

The AME2012 atomic mass evaluation *

(I). Evaluation of input data, adjustment procedures

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Abstract This paper is the first of two articles (Part I and Part II) that presents the results of the new atomic mass evaluation, AME2012. It includes complete information on the experimental input data (including not used and rejected ones), as well as details on the evaluation procedures used to derive the tables with recommended values given in the second part. This article describes the evaluation philosophy and procedures that were implemented in the selection of specific nuclear reaction, decay and mass-spectrometer results. These input values were entered in the least-squares adjustment procedure for determining the best values for the atomic masses and their uncertainties. Calculation procedures and particularities of the AME are then described. All accepted and rejected data, including outweighed ones, are presented in a tabular format and compared with the adjusted values (obtained using the adjustment procedure). Differences with the previous AME2003 evaluation are also discussed and specific information is presented for several cases that may be of interest to various AME users. The second AME2012 article, the last one in this issue, gives a table with recommended values of atomic masses, as well as tables and graphs of derived quantities, along with the list of references used in both this AME2012 evaluation and the NUBASE2012 one (the first paper in this issue).

AMDC: <http://amdc.in2p3.fr/> and <http://amdc.impcas.ac.cn/>

1 Introduction

The last complete evaluation of experimental atomic mass data AME2003 [1, 2] was published in 2003. Since then an uncommonly large amount of new, high quality, data has been published in the scientific literature. This is substantiated by the fact that as much as 53% of the data used in the present AME2012 evaluation were not available in 2003.

The large number of new data with high quality that are continuously produced render updates of the atomic mass table on a regular basis and a frequency of two or three years necessary. This also corresponds to the demand expressed by the extended nuclear research community. Actually, just after the publication of the AME1993

evaluation [3, 4, 5, 6], the intention was to produce interim updates every two years, followed by a full publication every six to eight years. As a result, the AME1995 update [7] was indeed published two years later. However, due to the necessity to create the NUBASE evaluation (see below), the planned AME updates were not completed. A certain stabilization was reached in 2003, encouraging the publication of the full AME2003 evaluation [1, 2], which was for the first time synchronized with the complementary evaluation of nuclear structure properties, NUBASE2003.

At the same time, renewal and extension of the manpower devoted to these two evaluations was clearly needed, while effective support from institutions was declining and the main authors in the AME2003 were com-

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ing close to retirement for one, stopping for the other one. In 2007, the evaluation was about to disappear. Fortunately, this work was revived in November 2008 when the Institute of Modern Physics at Lanzhou decided to ascertain the future of this long tradition, for the benefit of the physics community worldwide. From the dynamics thus created, other collaborators from all around the world joined gradually.

In order to accommodate the strong demand from the international physics community, a preliminary version of AME, the AME2011 preview, was released from the Atomic Mass Data Center website in April 2011. It was the first time for the mass tables to be disseminated through internet without an accompanying hardcopy.

In this article, general aspects of the development of AME2012 are presented and discussed. In doing this, we will mention several local analyses intended, partly, to study points elaborated further below. Other local analyses may be found on the AMDC web site [8].

The main AME2012 evaluation table (Table I) is presented in this Part I. All accepted and rejected experimental data are given and compared with the adjusted values deduced using a least-squares fit analysis.

Similarly to the previous AME evaluations, the uncertainties quoted in the present tables are one-standard deviation (1σ).

There is no strict literature cut-off date for the data used in the present AME2012 evaluation: all data, available to the authors until the material was sent to the publisher (November 18, 2012), were included. Those results which could not be included for particular reasons, such as the need for a heavy revision of the evaluation at too late a development stage, were added in remarks to the relevant data. The final mass-adjustment calculations were performed on November 16, 2012.

The present publication updates and includes all the information presented in the previous atomic mass evaluations (since AME1983), including those which are not contributing to the final adjustment results presented here.

Aaldert H. Wapstra, the founder of AME, is among the co-authors of the AME2012 publication. Unfortunately, he passed away at the end of 2006, but he made enormous contributions to the AME2012 development during the two years following the publication of the previous AME2003 evaluation. And more than those two years, the present work is composed of his spirit and wisdom.

1.1 Isomers in the AME and the emergence of NUBASE

During the development of the previous atomic mass evaluations, a computer file (called *Mfile*) that contains the approximate mass values for nuclides in their ground and

selected excited isomeric states was maintained. It was used as an approximate input to the computer adjustment program, which essentially uses the differences between the input and these approximate values in order to improve the precision of the calculations. The other reason for the existence of this file was that, where isomers occur, one has to be careful to check which one is involved in reported experimental data, such as α - and β -decay energies. In fact, several cases exist in the literature where the authors were not aware that complications occurred due to presence of isomers. For that reason, our *Mfile* contained known data on such isomeric pairs (half-lives, excitation energies and spin-parities). The issue of isomerism became even more important, when considering new mass-spectrometer methods that were developed to measure masses of exotic nuclides far from the valley of β -stability, which have, in general, relatively short lifetimes. Since the mass resolution of such spectrometers is limited, it is often experimentally impossible to separate isomers. As a consequence, only an average mass value for a particular isomeric pair can be obtained. Since the mass of the ground state is the primary aim of the present evaluation, it can be derived only in cases where one has information on the excitation energies and production rates of the isomers. When the excitation energy of a particular isomer is not experimentally known, it was estimated from trends in neighboring nuclides, as outlined below. Therefore, it was judged necessary to make the *Mfile* as complete as possible, which turned out to be a major effort. However, the resulting NUBASE evaluation, published for the first time in 1997 [9], was greeted with interest from many colleagues working in the areas of nuclear structure physics, nuclear astrophysics and applied nuclear physics, which made the effort worthwhile. In 2003, the NUBASE2003 and AME2003 were published jointly for the first time. Similarly, accompanying the present AME, the NUBASE2012 is published in the first part of this issue.

1.2 Highlights

The backbone Nowadays, the highest precision values presently measured for the atomic masses are concurrently obtained by two different experimental techniques. The first one comprises of direct mass-spectrometry measurements using Penning traps, while the second one utilizes γ -ray energy measurements following neutron capture reactions.

In the present work, results obtained by both methods are combined consistently (with a very few exceptions) to improve considerably the precision of the atomic masses for nuclides along the line of stability in a diagram of the

atomic number Z versus neutron number N [10], thus resulting in a reliable ‘backbone’.

The highest precision of 7×10^{-12} presently achieved for mass measurements has been obtained by the Penning trap method. The masses of some stable alkali-metal nuclides and noble-gas nuclides have been determined to 10^{-10} or even better, providing reliable reference standards for other mass measurements.

While most stable nuclides, and some long-lived ones, could have their mass accuracy improved using Penning traps, the priority was given to cases where there is a strong motivation from the physics point of view. For example, the $Q_{\beta\beta}$ values for some nuclides relevant to neutrino properties have been determined with very high precision, strengthening at the same time the backbone.

The exotic species The extent of the domain of nuclides with experimentally known masses has increased impressively over the last few years. Penning traps together with storage rings have played an important role in this extension.

Penning trap mass measurement facilities exist in many nuclear physics laboratories all around the world. They contribute not only in obtaining precise mass values for nuclides near the stability line, but together with the two storage rings facilities, one at the GSI-DARMSTADT and the other at the IMP-LANZHOU, provide valuable experimental results for a wealth of unstable, short-lived nuclides. Until recently, masses of such unstable nuclides were only known from Q_{β} end-point measurements, which have severe drawbacks owing to the pandemonium effect [11], more specially for high Q_{β} -values (see Section 6.7). In the present work, the masses for such nuclides have changed considerably compared to AME2003. It can be concluded that the shape of the atomic mass surface, and hence understanding of nuclear interactions, has changed significantly over the last 10-20 years.

It is somewhat ironical, but not unexpected, that the new results showed that several older data are not as good as thought earlier, but the reverse is also true. For example, while reactivating mass-spectrometer measurements performed by the group of Demirkhanov (laboratory labels R04-R13 in Table I), we were positively surprised to notice that their accuracy is much better than thought in the past.

The Isobaric Analogue States - IAS Isobaric Analogue States (IAS) have not been considered with the attention they require and included in the mass evaluation since AME1993. In this issue we have updated and included these masses since they are important states from

the nuclear interaction point of view (see Section 6.4). As for any excited state (see also the discussion about isomers in NUBASE, Section 2.2, p. 1161), the mass of an IAS can be derived either from an internal relation (amongst levels within the same nuclide) where the best evaluations are in ENSDF, or from external relations (to other nuclides). In the latter case, only the AME’s method can treat with accurateness the data to derive a mass value. It was therefore considered important and also our duty to have these data included in the main mass table, hence providing the users of our tables with the best mass values for the IAS.

Recalibrations Gamma-ray energies measured with bent-crystal spectrometers following neutron capture provide highly-accurate energy relations, e.g. the one-neutron separation energies. However, energies deduced in several (p,γ) reactions are also known with a similar precision. In fact, the accuracies achieved in both cases are so high that one of us [AHW] has re-examined all calibrations. In addition, several α -particle decay energies are also known with a high precision; and here too it was found necessary to harmonize the calibrations.

Differential reactions Another feature near the line of stability is the increased number of measurements of reaction energy differences, which can often be measured with a much higher precision compared to the absolute reaction energies. The AME2012 computer program accepts this type of input data which are given in their original shape in the present table of input data (Table I). This may be another incentive for presenting *primary* results in published literature: in later evaluations those results could be corrected automatically if calibration values change due to new experimental results.

Bare and highly ionized atoms As a result of availability of high-energy accelerators that produce highly ionized atoms, the number of nuclides for which experimental mass values are now known is substantially larger compared to our previous atomic mass tables. These measurements are sometimes made on deeply ionized particles, even up to bare nuclides. The results for masses reported in the literature are converted by the authors to values for neutral (and un-excited) atoms. The needed electron binding energies are taken from tables, like those of Huang et al. [12] (see also the discussion in Part II, Section 2, p. 1604).

At the proton drip-line A further significant development of the presented work is the inclusion of many new data on proton disintegrations that allowed a significant extension of the knowledge of proton binding en-

ergies. In several cases such data are also useful in determining the excitation energies of isomers, as well as in gaining information about the spins and parities of the parent and daughter states. The latter two developments are reasons why it is necessary to pay even more attention to relative positions of isomers than was necessary in our early evaluations. Spatial and time-correlated studies using double-sided silicon strip detectors were especially useful in studying long chains of α -decaying nuclides. The measured α -decay energies often provided precise information on mass differences between the individual

chain members. It is fortunate that such new experimental data are produced regularly mainly at laboratories in Finland, Germany, Japan and USA.

Remark: in the following text, several data of general interest will be discussed. Mention of references that can be found in Table I will be avoided. When it is necessary to provide a specific reference, those will be given using the key-numbers (e.g. [2002Aa15]), listed at the end of Part II, under “References used in the AME2012 and the NUBASE2012 evaluations”, p. 1863.

Table A. Constants used in this work or resulting from the present evaluation.

1 u	=	$M(^{12}\text{C})/12$	=	atomic mass unit				
1 u	=	1 660 538.921	±	0.073	$\times 10^{-33}$ kg	44	ppb	<i>a</i>
1 u	=	931 494.061	±	0.021	keV	22	ppb	<i>a</i>
1 u	=	931 494.0023	±	0.0007	keV ₉₀	0.7	ppb	<i>b</i>
1 eV ₉₀	=	1 000 000.0063	±	0.022	μeV	22	ppb	<i>a</i>
1 MeV	=	1 073 544.150	±	0.024	nu	22	ppb	<i>a</i>
1 MeV ₉₀	=	1 073 544.2174	±	0.0007	nu	0.7	ppb	<i>b</i>
M_e	=	548 579.90946	±	0.00022	nu	0.4	ppb	<i>a</i>
	=	510 998.928	±	0.011	eV	22	ppb	<i>a</i>
	=	510 998.89581	±	0.00041	eV ₉₀	0.8	ppb	<i>b</i>
M_p	=	1 007 276 466.92	±	0.09	nu	0.09	ppb	<i>c</i>
M_α	=	4 001 506 179.127	±	0.060	nu	0.015	ppb	<i>c</i>
$M_n - M_H$	=	839 883.71	±	0.51	nu	610	ppb	<i>d</i>
	=	782 346.64	±	0.48	eV ₉₀	610	ppb	<i>d</i>

a) derived from the work of Mohr and Taylor [13].

b) for the definition of V₉₀, see text.

c) derived from this work combined with M_e and total ionization energies for ¹H and ⁴He from [13].

d) this work.

2 Units; recalibration of α - and γ -ray energies

Atomic mass determination for a particular nuclide can be generally performed by establishing an energy relation between the mass we want to deduce and that for a well known nuclide. This energy relation is then expressed in electron-volts (eV). Mass values can also be obtained as an inertial mass from the movement characteristics of an ionized atom in an electro-magnetic field. The mass, is then derived from a ratio of masses and it is then expressed in ‘unified atomic mass’ (u). Those two units are used in the present work.

The mass unit is defined, since 1960, as one twelfth of the mass of one free atom of carbon-12 in its atomic and nuclear ground states, $1 \text{ u} = M(^{12}\text{C})/12$. Before 1960, two mass units were used: the physics one, defined as

¹⁶O/16, and the chemical one which considered one sixteenth of the average mass of a standard mixture of the three stable oxygen isotopes. This difference was considered as being not at all negligible, when taking into account the commercial value of all concerned chemical substances. Physicists could not convince the chemists to drop their unit off; “The change would mean millions of dollars in the sale of all chemical substances”, said the chemists, which is indeed true! Kohman, Mat- tauch and Wapstra [14] then calculated that, if ¹²C/12 was chosen, the change would be ten times smaller for chemists, and in the opposite direction . . . This led to an unification; ‘u’ stands therefore, officially, for ‘unified mass unit’! It is worth mentioning that the chemical mass- spectrometry community (e.g. bio-chemistry, polymer chemistry) widely use the dalton unit (symbol Da, named after John Dalton [15]). It allows to express the number

of nucleons in a molecule, at least as it is presently used in these domains. It is thus not strictly the same as ‘u’.

The unit for energy is the electron-volt. Until the end of last century, the relative precision of $M - A$ expressed in keV was for several nuclides less accurate than the same quantity expressed in mass units. The choice of the volt for the energy unit (the electronvolt) is not unambiguous. For example, one may use the *international* volt V, but other can choose the volt V_{90} as *maintained* in national metrology laboratories and defined by adopting an exact value for the constant ($2e/h$) in the relation between frequency and voltage in the Josephson effect. Since 1990, by definition $2e/h = 483597.9$ (exact) GHz/ V_{90} (see Table B). Already in 1983, an analysis by Cohen and Wapstra [16] showed that all precision measurements of reaction and decay energies were calibrated in such a way that they can be more accurately expressed in *maintained* volt. Also, as seen in Table A, the precision of the conversion factor between mass units and *maintained* volt (V_{90}) is more accurate than that between the former and *international* volt. In fact, the accuracy is so high that the relative precision of $M - A$ expressed in eV_{90} is the same as that expressed in mass units. For example, the mass excess of ${}^4\text{He}$ is $2\,603\,254.13 \pm 0.06$ nu in mass units, $2\,424\,915.63 \pm 0.06$ eV_{90} in *maintained* volt units and $2\,424\,915.78 \pm 0.08$ eV in *international* volt units. Due to the increase of precision, the relative precision of $M - A$ expressed in keV_{90} is as good as the same quantity expressed in mass units, whereas the uncertainties expressed in *international* volts are larger than in V_{90} . Therefore, as already adopted in our previous mass evaluations, the V_{90} (*maintained* volt) unit is used in the present work.

In the most recent (2012) evaluation by Mohr et al. [13], the relation between *maintained* and *international* volts is given as $V_{90} = [1 + 6.3(2.2) \times 10^{-8}]V$, that could be expressed as a difference of 63(22) ppb.

In Table A the relations between *maintained* and *international* volts, and several constants of interest, obtained from the evaluation of Mohr et al. [13] are given. Given also are the ratio of mass units to electronvolts for the two

Volt units, and also the ratio of the two Volts. In addition, values for the masses of the proton, neutron and α particle, as derived from the present evaluation, are also given, together with the mass difference between the neutron and the light hydrogen atom.

In earlier mass tables (e.g. AME1993), we used to give values for the binding energies, $ZM_H + NM_n - M$. The main reason for this was that the uncertainty (in keV_{90}) of this quantity was larger than that of the mass excess, $M - A$. However, due to the increased precision in the neutron mass, this is no longer important. Similarly to AME2003, we now give instead the binding energy per nucleon for educational reasons, connected to the Aston curve and the maximum stability around the ‘Iron-peak’ of importance in astrophysics (see also the note in Part II, Section 2, p. 1605).

The defining values and the resulting mass-energy conversion factors are given in Table B. Since 2003 the definition has not been modified. Therefore, no recalibration has been necessary in the present AME2012 compared to AME2003, except in one case where the precision in the obtained data is better than a few hundred ppb.

This case is the ${}^1\text{H}(n,\gamma){}^2\text{H}$ reaction which has the highest energy precision in the input data with relative uncertainty of 180 ppb, where the wave length of the emitted γ ray is determined by using the ILL silicon crystal spectrometer. In AME2003, the recommended value was $2224.5660(4)$ keV_{90} , based on the work of [1999Ke05] at the NBS. In a later work from the same group [2006De21], the value was corrected to be $2224.55610(44)$ keV with new evaluation on the lattice spacing of the crystal and fundamental constants at that time. The value of the crystal lattice spacing is used as an adjusted parameter in the new evaluation of Mohr et al., but not expressed explicitly. Using the same value of the wave length in [2006De21], and the new length-energy conversion coefficient, we derive $2224.55600(44)$ keV_{90} as input to our evaluation. Note that the value expressed in eV_{90} is 0.14 smaller than expressed in *international* eV, about one third of the uncertainty.

Table B. Definition of Volt units, and resulting mass-energy conversion constants.

	$2e/h$			u		
1983	483594.21	(1.34)	GHz/V	931501.2	(2.6)	keV
1983	483594	(exact)	GHz/ V_{86}	931501.6	(0.3)	keV $_{86}$
1986	483597.67	(0.14)	GHz/V	931494.32	(0.28)	keV
1990	483597.9	(exact)	GHz/ V_{90}	931493.86	(0.07)	keV $_{90}$
1999	483597.9	(exact)	GHz/ V_{90}	931494.009	(0.007)	keV $_{90}$
2010	483597.9	(exact)	GHz/ V_{90}	931494.0023	(0.0007)	keV $_{90}$

Some more historical points are worth mentioning.

It was in 1986 that Taylor and Cohen [17] showed that the empirical ratio between the two types of volts, which had of course been selected to be nearly equal to 1, had changed by as much as 7 ppm. For this reason, in 1990 a new value was chosen [18] to define the *maintained* volt V_{90} . In their 1998 evaluation, Mohr and Taylor [19] had to revise the conversion constant to *international* eV. The result was a slightly higher (and 10 times more precise) value for V_{90} .

Since older high-precision, reaction-energy measurements were essentially expressed in keV_{86} , we had to take into account the difference in voltage definition that causes a systematic error of 8 ppm. We were therefore obliged, for the AME2003 tables, to adjust the older precise data to the new keV_{90} standard. For α -particle energies, Rytz [20] has taken this change into account, when updating his earlier evaluation of α -particle energies. We have used his values in the present input data table (Table I) and indicated this by adding in the reference field the symbol “Z”.

A considerable number of (n,γ) and (p,γ) reactions has a precision not much worse than 8 ppm. In 1990, one of us [21] has discussed the need for necessary recalibration for several γ rays that are often used as calibration standards. This work has been updated in AME2003 (in a special file dedicated to this study, available from the AMDC Web-site [22]) to evaluate the influence of new calibrators, as well as of the new Mohr and Taylor fundamental constants on γ -ray and particle energies used in (n,γ) , (p,γ) and (p,n) reactions. In doing this, the calibration work of Helmer and van der Leun [23], based on the fundamental constants at that time, was used. For each of the data concerned, the changes were relatively minor. However, we judged it necessary, in AME2003, to make such recalibrations, since otherwise they add up to systematic uncertainties that are non-negligible. We also reconsidered the calibration for proton energies (see below). As in the case of Rytz’ recalibrations for α -decay energies, such data are marked by “Z” behind the reference key-number. If it was not possible to do so, for example when this position was used to indicate that a remark was added, the same “Z” symbol was added to the uncertainty value mentioned in the remark.

The list of input values (Table I) for our calculations includes many excitation energies that are derived from γ -ray measurements that are generally evaluated in the Nuclear Data Sheets (NDS) [24]. Only in exceptional cases, it made sense to change them to recalibrated results.

For higher γ -ray energies, the AME1995 adjustment used several data recalibrated with results from Penning trap measurements for initial and final atoms in-

involved in (n,γ) reactions. The use of the newer constants and of additional, or revised, Penning trap results, made it necessary, in AME2003, to revise again the recalibrated results. One of the consequences was that the energy coming free in the $^{14}\text{N}(n,\gamma)^{15}\text{N}$ reaction, playing a crucial role in these calibrations, was changed from $10\,833\,301.6 \pm 2.3 \text{ eV}_{90}$ to $10\,833\,296.2 \pm 0.9 \text{ eV}_{90}$ in AME2003, and $10\,833\,295.33 \pm 0.77 \text{ eV}_{90}$ in present AME. For more details and discussion, see [22].

Several old neutron binding energies were improved in unexpected ways. For example, a value with a somewhat large uncertainty of 650 eV was reported for the neutron binding energy of ^{54}Cr . Careful examination of the original article showed that this value was essentially the sum of the energies of two capture γ -rays. For their small energy difference a smaller error was reported. Later work yielded a much improved value for the transition to the ground state, allowing to derive a considerably improved neutron binding energy. Also, in some cases, observed neutron resonance energies could be combined with the latest measurements of the excitation energies of the resonance states. Further discussions can be found on the AMDC web site [22].

In AME2003, we also recalibrated proton energies, more particularly those involved in resonance energies and thresholds. An unfortunate development here was that the data for the 991 keV $^{27}\text{Al}+p$ resonance [1994Br37] (used frequently for calibration) were reported with higher precision than older ones, but they differed more than expected [22]. The value most often used in earlier work was $991.88 \pm 0.04 \text{ keV}$ from the work of Roush *et al.* [25]. In 1990, Endt *et al.* [26] averaged it with the later result by Stoker *et al.* [27], thus obtaining a slightly modified value of $991.858 \pm 0.025 \text{ keV}$. By doing this, changes in the values of natural constants used in the derivation of these values were not taken into account. By correcting for this omission and by critically evaluating earlier data, one of us [28] derived in 1993 a value $991.843 \pm 0.033 \text{ keV}$ for this standard, and, after the 2003 revision, $991.830 \pm 0.050 \text{ keV}$ [22]. The measurement of [1994Br37] yielded $991.724 \pm 0.021 \text{ keV}$, which is two standard deviations from the above adopted value (labeled ‘B’ in Table I).

3 Input data, representation in a connections diagram

As mentioned above, there are two methods that are used in measurements of atomic masses: the mass-spectrometry one (often called a “direct method”), where the inertial mass is determined from the trajectory of the ion in a magnetic field, or from its time-of-flight, and

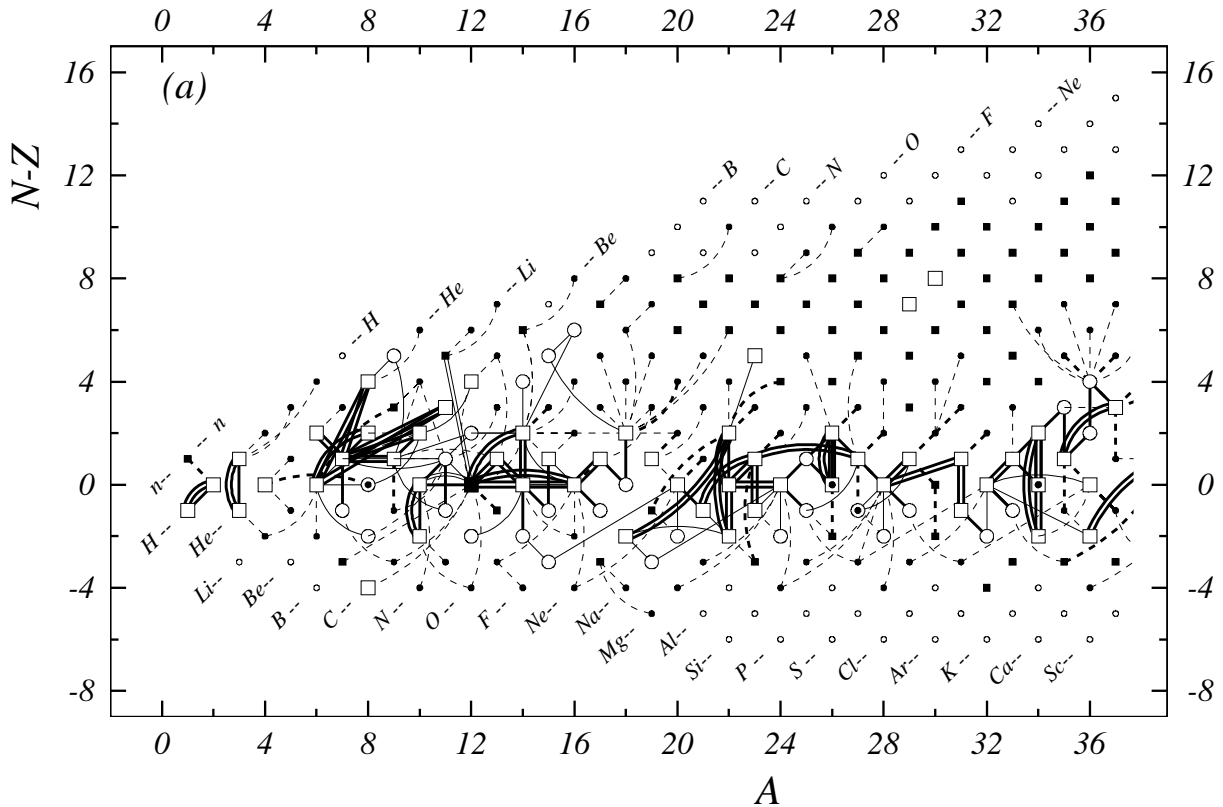


Figure 1: (a)–(j). Diagram of connections for input data.

For *primary data* (those checked by other data):

- absolute mass-doublet nuclide (i.e. connected to ^{12}C , ^{35}Cl or ^{37}Cl);
(or nuclide connected by a unique secondary relative mass-doublet to a remote reference nuclide);
- other primary nuclide;
- ◻ ⊙ primary nuclide with relevant isomer;
- // mass-spectrometer connection;
- other primary reaction connection.

Primary connections are drawn with two different thicknesses. Thicker lines represent the highest precision data in the given mass region

- (limits: 1 keV for $A < 36$,
2 keV for $A = 36$ to 165 and
3 keV for $A > 165$).

For *secondary data* (cases where masses are known from one type of data and are therefore not checked by a different connection):

- secondary experimental nuclide determined from mass-spectrometry;
- secondary experimental nuclide determined by a reaction or a decay;
- nuclide for which mass is estimated from trends in the Mass Surface TMS;
- connection to a secondary nuclide. Note that an experimental connection may exist between two estimated TMS nuclides when neither of them is connected to the network of primaries.

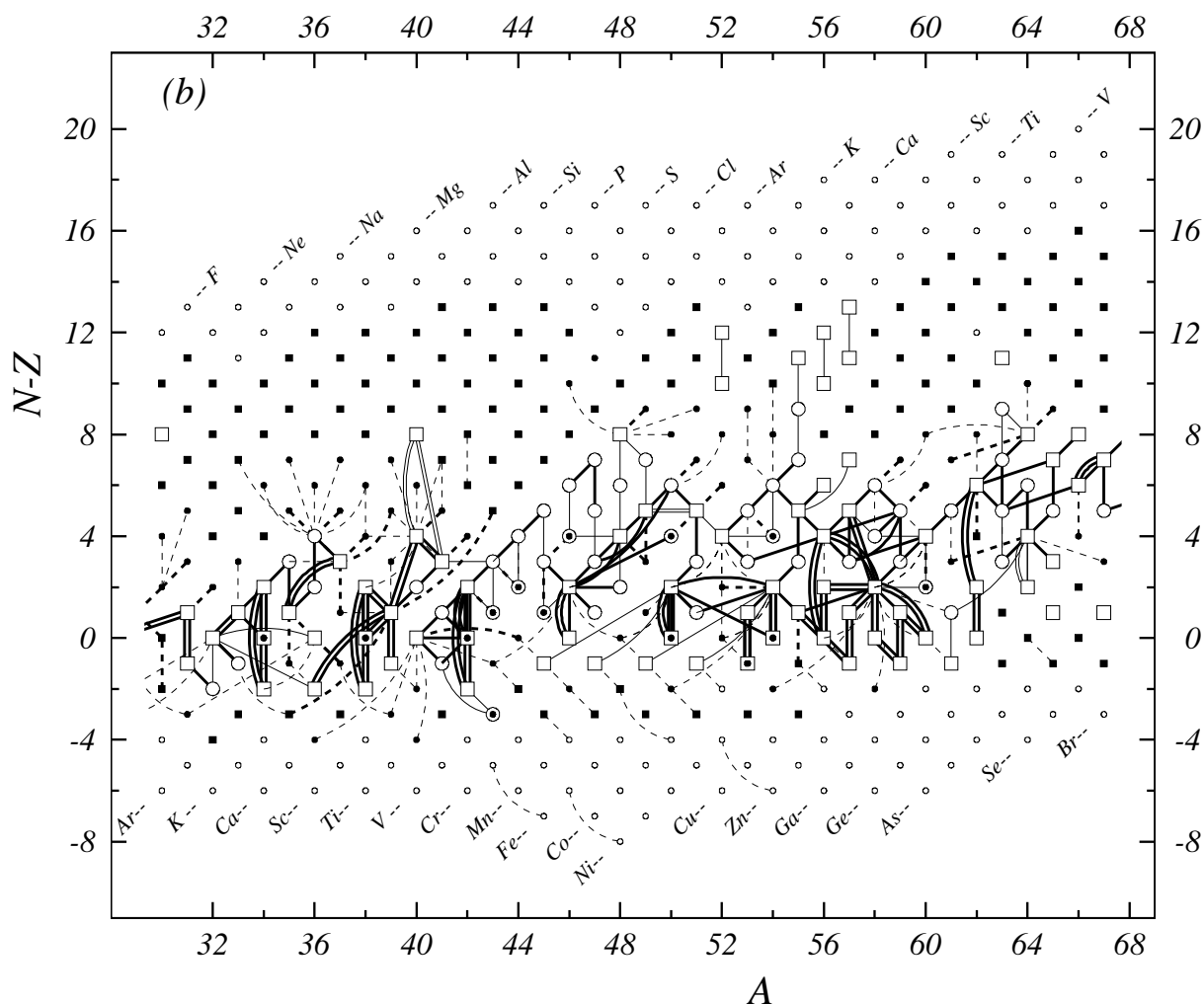


Figure 1 (b). Diagram of connections for input data — continued.

the so-called "indirect method" where the reaction energy, i.e. the difference between several masses, is determined using a specific nuclear reaction or a decay process. In the present work all available experimental data related to atomic masses (both energy and mass-spectrometry data) are considered. The input data are extracted from the available literature, compiled in an appropriate format and then carefully evaluated.

In AME data treatment, we try our best to use the primary experimental information. In this way, the masses can be recalibrated automatically for any future changes, and the original correlation information can be properly preserved.

One example that illustrates our policy of data treatment is the following. In the [1986Ma40] publication, the Q value of the $^{148}\text{Gd}(p,t)^{146}\text{Gd}$ reaction was measured relative to that for the $^{65}\text{Cu}(p,t)^{63}\text{Cu}$ reference reaction. The latter value was adopted from the AME1995 mass table, but it was changed by 1.8 keV in the present mass table. In AME2003, the corresponding equation was $^{148}\text{Gd}(p,t)^{146}\text{Gd} = -7843 \pm 4$ keV. However, in the present

work, it is presented and used as a differential reaction equation: $^{148}\text{Gd}(p,t)^{146}\text{Gd} - ^{65}\text{Cu}(p,t)^{63}\text{Cu} = 1500 \pm 4$ keV. Strictly speaking, those equations are not exact either. What is measured in the experiment is the energy spectra of the ejected particles. Since there are differences between the masses of the measured nuclides and the reference, the response of the ejected particles to the Q values are different for the measured nuclides and the reference, depending also on the angle where the spectra are obtained. While the exact equations are quite complex, we believe that the treatment by differential reaction equation represents the original data more reliably and that most of the primary information is preserved.

Nuclear reaction $A(a,b)B$ and decay $A(b)B$ energy measurements connect the initial (A) and final (B) nuclides with one or two reaction or decay particles. With the exception of some reactions between very light nuclides, the precision with which the masses of reaction particles a and b are known is much higher than that of the measured reaction and decay energies. Thus, these reactions and decays can each be represented as a link be-

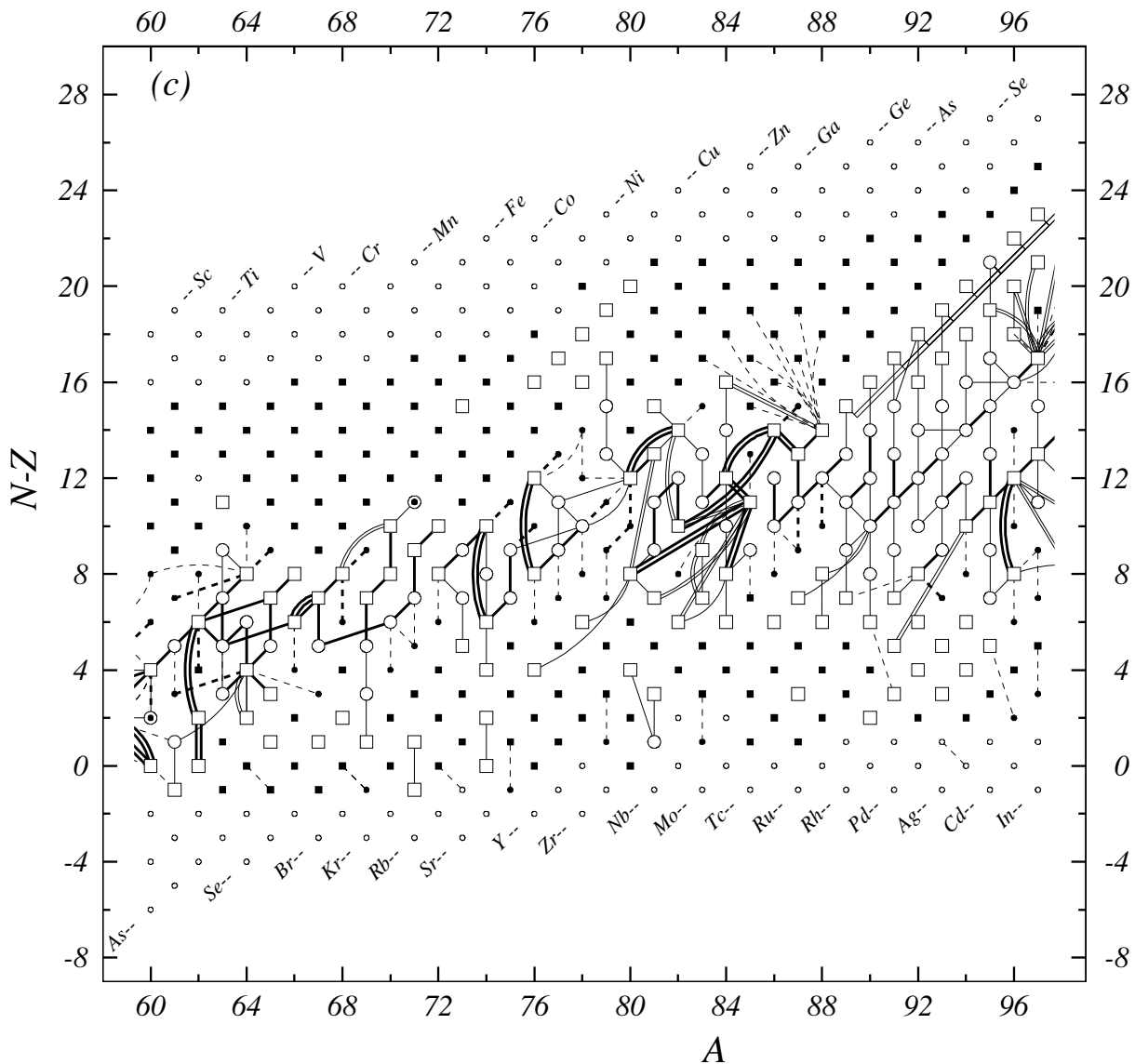


Figure 1 (c). Diagram of connections for input data — continued.

tween two nuclides A and B . Differential reaction energies $A(a,b)B - C(a,b)D$ are in principle represented by a combination of four masses.

Direct mass-spectrometry measurements, again with exception of a few cases between very light nuclides, can be separated in a class of connections between two or three nuclides, and a class essentially determining an absolute mass value (see Section 5). Penning trap measurements, almost always give a ratio of masses between two nuclides (inversely proportional to their cyclotron frequencies in the trap). Sometimes these two nuclides can be very far apart. Thus, those measurements are in most cases best represented as a combination of two masses. Other types of direct experimental methods, such as ‘Smith-type’, ‘Schottky’, ‘Isochronous’ and ‘time-of-flight’ mass-spectrometers, are calibrated in a more complex way, and are thus published by their authors as abso-

lute mass doublets. They are then presented in Table I as a difference: ${}^A\text{El-u}$.

For completeness we mention that early mass-spectrometer “triplet” measurements on unstable nuclides can best be represented as linear combinations of masses of three isotopes, with non-integer coefficients [29].

This situation allows us to represent the input data graphically in a diagram of $(N - Z)$ versus $(N + Z)$ as shown in Fig. 1. This is straightforward for absolute mass-doublets and for two-nuclide difference cases; but not for spectrometer triplets and differential reaction energies (see Section 1.2., p. 1289). The latter are in general more important for one of the two reaction energies than for the other one; in the graphs we therefore represent them simply by the former. (For computational reasons, these data are treated as primaries even though the diagrams then show only one connection.)

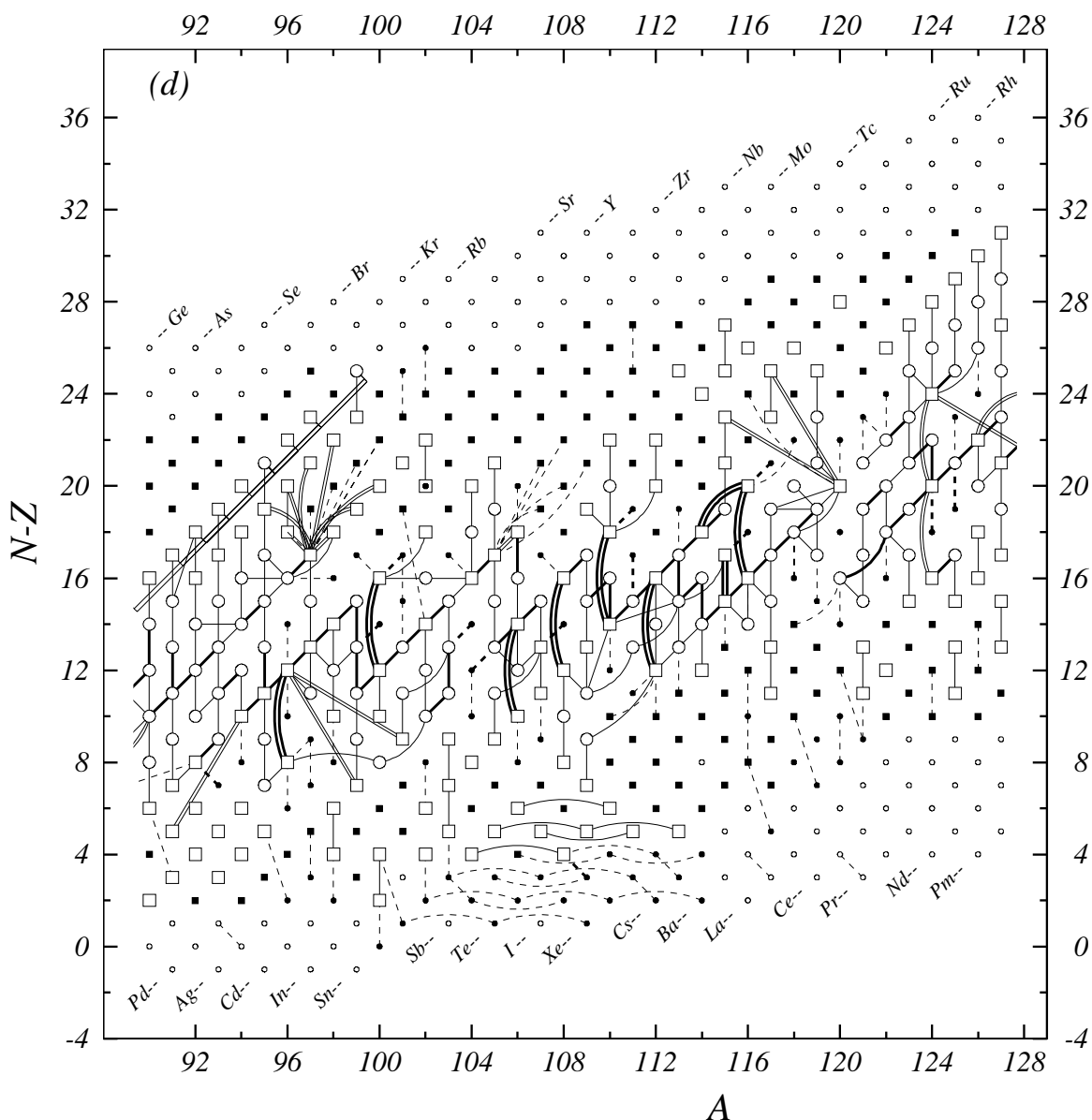


Figure 1 (d). Diagram of connections for input data — continued.

In the present work, all input data are evaluated, i.e. calibrations are checked if necessary, and the data are compared with other results and with the trends in the mass surface (TMS) in the region. As a consequence, several input data are changed or even rejected. All input data, including the rejected ones (not presented in Fig. 1), are given in Table I. As can be seen from Fig. 1, the accepted data may allow determination of the mass of a particular nuclide using several different routes; such a nuclide is called *primary*. The mass values in the table are then derived by least squares methods. In the other cases, the mass of a nuclide can be derived only from a connection to another one; it is called a *secondary* nuclide. This classification is of importance for our calculation procedure (see Section 5, p. 1305).

The diagrams in Fig. 1 also show many cases where the relation between two atomic masses is accurately known, but not the values of the masses. Since our policy is to include all available experimental results, we have produced in such cases estimated mass values that are based on the trends in the mass surface in the neighborhood (TMS). In the resulting system of data representations, vacancies occur, which were filled using the same TMS procedure. Estimates of unknown masses are further discussed in the next section.

Some care should be taken in the interpretation of Fig. 1, since excited isomeric states and data relations involving such isomers are not completely represented on these drawings. This is not considered a serious defect; those readers who want to update such values can conve-

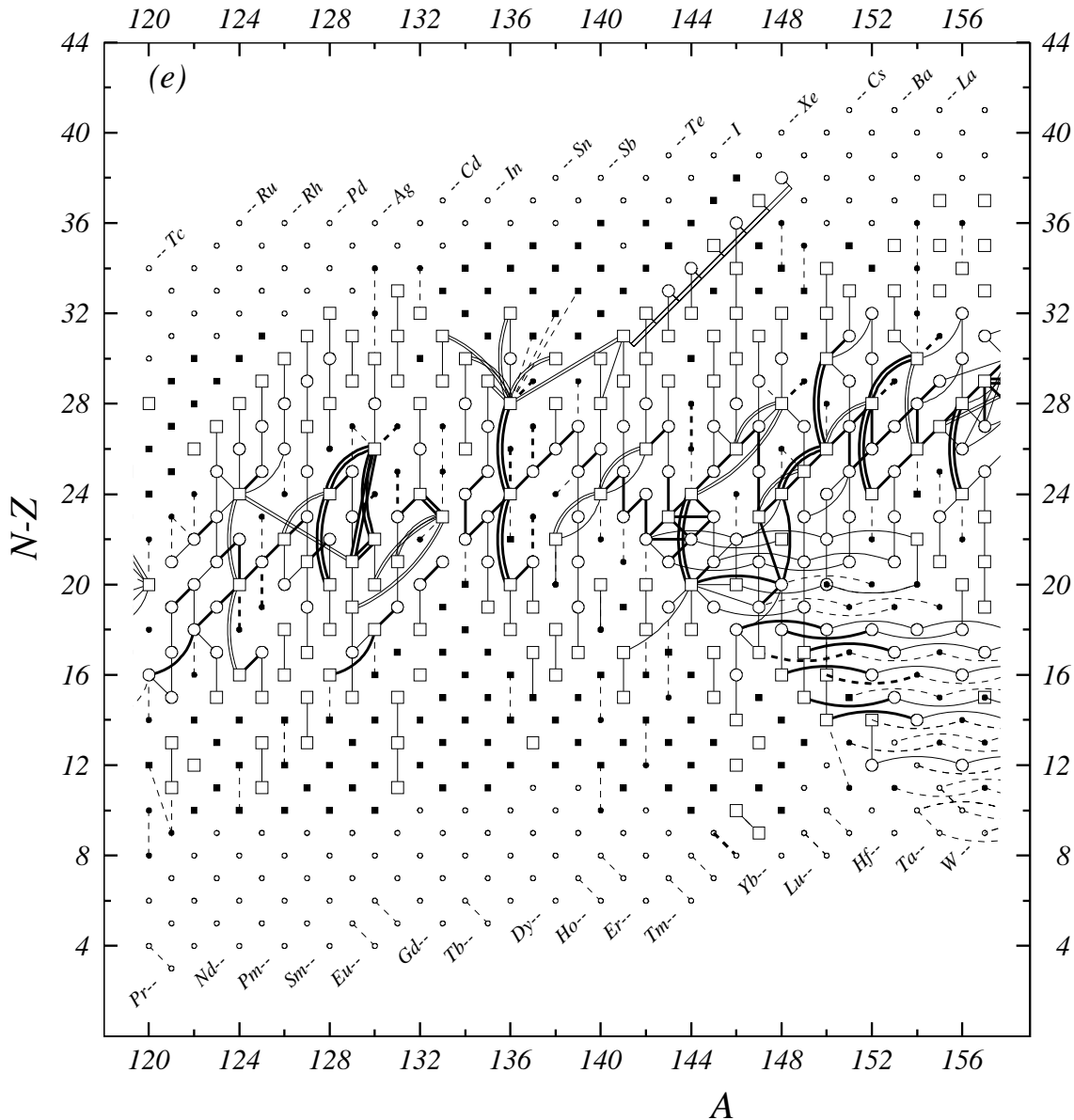


Figure 1 (e). Diagram of connections for input data — continued.

niently consult Table I, where all relevant information is given.

4 Regularity of the mass-surface and use of trends in the Mass Surface (TMS)

When atomic masses are displayed as a function of N and Z , one obtains a *surface* in a 3-dimensional space. However, due to the pairing energy, this surface is divided into four *sheets*. The even-even sheet lies lowest, the odd-odd highest, the other two nearly halfway in-between, as shown in Fig. 2. The vertical distances from the even-even sheet to the odd-even and even-odd ones are the proton and neutron pairing energies Δ_{pp} and Δ_{nn} . They are nearly equal. The distances of the last two sheets to the odd-odd

sheet are equal to $\Delta_{nn} - \Delta_{np}$ and $\Delta_{pp} - \Delta_{np}$, where Δ_{np} is the proton-neutron pairing energy due to the interaction between the two odd nucleons, which are generally not in the same shell. These energies are represented in Fig. 2, where a hypothetical energy zero represents a nuclide with no pairing among the last nucleons.

Experimentally, it has been observed that: the four sheets run nearly parallel in all directions, which means that the quantities Δ_{nn} , Δ_{pp} and Δ_{np} vary smoothly and slowly with N and Z ; and that each of the mass sheets varies also smoothly, but rapidly with N and Z [30]. The smoothness is also observed for first order derivatives (slopes, e.g. the graphs in Part II, p. 1826) and all second order derivatives (curvatures of the mass surface). They are only interrupted in places by cusps or bumps associ-

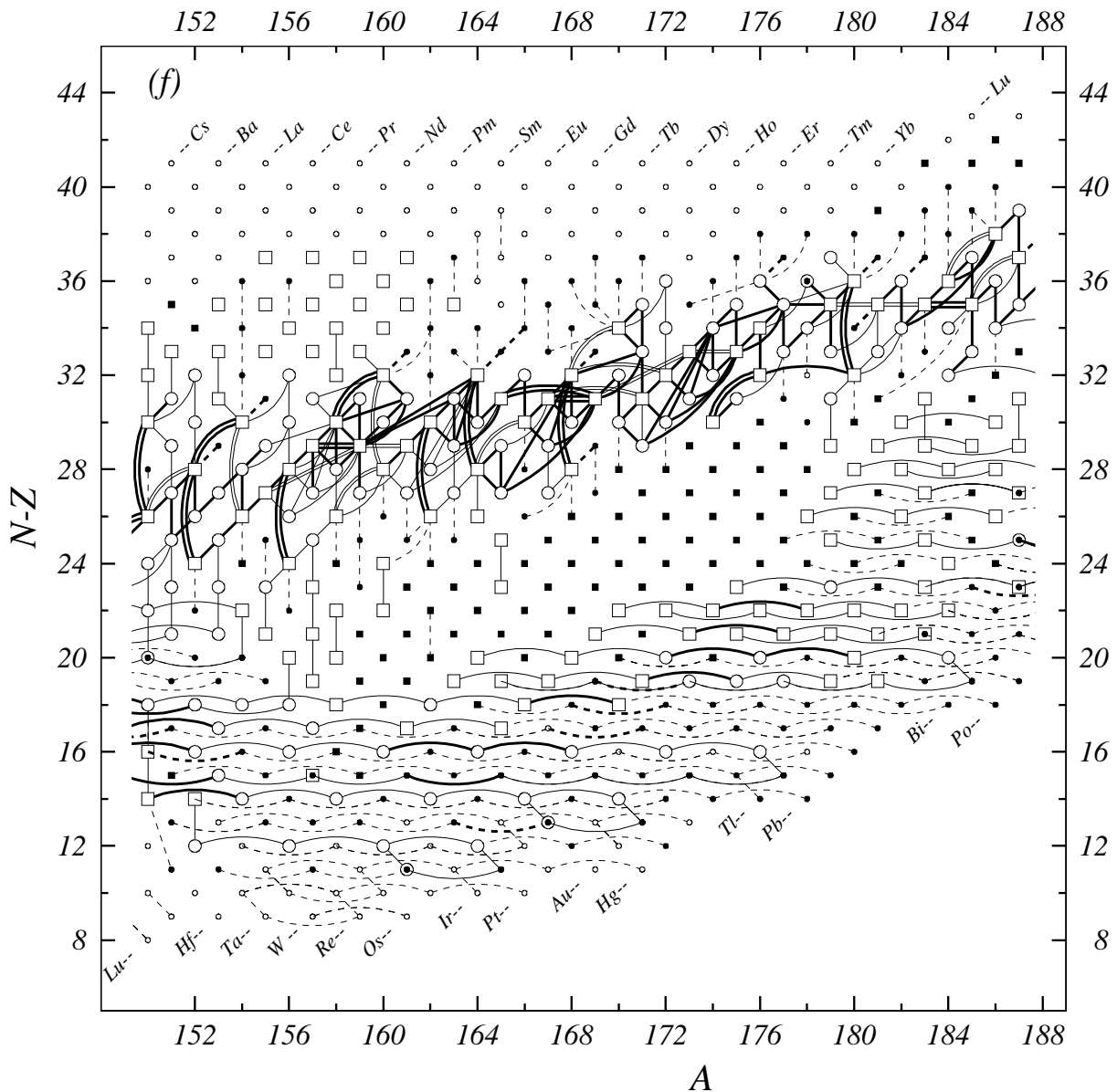


Figure 1 (f). Diagram of connections for input data — continued.

ated with important changes in nuclear structure: shell or sub-shell closures, shape transitions (spherical-deformed, prolate-oblate), and the so-called ‘Wigner’ cusp along the $N = Z$ line.

This observed regularity of the mass sheets in all places where no change in the physics of the nucleus are known to exist, can be considered as one of the BASIC PROPERTIES of the mass surface. Thus, dependable estimates of unknown, poorly known or questionable masses can be obtained by extrapolation from well-known mass values on the same sheet. In the evaluation of masses the property of regularity and the possibility to make estimates are used for several purposes:

1. Any coherent deviation from regularity, in a region (N, Z) of some extent, could be considered as an in-

dication that some new physical property is being discovered. However, if one single mass violates the trends in the mass surface given by neighboring nuclides, then one may seriously question the correctness of the related datum. There might be, for example, some undetected systematic [31] contribution to the reported result of the experiment measuring this mass. We then reexamine with extra care the available experimental information in literature for possible errors and often ask the corresponding authors for additional information. Such a process often leads to corrections.

2. There are cases where several experimental data disagree among each other, but no particular reason can be found for rejecting one or some of them by

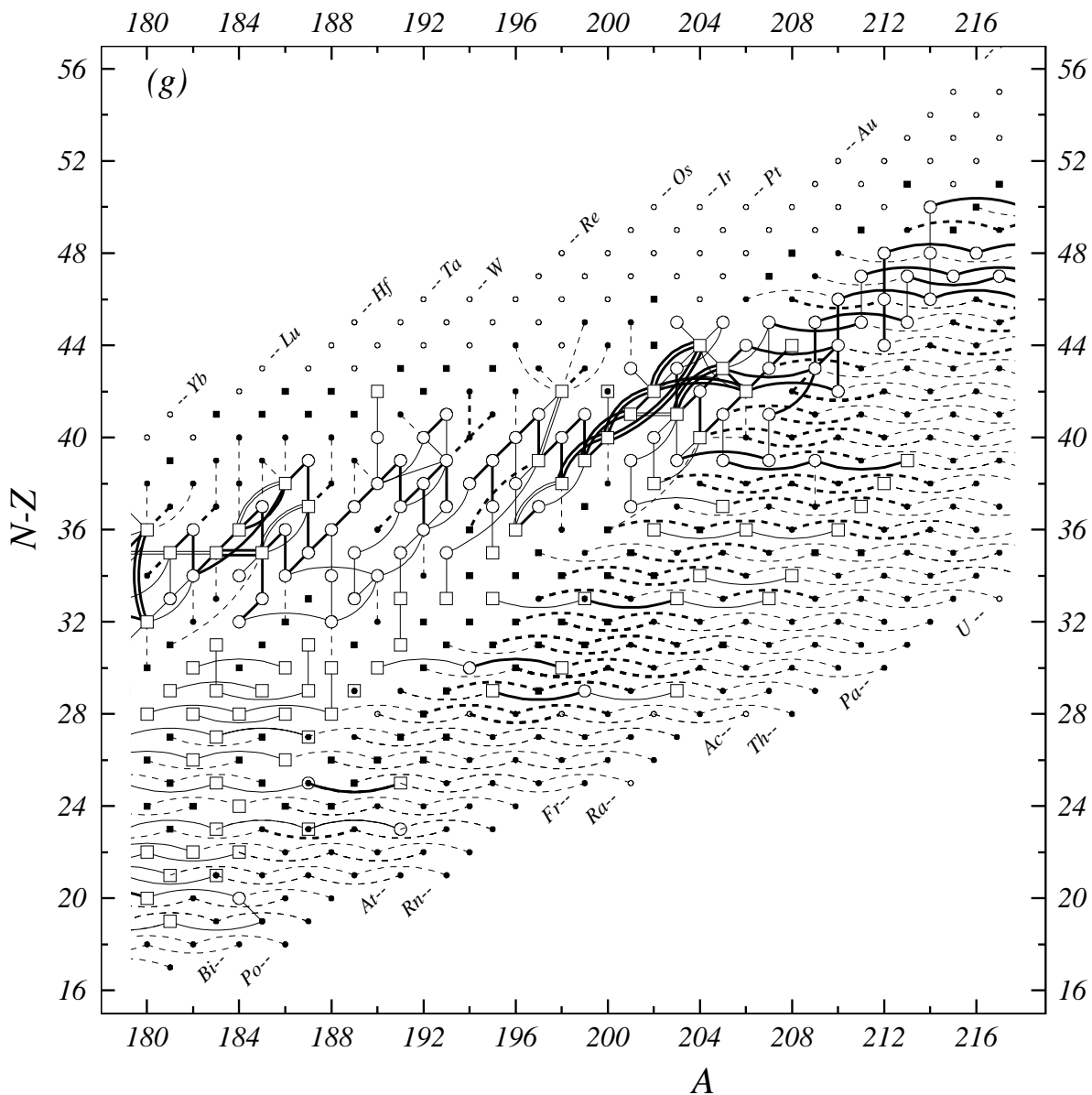


Figure 1 (g). Diagram of connections for input data — continued.

studying the corresponding papers. In such cases, the measure of agreement with the just mentioned regularity can be used by the evaluators for selecting which of the conflicting data will be accepted and used in the evaluation, thus following the same policy that was used in our earlier work.

- There are cases where masses determined from ONLY ONE experiment (or from same experiments) deviate severely from the smooth surface. Such cases are examined closely and are discussed extensively below (Section 4.1).
- Finally, drawing the mass surface allows to derive estimates for the still unknown masses, either from interpolations or from short extrapolations (see be-

low, Section 4.2).

4.1 Scrutinizing and manipulating the surface of masses

Direct representation of the mass surface is not convenient, since the binding energy varies very rapidly with N and Z . Splitting in four sheets, as mentioned above, complicates even more such a representation. There are two ways that allow to observe with some precision the surface of masses: one of them uses the *derivatives* of this surface, the other is obtained by *subtracting a simple function* of N and Z from the masses.

The derivatives of the mass surface By *derivative* of the mass surface we mean a specified difference between

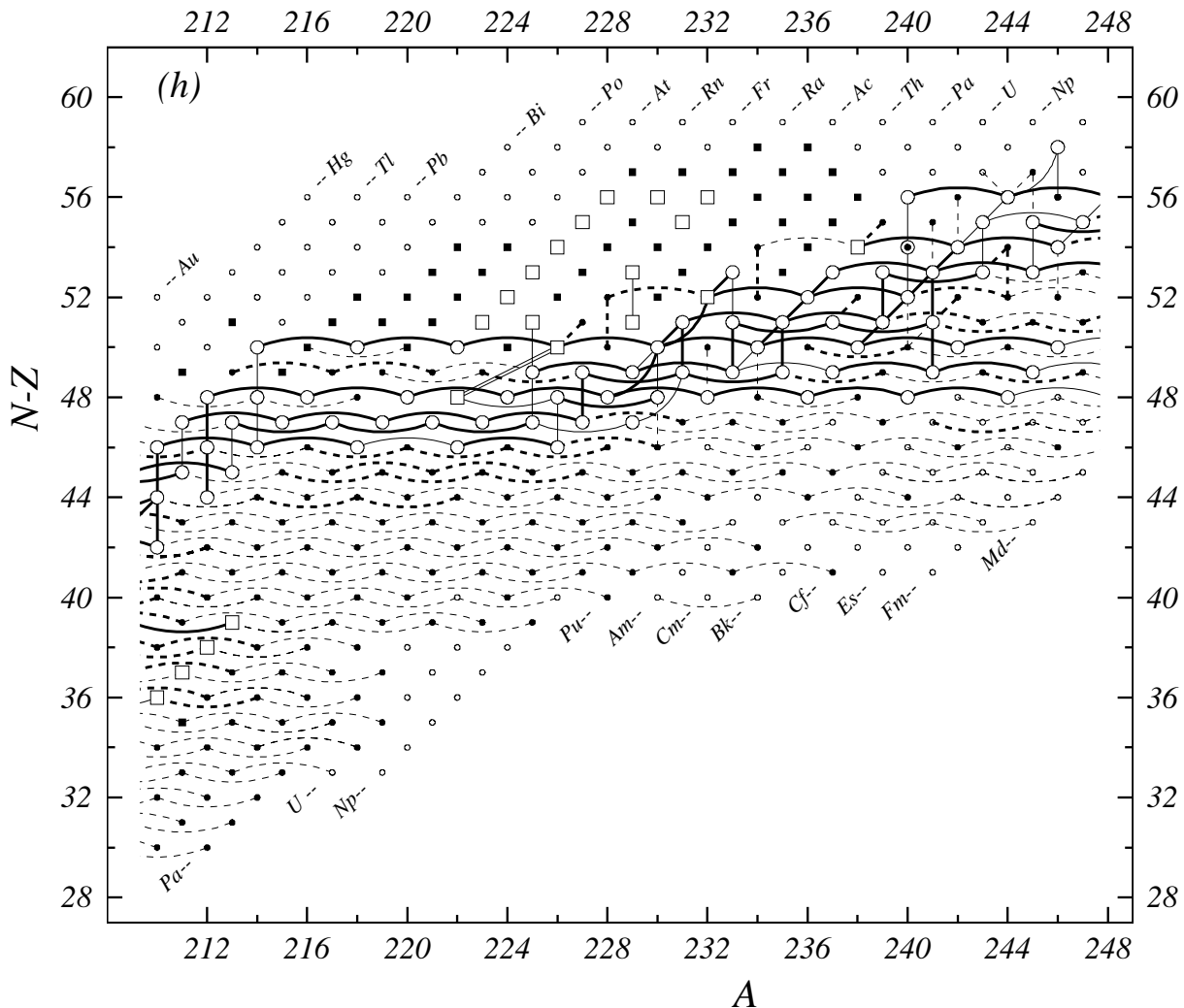


Figure 1 (h). Diagram of connections for input data — continued.

the masses of two nearby nuclides. These functions are also smooth and have the advantage of displaying much smaller variations. For a derivative specified in such a way that differences are between nuclides in the same mass sheet, the near parallelism of these leads to an (almost) unique surface for the derivative, allowing thus a single display. Therefore, in order to visualize the trends in the mass surface, we found that such estimates could be obtained best in graphs such as α - and double- β -decay energies and separation energies of two protons and two neutrons. These four derivatives are plotted against N , Z or A in Part II, Figs. 1–36, p. 1826.

However, from the way these four derivatives are created, they give information only within one of the four sheets of the mass surface (e-e, e-o, o-e or e-e; e-o standing for even- N and odd- Z). When examining the mass surface, an increased or decreased spacing of the sheets cannot be observed. Also, when estimating unknown masses,

divergences of the four sheets could be unduly created, which is unacceptable.

Fortunately, other various representations are possible (e.g. separately for odd and even nuclides: one-neutron separation energies versus N , one-proton separation energy versus Z , β -decay energy versus A , ...). We have prepared such graphs that can be obtained from the AMDC web site [8].

The method of ‘derivatives’ suffers from involving two masses for each point to be drawn, which means that if one mass is moved then two points are changed in opposite direction, causing confusion in the drawings. Also, reversely, the deviation of one point from regularity could be due to either the nuclide it represents or the related one in the difference, rendering the analysis rather complex.

Subtracting a simple function Since the mass surface is smooth, one can try to define a function of N and Z as

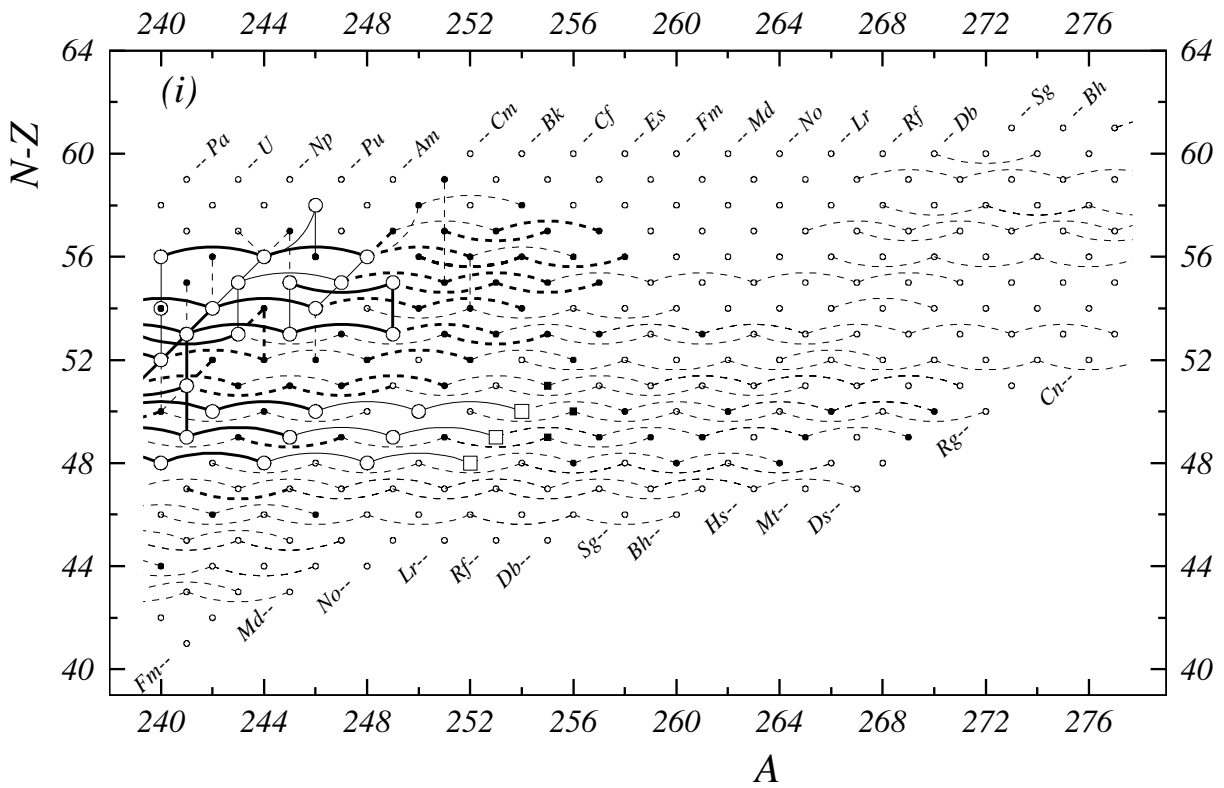


Figure 1 (i). Diagram of connections for input data — continued.

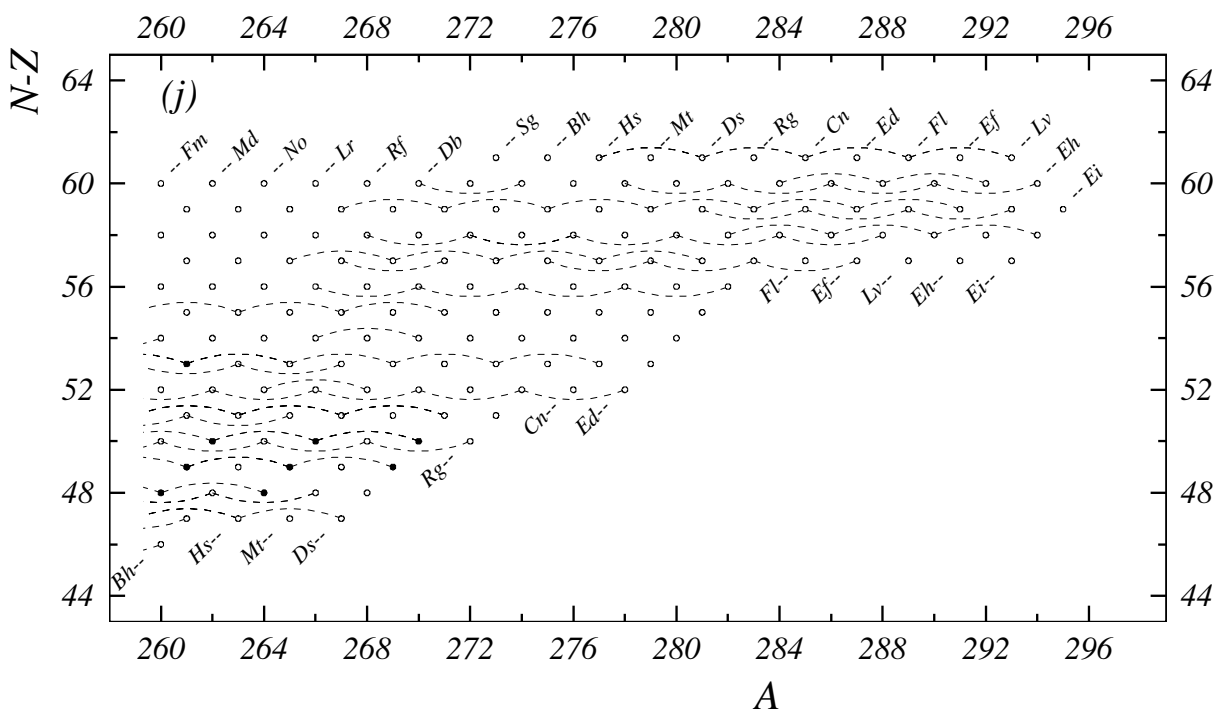


Figure 1 (j). Diagram of connections for input data — continued.

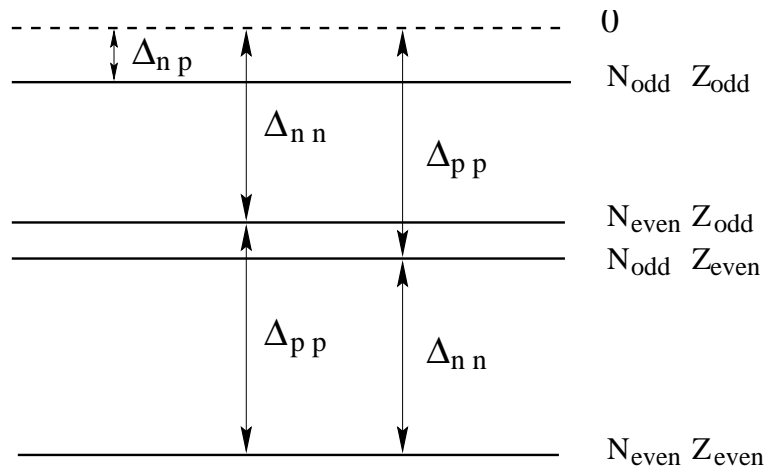


Figure 2: The surface of masses is split into four sheets. This scheme represents the pairing energies responsible for this splitting. The zero energy surface is purely hypothetical with no pairing at all among the outer nucleons.

simple as possible and not too far from the real surface of masses. The difference between the mass surface and this function, while displaying reliably the structure of the former, will vary less rapidly, thus improving its observation.

A first and simple approach is the semi-empirical *liquid drop* formula of Bethe and Weizsäcker [32] with the addition of a pairing term in order to fuse more or less the four sheets of the mass surface. Another possibility, that we prefer [30], is to use the results of the calculation of one of the modern models. However, we can use here only those models that provide masses specifically for the spherical part, forcing the nucleus to be not deformed. The reason is that the models generally describe quite well the shell and sub-shell closures, and to some extent the pairing energies, but not the locations of deformation. If the theoretical deformations were included and not located at exactly the same position as given by the experimental masses, the mass difference surface would show two dislocations for each shape transition. Interpretation of the resulting surface would then be very difficult. In the present work, we make use of such differences with models. The plots we have prepared can also be retrieved from the AMDC web site [8].

Manipulating the mass surface In order to make estimates of unknown masses or to test changes on measured ones, an interactive graphical program was developed [30, 33] that allows a simultaneous observation of four graphs, either from the ‘derivatives’ type or from the ‘differences’ type, as a function of any of the variables N , Z , A , $N - Z$ or $N - 2Z$, while drawing iso-lines (lines connecting nuclides having same value for a parameter) of any of these quantities. The mass of a nuclide can be modified or created in any view and we can determine how

much freedom is left in setting a value for this mass. At the same time, interdependence through secondary connections (Fig. 1) are taken into account. In cases where two tendencies may alternate, following the parity of the proton or of the neutron numbers, one of the parities may be deselected.

The replaced values for data yielding the ‘irregular masses’ as well as the ‘estimated unknown masses’ (see below) are thus derived by observing the continuity property in several views of the mass surface, with all the consequences due to connections to masses in the same chain. Comparisons with the predictions of 16 nuclear mass-models are presently available in this program.

With this graphical tool, the results of ‘replacement’ analyses are felt to be safer; and also the estimation of unknown masses is more reliable.

All mass values dependent on interpolation procedures, and indeed all values not derived from experimental data alone, have been clearly marked with the sharp (#) symbol in all tables, here and in Part II.

Since publication of AME1983 [34], estimates are also given for the precision of such data derived from trends in the mass surface (TMS). These precisions are not based on a formalized procedure, but on previous experience with such estimates.

In the case of extrapolation however, the uncertainty in the estimated mass will increase with the distance of extrapolation. These uncertainties are obtained by considering several graphs of TMS with a guess on how much the estimated mass may change without the extrapolated surface looking too much distorted. This recipe is unavoidably subjective, but has proven to be efficient through the agreement of these estimates with newly measured masses in a great majority of cases [35].

4.2 Irregular mass values

When a single mass deviates significantly from regularity with no similar pattern for nuclides with same N or with same Z values, then the correctness of the data determining this mass may be questioned.

Our policy, redefined in AME1995 [7], for those locally *irregular* masses, and only when they are derived from a unique mass relation (i.e., not confirmed by a different experimental method), is to replace them by values derived from trends in the mass surface (TMS). There are only 27 such physical quantities in the present evaluation, compared to 27 in AME2003, 59 in AME1995 and 67 in AME1993 that were selected, partly, in order to avoid too strongly oscillating plots. Although these numbers reflect a more strict use of this procedure, the user of our tables should not assume that the remaining 27 items are the same ones carried on from generation to generation. The opposite is true, most of the old ones have been replaced by new data showing that we were correct in our choice. Generally, in such unique mass relation, only one measurement is reported. But sometimes there are two measurements (2 cases) or three (in previous evaluations) that we still treat the same way, since use of the same method and the same type of relation may well lead to the same systematic uncertainty (for example a mis-assignment or ignorance of a final level). Taking into account the connecting chains for secondaries (Figs. 1a–1j) has the consequence that several more ground state masses are affected (and twice as many values in each type of plot of derivatives as given in Part II). It should be stressed that only the most striking cases have been treated this way, those necessary to avoid, as much as possible, confusions in the graphs in Part II. In particular, as happened previously, the plots of α -decay energies of light nuclides (Fig. 18 and 19 in Part II, p. 1844 and 1845) exhibit many overlaps and crossings that obscure the drawings; no attempt was made to locate possible origins of such irregularities.

Replacing these few irregular experimental values by ones we recommend, in all tables and graphs in this AME2012, means also that, as explained already in AME1995, we discontinued an older policy that was introduced in AME1993, where original irregular experimental values were given in all main tables, and ‘recommended’ ones given separately in secondary tables. This policy led to confusion for many users of our tables. Since AME1995, we only give what we consider the “*best recommended values*”, using, when we felt necessary and as explained above, ‘*values derived from TMS*’. Data which are not used following this policy, can be easily located in Table I where they are flagged ‘D’ and always accompanied by a comment explaining in which direction the value

has been changed and by which amount.

Such data, as well as the other local irregularities that can be observed in the figures in Part II could be considered as incentive to remeasure the masses of the involved nuclides, preferably by different methods, in order to remove any doubt and possibly point out true irregularities due to physical properties.

The present authors insist that only the most striking irregularities have been replaced by estimates. In AME2003, p. 148, we gave as an example the case of ^{112}Te , which mass was determined from the reported delayed-proton energy measurement from ^{113}Xe with a precision of 150 keV. However, we felt that it was deviating 300 keV from the trends given by neighboring nuclides, but it was not been replaced by an estimated mass value. This was felt as an incentive to remeasure the mass of ^{112}Te , if possible using a different method. As a matter of fact, a group using a Penning trap at SHIP-TRAP [2007Ma92], measured the mass of this nuclide and found its mass was to be moved from -77301 ± 170 keV to -77567.5 ± 8.4 keV, i.e. almost exactly where our estimate located it.

4.3 Estimates for unknown masses

Estimates for unknown masses are also made with use of trends in the mass surface, as explained above, by demanding that all graphs should be as smooth as possible, except where they are expected to show the effects of shell closures or nuclear deformations effects. Therefore, we warn the user of our tables that the present extrapolations, based on trends in known masses, will be wrong if unsuspected new regions of deformation or (semi-) magic numbers occur.

In addition to the rather severe constraints imposed by the requirement of simultaneous REGULARITY of all graphs, many further constraints result from knowledge of reaction or decay energies in the regions where these estimates are made. These regions and these constraints are shown in Figs. 1a–1j. Two kinds of constraints are present. In some cases the masses of (Z, A) and $(Z, A+4)$ are known but not the mass of $(Z, A+2)$. Then, the values of $S_{2n}(A+2)$ and $S_{2n}(A+4)$ cannot both be chosen freely from the graphs; their sum is known. In other cases, the mass differences between several nuclides $(A+4n, Z+2n)$ are known from α -decays and also those of $(A-2+4n, Z+2n)$. Then, the differences between several successive $S_{2n}(A+4n, Z+2n)$ are known. Similar situations exist for two or three successive S_{2p} ’s or Q_α ’s.

Also, knowledge of stability or instability against particle emission, or limits on proton or α emission, yield upper or lower limits on the separation energies.

For proton-rich nuclides with $N < Z$, mass estimates can be obtained from the charge symmetry. This feature gives a relation between masses of isobars around the one with $N = Z$. In several cases, we make a correction by including the Thomas-Ehrman effect [36], which makes proton-unstable nuclides more bound than follows from the above estimate. For very light nuclides, we can use the estimates for this effect found by Comay *et al.* [37]. However, since the analysis of proton-unstable nuclides (see Section 6.5) showed that this effect is much smaller for $A = 100 - 210$, we use a correction that decreases with increasing mass number.

Another often good estimate can be obtained from the observation that masses of nuclidic states belonging to an isobaric multiplet are represented quite accurately by a quadratic equation of the charge number Z (or of the third components of the isospin, $T_3 = \frac{1}{2}(N - Z)$): the Isobaric Multiplet Mass Equation (IMME). Use of this relation is attractive since, otherwise than the relation mentioned above, it uses experimental information (i.e. excitation energies of isobaric analogues). The exactness of the IMME has regularly been a matter of discussion. At regular intervals of time, some new mass measurements question the validity of the IMME, followed soon by other works showing that another member of the same multiplet is to be questioned. For example, a measurement [2001He29] of the mass of ^{33}Ar has questioned the validity of the IMME at $A = 33$. The measured mass, with an uncertainty of about 4 keV, was 18 keV lower than the value following from IMME, with a precision of 3 keV. One year later, another measurement [38] showed that one of the other mass values entering in this equation was wrong. With the new value, the difference is only 3 keV, thus within uncertainties.

Up to the AME1983, we indeed used the IMME for deriving mass values for nuclides for which no, or little information was available. This policy was questioned with respect to the correctness in stating as ‘experimental’ a quantity that was derived by combination with a calculation. Since AME1993, it was decided not to present any IMME-derived mass values in our evaluation, but rather use the IMME as a guideline when estimating masses of unknown nuclides. We continue this policy here, and do not replace experimental values by an estimated one from IMME, even if orders of magnitude more precise. Typical examples are ^{28}S and ^{40}Ti , for which the IMME predicts masses with precisions of respectively 24 keV and 22 keV, whereas the experimental masses are known both with 160 keV precision, from double-charge exchange reactions.

The extension of the IMME to higher energy isobaric analogues has been studied by one of the present authors [39]. The validity of the method, however, is made uncertain by possible effects spoiling the relation. In the first place, the strength of some isobaric analogues at high excitation energies is known to be distributed over several levels with the same spin and parity. Even in cases where this interference effect has not been observed, it remains a possibility, and as such, it introduces an uncertainty in the energy level to be attributed to the IAS. In the second place, as argued by Thomas and Ehrman [36], particle-unstable levels must be expected to be shifted somewhat.

It also happens that information on excitation energies of $T_3 = -T + 1$ isobaric analogue states is available from measurements on proton emission following β -decays of their $T_3 = -T$ parents. Their authors, in some cases, derived from their results a mass value for the parent nuclide, using a formula derived by Antony *et al.* [40] from a study of known energy differences between isobaric analogues. We observe, however, that one obtains somewhat different mass values by combining Antony differences with the mass of the mirror nuclide of the mother. Also, earlier considerations did not take into account the difference between proton-pairing and neutron-pairing energies, which one of the present authors [AHW] noticed to have a not negligible influence on the constants in the IMME.

Another possibility is to use a relation proposed by Jänecke [41], as done for example by Axelsson *et al.* [42] in the case of ^{31}Ar . We have in several cases compared the results of different ways for extrapolating, in order to find a best estimate for the desired mass value.

Enough values have been estimated to ensure that every nuclide for which there is any experimental Q -value is connected to the main group of primary nuclides. In addition, the evaluators want to achieve continuity of the mass surface. Therefore an estimated value is included for any nuclide if it is between two experimentally studied nuclides on a line defined by either $Z = \text{constant}$ (isotopes), $N = \text{constant}$ (isotones), $N - Z = \text{constant}$ (isodiaspheres), or, in a few cases $N + Z = \text{constant}$ (isobars). It would have been desirable to give also estimates for all unknown nuclides that are within reach of the present accelerator and mass separator technologies. Unfortunately, such an ensemble is practically not easy to define. Instead, we estimate mass values for all nuclides for which at least one piece of experimental information is available (e.g. identification or half-life measurement or proof of instability towards proton or neutron emission). Then, the ensemble of experimental masses and estimated ones has the same contour as in the NUBASE2012 evaluation (see p. 1159).

5 Calculation Procedures

The atomic mass evaluation is unique when compared to the other evaluations of data [30], in a sense that almost all mass determinations are relative measurements, not absolute ones. Even those called ‘absolute mass doublets’ are relative to ^{12}C , ^{35}Cl or ^{37}Cl . Each experimental datum sets a relation in mass or in energy among two (in a few cases three or more) nuclides. It can be therefore represented by one link among these two nuclides. The ensemble of these links generates a highly entangled network. Figs. 1a–1j, in Section 3 above, show a schematic representation of such a network.

The masses of a large number of nuclides are multiply determined, entering the entangled area of the canvas, mainly along the backbone. Correlations do not allow to determine their masses straightforwardly.

To take into account these correlations we use a least-squares method weighed according to the precision with which each piece of data is known. This method allows to determine a set of adjusted masses.

5.1 Least-squares method

Each piece of data has a value $q_i \pm dq_i$ with the accuracy dq_i (one standard deviation) and makes a relation between 2, 3 or 4 masses with unknown values m_μ . An overdetermined system of Q data to M masses ($Q > M$) can be represented by a system of Q linear equations with M parameters:

$$\sum_{\mu=1}^M k_i^\mu m_\mu = q_i \pm dq_i \quad (1)$$

e.g. for a nuclear reaction $A(a,b)B$ requiring an energy q_i to occur, the energy balance writes:

$$m_A + m_a - m_b - m_B = q_i \pm dq_i \quad (2)$$

thus, $k_i^A = +1$, $k_i^a = +1$, $k_i^b = -1$ and $k_i^B = -1$.

In matrix notation, \mathbf{K} being the (Q, M) matrix of coefficients, Eq. 1 writes: $\mathbf{K}|m\rangle = |q\rangle$. Elements of matrix \mathbf{K} are almost all null: e.g. for $A(a, b)B$, Eq. 2 yields a line of \mathbf{K} with only four non-zero elements.

We define the diagonal weight matrix \mathbf{W} by its elements $w_i^i = 1/(dq_i dq_i)$. The solution of the least-squares method leads to a very simple construction:

$${}^t\mathbf{K}\mathbf{W}\mathbf{K}|m\rangle = {}^t\mathbf{K}\mathbf{W}|q\rangle \quad (3)$$

the NORMAL matrix $\mathbf{A} = {}^t\mathbf{K}\mathbf{W}\mathbf{K}$ is a square matrix of order M , positive-definite, symmetric and regular and hence invertible [43]. Thus the vector $|\bar{m}\rangle$ for the adjusted masses is:

$$|\bar{m}\rangle = \mathbf{A}^{-1} {}^t\mathbf{K}\mathbf{W}|q\rangle \quad \text{or} \quad |\bar{m}\rangle = \mathbf{R}|q\rangle \quad (4)$$

The rectangular (M, Q) matrix \mathbf{R} is called the RESPONSE matrix.

The diagonal elements of \mathbf{A}^{-1} are the squared errors on the adjusted masses, and the non-diagonal ones $(a^{-1})_{\mu\nu}^v$ are the coefficients for the correlations between masses m_μ and m_ν . Values for correlation coefficients for the most precise nuclides are given in Table B of Part II (p. 1605). Following the advice of B.N. Taylor, we now also give on the web-site of the AMDC [8] the full list of correlation coefficients, allowing thus any user to perform exact calculation of any combination of masses.

One of the most powerful tools in the least-squares calculation described above is the flow-of-information matrix, discovered in 1984 by one of us [GAu]. This matrix allows to trace back the contribution of each individual piece of data to each of the parameters (here the atomic masses). The AME uses this method since 1993.

The flow-of-information matrix \mathbf{F} is defined as follows: \mathbf{K} , the matrix of coefficients, is a rectangular (Q, M) matrix, the transpose of the response matrix ${}^t\mathbf{R}$ is also a (Q, M) rectangular one. The (i, μ) element of \mathbf{F} is defined as the product of the corresponding elements of ${}^t\mathbf{R}$ and of \mathbf{K} . In reference [44] it is demonstrated that such an element represents the ‘‘influence’’ of datum i on parameter (mass) m_μ . A column of \mathbf{F} thus represents all the contributions brought by all data to a given mass m_μ , and a line of \mathbf{F} represents all the influences given by a single piece of data. The sum of influences along a line is the ‘‘significance’’ of that datum. It has also been proven [44] that the influences and significances have all the expected properties, namely that the sum of all the influences on a given mass (along a column) is unity, that the significance of a datum is always less than unity and that it always decreases when new data are added. The significance defined in this way is exactly the quantity obtained by squaring the ratio of the uncertainty on the adjusted value over that on the input one, which is the recipe that was used before the discovery of the \mathbf{F} matrix to calculate the relative importance of data.

A simple interpretation of influences and significances can be obtained in calculating, from the adjusted masses and Eq. 1, the adjusted data:

$$|\bar{q}\rangle = \mathbf{K}\mathbf{R}|q\rangle. \quad (5)$$

The i^{th} diagonal element of $\mathbf{K}\mathbf{R}$ represents then the contribution of datum i to the determination of \bar{q}_i (same datum): this quantity is exactly what is called above the *significance* of datum i . This i^{th} diagonal element of $\mathbf{K}\mathbf{R}$ is the sum of the products of line i of \mathbf{K} and column i of \mathbf{R} . The individual terms in this sum are precisely the *influences* defined above.

The flow-of-information matrix \mathbf{F} , provides thus insight on how the information from datum i flows into each of the masses m_μ .

The flow-of-information matrix cannot be given in full in a printed table. It can be observed along lines, displaying thus, for each datum, the nuclides influenced by this datum and the values of these *influences*. It can be observed also along columns to display for each primary mass all contributing data with their *influence* on that mass.

The first display is partly given in the table of input data (Table I) in column ‘Signf.’ for the *significance* of primary data and ‘Main infl.’ for the largest *influence*. Since in the large majority of cases only two nuclides are concerned in each piece of data, the second largest *influence* could easily be deduced. It is therefore not felt necessary to give a table of all *influences* for each primary datum.

The second display is given in Part II, Table II (p. 1673) for the up to three most important data with their *influence* in the determination of each primary mass.

5.2 Consistency of data

The system of equations being largely over-determined ($Q \gg M$) offers the evaluator several interesting possibilities to examine and judge the data. One might for example examine all data for which the adjusted values deviate significantly from the input ones. This helps to locate erroneous pieces of information. One could also examine a group of data in one experiment and check if the uncertainties assigned to them in the experimental paper were not underestimated.

If the precisions dq_i assigned to the data q_i were indeed all accurate, the normalized deviations v_i between adjusted \bar{q}_i (Eq. 5) and input q_i data, $v_i = (\bar{q}_i - q_i)/dq_i$, would be distributed as a Gaussian function of standard deviation $\sigma = 1$, and would make χ^2 :

$$\chi^2 = \sum_{i=1}^Q \left(\frac{\bar{q}_i - q_i}{dq_i} \right)^2 \quad \text{or} \quad \chi^2 = \sum_{i=1}^Q v_i^2 \quad (6)$$

equal to $Q - M$, the number of degrees of freedom, with a precision of $\sqrt{2(Q - M)}$.

One can define as above the NORMALIZED CHI, χ_n (or ‘consistency factor’ or ‘Birge ratio’): $\chi_n = \sqrt{\chi^2/(Q - M)}$ for which the expected value is $1 \pm 1/\sqrt{2(Q - M)}$.

Another quantity of interest for the evaluator is the PARTIAL CONSISTENCY FACTOR, χ_n^p , defined for a (homogeneous) group of p data as:

$$\chi_n^p = \sqrt{\frac{Q}{Q - M} \frac{1}{p} \sum_{i=1}^p v_i^2}. \quad (7)$$

Of course the definition is such that χ_n^p reduces to χ_n if the sum is taken over all the input data. One can consider for example the two main classes of data: the reaction and decay energy measurements and the mass-spectrometry data (see Section 5.5). One can also consider groups of data related to a given laboratory and with a given method of measurement and examine the χ_n^p of each of them. There are presently 269 groups of data in Table I (among which 184 have at least one measurement used in determining the masses), identified in column ‘Lab’. A high value of χ_n^p might be a warning on the validity of the considered group of data within the reported uncertainties. We used such analyses in order to be able to locate questionable groups of data. In bad cases they are treated in such a way that, in the final adjustment, no really serious cases occur. Remarks in Table I report where such corrections have been made.

5.3 Separating secondary data

In Section 3, while examining the diagrams of connections (Fig. 1), we noticed that, whereas the masses of *secondary* nuclides can be determined uniquely from the chain of secondary connections going down to a *primary* nuclide, only the latter see the complex entanglement that necessitated the use of the least-squares method.

In terms of equations and parameters, we consider that if, in a collection of equations to be treated with the least-squares method, a parameter occurs in only one equation, removing this equation and this parameter will not affect the result of the fit for all other data. We can thus redefine more precisely what was called *secondary* in Section 3: the parameter above is a *secondary* parameter (or mass) and its related equation a *secondary* equation. After solving the reduced set, the *secondary* equation can be used to find the value and uncertainty for that particular *secondary* parameter. The equations and parameters remaining after taking out all secondaries are called *primary*.

Therefore, only the system of *primary* data is over-determined, and thus will be improved in the adjustment, so that each *primary* nuclide will benefit from all the available information. *Secondary* data will remain unchanged; they do not contribute to χ^2 .

The diagrams in Fig. 1 show, that many *secondary* data exist. Thus, taking them out simplifies considerably the system. More importantly, if a better value is found for a *secondary* datum, the mass of the *secondary* nuclide can easily be improved (one has only to watch since the replacement can change other *secondary* masses down the chain, see Fig. 1). The procedure is more complicated for new *primary* data.

We define DEGREES for *secondary* nuclides and *sec-*

ondary data. They reflect their distances along the chains connecting them to the network of primaries. The first secondary nuclide connected to a primary one will be a nuclide of degree 2; and the connecting datum will be a datum of degree 2 as well. Degree 1 is for primary nuclides and data. Degrees for secondary nuclides and data range from 2 to 18. In Table I, the degree of data is indicated in column ‘Dg’. In the table of atomic masses (Part II, Table I, p. 1608), each *secondary* nuclide is marked with a label in column ‘Orig.’ indicating from which other nuclide its mass value is determined.

To summarize, separating secondary nuclides and secondary data from primaries allow to significantly reduce the size of the system that will be treated by the least-squares method described above. After treatment of the primary data alone, the adjusted masses for primary nuclides can be easily combined with the secondary data to yield masses of secondary nuclides.

In the next section we will show methods for reducing further this system, but without allowing any loss of information. Methods that reduce the system of primaries for the benefit of the secondaries not only decrease computational time (which nowadays is not so important), but

allows an easier insight into the relations between data and masses, since no correlation is involved.

Remark: the word *primary* used for these nuclides and for the data connecting them does not mean that they are more important than the others, but only that they are subject to the special treatment below. The labels *primary* and *secondary* are not intrinsic properties of data or nuclides. They may change from primary to secondary or reversely when other information becomes available.

5.4 Compacting the set of data

5.4.1 Pre-averaging

Two or more measurements of the same physical quantities can be replaced without loss of information by their average value and precision, reducing thus the system of equations to be treated. By extending this procedure, we consider *parallel* data: reaction data occur that give essentially values for the mass-difference between the same two nuclides, except in rare cases where the precision is comparable to that in the masses of the reaction particles. Example: $^{14}\text{C}(^7\text{Li}, ^7\text{Be})^{14}\text{B}$ and $^{14}\text{C}(^{14}\text{C}, ^{14}\text{N})^{14}\text{B}$; or $^{22}\text{Ne}(t, ^3\text{He})^{22}\text{F}$ and $^{22}\text{Ne}(^7\text{Li}, ^7\text{Be})^{22}\text{F}$.

Table C. Worst pre-averagings. n is the number of data in the pre-average.

Item	n	χ_n	σ_e	Item	n	χ_n	σ_e
$^{249}\text{Bk}(\alpha)^{245}\text{Am}$	2	2.55	2.45	$^{223}\text{Pa}(\alpha)^{219}\text{Ac}$	2	2.09	10.0
$^{133}\text{Te}-^{130}\text{Xe}_{1,023}$	2	2.54	4.4	$^{27}\text{P}^i(2p)^{25}\text{Al}$	2	2.08	75
$^{144}\text{Ce}(\beta^-)^{144}\text{Pr}$	2	2.44	2.18	$^{177}\text{Pt}(\alpha)^{173}\text{Os}$	2	2.06	6
$^{97}\text{Mo}(p,n)^{97}\text{Tc}$	2	2.40	12.9	$^{244}\text{Cf}(\alpha)^{240}\text{Cm}$	2	2.03	4.0
$^{220}\text{Fr}(\alpha)^{216}\text{At}$	2	2.34	4.7	$^{15}\text{N}(p,n)^{15}\text{O}$	2	2.03	1.4
$^{75}\text{As}(n,\gamma)^{76}\text{As}$	2	2.32	0.17	$^{58}\text{Fe}(t,p)^{60}\text{Fe}$	4	2.03	7.4
$^{176}\text{Au}(\alpha)^{172}\text{Ir}$	2	2.31	17.6	$^{204}\text{Tl}(\beta^-)^{204}\text{Pb}$	2	2.03	0.39
$^{110}\text{In}(\beta^+)^{110}\text{Cd}$	3	2.29	28.4	$^{69}\text{Co-u}$	2	2.02	413
$^{43}\text{Cl-u}$	2	2.28	233	$^{167}\text{Os}(\alpha)^{163}\text{W}$	4	1.98	3.5
$^{166}\text{Os}(\alpha)^{162}\text{W}$	2	2.24	10.5	$^{106}\text{Ag}(\epsilon)^{106}\text{Pd}$	2	1.98	6.6
$^{146}\text{Ba}(\beta^-)^{146}\text{La}$	2	2.24	107	$^{78}\text{Se}(n,\gamma)^{79}\text{Se}$	3	1.96	0.28
$^{154}\text{Eu}(\beta^-)^{154}\text{Gd}$	2	2.22	4.0	$^{46}\text{Ca}(n,\gamma)^{47}\text{Ca}$	2	1.94	0.56
$^{40}\text{Cl}(\beta^-)^{40}\text{Ar}$	2	2.21	76	$^{145}\text{Sm}(\epsilon)^{145}\text{Pm}$	2	1.92	7.9
$^{219}\text{U}(\alpha)^{215}\text{Th}$	2	2.18	38	$^{234}\text{Th}(\beta^-)^{234}\text{Pam}$	3	1.90	2.10
$^{153}\text{Gd}(n,\gamma)^{154}\text{Gd}$	2	2.16	0.39	$^{242}\text{Pu}(\alpha)^{238}\text{U}$	2	1.89	2.08
$^{36}\text{S}(^{11}\text{B}, ^{13}\text{N})^{34}\text{Si}$	3	2.13	32	$^{230}\text{Th}(d,t)^{229}\text{Th}$	2	1.89	8.6
$^{113}\text{Cs}(p)^{112}\text{Xe}$	3	2.11	5.8	$^{99}\text{Ag}-^{85}\text{Rb}_{1,165}$	2	1.87	12.6

Such data are represented together, in the main least-squares fit calculations, by one of them carrying their average value. If the Q data to be pre-averaged are strongly conflicting, i.e. if the consistency factor (or Birge ratio, or normalized χ) $\chi_n = \sqrt{\chi^2/(Q-1)}$ resulting in the calcu-

lation of the pre-average is greater than 2.5, the (internal) precision σ_i in the average is multiplied by the Birge ratio ($\sigma_e = \sigma_i \times \chi_n$). There are 2 cases where $\chi_n > 2.5$, see Table C (they were 6 in AME2003). The quantity σ_e is often called the ‘external error’. However, this treatment is not

used in the very rare cases where the precisions in the values to be averaged differ too much from one another, since the assigned uncertainties lose any significance (only one case in AME2003, none here.) If such a case occurs, considering policies from the Particle Data Group [45] and some statistical-treatment methods reviewed by Rajput and MacMahon [46], we adopt an arithmetic average and the dispersion of values as an uncertainty, which is equivalent to assigning to each of these conflicting data the same uncertainty.

In the present evaluation, we have replaced 2961 data by 1182 averages. As much as 23% of those have values of χ_n (Birge ratio) beyond unity, 2.1% beyond two, none beyond 3, giving an overall very satisfactory distribution for our treatment. With the above choice of a threshold of $\chi_n^0=2.5$ for the Birge ratio, only 0.17% of the cases are concerned by the multiplication by χ_n . As a matter of fact, in a complex system like the one here, many values of χ_n beyond 1 or 2 are expected to exist, and if errors were multiplied by χ_n in all these cases, the χ^2 -test on the total adjustment would have been invalidated. This explains the choice we made here of a rather high threshold ($\chi_n^0 = 2.5$), compared e.g. to $\chi_n^0 = 2$ recommended by Woods and Munster [47] or $\chi_n^0 = 1$ used in a different context by the Particle Data Group [45], for departing from the rule of ‘internal error’ of the weighted average.

Besides the computer-automated pre-averaging, we found it convenient, in the case of some β^+ -decays, to combine results stemming from various capture ratios in an average. These cases are $^{109}\text{Cd}(\varepsilon)^{109}\text{Ag}$ (average of 3 data), $^{139}\text{Ce}(\varepsilon)^{139}\text{La}$ (average of 10) and $^{195}\text{Au}(\varepsilon)^{195}\text{Pt}$ (5 results), and they are detailed in Table I. Four more cases occur in our list, but they carry no weight (they are then, as usual, labeled ‘U’ in Table I).

Used policies in treating parallel data In averaging β^- - (or α^-) decay energies derived from branches observed in the same experiment, to or from different levels in the decay of a given nuclide, the uncertainty we use for the average is not the one resulting from the least-squares, but instead we use the smallest occurring one. In this way, we avoid decreasing artificially the part of the uncertainty that is not due to statistics. In some cases, however, when it is obvious that the uncertainty is dominated by weak statistics, we do not follow the above rule (e.g. $^{23}\text{Al}(\text{p})^{22}\text{Mg}$ of [1997BI04]).

Some quantities have been reported more than once by the same group. If the results are obtained by the same method in different experiments and are published in regular refereed journals, only the most recent one is used in the calculation, unless explicitly mentioned otherwise. There are two reasons for this policy. The first is that one might expect that the authors, who believe their two re-

sults are of the same quality, would have averaged them in their latest publication. The second is that if we accept and average the two results, we would have no control on the part of the uncertainty that is not due to statistics. Our policy is different if the newer result is published in a secondary reference (not refereed abstract, preprint, private communication, conference, thesis or annual report). In such cases, the older result is used in the calculations, except when the newer one is an update of the previous value. In the latter case, the original reference in our list mentions the unrefereed paper.

5.4.2 Replacement procedure

Large contributions to χ^2 have been known to be caused by a nuclide G connected to two other ones H and K by reaction links with errors large compared to the error in the mass difference between H and K , in cases where the two disagreed. Evidently, contributions to χ^2 of such local discrepancies suggest an unrealistically high value of the overall consistency parameter. This is avoided by a replacement procedure: one of the two links is replaced by an equivalent value for the other. The pre-averaging procedure then takes care both of giving the most reasonable mass value for G , and of not causing undesirably large contributions to χ^2 .

5.4.3 Insignificant data

Another feature to increase the meaning of the final χ^2 is to not use, in the least-squares procedure, data with weights at least a factor 10 smaller than other data, or than combinations of *all* other data giving the same result. They are given in the list of input data but labeled ‘U’; comparison with the output values allows to check our judgment. Earlier, data were labeled ‘U’ if their weight was 10 times smaller than that of a *simple* combination of other data. This concept has been extended since AME1993 to data that weigh 10 times less than the combination of *all* other accepted data. Until the AME2003 evaluation, our policy was not to print data labeled ‘U’ if they already appeared in one of our previous tables, reducing thus the size of the table of data to be printed. This policy is changed in the present publication, and we try as much as possible to give all relevant data, including insignificant ones. The reason for this is that it often happens that conflicts might appear amongst recent results, then accessibility to older ones might be of help or shed some light, when evaluating the new data.

5.5 Used policies - treatment of undependable data

The important interdependence of most data, as illustrated by the connection diagrams (Figs. 1a–1j) allows local and general consistency tests. These can indicate that

something may be wrong with the input values. We follow the policy of checking all significant data that differ by more than two (sometimes 1.5) standard deviations from the adjusted values. Fairly often, study of the experimental paper shows that a correction is necessary. Possible reasons could be that a particular decay has been assigned to a wrong final level or that a reported decay energy belongs to an isomer, rather than to a ground state, or even that the mass number assigned to a decay has been shown to be incorrect. In such cases, the values are corrected and remarks are added below the corresponding *A*-group of data in Table I, in order to explain the reasons for the corrections.

It can also happen that a careful examination of a particular paper can lead to serious doubts about the validity of the results within the reported precision, but could not permit making a specific correction. Doubts can also be expressed by the authors themselves. The results are given, however, in Table I and compared with the adjusted values. They are labeled ‘F’, and not used in the final adjustment, but always followed by a comment to explain the reason for this label. The reader might observe that in several cases the difference between the experimental and adjusted values is small compared to the experimental uncertainty: this does not disprove the correctness of the label ‘F’ assignment.

It happens quite often that two (or more) pieces of data are discrepant, leading to important contribution to the χ^2 . A detailed examination of the papers may not allow correction or rejection, indicating that at least the result of one of them could not be trusted within the given uncertainties. Then, based on past experience, we use in the calculations the value that seems to us to be the most trustable, while the other is labeled ‘B’, if published in a regular refereed journal, or ‘C’ otherwise.

Data with labels ‘F’, ‘B’ or ‘C’ are not used in the calculations. We do not assign such labels if, as a result, no experimental value published in a regular refereed journal could be given for one or more resulting masses. When necessary, the policy defined for ‘irregular masses’ with ‘D’-label assignment may apply (see Section 4.2). In some cases, detailed analysis of strongly conflicting data could not lead to reasons to assume that one of them is more dependable than the others or could not lead to a rejection of a particular data entry. Also, bad agreement with other data is not the only reason to doubt the correctness of reported data. As in previous AME, and as explained above (see Section 4), we made use of the property of regularity of the surface of masses in making a choice, as well as in further checks on the other data.

We do not accept experimental results if information on other quantities (e.g. half-lives), derived in the same

experiment and for the same nuclide, were in strong contradiction with well established values.

5.6 The AME computer program

Our computer program in four phases has to perform the following tasks: **i)** decode and check the data file; **ii)** build up a representation of the connections between masses, allowing thus to separate primary masses and data from secondary ones, to pre-average same and parallel data, and thus to reduce drastically the size of the system of equations to be solved (see Section 5.3 and 5.4), without any loss of information; **iii)** perform the least-squares matrix calculations (see above); and **iv)** deduce the atomic masses (Part II, Table I), the nuclear reaction and separation energies (Part II, Table III), the adjusted values for the input data (Table I), the *influences* of data on the primary nuclides (Table I), the *influences* received by each primary nuclide (Part II, Table II), and display information on the inversion errors, the correlations coefficients (Part II, Table B), the values of the χ^2 s and the distribution of the v_i (see below), ...

5.7 Results of the calculation

In this evaluation we have 12437 experimental data of which 5376 are labeled ‘U’ (see above), 765 are labeled ‘O’ (old result from same group) and 740 are not accepted and labeled ‘B’, ‘C’, ‘D’ or ‘F’ (respectively 416, 144, 29 and 151 items). In the calculation we have thus 5556 valid input data, compressed to 3777 in the pre-averaging procedure. Separating secondary data, leaves a system of 1947 primary data, representing 1117 primary reactions and decays, and 830 primary mass-spectrometer measurements. To these are added 821 data estimated from TMS trends (see Section 4, p. 1297), some of which are essential for linking unconnected experimental data to the network of experimentally known masses (see Figs. 1a–1j).

In the atomic mass table (Part II, Table I) there is a total of 3827 masses (including ^{12}C) of which 3353 are ground state masses (2438 experimental masses and 915 estimated ones), and 464 are excited isomers (336 experimental and 128 estimated). Among the 2438 experimental ground state masses, 87 nuclides have a precision better than 0.1 keV, 315 better than 1 keV and 1438 better than 10 keV (respectively 45, 192 and 1020 in AME2003). There are 123 nuclides known with uncertainties larger than 100 keV (231 in AME2003). Separating secondary masses in the ensemble of 3827, leaves 1176 primary masses (^{12}C not included).

Thus, we have to solve a system of 1947 equations with 1176 parameters. Theoretically, the expectation value for χ^2 should be 771 ± 39 (and the theoretical $\chi_n =$

1 ± 0.025).

The total χ^2 of the adjustment is actually 765 ($\chi_n = 0.996$), thus showing that the ensemble of evaluated data was of excellent quality, and that the criteria of selection and rejection we adopted were adequate. In the past this was not always the case and in AME2003 we could observe that on average the uncertainties in the input values were underestimated by 23%. The distribution of the v_i 's (the individual contributions to χ^2 , as defined in Eq. 6, and given in Table I) is also acceptable. If we consider all the 10531 data that are used in the adjustment plus the 'obsolete' ones (label 'O') and the unweighed ones (label 'U'), the distribution of v_i 's yields 21% of the cases beyond unity, 4% beyond two, and 6 items (0.06%) beyond 3.

Considering separately the two main classes of data, the partial consistency factors χ_n^p are respectively 1.021 and 0.962 for energy measurements and for mass-spectrometry data, showing that both types of input data, after selection, are of excellent quality.

As in our preceding works [1, 6], we have tried to estimate the average accuracy for 269 groups of data related to a given laboratory and with a given method of measurement, by calculating their partial consistency factors χ_n^p (see Section 5.2). In general, the experimental uncertainties appear to be correctly estimated, with as much as 37% of the groups of data having χ_n^p larger than unity, and 2.6% beyond $\chi_n^p = 2$.

6 Discussion of the input data

In most cases, values as given by authors in the original publication are accepted, but there are also exceptions. An example is the performed recalibration due to change in the definition of the volt, as discussed in Section 2. For somewhat less simple cases, a remark is added in Table I at the end of the concerned A-group. A curious example of combinations of data that cannot be accepted without change follows from the measurements of the Edinburgh-Argonne group. They report decay energies in α -decay series, where the ancestors are isomers between which the excitation energy is accurately known from their proton-decay energies. These authors give values for the excitation energies between isomeric daughter pairs with considerably smaller errors than follow from the errors quoted for the measured α -decay energies. The evident reason is, that these decay energies are correlated; this means that the errors in their differences are relatively small. Unfortunately, the presented data do not allow an exact calculation of both masses and isomeric excitation energies. This would have required that, instead of the two E_α values of an isomeric pair, they would have given the error in their

difference (and, perhaps, a more exact value for the most accurate E_α of the pair). Instead, entering all their Q_α and E_1 (isomeric excitation energies) values in our input file would yield outputs with too small errors. And accepting any partial collection makes some errors rather drastically too large. We therefore do enter here a selection of input values, but sometimes slightly changed, chosen in such a way that our adjusted Q_α and E_1 values and errors differ as little as possible from those given by the authors. A further complication could occur if some of the Q_α 's are also measured by other groups. But until now, we found no serious troubles in such cases.

Necessary corrections to recent mass-spectrometer data are mentioned in Section 6.2.

A change in errors, not values, is caused by the fact explained below that in several cases we do not necessarily accept reported α -energies as belonging to transitions between ground states. This also causes uncertainties in derived proton decay energies to deviate from those reported by the authors (e.g. in the α -decay chain of ^{170}Au), see also Section 7.10.

6.1 Improvements along the backbone

After the publication of AME2003, only a few new measurements for stable nuclides that used the classical mass-spectrometers were published.

Most of the new mass-spectrometry data were obtained from precision measurements of ratios of cyclotron frequencies of ions in Penning traps. Similarly to the classical measurements, where ratios of voltages or resistances were used, we found that the Penning trap results can be converted to a linear combination of masses of electrically neutral atoms in μu , without any loss of accuracy. A special mention is for the MIT-FSU group who give their original results as linear equations, including corrections for electron and molecular binding energies, which can be easily used in our computer code. Other groups give their results as ratio of cyclotron frequencies (see also next paragraph), which we convert to linear equations as described in Appendix C, and finally we add corrections for electron and molecular binding energies. In such cases, we added a remark to the equation used in the input data table (Table I), to describe the original data and our treatment. Some authors publish their results directly as masses, but this is not a recommended practice for high-precision mass measurements.

6.2 Mass-spectrometry away from β -stability

For the reader interested in the history of mass measurements by mass spectrometry, the resolving powers, resolutions and the discoveries they rendered possible in nuclear

physics as well as in cosmology, one of us has prepared a document [48].

6.2.1 Penning trap spectrometers

In addition to ISOLTRAP, the Penning trap spectrometer located at on-line mass separator facility ISOLDE at CERN, several others Penning traps have been operating at the major accelerators facilities around the world: CPT-Argonne, JYFLTRAP-Jyväskylä, LEBIT-East-Lansing, SHIPTRAP-Darmstadt, and TITAN-Vancouver. More are presently under construction. They produce experimental atomic masses for nuclides further away from the valley of β -stability, by using the cyclotron frequencies of charged ions captured in the trap. Such frequencies are always compared to that of a well know calibrator in order to determine the ratio of two masses, which is converted, without loss of accuracy, to a linear relation between the two masses (see also Section 6.1 above and Appendix C). Experimental methods that utilize measurements of cyclotron frequency have an advantage compared to volt or magnetic field measurements in a sense that the parameter that is needed in the former, namely the frequency, is the physical quantity that can be measured with the highest precision. In fact, very high resolving power (10^6) and accuracies (up to 10^{-8}) are routinely achieved for nuclides located quite far from the line of β -stability. Such high resolving power made it possible in 1991 [49], for the first time in the history of mass-spectrometry, to resolve nuclear isomers from their ground state ($^{84}\text{Rb}^m$) and to determine their excitation energies. Another beautiful demonstration was given in 2003 in [2004Va07] for ^{70}Cu , $^{70}\text{Cu}^m$ and $^{70}\text{Cu}^n$, where in the same work the masses of the three isomers were determined by mass-spectrometry, and the excitation energies by $\beta\gamma$ spectroscopy. Typically, the precision can reach 100 eV or better (60 eV for the difference between ^6He and ^7Li at TITAN-Vancouver, [2012Br03]). Even the most exotic nuclides, such as ^{11}Li (8.75 ms) or ^{74}Rb (64.78 ms), could be measured with precisions of 600 eV and 4 keV at the TITAN-Vancouver [2008Sm03] and ISOLTRAP-Cern [2007Ke09] facilities, respectively.

In earlier evaluations we found it necessary to multiply uncertainties in values from some groups of mass-spectrometry data [50] with discrete factors ($F = 1.5, 2.5$ or 4.0) following the partial consistency factors χ_n^p we found for these groups (see Section 5.2). Such a treatment is not necessary in the case of most the Penning trap which all have $F = 1$ (except for the sub-group ‘Ma8’ [2006Mu05] from ISOLTRAP for which $F = 1.5$).

6.2.2 Double-focussing mass-spectrometry

For nuclides far away from the valley of stability, mass-triplet measurements, in which undetectable system-

atic effects could build-up in large deviations when the procedure is iterated [1986Au02], could be recalibrated with the help of the Penning trap measurements. Recalibration was automatically obtained in the evaluation, since each mass-triplet was originally converted to a linear mass relation among the three nuclides, allowing both easy application of least-squares procedures, and automatic recalibration. In the present adjustment of data, most of the 181 original data, performed in the 80’s, are now outweighed, except for the most exotic (and thus the most interesting) ones. There are still 12 of them that contribute to the present adjustment, essentially for the most exotic nuclides: ^{91}Rb for 12% of the determination of its mass, ^{95}Rb (48%), ^{99}Rb (13%), ^{143}Cs (24%), ^{144}Cs (30%), ^{146}Cs (18%), ^{147}Cs (21%) and the most exotic ^{148}Cs (100%). In Table I, the relevant equations are normalized to make the coefficient of the middle isotope unity, so that they read e.g.

$$^{97}\text{Rb} - (0.490 \times ^{99}\text{Rb} + 0.511 \times ^{95}\text{Rb}) = 350 \pm 60 \text{ keV}$$

$$^{145}\text{Cs} - (0.392 \times ^{148}\text{Cs} + 0.608 \times ^{143}\text{Cs}) = -370 \pm 90 \text{ keV}$$

(the ^{148}Cs symbol representing the mass excess of nuclide ^{148}Cs in keV). The other two coefficients are three-digit approximations of

$$\frac{A_2}{A_3 - A_1} \times \frac{A_2 - A_1}{A_3} \quad \text{and} \quad \frac{A_2}{A_3 - A_1} \times \frac{A_3 - A_2}{A_1}$$

We took A instead of M in order to arrive at coefficients that do not change if the M -values change slightly. The difference is unimportant.

6.2.3 Radio-frequency mass-spectrometry

The Orsay Smith-type mass-spectrometer MISTRAL, also connected to ISOLDE, has performed quite precise measurements of very short-lived light nuclides, before the Penning traps could cover all the possibilities that were offered by a transmission mass-spectrometer in terms of instant measurements. There are still 8 of the measurements performed with MISTRAL that are used in this evaluation for the determination of the masses of ^{26}Ne , $^{26,27,28,29}\text{Na}$ and ^{29}Mg .

6.2.4 Classical time-of-flight

Mass measurements by time-of-flight mass spectrometry technique at SPEG (GANIL) and TOFI (Los Alamos), also apply to very short nuclides, due to instant measurements, but the precisions are much lower than with MISTRAL. Masses of almost undecelerated fragment products, coming from thin targets bombarded with heavy ions [51] or high energy protons [52] are measured from a combination of magnetic deflection and time of flight determination. Nuclides in an extended region in A/Z and Z are

analyzed simultaneously. Each individual ion, even if very short-lived ($1\mu\text{s}$), is identified and has its mass measured at the same time. In this way, mass values with accuracies of (3×10^{-6} to 5×10^{-5}) are obtained for a large number of neutron-rich nuclides of light elements, up to $A = 70$. A difficulty is that the obtained value applies to an isomeric mixture where all isomers with half-lives of the order of, or longer than the time of flight (about $1\mu\text{s}$) may contribute. The resolving power, around 10^4 , and cross-contaminations can cause significant shifts in masses. The most critical part in these experiments is calibration, since obtained from an empirically determined function, which, in several cases, had to be extrapolated rather far from the calibrating masses. It is possible that, in the future, a few mass-measurements far from stability may provide better calibration points and allow a re-analysis of the concerned data, on a firmer basis. Such recalibrations require analysis of the raw data and cannot be done by the evaluators. With new data from other methods allowing now comparison, we observed strong discrepancies for one of the two groups, and had to increase thus the associated partial consistency factor to $F = 1.5$. We noted already earlier that important differences occurred between ensemble of results within this group of data. Using $F = 1.5$ for data labeled 'TO1-TO6' in the 'Lab' column of Table I, allows to recover consistency.

6.2.5 Cyclotron time-of-flight

Longer time-of-flights (50 to $100\mu\text{s}$), thus higher resolving powers, can be obtained with cyclotrons. The accelerating radio-frequency is taken as reference to ensure a precise time determination, but this method implies that the number of turns of the ions inside the cyclotron, should be known exactly. This was achieved successfully at SARA-Grenoble for the mass of ^{80}Y . Measurements performed at GANIL with the CSS2 cyclotron, could not determine the exact number of turns. In a first experiment on ^{100}Sn , a careful simulation was done instead. In a second experiment on ^{68}Se , ^{76}Sr , ^{80}Sr and ^{80}Y , a mean value of the number of turns was experimentally determined for the most abundant species only, thus mainly the calibrants. Penning traps measurements at the CPT-Argonne, JYFLTRAP-Jyvaskylä and ISOLTRAP revealed that this last method suffered serious systematic errors. Remeasurement at GANIL with the CSS2 cyclotron with improved method confirm the Penning trap data.

6.2.6 Storage ring time-of-flight

Similarly, long flight path can be obtained in a storage ring. The first set-up of this type is the GSI-ESR at Darmstadt. The precision of the measurements could be as good as 90 keV even for nuclides quite far from stability. The second one at the IMP-CSR at Lanzhou could achieve pre-

cision better than 10 keV. The accuracy is excellent for both yielding partial consistency factors of $F = 1.0$ for the IMP-CSR, slightly less for the GSI-ESR set-up with $F = 1.5$.

6.2.7 Cooled beam cyclotron frequency

Storage rings could also be used with cooled beams to measure the cyclotron frequency as has been demonstrated since 2003 at the GSI-ESR storage ring, with precisions sometimes as good as a 12 keV. Many of the measured nuclides belong to known α -decay chains. Thus, the available information on masses for proton-rich nuclides is considerably extended.

It must be mentioned that in the first group of mass values as given by GSI authors [2000Ra23], several could not be accepted without changes. The reason is that in their derivation α -decay energies between two or more of the occurring nuclides have been used. Evidently, they could therefore not without correction be included in our calculations, where they are again combined with these Q_α 's. Remarks added to the data in Table I warn for this matter where important. This point is added here to show a kind of difficulty we meet more often in this work. Fortunately, for this group of data it is only of historical interest since all their data are outdated by more recent measurements [2005Li24] with the same instruments and with a much higher precision. Since then, a wealth of measurements of very high quality were published using this technique, see e.g. [2012Ch19] and references therein.

6.2.8 Isomeric mixtures

As stated above, many mass-spectrometer results yield an average mass value M_{exp} for a mixture of isomers. Here, we use a special treatment for the possible mixture of isomers (see Appendix B) and those changes are duly included in remarks accompanying these data.

The mass M_0 of the ground state can be calculated if both the excitation energy E_1 of the upper isomer, and the relative intensities of the isomers are known. But often this is not the case. If E_1 is known but not the intensity ratio, one must assume equal probabilities for all possible relative intensities. In the case of one excited isomer, see Appendix B, the mass estimate for M_0 becomes $M_{exp} - E_1/2$, and the part of the error due to this uncertainty $0.29E_1$ (see Appendix B, Section B.4). This policy was defined and tested first for the GSI-ESR cooled beam cyclotron frequency data and was discussed with the authors of the measurements. In eight cases, more than two isomers contribute to the measured line. They are treated as indicated in Appendix B.

A further complication arises if E_1 is not known. This, in addition to questions related to α -decay chains involving isomers, was a reason for us to consider the matter of

isomers with even more attention than was done before. Part of the results of our estimates (as always, flagged with ‘#’) are incorporated in the NUBASE evaluation. In estimating the E_1 values, we first look at experimental data possibly giving lower limits: e.g. if it is known that one of two isomers decays to the other; or if γ rays of known energy occur in such decays. If not, we try to interpolate between E_1 values for neighboring nuclides that can be expected to have the same spin and configuration assignments (for odd A : isotones if Z is even, or isotopes if Z is odd). If such a comparison does not yield useful results, indications from theory were sometimes accepted, including upper limits for transition energies following from the measured half-lives. Values estimated this way were provided with somewhat generous errors, dutifully taken into account in deriving final results.

In several of these measurements, an isomer can only contribute if its lifetime is relatively long (hundreds of milliseconds or longer). However, half-life values given in NUBASE are those for neutral atoms. For bare nuclides, where all electrons are fully stripped from the atom, the lifetimes of such isomers can be considerably longer, since the decay by conversion electrons is switched off. Examples are the reported mass measurements [2005Li24] of the 580 ms $^{151}\text{Er}^m$ isomer at $E_1=2586.0$ keV excitation energy; and of the 103 ms $^{117}\text{Te}^m$ isomer at $E_1=296.1$ keV.

6.3 Mass of unbound nuclides

In the light mass region, many nuclides beyond the driplines can be accessed in nowadays experiments. They can decay by direct proton or neutron emission. The half-lives of these unbound nuclides are too short for them to acquire their outer electrons (which takes around 10^{-14} s), and to form atoms. However, we still convert their masses to “atomic masses” to have them treated consistently with other nuclides and be used conveniently in our tables. It’s an experimental challenge to study these unbound nuclides far from stability: only very few events can be observed. Most often, theoretical calculations are required to extract their properties from the experimental data.

On the proton rich side, resonant states could be formed due to the Coulomb barrier. There are different approaches to study these states: transfer reaction with missing mass spectrum, proton scattering, and complete kinematic measurement with invariance mass spectrum. For a broad resonant state, the definition of the resonance energy and width is not unique. For example, in Ref. [2004Go15], ^{15}F is studied by using the inverse kinematical measurement of proton elastic scattering on ^{14}O . From the same experimental data, the proton decay energy of

^{15}F is obtained to be $1.29_{-0.06}^{+0.08}$ MeV where the energy at which the magnitude of the internal wave function is a maximum, or $1.45_{-0.10}^{+0.16}$ MeV where the nuclear phase shift has the value $\delta = \pi/2$. Since the latter value is consistent with values obtained by transfer reactions and complete kinematic measurements, it is adopted in our evaluation.

Some single proton resonant states could be accessed through the two proton decay. Their properties can be used or extracted from the two proton decay studies. In [2008Mu13], the authors quoted the value of $Q_p = 1560 \pm 130$ keV from [2004Le12] as the ground state of ^{15}F to study the 2p decay of ^{16}Ne ; Similarly, $Q_p = 1300 \pm 170$ keV for ^{18}Na from [2004Ze05] to study the 2p decay of ^{19}Mg . In [2012Mu05], the same experimental data were reanalyzed and the resonant state of ^{18}Na is reconstructed from $p+^{17}\text{Ne}$ independently. The ambiguous interpretation of the ^{18}Na states in [2004Ze05] is also clarified.

On the neutron rich side of the nuclear chart, the mass of unbound nuclides close to the stability line can be determined with missing mass method using transfer reactions, or with invariant mass method using radioactive ion (RI) beams. Recently the RI beams and detection techniques have been developed impressively and new masses of unbound nuclides in this region are obtained by using invariant mass method.

Since there is no Coulomb barrier, it is the centrifugal barrier that will play an important role to have a resonant state. For an s-wave neutron, no barrier exists, and an asymmetric peak situated at the threshold is a general feature of spectra obtained in s-wave elastic neutron-nucleus scattering. This state is usually referred to as a virtual state, which has no definite lifetime and thus differs strongly from a real resonance state. The virtual state can be characterized by the scattering length; its eigen energy is approximately $\hbar^2/2\mu a_s^2$, where μ is the reduced mass and a_s is the scattering length.

In AME2003, a $1/2^+$ s-state was assigned as the g.s. for ^{13}Be , based on [2001Th01], where this virtual state is found unbound with respect to ^{12}Be and a neutron by < 200 keV from the scattering length of $a_s < -10$ fm. Later work of [2008Ch07] seems to support this result with $a_s = -10$ fm. However, these results have been questioned by [2010Ko17], where the authors state: “*a mimic resonant peak may appear in a two-body relative energy spectrum obtained in an experiment with limited neutron-detection efficiency via a breakup reaction in which more than one neutron can be emitted. The sequential neutron decay spectroscopy measurements [2001Th01], [2008Ch07] where ^{13}Be was produced by the breakup of ^{18}O and ^{48}Ca may have suffered from this*

problem.” In [2010Ko17], the reaction $^1\text{H}(^{14}\text{Be}, ^{12}\text{Be}+n)$ was studied, which is expected to be a clear way to populate the unbound ^{13}Be . A scattering length $a_s = -3.4(0.6)$ fm was obtained in this experiment. This result is supported by [2007Si24], where fragmentation of ^{14}Be on a carbon target was used and $a_s = -3.2_{-1.1}^{+0.9}$ fm was obtained. From these results, we assign now the $1/2^-$ state to be the g.s. of ^{13}Be , whereas it was the $^{13}\text{Be}^p$ state in NUBASE2003.

6.4 Isobaric Analogue states IAS

Definitions and notation For isobars around the $N = Z$ line, and in particular for mirror nuclides, the main difference between their masses can be attributed to the charge symmetry of the nucleon-nucleon interaction [1971Be29]. A more extensive mass relationship can be observed in isobars belonging to the same isospin multiplet around $N = Z$. In this case the ground state of a given nuclide may be identified as an excited state in the multiplet members. These isobaric analogue states (IAS) therefore have, by definition, the same spin-parity and isospin attributions. Their relative masses may be used to explore the charge-symmetry and charge-independence of the nuclear interaction via the isobaric mass multiplet equation (IMME) [53], and with calculations of the Coulomb Displacement Energy (CDE) (see for example [40], and references therein).

The localization of IAS multiplets on the chart of the nuclides is illustrated in Fig. 3.

$T = 1$ and $T = 2$ multiplets

In Fig. 3, the line going from bottom left to top right designates the $N = Z$ axis. The black line joining ^{38}Ca , ^{38}K , and ^{38}Ar are members of the same $T=1$ isospin triplet. By convention, the IAS multiplet is defined by its lowest Z member, and in this example it is ^{38}Ar . We therefore expect to find an excited state in ^{38}K which is the IAS of ground state ^{38}Ar . To differentiate between ground states (*gs*), isomers (*m,n,...*), and IAS, the IAS is labeled $^{38}\text{K}^i$.

Members of the $A = 38$, $T = 2$ multiplet are shown by the red line extensions to the black line. The IAS of ground state ^{38}Cl should exist in ^{38}Ar , ^{38}K , and ^{38}Ca . Since ^{38}K has levels which could be part of either the $T = 1$ or $T = 2$ isospin multiplets for $A = 38$, extra notation is required to distinguish between the two expected IAS. The triplet and quintuplet IAS in ^{38}K are written as $^{38}\text{K}^i$ and $^{38}\text{K}^j$, respectively. The superscripts i and j designating successively higher multiplet members. The j levels are commonly called *double IAS's*.

$T = 3/2$ and $T = 5/2$ multiplets

To complete the illustration of the IAS multiplet location on the nuclide chart, a case for odd- A is also shown.

The $A = 39$ IAS quadruplet is composed of Ar, K, Ca, and Sc as shown by the blue connecting line. The Ar ground state should show up as an excited IAS in K and Ca. The green extensions connect the $T = 5/2$ sextuplet members, Cl and Ti, and so in this IAS multiplet it is the analogue ground state of Cl that is looked for in the multiplet members. The lower $T = 3/2$ IAS members in both K and Ca are denoted with the superscript i ($^{39}\text{K}^i$ and $^{39}\text{Ca}^i$), and the $T = 5/2$ IAS by j ($^{39}\text{K}^j$ and $^{39}\text{Ca}^j$).

Exceptions

In general, IAS multiplets are naturally delimited by ground state mirror nuclides. However, the relationship between ground state masses being the main subject of the AME, these configurations have always been naturally included in the evaluation. We do not label these states in any particular way, and they are not included in the IAS statistics of the following paragraphs.

In two cases, $^{16}\text{N}^m$ and $^{26}\text{Al}^m$, it turns out that the IAS also happens to be an excited isomeric state. In these cases we have given preference to the isomeric notation.

IAS updates The most recent IAS evaluation in the AME dates back to 1993 [3]. In the present edition we re-introduce and update the IAS experimental data. The evaluation procedure is the same as for ground state masses and isomers, the global mass matrix being minimized in a single step.

Nuclides from $A = 6$ to $A = 74$, and mainly for isospins $T = 1$, $3/2$, 2 , and $5/2$ were studied. Roughly 117 nuclear excited states were retained as being experimentally identified IAS, of which around 50 are precise enough to survive through to the final evaluated mass table.

In most cases, when reaction data has been evaluated, the precision of IAS masses has been bettered. However, in the case of $^{73}\text{Rb}^i$, even though the excited IAS level is known to ± 40 keV, the ground state has not yet been measured, and can only be estimated. Hence the final estimate for the excitation energy is given with a precision of $100\#$ keV.

Only one new IAS has been included in this evaluation, $^{44}\text{V}^i$, from recent experimental measurements of beta-delayed proton emission [2007Do17].

Beta-delayed proton emitters In general, when an IAS decays via internal transitions, even with a low branching ratio, the associated gamma measurements will generally provide more precise data than that obtained through external relationships with other nuclides. In the current evaluation, 33 cases of beta-delayed IAS proton emission are considered, most of which provide a more precise IAS mass evaluation as compared to previous ones.



Figure 3: Excerpt from the chart of nuclides. The ground state spin-parities are given for each nuclide. The ground state isospin T is given when it deviates from the expected value based on a charge independent nuclear force. Members of the same multiplet naturally show up through the symmetry of the $N = Z$ axis.

The biggest change in precision comes from the recently published results on $^{45}\text{V}^i$ [2007Do17] where a proton-gamma coincidence method provides a 9 keV precision on the Q-value, as compared to the previous, first identification of this IAS by Jackson *et al.* in 1974, with a 50 keV precision [1974Ja10].

Fragmented states Fragmented IAS levels have been seen to occur in eleven cases evaluated here. They are $^8\text{Be}^i$, $^{44}\text{Ti}^i$, $^{48}\text{Cr}^i$, $^{56}\text{Co}^i$, $^{56}\text{Ni}^i$, $^{57}\text{Ni}^i$, $^{58}\text{Co}^i$, $^{59}\text{Ni}^i$, $^{59}\text{Cu}^i$, $^{61}\text{Cu}^i$, and $^{64}\text{Cu}^i$. In these cases the IAS is spread over several isospin mixed levels. The first phenomenological description of fragmented IAS was given by A.M. Lane [54] using a spectral line broadening theory; a full description of the experimental application can be found in [1971Be29] (and references therein).

In this case the simple relationship between isobaric multiplet members breaks down, since there is no longer

a single IAS level observed, but several isospin impure fragments. The sum of the individual IAS fragments, and their relative intensities, are considered in the final IAS mass evaluation. Our choice is to use the main experimentally observed mass fragment (“strongest fragment” in Table I) in the current evaluation. The excitation energies of the other fragments, along with their relative intensity when known, are provided in the associated comment. The original experimental observations are thus reported as accurately as possible.

6.5 Proton- and α -decays

In some cases, proton-decay energies can be estimated from proton-decay half-lives. Estimates for the following nuclides could thus be obtained:

Nuclide	$T_{1/2}$	S_p (keV)	Adopted S_p
^{64}As	40 ± 30 ms	> -100	$20\# \pm 300\#$
^{68}Br	< 1.5 μs	< -500	$-850\# \pm 300\#$
^{73}Rb	< 30 ns	< -570	$-570\# \pm 100\#$
^{77}Y	63 ± 17 ms	> -180	$-180\# \pm 50\#$
^{81}Nb	< 80 ns	< -1000	$-1280\# \pm 1540\#$
^{89}Rh	> 1.5 μs	> -860	$-1080\# \pm 200\#$

These limits were used as a guide, but not the only one, to set our estimated S_p , thus masses, for these nuclides.

Experimental data are now available for many proton-rich nuclides, from $^{97}_{47}\text{Ag}$ to $^{185}_{83}\text{Bi}$; among them for all intermediary odd- Z nuclides with the exception of ^{49}In and ^{61}Pm .

These results are important for two main reasons. Firstly, knowledge of proton separation energies just beyond the proton drip line is quite valuable in allowing estimate of mass values for nuclides for which no experimental data is available. Secondly, there are several cases where proton-decay energies from both members of an isomeric pair were measured, so one can determine the energy of a particular excited isomer. In addition, the lifetime of a proton-emitting nuclide is sensitive to the l value carried out by the proton and this can be used in turn to obtain reliable information about the spins and parities of the parent, and daughter states. This feature is even more valuable, since often the α -decay of both members is observed. Combination of long α -decay chains with proton decays offers a somewhat complete view of extended regions of the chart in the neighborhood of the proton drip-line. These studies showed that several decays earlier assigned to ground states do belong in reality to upper isomers. Also, these measurements are found to yield good values for the excitation energies of the isomers among the descendants. We here follow the judgment of the authors, including their judgment about the final levels fed in those α -decays.

Often in α -decay studies of odd- $N(Z)$ and odd-odd nuclides, the level fed directly by the α particle is not known. A comprehensive investigation that we have performed some time ago suggested, that in most cases when the decay does not go directly to the ground state, the final level is relatively close to the ground state. In such cases, we adopted the policy of accepting the measured E_α as feeding the ground state, but assigning a special label (not given in Table I) to indicate that a close-lying excited level may be also fed. This label will indicate to our computer program that the uncertainty, after possible pre-averaging of data of the same kind (also given in Table I), is to be increased to 50 keV.

The above mentioned results of proton decay analysis have been a reason to omit the mentioned label in several cases. One has to be also careful with the use of this la-

bel if mass-spectrometry results with a precision of about 50 keV or better are known for the parent and daughter nuclides. Comparison with theoretical models may also suggest to drop the mentioned above label; or just reversely to not accept a reported α energy.

In some cases, TMS estimates and theoretical predictions of α -decay energies indicate that the excitation energy E_1 of the final level may be much higher. Then, an estimate for the excited level energy (provided with a generous error) is added as an input value.

In regions where the Nilsson model for deformed nuclides applies, it is expected that the most intense α transition connects parent and daughter levels that have the same quantum numbers and configurations. (It is not rarely the only observed α -ray.) In such a case, adding an estimate for E_1 is attractive. Frequently, the energy difference between the excited and ground states can be estimated by comparison with the energy differences between the corresponding Nilsson levels in nearby nuclides.

Unfortunately, some authors derive a value they call Q_α from the measured α -particle energy by not only correcting for the recoil energy, but also for screening by atomic electrons (see Appendix A). In our calculations, the latter corrections have been removed.

Finally, some measured α -particle energies are affected by the coincidence summing between the α particle that feeds an excited level of the daughter nuclide and the conversion electrons that follow the decay of this level. This is sometimes apparent from the reported α spectra, since the width of the observed line is larger than that of other ones. In some cases, spurious α peaks can be observed. When deriving the corresponding Q_α values, appropriate (small) corrections are made for the escaping X-rays. Those are mentioned in a remark added to such a case.

6.6 Decay energies from capture ratios and relative positron feedings

For allowed transitions, the ratio of electron capture in different shells is proportional to the ratio of the squares of the energies of the emitted neutrinos, with a proportionality constant dependent on Z and quite well known [55]. For (non-unique) first forbidden transitions, the ratio is not notably different; with few exceptions. The neutrino energy mentioned is the difference of the transition energy Q with the electron binding energy in the pertinent shell. Especially if the transition energy is not too much larger than the binding energy in, say, the K shell, it can be determined rather well from a measurement of the ratio of capture in the K and L shells.

The non-linear character of the relation between Q and

the ratio introduces two problems. In the first place, a symmetrical error for the ratio is generally transformed in an asymmetrical one for the transition energy. Since our least-squares program cannot handle them, we have symmetrized the probability distribution by considering the first and second momenta of the real probability distribution (see NUBASE2012, Appendix A, p. 1173). The other problem is related to averaging of several values that are reported for the same ratio. Our policy, since AME1993, is to average the capture ratios, and calculate the decay energy following from that average. An example is $^{139}\text{Ce}(\epsilon)^{139}\text{La}$ (see p. 1482), where the 10 results that are averaged are all given in the following remarks. In this procedure we used the best values [55] of the proportionality constant. We also recalculated older reported decay energies originally calculated using now obsolete values for this constant.

The ratio of positron emission and electron capture in the transition to the same final level also depends on the transition energy in a known way (anyhow for allowed and not much delayed first forbidden transitions). Thus, the transition energy can be derived from a measurement of the relative positron feeding of the level, which is often easier than a measurement of the positron spectrum end-point (e.g. $^{147}\text{Tb}(\beta^+)^{147}\text{Gd}$, now labeled ‘U’, p. 1494). For several cases we made here the same kind of combinations and corrections as mentioned for capture ratios. But in this case, a special difficulty must be mentioned. Positron decay can only occur when the transition energy exceeds $2m_e c^2 = 1022$ keV. Thus, quite often, a level fed by positrons is also fed by γ -rays coming from higher levels fed by electron capture. Determination of the intensity of this *side* feeding is often difficult. Cases exist where such feeding occurs by a great number of weak γ -rays easily overlooked (the *pandemonium* effect [11]). Then, the reported decay energy may be much lower than the real value. In judging the validity of experimental data, we kept this possibility in our mind.

6.7 Q_β far from β -stability

In the present work, the mass surface for nuclides far away from the valley of β -stability is observed to be located much higher than was previously believed. This is largely due to an underestimation of the Q_β decay energies, which were measured in the past using the end-point energy method. For nuclides far from the valley of stability, the decay energies become very large offering accessibility to many states in the daughter nuclide. The combination of many individual continuous β -decay spectra renders the analysis very difficult. The maximum energy analysis method is also not reliable, since there is no guarantee that the ground state is significantly fed. Also the

$\beta - \gamma$ coincidence method can suffer from the ‘pandemonium’ effect [11].

As an example, in AME2003 the mass excess of the proton-rich nuclide ^{85}Nb was determined as $M - A = 67150 \pm 220$ keV. This value was derived from the measured Q_β in [1988Ku14], where the authors already noticed that their experimental Q_β was “noticeably lower than predicted values from mass formulae”. The masses of ^{85}Nb and ^{85}Zr were recently measured with high precision using a Penning trap, and the Q_β value was thus determined to be about 900 keV higher than obtained in [1988Ku14]. The masses of ^{85}Nb and ^{85}Zr are now respectively 870 keV higher and 25 keV lower than in AME2003 with 2 orders of magnitude higher precisions.

The deduced higher values of atomic masses for exotic nuclides in the present work will have important consequences for nuclear astrophysics and nuclear energy applications, see the discussion in Ref. [56].

To conclude, for nuclei very far from the valley of stability, results from Q_β end-point measurements should be treated with caution. In such cases, data available from Penning traps and/or storage rings facilities should always be given a priority.

6.8 Superheavy nuclides

The search for superheavy nuclides (SHE) and elucidation of their properties is one of the prominent areas of the modern nuclear physics research. In the last several years the nuclear chart was extended impressively in the heaviest mass region up to the element with an atomic number of $Z = 118$. However, the exactness of the mass surface built with the available data is far from being perfect (see Part II, Fig. 9, p. 1835 and also Fig. 36, p. 1862).

Names and symbols At the time when AME2003 was published, SHE up to $Z = 109$ were officially named by The Commission on Nomenclature of Inorganic Chemistry of the International Union of Pure and Applied Chemistry (IUPAC) [57]. However and to be complete, if the user is to compare AME2012 with some older versions of AME or NUBASE, he should be aware that in the past some confusion occurred in the naming of elements, due to IUPAC revising in 1997 some earlier proposals (see also NUBASE2012, Section 2, p. 1159) and changing symbols and names for $Z = 104, 105, 106$ and 108 elements as follows:

104	rutherfordium	Rf	replacing	Db
105	dubnium	Db	”	Jl
106	seaborgium	Sg	”	Rf
108	hassium	Hs	”	Hn

Since then, the names of five additional SHE were also approved: the $Z = 110, 111$ and 112 elements were named

Darmstadtium, Roentgenium and Copernicium, respectively, as proposed by the SHIP group at GSI; while the elements 114 and 116 were named Flerovium and Livermorium, respectively, following the proposal by the Dubna-Livermore collaboration. The provisional symbols Ed, Ef, Eh, and Ei are used in AME2012 for the yet unnamed elements 113, 115, 117, and 118, respectively.

Experimental methods Since α decay is the dominant decay mode in the region of super-heavy nuclides, knowledge of masses of SHE is most often obtained from measured E_α energy in α decay chains going down to a nuclide with known mass. Spatial and time-correlated α -decay (and SF) spectroscopy measurements of SHE continue to provide useful information about their properties. However, it often happens that α chains end-up on a nuclide decaying only by spontaneous fission (SF), offering thus no link to known masses. For example, the SF decay of ^{266}Sg does not allow to determine the mass of the doubly magic nuclide ^{270}Hs .

A very important development in this mass region since AME2003 was the first direct mass measurements of several isotopes of No ($Z = 102$) and Lr ($Z = 103$) at the SHIPTRAP facility at GSI. Those results provided anchor points for the values of atomic masses in this remote region of the nuclear chart. In general, the newly measured masses agree reasonably well with those deduced from known Q_α values of long α chains, thus giving confidence not only for the reliability of masses for SHE reported in the present work, but also for the Q_α obtained up to here and to the treatment and policies we used.

Alpha decay of superheavy nuclides For even-even nuclides, the strongest (favored) decays connect the parent and daughter ground states, and hence, those are directly related to the α -decay Q values. As a result, masses determined this way are quite reliable. Unfortunately, even-even nuclides are prone to spontaneous fission decay rendering these “good” cases relatively rare.

For many odd- A nuclides, and especially for odd-odd ones, the assignments are frequently complicated. In the present region of deformed nuclides, α -decays preferentially feed levels with the same Nilsson model assignments as the mother, which in the daughter are most often excited states, with unknown excitation energies E_1 . Thus, in order to find the corresponding mass difference, we have to estimate these E_1 's. For somewhat lighter nuclides, one may estimate them, as said above, from known differences in excitation energies for levels with the same Nilsson assignments in other nuclides. But such information is lacking in the region under consideration. In

its place, one might consider to use values obtained theoretically [58]. We have not done so, but used their values as a guide-line. Finally, we choose values in such a way that diagrams of α -energies and the mass surface looked acceptable. Important for this purpose were the experimental α -decay energies for the heaviest isotopes for $Z = 112, 114$ and 116 , especially for the even- A isotopes among them. The errors we assigned to values thus obtained may be somewhat optimistic; but we expect them not to be ridiculous.

This is especially true near sub-shell closures, since the favored alpha decay occurs between states that have the same quantum numbers and configurations. The presence of excited, long-lived isomers can also lead to severe complications. While many dedicated $\alpha - \gamma$ coincidence studies have been performed for nuclides in the light actinide region, such spectroscopy information needs to be extended to the heavier nuclides. In the last several years new results were published in the No-Lr-Rf region, which resolved some of the ambiguities. However, high quality data are still in demand and such studies would be very beneficial to future determination of masses for SHE.

A weak α -decay branch was recently observed in the decay of ^{262}Sg [2010Ac.A], which allowed experimental determination of the mass of ^{270}Ds , the heaviest nuclide that has an experimental mass value in AME2012. The new data allowed to establish unambiguously the existence of a significant deformed sub-shell gap at $N = 162$ and $Z = 108$. This gap appears to be much larger than the well known one at $N = 152$ and $Z = 100$.

In the AME2003 mass table, the heaviest nuclide with known mass was ^{265}Sg , where the highest α decay group $E_\alpha = 8940 \pm 30$ keV of [1998Tu01] was adopted as gs-gs transition. This is a common policy if the α decay energies spread too much, because even if this group is formed due to α -electron summing, it is still the closest one to the real gs-gs Q value. With more events accumulated, the status has been changed for ^{265}Sg and the former α decay group assigned to ^{266}Sg is reassigned to $^{265}\text{Sg}^m$ state. In present evaluation we use the strongest group, which may be the unhindered transition, assuming this transition goes to one excited state in the daughter nuclide ^{261}Rf with unknown energy, which is estimated from the trends in the neighboring nuclides. Then in the present mass table, the mass of ^{265}Sg is estimated rather than experimental in AME2003, although the mass value doesn't change much.

With exception of the nuclide $^{278}113$, all of the nuclides with atomic number from 113 to 118 are produced by using the “hot fusion” method, decaying with α emission eventually to some fissile nuclides whose masses are unknown experimentally, thus forming a floating island with none of the nuclides having known mass.

7 Special cases

In AME2003, some special cases have been discussed. Since new experimental information emerged in recent years, some of them have been resolved, while for others new issues were raised.

7.1 ${}^9\text{He}$ and ${}^{10}\text{He}$

The knockout reaction on ${}^{11}\text{Be}$ has been used to produce ${}^9\text{He}$ [2001Ch31] and an $l = 0$ state has been assigned as its lowest state. An upper limit of the s-wave scattering length $a_s = -10$ fm has been obtained, corresponding to an energy for the virtual state below 0.2 MeV. In [2007Go24], the spectrum of ${}^9\text{He}$ was studied by means of the ${}^2\text{H}({}^8\text{He}, \text{p}){}^9\text{He}$ reaction. The lowest resonant state of ${}^9\text{He}$ was found at 2.0 ± 0.2 MeV with a width of 2 MeV and has been identified as a $1/2^-$ state. For the virtual $1/2^+$ state, a lower limit $a_s > -20$ fm has been obtained, which is not inconsistent with the result in [2001Ch31]. This assignment has been questioned in [2010Jo06], where ${}^9\text{He}$ was studied by using knockout reaction from ${}^{11}\text{Li}$. The ${}^8\text{He}+n$ relative-energy spectrum is dominated by a strong peak-like structure at low energy, which may be interpreted within the effective-range approximation as the result of an s-wave interaction with a neutron scattering length $a_s = -3.17 \pm 0.66$ fm, thus conflicting with [2001Ch31]. It is argued that the s-state might not be the g.s. of ${}^9\text{He}$.

This argument is supported by the structure of ${}^{10}\text{He}$, which is highly dependent on the structure of ${}^9\text{He}$. If a virtual state in ${}^9\text{He}$ as seen in [2001Ch31] really existed, a narrow near-threshold 0^+ state in ${}^{10}\text{He}$ with a $[s1/2]^2$ structure would exist in addition to the $[p1/2]^2$ state [59, 60], in contradiction to the available experimental data on ${}^{10}\text{He}$.

Based on these experimental results, we adopt the $1/2^-$ as the ground state of ${}^9\text{He}$. In earlier work [1987Se05], [1988Bo20], and [1991Bo.B], transfer reactions were used, yielding values of E_r (resonance energy) of this state around 1.1 MeV. More recently, [1999Bo26] and [2010Jo06] determined $E_r \sim 1.3$ MeV. In [2007Go24], the $1/2^-$ state of ${}^9\text{He}$ was found at $E_r = 2.0 \pm 0.2$ MeV with a width ~ 2 MeV in this work, significantly higher than in the other work. The energy resolution of this experiment was 0.8 MeV (FWHM), which is quite large compared to the energy difference of ~ 1.1 MeV between the $1/2^-$ and $3/2^-$ states [1988Bo20], [1999Bo26], [2010Jo06]. Therefore, we suspect this state to be a mixture due to the poor energy resolution in this experiment.

Finally, we adopt the results of [1999Bo26] and [2010Jo06] to define the resonance energy of the g.s. of ${}^9\text{He}$.

Four experimental results are known concerning the mass of ${}^{10}\text{He}$, as listed below:

Reference	Q_{2n} (in keV)	Method of production
1994Os04	1070 ± 70	${}^{10}\text{Be}({}^{14}\text{C}, {}^{14}\text{O}){}^{10}\text{He}$
1994Ko16	1200 ± 300	$\text{C}({}^{11}\text{Li}, {}^{10}\text{He})$
2010Jo06	1420 ± 100	${}^1\text{H}({}^{11}\text{Li}, {}^{10}\text{He})$
2012Si07	2100 ± 200	${}^3\text{H}({}^8\text{He}, \text{p}){}^{10}\text{He}$

The mass of ${}^{10}\text{He}$ from [1994Os04] is significantly lower than the others. In this work the statistics are poor compared to the high background. The values obtained in two invariant mass measurements agree with each other, both using ${}^{11}\text{Li}$ to produce ${}^{10}\text{He}$. In the most recent work the value is higher than the others, while the authors stated that “the results reported in Refs. [1994Ko16] and [2010Jo06] do not contradict the g.s. energy of ${}^{10}\text{He}$ obtained in the present work”, based on the calculations of Ref. [60]. They argued that due to the strong initial state effect, the observable g.s. peak position in [1994Ko16] and [2010Jo06] is shifted towards lower energy because of the abnormal size of ${}^{11}\text{Li}$ possessing one of the most developed known neutron halos.

The argument is based on theoretical calculations in a three-body ${}^8\text{He}+n+n$ model from [60]. The structure of ${}^{10}\text{He}$ is highly dependent on the structure of ${}^9\text{He}$. Based on the ${}^9\text{He}$ spectrum from [2007Go24], the ${}^{10}\text{He}$ g.s. with structure $[p1/2]^2$ is predicted to be at about 2.0 – 2.3 MeV. However, the result of ${}^9\text{He}$ from [2007Go24] is not adopted, as discussed earlier. The model has problems in interpreting all of the experimental data, indicating the states may have a more complex structure. In the present evaluation, we choose the result from [2010Jo06] provisionally and call for more experiments to clarify this case.

Note added in proof: very recently, a group from MSU has studied ${}^{10}\text{He}$ using the fragmentation of ${}^{14}\text{Be}$. Their result supports our choice. The discrepancy with the result in [2012Si07] could not be explained simply by the exotic structure of ${}^{11}\text{Li}$, which was the argument used in the previous experiment, since, in the present case, a different reaction channel is explored.

7.2 The masses of ${}^{26}\text{Al}$ and ${}^{27}\text{Al}$

In AME2012, the mass excess of ${}^{26}\text{Al}$ is -12210.112 ± 0.064 keV, which is more than 3σ away from the AME2003 value of -12210.31 ± 0.06 keV. The origin of this difference lies in the new ${}^{26}\text{Al}$ - ${}^{26}\text{Mg}$ Penning trap measurement at JYFLTRAP [2009Er02], which is in strong conflict with the older ${}^{26}\text{Mg}(\text{p}, \text{n}){}^{26}\text{Al}$ measurement [1994Br11] as used in AME2003.

Prior to AME2003, the two results of the ${}^{25}\text{Mg}(\text{n}, \gamma)$ reaction were not in absolute agreement, either with

one another, or when combined with the average of non-conflicting values, such as that constructed from $^{25}\text{Mg}(p,\gamma)$ and the two values for $^{26}\text{Mg}(p,n)^{26}\text{Al}$. The older Penning trap mass values for ^{24}Mg and ^{26}Mg [2003Be02], combined with the average of the very nicely agreeing values for the $^{24}\text{Mg}(n,\gamma)$ reaction, gave a value halfway between the ones just mentioned. In AME2003 we considered this compromise but concluded that the mass of ^{26}Al was not reliable. This situation was thought unfortunate, especially because of the special interest of the $^{26}\text{Mg}(p,n)^{26}\text{Al}$ reaction for problems connected with the intensity of allowed Fermi β -transitions. Therefore, the new result from JYFLTRAP mentioned above is mostly welcome in the present adjustment.

This result also helped solving the difficulty we had with the mass of ^{27}Al (see AME2003), due to its connections with all the nuclides just mentioned and, also with ^{28}Si through the (p,γ) reaction.

The new mass for ^{26}Al fix the problem by discarding definitively the $^{26}\text{Mg}(p,n)^{26}\text{Al}$ results [1992Ba.A], [1984Ba.B], and [1994Br11], all from the same group. However, no clear explanation can be given here for these discrepancies.

7.3 The mass of ^{32}Si

In AME2003, the mass excess of ^{32}Si was -24080.91 ± 0.05 keV. The value was determined, by the PTB group in Braunschweig, from an extraordinarily precise (n,γ) measurement [2001Pa52], originally given with a precision (5 eV) we judged, at that time already, to be excessively optimistic. Moreover, the publication did not provide spectra or any other detailed information. By comparison to well established (n,γ) from other groups, we could evaluate a calibration error of 30 eV and derive the above value in AME2003.

However, recently, the MSU group [2009Kw02] measured the masses of several nuclides including ^{32}Si , in a Penning trap. Their result is 3.25 keV away from the PTB result, and with a precision of 0.30 keV for ^{32}Si . The MSU measurements were internally cross-checked by combining various molecules and comparing to different references.

In general, and until otherwise proven, (n,γ) measurements have the reputation of being quite reliable. We have tried to contact the PTB group, but without success, to discuss their measurement. Until this issue is resolved, it has been decided, provisionally at least, not to use the (n,γ) data, but rather the Penning trap values.

7.4 The $^{35}\text{S}(\beta^-)^{35}\text{Cl}$ decay energy

This case has been investigated several times in connection with the report that a neutrino might exist with a mass of 17 keV.

Up until AME2003, the reported decay energies were so different from each other (with a Birge ratio of $\chi_n = 3.07$), that we decided at that time to use all nine datasets, irrespective of their claimed precision. We applied then the procedure described in Section 5.4.1 to establish the arithmetic average, and uncertainty, derived from the dispersion of the 9 data, at 167.222 ± 0.095 keV.

A new value, that was unfortunately missed in AME2003 is now adopted, at 167.334 ± 0.027 keV [2000Ho13]. It outweighs all previous $^{35}\text{S}(\beta^-)^{35}\text{Cl}$ measurements. Moreover it agrees quite nicely with the two accepted $^{34}\text{S}(n,\gamma)^{35}\text{S}$ results in [1983Ra04] and [1985Ke08].

7.5 The masses of $^{35,37}\text{Cl}$ and ^{36}Ar

The SMILETRAP ^{36}Ar result [2003Fr08] was some 1.2 keV lower than the value accepted until 2003, for which an error of 0.3 keV was claimed. The latter value was essentially due to mass-spectrometry results for ^{35}Cl and ^{37}Cl , combined with reaction energies for five reactions. These data agreed quite well if combined in a least squares analysis: $\chi_n = 1.13$. Combining with the [2003Fr08] mass value for ^{36}Ar increases χ_n to 2.00. But this value could be reduced to a reasonable 1.35 if, of the two available values for the $^{36}\text{Ar}(n,\gamma)^{37}\text{Ar}$ reaction energy, the oldest, not well documented one is no longer used. Also, this removed an earlier hardness in the connection with ^{40}Ar , of which the mass was already known with high precision. This problem is considered definitively settled.

7.6 The masses of ^{100}Sn

Determination of the mass of ^{100}Sn has been subject of discussion in AME2003. This result is particularly interesting due to the doubly magic character of ^{100}Sn which is, moreover, the heaviest known nuclide with $N = Z$.

The adopted mass in AME2003 was -56780 ± 710 keV, due to β^+ decay, and is 1060 keV less bound than indicated by the GANIL result [1996Ch32]. Earlier estimate from trends in the mass surface (TMS), were $-56860\#(430\#)$ keV in AME1995, and $-56460\#(450\#)$ keV in AME1993. The differences are not particularly large as compared to the claimed or estimated precisions. It is therefore interesting to note that the new result in [2012Hi07], also from β^+ decay, yields $-57280(300)$ keV, that is almost half-way between the above values.

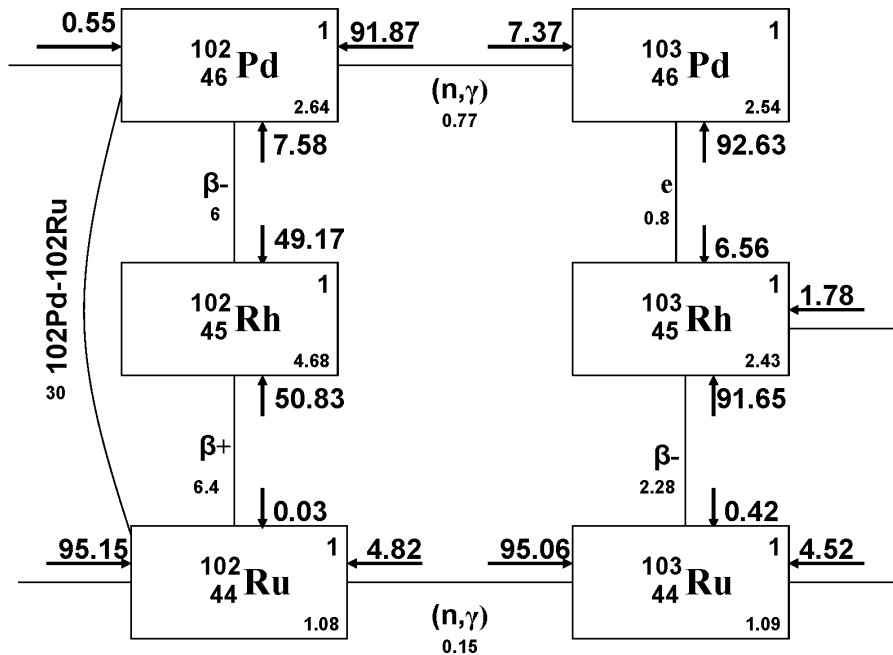


Figure 4: Flow of information diagram displaying the three “routes” between ^{102}Pd and ^{102}Ru . Each square box represents an individual nuclide. Its mass precision (keV) is given in the lower right corner, its degree in the upper right corner. Along each connection between two nuclides is the type of relation, its precision and on both sides are arrows indicating the flow of information to the two connected nuclides.

7.7 The ^{102}Pd double-electron capture energy

The double β or ϵ energy of some nuclides is an important parameter to study the neutrino properties. In recent years this measurement has attracted a lot of attention, mainly in high-precision Penning traps. The mass difference between ^{102}Pd and ^{102}Rh , equivalent to the double-electron capture energy of ^{102}Pd , has been measured recently by SHIPTRAP yielding $Q_{\epsilon\epsilon} = 1203.27 \pm 0.36$ keV [2011Go23]. This result differs from the AME2003 value 1173.0 ± 2.4 keV by 30 keV, i.e., more than 10 standard deviations. Besides this measurement, this $Q_{\epsilon\epsilon}$ value can be determined by local links established experimentally, as shown in Fig. 4. The two nuclides involved are not only linked via ^{102}Rh , but also are connected with higher mass isotopes through (n,γ) with lower uncertainty. The $Q_{\epsilon\epsilon}$ values obtained with these two different links agree with each other perfectly. All these connections, except $^{102}\text{Rh}(\beta^-)^{102}\text{Pd}$, are determined by two or more different groups, sometimes with different methods. Their results are in good agreement with each other, and no reason can be found to suspect any individual measurement. Details of the input data is displayed in Table I. It should be recalled that Penning trap measurements have generally been quite reliable. In the present evaluation, the new Penning trap result is provisionally not used. We call for more measurements to clarify this issue.

7.8 The mass of ^{105}Sb

The nuclide ^{105}Sb was reported in [1994Ti03] to be a proton emitter with $E_p = 478 \pm 15$ keV (thus $Q_p = 482.6 \pm 15$ keV) and a branching ratio of 1%. However, the later work of [1997Sh13] and [2005Li47], using different experimental methods, were unable to confirm the [1994Ti03] result. In fact, the production yield in the [2005Li47] work was significantly higher than in the previous studies, yielding an upper limit of 0.1% for the proton branching ratio (~ 150 decay events of ^{105}Sb were expected, but none were seen), indicating that the activity observed in [1994Ti03] did not belong to ^{105}Sb . In more recent work, [2007Ma35] reported a weak α -decay branch for the ground state decay of ^{109}I with an energy of $E_\alpha = 3774 \pm 20$ keV. Because of the existing relationship between proton and α -decay Q values, $Q_\alpha(^{109}\text{I}) + Q_p(^{105}\text{Sb}) = Q_p(^{109}\text{I}) + Q_\alpha(^{108}\text{Te})$, one can determine $Q_p(^{105}\text{Sb}) = 322 \pm 22$ keV. This value is in severe disagreement with the result (483 ± 15 keV) of [1994Ti03]. It is difficult to conclude unambiguously from the trends in the mass surface alone, which value is correct. Consequently, the Q_p value deduced from the Q_α measurement in [2007Ma35] was adopted in the present evaluation, and will determine the mass of ^{105}Sb . Direct proton-decay studies of ^{105}Sb are desirable in order to clarify this case.

7.9 The $^{163}\text{Ta}(\alpha)^{159}\text{Lu}(\alpha)^{155}\text{Tm}$ decay chain

This α -decay chain was discussed in the previous AME2003 publication, because it presented special difficulties.

The chain starts at ^{179}Tl and undergoes a series of consecutive α decays from both the ground state and excited isomer, which are associated with the $s_{1/2}$ and $h_{11/2}$ proton orbitals. It terminates at ^{147}Tb , which decays entirely by β^+ decay and whose ground state spin is measured directly as $J=1/2$, with a higher spin isomeric state, $J^\pi=11/2^-$, located at 50.6 ± 0.9 keV.

Mass-spectrometer data with precisions ranging from 28 to 68 keV are available [2005Li24] for the ^{147}Tb , ^{151}Ho , ^{155}Tm , ^{159}Lu and ^{163}Ta members of the chain. The first 3 ones carry no weight, but agree within their precision with values deduced from α decays. The directly measured mass of ^{159}Lu , with a precision of 57 keV, agrees with, and is combined with the Q_α measurement within the adjustment procedure.

Only ^{163}Ta (48 keV precision) strongly disagrees (3.6σ) and is not accepted in our calculation. The α decay of ^{163}Ta yields $Q(\alpha)=4749 \pm 6$ keV whereas combining masses from [2005Li24] one can derive $Q(\alpha)=4656 \pm 40$ keV. In order to resolve this discrepancy, an isomeric state needs to be introduced in ^{163}Ta , and

which α decays to the ^{159}Lu ground state.

In fact, such an isomer is now established at $130\# \pm 20\#$ keV above the ground state from the measured α -decay energies and parent-daughter correlations in decays of the $^{179}\text{Tl}^m(\alpha)^{175}\text{Au}^m(\alpha)^{171}\text{Ir}^m(\alpha)^{167}\text{Re}^s(\alpha)^{163}\text{Ta}^m$ chain nuclides and the estimated excitation energies $825\# \pm 10\#$ for the $^{179}\text{Tl}^m$ isomer. The latter estimate is derived from interpolation of similar $(11/2^-)$ states in Tl isotopes 177, 181 and 183. The isomer in ^{163}Ta is assigned $J^\pi = (9/2^-)$, following the favorite α decay from the $J^\pi = (9/2^-)$ ^{167}Re ground state.

To summarize, by combining all available information, and by discarding only one piece of data, we were able to build up a scenario for the double (ground states and excited isomers) ^{147}Tb - ^{179}Tl decay chain. However most of the adopted values for excitation energies, and also for the ^{167}Re ground state are still labeled with the ‘#’ flag, due to the estimated excitation energy of $^{179}\text{Tl}^m$. Experimental determination of any of the excitation energy in ^{159}Lu , ^{163}Ta , ^{167}Re , ^{171}Ir , ^{175}Au , or ^{179}Tl will allow to access all other ones. Future measurements would be beneficial not only in order to firmly establish these excitation energies, but even more importantly, to provide also useful parent-daughter correlations on α decays that feed the ^{159}Lu ground state and decays out of the excited isomer.

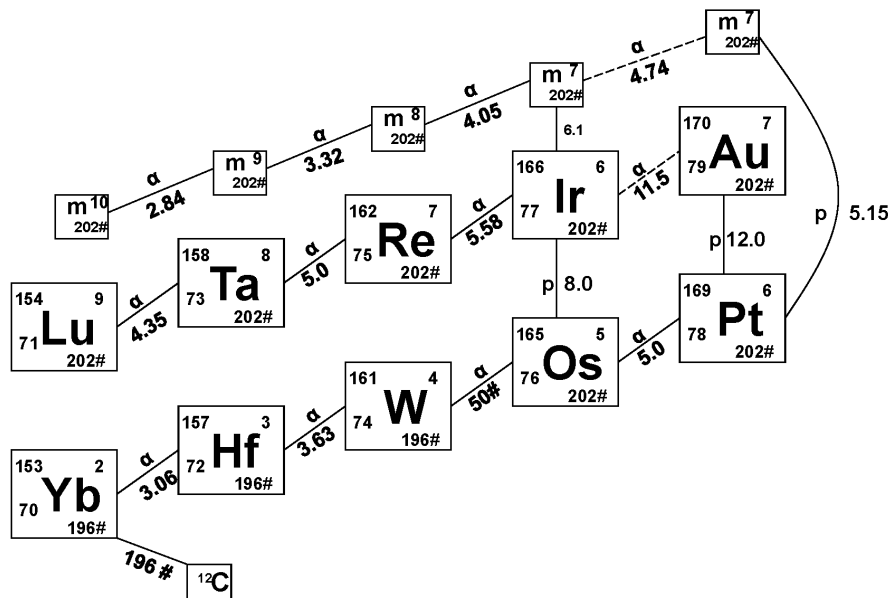


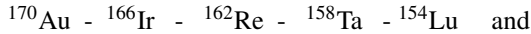
Figure 5: Loops created by two alpha decay chains interconnected by proton decays. See caption of Fig. 4. ‘m’ stands for the excited isomer of the nuclide below it.

Table D. Input data and adjusted values around the ^{170}Au - ^{165}Os loop.

Item	Input AME2003	Output AME2003	Adjusted LSM	Input AME2012	adjusted value
$^{166}\text{Ir}(p)^{165}\text{Os}$	1152(8)	1152(8)	1150.6(7.1)	1152(8)	1154(6)
$^{166}\text{Ir}^m(\text{IT})^{166}\text{Ir}$	171.5(6.1)	172(6)	170.8(5.6)	171.5(6.1)	172(6)
$^{169}\text{Pt}(\alpha)^{165}\text{Os}$	6846.233(12.869)	6846(13)	6849.8(8.9)	6857.4(5.)	6856(5)
$^{170}\text{Au}(p)^{169}\text{Pt}$	1473.8(15.)	1474(15)	1475(10)	1471.7(12.)	1470(9)
$^{170}\text{Au}^m(p)^{169}\text{Pt}$	1747.9(6.247)	1748(6)	1748.9(5.7)	1751.356(5.145)	1751(5)
$^{170}\text{Au}(\alpha)^{166}\text{Ir}$	7174.1(11.)	7168(21)	7173.7(9.3)	7170(12)	7172(9)
$^{170}\text{Au}^m(\alpha)^{166}\text{Ir}^m$	7277.5(6.)	7271(17)	7276.9(5.6)	7278.5(9.)	7280(7)

7.10 The $^{170}\text{Au}(\alpha)$ and $^{169}\text{Pt}(\alpha)$ decay chains

It has been previously mentioned that some proton-rich nuclides can decay by both α and proton emission. In some cases, a loop of interconnected nuclides can be formed. Two long α -decay chains illustrate this case:



which are connected by $^{170}\text{Au}(p)^{169}\text{Pt}$ and $^{166}\text{Ir}(p)^{165}\text{Os}$, thus forming a loop as shown in Fig. 5. Unfortunately, none of the masses shown in Fig. 5 has been measured. If the mass of at least one nuclide is measured in the future, then all of the masses along the above two decay chains will be determined.

The general difficulty here, is that if all of the experimental information is used in the evaluation, then a

closed loop would be formed, and all nuclides involved would be primary. The consequence is that some estimated (non-experimental) values would then automatically become primary data. For example, to avoid this, the $^{170}\text{Au}(\alpha)^{166}\text{Ir}$ value was not used in AME2003, despite its good precision. A local evaluation is carried out in this region, involving all the corresponding nuclides, using least-squares method. The input and adjusted values are listed in Table D. The sources of the input data can be found in main Table I. As can be seen, the adjusted value of $^{170}\text{Au}(\alpha)^{166}\text{Ir}$ would be 7173.7 ± 9.3 instead of 7168 ± 21 , as listed in Table I of AME2003, if the full-scale least-squares method had been employed. Other values are also influenced by this new evaluation, as discussed in the following paragraph.

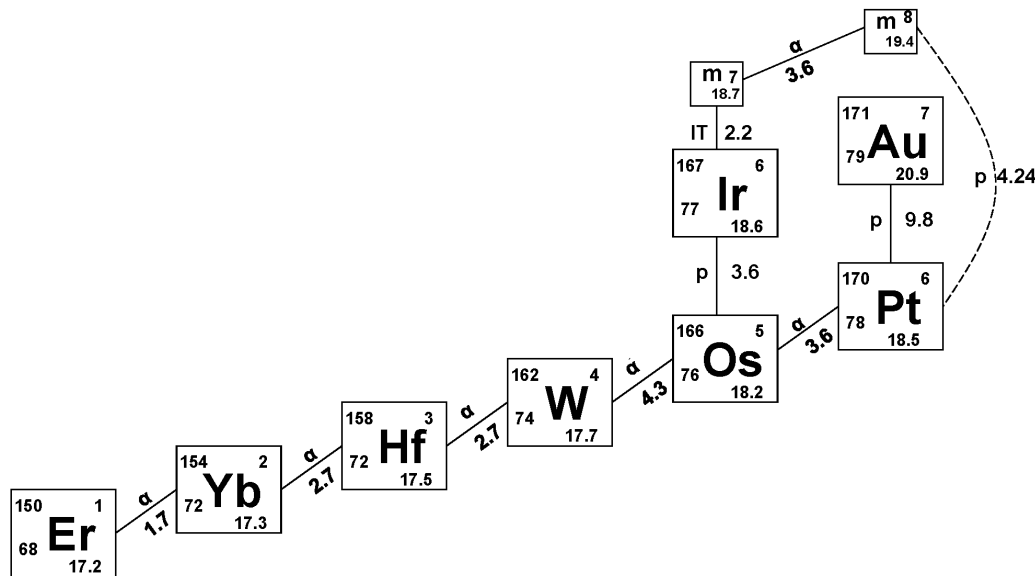


Figure 6: The loop and decay chains from $^{171}\text{Au}^m$ down to ^{150}Er , when replacing $^{171}\text{Au}^m(p)^{170}\text{Pt}$ by an equivalent $^{167}\text{Ir}(p)^{166}\text{Os}$, as treated in AME2003. In the AME2012 treatment, the dotted connection has been restored. See caption of Fig. 4. ‘m’ stands for the excited isomer of the nuclide below it.

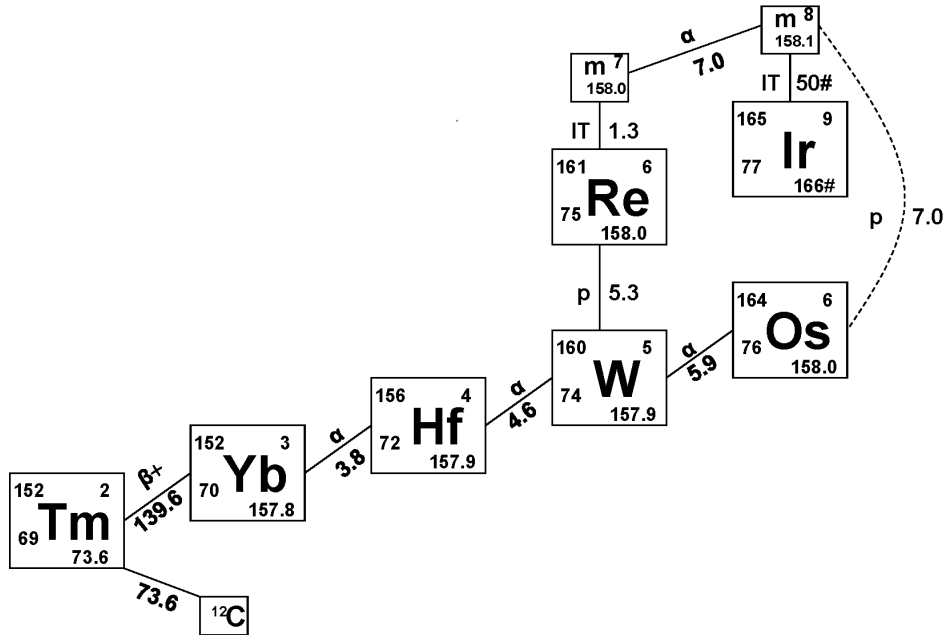


Figure 7: The loop and decay chains from $^{165}\text{Ir}^m$ down to ^{152}Tm , when replacing $^{165}\text{Ir}^m(p)^{164}\text{Os}$ by an equivalent $^{161}\text{Re}(p)^{160}\text{W}$, as treated in AME2003. In the AME2012 treatment, the dotted connection has been restored. See caption of Fig. 4. ‘m’ stands for the excited isomer of the nuclide below it.

Table E. Input data and adjusted values around the ^{165}Ir - ^{160}W loop.

Item	Input Value AME2003	Output AME2003	Reference	Output AME2012
$^{161}\text{Re}(p)^{160}\text{W}$	1199.5 ± 6.0	1197.2 ± 5.3	97Ir01	1197.3 ± 5.3
$^{161}\text{Re}(p)^{160}\text{W}$	1188.9 ± 11.5	1197.2 ± 5.3	replacement	
$^{161}\text{Re}^m(\text{IT})^{161}\text{Re}$	123.8 ± 1.3	123.8 ± 1.3	97Ir01	123.4 ± 1.3
$^{164}\text{Os}(\alpha)^{160}\text{W}$	6473.2 ± 10.0	6477.2 ± 5.9	96Bi07	6479.4 ± 5.3
$^{164}\text{Os}(\alpha)^{160}\text{W}$	6479.4 ± 7.0	6477.2 ± 5.9	96Pa01	6479.4 ± 5.3
$^{165}\text{Ir}^m(p)^{164}\text{Os}$	1717.5 ± 7.0	1725.9 ± 10.8	97Da07	1720.5 ± 5.9
$^{165}\text{Ir}^m(\alpha)^{161}\text{Re}^m$	6882.1 ± 7.0	6882.1 ± 7.0	97Da07	6878.9 ± 6.0

Here is a similar, but slightly different example. In our previous adjustments, following our policy of replacement to avoid loops, we also replaced in some rare cases a connection that did not obey the conditions defined in Section 5.4.2, by an equivalent connection, accepting a (slight) loss of precision. For example, in AME2003, the 1717.5 ± 7.0 for $^{165}\text{Ir}^m(p)^{164}\text{Os}$ was replaced (see Table E) by an equivalent 1188.9 ± 11.5 for $^{161}\text{Re}(p)^{160}\text{W}$, to avoid having 7 secondary masses to become primary as illustrated in Fig. 7. The increase in the uncertainty reflects the combination with other connections in the loop which uncertainties are not negligible.

There is no new experimental data since the publication of AME2003. We however decided in AME2012, taking advantage of computer’s increased power, to restore original data, making thus all the nuclides in the chain down to ^{152}Tm to become primaries. Table E displays comparison of the two treatments and the restored precision of the $^{165}\text{Ir}^m(p)^{164}\text{Os}$ datum.

The only other case of this type is illustrated in Fig. 9. The interested reader will find in the main Table I all details and rebuild easily an equivalent of Table E.

7.11 The problem of the stable Hg isotopes

In our earlier evaluations we did not accept the 1980 Winnipeg measurements of the atomic masses of stable Hg isotopes, reported with errors of only about 1 keV. Since AME2003 the situation is stabilized. Here we recall the reasons for this.

In [1980Ko25], mass differences were measured between stable Hg isotopes and $^{12}\text{C}_2\text{Cl}_5$ molecules, for $A = 199$ and 201 , or $^{12}\text{C}^{13}\text{C}\text{Cl}_5$, for $A = 200, 202$ and 204 . The resulting Hg masses values were $22\ \mu\text{u}$ high (odd A) and $17\ \mu\text{u}$ high (even- A), compared to values from mass-spectrometry results for both lighter and heavier nuclides combined with experimental reaction and decay energies, see Fig. 1 in [34]. The difference suggested an influence due to the intensities of the ion beams, since ^{13}C is much less abundant than ^{12}C . Therefore, both sets of results were judged questionable.

In 2003, the Winnipeg group reported a new value for ^{199}Hg [2003Ba49], $7\ \mu\text{u}$ lower than their 1980 result. In addition, measurements with the Stockholm Penning trap spectrometer SMILETRAP gave results for ^{198}Hg and ^{204}Hg , essentially agreeing with the 1980 Winnipeg even-mass values. Thus, the latter appear to be reasonable.

We therefore accepted these data, and also included old and new nuclear reaction and decay results.

The relation with the higher- A mass-spectrometry results (Th and U isotopes) is acceptable, but the differences are nearly equal to the old ones but with a change in sign. With lower- A , Winnipeg provided further information through new measurements of the mass of ^{183}W and its difference with ^{199}Hg . These essentially confirmed the mass values around ^{183}W given in earlier evaluations [3, 7]. For completeness, we observe that the new ^{183}W result is $15\ \mu\text{u}$ higher than the 1977 Winnipeg result (error $2.7\ \mu\text{u}$), which was one of the items that helped to suggest the lower Hg masses.

Closer scrutiny, shows that nuclear reaction energies, in the region between these two nuclides, have discrepancies which, as yet, are not resolved. The upshot is, that the earlier difficulty in the connection of the stable Hg's to lower A data appears to be due to errors in the mass-spectrometer data used at the time. We therefore think that the most recent mass values for these Hg isotopes as adopted since 2003 are definitely more dependable than earlier ones.

7.12 Other special cases

Other special cases are presented and discussed on the AMDC web site [8].

8 General information and acknowledgments

The full content of the present issue is accessible online at the AMDC website [8]. In addition, on the site, there are several localized mass analyses that were carried out, but could not be given in the printed version. Also, several graphs representing the mass surface, beyond the main ones in Part II, are also available.

As before, the table of masses (Part II, Table I) and the table of nuclear reaction and separation energies (Part II, Table III) are available in plain ASCII format to simplify their input to computer programs using standard languages. The headers of these files give information on the formats. The first file, named **mass_rmd.mas12**, contains the table of masses. The next two files correspond to the table of reaction and separation energies, in two parts of 6 entries each, as in Part II, Table III: **rct1_rmd.mas12** for S_{2n} , S_{2p} , Q_α , $Q_{2\beta}$, $Q_{\epsilon p}$ and $Q_{\beta n}$ (odd pages in this issue); and **rct2_rmd.mas12** for S_n , S_p , $Q_{4\beta}$, $Q_{d,\alpha}$, $Q_{p,\alpha}$ and $Q_{n,\alpha}$ (facing even pages). As explained in Section 4.2, since AME2003, we no longer produce any more special tables for experimental data which we do not recommend.

We wish to thank our many colleagues who answered our questions about their experiments and those who sent us preprints of their papers. Continuous interest, discussions, suggestions and encouragements from K. Blaum, D. Lunney, G. Savard, Zhang Yuhu, Zhongzhou Ren, and Ch. Scheidenberger were highly appreciated.

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Appendix A The meaning of decay energies

Conventionally, the decay energy in an α -decay is defined as the difference in the atomic masses of mother and daughter nuclides:

$$Q_\alpha = M_{\text{mother}} - M_{\text{daughter}} - M_{4\text{He}} \quad (8)$$

This value equals the sum of the observed energy of the α particle and the easily calculated energy of the recoiling nuclide (with only a minor correction for the fact that the cortège of atomic electrons in the latter may be in an excited state). Very unfortunately, some authors quote as resulting Q_α a value 'corrected for screening', which essentially means that they take for the values M in the above

equation the masses of the bare nuclides (the difference is essentially that between the total binding energies of all electrons in the corresponding neutral atoms).

This bad custom is a cause of confusion; even so much that in a certain paper this “correction” was made for some nuclides but not for others.

A similar bad habit has been observed for some proton decay energies. We very strongly object to this custom; at the very least, the symbol Q should not be used for the difference in nuclear masses!

Appendix B Mixtures of isomers or of iso-bars in mass-spectrometry

In cases where two or more unresolved lines may combine into a single one in an observed spectrum, while one cannot decide which ones are present and in which proportion, a special procedure has to be used.

The first goal is to determine what is the most probable value M_{exp} that will be observed in the measurement, and what is the uncertainty σ of this prediction. We assume that all the lines may contribute and that all contributions have equal probabilities. The measured mass reflects the mixing. We call M_0 the mass of the lowest line, and M_1, M_2, M_3, \dots the masses of the other lines. For a given composition of the mixture, the resulting mass m is given by

$$m = (1 - \sum_{i=1}^n x_i)M_0 + \sum_{i=1}^n x_i M_i \quad \text{with} \quad \begin{cases} 0 \leq x_i \leq 1 \\ \sum_{i=1}^n x_i \leq 1 \end{cases} \quad (9)$$

in which the relative unknown contributions x_1, x_2, x_3, \dots have each a uniform distribution of probability within the allowed range.

If $P(m)$ is the normalized probability of measuring the value m , then :

$$\bar{M} = \int P(m) m dm \quad (10)$$

$$\text{and } \sigma^2 = \int P(m) (m - \bar{M})^2 dm \quad (11)$$

It is thus assumed that the experimentally measured mass will be $M_{exp} = \bar{M}$, and that σ , which reflects the uncertainty on the composition of the mixture, will have to be quadratically added to the experimental uncertainties.

The difficult point is to derive the function $P(m)$.

B.1 Case of 2 spectral lines

In the case of two lines, one simply gets

$$m = (1 - x_1)M_0 + x_1 M_1 \quad \text{with} \quad 0 \leq x_1 \leq 1 \quad (12)$$

The relation between m and x_1 is biunivocal so that

$$P(m) = \begin{cases} 1/(M_1 - M_0) & \text{if } M_0 \leq m \leq M_1, \\ 0 & \text{elsewhere} \end{cases} \quad (13)$$

i.e. a rectangular distribution (see Fig. 8a), and one obtains :

$$\begin{aligned} M_{exp} &= \frac{1}{2}(M_0 + M_1) \\ \sigma &= \frac{\sqrt{3}}{6}(M_1 - M_0) = 0.290 (M_1 - M_0) \end{aligned} \quad (14)$$

B.2 Case of 3 spectral lines

In the case of three spectral lines, we derive from Eq. 9:

$$m = (1 - x_1 - x_2)M_0 + x_1 M_1 + x_2 M_2 \quad (15)$$

$$\text{with} \quad \begin{cases} 0 \leq x_1 \leq 1 \\ 0 \leq x_2 \leq 1 \\ 0 \leq x_1 + x_2 \leq 1 \end{cases} \quad (16)$$

The relations (15) and (16) may be represented on a x_2 vs x_1 plot (Fig. 9). The conditions (16) define a triangular authorized domain in which the density of probability is uniform. The relation (15) is represented by a straight line. The part of this line contained inside the triangle defines a segment which represents the values of x_1 and x_2 satisfying all relations (16). Since the density of probability is constant along this segment, the probability $P(m)$ is proportional to its length. After normalization, one gets (Fig. 8b):

$$P(m) = \frac{2k}{M_2 - M_0} \quad (17)$$

$$\text{with} \quad \begin{cases} k = (m - M_0)/(M_1 - M_0) & \text{if } M_0 \leq m \leq M_1 \\ k = (M_2 - m)/(M_2 - M_1) & \text{if } M_1 \leq m \leq M_2 \end{cases} \quad (18)$$

and finally:

$$M_{exp} = \frac{1}{3}(M_0 + M_1 + M_2) \quad (19)$$

$$\sigma = \frac{\sqrt{2}}{6} \sqrt{M_0^2 + M_1^2 + M_2^2 - M_0 M_1 - M_1 M_2 - M_2 M_0}$$

B.3 Case of more than 3 spectral lines

For more than 3 lines, one may easily infer $M_{exp} = \sum_{i=0}^n M_i / (n + 1)$, but the determination of σ requires the knowledge of $P(m)$. As the exact calculation of $P(m)$ becomes rather difficult, it is more simple to do simulations.

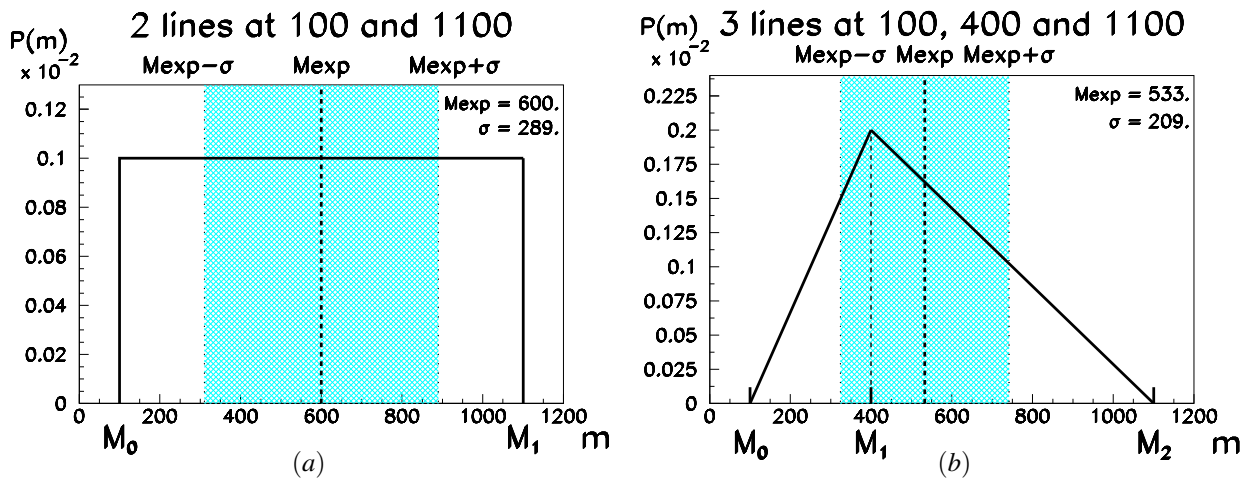


Figure 8: Examples of probabilities to measure m according to an exact calculation in cases of the mixture of two (a) and three (b) spectral lines.

However, care must be taken that the values of the x_i 's are explored with an exact equality of chance to occur. For each set of x_i 's, m is calculated, and the histogram $N_j(m_j)$ of its distribution is built (Fig. 10). Calling $nbin$ the number of bins of the histogram, one gets :

$$P(m_j) = \frac{N_j}{\sum_{j=1}^{nbin} N_j} \quad (20)$$

$$M_{exp} = \sum_{j=1}^{nbin} P(m_j) m_j$$

$$\sigma^2 = \sum_{j=1}^{nbin} P(m_j) (m_j - M_{exp})^2$$

A first possibility is to explore the x_i 's step-by-step: x_1

varies from 0 to 1, and for each x_1 value, x_2 varies from 0 to $(1 - x_1)$, and for each x_2 value, x_3 varies from 0 to $(1 - x_1 - x_2)$, ... using the same step value for all.

A second possibility is to choose x_1, x_2, x_3, \dots randomly in the range $[0,1]$ in an independent way, and to keep only the sets of values which satisfy the relation $\sum_{i=1}^n x_i \leq 1$. An example of a Fortran program based on the CERN library is given below for the cases of two, three and four lines. The results are presented in Fig. 10.

Both methods give results in excellent agreement with each other, and as well with the exact calculation in the cases of two lines (see Fig. 8a and 10a) and three lines (see Fig. 8b and 10b).

The Fortran program used to produce the histograms in Fig. 10.

```

program isomers
-----
c-  October 15, 2003                C.Thibault
c-  Purpose and Methods : MC simulation for isomers (2-4 levels)
c-  Returned value      : mass distribution histograms
-----

parameter (nwpawc=10000)
common/pawc/hmemor(nwpawc)
parameter (ndim=500000)
dimension xm(3,ndim)
data e0,e1,e31,e41,e42/100.,1100.,400.,200.,400./
call hlimit(nwpawc)

c histograms 2, 3, 4 levels
call hbook1(200,'',120,0.,1200.,0.)
call hbook1(300,'',120,0.,1200.,0.)
call hbook1(400,'',120,0.,1200.,0.)
call hmaxim(200,6500.)

```

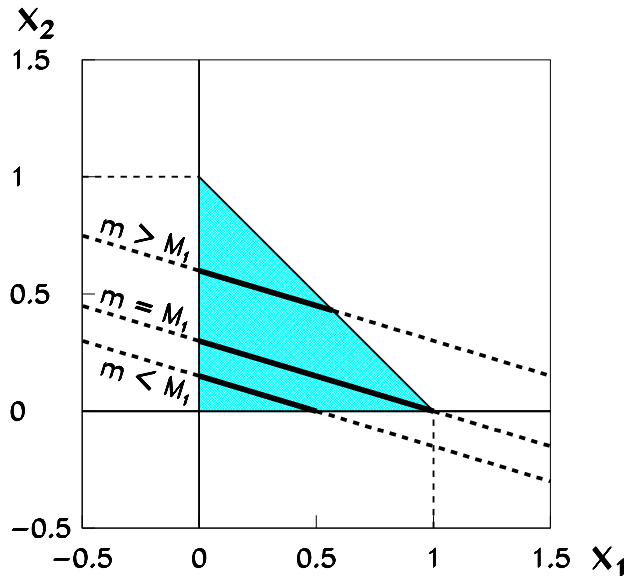


Figure 9: Graphic representation of relations 15 and 16. The length of the segments (full thick lines) inside the triangle are proportional to the probability $P(m)$. Three cases are shown corresponding respectively to $m < M_1$, $m = M_1$, and to $m > M_1$. The maximum of probability is obtained when $m = M_1$.

```

call hmaxim(300,6500.)
call hmaxim(400,2500.)
w=1.
c random numbers [0,1]
ntot=3*ndim
iseq=1
call ranecq(iseed1,iseed2,iseq,' ')
call ranecu(xm,ntot,iseq)
do i=1,ndim
c 2 levels :
t=1-xm(1,i)
e = t*e0 + xm(1,i)*e1
call hfill(200,e,0.,w)
c 3 levels :
if ((xm(1,i)+xm(2,i)).le.1.) then
t=1.-xm(1,i)-xm(2,i)
e = t*e0 + xm(1,i)*e31 + xm(2,i)*e1
call hfill(300,e,0.,w)
end if
c 4 levels
if ((xm(1,i)+xm(2,i)+xm(3,i)).le.1.) then
t=1.-xm(1,i)-xm(2,i)-xm(3,i)
e = t*e0 + xm(1,i)*e41 + xm(2,i)*e42 + xm(3,i)*e1
call hfill(400,e,0.,w)
end if
end do
call hrput(0,'isomers.histo','N')
end

```

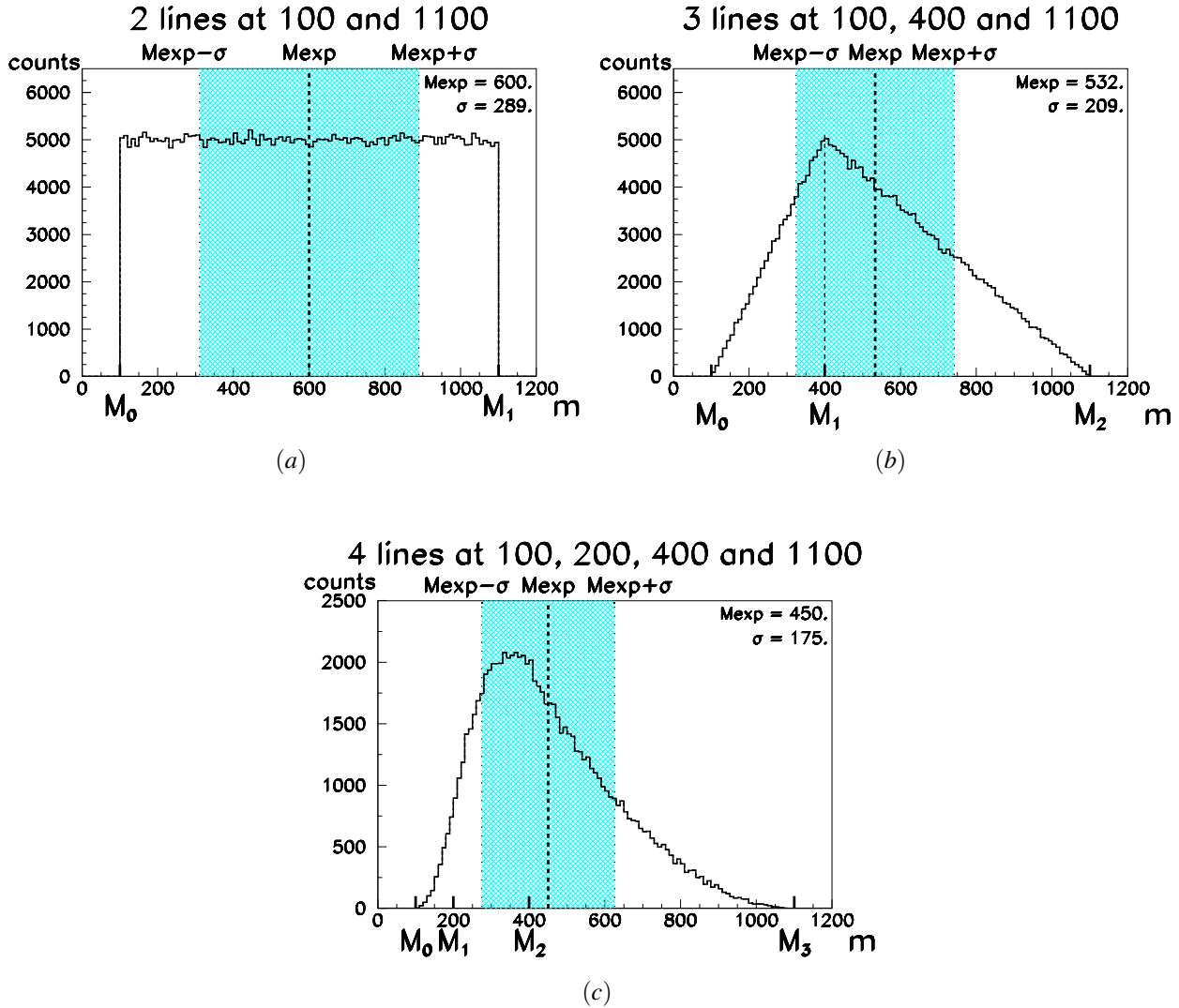


Figure 10: Examples of Monte-Carlo simulations of the probabilities to measure m in cases of two (a), three (b) and four (c) spectral lines.

B.4 Example of application for one, two or three excited isomers

We consider the case of a mixture implying isomeric states. We want to determine the ground state mass $M_0 \pm \sigma_0$ from the measured mass $M_{exp} \pm \sigma_{exp}$ and the knowledge of the excitation energies $E_1 \pm \sigma_1, E_2 \pm \sigma_2, \dots$

With the above notation, we have

$$M_1 = M_0 + E_1,$$

$$M_2 = M_0 + E_2, \dots$$

For a single excited isomer, Equ. (14) can be written:

$$M_0 = M_{exp} - \frac{1}{2}E_1$$

$$\sigma^2 = \frac{1}{12}E_1^2 \quad \text{or} \quad \sigma = 0.29E_1$$

$$\sigma_0^2 = \sigma_{exp}^2 + \left(\frac{1}{2}\sigma_1\right)^2 + \sigma^2$$

For two excited isomers, Equ. (19) lead to :

$$M_0 = M_{exp} - \frac{1}{3}(E_1 + E_2)$$

$$\sigma^2 = \frac{1}{18}(E_1^2 + E_2^2 - E_1E_2)$$

$$\text{or} \quad \sigma = 0.236\sqrt{E_1^2 + E_2^2 - E_1E_2}$$

$$\sigma_0^2 = \sigma_{exp}^2 + \left(\frac{1}{3}\sigma_1\right)^2 + \left(\frac{1}{3}\sigma_2\right)^2 + \sigma^2$$

If the levels are regularly spaced, *i.e.* $E_2 = 2E_1$,

$$\sigma = \frac{\sqrt{6}}{12}E_2 = 0.204E_2$$

while for a value of E_1 very near 0 or E_2 ,

$$\sigma = \frac{\sqrt{2}}{6}E_2 = 0.236E_2$$

For three excited isomers, the example shown in Fig. 10c leads to:

$$\begin{aligned} M_0 &= M_{exp} - \frac{1}{4}(E_1 + E_2 + E_3) = 450. \\ \sigma &= 175. \\ \sigma_0^2 &= \sigma_{exp}^2 + \left(\frac{1}{4}\sigma_1\right)^2 + \left(\frac{1}{4}\sigma_2\right)^2 + \left(\frac{1}{4}\sigma_3\right)^2 + \sigma^2 \end{aligned}$$

Appendix C Converting frequency ratios to linear equations

In the following, quantities with the subscript r describe the characteristics of the reference ion in the Penning Trap. Equivalent quantities, with no subscript, describe characteristics of the ion being measured. The ratio R of frequencies f between the reference and newly measured ion is written:

$$R = \frac{f_r}{f} = \frac{\mathcal{M} - m_e q + B}{\mathcal{M}_r - m_e q_r + B_r} \frac{q_r}{q} \quad (21)$$

where q is the charged state of the given ion, B is the electron binding energy, m_e is the mass of the electron and \mathcal{M} the total atomic mass. All masses and energies are in atomic mass units (u) and so, $u=1$.

This expression can be written in terms of the mass excess M and atomic mass number A :

$$\begin{aligned} A + M - R \frac{q}{q_r} A_r - R \frac{q}{q_r} M_r &= \\ &= m_e q(1-R) + B_r R \frac{q}{q_r} - B \end{aligned}$$

or, alternatively:

$$\begin{aligned} M - R \frac{q}{q_r} M_r &= m_e q(1-R) + A_r \left(\frac{q}{q_r} R - \frac{A}{A_r} \right) \\ &+ B_r R \frac{q}{q_r} - B \end{aligned}$$

The general aim is to establish some quantity y and its associated precision dy . We define C to be a truncated, three-digit decimal approximation of the ratio A to A_r , and then we can write:

$$y = M - C M_r \quad (22)$$

and so

$$y = y_1 + y_2 + y_3 + y_4 \quad (23)$$

where

$$y_1 = M_r \left(R \frac{q}{q_r} - C \right) \quad (24)$$

$$y_2 = m_e q(1-R) \quad (25)$$

$$y_3 = A_r \left(\frac{q}{q_r} R - \frac{A}{A_r} \right) \quad (26)$$

and

$$y_4 = B_r R \frac{q}{q_r} - B \quad (27)$$

To fix relative orders of magnitude, M_r is generally smaller than 0.1 u , $R - C$ is a few 10^{-4} , $(1-R)$ is usually smaller than unity (and typically 0.2 for a 20% mass change), $R - \frac{A}{A_r}$ varies from 1 to 100×10^{-6} and A_r is typically 100 u for atomic mass $A = 100$. The four terms y_1 , y_2 , y_3 , and y_4 take values of the order of 10 μu , 100 μu , 10 to 10000 μu , and 0.1 μu , respectively.

The associated precision dy is written:

$$dy = dy_1 + dy_2 + dy_3 + dy_4 \quad (28)$$

where

$$dy_1 = \frac{q}{q_r} M_r dR + \left(R \frac{q}{q_r} - C \right) dM_r \simeq dR \times 10^5 \mu u \quad (29)$$

$$dy_2 = m_e q dR \simeq dR \times 10^3 \mu u \quad (30)$$

$$dy_3 = \frac{q}{q_r} A_r dR \simeq dR \times 10^8 \mu u \quad (31)$$

and

$$dy_4 = \frac{q}{q_r} B_r dR + R \frac{q}{q_r} dB_r + dB \simeq dR \times 10^{-1} \mu u \quad (32)$$

Consequently, only the 3rd term contributes significantly to the precision of the measurement, and so we write: $dy = dy_3$

If the two frequencies are measured with a typical precision of 10^{-7} for ions at $A = 100$, then the precision on the frequency ratio R is 1.4×10^{-7} and the precision on the mass is approximatively 14 μu .

C.1 Program for frequency conversion

Primary data from Penning Trap measurement are typically given in the form of an experimental frequency ratio. An example is given here for a series of nuclides with respect to a various reference nuclides and various charge states. Below is the Fortran frequency conversion program, followed by sample input file and corresponding output file.

The frequency conversion program

```

c                               PTrap15publ      G.Audi      m 06 nov 2012
c
c Conversion of Frequency Ratios to Linear Equations
c
  real*8 xzero,mel,mref,smref,mrefk,rap,srap,coef
  real*8 prov,membre,sigmem,m118,sm118
  integer q118,qref
  character txref*4,tx118*4,rev*2
  character*30 filea,fileb

c
c   mel : electron mass in micro-u
c   mref, smref : Mass and uncert. for reference (ref)
c   m118, sm118 : Mass and uncert. for mesured (118)
c   qref, q118  : charge states of the ions
c
  filea='ptkl.equat'           '           ! output file
  fileb='ptkl.freq'           '           ! input file
  open(unit=1,file=filea,form='formatted',status='new')
  open(unit=3,file=fileb,form='formatted',status='old',readonly)
c
  mel  = 548.5799110
  xzero = 9.314940090d-1           ! conversion factor micro-u to keV
  12 read(3,1001,err=99) iaref,txref,qref,mref,rev,smref ! read reference, mass in micro-u
  1001 format(i4,a4,i4,f17.6,a2,f11.6)
  mrefk = mref * xzero
c
  15 read(3,1001,end=90,err=99) ia118,tx118,q118,rap,rev,srap ! read frequency ratio
  if(tx118.eq.'NEW ') go to 12 ! reset reference
  if(rev.eq.' ') then ! if reversed freq. ratio: rev=-1
    rap = rap / 1.d+6
    srapsrap = srapsrap / 1.d+6
  else
    rap = 1.d+6 / rap
    srapsrap = srapsrap * srapsrap/1.d+6
  endif
  coef = anint(1000.*ia118/iaaref) / 1000. ! calculate 3-digit coefficient
c
  prov = (ia118*1.d+0)/iaaref - rap*q118/qref
  membre = mref*(rap*q118/qref-coef) + mel*q118*(1-rap)
  * - iaaref*1.d+6*prov ! value (in micro-u) for the equation
  sigmem = srapsrap * iaaref * 1.d+6 * q118/qref ! its uncertainty
  write (1,1020) ia118,tx118,iaaref,txref,coef,membre,sigmem
  1020 format(5x,i6,a4,'-',i4,a4,'*',
  * f6.3,' =', f13.3,' (' ,f9.3,')')
  m118 = membre + coef*mref
  sm118 = sqrt(sigmem**2 + (coef*smref)**2)
  write (1,1030) ia118,tx118,m118,sm118
  1030 format(13x,i4,a4,' =',f14.5,' +/-',f10.5,' micro-u')
  m118 = m118 * xzero
  sm118 = sm118 * xzero
  write (1,1032) m118,sm118
  1032 format(13x,8x,' =',f14.5,' +/-',f10.5,' keV',/)
c
  go to 15
c
  90 write (1,1990)
  1990 format(1H0,'Normal End of Freq.Ratios to Equations Conversion')
  stop
  99 write(1,1999)
  1999 format(1H0,'Error in File Reading')
  stop
  end

```

A typical frequency ratio input file

```

6Li +1 15122.885 .. 0.029 1st line : reference nuclide
4He +1 665392.8420 0.0077 following lines : frequency ratios
7Li +1 1166409.2053 0.0131 NEW : new set with new ref. follows
8Li +1 1333749.8620 0.0180
NEW ..
7Li +1 16003.42560 0.00455 column 1 : nuclidic name
10Be +1 700635.628 -1 0.009 column 2 : ionic charge
11Be +1 636546.859 -1 0.036 column 3 : mass excess for ref. (micro-u)
NEW .. or frequency ratio *10^6
39K +4 -36293.410 .. 0.085 column 5 : -1 for inverse ratio
44K +4 886306.8169 -1 0.0444 column 4 : uncertainty
NEW ..
85Rb +9 -88210.26200 .. 0.00535
74Rb +8 979689.6094 0.0858
76Rb +8 1006067.4141 0.0223
NEW ..
85Rb +13 -88210.26200 .. 0.00535
99Sr +15 1009776.3077 0.0451

```

Corresponding output file

```

4He - 6Li * 0.667 = -7483.694 ( 0.046)
4He = 2603.27019 +/- 0.05009 micro-u
= 2424.93058 +/- 0.04665 keV

7Li - 6Li * 1.167 = -1644.991 ( 0.079)
7Li = 16003.41533 +/- 0.08558 micro-u
= 14907.08550 +/- 0.07971 keV

8Li - 6Li * 1.333 = 2327.424 ( 0.108)
8Li = 22486.22932 +/- 0.11471 micro-u
= 20945.78789 +/- 0.10685 keV

10Be - 7Li * 1.429 = -9334.156 ( 0.128)
10Be = 13534.73895 +/- 0.12850 micro-u
= 12607.52825 +/- 0.11970 keV

11Be - 7Li * 1.571 = -3479.829 ( 0.622)
11Be = 21661.55299 +/- 0.62197 micro-u
= 20177.60683 +/- 0.57936 keV

44K - 39K * 1.128 = 2529.206 ( 2.204)
44K = -38409.76074 +/- 2.20643 micro-u
= -35778.46201 +/- 2.05527 keV

74Rb - 85Rb * 0.871 = 21096.382 ( 6.483)
74Rb = -55734.75669 +/- 6.48267 micro-u
= -51916.59195 +/- 6.03857 keV

76Rb - 85Rb * 0.894 = 13930.883 ( 1.685)
76Rb = -64929.09141 +/- 1.68490 micro-u
= -60481.05966 +/- 1.56947 keV

99Sr - 85Rb * 1.165 = 35661.650 ( 4.423)
99Sr = -67103.30571 +/- 4.42327 micro-u
= -62506.32725 +/- 4.12025 keV

```

ONormal End of Freq.Ratios to Equations Conversion

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Table I. Input data compared with adjusted values**EXPLANATION OF TABLE**

The ordering is in groups according to highest occurring relevant mass number.

Item	K^m , Cs^m , Cs^n , In^p , Tl^q : higher isomers, see NUBASE.	In nuclear reactions: ϵ = electron capture,	In mass-doublet equation: $H = {}^1H$, $N = {}^{14}N$, $D = {}^2H$, $O = {}^{16}O$, $C = {}^{12}C$, u = absolute mass-doublet.	In mass-triplet equation: Rb^x , Rb^y : different mixtures of isomers or contaminants.
Input value	Mass doublet: value and its standard precision in μu . Triplet: value and its standard precision in keV. Reaction: value and its standard precision in keV. The value is the combination of mass excesses $\Delta(M - A)$ given under ‘item’. It is the author’s experimental result and the author’s stated uncertainty, except in a few cases for which comments are given and for some α -reactions: if the α -decay does not clearly feed the ground state, then the precision is increased to 50 keV. If more than one group report such energies, an average is calculated first (mentioned in the Table) and the 50 keV is added to the averaged precision in the adjustment (see Section 6.3).			
Adjusted value	Output of calculation. For secondary data ($Dg = 2-20$) the adjusted value is the same as the input value and is not repeated. Also, the adjusted value is only given once for a group of results for the same reaction or doublet. Values and precisions were rounded off, but not to more than tens of keV. # Value and precision derived not from purely experimental data, but at least partly from trends of the mass surface (TMS). * No mass value has been calculated for one of the masses involved.			
v_i	Normalized deviation between input and adjusted value, given as their difference divided by the input precision (see Section 5.2).			
Dg	1 Primary data (see Section 3). 2–13 Secondary data of different degrees. B Well-documented data, or data from regular reviewed journals, which disagree with other well-documented values. C Data from incomplete reports, at variance with other data. o Data included in or superseded by later work of same group. D Data not checked by another method and at large variance with TMS, replaced by an estimated value (see Section 4, p. 1303). F Study of paper raises doubts about validity of data within the reported precision. R Item replaced for computational reasons by an equivalent one giving same result. U Data with much less weight than that of a combination of other data. – Data that will be averaged.			
Signf.	<i>Significance</i> ($\times 100$) of primary data only (see Section 5.1); the significance of secondary data is always 100%.			
Main infl.	Largest <i>influence</i> ($\times 100$) and nucleus to which the data contributes the most (see Section 5.1).			
Lab	Identifies the group which measured the corresponding item. Example of Lab key: MA8 Penning Trap data of Mainz-Isolde group. The numbers refer to different experimental conditions.			
F	Multiplying factor for mass spectrometric data (see Section 6.1). The standard precision given in the ‘Input value’ column has been multiplied by this factor before being used in the least-squares adjustment.			

Reference	Reference keys: (in order to reduce the width of the Table, the two digits for the centuries are omitted; at the end of this volume however, the full reference key-number is given: 2003Ba49 and not 03Ba49).
12Na15	Results derived from regular journal. These keys are copied from Nuclear Data Sheets. Where not yet available, the style 12Re.1 has been used.
12Zh.A	Result from abstract, preprint, private communication, conference, thesis or annual report.
Ens12a	References to energies of excited states, when of interest, are mentioned in remarks in the Qfile. Their reference-keys refer to the "Evaluated Nuclear Structure Data Files" (ENSDF) (the electronic version of the Nuclear Data Sheets NDS), the reference-keys are indicated Ens126 in which '12' indicates the year (here 2012) and '6' the month (Oct, Nov, Dec indicated a b c) of the released ENSDF file. When the excited energy is derived or estimated in NUBASE2012, it is indicated with 'Nubase'.
AHW	(or FGK, GAU, JBL, MMC, WGM) : comment written by one of the present authors.
*	A remark on the corresponding item is given below the block of data corresponding to the same (highest) A.
Y	recalibrations of 65Ry01 for charged particle recalibrations, and recalculated triplets for isomeric mixtures.
Z	recalibrations of 91Ry01 for α particles, 90Wa22 for γ in (n, γ) and (p, γ) reactions and 91Wa.A for protons and γ in (p, γ) reactions (see Section 2).

Remarks. For data indicated with a star in the reference column, remarks have been added. They are collected in groups at the end of each block of data in which the highest occurring relevant mass number is the same. They give:

- i) Information explaining how the values in column 'Input value' have been derived for papers not mentioning e.g. the mass differences as derived from measured ratios of voltages or frequencies, or the reaction energies, or values for transitions to excited states in the final nuclei (for which better values of the excitation energies are now known).
- ii) Reasons for changing values (e.g. recalibrations) or precisions as given by the authors or for rejecting them (i.e. for labelling them B, C or F).
- iii) Value suggested by TMS and recommended in this evaluation as the best estimate (see Section 4, p. 1297).
- iv) Separate values for capture ratios (see Section 6.4).

Special notation in remarks:

E_{β^-} , Q_{β^-}	β^- endpoint energy, β^- decay energy
E_{β^+} , Q_{β^+}	β^+ endpoint energy, β^+ decay energy
E_p , Q_p	proton energy in the laboratory, proton decay energy
a_s	scattering length
T	threshold for given reaction
ϵ	electron capture; $\beta^+ = \epsilon + e^+$ (see NUBASE2012, p. 1178)
p^+ , pK, pL	fraction β^+ , $\epsilon(K)$ or $\epsilon(L)$ in transition to mentioned states
L/K, L/M	$\epsilon(L)/\epsilon(K)$, $\epsilon(L)/\epsilon(M)$
IBE	internal bremsstrahlung endpoint
M-A, D_M	mass excess (in keV), mass difference (in μu)
TMS	Trends from Mass Surface
'Z' (after uncertainty)	recalibrated (see above, under 'Reference')

Table I. Comparison of input data and adjusted values (Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
π^+	140081.18	0.35	140081.2	0.4	0.0	1	100	100 π^+			06PaDG *
$\pi^+(2\beta^+)\pi^-$	1021.998	0.001	1021.9980	0.0010	0.0	1	100	100 π^-			88CoTa *
* π^+	By convention! This is $M=139570.18(0.35)$ keV + $m(e^-)$										GAu **
$H_{12}-C$	93902.7	0.4	93900.3868	0.0011	-2.3	U			M17	2.5	66Be10
	93900.66	0.48			-0.2	U			A2	2.5	70St25
	93900.32	0.12			0.4	U			B07	1.5	71Sm01
	93900.391	0.012			-0.4	U			WA1	1.0	95Va38
	93900.3804	0.0084			0.8	U			MI1	1.0	95Di08
	93900.3865	0.0017			0.2	1	43	43 1H	WA1	1.0	01Va33
	93900.3860	0.0042			0.2	U			ST2	1.0	02Be64
$n(\beta^-)^1H$	782	13	782.3466	0.0005	0.0	U					51Ro50
D_6-C	84610.56	0.12	84610.6687	0.0007	0.4	U			A2	2.5	70St25
	84610.62	0.09			0.4	U			B07	1.5	71Sm01
	84611.60	0.34			-1.1	U			J5	2.5	72Ka57 *
	84611.47	0.40			-0.8	U			J6	2.5	76Ka50
	84610.644	0.005			4.9	C			WA1	1.0	92Va.A
	84610.584	0.078			0.4	U			OH1	2.5	93Ma.A
	84610.662	0.007			1.0	o			WA1	1.0	93Va.C
	84610.6616	0.0067			1.1	o			WA1	1.0	95Va38
	84610.6710	0.0054			-0.4	-			MI1	1.0	95Di08
	84610.6656	0.0036			0.9	-			MI1	1.0	95Di08
	84610.66897	0.00086			-0.3	-			WA1	1.0	06Va22
	ave. 84610.6688	0.0008			-0.1	1	78	78 2H			average
H_2-D	1547.77	0.28	1548.28634	0.00020	0.7	U			C1	2.5	64Mo.A
	1548.22	0.05			0.5	o			M19	2.5	67Jo18
	1548.08	0.08			1.0	o			J2	2.5	69Na21
	1548.286	0.004			0.1	o			B07	1.5	71Sm01
	1548.222	0.063			0.4	o			J5	2.5	72Ka57
	1548.176	0.133			0.3	o			J5	2.5	72Ka57
	1548.298	0.008			-1.0	U			B08	1.5	75Sm02
	1548.301	0.005			-2.0	U			B08	1.5	75Sm02
	1548.190	0.023			1.7	U			J6	2.5	76Ka50
	1548.28	0.05			0.1	U			M25	2.5	78Ha14
	1548.302	0.012			-0.5	U			OH1	2.5	93Go37
	1548.2836	0.0018			1.5	U			MI1	1.0	95Di08
	1548.28649	0.00035			-0.4	1	32	24 1H	ST2	1.0	08So20
$^1H(n,\gamma)^2H$	2224.564	0.017	2224.5660	0.0004	0.1	U			BNL		80Gr02
	2224.5	0.12			0.5	U			MMn		80Is02
	2224.561	0.009			0.6	U			Utr		82Va13 Z
	2224.549	0.009			1.9	U					82Vy10 Z
	2224.560	0.009			0.7	U					83Ad05 Z
	2224.5756	0.008			-1.2	U			NBS		86Gr01 *
	2224.5727	0.0500			-0.1	U			PTc		97Ro26 *
	2224.5660	0.0004			0.0	o			NBS		99Ke05 *
	2224.58	0.05			-0.3	U			Bdn		06Fi.A *
	2224.56600	0.00044			0.0	1	100	100 $1n$	NBS		06De21 *
* D_6-C	For all 72Ka57 doublets, see also reference										72Og03 **
* $^1H(n,\gamma)^2H$	Original 2224.5890(0.0022) revised in reference; error increased by evaluator										90Wa22 **
* $^1H(n,\gamma)^2H$	Original error 0.0005 increased for calibration										GAu **
* $^1H(n,\gamma)^2H$	More precisely, $H+n-D=2388170.07(0.42)$ nu										99Ke05 **
*	corrected to 2388169.95(0.42) nu										99Mo39 **
* $^1H(n,\gamma)^2H$	All errors in reference increased by 20 ppm for calibration										06Fi.A **
* $^1H(n,\gamma)^2H$	Original 2224.56610(0.00044) recalibrated with 2010 Codata (see text)										WgM129**

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
${}^3\text{H}_4\text{-C}$	64197.0690	0.0062	64197.112	0.009	6.9	B			WA1	1.0	93Va04 *	
	64197.1136	0.0116			-0.2	o			ST2	1.0	02Bf02	
	64197.1148	0.0100			-0.3	1	90	$90\ {}^3\text{H}$	ST2	1.0	06Na49	
${}^3\text{He}_4\text{-C}$	64117.2399	0.0039	64117.280	0.010	10.4	B			WA1	1.0	93Va04	
	64117.252	0.030			0.9	1	11	$11\ {}^3\text{He}$	WA1	1.0	93Va04 *	
	64117.294	0.011			-1.2	o			ST2	1.0	01Fr18	
	64117.2868	0.0100			-0.6	o			ST2	1.0	06Na49 *	
									MZ1	2.5	91Ha31 *	
$\text{H}_3\text{-}{}^3\text{He}$	7445.858	0.012	7445.7766	0.0025	-2.7	U			B08	1.5	75Sm02	
$\text{D}_2\text{-H }{}^3\text{H}$	4329.257	0.003	4329.2461	0.0024	-2.4	U			C1	2.5	64Mo.A	
$\text{H D-}{}^3\text{H}$	5877.2	0.7	5877.5324	0.0024	0.2	U			C1	2.5	64Mo.A	
$\text{H D-}{}^3\text{He}$	5896.84	0.42	5897.4903	0.0025	0.6	U			B08	1.5	75Sm02	
	5897.512	0.005			-2.9	B			B09	1.5	81Sm02	
	5897.495	0.006			-0.5	U			C1	2.5	64Mo.A	
										2.5	84Ni16 *	
${}^3\text{H-}{}^3\text{He}$	19.83	0.18	19.9578	0.0009	0.3	U				2.5	84Li24	
	19.951	0.004			0.7	o				2.5	85Li02	
	19.967	0.003			-1.2	o				2.5	85Ta.A	
	19.967	0.002			-1.8	U				2.5	06Na49	
	19.948	0.003			1.3	U				1.0	69Pr06	
	19.9570	0.0013			0.6	1	47	$43\ {}^3\text{He}$	ST2	1.0	79Br25 Z	
${}^2\text{H}(n,\gamma){}^3\text{H}$	6257.6	0.3	6257.2328	0.0023	-1.2	U			ILn		49To23 Y	
${}^2\text{H}(d,p){}^3\text{H}$	6256.96	0.25			1.1	U			CIT		64Sp12	
	4029	12	4032.6668	0.0022	0.3	U			MIT		67Od01	
	4034	6			-0.2	U			NDm		49To23 Y	
${}^2\text{H}(d,n){}^3\text{He}$	4033.7	1.7			-0.6	U			CIT		56Do41 Y	
	3260	9	3268.9108	0.0024	1.0	U			Wis		72Be11 *	
${}^3\text{H}(\beta^-){}^3\text{He}$	3269	11			0.0	U					73Pi01 *	
	18.645	0.016	18.5906	0.0008	-3.4	B					76Tr07	
	18.619	0.040			-0.7	U					81Lu07 *	
	18.607	0.013			-1.3	o					83De47 *	
	18.614	0.013			-1.8	U					85Si07 *	
	18.562	0.020			1.4	U					85Bo34	
	18.590	0.008			0.1	U					86Fr09 *	
	18.604	0.006			-2.2	o					87Bo07	
	18.603	0.010			-1.2	o					87Bu.A	
	18.600	0.004			-2.4	U					88Ka32	
	18.598	0.015			-0.5	o					89St05	
	18.603	0.004			-3.1	o					91Bu12	
	18.589	0.003			0.5	o					91Ka41 *	
	18.595	0.006			-0.7	o					91Ro07 *	
	18.592	0.003			-0.5	-					92Bu13 *	
	18.591	0.002			-0.2	-					92Ot.A	
	18.595	0.006			-0.7	U					92Ho09 *	
	18.589	0.003			0.5	o					93We03	
	18.593	0.003			-0.8	-					95Hi14	
	18.591	0.003			-0.1	-					95St26	
	18.597	0.014			-0.5	U					61Ry05	
	18.5895	0.0025			0.4	-					64Bo10	
	${}^3\text{H}(p,n){}^3\text{He}$	-764.08	0.15	-763.7560	0.0010	2.1	o			Zur		64Sa12
		-764.39	0.37			1.7	U			NRL		average
		-763.82	0.08			0.8	U			Zur		
	${}^3\text{H}(\beta^-){}^3\text{He}$	ave.	18.5911	0.0012	18.5906	0.0008	-0.5	1	51	$46\ {}^3\text{He}$		
	* ${}^3\text{H}_4\text{-C}$	Item preliminarily disregarded										AHW **
* ${}^3\text{He}_4\text{-C}$	Original changed after discussion with authors										AHW **	
* ${}^3\text{He}_4\text{-C}$	Use instead the most precise difference between ${}^3\text{H}$ and ${}^3\text{He}$ (see below)										GAu **	
* $\text{H}_3\text{-}{}^3\text{He}$	From ${}^3\text{He}^+/\text{H}_2^+ = 1.496441095(6) + 3\text{eV}$ ioniz.										AHW **	
* ${}^3\text{H-}{}^3\text{He}$	Atom mass difference=ion mass difference $18.573 + 0.011$ keV										AHW **	
*	required correction cannot be estimated										85Au07 **	
* ${}^3\text{H}(\beta^-){}^3\text{He}$	For corrections to 72Be11 see reference										82Di01 **	
* ${}^3\text{H}(\beta^-){}^3\text{He}$	For corrections to 73Pi01 and 81Lu07 see reference										85Au07 **	
* ${}^3\text{H}(\beta^-){}^3\text{He}$	Error for 83De47 increased, see reference										85Au07 **	
* ${}^3\text{H}(\beta^-){}^3\text{He}$	Original value 18580(7) corrected in reference										89Re04 **	
* ${}^3\text{H}(\beta^-){}^3\text{He}$	As calculated from their data in reference										89Re04 **	
* ${}^3\text{H}(\beta^-){}^3\text{He}$	$E_{\beta^-} = 18.5721(0.0030)$, SFS and recoil as in reference										88Ka32 **	
* ${}^3\text{H}(\beta^-){}^3\text{He}$	$E_{\beta^-} = 18.5705(0.0020)$, SFS and recoil as in reference										89St05 **	
* ${}^3\text{H}(\beta^-){}^3\text{He}$	$E_{\beta^-} = 18.556(0.006)$, corrections as in reference										91Bu12 **	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference	
${}^3\text{H}(\beta^-){}^3\text{He}$	$E_{\beta^-}=18.5733(0.0002+\text{syst})$, SFS and recoil as in reference										88Ka32 **	
${}^4\text{He}_3\text{-C}$	7809.706	0.009	7809.76239	0.00019	6.3	B			WA1	1.0	92Va.A	
	7809.7493	0.0030			4.4	B	WA1	1.0	95Va38			
	7809.7704	0.0039			-2.1	U	ST2	1.0	01Fr18			
	7809.7620	0.0003			1.3	o	WA1	1.0	01Va.A			
	7809.7467	0.0066			1.0	U	MZ2	2.5	01Br27			
	7809.76246	0.00019			-0.4	o	WA1	1.0	04Va14			
	7809.76239	0.00019			0.0	1	100	100	${}^4\text{He}$	WA1	1.0	06Va22
${}^4\text{He-H}_4$	-28696.8747	0.0026	-28696.8748	0.0004	0.0	o			ST2	1.0	06Na49	
	-28696.8750	0.0026			0.1	U	ST2	1.0	06Na13			
$\text{D}_2\text{-}{}^4\text{He}$	25600.315	0.014	25600.30211	0.00025	-0.6	U			B08	1.5	75Sm02	
	25600.331	0.005			-2.3	U	MZ1	2.5	90Ge12 *			
	25600.328	0.005			-2.1	U	MZ1	2.5	92Ke06 *			
	25600.294	0.005			0.4	U	BL1	4.0	01He36			
$\text{H } {}^3\text{H-}{}^4\text{He}$	21271.075	0.012	21271.0560	0.0024	-1.1	U			B08	1.5	75Sm02	
${}^4\text{H}(\gamma, n){}^3\text{H}$	5200	1700	1600	100	-2.1	U					62Ar05	
	2900	500			-2.6	U					69Mi10 *	
	8000	3000			-2.1	U					79Me13 *	
	2700	600			-1.8	U					81Se11	
	2600	200			-5.0	B					85Fr01 *	
	3500	500			-3.8	B					86Be35 *	
	2600	400			-2.5	U					86Mi14 *	
	3000	200			-7.0	B					87Go25 *	
	3800	300			-7.3	B					90Am04 *	
	3100	300			-5.0	B					91Bi05 *	
	2300	300			-2.3	U					95Al31 *	
	2670	310			-3.5	B					03Me11	
	1600	100				2					09Gu17 *	
	${}^3\text{He}(\text{d}, \text{p}){}^4\text{He}$	18380	10	18353.0511	0.0023	-2.7	U			Mex		64Ma.B
		18382	15			-1.9	U	Mex		64Ma.B		
18350.1		3.9	0.8			U	NDm		67Od01			
${}^4\text{Li}(\text{p}){}^3\text{He}$	3300	300	3100	210	-0.7	2					87Br.B	
${}^*\text{D}_2\text{-}{}^4\text{He}$	Error has to be confirmed										GAu **	
${}^*\text{H}(\gamma, n){}^3\text{H}$	From ${}^7\text{Li}(\pi^-, t){}^4\text{H}$ reaction										69Mi10 **	
${}^*\text{H}(\gamma, n){}^3\text{H}$	From ${}^7\text{Li}(\pi^-, t){}^4\text{H}$ reaction										AHW **	
${}^*\text{H}(\gamma, n){}^3\text{H}$	From ${}^7\text{Li}({}^3\text{He}, {}^3\text{He}){}^4\text{H}$ reaction										85Fr01 **	
${}^*\text{H}(\gamma, n){}^3\text{H}$	From ${}^9\text{Be}({}^{11}\text{B}, {}^{16}\text{O}){}^4\text{H}$ reaction										86Be35 **	
${}^*\text{H}(\gamma, n){}^3\text{H}$	From ${}^7\text{Li}(\text{n}, \alpha){}^4\text{H}$ reaction										86Mi14 **	
${}^*\text{H}(\gamma, n){}^3\text{H}$	From ${}^9\text{Be}(\pi^-, \text{dt}){}^4\text{H}$, same data in reference										91Go19 **	
${}^*\text{H}(\gamma, n){}^3\text{H}$	From ${}^7\text{Li}(\pi^-, t){}^4\text{H}$										90Am04 **	
${}^*\text{H}(\gamma, n){}^3\text{H}$	From ${}^2\text{D}(\text{t}, \text{n}){}^4\text{H}$										91Bi05 **	
${}^*\text{H}(\gamma, n){}^3\text{H}$	From ${}^6\text{Li}({}^6\text{Li}, {}^8\text{B})$										95Al31 **	
${}^*\text{H}(\gamma, n){}^3\text{H}$	Fit with 3 resonances 1.6(0.1), 3.4(0.1), 6.0(0.1) MeV										09Gu17 **	
${}^5\text{H}(\gamma, 2\text{n}){}^3\text{H}$	1800	800	1800	90	0.0	U					68Yo06	
	11000	1500			-6.1	F			81Se.A *			
	7400	700			-8.0	F			87Go25 *			
	5200	400			-8.5	F			95Al31 *			
	1700	300			0.3	U			01Ko52 *			
	1800	100			0.0	2			03Go11 *			
	1800	200			0.0	2			04St18			
${}^4\text{He}(\text{n}, \gamma){}^5\text{He}$	-890	50	-735	20	3.1	B					66La04 *	
	-735	20							09Ak03			
${}^4\text{He}(\text{p}, \gamma){}^5\text{Li}$	-1965	50				3					65Ma32 *	
${}^*\text{H}(\gamma, 2\text{n}){}^3\text{H}$	From ${}^6\text{Li}(\pi^-, \text{p}){}^5\text{H}$. F : private communication by author										AHW **	
${}^*\text{H}(\gamma, 2\text{n}){}^3\text{H}$	From ${}^9\text{Be}(\pi^-, \text{pt}){}^5\text{H}$, same data in reference										91Go19 **	
${}^*\text{H}(\gamma, 2\text{n}){}^3\text{H}$	F : probably higher state										01Ko52 **	
${}^*\text{H}(\gamma, 2\text{n}){}^3\text{H}$	From ${}^7\text{Li}({}^6\text{Li}, {}^8\text{B})$										95Al31 **	
${}^*\text{H}(\gamma, 2\text{n}){}^3\text{H}$	F : probably higher state										01Ko52 **	
${}^*\text{H}(\gamma, 2\text{n}){}^3\text{H}$	From $\text{p}({}^6\text{He}, {}^2\text{He})$										01Ko52 **	
${}^*\text{H}(\gamma, 2\text{n}){}^3\text{H}$	From $\text{t}(\text{t}, \text{p})$										03Go11 **	
${}^*\text{H}(\text{n}, \gamma){}^5\text{He}$	Average of many reactions leading to ${}^5\text{He}$										AHW **	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
${}^4\text{He}(p,\gamma){}^5\text{Li}$	Average of many reactions leading to ${}^5\text{Li}$										AHW	**
${}^6\text{Li}-\text{C}$	30246.126	0.120	30245.775	0.003	-0.7	F			BL1	4.0	98He.B	*
	30245.548	0.034			1.7	U			BL1	4.0	01He36	
	30245.7748	0.0031			0.0	1	100	100 ${}^6\text{Li}$	FS1	1.0	10Mo30	
${}^6\text{Li}-\text{H}_6$	-31827.302	0.040	-31827.3060	0.0016	-0.1	U			ST2	1.0	06Na13	
${}^6\text{Li}-\text{D}_3$	-27182.498	0.040	-27182.4469	0.0016	0.3	U			BL1	4.0	01He36	
${}^4\text{He}-{}^6\text{Li}_{.667}$	-7483.694	0.046	-7483.7117	0.0010	-0.4	U			TT1	1.0	09Br10	
${}^6\text{He}-{}^7\text{Li}_{.857}$	5170.947	0.057	5170.95	0.06	0.0	1	100	100 ${}^6\text{He}$	TT1	1.0	12Br03	
${}^6\text{H}(\gamma,3n){}^3\text{H}$	2700	400	2710	250	0.0	2					84Al08	*
	2600	500			0.2	2					86Be35	*
	2800	500			-0.2	2					92Al.A	*
	2850	900			-0.2	2					08Ca22	*
${}^6\text{Li}(n,\alpha){}^3\text{H}$	4794	6	4783.4744	0.0027	-1.8	U			Win		67De15	
${}^6\text{Li}(p,\alpha){}^3\text{He}$	4017	12	4019.7184	0.0027	0.2	U			CIT		49To16	Y
	4021	5			-0.3	U			Wis		51Wi26	Y
	4023	2			-1.6	U			Bir		53Co02	Y
	4025	6			-0.9	o			MIT		64Sp12	
	4018.2	1.1			1.4	U			MIT		81Ro02	
${}^6\text{Li}(d,\alpha){}^4\text{He}$	22396	12	22372.7695	0.0015	-1.9	U			Bir		53Co02	Y
	22376	14			-0.2	U			Ric		53Ph28	Y
	22403	12			-2.5	U			Mex		64Ma.B	
${}^6\text{Li}(p,t){}^4\text{Li}$	-18700	300	-18900	210	-0.7	R			Brk		65Ce02	
${}^6\text{He}(\beta^-){}^6\text{Li}$	3509.8	3.8	3505.22	0.05	-1.2	U					63Jo04	
${}^6\text{Li}(p,n){}^6\text{Be}$	-5074	13	-5071	5	0.3	2			CIT		67Ho01	
${}^6\text{Li}({}^3\text{He},t){}^6\text{Be}$	-4306	6	-4307	5	-0.1	2			CIT		66Wh01	
${}^6\text{Li}_2-\text{C}$	F: leak during the measurement										98He.B	**
${}^6\text{H}(\gamma,3n){}^3\text{H}$	From ${}^7\text{Li}({}^7\text{Li}, {}^8\text{B}){}^6\text{H}$										84Al08	**
${}^6\text{H}(\gamma,3n){}^3\text{H}$	From ${}^9\text{Be}({}^{11}\text{B}, {}^{14}\text{O}){}^6\text{H}$										86Be35	**
*	${}^6\text{H}$ not observed in ${}^6\text{Li}(\pi^-, \pi^+)$										87Se.A	**
${}^6\text{H}(\gamma,3n){}^3\text{H}$	From ${}^7\text{Li}({}^7\text{Li}, {}^8\text{B}){}^6\text{H}$										92Al.A	**
${}^6\text{H}(\gamma,3n){}^3\text{H}$	Symmetrized from 2910(+850-950) keV										08Ca22	**
${}^7\text{Li}-\text{H}_7$	-38771.7889	0.0045	-38771.789	0.004	0.0	1	100	100 ${}^7\text{Li}$	ST2	1.0	06Na13	*
	29712	27				2				1.0	11Ch32	*
${}^7\text{Li}-{}^6\text{Li}_{1.167}$	-1644.991	0.079	-1644.974	0.005	0.2	o			TT1	1.0	09Br10	
${}^6\text{Li}-{}^7\text{Li}_{.857}$	1407.954	0.013	1407.942	0.004	-0.9	U			TT1	1.0	09Br.A	
${}^3\text{He}(\alpha,\gamma){}^7\text{Be}$	1586.3	0.6	1587.13	0.07	1.4	U					82Kr05	
${}^7\text{Li}(p,\alpha){}^4\text{He}$	17364	11	17346.245	0.004	-1.6	U			CIT		51Wh05	Y
	17352	9			-0.6	U			Bir		53Co02	Y
	17345	13			0.1	U			Ric		53Fa18	Y
	17373	6			-4.5	C			Mex		64Ma.B	
	17357	14			-0.8	U			MIT		64Sp12	
${}^7\text{H}(\gamma,2n){}^5\text{H}$	-1100	340	100#	1000#	3.5	F					08Ca22	*
${}^7\text{He}(\gamma,n){}^6\text{He}$	450	20	410	8	-2.0	3			MSU		01Ch31	
	430	20			-1.0	3					02Me07	
	360	50			1.0	U					06Sk03	
	400	10			1.0	3					08De29	
	388	20			1.1	3					09Ak03	
${}^7\text{Li}(t,\alpha){}^6\text{He}$	9788	30	9839.90	0.05	1.7	U			ChR		54Al35	Y
${}^7\text{Li}(d,{}^3\text{He}){}^6\text{He}-{}^{19}\text{F}({}^{18}\text{O})$	-1981.09	0.42	-1980.36	0.05	1.7	U			MSU		78Ro01	*
${}^6\text{Li}(n,\gamma){}^7\text{Li}$	7250.0	0.5	7251.091	0.005	2.2	U			Utr		68Sp01	
	7250.3	0.9			0.9	U					72Op01	
	7250.98	0.09			1.2	U			Ptn		85Ko47	*
	7249.94	0.15			7.7	C			Bdn		06Fi.A	
${}^6\text{Li}(d,p){}^7\text{Li}$	5028	2	5026.525	0.004	-0.7	U			Bir		53Co02	Y
	5035	5			-1.7	U			Mex		61Ja23	
	5024	7			0.4	U			MIT		64Sp12	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
${}^6\text{Li}(t,d){}^7\text{Li}$	986	7	993.858	0.005	1.1	U			ChR		54A135
${}^7\text{Li}({}^3\text{He},\alpha){}^6\text{Li}$	13322	10	13326.526	0.005	0.5	U			Mex		64Ma.B
${}^6\text{Li}(n,\gamma){}^7\text{Li}^i$	-3947	50	-4000	30	-1.0	1	39	39 ${}^7\text{Li}^i$			69Pr04 *
${}^6\text{Li}({}^3\text{He},d){}^7\text{Be}$	136	3	113.37	0.07	-7.5	C			Mex		64Ma.B
${}^7\text{Li}({}^3\text{He},{}^7\text{He})$	-11184	30	-11147	8	1.2	U			LAL		69St02
${}^7\text{Be}(\epsilon){}^7\text{Li}$	866	7	861.89	0.07	-0.6	U					72Pe05
${}^7\text{Li}(p,n){}^7\text{Be}$	-1644.04	0.22	-1644.24	0.07	-0.9	U			Zur		61Ry05 Z
	-1643.68	0.26			-2.2	U			Wis		63Ga09 Y
	-1644.30	0.10			0.6	-			Mar		70Ro07 *
	-1644.18	0.10			-0.6	-			Auc		85Wh03 *
ave.	-1644.24	0.07			0.0	1	100	100 ${}^7\text{Be}$			average
${}^7\text{Li}(\pi^+,\pi^-){}^7\text{B}$	-11870	100	-11747	25	1.2	U					81Se.A
${}^7\text{Be}^i(\text{IT}){}^7\text{Be}$	11000	50	10980	30	-0.4	3					67Ha08
	10970	40			0.3	3					67Mc14
* ${}^7\text{Li}-\text{H}_7$	$D_M=7016003.4256(45)-7x1007825.03207(10)$ using Ame2003										06Na13 **
* ${}^7\text{B}-\text{u}$	Represents ${}^7\text{B} \rightarrow 3p + {}^4\text{He}$, yielding $\text{ME}=27677(25)$ keV										GAu **
* ${}^7\text{H}(\gamma,2n){}^5\text{H}$	From ${}^7\text{H}(\gamma,4n){}^3\text{H} = 704(323)$, and ${}^5\text{H}(\gamma,2n){}^3\text{H} = 1800(100)$ keV										08Ca22 **
* ${}^7\text{H}(\gamma,2n){}^5\text{H}$	F : not confirmed in later work of reference with higher statistics										10Ni10 **
* ${}^7\text{Li}(d,{}^3\text{He}){}^6\text{He}-{}^{19}\text{F}({}^{18}\text{O})$	$Q-Q=0.98(0.41)$ to 2^+ level at $1982.07(0.09)$ keV in ${}^{18}\text{O}$										Ens967 **
* ${}^6\text{Li}(n,\gamma){}^7\text{Li}$	Original 7251.02 recalibrated using ${}^{35}\text{Cl}(n,\gamma)$ of reference										82Kr12 **
* ${}^6\text{Li}(n,\gamma){}^7\text{Li}$	Typo 7250.02 in Ame1986 recalib. 7249.97 in Ame1993, 7249.98 Ame2003										GAu **
* ${}^6\text{Li}(n,\gamma){}^7\text{Li}^i$	IT=11200(50); Q rebuilt with Ame1965										MMC128**
* ${}^7\text{Li}(p,n){}^7\text{Be}$	T=1880.64(0.09,Z); error in Q increased										AHW **
* ${}^7\text{Li}(p,n){}^7\text{Be}$	T=1880.43(0.02,Z); error in Q increased										AHW **
${}^8\text{C}-\text{u}$	37606	32	37643	20	1.2	1	37	37 ${}^8\text{C}$	1.0	1.0	11Ch32 *
${}^8\text{He}-{}^6\text{Li}_{1.333}$	13776.88	0.72	13775.58	0.10	-1.8	o			TT1	1.0	08Ry03
	13775.50	0.19			0.4	1	25	25 ${}^8\text{He}$	TT1	1.0	08Br.D
${}^8\text{Li}-{}^6\text{Li}_{1.333}$	2327.426	0.034	2327.44	0.05	0.4	o			TT1	1.0	08Sm.A
	2327.42	0.11			0.2	o			TT1	1.0	08Sm03
	2327.42	0.11			0.2	1	21	21 ${}^8\text{Li}$	TT1	1.0	09Br10
${}^8\text{He}-{}^7\text{Li}_{1.143}$	15642.49	0.11	15642.46	0.10	-0.2	1	75	75 ${}^8\text{He}$	TT1	1.0	12Br03
${}^4\text{He}({}^{18}\text{O},{}^{14}\text{O}){}^8\text{He}$	-37967	25	-37975.04	0.14	-0.3	U			MIT		75Ja10
${}^4\text{He}({}^{26}\text{Mg},{}^{22}\text{Mg}){}^8\text{He}$	-44962	30	-44999.4	0.3	-1.2	U			Brk		74Ce05
${}^4\text{He}({}^{64}\text{Ni},{}^{60}\text{Ni}){}^8\text{He}$	-31818	15	-31810.7	0.4	0.5	U			Pri		75Ko18
	-31796	8			-1.8	U			Tex		77Tr07
${}^8\text{Be}(\alpha){}^4\text{He}$	91.88	0.05	91.84	0.04	-0.8	3			Zur		68Be02 *
	91.80	0.05			0.8	3					92Wu09 *
${}^6\text{Li}(t,p){}^8\text{Li}$	790	11	801.91	0.05	1.1	U			ChR		54A135
${}^6\text{Li}({}^3\text{He},p){}^8\text{Be}$	16824	12	16787.45	0.04	-3.0	U			Mex		64Ma.B
${}^6\text{Li}(d,\gamma){}^8\text{Be}^j$	-5216.5	3.0	-5213.4	2.0	1.0	1	43	43 ${}^8\text{Be}^j$			76No07 *
${}^6\text{Li}({}^3\text{He},n){}^8\text{B}$	-1974.8	1.0	-1974.8	1.0	0.0	1	100	100 ${}^8\text{B}$	Nvl		58Du78 Y
${}^7\text{Li}(n,\gamma){}^8\text{Li}$	2032.78	0.15	2032.62	0.05	-1.1	-					74Ju.A *
	2032.77	0.18			-0.8	-			ORn		91Ly01 Z
	2032.57	0.06			0.8	-			Bdn		06Fi.A
${}^7\text{Li}(d,p){}^8\text{Li}$	-192	1	-191.95	0.05	0.1	U			Wis		51Wi26 Y
	-188	7			-0.6	U			MIT		64Sp12
ave.	2032.61	0.05	2032.62	0.05	0.1	1	79	79 ${}^8\text{Li}$			average
${}^7\text{Li}({}^3\text{He},d){}^8\text{Be}$	11795	13	11760.93	0.04	-2.6	U			Mex		64Ma.B
* ${}^8\text{C}-\text{u}$	Represents ${}^8\text{C} \rightarrow 4p + {}^4\text{He}$, yielding $\text{ME}=35030(30)$ keV										GAu **
* ${}^8\text{Be}(\alpha){}^4\text{He}$	For atomic binding energy correction see reference										67St30 **
* ${}^6\text{Li}(d,\gamma){}^8\text{Be}^j$	$E_d=6962.8(3.0)$ keV										76No07 **
* ${}^7\text{Li}(n,\gamma){}^8\text{Li}$	PrvCom to reference										74Aj01 **
${}^9\text{Li}-{}^6\text{Li}_{1.500}$	4105.867	0.092	4105.86	0.20	-0.1	o			TT1	1.0	08Sm.A
	4105.86	0.20				2			TT1	1.0	08Sm03
${}^9\text{Be}-{}^7\text{Li}_{1.286}$	-8397.39	0.10	-8397.35	0.08	0.4	1	67	67 ${}^9\text{Be}$	TT1	1.0	09Ri03

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
${}^9\text{Be}(\text{p},\alpha){}^6\text{Li}$	2117	7	2125.63	0.08	1.2	U			CIT		49To16 Y
	2130	10			-0.4	U			Chi		51Ca37 Y
	2125	4			0.2	U			Wis		51Wi26 Y
	2126	2			-0.2	U			Bir		53Co02 Y
	2144	6			-3.1	B			MIT		64Sp12
	2125.4	1.8			0.1	U			NDm		67Od01
${}^6\text{Li}(\alpha,\text{p}){}^9\text{Be}$	-2125.6	1.2	-2125.63	0.08	0.0	U			NDm		65Br28
${}^6\text{Li}(\alpha,\text{n}){}^9\text{B}$	-3974	12	-3976.0	0.9	-0.2	U			Tal		63Me08
${}^7\text{Li}(\text{t},\text{p}){}^9\text{Li}$	-2397	20	-2386.96	0.19	0.5	U					64Mi04
	-2385.7	3.0			-0.4	U			MSU		75Ka18
${}^9\text{Be}(\text{d},\alpha){}^7\text{Li}$	7162	10	7152.15	0.08	-1.0	U			CIT		51Wh05 Y
	7153	3			-0.3	U			Bir		53Co02 Y
	7162	4			-2.5	U			Mex		64Ma.B
	7157	8			-0.6	U			MIT		64Sp12
${}^7\text{Li}({}^3\text{He},\text{p}){}^9\text{Be}$	11215	15	11200.90	0.08	-0.9	U			Mex		64Ma.B
${}^9\text{Be}(\text{p},{}^3\text{He}){}^7\text{Li}^i$	-22499	50	-22450	30	1.0	o			Brk		65De08
	-22479	40			0.8	1	61	61 ${}^7\text{Li}^i$	Brk		67Mc14
${}^7\text{Be}({}^3\text{He},\text{n}){}^9\text{C}$	-6287	5	-6282.1	2.1	1.0	3			CIT		67Ba.A Z
	-6275.2	3.5			-2.0	3			CIT		71Mo01 Z
${}^9\text{He}(\gamma,\text{n}){}^8\text{He}$	100	60	1250	50	19.2	B			MSU		01Ch31 *
	1270	100			-0.2	-			Ber		99Bo26
	2000	200			-3.7	B					07Go24
	1330	80			-0.9	-					10Jo06 *
	ave.	1310	60			-0.8	1	56	56 ${}^9\text{He}$		average
${}^9\text{Be}(\gamma,\text{n}){}^8\text{Be}$	-1665	1	-1664.54	0.08	0.5	U			Wis		50Mo56 Y
${}^9\text{Be}(\text{p},\text{d}){}^8\text{Be}$	557	3	560.03	0.08	1.0	U			CIT		49To16 Y
	558	5			0.4	U			Chi		51Ca37 Y
	557.5	1.			2.5	U			Wis		51Wi26 Y
	560	2			0.0	U			Bir		53Co02 Y
	562	4			-0.5	U			MIT		64Sp12
	559.0	1.1			0.9	U			Zur		66Re02
	559.6	0.6			0.7	U			NDm		67Od01 Z
	4602	13	4592.70	0.08	-0.7	U			MIT		64Sp12
4591.7	3.1			0.3	U			NDm		67Od01	
${}^9\text{Be}({}^3\text{He},\alpha){}^8\text{Be}$	18931	13	18913.08	0.08	-1.4	U			Mex		64Ma.B
${}^9\text{Be}(\pi^-, \pi^+){}^9\text{He}$	-30472	100	-30610	50	-1.4	-					87Se05
${}^9\text{Be}({}^{13}\text{C}, {}^{13}\text{O}){}^9\text{He}$	-50200	600	-49580	50	1.0	o			Ber		88Bo20
	-49470	80			-1.3	o			Ber		91Bo.B
${}^9\text{Be}({}^{14}\text{C}, {}^{14}\text{O}){}^9\text{He}$	-34580	100	-34580	50	0.0	-			Ber		95Bo.B
${}^9\text{Be}(\pi^-, \pi^+){}^9\text{He}$	ave.	-30540	70	-30610	50	-0.9	1	44	44 ${}^9\text{He}$		average
${}^9\text{Be}(\text{p},\text{n}){}^9\text{B}$	-1850.4	1.0				2			Wis		50Ri59 Z
	-1852	3	-1850.4	0.9	0.5	U			Ric		55Ma84 Z
* ${}^9\text{He}(\gamma,\text{n}){}^8\text{He}$	From scattering length $a_s = -10$ fm; questioned in reference										
* ${}^9\text{He}(\gamma,\text{n}){}^8\text{He}$	Scattering length $a_s = -3.17(66)$ fm										
${}^{10}\text{B} {}^{37}\text{Cl}-\text{C} {}^{35}\text{Cl}$	9987.21	0.56	9986.9	0.4	-0.2	U			H38	2.5	84El05
${}^{10}\text{Be}-{}^7\text{Li}_{1,429}$	-9334.16	0.13	-9334.22	0.09	-0.4	1	44	44 ${}^{10}\text{Be}$	TT1	1.0	09Ri03
${}^{10}\text{C}-{}^{10}\text{B}$	3916.416	0.090	3916.36	0.07	-0.6	1	67	67 ${}^{10}\text{C}$	JY1	1.0	11Er02
${}^7\text{Li}(\text{t},\gamma){}^{10}\text{Be}^i$	-3930	20				2					73Ab10
${}^{10}\text{B}(\text{n},\alpha){}^7\text{Li}$	2801	4	2790.0	0.4	-2.8	U					67De15
${}^7\text{Li}(\alpha,\text{n}){}^{10}\text{B}$	-2787	4	-2790.0	0.4	-0.7	U			Ric		57Bi84 Y
${}^{10}\text{B}(\text{p},\alpha){}^7\text{Be}$	1147	5	1145.7	0.4	-0.3	U			CIT		49Ch35 Y
	1146	6			0.0	U			CIT		51Br10 Y
	1146	2			-0.1	U			Wis		52Cr30 Y
	1153	4			-1.8	U			MIT		64Sp12
${}^{10}\text{B}({}^3\text{He}, {}^6\text{He}){}^7\text{B}$	-18550	100	-18287	25	2.6	U			Brk		67Mc14
${}^{10}\text{He}(\gamma,2\text{n}){}^8\text{He}$	1200	300	1420	100	0.7	U					94Ko16
	1420	100				2					10Jo06
	2100	200			-3.4	B					12Si07

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{10}\text{Be}(p,^3\text{He})^8\text{Li}^i$	-26802.3	5.4				2			MSU		75Ro01 *
$^{10}\text{Be}(p,t)^8\text{Be}^j$	-27487.0	2.6	-27489.3	2.0	-0.9	1	57	$^{57}\text{ }^8\text{Be}^j$	MSU		75Ro01 *
$^{10}\text{B}(d,\alpha)^8\text{Be}$	17829	10	17819.8	0.4	-0.9	U			Bir		54El10 Y
	17830	6			-1.7	U			Mex		64Ma.B
	17818.6	4.1			0.3	U			NDm		67Od01
$^{10}\text{B}(p,^3\text{He})^8\text{Be}$	-535.5	2.5	-533.2	0.4	0.9	U			Wis		52Cr30 Y
$^{10}\text{Li}(\gamma,n)^9\text{Li}$	150	150	26	13	-0.8	U					90Am05 *
	25	15			0.1	3					95Zi03 *
	30	24			-0.1	3					08Ak03 *
$^{10}\text{Li}^m(\gamma,n)^9\text{Li}$	240	60	220	40	-0.3	3					97Bo10 *
	210	50			0.2	3					97Zi04 *
$^9\text{Be}(^9\text{Be},^8\text{B})^{10}\text{Li}^n$	-33770	260	-33750	40	0.1	U			Brk		75Wi26 *
$^9\text{Be}(^{13}\text{C},^{12}\text{N})^{10}\text{Li}^n$	-36370	50	-36390	40	-0.4	2			Ber		93Bo03 *
$^{10}\text{Be}(d,^3\text{He})^9\text{Li}$	-14142.8	2.5	-14142.91	0.20	0.0	U			MSU		75Ka18
$^9\text{Be}(n,\gamma)^{10}\text{Be}$	6812.33	0.06	6812.28	0.05	-0.8	-			MMn		86Ke14 Z
	6812.10	0.14			1.3	-			Bdn		06Fi.A
$^9\text{Be}(d,p)^{10}\text{Be}$	4583	8	4587.72	0.05	0.6	U			Ric		51K155 Y
	4595	4			-1.8	U			Mex		64Ma.B
	4590	8			-0.3	U			MIT		64Sp12
$^9\text{Be}(n,\gamma)^{10}\text{Be}$	ave.	6812.29	0.06	6812.28	0.05	-0.2	1	88	$^{56}\text{ }^{10}\text{Be}$		average
$^9\text{Be}(^3\text{He},d)^{10}\text{B}$	1123	5	1093.3	0.4	-5.9	C			Mex		64Ma.B
$^{10}\text{B}(d,t)^9\text{B}$	-2189	10	-2179.9	1.0	0.9	U			MIT		64Sp12
$^{10}\text{B}(^3\text{He},\alpha)^9\text{B}$	12130	15	12140.5	1.0	0.7	U			Ric		60Sp08
	12171	15			-2.0	U			Mex		64Ma.B
$^{10}\text{Be}(^{14}\text{C},^{14}\text{O})^{10}\text{He}$	-41190	70	-41550	100	-5.2	B			Ber		94Os04
$^{10}\text{Be}(\beta^-)^{10}\text{B}$	560	5	556.8	0.4	-0.6	U					50Hu27
	555	5			0.4	U					52Fe16
$^{10}\text{C}(\beta^+)^{10}\text{B}$	3604	16	3648.06	0.07	2.8	U					63Ba52
$^{10}\text{B}(p,n)^{10}\text{C}$	-4433.7	1.5	-4430.41	0.07	2.2	U			Har		75Fr.A
	-4430.17	0.34			-0.7	o			Auc		84Ba12 *
	-4430.17	0.09			-2.7	o			Auc		89Ba28 *
	-4430.30	0.12			-0.9	1	33	$^{33}\text{ }^{10}\text{C}$	Auc		98Ba83 *
$^{10}\text{B}(^3\text{He},t)^{10}\text{C}$	-3667	10	-3666.65	0.07	0.0	U			Brk		68Br23
$^{10}\text{B}(^{14}\text{N},^{14}\text{B})^{10}\text{N}$	-47550	400				2					02Le16
$^*^{10}\text{Be}(p,^3\text{He})^8\text{Li}^i$	Original value -26804.1(5.4) recalibrated										AHW **
$^*^{10}\text{Be}(p,t)^8\text{Be}^j$	Original -27487.6(2.6) recalibrated										GAu **
$^*^{10}\text{Li}(\gamma,n)^9\text{Li}$	From $^{11}\text{B}(\pi^-,p)^{10}\text{Li}$										GAu **
$^*^{10}\text{Li}(\gamma,n)^9\text{Li}$	Resonance less than 50 above the one neutron threshold, but could also be final state interaction; then ^{10}Li would be 200 higher										95Zi03 **
$^*^{10}\text{Li}(\gamma,n)^9\text{Li}$	Deduced from s-state scattering length of -22.4(4.8) fm										97Bo10 **
$^*^{10}\text{Li}^m(\gamma,n)^9\text{Li}$	From $^{10}\text{Be}(^{12}\text{C},^{12}\text{N})^{10}\text{Li}^m$ (1^+ level)										08Ak03 **
$^*^{10}\text{Li}^m(\gamma,n)^9\text{Li}$	Theoretical work: 1^+ level above 1^- ground state										GAu **
$^*^9\text{Be}(^9\text{Be},^8\text{B})^{10}\text{Li}^n$	Q=-34060(250) to 2^+ level 290(80) above 1^+ level revised with Breit-Wigner line shape. Probably 2^+ level										02Ga12 **
$^*^9\text{Be}(^{13}\text{C},^{12}\text{N})^{10}\text{Li}^n$	Revised with Breit-Wigner line shape (probably 2^+ level)										93Bo03 **
$^*^{10}\text{B}(p,n)^{10}\text{C}$	T=4876.90(0.37); withdrawn by author										97Bo10 **
$^*^{10}\text{B}(p,n)^{10}\text{C}$	T=4876.88(0.10,Z); original T=4876.95(0.10) keV										97Bo10 **
$^*^{10}\text{B}(p,n)^{10}\text{C}$	Average of two datasets; withdrawn by author										89Ba28 **
$^*^{10}\text{B}(p,n)^{10}\text{C}$	T=4877.03(0.13); this is the second 89Ba28 dataset, recalibrated by author										MMC126**
											98Ba83 **
											98Ba83 **
$^{11}\text{B } ^{37}\text{Cl}-^{13}\text{C } ^{35}\text{Cl}$	2998.15	1.30	3000.4	0.5	0.7	U			H38	2.5	84El05
$^{11}\text{Li}-^6\text{Li}_{1,833}$	16003.5	1.2	16003.3	0.7	-0.1	o			TT1	1.0	08Sm.A
	16003.33	0.66				2			TT1	1.0	08Sm03
$^{11}\text{Be}-^6\text{Li}_{1,833}$	-6059.27	0.28	-6059.17	0.26	0.4	1	83	$^{83}\text{ }^{11}\text{Be}$	TT1	1.0	08Br.C
$^{11}\text{Be}-^7\text{Li}_{1,571}$	-3479.83	0.62	-3480.32	0.26	-0.8	1	17	$^{17}\text{ }^{11}\text{Be}$	TT1	1.0	09Ri03
$^{11}\text{Li-u}$	43780	130	43723.6	0.7	-0.3	U			TO2	1.5	88Wo09
	43805	28			-2.9	U			P40	1.0	03Ba.A
	43715.4	5.0			1.6	o			P40	1.0	04Ba.A
	43714.5	5.1			1.8	U			P40	1.0	09Ga24

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{11}\text{Be-u}$	21654.0	3.6	21661.08	0.26	2.0		P40	1.0	04Ba.A	
	21653.5	3.5			2.2		P40	1.0	09Ga24	
	21658.5	3.8			0.7		P40	1.0	09Ga24 *	
$^9\text{Li}-^{11}\text{Li}_{.491} \ ^6\text{Li}_{.600}$	-3949	175	-3494.8	0.4	1.0		P12	2.5	75Th08	
$^9\text{Li}-^{11}\text{Li}_{.409} \ ^7\text{Li}_{.643}$	-1250	86	-1288.2	0.3	-0.3		P11	1.5	75Th08 *	
$^9\text{Li}-^{11}\text{Li}_{.273} \ ^8\text{Li}_{.750}$	-1223	195			-0.3		P13	1.0	75Th08	
	-1928	31	-1873.26	0.25	0.7		P12	2.5	75Th08	
	-1923	31			1.6		P13	1.0	75Th08	
$^7\text{Li}(\alpha,\gamma)^{11}\text{B}^i$	-3885.6	20.0	-3896	9	-0.5	1	21	21	$^{11}\text{B}^i$	
$^{11}\text{B}(\text{p},\alpha)^8\text{Be}$	8583	15	8590.3	0.4	0.5		CIT		66Cu02 *	
	8589	4			0.3		Bir		53Co02 Y	
	8597	6			-1.1		Mex		61Ja23	
	8575	11			1.4		MIT		64Sp12	
$^{11}\text{B}(\ ^3\text{He},\ ^6\text{He})^8\text{B}^i$	-27539	8				2	MSU		75Ro01 *	
$^9\text{Be}(\text{t},\text{p})^{11}\text{Be}$	-1164	15	-1167.88	0.25	-0.3		Ald		62Pu01	
$^{11}\text{B}(\text{d},\alpha)^9\text{Be}$	8029	4	8030.2	0.4	0.3		Bir		54El10 Y	
	8035	9			-0.5		Mex		64Ma.B	
	8024	7			0.9		MIT		64Sp12	
	8029.7	2.8			0.2		NDm		67Od01	
$^9\text{Be}(\ ^3\text{He},\text{p})^{11}\text{B}$	10344	13	10322.8	0.4	-1.6		Mex		64Ma.B	
	10322.1	2.3			0.3		NDm		67Od01	
$^{11}\text{B}(\text{p},\ ^3\text{He})^9\text{Be}^i$	-24713.3	1.7				2	MSU		74Ka15 *	
$^9\text{Be}(\ ^3\text{He},\text{p})^{11}\text{B}^i$	-2240	12	-2237	9	0.2				63Gr.A *	
	-2240.6	20.			0.2		MSU		82Zw02 *	
ave.	-2240	10			0.3	1	79	79	$^{11}\text{B}^i$	
$^{11}\text{B}(\text{p},\text{t})^9\text{B}^i$	-26064.1	2.3				2	MSU		74Ka15 *	
$^9\text{Be}(\ ^3\text{He},\text{n})^{11}\text{C}^i$	-4612	50	-4600	40	0.2	1	50	50	$^{11}\text{C}^i$	
$^{10}\text{Be}(\text{d},\text{p})^{11}\text{Be}$	-1721	7	-1722.93	0.25	-0.3		CIT		70Go11 *	
$^{11}\text{B}(\ ^7\text{Li},\ ^8\text{B})^{10}\text{Li}$	-32431	80	-32399	13	0.4		MSU		94Yo01 *	
$^{11}\text{B}(\ ^7\text{Li},\ ^8\text{B})^{10}\text{Li}^n$	-32908	62	-32870	40	0.5	R	MSU		94Yo01 *	
$^{10}\text{Be}(\text{p},\gamma)^{11}\text{B}^i$	-1322	30	-1332	9	-0.3				70Go04 *	
$^{10}\text{B}(\text{n},\gamma)^{11}\text{B}$	11454.1	0.2	11454.12	0.16	0.1	-	Ptn		86Ko19 Z	
	11454.15	0.27			-0.1	-	Bdn		06Fi.A	
$^{10}\text{B}(\text{d},\text{p})^{11}\text{B}$	9227	5	9229.56	0.16	0.5		Bir		54El10 Y	
	9234	6			-0.7		Mex		64Ma.B	
	9244	11			-1.3		MIT		64Sp12	
	9232.9	2.			-1.7		NDm		66Br18	
$^{11}\text{B}(\ ^3\text{He},\alpha)^{10}\text{B}$	9101	20	9123.49	0.16	1.1		Man		60Ta12	
$^{10}\text{B}(\text{n},\gamma)^{11}\text{B}$	ave.	11454.12	0.16	11454.12	0.16	0.0	1	100	99	^{11}B
$^{10}\text{B}(\ ^3\text{He},\text{d})^{11}\text{C}$	3174	15	3195.9	0.9	1.5				average	
	3226	10			-3.0		Man		60Fo01	
$^{11}\text{N}(\text{p})^{10}\text{C}$	1973	180	1320	50	-3.7	B	MSU		74Be20 *	
	1300	40			0.4	o	Lis		96Ax01	
	1450	400			-0.3	U	MSU		98Az01 *	
	1630	50			-6.3	B	Spe		00O101 *	
	1350	120			-0.3	2	Lis		00Ma62 *	
	1310	50			0.1	2	INS		03Gu06	
	1540	20			-11.2	B			06Ca05	
$^{11}\text{B}(\pi^-, \pi^+)^{11}\text{Li}$	-33120	50	-33082.4	0.7	0.8				91Ko.B	
$^{11}\text{B}(\ ^{14}\text{C},\ ^{14}\text{O})^{11}\text{Li}$	-37120	35	-37047.9	0.8	2.1		MSU		93Yo07	
$^{11}\text{B}^i(\text{IT})^{11}\text{B}$	12510	50	12560	9	1.0				71Wa21 *	
$^{11}\text{C}(\beta^+)^{11}\text{B}$	1982.8	2.6	1982.4	0.9	-0.1	-			75Be28	
$^{11}\text{B}(\text{p},\text{n})^{11}\text{C}$	-2759.7	3.	-2764.8	0.9	-1.7				50Ri59 Z	
	-2763.2	1.4			-1.1	-	Ric		61Be13 Z	
$^{11}\text{B}(\ ^3\text{He},\text{t})^{11}\text{C}$	-2002.1	1.2	-2001.0	0.9	0.9	-	Str		65Go05 Z	
$^{11}\text{C}(\beta^+)^{11}\text{B}$	ave.	1982.4	0.9	1982.4	0.9	0.0	1	100	100	^{11}C
$^{11}\text{B}(\ ^3\text{He},\text{t})^{11}\text{C}^i$	-14151	50	-14160	40	-0.2	1	50	50	$^{11}\text{C}^i$	
* $^{11}\text{Be-u}$	Result from the "cooling" experiment									
* $^9\text{Li}-^{11}\text{Li}_{.409} \ ^7\text{Li}_{.643}$	Symmetric double-doublet 6-9-8-11 included									
* $^7\text{Li}(\alpha,\gamma)^{11}\text{B}^i$	IT=12550(30); Q rebuilt with Ame1964									
* $^{11}\text{B}(\ ^3\text{He},\ ^6\text{He})^8\text{B}^i$	IT=10619(9); rebuilt Q=-27538.9(8.2) keV									
* $^{11}\text{B}(\text{p},\ ^3\text{He})^9\text{Be}^i$	IT=14392.2(1.8); rebuilt Q=-24715.2(1.7); recalibrated +1.87 keV									
* $^9\text{Be}(\ ^3\text{He},\text{p})^{11}\text{B}^i$	IT=12565(12); Q rebuilt with Ame1961									
* $^9\text{Be}(\ ^3\text{He},\text{p})^{11}\text{B}^i$	IT=12563(20); Q rebuilt with Ame1977									
* $^{11}\text{B}(\text{p},\text{t})^9\text{B}^i$	IT=14655.4(2.5); rebuilt Q=-26064.3; recalibrated +0.16 keV									

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
C H- ¹³ C	4500	36	4470.19716	0.00027	-0.6	U			R08	1.5	69De19	
	4470.185	0.008			1.0	U			B08	1.5	75Sm02	
	4470.10	0.05			0.8	U			M25	2.5	78Ha14	
C D- ¹³ C H	2921.923	0.008	2921.91082	0.00024	-1.0	U			B08	1.5	75Sm02	
	2921.87	0.05			0.3	U			M25	2.5	78Ha14	
	2921.9086	0.0012			1.8	U			MI1	1.0	95Di08	
	2921.9074	0.0015			2.3	U			MI1	1.0	95Di08	
¹³ C-u	3354.8404	0.0041	3354.83507	0.00023	-1.3	U			WA1	1.0	95Va38	
⁹ Be(α,γ) ¹³ C ⁱ	-4458.4	2.0	-4460.4	1.1	-1.0	2					73Ad02	
	-4461.4	1.4			0.7	2					78Hi06	
¹⁰ B(α,p) ¹³ C	4068	12	4061.6	0.4	-0.5	U			MIT		64Sp12	
	4063.4	2.4			-0.7	U			NDm		67Od01	
¹³ Li($\gamma,2n$) ¹¹ Li	1470	310	1470	350	0.0	o					08Ak03	
	1470	350				3					10Jo07	
¹¹ B(t,p) ¹³ B	-233	4	-233.4	1.0	-0.1	U			Man		60Mu07	
	-233.4	1.0				2			Str		83An15	
¹³ C(d, α) ¹¹ B	5169	6	5167.9	0.4	-0.2	U			CIT		51Li29 Y	
	5166	5			0.4	U			Ric		53Ph28 Y	
	5165	10			0.3	U			MIT		64Sp12	
	5166.6	2.5			0.5	U			NDm		70Br23	
¹¹ B(³ He,p) ¹³ C	13221	10	13185.1	0.4	-3.6	C			Mex		64Ma.B	
	13185.4	4.0			-0.1	U			NDm		67Od01	
¹¹ B(³ He,n) ¹³ N	10183	11	10182.3	0.5	-0.1	U					71Hs03	
¹³ Be(γ,n) ¹² Be	100	70	510	10	5.9	B					01Th01 *	
	60	10			45.0	B					08Ch07 *	
	510	10				2					10Ko17	
¹² C(n, γ) ¹³ C	4946.47	0.17	4946.3084	0.0005	-1.0	U					67Pr10	
	4946.03	0.15			1.9	U			Utr		68Sp01	
	4946.51	0.31			-0.7	U			ILn		79Br25 Z	
	4946.321	0.024			-0.5	U					80Wa24 *	
	4946.337	0.031			-0.9	U			Utr		81Va.B *	
	4946.31	0.10			0.0	U			Bdn		06Fi.A	
¹² C(d,p) ¹³ C	2727	6	2721.74240	0.00023	-0.9	o			Ric		51K155 Y	
	2722	4			-0.1	U			Ric		53Fa18 Y	
	2720	2			0.9	U			Bir		54E110 Y	
	2725	5			-0.7	U			Mex		61Ja23	
	2722	4			-0.1	U			MIT		64Sp12	
	2722.3	0.6			-0.9	o			NDm		67Od01	
	2721.9	0.8			-0.2	U			NDm		74Jo14	
	2721.80	0.50			-0.1	U			Rez		90Pi05 *	
	¹³ C(p,d) ¹² C	-2722	7	-2721.74240	0.00023	0.0	o			MIT		64Sp12
	¹³ C(d,t) ¹² C	1311	3	1310.9244	0.0022	0.0	U			CIT		51Li29 Y
1311		6			0.0	U			Mex		64Ma.B	
1311		6			0.0	U			MIT		64Sp12	
1310.9		0.7			0.0	U			NDm		67Od01	
¹² C(p, γ) ¹³ N	1943.24	0.32	1943.49	0.27	0.8	-					77Fr20 Z	
	1944.1	0.5			-1.2	-					77He26 Z	
¹² C(d,n) ¹³ N	-280.5	3.	-281.08	0.27	-0.2	U			Ric		49Bo67 Y	
¹² C(p, γ) ¹³ N	ave.	1943.49	1943.49	0.27	0.0	1	100	100 ¹³ N			average	
¹² C(p, γ) ¹³ N ⁱ	-13121.62	0.18				2					73Hu07	
¹³ C(¹⁴ C, ¹⁴ O) ¹³ Be ^p	-37020	50				2			Ber		92Os04	
¹³ N(β^+) ¹³ C	2222.3	3.8	2220.47	0.27	-0.5	U					54Ki23	
¹³ C(p,n) ¹³ N	-3002.3	1.0	-3002.82	0.27	-0.5	o			Ric		61Be13 Z	
	-3004.1	1.5			0.9	U			NRL		64Bo10 Z	
	-3002.4	1.0			-0.4	U			Ric		66Bo20	
¹³ O(β^+) ¹³ N	17500	200	17770	10	1.3	U					65Mc09	
* ¹³ Be(γ,n) ¹² Be	From scattering length as <-10 fm; questioned in reference											
* ¹³ Be(γ,n) ¹² Be	From scattering length $a_s = -20$ fm; questioned in reference											
*	$a_s = -3.4(0.6)$ fm in 10Ko17; $a_s = -3.2(+9-1.1)$ fm in 07Si24											
* ¹² C(n, γ) ¹³ C	Q(γ)=1261.844(0.006,Z) to 3684.477(0.023,Z) level											
* ¹² C(n, γ) ¹³ C	Q(γ)=1261.844(0.006,Z) to 3684.493(0.030,Z) level											
* ¹² C(d,p) ¹³ C	Estimated systematic error 0.5 added to statistical error 0.038 keV											

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{14}\text{Be-u}$	42660	150	42890	140	1.0	2			TO2	1.5	88Wo09
$\text{C D}_2-^{14}\text{C H}_2$	9311.498	0.006	9311.503	0.004	0.6	1	20	20	^{14}C	B08	1.5 75Sm02
$\text{C H}_2-\text{N}$	12576.22	0.10	12576.06004	0.00026	-0.6	U			J2	2.5	69Na21
	12576.086	0.009			-1.9	U			B07	1.5	71Sm01
	12576.0598	0.0008			0.3	U			MI1	1.0	95Di08
$\text{C D}-\text{N}$	11027.815	0.018	11027.77369	0.00023	-1.5	o			B07	1.5	71Sm01
	11027.773	0.007			0.1	U			B08	1.5	75Sm02
$\text{C H}_4-\text{N D}$	14124.17	0.14	14124.3464	0.0004	0.5	U			J6	2.5	76Ka50
$\text{C D}_2-\text{N H}_2$	9479.68	0.13	9479.4874	0.0003	-0.6	U			J6	2.5	76Ka50
$^{14}\text{N-u}$	3074.014	0.019	3074.00443	0.00020	-0.2	U			OH1	2.5	93Ma.A
	3074.0056	0.0018			-0.7	U			WA1	1.0	95Va38
$^{13}\text{C H}-^{14}\text{N}$	8105.86288	0.00010	8105.86288	0.00010	0.0	1	96	75	^{13}C	MI3	1.0 04Ra33
$^{14}\text{C H}_2-\text{N D}$	1716.269	0.003	1716.270	0.004	0.3	1	80	80	^{14}C	B08	1.5 75Sm02
$^{14}\text{N}(^3\text{He},^9\text{Li})^8\text{C}$	-42214	50	-42225	18	-0.2	R			MSU		76Ro04
$^{11}\text{B}(\alpha,p)^{14}\text{C}$	789	17	783.9	0.4	-0.3	U			MIT		64Sp12
$^{14}\text{C}(^{18}\text{O},^{20}\text{Ne})^{12}\text{Be}$	-15770	50	-15798.8	1.9	-0.6	U			ChR		74Ba15
$^{14}\text{C}(d,\alpha)^{12}\text{B}$	361.8	1.4	361.3	1.3	-0.4	1	89	89	^{12}B	Wis	56Do41 Z
$^{14}\text{C}(p,^3\text{He})^{12}\text{B}^i$	-30702.73	19.96	-30711	19	-0.4	1	86	86	$^{12}\text{B}^i$		71Ne.A *
$^{14}\text{C}(p,t)^{12}\text{C}^j$	-32235.9	2.4				2			MSU		78Ro08 *
$^{14}\text{N}(d,\alpha)^{12}\text{C}$	13579	6	13574.22282	0.00023	-0.8	U			Mex		64Ma.B
	13588	6			-2.3	U			MIT		64Sp12
$^{12}\text{C}(^3\text{He},p)^{14}\text{N}$	4779.0	1.4	4778.8282	0.0023	-0.1	U			CIT		62Ba26 Y
	4806	9			-3.0	U			Mex		64Ma.B
	4776.3	1.5			1.7	U			NDm		67Od01
$^{14}\text{N}(p,t)^{12}\text{N}$	-22135.5	1.0	-22135.5	1.0	0.0	1	100	100	^{12}N	MSU	75No.A
$^{12}\text{C}(^3\text{He},n)^{14}\text{O}$	-1146.86	0.72	-1147.56	0.11	-1.0	U			Nvl		61Bu04 *
	-1148.61	0.56			1.9	U			CIT		62Ba26 *
	-1149.01	0.48			3.0	B			Mar		70Ro07 *
$^{14}\text{C}(^7\text{Li},^8\text{B})^{13}\text{Be}$	-39990	500	-38654	10	2.7	U			Dbn		83Al20
$^{14}\text{C}(^{11}\text{B},^{12}\text{N})^{13}\text{Be}$	-39600	90	-39309	10	3.2	B			Dbn		98Be28
$^{13}\text{C}(n,\gamma)^{14}\text{C}$	8177	2	8176.433	0.004	-0.3	U					67Th05
	8176.61	0.24			-0.7	U			Bdn		06Fi.A
$^{13}\text{C}(d,p)^{14}\text{C}$	5946	4	5951.867	0.004	1.5	U			CIT		51Li29 Y
	5952	10			0.0	U			Nob		54Ah47 Y
	5951	10			0.1	U			Mex		64Ma.B
	5951	8			0.1	U			MIT		64Sp12
	5951.85	0.54			0.0	U			Rez		90Pi05 *
$^{13}\text{C}(p,\gamma)^{14}\text{N}$	7551.0	0.8	7550.56265	0.00009	-0.5	U					56Ma87 Z
	7551.1	0.5			-1.1	U					63Bo07 *
$^{13}\text{C}(^3\text{He},d)^{14}\text{N}$	2048	14	2057.0858	0.0023	0.6	U			MIT		64Sp12
$^{14}\text{N}(^3\text{He},\alpha)^{13}\text{N}$	10015	10	10024.24	0.27	0.9	U			Ric		59Yo25
$^{14}\text{F}(p)^{13}\text{O}$	1560	40				3					10Go16
$^{14}\text{C}(\pi^-, \pi^+)^{14}\text{Be}$	-38100	170	-37960	130	0.8	R					84Gi09 *
$^{14}\text{C}(^{14}\text{C}, ^{14}\text{O})^{14}\text{Be}^p$	-43440	60				2			Ber		95Bo10
$^{14}\text{C}(^7\text{Li}, ^7\text{Be})^{14}\text{B}$	-21499	30	-21506	21	-0.2	-			ChR		73Ba34
$^{14}\text{C}(^{14}\text{C}, ^{14}\text{N})^{14}\text{B}$	-20494	30	-20487	21	0.2	-			Ors		81Na.A
$^{14}\text{C}(^7\text{Li}, ^7\text{Be})^{14}\text{B}$	ave. -21506	21	-21506	21	0.0	1	100	100	^{14}B		average
$^{14}\text{C}(\beta^-)^{14}\text{N}$	155.2	0.5	156.476	0.004	2.6	U					54Ki23
	155.74	0.08			9.2	F					91Su09 *
	155.95	0.22			2.4	U					95Wi20
	156.27	0.14			1.5	U					00Ku25
$^{14}\text{C}(p,n)^{14}\text{N}$	-626.15	0.3	-625.870	0.004	0.9	U			Wis		56Sa06
	-625.88	0.09			0.1	U			Zur		73Hi.A
$^{14}\text{N}(p,n)^{14}\text{O}$	-5930.7	2.8	-5926.39	0.11	1.5	U			Ric		65Ku02
	-5927.6	1.5			0.8	U			Har		73Cl12
	-5925.6	0.4			-2.0	F			Auc		77Wh01 *
	-5925.41	0.08			-12.2	F			Auc		81Wh03 *
	-5925.41	0.11			-8.9	F			Auc		98Ba83 *
	-5926.68	0.17			1.8	1	43	43	^{14}O	Auc	03To03

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{14}\text{N}(^3\text{He,t})^{14}\text{O}$	-5161.3	0.8	-5162.63	0.11	-1.7	F	Mun		77Vo02 *	
$^{14}\text{C}(p,^3\text{He})^{12}\text{B}^i$	IT=12710(20); Q rebuilt with Ame1964									
*	energy and resolution arguments for T=1, not an IAS									
$^{14}\text{C}(p,t)^{12}\text{C}^j$	IT=27595.0(2.4); Q rebuilt									
$^{12}\text{C}(^3\text{He,n})^{14}\text{O}$	Originals T=1436.2(0.9,Bu) 1437.5(0.7,Ba) 1437.9(0.6,Ro) respectively, recalibrated									
$^{13}\text{C}(d,p)^{14}\text{C}$	Estimated systematic error 0.5 added to statistical error 0.20									
$^{13}\text{C}(p,\gamma)^{14}\text{N}$	$E_p=1747.06(0.53)$ to 2^+ level at 9172.25 keV									
$^{14}\text{C}(\pi^-, \pi^+)^{14}\text{Be}$	Original error 160 increased with 60 calibration uncertainty									
$^{14}\text{C}(\beta^-)^{14}\text{N}$	F: find 17 keV neutrino. See also reference									
$^{14}\text{N}(p,n)^{14}\text{O}$	F: withdrawn by author									
$^{14}\text{N}(p,n)^{14}\text{O}$	Authors recalibrated 77Wh01 for atomic effects									
$^{14}\text{N}(p,n)^{14}\text{O}$	F: withdrawn by author									
$^{14}\text{N}(p,n)^{14}\text{O}$	Original T=6353.08(0.07) recalibrated to T=6352.99(0.12) by author									
$^{14}\text{N}(p,n)^{14}\text{O}$	F: withdrawn by author									
$^{14}\text{N}(^3\text{He,t})^{14}\text{O}$	F: rejected in reference of same group									
C D H- ^{15}N	21817.9119	0.0008	21817.9115	0.0006	-0.5	1	61	^{15}N	MI1 1.0	95Di08
C H $_3$ - ^{15}N	23366.1979	0.0017	23366.1978	0.0006	-0.1	1	14	13 ^{15}N	MI1 1.0	95Di08
$^{15}\text{F}-u$	17477	86	18040	70	6.6	C			1.0 1.0	01Ze.A
$^{14}\text{N D}-^{15}\text{N H}$	9242.29	0.11	9241.8514	0.0007	-1.6	U			C5 2.5	71Ke01
	9241.780	0.008			6.0	B			B08 1.5	75Sm02
$^{15}\text{N}(p,\alpha)^{12}\text{C}$	4966	6	4965.4936	0.0006	-0.1	U			CIT	51Li26 Y
	4962	4			0.9	U			Bir	53Co02 Y
	4954	8			1.4	U			Mex	64Ma.B
	4965	7			0.1	U			MIT	64Sp12
$^{12}\text{C}(\alpha,n)^{15}\text{O}$	-8503	12	-8502.0	0.5	0.1	U			Tal	63Ne05
$^{15}\text{N}(d,\alpha)^{13}\text{C}$	7675	9	7687.2360	0.0007	1.4	U			Mex	64Ma.B
	7689	6			-0.3	U			MIT	64Sp12
$^{14}\text{C}(d,p)^{15}\text{C}$	-1006.5	0.8				2			Wis	56Do41 Y
$^{14}\text{C}(p,\gamma)^{15}\text{N}^i$	-1407.8	3.5				2				59Fe99 *
$^{14}\text{N}(n,\gamma)^{15}\text{N}$	10833.2	0.6	10833.2952	0.0008	0.2	U				68Gr14
	10833.1	0.7			4.3	U				74Sp04
	10833.5	0.05			-0.1	B			MMn	80Is02
	10833.314	0.012			-1.6	U				97Ju02
	10833.2339	0.0500			1.2	U			PTc	97Ro26 *
	10833.32	0.22			-0.1	U			Bdn	06Fi.A
	10833.3	0.5			0.0	U				06Be33
$^{14}\text{N}(d,p)^{15}\text{N}$	8629	11	8608.7292	0.0006	-1.8	U			CIT	52Mi54 Y
	8614	6			-0.9	U			Mex	64Ma.B
	8623	3			-4.8	B			MIT	64Sp12
	8608.83	0.50			-0.2	U			Rez	90Pi05 *
$^{14}\text{N}(p,\gamma)^{15}\text{O}$	7297.1	0.9	7296.8	0.5	-0.4	1	30	^{15}O	CIT	72Ne05
$^{14}\text{N}(^3\text{He,d})^{15}\text{O}$	1803	10	1803.3	0.5	0.0	U			Ric	59Yo25 Y
	1802	15			0.1	U			Man	60Fo01
$^{15}\text{F}(p)^{14}\text{O}$	1410	150	1510	60	0.7	o				03Le26
	1510	110			0.0	-				03Pe23
	1490	130			0.2	-				04Go15 *
	1560	130			-0.4	-				04Le12
	1230	50			5.6	B				05Gu25
ave.	1520	70			-0.1	1	78	^{15}F		average
$^{15}\text{C}(\beta^-)^{15}\text{N}$	9810	30	9771.7	0.8	-1.3	U				59Al06
$^{15}\text{O}(\beta^+)^{15}\text{N}$	2745	5	2754.2	0.5	1.8	U				57Ki22
$^{15}\text{N}(p,n)^{15}\text{O}$	-3541.7	0.9	-3536.5	0.5	5.8	B				58Jo28 Y
	-3535.1	1.0			-1.4	-			CIT	72Je02 Z
	-3537.6	0.8			1.4	-				72Sh08 Z
ave.	-3536.6	0.6			0.2	1	70	^{15}O		average
$^{14}\text{C}(p,\gamma)^{15}\text{N}^i$	From a parametrized fit									
$^{14}\text{N}(n,\gamma)^{15}\text{N}$	Original error 0.0005 increased for calibration									
$^{14}\text{N}(d,p)^{15}\text{N}$	Estimated systematic error 0.5 added to statistical error 0.061 keV									
$^{15}\text{F}(p)^{14}\text{O}$	Symmetrized from 1450(+160-100) keV									

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
C H ₂ D–O	34837.406	0.033	34837.22302	0.00028	–3.7	B			B07	1.5	71Sm01	
	34837.202	0.020			0.7	U			B08	1.5	75Sm02	
C D ₂ –O	33289.129	0.033	33288.93667	0.00029	–3.9	B			B07	1.5	71Sm01	
	33289.061	0.038			–2.2	B			B07	1.5	71Sm01	
C ₄ –O ₃	33288.940	0.019			–0.1	U			B08	1.5	75Sm02	
	15256.131	0.018	15256.1413	0.0005	0.6	o			WA1	1.0	92Va.A	
	15256.086	0.081			0.3	U			OH1	2.5	93Ma.A	
	15256.121	0.009			2.3	o			WA1	1.0	95Va38	
	15256.1425	0.0008			–1.5	o			WA1	1.0	01Va33	
	15256.1415	0.0005			–0.4	o			WA1	1.0	03Va.A	
	15256.14129	0.00054			0.0	1	91	91 ¹⁶ O	WA1	1.0	06Va22	
C H ₄ –O	36387.55	0.8	36385.5094	0.0004	–1.0	U			J1	2.5	68Ma45	
	36386.01	0.24			–0.8	U			J2	2.5	69Na21	
	36385.644	0.036			–2.5	U			B07	1.5	71Sm01	
	36385.5062	0.0013			2.4	U			MI1	1.0	95Di08	
	36385.5073	0.0019			1.1	U			MI1	1.0	95Di08	
	36385.5060	0.0022			1.5	U			MI1	1.0	95Di08	
	–5085.362	0.027	–5085.38043	0.00017	–0.3	U			OH1	2.5	93Ma.A	
¹⁴ C H ₂ –O	23977.413	0.014	23977.433	0.004	1.0	U			B08	1.5	75Sm02	
N D–O	22261.160	0.013	22261.16298	0.00024	0.2	U			B08	1.5	75Sm02	
N ₂ –C O	11233.57	0.20	11233.3893	0.0004	–0.4	U			J2	2.5	69Na21	
	11233.543	0.025			–4.1	B			B07	1.5	71Sm01	
	11233.43	0.21			–0.1	U			J6	2.5	76Ka50	
	11259	27			–0.4	U			CR1	2.5	89Sh10	
	11233.3909	0.0022			–0.7	U			MI1	1.0	95Di08	
	11233.38932	0.00042			–0.1	1	80	78 ¹⁴ N	MI1	1.0	04Th17	
	¹⁶ O(α , ⁸ He) ¹² O	–66020	120	–65836	24	1.5	U			Brk		78Ke06
¹⁶ O(p, α) ¹³ N	–5211	10	–5218.43	0.27	–0.7	U			MIT		64Sp12	
¹⁶ O(³ He, ⁶ He) ¹³ O	–30516	14	–30513	10	0.2	2			Brk		70Me11 *	
	–30511	13			–0.2	2			MSU		71Tr03 *	
¹⁶ Be(γ ,2n) ¹⁴ Be	1350	100				3					12Sp02	
¹⁴ C(¹⁴ C, ¹² N) ¹⁶ B	–48380	60	–48411	25	–0.5	o			Ber		95Bo10	
	–48378	60			–0.5	1	17	17 ¹⁶ B	Ber		00Ka21	
¹⁴ C(t,p) ¹⁶ C	–3015	8	–3013	4	0.2	2			MSU		77Fo09	
	–3013	4			–0.1	2			LAI		78Se04	
¹⁴ C(³ He,p) ¹⁶ N	4983	4	4978.2	2.3	–1.2	R			BNL		66Ga08	
¹⁴ C(³ He,p) ¹⁶ N ^j	–4951	7				2					68He03 *	
¹⁴ N(t,p) ¹⁶ N	4853	10	4840.3	2.3	–1.3	U			Ald		66He10	
¹⁴ C(³ He,n) ¹⁶ O ^j	–8100	8	–8104	4	–0.5	1	23	23 ¹⁶ O ^j			70Ad01 *	
	3110.	3.5	3110.38807	0.00024	0.1	U			Wis		52Cr30 Y	
¹⁶ O(d, α) ¹⁴ N	3119	5			–1.7	U			Ric		53Fa18 Y	
	3110	6			0.1	U			Mex		64Ma.B	
	3113	6			–0.4	U			MIT		64Sp12	
	2444	6	2447	4	0.5	1	54	54 ¹⁶ O ^j			64Br08 *	
¹⁴ N(d, γ) ¹⁶ O ^j	–1986.3	4.4	–1985	4	0.3	1	77	77 ¹⁶ O ^j			72Ne10	
¹⁴ N(³ He,n) ¹⁶ F	–963	40	–957	8	0.2	U			LAI		65Za01	
	–970	15			0.9	R			Har		68Ad03	
¹⁶ Ne(2p) ¹⁴ O	1350	80	1401	20	0.6	U					08Mu13	
¹⁶ B(γ ,n) ¹⁵ B	85	15	83	15	–0.1	1	95	83 ¹⁶ B			09Le02	
¹⁵ N(d,p) ¹⁶ N	286	12	264.3	2.3	–1.8	U			CIT		55Pa50 Y	
	269	10			–0.5	U			Pit		57Wa01 Y	
	259	6			0.9	2			Mex		64Ma.B	
	267	8			–0.3	2			MIT		64Sp12	
	270	10			–0.6	U			Pen		66He10	
¹⁵ N(p, γ) ¹⁶ O ⁱ	–665.3	6.6	–669	4	–0.5	1	46	46 ¹⁶ O ⁱ			57Ha99	
¹⁶ O(³ He, α) ¹⁵ O	4920	10	4913.7	0.5	–0.6	U			Ald		59Hi68 Y	
	4907	7			1.0	U			Ric		59Yo25 Y	
¹⁶ N(β^-) ¹⁶ O	10400	20	10420.9	2.3	1.0	U					59Al06	
¹⁶ O(³ He,t) ¹⁶ F	–15430	10	–15436	8	–0.6	2			KVI		80Ja.A	
¹⁶ O(π^+ , π^-) ¹⁶ Ne	–27763	45	–27701	20	1.4	2					80Bu15	
* ¹⁶ O(³ He, ⁶ He) ¹³ O	M increased by 7 for more recent calibrator M(¹² C)=28913(2)										AHW	**
* ¹⁶ O(³ He, ⁶ He) ¹³ O	Recalibrated using their ¹² C(³ He, ⁶ He) result										AHW	**
* ¹⁴ C(³ He,p) ¹⁶ N ^j	IT=9928(7), Q rebuilt with Ame1965										MMC121**	**
* ¹⁴ C(³ He,n) ¹⁶ O ^j	IT=22717(8), Q rebuilt with Ame1964										MMC121**	**
* ¹⁴ N(³ He,p) ¹⁶ O ⁱ	IT=12798(6), Q rebuilt										MMC121**	**

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{17}\text{O}_2-^{28}\text{Si D}_3$	-20968.3557	0.0014	-20968.3560	0.0013	-0.2	1	84	82	^{17}O	FS1	1.0	10Mo29	
$^{17}\text{B-u}$	45970	860	46990	180	1.2	U			GA1	1.0	87Gi05		
	46830	180			0.6	2			TO2	1.5	88Wo09		
	47127	250			-0.5	2			GA3	1.0	91Or01		
									MA8	1.0	08Ge07		
$^{17}\text{Ne}-^{22}\text{Ne}_{.773}$	24373.27	0.38				2							
$^{17}\text{O}-^{16}\text{O H}$	-3607.8961	0.0016	-3607.8953	0.0007	0.5	1	19	18	^{17}O	FS1	1.0	10Mo29	
$^{17}\text{O(n,\alpha)}^{14}\text{C}$	1817.2	3.5	1817.745	0.004	0.2	U						01Wa50	
$^{14}\text{C}(\alpha,n)^{17}\text{O}$	-1819.07	2.0	-1817.745	0.004	0.7	U			Wis			56Sa06	Y
$^{17}\text{O(p,\alpha)}^{14}\text{N}$	1200	17	1191.8747	0.0007	-0.5	U			MIT			64Sp12	
$^{17}\text{O(d,\alpha)}^{15}\text{N}$	9818	12	9800.6039	0.0009	-1.4	U			Nob			54Pa39	Y
$^{16}\text{O(n,\gamma)}^{17}\text{O}$	4143.24	0.23	4143.0794	0.0008	-0.7	U						77Mc05	Z
	4143.06	0.13			0.1	U			Bdn			06Fi.A	
$^{16}\text{O(d,p)}^{17}\text{O}$	1915	8	1918.5134	0.0006	0.4	U			Ric			51K155	Y
	1918	4			0.1	U			MIT			57Br82	
	1918	3			0.2	U			Mex			61Ja23	
	1920	3			-0.5	U			MIT			64Sp12	
	1918.74	0.5			-0.5	U			Rez			90Pi05	*
$^{16}\text{O(n,\gamma)}^{17}\text{O}^i$	-6935.70	0.17				2						81Hi01	*
$^{16}\text{O(p,\gamma)}^{17}\text{F}$	600.35	0.28	600.27	0.25	-0.3	-			CIT			75Ro05	
$^{16}\text{O(d,n)}^{17}\text{F}$	-1626	4	-1624.30	0.25	0.4	U			Ric			51Bo49	Y
	-1624.6	0.5			0.6	-			Nvl			60Bo21	Z
$^{16}\text{O(p,\gamma)}^{17}\text{F}$	ave.	600.27	600.27	0.25	0.0	1	100	100	^{17}F			average	
$^{16}\text{O(p,\gamma)}^{17}\text{F}^i$	-10592.8	1.9				2						76Hi09	
$^{16}\text{O}(^3\text{He},2n)^{17}\text{Ne}$	-22420	190	-22448.9	0.4	-0.2	U			BNL			67Es02	
$^{17}\text{F}(\beta^+)^{17}\text{O}$	2770	6	2760.47	0.25	-1.6	U						54Wo23	
* $^{16}\text{O(d,p)}^{17}\text{O}$	Estimated systematic error 0.5 added to statistical error 0.062 keV										AHW	**	
* $^{16}\text{O(n,\gamma)}^{17}\text{O}^i$	Original Q=-6934.41(0.17) does not match original T=7373.31(0.18)										MMC129**		
$\text{C D}_3-^{18}\text{O}$	43145.72216	0.00088	43145.7215	0.0007	-0.7	-			FS1	1.0	09Re15	*	
	43145.72116	0.00136			0.3	-			FS1	1.0	09Re15	*	
ave.	43145.7219	0.0007			-0.5	1	87	84	^{18}O			average	
$\text{C}_3-^{18}\text{O}_2$	1680.7695	0.0038	1680.7743	0.0015	1.3	1	16	16	^{18}O	FS1	1.0	09Re15	
$^{18}\text{F-u}$	943	85	937.3	0.5	0.0	U					2.5	92Ge08	
$^{18}\text{Na-u}$	25969	54	26880	120	16.8	C				1.0	1.0	01Ze.A	
$^{18}\text{Ne}-^{22}\text{Ne}_{.818}$	12755.68	0.39	12755.7	0.4	0.0	1	100	100	^{18}Ne	MA8	1.0	04Bl20	
$^{14}\text{C}(^7\text{Li},^3\text{He})^{18}\text{N}$	-10170	60	-10117	19	0.9	U			Str			80Kr.A	
$^{18}\text{O}(^{48}\text{Ca},^{51}\text{V})^{15}\text{B}$	-21760	50	-21762	21	0.0	-			Hei			78Bh02	
	-21768	25			0.2	-			Can			83Ho08	
ave.	-21766	22			0.2	1	88	88	^{15}B			average	
$^{18}\text{O(p,\alpha)}^{15}\text{N}$	3954	9	3979.8007	0.0009	2.9	U			Nob			54Mi60	Y
	3964	10			1.6	U			Mex			64Ma.B	
$^{18}\text{O(d,\alpha)}^{16}\text{N}$	4235	7	4244.1	2.3	1.3	R			CIT			55Pa50	Z
	4219	20			1.3	U			Mex			64Ma.B	
	4249	15			-0.3	U			Phi			66He10	
	4244	4			0.0	R			MIT			67Sp09	Z
$^{16}\text{O}(^3\text{He,p})^{18}\text{F}$	2033	5	2032.1	0.5	-0.2	U			Ric			59Yo25	
	2055	5			-4.6	C			Mex			64Ma.B	
$^{16}\text{O}(^3\text{He,n})^{18}\text{Ne}$	-3205	13	-3194.7	0.4	0.8	U			Nvl			61Du02	Y
	-3198	6			0.5	U			Ald			61To03	Y
	-3194.0	1.5			-0.5	U						94Ma14	
$^{18}\text{B}(\gamma,n)^{17}\text{B}$	5	5				3						10Sp02	*
$^{18}\text{O}(^{48}\text{Ca},^{49}\text{Ti})^{17}\text{C}$	-17465	35	-17476	17	-0.3	2			Hei			77No08	
	-17479	20			0.2	2			Can			82Fi10	
$^{18}\text{O}(^{207}\text{Pb},^{208}\text{Po})^{17}\text{C}$	-26870	220	-26796	17	0.3	U			ChR			79Ba31	
$^{18}\text{O}(t,\alpha)^{17}\text{N}$	3872	15				2			LAI			60Ja13	
$^{17}\text{O(n,\gamma)}^{18}\text{O}$	8043.5	1.0	8045.3691	0.0010	1.9	U			Bdn			06Fi.A	
$^{17}\text{O(d,p)}^{18}\text{O}$	5820	10	5820.8031	0.0009	0.1	U			Nob			54Ah37	Y
	5820	10			0.1	U			Man			65Mo16	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{17}\text{O}(p,\gamma)^{18}\text{F}$	5603	3	5607.1	0.5	1.4	U			Str		73Se03	
	5606.2	0.6			1.5	1	60	^{60}F	CIT		75Ro05 Z	
$^{18}\text{Na}(p)^{17}\text{Ne}$	1270	170	1250	110	-0.1	3					04Ze05	
	1230	150			0.1	3					12Mu05	
$^{18}\text{O}(\pi^-, \pi^+)^{18}\text{C}$	-26712	150	-26720	30	-0.1	U					78Se07	
$^{18}\text{O}(^{48}\text{Ca}, ^{48}\text{Ti})^{18}\text{C}$	-21434	30				2			Can		82Fi10	
	-21331	300	-21430	30	-0.3	U			Ors		82Na04	
$^{18}\text{N}(\beta^-)^{18}\text{O}$	13860	400	13896	19	0.1	U					64Ch19	
$^{18}\text{O}(d, 2p)^{18}\text{N}$	-15270	100	-15338	19	-0.7	U			Brk		78De.A	
$^{18}\text{O}(t, ^3\text{He})^{18}\text{N}$	-13917	60	-13877	19	0.7	U			LAL		69St07 *	
$^{18}\text{O}(^7\text{Li}, ^7\text{Be})^{18}\text{N}$	-14761	20	-14758	19	0.2	2			Can		83Pu01	
$^{18}\text{O}(^{14}\text{C}, ^{14}\text{N})^{18}\text{N}$	-13720	50	-13740	19	-0.4	2			Ors		80Na14	
$^{18}\text{F}(\beta^+)^{18}\text{O}$	1657	2	1655.9	0.5	-0.5	U					64Ho28	
$^{18}\text{O}(p, n)^{18}\text{F}$	-2451	4	-2438.3	0.5	3.2	B			Wis		50Ri59 Y	
	-2436.97	0.73			-1.8	1	40	^{40}F	Nvl		64Bo13 Z	
	-2440.2	2.8			0.7	U					67Pr04	
$^{18}\text{Ne}(\beta^+)^{18}\text{F}$	4438	9	4444.5	0.6	0.7	U					63Fr10	
* $\text{C D}_3-^{18}\text{O}$	Respectively $\text{CD}_3^+ / ^{18}\text{O}^+$, $\text{C}_2\text{D}_6^+ / ^{18}\text{O}^{2+}$ considered independent										GAu	**
* $^{18}\text{B}(\gamma, n)^{17}\text{B}$	Decay energy <10 keV, derived from scattering length <-50 fm										10Sp02	**
* $^{18}\text{O}(t, ^3\text{He})^{18}\text{N}$	From $Q=14038(30)$, reinterpreted as mainly to (2^-) level at 114.90 keV										Ens967	**
$^{28}\text{Si H}_3-\text{C } ^{19}\text{F}$	1998.4687	0.0022	1998.4686	0.0010	0.0	1	21	^{16}F	FS1	1.0	09Re15	
$^{19}\text{C}-\text{u}$	34680	260	34800	110	0.3	o			TO1	1.5	86Vi09	
	35370	450			-1.3	U			GA1	1.0	87Gi05	
	35180	130			-2.0	o			TO2	1.5	88Wo09	
	35506	253			-2.8	U			GA3	1.0	91Or01	
$\text{C D}_4-\text{H } ^{19}\text{F}$	50178.88	0.05	50178.9175	0.0009	0.5	U			B08	1.5	75Sm02	
$^{19}\text{Mg}-\text{u}$	35470	270	34170	50	-4.8	C			1.0	1.0	01Ze.A	
$^{13}\text{C D}_3-^{19}\text{F}$	47257.00669	0.00091	47257.0067	0.0008	0.0	1	86	^{84}F	FS1	1.0	09Re15	
$^{19}\text{Ne}-^{22}\text{Ne}_{.864}$	9323.92	0.33	9324.17	0.17	0.8	2			MA8	1.0	04Bi20	
	9324.26	0.20			-0.5	2			MA8	1.0	08Ge07	
$^{19}\text{F}(p, \alpha)^{16}\text{O}$	8115	10	8113.6120	0.0009	-0.1	U			CIT		50Ch53 Y	
	8115	10			-0.1	U			CIT		57Yo04 Y	
	8122	9			-0.9	U			MIT		64Sp12	
$^{17}\text{O}(t, p)^{19}\text{O}$	3524	7	3519.2	2.6	-0.7	R			Man		65Mo19	
$^{19}\text{F}(d, \alpha)^{17}\text{O}$	10060	12	10032.1254	0.0010	-2.3	U			MIT		64Sp12	
$^{19}\text{Mg}(2p)^{17}\text{Ne}$	750	50				3					07Mu15	
$^{18}\text{C}(n, \gamma)^{19}\text{C}$	530	120	580	90	0.4	3					99Na27 *	
	650	150			-0.5	3					01Ma08 *	
$^{18}\text{O}(^{18}\text{O}, ^{17}\text{F})^{19}\text{N}$	-19374	50	-19373	16	0.0	2			Ors		81Na.A	
	-19334	35			-1.1	2			Can		89Ca25	
$^{18}\text{O}(^{48}\text{Ca}, ^{47}\text{Sc})^{19}\text{N}$	-16540	20	-16527	17	0.6	2			Can		83Ho08	
$^{18}\text{O}(^{208}\text{Pb}, ^{207}\text{Bi})^{19}\text{N}$	-18440	150	-18332	17	0.7	U			ChR		79Ba31	
$^{18}\text{O}(d, p)^{19}\text{O}$	1727	8	1731.1	2.6	0.5	o			Nob		54Mi89 Y	
	1732	8			-0.1	2			CIT		54Th30	
	1731	5			0.0	2			Nob		57Ah19 Y	
	1733	6			-0.3	2			Mex		64Ma.B	
	1727	5			0.8	2			MIT		64Sp12 Z	
	1734	10			-0.3	U			Man		65Mo16	
$^{19}\text{F}(^3\text{He}, \alpha)^{18}\text{F}$	10166	15	10145.7	0.5	-1.4	U			Ald		59Hi67 Y	
$^{19}\text{Na}(p)^{18}\text{Ne}$	160	110	323	11	1.5	U					04Ze05	
	328	22			-0.2	1	23	^{23}Na			10Mu12	
$^{19}\text{O}(\beta^-)^{19}\text{F}$	4800	12	4820.3	2.6	1.7	U					59Al06	
$^{19}\text{Ne}(\beta^+)^{19}\text{F}$	3262	10	3239.50	0.16	-2.3	U					60Wa04	
$^{19}\text{F}(p, n)^{19}\text{Ne}$	-4021.3	4.7	-4021.84	0.16	-0.1	U			Ric		55Ma84	
	-4019.6	1.4			-1.6	U			Ric		61Be13 Z	
	-4021.1	1.0			-0.7	U			Zur		61Ry04 Z	
	-4020.7	0.8			-1.4	U					66Ma60	
	-4019.6	0.7			-3.2	B					69Ov01 Z	
* $^{18}\text{C}(n, \gamma)^{19}\text{C}$	From Coulomb dissociation cross sections and angular distribution										99Na27	**
* $^{18}\text{C}(n, \gamma)^{19}\text{C}$	From momentum distribution following one neutron removal										01Ma08	**

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{21}\text{N-u}$	26580	200	27110	100	1.8	U			TO1	1.5	86Vi09
	27060	190			0.3	2			GA1	1.0	87Gi05
	26930	210			0.6	2			TO2	1.5	88Wo09
	27162	131			-0.4	2			GA3	1.0	91Or01
$^{21}\text{Na-}^{39}\text{K}_{.538}$	17180.51	0.29	17180.61	0.30	0.3	o			MA8	1.0	04Mu26
	17180.51	0.29			0.2	1	46	46	^{21}Na	1.5	08Mu05 *
$\text{H}_3\ ^{18}\text{O-}^{21}\text{Ne}$	28787.76	0.25	28788.02	0.04	1.1	U			CP1	1.0	04Sa53 *
$^{21}\text{Na-}^{23}\text{Na}_{.913}$	6995.25	0.32	6995.34	0.30	0.3	o			MA8	1.0	04Mu26
	6995.25	0.32			0.2	1	38	38	^{21}Na	1.5	08Mu05
$^{21}\text{Ne-}^{22}\text{Ne}_{.955}$	2073.82	0.40	2073.90	0.05	0.2	U			MA8	1.0	04BI20
	2074.04	0.26			-0.5	U			MA8	1.0	08Ge07
$^{21}\text{Na-}^{20}\text{Na}$	-9732	50	-9699.7	1.2	0.3	U			CR1	2.5	89Sh10
$^{18}\text{O}(^{18}\text{O},^{15}\text{O})^{21}\text{O}$	-12574	70	-12483	12	1.3	U			Ors		78Na02
	-12499	20			0.8	2			Can		89Ca25
$^{18}\text{O}(^{64}\text{Ni},^{61}\text{Ni})^{21}\text{O}$	-11713	15	-11722	12	-0.6	2			Dar		85Wo01
$^{18}\text{O}(^{208}\text{Pb},^{205}\text{Pb})^{21}\text{O}$	-6860	75	-6823	12	0.5	U			ChR		79Ba31
$^{19}\text{F}(t,p)^{21}\text{F}$	6221.0	1.8				2			Str		84An17
$^{19}\text{F}(^3\text{He},p)^{21}\text{Ne}$	11911	15	11886.58	0.04	-1.6	U			Ald		59Hi75 Y
$^{20}\text{Ne}(n,\gamma)^{21}\text{Ne}$	6760.8	1.5	6761.16	0.04	0.2	U					70Se14
	6761.16	0.04			0.1	2			MMn		86Pr05 Z
	6761.19	0.14			-0.2	2			Bdn		06Fi.A
$^{20}\text{Ne}(d,p)^{21}\text{Ne}$	4531	9	4536.60	0.04	0.6	U			Nob		55Ah41 Y
	4532	6			0.8	U			Mex		64Ma.B
	4534	7			0.4	U			MIT		64Sp12
$^{20}\text{Ne}(p,\gamma)^{21}\text{Na}$	2431.2	0.7	2431.68	0.28	0.7	1	16	16	^{21}Na		69BI03 Z
$^{20}\text{Ne}(p,\gamma)^{21}\text{Na}^i$	-6547.9	14.3	-6543	4	0.3	U					81Fe05
$^{21}\text{Na}^i(p)^{20}\text{Ne}$	6543	4				2					73Se08 *
$^{21}\text{O}(\beta^-)^{21}\text{F}$	8150	175	8110	12	-0.2	U					81AI07
$^{21}\text{Na}(\beta^+)^{21}\text{Ne}$	3522	30	3547.14	0.28	0.8	U					52Sc15
	3532	20			0.8	U					60Wa04
$^{*21}\text{Na-}^{39}\text{K}_{.538}$											GAu **
$^{*}\text{H}_3\ ^{18}\text{O-}^{21}\text{Ne}$											$D_M=28787.78(0.25)$ corrected -0.02 keV for molecular and ionization 04Sa53 **
$^{*21}\text{Na}^i(p)^{20}\text{Ne}$											$Q_p=6548(4), 4904(4)$ to ground state and 2^+ level at 1633.674 keV Ens992 **
$^{22}\text{N-u}$	32990	790	34390	210	1.8	U			GA1	1.0	87Gi05
	34340	250			0.1	2			TO2	1.5	88Wo09
	34683	389			-0.7	2			GA3	1.0	91Or01
	34240	320			0.5	2			GA5	1.0	99Sa.A
$^{22}\text{O-u}$	9842	81	9970	60	1.5	R			GA3	1.0	91Or01
$^{22}\text{Ne-u}$	-8614.885	0.019	-8614.885	0.019	0.0	1	100	100	^{22}Ne	1.0	02Bf02
$^{22}\text{Na-}^{39}\text{K}_{.564}$	14907.33	0.30	14906.95	0.18	-1.3	o			MA8	1.0	04Mu26
	14907.33	0.30			-0.8	1	17	17	^{22}Na	1.5	08Mu05
$^{22}\text{Mg-}^{39}\text{K}_{.564}$	20040.33	0.35	20040.2	0.3	-0.4	o			MA8	1.0	04Mu26
	20040.33	0.35			-0.3	1	41	41	^{22}Mg	1.5	08Mu05
$\text{O H-}^{22}\text{Ne}_{.773}$	9398.87	0.19	9398.958	0.015	0.5	U			MA8	1.0	08Ge07
$^{22}\text{Na-}^{24}\text{Mg}_{.917}$	8153.64	0.31	8154.17	0.18	1.7	o			MA8	1.0	04Mu26
	8153.64	0.31			1.1	1	16	16	^{22}Na	1.5	08Mu05
$^{22}\text{Na-}^{23}\text{Na}_{.957}$	4228.11	0.29	4228.21	0.18	0.3	o			MA8	1.0	04Mu26
	4228.11	0.29			0.2	1	18	18	^{22}Na	1.5	08Mu05
$^{22}\text{Na-}^{22}\text{Ne}$	3052.72	0.33	3052.30	0.18	-1.3	1	31	31	^{22}Na	1.0	04Sa53 *
$^{22}\text{Mg-}^{22}\text{Ne}$	8185.77	0.73	8185.5	0.3	-0.3	1	21	21	^{22}Mg	1.0	04Sa53 *
$^{22}\text{Mg-}^{22}\text{Na}$	5132.99	0.34	5133.2	0.3	0.7	o			MA8	1.0	04Mu26
	5132.99	0.34			0.5	1	46	38	^{22}Mg	1.5	08Mu05
$^{22}\text{Ne-}^{20}\text{Ne}$	-1056.415	0.290	-1055.062	0.019	1.9	U			OH1	2.5	93Go38
$^{18}\text{O}(^{18}\text{O},^{14}\text{O})^{22}\text{O}$	-19060	100	-18860	60	2.0	2			Can		76Hi10
$^{18}\text{O}(^{208}\text{Pb},^{204}\text{Pb})^{22}\text{O}$	-6710	180	-6700	60	0.0	2			ChR		79Ba31
$^{22}\text{Mg}^i(\alpha)^{18}\text{Ne}$	5885	40	5906	14	0.5	1	12	12	$^{22}\text{Mg}^i$		97BI03 *
$^{19}\text{F}(\alpha,p)^{22}\text{Ne}$	1674	11	1673.215	0.018	-0.1	U			MIT		64Sp12

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{19}\text{F}(\alpha, n)^{22}\text{Na}$	-1958	10	-1952.33	0.17	0.6	U			Duk		60Wi07 Y
$^{22}\text{C}(\gamma, 2n)^{20}\text{C}$	-200	120	-110	60	0.7	o					11Ya25 *
	-110	60				3					12Fo04 *
$^{20}\text{Ne}(\alpha, n)^{22}\text{Mg}$	197	25	217.9	0.3	0.8	U			Har		68Ad03
	209	11			0.8	U			CIT		70Mc06
$^{22}\text{Ne}(t, \alpha)^{21}\text{F}$	4545	10	4547.8	1.8	0.3	U			LAI		61Si03 Y
$^{21}\text{Ne}(n, \gamma)^{22}\text{Ne}$	10364.4	0.3	10364.26	0.04	-0.5	U			MMn		86Pr05 Z
	10363.9	0.5			0.7	U			Bdn		06Fi.A
$^{21}\text{Ne}(d, p)^{22}\text{Ne}$	8152	11	8139.69	0.04	-1.1	U			CIT		52Mi54 Y
$^{21}\text{Ne}(p, \gamma)^{22}\text{Na}$	6738.3	1.1	6738.71	0.18	0.4	U					70An06 *
$^{22}\text{Mg}^i(p)^{21}\text{Na}$	8547	15	8544	14	-0.2	1	88	88 $^{22}\text{Mg}^i$	Brk		82Ca16 *
$^{22}\text{F}(\beta^-)^{22}\text{Ne}$	11000	150	10818	12	-1.2	U					73Gu05
	10950	120			-1.1	U			ANB		74Da02
$^{22}\text{Ne}(t, \alpha)^{22}\text{F}$	-10788	33	-10800	12	-0.3	2					69St07 *
	-10794	18			-0.3	2			Dar		88Cl04 *
$^{22}\text{Ne}(^7\text{Li}, ^7\text{Be})^{22}\text{F}$	-11691	20	-11680	12	0.6	2			Can		89Or04 *
$^{22}\text{Na}(\beta^+)^{22}\text{Ne}$	2842.2	0.5	2843.20	0.17	2.0	1	12	12 ^{22}Na			68Be35 *
	2840.4	1.5			1.9	U					68We02 *
	2841.5	1.0			1.7	U					72Gi17 *
* $^{22}\text{Na}-^{22}\text{Ne}$	$D_M=3052.77(0.33)$ corrected -0.04 keV for ion-ion interaction and										04Sa53 **
*	-0.01 keV for ionization										04Sa53 **
* $^{22}\text{Mg}-^{22}\text{Ne}$	$D_M=8185.83(0.73)$ corrected -0.05 keV for ion-ion interaction and										04Sa53 **
*	-0.01 keV for ionization										04Sa53 **
* $^{22}\text{Mg}^i(\alpha)^{18}\text{Ne}$	$E_\alpha=3270(40)$ to 2^+ level at 1887.3 keV										Ens967 **
* $^{22}\text{C}(\gamma, 2n)^{20}\text{C}$	From upper limit $S_2n < 400$										GAu **
* $^{22}\text{C}(\gamma, 2n)^{20}\text{C}$	From upper limit $S_2n < 220$										GAu **
* $^{22}\text{C}(\gamma, 2n)^{20}\text{C}$	The two items are estimates derived from the experimental result of reference										10Ta04 **
* $^{21}\text{Ne}(p, \gamma)^{22}\text{Na}$	$T=701.8(0.5)$ to $(1^+, 2^+)$ level at 7407.9(1.6) keV										Ens05c **
* $^{21}\text{Ne}(p, \gamma)^{22}\text{Na}$	Reanalysis using E(exc) for lower levels of reference										90En08 **
* $^{22}\text{Mg}^i(p)^{21}\text{Na}$	$E_p=8149(21), 7839(15)$ to $3/2^+$ ground state, $5/2^+$ level at 331.90 keV										Ens04c **
* $^{22}\text{Ne}(t, \alpha)^{22}\text{F}$	Original value -10834(30) re-calculated from Q to										GAu **
*	(3^+) level at 709.0, 1^+ at 1627.0 and 1^+ at 2572.2 keV										Ens05b **
* $^{22}\text{Ne}(t, \alpha)^{22}\text{F}$	Original value -10836(12) re-calculated										GAu **
* $^{22}\text{Ne}(^7\text{Li}, ^7\text{Be})^{22}\text{F}$	$Q=-12400(20)$ to (3^+) level at 709.0 keV										Ens05c **
* $^{22}\text{Na}(\beta^+)^{22}\text{Ne}$	$E_{\beta^+}=545.7(0.5) 543.9(1.5) 545(1)$ respectively, to 2^+ level at 1274.577 keV										Ens05c **
$^{23}\text{N}-u$	37110	2000	41140#	320#	2.0	o			GA5	1.0	99Sa.A
	39378	923			1.9	D			GA7	1.0	07Ju03 *
$^{23}\text{O}-u$	15700	320	15700	100	0.0	o			TO1	1.5	86Vi09
	15860	320			-0.5	o			GA1	1.0	87Gi05
	15700	150			0.0	2			TO2	1.5	88Wo09
	15621	186			0.4	o			GA3	1.0	91Or01
	15695	107			0.0	2			GA7	1.0	07Ju03
$^{23}\text{F}-u$	3530	210	3560	50	0.1	U			TO1	1.5	86Vi09
	3553	43			0.1	1	69	69 ^{23}F	GT1	1.5	04Ma.A
$^{23}\text{Na}-u$	-10230.721	0.0037	-10230.7180	0.0019	0.8	-			MI2	1.0	99Br47
	-10230.716	0.0048			-0.4	-			MI2	1.0	99Br47
	-10230.7172	0.0026			-0.3	-			FS1	1.0	10Mo30
ave.	-10230.7181	0.0019			0.0	1	100	100 ^{23}Na			average
$^{23}\text{Ne}-^{22}\text{Ne}_{1.045}$	3469.59	0.37	3469.46	0.11	-0.4	U			MA8	1.0	04Bi20
$^{23}\text{Mg}-^{23}\text{Na}$	4354.80	0.83	4354.9	0.7	0.2	1	79	79 ^{23}Mg	JY1	1.0	09Sa38
$^{23}\text{Al}-^{23}\text{Na}$	17475.07	0.37				2			JY1	1.0	09Sa38
$^{23}\text{Na}(p, \alpha)^{20}\text{Ne}$	2377	3	2376.1330	0.0024	-0.3	U			Wis		53Do04 Y
	2373	8			0.4	U			MIT		64Sp12
$^{23}\text{Na}(d, \alpha)^{21}\text{Ne}$	6911	9	6912.73	0.04	0.2	U			Mex		64Ma.B
	6909	10			0.4	U			MIT		64Sp12
$^{22}\text{Ne}(^{18}\text{O}, ^{17}\text{F})^{23}\text{F}$	-14080	90	-14070	50	0.1	1	31	31 ^{23}F	Can		89Or04
$^{22}\text{Ne}(n, \gamma)^{23}\text{Ne}$	5200.2	2.0	5200.65	0.10	0.2	U					70Se14
	5200.65	0.12			0.0	2			MMn		86Pr05 Z
	5200.64	0.20			0.0	2			Bdn		06Fi.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{22}\text{Ne}(\text{d,p})^{23}\text{Ne}$	2967	8	2976.08	0.10	1.1	U			Nob		54Ah20 Y	
	2971	9			0.6	o			MIT		60Fr04	
	2974	6			0.3	U			Mex		64Ma.B	
	2968	7			1.2	U			MIT		64Sp12	
$^{22}\text{Ne}(\text{p},\gamma)^{23}\text{Na}$	8794.0	1.5	8794.109	0.018	0.1	U					71Pi08 Z	
	8794.26	0.17			-0.9	U					89Ba42 Z	
$^{23}\text{Al}^i(\text{p})^{22}\text{Mg}$	11644	57				2			Bor		97B104 *	
$^{23}\text{F}(\beta^-)^{23}\text{Ne}$	8510	170	8470	50	-0.3	U					74Go17	
$^{23}\text{Ne}(\beta^-)^{23}\text{Na}$	4383	8	4375.81	0.10	-0.9	U					63Ca06	
$^{23}\text{Mg}(\beta^+)^{23}\text{Na}$	4121	12	4056.6	0.7	-5.4	B					63Fr10	
$^{23}\text{Na}(\text{p,n})^{23}\text{Mg}$	-4832	10	-4838.9	0.7	-0.7	U			Oak		55Ki28 Z	
	-4836.5	6.			-0.4	U			Ric		58Bi41 Y	
	-4848.0	7.			1.3	U			ChR		58Go77 Y	
	-4835.8	2.5			-1.3	U			Har		62Fr09 Z	
	-4843.2	5.1			0.8	U			Tkm		63Ok01 Z	
* $^{23}\text{N}-\text{u}$	Trends from Mass Surface TMS suggest ^{23}N 1640 less bound										GAu	**
* $^{23}\text{Al}^i(\text{p})^{22}\text{Mg}$	$Q_p=11620(100)$, $10410(70)$ to ground state and 2^+ level at 1247.02 keV										Ens05c	**
*	also $Q_{2p}=6180(100)$, $5860(100)$ to ground state and 331.90 level in ^{21}Na										97B104	**
$^{24}\text{O}-\text{u}$	20080	1070	19860	120	-0.2	o			GA1	1.0	87Gi05	
	20000	500			-0.2	U			TO2	1.5	88Wo09	
	20659	442			-1.8	o			GA3	1.0	91Or01	
	20460	340			-1.8	o			GA5	1.0	99Sa.A	
	19861	118				2			GA7	1.0	07Ju03	
$^{24}\text{F}-\text{u}$	8070	170	8120	80	0.2	U			TO1	1.5	86Vi09	
	8450	240			-1.4	U			GA1	1.0	87Gi05	
	8135	86			-0.2	2			GA3	1.0	91Or01	
	8030	120			0.5	2			TO4	1.5	91Zh24	
$^{24}\text{Mg}-\text{H}_{24}$	-202759.080	0.014	-202759.076	0.014	0.3	1	98	98 ^{24}Mg	ST2	1.0	03Be02	
$^{24}\text{Ne}-^{22}\text{Ne}_{1.091}$	3009.49	0.55				2			MA8	1.0	04B120	
$^{24}\text{Mg}-^{23}\text{Na}_{1.043}$	-4287.23	0.32	-4287.664	0.014	-0.9	U			Ma8	1.5	08Mu05	
$^{24}\text{Mg}(\text{p},^6\text{He})^{19}\text{Na}$	-37213	70	-37166	11	0.7	U			Brk		69Ce01	
$^{24}\text{Mg}(^3\text{He},^8\text{Li})^{19}\text{Na}$	-32876	12	-32878	11	-0.1	1	77	77 ^{19}Na	MSU		75Be38	
$^{24}\text{Mg}(\alpha,^8\text{He})^{20}\text{Mg}$	-60900	210	-60677	27	1.1	U					74Ro17	
	-60677	27				2			Tex		76Tr03	
$^{24}\text{Mg}(^3\text{He},^6\text{He})^{21}\text{Mg}$	-27488	40	-27508	16	-0.5	2			Brk		70Me11	
	-27512	18			0.2	2			MSU		71Tr03	
$^{22}\text{Ne}(\text{t,p})^{24}\text{Ne}$	5587	10	5587.8	0.5	0.1	U			LAI		61Si03 Z	
$^{24}\text{Mg}(\text{d},\alpha)^{22}\text{Na}$	1955	12	1958.76	0.17	0.3	U			MIT		64Sp12	
$^{24}\text{Mg}(\text{p,t})^{22}\text{Mg}$	-21194	3	-21194.5	0.3	-0.2	U			MSU		74Ha02	
	-21198.3	1.5			2.6	U			MSU		74No07	
	-21193.9	1.0			-0.6	U			Yal		05Pa31	
$^{23}\text{Na}(\text{n},\gamma)^{24}\text{Na}$	6959.50	0.12	6959.42	0.04	-0.6	o			BNn		74Gr37 Z	
	6959.42	0.07			0.0	2			BNn		80Gr12 *	
	6959.67	0.14			-1.8	U			ILn		83Hu11 Z	
	6959.38	0.08			0.5	2			Ptn		83Ti02	
	6959.44	0.05			-0.4	2			ORn		04To03	
6959.59	0.14			-1.2	U			Bdn		06Fi.A		
$^{23}\text{Na}(\text{d,p})^{24}\text{Na}$	4735	7	4734.86	0.04	0.0	U			CIT		52Mi54 Y	
	4736	5			-0.2	U			Mex		64Ma.B	
	4736	7			-0.2	U			MIT		64Sp12	
$^{23}\text{Na}(\text{p},\gamma)^{24}\text{Mg}$	11692.95	0.17	11692.687	0.013	-1.5	U			Wis		67Mo17 Z	
	11691.2	1.1			1.4	U					72Me09	
	11692.43	0.31			0.8	U					85Uh01 Z	
$^{24}\text{Mg}(\text{p,d})^{23}\text{Mg}$	-14307.5	1.5	-14307.1	0.7	0.3	1	21	21 ^{23}Mg	MSU		74No07	
$^{24}\text{Mg}(^3\text{He},\alpha)^{23}\text{Mg}$	4051	15	4046.0	0.7	-0.3	U			Man		59Ba13 Y	
$^{24}\text{Mg}(^7\text{Li},^8\text{He})^{23}\text{Al}$	-37397	27	-37384.2	0.4	0.5	U					01Ca37	
$^{24}\text{Al}^i(\text{p})^{23}\text{Mg}$	4086	9	4085	3	-0.1	2			Brk		79Ay01	
	4084.5	3.5			0.1	2			MSU		80Le18	
	4093	20			-0.4	U			Bor		98Cz01	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{24}\text{Ne}(\beta^-)^{24}\text{Na}$	2449	50	2466.3	0.5	0.3	U					56Dr11
$^{24}\text{Na}(\beta^-)^{24}\text{Mg}$	5511.8	2.	5515.61	0.04	1.9	U					61De25 *
	5515.8	2.			-0.1	U					64Le09 *
	5516.8	2.			-0.6	U					65Be24 *
	5511.5	1.0			4.1	B					69Bo48 *
	5511.8	2.			1.9	U					72Gi17 *
	5512.5	1.2			2.6	U					76Ge06 *
$^{24}\text{Al}(\beta^+)^{24}\text{Mg}$	13880	50	13886.0	1.1	0.1	U					68Ar03
$^{24}\text{Mg}(\text{p,n})^{24}\text{Al}$	-14659.0	2.8	-14668.3	1.1	-3.3	B			Yal		69Ov01 Z
$^{24}\text{Mg}(\text{}^3\text{He,t})^{24}\text{Al}$	-13880	60	-13904.5	1.1	-0.4	U			Brk		66Ma18
$^{24}\text{Mg}(\text{}^3\text{He,t})^{24}\text{Al}-^{36}\text{Ar}^{36}\text{K}$	-1071.48	1.05	-1071.5	1.0	0.0	1	100	100 ^{24}Al	Mun		10Wr01
$^{24}\text{Mg}(\pi^+, \pi^-)^{24}\text{Si}$	-23588	52	-23656	19	-1.3	2					80Bu15
$^{23}\text{Na}(\text{n}, \gamma)^{24}\text{Na}$	Original value (Z) increased by 0.037 for better recoil correction										AHW **
$^{24}\text{Na}(\beta^-)^{24}\text{Mg}$	$E_{\beta^-} = 1389(2) 1393(2) 1394(2) 1388.7(1.0) 1389(2) 1389.7(1.2)$ respectively,										GAu **
*	to 4^+ level at 4122.889 keV										Ens07a **
$^{25}\text{F}-\text{u}$	12010	220	12200	80	0.6	o			TO1	1.5	86Vi09
	12010	290			0.7	o			GA1	1.0	87Gi05
	12210	150			0.0	2			TO2	1.5	88Wo09
	12120	151			0.5	o			GA3	1.0	91Or01
	11990	130			1.1	2			TO4	1.5	91Zh24
	12249	97			-0.5	2			GA7	1.0	07Ju03
$^{25}\text{Ne}-\text{u}$	-2293	32	-2210	50	2.6	F			P40	1.0	01Lu20 *
$^{25}\text{Mg}(\text{p}, \alpha)^{22}\text{Na}$	-3151	8	-3147.20	0.18	0.5	U			MIT		59Br74 Y
$^{23}\text{Na}(\text{t}, \text{p})^{25}\text{Na}$	7488.8	1.2				2			Str		84An17
$^{25}\text{Mg}(\text{d}, \alpha)^{23}\text{Na}$	7026	13	7047.89	0.05	1.7	U			MIT		64Sp12
	7048	10			0.0	U					67Ha17
$^{25}\text{O}(\gamma, \text{n})^{24}\text{O}$	776	15				3					08Ho03 *
$^{24}\text{Mg}(\text{n}, \gamma)^{25}\text{Mg}$	7330.5	9.99	7330.52	0.05	0.0	U					69Ha.A
	7330.5	0.3			0.1	U			MMn		80Is02 Z
	7330.78	0.14			-1.9	U			ILn		82Hu02 Z
	7330.4	0.2			0.6	U			MMn		85Ke.A
	7330.64	0.08			-1.5	-			MMn		90Pr02 Z
	7330.69	0.05			-3.4	B			ORn		92Wa06
	7330.53	0.15			-0.1	-			Bdn		06Fi.A
$^{24}\text{Mg}(\text{d}, \text{p})^{25}\text{Mg}$	5098	12	5105.95	0.05	0.7	U			Har		61Hi11 Y
	5112	12			-0.5	U			Mex		61Ja23
	5102	7			0.6	U			MIT		64Sp12
$^{24}\text{Mg}(\text{n}, \gamma)^{25}\text{Mg}$	ave.	7330.62	0.07	7330.52	0.05	-1.4	1	44	42 ^{25}Mg		average
$^{24}\text{Mg}(\text{p}, \gamma)^{25}\text{Al}$	2271.6	1.1	2271.6	0.5	0.0	-					71Ev01 Z
	2271.7	0.7			-0.2	-					72Pi07 Z
	2271.4	0.8			0.2	-					85Uh01 Z
$^{24}\text{Mg}(\text{}^3\text{He}, \text{d})^{25}\text{Al}$	-3218.0	4.5	-3221.9	0.5	-0.9	U			NDm		73Br27
$^{24}\text{Mg}(\text{p}, \gamma)^{25}\text{Al}$	ave.	2271.6	0.5	2271.6	0.5	0.0	1	99	99 ^{25}Al		average
$^{24}\text{Mg}(\text{p}, \gamma)^{25}\text{Al}^i$	-5629.3	5.8	-5629.6	1.9	0.0	U					68Te01 *
$^{25}\text{Ne}(\beta^-)^{25}\text{Na}$	7380	300	7300	40	-0.3	U					73Go11
$^{25}\text{Na}(\beta^-)^{25}\text{Mg}$	3650	250	3835.0	1.2	0.7	U					54Na18
	4000	200			-0.8	U					55Ma63
$^{25}\text{Al}(\beta^+)^{25}\text{Mg}$	4292	30	4276.6	0.5	-0.5	U					60Wa04
$^{25}\text{Mg}(\text{p}, \text{n})^{25}\text{Al}$	-5058	6	-5059.0	0.5	-0.2	U			Har		69Fr08
$^{25}\text{Al}^i(\text{IT})^{25}\text{Al}$	7901	2	7901.2	1.8	0.1	1	85	84 $^{25}\text{Al}^i$			77Ro03
$^{25}\text{Ne}-\text{u}$	F : rejected by authors: "unreliable double peak"										06Ga04 **
$^{25}\text{O}(\gamma, \text{n})^{24}\text{O}$	Symmetrized from 770(+20-10)										08Ho03 **
$^{24}\text{Mg}(\text{p}, \gamma)^{25}\text{Al}^i$	IT=7916(6), Q rebuilt with Ame1964, error estimated by evaluator										GAu **
$^{26}\text{F}-\text{u}$	19800	1000	20040	80	0.2	o			TO1	1.5	86Vi09
	20940	640			-1.4	o			GA1	1.0	87Gi05
	19820	210			0.7	2			TO2	1.5	88Wo09
	19544	300			1.6	o			GA3	1.0	91Or01
	19490	210			1.7	U			TO4	1.5	91Zh24
	20054	86			-0.2	2			GA7	1.0	07Ju03
$^{26}\text{Ne}-\text{u}$	448	90	515	20	0.7	2			GA3	1.0	91Or01
	461	33			1.6	o			P40	1.0	01Lu20

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{26}\text{Ne-u}$	518	20	515	20	-0.2	2			P40	1.0	06Ga04
$^{26}\text{Na-u}$	-7367	7	-7365	4	0.2	o			P40	1.0	01Lu17
	-7365	4			-0.1	2			P40	1.0	06Ga04 *
	-7368	11			0.2	2			P40	1.0	06Ga04
$^{26}\text{Mg-H}_{26}$	-220857.848	0.034	-220857.87	0.03	-0.6	1	88	88 ^{26}Mg	ST2	1.0	03Be02
$^{26}\text{Al-}^{23}\text{Na}_{1,130}$	-1547.46	0.24	-1547.38	0.07	0.3	U			MA8	1.0	08Ge08
$^{26}\text{Si-}^{23}\text{Na}_{1,13}$	3895.1	2.1	3894.56	0.11	-0.3	U			MS1	1.0	10Kw02
$^{26}\text{Al-}^{25}\text{Mg}_{1,040}$	1621.46	0.48	1621.45	0.06	0.0	U			JY1	1.0	06Er08
$^{26}\text{Al}^m\text{-}^{25}\text{Mg}_{1,040}$	1867.09	0.53	1866.54	0.06	-1.0	U			JY1	1.0	06Er08
$^{26}\text{Al-}^{26}\text{Mg}$	4299.14	0.17	4298.94	0.07	-1.2	1	15	14 ^{26}Al	JY1	1.0	06Er08
$^{26}\text{Al}^m\text{-}^{26}\text{Mg}$	4544.09	0.17	4544.03	0.07	-0.3	1	15	14 $^{26}\text{Al}^m$	JY1	1.0	06Er08
$^{26}\text{Al}^m\text{-}^{26}\text{Al}$	245.09	0.17	245.096	0.014	0.0	U			JY1	1.0	06Er08
	244.91	0.14			1.3	U			JY1	1.0	09Er02
	245.114	0.049			-0.4	U			JY1	1.0	09Er07
$^{26}\text{Si-}^{26}\text{Al}$	5441.97	0.14	5441.94	0.09	-0.2	2			JY1	1.0	09Er02
	5441.92	0.12			0.2	2			JY1	1.0	09Er02 *
$^{25}\text{Na-}^{26}\text{Na}_{721}$ $^{22}\text{Na}_{284}$	-2881	33	-2939.6	2.8	-1.8	U			P13	1.0	75Th08
	-2921	22			-0.8	U			P13	1.0	75Th08
$^{26}\text{Al(n,}\alpha\text{)}^{23}\text{Na}$	2966.5	2.5	2966.14	0.06	-0.1	U					01Wa50
$^{23}\text{Na}(\alpha,\text{n})^{26}\text{Al}$	-2968	4	-2966.14	0.06	0.5	U			Duk		60Wi07 Y
$^{26}\text{O}(\gamma,2\text{n})^{24}\text{O}$	90	110				3					12Lu07 *
$^{24}\text{Mg(t,p)}^{26}\text{Mg}$	9940	12	9941.81	0.03	0.2	U			Har		61Hi11 Y
$^{24}\text{Mg}(\text{}^3\text{He,p})^{26}\text{Al}$	5932	15	5918.79	0.06	-0.9	U			Ald		59Hi66 Y
	5922	8			-0.4	U			Phi		72Be51
$^{24}\text{Mg}(\text{}^3\text{He,n})^{26}\text{Si}$	85	18	67.31	0.11	-1.0	U			CIT		67Mi02
	75	30			-0.3	U					67Mc03
	95	15			-1.8	U			Har		68Ad03
	65	30			0.1	U			Ber		68Ha09
$^{26}\text{Mg}(\text{}^7\text{Li,}^8\text{B})^{25}\text{Ne}$	-22050	100	-22170	40	-1.2	2			Brk		73Wi06
$^{26}\text{Mg}(\text{}^{13}\text{C,}^{14}\text{O})^{25}\text{Ne}$	-19067	50	-19040	40	0.6	2			Can		85Wo04
$^{26}\text{Mg(d,}^3\text{He})^{25}\text{Na}$	-8653	10	-8652.2	1.2	0.1	U			MSU		73Be14
$^{26}\text{Mg(t,}\alpha\text{)}^{25}\text{Na}$	5664	12	5668.2	1.2	0.3	U			Ald		62Hi01
$^{25}\text{Mg(n,}\gamma\text{)}^{26}\text{Mg}$	11092.9	0.3	11093.09	0.04	0.6	U			MMn		80Is02
	11091.84	0.44			2.8	U			ILn		82Hu02 Z
	11093.10	0.06			-0.1	1	54	45 ^{25}Mg	MMn		90Pr02 Z
	11093.17	0.06			-1.3	o			ORn		91Ki04 Z
	11093.23	0.05			-2.8	B			ORn		92Wa06 Z
	11093.16	0.22			-0.3	U			Bdn		06Fi.A
$^{25}\text{Mg(d,p)}^{26}\text{Mg}$	8865	12	8868.53	0.04	0.3	U			Ald		61Hi11 Y
	8876	12			-0.6	U			Mex		61Ja23
	8889	12			-1.7	U			MIT		64Sp12
$^{25}\text{Mg(p,}\gamma\text{)}^{26}\text{Al}$	6305.0	1.2	6306.31	0.05	1.1	U					74De37
	6304.9	1.1			1.3	U					79Ei11
	6306.39	0.11			-0.7	-					85Be17 Z
	6306.38	0.08			-0.9	-			Utr		91Ki04 Z
ave.	6306.38	0.06			-1.1	1	72	59 ^{26}Al			average
$^{26}\text{Si}(\text{p})^{25}\text{Al}$	7563	15	7553	11	-0.6	2			Brk		83Ca06
	7544	15			0.6	2			Brk		83Ho23 *
$^{26}\text{Mg}(\pi^-, \pi^+)^{26}\text{Ne}$	-17676	72	-17716	18	-0.6	U					80Na12
$^{26}\text{Na}(\beta^-)^{26}\text{Mg}$	9210	200	9354	4	0.7	U					73Al13
$^{26}\text{Mg(t,}^3\text{He)}^{26}\text{Na}$	-9292	20	-9335	4	-2.2	U			LAl		74Fi01
$^{26}\text{Mg}(\text{}^7\text{Li,}^7\text{Be})^{26}\text{Na}$	-10182	40	-10216	4	-0.8	U			ChR		72Ba35 *
$^{26}\text{Al}(\beta^+)^{26}\text{Mg}$	3991	8	4004.43	0.06	1.7	U					58Fe16 *
$^{26}\text{Mg(p,n)}^{26}\text{Al}$	-4786.7	10.	-4786.78	0.06	0.0	U			Oak		55Ki28 *
	-4787.04	0.48			0.5	U			Utr		69De27
	-4786.1	1.6			-0.4	U			Har		69Fr08 *
	-4785.66	0.22			-5.1	C			Auc		84Ba.B *
	-4786.57	0.05			-4.2	C			Auc		92Ba.A *
	-4786.25	0.12			-4.4	B			Auc		94Br11 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{26}\text{Mg}(^3\text{He,t})^{26}\text{Al}$	-4023.0	0.6	-4023.02	0.06	0.0	F			Mun		77Vo02 *
$^{26}\text{Mg}(^3\text{He,t})^{26}\text{Al}-^{27}\text{Al}(^27\text{Si})$	808.2	2.0	807.93	0.11	-0.1	U			ChR		74Ha35
$^{26}\text{Mg}(^3\text{He,t})^{26}\text{Al}-^{14}\text{N}(^14\text{O})$	1139.43	0.13	1139.61	0.11	1.4	1	66	^{14}O	ChR		87Ko34 *
$^{26}\text{Al}^m(\text{IT})^{26}\text{Al}$	228.305	0.013	228.305	0.013	0.0	1	99	$^{86}\text{Al}^m$			Ens004
$^{26}\text{Si}(\beta^+)^{26}\text{Al}$	5079	13	5069.14	0.08	-0.8	U					63Fr10
* $^{26}\text{Na-u}$	Result from the "Thermo" experiment. Next item from "Rilis"										06Ga04 **
* $^{26}\text{Si}-^{26}\text{Al}$	$D_M=5196.82(0.12)\mu\text{u}$ for $^{26}\text{Al}^m$ at 228.305(0.013); $M-A=-7141.05(0.13)\text{keV}$										Nub127 **
* $^{26}\text{O}(\gamma,2n)^{24}\text{O}$	Symmetrized from 150(+50-150) keV										12Lu07 **
* $^{26}\text{Si}^i(\text{p})^{25}\text{Al}$	$E_p=3699(15)$ to 3695.5 level; different from preceeding data										Ens098 **
* $^{26}\text{Mg}(^7\text{Li},^7\text{Be})^{26}\text{Na}$	$Q=-10222(30)$ corrected for contribution of unresolved 82.5 level										Ens90 **
* $^{26}\text{Al}(\beta^+)^{26}\text{Mg}$	$E_{\beta^+}=1160(8)$ to 2^+ level at 1808.70 level										Ens004 **
* $^{26}\text{Mg}(\text{p,n})^{26}\text{Al}$	$T=5191(10,Z)$ to $^{26}\text{Al}^m$ at 228.305 keV										Nub127 **
* $^{26}\text{Mg}(\text{p,n})^{26}\text{Al}$	$T=5209.3(1.6,Z)$ to $^{26}\text{Al}^m$ at 228.305 keV										Nub127 **
* $^{26}\text{Mg}(\text{p,n})^{26}\text{Al}$	$T=5208.86(0.23)$ to $^{26}\text{Al}^m$ at 228.305 keV										Nub127 **
* $^{26}\text{Mg}(\text{p,n})^{26}\text{Al}$	$T=5209.71(0.05)$ to $^{26}\text{Al}^m$ at 228.305 keV										Nub127 **
* $^{26}\text{Mg}(\text{p,n})^{26}\text{Al}$	$T=5209.46(0.12)$ to $^{26}\text{Al}^m$ at 228.305 keV										Nub127 **
* $^{26}\text{Mg}(^3\text{He,t})^{26}\text{Al}$	$Q=-4251.3(0.6,Z)$ to $^{26}\text{Al}^m$ at 228.305 keV										Nub127 **
* $^{26}\text{Mg}(^3\text{He,t})^{26}\text{Al}$	F : rejected in reference of same group										09Fa15 **
* $^{26}\text{Mg}(^3\text{He,t})^{26}\text{Al}-^{14}\text{N}(^14\text{O})$	$Q(\text{to } 1057.740(0.023)\text{ level})-^{14}\text{N}(^14\text{O})=81.69(0.13)$										82A119 **
$^{27}\text{F-u}$	27500	700	26440	200	-1.0	U			TO2	1.5	88Wo09
	26005	770			0.6	U			GA3	1.0	91Or01
	27100	900			-0.5	U			TO4	1.5	91Zh24
	26900	580			-0.8	o			GA5	1.0	99Sa.A
	26441	204				2			GA7	1.0	07Ju03
$^{27}\text{Ne-u}$	6010	640	7550	70	1.6	F			TO1	1.5	86Vi09 *
	7470	300			0.3	U			GA1	1.0	87Gi05
	7567	172			-0.1	o			GA3	1.0	91Or01
	7670	130			-0.6	2			TO4	1.5	91Zh24
	7536	75			0.2	2			GA7	1.0	07Ju03
$^{27}\text{Na-u}$	-5922	11	-5923	4	-0.1	o			P40	1.0	01Lu17 *
	-5922	4			-0.4	o			P40	1.0	06Ga04 *
$^{27}\text{Al}-^{23}\text{Na}_{1,174}$	-6450.79	0.25	-6450.61	0.11	0.7	1	20	^{27}Al	MA8	1.0	08Ge08
$^{27}\text{Na}-^{27}\text{Al}$	12538	4				2			P40	1.0	01Lu17
$^{24}\text{Na}-^{27}\text{Na}_{,356} \quad ^{22}\text{Na}_{,655}$	-3006	38	-3059.8	1.3	-0.9	U			P10	1.5	75Th08
$^{26}\text{Na}-^{27}\text{Na}_{,770} \quad ^{22}\text{Na}_{,236}$	-1437	86	-1389	5	0.6	U			P13	1.0	75Th08
$^{26}\text{Na}-^{27}\text{Na}_{,481} \quad ^{25}\text{Na}_{,520}$	676	66	659	4	-0.2	U			P10	1.5	75Th08
	734	86			-0.6	U			P11	1.5	75Th08
$^{23}\text{Na}(\alpha,\gamma)^{27}\text{Al}$	10090.0	1.3	10091.81	0.10	1.4	U			Utr		78Ma23
$^{27}\text{Al}(\text{p},\alpha)^{24}\text{Mg}$	1601.7	0.7	1600.88	0.10	-1.2	o			Zur		63Ry04
	1598.4	1.0			2.5	U			NDm		65Br28
	1601.3	0.5			-0.8	U			Zur		67St30 Z
	1600.06	0.21			3.9	B			Utr		78Ma23 Z
$^{24}\text{Mg}(\alpha,\text{p})^{27}\text{Al}$	-1598.9	1.0	-1600.88	0.10	-2.0	U			NDm		65Br28
$^{25}\text{Mg}(\text{t,p})^{27}\text{Mg}$	9055	11	9054.68	0.06	0.0	U			Tal		61Hi11 Y
$^{27}\text{Al}(\text{d},\alpha)^{25}\text{Mg}$	6699	12	6706.83	0.11	0.7	U			Ald		61Hi11 Y
	6691	11			1.4	U			Tal		62Sh01 Y
	6700	10			0.7	U			MIT		64Sp12
$^{27}\text{Al}(\text{p,t})^{25}\text{Al}^i$	-23843.4	4.7	-23842.6	1.9	0.2	1	16	$^{25}\text{Al}^i$	MSU		73Be14 *
$^{27}\text{P}^i(2\text{p})^{25}\text{Al}$	6410	45	6350	30	-1.4	2			Lis		91Bo32
	6270	50			1.5	2					01Ca60 *
$^{26}\text{Mg}(^{18}\text{O},^{17}\text{F})^{27}\text{Na}$	-13295	55	-13431	4	-2.5	F			Mun		78Pa12 *
	-13433	60			0.0	U			Can		85Fi08
$^{26}\text{Mg}(\text{n},\gamma)^{27}\text{Mg}$	6443.35	0.55	6443.39	0.04	0.1	U			ILn		82Hu02
	6443.56	0.25			-0.7	o			MMn		85Ke.A
	6443.26	0.08			1.6	2			MMn		90Pr02 Z
	6443.44	0.05			-1.1	2			ORn		92Wa06 Z
	6443.35	0.13			0.3	2			Bdn		06Fi.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{26}\text{Mg}(\text{d,p})^{27}\text{Mg}$	4214	12	4218.82	0.04	0.4	U			Ald		61Hi11 Y
	4215	10			0.4	U			Mex		61Ja23
	4211	6			1.3	U			MIT		64Sp12
$^{26}\text{Mg}(\text{p},\gamma)^{27}\text{Al}$	8270.8	0.5	8271.17	0.11	0.7	-			Utr		59An33 *
	8271.2	0.5			-0.1	-					63Va24 Z
	8271.3	0.5			-0.3	-			Utr		78Ma24 *
$^{27}\text{Al}(\text{t},\alpha)^{26}\text{Mg}$	11541	12	11542.69	0.11	0.1	U			Ald		61Hi11
$^{26}\text{Mg}(\text{p},\gamma)^{27}\text{Al}$	ave.	8271.10	0.29	8271.17	0.11	0.3	1	14	13 ^{27}Al		average
$^{27}\text{Al}(\text{^3\text{He},\alpha)^{26}\text{Al}$	7523	15	7519.66	0.12	-0.2	U			Ald		59Hi66
	7519	15			0.0	U			Man		60Ta12
$^{26}\text{Al}(\text{p},\gamma)^{27}\text{Si}$	7464.9	0.9	7463.25	0.16	-1.8	U					84Bu09 Z
$^{27}\text{Na}(\beta^-)^{27}\text{Mg}$	8930	150	9069	4	0.9	U					73Al13
$^{27}\text{Mg}(\beta^-)^{27}\text{Al}$	2600	11	2610.13	0.11	0.9	U					54Da22
$^{27}\text{Si}(\beta^+)^{27}\text{Al}$	4872	20	4812.36	0.10	-3.0	U					60Wa04
$^{27}\text{Al}(\text{p,n})^{27}\text{Si}$	-5573	10	-5594.71	0.10	-2.2	U					Oak 55Ki28 Z
	-5597.5	6.0			0.5	U			Tkm		63Ok01
	-5593.6	4.3			-0.3	U			Ric		65Ku02
	-5585.1	2.3			-4.2	B			Ric		66Bo20 Z
	-5592.0	1.0			-2.7	U			Yal		69Ov01 Z
	-5594.1	3.2			-0.2	U			Har		76Fr13
	-5593.8	0.26			-3.5	F			Auc		77Na24 *
	-5594.27	0.11			-4.0	F			Auc		85Wh03 *
	-5594.72	0.10				2			Auc		94Br37 Z
	* $^{27}\text{Ne-u}$	F : contaminated by ^{27}Na									
* $^{27}\text{Na-u}$	Not independent of ^{27}Na - ^{27}Al from isobaric method, do not use										01Lu17 **
* $^{27}\text{Al}(\text{p,t})^{25}\text{Al}^i$	IT=7904(5), rebuilt Q=-23847.9(4.7); recalib +4.5keV										GAu **
* $^{27}\text{P}^i(2\text{p})^{25}\text{Al}$	And E_{2p} =5315(60) to $3/2^+$ level at 944.9 keV										Ens098 **
* $^{26}\text{Mg}(\text{^{18}\text{O},^{17}\text{F})^{27}\text{Na}$	F : shape of peak raises doubt on centroid determination										GAu **
* $^{26}\text{Mg}(\text{p},\gamma)^{27}\text{Al}$	E_p =338.65(0.12) to 8596.8(0.5) level										78Ma24 **
* $^{26}\text{Mg}(\text{p},\gamma)^{27}\text{Al}$	E_p =338.21(0.30) to 8596.8(0.5) level										78Ma24 **
* $^{26}\text{Mg}(\text{p},\gamma)^{27}\text{Al}$	E_p =809.90(0.05,Z) to 9050.7(0.5,Z) level										78Ma24 **
* $^{27}\text{Al}(\text{p,n})^{27}\text{Si}$	F : rejected by same group "measurement contains error"										94Br37 **
$^{28}\text{Ne-u}$	11490	430	12120	100	1.0	o			TO1	1.5	86Vi09
	12270	560			-0.3	o			GA1	1.0	87Gi05
	11958	238			0.7	o			GA3	1.0	91Or01
	12160	140			-0.2	2			TO4	1.5	91Zh24
	12110	118			0.1	2			GA7	1.0	07Ju03
$^{28}\text{Na-u}$	-1220	190	-1061	11	0.6	o			TO1	1.5	86Vi09
	-1097	96			0.4	U			GA3	1.0	91Or01
	-1062	14			0.1	o			P40	1.0	01Lu17
	-1061	11				2			P40	1.0	06Ga04
$^{28}\text{Si-u}$	-23073.43	0.30	-23073.4654	0.0004	-0.1	U			ST1	1.0	93Je06
	-23073.4676	0.0020			1.1	U			MI1	1.0	95Di08
	-23073.00	0.27			-0.7	U			OH1	2.5	94Go.A
	-23073.4661	0.0008			0.9	1	30	30 ^{28}Si	ST2	1.0	02Be64
$\text{C}_2 \text{D}_2$ - ^{28}Si	51277.0224	0.0024	51277.0216	0.0005	-0.3	U			MI1	1.0	95Di08
$^{15}\text{N}_2$ - $^{28}\text{Si} \text{H}_2$	7641.2007	0.0024	7641.1987	0.0013	-0.9	1	29	27 ^{15}N	MI1	1.0	95Di08
$\text{C}_2 \text{H}_4$ - ^{28}Si	54373.59360	0.00079	54373.5943	0.0005	0.9	1	45	27 ^{28}Si	FS1	1.0	08Re16
$^{13}\text{C}_2 \text{H}_2$ - ^{28}Si	45433.19986	0.00071	45433.2000	0.0005	0.1	1	47	24 ^{28}Si	FS1	1.0	08Re16
$^{28}\text{Si}_2 \text{^{16}\text{O}-^{35}\text{Cl} ^{37}\text{Cl}}$	14013.07	0.70	14012.40	0.07	-0.6	U			H46	1.5	93Nx02
^{25}Na - $^{28}\text{Na}_{446}$ $^{22}\text{Na}_{568}$	-5869	75	-5974	5	-0.9	U			P10	1.5	75Th08 *
^{26}Na - $^{28}\text{Na}_{619}$ $^{22}\text{Na}_{394}$	-4229	613	-4207	7	0.0	U			P11	1.5	75Th08
	-4205	128			0.0	U			P12	2.5	75Th08
	-4203	87			-0.1	U			P13	1.0	75Th08
$^{28}\text{Si}(\text{p},^6\text{He})^{23}\text{Al}$	-38569	80	-38544.0	0.3	0.3	U			Brk		69Ce01
$^{28}\text{Si}(\text{^3\text{He},^8\text{Li})^{23}\text{Al}$	-34274	25	-34255.5	0.3	0.7	U			MSU		75Be38
$^{28}\text{Si}(\alpha,^8\text{He})^{24}\text{Si}$	-61433	21	-61422	19	0.5	R			Tex		80Tr04

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{28}\text{Si}(p,\alpha)^{25}\text{Al}$	-7709.3	2.6	-7712.6	0.5	-1.3	U			NDm		73Br27	
$^{28}\text{Si}(^3\text{He},^6\text{He})^{25}\text{Si}$	-27976	50	-27981	10	-0.1	U			Brk		70Me11	
	-27981	10				2			MSU		72Be12	
$^{26}\text{Mg}(t,p)^{28}\text{Mg}$	6474	12	6465.0	2.0	-0.7	U			Har		61Hi11 Y	
$^{26}\text{Mg}(^3\text{He},p)^{28}\text{Al}$	8285	5	8278.23	0.12	-1.4	U			Phi		74Be07	
$^{28}\text{Si}(d,\alpha)^{26}\text{Al}$	1429	4	1428.12	0.06	-0.2	U			MIT		64Sp12	
$^{28}\text{Si}(p,t)^{26}\text{Si}$	-22009	3	-22012.65	0.11	-1.2	U			MSU		74Ha02	
	-22014.1	1.0				1.4			Yal		05Pa31	
$^{28}\text{F}(\gamma,n)^{27}\text{F}$	220	50				3			MSU		12Ch02	
$^{27}\text{Al}(n,\gamma)^{28}\text{Al}$	7725.02	0.20	7725.10	0.06	0.4	U			BNn		78St25 Z	
	7725.07	0.30				0.1			ILn		79Br25 Z	
	7725.13	0.3				-0.1			MMn		80Is02 Z	
	7725.02	0.10				0.8					81Su.A Z	
	7725.14	0.09				-0.4			ILn		82Sc14 Z	
	7725.17	0.15				-0.5			Bdn		06Fi.A Z	
$^{27}\text{Al}(d,p)^{28}\text{Al}$	5511	5	5500.53	0.06	-2.1	U			Mex		61Ja23	
	5503	10				-0.2			MIT		64Sp12	
$^{27}\text{Al}(p,\gamma)^{28}\text{Si}$	11584.89	0.30	11585.02	0.10	0.4	-			Utr		78Ma23 Z	
$^{27}\text{Al}(^3\text{He},d)^{28}\text{Si}$	6049	18	6091.54	0.10	2.4	U					60Fo01	
$^{27}\text{Al}(p,\gamma)^{28}\text{Si}$	ave. 11585.05	0.13	11585.02	0.10	-0.3	1	67	67	^{27}Al		average	
$^{27}\text{Al}(p,\gamma)^{28}\text{Si}^r$	-956.15	0.03	-956.139	0.025	0.3	2			Utr		78Ma23 Z	
	-956.025	0.020				-5.7			Auc		94Br37 Z	
	-956.13	0.05				-0.4					98Wa.A Z	
$^{28}\text{Si}(^3\text{He},\alpha)^{27}\text{Si}$	3407	15	3397.89	0.14	-0.6	U			Ald		59Hi68 Y	
$^{28}\text{Si}(^3\text{He},\alpha)^{27}\text{Si}^i$	-3225.5	2.6	-3227.0	2.3	-0.6	1	79	79	$^{27}\text{Si}^i$		86Sc21 *	
$^{28}\text{Si}(^7\text{Li},^8\text{He})^{27}\text{P}$	-37513	40	-37473	26	1.0	R					01Ca37	
$^{28}\text{P}^i(p)^{27}\text{Si}$	3835	20				3			Lis		89Po10	
$^{28}\text{Mg}(\beta^-)^{28}\text{Al}$	1791	10	1831.8	2.0	4.1	B					53Ma23 *	
	1831.8	2.0				3					54O103 *	
$^{28}\text{Al}(\beta^-)^{28}\text{Si}$	4644	10	4642.26	0.12	-0.2	U					52Mo22 *	
	4657	14				-1.1					54O103 *	
$^{28}\text{Si}^r(\text{IT})^{28}\text{Si}$	12541.23	0.14	12541.16	0.11	-0.5	R			Utr		90En02 Z	
$^{28}\text{P}(\beta^+)^{28}\text{Si}$	14290	40	14345.1	1.2	1.4	U					68Ar03 *	
$^{28}\text{Si}(p,n)^{28}\text{P}$	-15118.3	4.1	-15127.4	1.2	-2.2	U			Yal		69Ov01 Z	
	-15112.5	5.8				-2.6			BNL		71Go18 Z	
$^{28}\text{Si}(^3\text{He},t)^{28}\text{P}$	-14380	60	-14363.6	1.2	0.3	U			Brk		66Ma18	
$^{28}\text{Si}(^3\text{He},t)^{28}\text{P}-^{36}\text{Ar}(^{36}\text{K})$	-1530.58	1.10	-1530.6	1.1	0.0	1	100	100	^{28}P	Mun	10Wr01	
$^{28}\text{Si}(\pi^+,\pi^-)^{28}\text{S}$	-24544	160				2					82Mo12 *	
$^{25}\text{Na}-^{28}\text{Na}_{446}-^{22}\text{Na}_{568}$	Symmetric double-doublet 22-24 26-28 included										GAu	**
$^{28}\text{Si}(^3\text{He},\alpha)^{27}\text{Si}^i$	IT=6626(3), Q rebuilt with Ame1977										GAu	**
$^{28}\text{Mg}(\beta^-)^{28}\text{Al}$	$E_{\beta^-}=418(10) 459(2)$ respectively, to 1^+ level at 1372.95 keV										Ens013	**
$^{28}\text{Al}(\beta^-)^{28}\text{Si}$	$E_{\beta^-}=2865(10) 2878(14)$ respectively, to 2^+ level at 1779.030 keV										Ens013	**
$^{28}\text{P}(\beta^+)^{28}\text{Si}$	$E_{\beta^+}=11490(40)$ to 2^+ level at 1779.030 keV										Ens013	**
$^{28}\text{Si}(\pi^+,\pi^-)^{28}\text{S}$	Original -24603(160) recalibrated to $^{16}\text{O}(\pi^+,\pi^-)^{16}\text{Ne}$ Q=-27704(20) keV										GAu	**
$^{29}\text{Ne-u}$	19433	551	19750	110	0.6	o			GA3	1.0	91Or01	
	19300	400				0.8			TO4	1.5	91Zh24	
	19400	410				0.9			GA5	1.0	00Sa21	
	19753	107				2			GA7	1.0	07Ju03	
$^{29}\text{Na-u}$	2820	230	2877	8	0.2	U			TO1	1.5	86Vi09	
	2838	143				0.3			GA3	1.0	91Or01	
	2861	14				1.1			P40	1.0	01Lu17	
	2866	13				0.9			P40	1.0	06Ga04	
$^{29}\text{Na}-^{39}\text{K}_{744}$	29886	10	29879	8	-0.7	1	37	37	^{29}Na			
$^{29}\text{Mg-u}$	-11375	19	-11383	12	-0.4	2	63	63	^{29}Na			
	-11388	16				0.3			P40	1.0	06Ga04 *	
$^{29}\text{Al}-\text{O}_{1.812}$	-10328.8	1.0				2			TT1	1.0	12Ch.A	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference			
$^{29}\text{Si}-^{28}\text{Si}$ H	-8256.90198	0.00024	-8256.90198	0.00024	0.0	1	100	100	^{29}Si	MI3	1.0	05Ra34		
$^{26}\text{Na}-^{29}\text{Na}_{.512}$ $^{22}\text{Na}_{.506}$	-5763	91	-5611	5	1.1	U			P10	1.5	75Th08			
	-6379	293			1.7	U			P11	1.5	75Th08			
	-5252	277			-0.5	U			P12	2.5	75Th08			
	-5576	66			-0.5	U			P13	1.0	75Th08			
	-1708	124	-1713	5	0.0	U			P10	1.5	75Th08			
$^{18}\text{O}(^{13}\text{C},2\text{p})^{29}\text{Mg}$	-1456	50	-1633	11	-3.5	B						81Pa17		
$^{26}\text{Mg}(^{11}\text{B},^8\text{B})^{29}\text{Mg}$	-19720	50	-19865	11	-2.9	U			Brk			74Sc26		
$^{26}\text{Mg}(^{18}\text{O},^{15}\text{O})^{29}\text{Mg}$	-9207	55	-9250	11	-0.8	U			Mun			78Pa12		
	-9250	45			0.0	U			Can			85Fi08		
$^{26}\text{Mg}(\alpha,\text{p})^{29}\text{Al}$	-2880	40	-2873.9	0.9	0.2	U			Yal			57Gr47	Y	
	-2874	10			0.0	U			ANL			68Be13		
$^{29}\text{Si}(\text{n},\alpha)^{26}\text{Mg}$	-21	21	-34.131	0.030	-0.6	U			Ham			62An05		
$^{27}\text{Al}(\text{t},\text{p})^{29}\text{Al}$	8679.5	1.2	8668.8	0.9	-9.0	B			Str			84An17		
$^{29}\text{Si}(\text{d},\alpha)^{27}\text{Al}$	6000	11	6012.47	0.10	1.1	U			MIT			64Sp12		
$^{29}\text{Si}(\text{p},\text{t})^{27}\text{Si}^i$	-23802	5	-23796.4	2.3	1.1	1	21	21	$^{27}\text{Si}^i$	MSU		77Be13		
$^{27}\text{Al}(^3\text{He},\text{n})^{29}\text{P}$	6616	30	6615.6	0.6	0.0	U			Oak			72Gr39		
	8473.6	0.3	8473.6012	0.0005	0.0	o			MMn			80Is02	Z	
	8473.61	0.04			-0.2	U			MMn			90Is02	Z	
	8473.55	0.04			1.3	U			ORn			92Ra19	Z	
	8473.5509	0.0500			1.0	o			PTc			97Ro26	*	
	8473.54	0.17			0.4	U			Bdn			06Fi.A		
	8473.551	0.030			1.7	U			PTc			01Pa52	*	
	8473.5957	0.0050			1.1	U			NBS			06De21		
	$^{28}\text{Si}(\text{d},\text{p})^{29}\text{Si}$	6252	10	6249.03523	0.00029	-0.3	U			Mex			64Ma.B	
		6252	10			-0.3	U			MIT			64Sp12	
6249.35		0.5			-0.6	U			Rez			90Pi05	*	
$^{28}\text{Si}(\text{p},\gamma)^{29}\text{P}$	2747.1	1.7	2748.6	0.6	0.9	-						73Ba35	Z	
	2748.8	0.6			-0.3	-						74By01	Z	
$^{28}\text{Si}(\text{d},\text{n})^{29}\text{P}$	560	30	524.1	0.6	-1.2	U			Ald			60Ma21		
$^{28}\text{Si}(^3\text{He},\text{d})^{29}\text{P}$	-2733	12	-2744.8	0.6	-1.0	U			Ald			60Hi03	Y	
$^{28}\text{Si}(\text{p},\gamma)^{29}\text{P}$	ave.	2748.6	2748.6	0.6	0.0	1	99	99	^{29}P			average		
$^{28}\text{Si}(\text{p},\gamma)^{29}\text{P}^i$	-5630	10	-5633.1	2.5	-0.3	U			ANL			66Yo01		
	-5631.9	5.0			-0.2	1	25	25	$^{29}\text{P}^i$			68Te01	*	
$^{29}\text{Mg}(\beta^-)^{29}\text{Al}$	7624	400	7602	11	-0.1	U						73Go34		
$^{29}\text{Al}(\beta^-)^{29}\text{Si}$	3850	100	3690.4	0.9	-1.6	U						54Na14	*	
$^{29}\text{P}(\beta^+)^{29}\text{Si}$	4967	20	4942.6	0.6	-1.2	U						55Ro05		
$^{29}\text{P}^i(\text{IT})^{29}\text{P}$	8382.1	2.8	8381.7	2.4	-0.1	1	76	75	$^{29}\text{P}^i$			72Ba26		
* ^{29}Mg -u	Result from the "Plasma" experiment. Next item from "Rilis"										06Ga04	**		
* $^{28}\text{Si}(\text{n},\gamma)^{29}\text{Si}$	Original error 0.0005 increased for calibration										GAu	**		
* $^{28}\text{Si}(\text{n},\gamma)^{29}\text{Si}$	Original error 0.005 increased for calibration										GAu	**		
* $^{28}\text{Si}(\text{d},\text{p})^{29}\text{Si}$	Estimated systematic error 0.5 added to statistical error 0.037 keV										AHW	**		
* $^{28}\text{Si}(\text{p},\gamma)^{29}\text{P}^i$	IT=8376(6), Q rebuilt with Ame1964, error estimated by evaluator										GAu	**		
* $^{29}\text{Al}(\beta^-)^{29}\text{Si}$	$E_{\beta^-}=1550(100)$ to $5/2^+$ level at 2028.15 and $3/2^+$ at 2426.016 keV										Ens013	**		
^{30}Ne -u	23872	884	24730	300	1.0	o			GA3	1.0		91Or01		
	25660	850			-1.1	o			GA5	1.0		00Sa21		
	24734	301			2				GA7	1.0		07Ju03		
^{30}Na -u	7620	540	9098	5	1.8	F			TO1	1.5		86Vi09	*	
	9200	370			-0.3	U			GA1	1.0		87Gi05		
	9126	218			-0.1	U			GA3	1.0		91Or01		
	9330	130			-1.2	U			TO4	1.5		91Zh24		
	8976	27			4.5	B			P40	1.0		01Lu17		
	8990	25			4.3	B			P40	1.0		06Ga04		
$^{30}\text{Na}-\text{O}_{1.876}$	18638.9	5.6	18638	5	-0.1	1	82	82	^{30}Na	TT1	1.0	12Ch.A		
$^{30}\text{Na}-^{39}\text{K}_{.769}$	37004	12	37008	5	0.3	1	18	18	^{30}Na	TT1	1.0	12Ch.A		
$^{30}\text{Mg}-\text{O}_{1.876}$	3.1	3.7			2				TT1	1.0		12Ch.A		
^{30}Mg -u	-9700	230	-9537	4	0.5	o			TO1	1.5		86Vi09		
	-9597	98			0.6	U			GA3	1.0		91Or01		
	-9490	110			-0.3	U			TO4	1.5		91Zh24		
	-9546	14			0.6	U			P40	1.0		06Ga04		

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{30}\text{S}_{-30}\text{P}$	6593.28	0.21				3			JY1	1.0	11So11
$^{26}\text{Na}_{-30}\text{Na}_{.433} \ ^{22}\text{Na}_{.591}$	-7454	287	-7468	4	0.0	U			P10	1.5	75Th08
	-8060	641			0.6	U			P11	1.5	75Th08
	-7045	225			-0.8	U			P12	2.5	75Th08
	-7515	117			0.4	U			P13	1.0	75Th08
$^{27}\text{Na}_{-30}\text{Na}_{.360} \ ^{25}\text{Na}_{.648}$	-2750	213	-2505	4	0.8	U			P10	1.5	75Th08
$^{26}\text{Mg}(^{18}\text{O}, ^{14}\text{O})^{30}\text{Mg}$	-16234	55	-16121	3	2.1	U			Mun		78Pa12 *
$^{30}\text{Si}(n, \alpha)^{27}\text{Mg}$	-4193	21	-4199.94	0.05	-0.3	U			Ham		62An05
$^{30}\text{Si}(p, \alpha)^{27}\text{Al}$	-2368	10	-2372.16	0.11	-0.4	U			MIT		64Sp12
$^{27}\text{Al}(\alpha, p)^{30}\text{Si}$	2375	8	2372.16	0.11	-0.4	U			Man		59Ba13 Y
$^{30}\text{Si}(d, \alpha)^{28}\text{Al}$	3123	10	3128.38	0.12	0.5	U			MIT		64Sp12
$^{28}\text{Si}(^3\text{He}, n)^{30}\text{S}$	-573	15	-573.9	0.4	-0.1	U			CIT		67Mi02
$^{29}\text{Si}(n, \gamma)^{30}\text{Si}$	10609.6	0.3	10609.199	0.022	-1.3	o			MMn		80Is02 Z
	10609.21	0.04			-0.3	2			MMn		90Is02 Z
	10609.24	0.05			-0.8	2			ORn		92Ra19 Z
	10609.1776	0.0500			0.4	o			PTc		97Ro26 *
	10609.178	0.030			0.7	2			PTc		01Pa52 *
	10609.23	0.21			-0.1	U			Bdn		06Fi.A
$^{29}\text{Si}(d, p)^{30}\text{Si}$	8413	10	8384.633	0.022	-2.8	U			Mex		61Ja23
	8396	13			-0.9	U			MIT		64Sp12
	8384.92	0.53			-0.5	U			Rez		90Pi05 *
$^{29}\text{Si}(p, \gamma)^{30}\text{P}$	5594.5	0.4	5594.5	0.3	0.0	2					85Re02
	5594.5	0.5			0.0	2					96Wa33
$^{30}\text{Na}(\beta^-)^{30}\text{Mg}$	17167	330	17358	6	0.6	U					83De04 *
$^{30}\text{Mg}(\beta^-)^{30}\text{Al}$	6690	240	6989	14	1.2	U					83De04 *
$^{30}\text{Al}(\beta^-)^{30}\text{Si}$	8550	250	8561	14	0.0	U					61Ro12 *
$^{30}\text{Si}(t, ^3\text{He})^{30}\text{Al}$	-8520	40	-8542	14	-0.5	3					69Aj03
	-8545	15			0.2	3					87Pe06
$^{30}\text{P}(\beta^+)^{30}\text{Si}$	4262	40	4232.4	0.3	-0.7	U					56Gr07
	4267	25			-1.4	U					63Fr10
$^{30}\text{Si}(p, n)^{30}\text{P}$	-5012.1	5.	-5014.7	0.3	-0.5	U			Har		75Fr.A Z
$^{30}\text{S}(\beta^+)^{30}\text{P}$	6118	22	6141.60	0.20	1.1	U					63Fr10 *
* ^{30}Na -u	F : contaminated by ^{30}Mg										
* $^{26}\text{Mg}(^{18}\text{O}, ^{14}\text{O})^{30}\text{Mg}$	Tentative, say authors; four counts only										
* $^{29}\text{Si}(n, \gamma)^{30}\text{Si}$	Original error 0.0005 increased for calibration										
* $^{29}\text{Si}(n, \gamma)^{30}\text{Si}$	Original error 0.005 increased for calibration										
* $^{29}\text{Si}(d, p)^{30}\text{Si}$	Estimated systematic error 0.5 added to statistical error 0.16 keV										
* $^{30}\text{Na}(\beta^-)^{30}\text{Mg}$	Calculated from 3 values used for calibration										
* $^{30}\text{Mg}(\beta^-)^{30}\text{Al}$	Calculated from value used for calibration										
* $^{30}\text{Al}(\beta^-)^{30}\text{Si}$	$E_{\beta^-} = 5050(250)$ to 2^+ level at 3498.49 keV										
* $^{30}\text{S}(\beta^+)^{30}\text{P}$	$E_{\beta^+} = 4422(22)$ to 0^+ level at 677.01 keV										
^{31}Ne -u	33087	1739				2			GA7	1.0	07Ju03
^{31}Na -u	13440	1000	13163	25	-0.3	o			GA1	1.0	87Gi05
	13559	327			-1.2	o			GA3	1.0	91Or01
	13610	210			-1.4	U			TO4	1.5	91Zh24
	13441	118			-2.4	U			GA7	1.0	07Ju03
^{31}Mg -O _{1.938}	6503.5	3.3				2			TT1	1.0	12Ch.A
^{31}Mg -u	-3830	220	-3352	3	1.4	o			TO1	1.5	86Vi09
	-3520	180			0.9	o			GA1	1.0	87Gi05
	-3458	149			0.7	U			GA3	1.0	91Or01
	-3370	120			0.1	U			TO4	1.5	91Zh24
	-3425	18			4.1	B			P40	1.0	06Ga04
O ₂ - ^{31}P H	8242.20819	0.00086	8242.2085	0.0007	0.3	1	64	58 ^{31}P	FS1	1.0	08Re16
^{31}Na - $^{39}\text{K}_{.795}$	42016	25				2			TT1	1.0	12Ch.A
^{31}P - ^{28}Si H ₃	-26639.6290	0.0056	-26639.6329	0.0007	-0.7	U			FS1	1.0	06Re19
	-26639.63324	0.00089			0.4	1	62	42 ^{31}P	FS1	1.0	08Re16
^{31}S - ^{31}P	5794.98	0.25	5795.01	0.25	0.1	1	97	97 ^{31}S	JY1	1.0	10Ka30

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$O_2-^{31}P$	16067.228	0.096	16067.2407	0.0007	0.1	U			MS1	1.0	09Kw02 *	
$^{26}Na-^{31}Na_{,373} \ ^{22}Na_{,657}$	-7457	286	-8030	9	-0.8	U			P12	2.5	75Th08	
$^{18}O(^{15}N,2p)^{31}Al$	-170	90	-304	20	-1.5	U					81Pa11	
$^{27}Al(\alpha,\gamma)^{31}P$	9667.4	1.3	9668.71	0.10	1.0	U			Utr		78Ma23	
$^{31}P(p,\alpha)^{28}Si$	1912	5	1916.3085	0.0006	0.9	U			Bar		56Va14 Y	
	1919	4			-0.7	U			VUn		64Sm03	
	1911	10			0.5	U			MIT		64Sp12	
	1915.8	0.2			2.5	U			Zur		67St30	
$^{28}Si(\alpha,n)^{31}S$	-8135	44	-8096.67	0.23	0.9	U			Tal		63Ne05	
$^{31}P(d,\alpha)^{29}Si$	8166	11	8165.3437	0.0007	-0.1	U			MIT		64Sp12	
$^{31}Cl^i(2p)^{29}P$	7700	100	7631	3	-0.7	U					90Bo24 *	
	7610	60			0.3	U			Lis		91Bo32	
	7643	50			-0.2	U			Lis		92Ba01 *	
	7627	15			0.3	o					98Ax02	
	7631	3				2					00Fy01 *	
$^{30}Si(^{18}O,^{17}F)^{31}Al$	-12200	25	-12213	20	-0.5	3					88Wo02	
	-12237	35			-0.7	3			Ber		89Bo.A	
$^{30}Si(n,\gamma)^{31}Si$	6589.1	0.7	6587.39	0.04	-2.4	U					70Be48	
	6587.5	0.8			-0.1	U					70Sp02	
	6588.4	0.3			-3.4	B					72Dz13	
	6587.32	0.20			0.4	U			MMn		90Is02 Z	
	6587.39	0.05			0.1	3			ORn		92Ra19 Z	
	6587.3970	0.0500			-0.1	o			PTc		97Ro26 *	
	6587.39	0.14			0.0	U			Bdn		06Fi.A	
	6587.397	0.057			-0.1	3			PTc		01Pa52	
$^{30}Si(d,p)^{31}Si$	4368	7	4362.83	0.04	-0.7	U			MIT		64Sp12	
	4364.18	0.55			-2.5	U			Rez		90Pi05 *	
$^{30}Si(p,\gamma)^{31}P$	7297.4	1.2	7296.551	0.022	-0.7	U					68Wo01	
$^{31}Cl^i(p)^{30}S$	12033	10	12027	3	-0.6	o					98Ax02 *	
	12033	14			-0.5	U					00Fy01 *	
$^{31}Mg(\beta^-)^{31}Al$	10150	700	11833	21	2.4	U					83De04	
$^{31}Al(\beta^-)^{31}Si$	7940	100	7994	20	0.5	U					73Go22	
$^{31}Si(\beta^-)^{31}P$	1471	8	1491.50	0.04	2.6	U					52Mo12	
	1486	12			0.5	U					52Wa12	
$^{31}S(\beta^+)^{31}P$	5412	30	5398.02	0.23	-0.5	U					60Wa04	
$^{31}P(p,n)^{31}S$	-6212.3	20.	-6180.36	0.23	1.6	o			ChR		58Go77 Y	
	-6250	20			3.5	B			ChR		59Br06 Y	
* $O_2-^{31}P$	For original doublet $^{31}P-O_{1,938}$, $D_M=-16382.522(0.096) \mu u$										GAu	**
* $^{31}Cl^i(2p)^{29}P$	Large error in Ecm due to sequential decay kinematics										MMC122**	**
* $^{31}Cl^i(2p)^{29}P$	reference also finds 3p emission at 4870										92Ba01	**
* $^{31}Cl^i(2p)^{29}P$	$Q_{2p}=7620(5), 6245(2), 5679(3), 5223(5) \text{ keV}$										00Fy01	**
* $^{31}Cl^i(2p)^{29}P$	to ground state and levels $3/2^+$ at 1383.55, $5/2^+$ at 1953.91, $3/2^+$ 2422.7 keV										Ens013	**
* $^{30}Si(n,\gamma)^{31}Si$	Original error 0.0005 increased for calibration										GAu	**
* $^{30}Si(d,p)^{31}Si$	Estimated systematic error 0.5 added to statistical error 0.23 keV										AHW	**
* $^{31}Cl^i(p)^{30}S$	Average of 3 branches										AHW	**
* $^{31}Cl^i(p)^{30}S$	$E_p=11654(28), 9493(20), 8347(15), 8092(14) \text{ keV}$										00Fy01	**
$^{32}Na-u$	19720	636	20190	130	0.7	o			GA3	1.0	91Or01	
	19900	1100			0.2	U			TO4	1.5	91Zh24	
	20980	500			-1.6	o			GA5	1.0	00Sa21	
	20193	129				2			GA7	1.0	07Ju03	
$^{32}Mg-O_2$	9281.0	3.4				2			TT1	1.0	12Ch.A	
$^{32}Mg-u$	-800	260	-890	3	-0.2	o			TO1	1.5	86Vi09	
	-890	270			0.0	U			GA1	1.0	87Gi05	
	-924	214			0.2	U			GA3	1.0	91Or01	
	-820	130			-0.4	U			TO4	1.5	91Zh24	
	-1142	113			2.2	o			P40	1.0	01Lu20	
	-966	38			2.0	U			P40	1.0	06Ga04 *	
	-983	22			4.2	B			P40	1.0	06Ga04	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{32}\text{Al}-\text{O}_2$	-1744	13				2			TT1	1.0	12Ch.A
$^{32}\text{Al}-\text{u}$	-12160	220	-11915	13	0.7	U			TO1	1.5	86Vi09
	-11870	200			-0.2	U			GA1	1.0	87Gi05
	-11877	104			-0.4	U			GA3	1.0	91Or01
$^{32}\text{Si O}_2-\text{C}_5 \text{H}_4$	-67319.35	0.32				2			MS1	1.0	09Kw02 *
O_2-^{32}S	17754.2	1.0	17758.0647	0.0014	1.5	U			J1	2.5	68Ma45
$\text{C}_2 \text{H}_8-^{32}\text{S}$	90531.3	1.4	90529.0834	0.0016	-0.6	U			J1	2.5	68Ma45
$^{32}\text{S}-\text{O}_2$	-17758.0663	0.0020	-17758.0647	0.0014	0.8	1	50	48 ^{32}S	FS1	1.0	05Sh38
$^{32}\text{S}-\text{C}_2 \text{D}_4$	-84335.9367	0.0019	-84335.9381	0.0014	-0.7	1	55	52 ^{32}S	FS1	1.0	05Sh38
$^{32}\text{S}-\text{H C F}$	-34156.50	0.57	-34157.0206	0.0016	-0.9	U			MS1	1.0	09Kw02 *
$^{32}\text{Ar}-^{39}\text{K}_{.821}$	27434.8	1.9				2			MA8	1.0	03B117
$\text{C F}_3-^{32}\text{S O}_2 \text{H}$	25483.43	0.34	25484.042	0.003	1.8	U			MS1	1.0	09Kw02 *
$\text{C F}_3-^{32}\text{S O}_2$	33310.02	0.59	33309.075	0.003	-1.6	U			MS1	1.0	09Kw02 *
$^{26}\text{Na}-^{32}\text{Na}_{.325} \text{ } ^{22}\text{Na}_{.709}$	-8569	354	-9300	40	-0.8	U			P12	2.5	75Th08
$^{32}\text{S}(^3\text{He},^8\text{Li})^{27}\text{P}$	-31277	35	-31308	26	-0.9	2			MSU		77Be13
$^{32}\text{S}(p,\alpha)^{29}\text{P}$	-4171	20	-4199.0	0.6	-1.4	U			Tky		64Ej05
$^{32}\text{S}(^3\text{He},^6\text{He})^{29}\text{S}$	-25520	50				2			MSU		73Be09
$^{30}\text{Si}(t,p)^{32}\text{Si}$	7307	1	7305.56	0.30	-1.4	U			Str		80An.A
$^{32}\text{S}(d,\alpha)^{30}\text{P}$	4892	10	4895.9	0.3	0.4	U			MIT		64Sp12
$^{32}\text{S}(p,t)^{30}\text{S}$	-19614	3	-19617.4	0.4	-1.1	U			MSU		74Ha02
$^{31}\text{Si}(n,\gamma)^{32}\text{Si}$	9203.2180	0.0500	9200.0	0.3	-65.0	B			PTc		97Ro26 *
	9203.22	0.76			-4.3	B			PTc		01Pa52
$^{31}\text{P}(n,\gamma)^{32}\text{P}$	7935.73	0.16	7935.65	0.04	-0.5	U			MMn		85Ke11 Z
	7935.65	0.04				2			ILn		89Mi16 Z
	7935.60	0.16				0.3			Bdn		06Fi.A
$^{31}\text{P}(d,p)^{32}\text{P}$	5712	8	5711.08	0.04	-0.1	U			MIT		64Sp12
$^{31}\text{P}(p,\gamma)^{32}\text{S}$	8864.9	0.9	8863.9630	0.0014	-1.0	U					72Co13
	8862.7	3.			0.4	U					73Ve06 *
	8865.6	1.0			-1.6	U					73Ve08 Z
	8865.1	0.9			-1.3	U					74Vi02
$^{31}\text{P}(^3\text{He},d)^{32}\text{S}$	3356	13	3370.4862	0.0028	1.1	U			MIT		68Gr17
$^{32}\text{S}(p,d)^{31}\text{S}$	-12817.8	1.5	-12819.76	0.23	-1.3	U			MSU		73Mo23
$^{32}\text{S}(^3\text{He},\alpha)^{31}\text{S}$	5415	15	5533.29	0.23	7.9	B					66Gr26
	5515	15			1.2	U			MIT		67Sp09
	5486	20			2.4	U			Ors		67Ro17
	5538	6			-0.8	U			CIT		70Mo08
$^{32}\text{Cl}(p)^{31}\text{S}$	-1583.5	3.1	-1581.1	0.5	0.8	U					85Bj01 *
	-1581.9	2.1			0.4	U					93Sc16 *
	-1581.3	0.6			0.3	1	79	76 ^{32}Cl			08Ga.A *
$^{32}\text{Na}(\beta^-)^{32}\text{Mg}$	18300	1400	19640	120	1.0	U					83De04
$^{32}\text{Si}(\beta^-)^{32}\text{P}$	213	7	227.2	0.3	2.0	U					64Br09
	221.4	1.2			4.8	B					84Po09
$^{32}\text{P}(\beta^-)^{32}\text{S}$	1707.6	0.7	1710.66	0.04	4.4	B					61Ni02
	1710.1	0.7			0.8	U					68Fi04
$^{32}\text{Cl}(\beta^+)^{32}\text{S}$	12720	30	12680.9	0.6	-1.3	U					68Ar03 *
$^{32}\text{S}(p,n)^{32}\text{Cl}$	-13470	14	-13463.2	0.6	0.5	U			Yal		69Ov01 Z
	-13470	9			0.8	U			BNL		71Go18 Z
$^{32}\text{S}(^3\text{He},t)^{32}\text{Cl}$	-12699	15	-12699.4	0.6	0.0	U					89Je07
$^{32}\text{S}(^3\text{He},t)^{32}\text{Cl}-^{36}\text{Ar}^{36}\text{K}$	133.01	1.10	133.6	0.6	0.6	1	31	24 ^{32}Cl	Mun		10Wr01
$^{32}\text{S}(\pi^+, \pi^-)^{32}\text{Ar}$	-22815	50	-22793.2	1.8	0.4	U					80Bu15
* $^{32}\text{Mg}-\text{u}$	Result from the "Plasma" experiment. Next item from "Rilis"										06Ga04 **
* $^{32}\text{Si O}_2-\text{C}_5 \text{H}_4$	For original doublet $^{32}\text{Si O}_2 \text{H}_3-\text{C}_5 \text{H}_7$										GAu **
* $^{32}\text{S}-\text{H C F}$	For original doublet $^{32}\text{S O}_2 \text{H}-\text{H}_2 \text{C O}_2 \text{F}$										GAu **
* $\text{C F}_3-^{32}\text{S O}_2 \text{H}$	For original doublet $^{32}\text{S O}_2 \text{H}-(\text{CF}_3)0.942, D_M=-25761.27(0.34) \mu\text{u}$										GAu **
* $\text{C F}_3-^{32}\text{S O}_2$	For original doublet $^{32}\text{S O}_2-(\text{C F}_3)0.928, D_M=-33654.93(0.59) \mu\text{u}$										GAu **
* $^{31}\text{Si}(n,\gamma)^{32}\text{Si}$	Original error 0.0005 increased for calibration										GAu **
* $^{31}\text{P}(p,\gamma)^{32}\text{S}$	T=3289(3) Q=-3185.3(3.) to $^{32}\text{S}^j$ at 12047.96(0.28) keV										Nub127 **
* $^{32}\text{Cl}(p)^{31}\text{S}$	$E_p=3353.5(3.0) Q_p=3462.8(3.1)$ from 5046.3(0.3) T=2 level										Nub126 **
* $^{32}\text{Cl}(p)^{31}\text{S}$	$E_p=3348.5(2.0) Q_p=3457.6(2.1)$ from 5046.3(0.3) T=2 level										Nub126 **
*	corrected to 3464.4(2.1) keV										02Py02 **
* $^{32}\text{Cl}(p)^{31}\text{S}$	$Q_p=3465.0(0.4)$ from 5046.3(0.3) T=2 level										Nub126 **
*	this Q_p is quoted in reference as "A.Garcia et al. (in preparation)"										08Bh08 **
* $^{32}\text{Cl}(\beta^+)^{32}\text{S}$	$E_{\beta^+}=9470(30)$ to 2^+ level at 2230.57 keV										Ens119 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{33}\text{Na-u}$	27386	1601	25730#	640#	-1.0	o			GA3	1.0	91Or01	
	26370	1160			-0.6	o			GA5	1.0	00Sa21	
	25142	376			1.6	D			GA7	1.0	07Ju03	
$^{33}\text{Mg-O}_{2,062}$	15813.2	3.1				2			TT1	1.0	12Ch.A	
$^{33}\text{Mg-u}$	5460	900	5327	3	-0.1	o			GA1	1.0	87Gi05	
	5203	318			0.4	U			GA3	1.0	91Or01	
	5710	180			-1.4	U			TO4	1.5	91Zh24	
	5311	24			0.7	U			P40	1.0	06Ga04	
$^{33}\text{Al-u}$	-9490	250	-9090	80	1.1	o			TO1	1.5	86Vi09	
	-9250	160			1.0	o			GA1	1.0	87Gi05	
	-9167	142			0.5	2			GA3	1.0	91Or01	
	-9020	120			-0.4	2			TO4	1.5	91Zh24	
	-9125	64			0.4	o			GT1	1.5	04Ma.A	
	-8957	100			-0.9	o			GT2	1.5	08Kn.A	
	-8915	128			-0.9	2			GT2	1.5	08Su19	
						2			MS1	1.0	09Kw02	
$^{33}\text{Si O}_2-^{13}\text{C C}_4\text{ H}_4$	-66848.76	0.75				2					*	
$^{33}\text{Cl-u}$	-22536.9	7.5	-22548.0	0.4	-1.5	U			LZ1	1.0	11Tu09	
$^{33}\text{Ar}-^{39}\text{K}_{,846}$	20629.86	0.43				2			MA8	1.0	03B117	
$^{33}\text{Ar}-^{36}\text{Ar}_{,917}$	19689.2	4.5	19686.7	0.4	-0.6	U			MA6	1.0	01He29	
$^{33}\text{S}-^{32}\text{S H}$	-8437.29682	0.00030	-8437.2968	0.0003	0.0	1	100	100 ^{33}S	MI3	1.0	05Ra34	
$^{30}\text{Si}(\alpha,p)^{33}\text{P}$	-2965	10	-2959.7	1.1	0.5	U			ANL		68Be13	
$^{33}\text{S}(n,\alpha)^{30}\text{Si}$	3497.6	5.	3493.508	0.022	-0.8	U			ILL		81Wa31	
	3496.9	5.0			-0.7	U					01Wa50	
$^{31}\text{P}(\beta^3\text{He},p)^{33}\text{S}$	9787	15	9787.5581	0.0028	0.0	U					71Gr04	
$^{32}\text{S}(n,\gamma)^{33}\text{S}$	8641.5	0.3	8641.6379	0.0006	0.5	o			MMn		80Is02	
	8641.82	0.10			-1.8	U			ORn		83Ra04	
	8641.60	0.03			1.3	U			MMn		85Ke08	
	8641.81	0.17			-1.0	U			Bdn		06Fi.A	
	8641.6398	0.0033			-0.6	U			NBS		06De21	
$^{32}\text{S}(d,p)^{33}\text{S}$	6420	6	6417.0719	0.0003	-0.5	U			MIT		64Sp12	
$^{32}\text{S}(p,\gamma)^{33}\text{Cl}$	2276.4	0.9	2276.8	0.4	0.4	-					59Ku79	
	2276.8	0.5			-0.1	-					76Al01	
$^{32}\text{S}(d,n)^{33}\text{Cl}$	62	9	52.2	0.4	-1.1	U					72El03	
$^{32}\text{S}(\beta^3\text{He},d)^{33}\text{Cl}$	-3218	15	-3216.7	0.4	0.1	U					66Gr26	
	-3217	5			0.1	U			CIT		70Mo08	
$^{32}\text{S}(p,\gamma)^{33}\text{Cl}$	ave. 2276.7	0.4	2276.8	0.4	0.2	1	80	80 ^{33}Cl			average	
$^{32}\text{S}(p,\gamma)^{33}\text{Cl}^i$	-3267.0	1.0	-3271.7	0.5	-4.7	B					70Ab15	
	-3271.4	2.0			-0.1	U					82Wi.A	
	-3271.6	0.8			-0.3	1	37	37 $^{33}\text{Cl}^i$			02Py01	
$^{33}\text{Si}(\beta^-)^{33}\text{P}$	5768	50	5823.0	1.3	1.1	U					73Go33	
$^{33}\text{P}(\beta^-)^{33}\text{S}$	249	2	248.5	1.1	-0.2	2					54Ni06	
	248.3	1.3			0.2	2					84Po09	
$^{33}\text{Cl}(\beta^+)^{33}\text{S}$	5532	50	5582.5	0.4	1.0	U					60Wa04	
$^{33}\text{Cl}^i(\text{IT})^{33}\text{Cl}$	5548.5	0.4	5548.4	0.4	-0.1	1	83	63 $^{33}\text{Cl}^i$			06Tr10	
* $^{33}\text{Na-u}$	Trends from Mass Surface TMS suggest ^{33}Na 550 less bound										GAu	**
* $^{33}\text{Si O}_2-^{13}\text{C C}_4\text{ H}_4$	For original doublet $^{33}\text{Si O}_2\text{ H}_3-^{13}\text{C C}_4\text{ H}_7$										GAu	**
$^{34}\text{Mg-O}_{2,126}$	19747	31				2			TT1	1.0	12Ch.A	
	8855	476	8940	30	0.2	o			GA3	1.0	91Or01	
	9190	350			-0.5	U			TO4	1.5	91Zh24	
	9900	350			-2.8	U			GA5	1.0	00Sa21	
$^{34}\text{Mg-u}$	9190	97			-2.6	U			GA7	1.0	07Ju03	
	-3760	430	-3290	70	0.7	o			TO1	1.5	86Vi09	
	-3400	250			0.4	o			GA1	1.0	87Gi05	
	-3262	218			-0.1	o			GA3	1.0	91Or01	
	-2940	120			-2.0	U			TO4	1.5	91Zh24	
$^{34}\text{Al-u}$	-3199	97			-0.7	2			GT1	1.5	04Ma.A	
	-3328	86			0.4	2			GA7	1.0	07Ju03	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{34}\text{Ar}-^{39}\text{K}_{.872}$	11919.02	0.36	11918.03	0.08	-2.7	U			MA8	1.0	02He23
$^{34}\text{Ar}-^{36}\text{Ar}_{.944}$	10907.4	3.8	10907.51	0.09	0.0	U			MA6	1.0	01He29
$^{34}\text{Cl}-^{34}\text{S}$	5895.548	0.058	5895.48	0.04	-1.2	1	49	31 ^{34}Cl	JY1	1.0	09Er07
$^{34}\text{Cl}^m-^{34}\text{S}$	6052.575	0.068	6052.60	0.04	0.4	1	41	31 $^{34}\text{Cl}^m$	JY1	1.0	09Er07
$^{34}\text{S}-^{34}\text{Ar}$	-12403.20	0.20	-12403.09	0.08	0.6	1	14	13 ^{34}Ar	JY1	1.0	11Er02
$^{34}\text{Cl}^m-^{34}\text{Cl}$	157.05	0.11	157.123	0.029	0.7	U			JY1	1.0	09Er07
	157.30	0.27			-0.7	U			JY1	1.0	11Er02
$^{34}\text{Ar}-^{34}\text{Cl}$	6507.630	0.092	6507.60	0.07	-0.3	1	54	52 ^{34}Ar	JY1	1.0	11Er02
$^{34}\text{Cl}^m-^{34}\text{Ar}$	-6350.41	0.11	-6350.48	0.07	-0.6	1	39	35 ^{34}Ar	JY1	1.0	11Er02
$\text{C}_4\text{H}_3-^{34}\text{P O}$	54914.59	0.87				2			MS1	1.0	09Kw02 *
$^{30}\text{Si}(^7\text{Li},^3\text{He})^{34}\text{P}$	100	40	91.6	0.8	-0.2	U					77Pe17
$^{31}\text{P}(\alpha,p)^{34}\text{S}$	629.9	2.9	627.10	0.04	-1.0	U			Har		73Ry01
$^{31}\text{P}(\alpha,n)^{34}\text{Cl}$	-5632	10	-5646.86	0.05	-1.5	U			Tal		70Um01
	-5641.5	3.7			-1.4	U			Har		73Ry01
$^{34}\text{S}(\text{d},\alpha)^{32}\text{P}$	5096	10	5083.99	0.06	-1.2	U					78Ba30
$^{32}\text{S}(^3\text{He},n)^{34}\text{Ar}$	-759	15	-777.34	0.08	-1.2	U			CIT		67Mi02
$^{34}\text{S}(^{13}\text{C},^{14}\text{O})^{33}\text{Si}$	-14243	75	-14299.8	0.7	-0.8	U			Can		86Fi06
$^{33}\text{S}(\text{n},\gamma)^{34}\text{S}$	11417.12	0.10	11417.16	0.04	0.4	-			ORn		83Ra04 Z
	11417.22	0.23			-0.3	-			Bdn		06Fi.A
$^{33}\text{S}(\text{d},\text{p})^{34}\text{S}$	9202	10	9192.59	0.04	-0.9	U			MIT		64Sp12
	9195	6			-0.4	U			Utr		71Va21
$^{33}\text{S}(\text{n},\gamma)^{34}\text{S}$	ave. 11417.14	0.09	11417.16	0.04	0.2	1	24	24 ^{34}S			average
$^{33}\text{S}(\text{p},\gamma)^{34}\text{Cl}$	5142.42	0.20	5143.20	0.05	3.9	B			Oak		83Ra04 *
	5142.4	0.3			2.7	U			Utr		83Wa27 Z
	5143.29	0.07			-1.2	1	48	48 ^{34}Cl	Auc		94Li20
$^{34}\text{Si}(\beta^-)^{34}\text{P}$	4700	300	4592	14	-0.4	U					77Na05
$^{34}\text{P}(\beta^-)^{34}\text{S}$	5383	45	5383.0	0.8	0.0	U			ANB		73Go33
$^{34}\text{S}(^3\text{He})^{34}\text{P}$	-5368	20	-5364.4	0.8	0.2	U			LAI		77Aj01
$^{34}\text{S}(^7\text{Li},^7\text{Be})^{34}\text{P}$	-6224	40	-6244.9	0.8	-0.5	U			Can		85Dr06
$^{34}\text{Cl}(\beta^+)^{34}\text{S}$	5522	30	5491.61	0.04	-1.0	U					56Gr07
$^{34}\text{S}(\text{p},\text{n})^{34}\text{Cl}$	-6252	10	-6273.95	0.04	-2.2	U			Tal		70Um01
	-6271.9	1.9			-1.1	U			Har		75Fr.A
	-6274.27	0.56			0.6	U			Auc		77Ba16
	-6273.11	0.25			-3.4	F			Auc		92Ba.A *
$^{34}\text{S}(^3\text{He},\text{t})^{34}\text{Cl}$	-5510.8	0.4	-5510.20	0.04	1.5	F			Mun		77Vo02 *
$^{34}\text{S}(^3\text{He},\text{t})^{34}\text{Cl}-^{27}\text{Al}(^27\text{Si})$	-678.7	2.3	-679.25	0.10	-0.2	U			ChR		74Ha35
$^{34}\text{Cl}^m(\text{IT})^{34}\text{Cl}$	146.36	0.03	146.360	0.027	0.0	1	84	65 $^{34}\text{Cl}^m$			Ens013
* $^{34}\text{Al-u}$	Note added in proof : possible isomeric mixture 26(1) ms, E=550# keV										12Ro25 **
* $\text{C}_4\text{H}_3-^{34}\text{P O}$	For original doublet $^{34}\text{P}_2\text{H}_3\text{O}-\text{C}_4\text{H}_3$										GAu **
* $^{33}\text{S}(\text{p},\gamma)^{34}\text{Cl}$	$E_p=974.76(0.15,Z)$ to $6088.20(0.10,Z)$ level										83Ra04 **
* $^{34}\text{S}(\text{p},\text{n})^{34}\text{Cl}$	F : disturbed by resonance; at least 0.5 keV uncertain										94Li20 **
* $^{34}\text{S}(^3\text{He},\text{t})^{34}\text{Cl}$	F : rejected in reference of same group										09Fa15 **
$^{35}\text{Mg-u}$	18669	1721	16790	190	-1.1	o			GA3	1.0	91Or01
	18830	1070			-1.9	o			GA5	1.0	00Sa21
	16790	193				2			GA7	1.0	07Ju03
$^{35}\text{Al-u}$	-340	460	-240	80	0.2	o			GA1	1.0	87Gi05
	-296	298			0.2	o			GA3	1.0	91Or01
	80	190			-1.1	U			TO4	1.5	91Zh24
	-236	75				2			GA7	1.0	07Ju03
$\text{C}_3-^{35}\text{Cl H}$	23320.8	0.3	23322.29	0.04	2.0	U			M17	2.5	66Be10
	23322.239	0.034			0.9	1	55	55 ^{35}Cl	B07	1.5	71Sm01
	23321.83	0.63			0.3	U			J5	2.5	72Ka57
	23322.328	0.325			-0.1	U			J5	2.5	72Ka57
$\text{C}_5\text{H}_{10}-^{35}\text{Cl}_2$	140549.37	2.98	140544.96	0.08	-0.6	U			C2	2.5	65De09
	140545.01	0.13			-0.3	1	15	15 ^{35}Cl	B07	1.5	71Sm01
$\text{C}_4\text{H}_6\text{O}-^{35}\text{Cl}_2$	104153.75	3.45	104159.45	0.08	0.7	U			C2	2.5	65De09
$\text{C}_2\text{D}_6-^{35}\text{Cl H}$	107934.90	0.54	107932.95	0.04	-1.4	U			J5	2.5	72Ka57
	107933.422	0.538			-0.3	U			J5	2.5	72Ka57

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
C_3 H-D ^{35}Cl	24871.92	0.75	24870.57	0.04	-0.7	U			C2	2.5	65De09
C_8 H ₉ - $^{35}\text{Cl}_3$	163867.25	0.90	163867.24	0.11	0.0	U			A2	2.5	70St25
$^{35}\text{Ar-u}$	-24747.3	4.3	-24742.4	0.8	1.1	U			LZ1	1.0	11Tu09
$^{35}\text{K}-^{39}\text{K}_{897}$	20560.69	0.55				2			MA8	1.0	07Ya08
$^{35}\text{Cl}(p,\alpha)^{32}\text{S}$	1862	5	1866.05	0.04	0.8	U			Bar		57Va03 Y
	1865	8			0.1	U			MIT		64Sp12
$^{32}\text{S}(\alpha,p)^{35}\text{Cl}$	-1862	17	-1866.05	0.04	-0.2	U			MIT		64Sp12
$^{32}\text{S}(\alpha,n)^{35}\text{Ar}$	-8751	18	-8614.5	0.7	7.6	B			Tal		63Ne05
$^{35}\text{Cl}(d,\alpha)^{33}\text{S}$	8285	10	8283.12	0.04	-0.2	U			MIT		64Sp12
$^{33}\text{S}(^3\text{He},n)^{35}\text{Ar}$	3335	16	3321.5	0.7	-0.8	U					75Da14
$^{35}\text{K}^i(2p)^{33}\text{Cl}$	4311	40				2					85Ay01
$^{34}\text{S}(^{18}\text{O},^{17}\text{F})^{35}\text{P}$	-7796	40	-7808.4	1.9	-0.3	U			Can		88Or01
$^{34}\text{S}(n,\gamma)^{35}\text{S}$	6986.00	0.10	6985.84	0.04	-1.6	-			ORn		83Ra04 Z
	6985.84	0.05			0.0	-			MMn		85Ke08 Z
	6986.09	0.14			-1.8	U			Bdn		06Fi.A
$^{34}\text{S}(d,p)^{35}\text{S}$	4762	10	4761.28	0.04	-0.1	U			MIT		64Sp12
	4757	5			0.9	U			Utr		71Va18
$^{34}\text{S}(n,\gamma)^{35}\text{S}$	ave.	6985.87	6985.84	0.04	-0.7	1	75	46	^{34}S		average
$^{34}\text{S}(p,\gamma)^{35}\text{Cl}$	6367.4	1.6	6370.82	0.04	2.1	U					72Hu10
	6370.7	0.4			0.3	U					76Sp08 Z
	6370.70	0.20			0.6	U			Oak		83Ra04 *
$^{35}\text{Cl}(\gamma,n)^{34}\text{Cl}$	-12660	40	-12644.77	0.05	0.4	U					61Sa11
$^{35}\text{P}(\beta^-)^{35}\text{S}$	3909	75	3988.4	1.9	1.1	U					72Go31
$^{35}\text{S}(\beta^-)^{35}\text{Cl}$	167.4	0.2	167.323	0.026	-0.4	U					57Co62
	166.80	0.15			3.5	B					85Al11
	167.288	0.100			0.3	U					85Ap01 *
	166.93	0.2			2.0	o					85Ma59
	167.4	0.1			-0.8	U					85Oh06 *
	166.7	0.2			3.1	B					89Si04 *
	167.56	0.03			-7.9	B					92Ch27 *
	167.35	0.10			-0.3	U					93Ab11 *
	167.23	0.10			0.9	U					93Be21 *
	167.27	0.10			0.5	U					93Mo01 *
	167.334	0.027			-0.4	1	91	71	^{35}S		00Ho13
$^{35}\text{Cl}(n,p)^{35}\text{S}$	612	4	615.024	0.026	0.8	U			BNL		68Sc01
$^{35}\text{Ar}(\beta^+)^{35}\text{Cl}$	5980	40	5966.1	0.7	-0.3	U					56Ki29
	5950	50			0.3	U					60Wa04
$^{35}\text{Cl}(p,n)^{35}\text{Ar}$	-6747.2	1.6	-6748.5	0.7	-0.8	2			Har		75Fr.A Z
	-6747.9	1.0			-0.6	2			Auc		77Wh03 Z
	-6751.9	1.8			1.9	2			Mtr		78Az01 Z
$^{34}\text{S}(p,\gamma)^{35}\text{Cl}$	$E_p=1264.97(0.13,Z)$ to $7598.91(0.15,Z)$ level										
$^{35}\text{S}(\beta^-)^{35}\text{Cl}$	Original error (0.030) increased to 0.100										
											83Ra04 **
											AHW **
$^{36}\text{Mg-u}$	24930	1610	21880	490	-1.9	o			GA5	1.0	00Sa21
	21879	494				2			GA7	1.0	07Ju03
$^{36}\text{Al-u}$	6187	421	6390	110	0.5	o			GA3	1.0	91Or01
	6500	400			-0.2	U			TO4	1.5	91Zh24
	6140	310			0.8	o			GA5	1.0	00Sa21
	6388	107				2			GA7	1.0	07Ju03
$^{36}\text{Si-u}$	-13850	640	-13300	80	0.6	U			TO1	1.5	86Vi09
	-13490	320			0.6	o			GA1	1.0	87Gi05
	-13578	191			1.4	o			GA3	1.0	91Or01
	-13110	150			-0.9	2			TO4	1.5	91Zh24
	-13376	75			0.6	2			GT1	1.5	04Ma.A
	-13280	118			-0.2	2			GA7	1.0	07Ju03
$^{36}\text{Ar-u}$	-32454.895	0.015	-32454.895	0.029	0.0	o			ST2	1.0	02Bf02
	-32454.895	0.029			0.0	1	100	100	^{36}Ar		03Fr08
$^{36}\text{K}-^{39}\text{K}_{923}$	14800.99	0.38	14800.9	0.4	-0.2	1	93	93	^{36}K		07Ya08

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{36}\text{Ar}(^3\text{He}, ^8\text{Li})^{31}\text{Cl}$	-29180	50				2			MSU		77Be13
$^{36}\text{S}(^{48}\text{Ca}, ^{52}\text{V})^{32}\text{Al}$	-12651	370	-12347	12	0.8	o			Dar		87Ch.A
$^{36}\text{S}(^{48}\text{Ca}, ^{51}\text{V})^{33}\text{Al}$	-14150	140	-14220	80	-0.5	R			Dar		86Wo07
$^{36}\text{S}(^{14}\text{C}, ^{17}\text{O})^{33}\text{Si}$	-6380	20	-6321.1	0.7	2.9	U			Mun		84Ma49
$^{36}\text{S}(^{11}\text{B}, ^{14}\text{N})^{33}\text{Si}$	-4311	30	-4345.3	0.8	-1.1	U			Can		85Fi03
$^{36}\text{Ar}(^3\text{He}, ^6\text{He})^{33}\text{Ar}$	-23512	30	-23508.1	0.4	0.1	U			MSU		74Na07
$^{36}\text{S}(^{11}\text{B}, ^{13}\text{N})^{34}\text{Si}$	-7327	25	-7385	14	-2.3	2			Can		85Fi03
$^{36}\text{S}(^{14}\text{C}, ^{16}\text{O})^{34}\text{Si}$	-2989	20	-2951	14	1.9	2			Mun		84Ma49
$^{36}\text{S}(^{64}\text{Ni}, ^{66}\text{Zn})^{34}\text{Si}$	-8890	41	-8907	14	-0.4	o			Dar		85Wo07 *
	-8903	33			-0.1	2			Dar		86Sm05 *
$^{36}\text{S}(d, \alpha)^{34}\text{P}$	4604.4	5.	4595.4	0.8	-1.8	U					82So.A *
$^{36}\text{Ar}(p, t)^{34}\text{Ar}$	-19513	3	-19514.08	0.08	-0.4	U			MSU		74Ha02
$^{36}\text{Ar}(p, t)^{34}\text{Ar}^i$	-27473	50	-27448	5	0.5	U					69Br21 *
	-27448	5				2					72Pa02 *
$^{36}\text{S}(^{14}\text{C}, ^{15}\text{O})^{35}\text{Si}$	-16184	50	-16140	40	0.9	2			Mun		84Ma49
$^{36}\text{S}(^{13}\text{C}, ^{14}\text{O})^{35}\text{Si}$	-21122	60	-21190	40	-1.1	2			Can		86Fi06
$^{36}\text{S}(^{64}\text{Ni}, ^{65}\text{Zn})^{35}\text{Si}$	-17250	100	-17490	40	-2.4	U			Dar		86Sm05 *
$^{36}\text{S}(d, ^3\text{He})^{35}\text{P}$	-7607	5	-7601.8	1.9	1.0	2			BNL		84Th08
	-7601	2			-0.4	2			Hei		85Kh04
$^{36}\text{S}(^{14}\text{C}, ^{15}\text{N})^{35}\text{P}$	-2927	10	-2887.9	1.9	3.9	B			Mun		84Ma49 *
$^{36}\text{S}(^6\text{Li}, ^7\text{Be})^{35}\text{P}$	-7521	17	-7488.5	1.9	1.9	U			Can		85Dr06
$^{36}\text{S}(^{64}\text{Ni}, ^{65}\text{Cu})^{35}\text{P}$	-5659	34	-5641.4	2.0	0.5	U			Dar		85Wo.A
$^{35}\text{Cl}(n, \gamma)^{36}\text{Cl}$	8579.73	0.20	8579.794	0.005	0.3	U			BNn		78St25 Z
	8579.7	0.3			0.3	o			MMn		80Is02 Z
	8579.81	0.20			-0.1	U			MMn		81Ke02 Z
	8579.66	0.10			1.3	U					81Su.A Z
	8579.61	0.09			2.0	U			ILn		82Kr12 Z
	8579.67	0.17			0.7	U			Bdn		06Fi.A
	8579.7945	0.0048			0.0	1	100	^{99}Cl	NBS		06De21
$^{35}\text{Cl}(d, p)^{36}\text{Cl}$	6360	8	6355.228	0.005	-0.6	U			MIT		64Sp12
$^{35}\text{Cl}(p, \gamma)^{36}\text{Ar}$	8506.1	0.5	8506.97	0.04	1.7	U					72Ho40 Z
$^{35}\text{Cl}(p, \gamma)^{36}\text{Ar}^j$	-2346.8	1.5	-2345.2	1.2	1.1	2					76Hu01
	-2342.5	1.9			-1.4	2					76Ma40
$^{36}\text{Ar}(d, t)^{35}\text{Ar}$	-9007	10	-8998.2	0.7	0.9	U			Yal		70Wh04
$^{36}\text{K}^i(p)^{35}\text{Ar}$	2592	21	2623.8	2.3	1.5	U			Brk		81Ay01
	2623.8	2.3				3					95Ga16
$^{36}\text{S}(^7\text{Li}, ^7\text{Be})^{36}\text{P}$	-11277	27	-11275	13	0.1	2			Can		85Dr06
$^{36}\text{S}(^{14}\text{C}, ^{14}\text{N})^{36}\text{P}$	-10256	15	-10257	13	0.0	2			Mun		84Ma49
$^{36}\text{Cl}(\beta^+)^{36}\text{S}$	1137	18	1142.11	0.19	0.3	U					68Pi03
$^{36}\text{Cl}(e)^{36}\text{S}$	1180	15			-2.5	U					64Li10
	1160	18			-1.0	U					65Be19
$^{36}\text{S}(p, n)^{36}\text{Cl}$	-1924.64	0.31	-1924.45	0.19	0.6	1	37	^{36}S			01Wa50
$^{36}\text{Cl}(\beta^-)^{36}\text{Ar}$	708.7	0.6	709.52	0.04	1.4	U					67Sp06
$^{36}\text{Ar}(p, n)^{36}\text{K}$	-13588.3	8.	-13596.8	0.3	-1.1	U			BNL		71Go18 Z
	-13618	23			0.9	U					71Ja09
$^{36}\text{Ar}(^3\text{He}, t)^{36}\text{K}$	-12930	40	-12833.1	0.3	2.4	U			Duk		70Dz04
* $^{36}\text{S}(^{64}\text{Ni}, ^{66}\text{Zn})^{34}\text{Si}$	Calibrated with $^{36}\text{S}(^{64}\text{Ni}, ^{62}\text{Ni})\text{M}=-26862(12)$ now $-26861(7)$										AHW **
* $^{36}\text{S}(d, \alpha)^{34}\text{P}$	Original error 1.2 judged too small										GAu **
* $^{36}\text{Ar}(p, t)^{34}\text{Ar}^i$	IT=7950(50); Q rebuilt, estimated with 72Pa02 Q=-19523 for ground state										MMC12a**
* $^{36}\text{Ar}(p, t)^{34}\text{Ar}^j$	IT=7925(5); Q rebuilt with author's Q=-19523 for ground state										MMC128**
* $^{36}\text{S}(^{64}\text{Ni}, ^{65}\text{Zn})^{35}\text{Si}$	M-A=-14482(59) for average of ground state and 54, 114, 207 levels										86Sm05 **
* $^{36}\text{S}(^{14}\text{C}, ^{15}\text{N})^{35}\text{P}$	Original report -2693 is a typo										GAu **
$^{37}\text{Al-u}$	10310	579	10530	130	0.4	o			GA3	1.0	91Or01
	10900	450			-0.8	o			GA5	1.0	00Sa21
	10531	129				2			GA7	1.0	07Ju03
$^{37}\text{Si-u}$	-7550	1410	-7080	90	0.3	o			GA1	1.0	87Gi05
	-7310	305			0.8	o			GA3	1.0	91Or01
	-6930	150			-0.7	2			TO4	1.5	91Zh24
	-7107	97			0.3	2			GA7	1.0	07Ju03

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{37}\text{P}-u$	-20740	430	-20390	40	0.5	U			TO1	1.5	86Vi09
	-19910	190			-2.5	o			GA1	1.0	87Gi05
	-20442	200			0.2	U			GA3	1.0	91Or01
$\text{C}_3\text{H}-^{37}\text{Cl}$	41924.73	1.09	41922.43	0.06	-0.8	U			C2	2.5	65De09
	41922.2	0.2			0.5	U			M17	2.5	66Be10
	41922.176	0.305			0.3	U			J5	2.5	72Ka57
$\text{C}_2\text{D}_8-^{37}\text{Cl}\text{H}_3$	123436.51	0.12	123436.53	0.06	0.1	U			B07	1.5	71Sm01
$\text{C}_3\text{H}_6\text{O}_2-^{37}\text{Cl}_2$	104974.24	0.08	104974.23	0.11	-0.1	1	85	$^{85}\text{^{37}Cl}$	B07	1.5	71Sm01
$\text{C}_3\text{H}_5-\text{D}_2\text{^{37}Cl}$	45020.96	1.14	45019.00	0.06	-0.7	U			C2	2.5	65De09
$\text{C}_8\text{H}_{15}-^{37}\text{Cl}_3$	219665.80	0.90	219667.68	0.17	0.8	U			A2	2.5	70St25
$\text{C}_3\text{H}_3-\text{D}^{37}\text{Cl}$	43473.27	1.33	43470.72	0.06	-0.8	U			C2	2.5	65De09
$^{37}\text{K}-u$	-26632.5	6.4	-26624.11	0.10	1.3	U			LZ1	1.0	11Tu09
$\text{H}_3\text{O}-^{37}\text{Ca}_{514}$	25638.22	0.35				2			MS1	1.0	07Ri08 *
$\text{D}_2\text{^{35}Cl}-\text{H}_2\text{^{37}Cl}$	15505.41	0.71	15503.57	0.07	-1.0	U			C2	2.5	65De09
	15503.80	0.09			-1.0	U			H31	2.5	77So02
$\text{C}_5\text{H}_{12}-^{35}\text{Cl}^{37}\text{Cl}$	159145.17	0.12	159145.10	0.07	-0.4	1	13	$^9\text{^{37}Cl}$	B07	1.5	71Sm01
$\text{H}_2\text{^{35}Cl}-^{37}\text{Cl}$	18600.0	0.4	18600.14	0.07	0.1	U			M17	2.5	66Be10
$\text{D}^{35}\text{Cl}-^{37}\text{Cl}$	17052.95	1.02	17051.86	0.07	-0.4	U			C2	2.5	65De09
	17051.816	0.185			0.1	U			J5	2.5	72Ka57
$^{37}\text{K}-^{39}\text{K}_{949}$	7817.98	0.33	7818.43	0.10	1.4	U			MA8	1.0	07Ya08
$^{37}\text{Cl}(p,\alpha)^{34}\text{S}$	3030	6	3034.23	0.07	0.7	U			Bar		57Va03 Y
	3029	8			0.7	U			MIT		64Sp12
$^{37}\text{Ar}(n,\alpha)^{34}\text{S}$	4630	7	4630.45	0.21	0.1	U			ILL		78As06
$^{34}\text{S}(\alpha,n)^{37}\text{Ar}$	-4625	90	-4630.45	0.21	-0.1	U			Tal		63Ne05
$^{37}\text{Cl}(d,\alpha)^{35}\text{S}$	7791	12	7795.50	0.07	0.4	U			MIT		64Sp12
$^{37}\text{Cl}(p,^3\text{He})^{35}\text{S}^i$	-19713	10				2					75Gu15
$^{35}\text{Cl}(^3\text{He},p)^{37}\text{Ar}$	9582	15	9576.35	0.21	-0.4	U			MIT		67Sp09
$^{36}\text{S}(^{18}\text{O},^{17}\text{F})^{37}\text{P}$	-14410	40	-14400	40	0.2	2			Can		88Or.A *
$^{36}\text{S}(^{48}\text{Ca},^{47}\text{Sc})^{37}\text{P}$	-11490	120	-11560	40	-0.6	2			Dar		88Fi04 *
	4303.52	0.12	4303.60	0.06	0.7	2			ORn		84Ra09 Z
$^{36}\text{S}(n,\gamma)^{37}\text{S}$	4303.61	0.09			-0.1	2			Bdn		06Fi.A
	2079.12	0.13	2079.04	0.06	-0.6	2					84Pi03
$^{36}\text{S}(^{14}\text{C},^{13}\text{C})^{37}\text{S}$	-3874	7	-3872.83	0.06	0.2	U			Mun		84Ma49
$^{37}\text{Cl}(^{13}\text{C},^{14}\text{O})^{36}\text{P}$	-16433	50	-16393	13	0.8	U			Can		88Or01
$^{36}\text{S}(p,\gamma)^{37}\text{Cl}$	8386.47	0.23	8386.37	0.19	-0.4	1	65	$^{64}\text{^{36}S}$	Utr		84No05 Z
	-1835.5	0.3				2					84No05
$^{36}\text{S}(p,\gamma)^{37}\text{Cl}^i$	8791.1	1.0	8787.43	0.21	-3.7	B					68Wi25 Z
	8788.8	1.2			-1.1	U					70Ha56 Z
	8789.9	0.9			-2.7	U			Bdn		06Fi.A
$^{36}\text{Ar}(p,\gamma)^{37}\text{K}$	1857.3	1.0	1857.63	0.09	0.3	U					64Ar17
	1857.63	0.09				2			Utr		88De03 Z
$^{36}\text{Ar}(d,n)^{37}\text{K}$	-320	100	-366.94	0.09	-0.5	U			Yal		61Ya01
$^{36}\text{Ar}(p,\gamma)^{37}\text{K}^i$	-3192.6	0.8				2					88De03
$^{37}\text{S}(\beta^-)^{37}\text{Cl}$	4750	40	4865.11	0.20	2.9	U					67Wi14
$^{37}\text{Cl}(t,^3\text{He})^{37}\text{S}$	-4854	30	-4846.52	0.20	0.2	U			LAL		70Aj01
$^{37}\text{Ar}(e)^{37}\text{Cl}$	818	15	813.87	0.20	-0.3	U					53An01
$^{37}\text{Cl}(p,n)^{37}\text{Ar}$	-1595.5	4.0	-1596.22	0.20	-0.2	U			Wis		50Ri59 Y
	-1595.4	1.0			-0.8	U			MIT		52Sc09 Z
	-1596.9	2.4			0.3	U			Oak		64Jo11
	-1596.8	1.0			0.6	U			Duk		66Pa18 Z
	-1596.22	0.20				2			PTB		98Bo30
	-1596.3	1.0			0.1	U					01Wa50
$^{37}\text{K}(\beta^+)^{37}\text{Ar}$	6120	70	6147.45	0.23	0.4	U					58Su60
	6170	70			-0.3	U					60Wa04
$^*\text{H}_3\text{O}-^{37}\text{Ca}_{514}$	Error in Table II : $M-A=13135.7(1.4)$ corrected to $-13136.06(0.64)$ keV										
$^*\text{^{36}S}(^{18}\text{O},^{17}\text{F})^{37}\text{P}$	And $Q=-13650(40)$, $M=-19750(40)$ if other peak is ground state one										
$^*\text{^{36}S}(^{48}\text{Ca},^{47}\text{Sc})^{37}\text{P}$	And $Q=-11569(80)$, $M=-18980(80)$ if other peak due to ^{47}Sc 807.89 level										

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{38}\text{Al-u}$	15240	1500	17400	270	1.4	o			GA4	1.0	00Sa21
	17980	920			-0.6	o			GA5	1.0	00Sa21
	17402	268				2			GA7	1.0	07Ju03
$^{38}\text{Si-u}$	-4510	180	-4480	80	0.2	o			GA4	1.0	00Sa21
	-4020	290			-1.1	U			TO4	1.5	91Zh24
	-4100	320			-1.2	o			GA5	1.0	00Sa21
	-4477	75				2			GA7	1.0	07Ju03
	-14420	620	-15750	90	-2.1	U			GA1	1.0	87Gi05
$^{38}\text{P-u}$	-15910	140			1.2	2			GA4	1.0	00Sa21
	-15530	150			-1.0	2			TO4	1.5	91Zh24
	-16110	310			1.2	U			GA5	1.0	00Sa21
	-15717	75			-0.3	o			GT1	1.5	04Ma.A
	-15660	100			-0.6	2			GT2	1.5	08Kn.A
	$^{38}\text{Ca-H}_6\text{O}_2$	-60460.24	0.30	-60460.21	0.21	0.1	o			MS1	1.0
-60460.24		0.30			0.1	1	48	48 ^{38}Ca	MS1	1.0	07Ri08
$^{38}\text{Ar-}^{39}\text{K}_{.974}$	-1917.88	0.37	-1918.01	0.21	-0.4	1	32	32 ^{38}Ar	MA8	1.0	02He23
$^{38}\text{K-}^{39}\text{K}_{.974}$	4430.88	0.44	4431.00	0.21	0.3	1	23	23 ^{38}K	MA8	1.0	07Ya08
$^{38}\text{Ca }^{19}\text{F-}^{39}\text{K}_{1.462}$	27783.80	0.63	27783.50	0.21	-0.5	U			MA8	1.0	07Ge07
$^{38}\text{K-}^{38}\text{Ar}$	6348.974	0.068	6349.01	0.05	0.5	1	50	27 ^{38}K	JY1	1.0	09Er07
$^{38}\text{K}^m\text{-}^{38}\text{Ar}$	6488.743	0.049	6488.73	0.04	-0.3	1	72	45 $^{38}\text{K}^m$	JY1	1.0	09Er07
$^{38}\text{Ar-}^{38}\text{Ca}$	-13587.17	0.12	-13587.12	0.07	0.4	1	32	17 ^{38}Ar	JY1	1.0	11Er02
$^{38}\text{K}^m\text{-}^{38}\text{K}$	139.698	0.065	139.72	0.05	0.3	-			JY1	1.0	09Er07
	139.78	0.14			-0.4	-			JY1	1.0	11Er02
	ave.	139.71	0.06		0.1	1	60	34 $^{38}\text{K}^m$			average
$^{38}\text{Ca-}^{38}\text{K}$	7238.04	0.10	7238.11	0.07	0.7	1	45	25 ^{38}K	JY1	1.0	11Er02
$^{38}\text{K}^m\text{-}^{38}\text{Ca}$	-7098.43	0.11	-7098.39	0.07	0.4	1	37	21 $^{38}\text{K}^m$	JY1	1.0	11Er02
$^{24}\text{Mg}(^{16}\text{O},2n)^{38}\text{Ca}$	-12727	30	-12754.70	0.19	-0.9	U					72Zi02 *
$^{35}\text{Cl}(\alpha,p)^{38}\text{Ar}$	837.2	2.4	837.22	0.20	0.0	U			Har		75Sq01
$^{35}\text{Cl}(\alpha,n)^{38}\text{K}$	-5862.1	1.5	-5859.19	0.20	1.9	U			Mun		76Sh24 Z
	-5858.7	2.9			-0.2	U			Har		75Sq01 *
$^{36}\text{S}(t,p)^{38}\text{S}$	3838	30	3858	7	0.7	U					85Da15
$^{36}\text{S}(^{14}\text{C},^{12}\text{C})^{38}\text{S}$	-781	10	-783	7	-0.2	R			Mun		84Ma49
$^{36}\text{Ar}(^3\text{He},n)^{38}\text{Ca}$	-1365	21	-1313.14	0.20	2.5	U			CIT		69Sh04
$^{37}\text{Cl}(n,\gamma)^{38}\text{Cl}$	6107.84	0.30	6107.88	0.08	0.1	U					73Sp06 Z
	6107.95	0.10			-0.7	2			MMn		81Ke02 Z
	6107.73	0.15			1.0	2			Bdn		06Fi.A
$^{37}\text{Cl}(d,p)^{38}\text{Cl}$	3885	8	3883.32	0.08	-0.2	U			MIT		64Sp12
	3883.28	0.50			0.1	U			Rez		90Pi05 *
$^{37}\text{Cl}(p,\gamma)^{38}\text{Ar}$	10243.0	1.0	10242.27	0.20	-0.7	U					68En01 Z
$^{38}\text{S}(\beta^-)^{38}\text{Cl}$	2947	20	2937	7	-0.5	3					71En01
	2936	12			0.1	3					72Vi11
$^{38}\text{Cl}(\beta^-)^{38}\text{Ar}$	4913	5	4916.73	0.22	0.7	U					68Va06
$^{38}\text{K}(\beta^+)^{38}\text{Ar}$	5870	30	5914.07	0.04	1.5	U					56Gr07 *
	5790	50			2.5	U					67Va27 *
$^{38}\text{Ar}(p,n)^{38}\text{K}$	-6695.5	4.	-6696.41	0.04	-0.2	U			Har		75Sq01
	-6695.65	0.70			-1.1	U					78Ja06 Z
$^{38}\text{Ar}(p,n)^{38}\text{K}^m$	-6826.73	0.12	-6826.56	0.04	1.4	U			Auc		98Ha36 Z
$^{24}\text{Mg}(^{16}\text{O},2n)^{38}\text{Ca}$	E(^{16}O)=24880(30) to 2^+ level at 2213.13(0.10) keV										
$^{35}\text{Cl}(\alpha,n)^{38}\text{K}$	Q=-5989.1(2.9,Z) to $^{38}\text{K}^m$ at 130.15(0.04) keV										
$^{37}\text{Cl}(d,p)^{38}\text{Cl}$	Estimated systematic error 0.5 added to statistical error 0.064 keV										
$^{38}\text{K}(\beta^+)^{38}\text{Ar}$	E_{β^+} =2680(30) 2600(50) respectively, to 2^+ level at 2167.64 keV										
$^{39}\text{Al-u}$	22970	1580	22540#	540#	-0.3	o			GA5	1.0	00Sa21
	21653	676			1.3	D			GA7	1.0	07Ju03 *
$^{39}\text{Si-u}$	1900	540	2490	100	1.1	o			GA4	1.0	00Sa21
	2210	490			0.6	o			GA5	1.0	00Sa21
	2491	97				2			GA7	1.0	07Ju03
$^{39}\text{P-u}$	-13890	140	-13770	100	0.8	2			GA4	1.0	00Sa21
	-13580	160			-0.8	2			TO4	1.5	91Zh24
	-13870	280			0.3	2			GA5	1.0	00Sa21
	-13602	140			-0.8	2			GT1	1.5	04Ma.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{39}\text{K}-^{23}\text{Na}_{1.696}$	-18942.88	0.58	-18942.216	0.006	0.8	U			Ma8	1.5	08Mu05	
$^{39}\text{Ca-u}$	-29278.8	6.4	-29289.2	0.6	-1.6	U			LZ1	1.0	11Tu09	
$^{39}\text{K}-^{36}\text{Ar}_{1.083}$	-1144.65	0.44	-1144.86	0.03	-0.5	U			MA8	1.0	02He23	
	-1144.83	0.40			-0.1	U			MA8	1.0	03B117	
$^{39}\text{K}-^{37}\text{K}_{1.054}$	-8231.29	0.53	-8231.70	0.11	-0.5	U			Ma8	1.5	08Mu05	
$^{39}\text{Ca } ^{19}\text{F}-^{39}\text{K}_{1.487}$	23082.43	0.64	23082.4	0.6	0.0	1	100	100 ^{39}Ca	MA8	1.0	08Ge08	
$^{39}\text{K}-^{40}\text{Ar}$	1323.3631	0.0043	1323.363	0.004	-0.1	1	100	100 ^{39}K	FS1	1.0	10Mo30	
$^{39}\text{K}(\text{p},\alpha)^{36}\text{Ar}$	1287	7	1288.404	0.027	0.2	U			MIT		64Sp12	
$^{37}\text{Cl}(\text{t},\text{p})^{39}\text{Cl}$	5701.9	2.5	5699.5	1.7	-1.0	2			Str		84An03	
$^{39}\text{K}(\text{p},^3\text{He})^{37}\text{Ar}^i$	-15493.4	6.				2			MSU		73Be23 *	
$^{39}\text{K}(\text{p},\text{t})^{37}\text{K}^i$	-21713.1	3.	-21718.1	0.8	-1.7	U			MSU		73Be23 *	
$^{39}\text{Sc}^i(2\text{p})^{37}\text{K}$	4969	120	4878	28	-0.8	U			Lis		90De43 *	
	4877	40			0.0	3			Brk		92Mo15 *	
	4880	40			0.0	3			Bor		01Gi01	
$^{38}\text{Ar}(\text{p},\gamma)^{39}\text{K}$	6380.9	1.1	6381.34	0.19	0.4	U					70Ma31 Z	
	6382.2	0.8			-1.1	U					84Ha27 Z	
$^{39}\text{K}(\text{p},\text{d})^{38}\text{K}$	-10851	2	-10853.19	0.20	-1.1	U			MSU		74Wi17	
$^{39}\text{K}(^3\text{He},\alpha)^{38}\text{K}$	7498	15	7499.86	0.20	0.1	U			Roc		66B104	
	7483	10			1.7	U			Roc		72Fe06	
$^{39}\text{Cl}(\beta^-)^{39}\text{Ar}$	3440	20	3442	5	0.1	U					56Pe38	
$^{39}\text{Ar}(\beta^-)^{39}\text{K}$	565	5				2					50Br66	
$^{39}\text{Ca}(\beta^+)^{39}\text{K}$	6512	25	6524.5	0.6	0.5	U					58Ki40	
$^{39}\text{K}(\text{p},\text{n})^{39}\text{Ca}$	-7302.5	6.	-7306.8	0.6	-0.7	U			Tal		70Ke08	
	-7314.9	1.8			4.5	B					78Ra15 Z	
$^{39}\text{Al-u}$	Trends from Mass Surface TMS suggest ^{39}Al 830 less bound										GAu	**
$^{39}\text{K}(\text{p},^3\text{He})^{37}\text{Ar}^i$	M-A=-25954(6); rebuilt Q=-15493.8(6.) with Ame1971; recalibration +0.35										MMC123**	
$^{39}\text{K}(\text{p},\text{t})^{37}\text{K}^i$	M-A=-19753(3); Q rebuilt with Ame1971										MMC123**	
$^{39}\text{Sc}^i(2\text{p})^{37}\text{K}$	$E_{2p}=3600(120)$ to $1/2^+$ level at 1370.85 keV										Ens013	**
$^{39}\text{Sc}^i(2\text{p})^{37}\text{K}$	Other possib. $^{39}\text{Sc}^i(\alpha)^{35}\text{K}=3600(120)$ keV										90De43	**
$^{39}\text{Sc}^i(2\text{p})^{37}\text{K}$	$E_{2p}=4750(40)$ p+p at 90 degrees; deduced $Q=E_{2p}[1+ \text{Mp}/\text{M}(^{37}\text{K})]$										MMC123**	
$^{40}\text{Si-u}$	5290	1010	5830	250	0.5	o			GA4	1.0	00Sa21	
	6180	740			-0.5	o			GA5	1.0	00Sa21	
	5829	247				2			GA7	1.0	07Ju03	
$^{40}\text{P-u}$	-8800	200	-8670	120	0.7	o			GA4	1.0	00Sa21	
	-8950	210			0.9	2			TO4	1.5	91Zh24	
	-8200	320			-1.5	o			GA5	1.0	00Sa21	
	-8621	129			-0.4	2			GA7	1.0	07Ju03	
$^{40}\text{S-u}$	-24440	190	-24517	4	-0.4	o			GA4	1.0	00Sa21	
	-24530	250			0.0	U			TO4	1.5	91Zh24	
	-24910	340			1.2	o			GA5	1.0	00Sa21	
	-24627	129			0.8	U			GA7	1.0	07Ju03	
$\text{C}_3 \text{H}_4-^{40}\text{Ar}$	68917.0053	0.0035	68917.0052	0.0024	0.0	1	46	46 ^{40}Ar	MI1	1.0	95Di08	
$\text{C}_2 \text{D}_8-^{40}\text{Ar}$	150431.1045	0.0040	150431.1012	0.0024	-0.8	1	36	33 ^{40}Ar	MI1	1.0	95Di08	
$^{20}\text{Ne}_2-^{40}\text{Ar}$	22497.2245	0.0042	22497.228	0.003	1.0	-			MI1	1.0	95Di08	
	22497.2280	0.0060			0.1	-			MI1	1.0	95Di08	
ave.	22497.226	0.003			0.9	1	74	60 ^{20}Ne			average	
$^{40}\text{Ar-u}$	-37616.878	0.040	-37616.8763	0.0024	0.0	U			ST2	1.0	02Bf02	
$^{40}\text{Ca-H}_{40}$	-350410.425	0.022	-350410.426	0.022	0.0	1	99	99 ^{40}Ca	ST2	1.0	06Na18	
$^{40}\text{S O}-^{41}\text{K}_{1.366}$	22541	16	22544	4	0.2	U			MS1	1.0	09Ri12	
$^{40}\text{S}-^{41}\text{K}_{.976}$	12752.0	9.4	12741	4	-1.2	1	21	21 ^{40}S	MS1	1.0	09Ri12	
$^{40}\text{S}-^{40}\text{Ar}$	13096.6	4.8	13099	4	0.6	1	79	79 ^{40}S	MS1	1.0	09Ri12	
$^{40}\text{Ca}-^{40}\text{Ar}$	208.2	0.5	207.740	0.022	-0.4	U			J3	2.5	68Fu11	
$^{40}\text{Ca}(^3\text{He},^8\text{Li})^{35}\text{K}$	-29693	20	-29688.1	0.5	0.2	U			MSU		76Be08	
$^{40}\text{Ca}(\alpha,^8\text{He})^{36}\text{Ca}$	-57580	40				2			Tex		77Tr03	
$^{40}\text{Ar}(\text{n},\alpha)^{37}\text{S}$	-2500	50	-2497.08	0.20	0.1	U					55Be78	
	-2490	50			-0.1	U			Ric		64Da11	
$^{40}\text{K}(\text{n},\alpha)^{37}\text{Cl}$	3866	7	3872.43	0.08	0.9	U			BNL		68Sc01	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
⁴¹ Si-u	14560	1980	13010	400	-0.8	o			GA5	1.0	00Sa21
	13011	397				2			GA7	1.0	07Ju03
⁴¹ P-u	-5930	300	-5350	90	1.9	o			GA4	1.0	00Sa21
	-5200	500			-0.2	U			TO4	1.5	91Zh24
	-5290	420			-0.1	o			GA5	1.0	00Sa21
	-5346	86				2			GA7	1.0	07Ju03
	-20500	150	-20407	4	0.6	U			GA4	1.0	00Sa21
⁴¹ S-u	-19970	230			-1.3	U			TO4	1.5	91Zh24
	-20430	330			0.1	U			GA5	1.0	00Sa21
	-20494	75			0.8	U			GT1	1.5	04Ma.A
	-23146.2	4.4				2			MS1	1.0	09Ri12
⁴¹ S-C ₂ H O											*
⁴¹ Cl-u	-29620	190	-29320	70	1.1	2			TO3	1.5	90Tu01
	-29500	270			0.5	2			TO4	1.5	91Zh24
⁴¹ Sc-u	-30741	12	-30748.89	0.09	-0.7	U			LZ1	1.0	11Tu09
⁴¹ Ti-u	-16200	390	-16850	30	-1.1	U			GT1	1.5	04St05
	-16852	30				2			LZ1	1.0	12Zh34
⁴¹ K- ³⁹ K _{1.051}	-30.05	0.32	-30.259	0.006	-0.7	U			MA8	1.0	02He23
	-29.5	2.4			-0.3	U			MA8	1.0	09Na.A
⁴¹ K- ⁴⁰ Ar H	-8382.9005	0.0061	-8382.898	0.003	0.4	-			FS1	1.0	10Mo30
⁴¹ K- ⁴⁰ Ar	-557.8652	0.0039	-557.866	0.003	-0.2	-			FS1	1.0	10Mo30
⁴¹ K- ⁴⁰ Ar H	ave.	-8382.898	0.003	-8382.898	0.003	0.1	1	100	100 ⁴¹ K		average
⁴¹ K(p,α) ³⁸ Ar	4002	20	4019.33	0.20	0.9	U			ChR		60Cl02
	4018	10			0.1	U			MIT		64Sp12
⁴¹ K(d,α) ³⁹ Ar	8397	15	8393	5	-0.2	U			MIT		67Sp09
³⁹ K(³ He,p) ⁴¹ Ca	8920	20	8972.94	0.14	2.6	U			MIT		67Sp09
⁴⁰ Ar(¹⁸ O, ¹⁷ F) ⁴¹ Cl	-10530	83	-10470	70	0.8	R			Can		84Ho.B
⁴⁰ Ar(n,γ) ⁴¹ Ar	6098.4	0.7	6098.9	0.3	0.8	2					70Ha56
	6099.1	0.4			-0.4	2			Bdn		06Fi.A
	3878	6	3874.4	0.3	-0.6	U			MIT		64Sp12
⁴⁰ Ar(d,p) ⁴¹ Ar	7807.8	0.3	7808.619	0.003	2.7	U					89Sm06
⁴⁰ Ar(p,γ) ⁴¹ K	-6034	15				2					75Me10
⁴⁰ Ar(³ He,d) ⁴¹ K ⁱ	-6034	15				2					*
	10095.19	0.10	10095.37	0.06	1.8	-			ILn		84Kr05
⁴⁰ K(n,γ) ⁴¹ K	10095.25	0.20			0.6	-			Bdn		06Fi.A
	ave.	10095.20	0.09		1.9	1	39	39	⁴⁰ K		average
⁴⁰ Ca(n,γ) ⁴¹ Ca	8363.0	0.5	8362.82	0.14	-0.4	-					69Ar.A
	8362.5	0.5			0.6	-					70Cr04
	8362.72	0.3			0.3	-			MMn		80Is02
	8362.86	0.17			-0.2	-			Bdn		06Fi.A
⁴⁰ Ca(d,p) ⁴¹ Ca	6134	4	6138.25	0.14	1.1	U			MIT		68Be36
⁴⁰ Ca(n,γ) ⁴¹ Ca	ave.	8362.81	0.14	8362.82	0.14	0.0	1	100	100 ⁴¹ Ca		average
	⁴⁰ Ca(p,γ) ⁴¹ Sc	1085.7	1.4	1085.00	0.08	-0.5	U				73Al11
⁴⁰ Ca(p,γ) ⁴¹ Sc	1085.09	0.09			-1.0	1	79	79	⁴¹ Sc	Utr	87Zi02
											*
⁴⁰ Ca(d,n) ⁴¹ Sc	-1145	15	-1139.57	0.08	0.4	U					61Ma08
⁴⁰ Ca(p,γ) ⁴¹ Sc ^r	-1796.4	1.5	-1797.33	0.09	-0.6	U					77Ko10
⁴⁰ Ca(p,γ) ⁴¹ Sc ⁱ	-4851.4	4.9	-4854	3	-0.5	2					76Fo01
	⁴¹ Sc ⁱ (p) ⁴⁰ Ca	4855.6	5.	4854	3	-0.4	2				97Ho12
⁴¹ Cl(β ⁻) ⁴¹ Ar	4855.6	8.			-0.2	2			Lis		98Bh12
	4857	16			-0.2	U			Bor		07Do17
⁴¹ Cl(β ⁻) ⁴¹ Ar	5670	150	5760	70	0.6	R					74Gu10
⁴¹ Ar(β ⁻) ⁴¹ K	2492.0	1.1	2492.0	0.3	0.0	U					64Pa03
⁴¹ K(p,n) ⁴¹ Ca	-1209.6	1.5	-1204.00	0.14	3.7	B			Oak		64Jo11
	-1203.8	0.5			-0.4	U			Can		70Kn03
⁴¹ Sc(β ⁺) ⁴¹ Ca	6630	100	6495.48	0.16	-1.3	U					62Cr04
⁴¹ Sc ^r (IT) ⁴¹ Sc	2882.6	0.3	2882.33	0.05	-0.9	U					77Ko10
	2882.39	0.10			-0.6	-			Utr		87Zi02
	2882.26	0.06			1.1	-			Utr		89Ki11
	ave.	2882.29	0.05		0.6	1	93	72	⁴¹ Sc ^r		average
* ⁴¹ S-C ₂ H O	For original doublet ⁴¹ S C H-C ₃ H ₂ O										
* ⁴⁰ Ar(³ He,d) ⁴¹ K ⁱ	IT=8349(15); Q rebuilt with Ame1971										
* ⁴⁰ Ca(p,γ) ⁴¹ Sc	E _p =647.25(0.05,Z) to 1716.43(0.08,Z) level										
* ⁴¹ Ar(β ⁻) ⁴¹ K	E _{β⁻} =1198.3(1.1) to 7/2 ⁻ level at 1293.609 keV										

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{42}\text{Si-u}$	20860	3990	17780#	540#	-0.8	o			GA5	1.0	99Sa.A	
	16275	623			2.4	D			GA7	1.0	07Ju03 *	
$^{42}\text{P-u}$	260	740	1080	230	1.1	o			GA4	1.0	00Sa21	
	1550	630			-0.7	o			GA5	1.0	00Sa21	
$^{42}\text{S-u}$	1084	225				2			GA7	1.0	07Ju03	
	-18940	150	-18935	3	0.0	U			GA4	1.0	00Sa21	
	-18510	350			-0.8	U			TO4	1.5	91Zh24	
	-19390	350			1.3	U			GA5	1.0	00Sa21	
$^{42}\text{Cl-u}$	-18934.9	3.0				2			MS1	1.0	09Ri12 *	
	-27000	190	-26750	150	0.9	2			TO3	1.5	90Tu01	
	-26870	190			0.4	2			TO4	1.5	91Zh24	
$^{42}\text{Ar}-^{36}\text{Ar}_{1.167}$	920.6	6.2				2		MA6	1.0	01He29		
$^{42}\text{S}-^{41}\text{K}_{1.024}$	20151.8	9.5	20156	3	0.4	U		MS1	1.0	09Ri12		
$^{42}\text{Sc}-^{42}\text{Ca}$	6898.74	0.22	6898.70	0.10	-0.2	1	22	19 ^{42}Sc	JY1	1.0	06Er08	
$^{42}\text{Sc}^m-^{42}\text{Ca}$	7560.68	0.23	7560.35	0.11	-1.4	1	25	22 $^{42}\text{Sc}^m$	JY1	1.0	06Er08	
$^{42}\text{Ti}-^{42}\text{Ca}$	14431.69	0.71	14431.20	0.26	-0.7	1	13	13 ^{42}Ti	JY1	1.0	09Ku19	
$^{42}\text{Sc}^m-^{42}\text{Sc}$	661.97	0.24	661.65	0.06	-1.3	U			JY1	1.0	06Er08	
	662.50	0.42			-2.0	U			JY1	1.0	09Ku19	
$^{42}\text{Ti}-^{42}\text{Sc}$	7532.92	0.34	7532.50	0.24	-1.2	1	50	49 ^{42}Ti	JY1	1.0	09Ku19	
$^{42}\text{Ti}-^{42}\text{Sc}^m$	6870.19	0.38	6870.85	0.24	1.7	1	40	38 ^{42}Ti	JY1	1.0	09Ku19	
$^{28}\text{Si}(^{16}\text{O},2n)^{42}\text{Ti}$	-17250	13	-17267.77	0.28	-1.4	U					72Zi02	
$^{42}\text{Ca}(p,\alpha)^{39}\text{K}$	118	7	124.00	0.15	0.9	U			MIT		64Sp12	
$^{39}\text{K}(\alpha,n)^{42}\text{Sc}$	-7160	60	-7332.45	0.17	-2.9	U			Yal		61Sm05	
	-7455	30			4.1	B			Tal		65Ne02	
$^{40}\text{Ar}(t,p)^{42}\text{Ar}$	7043	40	7044	6	0.0	U			LAl		61Ja07	
$^{40}\text{Ca}(^3\text{He},p)^{42}\text{Sc}$	4966	20	4917.00	0.17	-2.4	U			MIT		64Sp12	
	4905	5			2.4	U			ANL		74Ha55	
$^{40}\text{Ca}(^3\text{He},n)^{42}\text{Ti}$	-2865	6	-2881.82	0.28	-2.8	U			CIT		67Mi02	
$^{41}\text{K}(n,\gamma)^{42}\text{K}$	7533.78	0.15	7533.80	0.11	0.1	2			ILn		85Kr06 Z	
	7533.82	0.15			-0.1	2			Bdn		06Fi.A	
$^{41}\text{K}(d,p)^{42}\text{K}$	5314	12	5309.23	0.11	-0.4	U			MIT		64Sp12	
$^{41}\text{K}(p,\gamma)^{42}\text{Ca}$	10275.5	3.4	10276.67	0.15	0.3	U					71Vi14	
$^{41}\text{Ca}(n,\gamma)^{42}\text{Ca}$	11480.63	0.06	11480.67	0.06	0.7	1	91	90 ^{42}Ca	ORn		89Ki11 Z	
$^{42}\text{Ca}(^3\text{He},\alpha)^{41}\text{Ca}$	9102	15	9096.94	0.06	-0.3	U			MIT		71Ra35	
$^{41}\text{Ca}(p,\gamma)^{42}\text{Sc}^r-^{40}\text{Ca}^{41}\text{Sc}^r$	-6.67	0.05	-6.70	0.05	-0.6	1	94	66 $^{42}\text{Sc}^r$	Utr		89Ki11 *	
$^{42}\text{Cl}(\beta^-)^{42}\text{Ar}$	9760	220	9510	140	-1.1	R					89Mi03	
$^{42}\text{K}(\beta^-)^{42}\text{Ca}$	3519.	3.5	3525.22	0.18	1.8	U					68Va06	
	3524	6			0.2	U					75Ra09	
	6342	100	6426.10	0.10	0.8	U					61Ja22	
$^{42}\text{Sc}(\beta^+)^{42}\text{Ca}$	6486	100			-0.6	U					63Ro10 *	
	-7213.7	2.3	-7208.45	0.10	2.3	U			Har		75Fr.A	
$^{42}\text{Ca}(p,n)^{42}\text{Sc}$	-6442.3	0.4	-6444.69	0.10	-6.0	F			Mun		77Vo02 *	
$^{42}\text{Ca}(^3\text{He},t)^{42}\text{Sc}$	-1611.7	2.6	-1613.74	0.14	-0.8	U			ChR		74Ha35	
$^{42}\text{Ca}(^3\text{He},t)^{42}\text{Sc}-^{27}\text{Al}^{(27)}\text{Si}$	-2417.8	3.5	-2421.67	0.11	-1.1	U			ChR		74Ha35	
$^{42}\text{Ca}(^3\text{He},t)^{42}\text{Sc}-^{26}\text{Mg}^{(26)}\text{Al}$	-2421.83	0.23			0.7	1	22	14 ^{42}Sc	ChR		87Ko34 *	
	616.28	0.06	616.32	0.06	0.7	1	93	76 $^{42}\text{Sc}^m$			Ens013	
$^{42}\text{Sc}^m(\text{IT})^{42}\text{Sc}$	6076.33	0.08	6076.26	0.07	-0.9	1	84	50 ^{42}Sc	Utr		89Ki11 Z	
$^{42}\text{Sc}^r(\text{IT})^{42}\text{Sc}$	Trends from Mass Surface TMS suggest ^{42}Si 1400 less bound For original doublet $^{42}\text{S}-(\text{C}_2\text{H O})1.024$, $D_M=-21740.2(3.1)\mu\text{u}$ Calculated from resonance energy difference = 5.73(0.05) keV $E_{\beta^+}=2870(100)$ from $^{42}\text{Sc}^m$ at 616.32 to 6^+ level at 3189.44 keV F : rejected in reference of same group Q=-2193.52(0.23) to $^{26}\text{Al}^m$ at 228.305 keV											
$^{42}\text{Si-u}$											GAu	**
$^{42}\text{S-u}$											09Ri12	**
$^{41}\text{Ca}(p,\gamma)^{42}\text{Sc}^r-^{40}\text{Ca}^{41}\text{Sc}^r$											GAu	**
$^{42}\text{Sc}(\beta^+)^{42}\text{Ca}$											Ens013	**
$^{42}\text{Ca}(^3\text{He},t)^{42}\text{Sc}$											09Fa15	**
$^{42}\text{Ca}(^3\text{He},t)^{42}\text{Sc}-^{26}\text{Mg}^{(26)}\text{Al}$											Nub127	**
$^{43}\text{P-u}$	4220	1620	5020	400	0.5	U			GA4	1.0	00Sa21	
	6190	1040			-1.1	o			GA5	1.0	00Sa21	
	5024	397				2			GA7	1.0	07Ju03	
$^{43}\text{S-u}$	-12810	250	-13092	5	-1.1	o			GA4	1.0	00Sa21	
	-13400	900			0.2	U			TO4	1.5	91Zh24	
	-12900	460			-0.4	o			GA5	1.0	00Sa21	
	-12958	107			-1.3	U			GA7	1.0	07Ju03	
	-13087	22			-0.2	2			MS1	1.0	09Ri12 *	
	-13092.7	5.5			0.1	2			MS1	1.0	09Ri12 *	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{43}\text{Cl-u}$	-26090	300	-26110	100	-0.1	o			GA4	1.0	00Sa21
	-25740	200			-1.2	o			TO3	1.5	90Tu01
	-25970	350			-0.3	U			TO4	1.5	91Zh24
	-26010	330			-0.3	o			GA5	1.0	00Sa21
	-25905	86			-1.6	o			GT1	1.5	04Ma.A
	-25894	140			-1.6	2			GA7	1.0	07Ju03
	-26361	100			1.7	2			GT2	1.5	08Kn.A
$^{43}\text{V-u}$	-19234	46				2		LZ1	1.0	12Ya.A	
$^{43}\text{Ar}-^{36}\text{Ar}_{1.194}$	4387.2	5.7				2		MA6	1.0	01He29	
$^{43}\text{K}-^{39}\text{K}_{1.103}$	766.45	0.44				2		MA8	1.0	07Ya08	
$^{43}\text{Ca}(p,\alpha)^{40}\text{K}$	-14	8	-9.27	0.23	0.6	U		MIT		64Sp12	
$^{40}\text{Ca}(\alpha,p)^{43}\text{Sc}$	-3470	30	-3522.3	1.9	-1.7	U				61Ma03	
$^{40}\text{Ca}(\alpha,n)^{43}\text{Ti}$	-11169.9	10.	-11172	7	-0.2	2		Tal		67Al08	
$^{41}\text{K}(^3\text{He},p)^{43}\text{Ca}^i$	2452	30	2497	14	1.5	1	23	23 $^{43}\text{Ca}^i$	MIT		68Do02
$^{43}\text{V}^i(2p)^{41}\text{Sc}$	4320	50	4346	15	0.5	U			Lis		92Bo37
	4292	22			2.5	o			Bor		01Gi01
	4348	16			-0.1	1	89	89 $^{43}\text{V}^i$	Bor		07Do17
$^{42}\text{Ca}(n,\gamma)^{43}\text{Ca}$	7933.1	0.5	7932.89	0.17	-0.4	-					69Ar.A Z
	7933.1	0.5			-0.4	-			Ptn		69Gr08 Z
	7933.1	0.4			-0.5	-					71Bi.A
	7932.73	0.23			0.7	-			Bdn		06Fi.A
$^{42}\text{Ca}(d,p)^{43}\text{Ca}$	5716	10	5708.32	0.17	-0.8	U			MIT		64Sp12
	5707	12			0.1	U			MIT		66Do02
$^{43}\text{Ca}(d,t)^{42}\text{Ca}$	-1672	10	-1675.66	0.17	-0.4	U			Ald		64Bj02
$^{42}\text{Ca}(n,\gamma)^{43}\text{Ca}$	ave.	7932.89	0.17	7932.89	0.17	0.0	1	99	99 ^{43}Ca		average
$^{42}\text{Ca}(p,\gamma)^{43}\text{Sc}$	4935	5	4929.8	1.9	-1.0	2					65Br31
	4929	2			0.4	2					69Wa19
$^{42}\text{Ca}(^3\text{He},d)^{43}\text{Sc}^i$	-4808	8	-4795	3	1.6	1	17	17 $^{43}\text{Sc}^i$			66Sc17 *
$^{43}\text{V}^i(p)^{42}\text{Ti}$	8082	45	8097	15	0.3	1	11	11 $^{43}\text{V}^i$	Bor		01Gi01 *
$^{43}\text{K}(\beta^-)^{43}\text{Ca}$	1817	20	1833.4	0.5	0.8	U					54Li24 *
	1815	10			1.8	U					59Be72 *
$^{43}\text{Sc}(\beta^+)^{43}\text{Ca}$	2200	20	2220.7	1.9	1.0	U					52Ha44
	2220	10			0.1	U					54Li42
$^{43}\text{Ca}(p,n)^{43}\text{Sc}$	-3005	10	-3003.1	1.9	0.2	U			Har		60Mc12 Y
	-2998	10			-0.5	U					67Mc07
$^{43}\text{Ca}(^3\text{He},t)^{43}\text{Sc}^i$	-6467	8	-6471	3	-0.5	-					71Al19 *
	-6469	4			-0.5	-					71Be29 *
	ave.	-6469	4			-0.7	1	83	83 $^{43}\text{Sc}^i$		average
$^{43}\text{S-u}$	For original doublet $^{43}\text{S}-(\text{C}_3\text{H}_5\text{O})0.754$, $D_M=-38753(22)\mu\text{u}$										
$^{43}\text{S-u}$	For original doublet $^{43}\text{S C H}-(\text{C}_3\text{H}_5\text{O})0.982$, $D_M=-38694.8(5.5)\mu\text{u}$										
$^{42}\text{Ca}(^3\text{He},d)^{43}\text{Sc}^i$	IT=4238(8); Q rebuilt with Ame1961										
$^{43}\text{V}^i(p)^{42}\text{Ti}$	$Q_p=4590(45)$ followed by γ 's 1938+1554 keV										
$^{43}\text{K}(\beta^-)^{43}\text{Ca}$	$E_{\beta^-}=827(20)$ 825(10) respectively, to $3/2^+$ level at 990.257 keV										
$^{43}\text{Ca}(^3\text{He},t)^{43}\text{Sc}^i$	IT=4226(8); Q rebuilt with Ame1965										
$^{43}\text{Ca}(^3\text{He},t)^{43}\text{Sc}^i$	CDE=7238(4) Q=-6474(4); recalibration +6 keV for $^{42}\text{Ca}(p,n)^{42}\text{Sc}$ from Ame1961										
$^{44}\text{P-u}$	10070	966	11210#	540#	1.2	D			GA7	1.0	07Ju03 *
$^{44}\text{S-u}$	-10510	580	-9881	6	1.1	o			GA4	1.0	00Sa21
	-8960	620			-1.5	o			GA5	1.0	00Sa21
	-9769	150			-0.7	o			GA7	1.0	07Ju03
$^{44}\text{S-C}_2\text{H}_4\text{O}$	-36095.9	5.6				2		MS1	1.0	09Ri12 *	
$^{44}\text{Cl-u}$	-21700	130	-22130	200	-3.3	B			GA4	1.0	00Sa21
	-21500	500			-0.8	U			TO3	1.5	90Tu01
	-21450	270			-1.7	U			TO4	1.5	91Zh24
	-22150	370			0.1	2			GA5	1.0	00Sa21
	-22115	161			0.0	2			GT1	1.5	04Ma.A
$^{44}\text{Sc-u}$	-40480	410	-40597.1	1.9	-0.2	U			TO6	1.5	98Ba.A *
$^{44}\text{V-u}$	-25890	130				2		GT1	1.5	04St05 *	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{44}\text{Ar}-^{39}\text{K}_{1.128}$	5862.9	1.7				2			MA8	1.0	03B117
$^{44}\text{K}-^{39}\text{K}_{1.128}$	2526.07	0.45				2			MA8	1.0	07Ya08
	2529.2	2.2	2526.1	0.5	-1.4	o			TT1	1.0	10La.A
	2529.1	1.7			-1.8	U			TT1	1.0	12La05
$^{40}\text{Ca}(\alpha,\gamma)^{44}\text{Ti}$	5127.1	0.7				2					82Di05
$^{44}\text{Ca}(\text{p},\alpha)^{41}\text{K}$	-1058	10	-1045.1	0.3	1.3	U			MIT		64Sp12
$^{41}\text{K}(\alpha,\text{n})^{44}\text{Sc}$	-3420	60	-3390.0	1.8	0.5	U			Yal		61Sm05
$^{44}\text{Ca}(\text{d},\alpha)^{42}\text{K}$	4273	20	4264.2	0.3	-0.4	U					77Pa24
$^{42}\text{Ca}(\text{t},\text{p})^{44}\text{Ca}$	10593	15	10582.25	0.29	-0.7	U			Ald		67Bj06
$^{42}\text{Ca}(\text{}^3\text{He},\text{p})^{44}\text{Sc}$	6920	20	6911.0	1.7	-0.5	U			Hei		70Sc22
$^{43}\text{Ca}(\text{n},\gamma)^{44}\text{Ca}$	11130.6	0.5	11131.16	0.23	1.1	-					69Ar.A Z
	11130.1	0.7			1.5	-					72Wh02 Z
	11131.54	0.29			-1.3	-			Bdn		06Fi.A
$^{43}\text{Ca}(\text{d},\text{p})^{44}\text{Ca}$	8922	14	8906.59	0.23	-1.1	U			MIT		64Sp12
	8920	10			-1.3	U			Kop		67Bj02
$^{44}\text{Ca}(\text{}^3\text{He},\alpha)^{43}\text{Ca}$	9452	15	9446.46	0.23	-0.4	U			MIT		71Ra35
$^{43}\text{Ca}(\text{n},\gamma)^{44}\text{Ca}$	ave. 11131.17	0.24	11131.16	0.23	0.0	1	99	98 ^{44}Ca			average
$^{44}\text{Ca}(\text{p},\text{d})^{43}\text{Ca}^i$	-16880	30	-16901	14	-0.7	-					72Ma23 *
$^{44}\text{Ca}(\text{d},\text{t})^{43}\text{Ca}^i$	-12858.7	19.7	-12869	14	-0.5	-					76Do05 *
$^{44}\text{Ca}(\text{p},\text{d})^{43}\text{Ca}^i$	ave. -16888	16	-16901	14	-0.8	1	77	77 $^{43}\text{Ca}^i$			average
$^{43}\text{Ca}(\text{p},\gamma)^{44}\text{Sc}$	6694	2	6696.1	1.7	1.1	2					71Po.A
$^{43}\text{Ca}(\text{}^3\text{He},\text{d})^{44}\text{Sc}^i$	-1583	5	-1575.1	2.5	1.6	1	24	24 $^{44}\text{Sc}^i$			68Sc15
$^{44}\text{V}^i(\text{p})^{43}\text{Ti}$	950	50	908	11	-0.8	U			Lis		92Bo37
	908	11				3			Bor		07Do17
$^{44}\text{K}(\beta^-)^{44}\text{Ca}$	5580	80	5687.2	0.5	1.3	U					70Le05
$^{44}\text{Ca}(\text{t},\text{}^3\text{He})^{44}\text{K}$	-5660	40	-5668.6	0.5	-0.2	U			LAI		70Aj01
$^{44}\text{Sc}(\beta^+)^{44}\text{Ca}$	3642	5	3652.7	1.8	2.1	R					50Br52 *
	3650	5			0.5	R					55Bl23 *
$^{44}\text{Ca}(\text{p},\text{n})^{44}\text{Sc}$	-4410	15	-4435.0	1.8	-1.7	U			Har		60Mc12 Y
	-4447	10			1.2	U					67Mc07
$^{44}\text{Ca}(\text{}^3\text{He},\text{t})^{44}\text{Sc}^i$	-6444	4	-6449.0	2.5	-1.3	-					71Be29 *
	-6449	4			0.0	-					72Ma50 *
	ave. -6446.5	2.8			-0.9	1	76	76 $^{44}\text{Sc}^i$			average
* $^{44}\text{P}-\text{u}$	Trends from Mass Surface TMS suggest ^{44}P 1060 less bound										
* $^{44}\text{S}-\text{C}_2\text{H}_4\text{O}$	For original doublet $^{44}\text{S C H}-\text{C}_3\text{H}_5\text{O}$										
* $^{44}\text{Sc}-\text{u}$	$M-A=-37570(370)$ keV for mixture $\text{gs}+\text{m}$ at 270.95 keV										
* $^{44}\text{V}-\text{u}$	$M-A=-23980(80)$ keV for mixture $\text{gs}+\text{m}$ at 270#100 keV										
* $^{44}\text{V}-\text{u}$	Authors have unduely increased the lower error to 380 keV										
* $^{44}\text{Ca}(\text{p},\text{d})^{43}\text{Ca}^i$	IT=7970(30); Q rebuilt with Ame1965										
* $^{44}\text{Ca}(\text{d},\text{t})^{43}\text{Ca}^i$	IT=7980(20); Q rebuilt with Ame1971										
* $^{43}\text{Ca}(\text{}^3\text{He},\text{d})^{44}\text{Sc}^i$	IT=2796(5); Q rebuilt with Ame1965										
* $^{44}\text{Sc}(\beta^+)^{44}\text{Ca}$	$E_{\beta^+}=1463(5)$ 1471(5) respectively, to 2^+ level at 1157.019 keV										
* $^{44}\text{Ca}(\text{}^3\text{He},\text{t})^{44}\text{Sc}^i$	CDE=7214(4) Q=-6450(4); recalibration +6 keV for $^{42}\text{Ca}(\text{p},\text{n})^{42}\text{Sc}$ from Ame1961										
* $^{44}\text{Ca}(\text{}^3\text{He},\text{t})^{44}\text{Sc}^i$	IT=2781(5); Q rebuilt with Ame1971										
$^{45}\text{S}-\text{u}$	-3610	2460	-4280	740	-0.3	o			GA4	1.0	00Sa21
	-3330	2880			-0.3	o			GA5	1.0	00Sa21
	-4283	741				2			GA7	1.0	07Ju03
$^{45}\text{Cl}-\text{u}$	-19690	140	-19710	110	-0.1	o			GA4	1.0	00Sa21
	-20300	700			0.6	U			TO3	1.5	90Tu01
	-19850	460			0.3	o			GA5	1.0	00Sa21
	-19710	107				2			GA7	1.0	07Ju03
$^{45}\text{V}-\text{u}$	-34225.7	9.7	-34225	9	0.1	1	78	78 ^{45}V	LZ1	1.0	11Tu09
$^{45}\text{Cr}-\text{u}$	-20390	540	-20950	40	-0.7	U			GT1	1.5	04St05 *
	-20950	38				2			LZ1	1.0	12Zh34 *
$^{45}\text{Ar}-^{39}\text{K}_{1.154}$	9922.45	0.55				2			MA8	1.0	03B117
$^{45}\text{K}-^{39}\text{K}_{1.154}$	2574.21	0.56				2			MA8	1.0	07Ya08
$^{45}\text{Sc}(\text{p},\alpha)^{42}\text{Ca}$	2343	8	2340.1	0.7	-0.4	U			MIT		64Sp12

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{45}\text{Sc}(d,\alpha)^{43}\text{Ca}$	8028	12	8048.4	0.7	1.7	U			MIT		64Sp12
	8059	12			-0.9	U			Kop		67Ha.A
$^{43}\text{Ca}(^3\text{He},p)^{45}\text{Sc}$	10310	20	10304.6	0.7	-0.3	U			Hei		70Sc22
$^{45}\text{Fe}(2p)^{43}\text{Cr}$	1140	40	1154	16	0.3	o					02Gi09
	1100	100			0.5	U					02Pf02
	1154	16				3					05Do20
$^{44}\text{Ca}(n,\gamma)^{45}\text{Ca}$	7414.8	1.0	7414.81	0.17	0.0	U					69Ar.A Z
	7414.83	0.3			-0.1	-			MMn		80Is02 Z
	7414.79	0.21			0.1	-			Bdn		06Fi.A
$^{44}\text{Ca}(d,p)^{45}\text{Ca}$	5184	4	5190.24	0.17	1.6	U			MIT		68Be36
$^{44}\text{Ca}(n,\gamma)^{45}\text{Ca}$	ave.	7414.80	0.17	7414.81	0.17	0.0	1	99	^{97}Ca		average
$^{44}\text{Ca}(p,\gamma)^{45}\text{Sc}$	6887.8	1.2	6891.5	0.8	3.1	B					74Sc02 Z
$^{45}\text{Sc}(^3\text{He},\alpha)^{44}\text{Sc}$	9249	15	9251.1	1.9	0.1	U			MIT		71Ra09
$^{45}\text{Sc}(d,t)^{44}\text{Sc}^i$	-7846	10	-7847.0	2.6	-0.1	U					71Oh01 *
$^{45}\text{V}(p)^{44}\text{Ti}$	3190	50	3170	9	-0.4	U					74Ja10 *
	3170	9				3			Bor		07Do17 *
$^{45}\text{K}(\beta^-)^{45}\text{Ca}$	4180	200	4196.5	0.6	0.1	U					64Mo18
$^{45}\text{Ca}(\beta^-)^{45}\text{Sc}$	258	2	259.0	0.8	0.5	1	15	13	^{45}Sc		65Fr12
$^{45}\text{Ti}(\beta^+)^{45}\text{Sc}$	2066	5	2062.1	0.5	-0.8	U					66Po04
$^{45}\text{Sc}(p,n)^{45}\text{Ti}$	-2844.2	4.	-2844.4	0.5	-0.1	U			Ric		55Br16 Y
	-2843.6	4.0			-0.2	U			Can		70Kn03
	-2844.4	0.5				2			PTB		85Sc16 Z
$^{45}\text{Sc}(^3\text{He},t)^{45}\text{Ti}^i$	-6801	4	-6800	3	0.3	1	61	60	$^{45}\text{Ti}^i$		71Be29 *
* ^{45}Cr -u	M-A=-18940(500) keV for mixture gs+m at 107(1) keV										Nub126 **
* ^{45}Cr -u	Original error 19 increased for possible isomeric contamination (<10%)										12Zh34 **
* $^{45}\text{Sc}(d,t)^{44}\text{Sc}^i$	IT=2784(10) combined with Q=-5062; Q rebuilt										MMC123**
* $^{45}\text{V}(p)^{44}\text{Ti}$	Q _p =2060(50) 2087(9) respectively, to 2 ⁺ level at 1083.06 keV										Ens119 **
* $^{45}\text{Sc}(^3\text{He},t)^{45}\text{Ti}^i$	CDE=7571(4) Q=-6807(4); recalibration +6 keV for $^{42}\text{Ca}(p,n)^{42}\text{Sc}$ from Ame1961										MMC123**
^{46}Cl -u	-16000	860	-14830	170	1.4	o			GA4	1.0	00Sa21
	-14940	1730			0.1	o			GA5	1.0	00Sa21
	-14826	172				2			GA7	1.0	07Ju03
^{46}Ar -u	-32013	107	-31920	40	0.6	U			GT1	1.5	04Ma.A
^{46}Sc -u	-44650	230	-44831.7	0.8	-0.5	U			TO6	1.5	98Ba.A *
$\text{C}_2\text{H}_8\text{N}-^{46}\text{Ti}$	113071	7	113046.5	0.4	-0.9	U			R09	4.0	72De11
$\text{C}^{13}\text{C H}_5\text{O}-^{46}\text{Ti}$	84799	13	84766.9	0.4	-0.6	U			R09	4.0	72De11
$\text{C H}_4\text{N O}-^{46}\text{Ti}$	76672	8	76661.0	0.4	-0.3	U			R09	4.0	72De11
$\text{C}_5\text{H}_2-^{46}\text{Ti O}$	68145	15	68107.7	0.4	-0.6	U			R09	4.0	72De11
$\text{C H}_2\text{O}_2-^{46}\text{Ti}$	52881	14	52851.6	0.4	-0.5	U			R09	4.0	72De11
$^{13}\text{C H O}_2-^{46}\text{Ti}$	48423	9	48381.4	0.4	-1.2	U			R09	4.0	72De11
$^{46}\text{Ti}-^{22}\text{Ne}_{2,091}$	-29358.77	0.48	-29358.6	0.3	0.4	1	53	53	^{46}Ti	1.0	05Sa44
$^{46}\text{V}-^{22}\text{Ne}_{2,091}$	-21787.12	0.58	-21787.5	0.4	-0.7	1	37	37	^{46}V	1.0	05Sa44
$^{46}\text{K}-^{39}\text{K}_{1,179}$	4771.64	0.78				2			MA8	1.0	07Ya08
$^{46}\text{V}-^{46}\text{Ti}$	7571.67	0.41	7571.06	0.10	-1.5	U			CP1	1.0	05Sa44
	7571.41	0.33			-1.1	o			JY1	1.0	06Er08
	7571.10	0.11			-0.4	1	86	59	^{46}V	1.0	11Er02
$^{32}\text{S}(^{16}\text{O},2n)^{46}\text{Cr}$	-17421.6	20.				2					72Zi02
$^{46}\text{Ti}(p,\alpha)^{43}\text{Sc}$	-3065	14	-3074.8	1.9	-0.7	U			MIT		64Sp12 *
	-3083	10			0.8	U			Tal		65Pl01
$^{46}\text{Ti}(^3\text{He},^6\text{He})^{43}\text{Ti}$	-17470	12	-17467	7	0.3	R			MSU		77Mu03 *
$^{44}\text{Ca}(t,p)^{46}\text{Ca}$	9339	20	9330.6	2.3	-0.4	U			Kop		67Bj06
$^{44}\text{Ca}(^3\text{He},p)^{46}\text{Sc}$	7940	20	7934.1	0.8	-0.3	U			Hei		70Sc22
$^{46}\text{Ti}(d,\alpha)^{44}\text{Sc}$	4400	12	4399.8	1.8	0.0	U			Kop		67Ha.A
$^{46}\text{Ti}(p,t)^{44}\text{Ti}$	-14235	10	-14239.3	0.8	-0.4	U			Oak		72Ra05
$^{46}\text{Ca}(t,\alpha)^{45}\text{K}$	5998	10	6002.1	2.3	0.4	U			Ald		68Sa09
$^{46}\text{Ca}(d,t)^{45}\text{Ca}$	-4144	10	-4140.3	2.3	0.4	U			Ald		67Bj05
$^{46}\text{Ca}(^3\text{He},\alpha)^{45}\text{Ca}$	10194	10	10180.1	2.3	-1.4	U			MIT		71Ra35
$^{45}\text{Sc}(n,\gamma)^{46}\text{Sc}$	8760.61	0.3	8760.64	0.10	0.1	2			BNn		80Li07 Z
	8760.58	0.14			0.4	2			Utr		82Ti02 Z
	8760.75	0.18			-0.6	2			Bdn		06Fi.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{46}\text{Ti}(d,p)^{47}\text{Ti}-^{48}\text{Ti}(^4\text{He})^{49}\text{Ti}$	738.15	0.25	738.33	0.15	0.7	1	34	$^{33}\text{ }^{47}\text{Ti}$	Mun	09Fa15	
$^{46}\text{Ti}(p,\gamma)^{47}\text{V}$	5167.80	0.07	5167.78	0.07	-0.3	1	94	$^{86}\text{ }^{47}\text{V}$	Utr	86De13 *	
$^{46}\text{Ti}(^3\text{He},d)^{47}\text{V}$	-317	15	-325.70	0.07	-0.6	U			MIT	67Do03	
$^{47}\text{Mn}^i(p)^{46}\text{Cr}$	6867	20	6992	13	6.2	B			Bor	01Gi01 *	
	6992	13				3			Bor	07Do17 *	
$^{47}\text{K}(\beta^-)^{47}\text{Ca}$	6700	300	6631.5	2.6	-0.2	U				64Ku02 *	
$^{47}\text{Ca}(\beta^-)^{47}\text{Sc}$	1984.6	5.	1992.2	1.2	1.5	U				67Hs03 *	
	1992.3	5.			0.0	U				68Fi04 *	
	1991.9	1.2			0.2	1	97	$^{91}\text{ }^{47}\text{Ca}$		87Ju04	
$^{47}\text{Sc}(\beta^-)^{47}\text{Ti}$	600	2	600.8	1.9	0.4	1	93	$^{93}\text{ }^{47}\text{Sc}$		56Gr12	
$^{47}\text{V}(\beta^+)^{47}\text{Ti}$	2912	10	2930.60	0.15	1.9	U				54Da31	
$^{47}\text{Ti}(p,n)^{47}\text{V}$	-3706	13	-3712.95	0.15	-0.5	U			Har	60Mc12 Y	
* $^{47}\text{Cl-u}$	Trends from Mass Surface TMS suggest ^{47}Cl 1180 more bound									Gau	**
* $^{47}\text{Sc-u}$	M-A=-44320(210) keV for mixture gs+m at 766.83 keV and									Ens95	**
*	assuming ratio R=0.07(3), from half-life=272 ns and TOF=1 μs									Gau	**
* $^{46}\text{Ti}(d,p)^{47}\text{Ti}$	All 67Ba32 results decreased 0.2% for recalibration									AHW	**
* $^{46}\text{Ti}(p,\gamma)^{47}\text{V}$	$E_p=985.94(0.05,Z)$ to $1/2^+$ level at 6132.60(0.09) keV									Ens075	**
* $^{47}\text{Mn}^i(p)^{46}\text{Cr}$	$Q_p=5975(25)$ 4880(20) to 2^+ level at 892.16 and (4^+) at 1987.1 keV									Ens102	**
* $^{47}\text{Mn}^i(p)^{46}\text{Cr}$	$Q_p=6104(24)$ 5000(15) to 2^+ level at 892.16 and (4^+) at 1987.1 keV									Ens102	**
*	also tentatively $Q_p=3973(20)$ to (3^-) at 3196.5 keV, not used									MMC128**	
* $^{47}\text{K}(\beta^-)^{47}\text{Ca}$	$E_{\beta^-}=4100(300)$ to 2578.33 $3/2^+$ and 2599.53 $1/2^+$ levels									Ens075	**
* $^{47}\text{Ca}(\beta^-)^{47}\text{Sc}$	Original values increased by 4(4) for shape factor									87Ju04	**
$^{48}\text{K}-^{39}\text{K}_{1,231}$	10017.7	2.5	10018.5	0.8	0.3	o			TT1	1.0	10La.A
	10018.50	0.83				2			TT1	1.0	12La05
$^{48}\text{Ca}-^{39}\text{K}_{1,231}$	-2799.93	0.22	-2799.92	0.13	0.0	1	34	$^{34}\text{ }^{48}\text{Ca}$	MS1	1.0	12Re17
$^{13}\text{C }^{35}\text{Cl}-^{48}\text{Ti}$	24261.73	0.75	24265.5	0.4	2.0	U			H32	2.5	79Ko10
$\text{C}_5\text{H}_4-^{48}\text{Ti O}$	88492	24	88443.5	0.4	-0.5	U			R09	4.0	72De11
	88494	27			-0.5	U			R09	4.0	72De11
$\text{C}_4\text{H}_2\text{N}-^{48}\text{Ti O}$	75935	17	75867.5	0.4	-1.0	U			R09	4.0	72De11
$\text{C}_4-^{48}\text{Ti}$	52109	19	52058.0	0.4	-0.7	U			R09	4.0	72De11
$^{48}\text{Ti O}-^{85}\text{Rb}_{753}$	9277.7	1.2	9278.9	0.4	1.0	U			MA8	1.0	12Na15
$^{48}\text{Mn-u}$	-31480	120				2			GT1	1.5	04St05
$^{48}\text{Ca}-^{40}\text{Ca}_{1,200}$	-2586.23	0.23	-2586.27	0.13	-0.2	1	32	$^{31}\text{ }^{48}\text{Ca}$	MS1	1.0	12Re17
$^{48}\text{Ca}-^{41}\text{K}_{1,171}$	-2774.65	0.22	-2774.61	0.13	0.2	1	34	$^{34}\text{ }^{48}\text{Ca}$	MS1	1.0	12Re17
$^{48}\text{Ti O}-^{55}\text{Mn}_{1,164}$	14972.6	1.2	14973.5	0.6	0.7	1	26	$^{18}\text{ }^{55}\text{Mn}$	MA8	1.0	12Na15
$^{46}\text{Ti }^{37}\text{Cl}-^{48}\text{Ti }^{35}\text{Cl}$	1726.8	1.1	1735.66	0.18	2.0	U			H18	4.0	64Ba03
	1730.29	0.87			2.5	U			H32	2.5	79Ko10
$^{48}\text{Ti}-^{47}\text{Ti}$	-3791	48	-3816.81	0.04	-0.1	U			R09	4.0	72De11
$^{48}\text{Ca}(^3\text{He}, ^{11}\text{C})^{40}\text{S}$	-17416	35	-17106	4	8.9	F			Pri		79Ko.B *
$^{48}\text{Ca}(^3\text{He}, ^8\text{B})^{43}\text{Cl}$	-29070	60	-27890	100	19.6	F			MSU		76Ka24 *
$^{48}\text{Ca}(\alpha, ^9\text{Be})^{43}\text{Ar}$	-21160	70	-21138	5	0.3	U			Brk		74Je01
$^{48}\text{Ca}(^3\text{He}, ^7\text{Be})^{44}\text{Ar}$	-12362	20	-12389.3	1.6	-1.4	U			MSU		76Cr03 *
$^{48}\text{Ca}(\alpha, ^7\text{Be})^{45}\text{Ar}$	-27840	60	-27798.0	0.5	0.7	U			Brk		74Je01
$^{48}\text{Ti}(p,\alpha)^{45}\text{Sc}$	-2560	5	-2556.5	0.7	0.7	U			ANL		64Yn03
	-2545	15			-0.8	U			Tal		65Pi01
$^{48}\text{Ca}(^6\text{Li}, ^8\text{B})^{46}\text{Ar}$	-23325	70	-23330	40	-0.1	2			Brk		74Je01
$^{48}\text{Ca}(^{14}\text{C}, ^{16}\text{O})^{46}\text{Ar}$	-6739	50	-6740	40	0.0	2			Mun		80Ma40
$^{48}\text{Ca}(d,\alpha)^{46}\text{K}$	1915	15	1900.0	0.7	-1.0	U			ANL		65Ma07
$^{46}\text{Ca}(t,p)^{48}\text{Ca}$	8752	20	8747.2	2.3	-0.2	U			Ald		67Bj06
$^{48}\text{Ti}(d,\alpha)^{46}\text{Sc}$	3967	12	3979.6	0.7	1.0	U			Kop		67Ha.A
$^{48}\text{Ti}(p, ^3\text{He})^{46}\text{Sc}^i$	-19394	6	-19387	4	1.2	1	37	$^{37}\text{ }^{46}\text{Sc}^i$			78Ko27
$^{48}\text{Ti}(p,t)^{46}\text{Ti}^i$	-21192	7				2					78Ko27
$^{48}\text{Ti}(p,t)^{46}\text{Ti}^j$	-26177	6				2					78Ko27
$^{46}\text{Ti}(^3\text{He},n)^{48}\text{Cr}$	5550	18	5555	7	0.3	R			CIT		67Mi02
$^{48}\text{Ni}(2p)^{46}\text{Fe}$	1400	100	1310	50	-0.9	3					05Gi15 *
	1280	120			0.3	o					11Po09
	1280	60			0.5	3					12Po03 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{48}\text{Ca}(^{14}\text{C}, ^{15}\text{O})^{47}\text{Ar}$	-18142	100	-18850	90	-7.1	B			MSU		85Be50
$^{48}\text{Ca}(d, ^3\text{He})^{47}\text{K}$	-10304	12	-10308.3	1.4	-0.4	U			ANL		66Ne01
$^{48}\text{Ca}(t, \alpha)^{47}\text{K}$	4006	15	4012.1	1.4	0.4	U			LAl		66Wi11
	4001	10			1.1	U			Ald		68Sa09
$^{48}\text{Ca}(d, t)^{47}\text{Ca}$	-3699	10	-3695.4	2.3	0.4	U			ANL		66Er02
$^{48}\text{Ca}(^3\text{He}, \alpha)^{47}\text{Ca}$	10630	12	10625.0	2.3	-0.4	U			ANL		66Er02
	10642	10			-1.7	U			MIT		71Ra35
$^{47}\text{Ti}(n, \gamma)^{48}\text{Ti}$	11626.39	0.3	11626.65	0.04	0.9	U			MMn		80Is02 Z
	11626.65	0.04			0.0	1	100	89 ^{48}Ti	Ptn		84Ru06 Z
	11626.66	0.23			0.0	U			Bdn		06Fi.A
$^{47}\text{Ti}(d, p)^{48}\text{Ti}$	9401	8	9402.09	0.04	0.1	U			Kop		67Ba32
	9403	6			-0.2	U			MIT		67Ba32
$^{47}\text{Ti}(^3\text{He}, d)^{48}\text{V}$	1337	15	1335.9	1.0	-0.1	U			MIT		68Do06
$^{47}\text{Ti}(^3\text{He}, d)^{48}\text{V}^i$	-1706	20	-1682.99	0.22	1.2	U					68Do06
$^{48}\text{Mn}^i(p)^{47}\text{Cr}$	979.6	32.	1013	12	1.0	o			Bor		95BI05
	979.6	33.			1.0	o			Bor		96Fa09 *
	1013	12			2				Bor		07Do17 *
$^{48}\text{K}(\beta^-)^{48}\text{Ca}$	12000	500	11940.3	0.8	-0.1	U					75Mu08
$^{48}\text{Ca}(^7\text{Li}, ^7\text{Be})^{48}\text{K}$	-12959	27	-12802.2	0.8	5.8	B			Can		78We14
$^{48}\text{Ca}(^{14}\text{C}, ^{14}\text{N})^{48}\text{K}$	-11910	50	-11783.8	0.8	2.5	U			Mun		80Ma40
$^{48}\text{Ca}(p, n)^{48}\text{Sc}$	-534	15	-504	5	2.0	U					67Mc07 Z
	-506	7			0.3	1	50	50 ^{48}Sc			68Mc10
$^{48}\text{Sc}(\beta^-)^{48}\text{Ti}$	3986	7	3988	5	0.3	1	50	50 ^{48}Sc			57Va08 *
$^{48}\text{V}(\beta^+)^{48}\text{Ti}$	4008	5	4015.0	1.0	1.4	U					53Ma64 *
	4013.6	3.			0.5	1	10	10 ^{48}V			67Ko01 *
	4014	7			0.1	U					74Me15 *
$^{48}\text{Ti}(p, n)^{48}\text{V}$	-4803	10	-4797.3	1.0	0.6	U			Tal		62Ne08 Y
$^{48}\text{Ti}(^3\text{He}, t)^{48}\text{V}^i$	-7048	4	-7052.41	0.22	-1.1	U					71Be29 *
$^{48}\text{V}^i(\text{IT})^{48}\text{V}$	3018.7	1.0	3018.9	0.9	0.2	1	90	90 ^{48}V			Ens067
* $^{48}\text{Ca}(^3\text{He}, ^{11}\text{C})^{40}\text{S}$	F : possible ^{40}Ca contamination; mismatch in cross-sections										
* $^{48}\text{Ca}(^3\text{He}, ^8\text{B})^{43}\text{Cl}$	F : poor spectrum. Authors say: possibly not to ground state										
* $^{48}\text{Ca}(^3\text{He}, ^7\text{Be})^{44}\text{Ar}$	M-A=-32270(20) Q=-12791(20) for ^7Be 429 keV level										
* $^{48}\text{Ni}(2p)^{46}\text{Fe}$	From only 1 event, Si detector										
* $^{48}\text{Ni}(2p)^{46}\text{Fe}$	From 4 events, gaseous detector										
* $^{48}\text{Mn}^i(p)^{47}\text{Cr}$	Unexpectedly low intensity 3.6(1.1)%										
* $^{48}\text{Mn}^i(p)^{47}\text{Cr}$	Measured intensity 1.8(0.3)%										
* $^{48}\text{Sc}(\beta^-)^{48}\text{Ti}$	$E_{\beta^-}=654(7)$ to 6^+ level at 3333.196 keV										
* $^{48}\text{V}(\beta^+)^{48}\text{Ti}$	$E_{\beta^+}=692(5)$ 698(3) 698(7) respectively, to 4^+ level at 2295.654 keV										
* $^{48}\text{Ti}(^3\text{He}, t)^{48}\text{V}^i$	CDE=7818(4) Q=-7054(4); recalibration +6 keV for $^{42}\text{Ca}(p, n)^{42}\text{Sc}$ from Ame1961										
$^{49}\text{K-u}$	-31981	225	-31789.2	0.9	0.6	U			GT1	1.5	04Ma.A
$^{49}\text{K}-^{39}\text{K}_{1.256}$	13794.9	2.8	13795.4	0.9	0.2	o			TT1	1.0	10La.A
	13795.41	0.86			2				TT1	1.0	12La05
$^{49}\text{Ca}-^{39}\text{K}_{1.256}$	1247.1	2.9	1247.39	0.23	0.1	o			TT1	1.0	10La.A
	1247.1	1.2			0.2	U			TT1	1.0	12La05
$\text{C H}_2 ^{35}\text{Cl}-^{49}\text{Ti}$	36637	13	36637.1	0.4	0.0	U			R09	4.0	72De11
$\text{C}_4 \text{H}-^{49}\text{Ti}$	59967	10	59959.4	0.4	-0.2	U			R09	4.0	72De11
$\text{C}_5 \text{H}_5-^{49}\text{Ti O}$	96348	19	96344.9	0.4	0.0	U			R09	4.0	72De11
$\text{C H}_5 ^{32}\text{S}-^{49}\text{Ti}$	63365	14	63330.7	0.4	-0.6	U			R09	4.0	72De11
$^{49}\text{Mn-u}$	-40410	12	-40405	11	0.4	1	82	82 ^{49}Mn	LZ1	1.0	11Tu09
$^{49}\text{Fe-u}$	-26571	26			2				LZ1	1.0	12Zh34
$^{47}\text{Ti } ^{37}\text{Cl}-^{49}\text{Ti } ^{35}\text{Cl}$	946.4	1.1	943.03	0.09	-0.8	U			H18	4.0	64Ba03
	944.46	0.35			-1.6	U			H32	2.5	79Ko10
$^{48}\text{Ti } ^{13}\text{C}-^{49}\text{Ti C}$	3432.64	0.80	3431.14	0.03	-0.8	U			H32	2.5	79Ko10
$^{48}\text{Ti H}-^{49}\text{Ti}$	7876	7	7901.33	0.03	0.9	U			R09	4.0	72De11
	7874	27			0.3	U			R09	4.0	72De11
$^{49}\text{Ti}-^{48}\text{Ti}$	-43	36	-76.30	0.03	-0.2	U			R09	4.0	72De11
$^{49}\text{Ti}(d, \alpha)^{47}\text{Sc}$	6476	12	6483.6	1.9	0.6	U			Kop		67Ha.A
$^{48}\text{Ca}(n, \gamma)^{49}\text{Ca}$	5146.6	0.7	5146.45	0.18	-0.2	2					69Ar.A Z
	5146.38	0.30			0.2	2					70Cr04 Z
	5146.48	0.23			-0.1	2			Bdn		06Fi.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{48}\text{Ca}(\text{d,p})^{49}\text{Ca}$	2917	7	2921.89	0.18	0.7	U			ANL		66Er02	
	2917	4			1.2	U			MIT		68Be36	
$^{48}\text{Ca}(\text{p},\gamma)^{49}\text{Sc}$	9628.7	3.6	9625.3	2.7	-0.9	-					68Vi01 Z	
$^{48}\text{Ca}(\text{d,n})^{49}\text{Sc}$	7404	7	7400.7	2.7	-0.5	-					68Gr09	
$^{48}\text{Ca}(\text{}^3\text{He,d})^{49}\text{Sc}$	4150	12	4131.8	2.7	-1.5	U			ANL		66Er02	
$^{48}\text{Ca}(\text{p},\gamma)^{49}\text{Sc}$	ave.	9629	3	9625.3	2.7	-1.1	1	71	71 ^{49}Sc		average	
$^{48}\text{Ti}(\text{n},\gamma)^{49}\text{Ti}$		8142.22	0.3	8142.392	0.030	0.6	U			MMn	80Is02 Z	
		8142.39	0.03			0.1	1	99	100 ^{49}Ti	Ptn	83Ru08 Z	
	8142.35	0.16			0.3	U			Bdn	06Fi.A		
$^{48}\text{Ti}(\text{d,p})^{49}\text{Ti}$	5907	8	5917.826	0.030	1.4	U			Kop	67Ba32		
	5918	6			0.0	U			MIT	67Ba32		
	5918.6	1.7			-0.5	U			NDm	76Jo01		
	6756.8	1.5	6758.2	0.8	0.9	R				72Ki06		
$^{48}\text{Ti}(\text{p},\gamma)^{49}\text{V}$	2712.2	50.	2729	16	0.3	U				70Ce02		
$^{49}\text{Mn}^{\text{i}}(\text{p})^{48}\text{Cr}$	2730	29			0.0	o			Bor	96Fa09		
	2729	16				3			Bor	07Do17		
											*	
$^{49}\text{K}(\beta^-)^{49}\text{Ca}$	10970	70	11688.4	0.8	10.3	B					86Mi08	
$^{49}\text{Ca}(\beta^-)^{49}\text{Sc}$	5200	100	5261.2	2.7	0.6	U					56Ma27	
	4970	50			5.8	B					56Ok02	
$^{49}\text{Sc}(\beta^-)^{49}\text{Ti}$	2010	5	2001.7	2.7	-1.7	1	29	29 ^{49}Sc			61Re06	
	1983	7			2.7	U					69Fl02	
$^{49}\text{V}(\epsilon)^{49}\text{Ti}$	626	10	601.9	0.8	-2.4	U					56Ha59	
$^{49}\text{Ti}(\text{p,n})^{49}\text{V}$	-1383	9	-1384.2	0.8	-0.1	U			Har		60Mc12 Z	
	-1383.6	1.0			-0.6	2			Oak		64Jo11 Z	
$^{49}\text{Ti}(\text{}^3\text{He,t})^{49}\text{V}^{\text{i}}$	-7052	4				2					71Be29 *	
$^{49}\text{Cr}(\beta^+)^{49}\text{V}$	2590	20	2628.3	2.5	1.9	U					53Cr18 *	
$^{49}\text{Mn}^{\text{i}}(\text{p})^{48}\text{Cr}$	Q _p =1960(50) 1978(29) 1977(16) respectively, to 2 ⁺ level at 752.19(0.11) keV										Ens067	**
$^{49}\text{Ti}(\text{}^3\text{He,t})^{49}\text{V}^{\text{i}}$	CDE=7822(4) Q=-7058(4); recalibration +6 keV for $^{42}\text{Ca}(\text{p,n})^{42}\text{Sc}$ from Ame1961										MMC123	**
$^{49}\text{Cr}(\beta^+)^{49}\text{V}$	E _{β^+} =1540(10) 1390(20) to (7/2 ⁻)ground state + (5/2 ⁻)90.6392 and 3/2 ⁻ at 152.9282										Ens089	**
$^{50}\text{K-u}$	-26100	800	-27620	8	-1.3	U			TO3	1.5	90Tu01	
$^{50}\text{K}-^{39}\text{K}_{1,282}$	18899	11	18908	8	0.8	o			TT1	1.0	10La.A	
	18908.3	8.3				2			TT1	1.0	12La05	
$^{50}\text{Ca}-^{39}\text{K}_{1,282}$	4027.0	4.0	4027.5	1.7	0.1	o			TT1	1.0	10La.A	
	4027.5	1.7				2			TT1	1.0	12La05	
$^{50}\text{Sc-u}$	-47940	250	-47824	16	0.3	U			TO6	1.5	98Ba.A *	
$\text{C H}_3 \text{}^{35}\text{Cl}-^{50}\text{Ti}$	47550	23	47540.9	0.4	-0.1	U			R09	4.0	72De11	
$\text{C}_4 \text{H}_2-^{50}\text{Ti}$	70860	8	70863.2	0.4	0.1	U			R09	4.0	72De11	
$\text{C}_5 \text{H}_6-^{50}\text{Ti O}$	107253	18	107248.7	0.4	-0.1	U			R09	4.0	72De11	
$\text{C}_3 \text{}^{13}\text{C H}-^{50}\text{Ti}$	66401	21	66393.0	0.4	-0.1	U			R09	4.0	72De11	
$\text{C}_3 \text{N}-^{50}\text{Ti}$	58279	43	58287.1	0.4	0.0	U			R09	4.0	72De11	
$\text{C}_4 \text{H}_2-^{50}\text{V}$	68485	14	68494.1	0.9	0.2	U			R09	4.0	72De11	
$\text{C}_3 \text{N}-^{50}\text{V}$	55903	23	55918.0	0.9	0.2	U			R09	4.0	72De11	
$\text{C H}_3 \text{}^{35}\text{Cl}-^{50}\text{V}$	45158	17	45171.8	0.9	0.2	U			R09	4.0	72De11	
$\text{C}_4 \text{H}_2-^{50}\text{Cr}$	69608	8	69608.2	0.9	0.0	U			R09	4.0	72De11	
$\text{C}_3 \text{N}-^{50}\text{Cr}$	57051	7	57032.2	0.9	-0.7	U			R09	4.0	72De11	
$\text{C H}_3 \text{}^{35}\text{Cl}-^{50}\text{Cr}$	46290	14	46285.9	0.9	-0.1	U			R09	4.0	72De11	
$^{49}\text{Ti} \text{}^{13}\text{C}-^{50}\text{Ti C}$	6440.47	0.88	6433.62	0.04	-3.1	B			H32	2.5	79Ko10	
$^{50}\text{Mn}-^{50}\text{Cr}$	8195.91	0.10	8195.95	0.07	0.4	1	52	52 ^{50}Mn	JY1	1.0	08Er04	
$^{50}\text{Mn}^{\text{m}}-^{50}\text{Cr}$	8437.852	0.065	8437.83	0.06	-0.3	1	81	81 $^{50}\text{Mn}^{\text{m}}$	JY1	1.0	08Er04	
$^{50}\text{Mn}^{\text{m}}-^{50}\text{Mn}$	241.840	0.100	241.88	0.07	0.4	1	55	37 ^{50}Mn	JY1	1.0	08Er04	
$^{50}\text{Ti}-^{49}\text{Ti}$	-3075	38	-3078.79	0.04	0.0	U			R09	4.0	72De11	
$^{50}\text{Cr}(\text{p},\text{}^6\text{He})^{45}\text{V}$	-28686	17	-28684	8	0.1	1	22	22 ^{45}V	MSU		75Mu09 *	
$^{50}\text{Ti}(\text{p},\alpha)^{47}\text{Sc}$	-2231	15	-2231.0	1.9	0.0	U			Tal		65PI01	
$^{50}\text{V}(\text{p},\alpha)^{47}\text{Ti}$	572	23	576.6	0.9	0.2	U			MIT		67Sp09	
$^{50}\text{Cr}(\text{p},\alpha)^{47}\text{V}$	-3387	10	-3391.9	0.9	-0.5	U			Ald		66Br06	
$^{50}\text{Cr}(\text{}^3\text{He},\text{}^6\text{He})^{47}\text{Cr}$	-18365	14	-18362	7	0.2	1	25	25 ^{47}Cr	MSU		77Mu03 *	
$^{48}\text{Ca}(\text{t,p})^{50}\text{Ca}$	3012	15	3025.3	1.6	0.9	U			Ald		66Hi01	
	3020	10			0.5	U			LAI		66Wi11	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{48}\text{Ca}(^3\text{He,p})^{50}\text{Sc}$	7965	15					ANL		69Oh01	
$^{50}\text{V}(\text{d},\alpha)^{48}\text{Ti}$	9982	15	9978.7	0.9	-0.2	U	MIT		66Do06	
	9988	20			-0.5	U	Kop		67Ha.A	
$^{50}\text{Cr}(\text{d},\alpha)^{48}\text{V}$	4928	12	4925.9	1.3	-0.2	U	Kop		67Ha.A	
	4923	15			0.2	U	MIT		68Do03	
$^{50}\text{Cr}(\text{d},\alpha)^{48}\text{V}^i$	1880	11	1907.0	0.9	2.5	U	MIT		68Do03 *	
$^{50}\text{Cr}(\text{p,t})^{48}\text{Cr}$	-15100	8	-15101	7	-0.1	2	Oak		71Do18	
	-15100	30			0.0	U	Bld		72Sh27	
$^{50}\text{Cr}(\text{p,t})^{48}\text{Cr}^j$	-23861	15				2	MSU		75Mo26 *	
$^{50}\text{Co}^i(2\text{p})^{48}\text{Mn}$	1972	13				3	Bor		07Do17	
$^{50}\text{Ti}(\text{t},\alpha)^{49}\text{Sc}$	7644	25	7655.3	2.7	0.5	U	LAI		66Wi11	
$^{49}\text{Ti}(\text{n},\gamma)^{50}\text{Ti}$	10939.6	0.3	10939.19	0.04	-1.4	U	MMn		80Is02 Z	
	10939.19	0.04			0.0	1	100	97 ^{50}Ti	Ptn	84Ru06 Z
	10939.20	0.22			-0.1	U			Bdn	06Fi.A
$^{49}\text{Ti}(\text{d,p})^{50}\text{Ti}$	8723	8	8714.62	0.04	-1.0	U	Kop		67Ba32	
	8721	6			-1.1	U	MIT		67Ba32	
$^{50}\text{Cr}(\text{p,d})^{49}\text{Cr}$	-10790	30	-10775.8	2.2	0.5	U	Pri		67Wh03	
$^{50}\text{Cr}(\text{d,t})^{49}\text{Cr}$	-6743.1	2.2				2	NDm		76Jo01	
$^{50}\text{Fe}^j(\text{p})^{49}\text{Mn}$	4389	41	4332	10	-1.4	o	Bor		96Fa09 *	
	4332	10				2	Bor		07Do17 *	
$^{50}\text{K}(\beta^-)^{50}\text{Ca}$	14050	300	13861	8	-0.6	U			86Mi08	
$^{50}\text{Sc}(\beta^-)^{50}\text{Ti}$	6500	200	6883	15	1.9	U			63Ch03	
	6260	100			6.2	B			69Wa24	
$^{50}\text{V}(\text{n,p})^{50}\text{Ti}$	2979	15	2989.2	0.9	0.7	U	ILL		81Wa31	
	2984	10			0.5	U	ILL		94Wa17	
$^{50}\text{Ti}(\text{p,n})^{50}\text{V}$	-2991	10	-2989.2	0.9	0.2	U	Har		60Mc12 Y	
$^{50}\text{Ti}(^3\text{He,t})^{50}\text{V}^i$	-7032	4	-7039.77	0.27	-1.9	U			71Be29 *	
$^{50}\text{Cr}(\text{p,n})^{50}\text{Mn}$	-8416.1	1.9	-8416.82	0.07	-0.4	U	Har		75Fr.A	
$^{50}\text{Cr}(^3\text{He,t})^{50}\text{Mn}$	-7650.5	0.4	-7653.07	0.07	-6.4	F	Mun		77Vo02 *	
$^{50}\text{Cr}(^3\text{He,t})^{50}\text{Mn}-^{27}\text{Al}(^27\text{Si})$	-2820.0	2.8	-2822.12	0.12	-0.8	U	ChR		74Ha35	
$^{50}\text{Cr}(^3\text{He,t})^{50}\text{Mn}-^{42}\text{Ca}(^42\text{Sc})$	-1207.6	2.3	-1208.38	0.12	-0.3	U	ChR		74Ha35	
$^{50}\text{Cr}(^3\text{He,t})^{50}\text{Mn}-^{54}\text{Fe}(^54\text{Co})$	610.09	0.17	610.07	0.10	-0.1	1	35	23 ^{54}Co	ChR	87Ko34 *
* $^{50}\text{Sc-u}$	M-A=-44530(220) keV for mixture gs+m at 256.895 keV								Nub127 **	
* $^{50}\text{Cr}(\text{p},^6\text{He})^{45}\text{V}$	Original Q increase by 1 for recalibration								AHW **	
* $^{50}\text{Cr}(^3\text{He},^6\text{He})^{47}\text{Cr}$	Original Q reduced by 3, see $^{46}\text{Ti}(^3\text{He},^6\text{He})$								AHW **	
* $^{50}\text{Cr}(\text{d},\alpha)^{48}\text{V}^i$	IT=3043(9); rebuilt from their $Q_{gs}=4923(15)$ keV								MMC124**	
* $^{50}\text{Cr}(\text{p,t})^{48}\text{Cr}^j$	Strongest of two fragments given as IT = 8760(15); Q rebuilt with Ame197								75Mo26 **	
* $^{50}\text{Fe}^j(\text{p})^{49}\text{Mn}$	$E_p=2790(41)$ to $11/2^{(-)}$ level at 1541.3125 keV								Ens089 **	
* $^{50}\text{Fe}^j(\text{p})^{49}\text{Mn}$	$Q_p=2770(12)$ 41.1%, 1874(16) 1.0% to $11/2^{(-)}$ level at 1541.3125, and								Ens089 **	
	13/2 ⁽⁻⁾ at 2481.3 keV								Ens089 **	
* $^{50}\text{Ti}(^3\text{He,t})^{50}\text{V}^i$	CDE=7802(4) Q=-7038(4); recalibration +6 keV for $^{42}\text{Ca}(\text{p,n})^{42}\text{Sc}$ from Ame1961								MMC123**	
* $^{50}\text{Cr}(^3\text{He,t})^{50}\text{Mn}$	F : rejected in reference of same group								09Fa15 **	
* $^{50}\text{Cr}(^3\text{He,t})^{50}\text{Mn}-^{54}\text{Fe}(^54\text{Co})$	Q-Q=40.90(0.16) to 650.99(0.06) level in ^{50}Mn								92Ha.B **	
$^{51}\text{Ca-u}$	-38800	350	-39011	24	-0.4	U			90Tu01	
	-38900	400			-0.2	U	TO3	1.5	94Se12	
	-39249	183			0.9	U	TO5	1.5	04Ma.A	
$\text{C}_4\text{H}_3-^{51}\text{V}$	79526	9	79518.1	0.9	-0.2	U	GT1	1.5	72De11	
$\text{C}_5\text{H}_7-^{51}\text{V O}$	115921	13	115903.6	0.9	-0.3	U	R09	4.0	72De11	
$\text{C}_4\text{H}_5\text{N}-^{51}\text{V O}$	103334	13	103327.5	0.9	-0.1	U	R09	4.0	72De11	
$\text{C}_3\text{H N}-^{51}\text{V}$	66943	7	66942.0	0.9	0.0	U	R09	4.0	72De11	
$^{51}\text{Fe-u}$	-43148	12	-43159	10	-0.9	1	64	64 ^{51}Fe	LZ1	11Tu09
$^{51}\text{Co-u}$	-29353	52				2			LZ1	12Ya.A
$^{51}\text{Ca}-^{58}\text{Ni}_{879}$	17823	24				2			TT1	12Ga29
$^{47}\text{Ti } ^{37}\text{Cl}_2-^{51}\text{V } ^{35}\text{Cl}_2$	1906.	1.8	1901.6	0.9	-0.6	U	H18	4.0	64Ba03	
$^{49}\text{Ti } ^{37}\text{Cl}-^{51}\text{V } ^{35}\text{Cl}$	956.7	0.7	958.6	0.9	0.7	1	11	10 ^{51}V	H18	64Ba03
$^{51}\text{K}-^{51}\text{V}$	31871	14				2			TT1	12Ga29
$^{48}\text{Ca}(^{14}\text{C}, ^{11}\text{C})^{51}\text{Ca}$	-15900	150	-15517	22	2.6	U	Mun		80Ma40 *	
	-16886	100			13.7	B	MSU		85Be50	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{48}\text{Ca}(^{18}\text{O}, ^{15}\text{O})^{51}\text{Ca}$	-12040	120	-11525	22	4.3	B			Hei		85Br03 *
	-13900	40			59.4	B			Can		88Ca21
$^{48}\text{Ca}(\alpha, p)^{51}\text{Sc}$	-5860	20				2			ANL		66Er02
$^{51}\text{V}(p, \alpha)^{48}\text{Ti}$	1162	10	1152.1	0.9	-1.0	U			MIT		64Sp12
$^{51}\text{V}(d, \alpha)^{49}\text{Ti}$	7066	12	7069.9	0.9	0.3	U			Kop		67Ha.A
$^{50}\text{Ti}(n, \gamma)^{51}\text{Ti}$	6372.3	1.2	6372.5	0.5	0.2	2					71Ar39 Z
	6372.6	0.6			-0.2	2			Bdn		06Fi.A
$^{50}\text{Ti}(d, p)^{51}\text{Ti}$	4143	6	4147.9	0.5	0.8	U			MIT		67Ba32
	4148	8			0.0	U			Kop		67Ba32
	4147.7	1.2			0.2	2			NDm		76Jo01
$^{50}\text{Ti}(p, \gamma)^{51}\text{V}$	8063.3	2.0	8062.0	0.9	-0.7	-					70K105 Z
	8063.6	2.0			-0.8	-					70Ma36 Z
$^{50}\text{Ti}(^3\text{He}, d)^{51}\text{V}$	2555	15	2568.5	0.9	0.9	U			MIT		67Ob04
$^{50}\text{Ti}(p, \gamma)^{51}\text{V}$	ave.	8063.5	1.4	8062.0	0.9	-1.0	1	38	35 ^{51}V		average
$^{50}\text{V}(n, \gamma)^{51}\text{V}$	11051.18	0.10	11051.15	0.08	-0.3	2			MMn		78Ro03 Z
	11051.05	0.17			0.6	2			ILn		91Mi08 Z
	11051.14	0.22			0.0	2			Bdn		06Fi.A
$^{51}\text{V}(\gamma, n)^{50}\text{V}$	-11040	60	-11051.15	0.08	-0.2	U			Phi		60Ge01
$^{50}\text{V}(d, p)^{51}\text{V}$	8840	15	8826.58	0.08	-0.9	U			MIT		67De02
	8828	20			-0.1	U			Kop		67Ha.A
$^{51}\text{V}(p, d)^{50}\text{V}$	-8815	20	-8826.58	0.08	-0.6	U			Oak		65Ba29
$^{50}\text{V}(^3\text{He}, d)^{51}\text{Cr}$	4031	12	4022.69	0.25	-0.7	U			MIT		69Do01
$^{50}\text{Cr}(n, \gamma)^{51}\text{Cr}$	9261.71	0.30	9260.66	0.20	-3.5	B			MMn		80Is02 Z
	9260.63	0.20			0.2	1	99	50 ^{50}Cr	Bdn		06Fi.A
$^{50}\text{Cr}(d, p)^{51}\text{Cr}$	7049	8	7036.10	0.20	-1.6	U			Kop		67Ha.A
	7041	6			-0.8	U			MIT		68Ro09
$^{50}\text{Cr}(p, \gamma)^{51}\text{Mn}$	5270.8	0.3	5270.76	0.30	-0.1	1	97	49 ^{51}Mn			72Fo25 Z
$^{50}\text{Cr}(^3\text{He}, d)^{51}\text{Mn}$	-206	15	-222.72	0.30	-1.1	U			MIT		67Sp09
$^{50}\text{Cr}(p, \gamma)^{51}\text{Mn}^i$	819	2	819.4	1.4	0.2	-					72Fo25
$^{50}\text{Cr}(^3\text{He}, d)^{51}\text{Mn}^i$	-4652	20	-4674.1	1.4	-1.1	U			MIT		67Ra14
	-4671.7	2.3			-1.0	-					79Pa14 *
$^{50}\text{Cr}(p, \gamma)^{51}\text{Mn}^i$	ave.	820.2	1.5	819.4	1.4	-0.5	1	92	90 $^{51}\text{Mn}^i$		average
$^{51}\text{Co}^i(p)^{50}\text{Fe}$	6153	16				3			Bor		07Do17 *
$^{51}\text{Ti}(\beta^-)^{51}\text{V}$	2440	30	2471.8	1.0	1.1	U					55Bu01
	2450	30			0.7	U					55Ma01
$^{51}\text{Cr}(e)^{51}\text{V}$	756	5	752.63	0.24	-0.7	U					55Bi29
$^{51}\text{V}(p, n)^{51}\text{Cr}$	-1533.5	2.0	-1534.98	0.24	-0.7	U			Nvl		59Go68 Z
	-1533.3	1.8			-0.9	U			Oak		64Jo11 Z
	-1533.7	1.5			-0.9	U			Can		70Kn03 Z
	-1534.93	0.24			-0.2	1	98	51 ^{51}Cr	PTB		89Sc24 Z
$^{51}\text{V}(^3\text{He}, t)^{51}\text{Cr}^i$	-7384	5				2					71Be29
$^{51}\text{Mn}(\beta^+)^{51}\text{Cr}$	3232	20	3207.6	0.4	-1.2	U					66Gl02
* $^{48}\text{Ca}(^{14}\text{C}, ^{11}\text{C})^{51}\text{Ca}$	May be a ^{40}Ca contamination. There is a -16900(150) peak										85Be50 **
* $^{48}\text{Ca}(^{18}\text{O}, ^{15}\text{O})^{51}\text{Ca}$	Proposed 970(90) level reinterpreted as ground state in reference										85Be50 **
* $^{48}\text{Ca}(^{18}\text{O}, ^{15}\text{O})^{51}\text{Ca}$	Weak M-A=-36120(120) level disregarded										AHW **
* $^{50}\text{Cr}(^3\text{He}, d)^{51}\text{Mn}^i$	IT=4449(3); Q rebuilt with Ame1977										MMC124**
* $^{51}\text{Co}^i(p)^{50}\text{Fe}$	$Q_p=4662(16)$ to (4^+) level at 1851.5 keV										Ens10c **
* $^{51}\text{V}(^3\text{He}, t)^{51}\text{Cr}^i$	CDE=8145(5) Q=-7881(5); recalibration -3 keV for $^{50}\text{Cr}(p, n)^{50}\text{Mn}$ from Ame1961										MMC123**
$^{52}\text{Ca-u}$	-34900	500	-36780	60	-2.5	U			TO3	1.5	90Tu01
$^{52}\text{Sc-u}$	-43500	230	-43120	150	1.1	-			TO3	1.5	90Tu01
	-43350	250			0.6	-			TO5	1.5	94Se12
	-43110	240			0.0	-			TO6	1.5	98Ba.A
	ave.	-43320	210		1.0	1	54	54 ^{52}Sc			average
$\text{C}_4 \text{H}_4 - ^{52}\text{Cr}$	90826	9	90793.9	0.6	-0.9	U			R09	4.0	72De11
$\text{C}_3 ^{13}\text{C} \text{H}_3 - ^{52}\text{Cr}$	86373	18	86323.7	0.6	-0.7	U			R09	4.0	72De11
$\text{C}_3 \text{H}_2 \text{N} - ^{52}\text{Cr}$	78253	6	78217.8	0.6	-1.5	U			R09	4.0	72De11
$^{52}\text{Ca} - ^{58}\text{Ni}_{.897}$	21220	110	21220	60	0.0	1	34	34 ^{52}Ca	TT1	1.0	12Ga29

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{52}\text{Ca}-^{52}\text{Cr}$	22740	82	22710	60	-0.4	1	61	61 ^{52}Ca	TT1	1.0	12Ga29
$^{52}\text{Cr}-^{50}\text{Cr}$	-5566	41	-5535.6	1.0	0.2	U			R09	4.0	72De11
$^{52}\text{Cr}(p,\alpha)^{49}\text{V}$	-2596	10	-2593.1	1.0	0.3	U			Ald		66Br06
$^{50}\text{Ti}(t,p)^{52}\text{Ti}$	5698	10	5699	7	0.1	2			LAl		66Wi11
	5700	10			-0.1	2			LAl		71Ca19
$^{50}\text{Ti}(^3\text{He},p)^{52}\text{V}$	7653	15	7655.2	0.9	0.1	U			Phi		75Ca07
$^{52}\text{Cr}(d,\alpha)^{50}\text{V}$	4517	12	4516.6	0.9	0.0	U			Kop		67Ha.A
$^{52}\text{Cr}(p,^3\text{He})^{50}\text{V}^i$	-18645	6	-18650.8	0.7	-1.0	U					78Ko27
$^{52}\text{Cr}(p,t)^{50}\text{Cr}^j$	-21244	7				2					78Ko27
$^{52}\text{Cr}(p,t)^{50}\text{Cr}^j$	-26041	6				2					78Ko27
$^{51}\text{V}(n,\gamma)^{52}\text{V}$	7311.2	0.5	7311.24	0.13	0.1	2					84De15
	7311.18	0.26			0.2	2			ILn		91Mi08 Z
	7311.27	0.15			-0.2	2			Bdn		06Fi.A
$^{51}\text{V}(d,p)^{52}\text{V}$	5098	9	5086.68	0.13	-1.3	U			MIT		64Sp12
	5086	8			0.1	U			Kop		67Ha.A
$^{51}\text{V}(p,\gamma)^{52}\text{Cr}$	10500.7	2.8	10503.4	0.9	1.0	1	11	8 ^{51}V			74Ro44 Z
$^{52}\text{Co}^i(p)^{51}\text{Fe}$	1367	60	1349	10	-0.3	o			Bor		94Fa06
	1349	10				2			Bor		07Do17
$^{52}\text{Ca}(\beta^-)^{52}\text{Sc}$	5700	200	5900	140	1.0	1	51	46 ^{52}Sc			85Hu03
$^{52}\text{Sc}(\beta^-)^{52}\text{Ti}$	8020	250	9300	140	5.1	B					85Hu03
$^{52}\text{Ti}(\beta^-)^{52}\text{V}$	1940	200	1975	7	0.2	U					67Mo11 *
$^{52}\text{V}(\beta^-)^{52}\text{Cr}$	3904	30	3974.5	0.9	2.3	U					65Ko09 *
	3854	30			4.0	B					67Va27 *
$^{52}\text{Mn}(\beta^+)^{52}\text{Cr}$	4710.9	4.	4711.2	1.9	0.1	R					58Ko57 *
	4707.9	6.			0.6	R					60Ka20 *
$^{52}\text{Cr}(p,n)^{52}\text{Mn}$	-5479	10	-5493.6	1.9	-1.5	U			Ric		66Ri09
$^{52}\text{Cr}(^3\text{He},t)^{52}\text{Mn}^i$	-7653	5				2					71Be29 *
$^{52}\text{Fe}(\beta^+)^{52}\text{Mn}$	2372	10	2375	6	0.3	3					56Ar33 *
	2229	130			1.1	U					79Ge02 *
	2510	100			-1.4	U					95Ir01
$^{52}\text{Ti}(\beta^-)^{52}\text{V}$	$E_{\beta^-}=1800(200)$ to 1^+ level at 141.6 keV										Ens075 **
$^{52}\text{V}(\beta^-)^{52}\text{Cr}$	$E_{\beta^-}=2470(30)$ 2420(30) respectively, to 2^+ level at 1434.094 keV										Ens075 **
$^{52}\text{Mn}(\beta^+)^{52}\text{Cr}$	$E_{\beta^+}=575(4)$ and $572(6)$ respectively, to 6^+ level at 3113.865 keV										Ens075 **
$^{52}\text{Cr}(^3\text{He},t)^{52}\text{Mn}^i$	CDE=8414(5) Q=-7650(5); recalibration -3 keV for $^{50}\text{Cr}(p,n)^{50}\text{Mn}$ from Ame1961										MMC123**
$^{52}\text{Fe}(\beta^+)^{52}\text{Mn}$	$E_{\beta^+}=804(10)$ to 1^+ level at 546.438 keV										Ens075 **
$^{52}\text{Fe}(\beta^+)^{52}\text{Mn}$	$E_{\beta^+}=5350(130)$ from $^{52}\text{Fe}^m$ 12^+ at 6958.0 to 11^+ level at 3837.2 keV										Ens075 **
$^{53}\text{Sc-u}$	-41440	260	-40910	290	1.4	o			TO3	1.5	90Tu01
	-41830	280			2.2	U			TO5	1.5	94Se12
	-41100	400			0.3	U			TO6	1.5	98Ba.A
	-41694	118			4.4	C			GT1	1.5	04Ma.A
	-40910	290				2			MT1	1.0	11Es06
$\text{C}_4 \text{H}_5-^{53}\text{Cr}$	98529	8	98477.0	0.6	-1.6	U			R09	4.0	72De11
$\text{C}_3 \text{H}_3 \text{N}-^{53}\text{Cr}$	85958	10	85901.0	0.6	-1.4	U			R09	4.0	72De11
$\text{C}_2 \text{ }^{13}\text{C} \text{H}_2 \text{N}-^{53}\text{Cr}$	81507	27	81430.8	0.6	-0.7	U			R09	4.0	72De11
$\text{C}_3 \text{H O}-^{53}\text{Cr}$	62152	14	62091.5	0.6	-1.1	U			R09	4.0	72De11
$^{53}\text{Co-u}$	-45783	18	-45795.9	1.9	-0.7	U			LZ1	1.0	11Tu09
$^{53}\text{Ni-u}$	-31810	27				2			LZ1	1.0	12Zh34
$^{53}\text{Co}-^{53}\text{Fe}$	8897.67	0.49	8897.6	0.5	0.0	1	94	94 ^{53}Co	JY1	1.0	10Ka26
$^{53}\text{Co}^m-^{53}\text{Fe}$	12305.2	1.3	12305.3	1.0	0.1	1	60	60 $^{53}\text{Co}^m$	JY1	1.0	10Ka26
$^{53}\text{Co}^m-^{53}\text{Co}$	3407.9	1.5	3407.7	1.0	-0.1	1	46	40 $^{53}\text{Co}^m$	JY1	1.0	10Ka26
$^{53}\text{Cr}-^{52}\text{Cr}$	115	46	141.92	0.15	0.1	U			R09	4.0	72De11
$^{51}\text{V}(t,p)^{53}\text{V}$	7325	25	7307	3	-0.7	U			Ald		67Hi02
$^{53}\text{Cr}(d,\alpha)^{51}\text{V}$	7635	12	7628.6	0.9	-0.5	U			Kop		67Ha.A
$^{52}\text{Cr}(n,\gamma)^{53}\text{Cr}$	7939.52	0.3	7939.12	0.14	-1.3	-			MMN		80Is02 Z
	7939.01	0.2			0.6	-			BNN		80Ko01 Z
	7939.10	0.28			0.1	-			Bdn		06Fi.A
$^{52}\text{Cr}(d,p)^{53}\text{Cr}$	5725	6	5714.56	0.14	-1.7	U			MIT		64Sp12
	5719	8			-0.6	U			Kop		67Ha.A
$^{52}\text{Cr}(n,\gamma)^{53}\text{Cr}$	ave.	7939.15	0.14	7939.12	0.14	-0.2	1	98	77 ^{52}Cr		average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{52}\text{Cr}(p,\gamma)^{53}\text{Mn}$	6559.1	1.1	6559.9	0.3	0.8	U					70Ma25 Z
	6559.72	0.36			0.6	1	87	$67\ ^{53}\text{Mn}$			79Sw01 Z
$^{52}\text{Cr}(^3\text{He,d})^{53}\text{Mn}$	1070	15	1066.5	0.3	-0.2	U			MIT		67Ob04
$^{53}\text{Co}^m(p)^{52}\text{Fe}$	1600.5	30.	1559	7	-1.4	U					70Ce04
	1590	30			-1.0	U					76Vi02
$^{53}\text{Co}^i(p)^{52}\text{Fe}$	2789.5	50.	2780	17	-0.2	4					76Vi02 *
	2778.5	18.			0.1	4			Bor		07Do17 *
$^{53}\text{Ti}(\beta^-)^{53}\text{V}$	5020	100				3			ANB		77Pa01
$^{53}\text{V}(\beta^-)^{53}\text{Cr}$	3536	50	3436	3	-2.0	U					56Sc.A *
$^{53}\text{Cr}(p,n)^{53}\text{Mn}$	-1379	8	-1379.2	0.4	0.0	U			MIT		52Lo06 Y
	-1381.1	1.6			1.2	U			Oak		64Jo11 Z
$^{53}\text{Cr}(^3\text{He,t})^{53}\text{Mn}^i$	-7589	4				2					71Be29 *
$^{53}\text{Fe}(\beta^+)^{53}\text{Mn}$	3860	100	3742.3	1.7	-1.2	U					59Ju40
	3820	100			-0.8	U					75Bl01
$^{53}\text{Co}^i(p)^{52}\text{Fe}$	Q _p =1940(50) 1929(18) respectively, to 2 ⁺ level at 849.45 keV										Ens075 **
$^{53}\text{V}(\beta^-)^{53}\text{Cr}$	E _{β-} =2530(50) to 5/2 ⁻ level at 1006.27 keV										Ens09a **
$^{53}\text{Cr}(^3\text{He,t})^{53}\text{Mn}^i$	CDE=8350(4) Q=-7586(4); recalibration -3 keV for $^{50}\text{Cr}(p,n)^{50}\text{Mn}$ from Ame1961										MMC123**
$^{54}\text{Sc-u}$	-36060	500	-36070	390	0.0	o			TO3	1.5	90Tu01 *
	-37060	500			1.3	o			TO5	1.5	94Se12 *
	-36960	400			1.5	U			TO6	1.5	98Ba.A *
	-37059	225			2.9	U			GT1	1.5	04Ma.A *
	-36070	390				2			MT1	1.0	11Es06 *
$^{54}\text{Ti-u}$	-48820	230	-48950	130	-0.4	2			TO3	1.5	90Tu01
	-49130	250			0.5	2			TO5	1.5	94Se12
	-48820	280			-0.3	2			TO6	1.5	98Ba.A
$\text{C}_4\ \text{H}_6\text{-}^{54}\text{Cr}$	108018	17	108071.0	0.6	0.8	U			R09	4.0	72De11
$\text{C}_3\ ^{13}\text{C}\ \text{H}_5\text{-}^{54}\text{Cr}$	103569	15	103600.8	0.6	0.5	U			R09	4.0	72De11
$\text{C}_3\ \text{H}_4\ \text{N}\text{-}^{54}\text{Cr}$	95445	13	95495.0	0.6	1.0	U			R09	4.0	72De11
$\text{C}_2\ ^{13}\text{C}\ \text{H}_3\ \text{N}\text{-}^{54}\text{Cr}$	90960	24	91024.8	0.6	0.7	U			R09	4.0	72De11
$\text{C}_2\ \text{N}\ \text{O}\text{-}^{54}\text{Cr}$	59057	26	59109.5	0.6	0.5	U			R09	4.0	72De11
$^{13}\text{C}\ ^{37}\text{Cl}_3\text{-}^{54}\text{Fe}\ ^{35}\text{Cl}_2$	23744.46	1.26	23748.3	0.6	1.2	U			H39	2.5	84Ha20
$\text{C}_4\ \text{H}_6\text{-}^{54}\text{Fe}$	107368	11	107341.2	0.5	-0.6	U			R09	4.0	72De11
$\text{C}_3\ \text{H}_4\ \text{N}\text{-}^{54}\text{Fe}$	94791	8	94765.1	0.5	-0.8	U			R09	4.0	72De11
$\text{C}_2\ \text{N}\ \text{O}\text{-}^{54}\text{Fe}$	58411	8	58379.6	0.5	-1.0	U			R09	4.0	72De11
$\text{C}_3\ ^{13}\text{C}\ \text{H}_5\text{-}^{54}\text{Fe}$	102908	48	102871.0	0.5	-0.2	U			R09	4.0	72De11
$^{54}\text{Co}\text{-}^{54}\text{Fe}$	8850.94	0.14	8850.89	0.10	-0.4	1	47	$47\ ^{54}\text{Co}$	JY1	1.0	08Er04
$^{54}\text{Co}^m\text{-}^{54}\text{Fe}$	9062.960	0.092	9062.99	0.08	0.3	1	81	$81\ ^{54}\text{Co}^m$	JY1	1.0	08Er04
$^{54}\text{Co}^m\text{-}^{54}\text{Co}$	212.18	0.15	212.10	0.10	-0.5	1	49	$30\ ^{54}\text{Co}$	JY1	1.0	08Er04
$^{54}\text{Cr}\text{-}^{53}\text{Cr}$	-1662	48	-1768.99	0.13	-0.6	U			R09	4.0	72De11
$^{54}\text{Fe}(p,^6\text{He})^{49}\text{Mn}$	-28943	24	-28920	10	0.9	1	18	$18\ ^{49}\text{Mn}$	MSU		75Mu09 *
$^{54}\text{Fe}(\alpha,^8\text{He})^{50}\text{Fe}$	-50950	60				2			Tex		77Tr05
$^{54}\text{Cr}(p,\alpha)^{51}\text{V}$	130	30	134.0	0.9	0.1	U			Kop		64Ve02
$^{54}\text{Fe}(p,\alpha)^{51}\text{Mn}$	-3145	9	-3146.3	0.8	-0.1	U			Ald		66Br05
	-3146.9	1.1			0.5	1	57	$51\ ^{51}\text{Mn}$	NDm		74Jo14
$^{54}\text{Fe}(p,\alpha)^{51}\text{Mn}^i$	-7606.6	5.0	-7597.7	1.6	1.8	1	11	$10\ ^{51}\text{Mn}^i$			79Ta22 *
$^{54}\text{Fe}(^3\text{He},^6\text{He})^{51}\text{Fe}$	-18694	15	-18712	9	-1.2	1	36	$36\ ^{51}\text{Fe}$	MSU		77Mu03 *
$^{54}\text{Cr}(d,\alpha)^{52}\text{V}$	5225	12	5220.7	0.9	-0.4	U			Kop		67Ha.A
$^{52}\text{Cr}(t,p)^{54}\text{Cr}$	9171	10	9176.44	0.19	0.5	U			LAI		71Ca19
$^{52}\text{Cr}(^3\text{He},p)^{54}\text{Mn}$	7785	15	7780.7	1.0	-0.3	U			MIT		69Ly06
	7788	9			-0.8	U			Phi		72Be07
$^{52}\text{Cr}(^3\text{He},p)^{54}\text{Mn}^i$	1633.6	3.9	1634.5	2.8	0.2	1	51	$51\ ^{54}\text{Mn}^i$			72Be07 *
$^{52}\text{Cr}(^3\text{He},n)^{54}\text{Fe}^j$	-7173	20				2					75Bo14
$^{54}\text{Fe}(d,\alpha)^{52}\text{Mn}$	5169	12	5163.8	1.8	-0.4	U			Kop		67Ha.A
	5159	15			0.3	U			MIT		67Sp09
	5163.3	2.2			0.2	2			NDm		76Jo01
$^{54}\text{Fe}(p,t)^{52}\text{Fe}$	-15584	8	-15582	7	0.2	R					78Ko27 *
$^{54}\text{Fe}(p,t)^{52}\text{Fe}^j$	-24139	7	-24140	6	-0.1	2					78Ko27
	-24141.3	11.0			0.1	2					78De18 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{54}\text{Zn}(2p)^{52}\text{Ni}$	1480	20	1480	20	0.0	o					05Gi15	
	1480	20				3					05B115	
	1280	210			1.0	U					11As08	
$^{54}\text{Cr}(d,^3\text{He})^{53}\text{V}$	-6879.2	3.1				2			NDm		79Br.B	
$^{53}\text{Cr}(n,\gamma)^{54}\text{Cr}$	9719.30	0.16	9719.12	0.12	-1.1	-					68Wh03 Z	
	9718.3	0.4			2.1	-					72Lo26 Z	
	9718.91	0.27			0.8	-			MMn		80Is02 Z	
	9718.0	0.2			5.6	B					87Mh.A	
	9719.7	0.5			-1.2	-			SAn		89Ho15 Z	
	9720.00	0.20			-4.4	C			Bdn		06Fi.A	
$^{53}\text{Cr}(d,p)^{54}\text{Cr}$	7480	12	7494.55	0.12	1.2	U			MIT		64Sp12	
	7514	10			-1.9	U			Kop		67Ha.A	
	ave.	9719.14	0.13	9719.12	0.12	-0.2	1	98	79 ^{53}Cr		average	
$^{53}\text{Cr}(n,\gamma)^{54}\text{Cr}$						2					75We10 Z	
$^{53}\text{Cr}(p,\gamma)^{54}\text{Mn}$	7559.6	1.0										
$^{53}\text{Cr}(^3\text{He},d)^{54}\text{Mn}$	2080	12	2066.1	1.0	-1.2	U			MIT		69Ly06	
$^{54}\text{Fe}(d,t)^{53}\text{Fe}$	-7121.5	2.1	-7121.2	1.6	0.1	-			NDm		74Jo14	
$^{54}\text{Fe}(^3\text{He},\alpha)^{53}\text{Fe}$	7197	20	7199.2	1.6	0.1	U			MIT		68Tr01	
	7199.6	2.6			-0.2	-			NDm		74Jo14	
	ave.	-7121.2	1.6	-7121.2	1.6	0.0	1	100	100 ^{53}Fe		average	
$^{54}\text{Fe}(d,t)^{53}\text{Fe}$												
$^{54}\text{Ti}(\beta^-)^{54}\text{V}$	4280	160	4300	130	0.1	R					96Do23	
$^{54}\text{V}(\beta^-)^{54}\text{Cr}$	7000	100	7042	15	0.4	U					70Wa14	
$^{54}\text{Cr}(t,^3\text{He})^{54}\text{V}$	-7023	15				2			LAI		77Fl03	
$^{54}\text{Mn}(\epsilon)^{54}\text{Cr}$	1359	8	1377.2	1.0	2.3	U					72Ko47 *	
	1379	8			-0.2	U					00Hi08 *	
	-2160	5	-2159.5	1.0	0.1	U			MIT		52Lo06 Z	
$^{54}\text{Cr}(p,n)^{54}\text{Mn}$	-7541	4	-7541.9	2.8	-0.2	1	49	49 $^{54}\text{Mn}^i$			71Be29 *	
$^{54}\text{Cr}(^3\text{He},t)^{54}\text{Mn}^i$	8023	110	8244.55	0.09	2.0	U					59Su.A *	
$^{54}\text{Co}(\beta^+)^{54}\text{Fe}$	8459	41			-5.2	C					60Mi.A	
	-9031.1	2.5	-9026.89	0.09	1.7	U			Yal		69Ov01 *	
	-9023.7	1.8			-1.8	U			Har		74Ho21 Z	
$^{54}\text{Fe}(^3\text{He},t)^{54}\text{Co}$	-8261.2	1.0	-8263.14	0.09	-1.9	F			Mun		77Vo02 *	
$^{54}\text{Fe}(^3\text{He},t)^{54}\text{Co}-^{27}\text{Al}(^{27}\text{Si})$	-3432.5	3.0	-3432.19	0.13	0.1	U			ChR		74Ha35	
$^{54}\text{Fe}(^3\text{He},t)^{54}\text{Co}-^{42}\text{Ca}(^{42}\text{Sc})$	-1817.24	0.18	-1818.45	0.13	-6.7	B			ChR		87Ko34	
* $^{54}\text{Sc-u}$	Original -36000(500) μu or $M=-33500(470)$ keV										GAu	**
* $^{54}\text{Sc-u}$	Original -37000(500) μu or $M=-34470(470)$ keV										GAu	**
* $^{54}\text{Sc-u}$	$M-A=-34370(370)$ keV for mixture gs+m at 110(3) keV										Nub126	**
* $^{54}\text{Sc-u}$	$M-A=-33540(360)$ keV for mixture gs+m at 110(3) keV										Nub126	**
* $^{54}\text{Fe}(p,^6\text{He})^{49}\text{Mn}$	Q increased 1 for recalibration										AHW	**
* $^{54}\text{Fe}(p,\alpha)^{51}\text{Mn}^i$	IT=4459(5); Q rebuilt with Ame1977										MMC124**	
* $^{54}\text{Fe}(^3\text{He},^6\text{He})^{51}\text{Fe}$	Averaged with reference See $^{46}\text{Ti}(^3\text{He},^6\text{He})$										75Mu09	**
* $^{52}\text{Cr}(^3\text{He},p)^{54}\text{Mn}^i$	IT=6151(5); Q rebuilt with Ame1971										MMC124**	
* $^{54}\text{Fe}(p,t)^{52}\text{Fe}$	Q=-21239(8) to 5655.4 level										Ens00	**
* $^{54}\text{Fe}(p,t)^{52}\text{Fe}^j$	IT=8561(5); Q rebuilt with Ame1977										MMC124**	
* $^{54}\text{Mn}(\epsilon)^{54}\text{Cr}$	IBE=518(8) to 2^+ level at 834.855 keV, B(K)=5.99										Ens066	**
* $^{54}\text{Mn}(\epsilon)^{54}\text{Cr}$	IBE=544(8) to 2^+ level at 834.855 keV										Ens066	**
* $^{54}\text{Cr}(^3\text{He},t)^{54}\text{Mn}^i$	CDE=8302(4) Q=-7538(4); recalibration -3 keV for $^{50}\text{Cr}(p,n)^{50}\text{Mn}$ from Ame1961										MMC123**	
* $^{54}\text{Co}(\beta^+)^{54}\text{Fe}$	$E_{\beta^+}=4250(110)$ from $^{54}\text{Co}^m$ at 197.57 to 2949.2 6^+ level										Nub126	**
* $^{54}\text{Fe}(p,n)^{54}\text{Co}$	Uncorrected for resonance. Orig T=9204.1(1.8) corrected in reference										76Fr13	**
* $^{54}\text{Fe}(^3\text{He},t)^{54}\text{Co}$	F : rejected in reference of same group										09Fa15	**
$^{55}\text{Sc-u}$	-30600	1100	-32180	500	-1.0	2			TO3	1.5	90Tu01	
	-32100	600			-0.1	2			TO6	1.5	98Ba.A	
	-32460	640			0.4	2			MT1	1.0	11Es06	
$^{55}\text{Ti-u}$	-44650	280	-44730	170	-0.2	-			TO3	1.5	90Tu01	
	-44880	260			0.4	-			TO5	1.5	94Se12	
	-44360	350			-0.7	-			TO6	1.5	98Ba.A	
	ave.	-44680	250			-0.2	1	48	48 ^{55}Ti		average	
	$\text{C}_4\text{H}_7-^{55}\text{Mn}$	116757	8	116731.3	0.5	-0.8	U			R09	4.0	72De11

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$C_3 \text{ }^{13}\text{C} \text{H}_6-^{55}\text{Mn}$	112281	25	112261.1	0.5	-0.2	U			R09	4.0	72De11
$C_3 \text{H}_5 \text{N}-^{55}\text{Mn}$	104202	10	104155.3	0.5	-1.2	U			R09	4.0	72De11
$C_2 \text{H}_3 \text{N}_2-^{55}\text{Mn}$	91618	28	91579.2	0.5	-0.3	U			R09	4.0	72De11
$C_3 \text{H}_3 \text{O}-^{55}\text{Mn}$	80372	10	80345.8	0.5	-0.7	U			R09	4.0	72De11
$^{55}\text{Mn}-^{85}\text{Rb}_{647}$	-4884.41	0.84	-4884.0	0.5	0.4	1	32	32 ^{55}Mn	MA8	1.0	12Na15
$^{55}\text{Ni-u}$	-48678	18	-48669.4	0.8	0.5	U			LZ1	1.0	11Tu09
$^{55}\text{Cu-u}$	-33962	167				2			LZ1	1.0	12Ya.A
$^{55}\text{Ni}-^{55}\text{Co}$	9333.43	0.62				2			JY1	1.0	10Ka26
$^{55}\text{Mn}(p,\alpha)^{52}\text{Cr}$	2570	8	2570.4	0.4	0.1	U			MIT		64Sp12
	2600	10			-3.0	U			ANL		67Ka11
$^{55}\text{Mn}(d,\alpha)^{53}\text{Cr}$	8283	8	8285.0	0.4	0.2	U			MIT		64Sp12
	8277	15			0.5	U			Kop		67Ha.A
$^{54}\text{Cr}(n,\gamma)^{55}\text{Cr}$	6246.2	0.4	6246.26	0.19	0.2	-					72Wh05 Z
	6246.28	0.21			-0.1	-			Bdn		06Fi.A
$^{54}\text{Cr}(d,p)^{55}\text{Cr}$	4027	8	4021.70	0.19	-0.7	U			MIT		64Sp12
	4035	8			-1.7	U			Kop		67Ha.A
	4022.1	1.2			-0.3	U			NDm		74Jo14
$^{54}\text{Cr}(n,\gamma)^{55}\text{Cr}$	ave.	6246.26	0.19	6246.26	0.19	0.0	1	100	100 ^{55}Cr		average
$^{54}\text{Cr}(p,\gamma)^{55}\text{Mn}$	8067.2	0.4	8067.0	0.4	-0.5	1	83	81 ^{54}Cr			78We12
$^{54}\text{Cr}(^3\text{He},d)^{53}\text{Mn}$	2568	18	2573.5	0.4	0.3	U			MIT		69Ra02
$^{55}\text{Mn}(\gamma,n)^{54}\text{Mn}$	-10192	20	-10226.5	1.1	-1.7	U			Phi		60Ge01
$^{54}\text{Fe}(n,\gamma)^{55}\text{Fe}$	9297.91	0.3	9298.09	0.19	0.6	-			MMn		80Is02 Z
	9298.53	0.27			-1.6	-			Bdn		06Fi.A
$^{54}\text{Fe}(d,p)^{55}\text{Fe}$	7084	8	7073.52	0.19	-1.3	U			MIT		64Sp12
	7083	10			-0.9	U			Kop		67Ha.A
	7072.3	1.7			0.7	U			NDm		74Jo14
$^{54}\text{Fe}(n,\gamma)^{55}\text{Fe}$	ave.	9298.25	0.20	9298.09	0.19	-0.8	1	90	72 ^{54}Fe		average
$^{54}\text{Fe}(p,\gamma)^{55}\text{Co}$	5064.0	0.7	5064.36	0.30	0.5	-					77Er02 Z
	5063.9	0.4			1.2	-					80Ha36 Z
$^{54}\text{Fe}(^3\text{He},d)^{55}\text{Co}$	-428	15	-429.11	0.30	-0.1	U			MIT		67Ob04
	-426.9	2.2			-1.0	U			NDm		74Jo14
$^{54}\text{Fe}(p,\gamma)^{55}\text{Co}$	ave.	5063.9	0.3	5064.36	0.30	1.3	1	74	54 ^{55}Co		average
$^{55}\text{Ti}(\beta^-)^{55}\text{V}$	7440	200	7480	160	0.2	1	62	52 ^{55}Ti			96Do23
$^{55}\text{V}(\beta^-)^{55}\text{Cr}$	5956	100	5970	100	0.1	1	90	90 ^{55}V	ANB		77Na17
$^{55}\text{Cr}(\beta^-)^{55}\text{Mn}$	2500	40	2603.1	0.4	2.6	U					63Me06
	2494	25			4.4	B					65Ko09
$^{55}\text{Fe}(\epsilon)^{55}\text{Mn}$	224.5	4.	231.09	0.18	1.6	U					65Be19
	224.5	3.			2.2	U					69Ka13
	231.4	0.4			-0.8	-					89Zl.A
	230.7	1.9			0.2	U					90Is06
	231.0	1.0			0.1	U					93Wi05 *
	231.37	0.30			-0.9	-					95Da14 *
	231.0	0.3			0.3	-					95Sy01 *
	232.36	0.64			-2.0	U					01Ke14
$^{55}\text{Mn}(p,n)^{55}\text{Fe}$	-1015.7	2.	-1013.43	0.18	1.1	U			Nvl		59Go68 Z
	-1014.6	0.8			1.5	U			Oak		64Jo11 Z
$^{55}\text{Fe}(\epsilon)^{55}\text{Mn}$	ave.	231.23	0.19	231.09	0.18	-0.8	1	92	81 ^{55}Fe		average
$^{55}\text{Mn}(^3\text{He},t)^{55}\text{Fe}^i$	-7883	6				2					71Be29 *
$^{55}\text{Co}(\beta^+)^{55}\text{Fe}$	3466	2	3451.4	0.3	-7.3	B					66Fi06 *
* $^{55}\text{Fe}(\epsilon)^{55}\text{Mn}$	Error estimated by evaluator										
* $^{55}\text{Fe}(\epsilon)^{55}\text{Mn}$	Original error 0.10 increased by evaluator										
* $^{55}\text{Fe}(\epsilon)^{55}\text{Mn}$	Original statistical error 0.10 increased by evaluator										
* $^{55}\text{Mn}(^3\text{He},t)^{55}\text{Fe}^i$	CDE=8654(6) Q=-7890(6); recalibration +7 keV for $^{54}\text{Fe}(p,n)^{54}\text{Co}$ from Ame1961										
* $^{55}\text{Co}(\beta^+)^{55}\text{Fe}$	$E_{\beta^+}=1513(2)$ to $5/2^-$ level at 931.29 keV										
$^{56}\text{Ti-u}$	-41300	350	-42090	150	-1.5	-			TO3	1.5	90Tu01
	-42010	300			-0.2	-			TO5	1.5	94Se12
	-41770	270			-0.8	-			TO6	1.5	98Ba.A
	-42319	129			1.2	-			GT1	1.5	04Ma.A
ave.	-42110	160			0.1	1	88	88 ^{56}Ti			average
$^{56}\text{V-u}$	-49470	250	-49520	190	-0.1	-			TO3	1.5	90Tu01
	-49640	260			0.3	-			TO5	1.5	94Se12
	-49310	250			-0.5	-			TO6	1.5	98Ba.A
ave.	-49470	220			-0.2	1	76	76 ^{56}V			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{56}\text{Cr}-^{85}\text{Rb}_{.659}$	-1216.3	2.0				2			MA8	1.0	05Gu27
$^{56}\text{Mn}-^{85}\text{Rb}_{.659}$	-2965.1	1.5	-2965.7	0.5	-0.4	1	11	11 ^{56}Mn	MA8	1.0	05Gu37
$^{56}\text{Mn}-^{39}\text{K}_{1.436}$	-8979.0	2.7	-8978.8	0.5	0.1	U			MA8	1.0	09Na.A
$\text{C}_4 \text{H}_8-^{56}\text{Fe}$	127754	10	127663.9	0.5	-2.3	U			R09	4.0	72De11
$\text{C}_3 \text{ }^{13}\text{C} \text{H}_7-^{56}\text{Fe}$	123300	47	123193.7	0.5	-0.6	U			R09	4.0	72De11
$\text{C}_3 \text{H}_6 \text{N}-^{56}\text{Fe}$	115171	13	115087.9	0.5	-1.6	U			R09	4.0	72De11
$\text{C}_3 \text{H}_4 \text{O}-^{56}\text{Fe}$	91381	15	91278.4	0.5	-1.7	U			R09	4.0	72De11
$\text{C}_2 \text{H}_2 \text{N O}-^{56}\text{Fe}$	78790	24	78702.4	0.5	-0.9	U			R09	4.0	72De11
$\text{C}_2 \text{O}_2-^{56}\text{Fe}$	54990	9	54892.9	0.5	-2.7	B			R09	4.0	72De11
$^{56}\text{Fe}-^{58}\text{Ni}_{.966}$	-2604.70	0.47	-2604.44	0.26	0.5	1	32	18 ^{58}Ni	JY1	1.0	10Ka26
$^{56}\text{Co}-^{58}\text{Ni}_{.966}$	2297.85	0.55	2298.0	0.4	0.3	1	58	53 ^{56}Co	JY1	1.0	10Ka26
$^{56}\text{Ni}-^{55}\text{Co}_{1.018}$	1176.23	0.48	1175.4	0.4	-1.7	1	60	33 ^{55}Co	JY1	1.0	10Ka26
$^{56}\text{Ni}-^{56}\text{Fe}$	7192.00	0.52	7192.2	0.3	0.4	1	43	37 ^{56}Ni	JY1	1.0	10Ka26
$^{56}\text{Ni}-^{56}\text{Co}$	2289.61	0.49	2289.8	0.4	0.3	1	67	47 ^{56}Co	JY1	1.0	10Ka26
$^{56}\text{Fe}-^{54}\text{Fe}$	-4755	47	-4672.7	0.3	0.4	U			R09	4.0	72De11
$^{56}\text{Fe}(p,\alpha)^{53}\text{Mn}$	-1060	9	-1053.3	0.5	0.7	U			MIT		64Sp12
	-1056	9			0.3	U			Ald		66Br05
	-1052.3	0.8			-1.3	1	35	33 ^{53}Mn	NDm		74Jo14
$^{54}\text{Cr}(t,p)^{56}\text{Cr}$	5995	30	6008.4	1.9	0.4	U			Ald		68Ch20
	6024	10			-1.6	U			LAL		71Ca19
$^{56}\text{Fe}(d,\alpha)^{54}\text{Mn}$	5662	12	5660.9	1.1	-0.1	U			Kop		67Ha.A
	5673	30			-0.4	U					67Hj01
$^{54}\text{Fe}(^3\text{He},p)^{56}\text{Co}$	7410	10	7428.2	0.5	1.8	U			CIT		67Mi02
	7408	15			1.3	U			MIT		68Be10
$^{54}\text{Fe}(^3\text{He},n)^{56}\text{Ni}$	4513	14	4512.9	0.4	0.0	U			CIT		67Mi02
$^{55}\text{Mn}(n,\gamma)^{56}\text{Mn}$	7270.53	0.3	7270.44	0.13	-0.3	-			MMn		80Is02 Z
	7270.42	0.15			0.1	-			Bdn		06Fi.A
$^{55}\text{Mn}(d,p)^{56}\text{Mn}$	5052	5	5045.87	0.13	-1.2	U			MIT		64Sp12
	5053	8			-0.9	U			Kop		67Ha.A
$^{55}\text{Mn}(n,\gamma)^{56}\text{Mn}$	ave.	7270.44	0.13	7270.44	0.13	0.0	1	99	89 ^{56}Mn		average
$^{55}\text{Mn}(p,\gamma)^{56}\text{Fe}$	10189	7	10183.67	0.16	-0.8	U					69Fr22
	10193.7	4.5			-2.2	U					70Sa19 *
	10195.7	3.6			-3.3	B					74Pe15 *
	10183.80	0.17			-0.8	1	89	63 ^{56}Fe	Utr		92Gu03 Z
$^{56}\text{Fe}(d,t)^{55}\text{Fe}$	-4938.3	1.3	-4939.87	0.23	-1.2	U			NDm		74Jo14
$^{56}\text{Ni}(p)^{55}\text{Co}$	-7148.5	30.	-7166.6	0.3	-0.6	U					08Jo04 *
$^{56}\text{Cu}^i(p)^{55}\text{Ni}$	2929	31				3			Bor		07Do17
$^{56}\text{Ti}(\beta^-)^{56}\text{V}$	7030	330	6920	200	-0.3	1	37	24 ^{56}V			96Do23
$^{56}\text{Cr}(\beta^-)^{56}\text{Mn}$	1610	150	1629.6	1.9	0.1	U					60Dr03
$^{56}\text{Mn}(\beta^-)^{56}\text{Fe}$	3685	5	3695.58	0.21	2.1	U					62Ho14 *
$^{56}\text{Co}(\beta^+)^{56}\text{Fe}$	4566.0	2.0	4566.6	0.4	0.3	U					65Pe18 *
$^{56}\text{Fe}(p,n)^{56}\text{Co}$	-5351	10	-5349.0	0.4	0.2	U			Tal		62Ne08 Y
$^{56}\text{Fe}(^3\text{He},t)^{56}\text{Co}^i$	-8178	9				2					71Be29 *
$^{55}\text{Mn}(p,\gamma)^{56}\text{Fe}$	$E_p=1537(2)$ to $11703(4)$ level										70Sa19 **
$^{55}\text{Mn}(p,\gamma)^{56}\text{Fe}$	$E_p=1537(2)$ to $11705(3)$ level										74Pe15 **
$^{56}\text{Ni}(p)^{55}\text{Co}$	$E_p=2540(30)$ from 9735 level										08Jo04 **
$^{56}\text{Mn}(\beta^-)^{56}\text{Fe}$	$E_{\beta^-}=2838(5)$ to 2^+ level at 846.7778 keV										Ens115 **
$^{56}\text{Co}(\beta^+)^{56}\text{Fe}$	$E_{\beta^+}=1459(3)$ to 4^+ level at 2085.1045 keV										Ens115 **
$^{56}\text{Fe}(^3\text{He},t)^{56}\text{Co}^i$	Strongest fragment given as $\text{CDE}=8950(6)$; $\text{Q}=-8186(6)$ rebuilt with Ame1965										71Be29 **
*	recalibration +7 keV for $^{54}\text{Fe}(p,n)^{54}\text{Co}$ from Ame1961										MMC123**
$^{57}\text{Ti-u}$	-35700	1000	-36360	270	-0.4	-			TO3	1.5	90Tu01
	-36200	400			-0.3	-			TO6	1.5	98Ba.A
	-37102	408			1.2	-			GT1	1.5	04Ma.A
	-36280	370			-0.2	-			MT1	1.0	11Es06
	ave.	-36410	280		0.2	1	94	94 ^{57}Ti			average
$^{57}\text{V-u}$	-47300	400	-47480	240	-0.3	-			TO3	1.5	90Tu01
	-47640	270			0.4	-			TO5	1.5	94Se12
	-47320	250			-0.4	-			TO6	1.5	98Ba.A
	ave.	-47440	250		-0.2	1	95	95 ^{57}V			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{57}\text{Cr-u}$	-56240	250	-56387.0	2.0	-0.4	U			TO3	1.5	90Tu01
	-56300	260			-0.2	U			TO5	1.5	94Se12
	-56170	270			-0.5	U			TO6	1.5	98Ba.A
$^{57}\text{Cr}-^{85}\text{Rb}_{.671}$	2802.1	2.0				2		MA8	1.0	05Gu27	
$^{57}\text{Mn}-^{85}\text{Rb}_{.671}$	-2525.1	2.3	-2524.8	1.6	0.1	1	49	49 ^{57}Mn	MA8	1.0	05Gu37
$^{57}\text{Mn}-^{39}\text{K}_{1.462}$	-8650.7	2.8	-8652.8	1.6	-0.7	1	33	33 ^{57}Mn	MA8	1.0	12Na15
$\text{C}_7\text{H}_8-^{57}\text{Fe}\ ^{35}\text{Cl}$	158378.5	3.5	158354.7	0.5	-2.7	U			M18	2.5	68Hu05
$\text{C}_4\text{H}_9-^{57}\text{Fe}$	135085	11	135032.4	0.5	-1.2	U			R09	4.0	72De11
$\text{C}_3\text{H}_7\text{N}-^{57}\text{Fe}$	122500	10	122456.4	0.5	-1.1	U			R09	4.0	72De11
$\text{C}_3\text{H}_5\text{O}-^{57}\text{Fe}$	98684	8	98646.9	0.5	-1.2	U			R09	4.0	72De11
$\text{C}_2\text{H}_3\text{NO}-^{57}\text{Fe}$	86104	17	86070.9	0.5	-0.5	U			R09	4.0	72De11
$^{57}\text{Ni}-^{85}\text{Rb}_{.671}$	-1019.8	2.7	-1018.7	0.7	0.4	U			MA8	1.0	07Gu09
$^{57}\text{Cu-u}$	-50772	43	-50787.5	0.7	-0.4	U			LZ1	1.0	11Tu09
	$^{56}\text{Fe}\ ^{13}\text{C}-^{57}\text{Fe}\ \text{C}$	2897.67	0.47	2898.32	0.04	0.6	U		H30	2.5	77Ba10
	2897.68	0.40			0.6	U		H30	2.5	77Ba10	
$^{56}\text{Fe}\ \text{H}-^{57}\text{Fe}$	7325	7	7368.52	0.04	1.6	U			R09	4.0	72De11
$^{57}\text{Fe}-^{56}\text{Fe}_{1.018}$	1627.95	0.46	1627.66	0.04	-0.6	U			JY1	1.0	10Ka26
$^{57}\text{Fe}-^{58}\text{Ni}_{.983}$	-1048.75	0.46	-1048.75	0.27	0.0	1	34	21 ^{58}Ni	JY1	1.0	10Ka26
$^{57}\text{Ni}-^{58}\text{Ni}_{.983}$	3350.77	0.72	3350.6	0.5	-0.3	1	55	51 ^{57}Ni	JY1	1.0	10Ka26
$^{57}\text{Cu}-^{56}\text{Ni}_{1.018}$	8126.29	0.55	8125.6	0.4	-1.2	1	63	48 ^{57}Cu	JY1	1.0	10Ka26
$^{57}\text{Cu}-^{57}\text{Fe}$	13817.80	0.86	13819.7	0.5	2.2	1	29	28 ^{57}Cu	JY1	1.0	10Ka26
$^{57}\text{Cu}-^{57}\text{Ni}$	9420.42	0.55	9420.3	0.5	-0.2	1	74	49 ^{57}Ni	JY1	1.0	10Ka26
$^{56}\text{Fe}\ ^{37}\text{Cl}-^{57}\text{Fe}\ ^{35}\text{Cl}$	-3413.7	4.3	-3406.60	0.08	0.7	U			M18	2.5	68Hu05
$^{57}\text{Fe}-^{56}\text{Fe}$	456.6	1.4	456.52	0.04	0.0	U			M18	2.5	68Hu05
	453.2	2.1			0.6	U			M18	2.5	68Hu05
	491	39			-0.2	U			R09	4.0	72De11
$^{54}\text{Cr}(\alpha,p)^{57}\text{Mn}$	-4308	8	-4311.6	1.6	-0.5	U			NDm		76Ma03
	-4302	8			-1.2	U			Can		78An10
$^{57}\text{Fe}(\text{p},\alpha)^{54}\text{Mn}$	237	9	239.4	1.1	0.3	U			MIT		64Sp12
$^{54}\text{Fe}(\alpha,p)^{57}\text{Co}$	-1770.3	1.8	-1773.0	0.5	-1.5	U			NDm		74Jo14
$^{55}\text{Mn}(\text{t},\text{p})^{57}\text{Mn}$	7438.2	3.6	7435.2	1.5	-0.8	1	18	17 ^{57}Mn	NDm		77Ma12
$^{57}\text{Fe}(\text{d},\alpha)^{55}\text{Mn}$	8246	15	8241.35	0.17	-0.3	U			Kop		67Ha.A
$^{56}\text{Fe}(\text{n},\gamma)^{57}\text{Fe}$	7645.9	0.5	7646.08	0.04	0.4	U			Utr		68Sp01
	7646.10	0.17			-0.1	o			BNn		76Al16
	7645.96	0.20			0.6	U			BNn		78St25
	7646.13	0.21			-0.3	U			MMn		80Is02
	7645.93	0.15			1.0	-			Ptn		80Ve05
	7646.0956	0.0500			-0.4	-			PTc		97Ro26
	7646.08	0.09			0.0	-					02Bo11
	7646.10	0.15			-0.2	-			Bdn		06Fi.A
	5425	8	5421.51	0.04	-0.4	U			MIT		64Sp12
	5425	8			-0.4	U			Kop		67Ha.A
5419.8	1.3			1.3	U			NDm		74Jo14	
$^{56}\text{Fe}(\text{n},\gamma)^{57}\text{Fe}$	ave.	7646.08	0.04	7646.08	0.04	-0.1	1	99	84 ^{57}Fe		average
$^{56}\text{Fe}(\text{p},\gamma)^{57}\text{Co}$	6027.7	1.0	6027.5	0.4	-0.2	-					70Ob02
	6029.3	1.5			-1.2	-					71Le21
$^{56}\text{Fe}(\ ^3\text{He},\text{d})^{57}\text{Co}$	538	20	534.0	0.4	-0.2	U			LAI		65B113
$^{56}\text{Fe}(\text{p},\gamma)^{57}\text{Co}$	ave.	6028.2	0.8	6027.5	0.4	-0.8	1	29	27 ^{57}Co		average
$^{56}\text{Fe}(\text{p},\gamma)^{57}\text{Co}^i$	-1226.4	0.5	-1225.9	0.3	0.9	2					70Ob02
	-1225.6	0.4			-0.6	2					71Le21
$^{57}\text{Cu}^i(\text{p})^{56}\text{Ni}$	4650	50	4609	25	-0.8	2					76Vi02
	4568	10			4.1	C					98Jo.A
	4595	29			0.5	2					02Jo09
$^{57}\text{Ti}(\beta^-)^{57}\text{V}$	11020	950	10360	330	-0.7	1	12	6 ^{57}Ti			96Do23
$^{57}\text{Cr}(\beta^-)^{57}\text{Mn}$	5100	100	4962.0	2.4	-1.4	U			ANB		78Da04
$^{57}\text{Mn}(\beta^-)^{57}\text{Fe}$	2690	50	2695.0	1.6	0.1	U					63Va37
$^{57}\text{Co}(\epsilon)^{57}\text{Fe}$	810	30	836.2	0.5	0.9	U					71La02
$^{57}\text{Fe}(\text{p},\text{n})^{57}\text{Co}$	-1619.4	2.0	-1618.6	0.5	0.4	-			Oak		64Jo11
	-1618.2	2.0			-0.2	-			Can		70Kn03
	ave.	-1618.8	1.4			0.1	1	10	10 ^{57}Co		average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{57}\text{Fe}(\beta^+\text{He,t})^{57}\text{Co}^i$	-8122	7	-8108.2	0.3	2.0	U					71Be29 *
$^{57}\text{Ni}(\beta^+)^{57}\text{Co}$	3245	10	3261.7	0.6	1.7	U					50Fr10 *
	3235	10			2.7	U					51Ca28 *
	3246	10			1.6	U					58Ko60 *
$^{57}\text{Cu}(\beta^+)^{57}\text{Ni}$	8742	130	8775.0	0.4	0.3	U					84Sh28
$^{56}\text{Fe}(\text{n},\gamma)^{57}\text{Fe}$	Original error 0.0005 increased for calibration										GAu **
$^{56}\text{Fe}(\text{p},\gamma)^{57}\text{Co}^i$	T=1247.9 recalibrated to T=1248.5(0.6) keV										AHW **
$^{56}\text{Fe}(\text{p},\gamma)^{57}\text{Co}^i$	T=1247.1 recalibrated to T=1247.7(0.4) keV										AHW **
$^{57}\text{Co}(\epsilon)^{57}\text{Fe}$	IBE=674(30) to $5/2^-$ level at 136.4743 keV										Ens98c **
$^{57}\text{Fe}(\beta^+\text{He,t})^{57}\text{Co}^i$	CDE=8893(7) Q=-8129(7); recalibration +7 keV for $^{54}\text{Fe}(\text{p,n})^{54}\text{Co}$ from Ame1961										MMC123**
$^{57}\text{Ni}(\beta^+)^{57}\text{Co}$	E_{β^+} =845(10) 835(10) 849(10) respectively, to $13/2^-$ level at 1377.663 keV										Ens98c **
$^{58}\text{V-u}$	-43210	280	-43280	140	-0.2	2			TO3	1.5	90Tu01
	-43350	280			0.2	2			TO5	1.5	94Se12
	-42700	400			-1.0	2			TO6	1.5	98Ba.A
	-43328	107			0.3	2			GT1	1.5	04Ma.A
$^{58}\text{Cr-u}$	-55680	230	-55650	220	0.1	2			TO3	1.5	90Tu01
	-55750	260			0.3	2			TO5	1.5	94Se12
	-55490	270			-0.4	2			TO6	1.5	98Ba.A
$^{58}\text{Mn}-^{39}\text{K}_{1.487}$	-5964.9	2.9				2			MA8	1.0	12Na15 *
$\text{C}_3 \text{H}_8 \text{N}-^{58}\text{Fe}$	132382	12	132399.8	0.5	0.4	U			R09	4.0	72De11
$\text{C}_3 \text{H}_6 \text{O}-^{58}\text{Fe}$	108576	13	108590.4	0.5	0.3	U			R09	4.0	72De11
$\text{C}_2 \text{H}_4 \text{N O}-^{58}\text{Fe}$	95999	13	96014.3	0.5	0.3	U			R09	4.0	72De11
$\text{C}_3 \text{H}_6 \text{O}-^{58}\text{Ni}$	106491	8	106522.4	0.5	1.0	U			R10	4.0	74De22
$\text{C}_3 \text{ }^{13}\text{C H}_9-^{58}\text{Ni}$	138424	14	138437.7	0.5	0.2	U			R10	4.0	74De22
$\text{C}_3 \text{H}_8 \text{N}-^{58}\text{Ni}$	130302	25	130331.8	0.5	0.3	U			R10	4.0	74De22
$\text{C}_2 \text{H}_4 \text{O N}-^{58}\text{Ni}$	93926	10	93946.3	0.5	0.5	U			R10	4.0	74De22
	93928	15			0.3	U			R10	4.0	74De22
$\text{C}_3 \text{H}_6 \text{O}-^{58}\text{Ni}$	106504	14	106522.4	0.5	0.3	U			R10	4.0	74De22
$^{58}\text{Ni}-^{58}\text{Fe}$	2059	32	2068.0	0.3	0.1	U			R09	4.0	72De11
$^{58}\text{Cu}-^{58}\text{Ni}$	9190.61	0.50	9190.6	0.5	0.0	1	90	90 ^{58}Cu	JY1	1.0	10Ka26
$^{58}\text{Ni}(\text{p},^6\text{He})^{53}\text{Co}$	-27889	18	-27872.7	1.7	0.9	U			MSU		75Mu09 *
$^{58}\text{Ni}(\alpha,^8\text{He})^{54}\text{Ni}$	-50190	50				2			Tex		77Tr05
$^{58}\text{Fe}(\text{p},\alpha)^{55}\text{Mn}$	420	9	421.31	0.25	0.1	U			MIT		64Sp12
$^{58}\text{Ni}(\text{p},\alpha)^{55}\text{Co}$	-1341.0	2.9	-1334.8	0.4	2.1	U			BNL		73Go19
	-1335.1	0.9			0.3	1	18	12 ^{55}Co	NDm		74Jo14
$^{58}\text{Ni}(\beta^+\text{He},^6\text{He})^{55}\text{Ni}$	-17556	11	-17553.8	0.7	0.2	U			MSU		77Mu03 *
$^{58}\text{Fe}(\text{d},\alpha)^{56}\text{Mn}$	5470	12	5467.18	0.28	-0.2	U			Kop		67Ha.A
$^{56}\text{Fe}(\beta^+\text{He},\text{p})^{58}\text{Co}$	6853	15	6882.4	1.1	2.0	U			MIT		72Ly01
$^{58}\text{Ni}(\text{d},\alpha)^{56}\text{Co}$	6522	12	6522.5	0.4	0.0	U			Kop		67Ha.A
	6506	10			1.6	U			MIT		68Be10
$^{58}\text{Ni}(\text{p},\text{t})^{56}\text{Ni}$	-13987	18	-13982.1	0.3	0.3	U			Bld		65Ho07
$^{58}\text{Ni}(\text{p},\text{t})^{56}\text{Ni}^j$	-23926	4				2					84Ka07 *
$^{57}\text{Fe}(\text{n},\gamma)^{58}\text{Fe}$	10044.60	0.3	10044.60	0.18	0.0	-			MMn		80Is02 Z
	10044.65	0.24			-0.2	-			Bdn		06Fi.A
$^{57}\text{Fe}(\text{d},\text{p})^{58}\text{Fe}$	7815	8	7820.04	0.18	0.6	U			MIT		64Sp12
	7824	12			-0.3	U			Kop		67Ha.A
$^{57}\text{Fe}(\text{n},\gamma)^{58}\text{Fe}$	ave.	10044.63	0.19	10044.60	0.18	-0.1	1	96	94 ^{58}Fe		average
$^{57}\text{Fe}(\text{p},\gamma)^{58}\text{Co}$	6952	3	6954.3	1.1	0.8	1	14	14 ^{58}Co			70Er03
$^{58}\text{Ni}(\text{p},\text{d})^{57}\text{Ni}$	-9971.2	7.	-9991.7	0.5	-2.9	U					79Ik04 *
$^{58}\text{Ni}(\beta^+\text{He},\alpha)^{57}\text{Ni}$	8360.3	4.	8361.4	0.5	0.3	U			MSU		76Na23
	8384.8	15.			-1.6	U					79Fo09 *
$^{58}\text{Ni}(\text{}^7\text{Li},^8\text{He})^{57}\text{Cu}$	-29564	50	-29622.5	0.5	-1.2	U			MSU		85Sh03
	-29613	17			-0.6	U			Tex		86Ga19
$^{58}\text{Ni}(\text{}^{14}\text{N},\text{}^{15}\text{C})^{57}\text{Cu}$	-19900	40	-19929.6	0.9	-0.7	U			Ber		87St04
$^{58}\text{Mn}(\beta^-)^{58}\text{Fe}$	5890	100	6326.9	2.7	4.4	B					69Wa10 *
	5958	100			3.7	B					71Dy01 *
$^{58}\text{Fe}(\text{t},^3\text{He})^{58}\text{Mn}$	-6318	15	-6308.3	2.7	0.6	U			LAI		77Fl03 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{58}\text{Co}(\beta^+)^{58}\text{Fe}$	2305	6	2307.9	1.1	0.5	U			52Ch31 *
	2307	4			0.2	U			63Rh02 *
$^{58}\text{Fe}(\beta^+\text{He,t})^{58}\text{Co}^i$	-8079	8				2			71Be29 *
$^{58}\text{Ni}(\text{p,n})^{58}\text{Cu}$	-9351	5	-9343.4	0.4	1.5	U	Mar		64Ma.A
	-9352.6	3.4			2.7	U	Ric		66Bo20 Z
	-9346	10			0.3	U	Ric		66Ri09
	-9346.6	1.7			1.9	U	Yal		69Ov01 Z
	-9347.8	4.0			1.1	U	Har		76Fr13
$^{58}\text{Ni}(\pi^+, \pi^-)^{58}\text{Zn}$	-16908	50				2			86Se04
$^{58}\text{Mn}-^{39}\text{K}_{1.487}$	$D_M=-5887.8(2.9) \mu\text{V}$ for $^{58}\text{Mn}^m$ at 71.77(0.05) keV; $M-A=-55755.6(2.7)$ keV								
$^{58}\text{Ni}(\text{p}, ^6\text{He})^{53}\text{Co}$	Q increased 1 for recalibration								
$^{58}\text{Ni}(\beta^+\text{He}, ^6\text{He})^{55}\text{Ni}$	Averaged with reference See $^{46}\text{Ti}(\beta^+\text{He}, ^6\text{He})$								
$^{58}\text{Ni}(\text{p,t})^{56}\text{Ni}^j$	Strongest of three fragments IT=9943(4); Q rebuilt with Ame1977								
$^{58}\text{Ni}(\text{p,d})^{57}\text{Ni}$	Q=-15210(7) for $^{57}\text{Ni}^i$ at 5238.8(0.7) keV, strongest fragment IT=5230(7);								
*	rebuilt with $Q_{gs}=-9975$ keV, average of 73Ed01 and 65Sh06								
$^{58}\text{Ni}(\beta^+\text{He}, \alpha)^{57}\text{Ni}$	IT=5235(15); Q=3146(15) for $^{57}\text{Ni}^i$ at 5238.8(0.7) keV rebuilt with Ame1977								
$^{58}\text{Mn}(\beta^-)^{58}\text{Fe}$	$Q_{\beta^-}=6100(300)$; and 5930(100) from $^{58}\text{Mn}^m$ at 71.77(0.05) keV								
$^{58}\text{Mn}(\beta^-)^{58}\text{Fe}$	$Q_{\beta^-}=6030(100)$ from $^{58}\text{Mn}^m$ at 71.77(0.05) keV								
$^{58}\text{Fe}(\text{t}, ^3\text{He})^{58}\text{Mn}$	And Q=-6318(15)-77(8) to $^{58}\text{Mn}^m$ at 71.77(0.05) keV								
$^{58}\text{Co}(\beta^+)^{58}\text{Fe}$	$E_{\beta^+}=472(6)$ 474(4) respectively, to 2^+ level at 810.7662 keV								
$^{58}\text{Fe}(\beta^+\text{He,t})^{58}\text{Co}^i$	Strongest of two fragments IT=5759(8); Q rebuilt with Ame1964								
*	recalibration +7 keV for $^{54}\text{Fe}(\text{p,n})^{54}\text{Co}$ from Ame1961								
$^{59}\text{V}-u$	-38500	400	-40610	170	-3.5	B			90Tu01
	-40700	350			0.2	2	TO3	1.5	94Se12
	-39900	400			-1.2	2	TO5	1.5	98Ba.A
	-40677	129			0.3	2	TO6	1.5	98Ba.A
$^{59}\text{Cr}-u$	-51490	290	-51410	260	0.2	2	GT1	1.5	04Ma.A
	-51640	310			0.5	2	TO3	1.5	90Tu01 *
	-51100	310			-0.7	2	TO5	1.5	94Se12 *
							TO6	1.5	98Ba.A *
$^{59}\text{Mn}-^{39}\text{K}_{1.513}$	-4696.8	2.5				2	MA8	1.0	12Na15
$\text{C}_3 \text{H}_7 \text{O}-^{59}\text{Co}$	116467	12	116495.6	0.6	0.6	U	R10	4.0	74De22
$\text{C}_2 \text{ }^{13}\text{C} \text{H}_6 \text{O}-^{59}\text{Co}$	112011	25	112025.4	0.6	0.1	U	R10	4.0	74De22
$\text{C}_2 \text{H}_5 \text{O N}-^{59}\text{Co}$	103901	6	103919.5	0.6	0.8	U	R10	4.0	74De22
$^{59}\text{Zn}-u$	-50698	29	-50687.3	0.9	0.4	U	LZ1	1.0	11Tu09
$^{58}\text{Ni} \text{H}-^{59}\text{Co}$	9970	15	9973.16	0.22	0.1	U	R10	4.0	74De22
$^{59}\text{Zn}-^{58}\text{Cu}_{1.017}$	5722.4	1.3	5722.5	0.8	0.1	1	36	27 ^{59}Zn	JY1
$^{59}\text{Zn}-^{59}\text{Cu}$	9815.22	0.72	9815.2	0.6	-0.1	1	81	73 ^{59}Zn	JY1
$^{59}\text{Co}-^{58}\text{Ni}$	-2182	35	-2148.13	0.22	0.2	U	R10	4.0	74De22
$^{59}\text{Co}(\text{p}, \alpha)^{56}\text{Fe}$	3245	8	3241.4	0.3	-0.5	U	MIT		64Sp12
	3243	9			-0.2	U	Ald		66Br05
	3240.4	1.4			0.7	U	NDm		74Jo14
$^{59}\text{Co}(\text{d}, \alpha)^{57}\text{Fe}$	8667	15	8662.9	0.3	-0.3	U	Kop		67Ha.A
	8659.3	3.2			1.1	U	NDm		74Jo14
$^{59}\text{Ni}(\text{p,t})^{57}\text{Ni}$	-12738.2	3.3	-12733.7	0.5	1.4	U	MSU		76Na23
	-12738.4	5.0			0.9	U			78Na11 *
$^{58}\text{Fe}(\text{n}, \gamma)^{59}\text{Fe}$	6581.15	0.30	6581.01	0.11	-0.5	2	Ptn		73Sp06 Z
	6580.94	0.20			0.4	2	Ptn		80Ve05 Z
	6581.02	0.14			0.0	2	Bdn		06Fi.A
$^{58}\text{Fe}(\text{d,p})^{59}\text{Fe}$	4357	8	4356.45	0.11	-0.1	U	MIT		64Sp12
	4369	8			-1.6	U	Kop		67Ha.A
$^{58}\text{Fe}(\text{p}, \gamma)^{59}\text{Co}$	7359.7	2.0	7363.6	0.4	2.0	U			74Ke14 Z
$^{58}\text{Fe}(\beta^+\text{He}, \text{d})^{59}\text{Co}$	1871	20	1870.1	0.4	0.0	U	LAL		65B113
$^{58}\text{Fe}(\text{p}, \gamma)^{59}\text{Co}-^{56}\text{Fe}(\gamma)^{57}\text{Co}$	1336.5	0.7	1336.1	0.4	-0.5	1	41	29 ^{57}Co	75Br29
$^{59}\text{Co}(\gamma, \text{n})^{58}\text{Co}$	-10441	26	-10453.9	1.1	-0.5	U	Phi		60Ge01
$^{59}\text{Co}(\text{d,t})^{58}\text{Co}$	-4196.0	1.4	-4196.6	1.1	-0.5	1	62	61 ^{58}Co	NDm
$^{58}\text{Ni}(\text{n}, \gamma)^{59}\text{Ni}$	8999.37	0.30	8999.28	0.05	-0.3	U			75Wi06 Z
	8999.38	0.20			-0.5	U	MMn		77Is01 Z
	8999.10	0.23			0.8	U	ILn		93Ha05 Z
	8999.28	0.05			0.1	1	99	54 ^{59}Ni	ORn
	8999.15	0.18			0.7	U	Bdn		06Fi.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{58}\text{Ni}(d,p)^{59}\text{Ni}$	6797	10	6774.72	0.05	-2.2	U			Kop		67Ha.A	
	6785	5			-2.1	U			MIT		70An25	
	6773.5	1.7			0.7	U			NDm		74Jo14	
$^{58}\text{Ni}(p,\gamma)^{59}\text{Cu}$	3418.5	0.5	3418.5	0.4	0.1	1	62	^{63}Cu			63Bo07 Z	
	3419	2			-0.2	U					70Fo09	
	3416.7	2.0			0.9	U					75K106 Z	
$^{58}\text{Ni}(p,\pi^-)^{59}\text{Zn}$	-144735	40	-144783.4	0.8	-1.2	U					83Sh31	
$^{59}\text{Mn}(\beta^-)^{59}\text{Fe}$	5200	100	5138.8	2.4	-0.6	U			ANB		77Pa18	
$^{59}\text{Fe}(\beta^-)^{59}\text{Co}$	1570	4	1565.0	0.4	-1.3	U					52Me53 *	
	1563	3			0.7	U					63Wo01 *	
$^{59}\text{Ni}(\epsilon)^{59}\text{Co}$	1074.5	1.3	1073.00	0.19	-1.2	U					76Be02 *	
$^{59}\text{Co}(p,n)^{59}\text{Ni}$	-1855.8	2.0	-1855.35	0.19	0.2	U			MIT		51Mc48 Z	
	-1854.3	4.0			-0.3	U					57Bu37 Z	
	-1861	5			1.1	U			Ric		57Ch30 Z	
	-1855.8	1.6			0.3	U			Oak		64Jo11 Z	
	-1855.33	0.20			-0.1	1	95	^{92}Co	PTB		98Bo30	
$^{59}\text{Co}(\alpha,\text{He,t})^{59}\text{Ni}^i$	-8436	8	-8433.5	2.1	0.3	U					71Be29 *	
$^{59}\text{Zn}(\beta^+)^{59}\text{Cu}$	9120	100	9142.8	0.6	0.2	U					81Ar13	
* $^{59}\text{Cr-u}$	Original -51220(240) μu or $M=-47710(230)$ keV										GAu	**
* $^{59}\text{Cr-u}$	Original -51370(270) μu or $M=-47850(250)$ keV										GAu	**
* $^{59}\text{Cr-u}$	$M-A=-47350(250)$ keV for mixture gs+m at 503.0(1.7) keV										Nub126	**
* $^{59}\text{Ni}(p,t)^{57}\text{Ni}$	Strongest of three IAS fragments, $Q=-17977.2(5.0)$ for $^{57}\text{Ni}^i$ at 5238.8(0.7)										Nub129	**
* $^{59}\text{Fe}(\beta^-)^{59}\text{Co}$	$E_{\beta^-}=475(3)$ to $3/2^-$ level at 1099.256 keV										Ens024	**
* $^{59}\text{Fe}(\beta^-)^{59}\text{Co}$	$E_{\beta^-}=462(3), 273(3)$ to $3/2^-$ levels at 1099.256, 1291.605 keV										Ens024	**
* $^{59}\text{Ni}(\epsilon)^{59}\text{Co}$	Authors add $B(K)=8.3$ of Ni, changed in 7.7 of Co										AHW	**
* $^{59}\text{Co}(\alpha,\text{He,t})^{59}\text{Ni}^i$	Strongest fragment $Q=-8441(8)$; recalibration +5 keV for $^{58}\text{Ni}(p,n)^{58}\text{Cu}^i$ from Ame1961										MMC129**	
$^{60}\text{V-u}$	-33860	700	-35690	240	-1.7	U			TO3	1.5	90Tu01 *	
	-35560	600			-0.1	2			TO5	1.5	94Se12 *	
	-35180	520			-0.6	2			TO6	1.5	98Ba.A *	
	-35889	215			0.6	2			GT1	1.5	04Ma.A *	
	-35510	430			-0.4	2			MT1	1.0	11Es06 *	
$^{60}\text{Cr-u}$	-49680	240	-49920	230	-0.7	2			TO3	1.5	90Tu01	
	-50270	280			0.8	2			TO5	1.5	94Se12	
	-49910	280			0.0	2			TO6	1.5	98Ba.A	
$^{60}\text{Mn-u}$	-56550	240	-56863.4	2.5	-0.9	U			TO3	1.5	90Tu01 *	
	-56810	290			-0.1	U			TO5	1.5	94Se12 *	
	-56530	280			-0.8	U			TO6	1.5	98Ba.A *	
$^{60}\text{Mn}-^{39}\text{K}_{1.538}$	-1044.0	2.5				2		MA8	1.0	12Na15 *		
$^{60}\text{Co-u}$	-66380	280	-66183.7	0.6	0.5	U			TO6	1.5	98Ba.A *	
$\text{C}_3\text{H}_8\text{O}-^{60}\text{Ni}$	126796	14	126729.0	0.5	-1.2	U			R10	4.0	74De22	
$\text{C}_2\text{H}_6\text{ON}-^{60}\text{Ni}$	114231	10	114152.9	0.5	-2.0	U			R10	4.0	74De22	
$\text{C}_2^{13}\text{CH}_7\text{O}-^{60}\text{Ni}$	122315	10	122258.8	0.5	-1.4	U			R10	4.0	74De22	
$\text{CH}_2\text{NO}_2-^{60}\text{Ni}$	77843	16	77767.4	0.5	-1.2	U			R10	4.0	74De22	
$\text{C}_5-^{60}\text{Ni}$	69275	14	69214.1	0.5	-1.1	U			R10	4.0	74De22	
$^{60}\text{Ni}-^{85}\text{Rb}_{.706}$	-6937.8	1.6	-6937.7	0.5	0.1	1	11	^{60}Ni	MA8	1.0	07Gu09	
$^{60}\text{Zn}-^{58}\text{Ni}_{1.034}$	8698.02	0.55	8698.0	0.4	0.1	1	65	^{60}Zn	JY1	1.0	10Ka26	
$^{60}\text{Zn}-^{59}\text{Cu}_{1.017}$	3373.19	0.55	3373.2	0.4	-0.1	1	65	^{35}Zn	JY1	1.0	10Ka26	
$^{60}\text{Ni}-^{58}\text{Ni H}$	-12513	30	-12381.56	0.08	1.1	U			R10	4.0	74De22	
$^{60}\text{Ni}-^{59}\text{Co}$	-2503	40	-2408.40	0.22	0.6	U			R10	4.0	74De22	
$^{60}\text{Ni}-^{58}\text{Ni}$	-4624	25	-4556.53	0.08	0.7	U			R10	4.0	74De22	
	-4627	45			0.4	U			R10	4.0	74De22	
$^{60}\text{Ni H}-^{59}\text{Co}$	5310	40	5416.63	0.22	0.7	U			R10	4.0	74De22	
$^{60}\text{Ni}(p,\alpha)^{57}\text{Co}$	-263.6	0.7	-263.5	0.4	0.1	1	37	^{34}Co	NDm		74Jo14	
$^{58}\text{Fe}(t,p)^{60}\text{Fe}$	6907	15	6919	3	0.8	2			LAI		71Ca19	
	6947	10			-2.8	2			MSU		76St11	
	6913	4			1.4	2			LAI		78No05	
$^{60}\text{Ni}(d,\alpha)^{58}\text{Co}$	6084.5	2.2	6084.8	1.1	0.2	1	25	^{25}Co	NDm		74Jo14	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{58}\text{Ni}(t,p)^{60}\text{Ni}$	11905	10	11905.22	0.07	0.0		Ald		71Da16		
$^{60}\text{Ni}(p,t)^{58}\text{Ni}^i$	-20735	40							74Ko08 *		
$^{60}\text{Ni}(p,t)^{58}\text{Ni}^j$	-26444	7							84Ka07 *		
$^{58}\text{Ni}(^3\text{He},p)^{60}\text{Cu}$	5770	12	5758.6	1.6	-0.9		CIT		67Mi02		
	5746	20			0.6		MIT		68Yo01		
$^{58}\text{Ni}(^3\text{He},p)^{60}\text{Cu}^i$	3210	10	3218	5	0.8	1	26	$^{26}\text{Cu}^i$	MIT	68Yo01	
$^{58}\text{Ni}(^3\text{He},n)^{60}\text{Zn}$	818	18	805.5	0.4	-0.7		CIT		67Mi02		
	821	13			-1.2		Oak		72Gr39		
$^{58}\text{Ni}(^3\text{He},n)^{60}\text{Zn}^j$	-6562	24							74Ev02 *		
$^{59}\text{Co}(n,\gamma)^{60}\text{Co}$	7491.88	0.08	7491.92	0.07	0.5	2			84Ko29 Z		
	7492.05	0.15			-0.9	2			Bdn	06Fi.A	
$^{59}\text{Co}(d,p)^{60}\text{Co}$	5267	11	5267.35	0.07	0.0	U			MIT	64Sp12	
	5272	8			-0.6	U			Kop	67Ha.A	
$^{59}\text{Co}(p,\gamma)^{60}\text{Ni}^i$	-1594	4								67Ar01	
$^{59}\text{Ni}(n,\gamma)^{60}\text{Ni}$	11387.6	0.4	11387.73	0.05	0.3	U				75Wi06 Z	
	11387.73	0.05			0.0	1	99	^{56}Ni	ORn	04Ra23	
$^{60}\text{Ni}(p,d)^{59}\text{Ni}$	-9180	50	-9163.17	0.05	0.3	U			Pri	64Le10	
$^{60}\text{Ni}(d,t)^{59}\text{Ni}$	-5130.2	2.1	-5130.50	0.05	-0.1	U			NDm	74Jo14	
$^{60}\text{Ni}(p,d)^{59}\text{Ni}^i$	-16505.1	2.1								78Ik02 *	
$^{60}\text{Mn}(\beta^-)^{60}\text{Fe}$	8234	86	8444	4	2.4	U			ANB	78No03 *	
$^{60}\text{Co}(\beta^-)^{60}\text{Ni}$	2823.6	1.0	2822.81	0.21	-0.8	U				68Wo02 *	
$^{60}\text{Cu}(\beta^+)^{60}\text{Ni}$	6250	40	6128.0	1.6	-3.1	B				54Nu26	
$^{60}\text{Ni}(p,n)^{60}\text{Cu}$	-6912	20	-6910.3	1.6	0.1	U			ChR	58Go77	
	-6909	10			-0.1	U			Ric	66Ri09	
	-6910.3	1.6				2			Yal	69Ov01 Z	
$^{60}\text{Ni}(^3\text{He},t)^{60}\text{Cu}^i$	-8685	6	-8688	5	-0.5	1	74	$^{74}\text{Cu}^i$		71Be29 *	
$^{60}\text{Zn}(\beta^+)^{60}\text{Cu}$	4166	64	4170.8	1.6	0.1	U				86Ka38	
* $^{60}\text{V}-u$	Original -33800(700) μu or $M=-31500(650)$ keV									GAu	**
* $^{60}\text{V}-u$	Original -35500(600) μu or $M=-33070(560)$ keV									GAu	**
* $^{60}\text{V}-u$	$M-A=-32700(470)$ keV for mixture $gs+m+n$ at 0#150 and 202.1(1.0) keV									Nub126	**
* $^{60}\text{V}-u$	$M-A=-33010(390)$ keV for mixture $gs+m+n$ at 0#150 and 202.1(1.0) keV									Nub126	**
* $^{60}\text{Mn}-u$	$M-A=-52540(230)$ keV for mixture $gs+m$ at 271.90 keV									Nub126	**
* $^{60}\text{Mn}-u$	$M-A=-52780(260)$ keV for mixture $gs+m$ at 271.90 keV									Nub126	**
* $^{60}\text{Mn}-u$	$M-A=-52520(250)$ keV for mixture $gs+m$ at 271.90 keV									Nub126	**
* $^{60}\text{Mn}-^{39}\text{K}_{1.538}$	$D_M=-752.1(2.5)$ μu for $^{60}\text{Mn}^m$ at 271.90 keV; $M-A=-52695.9(2.4)$ keV									Nub127	**
* $^{60}\text{Co}-u$	$M-A=-61800(260)$ keV for mixture $gs+m$ at 58.59 keV									Nub126	**
* $^{60}\text{Ni}(p,t)^{58}\text{Ni}^i$	IT=8830(40); Q rebuilt with Ame1971									MMC124**	
* $^{60}\text{Ni}(p,t)^{58}\text{Ni}^j$	IT=14537(7); Q rebuilt with Ame1977									MMC124**	
* $^{58}\text{Ni}(^3\text{He},n)^{60}\text{Zn}^j$	IT=7380(30); Q rebuilt with Ame1971									MMC124**	
* $^{60}\text{Ni}(p,d)^{59}\text{Ni}^i$	Strongest fragment IT=7341; Q rebuilt with Ame1977									MMC129**	
* $^{60}\text{Mn}(\beta^-)^{60}\text{Fe}$	$E_{\beta^-}=5714(86)$ from $^{60}\text{Mn}^m$ at 271.9(0.1) to 2792.4 level									Ens03b	**
* $^{60}\text{Co}(\beta^-)^{60}\text{Ni}$	$E_{\beta^-}=317.88(0.10)$ to 4^+ level at 2505.766 keV									Ens03b	**
* $^{60}\text{Ni}(^3\text{He},t)^{60}\text{Cu}^i$	CDE=9454(6) Q=-8690(6); recalibration +5 keV for $^{58}\text{Ni}(p,n)^{58}\text{Cu}^i$ from Ame1961									MMC123**	
$^{61}\text{V}-u$	-32750	960				2			MT1	1.0	11Es06
$^{61}\text{Cr}-u$	-44500	400	-45580	140	-1.8	2			TO3	1.5	90Tu01
	-45910	300			0.7	2			TO5	1.5	94Se12
	-45120	280			-1.1	2			TO6	1.5	98Ba.A
	-45679	107			0.6	2			GT1	1.5	04Ma.A
$^{61}\text{Mn}-u$	-55160	300	-55547.5	2.5	-0.9	U			TO3	1.5	90Tu01
	-55540	280			0.0	U			TO5	1.5	94Se12
	-55320	270			-0.6	U			TO6	1.5	98Ba.A
$^{61}\text{Mn}-^{39}\text{K}_{1.564}$	1215.6	2.5				2			MA8	1.0	12Na15
$^{61}\text{Fe}-^{39}\text{K}_{1.564}$	-6490.7	2.8				2			MA8	1.0	12Na15
$\text{C}_5\text{H}_3\text{N}_2\text{O}_2-^{61}\text{Ni}$	85373	14	85322.8	0.5	-0.9	U			R10	4.0	74De22
$\text{C}_5\text{H}-^{61}\text{Ni}$	76810	10	76769.5	0.5	-1.0	U			R10	4.0	74De22
$^{61}\text{Ga}-u$	-50654	59	-50600	40	0.9	1	48	^{48}Ga	LZ1	1.0	11Tu09
$^{60}\text{Ni}\text{H}-^{61}\text{Ni}$	7539	14	7555.35	0.05	0.3	U			R10	4.0	74De22

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{61}\text{Ni}-^{60}\text{Ni}$	339	60	269.69	0.05	-0.3	U			R10	4.0	74De22
$^{61}\text{Ni}-^{58}\text{Ni}$ H	-12187	30	-12111.88	0.09	0.6	U			R10	4.0	74De22
$^{61}\text{Ni}-^{59}\text{Co}$	-2220	30	-2138.72	0.22	0.7	U			R10	4.0	74De22
$^{58}\text{Ni}(\alpha, n)^{61}\text{Zn}$	-9810	30	-9526	16	9.5	B			Oak		64St01
$^{58}\text{Ni}(^6\text{Li}, t)^{61}\text{Zn}$	-4736	23	-4742	16	-0.3	R			LAI		78Wo01
$^{59}\text{Co}(^3\text{He}, p)^{61}\text{Ni}$	9635	10	9634.45	0.21	-0.1	U			MIT		67Sp09
$^{60}\text{Ni}(n, \gamma)^{61}\text{Ni}$	7820.22	0.40	7820.11	0.05	-0.3	U					75Wi06 Z
	7819.96	0.20			0.7	U			MMn		77Is01 Z
	7820.02	0.20			0.4	U			ILn		93Ha05 Z
	7820.11	0.05			-0.1	-			ORn		04Ra23
	7820.06	0.16			0.3	-			Bdn		06Fi.A
$^{60}\text{Ni}(d, p)^{61}\text{Ni}$	5604	8	5595.54	0.05	-1.1	U			MIT		70An25
	5596.1	1.3			-0.4	U			NDm		74Jo14
$^{60}\text{Ni}(n, \gamma)^{61}\text{Ni}$	ave.	7820.11	0.05	7820.11	0.05	0.0	1	100	70 ^{61}Ni		average
$^{61}\text{Ga}(p)^{60}\text{Zn}$	3110	30				2					87Ho.A
$^{61}\text{Fe}(\beta^-)^{61}\text{Co}$	3827	100	3977.1	2.8	1.5	U					67Eh02 *
	3887	100			0.9	U					67Gu06 *
$^{61}\text{Co}(\beta^-)^{61}\text{Ni}$	1290	40	1323.7	0.8	0.8	U					56Nu02
$^{61}\text{Cu}(\beta^+)^{61}\text{Ni}$	2227	5	2237.5	1.0	2.1	U					50Ow03
$^{61}\text{Ni}(p, n)^{61}\text{Cu}$	-3024.0	4.	-3019.8	1.0	1.0	U			Oak		64Jo11 Z
$^{61}\text{Ni}(^3\text{He}, t)^{61}\text{Cu}^i$	-8630	7				2					71Be29 *
$^{61}\text{Zn}(\beta^+)^{61}\text{Cu}$	5400	200	5635	16	1.2	U					59Cu86
$^{61}\text{Ga}(\beta^+)^{61}\text{Zn}$	9255	50	9210	40	-0.8	1	57	52 ^{61}Ga			02We07
$^{*61}\text{Fe}(\beta^-)^{61}\text{Co}$	E $_{\beta^-}$ =2800(100) 2860(100) respectively, to 3/2 $^-$ level at 1027.48 keV										
$^{*61}\text{Ni}(^3\text{He}, t)^{61}\text{Cu}^i$	Strongest fragment IT=6380(7); Q rebuilt with Ame1964										
*	recalibration +5 keV for $^{58}\text{Ni}(p, n)^{58}\text{Cu}^i$ from Ame1961										
$^{62}\text{Cr-u}$	-42400	600	-43900	160	-1.7	2			TO3	1.5	90Tu01
	-44200	400			0.5	2			TO5	1.5	94Se12
	-43100	350			-1.5	2			TO6	1.5	98Ba.A
	-44026	118			0.7	2			GT1	1.5	04Ma.A
$^{62}\text{Mn-u}$	-51510	270	-52050#	160#	-1.3	U			TO3	1.5	90Tu01
	-52030	280			0.0	U			TO5	1.5	94Se12
	-51180	280			-2.1	U			TO6	1.5	98Ba.A
$^{62}\text{Mn}^m-^{39}\text{K}_{1.590}$	5982.3	2.8				2			MA8	1.0	12Na15
$^{62}\text{Fe}-^{39}\text{K}_{1.590}$	-5501.5	3.0				2			MA8	1.0	12Na15
$\text{C}_5\text{H}_2-^{62}\text{Ni}$	87299	10	87304.7	0.6	0.1	U			R10	4.0	74De22
$\text{C}_4\text{H}_4\text{N}_2\text{O}_2-^{62}\text{Ni}$	95859	12	95858.0	0.6	0.0	U			R10	4.0	74De22
$^{62}\text{Cu}-^{62}\text{Ni}$	4250.05	0.51				2			JY1	1.0	06Er03
$^{62}\text{Zn}-^{62}\text{Ni}$	5988.49	0.58	5988.6	0.5	0.2	1	68	68 ^{62}Zn	JY1	1.0	06Er03
$^{62}\text{Ga}-^{62}\text{Ni}$	15845.06	0.71	15844.9	0.5	-0.2	1	52	52 ^{62}Ga	JY1	1.0	06Er03
$^{62}\text{Ga}-^{62}\text{Zn}$	9856.21	0.45	9856.3	0.4	0.2	1	81	48 ^{62}Ga	JY1	1.0	06Er03
$^{62}\text{Ni}-^{61}\text{Ni}$	-2669	15	-2710.2	0.3	-0.7	U			R10	4.0	74De22
$^{62}\text{Ni}-^{60}\text{Ni}$	-2333	30	-2440.5	0.3	-0.9	U			R10	4.0	74De22
$^{62}\text{Ni}(p, \alpha)^{59}\text{Co}$	342	10	347.3	0.4	0.5	U			MIT		64Sp12
	343.3	0.7			5.7	B			NDm		74Jo14
$^{59}\text{Co}(\alpha, p)^{62}\text{Ni}$	-346.5	2.3	-347.3	0.4	-0.4	U			NDm		74Jo14
$^{62}\text{Ni}(^{18}\text{O}, ^{20}\text{Ne})^{60}\text{Fe}$	911	20	926	3	0.7	U			Hei		84Ha31
$^{62}\text{Ni}(d, \alpha)^{60}\text{Co}$	5611.2	2.4	5614.7	0.4	1.4	U			NDm		74Jo14
$^{60}\text{Ni}(t, p)^{62}\text{Ni}$	9937	10	9934.2	0.3	-0.3	U			Ald		71Da16
$^{60}\text{Ni}(^3\text{He}, p)^{62}\text{Cu}$	5938	25	5956.7	0.6	0.7	U			MIT		67Sp09
$^{60}\text{Ni}(^3\text{He}, n)^{62}\text{Zn}$	3580	30	3554.9	0.5	-0.8	U			Oak		72Gr39
$^{62}\text{Ni}(^{14}\text{C}, ^{15}\text{O})^{61}\text{Fe}$	-7921	100	-7661.1	2.7	2.6	F			Ors		84De33 *
$^{62}\text{Ni}(t, \alpha)^{61}\text{Co}$	8689	20	8676.7	0.7	-0.6	U			LAI		66B115
$^{61}\text{Ni}(n, \gamma)^{62}\text{Ni}$	10596.2	1.5	10595.9	0.3	-0.2	-					70Fa06
	10595.8	0.7			0.1	-					75Wi06 Z
	10595.6	0.4			0.6	-			Bdn		06Fi.A
$^{61}\text{Ni}(d, p)^{62}\text{Ni}$	8379	8	8371.3	0.3	-1.0	U			MIT		64Sp12
	8369	15			0.2	U			Ald		67Te02
$^{62}\text{Ni}(d, t)^{61}\text{Ni}$	-4340.6	1.3	-4338.6	0.3	1.5	-			NDm		74Jo14
$^{61}\text{Ni}(n, \gamma)^{62}\text{Ni}$	ave.	10595.8	0.3	10595.9	0.3	0.1	1	90	60 ^{62}Ni		average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{62}\text{Fe}(\beta^-)^{62}\text{Co}$	3000	200	2546	19	-2.3	U			75Fr16
$^{62}\text{Co}(\beta^-)^{62}\text{Ni}$	5195	30	5322	19	4.2	C			57Ga15 *
$^{62}\text{Ni}(t,^3\text{He})^{62}\text{Co}$	-5350	50	-5303	19	0.9	2			72Ba31
	-5296	20			-0.4	2	LAl		76Aj03
$^{62}\text{Cu}(\beta^+)^{62}\text{Ni}$	3932	10	3958.9	0.5	2.7	U			54Nu27
	3942	10			1.7	U			64Sa32
	3956	7			0.4	U			67An01
$^{62}\text{Ni}(p,n)^{62}\text{Cu}$	-4733	10	-4741.2	0.5	-0.8	U	Bar		61Ri02
	-4734.8	10.			-0.6	U	Ric		66Ri09
$^{62}\text{Ni}(^3\text{He},t)^{62}\text{Cu}^i$	-8591	6				2			71Be29 *
$^{62}\text{Zn}(\beta^+)^{62}\text{Cu}$	1682	10	1619.5	0.7	-6.3	B			50Ha65
	1697	10			-7.8	B			54Nu27
$^{62}\text{Ga}(\beta^+)^{62}\text{Zn}$	9171	26	9181.1	0.4	0.4	U	ANB		79Da04
$^{62}\text{Ni}(^{14}\text{C},^{15}\text{O})^{61}\text{Fe}$	F : not unambiguously ground state transition								
$^{62}\text{Co}(\beta^-)^{62}\text{Ni}$	$E_{\beta^-}=5217(30)$ from $^{62}\text{Co}^m$ at 22(5) keV								
$^{62}\text{Ni}(^3\text{He},t)^{62}\text{Cu}^i$	CDE=9360(6) Q=-8596(6); recalibration +5 keV for $^{58}\text{Ni}(p,n)^{58}\text{Cu}^i$ from Ame1961								
$^{63}\text{Cr-u}$	-38819	462	-38350	490	0.7	2			04Ma.A
	-37870	700			-0.7	2	GT1	1.5	11Es06
$^{63}\text{Mn-u}$	-49300	400	-50335	4	-1.7	U	MT1	1.0	90Tu01
	-50190	300			-0.3	U	TO3	1.5	94Se12
	-49600	290			-1.7	U	TO5	1.5	98Ba.A
	-50500	107			1.0	o	TO6	1.5	04Ma.A
	-50829	102			3.2	C	GT1	1.5	08Kn.A
$^{63}\text{Mn}-^{39}\text{K}_{1.615}$	8278.7	4.0				2	GT2	1.5	12Na15
$^{63}\text{Fe-u}$	-59190	240	-59727	5	-1.5	U	MA8	1.0	90Tu01
	-59570	290			-0.4	U	TO3	1.5	94Se12
	-58990	300			-1.6	U	TO5	1.5	98Ba.A
$^{63}\text{Fe}-^{39}\text{K}_{1.615}$	-1114.5	6.1	-1113	5	0.2	1	TO6	1.5	12Na15
$^{63}\text{Fe}-\text{H C}_2 \text{ F}_2$	-64354	10	-64359	5	-0.5	o	57	57 ^{63}Fe	MA8
	-64353	10			-0.6	1	21	21 ^{63}Fe	MS1
$^{63}\text{Fe}-\text{C }^{32}\text{S F}$	-30204	10	-30202	5	0.2	1	21	21 ^{63}Fe	MS1
$\text{C}_5 \text{ H}_3 -^{63}\text{Cu}$	93930	4	93877.4	0.6	-3.3	B			10Fe01
$\text{C}_4 \text{ H N} -^{63}\text{Cu}$	81347	10	81301.3	0.6	-1.1	U	R10	4.0	74De22
$\text{C}_4 \text{ }^{13}\text{C H}_2 -^{63}\text{Cu}$	89466	14	89407.2	0.6	-1.1	U	R10	4.0	74De22
$\text{C}_2 \text{ H}_7 \text{ O}_2 -^{63}\text{Cu}$	115064	16	115006.7	0.6	-0.9	U	R10	4.0	74De22
$^{13}\text{C C H}_8 \text{ O N} -^{63}\text{Cu}$	134404	18	134346.0	0.6	-0.8	U	R10	4.0	74De22
$^{47}\text{Ti O} -^{63}\text{Cu}$	17036	23	17075.7	0.6	0.4	U	R09	4.0	72De11
$^{63}\text{Ga}-^{85}\text{Rb}_{.741}$	4658.0	1.4				2	MA8	1.0	07Gu09
$\text{C}_5 \text{ H}_2 -^{63}\text{Ga}_{.984}$	75382.6	6.7	75384.6	1.4	0.3	U	MS1	1.0	07Sc24
$^{63}\text{Ge-u}$	-50372	40				2	LZ1	1.0	11Tu02
$^{63}\text{Cu}-^{62}\text{Ni}$	1193	35	1252.36	0.07	0.4	U	R10	4.0	74De22
$^{63}\text{Cu}-^{61}\text{Ni}$	-1449	30	-1457.8	0.3	-0.1	U	R10	4.0	74De22
$^{63}\text{Cu}(p,\alpha)^{60}\text{Ni}$	3757	8	3757.3	0.3	0.0	U	MIT		64Sp12
	3780	10			-2.3	U	Min		67Jo03
	3754.9	1.5			1.6	U	NDm		76Jo01
$^{60}\text{Ni}(\alpha,n)^{63}\text{Zn}$	-7970	40	-7905.8	1.6	1.6	U	Oak		64St01
	-7910	20			0.2	U			67Bi04
$^{63}\text{Cu}(d,\alpha)^{61}\text{Ni}$	9376	30	9352.8	0.3	-0.8	U			67Hj01
$^{62}\text{Ni}(n,\gamma)^{63}\text{Ni}$	6838.04	0.20	6837.78	0.06	-1.3	-	MMn		77Is01 Z
	6837.88	0.18			-0.6	-	ILn		92Ha21 Z
	6837.89	0.14			-0.8	-	Bdn		06Fi.A
$^{62}\text{Ni}(d,p)^{63}\text{Ni}$	4620	6	4613.21	0.06	-1.1	U	MIT		70An25
	4614.0	1.1			-0.7	U	NDm		74Jo14
$^{62}\text{Ni}(n,\gamma)^{63}\text{Ni}$	ave.	6837.92	6837.78	0.06	-1.5	1	41	27 ^{63}Ni	average
$^{62}\text{Ni}(p,\gamma)^{63}\text{Cu}$	6119.2	1.5	6122.41	0.06	2.1	U			72Ki15
	6122.30	0.08			1.3	1	60	39 ^{63}Cu	86De14 Z
$^{63}\text{Cu}(\gamma,n)^{62}\text{Cu}$	-10833	17	-10863.6	0.5	-1.8	U	Phi		60Ge01

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{63}\text{Co}(\beta^-)^{63}\text{Ni}$	3590	50	3661	19	1.4	1	14	14 ^{63}Co			69Ki.A
$^{63}\text{Ni}(\beta^-)^{63}\text{Cu}$	65.87	0.15	66.977	0.015	7.4	B					66Hs01
	66.946	0.020			1.5	o					87He14
	66.945	0.004			7.9	F					92Ka29 *
	66.9459	0.0054			5.7	F					93Oh02 *
	66.980	0.015			-0.2	1	99	58 ^{63}Ni			99Ho09
$^{63}\text{Zn}(\beta^+)^{63}\text{Cu}$	3352	20	3366.2	1.5	0.7	U					61Cu02
	3390	30			-0.8	U					61Va08
$^{63}\text{Cu}(p,n)^{63}\text{Zn}$	-4146.5	4.	-4148.5	1.5	-0.5	-			Ric		55Br16
	-4139.5	8.			-1.1	U			Oak		55Ki28 Z
	-4150.1	4.4			0.4	-			Tkm		63Ok01
ave.	-4148.1	2.9			-0.1	1	28	27 ^{63}Zn			average
$^{63}\text{Cu}(\beta^+)^{63}\text{Zn}$	-8875	6				2					71Be29 *
$^{63}\text{Ga}(\beta^+)^{63}\text{Zn}$	5520	100	5666.0	2.0	1.5	U					72Fi.A
$^{63}\text{Ni}(\beta^-)^{63}\text{Cu}$	F : excitation of atomic electron not taken into account										99Ho09 **
$^{63}\text{Cu}(\beta^+)^{63}\text{Zn}$	CDE=9644(6) Q=-8880(6); recalibration +5 keV for $^{58}\text{Ni}(p,n)^{58}\text{Cu}^i$ from Ame1961										MMC124**
$^{64}\text{Mn-u}$	-45340	350	-46151	4	-1.5	U			TO3	1.5	90Tu01 *
	-46340	350			0.4	U			TO5	1.5	94Se12 *
	-45664	306			-1.1	U			TO6	1.5	98Ba.A *
	-46280	129			0.7	U			GT1	1.5	04Ma.A
$^{64}\text{Mn}-^{85}\text{Rb}_{.753}$	20271.7	3.8				2			MA8	1.0	12Na15
$^{64}\text{Fe-u}$	-58600	400	-59012	5	-0.7	U			TO3	1.5	90Tu01
	-59130	300			0.3	U			TO5	1.5	94Se12
	-58500	350			-1.0	U			TO6	1.5	98Ba.A
	-59012.2	5.3			0.0	o			MS1	1.0	08Bi05
$\text{H C}_2 \text{ F}_2 - ^{64}\text{Fe}_{.984}$	62699.4	5.3				2			MS1	1.0	10Fe01
$^{64}\text{Co}^m\text{-u}$	-64075.5	4.5	-64075	4	0.1	o			MS1	1.0	08Bi05
$\text{H C}_2 \text{ F}_2 - ^{64}\text{Co}^m_{.984}$	67681.6	4.6	67681	4	-0.1	1	87	87 $^{64}\text{Co}^m$	MS1	1.0	10Fe01
$^{64}\text{Co}^m - ^{32}\text{S O}_2$	-25974	12	-25976	4	-0.1	1	13	13 $^{64}\text{Co}^m$	MS1	1.0	10Fe01
$\text{C}_5 \text{ H}_4 - ^{64}\text{Ni}$	103278	10	103333.3	0.6	1.4	U			R10	4.0	74De22
$\text{C}_4 \text{ }^{13}\text{C H}_3 - ^{64}\text{Ni}$	98809	12	98863.1	0.6	1.1	U			R10	4.0	74De22
$\text{C}_4 \text{ H}_2 \text{ N} - ^{64}\text{Ni}$	90703	16	90757.3	0.6	0.8	U			R10	4.0	74De22
$^{64}\text{Ni}-^{85}\text{Rb}_{.753}$	-5609.2	1.4	-5610.9	0.6	-1.2	1	17	17 ^{64}Ni	MA8	1.0	07Gu09
$^{64}\text{Zn}-^{85}\text{Rb}_{.753}$	-4430.1	8.4	-4435.7	0.7	-0.7	U			MA8	1.0	07Ke09
$^{64}\text{Ga}-^{85}\text{Rb}_{.753}$	3261.3	2.5	3262.8	1.5	0.6	1	38	38 ^{64}Ga	MA8	1.0	07Gu09
$\text{C}_5 \text{ H}_2 - ^{64}\text{Ga}_{.969}$	76851.5	2.6	76851.7	1.5	0.1	1	33	33 ^{64}Ga	MS1	1.0	07Sc24
$^{64}\text{Ge-u}$	-57090	690	-58310	4	-1.8	U			GA6	1.0	02Li24
$\text{H } ^{32}\text{S O}_2 - ^{64}\text{Ge H}$	20210.5	4.0				2			MS1	1.0	07Sc24
$^{64}\text{Ge}-^{85}\text{Rb}_{.753}$	8070	43	8112	4	1.0	U			MS1	1.0	12Sc.A
$^{64}\text{Ga}-^{64}\text{Zn}$	7698.5	4.1	7698.4	1.6	0.0	1	15	13 ^{64}Ga	CP1	1.0	07Cl01
$^{64}\text{Ge}-^{64}\text{Zn}$	12517	33	12548	4	0.9	U			CP1	1.0	07Cl01
$^{64}\text{Ni}-^{63}\text{Cu}$	-1523	30	-1630.91	0.22	-0.9	U			R10	4.0	74De22
$^{64}\text{Ga}-^{63}\text{Ga}$	-2730	150	-2453.8	2.1	0.7	U			CR1	2.5	89Sh10
$^{64}\text{Ni}-^{62}\text{Ni}$	-352	25	-378.55	0.23	-0.3	U			R10	4.0	74De22
$^{64}\text{Ni}(\beta^+)^{63}\text{Mn}$	-19610	30	-19563.5	2.6	1.5	U			MSU		76Ka24
$^{64}\text{Ni}(\beta^+)^{60}\text{Fe}$	-6511	10	-6524	3	-1.3	R			MSU		76St11
$^{64}\text{Ni}(\alpha, \beta)^{61}\text{Fe}$	-21523	20	-21522.1	2.7	0.0	U			Tex		77Co08
$^{64}\text{Ni}(\alpha, \beta)^{61}\text{Fe}$	-4609	100	-4349.3	2.7	2.6	U			Ors		84Be.A *
$^{64}\text{Ni}(p, \alpha)^{61}\text{Co}$	663.2	0.7				2			NDm		74Jo14
$^{64}\text{Zn}(p, \alpha)^{61}\text{Cu}$	830	15	844.1	0.7	0.9	U					67Br10
	830	10			1.4	U			Min		67Jo03
	844.1	0.7				2			NDm		76Jo01
$^{64}\text{Zn}(\beta^+)^{61}\text{Zn}$	-12331	23	-12316	16	0.7	-			MSU		79We02
ave.	-12320	16			0.3	1	95	95 ^{61}Zn			average
$^{64}\text{Ni}(\beta^+)^{62}\text{Fe}$	-4930	70	-4898.0	2.9	0.5	U			Tex		77Co08
$^{64}\text{Ni}(\beta^+)^{62}\text{Fe}$	-501	40	-463.5	2.8	0.9	U			Ors		81Be40

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{64}\text{Ni}(^{18}\text{O}, ^{20}\text{Ne})^{62}\text{Fe}$	-1915	50	-1961.3	2.8	-0.9	U			Can		76Hi14
	-1920	21			-2.0	U			Hei		77Bh03 *
	-1947	26			-0.6	U			Hei		84Ha31
$^{64}\text{Ni}(d, \alpha)^{62}\text{Co}$	5190	20	5036	19	-7.7	B					72Ba31
$^{62}\text{Ni}(t, p)^{64}\text{Ni}$	7999	20	8013.45	0.21	0.7	U			Ald		71Da16
$^{62}\text{Ni}(^3\text{He}, p)^{64}\text{Cu}$	6299	25	6320.48	0.11	0.9	U			MIT		67Sp09
$^{62}\text{Ni}(^3\text{He}, n)^{64}\text{Zn}$	6118	12	6117.8	0.7	0.0	U			Oak		72Gr39
$^{64}\text{Zn}(d, \alpha)^{62}\text{Cu}$	7508	15	7494.0	0.8	-0.9	U			MIT		67Sp09
$^{64}\text{Zn}(p, t)^{62}\text{Zn}$	-12493	10	-12497.1	0.8	-0.4	U			Bld		72Fa08
$^{64}\text{Ni}(^{14}\text{C}, ^{15}\text{O})^{63}\text{Fe}$	-11387	60	-11299	4	1.5	U			Ors		82De.A *
$^{64}\text{Ni}(^{34}\text{S}, ^{35}\text{Ar})^{63}\text{Fe}$	-17931	260	-18347	4	-1.6	U			Hei		83Wi.B
$^{64}\text{Ni}(t, \alpha)^{63}\text{Co}$	7266	20	7277	19	0.6	1	86	86 ^{63}Co	LAI		66B115
$^{63}\text{Ni}(n, \gamma)^{64}\text{Ni}$	9657.32	0.4	9657.47	0.20	0.4	-					75W106 Z
	9657.58	0.24			-0.4	-			ILn		92Ha21
	ave.	0.21			-0.2	1	98	83 ^{64}Ni			average
$^{63}\text{Cu}(n, \gamma)^{64}\text{Cu}$	7916.07	0.12	7916.11	0.10	0.4	-			BNn		83De28 Z
	7915.52	0.08			7.4	B					02Bo11
	7916.14	0.16			-0.2	-			Bdn		06Fi.A
$^{63}\text{Cu}(d, p)^{64}\text{Cu}$	5697	8	5691.55	0.10	-0.7	U			MIT		64Sp12
$^{63}\text{Cu}(n, \gamma)^{64}\text{Cu}$	ave.	0.10	7916.11	0.10	0.2	1	99	86 ^{64}Cu			average
$^{64}\text{Zn}(n, d)^{63}\text{Cu}$	-5520	50	-5488.9	0.7	0.6	U					65Wa14
$^{64}\text{Zn}(d, t)^{63}\text{Zn}$	-5604.9	1.7	-5604.8	1.5	0.1	1	76	73 ^{63}Zn	NDm		76Jo01
$^{64}\text{Co}(\beta^-)^{64}\text{Ni}$	7000	500	7307	20	0.6	U					69Wa15
	7000	400			0.8	U					74Ra31
$^{64}\text{Ni}(t, ^3\text{He})^{64}\text{Co}$	-7288	20				2			LAI		72Fi17
$^{64}\text{Cu}(\beta^+)^{64}\text{Ni}$	1673.4	1.0	1674.38	0.23	1.0	U					83Ch47
$^{64}\text{Ni}(p, n)^{64}\text{Cu}$	-2458	6	-2456.73	0.23	0.2	U					61Va19
	-2458.22	0.31			4.8	B			PTB		92Bo02 Z
$^{64}\text{Cu}(\beta^-)^{64}\text{Zn}$	577.8	1.0	579.7	0.7	1.9	1	44	30 ^{64}Zn			83Ch47
$^{64}\text{Ga}(\beta^+)^{64}\text{Zn}$	7072	30	7171.0	1.5	3.3	B					60Ja07
$^{64}\text{Zn}(p, n)^{64}\text{Ga}$	-7951	4	-7953.4	1.5	-0.6	1	14	12 ^{64}Ga	Tex		72Da.A
$^{64}\text{Zn}(^3\text{He}, t)^{64}\text{Ga}$	-7206	8	-7189.6	1.5	2.0	U			MSU		74Ro16 *
$^{64}\text{Zn}(^3\text{He}, t)^{64}\text{Ga}^i$	-9141	17	-9096.7	2.5	2.6	U			MIT		70Hi06
	-9110	6			2.2	1	17	17 $^{64}\text{Ga}^i$			71Be29 *
$^{64}\text{Ga}^i(\text{IT})^{64}\text{Ga}$	1905.1	2.3	1907.1	2.2	0.9	1	88	83 $^{64}\text{Ga}^i$			74Ro16
$^{64}\text{Ge}(\beta^+)^{64}\text{Ga}$	4410	250	4517	4	0.4	U					73Da01 *
* $^{64}\text{Mn-u}$	Original -45270(350) μu or $M=-42170(330)$ keV										GAu **
* $^{64}\text{Mn-u}$	Original -46270(350) μu or $M=-43100(330)$ keV										GAu **
* $^{64}\text{Mn-u}$	$M-A=-42430(280)$ keV for mixture gs+m at 175(10) (4^+) keV										Nub127 **
* $^{64}\text{Ni}(^{14}\text{C}, ^{17}\text{O})^{61}\text{Fe}$	Cited in reference and confirmed in PrvCom sep 88										84De33 **
* $^{64}\text{Ni}(^{18}\text{O}, ^{20}\text{Ne})^{62}\text{Fe}$	$Q-Q(^{62}\text{Ni}(^{18}\text{O}, ^{20}\text{Ne}))=-2843(20)$, $Q(62)=923(4)$ keV										AHW **
* $^{64}\text{Ni}(^{14}\text{C}, ^{15}\text{O})^{63}\text{Fe}$	Original -11743(60) reinterpreted as ($3/2^-$) 356.2 level in ^{63}Fe										GAu **
* $^{64}\text{Zn}(^3\text{He}, t)^{64}\text{Ga}$	$M-A=-58819(8)$; Q rebuilt with Ame1971										GAu **
* $^{64}\text{Zn}(^3\text{He}, t)^{64}\text{Ga}^i$	CDE=9879(6) $Q=-9115(6)$; recalibration +5 keV for $^{58}\text{Ni}(p, n)^{58}\text{Cu}^i$ from Ame1961										MMC124**
* $^{64}\text{Ge}(\beta^+)^{64}\text{Ga}$	$E_{\beta^+}=2960(250)$ to (1^+) level at 427.03 keV										Ens073 **
$^{65}\text{Mn-u}$	-43900	600	-43980	4	-0.1	U			TO5	1.5	94Se12
	-43500	500			-0.6	U			TO6	1.5	98Ba.A
	-43790	330			-0.6	U			MT1	1.0	11Es06
$^{65}\text{Mn}-^{85}\text{Rb}_{.765}$	23500.6	4.0				2			MA8	1.0	12Na15
$^{65}\text{Fe-u}$	-54680	300	-54989	7	-0.7	U			TO3	1.5	90Tu01 *
	-55280	320			0.6	U			TO5	1.5	94Se12 *
	-54290	380			-1.2	U			TO6	1.5	98Ba.A *
	-54988.9	7.1			0.1	o			MS1	1.0	08Bi05
$\text{O}_2-^{65}\text{Fe}_{.492}$	16883.6	3.6				2			MS1	1.0	10Fe01
$^{65}\text{Fe}^n\text{-u}$	-54557.0	8.4	-54557	9	0.0	o			MS1	1.0	08Bi05
$\text{O}_2-^{65}\text{Fe}^n_{.492}$	16671.2	4.2				2			MS1	1.0	10Fe01
$^{65}\text{Co-u}$	-63537.9	2.3	-63537.9	2.2	0.0	o			MS1	1.0	08Bi05

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$O_2-^{65}Co_{.492}$	21089.9	1.1				2			MS1	1.0	10Fe01
$^{65}Ni-^{85}Rb_{.765}$	-2438.0	2.4	-2434.0	0.6	1.7	U			MA8	1.0	07Gu09
$C_5 H_5-^{65}Cu$	111384	4	111335.5	0.7	-3.0	B			R10	4.0	74De22
$C_4 H_3 N-^{65}Cu$	98800	8	98759.4	0.7	-1.3	U			R10	4.0	74De22
$C_4 ^{13}C H_4-^{65}Cu$	106921	18	106865.3	0.7	-0.8	U			R10	4.0	74De22
$^{49}Ti O-^{65}Cu$	15030	10	14990.6	0.8	-1.0	U			R09	4.0	72De11
$^{65}Cu-^{85}Rb_{.765}$	-4730.6	1.2	-4729.4	0.7	1.0	1	35	$^{35} ^{65}Cu$	MA8	1.0	07Gu09
$^{65}Ga-^{85}Rb_{.765}$	215.4	1.5	215.4	0.9	0.0	1	35	$^{35} ^{65}Ga$	MA8	1.0	07Gu09
$^{65}Ge-u$	-60080	270	-60631.9	2.3	-2.0	U			GA6	1.0	02Li24
$C_5 H_2-^{65}Ge_{.939}$	72585.2	4.0	72583.4	2.2	-0.5	-			MS1	1.0	07Sc24 *
$C_5 H_5-^{65}Ge_{.985}$	98847.2	4.2	98847.5	2.3	0.1	-			MS1	1.0	07Sc24 *
$C_5 H_2-^{65}Ge_{.939}$	ave. 72584.2	2.9	72583.4	2.2	-0.3	1	57	$^{57} ^{65}Ge$			average
$^{65}Ge H-^{85}Rb_{.776}$	15634.4	6.2	15644.3	2.3	1.6	1	14	$^{14} ^{65}Ge$	MS1	1.0	07Sc24 *
$^{65}Ge O H-^{85}Rb_{.965}$	27237.1	4.3	27230.7	2.3	-1.5	1	29	$^{29} ^{65}Ge$	MS1	1.0	12Sc.A
$^{65}As-u$	-50389	91				2			LZ1	1.0	11Tu02
$^{65}Cu-^{64}Ni$	-275	40	-177.1	0.8	0.6	U			R10	4.0	74De22
$^{65}Cu-^{63}Cu$	-1784	10	-1808.0	0.7	-0.6	U			R10	4.0	74De22
$^{65}Cu(p,\alpha)^{62}Ni$	4345	8	4346.5	0.7	0.2	U			MIT		64Sp12
	4340	10			0.6	U			Min		67Jo03
	4344.6	1.8			1.0	1	14	$^{10} ^{65}Cu$	NDm		76Jo01
$^{62}Ni(\alpha,n)^{65}Zn$	-6510	40	-6480.5	0.7	0.7	U			Oak		64St01
$^{65}Cu(d,\alpha)^{63}Ni$	9012	40	8959.7	0.7	-1.3	U					67Hj01
$^{63}Cu(t,p)^{65}Cu$	9351	25	9345.0	0.7	-0.2	U			Ald		66Bj02
$^{64}Ni(n,\gamma)^{65}Ni$	6097.86	0.20	6098.08	0.14	1.1	2			MMn		77Is01 Z
	6098.28	0.19			-1.0	2			Bdn		06Fi.A
$^{64}Ni(d,p)^{65}Ni$	3876	6	3873.51	0.14	-0.4	U			MIT		64Sp12
	3867	15			0.4	U			Ald		67Te02
	3870	5			0.7	U			MIT		70An25
$^{65}Cu(t,\alpha)^{64}Ni$	12352	11	12359.9	0.7	0.7	U					72He23
$^{65}Cu(\gamma,n)^{64}Cu$	-9896	28	-9910.7	0.7	-0.5	U			Phi		60Ge01
$^{65}Cu(d,t)^{64}Cu$	-3650	60	-3653.4	0.7	-0.1	U			ANL		60Ze02
$^{64}Zn(n,\gamma)^{65}Zn$	7979.3	0.8	7979.33	0.17	0.0	U					71Ot01 Z
	7979.2	0.5			0.3	U					75De.A Z
	7979.28	0.17			0.3	1	98	$^{54} ^{65}Zn$	Bdn		06Fi.A
$^{64}Zn(d,p)^{65}Zn$	5758	10	5754.76	0.17	-0.3	U			ANL		67Vo05
$^{64}Zn(p,\gamma)^{65}Ga$	3942.0	1.0	3942.5	0.6	0.5	-					75We24 Z
	3943.0	1.0			-0.5	-					87Vi01
	ave. 3942.5	0.7			0.0	1	83	$^{65} ^{65}Ga$			average
$^{65}Ge(\epsilon p)^{64}Zn$	2300	100	2236.6	2.3	-0.6	U			ChR		81Ha44
$^{65}As^i(p)^{64}Ge$	3603	30	3576	17	-0.9	3					93Ba12
	3564	20			0.6	3					11Ro47 *
$^{65}Ni(\beta^-)^{65}Cu$	2140	10	2138.2	0.7	-0.2	U					64Fr04
$^{65}Zn(\beta^+)^{65}Cu$	1347	2	1351.7	0.4	2.3	U					49Ma57
	1347	2			2.3	U					53Ba82
	1347	3			1.6	U					53Pe14
	1349	3			0.9	U					53Sa26
	1342	4			2.4	U					53Yu04
	1346	4			1.4	U					56Av28
$^{65}Cu(p,n)^{65}Zn$	-2131.4	1.5	-2134.0	0.4	-1.7	U					56Ma14 Z
	-2135.8	2.5			0.7	U					57Be44 Z
	-2135.3	1.8			0.7	U			Tkm		63Ok01
	-2135.6	1.7			0.9	U			Oak		64Jo11 Z
	-2134.6	0.8			0.7	-			Yal		69Ov01 Z
	-2133.55	0.43			-1.1	-			PTB		89Sc24
	ave. -2133.8	0.4			-0.6	1	91	$^{46} ^{65}Zn$			average
$^{65}Ga(\beta^+)^{65}Zn$	3277	30	3254.5	0.7	-0.8	U					57Da07
$^{65}Ge(\beta^+)^{65}Ga$	5220	400	6179.1	2.3	2.4	U					58Po79
* $^{65}Fe-u$	M-A=-50740(250) keV for mixture gs+m at 396.8(0.5) keV										Nub127 **
* $^{65}Fe-u$	M-A=-51290(280) keV for mixture gs+m at 396.8(0.5) keV										Nub127 **
* $^{65}Fe-u$	M-A=-50370(330) keV for mixture gs+m at 396.8(0.5) keV and assuming ratio R=0.13(6), from half-life=430 ns and TOF=1 μ s										Nub127 **
*											GAu **
* $C_5 H_2-^{65}Ge_{.939}$	For original doublet $C_5 H_2-(^{65}Ge H)0.939$, $D_M=65237.5(4.0) \mu$ s										GAu **
* $C_5 H_5-^{65}Ge_{.985}$	For original doublet $C_5 H_5-(^{65}Ge H)0.985$, $D_M=91139.5(4.2) \mu$ s										GAu **
* $^{65}Ge H-^{85}Rb_{.776}$	Combining their 3 results yields a precision for ^{65}Ge of 2.4 keV, while										GAu **
*	their Table III gives 1.2 keV										GAu **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
* ⁶⁵ As ⁱ (p) ⁶⁴ Ge	And $E_p=2620(30)$ to 901.7 level										11Ro47 **	
⁶⁶ Mn-u	-39860	860	-39453	12	0.5	U		MT1	1.0	11Es06	*	
⁶⁶ Mn- ⁸⁵ Rb. ₇₇₆	28998	12				2		MA8	1.0	12Na15		
⁶⁶ Fe-u	-52300	700	-53750	4	-1.4	U		TO3	1.5	90Tu01		
	-54020	350			0.5	U		TO5	1.5	94Se12		
	-52800	300			-2.1	U		TO6	1.5	98Ba.A		
	-53935	150			0.8	U		GT1	1.5	04Ma.A		
⁶⁶ Fe- ²⁸ Si F ₂	-27482.9	4.4				2		MS1	1.0	10Fe01		
⁶⁶ Co-u	-60470	300	-60557	15	-0.2	U		TO5	1.5	94Se12	*	
	-59870	290			-1.6	U		TO6	1.5	98Ba.A	*	
⁶⁶ Co-O C F ₂	-52278	15	-52278	15	0.0	o		MS1	1.0	08BI05		
	-52278	15				2		MS1	1.0	10Fe01		
⁶⁶ Ni- ⁸⁵ Rb. ₇₇₆	-2409.5	1.5				2		MA8	1.0	07Gu09		
⁶⁶ Cu- ⁸⁵ Rb. ₇₇₆	-2680.6	2.2	-2679.8	0.7	0.4	1	11	11 ⁶⁶ Cu	MA8	1.0	07Gu09	
C ₅ H ₅ - ⁶⁶ Ge. ₉₇₀	103278.9	2.5				2		MS1	1.0	07Sc24	*	
⁶⁶ As-u	-55290	730	-55851	6	-0.8	U		GA6	1.0	02Li24		
⁶⁶ As- ⁸⁵ Rb. ₇₇₆	12607	32	12600	6	-0.2	U		MS1	1.0	07Sc24		
⁶⁶ As O- ⁸⁵ Rb. ₉₆₅	24186.3	6.1				2		MS1	1.0	12Sc.A		
⁶⁶ Zn(p,α) ⁶³ Cu	1544.3	0.8	1544.3	0.8	0.0	1	88	83 ⁶⁶ Zn	NDm		76Jo01	
⁶³ Cu(α,n) ⁶⁶ Ga	-7670	30	-7502	3	5.6	B		Oak			64St01	
⁶⁴ Ni(t,p) ⁶⁶ Ni	6559	25	6568.6	1.5	0.4	U		Ald			71Da16	
⁶⁴ Zn(t,p) ⁶⁶ Zn	10582	15	10556.1	1.0	-1.7	U		Ald			72Hu06	
⁶⁵ Cu(n,γ) ⁶⁶ Cu	7065.80	0.12	7065.93	0.09	1.1	-		BNn			83De29	Z
	7066.13	0.15			-1.3	-		Bdn			06Fi.A	
⁶⁵ Cu(d,p) ⁶⁶ Cu	4837	8	4841.36	0.09	0.5	U		MIT			64Sp12	
⁶⁵ Cu(n,γ) ⁶⁶ Cu	ave.	7065.93	0.09	7065.93	0.09	0.0	100	89 ⁶⁶ Cu			average	
⁶⁶ Zn(d,t) ⁶⁵ Zn	-4770	60	-4801.3	1.0	-0.5	U		ANL			60Ze02	
⁶⁶ Co(β ⁻) ⁶⁶ Ni	9700	500	9598	14	-0.2	U					88Bo06	
⁶⁶ Ni(β ⁻) ⁶⁶ Cu	200	30	251.8	1.5	1.7	U					56Jo20	
⁶⁶ Cu(β ⁻) ⁶⁶ Zn	2650	30	2641.0	1.0	-0.3	U					51Fr19	*
	2650	30			-0.3	U					56Jo20	
⁶⁶ Ga(β ⁺) ⁶⁶ Zn	5175.0	3.0				2					63Ca03	
⁶⁶ Zn(³ He,t) ⁶⁶ Ga ⁱ	-9044	6				2					71Be29	*
⁶⁶ Ge(β ⁺) ⁶⁶ Ga	2490	50	2117	4	-7.5	F					69Ba31	*
	2420	30			-10.1	F					69Sa08	*
	2100	30			0.6	U					70De39	*
⁶⁶ As(β ⁺) ⁶⁶ Ge	9550	50	9582	6	0.6	U		ANB			79Da.A	
* ⁶⁶ Mn-u	M-A=-36900(790) keV for mixture gs+m at 464.5(0.4) keV (5 ⁻)										Nub127	**
* ⁶⁶ Co-u	Original -60160(300) μu or M=-56040(280) keV										GAu	**
* ⁶⁶ Co-u	M-A=-55480(270) keV for mixture gs+m+n at 175.1(0.3) and 642(5) keV										Nub126	**
*	and assuming for first isomer a ratio R=0.5(0.2) to ground state,										GAu	**
*	from half-life=1.21 μs and TOF=1 μs										GAu	**
*C ₅ H ₅ - ⁶⁶ Ge. ₉₇₀	For original doublet C ₅ H ₅ -(⁶⁶ Ge H)0.970, $D_M=95688.6(2.5)$ μu										GAu	**
* ⁶⁶ Cu(β ⁻) ⁶⁶ Zn	$E_{\beta^-}=2630(30)$ 1640(30) to ground state and 2 ⁺ level at 1039.2279 keV										Ens104	**
* ⁶⁶ Zn(³ He,t) ⁶⁶ Ga ⁱ	CDE=9813(6) Q=-9049(6); recalibration +5 keV for ⁵⁸ Ni(p,n) ⁵⁸ Cu ⁱ from Ame1961										MMC124	**
* ⁶⁶ Ge(β ⁺) ⁶⁶ Ga	$E_{\beta^+}=1440(50)$ to 43.9 level; F : probably distorted by annihilation pile up										AHW	**
* ⁶⁶ Ge(β ⁺) ⁶⁶ Ga	$E_{\beta^+}=1370(30)$ to 43.9 level; F : probably distorted by annihilation pile up										AHW	**
* ⁶⁶ Ge(β ⁺) ⁶⁶ Ga	$E_{\beta^+}=1028(30)$, 668(30), 558(50) to 43.812 1 ⁺ , 381.859 1 ⁺ , 536.618 1 ⁺ level										Ens104	**
⁶⁷ Fe-u	-50190	500	-49460	230	1.0	2		TO5	1.5	94Se12	*	
	-48450	380			-1.8	2		TO6	1.5	98Ba.A	*	
	-49641	440			0.3	2		GT1	1.5	04Ma.A		
	-49580	300			0.4	2		MT1	1.0	11Es06	*	
⁶⁷ Co-u	-59390	300	-59390	7	0.0	U		TO5	1.5	94Se12		
	-58730	350			-1.3	U		TO6	1.5	98Ba.A		
²⁸ Si F ₂ - ⁶⁷ Co. ₉₈₅	32232.9	8.0	32232	7	-0.1	2		MS1	1.0	10Fe01		
	32231	13			0.1	2		MS1	1.0	10Fe01	*	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{67}\text{Ni-u}$	-68370	430	-68431	3	-0.1	U			TO5	1.5	94Se12 *	
	-68090	470			-0.5	U			TO6	1.5	98Ba.A *	
$^{67}\text{Ni}-^{85}\text{Rb}_{.788}$	1079.1	3.1				2			MA8	1.0	07Gu09	
$^{67}\text{Cu}-^{85}\text{Rb}_{.788}$	-2760.0	1.3				2			MA8	1.0	07Gu09	
$^{67}\text{As-u}$	-60500	260	-60748.9	0.5	-1.0	U			GA6	1.0	02Li24	
$^{67}\text{As}-^{86}\text{Kr}_{.779}$	8885.7	2.9	8885.4	0.5	-0.1	U			MS1	1.0	07Sc24	
	8808	30			2.6	U			MS1	1.0	07Sc24	
$^{67}\text{As}-^{85}\text{Rb}_{.788}$	8762.5	1.7	8760.8	0.5	-1.0	U			MS1	1.0	07Sc24	
	8760.87	0.54			-0.1	1	77	^{77}As	MS1	1.0	12Sc.A	
$^{67}\text{As O}-^{85}\text{Rb}_{.976}$	20258.7	1.0	20258.9	0.5	0.2	1	23	^{23}As	MS1	1.0	12Sc.A	
$^{67}\text{Se-u}$	-50006	72				2			LZ1	1.0	11Tu02	
$^{67}\text{Zn N}-^{66}\text{Zn }^{15}\text{N}$	4060.21	0.25	4059.04	0.23	-1.9	1	14	^{12}Zn	H30	2.5	77Ba10	
$^{64}\text{Zn}(\alpha,n)^{67}\text{Ge}$	-9240	60	-8992	5	4.1	B			Oak		64St01	
	-8987.5	12.			-0.4	2			ANL		78Mu05	
	-8993	5			0.2	2					79A104	
$^{65}\text{Cu}(t,p)^{67}\text{Cu}$	7716	25	7716.2	1.4	0.0	U			Ald		66Bj02	
$^{65}\text{Cu}(^3\text{He,p})^{67}\text{Zn}$	8185	40	8258.9	1.0	1.8	U			MIT		74Is01	
$^{66}\text{Zn}(n,\gamma)^{67}\text{Zn}$	7052.5	0.6	7052.32	0.22	-0.3	-					71Ot01 Z	
	7052.5	0.5			-0.4	-					75De.A Z	
	7052.5	0.3			-0.6	-			Bdn		06Fi.A	
$^{66}\text{Zn}(d,p)^{67}\text{Zn}$	4827	10	4827.76	0.22	0.1	U			ANL		67Vo05	
	4820	5			1.6	U			MIT		74Is01	
$^{67}\text{Zn}(d,t)^{66}\text{Zn}$	-800	60	-795.09	0.22	0.1	U			ANL		60Ze02	
$^{66}\text{Zn}(n,\gamma)^{67}\text{Zn}$	ave.	7052.50	0.24	7052.32	0.22	-0.8	1	85	^{71}Zn		average	
$^{67}\text{Ni}(\beta^-)^{67}\text{Cu}$	3830	90	3576	3	-2.8	U					75Re09	
$^{67}\text{Cu}(\beta^-)^{67}\text{Zn}$	577	8	561.3	1.5	-2.0	U					53Ea11	
$^{67}\text{Zn}(p,n)^{67}\text{Ga}$	-1776	5	-1783.5	1.1	-1.5	U			Ric		57Ch30 Y	
	-1783.3	1.4			-0.1	1	68	^{52}Ga	Oak		64Jo11 Z	
$^{67}\text{Ge}(\beta^+)^{67}\text{Ga}$	4330	100	4221	5	-1.1	U					59Ri35 *	
	4370	150			-1.0	U					69Ba07 *	
$^{67}\text{As}(\beta^+)^{67}\text{Ge}$	6010	100	6071	5	0.6	U			ANB		80Mu12	
* $^{67}\text{Fe-u}$	Original -50000(500) μu or $M=-46570(470)$ keV										GAu	**
* $^{67}\text{Fe-u}$	$M-A=-44930(330)$ keV for mixture gs+m at 402(9) keV										Nub127	**
* $^{67}\text{Fe-u}$	$M-A=-45980(250)$ keV for mixture gs+m at 402(9) keV										Nub127	**
* $^{28}\text{Si F}_2-^{67}\text{Co}_{.985}$	$M-A=-54829(12)$ for $^{67}\text{Co}^m$ at 491.55(0.11) keV										10Fe01	**
* $^{67}\text{Ni-u}$	Original -67840(300) μu or $M=-63190(280)$ keV										GAu	**
* $^{67}\text{Ni-u}$	$M-A=-62930(330)$ keV for mixture gs+m at 1007.2(1.0) keV										Nub126	**
* $^{67}\text{Ge}(\beta^+)^{67}\text{Ga}$	$E_{\beta^+}=3140(100)$ 3180(100) respectively, to $1/2^-$ level at 166.98 keV										Ens05c	**
$^{68}\text{Fe-u}$	-46300	500	-47050	390	-1.0	2			TO6	1.5	98Ba.A	
	-47330	460			0.6	2			MT1	1.0	11Es06	
$^{68}\text{Co-u}$	-55640	350	-55740	160	-0.2	o			TO5	1.5	94Se12	
	-54750	300			-2.2	U			TO6	1.5	98Ba.A	
	-55730	140			-0.1	2			GT2	1.5	08Kn.A *	
	-55760	250			0.1	2			MT1	1.0	11Es06 *	
$^{68}\text{Ni-u}$	-68030	930	-68131	3	-0.1	U			TO5	1.5	94Se12 *	
	-67530	930			-0.4	U			TO6	1.5	98Ba.A *	
$^{68}\text{Ni}-^{85}\text{Rb}_{.800}$	2437.0	3.2				2			MA8	1.0	07Gu09	
$^{68}\text{Cu-u}$	-70570	440	-70389.1	1.7	0.3	U			TO6	1.5	98Ba.A *	
$^{68}\text{Cu}-^{85}\text{Rb}_{.800}$	179.1	1.7				2			MA8	1.0	07Gu09 *	
$^{68}\text{Ga}-^{85}\text{Rb}_{.800}$	-1484	37	-1451.3	1.6	0.9	U			MA8	1.0	07Gu09	
$^{68}\text{Ge}-\text{C}_5\text{H}_8$	-134496.7	8.6	-134504.9	2.0	-1.0	U			CP1	1.0	04Cl03	
	-134506.3	2.8			0.5	2			CP1	1.0	04Cl03	
	-134503.5	2.9			-0.5	2			CP1	1.0	04Cl03	
$^{68}\text{As-u}$	-63221	107	-63225.9	2.0	0.0	U			GT1	1.5	01Ha66	
$^{68}\text{As}-\text{C}_5\text{H}_8$	-125839	13	-125826.1	2.0	1.0	U			CP1	1.0	04Cl03	
	-125827.7	9.9			0.2	U			CP1	1.0	04Cl03	
	-125827.1	2.9			0.3	-			CP1	1.0	04Cl03	
	-125824.4	3.1			-0.6	-			CP1	1.0	04Cl03	
	ave.	-125825.8	2.1		-0.1	1	88	^{88}As			average	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
C F ₃ - ⁶⁸ As _{1.015}	59385.8	5.7	59383.7	2.0	-0.4	1	12	12 ⁶⁸ As	MS1	1.0	07Sc24
⁶⁸ Se-u	-56197	86	-58174.8	0.5	-9.2	F				2.5	01La31 *
	-57560	1070			-0.6	U			GA6	1.0	02Li24
	-57900	300			-0.9	U			CS1	1.0	08Go23
⁶⁸ Se-C ₅ H ₈	-120801	31	-120775.0	0.5	0.8	U			CP1	1.0	04Cl03
C F ₃ - ⁶⁸ Se _{1.015}	54256.87	0.54				2			MS1	1.0	09Sa12
⁶⁸ Zn ³⁵ Cl- ⁶⁶ Zn ³⁷ Cl	1757.9	1.0	1760.8	0.3	0.7	U			H18	4.0	64Ba03
⁶⁸ As- ⁶⁸ Ge	8698.8	9.9	8678.8	2.8	-2.0	U			CP1	1.0	04Cl03
⁶⁸ Se- ⁶⁸ Ge	13669	27	13729.9	2.1	2.3	U			CP1	1.0	04Cl03
⁶⁵ Cu(α ,n) ⁶⁸ Ga	-5800	40	-5824.1	1.6	-0.6	U			Oak		64St01
⁶⁶ Ni(t,p) ⁶⁸ Ni- ⁶⁸ Zn(⁷⁰ Zn)	-2110	21	-2100	4	0.5	U			Hei		77Bh03
⁶⁶ Zn(t,p) ⁶⁸ Zn	8758	15	8768.62	0.29	0.7	U			Ald		72Hu06
⁶⁸ Zn(¹⁴ C, ¹⁵ O) ⁶⁷ Ni	-6052	150	-6100	3	-0.3	U			Ors		84De33
⁶⁷ Zn(n, γ) ⁶⁸ Zn	10198.2	0.4	10198.10	0.19	-0.3	-					71Ot01 Z
	10198.06	0.22			0.2	-			Bdn		06Fi.A
⁶⁸ Zn(d,t) ⁶⁷ Zn	-3930	60	-3940.86	0.19	-0.2	U			ANL		60Ze02
⁶⁷ Zn(n, γ) ⁶⁸ Zn	ave. 10198.09	0.19	10198.10	0.19	0.0	1	100	98 ⁶⁸ Zn			average
⁶⁸ Cu(β^-) ⁶⁸ Zn	4580	60	4439.8	1.8	-2.3	U					64Ba13
	4590	50			-3.0	U					72Sw01
⁶⁸ Zn(t, ³ He) ⁶⁸ Cu	-4410	20	-4421.2	1.8	-0.6	U			LAI		77Sh08
⁶⁸ Ga(β^+) ⁶⁸ Zn	2921.1	1.2				2					72SI03
	2915	10	2921.1	1.2	0.6	U					85Bo58
⁶⁸ Zn(p,n) ⁶⁸ Ga	-3693	6	-3703.4	1.2	-1.7	U			Ric		55Br16 Z
	-3703	5			-0.1	U			Ric		57Ch30 Z
	-3707	5			0.7	U			Oak		64Jo11 Z
⁶⁸ As(β^+) ⁶⁸ Ge	8100	100	8084.3	2.6	-0.2	U			ANB		77Pa13
	8073	54			0.2	U					02Cl.A *
⁶⁸ Se(β^+) ⁶⁸ As	4710	200	4705.1	1.9	0.0	U					04Wo16
* ⁶⁸ Co-u	M-A=-51838(96) keV for mixture gs+m at 150#(150#) keV										Nub126 **
* ⁶⁸ Co-u	M-A=-51860(210) keV for mixture gs+m at 150#(150#) keV										Nub126 **
* ⁶⁸ Ni-u	M-A=-61950(280) keV for mixture gs+p at 2849.1(0.3) keV										Nub126 **
* ⁶⁸ Ni-u	M-A=-61480(280) keV for mixture gs+p at 2849.1(0.3) keV										Nub126 **
* ⁶⁸ Cu-u	M-A=-65380(350) keV for mixture gs+m at 721.26 keV										Nub127 **
* ⁶⁸ Cu- ⁸⁵ Rb _{.800}	This result was first published in reference										04BI16 **
* ⁶⁸ Cu- ⁸⁵ Rb _{.800}	Also 948.6(1.6) μ u for ⁶⁸ Cu ^m - ⁸⁵ Rb _{.800} , yielding excit. of 716.7(2.2) keV										07Gu09 **
* ⁶⁸ Se-u	F : other results in same paper not trusted, see ⁸⁰ Y and ⁸⁰ Zr										GAu **
* ⁶⁸ As(β^+) ⁶⁸ Ge	From mass difference 8667(64) μ u										02Cl.A **
⁶⁹ Co-u	-54800	400	-53860	200	1.6	o			TO5	1.5	94Se12
	-53050	300			-1.8	2			TO6	1.5	98Ba.A
	-54070	230			0.9	2			MT1	1.0	11Es06
⁶⁹ Ni-u	-64600	400	-64390	4	0.4	U			TO5	1.5	94Se12 *
	-64250	450			-0.2	U			TO6	1.5	98Ba.A *
⁶⁹ Ni- ⁸⁵ Rb _{.812}	7237.0	4.0				2			MA8	1.0	07Gu09
⁶⁹ Cu- ⁸⁵ Rb _{.812}	1056.0	1.5				2			MA8	1.0	07Gu09
⁶⁹ Zn-u	-73580	400	-73449.3	1.0	0.2	U			TO6	1.5	98Ba.A *
C ₅ H ₉ - ⁶⁹ Ga	144852.7	2.4	144851.7	1.3	-0.2	U			M15	2.5	63Ri07
⁶⁹ Ga- ⁸⁵ Rb _{.812}	-2799.8	1.6	-2799.7	1.3	0.0	1	65	65 ⁶⁹ Ga	MA8	1.0	07Gu09
C F ₃ - ⁶⁹ Se	55794.7	1.6	55794.6	1.6	0.0	1	100	100 ⁶⁹ Se	MS1	1.0	07Sc24
⁶⁹ Ga(p, α) ⁶⁶ Zn	4440	10	4435.3	1.5	-0.5	U			ANL		67Ka11
⁶⁶ Zn(α ,n) ⁶⁹ Ge	-7520	30	-7444.8	1.6	2.5	U			Oak		64St01
⁶⁷ Zn(t,p) ⁶⁹ Zn	8168	20	8198.37	0.25	1.5	U			Ald		72Hu06
⁶⁸ Zn(n, γ) ⁶⁹ Zn	6482.3	0.8	6482.07	0.16	-0.3	U					71Ot01 Z
	6481.8	0.5			0.5	U					75De.A Z
	6482.07	0.16				2			Bdn		06Fi.A
⁶⁸ Zn(d,p) ⁶⁹ Zn	4259	10	4257.50	0.16	-0.1	U			ANL		67Vo05
	4243	10			1.5	U			MIT		75Is04
⁶⁸ Zn(³ He,d) ⁶⁹ Ga	1126	20	1116.4	1.5	-0.5	U					74Ri08

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{69}\text{Se}(\epsilon p)^{68}\text{Ge}$	3390	50	3255.1	2.4	-2.7	U			ChR		76Ha29
	3370	70			-1.6	U			ChR		77Ma24
$^{69}\text{Br}(p)^{68}\text{Se}$	789	37				3			MSU		11Ro18 *
$^{69}\text{Br}^i(p)^{68}\text{Se}$	4131	50				3					97Xu01
	3867.6	50.	4130	50	5.3	B			MSU		11Ro47 *
$^{69}\text{Cu}(\beta^-)^{69}\text{Zn}$	2480	70	2681.4	1.7	2.9	U					66Va12
$^{69}\text{Zn}(\beta^-)^{69}\text{Ga}$	897	5	910.2	1.5	2.6	U					53Du03
$^{69}\text{Ge}(\beta^+)^{69}\text{Ga}$	2225	15	2227.1	0.5	0.1	U					51Hu38 *
$^{69}\text{Ga}(p,n)^{69}\text{Ge}$	-3008.8	3.2	-3009.5	0.5	-0.2	U			Tkm		63Ok01
	-3006.0	4.			-0.9	U			Oak		64Jo11 Z
	-3009.50	0.55			0.0	1	100	100 ^{69}Ge	PTB		92Bo.B Z
$^{69}\text{As}(\beta^+)^{69}\text{Ge}$	3972	50	3990	30	0.3	-					70Bo19
	4067	50			-1.6	-			ChR		77Ma24 *
	ave.	4020	40		-0.9	1	82	82 ^{69}As			average
$^{69}\text{Se}(\beta^+)^{69}\text{As}$	6817	75	6680	30	-1.9	1	18	18 ^{69}As	ChR		77Ma24 *
* $^{69}\text{Ni-u}$	M-A=-59940(330) keV for mixture gs+m+n at 321(2) and 2701.0(1.0) keV										Nub126 **
* $^{69}\text{Ni-u}$	M-A=-59620(380) keV for mixture gs+m+n at 321(2) and 2701.0(1.0) keV										Nub126 **
*	and assuming for second isomer a ratio R=0.13(0.06) to ground state,										GAu **
*	from half-life=439 ns and TOF=1 μs										GAu **
* $^{69}\text{Zn-u}$	M-A=-68320(350) keV for mixture gs+m at 438.636(0.018) keV										Nub126 **
* $^{69}\text{Br}(p)^{68}\text{Se}$	Symmetrized from $Q_p=785(+40-34)$ keV										GAu **
* $^{69}\text{Br}^i(p)^{68}\text{Se}$	$E_p=2970(50)$ to (2^+) level at 854.2 keV										Ens021 **
* $^{69}\text{Ge}(\beta^+)^{69}\text{Ga}$	$E_{\beta^+}=1215, 610$ to ground state $3/2^-, 574.21 5/2^-$ levels										Ens006 **
* $^{69}\text{As}(\beta^+)^{69}\text{Ge}$	$E_{\beta^+}=2812(50)$ to $3/2^-$ level at 232.694 keV										Ens006 **
* $^{69}\text{Se}(\beta^+)^{69}\text{As}$	$E_{\beta^+}=5006(75)$ to $789.47 5/2^{(-)}$ level, and others										Ens006 **
$^{70}\text{Co-u}$	-49000	600	-50370	320	-1.5	U			TO6	1.5	98Ba.A
	-50370	320				2			MT1	1.0	11Es06 *
$^{70}\text{Ni-u}$	-63980	350	-63568.7	2.3	0.8	U			TO5	1.5	94Se12 *
	-63020	350			-1.0	U			TO6	1.5	98Ba.A *
$^{70}\text{Cu}-^{85}\text{Rb}_{.824}$	5077.6	1.7	5077.3	1.2	-0.2	2			MA8	1.0	07Gu09 *
	5077.2	2.2			0.1	2			MA8	1.0	07Gu09 *
	5077.0	2.3			0.1	2			MA8	1.0	07Gu09 *
$^{70}\text{Ga}-^{85}\text{Rb}_{.824}$	-1293.0	2.3	-1292.8	1.3	0.1	1	31	31 ^{70}Ga	MA8	1.0	07Gu09
$\text{C}_5 \text{H}_{10}-^{70}\text{Ge}$	154001.3	2.2	154001.6	0.9	0.0	U			M15	2.5	63Ri07
$\text{C}_4 \text{H}_6 \text{O}-^{70}\text{Ge}$	117616.1	1.8	117616.1	0.9	0.0	U			M15	2.5	63Ri07
$^{70}\text{Se-u}$	-66890	490	-66484.5	1.7	0.8	o			GA6	1.0	98Ch20
	-66635	75			1.3	U			GT1	1.5	01Ha66
	-66520	140			0.3	U			GA6	1.0	02Li24
$^{70}\text{Se}-^{13}\text{C F}_3$	-65048.8	1.7				2			MS1	1.0	09Sa12
$^{70}\text{Se}-^{85}\text{Rb}_{.824}$	6209	18	6200.8	1.7	-0.5	U			MA8	1.0	11He10
$^{70}\text{Br}-^{13}\text{C F}_3$	-53772	16				2			MS1	1.0	09Sa12 *
$^{70}\text{Ni}-^{72}\text{Ge}_{.972}$	12173.6	2.3				2			JY1	1.0	07Ra27
$^{70}\text{Zn}^{35}\text{Cl}-^{68}\text{Zn}^{37}\text{Cl}$	3429.5	1.7	3424.7	2.2	-0.7	1	11	9 ^{70}Zn	H18	4.0	64Ba03
$^{70}\text{Zn}(^3\text{He}, ^8\text{B})^{65}\text{Co}$	-18385	13	-18370	3	1.2	U			Pri		78Ko24
$^{70}\text{Zn}(\alpha, ^7\text{Be})^{67}\text{Ni}$	-19155	36	-19166	3	-0.3	U			Tex		78Co.A
	-19164	22			-0.1	U			Pri		78Ko28
$^{70}\text{Zn}(^{14}\text{C}, ^{17}\text{O})^{67}\text{Ni}$	-1661	100	-1993	3	-3.3	B			Ors		88Gi04
$^{70}\text{Ge}(p, \alpha)^{67}\text{Ga}$	1180.9	1.5	1181.1	1.2	0.1	1	62	48 ^{67}Ga	NDm		76Jo01
$^{70}\text{Ge}(^3\text{He}, ^6\text{He})^{67}\text{Ge}$	-10572	30	-10565	5	0.2	U			MSU		78Pa11
$^{70}\text{Zn}(^{14}\text{C}, ^{16}\text{O})^{68}\text{Ni}$	1727	30	1656	4	-2.4	U			Ors		88Gi04
$^{70}\text{Zn}(^{18}\text{O}, ^{20}\text{Ne})^{68}\text{Ni}$	172	26	158	4	-0.5	U			Hei		84Ha31
$^{68}\text{Zn}(t, p)^{70}\text{Zn}$	7196	15	7218.7	2.1	1.5	U			Ald		72Hu06
$^{70}\text{Ge}(p, t)^{68}\text{Ge}$	-11251	13	-11243.9	2.1	0.5	U			ChR		72Hs01
	-11242	7			-0.3	U			Ors		77Gu02
$^{70}\text{Zn}(^{14}\text{C}, ^{15}\text{O})^{69}\text{Ni}$	-8936	150	-9422	4	-3.2	B			Ors		84De33
$^{70}\text{Zn}(d, ^3\text{He})^{69}\text{Cu}$	-5605	10	-5624.0	2.4	-1.9	U			ANL		78Ze04
	-5622	13			-0.2	U			Hei		84Ha31

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{70}\text{Zn}(t,\alpha)^{69}\text{Cu}$	8682	20	8696.4	2.4	0.7	U			81Aj02		
$^{69}\text{Ga}(n,\gamma)^{70}\text{Ga}$	7654.0	1.0	7653.65	0.17	-0.4	U			71Ar12 Z		
	7651.6	1.0			2.0	F			71Ve03 *		
	7653.65	0.17			0.0	1	100	64 ^{70}Ga	Bdn	06Fi.A	
$^{69}\text{Ga}(d,p)^{70}\text{Ga}$	5430	10	5429.08	0.17	-0.1	U			Kop	71Ar12	
$^{70}\text{Ge}(d,^3\text{He})^{69}\text{Ga}$	-3030	7	-3029.5	1.5	0.1	U			Ors	78Ro14	
$^{70}\text{Cu}(\beta^-)^{70}\text{Zn}$	6310	110	6588.3	2.2	2.5	U				75Re09 *	
	5928	110			6.0	B				75Re09 *	
$^{70}\text{Zn}(t,^3\text{He})^{70}\text{Cu}$	-6559	20	-6569.7	2.2	-0.5	U			LAI	77Sh08	
	-6602	20			1.6	U			LAI	87Aj.A	
$^{70}\text{Zn}(p,n)^{70}\text{Ga}$	-1436.3	2.0	-1436.9	1.6	-0.3	-			Nvl	59Go68 Z	
	-1439.1	3.0			0.8	-			Oak	64Jo11 Z	
	ave.	-1437.2	1.6		0.2	1	92	88 ^{70}Zn		average	
$^{70}\text{Ga}(\beta^-)^{70}\text{Ge}$	1650	10	1651.7	1.5	0.2	U				57Bu41	
$^{70}\text{As}(\beta^+)^{70}\text{Ge}$	6220	50				2				63Bo14 *	
$^{70}\text{Se}(\beta^+)^{70}\text{As}$	2780	200	2410	50	-1.8	F				75La02 *	
	2736	85			-3.8	B				01To06	
$^{70}\text{Br}(\beta^+)^{70}\text{Se}$	9970	170	10504	15	3.1	C			ANB	79Da.A	
	9898	80			7.6	B				04Ka38 *	
* $^{70}\text{Co-u}$	M-A=-46820(280) keV for mixture gs+m at 200#200 keV										
* $^{70}\text{Ni-u}$	Original -63860(350) μu or M=-59490(330) keV										
* $^{70}\text{Ni-u}$	M-A=-58590(330) keV for mixture gs+m at 2860(2) keV and										
	assuming ratio R=0.04(2), from half-life=210 ns and TOF=1 μs										
* $^{70}\text{Cu}-^{85}\text{Rb}_{.824}$	The three results for ^{70}Cu were first published in reference										
* $^{70}\text{Cu}-^{85}\text{Rb}_{.824}$	$D_M=5185.7(2.2) \mu\text{u}$ for $^{70}\text{Cu}^m$ at 101.1 keV; M-A=-62875.4(2.0) keV										
* $^{70}\text{Cu}-^{85}\text{Rb}_{.824}$	$D_M=5337.4(2.3) \mu\text{u}$ for $^{70}\text{Cu}^n$ at 242.6 keV; M-A=-62734.1(2.2) keV										
* $^{70}\text{Br}-^{13}\text{C F}_3$	$D_M=-51311(16) \mu\text{u}$ for $^{70}\text{Br}^m$ at 2292.3(0.8) keV										
* $^{69}\text{Ga}(n,\gamma)^{70}\text{Ga}$	F : E(γ) systematically lower than for other authors; Z recalibrated										
* $^{70}\text{Cu}(\beta^-)^{70}\text{Zn}$	$E_{\beta^-}=4550(120), 3370(170)$ to 4^+ level at 1786.33, 5^- at 3037.61 keV										
* $^{70}\text{Cu}(\beta^-)^{70}\text{Zn}$	$E_{\beta^-}=6170(110)$ from $^{70}\text{Cu}^n 1^+$ at 242.6 keV										
* $^{70}\text{As}(\beta^+)^{70}\text{Ge}$	$E_{\beta^+}=2144(50)$ to 3^+ level at 3046.427, 4^+ at 3058.707 keV										
* $^{70}\text{Se}(\beta^+)^{70}\text{As}$	$E_{\beta^+}=1500(200)$ to 1^+ level at 81.49, 1^+ at 234.70, 1^+ at 458.12 keV										
* $^{70}\text{Se}(\beta^+)^{70}\text{As}$	F : author's half-life 20(2)m disagrees with Nubase 41.1(0.3)m										
* $^{70}\text{Br}(\beta^+)^{70}\text{Se}$	$Q_{\beta^+}=12190(80)$ from 2292.3 $^{70}\text{Br}^m$										
$^{71}\text{Co-u}$	-47100	600	-47630	500	-0.6	2			TO6	1.5	98Ba.A
	-47870	600			0.4	2			MT1	1.0	11Es06
$^{71}\text{Ni-u}$	-60000	400	-59481.0	2.4	0.9	U			TO5	1.5	94Se12
	-58700	350			-1.5	U			TO6	1.5	98Ba.A
$^{71}\text{Cu}-^{85}\text{Rb}_{.835}$	6332.4	1.6				2			MA8	1.0	07Gu09
$^{71}\text{Zn-u}$	-72080	380	-72280.4	2.8	-0.4	U			TO6	1.5	98Ba.A *
$^{71}\text{Zn}^m-^{85}\text{Rb}_{.835}$	1544.3	2.6	1544.4	2.5	0.0	1	95	95 $^{71}\text{Zn}^m$	MA8	1.0	08Ba54
$\text{C}_5 \text{H}_{11}-^{71}\text{Ga}$	161370.2	3.2	161372.8	0.9	0.3	U			M15	2.5	63Ri07
$^{71}\text{Ga}-^{85}\text{Rb}_{.835}$	-1641.6	3.0	-1641.9	0.9	-0.1	-			MA8	1.0	07Gu09
	-1640.2	1.3			-1.3	-			MA8	1.0	07Ke09
	ave.	-1640.4	1.2		-1.2	1	54	54 ^{71}Ga			average
$^{71}\text{Se-u}$	-68160	340	-67791	3	1.1	o			GA6	1.0	98Ch20
	-67687	75			-0.9	U			GT1	1.5	01Ha66
	-67830	120			0.3	U			GA6	1.0	02Li24
$^{71}\text{Se}-^{85}\text{Rb}_{.835}$	5865.0	3.0				2			MA8	1.0	11He10
$^{71}\text{Br-u}$	-61260	610	-60658	6	1.0	U			GA6	1.0	02Li24
$^{71}\text{Br H}_2-\text{C}_4 \text{H}_9 \text{O}$	-110347.7	5.8	-110348	6	0.0	1	100	100 ^{71}Br	MS1	1.0	09Sa12
$^{71}\text{Kr-u}$	-49727	151	-49730	140	0.0	1	84	84 ^{71}Kr	LZ1	1.0	11Tu02
$^{71}\text{Ni}-^{72}\text{Ge}_{.986}$	17352.2	2.4				2			JY1	1.0	07Ra27
$^{68}\text{Zn}(\alpha,n)^{71}\text{Ge}$	-5630	40	-5746.8	1.1	-2.9	U			Oak		64St01
$^{70}\text{Zn}(^{18}\text{O},^{17}\text{F})^{71}\text{Cu}$	-9529	35	-9588.1	2.4	-1.7	U			Ber		89Bo.A
$^{70}\text{Zn}(d,p)^{71}\text{Zn}$	3609	10	3611	3	0.2	1	10	7 ^{71}Zn	ANL		67Vo05
$^{70}\text{Zn}(^3\text{He},d)^{71}\text{Ga}$	2380	20	2369.9	2.1	-0.5	U					74Ri08

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{71}\text{Ga}(\gamma, n)^{70}\text{Ga}$	-9240	60	-9300.3	1.4	-1.0	U			Phi		60Ge01
$^{71}\text{Ga}(d, t)^{70}\text{Ga}$	-3054	10	-3043.1	1.4	1.1	U			Kop		71Ar12
$^{70}\text{Ge}(n, \gamma)^{71}\text{Ge}$	7415.3	1.5	7415.94	0.11	0.4	U					70Or.A
	7415.1	2.			0.4	U					72Gr34
	7415.95	0.15			-0.1	-			MMn		91Is01 Z
	7415.93	0.15			0.1	-			Bdn		06Fi.A
	5182	10	5191.37	0.11	0.9	U			Kyu		73Ka03
$^{70}\text{Ge}(d, p)^{71}\text{Ge}$			5191.37	0.11	0.9	U					
$^{70}\text{Ge}(n, \gamma)^{71}\text{Ge}$	ave.	7415.94	0.11	7415.94	0.11	0.0	1	100	86 ^{70}Ge		average
$^{70}\text{Ge}(p, \gamma)^{71}\text{As}$	4619	5	4620	4	0.2	R					75Li14
$^{71}\text{Zn}^m(\text{IT})^{71}\text{Zn}$	157.7	1.3	157.7	1.3	0.0	1	98	93 ^{71}Zn			Ens10c
$^{71}\text{Zn}(\beta^-)^{71}\text{Ga}$	2610	50	2810.3	2.8	4.0	B					61Th01
	2786	50			0.5	U					61Th01 *
	2796	50			0.3	U					64So01 *
	233.0	0.5	232.64	0.22	-0.7	-			Hei		84Ha.A
$^{71}\text{Ge}(\epsilon)^{71}\text{Ga}$	229.3	1.0			3.3	F					91Zl01 *
	232.1	0.5			1.1	-					93Di03 *
	232.71	0.29			-0.2	-					95Le19 *
	-1018.4	2.0	-1014.99	0.22	1.7	U			Oak		64Jo11 Z
$^{71}\text{Ge}(\epsilon)^{71}\text{Ga}$	ave.	232.65	0.22	232.64	0.22	0.0	1	99	86 ^{71}Ge		average
$^{71}\text{Ga}(^3\text{He}, t)^{71}\text{Ge}-^{65}\text{Cu}(^65)\text{Zn}$	1122.0	0.9	1119.0	0.4	-3.3	B			Pri		84Ko10
$^{71}\text{As}(\beta^+)^{71}\text{Ge}$	1997	20	2013	4	0.8	U					53St31 *
	2010	10			0.3	2					54Th36 *
	2012	10			0.1	2					55Gr08 *
	4428	125	4747	5	2.5	U					73Sc17
$^{71}\text{Se}(\beta^+)^{71}\text{As}$	4762	35			-0.4	U					01To06
	10140	320	10180	130	0.1	1	16	16 ^{71}Kr			97Oi01
$^{71}\text{Kr}(\epsilon)^{71}\text{Br}$											
$^{71}\text{Zn-u}$	M-A=-67060(350) keV for mixture gs+m at 157.7 keV										Ens93 **
$^{71}\text{Zn}(\beta^-)^{71}\text{Ga}$	E_{β^-} =1450(50) 1460(50) respectively, from $^{71}\text{Zn}^m$ at 157.7(1.3) to $9/2^+$ at 1493.74										Ens10c **
$^{71}\text{Ge}(\epsilon)^{71}\text{Ga}$	F: sees 17 keV neutrino										AHW **
$^{71}\text{Ge}(\epsilon)^{71}\text{Ga}$	Original error 0.1 increased for calibration uncertainty										GAU **
$^{71}\text{As}(\beta^+)^{71}\text{Ge}$	E_{β^+} =800(20) 813(10) 815(10) respectively, to $5/2^-$ level at 174.943 keV										Ens10c **
$^{72}\text{Ni-u}$	-58700	500	-58214.1	2.4	0.6	U			TO5	1.5	94Se12
	-57400	400			-1.4	U			TO6	1.5	98Ba.A
$^{72}\text{Cu-u}$	-64250	510	-64179.7	1.5	0.1	U			TO6	1.5	98Ba.A *
	10534.4	1.5				2			MA8	1.0	07Gu09
$^{72}\text{Zn}-^{85}\text{Rb}_{.847}$	1556.9	2.3				2			MA8	1.0	08Ba54
$^{72}\text{Ga}-^{85}\text{Rb}_{.847}$	1079.5	1.5	1081.6	0.9	1.4	1	35	35 ^{72}Ga	MA8	1.0	07Gu09
$\text{C}_4 \text{H}_8 \text{O}-^{72}\text{Ge}$	135438.4	2.1	135439.05	0.08	0.1	U			M15	2.5	63Ri07
$^{72}\text{Se}-^{85}\text{Rb}_{.847}$	1854.6	2.1				2			MA8	1.0	11He10
$^{72}\text{Br}-^{27}\text{Al}-^{85}\text{Rb}_{1.165}$	20892.1	7.2				2			MA8	1.0	11He10
$^{72}\text{Kr}-^{85}\text{Rb}_{.847}$	16806.5	8.6				2			MA8	1.0	06Ro11
$^{70}\text{Ge} \text{H}_2-^{72}\text{Ge}$	17821.3	1.7	17823.0	0.9	0.4	U			M15	2.5	63Ri07
$^{72}\text{Ge} ^{35}\text{Cl}-^{70}\text{Ge} ^{37}\text{Cl}$	779.8	5.9	777.2	0.9	-0.2	U			H40	2.5	85El01
$^{72}\text{Ni}-^{72}\text{Ge}$	19710.1	2.4				2			JY1	1.0	07Ra27
$^{70}\text{Zn}(t, p)^{72}\text{Zn}$	6231	20	6241.6	2.9	0.5	U			Ald		72Hu06
$^{71}\text{Ga}(n, \gamma)^{72}\text{Ga}$	6521.1	1.0	6520.48	0.19	-0.6	U					70Li04 Z
	6519.8	1.0			0.7	F					71Ve03 *
	6520.44	0.19			0.2	1	99	65 ^{72}Ga	Bdn		06Fi.A
$^{72}\text{Ge}(d, ^3\text{He})^{71}\text{Ga}$	-4241	7	-4242.3	0.8	-0.2	U			Ors		78Ro14
$^{72}\text{Zn}(\beta^-)^{72}\text{Ga}$	422	20	442.8	2.3	1.0	U					63De11 *
	458	6			-2.5	U					63Th03 *
$^{72}\text{Ga}(\beta^-)^{72}\text{Ge}$	4000	20	3997.6	0.8	-0.1	U					55Jo09 *
	3984	10			1.4	U					60La04 *
	4361	10	4356	4	-0.5	2					50Me55
$^{72}\text{As}(\beta^+)^{72}\text{Ge}$	4345	10			1.1	2					68Vi05
	-5140	5	-5138	4	0.3	2			Kyu		76Ki12
$^{72}\text{Ge}(p, n)^{72}\text{As}$											
$^{72}\text{Br}(\beta^+)^{72}\text{Se}$	8869	95	8801	7	-0.7	U					01To06

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{72}\text{Kr}(\beta^+)^{72}\text{Br}$	5040	80	5127	10	1.1	U					73Sc17 *
* $^{72}\text{Cu-u}$	M-A=-59710(470) keV for mixture gs+m at 270.3(1.0) keV										Nub127 **
* $^{71}\text{Ga}(n,\gamma)^{72}\text{Ga}$	F : E(γ) systematically lower than for other authors; Z recalibrated										AHW **
* $^{72}\text{Zn}(\beta^-)^{72}\text{Ga}$	E_{β^-} =260(20) 296(6) respectively, to 1^+ level at 161.53 keV										Ens102 **
* $^{72}\text{Ga}(\beta^-)^{72}\text{Ge}$	E_{β^-} =3166(20) 3150(10) respectively, to 2^+ level at 834.01 keV										Ens102 **
* $^{72}\text{Kr}(\beta^+)^{72}\text{Br}$	E_{β^+} =3794(180), 3626(105), 3682(80), 3364(155) to 162.67, 309.84 1^+ ,										73Sc17 **
*	415.05 1^+ and 576.74 1^+ levels										Ens102 **
$^{73}\text{Ni-u}$	-52500	500	-53793.3	2.6	-1.7	U			TO6	1.5	98Ba.A
$^{73}\text{Cu-u}$	-62740	350	-63325.6	2.1	-1.1	U			TO6	1.5	98Ba.A
$^{73}\text{Cu}-^{85}\text{Rb}_{.859}$	12447.9	4.2	12447.0	2.1	-0.2	1	25	25 ^{73}Cu	MA8	1.0	07Gu09
$^{73}\text{Zn-u}$	-70100	380	-70417.4	2.0	-0.6	U			TO6	1.5	98Ba.A *
$^{73}\text{Zn}-^{85}\text{Rb}_{.859}$	5355.2	2.0				2			MA8	1.0	08Ba54
$^{73}\text{Ga}-^{85}\text{Rb}_{.859}$	947.3	1.8				2			MA8	1.0	07Gu09
$\text{C}_4 \text{H}_9 \text{O}-^{73}\text{Ge}$	141878.4	2.1	141880.95	0.06	0.5	U			M15	2.5	63Ri07
$^{73}\text{Se}-^{85}\text{Rb}_{.859}$	2511	11	2527	8	1.5	1	52	52 ^{73}Se	MA8	1.0	11He10 *
$^{73}\text{Br-u}$	-68428	97	-68328	8	0.7	U			GT1	1.5	01Ha66
$^{73}\text{Br}^{27}\text{Al}-^{85}\text{Rb}_{1.176}$	16945.3	7.8				2			MA8	1.0	11He10
$^{73}\text{Kr}-^{85}\text{Rb}_{.859}$	15061.8	7.1	15062	7	0.0	o			MA8	1.0	04Ro32 *
	15062.8	9.7			-0.1	2			MA8	1.0	06Ro11
	15060.7	10.3			0.1	2			MA8	1.0	06Ro11
$^{73}\text{Ni}-^{72}\text{Ge}_{1.014}$	25221.8	2.6				2			JY1	1.0	07Ra27
$^{73}\text{Cu}-^{72}\text{Ge}_{1.014}$	15689.2	2.4	15689.5	2.1	0.1	1	75	75 ^{73}Cu	JY1	1.0	07Ra27
$^{72}\text{Ge H}-^{73}\text{Ge}$	6443.9	1.3	6441.90	0.05	-0.6	U			M15	2.5	63Ri07
$^{73}\text{Br}-^{72}\text{Br}$	-4610	330	-4917	11	-0.4	U			CR1	2.5	89Sh10 *
	-4709	166			-0.8	U			CR2	1.5	91Sh19 *
$^{72}\text{Ge}(n,\gamma)^{73}\text{Ge}$	6783.4	0.9	6782.94	0.05	-0.5	U					72Gr34
	6780.9	2.			1.0	U					72Ha74
	6782.94	0.05			0.0	1	100	100 ^{72}Ge	MMn		91Is01 Z
	6783.12	0.15			-1.2	U			Bdn		06Fi.A
$^{72}\text{Ge}(d,p)^{73}\text{Ge}$	4571	4	4558.37	0.05	-3.2	B			Ald		69He05
	4563	10			-0.5	U			Kop		72Ha74
	4541	10			1.7	U			Kyu		73Ka03
$^{72}\text{Ge}(\beta^3\text{He,d})^{73}\text{As}$	160	4	162	4	0.6	1	93	93 ^{73}As	Hei		76Sc13
$^{73}\text{Kr}(\epsilon p)^{72}\text{Se}$	3700	150	4027	7	2.2	U			ChR		81Ha44
$^{73}\text{Rb}(\text{p})^{72}\text{Kr}$	3803	40				3					93Ba61
$^{73}\text{Ga}(\beta^-)^{73}\text{Ge}$	1554	40	1598.2	1.7	1.1	U					58Yt22 *
	1564	80			0.4	U					70Wa21 *
$^{73}\text{Ge}(p,n)^{73}\text{As}$	-1121.6	15.	-1127	4	-0.4	U			Oak		64Jo11 *
$^{73}\text{Se}(\beta^+)^{73}\text{As}$	2740	10	2725	7	-1.5	1	55	48 ^{73}Se			56Ha10 *
$^{73}\text{Br}(\beta^+)^{73}\text{Se}$	4748	500	4580	10	-0.3	U					70Mu02 *
	4648	400			-0.2	U					74Ro11 *
	4688	140			-0.8	U					87He21 *
	4610	70			-0.4	U					01To06
$^{73}\text{Kr}(\beta^+)^{73}\text{Br}$	6790	350	7096	10	0.9	U					73Sc17 *
	6860	220			1.1	U					97Oi01
* $^{73}\text{Zn-u}$	M-A=-65200(350) keV for mixture gs+m at 195.5 keV										Ens93 **
* $^{73}\text{Se}-^{85}\text{Rb}_{.859}$	$D_M=2524.6(7.3) \mu\text{u}$ for mixture gs+m at 25.71 keV; M-A=-68230.0(6.8) keV										Nub129 **
* $^{73}\text{Kr}-^{85}\text{Rb}_{.859}$	Combined results of next two items										GAU **
* $^{73}\text{Br}-^{72}\text{Br}$	$D_M=-4660(330) \mu\text{u}$ corrected for ^{72}Br gs+m mixture at 100.76 keV										Nub127 **
* $^{73}\text{Br}-^{72}\text{Br}$	From $^{72}\text{Br}/^{73}\text{Br}=0.98635312(227)$										AHW **
* $^{73}\text{Ga}(\beta^-)^{73}\text{Ge}$	E_{β^-} =1190(40) 1200(80) respectively, to $3/2^-$ level at 364.02 keV										Ens043 **
* $^{73}\text{Ge}(p,n)^{73}\text{As}$	T=1205(15) to $5/2^-$ level at 67.039(0.008)keV										Ens043 **
* $^{73}\text{Se}(\beta^+)^{73}\text{As}$	E_{β^+} =1290(10) to $9/2^+$ level at 427.906 keV										Ens043 **
* $^{73}\text{Br}(\beta^+)^{73}\text{Se}$	E_{β^+} =3700(500) 3600(400) 3640(140) respectively, to $^{73}\text{Se}^m$ at 25.71 keV										Nub127 **
* $^{73}\text{Kr}(\beta^+)^{73}\text{Br}$	E_{β^+} =5589(350) to $3/2^-$ level at 178.08 keV										Ens043 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{74}\text{Ni-u}$	-52830	1060	-52020#	430#	0.8	D			MT1	1.0	11Es06 *
$^{74}\text{Cu-u}$	-59400	400	-60125	7	-1.2	U			TO6	1.5	98Ba.A
$^{74}\text{Cu-}^{85}\text{Rb}_{.871}$	16706.0	6.6				2			MA8	1.0	07Gu09
$^{74}\text{Zn-}^{85}\text{Rb}_{.871}$	6238.4	2.7				2			MA8	1.0	08Ba54
$^{74}\text{Ga-}^{85}\text{Rb}_{.871}$	3776.9	22.6	3777	3	0.0	U			MA8	1.0	07Ke09 *
	3776.9	4.0			0.0	2			MA8	1.0	07Gu09
	3806.5	34.6			-0.9	U			MA8	1.0	07Ke09 *
	3776.8	5.4			0.0	2			TT1	1.0	11Et.A *
$\text{C }^{32}\text{S}_2\text{-}^{74}\text{Ge H}_2$	7314.0	1.4	7314.522	0.014	0.1	U			M15	2.5	63Ri07
$^{74}\text{Ge-}^{84}\text{Kr}$	9680.0337	0.0128	9680.034	0.013	0.0	1	100	100 ^{74}Ge	FS1	1.0	10Mo03
$\text{C}_6\text{ H}_2\text{-}^{74}\text{Se}$	93173.8	3.8	93174.130	0.016	0.0	U			M15	2.5	63Ri07
$^{74}\text{Se-}^{84}\text{Kr}$	10978.2066	0.0128	10978.207	0.015	0.0	o			FS1	1.0	10Mo03 *
$^{74}\text{Se-}^{85}\text{Rb}_{.871}$	-691.4	7.3	-692.928	0.016	-0.2	U			MA8	1.0	11He10
$^{74}\text{Br }^{27}\text{Al-}^{85}\text{Rb}_{1.188}$	16246.0	6.8	16242	6	-0.5	1	85	85 ^{74}Br	MA8	1.0	11He10 *
$^{74}\text{Kr-}^{85}\text{Rb}_{.871}$	9915.0	2.2	9915.2	2.2	0.1	o			MA8	1.0	04Ro32 *
	9916.8	2.6			-0.6	-			MA8	1.0	06Ro11
	9909.7	4.4			1.2	-			MA8	1.0	06Ro11
ave.	9915.0	2.2			0.1	1	93	93 ^{74}Kr			average
$^{74}\text{Rb-}^{85}\text{Rb}_{.871}$	21109	19	21097	3	-0.6	U			MA8	1.0	07Ke09
	21097.9	4.3			-0.2	o			MA8	1.0	04Ke10 *
	21095.7	5.2			0.3	-			MA8	1.0	07Ke09
	21102.7	7.5			-0.8	-			MA8	1.0	07Ke09
	21096.5	6.5			0.1	-			TT1	1.0	11Et.A *
ave.	21098	4			-0.1	1	83	83 ^{74}Rb			average
$^{74}\text{Rb-u}$	-55765	125	-55734	3	0.2	U			P40	1.0	06Lu19
$^{74}\text{Ge }^{35}\text{Cl-}^{72}\text{Ge }^{37}\text{Cl}$	2047.5	1.1	2052.02	0.11	1.0	U			H18	4.0	64Ba03
	2047.74	0.71			2.4	U			H40	2.5	85Ei01
	2052.01	0.26			0.0	U			H44	1.5	91Hy01
$^{74}\text{Se }^{35}\text{Cl-}^{72}\text{Ge }^{37}\text{Cl}$	3347.9	4.7	3350.19	0.11	0.2	U			H40	2.5	85Ei01
$^{73}\text{Ge H-}^{74}\text{Ge}$	10105.1	1.7	10106.23	0.06	0.3	U			M15	2.5	63Ri07
$^{74}\text{Se-}^{74}\text{Ge}$	1298.5	8.5	1298.173	0.008	0.0	U			H40	2.5	85Ei01
	1298.7	3.7			-0.1	U			H40	2.5	85Ei01
	1298.096	0.053			1.5	U			JY1	1.0	10Ko15
	1298.1729	0.0080			0.0	1	100	100 ^{74}Se	FS1	1.0	10Mo03
$^{74}\text{Br-}^{73}\text{Br}$	-1244	410	-1761	10	-0.5	U			CR1	2.5	89Sh10 *
$^{74}\text{Se(p,t)}^{72}\text{Se}$	-11979	24	-12005.9	2.0	-1.1	U			Win		74De31 *
$^{74}\text{Ge}^{14}\text{C,}^{15}\text{O)}^{73}\text{Zn}$	-8018	150	-7664.8	1.9	2.4	U			Ors		84De33
$^{74}\text{Ge(d,}^3\text{He)}^{73}\text{Ga}$	-5515	7	-5518.6	1.7	-0.5	U			Ors		78Ro14
	-5509	13			-0.7	U			Hei		84Ha31
$^{73}\text{Ge(n,}\gamma)^{74}\text{Ge}$	10200.2	0.6	10196.24	0.06	-6.6	B					70Ha60
	10198	2			-0.9	U					74Ch18
	10195.90	0.15			2.2	-			ILn		85Ho.A Z
	10196.32	0.14			-0.6	-					89Bu.A
	10196.31	0.07			-1.1	-			MMn		91Is01 Z
	10196.06	0.20			0.9	-			Bdn		06Fi.A
ave.	10196.24	0.06			0.0	1	100	100 ^{73}Ge			average
$^{74}\text{Se(d,}^3\text{He)}^{73}\text{As}$	-3027	8	-3056	4	-3.6	B			Ors		83Ro08 *
$^{74}\text{Zn}(\beta^-)^{74}\text{Ga}$	2350	100	2293	4	-0.6	U					72Er05 *
$^{74}\text{Ga}(\beta^-)^{74}\text{Ge}$	5400	100	5372.8	3.0	-0.3	U					62Ei02 *
$^{74}\text{As}(\beta^+)^{74}\text{Ge}$	2558	4	2562.4	1.7	1.1	-					71Bo01 *
$^{74}\text{Ge(p,n)}^{74}\text{As}$	-3343.5	5.6	-3344.7	1.7	-0.2	-			Tkm		63Ok01
	-3348.3	5.			0.7	-			Oak		64Jo11 Z
	-3346	5			0.3	-					70Fi03 Z
	-3347	3			0.8	-			Kyu		73Ki11
ave.	2562.9	1.9	2562.4	1.7	-0.3	1	82	82 ^{74}As			average
$^{74}\text{As}(\beta^-)^{74}\text{Se}$	1351	4	1353.1	1.7	0.5	1	18	18 ^{74}As			71Bo01 *
$^{74}\text{Br}(\beta^+)^{74}\text{Se}$	6857	100	6925	6	0.7	U					69La15 *
$^{74}\text{Se(p,n)}^{74}\text{Br}$	-7689	15	-7707	6	-1.2	1	15	15 ^{74}Br			75Lu02 *
$^{74}\text{Kr}(\beta^+)^{74}\text{Br}$	3000	200	2956	6	-0.2	U					74Ro11
	3327	125			-3.0	U					75Sc07

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{74}\text{Rb}(\beta^+)^{74}\text{Kr}$	10000	1500	10416	3	0.3	U			76Da.D
	10413.8	7.0			0.3	1	24	17	^{74}Rb
* $^{74}\text{Ni-u}$	Trends from Mass Surface TMS suggest ^{74}Ni 750 less bound								G Au **
* $^{74}\text{Ga}-^{85}\text{Rb}_{.871}$	$D_M=3780.1(22.5) \mu\text{u}$ corrected $-3.0(1.7) \text{ keV}$ for gs+m mixture $R<0.1$ at 59.571 keV								Nub129 **
* $^{74}\text{Ga}-^{85}\text{Rb}_{.871}$	$D_M=3809.7(34.6) \mu\text{u}$ corrected $-3.0(1.7) \text{ keV}$ for gs+m mixture $R<0.1$ at 59.571 keV								Nub129 **
* $^{74}\text{Ga}-^{85}\text{Rb}_{.871}$	$D_M=3776.9(5.4) \mu\text{u}$ $\text{ME}=-68049.6(5.0)\text{keV}$ corrected for e^- binding= -60eV								11Et.A **
*	isomeric mixture 200:1								11Et.A **
* $^{74}\text{Se}-^{84}\text{Kr}$	Not independent measurement, use $^{74}\text{Ge}-^{74}\text{Se}$ below								10Mo03 **
* $^{74}\text{Br }^{27}\text{Al}-^{85}\text{Rb}_{1.188}$	$D_M=16253.4(5.3) \mu\text{u}$ for mixture gs+m at 13.58 keV; $M-A=-82474.9(4.9) \text{ keV}$								Nub129 **
* $^{74}\text{Kr}-^{85}\text{Rb}_{.871}$	Combined results of next two items								G Au **
* $^{74}\text{Rb}-^{85}\text{Rb}_{.871}$	Combined results of next two items								G Au **
* $^{74}\text{Rb}-^{85}\text{Rb}_{.871}$	$D_M=21096.4(6.5) \mu\text{u}$ $\text{ME}=-51916.6(6.0)\text{keV}$ corrected for e^- binding= $+66\text{eV}$								11Et.A **
* $^{74}\text{Br}-^{73}\text{Br}$	$D_M=-1230(410) \mu\text{u}$ for $^{74}\text{Br}^m$ at 13.58(0.21) keV								Nub127 **
* $^{74}\text{Se}(p,t)^{72}\text{Se}$	Original error 12; added systematic error 21 keV								G Au **
* $^{74}\text{Se}(d,^3\text{He})^{73}\text{As}$	$Q=-3033(8)$ for $Q(^{76}\text{Se}(d,^3\text{He}))=-4020.7(2.0)$, now 4014.5 keV								AHW **
* $^{74}\text{Zn}(\beta^-)^{74}\text{Ga}$	$E_{\beta^-}=2100(100)$ to 1^+ level at 251.787 keV								Ens067 **
* $^{74}\text{Ga}(\beta^-)^{74}\text{Ge}$	$E_{\beta^-}=2450(100)$ to 3^- level at 2949.48 keV								Ens067 **
* $^{74}\text{As}(\beta^+)^{74}\text{Ge}$	Original error increased: authors report $E(2^+)=593.1(1.5)$ while								AHW **
*	$E(2^+)=595.850(0.006) \text{ keV}$; see also $^{84}\text{Rb}(\beta^+)$								Ens067 **
* $^{74}\text{As}(\beta^-)^{74}\text{Se}$	Original value 1350.1(0.7), error increased, see $^{84}\text{Rb}(\beta^+)$								AHW **
* $^{74}\text{Rb}(\beta^+)^{74}\text{Se}$	$E_{\beta^+}=5200(100)$, 4500(100) to 634.76, 1363.21 levels								69La15 **
*	from $^{74}\text{Br}^m$ at 13.8(0.5) keV								93Do05 **
* $^{74}\text{Se}(p,n)^{74}\text{Br}$	$T=7868(15)$ to (2^-) level at 72.65 keV								Ens067 **
* $^{74}\text{Rb}(\beta^+)^{74}\text{Kr}$	Deduced from measured half-life and branching ratio								G Au **
* $^{74}\text{Rb}(\beta^+)^{74}\text{Kr}$	Original 10405(9) re-evaluated in reference								11To.A **
$^{75}\text{Cu-u}$	-58100	700	-58477.4	2.5	-0.4	U		1.5	98Ba.A
$^{75}\text{Zn}-^{85}\text{Rb}_{.882}$	10641.7	2.1				2	TO6	1.0	08Ba54
$^{75}\text{Ga}-^{85}\text{Rb}_{.882}$	4301.7	2.6				2	MA8	1.0	07Gu09
$\text{C}_3 \text{H}_7 \text{O}_2 - ^{75}\text{As}$	123009.8	2.6	123009.9	0.9	0.0	U	M15	2.5	63Ri07
$^{75}\text{As}-^{85}\text{Rb}_{.882}$	-601.3	7.6	-604.0	0.9	-0.4	U	MA8	1.0	02Ke.A
$^{75}\text{Br }^{27}\text{Al}-^{85}\text{Rb}_{1.200}$	13201.3	4.6				2	MA8	1.0	11He10
$^{75}\text{Kr}-^{85}\text{Rb}_{.882}$	8747.2	8.7				2	MA8	1.0	06Ro11
$^{75}\text{Rb}-^{85}\text{Rb}_{.882}$	16371	8	16374.7	1.3	0.5	U	MA2	1.0	94Ot01
	16374.7	1.7			0.0	2	MA8	1.0	07Ke09
	16368	21			0.3	U	MA8	1.0	07Ke09
	16374.6	1.9			0.0	2	TT1	1.0	11Et.A *
$^{75}\text{Cu}-^{72}\text{Ge}_{1.042}$	22719.6	2.5				2	JY1	1.0	07Ra27
$^{75}\text{As }^{35}\text{Cl}-^{73}\text{Ge }^{37}\text{Cl}$	1079.6	5.0	1085.7	1.0	0.5	U	H40	2.5	85EI01
$^{74}\text{Ge}(n,\gamma)^{75}\text{Ge}$	6505.9	1.1	6505.84	0.05	-0.1	U			72Gr34
	6505.5	2.			0.2	U			72Ha74
	6505.81	0.30			0.1	U			89Bu.A *
	6505.26	0.08			7.3	B	MMn		91Is01 Z
	6505.45	0.14			2.8	C	Bdn		06Fi.A
	6505.84	0.05				2			12Me04
$^{74}\text{Ge}(d,p)^{75}\text{Ge}$	4265	15	4281.27	0.05	1.1	U	MIT		67Sp09
	4282	10			-0.1	U	Kop		72Ha74
	4268	10			1.3	U	Kyu		73Ka03
$^{74}\text{Ge}(p,\gamma)^{75}\text{As}$	6901.6	5.	6900.7	0.9	-0.2	U			74Wa08
$^{74}\text{Ge}(^3\text{He,d})^{75}\text{As}$	1414	4	1407.2	0.9	-1.7	U	Hei		76Sc13
$^{75}\text{As}(\gamma,n)^{74}\text{As}$	-10259	31	-10245.5	1.9	0.4	U	Phi		60Ge01
$^{74}\text{Se}(n,\gamma)^{75}\text{Se}$	8027.84	0.30	8027.60	0.07	-0.8	U	BNn		81En07 Z
	8027.60	0.08			0.0	-	ILn		84To11 Z
	8027.59	0.16			0.0	-	Bdn		06Fi.A
ave.	8027.60	0.07			0.0	1		100	^{75}Se
$^{75}\text{Zn}(\beta^-)^{75}\text{Ga}$	6060	80	5906	3	-1.9	U	Stu		86Ek01
$^{75}\text{Ga}(\beta^-)^{75}\text{Ge}$	3300	200	3392.4	2.4	0.5	U			60Mo01
$^{75}\text{Ge}(\beta^-)^{75}\text{As}$	1188	20	1177.2	0.9	-0.5	U			55Sc09
$^{75}\text{As}(p,n)^{75}\text{Se}$	-1647.2	2.0	-1647.1	0.9	0.1	-	Nvl		59Go68 Z
	-1647.3	1.1			0.3	-	Oak		64Jo11 Z
	-1643	5			-0.8	U			70Fi03
ave.	-1647.3	1.0			0.3	1		85	^{75}As

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{75}\text{Br}(\beta^+)^{75}\text{Se}$	3010	20	3062	4	2.6	U					52Fu04 *
	3030	50			0.6	U					61Ba43 *
	3050	20			0.6	U					69Ra24 *
$^{75}\text{Kr}(\beta^+)^{75}\text{Br}$	4400	200	4783	9	1.9	U					74Ro12 *
$^{75}\text{Sr}(\epsilon)^{75}\text{Rb}$	10600	220				3					03Hu01
$^{75}\text{Rb}-^{85}\text{Rb}_{.882}$	$D_M=16374.5(1.9) \mu\text{u}$ ME=-57218.8(1.7)keV corrected for e^- binding=+74eV										11Et.A **
$^{74}\text{Ge}(n,\gamma)^{75}\text{Ge}$	Original error 0.03 keV increased										GAu **
$^{75}\text{Br}(\beta^+)^{75}\text{Se}$	$E_{\beta^+}=1700(20) 1720(50) 1740(20)$ respectively, to $3/2^-$ level at 286.5698 keV										Ens997 **
$^{75}\text{Kr}(\beta^+)^{75}\text{Br}$	$E_{\beta^+}=3200(200)$ to 132.46 $5/2^+$, 154.61 $3/2^+$ levels										Ens997 **
$^{76}\text{Cu}-^{85}\text{Rb}_{.894}$	24135.0	7.2					2				MA8 1.0 07Gu09
$^{76}\text{Zn}-^{85}\text{Rb}_{.894}$	11975.5	2.0	11974.9	1.6	-0.3	1	61	61	^{76}Zn	MA8 1.0	08Ba54
$^{76}\text{Zn}-^{88}\text{Rb}_{.864}$	9737.4	2.5	9738.3	1.6	0.4	1	39	39	^{76}Zn	JY1 1.0	08Ha23
$^{76}\text{Ga}-^{85}\text{Rb}_{.894}$	7687.6	2.1					2			MA8 1.0	07Gu09
$\text{C}^{32}\text{S}_2-^{76}\text{Ge}$	22741.6	1.5	22739.622	0.019	-0.5	U				M15 2.5	63Ri07
$^{76}\text{Ge-u}$	-78597.242	0.096	-78597.274	0.019	-0.3	U				ST2 1.0	01Do08
$\text{C}_6\text{H}_4-^{76}\text{Se}$	112100	8	112086.425	0.017	-0.7	U				M15 2.5	63Ri07
$^{76}\text{Se-u}$	-80786.205	0.081	-80786.296	0.017	-1.1	U				ST2 1.0	01Do08
$^{76}\text{Kr}-^{85}\text{Rb}_{.894}$	4774.3	4.7	4770	4	-0.9	1	84	84	^{76}Kr	MA8 1.0	06Ro11
$^{76}\text{Rb}-^{85}\text{Rb}_{.894}$	13931	8	13933.0	1.0	0.3	U				MA2 1.0	94Ot01
	13932.2	2.0			0.4	2				MA8 1.0	07Ke09
	13923	15			0.7	U				MA8 1.0	07Ke09
	13935.3	1.6			-1.4	2				MA8 1.0	07Ke09
	13931.0	1.7			1.2	2				TT1 1.0	11Et.A *
$^{76}\text{Sr}^{19}\text{F}-^{85}\text{Rb}_{1.118}$	38785	37				2				MA8 1.0	05Si34
$^{76}\text{Sr-u}$	-58813	107	-58240	40	2.2	F				2.5	01La31 *
$^{76}\text{Ge}-^{84}\text{Kr}$	9904.9983	0.0175	9904.998	0.019	0.0	o				FS1 1.0	10Mo03 *
$^{76}\text{Se}-^{84}\text{Kr}$	7715.9762	0.0169	7715.976	0.017	0.0	1	100	100	^{76}Se	FS1 1.0	10Mo03
$^{74}\text{Ge}\text{H}_2-^{76}\text{Ge}$	15425.0	1.7	15425.100	0.023	0.0	U				M15 2.5	63Ri07
$^{76}\text{Ge}^{35}\text{Cl}-^{74}\text{Ge}^{37}\text{Cl}$	3175.7	1.5	3175.04	0.07	-0.1	U				H18 4.0	64Ba03
	3170.41	0.74			2.5	U				H40 2.5	85Ei01
	3174.61	0.41			0.7	U				H44 1.5	91Hy01
$^{76}\text{Se}^{35}\text{Cl}-^{74}\text{Ge}^{37}\text{Cl}$	986.30	0.65	986.02	0.07	-0.3	U				H44 1.5	91Hy01
$^{76}\text{Ge}-^{76}\text{Se}$	2190.92	0.59	2189.022	0.008	-1.3	U				H40 2.5	85Ei01
	2188.60	0.42			0.7	U				H44 1.5	91Hy01
	2188.963	0.054			1.1	U				ST2 1.0	01Do08
	2188.98	0.16			0.3	U				JY1 1.0	08Ra09
	2189.0221	0.008			0.0	1	100	100	^{76}Ge	FS1 1.0	10Mo03
$^{75}\text{Rb}-^{76}\text{Rb}_{.493} \quad ^{74}\text{Rb}_{.507}$	-1140	170	-1081.1	2.0	0.1	U				P20 2.5	82Au01
$^{76}\text{Ge}(^{14}\text{C},^{17}\text{O})^{73}\text{Zn}$	-3779	40	-3790.8	1.9	-0.3	U				Ors	84Be10 *
$^{76}\text{Ge}(^{14}\text{C},^{16}\text{O})^{74}\text{Zn}$	163	40	300.7	2.5	3.4	B				Ors	84Be10
$^{76}\text{Ge}(^{18}\text{O},^{20}\text{Ne})^{74}\text{Zn}$	-1219	21	-1197.1	2.5	1.0	U				Hei	84Ha31
$^{76}\text{Ge}(^{14}\text{C},^{15}\text{O})^{75}\text{Zn}$	-10354	150	-10489.7	2.0	-0.9	U				Ors	84De33
$^{76}\text{Ge}(d,^3\text{He})^{75}\text{Ga}$	-6545	7	-6543.8	2.4	0.2	U				Ors	78Ro14
	-6536	22			-0.4	U				Hei	84Ha31
$^{75}\text{As}(n,\gamma)^{76}\text{As}$	7329	2	7328.50	0.07	-0.3	U					68Jo11
	7328.421	0.075			1.0	2				ILn	90Ho10 Z
	7328.81	0.15			-2.1	2				Bdn	06Fi.A
$^{75}\text{As}(d,p)^{76}\text{As}$	5105	5	5103.93	0.07	-0.2	U					76Mo32
$^{75}\text{Se}(n,\gamma)^{76}\text{Se}$	11154.15	0.30	11153.79	0.07	-1.2	U				ILn	83To20 Z
$^{76}\text{Zn}(\beta^-)^{76}\text{Ga}$	4160	80	3993.6	2.4	-2.1	U				Stu	86Ek01
$^{76}\text{Ga}(\beta^-)^{76}\text{Ge}$	6770	150	6916.2	2.0	1.0	o				Stu	77Al17
	7010	90			-1.0	U				Stu	86Ek01
$^{76}\text{Ge}(p,n)^{76}\text{As}$	-1705	5	-1703.9	0.9	0.2	U					70Fi03
$^{76}\text{As}(\beta^-)^{76}\text{Se}$	2970	2	2960.6	0.9	-4.7	B					69Na11
$^{76}\text{Br}(\beta^+)^{76}\text{Se}$	5002	20	4963	9	-2.0	2					71Dz08
$^{76}\text{Br}(n,p)^{76}\text{Se}$	5730	15	5745	9	1.0	2			ILL		78An14
$^{76}\text{Se}(p,n)^{76}\text{Br}$	-5738.6	15.	-5745	9	-0.4	2					75Lu02

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	ν_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{76}\text{Rb}(\beta^+)^{76}\text{Kr}$	8793	570	8535	4	-0.5	U			75We23	
	8063	44			10.7	F			82Mo10 *	
	8094	162			2.7	F	BNL		83Li11 *	
	8250	150			1.9	U	IRS		93Al03	
* $^{76}\text{Rb}-^{85}\text{Rb}_{.894}$	$D_M=13930.9(1.7) \mu\text{u}$ ME=-60481.1(1.6)keV corrected for e^- binding=+81eV								11Et.A **	
* $^{76}\text{Sr-u}$	F : other results in same paper not trusted, see ^{80}Y								GAu **	
* $^{76}\text{Ge}-^{84}\text{Kr}$	Not independent measurement, use $^{76}\text{Ge}-^{76}\text{Se}$ below								10Mo03 **	
* $^{76}\text{Ge}(^{14}\text{C}, ^{17}\text{O})^{73}\text{Zn}$	Q=-3974(40) M=-65410(40) to $^{73}\text{Zn}^m$ at 195.5 keV								GAu **	
* $^{76}\text{Rb}(\beta^+)^{76}\text{Kr}$	$E_{\beta^+}=4558(30)$ to level ($1^+, 2^+$) at 2570.95 keV and corrections by authors								Ens953 **	
* $^{76}\text{Rb}(\beta^+)^{76}\text{Kr}$	F : 29.6% feeding above 2570.95 level from reference								84Mo22 **	
$^{77}\text{Cu-u}$	-51850	540	-52080#	160#	-0.4	D	OR1	1.0	06Ha62 *	
$^{77}\text{Zn-u}$	-62790	780	-63112.8	2.1	-0.3	U	TO6	1.5	98Ba.A *	
	-63380	260			0.7	U	GT2	1.5	08Kn.A *	
$^{77}\text{Zn}-^{88}\text{Rb}_{.875}$	14485.7	4.5	14486.1	2.1	0.1	1	22	22	^{77}Zn JY1 1.0 08Ha23	
$\text{C}_6 \text{H}_5-^{77}\text{Se}$	119211.9	4.2	119211.01	0.07	-0.1	U			M15 2.5 63Ri07	
$^{77}\text{Rb}-^{39}\text{K}_{1.974}$	1912	27	2045.0	1.4	4.9	B			MA2 1.0 87Bo59	
$^{77}\text{Zn}-^{85}\text{Rb}_{.906}$	16805.8	2.4	16805.7	2.1	0.0	1	78	78	^{77}Zn MA8 1.0 08Ba54	
$^{77}\text{Ga}-^{85}\text{Rb}_{.906}$	9072.8	2.6				2			MA8 1.0 07Gu09	
$^{77}\text{Kr}-^{85}\text{Rb}_{.906}$	4588.5	2.1				2			MA8 1.0 06Ro11	
$^{77}\text{Rb}-^{85}\text{Rb}_{.906}$	10327	8	10320.1	1.4	-0.9	U			MA2 1.0 94Ot01	
	10320.1	1.4				2			MA8 1.0 07Ke09	
$^{77}\text{Sr }^{19}\text{F}-^{85}\text{Rb}_{1.129}$	35938.0	8.5				2			MA8 1.0 05Si34	
$^{75}\text{Rb}-^{77}\text{Rb}_{.325} \text{ } ^{74}\text{Rb}_{.676}$	-1340	380	-1053.6	2.4	0.3	U			P20 2.5 82Au01	
$^{76}\text{Rb}-^{77}\text{Rb}_{.494} \text{ } ^{75}\text{Rb}_{.507}$	525	30	557.1	1.3	0.4	U			P20 2.5 82Au01	
	6072.5	1.0	6071.29	0.05	-1.2	U			72Gr34 Z	
$^{76}\text{Ge}(n,\gamma)^{77}\text{Ge}$	6071.7	1.2			-0.3	U			72Ha74 Z	
	6072.3	0.4			-2.5	U			Bdn 06Fi.A	
	6071.29	0.05				2			12Me04	
	3839	10	3846.72	0.05	0.8	U			Kop 72Ha74	
$^{76}\text{Ge}(d,p)^{77}\text{Ge}$	3823	12			2.0	U			Kyu 73Ka03	
	2497	3	2498.9	1.7	0.6	1	33	33	^{77}As Hei 76Sc13	
$^{76}\text{Ge}(^3\text{He,d})^{77}\text{As}$	7418.87	0.20	7418.85	0.06	-0.1	-			BNn 81En07	
	7418.85	0.07			0.0	-			ILn 85To10 Z	
	7418.85	0.15			0.0	-			Bdn 06Fi.A	
$^{76}\text{Se}(n,\gamma)^{77}\text{Se}$	5192	10	5194.29	0.06	0.2	U			Ald 63Ma27	
$^{76}\text{Se}(d,p)^{77}\text{Se}$	ave.	7418.85	0.06	7418.85	0.06	0.0	1	100	100	^{77}Se average
$^{76}\text{Se}(n,\gamma)^{77}\text{Se}$	3850	200	3922	9	0.4	U			ChR 76Ha29	
$^{77}\text{Sr}(\epsilon p)^{76}\text{Kr}$	7270	120	7203	3	-0.6	U			Stu 86Ek01	
$^{77}\text{Zn}(\beta^-)^{77}\text{Ga}$	5340	60	5220.5	2.4	-2.0	U			Stu 77Al17	
$^{77}\text{Ga}(\beta^-)^{77}\text{Ge}$	5690	300			-1.6	U			Stu 86Ek01	
$^{77}\text{Ge}(\beta^-)^{77}\text{As}$	2670	100	2703.5	1.7	0.3	U			52Sm13 *	
$^{77}\text{As}(\beta^-)^{77}\text{Se}$	700	7	683.2	1.7	-2.4	U			51Ca04	
	679	4			1.0	1	18	18	^{77}As 51Je01	
$^{77}\text{Br}(\beta^+)^{77}\text{Se}$	1358	20	1364.7	2.8	0.3	U			51Ca28	
$^{77}\text{Se}(p,n)^{77}\text{Br}$	-2147	4	-2147.0	2.8	0.0	2			Oak 58Jo01	
	-2147.0	4.			0.0	2			Tkm 63Ok01	
$^{77}\text{Kr}(\beta^+)^{77}\text{Br}$	3012	30	3065	3	1.8	U			55Th01 *	
	3027	40			1.0	U			73Ba22 *	
	3300	100			-2.3	U			74Ro11 *	
	2760	42			7.3	B			82Mo10 *	
$^{77}\text{Rb}(\beta^+)^{77}\text{Kr}$	5180	390	5339.0	2.4	0.4	U			75We23	
	5272	26			2.6	U			82Mo10	
	5113	69			3.3	B	BNL		83Li11	
	5320	70			0.3	U	IRS		93Al03	
$^{77}\text{Sr}(\beta^+)^{77}\text{Rb}$	6986	227	7027	8	0.2	U	BNL		83Li11	
* $^{77}\text{Cu-u}$	Trends from Mass Surface TMS suggest ^{77}Cu 210 more bound								GAu **	
* $^{77}\text{Zn-u}$	M-A=-58100(700) keV for mixture gs+m at 772.440 keV								Nub127 **	
* $^{77}\text{Zn-u}$	M-A=-58648(95) keV for mixture gs+m at 772.440 keV ($1/2^-$)								Nub127 **	
* $^{77}\text{Ge}(\beta^-)^{77}\text{As}$	$E_{\beta^-}=2196(100)$ to $9/2^+$ level at 475.443 keV								Ens978 **	
* $^{77}\text{Kr}(\beta^+)^{77}\text{Br}$	Error not in 55Th01, estimated by evaluator								AHW **	
* $^{77}\text{Kr}(\beta^+)^{77}\text{Br}$	$E_{\beta^+}=1860(30)$ 1875(40) respectively, to $5/2^+$ level at 129.64 keV								Ens978 **	
* $^{77}\text{Kr}(\beta^+)^{77}\text{Br}$	$E_{\beta^+}=2000(100)$ 1528(36) respectively, to $3/2^+$ level at 276.22 keV								Ens978 **	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{78}\text{Cu-u}$	-47770	540				2			OR1	1.0	06Ha62
$^{78}\text{Zn}-^{88}\text{Rb}_{.886}$	16863.8	2.9	16863.6	2.1	-0.1	1	52	52 ^{78}Zn	JY1	1.0	08Ha23
$^{78}\text{Ga}-^{88}\text{Rb}_{.886}$	10184.3	3.3	10183.2	2.0	-0.3	1	38	38 ^{78}Ga	JY1	1.0	08Ha23
$\text{C}_6\text{H}_6-^{78}\text{Se}$	129642.6	2.2	129640.91	0.20	-0.3	U			M15	2.5	63Ri07
$\text{C}_6\text{H}_6-^{78}\text{Kr}$	126548.3	3.6	126585.2	0.8	4.1	B			M15	2.5	63Ri07
	126554	17			1.2	U			R11	1.5	78Di09
	126560	7			2.4	U			R11	1.5	78Di09
$\text{C}_5\text{N H}_4-^{78}\text{Kr}$	113994	20	114009.2	0.8	0.5	U			R11	1.5	78Di09
$^{78}\text{Kr}-^{86}\text{Kr}_{.907}$	1441.2	1.0	1441.1	0.8	-0.1	1	57	57 ^{78}Kr	MS1	1.0	06Ri15
$^{78}\text{Zn}-^{85}\text{Rb}_{.918}$	19266.0	3.0	19266.2	2.1	0.1	1	48	48 ^{78}Zn	MA8	1.0	08Ba54
$^{78}\text{Ga}-^{85}\text{Rb}_{.918}$	12585.2	2.6	12585.9	2.0	0.3	1	62	62 ^{78}Ga	MA8	1.0	07Gu09
$^{78}\text{Kr}-^{85}\text{Rb}_{.918}$	1342.3	1.4	1342.0	0.8	-0.2	-			MA8	1.0	06Ro11
	1338.9	2.2			1.4	-			MA8	1.0	06Ro11
ave.	1341.3	1.2			0.5	1	41	41 ^{78}Kr			average
$^{78}\text{Rb}-^{85}\text{Rb}_{.918}$	9118	8	9119	3	0.1	2			MA2	1.0	94Ot01
	9121.3	7.5			-0.3	2			TT1	1.0	12Ga15 *
	9118.3	4.5			0.1	2			TT1	1.0	12Ga15 *
$^{78}\text{Sr}-^{85}\text{Rb}_{.918}$	13157	8				2			MA2	1.0	94Ot01
$^{78}\text{Se }^{35}\text{Cl}_2-^{74}\text{Ge }^{37}\text{Cl}_2$	2030.4	2.2	2031.68	0.24	0.4	U			H44	1.5	91Hy01
$^{78}\text{Se }^{35}\text{Cl}-^{76}\text{Ge }^{37}\text{Cl}$	-1147.60	0.92	-1143.37	0.21	1.8	U			H40	2.5	85Ei01
	-1143.57	0.72			0.2	U			H44	1.5	91Hy01
$^{78}\text{Se }^{35}\text{Cl}-^{76}\text{Se }^{37}\text{Cl}$	1042.03	1.35	1045.66	0.21	1.1	U			H40	2.5	85Ei01
	1044.58	0.45			1.6	U			H44	1.5	91Hy01
$^{76}\text{Se H}_2-^{78}\text{Kr}$	14440	25	14498.8	0.8	1.6	U			R11	1.5	78Di09
$^{77}\text{Se H}-^{78}\text{Kr}$	7367	26	7374.2	0.8	0.2	U			R11	1.5	78Di09
$^{78}\text{Kr}-^{78}\text{Se}$	3074	16	3055.7	0.8	-0.8	U			R11	1.5	78Di09
	3098	20			-1.4	U			R11	1.5	78Di09
$^{78}\text{Se H}-^{78}\text{Kr}$	4724	33	4769.4	0.8	0.9	U			R11	1.5	78Di09
$^{76}\text{Rb}-^{78}\text{Rb}_{.325}^{75}\text{Rb}_{.676}$	-130	40	-69	4	0.6	U			P20	2.5	82Au01
$^{77}\text{Rb}-^{78}\text{Rb}_{.494}^{76}\text{Rb}_{.507}$	-1192	19	-1138	6	1.1	U			P20	2.5	82Au01
$^{78}\text{Kr}(\alpha, ^8\text{He})^{74}\text{Kr}$	-41080	75	-41032.5	2.1	0.6	U			Tex		82Mo23 *
$^{78}\text{Se}(p,\alpha)^{75}\text{As}$	870.9	2.3	872.3	0.9	0.6	1	15	15 ^{75}As	NDm		82Zu04
$^{78}\text{Kr}(^3\text{He}, ^6\text{He})^{75}\text{Kr}$	-12581	14	-12517	8	4.6	B					87Mo06
$^{76}\text{Ge}(t,p)^{78}\text{Ge}$	6310	5	6310	4	0.0	2			LAI		78Ar12
	6310	5			0.0	2			Phi		81St18
$^{78}\text{Se}(p,t)^{76}\text{Se}$	-9433.7	4.3	-9434.80	0.18	-0.3	U			NDm		82Zu04
$^{78}\text{Kr}(\alpha, ^6\text{He})^{76}\text{Kr}$	-20351	10	-20333	4	1.8	o			Tex		82Mo23 *
$^{78}\text{Kr}(p,t)^{76}\text{Kr}$	-12840	15	-12826	4	0.9	U			Tky		81Ma30
$^{78}\text{Se}(d, ^3\text{He})^{77}\text{As}$	-4904	4	-4905.1	1.7	-0.3	1	18	18 ^{77}As	Ors		83Ro08 *
$^{77}\text{Se}(n,\gamma)^{78}\text{Se}$	10497.7	0.3	10497.74	0.17	0.1	-			BNn		81En07 Z
	10497.75	0.21			0.0	-			Bdn		06Fi.A
$^{78}\text{Se}(p,d)^{77}\text{Se}$	-8271.9	4.0	-8273.18	0.17	-0.3	U			NDm		82Zu04
$^{77}\text{Se}(n,\gamma)^{78}\text{Se}$	ave. 10497.73	0.17	10497.74	0.17	0.0	1	99	99 ^{78}Se			average
$^{78}\text{Kr}(d,t)^{77}\text{Kr}$	-5804	7	-5824.2	2.1	-2.9	U					87Mo06
$^{78}\text{Zn}(\beta^-)^{78}\text{Ga}$	6440	140	6222.7	2.7	-1.6	o			Stu		86Ek01
	6364	90			-1.6	U			Stu		00Me.A
$^{78}\text{Ga}(\beta^-)^{78}\text{Ge}$	8140	160	8156	4	0.1	o			Stu		77Al17
	8200	80			-0.5	o			Stu		86Ek01
	8054	43			2.4	U			Stu		00Me.A
$^{78}\text{Ge}(\beta^-)^{78}\text{As}$	967	30	955	10	-0.4	R					65Fr04 *
	987	20			-1.6	R					65Kv01 *
$^{78}\text{As}(\beta^-)^{78}\text{Se}$	4270	100	4209	10	-0.6	U					70Mc01
	4310	100			-1.0	U					71Mo20 *
$^{78}\text{Br}(\beta^+)^{78}\text{Se}$	3542	50	3574	4	0.6	U			Bar		61Ri02
$^{78}\text{Se}(p,n)^{78}\text{Br}$	-4344	10	-4356	4	-1.2	2			Bar		61Ri02
	-4370	10			1.4	2			LAI		61Sc11
	-4355.5	7.4			-0.1	2			Tkm		63Ok01 Z
	-4356	5			0.0	2					70Fi03 Z
$^{78}\text{Rb}(\beta^+)^{78}\text{Kr}$	7085	370	7244	3	0.4	U					75We23 *
	7240	50			0.1	U					81Ba40
	7185	50			1.2	U			IRS		93Al03 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{78}\text{Rb}^x(\text{IT})^{78}\text{Rb}$	74	12				3					82Au01 *
* $^{78}\text{Rb}-^{85}\text{Rb}_{.918}$	Correction for e^- binding=+97eV is negligible										
* $^{78}\text{Rb}-^{85}\text{Rb}_{.918}$	$D_M = 9237.6(4.5) \mu\text{u}$ $\text{ME} = -66824.9(4.2)\text{keV}$ corrected for e^- binding=+97eV										
*	from $^{78}\text{Rb}^n$ at 111.19(0.22) keV										
* $^{78}\text{Kr}(\alpha, ^8\text{He})^{74}\text{Kr}$	Original -41120(75) for 4 events included 1 background event										
* $^{78}\text{Kr}(\alpha, ^6\text{He})^{76}\text{Kr}$	Replaced by calibration free $^{80}\text{Kr}(\alpha, ^6\text{He})^{78}\text{Kr}-^{78}\text{Kr}()$										
* $^{78}\text{Se}(\text{d}, ^3\text{He})^{77}\text{As}$	Original value -4910(4) corrected, see $^{74}\text{Se}(\text{d}, ^3\text{He})$										
* $^{78}\text{Ge}(\beta^-)^{78}\text{As}$	$E_{\beta^-} = 690(30) 710(20)$ respectively, to 1^+ level at 277.3 keV										
* $^{78}\text{As}(\beta^-)^{78}\text{Se}$	$E_{\beta^-} = 3000(100)$ to 2^+ level at 1308.644 keV										
* $^{78}\text{Rb}(\beta^+)^{78}\text{Kr}$	$E_{\beta^+} = 3410(370)$ from $^{78}\text{Rb}^n 4^{(-)}$ at 111.19(0.22) to $(4)^-$ level at 2764.10 keV										
* $^{78}\text{Rb}(\beta^+)^{78}\text{Kr}$	$Q_{\beta^+} = 7180(80);$ and 7300(50) from $^{78}\text{Rb}^n$ at 111.19(0.22) keV										
* $^{78}\text{Rb}^x(\text{IT})^{78}\text{Rb}$	Corrected; using $^{78}\text{Rb}^n(\text{IT}) = 111.2$ keV										
$^{79}\text{Cu-u}$	-46700	540	-44980#	430#	3.2	D			OR1	1.0	06Ha62 *
$^{79}\text{Zn}-^{88}\text{Rb}_{.898}$	22278.1	2.9	22276.7	2.4	-0.5	1	68	68 ^{79}Zn	JY1	1.0	08Ha23
$^{79}\text{Ga}-^{88}\text{Rb}_{.898}$	12490.9	2.0	12490.9	2.0	0.0	1	100	100 ^{79}Ga	JY1	1.0	08Ha23
$^{79}\text{Ga-u}$	-67064	129	-67147.7	2.0	-0.4	U			GT2	1.5	08Su19
$\text{C}_6 \text{H}_7-^{79}\text{Br}$	136444.3	2.4	136437.6	1.4	-1.1	U			M15	2.5	63Ri07
	136444	15			-0.3	U			R11	1.5	78Di09
	136449	12			-0.6	U			R11	1.5	78Di09
$\text{C}_5 ^{13}\text{C} \text{H}_6-^{79}\text{Br}$	131976	16	131967.4	1.4	-0.4	U			R11	1.5	78Di09
	131974	17			-0.3	U			R11	1.5	78Di09
$\text{C}_5 \text{N} \text{H}_5-^{79}\text{Br}$	123870	7	123861.6	1.4	-0.8	U			R11	1.5	78Di09
	123871	14			-0.4	U			R11	1.5	78Di09
$\text{C}_5 \text{O} \text{H}_3-^{79}\text{Br}$	100061	15	100052.1	1.4	-0.4	U			R11	1.5	78Di09
	100057	20			-0.2	U			R11	1.5	78Di09
$\text{C}_4 \text{N} \text{O} \text{H}-^{79}\text{Br}$	87489	20	87476.1	1.4	-0.4	U			R11	1.5	78Di09
$^{79}\text{Kr-u}$	-79981	52	-79917	4	1.2	U			GS2	1.0	05Li24 *
$^{79}\text{Zn}-^{85}\text{Rb}_{.929}$	24582.4	4.2	24585.4	2.4	0.7	1	32	32 ^{79}Zn	MA8	1.0	08Ba54
$^{79}\text{Rb}-^{85}\text{Rb}_{.929}$	5934	8	5937.2	2.3	0.4	U			MA2	1.0	94Ot01
	5937.2	2.3				2			MA8	1.0	07Ke09
$^{79}\text{Sr}-^{85}\text{Rb}_{.929}$	11655	9				2			MA2	1.0	94Ot01
$^{77}\text{Se} \text{H}_2-^{79}\text{Br}$	17239	8	17226.6	1.4	-1.0	U			R11	1.5	78Di09
$^{78}\text{Se} \text{H}-^{79}\text{Br}$	6806	8	6796.7	1.4	-0.8	U			R11	1.5	78Di09
$^{79}\text{Br}-^{78}\text{Kr}$	-2072	30	-2027.4	1.6	1.0	U			R11	1.5	78Di09
$^{77}\text{Rb}-^{79}\text{Rb}_{.487} ^{75}\text{Rb}_{.513}$	-1010	40	-996.2	1.8	0.1	U			P20	2.5	82Au01
$^{77}\text{Rb}-^{79}\text{Rb}_{.325} ^{76}\text{Rb}_{.675}$	-1060	40	-996.1	1.6	0.6	U			P20	2.5	82Au01
	-990	70			0.0	U			P20	2.5	82Au01
$^{78}\text{Rb}^x-^{79}\text{Rb}_{.494} ^{77}\text{Rb}_{.506}$	940	40	919	12	-0.2	U			P20	2.5	82Au01
$^{78}\text{Se}(\text{n}, \gamma)^{79}\text{Se}$	6962.6	0.3	6962.83	0.13	0.8	2					79Br.A Z
	6962.2	0.3			2.1	2			BNn		81En07 Z
	6963.11	0.17			-1.6	2			Bdn		06Fi.A
$^{78}\text{Se}(\text{d}, \text{p})^{79}\text{Se}$	4756	6	4738.27	0.13	-3.0	U			MIT		64Sp12
$^{78}\text{Kr}(\text{d}, \text{p})^{79}\text{Kr}$	5980	50	6109	4	2.6	U			Yal		56B110
$^{78}\text{Kr}(\text{d}, \text{p})^{79}\text{Kr}$	-1585	10	-1581.1	2.3	0.4	U			Phi		87St11
$^{79}\text{Zn}(\beta^-)^{79}\text{Ga}$	8550	240	9115.4	2.9	2.4	U			Stu		86Ek01
$^{79}\text{Ga}(\beta^-)^{79}\text{Ge}$	6770	80	6980	40	2.6	U			Stu		77Al17
	7000	80			-0.3	o			Stu		86Ek01
	6979	40			0.0	1	86	86 ^{79}Ge	Stu		00Me.A
$^{79}\text{Ge}(\beta^-)^{79}\text{As}$	4300	200	4110	40	-1.0	U					70Ka04
	4110	100			0.0	1	14	14 ^{79}Ge	Stu		81Al20
$^{79}\text{As}(\beta^-)^{79}\text{Se}$	2230	50	2281	5	1.0	U					61Ku09 *
$^{79}\text{Se}(\beta^-)^{79}\text{Br}$	160	5	150.6	1.3	-1.9	U					49Pa.A
$^{79}\text{Kr}(\beta^+)^{79}\text{Br}$	1612	10	1626	3	1.4	4					52Be55
	1620	5			1.2	4					54Th39
	1635	5			-1.8	4					64Bo25
$^{79}\text{Rb}(\beta^+)^{79}\text{Kr}$	3530	50	3639	4	2.2	U					71Li02 *
	3720	90			-0.9	U					72Br31 *
	3650	70			-0.2	U			IRS		93A103

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{79}\text{Sr}(\beta^+)^{79}\text{Rb}$	5259	78	5326	9	0.9	U			BNL		81Li12	
	5059	67			4.0	B			Ors		82De36	
$^{79}\text{Y}(\beta^+)^{79}\text{Sr}$	7120	450				3					92Mu12	
* $^{79}\text{Cu-u}$	Trends from Mass Surface TMS suggest ^{79}Cu 1600 less bound										GAu	**
* $^{79}\text{Kr-u}$	$M-A=-74437(30)$ keV for mixture gs+m at $129.77\ 7/2^+$ keV										Ens026	**
* $^{79}\text{As}(\beta^-)^{79}\text{Se}$	$E_{\beta^-}=1700(50)$ to $527.93\ 3/2^-$ level, and other E_{β^-}										Ens026	**
* $^{79}\text{Rb}(\beta^+)^{79}\text{Kr}$	$E_{\beta^+}=1825(50)\ 2010(90)$ respectively, to $3/2^+$ level at $688.17(0.05)$ keV										Ens026	**
$^{80}\text{Ga-u}$	-63441	129	-63579	3	-0.7	U			GT2	1.5	08Su19	
$\text{C}_6\ \text{H}_8-^{80}\text{Se}$	146068.5	2.9	146078.5	1.3	1.4	U			M15	2.5	63Ri07	
$\text{C}_6\ \text{H}_8-^{80}\text{Kr}$	146225.7	4.6	146222.2	0.7	-0.3	U			M15	2.5	63Ri07	
	146235	18			-0.5	U			R11	1.5	78Di09	
	146215	16			0.3	U			R11	1.5	78Di09	
$\text{C}_5\ \text{O}\ \text{H}_4-^{80}\text{Kr}$	109834	20	109836.7	0.7	0.1	U			R11	1.5	78Di09	
$^{80}\text{Y-u}$	-65720	190	-65644	7	0.4	U			1.0	1.0	98Is06	
	-66664	86			4.7	F				2.5	01La31	
	-65600	200			-0.1	U				2.5	08Go23	
$^{80}\text{Y}\ \text{O}-^{96}\text{Mo}$	24594.6	6.7				2			JY1	1.0	06Ka48	
$^{80}\text{Zr-u}$	-59600	1600				2			1.0	1.0	98Is06	
	-59740	161	-59600	1600	0.3	F				2.5	01La31	
$^{80}\text{Zn}-^{88}\text{Rb}_{.909}$	25165.2	7.3	25167.1	2.8	0.3	1	14	14	^{80}Zn	JY1	1.0	08Ha23
$^{80}\text{Ga}-^{88}\text{Rb}_{.909}$	17034.9	3.1				2			JY1	1.0	08Ha23	
$^{80}\text{Ge}-^{88}\text{Rb}_{.909}$	5964.9	2.2				2			JY1	1.0	08Ha23	
$^{80}\text{Kr}-^{86}\text{Kr}_{.930}$	-488.9	1.1	-489.8	0.7	-0.8	1	46	46	^{80}Kr	MS1	1.0	06Ri15
$^{80}\text{Zn}-^{85}\text{Rb}_{.941}$	27559.1	3.0	27558.8	2.8	-0.1	1	86	86	^{80}Zn	MA8	1.0	08Ba54
$^{80}\text{Kr}-^{85}\text{Rb}_{.941}$	-614.5	1.7	-616.1	0.7	-0.9	1	19	19	^{80}Kr	MA8	1.0	06Ro11
	-627.1	9.6			1.1	U			MA8	1.0	10Na13	
$^{80}\text{Rb}-^{85}\text{Rb}_{.941}$	5528	8	5522.3	2.0	-0.7	U			MA2	1.0	94Ot01	
	5522.3	2.0				2			MA8	1.0	07Ke09	
$^{80}\text{Sr}-^{85}\text{Rb}_{.941}$	7531	8	7523	4	-1.0	-			MA2	1.0	94Ot01	
	7513	14			0.7	U			MA8	1.0	05Si34	
	7521.3	4.2			0.5	-			SH1	1.0	11Ha08	
	ave.	7523	4		0.0	1	100	100	^{80}Sr		average	
$^{80}\text{Se}\ ^{35}\text{Cl}-^{78}\text{Se}\ ^{37}\text{Cl}$	2164.8	1.4	2162.6	1.3	-0.4	U			H18	4.0	64Ba03	
	2160.8	9.2			0.1	U			H40	2.5	85Ei01	
$^{80}\text{As}-^{80}\text{Kr}$	6096.5	3.5				2			MS1	1.0	07Bo50	
$^{80}\text{Kr}-^{79}\text{Br}$	-1955	28	-1959.5	1.5	-0.1	U			R11	1.5	78Di09	
$^{80}\text{Kr}-^{78}\text{Kr}$	-4046	30	-3986.9	1.1	1.3	U			R11	1.5	78Di09	
$^{79}\text{Rb}-^{80}\text{Rb}_{.658}\ ^{77}\text{Rb}_{.342}$	-1218	27	-1139.5	2.5	1.2	U			P20	2.5	82Au01	
$^{79}\text{Rb}-^{80}\text{Rb}_{.494}\ ^{78}\text{Rb}_{.506}$	-1313	24	-1316	7	-0.1	U			P20	2.5	82Au01	
$^{80}\text{Se}(p,\alpha)^{77}\text{As}$	1020.0	2.8	1020.9	1.8	0.3	1	43	31	^{77}As	NDm	82Zu04	
$^{80}\text{Kr}(^3\text{He},^6\text{He})^{77}\text{Kr}$	-10398	24	-10384.8	2.1	0.6	U					87Mo06	
$^{80}\text{Se}(d,\alpha)^{78}\text{As}$	5755	12	5768	10	1.1	2			Phi		77Mo13	
$^{80}\text{Se}(p,t)^{78}\text{Se}$	-8395.1	3.0	-8394.4	1.3	0.2	-			NDm		82Zu04	
	ave.	-8394.1	2.1		-0.2	1	35	34	^{80}Se		average	
$^{80}\text{Kr}(\alpha,^6\text{He})^{78}\text{Kr}-^{78}\text{Kr}(^7\text{Li})^{76}\text{Kr}$	1432	10	1452	4	2.0	1	18	16	^{76}Kr		82Mo23	
$^{78}\text{Kr}(^3\text{He},n)^{80}\text{Sr}$	2990	30	2992	4	0.1	U					79Al19	
$^{80}\text{Se}(d,^3\text{He})^{79}\text{As}$	-5921	7	-5919	5	0.3	-			Ors		83Ro08	
	-5921	13			0.2	-			Hei		83Wi14	
$^{80}\text{Se}(t,\alpha)^{79}\text{As}$	8407	10	8401	5	-0.6	-			Phi		83Mo09	
$^{80}\text{Se}(d,^3\text{He})^{79}\text{As}$	ave.	-5919	5	-5919	5	0.0	1	100	^{79}As		average	
$^{80}\text{Se}(p,d)^{79}\text{Se}$	-7687.6	3.0	-7688.8	1.3	-0.4	R			NDm		82Zu04	
$^{79}\text{Br}(n,\gamma)^{80}\text{Br}$	7892.11	0.20	7892.28	0.13	0.8	3			ILn		78Do06	
	7892.41	0.18			-0.7	3			Bdn		06Fi.A	
$^{79}\text{Br}(d,p)^{80}\text{Br}$	5640	20	5667.71	0.13	1.4	U			Mtr		72Ch33	
$^{80}\text{Zn}(\beta^-)^{80}\text{Ga}$	7540	200	7575	4	0.2	U			Stu		86Ek01	
	7150	150			2.8	U			Trs		86Gi07	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{80}\text{Ga}(\beta^-)^{80}\text{Ge}$	10000	300	10312	4	1.0	o			Stu		81Al20	
	10380	120			-0.6	U			Stu		86Ek01	
$^{80}\text{Ge}(\beta^-)^{80}\text{As}$	2640	70	2679	4	0.6	U			Stu		77Al17	
	2630	20			2.5	U			Trs		86Gi07	
$^{80}\text{As}(\beta^-)^{80}\text{Se}$	6000	200	5545	4	-2.3	U					59Me68	
	5470	90			0.8	U			Trs		86Gi07	
$^{80}\text{Se}(t,^3\text{He})^{80}\text{As}$	-5560	25	-5526	4	1.3	U			LAl		79Aj02	
$^{80}\text{Br}(\beta^+)^{80}\text{Se}$	1884	10	1870.5	0.3	-1.4	U					54Li19	
	1872	7			-0.2	U					69Ka06	
$^{80}\text{Se}(p,n)^{80}\text{Br}$	-2655.2	2.8	-2652.8	0.3	0.9	U			Tkm		63Ok01	
	-2652.5	3.0			-0.1	U			Oak		64Jo11	
	-2653.2	5.			0.1	U					70Fi03	
	-2652.81	0.31				2			PTB		92Bo02	
$^{80}\text{Br}(\beta^-)^{80}\text{Kr}$	1970	30	2004.3	1.4	1.1	U					52Fu04	
	2040	20			-1.8	U					54Li19	
	1997	10			0.7	U					69Ka06	
	5120	500	5717.8	2.0	1.2	U					61Ho13	
$^{80}\text{Rb}(\beta^+)^{80}\text{Kr}$	5500	350			0.6	U					75We23	
	5650	100			0.7	U			IRS		93Al03	
	-6484.0	20.	-6500.2	2.0	-0.8	U					72Ja.A	
$^{80}\text{Kr}(p,n)^{80}\text{Rb}$	6952	152	9165	7	14.6	F			BNL		81Li12	
	6934	242			9.2	F			Ors		82De36	
	6200	600			4.9	F					96Sh27	
$^{80}\text{Y}-u$	F : below lower limit $M > -65890(90) \mu u - 61376(83) \text{ keV}$ determined in reference										03Ba18	**
$^{80}\text{Zr}-u$	F : other results in same paper not trusted, see ^{80}Y and ^{68}Se										GAu	**
$^{80}\text{Kr}-^{85}\text{Rb}_{941}$	Only one measurement										GAu	**
$^{80}\text{Se}(d,^3\text{He})^{79}\text{As}$	Originally -5927(7), see $^{74}\text{Se}(d,^3\text{He})$										AHW	**
$^{80}\text{Rb}(\beta^+)^{80}\text{Kr}$	$E_{\beta^+} = 3860(350) \text{ to } 2^+ \text{ level at } 616.60 \text{ keV}$										Ens058	**
$^{80}\text{Y}(\beta^+)^{80}\text{Sr}$	F : below lower limit $Q_{\beta^-} > 8929(23) \text{ keV}$ determined in reference										03Ba18	**
$^{81}\text{Ge}-u$	-71710	240	-71167.1	2.2	1.5	U			GT2	1.5	08Kn.A	
$\text{C}_6 \text{H}_9 - ^{81}\text{Br}$	154135.3	3.8	154135.6	1.4	0.0	U			M15	2.5	63Ri07	
	154143	17			-0.3	U			R11	1.5	78Di09	
	154134	10			0.1	U			R11	1.5	78Di09	
	141561	10	141559.5	1.4	-0.1	U			R11	1.5	78Di09	
$\text{C}_5 \text{N H}_7 - ^{81}\text{Br}$	141553	18			0.2	U			R11	1.5	78Di09	
	117742	12	117750.1	1.4	0.4	U			R11	1.5	78Di09	
$\text{C}_5 \text{O H}_5 - ^{81}\text{Br}$	81356	20	81364.6	1.4	0.3	U			R11	1.5	78Di09	
$\text{C}_4 \text{O}_2 \text{H} - ^{81}\text{Br}$	113275	14	113279.9	1.4	0.2	U			R11	1.5	78Di09	
$\text{C}_4 \text{ }^{13}\text{C O H}_4 - ^{81}\text{Br}$	113275	14	113279.9	1.4	0.2	U			R11	1.5	78Di09	
$^{81}\text{Rb}-u$	-80958	41	-81006	5	-1.2	U			GS2	1.0	05Li24	
$^{81}\text{Y O} - ^{97}\text{Mo}$	18352.0	5.8	18352	6	0.0	1	100	100 ^{81}Y	JY1	1.0	06Ka48	
	19723.5	3.5				2			JY1	1.0	08Ha23	
$^{81}\text{Ga} - ^{88}\text{Rb}_{920}$	10422.6	2.2				2		JY1	1.0	08Ha23		
$^{81}\text{Ge} - ^{88}\text{Rb}_{920}$	3721.9	3.3	3721.9	2.9	0.0	1	75	75 ^{81}As	JY1	1.0	08Ha23	
$^{81}\text{As} - ^{88}\text{Rb}_{920}$	34467.0	5.4				2		MA8	1.0	08Ba54		
$^{81}\text{Zn} - ^{85}\text{Rb}_{953}$	3063	8	3058	5	-0.6	-			MA2	1.0	94Ot01	
$^{81}\text{Rb} - ^{85}\text{Rb}_{953}$	3055.4	9.2			0.3	-			SH1	1.0	11Ha08	
	ave.	3060	6		-0.2	1	76	76 ^{81}Rb			average	
$^{81}\text{Sr} - ^{85}\text{Rb}_{953}$	7278	8	7276	3	-0.3	2			MA2	1.0	94Ot01	
	7272	12			0.3	U			MA8	1.0	05Si34	
	7275.3	3.7			0.1	2			SH1	1.0	11Ha08	
	2704.2	2.4	2702.0	1.4	-0.9	1	36	29 ^{81}Se	MS1	1.0	07Bo50	
$^{81}\text{Se} - ^{80}\text{Kr}_{1.013}$	8023	8	8057.1	1.8	2.8	U			R11	1.5	78Di09	
$^{80}\text{Se H} - ^{81}\text{Br}$	7922	18	7913.4	1.5	-0.3	U			R11	1.5	78Di09	
$^{80}\text{Kr H} - ^{81}\text{Br}$	-9865	13	-9872.9	1.8	-0.2	U			M15	2.5	63Ri07	
$^{81}\text{Br} - \text{H } ^{79}\text{Br}$	-91	32	-88.4	1.5	0.1	U			R11	1.5	78Di09	
$^{81}\text{Br} - ^{80}\text{Kr}$	-2020	32	-2047.9	1.8	-0.6	U			R11	1.5	78Di09	
$^{81}\text{Br} - ^{79}\text{Br}$	-2014	35			-0.6	U			R11	1.5	78Di09	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{79}\text{Rb}-^{81}\text{Rb}_{.325}$ $^{78}\text{Rb}_{.675}^x$	-1130	30	-1148	9	-0.2	U	P20	2.5	82Au01 Y		
$^{80}\text{Rb}-^{81}\text{Rb}_{.494}$ $^{79}\text{Rb}_{.506}$	927	29	926	3	0.0	U	P20	2.5	82Au01 Y		
$^{80}\text{Se}(n,\gamma)^{81}\text{Se}$	6700.9	0.5	6700.8	0.3	-0.1	-	BNn		81En07 Z		
	6700.9	0.5			-0.1	-	Bdn		06Fi.A		
$^{80}\text{Se}(d,p)^{81}\text{Se}$	4490	6	4476.3	0.3	-2.3	U	MIT		64Sp12		
	4477.5	3.0			-0.4	U	NDm		82Zu04		
$^{80}\text{Se}(n,\gamma)^{81}\text{Se}$	ave.	6700.9	0.4	6700.8	0.3	-0.1	1	97	66 ^{81}Se	average	
$^{81}\text{Br}(\gamma,n)^{80}\text{Br}$	-10130	35	-10158.0	1.7	-0.8	U	Phi		60Ge01		
$^{80}\text{Kr}(d,p)^{81}\text{Kr}$	5660	15	5648.3	1.5	-0.8	U	Tex		75Ch11 *		
	5646	4			0.6	1	14	11 ^{81}Kr	Oak	86Bu18	
$^{80}\text{Kr}(^3\text{He},d)^{81}\text{Rb}$	-637	10	-641	5	-0.4	1	24	24 ^{81}Rb	Phi	87St11	
$^{81}\text{Zr}(\epsilon p)^{80}\text{Sr}$	4700	200	4630	160	-0.4	1	68	68 ^{81}Zr		99Hu05	
$^{81}\text{Ga}(\beta^-)^{81}\text{Ge}$	8320	150	8664	4	2.3	U			Stu	81A120	
$^{81}\text{Ge}(\beta^-)^{81}\text{As}$	6230	120	6242	3	0.1	U			Stu	81A120 *	
$^{81}\text{As}(\beta^-)^{81}\text{Se}$	3800	200	3855.7	2.8	0.3	U				60Mo01	
	3730	100			1.3	U			Stu	77A117	
$^{81}\text{Se}(\beta^-)^{81}\text{Br}$	1600	50	1586.6	1.7	-0.3	U				60Ku06	
	1560	50			0.5	U				67Yt03	
$^{81}\text{Kr}(\epsilon)^{81}\text{Br}$	280.7	0.5	280.8	0.5	0.3	1	93	84 ^{81}Kr		88Ax01 *	
$^{81}\text{Br}(p,n)^{81}\text{Kr}$	-1062	4	-1063.2	0.5	-0.3	U				84Fi.A	
$^{81}\text{Br}(^3\text{He},t)^{81}\text{Kr}$	-296	6	-299.4	0.5	-0.6	U				84Bu23	
$^{81}\text{Br}(^3\text{He},t)^{81}\text{Kr}-^{51}\text{V}(^51\text{Cr})$	470.6	1.8	471.8	0.5	0.7	U			Pri	82Ko06 *	
$^{81}\text{Rb}(\beta^+)^{81}\text{Kr}$	2260	30	2238	5	-0.7	U				75Va24 *	
	2290	50			-1.0	U				77Li14	
$^{81}\text{Sr}(\beta^+)^{81}\text{Rb}$	3990	30	3929	6	-2.0	U				73Br32 *	
$^{81}\text{Y}(\beta^+)^{81}\text{Sr}$	5408	86	5816	6	4.7	B			BNL	81Li12	
	5620	89			2.2	U			Ors	82De36	
$^{81}\text{Zr}(\beta^+)^{81}\text{Y}$	7160	290	7320	160	0.5	1	32	32 ^{81}Zr	Ors	82De36	
* $^{81}\text{Ge-u}$	M-A=-66454(93) keV for mixture gs+m at 679.14 keV								Nub127	**	
* $^{81}\text{Rb-u}$	M-A=-75369(29) keV for mixture gs+m at 86.31 keV								Nub127	**	
* $^{81}\text{Rb}-^{85}\text{Rb}_{.953}$	$D_M=3148.1(9.2)$ keV for $^{81}\text{Rb}^m$ at 86.31(0.07) keV; M-A=-75373.1(8.6) keV								Nub127	**	
* $^{81}\text{Se}-^{80}\text{Kr}_{1.013}$	$D_M=2814.8(2.4)$ μV for $^{81}\text{Se}^m$ at 103.00(0.06)keV; M-A=-76283.2(2.4) keV								Nub127	**	
* $^{80}\text{Kr}(d,p)^{81}\text{Kr}$	Original value 5610(15) reinterpreted as going to 49.57 level								76Me08	**	
* $^{81}\text{Ge}(\beta^-)^{81}\text{As}$	$Q_{\beta^-}=-6230(120)$; and 6930(280) from $^{81}\text{Ge}^m$ at 679.14 keV								Nub127	**	
* $^{81}\text{Kr}(\epsilon)^{81}\text{Br}$	LM=0.42(0.05), $Q(\epsilon)=4.7(0.5)$ to $5/2^-$ level at 275.985 keV								Ens08a	**	
* $^{81}\text{Br}(^3\text{He},t)^{81}\text{Kr}-^{51}\text{V}(^51\text{Cr})$	Q-Q to 456.89(0.03) level=13.7(1.8) keV								GAU	**	
* $^{81}\text{Rb}(\beta^+)^{81}\text{Kr}$	$E_{\beta^+}=1050(30)$ to $1/2^-$ level at 190.64 keV								Ens08a	**	
* $^{81}\text{Sr}(\beta^+)^{81}\text{Rb}$	$E_{\beta^+}=2684(30)$ to $3/2^-$ level, and other E_{β^+}								Ens08a	**	
$^{82}\text{Ga-u}$	-56812	268	-56823.5	2.6	0.0	U	GT1	1.5	04Ma.A		
$^{82}\text{Ge-u}$	-70400	129	-70226.0	2.4	0.9	U	GT2	1.5	08Su19		
$\text{C}_6 \text{H}_{10}-^{82}\text{Se}$	161545.0	4.6	161550.8	1.5	0.5	U	M15	2.5	63Ri07		
$\text{C}_6 \text{H}_{10}-^{82}\text{Kr}$	164769.8	3.4	164767.6	0.9	-0.3	U	M15	2.5	63Ri07		
	164787	14			-0.9	U	R11	1.5	78Di09		
	164784	16			-0.7	U	R11	1.5	78Di09		
$\text{C}_5 \text{N H}_8-^{82}\text{Kr}$	152200	25	152191.5	0.9	-0.2	U	R11	1.5	78Di09		
$\text{C}_5 \text{O H}_6-^{82}\text{Kr}$	128396	20	128382.1	0.9	-0.5	U	R11	1.5	78Di09		
$^{82}\text{Rb-u}$	-81775	39	-81791	3	-0.4	U	GS2	1.0	05Li24 *		
$^{82}\text{Sr-u}$	-81604	63	-81600	6	0.1	U	GS2	1.0	05Li24		
$^{82}\text{Y O}-^{98}\text{Mo}$	16441.2	5.9				2	JY1	1.0	06Ka48		
$^{82}\text{Ga}-^{88}\text{Rb}_{.932}$	25830.4	2.6				2	JY1	1.0	08Ha23		
$^{82}\text{Ge}-^{88}\text{Rb}_{.932}$	12427.9	2.4				2	JY1	1.0	08Ha23		
$^{82}\text{As}-^{88}\text{Rb}_{.932}$	7395.1	4.6				2	JY1	1.0	08Ha23		
$^{82}\text{As}^m-^{88}\text{Rb}_{.932}$	7532.5	4.0				2	JY1	1.0	08Ha23		
$^{82}\text{Kr}-^{86}\text{Kr}_{.953}$	-1329.4	1.1	-1329.2	0.9	0.2	1	73	73 ^{82}Kr	MS1	1.0	06Ri15
$^{82}\text{Kr}-^{85}\text{Rb}_{.965}$	-1394.9	2.6	-1394.4	0.9	0.2	1	13	13 ^{82}Kr	MA8	1.0	06Ro11
$^{82}\text{Rb}^m-^{85}\text{Rb}_{.965}$	3407	9	3406.0	2.8	-0.1	U			MA2	1.0	94Ot01
	3406.0	2.8				2			MA8	1.0	05Gu37

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{82}\text{Sr}-^{85}\text{Rb}_{.965}$	3517	8	3523	6	0.7	1	65	65 ^{82}Sr	MA2	1.0	94Ot01
$^{82}\text{Se } ^{35}\text{Cl}-^{80}\text{Se } ^{37}\text{Cl}$	3128.92	0.63	3127.8	1.2	-0.7	1	55	38 ^{82}Se	H40	2.5	85E101
$^{80}\text{Se } \text{H}_2-^{82}\text{Kr}$	18665	18	18689.1	1.5	0.9	U			R11	1.5	78Di09
	18671	19			0.6	U			R11	1.5	78Di09
$^{81}\text{Br } \text{H}-^{82}\text{Se}$	7419	8	7415.2	1.9	-0.3	U			R11	1.5	78Di09
$^{81}\text{Br } \text{H}-^{82}\text{Kr}$	10662	20	10632.0	1.1	-1.0	U			R11	1.5	78Di09
$^{82}\text{Se}-^{82}\text{Kr}$	3222	16	3216.8	1.6	-0.2	U			R11	1.5	78Di09
	3218	22			0.0	U			R11	1.5	78Di09
	3216.1	1.6			0.3	1	44	34 ^{82}Se	H45	1.5	93Nx01
$^{82}\text{Kr}-^{78}\text{Se } \text{H}_3$	-27269	35	-27301.6	1.0	-0.6	U			R11	1.5	78Di09
$^{80}\text{Se } \text{H}_3-^{82}\text{Kr}$	26466	32	26514.1	1.5	1.0	U			R11	1.5	78Di09
$^{82}\text{Kr}-^{81}\text{Br}$	-2805	32	-2807.0	1.1	0.0	U			R11	1.5	78Di09
$^{82}\text{Se } \text{H}-^{82}\text{Kr}$	11082	40	11041.8	1.6	-0.7	U			R11	1.5	78Di09
$^{79}\text{Rb}-^{82}\text{Rb}_{.241}$ $^{78}\text{Rb}_{.760}^x$	-1536	29	-1627	10	-1.3	U			P20	2.5	82Au01 Y
$^{81}\text{Rb}-^{82}\text{Rb}_{.741}$ $^{78}\text{Rb}_{.260}^x$	-1680	40	-1618	6	0.6	U			P20	2.5	82Au01 Y
$^{80}\text{Rb}-^{82}\text{Rb}_{.325}$ $^{79}\text{Rb}_{.675}$	440	40	377.6	2.6	-0.6	U			P20	2.5	82Au01 Y
$^{82}\text{Kr}(^3\text{He}, ^6\text{He})^{79}\text{Kr}$	-8822	31	-8809	4	0.4	U					87Mo06
$^{82}\text{Se}(^{14}\text{C}, ^{16}\text{O})^{80}\text{Ge}$	-449	60	-301.7	2.5	2.5	U			Ors		83Be.C
$^{82}\text{Se}(^{18}\text{O}, ^{20}\text{Ne})^{80}\text{Ge}$	-2020	40	-1799.5	2.5	5.5	B			Hei		83Wi14 *
$^{82}\text{Se}(p,t)^{80}\text{Se}$	-7496.1	3.0	-7495.3	1.1	0.3	1	13	9 ^{82}Se	NDm		82Zu04
$^{82}\text{Se}(d, ^3\text{He})^{81}\text{As}$	-6864	10	-6856.1	2.8	0.8	-			Ors		83Ro08 *
	-6861	18			0.3	U			Hei		83Wi14
$^{82}\text{Se}(t,\alpha)^{81}\text{As}$	7467	6	7464.3	2.8	-0.5	-			Phi		82Mo04
$^{82}\text{Se}(d, ^3\text{He})^{81}\text{As}$	ave. -6856	5	-6856.1	2.8	0.0	1	30	25 ^{81}As			average
$^{82}\text{Se}(p,d)^{81}\text{Se}$	-7051.8	2.8	-7051.7	1.1	0.0	1	16	10 ^{82}Se	NDm		82Zu04
$^{81}\text{Br}(n,\gamma)^{82}\text{Br}$	7592.80	0.20	7592.94	0.12	0.7	-			ILn		78Do06 Z
	7593.02	0.15			-0.5	-			Bdn		06Fi.A
$^{81}\text{Br}(d,p)^{82}\text{Br}$	5400	20	5368.38	0.12	-1.6	U			Mtr		72Ch33
$^{81}\text{Br}(n,\gamma)^{82}\text{Br}$	ave. 7592.94	0.12	7592.94	0.12	0.0	1	100	90 ^{81}Br			average
$^{82}\text{Ge}(\beta^-)^{82}\text{As}$	4700	140	4688	5	-0.1	U			Stu		81Al20
$^{82}\text{As}(\beta^-)^{82}\text{Se}$	7270	200	7491	5	1.1	U					70Va31 *
	7740	30			-8.3	C			Stu		00Me.A
	7531	21			-1.9	U			Stu		04Ga44 *
$^{82}\text{As}^m(\beta^-)^{82}\text{Se}$	6600	200	7619	4	5.1	B					70Ka04 *
	7625	22			-0.3	U			Stu		00Me.A
	7677	17			-3.4	B			Stu		04Ga44 *
$^{82}\text{Se}(t, ^3\text{He})^{82}\text{As}^m$	-7500	25	-7600	4	-4.0	B			LAI		79Aj02
$^{82}\text{Br}(\beta^-)^{82}\text{Kr}$	3092.9	1.0	3093.0	1.0	0.1	1	95	90 ^{82}Br			56Wa24 *
$^{82}\text{Rb}(\beta^+)^{82}\text{Kr}$	4400	15	4403	3	0.2	U					69Be74 *
	4420	60			-0.3	U			IRS		93Al03 *
$^{82}\text{Kr}(p,n)^{82}\text{Rb}$	-5161	20	-5185	3	-1.2	U					72Ja.A
$^{82}\text{Rb}^m(\text{IT})^{82}\text{Rb}$	69.0	1.5				3					Ens03
$^{82}\text{Y}(\beta^+)^{82}\text{Sr}$	7868	185	7947	8	0.4	U			BNL		81Li12
	7793	123			1.3	U			Ors		82De36
$^{82}\text{Zr}(\beta^+)^{82}\text{Y}$	4000	500	4120#	200#	0.2	F			Ors		82De36 *
* $^{82}\text{Rb-u}$	M-A=-76138(30) keV for mixture gs+m at 69.0(1.5) keV										
* $^{82}\text{Se}(^{18}\text{O}, ^{20}\text{Ne})^{80}\text{Ge}$	Recalibrated to $^{64}\text{Ni}(^{62}\text{Fe})=-1938(15)$ keV										
* $^{82}\text{Se}(d, ^3\text{He})^{81}\text{As}$	Originally -6870(10), see $^{74}\text{Se}(d, ^3\text{He})$										
* $^{82}\text{As}(\beta^-)^{82}\text{Se}$	$E_{\beta^-}=7200(200)$ to ground state (80%) and $654.75\ 2^+$ level (10%)										
* $^{82}\text{As}(\beta^-)^{82}\text{Se}$	Average of 3 branches										
* $^{82}\text{As}^m(\beta^-)^{82}\text{Se}$	$E_{\beta^-}=3600(200)$ to 5^- level at 2893.70 and higher levels										
* $^{82}\text{As}^m(\beta^-)^{82}\text{Se}$	Average of 2 branches										
* $^{82}\text{Br}(\beta^-)^{82}\text{Kr}$	$E_{\beta^-}=444(1)$ to 4^- level at 2648.360 keV										
* $^{82}\text{Rb}(\beta^+)^{82}\text{Kr}$	$E_{\beta^+}=3350(60)$; and $800(15)$ from $^{82}\text{Rb}^m$ at $69.0(1.5)$ to 4^- level at 2648.360										
* $^{82}\text{Rb}(\beta^+)^{82}\text{Kr}$	$Q_{\beta^+}=4360(100)$; and $4510(60)$ of $^{82}\text{Rb}^m$ at $69.0(1.5)$ keV										
* $^{82}\text{Zr}(\beta^+)^{82}\text{Y}$	F : for 2.5(0.1) m activity, but Ensdf adopts 32(5) s										
$^{83}\text{Ge-u}$	-65626	268	-65460.9	2.6	0.4	o			GT1	1.5	04Ma.A
	-65270	320			-0.6	U			OR1	1.0	06Ha62
	-65276	129			-1.0	U			GT2	1.5	08Su19

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{83}\text{As-u}$	-74677	129	-74793	3	-0.6	U	GT2	1.5	08Su19	
$\text{C}_6 \text{H}_{11}-^{83}\text{Kr}$	171946.8	3.4	171948.2	0.3	0.2	U	M15	2.5	63Ri07	
	171948	16			0.0	U	R11	1.5	78Di09	
$\text{C}_5 \text{N H}_9-^{83}\text{Kr}$	159344	25	159372.1	0.3	0.8	U	R11	1.5	78Di09	
	159360	19			0.4	U	R11	1.5	78Di09	
$\text{C}_5 \text{O H}_7-^{83}\text{Kr}$	135543	25	135562.7	0.3	0.5	U	R11	1.5	78Di09	
$^{83}\text{Y O}-^{98}\text{Mo}_{1,010}$	12941	20				2	JY1	1.0	06Ka48 *	
$^{83}\text{Zr O}-^{98}\text{Mo}_{1,010}$	19697.9	6.9				2	JY1	1.0	06Ka48	
$^{83}\text{Ga}-^{88}\text{Rb}_{,943}$	30749.7	2.8				2	JY1	1.0	08Ha23	
$^{83}\text{Ge}-^{88}\text{Rb}_{,943}$	18168.5	2.6				2	JY1	1.0	08Ha23	
$^{83}\text{As}-^{88}\text{Rb}_{,943}$	8836.3	3.0				2	JY1	1.0	08Ha23	
$^{80}\text{Se H}_3-^{83}\text{Kr}$	25825	25	25869.7	1.4	1.2	U	R11	1.5	78Di09	
$^{83}\text{Kr}-^{86}\text{Kr}_{,965}$	386.6	1.1	387.9	0.3	1.2	U	MS1	1.0	06Ri15	
$^{83}\text{Rb}-^{85}\text{Rb}_{,976}$	1207	8	1207.4	2.5	0.1	U	MA2	1.0	94Ot01	
	1207.4	2.5			0.0	1	100	100 ^{83}Rb	MA8 1.0	07Ke09
$^{82}\text{Se H}-^{83}\text{Kr}$	10380	18	10397.4	1.5	0.6	U	R11	1.5	78Di09	
	10368	16			1.2	U	R11	1.5	78Di09	
$^{82}\text{Kr H}-^{83}\text{Kr}$	7160	18	7180.6	1.0	0.8	U	R11	1.5	78Di09	
$^{83}\text{Sr}-^{83}\text{Rb}$	2447	9	2440	7	-0.8	1	59	59 ^{83}Sr	MA2 1.0	94Ot01
$^{83}\text{Kr}-^{80}\text{Se H}_2$	-18022	36	-18044.7	1.4	-0.4	U	R11	1.5	78Di09	
$^{85}\text{Rb}-^{83}\text{Kr H}$	-10211	45	-10162.5	0.3	0.7	U	R11	1.5	78Di09	
$^{83}\text{Kr}-^{82}\text{Se}$	-2572	35	-2572.3	1.5	0.0	U	R11	1.5	78Di09	
$^{83}\text{Kr}-^{82}\text{Kr}$	648	12	644.4	1.0	-0.1	U	M15	2.5	63Ri07	
$^{81}\text{Rb}-^{83}\text{Rb}_{,488}$	-529	26	-548	5	-0.3	U	P20	2.5	82Au01 Y	
$^{81}\text{Rb}-^{83}\text{Rb}_{,325}$	-1054	27	-1040	5	0.2	U	P20	2.5	82Au01 Y	
$^{82}\text{Rb}-^{83}\text{Rb}_{,659}$	627	24	604	3	-0.4	U	P20	2.5	82Au01 Y	
$^{82}\text{Rb}-^{83}\text{Rb}_{,494}$	1098	23	1054	4	-0.8	U	P21	2.5	82Au01 Y	
$^{82}\text{Ge(d,p)}^{83}\text{Ge}$	1470	70	1408	3	-0.9	U	NDm		05Th03	
$^{82}\text{Se(d,p)}^{83}\text{Se}$	3593.4	3.0				2	NDm		78Mo12	
$^{82}\text{Se}(^3\text{He,d})^{83}\text{Br}$	3207.4	5.6	3215	4	1.4	1	48	44 ^{83}Br	NDm	83Zu01
$^{82}\text{Kr}(^3\text{He,d})^{83}\text{Rb}$	288	10	275.8	2.5	-1.2	U	Phi		87St11	
$^{83}\text{Zr(ep)}^{82}\text{Sr}$	2750	100	2811	9	0.6	U			83Ha06	
$^{83}\text{As}(\beta^-)^{83}\text{Se}$	5460	220	5671	4	1.0	U	Stu		77Al17	
$^{83}\text{Se}(\beta^-)^{83}\text{Br}$	3610	40	3673	5	1.6	U			67Ma35	
	3681	20			-0.4	U			68Sc10 *	
$^{83}\text{Br}(\beta^-)^{83}\text{Kr}$	982	10	977	4	-0.5	-			51Du03 *	
	967	15			0.6	U			63Pa09 *	
	966	6			1.8	-			69Ph03 *	
	ave.	970	5		1.2	1	56	56 ^{83}Br	average	
$^{83}\text{Rb}(\epsilon)^{83}\text{Kr}$	750	20	919.4	2.3	8.5	B			70Go45 *	
$^{83}\text{Sr}(\beta^+)^{83}\text{Rb}$	2264	10	2273	6	0.9	1	41	41 ^{83}Sr	68Et01 *	
$^{83}\text{Y}(\beta^+)^{83}\text{Sr}$	4509	85	4593	20	1.0	U			81Li12 *	
	4455	50			2.8	B	Ors		82De36 *	
$^{83}\text{Zr}(\beta^+)^{83}\text{Y}$	5868	85	6294	20	5.0	B	Ors		82De36 *	
$^{83}\text{Nb}(\beta^+)^{83}\text{Zr}$	7500	300				3			88Ku14	
$^{*83}\text{Y O}-^{98}\text{Mo}_{1,010}$	$D_M=12973.8(5.9) \mu\text{u}$ for mixture gs+m at 61.98(0.11) keV; $M-A=-72172.9(5.8)$ keV									
$^{*83}\text{Se}(\beta^-)^{83}\text{Br}$	$Q_{\beta^-}=3910(20)$ from $^{83}\text{Se}^m$ at 228.50 keV									
$^{*83}\text{Br}(\beta^-)^{83}\text{Kr}$	$E_{\beta^-}=940(10) 925(15) 924(6)$ respectively, to $^{83}\text{Kr}^n$ at 41.5569 keV									
$^{*83}\text{Rb}(\epsilon)^{83}\text{Kr}$	LK=0.132(0.002) to $5/2^-$ level at 561.9569, recalculated Q									
$^{*83}\text{Sr}(\beta^+)^{83}\text{Rb}$	$E_{\beta^+}=1227(8)$ 24% to ground state, 20% to $^{83}\text{Rb}^m$ at 42.11, and other E_{β^+}									
$^{*83}\text{Y}(\beta^+)^{83}\text{Sr}$	$E_{\beta^+}=2868(85)$ from $^{83}\text{Y}^m$ at 61.98 keV to $(3/2^-, 5/2^-)$ level at 681.11 keV									
$^{*83}\text{Y}(\beta^+)^{83}\text{Sr}$	$E_{\beta^+}=3353(50)$ to $9/2^+$ level at 35.47 keV									
*	and $E_{\beta^+}=2941(84)$ from $^{83}\text{Y}^m$ at 61.98 to $(3/2^-, 5/2^-)$ level at 681.11 k									
$^{*83}\text{Zr}(\beta^+)^{83}\text{Y}$	$Q_{\beta^+}=5806(85)$ to $^{83}\text{Y}^m$ at 61.98 keV									
$^{*83}\text{Zr}(\beta^+)^{83}\text{Y}$	Recalculated value 5802(50) of reference not accepted									
$^{84}\text{Ge-u}$	-62270	430	-62425	3	-0.4	U	OR1	1.0	06Ha62	
$^{84}\text{As-u}$	-70530	320	-70697	3	-0.5	U	OR1	1.0	06Ha62 *	
	-70710	140			0.1	U	GT2	1.5	08Su19 *	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$C_6 H_{12}-^{84}Kr$	182399.4	2.5	182402.659	0.005	0.5	U			M15	2.5	63Ri07	
	182392	6			1.2	U			R11	1.5	78Di09	
$C_5 N H_{10}-^{84}Kr$	169819	18	169826.599	0.004	0.3	U			R11	1.5	78Di09	
	169819	13			0.4	U			R11	1.5	78Di09	
$C_5 O H_8-^{84}Kr$	146010	20	146017.149	0.004	0.2	U			R11	1.5	78Di09	
$C_4 ^{13}C O H_7-^{84}Kr$	141543	18	141546.952	0.004	0.1	U			R11	1.5	78Di09	
$^{84}Kr-N_6$	-106946.3154	0.0152	-106946.298	0.004	1.1	o			FS1	1.0	05Sh38 *	
	-106946.2971	0.0086			-0.2	1	26	25	^{84}Kr	FS1	1.0	09Re03 *
$^{84}Kr H-^{85}Rb$	7515	18	7533.022	0.004	0.7	U			R11	1.5	78Di09	
$C_6 H_{12}-^{84}Sr$	180470.8	2.6	180481.3	1.3	1.6	U			M15	2.5	63Ri07	
$^{84}Y O-^{97}Mo_{1.031}$	12483.5	5.1	12482	5	-0.3	1	82	82	^{84}Y	JY1	1.0	08We10
$^{84}Zr O-^{98}Mo_{1.020}$	14728.6	5.9				2			JY1	1.0	06Ka48	
$^{84}Ge-^{88}Rb_{.955}$	22268.7	3.4				2			JY1	1.0	08Ha23	
$^{84}As-^{88}Rb_{.955}$	13996.9	3.4				2			JY1	1.0	08Ha23	
$^{84}Se-^{88}Rb_{.955}$	3160.4	2.1	3160.4	2.1	0.0	1	100	100	^{84}Se	JY1	1.0	08Ha23
$^{82}Se H_2-^{84}Kr$	20834	16	20851.8	1.5	0.7	U			R11	1.5	78Di09	
$^{84}Kr-^{86}Kr_{.977}$	-1168.3	1.0	-1168.855	0.003	-0.6	U			MS1	1.0	06Ri15	
$^{83}Kr H-^{84}Kr$	10465	16	10454.5	0.3	-0.4	U			R11	1.5	78Di09	
$^{84}Kr-^{85}Rb_{.988}$	-1349.4	1.5	-1350.535	0.004	-0.8	U			MA8	1.0	06De36	
$^{84}Rb-^{85}Rb_{.988}$	1536	8	1527.0	2.4	-1.1	U			MA2	1.0	94Ot01	
$^{84}Sr-^{85}Rb_{.988}$	570.9	1.5	570.9	1.3	0.0	-			MA8	1.0	07Ke09	
	572.1	4.3			-0.3	-			SH1	1.0	11Ha08	
ave.	571.0	1.4			-0.1	1	89	89	^{84}Sr		average	
$^{84}Kr-^{80}Se H_3$	-28505	48	-28499.1	1.3	0.1	U			R11	1.5	78Di09	
$^{84}Kr-^{83}Kr$	-2628	12	-2629.4	0.3	0.0	U			M15	2.5	63Ri07	
	-2646	30			0.4	U			R11	1.5	78Di09	
$^{84}Kr-^{40}Ar_2$	-13268.5136	0.0171	-13268.519	0.006	-0.3	1	13	7	^{40}Ar	FS1	1.0	05Sh38 *
$C_2 O_4-^{84}Kr$	68160.7359	0.0205	68160.750	0.004	0.7	o			FS1	1.0	05Sh38 *	
	68160.7516	0.0131			-0.1	1	11	11	^{84}Kr	FS1	1.0	09Re03 *
$^{82}Se(t,p)^{84}Se$	6016	15	6014.6	2.4	-0.1	U			LAL		74Kn02	
$^{84}Sr(p,t)^{82}Sr$	-12310	10	-12300	6	1.0	1	36	35	^{82}Sr	Oak		73Ba56
	-12295	24			-0.2	U			Win			74De31 *
$^{83}Kr(n,\gamma)^{84}Kr$	10519.5	1.8	10520.62	0.30	0.6	U						72Ma42 Z
	10520.6	0.3			0.1	1	100	100	^{83}Kr	Bdn		06Fi.A *
$^{84}Sr(d,t)^{83}Sr$	-5720	30	-5666	7	1.8	U						70Be24 *
$^{84}As(\beta^-)^{84}Se$	7195	200	10094	4	14.5	F			Trs			94Gi07 *
	9120	880			1.1	U						96WaZX *
$^{84}Se(\beta^-)^{84}Br$	1818	50	1835	26	0.3	1	27	26	^{84}Br			68Re12 *
	1808	100			0.3	U						70Ei02 *
$^{84}Br(\beta^-)^{84}Kr$	4650	30	4656	26	0.2	1	74	74	^{84}Br			70Ha21 *
$^{84}Br^m(\beta^-)^{84}Kr$	4970	100				2						70Ha21 *
$^{84}Rb(\beta^+)^{84}Kr$	2679	3	2680.4	2.2	0.5	-						64La03 *
	2682	5			-0.3	-						71Bo01 *
$^{84}Rb(n,p)^{84}Kr$	3450	10	3462.7	2.2	1.3	U			ILL			76An05
ave.	2679.8	2.6	2680.4	2.2	0.2	1	73	73	^{84}Rb			average
$^{84}Rb(\beta^-)^{84}Sr$	892	4	890.6	2.3	-0.4	1	34	27	^{84}Rb			71Bo01 *
$^{84}Y(\beta^+)^{84}Sr$	6950	30	6756	4	-6.5	F						70Va.A *
	6750	10			0.6	1	20	18	^{84}Y			70Re.A *
	6423	135			2.5	U			BNL			81Li12 *
	6408	124			2.8	U			Ors			82De36 *
$^{84}Nb(\beta^+)^{84}Zr$	7200	300	10400#	300#	10.7	D						96Sh27 *
* $^{84}As-u$	Erroneously reported as -75700(300) keV in the publication										08Ha.A **	
* $^{84}As-u$	M-A=-65869(119) keV for mixture gs+m at 0#(100#) keV										Nub127 **	
* $^{84}Kr-N_6$	Corrected in reference of same group										09Re03 **	
* $^{84}Kr-^{40}Ar_2$	Corrected in reference of same group										09Re03 **	
* $C_2 O_4-^{84}Kr$	Corrected in reference of same group										09Re03 **	
* $^{84}Sr(p,t)^{82}Sr$	Original error 12; added systematic error 21 keV										GAu **	
* $^{84}Sr(d,t)^{83}Sr$	Q=-5755(30) to 9/2+ level at 35.47 keV										Ens015 **	
* $^{84}As(\beta^-)^{84}Se$	F : observed (β^-n) decay implies $Q_{\beta^-} > 8681(15)$ keV										93Ru01 **	
* $^{84}Se(\beta^-)^{84}Br$	$E_{\beta^-} = 1410(50)$ 1400(100) respectively, to 1+ level at 408.2 keV										Ens09a **	
* $^{84}Br(\beta^-)^{84}Kr$	$E_{\beta^-} = 4626(15), 3810(50), 2700(50)$ to ground state, 881.615 2+, 1897.784 0+										Ens09a **	
* $^{84}Br^m(\beta^-)^{84}Kr$	$E_{\beta^-} = 2200(100)$ to 5- level at 2770.94 keV										Ens09a **	
* $^{84}Rb(\beta^+)^{84}Kr$	Original error increased: authors report $E(2^+) = 877.2(1.5)$ while										AHW **	
*	$E(2^+) = 881.615(0.003)$ keV; see also $^{74}As(\beta^+)$										Ens09a **	
* $^{84}Rb(\beta^-)^{84}Sr$	Originally 891.8(2.0), error increased, see $^{84}Rb(\beta^+)$										AHW **	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
* ⁸⁴ Y(β^+) ⁸⁴ Sr	F : possibly additioned with e^+e^-										AHW **
* ⁸⁴ Y(β^+) ⁸⁴ Sr	E $_{\beta^+}$ =1641(10) and 2242(17) to levels at 4062 and 3511 keV										70Re.A **
* ⁸⁴ Y(β^+) ⁸⁴ Sr	Q $_{\beta^+}$ =6409(170), and 6499(135) from ⁸⁴ Y ^m at 67 keV										00Do10 **
* ⁸⁴ Y(β^+) ⁸⁴ Sr	Q $_{\beta^+}$ =6475(124) from ⁸⁴ Y ^m at 67 keV										00Do10 **
* ⁸⁴ Nb(β^+) ⁸⁴ Zr	Trends from Mass Surface TMS suggest ⁸⁴ Nb 3200 less bound										GAu **
*	see also result of same reference for ⁸⁰ Y and ⁸⁸ Tc: all 3 MeV too small										GAu **
⁸⁵ Ge-u	-57220	540	-57030	4	0.4	U			OR1	1.0	06Ha62
⁸⁵ As-u	-68095	225	-67836	3	0.8	o			GT1	1.5	04Ma.A
	-67887	129			0.3	U			GT2	1.5	08Su19
C ₆ H ₁₃ - ⁸⁵ Rb	189927.6	3.9	189935.681	0.005	0.8	U			M15	2.5	63Ri07
	189930	15			0.3	U			R11	1.5	78Di09
C ₄ N O H ₇ - ⁸⁵ Rb	140985	18	140974.112	0.005	-0.4	U			R11	1.5	78Di09
⁸⁵ Rb- ³⁹ K _{2,179}	-9124.6	2.7	-9126.700	0.012	-0.8	U			MA8	1.0	09Na.A
⁸⁵ Rb- ¹²⁰ Sn ₇₀₈	-18970.8	2.2	-18969.0	0.7	0.8	U			JY1	1.0	11Ha48
⁸⁵ Y-u	-83559	31	-83567	20	-0.3	2			GS2	1.0	05Li24 *
⁸⁵ Zr O- ⁹⁸ Mo _{1,031}	13886.7	6.9				2			JY1	1.0	06Ka48
⁸⁵ Nb O- ⁹⁸ Mo _{1,031}	21246	26	21288	4	1.6	U			JY1	1.0	06Ka48 *
⁸⁵ Ge- ⁸⁸ Rb ₉₆₆	28638.8	4.0				2			JY1	1.0	08Ha23
⁸⁵ As- ⁸⁸ Rb ₉₆₆	17832.8	3.3				2			JY1	1.0	08Ha23
⁸⁵ Se- ⁸⁸ Rb ₉₆₆	7929.9	2.8				2			JY1	1.0	08Ha23
⁸⁵ Br- ⁸⁸ Rb ₉₆₆	1314.9	3.3				2			JY1	1.0	07Ra23
⁸⁵ Nb- ⁸⁵ Rb	17056.1	4.4				2			SH1	1.0	11Ha08 *
⁸⁵ Mo- ⁸⁵ Rb	26471	17				2			SH1	1.0	11Ha08
C ₆ H ₁₄ - ⁸⁵ Rb	197760.706	0.014	197760.713	0.005	0.5	U			MI2	1.0	99Br47
⁸⁵ Rb-C ₆ H ₁₂	-182110.662	0.024	-182110.649	0.005	0.5	U			MI2	1.0	99Br47
⁸⁵ Rb- ⁸⁴ Kr	300	32	292.010	0.004	-0.2	U			R11	1.5	78Di09
	292.0121	0.0064			-0.4	1	47	34 ⁸⁵ Rb	FS1	1.0	10Mo30
⁸³ Rb- ⁸⁵ Rb ₄₈₈ ⁸¹ Rb ₅₁₂	-351	22	-339	3	0.2	U			P21	2.5	82Au01 Y
⁸⁴ Kr(d,p) ⁸⁵ Kr	4895	8	4887.7	2.0	-0.9	U			MIT		63Ho.A
⁸⁵ Rb(γ ,n) ⁸⁴ Rb	-10650	80	-10479.7	2.2	2.1	U			Phi		60Ge01
⁸⁵ Rb(p,d) ⁸⁴ Rb	-8275	6	-8255.1	2.2	3.3	B			Bld		78Sh11
⁸⁴ Sr(d,p) ⁸⁵ Sr	6303	8	6300	3	-0.3	1	14	12 ⁸⁵ Sr			71Mo02
⁸⁵ Mo(ϵ p) ⁸⁴ Zr	5100	200	6622	17	7.6	B					99Hu05
⁸⁵ Se(β^-) ⁸⁵ Br	6185	90	6162	4	-0.3	o			Bwg		87Gr.A
	6182	23			-0.9	U			Bwg		92Gr.A
⁸⁵ Br(β^-) ⁸⁵ Kr	2870	19	2905	4	1.8	U			Stu		79Al05
⁸⁵ Kr(β^-) ⁸⁵ Rb	687	2				2					70Wo08
⁸⁵ Sr(ϵ) ⁸⁵ Rb	1007	30	1064.1	2.8	1.9	U					69Mc05
⁸⁵ Rb(p,n) ⁸⁵ Sr	-1890	30	-1846.4	2.8	1.5	U			BNL		58El44
⁸⁵ Rb(³ He,t) ⁸⁵ Sr	-1083	3	-1082.6	2.8	0.1	1	88	88 ⁸⁵ Sr	Pri		82Ko06
⁸⁵ Y(β^+) ⁸⁵ Sr	3255	25	3261	19	0.2	R					63Do07 *
⁸⁵ Zr(β^+) ⁸⁵ Y	4693	99	4668	20	-0.3	U			Ors		82De36
⁸⁵ Nb(β^+) ⁸⁵ Zr	6000	200	6894	8	4.5	F					88Ku14 *
* ⁸⁵ Y-u	M-A=-77824(28) keV for mixture gs+m at 19.8 keV										Ens94 **
* ⁸⁵ Nb O- ⁹⁸ Mo _{1,031}	D _M =21292.2(6.9) μ u for mixture gs+m at 150#80 keV; M-A=-66274.8(6.6) keV										Nub127 **
*	ground state 2 ions/s; 0.8/s 69 keV transitions for same production reaction										05Ka39 **
* ⁸⁵ Nb- ⁸⁵ Rb	Misprint in publication 1.000200869 (not 1.00200869)										GAu **
* ⁸⁵ Y(β^+) ⁸⁵ Sr	E $_{\beta^+}$ =1540(20) to 3/2 ⁻ level at 743.13 keV										Ens914 **
*	and E $_{\beta^+}$ =2240(10) from ⁸⁵ Y ^m at 19.8 (conflicting -> outer error used)										Nub127 **
* ⁸⁵ Nb(β^+) ⁸⁵ Zr	F : see discussion of this result in reference										06Ka48 **
*	Q $_{\beta^+}$ =6100(200) in text p.268 and in Table 1										GAu **
⁸⁶ Ge-u	-54750	540	-53420#	320#	2.5	D			OR1	1.0	06Ha62 *
⁸⁶ As-u	-63586	247	-63298	4	0.8	o			GT1	1.5	04Ma.A
	-63189	129			-0.6	U			GT2	1.5	08Su19
⁸⁶ Se-u	-75702	128	-75688.3	2.7	0.1	U			GT2	1.5	08Su19

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$C_6 H_{14} - {}^{86}Kr$	198936.7	2.7	198939.824	0.004	0.5	U	M15	2.5	63Ri07		
	198933	15			0.3	U	R11	1.5	78Di09		
$C_5 N H_{12} - {}^{86}Kr$	186366	20	186363.764	0.004	-0.1	U	R11	1.5	78Di09		
${}^{86}Kr-u$	-89389.271	0.110	-89389.373	0.004	-0.9	U	ST2	1.0	02Bf02		
${}^{86}Kr - {}^{120}Sn_{.717}$	-19269.6	2.2	-19267.9	0.7	0.8	U	JY1	1.0	11Ha48		
$C_6 H_{14} - {}^{86}Sr$	200264.9	3.6	200289.8	1.2	2.8	U	M15	2.5	63Ri07		
${}^{86}Y-u$	-85019	75	-85114	15	-1.3	U	GS2	1.0	05Li24 *		
${}^{86}Zr O - {}^{98}Mo_{1.041}$	9692.8	6.9	9685	4	-1.1	1	31	31 ${}^{86}Zr$	JY1	1.0	06Ka48
${}^{86}Nb O - {}^{98}Mo_{1.041}$	19171.0	5.9				2			JY1	1.0	06Ka48
${}^{86}As - {}^{88}Rb_{.977}$	23346.2	3.7				2			JY1	1.0	08Ha23
${}^{86}Se - {}^{88}Rb_{.977}$	10956.4	2.7				2			JY1	1.0	08Ha23
${}^{86}Br - {}^{88}Rb_{.977}$	5450.1	3.3				2			JY1	1.0	07Ra23
${}^{86}Kr - {}^{85}Rb_{1.012}$	-120.3	3.6	-120.591	0.004	-0.1	U	MA8	1.0	06Ro11		
	-119.1	1.6			-0.9	U	MA8	1.0	06De36		
	-54	88			-0.8	U	MA9	1.0	10Na13 *		
${}^{86}Rb - {}^{85}Rb_{1.012}$	441	9	436.21	0.21	-0.5	U	MA2	1.0	94Ot01		
${}^{86}Sr {}^{19}F - {}^{85}Rb_{1.235}$	16608	13	16603.4	1.2	-0.4	U	MA8	1.0	05Si34		
${}^{86}Zr - {}^{85}Rb_{1.012}$	5562.7	4.6	5566	4	0.7	1	69	69 ${}^{86}Zr$	SH1	1.0	11Ha08
${}^{86}Mo - {}^{85}Rb_{1.012}$	20443.6	4.0				2			SH1	1.0	11Ha08
${}^{86}Kr - {}^{85}Rb$	-1206	42	-1179.111	0.004	0.4	U	R11	1.5	78Di09		
	-1179.1083	0.0071			-0.4	-			FS1	1.0	10Mo30 *
	-1179.1109	0.0059			0.0	-			FS1	1.0	10Mo30 *
ave.	-1179.110	0.005			-0.2	1	73	66 ${}^{85}Rb$			average
${}^{86}Kr - N_6$	-107833.3986	0.0074	-107833.400	0.004	-0.1	1	30	29 ${}^{86}Kr$	FS1	1.0	09Re03
$C_2 O_4 - {}^{86}Kr$	69047.8337	0.0155	69047.851	0.004	1.1	o			FS1	1.0	05Sh38 *
	69047.8440	0.0113			0.6	1	13	13 ${}^{86}Kr$	FS1	1.0	09Re03
${}^{86}Kr - {}^{84}Kr$	-908	32	-887.101	0.003	0.4	U	R11	1.5	78Di09		
	-887.1041	0.0125			0.2	o			FS1	1.0	05Sh38 *
	-887.1080	0.0069			1.0	-			FS1	1.0	09Re03 *
	-887.0954	0.0060			-1.0	-			FS1	1.0	10Mo30 *
ave.	-887.101	0.005			-0.1	1	59	37 ${}^{84}Kr$			average
${}^{86}Sr(p,t) {}^{84}Sr$	-11535	10	-11534.5	1.6	0.1	U	Oak				73Ba56
${}^{85}Rb(n,\gamma) {}^{86}Rb$	8651.1	1.0	8651.00	0.20	-0.1	U					69Da15 Z
	8651.3	1.5			-0.2	U					70Or.A
	8650.98	0.20			0.1	1	99	99 ${}^{86}Rb$	Bdn		06Fi.A
${}^{85}Rb(d,p) {}^{86}Rb$	6433	10	6426.43	0.20	-0.7	U	Tal				69Da15
${}^{86}Se(\beta^-) {}^{86}Br$	5095	100	5129	4	0.3	o			Bwg		87Gr.A
	5099	11			2.7	U			Bwg		92Gr.A
${}^{86}Br(\beta^-) {}^{86}Kr$	7620	60	7633	3	0.2	U	Stu				79Al05
	7626	11			0.7	U			Bwg		92Gr.A
${}^{86}Rb(\beta^-) {}^{86}Sr$	1774	5	1776.2	1.1	0.4	-					64Da16
	1770	3			2.1	-					66An10
	1779.2	2.5			-1.2	-					75Be21
	1775	3			0.4	-					75Ra09
ave.	1775.2	1.5			0.7	1	49	48 ${}^{86}Sr$			average
${}^{86}Y(\beta^+) {}^{86}Sr$	5220	20	5240	14	1.0	2					62Ya01 *
	5260	20			-1.0	2					65Va02 *
${}^{86}Nb(\beta^+) {}^{86}Zr$	7978	80	8836	7	10.7	F					82De43 *
${}^{86}Mo(\beta^+) {}^{86}Nb$	5019	430	5023	7	0.0	U					94Sh07 *
* ${}^{86}Ge-u$	Trends from Mass Surface TMS suggest ${}^{86}Ge$ 1240 less bound									GAu	**
* ${}^{86}Y-u$	$M-A = -79086(29)$ keV for mixture gs+m at 218.30 keV									Nub127	**
* ${}^{86}Kr - {}^{85}Rb_{1.012}$	Typo in original paper, ratio should read 1.011 763 90(1 03)									GAu	**
* ${}^{86}Kr - {}^{85}Rb$	Different charge states : 3^+ and 2^+									10Mo30	**
* $C_2 O_4 - {}^{86}Kr$	Corrected in reference of same group									09Re03	**
* ${}^{86}Kr - {}^{84}Kr$	Corrected in reference of same group									09Re03	**
* ${}^{86}Kr - {}^{84}Kr$	Different charge states in these two results: 3^+ and 2^+									10Mo30	**
* ${}^{86}Y(\beta^+) {}^{86}Sr$	$E_{\beta^+} = 2019(20)$ 1960(20) respectively, to 2229.74 4^+ level, and other E_{β^+}									Ens01c	**
* ${}^{86}Nb(\beta^+) {}^{86}Zr$	F : see discussion of this result in reference									06Ka48	**
* ${}^{86}Mo(\beta^+) {}^{86}Nb$	$E_{\beta^+} = 3900(400)$ to (1^+) level at 97.1 keV									94Sh07	**

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{87}\text{Se-u}$	-71357	128	-71311.4	2.4	0.2	U			GT2	1.5	08Su19
$^{87}\text{Kr-u}$	-86622	30	-86645.24	0.26	-0.8	U			GS2	1.0	05Li24
$\text{C}_4 \text{H}_7 \text{O}_2 - ^{87}\text{Rb}$	135417.8	2.7	135423.933	0.007	0.9	U			M15	2.5	63Ri07
$\text{C}_5 \text{}^{13}\text{C} \text{H}_{14} - ^{87}\text{Rb}$	203767	15	203724.754	0.007	-1.9	U			R11	1.5	78Di09
$\text{C}_4 \text{O} \text{N} \text{H}_9 - ^{87}\text{Rb}$	159277	15	159233.382	0.007	-1.9	U			R11	1.5	78Di09
$\text{C}_3 \text{}^{13}\text{C} \text{O} \text{N} \text{H}_8 - ^{87}\text{Rb}$	154809	25	154763.185	0.007	-1.2	U			R11	1.5	78Di09
$\text{C}_4 \text{H}_7 \text{O}_2 - ^{87}\text{Sr}$	135722.2	3.5	135726.9	1.2	0.5	U			M15	2.5	63Ri07
$^{87}\text{Y-u}$	-89153	30	-89123.9	1.7	1.0	U			GS2	1.0	03Li.A *
$^{87}\text{Zr-u}$	-85222	30	-85182	5	1.3	U			GS2	1.0	05Li24
$^{87}\text{Zr} \text{O} - ^{97}\text{Mo}_{1.062}$	9543.3	5.2	9541	4	-0.4	1	74	$^{74} \text{}^{87}\text{Zr}$	JY1	1.0	08We10
$^{87}\text{Nb}_{1.069} - \text{C}_7 \text{H}_9$	-155224	30	-155204	8	0.7	U			CP1	1.0	11Fa10
$^{87}\text{Nb} \text{O} - ^{98}\text{Mo}_{1.051}$	15027.9	7.3				2			JY1	1.0	06Ka48 *
$^{87}\text{Mo}_{1.069} - \text{C}_7 \text{H}_9$	-147186.1	4.8	-147184	3	0.5	1	47	$^{47} \text{}^{87}\text{Mo}$	CP1	1.0	11Fa10
$^{87}\text{Kr} - ^{85}\text{Rb}_{1.024}$	3683.0	2.9	3682.07	0.26	-0.3	U			MA8	1.0	06De36
	3684.1	4.7			-0.4	U			MA8	1.0	10Na13
$^{87}\text{Rb} - ^{85}\text{Rb}_{1.024}$	-490	9	-492.155	0.007	-0.2	U			MA2	1.0	94Ot01
	-493.0	2.7			0.3	U			MA8	1.0	06De36
	-492.33	0.80			0.2	U			MA8	1.0	07Ke09
	-492.4	1.4			0.2	U			MA8	1.0	09Na.A
	-492.04	0.87			-0.1	U			MA8	1.0	11He10
$^{87}\text{Sr} - ^{85}\text{Rb}_{1.024}$	-780	9	-795.2	1.2	-1.7	U			MA2	1.0	94Ot01
$^{87}\text{Mo} - ^{85}\text{Rb}_{1.024}$	18525.6	4.2	18524	3	-0.5	1	53	$^{53} \text{}^{87}\text{Mo}$	SH1	1.0	11Ha08
$^{87}\text{Tc} - ^{85}\text{Rb}_{1.024}$	28394.5	4.5				2			SH1	1.0	11Ha08 *
$^{87}\text{As} - ^{88}\text{Rb}_{.989}$	28000.6	3.2				2			JY1	1.0	08Ha23
$^{87}\text{Se} - ^{88}\text{Rb}_{.989}$	16397.5	2.4				2			JY1	1.0	08Ha23
$^{87}\text{Br} - ^{88}\text{Rb}_{.989}$	8382.9	3.4				2			JY1	1.0	07Ra23
$^{86}\text{Kr} \text{H} - ^{87}\text{Rb}$	9309	16	9255.127	0.006	-2.2	U			R11	1.5	78Di09
$\text{C}_6 \text{H}_{16} - ^{87}\text{Rb}$	216019.966	0.023	216019.984	0.007	0.8	U			MI2	1.0	99Br47
$^{87}\text{Rb} - \text{C}_6 \text{H}_{14}$	-200369.931	0.015	-200369.919	0.007	0.8	1	19	$^{19} \text{}^{87}\text{Rb}$	MI2	1.0	99Br47
$^{87}\text{Rb} - ^{86}\text{Kr}$	-1477	30	-1430.095	0.006	1.0	U			R11	1.5	78Di09
	-1430.0932	0.0059			-0.3	1	88	$^{81} \text{}^{87}\text{Rb}$	FS1	1.0	10Mo30
$^{87}\text{Sr} - ^{86}\text{Sr}$	-382	12	-383.08	0.13	0.0	U			M15	2.5	63Ri07
$^{87}\text{Rb} - ^{85}\text{Rb}$	-2620	35	-2609.206	0.007	0.2	U			R11	1.5	78Di09
$^{85}\text{Rb} - ^{87}\text{Rb}_{.489} \quad ^{83}\text{Rb}_{.512}$	-310	30	-314.8	1.2	-0.1	U			P21	2.5	82Au01
$^{84}\text{Rb} - ^{87}\text{Rb}_{.241} \quad ^{83}\text{Rb}_{.759}$	850	72	643.7	2.8	-1.1	U			P21	2.5	82Au01 *
$^{87}\text{Sr}(\text{p,t}) \quad ^{85}\text{Sr}$	-11440	10	-11438	3	0.2	U			Oak		73Ba56
$^{87}\text{Br}(\beta^- \text{n}) \quad ^{86}\text{Kr}$	1335	25	1303	3	-1.3	U					84Kr.B
$^{86}\text{Kr}(\text{n},\gamma) \quad ^{87}\text{Kr}$	5515.04	0.6	5515.17	0.25	0.2	2					77Je03 Z
	5515.20	0.27			-0.1	2			Bdn		06Fi.A
$^{86}\text{Kr}(\text{d,p}) \quad ^{87}\text{Kr}$	3286	8	3290.61	0.25	0.6	U			MIT		63Ho.A
$^{87}\text{Rb}(\gamma, \text{n}) \quad ^{86}\text{Rb}$	-9990	70	-9922.10	0.20	1.0	U			Phi		60Ge01
$^{87}\text{Rb}(\text{d,t}) \quad ^{86}\text{Rb}$	-3659	15	-3664.86	0.20	-0.4	U			Tal		69Da15
$^{86}\text{Sr}(\text{n},\gamma) \quad ^{87}\text{Sr}$	8428.12	0.17	8428.15	0.12	0.2	-			ILn		86Wi16 Z
	8428.17	0.17			-0.1	-			Bdn		06Fi.A
$^{86}\text{Sr}(\text{d,p}) \quad ^{87}\text{Sr}$	6203	8	6203.59	0.12	0.1	U					71Mo02
$^{86}\text{Sr}(\text{n},\gamma) \quad ^{87}\text{Sr}$	ave. 8428.15	0.12	8428.15	0.12	0.1	1	100	$^{52} \text{}^{86}\text{Sr}$			average
$^{86}\text{Sr}(\text{p},\gamma) \quad ^{87}\text{Y}$	5785.4	3.3	5784.1	1.1	-0.4	R					71Um03
$^{86}\text{Sr}(\text{}^3\text{He}, \text{d}) \quad ^{87}\text{Y}$	346	15	290.6	1.1	-3.7	B			ANL		71Ma11
$^{87}\text{Mo}(\text{ep}) \quad ^{86}\text{Zr}$	3700	300	3795	5	0.3	U					83Ha06
$^{87}\text{Se}(\beta^-) \quad ^{87}\text{Br}$	7250	150	7466	4	1.4	o			Bwg		87Gr.A
	7275	35			5.4	B			Bwg		92Gr.A
$^{87}\text{Br}(\beta^-) \quad ^{87}\text{Kr}$	6830	120	6818	3	-0.1	U			Stu		79Al05
	6750	150			0.5	o			Bwg		87Gr.B
	6855	25			-1.5	U			Bwg		92Gr.A
$^{87}\text{Kr}(\beta^-) \quad ^{87}\text{Rb}$	3888	7	3888.27	0.25	0.0	U					73Wo01
$^{87}\text{Rb}(\beta^-) \quad ^{87}\text{Sr}$	272	3	282.2	1.1	3.4	B					59Fl40
	274	3			2.7	U					61Be41
$^{87}\text{Rb}(\text{}^3\text{He}, \text{t}) \quad ^{87}\text{Sr} - ^{81}\text{Br} \quad ^{81}\text{Kr}$	564.0	1.5	563.1	1.1	-0.6	1	52	$^{46} \text{}^{87}\text{Sr}$	Pri		82Ko06
$^{87}\text{Y}(\beta^+) \quad ^{87}\text{Sr}$	2190	50	1861.7	1.1	-6.6	B					67Mi13 *
	1791	40			1.8	U					69Zo04 *
$^{87}\text{Sr}(\text{p,n}) \quad ^{87}\text{Y}$	-2644.2	1.2	-2644.0	1.1	0.1	2					71Um03 Z

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{87}\text{Zr}(\beta^+)^{87}\text{Y}$	3663	40	3672	4	0.2	U			65Ba48 *	
$^{87}\text{Nb}(\beta^+)^{87}\text{Zr}$	5165	60	5473	8	5.1	B			82De43 *	
$^{87}\text{Mo}(\beta^+)^{87}\text{Nb}$	6382	308	6988	7	2.0	U			82De43 *	
	6589	300			1.3	U			91Mi15 *	
$^{87}\text{Y}-u$	M-A=-82665(28) keV for $^{87}\text{Y}^m$ at 380.82 keV								Nub127 **	
$^{87}\text{Nb O}-^{98}\text{Mo}_{1.051}$	$D_M=15030.0(6.9) \mu\text{u}$ for mixture gs+m at 3.84(0.14) keV; M-A=-73870.2(6.7) keV								Nub127 **	
$^{87}\text{Tc}-^{85}\text{Rb}_{1.024}$	Most probably the high-spin isomer								11Ha08 **	
$^{84}\text{Rb}-^{87}\text{Rb}_{241} \text{ } ^{83}\text{Rb}_{759}$	$D_M=1080(40)$ keV corrected -230(60) for mixture gs+m at 463.59 keV								Nub129 **	
$^{87}\text{Y}(\beta^+)^{87}\text{Sr}$	$E_{\beta^+}=780(50)$ to $^{87}\text{Sr}^m$ at 388.533 keV								Nub127 **	
$^{87}\text{Y}(\beta^+)^{87}\text{Sr}$	$E_{\beta^+}=1150(40)$ from $^{87}\text{Y}^m$ at 380.82 keV								Nub127 **	
$^{87}\text{Zr}(\beta^+)^{87}\text{Y}$	$E_{\beta^+}=2260(40)$ to $^{87}\text{Y}^m$ at 380.82 keV								Nub127 **	
$^{87}\text{Nb}(\beta^+)^{87}\text{Zr}$	$Q_{\beta^+}=5169(60)$ from $^{87}\text{Nb}^m$ at 3.84(0.14) keV								Nub127 **	
$^{87}\text{Mo}(\beta^+)^{87}\text{Nb}$	$Q_{\beta^+}=6378(308)$ to $^{87}\text{Nb}^m$ at 3.84(0.14) keV								Nub127 **	
$^{87}\text{Mo}(\beta^+)^{87}\text{Nb}$	$E_{\beta^+}=5300(300)$ to $(7/2^+)$ level at 266.81 keV								Ens025 **	
$^{88}\text{Se}-u$	-68555	129	-68583	4	-0.1	U	GT2	1.5	08Su19	
$^{88}\text{Br}-u$	-75832	100	-75917	3	-0.6	o	GT2	1.5	08Kn.A	
	-75823	129			-0.5	U	GT2	1.5	08Su19	
$\text{C}_4 \text{ H}_8 \text{ O}_2 -^{88}\text{Sr}$	146789.1	4.7	146817.0	1.2	2.4	U	M15	2.5	63Ri07	
$^{88}\text{Y}-u$	-90500	31	-90498.4	2.0	0.1	U	GS2	1.0	05Li24	
$^{88}\text{Zr O}-^{98}\text{Mo}_{1.061}$	5502.3	6.9	5501	6	-0.1	1	71 ^{88}Zr	JY1	1.0	06Ka48
$^{88}\text{Nb O}-^{98}\text{Mo}_{1.061}$	13452	74	13500	60	0.7	1	68 ^{88}Nb	JY1	1.0	06Ka48 *
$^{88}\text{Kr}-^{85}\text{Rb}_{1.035}$	5745.5	2.8				2	MA8	1.0	06De36	
$^{88}\text{Rb}-^{85}\text{Rb}_{1.035}$	2615	9	2613.21	0.17	-0.2	U	MA4	1.0	02Ra23	
$^{88}\text{Sr}-^{85}\text{Rb}_{1.035}$	-3108	20	-3089.8	1.2	0.9	U	MA8	1.0	07Ke09	
	-3088	11			-0.2	U	MA8	1.0	05Si34	
$^{88}\text{Mo}-^{85}\text{Rb}_{1.035}$	13265.4	4.1				2	JY1	1.0	08We10	
$^{88}\text{Tc}-^{85}\text{Rb}_{1.035}$	25080	160				2	JY1	1.0	08We10 *	
$^{88}\text{Se}-^{88}\text{Rb}$	20101.9	3.6				2	JY1	1.0	08Ha23	
$^{88}\text{Br}-^{88}\text{Rb}$	12767.7	3.4				2	JY1	1.0	07Ra23	
$^{88}\text{Sr}-^{87}\text{Sr}$	-3260	12	-3264.99	0.17	-0.2	U	M15	2.5	63Ri07	
$^{86}\text{Kr}(t,p)^{88}\text{Kr}$	4091	15	4086.5	2.6	-0.3	U	LAL		76Fl02	
$^{88}\text{Sr}(p,t)^{86}\text{Sr}$	-11060	10	-11058.99	0.20	0.1	U	Oak		73Ba56	
$^{87}\text{Rb}(n,\gamma)^{88}\text{Rb}$	6082.52	0.16	6082.52	0.16	0.0	1	99 ^{88}Rb	Bdn	06Fi.A	
$^{87}\text{Rb}(d,p)^{88}\text{Rb}$	3858	15	3857.96	0.16	0.0	U	Oak		71Ra17	
	3837	20			1.0	U			71To05	
$^{87}\text{Sr}(n,\gamma)^{88}\text{Sr}$	11112.63	0.22	11112.64	0.16	0.0	-	ILn		87Wi15 Z	
	11112.64	0.22			0.0	-	Bdn		06Fi.A	
$^{87}\text{Sr}(d,p)^{88}\text{Sr}$	8865	5	8888.07	0.16	4.6	B	MIT		68Co20	
$^{87}\text{Sr}(n,\gamma)^{88}\text{Sr}$	ave. 11112.64	0.16	11112.64	0.16	0.0	1	100 ^{88}Sr		average	
$^{88}\text{Se}(\beta^-)^{88}\text{Br}$	6854	31	6832	5	-0.7	U	Bwg		92Gr.A	
$^{88}\text{Br}(\beta^-)^{88}\text{Kr}$	8970	130	8975	4	0.0	U	Stu		79Al05	
	8880	200			0.5	o	Bwg		87Gr.B	
	8960	36			0.4	U	Bwg		92Gr.A	
$^{88}\text{Kr}(\beta^-)^{88}\text{Rb}$	2930	30	2917.7	2.6	-0.4	U	Trs		78Wo15	
$^{88}\text{Rb}(\beta^-)^{88}\text{Sr}$	5310	60	5312.4	1.1	0.0	U	Trs		78Wo15	
	5318	9			-0.6	U	Gsn		80De02 *	
	5313	5			-0.1	U	Trs		82Br23	
$^{88}\text{Y}(\beta^+)^{88}\text{Sr}$	3622.6	1.5				2			79An36 *	
$^{88}\text{Sr}(p,n)^{88}\text{Y}$	-4402	6	-4404.9	1.5	-0.5	U	Bar		61Sh23	
	-4406	10			0.1	U	Tal		62Ne08	
$^{88}\text{Nb}(\beta^+)^{88}\text{Zr}$	7550	100	7450	60	-1.0	1	32 ^{88}Nb		84Ox01	
$^{88}\text{Nb}^m(\beta^+)^{88}\text{Zr}$	7590	100				2			84Ox01	
$^{88}\text{Tc}(\beta^+)^{88}\text{Mo}$	8600	1300	11010	150	1.9	U			96Od01	
	7800	600			5.3	B			96Sh27	
$^{88}\text{Nb O}-^{98}\text{Mo}_{1.061}$	$D_M=13527.5(6.9) \mu\text{u}$ for mixture gs+m at 140(110) keV; M-A=-76150.9(6.7) keV								Nub127 **	
$^{88}\text{Tc}-^{85}\text{Rb}_{1.035}$	Most probably the high-spin isomer								08We10 **	
$^{88}\text{Tc}-^{85}\text{Rb}_{1.035}$	$D_M=25082.4(4.1) \mu\text{u}$ for mixture gs+m at 0#300 keV; M-A=-61679.1(3.8) keV								Nub127 **	
$^{88}\text{Rb}(\beta^-)^{88}\text{Sr}$	Original error 4 corrected in reference								94Ha.A **	
$^{88}\text{Y}(\beta^+)^{88}\text{Sr}$	$E_{\beta^+}=764.6(1.5)$ to 2^+ level at 1836.087 keV								Ens058 **	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{89}\text{Se-u}$	-63285	225	-63331	4	-0.1	o			GT1	1.5	04Ma.A
	-63291	129			-0.2	U			GT2	1.5	08Su19
$\text{C}_7 \text{H}_5-^{89}\text{Y}$	133247.0	3.4	133284.8	2.4	4.4	B			M15	2.5	63Ri07
$^{89}\text{Nb-u}$	-86588	34	-86555	25	1.0	-			GS2	1.0	05Li24 *
ave.	-86582	29			1.0	1	78	78 ^{89}Nb			average
$^{89}\text{Kr}-^{85}\text{Rb}_{1.047}$	10191.6	2.3				2			MA8	1.0	06De36
$^{89}\text{Rb}-^{85}\text{Rb}_{1.047}$	4628	9	4634	6	0.7	1	42	42 ^{89}Rb	MA4	1.0	02Ra23
$^{89}\text{Mo}-^{85}\text{Rb}_{1.047}$	11824.3	4.2				2			JY1	1.0	08We10
$^{89}\text{Tc}-^{85}\text{Rb}_{1.047}$	20007	17	20005	4	-0.1	U			SH1	1.0	08We10
	20004.8	4.1				2			JY1	1.0	08We10
$^{89}\text{Se}-^{88}\text{Rb}_{1.011}$	26329.0	4.0				2			JY1	1.0	08Ha23
$^{89}\text{Br}-^{88}\text{Rb}_{1.011}$	16364.5	3.5				2			JY1	1.0	07Ra23
$^{88}\text{Rb}-^{89}\text{Rb}_{.494} \text{ } ^{87}\text{Rb}_{.506}$	545	23	563.3	2.7	0.3	U			P21	2.5	82Au01
$^{89}\text{Y}(d,\alpha)^{87}\text{Sr}$	7889	15	7881.7	2.3	-0.5	U			Mtr		72Br13
$^{88}\text{Sr}(n,\gamma)^{89}\text{Sr}$	6358.70	0.13	6358.72	0.09	0.1	-			ILn		89Wi05 Z
	6358.73	0.13			-0.1	-			Bdn		06Fi.A
$^{88}\text{Sr}(d,p)^{89}\text{Sr}$	4133	5	4134.15	0.09	0.2	U			MIT		67Sp09
$^{88}\text{Sr}(n,\gamma)^{89}\text{Sr}$	6358.71	0.09	6358.72	0.09	0.0	1	100	99 ^{89}Sr			average
$^{88}\text{Sr}(p,\gamma)^{89}\text{Y}$	7078	4	7076.8	2.3	-0.3	1	34	29 ^{89}Y			75Be.B Z
$^{89}\text{Y}(\gamma,n)^{88}\text{Y}$	-11540	40	-11481.7	2.8	1.5	U			Phi		63Ge02
$^{89}\text{Br}(\beta^-)^{89}\text{Kr}$	8140	140	8262	4	0.9	U			Stu		81Ho17
	8120	120			1.2	o			Bwg		87Gr.B
	8155	30			3.6	C			Bwg		92Gr.A
$^{89}\text{Kr}(\beta^-)^{89}\text{Rb}$	5150	30	5176	6	0.9	U					67Ki01
	5191	60			-0.2	U			Trs		78Wo15 *
	5140	120			0.3	U			Stu		81Ho17 *
$^{89}\text{Rb}(\beta^-)^{89}\text{Sr}$	4486	12	4497	5	0.9	-					66Ki06
	4491	15			0.4	o			Gsn		80BLA
	4510	9			-1.5	-			Gsn		80De02 *
ave.	4501	7			-0.7	1	57	56 ^{89}Rb			average
$^{89}\text{Sr}(\beta^-)^{89}\text{Y}$	1463	5	1500.4	2.3	7.5	B					49La06
	1488	4			3.1	B					70Wo05
$^{89}\text{Zr}(\beta^+)^{89}\text{Y}$	2841	10	2832.8	2.8	-0.8	U					51Hy24 *
	2832	10			0.1	U					53Sh48 *
	2828	7			0.7	-					60Ha26 *
$^{89}\text{Y}(p,n)^{89}\text{Zr}$	-3612.8	4.	-3615.1	2.8	-0.6	-			Tkm		63Ok01 Z
	-3619.4	6.			0.7	-			Oak		64Jo11 Z
$^{89}\text{Zr}(\beta^+)^{89}\text{Y}$	2832	3	2832.8	2.8	0.4	1	85	82 ^{89}Zr			average
$^{89}\text{Nb}(\beta^+)^{89}\text{Zr}$	3870	100	4251	24	3.8	B					55Ma13
	4340	50			-1.8	1	23	22 ^{89}Nb			74Vo08
$^{89}\text{Mo}(\beta^+)^{89}\text{Nb}$	5970	300	5610	24	-1.2	U					64Bu12
$^{89}\text{Tc}(\beta^+)^{89}\text{Mo}$	7510	210	7620	5	0.5	U					91He04 *
* $^{89}\text{Nb-u}$	M-A=-80656(28) keV for mixture gs+m at 0#30 keV										
* $^{89}\text{Kr}(\beta^-)^{89}\text{Rb}$	E_{β^-} =4970(60) to 220.948 level										
* $^{89}\text{Kr}(\beta^-)^{89}\text{Rb}$	Splitting Table 3a into 3 groups yields 4610(120) 4867(152) 5135(123) keV										
* $^{89}\text{Rb}(\beta^-)^{89}\text{Sr}$	Original error 8 corrected in reference										
* $^{89}\text{Zr}(\beta^+)^{89}\text{Y}$	E_{β^+} =910(10) 901(10) 897(7) respectively, to $^{89}\text{Y}^m$ at 908.97 keV										
* $^{89}\text{Tc}(\beta^+)^{89}\text{Mo}$	E_{β^+} =6370(210) to 118.8 level; no Fermi-Kurie plot										
$^{90}\text{Se-u}$	-59904	236				2			GT1	1.5	04Ma.A
$\text{C}_4 \text{H}_{10} \text{O}_2-^{90}\text{Zr}$	163377	6	163381.9	2.0	0.3	U			M15	2.5	63Ri07
$^{90}\text{Nb-u}$	-88872	50	-88742	4	2.6	U			GS2	1.0	05Li24 *
$^{90}\text{Mo}-\text{C}_7 \text{H}_6$	-133018.9	4.7	-133019	4	-0.1	1	65	65 ^{90}Mo	CP1	1.0	11Fa10
$^{90}\text{Mo}_{1.033}-\text{C}_7 \text{H}_9$	-159318	23	-159335	4	-0.7	U			CP1	1.0	11Fa10
$^{90}\text{Tc}-\text{C}_7 \text{H}_6$	-122880.3	6.7	-122876.3	1.1	0.6	U			CP1	1.0	11Fa10
$^{90}\text{Tc}_{1.033}-\text{C}_7 \text{H}_9$	-148835	22	-148856.9	1.1	-1.0	U			CP1	1.0	11Fa10
	-148854.2	8.5			-0.3	U			CP1	1.0	11Fa10

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{90}\text{Ru}_{1.033}-\text{C}_7\text{H}_9$	-142382	11	-142380	4	0.2	1	14	14 ^{90}Ru	CP1	1.0	11Fa10
$^{90}\text{Kr}-^{85}\text{Rb}_{1.059}$	12942.6	2.0				2			MA8	1.0	06De36
$^{90}\text{Rb}-^{85}\text{Rb}_{1.059}$	8211	9	8213	7	0.2	1	60	60 ^{90}Rb	MA4	1.0	02Ra23 *
$^{90}\text{Tc}-^{85}\text{Rb}_{1.059}$	17489.2	8.0	17488.6	1.1	-0.1	U			SH1	1.0	08We10
	17489.8	4.2			-0.3	U			JY1	1.0	08We10
$^{90}\text{Ru}-^{85}\text{Rb}_{1.059}$	23775	11	23759	4	-1.5	-			SH1	1.0	08We10
	23756.6	4.7			0.5	-			JY1	1.0	08We10
ave.	23759	4			-0.1	1	86	86 ^{90}Ru			average
$^{90}\text{Tc}-^{86}\text{Kr}_{1.047}$	17664.6	1.1				2			JY1	1.0	12Ka12
$^{90}\text{Tc}^m-^{86}\text{Kr}_{1.047}$	17819.2	1.4				2			JY1	1.0	12Ka12
$^{90}\text{Br}-^{88}\text{Rb}_{1.023}$	22017.0	3.6				2			JY1	1.0	07Ra23
$^{89}\text{Rb}-^{90}\text{Rb}_{791}^{85}\text{Rb}_{209}$	-1826	24	-1818	12	0.1	U			P21	2.5	82Au01
$^{90}\text{Zr}(\alpha,^8\text{He})^{86}\text{Zr}$	-40136	30	-39990	4	4.9	B			INS		90Ka01
$^{90}\text{Zr}(\alpha,^8\text{He})^{87}\text{Zr}$	-12083	8	-12088	4	-0.6	1	30	26 ^{87}Zr	MSU		78Pa11
$^{90}\text{Zr}(\text{p,t})^{88}\text{Zr}$	-12805	10	-12806	6	-0.1	1	31	29 ^{88}Zr	Oak		71Ba43
$^{89}\text{Y}(\text{n},\gamma)^{90}\text{Y}$	6857.1	1.0	6857.03	0.10	-0.1	U			ORn		81Ra07
	6857.26	0.30			-0.8	-					83De17
	6856.98	0.17			0.3	-			ILn		93Mi04 Z
	6857.01	0.14			0.1	-			Bdn		06Fi.A
$^{89}\text{Y}(\text{d,p})^{90}\text{Y}$	4635	5	4632.46	0.10	-0.5	U					64Wa14
$^{89}\text{Y}(\text{n},\gamma)^{90}\text{Y}$	ave.	6857.03	6857.03	0.10	0.0	1	100	54 ^{89}Y			average
$^{89}\text{Y}(\text{p},\gamma)^{90}\text{Zr}$	8351	4	8353.4	1.6	0.6	1	17	13 ^{89}Y			75Be.B
$^{90}\text{Zr}(\gamma,\text{n})^{89}\text{Zr}$	-11940	50	-11968	3	-0.6	U			Phi		63Ge02
$^{90}\text{Zr}(\text{p,d})^{89}\text{Zr}$	-9728	10	-9744	3	-1.6	U			Oak		71Ba43
$^{90}\text{Zr}(\text{d,t})^{89}\text{Zr}$	-5719.2	7.1	-5711	3	1.1	1	19	18 ^{89}Zr	SPa		79Bo37
$^{90}\text{Zr}(\alpha,^3\text{He},\alpha)^{89}\text{Zr}$	8580	50	8609	3	0.6	U			Phi		67Fo04
$^{90}\text{Br}(\beta^-)^{90}\text{Kr}$	9800	400	10959	4	2.9	U			Stu		81Ho17
	10280	110			6.2	C			Bwg		87Gr.B
	10350	75			8.1	C			Bwg		92Gr.A
$^{90}\text{Kr}(\beta^-)^{90}\text{Rb}$	4410	30	4405	7	-0.2	U					70Ma11
	4390	40			0.4	U			Trs		78Wo15
	4380	25			1.0	U			Bwg		87Gr.A
$^{90}\text{Rb}^{\text{v}}(\text{IT})^{90}\text{Rb}$	71	12				2					82Au01
$^{90}\text{Rb}(\beta^-)^{90}\text{Sr}$	6550	60	6584	7	0.6	U			Trs		78Wo15
	6560	150			0.2	U			Bwg		78St02
	6585	15			-0.1	o			Gsn		80Bl.A
	6578	15			0.4	o			Gsn		80De02
	6587	10			-0.3	1	44	40 ^{90}Rb	Gsn		92Pr03
$^{90}\text{Sr}(\beta^-)^{90}\text{Y}$	546	2	545.9	1.4	0.0	-					64Da16
	546	2			0.0	-					83Ha35
ave.	546.0	1.4			0.0	1	99	96 ^{90}Sr			average
$^{90}\text{Y}(\beta^-)^{90}\text{Zr}$	2271	2	2278.7	1.6	3.8	B					61Ni02
	2284	5			-1.1	-					64Da16
	2273	5			1.1	-					64La13
	2280	5			-0.3	-					66Ri01
	2278	8			0.1	U			Gsn		80Bl.A
	2279.5	2.9			-0.3	-					83Ha35
ave.	2279.2	2.0			-0.3	1	65	51 ^{90}Y			average
$^{90}\text{Nb}(\beta^+)^{90}\text{Zr}$	6111	4	6111	3	0.1	1	71	64 ^{90}Nb			68Pe01 *
$^{90}\text{Mo}(\beta^+)^{90}\text{Nb}$	2489	4	2489	3	0.1	1	71	36 ^{90}Nb			66Pe10 *
$^{90}\text{Tc}(\beta^+)^{90}\text{Mo}$	8920	410	9448	4	1.3	U					74Ia01 *
	9270	300			0.6	U					81Ox01 *
	8726	300			2.4	U					81Ox01 *
* $^{90}\text{Nb}-\text{u}$	M-A=-82721(29) keV for mixture gs+n at 124.67 keV										
* $^{90}\text{Rb}-^{85}\text{Rb}_{1.059}$	$D_M=8326(9) \mu\text{u}$ for $^{90}\text{Rb}^m$ at 106.90 keV; M-A=-79260(9) keV										
* $^{90}\text{Nb}(\beta^+)^{90}\text{Zr}$	$E_{\beta^+}=1500(4)$ to 6^+ level at 3589.419 keV										
* $^{90}\text{Mo}(\beta^+)^{90}\text{Nb}$	$E_{\beta^+}=1085(4)$ to 1^+ level at 382.01 keV										
* $^{90}\text{Tc}(\beta^+)^{90}\text{Mo}$	$E_{\beta^+}=7900(400)$ from $^{90}\text{Tc}^m$ at 144.1 to ground state (85%) and 947.97 (15%) level										
* $^{90}\text{Tc}(\beta^+)^{90}\text{Mo}$	$E_{\beta^+}=5300(300)$ to 2946.82 level										
* $^{90}\text{Tc}(\beta^+)^{90}\text{Mo}$	$E_{\beta^+}=6900(300)$ from $^{90}\text{Tc}^m$ at 144.0(1.7) to 2^+ level a 947.97 keV										

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{91}\text{Rb-u}$	-83532	21	-83463	8	1.3	U			Pb1	2.5	89Al33
$\text{C}_7\text{H}_7-^{91}\text{Zr}$	149143.1	4.4	149135.6	2.0	-0.7	U			M15	2.5	63Ri07
$^{91}\text{Nb-u}$	-93064	46	-93010	4	1.2	U			GS2	1.0	05Li24 *
$^{91}\text{Mo}-\text{C}_7\text{H}_7$	-143031.3	8.3	-143030	7	0.2	1	65	65 ^{91}Mo	CP1	1.0	11Fa10
$^{91}\text{Tc}-\text{C}_7\text{H}_7$	-136340.9	6.7	-136349.8	2.5	-1.3	-			CP1	1.0	11Fa10
	-136353.6	4.6			0.8	-			CP1	1.0	11Fa10
ave.	-136350	4			-0.1	1	45	45 ^{91}Tc			average
$^{91}\text{Ru}_{1.011}-\text{C}_7\text{H}_8$	-136730	610	-136664.2	2.4	0.1	U			CP1	1.0	11Fa10
$^{91}\text{Ru}-\text{C}_7\text{H}_7$	-128035.6	3.9	-128033.4	2.4	0.6	1	37	37 ^{91}Ru	CP1	1.0	11Fa10
$^{91}\text{Ru}_{1.022}-\text{C}_7\text{H}_9$	-145261	23	-145295.1	2.4	-1.5	U			CP1	1.0	11Fa10
$^{91}\text{Kr}-^{85}\text{Rb}_{1.071}$	18279.5	2.4				2			MA8	1.0	06De36
$^{91}\text{Rb}-^{85}\text{Rb}_{1.071}$	11003	10	11010	8	0.7	1	70	70 ^{91}Rb	MA4	1.0	02Ra23
$^{91}\text{Sr}-^{85}\text{Rb}_{1.071}$	4702	9	4669	6	-3.7	B			MA4	1.0	02Ra23
$^{91}\text{Tc}-^{85}\text{Rb}_{1.071}$	12898.3	5.4	12898.6	2.5	0.1	1	22	22 ^{91}Tc	SH1	1.0	08We10
$^{91}\text{Ru}-^{85}\text{Rb}_{1.071}$	21223	11	21215.0	2.4	-0.7	-			SH1	1.0	08We10
	21215.5	4.2			-0.1	-			JY1	1.0	08We10
ave.	21216	4			-0.4	1	37	37 ^{91}Ru			average
$^{91}\text{Br}-^{88}\text{Rb}_{1.034}$	26098.3	3.8				2			JY1	1.0	07Ra23
$^{91}\text{Tc}-^{94}\text{Mo}_{.968}$	10303.0	4.4	10303.2	2.6	0.0	1	34	33 ^{91}Tc	JY1	1.0	08We10
$^{91}\text{Ru}-^{94}\text{Mo}_{.968}$	18620.9	4.7	18619.7	2.4	-0.3	1	26	26 ^{91}Ru	JY1	1.0	08We10
$^{91}\text{Zr}-^{90}\text{Zr}$	942	12	941.9	0.5	0.0	U			M15	2.5	63Ri07
$^{90}\text{Rb}^x-^{91}\text{Rb}_{.824} \text{ } ^{85}\text{Rb}_{.176}$	-686	24	-770	15	-1.4	U			P21	2.5	82Au01
$^{91}\text{Zr(p,t)}^{89}\text{Zr}$	-10677	10	-10681	3	-0.4	U			Oak		71Ba43
$^{90}\text{Zr(n,\gamma)}^{91}\text{Zr}$	7194.4	0.5	7193.9	0.4	-1.0	-					81Lo.A Z
	7192.7	0.8			1.5	-			Bdn		06Fi.A
$^{90}\text{Zr(d,p)}^{91}\text{Zr}$	4959	20	4969.4	0.4	0.5	U			Pit		64Co11
	4969	8			0.0	U			MIT		72Gr12
	4970.3	2.2			-0.4	U			SPa		79Bo37
$^{91}\text{Zr(p,d)}^{90}\text{Zr}$	-4977	10	-4969.4	0.4	0.8	U			Oak		71Ba43
$^{91}\text{Zr(d,t)}^{90}\text{Zr}$	-932	20	-936.7	0.4	-0.2	U			Pit		64Co11
	-940.3	3.7			1.0	U			SPa		79Bo37
$^{90}\text{Zr(n,\gamma)}^{91}\text{Zr}$	7193.9	0.4	7193.9	0.4	0.0	1	99	69 ^{90}Zr			average
$^{90}\text{Zr(p,\gamma)}^{91}\text{Nb}$	5167	5	5154.0	3.0	-2.6	U					71Ra08
	5167	4			-3.3	C					75Be.B Z
$^{90}\text{Zr}(^3\text{He,d})^{91}\text{Nb}$	-227	20	-339.5	3.0	-5.6	B			Hei		70Kn05
$^{90}\text{Zr}(\alpha,t)^{91}\text{Nb}$	-14643	27	-14659.9	3.0	-0.6	U			Brk		71Zi03
$^{91}\text{Ru}^m(\text{ep})^{90}\text{Mo}$	4300	500				2					83Ha06
$^{91}\text{Br}(\beta^-)^{91}\text{Kr}$	9790	100	9867	4	0.8	U			Bwg		89Gr03
	9805	50			1.2	U			Bwg		92Gr.A
$^{91}\text{Kr}(\beta^-)^{91}\text{Rb}$	6420	80	6771	8	4.4	B			Trs		78Wo15
	6450	80			4.0	B			Bwg		89Gr03
$^{91}\text{Rb}(\beta^-)^{91}\text{Sr}$	5830	45	5907	9	1.7	U			Trs		78Wo15 *
	5927	24			-0.8	o			Gsn		80De02 *
	5920	28			-0.5	-			McG		83Ia02 *
	5930	22			-1.0	-			Gsn		92Pr03 *
ave.	5926	17			-1.1	1	27	18 ^{91}Rb			average
$^{91}\text{Sr}(\beta^-)^{91}\text{Y}$	2669	10	2699	5	3.0	B					53Am08 *
	2684	10			1.5	-					73Ha11 *
	2704	8			-0.6	-			Gsn		80De02 *
	2709	15			-0.6	-			McG		83Ia02
ave.	2698	6			0.2	1	83	80 ^{91}Sr			average
$^{91}\text{Y}(\beta^-)^{91}\text{Zr}$	1545	5	1544.3	1.8	-0.1	-					64La13
	1544	2			0.1	-					75Ra08
ave.	1544.1	1.9			0.1	1	98	97 ^{91}Y			average
$^{91}\text{Zr(p,n)}^{91}\text{Nb}$	-2045	6	-2039.9	2.9	0.8	-			Oak		70Ki01
	-2038.8	3.4			-0.3	-			Kyu		71Ma47
ave.	-2040.3	3.0			0.1	1	98	97 ^{91}Nb			average
$^{91}\text{Mo}(\beta^+)^{91}\text{Nb}$	4460	30	4430	7	-1.0	-					56Sm96
	4435	23			-0.2	-					93Os06
ave.	4444	18			-0.8	1	14	11 ^{91}Mo			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{91}\text{Tc}(\beta^+)^{91}\text{Mo}$	6220	200	6222	7	0.0	U			74Ia01
* $^{91}\text{Nb-u}$	M-A=-86636(30) keV for mixture gs+m at 104.60 keV								
* $^{91}\text{Rb}(\beta^-)^{91}\text{Sr}$	E_{β^-} =5760(40) to ^{91}Sr ground state <8% and 93.628 keV $3/2^+$ level 25%								
* $^{91}\text{Rb}(\beta^-)^{91}\text{Sr}$	Original error 8 corrected to 13 keV in reference								
* $^{91}\text{Rb}(\beta^-)^{91}\text{Sr}$	E_{β^-} =5857 to mixture ^{91}Sr ground state <8% and 93.628 $3/2^+$ level 25%								
* $^{91}\text{Rb}(\beta^-)^{91}\text{Sr}$	E_{β^-} =5850(20) and E_{β^-} =5860(10) respectively, to ^{91}Sr ground state <8% and 93.628 level 25%								
* $^{91}\text{Sr}(\beta^-)^{91}\text{Y}$	E_{β^-} =2665(10), 2030(20), 1359(10), 1093(10) to								
*	ground state, $3/2^-$ level at 653.02 keV, $(5/2)^+$ at 1305.39, $(5/2)^-$ at 1545.90								
* $^{91}\text{Sr}(\beta^-)^{91}\text{Y}$	Original error 4 increased: in disagreement with other results								
* $^{91}\text{Sr}(\beta^-)^{91}\text{Y}$	Original error 3 corrected in reference								
$^{92}\text{Br-u}$	-60711	103	-60368	7	2.2	U			08Kn.A
$^{92}\text{Rb-u}$	-80323	32	-80272	7	0.6	U			89A133
$\text{C}_7 \text{H}_8 - ^{92}\text{Zr}$	157569.4	3.8	157565.6	2.0	-0.4	U			63Ri07
$^{92}\text{Nb-u}$	-92851	56	-92811.9	2.6	0.7	U			05Li24 *
$\text{C}_7 \text{H}_8 - ^{92}\text{Mo}$	155790.0	3.2	155792.3	0.8	0.3	U			63Ri07
$^{92}\text{Mo}_{1.011} - \text{C}_7 \text{H}_9$	-164641.3	7.0	-164642.4	0.8	-0.2	U			11Fa10
$^{92}\text{Tc} - \text{C}_7 \text{H}_8$	-147328	13	-147330	3	-0.2	U			11Fa10
$^{92}\text{Tc}_{.989} - \text{C}_7 \text{H}_7$	-138569	10	-138573	3	-0.4	-			11Fa10
$^{92}\text{Tc}_{1.011} - \text{C}_7 \text{H}_9$	-156087.6	6.1	-156088	3	0.0	-			11Fa10
$^{92}\text{Tc}_{.989} - \text{C}_7 \text{H}_7$	ave. -138572	5	-138573	3	-0.2	1	40	40 ^{92}Tc	average
$^{92}\text{Ru} - \text{C}_7 \text{H}_8$	-142352	18	-142365.9	2.9	-0.8	o			08Fa11
	-142352	18			-0.8	U			11Fa10
	-142377	10			1.1	o			08Fa11
	-142378	10			1.2	U			11Fa10
$^{92}\text{Ru}_{1.011} - \text{C}_7 \text{H}_9$	-151074.5	5.6	-151068.3	2.9	1.1	o			08Fa11
	-151074.5	5.6			1.1	1	28	28 ^{92}Ru	11Fa10
$^{92}\text{Rh}_{1.011} - \text{C}_7 \text{H}_9$	-138825	23	-138802	5	1.0	U			11Fa10
	-138818	17			1.0	U			11Fa10
$^{92}\text{Kr} - ^{85}\text{Rb}_{1.082}$	21616.6	2.9			2				06De36
$^{92}\text{Rb} - ^{85}\text{Rb}_{1.082}$	15176	9	15172	7	-0.5	1	53	53 ^{92}Rb	02Ra23
$^{92}\text{Sr} - ^{85}\text{Rb}_{1.082}$	6482	9	6482	4	0.0	-			02Ra23
	6484.0	4.3			-0.5	-			05Gu37
	ave. 6484	4			-0.5	1	90	90 ^{92}Sr	average
$^{92}\text{Mo} - ^{85}\text{Rb}_{1.082}$	2251.43	0.85	2251.5	0.8	0.0	1	97	97 ^{92}Mo	12Ka13
$^{92}\text{Tc} - ^{85}\text{Rb}_{1.082}$	10728	12	10713	3	-1.2	U			08We10
	10712.5	4.3			0.2	1	60	60 ^{92}Tc	08We10
$^{92}\text{Ru} - ^{85}\text{Rb}_{1.082}$	15684.3	5.7	15677.9	2.9	-1.1	-			08We10
	15677.9	4.3			0.0	-			08We10
	ave. 15680	3			-0.7	1	72	72 ^{92}Ru	average
$^{92}\text{Rh} - ^{85}\text{Rb}_{1.082}$	27841	37	27811	5	-0.8	U			08We10
	27811.2	4.7				2			08We10
	32306.8	7.2				2			07Ra23
$^{92}\text{Br} - ^{88}\text{Rb}_{1.045}$	3285	2	3287.1	0.5	0.3	U			63Ba20
$^{92}\text{Zr} - ^{35}\text{Cl} - ^{90}\text{Zr} - ^{37}\text{Cl}$	-603	12	-604.91	0.12	-0.1	U			63Ri07
$^{92}\text{Zr} - ^{91}\text{Zr}$	-3258	22	-3309.2	2.5	-0.9	U			82Au01
$^{88}\text{Rb} - ^{92}\text{Rb}_{.410} - ^{85}\text{Rb}_{.592}$	-3457	24	-3470	6	-0.2	U			82Au01
$^{89}\text{Rb} - ^{92}\text{Rb}_{.553} - ^{85}\text{Rb}_{.449}$	-1703	25	-1766	9	-1.0	U			82Au01
$^{91}\text{Rb} - ^{92}\text{Rb}_{.848} - ^{85}\text{Rb}_{.153}$	-2059	24	-2131	14	-1.2	U			82Au01
$^{90}\text{Rb}^{\text{r}} - ^{92}\text{Rb}_{.699} - ^{85}\text{Rb}_{.303}$	209	24	156	14	-0.9	U			82Au01
$^{90}\text{Rb}^{\text{r}} - ^{92}\text{Rb}_{.326} - ^{89}\text{Rb}_{.674}$	-43278	20	-43306	4	-1.4	U			90Ka01
$^{92}\text{Mo}(\alpha, ^8\text{He})^{88}\text{Mo}$	-1306	50	-1318	24	-0.2	R			75Se.A
$^{92}\text{Mo}(\text{p}, \alpha)^{89}\text{Nb}$	-14465	15	-14454	4	0.7	U			80Pa02
$^{92}\text{Mo}(\text{He}, ^6\text{He})^{89}\text{Mo}$	-7372	14	-7346.9	0.4	1.8	U			66St15
$^{92}\text{Zr}(\text{p}, \text{t})^{90}\text{Zr}$	-7350	10			0.3	U			71Ba43
$^{92}\text{Mo}(\text{p}, \text{t})^{90}\text{Mo}$	-14330	30	-14296	4	1.1	U			76Ka08
$^{92}\text{Rb}(\beta^- \text{ n})^{91}\text{Sr}$	785	15	809	8	1.6	1	26	14 ^{92}Rb	84Kr.B
$^{91}\text{Zr}(\text{n}, \gamma)^{92}\text{Zr}$	8634.91	0.20	8634.79	0.11	-0.6	-			79Br25 Z
	8634.64	0.15			1.0	-			81Su.A Z
	8635.00	0.24			-0.9	-			06Fi.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{91}\text{Zr(d,p)}^{92}\text{Zr}$	6470	30	6410.22	0.11	-2.0	U					62Ma06
	6395	20			0.8	U			Pit		64Co11
	6410.9	4.3			-0.2	U			SPa		79Bo37
$^{92}\text{Zr(p,d)}^{91}\text{Zr}$	-6410	11	-6410.22	0.11	0.0	U			Bld		66St15
	-6410	10			0.0	U			Oak		71Ba43
$^{92}\text{Zr(d,t)}^{91}\text{Zr}$	-2363	25	-2377.56	0.11	-0.6	U			Pit		64Co11
$^{91}\text{Zr(n,\gamma)}^{92}\text{Zr}$	ave.	8634.79	0.11	8634.79	0.11	0.0	1	100	68 ^{91}Zr		average
$^{92}\text{Mo(p,d)}^{91}\text{Mo}$	-10446	15	-10446	6	0.0	-			Tex		73Ko03
	-10432	25			-0.6	-			Grn		73Mo03
$^{92}\text{Br}(\beta^-)^{92}\text{Kr}$	ave.	-10442	13		-0.3	1	24	23 ^{91}Mo			average
	12155	100	12537	7	3.8	B			Bwg		89Gr03
$^{92}\text{Kr}(\beta^-)^{92}\text{Rb}$	12220	55			5.8	C			Bwg		92Gr.A
	6160	80	6003	7	-2.0	U			Trs		78Wo15
$^{92}\text{Rb}(\beta^-)^{92}\text{Sr}$	6045	80			-0.5	o			Bwg		89Gr03
	5987	10			1.6	o			Bwg		92Gr.A
$^{92}\text{Sr}(\beta^-)^{92}\text{Y}$	5993	27			0.4	U			Bwg		92Gr06
	8080	160	8095	6	0.1	U			Trs		78Wo15
$^{92}\text{Y}(\beta^-)^{92}\text{Zr}$	8091	15			0.3	o			Gsn		80Bl.A
	8111	15			-1.1	o			Gsn		80De02
$^{92}\text{Zr}(\beta^-)^{92}\text{Nb}$	8080	30			0.5	-			McG		83Ia02
	8095	25			0.0	o			Bwg		87Gr.A
$^{92}\text{Nb}(\beta^+)^{92}\text{Zr}$	8096	16			-0.1	-			Bwg		92Gr.A
	8107	15			-0.8	-			Gsn		92Pr03
$^{92}\text{Sr}(\beta^-)^{92}\text{Y}$	ave.	8099	10		-0.4	1	39	32 ^{92}Rb			average
	1929	50	1950	9	0.4	U					57He39 *
$^{92}\text{Y}(\beta^-)^{92}\text{Zr}$	1930	30			0.7	-			Trs		78Wo15 *
	1920	20			1.5	-			McG		83Ia02
$^{92}\text{Nb}(\beta^+)^{92}\text{Zr}$	ave.	1923	17		1.6	1	32	29 ^{92}Y			average
	3640	20	3643	9	0.1	-					62Bu16
$^{92}\text{Zr}(\beta^-)^{92}\text{Nb}$	3630	15			0.8	-			McG		83Ia02
	ave.	3634	12		0.7	1	58	57 ^{92}Y			average
$^{92}\text{Mo(p,n)}^{92}\text{Tc}$	2005	6	2005.9	1.8	0.1	U					59We30 *
	2008	6			-0.4	U					62Bu16 *
$^{92}\text{Zr(p,n)}^{92}\text{Nb}$	-2790.7	2.3	-2788.2	1.8	1.1	-			Kyu		74Ku01
	-2792	5			0.8	-					75Ke12
$^{92}\text{Tc}(\beta^+)^{92}\text{Mo}$	ave.	-2790.9	2.1		1.3	1	73	64 ^{92}Nb			average
	7880	100	7882	3	0.0	U					64Va05
$^{92}\text{Mo(p,n)}^{92}\text{Tc}$	-8672	50	-8664	3	0.2	U			Tal		66Mo06 *
$^{92}\text{Mo}(\text{}^3\text{He,t})^{92}\text{Tc}$	-7882	30	-7901	3	-0.6	U			ChR		73Ha02
$^{92}\text{Nb-u}$	M-A=-86422(34) keV for mixture gs+m at 135.5 keV										Nub127 **
$^{92}\text{Sr}(\beta^-)^{92}\text{Y}$	E_{β^-} =545(50) 546(30) respectively, to 1^+ level at 1383.90 keV										Ens011 **
$^{92}\text{Nb}(\beta^+)^{92}\text{Zr}$	p^+ =56(6) $\times 10^{-5}$, 60(6) $\times 10^{-5}$ respectively, to 2^+ level at 934.47 keV										Ens011 **
*	recalculated Q_{β^+} =2140(6) 2143(6) respectively, from $^{92}\text{Nb}^m$ at 135.5 keV										AHW **
$^{92}\text{Mo(p,n)}^{92}\text{Tc}$	T=9040(50) to 4^+ level at 270.15 keV										Ens011 **
$^{93}\text{Br-u}$	-56866	322					2		GT1	1.5	04Ma.A
	-78036	21	-77961	8	1.4	U			Pb1	2.5	89Al33
$^{93}\text{Rb-u}$	-77868	100			-0.6	U			GT2	1.5	08Kn.A
	164046.9	3.5	164052.3	2.0	0.6	U			M15	2.5	63Ri07
$\text{C}_7\text{H}_9-^{93}\text{Nb}$	-93194	30	-93190.4	0.8	0.1	U			GS2	1.0	05Li24 *
$^{93}\text{Mo-u}$	-89729	31	-89754.0	1.4	-0.8	U			GS2	1.0	05Li24
$^{93}\text{Tc-u}$	-160189.5	7.7	-160179.3	1.4	1.3	U			CP1	1.0	11Fa10
	-160170	22			-0.4	U			CP1	1.0	11Fa10
$^{93}\text{Tc}-\text{C}_7\text{H}_9$	-160189.4	8.5			1.2	U			CP1	1.0	11Fa10
	-151270	190	-151367.0	1.3	-0.5	U			CP1	1.0	11Fa10
$^{93}\text{Tc}_{989}-\text{C}_7\text{H}_8$	-153318.2	6.4	-153320.8	2.2	-0.4	-			CP1	1.0	11Fa10
	-153307	23			-0.6	U			CP1	1.0	11Fa10
$^{93}\text{Ru}-\text{C}_7\text{H}_9$	-153324.0	4.8			0.7	-			CP1	1.0	11Fa10
	-153321.9	3.5			0.3	-			CP1	1.0	11Fa10
ave.	-153321.9	2.6			0.4	1	73	73 ^{93}Ru			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{93}\text{Rh}-\text{C}_7\text{H}_9$	-144485	25	-144512.5	2.8	-1.1	o			CP1	1.0	08Fa11
	-144485	26			-1.1	U			CP1	1.0	11Fa10
	-144527.7	5.3			2.9	U			CP1	1.0	08Fa11
	-144527.7	5.2			2.9	U			CP1	1.0	11Fa10
	-144512.9	3.8			0.1	1	55	55 ^{93}Rh	CP1	1.0	11Fa10
$^{93}\text{Kr}-^{85}\text{Rb}_{1.094}$	27649.2	2.7				2		MA8	1.0	06De36	
$^{93}\text{Rb}-^{85}\text{Rb}_{1.094}$	18549	10	18541	8	-0.8	1	71	71 ^{93}Rb	MA4	1.0	02Ra23
$^{93}\text{Sr}-^{85}\text{Rb}_{1.094}$	10526	10	10526	8	0.0	1	66	66 ^{93}Sr	MA4	1.0	02Ra23
$^{93}\text{Ru}-^{85}\text{Rb}_{1.094}$	13609.4	4.3	13606.5	2.2	-0.7	1	27	27 ^{93}Ru	JY1	1.0	08We10
$^{93}\text{Rh}-^{85}\text{Rb}_{1.094}$	22428	12	22414.8	2.8	-1.1	-			SH1	1.0	08We10
	22413.5	4.5			0.3	-			JY1	1.0	08We10
ave.	22415	4			-0.1	1	45	45 ^{93}Rh			average
$^{91}\text{Rb}-^{93}\text{Rb}_{.489}$ $^{89}\text{Rb}_{.511}$	-471	9	-479	9	-0.4	1	15	12 ^{91}Rb	P31	2.5	86Au02
$^{91}\text{Rb}-^{93}\text{Rb}_{.326}$ $^{90}\text{Rb}_{.674}$	-656	23	-627	12	0.5	U			P21	2.5	82Au01
$^{92}\text{Rb}-^{93}\text{Rb}_{.495}$ $^{91}\text{Rb}_{.505}$	465	23	436	8	-0.5	U			P21	2.5	82Au01
$^{93}\text{Rb}(\beta^-)^{92}\text{Sr}$	2220	30	2176	9	-1.5	U					84Kr.B
$^{92}\text{Sr}(n,\gamma)^{93}\text{Sr}$	5230	6	5290	8	10.0	B					80Kr07
$^{92}\text{Zr}(n,\gamma)^{93}\text{Zr}$	6733.7	1.1	6734.4	0.4	0.6	-					72Gr23 Z
	6734.0	0.7			0.5	-					79Ke.D Z
	6735.3	0.7			-1.3	-			Bdn		06Fi.A
$^{92}\text{Zr}(d,p)^{93}\text{Zr}$	4493	20	4509.8	0.4	0.8	U			Pit		64Co11
ave.	6734.5	0.5	6734.4	0.4	-0.3	1	98	57 ^{92}Zr			average
$^{93}\text{Nb}(\gamma,n)^{92}\text{Nb}$	-8780	60	-8830.6	2.0	-0.8	U			Phi		60Ge01
$^{93}\text{Nb}(d,t)^{92}\text{Nb}$	-8825	3			-1.9	1	45	36 ^{92}Nb	McM		79Ba06
	-2581	20	-2573.3	2.0	0.4	U			Pit		64Co11
$^{92}\text{Mo}(n,\gamma)^{93}\text{Mo}$	-2571	10			-0.2	U			Tal		64Sh04
	8067.4	1.5	8069.81	0.09	1.6	U					73Wa17
$^{92}\text{Mo}(d,p)^{93}\text{Mo}$	8066	2			1.9	U					77Ri04
	8069.81	0.09			0.0	1	100	97 ^{93}Mo	MMn		91Is02 Z
	8070.0	0.3			-0.6	U			Bdn		06Fi.A
$^{92}\text{Mo}(p,\gamma)^{93}\text{Tc}$	5853	20	5845.24	0.09	-0.4	U			Pit		64Co11
$^{92}\text{Mo}(\beta^-)^{93}\text{Tc}$	4081	5	4086.5	1.0	1.1	U					75Be.B
	4086.5	1.0				2					83Ay01
$^{92}\text{Mo}(\beta^-)^{93}\text{Tc}$	-1411	4	-1407.0	1.0	1.0	U			Hei		83Wi.A
$^{93}\text{Kr}(\beta^-)^{93}\text{Rb}$	8700	500	8484	8	-0.4	U			Trs		78Wo15
	8600	100			-1.2	U			Bwg		87Gr.A
$^{93}\text{Rb}(\beta^-)^{93}\text{Sr}$	7560	120	7466	9	-0.8	U			Trs		78Wo15
	7488	15			-1.5	o			Gsn		80BL.A
	7485	15			-1.3	o			Gsn		80De02
	7440	30			0.9	-			McG		83Ia02
	7455	35			0.3	-			Bwg		87Gr.A
	7456	15			0.7	-			Gsn		92Pr03
	ave.	7453	13			1.0	1	50	26 ^{93}Rb		
$^{93}\text{Sr}(\beta^-)^{93}\text{Y}$	4130	100	4142	12	0.1	U			Bwg		78St02
	4110	20			1.6	1	35	24 ^{93}Y	McG		83Ia02
$^{93}\text{Y}(\beta^-)^{93}\text{Zr}$	2890	20	2895	10	0.3	-					59Kn38
	2880	15			1.0	-			McG		83Ia02
ave.	2884	12			1.0	1	76	76 ^{93}Y			average
$^{93}\text{Zr}(\beta^-)^{93}\text{Nb}$	93.8	2.	90.3	1.5	-1.7	1	60	30 ^{93}Nb			53Gl.A *
$^{93}\text{Mo}(\epsilon)^{93}\text{Nb}$	158	15	406.7	1.9	16.6	B					64Ho08 *
$^{93}\text{Nb}(p,n)^{93}\text{Mo}$	-1188	10	-1189.0	1.9	-0.1	-					68Fi01
	-1190	5			0.2	-					75Ch05
ave.	-1190	4			0.1	1	19	16 ^{93}Nb			average
$^{93}\text{Tc}(\beta^+)^{93}\text{Mo}$	3185.1	5.	3201.0	1.0	3.2	B					51Bo48 *
	3192.1	3.			3.0	U					74An24 *
$^{93}\text{Ru}(\beta^+)^{93}\text{Tc}$	6337	85	6388.6	2.4	0.6	U					83Ay01
* $^{93}\text{Mo}-u$	M-A=-84385(28) keV for $^{93}\text{Mo}^m$ at 2424.95 keV										Ens115 **
* $^{93}\text{Zr}(\beta^-)^{93}\text{Nb}$	$E_{\beta^-}=63(2)$ to $1/2^-$ level at 30.77(0.02)keV										Ens **
* $^{93}\text{Mo}(\epsilon)^{93}\text{Nb}$	L/K=0.36(0.04) to $1/2^-$ level at 30.82 keV, recalculated Q										Ens115 **
* $^{93}\text{Tc}(\beta^+)^{93}\text{Mo}$	$E_{\beta^+}=800(5)$ $807(3)$ respectively, to $7/2^+$ level 1363.048 keV										Ens115 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{94}\text{Kr-u}$	-66238	247	-65860	13	1.0	U			GT1	1.5	04Ma.A
$^{94}\text{Kr}-^{85}\text{Rb}_{1.106}$	31701	13				2			MA8	1.0	06De36
	31665	24	31701	13	1.5	U			MA8	1.0	10Na13
	31649	97			0.5	U			MA9	1.0	10Na13 *
$^{94}\text{Rb-u}$	-73602	54	-73605.2	2.2	0.0	F			Pb1	2.5	89Al33 *
$^{94}\text{Rb}-^{85}\text{Rb}_{1.106}$	23958	10	23955.4	2.2	-0.3	U			MA4	1.0	02Ra23
	23955.6	2.6			-0.1	1	70	70 ^{94}Rb	TT1	1.0	12Si10 *
$^{94}\text{Sr}-^{85}\text{Rb}_{1.106}$	12924	10	12916.1	1.8	-0.8	U			MA4	1.0	02Ra23
	12916.0	1.8			0.1	1	98	98 ^{94}Sr	TT1	1.0	12Si10 *
$\text{C}_7\text{H}_{10}-^{94}\text{Zr}$	171929.4	3.9	171939.5	2.0	1.0	U			M15	2.5	63Ri07
$^{94}\text{Mo}-^{85}\text{Rb}_{1.106}$	2645.6	1.0	2645.4	0.5	-0.2	1	23	23 ^{94}Mo	JY1	1.0	12Ka13
$\text{C}_7\text{H}_{10}-^{94}\text{Mo}$	173159.6	3.2	173165.4	0.5	0.7	U			M15	2.5	63Ri07
$^{94}\text{Tc-u}$	-90362	39	-90346	4	0.4	U			GS2	1.0	05Li24 *
$^{94}\text{Ru}-^{85}\text{Rb}_{1.106}$	8891	25	8903	3	0.5	U			SH1	1.0	08We10
	8907.1	4.5			-0.8	1	56	56 ^{94}Ru	JY1	1.0	08We10
$^{94}\text{Ru}-\text{C}_7\text{H}_{10}$	-166912.2	5.1	-166907	3	0.9	1	44	44 ^{94}Ru	CP1	1.0	11Fa10
$^{94}\text{Rh}-^{85}\text{Rb}_{1.106}$	19291.2	4.6	19291	4	0.0	1	62	62 ^{94}Rh	JY1	1.0	08We10
$^{94}\text{Rh}-\text{C}_7\text{H}_{10}$	-156520.2	5.9	-156520	4	0.1	1	38	38 ^{94}Rh	CP1	1.0	11Fa10
$^{94}\text{Rh}_{989}-\text{C}_7\text{H}_9$	-147834	30	-147834	4	0.0	U			CP1	1.0	11Fa10
$^{94}\text{Kr}-^{86}\text{Kr}_{1.093}$	31710	110	31843	13	1.2	U			MA9	1.0	10Na13
$^{94}\text{Rb}-^{88}\text{Rb}_{1.068}$	21109.1	4.0	21109.8	2.2	0.2	1	30	30 ^{94}Rb	JY1	1.0	07Ra23
$^{94}\text{Zr}^{35}\text{Cl}-^{92}\text{Zr}^{37}\text{Cl}$	4235.0	2.	4226.2	2.1	-1.1	U			H13	4.0	63Ba20
$^{94}\text{Mo}^{35}\text{Cl}-^{92}\text{Mo}^{37}\text{Cl}$	1234.0	2.	1227.0	1.0	-0.9	U			H11	4.0	63Bi12
$^{94}\text{Pd}-^{94}\text{Mo}$	23952.7	4.6				2			JY1	1.0	08We10
$^{92}\text{Rb}-^{94}\text{Rb}_{.587}^{89}\text{Rb}_{.413}$	-764	24	-779	7	-0.3	U			P21	2.5	82Au01 Y
$^{92}\text{Rb}-^{94}\text{Rb}_{.489}^{90}\text{Rb}_{.511}$	-717	23	-726	9	-0.2	U			P21	2.5	82Au01 Y
$^{93}\text{Rb}-^{94}\text{Rb}_{.742}^{90}\text{Rb}_{.258}$	-1296	25	-1289	9	0.1	U			P21	2.5	82Au01 Y
$^{93}\text{Rb}-^{94}\text{Rb}_{.495}^{92}\text{Rb}_{.505}$	-840	40	-921	8	-0.8	F			P31	2.5	86Au02 *
$^{94}\text{Zr}(d,\alpha)^{92}\text{Y}$	8278	25	8257	9	-0.8	1	14	13 ^{92}Y	Grn		74Gi09
$^{94}\text{Zr}(p,t)^{92}\text{Zr}$	-6466	12	-6472.1	1.9	-0.5	U			Bld		66St15
	-6470	10			-0.2	U			Oak		71Ba43
$^{94}\text{Ag}^n(2p)^{92}\text{Rh}$	3449	100	2360#	400#	-10.9	F					06Mu03 *
$^{94}\text{Rb}(\beta^-n)^{93}\text{Sr}$	3580	80	3452	8	-1.6	U					84Kr.B
$^{94}\text{Zr}(p,d)^{93}\text{Zr}$	-5983	15	-5995.0	1.9	-0.8	U			Bld		66St15
	-6000	10			0.5	U			Oak		71Ba43
$^{94}\text{Zr}(d,t)^{93}\text{Zr}$	-1969	20	-1962.3	1.9	0.3	U			Pit		64Co11
	-1960.2	2.4			-0.9	1	63	33 ^{94}Zr	SPa		79Bo37
$^{93}\text{Nb}(n,\gamma)^{94}\text{Nb}$	7229.13	0.12	7227.54	0.08	-13.2	C					84Bo.C
	7227.51	0.09			0.3	-			MMn		88Ke09 Z
	7227.63	0.15			-0.6	-			Bdn		06Fi.A
ave.	7227.54	0.08			0.0	1	100	56 ^{94}Nb			average
$^{94}\text{Mo}(d,t)^{93}\text{Mo}$	-3441	20	-3420.6	0.9	1.0	U			Pit		64Co11
$^{94}\text{Ag}^n(p)^{93}\text{Pd}$	5780	30	5790	17	0.3	4					05Mu15 *
	5794	20			-0.2	4					09Ce04 *
$^{94}\text{Rb}(\beta^-)^{94}\text{Sr}$	10304	20	10283.0	2.6	-1.1	o			Gsn		80Bl.A
	10322	100			-0.4	o			Gsn		80De02 *
	10353	140			-0.5	U			Trs		82Br23 *
	10335	45			-1.2	U			Bwg		82Pa24 *
	10312	20			-1.5	U			Gsn		92Pr03 *
$^{94}\text{Sr}(\beta^-)^{94}\text{Y}$	3512	10	3507	7	-0.5	1	42	41 ^{94}Y	Gsn		80De02 *
$^{94}\text{Y}(\beta^-)^{94}\text{Zr}$	4920	9	4918	6	-0.2	1	51	49 ^{94}Y	Gsn		80De02 *
$^{94}\text{Nb}(\beta^-)^{94}\text{Mo}$	2043.3	6.	2043.6	1.8	0.1	-					66Sn02 *
	2046.3	3.			-0.9	-					68Ho10 *
ave.	2045.7	2.7			-0.8	1	45	44 ^{94}Nb			average
$^{94}\text{Tc}(\beta^+)^{94}\text{Mo}$	4261	5	4256	4	-1.1	2					64Ha29 *
$^{94}\text{Mo}(p,n)^{94}\text{Tc}$	-5027.8	7.	-5038	4	-1.5	2					73Mc04 *
$^{94}\text{Rh}(\beta^+)^{94}\text{Ru}$	9930	400	9676	5	-0.6	U					80Ox01 *
	9750	320			-0.2	U					06Ba55
$^{94}\text{Pd}(\beta^+)^{94}\text{Rh}$	6700	320	6807	5	0.3	U					06Ba55

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{94}\text{Ag}^n(\beta^+)^{94}\text{Pd}$	17700	500	20040#	400#	4.7	D			04Mu30 *
* $^{94}\text{Kr}-^{85}\text{Rb}_{1.106}$	Typo in original paper, ratio should read 1.006 255 64(1 14)								
* $^{94}\text{Rb-u}$	F : possibly isomeric mixture								
* $^{94}\text{Rb}-^{85}\text{Rb}_{1.106}$	$D_M=23956.4(2.6) \mu\text{u}$ ME=-68561.8(2.4)keV corrected for e^- binding=-775eV								
* $^{94}\text{Sr}-^{85}\text{Rb}_{1.106}$	$D_M=12916.7(1.8) \mu\text{u}$ ME=-78845.2(1.7)keV corrected for e^- binding=-625eV								
* $^{94}\text{Tc-u}$	M-A=-84133(29) keV for mixture gs+m at 76(3) keV								
* $^{93}\text{Rb}-^{94}\text{Rb}_{.495}$ $^{92}\text{Rb}_{.505}$	F : rejection based on line-shape analysis								
* $^{94}\text{Ag}^n(2p)^{92}\text{Rh}$	$Q_{2p}=1900(100)$ to (11^+) level at 1548.6(1.4) keV								
* $^{94}\text{Ag}^n(2p)^{92}\text{Rh}$	F : no evidence from He-jet experiment								
* $^{94}\text{Ag}^n(2p)^{92}\text{Rh}$	F : possibly misidentified ^{92}Rh γ rays								
* $^{94}\text{Ag}^n(p)^{93}\text{Pd}$	$E_p=790(30)$, $1010(30)$ to $(33/2^+)$ at 4995.6, $(33/2^-,35/2^-)$ at 4752.7								
* $^{94}\text{Ag}^n(p)^{93}\text{Pd}$	$E_p=790(20)$ to level $(33/2^+)$ at 4995.6 keV								
* $^{94}\text{Rb}(\beta^-)^{94}\text{Sr}$	Original value 10304(30) corrected in reference								
* $^{94}\text{Rb}(\beta^-)^{94}\text{Sr}$	Original error 100 keV increased by 100 in reference for lower level feeding								
* $^{94}\text{Rb}(\beta^-)^{94}\text{Sr}$	As corrected in reference								
* $^{94}\text{Rb}(\beta^-)^{94}\text{Sr}$	$E_{\beta^-}=9475(20)$ to 2^+ level at 836.91 keV								
* $^{94}\text{Sr}(\beta^-)^{94}\text{Y}$	Original error 6 corrected in reference								
* $^{94}\text{Y}(\beta^-)^{94}\text{Zr}$	Original error 5 corrected in reference								
* $^{94}\text{Nb}(\beta^-)^{94}\text{Mo}$	$E_{\beta^-}=470(6)$ 473(3) respectively, to level 4^+ at 1573.76 keV								
* $^{94}\text{Tc}(\beta^+)^{94}\text{Mo}$	$E_{\beta^+}=816(5)$ to 6^+ level at 2423.45 keV								
* $^{94}\text{Mo}(p,n)^{94}\text{Tc}$	T=5158(7) to $^{94}\text{Tc}^m$ at 76(3) keV								
* $^{94}\text{Rh}(\beta^+)^{94}\text{Ru}$	$E_{\beta^+}=6400(400)$ to $(3,4,5)$ level at 2503.2 keV								
* $^{94}\text{Ag}^n(\beta^+)^{94}\text{Pd}$	Q_{β^+} larger than 17.7 MeV, uncertainty not given								
* $^{94}\text{Ag}^n(\beta^+)^{94}\text{Pd}$	Trends from Mass Surface TMS suggest $^{94}\text{Ag}^n$ 2340 less bound								
$^{95}\text{Kr-u}$	-60183	150	-60289	20	-0.5	U			GT1 1.5 04Ma.A
$^{95}\text{Kr}-^{85}\text{Rb}_{1.118}$	38330	20				2			MA8 1.0 06De36
$^{95}\text{Rb-u}$	-70618	86	-70740	22	-0.6	U			Pb1 2.5 89Al33
$^{95}\text{Sr}-^{85}\text{Rb}_{1.118}$	17987	10	17972	6	-1.5	1	40	40 ^{95}Sr	MA4 1.0 02Ra23
$^{95}\text{Mo}-^{85}\text{Rb}_{1.118}$	4457.6	1.0	4457.8	0.5	0.2	1	22	22 ^{95}Mo	JY1 1.0 12Ka13
$\text{C}_7 \text{H}_{11}-^{95}\text{Mo}$	180236.5	3.5	180236.6	0.5	0.0	U			M15 2.5 63Ri07
$^{95}\text{Tc-u}$	-92417	32	-92346	5	2.2	U			GS2 1.0 05Li24 *
$^{95}\text{Rh}-^{85}\text{Rb}_{1.118}$	14515.1	4.5	14517	4	0.4	1	86	86 ^{95}Rh	JY1 1.0 08We10
$^{95}\text{Rh}_{.989}-\text{C}_7 \text{H}_{10}$	-161416	11	-161427	4	-1.0	1	14	14 ^{95}Rh	CP1 1.0 11Fa10
$^{95}\text{Sr}-^{97}\text{Zr}_{.979}$	6529	10	6532	6	0.3	1	40	38 ^{95}Sr	JY1 1.0 06Ha03
$^{95}\text{Y}-^{97}\text{Zr}_{.979}$	-32.4	6.7	-5	7	4.1	B			JY1 1.0 07Ha32
$^{95}\text{Pd}-^{94}\text{Mo}_{1.011}$	20848.9	4.7	20849	3	0.0	2			JY1 1.0 08We10
	20849.1	4.5			0.0	2			JY1 1.0 08We10 *
$^{95}\text{Mo}-^{94}\text{Mo}$	757	12	753.86	0.11	-0.1	U			M15 2.5 63Ri07
$^{93}\text{Rb}-^{95}\text{Rb}_{.653}$ $^{89}\text{Rb}_{.348}$	-1323	25	-1155	15	2.7	U			P21 2.5 82Au01
$^{93}\text{Rb}-^{95}\text{Rb}_{.587}$ $^{90}\text{Rb}_{.413}$	-1376	24	-1192	15	3.1	B			P21 2.5 82Au01
$^{94}\text{Rb}-^{95}\text{Rb}_{.792}$ $^{90}\text{Rb}_{.209}$	-16	28	198	16	3.1	B			P21 2.5 82Au01 Y
$^{92}\text{Rb}-^{95}\text{Rb}_{.242}$ $^{91}\text{Rb}_{.758}$	80	23	105	10	0.4	U			P21 2.5 82Au01
$^{93}\text{Rb}-^{95}\text{Rb}_{.489}$ $^{91}\text{Rb}_{.511}$	-654	12	-670	13	-0.5	F			P31 2.5 86Au02 *
$^{94}\text{Rb}-^{95}\text{Rb}_{.660}$ $^{92}\text{Rb}_{.341}$	433	15	425	14	-0.2	1	13	13 ^{95}Rb	P31 2.5 86Au02
	462	28			-0.5	U			P31 2.5 86Au02
$^{95}\text{Mo}(n,\alpha)^{92}\text{Zr}$	6405	30	6395.4	1.8	-0.3	U			ILL 75Em04
$^{95}\text{Rb}(\beta^-n)^{94}\text{Sr}$	5120	100	4881	20	-2.4	U			84Kr.B
$^{94}\text{Zr}(n,\gamma)^{95}\text{Zr}$	6461.6	1.0	6462.0	0.9	0.4	-			79Ke.D Z
	6357.8	0.3			347.2	F			Bdn 06Fi.A *
	6460.3	0.5			3.3	C			Bdn 08Fi.A *
$^{94}\text{Zr}(d,p)^{95}\text{Zr}$	4223	20	4237.4	0.9	0.7	U			Pit 64Co11
	4237.4	2.0			0.0	-			SPa 79Bo37
$^{94}\text{Zr}(n,\gamma)^{95}\text{Zr}$	ave.	6461.7	0.9	6462.0	0.9	0.3	1	95	64 ^{94}Zr
$^{94}\text{Mo}(n,\gamma)^{95}\text{Mo}$		7367	2	7369.10	0.10	1.0	U		77Ri04
		7369.10	0.10			0.0	1	99	75 ^{94}Mo
		7368.4	0.5			1.4	U		Bdn 06Fi.A
$^{94}\text{Mo}(d,p)^{95}\text{Mo}$	5137	20	5144.53	0.10	0.4	U			Pit 64Co11

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{95}\text{Pd}(\epsilon p)^{94}\text{Ru}$	5116	300	5330	4	0.7	U					82Ku15 *	
$^{95}\text{Rb}(\beta^-)^{95}\text{Sr}$	9224	30	9228	20	0.1	o			Gsn		80Bl.A	
	9276	100			-0.5	o			Gsn		80De02 *	
	9300	30			-2.4	U			Gsn		84Bl.A	
	9280	45			-1.1	-			Bwg		87Gr.A	
	9272	35			-1.2	-			Gsn		92Pr03	
ave.	9275	28			-1.7	1	53	51	^{95}Rb		average	
$^{95}\text{Sr}(\beta^-)^{95}\text{Y}$	6110	150	6089	7	-0.1	U					70Ma.A	
	6060	100			0.3	U			Bwg		78St02	
	6082	10			0.7	1	53	33	^{95}Y	Gsn	84Bl.A	
	6052	25			1.5	U					90Ma03	
$^{95}\text{Y}(\beta^-)^{95}\text{Zr}$	4445	9	4450	7	0.6	1	57	56	^{95}Y	Gsn	80De02 *	
$^{95}\text{Zr}(\beta^-)^{95}\text{Nb}$	1125	8	1123.5	1.8	-0.2	U					54Za05	
	1119	5			0.9	-					55Dr43	
	1122.7	3.			0.3	-					74An22 *	
ave.	1121.7	2.6			0.7	1	48	45	^{95}Zr		average	
$^{95}\text{Nb}(\beta^-)^{95}\text{Mo}$	925.5	0.5	925.6	0.5	0.1	1	98	97	^{95}Nb		63La06 *	
$^{95}\text{Tc}(\beta^+)^{95}\text{Mo}$	1683	10	1691	5	0.8	-					65Cr04 *	
	1693	6			-0.4	-					74An05 *	
$^{95}\text{Mo}(p,n)^{95}\text{Tc}$	-2440	30	-2473	5	-1.1	U					57Le27	
	-2490	6			2.9	B			Oak		70Ki01	
ave.	1690	5	1691	5	0.0	1	97	97	^{95}Tc		average	
$^{95}\text{Ru}(\beta^+)^{95}\text{Tc}$	2558	30	2564	11	0.2	1	12	10	^{95}Ru		68Pi03 *	
$^{95}\text{Rh}(\beta^+)^{95}\text{Ru}$	5110	150	5116	10	0.0	U					75We03 *	
$^{95}\text{Tc-u}$	M-A=-86066(28) keV for mixture gs+m at 38.91 keV										Nub127 **	
$^{95}\text{Pd}-^{94}\text{Mo}_{1.011}$	$D_M=22862.1(4.5) \mu\text{u}$ for $^{95}\text{Pd}^m$ at 1875.13 keV; M-A=-68090.2(4.4) keV										Nub128 **	
$^{93}\text{Rb}-^{95}\text{Rb}_{.489} \ ^{91}\text{Rb}_{.511}$	F : Rejected by authors										86Au02 **	
$^{94}\text{Zr}(n,\gamma)^{95}\text{Zr}$	F : value from 06Fi.A retracted										08Fi.A **	
$^{94}\text{Zr}(n,\gamma)^{95}\text{Zr}$	Weak evidence										08Fi.A **	
$^{95}\text{Pd}(\epsilon p)^{94}\text{Ru}$	$E_p=4300(30)$ from $^{95}\text{Pd}^m$ at 1875.13 to $^{94}\text{Ru}^m$ at 2644.1 keV										Nub127 **	
*	same E_p ; both from figures										82No06 **	
$^{95}\text{Rb}(\beta^-)^{95}\text{Sr}$	$E_{\beta^-}=8595(100)$ to $(3/2^+, 5/2^+)$ level at 680.70, corrected in reference										92Pr03 **	
$^{95}\text{Y}(\beta^-)^{95}\text{Zr}$	Original error 5 corrected in reference										94Ha.A **	
*	$Q_{\beta^-}=4417(10)$ given by same group, not used										84Bl.A **	
$^{95}\text{Zr}(\beta^-)^{95}\text{Nb}$	$E_{\beta^-}=887(3)$ to $1/2^-$ level at 235.69 keV										Ens10a **	
$^{95}\text{Nb}(\beta^-)^{95}\text{Mo}$	$E_{\beta^-}=159.7(0.5)$ to $7/2^+$ level at 765.803 keV										Ens10a **	
$^{95}\text{Tc}(\beta^+)^{95}\text{Mo}$	$E_{\beta^+}=700(10) \ 710(6)$ respectively, from $^{95}\text{Tc}^m$ at 38.91 keV										Nub127 **	
$^{95}\text{Ru}(\beta^+)^{95}\text{Tc}$	$E_{\beta^+}=1200(30)$ to $7/2^+$ level at 336.413 keV										Ens10a **	
$^{95}\text{Rh}(\beta^+)^{95}\text{Ru}$	$E_{\beta^+}=3150(150)$ to $7/2^+$ level at 941.79 keV										Ens10a **	
$^{96}\text{Kr}-^{85}\text{Rb}_{1.129}$	42606	22							MA8	1.0	10Na13	
$^{96}\text{Rb-u}$	-65508	43	-65867	4	-3.3	F			Pb1	2.5	89A133 *	
$C_7 \text{H}_{12}-^{96}\text{Zr}$	185628	6	185629.0	2.1	0.1	U			M15	2.5	63Ri07	
$^{96}\text{Zr-u}$	-91691	43	-91728.6	2.1	-0.9	U			JY0	1.0	04Ri12	
$^{96}\text{Mo}-^{85}\text{Rb}_{1.129}$	4265.7	1.1	4265.5	0.5	-0.2	1	19	19	^{96}Mo	JY1	1.0	12Ka13
$C_7 \text{H}_{12}-^{96}\text{Mo}$	189226.9	3.0	189224.3	0.5	-0.4	U			M15	2.5	63Ri07	
$^{96}\text{Tc-u}$	-92192	32	-92132	6	1.9	U			GS2	1.0	05Li24 *	
$C_7 \text{H}_{12}-^{96}\text{Ru}$	186304.6	3.8	186310.1	0.5	0.6	U			M16	2.5	63Da10	
$^{96}\text{Rb}-^{88}\text{Rb}_{1.091}$	30887.7	3.6	30888	4	0.1	1	100	100	^{96}Rb	JY1	1.0	07Ra23
$^{96}\text{Zr} \ ^{35}\text{Cl}-^{94}\text{Zr} \ ^{37}\text{Cl}$	4929	3	4910.7	2.3	-1.5	U			H13	4.0	63Ba20	
$^{96}\text{Mo} \ ^{35}\text{Cl}-^{94}\text{Mo} \ ^{37}\text{Cl}$	2539	2	2541.29	0.14	0.3	U			H11	4.0	63Bi12	
$^{96}\text{Pd}-^{94}\text{Mo}_{1.021}$	15123.4	4.5				2			JY1	1.0	08We10	
$^{96}\text{Sr}-^{97}\text{Zr}_{.990}$	9868	10	9865	9	-0.3	1	83	83	^{96}Sr	JY1	1.0	06Ha03
$^{96}\text{Y}-^{97}\text{Zr}_{.990}$	4053.7	6.8	4055	7	0.2	1	92	92	^{96}Y	JY1	1.0	07Ha32
$^{96}\text{Y}^m-^{97}\text{Zr}_{.990}$	5708.1	6.7				2			JY1	1.0	07Ha32	
$^{96}\text{Mo}-^{97}\text{Mo}_{.990}$	-2280.5	5.8	-2281.82	0.22	-0.2	U			JY1	1.0	06Ka48	
$^{96}\text{Ru}-^{96}\text{Mo}$	2914.14	0.13	2914.14	0.13	0.0	1	100	100	^{96}Ru	SH1	1.0	11Ei04
$^{96}\text{Mo}-^{95}\text{Mo}$	-1161	12	-1162.65	0.05	-0.1	U			M15	2.5	63Ri07	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{93}\text{Rb}-^{96}\text{Rb}_{.554}$ $^{89}\text{Rb}_{.448}$	-2210 27	-2023 8	2.8	U			P21	2.5	82Au01
$^{95}\text{Rb}-^{96}\text{Rb}_{.848}$ $^{89}\text{Rb}_{.152}$	-1590 30	-1445 20	1.9	U			P21	2.5	82Au01
$^{94}\text{Rb}-^{96}\text{Rb}_{.699}$ $^{89}\text{Rb}_{.302}$	-1250 30	-999 4	3.3	B			P21	2.5	82Au01 Y
$^{94}\text{Rb}-^{96}\text{Rb}_{.588}$ $^{91}\text{Rb}_{.413}$	-380 25	-378 4	0.0	U			P21	2.5	82Au01
$^{95}\text{Rb}-^{96}\text{Rb}_{.742}$ $^{92}\text{Rb}_{.258}$	-1116 27	-1078 20	0.6	U			P21	2.5	82Au01
	-1143 16		1.6	1	26	25 ^{95}Rb	P31	2.5	86Au02
$^{96}\text{Zr}(\text{d},\alpha)^{94}\text{Y}$	7609 20	7619 7	0.5	1	11	10 ^{94}Y	Grn		74Gi09
$^{96}\text{Zr}(\text{p},\text{t})^{94}\text{Zr}$	-5825 10	-5834.5 2.2	-1.0	U			Oak		71Ba43
$^{96}\text{Ru}(\text{p},\text{t})^{94}\text{Ru}$	-11165 10	-11156 3	0.9	U			Oak		71Ba01
$^{96}\text{Zr}(\text{t},\alpha)^{95}\text{Y}$	8294 20	8292 7	-0.1	1	12	11 ^{95}Y	LAl		83FI06
$^{96}\text{Zr}(\text{p},\text{d})^{95}\text{Zr}$	-5440 20	-5629.8 2.1	-9.5	B			Bld		67St24
	-5630 10		0.0	U			Oak		71Ba43
$^{96}\text{Zr}(\text{d},\text{t})^{95}\text{Zr}$	-1603 20	-1597.1 2.1	0.3	U			Pit		64Co11
	-1595.8 2.8		-0.5	1	55	32 ^{96}Zr	SPa		79Bo37
$^{96}\text{Mo}(\text{t},\alpha)^{95}\text{Nb}$	10524 20	10516.3 0.5	-0.4	U			LAl		83FI06
$^{95}\text{Mo}(\text{n},\gamma)^{96}\text{Mo}$	9154.2 0.5	9154.32 0.05	0.2	U					70He27
	9154.32 0.05		0.0	1	100	52 ^{95}Mo	MMn		91Is02 Z
	9153.90 0.20		2.1	U			Bdn		06Fi.A
$^{96}\text{Mo}(\text{d},\text{t})^{95}\text{Mo}$	-2923 20	-2897.09 0.05	1.3	U			Pit		64Co11
$^{96}\text{Ru}(\text{p},\text{d})^{95}\text{Ru}$	-8470 10	-8469 10	0.1	1	90	90 ^{95}Ru	Oak		71Ba01
$^{96}\text{Ag}(\epsilon\text{p})^{95}\text{Rh}$	6540 90			2					03Ba39 *
$^{96}\text{Rb}(\beta^-)^{96}\text{Sr}$	10800 220	11575 9	3.5	B					79Pe17
	11303 250		1.1	o			Gsn		80De02
	11547 100		0.3	U			Trs		82Br23
	11553 45		0.5	U			Gsn		84Bl.A
	11590 80		-0.2	U			Bwg		87Gr.A
	11709 40		-3.3	B			Gsn		92Pr03 *
$^{96}\text{Sr}(\beta^-)^{96}\text{Y}$	5332 30	5412 10	2.7	F					79Pe17 *
	5413 22		-0.1	-			Gsn		80De02 *
	5345 50		1.3	U			Bwg		87Gr.A
	5354 40		1.4	-					90Ma03
	ave. 5399 19		0.6	1	25	17 ^{96}Sr			average
$^{96}\text{Y}(\beta^-)^{96}\text{Zr}$	7120 50	7103 6	-0.3	U			Gsn		80De02 *
	7030 70		1.0	U			Bwg		87Gr.A
	7067 30		1.2	U					90Ma03 *
$^{96}\text{Y}^m(\beta^-)^{96}\text{Zr}$	8030 150	8643 6	4.1	C			Bwg		87Gr.A
	8600 200		0.2	U					88St.A
	8237 21		19.3	C			Bwg		92Gr.A
$^{96}\text{Nb}(\beta^-)^{96}\text{Mo}$	3186.8 3.2			2					68An03 *
$^{96}\text{Mo}(\text{p},\text{n})^{96}\text{Tc}$	-3760 10	-3756 5	0.4	2					74Do09
	-3754 6		-0.3	2					78Ke10
$^{96}\text{Rh}(\beta^+)^{96}\text{Ru}$	6472 200	6393 10	-0.4	U					75Gu01 *
$^{96}\text{Ru}(\text{p},\text{n})^{96}\text{Rh}$	-7175 10			2					70As08 Z
$^{96}\text{Pd}(\beta^+)^{96}\text{Rh}$	3450 150	3504 11	0.4	U					85Ry02 **
* $^{96}\text{Rb-u}$									92Al.B **
* $^{96}\text{Tc-u}$									M-A=-85860(28) keV for mixture gs+m at 34.23 keV Nub127 **
* $^{96}\text{Ag}(\epsilon\text{p})^{95}\text{Rh}$									Original 6430(60) corrected by -110 keV for mixture of two β -decaying ^{96}Ag states, to two isomeric states in ^{95}Rh 03Ba39 **
*									03Ba39 **
* $^{96}\text{Rb}(\beta^-)^{96}\text{Sr}$									$E_{\beta^-}=10894(40)$ to 2^+ level at 814.93 keV Ens08a **
* $^{96}\text{Sr}(\beta^-)^{96}\text{Y}$									$E_{\beta^-}=4400(30)$ to 1^+ level at 931.70 keV, and other E_{β^-} Ens08a **
* $^{96}\text{Sr}(\beta^-)^{96}\text{Y}$									F : all other results of reference are strongly conflicting 79Pe17 **
* $^{96}\text{Sr}(\beta^-)^{96}\text{Y}$									Original error 20 corrected in reference 94Ha.A **
*									$Q_{\beta^-}=5362(10)$ given by same group, not used 84Bl.A **
* $^{96}\text{Y}(\beta^-)^{96}\text{Zr}$									$Q_{\beta^-}=7079(15)$ given by same group, not used 84Bl.A **
* $^{96}\text{Y}(\beta^-)^{96}\text{Zr}$									$E_{\beta^-}=5326(36)$ to 2^+ level at 1750.497 keV, and other E_{β^-} Ens08a **
* $^{96}\text{Nb}(\beta^-)^{96}\text{Mo}$									$E_{\beta^-}=748.4(3.1)$ to 5^+ level at 2438.477 keV Ens08a **
* $^{96}\text{Rh}(\beta^+)^{96}\text{Ru}$									$E_{\beta^+}=3300(200)$ to 6^+ level at 2149.74 keV Ens08a **
* $^{96}\text{Pd}(\beta^+)^{96}\text{Rh}$									$p^+=0.257(0.03)$ to 1^+ level at 1274.78 keV Ens08a **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{97}\text{Kr}-^{86}\text{Kr}_{1.128}$	49920	140				2			MA9	1.0	10Na13
$^{97}\text{Rb-u}$	-62512	64	-62822.9	2.1	-1.9	U			Pb1	2.5	89Al33
$^{97}\text{Rb}-^{88}\text{Rb}_{1.102}$	34908.0	5.7	34907.4	2.1	-0.1	1	13	13 ^{97}Rb	JY1	1.0	07Ra23
$^{97}\text{Rb}-^{85}\text{Rb}_{1.141}$	37824.9	2.2	37825.0	2.1	0.1	1	87	87 ^{97}Rb	TT1	1.0	12Si10 *
$^{97}\text{Sr}-^{85}\text{Rb}_{1.141}$	27022.9	3.9	27022	4	-0.3	1	87	87 ^{97}Sr	TT1	1.0	12Si10 *
$^{97}\text{Sr-u}$	-73599	99	-73626	4	-0.2	U			GT2	1.5	08Kn.A
$^{97}\text{Mo}-^{85}\text{Rb}_{1.141}$	6666.9	1.2	6666.0	0.5	-0.7	1	17	17 ^{97}Mo	JY1	1.0	12Ka13
$\text{C}_5\text{H}_5\text{O}_2-^{97}\text{Mo}$	122937.6	2.3	122936.3	0.5	-0.2	U			M15	2.5	63Ri07
$^{97}\text{Ru-u}$	-92471	30	-92453	3	0.6	U			GS2	1.0	05Li24
$^{97}\text{Pd}-^{85}\text{Rb}_{1.141}$	17119.9	5.2				2			JY1	1.0	09EI08
$^{97}\text{Mo}-^{35}\text{Cl}-^{95}\text{Mo}-^{37}\text{Cl}$	3138	2	3129.43	0.24	-1.1	U			H11	4.0	63Bi12
$^{97}\text{Sr}-^{97}\text{Zr}$	15416	10	15423	4	0.7	1	17	13 ^{97}Sr	JY1	1.0	06Ha03
$^{97}\text{Y}-^{97}\text{Zr}$	7322.9	7.2				2			JY1	1.0	07Ha32 *
$^{97}\text{Mo}-^{96}\text{Mo}$	1346	12	1342.00	0.22	-0.1	U			M15	2.5	63Ri07
$^{94}\text{Rb}-^{97}\text{Rb}_{.485}$ $^{91}\text{Rb}_{.516}$	-21	25	-65	5	-0.7	U			P21	2.5	82Au01 Y
$^{96}\text{Rb}-^{97}\text{Rb}_{.792}$ $^{92}\text{Rb}_{.209}$	650	30	620	4	-0.4	U			P21	2.5	82Au01
$^{95}\text{Rb}-^{97}\text{Rb}_{.490}$ $^{93}\text{Rb}_{.511}$	-165	25	-111	21	0.9	1	11	10 ^{95}Rb	P21	2.5	82Au01
$^{96}\text{Rb}-^{97}\text{Rb}_{.742}$ $^{93}\text{Rb}_{.258}$	848	19	803	4	-1.0	U			P31	2.5	86Au02
$^{96}\text{Zr}(n,\gamma)^{97}\text{Zr}$	5574	5	5575.1	0.4	0.2	U					77Ba33
	5575.1	0.4			0.1	1	99	67 ^{96}Zr	Bdn		06Fi.A
$^{96}\text{Zr}(d,p)^{97}\text{Zr}$	3338	20	3350.6	0.4	0.6	U			Pit		64Co11
$^{96}\text{Mo}(n,\gamma)^{97}\text{Mo}$	6821.1	1.0	6821.25	0.21	0.1	U					73De39
	6820	2			0.6	U					77Ri04
	6821.15	0.25			0.4	-			MMn		91Is02 Z
	6821.5	0.4			-0.6	-			Bdn		06Fi.A
$^{96}\text{Mo}(d,p)^{97}\text{Mo}$	4582	20	4596.68	0.21	0.7	U			Pit		64Co11
$^{96}\text{Mo}(n,\gamma)^{97}\text{Mo}$	ave. 6821.25	0.21	6821.25	0.21	0.0	1	95	63 ^{97}Mo			average
$^{96}\text{Mo}(^3\text{He},d)^{97}\text{Tc}$	229	8	221	4	-1.0	-			ANL		74Co27
	220	8			0.1	-			Pit		74Co27
	ave. 225	6			-0.7	1	44	44 ^{97}Tc			average
$^{96}\text{Ru}(d,p)^{97}\text{Ru}$	5886	3	5886.9	2.8	0.3	2			Can		77Ho02
	5892	7			-0.7	2			ANL		77Me04
$^{97}\text{Rb}(\beta^-)^{97}\text{Sr}$	10020	50	10063	4	0.9	U			Gsn		80De02
	10450	30			-12.9	C			Gsn		84Bl.A
	10440	60			-6.3	C			Bwg		87Gr.A
	10462	40			-10.0	B			Gsn		92Pr03
$^{97}\text{Sr}(\beta^-)^{97}\text{Y}$	7452	40	7545	8	2.3	U			Gsn		84Bl.A
	7420	80			1.6	o			Bwg		87Gr.A
	7480	18			3.6	C			Bwg		92Gr.A
$^{97}\text{Y}(\beta^-)^{97}\text{Zr}$	6702	25	6821	7	4.8	C			Gsn		84Bl.A
	6640	70			2.6	o			Bwg		87Gr.A *
	6689	13			10.2	C			Bwg		92Gr.A *
$^{97}\text{Zr}(\beta^-)^{97}\text{Nb}$	2657.3	2.	2659.7	1.7	1.2	1	74	47 ^{97}Zr			74Ra.A *
$^{97}\text{Nb}(\beta^-)^{97}\text{Mo}$	1933.1	2.	1935.5	1.7	1.2	1	74	73 ^{97}Nb			74Ra.A *
$^{97}\text{Mo}(p,n)^{97}\text{Tc}$	-1128	9	-1107	4	2.3	-			Oak		70Ki01
	-1102	6			-0.8	-			ANL		74Co27
	ave. -1110	5			0.6	1	56	56 ^{97}Tc			average
$^{97}\text{Ru}(\beta^+)^{97}\text{Tc}$	1150	100	1100	5	-0.5	U					70Ho01 *
$^{97}\text{Rh}(\beta^+)^{97}\text{Ru}$	3533	50	3520	40	-0.2	3					62Ba28 *
	3513	50			0.2	3					62Ch21 *
$^{97}\text{Pd}(\beta^+)^{97}\text{Rh}$	4790	300	4790	40	0.0	U					80Go11 *
$^{97}\text{Ag}(\beta^+)^{97}\text{Pd}$	6980	110				3					99Hu10
* $^{97}\text{Rb}-^{85}\text{Rb}_{1.141}$	$D_M=37825.7(2.2) \mu\text{u}$ ME=-58518.5(2.1)keV corrected for e^- binding=-703eV										12Si10 **
* $^{97}\text{Sr}-^{85}\text{Rb}_{1.141}$	$D_M=27023.5(3.9) \mu\text{u}$ ME=-68580.7(3.7)keV corrected for e^- binding=-553eV										12Si10 **
* $^{97}\text{Y}-^{97}\text{Zr}$	$D_M=8039.5(7.2) \mu\text{u}$ for $^{97}\text{Y}^m$ at 667.52(0.23) keV; M-A=-75461.3(7.1) keV										Nub127 **
* $^{97}\text{Y}(\beta^-)^{97}\text{Zr}$	$E_{\beta^-}=6645(70)$; and 7280(150) from $^{97}\text{Y}^m$ at 667.52 keV										Nub127 **
* $^{97}\text{Y}(\beta^-)^{97}\text{Zr}$	$E_{\beta^-}=6688(13)$; and 7361(26) from $^{97}\text{Y}^m$ at 667.52 keV										Nub127 **
* $^{97}\text{Zr}(\beta^-)^{97}\text{Nb}$	$E_{\beta^-}=1914(2)$ to $1/2^-$ level at 743.35 keV										Ens104 **
* $^{97}\text{Nb}(\beta^-)^{97}\text{Mo}$	$E_{\beta^-}=1275(2)$ to $7/2^+$ level at 658.13 keV										Ens104 **
* $^{97}\text{Ru}(\beta^+)^{97}\text{Tc}$	$p^+ < 0.0001$ (see fig 1), decay to $7/2^+$ level at 970.03 keV										Ens104 **
* $^{97}\text{Rh}(\beta^+)^{97}\text{Ru}$	$E_{\beta^+}=2090(50)$ 2070(50) respectively, to $7/2^+$ level at 421.54 keV										Ens104 **
* $^{97}\text{Pd}(\beta^+)^{97}\text{Rh}$	$E_{\beta^+}=3500(300)$ to $7/2^+$ level at 265.36 keV										Ens104 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{98}\text{Rb}-^{85}\text{Rb}_{1.153}$	43393.3	3.7				2			TT1	1.0	12Si10 *
$^{98}\text{Sr}-^{85}\text{Rb}_{1.153}$	30396.7	4.3	30395	4	-0.3	1	85	85 ^{98}Sr	TT1	1.0	12Si10 *
$^{98}\text{Zr-u}$	-87247	43	-87271	9	-0.6	U			JY0	1.0	04Ri12
$^{98}\text{Mo}-^{85}\text{Rb}_{1.153}$	7104.1	5.7	7111.3	0.5	1.3	U			MA8	1.0	11He10
	7111.6	1.3			-0.3	1	14	14 ^{98}Mo	JY1	1.0	12Ka13
$\text{C}_5\text{H}_6\text{O}_2-^{98}\text{Mo}$	131375.4	2.8	131374.6	0.5	-0.1	U			M15	2.5	63Ri07
$\text{C}_7\text{H}_{14}-^{98}\text{Ru}$	204263.5	2.9	204264	7	0.0	1	92	92 ^{98}Ru	M16	2.5	63Da10
$^{98}\text{Rh-u}$	-89302	46	-89292	13	0.2	U			GS2	1.0	05Li24 *
$^{98}\text{Pd}-^{85}\text{Rb}_{1.153}$	14404.5	5.1	14405	5	0.1	1	100	100 ^{98}Pd	JY1	1.0	09El08
$^{98}\text{Ag}-^{85}\text{Rb}_{1.153}$	23283	40	23270	40	-0.4	1	78	78 ^{98}Ag	MA8	1.0	11He10
$^{98}\text{Mo } ^{35}\text{Cl}-^{96}\text{Mo } ^{37}\text{Cl}$	3690	2	3678.78	0.24	-1.4	U			H11	4.0	63Bi12
$^{98}\text{Sr}-^{97}\text{Zr}_{1.010}$	18620	10	18628	4	0.8	1	19	15 ^{98}Sr	JY1	1.0	06Ha03
$^{98}\text{Y}-^{97}\text{Zr}_{1.010}$	12321.4	8.5				2			JY1	1.0	07Ha32
$^{98}\text{Zr}-^{97}\text{Zr}_{1.010}$	2668	10	2668	9	0.0	1	82	82 ^{98}Zr	JY1	1.0	06Ha03
$^{98}\text{Mo}-^{97}\text{Mo}_{1.010}$	327.9	5.8	326.52	0.07	-0.2	U			JY1	1.0	06Ka48
$^{98}\text{Mo}-^{97}\text{Mo}$	-614	12	-613.30	0.07	0.0	U			M15	2.5	63Ri07
$^{94}\text{Rb}-^{98}\text{Rb}_{.411} \text{ } ^{91}\text{Rb}_{.590}$	-290	40	-368	5	-0.8	U			P21	2.5	82Au01 Y
$^{97}\text{Rb}-^{98}\text{Rb}_{.792} \text{ } ^{93}\text{Rb}_{.209}$	-250	60	-321	4	-0.5	U			P21	2.5	82Au01
$^{96}\text{Rb}-^{98}\text{Rb}_{.490} \text{ } ^{94}\text{Rb}_{.511}$	330	30	297	4	-0.4	U			P21	2.5	82Au01 Y
$^{97}\text{Rb}-^{98}\text{Rb}_{.660} \text{ } ^{95}\text{Rb}_{.340}$	-300	50	-265	7	0.3	U			P21	2.5	82Au01
	-232	27			-0.5	U			P31	2.5	86Au02
$^{96}\text{Zr(t,p)}^{98}\text{Zr}$	3508	20	3509	8	0.0	1	18	18 ^{98}Zr	LAI		69Bi01
$^{96}\text{Zr}(^3\text{He,p})^{98}\text{Nb}$	5728	5				2			Phi		75Me13
$^{96}\text{Ru}(^{16}\text{O},^{14}\text{C})^{98}\text{Pd}$	-12529	20	-12515	5	0.7	U			BNL		82Th01
$^{98}\text{Mo}(t,\alpha)^{97}\text{Nb}$	10019	20	10018.1	1.7	0.0	U			LAI		83Fl06
$^{97}\text{Mo}(n,\gamma)^{98}\text{Mo}$	8642.4	0.5	8642.60	0.07	0.4	U					71He10
	8642.60	0.07			0.0	-			MMn		91Is02 Z
	8642.57	0.18			0.2	-			Bdn		06Fi.A
$^{98}\text{Mo}(d,t)^{97}\text{Mo}$	-2379	20	-2385.37	0.07	-0.3	U			Pit		64Co11
$^{97}\text{Mo}(n,\gamma)^{98}\text{Mo}$	ave. 8642.60	0.07	8642.60	0.07	0.1	1	100	81 ^{98}Mo			average
$^{97}\text{Mo}(^3\text{He,d})^{98}\text{Tc}$	680	8	683	3	0.4	-			ANL		74Co27
	686	10			-0.3	-			McM		76Ma16
	ave. 682	6			0.1	1	29	29 ^{98}Tc			average
$^{98}\text{Rb}(\beta^-)^{98}\text{Sr}$	11200	110	12108	5	8.3	B					79Pe17
	12343	150			-1.6	U			Trs		82Br23
	12519	60			-6.9	C			Gsn		84Bl.A
	12270	30			-5.4	C			McG		84Ia.A
	12440	75			-4.4	C			Bwg		87Gr.A
	12380	65			-4.2	B			Gsn		92Pr03
$^{98}\text{Rb}^m(\beta^-)^{98}\text{Sr}$	12710	120				2			Bwg		87Gr.A
$^{98}\text{Sr}(\beta^-)^{98}\text{Y}$	5730	40	5875	9	3.6	C					79Pe17
	5821	10			5.4	C			Gsn		84Bl.A
	5815	40			1.5	U			Bwg		87Gr.A
$^{98}\text{Y}(\beta^-)^{98}\text{Zr}$	8974	100	8992	12	0.2	U					79Pe17 *
	8780	30			7.1	C			Gsn		84Bl.A
	8840	55			2.8	o			Bwg		87Gr.A
	8963	41			0.7	U					88Ma.A
	8830	17			9.5	C			Bwg		92Gr.A
$^{98}\text{Y}^m(\beta^-)^{98}\text{Zr}$	9780	200	9233	27	-2.7	o			Bwg		87Gr.A
	9233	27				2			Bwg		92Gr.A
$^{98}\text{Zr}(\beta^-)^{98}\text{Nb}$	2300	200	2238	10	-0.3	U					76He10
$^{98}\text{Nb}(\beta^-)^{98}\text{Mo}$	4300	200	4584	5	1.4	U					66Gu05
	4300	200			1.4	U					67Hu07
	4800	200			-1.1	U					76He10
	4580	100			0.0	U			Bwg		78St02
$^{98}\text{Mo}(p,n)^{98}\text{Tc}$	-2458	10	-2466	3	-0.8	1	11	11 ^{98}Tc	ANL		74Co27
$^{98}\text{Tc}(\beta^-)^{98}\text{Ru}$	1795	22	1794	7	-0.1	1	11	8 ^{98}Ru			73Ok.A *
$^{98}\text{Rh}(\beta^+)^{98}\text{Ru}$	5120	100	5050	10	-0.7	U					72Ba37 *
	5151	50			-2.0	U					94Ba06 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{98}\text{Ru}(\text{p,n})^{98}\text{Rh}$	-5832	10				2					70As08 Z
$^{98}\text{Ag}(\beta^+)^{98}\text{Pd}$	8420	150	8250	30	-1.1	U					79Ve.A *
	8200	70			0.8	1	22	22 ^{98}Ag			00Hu17
$^{98}\text{Cd}(\beta^+)^{98}\text{Ag}$	5330	140	5430	40	0.7	U					92PI01
$^{98}\text{Cd}(\epsilon)^{98}\text{Ag}$	5430	40				2					01St.A
$^{*98}\text{Rb}-^{85}\text{Rb}_{1.153}$	$D_M=43394.0(3.7) \mu\text{u}$ ME=-54317.7(3.4)keV corrected for e^- binding=-679eV										12Si10 **
$^{*98}\text{Sr}-^{85}\text{Rb}_{1.153}$	$D_M=30397.3(4.3) \mu\text{u}$ ME=-66424.0(4.0)keV corrected for e^- binding=-529eV										12Si10 **
$^{*98}\text{Rh-u}$	M-A=-83154(30) keV for mixture gs+m at 60#50 keV										Nub127 **
$^{*98}\text{Y}(\beta^-)^{98}\text{Zr}$	$E_{\beta^-}=4810(100)$ to 1^- level at 4164.60 keV										Ens035 **
$^{*98}\text{Tc}(\beta^-)^{98}\text{Ru}$	$E_{\beta^-}=397(22)$ to 4^+ level at 1397.82 keV										Ens035 **
$^{*98}\text{Rh}(\beta^+)^{98}\text{Ru}$	$E_{\beta^+}=3450(100)$ to 2^+ level at 652.44 keV, and others										Ens035 **
$^{*98}\text{Rh}(\beta^+)^{98}\text{Ru}$	$E_{\beta^+}=3476(50)$ to 2^+ level at 652.44 keV										Ens035 **
$^{*98}\text{Ag}(\beta^+)^{98}\text{Pd}$	$Q_{\beta^+}=6880(150)$ to 4^+ level at 1541.40 keV										Ens035 **
$^{99}\text{Sr}-^{85}\text{Rb}_{1.165}$	35661.1	4.4	35656	4	-1.2	1	76	76 ^{99}Sr	TT1	1.0	12Si10 *
$^{99}\text{Zr-u}$	-83323	19	-83333	11	-0.5	1	36	36 ^{99}Zr	JY0	1.0	04Ri12
$\text{C}_7 \text{H}_{15}-^{99}\text{Ru}$	211442.8	3.0	211441.4	1.1	-0.2	U			M16	2.5	63Da10
$^{99}\text{Ag}-^{85}\text{Rb}_{1.165}$	20401.0	8.5	20411	7	1.1	2			SH1	1.0	07Ma92
	20427	11			-1.5	2			MA8	1.0	11He10
$^{99}\text{Cd}-^{85}\text{Rb}_{1.165}$	27690.8	1.7				2			MA8	1.0	09Br09
$^{99}\text{Pd}-^{96}\text{Mo}_{1.031}$	10052.8	5.5	10054	5	0.2	1	95	94 ^{99}Pd	JY1	1.0	09El08
$^{99}\text{Sr}-^{97}\text{Zr}_{1.021}$	23794.1	7.4	23809	4	2.1	1	31	24 ^{99}Sr	JY1	1.0	06Ha03
$^{99}\text{Y}-^{97}\text{Zr}_{1.021}$	15066.8	7.1				2			JY1	1.0	07Ha32
$^{99}\text{Zr}-^{97}\text{Zr}_{1.021}$	7580	14	7586	11	0.4	1	65	64 ^{99}Zr	JY1	1.0	06Ha03
$^{99}\text{Ru}-^{98}\text{Ru}$	652	11	647	7	-0.2	U			M16	2.5	63Da10
$^{97}\text{Rb}-^{99}\text{Rb}_{.653} \text{ } ^{93}\text{Rb}_{.348}$	100	100	190	70	0.4	U			P21	2.5	82Au01
$^{98}\text{Rb}-^{99}\text{Rb}_{.742} \text{ } ^{95}\text{Rb}_{.258}$	690	180	680	80	0.0	U			P21	2.5	82Au01
$^{97}\text{Rb}-^{99}\text{Rb}_{.490} \text{ } ^{95}\text{Rb}_{.511}$	350	60	240	60	-0.7	1	14	13 ^{99}Rb	P31	2.5	86Au02
$^{99}\text{Ru}(\text{n},\alpha)^{96}\text{Mo}$	6822	5	6818.2	1.1	-0.8	U					01Wa50
$^{96}\text{Ru}(\text{ } ^{16}\text{O}, \text{ } ^{13}\text{C})^{99}\text{Pd}$	-11723	20	-11760	5	-1.8	U			BNL		82Th01
$^{98}\text{Mo}(\text{n},\gamma)^{99}\text{Mo}$	5927.7	1.	5925.44	0.15	-2.3	U					73De39
	5927	1			-1.6	U					74Er.A
	5924.6	0.6			1.4	U					76Ch02
	5923	2			1.2	U					77Ri04
	5925.42	0.15			0.2	1	100	95 ^{99}Mo	MMn		91Is02 Z
	5927.7	0.5			-4.5	C			Bdn		06Fi.A
$^{98}\text{Mo}(\text{d,p})^{99}\text{Mo}$	3687	20	3700.88	0.15	0.7	U			Pit		64Co11
$^{98}\text{Mo}(\text{ } ^3\text{He}, \text{d})^{99}\text{Tc}$	1010	20	1007.4	0.9	-0.1	U			McM		77Ch06
$^{99}\text{Tc}(\text{p,d})^{98}\text{Tc}$	-6740	5	-6742	3	-0.5	-					76SI06
	-6755	9			1.4	-			Bld		77Em02
ave.	-6744	4			0.3	1	59	57 ^{98}Tc			average
$^{99}\text{Rb}(\beta^-)^{99}\text{Sr}$	11340	120	11310	110	-0.3	1	87	87 ^{99}Rb	McG		84Ia.A
	10960	130			2.7	U			Bwg		87Gr.A
$^{99}\text{Sr}(\beta^-)^{99}\text{Y}$	8030	80	8144	8	1.4	U			McG		84Ia.A
	8360	75			-2.9	U			Bwg		87Gr.A
$^{99}\text{Y}(\beta^-)^{99}\text{Zr}$	7605	60	6969	12	-10.6	C			Bwg		87Gr.A
	7568	14			-42.8	C			Bwg		92Gr.A
$^{99}\text{Zr}(\beta^-)^{99}\text{Nb}$	4550	35	4707	16	4.5	C			Bwg		87Gr.A
	4559	15			9.9	C			Bwg		92Gr.A
$^{99}\text{Nb}(\beta^-)^{99}\text{Mo}$	3740	200	3637	12	-0.5	U					70Ei02 *
$^{99}\text{Mo}(\beta^-)^{99}\text{Tc}$	1356.7	1.0	1357.8	0.9	1.1	1	79	75 ^{99}Tc			71Na01 *
$^{99}\text{Tc}(\beta^-)^{99}\text{Ru}$	292	3	295.1	1.1	1.0	-					51Ta05
	290	4			1.3	-					52Fe16
	293.5	2.0			0.8	-					80Al02 *
ave.	292.6	1.5			1.6	1	54	31 ^{99}Ru			average
$^{99}\text{Rh}(\beta^+)^{99}\text{Ru}$	2038	10	2044	7	0.6	-					52Sc11 *
	2053	10			-0.9	-					59To.A *
	2110	40			-1.7	U					74An23 *
ave.	2046	7			-0.2	1	90	89 ^{99}Rh			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{99}\text{Pd}(\beta^+)^{99}\text{Rh}$	3410	20	3397	8	-0.7	1	16	11	^{99}Rh		69Ph01 *	
$^{99}\text{Ag}(\beta^+)^{99}\text{Pd}$	5430	150	5469	8	0.3	U					81Hu03	
$^{*99}\text{Sr}-^{85}\text{Rb}_{1.165}$	$D_M=35661.6(4.4) \mu\text{u}$ ME=-62506.3(4.1)keV corrected for e ⁻ binding=-505eV											
$^{*99}\text{Nb}(\beta^-)^{99}\text{Mo}$	$E_{\beta^-}=3500(200)$ to $7/2^+$ level at 235.508 keV											
$^{*99}\text{Mo}(\beta^-)^{99}\text{Tc}$	$E_{\beta^-}=1214(1)$ to $1/2^-$ level at 142.6832 keV											
$^{*99}\text{Tc}(\beta^-)^{99}\text{Ru}$	$E_{\beta^+}=434.8(2.6), 346.7(2.0)$ from $^{99}\text{Tc}^m$ at 142.6832 to ground state, 89.57 level											
$^{*99}\text{Rh}(\beta^+)^{99}\text{Ru}$	$E_{\beta^+}=740(10)$ from $^{99}\text{Rh}^m$ at 64.5 to 340.90 level											
$^{*99}\text{Rh}(\beta^+)^{99}\text{Ru}$	$E_{\beta^+}=1030(10), 710(10), 590(10), 420(20)$ keV											
*	to ground state, 321.99 $3/2^+$, 442.59 $3/2^+$, 618.13 $1/2^+$ levels											
$^{*99}\text{Rh}(\beta^+)^{99}\text{Ru}$	$E_{\beta^+}=680(30), 540(30)$ to mixture $322.38 3/2^+$, 442.71 $3/2^+$, 618.04 $1/2^+$ levels											
$^{*99}\text{Pd}(\beta^+)^{99}\text{Rh}$	$E_{\beta^+}=2180(20), 1930(20), 1510(20)$ keV											
*	to $200.7 7/2^+$, 464.4 $(5/2, 7/2)^+$, 874.5 $5/2^+$ levels above $(1/2^-)$ ground state											
$^{100}\text{Y}-u$	-72270	110	-72285	12	-0.1	o			GT2	1.5	08Kn.A *	
	-72290	140			0.0	U			GT2	1.5	08Su19 *	
$^{100}\text{Zr}-u$	-82016	18	-81999	9	0.9	1	24	24	^{100}Zr	JY0	1.0	04Ri12
$^{100}\text{Mo}-^{85}\text{Rb}_{1.176}$	11216	27	11207.1	1.1	-0.3	U			MA8	1.0	11He10	
	11205.5	1.4			1.1	1	65	65	^{100}Mo	JY1	1.0	12Ka13
$\text{C}_7 \text{H}_{16}-^{100}\text{Mo}$	217730.3	4.2	217728.7	1.1	-0.1	U			M15	2.5	63Ri07	
$\text{C}_7 \text{H}_{16}-^{100}\text{Ru}$	220983.8	3.7	220986.3	1.1	0.3	U			M16	2.5	63Da10	
$^{100}\text{Rh}-u$	-91855	46	-91883	19	-0.6	1	18	18	^{100}Rh	GS2	1.0	05Li24 *
$^{100}\text{Ag}-^{85}\text{Rb}_{1.176}$	19849.9	7.1	19851	5	0.1	2			JY1	1.0	09El08 *	
	19851.8	8.2			-0.1	2			MA8	1.0	11He10 *	
$^{100}\text{Cd}-u$	-79636	214	-79651.2	1.8	-0.1	U			CS1	1.0	96Ch32	
$^{100}\text{Cd}-^{85}\text{Rb}_{1.176}$	24084.1	1.8	24084.1	1.8	0.0	1	100	100	^{100}Cd	MA8	1.0	09Br09
$^{100}\text{In}-u$	-69405	322	-69040	200	1.1	1	37	37	^{100}In	CS1	1.0	96Ch32
$^{100}\text{Sn}-u$	-62020	1020	-61500	320	0.5	U			CS1	1.0	96Ch32	
$^{100}\text{Sr}-^{97}\text{Zr}_{1.031}$	27579	10				2			JY1	1.0	06Ha03	
$^{100}\text{Y}-^{97}\text{Zr}_{1.031}$	19524	12				2			JY1	1.0	07Ha32	
$^{100}\text{Y}^m-^{97}\text{Zr}_{1.031}$	19679	12				2			JY1	1.0	07Ha32	
$^{100}\text{Zr}-^{97}\text{Zr}_{1.031}$	9815	10	9810	9	-0.5	1	77	76	^{100}Zr	JY1	1.0	06Ha03
$^{100}\text{Nb}^m-^{97}\text{Zr}_{1.031}$	6472.6	2.1				2			JY1	1.0	07Ha32	
$^{100}\text{Mo } ^{35}\text{Cl}-^{98}\text{Mo } ^{37}\text{Cl}$	5019	2	5017.0	1.2	-0.2	U			H11	4.0	63Bi12	
$^{100}\text{Nb}-^{100}\text{Nb}^m$	-335.7	8.3				3			JY1	1.0	07Ha32	
$^{100}\text{Mo}-^{100}\text{Ru}$	3257.55	0.18	3257.53	0.18	-0.1	1	99	64	^{100}Ru	JY1	1.0	08Ra09
$^{100}\text{Ru}-^{99}\text{Ru}$	-1718	11	-1719.826	0.028	-0.1	U			M16	2.5	63Da10	
$^{96}\text{Ru}(^{16}\text{O}, ^{12}\text{C})^{100}\text{Pd}$	-5599	26	-5589	18	0.4	1	46	46	^{100}Pd	BNL		82Th01
$^{100}\text{Mo}(d, ^3\text{He})^{99}\text{Nb}$	-5639	15	-5653	12	-0.9	2			Tex		74Bi08	
$^{100}\text{Mo}(t, \alpha)^{99}\text{Nb}$	8642	20	8667	12	1.3	2			LAL		83Fl06	
$^{100}\text{Mo}(d, t)^{99}\text{Mo}$	-2038	20	-2034.6	1.1	0.2	U			Pit		64Co11	
$^{99}\text{Tc}(n, \gamma)^{100}\text{Tc}$	6764.4	1.				2					79Pi08	
	6765.20	0.04	6764.4	1.0	-20.0	C					04Fu.A	
$^{99}\text{Ru}(n, \gamma)^{100}\text{Ru}$	9673.2	0.7	9673.324	0.026	0.2	U					74Ri03	
	9672.65	0.06			11.2	B			ILn		88Co18 Z	
	9673.39	0.05			-1.3	-			MMn		91Is02 Z	
	9673.30	0.03			0.8	-			ILn		00Ge01	
	9673.41	0.19			-0.5	U			Bdn		06Fi.A	
ave.	9673.324	0.026			0.0	1	100	69	^{99}Ru		average	
$^{100}\text{Sr}(\beta^-)^{100}\text{Y}$	7460	140	7503	15	0.3	U			McG		84Ia.A *	
	7075	100			4.3	C			Bwg		87Gr.A	
$^{100}\text{Y}(\beta^-)^{100}\text{Zr}$	7920	100	9049	14	11.3	C			McG		84Ia.A *	
	9310	70			-3.7	C			Bwg		87Gr.A	
$^{100}\text{Zr}(\beta^-)^{100}\text{Nb}$	3335	25	3421	11	3.5	C			Bwg		87Gr.A	
$^{100}\text{Nb}(\beta^-)^{100}\text{Mo}$	6245	25	6386	8	5.6	C			Bwg		87Gr.A	
$^{100}\text{Nb}^m(\beta^-)^{100}\text{Mo}$	6745	75	6698.8	3.0	-0.6	U			Bwg		87Gr.A	
$^{100}\text{Mo}(t, ^3\text{He})^{100}\text{Nb}^m$	-6690	30	-6680.3	3.0	0.3	U			LAL		79Aj03	
$^{100}\text{Rh}(\beta^+)^{100}\text{Ru}$	3630	20	3636	18	0.3	1	82	82	^{100}Rh		53Ma64	
$^{100}\text{Ag}(\beta^+)^{100}\text{Pd}$	7075	90	7089	18	0.2	U					79Ve.A *	
	7022	200			0.3	U					80Ha20 *	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{100}\text{Cd}(\beta^+)^{100}\text{Ag}$	3890	70	3943	5	0.8	U					89Ry02
$^{100}\text{In}(\beta^+)^{100}\text{Cd}$	10900	930	9880	180	-1.1	U					95Sz01 *
	10080	230			-0.9	1	63	$^{63}\text{In}^{100}$	Lvp		02PI03
$^{100}\text{Sn}(\beta^+)^{100}\text{In}$	7390	660	7030	240	-0.5	o			GSI		97Su06 *
	7840	660			-1.2	o			GSI		02Fa13 *
	7030	240				2			GSI		12Hi07 *
* $^{100}\text{Y}-u$	M-A=-67245(93) keV for mixture gs+m at 144(16) keV										Nub127 **
* $^{100}\text{Y}-u$	M-A=-67264(119) keV for mixture gs+m at 144(16) keV										Nub127 **
* $^{100}\text{Rh}-u$	M-A=-85508(29) keV for mixture gs+m at 107.6 keV										Nub127 **
* $^{100}\text{Ag}-^{85}\text{Rb}_{1.176}$	$D_M=19858.2(5.2) \mu\text{u}$ for mixture gs+m at 15.52 keV; M-A=-78131.0(4.9) keV										Nub127 **
* $^{100}\text{Ag}-^{85}\text{Rb}_{1.176}$	$D_M=19860.2(6.6) \mu\text{u}$ for mixture gs+m at 15.52 keV; M-A=-78129.1(6.2) keV										Nub127 **
* $^{100}\text{Sr}(\beta^-)^{100}\text{Y}$	$E_{\beta^-}=7450(140)$ assumed by evaluator to 1^+ level at 10.70 keV										Ens082 **
* $^{100}\text{Y}(\beta^-)^{100}\text{Zr}$	Not unambiguously ground state transition										GAu **
* $^{100}\text{Ag}(\beta^+)^{100}\text{Pd}$	From 5^+ ground state to high spin level at 2920.4 keV										79Ve.A **
* $^{100}\text{Ag}(\beta^+)^{100}\text{Pd}$	$E_{\beta^+}=5350(200)$ from $^{100}\text{Ag}^m 2^+$ at 15.52 to 2^+ level at 665.50 keV										Ens082 **
* $^{100}\text{In}(\beta^+)^{100}\text{Cd}$	From lower and upper limits 9300-12500										GAu **
* $^{100}\text{Sn}(\beta^+)^{100}\text{In}$	$Q_{\beta^+}=7200(+800-500)$; also $E_{\beta^+}=3400(+700-300)$ keV										97Su06 **
* $^{100}\text{Sn}(\beta^+)^{100}\text{In}$	$E_{\beta^+}=3800(+700-300)$ to 2760(430) level										96Ki23 **
* $^{100}\text{Sn}(\beta^+)^{100}\text{In}$	$E_{\beta^+}=3290(200)$ to 1^+ level at 2721+x, with $x<80$ keV										12Hi07 **
$^{101}\text{Zr}-u$	-78573	20	-78552	9	1.0	1	21	$^{21}\text{Zr}^{101}$	JY0	1.0	04Ri12
$\text{C}_8 \text{H}_5-^{101}\text{Ru}$	133549.5	2.2	133548.3	1.2	-0.2	U			M16	2.5	63Da10
$^{101}\text{Rh}-u$	-93821	58	-93839	6	-0.3	U			GS2	1.0	05Li24 *
$^{101}\text{Pd}-u$	-91816	30	-91714	5	3.4	C			GS2	1.0	05Li24
$^{101}\text{Ag}-^{85}\text{Rb}_{1.188}$	17470.5	7.2	17478	5	1.0	2			SH1	1.0	07Ma92
	17485.6	7.5			-1.0	2			MA8	1.0	11He10
$^{101}\text{Cd}-^{85}\text{Rb}_{1.188}$	23367	11	23380.0	1.6	1.2	U			SH1	1.0	07Ma92
	23380.0	1.6				2			MA8	1.0	09Br09
$^{101}\text{Pd}-^{96}\text{Mo}_{1.052}$	8567.4	5.1	8567	5	-0.1	1	93	$^{93}\text{Pd}^{101}$	JY1	1.0	09El08
$^{101}\text{Cd}-^{96}\text{Mo}_{1.052}$	18872.7	5.5	18866.9	1.7	-1.0	U			JY1	1.0	09El08
$^{101}\text{Y}-^{97}\text{Zr}_{1.041}$	22847.5	7.6				2			JY1	1.0	07Ha32
$^{101}\text{Zr}-^{97}\text{Zr}_{1.041}$	14153	10	14148	9	-0.5	1	80	$^{79}\text{Zr}^{101}$	JY1	1.0	06Ha03
$^{101}\text{Nb}-^{102}\text{Ru}_{0.990}$	10009.6	4.0				2			JY1	1.0	07Ha32
$^{101}\text{Ru}-^{100}\text{Ru}$	1368	11	1362.62	0.25	-0.2	U			M16	2.5	63Da10
$^{100}\text{Mo}(n,\gamma)^{101}\text{Mo}$	5398.4	0.5	5398.24	0.07	-0.3	U			ILn		75Ka.A
	5399.6	0.7			-1.9	U			ORn		79We07 Z
	5398.23	0.08			0.1	2			ILn		90Se17 Z
	5398.27	0.13			-0.2	2			Bdn		06Fi.A
$^{100}\text{Mo}(d,p)^{101}\text{Mo}$	3161	6	3173.68	0.07	2.1	U					72Si25
$^{100}\text{Ru}(n,\gamma)^{101}\text{Ru}$	6802.0	0.7	6802.05	0.24	0.1	-					82Ba69
	6802.04	0.25			0.0	-			Bdn		06Fi.A
$^{100}\text{Ru}(d,p)^{101}\text{Ru}$	4581	4	4577.48	0.24	-0.9	U					77Ho02
$^{100}\text{Ru}(n,\gamma)^{101}\text{Ru}$	ave. 6802.04	0.24	6802.05	0.24	0.1	1	100	$^{95}\text{Ru}^{101}$			average
$^{101}\text{Sn}(\epsilon p)^{100}\text{Cd}$	6600	300				2					10St.A
$^{101}\text{Rb}(\beta^-)^{101}\text{Sr}$	11810	110	12750#	200#	8.5	D			Bwg		92Ba28 *
$^{101}\text{Sr}(\beta^-)^{101}\text{Y}$	9505	80				3			Bwg		92Ba28
$^{101}\text{Y}(\beta^-)^{101}\text{Zr}$	8545	90	8104	11	-4.9	B			Bwg		92Ba28
$^{101}\text{Zr}(\beta^-)^{101}\text{Nb}$	5520	45	5717	9	4.4	B			Bwg		87Gr18
	5485	25			9.3	C			Bwg		92Gr.A
$^{101}\text{Nb}(\beta^-)^{101}\text{Mo}$	4575	30	4628	4	1.8	U			Bwg		87Gr.A
	4590	30			1.3	U			Bwg		87Gr18
	4569	18			3.3	C			Bwg		92Gr.A
$^{101}\text{Mo}(\beta^-)^{101}\text{Tc}$	2836	40	2825	24	-0.3	R					57Ok.A *
$^{101}\text{Tc}(\beta^-)^{101}\text{Ru}$	1620	30	1614	24	-0.2	2					71Ar23 *
$^{101}\text{Pd}(\beta^+)^{101}\text{Rh}$	1980	4	1980	4	0.0	1	95	$^{88}\text{Rh}^{101}$			71Ib01 *
$^{101}\text{Ag}(\beta^+)^{101}\text{Pd}$	4100	200	4096	7	0.0	U					72We.A
	4350	200			-1.3	U					78Ha11
	4180	150			-0.6	U					79Ve.A *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{101}\text{Cd}(\beta^+)^{101}\text{Ag}$	5530	130	5498	5	-0.2	U					70Be.A *
	5350	200			0.7	U					72We.A
* $^{101}\text{Rh-u}$	M-A=-87315(29) keV for mixture gs+m at 157.32 keV										Nub127 **
* $^{101}\text{Rb}(\beta^-)^{101}\text{Sr}$	Trends from Mass Surface TMS suggest ^{101}Rb 940 less bound										GAu **
* $^{101}\text{Mo}(\beta^-)^{101}\text{Tc}$	E_{β^-} =2230(40) to (1/2 ⁺ ,3/2 ⁺) level at 606.47 keV										Ens06a **
* $^{101}\text{Tc}(\beta^-)^{101}\text{Ru}$	E_{β^-} =1320(30) to 306.858 7/2 ⁺ and 1070(30) to 545.115 7/2 ⁺ levels										Ens06a **
* $^{101}\text{Pd}(\beta^+)^{101}\text{Rh}$	E_{β^+} =776(4) to 7/2 ⁺ level at 181.78 keV										Ens06a **
* $^{101}\text{Ag}(\beta^+)^{101}\text{Pd}$	E_{β^+} =2895(150) to 7/2 ⁺ level at 261.0 keV, and others										Ens06a **
* $^{101}\text{Cd}(\beta^+)^{101}\text{Ag}$	Measured E_{β^+} may go to excited state										70Be.A **
$^{102}\text{Y}-^{120}\text{Sn}_{.850}$	17456.3	4.3							JY1	1.0	11Ha48 *
$^{102}\text{Zr-u}$	-76780	43	-76859	10	-1.8	U			JY0	1.0	04Ri12
$\text{C}_8 \text{H}_6-^{102}\text{Ru}$	142604.8	3.2	142606.1	1.2	0.2	U			M16	2.5	63Da10
$\text{C}_8 \text{H}_6-^{102}\text{Pd}$	141324	19	141348.0	2.8	0.5	U			M16	2.5	63Da10
	141346	18			0.1	U			R12	1.5	83De51
$\text{C}_7 \text{N H}_4-^{102}\text{Pd}$	128775	19	128771.9	2.8	-0.1	U			R12	1.5	83De51
$^{102}\text{Ag-u}$	-88315	30	-88295	9	0.7	U			GS2	1.0	05Li24 *
$^{102}\text{Cd}-^{85}\text{Rb}_{1.200}$	20320.9	7.3	20334.3	1.8	1.8	U			SH1	1.0	07Ma92
	20334.2	1.9			0.0	1	88	88 ^{102}Cd	MA8	1.0	09Br09
$^{102}\text{In}-^{85}\text{Rb}_{1.200}$	29959	13	29959	5	0.0	1	14	14 ^{102}In	SH1	1.0	07Ma92
$^{102}\text{Cd}-^{96}\text{Mo}_{1.063}$	15811.9	5.2	15811.3	1.8	-0.1	1	13	12 ^{102}Cd	JY1	1.0	09EI08
$^{102}\text{In}-^{96}\text{Mo}_{1.063}$	25436.5	5.3	25436	5	0.0	1	86	86 ^{102}In	JY1	1.0	09EI08
$^{102}\text{Zr}-^{97}\text{Zr}_{1.052}$	16822.0	9.8	16820	9	-0.2	1	92	92 ^{102}Zr	JY1	1.0	06Ha03
$^{102}\text{Nb}-^{97}\text{Zr}_{1.052}$	11756.4	2.7	11756.5	2.7	0.0	1	99	99 ^{102}Nb	JY1	1.0	07Ha32
$^{102}\text{Mo}-^{97}\text{Zr}_{1.052}$	3961.0	9.8	3963	9	0.2	1	83	82 ^{102}Mo	JY1	1.0	06Ha03
$^{102}\text{Nb}^m-^{102}\text{Nb}$	100.2	7.9	101	8	0.1	1	95	94 $^{102}\text{Nb}^m$	JY1	1.0	07Ha32
$^{102}\text{Pd}-^{102}\text{Ru}$	1291.76	0.39	1258.1	2.6	-86.3	B			SH1	1.0	11Go23 *
$^{102}\text{Ru}-^{101}\text{Ru}$	-1233	11	-1232.78	0.05	0.0	U			M16	2.5	63Da10
$^{100}\text{Mo}(t,p)^{102}\text{Mo}$	5034	20	5042	9	0.4	1	18	18 ^{102}Mo	LAL		72Ca10
$^{100}\text{Mo}(^3\text{He,p})^{102}\text{Tc}$	6054	20	6023	9	-1.5	1	21	21 ^{102}Tc	Pri		82De03
$^{102}\text{Pd}(p,t)^{100}\text{Pd}$	-10356	24	-10365	18	-0.4	1	54	54 ^{100}Pd	Win		74De31 *
$^{101}\text{Ru}(n,\gamma)^{102}\text{Ru}$	9220.4	0.9	9219.64	0.05	-0.8	U					74Ri03
	9219.64	0.05			0.0	1	100	95 ^{102}Ru	MMn		91Is02 Z
	9219.63	0.19			0.1	U			Bdn		06Fi.A
$^{102}\text{In}(\epsilon p)^{101}\text{Ag}$	3420	310	3352	7	-0.2	o			Lvp		91Re.A *
$^{102}\text{Sr}(\beta^-)^{102}\text{Y}$	8815	70				3			Bwg		92Ba28
$^{102}\text{Y}(\beta^-)^{102}\text{Zr}$	9850	70	10420	10	8.1	B			Bwg		92Ba28
$^{102}\text{Zr}(\beta^-)^{102}\text{Nb}^m$	4605	30	4622	11	0.6	1	14	8 ^{102}Zr	Bwg		87Gr18
$^{102}\text{Nb}(\beta^-)^{102}\text{Mo}$	7300	50	7260	9	-0.8	o			Bwg		87Gr.A
	7335	40			-1.9	U			Bwg		87Gr18
$^{102}\text{Nb}^m(\beta^-)^{102}\text{Mo}$	7215	40	7354	11	3.5	C			Bwg		87Gr.A
	7210	35			4.1	B			Bwg		87Gr18
$^{102}\text{Tc}(\beta^-)^{102}\text{Ru}$	4420	100	4532	9	1.1	U					69B116
$^{102}\text{Rh}(\beta^+)^{102}\text{Ru}$	2317	10	2322	5	0.5	-					61Hi06
	2325	10			-0.3	-					63Bo17
$^{102}\text{Ru}(p,n)^{102}\text{Rh}$	-3115	15	-3105	5	0.7	-					83Do11
$^{102}\text{Rh}(\beta^+)^{102}\text{Ru}$	ave.	6	2322	5	-0.1	1	51	51 ^{102}Rh			average
$^{102}\text{Rh}(\beta^-)^{102}\text{Pd}$	1150	6	1151	5	0.1	1	57	49 ^{102}Rh			61Hi06
$^{102}\text{Ag}(\beta^+)^{102}\text{Pd}$	5800	200	5684	9	-0.6	U					67Ch05
	5966	100			-2.8	U					67Ch05 *
	4910	140			5.5	C					70Be.A *
	5350	200			1.7	U					72We.A
	5880	110			-1.8	U					79Ve.A
$^{102}\text{Cd}(\beta^+)^{102}\text{Ag}$	2554	57	2587	8	0.6	U					72We.A
	2587	8				2			GSI		91Ke08 *
$^{102}\text{In}(\beta^+)^{102}\text{Cd}$	9250	380	8966	5	-0.7	U					95Sz01 *
	8970	150			0.0	U			GSI		98Ka.A
	8910	170			0.3	U			GSI		03Gi06 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{102}\text{Sn}(\beta^+)^{102}\text{In}$	5780	70	5760	100	-0.3	o			GSI		01St.A
	5760	100				2			GSI		02Fa13
* $^{102}\text{Y}-^{120}\text{Sn}_{.850}$	Associated with low-spin isomer										11Ha48 **
* $^{102}\text{Ag-u}$	M-A=-82260(28) keV for mixture gs+m at 9.40(0.07) keV										Nub127 **
* $^{102}\text{Pd}-^{102}\text{Ru}$	10 σ away from other data! (see text)										11Go23 **
* $^{102}\text{Pd}(p,t)^{100}\text{Pd}$	Original error 12; added systematic error 21 keV										GAu **
* $^{102}\text{In}(\epsilon p)^{101}\text{Ag}$	Estimated using proton spectrum from 1450 to 3200 keV										GAu **
* $^{102}\text{Ag}(\beta^+)^{102}\text{Pd}$	$E_{\beta^+}=3340(100), 3070(130)$ from $^{102}\text{Ag}^m$ at 9.40 to 1534.48, 2017.8 levels										Ens098 **
* $^{102}\text{Ag}(\beta^+)^{102}\text{Pd}$	$Q_{\beta^+}=4920(100)$ from $^{102}\text{Ag}^m$ at 9.40(0.07) keV										Nub127 **
* $^{102}\text{Cd}(\beta^+)^{102}\text{Ag}$	$E_{\beta^+}=1075(8)$ to 1^+ level at 490.44 keV										Ens098 **
* $^{102}\text{In}(\beta^+)^{102}\text{Cd}$	From 9900 keV upper and 8600 keV lower limits										GAu **
* $^{102}\text{In}(\beta^+)^{102}\text{Cd}$	Good agreement with authors' earlier measurement, average=8950(120) keV										03Gi06 **
$^{103}\text{Y-u}$	-63060	183	-62757	12	1.1	o			GT1	1.5	04Ma.A
	-62803	106			0.3	U			GT2	1.5	08Kn.A
$^{103}\text{Y}-^{120}\text{Sn}_{.858}$	21154	12				2			JY1	1.0	11Ha48
$^{103}\text{Zr-u}$	-72765	64	-72809	10	-0.7	U			JY0	1.0	04Ri12
$\text{C}_8 \text{H}_7-^{103}\text{Rh}$	149263.5	3.3	149277.2	2.6	1.7	U			M16	2.5	63Da10
	149261	19			0.6	U			R12	1.5	83De51
$\text{C}_7 \text{N H}_5-^{103}\text{Rh}$	136681	18	136701.2	2.6	0.7	U			R12	1.5	83De51
$^{103}\text{Ag-u}$	-91091	52	-91037	4	1.0	U			GS2	1.0	05Li24 *
$^{103}\text{Ag}-^{85}\text{Rb}_{1.212}$	15875	14	15874	4	-0.1	U			SH1	1.0	07Ma92
	15871.4	4.4			0.6	1	88	88 ^{103}Ag	MA8	1.0	11He10
$^{103}\text{Cd}-^{85}\text{Rb}_{1.212}$	20328	11	20327.4	1.9	-0.1	U			SH1	1.0	07Ma92
	20328.2	2.1			-0.4	1	84	84 ^{103}Cd	MA8	1.0	09Br09
$^{103}\text{In}-^{85}\text{Rb}_{1.212}$	26785	11	26793	10	0.7	1	79	79 ^{103}In	SH1	1.0	07Ma92
$^{103}\text{Cd}-^{96}\text{Mo}_{1.073}$	15699.2	5.2	15699.0	2.0	0.0	1	14	13 ^{103}Cd	JY1	1.0	09El08
$^{103}\text{Zr}-^{97}\text{Zr}_{1.062}$	21760.5	9.9				2			JY1	1.0	06Ha03
$^{103}\text{Mo}-^{97}\text{Zr}_{1.062}$	7648.4	9.9				2			JY1	1.0	06Ha03
$^{103}\text{Nb}-^{102}\text{Ru}_{1.010}$	16069.7	4.2				2			JY1	1.0	07Ha32
$^{103}\text{Cd}-^{102}\text{Cd}$	-1534	154	-1065.5	2.6	2.0	U			CR2	1.5	92Sh.A *
$^{103}\text{Rh}(p,t)^{101}\text{Rh}$	-8275	17	-8278	6	-0.2	1	13	12 ^{101}Rh	Pri		64Th05
$^{102}\text{Ru}(n,\gamma)^{103}\text{Ru}$	6232.2	0.3	6232.05	0.15	-0.5	-					82Ba69 Z
	6232.00	0.17			0.3	-			Bdn		06Fi.A
$^{102}\text{Ru}(d,p)^{103}\text{Ru}$	4005	15	4007.49	0.15	0.2	U			ANL		71Fo01
$^{102}\text{Ru}(n,\gamma)^{103}\text{Ru}$	ave.	6232.05	6232.05	0.15	0.0	1	100	95 ^{103}Ru			average
$^{103}\text{Rh}(\gamma,n)^{102}\text{Rh}$	-9307	32	-9319	5	-0.4	U			Phi		60Ge01
$^{103}\text{Rh}(p,d)^{102}\text{Rh}$	-7144	16	-7094	5	3.1	B			Pri		64Th05
$^{102}\text{Pd}(n,\gamma)^{103}\text{Pd}$	7624.6	1.5	7625.4	0.8	0.5	-					70Bo29
	7625.6	0.9			-0.3	-			Bdn		06Fi.A
	ave.	7625.3			0.0	1	99	92 ^{102}Pd			average
$^{103}\text{Zr}(\beta^-)^{103}\text{Nb}$	6945	85	7204	10	3.0	U			Bwg		87Gr18
$^{103}\text{Nb}(\beta^-)^{103}\text{Mo}$	5535	35	5942	10	11.6	C			Bwg		87Gr.A
	5530	30			13.7	B			Bwg		87Gr18
$^{103}\text{Mo}(\beta^-)^{103}\text{Tc}$	3750	60	3635	14	-1.9	U			Bwg		87Gr18
$^{103}\text{Tc}(\beta^-)^{103}\text{Ru}$	2615	45	2662	10	1.0	U			Bwg		87Gr.A
$^{103}\text{Ru}(\beta^-)^{103}\text{Rh}$	764	4	764.4	2.2	0.1	-					58Ro09 *
	760	6			0.7	-					65Mu09 *
	762	5			0.5	-					70Pe04 *
	769	4			-1.1	-					82Oh04
	ave.	764.6			-0.1	1	92	92 ^{103}Rh			average
$^{103}\text{Pd}(\epsilon)^{103}\text{Rh}$	564	20	543.0	0.8	-1.0	U					54Ri09 *
	543.0	0.8			0.0	1	99	93 ^{103}Pd			86Be53
$^{103}\text{Ag}(\beta^+)^{103}\text{Pd}$	2580	100	2685	5	1.0	U					62Pa05 *
	2700	100			-0.2	U					66Ja12
	2320	50			7.3	B					69Ba02
	2622	27			2.3	U			Dlf		88Bo28
$^{103}\text{Cd}(\beta^+)^{103}\text{Ag}$	4200	130	4148	4	-0.4	U					70Be.A
	4250	200			-0.5	U					72We.A
	4131	11			1.6	1	14	12 ^{103}Ag	Dlf		88Bo28

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{103}\text{In}(\beta^+)^{103}\text{Cd}$	5380	200	6022	9	3.2	B			Brk		83Wo04 *
	6050	20			-1.4	1	21	21 ^{103}In	Dif		88Bo28 *
	6040	60			-0.3	U					98Ka42
$^{103}\text{Sn}(\beta^+)^{103}\text{In}$	7500	600	7660	70	0.3	o			GSI		04Mu32
	7660	70				2			GSI		05Ka34 *
* $^{103}\text{Ag-u}$	M-A=-84784(29) keV for mixture gs+m at 134.45 keV										Nub127 **
* $^{103}\text{Cd}-^{102}\text{Cd}$	From $^{102}\text{Cd}/^{103}\text{Cd}=0.99029800(150)$										AHW **
* $^{103}\text{Ru}(\beta^-)^{103}\text{Rh}$	$E_{\beta^-}=227(4)$ to $5/2^+$ level at 536.840 keV, and other E_{β^-}										Ens09a **
* $^{103}\text{Ru}(\beta^-)^{103}\text{Rh}$	$E_{\beta^-}=112(6)$ to $5/2^+$ level at 650.064 keV, and other E_{β^-}										Ens09a **
* $^{103}\text{Ru}(\beta^-)^{103}\text{Rh}$	$E_{\beta^-}=225(5)$ to $5/2^+$ level at 536.840 keV, and other E_{β^-}										Ens09a **
* $^{103}\text{Pd}(\epsilon)^{103}\text{Rh}$	IBE=500(20) to $^{103}\text{Rh}^m 7/2^+$ at 39.753 keV										Nub127 **
* $^{103}\text{Ag}(\beta^+)^{103}\text{Pd}$	$E_{\beta^+}=1290(100)$ to $5/2^+$ level at 266.861 keV, and other E_{β^+}										Ens09a **
* $^{103}\text{In}(\beta^+)^{103}\text{Cd}$	$E_{\beta^+}=4170(200)$ 4833(20) respectively, to $7/2^+$ level 187.89 keV										Ens09a **
* $^{103}\text{Sn}(\beta^+)^{103}\text{In}$	Original 7640(70) recalibrated										05Ka34 **
$^{104}\text{Zr-u}$	-70661	54	-70564	10	1.8	U			JY0	1.0	04Ri12
$^{104}\text{Nb-u}$	-77460	140	-77108	4	1.7	U			GT2	1.5	08Kn.A *
$\text{C}_8 \text{H}_8-^{104}\text{Ru}$	157171.5	3.4	157172.8	2.8	0.2	1	11	11 ^{104}Ru	M16	2.5	63Da10
$\text{C}_8 \text{H}_8-^{104}\text{Pd}$	158612	10	158569.7	1.4	-1.7	U			M16	2.5	63Da10
	158599	12			-1.6	U			R12	1.5	83De51
$\text{C}_7 \text{N H}_6-^{104}\text{Pd}$	146013	8	145993.7	1.4	-1.6	U			R12	1.5	83De51
$\text{C}_6 \text{ }^{13}\text{C N H}_5-^{104}\text{Pd}$	141552	20	141523.5	1.4	-1.0	U			R12	1.5	83De51
$^{104}\text{Pd-u}$	-95938	30	-95969.5	1.4	-1.0	U			GS2	1.0	05Li24
$^{104}\text{Ag-u}$	-91410	30	-91376	5	1.1	U			GS2	1.0	05Li24 *
$^{104}\text{Cd-u}$	-90147	30	-90143.6	1.8	0.1	U			GS2	1.0	05Li24
$^{104}\text{Cd}-^{85}\text{Rb}_{1,224}$	17813.7	5.5	17825.7	1.8	2.2	U			SH1	1.0	07Ma92
	17825.5	1.9			0.1	1	89	89 ^{104}Cd	MA8	1.0	09Br09
$^{104}\text{In}-^{85}\text{Rb}_{1,224}$	26183.9	6.2				2			SH1	1.0	07Ma92
	26140.3	29.6	26184	6	1.5	U			JY1	1.0	09Ei08 *
$^{104}\text{Sn}-^{87}\text{Rb}_{1,195}$	31636.9	6.4	31634	6	-0.4	1	93	93 ^{104}Sn	JY1	1.0	09Ei07
$^{104}\text{Cd}-^{96}\text{Mo}_{1,083}$	13094.2	5.5	13092.1	1.9	-0.4	1	11	11 ^{104}Cd	JY1	1.0	09Ei08
$^{104}\text{Zr}-^{97}\text{Zr}_{1,072}$	24896	10				2			JY1	1.0	06Ha03
$^{104}\text{Nb}-^{97}\text{Zr}_{1,072}$	18352.8	2.9				2			JY1	1.0	07Ha32 *
$^{104}\text{Mo}-^{97}\text{Zr}_{1,072}$	9194.0	9.7	9195	10	0.1	1	97	97 ^{104}Mo	JY1	1.0	06Ha03
$^{104}\text{In}-^{103}\text{In}$	-1241	231	-1667	12	-1.2	U			CR2	1.5	91Sh19 *
$^{104}\text{Pd}-^{102}\text{Pd}$	-1617	30	-1572	3	1.0	U			R12	1.5	83De51
$^{104}\text{Ru}(d,\alpha)^{102}\text{Tc}$	7180	10	7188	9	0.8	1	80	79 ^{102}Tc	Pri		82De03
$^{102}\text{Ru}(t,p)^{104}\text{Ru}$	6648	30	6651.7	2.5	0.1	U			LAl		72Ca10
$^{104}\text{Ru}(d,^3\text{He})^{103}\text{Tc}$	-5289	10	-5287	9	0.2	2			VUn		83De20
$^{104}\text{Ru}(t,\alpha)^{103}\text{Tc}$	9048	30	9033	9	-0.5	2			LAl		81Fi02
$^{104}\text{Ru}(d,t)^{103}\text{Ru}-^{148}\text{Gd}(\gamma)^{147}\text{Gd}$	85	3	82.6	2.4	-0.8	1	66	55 ^{104}Ru	Jul		86Ru04 *
$^{103}\text{Rh}(n,\gamma)^{104}\text{Rh}$	6998.96	0.10	6998.96	0.08	0.0	2			MMn		81Ke03 Z
	6998.95	0.14			0.0	2			Bdn		06Fi.A
$^{103}\text{Rh}(d,p)^{104}\text{Rh}$	4786	10	4774.39	0.08	-1.2	U			MIT		64Sp12
$^{104}\text{Pd}(d,t)^{103}\text{Pd}$	-3762	25	-3724.0	2.9	1.5	U			Pit		64Co11
$^{104}\text{Sb}(p)^{103}\text{Sn}$	510	100				3					94Pa12 *
$^{104}\text{Nb}^m(\text{IT})^{104}\text{Nb}$	215	120				3			Bwg		87Gr18 *
$^{104}\text{Nb}(\beta^-)^{104}\text{Mo}$	8105	90	8531	9	4.7	B			Bwg		87Gr18
$^{104}\text{Nb}^m(\beta^-)^{104}\text{Mo}$	8320	80	8750	120	5.3	B			Bwg		87Gr18 *
$^{104}\text{Mo}(\beta^-)^{104}\text{Tc}$	4800	200	2151	24	-13.2	B					64Te02
	2155	40			-0.1	-			Bwg		87Gr18
	2160	40			-0.2	-			Jyv		94Jo.A
$^{104}\text{Tc}(\beta^-)^{104}\text{Ru}$	ave.	2158	28		-0.2	1	73	70 ^{104}Tc			average
		5620	70	5587	25	-0.5	-				78Su03
		5590	60			-0.1	-		Bwg		87Gr18
	ave.	5600	50			-0.4	1	30	30 ^{104}Tc		average
$^{104}\text{Rh}(\beta^-)^{104}\text{Pd}$	2440	30	2439.3	2.8	0.0	U					55Bu.A
$^{104}\text{Ag}(\beta^+)^{104}\text{Pd}$	4276	15	4279	4	0.2	U					60Nu02 *
	4350	200			-0.4	U					72We.A
	4306	24			-1.1	U			Dif		88Bo28 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{104}\text{Pd}(\text{p,n})^{104}\text{Ag}$	-5061	4				3					79De44
$^{104}\text{Cd}(\beta^+)^{104}\text{Ag}$	1587	60	1148	5	-7.3	B					70Mu17 *
	1403	26			-9.8	B		GSI			79PI06 *
$^{104}\text{In}(\beta^+)^{104}\text{Cd}$	7100	200	7786	6	3.4	B					78Hu06 *
	7260	250			2.1	U		Brk			83Wo04 *
	7800	250			-0.1	U		Dlf			88Bo28
	7890	120			-0.9	U		Dlf			90Re08
	7880	100			-0.9	U		GSI			98Ka.A
$^{104}\text{Sn}(\beta^+)^{104}\text{In}$	4550	300	4556	8	0.0	U					88Ba10 *
	4515	60			0.7	U		GSI			91Ke11
* $^{104}\text{Nb-u}$	$D_M = -77350(100) \mu\text{u}$ for mixture gs+m at 210(120); $M-A = -72051(93) \text{ keV}$										Nub127 **
* $^{104}\text{Ag-u}$	$M-A = -85144(28) \text{ keV}$ for mixture gs+m at 6.90 keV										Nub127 **
* $^{104}\text{In}-^{85}\text{Rb}_{1.224}$	$D_M = 26190.5(5.5) \mu\text{u}$ for mixture gs+m at 93.48 keV; $M-A = -76176.5(5.1) \text{ keV}$										Nub127 **
* $^{104}\text{Nb}-^{97}\text{Zr}_{1.072}$	Only long-lived state is measured										07Ri01 **
* $^{104}\text{In}-^{103}\text{In}$	From $^{103}\text{In}/^{104}\text{In} = 0.99038900(222)$										AHW **
* $^{104}\text{Ru}(\text{d,t})^{103}\text{Ru}-^{148}\text{Gd}$	$Q = 82(3)$ to $5/2^+$ level at 2.81 keV										Ens09a **
* $^{104}\text{Sb}(\text{p})^{103}\text{Sn}$	Below 550 keV; value and error estimated by evaluator										94Pa12 **
* $^{104}\text{Nb}^m(\text{IT})^{104}\text{Nb}$	From difference in Q_{β^-}										GAu **
* $^{104}\text{Nb}^m(\beta^-)^{104}\text{Mo}$	Better use the difference of the two Q_{β^-} 's										GAu **
* $^{104}\text{Ag}(\beta^+)^{104}\text{Pd}$	$E_{\beta^+} = 2705(15)$ from $^{104}\text{Ag}^m$ at 6.90 to 2^+ level at 555.81 keV										Ens079 **
* $^{104}\text{Ag}(\beta^+)^{104}\text{Pd}$	$E_{\beta^+} = 2012(71)$ to 4^+ level at 1323.59 keV										Ens079 **
*	and $E_{\beta^+} = 2729(24)$ from $^{104}\text{Ag}^m$ at 6.90 to 2^+ level at 555.81 keV										Ens079 **
* $^{104}\text{Cd}(\beta^+)^{104}\text{Ag}$	$p^+ = 0.011(0.003)$ $0.0019(0.0005)$ respectively, to 1^+ level at 90.6 keV; recalculated E_{β^+}										Ens079 **
* $^{104}\text{In}(\beta^+)^{104}\text{Cd}$	$E_{\beta^+} = 4600(200)$ $4750(250)$ respectively, to 4^+ level at 1492.1 keV										Ens079 **
* $^{104}\text{Sn}(\beta^+)^{104}\text{In}$	$p^+ = 0.71(0.07)$ to 1139.25 level										Ens079 **
$^{105}\text{Rh-u}$	-94378	53	-94311.5	2.7	1.3	U		GS2	1.0		05Li24 *
$\text{C}_8 \text{H}_9 - ^{105}\text{Pd}$	165357	14	165345.7	1.2	-0.3	U		M16	2.5		63Da10
	165360	9			-1.1	U		R12	1.5		83De51
$\text{C}_7 \text{N H}_7 - ^{105}\text{Pd}$	152773	18	152769.6	1.2	-0.1	U		R12	1.5		83De51
$\text{C}_6 \text{ }^{13}\text{C N H}_6 - ^{105}\text{Pd}$	148309	26	148299.4	1.2	-0.2	U		R12	1.5		83De51
$\text{C}_7 \text{ O H}_5 - ^{105}\text{Pd}$	128970	18	128960.2	1.2	-0.4	U		R12	1.5		83De51
$^{105}\text{Ag-u}$	-93534	31	-93474	5	1.9	U		GS2	1.0		05Li24 *
$^{105}\text{Cd}-^{96}\text{Mo}_{1.094}$	13748.5	5.4	13748.2	1.6	-0.1	U		JY1	1.0		09EI08
$^{105}\text{Cd}-^{85}\text{Rb}_{1.235}$	18403.4	1.5	18403.6	1.5	0.1	1	99	^{105}Cd	MA8	1.0	09Br09
$^{105}\text{In}-^{85}\text{Rb}_{1.235}$	23442	11				2		SH1	1.0		07Ma92
$^{105}\text{Sn}-^{85}\text{Rb}_{1.235}$	30204.1	7.1	30208	4	0.6	1	36	^{105}Sn	SH1	1.0	07Ma92
$^{105}\text{Sn}-^{87}\text{Rb}_{1.207}$	30890.0	5.6	30888	4	-0.4	1	58	^{105}Sn	JY1	1.0	09EI07
$^{105}\text{Zr}-^{97}\text{Zr}_{1.082}$	30359	13				2		JY1	1.0		06Ha03
$^{105}\text{Mo}-^{97}\text{Zr}_{1.082}$	13319.4	9.8	13319	10	0.0	1	98	^{105}Mo	JY1	1.0	06Ha03
$^{105}\text{Nb}-^{102}\text{Ru}_{1.029}$	23376.4	4.3				2		JY1	1.0		07Ha32
$^{105}\text{Pd}-^{104}\text{Pd}$	1049	35	1049.1	0.8	0.0	U		R12	1.5		83De51
$^{105}\text{In}-^{104}\text{In}$	-3618	144	-3712	13	-0.4	U		CR2	1.5		91Sh19 *
$^{105}\text{Te}(\alpha)^{101}\text{Sn}$	5079	50	5069	3	-0.2	U					06Se08 *
	5061.1	5.			1.6	o					06Li41 *
	5069.2	3.				3					10Da17 *
$^{104}\text{Ru}(\text{n},\gamma)^{105}\text{Ru}$	5909.9	0.5	5910.10	0.11	0.4	-					74Hr01
	5910.1	0.2			0.0	-					78Gu14
	5910.11	0.14			-0.1	-		Bdn			06Fi.A
$^{104}\text{Ru}(\text{d,p})^{105}\text{Ru}$	3684	15	3685.53	0.11	0.1	U		ANL			71Fo01
	3684.5	1.0			1.0	U		Mun			76Ma49
$^{104}\text{Ru}(\text{n},\gamma)^{105}\text{Ru}$	ave.	5910.10	0.11	5910.10	0.11	0.0	1	100	^{105}Ru		average
$^{104}\text{Pd}(\text{n},\gamma)^{105}\text{Pd}$	7094.1	0.7				2					70Bo29
$^{104}\text{Pd}(\text{d,p})^{105}\text{Pd}$	4867	20	4869.5	0.7	0.1	U		Pit			64Co11
$^{105}\text{Pd}(\text{d,t})^{104}\text{Pd}$	-851	30	-836.9	0.7	0.5	U		Pit			64Co11
$^{105}\text{Sb}(\text{p})^{104}\text{Sn}$	482.6	15.	322	22	-10.7	F		Bkp			94Ti03 *
$^{105}\text{Nb}(\beta^-)^{105}\text{Mo}$	6485	70	7431	10	13.5	B		Bwg			87Gr18
$^{105}\text{Mo}(\beta^-)^{105}\text{Tc}$	4950	45	4950	40	0.0	1	61	^{105}Tc	Bwg		87Gr18

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{105}\text{Tc}(\beta^-)^{105}\text{Ru}$	3640	55	3640	40	0.0	1	41	41 ^{105}Tc	Bwg		87Gr18
$^{105}\text{Ru}(\beta^-)^{105}\text{Rh}$	1916	4	1918.0	2.9	0.5	1	52	27 ^{105}Ru			67Sc01
$^{105}\text{Rh}(\beta^-)^{105}\text{Pd}$	570	5	567.2	2.4	-0.6	-					51Du03
	560	5			1.4	-					56La24
	568	4			-0.2	-					64Ka23
ave.	566.3	2.6			0.3	1	79	75 ^{105}Rh			average
$^{105}\text{Ag}(\epsilon)^{105}\text{Pd}$	1347	25	1347	5	0.0	U					67Pi03
	1310	25			1.5	U					67Sc26 *
$^{105}\text{Cd}(\beta^+)^{105}\text{Ag}$	2738	5	2737	4	-0.2	-					53Jo20 *
	2600	200			0.7	U					72We.A
	2742	11			-0.5	-					86Bo28 *
ave.	2739	5			-0.4	1	92	91 ^{105}Ag			average
$^{105}\text{In}(\beta^+)^{105}\text{Cd}$	5140	200	4693	10	-2.2	U			Brk		83Wo04
	4849	13			-12.0	B					86Bo28 *
$^{105}\text{Sn}(\beta^+)^{105}\text{In}$	6230	80	6303	11	0.9	U			GSI		06Ka74
* $^{105}\text{Rh-u}$	M-A=-87847(32) keV for mixture gs+m at 129.782 keV										Nub127 **
* $^{105}\text{Ag-u}$	M-A=-87113(28) keV for mixture gs+m at 25.465 keV										Ens93 **
* $^{105}\text{In-}^{104}\text{In}$	From $^{104}\text{In}^{105}\text{In}=0.99050293(139)$										AHW **
* $^{105}\text{Te}(\alpha)^{101}\text{Sn}$	$E_\alpha=4720(50)$, $4703(5)$ to $7/2^+$ level at 171.7 keV (same group as next)										Ens07a **
* $^{105}\text{Te}(\alpha)^{101}\text{Sn}$	$E_\alpha=4711(3)$ to $7/2^+$ level at 171.7 keV; also $E_\alpha=4880(20)$ to ground state										Ens07a **
* $^{105}\text{Sb}(p)^{104}\text{Sn}$	F : expected 150 protons, no proton peak observed										05Li47 **
* $^{105}\text{Ag}(\epsilon)^{105}\text{Pd}$	L/K=0.152(0.002) -> Q=222(12+theor.error) to $3/2^-$ level at 1087.96 keV										Ens05b **
* $^{105}\text{Cd}(\beta^+)^{105}\text{Ag}$	$E_{\beta^+}=1691(5)$ to $^{105}\text{Ag}^m$ at 25.479 keV										Nub127 **
* $^{105}\text{Cd}(\beta^+)^{105}\text{Ag}$	$E_{\beta^+}=1695(11)$ to $^{105}\text{Ag}^m$ at 25.479 keV										Nub127 **
* $^{105}\text{In}(\beta^+)^{105}\text{Cd}$	$E_{\beta^+}=3696(13)$ to $7/2^+$ level at 131.11 keV										Ens05b **
$^{106}\text{Zr-u}$	-62674	322	-63240#	210#	-1.2	D			GT1	1.5	04Ma.A *
$^{106}\text{Nb-u}$	-70843	258	-71068	5	-0.6	U			GT1	1.5	04Ma.A
$^{106}\text{Mo-}^{97}\text{Zr}_{1.093}$	15589.8	9.8				2			JY1	1.0	06Ha03
$\text{C}_8 \text{H}_{10-}^{106}\text{Pd}$	174764.0	4.3	174769.9	1.2	0.5	U			M16	2.5	63Da10
	174751	32			0.4	U			R12	1.5	83De51
	174766	8			0.3	U			R12	1.5	83De51
$\text{C}_7 \text{ }^{13}\text{C} \text{H}_9-^{106}\text{Pd}$	170285	32	170299.7	1.2	0.3	U			R12	1.5	83De51
	170298	30			0.0	U			R12	1.5	83De51
$\text{C}_7 \text{N} \text{H}_8-^{106}\text{Pd}$	162186	18	162193.8	1.2	0.3	U			R12	1.5	83De51
$\text{C}_7 \text{O} \text{H}_6-^{106}\text{Pd}$	138378	20	138384.4	1.2	0.2	U			R12	1.5	83De51
$^{106}\text{Pd-u}$	-96495	30	-96519.6	1.2	-0.8	U			GS2	1.0	05Li24
	-96521.0	1.9			0.5	-			TG1	1.5	12Sm01
	-96524.9	4.7			0.8	-			TG1	1.5	12Sm01
ave.	-96521.5	2.6			0.7	1	20	20 ^{106}Pd			average
$^{106}\text{Ag-u}$	-93318	44	-93336	3	-0.4	U			GS2	1.0	05Li24 *
$\text{C}_8 \text{H}_{10-}^{106}\text{Cd}$	171789.3	2.7	171790.4	1.2	0.2	U			M16	2.5	63Da10
	171841	17			-2.0	U			R12	1.5	83De51
$\text{C}_7 \text{N} \text{H}_8-^{106}\text{Cd}$	159210	15	159214.3	1.2	0.2	U			R12	1.5	83De51
$^{106}\text{Cd-u}$	-93540.6	1.7	-93540.1	1.2	0.2	-			TG1	1.5	12Sm01
	-93545.7	3.47			1.1	-			TG1	1.5	12Sm01
ave.	-93541.6	2.3			0.7	1	27	27 ^{106}Cd			average
$^{106}\text{Cd-}^{85}\text{Rb}_{1.247}$	16459.8	1.8	16458.1	1.2	-0.9	1	43	43 ^{106}Cd	MA8	1.0	09Br09
$^{106}\text{In-u}$	-86516	32	-86536	13	-0.6	U			GS2	1.0	05Li24 *
$^{106}\text{Sn-}^{85}\text{Rb}_{1.247}$	26959.4	8.7	26956	5	-0.4	1	39	39 ^{106}Sn	SH1	1.0	07Ma92
$^{106}\text{Sn-}^{87}\text{Rb}_{1.218}$	27578.0	7.6	27576	5	-0.3	1	52	52 ^{106}Sn	JY1	1.0	09EI07
$^{106}\text{Sb-}^{87}\text{Rb}_{1.218}$	39256.1	8.0				2			JY1	1.0	09EI07
$^{106}\text{Nb-}^{102}\text{Ru}_{1.039}$	28318.2	4.4				2			JY1	1.0	07Ha32
$^{106}\text{Tc-}^{102}\text{Ru}_{1.039}$	13780.7	4.7	13744	13	-7.8	F			JY1	1.0	07Ha20 *
$^{106}\text{Ru-}^{105}\text{Ru}_{1.010}$	511.8	9.1	504	6	-0.9	1	42	37 ^{106}Ru	JY1	1.0	07Ha20
$^{106}\text{Cd-}^{106}\text{Pd}$	2979.50	0.11	2979.50	0.11	0.0	1	100	70 ^{106}Pd	SH1	1.0	11Go23
	2979.08	0.60			0.5	U			TG1	1.5	12Sm01
$^{106}\text{Pd-}^{105}\text{Pd}$	-1608	25	-1599.2	0.3	0.2	U			R12	1.5	83De51

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{106}\text{Pd}-^{104}\text{Pd}$	-508	32	-550.1	0.8	-0.9	U	R12	1.5	83De51
$^{106}\text{Te}(\alpha)^{102}\text{Sn}$	4323.5	30.	4290	9	-1.1	U			81Sc17
	4290.2	9.				3			94Pa11
	4323.5	30.			-1.1	U			02Ma19
$^{106}\text{Cd}(\text{}^3\text{He}, \text{}^6\text{He})^{103}\text{Cd}$	-9173	17	-9140.9	2.1	1.9	U	MSU		78Pa11 *
$^{104}\text{Ru}(\text{t}, \text{p})^{106}\text{Ru}$	5892	20	5889	5	-0.1	U	LAI		72Ca10
$^{104}\text{Pd}(\text{}^3\text{He}, \text{p})^{106}\text{Ag}$	5153	6	5189.5	2.9	6.1	F	Bld		75An07 *
$^{106}\text{Cd}(\text{p}, \text{t})^{104}\text{Cd}$	-10802	15	-10824.6	2.0	-1.5	U	MSU		82Cr01
	-10829	12			0.4	U	Pri		83De03
	-10819	12			-0.5	U	Ors		84Ro.A
$^{105}\text{Pd}(\text{n}, \gamma)^{106}\text{Pd}$	9562.8	1.1	9560.96	0.28	-1.7	U			70Bo29
	9560.5	0.4			1.2	-	BNn		87Fo20 *
	9561.4	0.4			-1.1	-	Bdn		06Fi.A
$^{105}\text{Pd}(\text{d}, \text{p})^{106}\text{Pd}$	7349	30	7336.40	0.28	-0.4	U	Pit		64Co11
$^{106}\text{Pd}(\text{d}, \text{t})^{105}\text{Pd}$	-3311	25	-3303.73	0.28	0.3	U	Pit		64Co11
$^{105}\text{Pd}(\text{n}, \gamma)^{106}\text{Pd}$	ave. 9560.95	0.28	9560.96	0.28	0.0	1	100	96 ^{105}Pd	average
$^{105}\text{Pd}(\text{}^3\text{He}, \text{d})^{106}\text{Ag}$	322	8	320.0	2.8	-0.3	1	12	12 ^{106}Ag	Bld
$^{106}\text{Cd}(\text{d}, \text{t})^{105}\text{Cd}$	-4661	50	-4612.3	1.8	1.0	U			73De16
$^{106}\text{Cd}(\text{}^3\text{He}, \alpha)^{105}\text{Cd}$	9728	25	9708.1	1.8	-0.8	U	Man		75Ch21
$^{106}\text{Mo}(\beta^-)^{106}\text{Tc}$	3510	45	3635	15	2.8	U	Bwg		87Gr18
	3520	17			6.7	C	Bwg		92Gr.A
	3520	17			6.7	C	Jyv		94Jo.A
$^{106}\text{Tc}(\beta^-)^{106}\text{Ru}$	6545	45	6547	11	0.0	o	Bwg		87Gr18
	6547	11				2	Bwg		92Gr.A
$^{106}\text{Ru}(\beta^-)^{106}\text{Rh}$	39.2	0.3	39.40	0.21	0.7	-			50Ag01
	39.6	0.3			-0.7	-			58Gr07
	ave. 39.40	0.21			0.0	1	100	63 ^{106}Ru	average
$^{106}\text{Rh}(\beta^-)^{106}\text{Pd}$	3530	10	3546	5	1.6	-			52Al06
	3550	10			-0.4	-			58Gr07
	3550	20			-0.2	-			60Se05
	ave. 3541	7			0.7	1	64	63 ^{106}Rh	average
$^{106}\text{Rh}^m(\beta^-)^{106}\text{Pd}$	3677	10				2			66De11 *
$^{106}\text{Ag}(\beta^+)^{106}\text{Pd}$	2980	20	2965.1	2.8	-0.7	U			53Be42
	3011	72			-0.6	U			86Bo28
$^{106}\text{Ag}(\epsilon)^{106}\text{Pd}$	2961	4			1.0	-			78Ge01 *
$^{106}\text{Pd}(\text{p}, \text{n})^{106}\text{Ag}$	-3754	13	-3747.5	2.8	0.5	U	Oak		64Jo11
	-3756	5			1.7	-			79De44
$^{106}\text{Ag}(\epsilon)^{106}\text{Pd}$	ave. 2966	3	2965.1	2.8	-0.3	1	81	81 ^{106}Ag	average
$^{106}\text{In}(\beta^+)^{106}\text{Cd}$	6516	30	6524	12	0.3	2			66Ca09 *
	6507	29			0.6	2			86Bo28 *
$^{106}\text{Cd}(\text{p}, \text{n})^{106}\text{In}$	-7312.9	15.	-7306	12	0.4	2			ANL
$^{106}\text{Sn}(\beta^+)^{106}\text{In}$	3195	60	3254	13	1.0	U	GSI		79PI06 *
	3200	100			0.5	U			88Ba10
* $^{106}\text{Zr}-\text{u}$	Trends from Mass Surface TMS suggest ^{106}Zr 530 more bound								GAu **
* $^{106}\text{Ag}-\text{u}$	M-A=-86880(32) keV for mixture gs+m at 89.66 keV								Nub127 **
* $^{106}\text{In}-\text{u}$	M-A=-80575(29) keV for mixture gs+m at 28.6 keV								Nub127 **
* $^{106}\text{Tc}-^{102}\text{Ru}_{1.039}$	F : unidentified impurities in the trap								07Ha20 **
* $^{106}\text{Cd}(\text{}^3\text{He}, \text{}^6\text{He})^{103}\text{Cd}$	First excited state at 187.89 keV yields Q=-9146 keV								GAu **
* $^{104}\text{Pd}(\text{}^3\text{He}, \text{p})^{106}\text{Ag}$	F : withdrawn by authors								AHW **
* $^{105}\text{Pd}(\text{n}, \gamma)^{106}\text{Pd}$	Calculated from 13 γ energies in 2 keV n-capture to levels in ^{106}Pd ; corr. for recoil								AHW **
*									Ens086 **
* $^{106}\text{Rh}^m(\beta^-)^{106}\text{Pd}$	$E_{\beta^-}=920(10)$ to 5^+ level at 2757.06 keV								Ens086 **
* $^{106}\text{Ag}(\epsilon)^{106}\text{Pd}$	L/K=0.203(0.003) gives $Q_{\beta^+}=99(4)$, recalculated Q								AHW **
*	from $^{106}\text{Ag}^m 6^+$ at 89.66 keV to 5^+ level at 2951.84 keV								Ens086 **
* $^{106}\text{In}(\beta^+)^{106}\text{Cd}$	$E_{\beta^+}=4890(30)$ from $^{106}\text{In}^m 2^+$ at 28.6 to 2^+ level at 632.64 keV								Ens086 **
* $^{106}\text{In}(\beta^+)^{106}\text{Cd}$	$E_{\beta^+}=2965(30)$ to 6^+ level at 2491.66 keV and 4908(29) from $^{106}\text{In}^m(2^+)$ at 28.6 to 2^+ level at 632.64 keV								Ens086 **
*									Ens086 **
* $^{106}\text{Cd}(\text{p}, \text{n})^{106}\text{In}$	T=7535(15) to 2^+ level at 151.1 keV								Ens086 **
* $^{106}\text{Sn}(\beta^+)^{106}\text{In}$	$p^+=0.253(0.021)$ to 1^+ level at 893.0 keV								Ens086 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{107}\text{Nb-u}$	-68326	279	-68406	9	-0.2	U			GT1	1.5	04Ma.A
$^{107}\text{Mo}-^{97}\text{Zr}_{1.103}$	20326.7	9.9				2			JY1	1.0	06Ha03
$^{107}\text{Pd-u}$	-95013	95	-94871.8	1.3	1.5	U			GS2	1.0	05Li24 *
$\text{C}_8 \text{H}_{11}-^{107}\text{Ag}$	180986.4	3.1	180983.7	2.6	-0.3	1	11	11 ^{107}Ag	M16	2.5	63Da10
	180994	17			-0.4	U			R12	1.5	83De51
$\text{C}_7 \text{N H}_9-^{107}\text{Ag}$	168415	8	168407.7	2.6	-0.6	U			R12	1.5	83De51
$\text{C}_7 \text{O H}_7-^{107}\text{Ag}$	144595	18	144598.2	2.6	0.1	U			R12	1.5	83De51
$\text{C}_6 \text{ }^{13}\text{C O H}_6-^{107}\text{Ag}$	140131	16	140128.0	2.6	-0.1	U			R12	1.5	83De51
$\text{C}_6 \text{N O H}_5-^{107}\text{Ag}$	132025	16	132022.2	2.6	-0.1	U			R12	1.5	83De51
$^{107}\text{Cd-u}$	-93410	30	-93387.9	1.8	0.7	U			GS2	1.0	05Li24
$^{107}\text{Cd}-^{85}\text{Rb}_{1.259}$	17668.7	1.9	17668.8	1.8	0.1	1	88	88 ^{107}Cd	MA8	1.0	09Br09
$^{107}\text{In-u}$	-89710	30	-89710	12	0.0	U			GS2	1.0	05Li24
$^{107}\text{Sn}-^{87}\text{Rb}_{1.230}$	27421.6	5.7				2			JY1	1.0	09EI07
$^{107}\text{Sb}-^{87}\text{Rb}_{1.230}$	35866.2	5.8	35859	4	-1.3	1	59	59 ^{107}Sb	JY1	1.0	09EI07
$^{107}\text{Sb}-^{133}\text{Cs}_{.805}$	251.8	9.7	262	4	1.0	1	21	21 ^{107}Sb	SH1	1.0	07Ma92
$^{107}\text{Nb}-^{102}\text{Ru}_{1.049}$	31936.7	8.6				2			JY1	1.0	07Ha32
$^{107}\text{Tc}-^{105}\text{Ru}_{1.019}$	9465.8	8.9				2			JY1	1.0	07Ha20
$^{107}\text{Ru}-^{105}\text{Ru}_{1.019}$	3977.2	8.9				2			JY1	1.0	07Ha20
$^{107}\text{Sn}-^{106}\text{Sn}$	-1148	86	-1244	8	-0.7	U			CR2	1.5	92Sh.A *
$^{107}\text{Te}(\alpha)^{103}\text{Sn}$	3982.2	15.	4008	5	1.7	3					79Sc22
	4011.3	5.			-0.6	3					91He21
$^{107}\text{Ag}(p,t)^{105}\text{Ag}$	-9015	15	-8997	5	1.2	1	11	9 ^{105}Ag	Min		75Ku14 *
$^{106}\text{Pd}(n,\gamma)^{107}\text{Pd}$	6536.4	0.5	6536.4	0.5	0.1	1	99	94 ^{107}Pd	Bdn		06Fi.A
$^{107}\text{Ag}(\gamma,n)^{106}\text{Ag}$	-9353	34	-9536	4	-5.4	B			Phi		60Ge01
$^{107}\text{Ag}(p,d)^{106}\text{Ag}$	-7305	11	-7311	4	-0.6	1	10	7 ^{106}Ag	Bld		75An07
$^{107}\text{Mo}(\beta^-)^{107}\text{Tc}$	6160	60	6190	13	0.5	U			Bwg		89Gr23
$^{107}\text{Tc}(\beta^-)^{107}\text{Ru}$	4820	85	5113	12	3.4	B			Bwg		89Gr23
$^{107}\text{Ru}(\beta^-)^{107}\text{Rh}$	3140	300	3003	15	-0.5	U					62Pi02 *
	2900	135			0.8	U			Bwg		89Gr23
$^{107}\text{Rh}(\beta^-)^{107}\text{Pd}$	1510	40	1509	12	0.0	U					62Pi02 *
$^{107}\text{Pd}(\beta^-)^{107}\text{Ag}$	33	3	34.1	2.3	0.4	1	60	53 ^{107}Ag			49Pa.B
$^{107}\text{Cd}(\beta^+)^{107}\text{Ag}$	1417	4	1416.3	2.6	-0.2	1	41	30 ^{107}Ag			62La10 *
$^{107}\text{In}(\beta^+)^{107}\text{Cd}$	3426	11				2					86Bo28 *
* $^{107}\text{Pd-u}$	M-A=-88397(62) keV for mixture gs+n at 214.6 keV										Nub127 **
* $^{107}\text{Sn}-^{106}\text{Sn}$	From $^{107}\text{Sn}/^{106}\text{Sn}=1.00943053(81)$										AHW **
* $^{107}\text{Ag}(p,t)^{105}\text{Ag}$	Recalibrated with (p,t) results on ^{104}Pd , ^{105}Pd , ^{106}Pd and ^{108}Pd										AHW **
* $^{107}\text{Ru}(\beta^-)^{107}\text{Rh}$	$E_{\beta^-}=2100(300)$ to $(5/2^+, 7/2^+)$ level at 1041.950 keV										Ens085 **
* $^{107}\text{Rh}(\beta^-)^{107}\text{Pd}$	$E_{\beta^-}=840(40)$ to $5/2^+$ level at 670.06 keV										Ens085 **
* $^{107}\text{Cd}(\beta^+)^{107}\text{Ag}$	$E_{\beta^+}=302(4)$ to $^{107}\text{Ag}^m$ at 93.125 keV										Nub127 **
* $^{107}\text{In}(\beta^+)^{107}\text{Cd}$	$E_{\beta^+}=2199(11)$ to $5/2^+$ level at 204.98 keV										Ens085 **
$^{108}\text{Nb-u}$	-64413	440	-63925	9	0.7	o			GT1	1.5	04Ma.A
	-63945	112			0.1	U			GT2	1.5	08Kn.A
$^{108}\text{Nb}-^{120}\text{Sn}_{.900}$	24093.3	8.8				2			JY1	1.0	11Ha48
$^{108}\text{Mo}-^{97}\text{Zr}_{1.113}$	23144.8	9.9				2			JY1	1.0	06Ha03
$^{108}\text{Mo-u}$	-76039	215	-75967	10	0.2	U			GT1	1.5	04Ma.A
$^{108}\text{Rh}-^{120}\text{Sn}_{.900}$	-3267	15				2			JY1	1.0	07Ha20
$^{108}\text{Rh}^m-^{120}\text{Sn}_{.900}$	-3144	13				2			JY1	1.0	07Ha20
$\text{C}_8 \text{H}_{12}-^{108}\text{Pd}$	190014	6	190008.7	1.2	-0.4	U			M16	2.5	63Da10
	190005	19			0.1	U			R12	1.5	83De51
$\text{C}_7 \text{ }^{13}\text{C H}_{11}-^{108}\text{Pd}$	185532	30	185538.5	1.2	0.1	U			R12	1.5	83De51
$\text{C}_7 \text{N H}_{10}-^{108}\text{Pd}$	177422	17	177432.7	1.2	0.4	U			R12	1.5	83De51
$\text{C}_6 \text{ }^{13}\text{C N H}_9-^{108}\text{Pd}$	172943	18	172962.5	1.2	0.7	U			R12	1.5	83De51
$\text{C}_7 \text{O H}_8-^{108}\text{Pd}$	153611	17	153623.2	1.2	0.5	U			R12	1.5	83De51
$\text{C}_6 \text{N O H}_6-^{108}\text{Pd}$	141031	16	141047.2	1.2	0.7	U			R12	1.5	83De51
$^{108}\text{Pd-u}$	-96109.6	1.3	-96108.4	1.2	0.6	-			TG1	1.5	12Sm01
	-96108.1	4.7			0.0	-			TG1	1.5	12Sm01
ave.	-96109.5	1.9			0.6	1	40	40 ^{108}Pd			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{108}\text{Ag-u}$	-93973	50	-94049.7	2.6	-1.5	U			GS2	1.0	05Li24 *
$^{108}\text{Ag}-^{133}\text{Cs}_{.812}$	-17218	84	-17276.6	2.6	-0.7	U			MA8	1.0	08Br.A *
$\text{C}_8 \text{H}_{12}-^{108}\text{Cd}$	189715.6	2.9	189716.9	1.2	0.2	U			M16	2.5	63Da10
	189695	16			0.9	U			R12	1.5	83De51
$\text{C}_7 \text{N H}_{10}-^{108}\text{Cd}$	177140	30	177140.9	1.2	0.0	U			R12	1.5	83De51
$\text{C}_6 \text{ }^{13}\text{C N H}_9-^{108}\text{Cd}$	172653	15	172670.7	1.2	0.8	U			R12	1.5	83De51
$\text{C}_6 \text{ N O H}_6-^{108}\text{Cd}$	140746	15	140755.4	1.2	0.4	U			R12	1.5	83De51
$^{108}\text{Cd}-^{85}\text{Rb}_{1.271}$	16298.5	2.3	16298.7	1.2	0.1	1	28	28 ^{108}Cd	MA8	1.0	09Br09
$^{108}\text{Cd-u}$	-95818.3	1.7	-95816.6	1.2	0.7	-			TG1	1.5	12Sm01
	-95817.1	4.87			0.1	-			TG1	1.5	12Sm01
ave.	-95818.2	2.4			0.7	1	25	25 ^{108}Cd			average
$^{108}\text{In-u}$	-90277	31	-90306	9	-1.0	U			GS2	1.0	05Li24 *
$^{108}\text{Sn-u}$	-88102	32	-88106	6	-0.1	U			GS2	1.0	05Li24 *
$^{108}\text{Sn}-^{87}\text{Rb}_{1.241}$	24599.8	5.9	24601	6	0.2	1	96	96 ^{108}Sn	JY1	1.0	09EI07
$^{108}\text{Sb}-^{87}\text{Rb}_{1.241}$	34933.7	5.9				2			JY1	1.0	09EI07
$^{108}\text{Te}-^{87}\text{Rb}_{1.241}$	42085.3	6.0	42087	6	0.4	1	94	94 ^{108}Te	JY1	1.0	09EI07
$^{108}\text{Tc}-^{105}\text{Ru}_{1.029}$	13423.4	9.0				2			JY1	1.0	07Ha20
$^{108}\text{Ru}-^{105}\text{Ru}_{1.029}$	5115.7	8.9				2			JY1	1.0	07Ha20
$^{108}\text{Pd}-^{108}\text{Cd}$	-292.05	0.59	-291.8	0.8	0.3	1	87	46 ^{108}Cd	TG1	1.5	12Sm01
$^{108}\text{Sn}-^{107}\text{Sn}$	-3650	76	-3819	8	-1.5	U			CR2	1.5	92Sh.A *
$^{108}\text{Pd}-^{106}\text{Pd}$	425	40	411.2	1.7	-0.2	U			R12	1.5	83De51
$^{108}\text{Cd}-^{106}\text{Cd}$	-2232	32	-2276.5	1.7	-0.9	U			R12	1.5	83De51
$^{108}\text{Te}(\alpha)^{104}\text{Sn}$	3406.4	30.	3420	8	0.5	U					65Ma12
	3448.0	20.			-1.3	1	13	7 ^{104}Sn			81Sc17
	3444.9	4.			-6.1	B					91He21
	3406.4	25.			0.6	U					91Pa05
$^{108}\text{I}(\alpha)^{104}\text{Sb}$	4034.7	25.	4100	50	1.3	F					91Pa05 *
	4099.1	5.				4					94Pa12
$^{108}\text{Pd}(d, ^3\text{He})^{107}\text{Rh}$	-4456	12				2			Grn		86Ka43
$^{108}\text{Pd}(d,t)^{107}\text{Pd}$	-2977	30	-2965.9	1.6	0.4	U			Pit		64Co11
$^{107}\text{Ag}(n,\gamma)^{108}\text{Ag}$	7269.6	0.6	7271.41	0.17	3.0	B			ILn		85Ma54 Z
	7271.41	0.17				2			Bdn		06Fi.A
$^{107}\text{Ag}(d,p)^{108}\text{Ag}$	5051	7	5046.84	0.17	-0.6	U			MIT		67Sp09
$^{108}\text{Mo}(\beta^-)^{108}\text{Tc}$	5135	60	5158	13	0.4	U			Bwg		92Gr.A
	5120	40			1.0	o					94Jo.A
	5100	60			1.0	U					95Jo02
$^{108}\text{Tc}(\beta^-)^{108}\text{Ru}$	7720	50	7739	12	0.4	U			Bwg		89Gr23
$^{108}\text{Ru}(\beta^-)^{108}\text{Rh}$	1315	100	1373	16	0.6	U					62Pi02 *
	1420	185			-0.3	U			Bwg		89Gr23
	1380	80			-0.1	o			Jyv		92Jo05
	1350	60			0.4	U			Jyv		94Jo.A
$^{108}\text{Rh}(\beta^-)^{108}\text{Pd}$	4500	600	4492	14	0.0	U					62Pi02
	4505	105			-0.1	U			Bwg		89Gr23
$^{108}\text{Rh}^m(\beta^-)^{108}\text{Pd}$	4434	50	4607	12	3.5	B					69Pi08 *
	4510	100			1.0	U					84Bh02 *
$^{108}\text{Ag}(\beta^+)^{108}\text{Pd}$	1902	25	1917.7	2.6	0.6	U					62Fr07
$^{108}\text{Pd}(p,n)^{108}\text{Ag}$	-2675	100	-2700.0	2.6	-0.3	U			Oak		64Jo11
$^{108}\text{Ag}(\beta^-)^{108}\text{Cd}$	1650	40	1645.9	2.6	-0.1	U					60Wa10
$^{108}\text{In}(\beta^+)^{108}\text{Cd}$	5124	50	5133	9	0.2	U					62Ka23 *
	5125	14			0.5	-					86Bo28 *
$^{108}\text{Cd}(p,n)^{108}\text{In}$	-5927	12	-5915	9	1.0	-			ANL		84Fi05 *
$^{108}\text{In}(\beta^+)^{108}\text{Cd}$	ave.	5136	5133	9	-0.4	1	89	89 ^{108}In			average
$^{108}\text{Sn}(\beta^+)^{108}\text{In}$	2078	25	2050	10	-1.1	1	15	11 ^{108}In	GSI		79Pi06 *
* $^{108}\text{Ag-u}$	M-A=-87480(34) keV for mixture gs+m at 109.466 keV										
* $^{108}\text{Ag}-^{133}\text{Cs}_{.812}$	$D_M=-17159(77) \mu\text{u}$ for mixture gs+m at 109.466 keV; M-A=-87497(72) keV										
* $^{108}\text{In-u}$	M-A=-84078(28) keV for mixture gs+m at 29.75 keV										
* $^{108}\text{Sn}-^{107}\text{Sn}$	From $^{107}\text{Sn}/^{108}\text{Sn}=0.99076701(70)$										
* $^{108}\text{I}(\alpha)^{104}\text{Sb}$	F : Same authors say: Consistent with new value, if recalibrated										
* $^{108}\text{Ru}(\beta^-)^{108}\text{Rh}$	$E_{\beta^-}=1150(100)$ to 1^+ level at 164.98 keV										
* $^{108}\text{Rh}^m(\beta^-)^{108}\text{Pd}$	$E_{\beta^-}=1570(50)$ to $(4^+, 5^+, 6^+)$ level at 2863.70 keV										
* $^{108}\text{Rh}^m(\beta^-)^{108}\text{Pd}$	$E_{\beta^-}=1970(100)$ to 4^+ level at 2540.2 keV										
* $^{108}\text{In}(\beta^+)^{108}\text{Cd}$	$E_{\beta^+}=1290(80)$ to 6^+ level at 2807.81 keV, and $E_{\beta^+}=3500(50)$ from $^{108}\text{In}^m$										
*	at 29.75 to 2^+ level at 632.986 keV										
* $^{108}\text{In}(\beta^+)^{108}\text{Cd}$	$E_{\beta^+}=1887(28)$ to 4^+ level at 2239.35 keV, and $E_{\beta^+}=3494(14)$ from $^{108}\text{In}^m$										
*	at 29.75 to 2^+ level at 632.986 keV										

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
* ¹⁰⁸ Cd(p,n) ¹⁰⁸ In	Q(not -T, PrvCom Fi)=-6191(8), -6244(9), errors statistical only,								AHW **	
*	to 3 ⁺ levels at respectively, 198.36 and 266.06 keV								Ens08a **	
* ¹⁰⁸ Sn(β^+) ¹⁰⁸ In	p ⁺ =35(6) $\times 10^{-4}$ to 1 ⁺ level at 698.85 keV								Ens08a **	
¹⁰⁹ Nb-u	-60784	376			2		GT1	1.5	04Ma.A	
¹⁰⁹ Mo- ⁹⁷ Zr _{1.124}	28515	12			2		JY1	1.0	06Ha03	
¹⁰⁹ Mo-u	-71552	247	-71576	12	-0.1	U			GT1 1.5 04Ma.A	
¹⁰⁹ Rh- ¹²⁰ Sn ₉₀₈	-2463.6	7.2	-2450	4	1.9	1	37	36 ¹⁰⁹ Rh	JY1 1.0 07Ha20	
C ₈ H ₁₃ - ¹⁰⁹ Ag	196972.1	3.8	196970.1	1.4	-0.2	U			M16 2.5 63Da10	
	196972	6			-0.2	U			R12 1.5 83De51	
C ₆ ¹³ C O H ₈ - ¹⁰⁹ Ag	156110	16	156114.4	1.4	0.2	U			R12 1.5 83De51	
C ₆ N O H ₇ - ¹⁰⁹ Ag	148006	16	148008.6	1.4	0.1	U			R12 1.5 83De51	
¹⁰⁹ Ag- ¹³³ Cs ₈₂₀	-17766	83	-17715.3	1.4	0.6	U			MA8 1.0 08Br.A *	
¹⁰⁹ Cd- ⁸⁵ Rb _{1.282}	18072.9	1.9	18072.2	1.7	-0.4	1	75	75 ¹⁰⁹ Cd	MA8 1.0 09Br09	
¹⁰⁹ Sn-u	-88747	30	-88708	9	1.3	U			GS2 1.0 05Li24	
¹⁰⁹ Sb- ⁸⁷ Rb _{1.253}	31937.9	5.9	31938	6	0.0	1	92	92 ¹⁰⁹ Sb	JY1 1.0 09EI07	
¹⁰⁹ Sb- ¹³³ Cs ₈₂₀	-4360	19	-4329	6	1.6	U			SH1 1.0 07Ma92	
¹⁰⁹ Te- ⁸⁷ Rb _{1.253}	41101.6	6.4	41101	5	0.0	1	54	54 ¹⁰⁹ Te	JY1 1.0 09EI07	
¹⁰⁹ Te- ¹³³ Cs ₈₂₀	4835.6	8.3	4834	5	-0.2	1	32	32 ¹⁰⁹ Te	SH1 1.0 07Ma92	
¹⁰⁹ Tc- ¹⁰⁵ Ru _{1.038}	16014.3	10.0				2			JY1 1.0 07Ha20	
¹⁰⁹ Ru- ¹⁰⁵ Ru _{1.038}	9083.9	9.2				2			JY1 1.0 07Ha20	
¹⁰⁹ Ag- ¹⁰⁷ Ag	-335	28	-336.3	2.9	0.0	U			R12 1.5 83De51	
¹⁰⁹ Te(α) ¹⁰⁵ Sn	3197.6	30.	3198	6	0.0	U			65Ma12	
	3197.6	15.			0.0	1	13	7 ¹⁰⁹ Te	79Sc22	
	3225.6	4.			-7.0	C			91He21	
¹⁰⁹ I(α) ¹⁰⁵ Sb	3917.9	20.				3			ORa 07Ma35	
¹⁰⁹ Xe(α) ¹⁰⁵ Te	4216.8	7.				4			06Li41 *	
¹⁰⁹ Ag(p,t) ¹⁰⁷ Ag	-7995	15	-7974.1	2.7	1.4	U			Min 75Ku14 *	
¹⁰⁸ Pd(n, γ) ¹⁰⁹ Pd	6153.8	0.3	6153.59	0.15	-0.7	-			ILn 80Ca02 Z	
	6153.54	0.17			0.3	-			Bdn 06Fi.A	
¹⁰⁸ Pd(d,p) ¹⁰⁹ Pd	3936	30	3929.02	0.15	-0.2	U			Pit 64Co11	
¹⁰⁸ Pd(n, γ) ¹⁰⁹ Pd	ave.	6153.60	0.15	6153.59	0.15	-0.1	1	100	81 ¹⁰⁹ Pd	average
¹⁰⁹ Ag(γ ,n) ¹⁰⁸ Ag	-9196	26	-9184.5	2.7	0.4	U			Phi 60Ge01	
¹⁰⁹ Ag(d,t) ¹⁰⁸ Ag	-2947	30	-2927.3	2.7	0.7	U			Pit 64Co11	
¹⁰⁸ Cd(³ He,d) ¹⁰⁹ In- ¹¹⁰ Cd(¹¹¹ In)	-806.5	2.6	-806.8	2.5	-0.1	1	91	69 ¹⁰⁹ In	80Ta07	
¹⁰⁹ Te(ϵ p) ¹⁰⁸ Sn	7140	60	7066	7	-1.2	U			73Bo20	
¹⁰⁹ I(p) ¹⁰⁸ Te	819	5	819.5	1.9	0.1	2			84Fa04	
	819.6	2.0			0.0	2			92He.A	
¹⁰⁹ Tc(β^-) ¹⁰⁹ Ru	6315	70	6456	13	2.0	U			Bwg 89Gr23	
¹⁰⁹ Ru(β^-) ¹⁰⁹ Rh	4160	65	4264	10	1.6	U			Bwg 89Gr23	
¹⁰⁹ Rh(β^-) ¹⁰⁹ Pd	2577	50	2607	4	0.6	U			78Ka10 *	
¹⁰⁹ Pd(β^-) ¹⁰⁹ Ag	1116	2	1113.3	1.4	-1.4	1	50	31 ¹⁰⁹ Ag	62Br15 *	
¹⁰⁹ Cd(ϵ) ¹⁰⁹ Ag	182	3	215.5	1.8	11.2	C			68Go.A *	
	214	3			0.5	1	36	21 ¹⁰⁹ Cd	Averag *	
¹⁰⁹ In(β^+) ¹⁰⁹ Cd	2015	8	2016	4	0.2	-			62No06 *	
	2030	15			-0.9	-			71Ba08 *	
	ave.	2018	7		-0.3	1	34	31 ¹⁰⁹ In	average	
¹⁰⁹ Sn(β^+) ¹⁰⁹ In	4120	50	3857	9	-5.3	B			70Sh05	
¹⁰⁹ Sb(β^+) ¹⁰⁹ Sn	6380	16	6380	9	0.0	1	30	22 ¹⁰⁹ Sn	82Jo03 *	
* ¹⁰⁹ Ag- ¹³³ Cs ₈₂₀	$D_M=-17719(78) \mu$ for mixture gs+m at 88.0341 keV; $M-A=-88723(73) \text{ keV}$								Nub129 **	
* ¹⁰⁹ Xe(α) ¹⁰⁵ Te	Also $E_\alpha=3918(9) \text{ keV}$ to 150(13) level								06Li41 **	
* ¹⁰⁹ Ag(p,t) ¹⁰⁷ Ag	Recalibrated with (p,t) results on ¹⁰⁴ Pd, ¹⁰⁵ Pd, ¹⁰⁶ Pd and ¹⁰⁸ Pd								AHW **	
* ¹⁰⁹ Rh(β^-) ¹⁰⁹ Pd	$E_{\beta^-}=2250(50)$ to 5/2 ⁺ level at 326.869 keV								Ens062 **	
* ¹⁰⁹ Pd(β^-) ¹⁰⁹ Ag	$E_{\beta^-}=1028(2)$ to ¹⁰⁹ Ag ^m at 88.0341 keV								Nub127 **	
* ¹⁰⁹ Cd(ϵ) ¹⁰⁹ Ag	IBE=68(3) gives 94(3) to ¹⁰⁹ Ag ^m at 88.0341 keV								Nub127 **	
* ¹⁰⁹ Cd(ϵ) ¹⁰⁹ Ag	From aver. LM/K=0.2265(0.0026) -> $Q_{\beta^+}=126(3)$; recal. Q								AHW **	
*	to ¹⁰⁹ Ag ^m at 88.0341 keV								Nub127 **	
*	LMN/K=0.228(0.003)								65Le06 **	
*	L/K=0.195(0.005) -> LMN/K=0.258(0.006) -> $Q_{\beta^+}=109(5)$ not used								65Le06 **	
*	LMN/K=0.226(0.003)								70Go39 **	
* ¹⁰⁹ In(β^+) ¹⁰⁹ Cd	$E_{\beta^+}=790(8) \text{ keV}$ to 7/2 ⁺ level at 203.30 keV								Ens062 **	
* ¹⁰⁹ Sb(β^+) ¹⁰⁹ Sn	$E_{\beta^+}=4416(21) \text{ keV}$ to 3/2 ⁺ level at 925.6 keV, and other E_{β^+}								Ens062 **	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{110}\text{Mo}-^{97}\text{Zr}_{1.134}$	31685	26				2			JY1	1.0	06Ha03
$^{110}\text{Mo}-\text{u}$	-69544	268	-69296	26	0.6	U			GT1	1.5	04Ma.A
$^{110}\text{Ru}-\text{u}$	-85903	78	-85959	10	-0.7	U			JY0	1.0	03Ko.A
$^{110}\text{Rh}-\text{u}$	-88840	130	-88921	19	-0.6	U			JY0	1.0	03Ko.A *
$^{110}\text{Rh}-^{120}\text{Sn}_{9.17}$	815	110	761	19	-0.5	U			JY1	1.0	07Ha20 *
$\text{C}_8 \text{H}_{14}-^{110}\text{Pd}$	204389	9	204378.3	0.7	-0.5	U			M16	2.5	63Da10
	204380	20			-0.1	U			R12	1.5	83De51
$\text{C}_7 \text{ }^{13}\text{C} \text{H}_{13}-^{110}\text{Pd}$	199913	20	199908.1	0.7	-0.2	U			R12	1.5	83De51
$\text{C}_6 \text{N} \text{O} \text{H}_8-^{110}\text{Pd}$	155418	17	155416.7	0.7	-0.1	U			R12	1.5	83De51
$\text{C}_5 \text{ }^{13}\text{C} \text{N} \text{O} \text{H}_7-^{110}\text{Pd}$	150946	17	150946.5	0.7	0.0	U			R12	1.5	83De51
$\text{C}_6 \text{O}_2 \text{H}_6-^{110}\text{Pd}$	131609	18	131607.2	0.7	-0.1	U			R12	1.5	83De51
$^{110}\text{Pd}-\text{u}$	-94829.7	1.5	-94827.8	0.7	1.3	-			MA8	1.0	12Fi01
	-94829.5	1.7			0.7	-			TG1	1.5	12Sm01
	-94830.9	3.0			0.7	-			TG1	1.5	12Sm01
ave.	-94829.7	1.2			1.6	1	36	36 ^{110}Pd			average
$\text{C}_8 \text{H}_{14}-^{110}\text{Cd}$	206548.4	4.6	206543.8	0.6	-0.4	U			M16	2.5	63Da10
	206550	45			-0.1	U			R12	1.5	83De51
	206569	13			-1.3	U			R12	1.5	83De51
$\text{C}_7 \text{ }^{13}\text{C} \text{H}_{13}-^{110}\text{Cd}$	202093	14	202073.6	0.6	-0.9	U			R12	1.5	83De51
	202053	28			0.5	U			R12	1.5	83De51
$\text{C}_7 \text{O} \text{H}_{10}-^{110}\text{Cd}$	170156	16	170158.3	0.6	0.1	U			R12	1.5	83De51
$\text{C}_6 \text{N} \text{O} \text{H}_8-^{110}\text{Cd}$	157614	17	157582.3	0.6	-1.2	U			R12	1.5	83De51
$\text{C}_5 \text{ }^{13}\text{C} \text{N} \text{O} \text{H}_7-^{110}\text{Cd}$	153131	17	153112.1	0.6	-0.7	U			R12	1.5	83De51
$\text{C}_6 \text{O}_2 \text{H}_6-^{110}\text{Cd}$	133801	18	133772.8	0.6	-1.0	U			R12	1.5	83De51
$\text{C}_9 \text{H}_2-^{110}\text{Cd}$	112661	19	112643.5	0.6	-0.6	U			R12	1.5	83De51
$^{110}\text{Cd}-\text{u}$	-96993.6	1.5	-96993.4	0.6	0.1	-			MA8	1.0	12Fi01
	-96997.0	1.5			1.6	-			TG1	1.5	12Sm01
	-96992.2	2.4			-0.3	-			TG1	1.5	12Sm01
ave.	-96994.4	1.2			0.8	1	26	26 ^{110}Cd			average
$^{110}\text{In}-\text{u}$	-92898	36	-92830	12	1.9	U			GS2	1.0	05Li24 *
$^{110}\text{Sn}-\text{u}$	-92189	30	-92155	15	1.1	2			GS2	1.0	05Li24
$^{110}\text{Sb}-^{87}\text{Rb}_{1.264}$	31650.1	6.4				2			JY1	1.0	09EI07
$^{110}\text{Te}-^{133}\text{Cs}_{8.27}$	643.8	7.7	649	7	0.7	1	84	84 ^{110}Te	SH1	1.0	07Ma92
$^{110}\text{Tc}-^{105}\text{Ru}_{1.048}$	20424.0	9.8				2			JY1	1.0	07Ha20
$^{110}\text{Ru}-^{105}\text{Ru}_{1.048}$	10719.5	9.3	10721	9	0.2	1	97	97 ^{110}Ru	JY1	1.0	07Ha20
$^{110}\text{Cd} \text{ }^{35}\text{Cl}-^{108}\text{Cd} \text{ }^{37}\text{Cl}$	1764	5	1773.2	1.3	0.5	U			H11	4.0	63Bi12
$^{110}\text{Pd}-^{110}\text{Cd}$	2166.24	0.69	2165.6	0.6	-0.9	-			MA8	1.0	12Fi01
	2166.2	1.3			-0.3	-			TG1	1.5	12Sm01
ave.	2166.2	0.7			-1.0	1	82	63 ^{110}Pd			average
$^{110}\text{Pd}-^{108}\text{Pd}$	1288	35	1280.6	1.4	-0.1	U			R12	1.5	83De51
$^{110}\text{Cd}-^{108}\text{Cd}$	-1219	34	-1176.8	1.3	0.8	U			R12	1.5	83De51
$^{110}\text{Te}(\alpha)^{106}\text{Sn}$	2723.1	15.	2699	8	-1.6	1	25	16 ^{110}Te			81Sc17
$^{110}\text{I}(\alpha)^{106}\text{Sb}$	3574.2	10.	3580	50	0.2	3					81Sc17
	3586.7	5.			-0.1	3					91He21
$^{110}\text{Xe}(\alpha)^{106}\text{Te}$	3878.3	30.	3875	11	-0.1	4					81Sc17
	3886.6	15.			-0.7	4					92He.A
	3871.0	30.			0.1	4					02Ma19
	3857.3	19.			0.9	4			Jya		07Sa36
$^{110}\text{Pd}(\text{p,t})^{108}\text{Pd}$	-6495	15	-6468.0	1.3	1.8	U			Min		75Ku14 *
$^{110}\text{Pd}(\text{d},^3\text{He})^{109}\text{Rh}$	-5134	5	-5127	4	1.4	1	65	64 ^{109}Rh	VUn		87Ka29
$^{110}\text{Pd}(\text{t},\alpha)^{109}\text{Rh}$	9206	25	9193	4	-0.5	U			LAl		82Fl09
$^{109}\text{Ag}(\text{n},\gamma)^{110}\text{Ag}$	6809.2	0.1	6809.19	0.10	-0.1	1	100	55 ^{109}Ag			81Bo.B
	6808.20	0.16			6.2	C			Bdn		06Fi.A
$^{109}\text{Ag}(\text{d,p})^{110}\text{Ag}$	4590	5	4584.63	0.10	-1.1	U			MIT		64Sp12
$^{110}\text{Cd}(\text{d,t})^{109}\text{Cd}$	-3664	30	-3658.5	1.6	0.2	U			Pit		64Ro17
$^{110}\text{Tc}(\beta^-)^{110}\text{Ru}$	6680	120	9038	13	19.7	C			Jyv		89Jo.A
	9021	55			0.3	U			Jyv		00Kr.A
$^{110}\text{Ru}(\beta^-)^{110}\text{Rh}$	2810	50	2758	19	-1.0	1	15	12 ^{110}Rh	Jyv		91Jo11 *
$^{110}\text{Rh}(\beta^-)^{110}\text{Pd}$	5500	500	5503	18	0.0	U					63Ka21
	5400	100			1.0	U					70Pi01 *
	5510	19			-0.4	1	88	88 ^{110}Rh	Bwg		00Kr.A
$^{110}\text{Ag}(\beta^-)^{110}\text{Cd}$	2891.4	3.0	2891.0	1.3	-0.1	-					63Da03 *
	2892.9	2.0			-0.9	-					67Mo12 *
ave.	2892.4	1.7			-0.9	1	60	55 ^{110}Ag			average
$^{110}\text{In}(\beta^+)^{110}\text{Cd}$	3928	20	3878	12	-2.5	2					51Mc11 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{110}\text{In}(\beta^+)^{110}\text{Cd}$	3868	20	3878	12	0.5	2					53BI44 *
	3838	20			2.0	2					62Ka08 *
$^{110}\text{Sb}(\beta^+)^{110}\text{Sn}$	8750	200	8392	15	-1.8	U					72Mi26 *
	9085	100			-6.9	B					72Si28 *
* $^{110}\text{Rh-u}$	M-A=-82645(73) keV for mixture gs+m at 220#(150#) keV										Nub127 **
* $^{110}\text{Rh}-^{120}\text{Sn}_{917}$	$D_M=933.3(7.2) \mu\text{u}$ for mixture gs+m at 220#(150#) keV; M-A=-82675.0(7.1) keV										Nub127 **
* $^{110}\text{In-u}$	M-A=-86503(28) keV for mixture gs+m at 62.08 keV										Nub127 **
* $^{110}\text{Pd}(p,t)^{108}\text{Pd}$	Recalibrated with (p,t) results on ^{104}Pd , ^{105}Pd , ^{106}Pd and ^{108}Pd										AHW **
* $^{110}\text{Ru}(\beta^-)^{110}\text{Rh}$	$E_{\beta^-}=2700(50)$ to 1^+ level at 112.19 keV										Ens126 **
* $^{110}\text{Rh}(\beta^-)^{110}\text{Pd}$	$E_{\beta^-}=2600(100)$ to (4^+) levels at 2790.64 and 2805.03 keV										Ens126 **
* $^{110}\text{Ag}(\beta^-)^{110}\text{Cd}$	$E_{\beta^-}=529(3)$ from $^{110}\text{Ag}^n$ at 117.59 to 6^+ level at 2479.9339 keV										Ens126 **
* $^{110}\text{Ag}(\beta^-)^{110}\text{Cd}$	$E_{\beta^-}=2891(4)$; and $531(2)$ from $^{110}\text{Ag}^n$ at 117.59 to 6^+ level at 2479.9339 keV										Ens126 **
* $^{110}\text{In}(\beta^+)^{110}\text{Cd}$	$E_{\beta^+}=2310(20)$ $2250(20)$ $2220(20)$ respectively, from $^{110}\text{In}^m$ at 62.08(0.04) keV										Nub127 **
*	to 2^+ level at 657.7623 keV										Ens126 **
* $^{110}\text{Sb}(\beta^+)^{110}\text{Sn}$	$E_{\beta^+}=6500(200)$ $6850(100)$ respectively, to 2^+ level at 1211.72; and other E_{β^+}										Ens126 **
$^{111}\text{Mo-u}$	-64348	279	-64346	14	0.0	U			GT1	1.5	04Ma.A
$^{111}\text{Ru-u}$	-82308	79	-82430	10	-1.5	U			JY0	1.0	03Ko.A
$^{111}\text{Rh-u}$	-88287	79	-88358	7	-0.9	U			JY0	1.0	03Ko.A
$^{111}\text{Rh}-^{120}\text{Sn}_{925}$	2105.8	7.3				2			JY1	1.0	07Ha20
$^{111}\text{Ag-u}$	-94741	51	-94704.1	1.6	0.7	U			GS2	1.0	05Li24 *
$\text{C}_8 \text{H}_{15}-^{111}\text{Cd}$	213184.4	3.9	213192.6	0.6	0.8	U			M16	2.5	63Da10
	213197	40			-0.1	U			R12	1.5	83De51
$\text{C}_7 \text{ }^{13}\text{C} \text{H}_{14}-^{111}\text{Cd}$	208719	19	208722.4	0.6	0.1	U			R12	1.5	83De51
$\text{C}_7 \text{ O} \text{H}_{11}-^{111}\text{Cd}$	176814	16	176807.1	0.6	-0.3	U			R12	1.5	83De51
$\text{C}_9 \text{ H}_3-^{111}\text{Cd}$	119317	18	119292.2	0.6	-0.9	U			R12	1.5	83De51
$\text{C}_8 \text{ N} \text{H}-^{111}\text{Cd}$	106723	17	106716.2	0.6	-0.3	U			R12	1.5	83De51
$^{111}\text{Cd-u}$	-95774	30	-95817.1	0.6	-1.4	U			GS2	1.0	05Li24 *
$^{111}\text{Sb-u}$	-86837	30	-86782	10	1.8	U			GS2	1.0	05Li24 *
$^{111}\text{Sb}-^{133}\text{Cs}_{835}$	-7834.2	9.5				2			SH1	1.0	07Ma92
$^{111}\text{Te}-^{133}\text{Cs}_{835}$	-51.8	6.9				2			SH1	1.0	07Ma92
$^{111}\text{I}-^{87}\text{Rb}_{1.276}$	46150.4	6.1	46155	5	0.7	1	70	70 ^{111}I	JY1	1.0	09EI07
$^{111}\text{I}-^{133}\text{Cs}_{835}$	9197	19	9217	5	1.0	U			SH1	1.0	07Ma92
$^{111}\text{Tc}-^{105}\text{Ru}_{1.057}$	23412	11				2			JY1	1.0	07Ha20
$^{111}\text{Ru}-^{105}\text{Ru}_{1.057}$	15080.6	10.0				2			JY1	1.0	07Ha20
$^{110}\text{Cd} \text{H}-^{111}\text{Cd}$	6638	18	6648.77	0.18	0.4	U			R12	1.5	83De51
$^{111}\text{Mo}-^{111}\text{Tc}$	9753.0	7.3				3			JY1	1.0	11Ha48 *
$^{111}\text{Cd}-^{110}\text{Cd}$	1180	11	1176.27	0.18	-0.1	U			M16	2.5	63Da10
	1208	34			-0.6	U			R12	1.5	83De51
$^{111}\text{Cd} \text{H}-^{110}\text{Cd}$	8994	35	9001.30	0.18	0.1	U			R12	1.5	83De51
$^{111}\text{I}(\alpha)^{107}\text{Sb}$	3270.1	10.	3274	5	0.4	-					79Sc22
	3293.0	10.			-1.8	-					92He.A
ave.	3281	7			-0.9	1	50	30 ^{111}I			average
$^{111}\text{Xe}(\alpha)^{107}\text{Te}$	3693.3	25.	3720	50	0.5	4					79Sc22
	3714.1	30.			0.1	4					81Sc17
	3723.5	10.			-0.1	4					91He21
$^{110}\text{Pd}(n,\gamma)^{111}\text{Pd}$	5726.3	0.4				2			Bdn		06Fi.A
$^{110}\text{Cd}(n,\gamma)^{111}\text{Cd}$	6980	100	6975.63	0.17	0.0	U					61Ja21
	6975.5	0.5			0.3	-					86Ba72
	6975.9	0.2			-1.3	-					90Ne.B
	6975.1	0.4			1.3	-			Bdn		06Fi.A
$^{111}\text{Cd}(\gamma,n)^{110}\text{Cd}$	-6975	3	-6975.63	0.17	-0.2	U			McM		79Ba06
$^{110}\text{Cd}(d,p)^{111}\text{Cd}$	4740	30	4751.07	0.17	0.4	U			Pit		64Ro17
	4750.68	0.88			0.4	U			Rez		90Pi05 *
$^{111}\text{Cd}(d,t)^{110}\text{Cd}$	-745	30	-718.40	0.17	0.9	U			Pit		64Co11
ave.	6975.71	0.17	6975.63	0.17	-0.5	1	98	50 ^{110}Cd			average
$^{111}\text{Te}(\epsilon p)^{110}\text{Sn}$	5070	70	4966	15	-1.5	U					68Ba53
$^{111}\text{Tc}(\beta^-)^{111}\text{Ru}$	7480	80	7761	14	3.5	B			Jyv		96KL.A
	7449	80			3.9	B			Jyv		00Kr.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{111}\text{Ru}(\beta^-)^{111}\text{Rh}$	5039	50	5521	12	9.6	C			Jyv		00Kr.A
$^{111}\text{Rh}(\beta^-)^{111}\text{Pd}$	3640	50	3682	7	0.8	U			Jyv		00Kr.A
	3650	33			1.0	U			Bwg		00Kr.A
$^{111}\text{Pd}(\beta^-)^{111}\text{Ag}$	2210	100	2229.8	1.6	0.2	U					52Mc34 *
	2190	50			0.8	U					57Kn.A *
	2160	100			0.7	U					60Pr07 *
$^{111}\text{Ag}(\beta^-)^{111}\text{Cd}$	1028	3	1036.8	1.4	2.9	B					67Le06
	1035	2			0.9	2					71Na02
	1038.6	2.			-0.9	2					77Re12
$^{111}\text{Cd}(\text{p,n})^{111}\text{In}$	-1635	20	-1645	4	-0.5	U			Oak		74Ki02
$^{111}\text{Sn}(\beta^+)^{111}\text{In}$	2530	30	2451	6	-2.6	U					51Mc11
$^{111}\text{Sb}(\beta^+)^{111}\text{Sn}$	4470	50	5103	10	12.7	B					72Si28 *
* $^{111}\text{Ag-u}$	M-A=-88221(44) keV for mixture gs+m at 59.82 keV										Nub127 **
* $^{111}\text{Cd-u}$	M-A=-88817(28) keV for $^{111}\text{Cd}^m$ 11/2 ⁻ at 396.214 keV										Nub127 **
* $^{111}\text{Mo}-^{111}\text{Tc}$	Taken as low-spin isomer (see also ^{102}Y and ^{114}Tc doublets in same work)										GAu **
* $^{110}\text{Cd}(\text{d,p})^{111}\text{Cd}$	Estimated systematic error 0.5 added to statistical error 0.73 keV										AHW **
* $^{111}\text{Pd}(\beta^-)^{111}\text{Ag}$	Q_{β^-} =2150(100) 2130(50) 2100(100) respectively, to $^{111}\text{Ag}^m$ at 59.82 keV										Nub127 **
* $^{111}\text{Sb}(\beta^+)^{111}\text{Sn}$	E_{β^+} =3290(50) to 5/2 ⁺ level at 154.48 keV										Ens095 **
$^{112}\text{Tc}-^{102}\text{Ru}_{1.098}$	34976.0	5.9				2			JY1	1.0	07Ha20
$^{112}\text{Ru-u}$	-81040	78	-81191	10	-1.9	U			JY0	1.0	03Ko.A
$^{112}\text{Rh-u}$	-85514	119	-85600	50	-0.7	1	16	16 ^{112}Rh	JY0	1.0	03Ko.A *
$^{112}\text{Ag}-^{133}\text{Cs}_{.842}$	-13342.0	2.6				2			MA8	1.0	10Br02
$\text{C}_8 \text{H}_{16}-^{112}\text{Cd}$	222445.3	3.9	222437.6	0.6	-0.8	U			M16	2.5	63Da10
$\text{C}_7 \text{O H}_{12}-^{112}\text{Cd}$	186063	16	186052.1	0.6	-0.5	U			R12	1.5	83De51
$\text{C}_9 \text{H}_4-^{112}\text{Cd}$	128541	19	128537.3	0.6	-0.1	U			R12	1.5	83De51
	128550	10			-0.8	U			R12	1.5	83De51
$\text{C}_8 \text{N H}_2-^{112}\text{Cd}$	115979	14	115961.2	0.6	-0.8	U			R12	1.5	83De51
$^{112}\text{In-u}$	-94366	58	-94462	5	-1.7	U			GS2	1.0	05Li24 *
$\text{C}_8 \text{H}_{16}-^{112}\text{Sn}$	220384	9	220376.6	0.6	-0.3	U			M16	2.5	63Da10
	220385	8			-0.7	U			R13	1.5	83De51
$^{112}\text{Sn}-^{86}\text{Kr}_{1.302}$	21210.3	2.5	21208.8	0.6	-0.6	U			JY1	1.0	11Ha48
$^{112}\text{Sb-u}$	-87597	30	-87600	19	-0.1	2			GS2	1.0	05Li24
$^{112}\text{Te}-^{133}\text{Cs}_{.842}$	-3662.7	9.0				2			SH1	1.0	07Ma92
$^{112}\text{I}-^{133}\text{Cs}_{.842}$	7614	11				2			SH1	1.0	07Ma92
$^{112}\text{Rh}-^{120}\text{Sn}_{.933}$	5640	110	5650	50	0.1	1	19	19 ^{112}Rh	JY1	1.0	07Ha20 *
$^{112}\text{Pd}-^{120}\text{Sn}_{.933}$	-1423.7	7.4	-1424	7	-0.1	1	89	89 ^{112}Pd	JY1	1.0	07Ha20
$^{112}\text{Sn}-^{120}\text{Sn}_{.933}$	-3930.2	1.9	-3930.2	1.0	0.0	1	28	20 ^{120}Sn	JY1	1.0	11Ha48
$^{112}\text{Ru}-^{105}\text{Ru}_{1.067}$	17242.5	9.9				2			JY1	1.0	07Ha20
$^{112}\text{Cd } ^{35}\text{Cl}-^{110}\text{Cd } ^{37}\text{Cl}$	2701	2	2706.3	0.4	0.7	U			H11	4.0	63Bi12
$^{111}\text{Cd H}-^{112}\text{Cd}$	9255	20	9245.0	0.3	-0.3	U			R12	1.5	83De51
$^{112}\text{Sn}-^{112}\text{Cd}$	2061.01	0.17	2061.01	0.17	0.0	1	99	90 ^{112}Sn	JY1	1.0	09Ra11
$^{112}\text{Cd}-^{110}\text{Cd H}$	-8060	40	-8068.8	0.4	-0.1	U			R12	1.5	83De51
$^{112}\text{Cd}-^{111}\text{Cd}$	-1419	11	-1420.0	0.3	0.0	U			M16	2.5	63Da10
	-1410	42			-0.2	U			R12	1.5	83De51
$^{112}\text{Cd}-^{110}\text{Cd}$	-238	39	-243.7	0.4	-0.1	U			R12	1.5	83De51
$^{112}\text{Cd H}-^{111}\text{Cd}$	6402	35	6405.0	0.3	0.1	U			R12	1.5	83De51
$^{112}\text{I}(\alpha)^{108}\text{Sb}$	2987.0	30.	2957	12	-0.6	U					81Sc17
$^{112}\text{Xe}(\alpha)^{108}\text{Te}$	3329.1	20.	3330	6	0.1	2					81Sc17
	3308.5	15.			1.4	2					92He.A
	3335.4	7.			-0.7	2					94Pa11
$^{112}\text{Sn}(\text{}^3\text{He},\text{}^6\text{He})^{109}\text{Sn}$	-8686	9	-8686	8	0.0	1	78	78 ^{109}Sn	MSU		78Pa11
$^{110}\text{Pd}(\text{t,p})^{112}\text{Pd}$	5659	20	5651	7	-0.4	1	11	11 ^{112}Pd	LAI		72Ca10
$^{112}\text{Cd}(\text{}^{14}\text{C},\text{}^{16}\text{O})^{110}\text{Pd}$	5543	29	5512.6	0.6	-1.0	U			LAI		84Co19
$^{110}\text{Cd}(\text{t,p})^{112}\text{Cd}$	7888	20	7887.9	0.3	0.0	U			Ald		67Hi01
$^{112}\text{Cd}(\text{p,t})^{110}\text{Cd}$	-7891	5	-7887.9	0.3	0.6	U			Min		73Oo01
$^{112}\text{Sn}(\text{p,t})^{110}\text{Sn}$	-10485	15	-10475	14	0.7	R			Roc		70Fl08
$^{111}\text{Cd}(\text{n},\gamma)^{112}\text{Cd}$	9460	50	9394.04	0.29	-1.3	U					61Ja21
	9394.3	0.3			-0.9	1	93	52 ^{111}Cd	ILn		93Dr.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{112}\text{Cd}(\gamma,n)^{111}\text{Cd}$	-9403	5	-9394.04	0.29	1.8	U			McM		79Ba06
$^{111}\text{Cd}(\text{d,p})^{112}\text{Cd}$	7183	30	7169.48	0.29	-0.5	U			Pit		64Co11
	7170	10			-0.1	U			Yal		67Ba15
	7171	5			-0.3	U			MIT		67Sp09
$^{112}\text{Cd}(\text{d,t})^{111}\text{Cd}$	-3129	30	-3136.81	0.29	-0.3	U			Pit		64Ro17
$^{112}\text{Sn}(\text{d},^3\text{He})^{111}\text{In}$	-2050	50	-2061	4	-0.2	U			Sac		69Co03
$^{112}\text{Sn}(\text{p,d})^{111}\text{Sn}$	-8574	15	-8563	5	0.7	2			Har		70Ca01
$^{112}\text{Sn}(\text{d,t})^{111}\text{Sn}$	-4529.0	5.7	-4531	5	-0.3	2			SPa		75Be09
$^{112}\text{Cs}(\text{p})^{111}\text{Xe}$	814.3	7.	816	4	0.3	5					94Pa12
	817.3	5.			-0.2	5					12Wa10
$^{112}\text{Tc}(\beta^-)^{112}\text{Ru}$	6060	130	10374	11	33.2	C			Jyv		89Jo.A
	9484	100			8.9	C			Jyv		00Kr.A
$^{112}\text{Ru}(\beta^-)^{112}\text{Rh}$	4520	80	4100	50	-5.2	B			Jyv		91Jo11 *
$^{112}\text{Rh}(\beta^-)^{112}\text{Pd}$	6200	500	6590	40	0.8	U			Jyv		88Ay02
	6573	54			0.3	1	66	66 ^{112}Rh	Bwg		00Kr.A
$^{112}\text{Rh}^m(\beta^-)^{112}\text{Pd}$	6929	56				2			Bwg		00Kr.A
$^{112}\text{Pd}(\beta^-)^{112}\text{Ag}$	299	20	262	7	-1.9	U					55Nu11 *
$^{112}\text{Ag}(\beta^-)^{112}\text{Cd}$	4057	20	3992.1	2.5	-3.2	C					57Je.A *
	3940	40			1.3	U					62In01 *
$^{112}\text{In}(\beta^+)^{112}\text{Cd}$	2582	20	2585	4	0.1	U					62Ru05
$^{112}\text{Cd}(\text{p,n})^{112}\text{In}$	-3399.3	20.	-3367	4	1.6	U			Oak		64Jo11
	-3376	6			1.5	1	50	50 ^{112}In	Tky		80Ad04 *
$^{112}\text{In}(\beta^-)^{112}\text{Sn}$	656	6	665	4	1.5	1	50	50 ^{112}In			53Bl44
$^{112}\text{Sb}(\beta^+)^{112}\text{Sn}$	7530	100	7057	18	-4.7	B					72Mi27 *
	7029	50			0.6	R					72Si28 *
	7062	26			-0.2	R					82Jo03 *
$^{112}\text{Sn}(\text{p,n})^{112}\text{Sb}$	-7995	55	-7839	18	2.8	U			VUn		76Ka19
* $^{112}\text{Rh-u}$	Average of 2 values; M-A=-79486(37) keV for mixture gs+m at 340(70) keV										Nub127 **
* $^{112}\text{In-u}$	M-A=-87823(30) keV for mixture gs+m at 156.59 keV										Nub127 **
* $^{112}\text{Rh}-^{120}\text{Sn}_{933}$	$D_M=5822.6(7.4) \mu\text{u}$ for mixture gs+m at 340(70) keV; M-A=-79578.2(7.3) keV										Nub127 **
* $^{112}\text{Ru}(\beta^-)^{112}\text{Rh}$	$E_{\beta^-}=4190(80)$ to 1^+ level at 327.0 keV										Ens971 **
* $^{112}\text{Pd}(\beta^-)^{112}\text{Ag}$	$E_{\beta^-}=280(20)$ to 1^+ level at 18.5 keV										Ens971 **
* $^{112}\text{Ag}(\beta^-)^{112}\text{Cd}$	$E_{\beta^-}=3440(20)$ to 2^+ level at 617.520 keV										Ens971 **
* $^{112}\text{Ag}(\beta^-)^{112}\text{Cd}$	$E_{\beta^-}=3350(20)$ to 2^+ level at 617.520 keV; error increased by evaluator										Ens971 **
* $^{112}\text{Cd}(\text{p,n})^{112}\text{In}$	T=3583(6) to gs; 3376(6) to 2^+ level at 206.701 keV										Ens971 **
* $^{112}\text{Sb}(\beta^+)^{112}\text{Sn}$	$E_{\beta^+}=5200(100)$ 4750(50) 4783(26) respectively, to 2^+ level at 1256.85 keV										Ens971 **
$^{113}\text{Tc-u}$	-67633	268	-67431	4	0.5	o			GT1	1.5	04Ma.A
	-67502	106			0.4	U			GT2	1.5	08Kn.A
$^{113}\text{Tc}-^{129}\text{Xe}_{876}$	15981.0	3.6				2			JY1	1.0	11Ha48
$^{113}\text{Ru-u}$	-77038	93	-77160	40	-1.3	-			JY0	1.0	03Ko.A *
	-77240	110			0.5	o			GT2	1.5	08Kn.A
	-77290	140			0.6	-			GT2	1.5	08Su19
	ave.	90			-0.9	1	21	21 ^{113}Ru			average
$^{113}\text{Rh-u}$	-84471	83	-84561	8	-1.1	U			JY0	1.0	03Ko.A
$\text{C}_9 \text{H}_5-^{113}\text{Cd}$	134721.1	3.9	134717.0	0.4	-0.4	U			M16	2.5	63Da10
	134727	19			-0.3	U			R12	1.5	83De51
	134728	5			-1.5	U			R12	1.5	83De51
$\text{C}_7 \text{O H}_{13}-^{113}\text{Cd}$	192250	16	192231.9	0.4	-0.8	U			R12	1.5	83De51
$\text{C}_6 \text{ }^{13}\text{C O H}_{12}-^{113}\text{Cd}$	187772	17	187761.7	0.4	-0.4	U			R12	1.5	83De51
$\text{C}_8 \text{ N H}_3-^{113}\text{Cd}$	122161	19	122141.0	0.4	-0.7	U			R12	1.5	83De51
$^{113}\text{Cd-u}$	-95506	93	-95591.9	0.4	-0.9	U			GS2	1.0	05Li24 *
$\text{C}_9 \text{H}_5-^{113}\text{In}$	135015	9	135063.3	0.9	2.1	U			M16	2.5	63Da10
	135087	6			-2.6	U			R12	1.5	83De51
$\text{C}_8 \text{ N H}_3-^{113}\text{In}$	122506	14	122487.3	0.9	-0.9	U			R12	1.5	83De51
$^{113}\text{In-u}$	-95969	126	-95938.2	0.9	0.2	U			GS2	1.0	05Li24 *
$^{113}\text{Sn-u}$	-94796	39	-94824.3	1.8	-0.7	U			GS2	1.0	05Li24 *
$^{113}\text{Sb-u}$	-90635	30	-90625	18	0.3	R			GS2	1.0	05Li24

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{113}\text{Te-u}$	-84109	30				2			GS2	1.0	05Li24
$^{113}\text{I}-^{133}\text{Cs}_{.850}$	4015.9	8.6				2			SH1	1.0	07Ma92
$^{113}\text{Xe}-^{133}\text{Cs}_{.850}$	13585.5	8.1	13587	7	0.2	1	82	82 ^{113}Xe	SH1	1.0	07Ma92
$^{113}\text{Ru}-^{105}\text{Ru}_{1.076}$	22087	44	22110	40	0.5	1	79	79 ^{113}Ru	JY1	1.0	07Ha20 *
$^{113}\text{Rh}-^{120}\text{Sn}_{.942}$	7565.4	7.6				2			JY1	1.0	07Ha20
$^{113}\text{Pd}-^{120}\text{Sn}_{.942}$	2387.1	7.4				2			JY1	1.0	07Ha20
$^{113}\text{Cd } ^{35}\text{Cl}-^{111}\text{Cd } ^{37}\text{Cl}$	3174	2	3175.3	0.6	0.2	U			H11	4.0	63Bi12
$^{112}\text{Cd H}-^{113}\text{Cd}$	6164	20	6179.8	0.6	0.5	U			R12	1.5	83De51
$^{113}\text{Cd}-^{111}\text{Cd H}$	-7623	42	-7599.8	0.6	0.4	U			R12	1.5	83De51
$^{113}\text{Cd}-^{112}\text{Cd}$	1642	11	1645.3	0.6	0.1	U			M16	2.5	63Da10
	1620	40			0.4	U			R12	1.5	83De51
$^{113}\text{In}-^{112}\text{Cd}$	1297	45	1299.0	1.0	0.0	U			R12	1.5	83De51
$^{113}\text{Cd}-^{110}\text{Cd H}$	-6412	32	-6423.5	0.6	-0.2	U			R12	1.5	83De51
$^{113}\text{Cd}-^{111}\text{Cd}$	242	35	225.3	0.6	-0.3	U			R12	1.5	83De51
$^{113}\text{Cd H}-^{112}\text{Cd}$	9467	35	9470.3	0.6	0.1	U			R12	1.5	83De51
$^{113}\text{I}(\alpha)^{109}\text{Sb}$	2705.9	40.	2707	10	0.0	U					81Sc17
$^{113}\text{Xe}(\alpha)^{109}\text{Te}$	3094.8	15.	3087	8	-0.5	1	24	18 ^{113}Xe			79Sc22
$^{111}\text{Cd}(\text{t,p})^{113}\text{Cd}$	7456	20	7451.0	0.6	-0.2	U			Ald		67Hi01
$^{113}\text{Cd}(\text{p,t})^{111}\text{Cd}$	-7456	5	-7451.0	0.6	1.0	U			Min		73Oo01
$^{113}\text{In}(\text{p,t})^{111}\text{In}-^{115}\text{In}(\text{O})^{113}\text{In}$	-810	10	-804	4	0.6	1	13	11 ^{111}In	Roc		74Ma09
$^{113}\text{In}(\text{p,t})^{111}\text{In}-^{112}\text{Cd}(\text{O})^{110}\text{Cd}$	-746.3	4.1	-748	3	-0.4	1	69	69 ^{111}In	SPa		80Ta07
$^{112}\text{Cd}(\text{n},\gamma)^{113}\text{Cd}$	6550	100	6538.8	0.5	-0.1	U					61Ja21
	6542.0	0.2			-16.2	C					90Ne.A
$^{112}\text{Cd}(\text{d,p})^{113}\text{Cd}$	4318	30	4314.2	0.5	-0.1	U			Pit		64Ro17
	4315.56	0.64			-2.1	1	66	49 ^{112}Cd	Rez		90Pi05 *
$^{113}\text{Cd}(\text{d,t})^{112}\text{Cd}$	-254	30	-281.5	0.5	-0.9	U			Pit		64Co11
$^{113}\text{In}(\text{d,t})^{112}\text{In}$	-3180	25	-3189	4	-0.4	U			Pit		67Hj03
$^{112}\text{Sn}(\text{n},\gamma)^{113}\text{Sn}$	7741.9	2.3	7743.6	1.6	0.7	-			ORn		75Sl.A
$^{112}\text{Sn}(\text{d,p})^{113}\text{Sn}$	5504	25	5519.0	1.6	0.6	U			Pit		64Co11
	5518.2	3.2			0.3	-			SPa		75Be09
$^{112}\text{Sn}(\text{n},\gamma)^{113}\text{Sn}$	ave. 7742.2	1.9	7743.6	1.6	0.7	1	72	70 ^{113}Sn			average
$^{112}\text{Sn}(\text{He},\text{d})^{113}\text{Sb}$	-2400	40	-2443	17	-1.1	R			Sac		68Co22
$^{113}\text{Xe}(\text{ep})^{112}\text{Te}$	7920	150	8075	11	1.0	o					82Pi05
	8300	150			-1.5	U					05Ja10
$^{113}\text{Cs}(\text{p})^{112}\text{Xe}$	967	4	973.5	2.6	1.6	3					84Fa04
	982.7	4.			-2.3	3					92He.A
	967.6	6.			1.0	3					94Pa12
$^{113}\text{Ru}(\beta^-)^{113}\text{Rh}$	6480	50	6900	40	8.3	C			Jyv		00Kr.A
$^{113}\text{Rh}(\beta^-)^{113}\text{Pd}$	5008	50	4824	10	-3.7	C			Jyv		00Kr.A
$^{113}\text{Pd}(\beta^-)^{113}\text{Ag}$	3360	150	3435	18	0.5	U					75Br.A
	3340	35			2.7	U			Stu		90Fo07
$^{113}\text{Ag}(\beta^-)^{113}\text{Cd}$	2010	20	2016	17	0.3	2					57Je.A
	2070	150			-0.4	U					70Ma47 *
	2031	30			-0.5	2			Stu		90Fo07 *
$^{113}\text{Cd}(\beta^-)^{113}\text{In}$	326.4	15.	322.6	0.8	-0.3	U					51Ca43 *
	316.4	30.			0.2	U					54De13 *
	320	10			0.3	U			CIT		88Mi13
	344.9	21.0			-1.1	U					07Be61
	322.2	0.9			0.4	1	77	73 ^{113}In			09Da03
$^{113}\text{Sn}(\beta^+)^{113}\text{In}$	1034.6	5.0	1037.6	1.7	0.6	-					93Li10 *
$^{113}\text{In}(\text{p,n})^{113}\text{Sn}$	-1809	6	-1819.9	1.7	-1.8	-			Oak		73Ra13
$^{113}\text{Sn}(\beta^+)^{113}\text{In}$	ave. 1031	4	1037.6	1.7	1.6	1	20	16 ^{113}Sn			average
$^{113}\text{Sb}(\beta^+)^{113}\text{Sn}$	3934	30	3911	17	-0.8	2					61Se08 *
	3945	50			-0.7	2					69Ki16 *
$^{113}\text{Te}(\beta^+)^{113}\text{Sb}$	5520	300	6070	30	1.8	U					74Bu21
	5720	200			1.8	U					74Ch17
* $^{113}\text{Ru-u}$	M-A=-71695(77) keV for mixture gs+m at 130(18) keV										Nub127 **
* $^{113}\text{Ru-u}$	M-A=-71882(93) keV for mixture gs+m at 130(18) keV										Nub127 **
* $^{113}\text{Ru-u}$	M-A=-71931(120) keV for mixture gs+m at 130(18) keV										Nub127 **
* $^{113}\text{Cd-u}$	M-A=-88832(41) keV for mixture gs+m at 263.54 keV										Nub126 **
* $^{113}\text{In-u}$	M-A=-89199(30) keV for mixture gs+m at 391.699 keV										Nub126 **
* $^{113}\text{Sn-u}$	M-A=-88263(29) keV for mixture gs+m at 77.389 keV										Nub126 **
* $^{113}\text{Ru}-^{105}\text{Ru}_{1.076}$	$D_M=22157(12) \mu\text{u}$ for mixture gs+m at 130(18) keV; M-A=-71822(12) keV										Nub127 **
* $^{112}\text{Cd}(\text{d,p})^{113}\text{Cd}$	Estimated systematic error 0.5 added to statistical error 0.40										AHW **
* $^{113}\text{Ag}(\beta^-)^{113}\text{Cd}$	$E_{\beta^-}=1530(150)$ from $^{113}\text{Ag}^m$ at 43.50 to 5/2 ⁺ level at 583.962 keV										Ens106 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
* $^{113}\text{Ag}(\beta^-)^{113}\text{Cd}$	$Q_{\beta^-}=2075(30)$ from $^{113}\text{Ag}^m$ at 43.50 keV										Nub127 **
* $^{113}\text{Cd}(\beta^-)^{113}\text{In}$	$Q_{\beta^-}=590(15)$ 580(30) respectively, from $^{113}\text{Cd}^m$ at 263.54 keV										Nub127 **
* $^{113}\text{Sn}(\beta^+)^{113}\text{In}$	$Q_{\beta^+}=642.9(5.0)$ to $1/2^-$ level at 391.699 keV										Ens106 **
* $^{113}\text{Sb}(\beta^+)^{113}\text{Sn}$	$E_{\beta^+}=2420(20)$ 2430(50) respectively, to $3/2^+$ level at 498.06 keV,										Ens106 **
*	plus 6% to $5/2^+$ at 409.83 keV										Ens106 **
$^{114}\text{Tc-u}$	-62459	365	-63090#	110#	-1.2	U			GT1	1.5	04Ma.A
$^{114}\text{Ru}-^{105}\text{Ru}_{1,086}$	24805	13	24800	5	-0.4	U			JY1	1.0	07Ha20
$^{114}\text{Ru-u}$	-75642	236	-75386	4	0.7	U			GT1	1.5	04Ma.A
$^{114}\text{Rh-u}$	-81200	120	-81280	80	-0.7	1	41	41 ^{114}Rh	JY0	1.0	03Ko.A *
$^{114}\text{Ag}-^{133}\text{Cs}_{,857}$	-10149.3	4.9				2			MA8	1.0	10Br02
$\text{C}_8 \text{H}_{18}-^{114}\text{Cd}$	237487.6	4.	237485.5	0.4	-0.2	U			M16	2.5	63Da10
$\text{C}_6 \text{O}_2 \text{H}_{10}-^{114}\text{Cd}$	164713	15	164714.5	0.4	0.1	U			R12	1.5	83De51
	164711	15			0.2	U			R12	1.5	83De51
$\text{C}_9 \text{H}_6-^{114}\text{Cd}$	143591	5	143585.1	0.4	-0.8	U			R12	1.5	83De51
	143586	8			-0.1	U			R12	1.5	83De51
$\text{C}_8 \text{ }^{13}\text{C} \text{H}_5-^{114}\text{Cd}$	139117	17	139114.9	0.4	-0.1	U			R12	1.5	83De51
$\text{C}_8 \text{N} \text{H}_4-^{114}\text{Cd}$	131017	12	131009.0	0.4	-0.4	U			R12	1.5	83De51
	131009	20			0.0	U			R12	1.5	83De51
$^{114}\text{Cd}-^{133}\text{Cs}_{,857}$	-15611.4	4.2	-15607.2	0.4	1.0	U			MA8	1.0	10Br02
$^{114}\text{In-u}$	-94986	68	-95082.1	0.9	-1.4	U			GS2	1.0	05Li24 *
$\text{C}_8 \text{H}_{18}-^{114}\text{Sn}$	238092	10	238067.9	1.0	-1.0	U			M16	2.5	63Da10
	238066	8			0.2	U			R13	1.5	83De51
$^{114}\text{Sb-u}$	-90731	30	-90710	23	0.7	1	61	61 ^{114}Sb	GS2	1.0	05Li24
$^{114}\text{Te-u}$	-87911	30				2			GS2	1.0	05Li24
$^{114}\text{Xe}-^{133}\text{Cs}_{,857}$	9008	12				2			MA6	1.0	04Di18
$^{114}\text{Ru}-^{120}\text{Sn}_{,950}$	17522.0	3.7				2			JY1	1.0	11Ha48
$^{114}\text{Rh}-^{120}\text{Sn}_{,950}$	11570	100	11630	80	0.6	1	59	59 ^{114}Rh	JY1	1.0	07Ha20 *
$^{114}\text{Pd}-^{120}\text{Sn}_{,950}$	3277.0	7.4				2			JY1	1.0	07Ha20
$^{114}\text{Cd} \text{ }^{35}\text{Cl}-^{112}\text{Cd} \text{ }^{37}\text{Cl}$	3546	3	3552.3	0.6	0.5	U			H11	4.0	63Bi12
	3547	3			0.7	U			H20	2.5	66Ma05
	3548.5	1.0			1.5	U			H26	2.5	73Me28
$^{113}\text{Cd} \text{H}-^{114}\text{Cd}$	8859	18	8868.08	0.15	0.3	U			R12	1.5	83De51
$^{114}\text{Tc}^m-^{114}\text{Ru}$	12651	13				3			JY1	1.0	11Ha48 *
$^{114}\text{Cd}-^{112}\text{Cd} \text{H}$	-7225	33	-7222.8	0.6	0.0	U			R12	1.5	83De51
$^{114}\text{Cd}-^{113}\text{Cd}$	-1040	11	-1043.05	0.15	-0.1	U			M16	2.5	63Da10
	-1032	33			-0.2	U			R12	1.5	83De51
$^{114}\text{Cd}-^{113}\text{In}$	-679	45	-696.8	0.9	-0.3	U			R12	1.5	83De51
$^{114}\text{Cd}-^{111}\text{Cd} \text{H}$	-8651	35	-8642.8	0.6	0.2	U			R12	1.5	83De51
$^{114}\text{Cd}-^{112}\text{Cd}$	587	33	602.2	0.6	0.3	U			R12	1.5	83De51
$^{114}\text{Cd} \text{H}-^{113}\text{Cd}$	6821	35	6781.99	0.15	-0.7	U			R12	1.5	83De51
$^{114}\text{Ba}(\gamma,^{12}\text{C})^{102}\text{Sn}$	18110	780	18970	40	1.1	U					95Gu01
$^{114}\text{Cs}(\alpha)^{110}\text{I}$	3343.5	30.	3360	50	0.3	o			GSa		80Ro04
	3357.0	30.				4			GSa		81Sc17
$^{114}\text{Ba}(\alpha)^{110}\text{Xe}$	3534.2	40.				5					02Ma19
$^{112}\text{Cd}(\text{t,p})^{114}\text{Cd}$	7105	20	7099.9	0.5	-0.3	U			Ald		67Hi01
$^{114}\text{Cd}(\text{p,t})^{112}\text{Cd}$	-7106	5	-7099.9	0.5	1.2	U			Min		73Oo01
$^{112}\text{Sn}(\text{t,p})^{114}\text{Sn}$	9579	15	9562.2	1.0	-1.1	U			Ald		69Bj01
$^{114}\text{Sn}(\text{p,t})^{112}\text{Sn}$	-9582	15	-9562.2	1.0	1.3	U			Roc		70Fi08
$^{113}\text{Cd}(\text{n},\gamma)^{114}\text{Cd}$	9042.76	0.20	9042.91	0.14	0.7	-			ILn		79Br25 Z
	9043.18	0.19			-1.4	-			Bdn		06Fi.A
$^{114}\text{Cd}(\gamma,\text{n})^{113}\text{Cd}$	-9050	4	-9042.91	0.14	1.8	U			McM		79Ba06
$^{113}\text{Cd}(\text{d,p})^{114}\text{Cd}$	6817	30	6818.34	0.14	0.0	U			Pit		64Co11
	6822	8			-0.5	U			MIT		67Co15
$^{114}\text{Cd}(\text{d,t})^{113}\text{Cd}$	-2801	30	-2785.68	0.14	0.5	U			Pit		64Ro17
$^{113}\text{Cd}(\text{n},\gamma)^{114}\text{Cd}$	ave.	9042.98	0.14	9042.91	0.14	-0.5	1	98	79 ^{113}Cd		average
$^{113}\text{In}(\text{n},\gamma)^{114}\text{In}$	7274.0	1.2	7273.89	0.27	-0.1	U					75Ra07 Z
	7273.83	0.27			0.2	1	98	76 ^{114}In	Bdn		06Fi.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{113}\text{In}(\text{d,p})^{114}\text{In}$	5082	25	5049.33	0.27	-1.3	U			Pit		67Hj03	
$^{114}\text{Sn}(\text{d},^3\text{He})^{113}\text{In}$	-2980	50	-2987.0	0.7	-0.1	U			Sac		69Co03	
$^{114}\text{Sn}(\text{p,d})^{113}\text{Sn}$	-8101	15	-8075.8	1.7	1.7	U			Har		70Ca01	
$^{114}\text{Sn}(\text{d,t})^{113}\text{Sn}$	-4052	20	-4043.2	1.7	0.4	U			Pit		64Co11	
	-4043.7	4.2			0.1	1	17	14	^{113}Sn	SPa	75Be09	
$^{114}\text{Cs}(\text{ep})^{113}\text{I}$	8730	150	9150	70	2.8	B					82Pi05	
$^{114}\text{Ru}(\beta^-)^{114}\text{Rh}$	6100	200	5490	70	-3.0	B			Jyv		92Jo05 *	
	6120	200			-3.1	C			Jyv		94Jo.A	
$^{114}\text{Rh}(\beta^-)^{114}\text{Pd}$	6500	500	7780	70	2.6	U			Jyv		88Ay02	
	7392	53			7.3	C			Jyv		00Kr.A	
$^{114}\text{Pd}(\beta^-)^{114}\text{Ag}$	1450	100	1440	8	-0.1	U					75Br.A	
	1450	100			-0.1	o			Jyv		89Ay.A	
	1450	100			-0.1	o			Jyv		89Ko22	
	1414	30			0.9	U			Stu		90Fo07	
	1451	25			-0.5	U			Jyv		94Jo.A	
$^{114}\text{Ag}(\beta^-)^{114}\text{Cd}$	4850	150	5084	5	1.6	U					71Ro19	
	4900	260			0.7	U					72Wa06	
	5160	110			-0.7	o			Stu		84Lu02	
	5018	35			1.9	U			Stu		90Fo07	
$^{114}\text{In}(\beta^+)^{114}\text{Cd}$	1422	25	1446.4	0.8	1.0	U					56Gr35	
	1417	20			1.5	U					57Dz64	
$^{114}\text{In}(\beta^-)^{114}\text{Sn}$	1987	2	1988.9	0.6	1.0	-					61Da01	
	1989	1			-0.1	-					61Ni02	
	1980	2			4.5	B					64An12	
	1988.5	1.0			0.4	-					68Ze04	
ave.	1988.6	0.7			0.6	1	89	65	^{114}Sn		average	
$^{114}\text{Sb}(\beta^+)^{114}\text{Sn}$	5690	100	6062	22	3.7	C					69Bu.A *	
	6370	100			-3.1	B					72Mi27 *	
$^{114}\text{Sn}(\text{p,n})^{114}\text{Sb}$	-6875	35	-6844	22	0.9	1	39	39	^{114}Sb	VUn	76Ka19	
* $^{114}\text{Rh-u}$	Average of 2 values; M-A=-75537(60) keV for mixture gs+m at 200#150 keV										Nub127 **	
* $^{114}\text{In-u}$	M-A=-88384(31) keV for mixture gs+m at 190.2682 keV										Nub126 **	
* $^{114}\text{Rh}-^{120}\text{Sn}_{950}$	$D_M=11678.0(7.8) \mu\text{u}$ for mixture gs+m at 200#150 keV; M-A=-75672.8(7.6) keV										Nub127 **	
* $^{114}\text{Tc}^m-^{114}\text{Ru}$	Mixture of two isomeric states with stronger component of low-spin state										11Ri01 **	
*	however, estimates from TMS suggest this is $^{114}\text{Tc}^m$										GAu **	
* $^{114}\text{Ru}(\beta^-)^{114}\text{Rh}$	$E_{\beta^-}=5910(120)$ doublet to $(2)^+$ level at 127.0, 1^+ at 255.2 keV										Ens031 **	
* $^{114}\text{Sb}(\beta^+)^{114}\text{Sn}$	$E_{\beta^+}=3365(50)$ to 2^+ at 1299.92, original error doubled see $^{114}\text{Sn}(\text{p,n})$										Ens031 **	
* $^{114}\text{Sb}(\beta^+)^{114}\text{Sn}$	$E_{\beta^+}=4050(100)$ to 2^+ at 1299.92 level, see $^{112}\text{Sb}(\beta^+)$										Ens031 **	
$^{115}\text{Rh-u}$	-79671	85	-79688	8	-0.2	U			JY0	1.0	03Ko.A	
$^{115}\text{Ag}-^{133}\text{Cs}_{865}$	-9439	24	-9449	20	-0.4	1	67	67	^{115}Ag	MA8	1.0	10Br02 *
$\text{C}_9 \text{H}_7-^{115}\text{In}$	150910	8	150896.449	0.013	-0.7	U			M16	2.5	63Da10	
	150932	16			-1.5	U			R12	1.5	83De51	
$\text{C}_6 \text{O}_2 \text{H}_{11}-^{115}\text{In}$	172055	16	172025.817	0.013	-1.2	U			R12	1.5	83De51	
$\text{C}_8 \text{N H}_5-^{115}\text{In}$	138355	13	138320.389	0.013	-1.8	U			R12	1.5	83De51	
$^{115}\text{In-u}$	-96095	30	-96121.224	0.013	-0.9	U			GS2	1.0	05Li24	
$\text{C}_9 \text{H}_7-^{115}\text{Sn}$	151411	8	151430.526	0.016	1.0	U			M16	2.5	63Da10	
	151440	8			-0.8	U			R13	1.5	83De51	
$^{115}\text{Sb-u}$	-93402	30	-93402	17	0.0	2			GS2	1.0	05Li24	
$^{115}\text{Te-u}$	-88098	30				2			GS2	1.0	05Li24 *	
$^{115}\text{I-u}$	-81952	31				2			GS2	1.0	05Li24	
$^{115}\text{Xe}-^{133}\text{Cs}_{865}$	8078	13				2			MA6	1.0	04Di18	
$^{115}\text{Ru}-^{120}\text{Sn}_{958}$	22633	95	22510	70	-1.3	1	56	56	^{115}Ru	JY1	1.0	07Ha20 *
$^{115}\text{Rh}-^{120}\text{Sn}_{958}$	14001.6	7.8	14002	8	0.1	1	100	100	^{115}Rh	JY1	1.0	07Ha20
$^{115}\text{Pd}-^{120}\text{Sn}_{958}$	7347	15	7349	15	0.2	1	94	94	^{115}Pd	JY1	1.0	07Ha20 *
$^{115}\text{Sn}-^{120}\text{Sn}_{958}$	-2963.9	2.0	-2964.5	0.9	-0.3	1	22	22	^{120}Sn	JY1	1.0	11Ha48
$^{115}\text{In}-^{115}\text{Sn}$	534.0768	0.0104	534.077	0.010	0.0	1	100	100	^{115}Sn	FS1	1.0	09Mo23
	534.28	0.18			-1.1	U			JY1	1.0	09Wi10	
$^{115}\text{In}-^{114}\text{Cd}$	483	45	513.7	0.4	0.5	U			R12	1.5	83De51	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{115}\text{Sn}-^{114}\text{Sn}$	573	11	562.0	1.0	-0.4	U			M16	2.5	63Da10
$^{115}\text{In}-^{113}\text{In}$	-200	28	-183.1	0.9	0.4	U			R12	1.5	83De51
$^{115}\text{In}-^{129}\text{Xe}$	-902.0845	0.0111	-902.085	0.011	0.0	1	100	100 ^{115}In	FS1	1.0	09Mo23
$^{115}\text{Sn}-^{129}\text{Xe}$	-1436.1613	0.0130	-1436.162	0.015	0.0	o			FS1	1.0	09Mo23 *
$^{113}\text{Cd}(t,p)^{115}\text{Cd}$	6702	20	6702.0	0.6	0.0	U			Ald		67Hi01
$^{114}\text{Cd}(n,\gamma)^{115}\text{Cd}$	6160	100	6140.9	0.6	-0.2	U					61Ja21
$^{114}\text{Cd}(d,p)^{115}\text{Cd}$	3923	30	3916.3	0.6	-0.2	U			Pit		64Ro17
	3929	20			-0.6	U			Oak		64Si18
	3916.30	0.59			0.0	1	100	100 ^{115}Cd	Rez		90Pi05 *
$^{114}\text{Cd}(^3\text{He,d})^{115}\text{In}$	1320	15	1317.0	0.4	-0.2	U					70Th.A
$^{115}\text{In}(\gamma,n)^{114}\text{In}$	-9025	29	-9039.3	0.9	-0.5	U			Phi		60Ge01
	-9039	5			-0.1	U			McM		79Ba06
$^{115}\text{In}(d,t)^{114}\text{In}$	-2789	30	-2782.0	0.9	0.2	U			Pit		64Co11
	-2766	25			-0.6	U			Pit		67Hj03
$^{114}\text{Sn}(n,\gamma)^{115}\text{Sn}$	7545.5	2.0	7547.8	1.0	1.2	-			ORn		78Ra16 Z
$^{114}\text{Sn}(d,p)^{115}\text{Sn}$	5329	25	5323.2	1.0	-0.2	U			Pit		64Co11
	5320.6	3.4			0.8	-			SPa		75Be09
$^{115}\text{Sn}(d,t)^{114}\text{Sn}$	-1304	30	-1290.6	1.0	0.4	U			Pit		64Co11
$^{114}\text{Sn}(n,\gamma)^{115}\text{Sn}$	ave. 7545.4	1.7	7547.8	1.0	1.4	1	32	32 ^{114}Sn			average
$^{115}\text{Xe}(\epsilon p)^{114}\text{Te}$	6200	130	5940	30	-2.0	U					72Ho18
$^{115}\text{Ru}(\beta^-)^{115}\text{Rh}$	7780	100	7930	70	1.5	1	44	44 ^{115}Ru	Jyv		00Kr.A
$^{115}\text{Rh}(\beta^-)^{115}\text{Pd}$	6000	500	6197	15	0.4	U			Jyv		88Ay01
	6566	50			-7.4	C			Jyv		00Kr.A
$^{115}\text{Pd}(\beta^-)^{115}\text{Ag}$	4584	50	4556	22	-0.6	1	19	12 ^{115}Ag	Stu		90Fo07
$^{115}\text{Ag}(\beta^-)^{115}\text{Cd}$	3180	100	3102	18	-0.8	U					64Ba36 *
	3105	100			0.0	U					78Ma18 *
	3091	40			0.3	1	21	21 ^{115}Ag			90Fo07 *
$^{115}\text{Cd}(\beta^-)^{115}\text{In}$	1460	4	1452.0	0.7	-2.0	U					74Bo26 *
	1431	5			4.2	B					75Bo29 *
	1440	2			6.0	B					76Ra16 *
$^{115}\text{In}(\beta^-)^{115}\text{Sn}$	494	20	497.490	0.010	0.2	U					49Be53 *
	630	30			-4.4	B					50Ma76
	625	70			-1.8	U					61Be15
	494	30			0.1	U					62Se03 *
	480	30			0.6	U					62Wa15
	495	20			0.1	U					72Mu02
	482	15			1.0	U					78Pf01 *
$^{115}\text{Sb}(\beta^+)^{115}\text{Sn}$	3030	20	3030	16	0.0	R					61Se08 *
* $^{115}\text{Ag}-^{133}\text{Cs}_{.865}$	$D_M=-9416.7(9.2) \mu\text{u}$ for ground state or $^{115}\text{Ag}^m$ at 41.16 keV; $M-A=-84952.9(8.6)$ keV										
* $^{115}\text{Te}-u$	$M-A=-82058(28)$ keV for mixture gs+m at 10(7) keV										
* $^{115}\text{Ru}-^{120}\text{Sn}_{.958}$	$D_M=22767.3(7.3) \mu\text{u}$ for mixture gs+m at 250#(100#); $M-A=-66072.0(7.2)$ keV										
* $^{115}\text{Pd}-^{120}\text{Sn}_{.958}$	$D_M=7348(15), 7442(15) \mu\text{u}$ for ground state, 89.18 level										
* $^{115}\text{Sn}-^{129}\text{Xe}$	Used are the equations for the $^{115}\text{In}-^{129}\text{Xe}$ and $^{115}\text{In}-^{115}\text{Sn}$ doublets										
* $^{114}\text{Cd}(d,p)^{115}\text{Cd}$	Estimated systematic error 0.5 added to statistical error 0.32 keV										
* $^{115}\text{Ag}(\beta^-)^{115}\text{Cd}$	$E_{\beta^-}=2950(100)$ to $3/2^+$ level at 229.1 keV, and other E_{β^-}										
* $^{115}\text{Ag}(\beta^-)^{115}\text{Cd}$	$E_{\beta^-}=721(100)$ to $23/2^-$ level at 2383.5 keV, and other E_{β^-}										
* $^{115}\text{Ag}(\beta^-)^{115}\text{Cd}$	$Q_{\beta^-}=3132(40)$ from $^{115}\text{Ag}^m$ at 41.16 keV										
* $^{115}\text{Cd}(\beta^-)^{115}\text{In}$	$E_{\beta^-}=593(2), 636(2)$ to $1/2^+$ level at 864.139, $3/2^+$ at 828.588 keV										
* $^{115}\text{Cd}(\beta^-)^{115}\text{In}$	$E_{\beta^-}=320(5), 679(6)$ from $^{115}\text{Cd}^m$ 181.0 to $13/2^+$ 1290.592, $7/2^-$ 933.780										
* $^{115}\text{Cd}(\beta^-)^{115}\text{In}$	$Q_{\beta^-}=1621(2)$ from $^{115}\text{Cd}^m$ at 181.0 keV										
* $^{115}\text{In}(\beta^-)^{115}\text{Sn}$	$Q_{\beta^-}=830(20)$ from $^{115}\text{In}^m$ at 336.244 keV										
* $^{115}\text{In}(\beta^-)^{115}\text{Sn}$	$Q_{\beta^-}=830(30)$ from $^{115}\text{In}^m$ at 336.244 keV										
* $^{115}\text{In}(\beta^-)^{115}\text{Sn}$	Q_{β^-} is larger than first excitation energy 497.334(0.023) in ^{115}Sn										
* $^{115}\text{Sb}(\beta^+)^{115}\text{Sn}$	$E_{\beta^+}=1510(20)$ to $3/2^+$ level at 497.334 keV										
$^{116}\text{Ru}-^{129}\text{Xe}_{.899}$	16821.2	4.0							JY1	1.0	11Ha48
$^{116}\text{Rh}-u$	-75940	140	-75940	80	0.0	-			JY0	1.0	03Ko.A *
	-75960	140			0.1	-			GT2	1.5	08Kn.A *
ave.	-75950	120			0.0	1	42	42 ^{116}Rh			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{116}\text{Ag}-^{133}\text{Cs}_{.872}$	-6167.3	3.5					MA8	1.0	10Br02		
$\text{C}_9 \text{H}_8-^{116}\text{Cd}$	157837.4	2.9	157837.11	0.17	0.0	U	M16	2.5	63Da10		
	157851	5			-1.9	U	R12	1.5	83De51		
	157846	22			-0.3	U	R12	1.5	83De51		
$\text{C}_6 \text{O}_2 \text{H}_{12}-^{116}\text{Cd}$	178982	15	178966.48	0.17	-0.7	U	R12	1.5	83De51		
$\text{C}_8 \text{ }^{13}\text{C} \text{H}_7-^{116}\text{Cd}$	153376	8	153366.91	0.17	-0.8	U	R12	1.5	83De51		
	153382	22			-0.5	U	R12	1.5	83De51		
$\text{C}_8 \text{N} \text{H}_6-^{116}\text{Cd}$	145262	17	145261.05	0.17	0.0	U	R12	1.5	83De51		
$\text{C}_9 \text{H}_8-^{116}\text{Sn}$	160861	8	160857.46	0.10	-0.2	U	M16	2.5	63Da10		
	160857	8			0.0	U	R13	1.5	83De51		
$^{116}\text{Sb-u}$	-93128	129	-93207	6	-0.6	U	GS2	1.0	05Li24 *		
$^{116}\text{Te-u}$	-91540	30				2	GS2	1.0	05Li24		
$^{116}\text{Xe}-^{133}\text{Cs}_{.872}$	4027	14				2	MA6	1.0	04Di18		
$^{116}\text{Rh}-^{120}\text{Sn}_{.967}$	18633	100	18630	80	0.0	1	58	58 ^{116}Rh	JY1	1.0	07Ha20 *
$^{116}\text{Pd}-^{120}\text{Sn}_{.967}$	8868.0	7.6				2			JY1	1.0	07Ha20
$^{116}\text{Cd }^{35}\text{Cl}-^{114}\text{Cd }^{37}\text{Cl}$	4353	3	4348.1	0.4	-0.4	U			H11	4.0	63Bi12
	4344	2			0.8	U			H20	2.5	66Ma05
	4348.7	1.2			-0.2	o			H26	2.5	73Me28
	4347.46	0.44			1.5	1	84	81 ^{114}Cd	H49	1.0	10Mc04
$^{116}\text{Cd}-^{116}\text{Sn}$	3020.42	0.14	3020.35	0.14	-0.5	1	98	98 ^{116}Cd	JY1	1.0	11Ra24
$^{116}\text{Cd}-^{114}\text{Cd} \text{H}$	-6452	32	-6427.0	0.4	0.5	U			R12	1.5	83De51
$^{116}\text{Sn}-^{115}\text{Sn}$	-1602	11	-1601.90	0.10	0.0	U			M16	2.5	63Da10
$^{116}\text{Cd}-^{113}\text{Cd} \text{H}$	-7458	32	-7470.0	0.4	-0.3	U			R12	1.5	83De51
$^{116}\text{Cd}-^{114}\text{Cd}$	1370	32	1398.1	0.4	0.6	U			R12	1.5	83De51
$^{116}\text{Cs}(\epsilon\alpha)^{112}\text{Te}$	12300	400	13080#	100#	1.9	D					77Bo28
	12400	900			0.8	D					76Jo.A *
$^{116}\text{Cd}(^{14}\text{C}, ^{16}\text{O})^{114}\text{Pd}$	2497	29	2535	7	1.3	U			LAI		84Co19
$^{114}\text{Cd}(t,p)^{116}\text{Cd}$	6362	20	6358.5	0.4	-0.2	U			Ald		67Hi01
$^{116}\text{Cd}(p,t)^{114}\text{Cd}$	-6363	5	-6358.5	0.4	0.9	U			Min		73Oo01
$^{116}\text{Sn}(p,t)^{114}\text{Sn}$	-8619	15	-8629.5	1.0	-0.7	U			Roc		70FI08
$^{116}\text{Cd}(\gamma,n)^{115}\text{Cd}$	-8702	4	-8699.5	0.7	0.6	U			McM		79Ba06
$^{116}\text{Cd}(d,t)^{115}\text{Cd}$	-2458	30	-2442.3	0.7	0.5	U			Pit		64Ro17
$^{115}\text{In}(n,\gamma)^{116}\text{In}$	6783.8	1.2	6784.72	0.22	0.8	U					72Ra39 Z
	6784.4	1.1			0.3	U					74Co35
	6784.72	0.22				2			Bdn		06Fi.A
$^{115}\text{In}(d,p)^{116}\text{In}$	4494	25	4560.15	0.22	2.6	U			Pit		64Co11
	4580	30			-0.7	U			Pit		67Hj03
$^{116}\text{Sn}(d, ^3\text{He})^{115}\text{In}$	-3740	50	-3785.15	0.10	-0.9	U			Sac		69Co03
$^{115}\text{Sn}(n,\gamma)^{116}\text{Sn}$	9562.2	1.5	9563.48	0.09	0.9	U					72Mc08
	9563.5	0.5			0.0	U					84Ga.B
	9563.41	0.11			0.6	-			ORn		91Ra01 Z
	9563.55	0.19			-0.4	-			Bdn		06Fi.A
$^{115}\text{Sn}(d,p)^{116}\text{Sn}$	7358	30	7338.91	0.09	-0.6	U			Pit		64Co11
$^{116}\text{Sn}(p,d)^{115}\text{Sn}$	-7344	15	-7338.91	0.09	0.3	U			Har		70Ca01
$^{116}\text{Sn}(d,t)^{115}\text{Sn}$	-3309	20	-3306.25	0.09	0.1	U			Pit		64Co11
	-3305.0	2.5			-0.5	U			SPa		75Be09
$^{115}\text{Sn}(n,\gamma)^{116}\text{Sn}$	ave. 9563.45	0.10	9563.48	0.09	0.4	1	99	99 ^{116}Sn			average
$^{115}\text{Sn}(^3\text{He},d)^{116}\text{Sb}-^{120}\text{Sn}(^0)^{121}\text{Sb}$	-1722	10	-1712	6	1.0	1	31	25 ^{116}Sb	VUn		78Ka12
$^{116}\text{Cs}(\epsilon p)^{115}\text{I}$	6350	300	6990#	100#	2.1	U					78Da07 *
$^{116}\text{Rh}(\beta^-)^{116}\text{Pd}$	8000	500	9090	70	2.2	U			Jyv		88Ay02
$^{116}\text{Pd}(\beta^-)^{116}\text{Ag}$	2615	100	2711	8	1.0	U					75Br.A
	2620	100			0.9	o			Jyv		89Ay.A
	2607	30			3.5	B			Stu		90Fo07
	2620	100			0.9	U			Jyv		94Jo.A
$^{116}\text{Ag}(\beta^-)^{116}\text{Cd}$	6062	130	6170	3	0.8	o			Stu		82A129 *
	5800	200			1.8	U					82Br10
	6194	50			-0.5	U			Stu		90Fo07 *
$^{116}\text{In}(\beta^-)^{116}\text{Sn}$	3290	60	3276.25	0.24	-0.2	U					54Bo39
$^{116}\text{Sb}(\beta^+)^{116}\text{Sn}$	4586	100	4704	5	1.2	U					61Fi05 *
	4606	50			2.0	U					68Ki07 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{116}\text{Sn}(p,n)^{116}\text{Sb}$	-5515	40	-5487	5	0.7	U			VUn		76Ka19
	-5483.2	6.			-0.6	1	75	75 ^{116}Sb	Oak		77Jo03
$^{116}\text{Sb}^n(\beta^+)^{116}\text{Sn}$	5090	40				2					60Je03 *
$^{116}\text{Te}(\beta^+)^{116}\text{Sb}$	1554	100	1553	28	0.0	U					61Fi05 *
$^{116}\text{I}(\beta^+)^{116}\text{Te}$	7760	130	7780	100	0.1	R					70Be.A
	7710	200			0.3	R					76Go02
$^{116}\text{Xe}(\beta^+)^{116}\text{I}$	4340	200	4450	100	0.5	3					76Go02
* $^{116}\text{Rh-u}$	M-A=-70641(96) keV for mixture gs+m at 200#150 keV										Nub127 **
* $^{116}\text{Rh-u}$	M-A=-70662(93) keV for mixture gs+m at 200#150 keV										Nub127 **
* $^{116}\text{Sb-u}$	M-A=-86553(34) keV for mixture gs+n at 390(40) keV										Nub127 **
* $^{116}\text{Rh}-^{120}\text{Sn}_{967}$	$D_M=18740.7(8.4) \mu\text{u}$ for mixture gs+m at 200#150 keV ; M-A=-70642.7(8.2) keV										Nub127 **
* $^{116}\text{Cs}(\epsilon\alpha)^{112}\text{Te}$	Q=12500(900) from $^{116}\text{Cs}^m$ estimated at 100#60 keV										Nub127 **
* $^{116}\text{Cs}(\epsilon\alpha)^{112}\text{Te}$	Trends from Mass Surface TMS suggest ^{116}Cs 760 less bound										GAu **
* $^{116}\text{Cs}(\epsilon p)^{115}\text{I}$	Q=6450(300) from $^{116}\text{Cs}^m$ at estimated 100#60 keV										Nub127 **
* $^{116}\text{Ag}(\beta^-)^{116}\text{Cd}$	$Q_{\beta^-}=6110(130)$ from $^{116}\text{Ag}^m$ at 47.90 keV										Nub127 **
* $^{116}\text{Ag}(\beta^-)^{116}\text{Cd}$	$Q_{\beta^-}=6199(100)$; and 6241(50) from $^{116}\text{Ag}^m$ at 47.90 keV										Nub127 **
* $^{116}\text{Sb}(\beta^+)^{116}\text{Sn}$	$E_{\beta^+}=2270(100)$ 2290(50) respectively, to 2^+ level at 1293.560 keV										Ens104 **
* $^{116}\text{Sb}^n(\beta^+)^{116}\text{Sn}$	$E_{\beta^+}=1160(40)$ to 7^- level at 2908.85 keV										Ens104 **
* $^{116}\text{Te}(\beta^+)^{116}\text{Sb}$	$E_{\beta^+}=440(100)$ to 1^+ level at 93.99 keV										Ens104 **
$^{117}\text{Ru-u}$	-63897	419				2			GT1	1.5	04Ma.A
$^{117}\text{Rh-u}$	-73903	408	-73965	10	-0.1	U			GT1	1.5	04Ma.A
$^{117}\text{Ag}-^{133}\text{Cs}_{880}$	-5029	16	-5024	15	0.3	1	83	83 ^{117}Ag	MA8	1.0	10Br02 *
$\text{C}_9 \text{H}_9-^{117}\text{Sn}$	167486	12	167471.3	0.5	-0.5	U			M16	2.5	63Da10
	167471	8			0.0	U			R13	1.5	83De51
$\text{C}^{35}\text{Cl}_3-^{117}\text{Sn}$	3596	2	3604.1	0.5	1.0	U			H14	4.0	62Ba24
$^{117}\text{Te-u}$	-91318	30	-91354	14	-1.2	-			GS2	1.0	05Li24
	-91359	30			0.2	-			GS2	1.0	05Li24 *
ave.	-91339	21			-0.7	1	46	46 ^{117}Te			average
$^{117}\text{I-u}$	-86350	30	-86352	28	-0.1	1	88	88 ^{117}I	GS2	1.0	05Li24
$^{117}\text{Xe-u}$	-79647	30	-79641	11	0.2	R			GS2	1.0	05Li24
$^{117}\text{Xe}-^{133}\text{Cs}_{880}$	3562	12	3561	11	-0.1	2			MA6	1.0	04Di18
$^{117}\text{Cs}-^{133}\text{Cs}_{880}$	11819	67				2			MA4	1.0	99Am05 *
$^{117}\text{Rh}-^{120}\text{Sn}_{975}$	21388.8	9.5				2			JY1	1.0	07Ha20
$^{117}\text{Pd}-^{120}\text{Sn}_{975}$	13309.4	7.9	13308	8	-0.2	1	96	96 ^{117}Pd	JY1	1.0	07Ha20
$^{117}\text{Sn}-^{116}\text{Sn}$	1219	11	1211.2	0.5	-0.3	U			M16	2.5	63Da10
$^{116}\text{Cd}(d,p)^{117}\text{Cd}$	3538	30	3552.7	1.0	0.5	U			Pit		64Ro17
	3550	20			0.1	U			Oak		64Si18
	3552.66	1.0				2			Rez		90Pi05 *
$^{116}\text{Sn}(n,\gamma)^{117}\text{Sn}$	6943.5	2.0	6943.1	0.5	-0.2	U					75Bh01 Z
	6943.3	1.5			-0.1	U			ORn		78Ra16 Z
	6942.9	0.5			0.4	-			Bdn		06Fi.A
$^{116}\text{Sn}(d,p)^{117}\text{Sn}$	4721.0	1.8	4718.5	0.5	-1.4	-			SPa		75Be09
$^{116}\text{Sn}(n,\gamma)^{117}\text{Sn}$	ave.	6943.1	6943.1	0.5	0.0	1	97	97 ^{117}Sn			average
$^{116}\text{Sn}(^3\text{He},d)^{117}\text{Sb}$	-1091	10	-1091	8	0.0	1	71	71 ^{117}Sb	VUn		78Ka12 *
$^{117}\text{Xe}(\epsilon p)^{116}\text{Te}$	4100	200	3795	30	-1.5	U					72Ho18
$^{117}\text{Ba}(\epsilon p)^{116}\text{Xe}$	7900	300	8140	190	0.8	3					78Bo20
	8300	250			-0.7	3			GSI		05Ja06
$^{117}\text{La}(p)^{116}\text{Ba}$	789.8	6.	820	3	5.0	B					01So02 *
	813.0	5.			1.4	o			Arp		01Ma69
	820.1	3.				3			Arp		11Li28
$^{117}\text{Pd}(\beta^-)^{117}\text{Ag}$	5735	32	5757	15	0.7	1	21	17 ^{117}Ag	Jyv		00Kr.A
$^{117}\text{Ag}(\beta^-)^{117}\text{Cd}$	4160	50	4236	14	1.5	U			Stu		82Al29 *
$^{117}\text{Cd}(\beta^-)^{117}\text{In}$	2535	20	2525	5	-0.5	U					75Ta06 *
$^{117}\text{In}(\beta^-)^{117}\text{Sn}$	1456.6	5.	1455	5	-0.4	1	94	94 ^{117}In			55Mc17 *
$^{117}\text{Sb}(\beta^+)^{117}\text{Sn}$	1751	40	1758	8	0.2	U					64Ba46 *
$^{117}\text{Sn}(p,n)^{117}\text{Sb}$	-2525	20	-2541	8	-0.8	1	18	18 ^{117}Sb	Oak		71Ke21
$^{117}\text{Te}(\beta^+)^{117}\text{Sb}$	3552	20	3544	13	-0.4	-					62Kh05 *
	3492	30			1.7	-					67Be46 *
ave.	3534	17			0.6	1	62	51 ^{117}Te			average
$^{117}\text{I}(\beta^+)^{117}\text{Te}$	4680	100	4659	29	-0.2	-					69La33 *
	4610	110			0.4	-					70Be.A *
ave.	4650	70			0.1	1	15	12 ^{117}I			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{117}\text{Xe}(\beta^+)^{117}\text{I}$	6270	300	6251	28	-0.1	U					85Le10 *	
$^{117}\text{Cs}^x(\text{IT})^{117}\text{Cs}$	50	50				3					AHW	
* $^{117}\text{Ag}-^{133}\text{Cs}_{.880}$	$D_M=-5013.3(4.0) \mu\text{u}$ for ground state or $^{117}\text{Ag}^m$ at 28.6 keV; $M-A=-82172.3(3.7)$ keV											
* $^{117}\text{Te-u}$	$M-A=-84804(28)$ keV for $^{117}\text{Te}^m$ 11/2 ⁻ at 296.1 keV											
* $^{117}\text{Cs}-^{133}\text{Cs}_{.880}$	$D_M=11900(21) \mu\text{u}$ for mixture gs+m at 150#80 keV; $M-A=-66418(19)$ keV											
* $^{116}\text{Cd}(\text{d,p})^{117}\text{Cd}$	Estimated systematic error 0.5 added to statistical error 0.85 keV											
* $^{116}\text{Sn}(^3\text{He,d})^{117}\text{Sb}$	$Q-Q(^{120}\text{Sn}(^3\text{He,d}))=1373(10,\text{Ka})$, $Q(120)=282.1(2.0)$ keV											
* $^{117}\text{La}(\text{p})^{116}\text{Ba}$	Reports also an isomer $^{117}\text{La}^m$ $E_p=933(10)$ $Q_p=941.1$ keV $T=10(5)$ ms, not observed in reference using similar set-up and far greater statistics											
* $^{117}\text{Ag}(\beta^-)^{117}\text{Cd}$	$Q_{\beta^-}=4260(110)$; and 4170(50) from $^{117}\text{Ag}^m$ at 28.6 keV											
* $^{117}\text{Cd}(\beta^-)^{117}\text{In}$	$Q_{\beta^-}=2220(20)$ to $^{117}\text{In}^m$ at 315.303 keV											
* $^{117}\text{In}(\beta^-)^{117}\text{Sn}$	$E_{\beta^-}=740(10)$ to 7/2 ⁺ level at 711.54; and 1772(5), 1616(5) from $^{117}\text{In}^m$ at 315.303 to 1/2 ⁺ ground state, 3/2 ⁺ level at 158.56 keV											
*												
* $^{117}\text{Sb}(\beta^+)^{117}\text{Sn}$	$E_{\beta^+}=570(40)$ to 3/2 ⁺ level at 158.562 keV											
* $^{117}\text{Te}(\beta^+)^{117}\text{Sb}$	$E_{\beta^+}=1810(20)$ 1750(30) respectively, to 1/2 ⁺ level at 719.7 keV											
* $^{117}\text{I}(\beta^+)^{117}\text{Te}$	$E_{\beta^+}=3500(50)$, 3250(50) to 5/2 ⁺ level at 274.4, (3/2) ⁺ at 325.9 keV											
* $^{117}\text{I}(\beta^+)^{117}\text{Te}$	$Q_{\beta^+}=4310(100)$ assumed to 5/2 ⁺ level at 274.4, (3/2) ⁺ at 325.9 keV											
* $^{117}\text{Xe}(\beta^+)^{117}\text{I}$	May be lower limit											
$^{118}\text{Rh-u}$	-69598	290	-69660	26	-0.1	U					04Ma.A	
$^{118}\text{Pd}-^{129}\text{Xe}_{.915}$	6193.6	4.3	6192.2	2.7	-0.3	1	39	39	^{118}Pd	JY1	1.0	11Ha48
$^{118}\text{Ag}-^{133}\text{Cs}_{.887}$	-1540.4	2.7				2				MA8	1.0	10Br02 *
$\text{C}_9 \text{H}_{10}-^{118}\text{Sn}$	176645	7	176643.7	0.5	-0.1	U				M16	2.5	63Da10
	176637	8			0.6	U				R13	1.5	83De51
$^{118}\text{Te-u}$	-94162	30	-94146	20	0.5	R				GS2	1.0	05Li24
$^{118}\text{I-u}$	-86932	30	-86926	21	0.2	2				GS2	1.0	05Li24
	-86920	30			-0.2	2				GS2	1.0	05Li24 *
$^{118}\text{Xe-u}$	-83785	30	-83821	11	-1.2	R				GS2	1.0	05Li24
$^{118}\text{Xe}-^{133}\text{Cs}_{.887}$	37	12	43	11	0.5	2				MA6	1.0	04Di18
$^{118}\text{Cs}^x-^{133}\text{Cs}_{.887}$	10433	15	10429	13	-0.3	o				MA1	1.0	90St25
	10429	13				2				MA1	1.0	99Am05
$^{118}\text{Rh}-^{120}\text{Sn}_{.983}$	26476	26				2				JY1	1.0	07Ha20
$^{118}\text{Pd}-^{120}\text{Sn}_{.983}$	15199.7	7.9	15202.5	2.6	0.4	-				JY1	1.0	07Ha20
	15202.1	3.6			0.1	-				JY1	1.0	11Ha48
ave.	15202	3			0.2	1	64	61	^{118}Pd			average
$^{118}\text{Sn}^{35}\text{Cl}-^{116}\text{Sn}^{37}\text{Cl}$	2814	2	2813.9	0.5	0.0	U				H15	4.0	62Ba23
$^{118}\text{Sn}-^{117}\text{Sn}$	-1338	11	-1347.41	0.14	-0.3	U				M16	2.5	63Da10
$^{117}\text{Cs}^x-^{118}\text{Cs}_{.496}^{x} \quad ^{116}\text{Cs}_{.504}$	-1160	400	-1240#	100#	-0.1	U				P32	2.5	86Au02
$^{118}\text{Cs}(\epsilon\alpha)^{114}\text{Te}$	10600	200	11050	30	2.3	U						77Bo28
	10750	200			1.5	U						78Da07 *
$^{116}\text{Cd}(\text{t,p})^{118}\text{Cd}$	5650	20				2				Ald		67Hi01
$^{116}\text{Sn}(\text{t,p})^{118}\text{Sn}$	7769	15	7787.7	0.5	1.2	U				Ald		68Bj02
$^{118}\text{Sn}(\text{p,t})^{116}\text{Sn}$	-7790	10	-7787.7	0.5	0.2	U				Roc		70F108
$^{118}\text{Sn}(\text{d},^3\text{He})^{117}\text{In}$	-4440	40	-4505	5	-1.6	U				Sac		69Co03
	-4481	15			-1.6	U				MSU		71We01
$^{117}\text{Sn}(\text{n},\gamma)^{118}\text{Sn}$	9326.5	2.	9326.42	0.13	0.0	U						70Or.A
	9324.8	2.1			0.8	U				ORn		75Sl.A
	9326.42	0.13			0.0	1	100	97	^{118}Sn			02Bo11
	9327.9	1.1			-1.3	U				Bdn		06Fi.A
$^{117}\text{Sn}(\text{d,p})^{118}\text{Sn}$	7090	12	7101.85	0.13	1.0	U				Tal		64No06
$^{118}\text{Sn}(\text{p,d})^{117}\text{Sn}$	-7097	15	-7101.85	0.13	-0.3	U				Har		70Ca01
$^{118}\text{Cs}(\epsilon\text{p})^{117}\text{I}$	4700	300	4738	29	0.1	U						78Da07
$^{118}\text{Pd}(\beta^-)^{118}\text{Ag}$	4100	200	4165	4	0.3	U				Jyv		89Ko22 *
$^{118}\text{Ag}(\beta^-)^{118}\text{Cd}$	7122	100	7148	20	0.3	U				Stu		82Al29 *
	7110	470			0.1	U				Stu		82Al29 *
	7155	76			-0.1	U						95Ap.A
$^{118}\text{In}(\beta^-)^{118}\text{Sn}$	4200	400	4425	8	0.6	U						61Gl02
	4200	300			0.7	U						64Ka10
	4310	100			1.1	U						87Ga.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{118}\text{In}^m(\beta^-)^{118}\text{Sn}$	4270	100	4530#	50#	2.5	D					64Ka10 *
$^{118}\text{Sb}(\beta^+)^{118}\text{Sn}$	3610	50	3656.6	3.0	0.9	U					61Fi05
$^{118}\text{Sn}(\text{p,n})^{118}\text{Sb}$	-4477.7	5.7	-4439.0	3.0	6.8	F			Tkm		63Ok01 *
	-4439.0	3.				2			Oak		77Jo03
$^{118}\text{Sb}^n(\beta^+)^{118}\text{Sn}$	3907	5				2					61Bo13 *
$^{118}\text{I}(\beta^+)^{118}\text{Te}$	7080	150	6726	27	-2.4	U					68La18 *
	7068	100				-3.4	C				70Be.A *
$^{118}\text{Xe}(\beta^+)^{118}\text{I}$	3720	110	2892	22	-7.5	F					70Be.A *
$^{118}\text{Cs}(\beta^+)^{118}\text{Xe}$	9300	1000	9670	16	0.4	U					76Da.C
$^{118}\text{Cs}^x(\text{IT})^{118}\text{Cs}$	5	4				3					82Au01 *
* $^{118}\text{Ag}-^{133}\text{Cs}_{.887}$	$D_M=-1403.5(2.7) \mu\text{u}$ for $^{118}\text{Ag}^n$ at 127.63(0.10) keV; $M-A=-79426.3(2.5)$ keV										Nub127 **
* $^{118}\text{I}-\text{u}$	$M-A=-80775(28)$ keV for $^{118}\text{I}^m 7^-$ at 188.8 keV										Nub128 **
* $^{118}\text{Cs}(\epsilon\alpha)^{114}\text{Te}$	As read from Fig. 2 (p.401)										GAu **
* $^{118}\text{Pd}(\beta^-)^{118}\text{Ag}$	Original value 4000(200) corrected for new branching ratios										93Ja03 **
* $^{118}\text{Ag}(\beta^-)^{118}\text{Cd}$	$E_{\beta^-}=4330(240), 3960(170), 3810(150)$ reinterpreted as feeding										95Ap.A **
*	(1) level at 2788.72, (1) at 3224.32, (2,3,4) at 3265.77 keV										Ens959 **
* $^{118}\text{Ag}(\beta^-)^{118}\text{Cd}$	$E_{\beta^-}=3990(720), 3910(630)$ reinterpreted as $^{118}\text{Ag}^n$ at 127.63(0.10) keV										95Ap.A **
*	to (2,3,4) level at 3181.73, 3381.8 keV										Ens959 **
* $^{118}\text{In}^m(\beta^-)^{118}\text{Sn}$	$E_{\beta^-}=2000(100)$ to 4^+ level at 2280.342 level, and other E_{β^-}										Ens959 **
* $^{118}\text{In}^m(\beta^-)^{118}\text{Sn}$	Trends from Mass Surface TMS suggest $^{118}\text{In}^m 255$ less bound										GAu **
* $^{118}\text{Sn}(\text{p,n})^{118}\text{Sb}$	F : see note added in proof to reference										77Jo03 **
* $^{118}\text{Sb}^n(\beta^+)^{118}\text{Sn}$	$p^+ = 16(1) \times 10^{-4}$ to 7^- level at 2574.91 keV, recalculated Q										Ens959 **
* $^{118}\text{I}(\beta^+)^{118}\text{Te}$	$E_{\beta^+}=5450(150)$ to 2^+ level at 605.70 keV										Ens959 **
* $^{118}\text{I}(\beta^+)^{118}\text{Te}$	$E_{\beta^+}=5440(100)$ to 2^+ level at 605.70 keV										Ens959 **
* $^{118}\text{Xe}(\beta^+)^{118}\text{I}$	F : probably contaminated by isobars										GAu **
* $^{118}\text{Cs}^x(\text{IT})^{118}\text{Cs}$	Original 24(19) corrected for new estimated $\text{IT}=100(60)\#$										Nub127 **
$^{119}\text{Rh}-\text{u}$	-67698	268	-67443	10	0.6	U			GT1	1.5	04Ma.A
$^{119}\text{Rh}-^{129}\text{Xe}_{.922}$	20349	10				2			JY1	1.0	11Ha48
$^{119}\text{Pd}-\text{u}$	-76844	208	-76660	9	0.6	U			GT1	1.5	04Ma.A
$^{119}\text{Ag}-^{133}\text{Cs}_{.895}$	188	16	191	16	0.2	1	97	97 ^{119}Ag	MA8	1.0	10Br02 *
$\text{C}_9 \text{H}_{11}-^{119}\text{Sn}$	182778	7	182764.2	0.8	-0.8	U			M16	2.5	63Da10
	182762	8				0.2	U		R13	1.5	83De51
$^{119}\text{I}-\text{u}$	-89926	30				2			GS2	1.0	05Li24
$^{119}\text{Xe}-\text{u}$	-84601	30	-84589	11	0.4	R			GS2	1.0	05Li24
$^{119}\text{Xe}-^{133}\text{Cs}_{.895}$	33	12	31	11	-0.1	2			MA6	1.0	04Di18
$^{119}\text{Cs}-\text{u}$	-77532	57	-77623	15	-1.6	U			GS2	1.0	05Li24 *
$^{119}\text{Cs}^x-^{133}\text{Cs}_{.895}$	7019	15	7015	9	-0.3	o			MA1	1.0	90St25
	7018	13				-0.2	2		MA1	1.0	99Am05
	7012	13				0.2	2		MA4	1.0	99Am05
$^{119}\text{Sn } ^{35}\text{Cl}-^{117}\text{Sn } ^{37}\text{Cl}$	3306	2	3307.3	0.6	0.2	U			H15	4.0	62Ba23
$^{119}\text{Pd}-^{120}\text{Sn}_{.992}$	20356.2	8.8				2			JY1	1.0	07Ha20
$^{119}\text{Sn}-^{118}\text{Sn}$	1709	12	1704.6	0.6	-0.1	U			M16	2.5	63Da10
$^{119}\text{I}-^{118}\text{I}$	-2747	155	-3000	40	-1.1	U			CR2	1.5	92Sh.A *
$^{119}\text{I}-^{117}\text{I}$	-3570	155	-3570	40	0.0	U			CR2	1.5	92Sh.A *
$^{118}\text{Cs}^x-^{119}\text{Cs}_{.661}^{116}\text{Cs}_{.339}$	530	80	420#	40#	-0.6	U			P32	2.5	86Au02
$^{118}\text{Cs}^x-^{119}\text{Cs}_{.496}^{117}\text{Cs}_{.504}$	870	50	940	40	0.5	U			P22	2.5	82Au01
	980	40				-0.4	U		P32	2.5	86Au02
$^{119}\text{Sn}(\text{t},\alpha)^{118}\text{In}-^{118}\text{Sn}(\text{)}^{117}\text{In}$	-127	6	-127	6	0.0	1	100	100 ^{118}In	McM		85Pi03
$^{118}\text{Sn}(\text{n},\gamma)^{119}\text{Sn}$	6484.6	1.5	6483.5	0.5	-0.7	-			ORn		78Ra16
	6483.3	0.6				0.3	-		Bdn		06Fi.A
$^{118}\text{Sn}(\text{d,p})^{119}\text{Sn}$	4238	12	4258.9	0.5	1.7	U			MIT		67Sp09
$^{118}\text{Sn}(\text{n},\gamma)^{119}\text{Sn}$	ave.	6483.5	0.6	6483.5	0.5	0.0	1	96	93 ^{119}Sn		average
$^{118}\text{Sn}(\text{}^3\text{He,d})^{119}\text{Sb}$	-388	10	-383	8	0.5	1	59	59 ^{119}Sb	VUn		78Ka12 *
$^{119}\text{Ba}(\epsilon\text{p})^{118}\text{Xe}$	6200	200				3					78Bo20 *
$^{119}\text{Ag}(\beta^-)^{119}\text{Cd}$	5350	40	5330	40	-0.5	1	81	78 ^{119}Cd	Stu		82Al29
$^{119}\text{Cd}(\beta^-)^{119}\text{In}$	3797	80	3720	40	-0.9	1	23	22 ^{119}Cd	Stu		82Al29 *
$^{119}\text{In}(\beta^-)^{119}\text{Sn}$	2387	100	2366	7	-0.2	U					60Yu01 *
	2413	200				-0.2	U				61Gl06 *
$^{119}\text{Sb}(\epsilon)^{119}\text{Sn}$	579	20	591	8	0.6	-					57OI05 *
$^{119}\text{Sn}(\text{p,n})^{119}\text{Sb}$	-1369	15	-1373	8	-0.3	-			Oak		71Ke21
$^{119}\text{Sb}(\epsilon)^{119}\text{Sn}$	ave.	584	12	591	8	0.6	1	41	41 ^{119}Sb		average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{119}\text{Te}(\beta^+)^{119}\text{Sb}$	2293	2							60Ko12 *	
$^{119}\text{I}(\beta^+)^{119}\text{Te}$	3630	100	3416	29	-2.1	U			69La33 *	
	3370	100			0.5	U			70Be.A	
$^{119}\text{Xe}(\beta^+)^{119}\text{I}$	4990	120	4971	30	-0.2	U			70Be.A	
$^{119}\text{Cs}(\beta^+)^{119}\text{Xe}$	6260	290	6489	17	0.8	U			83Pa.A *	
$^{119}\text{Cs}^x(\text{IT})^{119}\text{Cs}$	16	11				3			82Au01 *	
$^{*119}\text{Ag}-^{133}\text{Cs}_{895}$	$D_M=198.4(5.7) \mu\text{u}$ for ground state or $^{119}\text{Ag}^m$ at 20#20 keV; $M-A=-78638.7(5.3) \text{keV}$									
$^{*119}\text{Cs-u}$	$M-A=-72195(48) \text{keV}$ for mixture gs+m at 50#30 keV									
$^{*119}\text{I}-^{118}\text{I}$	From $^{118}\text{I}/^{119}\text{I}=0.99161584(117)$, originally $D_M=-3039(139) \mu\text{u}$, revised by									
	authors: $-2849(139) \mu\text{u}$ for ^{118}I gs+m mixture at 188.8(0.7) keV									
$^{*119}\text{I}-^{117}\text{I}$	From $^{117}\text{I}/^{119}\text{I}=0.98321059(130)$									
$^{*118}\text{Sn}(\beta^+\text{He,d})^{119}\text{Sb}$	$Q-Q(^{120}\text{Sn}(\beta^+\text{He,d})^{121}\text{Sb})=-673(10)$, $Q(120)=285.1(2.1) \text{keV}$									
$^{*119}\text{Ba}(\epsilon\text{p})^{118}\text{Xe}$	Trends from Mass Surface TMS suggest ^{119}Ba 180 less bound									
$^{*119}\text{Cd}(\beta^-)^{119}\text{In}$	$Q_{\beta^-}=3800(90)$; and $3940(80)$ from $^{119}\text{Cd}^m$ at 146.54 keV									
$^{*119}\text{In}(\beta^-)^{119}\text{Sn}$	$E_{\beta^-}=1600(100)$ to $7/2^+$ level at 787.01 keV									
$^{*119}\text{In}(\beta^-)^{119}\text{Sn}$	$E_{\beta^-}=2700(200)$ from $^{119}\text{In}^m$ at 311.37(0.03) to $3/2^+$ level at 23.871 keV									
$^{*119}\text{Sb}(\epsilon)^{119}\text{Sn}$	IBE=526(20) to $3/2^+$ level at 23.871 keV									
$^{*119}\text{Te}(\beta^+)^{119}\text{Sb}$	$E_{\beta^+}=627(2)$ to $1/2^+$ level at 644.03 keV									
$^{*119}\text{I}(\beta^+)^{119}\text{Te}$	$E_{\beta^+}=2350(100)$ to $3/2^+$ level at 257.484 keV									
$^{*119}\text{Cs}(\beta^+)^{119}\text{Xe}$	$E_{\beta^+}=4980(290)$ to $9/2^+$ level at 257.84 keV									
$^{*119}\text{Cs}^x(\text{IT})^{119}\text{Cs}$	Original 33(22) corrected for new estimated IT=50(30)#									
$^{120}\text{Pd}-^{129}\text{Xe}_{930}$	13107.0	4.4	13104.9	2.5	-0.5	1	31	31 ^{120}Pd	JY1 1.0	11Ha48
$^{120}\text{Ag}-^{133}\text{Cs}_{902}$	4067.1	4.8				2			MA8 1.0	10Br02
	4086	12	4067	5	-1.6	o			MA8 1.0	10Br02
$^{120}\text{Cd}-^{133}\text{Cs}_{902}$	-4849.6	4.0				2			MA8 1.0	10Br02
$\text{C}_9 \text{H}_{12}-^{120}\text{Sn}$	191709	11	191698.8	1.0	-0.4	U			M16 2.5	63Da10
	191705	8			-0.5	U			R13 1.5	83De51
$^{13}\text{C}^{35}\text{Cl}_2^{37}\text{Cl}-^{120}\text{Sn}$	4758	3	4761.2	1.0	0.3	U			H14 4.0	62Ba24
$^{120}\text{Sb-u}$	-94796	76	-94921	8	-1.6	U			GS2 1.0	05Li24 *
$\text{C}_9 \text{H}_{12}-^{120}\text{Te}$	189879	9	189841	3	-1.7	U			M16 2.5	63Da10
	189868	8			-2.2	U			R13 1.5	83De51
$^{120}\text{I-u}$	-90222	104	-89913	16	3.0	C			GS2 1.0	05Li24 *
$^{120}\text{Xe-u}$	-88231	30	-88216	13	0.5	R			GS2 1.0	05Li24
$^{120}\text{Xe}-^{133}\text{Cs}_{902}$	-2930	14	-2933	13	-0.2	2			MA6 1.0	04Di18
$^{120}\text{Cs-u}$	-79342	54	-79323	11	0.4	U			GS2 1.0	05Li24 *
$^{120}\text{Cs}^x-^{133}\text{Cs}_{902}$	5956	15	5965	10	0.6	o			MA1 1.0	90St25
	5956	12			0.7	2			MA1 1.0	99Am05
	5983	17			-1.1	2			MA4 1.0	99Am05
$^{120}\text{Sn}^{35}\text{Cl}-^{118}\text{Sn}^{37}\text{Cl}$	3546	2	3545.1	1.1	-0.1	U			H15 4.0	62Ba23
$^{120}\text{Pd}-^{120}\text{Sn}$	22317.1	9.7	22349.5	2.4	3.3	B			JY1 1.0	07Ha20
	22348.6	2.8			0.3	1	72	69 ^{120}Pd	JY1 1.0	11Ha48
$^{120}\text{Te}-^{120}\text{Sn}$	1842.2	1.7	1858	3	9.1	B			CP1 1.0	09Sc19
	1839.7	1.7			10.6	B			CP1 1.0	09Sc19
$^{120}\text{Sn}-^{119}\text{Sn}$	-1113	11	-1109.5	1.2	0.1	U			M16 2.5	63Da10
$^{118}\text{Cs}^x-^{120}\text{Cs}_{328}^{117}\text{Cs}_{672}^x$	460	120	480	60	0.1	U			P22 2.5	82Au01
$^{119}\text{Cs}^x-^{120}\text{Cs}_{661}^{117}\text{Cs}_{339}^x$	-940	50	-928	29	0.1	U			P22 2.5	82Au01
$^{119}\text{Cs}^x-^{120}\text{Cs}_{496}^{118}\text{Cs}_{504}^x$	-1220	30	-1167	11	0.7	U			P22 2.5	82Au01
	-1180	60			0.1	U			P32 2.5	86Au02
	-1200	30			0.4	U			P32 2.5	86Au02
	-1270	50			0.8	F			P32 2.5	86Au02 *
$^{120}\text{Cs}(\epsilon\alpha)^{116}\text{Te}$	9200	300	8955	30	-0.8	U				76Jo.A
$^{118}\text{Sn}(\text{t,p})^{120}\text{Sn}$	7107	15	7106.5	1.0	0.0	U			Ald	68Bj02
$^{120}\text{Sn}(\text{p,t})^{118}\text{Sn}$	-7109	10	-7106.5	1.0	0.2	U			Roc	70Fl08
$^{120}\text{Te}(\text{p,t})^{118}\text{Te}$	-9343	24	-9332	18	0.4	2			Win	74De31 *
$^{120}\text{Sn}(\text{d},^3\text{He})^{119}\text{In}$	-5160	40	-5195	7	-0.9	U			Sac	69Co03
	-5169	20			-1.3	1	13	13 ^{119}In	MSU	71We01
$^{120}\text{Sn}(\text{t},\alpha)^{119}\text{In}-^{118}\text{Sn}(\text{t})^{117}\text{In}$	-692	6	-689	6	0.5	1	92	86 ^{119}In	McM	85Pi03

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{119}\text{Sn}(\text{d,p})^{120}\text{Sn}$	6890	12	6880.3	1.1	-0.8	U			Tal		64No06
$^{120}\text{Sn}(\text{p,d})^{119}\text{Sn}$	-6889	15	-6880.3	1.1	0.6	U			Har		70Ca01
$^{120}\text{Sn}(\text{d,t})^{119}\text{Sn}$	-2847.0	2.5	-2847.6	1.1	-0.2	1	19	12 ^{120}Sn	SPa		75Be09
$^{120}\text{Pd}(\beta^-)^{120}\text{Ag}$	5500	100	5371	5	-1.3	U			Jyv		94Jo.A
$^{120}\text{Ag}(\beta^-)^{120}\text{Cd}$	8200	100	8306	6	1.1	U			Stu		82Al29
	8450	100			-1.4	U					95Ap.A
$^{120}\text{In}(\beta^-)^{120}\text{Sn}$	5300	170	5370	40	0.4	U			Stu		78Al18
	5370	40				2					87Ga.A
$^{120}\text{In}^m(\beta^-)^{120}\text{Sn}$	5280	200	5420#	50#	0.7	D					64Ka10 *
	5340	170			0.5	D			Stu		78Al18 *
$^{120}\text{Sb}(\beta^+)^{120}\text{Sn}$	2720	20	2681	7	-2.0	U					50BI92
	2770	30			-3.0	U					69Ki15
$^{120}\text{Sn}(\text{p,n})^{120}\text{Sb}$	-3462.9	7.1				2			Tkm		63Ok01
$^{120}\text{I}(\beta^+)^{120}\text{Te}$	5615	15				2					70Ga32 *
	5608	150	5615	15	0.0	U					68La18 *
$^{120}\text{Xe}(\beta^+)^{120}\text{I}$	1960	40	1581	19	-9.5	B					74Mu10 *
$^{120}\text{Cs}(\beta^+)^{120}\text{Xe}$	7300	500	8284	15	2.0	U					76Ba.A *
	7800	1000			0.5	U					76Da.C *
	7380	230			3.9	C					83Pa.A *
	8210	200			0.4	U			IRS		93Al03
$^{120}\text{Cs}^x(\text{IT})^{120}\text{Cs}$	5	4				3					82Au01 *
$^{120}\text{Ba}(\beta^+)^{120}\text{Cs}$	5000	300				4					92Xu04
* $^{120}\text{Sb-u}$	M-A=-88302(50) keV for mixture gs+m at 0#100 keV										Nub127 **
* $^{120}\text{I-u}$	M-A=-83881(28) keV for mixture gs+n at 320(15) keV										Nub127 **
* $^{120}\text{Cs-u}$	M-A=-73856(29) keV for mixture gs+m at 100#60 keV										Nub127 **
* $^{119}\text{Cs}^x - ^{120}\text{Cs}^x_{496} \quad ^{118}\text{C}$	F : rejection based on line-shape analysis										86Au02 **
* $^{120}\text{Te}(\text{p,t})^{118}\text{Te}$	Original error 12; added systematic error 21 keV										GAu **
* $^{120}\text{In}^m(\beta^-)^{120}\text{Sn}$	$E_{\beta^-} = 3100(200), 2200(200)$ to 4^+ levels at 2194.299, 3057.946 keV										Ens029 **
* $^{120}\text{In}^m(\beta^-)^{120}\text{Sn}$	$E_{\beta^-} = 3100(170)$ to 4^+ level at 2194.299 keV, and other E_{β^-}										Ens029 **
* $^{120}\text{In}^m(\beta^-)^{120}\text{Sn}$	Trends from Mass Surface TMS suggest $^{120}\text{In}^m$ 105 less bound										GAu **
* $^{120}\text{I}(\beta^+)^{120}\text{Te}$	$E_{\beta^+} = 4595(15), 4030(20)$ to ground state, 2^+ level at 560.438 keV										Ens029 **
* $^{120}\text{I}(\beta^+)^{120}\text{Te}$	$E_{\beta^+} = 3130(150)$ from $^{120}\text{I}^m$ at 320(15) to 6^+ level at 1776.23 keV										Ens029 **
* $^{120}\text{Xe}(\beta^+)^{120}\text{I}$	$p^+ = 0.07(0.01)$ to 1^+ level at 25.1 keV, recalculated Q										Ens029 **
* $^{120}\text{Cs}(\beta^+)^{120}\text{Xe}$	$E_{\beta^+} = 6000(500) 6500(1000) 6040(230)$, respectively, to 2^+ level at 322.61 keV										Ens029 **
* $^{120}\text{Cs}^x(\text{IT})^{120}\text{Cs}$	Original 24(19) corrected for new estimated IT=100(60)#										Nub127 **
$^{121}\text{Pd-u}$	-71820	311	-71050	4	1.7	U			GT1	1.5	04Ma.A
$^{121}\text{Ag} - ^{133}\text{Cs}_{910}$	6164	13				2			MA8	1.0	10Br02 *
	6170	17	6164	13	-0.4	o			MA8	1.0	10Br02 *
$^{121}\text{Cd} - ^{130}\text{Xe}_{931}$	2796.2	3.0	2796.5	2.1	0.1	2			JY1	1.0	12Ha25
	2796.7	2.9			-0.1	2			JY1	1.0	12Ka.C *
$\text{C}_9 \text{H}_{13} - ^{121}\text{Sb}$	197910.5	3.7	197913	3	0.3	U			M16	2.5	63Da10
	197910	8			0.3	U			R13	1.5	83De51
$^{121}\text{Sb} - \text{C}^{35}\text{Cl}^{37}\text{Cl}_2$	3162	3	3154	3	-0.7	U			H14	4.0	62Ba24
$^{121}\text{Sb-u}$	-96180	30	-96188	3	-0.3	U			GS2	1.0	05Li24
$^{121}\text{I-u}$	-92609	30	-92595	6	0.5	U			GS2	1.0	05Li24
$^{121}\text{Xe-u}$	-88562	30	-88547	11	0.5	R			GS2	1.0	05Li24
$^{121}\text{Xe} - ^{133}\text{Cs}_{910}$	-2495	13	-2508	11	-1.0	-			MA6	1.0	04Di18
	ave.	-2499	12		-0.7	1	85	85 ^{121}Xe			average
$^{121}\text{Cs} - ^{133}\text{Cs}_{910}$	3247	25	3266	15	0.8	o			MA1	1.0	90St25 *
	3248	25			0.7	1	38	38 ^{121}Cs	MA1	1.0	99Am05 *
$^{121}\text{Cs-u}$	-82821	38	-82773	15	1.3	1	16	16 ^{121}Cs	GS2	1.0	05Li24 *
$^{121}\text{Pd} - ^{129}\text{Xe}_{938}$	18265.9	3.6				2			JY1	1.0	11Ha48 *
$^{121}\text{Sb} \text{ } ^{35}\text{Cl} - ^{119}\text{Sn} \text{ } ^{37}\text{Cl}$	3452	2	3451	3	-0.1	U			H14	4.0	62Ba24
$^{119}\text{Cs}^x - ^{121}\text{Cs}^x_{328} \quad ^{118}\text{Cs}^x_{672}$	-1080	30	-1047	13	0.4	U			P22	2.5	82Au01
$^{120}\text{Cs}^x - ^{121}\text{Cs}^x_{661} \quad ^{118}\text{Cs}^x_{339}$	280	30	240	15	-0.5	U			P22	2.5	82Au01
$^{120}\text{Cs}^x - ^{121}\text{Cs}^x_{496} \quad ^{119}\text{Cs}^x_{504}$	790	30	770	13	-0.3	U			P22	2.5	82Au01
	860	50			-0.7	U			P32	2.5	86Au02
	813	14			-1.2	U			P32	2.5	86Au02

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{120}\text{Sn}(n,\gamma)^{121}\text{Sn}$	6170.3	2.	6170.2	0.3	0.0	U					76Ca24
	6170.5	0.7			-0.4	-					81Ba53
	6170.1	0.4			0.3	-			Bdn		06Fi.A
$^{120}\text{Sn}(d,p)^{121}\text{Sn}$	3946.2	1.7	3945.6	0.3	-0.3	-			SPa		75Be09
$^{120}\text{Sn}(n,\gamma)^{121}\text{Sn}$	ave.	6170.2	0.3	6170.2	0.3	0.0	1	99	97 ^{121}Sn		average
$^{121}\text{Sb}(\gamma,n)^{120}\text{Sb}$	-9310	60	-9252	8	1.0	U			Phi		60Ge01
	-9240	25			-0.5	U			McM		79Ba06
$^{120}\text{Te}(^3\text{He},d)^{121}\text{I}$	-1320.5	4.4	-1321	4	-0.1	1	99	99 ^{121}I	Hei		78Sz09
$^{121}\text{Ba}(\varepsilon p)^{120}\text{Xe}$	4200	300	4140	140	-0.2	R					78Bo20
$^{121}\text{Pr}(p)^{120}\text{Ce}$	837	50	890	10	1.1	F					90Bo39 *
	889.6	10.				3			Arp		05Ro19 *
$^{121}\text{Ag}(\beta^-)^{121}\text{Cd}$	6400	120	6671	12	2.3	U			Stu		82Al29
$^{121}\text{Cd}(\beta^-)^{121}\text{In}$	4780	80	4762	27	-0.2	U			Stu		82Al29 *
$^{121}\text{In}(\beta^-)^{121}\text{Sn}$	3426	200	3361	27	-0.3	U					60Yu01 *
	3406	50			-0.9	R			Stu		78Al18 *
$^{121}\text{Sn}(\beta^-)^{121}\text{Sb}$	383	5	401.1	2.9	3.6	B					49Du15
	383.4	3.			5.9	B					68Sn01 *
$^{121}\text{Te}(\beta^+)^{121}\text{Sb}$	1080	30	1054	26	-0.9	1	74	74 ^{121}Te			75Me23 *
$^{121}\text{I}(\beta^+)^{121}\text{Te}$	2364	50	2293	26	-1.4	1	27	26 ^{121}Te			53Fi.A *
	2384	100			-0.9	U					65Bu03 *
$^{121}\text{Xe}(\beta^+)^{121}\text{I}$	3790	100	3771	12	-0.2	U					60Mo.A
	4160	140			-2.8	U					70Be.A
$^{121}\text{Cs}(\beta^+)^{121}\text{Xe}$	5650	490	5379	14	-0.6	U					75We23
	5400	20			-1.1	-					81So06
	5210	220			0.8	U					83Pa.A *
	5300	100			0.8	U			IRS		93Al03 *
	5400	40			-0.5	-			JAE		96Os04 *
	ave.	5400	18			-1.2	1	61	46 ^{121}Cs		average
$^{121}\text{Cs}^x(\text{IT})^{121}\text{Cs}$	46	8				2					GAu
$^{121}\text{Ba}(\beta^+)^{121}\text{Cs}$	6340	160	6360	140	0.1	2			JAE		96Os04
* $^{121}\text{Ag}-^{133}\text{Cs}_{910}$	$D_M=6175.1(5.0) \mu\text{u}$ for ground state or $^{121}\text{Ag}^m$ at 20#20 keV; $M-A=-74392.5(4.7)$ keV										Nub127 **
* $^{121}\text{Ag}-^{133}\text{Cs}_{910}$	$D_M=6180(12) \mu\text{u}$ for ground state or $^{121}\text{Ag}^m$ at 20#20 keV; $M-A=-74388(11)$ keV										Nub127 **
* $^{121}\text{Cd}-^{130}\text{Xe}_{931}$	$D_M=3027.4(2.9) \mu\text{u}$ for $^{121}\text{Cd}^m$ at 214.86(0.15) keV; $M-A=-80858.7(2.7)$ keV										Nub129 **
* $^{121}\text{Cs}-^{133}\text{Cs}_{910}$	$D_M=3284(16) \mu\text{u}$ for mixture gs+m at 68.5 keV										Nub127 **
* $^{121}\text{Cs}-^{133}\text{Cs}_{910}$	$D_M=3285(13) \mu\text{u}$ for mixture gs+m at 68.5 keV; $M-A=-77084(12)$ keV										Nub127 **
* $^{121}\text{Cs-u}$	$M-A=-77113(29)$ keV for mixture gs+m at 68.5 keV										Nub127 **
* $^{121}\text{Pd}-^{129}\text{Xe}_{938}$	Taken as low-spin isomer (see also ^{102}Y and ^{114}Tc doublets in same paper)										GAu **
* $^{121}\text{Pr}(p)^{120}\text{Ce}$	F : misassigned according to reference										05Ro19 **
* $^{121}\text{Pr}(p)^{120}\text{Ce}$	$E_p=882(10)$; in publication $Q_p=900(10)$ keV										WgM10C **
* $^{121}\text{Cd}(\beta^-)^{121}\text{In}$	$Q_{\beta^-}=4890(150)$; and $4960(80)$ from $^{121}\text{Cd}^m$ at 214.86 keV										Nub127 **
* $^{121}\text{In}(\beta^-)^{121}\text{Sn}$	$E_{\beta^-}=3700(200)$ from $^{121}\text{In}^m$ at 313.68(0.07) to ground state and $1/2^+$ level at 60.34 keV										Ens106 **
* $^{121}\text{In}(\beta^-)^{121}\text{Sn}$	$E_{\beta^-}=2480(50)$ to $7/2^+$ level at 925.59 keV										Ens106 **
* $^{121}\text{Sn}(\beta^-)^{121}\text{Sb}$	$E_{\beta^-}=383(3)$; and $354(5)$ from $^{121}\text{Sn}^m$ at 6.31 to $7/2^+$ level at 37.1298 keV										Ens106 **
* $^{121}\text{Te}(\beta^+)^{121}\text{Sb}$	$p^+=0.024(0.011)$ gives $Q_{\beta^+}=315(30)$, recalculated Q_{β^+} from $^{121}\text{Te}^m$ at 293.974 to $7/2^+$ level at 37.1298 keV										AHW **
*											Ens106 **
* $^{121}\text{I}(\beta^+)^{121}\text{Te}$	$E_{\beta^+}=1130(50)$ $1150(100)$ respectively, to $3/2^+$ level at 212.191 keV										Ens106 **
* $^{121}\text{Cs}(\beta^+)^{121}\text{Xe}$	$E_{\beta^+}=3730(220)$ to $7/2^+$ level at 459.59 keV										Ens106 **
* $^{121}\text{Cs}(\beta^+)^{121}\text{Xe}$	$Q_{\beta^+}=5370(100)$ $5470(40)$ respectively, from $^{121}\text{Cs}^m$ at 68.5 keV										Ens106 **
$^{122}\text{Pd-u}$	-69308	397	-69368	21	-0.1	U			GT1	1.5	04Ma.A
$^{122}\text{Ag-u}$	-76280	110	-76340	40	-0.3	o			GT2	1.5	08Kn.A *
	-76340	130			0.0	U			GT2	1.5	08Su19 *
$^{122}\text{Ag}-^{133}\text{Cs}_{917}$	10365	41				2			MA8	1.0	10Br02 *
$^{122}\text{Cd}-^{133}\text{Cs}_{917}$	155.1	4.7	159.6	2.5	1.0	1	28	28 ^{122}Cd	MA8	1.0	10Br02
$\text{C}_8 \text{H}_{12} \text{N}-^{122}\text{Sn}$	193541	8	193530.6	2.6	-0.5	U			M16	2.5	63Da10
	193558	8			-2.3	U			R13	1.5	83De51
$\text{C}_8 \text{H}_{12} \text{N}-^{122}\text{Te}$	193925	9	193930.9	1.6	0.3	U			M16	2.5	63Da10
	193926	8			0.4	U			R13	1.5	83De51

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{122}\text{Xe-u}$	-91637 30	-91632 12	0.2	R			GS2	1.0	05Li24
$^{122}\text{Xe}-^{133}\text{Cs}_{,917}$	-4931 13	-4932 12	-0.1	2			MA6	1.0	04Di18
$^{122}\text{Cs}-^{133}\text{Cs}_{,917}$	2812 48	2810 40	-0.1	o			MA1	1.0	90St25 *
	2805 48		0.1	1	57	57 ^{122}Cs	MA1	1.0	99Am05 *
$^{122}\text{Cs-u}$	-83887 55	-83890 40	-0.1	1	43	43 ^{122}Cs	GS2	1.0	05Li24 *
$^{122}\text{Cs}^n-^{133}\text{Cs}_{,917}$	2961 15	2959 10	-0.1	o			MA1	1.0	90St25
	2961 12		-0.2	2			MA1	1.0	99Am05
	2955 17		0.2	2			MA4	1.0	99Am05
$^{122}\text{Ba-u}$	-80096 30			2			GS2	1.0	05Li24
$^{122}\text{Cd}-^{130}\text{Xe}_{,938}$	3969.0 2.9	3967.3 2.5	-0.6	1	72	72 ^{122}Cd	JY1	1.0	12Ha25
$^{122}\text{Pd}-^{129}\text{Xe}_{,946}$	20709 21			2			JY1	1.0	11Ha48
$^{122}\text{Sn } ^{35}\text{Cl}-^{120}\text{Sn } ^{37}\text{Cl}$	4196 2	4192.2 2.5	-0.5	U			H15	4.0	62Ba23
$^{119}\text{Cs}^x-^{122}\text{Cs}^x_{,244} \ ^{118}\text{Cs}^x_{,756}$	-1600 80	-1511 15	0.4	U			P32	2.5	86Au02
$^{120}\text{Cs}^x-^{122}\text{Cs}^x_{,492} \ ^{118}\text{Cs}^x_{,508}$	-724 27	-694 20	0.4	U			P32	2.5	86Au02
$^{120}\text{Cs}^x-^{122}\text{Cs}^x_{,328} \ ^{119}\text{Cs}^x_{,672}$	350 50	321 16	-0.2	U			P22	2.5	82Au01
	360 17		-0.9	U			P32	2.5	86Au02
$^{121}\text{Cs}^x-^{122}\text{Cs}^x_{,496} \ ^{120}\text{Cs}^x_{,504}$	-1100 40	-1066 24	0.3	U			P32	2.5	86Au02
	-1169 15		2.7	U			P32	2.5	86Au02
$^{122}\text{Sn}(p,t)^{120}\text{Sn}$	-6504 15	-6503.8 2.3	0.0	U			Roc		70FI08
$^{122}\text{Te}(p,t)^{120}\text{Te}$	-8560 24	-8607.1 2.7	-2.0	U			Win		74De31 *
$^{122}\text{Te}(p,t)^{120}\text{Te}-^{132}\text{Ba}^{(130)\text{Ba}}$	227.0 0.2	227.00 0.20	0.0	1	100	82 ^{120}Te			08Su14
$^{122}\text{Te}(p,t)^{120}\text{Te}-^{144}\text{Sm}^{(142)\text{Sm}}$	2032.6 0.4	2032.6 0.4	0.0	1	100	81 ^{142}Sm			09Bu.A
$^{122}\text{Sn}(d,^3\text{He})^{121}\text{In}$	-5910 50	-5901 27	0.2	2			Sac		69Co03
	-5861 43		-0.9	2			MSU		71We01
$^{122}\text{Sn}(p,d)^{121}\text{Sn}$	-6587 15	-6590.8 2.3	-0.3	U			Har		70Ca01
$^{122}\text{Sn}(d,t)^{121}\text{Sn}$	-2558.8 3.0	-2558.1 2.3	0.2	1	60	57 ^{122}Sn	SPa		75Be09
$^{121}\text{Sb}(n,\gamma)^{122}\text{Sb}$	6806.4 0.3	6806.37 0.13	-0.1	-					72Sh.A Z
	6806.36 0.15		0.0	-			Bdn		06Fi.A
	ave. 6806.37 0.13		0.0	1	100	94 ^{121}Sb			average
$^{122}\text{In}(\beta^-)^{122}\text{Sn}$	6440 200	6370 50	-0.4	U					71Ta07 *
	6510 230		-0.6	U			Stu		78A118
$^{122}\text{Sn}(t,^3\text{He})^{122}\text{In}$	-6350 50			2			LAI		78Aj01
$^{122}\text{In}^n(\beta^-)^{122}\text{Sn}$	6736 200	6660 130	-0.4	2					71Ta07 *
	6590 180		0.4	2			Stu		78A118
$^{122}\text{Sb}(\beta^+)^{122}\text{Sn}$	1587 25	1608 4	0.8	U					58Pe17
$^{122}\text{Sb}(\beta^-)^{122}\text{Te}$	1970 5	1980.8 2.4	2.2	U					55Fa33
	1980 3		0.3	1	65	63 ^{122}Sb			68Hs02
$^{122}\text{I}(\beta^+)^{122}\text{Te}$	4140 40	4234 5	2.3	U					54Ma75
	4140 40		2.3	U					60Mo.A
	4234 5			2					77Re.A
$^{122}\text{Cs}(\beta^+)^{122}\text{Xe}$	7150 700	7210 40	0.1	U					75We23 *
	7050 180		0.9	U					83Pa.A *
	7000 150		1.4	U			IRS		93A103
	7080 50		2.6	U			JAE		96Os04
$^{122}\text{Cs}^n(\beta^+)^{122}\text{Xe}$	6950 250	7350 14	1.6	U					83Pa.A *
	7300 150		0.3	U			IRS		93A103
$^{122}\text{Cs}^x(\text{IT})^{122}\text{Cs}$	14 7			2					82Au01 *
* $^{122}\text{Ag-u}$	M-A=-71014(94) keV for mixture gs+m at 80#(50#) keV								Nub126 **
* $^{122}\text{Ag-u}$	M-A=-71065(120) keV for mixture gs+m at 80#(50#) keV								Nub126 **
* $^{122}\text{Ag}-^{133}\text{Cs}_{,917}$	$D_M=10408(18) \mu\text{u}$ for mixture gs+m at 80#(50#) keV; M-A=-71066(17) keV								Nub126 **
* $^{122}\text{Cs}-^{133}\text{Cs}_{,917}$	$D_M=2887(12) \mu\text{u}$ for mixture gs+n at 140(30) keV								Nub127 **
* $^{122}\text{Cs}-^{133}\text{Cs}_{,917}$	$D_M=2880(12) \mu\text{u}$ for mixture gs+n at 140(30) keV; M-A=-78078(12) keV								Nub127 **
* $^{122}\text{Cs-u}$	M-A=-78070(28) keV for mixture gs+m at 140(30) keV								Nub127 **
* $^{122}\text{Te}(p,t)^{120}\text{Te}$	Original error 12; added systematic error 21 keV								GAU **
* $^{122}\text{In}(\beta^-)^{122}\text{Sn}$	$E_{\beta^-}=5300(200)$ to 2^+ level at 1140.51 keV								Ens074 **
* $^{122}\text{In}^n(\beta^-)^{122}\text{Sn}$	$E_{\beta^-}=4400(200)$ to 4^+ level at 2331.09 keV								Ens074 **
* $^{122}\text{Cs}(\beta^+)^{122}\text{Xe}$	$E_{\beta^+}=5800(700) \ 5690(180)$ respectively, to 2^+ level at 331.28 keV								Ens074 **
* $^{122}\text{Cs}^n(\beta^+)^{122}\text{Xe}$	$E_{\beta^+}=3710(250)$ to 8^+ level at 2217.69 keV								Ens074 **
* $^{122}\text{Cs}^x(\text{IT})^{122}\text{Cs}$	Original was 45(33); revised using $^{122}\text{Cs}^n=140(30)$ keV								Nub127 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{123}\text{Pd-u}$	-64423	290	-64860#	210#	-1.0	D	GT1	1.5	04Ma.A *		
$^{123}\text{Ag-u}$	-74729	215	-74660	30	0.2	o	GT1	1.5	04Ma.A *		
	-74479	130			-0.9	U	GT2	1.5	08Su19 *		
$^{123}\text{Ag}-^{133}\text{Cs}_{.925}$	12700	120	12790	30	0.8	U	MA8	1.0	10Br02 *		
	12794	33				2	MA8	1.0	10Br02 *		
$^{123}\text{Cd}-^{133}\text{Cs}_{.925}$	4400	100	4349.4	2.9	-0.5	U	MA8	1.0	10Br02 *		
$\text{C}_8 \text{H}_{13} \text{N}-^{123}\text{Sb}$	200580.0	3.3	200586.2	2.3	0.8	U	M16	2.5	63Da10		
	200615	8			-2.4	U	R13	1.5	83De51		
$\text{C}_8 \text{H}_{13} \text{N}-^{123}\text{Te}$	200538	16	200529.7	1.6	-0.2	U	M16	2.5	63Da10		
	200515	8			1.2	U	R13	1.5	83De51		
$^{123}\text{Te-u}$	-95615	83	-95730.2	1.6	-1.4	U	GS2	1.0	05Li24 *		
$^{123}\text{I-u}$	-94444	30	-94411	4	1.1	U	GS2	1.0	05Li24 *		
$^{123}\text{Xe}-^{133}\text{Cs}_{.925}$	-4048	13	-4061	10	-1.0	1	62	62	^{123}Xe MA6	1.0	04Di18
$^{123}\text{Cs-u}$	-87007	57	-87004	13	0.1	U	GS2	1.0	05Li24 *		
$^{123}\text{Cs}-^{133}\text{Cs}_{.925}$	456	16	453	13	-0.2	o	MA1	1.0	90St25		
	453	13				2	MA1	1.0	99Am05		
$^{123}\text{Ba}-^{133}\text{Cs}_{.925}$	6238	13				2	MA5	1.0	00Be42		
$^{123}\text{Ba-u}$	-81327	30	-81219	13	3.6	C	GS2	1.0	05Li24		
$^{123}\text{Cd}-^{130}\text{Xe}_{.946}$	8172.5	2.9	8172.6	2.9	0.0	1	100	100	^{123}Cd JY1	1.0	12Ha25
$^{123}\text{Cd}^m-^{130}\text{Xe}_{.946}$	8326.5	3.3				2	JY1	1.0	12Ka.C		
$^{123}\text{Sb } ^{35}\text{Cl}-^{121}\text{Sb } ^{37}\text{Cl}$	3343	2	3351.3	2.8	1.0	U	H14	4.0	62Ba24		
$^{119}\text{Cs}^x-^{123}\text{Cs}^x_{.193} \text{ } ^{118}\text{Cs}^x_{.807}$	-1480	60	-1447	13	0.2	U	P32	2.5	86Au02		
$^{123}\text{Te}(n,\alpha)^{120}\text{Sn}$	7564	30	7572.9	1.7	0.3	U	ILL		75Em04		
$^{121}\text{Sb}(t,p)^{123}\text{Sb}$	7295	20	7287.1	2.6	-0.4	U	Ald		67Hi01		
$^{122}\text{Sn}(n,\gamma)^{123}\text{Sn}$	5948	3	5946.2	1.2	-0.6	-			75Bh01		
	5945.8	1.5			0.2	-			77Ca09		
$^{122}\text{Sn}(d,p)^{123}\text{Sn}$	3726	12	3721.6	1.2	-0.4	U	Tal		64Ne10		
	3716	11			0.5	U			72Ca33		
	3721.8	2.6			-0.1	-	SPa		75Be09		
$^{122}\text{Sn}(n,\gamma)^{123}\text{Sn}$	ave. 5946.3	1.2	5946.2	1.2	-0.1	1	94	51	^{123}Sn	average	
$^{123}\text{Sb}(\gamma,n)^{122}\text{Sb}$	-8980	50	-8962.5	2.6	0.3	U	Phi		60Ge01		
	-8966	4			0.9	1	41	31	^{122}Sb McM	79Ba06	
$^{122}\text{Te}(n,\gamma)^{123}\text{Te}$	6937	5	6929.01	0.08	-1.6	U			68Ch.A		
	6929.1	0.5			-0.2	U			91Ho08		
	6928.97	0.09			0.5	-			00Bo24		
	6929.16	0.17			-0.9	-	Bdn		06Fi.A		
$^{122}\text{Te}(d,p)^{123}\text{Te}$	4706	6	4704.45	0.08	-0.3	U	MIT		75Li22		
$^{122}\text{Te}(n,\gamma)^{123}\text{Te}$	ave. 6929.01	0.08	6929.01	0.08	0.0	1	100	98	^{122}Te	average	
$^{122}\text{Te}(^3\text{He,d})^{123}\text{I}$	-574.2	3.5	-575	3	-0.3	1	97	96	^{123}I Hei	78Sz04	
$^{123}\text{Cd}(\beta^-)^{123}\text{In}$	6033	35	6016	20	-0.5	1	32	32	^{123}In Stu	87Sp09 *	
$^{123}\text{In}(\beta^-)^{123}\text{Sn}$	4400	30	4386	20	-0.5	1	44	43	^{123}In Stu	87Sp09 *	
$^{123}\text{Sn}(\beta^-)^{123}\text{Sb}$	1395	10	1408.4	3.0	1.3	-			49Du15 *		
	1420	10			-1.2	-			50Ke11		
	1399	20			0.5	U			66Au04 *		
	ave. 1407	7			0.1	1	18	10	^{123}Sn	average	
$^{123}\text{I}(\beta^+)^{123}\text{Te}$	1260	7	1228	3	-4.5	C			86Ag.A		
$^{123}\text{Xe}(\beta^+)^{123}\text{I}$	2720	100	2695	10	-0.2	U			54Ma75		
	2676	15			1.3	1	42	38	^{123}Xe	60Mo.A *	
$^{123}\text{Cs}(\beta^+)^{123}\text{Xe}$	4110	310	4205	15	0.3	U			75We23 *		
	4000	140			1.5	U			81So06 *		
	4050	180			0.9	U			83Pa.A *		
	4200	100			0.1	U	IRS		93Al03		
	4110	30			3.2	B	JAE		96Os04		
$^{123}\text{Cs}^x(\text{IT})^{123}\text{Cs}$	7	4				3			82Au01 *		
$^{123}\text{Ba}(\beta^+)^{123}\text{Cs}$	5330	100	5389	17	0.6	U	JAE		96Os04		
* $^{123}\text{Pd-u}$	Trends from Mass Surface TMS suggest ^{123}Pd 410 more bound										
* $^{123}\text{Ag-u}$	Isomer should be expected, but $^{123}\text{Ag}^m$ at 20#(20#) keV, corr. negligible										
* $^{123}\text{Ag}-^{133}\text{Cs}_{.925}$	$D_M=12805(30) \mu\text{u}$ for mixture gs+m at 20#(20#) keV; $M-A=-69538(28)$										
* $^{123}\text{Cd}-^{133}\text{Cs}_{.925}$	$D_M=4568(26) \mu\text{u}$ for mixture gs+m at 316.53(0.23) keV; $M-A=-77210(25)$										
* $^{123}\text{Te-u}$	$M-A=-88941(30) \text{keV}$ for mixture gs+m at 247.47 keV										
* $^{123}\text{Cs-u}$	$M-A=-80968(28) \text{keV}$ for mixture gs+m at 156.27 keV										
* $^{123}\text{Cd}(\beta^-)^{123}\text{In}$	$Q=3590(51) 3464(41) 3547(36)$ from ground state to 2393 2529 2541 levels, $Q=3624(21)$										
*	3710(37) 3513(59) from $^{123}\text{Cd}^m$ at 316.53 to 2529 2461 2602 levels										
* $^{123}\text{In}(\beta^-)^{123}\text{Sn}$	$Q_{\beta^-}=4410(31)$; and 4645(72) from $^{123}\text{In}^m$ at 327.21 keV										
* $^{123}\text{Sn}(\beta^-)^{123}\text{Sb}$	$E_{\beta^-}=1260(10)$ from $^{123}\text{Sn}^m$ at 24.6 to $5/2^+$ level at 160.33 keV										

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
* ¹²³ Sn(β^-) ¹²³ Sb	E β^- =310(20) to 9/2 ⁺ level at 1088.64 keV										Ens04a **
* ¹²³ Xe(β^+) ¹²³ I	E β^+ =1505(15) to 1/2 ⁺ level at 148.92 keV										Ens04a **
* ¹²³ Cs(β^+) ¹²³ Xe	E β^+ =2990(310) to 3/2 ⁺ level at 97.30 keV										Ens04a **
* ¹²³ Cs(β^+) ¹²³ Xe	E β^+ =2370(140) to (1/2,3/2) ⁺ level at 596.65 keV, and other E β^+										Ens04a **
* ¹²³ Cs(β^+) ¹²³ Xe	E β^+ =2930(180) to 3/2 ⁺ level at 97.30 keV										Ens04a **
* ¹²³ Cs ^x (IT) ¹²³ Cs	Based on ¹²³ Cs ^m (IT)=156.27 and isomeric ratio R<0.1										Nub127 **
¹²⁴ Ag- ¹³³ Cs, ₉₃₂	17050	270				2			MA8	1.0	10Br02 *
¹²⁴ Cd- ¹³³ Cs, ₉₃₂	5781	10	5776	3	-0.5	1	10	10 ¹²⁴ Cd	MA8	1.0	10Br02
C ₇ ¹³ C H ₁₃ N- ¹²⁴ Sn	202886	8	202877.6	1.1	-0.4	U			M16	2.5	63Da10
	202891	8			-1.1	U			R13	1.5	83De51
¹²⁴ Sn- ¹³ C ³⁷ Cl ₃	4210.47	0.71	4214.0	1.1	2.0	1	38	37 ¹²⁴ Sn	H39	2.5	84Ha20
¹²⁴ Sn- ¹³³ Cs, ₉₃₂	-6598	21	-6604.6	1.1	-0.3	U			MA8	1.0	05Si34
¹²⁴ Te- ¹³ C ³⁷ Cl ₃	1754.63	1.26	1754.4	1.6	-0.1	1	26	26 ¹²⁴ Te	H39	2.5	84Ha20
¹²⁴ Te- ⁵⁴ Fe ³⁵ Cl ₂	25501.65	2.56	25502.7	1.7	0.2	U			H39	2.5	84Ha20
C ₇ ¹³ C H ₁₃ N- ¹²⁴ Te	205336	13	205337.2	1.6	0.0	U			M16	2.5	63Da10
	205325	8			1.0	U			R13	1.5	83De51
¹²⁴ I-u	-93786	30	-93791.0	2.6	-0.2	U			GS2	1.0	05Li24
¹²⁴ Xe- ¹³ C ³⁷ Cl ₃	4831.15	1.58	4829.3	1.9	-0.5	1	24	24 ¹²⁴ Xe	H39	2.5	84Ha20
¹²⁴ Xe- ⁵⁴ Fe ³⁵ Cl ₂	28575.78	0.99	28577.6	1.9	0.7	1	60	58 ¹²⁴ Xe	H39	2.5	84Ha20
¹²⁴ Xe- ¹³³ Cs, ₉₃₂	-5986	13	-5989.2	1.9	-0.2	U			MA6	1.0	04Di18
¹²⁴ Cs- ¹³³ Cs, ₉₃₂	370	16	377	9	0.4	o			MA1	1.0	90St25
	370	13			0.5	R			MA1	1.0	99Am05
	361	15			1.0	R			MA8	1.0	05Gu37
¹²⁴ Cs-u	-87696	30	-87742	9	-1.5	2			GS2	1.0	05Li24
	-87693	30			-1.6	2			GS2	1.0	05Li24 *
¹²⁴ Ba- ¹³³ Cs, ₉₃₂	3212	15	3212	13	0.0	2			MA1	1.0	99Am05
¹²⁴ Ba-u	-84905	30	-84906	13	0.0	R			GS2	1.0	05Li24
¹²⁴ La-u	-75464	71	-75430	60	0.5	2			GS2	1.0	05Li24 *
¹²⁴ Cd- ¹³⁰ Xe, ₉₅₄	9708.9	3.4	9709	3	0.2	1	89	89 ¹²⁴ Cd	JY1	1.0	12Ha25
¹²⁴ Sn- ¹²⁹ Xe, ₉₆₁	-3214.3	2.1	-3217.8	1.1	-1.6	1	27	27 ¹²⁴ Sn	JY1	1.0	11Ha48
¹²⁴ Sn- ¹²⁰ Sn, _{1,033}	6305.1	2.1	6302.4	1.3	-1.3	1	36	20 ¹²⁴ Sn	JY1	1.0	11Ha48
¹²⁴ Sn ³⁵ Cl- ¹²² Sn ³⁷ Cl	4784	2	4783.0	2.6	-0.1	U			H15	4.0	62Ba23
¹²⁴ Te ³⁵ Cl- ¹²² Te ³⁷ Cl	2728	2	2723.71	0.15	-0.5	U			H16	4.0	63Ba47
¹²⁴ Sn- ¹²⁴ Te	2458.51	0.89	2459.6	1.6	0.5	1	53	41 ¹²⁴ Te	H39	2.5	84Ha20
¹²⁴ Xe- ¹²⁴ Te	3076.00	1.78	3074.9	2.3	-0.2	1	27	16 ¹²⁴ Xe	H39	2.5	84Ha20
¹²⁴ Sn- ¹²² Sn	1838	22	1832.9	2.6	-0.1	U			M16	2.5	63Da10
¹²⁰ Cs ^x - ¹²⁴ Cs ^x ₁₉₄ ¹¹⁹ Cs ^x ₈₀₇	310	30	304	12	-0.1	U			P22	2.5	82Au01
¹²¹ Cs ^x - ¹²⁴ Cs ^x ₂₄₄ ¹²⁰ Cs ^x ₇₅₆	-1360	30	-1265	19	1.3	U			P22	2.5	82Au01
¹²³ Cs ^x - ¹²⁴ Cs ^x ₇₄₄ ¹²⁰ Cs ^x ₂₅₆	-1390	30	-1337	21	0.7	U			P22	2.5	82Au01
¹²⁴ Sn(d, ⁶ Li) ¹²⁰ Cd	-5216	24	-5228	4	-0.5	U					79Ja21
¹²⁴ Sn(³ He, ⁷ Be) ¹²⁰ Cd	-5098	30	-5115	4	-0.6	U			MSU		76St11
¹²⁴ Sn(¹⁸ O, ²⁰ Ne) ¹²² Cd	-1266	39	-1362.7	2.5	-2.5	U					97Gu32 *
¹²² Sn(t,p) ¹²⁴ Sn	5931	15	5953.5	2.4	1.5	U			Roc		70Fl05
¹²⁴ Sn(p,t) ¹²² Sn	-5956	10	-5953.5	2.4	0.2	U					64Al29
¹²⁴ Sn(d, ³ He) ¹²³ In	-6610	50	-6599	20	0.2	-			Sac		69Co03
	-6572	66			-0.4	-			MSU		71We01
ave.	-6600	40			-0.1	1	25	25 ¹²³ In			average
¹²⁴ Sn(p,d) ¹²³ Sn	-6279	15	-6264.6	2.4	1.0	U			Har		70Ca01
¹²⁴ Sn(d,t) ¹²³ Sn	-2260	35	-2231.9	2.4	0.8	U			Pit		64Co11
	-2233.4	3.7			0.4	1	42	39 ¹²³ Sn	SPa		75Be09
¹²³ Sb(n, γ) ¹²⁴ Sb	6467.55	0.10	6467.50	0.06	-0.5	-					73Sh.A Z
	6467.40	0.10			1.0	-					81Su.A Z
	6467.58	0.14			-0.6	-			Bdn		06Fi.A
ave.	6467.50	0.06			0.0	1	100	82 ¹²³ Sb			average
¹²³ Te(n, γ) ¹²⁴ Te	9425	2	9424.48	0.09	-0.3	U					69Bu05
	9423.7	1.5			0.5	U					70Or.A
	9424.05	0.30			1.4	-			Ltn		95Ge06 Z
	9423.89	0.20			3.0	C			Bdn		06Fi.A
	9424.53	0.10			-0.5	-					06Vo09
ave.	9424.48	0.09			0.0	1	100	98 ¹²³ Te			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{124}\text{Cd}(\beta^-)^{124}\text{In}$	4166	39	4170	30	0.1	1	61	61	^{124}In	Stu	87Sp09	
$^{124}\text{In}(\beta^-)^{124}\text{Sn}$	7180	50	7360	30	3.7	B			Stu		78Al18	
	7360	49			0.1	1	39	39	^{124}In	Stu	87Sp09	
$^{124}\text{Sn}(t,^3\text{He})^{124}\text{In}$	-7590	50	-7350	30	4.9	B			LAL		78Aj01	
$^{124}\text{In}^m(\beta^-)^{124}\text{Sn}$	7370	210	7340	50	-0.1	o			Stu		78Al18	
	7341	51				2			Stu		87Sp09	
$^{124}\text{Sb}(\beta^-)^{124}\text{Te}$	2907.7	5.	2904.3	1.6	-0.7	-					65Hs02 *	
	2903.7	4.			0.1	-					66Ca10 *	
	2904.7	2.			-0.2	-					69Na05 *	
ave.	2904.9	1.7			-0.3	1	86	82	^{124}Sb		average	
$^{124}\text{I}(\beta^+)^{124}\text{Te}$	3157	4	3159.6	1.9	0.6	2					71Bo01 *	
	3160.3	2.1			-0.3	2					92Wo03	
$^{124}\text{Cs}(\beta^+)^{124}\text{Xe}$	5920	460	5930	8	0.0	U					75We23	
	5900	90			0.3	U			IRS		93Al03	
	5910	30			0.7	U			JAE		96Os04	
$^{124}\text{Cs}^x(\text{IT})^{124}\text{Cs}$	30	20				3					AHW *	
$^{124}\text{La}(\beta^+)^{124}\text{Ba}$	8930	110	8830	60	-0.9	R			JAE		98Ko66	
* $^{124}\text{Ag}-^{133}\text{Cs}_{932}$	$D_M=17050(270) \mu\text{u}$ for mixture gs+m at 0#(100#); $M-A=-66200(250) \text{keV}$											
* $^{124}\text{Cs-u}$	$M-A=-81223(28) \text{keV}$ for $^{124}\text{Cs}^m$ at 462.63 keV											
* $^{124}\text{La-u}$	$M-A=-70244(32) \text{keV}$ for mixture gs+m at 100#100 keV											
* $^{124}\text{Sn}(^{18}\text{O},^{20}\text{Ne})^{122}\text{Cd}$	Original $Q=-1250(39) \text{calibrated with } ^{120}\text{Cd}=-83973(19) \text{keV}$											
* $^{124}\text{Sb}(\beta^-)^{124}\text{Te}$	$E_{\beta^-}=2305(5) 2301(4) 2302(2)$ respectively, to 2^+ level at 602.7271 keV											
* $^{124}\text{I}(\beta^+)^{124}\text{Te}$	Original error increased, see $^{84}\text{Rb}(\beta^+)$											
* $^{124}\text{Cs}^x(\text{IT})^{124}\text{Cs}$	Based on $^{124}\text{Cs}^m(\text{IT})=462.63 \text{keV}$											
* $^{124}\text{Cs}^x(\text{IT})^{124}\text{Cs}$	Isomeric ratio assumed <0.1 as for ^{118}Cs , ^{120}Cs , ^{122}Cs											
$^{125}\text{Ag-u}$	-68954	429				2			GT1	1.5	04Ma.A	
$^{125}\text{Cd-u}$	-78770	120	-78742	3	0.2	o			GT2	1.5	08Kn.A *	
	-78780	140			0.2	U			GT2	1.5	08Su19 *	
$\text{C}_7 \text{H}_6 \text{ } ^{35}\text{Cl}-^{125}\text{Te}$	111363	6	111373.0	1.6	0.7	U			M16	2.5	63Da10	
	111368	8			0.4	U			R13	1.5	83De51	
$^{125}\text{I-u}$	-95374	30	-95370.6	1.6	0.1	U			GS2	1.0	05Li24	
$^{125}\text{Cs-u}$	-90280	30	-90272	8	0.3	U			GS2	1.0	05Li24	
$^{125}\text{Ba-u}$	-85569	30	-85528	12	1.4	R			GS2	1.0	05Li24	
$^{125}\text{La-u}$	-79191	30	-79184	28	0.2	1	87	87	^{125}La	GS2	1.0	05Li24
$^{125}\text{Cs}-^{133}\text{Cs}_{940}$	-1383	17	-1397	8	-0.8	o			MA1	1.0	90St25	
	-1382	14			-1.1	-			MA1	1.0	99Am05	
	-1386	14			-0.8	-			MA4	1.0	99Am05	
ave.	-1384	10			-1.3	1	71	71	^{125}Cs		average	
$^{125}\text{Ba}-^{133}\text{Cs}_{940}$	3356	13	3347	12	-0.7	-			MA5	1.0	00Be42	
ave.	3348	12			-0.1	1	98	98	^{125}Ba		average	
$^{125}\text{Cd}-^{130}\text{Xe}_{962}$	14081.6	3.1	14082	3	0.0	1	100	100	^{125}Cd	JY1	1.0	12Ha25
$^{125}\text{Cd}^m-^{130}\text{Xe}_{962}$	14281.6	3.4				2			JY1	1.0	12Ka.C	
$^{125}\text{Te } ^{35}\text{Cl}-^{123}\text{Te } ^{37}\text{Cl}$	3090	2	3110.23	0.13	2.5	U			H16	4.0	63Ba47	
$^{122}\text{Cs}^x-^{125}\text{Cs}_{244} \text{ } ^{121}\text{Cs}^x_{756}$	715	23	640	40	-1.3	U			P32	2.5	86Au02	
$^{123}\text{Sb}(t,p)^{125}\text{Sb}$	6696	20	6692.3	2.6	-0.2	U			Ald		67Hi01	
$^{124}\text{Sn}(n,\gamma)^{125}\text{Sn}$	5733.1	1.5	5733.50	0.20	0.3	U					77Ca09 Z	
	5733.1	0.6			0.7	U					81Ba53	
	5733.5	0.2			0.0	1	100	100	^{125}Sn		11To04	
$^{124}\text{Sn}(d,p)^{125}\text{Sn}$	3530	30	3508.93	0.20	-0.7	U			Pit		64Co11	
	3506	12			0.2	U			Tal		64Ne10	
	3515	11			-0.6	U					72Ca33	
	3509.4	3.6			-0.1	U			SPa		75Be09	
$^{124}\text{Te}(n,\gamma)^{125}\text{Te}$	6569.0	1.0	6568.970	0.030	0.0	U					71Gr.A	
	6568.97	0.03			0.0	1	100	83	^{125}Te	Prn	99Ho01	
	6569.39	0.19			-2.2	U			Bdn		06Fi.A	
$^{125}\text{Te}(\gamma,n)^{124}\text{Te}$	-6560	60	-6568.970	0.030	-0.1	U			Phi		60Ge01	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{124}\text{Te}(\text{d,p})^{125}\text{Te}$	4344	8	4344.404	0.030	0.1	U			MIT		69Gr24
$^{124}\text{Te}(\text{}^3\text{He,d})^{125}\text{I}$	115.1	3.0	107.38	0.07	-2.6	U			Hei		78Sz04
$^{124}\text{Te}(\alpha,\text{t})^{125}\text{I}$	-14203	7	-14213.01	0.07	-1.4	U			Hei		78Sz04
$^{124}\text{Xe}(\text{n},\gamma)^{125}\text{Xe}$	7603.3	0.4	7603.3	0.4	-0.1	1	100	99 ^{125}Xe			82Ka.A
$^{125}\text{Cd}(\beta^-)^{125}\text{In}$	7122	62	7129	27	0.1	1	19	19 ^{125}In	Stu		87Sp09 *
$^{125}\text{Cd}^m(\beta^-)^{125}\text{In}$	7172	35	7315	27	4.1	U			Stu		87Sp09 *
$^{125}\text{In}(\beta^-)^{125}\text{Sn}$	5418	30	5420	27	0.1	1	81	81 ^{125}In	Stu		87Sp09 *
$^{125}\text{Sn}(\beta^-)^{125}\text{Sb}$	2330	10	2359.8	2.6	3.0	U					50Ha58
	2370	20			-0.5	U					50Ke11
	2335	40			0.6	U					64De02 *
$^{125}\text{Sb}(\beta^-)^{125}\text{Te}$	767.7	3.	766.7	2.1	-0.3	2					64Ma30 *
	765.7	3.			0.3	2					66Ma49 *
$^{125}\text{I}(\epsilon)^{125}\text{Te}$	184	7	185.77	0.06	0.3	U					64Le05 *
	185	8			0.1	U					66Sm05 *
	177.2	2.			4.3	C					68Go.A *
	186.1	0.3			-1.1	U					86Bo46
	179.3	2.0			3.2	B					90Li14 *
	185.77	0.06				2					94Hi04
$^{125}\text{Xe}(\epsilon)^{125}\text{I}$	1735	40	1644.2	2.2	-2.3	U					69Lu09 *
$^{125}\text{Cs}(\beta^+)^{125}\text{Xe}$	3072	20	3105	8	1.7	-					54Ma54
	3082	20			1.2	-					75We23
	3100	100			0.1	U			IRS		93Al03
	ave.	3077	14		2.0	1	31	29 ^{125}Cs			average
$^{125}\text{Ba}(\beta^+)^{125}\text{Cs}$	4560	250	4419	13	-0.6	U					68Da09 *
	4380	50			0.8	U			JAE		96Os04
$^{125}\text{La}(\beta^+)^{125}\text{Ba}$	5950	70	5909	28	-0.6	1	16	13 ^{125}La	JAE		98Ko66
* $^{125}\text{Cd-u}$	M-A=-73274(93) keV for mixture gs+m at 186(5) keV										Nub129 **
* $^{125}\text{Cd-u}$	M-A=-73287(120) keV for mixture gs+m at 186(5) keV										Nub129 **
* $^{125}\text{Cd}(\beta^-)^{125}\text{In}$	E_{β^-} =4625(62) to (1/2 ⁺ ,3/2 ⁺) level at 2497.43 keV										Ens112 **
* $^{125}\text{Cd}^m(\beta^-)^{125}\text{In}$	E_{β^-} =5009(109), 4581(126), 4533(39) to 2101.40, 2640.29, 2641.26 levels										Ens112 **
* $^{125}\text{In}(\beta^-)^{125}\text{Sn}$	Q_{β^-} =5443(31); and 5730(43) from $^{125}\text{In}^m$ at 360.12 keV										Nub127 **
* $^{125}\text{Sn}(\beta^-)^{125}\text{Sb}$	E_{β^-} =2030(40) from $^{125}\text{Sn}^m$ at 27.50(0.14) to 5/2 ⁺ level at 332.06 keV										Ens112 **
* $^{125}\text{Sb}(\beta^-)^{125}\text{Te}$	E_{β^-} =623(3) 621(3) respectively, to 1/2 ⁻ level at 144.775 keV										Ens112 **
* $^{125}\text{I}(\epsilon)^{125}\text{Te}$	LMK=0.254(0.003) 0.253(0.005) IBE=110(2) 150.6(0.3) respectively, all to 3/2 ⁺ level at 35.4925 keV. Q(LMK) recalculated, error mainly theory										AHW **
*											Ens112 **
* $^{125}\text{I}(\epsilon)^{125}\text{Te}$	IBE=112.0(2.0)(1s)+31.8 to 3/2 ⁺ level at 35.4925 keV										Ens112 **
* $^{125}\text{Xe}(\epsilon)^{125}\text{I}$	E_{β^+} =470(40) to 3/2 ⁺ at 188.416 and 1/2 ⁺ at 243.382 keV, ratio 1:2										Ens112 **
* $^{125}\text{Ba}(\beta^+)^{125}\text{Cs}$	E_{β^+} =3450(250) to (5/2 ⁺) level at 84.82 level										Ens112 **
$\text{C}_{10} \text{H}_6 - ^{126}\text{Te}$	143623	9	143639.3	1.6	0.7	U			M16	2.5	63Da10
	143640	8			-0.1	U			R13	1.5	83De51
$^{126}\text{Xe-u}$	-95647	30	-95702	4	-1.8	U			GS2	1.0	05Li24
$^{126}\text{Ba-u}$	-88745	30	-88750	13	-0.2	R			GS2	1.0	05Li24
$^{126}\text{La-u}$	-80503	232	-80490	100	0.1	2			GS2	1.0	05Li24 *
$^{126}\text{Ce-u}$	-76029	30				2			GS2	1.0	05Li24
$^{126}\text{Xe} - ^{134}\text{Xe}_{.940}$	-6772.8	2.9	-6773	4	0.0	o			MA8	1.0	05He.A
	-6773.2	3.8			0.1	1	98	98 ^{126}Xe	MA8	1.0	06He29
$^{126}\text{Cd} - ^{133}\text{Cs}_{.947}$	11966.5	4.5	11966.1	2.7	-0.1	1	35	35 ^{126}Cd	MA8	1.0	10Br02
	11956	15			0.7	U			MA8	1.0	10Br02
$^{126}\text{Cs} - ^{133}\text{Cs}_{.947}$	-1018	16	-1017	11	0.1	o			MA1	1.0	90St25
	-1011	13			-0.5	1	74	74 ^{126}Cs	MA1	1.0	99Am05
$^{126}\text{Ba} - ^{133}\text{Cs}_{.947}$	786	15	787	13	0.1	2			MA1	1.0	99Am05
$^{126}\text{Cd} - ^{130}\text{Xe}_{.969}$	15928.6	3.3	15928.6	2.7	0.0	1	65	65 ^{126}Cd	JY1	1.0	12Ha25
$^{126}\text{Te} \text{}^{35}\text{Cl} - ^{124}\text{Te} \text{}^{37}\text{Cl}$	3432	2	3443.88	0.11	1.5	U			H16	4.0	63Ba04
	3441.28	1.54			1.1	U			H43	1.5	90Dy07
$^{123}\text{Cs}^x - ^{126}\text{Cs}_{.390} \text{}^{121}\text{Cs}^x_{.610}$	-1160	30	-1136	17	0.3	U			P22	2.5	82Au01
$^{124}\text{Cs}^x - ^{126}\text{Cs}_{.590} \text{}^{121}\text{Cs}^x_{.410}$	-340	30	-341	23	0.0	U			P22	2.5	82Au01
$^{124}\text{Cs}^x - ^{126}\text{Cs}_{.492} \text{}^{122}\text{Cs}^x_{.508}$	-570	30	-510	28	0.8	U			P22	2.5	82Au01

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{124}\text{Cs}^x - ^{126}\text{Cs}_{.328} \quad ^{123}\text{Cs}_{.672}^x$	390	30	422	24	0.4	U			P22	2.5	82Au01
$^{125}\text{Cs} - ^{126}\text{Cs}_{.496} \quad ^{124}\text{Cs}_{.504}^x$	-1130	30	-1073	14	0.8	U			P22	2.5	82Au01
$^{124}\text{Sn}(t,p)^{126}\text{Sn}$	5445	15	5442	10	-0.2	-			Ald		69Bj01
	5444	15			-0.1	-			Roc		70Fi05
ave.	5445	11			-0.2	1	96	96 ^{126}Sn			average
$^{125}\text{Te}(n,\gamma)^{126}\text{Te}$	9113.7	0.4	9113.69	0.08	0.0	U					77Ko.A
	9113.69	0.08			0.0	1	100	83 ^{126}Te			03Vo03
$^{126}\text{Te}(\gamma,n)^{125}\text{Te}$	-8840	120	-9113.69	0.08	-2.3	U			Phi		60Ge01
$^{125}\text{Te}(d,p)^{126}\text{Te}$	6892	6	6889.13	0.08	-0.5	U			MIT		71Gr01
$^{126}\text{Cd}(\beta^-)^{126}\text{In}$	5486	36	5516	27	0.8	1	56	56 ^{126}In	Stu		87Sp09
$^{126}\text{In}(\beta^-)^{126}\text{Sn}$	8207	39	8242	27	0.9	1	48	44 ^{126}In	Stu		87Sp09
$^{126}\text{In}^m(\beta^-)^{126}\text{Sn}$	8309	51				2			Stu		87Sp09
$^{126}\text{Sn}(\beta^-)^{126}\text{Sb}$	378	30				2					71Or04 *
$^{126}\text{Sb}(\beta^-)^{126}\text{Te}$	3667	150	3670	30	0.0	U					71Or04 *
$^{126}\text{I}(\beta^+)^{126}\text{Te}$	2151	5	2154	4	0.6	1	54	52 ^{126}I			59Ha27
$^{126}\text{I}(\beta^-)^{126}\text{Xe}$	1258	5	1234	5	-4.7	B					55Ko14 *
$^{126}\text{Cs}(\beta^+)^{126}\text{Xe}$	4670	140	4795	11	0.9	U					75We23 *
	4810	100			-0.1	U					76Pa11 *
	4830	40			-0.9	U			JAE		92Os07
	4730	100			0.7	U			IRS		93Al03
	4780	20			0.8	1	29	26 ^{126}Cs	JAE		96Os04
$^{126}\text{La}(\beta^+)^{126}\text{Ba}$	7700	100	7700	90	0.0	R			JAE		98Ko66
$^{126}\text{La}^m(\beta^+)^{126}\text{Ba}$	7910	400				3			JAE		98Ko66
* $^{126}\text{La-u}$	M-A=-74883(28) keV for mixture gs+m at 210(410) keV										Nub127 **
* $^{126}\text{Sn}(\beta^-)^{126}\text{Sb}$	E_{β^-} =250(30) to 2^+ level at 127.9 keV										Ens031 **
* $^{126}\text{Sb}(\beta^-)^{126}\text{Te}$	E_{β^-} =1900(150) from mixture ground state and $^{126}\text{Sb}^m$ at 17.7 to 6^+ level at 1776.19 keV										Ens031 **
* $^{126}\text{I}(\beta^-)^{126}\text{Xe}$	E_{β^-} =865(5) to 2^+ level at 388.631 keV, and other E_{β^-}										Ens031 **
* $^{126}\text{Cs}(\beta^+)^{126}\text{Xe}$	E_{β^+} =3260(140) 3400(100) respectively, to 2^+ level at 388.631 keV										Ens031 **
$\text{C}_{10} \text{H}_7 - ^{127}\text{I}$	150297	6	150303	4	0.4	U			M16	2.5	63Da10
	150305.3	3.4			-0.2	1	21	21 ^{127}I	M16	2.5	63Da10
	150322	8			-1.6	U			R13	1.5	83De51
$^{127}\text{Cs-u}$	-92571	30	-92583	6	-0.4	U			GS2	1.0	05Li24
$^{127}\text{Ba-u}$	-88923	39	-88909	12	0.4	R			GS2	1.0	05Li24 *
$^{127}\text{La-u}$	-83640	30	-83625	28	0.5	1	87	87 ^{127}La	GS2	1.0	05Li24 *
$^{127}\text{Ce-u}$	-77273	31				2			GS2	1.0	05Li24 *
$^{127}\text{Sn} \quad ^{34}\text{S} - ^{133}\text{Cs}_{1.211}$	-7237	12	-7245	11	-0.7	1	81	81 ^{127}Sn	MA8	1.0	08Dw01 *
$^{127}\text{Cs} - ^{133}\text{Cs}_{.955}$	-2293	16	-2289	6	0.2	o			MA1	1.0	90St25
	-2287	13			-0.2	-			MA1	1.0	99Am05
	-2293.3	7.7			0.5	-			MA8	1.0	05Gu37
ave.	-2292	7			0.4	1	82	82 ^{127}Cs			average
$^{127}\text{Ba} - ^{133}\text{Cs}_{.955}$	1389	13	1385	12	-0.3	-			MA5	1.0	00Be42
ave.	1387	12			-0.2	1	98	98 ^{127}Ba			average
$^{127}\text{Cd} - ^{130}\text{Xe}_{.977}$	20741	14	20744	14	0.2	1	96	96 ^{127}Cd	JY1	1.0	12Ha25
$^{125}\text{Cs} - ^{127}\text{Cs}_{.591} \quad ^{122}\text{Cs}_{.410}^x$	-1098	18	-1086	16	0.3	U			P32	2.5	86Au02
$^{126}\text{Te}(n,\gamma)^{127}\text{Te}$	6289	3	6287.65	0.18	-0.5	U					72Mu.A
	6287.8	0.4			-0.4	-			Bdn		06Fi.A
	6287.6	0.2			0.2	-			Prn		05Ho15
$^{126}\text{Te}(d,p)^{127}\text{Te}$	4044	8	4063.08	0.18	2.4	U			MIT		68Gr16
$^{126}\text{Te}(n,\gamma)^{127}\text{Te}$	ave.	6287.64	0.18	6287.65	0.18	0.0	1	100	98 ^{127}Te		average
$^{127}\text{I}(\gamma,n)^{126}\text{I}$	-9135	22	-9143.9	2.7	-0.4	U			Phi		60Ge01
	-9145	3			0.4	1	83	48 ^{126}I	MMn		86Ts04
$^{127}\text{Cd}(\beta^-)^{127}\text{In}$	8468	63	8408	24	-1.0	1	15	11 ^{127}In	Stu		87Sp09 *
$^{127}\text{In}(\beta^-)^{127}\text{Sn}$	6514	31	6573	19	1.9	o			Stu		87Sp09 *
	6579	20			-0.3	1	91	89 ^{127}In	Stu		04Ga24 *
$^{127}\text{In}^n(\beta^-)^{127}\text{Sn}$	8442	56				2			Stu		04Ga24
$^{127}\text{Sn}(\beta^-)^{127}\text{Sb}$	3201	24	3228	11	1.1	1	21	17 ^{127}Sn	Stu		77Lu06 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{127}\text{Sb}(\beta^-)^{127}\text{Te}$	1581	5	1582	5	0.2	1	97	96 ^{127}Sb			67Ra13 *
$^{127}\text{Te}(\beta^-)^{127}\text{I}$	683	10	702	4	1.9	–					55Da37
	695	10			0.7	–					56Kn20
ave.	689	7			1.9	1	26	24 ^{127}I			average
$^{127}\text{Xe}(\epsilon)^{127}\text{I}$	663.3	2.2	662.3	2.0	–0.4	–					68Sc14
$^{127}\text{I}(\beta^-)^{127}\text{Xe}$	–676	6	–680.9	2.0	–0.8	–			Pri		89Ch01
$^{127}\text{Xe}(\epsilon)^{127}\text{I}$	ave.	662.6	2.1	662.3	2.0	–0.1	1	98	91 ^{127}Xe		average
$^{127}\text{Cs}(\beta^+)^{127}\text{Xe}$	2115	25	2081	6	–1.3	–					54Ma54 *
	2076	20			0.3	–					67Sp08 *
	2089	20			–0.4	–					75We23 *
ave.	2090	12			–0.7	1	27	18 ^{127}Cs			average
$^{127}\text{Ba}(\beta^+)^{127}\text{Cs}$	3450	100	3422	13	–0.3	U					76Be11 *
$^{127}\text{La}(\beta^+)^{127}\text{Ba}$	5010	70	4922	28	–1.3	1	16	13 ^{127}La	JAE		98Ko66
* $^{127}\text{Ba-u}$	M–A=–82791(28) keV for mixture gs+m at 80.32 keV										Nub127 **
* $^{127}\text{La-u}$	M–A=–77903(28) keV for mixture gs+m at 14.2(0.4) keV										Nub127 **
* $^{127}\text{Ce-u}$	M–A=–71976(29) keV for mixture gs+m at 7.3(1.1) keV										Nub127 **
* $^{127}\text{Sn }^{34}\text{S}–^{133}\text{Cs}_{1,211}$	D_M =–7234.3(11.6) μu for mixture gs+m at 5.07(0.06) keV										Nub127 **
* $^{127}\text{Cd}(\beta^-)^{127}\text{In}$	Also E_{β^-} =7910(200) to $^{127}\text{In}^m$ at 408.9(0.3) keV										Nub127 **
* $^{127}\text{In}(\beta^-)^{127}\text{Sn}$	Also E_{β^-} =6976(64) from $^{127}\text{In}^m$ at 408.9(0.3) keV										Nub127 **
* $^{127}\text{In}(\beta^-)^{127}\text{Sn}$	Also E_{β^-} =6999(63) from $^{127}\text{In}^m$ at 408.9(0.3) keV										Nub127 **
* $^{127}\text{Sn}(\beta^-)^{127}\text{Sb}$	Q_{β^-} =3206(24) from $^{127}\text{Sn}^m$ at 5.07(0.06) keV										Nub127 **
* $^{127}\text{Sb}(\beta^-)^{127}\text{Te}$	E_{β^-} =1493(5) to $11/2^-$ level at 88.23 keV, and other E_{β^-}										Ens118 **
* $^{127}\text{Cs}(\beta^+)^{127}\text{Xe}$	E_{β^+} =1063(10), 685(25) to mixture gs+124.751 and $1/2^+$ level at 411.965 keV										Ens118 **
* $^{127}\text{Cs}(\beta^+)^{127}\text{Xe}$	E_{β^+} =1068(20), 910(30), 650(30) to ground state, $3/2^+$ at 124.751, $1/2^+$ at 411.965										Ens118 **
* $^{127}\text{Cs}(\beta^+)^{127}\text{Xe}$	E_{β^+} =1040(20), 650(20) to mixture gs+124.751 and $1/2^+$ level at 411.965 keV										Ens118 **
* $^{127}\text{Ba}(\beta^+)^{127}\text{Cs}$	E_{β^+} =2230(100) to $3/2^+$ level at 180.92 keV, and other E_{β^+}										Ens118 **
$^{128}\text{Sn-u}$	–89512	25	–89493	19	0.8	1	58	58 ^{128}Sn	GS3	1.0	12Ch19
$\text{C}_{10} \text{H}_8–^{128}\text{Te}$	158112	9	158139.0	0.9	1.2	U			M16	2.5	63Da10
	158141.2	7.			–0.1	U			C3	2.5	70Ke05
	158151	8			–1.0	U			R13	1.5	83De51
$\text{C}_{10} \text{H}_8–^{128}\text{Xe}$	159068.2	4.2	159069.2	1.1	0.1	U			M16	2.5	63Da10
	159069.7	0.7			–0.3	1	42	42 ^{128}Xe	C3	2.5	70Ke05
$^{128}\text{Cs-u}$	–92181	30	–92251	6	–2.3	U			GS2	1.0	05Li24
$^{128}\text{Ba-u}$	–91663	30	–91658	6	0.2	R			GS2	1.0	05Li24
$^{128}\text{La-u}$	–84436	69	–84410	60	0.4	2			GS2	1.0	05Li24 *
$^{128}\text{Ce-u}$	–81089	30				2			GS2	1.0	05Li24
$^{128}\text{Pr-u}$	–71209	32				2			GS2	1.0	05Li24
$^{128}\text{Cd}–^{133}\text{Cs}_{,962}$	18759	11	18768	8	0.8	1	50	50 ^{128}Cd	MA8	1.0	10Br02
$^{128}\text{Sn }^{34}\text{S}–^{133}\text{Cs}_{1,218}$	–6396	14	–6466	19	–5.0	F			MA8	1.0	08Dw01 *
$^{128}\text{Cs}–^{133}\text{Cs}_{,962}$	–1297	16	–1296	6	0.1	o			MA1	1.0	90St25
	–1293	13			–0.2	1	20	20 ^{128}Cs	MA1	1.0	99Am05
$^{128}\text{Ba}–^{133}\text{Cs}_{,962}$	–720	13	–703	6	1.3	–			MA1	1.0	99Am05
ave.	–718	12			1.3	1	22	22 ^{128}Ba			average
$^{128}\text{Cd}–^{130}\text{Xe}_{,985}$	22865	11	22856	8	–0.8	1	50	50 ^{128}Cd	JY1	1.0	12Ha25
$^{128}\text{Te }^{35}\text{Cl}–^{126}\text{Te }^{37}\text{Cl}$	4106	2	4100.5	1.8	–0.7	U			H16	4.0	63Ba47
	4102.3	1.8			–0.4	1	16	12 ^{126}Te	C3	2.5	70Ke05
$^{128}\text{Te}–^{128}\text{Xe}$	931.26	1.20	930.3	1.0	–0.6	–			H43	1.5	90Dy04
	929.5	1.4			0.5	–			CP1	1.0	09Sc19
ave.	930.2	1.1			0.1	1	77	56 ^{128}Xe			average
$^{128}\text{Xe}–^{126}\text{Xe}$	–774	45	–767	4	0.1	U			M16	2.5	63Da10
$^{126}\text{Cs}–^{128}\text{Cs}_{,656}$ $^{122}\text{Cs}_{,344}^x$	–1130	30	–1102	16	0.4	U			P22	2.5	82Au01
$^{124}\text{Cs}^x–^{128}\text{Cs}_{,323}$ $^{122}\text{Cs}_{,678}^x$	–1070	30	–970	30	1.3	U			P22	2.5	82Au01
$^{126}\text{Cs}–^{128}\text{Cs}_{,591}$ $^{123}\text{Cs}_{,410}^x$	–350	30	–340	12	0.1	U			P22	2.5	82Au01
$^{124}\text{Cs}^x–^{128}\text{Cs}_{,194}$ $^{123}\text{Cs}_{,807}^x$	370	50	366	24	0.0	U			P22	2.5	82Au01
$^{125}\text{Cs}–^{128}\text{Cs}_{,244}$ $^{124}\text{Cs}_{,756}^x$	–1440	30	–1354	18	1.1	U			P22	2.5	82Au01
$^{126}\text{Cs}–^{128}\text{Cs}_{,492}$ $^{124}\text{Cs}_{,508}^x$	–610	30	–568	15	0.6	U			P22	2.5	82Au01

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{127}\text{Cs}-^{128}\text{Cs}_{.661}$ $^{125}\text{Cs}_{.339}$	-965	16	-934	7	0.8	U			P32	2.5	86Au02
$^{127}\text{Cs}-^{128}\text{Cs}_{.496}$ $^{126}\text{Cs}_{.504}$	-1160	30	-1105	8	0.7	U			P22	2.5	82Au01
$^{128}\text{Te}(\gamma,n)^{127}\text{Te}$	-8410	120	-8783.4	1.7	-3.1	B			Phi		60Ge01
$^{127}\text{I}(n,\gamma)^{128}\text{I}$	6825.7	0.5	6826.13	0.05	0.9	U					71Sc07
	6826.12	0.05			0.2	-			MMn		90Is03
	6826.22	0.14			-0.6	-			Bdn		06Fi.A
ave.	6826.13	0.05			0.0	1	100	87 ^{128}I			average
$^{128}\text{Cd}(\beta^-)^{128}\text{In}$	7070	290	6900	150	-0.6	1	28	28 ^{128}In	Stu		87Sp09
$^{128}\text{In}(\beta^-)^{128}\text{Sn}$	9280	180	9220	150	-0.4	1	72	72 ^{128}In	Stu		78Al18
	8984	37			6.3	F			Stu		87Sp09
	8950	103			2.6	F			Gsn		90St13
$^{128}\text{In}^m(\beta^-)^{128}\text{Sn}$	9390	220	9298	28	-0.4	o			Stu		78Al18
	9306	30			-0.3	2			Stu		87Sp09
	9230	90			0.8	2			Gsn		90St13
$^{128}\text{Sn}(\beta^-)^{128}\text{Sb}^m$	1265	30	1258	12	-0.2	-					76Nu01
	1290	40			-0.8	-			Stu		77Lu06
	1260	15			-0.1	-			Gsn		90St13
ave.	1264	13			-0.4	1	87	45 $^{128}\text{Sb}^m$			average
$^{128}\text{Sb}^m(\text{IT})^{128}\text{Sb}$	10	7				2					AHW
$^{128}\text{Sb}(\beta^-)^{128}\text{Te}$	4640	100	4363	19	-2.8	U					71Ki15
$^{128}\text{Sb}^m(\beta^-)^{128}\text{Te}$	4391	40	4373	18	-0.4	-			Stu		77Lu06
	4395	30			-0.7	-			Gsn		90St13
ave.	4394	24			-0.8	1	55	55 $^{128}\text{Sb}^m$			average
$^{128}\text{I}(\beta^+)^{128}\text{Te}$	1277	13	1255	4	-1.7	U					61La16
$^{128}\text{I}(\beta^-)^{128}\text{Xe}$	2116	10	2122	4	0.6	1	14	13 ^{128}I			56Be18
$^{128}\text{Cs}(\beta^+)^{128}\text{Xe}$	3855	90	3929	5	0.8	U					75We23
	3928	6			0.1	1	80	80 ^{128}Cs			76Cr.B
	3907	40			0.5	o			IRS		83Al06
	3930	100			0.0	U			IRS		93Al03
$^{128}\text{La}(\beta^+)^{128}\text{Ba}$	6650	400	6750	50	0.3	U					66Li04
	6820	100			-0.7	R			JAE		98Ko66
* $^{128}\text{La-u}$	M-A=-78601(28) keV for mixture gs+m at 100#100 keV										Nub127
* ^{128}Sn $^{34}\text{S}-^{133}\text{Cs}_{1.218}$	F : authors say "possible contamination, measurement abandoned"										GAU
* $^{128}\text{In}(\beta^-)^{128}\text{Sn}$	$E_{\beta^-}=4980(180)$ to $(2)^+$ level at 4297.70 keV										Ens01c
* $^{128}\text{In}(\beta^-)^{128}\text{Sn}$	$E_{\beta^-}=5464(37)$ to $(2)^+$ at 3519.86; others 6986(170), 7857(109) to 2104.07, 1168.82; different equipment/method than in previous; low E_{β^-} not seen										Ens01c
* $^{128}\text{In}(\beta^-)^{128}\text{Sn}$	$E_{\beta^-}=4650(120)$, 5440(200) to 4297, 3520 levels and others										FGK126
* $^{128}\text{In}(\beta^-)^{128}\text{Sn}$	F : above 2 items conflict with 1st one and with trends in Ex of 8^- isomer										GAU
* $^{128}\text{In}^m(\beta^-)^{128}\text{Sn}$	$E_{\beta^-}=5430(220)$ to 3958 level										FGK126
* $^{128}\text{In}^m(\beta^-)^{128}\text{Sn}$	$E_{\beta^-}=5239(40)$, 5350(44) to 4066, 3958 level										FGK126
* $^{128}\text{In}^m(\beta^-)^{128}\text{Sn}$	$E_{\beta^-}=5160(170)$, 5250(130) to 4066, 3958 levels										FGK126
* $^{128}\text{Sn}(\beta^-)^{128}\text{Sb}^m$	$E_{\beta^-}=630(30)$ 655(40) 625(15), to 1^+ level 635.2 above $^{128}\text{Sb}^m$ at 10(7) keV										Ens01c
* $^{128}\text{Sb}^m(\text{IT})^{128}\text{Sb}$	From 3.6% IT for M3 transition										Ens01c
* $^{128}\text{Sb}(\beta^-)^{128}\text{Te}$	$E_{\beta^-}=2300(100)$ to 7^- level at 2337.73 keV										Ens01c
* $^{128}\text{Sb}^m(\beta^-)^{128}\text{Te}$	$E_{\beta^-}=2580(40)$ 2585(30) respectively, to 6^+ level at 1811.16 keV										Ens01c
* $^{128}\text{I}(\beta^-)^{128}\text{Xe}$	$E_{\beta^-}=2120(10)$ and $E_{\beta^-}=1665(15)$ to ground state and 2^+ level at 442.911 keV										Ens01c
* $^{128}\text{Cs}(\beta^+)^{128}\text{Xe}$	$E_{\beta^+}=2390(90)$ to 2^+ level at 442.911 keV										Ens01c
* $^{128}\text{La}(\beta^+)^{128}\text{Ba}$	$E_{\beta^+}=3200(400)$ 3370(100) respectively, to $(4^-, 5^+)$ level at 2425.44 keV										Ens01c
$^{129}\text{Sn-u}$	-86521	31	-86535	21	-0.5	1	45	45 ^{129}Sn	MA8	1.0	05Si34
$^{129}\text{Xe}-^{120}\text{Sn}_{1.075}$	9913.3	2.4	9914.1	1.0	0.3	1	19	19 ^{120}Sn	JY1	1.0	11Ha48
$\text{C}_{10}\text{H}_9-^{129}\text{Xe}$	165643.6	3.6	165644.429	0.006	0.1	U			M16	2.5	63Da10
$^{129}\text{Xe-u}$	-95228.7	5.4	-95219.139	0.006	0.7	U			ACC	2.5	90Me08
$^{129}\text{Xe}-\text{C}_2$ $^{35}\text{Cl}_3$	-1777.98	0.68	-1777.18	0.11	0.8	U			H47	1.5	94Hy01
$^{129}\text{Xe}_2-^{86}\text{Kr}_3$	77729.8547	0.0250	77729.841	0.014	-0.5	1	31	16 ^{86}Kr	FS1	1.0	05Sh38
$^{129}\text{La-u}$	-87300	30	-87306	23	-0.2	1	58	58 ^{129}La	GS2	1.0	05Li24
$^{129}\text{Ce-u}$	-81898	30				2			GS2	1.0	05Li24
$^{129}\text{Pr-u}$	-74905	32				2			GS2	1.0	05Li24

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{129}\text{Xe}-^{134}\text{Xe}_{.963}$	-4114.7	3.8	-4114.2	0.9	0.1	o			MA8	1.0	05He.A
	-4119.3	5.1			1.0	U			MA8	1.0	06He29
$^{129}\text{Cs}-^{133}\text{Cs}_{.970}$	-2225	18	-2223	5	0.1	o			MA1	1.0	90St25
	-2216	14			-0.5	1	12	12 ^{129}Cs	MA1	1.0	99Am05
$^{129}\text{In}-^{130}\text{Xe}_{.992}$	17523.9	2.9	17524.0	2.9	0.0	1	100	100 ^{129}In	JY1	1.0	12Ha25
$^{129}\text{In}^m-^{130}\text{Xe}_{.992}$	18016.5	3.5				2			JY1	1.0	12Ka.C
$\text{C}_{10}\text{H}_{10}-^{129}\text{Xe}$	173469.4660	0.0147	173469.461	0.006	-0.3	1	16	16 ^{129}Xe	FS1	1.0	09Re03
$^{129}\text{Xe}-^{128}\text{Xe}$	1247	12	1249.8	1.1	0.1	U			M16	2.5	63Da10
$\text{C}_3\text{O}_6-^{129}\text{Xe}$	64706.8420	0.0255	64706.856	0.006	0.6	o			FS1	1.0	05Sh38 *
	64706.8516	0.0181			0.3	1	11	11 ^{129}Xe	FS1	1.0	09Re03
$^{129}\text{Xe}_2-^{84}\text{Kr}_3$	75068.5115	0.0405	75068.538	0.015	0.6	1	14	8 ^{84}Kr	FS1	1.0	05Sh38 *
$^{128}\text{Cs}-^{129}\text{Cs}_{.661}$ $^{126}\text{Cs}_{.339}$	510	30	500	7	-0.1	U			P22	2.5	82Au01
$^{128}\text{Te}(\text{n},\gamma)^{129}\text{Te}$	6085	3	6082.41	0.08	-0.9	U					72Mu.A
	6082.42	0.09			-0.1	-			Prn		03Wi02
	6082.36	0.19			0.3	-			Bdn		06Fi.A
$^{128}\text{Te}(\text{d},\text{p})^{129}\text{Te}$	3857	10	3857.84	0.08	0.1	U			MIT		67Mo22
$^{128}\text{Te}(\text{n},\gamma)^{129}\text{Te}$	ave. 6082.41	0.08	6082.41	0.08	0.0	1	100	98 ^{129}Te			average
$^{129}\text{Nd}(\text{ep})^{128}\text{Ce}$	5300	300	5930#	200#	2.1	D					78Bo.A *
$^{129}\text{In}(\beta^-)^{129}\text{Sn}$	7655	32	7769	19	3.6	B			Stu		87Sp09 *
	7780	26			-0.4	1	55	55 ^{129}Sn	Stu		04Ga24 *
$^{129}\text{In}^m(\beta^-)^{129}\text{Sn}$	8033	66	8228	20	3.0	U			Stu		87Sp09
	8149	38			2.1	U			Stu		04Ga24
$^{129}\text{In}^p(\beta^-)^{129}\text{Sn}$	9410	50				2			Stu		04Ga24
$^{129}\text{Sn}(\beta^-)^{129}\text{Sb}$	3996	120	4022	29	0.2	U			Stu		77Lu06 *
$^{129}\text{Sb}(\beta^-)^{129}\text{Te}$	2345	30	2376	21	1.0	2					70Oh05 *
$^{129}\text{Te}(\beta^-)^{129}\text{I}$	1453	28	1502	3	1.8	U					56Gr10 *
	1485	10			1.7	U					64De10 *
	1503	4			-0.2	1	62	60 ^{129}I			68Go34 *
$^{129}\text{I}(\beta^-)^{129}\text{Xe}$	190	5	189	3	-0.2	1	40	40 ^{129}I			54De17 *
$^{129}\text{Cs}(\beta^+)^{129}\text{Xe}$	1197	5	1197	5	0.0	1	83	83 ^{129}Cs			76Ma35
$^{129}\text{Ba}(\beta^+)^{129}\text{Cs}$	2446	15	2436	11	-0.7	1	50	45 ^{129}Ba			61Ar05 *
$^{129}\text{La}(\beta^+)^{129}\text{Ba}$	3720	50	3739	22	0.4	-					79Br05 *
	3740	40			0.0	-			JAE		98Ko66 *
	ave. 3730	30			0.2	1	48	42 ^{129}La			average
$^{129}\text{Ce}(\beta^+)^{129}\text{La}$	5600	200	5040	40	-2.8	U			IRS		93Al03
* $^{129}\text{Sn-u}$	M-A=-80576(27) keV for mixture gs+m at 35.2 keV										Nub127 **
* $^{129}\text{Xe}_2-^{86}\text{Kr}_3$	Corrected in reference of same group										09Re03 **
* $^{129}\text{Pr-u}$	Isomer at 382.7(0.5) with estimated T=1# ms not considered										Nub127 **
* $\text{C}_3\text{O}_6-^{129}\text{Xe}$	Corrected in reference of same group										09Re03 **
* $^{129}\text{Xe}_2-^{84}\text{Kr}_3$	Corrected in reference of same group										09Re03 **
* $^{129}\text{Nd}(\text{ep})^{128}\text{Ce}$	Trends from Mass Surface TMS suggest ^{129}Nd 630 less bound										GAU **
* $^{129}\text{In}(\beta^-)^{129}\text{Sn}$	$E_{\beta^-}=7780(26), 9410(50)$ from ground state, 1688.0(0.5) levels										03Ge04 **
* $^{129}\text{Sn}(\beta^-)^{129}\text{Sb}$	$E_{\beta^-}=3350(120)$ to $(3/2^+, 5/2^+)$ level at 645.2 keV										Ens965 **
* $^{129}\text{Sb}(\beta^-)^{129}\text{Te}$	$E_{\beta^-}=1800(30)$ to $5/2^+$ level at 544.5 keV, and other E_{β^-}										Ens965 **
* $^{129}\text{Te}(\beta^-)^{129}\text{I}$	$E_{\beta^-}=1453(5)$ to $5/2^+$ level at 27.80 keV and 1530(5) from $^{129}\text{Te}^m$										Ens965 **
*	at 105.50 to ground state (Birge=8.0: arithmetic average used)										Nub127 **
* $^{129}\text{Te}(\beta^-)^{129}\text{I}$	$E_{\beta^-}=1452(10)$ to $5/2^+$ level at 27.80 keV and 1595(10) from $^{129}\text{Te}^m$ at 105.50										Ens965 **
* $^{129}\text{Te}(\beta^-)^{129}\text{I}$	$E_{\beta^-}=1476(4)$ to $5/2^+$ level at 27.80 keV and 1607(7) from $^{129}\text{Te}^m$ at 105.50										Ens965 **
* $^{129}\text{I}(\beta^-)^{129}\text{Xe}$	$E_{\beta^-}=150(5)$ to $3/2^+$ level at 39.578 keV										Ens965 **
* $^{129}\text{Ba}(\beta^+)^{129}\text{Cs}$	$E_{\beta^+}=1425(15);$ and 1243(35), 975(60) from $^{129}\text{Ba}^m$ at 8.42(0.06) keV										Nub127 **
*	to $7/2^+$ level at 188.93, $9/2^+$ at 426.47 keV										Ens965 **
* $^{129}\text{La}(\beta^+)^{129}\text{Ba}$	$E_{\beta^+}=2420(50)$ to $(1/2^+, 3/2^+)$ level at 278.57 keV, and other E_{β^+}										Ens965 **
$\text{C}_9\text{H}_8\text{N}-^{130}\text{Te}$	159446	10	159451.513	0.012	0.2	U			M16	2.5	63Da10
$^{13}\text{C}\text{C}_8\text{NH}_7-^{130}\text{Te}$	154990.6	7.	154981.316	0.012	-0.5	U			C3	2.5	70Ke05
$\text{C}_9\text{H}_8\text{N}-^{130}\text{Te}$	159449	8	159451.513	0.012	0.2	U			R13	1.5	83De51
$\text{C}_{10}\text{H}_{10}-^{130}\text{Xe}$	174743.6	4.2	174740.972	0.010	-0.3	U			M16	2.5	63Da10
$^{13}\text{C}\text{C}_8\text{NH}_7-^{130}\text{Xe}$	157695.4	0.7	157694.715	0.010	-0.4	U			C3	2.5	70Ke05

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{130}\text{Xe}-\text{C } ^{13}\text{C } ^{35}\text{Cl}_3$	-6407.63	1.21	-6403.53	0.11	2.3	U			H47	1.5	94Hy01
$^{130}\text{Cs-u}$	-93181	60	-93291	9	-1.8	U			GS2	1.0	05Li24 *
$\text{C}_{10} \text{H}_{10}-^{130}\text{Ba}$	171926	68	171929.7	2.8	0.0	U			R07	1.5	68De17
$^{130}\text{Ba}-^{85}\text{Rb}_{1.529}$	41195.8	3.4	41194.2	2.8	-0.5	1	66	66 ^{130}Ba	MA8	1.0	05Gu37
$^{130}\text{La-u}$	-87635	30	-87631	28	0.1	2			GS2	1.0	05Li24
$^{130}\text{Ce-u}$	-85264	30				2			GS2	1.0	05Li24
$^{130}\text{Pr-u}$	-76410	69				2			GS2	1.0	05Li24 *
$^{130}\text{Nd-u}$	-71494	30				2			GS2	1.0	05Li24
$^{130}\text{Xe}-^{134}\text{Xe}_{.970}$	-4726.6	5.6	-4723.5	0.9	0.6	o			MA8	1.0	05He.A
	-4724.8	7.0			0.2	U			MA8	1.0	06He29
$^{130}\text{Sn}-^{133}\text{Cs}_{.977}$	6346	17	6347.3	2.3	0.1	-			MA8	1.0	05Si34
	6344	12			0.3	-			MA8	1.0	05Si34 *
	ave.	6345			0.3	1	5	5 ^{130}Sn			average
$^{130}\text{Xe}-^{133}\text{Cs}_{.977}$	-4114	13	-4117.217	0.011	-0.2	U			MA6	1.0	04Di18
$^{130}\text{Cs}-^{133}\text{Cs}_{.977}$	-919	17	-917	9	0.1	o			MA1	1.0	90St25
	-916	13			-0.1	1	48	48 ^{130}Cs	MA1	1.0	99Am05
$^{130}\text{Nd } ^{19}\text{F}-^{133}\text{Cs}_{1.120}$	32902	130	32800	30	-0.8	U			MA5	1.0	00Be42 *
$^{130}\text{Te } ^{35}\text{Cl}-^{128}\text{Te } ^{37}\text{Cl}$	4715	2	4711.5	0.9	-0.4	o			H16	4.0	63Ba47
	4711.7	1.8			0.0	U			C3	2.5	70Ke05
	4711.57	0.72			0.0	1	74	74 ^{128}Te	H43	1.5	90Dy04
$^{130}\text{Xe}-^{129}\text{Xe}_{1.008}$	-509.78	0.34	-509.757	0.009	0.1	U			CP1	1.0	09Sc19
$^{130}\text{Sn}-^{130}\text{Xe}$	10463.9	3.6	10464.5	2.3	0.2	-			JY1	1.0	12Ha25
	10465.4	3.1			-0.3	-			JY1	1.0	12Ka.C *
	ave.	10464.8			-0.1	1	94	94 ^{130}Sn			average
$^{130}\text{Te}-^{130}\text{Xe}$	2706.2	7.	2713.399	0.012	0.4	U			C3	2.5	70Ke05
	2712.98	3.02			0.1	U			H43	1.5	90Dy04
	2713.416	0.034			-0.5	-			FS1	1.0	09Re07
	2713.402	0.026			-0.1	-			FS1	1.0	09Re07 *
	2713.402	0.014			-0.2	o			FS1	1.0	09Re07 *
	2712.85	0.34			1.6	U			CP1	1.0	09Sc19
	2712.82	0.25			2.3	U			JY1	1.0	11Ra24
	ave.	2713.407			-0.4	1	35	23 ^{130}Te			average
$^{130}\text{Te}-^{129}\text{Xe}$	1441.885	0.012	1441.888	0.011	0.2	1	78	77 ^{130}Te	FS1	1.0	09Re07
$^{130}\text{Xe}-^{129}\text{Xe}$	-1277	12	-1271.511	0.009	0.2	U			M16	2.5	63Da10
	-1271.517	0.012			0.5	1	52	49 ^{130}Xe	FS1	1.0	09Re07
$^{129}\text{Cs}-^{130}\text{Cs}_{.794} \text{ } ^{125}\text{Cs}_{.206}$	-1270	40	-1200	14	0.7	U			P22	2.5	82Au01
$^{130}\text{Ba}(p,t)^{128}\text{Ba}$	-9482	32	-9543.7	2.9	-1.9	U			Win		74De31 *
$^{130}\text{Ba}(p,t)^{128}\text{Ba}-^{144}\text{Sm}()^{142}\text{Sm}$	1095.9	1.0	1096.0	1.0	0.1	1	99	78 ^{128}Ba			09Pa25
$^{130}\text{Te}(d,^3\text{He})^{129}\text{Sb}$	-4550	30	-4519	21	1.0	R			Oak		68Au04
$^{129}\text{I}(n,\gamma)^{130}\text{I}$	6500.33	0.04				2			ILn		89Sa11 Z
$^{129}\text{Xe}(n,\gamma)^{130}\text{Xe}$	9255.3	1.0	9255.722	0.008	0.4	U					71Gr28 Z
	9256.1	0.8			-0.5	U					74Ge05 Z
	9255.57	0.30			0.5	U			Bdn		06Fi.A
$^{129}\text{Xe}(^3\text{He},d)^{130}\text{Cs}$	5	20	-1	8	-0.3	1	17	17 ^{130}Cs	ChR		81Ha08
$^{130}\text{Ba}(d,t)^{129}\text{Ba}$	-4001	15	-4013	11	-0.8	1	50	48 ^{129}Ba	Tal		74Gr22
$^{130}\text{Eu}(p)^{129}\text{Sm}$	1028.0	15.0				3			Arp		04Da04
$^{130}\text{Cd}(\beta^-)^{130}\text{In}$	8350	160				3			Bwg		03Di06 *
$^{130}\text{In}(\beta^-)^{130}\text{Sn}$	10249	38				2			Stu		87Sp09
	9880	90	10250	40	4.1	B			Gsn		90St13
$^{130}\text{In}^m(\beta^-)^{130}\text{Sn}$	10300	37				2			Stu		87Sp09
	10170	170	10300	40	0.8	U			Gsn		90St13
$^{130}\text{In}^n(\beta^-)^{130}\text{Sn}$	10650	49				2			Stu		87Sp09
	9880	200	10650	50	3.9	B			Gsn		90St13
$^{130}\text{Sn}(\beta^-)^{130}\text{Sb}$	2195	35	2153	14	-1.2	-			Stu		77Lu06 *
	2080	40			1.8	-					77Nu01 *
	2149	18			0.2	-			Gsn		90St13 *
	ave.	2148			0.4	1	90	90 ^{130}Sb			average
$^{130}\text{Sb}(\beta^-)^{130}\text{Te}$	5046	100	5067	14	0.2	U					71Ki15 *
	5015	100			0.5	U			Stu		77Lu06 *
	4990	70			1.1	U			Gsn		90St13 *
	5015	45			1.1	1	10	10 ^{130}Sb	Stu		95Me16 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{130}\text{I}(\beta^-)^{130}\text{Xe}$	2983	10	2944	3	-3.9	B					65Da01 *
	2964	50			-0.4	U					70Qa03 *
$^{130}\text{Cs}(\beta^+)^{130}\text{Xe}$	2992	20	2981	8	-0.6	-					52Sm41 *
	2972	20			0.4	-					75We23
ave.	2982	14			-0.1	1	35	35 ^{130}Cs			average
$^{130}\text{Cs}^x(\text{IT})^{130}\text{Cs}$	27	15				2					AHW *
$^{130}\text{Cs}(\beta^-)^{130}\text{Ba}$	442	50	362	9	-1.6	U					52Sm41 *
$^{130}\text{La}(\beta^+)^{130}\text{Ba}$	5660	70	5634	26	-0.4	R			JAE		98Ko66
* $^{130}\text{Cs-u}$	M-A=-86716(30) keV for mixture gs+m at 163.25 keV										Nub127 **
* $^{130}\text{Pr-u}$	M-A=-71125(29) keV for mixture gs+m at 100#100 keV										Nub127 **
* $^{130}\text{Sn}-^{133}\text{Cs}_{977}$	$D_M=8434(12) \mu\text{u}$ for $^{130}\text{Sn}^m$ at 1946.88 keV; M-A=-78189(11) keV										Nub127 **
* $^{130}\text{Nd}-^{133}\text{Cs}_{1,120}$	Tentative result, low statistics										00Be42 **
* $^{130}\text{Sn}-^{130}\text{Xe}$	$D_M=12555.5(3.1) \mu\text{u}$ for $^{130}\text{Sn}^m$ at 1946.88 keV; M-A=-78185.1(2.9) keV										Nub129 **
* $^{130}\text{Te}-^{130}\text{Xe}$	First item 1 ion; second item 2 ions - considered independent										GAu **
* $^{130}\text{Te}-^{130}\text{Xe}$	Combination of $^{130}\text{Xe}-^{129}\text{Xe}$ and $^{130}\text{Te}-^{129}\text{Xe}$										GAu **
* $^{130}\text{Ba}(\text{p,t})^{128}\text{Ba}$	Not resolved peak. Original uncertainty 16 increased to 24 keV and added systematic error 21 keV										GAu **
*											GAu **
* $^{130}\text{Cd}(\beta^-)^{130}\text{In}$	$E_{\beta^-}=6224(+165-157)$ to 1^+ level at 2120.2 keV										Ens017 **
* $^{130}\text{Sn}(\beta^-)^{130}\text{Sb}$	$E_{\beta^-}=1490(90), 1150(35)$ to 1^+ levels at 702.32, 1047.67 keV										Ens017 **
* $^{130}\text{Sn}(\beta^-)^{130}\text{Sb}$	$E_{\beta^-}=1280(80), 1060(40)$ to 1^+ levels at 702.32, 1047.67 keV										Ens017 **
* $^{130}\text{Sn}(\beta^-)^{130}\text{Sb}$	$E_{\beta^-}=1415(30), 1112(18)$ to 1^+ levels at 702.32, 1047.67 keV and a 3σ conflicting 3955(50) from $^{130}\text{Sn}^m$ at 1946.88 keV										Ens017 **
*											Nub127 **
* $^{130}\text{Sb}(\beta^-)^{130}\text{Te}$	$E_{\beta^-}=2900(100)$ to $^{130}\text{Te}^m$ at 2146.41 keV										Nub127 **
* $^{130}\text{Sb}(\beta^-)^{130}\text{Te}$	$Q=5020(100)$ from $^{130}\text{Sb}^m$ at 4.80(0.20) keV										Nub127 **
* $^{130}\text{Sb}(\beta^-)^{130}\text{Te}$	Also 4960(25) from $^{130}\text{Sb}^m$ at 4.80(0.20), in disagreement										Nub127 **
* $^{130}\text{Sb}(\beta^-)^{130}\text{Te}$	Derived from given average=5008(38) with 90St13=4990(70) keV										GAu **
* $^{130}\text{I}(\beta^-)^{130}\text{Xe}$	$E_{\beta^-}=1702(10) 1042(10) 618(10)$ to $4^+ 1204.614, 6^+ 1944.140, 5^+ 2362.073$										Ens017 **
* $^{130}\text{I}(\beta^-)^{130}\text{Xe}$	$E_{\beta^-}=2480(50), 1850(80)$ from $^{130}\text{I}^m$ at 39.9525 to 2^+ levels at 536.068, and 1122.112 keV										GAu **
*											Ens017 **
* $^{130}\text{Cs}^x(\text{IT})^{130}\text{Cs}$	Combining isomer ratio of reference										82Au01 **
*	with $^{130}\text{Cs}^m(\text{IT})=163.25$ keV										Nub127 **
* $^{130}\text{Cs}(\beta^-)^{130}\text{Ba}$	Value given without associated error										AHW **
$^{131}\text{Sn-u}$	-82958	26	-82955	7	0.1	U			MA8	1.0	05Si34 *
	-82950	130			0.0	U			GT2	1.5	08Su19 *
$^{131}\text{Sb-u}$	-88170	530	-88011.2	2.3	0.2	U			GT2	1.5	08Kn.A *
$\text{C}_{10} \text{H}_{11} - ^{131}\text{Xe}$	180991.6	3.0	180991.30	0.24	0.0	U			M16	2.5	63Da10
$^{131}\text{Xe-u}$	-94925.5	5.7	-94915.94	0.24	0.7	U			ACC	2.5	90Me08
$^{131}\text{Xe}-\text{C}_2 \text{ } ^{35}\text{Cl}_2 \text{ } ^{37}\text{Cl}$	1472.65	0.80	1476.09	0.25	2.9	B			H47	1.5	94Hy01
$^{131}\text{Ba-u}$	-92955	66	-93059.0	2.8	-1.6	U			GS2	1.0	05Li24 *
$^{131}\text{La-u}$	-89930	30				2			GS2	1.0	05Li24
$^{131}\text{Ce-u}$	-85579	36	-85570	40	0.2	1	96	96 ^{131}Ce	GS2	1.0	05Li24 *
$^{131}\text{Pr-u}$	-79741	56	-79770	50	-0.4	1	81	81 ^{131}Pr	GS2	1.0	05Li24 *
$^{131}\text{Nd-u}$	-72753	30	-72752	30	0.0	1	97	97 ^{131}Nd	GS2	1.0	05Li24
$^{131}\text{Sn}-^{133}\text{Cs}_{1,241}$	2253	11	2246	7	-0.6	1	35	35 ^{131}Sn	MA8	1.0	08Dw01 *
$^{131}\text{Cs}-^{133}\text{Cs}_{985}$	-1419	17	-1405	5	0.8	o			MA1	1.0	90St25
	-1419	14			1.0	1	15	15 ^{131}Cs	MA1	1.0	99Am05
$^{131}\text{Ba}-^{133}\text{Cs}_{985}$	72	14	70.8	2.8	-0.1	U			MA5	1.0	00Be42
$^{131}\text{In}-^{130}\text{Xe}_{1,008}$	24234.7	2.9	24234.1	2.9	-0.2	1	98	98 ^{131}In	JY1	1.0	12Ha25
$^{131}\text{In}^m-^{130}\text{Xe}_{1,008}$	24626.8	7.7				2			JY1	1.0	12Ka.C
$^{131}\text{Sn}-^{132}\text{Xe}_{992}$	12134	21	12123	7	-0.5	U			JY1	1.0	12Ha25 *
$^{131}\text{Sb}-^{130}\text{Xe}_{1,008}$	9250.7	2.3	9251.4	2.3	0.3	1	97	97 ^{131}Sb	JY1	1.0	12Ha25
$^{131}\text{Xe}-^{130}\text{Xe}$	1574	11	1574.71	0.24	0.0	U			M16	2.5	63Da10
$^{128}\text{Cs}-^{131}\text{Cs}_{391} \text{ } ^{126}\text{Cs}_{610}$	-100	30	-47	9	0.7	U			P22	2.5	82Au01
$^{128}\text{Cs}-^{131}\text{Cs}_{244} \text{ } ^{127}\text{Cs}_{756}$	783	21	752	7	-0.6	F			P33	2.5	86Au02 *
$^{129}\text{Cs}-^{131}\text{Cs}_{328} \text{ } ^{128}\text{Cs}_{672}$	-1030	30	-870	6	2.1	U			P22	2.5	82Au01
$^{130}\text{Te}(\text{n},\gamma)^{131}\text{Te}$	5929.7	0.5	5929.38	0.06	-0.6	U					77Ko.A
	5929.5	0.4			-0.3	U					80Ho29 Z
	5929.38	0.06				2			Prn		03To08
	5930.16	0.19			-4.1	C			Bdn		06Fi.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{130}\text{Te}(\text{d,p})^{131}\text{Te}$	3703	6	3704.81	0.06	0.3	U			MIT		67Gr21
$^{130}\text{Ba}(\text{n},\gamma)^{131}\text{Ba}$	7493.5	0.3	7493.50	0.30	0.0	1	100	95 ^{131}Ba			82Ka.A
$^{130}\text{Ba}(\text{d,p})^{131}\text{Ba}$	5269	15	5268.94	0.30	0.0	U			ANL		70Vo04
$^{131}\text{Nd}(\epsilon\text{p})^{130}\text{Ce}$	4600	400	4370	40	-0.6	U					78Bo.A
$^{131}\text{Eu}(\text{p})^{130}\text{Sm}$	957.4	8.	947	5	-1.3	3					98Da03
	939.2	7.			1.1	3					99So17
$^{131}\text{In}(\beta^-)^{131}\text{Sn}$	8820	200	9247	7	2.1	U					80De35
	8930	150			2.1	o			Stu		84Fo19
	9184	33			1.9	o			Stu		88Fo05
	9165	30			2.7	o			Stu		95Me16
	9174	22			3.3	B			Stu		99Fo01
	9222	18			1.4	1	13	11 ^{131}Sn	Stu		04Fo06
$^{131}\text{In}^m(\beta^-)^{131}\text{Sn}$	9230	220	9612	9	1.7	o			Stu		84Fo19
	9547	46			1.4	o			Stu		88Fo05
	9480	70			1.9	o			Stu		95Me16
	9524	26			3.4	U			Stu		04Fo06
$^{131}\text{In}^n(\beta^-)^{131}\text{Sn}$	13000	500	12990	90	0.0	o			Stu		84Fo19
	13450	163			-2.8	B			Stu		88Fo05
	13230	80			-3.1	B			Stu		95Me16
	12986	86				2			Stu		04Fo06
$^{131}\text{Sn}(\beta^-)^{131}\text{Sb}$	4582	120	4710	6	1.1	o			Bwg		79Ke02 *
	4640	20			3.5	B			Stu		84Fo19 *
	4610	110			0.9	U			Bwg		87Gr.A *
	4689	14			1.5	o			Stu		95Me16
	4688	14			1.6	o			Stu		99Fo01
	4701	8			1.1	1	57	54 ^{131}Sn	Stu		04Fo06 *
$^{131}\text{Sb}(\beta^-)^{131}\text{Te}$	3190	70	3229.1	2.1	0.6	o			Stu		77Lu06
	3217	20			0.6	o			Stu		95Me16
	3200	26			1.1	U			Stu		99Fo01
$^{131}\text{Te}(\beta^-)^{131}\text{I}$	2275	10	2231.8	0.6	-4.3	B					61Be20 *
	2278	15			-3.1	B					65De22 *
$^{131}\text{I}(\beta^-)^{131}\text{Xe}$	971.0	0.7	970.8	0.6	-0.2	2					51Ve05 *
	970.4	1.2			0.4	2					52Ro16 *
$^{131}\text{Cs}(\epsilon)^{131}\text{Xe}$	355	10	355	5	0.0	-					54Sa22
	355	10			0.0	-					56Ho66
	360	15			-0.3	-					57Mi63
	ave.	356	6		-0.2	1	61	60 ^{131}Cs			average
$^{131}\text{Ba}(\beta^+)^{131}\text{Cs}$	1370	16	1375	5	0.3	-					76Ge14 *
	1371	12			0.3	-					78Va04 *
	ave.	1371	10		0.4	1	30	25 ^{131}Cs			average
$^{131}\text{La}(\beta^+)^{131}\text{Ba}$	2960	100	2915	28	-0.5	U					60Cr01
$^{131}\text{Ce}(\beta^+)^{131}\text{La}$	4020	400	4060	40	0.1	U					66No05 *
$^{131}\text{Pr}(\beta^+)^{131}\text{Ce}$	5250	150	5410	60	1.1	1	14	9 ^{131}Pr	IRS		93AI03
$^{131}\text{Nd}(\beta^+)^{131}\text{Pr}$	6560	150	6530	50	-0.2	1	13	9 ^{131}Pr	IRS		93AI03
* $^{131}\text{Sn-u}$	M-A=-77242(15) keV for mixture gs+m at 65.1 keV										Nub127 **
*	next $^{131}\text{Sn } ^{34}\text{S}-^{133}\text{Cs}_{1,241}$ also from 1.4 GeV p on UC target										GAu **
* $^{131}\text{Sn-u}$	M-A=-77238(120) keV for mixture gs+m at 65.1 keV										Nub127 **
* $^{131}\text{Sb-u}$	M-A=-81291(96) keV for mixture gs+m at 1676.06 keV										Nub127 **
* $^{131}\text{Ba-u}$	M-A=-86494(30) keV for mixture gs+m at 187.995 keV										Nub127 **
* $^{131}\text{Ce-u}$	M-A=-79685(28) keV for mixture gs+m at 63.09 keV										Nub127 **
* $^{131}\text{Pr-u}$	M-A=-74202(28) keV for mixture gs+m at 152.4 keV										Nub127 **
* $^{131}\text{Sn } ^{34}\text{S}-^{133}\text{Cs}_{1,241}$	$D_M=2300.3(3.6) \mu\text{u}$ for mixture ^{131}Sn gs+m at 65.1 keV with $R=0.65(0.15)$										Nub129 **
* $^{131}\text{Sn}-^{132}\text{Xe}_{.992}$	$D_M=12168.7(3.4) \mu\text{u}$ for mixture gs+m at 65.1 keV; M-A=-77229.6(3.2) keV										Nub127 **
*	identical to result given in reference										12Ka.C **
* $^{128}\text{Cs}-^{131}\text{Cs}_{.244} \text{ } ^{127}\text{Cs.}$	F : rejection based on line-shape analysis										86Au02 **
* $^{131}\text{Sn}(\beta^-)^{131}\text{Sb}$	$E_{\beta^-}=3870(120), 2620(180)$ from $^{131}\text{Sn}^m$ at 65.1 keV										Nub127 **
*	to $(5/2^+)$ level at 798.494, $(13/2^-)$ at 1980.39 keV										Ens06c **
* $^{131}\text{Sn}(\beta^-)^{131}\text{Sb}$	$Q_{\beta^-}=4638(20)$; and 4796(80) from $^{131}\text{Sn}^m$ at 65.1 keV										Nub127 **
* $^{131}\text{Sn}(\beta^-)^{131}\text{Sb}$	$Q_{\beta^-}=4600(110)$; and 4680(120) from $^{131}\text{Sn}^m$ at 65.1 keV										Nub127 **
* $^{131}\text{Sn}(\beta^-)^{131}\text{Sb}$	$Q_{\beta^-}=4698(11)$; and 4767(8) from $^{131}\text{Sn}^m$ at 65.1 keV										Nub127 **
* $^{131}\text{Te}(\beta^-)^{131}\text{I}$	$Q_{\beta^-}=2457(10) 2460(15)$ respectively, from $^{131}\text{Te}^m$ at 182.258 keV										Nub127 **
* $^{131}\text{I}(\beta^-)^{131}\text{Xe}$	$E_{\beta^-}=606.5(0.7) 605.9(1.2)$ respectively, to $5/2^+$ level at 364.490 keV										Ens06c **
* $^{131}\text{Ba}(\beta^+)^{131}\text{Cs}$	$p^+=22(11)\times 10^{-6}$ to $3/2^+$ level at 216.086, recalculated p+ and Q										Ens06c **
* $^{131}\text{Ba}(\beta^+)^{131}\text{Cs}$	$L/K=0.165(0.001)$ to $3/2^+$ level at 1047.682 keV										Ens06c **
* $^{131}\text{Ce}(\beta^+)^{131}\text{La}$	$E_{\beta^+}=2800(400)$ to $7/2^+$ level at 195.68 keV										Ens06c **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{132}\text{Sb-u}$	-85850	150	-85492.3	2.9	1.6	U			GT2	1.5	08Su19 *	
$\text{C}_{10}\text{H}_{12}-^{132}\text{Xe}$	189740.8	3.3	189745.301	0.006	0.5	U			M16	2.5	63Da10	
$^{132}\text{Xe-u}$	-95856.2	4.0	-95844.914	0.006	1.1	U			ACC	2.5	90Me08	
$^{132}\text{Xe-C } ^{13}\text{C } ^{35}\text{Cl}_2 \text{ } ^{37}\text{Cl}$	-2803.73	1.40	-2807.72	0.09	-1.9	U			H47	1.5	94Hy01	
$^{132}\text{Xe-C}_3\text{O}_6$	-65332.6117	0.0248	-65332.632	0.006	-0.8	o			FS1	1.0	05Sh38 *	
	-65332.6238	0.0140			-0.6	1	16	16	^{132}Xe	FS1	1.0	09Re03
$\text{C}_{10}\text{H}_{12}-^{132}\text{Ba}$	188863	70	188839.3	1.1	-0.2	U			R07	1.5	68De17	
	188821	88			0.1	U			R07	1.5	68De17	
$^{132}\text{La-u}$	-89874	67	-89880	40	-0.1	1	34	34	^{132}La	GS2	1.0	05Li24 *
$^{132}\text{Ce-u}$	-88542	30	-88536	22	0.2	1	54	54	^{132}Ce	GS2	1.0	05Li24
$^{132}\text{Ce O}-^{142}\text{Sm}_{1.042}$	-5258	32	-5265	22	-0.2	1	47	46	^{132}Ce	MA7	1.0	01Bo59 *
$^{132}\text{Pr-u}$	-80745	61				2			GS2	1.0	05Li24 *	
$^{132}\text{Nd-u}$	-76690	30	-76679	26	0.4	2			GS2	1.0	05Li24	
$^{132}\text{Xe}-^{129}\text{Xe}_{1.023}$	1564.20	0.32	1564.265	0.005	0.2	U			CP1	1.0	09Sc19	
	1565.4	1.0			-1.1	U			CP1	1.0	09Sc19	
$^{132}\text{Sb}-^{130}\text{Xe}_{1.015}$	12445.7	2.9				2			JY1	1.0	12Ha25	
$^{132}\text{Te}-^{130}\text{Xe}_{1.015}$	6482.9	4.3	6485	4	0.4	1	76	76	^{132}Te	JY1	1.0	12Ha25
$^{132}\text{Sn}-^{133}\text{Cs}_{.992}$	11621	19	11618	3	-0.1	U			MA8	1.0	05Si34	
$^{132}\text{Sn } ^{34}\text{S}-^{133}\text{Cs}_{1.248}$	3686.3	7.7	3690	3	0.4	1	16	16	^{132}Sn	MA8	1.0	08Dw01
$^{132}\text{Cs}-^{133}\text{Cs}_{.992}$	233	18	225.6	2.1	-0.4	o			MA1	1.0	90St25	
	232	14			-0.5	U			MA1	1.0	99Am05	
	246.9	5.9			-3.6	C			MA8	1.0	09Bo.A	
$^{132}\text{Nd}-^{133}\text{Cs}_{.992}$	17147	52	17113	26	-0.7	R			MA5	1.0	00Be42	
$^{132}\text{Sn}-^{132}\text{Xe}$	13672.3	3.4	13672	3	-0.2	1	84	84	^{132}Sn	JY1	1.0	12Ha25
$^{132}\text{Xe}-^{131}\text{Xe}$	-930	11	-928.97	0.24	0.0	U			M16	2.5	63Da10	
$^{132}\text{Xe}-\text{C}_{10}\text{H}_{10}$	-174095.2367	0.0095	-174095.237	0.006	0.0	1	35	34	^{132}Xe	FS1	1.0	09Re03
$^{132}\text{Xe}-^{130}\text{Xe}$	645.724	0.014	645.736	0.009	0.8	1	41	38	^{130}Xe	FS1	1.0	09Re07
$^{132}\text{Ba}-^{130}\text{Ba}$	-1241	4	-1259.5	2.9	-1.9	U			M17	2.5	66Be10	
	-1253	68			-0.1	U			R07	1.5	68De17	
$^{132}\text{Xe}-^{129}\text{Xe}$	-625.7755	0.0156	-625.775	0.004	0.0	o			FS1	1.0	05Sh38 *	
	-625.7703	0.0119			-0.4	-			FS1	1.0	09Re03 *	
	-625.7732	0.0125			-0.2	-			FS1	1.0	09Re03 *	
	-625.771	0.013			-0.3	-			FS1	1.0	09Re07	
	-625.7771	0.0083			0.2	-			FS1	1.0	10Mo30	
ave.	-625.774	0.005			-0.3	1	67	40	^{129}Xe		average	
$^{132}\text{Xe}_2-^{84}\text{Kr}_3$	73816.9775	0.0594	73816.987	0.015	0.2	U			FS1	1.0	05Sh38 *	
$^{132}\text{Xe}_2-^{86}\text{Kr}_3$	76478.3099	0.0412	76478.290	0.014	-0.5	1	12	7	^{86}Kr	FS1	1.0	05Sh38 *
$^{14}\text{N}_{10}-^{132}\text{Xe}$	126584.9632	0.0168	126584.959	0.006	-0.3	1	12	11	^{132}Xe	FS1	1.0	09Re03
$^{131}\text{Cs}-^{132}\text{Cs}_{.794} \text{ } ^{127}\text{Cs}_{.206}$	-1118	16	-1091	5	0.7	F			P33	2.5	86Au02 *	
$^{131}\text{Cs}-^{132}\text{Cs}_{.744} \text{ } ^{128}\text{Cs}_{.256}$	-1200	30	-1216	5	-0.2	U			P22	2.5	82Au01	
$^{130}\text{Cs}^x-^{132}\text{Cs}_{.492} \text{ } ^{128}\text{Cs}_{.508}$	-210	40	-339	17	-1.3	U			P22	2.5	82Au01	
$^{131}\text{Xe}(n,\gamma)^{132}\text{Xe}$	8936.3	1.0	8936.65	0.22	0.3	U					71Ge05	
	8935	2			0.8	U					71Gr28	
	8936.65	0.22			0.0	1	100	100	^{131}Xe	Bdn		06Fi.A
$^{132}\text{In}(\beta^-)^{132}\text{Sn}$	13600	400	14140	60	1.3	U					86Bj01	
	14135	60				2			Stu		95Me16	
$^{132}\text{Sn}(\beta^-)^{132}\text{Sb}$	3080	40	3092	4	0.3	o			Stu		77Al09	
	3103	10			-1.1	o			Stu		95Me16	
	3115	10			-2.3	U			Stu		99Fo01	
$^{132}\text{Sb}(\beta^-)^{132}\text{Te}$	5530	70	5553	4	0.3	o			Stu		77Al09	
	5486	24			2.8	U			Stu		95Me16	
	5491	20			3.1	B			Stu		99Fo01	
$^{132}\text{Te}(\beta^-)^{132}\text{I}$	493	4	515	3	5.6	B					65Iv01 *	
	517	4			-0.4	1	76	52	^{132}I	Stu		99Fo01 *
$^{132}\text{I}(\beta^-)^{132}\text{Xe}$	3596	15	3575	4	-1.4	-					61De17 *	
	3558	15			1.2	-					65Jo13 *	
	3580	7			-0.6	-			Stu		99Fo01	
ave.	3579	6			-0.6	1	48	48	^{132}I		average	
$^{132}\text{I}^m(\beta^-)^{132}\text{Xe}$	3685	10				2					74Di03 *	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{132}\text{Cs}(\beta^+)^{132}\text{Xe}$	2090	25	2122.7	2.0	1.3	U					63Ta05 *	
	2127.7	6.			-0.8	U					87De33 *	
$^{132}\text{La}(\beta^+)^{132}\text{Ba}$	4820	100	4710	40	-1.1	-					60Wa03	
	4680	50			0.6	-					67Fr02	
	ave.	4710	40		0.1	1	66	66	^{132}La		average	
* $^{132}\text{Sb-u}$	M-A=-79870(124) keV for mixture gs+m at 200(30) keV										Nub127 **	
* $^{132}\text{Xe-C}_3\text{O}_6$	Corrected in reference of same group										09Re03 **	
* $^{132}\text{La-u}$	M-A=-83623(30) keV for mixture gs+m at 188.20 keV										Nub127 **	
* $^{132}\text{Ce O-}^{142}\text{Sm}_{1.042}$	Original error (22 keV) increased by 23 for BaF contamination in trap										GAu **	
* $^{132}\text{Pr-u}$	M-A=-75213(28) keV for mixture gs+m at 0#100 keV										Nub127 **	
* $^{132}\text{Xe-}^{129}\text{Xe}$	Corrected in reference of same group										09Re03 **	
* $^{132}\text{Xe-}^{129}\text{Xe}$	First item 5^+ ions; second item 3^+ ions - considered to be independent										09Re03 **	
* $^{132}\text{Xe}_2\text{-}^{84}\text{Kr}_3$	Corrected in reference of same group										09Re03 **	
* $^{132}\text{Xe}_2\text{-}^{86}\text{Kr}_3$	Corrected in reference of same group										09Re03 **	
* $^{131}\text{Cs-}^{132}\text{Cs}_{.794}$ ^{127}Cs .	F : Rejection based on line-shape analysis										86Au02 **	
* $^{132}\text{Te}(\beta^-)^{132}\text{I}$	$E_{\beta^-}=215(4)$ $239(4)$ respectively, to 1^+ level at 277.86 keV										Ens054 **	
* $^{132}\text{I}(\beta^-)^{132}\text{Xe}$	$E_{\beta^-}=2156(15)$ $2118(15)$ respectively, to 4^+ level at 1440.323 keV										Ens054 **	
* $^{132}\text{Im}(\beta^-)^{132}\text{Xe}$	$E_{\beta^-}=1465(10)$ to 7^- level at 2214.01 level, and other E_{β^-}										Ens054 **	
* $^{132}\text{Cs}(\beta^+)^{132}\text{Xe}$	$E_{\beta^+}=400(25)$ to 2^+ level at 667.715 keV										Ens054 **	
* $^{132}\text{Cs}(\beta^+)^{132}\text{Xe}$	$p^+=0.0042(0.0001)$ gives $E_{\beta^+}=438(6)$ recalculated Q										AHW **	
*	to 2^+ level at 667.715 keV										Ens054 **	
$^{133}\text{Sb-u}$	-84766	100	-84727	3	0.3	o			GT2	1.5	08Kn.A	
	-84795	129			0.4	U			GT2	1.5	08Su19	
	-84702	25			-1.0	U			GS3	1.0	12Ch19	
$\text{C}_{10}\text{H}_{13}\text{-}^{133}\text{Cs}$	196266	64	196273.458	0.009	0.1	U			R07	1.5	68De17	
	196279	25			-0.1	U			R07	1.5	68De17	
$\text{C}_9\text{ }^{13}\text{C}\text{H}_{12}\text{-}^{133}\text{Cs}$	191796	34	191803.260	0.009	0.1	U			R07	1.5	68De17	
$\text{C}_8\text{ O N H}_7\text{-}^{133}\text{Cs}$	147321	25	147311.888	0.009	-0.2	U			R07	1.5	68De17	
$\text{C}_7\text{ }^{13}\text{C}\text{N O H}_6\text{-}^{133}\text{Cs}$	142835	31	142841.691	0.009	0.1	U			R07	1.5	68De17	
	$^{133}\text{Cs-}^{85}\text{Rb}_{1.565}$	43500	13	43501.027	0.011	0.1	U			MA5	1.0	00Be42
43499.3		1.6			1.1	U			MA8	1.0	07Ke09	
43500.9		6.7			0.0	U			MA8	1.0	02Ke.A	
43500.1		6.7			0.1	U			MA8	1.0	09Na.A	
43470		47			0.7	U			MA9	1.0	09Na.A	
43501.2		1.7			-0.1	U			MA8	1.0	11He10	
43501.2		1.7			-0.1	U			MA8	1.0	11He10	
$^{133}\text{Cs-u}$	-94548.41	0.41	-94548.039	0.009	0.9	U			ST2	1.0	99Ca46 *	
$^{133}\text{La-u}$	-91810	120	-91780	30	0.2	U			GS1	1.0	00Ra23	
	-91782	30				2			GS2	1.0	05Li24	
$^{133}\text{Ce-u}$	-88471	32	-88480	18	-0.3	2			GS2	1.0	05Li24 *	
$^{133}\text{Ce O-}^{142}\text{Sm}_{1.049}$	-4618	21	-4614	18	0.2	R			MA7	1.0	01Bo59 *	
$^{133}\text{Pr-u}$	-83663	30	-83669	13	-0.2	R			GS2	1.0	05Li24	
$^{133}\text{Nd-u}$	-77652	50				2			GS2	1.0	05Li24 *	
$^{133}\text{Pm-u}$	-70218	54				2			GS2	1.0	05Li24 *	
$^{133}\text{Sb-}^{136}\text{Xe}_{.978}$	6022	10	6017	3	-0.5	1	12	12	^{133}Sb	CP1	1.0	12Va02
$^{133}\text{Sb-}^{130}\text{Xe}_{1.023}$	13984.7	4.0	13983	3	-0.4	1	73	73	^{133}Sb	JY1	1.0	12Ha25
$^{133}\text{Te-}^{130}\text{Xe}_{1.023}$	9672.1	2.3	9679	4	2.9	-			JY1	1.0	12Ha25	
	9680.9	2.6			-0.8	-			JY1	1.0	12Ka.C *	
ave.	9676	4			0.6	1	79	79	^{133}Te		average	
$^{133}\text{Sn-}^{134}\text{Xe}_{.993}$	17856.5	2.4				2			JY1	1.0	12Ha25	
$^{133}\text{Sn }^{34}\text{S-}^{133}\text{Cs}_{1.256}$	10562	25	10532.7	2.6	-1.2	U			MA8	1.0	08Dw01	
$^{133}\text{Pr-}^{133}\text{Cs}$	10877	15	10879	13	0.1	2			MA5	1.0	00Be42	
$^{133}\text{Cs-C}_3\text{O}_6$	-64035.786	0.026	-64035.756	0.009	1.2	1	11	11	^{133}Cs	MI2	1.0	99Br47
$^{133}\text{Cs-C}_{10}\text{H}_{12}$	-188448.445	0.057	-188448.425	0.009	0.3	U			MI2	1.0	99Br47	
$^{133}\text{Cs-}^{132}\text{Xe}$	1296.8803	0.0103	1296.876	0.007	-0.4	1	51	45	^{133}Cs	FS1	1.0	10Mo30
$^{133}\text{Cs-}^{129}\text{Xe}$	671.1007	0.0103	671.100	0.007	0.0	1	51	44	^{133}Cs	FS1	1.0	10Mo30
$^{133}\text{Cs}(\gamma,n)^{132}\text{Cs}$	-8988	33	-8986.0	2.0	0.1	U			Phi		60Ge01	
	-8986	2				2			MMn		85Ts02	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{132}\text{Ba}(n,\gamma)^{133}\text{Ba}$	7189.91	0.36	7189.9	0.4	0.0	1	100	99 ^{132}Ba	MMn		90Is07 Z
$^{132}\text{Ba}(d,p)^{133}\text{Ba}$	4977	15	4965.3	0.4	-0.8	U			ANL		70Vo04
$^{133}\text{Sn}(\beta^-)^{133}\text{Sb}$	7830	70	8048	4	3.1	B			Stu		83B116 *
	8013	50			0.7	o			Stu		92Sp.A *
	7990	25			2.3	U			Stu		95Me16
$^{133}\text{Sb}(\beta^-)^{133}\text{Te}$	3966	50	4010	4	0.9	o			Stu		70Ru.A *
	4003	10			0.7	o			Stu		95Me16
	4002	7			1.1	1	37	21 ^{133}Te	Stu		99Fo01
$^{133}\text{Te}(\beta^-)^{133}\text{I}$	2960	100	2955	6	-0.1	U					68Mc09
	2876	100			0.8	U					68Pa03 *
	3392	100			-4.4	C			Stu		70Ru.A *
	2890	15			4.3	B			Stu		95Me16
	2942	24			0.5	U			Stu		99Fo01
$^{133}\text{I}(\beta^-)^{133}\text{Xe}$	1800	50	1757	4	-0.9	U					59Ho97 *
	1760	30			-0.1	U					66Ei01 *
	1757	4				3			Stu		99Fo01
$^{133}\text{Xe}(\beta^-)^{133}\text{Cs}$	428.0	4.	427.4	2.4	-0.2	2					52Be55 *
	427.0	3.			0.1	2					61Er04 *
	424	11			0.3	U			Stu		99Fo01
$^{133}\text{Ba}(\epsilon)^{133}\text{Cs}$	517.3	1.0	517.3	1.0	0.0	1	99	99 ^{133}Ba			67Sc10 *
	498	5			3.9	F					68Mc06 *
	486	2			15.7	F					69Bo49 *
	521	5			-0.7	U					69To14 *
$^{133}\text{La}(\beta^+)^{133}\text{Ba}$	2230	200	2059	28	-0.9	U					50Na09 *
* $^{133}\text{Cs-u}$	As revised in reference. Original: -94548.20(0.28) μu										02Bf02 **
* $^{133}\text{Ce-u}$	M-A=-82392(28) keV for mixture gs+m at 37.2 keV										Nub127 **
* $^{133}\text{Ce O}-^{142}\text{Sm}_{1.049}$	D_M =-4599(16) μu for mixture gs+m at 37.2 keV; M-A=-87150(16) keV										Nub127 **
* $^{133}\text{Nd-u}$	M-A=-72268(28) keV for mixture gs+m at 127.97 keV										Nub127 **
* $^{133}\text{Pm-u}$	M-A=-65342(33) keV for mixture gs+m at 129.7(1.0) keV										Nub127 **
* $^{133}\text{Te}-^{130}\text{Xe}_{1.023}$	D_M =10039.7(2.6) μu for $^{133}\text{Te}^m$ at 334.26 keV; M-A=-82595.8(2.4) keV										Nub129 **
* $^{133}\text{Sn}(\beta^-)^{133}\text{Sb}$	E_{β^-} =6870(70) to $5/2^+$ level at 962.30 keV										Ens114 **
* $^{133}\text{Sn}(\beta^-)^{133}\text{Sb}$	Private communication to reference										92Ch09 **
* $^{133}\text{Sb}(\beta^-)^{133}\text{Te}$	E_{β^-} =1210(50) to $(5/2^+)$ level at 2755.51 keV; re-evaluated										Ens114 **
* $^{133}\text{Te}(\beta^-)^{133}\text{I}$	Q_{β^-} =3210(100) from $^{133}\text{Te}^m$ at 334.26 keV										Nub127 **
*	reported as belonging to ground state, reinterpreted										AHW **
* $^{133}\text{Te}(\beta^-)^{133}\text{I}$	E_{β^-} =850(100) to $(3/2^+, 5/2^+)$ level at 2541.74 keV										Ens114 **
* $^{133}\text{I}(\beta^-)^{133}\text{Xe}$	E_{β^-} =1270(50) 1230(30) respectively, to $5/2^+$ level at 529.872 keV										Ens114 **
* $^{133}\text{Xe}(\beta^-)^{133}\text{Cs}$	E_{β^-} =347(4) 346(3) respectively, to $5/2^+$ level at 80.9979 keV										Ens114 **
* $^{133}\text{Ba}(\epsilon)^{133}\text{Cs}$	From L/K=0.371(0.007) to $1/2^+$ level at 437.0113; recalculated Q										Ens114 **
*	and L/K=0.221(0.005) to $3/2^+$ level at 383.8491 keV; Q=521(5) keV										Ens114 **
* $^{133}\text{Ba}(\epsilon)^{133}\text{Cs}$	F : badly resolved L-peak										Ens114 **
* $^{133}\text{Ba}(\epsilon)^{133}\text{Cs}$	L/K=0.67(0.15) LM/K=1.11(0.05) 0.45(0.04) respectively, to $1/2^+$ 437.0113 keV										Ens114 **
* $^{133}\text{La}(\beta^+)^{133}\text{Ba}$	E_{β^+} =1200(200) to $3/2^+$ level at 12.327 keV										Ens114 **
$^{134}\text{Te-u}$	-88844	130	-88606.0	3.0	1.2	U			GT2	1.5	08Su19
$\text{C}_{10} \text{H}_{14}-^{134}\text{Xe}$	204155.5	3.2	204155.8	0.9	0.0	U			M16	2.5	63Da10
$^{134}\text{Xe-u}$	-94634.4	5.4	-94605.3	0.9	2.2	U			ACC	2.5	90Me08
$^{134}\text{Xe-C } ^{13}\text{C } ^{35}\text{Cl } ^{37}\text{Cl}_2$	1381.76	0.60	1381.9	0.9	0.2	1	99	99 ^{134}Xe	H47	1.5	94Hy01
$\text{C}_{10} \text{H}_{14}-^{134}\text{Ba}$	205025	20	205042.27	0.30	0.3	U			M17	2.5	66Be10
	205010	46			0.5	U			R07	1.5	68De17
$\text{C}_{11} \text{H}_2-^{134}\text{Ba}$	111125	48	111141.88	0.30	0.2	U			R07	1.5	68De17
$\text{C}_8 \text{N O H}_8-^{134}\text{Ba}$	156063	78	156080.70	0.30	0.2	U			R07	1.5	68De17
$\text{C}_{12} \text{H}_6-^{134}\text{Ba O}$	147531	64	147527.39	0.30	0.0	U			R07	1.5	68De17
$^{134}\text{La-u}$	-91456	34	-91486	21	-0.9	2			GS2	1.0	05Li24
$^{134}\text{Ce-u}$	-91190	130	-91072	22	0.9	U			GS1	1.0	00Ra23
	-91056	30			-0.5	2			GS2	1.0	05Li24
$^{134}\text{Ce O}-^{142}\text{Sm}_{1.056}$	-6631	32	-6613	22	0.6	R			MA7	1.0	01Bo59 *
$^{134}\text{Pr-u}$	-84285	37	-84303	22	-0.5	2			GS2	1.0	05Li24 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{134}\text{Nd-u}$	-81234	30	-81210	13	0.8	R	GS2	1.0	05Li24		
$^{134}\text{Pm-u}$	-71647	62				2	GS2	1.0	05Li24 *		
$^{134}\text{Sb}-^{130}\text{Xe}_{1.031}$	20016.8	2.2	20017.5	1.8	0.3	2	JY1	1.0	12Ha25		
	20019.2	3.3			-0.5	2	JY1	1.0	12Ka.C *		
$^{134}\text{Te}-^{130}\text{Xe}_{1.031}$	10877.1	3.5	10875.8	3.0	-0.4	1	72	72	^{134}Te JY1	1.0	12Ha25
$^{134}\text{Sb}-^{136}\text{Xe}_{.985}$	11906	36	11929.4	1.8	0.7	U	CP1	1.0	12Va02 *		
$^{134}\text{Te}-^{136}\text{Xe}_{.985}$	2791.4	6.5	2787.7	3.0	-0.6	1	21	21	^{134}Te CP1	1.0	12Va02
$^{134}\text{Sn } ^{34}\text{S}-^{133}\text{Cs}_{1.263}$	16080	160	15963	4	-0.7	U	MA8	1.0	08Dw01		
$^{134}\text{Cs}-^{133}\text{Cs}_{1.008}$	2035	18	2022.928	0.015	-0.7	o	MA1	1.0	90St25		
	2033	14			-0.7	U	MA1	1.0	99Am05		
$^{134}\text{Pr}-^{133}\text{Cs}_{1.008}$	10992	27	11001	22	0.3	R	MA5	1.0	00Be42 *		
$^{134}\text{Nd}-^{133}\text{Cs}_{1.008}$	14100	14	14095	13	-0.4	2	MA5	1.0	00Be42		
$^{134}\text{Sn}-^{134}\text{Xe}$	23287.4	3.4				2	JY1	1.0	12Ha25		
$^{134}\text{Ba}-\text{C}_{10}\text{H}_{13}$	-197229	20	-197217.24	0.30	0.2	U	M17	2.5	66Be10		
$^{134}\text{Ba}-^{132}\text{Ba}$	-553	4	-552.9	1.2	0.0	U	M17	2.5	66Be10		
	-550	121			0.0	U	R07	1.5	68De17		
$^{131}\text{Cs}-^{134}\text{Cs}_{.244} \text{ } ^{130}\text{Cs}_{.756}$	-1313	50	-1182	14	1.1	U	P22	2.5	82Au01 *		
$^{133}\text{Cs}(n,\gamma)^{134}\text{Cs}$	6891.540	0.017	6891.540	0.014	0.0	-	MMn		84Ke11 Z		
	6891.540	0.027			0.0	-	ILn		87Bo24 Z		
	6891.39	0.14			1.1	U	Bdn		06Fi.A		
ave.	6891.540	0.014			0.0	1	100	100	^{134}Cs average		
$^{134}\text{Sn}(\beta^-)^{134}\text{Sb}$	7370	90	7588	4	2.4	U	Stu		95Me16		
$^{134}\text{Sb}(\beta^-)^{134}\text{Te}$	8306	210	8515	3	1.0	o	Stu		72Ke21 *		
	7960	240			2.3	o	Stu		77Lu06 *		
	8310	80			2.6	U	Bwg		79Ke02 *		
	8390	45			2.8	U	Stu		95Me16		
$^{134}\text{Te}(\beta^-)^{134}\text{I}$	1560	90	1523	5	-0.4	U	Stu		77Lu06 *		
	1550	30			-0.9	U	Stu		95Me16		
	1513	7			1.4	1	60	53	^{134}I Stu		99Fo01
$^{134}\text{I}(\beta^-)^{134}\text{Xe}$	4170	60	4065	6	-1.7	U			61Jo08 *		
	4175	15			-7.3	B			95Me16		
	4052	8			1.7	1	48	47	^{134}I Stu		99Fo01
$^{134}\text{Cs}(\beta^-)^{134}\text{Ba}$	2058.6	0.4	2058.90	0.28	0.8	1	48	47	^{134}Ba		68Hs01 *
$^{134}\text{La}(\beta^+)^{134}\text{Ba}$	3772	50	3731	20	-0.8	R			65Bi12		
	3692	30			1.3	R			73Al20		
$^{134}\text{Ce}(\epsilon)^{134}\text{La}$	500	200	386	29	-0.6	U			76Gr09 *		
$^{134}\text{Pr}(\beta^+)^{134}\text{Ce}$	6190	90	6305	29	1.3	U			95Ve08 *		
$^{134}\text{Nd}(\beta^+)^{134}\text{Pr}$	2770	150	2882	24	0.7	U			77Ko.B		
$^{134}\text{Pm}(\beta^+)^{134}\text{Nd}$	9170	200	8910	60	-1.3	U			95Ve08 *		
* $^{134}\text{Ce O}-^{142}\text{Sm}_{1.056}$	Original error (22 keV) increased by 23 for BaF contamination in trap										
* $^{134}\text{Pr-u}$	M-A=-78477(28) keV for mixture gs+m at 68(1) keV										
* $^{134}\text{Pm-u}$	M-A=-66739(30) keV for mixture gs+m at 0#100 keV										
* $^{134}\text{Sb}-^{130}\text{Xe}_{1.031}$	$D_M=20318.7(3.1) \mu\text{u}$ for $^{134}\text{Sb}^m$ at 279(1) keV; M-A=-73740.0(2.9) keV										
* $^{134}\text{Sb}-^{136}\text{Xe}_{.985}$	$D_M=12206(36) \mu\text{u}$ for $^{134}\text{Sb}^m$ at 279(1) keV; M-A=-73762(33) keV										
*	assuming high spin is favored, as for $^{136}\text{I}^m$										
* $^{134}\text{Pr}-^{133}\text{Cs}_{1.008}$	Most certainly gs. Mixture with isomer not completely excluded										
* $^{134}\text{Pr}-^{133}\text{Cs}_{1.008}$	$D_M=11029(16) \mu\text{u}$ for mixture gs+m at 68(1) keV; M-A=-78503(15) keV										
* $^{131}\text{Cs}-^{134}\text{Cs}_{.244} \text{ } ^{130}\text{Cs}_{.756}$	$D_M=-1330(50) \text{keV}$ corrected for $^{134}\text{Cs}^x(\text{IT})=70(40)$										
* $^{134}\text{Sb}(\beta^-)^{134}\text{Te}$	$E_{\beta^-}=8400(300)$, and $6800(300)$ from $^{134}\text{Sb}^m$ at 279(1) to $^{134}\text{Te}^m$ at 1691.34										
* $^{134}\text{Sb}(\beta^-)^{134}\text{Te}$	$E_{\beta^-}=5840(240)$ from $^{134}\text{Sb}^m$ at 279(1) to $(6)^+$ level at 2397.70 keV										
* $^{134}\text{Sb}(\beta^-)^{134}\text{Te}$	$E_{\beta^-}=8420(120)$, and $6710(210), 6980(210), 6070(150)$ from $^{134}\text{Sb}^m$ at 279(1)										
*	to 6^+ levels at 1691.34, 1691.34, 2397.70 keV										
* $^{134}\text{Te}(\beta^-)^{134}\text{I}$	$E_{\beta^-}=730(110) 610(160)$ to 1^+ levels at 846.688 923.432 keV										
* $^{134}\text{I}(\beta^-)^{134}\text{Xe}$	$E_{\beta^-}=2410(60) 1680(60) 1250(60)$ to 4^+ levels at 1731.17 2588.46 2867.38 keV										
* $^{134}\text{Cs}(\beta^-)^{134}\text{Ba}$	$E_{\beta^-}=658.0(0.4)$ to 4^+ level at 1400.590 keV										
* $^{134}\text{Ce}(\epsilon)^{134}\text{La}$	LK=0.798(0.04); also $Q_{\beta^+} > 375 \text{keV}$										
* $^{134}\text{Pr}(\beta^+)^{134}\text{Ce}$	$E_{\beta^+}=4120(90)$ to 4^+ level at 1048.68 keV										
* $^{134}\text{Pm}(\beta^+)^{134}\text{Nd}$	$E_{\beta^+}=7360(200)$ to 4^+ level at 788.92 keV										

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{135}\text{Sb-u}$	-74932 103	-74815 3	0.8	o			GT2	1.5	08Kn.A
	-74943 130		0.7	U			GT2	1.5	08Su19
$^{135}\text{Te-u}$	-83643 106	-83444.3 2.9	1.2	U			GT2	1.5	08Kn.A
	-83441 132		0.0	U			GT2	1.5	08Su19
$\text{C}_8 \text{ N O H}_9 - ^{135}\text{Ba}$	162731 48	162725.54 0.29	-0.1	U			R07	1.5	68De17
$\text{C}_{11} \text{ H}_3 - ^{135}\text{Ba}$	117822 77	117786.72 0.29	-0.3	U			R07	1.5	68De17
$\text{C}_{12} \text{ H}_7 - ^{135}\text{Ba O}$	154160 46	154172.23 0.29	0.2	U			R07	1.5	68De17
$^{135}\text{Ce-u}$	-90779 30	-90839 11	-2.0	1	13	^{135}Ce	GS2	1.0	05Li24 *
$^{135}\text{Pr-u}$	-86897 30	-86888 13	0.3	R			GS2	1.0	05Li24
$^{135}\text{Nd-u}$	-81800 130	-81819 21	-0.1	o			GS1	1.0	00Ra23
	-81811 36		-0.2	R			GS2	1.0	05Li24 *
$^{135}\text{Pm-u}$	-75177 70			2			GS2	1.0	05Li24 *
$^{135}\text{Sm-u}$	-67480 166			2			GS2	1.0	05Li24 *
$^{135}\text{Sn} - ^{130}\text{Xe}_{1.038}$	35065.9 3.3			2			JY1	1.0	12Ha25
$^{135}\text{Sb} - ^{130}\text{Xe}_{1.038}$	25342.4 3.1			2			JY1	1.0	12Ha25
$^{135}\text{Te} - ^{130}\text{Xe}_{1.038}$	16713.0 2.9			2			JY1	1.0	12Ha25
$^{135}\text{Cs} - ^{133}\text{Cs}_{1.015}$	1968 18	1943.3 1.1	-1.4	o			MA1	1.0	90St25
	1957 14		-1.0	U			MA1	1.0	99Am05
$^{135}\text{Pr} - ^{133}\text{Cs}_{1.015}$	9080 14	9078 13	-0.1	2			MA5	1.0	00Be42
$^{135}\text{Nd} - ^{133}\text{Cs}_{1.015}$	14144 25	14148 21	0.1	2			MA5	1.0	00Be42 *
$^{135}\text{Te} - ^{136}\text{Xe}_{.993}$	8686 10	8691.7 2.9	0.6	U			CP1	1.0	12Va02
$^{135}\text{I} - ^{136}\text{Xe}_{.993}$	2186.3 8.3	2185 6	-0.2	1	49	^{135}I	CP1	1.0	12Va02
$^{135}\text{Ba} - \text{C}_{10} \text{ H}_{14}$	-203860 20	-203862.08 0.29	0.0	U			M17	2.5	66Be10
$^{135}\text{Ba} - ^{134}\text{Ba}$	1177 2	1180.19 0.11	0.6	U			M17	2.5	66Be10
	1161 70		0.2	U			R07	1.5	68De17
	1168 78		0.1	U			R07	1.5	68De17
$^{134}\text{Cs}(n,\gamma)^{135}\text{Cs}$	8762 1	8762.0 1.0	0.0	1	99	^{135}Cs	ILn		92U1.A
$^{134}\text{Ba}(n,\gamma)^{135}\text{Ba}$	6973.2 0.4	6971.97 0.10	-3.1	C			BNn		77Ko.A
	6972.17 0.18		-1.1	-			MMn		90Is07 Z
	6971.84 0.17		0.8	-			Ltn		93Bo01 Z
	6973.24 0.22		-5.8	B			BNn		93Ch21
	6971.87 0.18		0.6	-			Bdn		06Fi.A
$^{134}\text{Ba}(d,p)^{135}\text{Ba}$	4746 15	4747.41 0.10	0.1	U			ANL		70Vo04
$^{134}\text{Ba}(n,\gamma)^{135}\text{Ba}$	ave. 6971.96 0.10	6971.97 0.10	0.2	1	97	^{134}Ba			average
$^{135}\text{Tb}(p)^{134}\text{Gd}$	1188 7			3			Arp		04Wo07
$^{135}\text{Sb}(\beta^-)^{135}\text{Te}$	8120 50	8038 4	-1.6	U			Stu		89Ho08
$^{135}\text{Te}(\beta^-)^{135}\text{I}$	5950 240	6061 6	0.5	o			Stu		77Lu06
	5950 100		1.1	o			Bwg		79Ke02 *
	5970 200		0.5	U					85Sa15 *
	5960 100		1.0	U			Bwg		87Gr.A
	5888 13		13.3	B			Stu		07Fo02
$^{135}\text{I}(\beta^-)^{135}\text{Xe}$	2780 80	2628 5	-1.9	U					70Ma19
	2590 50		0.8	U			Stu		76Lu04 *
	2627 6		0.1	1	69	^{135}I	Stu		99Fo01
$^{135}\text{Xe}(\beta^-)^{135}\text{Cs}$	1155 10	1165 4	1.0	-					52Be55 *
	1167 5		-0.4	-			Stu		99Fo01 *
	ave. 1165 4		0.1	1	83	^{135}Xe			average
$^{135}\text{Cs}(\beta^-)^{135}\text{Ba}$	205 5	268.9 1.0	12.8	B					53Li01
$^{135}\text{La}(\beta^+)^{135}\text{Ba}$	1200 10	1207 9	0.7	1	89	^{135}La			71Ba18 *
$^{135}\text{Ce}(\beta^+)^{135}\text{La}$	2027 5	2027 5	0.0	-					76Ga.A *
	2016 13		0.9	-					81Sa09 *
	ave. 2026 5		0.3	1	98	^{135}Ce			average
$^{135}\text{Pr}(\beta^+)^{135}\text{Ce}$	3720 150	3680 16	-0.3	U					54Ha68 *
$^{135}\text{Pm}^m(\beta^+)^{135}\text{Nd}$	6040 150	6390# 50#	2.3	D			Dbn		95Ve08 **
* $^{135}\text{Ce-u}$	M-A=-84114(28) keV for $^{135}\text{Ce}^m$ at 445.81 keV								
* $^{135}\text{Nd-u}$	M-A=-76174(28) keV for mixture gs+m at 64.95 keV								
* $^{135}\text{Pm-u}$	M-A=-69952(28) keV for mixture gs+m at 150#80 keV								
* $^{135}\text{Sm-u}$	M-A=-62857(38) keV for mixture gs+m at 0#300 keV								
* $^{135}\text{Nd} - ^{133}\text{Cs}_{1.015}$	$D_M=14179(14) \mu\text{u}$ for gs+m mixture at 64.95 keV; M-A=-76185(13) keV								
* $^{135}\text{Te}(\beta^-)^{135}\text{I}$	$E_{\beta^-}=5120(120)$ to $5/2^-$ level at 870.52 keV and other E_{β^-}								
* $^{135}\text{Te}(\beta^-)^{135}\text{I}$	$E_{\beta^-}=5370(100)$ to $5/2^+$ level at 603.68 keV								
* $^{135}\text{I}(\beta^-)^{135}\text{Xe}$	$E_{\beta^-}=1320(50)$ to $5/2^+$ level at 1260.416 keV, and other E_{β^-}								
* $^{135}\text{Xe}(\beta^-)^{135}\text{Cs}$	$E_{\beta^-}=905(10) 917(5)$ respectively, to $5/2^+$ level at 249.767 keV								
* $^{135}\text{La}(\beta^+)^{135}\text{Ba}$	$p^+ = 7(1) \times 10^{-5}$, from reanalysis								
* $^{135}\text{La}(\beta^+)^{135}\text{Ba}$	But 65Mo05 says $p^+ < 0.002\%$ (2×10^{-5}) or $E_{\beta^+} < 125$ keV								

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
* $^{135}\text{Ce}(\beta^+)^{135}\text{La}$	$E_{\beta^+}=705(5)$ 694(13) respectively, to $1/2^+$ level at 300.052 keV										Ens083 **
* $^{135}\text{Pr}(\beta^+)^{135}\text{Ce}$	$E_{\beta^+}=2500(100)$ to levels ($5/2^+$) 296.11 and $3/2^+$ 82.67 keV, roughly equal										Ens083 **
* $^{135}\text{Pm}^m(\beta^+)^{135}\text{Nd}$	$E_{\beta^+}=4920(150)$ to mixture ground state and ($11/2^-$) level at 198.5 keV										Ens083 **
* $^{135}\text{Pm}^m(\beta^+)^{135}\text{Nd}$	Trends from Mass Surface TMS suggest $^{135}\text{Pm}^m$ 350 less bound (see Nubase)										GAU **
$^{136}\text{Te-u}$	-79945	25	-79899.4	2.6	1.8	U			GS3	1.0	12Ch19
$^{136}\text{Xe}-^{120}\text{Sn}_{1,133}$	18019.8	3.1	18020.0	1.1	0.1	U			JY1	1.0	11Ha48
$\text{C}_{10}\text{H}_{16}-^{136}\text{Xe}$	217982.	3.9	217986.032	0.011	0.4	U			M16	2.5	63Da10
$^{136}\text{Xe-u}$	-92793.6	9.0	-92785.516	0.011	0.4	U			ACC	2.5	90Me08
	-92785.516	0.011		0.0	1	U	100	100 ^{136}Xe	FS1	1.0	07Re03
$\text{C}_{11}\text{H}_4-^{136}\text{Ba}$	126737	56	126724.40	0.29	-0.1	U			R07	1.5	68De17
$\text{C}_8\text{N O H}_{10}-^{136}\text{Ba}$	171635	56	171663.22	0.29	0.3	U			R07	1.5	68De17
$\text{C}_{12}\text{H}_8-^{136}\text{Ba O}$	163094	40	163109.91	0.29	0.3	U			R07	1.5	68De17
$^{136}\text{La-u}$	-92394	88	-92370	60	0.3	2			GS2	1.0	05Li24 *
$\text{C}_{10}\text{H}_{16}-^{136}\text{Ce}$	218128	50	218071.3	0.4	-0.3	U			R05	4.0	65De13
$\text{C}_{12}\text{H}_8-^{136}\text{Ce O}$	160563	36	160556.4	0.4	0.0	U			R05	4.0	65De13
$^{136}\text{Nd-u}$	-85044	30	-85024	13	0.7	R			GS2	1.0	05Li24
$^{136}\text{Pm-u}$	-76389	82	-76420	80	-0.3	2			GS2	1.0	05Li24 *
$^{136}\text{Sm-u}$	-71768	30	-71724	13	1.5	R			GS2	1.0	05Li24 *
$^{136}\text{Sb}-^{130}\text{Xe}_{1,046}$	31675.1	6.8				2			JY1	1.0	12Ha25
$^{136}\text{Te}-^{130}\text{Xe}_{1,046}$	21029.9	3.1	21029.8	2.6	0.0	1	72	72 ^{136}Te	JY1	1.0	12Ha25
$^{136}\text{Xe}-^{133}\text{Cs}_{1,023}$	3936.5	1.9	3937.128	0.014	0.3	U			MA8	1.0	09Ne11
$^{136}\text{Cs}-^{133}\text{Cs}_{1,023}$	4017	18	4034.0	2.0	0.9	o			MA1	1.0	90St25
	4021	14			0.9	U			MA1	1.0	99Am05
$^{136}\text{Pr}-^{133}\text{Cs}_{1,023}$	9418	15	9400	12	-1.2	1	67	67 ^{136}Pr	MA5	1.0	00Be42
$^{136}\text{Nd}-^{133}\text{Cs}_{1,023}$	11703	14	11699	13	-0.3	2			MA5	1.0	00Be42
$^{136}\text{Pm}^m-^{133}\text{Cs}_{1,023}$	20429	100				2			MA5	1.0	00Be42 *
$^{136}\text{Sm}-^{133}\text{Cs}_{1,023}$	25009	15	24998	13	-0.7	2			MA5	1.0	00Be42
$^{136}\text{Xe}-^{134}\text{Xe}_{1,015}$	3245.8	3.8	3238.9	0.9	-1.8	o			MA8	1.0	05He.A
	3244.3	4.0			-1.4	U			MA8	1.0	06He29
$^{136}\text{Te}-^{136}\text{Xe}$	12887.9	5.0	12886.1	2.6	-0.4	1	28	28 ^{136}Te	CP1	1.0	12Va02
$^{136}\text{I}^m-^{136}\text{Xe}$	7611.2	4.9				2			CP1	1.0	12Va02 *
$^{136}\text{Xe}-^{136}\text{Ba}$	2639.6	0.6	2638.76	0.29	-1.4	-			H49	1.0	10Mc04
	2638.62	0.52			0.3	-			JY1	1.0	11Ko03
ave.	2639.0	0.4			-0.7	1	56	56 ^{136}Ba			average
$^{136}\text{Ce}-^{136}\text{Ba}$	2553.46	0.29	2553.48	0.29	0.1	1	100	100 ^{136}Ce	JY1	1.0	11Ko03
$^{136}\text{Ba}-^{135}\text{Ba}$	-1115	3	-1112.65	0.04	0.3	U			M17	2.5	66Be10
	-1119	50			0.1	U			R07	1.5	68De17
	-1074	50			-0.5	U			R07	1.5	68De17
$^{136}\text{Ba}-^{134}\text{Ba}$	67	5	67.54	0.11	0.0	U			M17	2.5	66Be10
	69	128			0.0	U			R07	1.5	68De17
	72	78			0.0	U			R07	1.5	68De17
$^{136}\text{Te}(\beta^-)^{135}\text{I}$	1285	50	1292	6	0.1	U					84Kr.B
$^{136}\text{Xe}(d,^3\text{He})^{135}\text{I}$	-4438	30	-4436	5	0.1	U			Oak		71Wi04
$^{136}\text{Xe}(d,t)^{135}\text{Xe}$	-1723	40	-1826	4	-2.6	U			Oak		68Mo21
$^{135}\text{Ba}(n,\gamma)^{136}\text{Ba}$	9106.4	0.8	9107.74	0.04	1.7	U					69Ge07
	9107.74	0.04			0.1	-			MMn		90Is07 Z
	9107.73	0.19			0.1	-			Bdn		06Fi.A
$^{135}\text{Ba}(d,p)^{136}\text{Ba}$	6886	15	6883.18	0.04	-0.2	U			ANL		70Vo04
$^{135}\text{Ba}(n,\gamma)^{136}\text{Ba}$	ave.	9107.74	9107.74	0.04	0.1	1	99	56 ^{135}Ba			average
$^{136}\text{Te}(\beta^-)^{136}\text{I}$	5100	150	5120	14	0.1	U					77Sc21
	5095	100			0.2	U			Bwg		87Gr.A
	5086	20			1.7	1	50	50 ^{136}I	Stu		07Fo02
$^{136}\text{I}(\beta^-)^{136}\text{Xe}$	6960	100	6884	14	-0.8	U					59Jo37 *
	6690	150			1.3	U			Stu		76Lu04 *
	6925	70			-0.6	U			Bwg		87Gr.A
	6850	20			1.7	1	50	50 ^{136}I	Stu		07Fo02
$^{136}\text{I}^m(\beta^-)^{136}\text{Xe}$	7100	230	7090	5	0.0	o			Stu		76Lu04 *
	7705	120			-5.1	C			Bwg		87Gr.A
	7051	12			3.2	B			Stu		07Fo02
$^{136}\text{Cs}(\beta^-)^{136}\text{Ba}$	2548.1	2.0	2548.2	1.9	0.1	2					54O105 *
	2549	5			-0.2	2					65Re07 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{136}\text{La}(\beta^+)^{136}\text{Ba}$	2870	70	2850	50	-0.3	R			59Gi50		
$^{136}\text{Pr}(\beta^+)^{136}\text{Ce}$	5084	50	5168	11	1.7	U			68Zh04 *		
	5114	75			0.7	U			71Ke07 *		
	5134	20			1.7	1	33	33 ^{136}Pr	IRS	83AlB *	
$^{136}\text{Nd}(\beta^+)^{136}\text{Pr}$	2501	50	2141	16	-7.2	B			68Zh04 *		
	2211	25			-2.8	B			75Br16 *		
$^{136}\text{Pm}(\beta^+)^{136}\text{Nd}$	7850	200	8020	70	0.8	R		IRS	83Al06 *		
* $^{136}\text{La-u}$	M-A=-85935(32) keV for mixture gs+m at 259.3(0.4) keV										
* $^{136}\text{Pm-u}$	M-A=-71091(28) keV for mixture gs+m at 130(120) keV										
* $^{136}\text{Pm}^m-^{133}\text{Cs}_{1.023}$	Slightly contaminated by ground state, original error (20) increased										
* $^{136}\text{I}^m-^{136}\text{Xe}$	High spin isomer is preferred (see also ^{134}Sb)										
* $^{136}\text{I}(\beta^-)^{136}\text{Xe}$	$E_{\beta^-}=7000(100), 5610(150), 4280(150)$ to ground state, 2^+ levels 1313.027, 2634.16 keV										
* $^{136}\text{I}(\beta^-)^{136}\text{Xe}$	$E_{\beta^-}=5370(400), 4700(320), 3920(220)$ to 2^+ levels 1313.027, 2289.53, 2634.16										
* $^{136}\text{I}^m(\beta^-)^{136}\text{Xe}$	$E_{\beta^-}=5170(400) 4670(270)$ to $^{136}\text{Xe}^m 6^+$ at 1891.703 and 2444.39 level										
* $^{136}\text{Cs}(\beta^-)^{136}\text{Ba}$	$E_{\beta^-}=341(2) 342(5)$ respectively, to 6^+ level at 2207.077 keV										
* $^{136}\text{Pr}(\beta^+)^{136}\text{Ce}$	$E_{\beta^+}=2970(50) 3000(75) 3020(20)$ respectively, to 2^+ level at 1092.09 keV										
* $^{136}\text{Nd}(\beta^+)^{136}\text{Pr}$	$E_{\beta^+}=1330(50)$ to 1^+ level at 149.11 keV										
* $^{136}\text{Nd}(\beta^+)^{136}\text{Pr}$	$K/\beta^+=13.2(0.5)$ to 1^+ level at 149.11 keV										
* $^{136}\text{Pm}(\beta^+)^{136}\text{Nd}$	$E_{\beta^+}=4732(70)$ probably from high spin isomer going to several										
*	high spin levels around 2100 keV										
									AHW **		
									AHW **		
$^{137}\text{Sb-u}$	-64445	215				2		GT1	1.5	04Ma.A	
$^{137}\text{Te-u}$	-74528	101	-74401.1	2.7	0.8	o		GT2	1.5	08Kn.A	
	-74386	129			-0.1	U		GT2	1.5	08Su19	
$^{137}\text{I-u}$	-82145	130	-81972	9	0.9	U		GT2	1.5	08Su19	
$\text{C}_{11} \text{H}_5-^{137}\text{Ba}$	133366	24	133298.0	0.3	-1.9	U		R07	1.5	68De17	
$\text{C}_7 \text{C N O H}_{10}-^{137}\text{Ba}$	173792	73	173766.6	0.3	-0.2	U		R07	1.5	68De17	
$\text{C}_{12} \text{H}_9-^{137}\text{Ba O}$	169692	39	169683.5	0.3	-0.1	U		R07	1.5	68De17	
$^{137}\text{La-u}$	-93556	30	-93549.6	1.8	0.2	U		GS2	1.0	05Li24	
$^{137}\text{Ce-u}$	-92101	85	-92237.6	0.4	-1.6	U		GS2	1.0	05Li24 *	
$^{137}\text{Nd-u}$	-85438	30	-85438	13	0.0	1	18	18 ^{137}Nd	GS2	1.0	05Li24
$^{137}\text{Pm-u}$	-79608	62	-79520	14	1.4	U		GS2	1.0	05Li24 *	
$^{137}\text{Sm-u}$	-73025	69	-73030	50	-0.1	1	44	44 ^{137}Sm	GS2	1.0	05Li24 *
$^{137}\text{Te}-^{130}\text{Xe}_{1.054}$	27300.0	2.7				2		JY1	1.0	12Ha25	
$^{137}\text{Xe}-^{133}\text{Cs}_{1.030}$	8943.6	2.0	8942.26	0.11	-0.7	U		MA8	1.0	09Ne11	
$^{137}\text{Cs}-^{133}\text{Cs}_{1.030}$	4462	19	4473.7	0.4	0.6	o		MA1	1.0	90St25	
	4470	14			0.3	U		MA1	1.0	99Am05	
$^{137}\text{Pr}-^{133}\text{Cs}_{1.030}$	8095	15	8064	9	-2.1	1	34	34 ^{137}Pr	MA5	1.0	00Be42
$^{137}\text{Nd}-^{133}\text{Cs}_{1.030}$	11947	14	11947	13	0.0	1	81	81 ^{137}Nd	MA5	1.0	00Be42
$^{137}\text{Pm}-^{133}\text{Cs}_{1.030}$	17864	14				2		MA5	1.0	00Be42	
$^{137}\text{Sm}-^{133}\text{Cs}_{1.030}$	24350	78	24350	50	0.1	1	34	34 ^{137}Sm	MA5	1.0	00Be42 *
$^{137}\text{Ba}^{35}\text{Cl}-^{135}\text{Ba}^{37}\text{Cl}$	3089.1	0.6	3088.85	0.11	-0.4	U		H49	1.0	10Mc04	
$^{137}\text{Te}-^{136}\text{Xe}_{1.007}$	19057	18	19033.9	2.7	-1.3	U		CPI1	1.0	12Va02	
$^{137}\text{I}-^{136}\text{Xe}_{1.007}$	11463.2	9.0				2		CPI1	1.0	12Va02	
$^{137}\text{Xe}-^{136}\text{Xe}_{1.007}$	5004	11	4992.79	0.11	-1.0	U		CPI1	1.0	12Va02	
$^{137}\text{Ba}-^{136}\text{Ba}$	1249	3	1251.41	0.07	0.3	U		M17	2.5	66Be10	
	1222	50			0.4	U		R07	1.5	68De17	
	1227	44			0.4	U		R07	1.5	68De17	
$^{137}\text{Ba}-^{135}\text{Ba}$	143	3	138.77	0.09	-0.6	U		M17	2.5	66Be10	
	69	63			0.7	U		R07	1.5	68De17	
	106	46			0.5	U		R07	1.5	68De17	
$^{137}\text{I}(\beta^-n)^{136}\text{Xe}$	1850	30	2002	8	5.1	C				84Kr.B	
$^{136}\text{Xe}(n,\gamma)^{137}\text{Xe}$	4025.5	0.5	4025.56	0.10	0.1	U				77Fo02 Z	
	4025.8	0.3			-0.8	2				77Pr07 Z	
	4025.53	0.11			0.3	2		Bdn		06Fi.A	
$^{136}\text{Xe}(d,p)^{137}\text{Xe}$	1637	20	1801.00	0.10	8.2	F		Oak		68Mo21 *	
$^{136}\text{Xe}(^3\text{He},d)^{137}\text{Cs}$	1918	12	1912.2	0.3	-0.5	U		ChR		81Ha08	
$^{136}\text{Ba}(n,\gamma)^{137}\text{Ba}$	6891	5	6905.63	0.07	2.9	U				69Gr31	
	6905.54	0.10			0.9	-		MMn		90Is07 Z	
	6905.70	0.12			-0.6	-		Mtn		95Bo03 Z	
	6905.74	0.16			-0.7	-		Bdn		06Fi.A	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{137}\text{Ba}(\gamma, n)^{136}\text{Ba}$	-6949	38	-6905.63	0.07	1.1	U			Phi		60Ge01
$^{136}\text{Ba}(d, p)^{137}\text{Ba}$	4680	15	4681.07	0.07	0.1	U			ANL		70Vo04
$^{136}\text{Ba}(n, \gamma)^{137}\text{Ba}$	ave. 6905.63	0.07	6905.63	0.07	0.0	1	100	100 ^{137}Ba			average
$^{136}\text{Ce}(n, \gamma)^{137}\text{Ce}$	7481.3	0.4	7481.53	0.16	0.6	-					81Ko.A Z
	7481.58	0.17			-0.3	-			Bdn		06Fi.A
	ave. 7481.54	0.16			0.0	1	100	100 ^{137}Ce			average
$^{137}\text{Te}(\beta^-)^{137}\text{I}$	7030	300	7052	9	0.1	U					85Sa15
	6925	130			1.0	U			Bwg		87Gr.A
$^{137}\text{I}(\beta^-)^{137}\text{Xe}$	5880	60	6027	8	2.5	U			Bwg		87Gr.A
$^{137}\text{Xe}(\beta^-)^{137}\text{Cs}$	4140	70	4162.4	0.3	0.3	U					64On03
	4150	100			0.1	U					68Ho22
$^{137}\text{Cs}(\beta^-)^{137}\text{Ba}$	1173.29	0.84	1175.63	0.17	2.8	U					68Wo02 *
	1175.55	0.26			0.3	2					78Ch22 *
	1175.69	0.23			-0.3	2					83Be18 *
$^{137}\text{Ce}(\beta^+)^{137}\text{La}$	1222.1	1.6				2					81Ar.A *
$^{137}\text{Pr}(\beta^+)^{137}\text{Ce}$	2702	10	2717	8	1.5	1	66	66 ^{137}Pr			73Bu17
$^{137}\text{Nd}(\beta^+)^{137}\text{Pr}$	3497	40	3617	14	3.0	B					73Bu18 *
	3690	54			-1.3	U					85Af.A *
$^{137}\text{Pm}^m(\beta^+)^{137}\text{Nd}$	5690	130	5660	50	-0.3	-			IRS		83Al06 *
	5650	60			0.1	-			Dbn		95Ve08 *
	ave. 5660	50			0.0	1	71	70 $^{137}\text{Pm}^m$			average
$^{137}\text{Sm}(\beta^+)^{137}\text{Pm}^m$	5900	70	5900	50	0.0	1	53	30 $^{137}\text{Pm}^m$	Dbn		95Ve08
* $^{137}\text{Ce-u}$	M-A=-85665(29) keV for mixture gs+m at 254.29 keV										Nub127 **
* $^{137}\text{Pm-u}$	M-A=-74079(28) keV for mixture gs+m at 150(50) keV										Nub127 **
* $^{137}\text{Sm-u}$	M-A=-67932(28) keV for mixture gs+m at 180#50 keV										Nub127 **
* $^{137}\text{Sm}-^{133}\text{Cs}_{1.030}$	Might be a mixture of ground state and isomer say authors										00Be42 **
*	$D_M=24447(14) \mu\text{u}$ for mixture gs+m at 180#50 keV; M-A=-67941(13) keV										Nub127 **
* $^{136}\text{Xe}(d, p)^{137}\text{Xe}$	F : error severely underestimated and value low, see excitation energies										AHW **
* $^{137}\text{Cs}(\beta^-)^{137}\text{Ba}$	$E_{\beta^-}=511.63(0.84) 513.89(0.26) 514.03(0.23)$ to $^{137}\text{Ba}^m$ at 661.659 keV										Nub127 **
* $^{137}\text{Ce}(\beta^+)^{137}\text{La}$	$E_{\beta^+}=189.5(1.6)$ to $5/2^+$ level at 10.59 keV										Ens079 **
* $^{137}\text{Nd}(\beta^+)^{137}\text{Pr}$	$E_{\beta^+}=2400(40) E_{\beta^+}=2592(54)$ respectively, to $3/2^+$ level at 75.5 keV										Ens079 **
* $^{137}\text{Pm}^m(\beta^+)^{137}\text{Nd}$	$E_{\beta^+}=4132(+150-115) 4110(60)$ respectively, to $11/2^-$ $^{137}\text{Nd}^m$ at 519.43 keV										Nub127 **
$^{138}\text{Te-u}$	-70940	247	-70528	5	1.1	o			GT1	1.5	04Ma.A
	-70583	106			0.3	o			GT2	1.5	08Kn.A
	-70591	131			0.3	U			GT2	1.5	08Su19
$\text{C}_{10} \text{H}_{18}-^{138}\text{Ba}$	235609	20	235603.6	0.3	-0.1	U			M17	2.5	66Be10
$\text{C}_{11} \text{H}_7-^{138}\text{Ba H}$	141649	51	141703.2	0.3	0.7	U			R07	1.5	68De17
$\text{C}_{11} \text{H}_6-^{138}\text{Ba}$	141701	30			0.0	U			R07	1.5	68De17
$\text{C}_{12} \text{H}_{10}-^{138}\text{Ba O}$	178106	15	178088.7	0.3	-0.8	U			R07	1.5	68De17
	178105	49			-0.2	U			R07	1.5	68De17
$\text{C}_{11} ^{13}\text{C H}_9-^{138}\text{Ba O}$	173612	37	173618.5	0.3	0.1	U			R07	1.5	68De17
$\text{C}_{10} \text{H}_{18}-^{138}\text{Ce}$	234799	60	234859	11	0.3	U			R05	4.0	65De13
$\text{C}_{12} \text{H}_{10}-^{138}\text{Ce O}$	177382	46	177345	11	-0.2	U			R05	4.0	65De13
$\text{C}_9 ^{13}\text{C H}_{17}-^{138}\text{Ce}$	230358	60	230389	11	0.1	U			R05	4.0	65De13
$^{138}\text{Pr}^m\text{-u}$	-88896	30	-88869	19	0.9	1	39	39 $^{138}\text{Pr}^m$	GS2	1.0	05Li24
$^{138}\text{Nd-u}$	-88060	130	-88050	12	0.1	o			GS1	1.0	00Ra23
	-88060	30			0.3	R			GS2	1.0	05Li24
$^{138}\text{Pm-u}$	-80242	141	-80452	30	-1.5	o			GS1	1.0	00Ra23 *
	-80454	35			0.1	1	72	72 ^{138}Pm	GS2	1.0	05Li24 *
$^{138}\text{Sm-u}$	-76766	30	-76756	13	0.3	R			GS2	1.0	05Li24
$^{138}\text{Eu-u}$	-66291	30				2			GS2	1.0	05Li24
$^{138}\text{Te}-^{130}\text{Xe}_{1.062}$	31945.3	4.7				2			JY1	1.0	12Ha25
$^{138}\text{Xe}-^{133}\text{Cs}_{1.038}$	12284.1	3.5	12287	3	0.9	1	74	74 ^{138}Xe	MA8	1.0	09Ne11
$^{138}\text{Cs}-^{133}\text{Cs}_{1.038}$	9158	14	9158	10	0.0	1	49	49 ^{138}Cs	MA1	1.0	99Am05
$^{138}\text{Ba}-^{133}\text{Cs}_{1.038}$	3388	14	3387.9	0.3	0.0	U			MA1	1.0	99Am05
$^{138}\text{Nd}-^{133}\text{Cs}_{1.038}$	10093	14	10091	12	-0.2	-			MA5	1.0	00Be42
	ave. 10091	13			0.0	1	96	96 ^{138}Nd			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{138}\text{Pm}^m-^{133}\text{Cs}_{1.038}$	17721	14					MA5	1.0	00Be42
$^{138}\text{Sm}-^{133}\text{Cs}_{1.038}$	21387	14	21385	13	-0.2		MA5	1.0	00Be42
$^{138}\text{I}-^{136}\text{Xe}_{1.015}$	16903.7	6.4					CP1	1.0	12Va02
$^{138}\text{Xe}-^{136}\text{Xe}_{1.015}$	8332.2	5.9	8324	3	-1.5	1	26	26	^{138}Xe
$^{138}\text{Ba}^{35}\text{Cl}-^{136}\text{Ba}^{37}\text{Cl}$	3621.1	0.6	3621.35	0.11	0.4	U	H49	1.0	10Mc04
$^{138}\text{Ba}-^{137}\text{Ba}$	-582	2	-580.15	0.04	0.4	U	M17	2.5	66Be10
	-480	27			-2.5	U	R07	1.5	68De17
	-553	40			-0.5	U	R07	1.5	68De17
$^{138}\text{Ba}-^{136}\text{Ba}$	676	3	671.27	0.09	-0.6	U	M17	2.5	66Be10
	658	98			0.1	U	R07	1.5	68De17
	628	43			0.7	U	R07	1.5	68De17
$^{138}\text{Ce}-^{136}\text{Ce}$	-1040	47	-1138	11	-0.5	U	R05	4.0	65De13
	-1158	20			0.4	U	M17	2.5	66Be10
$^{138}\text{Ba H}-^{137}\text{Ba}$	7399	88	7244.89	0.04	-1.2	U	R07	1.5	68De17
	7280	43			-0.5	U	R07	1.5	68De17
$^{137}\text{Ba}(n,\gamma)^{138}\text{Ba}$	8611.3	0.8	8611.72	0.04	0.5	U			68Ma35
	8611.72	0.04			0.0	1	100	100	^{138}Ba
	8611.5	0.15			1.5	U	Ltn		95Bo05
	8611.63	0.18			0.5	U	Bdn		06Fi.A
$^{137}\text{Ba}(d,p)^{138}\text{Ba}$	6398	15	6387.15	0.04	-0.7	U	ANL		70Vo04
$^{138}\text{I}(\beta^-)^{138}\text{Xe}$	7820	70	7992	7	2.5	U	Bwg		87Gr.A
$^{138}\text{Xe}(\beta^-)^{138}\text{Cs}$	2700	50	2915	10	4.3	B			72Mo33 *
	2830	80			1.1	U	Trs		78Wo15
$^{138}\text{Cs}^x(\text{IT})^{138}\text{Cs}$	40	23				2			82Au01 *
$^{138}\text{Cs}(\beta^-)^{138}\text{Ba}$	5350	80	5375	9	0.3	U	Trs		78Wo15
	5388	25			-0.5	-	Gsn		81De25
	5370	15			0.3	-	McG		84He.A
	ave.	5375	13		0.0	1	51	51	^{138}Cs
$^{138}\text{La}(\epsilon)^{138}\text{Ba}$	1620	15	1740	3	8.0	B			56Tu17 *
$^{138}\text{La}(\beta^-)^{138}\text{Ce}$	994	10	1047	10	5.3	B			57Gl20 *
	1159	40			-2.8	U			70El.A *
						2			71Af05
$^{138}\text{Pr}(\beta^+)^{138}\text{Ce}$	4437	10							64Fu08 *
$^{138}\text{Pr}^m(\beta^+)^{138}\text{Ce}$	4801	20	4788	17	-0.6	1	69	61	$^{138}\text{Pr}^m$
$^{138}\text{Nd}(\beta^+)^{138}\text{Pr}$	2020	100	1113	18	-9.1	C			61Bo.B
$^{138}\text{Pm}(\beta^+)^{138}\text{Nd}$	7090	100	7078	29	-0.1	-			83Al06
	7080	60			0.0	-	IRS		95Ve08
	ave.	7080	50		-0.1	1	31	28	^{138}Pm
$^{138}\text{Pm}^m(\beta^+)^{138}\text{Nd}$	7000	250	7108	17	0.4	U			81De38 *
* $^{138}\text{Pm-u}$	M-A=-74730(130) keV for mixture gs+m at 30(30) keV								
* $^{138}\text{Pm-u}$	M-A=-74927(28) keV for mixture gs+m at 30(30) keV								
* $^{138}\text{Xe}(\beta^-)^{138}\text{Cs}$	E_{β^-} =2460(50), 2270(50) to $(1^- 2^-)$ level at 258.400, 1^- at 412.260 keV								
* $^{138}\text{Cs}^x(\text{IT})^{138}\text{Cs}$	Based on $^{138}\text{Cs}^m(\text{IT})=79.9$ keV								
* $^{138}\text{La}(\epsilon)^{138}\text{Ba}$	L/K=1.40(0.25) to 2^+ level at 1435.816 keV								
* $^{138}\text{La}(\beta^-)^{138}\text{Ce}$	E_{β^-} =205(10) 370(40) respectively, to 2^+ level at 788.744 keV								
* $^{138}\text{Pr}^m(\beta^+)^{138}\text{Ce}$	E_{β^+} =1650(20) to 7^- level at 2129.17 keV								
* $^{138}\text{Pm}^m(\beta^+)^{138}\text{Nd}$	E_{β^+} =3900(200) to 5^- level at 1990.4, 6^+ at 2134.3 and (5^-) at 2221.8keV								
$^{139}\text{Te-u}$	-64541	333	-64633	4	-0.2	U	GT1	1.5	04Ma.A
$^{139}\text{Te}-^{130}\text{Xe}_{1.069}$	38515.7	3.8				2	JY1	1.0	12Ha25
$^{139}\text{I-u}$	-73838	102	-73490	30	2.2	U	GT2	1.5	08Kn.A
	-73567	130			0.4	U	GT2	1.5	08Su19
$\text{C}_6 \text{ } ^{13}\text{C} \text{ O}_3 \text{ H}_6-^{139}\text{La}$	128474	41	128692.6	2.4	1.3	U	R05	4.0	65De13
$\text{C}_7 \text{ O}_3 \text{ H}_7-^{139}\text{La}$	133063	32	133162.8	2.4	0.8	U	R05	4.0	65De13
$\text{C}_6 \text{ N O}_3 \text{ H}_5-^{139}\text{La}$	120496	21	120586.8	2.4	1.1	U	R05	4.0	65De13
$\text{C}_{12} \text{ H}_{11}-^{139}\text{La} \text{ O}$	184568	66	184804.5	2.4	0.9	U	R05	4.0	65De13
$\text{C}_{11} \text{ } ^{13}\text{C} \text{ H}_{10}-^{139}\text{La} \text{ O}$	180100	58	180334.3	2.4	1.0	U	R05	4.0	65De13
$^{139}\text{Nd-u}$	-87840	79	-88046	30	-2.6	U	GS2	1.0	05Li24 *
$^{139}\text{Sm-u}$	-77704	30	-77703	12	0.0	R	GS2	1.0	05Li24
	-77711	30			0.3	R	GS2	1.0	05Li24 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{139}\text{Eu-u}$	-70215	30	-70208	14	0.2	R			GS2	1.0	05Li24
$^{139}\text{Xe}-^{133}\text{Cs}_{1.045}$	17594.9	2.3				2			MA8	1.0	09Ne11 *
$^{139}\text{Cs}-^{133}\text{Cs}_{1.045}$	12163	14	12166	3	0.2	U			MA1	1.0	99Am05
$^{139}\text{Ba}-^{133}\text{Cs}_{1.045}$	7649	14	7643.8	0.3	-0.4	U			MA1	1.0	99Am05
$^{139}\text{Pm}-^{133}\text{Cs}_{1.045}$	15604	15	15602	15	-0.1	1	95	95 ^{139}Pm	MA5	1.0	00Be42
$^{139}\text{Sm}-^{133}\text{Cs}_{1.045}$	21101	14	21099	12	-0.1	2			MA5	1.0	00Be42
$^{139}\text{Eu}-^{133}\text{Cs}_{1.045}$	28597	16	28595	14	-0.1	2			MA5	1.0	00Be42
$^{139}\text{I}-^{136}\text{Xe}_{1.022}$	21333	31				2			CP1	1.0	12Va02
$^{139}\text{Xe}-^{136}\text{Xe}_{1.022}$	13618	12	13619.0	2.3	0.1	U			CP1	1.0	12Va02
$^{139}\text{La}-^{138}\text{La}$	-622	132	-758.7	2.8	-0.3	U			R05	4.0	65De13
$^{139}\text{La}-^{138}\text{Ce}$	485	74	365	11	-0.4	U			R05	4.0	65De13
$^{133}\text{Cs}-^{139}\text{Cs}_{2.239}$ $^{131}\text{Cs}_{.761}$	-1774	24	-1771	4	0.1	F			P33	2.5	86Au02 *
$^{138}\text{Cs}^x-^{139}\text{Cs}_{.496}$ $^{137}\text{Cs}_{.504}$	770	40	800	25	0.3	U			P23	2.5	82Au01
$^{138}\text{Ba}(n,\gamma)^{139}\text{Ba}$	4723.4	0.7	4723.43	0.04	0.0	U					69Mo13
	4723.4	0.3			0.1	U					80Ba.A
	4723.43	0.04			0.0	1	100	100 ^{139}Ba	MMn		90Is07 Z
	4723.20	0.14			1.6	U			Bdn		06Fi.A
$^{138}\text{Ba}(d,p)^{139}\text{Ba}$	2495	10	2498.86	0.04	0.4	U			MIT		64Sp12
	2496	15			0.2	U			Hei		67Wi08
	2493	10			0.6	U			ANL		70Vo04
$^{139}\text{La}(\gamma,n)^{138}\text{La}$	-8775	25	-8778.0	2.6	-0.1	U			Phi		60Ge01
$^{138}\text{La}(d,p)^{139}\text{La}$	6553	3	6553.4	2.6	0.1	2			Tal		71Du02
$^{139}\text{La}(d,t)^{138}\text{La}$	-2522	5	-2520.8	2.6	0.2	2			Tal		72La20
$^{139}\text{I}(\beta^-)^{139}\text{Xe}$	6815	100	7186	29	3.7	C			Bwg		87Gr.A
	6806	23			16.5	B			Bwg		92Gr06
$^{139}\text{Xe}(\beta^-)^{139}\text{Cs}$	5020	60	5057	4	0.6	U			Trs		78Wo15
	5062	22			-0.2	U			Bwg		92Gr06
$^{139}\text{Cs}(\beta^-)^{139}\text{Ba}$	4290	70	4213	3	-1.1	U			Trs		78Wo15
	4190	25			0.9	o			Gsn		80Bl.A
	4213	5			0.0	o			Gsn		81De25
	4214	4			-0.3	2			McG		84He.A
	4211	5			0.4	2			Gsn		92Pr04
$^{139}\text{Ba}(\beta^-)^{139}\text{La}$	2307	5	2314.6	2.3	1.5	-					75Fl07 *
	2336	25			-0.9	U			Gsn		81De25
	2316	4			-0.3	-			McG		84He.A
	ave.	2312			0.7	1	53	52 ^{139}La			average
$^{139}\text{Ce}(\epsilon)^{139}\text{La}$	278	7	278	7	0.1	1	99	99 ^{139}Ce			Averag *
$^{139}\text{Pr}(\beta^+)^{139}\text{Ce}$	2129	3	2129.1	3.0	0.0	1	100	98 ^{139}Pr			81Ar.A *
$^{139}\text{Nd}(\beta^+)^{139}\text{Pr}$	2787	50	2806	28	0.4	1	31	30 ^{139}Nd			75Vy02 *
$^{139}\text{Pm}(\beta^+)^{139}\text{Nd}$	4450	100	4514	26	0.6	-					77De06 *
	4540	40			-0.6	-			IRS		83Al06
	4470	50			0.9	-			Dbn		95Ve08
	ave.	4507			0.2	1	76	70 ^{139}Nd			average
$^{139}\text{Sm}(\beta^+)^{139}\text{Pm}$	5430	150	5120	17	-2.1	U					82De06 *
	5510	150			-2.6	U			IRS		83Al06 *
$^{139}\text{Eu}(\beta^+)^{139}\text{Sm}$	6080	50	6982	17	18.0	C			Dbn		95Ve08 *
* $^{139}\text{Nd-u}$	M-A=-81707(30) keV for mixture gs+m at 231.15 keV										Nub127 **
* $^{139}\text{Sm-u}$	M-A=-71930(28) keV for $^{139}\text{Sm}^m$ at 457.40 keV										Nub127 **
* $^{139}\text{Xe}-^{133}\text{Cs}_{1.045}$	Typo in original paper, ratio should read 1.045 245 4357(175)										GAu **
* $^{133}\text{Cs}-^{139}\text{Cs}_{2.239}$ ^{131}Cs .	F : rejection based on line-shape analysis										86Au02 **
* $^{139}\text{Ba}(\beta^-)^{139}\text{La}$	E_{β^-} =2141(5) to $5/2^+$ level at 165.8576 keV										Ens014 **
* $^{139}\text{Ce}(\epsilon)^{139}\text{La}$	Average pK=0.73(0.01) to $5/2^+$ level at 165.8576 keV in 10 references:										Ens014 **
*	pK=0.76 (0.04)										54Pr31 **
*	pK=0.73 (0.01)										56Ke23 **
*	pK=0.68 (0.02)										67Ma07 **
*	pK=0.75 (0.01)										68Ad08 **
*	pK=0.69 (0.02)										68Va08 **
*	pK=0.716(0.02)										72Ca07 **
*	pK=0.78 (0.02)										72Sc08 **
*	pK=0.726(0.010)										75Ha43 **
*	pK=0.801(0.034)										75Pi06 **
*	pK=0.705(0.020)										76Ha36 **
* $^{139}\text{Nd}(\beta^+)^{139}\text{Pr}$	E_{β^+} =1770(50); and 1170(50) from $^{139}\text{Nd}^m$ at 231.15 to $1/2^-$ level at 821.98										Ens014 **
* $^{139}\text{Pm}(\beta^+)^{139}\text{Nd}$	E_{β^+} =3020(120), 2990(100) to $3/2^+$ levels at 463.10, 402.77 keV										Ens014 **
* $^{139}\text{Sm}(\beta^+)^{139}\text{Pm}$	E_{β^+} =4100(150) to $(1/2,3/2)^+$ level at 306.69 keV										Ens014 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
* $^{139}\text{Sm}(\beta^+)^{139}\text{Pm}$	$E_{\beta^+}=4735(+180-130)$ from $^{139}\text{Sm}^m$ at 457.40 to $^{139}\text{Pm}^m$ at 188.7 keV										Nub127 **
* $^{139}\text{Eu}(\beta^+)^{139}\text{Sm}$	$E_{\beta^+}=4600(50)$ to $^{139}\text{Sm}^m$ at 457.40 keV										Nub127 **
$^{140}\text{Te-u}$	-60827	225	-60500	30	1.0	U			GT1	1.5	04Ma.A
$^{140}\text{Te}-^{130}\text{Xe}_{1.077}$	43419	30				2			JY1	1.0	12Ha25
$^{140}\text{I-u}$	-68181	193	-68270	200	-0.3	o			GT1	1.5	04Ma.A
	-68463	102			1.2	o			GT2	1.5	08Kn.A
	-68273	130				2			GT2	1.5	08Su19
$^{140}\text{Xe-u}$	-78449	103	-78354.2	2.5	0.6	o			GT2	1.5	08Kn.A
	-78229	130			-0.6	U			GT2	1.5	08Su19
$\text{C}_{11}\text{H}_8-^{140}\text{Ce}$	157116	29	157157.2	2.3	0.4	U			R05	4.0	65De13
$\text{C}_{10}\text{ }^{13}\text{C}\text{H}_7-^{140}\text{Ce}$	152553	17	152687.0	2.3	2.0	U			R05	4.0	65De13
$\text{C}_{10}\text{N}\text{H}_6-^{140}\text{Ce}$	144599	35	144581.1	2.3	-0.1	U			R05	4.0	65De13
$\text{C}_{10}\text{N}_2\text{H}_8-^{140}\text{Ce}\text{O}$	168207	48	168390.5	2.3	1.0	U			R05	4.0	65De13
$^{140}\text{Nd-u}$	-90448	30	-90450	28	-0.1	1	87	87 ^{140}Nd	GS2	1.0	05Li24
$^{140}\text{Pm}^m\text{-u}$	-83532	30	-83503	14	1.0	1	21	21 $^{140}\text{Pm}^m$	GS2	1.0	05Li24
$^{140}\text{Sm-u}$	-81018	30	-81005	13	0.4	R			GS2	1.0	05Li24
$^{140}\text{Gd-u}$	-66326	30				2			GS2	1.0	05Li24
$^{140}\text{Xe}-^{133}\text{Cs}_{1.053}$	21204.9	2.5				2			MA8	1.0	09Ne11
$^{140}\text{Cs}-^{133}\text{Cs}_{1.053}$	16837	14	16842	9	0.4	-			MA1	1.0	99Am05
	16857	14			-1.1	-			MA4	1.0	99Am05
ave.	16847	10			-0.5	1	79	79 ^{140}Cs			average
$^{140}\text{Ba}-^{133}\text{Cs}_{1.053}$	10150	14	10165	9	1.1	1	37	37 ^{140}Ba	MA1	1.0	99Am05
$^{140}\text{Pm}^m-^{133}\text{Cs}_{1.053}$	16064	16	16056	14	-0.5	1	76	76 $^{140}\text{Pm}^m$	MA5	1.0	00Be42
$^{140}\text{Sm}-^{133}\text{Cs}_{1.053}$	18557	15	18554	13	-0.2	2			MA5	1.0	00Be42
$^{140}\text{Xe}-^{136}\text{Xe}_{1.029}$	17134	11	17122.1	2.5	-1.1	U			CP1	1.0	12Va02
$\text{C}_{11}\text{H}_9-^{140}\text{Ce}$	164956	40	164982.2	2.3	0.3	U			M17	2.5	66Be10
$^{140}\text{Ce}-^{139}\text{La}$	-1029	80	-913.1	1.9	0.4	U			R05	4.0	65De13
$\text{C}_{11}\text{H}_{10}-^{140}\text{Ce}$	172765	40	172807.2	2.3	0.4	U			M17	2.5	66Be10
$^{140}\text{Ce}-^{138}\text{Ce}$	-497	83	-548	10	-0.2	U			R05	4.0	65De13
	-543	8			-0.2	1	27	27 ^{138}Ce	M17	2.5	66Be10
$^{139}\text{Cs}-^{140}\text{Cs}_{.883}$ $^{131}\text{Cs}_{.118}$	-2280	40	-2275	8	0.1	U			P23	2.5	82Au01
$^{139}\text{Cs}-^{140}\text{Cs}_{.869}$ $^{132}\text{Cs}_{.132}$	-2210	40	-2240	8	-0.3	U			P23	2.5	82Au01
$^{138}\text{Ce}(\text{t,p})^{140}\text{Ce}$	8184	15	8171	10	-0.8	-			LAl		72Mu09
$^{140}\text{Ce}(\text{p,t})^{138}\text{Ce}$	-8167	20	-8171	10	-0.2	-			Brk		77Sh06
$^{138}\text{Ce}(\text{t,p})^{140}\text{Ce}$	ave.	8178	8171	10	-0.6	1	65	65 ^{138}Ce			average
$^{139}\text{La}(\text{n},\gamma)^{140}\text{La}$	5161.1	1.0	5160.98	0.04	-0.1	U					70Ju04
	5160	1			1.0	U					72Fu10
	5160.97	0.05			0.1	-			MMn		90Is09 Z
	5161.00	0.10			-0.2	-			Bdn		06Fi.A
$^{139}\text{La}(\text{d,p})^{140}\text{La}$	2938	3	2936.41	0.04	-0.5	U			Tal		67Ke02
$^{139}\text{La}(\text{n},\gamma)^{140}\text{La}$	ave.	5160.98	5160.98	0.04	0.0	1	100	53 ^{140}La			average
$^{140}\text{Ho}(\text{p})^{139}\text{Dy}$	1093.9	10.				3					99Ry04
$^{140}\text{Xe}(\beta^-)^{140}\text{Cs}$	4060	60	4064	9	0.1	U			Trs		78Wo15
$^{140}\text{Cs}(\beta^-)^{140}\text{Ba}$	6100	100	6220	10	1.2	U			Trs		78Wo15
	6235	25			-0.6	o			Gsn		80Bl.A
	6220	15			0.0	o			Gsn		81De25
	6212	20			0.4	-			Gsn		92Pr04
	6199	25			0.8	-			Ida		93Gr17
ave.	6207	16			0.8	1	40	21 ^{140}Cs			average
$^{140}\text{Ba}(\beta^-)^{140}\text{La}$	1060	20	1048	8	-0.6	-					49Be36 *
	1050	20			-0.1	-					59Bo61 *
	1055	30			-0.2	-					65Bu07 *
ave.	1055	13			-0.5	1	39	37 ^{140}Ba			average
$^{140}\text{La}(\beta^-)^{140}\text{Ce}$	3760.2	2.0	3760.9	1.8	0.4	1	81	45 ^{140}La			72Na04 *
$^{140}\text{Pr}(\beta^+)^{140}\text{Ce}$	3388	6				2					68Ab17
$^{140}\text{Nd}(\epsilon)^{140}\text{Pr}$	160	60	437	27	4.6	B					72Ba91
$^{140}\text{Pm}(\beta^+)^{140}\text{Nd}$	6080	100	6045	24	-0.3	U					75Ke09
	6090	40			-1.1	2			IRS		83Al06
	6020	30			0.8	2			Dbn		95Ve08

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{140}\text{Pm}^m(\beta^+)^{140}\text{Nd}$	6484	70	6471	28	-0.2	1	16	13 ^{140}Nd			75Ke09 *
$^{140}\text{Sm}(\epsilon)^{140}\text{Pm}$	3400	300	2750	40	-2.2	U					87De04
$^{140}\text{Eu}(\beta^+)^{140}\text{Sm}$	8400	400	8470	50	0.2	U			LBL		91Fi03 *
	8470	50				3			Dbn		95Ve08
$^{140}\text{Gd}(\beta^+)^{140}\text{Eu}$	4800	400	5200	60	1.0	U			LBL		91Fi03
$^{140}\text{Tb}(\beta^+)^{140}\text{Gd}$	11300	800				3			LBL		91Fi03 *
* $^{140}\text{Ba}(\beta^-)^{140}\text{La}$	$E_{\beta^-}=1022(20), 480(20)$ to 2^- level at 29.9641, 0^- at 581.07 keV										Ens077 **
* $^{140}\text{Ba}(\beta^-)^{140}\text{La}$	$E_{\beta^-}=1020(20), 830(50), 590(50)$ to 2^- level at 29.9641, 2^- at 162.6591, and 1^- at 467.653 keV										GAU **
* $^{140}\text{Ba}(\beta^-)^{140}\text{La}$	$E_{\beta^-}=1030(30), 1020(30)$ to 2^- level at 29.9641, 1^- at 43.844 keV										Ens077 **
* $^{140}\text{La}(\beta^-)^{140}\text{Ce}$	$E_{\beta^-}=2164(2)$ to 2^+ level at 1596.237 keV										Ens077 **
* $^{140}\text{Pm}^m(\beta^+)^{140}\text{Nd}$	$E_{\beta^+}=3240(70)$ to 7^- level at 2221.4 keV										Ens077 **
* $^{140}\text{Eu}(\beta^+)^{140}\text{Sm}$	From p^+ . May be lower limit										91Fi03 **
* $^{140}\text{Tb}(\beta^+)^{140}\text{Gd}$	Lower limit										91Fi03 **
$^{141}\text{I}-u$	-64316	419	-64310#	210#	0.0	o			GT1	1.5	04Ma.A
	-64549	120			1.3	o			GT2	1.5	08Kn.A
	-64736	137			2.1	D			GT2	1.5	08Su19 *
$^{141}\text{Xe}-u$	-73092	126	-73213	3	-0.6	o			GT2	1.5	08Kn.A
	-73560	136			1.7	U			GT2	1.5	08Su19
$^{141}\text{Ba}-u$	-85603.5	7.5	-85597	6	0.9	1	58	58 ^{141}Ba	CP1	1.0	06Sa56
$\text{C}_{11} \text{H}_9 - ^{141}\text{Pr}$	162852	41	162767.7	2.3	-0.5	U			R05	4.0	65De13
$\text{C}_{10} \text{N H}_7 - ^{141}\text{Pr}$	150229	37	150191.7	2.3	-0.3	U			R05	4.0	65De13
$\text{C}_9 \text{ } ^{13}\text{C N H}_6 - ^{141}\text{Pr}$	145722	65	145721.5	2.3	0.0	U			R05	4.0	65De13
$^{141}\text{Pr}-u$	-92374	30	-92342.4	2.3	1.1	U			GS2	1.0	05Li24
$^{141}\text{Nd}-u$	-90401	30	-90385	4	0.5	U			GS2	1.0	05Li24
	-90365	30			-0.7	U			GS2	1.0	05Li24 *
$^{141}\text{Sm}-u$	-81496	62	-81518	9	-0.4	U			GS2	1.0	05Li24 *
$^{141}\text{Eu}-u$	-75048	42	-75068	14	-0.5	U			GS2	1.0	05Li24 *
$^{141}\text{Gd}-u$	-67881	30	-67874	21	0.2	2			GS2	1.0	05Li24
	-67867	30			-0.2	2			GS2	1.0	05Li24 *
$^{141}\text{Tb}-u$	-58552	113				2			GS2	1.0	05Li24 *
$^{141}\text{Xe}-^{133}\text{Cs}_{1.060}$	27008.1	3.1				2			MA8	1.0	09Ne11
$^{141}\text{Cs}-^{133}\text{Cs}_{1.060}$	20269	16	20266	10	-0.2	1	37	37 ^{141}Cs	MA4	1.0	99Am05
$^{141}\text{Ba}-^{133}\text{Cs}_{1.060}$	14625	15	14624	6	-0.1	-			MA1	1.0	99Am05
	14631	16			-0.4	-			MA4	1.0	99Am05
ave.	14628	11			-0.3	1	27	27 ^{141}Ba			average
$^{141}\text{Pm}-^{133}\text{Cs}_{1.060}$	13776	15				2			MA5	1.0	00Be42
$^{141}\text{Sm}-^{133}\text{Cs}_{1.060}$	18692	14	18703	9	0.8	1	43	43 ^{141}Sm	MA5	1.0	00Be42 *
$^{141}\text{Eu}-^{133}\text{Cs}_{1.060}$	25164	15	25153	14	-0.8	1	82	82 ^{141}Eu	MA5	1.0	00Be42 *
$^{141}\text{Xe}-^{136}\text{Xe}_{1.037}$	23003	10	23006	3	0.3	U			CP1	1.0	12Va02
$^{141}\text{Cs}-^{136}\text{Xe}_{1.037}$	16277	22	16264	10	-0.6	1	20	20 ^{141}Cs	CP1	1.0	12Va02
$^{139}\text{Cs}-^{141}\text{Cs}_{.789} \text{ } ^{131}\text{Cs}_{.212}$	-3190	40	-3270	8	-0.8	U			P23	2.5	82Au01
$^{140}\text{Cs}-^{141}\text{Cs}_{.894} \text{ } ^{131}\text{Cs}_{.107}$	-970	40	-1045	11	-0.8	U			P23	2.5	82Au01
$^{139}\text{Cs}-^{141}\text{Cs}_{.767} \text{ } ^{132}\text{Cs}_{.234}$	-3210	40	-3183	8	0.3	U			P23	2.5	82Au01
$^{141}\text{Cs}(\beta^-n)^{140}\text{Ba}$	735	30	722	12	-0.4	1	15	9 ^{141}Cs			84Kr.B
$^{140}\text{Ce}(n,\gamma)^{141}\text{Ce}$	5428.6	0.6	5428.14	0.10	-0.8	U			BNn		70Ge03 Z
	5428.01	0.20			0.7	-			Ptn		80Ba.A Z
	5428.19	0.12			-0.4	-			Bdn		06Fi.A
$^{140}\text{Ce}(d,p)^{141}\text{Ce}$	3210	10	3203.57	0.10	-0.6	U			MIT		64Sp12
	3202	15			0.1	U			Hei		67Wi08
$^{140}\text{Ce}(n,\gamma)^{141}\text{Ce}$	ave.	5428.14	0.10	5428.14	0.10	0.0	1	100	54 ^{140}Ce		average
$^{141}\text{Pr}(\gamma,n)^{140}\text{Pr}$	-9361	23	-9397	6	-1.5	U			Phi		60Ge01
$^{141}\text{Ho}(p)^{140}\text{Dy}$	1177.4	8.	1177	7	-0.1	3					98Da03
	1172.9	20.			0.2	3					99Ry04 *
$^{141}\text{Xe}(\beta^-)^{141}\text{Cs}$	6150	90	6280	10	1.4	U			Trs		78Wo15
$^{141}\text{Cs}(\beta^-)^{141}\text{Ba}$	5200	80	5256	10	0.7	U			Trs		78Wo15
	5264	15			-0.6	o			Gsn		80Bl.A *
	5252	15			0.2	o			Gsn		81De25
	5242	15			0.9	1	41	32 ^{141}Cs	Gsn		92Pr04

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	ν_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{141}\text{Ba}(\beta^-)^{141}\text{La}$	3010	60	3202	7	3.2	B	Trs		78Wo15		
	3208	35			-0.2	U	Gsn		81De25		
	3217	20			-0.8	1	11	7 ^{141}Ba	84He.A		
$^{141}\text{La}(\beta^-)^{141}\text{Ce}$	2430	30	2501	4	2.4	U	McG		51Du19		
	2502	4			-0.2	1	96	95 ^{141}La	84He.A		
$^{141}\text{Ce}(\beta^-)^{141}\text{Pr}$	584	3	580.4	1.1	-1.2	-			50Fr58 *		
	585	4			-1.1	-			52Ko27 *		
	576.4	2.0			2.0	-			55Jo02 *		
	581.4	2.0			-0.5	-			68Be06 *		
	582.2	2.6			-0.7	-			79Ha09 *		
	ave.	580.6	1.1			-0.2	1	91	53 ^{141}Ce	average	
$^{141}\text{Nd}(\beta^+)^{141}\text{Pr}$	1816	8	1823.0	2.8	0.9	2			73Bu21		
	1824	3			-0.3	2			76Ga.A *		
$^{141}\text{Pm}(\beta^+)^{141}\text{Nd}$	3730	60	3670	14	-1.0	U			70Ch29 *		
	3640	70			0.4	U			75Ke09		
$^{141}\text{Sm}(\beta^+)^{141}\text{Pm}$	4580	50	4589	16	0.2	U			77Ke03 *		
	4463	60			2.1	U	IRS		83Al06 *		
	4524	80			0.8	U	IRS		93Al03 *		
$^{141}\text{Eu}(\beta^+)^{141}\text{Sm}$	6030	100	6008	14	-0.2	U			77De25 *		
	5950	40			1.5	-	IRS		83Al06 *		
	6035	60			-0.4	U			85Af.A		
	5550	100			4.6	B	IRS		93Al03		
	5980	40			0.7	-		Dbn	95Ve08 *		
	ave.	5965	28			1.5	1	26	18 ^{141}Eu	average	
* $^{141}\text{I-u}$	Trends from Mass Surface TMS suggest ^{141}I 400 less bound								GAu **		
* $^{141}\text{Nd-u}$	M-A=-83418(28) keV for $^{141}\text{Nd}^m$ at 756.51 keV								Nub127 **		
* $^{141}\text{Sm-u}$	M-A=-75825(28) keV for mixture gs+m at 176.0 keV								Nub127 **		
* $^{141}\text{Eu-u}$	M-A=-69858(28) keV for mixture gs+m at 96.45 keV								Nub127 **		
* $^{141}\text{Gd-u}$	M-A=-62840(28) keV for $^{141}\text{Gd}^m$ at 377.8 keV								Nub127 **		
* $^{141}\text{Tb-u}$	M-A=-54541(34) keV for mixture gs+m at 0#200 keV								Nub127 **		
* $^{141}\text{Sm}-^{133}\text{Cs}_{1.060}$	$D_M=18694(14)$ and $D_M=18878(14)$ from $^{141}\text{Sm}^m$ at 176.0 keV								Nub127 **		
* $^{141}\text{Eu}-^{133}\text{Cs}_{1.060}$	Slight (< 10%) isomeric contamination cannot be excluded								00Be42 **		
* $^{141}\text{Ho}(p)^{140}\text{Dy}$	$E_p=1230(20)$ from $^{141}\text{Ho}^m$ at 66(2) keV								Nub127 **		
* $^{141}\text{Cs}(\beta^-)^{141}\text{Ba}$	$E_{\beta^-}=5215(15)$ to $(5/2)^-$ level at 48.53 keV								Ens013 **		
* $^{141}\text{Ce}(\beta^-)^{141}\text{Pr}$	$E_{\beta^-}=442(3)$ 444(4) 432(2) 436(2) 436.7(2.6) respectively, to $7/2^+$ level at 145.4434								Ens013 **		
* $^{141}\text{Nd}(\beta^+)^{141}\text{Pr}$	Was erroneously quoted 77Ga.A in the 1993 tables								GAu **		
* $^{141}\text{Pm}(\beta^+)^{141}\text{Nd}$	Original error 40 increased due to lack of information on calibration								GAu **		
* $^{141}\text{Sm}(\beta^+)^{141}\text{Pm}$	$E_{\beta^+}=3180(50)$, $3100(50)$ to $3/2^+$ level at 403.8, $1/2^+$ at 438.29 keV and $E_{\beta^+}=1670(70)$, $1600(70)$								Ens013 **		
*	from $^{141}\text{Sm}^m$ at 176.0 to $11/2^-$ at 2091.6, $(9/2,11/2,13/2)^-$ at 2119.0								Ens013 **		
* $^{141}\text{Sm}(\beta^+)^{141}\text{Pm}$	$E_{\beta^+}=3020(60)$ 32% to $3/2^+$ level at 403.8, 31% to $1/2^+$ 438.29 keV								Ens013 **		
* $^{141}\text{Sm}(\beta^+)^{141}\text{Pm}$	$Q_{\beta^+}=4700(80)$ from $^{141}\text{Sm}^m$ at 176.0 keV								Nub127 **		
* $^{141}\text{Eu}(\beta^+)^{141}\text{Sm}$	$E_{\beta^+}=4620(110)$ to $5/2^+$ level at 396.29 keV, and other E_{β^+} (not given)								Ens013 **		
* $^{141}\text{Eu}(\beta^+)^{141}\text{Sm}$	$E_{\beta^+}=4925(40)$ to $3/2^+$ level at 1.58 keV								Ens013 **		
* $^{141}\text{Eu}(\beta^+)^{141}\text{Sm}$	$E_{\beta^+}=4960(40)$ to $3/2^+$ level at 1.58 keV								Ens013 **		
$^{142}\text{I-u}$	-58798	268				2		GT1	1.5	04Ma.A	
$^{142}\text{Xe-u}$	-70247	111	-70026.9	2.9	1.3	U		GT2	1.5	08Kn.A	
$^{142}\text{Xe}-^{133}\text{Cs}_{1.068}$	30950.4	2.9				2		MA8	1.0	09Ne11	
$^{142}\text{Cs}-^{133}\text{Cs}_{1.068}$	25270	16	25273	8	0.2	1	24	24 ^{142}Cs	MA4	1.0	99Am05
$^{142}\text{Ba}-^{133}\text{Cs}_{1.068}$	17410	15	17410	6	0.0	-			MA1	1.0	99Am05
	17420	16			-0.6	-			MA4	1.0	99Am05
ave.	17415	11			-0.5	1	34	34 ^{142}Ba			average
$^{142}\text{Ba-u}$	-83576.8	9.1	-83568	6	1.0	1	49	49 ^{142}Ba	CP1	1.0	06Sa56
$\text{C}_{11} \text{H}_{10}-^{142}\text{Ce}$	169111	15	168999.9	2.9	-1.9	U			R05	4.0	65De13
	168955	40			0.4	U			M17	2.5	66Be10
	168955	40			0.4	U			M17	2.5	66Be10
$\text{C}_{10} \text{ } ^{13}\text{C} \text{H}_9-^{142}\text{Ce}$	164528	82	164529.7	2.9	0.0	U			R05	4.0	65De13

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$C_{10} N H_8 - {}^{142}Ce$	156558	42	156423.9	2.9	-0.8	U			R05	4.0	65De13
$C_{11} H_{10} - {}^{142}Nd$	170509	36	170521.3	2.0	0.1	U			R05	4.0	65De13
$C_{10} N H_8 - {}^{142}Nd$	157870	43	157945.3	2.0	0.4	U			R05	4.0	65De13
$C_{10} O H_6 - {}^{142}Nd$	134076	36	134135.8	2.0	0.4	U			R05	4.0	65De13
$C_{10} {}^{13}C H_9 - {}^{142}Nd$	166021	32	166051.1	2.0	0.2	U			R05	4.0	65De13 *
${}^{142}Pm-u$	-87136	30	-87110	25	0.9	-			GS2	1.0	05Li24
ave.	-87124	27			0.5	1	89	89 ${}^{142}Pm$			average
${}^{142}Sm - {}^{133}Cs_{1.068}$	16173	14	16182	4	0.6	U			MA5	1.0	00Be42
${}^{142}Eu^m - {}^{133}Cs_{1.068}$	24909	15	24910	13	0.1	2			MA5	1.0	00Be42
${}^{142}Eu^m-u$	-76063	30	-76067	13	-0.1	R			GS2	1.0	05Li24
${}^{142}Gd-u$	-71884	30				2			GS2	1.0	05Li24
${}^{142}Cs - {}^{136}Xe_{1.044}$	21171	11	21164	8	-0.6	1	52	52 ${}^{142}Cs$	CP1	1.0	12Va02
${}^{142}Ce - C_{11} H_9$	-161176	40	-161174.9	2.9	0.0	U			M17	2.5	66Be10
${}^{142}Nd - C_{11} H_9$	-162665	30	-162696.3	2.0	-0.4	U			M17	2.5	66Be10
${}^{142}Ce - {}^{140}Ce$	3818	3	3807.3	2.6	-1.4	1	12	9 ${}^{142}Ce$	M17	2.5	66Be10
${}^{142}Ce - {}^{138}Ce$	3644	35	3259	11	-2.7	B			R05	4.0	65De13
${}^{139}Cs - {}^{142}Cs_{.685} {}^{132}Cs_{.316}$	-4840	40	-4855	6	-0.2	U			P23	2.5	82Au01
${}^{140}Cs - {}^{142}Cs_{.789} {}^{132}Cs_{.212}$	-2950	40	-2935	10	0.2	U			P23	2.5	82Au01
${}^{141}Cs - {}^{142}Cs_{.794} {}^{137}Cs_{.206}$	-580	40	-658	11	-0.8	U			P23	2.5	82Au01
${}^{138}Cs^x - {}^{142}Cs_{.194} {}^{137}Cs_{.806}$	550	40	589	25	0.4	U			P23	2.5	82Au01
${}^{140}Cs - {}^{142}Cs_{.329} {}^{139}Cs_{.671}$	260	40	301	9	0.4	U			P23	2.5	82Au01
${}^{141}Cs - {}^{142}Cs_{.662} {}^{139}Cs_{.338}$	-410	40	-517	10	-1.1	U			P23	2.5	82Au01
${}^{141}Cs - {}^{142}Cs_{.496} {}^{140}Cs_{.504}$	-640	40	-667	11	-0.3	U			P23	2.5	82Au01
	-663	19			-0.1	U			P33	2.5	86Au02
${}^{142}Ce(\alpha) {}^{138}Ba$	1545	200	1304.2	2.7	-1.2	U					57Ri43
${}^{140}Ce(t,p) {}^{142}Ce$	4112	5	4114.4	2.4	0.5	1	23	17 ${}^{142}Ce$	LA1		72Mu09
${}^{142}Ce(p,t) {}^{140}Ce$	-4170	20	-4114.4	2.4	2.8	U			Osa		70Ya05
${}^{142}Nd(p,t) {}^{140}Nd$	-9150	20	-9357	26	-10.3	B			Osa		71Ya10 *
${}^{142}Ce(\gamma,n) {}^{141}Ce$	-7240	70	-7168.0	2.4	1.0	U			Phi		60Ge01
${}^{142}Ce(d,t) {}^{141}Ce$	-909	15	-910.8	2.4	-0.1	U			Mtr		72Le17
${}^{141}Pr(n,\gamma) {}^{142}Pr$	5843.14	0.10	5843.15	0.08	0.1	-			MMn		81Ke11 Z
	5843.16	0.12			-0.1	-			Bdn		06Fi.A
${}^{141}Pr(d,p) {}^{142}Pr$	3626	10	3618.58	0.08	-0.7	U			MIT		64Sp12
${}^{141}Pr(n,\gamma) {}^{142}Pr$	ave.	5843.15	0.08	5843.15	0.08	0.0	1	100	62 ${}^{141}Pr$		average
${}^{142}Xe(\beta^-) {}^{142}Cs$	5040	100	5288	8	2.5	U			Trs		78Wo15
${}^{142}Cs(\beta^-) {}^{142}Ba$	7230	70	7325	9	1.4	U			Trs		78Wo15
	7329	20			-0.2	o			Gsn		81De25
	7280	40			1.1	U			Bwg		87Gr.A
	7315	15			0.7	1	32	20 ${}^{142}Cs$	Gsn		92Pr04
${}^{142}Ba(\beta^-) {}^{142}La$	2200	25	2181	8	-0.8	1	11	6 ${}^{142}La$			83Ch39
	2216	5			-7.0	C			McG		84He.A
${}^{142}La(\beta^-) {}^{142}Ce$	4517	25	4509	6	-0.3	U					65Pr03
	4510	6			-0.2	1	95	94 ${}^{142}La$	McG		84He.A
${}^{142}Pr(\beta^-) {}^{142}Nd$	2164	2	2161.6	1.5	-1.2	-					66Be12
	2158	3			1.2	-					75Ra09
ave.	2162.2	1.7			-0.3	1	80	62 ${}^{142}Pr$			average
${}^{142}Pm(\beta^+) {}^{142}Nd$	4800	80	4808	24	0.1	R					60Ma.A
	4880	80			-0.9	R			IRS		83Al06
	4880	160			-0.5	U			LBL		91Fi03
${}^{142}Sm(\beta^+) {}^{142}Pm$	2050	70	2155	24	1.5	1	12	11 ${}^{142}Pm$			60Ma.A
	2100	400			0.1	U			LBL		91Fi03
${}^{142}Eu(\beta^+) {}^{142}Sm$	8000	300	7670	30	-1.1	U					75Ke08
	7400	100			2.7	U					82Gr.A
	7000	300			2.2	U			LBL		91Fi03
	7673	30				2			Dbn		94Po26
${}^{142}Eu^m(\beta^+) {}^{142}Sm$	8150	100	8130	13	-0.2	U					75Ke08 *
	8174	50			-0.9	U			IRS		83Al06 *
	7480	100			6.5	B			IRS		93Al03 *
	8150	60			-0.3	U			Dbn		94Po26 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{142}\text{Gd}(\beta^+)^{142}\text{Eu}$	4200	300	4350	40	0.5	U			LBL		91Fi03
$^{142}\text{Tb}(\beta^+)^{142}\text{Gd}$	10400	700				3			LBL		91Fi03
$^{142}\text{Dy}(\beta^+)^{142}\text{Tb}$	7100	200	6440#	200#	-3.3	D			LBL		91Fi03 *
* $\text{C}_{10}^{13}\text{C H}_9 - ^{142}\text{Nd}$	Original 1002055(32) is certainly a typo; rebuilt from M=141.907760(36)u										WgM127**
* $^{142}\text{Nd}(\text{p,t})^{140}\text{Nd}$	Disagrees strongly with $^{140}\text{Nd-u}$										AHW **
* $^{142}\text{Eu}^m(\beta^+)^{142}\text{Sm}$	$E_{\beta^+}=4760(100) 4782(50)$ respectively, to 7^- level at 2372.1 keV										Ens118 **
* $^{142}\text{Eu}^m(\beta^+)^{142}\text{Sm}$	Measured half-life 73.4(0.5) s corresponds to $^{142}\text{Eu}^m$										GAu **
* $^{142}\text{Eu}^m(\beta^+)^{142}\text{Sm}$	$E_{\beta^+}=4756(60)$ to 7^- level at 2372.1 keV										Ens118 **
* $^{142}\text{Dy}(\beta^+)^{142}\text{Tb}$	Trends from Mass Surface TMS suggest ^{142}Dy 660 more bound										GAu **
$^{143}\text{Xe-u}$	-64649	290	-64630	5	0.0	o			GT1	1.5	04Ma.A
	-64858	108			1.4	o			GT2	1.5	08Kn.A
	-64684	133			0.3	U			GT2	1.5	08Su19
$^{143}\text{Xe} - ^{133}\text{Cs}_{1.075}$	37008.7	5.0				2			MA8	1.0	09Ne11
$^{143}\text{Cs-u}$	-72771	117	-72651	24	0.7	U			GT2	1.5	08Kn.A
$^{143}\text{Ba} - ^{133}\text{Cs}_{1.075}$	22268	16	22264	7	-0.2	1	22	22 ^{143}Ba	MA1	1.0	99Am05
$^{143}\text{Ba-u}$	-79375.0	8.5	-79375	7	0.0	1	76	76 ^{143}Ba	CP1	1.0	06Sa56
$^{143}\text{La-u}$	-83918.1	8.7	-83920	8	-0.3	1	82	82 ^{143}La	CP1	1.0	06Sa56
$\text{C}_{10} \text{N H}_9 - ^{143}\text{Nd}$	163719	31	163679.3	2.0	-0.3	U			R05	4.0	65De13
$\text{C}_{10} \text{O H}_7 - ^{143}\text{Nd}$	139814	42	139869.9	2.0	0.3	U			R05	4.0	65De13
$^{143}\text{Pm} - ^{133}\text{Cs}_{1.075}$	12567	15	12577	3	0.7	U			MA5	1.0	00Be42
$^{143}\text{Sm} - ^{133}\text{Cs}_{1.075}$	16268	15	16274	3	0.4	U			MA5	1.0	00Be42
$^{143}\text{Sm-u}$	-85347	30	-85365	3	-0.6	U			GS2	1.0	05Li24 *
$^{143}\text{Eu} - ^{133}\text{Cs}_{1.075}$	21947	14	21938	12	-0.7	2			MA5	1.0	00Be42
$^{143}\text{Eu-u}$	-79706	30	-79701	12	0.2	R			GS2	1.0	05Li24
$^{143}\text{Gd-u}$	-73012	56	-73250	220	-4.2	C			GS2	1.0	05Li24 *
$^{143}\text{Tb-u}$	-64879	64	-64860	60	0.3	U			GS2	1.0	05Li24 *
$^{143}\text{Tb} - ^{85}\text{Rb}_{1.682}$	83507	55				2			SH1	1.0	07Ra37 *
$^{143}\text{Dy} - ^{85}\text{Rb}_{1.682}$	92364	14				2			SH1	1.0	07Ra37 *
$^{143}\text{Nd} \text{ } ^{35}\text{Cl} - ^{141}\text{Pr} \text{ } ^{37}\text{Cl}$	5116	4	5112.5	1.6	-0.3	U			H21	2.5	70Ma05
$^{143}\text{Nd} - \text{C}_{11} \text{H}_{10}$	-168422	30	-168430.3	2.0	-0.1	U			M17	2.5	66Be10
$^{143}\text{Nd} - ^{142}\text{Nd}$	2322	46	2090.99	0.07	-1.3	U			R05	4.0	65De13
	2084	2			1.4	U			M17	2.5	66Be10
$^{143}\text{Nd} - \text{C}_{11} \text{H}_9$	-160594	30	-160605.3	2.0	-0.2	U			M17	2.5	66Be10
$^{141}\text{Cs} - ^{143}\text{Cs}_{.493} \text{ } ^{139}\text{Cs}_{.507}$	-230	40	-199	14	0.3	U			P23	2.5	82Au01
	-115	22			-1.5	U			P33	2.5	86Au02
$^{142}\text{Cs} - ^{143}\text{Cs}_{.497} \text{ } ^{141}\text{Cs}_{.504}$	647	15	652	14	0.1	1	13	8 ^{143}Cs	P33	2.5	86Au02
$^{143}\text{Nd}(\text{n},\alpha)^{140}\text{Ce}$	9699	15	9723.4	1.7	1.6	U			ILL		75Em.A
$^{143}\text{Nd}(\text{p,t})^{141}\text{Nd}$	-7450	20	-7470	3	-1.0	U			Osa		71Ya10
$^{142}\text{Ce}(\text{n},\gamma)^{143}\text{Ce}$	5145.9	0.5	5144.80	0.09	-2.2	U					76Ge02
	5144.78	0.15			0.1	-			Ptn		80Ba.A Z
	5144.81	0.12			-0.1	-			Bdn		06Fi.A
$^{142}\text{Ce}(\text{d,p})^{143}\text{Ce}$	2945	15	2920.23	0.09	-1.7	U			Mtr		72Le17
$^{142}\text{Ce}(\text{n},\gamma)^{143}\text{Ce}$	ave.	5144.80	0.09	5144.80	0.09	0.0	1	100	73 ^{142}Ce		average
$^{142}\text{Nd}(\text{n},\gamma)^{143}\text{Nd}$	6123.62	0.08	6123.57	0.07	-0.6	-			MMn		82Is05 Z
	6123.41	0.14			1.1	-			Bdn		06Fi.A
$^{142}\text{Nd}(\text{d,p})^{143}\text{Nd}$	3916	15	3899.00	0.07	-1.1	U			Kop		67Ch16
	3902	15			-0.2	U			Tal		67Ne04
	3902	15			-0.2	U			Hei		67Wi08
$^{142}\text{Nd}(\text{n},\gamma)^{143}\text{Nd}$	ave.	6123.57	0.07	6123.57	0.07	0.0	1	100	80 ^{142}Nd		average
$^{142}\text{Nd}(\text{ } ^3\text{He,d})^{143}\text{Pm}$	-1099	25	-1193.9	2.7	-3.8	B			Oak		71Wi04
	-1195	5			0.2	1	29	28 ^{143}Pm	McM		80St10 *
$^{143}\text{Cs}(\beta^-)^{143}\text{Ba}$	6250	90	6263	22	0.1	o			Gsn		81De25 *
	6240	70			0.3	U			Bwg		87Gr.A
	6270	25			-0.3	1	74	72 ^{143}Cs	Gsn		92Pr04
$^{143}\text{Ba}(\beta^-)^{143}\text{La}$	4240	50	4234	10	-0.1	U					79Sc11
	4259	40			-0.6	U			Gsn		81De25
	4210	70			0.3	U			Bwg		87Gr.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{143}\text{La}(\beta^-)^{143}\text{Ce}$	3425	17	3435	8	0.6	1	20	18 ^{143}La			84Is09 *
$^{143}\text{Ce}(\beta^-)^{143}\text{Pr}$	1460.6	2.	1461.8	1.8	0.6	1	84	71 ^{143}Ce			77Ra18 *
$^{143}\text{Pr}(\beta^-)^{143}\text{Nd}$	932	2	934.1	1.4	1.1	-					49Fe18
	935	2			-0.4	-					76Ra33
ave.	933.5	1.4			0.4	1	92	88 ^{143}Pr			average
$^{143}\text{Pm}(\beta^+)^{143}\text{Nd}$	1000	70	1041.7	2.7	0.6	U					67Va01 *
$^{143}\text{Sm}(\beta^+)^{143}\text{Pm}$	3492	30	3444	4	-1.6	U					66Be21
	3437	30			0.2	U		IRS			83A106
	3500	60			-0.9	U		IRS			93A103
	3461	40			-0.4	U		Dbn			94Po26
$^{143}\text{Eu}(\beta^+)^{143}\text{Sm}$	5100	50	5275	11	3.5	B					74Ch21
	5160	60			1.9	o		IRS			83Ve.A
	5240	70			0.5	o		IRS			83A106
	5250	80			0.3	U		IRS			93A103
	5236	30			1.3	R		Dbn			94Po26
$^{143}\text{Gd}(\beta^+)^{143}\text{Eu}$	6010	200				3		IRS			93A103 *
* ^{143}Sm -u	M-A=-78746(28) keV for $^{143}\text{Sm}^m$ at 753.99 keV										Nub127 **
* ^{143}Gd -u	M-A=-67934(28) keV for mixture gs+m at 152.6 keV										Nub127 **
* ^{143}Tb -u	M-A=-60434(32) keV for mixture gs+m at 0#100 keV										Nub127 **
*	outweighed by next item before correcting for isomeric mixture										GAu **
* ^{143}Tb - ^{85}Rb _{1.682}	M-A=-60419.5(7.8) keV for mixture gs+m at 0#100 keV										Nub127 **
* ^{143}Dy - ^{85}Rb _{1.682}	$D_M=92354(17)$ and $D_M=92705(14)$ for $^{143}\text{Dy}^m$ at 310.7 keV										Nub127 **
* $^{142}\text{Nd}(\beta^+\text{He,d})^{143}\text{Pm}$	Based on $^{146}\text{Nd}(\beta^+\text{He,d})^{147}\text{Pm}$ $Q=-87.6(0.9)$ keV										AHW **
* $^{143}\text{Cs}(\beta^-)^{143}\text{Ba}$	$E_{\beta^-}=6070(50)$ and $5847(100)$ to $3/2^-$ level at 228.83 keV										Ens123 **
* $^{143}\text{La}(\beta^-)^{143}\text{Ce}$	$E_{\beta^-}=3419(17)$ 64% to $3/2^-$ ground state, 29% to $7/2^-$ level at 18.9 keV										Ens123 **
* $^{143}\text{Ce}(\beta^-)^{143}\text{Pr}$	$E_{\beta^-}=1110(2)$ to $3/2^+$ level at 350.622 keV										Ens123 **
* $^{143}\text{Pm}(\beta^+)^{143}\text{Nd}$	$pK=0.806(0.023)$ to $3/2^-$ level at 742.05 keV, and $p^+ < 1 \times 10^{-6}$										Ens123 **
* $^{143}\text{Gd}(\beta^+)^{143}\text{Eu}$	$Q_{\beta^+}=6160(200)$ from $^{143}\text{Gd}^m$ at 152.6 keV										Nub127 **
$^{144}\text{Xe}-^{133}\text{Cs}$ _{1.083}	41340.6	5.7				2			MA8	1.0	09Ne11
$^{144}\text{Ba}-^{133}\text{Cs}$ _{1.083}	25347	15	25350	8	0.2	1	26	26 ^{144}Ba	MA1	1.0	99Am05
^{144}Ba -u	-77045.3	9.1	-77045	8	0.0	1	72	72 ^{144}Ba	CP1	1.0	06Sa56
^{144}La -u	-80337.1	19.3	-80354	14	-0.9	2			CP1	1.0	06Sa56
	-80373	20			0.9	2			GS3	1.0	12Ch19
$\text{C}_{10} \text{O H}_8 - ^{144}\text{Nd}$	147408	28	147421.9	2.0	0.1	U			R05	4.0	65De13
	147384	29			0.3	U			R05	4.0	65De13
$\text{C}_9 \text{ } ^{13}\text{C N H}_9 - ^{144}\text{Nd}$	166777	28	166761.2	2.0	-0.1	U			R05	4.0	65De13
$\text{C}_{10} \text{H}_8 \text{O} - ^{144}\text{Sm}$	145450	50	145508.4	2.1	0.3	U			R04	4.0	64De15
$\text{C}_9 \text{ } ^{13}\text{C H}_9 \text{N} - ^{144}\text{Sm}$	164955	46	164847.7	2.1	-0.6	U			R04	4.0	64De15
$^{144}\text{Eu}-^{133}\text{Cs}$ _{1.083}	21223	17	21215	12	-0.5	1	47	47 ^{144}Eu	MA5	1.0	00Be42
^{144}Eu -u	-81117	30	-81180	12	-2.1	1	15	15 ^{144}Eu	GS2	1.0	05Li24
^{144}Gd -u	-77037	30				2			GS2	1.0	05Li24
^{144}Tb -u	-66955	30				2			GS2	1.0	05Li24 *
^{144}Dy -u	-60746	33	-60730	8	0.5	U			GS2	1.0	05Li24
$^{144}\text{Dy}-^{85}\text{Rb}$ _{1.694}	88697.7	7.7				2			SH1	1.0	07Ra37
$^{144}\text{Ho}-^{85}\text{Rb}$ _{1.694}	101537.9	9.1				2			SH1	1.0	07Ra37
$^{144}\text{Nd } ^{35}\text{Cl} - ^{142}\text{Nd } ^{37}\text{Cl}$	5329	3	5314.06	0.12	-1.2	U			H12	4.0	64Ba15
	5308	3			0.8	U			H21	2.5	70Ma05
$^{144}\text{Sm}-^{144}\text{Nd}$	1951	3	1913.5	0.9	-3.1	B			H19	4.0	64Mc11
	1911.9	1.1			0.6	-			H25	2.5	72Ba08
	1913.68	0.94			-0.2	-			SH1	1.0	11Go23
ave.	1913.5	0.9			0.0	1	92	81 ^{144}Sm			average
$^{144}\text{Nd}-^{143}\text{Nd}$	269	25	272.98	0.06	0.0	U			R05	4.0	65De13
	273	3			0.0	U			M17	2.5	66Be10
$^{144}\text{Nd}-^{142}\text{Nd}$	2366	3	2363.98	0.09	-0.3	U			M17	2.5	66Be10
$^{142}\text{Cs}-^{144}\text{Cs}$ _{5.92} ^{139}Cs _{4.09}	-60	40	-55	16	0.1	U			P23	2.5	82Au01
$^{143}\text{Cs}-^{144}\text{Cs}$ _{7.45} ^{140}Cs _{2.55}	-920	50	-889	27	0.2	U			P23	2.5	82Au01
$^{142}\text{Cs}-^{144}\text{Cs}$ _{3.29} ^{141}Cs _{6.71}	290	40	272	12	-0.2	U			P23	2.5	82Au01

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference			
$^{143}\text{Cs}-^{144}\text{Cs}_{.662} \ ^{141}\text{Cs}_{.338}$	-651	21	-615	26	0.7	1	24	16	^{143}Cs	P33	2.5	86Au02		
$^{143}\text{Cs}-^{144}\text{Cs}_{.497} \ ^{142}\text{Cs}_{.504}$	-790	50	-687	24	0.8	U			P23	2.5	82Au01			
$^{144}\text{Nd}(\alpha)^{140}\text{Ce}$	1882.4	30.	1906.4	1.7	0.8	U					61Ma05			
	1882.4	20.			1.2	U					65Is01			
$^{144}\text{Sm}(\beta^-\text{He}, \ ^6\text{He})^{141}\text{Sm}$	-8693	12	-8692	9	0.0	1	51	50	^{141}Sm	MSU		78Pa11		
$^{142}\text{Ce}(\text{t,p})^{144}\text{Ce}$	3582	15	3560	3	-1.5	U			LAI			72Mu09		
$^{142}\text{Nd}(\text{t,p})^{144}\text{Nd}$	5450	30	5458.80	0.09	0.3	U			Ald			72Ch11		
$^{144}\text{Nd}(\text{p,t})^{142}\text{Nd}$	-5470	20	-5458.80	0.09	0.6	U			Osa			71Ya10		
$^{144}\text{Sm}(\text{p,t})^{142}\text{Sm}$	-10649	15	-10639.7	2.7	0.6	U			Ham			73Oe02		
$^{143}\text{Nd}(\text{n},\gamma)^{144}\text{Nd}$	7817.11	0.07	7817.03	0.05	-1.1	-			MMn			82Is05	Z	
	7816.93	0.08			1.3	-			ILn			91Ro.A	Z	
	7816.94	0.23			0.4	U			Bdn			06Fi.A		
$^{144}\text{Nd}(\text{d,t})^{143}\text{Nd}$	-1555	15	-1559.80	0.05	-0.3	U			Ors			73Ga01		
$^{143}\text{Nd}(\text{n},\gamma)^{144}\text{Nd}$	ave. 7817.03	0.05	7817.03	0.05	0.0	1	100	60	^{143}Nd			average		
$^{143}\text{Nd}(\beta^-\text{He}, \text{d})^{144}\text{Pm}$	-804	5	-790.7	2.6	2.7	B			McM			80St10	*	
$^{143}\text{Nd}(\beta^-\text{He}, \text{d})^{144}\text{Pm}-^{142}\text{Nd}(\text{d})^{143}\text{Pm}$	402.7	1.6	403.2	1.5	0.3	1	91	49	^{143}Pm			75Ma04		
$^{144}\text{Sm}(\text{t},\alpha)^{143}\text{Pm}$	13542	25	13519.9	2.7	-0.9	U			Ald			68Ha13		
$^{144}\text{Sm}(\text{d,t})^{143}\text{Sm}$	-4262	10	-4262.8	2.3	-0.1	U						72Ja28		
$^{144}\text{Sm}(\text{p,d})^{143}\text{Sm}-^{148}\text{Gd}(\text{d})^{147}\text{Gd}$	-1536	2	-1536.0	2.0	0.0	1	100	100	^{143}Sm			86Ru04		
$^{144}\text{Tm}(\text{p})^{143}\text{Er}$	1712.0	16.				3			ORp			05Gr32		
$^{144}\text{Cs}(\beta^-)^{144}\text{Ba}$	8451	30	8497	25	1.5	o			Gsn			81De25		
	8560	80			-0.8	-			Bwg			87Gr.A		
	8462	35			1.0	-			Gsn			92Pr04		
	ave. 8480	30			0.6	1	61	59	^{144}Cs			average		
$^{144}\text{Ba}(\beta^-)^{144}\text{La}$	3055	70	3083	15	0.4	U			Bwg			87Gr.A		
$^{144}\text{La}(\beta^-)^{144}\text{Ce}$	4300	100	5582	13	12.8	B						79Ik07		
	5435	90			1.6	U			Bwg			87Gr.A		
	5540	100			0.4	o			Kur			02Sh.B		
	5540	100			0.4	U			Kur			02Sh16		
$^{144}\text{Ce}(\beta^-)^{144}\text{Pr}$	315.6	1.5	318.6	0.8	2.0	3						66Da04		
	320	1			-1.4	3						76Ra33		
$^{144}\text{Pr}(\beta^-)^{144}\text{Nd}$	2996	3	2997.4	2.4	0.5	2						59Po77		
	3000	4			-0.6	2						66Da04		
$^{144}\text{Eu}(\beta^+)^{144}\text{Sm}$	6330	30	6346	11	0.5	-			IRS			83Al06		
	6400	80			-0.7	U			IRS			93Al03		
	6287	30			2.0	-			Dbn			94Po26		
$^{144}\text{Sm}(\text{p,n})^{144}\text{Eu}$	-7110.0	30.	-7129	11	-0.6	-						65Me12		
$^{144}\text{Eu}(\beta^+)^{144}\text{Sm}$	ave. 6315	17	6346	11	1.8	1	39	39	^{144}Eu			average		
$^{144}\text{Gd}(\beta^+)^{144}\text{Eu}$	4300	400	3860	30	-1.1	U						70Ar04		
* $^{144}\text{Tb-u}$	M-A=-61971(28) keV for $^{144}\text{Tb}^m$ at 396.9 keV											Nub127	**	
* $^{143}\text{Nd}(\beta^-\text{He}, \text{d})^{144}\text{Pm}$	Based on $^{146}\text{Nd}(\beta^-\text{He}, \text{d})^{147}\text{Pm}$ Q=-87.6(0.9) keV											AHW	**	
$^{145}\text{Xe}-^{133}\text{Cs}_{1.090}$	47777	12				2						MA8	1.0	09Ne11
$^{145}\text{Cs}-^{133}\text{Cs}_{1.090}$	38588	12	38585	12	-0.3	1	93	93	^{145}Cs	MA8	1.0	08We02		
$^{145}\text{Ba-u}$	-72481.6	9.1				2				CP1	1.0	06Sa56		
$^{145}\text{La-u}$	-78188.8	13.3	-78192	13	-0.2	1	98	98	^{145}La	CP1	1.0	06Sa56		
$^{145}\text{Ce-u}$	-82771.8	92.2	-82730	40	0.4	1	16	16	^{145}Ce	CP1	1.0	06Sa56		
$\text{C}_{10} \text{O H}_9-^{145}\text{Nd}$	152641	55	152760.6	2.0	0.5	U				R05	4.0	65De13		
	152653	30			0.9	U				R05	4.0	65De13		
$\text{C}_9 \ ^{13}\text{C O H}_8-^{145}\text{Nd}$	148231	31	148290.4	2.0	0.5	U				R05	4.0	65De13		
$^{145}\text{Pm-u}$	-87255	30	-87244	3	0.4	U				GS2	1.0	05Li24		
$^{145}\text{Sm-u}$	-86535	30	-86582.7	2.1	-1.6	U				GS2	1.0	05Li24		
$^{145}\text{Eu}-^{133}\text{Cs}_{1.090}$	19338	17	19330	4	-0.5	U				MA5	1.0	00Be42		
$^{145}\text{Gd-u}$	-78287	30	-78287	21	0.0	-				GS2	1.0	05Li24		
	-78294	30			0.2	-				GS2	1.0	05Li24	*	
	ave. -78291	21			0.2	1	99	99	^{145}Gd			average		
$^{145}\text{Tb-u}$	-70952	175	-71180	100	-1.3	1	36	36	^{145}Tb	GS2	1.0	05Li24	*	
$^{145}\text{Dy-u}$	-62575	49	-62526	7	1.0	U				GS2	1.0	05Li24	*	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{145}\text{Dy}-^{85}\text{Rb}_{1.706}$	87960.7	7.0				2			SH1	1.0	07Ra37 *
$^{145}\text{Ho}-^{85}\text{Rb}_{1.706}$	97754.1	8.0				2			SH1	1.0	07Ra37
$^{145}\text{Nd } ^{35}\text{Cl}_2-^{141}\text{Pr } ^{37}\text{Cl}_2$	10828	7	10821.9	1.6	-0.3	U			H21	2.5	70Ma05
$^{145}\text{Nd } ^{35}\text{Cl}-^{143}\text{Nd } ^{37}\text{Cl}$	5744	5	5709.41	0.27	-1.7	U			H12	4.0	64Ba15
	5703	4			0.6	U			H21	2.5	70Ma05
$^{145}\text{Nd}-^{144}\text{Nd}$	2582	21	2486.35	0.25	-1.1	U			R05	4.0	65De13
	2480	2			1.3	U			M17	2.5	66Be10
$^{145}\text{Nd}-^{143}\text{Nd}$	2862	40	2759.33	0.26	-0.6	U			R05	4.0	65De13
	2751	3			1.1	U			M17	2.5	66Be10
$^{142}\text{Cs}-^{145}\text{Cs}_{.490} \ ^{139}\text{Cs}_{.511}$	240	50	148	9	-0.7	U			P23	2.5	82Au01
$^{144}\text{Cs}-^{145}\text{Cs}_{.828} \ ^{139}\text{Cs}_{.173}$	450	50	417	26	-0.3	U			P23	2.5	82Au01
$^{143}\text{Cs}-^{145}\text{Cs}_{.592} \ ^{140}\text{Cs}_{.409}$	-700	80	-607	23	0.5	U			P23	2.5	82Au01
$^{143}\text{Cs}-^{145}\text{Cs}_{.493} \ ^{141}\text{Cs}_{.507}$	-310	40	-306	23	0.0	U			P23	2.5	82Au01
$^{144}\text{Cs}-^{145}\text{Cs}_{.662} \ ^{142}\text{Cs}_{.338}$	320	18	321	25	0.0	1	32	30 ^{144}Cs	P33	2.5	86Au02
$^{144}\text{Cs}-^{145}\text{Cs}_{.497} \ ^{143}\text{Cs}_{.503}$	600	40	617	26	0.2	U			P23	2.5	82Au01
$^{145}\text{Pm}(\alpha)^{141}\text{Pr}$	2303.6	40.	2324.2	2.9	0.5	U					62Nu01
$^{145}\text{Nd}(n,\alpha)^{142}\text{Ce}$	8706	30	8747.3	2.1	1.4	U			ILL		75Em04
$^{145}\text{Nd}(p,t)^{143}\text{Nd}$	-5100	20	-5090.53	0.24	0.5	U			Osa		71Ya10
$^{144}\text{Nd}(n,\gamma)^{145}\text{Nd}$	5755.3	0.7	5755.30	0.23	0.0	-					75Na.A
	5756.9	2.0			-0.8	U					77Mc09
	5755.26	0.25			0.2	-			Bdn		06Fi.A
$^{144}\text{Nd}(d,p)^{145}\text{Nd}$	3521	15	3530.73	0.23	0.6	U			Hei		67Wi08
	3538	15			-0.5	U			Ors		73Ga01
$^{144}\text{Nd}(n,\gamma)^{145}\text{Nd}$	ave. 5755.26	0.24	5755.30	0.23	0.1	1	99	50 ^{145}Nd			average
$^{144}\text{Nd}(^3\text{He},d)^{145}\text{Pm}$	-680	5	-685.0	2.5	-1.0	1	26	25 ^{145}Pm	McM		80St10 *
$^{144}\text{Nd}(^3\text{He},d)^{145}\text{Pm}-^{143}\text{Nd}(^3\text{He},d)^{144}\text{Pm}$	105.2	1.6	105.7	1.5	0.3	1	91	57 ^{144}Pm			75Ma04
$^{144}\text{Sm}(n,\gamma)^{145}\text{Sm}$	6757.1	0.3	6757.10	0.30	0.0	1	99	91 ^{145}Sm			79Wa22
$^{144}\text{Sm}(d,p)^{145}\text{Sm}$	4533	12	4532.53	0.30	0.0	U			Tal		65Ke09
	4547	15			-1.0	U			Kop		67Ch16
$^{144}\text{Sm}(^3\text{He},d)^{145}\text{Eu}$	-2184	4	-2178.4	2.7	1.4	-			Mun		82Sc25
	-2174	4			-1.1	-					84Ru.A
	ave. -2179.0	2.8			0.2	1	92	91 ^{145}Eu			average
$^{145}\text{Dy}(\epsilon p)^{144}\text{Gd}$	6000	500	6228	29	0.5	U					83La.A *
$^{145}\text{Tm}(p)^{144}\text{Er}$	1740.1	10.	1736	7	-0.4	3			ORp		98Ba13
	1732.1	10.			0.4	3			Arp		07Se06
$^{145}\text{Cs}(\beta^-)^{145}\text{Ba}$	7358	70	7460	14	1.5	U			Gsn		81De25
	7930	75			-6.3	C			Bwg		87Gr.A
	7865	50			-8.1	B			Gsn		92Pr04
$^{145}\text{Ba}(\beta^-)^{145}\text{La}$	4925	80	5319	15	4.9	C			Bwg		87Gr.A
$^{145}\text{La}(\beta^-)^{145}\text{Ce}$	4110	80	4230	40	1.5	1	19	18 ^{145}Ce	Bwg		87Gr.A
$^{145}\text{Ce}(\beta^-)^{145}\text{Pr}$	2490	100	2560	30	0.7	-					67Ho19 *
	2600	100			-0.4	-					80Ya07 *
	2530	50			0.6	-			Bwg		87Gr.A
	ave. 2540	40			0.6	1	68	67 ^{145}Ce			average
$^{145}\text{Pr}(\beta^-)^{145}\text{Nd}$	1805	10	1806	7	0.1	1	50	49 ^{145}Pr			59Dr.A
$^{145}\text{Pm}(\epsilon)^{145}\text{Nd}$	143	15	164.5	2.5	1.4	U					59Br65 *
	150	5			2.9	B					74To04 *
$^{145}\text{Sm}(\epsilon)^{145}\text{Pm}$	607	6	616.1	2.5	1.5	-					71My01 *
	622	5			-1.2	-					83Vo10 *
	ave. 616	4			0.1	1	44	41 ^{145}Pm			average
$^{145}\text{Eu}(\beta^+)^{145}\text{Sm}$	2710	15	2659.7	2.7	-3.4	B					68Ad04 *
	2647	12			1.1	U					83Sc28 *
$^{145}\text{Gd}(\beta^+)^{145}\text{Eu}$	5070	60	5068	20	0.0	U					79Fi07
	5090	90			-0.2	o			IRS		83Ve.A *
	5070	80			0.0	U			IRS		85Al13
$^{145}\text{Gd}(\epsilon)^{145}\text{Eu}$	5000	70			1.0	U					77Ho18
$^{145}\text{Tb}(\beta^+)^{145}\text{Gd}$	6700	200	6620	100	-0.4	-					86Ve.A *
	6400	150			1.5	-			IRS		93Al03
	ave. 6510	120			1.0	1	65	64 ^{145}Tb			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{145}\text{Dy}(\beta^+)^{145}\text{Tb}^m$	7300	200				3			IRS		93Al03
* $^{145}\text{Gd-u}$	M-A=-72181(28) keV for $^{145}\text{Gd}^m$ at 749.1 keV										Nub127 **
* $^{145}\text{Tb-u}$	M-A=-65881(28) keV for mixture gs+m at 420(210) keV										Nub127 **
* $^{145}\text{Dy-u}$	M-A=-58230(30) keV for mixture gs+m at 118.2 keV										Nub127 **
* $^{145}\text{Dy}-^{85}\text{Rb}_{1.706}$	$D_M=88054.7(6.8) \mu\text{u}$ for mixture gs+m at 118.2 keV with ratio R=0.741(13)										Nub127 **
* $^{144}\text{Nd}(\beta^+\text{He,d})^{145}\text{Pm}$	Based on $^{146}\text{Nd}(\beta^+\text{He,d})^{147}\text{Pm}$ Q=-87.6(0.9) keV										AHW **
* $^{145}\text{Dy}(\epsilon\text{p})^{144}\text{Gd}$	As read from graph										AHW **
* $^{145}\text{Ce}(\beta^-)^{145}\text{Pr}$	$E_{\beta^-}=1700(100) 1810(100)$ respectively, to $(3/2)^-$ level at 786.91; and other E_{β^-}										Ens092 **
* $^{145}\text{Pm}(\epsilon)^{145}\text{Nd}$	LM/K=0.85(0.03) to $3/2^-$ level at 67.167 keV										Ens092 **
* $^{145}\text{Pm}(\epsilon)^{145}\text{Nd}$	pK=0.554(0.025) to $5/2^-$ level at 72.486 keV, and other pK										Ens092 **
* $^{145}\text{Sm}(\epsilon)^{145}\text{Pm}$	pK=0.27(0.03) 0.35(0.025) respectively, to $3/2^+$ level at 492.31 keV										Ens092 **
* $^{145}\text{Eu}(\beta^+)^{145}\text{Sm}$	$E_{\beta^+}=794(15)$ to $3/2^+$ level at 893.788 keV										Ens092 **
* $^{145}\text{Eu}(\beta^+)^{145}\text{Sm}$	pK=0.72(0.02) to $(5/2^-, 7/2^-)$ level at 2508.31 and 9^- at 2513.37 levels										Ens092 **
* $^{145}\text{Gd}(\beta^+)^{145}\text{Eu}$	$E_{\beta^+}=2310(90)$ to $3/2^+$ level at 1758.03 keV, and other E_{β^+}										Ens092 **
* $^{145}\text{Tb}(\beta^+)^{145}\text{Gd}$	$E_{\beta^+}=3300(200)$ to $(9/2^-)$ level at 2382.3(0.2) keV										Ens092 **
$^{146}\text{Xe}-^{133}\text{Cs}_{1.098}$	52332	26				2			MA8	1.0	09Ne11
$^{146}\text{Ba-u}$	-69618	112	-69716	22	-0.6	o			GT2	1.5	08Kn.A
	-69963	141				1.2	U		GT2	1.5	08Su19
	-69717.5	23.7				0.1	1	86	86 ^{146}Ba	1.0	06Sa56
$^{146}\text{La-u}$	-74252	86	-74120	40	1.5	1	18	18	^{146}La	1.0	06Sa56 *
$^{146}\text{Ce-u}$	-81191.8	20.8	-81198	18	-0.3	-			CP1	1.0	06Sa56
	-81171	40				-0.7	-		GS3	1.0	12Ch19
	ave. -81187	18				-0.6	1	90	90 ^{146}Ce		average
$\text{C}_{12} \text{H}_2 - ^{146}\text{Nd}$	102453	31	102527.4	2.0	0.6	U			R05	4.0	65De13
$\text{C}_{10} \text{O} \text{H}_{10} - ^{146}\text{Nd}$	160017	27	160042.3	2.0	0.2	U			R05	4.0	65De13
	159971	50				0.4	U		R05	4.0	65De13
$\text{C}_9 \text{ } ^{13}\text{C} \text{O} \text{H}_9 - ^{146}\text{Nd}$	155525	35	155572.1	2.0	0.3	U			R05	4.0	65De13
$^{146}\text{Pm-u}$	-85289	30	-85298	5	-0.3	U			GS2	1.0	05Li24
$^{146}\text{Eu}-^{133}\text{Cs}_{1.098}$	21029	15	21025	7	-0.3	1	19	19	^{146}Eu	1.0	00Be42
$^{146}\text{Tb-u}$	-72464	77	-72750	50	-3.7	C			GS2	1.0	05Li24 *
$^{146}\text{Dy-u}$	-67150	30	-67155	7	-0.2	U			GS2	1.0	05Li24
$^{146}\text{Dy}-^{85}\text{Rb}_{1.718}$	84390.0	7.2	84390	7	0.0	1	100	100	^{146}Dy	1.0	07Ra37
$^{146}\text{Ho}-^{133}\text{Cs}_{1.098}$	48797	10	48807	7	1.0	1	50	50	^{146}Ho	1.0	07Ra37
$^{146}\text{Ho}-^{85}\text{Rb}_{1.718}$	96549	10	96539	7	-1.0	1	50	50	^{146}Ho	1.0	07Ra37
$^{146}\text{Er}-^{85}\text{Rb}_{1.718}$	103960.4	9.2	103964	7	0.3	1	61	61	^{146}Er	1.0	07Ra37
$^{146}\text{Nd} \text{ } ^{35}\text{Cl} - ^{144}\text{Nd} \text{ } ^{37}\text{Cl}$	6003	3	5979.73	0.28	-1.9	U			H12	4.0	64Ba15
	5966	4				1.4	U		H21	2.5	70Ma05
	5982.8	1.1				-1.1	U		H25	2.5	72Ba08
$^{146}\text{Nd}-^{145}\text{Nd}$	526	33	543.31	0.09	0.1	U			R05	4.0	65De13
	536	2				1.5	U		M17	2.5	66Be10
$^{146}\text{Nd}-^{144}\text{Nd}$	3147	36	3029.65	0.27	-0.8	U			R05	4.0	65De13
	3026	3				0.5	U		M17	2.5	66Be10
$^{145}\text{Cs}-^{146}\text{Cs}_{.828} \text{ } ^{140}\text{Cs}_{.173}$	-580	80	-720	30	-0.7	U			P23	2.5	82Au01
$^{144}\text{Cs}-^{146}\text{Cs}_{.329} \text{ } ^{143}\text{Cs}_{.671}$	320	50	420	30	0.8	U			P23	2.5	82Au01
$^{145}\text{Cs}-^{146}\text{Cs}_{.662} \text{ } ^{143}\text{Cs}_{.338}$	-440	30	-395	28	0.6	1	14	12	^{146}Cs	2.5	86Au02
$^{145}\text{Cs}-^{146}\text{Cs}_{.497} \text{ } ^{144}\text{Cs}_{.503}$	-730	30	-613	24	1.6	1	10	6	^{146}Cs	2.5	86Au02
$^{146}\text{Sm}(\alpha)^{142}\text{Nd}$	2529.5	20.	2528.8	2.8	0.0	U					64Nu02
	2622.0	30.				-3.1	B				66Fr11
	2524.2	4.				1.1	1	47	45 ^{146}Sm		87Me08 Z
$^{144}\text{Nd}(\text{t,p})^{146}\text{Nd}$	4834	30	4838.73	0.25	0.2	U			Ald		72Ch11
$^{144}\text{Sm}(\text{t,p})^{146}\text{Sm}$	6681	25	6691.6	2.9	0.4	U			Ald		66Bj01
$^{144}\text{Sm}(\beta^+\text{He,p})^{146}\text{Eu}$	2797	12	2794	6	-0.2	1	25	24	^{146}Eu		84Ru.A
$^{144}\text{Sm}(\beta^+\text{He,n})^{146}\text{Gd}$	977	30	980	4	0.1	U			Bld		79Al07
$^{144}\text{Sm}(\text{}^{12}\text{C}, \text{}^{10}\text{Be})^{146}\text{Gd}$	-18476	25	-18487	4	-0.5	U			MSU		80Pa07
$^{146}\text{Nd}(\text{d}, \text{}^3\text{He})^{145}\text{Pr}$	-3095	10	-3095	7	0.0	1	50	49	^{145}Pr		79Sa.A
$^{145}\text{Nd}(\text{n}, \gamma)^{146}\text{Nd}$	7565.28	0.10	7565.23	0.09	-0.5	-			MMn		82Is05 Z
	7565.05	0.18				1.0	-		Bdn		06Fi.A
	ave. 7565.23	0.09				0.1	1	100	50 ^{146}Nd		average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{146}\text{Sm}(\beta^-)^{145}\text{Sm}$	12161	5	12161.3	2.9	0.1	1	33	30 ^{146}Sm			86Ru04 *
$^{146}\text{Tm}(\text{p})^{145}\text{Er}$	895.2	8.	896	6	0.1	o			ORp		03Gi10
	896.2	8.			-0.1	3			Arp		05Ro40
	895.2	8.			0.1	3			ORp		06Ta08
$^{146}\text{Tm}^m(\text{p})^{145}\text{Er}$	1197.3	5.	1199.3	1.0	0.4	U			Dap		93Li18
	1198.3	10.			0.1	o			ORp		01Ry01
	1200.3	8.			-0.1	U			Arp		05Ro40
	1199.3	1.				3			ORp		06Ta08
$^{146}\text{Tm}^m(\text{p})^{145}\text{Er}^m$	994.5	4.				4			ORp		06Ta08
$^{146}\text{Tm}^n(\text{p})^{145}\text{Er}^m$	1126.8	5.	1127.8	1.0	0.2	U			Dap		93Li18
	1127.8	10.			0.0	o			ORp		01Ry01
	1129.8	8.			-0.3	U			Arp		05Ro40
	1127.8	1.				5			ORp		06Ta08
$^{146}\text{Cs}(\beta^-)^{146}\text{Ba}$	9300	900	9370	40	0.1	o			Gsn		81De25
	9310	60			1.0	-			Bwg		87Gr.A
	9375	50			-0.1	-			Gsn		92Pr04
	ave.	9350	40		0.6	1	86	82 ^{146}Cs			average
$^{146}\text{Ba}(\beta^-)^{146}\text{La}$	4280	100	4110	30	-1.7	-			Gsn		81De25 *
	4030	50			1.5	-			Bwg		87Gr.A
	ave.	4080	40		0.6	1	56	46 ^{146}La			average
$^{146}\text{La}(\beta^-)^{146}\text{Ce}$	6175	100	6590	30	4.1	B			Gsn		81De25 *
	6380	30			6.9	B			Trs		82Br23 *
	6620	70			-0.5	-			Bwg		87Gr.A
	6580	80			0.1	-					01Ko07 *
	ave.	6600	50		-0.3	1	43	37 ^{146}La			average
$^{146}\text{Ce}(\beta^-)^{146}\text{Pr}$	1100	80	1050	30	-0.7	-					54Be10 *
	1050	100			0.0	-					67Ho19 *
	951	50			1.9	-					80Ya07 *
	1065	100			-0.2	-					81Eb01 *
	ave.	1010	40		1.0	1	80	76 ^{146}Pr			average
$^{146}\text{Pr}(\beta^-)^{146}\text{Nd}$	4150	200	4250	30	0.5	U					54Be10 *
	4250	200			0.0	U					65Ra02 *
	4080	100			1.7	-					68Da13 *
	4140	100			1.1	-					78Ik03 *
	ave.	4110	70		1.9	1	24	24 ^{146}Pr			average
$^{146}\text{Pm}(\beta^-)^{146}\text{Sm}$	1542	3				2					74Sc06 *
$^{146}\text{Eu}(\beta^+)^{146}\text{Sm}$	3871	10	3879	6	0.8	-					62Fu16 *
	3871	20			0.4	-					64Ta11 *
	3896	20			-0.9	-			Got		88Sa06 *
	ave.	3875	8		0.4	1	52	46 ^{146}Eu			average
$^{146}\text{Gd}(\beta^+)^{146}\text{Eu}$	1757	30	1032	7	-24.2	B					70Ag01 *
	1300	200			-1.3	U					81Ka07 *
$^{146}\text{Tb}(\beta^+)^{146}\text{Gd}$	8240	150	8320	40	0.5	o			IRS		83Al06
	7910	150			2.7	U			IRS		93Al03 *
	8310	50			0.2	1	80	80 ^{146}Tb	Dbn		94Po26
$^{146}\text{Dy}(\beta^+)^{146}\text{Tb}$	5160	100	5210	50	0.5	1	20	20 ^{146}Tb	IRS		93Al03
* $^{146}\text{La-u}$	$D_M = -74182.5(30.6) \mu\text{u}$ for mixture gs+m at 130(130) keV; $M-A = -69100.6(28.5) \text{keV}$										Nub127 **
* $^{146}\text{Tb-u}$	$M-A = -67424(28) \text{keV}$ for mixture gs+m at 150#100 keV										Nub127 **
* $^{146}\text{Sm}(\beta^-)^{145}\text{Sm}$	$Q - Q(^{148}\text{Gd}(\beta^-)^{147}\text{Sm}) = -567(5) \text{keV}$										AHW **
* $^{146}\text{Ba}(\beta^-)^{146}\text{La}$	$E_{\beta^-} = 3910(100)$ to 1^+ level at 372.4 keV, and other E_{β^-}										Ens97c **
* $^{146}\text{La}(\beta^-)^{146}\text{Ce}$	$E_{\beta^-} = 5919(100)$ 6120(30) respectively, to 2^+ level at 258.46 keV, and other E_{β^-}										Ens97c **
* $^{146}\text{Ce}(\beta^-)^{146}\text{Pr}$	$E_{\beta^-} = 6580(100)$ and 6320(80) to ground state and 2^+ level at 258.46 keV										01Ko07 **
* $^{146}\text{Pr}(\beta^-)^{146}\text{Nd}$	$E_{\beta^-} = 750(80)$ 700(100) 600(50) 715(100) respectively, to 1^+ at 351.78 keV										Ens97c **
* $^{146}\text{Nd}(\beta^-)^{146}\text{Pr}$	$E_{\beta^-} = 3700(200)$ 3800(200) respectively, to 2^+ level at 453.77 keV										Ens97c **
* $^{146}\text{Pr}(\beta^-)^{146}\text{Nd}$	$E_{\beta^-} = 4100(200)$, 3600(100), 2100(100) to ground state, 2^+ 453.77, 2^+ 1978.45 levels										Ens97c **
* $^{146}\text{Nd}(\beta^-)^{146}\text{Pr}$	$E_{\beta^-} = 4150(150)$, 3700(100), 2160(100) to ground state, 2^+ 453.77, 2^+ 1978.45 levels										Ens97c **
* $^{146}\text{Pm}(\beta^-)^{146}\text{Sm}$	$E_{\beta^-} = 795(3)$ to 2^+ level at 747.2 keV										Ens97c **
* $^{146}\text{Eu}(\beta^+)^{146}\text{Sm}$	$E_{\beta^+} = 2107(11)$ 2100(20) respectively, to 2^+ level at 747.2 keV, and other E_{β^+}										Ens97c **
* $^{146}\text{Sm}(\beta^+)^{146}\text{Eu}$	e/β^+ to 2045.8 level										Ens97c **
* $^{146}\text{Gd}(\beta^+)^{146}\text{Eu}$	$E_{\beta^+} = 350(30)$ to 1^- level at 384.79 keV										Ens97c **
* $^{146}\text{Eu}(\beta^+)^{146}\text{Gd}$	pK to 690.7 level, $p^+ < 1 \times 10^{-4}$ to 384.8 level, see $^{150}\text{Dy}(\beta^+)$										Ens97c **
* $^{146}\text{Tb}(\beta^+)^{146}\text{Gd}$	Reported half-life 24.1(0.5)s corresponds to $^{146}\text{Tb}^m$										GAU **
*	$Q_{\beta^-} = 8060(100) \text{keV}$ from $^{146}\text{Tb}^m$ at estimated 150#100 keV										Nub127 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{147}\text{Cs}-^{133}\text{Cs}_{1,105}$	48640	64	48630	60	-0.1	1	79	79 ^{147}Cs	MA8	1.0	08We02
$^{147}\text{Ba-u}$	-64696.1	21.2				2			CP1	1.0	06Sa56
$^{147}\text{La-u}$	-71582.2	11.5				2			CP1	1.0	06Sa56
$^{147}\text{Ce-u}$	-77309.2	9.6	-77310	9	-0.1	1	92	92 ^{147}Ce	CP1	1.0	06Sa56
$\text{C}_8 \text{H}_5 \text{N O}_2-^{147}\text{Sm}$	117197	40	117124.0	1.9	-0.5	U			R04	4.0	64De15
$\text{C}_9 \text{H}_7 \text{O}_2-^{147}\text{Sm}$	129703	17	129700.0	1.9	0.0	U			R04	4.0	64De15
$^{147}\text{Eu}-^{133}\text{Cs}_{1,105}$	21215	16	21228	3	0.8	U			MA5	1.0	00Be42
$^{147}\text{Tb-u}$	-75934	34	-75945	9	-0.3	U			GS2	1.0	05Li24 *
$^{147}\text{Tb}-^{133}\text{Cs}_{1,105}$	28533	12	28530	9	-0.2	1	53	53 ^{147}Tb	SH1	1.0	07Ra37 *
$^{147}\text{Dy-u}$	-68909	30	-68917	10	-0.3	U			GS2	1.0	05Li24 *
	-68908	30			-0.3	U			GS2	1.0	05Li24 *
$^{147}\text{Dy}-^{133}\text{Cs}_{1,105}$	35558.3	9.5				2			SH1	1.0	07Ra37 *
$^{147}\text{Ho-u}$	-59944	30	-59858	5	2.9	B			GS2	1.0	05Li24 *
$^{147}\text{Ho}-^{133}\text{Cs}_{1,105}$	44613.7	7.8	44618	5	0.5	1	47	47 ^{147}Ho	SH1	1.0	07Ra37
$^{147}\text{Ho}-^{85}\text{Rb}_{1,729}$	92661.6	7.4	92658	5	-0.5	1	53	53 ^{147}Ho	SH1	1.0	07Ra37
$^{147}\text{Er}-^{133}\text{Cs}_{1,105}$	54452	42	54440	40	-0.3	o			SH1	1.0	07Ra37 *
$^{147}\text{Er}-^{85}\text{Rb}_{1,729}$	102480	41				2			SH1	1.0	07Ra37 *
$^{147}\text{Tm}-^{85}\text{Rb}_{1,729}$	113900	11	113895	7	-0.4	1	45	45 ^{147}Tm	SH1	1.0	07Ra37
$^{147}\text{Eu}-^{142}\text{Sm}_{1,035}$	4516	17	4516	4	0.0	U			MA7	1.0	01Bo59
$^{147}\text{Sm} \text{ } ^{35}\text{Cl}-^{145}\text{Nd} \text{ } ^{37}\text{Cl}$	5305	4	5275.2	1.0	-1.9	U			H12	4.0	64Ba15
	5264	4			1.1	U			H21	2.5	70Ma05
$^{145}\text{Cs}-^{147}\text{Cs}_{,705} \text{ } ^{140}\text{Cs}_{,296}$	-170	170	-580	40	-1.0	U			P23	2.5	82Au01
$^{144}\text{Cs}-^{147}\text{Cs}_{,490} \text{ } ^{141}\text{Cs}_{,511}$	80	250	280	40	0.3	U			P23	2.5	82Au01
$^{145}\text{Cs}-^{147}\text{Cs}_{,493} \text{ } ^{143}\text{Cs}_{,507}$	-87	22	-100	28	-0.2	1	27	21 ^{147}Cs	P33	2.5	86Au02
$^{147}\text{Sm}(\alpha) \text{ } ^{143}\text{Nd}$	2292.5	10.	2311.2	1.0	1.9	U					62Si14 Z
	2296.7	5.			2.9	U					66Ma05 Z
	2300.8	5.			2.1	U					70Gu14 Z
$^{147}\text{Eu}(\alpha) \text{ } ^{143}\text{Pm}$	2990.6	10.	2991	3	0.1	U					62Si14 Z
	2981.5	20.			0.5	U					64To04 Z
	2987.2	5.			0.8	1	37	23 ^{143}Pm	DbA		67Go32 Z
$^{147}\text{Sm}(n,\alpha) \text{ } ^{144}\text{Nd}$	10114	8	10128.2	1.0	1.8	U			ILL		74Em01
$^{144}\text{Sm}(^{12}\text{C}, ^9\text{Be}) \text{ } ^{147}\text{Gd}$	-17832	30	-17957.3	1.2	-4.2	B			MSU		80Pa07
	-17921	25			-1.5	U			Ors		85Be24
$^{144}\text{Sm}(^{14}\text{N}, ^{11}\text{Be}) \text{ } ^{147}\text{Tb}$	-28280	50	-28537	8	-5.1	B			Hei		85Gy01
$^{147}\text{Sm}(p,t) \text{ } ^{145}\text{Sm}$	-6287	8	-6275.6	1.3	1.4	U			Min		72De47
$^{146}\text{Nd}(n,\gamma) \text{ } ^{147}\text{Nd}$	5292.19	0.15	5292.20	0.09	0.0	-			ILn		75Ro16 Z
	5292.19	0.11			0.1	-			Bdn		06Fi.A
$^{146}\text{Nd}(d,p) \text{ } ^{147}\text{Nd}$	3070	15	3067.63	0.09	-0.2	U			Hei		67Wi08
$^{146}\text{Nd}(n,\gamma) \text{ } ^{147}\text{Nd}$	ave. 5292.19	0.09	5292.20	0.09	0.1	1	100	53 ^{147}Nd			average
$^{147}\text{Sm}(d,t) \text{ } ^{146}\text{Sm}$	-98	10	-83.9	2.9	1.4	U			McM		75Si03
$^{147}\text{Tb}(p) \text{ } ^{146}\text{Gd}$	-1945	18	-1946	9	-0.1	1	23	19 ^{147}Tb			87Sc.A
$^{147}\text{Tm}(p) \text{ } ^{146}\text{Er}$	1062.2	6.	1059	3	-0.6	o					82Kl03
	1058.2	3.3			0.1	1	94	55 ^{147}Tm	Dap		93Se04 *
	1067.3	15.			-0.6	U			ORp		03Gi10
$^{147}\text{Tm}^m(p) \text{ } ^{146}\text{Er}$	1124.7	6.	1120	3	-0.7	2					84Ho.A
	1118.5	3.9			0.5	2			Dap		93Se04
$^{147}\text{Ba}(\beta^-) \text{ } ^{147}\text{La}$	5750	50	6414	22	13.3	C			Bwg		87Gr.A
$^{147}\text{La}(\beta^-) \text{ } ^{147}\text{Ce}$	4945	55	5335	14	7.1	C			Bwg		87Gr.A
	5150	40			4.6	B			Kur		95Ik03
	5370	100			-0.3	o			Kur		02Sh.B
	5366	40			-0.8	U			Kur		09Ha.B
$^{147}\text{Ce}(\beta^-) \text{ } ^{147}\text{Pr}$	3290	40	3430	16	3.5	C			Bwg		87Gr.A
	3426	20			0.2	1	60	52 ^{147}Pr	Kur		95Ik03
	3380	100			0.5	U			Kur		02Sh.B
$^{147}\text{Pr}(\beta^-) \text{ } ^{147}\text{Nd}$	2700	200	2703	16	0.0	U					64Ho03
	2790	100			-0.9	U					81Ya06 *
	2711	28			-0.3	-			Kur		95Ik03
	ave. 2697	23			0.2	1	48	48 ^{147}Pr			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference			
$^{147}\text{Nd}(\beta^-)^{147}\text{Pm}$	894.6	1.0	895.3	0.9	0.7	1	84	46	^{147}Nd	67Ca18 *		
$^{147}\text{Pm}(\beta^-)^{147}\text{Sm}$	223.2	0.5	224.1	0.3	1.7	-	-	-	-	50La04		
	224.3	1.3	-	-	-0.2	-	-	-	-	58Ha32		
	224.5	0.4	-	-	-1.1	-	-	-	-	66Hs01		
ave.	224.0	0.3	-	-	0.2	1	99	63	^{147}Pm	average		
$^{147}\text{Eu}(\beta^+)^{147}\text{Sm}$	1767	10	1721.6	2.3	-4.5	B	-	-	-	67Ad03		
	1723	3	-	-	-0.5	1	59	57	^{147}Eu	80Bu04		
	1702	13	-	-	1.5	U	-	-	-	84Sc18 *		
	1692	18	-	-	1.6	U	-	-	-	84Sc18		
$^{147}\text{Gd}(\beta^+)^{147}\text{Eu}$	2185	5	2187.8	2.6	0.6	1	27	19	^{147}Eu	80Vy01 *		
	2199	17	-	-	-0.7	U	-	-	-	84Sc18 *		
$^{147}\text{Tb}(\beta^+)^{147}\text{Gd}$	4700	90	4614	8	-1.0	U	-	-	-	83Ve06 *		
	4490	60	-	-	2.1	U	-	-	Got	85Ti01		
	4560	50	-	-	1.1	U	-	-	-	Averag *		
	4609	15	-	-	0.3	1	30	28	^{147}Tb	91Ke11 *		
	4509	60	-	-	1.8	U	-	-	IRS	93Al03 *		
$^{147}\text{Dy}(\beta^+)^{147}\text{Tb}$	6334	60	6546	12	3.5	B	-	-	IRS	83Al06 *		
	6480	100	-	-	0.7	U	-	-	IRS	83Al18 *		
	6334	60	-	-	3.5	C	-	-	-	85Af.A *		
	6480	100	-	-	0.7	U	-	-	IRS	85Al08 *		
* $^{147}\text{Tb-u}$	M-A=-70707(28) keV for mixture gs+m at 50.6 keV									Nub127 **		
* $^{147}\text{Tb}-^{133}\text{Cs}_{1.105}$	$D_M=28574(12) \mu\text{u}$ for mixture gs+m at 50.6 keV with ratio R=0.741(13)									Nub127 **		
* $^{147}\text{Dy-u}$	M-A=-63437(28) keV for $^{147}\text{Dy}^m$ at 750.5 keV									Ens928 **		
* $^{147}\text{Dy}-^{133}\text{Cs}_{1.105}$	$D_M=35567(14)$ and $D_M=36358.4(9.5)$ for $^{147}\text{Dy}^m$ at 750.5 keV									Nub127 **		
* $^{147}\text{Er}-^{133}\text{Cs}_{1.105}$	$D_M=54531(11) \mu\text{u}$ for mixture gs+m at 100#50 keV with ratio R=0.741(13)									Nub127 **		
*	error due to excitation energy, use only next item									GAu **		
* $^{147}\text{Er}-^{85}\text{Rb}_{1.729}$	$D_M=102559.5(8.3) \mu\text{u}$ for mixture gs+m at 100#50 keV with R=0.741(13)									Nub127 **		
* $^{147}\text{Tm}(p)^{146}\text{Er}$	Q_p from $E_p=1051.0(3.3)$, no screening correction should be applied									GAu **		
* $^{147}\text{Pr}(\beta^-)^{147}\text{Nd}$	$E_{\beta^-}=2760(100)$ to 49.93, 1450(100) to 1310.7 and 1350.5 keV									Ens092 **		
* $^{147}\text{Nd}(\beta^-)^{147}\text{Pm}$	$E_{\beta^-}=803.5(1.0)$ to $5/2^+$ level at 91.1047 keV									Ens092 **		
* $^{147}\text{Eu}(\beta^+)^{147}\text{Sm}$	$p^+=2.9(0.3)\times 10^{-3}$ to $3/2^-$ level at 197.284 keV									Ens092 **		
* $^{147}\text{Eu}(\beta^+)^{147}\text{Sm}$	$pK=0.724(0.026)$ to $(3/2^+, 5/2^+)$ level at 1548.634 keV									Ens092 **		
* $^{147}\text{Gd}(\beta^+)^{147}\text{Eu}$	$E_{\beta^+}=933(5)$ to $7/2^+$ level at 229.323 keV									Ens092 **		
* $^{147}\text{Gd}(\beta^+)^{147}\text{Eu}$	$pK=0.694(0.016)$ to 2073 level, recalculated by AHW									84Sc18 **		
* $^{147}\text{Tb}(\beta^+)^{147}\text{Gd}$	$E_{\beta^+}=2460(80)$ to $3/2^+$ level at 1152.56 and $1/2^+$ at 1292.3 keV, reinterpret									Ens092 **		
* $^{147}\text{Tb}(\beta^+)^{147}\text{Gd}$	Average $KLM/\beta^+=2.03(0.15) \rightarrow E_{\beta^+}=2190(50)$ from $^{147}\text{Tb}^m$ at 50.6(0.9) to $9/2^-$									Ens092 **		
*	level at 1397.00 from 3 references (no side-feeding correction applied):									AHW **		
*	$p^+=0.32(0.07)$ gives $KLM/\beta^+=2.2(0.8)$									84Ha.B **		
*	$KLM/\beta^+=2.17(0.30)$									85Al08 **		
*	$\beta^+/K=0.59(0.05)$ gives $KLM/\beta^+=1.99(0.17)$									85Sc09 **		
* $^{147}\text{Tb}(\beta^+)^{147}\text{Gd}$	$Q_{\beta^+}=4660(15)$ 4560(60) respectively, from $^{147}\text{Tb}^m$ at 50.6(0.9) keV									Nub127 **		
* $^{147}\text{Dy}(\beta^+)^{147}\text{Tb}$	$E_{\beta^+}=6012(60)$ from $^{147}\text{Dy}^m$ at 750.5 to $^{147}\text{Tb}^m$ at 50.6(0.9) keV									Nub127 **		
* $^{147}\text{Dy}(\beta^+)^{147}\text{Tb}$	$Q_{\beta^+}=7180(100)$ from $^{147}\text{Dy}^m$ at 750.5 to $^{147}\text{Tb}^m$ at 50.6(0.9) keV									Nub127 **		
* $^{147}\text{Dy}(\beta^+)^{147}\text{Tb}$	$E_{\beta^+}=6012(60)$ from $^{147}\text{Dy}^m$ at 750.5 to $^{147}\text{Tb}^m$ at 50.6(0.9) keV									Nub127 **		
* $^{147}\text{Dy}(\beta^+)^{147}\text{Tb}$	$Q_{\beta^+}=7180(100)$ from $^{147}\text{Dy}^m$ at 750.5 to $^{147}\text{Tb}^m$ at 50.6(0.9) keV									Nub127 **		
$^{148}\text{La-u}$	-67320.6	20.9	-	-	-	2	-	-	CP1	1.0	06Sa56	
$^{148}\text{Ce-u}$	-75578.2	13.0	-75576	12	0.2	1	85	85	^{148}Ce	CP1	1.0	06Sa56
$^{148}\text{Pr-u}$	-77766	38	-77870	16	-2.7	B	-	-	CP1	1.0	06Sa56 *	
$\text{C}_{12} \text{H}_4-^{148}\text{Nd}$	114261	34	114400.8	2.6	1.0	U	-	-	R05	4.0	65De13	
$\text{C}_9 \text{N O H}_{10}-^{148}\text{Nd}$	159186	59	159339.7	2.6	0.7	U	-	-	R05	4.0	65De13	
$\text{C}_9 \text{H}_8 \text{O}_2-^{148}\text{Sm}$	137540	26	137600.3	1.9	0.6	U	-	-	R04	4.0	64De15	
$\text{C}_9 \text{H}_{10} \text{N O}-^{148}\text{Sm}$	161275	31	161409.7	1.9	1.1	U	-	-	R04	4.0	64De15	
$\text{C}_8 \text{ }^{13}\text{C H}_7 \text{O}_2-^{148}\text{Sm}$	133030	60	133130.1	1.9	0.4	U	-	-	R04	4.0	64De15	
$^{148}\text{Eu}-^{133}\text{Cs}_{1.113}$	23315	15	23321	11	0.4	1	52	52	^{148}Eu	MA5	1.0	00Be42
$^{148}\text{Tb-u}$	-75692	41	-75718	14	-0.6	U	-	-	GS2	1.0	05Li24 *	
$^{148}\text{Dy}-^{133}\text{Cs}_{1.113}$	32394	16	32389	10	-0.3	-	-	-	MA5	1.0	00Be42	
	32380	14	-	-	0.6	-	-	-	SH1	1.0	07Ra37	
ave.	32386	11	-	-	0.2	1	90	90	^{148}Dy	average		

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{148}\text{Ho-u}$	-62201	100	-62260	90	-0.6	U			GS2	1.0	05Li24 *	
$^{148}\text{Ho}-^{85}\text{Rb}_{1,741}$	91318	90				2			SH1	1.0	07Ra37 *	
$^{148}\text{Er}-^{133}\text{Cs}_{1,113}$	49967	11				2			SH1	1.0	07Ra37	
$^{148}\text{Tm}-^{133}\text{Cs}_{1,113}$	63616	11				2			SH1	1.0	07Ra37	
$^{148}\text{Eu}-^{142}\text{Sm}_{1,042}$	6451	17	6446	11	-0.3	1	41	38	^{148}Eu	MA7	1.0	01Bo59
$^{148}\text{Nd } ^{35}\text{Cl}_2-^{144}\text{Nd } ^{37}\text{Cl}_2$	12690	9	12706.5	1.8	0.7	U			H21	2.5	70Ma05	
	12703.6	2.1			0.5	1	12	11	^{148}Nd	H25	2.5	72Ba08
$^{148}\text{Sm } ^{35}\text{Cl}_2-^{144}\text{Sm } ^{37}\text{Cl}_2$	8710	10	8722.9	1.3	0.3	U			H12	4.0	64Ba15	
	8721.4	2.6			0.2	U			H25	2.5	72Ba08	
$^{148}\text{Nd } ^{35}\text{Cl}-^{146}\text{Nd } ^{37}\text{Cl}$	6740	5	6726.7	1.8	-0.7	U			H12	4.0	64Ba15	
	6721	4			0.6	U			H21	2.5	70Ma05	
	6723.8	2.7			0.4	U			H25	2.5	72Ba08	
	6725.7	0.9			0.5	1	62	60	^{148}Nd	H26	2.5	73Me28
$^{148}\text{Sm } ^{35}\text{Cl}-^{146}\text{Nd } ^{37}\text{Cl}$	4656	3	4656.7	1.1	0.1	U			H12	4.0	64Ba15	
$^{148}\text{Sm}-^{147}\text{Sm}$	110	44	-75.21	0.30	-1.1	U			R04	4.0	64De15	
$^{148}\text{Nd}-^{146}\text{Nd}$	3866	50	3776.7	1.8	-0.4	U			R05	4.0	65De13	
	3773	3			0.5	U			M17	2.5	66Be10	
$^{145}\text{Cs}-^{148}\text{Cs}_{,392} \ ^{143}\text{Cs}_{,608}$	-370	90	-370	220	0.0	1	100	100	^{148}Cs	P33	2.5	86Au02
$^{148}\text{Sm}(\alpha)^{144}\text{Nd}$	2014.6	20.	1986.9	1.0	-1.4	U						70Gu14
$^{148}\text{Eu}(\alpha)^{144}\text{Pm}$	2703.2	30.	2692	10	-0.4	1	11	10	^{148}Eu			64To04
$^{148}\text{Gd}(\alpha)^{144}\text{Sm}$	3271.29	0.03	3271.21	0.03	0.0	1	100	94	^{148}Gd			73Go29 Z
$^{146}\text{Nd}(t,p)^{148}\text{Nd}$	4139	30	4142.9	1.7	0.1	U			Ald			72Ch11
$^{148}\text{Sm}(p,t)^{146}\text{Sm}$	-6011	8	-6000.7	2.9	1.3	1	13	13	^{146}Sm	Min		72De47
	-6018	15			1.2	U			Ham			74Oe03
$^{148}\text{Gd}(p,t)^{146}\text{Gd}$	-7844	14	-7845	4	0.0	U			LAl			83Fl05
$^{148}\text{Gd}(p,t)^{146}\text{Gd}-^{65}\text{Cu}^{63}\text{Cu}$	1500	4	1500	4	0.1	1	90	88	^{146}Gd	Liv		86Ma40
$^{148}\text{Nd}(d,^3\text{He})^{147}\text{Pr}$	-3726	40	-3759	16	-0.8	R			KVI			79Sa.A
$^{148}\text{Nd}(d,t)^{147}\text{Nd}$	-1072	4	-1075.3	1.7	-0.8	1	17	16	^{148}Nd	McM		77St22
$^{147}\text{Sm}(n,\gamma)^{148}\text{Sm}$	8139.8	1.2	8141.37	0.28	1.3	U						69Re04 Z
	8141.1	1.5			0.2	U						70Bu19 Z
	8141.8	0.8			-0.5	-						71Gr37 Z
	8141.3	0.3			0.2	-			Bdn			06Fi.A
$^{147}\text{Sm}(d,p)^{148}\text{Sm}$	5920	10	5916.81	0.28	-0.3	U			Tal			64Ke03
$^{148}\text{Sm}(d,t)^{147}\text{Sm}$	-1890	15	-1884.14	0.28	0.4	U			Kop			67Ve04
$^{147}\text{Sm}(n,\gamma)^{148}\text{Sm}$	ave.	8141.36	0.28	8141.37	0.28	0.0	1	97	51	^{148}Sm		average
$^{148}\text{Gd}(p,d)^{147}\text{Gd}$	-6755	5	-6759.5	1.2	-0.9	U						86Ru04
$^{148}\text{Gd}(p,d)^{147}\text{Gd}-^{148}\text{Sm}^{147}\text{Sm}$	-842	2	-842.7	1.2	-0.3	-						86Ru04
$^{148}\text{Gd}(d,t)^{147}\text{Gd}-^{148}\text{Sm}^{147}\text{Sm}$	-843	2			0.2	-						86Ru04
$^{148}\text{Gd}(^3\text{He},\alpha)^{147}\text{Gd}-^{148}\text{Sm}^{147}\text{Sm}$	-842	3			-0.2	-						86Ru04
$^{148}\text{Gd}(p,d)^{147}\text{Gd}-^{148}\text{Sm}^{147}\text{S}$	ave.	-842.4	1.3		-0.2	1	89	85	^{147}Gd			average
$^{148}\text{Ba}(\beta^-)^{148}\text{La}$	5115	60				3			Bwg			90Gr10
$^{148}\text{La}(\beta^-)^{148}\text{Ce}$	7310	140	7690	22	2.7	U			Trs			82Br23 *
	7255	55			7.9	B			Bwg			90Gr10
	7650	100			0.4	U			Kur			02Sh.B
	7732	70			-0.6	U			Kur			09Ha.B
$^{148}\text{Ce}(\beta^-)^{148}\text{Pr}$	2060	75	2137	13	1.0	U			Bwg			87Gr.A
	2140	14			-0.2	1	81	66	^{148}Pr	Kur		95Ik03
$^{148}\text{Pr}(\beta^-)^{148}\text{Nd}$	4800	200	4872	15	0.4	U						79Ik06
	4965	100			-0.9	U			Bwg			87Gr.A
	4890	50			-0.4	-						88Ka14
	4880	30			-0.3	-			Kur			95Ik03
	4930	100			-0.6	U			Kur			02Sh.B
	ave.	4883	26		-0.4	1	34	34	^{148}Pr			average
$^{148}\text{Pm}(\beta^-)^{148}\text{Sm}$	2480	15	2471	6	-0.6	R						62Sc04 *
	2475	30			-0.1	U						63Ba31 *
$^{148}\text{Eu}(\beta^+)^{148}\text{Sm}$	3122	30	3037	10	-2.8	U						63Ba32 *
	3150	30			-3.8	B						70Ag01 *
$^{148}\text{Tb}(\beta^+)^{148}\text{Gd}$	5630	80	5738	13	1.4	F						76Cr.B *
	5835	70			-1.4	U						83Ve06 *
	5710	100			0.3	U			Got			85Sc09 *
	5390	100			3.5	B			Got			85Ti01 *
	5760	80			-0.3	U			IRS			93Al03 *
	5752	40			-0.3	1	10	10	^{148}Tb	GSI		95Ke05 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{148}\text{Dy}(\beta^+)^{148}\text{Tb}$	2660 60	2678 10	0.3	U					81Sc21	
	2805 60		-2.1	U					81Sp03 *	
	2700 60		-0.4	U			IRS		82Al.A	
	2700 60		-0.4	U					82Ve.A	
	2722 60		-0.7	U					83Ve06 *	
	2835 95		-1.7	U					84Ha.B *	
	2740 60		-1.0	U			Got		85Sc09 *	
	2682 10		-0.4	1	92	85 ^{148}Tb	GSI		95Ke05 *	
$^{148}\text{Ho}^m(\beta^+)^{148}\text{Dy}$	9400 250	10110# 130#	2.8	B			IRS		93Al03	
* $^{148}\text{Pr-u}$	$D_M = -77739.3(30.6) \mu\text{u}$ for mixture gs+m at 50#30; $M-A = -72413.7(28.5) \text{keV}$									
* $^{148}\text{Tb-u}$	$M-A = -70462(28) \text{keV}$ for mixture gs+m at 90.1 keV									
* $^{148}\text{Ho-u}$	$M-A = -57815(30) \text{keV}$ for mixture gs+m at 250#100 keV									
*	outweighed by next item before correcting for isomeric mixture									
* $^{148}\text{Ho}-^{85}\text{Rb}_{1,741}$	$D_M = 91517.5(9.5) \mu\text{u}$ for mixture gs+m at 250#100 keV with $R=0.74(15)$									
* $^{148}\text{La}(\beta^-)^{148}\text{Ce}$	$E_{\beta^-} = 5862(100)$ supposed to go to levels around $E=1450(100) \text{keV}$									
* $^{148}\text{Pm}(\beta^-)^{148}\text{Sm}$	$E_{\beta^-} = 2460(20) 1020(15)$ to ground state, 1^- level at 1465.137 keV									
* $^{148}\text{Pm}(\beta^-)^{148}\text{Sm}$	$E_{\beta^-} = 2480(30) 1930(30) 1020(30)$ to ground state, 2^+ at 550.255, 1^- at 1465.137 keV									
*	and $E_{\beta^-} = 400(30)$ from $^{148}\text{Pm}^m$ at 137.0 to 6^+ level at 2194.061 keV									
* $^{148}\text{Eu}(\beta^+)^{148}\text{Sm}$	$E_{\beta^+} = 920(30)$ to 1180.261 keV 4^+ level									
* $^{148}\text{Eu}(\beta^+)^{148}\text{Sm}$	$E_{\beta^+} = 540(30)$ to 1594.247 keV 5^- level, and other E_{β^+}									
* $^{148}\text{Tb}(\beta^+)^{148}\text{Gd}$	$E_{\beta^+} = 4610(80)$ assumed to ground state									
*	F : since ^{148}Tb ground state 2^- , transition to ^{148}Gd ground state weak									
* $^{148}\text{Tb}(\beta^+)^{148}\text{Gd}$	$E_{\beta^+} = 2210(70)$ from $^{148}\text{Tb}^m$ at 90.1 to 8^+ level at 2693.28 keV and									
*	$E_{\beta^+} = 4560(80)$ mainly to 2^+ at 748.432 keV. Conflicting, not used									
* $^{148}\text{Tb}(\beta^+)^{148}\text{Gd}$	$p^+ = 0.271(0.10)$ gives $E_{\beta^+} = 1920(30)$ from $^{148}\text{Tb}^m$ at 90.1 to 8^+ at 2693.3 keV									
*	but assuming 5(5)% side-feeding; see reference									
* $^{148}\text{Tb}(\beta^+)^{148}\text{Gd}$	$KL/\beta^+ = 1.54(0.09)$ to 1863.42 level; yields $Q_{\beta^+} = 5295(45) \text{keV}$									
*	but assuming 7(7)% side-feeding; see 1990Sa32									
* $^{148}\text{Tb}(\beta^+)^{148}\text{Gd}$	$Q_{\beta^+} = 5700(80)$; and 5910(80) from $^{148}\text{Tb}^m$ at 90.1 keV									
* $^{148}\text{Tb}(\beta^+)^{148}\text{Gd}$	$Q_{\beta^+} = 5750(40)$; and 5846(50) from $^{148}\text{Tb}^m$ at 90.1 keV									
* $^{148}\text{Dy}(\beta^+)^{148}\text{Tb}$	$p^+ = 0.069(0.014)$ to 1^+ level at 620.24 keV, recalculated Q									
* $^{148}\text{Dy}(\beta^+)^{148}\text{Tb}$	$E_{\beta^+} = 1040(60)$, 1120(60) to 1^+ level at 620.24 keV									
* $^{148}\text{Dy}(\beta^+)^{148}\text{Tb}$	$p^+ = 0.055(0.015)$ to 1^+ level at 620.24 keV									
* $^{148}\text{Dy}(\beta^+)^{148}\text{Tb}$	$\beta^+/K = 0.045(0.005)$ to 1^+ level at 620.24 keV, gives $Q_{\beta^+} = 2680(30) \text{keV}$									
* $^{148}\text{Dy}(\beta^+)^{148}\text{Tb}$	GSI average of $E_{\beta^+} = 1043(10)$ and 1036(10) of reference									
*	to 1^+ level at 620.24 keV									
$^{149}\text{Ce-u}$	-71573.1	11.0			2		CP1	1.0	06Sa56	
$^{149}\text{Pr-u}$	-76263.9	10.6			2		CP1	1.0	06Sa56	
$\text{C}_8 \text{ }^{13}\text{C H}_8 \text{ O}_2 - ^{149}\text{Sm}$	138597	29	138592.3	1.8	0.0	U	R04	4.0	64De15	
$\text{C}_9 \text{ H}_{11} \text{ N O} - ^{149}\text{Sm}$	166820	33	166871.9	1.8	0.4	U	R04	4.0	64De15	
$\text{C}_8 \text{ }^{13}\text{C H}_{10} \text{ N O} - ^{149}\text{Sm}$	162408	46	162401.7	1.8	0.0	U	R04	4.0	64De15	
$^{149}\text{Eu} - ^{133}\text{Cs}_{1,120}$	23849	17	23832	4	-1.0	U	MA5	1.0	00Be42	
$^{149}\text{Tb-u}$	-76730	32	-76746	4	-0.5	U	GS2	1.0	05Li24 *	
$^{149}\text{Dy} - ^{133}\text{Cs}_{1,120}$	33278	109	33215	10	-0.6	U	MA5	1.0	00Be42	
$^{149}\text{Dy-u}$	-72698	30	-72678	10	0.7	U	GS2	1.0	05Li24 *	
$^{149}\text{Ho-u}$	-66179	34	-66197	16	-0.5	1	21	^{149}Ho	GS2 1.0	05Li24 *
$^{149}\text{Er-u}$	-57694	30			2		GS2	1.0	05Li24 *	
$^{149}\text{Eu} - ^{142}\text{Sm}_{1,049}$	6909	18	6888	5	-1.1	U	MA7	1.0	01Bo59	
$^{149}\text{Dy} - ^{142}\text{Sm}_{1,049}$	16249	16	16272	10	1.5	1	40	37 ^{149}Dy	MA7 1.0	01Bo59
$^{149}\text{Sm} \text{ } ^{35}\text{Cl} - ^{147}\text{Sm} \text{ } ^{37}\text{Cl}$	5257	4	5237.7	1.0	-1.2	U	H12	4.0	64Ba15	
	5231	3			0.9	U	H21	2.5	70Ma05	
	5239.8	0.8			-1.0	1	25	16 ^{147}Sm	M21 2.5	75Ka25
$^{149}\text{Sm} - ^{148}\text{Sm}$	2282	31	2362.8	1.0	0.7	U	R04	4.0	64De15	
$^{149}\text{Sm} - ^{147}\text{Sm}$	2320	60	2287.6	1.0	-0.1	U	R04	4.0	64De15	
$^{149}\text{Gd}(\alpha)^{145}\text{Sm}$	3102.3	10.	3100	3	-0.3	-			65Ma51 Z	
	3096.2	10.			0.3	-		ORa	66Wi12 Z	
	3099.1	5.			0.1	-		Db	67Go32 Z	
ave.	3099	4			0.1	1	56	53 ^{149}Gd	average	
$^{149}\text{Tb}(\alpha)^{145}\text{Eu}$	4074.4	3.	4077.8	2.2	1.1	-		Db	67Go32 Z	
	4073.8	7.			0.6	U	ORa		74To07 *	
	4074.6	10.			0.3	U			81Ho.A Z	
	4081.8	5.			-0.8	-		Bka	82Bo04 Z	
	4082.8	4.			-1.2	-		Daa	96Pa01	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{149}\text{Tb}(\alpha)^{145}\text{Eu}$	ave. 4078.1	2.2 4077.8	2.2	-0.2	1	95	86 ^{149}Tb		average
$^{149}\text{Sm}(n,\alpha)^{146}\text{Nd}$	9429	4 9437.1	1.2	2.0	U		McM		67Oa01
	9421	15		1.1	U		ILL		75Em.A
$^{149}\text{Sm}(p,t)^{147}\text{Sm}$	-5532	8 -5529.9	0.9	0.3	U		Min		72De47
	-5532	7		0.3	U		McM		73Ga04
$^{148}\text{Nd}(n,\gamma)^{149}\text{Nd}$	5038.76	0.10 5038.79	0.07	0.3	2		ILn		76Pi04 Z
	5038.82	0.11		-0.3	2		Bdn		06Fi.A
$^{148}\text{Nd}(\alpha^3\text{He,d})^{149}\text{Pm}$	455	5 451.4	2.5	-0.7	1	26	14 ^{149}Pm	McM	80St10 *
$^{149}\text{Sm}(d,\alpha^3\text{He})^{148}\text{Pm}$	-2064	6 -2066	6	-0.3	2				88No02
$^{148}\text{Sm}(n,\gamma)^{149}\text{Sm}$	5872.5	1.8 5870.3	0.9	-1.2	1	26	17 ^{148}Sm		70Sm.A
	5850.8	0.6		32.6	C				82Ba15
$^{149}\text{Sm}(\gamma,n)^{148}\text{Sm}$	-5890	160 -5870.3	0.9	0.1	U		Phi		60Ge01
$^{148}\text{Sm}(d,p)^{149}\text{Sm}$	3656	15 3645.8	0.9	-0.7	U		Kop		67Ve04
$^{149}\text{Er}(\epsilon p)^{148}\text{Dy}$	5758	900 6823	29	1.2	U				83La.A *
	7080	470		-0.5	U		LBL		89Fi01
$^{149}\text{La}(\beta^-)^{149}\text{Ce}$	6450	200			3		Kur		02Sh.B
$^{149}\text{Ce}(\beta^-)^{149}\text{Pr}$	4190	75 4369	14	2.4	U		Bwg		87Gr.A
	4380	60		-0.2	U		Kur		95Ik03
	4310	100		0.6	U		Kur		02Sh.B
$^{149}\text{Pr}(\beta^-)^{149}\text{Nd}$	3000	200 3336	10	1.7	U				67Va14
	3390	90		-0.6	U		Kur		95Ik03
$^{149}\text{Nd}(\beta^-)^{149}\text{Pm}$	1669	10 1688.4	2.5	1.9	U				64Go08 *
$^{149}\text{Pm}(\beta^-)^{149}\text{Sm}$	1072	2 1071.4	1.9	-0.3	1	88	86 ^{149}Pm		60Ar05
	1062	2		4.7	B				78Re01
$^{149}\text{Eu}(\epsilon)^{149}\text{Sm}$	680	10 695	4	1.5	1	14	14 ^{149}Eu		85Ad.A
$^{149}\text{Gd}(\epsilon)^{149}\text{Eu}$	1308	6 1314	4	1.0	1	48	30 ^{149}Eu	Got	84Sc.B
$^{149}\text{Tb}(\beta^+)^{149}\text{Gd}$	3575	50 3638	4	1.3	U			Got	85Sc09 *
	3635	10		0.3	1	19	11 ^{149}Tb	GSI	91Ke06 *
$^{149}\text{Dy}(\beta^+)^{149}\text{Tb}$	3930	150 3789	9	-0.9	U				84Al36 *
	3925	65		-2.1	U			Got	90Sa32 *
	3797	13		-0.6	1	51	48 ^{149}Dy	GSI	91Ke11 *
	3950	100		-1.6	U		IRS		93Al03
$^{149}\text{Ho}(\beta^+)^{149}\text{Dy}$	6043	50 6037	14	-0.1	-			IRS	83Al06 *
	5330	100		7.1	C				84Ha.B
	6000	90		0.4	U		IRS		93Al03
	6009	20		1.4	-		GSI		91Ke11 *
	ave. 6014	19		1.3	1	59	47 ^{149}Ho		average
$^{149}\text{Er}(\epsilon)^{149}\text{Ho}$	8610	650 7920	30	-1.1	U			LBL	89Fi01 *
* $^{149}\text{Tb-u}$	M-A=-71456(28) keV for mixture gs+m at 35.78 keV								
* $^{149}\text{Dy-u}$	M-A=-65057(28) keV for $^{149}\text{Dy}^m$ at 2661.1 keV								
* $^{149}\text{Ho-u}$	M-A=-61621(28) keV for mixture gs+m at 48.80 keV								
* $^{149}\text{Er-u}$	M-A=-53000(28) keV for $^{149}\text{Er}^m$ at 741.8 keV								
* $^{149}\text{Tb}(\alpha)^{145}\text{Eu}$	$E_\alpha=3999(7)$ from $^{149}\text{Tb}^m$ at 35.78 keV								
* $^{148}\text{Nd}(\alpha^3\text{He,d})^{149}\text{Pm}$	Based on $^{146}\text{Nd}(\alpha^3\text{He,d})^{147}\text{Pm}$ Q=-87.6(0.9) keV								
* $^{149}\text{Er}(\epsilon p)^{148}\text{Dy}$	As read from graph; Q=6500 from $^{149}\text{Er}^m$ at 741.8 keV								
* $^{149}\text{Nd}(\beta^-)^{149}\text{Pm}$	$E_{\beta^-}=1555(10)$ to $5/2^+$ level at 114.312 level								
* $^{149}\text{Tb}(\beta^+)^{149}\text{Gd}$	$\beta^+/\text{K}=0.31(0.03)$ from $^{149}\text{Tb}^m$ at 35.78 to $9/2^-$ level at 795.82 keV								
* $^{149}\text{Tb}(\beta^+)^{149}\text{Gd}$	$E_{\beta^+}=1853(10)$ from $^{149}\text{Tb}^m$ at 35.78 to $9/2^-$ level at 795.82 keV								
* $^{149}\text{Dy}(\beta^+)^{149}\text{Tb}$	$E_{\beta^+}=1030(150)$ to 1728.31-1876.96 levels								
* $^{149}\text{Dy}(\beta^+)^{149}\text{Tb}$	KL/ $\beta^+=29.4(10.6)$, 14.5(3.7), 17.6(4.9) to 1883, 1735, 1728 levels								
* $^{149}\text{Dy}(\beta^+)^{149}\text{Tb}$	Original Q=3812(10) from $E_{\beta^+}=1965(10)$ to 825.16 level corrected to $E_{\beta^+}=1950(13)$ for background subtraction								
* $^{149}\text{Ho}(\beta^+)^{149}\text{Dy}$	$E_{\beta^+}=3930(50)$ to $9/2^-$ level at 1090.76 keV								
* $^{149}\text{Ho}(\beta^+)^{149}\text{Dy}$	$E_{\beta^+}=3896(20)$ to $9/2^-$ level at 1090.76 keV								
* $^{149}\text{Er}(\epsilon)^{149}\text{Ho}$	KLM/ $\beta^+=0.68(0.34)$ from $^{149}\text{Er}^m$ at 741.8 to 4699.7 level								
$^{150}\text{Ce-u}$	-69618.6	13.1 -69616	13	0.2	1	92	92 ^{150}Ce	CP1	1.0 06Sa56
$^{150}\text{Pr-u}$	-73322.9	10.6 -73323	10	-0.1	1	83	83 ^{150}Pr	CP1	1.0 06Sa56
$\text{C}_{12}\text{H}_6-^{150}\text{Nd}$	126194	43 126047.9	1.8	-0.8	U			R05	4.0 65De13

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$C_8^{13}CNOH_{11}-^{150}Nd$	166439	34	166516.6	1.8	0.6	U			R05	4.0	65De13
$C_9NOH_{12}-^{150}Nd$	170931	46	170986.8	1.8	0.3	U			R05	4.0	65De13
$C_{12}H_6-^{150}Sm$	129810	140	129667.3	1.8	-0.3	U			R04	4.0	64De15
$C_8^{13}CH_{11}NO-^{150}Sm$	170029	25	170135.9	1.8	1.1	U			R04	4.0	64De15
$C_9H_{12}NO-^{150}Sm$	174612	47	174606.1	1.8	0.0	U			R04	4.0	64De15
$^{150}Tb^{m-u}$	-75850	30	-75840	28	0.3	1	89	89 $^{150}Tb^m$	GS2	1.0	05Li24
$^{150}Ho-^{133}Cs_{1.128}$	40150	29	40149	15	0.0	-			MA5	1.0	00Be42
	ave.	40132			0.8	1	53	53 ^{150}Ho			average
$^{150}Ho-u$	-66504	40	-66502	15	0.1	U			GS2	1.0	05Li24 *
$^{150}Er-u$	-62060	30	-62084	18	-0.8	1	38	38 ^{150}Er	GS2	1.0	05Li24
$^{150}Nd^{35}Cl_2-^{146}Nd^{37}Cl_2$	13654	9	13679.8	1.3	1.1	U			H21	2.5	70Ma05
		13672.5			1.6	U			H25	2.5	72Ba08
$^{150}Nd^{35}Cl-^{148}Nd^{37}Cl$	7006	4	6953.0	2.1	-3.3	B			H12	4.0	64Ba15
		6939			1.4	U			H21	2.5	70Ma05
$^{150}Sm^{35}Cl-^{148}Sm^{37}Cl$	5452	8	5403.8	1.0	-1.5	U			H12	4.0	64Ba15
		5400			0.4	U			H21	2.5	70Ma05
$^{150}Nd-^{150}Sm$	5404.8	0.6			-0.7	1	43	30 ^{148}Sm	M21	2.5	75Ka25
		3633		3619.33	0.21	-0.9	U		H19	4.0	64Mc11
		3617.0			0.8	U			H25	2.5	72Ba08
		3619.33			0.0	1	100	99 ^{150}Nd	JY1	1.0	10Ko28
$^{150}Sm-^{149}Sm$	149	30	90.9	0.4	-0.5	U			R04	4.0	64De15
$^{150}Nd-^{148}Nd$	3860	46	4003.0	2.1	0.8	U			R05	4.0	65De13
		3988			2.0	U			M17	2.5	66Be10
$^{150}Sm-^{148}Sm$	2430	50	2453.7	1.0	0.1	U			R04	4.0	64De15
$^{150}Nd-^{146}Nd$	7719	67	7779.6	1.3	0.2	U			R05	4.0	65De13
$^{150}Gd(\alpha)^{146}Sm$	2804.9	10.	2808	6	0.3	-					62Si14
		2792.6			0.8	-					65Og01
	ave.	2802			0.6	1	45	39 ^{150}Gd			average
$^{150}Tb(\alpha)^{146}Eu$	3585.5	5.	3587	5	0.3	1	92	80 ^{150}Tb	Db		67Go32 Z
$^{150}Dy(\alpha)^{146}Gd$	4345.8	5.	4351.2	1.5	1.1	-			Db		67Go32 Z
		4349.5			0.3	-			GS		79Ho10 Z
		4351.3			0.0	-			Bk		82Bo04 *
		4352.4			-0.6	-			Ora		82De11 Z
	ave.	4351.2			0.0	1	99	92 ^{150}Dy			average
$^{148}Nd(t,p)^{150}Nd$	3935	30	3932.1	2.0	-0.1	U			Ald		72Ch11
$^{148}Sm(t,p)^{150}Sm$	5372	25	5375.2	0.9	0.1	U			Ald		66Bj01
$^{150}Sm(p,t)^{148}Sm$	-5379	8	-5375.2	0.9	0.5	U			Min		72De47
		-5378			0.2	U			Ham		74Oe03
$^{150}Nd(d,^3He)^{149}Pr$	-4501	10	-4435	10	6.6	C			KVI		79Sa.A
$^{150}Nd(d,t)^{149}Nd$	-1122	10	-1117.9	2.0	0.4	U			McM		73Bu02
$^{149}Sm(n,\gamma)^{150}Sm$	7984.9	0.6	7986.7	0.4	3.0	B					69Re04 Z
		7986.7			0.0	-					70Bu19 Z
		7986.7			0.0	-			Bdn		06Fi.A
$^{149}Sm(d,p)^{150}Sm$	5764	4	5762.1	0.4	-0.5	U			Tal		64Ke03
$^{150}Sm(d,t)^{149}Sm$	-1738	15	-1729.5	0.4	0.6	U			Kop		67Ve04
$^{149}Sm(n,\gamma)^{150}Sm$	7986.7	0.4	7986.7	0.4	0.0	1	95	80 ^{149}Sm			average
$^{150}Lu(p)^{149}Yb$	1269.6	4.	1269.6	2.3	0.0	3					84Ho.A
		1269.6			0.0	3			Dap		93Se04
		1269.6			0.0	3			ORp		03Gi10
$^{150}Lu^m(p)^{149}Yb$	1303.8	15.	1291	5	-0.8	o			ORp		00Gi01
		1285.6			0.7	3			ORp		03Gi10
		1294.7			-0.5	3			Arp		03Ro21
$^{150}Ce(\beta^-)^{150}Pr$	3010	90	3454	14	4.9	C			Bwg		87Gr.A
		3480			-0.7	1	13	8 ^{150}Ce	Kur		95Ik03
$^{150}Pr(\beta^-)^{150}Nd$	5690	80	5379	9	-3.9	C			Bwg		87Gr.A
		5386			-0.3	1	12	12 ^{150}Pr	Kur		95Ik03
		5290			0.9	U			Kur		02Sh.B
$^{150}Pm(\beta^-)^{150}Sm$	3454	20				2					77Ho09

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{150}\text{Eu}(\beta^+)^{150}\text{Sm}$	2222	25	2259	6	1.5	U			65Gu03 *
$^{150}\text{Eu}(\beta^-)^{150}\text{Gd}$	978	10	972	4	-0.6	-			63Yo07 *
	968	4			0.9	-			65Gu03 *
ave.	969	4			0.6	1	91	54 ^{150}Eu	average
$^{150}\text{Tb}(\beta^+)^{150}\text{Gd}$	4720	40	4658	8	-1.6	U			68Wi21
	4670	15			-0.8	1	31	20 ^{150}Tb	76Cr.B
	4760	50			-2.0	U			77Ha31 *
	4620	60			0.6	U			83Ve06
$^{150}\text{Tb}^m(\beta^+)^{150}\text{Gd}$	5040	100	5119	27	0.8	U		IRS	93Al03
$^{150}\text{Dy}(\beta^+)^{150}\text{Tb}$	1760	40	1796	8	0.9	U			81Ka07 *
$^{150}\text{Ho}(\beta^+)^{150}\text{Dy}$	6980	150	7364	14	2.6	U			84Al36 *
	6560	100			8.0	B		IRS	93Al03
$^{150}\text{Ho}(\epsilon)^{150}\text{Dy}$	7400	200			-0.2	U			98Ag.A
	7372	27			-0.3	1	29	27 ^{150}Ho	00Ca.A
	7444	126			-0.6	U			01Ro35
$^{150}\text{Ho}^m(\beta^+)^{150}\text{Dy}$	7360	50				2		IRS	83Al06 *
	6575	75	7360	50	10.5	C			84Ha.B *
	6625	120			6.1	B		Got	85Sc09 *
	6900	130			3.5	B		Got	90Sa32 *
	7060	80			3.7	C		IRS	93Al03
$^{150}\text{Er}(\beta^+)^{150}\text{Ho}$	4010	80	4115	14	1.3	o			82No08 *
	4105	75			0.1	U			84Ha.B *
	4108	15			0.4	1	82	62 ^{150}Er	GSI
* $^{150}\text{Ho-u}$	M-A=-61948(28) keV for mixture gs+m at -0(50) keV								
* $^{150}\text{Dy}(\alpha)^{146}\text{Gd}$	Recalibrated as in reference								
* $^{150}\text{Eu}(\beta^+)^{150}\text{Sm}$	$E_{\beta^+}=1242(25)$ from $^{150}\text{Eu}^m$ at 42.1 keV								
* $^{150}\text{Eu}(\beta^-)^{150}\text{Gd}$	$Q_{\beta^-}=1020(10)$ 1010(4) respectively, from $^{150}\text{Eu}^m$ at 42.1 keV								
* $^{150}\text{Tb}(\beta^+)^{150}\text{Gd}$	$E_{\beta^+}=1655(80)$ to 2^+ at 2091.62 keV, and other E_{β^+} . Orig. error 35 increased								
* $^{150}\text{Dy}(\beta^+)^{150}\text{Tb}$	$p^+=2(10)\times 10^{-3}$ to 1^+ 397.2 level combined with lower limit through $^{146}\text{Gd}(\epsilon)$								
* $^{150}\text{Ho}(\beta^+)^{150}\text{Dy}$	$E_{\beta^+}=4550(150)$ to 1395.0 and 1456.8 levels								
* $^{150}\text{Ho}^m(\beta^+)^{150}\text{Dy}$	$E_{\beta^+}=3940(50)$ to 8^+ level at 2402 keV								
* $^{150}\text{Ho}^m(\beta^+)^{150}\text{Dy}$	$p^+=0.56(0.02)$ 0.58(0.07) respectively to 8^+ level at 2402 keV								
* $^{150}\text{Ho}^m(\beta^+)^{150}\text{Dy}$	$Q_{\beta^+}=6819(+117-100)$ from p^+ to 2402 level; could be raised 140 if 4% feeding of higher Dy levels								
* $^{150}\text{Er}(\beta^+)^{150}\text{Ho}$	$p^+=0.36(0.04)$ 0.39(0.04) to 1^+ level at 475.8 keV								
* $^{150}\text{Er}(\beta^+)^{150}\text{Ho}$	$E_{\beta^+}=2610(15)$ to 1^+ level at 475.8 keV								
$^{151}\text{La-u}$	-58734	397	-57680#	210#	1.8	D			GT1 1.5 04Ma.A *
$^{151}\text{Ce-u}$	-65727.8	19.0				2			CP1 1.0 06Sa56
$^{151}\text{Pr-u}$	-71697.5	14.3	-71691	13	0.5	1	77	77 ^{151}Pr	CP1 1.0 06Sa56
$\text{C}_{12}\text{H}_7-^{151}\text{Eu}$	134920	37	134917.4	1.8	0.0	U			R04 4.0 64De15
$\text{C}_{10}\text{H}_{15}\text{O}-^{151}\text{Eu}$	192490	70	192432.3	1.8	-0.2	U			R04 4.0 64De15
$^{151}\text{Eu}-^{85}\text{Rb}_{1.776}$	76520	15	76519.2	1.8	-0.1	U		MA5 1.0	00Be42
$^{151}\text{Tb-u}$	-76866	43	-76890	5	-0.6	U		GS2 1.0	05Li24 *
$^{151}\text{Dy-u}$	-73809	30	-73808	4	0.0	U		GS2 1.0	05Li24
$^{151}\text{Ho-u}$	-68323	33	-68302	9	0.6	U		GS2 1.0	05Li24 *
$^{151}\text{Er-u}$	-62528	30	-62551	18	-0.8	2		GS2 1.0	05Li24
	-62540	30			-0.4	2		GS2 1.0	05Li24 *
$^{151}\text{Eu}^{35}\text{Cl}-^{149}\text{Sm}^{37}\text{Cl}$	5620.3	2.6	5615.8	0.7	-0.7	U		H25 2.5	72Ba08
$^{151}\text{Eu}-^{150}\text{Sm}$	2800	60	2574.9	0.6	-0.9	U		R04 4.0	64De15
$^{151}\text{Eu}(\alpha)^{147}\text{Pm}$	1960	30	1965.0	1.1	0.2	U			07Be48
$^{151}\text{Gd}(\alpha)^{147}\text{Sm}$	2670.8	30.	2653.1	2.9	-0.6	U			65Si06
$^{151}\text{Tb}(\alpha)^{147}\text{Eu}$	3499.6	5.	3497	4	-0.6	1	58	49 ^{151}Tb	DbA 67Go32
$^{151}\text{Dy}(\alpha)^{147}\text{Gd}$	4175.5	5.	4179.5	2.6	0.8	2			DbA 67Go32 Z
	4181.1	3.			-0.5	2			BkA 82Bo04 Z
$^{151}\text{Ho}(\alpha)^{147}\text{Tb}$	4696.3	5.	4695.0	1.8	-0.3	2		GSa	79Ho10 *
	4695.8	3.			-0.3	2		BkA	82Bo04 *
	4693.8	3.			0.4	2		Ora	82De11 *
	4694.9	5.			0.0	2		Daa	96Pa01 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{151}\text{Eu}(n,\alpha)^{148}\text{Pm}$	7870	20	7859	6	-0.5	U			ILL		74Em01
$^{151}\text{Sm}(p,t)^{149}\text{Sm}$	-5100	4	-5101.3	0.4	-0.3	U			McM		73Ga04
$^{151}\text{Eu}(p,t)^{149}\text{Eu}$	-5872	5	-5872	4	-0.1	1	57	56	^{149}Eu		75Ta12
$^{150}\text{Nd}(n,\gamma)^{151}\text{Nd}$	5334.55	0.2	5334.55	0.10	0.0	-			ILn		76Pi13 Z
	5334.55	0.11			0.0	-			Bdn		06Fi.A
$^{150}\text{Nd}(d,p)^{151}\text{Nd}$	3084	15	3109.98	0.10	1.7	U			Tal		67Ne08
$^{150}\text{Nd}(n,\gamma)^{151}\text{Nd}$	ave. 5334.55	0.10	5334.55	0.10	0.0	1	100	100	^{151}Nd		average
$^{150}\text{Nd}(^3\text{He,d})^{151}\text{Pm}$	1503	5	1502	4	-0.2	1	80	80	^{151}Pm	McM	80St10 *
$^{150}\text{Sm}(n,\gamma)^{151}\text{Sm}$	5596.5	1.8	5596.45	0.11	0.0	U					70Sm.A *
	5596.	1.5			0.3	U					71Gr22
	5596.42	0.20			0.2	-			ILn		86Va08 Z
	5596.44	0.13			0.1	-			Bdn		06Fi.A
$^{150}\text{Sm}(d,p)^{151}\text{Sm}$	3369	16	3371.89	0.11	0.2	U			Tal		65Ke09
$^{150}\text{Sm}(n,\gamma)^{151}\text{Sm}$	ave. 5596.43	0.11	5596.45	0.11	0.2	1	100	64	^{150}Sm		average
$^{151}\text{Eu}(\gamma,n)^{150}\text{Eu}$	-8040	110	-7931	6	1.0	U			Phi		60Ge01
$^{151}\text{Eu}(p,d)^{150}\text{Eu}$	-5721	9	-5707	6	1.6	1	47	46	^{150}Eu		82So.B
$^{151}\text{Yb}(\text{ep})^{150}\text{Er}$	9000	300				2			ORa		86To12 *
$^{151}\text{Lu}(p)^{150}\text{Yb}$	1239.2	3.	1241.1	2.0	0.6	o			Dap		82Ho04
	1241.0	2.8			0.0	3			Dap		93Se04
	1241.3	3.0			-0.1	3			ORp		03Gi10
$^{151}\text{Lu}^m(p)^{150}\text{Yb}$	1318.8	10.	1318	5	-0.1	o			Daa		98Ba.B
	1318.8	10.			-0.1	o			Daa		99Bi14 *
$^{151}\text{Ce}(\beta^-)^{151}\text{Pr}$	5270	100	5554	21	2.8	U			Kur		02Sh.B
$^{151}\text{Pr}(\beta^-)^{151}\text{Nd}$	4170	75	4163	12	-0.1	U			Bwg		90Gr10
	4136	40			0.7	-			Ida		93Gr17 *
	4210	30			-1.6	-			Kur		95Ik03
	ave. 4183	24			-0.9	1	24	23	^{151}Pr		average
$^{151}\text{Nd}(\beta^-)^{151}\text{Pm}$	2510	50	2443	4	-1.3	U					73Se12 *
	2480	50			-0.7	U			Kur		95Ik03
$^{151}\text{Pm}(\beta^-)^{151}\text{Sm}$	1195	10	1190	4	-0.5	1	20	20	^{151}Pm		64Be10 *
$^{151}\text{Sm}(\beta^-)^{151}\text{Eu}$	75.9	0.6	76.4	0.5	0.8	1	80	55	^{151}Eu		59Ac28
$^{151}\text{Gd}(\epsilon)^{151}\text{Eu}$	463	3	464.0	2.8	0.3	1	86	85	^{151}Gd		83Vo10 *
$^{151}\text{Tb}(\beta^+)^{151}\text{Gd}$	2562	5	2565	4	0.6	-					77Cr05 *
	2566	12			-0.1	-					84Sc18 *
	ave. 2563	5			0.5	1	66	51	^{151}Tb		average
$^{151}\text{Ho}(\beta^+)^{151}\text{Dy}$	5080	50	5130	9	1.0	U			IRS		83Al06 *
	5100	80			0.4	U			IRS		93Al03
$^{151}\text{Er}(\beta^+)^{151}\text{Ho}$	5130	110	5356	18	2.1	U					98Fo06
$^{151}\text{Tm}(\beta^+)^{151}\text{Er}$	6025	145	7489	26	10.1	C					84Ha.B *
	7074	50			8.3	F			GSI		91Ke11 *
$^{151}\text{Tm}^m(\text{IT})^{151}\text{Tm}$	96.4	7.0	94	6	-0.4	o					97Da07 *
$^{151}\text{Lu}^m(\text{IT})^{151}\text{Lu}$	77	5				4			Daa		99Bi14
* $^{151}\text{La-u}$	Trends from Mass Surface TMS suggest ^{151}La 980 less bound										GAu **
* $^{151}\text{Tb-u}$	M-A=-71551(28) keV for mixture gs+m at 99.53 keV										Nub127 **
* $^{151}\text{Ho-u}$	M-A=-63622(28) keV for mixture gs+m at 41.0 keV										Nub127 **
* $^{151}\text{Er-u}$	M-A=-55670(28) keV for $^{151}\text{Er}^m$ at 2586.0 keV										Nub127 **
* $^{151}\text{Ho}(\alpha)^{147}\text{Tb}$	E=4523.8(5,Z) to $^{147}\text{Tb}^m$ at 50.6(0.9); 4610.8(5,Z) from $^{151}\text{Ho}^m$ 41.0(0.2)										Nub127 **
* $^{151}\text{Ho}(\alpha)^{147}\text{Tb}$	E=4521.5(3,Z) to $^{147}\text{Tb}^m$ at 50.6(0.9); 4611.5(3,Z) from $^{151}\text{Ho}^m$ 41.0(0.2)										Nub127 **
* $^{151}\text{Ho}(\alpha)^{147}\text{Tb}$	E=4521.2(3,Z) to $^{147}\text{Tb}^m$ at 50.6(0.9); 4607.2(4,Z) from $^{151}\text{Ho}^m$ 41.0(0.2)										Nub127 **
* $^{151}\text{Ho}(\alpha)^{147}\text{Tb}$	E $_{\alpha}$ =4521(5,Z) to $^{147}\text{Tb}^m$ at 50.6(0.9)										Nub127 **
* $^{150}\text{Nd}(^3\text{He,d})^{151}\text{Pm}$	Based on $^{146}\text{Nd}(^3\text{He,d})^{147}\text{Pm}$ Q=-87.6(0.9) keV										AHW **
* $^{150}\text{Sm}(n,\gamma)^{151}\text{Sm}$	E(γ)=5591.7(1.8) to 3/2 $^-$ level at 4.821 keV										Ens091 **
* $^{151}\text{Yb}(\text{ep})^{150}\text{Er}$	E $_p$ estimated 7300(300) to levels around 1700 keV										GAu **
*	"Statistical p's originate from 11/2 $^-$ isomer."										86To12 **
* $^{151}\text{Lu}^m(p)^{150}\text{Yb}$	Derived from $^{151}\text{Lu}^m(\text{IT})=77(5)$ keV										99Bi14 **
* $^{151}\text{Pr}(\beta^-)^{151}\text{Nd}$	Two highest Q $_{\beta^-}$ =4135(50),4137(40) keV										AHW **
* $^{151}\text{Nd}(\beta^-)^{151}\text{Pm}$	E $_{\beta^-}$ =2260(90) 2100(90) 1210(50) to 3/2 $^+$ level at 255.692, 1/2 $^+$ at 426.451, and 5/2 $^+$ at 1297.682 keV										Ens091 **
*											Ens091 **
* $^{151}\text{Pm}(\beta^-)^{151}\text{Sm}$	E $_{\beta^-}$ =1190(10) to ground state and 3/2 $^-$ level at 4.821 keV, and other E $_{\beta^-}$										Ens091 **
* $^{151}\text{Gd}(\epsilon)^{151}\text{Eu}$	pK=0.652(0.007) to (5/2 $^-$, 7/2 $^-$) level at 353.64 keV										Ens091 **
* $^{151}\text{Tb}(\beta^+)^{151}\text{Gd}$	E $_{\beta^+}$ =700(5) p $^+$ =104(5) $\times 10^{-4}$ respectively, to 1/2 $^-$ level at 839.320 keV, and other E $_{\beta^+}$										Ens091 **
* $^{151}\text{Ho}(\beta^+)^{151}\text{Dy}$	E $_{\beta^+}$ =3530(50) to 9/2 $^-$ level at 527.40 keV										Ens091 **
* $^{151}\text{Tm}(\beta^+)^{151}\text{Er}$	p $^+$ =0.71(0.02) to 9/2 $^-$ level at 801.52 keV										Ens091 **
* $^{151}\text{Tm}(\beta^+)^{151}\text{Er}$	F : lower limit: positrons escape from detector; E $_{\beta^+}$ =5250(50) to 801.6 level										91Ke11 **
* $^{151}\text{Tm}^m(\text{IT})^{151}\text{Tm}$	Only α decay energies are used										GAu **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{152}\text{Pr-u}$	-68447.1	19.9				2			CP1	1.0	06Sa56	
$\text{C}_{12}\text{H}_8-^{152}\text{Sm}$	142764	32	142860.5	1.8	0.8	U			R04	4.0	64De15	
	142867.0	5.0			-0.5	U			M22	2.5	75Ka25	
$^{152}\text{Eu-u}$	-78347	50	-78247.8	1.8	2.0	U			GS2	1.0	05Li24 *	
$\text{C}_{12}\text{H}_8-^{152}\text{Gd}$	142870	50	142800.8	1.8	-0.3	U			R04	4.0	64De15	
$^{152}\text{Gd O-C}_{14}$	-85290.7	3.5	-85285.9	1.8	0.9	U			TG1	1.5	11Ke03	
$^{152}\text{Tb-u}$	-76212	159	-75920	40	1.9	U			GS2	1.0	05Li24 *	
$^{152}\text{Dy-u}$	-75278	30	-75275	5	0.1	U			GS2	1.0	05Li24	
$^{152}\text{Ho-u}$	-68248	58	-68276	14	-0.5	U			GS2	1.0	05Li24 *	
$^{152}\text{Er-u}$	-64962	30	-64943	10	0.6	U			GS2	1.0	05Li24	
$^{152}\text{Tm-u}$	-55578	79	-55580	80	0.0	1	100	100	^{152}Tm	GS2	1.0	05Li24 *
$^{152}\text{Sm }^{35}\text{Cl}_2-^{148}\text{Sm }^{37}\text{Cl}_2$	10802	10	10810.7	1.2	0.3	U			H21	2.5	70Ma05	
	10810.8	2.0			0.0	U			H25	2.5	72Ba08	
	10807.9	1.4			0.8	U			M21	2.5	75Ka25	
$^{152}\text{Sm }^{35}\text{Cl}-^{150}\text{Sm }^{37}\text{Cl}$	5429	4	5406.9	0.7	-1.4	B			H12	4.0	64Ba15	
	5396	4			1.1	o			H21	2.5	70Ma05	
	5402.7	0.8			2.1	1	11	8	^{150}Sm	M21	2.5	75Ka25
$^{152}\text{Gd}-^{152}\text{Sm}$	59.80	0.19	59.77	0.19	-0.1	1	98	71	^{152}Sm	SH1	1.0	11EI02
$^{152}\text{Sm}-^{151}\text{Eu}$	95	42	-118.1	0.7	-1.3	U			R04	4.0	64De15	
$^{152}\text{Sm}-^{150}\text{Sm}$	2563	31	2456.8	0.7	-0.9	U			R04	4.0	64De15	
$^{152}\text{Gd}(\alpha)^{148}\text{Sm}$	2197.9	30.	2204.9	1.1	0.2	U					61Ma05	
$^{152}\text{Dy}(\alpha)^{148}\text{Gd}$	3728.0	8.	3726	4	-0.2	2					65Ma51 Z	
	3726.0	5.			0.1	2			DbA		67Go32 Z	
$^{152}\text{Ho}(\alpha)^{148}\text{Tb}$	4506.9	3.	4507.3	1.3	0.1	-			BkA		82Bo04 *	
	4508.0	2.			-0.3	-			Ora		82De11 Z	
	4505.8	3.			0.5	-					82To14	
	4507.9	3.			-0.2	-					87St.A Z	
ave.	4507.3	1.3			0.0	1	100	95	^{152}Ho		average	
$^{152}\text{Er}(\alpha)^{148}\text{Dy}$	4935.2	5.	4934.4	1.6	-0.1	-			GSa		79Ho10	
	4934.6	3.			-0.1	-			BkA		82Bo04 Z	
	4934.3	2.			0.1	-			Ora		82De11 Z	
ave.	4934.4	1.6			0.0	1	100	97	^{152}Er		average	
$^{150}\text{Nd}(\text{t,p})^{152}\text{Nd}$	4125	30	4131	24	0.2	1	66	66	^{152}Nd	Ald	72Ch11	
$^{150}\text{Sm}(\text{t,p})^{152}\text{Sm}$	5376	25	5372.3	0.6	-0.1	U			Ald		66Bj01	
$^{152}\text{Sm}(\text{p,t})^{150}\text{Sm}$	-5378	8	-5372.3	0.6	0.7	U			Min		72De47	
	-5376	4			0.9	U			McM		73Ga04	
	-5379	15			0.4	U			Ham		74Oe03	
$^{151}\text{Sm}(\text{n},\gamma)^{152}\text{Sm}$	8257.6	0.8	8257.7	0.6	0.1	1	58	41	^{151}Sm		71Gr22 Z	
$^{151}\text{Sm}(\text{p},\gamma)^{152}\text{Eu}$	5604	4	5600.7	0.5	-0.8	U					75Jo.A	
$^{151}\text{Eu}(\text{n},\gamma)^{152}\text{Eu}$	6306.70	0.10	6306.71	0.10	0.1	1	99	57	^{152}Eu	ILn	85Vo15 Z	
	6307.11	0.14			-2.8	C			Bdn		06Fi.A	
$^{152}\text{Gd}(\text{d,t})^{151}\text{Gd}$	-2338	10	-2332.4	2.9	0.6	U			Kop		67Tj01	
$^{152}\text{Pr}(\beta^-)^{152}\text{Nd}$	6350	120	6390	30	0.3	U			Kur		95Ik03	
$^{152}\text{Nd}(\beta^-)^{152}\text{Pm}$	1088	27	1105	19	0.6	-					93Sh23	
	1120	30			-0.5	-			Kur		95Ik03	
ave.	1102	20			0.1	1	85	51	^{152}Pm		average	
$^{152}\text{Pm}(\beta^-)^{152}\text{Sm}$	3600	200	3508	26	-0.5	U					71Da19	
	3520	150			-0.1	U					72Wa04	
	3400	200			0.5	U					75Wi08	
	3500	100			0.1	-					77Ya07	
	3500	40			0.2	-			Kur		95Ik03	
ave.	3500	40			0.2	1	49	49	^{152}Pm		average	
$^{152}\text{Pm}^m(\beta^-)^{152}\text{Sm}$	3603	100	3650	80	0.5	2					71Da19 *	
	3753	150			-0.7	2					72Wa04 *	
$^{152}\text{Eu}(\beta^+)^{152}\text{Sm}$	1871	5	1874.6	0.7	0.7	U					58AI99 *	
	1866	5			1.7	U					62Lo10 *	
	1870.8	2.			1.9	-					72Sv02 *	
	1872.8	1.5			1.2	-					77Mi.A *	
ave.	1872.1	1.2			2.1	1	32	25	^{152}Eu		average	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{152}\text{Eu}(\beta^-)^{152}\text{Gd}$	1809	10	1818.9	0.7	1.0	U			58A199 *	
	1827	7			-1.2	U			60La04 *	
	1836	20			-0.9	U			60Sc14 *	
	1806	4			3.2	B			69An18 *	
$^{152}\text{Tb}(\beta^+)^{152}\text{Gd}$	3990	40			2			76Cr.B *		
$^{152}\text{Ho}(\beta^+)^{152}\text{Dy}$	6690	100	6519	14	-1.7	U	IRS		83A106 *	
	6270	140			1.8	U			Averag *	
	6225	90			3.3	B	IRS		93A103 *	
$^{152}\text{Tm}^m(\beta^+)^{152}\text{Er}$	6850	110	8830#	100#	18.0	D			84Ha.B *	
$^{152}\text{Yb}(\beta^+)^{152}\text{Tm}$	5465	195	5450	140	-0.1	-	Got		90Sa.A *	
	5434	200			0.1	-	GSI		04Na.A *	
ave.	5450	140			0.0	1	100 ^{152}Yb		average	
* $^{152}\text{Eu-u}$	M-A=-72915(35) keV for mixture gs+m+r at 45.5998 and 147.86 keV								Nub127 **	
* $^{152}\text{Tb-u}$	M-A=-70740(29) keV for mixture gs+m at 501.74 keV								Nub127 **	
* $^{152}\text{Ho-u}$	M-A=-63492(28) keV for mixture gs+m at 160(1) keV								Nub127 **	
* $^{152}\text{Tm-u}$	M-A=-51720(54) keV for mixture gs+m at 100#80 keV								Nub127 **	
* $^{152}\text{Ho}(\alpha)^{148}\text{Tb}$	$E_\alpha=4389.1(3,Z)$; and $4455.1(3,Z)$ from $^{152}\text{Ho}^m$ to $^{148}\text{Tb}^m$								82Bo04 **	
*	combined with $^{152}\text{Ho}^m(\text{IT})$ - $^{148}\text{Tb}^m(\text{IT})=160(1)$ - $90.1(0.3)$ keV								87St.A **	
* $^{152}\text{Pm}^m(\beta^-)^{152}\text{Sm}$	$E_{\beta^-}=1800(100)$ $1950(150)$ respectively, to 5^- level at 1803.98 keV								Ens971 **	
* $^{152}\text{Eu}(\beta^+)^{152}\text{Sm}$	$E_{\beta^+}=895(5)$ $890(5)$ respectively, from $^{152}\text{Eu}^m$ at 45.5998 keV								Nub127 **	
* $^{152}\text{Eu}(\beta^+)^{152}\text{Sm}$	$E_{\beta^+}=727(2)$ $729(1.5)$ respectively, to 2^+ level at 121.78 keV								Ens971 **	
* $^{152}\text{Eu}(\beta^-)^{152}\text{Gd}$	$Q_{\beta^-}=1855(10)$ from $^{152}\text{Eu}^m$ at 45.5998 keV								Nub127 **	
* $^{152}\text{Eu}(\beta^-)^{152}\text{Gd}$	$E_{\beta^-}=1483(7)$ to 2^+ level at 344.2789 keV								Ens971 **	
* $^{152}\text{Eu}(\beta^-)^{152}\text{Gd}$	$E_{\beta^-}=1840(30)$ $1490(20)$ $1072(20)$ to ground state, 2^+ level at 344.28, 4^+ at 755.40 keV								Ens971 **	
* $^{152}\text{Eu}(\beta^-)^{152}\text{Gd}$	$Q_{\beta^-}=1852(4)$ from $^{152}\text{Eu}^m$ at 45.5998 keV								Nub127 **	
* $^{152}\text{Tb}(\beta^+)^{152}\text{Gd}$	$E_{\beta^+}=2830(15)$ $8(4)\%$ to ground state, $5.2(1)\%$ to 2^+ level at 344.2789 keV								Ens971 **	
* $^{152}\text{Ho}(\beta^+)^{152}\text{Dy}$	$E_{\beta^+}=3390(100)$ from $^{152}\text{Ho}^m$ at 160(1) to 8^+ level at 2437.40 keV								Ens971 **	
* $^{152}\text{Ho}(\beta^+)^{152}\text{Dy}$	From adopted $\text{KLM}/\beta^+=0.97(0.13)$								AHW **	
*	from $^{152}\text{Ho}^m$ at 160(1) to 8^+ level at 2437.40 keV								Ens026 **	
*	after extra 3(2)% side-feeding correction; see reference								90Sa32 **	
*	$p^+=0.52(0.04)/.967$ gives $\text{KLM}/\beta^+=0.86(0.14)$								85Sc09 **	
*	$\text{KLM}/\beta^+=1.12(0.10)$ after 0.967(0.008) side-feeding correction								90Sa32 **	
* $^{152}\text{Ho}(\beta^+)^{152}\text{Dy}$	$Q_{\beta^+}=6270(90)$; and $6330(100)$ from $^{152}\text{Ho}^m$ at 160(1) keV								Nub127 **	
* $^{152}\text{Tm}^m(\beta^+)^{152}\text{Er}$	$p^+=0.64(0.02)$ to 8^+ level at 2183.28 keV								Ens971 **	
*	Trends from Mass Surface TMS suggest $^{152}\text{Tm}^m$ 1980 less bound								GAu **	
* $^{152}\text{Yb}(\beta^+)^{152}\text{Tm}$	As reported in reference								11Es03 **	
$^{153}\text{Pr-u}$	-66110.5	15.3	-66096	13	0.9	-	CP1	1.0	06Sa56	
	-66065	40			-0.8	-	CP1	1.0	12Va02 *	
ave.	-66105	14			0.6	1	80 ^{153}Pr		average	
$^{153}\text{Pr}_{-80}\text{Kr}_{1.913}$	93906	40	93872	13	-0.8	1	10 ^{153}Pr	CP1	1.0	12Va02
$^{153}\text{Pr}_{-86}\text{Kr}_{1.779}$	92958	40	92927	13	-0.8	1	10 ^{153}Pr	CP1	1.0	12Va02
$^{153}\text{Nd-u}$	-72283.3	5.2	-72282.0	2.9	0.2	1	32 ^{153}Nd	CP1	1.0	12Va02 *
$^{153}\text{Nd}_{-80}\text{Kr}_{1.913}$	87687.9	4.7	87687	3	-0.3	1	42 ^{153}Nd	CP1	1.0	12Va02
$^{153}\text{Nd}_{-86}\text{Kr}_{1.779}$	86740.7	5.3	86741.7	2.9	0.2	1	31 ^{153}Nd	CP1	1.0	12Va02
$^{153}\text{Pm-u}$	-75833	23	-75843	10	-0.4	1	18 ^{153}Pm	CP1	1.0	12Va02 *
$^{153}\text{Pm}_{-80}\text{Kr}_{1.913}$	84139	23	84125	10	-0.6	1	18 ^{153}Pm	CP1	1.0	12Va02
$^{153}\text{Pm}_{-86}\text{Kr}_{1.779}$	83192	23	83180	10	-0.5	1	18 ^{153}Pm	CP1	1.0	12Va02
$\text{C}_{12} \text{H}_9 - ^{153}\text{Eu}$	149103	18	149187.3	1.8	1.2	U	R04	4.0	64De15	
$\text{C}_{11} \text{ } ^{13}\text{C} \text{H}_8 - ^{153}\text{Eu}$	144606	30	144717.1	1.8	0.9	U	R04	4.0	64De15	
$\text{C}_9 \text{ } ^{13}\text{C} \text{H}_{16} \text{O} - ^{153}\text{Eu}$	201934	38	202232.0	1.8	2.0	U	R04	4.0	64De15	
$^{153}\text{Eu} - ^{85}\text{Rb}_{1.800}$	80021	16	80016.5	1.8	-0.3	U	MA5	1.0	00Be42	
$^{153}\text{Ho-u}$	-69814	37	-69794	6	0.6	U	GS2	1.0	05Li24 *	
$^{153}\text{Er-u}$	-64942	30	-64920	10	0.7	U	GS2	1.0	05Li24	
$^{153}\text{Eu} \text{ } ^{35}\text{Cl} - ^{151}\text{Eu} \text{ } ^{37}\text{Cl}$	4334	4	4330.28	0.18	-0.4	U	H21	2.5	70Ma05 *	
$^{138}\text{La} \text{O} - ^{153}\text{Eu}$	-19266	123	-19208	4	0.1	U	R05	4.0	65De13	
$^{153}\text{Eu} \text{O} - \text{C}_{14}$	-83849.6	5.8	-83847.4	1.8	0.3	U	TG1	1.5	11Ke03	
$^{153}\text{Eu} - ^{152}\text{Sm}$	1544	42	1498.3	0.7	-0.3	U	R04	4.0	64De15	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{153}\text{Eu}-^{151}\text{Eu}$	1567	33	1380.20	0.17	-1.4	U	R04	4.0	64De15
$^{153}\text{Dy}(\alpha)^{149}\text{Gd}$	3560.0	8.	3559	4	-0.1	-			65Ma51 Z
	3554.9	5.			0.9	-	DbA		67Go32 Z
ave.	3556	4			0.7	1	69	48 ^{153}Dy	average
$^{153}\text{Ho}(\alpha)^{149}\text{Tb}$	4052.3	5.	4052	4	-0.1	2			68Go.C *
	4051.0	5.			0.1	2	ORa		71To01 *
$^{153}\text{Er}(\alpha)^{149}\text{Dy}$	4799.8	10.	4802.3	1.4	0.3	U			81Ho.A
	4804.5	3.			-0.7	-	Bka		82Bo04 Z
	4802.0	2.			0.2	-	Ora		82De11 Z
	4802.8	3.			-0.1	-			87Sc.A Z
	4799.7	4.			0.6	-	Daa		96Pa01
ave.	4802.3	1.4			0.0	1	100	97 ^{153}Er	average
$^{153}\text{Tm}(\alpha)^{149}\text{Ho}$	5252.3	5.	5248.2	1.5	-0.8	U			79Ho10 *
	5246.1	3.			0.7	-	Bka		82Bo04 *
	5249.2	2.			-0.5	-	Ora		82De11 *
	5247.7	3.			0.2	o			87Sc.A *
	5247.7	3.			0.2	-			88Sc.A
	5249.5	5.			-0.3	U	Daa		96Pa01
ave.	5248.1	1.5			0.1	1	100	68 ^{153}Tm	average
$^{153}\text{Gd}(\text{n},\alpha)^{150}\text{Sm}$	9790	30	9814.9	0.6	0.8	U	ILL		81Wa31
$^{153}\text{Eu}(\text{p},\text{t})^{151}\text{Eu}$	-6374	5	-6375.19	0.16	-0.2	U	Min		75Ta12
$^{152}\text{Sm}(\text{n},\gamma)^{153}\text{Sm}$	5867.1	0.4	5868.40	0.13	3.3	B			69Re04 Z
	5868.4	0.3			0.0	2			71Be41 Z
	5868.4	0.7			0.0	U			82Ba15 Z
	5868.40	0.15			0.0	2	Bdn		06Fi.A
$^{152}\text{Sm}(\text{d},\text{p})^{153}\text{Sm}$	3645	12	3643.83	0.13	-0.1	U	Tal		65Ke09
$^{152}\text{Eu}(\text{n},\gamma)^{153}\text{Eu}$	8550.28	0.12	8550.27	0.12	-0.1	1	100	82 ^{153}Eu	ILn 85Vo15 Z
$^{153}\text{Eu}(\gamma,\text{n})^{152}\text{Eu}$	-8650	130	-8550.27	0.12	0.8	U	Phi		60Ge01
$^{152}\text{Gd}(\text{n},\gamma)^{153}\text{Gd}$	6247.27	0.35	6246.96	0.13	-0.9	-	ILn		85Vo15 Z
	6246.89	0.14			0.5	-	ILn		93Sp.A
	6247.48	0.21			-2.5	U	Bdn		06Fi.A
$^{152}\text{Gd}(\text{d},\text{p})^{153}\text{Gd}$	4015	10	4022.39	0.13	0.7	U	Kop		67Tj01
$^{152}\text{Gd}(\text{n},\gamma)^{153}\text{Gd}$	ave.	6246.94	0.13	6246.96	0.13	0.1	1	99	73 ^{152}Gd
$^{152}\text{Gd}(\text{t},\text{He},\text{d})^{153}\text{Tb}$	-1634	30	-1598	4	1.2	U	McM		76St10
$^{153}\text{Pr}(\beta^-)^{153}\text{Nd}$	5720	100	5762	12	0.4	U	Kur		02Sh.B
$^{153}\text{Nd}(\beta^-)^{153}\text{Pm}$	3336	25	3317	9	-0.7	1	14	13 ^{153}Pm	Ida 93Gr17
	3260	100			0.6	U	Kur		02Sh.B
$^{153}\text{Pm}(\beta^-)^{153}\text{Sm}$	1777	50	1911	9	2.7	U			62Ko10 *
	1863	15			3.2	B	Ida		93Gr17
$^{153}\text{Sm}(\beta^-)^{153}\text{Eu}$	810	10	807.3	0.7	-0.3	U			54Gr19
	795	10			1.2	U			54Le08
	820	10			-1.3	U			55Ma62
	825	10			-1.8	U			56Du31
	792	10			1.5	U			57Jo24
$^{153}\text{Tb}(\beta^+)^{153}\text{Gd}$	1573	5	1569	4	-0.8	1	59	59 ^{153}Tb	78Cr02 *
$^{153}\text{Dy}(\beta^+)^{153}\text{Tb}$	2171	2	2170.4	1.9	-0.3	1	93	52 ^{153}Dy	78Gr13 *
$^{153}\text{Ho}(\beta^+)^{153}\text{Dy}$	4153	50	4130	6	-0.5	o			83Al06 *
	4160	60			-0.5	U	IRS		93Al03
$^{153}\text{Lu}^m(\text{IT})^{153}\text{Lu}$	80	5				4	IRS		97Ir01
* $^{153}\text{Pr}-\text{u}$	Represents frequency ratio $^{153}\text{Pr}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.99430250(26)$ WgM124**								
* $^{153}\text{Nd}-\text{u}$	Represents frequency ratio $^{153}\text{Pr}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.994342.931(34)$ WgM124**								
* $^{153}\text{Pm}-\text{u}$	Represents frequency ratio $^{153}\text{Pm}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.99436601(15)$ WgM124**								
* $^{153}\text{Ho}-\text{u}$	$M-A = -64997(28)$ keV for mixture gs+m at 68.7 keV Nub127 **								
* $^{153}\text{Eu } ^{35}\text{Cl}-^{151}\text{Eu } ^{37}\text{Cl}$	Increased by 5 for systematic difference of H21 with later data AHW **								
* $^{153}\text{Ho}(\alpha)^{149}\text{Tb}$	$E_\alpha = 4013.1(5,Z)$ from $^{153}\text{Ho}^m$ at 68.7(0.3) keV Nub127 **								
* $^{153}\text{Ho}(\alpha)^{149}\text{Tb}$	$E_\alpha = 3910(5)$ to $^{149}\text{Tb}^m$ at 35.78 keV Nub127 **								
* $^{153}\text{Tm}(\alpha)^{149}\text{Ho}$	$E_\alpha = 5114.2(5,Z)$ 5108.2(3,Z) 5111.2(2,Z) respectively, contain a 8% AHW **								
*	$^{153}\text{Tm}(\alpha)^{149}\text{Ho} - ^{153}\text{Tm}^m(\alpha)^{149}\text{Ho}^m = 48.80(0.20) - 43.2(0.2) =$ Nub127 **								
*	$= 5.6(0.3)$ keV lower $^{153}\text{Tm}^m(\alpha)^{149}\text{Ho}^m$ branch, corrected thus +0.5keV GAU **								
* $^{153}\text{Tm}(\alpha)^{149}\text{Ho}$	$E_\alpha = 5110.6(3,Z)$; and $5103.6(4,Z)$ for lower $^{153}\text{Tm}^m(\alpha)$ branch 87Sc.A **								
* $^{153}\text{Pm}(\beta^-)^{153}\text{Sm}$	$E_{\beta^-} = 1650(50)$ to $3/2^-$ level at 127.298 keV, and other E_{β^-} Ens062 **								
* $^{153}\text{Tb}(\beta^+)^{153}\text{Gd}$	$E_{\beta^+} = 339(5)$ to $3/2^+$ level at 212.0078 keV Ens062 **								
* $^{153}\text{Dy}(\beta^+)^{153}\text{Tb}$	$E_{\beta^+} = 886(2)$ to $9/2^-$ level at 262.831 keV Ens062 **								
* $^{153}\text{Ho}(\beta^+)^{153}\text{Dy}$	$E_{\beta^+} = 2835(50)$ to $9/2^-$ level at 295.84 keV Ens062 **								

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$C_{12} H_{10} - {}^{154}\text{Sm}$	155830	29	156033.5	2.0	1.8	U			R04	4.0	64De15	
	156035.7	4.0			-0.2	U			M22	2.5	75Ka25	
$C_{12} H_{10} - {}^{154}\text{Gd}$	157149	40	157376.3	1.7	1.4	U			R04	4.0	64De15	
$C_{11} {}^{13}\text{C} H_9 - {}^{154}\text{Gd}$	152550	110	152906.1	1.7	0.8	U			R04	4.0	64De15	
$C_{10} {}^{13}\text{C}_2 H_8 - {}^{154}\text{Gd}$	148030	90	148435.9	1.7	1.1	U			R04	4.0	64De15	
$C_{10} H_6 N_2 - {}^{154}\text{Gd}$	131980	240	132224.1	1.7	0.3	U			R04	4.0	64De15	
${}^{154}\text{Gd} - {}^{138}\text{La} \text{ O}$	19005	80	18845	4	-0.5	U			R05	4.0	65De13	
${}^{154}\text{Tb-u}$	-75376	115	-75320	50	0.5	R			GS2	1.0	05Li24 *	
${}^{154}\text{Dy} - {}^{133}\text{Cs}_{1.158}$	33903	19	33916	8	0.7	1	18	18	${}^{154}\text{Dy}$	MA5	1.0	00Be42 *
${}^{154}\text{Ho-u}$	-69345	80	-69393	9	-0.6	U			GS2	1.0	05Li24 *	
${}^{154}\text{Tm-u}$	-58485	50	-58430	15	1.1	U			GS2	1.0	05Li24 *	
${}^{154}\text{Sm} {}^{35}\text{Cl}_2 - {}^{150}\text{Sm} {}^{37}\text{Cl}_2$	10832.9	5.2	10834.1	1.1	0.1	U			M21	2.5	75Ka25	
${}^{154}\text{Sm} {}^{35}\text{Cl} - {}^{152}\text{Sm} {}^{37}\text{Cl}$	5480	4	5427.2	0.9	-3.3	B			H12	4.0	64Ba15	
	5417	4			1.0	U			H21	2.5	70Ma05	
${}^{154}\text{Gd} {}^{35}\text{Cl} - {}^{152}\text{Gd} {}^{37}\text{Cl}$	5427.2	0.4			0.0	1	80	78	${}^{154}\text{Sm}$	M21	2.5	75Ka25
	4019.5	2.	4024.65	0.23	1.0	U			H25	2.5	72Ba08	
${}^{154}\text{Sm} - {}^{154}\text{Gd}$	4016	30			0.1	U			H12	4.0	64Ba15	
	1338.2	3.8	1342.8	0.9	0.5	U			H25	2.5	72Ba08	
${}^{154}\text{Sm} - {}^{154}\text{Gd}$	1342.8	0.8			0.0	1	21	21	${}^{154}\text{Sm}$	M21	2.5	75Ka25
	-148211.0	8.0	-148208.4	2.0	0.1	U			M21	2.5	75Ka25	
${}^{139}\text{La} \text{ O} - {}^{154}\text{Gd}$	-19616	55	-19603.2	2.5	0.1	U			R05	4.0	65De13	
${}^{154}\text{Sm} - {}^{153}\text{Eu}$	1082	42	978.9	1.2	-0.6	U			R04	4.0	64De15	
${}^{154}\text{Sm} - {}^{152}\text{Sm}$	2664	43	2477.1	0.9	-1.1	U			R04	4.0	64De15	
${}^{154}\text{Gd} - {}^{152}\text{Gd}$	1400	50	1074.57	0.22	-1.6	U			R04	4.0	64De15	
${}^{154}\text{Gd} \text{ O} - C_{15}$	-84207.4	5.9	-84211.3	1.7	-0.4	U			TG1	1.5	09Ke.A	
	-84206.6	4.3			-0.7	U			TG1	1.5	11Ke03	
${}^{154}\text{Dy}(\alpha) {}^{150}\text{Gd}$	2946.4	5.	2945	5	-0.3	1	93	81	${}^{154}\text{Dy}$	DbA		67Go32 Z
${}^{154}\text{Ho}(\alpha) {}^{150}\text{Tb}$	4041.3	5.	4041	4	0.0	2						68Go.C Z
	4041.7	5.			0.0	2			ORa			74Sc19 Z
${}^{154}\text{Ho}^m(\alpha) {}^{150}\text{Tb}^m$	3819.2	10.	3823	5	0.4	-			ORa			71To01 Z
	3824.0	5.			-0.1	-			ORa			74Sc19 Z
${}^{154}\text{Er}(\alpha) {}^{150}\text{Dy}$	ave.	3823			0.1	1	100	89	${}^{154}\text{Ho}^m$			average
	4280.5	5.	4279.6	2.6	-0.2	-						68Go.C Z
${}^{154}\text{Er}(\alpha) {}^{150}\text{Dy}$	4279.5	3.			0.1	-			Bka			82Bo04 Z
	ave.	4279.7	2.6		0.0	1	98	91	${}^{154}\text{Er}$			average
${}^{154}\text{Tm}(\alpha) {}^{150}\text{Ho}$	5096.7	5.	5093.8	2.6	-0.6	2			GSa			79Ho10 Z
	5092.7	3.			0.4	2			Bka			82Bo04 Z
${}^{154}\text{Tm}^m(\alpha) {}^{150}\text{Ho}^m$	5174.8	5.	5171.7	1.6	-0.6	3			GSa			79Ho10 Z
	5170.8	3.			0.3	3			Bka			82Bo04 Z
${}^{154}\text{Yb}(\alpha) {}^{150}\text{Er}$	5171.7	2.			0.0	3			Ora			82De11 Z
	5473.4	5.	5474.2	1.7	0.2	-			GSa			79Ho10 Z
${}^{154}\text{Yb}(\alpha) {}^{150}\text{Er}$	5474.7	2.			-0.2	-			Ora			82De11 Z
	ave.	5473.4	4.		0.2	-	100	100	${}^{154}\text{Yb}$			96Pa01
${}^{152}\text{Sm}(\text{t,p}) {}^{154}\text{Sm}$	5361	25	5353.4	0.8	-0.3	U			Ald			66Bj01
${}^{154}\text{Sm}(\text{p,t}) {}^{152}\text{Sm}$	-5357	8	-5353.4	0.8	0.5	U			Min			72De47
	-5353	15			0.0	U			Ham			74Oe03
${}^{154}\text{Gd}(\text{p,t}) {}^{152}\text{Gd}$	-6660	5	-6659.88	0.21	0.0	U			Min			73Oo01
${}^{154}\text{Sm}(\text{d}, {}^3\text{He}) {}^{153}\text{Pm}$	-3623	25	-3602	9	0.8	-						76Su.B
${}^{154}\text{Sm}(\text{t}, \alpha) {}^{153}\text{Pm}$	10748	20	10718	9	-1.5	-			LAl			78Bu18
${}^{154}\text{Sm}(\text{d}, {}^3\text{He}) {}^{153}\text{Pm}$	ave.	-3592	16	-3602	9	-0.7	1	34	33	${}^{153}\text{Pm}$		average
	${}^{153}\text{Eu}(\text{n}, \gamma) {}^{154}\text{Eu}$	6442.2	0.3	6442.17	0.24	-0.1	-		ILn			87Ba52 Z
${}^{153}\text{Gd}(\text{n}, \gamma) {}^{154}\text{Gd}$	6442.2	0.4			-0.1	-			Bdn			06Fi.A
	ave.	6442.20	0.24			-0.1	1	98	80	${}^{154}\text{Eu}$		average
${}^{153}\text{Gd}(\text{n}, \gamma) {}^{154}\text{Gd}$	8895.25	0.30	8894.73	0.17	-1.7	-			ILn			85Vo15 Z
	8894.47	0.20			1.3	-			ILn			93Sp.A Z
${}^{154}\text{Gd}(\text{d,t}) {}^{153}\text{Gd}$	-2642	10	-2637.49	0.17	0.5	U			Kop			67Tj01
${}^{153}\text{Gd}(\text{n}, \gamma) {}^{154}\text{Gd}$	ave.	8894.71	0.17	8894.73	0.17	0.1	1	98	73	${}^{153}\text{Gd}$		average
${}^{154}\text{Pr}(\beta^-) {}^{154}\text{Nd}$	7490	100				4			Kur			02Sh.B

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{154}\text{Nd}(\beta^-)^{154}\text{Pm}^m$	2687	25					Ida		93Gr17		
$^{154}\text{Pm}^m(\text{IT})^{154}\text{Pm}$	210	70	120	120	-1.3	o			72Ta13 *		
	-20	12			11.7	B			90So08		
$^{154}\text{Pm}(\beta^-)^{154}\text{Sm}$	3900	200	3960	40	0.3	U			71Da28 *		
	4190	170			-1.3	U			72Ta13 *		
	3940	50			0.5	2			73Pr05 *		
	3940	200			0.1	U			74Ya07 *		
	4056	100			-0.9	2	Ida		93Gr17		
$^{154}\text{Pm}^m(\beta^-)^{154}\text{Sm}$	3900	200	4080	110	0.9	2			71Da28		
	4396	180			-1.7	2			72Ta13		
	3880	200			1.0	2			74Ya07 *		
$^{154}\text{Eu}(\beta^-)^{154}\text{Gd}$	1978	5	1968.2	0.7	-2.0	U			60La04 *		
	1967	2			0.6	-			77Ra08 *		
	1975	3			-2.3	-			81Bu.A *		
ave.	1969.5	1.7			-0.8	1	20	16 ^{154}Eu	average		
$^{154}\text{Tb}(\beta^+)^{154}\text{Gd}$	3562	50	3550	50	-0.2	2			70Ag03 *		
$^{154}\text{Ho}(\beta^+)^{154}\text{Dy}$	5700	80	5754	10	0.7	U	IRS		83Al06 *		
	5750	80			0.1	U	IRS		93Al03		
$^{154}\text{Ho}^m(\beta^+)^{154}\text{Dy}$	5994	100	5997	28	0.0	o	IRS		83Al.A *		
	6070	80			-0.9	1	12	11 $^{154}\text{Ho}^m$	IRS		
$^{154}\text{Tm}^m(\beta^+)^{154}\text{Er}$	8234	150	8250	50	0.1	U	Dbn		94Po26 *		
$^{154}\text{Lu}(\beta^+)^{154}\text{Yb}$	7556	450	10220#	200#	5.9	C			84Ha.B *		
$^{154}\text{Lu}^m(\text{IT})^{154}\text{Lu}$	58.7	9.3	60	12	0.1	o	Ara		97Da07 *		
* $^{154}\text{Tb-u}$	M-A=-70142(43) keV for mixture gs+m+n at 12(7) and 200#150 keV										
* $^{154}\text{Dy}-^{133}\text{Cs}_{1.158}$	No contamination observed, but contamination by ^{154}Tb cannot be excluded										
* $^{154}\text{Ho-u}$	M-A=-64478(28) keV for mixture gs+m at 233(30) keV										
* $^{154}\text{Tm-u}$	M-A=-54438(32) keV for mixture gs+m at 80(50) keV										
* $^{154}\text{Pm}^m(\text{IT})^{154}\text{Pm}$	Only use the two Q $^-$'s to ^{154}Sm , see below										
* $^{154}\text{Pm}(\beta^-)^{154}\text{Sm}$	E_{β^-} =3270, 3090, 2810 (all 170) to 921.345 1 $^-$, 1099.26 0 $^+$, 1475.81 1 $^-$										
* $^{154}\text{Pm}(\beta^-)^{154}\text{Sm}$	E_{β^-} =2810(170) to 1 $^-$ level at 1475.81 keV, and other E_{β^-}										
* $^{154}\text{Pm}(\beta^-)^{154}\text{Sm}$	E_{β^-} =3950(50) 3010(80) to ground state, 1 $^-$ level at 921.345 keV										
* $^{154}\text{Pm}(\beta^-)^{154}\text{Sm}$	E_{β^-} =3000(200), 1900(200), 1800(200) to 1 $^-$ level at 921.345, 2 $^+$ at 2069.07, and (1,2 $^+$) at 2139.82 keV										
* $^{154}\text{Pm}^m(\beta^-)^{154}\text{Sm}$	E_{β^-} =2410(180) to 3 $^-$ level at 1986.59 keV										
* $^{154}\text{Pm}^m(\beta^-)^{154}\text{Sm}$	E_{β^-} =2400(200), 1850(200) to 2 $^+$ levels at 1440.04, 2069.07 keV										
* $^{154}\text{Eu}(\beta^-)^{154}\text{Gd}$	E_{β^-} =1855(5) 1844(2) respectively, to 2 $^+$ level at 123.0709 keV										
* $^{154}\text{Eu}(\beta^-)^{154}\text{Gd}$	E_{β^-} =257(3) to 2 $^-$ level at 1719.5593 keV, and other E_{β^-}										
* $^{154}\text{Tb}(\beta^+)^{154}\text{Gd}$	E_{β^+} =2540(50) 1860(50) to ground state and 0 $^+$ level at 680.6673 keV										
* $^{154}\text{Ho}(\beta^+)^{154}\text{Dy}$	E_{β^+} =4340(80) to 2 $^+$ level at 334.34 keV										
* $^{154}\text{Ho}^m(\beta^+)^{154}\text{Dy}$	E_{β^+} =2500(100) to 7 $^+$ level at 2472.40 keV										
* $^{154}\text{Tm}^m(\beta^+)^{154}\text{Er}$	E_{β^+} =4882(150) to 8 $^+$ level 2329.5 keV										
* $^{154}\text{Lu}(\beta^+)^{154}\text{Yb}$	p^+ =0.75(0.05) Q=5710(450) from $^{154}\text{Lu}^m$ at 200#150 to 8 $^+$ level at 2046.2 keV										
* $^{154}\text{Lu}^m(\text{IT})^{154}\text{Lu}$	Use only their Q $_{\alpha}$'s										
$^{155}\text{Pr-u}$	-59492	31	-59491	18	0.0	1	35	35 ^{155}Pr	CP1	1.0	12Va02 *
$^{155}\text{Pr}-^{80}\text{Kr}_{1.938}$	102571	33	102569	18	-0.1	1	31	31 ^{155}Pr	CP1	1.0	12Va02
$^{155}\text{Pr}-^{86}\text{Kr}_{1.802}$	101588	32	101589	18	0.0	1	33	33 ^{155}Pr	CP1	1.0	12Va02
$^{155}\text{Nd-u}$	-66866	17	-66864	10	0.1	1	33	33 ^{155}Nd	CP1	1.0	12Va02 *
$^{155}\text{Nd}-^{80}\text{Kr}_{1.938}$	95197	17	95195	10	-0.1	1	34	33 ^{155}Nd	CP1	1.0	12Va02
$^{155}\text{Nd}-^{86}\text{Kr}_{1.802}$	94215	17	94215	10	0.0	1	33	33 ^{155}Nd	CP1	1.0	12Va02
$^{155}\text{Pm-u}$	-71863.8	8.8	-71863	5	0.1	1	33	33 ^{155}Pm	CP1	1.0	12Va02 *
$^{155}\text{Pm}-^{80}\text{Kr}_{1.938}$	90197.8	8.6	90196	5	-0.2	1	36	34 ^{155}Pm	CP1	1.0	12Va02
$^{155}\text{Pm}-^{86}\text{Kr}_{1.802}$	89216.0	8.8	89217	5	0.1	1	33	33 ^{155}Pm	CP1	1.0	12Va02
$^{155}\text{Sm-u}$	-75357	24	-75352.3	2.0	0.2	U			CP1	1.0	12Va02 *
$^{155}\text{Sm}-^{80}\text{Kr}_{1.938}$	86704	24	86707.0	2.4	0.1	U			CP1	1.0	12Va02
$^{155}\text{Sm}-^{86}\text{Kr}_{1.802}$	85722	24	85727.4	2.0	0.2	U			CP1	1.0	12Va02
$\text{C}_{12}\text{H}_{11}-^{155}\text{Gd}$	163530	70	163444.9	1.7	-0.3	U			R04	4.0	64De15

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$C_{11} \text{ } ^{13}\text{C} \text{ H}_{10} - ^{155}\text{Gd}$	158921	42	158974.7	1.7	0.3	U			R04	4.0	64De15
$C_{10} \text{ } ^{13}\text{C}_2 \text{ H}_9 - ^{155}\text{Gd}$	154450	140	154504.5	1.7	0.1	U			R04	4.0	64De15
$C_{10} \text{ H}_7 \text{ N}_2 - ^{155}\text{Gd}$	138213	38	138292.8	1.7	0.5	U			R04	4.0	64De15
$^{155}\text{Gd} - ^{139}\text{La} \text{ O}$	21252	32	21359.6	2.5	0.8	U			R05	4.0	65De13
$^{155}\text{Tb} - \text{u}$	-76431	30	-76489	11	-1.9	U			GS2	1.0	05Li24
$^{155}\text{Dy} - \text{u}$	-74227	30	-74241	10	-0.5	U			GS2	1.0	05Li24
$^{155}\text{Ho} - \text{u}$	-70867	30	-70896	19	-1.0	1	39	^{155}Ho	GS2	1.0	05Li24
$^{155}\text{Er} - \text{u}$	-66785	30	-66784	7	0.0	U			GS2	1.0	05Li24
$^{155}\text{Tm} - \text{u}$	-60814	33	-60790	11	0.7	U			GS2	1.0	05Li24 *
$^{155}\text{Gd} \text{ } ^{35}\text{Cl}_3 - ^{149}\text{Sm} \text{ } ^{37}\text{Cl}_3$	14282.4	6.3	14288.6	0.9	0.4	U			M21	2.5	75Ka25
$^{155}\text{Gd} \text{ } ^{35}\text{Cl} - ^{153}\text{Eu} \text{ } ^{37}\text{Cl}$	4345.4	2.4	4342.5	0.8	-0.5	U			H25	2.5	72Ba08
$^{155}\text{Gd} - ^{138}\text{La} \text{ O}$	20558	49	20601	4	0.2	U			R05	4.0	65De13
$^{155}\text{Gd} - ^{154}\text{Gd}$	1480	60	1756.41	0.20	1.2	U			R04	4.0	64De15
$^{155}\text{Gd} \text{ O} - \text{C}_{15}$	-82452.8	5.0	-82454.9	1.7	-0.3	o			TG1	1.5	09Ke.A
	-82452.2	2.6			-0.7	1	20	^{155}Gd	TG1	1.5	11Ke03
$^{155}\text{Er}(\alpha) \text{ } ^{151}\text{Dy}$	4118.3	5.				3			ORa		74To07 Z
$^{155}\text{Tm}(\alpha) \text{ } ^{151}\text{Ho}$	4578.3	10.3	4572	5	-0.6	3			ORa		71To01 *
	4568.1	10.			0.4	3			ORa		71To01 *
	4570.1	8.			0.2	3					92Ha10 *
$^{155}\text{Yb}(\alpha) \text{ } ^{151}\text{Er}$	5344.1	5.	5338.7	2.1	-1.1	3			GSa		79Ho10
	5336.6	5.			0.4	3			Bka		82Bo04 Z
	5344.2	5.			-1.1	3					87Ka.A
	5331.8	4.			1.7	3			ORa		91To08
	5340.1	4.			-0.3	3			Daa		96Pa01
$^{155}\text{Lu}(\alpha) \text{ } ^{151}\text{Tm}$	5796.9	5.	5802.7	2.6	1.2	5					89Ho12 *
	5797.9	5.			1.0	5			ORa		91To08
	5805.1	5.			-0.5	5			Daa		96Pa01
	5811.2	5.			-1.7	5			Ara		97Da07
$^{155}\text{Lu}^m(\alpha) \text{ } ^{151}\text{Tm}^m$	5723.0	10.	5730.5	2.8	0.7	6					89Ho12
	5727.1	5.			0.7	6			ORa		91To08
	5732.2	5.			-0.3	6			Daa		96Pa01
	5734.2	5.			-0.7	6			Ara		97Da07
$^{155}\text{Lu}^n(\alpha) \text{ } ^{151}\text{Tm}$	7574.9	15.	7584	3	0.2	U					89Ho12 *
	7586.2	5.			-0.5	o			Daa		96Pa01 *
$^{155}\text{Gd}(n, \alpha) \text{ } ^{152}\text{Sm}$	8331	6	8339.1	0.3	1.4	U			McM		69Be17
$^{155}\text{Gd}(p, t) \text{ } ^{153}\text{Gd}$	-6850	7	-6848.16	0.25	0.3	U			McM		73Lo08
	-6853	5			1.0	U			Min		73Oo01
$^{154}\text{Sm}(n, \gamma) \text{ } ^{155}\text{Sm}$	5806.8	0.6	5806.96	0.27	0.3	2					82Ba15 Z
	5807.0	0.3			-0.1	2			ILn		82Sc03 Z
$^{154}\text{Sm}(d, p) \text{ } ^{155}\text{Sm}$	3584	12	3582.39	0.27	-0.1	U			Tal		65Ke09
$^{154}\text{Eu}(n, \gamma) \text{ } ^{155}\text{Eu}$	8151.3	0.4	8151.3	0.4	0.0	1	100	^{155}Eu	ILn		86Pr03
$^{154}\text{Gd}(n, \gamma) \text{ } ^{155}\text{Gd}$	6435.11	0.30	6435.23	0.18	0.4	-			ILn		86Sc25 Z
	6435.29	0.23			-0.3	-			Bdn		06Fi.A
$^{154}\text{Gd}(d, p) \text{ } ^{155}\text{Gd}$	4217	10	4210.66	0.18	-0.6	U			Kop		67Tj01
$^{155}\text{Gd}(d, t) \text{ } ^{154}\text{Gd}$	-190	10	-178.00	0.18	1.2	U			Kop		67Tj01
$^{154}\text{Gd}(n, \gamma) \text{ } ^{155}\text{Gd}$	ave. 6435.22	0.18	6435.23	0.18	0.0	1	100	^{154}Gd			average
$^{155}\text{Ta}(p) \text{ } ^{154}\text{Hf}$	1776	10	1453	15	-32.3	B			Arp		99Uu01 *
	1453	15				3			Jya		07Pa27
$^{155}\text{Nd}(\beta^-) \text{ } ^{155}\text{Pm}$	4222	150	4656	10	2.9	U			Ida		93Gr17
$^{155}\text{Pm}(\beta^-) \text{ } ^{155}\text{Sm}$	3224	30	3250	5	0.9	U			Ida		93Gr17
$^{155}\text{Sm}(\beta^-) \text{ } ^{155}\text{Eu}$	1634	15	1627.0	1.2	-0.5	U					63Kr04 *
	1624	15			0.2	U					65Fu13 *
	1607	25			0.8	U			Ida		93Gr17
$^{155}\text{Eu}(\beta^-) \text{ } ^{155}\text{Gd}$	252	5	252.1	0.9	0.0	U					54Le08
	245	5			1.4	U					58G156
	245	5			1.4	U					59Am16
$^{155}\text{Dy}(\beta^+) \text{ } ^{155}\text{Tb}$	2099	6	2094.5	1.9	-0.7	2					63Pe13 *
	2094	2			0.3	2					80Bu04 *
$^{155}\text{Ho}(\beta^+) \text{ } ^{155}\text{Dy}$	3102	20	3116	17	0.7	1	69	^{155}Ho			72To07 *
$^{155}\text{Lu}^m(\text{IT}) \text{ } ^{155}\text{Lu}$	23.0	6.2	21	4	-0.2	5					96Pa01
	19.9	6.2			0.3	5					97Da07

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{155}\text{Lu}^n(\text{IT})^{155}\text{Lu}$	1781	2		5					96Pa01
* $^{155}\text{Pr-u}$	Represents frequency ratio $^{155}\text{Pr}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.98142559(20)$								WgM124**
* $^{155}\text{Nd-u}$	Represents frequency ratio $^{155}\text{Nd}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.98147230(11)$								WgM124**
* $^{155}\text{Pm-u}$	Represents frequency ratio $^{155}\text{Pm}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.981503965(56)$								WgM124**
* $^{155}\text{Sm-u}$	Represents frequency ratio $^{155}\text{Sm}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.98152610(15)$								WgM124**
* $^{155}\text{Tm-u}$	M-A=-56627(28) keV for mixture gs+m at 41(6) keV								Nub127 **
* $^{155}\text{Tm}(\alpha)^{151}\text{Ho}$	First assigned to $^{156}\text{Tm}^m$ but belonging to ^{155}Tm ground state								94To10 **
* $^{155}\text{Tm}(\alpha)^{151}\text{Ho}$	Doublet from ground state and isomer, less than 5 keV apart								90Po13 **
* $^{155}\text{Lu}(\alpha)^{151}\text{Tm}$	Original value E=5656(6) (Q=5806.1) recalibrated								79Ho10 **
* $^{155}\text{Lu}^n(\alpha)^{151}\text{Tm}$	Original value E=7408(10) recalibrated								81Ho.A **
* $^{155}\text{Lu}^n(\alpha)^{151}\text{Tm}$	Replaced by authors' value for $^{155}\text{Lu}^n(\text{IT})$								AHW **
* $^{155}\text{Ta}(\text{p})^{154}\text{Hf}$	$E_p=1765(10)$ for $(11/2^-)$ state; ground state may be $1/2^+$, slightly lower								99Uu01 **
*	1776 keV proton not observed in coincidence with feeding α								07Pa27 **
* $^{155}\text{Sm}(\beta^-)^{155}\text{Eu}$	$E_{\beta^-}=1530(15)$ $E_{\beta^-}=1520(15)$ respectively, to $5/2^-$ level at 104.334 keV								Ens051 **
* $^{155}\text{Dy}(\beta^+)^{155}\text{Tb}$	$E_{\beta^+}=850(6)$ $845(2)$ respectively, to $5/2^-$ level at 226.918 keV, and other E_{β^+}								Ens051 **
* $^{155}\text{Ho}(\beta^+)^{155}\text{Dy}$	$E_{\beta^+}=1840(20)$ to $3/2^+$ level at 240.196 keV								Ens051 **
$^{156}\text{Pm-u}$	-68883.4	6.9	-68882	4	0.1	1	32	32	^{156}Pm CP1 1.0 12Va02 *
$^{156}\text{Pm}-^{80}\text{Kr}_{1.950}$	94181.7	6.4	94180	4	-0.2	1	39	35	^{156}Pm CP1 1.0 12Va02
$^{156}\text{Pm}-^{86}\text{Kr}_{1.814}$	93269.1	6.8	93270	4	0.1	1	33	33	^{156}Pm CP1 1.0 12Va02
$\text{C}_{12}\text{H}_{12}-^{156}\text{Gd}$	171923	44	171769.1	1.7	-0.9	U			R04 4.0 64De15
$\text{C}_{11}\text{ }^{13}\text{C}\text{H}_{11}-^{156}\text{Gd}$	167384	43	167298.9	1.7	-0.5	U			R04 4.0 64De15
$\text{C}_{10}\text{ }^{13}\text{C}_2\text{H}_{10}-^{156}\text{Gd}$	162810	60	162828.8	1.7	0.1	U			R04 4.0 64De15
$\text{C}_{10}\text{H}_8\text{N}_2-^{156}\text{Gd}$	146661	38	146617.0	1.7	-0.3	U			R04 4.0 64De15
$^{156}\text{Tb-u}$	-75165	40	-75245	4	-2.0	U			GS2 1.0 05Li24 *
$\text{C}_{10}\text{H}_8\text{N}_2-^{156}\text{Dy}$	145130	100	144463.6	1.7	-1.7	U			R04 4.0 64De15
$^{156}\text{Ho-u}$	-70107	122	-70290	60	-1.5	o			GS1 1.0 00Ra23 *
$^{156}\text{Ho}^n\text{-u}$	-70107	30				2			GS2 1.0 05Li24 *
$^{156}\text{Er-u}$	-68907	30	-68933	26	-0.9	1	78	78	^{156}Er GS2 1.0 05Li24
$^{156}\text{Tm-u}$	-61044	30	-61008	16	1.2	U			GS2 1.0 05Li24
$^{156}\text{Yb-u}$	-57202	30	-57175	11	0.9	U			GS2 1.0 05Li24
$^{156}\text{Gd}\text{ }^{35}\text{Cl}-^{154}\text{Gd}\text{ }^{37}\text{Cl}$	4199	5	4207.26	0.22	0.4	U			H12 4.0 64Ba15
	4206	10			0.1	U			H21 2.5 70Ma05
	4204.8	1.4			0.7	U			H25 2.5 72Ba08
	4203.0	1.0			1.7	U			M21 2.5 75Ka25
$^{156}\text{Dy}-^{156}\text{Gd}$	2153.47	0.11	2153.47	0.11	0.0	1	100	99	^{156}Dy SH1 1.0 11E105
$^{156}\text{Gd}-^{139}\text{La}\text{O}$	20618	71	20860.4	2.5	0.9	U			R05 4.0 65De13
$^{156}\text{Gd}-^{155}\text{Gd}$	-584	33	-499.23	0.07	0.6	U			R04 4.0 64De15
$^{156}\text{Gd}\text{O}-\text{C}_{15}$	-82946.5	5.8	-82954.1	1.7	-0.9	o			TG1 1.5 09Ke.A
	-82945.6	3.6			-1.6	U			TG1 1.5 11Ke03
$^{156}\text{Er}(\alpha)^{152}\text{Dy}$	3109.9	70.	3483	25	5.3	C			95Ka.A
$^{156}\text{Tm}(\alpha)^{152}\text{Ho}$	4341.6	10.	4345	7	0.4	-			ORa 71To10
	4345.6	10.			0.0	-			81Ga36
ave.	4344	7			0.2	1	98	94	^{156}Tm average
$^{156}\text{Tm}^m(\alpha)^{152}\text{Ho}$	4737.5	10.	*			F			ORa 71To01 *
$^{156}\text{Yb}(\alpha)^{152}\text{Er}$	4813.6	10.	4811	4	-0.3	-			77Ha48
	4809.6	10.			0.1	-			GSa 79Ho10
	4810.6	4.			0.0	-			Daa 96Pa01
ave.	4811	4			-0.1	1	100	97	^{156}Yb average
$^{156}\text{Lu}(\alpha)^{152}\text{Tm}$	5593.7	10.	5596	3	0.2	U			GSa 79Ho10
	5592.7	5.			0.6	2			DbA 92Po14
	5597.9	4.			-0.5	2			Daa 96Pa01
$^{156}\text{Lu}^m(\alpha)^{152}\text{Tm}^m$	5713.7	5.	5711.4	2.6	-0.4	3			GSa 79Ho10 Z
	5709.7	5.			0.4	3			DbA 92Po14
	5709.7	8.			0.2	3			92Ha10
	5711.7	4.			-0.1	3			Daa 96Pa01
$^{156}\text{Hf}(\alpha)^{152}\text{Yb}$	6033.0	10.	6028	4	-0.4	-			GSa 79Ho10
	6027.9	4.			0.2	-			Daa 96Pa01
ave.	6028	4			0.0	1	100	100	^{156}Hf average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{156}\text{Hf}^m(\alpha)^{152}\text{Yb}$	8009.8	15.	7987	4	-1.5	U			GSa		81Ho.A	
	7987.2	4.			0.1	o			Daa		96Pa01 *	
$^{154}\text{Sm}(\text{t,p})^{156}\text{Sm}$	4556	25	4569	9	0.5	1	14	14	^{156}Sm	Ald	66Bj01	
$^{154}\text{Eu}(\text{t,p})^{156}\text{Eu}$	6003	10	6009	5	0.6	1	28	28	^{156}Eu	LAL	84La06 *	
$^{154}\text{Gd}(\text{t,p})^{156}\text{Gd}$	6495.1	3.6	6489.78	0.19	-1.5	U			McM		89Lo07	
$^{156}\text{Gd}(\text{p,t})^{154}\text{Gd}$	-6490	7	-6489.78	0.19	0.0	U			McM		73Lo08	
	-6490	5			0.0	U			Min		73Oo01	
$^{155}\text{Gd}(\text{n},\gamma)^{156}\text{Gd}$	8536.8	0.5	8536.35	0.07	-0.9	U			ILn		82Ba28	
	8536.39	0.07			-0.6	-			MMn		82Is05 Z	
	8536.04	0.19			1.6	-			Bdn		06Fi.A	
$^{155}\text{Gd}(\text{d,p})^{156}\text{Gd}$	6319	10	6311.78	0.07	-0.7	U			Kop		67Tj01	
$^{156}\text{Gd}(\text{d,t})^{155}\text{Gd}$	-2287	10	-2279.12	0.07	0.8	U			Kop		67Tj01	
$^{155}\text{Gd}(\text{n},\gamma)^{156}\text{Gd}$	ave.	8536.35	0.07	8536.35	0.07	0.0	1	100	50	^{156}Gd	average	
$^{155}\text{Gd}(\alpha,\text{t})^{156}\text{Tb}-^{158}\text{Gd}()^{159}\text{Tb}$		-821.9	3.6	-822	4	0.0	1	100	100	^{156}Tb	McM	75Bu02
$^{156}\text{Dy}(\text{d,t})^{155}\text{Dy}$	-3184	10	-3187	10	-0.3	1	92	92	^{155}Dy	Kop	70Gr46	
$^{156}\text{Ta}(\text{p})^{155}\text{Hf}$	1028.6	13.	1020	4	-0.7	o			Dap		92Pa05	
	1013.6	5.			1.2	o			Dap		96Pa01	
	1017.9	5.			0.4	3			Dap		11Da12	
$^{156}\text{Ta}^m(\text{p})^{155}\text{Hf}$	1110.2	12.	1114	7	0.3	3			Dap		93Li34	
	1115.2	8.			-0.2	3			Dap		96Pa01	
$^{156}\text{Nd}(\beta^-)^{156}\text{Pm}$	3690	200				2			Kur		02Sh.B *	
$^{156}\text{Pm}(\beta^-)^{156}\text{Sm}$	5155	35	5199	10	1.3	U			Stu		90He11	
	5110	100			0.9	U			Kur		02Sh.B	
$^{156}\text{Sm}(\beta^-)^{156}\text{Eu}$	721	10	722	8	0.1	-					63Gu04 *	
	721	15			0.1	-					65Wi08 *	
	ave.	721	8		0.2	1	90	86	^{156}Sm		average	
$^{156}\text{Eu}(\beta^-)^{156}\text{Gd}$	2430	10	2449	5	1.9	-					62Ew01	
	2460	10			-1.1	-					63Th02	
	2450	15			-0.1	-					64Pe17	
	2478	20			-1.4	U					67Va23	
	ave.	2446	6		0.5	1	68	68	^{156}Eu		average	
$^{156}\text{Tb}(\beta^+)^{156}\text{Gd}$	3570	50	2444	4	-22.5	B					70Ag02 *	
$^{156}\text{Ho}(\beta^+)^{156}\text{Dy}$	4400	400	5050	60	1.6	U					76Gr20 *	
	5050	90			0.0	o					02Iz01	
	5050	60				2					04Iz02 *	
$^{156}\text{Er}(\beta^+)^{156}\text{Ho}$	1670	70	1270	60	-5.7	B					82Vy06 *	
$^{156}\text{Tm}(\beta^+)^{156}\text{Er}$	7458	50	7381	27	-1.5	1	29	22	^{156}Er	Dbn	94Po26 *	
	7390	100			-0.1	U					95Ga.A	
$^{156}\text{Hf}^m(\text{IT})^{156}\text{Hf}$	1959	1				2					96Pa01	
* ^{156}Pm -u	Represents frequency ratio $^{156}\text{Pm}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.975190689(43)$										WgM124**	
* ^{156}Tb -u	$M-A = -69968(32)$ keV for mixture $gs+m+n$ at 54(3) and 88.4 keV										Nub127 **	
* ^{156}Ho -u	$M-A = -65230(100)$ keV for mixture $gs+m+n$ at 52.4 and 170(70) keV										Nub127 **	
* $^{156}\text{Ho}^n$ -u	Assuming high spin isomer is favored										GAu **	
* $^{156}\text{Tm}^m(\alpha)^{152}\text{Ho}$	F : originally $E_\alpha = 4460(10)$ to $^{152}\text{Ho}^m$ at 160(1), reassigned to ^{155}Tm										94To10 **	
* $^{156}\text{Hf}^m(\alpha)^{152}\text{Yb}$	Replaced by authors' value for $^{156}\text{Hf}^m(\text{IT})$										AHW **	
* $^{154}\text{Eu}(\text{t,p})^{156}\text{Eu}$	$Q = 5569(10)$ to 3^- level at 434.23 keV										91Ba06 **	
* $^{156}\text{Nd}(\beta^-)^{156}\text{Pm}$	Trends from Mass Surface TMS suggest ^{156}Nd 200 less bound										GAu **	
* $^{156}\text{Sm}(\beta^-)^{156}\text{Eu}$	$E_{\beta^-} = 430(10)$ 430(15) respectively, to 1^+ level at 291.3037 keV										Ens038 **	
* $^{156}\text{Tb}(\beta^+)^{156}\text{Gd}$	$E_{\beta^+} = 2640(50)$ from $^{156}\text{Tb}^n$ at 88.4 to ground state										Nub127 **	
* $^{156}\text{Ho}(\beta^+)^{156}\text{Dy}$	$E_{\beta^+} = 1800(50)$ to levels around 1600										Ens038 **	
* $^{156}\text{Ho}(\beta^+)^{156}\text{Dy}$	Original error 20 is for statistics only, increased by evaluator										GAu **	
* $^{156}\text{Er}(\beta^+)^{156}\text{Ho}$	$p^+ = 0.0036(0.0017)$ to $(0^-, 1^-, 2^-)$ level at 82.1 keV, reanalyzed										Ens038 **	
* $^{156}\text{Tm}(\beta^+)^{156}\text{Er}$	$E_{\beta^+} = 6091(50)$ to 2^+ level at 344.51 keV										Ens038 **	
^{157}Nd -u	-60614	47	-60614	27	0.0	1	32	32	^{157}Nd	CP1	1.0	12Va02 *
$^{157}\text{Nd}-^{80}\text{Kr}_{1.963}$	103537	46	103536	27	0.0	1	34	34	^{157}Nd	CP1	1.0	12Va02
$^{157}\text{Nd}-^{86}\text{Kr}_{1.826}$	102610	46	102611	27	0.0	1	34	34	^{157}Nd	CP1	1.0	12Va02
^{157}Pm -u	-66880	13	-66879	8	0.1	1	33	33	^{157}Pm	CP1	1.0	12Va02 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{157}\text{Pm}-^{80}\text{Kr}_{1.963}$	97273	13	97271	8	-0.1	1	34	33 ^{157}Pm	CP1	1.0	12Va02
$^{157}\text{Pm}-^{86}\text{Kr}_{1.826}$	96346	13	96346	8	0.0	1	33	33 ^{157}Pm	CP1	1.0	12Va02
$^{157}\text{Sm-u}$	-71582.2	8.3	-71581	5	0.1	1	33	33 ^{157}Sm	CP1	1.0	12Va02 *
$^{157}\text{Sm}-^{80}\text{Kr}_{1.963}$	92570.0	8.0	92569	5	-0.2	1	36	34 ^{157}Sm	CP1	1.0	12Va02
$^{157}\text{Sm}-^{86}\text{Kr}_{1.826}$	91643.0	8.3	91644	5	0.1	1	33	33 ^{157}Sm	CP1	1.0	12Va02
$\text{C}_{10}\text{H}_9\text{N}_2-^{157}\text{Gd}$	152720	60	152604.7	1.7	-0.5	U			R04	4.0	64De15
$\text{C}_9\text{ }^{13}\text{C}\text{H}_8\text{N}_2-^{157}\text{Gd}$	148170	70	148134.5	1.7	-0.1	U			R04	4.0	64De15
$\text{C}_{10}\text{H}_5\text{O}_2-^{157}\text{Gd}$	105080	60	104985.8	1.7	-0.4	U			R04	4.0	64De15
$^{157}\text{Ho-u}$	-71724	30	-71746	25	-0.7	1	70	70 ^{157}Ho	GS2	1.0	05Li24
$^{157}\text{Er-u}$	-68084	30	-68051	27	1.1	1	80	80 ^{157}Er	GS2	1.0	05Li24
$^{157}\text{Tm-u}$	-63027	30	-63056	28	-1.0	1	88	88 ^{157}Tm	GS2	1.0	05Li24
$^{157}\text{Yb-u}$	-57389	30	-57355	12	1.1	U			GS2	1.0	05Li24
$^{157}\text{Lu-u}$	-49842	31	-49873	16	-1.0	1	26	26 ^{157}Lu	GS2	1.0	05Li24 *
$^{157}\text{Gd }^{35}\text{Cl}-^{155}\text{Gd }^{37}\text{Cl}$	4318	4	4288.18	0.19	-1.9	U			H12	4.0	64Ba15
	4287	3			0.2	U			H21	2.5	70Ma05
	4289.0	0.7			-0.5	U			M21	2.5	75Ka25
	4288.83	0.66			-0.4	U			H41	2.5	85Dy04
$^{157}\text{Gd}-^{156}\text{Gd}$	1860	60	1837.33	0.16	-0.1	U			R04	4.0	64De15
$^{157}\text{Gd O}-\text{C}_{15}$	-81114.2	5.4	-81116.8	1.7	-0.3	o			TG1	1.5	09Ke.A
	-81113.6	3.3			-0.6	1	12	12 ^{157}Gd	TG1	1.5	11Ke03
$^{157}\text{Yb}(\alpha)^{153}\text{Er}$	4622.0	7.	4622	6	0.0	-					77Ha48
	4623.0	10.			-0.1	-			GSa		79Ho10
	ave.	4622	6		-0.1	1	99	96 ^{157}Yb			average
$^{157}\text{Lu}(\alpha)^{153}\text{Tm}$	5097.2	5.	5107.7	2.9	2.1	o			DbA		91Le15 *
	5096.2	20.			0.6	U			Bka		91To09 *
	5111.5	5.			-0.8	o			DbA		92Po14 *
$^{157}\text{Lu}^m(\alpha)^{153}\text{Tm}$	5128.9	10.	5128.5	2.0	0.0	U			IRa		79Al16 Z
	5131.8	5.			-0.6	-			GSa		79Ho10 Z
	5133.7	5.			-1.0	-			ORa		83To01 Z
	5128.9	5.			-0.1	o			DbA		91Le15
	5118.7	5.			1.9	-			Bka		91To09
	5125.8	6.			0.4	-					92Ha10
	5132.0	5.			-0.7	-			DbA		92Po14
	5127.9	4.			0.2	-			Daa		96Pa01
	ave.	5128.3	2.1		0.1	1	100	67 $^{157}\text{Lu}^m$			average
$^{157}\text{Hf}(\alpha)^{153}\text{Yb}$	5869.4	10.	5880	3	1.0	3					73Ea01 Z
	5884.1	5.			-0.8	3			GSa		79Ho10 Z
	5879.1	4.			0.2	3			Daa		96Pa01
$^{157}\text{Ta}(\alpha)^{153}\text{Lu}^m$	6277.2	4.	6275	8	-0.6	o			Ara		97Ir01 *
$^{157}\text{Ta}^m(\alpha)^{153}\text{Lu}$	6381.9	10.	6377	4	-0.5	3			GSa		79Ho10
	6375.8	4.			0.2	3			Daa		96Pa01 *
$^{157}\text{Ta}^n(\alpha)^{153}\text{Lu}$	7946.9	8.	7948	8	0.0	o			Daa		96Pa01 *
$^{155}\text{Gd}(t,p)^{157}\text{Gd}$	6417.8	2.9	6414.41	0.16	-1.2	U			McM		89Lo07
$^{157}\text{Gd}(p,t)^{155}\text{Gd}$	-6414	7	-6414.41	0.16	-0.1	U			McM		73Lo08
	-6417	5			0.5	U			Min		73Oo01
$^{156}\text{Gd}(n,\gamma)^{157}\text{Gd}$	6359.6	0.8	6359.86	0.15	0.3	U					70Bo29
	6360	1			-0.1	U					71Gr42
	6359.80	0.15			0.4	o			ILn		87Sp.A Z
	6359.86	0.15			0.0	1	99	54 ^{156}Gd	ILn		03Bo25
$^{157}\text{Gd}(\gamma,n)^{156}\text{Gd}$	-6350	80	-6359.86	0.15	-0.1	U			Phi		60Ge01
$^{156}\text{Gd}(d,p)^{157}\text{Gd}$	4136	10	4135.29	0.15	-0.1	U			Kop		67Tj01
$^{157}\text{Gd}(d,t)^{156}\text{Gd}$	-112	10	-102.62	0.15	0.9	U			Kop		67Tj01
$^{156}\text{Gd}(\alpha,t)^{157}\text{Tb}-^{158}\text{Gd}(\alpha)^{159}\text{Tb}$	-616.2	2.0	-614.3	0.8	1.0	1	17	12 ^{159}Tb	McM		75Bu02
$^{156}\text{Dy}(d,p)^{157}\text{Dy}$	4748	10	4742	5	-0.6	-			Tal		68Be.A
	4753	10			-1.1	-			Kop		70Gr46
	ave.	4750	7		-1.2	1	53	52 ^{157}Dy			average
$^{157}\text{Ta}(p)^{156}\text{Hf}$	925.0	17.	935	10	0.6	o			Dap		96Pa01
	933.0	7.			0.2	o			Ara		97Ir01 *
$^{157}\text{Pm}(\beta^-)^{157}\text{Sm}$	4360	100	4381	8	0.2	U			Kur		02Sh.B

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{157}\text{Sm}(\beta^-)^{157}\text{Eu}$	2700	200	2781	6	0.4	U			73Ka23 *
	2734	50			0.9	U	Ida		93Gr17
$^{157}\text{Eu}(\beta^-)^{157}\text{Gd}$	1350	20	1365	4	0.7	U			64Sh21 *
	1370	20			-0.3	U			66Fu05 *
$^{157}\text{Tb}(\epsilon)^{157}\text{Gd}$	62.4	0.6	60.04	0.30	-3.9	B			67Na08 *
	62.2	0.6			-3.6	B			83Be42 *
	60.0	0.3			0.1	1	98	96 ^{157}Tb	92Ra18
$^{157}\text{Ho}(\beta^+)^{157}\text{Dy}$	2540	50	2593	24	1.1	1	23	22 ^{157}Ho	72To05 *
$^{157}\text{Er}(\beta^+)^{157}\text{Ho}$	3470	80	3440	30	-0.4	1	17	9 ^{157}Er	75AlA
	3805	100			-3.6	B			Dbn 94Po26 *
$^{157}\text{Tm}(\beta^+)^{157}\text{Er}$	4480	100	4650	30	1.7	-			IRS 93Al03
	4482	100			1.7	-			Dbn 94Po26
	ave.	4480	70		2.4	1	23	12 ^{157}Tm	average
$^{157}\text{Yb}(\beta^+)^{157}\text{Tm}$	5074	100	5311	28	2.4	U			Dbn 94Po26
$^{157}\text{Lu}^m(\text{IT})^{157}\text{Lu}$	32	2	20.9	2.0	-5.6	B			Dbn 91Le15
	21	2			-0.1	1	100	74 ^{157}Lu	Dbn 92Po14 *
$^{157}\text{Ta}^m(\text{IT})^{157}\text{Ta}$	22	5				3			97Ir01
$^{157}\text{Ta}^n(\text{IT})^{157}\text{Ta}^m$	1571	7				3			Daa 96Pa01
* $^{157}\text{Nd-u}$	Represents frequency ratio $^{157}\text{Nd}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.96892546(29)$								
* $^{157}\text{Pm-u}$	Represents frequency ratio $^{157}\text{Pm}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.968964141(81)$								
* $^{157}\text{Sm-u}$	Represents frequency ratio $^{157}\text{Sm}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.968993178(51)$								
* $^{157}\text{Lu-u}$	$M-A = -46417(28)$ keV for mixture gs+m at 20.9(2.0) keV								
* $^{157}\text{Lu}(\alpha)^{153}\text{Tm}$	$E_\alpha = 4925(5)$ to $^{153}\text{Tm}^m$ at 43.2(0.2) keV								
* $^{157}\text{Lu}(\alpha)^{153}\text{Tm}$	$E_\alpha = 4924(20)$ to $^{153}\text{Tm}^m$ at 43.2(0.2) keV								
* $^{157}\text{Lu}(\alpha)^{153}\text{Tm}$	$E_\alpha = 4939(5)$ to $^{153}\text{Tm}^m$ at 43.2(0.2) keV; replaced by $^{157}\text{Lu}^m(\text{IT})$								
* $^{157}\text{Ta}(\alpha)^{153}\text{Lu}^m$	Replaced by $^{153}\text{Lu}^m(\text{IT})$								
* $^{157}\text{Ta}^m(\alpha)^{153}\text{Lu}$	Reassigned								
* $^{157}\text{Ta}^n(\alpha)^{153}\text{Lu}$	Replaced by authors' value for $^{157}\text{Ta}^n(\text{IT})$								
* $^{157}\text{Ta}(\text{p})^{156}\text{Hf}$	Use instead $^{157}\text{Ta}^m(\text{IT})$								
* $^{157}\text{Sm}(\beta^-)^{157}\text{Eu}$	$E_\beta = 2400(200)$ to $5/2^-$ level at 197.863 and $3/2^+$ at 394.334 keV								
* $^{157}\text{Eu}(\beta^-)^{157}\text{Gd}$	$E_\beta = 870(30)$ 910(20) respectively, to $3/2^+$ level at 474.629 keV, and other E_β^-								
* $^{157}\text{Tb}(\epsilon)^{157}\text{Gd}$	LK=2.65(0.20); original value 66(6) recalculated								
* $^{157}\text{Tb}(\epsilon)^{157}\text{Gd}$	LK=2.69(0.20); original value 62.9(0.7) recalculated								
* $^{157}\text{Ho}(\beta^+)^{157}\text{Dy}$	$E_{\beta^+} = 1180(50)$ to $5/2^-$ level at 341.118 keV								
* $^{157}\text{Er}(\beta^+)^{157}\text{Ho}$	$E_{\beta^+} = 2525(100)$ to ground state yielding 3547(100), rather 24% to $3/2^+$								
*	level at 174.55 keV, 15% to $5/2^-$ at 391.32 keV -> +258 keV								
* $^{157}\text{Lu}^m(\text{IT})^{157}\text{Lu}$	Derived from $^{157}\text{Lu}^m(\alpha)^{-157}\text{Lu}(\alpha)$ difference								
$^{158}\text{Pm-u}$	-63436	25	-63435	14	0.0	1	33	33 ^{158}Pm	CP1 1.0 12Va02 *
$^{158}\text{Pm}-^{80}\text{Kr}_{1.975}$	101720	25	101718	14	-0.1	1	33	33 ^{158}Pm	CP1 1.0 12Va02
$^{158}\text{Pm}-^{86}\text{Kr}_{1.837}$	100773	25	100773	14	0.0	1	33	33 ^{158}Pm	CP1 1.0 12Va02
$^{158}\text{Sm-u}$	-70049.2	9.5	-70049	5	0.0	1	31	31 ^{158}Sm	CP1 1.0 12Va02 *
$^{158}\text{Sm}-^{80}\text{Kr}_{1.975}$	95106.5	9.1	95104	5	-0.2	1	34	32 ^{158}Sm	CP1 1.0 12Va02
$^{158}\text{Sm}-^{86}\text{Kr}_{1.837}$	94159.3	9.4	94159	5	0.0	1	31	31 ^{158}Sm	CP1 1.0 12Va02
$^{158}\text{Eu-u}$	-72208	25	-72201	11	0.3	1	19	19 ^{158}Eu	CP1 1.0 12Va02 *
$^{158}\text{Eu}-^{80}\text{Kr}_{1.975}$	92949	25	92952	11	0.1	1	20	19 ^{158}Eu	CP1 1.0 12Va02
$^{158}\text{Eu}-^{86}\text{Kr}_{1.837}$	92001	25	92007	11	0.2	1	19	19 ^{158}Eu	CP1 1.0 12Va02
$\text{C}_{10}\text{H}_6\text{O}_2-^{158}\text{Gd}$	112444	33	112667.1	1.7	1.7	U		R04	4.0 64De15
$\text{C}_{10}\text{H}_6\text{O}_2-^{158}\text{Dy}$	112870	100	112364	3	-1.3	U		R04	4.0 64De15
$^{158}\text{Ho-u}$	-71101	67	-71054	29	0.7	R		GS2	1.0 05Li24 *
$^{158}\text{Er-u}$	-70220	110	-70107	27	1.0	U		GS1	1.0 00Ra23
	-70107	30			0.0	1	81	81 ^{158}Er	GS2 1.0 05Li24
$^{158}\text{Tm-u}$	-63080	110	-63020	27	0.5	U		GS1	1.0 00Ra23
	-63020	30			0.0	1	81	81 ^{158}Tm	GS2 1.0 05Li24
$^{158}\text{Yb}-^{142}\text{Sm}_{1.113}$	34252	22	34248	9	-0.2	1	16	14 ^{158}Yb	MA7 1.0 01Bo59
$^{158}\text{Lu-u}$	-50720	30	-50684	16	1.2	R		GS2	1.0 05Li24
$^{158}\text{Gd}-^{35}\text{Cl}-^{156}\text{Gd}-^{37}\text{Cl}$	4956	4	4931.19	0.19	-1.6	U		H12	4.0 64Ba15
	4929	3			0.3	U		H21	2.5 70Ma05
	4926.2	1.4			1.4	U		H25	2.5 72Ba08
	4930.8	0.7			0.2	U		M21	2.5 75Ka25
	4930.13	1.36			0.3	U		H41	2.5 85Dy04

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{158}\text{Dy } ^{35}\text{Cl}-^{156}\text{Dy } ^{37}\text{Cl}$	3081.4	3.3	3081.2	2.7	0.0	U			H25	2.5	72Ba08
$^{158}\text{Gd}-^{157}\text{Gd}$	392	48	143.78	0.07	-1.3	U			R04	4.0	64De15
$^{158}\text{Gd O}-\text{C}_{15}$	-80968.3	5.4	-80973.0	1.7	-0.6	o			TG1	1.5	09Ke.A
	-80967.8	3.2			-1.1	1	13	13	^{158}Gd	1.5	11Ke03
$^{158}\text{Gd O}-\text{C}_{14}$	-80964.7	8.2			-0.7	U			TG1	1.5	11Ke03
$^{158}\text{Yb}(\alpha)^{154}\text{Er}$	4174.9	10.	4170	7	-0.5	-					77Ha48
	4164.6	12.			0.4	-					92Ha10
	ave.	4171	8		-0.1	1	80	71	^{158}Yb		average
$^{158}\text{Lu}(\alpha)^{154}\text{Tm}$	4792.2	10.	4790	5	-0.2	3			IRa		79A116 Z
	4789.5	5.			0.1	3			ORa		83To01 Z
$^{158}\text{Hf}(\alpha)^{154}\text{Yb}$	5406.0	5.	5404.7	2.7	-0.2	-			GSa		79Ho10 Z
	5401.4	5.			0.7	-			ORa		83To01 Z
	5406.1	4.			-0.3	-			Daa		96Pa01
	ave.	5404.7	2.7		0.0	1	100	100	^{158}Hf		average
$^{158}\text{Ta}(\alpha)^{154}\text{Lu}$	6124.4	8.	6124	4	-0.1	9			Daa		96Pa01
	6123.3	5.			0.1	9			Ara		97Da07
$^{158}\text{Ta}^m(\alpha)^{154}\text{Lu}^m$	6208.5	6.	6205.0	2.8	-0.6	10			GSa		79Ho10
	6203.4	4.			0.4	10			Daa		96Pa01
	6205.4	5.			-0.1	10			Ara		97Da07
$^{158}\text{W}(\alpha)^{154}\text{Hf}$	6600.4	30.	6613	3	0.4	U			GSa		81Ho10 *
	6609.7	30.			0.1	U			Daa		96Pa01
	6612.7	3.				3			Ara		00Ma95
$^{158}\text{W}^m(\alpha)^{154}\text{Hf}$	8495.5	30.	8502	7	0.2	U			GSa		89Ho12
	8506.8	24.			-0.2	U			Daa		96Pa01
	8501.6	7.				3			Ara		00Ma95
$^{158}\text{Gd}(\text{p,t})^{156}\text{Gd}$	-5818	5	-5815.45	0.16	0.5	U			Min		73Oo01
$^{158}\text{Dy}(\text{p,t})^{156}\text{Dy}$	-7535	15	-7538.7	2.5	-0.2	U			Pri		77Ko04
$^{158}\text{Gd}(\text{t},\alpha)^{157}\text{Eu}-^{156}\text{Gd}(\alpha)^{155}\text{Eu}$	-512	5	-513	4	-0.3	1	70	66	^{157}Eu		LAL 79Bu05
$^{157}\text{Gd}(\text{n},\gamma)^{158}\text{Gd}$	7937.39	0.07	7937.39	0.06	0.0	-			MMn		82Is05 Z
	7937.39	0.17			0.0	-			Bdn		06Fi.A
$^{157}\text{Gd}(\text{d,p})^{158}\text{Gd}$	5724	10	5712.82	0.06	-1.1	U			Kop		67Tj01
	5706	5			1.4	U			Tal		71Sh04
$^{158}\text{Gd}(\text{d,t})^{157}\text{Gd}$	-1688	10	-1680.15	0.06	0.8	U			Kop		67Tj01
$^{157}\text{Gd}(\text{n},\gamma)^{158}\text{Gd}$	ave.	7937.39	0.06		0.0	1	100	63	^{158}Gd		average
$^{158}\text{Gd}(\text{d,t})^{157}\text{Gd}-^{159}\text{Tb}(\alpha)^{158}\text{Tb}$	195.0	1.5	195.6	0.6	0.4	1	18	18	^{158}Tb		McM 84Bu14
$^{157}\text{Gd}(\alpha,\text{t})^{158}\text{Tb}-^{158}\text{Gd}(\alpha)^{159}\text{Tb}$	-198.3	1.0	-195.6	0.6	2.7	o			McM		75Bu02
	-196.6	1.0			1.0	1	41	40	^{158}Tb		McM 84Bu14
$^{158}\text{Tb}(\text{p,d})^{157}\text{Tb}$	-4560.3	4.2	-4553.9	1.0	1.5	U			Pri		85A102 *
$^{158}\text{Dy}(\text{d,t})^{157}\text{Dy}$	-2804	10	-2797	5	0.7	-			Tal		68Be.A
	-2804	10			0.7	-			Kop		70Gr46
	ave.	-2804	7		1.0	1	53	47	^{157}Dy		average
$^{158}\text{Pm}(\beta^-)^{158}\text{Sm}$	6120	100	6161	14	0.4	o			Kur		02Sh.A
	6085	80			1.0	o			Kur		07Ha57
	6080	80			1.0	U			Kur		10Ha.A
$^{158}\text{Sm}(\beta^-)^{158}\text{Eu}$	1999	15	2005	10	0.4	1	48	42	^{158}Eu		Ida 93Gr17
$^{158}\text{Eu}(\beta^-)^{158}\text{Gd}$	3550	120	3434	10	-1.0	U					65Sc19 *
	3440	100			-0.1	U					66Da06 *
$^{158}\text{Tb}(\varepsilon)^{158}\text{Gd}$	1237.542	0.018	1219.0	1.0	*****	F					83Ra25 *
	1220	13			-0.1	U					87Br33
	1222.1	3.			-1.0	U					85Vo13 *
$^{158}\text{Tb}(\beta^-)^{158}\text{Dy}$	952	10	936.2	2.5	-1.6	U					68Sc04 *
	933	6			0.5	1	18	15	^{158}Dy		85Vo03 *
$^{158}\text{Ho}(\beta^+)^{158}\text{Dy}$	4350	100	4220	27	-1.3	U					61Bo24 *
	4230	30			-0.3	2					68Ab14 *
$^{158}\text{Er}(\beta^+)^{158}\text{Ho}$	1710	40	880	40	-20.7	F					82Vy06 *
$^{158}\text{Tm}(\beta^+)^{158}\text{Er}$	6530	100	6600	30	0.7	-			IRS		93A103
	6624	60			-0.4	-			Dbn		94Po26 *
	ave.	6600	50		0.0	1	37	19	^{158}Er		average
$^{158}\text{Lu}(\varepsilon)^{158}\text{Yb}$	8960	200	8798	17	-0.8	U					95Ga.A
* $^{158}\text{Pm-u}$	Represents frequency ratio $^{158}\text{Pm}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.96280782(15)$										
* $^{158}\text{Sm-u}$	Represents frequency ratio $^{158}\text{Sm}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.962848141(58)$										
* $^{158}\text{Eu-u}$	Represents frequency ratio $^{158}\text{Eu}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.96286130(15)$										
* $^{158}\text{Ho-u}$	M-A=-66148(29) keV for mixture gs+m+n at 67.199 and 180#70 keV										
* $^{158}\text{W}(\alpha)^{154}\text{Hf}$	Original value E=6450(30) (Q=6617.8) recalibrated to E=6433(30) keV										
* $^{158}\text{Tb}(\text{p,d})^{157}\text{Tb}$	Q-Q($^{158}\text{Gd}(\text{p,d})$)=1152.5(4.2) keV										

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference			
* ¹⁵⁸ Eu(β^-) ¹⁵⁸ Gd	$E_{\beta^-}=2520(120)$ 2430(100) respectively, to 2^- level at 1023.6974 keV								Ens043 **			
*	and 3^- level at 1041.6376 keV, and other E_{β^-}								Ens043 **			
* ¹⁵⁸ Tb(ϵ) ¹⁵⁸ Gd	pK=0.00009(2) to 2^+ level at 1187.143, recalculated Q								Ens043 **			
*	F : pK<0.00002								87Br33 **			
* ¹⁵⁸ Tb(ϵ) ¹⁵⁸ Gd	pL=0.689(0.01) to 2^+ level at 1187.143 keV, recalculated Q								Ens043 **			
* ¹⁵⁸ Tb(β^-) ¹⁵⁸ Dy	$E_{\beta^-}=853(10)$ 834(6) respectively, to 2^+ level at 98.9180 keV								Ens043 **			
* ¹⁵⁸ Ho(β^+) ¹⁵⁸ Dy	$E_{\beta^+}=780(80)$ to 2436–2605 levels; originally assigned to ¹⁵⁸ Er(β^+);								Ens043 **			
*	reinterpreted by evaluator								AHW **			
* ¹⁵⁸ Ho(β^+) ¹⁵⁸ Dy	$E_{\beta^+}=2890(20)$, 700(60) to 317.139–637.712 and 2436.52–2605.96 levels, and								Ens043 **			
*	$E_{\beta^+}=1300(30)$, 1850(25) keV from ¹⁵⁸ Ho ^m at 67.199 to 1920.43–1940.75								Nub127 **			
*	and 1441.75 levels; $E_{\beta^+}=700(60)$ was originally assigned to ¹⁵⁸ Er(β^+);								68Ab14 **			
*	reinterpreted by evaluator								AHW **			
* ¹⁵⁸ Er(β^+) ¹⁵⁸ Ho	$p^+ = 0.3(0.1)$ from annih. γ coinc. to 146.90 level								96Go06 **			
*	F : Q<1550 from upper limit on p^+								75Bu.A **			
* ¹⁵⁸ Tm(β^+) ¹⁵⁸ Er	$E_{\beta^+}=5410(60)$ to 2^+ level at 192.15 keV								Ens07a **			
¹⁵⁹ Pm-u	-60715	18	-60713	11	0.1	1	36	36 ¹⁵⁹ Pm	CP1	1.0	12Va02	*
¹⁵⁹ Pm- ⁸⁰ Kr _{1.988}	105529	19	105527	11	-0.1	1	32	32 ¹⁵⁹ Pm	CP1	1.0	12Va02	
¹⁵⁹ Pm- ⁸⁶ Kr _{1.849}	104567	19	104567	11	0.0	1	32	32 ¹⁵⁹ Pm	CP1	1.0	12Va02	
¹⁵⁹ Sm-u	-66784	11	-66783	6	0.1	1	34	34 ¹⁵⁹ Sm	CP1	1.0	12Va02	*
¹⁵⁹ Sm- ⁸⁰ Kr _{1.988}	99459	11	99458	6	-0.1	1	34	33 ¹⁵⁹ Sm	CP1	1.0	12Va02	
¹⁵⁹ Sm- ⁸⁶ Kr _{1.849}	98498	11	98498	6	0.0	1	34	34 ¹⁵⁹ Sm	CP1	1.0	12Va02	
¹⁵⁹ Eu-u	-70899	10	-70900	5	-0.1	1	22	22 ¹⁵⁹ Eu	CP1	1.0	12Va02	*
¹⁵⁹ Eu- ⁸⁰ Kr _{1.988}	95344	10	95340	5	-0.4	1	23	21 ¹⁵⁹ Eu	CP1	1.0	12Va02	
¹⁵⁹ Eu- ⁸⁶ Kr _{1.849}	94382	10	94381	5	-0.1	1	22	22 ¹⁵⁹ Eu	CP1	1.0	12Va02	
C ₉ ¹³ C H ₆ O ₂ - ¹⁵⁹ Tb	114840	50	114779.6	1.9	-0.3	U			R04	4.0	64De15	
C ₁₀ H ₇ O ₂ - ¹⁵⁹ Tb	119238	25	119249.8	1.9	0.1	U			R04	4.0	64De15	
¹⁵⁹ Dy-u	-74285	30	-74253.0	2.2	1.1	U			GS2	1.0	05Li24	
¹⁵⁹ Ho-u	-72365	71	-72280	4	1.2	U			GS2	1.0	05Li24	*
¹⁵⁹ Er-u	-69290	30	-69308	4	-0.6	U			GS2	1.0	05Li24	
¹⁵⁹ Tm-u	-65025	30							GS2	1.0	05Li24	
¹⁵⁹ Yb- ¹⁴² Sm _{1.120}	35035	24	35026	19	-0.4	2			MA7	1.0	01Bo59	
¹⁵⁹ Yb-u	-59960	30	-59945	19	0.5	R			GS2	1.0	05Li24	
¹⁵⁹ Lu-u	-53420	61	-53360	40	0.9	2			GS2	1.0	05Li24	*
¹⁵⁹ Hf-u	-46044	32	-46004	18	1.2	R			GS2	1.0	05Li24	
¹⁵⁹ Tb ³⁵ Cl ₂ - ¹⁵⁵ Gd ³⁷ Cl ₂	8625.64	1.03	8624.4	0.8	-0.5	1	11	9 ¹⁵⁹ Tb	H41	2.5	85Dy04	
¹⁵⁹ Tb ³⁵ Cl- ¹⁵⁷ Gd ³⁷ Cl	4333.3	1.2	4336.2	0.8	1.0	U			H25	2.5	72Ba08	
	4337.01	0.61			-0.5	1	29	25 ¹⁵⁹ Tb	H41	2.5	85Dy04	
¹⁵⁹ Lu(α) ¹⁵⁵ Tm	4534.3	10.	4490	40	-0.8	R			IRa		80Al14	
	4531.3	10.			-0.8	R					92Ha10	
¹⁵⁹ Hf(α) ¹⁵⁵ Yb	5221.2	10.	5225.0	2.7	0.4	U					73Ea01	Z
	5226.2	5.			-0.2	4			GSa		79Ho10	Z
	5223.0	5.			0.4	4			ORa		83To01	Z
	5219.6	6.			0.9	4					92Ha10	
	5229.8	5.			-0.9	4			Daa		96Pa01	
¹⁵⁹ Ta(α) ¹⁵⁵ Lu ^m	5658.6	5.	5659	7	0.2	o			Daa		96Pa01	*
	5661.7	5.			-0.4	o			Ara		97Da07	*
¹⁵⁹ Ta ^m (α) ¹⁵⁵ Lu	5745.8	6.	5745	3	-0.2	4			GSa		79Ho10	
	5743.8	5.			0.2	4			Daa		96Pa01	
	5744.8	5.			0.0	4			Ara		97Da07	
¹⁵⁹ W(α) ¹⁵⁵ Hf	6444.5	6.	6450	4	1.0	3			GSa		81Ho10	*
	6440.2	5.1			2.0	o			Daa		92Pa05	
	6454.7	5.			-0.8	3			Daa		96Pa01	
¹⁵⁹ Re ^m (α) ¹⁵⁵ Ta	6951.1	26.	6968	23	0.7	R			Daa		07Pa27	
¹⁵⁷ Gd(t,p) ¹⁵⁹ Gd	5398.9	2.3	5398.80	0.11	0.0	U			McM		89Lo07	
¹⁵⁸ Gd(n, γ) ¹⁵⁹ Gd	5942	1	5943.21	0.08	1.2	U					71Gr42	
	5943.07	0.15			0.9	-			ILn		87Sp.A	Z
	5943.1	0.2			0.5	-			Dbn		03Gr13	
	5943.32	0.12			-0.9	-			BNn		03Gr27	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{158}\text{Gd}(d,p)^{159}\text{Gd}$	3717	10	3718.64	0.08	0.2	U			
$^{158}\text{Gd}(n,\gamma)^{159}\text{Gd}$	ave. 5943.20	0.08	5943.21	0.08	0.1	1	100	96	^{159}Gd
$^{158}\text{Gd}(\alpha,t)^{159}\text{Tb}$	-13686.6	10.	-13682.1	0.8	0.4	U			Kop
$^{158}\text{Gd}(\alpha,t)^{159}\text{Tb}-^{164}\text{Dy}()^{165}\text{Ho}$	-85.7	2.2	-88.9	1.1	-1.4	1	24	11	^{159}Tb
$^{159}\text{Tb}(\gamma,n)^{158}\text{Tb}$	-8141	39	-8133.0	0.6	0.2	U			McM
$^{159}\text{Tb}(d,t)^{158}\text{Tb}$	-1870	15	-1875.8	0.6	-0.4	U			Phi
$^{159}\text{Tb}(d,t)^{158}\text{Tb}-^{164}\text{Dy}()^{163}\text{Dy}$	-474.3	1.0	-474.9	0.6	-0.6	1	41	40	^{158}Tb
$^{158}\text{Dy}(d,p)^{159}\text{Dy}$	4608	10	4606.9	2.6	-0.1	U			Tal
	4600	10			0.7	U			Kop
$^{159}\text{Re}^m(p)^{158}\text{W}$	1816.4	20.	1809	17	-0.4	4			Dap
$^{159}\text{Pm}(\beta^-)^{159}\text{Sm}$	5460	140	5653	12	1.4	o			Kur
	5430	140			1.6	U			Kur
$^{159}\text{Sm}(\beta^-)^{159}\text{Eu}$	3840	100	3835	7	0.0	o			Kur
	3805	65			0.5	o			Kur
	3800	65			0.5	U			Kur
$^{159}\text{Eu}(\beta^-)^{159}\text{Gd}$	2600	50	2518	4	-1.6	U			
$^{159}\text{Gd}(\beta^-)^{159}\text{Tb}$	969.0	1.5	970.9	0.8	1.2	1	26	22	^{159}Tb
$^{159}\text{Dy}(\epsilon)^{159}\text{Tb}$	365.9	1.3	365.4	1.2	-0.4	1	81	72	^{159}Dy
$^{159}\text{Ho}(\beta^+)^{159}\text{Dy}$	1837.6	6.	1837.6	2.7	0.0	2			
	1837.6	3.			0.0	2			
$^{159}\text{Er}(\beta^+)^{159}\text{Ho}$	2768.5	2.0				3			
	2810	100	2768.5	2.0	-0.4	U			IRS
$^{159}\text{Tm}(\beta^+)^{159}\text{Er}$	3400	300	3990	28	2.0	U			
	3850	100			1.4	U			IRS
	3670	100			3.2	B			Dbn
$^{159}\text{Yb}(\beta^+)^{159}\text{Tm}$	5050	200	4730	30	-1.6	U			IRS
	4554	150			1.2	U			Dbn
$^{159}\text{Lu}(\beta^+)^{159}\text{Yb}$	5850	150	6130	40	1.9	U			IRS
	5803	150			2.2	U			Dbn
$^{159}\text{Ta}^m(\text{IT})^{159}\text{Ta}$	63.7	5.2				4			Ara
* $^{159}\text{Pm-u}$	Represents frequency ratio $^{159}\text{Pm}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.95673359(11)$								
* $^{159}\text{Sm-u}$	Represents frequency ratio $^{159}\text{Sm}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.956770122(65)$								
* $^{159}\text{Eu-u}$	Represents frequency ratio $^{159}\text{Eu}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.956794898(63)$								
* $^{159}\text{Ho-u}$	M-A=-67304(28) keV for mixture gs+m at 205.91 keV								
* $^{159}\text{Lu-u}$	M-A=-49710(28) keV for mixture gs+m at 100#80 keV								
* $^{159}\text{Ta}(\alpha)^{155}\text{Lu}^m$	Replaced by $^{155}\text{Lu}^m(\text{IT})$								
* $^{159}\text{W}(\alpha)^{155}\text{Hf}$	Original value $E_\alpha=6299(6)$ recalibrated to $E_\alpha=6282(6)$ keV								
* $^{159}\text{Eu}(\beta^-)^{159}\text{Gd}$	$E_{\beta^-}=2350(50)$ to $7/2^-$ level at 227.412 level, and other E_{β^-}								
* $^{159}\text{Dy}(\epsilon)^{159}\text{Tb}$	From intensity of feeding $5/2^-$ level at 363.5449 keV								
* $^{159}\text{Ho}(\beta^+)^{159}\text{Dy}$	$E_{\beta^+}=506(6)$ $506(3)$ respectively, to $5/2^-$ level at 309.593 keV								
* $^{159}\text{Er}(\beta^+)^{159}\text{Ho}$	$E_{\beta^+}=1122(3)$ to $13/2^+$ level at 624.5 keV, and other E_{β^+}								
* $^{159}\text{Yb}(\beta^+)^{159}\text{Tm}$	$E_{\beta^+}=3366(150)$ to $7/2^-$ level at 166.17 keV								
$^{160}\text{Sm-u}$	-64666	11	-64665	6	0.1	1	34	34	^{160}Sm
$^{160}\text{Sm}-^{80}\text{Kr}_{2.000}$	102581	11	102579	6	-0.2	1	34	33	^{160}Sm
$^{160}\text{Sm}-^{86}\text{Kr}_{1.860}$	101599	11	101600	6	0.0	1	34	34	^{160}Sm
$^{160}\text{Eu-u}$	-68150	17	-68149	10	0.1	1	36	36	^{160}Eu
$^{160}\text{Eu}-^{80}\text{Kr}_{2.000}$	99096	18	99095	10	-0.1	1	32	32	^{160}Eu
$^{160}\text{Eu}-^{86}\text{Kr}_{1.860}$	98115	18	98115	10	0.0	1	32	32	^{160}Eu
$\text{C}_{12}\text{H}_{16}-^{160}\text{Gd}$	198150	50	198138.1	1.8	-0.1	U			R04
$\text{C}_{12}\text{H}_{16}-^{160}\text{Dy}$	200050	70	199995.9	2.0	-0.2	U			R04
$^{160}\text{Er-u}$	-70916	30	-70923	26	-0.2	-			GS2
	ave. -70914	27			-0.3	1	95	95	^{160}Er
$^{160}\text{Tm-u}$	-64773	127	-64740	40	0.3	U			GS1
	-64755	39			0.5	1	89	89	^{160}Tm
$^{160}\text{Yb}-^{142}\text{Sm}_{1.127}$	33120	20	33122	17	0.1	2			MA7
$^{160}\text{Yb-u}$	-62440	120	-62443	17	0.0	U			GS1
	-62438	30			-0.2	R			GS2

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{160}\text{Lu-u}$	-53967	61				2			GS2	1.0	05Li24 *
$^{160}\text{Hf-u}$	-49334	30	-49309	11	0.8	U			GS2	1.0	05Li24
$^{160}\text{Gd } ^{35}\text{Cl}-^{156}\text{Gd } ^{37}\text{Cl}_2$	10831.70	1.27	10831.3	0.8	-0.1	U			H41	2.5	85Dy04
$^{160}\text{Gd } ^{35}\text{Cl}-^{158}\text{Gd } ^{37}\text{Cl}$	5890	5	5900.1	0.8	0.5	U			H12	4.0	64Ba15
	5899	3			0.2	U			H21	2.5	70Ma05
	5900.0	0.5			0.1	-			M21	2.5	75Ka25
	5899.88	0.96			0.1	-			H41	2.5	85Dy04
	ave.	5900.0	1.1		0.2	1	50	39	^{160}Gd		average
$^{160}\text{Dy } ^{35}\text{Cl}-^{158}\text{Dy } ^{37}\text{Cl}$	3731.8	2.3	3738.9	2.4	1.2	1	18	17	^{158}Dy	2.5	72Ba08
$^{160}\text{Gd}-^{160}\text{Dy}$	1854.5	0.8	1857.8	1.4	1.6	1	47	32	^{160}Dy	2.5	72Ba08
$^{160}\text{Gd O}-\text{C}_{15}$	-78020.1	5.8	-78023.0	1.8	-0.3	o			TG1	1.5	09Ke.A
	-78019.9	3.6			-0.6	1	12	12	^{160}Gd	1.5	11Ke03
$^{160}\text{Hf}(\alpha)^{156}\text{Yb}$	4892.2	10.	4902.3	2.6	1.0	-					73Ea01 Z
	4905.0	5.			-0.5	-			GSa		79Ho10 Z
	4904.0	5.			-0.3	-			ORa		83To01 Z
	4901.8	6.			0.1	-					92Ha10
	4902.8	10.			0.0	-					95Hi12
	4900.8	6.			0.3	-			Daa		96Pa01
	ave.	4902.4	2.6		0.0	1	100	96	^{160}Hf		average
$^{160}\text{Ta}(\alpha)^{156}\text{Lu}$	5449.5	5.	5451	5	0.3	3			Daa		96Pa01
	5456.6	10.			-0.6	3			Jya		09Ha42
$^{160}\text{Ta}^m(\alpha)^{156}\text{Lu}^m$	5550.9	5.	5548.4	3.0	-0.5	4			GSa		79Ho10 Z
	5538.7	6.			1.6	4					92Ha10
	5552.1	5.			-0.7	4			Daa		96Pa01
	5551.0	10.			-0.3	4			Jya		09Ha42
$^{160}\text{W}(\alpha)^{156}\text{Hf}$	6072.1	10.	6065	5	-0.6	-			GSa		79Ho10
	6063.9	5.			0.3	-			Daa		96Pa01
	ave.	6065	5		0.0	1	100	100	^{160}W		average
$^{160}\text{Re}(\alpha)^{156}\text{Ta}$	6704.9	16.	6698	4	-0.4	o			Daa		92Pa05
	6711.1	16.			-0.8	o			Daa		96Pa01
	6697.7	4.				4			Daa		11Da12
$^{158}\text{Gd}(\text{t,p})^{160}\text{Gd}$	4912.0	2.2	4912.9	0.7	0.4	U			McM		89Lo07
$^{160}\text{Gd}(\text{p,t})^{158}\text{Gd}$	-4919	5	-4912.9	0.7	1.2	U			Min		73Oo01
$^{160}\text{Dy}(\text{p,t})^{158}\text{Dy}$	-6924	5	-6926.1	2.3	-0.4	-			Min		73Oo01
	-6925.1	3.4			-0.3	-			McM		88Bu08 *
	ave.	-6924.8	2.8		-0.5	1	64	62	^{158}Dy		average
$^{160}\text{Gd}(\text{t},\alpha)^{159}\text{Eu}-^{158}\text{Gd}(\gamma)^{157}\text{Eu}$	-666	5	-667	4	-0.3	1	70	35	^{159}Eu		79Bu05
$^{160}\text{Gd}(\text{d,t})^{159}\text{Gd}$	-1200	10	-1194.2	0.7	0.6	U			Kop		67Tj01
$^{159}\text{Tb}(\text{n},\gamma)^{160}\text{Tb}$	6375.45	0.3	6375.21	0.13	-0.8	-					74Ke01 Z
	6375.13	0.15			0.5	-			Bdn		06Fi.A
$^{159}\text{Tb}(\text{d,p})^{160}\text{Tb}$	4165	20	4150.64	0.13	-0.7	U			MIT		64Sp12
	4153	5			-0.5	U			Tal		67St14
	ave.	6375.19	0.13	6375.21	0.13	0.1	1	99	94	^{160}Tb	average
$^{159}\text{Tb}(\text{n},\gamma)^{160}\text{Tb}$	-2339	10	-2319.2	1.5	2.0	U			Tal		68Be.A
$^{160}\text{Dy}(\text{d,t})^{159}\text{Dy}$	-2323	10			0.4	U			Kop		70Gr46
$^{160}\text{Re}(\text{p})^{159}\text{W}$	1269.1	6.	1267	7	-0.3	o			Dap		92Pa05
	1271	9			-0.4	o			Dap		96Pa01 *
	1272.2	6.			-0.9	R			Dap		11Da12
$^{160}\text{Eu}(\beta^-)^{160}\text{Gd}$	3900	300	4460	10	1.9	U					73Da05
	4200	200			1.3	U					73Mo18
	4705	60			-4.1	B			Kur		07Ha57
	4695	60			-3.9	C			Kur		10Ha.A
$^{160}\text{Tb}(\beta^-)^{160}\text{Dy}$	1838	10	1835.9	1.3	-0.2	U					57Na03 *
	1827	10			0.9	U					59Gr93 *
	1825	10			1.1	U					63Wu01 *
$^{160}\text{Ho}(\beta^+)^{160}\text{Dy}$	3290	15				2					66Av03 *
$^{160}\text{Er}(\epsilon)^{160}\text{Ho}$	420	150	317	29	-0.7	U					82Vy06 *
$^{160}\text{Tm}(\beta^+)^{160}\text{Er}$	5600	300	5760	40	0.5	U					75St12 *
	5890	100			-1.3	1	16	11	^{160}Tm	IRS	93A103

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{160}\text{Lu}(\beta^+)^{160}\text{Yb}$	7210	240	7890	60	2.9	U					83Ge08		
	7340	100			5.5	C			IRS		83Vi.A		
	7300	100			5.9	B			IRS		93Al03		
* $^{160}\text{Sm-u}$	Represents frequency ratio $^{160}\text{Sm}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.950775181(67)$										WgM124**		
* $^{160}\text{Eu-u}$	Represents frequency ratio $^{160}\text{Eu}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.95079589(10)$										WgM124**		
* $^{160}\text{Tm-u}$	M-A=-60300(110) keV for mixture gs+m at 70(20) keV										Nub127 **		
* $^{160}\text{Tm-u}$	M-A=-60283(28) keV for mixture gs+m at 70(20) keV										Nub127 **		
* $^{160}\text{Lu-u}$	M-A=-50270(28) keV for mixture gs+m at 0#100 keV										Nub127 **		
* $^{160}\text{Dy}(p,t)^{158}\text{Dy}$	Q-Q($^{164}\text{Dy}(p,t)$)=-1477.9(3.4), see $^{164}\text{Dy}(p,t)$										AHW **		
* $^{160}\text{Re}(p)^{159}\text{W}$	Corrected : Ame2003 assumed $E_p=1271(9)$ thus $Q_p=1279.1(9.)$ keV										WgM105**		
* $^{160}\text{Tb}(\beta^-)^{160}\text{Dy}$	$E_{\beta^-}=870(10)$ 858(10) 868(10) respectively, to 8^+ level at 966.85 keV, and other E_{β^-}										Ens059 **		
* $^{160}\text{Ho}(\beta^+)^{160}\text{Dy}$	$E_{\beta^+}=570(15)$ to 4^+ level at 1694.37 keV; and 1045(15) from										Ens059 **		
*	$^{160}\text{Ho}^m$ at 59.98 to 1^- level at 1285.602 and 3^- at 1286.711 keV										Nub127 **		
* $^{160}\text{Er}(\epsilon)^{160}\text{Ho}$	pK=0.795(0.2) to 1^+ level at 67.11 keV										Ens059 **		
* $^{160}\text{Tm}(\beta^+)^{160}\text{Er}$	$E_{\beta^+}=3700(300)$ to 854.4-1007.95 levels, reassigned by evaluator										Ens059 **		
$^{161}\text{Sm-u}$	-60841	13	-60840	7	0.1	1	32	32 ^{161}Sm	CP1	1.0	12Va02	*	
$^{161}\text{Sm}-^{80}\text{Kr}_{2.013}$	107493	12	107491	7	-0.2	1	38	37 ^{161}Sm	CP1	1.0	12Va02		
$^{161}\text{Sm}-^{86}\text{Kr}_{1.872}$	106496	13	106497	7	0.1	1	32	32 ^{161}Sm	CP1	1.0	12Va02		
$^{161}\text{Eu-u}$	-66336	19	-66336	11	0.0	1	35	35 ^{161}Eu	CP1	1.0	12Va02	*	
$^{161}\text{Eu}-^{80}\text{Kr}_{2.013}$	101996	19	101995	11	-0.1	1	35	34 ^{161}Eu	CP1	1.0	12Va02		
$^{161}\text{Eu}-^{86}\text{Kr}_{1.872}$	101000	20	101001	11	0.0	1	31	31 ^{161}Eu	CP1	1.0	12Va02		
$\text{C}_{13}\text{H}_5-^{161}\text{Dy}$	112246	25	112184.7	2.0	-0.6	U			R04	4.0	64De15		
$^{161}\text{Tm-u}$	-66451	30				2			GS2	1.0	05Li24	*	
$^{161}\text{Yb}-^{142}\text{Sm}_{1.134}$	34071	19	34065	16	-0.3	2			MA7	1.0	01Bo59		
$^{161}\text{Yb-u}$	-62120	110	-62093	17	0.2	U			GS1	1.0	00Ra23		
	-62107	30			0.5	R			GS2	1.0	05Li24		
$^{161}\text{Lu-u}$	-56428	30				2			GS2	1.0	05Li24		
$^{161}\text{Hf-u}$	-49733	30	-49722	24	0.4	1	65	65 ^{161}Hf	GS2	1.0	05Li24		
$^{161}\text{Dy }^{35}\text{Cl}-^{159}\text{Tb }^{37}\text{Cl}$	4535.0	1.0	4535.9	1.4	0.3	1	29	19 ^{161}Dy	H25	2.5	72Ba08		
$^{161}\text{Hf}(\alpha)^{157}\text{Yb}$	4717.0	10.	4685	24	-0.6	-					73Ea01	Z	
	4725.2	10.			-0.8	-					82Sc15	Z	
	4724.2	5.			-0.8	-			ORa		83To01	Z	
	4716.4	7.			-0.6	-					92Ha10		
	4721.5	10.			-0.7	-					95Hi12		
	ave.	4721	3			-0.7	1	23	19 ^{161}Hf			average	
$^{161}\text{Ta}^m(\alpha)^{157}\text{Lu}^m$	5278.9	5.	5317	22	0.8	-			GSa		79Ho10	Z	
	5280.4	5.			0.7	-					92Ha10		
	5271.2	7.			0.9	-			Daa		96Pa01		
	5282.5	7.			0.7	-			Jya		05Sc22		
	ave.	5278.7	2.9			0.8	1	19	11 $^{161}\text{Ta}^m$			average	
		5923.4	5.	5923	4	-0.1	4			GSa		79Ho10	Z
$^{161}\text{W}(\alpha)^{157}\text{Hf}$	5922.4	5.			0.1	4			Daa		96Pa01		
	6439.3	10.	6430	4	-0.9	2			GSa		79Ho10		
	6425.0	6.			0.8	2			Daa		96Pa01		
$^{161}\text{Re}^m(\alpha)^{157}\text{Ta}^m$	6432.1	7.			-0.3	2			Ara		97Ir01		
	$^{161}\text{Os}(\alpha)^{157}\text{W}$	7065.9	12.			3					10Bi03		
	$^{161}\text{Os}(\alpha)^{157}\text{W}^p$	6748.0	30.			4					10Bi03		
$^{161}\text{Dy}(p,t)^{159}\text{Dy}$	-6546	5	-6549.1	1.5	-0.6	-			Min		73Oo01		
	-6547.9	2.5			-0.5	-			McM		88Bu08	*	
	ave.	-6547.5	2.2			-0.7	1	43	28 ^{159}Dy			average	
$^{160}\text{Gd}(n,\gamma)^{161}\text{Gd}$	5635.4	1.0				2					71Gr42		
$^{160}\text{Gd}(d,p)^{161}\text{Gd}$	3411	10	3410.8	1.0	0.0	U			Kop		67Tj01		
$^{160}\text{Gd}(\alpha,t)^{161}\text{Tb}-^{158}\text{Gd}()^{159}\text{Tb}$	678.0	1.0	677.1	0.7	-0.9	1	56	30 ^{160}Gd	McM		75Bu02		
$^{160}\text{Tb}(n,\gamma)^{161}\text{Tb}$	7696.3	0.6	7696.6	0.6	0.5	1	84	78 ^{161}Tb			75He.C		
$^{160}\text{Dy}(n,\gamma)^{161}\text{Dy}$	6451.5	2.	6454.39	0.08	1.4	U					77Be03		
	6454.40	0.09			-0.1	-			ILn		86Sc16	Z	
	6454.34	0.14			0.3	-			Bdn		06Fi.A		

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{160}\text{Dy}(d,p)^{161}\text{Dy}$	4231 10	4229.82	0.08	-0.1	U		Tal		68Be.A
	4237 10			-0.7	U		Kop		70Gr46
$^{161}\text{Dy}(d,t)^{160}\text{Dy}$	-205 10	-197.15	0.08	0.8	U		Kop		70Gr46
$^{160}\text{Dy}(n,\gamma)^{161}\text{Dy}$	ave. 6454.38 0.08	6454.39	0.08	0.1	1	100	64 ^{160}Dy		average
$^{160}\text{Dy}(^3\text{He,d})^{161}\text{Ho}-^{164}\text{Dy}(^0)^{165}\text{Ho}$	-1406.5 2.0	-1406.5	2.0	0.0	1	100	100 ^{161}Ho	McM	75Bu02
$^{161}\text{Re}(p)^{160}\text{W}$	1199.5 6.	1197	5	-0.4	1	79	79 ^{161}Re	Ara	97Ir01
$^{161}\text{Re}^m(p)^{160}\text{W}$	1323.3 7.	1321	5	-0.3	o			Ara	97Ir01 *
$^{161}\text{Sm}(\beta^-)^{161}\text{Eu}$	5065 130	5120	12	0.4	o			Kur	07Ha57
	5050 130			0.5	U			Kur	10Ha.A
$^{161}\text{Eu}(\beta^-)^{161}\text{Gd}$	3705 60	3714	11	0.1	o			Kur	07Ha57
	3705 60			0.1	U			Kur	10Ha.A
$^{161}\text{Gd}(\beta^-)^{161}\text{Tb}$	1977 30	1955.8	1.4	-0.7	U				66Zy02 *
$^{161}\text{Tb}(\beta^-)^{161}\text{Dy}$	584 6	593.7	1.3	1.6	U				63Ko08
	590 10			0.4	U				64Fu11
$^{161}\text{Er}(\beta^+)^{161}\text{Ho}$	2050 40	1996	9	-1.3	U				65Gr35 *
	1980 18			0.9	R				84Ka.A *
$^{161}\text{Tm}(\beta^+)^{161}\text{Er}$	3100 200	3302	29	1.0	U				75Ad08 *
	3180 100			1.2	U			IRS	93A103
$^{161}\text{Yb}(\beta^+)^{161}\text{Tm}$	3850 250	4060	30	0.8	U				81Ad02
	3585 200			2.4	U			Dbn	94Po26
$^{161}\text{Lu}(\beta^+)^{161}\text{Yb}$	5300 100	5280	30	-0.2	o			IRS	83Vi.A
	5300 100			-0.2	U			IRS	93A103
	5255 150			0.1	U			Dbn	94Po26 *
$^{161}\text{Re}^m(\text{IT})^{161}\text{Re}$	123.8 1.3	123.7	1.3	-0.1	1	99	78 $^{161}\text{Re}^m$		97Ir01
* $^{161}\text{Sm}-u$	Represents frequency ratio $^{161}\text{Sm}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.944844874(74)$								WgM124**
* $^{161}\text{Eu}-u$	Represents frequency ratio $^{161}\text{Eu}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.94487714(11)$								WgM124**
* $^{161}\text{Tm}-u$	$M-A = -61895(28)$ keV for mixture $gs+m$ at 7.51 keV								Nub127 **
* $^{161}\text{Dy}(p,t)^{159}\text{Dy}$	$Q-Q(^{164}\text{Dy}(p,t)) = -1100.7(2.5)$ keV								AHW **
* $^{161}\text{Re}^m(p)^{160}\text{W}$	Replaced by author's result for $^{161}\text{Re}^m(\text{IT})^{161}\text{Re}$								AHW **
* $^{161}\text{Gd}(\beta^-)^{161}\text{Tb}$	$E_{\beta^-} = 1560(30)$ mainly to $7/2^-$ level at 417.228 keV								Ens11b **
* $^{161}\text{Er}(\beta^+)^{161}\text{Ho}$	$E_{\beta^+} = 820(40)$ 748(18) respectively, to $1/2^+$ level at 211.15 keV								Ens11b **
* $^{161}\text{Tm}(\beta^+)^{161}\text{Er}$	$E_{\beta^+} = 1800(100)$ to several levels around $7/2^-$ one at 266.44 keV								Ens11b **
* $^{161}\text{Lu}(\beta^+)^{161}\text{Yb}$	$E_{\beta^+} = 3866(150)$ to 367.28 level								Ens11b **
$\text{C}_{13}\text{H}_6-^{162}\text{Dy}$	120115 19	120144.6	2.0	0.4	U			R04	4.0 64De15
$\text{C}_{12}\text{H}_4\text{N}-^{162}\text{Er}$	105590 70	105585.8	2.0	0.0	U			R04	4.0 64De15
$\text{C}_{13}\text{H}_6-^{162}\text{Er}$	118430 170	118161.8	2.0	-0.4	U			R04	4.0 64De15
$^{162}\text{Tm}-u$	-65942 55	-65998	28	-1.0	R			GS2	1.0 05Li24 *
$^{162}\text{Yb}-^{142}\text{Sm}_{1,141}$	32524 19	32525	16	0.1	2			MA7	1.0 01Bo59
$^{162}\text{Yb}-u$	-64210 110	-64226	17	-0.1	U			GS1	1.0 00Ra23
	-64223 30			-0.1	R			GS2	1.0 05Li24
$^{162}\text{Lu}-u$	-56758 234	-56720	80	0.2	o			GS1	1.0 00Ra23 *
	-56781 190			0.3	2			GS2	1.0 05Li24 *
$^{162}\text{Hf}-u$	-52756 30	-52785	10	-1.0	U			GS2	1.0 05Li24
$^{162}\text{Er } ^{35}\text{Cl}_2-^{158}\text{Gd } ^{37}\text{Cl}_2$	10577.5 2.7	10576.2	1.4	-0.2	U			H25	2.5 72Ba08
$^{162}\text{Dy } ^{35}\text{Cl}-^{160}\text{Dy } ^{37}\text{Cl}$	4555 6	4551.01	0.12	-0.2	U			H12	4.0 64Ba15
	4552.1 1.1			-0.4	U			H25	2.5 72Ba08
$^{162}\text{Er } ^{35}\text{Cl}-^{160}\text{Gd } ^{37}\text{Cl}$	4674.6 1.9	4676.0	1.4	0.3	U			H25	2.5 72Ba08
$^{162}\text{Er}-^{162}\text{Dy}$	1982.79 0.32	1982.8	0.3	0.0	1	100	100 ^{162}Er	SH1	1.0 11E104
$^{161}\text{Dy } ^{37}\text{Cl}-^{162}\text{Dy } ^{35}\text{Cl}$	-3080 70	-2815.16	0.09	0.9	U			R04	4.0 64De15
$^{162}\text{Dy}-^{161}\text{Dy}$	150 70	-134.92	0.06	-1.0	U			R04	4.0 64De15
	78 23			-2.3	U			R04	4.0 64De15
	22 40			-1.0	U			R04	4.0 64De15
$^{162}\text{Hf}(\alpha)^{158}\text{Yb}$	4417.2 10.	4416	5	-0.1	-				82Sc15
	4420.2 10.			-0.4	-			ORa	83To01
	4414.2 9.			0.2	-				92Ha10
	4416.0 10.			0.0	-				95Hi12
	ave. 4417 5			-0.1	1	95	81 ^{162}Hf		average
$^{162}\text{Ta}(\alpha)^{158}\text{Lu}$	5003.8 10.	5010	50	0.1	4				86Ru05
	5007.9 5.			0.0	4				92Ha10

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{162}\text{W}(\alpha)^{158}\text{Hf}$	5669.9	10.	5677.3	2.7	0.7	U					73Ea01 Z	
	5668.0	10.			0.9	U			ORa		75To05 Z	
	5677.5	5.			0.0	–			GSa		81Ho10 Z	
	5674.5	4.			0.7	–			Ora		82De11 Z	
	5681.6	5.			–0.8	–			Daa		96Pa01 Z	
ave.	5677.3	2.7			0.0	1	100	100	^{162}W		average	
$^{162}\text{Re}(\alpha)^{158}\text{Ta}$	6240.3	5.				8			Ara		97Da07	
$^{162}\text{Re}^m(\alpha)^{158}\text{Ta}^m$	6274.2	6.	6274	3	0.0	9			GSa		79Ho10	
	6278.3	6.			–0.7	9			Daa		96Pa01	
	6271.1	5.			0.6	9			Ara		97Da07	
$^{162}\text{Os}(\alpha)^{158}\text{W}$	6778.8	30.	6767	3	–0.4	U			GSa		89Ho12 *	
	6785.8	10.			–1.8	U			ORa		96Bi07	
	6767.4	3.				4			Ara		00Ma95	
	6781.7	13.			–1.1	U			Jya		04Jo12	
$^{160}\text{Gd}(\text{t,p})^{162}\text{Gd}$	3999.5	3.8				2			McM		89Lo07	
$^{160}\text{Dy}(\text{t,p})^{162}\text{Dy}$	6169.5	1.9	6169.58	0.10	0.0	U			McM		88Bu08 *	
$^{162}\text{Dy}(\text{p,t})^{160}\text{Dy}$	–6168	5	–6169.58	0.10	–0.3	U			Min		73Oo01	
	–6169.7	2.1			0.1	U			McM		88Bu08 *	
$^{162}\text{Er}(\text{p,t})^{160}\text{Er}$	–7944	55	–7930	24	0.3	R			Win		74De31 *	
$^{161}\text{Dy}(\text{n},\gamma)^{162}\text{Dy}$	8196.99	0.06	8196.99	0.06	0.1	1	100	70	^{162}Dy	MMn	82Is05 Z	
	8193	3			1.3	U			Bdn		06Fi.A	
$^{161}\text{Dy}(\text{d,p})^{162}\text{Dy}$	5969	10	5972.43	0.06	0.3	U			Tal		67Ba34	
	5981	10			–0.9	U			Kop		70Gr46	
$^{162}\text{Dy}(\text{d,t})^{161}\text{Dy}$	–1944	10	–1939.76	0.06	0.4	U			Kop		70Gr46	
	–1943	10			0.3	U			Tal		77Be03	
$^{161}\text{Dy}(\text{}^3\text{He,d})^{162}\text{Ho} - ^{164}\text{Dy}(\text{}^3\text{He,d})^{165}\text{Ho}$	–945.3	3.0	–945.3	3.0	0.0	1	100	100	^{162}Ho	McM	75Bu02	
$^{162}\text{Er}(\text{d,t})^{161}\text{Er}$	–2952	10	–2947	9	0.5	2			Kop		69Tj01	
$^{162}\text{Eu}(\beta^-)^{162}\text{Gd}$	5575	60	5580	60	0.2	o			Kur		07Ha57	
	5585	60				3			Kur		10Ha.A	
$^{162}\text{Gd}(\beta^-)^{162}\text{Tb}$	1442	100	1400	40	–0.5	R					70Ch02 *	
$^{162}\text{Tb}(\beta^-)^{162}\text{Dy}$	2448	100	2510	40	0.6	2					66Fu08 *	
	2523	50			–0.3	2					66Sc24 *	
	2528	80			–0.3	2					77Ka08 *	
	2220	50	2139	3	–1.6	U					69Ak01	
$^{162}\text{Tm}(\beta^+)^{162}\text{Er}$	4840	50	4857	26	0.3	2					63Ab02	
	4705	70			2.2	2					74De47 *	
	4900	100			–0.4	2			IRS		93Al03	
	4892	50			–0.7	2			Dbn		94Po26 *	
	6740	270	6990	80	0.9	U					83Ge08	
$^{162}\text{Lu}(\beta^+)^{162}\text{Yb}$	6990	120			0.0	o			IRS		83Vi.A	
	6960	100			0.3	R			IRS		93Al03	
	7111	150			–0.8	R			Dbn		94Po26 *	
* $^{162}\text{Tm-u}$	M–A=–61359(28) keV for mixture gs+m at 130(40) keV										Nub127 **	
* $^{162}\text{Lu-u}$	M–A=–52730(130) keV for mixture gs+m+n at 120#200 and 300#200 keV										Nub127 **	
* $^{162}\text{Lu-u}$	M–A=–52751(28) keV for mixture gs+m+n at 120#200 and 300#200 keV										Nub127 **	
* $^{162}\text{Os}(\alpha)^{158}\text{W}$	Original value E=6640(20) (Q=6808.4) recalibrated										88Ho.B **	
* $^{160}\text{Dy}(\text{t,p})^{162}\text{Dy}$	Q–Q($^{162}\text{Dy}(\text{t,p})$)=722.3(1.9) keV										AHW **	
* $^{162}\text{Dy}(\text{p,t})^{160}\text{Dy}$	Q–Q($^{164}\text{Dy}(\text{p,t})$)=–722.5(2.1) keV										AHW **	
* $^{162}\text{Er}(\text{p,t})^{160}\text{Er}$	Not resolved peak. Original uncertainty 28 increased to 51 keV and added systematic error 21 keV										GAU **	
*											GAU **	
* $^{162}\text{Gd}(\beta^-)^{162}\text{Tb}$	E_{β^-} =1000(100) to 1^+ level at 442.11 keV										Ens078 **	
* $^{162}\text{Tb}(\beta^-)^{162}\text{Dy}$	E_{β^-} =1300(100) 1375(50) 1380(80) respectively, to 2^- level at 1148.232 keV										Ens078 **	
* $^{162}\text{Tm}(\beta^+)^{162}\text{Er}$	E_{β^+} =2110(70) to 2^- level at 1572.84 keV										Ens078 **	
* $^{162}\text{Tm}(\beta^+)^{162}\text{Er}$	E_{β^+} =3768(50) to 2^+ level at 102.04 keV										Ens078 **	
* $^{162}\text{Lu}(\beta^+)^{162}\text{Yb}$	E_{β^+} =6006(150) to ground state and 2^+ level at 166.8, unknown intensity ratio										Ens078 **	
$^{163}\text{Gd-u}$	–65824	16	–65823	9	0.1	1	32	32	^{163}Gd	CPI	1.0	12Va02 *
$^{163}\text{Gd} - ^{80}\text{Kr}_{2.038}$	104600	16	104598	9	–0.1	1	32	32	^{163}Gd	CPI	1.0	12Va02
$^{163}\text{Gd} - ^{86}\text{Kr}_{1.895}$	103569	15	103570	9	0.0	1	36	36	^{163}Gd	CPI	1.0	12Va02

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$C_{13} H_7-^{163}Dy$	125906	36	126036.9	2.0	0.9	U			R04	4.0	64De15
$^{163}Tm-u$	-67327	30	-67341	6	-0.5	U			GS2	1.0	05Li24
$^{163}Yb-^{142}Sm_{1,148}$	33686	19	33685	16	-0.1	2			MA7	1.0	01Bo59
$^{163}Yb-u$	-63663	30	-63660	17	0.1	R			GS2	1.0	05Li24
$^{163}Lu-u$	-58730	110	-58820	30	-0.8	U			GS1	1.0	00Ra23
	-58821	30				2			GS2	1.0	05Li24
$^{163}Hf-u$	-52911	30	-52887	27	0.8	1	79	^{163}Hf	GS2	1.0	05Li24
$^{163}Ta-u$	-45849	51	-45660	40	3.6	C			GS2	1.0	05Li24
$^{163}Dy-^{35}Cl-^{161}Dy-^{37}Cl$	5200	60	4747.87	0.11	-1.9	U			R04	4.0	64De15
	4746	3			0.2	U			H23	2.5	70Wh01
	4744.7	1.2			1.1	U			H25	2.5	72Ba08
$^{162}Dy-^{37}Cl-^{163}Dy-^{35}Cl$	-5069	42	-4882.79	0.08	1.1	U			R04	4.0	64De15
$^{163}Dy-^{162}Dy$	2164	35	1932.71	0.05	-1.7	U			R04	4.0	64De15
	1985	38			-0.3	U			R04	4.0	64De15
	2174	40			-1.5	U			R04	4.0	64De15
$^{163}Ta(\alpha)^{159}Lu$	4741.5	15.	4749	5	0.5	3					83Sc18
	4746.7	10.			0.2	3					86Ru05
	4751.8	7.			-0.4	3					92Ha10
$^{163}W(\alpha)^{159}Hf$	5520.3	5.	5520	50	0.0	5					73Ea01
	5518.1	5.			0.0	5		GSa			79Ho10
	5519.9	3.			0.0	5		Ora			82De11
	5525.6	10.			-0.1	U					84Sc06
	5518.7	6.			0.0	5		Daa			96Pa01
$^{163}Re(\alpha)^{159}Ta$	6017.9	5.	6012	8	-1.2	o		Ara			97Da07
$^{163}Re^m(\alpha)^{159}Ta^m$	6067.2	6.	6068	3	0.2	3		GSa			79Ho10
	6067.2	7.			0.1	3		Daa			96Pa01
	6069.2	5.			-0.2	3		Ara			97Da07
$^{163}Os(\alpha)^{159}W$	6674.1	30.	6680	50	0.1	4		GSa			81Ho10
	6678.2	10.			0.0	4		ORa			96Bi07
	6676.2	19.			0.0	4		Daa			96Pa01
$^{161}Dy(t,p)^{163}Dy$	5986.3	1.5	5986.20	0.08	-0.1	U		McM			88Bu08
$^{163}Dy(p,t)^{161}Dy$	-5985	5	-5986.20	0.08	-0.2	U		Min			73Oo01
	-5987.1	2.2			0.4	U		McM			88Bu08
$^{162}Dy(n,\gamma)^{163}Dy$	6270.98	0.06	6271.01	0.05	0.5	-		MMn			82Is05
	6271.00	0.09			0.1	-		ILn			89Sc31
	6271.14	0.13			-1.0	-		Bdn			06Fi.A
$^{163}Dy(\gamma,n)^{162}Dy$	-6320	110	-6271.01	0.05	0.4	U		Phi			60Ge01
$^{162}Dy(d,p)^{163}Dy$	4049	5	4046.44	0.05	-0.5	U		Tal			67Sc05
	4045	10			0.1	U		Kop			70Gr46
$^{163}Dy(d,t)^{162}Dy$	-14	5	-13.78	0.05	0.0	U					67Ba34
	-27	10			1.3	U		Kop			70Gr46
$^{162}Dy(n,\gamma)^{163}Dy$	ave.	6271.01	0.05	6271.01	0.05	0.1	1	100	53 ^{163}Dy		average
$^{162}Dy(^3He,d)^{163}Ho-^{164}Dy()^{165}Ho$	-734.3	1.0	-734.5	0.8	-0.2	1	72	55 ^{165}Ho	McM		75Bu02
$^{162}Er(d,p)^{163}Er$	4682	10	4680	5	-0.2	1	21	21 ^{163}Er	Kop		69Tj01
$^{163}Eu(\beta^-)^{163}Gd$	4690	70	4670	70	-0.2	o			Kur		07Ha57
	4675	70				2			Kur		10Ha.A
$^{163}Gd(\beta^-)^{163}Tb$	3170	70	3281	10	1.6	o			Kur		07Ha57
	3120	70			2.3	U			Kur		10Ha.A
$^{163}Tb(\beta^-)^{163}Dy$	1684	50	1785	4	2.0	U					66Fu08
	1721	100			0.6	U					71Ka22
$^{163}Ho(\epsilon)^{163}Dy$	2.58	0.10	2.555	0.016	-0.2	U					82An19
	2.65	0.20			-0.5	U					83Ba32
	2.82	0.08			-3.3	C					84La.A
	2.56	0.05			-0.1	-					85Ha12
	2.60	0.03			-1.5	o					86Ya17
	2.561	0.020			-0.3	-					92Ha15
	2.54	0.03			0.5	-					93Bo.A
	2.71	0.10			-1.5	U					94Ya07
	2.800	0.050			-4.9	B					97Ga12
	ave.	2.555	0.016		0.0	1	100	83 ^{163}Ho			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{163}\text{Er}(\beta^+)^{163}\text{Ho}$	1210	6	1211	5	0.1	1	58	58 ^{163}Er	63Pe16		
$^{163}\text{Tm}(\beta^+)^{163}\text{Er}$	2439	3				2			82Vy07 *		
	2360	100	2439	3	0.8	U		IRS	93A103		
$^{163}\text{Yb}(\beta^+)^{163}\text{Tm}$	3370	100	3428	16	0.6	U			75Ad09 *		
$^{163}\text{Lu}(\beta^+)^{163}\text{Yb}$	4860	170	4510	30	-2.1	U			83Ge08		
	4600	200			-0.5	o		IRS	83Vi.A		
	4600	200			-0.5	U		IRS	93A103		
$^{163}\text{Re}^m(\text{IT})^{163}\text{Re}$	115.1	4.0	120	5	1.2	o		Ara	97Da07 *		
* $^{163}\text{Gd-u}$	Represents frequency ratio $^{163}\text{Gd}^{++}/(\text{C}_{12}\text{H}_4)^+ = 0.933275822(91)$										
* $^{163}\text{Ta-u}$	$M-A = -42644(28)$ keV for mixture gs+m at 129#(20#) keV										
* $^{163}\text{Ta}(\alpha)^{159}\text{Lu}$	Original assignment to 13 s ^{164}Ta changed to ^{163}Ta										
* $^{163}\text{W}(\alpha)^{159}\text{Hf}$	Originally assigned to ^{166}Re , re-assigned in reference										
*	original $E_\alpha = 5372$ recalibrated using their $^{168}\text{Os} - ^{170}\text{Os}$ results										
* $^{163}\text{Re}(\alpha)^{159}\text{Ta}$	Replaced by author's value for $^{159}\text{Ta}^m(\text{IT})$										
* $^{161}\text{Dy}(\text{t,p})^{163}\text{Dy}$	$Q-Q(^{162}\text{Dy}(\text{t,p})) = 539.1(1.5)$ keV										
* $^{163}\text{Dy}(\text{p,t})^{161}\text{Dy}$	$Q-Q(^{164}\text{Dy}(\text{p,t})) = -539.9(2.2)$ keV										
* $^{163}\text{Tb}(\beta^-)^{163}\text{Dy}$	$E_{\beta^-} = 800(50)$ to $1/2^+$ level at 884.2943 keV										
* $^{163}\text{Tb}(\beta^-)^{163}\text{Dy}$	$E_{\beta^-} = 1300(100)$ to $3/2^-$ level at 421.8439 keV										
* $^{163}\text{Ho}(\epsilon)^{163}\text{Dy}$	Orig. value 2.60(0.03) corrected to 2.561(0.020) for dynamic effects										
*	error 0.020 is statistical only										
* $^{163}\text{Ho}(\epsilon)^{163}\text{Dy}$	Original $2616 < Q < 2694$ eV 68% CL for charge $66+ Q_{\beta^+}$,										
*	corrected to $2511 < Q_{\beta^+} < 2572$ eV 68% CL										
* $^{163}\text{Tm}(\beta^+)^{163}\text{Er}$	$E_{\beta^+} = 884(3)$ to $1/2^+$ level at 540.56 keV, and other E_{β^+}										
* $^{163}\text{Yb}(\beta^+)^{163}\text{Tm}$	$E_{\beta^+} = 1400(100)$ to $5/2^-$ level at 947.29 keV										
* $^{163}\text{Re}^m(\text{IT})^{163}\text{Re}$	Redundant with $^{167}\text{Ir}(\alpha)^{163}\text{Re}$ in same paper										
$\text{C}_{13} \text{H}_8 - ^{164}\text{Dy}$	133320	38	133418.4	2.0	0.6	U		R04	4.0	64De15	
$\text{C}_{12} ^{13}\text{C} \text{H}_7 - ^{164}\text{Dy}$	128920	34	128948.2	2.0	0.2	U		R04	4.0	64De15	
$\text{C}_{12} \text{H}_6 \text{N} - ^{164}\text{Er}$	120876	39	120815.4	2.0	-0.4	U		R04	4.0	64De15	
$^{164}\text{Tm-u}$	-66440	30	-66456	26	-0.5	1	76	76 ^{164}Tm	GS2	1.0	05Li24 *
$^{164}\text{Yb} - ^{142}\text{Sm}_{1.155}$	32429	19	32434	16	0.3	2		MA7	1.0	01Bo59	
$^{164}\text{Yb-u}$	-65690	104	-65505	17	1.8	U		GS1	1.0	00Ra23	
	-65493	30			-0.4	R		GS2	1.0	05Li24	
$^{164}\text{Lu-u}$	-58750	110	-58660	30	0.8	U		GS1	1.0	00Ra23	
	-58661	30				2		GS2	1.0	05Li24	
$^{164}\text{Hf-u}$	-55620	110	-55629	17	-0.1	U		GS1	1.0	00Ra23	
	-55596	30			-1.1	1	32	32 ^{164}Hf	GS2	1.0	05Li24
$^{164}\text{Ta-u}$	-46466	30				2		GS2	1.0	05Li24	
$^{164}\text{Dy} ^{35}\text{Cl} - ^{162}\text{Dy} ^{37}\text{Cl}$	5347	5	5326.38	0.11	-1.0	U		H12	4.0	64Ba15	
	5589	19			-3.5	B		R04	4.0	64De15	
	5321	3			0.7	U		H23	2.5	70Wh01	
	5326.5	0.9			-0.1	U		H25	2.5	72Ba08	
$^{164}\text{Er} ^{35}\text{Cl} - ^{162}\text{Er} ^{37}\text{Cl}$	3373.3	1.3	3370.5	0.4	-0.9	U		H25	2.5	72Ba08	
$^{164}\text{Er} - ^{164}\text{Dy}$	26.92	0.12	26.92	0.12	0.0	1	100	94 ^{164}Er	SH1	1.0	11E108
$^{164}\text{Dy} ^{35}\text{Cl} - ^{161}\text{Dy} ^{37}\text{Cl}$	5610	48	5191.46	0.13	-2.2	U		R04	4.0	64De15	
$^{163}\text{Dy} ^{37}\text{Cl} - ^{164}\text{Dy} ^{35}\text{Cl}$	-3360	50	-3393.67	0.10	-0.2	U		R04	4.0	64De15	
$^{164}\text{Dy} - ^{163}\text{Dy}$	392	48	443.59	0.07	0.3	U		R04	4.0	64De15	
	540	25			-1.0	U		R04	4.0	64De15	
	446	28			0.0	U		R04	4.0	64De15	
$^{164}\text{Er} - ^{162}\text{Er}$	556	48	420.4	0.4	-0.7	U		R04	4.0	64De15	
$^{164}\text{W}(\alpha)^{160}\text{Hf}$	5281.7	5.	5278.5	2.0	-0.6	-				73Ea01 Z	
	5274.7	5.			0.8	-		ORa		75To05 Z	
	5268.7	10.			1.0	U				78Sc26 *	
	5279.0	5.			-0.1	-		GSa		79Ho10	
	5279.2	3.			-0.2	-		Ora		82De11 Z	
	5283.0	8.			-0.6	U				84Sc06 *	
	5277.0	6.			0.3	-		Daa		96Pa01	
ave.	5278.5	2.0			0.0	1	100	96 ^{164}W		average	
$^{164}\text{Re}(\alpha)^{160}\text{Ta}$	5922.7	10.	5926	5	0.4	4		GSa		79Ho10	
	5928.9	7.			-0.4	4		Daa		96Pa01	
	5924.7	10.			0.2	4		Jya		09Ha42	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{164}\text{Re}^m(\alpha)^{160}\text{Ta}^m$	5763.8	10.					Jya		09Ha42
$^{164}\text{Os}(\alpha)^{160}\text{W}$	6478.3	20.	6479	5	0.1	U	GSa		81Ho10
	6473.2	10.			0.6	–	ORa		96Bi07
	6479.4	7.			0.0	–	Daa		96Pa01
	ave. 6477	6			0.4	1	80	80 ^{164}Os	average
$^{162}\text{Dy}(\text{t,p})^{164}\text{Dy}$	5447.3	1.9	5447.33	0.08	0.0	U	McM		88Bu08 *
$^{164}\text{Dy}(\text{p,t})^{162}\text{Dy}$	–5450	5	–5447.33	0.08	0.5	U	Min		73Oo01
$^{164}\text{Er}(\text{p,t})^{162}\text{Er}$	–7262	10	–7269.2	0.3	–0.7	U	Min		73Oo01
$^{164}\text{Dy}(\text{t},\alpha)^{163}\text{Tb}$	11153	4				2	McM		92Ga15 *
$^{163}\text{Dy}(\text{n},\gamma)^{164}\text{Dy}$	7658.11	0.07	7658.12	0.07	0.1	1	100	69 ^{164}Dy	MMn 82Is05 Z
	7658.90	0.06			–13.1	C			99Fo.A
	7655.0	0.9			3.5	C	Bdn		06Fi.A
$^{163}\text{Dy}(\text{d,p})^{164}\text{Dy}$	5434	5	5433.55	0.07	–0.1	U	Tal		64Sh06
	5441	10			–0.7	U	Kop		70Gr46
$^{164}\text{Dy}(\text{d,t})^{163}\text{Dy}$	–1407	10	–1400.88	0.07	0.6	U	Kop		70Gr46
	–1407	10			0.6	U	Kop		70Gr46
$^{163}\text{Dy}(\text{He,d})^{164}\text{Ho} - ^{164}\text{Dy}(\text{O})^{165}\text{Ho}$	–331.6	1.4	–330.7	1.1	0.6	1	67	67 ^{164}Ho	McM 75Bu02 *
$^{164}\text{Er}(\text{d,t})^{163}\text{Er}$	–2593	10	–2589	5	0.4	1	21	21 ^{163}Er	Kop 69Tj01 *
$^{164}\text{Ir}^m(\text{p})^{163}\text{Os}$	1844	9	1836	8	–0.8	5		Jyp	01Ke05
	1818	14			1.3	5		Arp	02Ma61
$^{164}\text{Eu}(\beta^-)^{164}\text{Gd}$	6430	70	6440	70	0.1	o		Kur	07Ha57
	6440	70				3		Kur	10Ha.A
$^{164}\text{Tb}(\beta^-)^{164}\text{Dy}$	3890	100				2			71Gu18 *
$^{164}\text{Ho}(\beta^-)^{164}\text{Er}$	990	30	960.8	1.4	–1.0	U			54Br96
	965	20			–0.2	U			66Se07
$^{164}\text{Tm}(\beta^+)^{164}\text{Er}$	3985	20	4038	24	2.6	U			67Vr04 *
	3989	50			1.0	1	24	24 ^{164}Tm	IRS 94Po26 *
$^{164}\text{Lu}(\beta^+)^{164}\text{Yb}$	6390	140	6380	30	–0.1	U			83Ge08
	6250	90			1.4	o		IRS	83Vi.A
	6290	90			0.9	U		IRS	93Al03 *
	6255	120			1.0	U		Dbn	94Po26 *
* $^{164}\text{Tm-u}$	M–A=–61884(28) keV for mixture gs+m at 10(6) keV								Nub127 **
* $^{164}\text{W}(\alpha)^{160}\text{Hf}$	Originally assigned to ^{168}Re								AHW **
* $^{164}\text{W}(\alpha)^{160}\text{Hf}$	Originally assigned to ^{167}Re , re-assigned in reference								92Me10 **
*	original $E_\alpha=5136$ recalibrated using their $^{168}\text{Os}-^{170}\text{Os}$ results								GAU **
* $^{162}\text{Dy}(\text{t,p})^{164}\text{Dy}$	$Q-Q(^{160}\text{Dy}(\text{t,p}))=-722.3(1.9)$ keV, see $^{162}\text{Dy}(\text{p,t})$								88Bu08 **
* $^{164}\text{Dy}(\text{t},\alpha)^{163}\text{Tb}$	$Q-Q(^{162}\text{Dy}(\text{t},\alpha))=-123(4)+54-584=-653(4)$ keV								AHW **
* $^{163}\text{Dy}(\text{He,d})^{164}\text{Ho} - ^{164}\text{D}$	See erratum								75Bu02 **
* $^{164}\text{Tb}(\beta^-)^{164}\text{Dy}$	$E_{\beta^-}=1700(100)$ to 4^+ level at 2194.44 and 4^+ at 2205.63 keV, and other E_{β^-}								Ens017 **
* $^{164}\text{Tm}(\beta^+)^{164}\text{Er}$	$E_{\beta^+}=2940(20)$ 29 to ground state 10 to 2^+ level at 91.38 keV								Ens017 **
* $^{164}\text{Tm}(\beta^+)^{164}\text{Er}$	$E_{\beta^+}=2944(50)$ 29 to ground state 10 to 2^+ level at 91.38 keV								Ens017 **
* $^{164}\text{Lu}(\beta^+)^{164}\text{Yb}$	$Q_{\beta^+}=6250(90)$ partly to 2^+ level at 123.31 keV								Ens017 **
* $^{164}\text{Lu}(\beta^+)^{164}\text{Yb}$	$E_{\beta^+}=5191(120)$ partly to 2^+ level at 123.31 keV								Ens017 **
$\text{C}_{13} \text{H}_9 - ^{165}\text{Ho}$	140043	29	140096.5	2.1	0.5	U		R04	4.0 64De15
$\text{C}_{12} \text{H}_7 \text{N} - ^{165}\text{Ho}$	127537	28	127520.4	2.1	–0.1	U		R04	4.0 64De15
$\text{C}_{11} ^{13}\text{C} \text{H}_6 \text{N} - ^{165}\text{Ho}$	122970	50	123050.2	2.1	0.4	U		R04	4.0 64De15
$^{165}\text{Tm} - ^{142}\text{Sm}_{1.162}$	30970	20	30976	4	0.3	U		MA7	1.0 01Bo59
$^{165}\text{Yb-u}$	–64721	30	–64730	28	–0.3	1	90	90 ^{165}Yb	GS2 1.0 05Li24
$^{165}\text{Lu-u}$	–60602	30	–60593	28	0.3	1	90	90 ^{165}Lu	GS2 1.0 05Li24
$^{165}\text{Hf-u}$	–55360	140	–55430	30	–0.5	U		GS1	1.0 00Ra23
	–55433	30				2		GS2	1.0 05Li24
$^{165}\text{Ta-u}$	–49191	30	–49219	15	–0.9	1	25	25 ^{165}Ta	GS2 1.0 05Li24
$^{165}\text{W-u}$	–41720	30	–41719	27	0.0	1	80	80 ^{165}W	GS2 1.0 05Li24
$^{165}\text{Ho} ^{35}\text{Cl} - ^{163}\text{Dy} ^{37}\text{Cl}$	4539	4	4540.6	0.9	0.2	U		H23	2.5 70Wh01
$^{165}\text{W}(\alpha)^{161}\text{Hf}$	5031.0	5.	5029	30	0.0	–		ORa	75To05 Z
	5034.2	10.			–0.1	–			84Sc06 *
	ave. 5032	4			0.0	1	36	20 ^{165}W	average
$^{165}\text{Re}(\alpha)^{161}\text{Ta}$	5631.7	10.	5633	5	0.1	6			78Sc26 *
	5643.0	10.			–1.0	6		GSa	81Ho10
	5629.6	6.			0.5	6		Jya	05Sc22
$^{165}\text{Re}^m(\alpha)^{161}\text{Ta}^m$	5664.5	4.	5660.0	2.7	–1.1	–		Ora	82De11 *
	5655.4	5.			0.9	–		Daa	96Pa01 *
	5657.4	5.			0.5	–		Jya	05Sc22

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{165}\text{Re}^m(\alpha)^{161}\text{Ta}^m$	ave. 5659.9	2.7 5660.0	2.7	0.0	1	100	89 $^{161}\text{Ta}^m$		average
$^{165}\text{Os}(\alpha)^{161}\text{W}$	6354.3	20. 6340	50	-0.4	5		Ora		78Ca11
	6317.4	10.		0.4	5		GSa		81Ho10
	6342.1	7.		-0.1	5		Daa		96Pa01
$^{165}\text{Ir}^m(\alpha)^{161}\text{Re}^m$	6882.1	7. 6879	6	-0.4	1	70	48 $^{165}\text{Ir}^m$		Ara 97Da07
$^{163}\text{Dy}(\text{t,p})^{165}\text{Dy}$	4890.6	2.9 4892.27	0.09	0.6	U		McM		88Bu08 *
$^{164}\text{Dy}(\text{n},\gamma)^{165}\text{Dy}$	5716.36	0.20 5715.96	0.05	-2.0	U		ILn		79Br25 Z
	5715.96	0.06		0.0	2		MMn		82Is05 Z
	5715.70	0.30		0.9	U		ILn		90Ka21 Z
	5715.95	0.12		0.1	2		Bdn		06Fi.A
$^{164}\text{Dy}(\text{d,p})^{165}\text{Dy}$	3488	5 3491.39	0.05	0.7	U		Tal		64Sh13
	3496	10		-0.5	U		Kop		70Gr46
$^{164}\text{Dy}(\text{}^3\text{He,d})^{165}\text{Ho}$	717.3	10. 727.1	0.8	1.0	U		McM		75Bu02
$^{165}\text{Ho}(\gamma,\text{n})^{164}\text{Ho}$	-8160	80 -7988.8	1.1	2.1	U		Phi		60Ge01
	-7987	2		-0.9	1	33	33 ^{164}Ho		MMn 85Ts01
$^{165}\text{Ho}(\text{d,t})^{164}\text{Ho}$	-1730	15 -1731.6	1.1	-0.1	U		Tal		70Jo11
$^{164}\text{Er}(\text{n},\gamma)^{165}\text{Er}$	6650.1	0.6 6650.1	0.6	0.1	1	94	88 ^{165}Er		70Bo29 Z
$^{164}\text{Er}(\text{d,p})^{165}\text{Er}$	4431	10 4425.6	0.6	-0.5	U		Kop		69Tj01
$^{164}\text{Er}(\alpha,\text{t})^{165}\text{Tm}-^{168}\text{Er}(\text{}^1\text{O})^{169}\text{Tm}$	-1298.0	2.0 -1297.7	1.5	0.1	1	60	48 ^{165}Tm		McM 75Bu02
$^{165}\text{Ir}^m(\text{p})^{164}\text{Os}$	1717.5	7. 1721	6	0.4	1	72	52 $^{165}\text{Ir}^m$		Ara 97Da07
$^{165}\text{Eu}(\beta^-)^{165}\text{Gd}$	5800	120 5800	120	0.0	o		Kur		07Ha57
	5800	120			3		Kur		10Ha.A
$^{165}\text{Dy}(\beta^-)^{165}\text{Ho}$	1305	20 1287.0	0.8	-0.9	U				59Bo52
	1285	10		0.2	U				63Pe11
$^{165}\text{Er}(\epsilon)^{165}\text{Ho}$	370	10 377.9	1.0	0.8	U				63Ry01
	371	6		1.1	U				63Zy01
$^{165}\text{Tm}(\beta^+)^{165}\text{Er}$	1591.3	2.0 1591.6	1.5	0.1	1	60	52 ^{165}Tm		82Vy03 *
$^{165}\text{Yb}(\beta^+)^{165}\text{Tm}$	2762	20 2633	27	-6.4	B				67Pa04 *
$^{165}\text{Lu}(\beta^+)^{165}\text{Yb}$	4250	140 3850	40	-2.8	B				83Ge08
	3920	80		-0.8	o		IRS		83Vi.A
	3920	80		-0.8	1	20	10 ^{165}Yb		IRS 93Al03
* $^{165}\text{W}(\alpha)^{161}\text{Hf}$	Originally assigned to ^{168}Re , re-assigned in reference								92Me10 **
*	original $E_\alpha=4894$ recalibrated using their $^{168}\text{Os}-^{170}\text{Os}$ results								GAu **
* $^{165}\text{Re}(\alpha)^{161}\text{Ta}$	Originally assigned to ^{166}Re								AHW **
* $^{165}\text{Re}^m(\alpha)^{161}\text{Ta}^m$	Originally assigned to ^{166}Re								AHW **
* $^{165}\text{Re}^m(\alpha)^{161}\text{Ta}^m$	Due to a high spin isomer								99Po09 **
* $^{163}\text{Dy}(\text{t,p})^{165}\text{Dy}$	$Q-Q(^{162}\text{Dy}(\text{t,p}))=-556.6(2.9)$ keV								AHW **
* $^{165}\text{Tm}(\beta^+)^{165}\text{Er}$	$E_{\beta^+}=272(2)$ to $1/2^-$ level at 297.371 keV								Ens066 **
* $^{165}\text{Yb}(\beta^+)^{165}\text{Tm}$	$E_{\beta^+}=1580(20)$ to $7/2^-$ level at 160.47 keV								Ens066 **
$\text{C}_{12}\text{H}_8\text{N}-^{166}\text{Er}$	135376	29 135374.7	2.2	0.0	U		R04	4.0	64De15
	135420	60		-0.2	U		R04	4.0	64De15
$\text{C}_{13}\text{H}_{10}-^{166}\text{Er}$	147740	60 147950.8	2.2	0.9	U		R04	4.0	64De15
$^{166}\text{Lu}-\text{u}$	-60157	108 -60140	30	0.1	U		GS1	1.0	00Ra23 *
	-60141	32			2		GS2	1.0	05Li24 *
$^{166}\text{Hf}-\text{u}$	-57860	110 -57820	30	0.4	U		GS1	1.0	00Ra23
	-57820	30			2		GS2	1.0	05Li24
$^{166}\text{Ta}-\text{u}$	-49488	30			2		GS2	1.0	05Li24
$^{166}\text{W}-\text{u}$	-44957	30 -44969	10	-0.4	1	12	12 ^{166}W		GS2 1.0 05Li24
$^{166}\text{Er}-^{35}\text{Cl}-^{164}\text{Er}-^{37}\text{Cl}$	4040.9	1.4 4040.8	1.2	0.0	1	12	9 ^{166}Er		H25 2.5 72Ba08
$^{166}\text{Er}-^{164}\text{Er}$	1214	46 1090.7	1.2	-0.7	U		R04	4.0	64De15
	1110	80		-0.1	U		R04	4.0	64De15
$^{166}\text{W}(\alpha)^{162}\text{Hf}$	4856.0	5. 4856	4	0.0	-		ORa		75To05 Z
	4855.0	10.		0.1	-		GSa		79Ho10 Z
	4858.2	8.		-0.3	-				89Hi04
	ave. 4856	4		-0.1	1	97	78 ^{166}W		average
$^{166}\text{Re}(\alpha)^{162}\text{Ta}$	5461.8	10.			5				78Sc26 *
	5574.5	3. 5460	50	-2.3	U		Ora		82De11 *
	5637.0	13.		-3.5	B		Bea		92Me10 *
	5669.9	10.		-4.2	B		Daa		96Pa01 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{166}\text{Os}(\alpha)^{162}\text{W}$	6148.5	20.	6139	4	-0.5	U					77Ca23
	6129.0	6.			1.6	-		GSa			81Ho10
	6148.5	6.			-1.6	-		Daa			96Pa01
$^{166}\text{Ir}(\alpha)^{162}\text{Re}$	ave.	6139	4		0.0	1	100	100 ^{166}Os			average
	6702.8	20.	6722	6	1.0	U		GSa			81Ho10
$^{166}\text{Ir}^m(\alpha)^{162}\text{Re}^m$	6724.3	6.			-0.3	7		Ara			97Da07
	6713.1	13.			0.7	7		Jya			04Ke06 *
	6718.2	11.	6719	4	0.0	8		Daa			96Pa01 *
$^{166}\text{Pt}(\alpha)^{162}\text{Os}$	6723.3	5.			-0.9	8		Ara			97Da07
	6706.7	8.			1.4	8		Jya			04Ke06
	7285.9	15.				5		ORa			96Bi07
$^{164}\text{Dy}(\text{t,p})^{166}\text{Dy}$	4276.4	4.4	4277.7	0.4	0.3	U		McM			88Bu08 *
$^{166}\text{Er}(\text{p,t})^{164}\text{Er}$	-6641	5	-6644.8	1.1	-0.8	U		Min			73Oo01 *
$^{165}\text{Dy}(\text{n},\gamma)^{166}\text{Dy}$	7043.5	0.4				3					83Ke.A
$^{165}\text{Ho}(\text{n},\gamma)^{166}\text{Ho}$	6243.69	0.06	6243.640	0.020	-0.8	U		MMn			82Is05 Z
	6243.64	0.02			0.0	1	100	71 ^{166}Ho	MMn		84Ke15 Z
	6243.68	0.13			-0.3	U		Bdn			06Fi.A
$^{165}\text{Ho}(\text{d,p})^{166}\text{Ho}$	4025	7	4019.074	0.020	-0.8	U		Tal			65St06
$^{166}\text{Er}(\text{d,t})^{165}\text{Er}$	-2218	10	-2219.3	1.3	-0.1	U		Kop			69Tj01
$^{166}\text{Ir}(\text{p})^{165}\text{Os}$	1152.0	8.0				6		Ara			97Da07
$^{166}\text{Ir}^m(\text{p})^{165}\text{Os}$	1324.1	8.	1323	10	-0.1	o		Ara			97Da07 *
	4830	100	4700	70	-1.3	o		Kur			02Sh.A
	4695	70			0.1	o		Kur			07Ha57
$^{166}\text{Tb}(\beta^-)^{166}\text{Dy}$	4700	70				4		Kur			10Ha.A
$^{166}\text{Dy}(\beta^-)^{166}\text{Ho}$	483	5	487.1	0.9	0.8	U					60He09 *
$^{166}\text{Ho}(\beta^-)^{166}\text{Er}$	1859	3	1855.0	0.9	-1.3	-					63Fu17
	1857	3			-0.7	-					66Da04
	1854.7	1.5			0.2	-					74Gr41
	1851.6	2.0			1.7	-					83Ra.A
	ave.	1854.7	1.0			0.3	1	75	46 ^{166}Er		
$^{166}\text{Tm}(\beta^+)^{166}\text{Er}$	3043	20	3038	12	-0.3	2					61Gr33 *
	3031	20			0.3	2					61Zy02 *
	3039	20			-0.1	2					63Pr13 *
$^{166}\text{Yb}(\epsilon)^{166}\text{Tm}$	280	40	293	14	0.3	U					Averag *
$^{166}\text{Lu}(\beta^+)^{166}\text{Yb}$	5480	160	5570	30	0.6	U					74De09 *
$^{166}\text{Ir}^m(\text{IT})^{166}\text{Ir}$	171.5	6.1				7		Ara			97Da07
* $^{166}\text{Lu-u}$	M-A=-56010(100) keV for mixture gs+m+n at 34.37 and 43.0 keV										Nub127 **
* $^{166}\text{Lu-u}$	M-A=-55995(28) keV for mixture gs+m+n at 34.37 and 43.0 keV										Nub127 **
* $^{166}\text{Re}(\alpha)^{162}\text{Ta}$	Originally assigned to ^{167}Re										AHW **
* $^{166}\text{Re}(\alpha)^{162}\text{Ta}$	Assignment uncertain, no other obvious attribution										AHW **
* $^{166}\text{Re}(\alpha)^{162}\text{Ta}$	Originally assigned to ^{167}Re										AHW **
* $^{166}\text{Re}(\alpha)^{162}\text{Ta}$	Assignment tentative, may be ^{165}Re										92Me10 **
* $^{166}\text{Re}(\alpha)^{162}\text{Ta}$	Correlated to a ^{170}Ir 6003 line; assignment uncertain										GAu **
* $^{166}\text{Ir}(\alpha)^{162}\text{Re}$	All Q_α of reference increased by 7 keV for calibration error										04Ke06 **
* $^{166}\text{Ir}^m(\alpha)^{162}\text{Re}^m$	Correlated with $E_\alpha=6123$ of $^{162}\text{Re}^m$										96Pa01 **
* $^{164}\text{Dy}(\text{t,p})^{166}\text{Dy}$	$Q-Q(^{162}\text{Dy}(\text{t,p}))=-1170.8(4.4)$ keV										AHW **
* $^{166}\text{Ir}^m(\text{p})^{165}\text{Os}$	Replaced by author's value for $^{166}\text{Ir}^m(\text{IT})^{166}\text{Ir}$										97Da07 **
* $^{166}\text{Dy}(\beta^-)^{166}\text{Ho}$	$E_{\beta^-}=402(5)$ to 1^- level at 82.47 keV, and other E_{β^-}										Ens084 **
* $^{166}\text{Tm}(\beta^+)^{166}\text{Er}$	$E_{\beta^+}=1940(20)$ 1928(20) 1936(20) respectively, to 2^+ level at 80.5776 keV										Ens929 **
* $^{166}\text{Yb}(\epsilon)^{166}\text{Tm}$	Average $pK=0.712(0.038)$ to 1^+ level at 82.298 keV from 2 references:										Ens084 **
*	$pK=0.74(0.05)$ to 82.298 level										63Ja06 **
*	$pK=0.675(0.059)$ to 82.298 level										73De22 **
* $^{166}\text{Lu}(\beta^+)^{166}\text{Yb}$	$E_{\beta^+}=2225(160)$ to $(6^-, 7^-)$ level at 2233.36 keV										Ens084 **
$\text{C}_{13} \text{H}_{11}-^{167}\text{Er}$	153840	130	154020.7	2.2	0.3	U		R04	4.0		64De15
	154040.4	6.2			-1.3	U		M23	2.5		79Ha32
$\text{C}_{12} \text{H}_9 \text{N}-^{167}\text{Er}$	141480	27	141444.7	2.2	-0.3	U		R04	4.0		64De15
	141520	50			-0.4	U		R04	4.0		64De15

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{167}\text{Lu-u}$	-61730	34				2			GS2	1.0	05Li24 *
$^{167}\text{Hf-u}$	-57490	110	-57400	30	0.8	U			GS1	1.0	00Ra23
	-57400	30				2			GS2	1.0	05Li24
$^{167}\text{Ta-u}$	-51870	120	-51910	30	-0.3	U			GS1	1.0	00Ra23
	-51907	30				2			GS2	1.0	05Li24
$^{167}\text{W-u}$	-45175	30	-45195	20	-0.7	R			GS2	1.0	05Li24
$^{167}\text{Er } ^{35}\text{Cl}-^{165}\text{Ho } ^{37}\text{Cl}$	4666	3	4675.9	1.0	1.3	U			H23	2.5	70Wh01
	4679.5	1.2			-1.2	U			H25	2.5	72Ba08
$^{167}\text{Er}-^{166}\text{Er}$	1722	31	1755.09	0.19	0.3	U			R04	4.0	64De15
$^{167}\text{W}(\alpha)^{163}\text{Hf}$	4661.9	20.	4740	28	1.6	-					89Me02
	4671.1	13.			1.4	-					91Me05
	ave.	4668			1.4	1	32	21 ^{163}Hf			average
$^{167}\text{Re}(\alpha)^{163}\text{Ta}^m$	5138.3	12.				12			Bea		92Me10
$^{167}\text{Re}^m(\alpha)^{163}\text{Ta}$	5408.8	3.	5407.0	2.9	-0.6	4			Ora		82De11 *
	5397.5	10.			0.9	4			ChR		84Sc06 *
	5392.4	12.			1.2	4			Bea		92Me10
$^{167}\text{Os}(\alpha)^{163}\text{W}$	5983.6	5.	5980	50	0.0	6			GSa		81Ho10 Z
	5978.7	2.			0.1	6			Ora		82De11 Z
	5996.9	5.			-0.3	6			Daa		96Pa01
	5979.5	5.			0.0	6			Bka		02Ro17
$^{167}\text{Ir}(\alpha)^{163}\text{Re}$	6507.1	5.	6504.8	2.6	-0.4	2			Ara		97Da07
	6504.0	3.			0.3	2			Jya		05Sc22
$^{167}\text{Ir}^m(\alpha)^{163}\text{Re}^m$	6543.0	10.	6560	3	1.7	2			GSa		81Ho10
	6567.6	11.			-0.6	2			Daa		96Pa01
	6567.6	5.			-1.4	2			Ara		97Da07
	6551.1	7.			1.3	2			Jya		04Ke06
	6561.5	6.			-0.1	2			Jya		05Sc22
$^{167}\text{Pt}(\alpha)^{163}\text{Os}$	7159.8	10.	7160	50	-0.1	5			ORa		96Bi07
	7150.6	10.			0.1	5			Jya		04Ke06
$^{167}\text{Er}(\text{p,t})^{165}\text{Er}$	-6427	6	-6431.2	1.3	-0.7	-			Min		73Oo01
	-6430	5			-0.2	-					75St08
	ave.	-6429			-0.6	1	11	6 ^{167}Er			average
$^{166}\text{Er}(\text{n},\gamma)^{167}\text{Er}$	6436.35	0.50	6436.46	0.18	0.2	-					70Bo29 Z
	6436.51	0.40			-0.1	-					70Mi01 Z
	6436.46	0.22			0.0	-			Bdn		06Fi.A
$^{167}\text{Er}(\gamma,\text{n})^{166}\text{Er}$	-6560	80	-6436.46	0.18	1.5	U			Phi		60Ge01
$^{166}\text{Er}(\text{d,p})^{167}\text{Er}$	4209	10	4211.90	0.18	0.3	U			Tal		68Ha10
	4214	10			-0.2	U			Kop		69Tj01
$^{167}\text{Er}(\text{d,t})^{166}\text{Er}$	-189	12	-179.23	0.18	0.8	U			Kop		69Bu01
$^{166}\text{Er}(\text{n},\gamma)^{167}\text{Er}$	ave.	6436.46	0.18	6436.46	0.18	0.0	1	99	54 ^{167}Er		average
$^{166}\text{Er}(\alpha,\text{t})^{167}\text{Tm}-^{168}\text{Er}()^{169}\text{Tm}$	-666.5	1.0	-666.4	1.0	0.1	1	99	99 ^{167}Tm	McM		75Bu02
$^{167}\text{Ir}(\text{p})^{166}\text{Os}$	1070.5	6.	1070	4	-0.1	-					97Da07
	1068.5	6.			0.3	-			Jyp		05Sc22 *
	ave.	1070			0.1	1	77	77 ^{167}Ir			average
$^{167}\text{Ir}^m(\text{p})^{166}\text{Os}$	1245.5	7.	1246	4	0.0	o					97Da07 *
$^{167}\text{Dy}(\beta^-)^{167}\text{Ho}$	2350	60				3					77Tu01 *
$^{167}\text{Ho}(\beta^-)^{167}\text{Er}$	970	20	1010	5	2.0	U					68Fu07
$^{167}\text{Yb}(\beta^+)^{167}\text{Tm}$	1954	4	1953	4	-0.2	1	90	89 ^{167}Yb			77Kr.A *
$^{167}\text{Lu}(\beta^+)^{167}\text{Yb}$	3130	100	3090	30	-0.4	U					64Ag.A *
$^{167}\text{W}(\beta^+)^{167}\text{Ta}$	5620	270	6250	30	2.3	U			Got		89Me02
$^{167}\text{Ir}^m(\text{IT})^{167}\text{Ir}$	175.3	2.2	175.5	2.1	0.1	1	94	70 $^{167}\text{Ir}^m$	Ara		97Da07
* $^{167}\text{Lu-u}$	M-A=-57501(28) keV for mixture gs+m at 0#30 keV										Nub127 **
* $^{167}\text{Re}^m(\alpha)^{163}\text{Ta}$	Original assignment to ^{168}Re changed in reference										92Me10 **
* $^{167}\text{Re}^m(\alpha)^{163}\text{Ta}$	Original assignment to $^{168}\text{Re}^m$ changed in reference										92Me10 **
*	original $E_\alpha=5250$ recalibrated using their $^{168}\text{Os}-^{170}\text{Os}$ results										GAu **
* $^{167}\text{Ir}(\text{p})^{166}\text{Os}$	$E_p=1062(6)$; also $E_p=1248(7)$ from $^{167}\text{Ir}^m$										05Sc22 **
* $^{167}\text{Ir}^m(\text{p})^{166}\text{Os}$	Replaced by author's value for $^{167}\text{Ir}^m(\text{IT})^{167}\text{Ir}$										97Da07 **
* $^{167}\text{Dy}(\beta^-)^{167}\text{Ho}$	$E_{\beta^-}=1780(60)$ to $3/2^-$ level at 569.69 keV										Ens008 **
* $^{167}\text{Yb}(\beta^+)^{167}\text{Tm}$	$E_{\beta^+}=639(4)$ to $7/2^-$ level at 292.820 keV										Ens008 **
* $^{167}\text{Lu}(\beta^+)^{167}\text{Yb}$	$E_{\beta^+}=2060(100)$ to $5/2^+$ level at 29.658, $7/2^-$ at 78.671 keV										Ens008 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$C_{13} H_{12} -^{168}\text{Er}$	161543.3	5.1	161523.7	2.2	-1.5	U			M23	2.5	79Ha32	
$C_{12} H_{10} N -^{168}\text{Er}$	148884	44	148947.6	2.2	0.4	U			R04	4.0	64De15	
$C_{11} ^{13}\text{C} H_9 N -^{168}\text{Er}$	144524	29	144477.4	2.2	-0.4	U			R04	4.0	64De15	
$C_{12} H_{10} N -^{168}\text{Yb}$	147010	100	147434.7	2.2	1.1	U			R04	4.0	64De15	
$^{168}\text{Lu-u}$	-61217	70	-61260	40	-0.7	R			GS2	1.0	05Li24 *	
$^{168}\text{Hf-u}$	-59560	104	-59430	30	1.2	U			GS1	1.0	00Ra23	
	-59432	30				2			GS2	1.0	05Li24	
$^{168}\text{Ta-u}$	-52020	110	-51950	30	0.6	U			GS1	1.0	00Ra23	
	-51953	30				2			GS2	1.0	05Li24	
$^{168}\text{W-u}$	-48181	30	-48194	14	-0.4	1	23	23	^{168}W	GS2	1.0	05Li24
$^{168}\text{Yb} ^{35}\text{Cl}_2 -^{164}\text{Dy} ^{37}\text{Cl}_2$	10612.8	8.7	10607.9	1.3	-0.2	U			H27	2.5	74Ba90	
$^{168}\text{Er} ^{35}\text{Cl} -^{166}\text{Er} ^{37}\text{Cl}$	5037	50	5027.24	0.24	-0.1	U			R08	1.5	69De19	
	5026	3			0.2	U			H23	2.5	70Wh01	
	5028.9	1.5			-0.4	U			H25	2.5	72Ba08	
$^{168}\text{Yb} -^{168}\text{Er}$	1512.91	0.27	1512.91	0.27	0.0	1	100	100	^{168}Yb	SH1	1.0	11E104
$^{168}\text{Er} -^{167}\text{Er}$	284	31	322.07	0.13	0.3	U			R04	4.0	64De15	
	320.9	4.3			0.1	U			M24	2.5	79Ha32	
$^{168}\text{W}(\alpha)^{164}\text{Hf}$	4506.5	12.	4500	11	-0.5	1	87	68	^{164}Hf			91Me05
$^{168}\text{Re}(\alpha)^{164}\text{Ta}$	5063	13				3			Bea			92Me10 *
$^{168}\text{Os}(\alpha)^{164}\text{W}$	5819.0	3.	5816.1	2.7	-0.9	-			Ora			82De11 Z
	5800.4	8.			1.9	-						84Sc06
	5812.7	8.			0.4	-						95Hi02
	ave.	5816.2	2.7		0.0	1	100	96	^{168}Os			average
$^{168}\text{Ir}(\alpha)^{164}\text{Re}$	6410.9	5.	6381	9	-5.9	B			Ora			82De11
	6379.2	15.			0.1	5			Daa			96Pa01
	6382.2	10.			-0.1	5			Jya			09Ha42
$^{168}\text{Ir}^m(\alpha)^{164}\text{Re}^m$	6477.5	8.	6476	6	-0.1	6			Daa			96Pa01
	6474.4	10.			0.2	6			Jya			09Ha42 *
$^{168}\text{Pt}(\alpha)^{164}\text{Os}$	6990.8	20.	6990	3	-0.1	U			GSa			81Ho10
	6998.9	10.			-0.9	U			ORa			96Bi07
	6986.7	8.			0.4	o			Jya			04Ke06
	6989.5	3.				2			Jya			09Go16
$^{168}\text{Er}(\text{p,t})^{166}\text{Er}$	-5723	6	-5725.98	0.22	-0.5	U			Min			73Oo01
$^{168}\text{Yb}(\text{p,t})^{166}\text{Yb}$	-7647	7				2			Min			73Oo01
$^{167}\text{Er}(\text{n},\gamma)^{168}\text{Er}$	7771.43	0.40	7771.31	0.12	-0.3	-						70Mi01 Z
	7771.05	0.20			1.3	-			ILn			79Br25 Z
	7771.0	0.5			0.6	U						85Va.A
	7771.45	0.16			-0.9	-			Bdn			06Fi.A
$^{167}\text{Er}(\text{d,p})^{168}\text{Er}$	5541	6	5546.74	0.12	1.0	U			Tal			67Ha25
$^{168}\text{Er}(\text{d,t})^{167}\text{Er}$	-1523	10	-1514.08	0.12	0.9	U			Kop			69Tj01
$^{167}\text{Er}(\text{n},\gamma)^{168}\text{Er}$	ave.	7771.31	0.12	7771.31	0.12	0.0	1	100	74	^{168}Er		average
$^{167}\text{Er}(\alpha,\text{t})^{168}\text{Tm} -^{168}\text{Er}(\text{t})^{169}\text{Tm}$	-262.3	1.5	-262.3	1.5	0.0	1	100	100	^{168}Tm	McM		75Bu02
$^{168}\text{Yb}(\text{d,t})^{167}\text{Yb}$	-2797	12	-2805	4	-0.6	1	11	11	^{167}Yb	Kop		66Bu16
$^{168}\text{Ho}(\beta^-)^{168}\text{Er}$	2740	100	2930	30	1.9	U						73Ka07 *
	2930	30				2						90Ch37
$^{168}\text{Lu}(\beta^+)^{168}\text{Yb}$	4475	80	4510	40	0.5	2						70Ch28 *
	4493	100			0.2	2						72Ch44 *
	4500	80			0.2	2			IRS			83Vi.A
* $^{168}\text{Lu-u}$	M-A=-56922(28) keV for mixture gs+m at 202.81(0.12) keV										Nub127 **	
* $^{168}\text{Re}(\alpha)^{164}\text{Ta}$	$E_\alpha=4833(13)$ to level at 111.5 keV										Ens089 **	
* $^{168}\text{Ir}^m(\alpha)^{164}\text{Re}^m$	$E_\alpha=6320(10), 6260(10)$ to ground state and level at 69 keV										09Ha42 **	
* $^{168}\text{Ho}(\beta^-)^{168}\text{Er}$	$E_{\beta^-}=1900(100)$ to 2^+ level at 821.17 and 3^+ at 895.79 keV										Ens108 **	
* $^{168}\text{Lu}(\beta^+)^{168}\text{Yb}$	$E_{\beta^+}=1230(80)$ to 2222.37 level										Ens108 **	
* $^{168}\text{Lu}(\beta^+)^{168}\text{Yb}$	$E_{\beta^+}=1470(100)$ from $^{168}\text{Lu}^m$ at 202.81 to 4^+ level at 2203.84 keV										Ens108 **	
$C_{12} H_{11} N -^{169}\text{Tm}$	154920	60	154931.5	2.2	0.0	U			R04	4.0	64De15	
$^{169}\text{Lu-u}$	-62362	31	-62356	4	0.2	U			GS2	1.0	05Li24 *	
$^{169}\text{Hf-u}$	-58741	30				2			GS2	1.0	05Li24	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{169}\text{Ta-u}$	-53960	110	-53990	30	-0.3	U			GS1	1.0	00Ra23
	-53989	30				2			GS2	1.0	05Li24
$^{169}\text{W-u}$	-48195	30	-48221	17	-0.9	1	31	31 ^{169}W	GS2	1.0	05Li24
$^{169}\text{Re-u}$	-41200	62	-41234	12	-0.5	U			GS2	1.0	05Li24 *
$^{169}\text{Tm } ^{35}\text{Cl}_2-^{165}\text{Ho } ^{37}\text{Cl}_2$	9793.0	1.1	9789.2	1.4	-1.4	1	26	15 ^{169}Tm	H25	2.5	72Ba08
$^{169}\text{Tm } ^{35}\text{Cl}-^{167}\text{Er } ^{37}\text{Cl}$	5107	3	5113.4	1.2	0.8	U			H23	2.5	70Wh01
	5113.2	1.1			0.1	1	20	11 ^{169}Tm	H25	2.5	72Ba08
$^{169}\text{Re}(\alpha)^{165}\text{Ta}^m$	4989.3	12.				5			Bea		92Me10 *
$^{169}\text{Re}^m(\alpha)^{165}\text{Ta}$	5189.1	3.	5189	3	-0.1	1	99	75 ^{165}Ta	Ora		82De11
	5191.1	10.			-0.2	U			ChR		84Sc06 *
	5184.0	10.			0.5	U			Bea		92Me10
$^{169}\text{Os}(\alpha)^{165}\text{W}$	5717.6	4.	5713	3	-1.0	2			Ora		82De11
	5699.2	8.			1.7	2					84Sc06 *
	5713	8			0.0	2					95Hi02 *
	5711.5	8.			0.2	2			Daa		96Pa01
$^{169}\text{Ir}(\alpha)^{165}\text{Re}$	6150.8	8.	6141	4	-1.2	5			Ara		99Po09
	6138.5	4.			0.6	5			Jya		05Sc22
$^{169}\text{Ir}^m(\alpha)^{165}\text{Re}^m$	6276.0	3.	6265.8	2.9	-3.4	B			Ora		82De11 Z
	6258.4	10.			0.7	U			GSa		84Sc.A
	6267.6	9.			-0.2	-			Daa		96Pa01
	6254.3	5.			2.3	U			Ara		99Po09
	6265.6	3.			0.1	-			Jya		05Sc22
	ave.	6265.7	2.9		0.0	1	100	89 $^{165}\text{Re}^m$			average
$^{169}\text{Pt}(\alpha)^{165}\text{Os}$	6840.2	15.	6858	5	1.2	U			GSa		81Ho10
	6860.7	23.			-0.1	U			Daa		96Pa01
	6853.4	8.			0.5	o			Jya		04Ke06
	6857.4	5.				6			Jya		09Go16
$^{168}\text{Er}(n,\gamma)^{169}\text{Er}$	6002.5	0.7	6003.25	0.15	1.1	U					70Bo29 Z
	6003.5	0.3			-0.8	2					70Mu15 Z
	6003.16	0.18			0.5	2			Bdn		06Fi.A
$^{168}\text{Er}(d,p)^{169}\text{Er}$	3773	12	3778.68	0.15	0.5	U			Tal		68Ha10
	3781	10			-0.2	U			Kop		69Tj01
$^{168}\text{Er}(\alpha,t)^{169}\text{Tm}$	-14244.8	10.	-14240.0	1.1	0.5	U			McM		75Bu02
$^{169}\text{Tm}(\gamma,n)^{168}\text{Tm}$	-8110	50	-8033.6	1.5	1.5	U			Phi		60Ge01
$^{169}\text{Tm}(d,t)^{168}\text{Tm}$	-1775	6	-1776.4	1.5	-0.2	U			Pit		73Ko06
$^{168}\text{Yb}(n,\gamma)^{169}\text{Yb}$	6866.8	0.4	6866.98	0.15	0.4	2					68Mi08 Z
	6867.2	0.4			-0.6	2					68Sh12 Z
	6866.97	0.18			0.0	2			Bdn		06Fi.A
$^{168}\text{Yb}(d,p)^{169}\text{Yb}$	4636	12	4642.41	0.15	0.5	U			Kop		66Bu16
$^{169}\text{Dy}(\beta^-)^{169}\text{Ho}$	3200	300				3			LBL		90Ch34
$^{169}\text{Ho}(\beta^-)^{169}\text{Er}$	2070	100	2125	20	0.6	U					63Mi17 *
$^{169}\text{Er}(\beta^-)^{169}\text{Tm}$	343.8	3.	353.0	1.1	3.1	B					56Bi30 *
	347.8	5.			1.0	U					65Du02 *
$^{169}\text{Yb}(\epsilon)^{169}\text{Tm}$	913	12	898.5	1.2	-1.2	U					86Ad07 *
	900	100			0.0	U					87Sa53 *
$^{169}\text{Lu}(\beta^+)^{169}\text{Yb}$	2293	3				3					77Bo31
$^{169}\text{Hf}(\beta^+)^{169}\text{Lu}$	3365	200	3367	28	0.0	U					69Ar23 *
	3250	90			1.3	U					73Me09 *
* $^{169}\text{Lu-u}$	M-A=-58075(28) keV for mixture gs+m at 29.0 keV										
* $^{169}\text{Re-u}$	M-A=-38293(29) keV for mixture gs+m at 170(14) keV										
* $^{169}\text{Re}(\alpha)^{165}\text{Ta}^m$	$E_\alpha=4871(12)$, and a stronger $E_\alpha=4700(12)$										
* $^{169}\text{Re}^m(\alpha)^{165}\text{Ta}$	Original $E_\alpha=5050$ recalibrated using their $^{168}\text{Os}-^{170}\text{Os}$ results										
* $^{169}\text{Os}(\alpha)^{165}\text{W}$	Used to recalibrate other results in same reference										
* $^{169}\text{Os}(\alpha)^{165}\text{W}$	$E_\alpha=5578(8)$, $5536(10)$ to ground state, $(3/2^-)$ level at 43 keV										
* $^{169}\text{Ho}(\beta^-)^{169}\text{Er}$	$E_{\beta^-}=1200(100)$ to $5/2^-$ level at 853.0 and $7/2^-$ at 941.04 keV										
* $^{169}\text{Er}(\beta^-)^{169}\text{Tm}$	$E_{\beta^-}=340(2)$ $344(4)$ respectively, 55% to ground state, 45% to $3/2^+$ level at 8.41 keV										
* $^{169}\text{Yb}(\epsilon)^{169}\text{Tm}$	From decay rates to $(5/2^+)$ level at 781.796, $(7/2^+)$ 878.35 of same band										
* $^{169}\text{Yb}(\epsilon)^{169}\text{Tm}$	$pK=0.812(0.029)$ to $9/2^-$ level at 472.88 keV										
* $^{169}\text{Hf}(\beta^+)^{169}\text{Lu}$	$E_{\beta^+}=1850(200)$ to $7/2^-$ level at 492.88 keV										
* $^{169}\text{Hf}(\beta^+)^{169}\text{Lu}$	$K/\beta^+=5.2(1.0)$ to $7/2^-$ level at 492.88 keV										

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$C_{12} H_{12} N-^{170}Er$	161210	70	161504.2	2.6	1.1	U			R04	4.0	64De15
$C_{12} H_{12} N-^{170}Yb$	161831	43	162208.0	2.2	2.2	U			R04	4.0	64De15
$C_{11} H_8 O N-^{170}Yb$	125370	150	125822.5	2.2	0.8	U			R04	4.0	64De15
$C_{11} ^{13}C H_{11} N-^{170}Yb$	157320	210	157737.8	2.2	0.5	U			R04	4.0	64De15
$^{170}Lu-u$	-61529	42	-61522	18	0.2	R			GS2	1.0	05Li24 *
$^{170}Hf-u$	-60400	104	-60390	30	0.1	U			GS1	1.0	00Ra23
	-60391	30				2			GS2	1.0	05Li24
$^{170}Ta-u$	-53810	104	-53830	30	-0.1	U			GS1	1.0	00Ra23
	-53825	30				2			GS2	1.0	05Li24
$^{170}W-u$	-50710	110	-50768	14	-0.5	U			GS1	1.0	00Ra23
	-50755	30			-0.4	1	22	22 ^{170}W	GS2	1.0	05Li24
$^{170}Re-u$	-41782	30	-41780	28	0.1	2			GS2	1.0	05Li24
$^{170}Os-u$	-36454	31	-36422	11	1.0	1	12	12 ^{170}Os	GS2	1.0	05Li24
$^{170}Er ^{35}Cl-^{168}Er ^{37}Cl$	6073	31	6043.6	1.6	-0.6	U			R08	1.5	69De19
	6040	3			0.5	U			H23	2.5	70Wh01
	6046.9	1.8			-0.7	1	13	11 ^{170}Er	H25	2.5	72Ba08
$^{170}Yb ^{35}Cl-^{168}Yb ^{37}Cl$	3806.0	7.6	3826.9	1.4	1.1	U			H27	2.5	74Ba90
$^{170}Er-^{168}Er$	3450	70	3093.5	1.6	-1.3	U			R04	4.0	64De15
$^{170}Yb-^{168}Yb$	910	200	876.8	1.4	0.0	U			R04	4.0	64De15
$^{170}Os(\alpha)^{166}W$	5533.5	10.	5536.8	2.7	0.3	-			ORa		72To06 Z
	5541.6	4.			-1.2	-			Ora		82De11 Z
	5523.2	8.			1.7	-					84Sc06 *
	5533.4	8.			0.4	-					95Hi02
	5537.5	5.			-0.1	-			Bka		02Ro17
ave.	5537.1	2.7			-0.1	1	99	88 ^{170}Os			average
$^{170}Ir(\alpha)^{166}Re^p$	5955.4	10.				7			Bka		02Ro17
$^{170}Ir^m(\alpha)^{166}Re$	6175.4	10.	6272	10	9.7	B					78Sc26 *
	6172.7	5.			19.9	B			Ora		82De11 *
	6147.9	10.			12.4	B			Daa		96Pa01 *
	6229.9	11.			3.9	B			Daa		96Pa01 *
	6272.4	10.				6			Jya		07Ha45 *
$^{170}Pt(\alpha)^{166}Os$	6703.0	8.	6707	3	0.5	-			GSa		81Ho10
	6705.0	10.			0.2	-					82En03
	6708.1	6.			-0.1	-			ORa		96Bi07
	6711.2	11.			-0.3	-			Jya		97Uu01
	6723.5	14.			-1.1	-			Bka		01Ro.B
	6707.1	7.			0.0	-			Jya		04Ke06
ave.	6708	3			-0.1	1	84	84 ^{170}Pt			average
$^{170}Au(\alpha)^{166}Ir$	7174.1	11.	7177	15	0.3	o			Jya		02Ke.C
	7170.0	12.			0.6	U			Jya		04Ke06
$^{170}Au^m(\alpha)^{166}Ir^m$	7277.5	6.	7285	12	0.2	o			Jya		02Ke.C
	7226.3	15.			1.2	U			Ara		02Ma61
	7278.5	9.			0.1	U			Jya		04Ke06
$^{170}Er(p,\alpha)^{167}Ho$	7036	5				2			NDm		83Ta.A
$^{170}Er(^{18}O,^{20}Ne)^{168}Dy$	4710	140				2					98Lu08
$^{170}Er(p,t)^{168}Er$	-4785	5	-4779.2	1.5	1.2	U			Min		73Oo01
$^{170}Yb(p,t)^{168}Yb$	-6861	6	-6844.1	1.3	2.8	U			Min		73Oo01
$^{170}Er(d,^3He)^{169}Ho$	-3107	20				2					76Su.A
$^{170}Er(d,t)^{169}Er$	-1010	10	-1000.5	1.5	0.9	U			Kop		69Tj01
$^{169}Tm(n,\gamma)^{170}Tm$	6595.	2.5	6591.97	0.17	-1.2	U					66Sh03
	6592.1	1.5			-0.1	U					70Or.A
	6591.7	0.9			0.3	U			BNN		96Ho12 Z
	6591.95	0.17			0.1	1	99	58 ^{170}Tm	Bdn		06Fi.A
$^{169}Tm(d,p)^{170}Tm$	4420	20	4367.41	0.17	-2.6	U			CIT		66Ry01
	4369	15			-0.1	U			Tal		66Sh03
$^{170}Yb(d,t)^{169}Yb$	-2211	12	-2201.7	1.3	0.8	U			Kop		66Bu16
$^{170}Au(p)^{169}Pt$	1473.8	15.	1472	12	-0.1	o			Jyp		02Ke.C
	1471.7	12.				7			Jyp		04Ke06
$^{170}Au^m(p)^{169}Pt$	1749.5	8.	1751	5	0.2	o			Jyp		02Ke.C
	1745.4	10.			0.6	7			Arp		02Ma61
	1753.5	6.			-0.4	7			Jyp		04Ke06

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{170}\text{Ho}(\beta^-)^{170}\text{Er}$	3870	50				2					78Tu04
$^{170}\text{Ho}^m(\beta^-)^{170}\text{Er}$	3970	60				2					78Tu04
$^{170}\text{Tm}(\beta^-)^{170}\text{Yb}$	970	2	968.4	0.8	-0.8	-					54Po26
	967.3	1.			1.1	-					69Va17 *
ave.	967.8	0.9			0.7	1	81	42 ^{170}Tm			average
$^{170}\text{Lu}(\beta^+)^{170}\text{Yb}$	3467	20	3458	17	-0.5	2					60Dz02
	3410	50			1.0	2					65Ha30
* $^{170}\text{Lu-u}$	M-A=-57267(29) keV for mixture gs+m at 92.91 keV										Nub127 **
* $^{170}\text{Os}(\alpha)^{166}\text{W}$	Used to recalibrate other results in same reference										GAu **
* $^{170}\text{Ir}^m(\alpha)^{166}\text{Re}$	$E_\alpha=6029.8(10,Z)$ 6027.2(5,Z) 6003(10) most probably to low levels in ^{166}Re										GAu **
* $^{170}\text{Ir}^m(\alpha)^{166}\text{Re}$	Correlated with ^{166}Re $E_\alpha=5533$ keV										96Pa01 **
* $^{170}\text{Ir}^m(\alpha)^{166}\text{Re}$	$E_\alpha=5951(10)$ to level at 175, 6007(10) to 122, 6053(10) to 75 keV										07Ha45 **
* $^{170}\text{Tm}(\beta^-)^{170}\text{Yb}$	$E_{\beta^-}=883(1)$ to 2^+ level at 84.25468 keV										Ens02b **
$\text{C}_{11} \text{ }^{13}\text{C} \text{ H}_{12} \text{ N}-^{171}\text{Yb}$	164140	80	163999.0	2.2	-0.4	U			R04	4.0	64De15
$\text{C}_{10} \text{ H}_7 \text{ O} \text{ N}_2-^{171}\text{Yb}$	119640	270	119507.6	2.2	-0.1	U			R04	4.0	64De15
$^{171}\text{Lu-u}$	-62132	41	-62083.0	2.7	1.2	U			GS2	1.0	05Li24 *
$^{171}\text{Hf-u}$	-59570	104	-59510	30	0.6	U			GS1	1.0	00Ra23 *
	-59508	31				2			GS2	1.0	05Li24 *
$^{171}\text{Ta-u}$	-55550	104	-55520	30	0.3	U			GS1	1.0	00Ra23
	-55524	30				2			GS2	1.0	05Li24
$^{171}\text{W-u}$	-50650	110	-50550	30	0.9	U			GS1	1.0	00Ra23
	-50549	30				2			GS2	1.0	05Li24
$^{171}\text{Re-u}$	-44284	30				2			GS2	1.0	05Li24
$^{171}\text{Os-u}$	-36796	30	-36826	19	-1.0	-			GS2	1.0	05Li24
ave.	-36801	21			-1.2	1	81	81 ^{171}Os			average
$^{171}\text{Yb} \text{ }^{35}\text{Cl}_2-^{167}\text{Er} \text{ }^{37}\text{Cl}_2$	10178.0	1.7	10175.8	1.4	-0.5	1	11	6 ^{167}Er	H27	2.5	74Ba90
$^{171}\text{Yb} \text{ }^{35}\text{Cl}-^{169}\text{Tm} \text{ }^{37}\text{Cl}$	5055	3	5062.4	1.0	1.0	U			H23	2.5	70Wh01
	5061.9	1.7			0.1	U			H27	2.5	74Ba90
$^{171}\text{Yb}-^{170}\text{Yb}$	1220	60	1563.8	0.6	1.4	U			R04	4.0	64De15
$^{171}\text{Os}(\alpha)^{167}\text{W}$	5365.8	10.	5371	4	0.5	-			ORa		72To06
	5365.8	10.			0.5	-					78Sc26
	5393.4	15.			-1.4	-					79Ha10
	5367.9	8.			0.4	-					95Hi02 *
	5374.0	9.			-0.3	-			Daa		96Pa01
ave.	5371	4			0.1	1	99	90 ^{167}W			average
$^{171}\text{Ir}(\alpha)^{167}\text{Re}^m$	5854.2	10.	5861	6	0.7	5			Bka		02Ro17 *
	5865.4	8.			-0.5	5			Ara		11Ko.B *
$^{171}\text{Ir}^m(\alpha)^{167}\text{Re}$	6159.2	3.	6161.1	2.3	0.6	11			Ora		82De11 *
	6159	5			0.4	11					92Sc16 *
	6180	11			-1.7	11			Daa		96Pa01 *
	6159.2	8.			0.2	11			Anv		10An01 *
	6172.4	8.			-1.4	11			Ara		11Ko.B *
$^{171}\text{Pt}(\alpha)^{167}\text{Os}$	6608.1	4.	6607	3	-0.2	7			Ora		81De22 Z
	6606.8	5.			0.1	7			GSa		81Ho10 Z
	6604.8	11.			0.2	7			Jya		97Uu01
	6600.6	15.			0.4	U			Anv		10An01
$^{171}\text{Au}^m(\alpha)^{167}\text{Ir}^m$	7163.9	6.	7164	4	0.1	-			Ara		97Da07
	7162.9	8.			0.2	-			Jya		04Ke06
ave.	7163	5			0.2	1	69	39 $^{171}\text{Au}^m$			average
$^{171}\text{Hg}(\alpha)^{167}\text{Pt}$	7667.7	15.				6			Jya		04Ke06
$^{171}\text{Yb}(p,t)^{169}\text{Yb}$	-6599	5	-6591.8	1.3	1.4	U			Min		73Oo01
$^{170}\text{Er}(n,\gamma)^{171}\text{Er}$	5681.5	0.5	5681.6	0.4	0.2	-					71Al01
	5681.6	0.5			0.0	-			Bdn		06Fi.A
$^{170}\text{Er}(d,p)^{171}\text{Er}$	3450	10	3457.0	0.4	0.7	U			Tal		68Ha10
	3458	10			-0.1	U			Kop		69Tj01
$^{170}\text{Er}(n,\gamma)^{171}\text{Er}$	ave.	5681.6	0.4	5681.6	0.4	0.2	1	98	70 ^{171}Er		average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{170}\text{Er}(\alpha, t)^{171}\text{Tm} - ^{168}\text{Er}(\alpha)^{169}\text{Tm}$	817.9	1.0	817.4	0.9	-0.5	1	82	60 ^{170}Er	McM	75Bu02	
$^{170}\text{Yb}(n, \gamma)^{171}\text{Yb}$	6614.3	0.6	6614.6	0.6	0.5	1	89	67 ^{170}Yb		72Wa10 Z	
	6616.6	0.4			-5.0	C			Bdn	06Fi.A	
$^{170}\text{Yb}(d, p)^{171}\text{Yb}$	4390	12	4390.1	0.6	0.0	U			Kop	66Bu16	
$^{171}\text{Yb}(d, t)^{170}\text{Yb}$	-359	12	-357.4	0.6	0.1	U			Kop	66Bu16	
$^{170}\text{Yb}(\alpha, t)^{171}\text{Lu} - ^{174}\text{Yb}(\alpha)^{175}\text{Lu}$	-1156.2	2.0	-1156.8	1.7	-0.3	1	74	67 ^{171}Lu	McM	75Bu02	
$^{171}\text{Au}(p)^{170}\text{Pt}$	1452.6	17.	1448	10	-0.3	2			Arp	99Po09	
	1445.6	12.			0.2	2			Jyp	04Ke06	
$^{171}\text{Au}^m(p)^{170}\text{Pt}$	1702.1	6.	1702	4	0.1	-				97Da07	
	1704.1	6.			-0.3	-			Jyp	04Ke06	
ave.	1703	4			-0.1	1	77	61 $^{171}\text{Au}^m$		average	
$^{171}\text{Ho}(\beta^-)^{171}\text{Er}$	3200	600				2			LBL	90Ch34	
$^{171}\text{Er}(\beta^-)^{171}\text{Tm}$	1490	2	1492.1	1.3	1.0	1	41	30 ^{171}Er		61Ar15 *	
$^{171}\text{Tm}(\beta^-)^{171}\text{Yb}$	96.5	1.0	96.6	1.0	0.1	1	94	93 ^{171}Tm		57Sm73	
$^{171}\text{Lu}(\beta^+)^{171}\text{Yb}$	1479.3	3.	1478.0	1.9	-0.4	1	41	33 ^{171}Lu		77Bo32 *	
$^{171}\text{Re}(\beta^+)^{171}\text{W}$	5670	200	5840	40	0.8	U			Got	87Ru05	
$^{171}\text{Au}^m(\text{IT})^{171}\text{Au}$	250	16	255	10	0.3	o				99Po09 *	
* $^{171}\text{Lu}-u$	M-A=-57840(33) keV for mixture gs+m at 71.13 keV									Nub127 **	
* $^{171}\text{Hf}-u$	M-A=-55480(100) keV for mixture gs+m at 21.93 keV									Nub127 **	
* $^{171}\text{Hf}-u$	M-A=-55420(28) keV for mixture gs+m at 21.93 keV									Nub127 **	
* $^{171}\text{Os}(\alpha)^{167}\text{W}$	$E_\alpha=5241(8), 5166(8)$ to ground state and level at 79 keV									95Hi02 **	
* $^{171}\text{Ir}(\alpha)^{167}\text{Re}^m$	Correlated with $E_\alpha=6412$ of ^{175}Au									02Ro17 **	
* $^{171}\text{Ir}(\alpha)^{167}\text{Re}^m$	Correlated with $E_\alpha=6430(8)$ of ^{175}Au and $6556(8)$ of ^{179}Tl									11Ko.B **	
* $^{171}\text{Ir}^m(\alpha)^{167}\text{Re}$	$E_\alpha=5925.2(3, Z), 5925(5), 5945(11), 5925(8)$ respectively, to 92 level									92Sc16 **	
*	$E_\alpha=5920$ correlated with ^{175}Au $E_\alpha=6438$ keV									02Ro17 **	
* $^{171}\text{Ir}^m(\alpha)^{167}\text{Re}$	$E_\alpha=5938(8)$ to 92 level; correlated with $E_\alpha=6431(8)$ of $^{175}\text{Au}^m$									11Ko.B **	
*	and $7194(8)$ of $^{179}\text{Tl}^m$									11Ko.B **	
* $^{171}\text{Er}(\beta^-)^{171}\text{Tm}$	$E_{\beta^-}=1065(2)$ to $7/2^-$ level at 424.95 keV									Ens029 **	
* $^{171}\text{Lu}(\beta^+)^{171}\text{Yb}$	$E_{\beta^+}=362(3)$ to $7/2^+$ level at 95.28 keV									Ens029 **	
* $^{171}\text{Au}^m(\text{IT})^{171}\text{Au}$	Redundant; use only their Q_p									GAu **	
$\text{C}_{10} \text{H}_6 \text{O}_2 \text{N} - ^{172}\text{Yb}$	103560	60	103467.6	2.2	-0.4	U			R04	4.0	64De15
$^{172}\text{Hf}-u$	-60555	30	-60550	26	0.2	2			GS2	1.0	05Li24
$^{172}\text{Ta}-u$	-55105	30				2			GS2	1.0	05Li24
$^{172}\text{W}-u$	-52770	110	-52710	30	0.6	U			GS1	1.0	00Ra23
	-52708	30				2			GS2	1.0	05Li24
$^{172}\text{Re}-u$	-44702	221	-44580	40	0.6	U			GS1	1.0	00Ra23 *
	-44587	62			0.1	1	47	47 ^{172}Re	GS2	1.0	05Li24 *
$^{172}\text{Yb} \text{ } ^{35}\text{Cl}_2 - ^{168}\text{Er} \text{ } ^{37}\text{Cl}_2$	9906.7	1.7	9909.3	1.4	0.6	1	11	6 ^{168}Er	H27	2.5	74Ba90
$^{172}\text{Yb} \text{ } ^{35}\text{Cl} - ^{170}\text{Yb} \text{ } ^{37}\text{Cl}$	4568.5	2.0	4569.6	0.6	0.2	U			H27	2.5	74Ba90
$^{172}\text{Yb} - ^{171}\text{Yb}$	-50	230	55.66	0.15	0.1	U			R04	4.0	64De15
$^{172}\text{Os}(\alpha)^{168}\text{W}$	5226.8	10.	5224	7	-0.2	-					71Bo06
	5227.8	10.			-0.3	-			Daa		96Pa01
ave.	5227	7			-0.4	1	93	59 ^{168}W			average
$^{172}\text{Ir}(\alpha)^{168}\text{Re}$	5990.6	10.				4					92Sc16 *
$^{172}\text{Ir}^m(\alpha)^{168}\text{Re}$	6129.3	3.	6129.2	2.6	0.0	4			Ora		82De11 *
	6161	20			-1.6	F			GSa		84Sc.A *
	6129.1	5.			0.0	4					92Sc16 *
	6123.0	12.			0.5	U			Daa		96Pa01 *
$^{172}\text{Pt}(\alpha)^{168}\text{Os}$	6464.8	4.	6464	4	-0.1	1	99	95 ^{172}Pt	Ora		81De22 Z
	6474.8	15.			-0.7	U			Anv		09An20
$^{172}\text{Au}(\alpha)^{168}\text{Ir}$	6923.2	10.				6			Jya		09Ha42
$^{172}\text{Au}^m(\alpha)^{168}\text{Ir}^m$	7023.6	10.	7034	6	1.0	7					93Se09
	7042.1	9.			-0.9	7			Daa		96Pa01
	7033.8	10.			0.0	7			Jya		09Ha42 *
$^{172}\text{Hg}(\alpha)^{168}\text{Pt}$	7525.3	12.	7524	6	-0.1	3					99Se14
	7536.5	16.			-0.8	o			Jya		04Ke06
	7523.1	7.			0.1	3			Jya		09Sa27

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	ν_i	Dg	Signf.	Main infl.	Lab	F	Reference			
$^{170}\text{Er}(t,p)^{172}\text{Er}$	4034	4	4036	4	0.5	1	89	87	^{172}Er	80Sh14		
$^{172}\text{Yb}(p,t)^{170}\text{Yb}$	-6161	5	-6152.3	0.6	1.7	U			Min	73Oo01		
$^{171}\text{Yb}(n,\gamma)^{172}\text{Yb}$	8020.3	0.7	8019.47	0.14	-1.2	-				71Al14 Z		
	8020.1	0.5			-1.3	-				75Gr32		
	8019.67	0.35			-0.6	-			ILn	85Ge02 Z		
	8019.27	0.17			1.2	-			Bdn	06Fi.A		
$^{171}\text{Yb}(d,p)^{172}\text{Yb}$	5797	12	5794.90	0.14	-0.2	U			Kop	66Bu16		
	5789	5			1.2	U			Tal	66Sh14		
$^{172}\text{Yb}(d,t)^{171}\text{Yb}$	-1772	12	-1762.23	0.14	0.8	U			Kop	66Bu16		
$^{171}\text{Yb}(n,\gamma)^{172}\text{Yb}$	ave. 8019.45	0.14	8019.47	0.14	0.1	1	100	63	^{171}Yb	average		
$^{171}\text{Yb}(^3\text{He,d})^{172}\text{Lu}$	-792	34	-774.4	2.4	0.5	U			Roc	76El11		
$^{171}\text{Yb}(\alpha,t)^{172}\text{Lu}-^{174}\text{Yb}(\alpha)^{175}\text{Lu}$	-791.9	2.0	-791.9	2.0	0.0	1	100	100	^{172}Lu	75Bu02		
$^{172}\text{Er}(\beta^-)^{172}\text{Tm}$	888	5	891	5	0.6	1	83	70	^{172}Tm	62Gu03 *		
$^{172}\text{Tm}(\beta^-)^{172}\text{Yb}$	1870	10	1881	6	1.1	1	30	30	^{172}Tm	66Ha15		
$^{172}\text{Hf}(\epsilon)^{172}\text{Lu}$	350	50	336	25	-0.3	R				79To18		
$^{172}\text{Ta}(\beta^+)^{172}\text{Hf}$	4920	180	5070	40	0.8	U				73Ca10 *		
$^{172}\text{W}(\beta^+)^{172}\text{Ta}$	3210	100	2230	40	-9.8	C				74Ca.A *		
* $^{172}\text{Re-u}$	M-A=-41640(200) keV for mixture gs+m at 0#100 keV									Nub127 **		
* $^{172}\text{Re-u}$	M-A=-41533(28) keV for mixture gs+m at 0#100 keV									Nub127 **		
* $^{172}\text{Ir}(\alpha)^{168}\text{Re}$	$E_\alpha=5510(10)$ to 89.7+123.2+136.3 level									92Sc16 **		
*	level at 349.2 considered uncertain									Ens942 **		
*	$E_\alpha=5510(10)$ correlated with $E_\alpha=6260$ of ^{186}Au									02Ro17 **		
* $^{172}\text{Ir}^m(\alpha)^{168}\text{Re}$	$E_\alpha=5736$ followed by XK(Re), 128 M2 and 161 M3 γ 's									84Sc.A **		
* $^{172}\text{Ir}^m(\alpha)^{168}\text{Re}$	F : first assigned to $^{173}\text{Ir}(\alpha)$; seen in neither nuclide in reference									92Sc16 **		
* $^{172}\text{Ir}^m(\alpha)^{168}\text{Re}$	$E_\alpha=5828.2(3,Z)$ 5828(5) 5822(12) respectively, to (8 ⁺) level at 162.1 keV									Ens108 **		
* $^{172}\text{Au}^m(\alpha)^{168}\text{Ir}^m$	$E_\alpha=6870(10)$ 6800(10) to ground state and 70 keV level									09Ha42 **		
* $^{172}\text{Er}(\beta^-)^{172}\text{Tm}$	$E_{\beta^-}=278(5)$ to 1 ⁺ level at 610.06 keV									Ens959 **		
* $^{172}\text{Ta}(\beta^+)^{172}\text{Hf}$	$E_{\beta^+}=2480(180)$ to 4 ⁻ level at 1418.55 keV									Ens959 **		
* $^{172}\text{W}(\beta^+)^{172}\text{Ta}$	$E_{\beta^+}=1600(100)$ in coinc. with 459 keV γ from 586.3 level									Ens959 **		
$\text{C}_{14} \text{H}_5-^{173}\text{Yb}$	101030	70	100910.0	2.2	-0.4	U			R04	4.0	64De15	
$\text{C}_{10} \text{H}_7 \text{O}_2 \text{N}-^{173}\text{Yb}$	109810	60	109463.3	2.2	-1.4	U			R04	4.0	64De15	
$^{173}\text{Hf-u}$	-59487	30				2			GS2	1.0	05Li24	
$^{173}\text{Ta-u}$	-56270	104	-56250	30	0.2	U			GS1	1.0	00Ra23	
	-56250	30				2			GS2	1.0	05Li24	
$^{173}\text{W-u}$	-52340	104	-52310	30	0.3	U			GS1	1.0	00Ra23	
	-52311	30				2			GS2	1.0	05Li24	
$^{173}\text{Re-u}$	-46910	110	-46760	30	1.4	U			GS1	1.0	00Ra23	
	-46757	30				2			GS2	1.0	05Li24	
$^{173}\text{Os-u}$	-40169	30	-40192	16	-0.8	1	29	29	^{173}Os	GS2	1.0	05Li24
$^{173}\text{Ir-u}$	-32450	100	-32494	12	-0.4	U			GS2	1.0	05Li24 *	
$^{173}\text{Yb } ^{35}\text{Cl}_2-^{169}\text{Tm } ^{37}\text{Cl}_2$	9898.3	1.2	9897.4	1.0	-0.3	1	12	7	^{169}Tm	H27	2.5	74Ba90
$^{173}\text{Yb } ^{35}\text{Cl}-^{171}\text{Yb } ^{37}\text{Cl}$	4827	4	4835.0	0.4	0.8	U			H23	2.5	70Wh01	
	4835.3	1.6			-0.1	U			H27	2.5	74Ba90	
$^{173}\text{Yb}-^{172}\text{Yb}$	1970	120	1829.3	0.4	-0.3	U			R04	4.0	64De15	
$^{173}\text{Os}(\alpha)^{169}\text{W}$	5057.2	10.	5055	6	-0.2	-					71Bo06	
	5055.2	7.			-0.1	-			GSa		84Sc.A	
	ave. 5056	6			-0.2	1	97	69	^{169}W		average	
$^{173}\text{Ir}(\alpha)^{169}\text{Re}^m$	5544.4	10.	5541	10	-0.3	1	90	76	$^{169}\text{Re}^m$		92Sc16	
$^{173}\text{Ir}^m(\alpha)^{169}\text{Re}$	5930.4	5.	5941.8	2.5	2.3	4					67Si02 *	
	5947.1	4.			-1.3	4			Ora		82De11 *	
	5937	10			0.5	4			GSa		84Sc.A *	
	5944.8	5.			-0.6	4					92Sc16 *	
	5951.9	13.			-0.8	4			Daa		96Pa01 *	
	5927.3	20.			0.7	U			Ara		01Ko.B	
$^{173}\text{Pt}(\alpha)^{169}\text{Os}$	6359.1	8.	6350	50	-0.1	3					79Ha10 Z	
	6352.3	3.			0.1	3			Ora		81De22 Z	
	6382.9	10.			-0.6	o			GSa		84Sc.A	
	6372.6	9.			-0.4	3			Daa		96Pa01	
	6387.9	15.			-0.7	U			Anv		09An20	
$^{173}\text{Au}(\alpha)^{169}\text{Ir}$	6830.2	6.	6836	5	1.0	4			Ara		99Po09	
	6847.6	8.			-1.4	4			Ara		01Ko44	
$^{173}\text{Au}^m(\alpha)^{169}\text{Ir}^m$	6896.8	10.	6896	3	0.0	-			GSa		84Sc.A	
	6909.1	9.			-1.4	-			Daa		96Pa01	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{173}\text{Au}^m(\alpha)^{169}\text{Ir}^m$	6891.6	4.	6896	3	1.2	–			Ara		99Po09	
	6900.8	6.			–0.7	–			Ara		01Ko44	
$^{173}\text{Hg}(\alpha)^{169}\text{Pt}$	ave. 6896	3			0.0	1	100	89	$^{169}\text{Ir}^m$		average	
	7381.9	11.3	7378	4	–0.4	7					99Se14	
	7362.3	15.			1.0	7			Jya		04Ke06	
	7378.9	5.			–0.2	7					12Od01	
$^{173}\text{Yb}(\text{p,t})^{171}\text{Yb}$	–5913	5	–5905.0	0.4	1.6	U			Min		73Oo01	
$^{172}\text{Yb}(\text{n},\gamma)^{173}\text{Yb}$	6367.3	0.4	6367.4	0.3	0.2	–					71A101	
	6367.2	0.6			0.3	–			Bdn		06Fi.A	
$^{173}\text{Yb}(\gamma,\text{n})^{172}\text{Yb}$	–6500	80	–6367.4	0.3	1.7	U			Phi		60Ge01	
$^{172}\text{Yb}(\text{d,p})^{173}\text{Yb}$	4145	12	4142.8	0.3	–0.2	U			Kop		66Bu16	
$^{173}\text{Yb}(\text{d,t})^{172}\text{Yb}$	–114	12	–110.1	0.3	0.3	U			Kop		66Bu16	
$^{172}\text{Yb}(\text{n},\gamma)^{173}\text{Yb}$	ave. 6367.3	0.3	6367.4	0.3	0.3	1	98	58	^{172}Yb		average	
$^{172}\text{Yb}(\alpha,\text{t})^{173}\text{Lu} - ^{174}\text{Yb}(\text{t})^{175}\text{Lu}$	–595.6	1.0	–595.6	1.0	0.0	1	100	100	^{173}Lu	McM	75Bu02	
$^{173}\text{Tm}(\beta^-)^{173}\text{Yb}$	1260	50	1298	5	0.8	U					63Ku22	
	1320	40			–0.6	U					63Or01	
$^{173}\text{Lu}(\varepsilon)^{173}\text{Yb}$	675	20	669.6	1.6	–0.3	U					73Ko13	
$^{173}\text{Ta}(\beta^+)^{173}\text{Hf}$	3670	200	3020	40	–3.3	B					73Re03	
$^{173}\text{W}(\beta^+)^{173}\text{Ta}$	4000	300	3670	40	–1.1	U					80Vi.A	
* $^{173}\text{Ir-u}$	M–A=–30113(70) keV for mixture gs+m at 228(9) keV										Nub127	**
* $^{173}\text{Ir}^m(\alpha)^{169}\text{Re}$	E $_{\alpha}$ =5660.0(5,Z) 5676.2(4,Z) 5666(10) 5674(5) 5681(13) respectively,										AHW	**
*	to (11/2 [–]) level at 136.24 keV										Ens089	**
$\text{C}_{14}\text{H}_6 - ^{174}\text{Yb}$	108308	38	108083.8	2.2	–1.5	U			R04	4.0	64De15	
$^{174}\text{Ta-u}$	–55546	30				2			GS2	1.0	05Li24	
$^{174}\text{W-u}$	–53940	104	–53920	30	0.2	U			GS1	1.0	00Ra23	
	–53921	30				2			GS2	1.0	05Li24	
$^{174}\text{Re-u}$	–46930	104	–46890	30	0.4	U			GS1	1.0	00Ra23	
	–46885	30				2			GS2	1.0	05Li24	
$^{174}\text{Os-u}$	–42880	110	–42936	11	–0.5	U			GS1	1.0	00Ra23	
	–42919	30			–0.6	1	13	13	^{174}Os	GS2	1.0	05Li24
$^{174}\text{Ir-u}$	–33127	72	–33139	30	–0.2	R			GS2	1.0	05Li24	
$^{174}\text{Yb } ^{35}\text{Cl} - ^{172}\text{Yb } ^{37}\text{Cl}$	5420	4	5430.6	0.4	1.1	U			H23	2.5	70Wh01	
	5430.3	1.1			0.1	U			H27	2.5	74Ba90	
$^{174}\text{Yb} - ^{173}\text{Yb}$	700	50	651.30	0.06	–0.2	U			R04	4.0	64De15	
$^{174}\text{Hf}(\alpha)^{170}\text{Yb}$	2558.9	30.	2493.2	2.4	–2.2	U					61Ma05	
$^{174}\text{Os}(\alpha)^{170}\text{W}$	4872.2	10.	4870	10	–0.2	1	90	78	^{170}W		71Bo06	
$^{174}\text{Ir}(\alpha)^{170}\text{Re}$	5624.1	10.				3					92Sc16	
$^{174}\text{Ir}^m(\alpha)^{170}\text{Re}$	5817.6	6.	5817	4	–0.1	3					67Si02	
	5816.4	5.			0.1	3					92Sc16	
$^{174}\text{Pt}(\alpha)^{170}\text{Os}$	6176.3	10.	6183	3	0.7	2					79Ha10	
	6185.7	5.			–0.5	2			Ora		81De22	
	6182.5	5.			0.2	2			Ara		04Go38	
$^{174}\text{Au}(\alpha)^{170}\text{Ir}$	6700.3	10.	6699	7	–0.1	7			GSa		84Sc.A	
	6698.3	10.			0.1	7			Daa		96Pa01	
$^{174}\text{Au}^m(\alpha)^{170}\text{Ir}^m$	6683.9	20.	6784	8	5.0	B			GSa		83Sc24	
	6778	10			0.6	7			GSa		84Sc.A	
	6793.5	13.			–0.7	7			Daa		96Pa01	
$^{174}\text{Hg}(\alpha)^{170}\text{Pt}$	7235.6	11.	7233	6	–0.2	2			Jya		97Uu01	
	7232.5	8.2			0.1	2					99Se14	
	7231.5	14.3			0.1	2			Bka		01Ro.B	
	–5359	5	–5350.2	0.3	1.8	U			Min		73Oo01	
$^{174}\text{Yb}(\text{p,t})^{172}\text{Yb}$	7464.63	0.06	7464.63	0.06	0.1	1	100	54	^{174}Yb	MMn	82Is05	
$^{173}\text{Yb}(\text{n},\gamma)^{174}\text{Yb}$	7464.58	0.35			0.2	U			ILn		87Ge01	
	7465.5	0.4			–2.2	U			Bdn		06Fi.A	
	5239	12	5240.07	0.06	0.1	U			Kop		66Bu16	
$^{173}\text{Yb}(\text{d,p})^{174}\text{Yb}$	5229	5			2.2	U			Tal		66Sh14	
$^{174}\text{Yb}(\text{d,t})^{173}\text{Yb}$	–1218	12	–1207.40	0.06	0.9	U			Kop		66Bu16	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference				
$^{173}\text{Yb}(\alpha,t)^{174}\text{Lu}-^{174}\text{Yb}()$	^{175}Lu	-202.1	1.0	-202.1	1.0	0.0	1	100	100	^{174}Lu	McM	75Bu02	
$^{174}\text{Tm}(\beta^-)^{174}\text{Yb}$	3080	100	3080	40	0.0	2						64Ka16 *	
	3080	50			0.0	2						67Gu12 *	
$^{174}\text{Lu}(\beta^+)^{174}\text{Yb}$	1402	5	1373.4	1.6	-5.7	B						68Kl08	
$^{174}\text{Lu}(\epsilon)^{174}\text{Yb}$	1370	7			0.5	U						68Li01 *	
$^{174}\text{Ta}(\beta^+)^{174}\text{Hf}$	3845	80	4106	28	3.3	B						71Ch26 *	
* $^{174}\text{Ir}-u$	M-A=-30761(36) keV for mixture gs+m at 193(11) keV										Nub127 **		
* $^{174}\text{Ir}(\alpha)^{170}\text{Re}$	$E_\alpha=5275(10)$ to (3^+) level at 224.7 keV										Ens02b **		
* $^{174}\text{Ir}^m(\alpha)^{170}\text{Re}$	$E_\alpha=5478(6)$ to (7^+) level at 210.32 keV										Ens02b **		
* $^{174}\text{Ir}^m(\alpha)^{170}\text{Re}$	$E_\alpha=5478(5)$ 5316(10) to (7^+) at 210.32 and 370.1 level										Ens02b **		
* $^{174}\text{Au}(\alpha)^{170}\text{Ir}$	$E_\alpha=6538$ correlated with ^{170}Ir $E_\alpha=5817$ keV										02Ro17 **		
*	and only this with ^{178}Tl α 's										02Ro17 **		
* $^{174}\text{Au}^m(\alpha)^{170}\text{Ir}^m$	$E_\alpha=6530(20)$ to level above 76 keV										84Sc.A **		
* $^{174}\text{Au}^m(\alpha)^{170}\text{Ir}^m$	$E_\alpha=6626, 6470, 6435$ to $^{170}\text{Ir}^m$ and levels above $^{170}\text{Ir}^m$ (9^+) at 152.5,										Ens082 **		
*	$(7^-, 8^-, 9^-)$ at 190.56; last two E_α originally assigned to ^{175}Au										01Ko.B **		
* $^{174}\text{Tm}(\beta^-)^{174}\text{Yb}$	$E_{\beta^-}=1200(100)$ 1200(50) respectively, to 5^- level at 1884.674 keV, and other E_{β^-}										Ens998 **		
* $^{174}\text{Lu}(\epsilon)^{174}\text{Yb}$	No K capture to 2^- level at 1318.361 keV $\rightarrow Q < 1380$; and L capture										Ens998 **		
*	of $^{174}\text{Lu}^m$ at 170.83 to $^{174}\text{Yb}^m$ at 1518.148 keV $\rightarrow Q_{gs} > 1357$ keV										Nub127 **		
* $^{174}\text{Ta}(\beta^+)^{174}\text{Hf}$	$E_{\beta^+}=2525(80)$ to 4^+ level at 297.38 keV										Ens04a **		
^{175}Lu $^{37}\text{Cl}-^{142}\text{Nd}$ $^{35}\text{Cl}_2$	61249.5	2.5	61243.4	2.1	-1.0	U					H31	2.5	77So02
C_{14} $\text{H}_7-^{175}\text{Lu}$	114121	37	114000.0	2.0	-0.8	U					R04	4.0	64De15
C_{13} ^{13}C $\text{H}_6-^{175}\text{Lu}$	109763	36	109529.8	2.0	-1.6	U					R04	4.0	64De15
$^{175}\text{Ta}-u$	-56350	120	-56260	30	0.7	U					GS1	1.0	00Ra23
	-56263	30				2					GS2	1.0	05Li24
$^{175}\text{W}-u$	-53290	104	-53280	30	0.1	U					GS1	1.0	00Ra23
	-53283	30				2					GS2	1.0	05Li24
$^{175}\text{Re}-u$	-48630	104	-48620	30	0.1	U					GS1	1.0	00Ra23
	-48619	30				2					GS2	1.0	05Li24
$^{175}\text{Os}-u$	-43120	110	-43055	13	0.6	U					GS1	1.0	00Ra23
	-43024	30			-1.0	1	18	18	^{175}Os	GS2	1.0	05Li24	
$^{175}\text{Ir}-u$	-34353	1288	-35850	13	-0.5	U						2.5	91Br17
	-35828	30			-0.7	1	20	20	^{175}Ir	GS2	1.0	05Li24	
^{175}Lu $^{35}\text{Cl}-^{173}\text{Yb}$ ^{37}Cl	5503	4	5510.1	1.4	0.7	U					H23	2.5	70Wh01
	5507.3	1.4			0.8	1	15	9	^{173}Yb	H27	2.5	74Ba90	
^{175}Lu O-C ₁₆	-64316.3	4.5	-64310.2	2.0	0.9	U					TG1	1.5	11Ke03
$^{175}\text{Ir}(\alpha)^{171}\text{Re}$	5709.0	5.	5430	30	-55.6	B							67Si02 *
	5709.2	5.			-55.7	B							92Sc16 *
$^{175}\text{Pt}(\alpha)^{171}\text{Os}$	6179	5	6178.1	2.6	-0.2	-							79Ha10 *
	6178.1	3.			0.0	-							82De11 *
ave.	6178.3	2.6			-0.1	1	100	91	^{175}Pt	Ora			average
$^{175}\text{Au}(\alpha)^{171}\text{Ir}$	6562.3	15.	6577	7	0.9	6					Bka		02Ro17 *
	6580.6	8.			-0.5	6					Ara		11Ko.B *
$^{175}\text{Au}^m(\alpha)^{171}\text{Ir}^m$	6590.9	10.	6583	3	-0.7	10					Ora		75Ca06
	6775.8	10.			-19.3	F					GSa		84Sc.A *
	6588.8	9.			-0.6	10					Daa		96Pa01
	6579.6	6.			0.6	10					Ara		01Ko44
	6582.7	5.			0.1	10					Anv		10An01
	6581.6	8.			0.2	10					Ara		11Ko.B *
$^{175}\text{Hg}(\alpha)^{171}\text{Pt}$	7020.7	20.	7072	5	2.5	o					GSa		83Sc24
	7039.2	20.			1.6	U					GSa		84Sc.A
	7071.0	24.			0.1	o					Daa		96Pa01
	7058.7	11.			1.2	8					Jya		97Uu01
	7075	5			-0.5	8					Daa		09Od01
	7082.1	20.			-0.5	U					Anv		10An01
$^{174}\text{Yb}(n,\gamma)^{175}\text{Yb}$	5822.35	0.07	5822.36	0.07	0.1	1	100	62	^{175}Yb	MMn			82Is05 Z
	5822.5	0.4			-0.4	U					Bdn		06Fi.A
$^{174}\text{Yb}(d,p)^{175}\text{Yb}$	3595	12	3597.79	0.07	0.2	U					Kop		66Bu16

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{174}\text{Yb}(\alpha, t)^{175}\text{Lu}$	-14303	10	-14302.9	1.3	0.0	U			McM		75Bu02
$^{175}\text{Lu}(\gamma, n)^{174}\text{Lu}$	-7880	80	-7666.7	1.0	2.7	U			Phi		60Ge01
$^{175}\text{Lu}(d, t)^{174}\text{Lu}$	-1400	10	-1409.5	1.0	-1.0	U			Tal		70Jo08
$^{174}\text{Hf}(n, \gamma)^{175}\text{Hf}$	6708.4	0.5	6708.5	0.4	0.2	-					71Al01 Z
	6708.8	0.6			-0.5	-			Bdn		06Fi.A
ave.	6708.6	0.4			-0.2	1	100	85 ^{175}Hf			average
$^{175}\text{Tm}(\beta^-)^{175}\text{Yb}$	2385	50				2					66Wi04 *
$^{175}\text{Yb}(\beta^-)^{175}\text{Lu}$	466	3	471.0	1.3	1.7	-					55De18
	468	5			0.6	-					55Mi90
	471	3			0.0	-					56Co13
	467	3			1.3	-					62Ba32
ave.	468.0	1.6			1.8	1	59	38 ^{175}Yb			average
$^{175}\text{Hf}(\epsilon)^{175}\text{Lu}$	628	9	683.7	2.0	6.2	B					68Ja11 *
	650	20			1.7	U					69Jo16 *
	630	3			17.9	B					88Si22 *
* $^{175}\text{Ir}(\alpha)^{171}\text{Re}$	$E_\alpha=5392.8(5, Z)$ to 189.8 level										95Hi02 **
* $^{175}\text{Ir}(\alpha)^{171}\text{Re}$	$E_\alpha=5393(5)$ to 189.8 level										95Hi02 **
* $^{175}\text{Pt}(\alpha)^{171}\text{Os}$	$E_\alpha=6037(10), 5963.0(5, Z)$ to ground state, 76.4(0.5) level										84Sc.A **
* $^{175}\text{Pt}(\alpha)^{171}\text{Os}$	$E_\alpha=5959.2(3, Z)$ to 76.4(0.5) level										84Sc.A **
* $^{175}\text{Au}(\alpha)^{171}\text{Ir}$	Analysis by AHW of data in Fig. 3 of reference										02Ro17 **
* $^{175}\text{Au}(\alpha)^{171}\text{Ir}$	Correlated with $E_\alpha=6556(8)$ of ^{179}Tl and 5728(8) of ^{171}Ir										11Ko.B **
* $^{175}\text{Au}^m(\alpha)^{171}\text{Ir}^m$	$E_\alpha=6435(10)$ and 6470(20) to 190.0 and 152.7 levels										84Sc.A **
* $^{175}\text{Au}^m(\alpha)^{171}\text{Ir}^m$	F : Belongground state to ^{174}Au !										01Ko.B **
* $^{175}\text{Au}^m(\alpha)^{171}\text{Ir}^m$	Correlated with $E_\alpha=7194(8)$ of $^{179}\text{Tl}^m$ and 5958(8) of $^{171}\text{Ir}^m$										11Ko.B **
*	different method and different detectors as compared to 2001Ko44										11Ko.B **
* $^{175}\text{Tm}(\beta^-)^{175}\text{Yb}$	$E_{\beta^-}=1870(50)$ to $1/2^-$ level at 514.866 keV										Ens04a **
* $^{175}\text{Hf}(\epsilon)^{175}\text{Lu}$	$pK=0.712(0.008)$ 0.740(0.015) 0.714(0.002) respectively,										AHW **
*	to $7/2^+$ level at 432.74 keV, and other capture ratios, recalculated										Ens04a **
$\text{C}_{14} \text{H}_8 - ^{176}\text{Yb}$	119980	46	120023.8	2.4	0.2	U			R04	4.0	64De15
$\text{C}_{13} \text{H}_6 \text{N} - ^{176}\text{Yb}$	107190	110	107447.8	2.4	0.6	U			R04	4.0	64De15
$^{176}\text{Lu} \text{ } ^{37}\text{Cl} - ^{143}\text{Nd} \text{ } ^{35}\text{Cl}_2$	61067.2	1.4	61066.9	2.1	-0.1	1	35	19 ^{176}Lu	H31	2.5	77So02
$\text{C}_{14} \text{H}_8 - ^{176}\text{Lu}$	119962	49	119910.6	2.0	-0.3	U			R04	4.0	64De15
$^{176}\text{Lu} \text{ O} - \text{C}_{16}$	-62394.1	7.6	-62395.7	2.0	-0.1	U			TG1	1.5	11Ke03
$^{176}\text{Hf} \text{ O} - \text{C}_{16}$	-63668.5	9.8	-63677.8	2.2	-0.6	U			TG1	1.5	11Ke03
$^{176}\text{Ta} - \text{u}$	-55143	33				2			GS2	1.0	05Li24
$^{176}\text{W} - \text{u}$	-54420	104	-54370	30	0.5	U			GS1	1.0	00Ra23
	-54366	30				2			GS2	1.0	05Li24
$^{176}\text{Re} - \text{u}$	-48380	110	-48380	30	0.0	U			GS1	1.0	00Ra23
	-48377	30				2			GS2	1.0	05Li24
$^{176}\text{Os} - \text{u}$	-45150	110	-45190	30	-0.4	U			GS1	1.0	00Ra23
	-45194	30				2			GS2	1.0	05Li24
$^{176}\text{Ir} - \text{u}$	-36328	30	-36350	22	-0.7	1	54	54 ^{176}Ir	GS2	1.0	05Li24
$^{176}\text{Yb} \text{ } ^{35}\text{Cl}_2 - ^{172}\text{Yb} \text{ } ^{37}\text{Cl}_2$	12088.9	2.4	12090.7	1.2	0.3	U			H27	2.5	74Ba90
$^{176}\text{Yb} \text{ } ^{35}\text{Cl} - ^{174}\text{Yb} \text{ } ^{37}\text{Cl}$	6652	3	6660.1	1.1	1.1	U			H23	2.5	70Wh01
	6656.3	1.4			1.1	U			H27	2.5	74Ba90
$^{176}\text{Hf} \text{ } ^{35}\text{Cl} - ^{174}\text{Hf} \text{ } ^{37}\text{Cl}$	4106	16	4311.6	1.9	5.1	B			H24	2.5	73Ba40
	4314.21	0.86			-1.2	1	76	74 ^{174}Hf	H37	2.5	77Sh12
$^{176}\text{Lu} - ^{175}\text{Lu}$	1980	60	1914.49	0.16	-0.3	U			R04	4.0	64De15
$^{176}\text{Yb} - ^{174}\text{Yb}$	4000	50	3710.0	1.1	-1.4	U			R04	4.0	64De15
$^{176}\text{Ir}(\alpha)^{172}\text{Re}$	5237.3	8.	5240	40	0.1	1	60	53 ^{172}Re			67Si02
$^{176}\text{Pt}(\alpha)^{172}\text{Os}$	5890.1	5.	5885.0	2.1	-1.0	-					79Ha10 Z
	5881.4	4.			0.9	-			Bka		82Bo04 Z
	5887.3	3.			-0.7	-			Ora		82De11 Z
	5874.8	8.			1.3	-			Daa		96Pa01
ave.	5885.2	2.1			-0.1	1	99	66 ^{172}Os			average
$^{176}\text{Au}(\alpha)^{172}\text{Ir}$	6574.2	10.	6558	7	-1.6	5			Ora		75Ca06 *
	6541.5	10.			1.6	5			GSa		84Sc.A *
$^{176}\text{Au}^m(\alpha)^{172}\text{Ir}^m$	6436.6	10.	6433	5	-0.3	5			Ora		75Ca06 *
	6428.4	10.			0.5	5			GSa		84Sc.A *
	6433.4	6.			-0.1	5			Ara		01Ko44 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{176}\text{Hg}(\alpha)^{172}\text{Pt}$	6907.2	20.	6899	6	-0.4	o			GSa		83Sc24
	6924.7	10.			-2.5	U			GSa		84Sc.A
	6907.3	20.			-0.4	U			Daa		96Pa01
	6897.0	6.			0.4	-			Ara		99Po09
	6917.5	15.			-1.2	-			Anv		09An20
ave.	6900	6			-0.1	1	99	94 ^{176}Hg			average
$^{176}\text{Yb}(\text{p},\alpha)^{173}\text{Tm}$	7628.8	4.4				2			NDm		78Ta10
$^{176}\text{Yb}(\text{p},\text{t})^{174}\text{Yb}$	-4216	5	-4205.0	1.0	2.2	U			Min		73Oo01
$^{176}\text{Hf}(\text{p},\text{t})^{174}\text{Hf}$	-6397	5	-6392.6	1.7	0.9	1	12	12 ^{174}Hf	Min		73Oo01
$^{176}\text{Yb}(\text{d},\text{t})^{175}\text{Yb}$	-621	12	-607.2	1.0	1.2	U			Kop		66Bu16
$^{175}\text{Lu}(\text{n},\gamma)^{176}\text{Lu}$	6293.2	1.2	6287.98	0.15	-4.3	B					70Wa20
	6287.96	0.15			0.1	1	100	70 ^{175}Lu	ILn		91KI02 Z
	6289.78	0.24			-7.5	C			Bdn		06Fi.A
$^{175}\text{Lu}(\text{d},\text{p})^{176}\text{Lu}$	4070	8	4063.42	0.15	-0.8	U			Tal		67St14
$^{176}\text{Lu}(\text{d},\text{t})^{175}\text{Lu}$	-25	15	-30.75	0.15	-0.4	U			Tal		71Mi01
$^{176}\text{Hf}(\text{d},\text{t})^{175}\text{Hf}$	-1925	8	-1908.7	1.8	2.0	U			Tal		73Za08
$^{176}\text{Tl}(\text{p})^{175}\text{Hg}$	1265.2	18.				9			Jyp		04Ke06
$^{176}\text{Tm}(\beta^-)^{176}\text{Yb}$	4120	100				2					67Gu11 *
$^{176}\text{Lu}(\beta^-)^{176}\text{Hf}$	1162	25	1194.2	0.9	1.3	U					69Pr11 *
	1194.1	1.0			0.1	1	76	66 ^{176}Hf			73Va11 *
$^{176}\text{Ta}(\beta^+)^{176}\text{Hf}$	3100	90	3210	30	1.3	U					71Be10 *
* $^{176}\text{Au}(\alpha)^{172}\text{Ir}$	E $_{\alpha}$ =6260(10) coinc. with E(γ)=168.4(0.5) keV										75Ca06 **
* $^{176}\text{Au}(\alpha)^{172}\text{Ir}$	E $_{\alpha}$ =6228(10) to 168.4(0.5) γ										84Sc.A **
* $^{176}\text{Au}(\alpha)^{172}\text{Ir}$	E $_{\alpha}$ =6260 correlated with ^{172}Ir E $_{\alpha}$ =5510 keV										02Ro17 **
* $^{176}\text{Au}^m(\alpha)^{172}\text{Ir}^m$	E $_{\alpha}$ =6286 correlated with $^{172}\text{Ir}^m$ E $_{\alpha}$ =5828 keV										02Ro17 **
* $^{176}\text{Au}^m(\alpha)^{172}\text{Ir}^m$	E $_{\alpha}$ =6119+E(γ)=175.1 was misassigned to ^{177}Au										01Ko44 **
* $^{176}\text{Au}^m(\alpha)^{172}\text{Ir}^m$	E $_{\alpha}$ =6115(6) coinc. with 175.1 γ of reference										84Sc.A **
* $^{176}\text{Tm}(\beta^-)^{176}\text{Yb}$	E $_{\beta^-}$ =2000(100), 1150(100) to (3 $^+$,4 $^+$) level at 2053.34, (3 $^+$,4 $^+$,5 $^+$) 3052.2										Ens062 **
* $^{176}\text{Lu}(\beta^-)^{176}\text{Hf}$	E $_{\beta^-}$ =565(25) to 6 $^+$ level at 596.82 keV										Ens062 **
* $^{176}\text{Lu}(\beta^-)^{176}\text{Hf}$	Q $_{\beta^-}$ =1317(1) from $^{176}\text{Lu}^m$ at 122.855(0.009) keV										Nub127 **
* $^{176}\text{Ta}(\beta^+)^{176}\text{Hf}$	KLM/ β^+ =119(50) to 2 $^-$ level at 1247.70 keV, 1 $^+$ level at 2994 keV										Ens062 **
$^{177}\text{Ta-u}$	-55559	30	-55521	4	1.3	U			GS2	1.0	05Li24
$^{177}\text{W-u}$	-53420	110	-53360	30	0.6	U			GS1	1.0	00Ra23
	-53357	30				2			GS2	1.0	05Li24
$^{177}\text{Re-u}$	-49620	104	-49670	30	-0.5	U			GS1	1.0	00Ra23
	-49672	30				2			GS2	1.0	05Li24
$^{177}\text{Os-u}$	-45020	104	-45034	17	-0.1	U			GS1	1.0	00Ra23
	-45012	30			-0.7	R			GS2	1.0	05Li24
$^{177}\text{Ir-u}$	-38810	110	-38699	21	1.0	U			GS1	1.0	00Ra23
	-38699	30			0.0	2			GS2	1.0	05Li24
$^{177}\text{Pt-u}$	-31545	30	-31530	16	0.5	1	29	29 ^{177}Pt	GS2	1.0	05Li24
$^{177}\text{Hf O-C}_{16}$	-61845.2	7.2	-61857.7	2.0	-1.2	U			TG1	1.5	11Ke03
$^{177}\text{Ir}(\alpha)^{173}\text{Re}$	5127.1	10.	5080	30	-0.9	F					67Si02 *
$^{177}\text{Pt}(\alpha)^{173}\text{Os}$	5654.6	6.	5642.8	2.7	-1.9	-					79Ha10 Z
	5640.4	3.			0.8	-			Bka		82Bo04 Z
	ave.	5643.3	2.7			-0.2	1	99	55 ^{177}Pt		average
$^{177}\text{Au}(\alpha)^{173}\text{Ir}$	6292.5	10.	6298	4	0.6	-			Daa		75Ca06
	6292.5	20.			0.3	U			GSa		84Sc.A
	6296.5	10.			0.2	-			Daa		96Pa01
	6298.6	6.			0.0	-			Ara		01Ko44
	6303.7	7.			-0.7	-			Anv		09An14
ave.	6299	4			-0.1	1	99	86 ^{173}Ir			average
$^{177}\text{Au}^m(\alpha)^{173}\text{Ir}^m$	6251.5	10.	6262	4	1.0	3			Ora		75Ca06
	6260.8	10.			0.1	3			GSa		84Sc.A *
	6259.7	9.			0.2	3			Daa		96Pa01 *
	6263.8	6.			-0.3	3			Ara		01Ko44
	6265.8	7.			-0.6	3			Anv		09An14
$^{177}\text{Hg}(\alpha)^{173}\text{Pt}$	6732.4	8.	6740	50	0.1	4					79Ha10
	6747.8	10.			-0.2	4					91Ko.A
	6730.3	9.			0.1	4			Daa		96Pa01
	6734.5	15.			0.0	4			Anv		09An20

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{177}\text{Tl}(\alpha)^{173}\text{Au}$	7067.0	7.				3			Ara		99Po09	
$^{177}\text{Tl}^m(\alpha)^{173}\text{Au}^m$	7660.4	13.	7654	9	-0.5	-			Ara		99Po09	
	7645.1	13.			0.7	-			Jya		04Ke06	
	ave.	7653	9		0.1	1	97	90	$^{173}\text{Au}^m$		average	
$^{177}\text{Hf}(\text{p,t})^{175}\text{Hf}$	-6071	5	-6060.0	2.0	2.2	1	16	15	^{175}Hf	Min	73Oo01	
$^{176}\text{Yb}(\text{n},\gamma)^{177}\text{Yb}$	5565.1	1.0	5566.40	0.22	1.3	U					72A119 Z	
	5566.40	0.22				2			Bdn		06Fi.A	
$^{176}\text{Yb}(\text{d,p})^{177}\text{Yb}$	3340	16	3341.83	0.22	0.1	U			Tal		63Ve09	
	3337	12			0.4	U			Kop		66Bu16	
$^{176}\text{Yb}(\alpha,\text{t})^{177}\text{Lu}-^{174}\text{Yb}(\text{t})^{175}\text{Lu}$	674.1	1.0	674.1	1.0	0.0	1	100	100	^{176}Yb	McM	75Bu02	
$^{176}\text{Lu}(\text{n},\gamma)^{177}\text{Lu}$	7071.2	0.4	7072.90	0.16	4.2	B					71Ma45 Z	
	7073.1	0.4			-0.5	-					72Mi16 Z	
	7072.85	0.17			0.3	-			Bdn		06Fi.A	
$^{176}\text{Lu}(\text{d,p})^{177}\text{Lu}$	4843	10	4848.33	0.16	0.5	U			Tal		71Mi01	
$^{176}\text{Lu}(\text{n},\gamma)^{177}\text{Lu}$	ave.	7072.89	0.16	7072.90	0.16	0.1	1	99	59	^{177}Lu	average	
$^{176}\text{Hf}(\text{n},\gamma)^{177}\text{Hf}$	6385.8	0.8	6375.9	1.0	-12.4	C			Bdn		06Fi.A	
$^{177}\text{Hf}(\gamma,\text{n})^{176}\text{Hf}$	-6400	30	-6375.9	1.0	0.8	U			Phi		60Ge01	
$^{176}\text{Hf}(\text{d,p})^{177}\text{Hf}$	4150	7	4151.3	1.0	0.2	U			Tal		68Ri07	
$^{177}\text{Hf}(\text{d,t})^{176}\text{Hf}$	-127	11	-118.7	1.0	0.8	U			Tal		72Za04	
$^{177}\text{Tl}(\text{p})^{176}\text{Hg}$	1162.6	20.	1160	20	-0.1	o			Arp		99Po09 *	
$^{177}\text{Tl}^m(\text{p})^{176}\text{Hg}$	1969.2	10.	1967	8	-0.3	-			Arp		99Po09	
	1965.2	12.			0.1	-			Jyp		04Ke06	
	ave.	1968	8		-0.1	1	98	92	$^{177}\text{Tl}^m$		average	
$^{177}\text{Yb}(\beta^-)^{177}\text{Lu}$	1400	20	1401.0	1.6	0.1	U					64Jo03	
$^{177}\text{Lu}(\beta^-)^{177}\text{Hf}$	497	2	497.2	0.8	0.1	-					55Ma12	
	496.4	1.0			0.8	-					62Ei02 *	
	ave.	496.5	0.9		0.8	1	78	41	^{177}Lu		average	
$^{177}\text{Ta}(\beta^+)^{177}\text{Hf}$	1166	3				2					61We11	
$^{177}\text{Au}^m(\text{IT})^{177}\text{Au}$	210	30	189	8	-0.7	o					01Ko44 *	
$^{177}\text{Tl}^m(\text{IT})^{177}\text{Tl}$	807	18				2					99Po09	
* $^{177}\text{Ir}(\alpha)^{173}\text{Re}$	F : final state uncertain: possibly to $5/2^-$ level at 214.7 keV										95Hi02 **	
* $^{177}\text{Au}^m(\alpha)^{173}\text{Ir}^m$	Followed by a 175.1(0.5) γ										84Sc.A **	
*	γ associated with $E_\alpha=6116$ keV from ^{176}Au										01Ko44 **	
*	yet $E_\alpha=6118$ correlated with $E_\alpha=5672$ of $^{173}\text{Ir}^m$										02Ro17 **	
* $^{177}\text{Au}^m(\alpha)^{173}\text{Ir}^m$	E_α correlated with $^{173}\text{Ir} E_\alpha=5681(13)$; also with $^{181}\text{Tl} E_\alpha=6180$ keV										96Pa01 **	
*	evaluator doubts about correctness of latter remark										AHW **	
* $^{177}\text{Tl}(\text{p})^{176}\text{Hg}$	Replaced by $^{177}\text{Tl}^m(\text{IT})$										AHW **	
* $^{177}\text{Lu}(\beta^-)^{177}\text{Hf}$	$E_{\beta^-}=384(2), 175(1)$ to 112.95, 321.32 levels										Ens035 **	
* $^{177}\text{Au}^m(\text{IT})^{177}\text{Au}$	Authors say 157.9+x, x estimated by evaluator										AHW **	
*	x is better known from $^{181}\text{Tl}^m(\text{IT})^{181}\text{Tl}$ combined with Q_α										09An14 **	
$^{178}\text{W}-\text{u}$	-54152	30	-54117	16	1.2	U			GS2	1.0	05Li24	
$^{178}\text{Re}-\text{u}$	-48800	110	-49010	30	-1.9	U			GS1	1.0	00Ra23	
	-49011	30				2			GS2	1.0	05Li24	
$^{178}\text{Os}-\text{u}$	-46790	104	-46746	15	0.4	U			GS1	1.0	00Ra23	
	-46710	30			-1.2	1	24	24	^{178}Os	GS2	1.0	05Li24
$^{178}\text{Ir}-\text{u}$	-38950	110	-38918	21	0.3	U			GS1	1.0	00Ra23	
	-38888	30			-1.0	2			GS2	1.0	05Li24	
$^{178}\text{Pt}-\text{u}$	-34783	1181	-34350	11	0.1	U				2.5	91Br17	
	-34300	110			-0.5	U			GS1	1.0	00Ra23	
	-34333	30			-0.6	1	13	13	^{178}Pt	GS2	1.0	05Li24
$^{178}\text{Hf } ^{35}\text{Cl}-^{176}\text{Hf } ^{37}\text{Cl}$	5236	5	5248.3	1.1	1.0	U			H23	2.5	70Wh01	
	5239.5	1.3			2.7	U			H27	2.5	74Ba90	
$^{178}\text{Hf O}-\text{C}_{16}$	-61364.8	7.9	-61379.5	2.0	-1.2	U			TG1	1.5	11Ke03	
$^{178}\text{Pt}-^{175}\text{Ir}$	-472	1052	1500	17	0.7	U				2.5	91Br17	
$^{178}\text{Pt}(\alpha)^{174}\text{Os}$	5583.3	5.	5572.9	2.2	-2.0	-					79Ha10 Z	
	5569.9	3.			1.0	-			Bka		82Bo04 Z	
	5568.4	13.			0.3	U			Lvn		94Wa23	
	5572.4	4.			0.1	-			Ara		00Ko16 *	
	ave.	5573.1	2.2		-0.1	1	99	75	^{174}Os		average	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{178}\text{Au}(\alpha)^{174}\text{Ir}$	6056.4	10.	6120	50	1.2	F					68Si01 *
	6117.7	20.				4		GSa			86Ke03
$^{178}\text{Hg}(\alpha)^{174}\text{Pt}$	6578.1	6.	6577.3	3.0	-0.1	3					79Ha10
	6576.1	9.			0.1	3		Daa			96Pa01
	6577.1	4.			0.1	3		Ara			00Ko48
	6578.1	8.			-0.1	3		Anv			09An14
$^{178}\text{Tl}(\alpha)^{174}\text{Au}$	7017.0	5.				8		Bka			02Ro17 *
$^{178}\text{Pb}(\alpha)^{174}\text{Hg}$	7790.4	14.				3		Bka			01Ro.B
$^{178}\text{Pt}(p,\alpha)^{175}\text{Ir}$	4420	980	6261	16	1.9	U					91Br17
$^{176}\text{Yb}(t,p)^{178}\text{Yb}$	3865	10				2		Phi			82Zu02
$^{176}\text{Lu}(t,p)^{178}\text{Lu}^m$	4482	5	4492.6	2.9	2.1	1	34	$^{178}\text{Lu}^m$	LAI		81Gi01
$^{178}\text{Hf}(p,t)^{176}\text{Hf}$	-5531	5	-5520.1	1.0	2.2	U			Min		73Oo01
$^{177}\text{Hf}(n,\gamma)^{178}\text{Hf}$	7625	1	7625.95	0.18	1.0	U					69Fa01
	7624.4	1.5			1.0	U					77St10
	7626.2	0.3			-0.8	-		ILn			86Ha22 Z
	7625.80	0.22			0.7	-		Bdn			06Fi.A
$^{178}\text{Hf}(d,t)^{177}\text{Hf}$	-1364	9	-1368.72	0.18	-0.5	U			Tal		68Ri07
$^{177}\text{Hf}(n,\gamma)^{178}\text{Hf}$	ave.	7625.94	0.18	7625.95	0.18	0.1	1	99	^{177}Hf		average
$^{178}\text{Yb}(\beta^-)^{178}\text{Lu}$	641	30	646	10	0.2	U					73Or03 *
$^{178}\text{Lu}^m(\text{IT})^{178}\text{Lu}$	120	3	123.8	2.6	1.3	1	76	$^{178}\text{Lu}^m$	McM		93Bu02
$^{178}\text{Lu}(\beta^-)^{178}\text{Hf}$	2046	50	2097.9	2.1	1.0	U					73Or03 *
	2117	30			-0.6	U					75Ka15 *
$^{178}\text{Ta}^m(\beta^+)^{178}\text{Hf}$	1937	15				2					61Ga05 *
$^{178}\text{W}(\epsilon)^{178}\text{Ta}^m$	91.3	2.				3					67Ni02
$^{178}\text{Re}(\beta^+)^{178}\text{W}$	4660	180	4760	30	0.5	U					70Go20 *
* $^{178}\text{Pt}(\alpha)^{174}\text{Os}$	Also $E_\alpha=5289(8)$ keV to 2^+ 158.601 level (not used)										GAu **
* $^{178}\text{Au}(\alpha)^{174}\text{Ir}$	F : higher E_α branch seen in reference										86Ke03 **
* $^{178}\text{Tl}(\alpha)^{174}\text{Au}$	And a stronger $E_\alpha=6704$; both correlated with ^{174}Au $E_\alpha=6538$ keV										02Ro17 **
* $^{178}\text{Yb}(\beta^-)^{178}\text{Lu}$	$E_{\beta^-}=250(30)$ to 1^+ level at 390.8 keV										Ens097 **
* $^{178}\text{Lu}(\beta^-)^{178}\text{Hf}$	$E_{\beta^-}=2000(50)$ to ground state and 50% to 2^+ level at 93.18 keV										Ens097 **
* $^{178}\text{Lu}(\beta^-)^{178}\text{Hf}$	$E_{\beta^-}=2050(50)$ to ground state and 50% to 2^+ level at 93.18 keV and										Ens097 **
* $^{178}\text{Lu}(\beta^-)^{178}\text{Hf}$	$E_{\beta^-}=770(30)$ from $^{178}\text{Lu}^m$ at 123.8(2.6) to 8^- level 1479.025 keV										Nub127 **
* $^{178}\text{Ta}^m(\beta^+)^{178}\text{Hf}$	$E_{\beta^+}=890(10)$ to ground state and 2^+ level at 93.18 keV, ratio 2.7 to 1										Ens097 **
* $^{178}\text{Re}(\beta^+)^{178}\text{W}$	$E_{\beta^+}=3300(180)$ to 4^+ level at 342.74 keV										Ens097 **
$\text{C}_{14} \text{H}_{11}-^{179}\text{Hf}$	140260.3	1.8	140252.1	2.0	-1.8	1	20	^{179}Hf	M23	2.5	79Ha32
$^{179}\text{W}-u$	-52964	76	-52923	16	0.5	U			GS2	1.0	05Li24 *
$^{179}\text{Re}-u$	-50010	30	-50011	26	0.0	1	78	^{179}Re	GS2	1.0	05Li24
$^{179}\text{Os}-u$	-46220	104	-46183	18	0.4	U			GS1	1.0	00Ra23
	-46176	30			-0.2	1	35	^{179}Os	GS2	1.0	05Li24
$^{179}\text{Ir}-u$	-40910	104	-40880	10	0.3	U			GS1	1.0	00Ra23
	-40852	30			-0.9	1	12	^{179}Ir	GS2	1.0	05Li24
$^{179}\text{Pt}-u$	-34710	110	-34641	9	0.6	U			GS1	1.0	00Ra23
	-34625	30			-0.5	U			GS2	1.0	05Li24
$^{179}\text{Au}-u$	-26811	31	-26826	13	-0.5	1	16	^{179}Au	GS2	1.0	05Li24
$^{179}\text{Hg}-^{208}\text{Pb}_{.861}$	1900	34	1934	29	1.0	1	74	^{179}Hg	MA6	1.0	01Sc41
$^{179}\text{Hf }^{35}\text{Cl}-^{177}\text{Hf }^{37}\text{Cl}$	5539	3	5545.58	0.22	0.9	U			H23	2.5	70Wh01
	5544.4	0.7			0.7	U			H27	2.5	74Ba90
$^{179}\text{Hf O}-\text{C}_{16}$	-59261.8	6.5	-59262.2	2.0	0.0	U			TG1	1.5	11Ke03
$^{179}\text{Pt}(\alpha)^{175}\text{Os}$	5370	10	5412	9	4.2	F					66Si08 *
	5416	10			-0.4	1	89	^{175}Os			79Ha10 *
	5382	3			10.1	F		Bka			82Bo04 *
$^{179}\text{Au}(\alpha)^{175}\text{Ir}$	5981.8	5.	5981	5	-0.1	1	97	^{175}Ir			68Si01
	5986.9	15.			-0.4	U		Jya			04Ra28 *
$^{179}\text{Hg}(\alpha)^{175}\text{Pt}$	6431.0	5.	6351	30	-1.6	-		ISa			79Ha10 Z
	6418.7	9.			-1.3	-		Daa			96Pa01
	6430.0	4.			-1.6	-		Ara			02Ko09
$^{179}\text{Tl}(\alpha)^{175}\text{Au}$	ave.	6429.1	3.0		-1.6	1	35	^{179}Hg			average
	6710.2	20.	6710	5	0.0	7		GSa			83Sc24
	6718.4	18.			-0.4	7		Daa			96Pa01
	6719.4	10.			-0.9	7		Ara			98To14
	6706.1	8.			0.7	7		Ara			11Ko.B

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{179}\text{Tl}^m(\alpha)^{175}\text{Au}^m$	7364.5	20.	7368	4	0.2	U	GSa		83Sc24		
	7366.0	20.			0.1	U	Daa		96Pa01		
	7378.1	10.			-1.0	o	Ara		98To14		
	7371.9	5.			-0.7	9	Anv		10An01		
	7358.6	8.			1.2	9	Ara		11Ko.B		
$^{179}\text{Pb}(\alpha)^{175}\text{Hg}$	7598.3	20.				9	Anv		10An01 *		
$^{179}\text{Hf}(p,t)^{177}\text{Hf}$	-5249	5	-5243.15	0.19	1.2	U	Min		73Oo01		
$^{179}\text{Hf}(t,\alpha)^{178}\text{Lu}-^{178}\text{Hf}(\gamma)^{177}\text{Lu}$	-72	2	-73.7	1.9	-0.8	1	89	89 ^{178}Lu	McM	93Bu02	
$^{178}\text{Hf}(n,\gamma)^{179}\text{Hf}$	6099.02	0.10	6098.99	0.08	-0.3	-			ILn	89Ri03 Z	
	6098.95	0.12			0.3	-			Bdn	06Fi.A	
$^{179}\text{Hf}(\gamma,n)^{178}\text{Hf}$	-6000	70	-6098.99	0.08	-1.4	U			Phi	60Ge01	
$^{178}\text{Hf}(d,p)^{179}\text{Hf}$	3877	14	3874.43	0.08	-0.2	U			Tal	63Ve09	
$^{178}\text{Hf}(n,\gamma)^{179}\text{Hf}$	ave.	6098.99	0.08	6098.99	0.08	0.0	1	100	63 ^{178}Hf	average	
	$^{179}\text{Lu}(\beta^-)^{179}\text{Hf}$	1350	50	1404	5	1.1	U			61Ku10	
$^{179}\text{Lu}(\beta^-)^{179}\text{Hf}$	1380	70			0.3	U				63St06	
	$^{179}\text{Ta}(\epsilon)^{179}\text{Hf}$	129	16	105.6	0.4	-1.5	U			61Jo15 *	
$^{179}\text{Re}(\beta^+)^{179}\text{W}$	105.61	0.41			-0.1	1	99	89 ^{179}Ta		01Hi06	
	2710	50	2713	27	0.1	1	29	22 ^{179}Re		75Me20 *	
$^{179}\text{W}-u$	M-A=-49225(29) keV for mixture gs+m at 221.91 keV										
$^{179}\text{Pt}(\alpha)^{175}\text{Os}$	F : part of double line (with ^{180}Pt)										
$^{179}\text{Pt}(\alpha)^{175}\text{Os}$	$E_\alpha=5150(10)$ $5195(10)$ $5161(3)$ respectively, to $1/2^-$ level at 102.3 keV, recalibrated										
$^{179}\text{Au}(\alpha)^{175}\text{Ir}$	$E_\alpha=5853(15)$, $5810(15)$ to ground state, 49 keV level										
$^{179}\text{Pb}(\alpha)^{175}\text{Hg}$	$E_\alpha=7350(20)$ to 80 keV level										
$^{179}\text{Ta}(\epsilon)^{179}\text{Hf}$	As corrected in reference										
$^{179}\text{Re}(\beta^+)^{179}\text{W}$	$E_{\beta^+}=950(50)$ to $3/2^+$ level at 720.18 and $5/2^+$ at 773.65 keV										
$^{179}\text{Re}(\beta^+)^{179}\text{W}$	Ens092 **										
$^{179}\text{W}-u$	Nub127 **										
$^{179}\text{Pt}(\alpha)^{175}\text{Os}$	AHW **										
$^{179}\text{Pt}(\alpha)^{175}\text{Os}$	Ens092 **										
$^{179}\text{Au}(\alpha)^{175}\text{Ir}$	04Ra28 **										
$^{179}\text{Pb}(\alpha)^{175}\text{Hg}$	10An01 **										
$^{179}\text{Ta}(\epsilon)^{179}\text{Hf}$	76He.B **										
$^{179}\text{Re}(\beta^+)^{179}\text{W}$	Ens092 **										
$\text{C}_{14}\text{H}_{12}-^{180}\text{Hf}$	147356.6	4.8	147343.3	2.0	-1.1	U			M23	2.5	79Ha32
$^{180}\text{W}-u$	-53299	30	-53289.2	2.0	0.3	U			GS2	1.0	05Li24
$^{180}\text{Re}-u$	-49209	30	-49208	23	0.0	2			GS2	1.0	05Li24
$^{180}\text{Os}-u$	-47650	104	-47625	17	0.2	U			GS1	1.0	00Ra23
	-47626	30			0.0	1	34	34 ^{180}Os	GS2	1.0	05Li24
$^{180}\text{Ir}-u$	-40800	104	-40771	23	0.3	U			GS1	1.0	00Ra23
	-40765	30			-0.2	2			GS2	1.0	05Li24
$^{180}\text{Pt}-u$	-36900	104	-36968	12	-0.7	U			GS1	1.0	00Ra23
	-36918	30			-1.7	R			GS2	1.0	05Li24
$^{180}\text{Au}-u$	-27496	30	-27477	21	0.6	1	51	51 ^{180}Au	GS2	1.0	05Li24
$^{180}\text{Hg}-^{208}\text{Pb}_{.865}$	-1569	22	-1544	14	1.1	1	38	38 ^{180}Hg	MA6	1.0	01Sc41
$^{180}\text{Hf }^{35}\text{Cl}_2-^{176}\text{Hf }^{37}\text{Cl}_2$	11036.1	3.0	11049.6	1.1	1.8	U			H27	2.5	74Ba90
$^{180}\text{Hf }^{35}\text{Cl}-^{178}\text{Hf }^{37}\text{Cl}$	5797	3	5801.29	0.19	0.6	U			H23	2.5	70Wh01
	5798.4	0.7			1.7	U			H27	2.5	74Ba90
$^{180}\text{W}-^{180}\text{Hf}$	153.73	0.30	153.76	0.30	0.1	1	98	75 ^{180}W	SH1	1.0	12Dr01
$^{180}\text{Hf}-^{179}\text{Hf}$	730.8	4.7	733.83	0.16	0.3	U			M24	2.5	79Ha32
$^{180}\text{Hf O}-\text{C}_{16}$	-58524.5	6.5	-58528.3	2.0	-0.4	U			TG1	1.5	11Ke03
$^{180}\text{W}(\alpha)^{176}\text{Hf}$	2516.4	1.6	2515.0	1.0	-0.9	1	41	31 ^{176}Hf			04Co26
$^{180}\text{Pt}(\alpha)^{176}\text{Os}$	5257.1	10.	5240	30	-2.0	F					66Si08 *
	5279	3			-13.8	F			Bka		82Bo04 *
$^{180}\text{Au}(\alpha)^{176}\text{Ir}$	5845	30	5840	18	-0.2	-			GSa		86Ke03 *
	5857	30			-0.6	-			Lvn		93Wa03 *
$^{180}\text{Hg}(\alpha)^{176}\text{Pt}$	ave.	5851	21		-0.5	1	74	39 ^{176}Ir			average
	6258.3	5.	6258.4	2.4	0.0	-			ISa		79Ha10 Z
$^{180}\text{Hg}(\alpha)^{176}\text{Pt}$	6259.5	5.			-0.2	-			Lvn		93Wa03 *
	6258.3	4.			0.0	-			Ara		00Ko48
$^{180}\text{Hg}(\alpha)^{176}\text{Pt}$	6259.3	5.			-0.2	-			Anv		03An27
	ave.	6258.8	2.4		-0.1	1	99	66 ^{176}Pt			average
$^{180}\text{Tl}(\alpha)^{176}\text{Au}$	6709.4	10.				6			Ara		98To14 *
$^{180}\text{Pb}(\alpha)^{176}\text{Hg}$	7394.6	40.	7419	5	0.6	U			ORa		96To08
	7415.1	15.			0.2	2			Ara		99To11
	7419.2	10.			-0.1	2			Anv		09An20
	7419.2	7.			-0.1	2			Jya		10Ra12

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{180}\text{Hf}(p,t)^{178}\text{Hf}$	-5011	5	-5004.95	0.17	1.2	U			Min		73Oo01
$^{180}\text{Hf}(t,\alpha)^{179}\text{Lu}-^{178}\text{Hf}(l)^{177}\text{Lu}$	-669	5	-669	5	0.0	1	100	100 ^{179}Lu	McM		92Bu12
$^{179}\text{Hf}(n,\gamma)^{180}\text{Hf}$	7387.3	0.4	7387.76	0.15	1.1	-					74Bu22 Z
	7387.8	0.6			-0.1	-					90Bo52 Z
	7387.85	0.17			-0.5	-			Bdn		06Fi.A
$^{180}\text{Hf}(\gamma,n)^{179}\text{Hf}$	-7470	110	-7387.76	0.15	0.7	U			Phi		60Ge01
$^{179}\text{Hf}(d,p)^{180}\text{Hf}$	5167	7	5163.19	0.15	-0.5	U			Tal		72Za04
$^{180}\text{Hf}(d,t)^{179}\text{Hf}$	-1112	4	-1130.53	0.15	-4.6	B			Tal		68Ri07
$^{179}\text{Hf}(n,\gamma)^{180}\text{Hf}$	ave.	7387.77	0.15	7387.76	0.15	-0.1	1	99	77 ^{180}Hf		average
$^{180}\text{W}(d,t)^{179}\text{W}$	-2155	15	-2155	15	0.0	1	94	93 ^{179}W	Kop		72Ca01
$^{180}\text{Lu}(\beta^-)^{180}\text{Hf}$	3148	100	3100	70	-0.4	2					71Gu02 *
	3058	100			0.5	2					71Sw01 *
$^{180}\text{Ta}(\beta^-)^{180}\text{W}$	705	15	702.4	2.6	-0.2	U					51Br87
	712	15			-0.6	U					62Ga07
$^{180}\text{Re}(\beta^+)^{180}\text{W}$	3830	60	3801	21	-0.5	R					67Go22 *
	3790	40			0.3	R					67Ho12 *
* $^{180}\text{Pt}(\alpha)^{176}\text{Os}$	F: part of double line (with ^{179}Pt); $E_\alpha=5140(10)$ keV										AHW **
* $^{180}\text{Pt}(\alpha)^{176}\text{Os}$	F: part of double line (with ^{179}Pt)										AHW **
* $^{180}\text{Au}(\alpha)^{176}\text{Ir}$	$E_\alpha=5685(10)$ to $40(30)$ level										93Wa03 **
* $^{180}\text{Au}(\alpha)^{176}\text{Ir}$	$E_\alpha=5647(10,Z)$ to $80(30)$ level										93Wa03 **
* $^{180}\text{Hg}(\alpha)^{176}\text{Pt}$	$E_\alpha=6120$ 5862 5689(5) to ground state, 2^+ level at 264.0, 0^+ at 443 keV										Ens062 **
* $^{180}\text{Tl}(\alpha)^{176}\text{Au}$	Highest E_α ; not necessarily ground state to ground state										98To14 **
* $^{180}\text{Lu}(\beta^-)^{180}\text{Hf}$	$E_{\beta^-}=1540(100)$ 1450(100) respectively, to 4^+ level at 1607.55 keV										Ens043 **
* $^{180}\text{Re}(\beta^+)^{180}\text{W}$	$E_{\beta^+}=1800(60)$ 1760(40) respectively, to 2^- level 1006.33 keV										Ens043 **
$^{181}\text{Lu-u}$	-48092	171				2			GS3	1.0	12Sh.1
$^{181}\text{Re-u}$	-49915	30	-49942	14	-0.9	R			GS2	1.0	05Li24
$^{181}\text{Os-u}$	-46670	110	-46753	27	-0.8	U			GS1	1.0	00Ra23 *
	-46756	34			0.1	1	64	64 ^{181}Os	GS2	1.0	05Li24 *
$^{181}\text{Ir-u}$	-42330	104	-42375	28	-0.4	U			GS1	1.0	00Ra23
	-42372	30			-0.1	2			GS2	1.0	05Li24
$^{181}\text{Pt-u}$	-36880	104	-36902	16	-0.2	U			GS1	1.0	00Ra23
	-36900	30			-0.1	2			GS2	1.0	05Li24
$^{181}\text{Au-u}$	-30030	110	-29921	21	1.0	U			GS1	1.0	00Ra23
	-29920	30			0.0	R			GS2	1.0	05Li24
$^{181}\text{Hg}-^{208}\text{Pb}_{.870}$	-1929	40	-1868	17	1.5	1	17	17 ^{181}Hg	MA6	1.0	01Sc41
$^{181}\text{Tl}-^{133}\text{Cs}_{1.361}$	114936	11	114940	10	0.4	1	79	79 ^{181}Tl	MA8	1.0	08We02
$^{181}\text{Ta}^{35}\text{Cl}-^{179}\text{Hf}^{37}\text{Cl}$	5128.6	2.1	5122.6	2.4	-1.1	1	21	11 ^{179}Hf	H35	2.5	80Sh06
$^{181}\text{Ta}^{17}\text{O}^{35}\text{Cl}-^{180}\text{Ta}^m \text{O}^{37}\text{Cl}$	7572	21	7617.28	0.21	0.9	U			H35	2.5	80Sh06
$^{181}\text{Pt}(\alpha)^{177}\text{Os}$	5133.7	20.	5150	5	0.8	U					66Si08
	5150.1	5.				3			ORa		95Bi01
$^{181}\text{Au}(\alpha)^{177}\text{Ir}$	5750.1	5.	5751.3	2.9	0.2	3					68Si01 Z
	5751.9	5.			-0.1	3					79Ha10 Z
	5735	4			4.1	F			IRa		92Sa03 *
	5752	5			-0.1	3			ORa		95Bi01 *
$^{181}\text{Hg}(\alpha)^{177}\text{Pt}$	6288	5	6284	4	-0.7	-					79Ha10 *
	6283	10			0.1	-			GSa		86Ke03 *
	6269.3	13.			1.2	-			Daa		96Pa01 *
	ave.	6285	4		-0.2	1	99	83 ^{181}Hg			average
$^{181}\text{Tl}(\alpha)^{177}\text{Au}$	6319.9	20.	6321	6	0.1	U					92Bo.D
	6326.1	10.			-0.4	-			Ara		98To14
	6320.9	7.			0.1	-			Anv		09An14
	ave.	6323	6		-0.2	1	97	88 ^{177}Au			average
$^{181}\text{Tl}(\alpha)^{177}\text{Au}^m$	6120.3	20.	6132	5	0.6	2			GSa		84Sc.A *
	6132.6	10.			-0.1	2			Ara		98To14 *
	6133.1	6.4			-0.2	2			Anv		09An14 *
$^{181}\text{Pb}(\alpha)^{177}\text{Hg}$	7374.3	10.	7240	7	-13.4	F			GSa		86Ke03 *
	7203.5	15.			2.4	5			ORa		89To01
	7224.9	20.			0.8	o			Ara		96To01 *
	7250.7	10.			-1.0	5			Ara		05Ca.A *
	7252.0	15.			-0.8	5			Anv		09An20 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{181}\text{Ta}(\text{p,t})^{179}\text{Ta}$	-5738	5	-5742.7	2.2	-0.9	1	20	11 ^{179}Ta	Min	73Oo01	
$^{180}\text{Hf}(\text{n},\gamma)^{181}\text{Hf}$	5695.2	0.6	5694.80	0.07	-0.7	U				71Al22	
	5694.80	0.07				2			Prn	02Bo41	
	5695.58	0.20			-3.9	C			Bdn	06Fi.A	
$^{180}\text{Hf}(\text{d,p})^{181}\text{Hf}$	3440	25	3470.23	0.07	1.2	U			Sac	66Ga06	
	3475	10			-0.5	U			Tal	68Ri07	
$^{181}\text{Ta}(\gamma,\text{n})^{180}\text{Ta}$	-7713	25	-7576.8	1.3	5.4	B			Phi	60Ge01 *	
	-7852	26			10.6	B			Phi	60Ge01	
	-7580	5			0.6	U			McM	79Ba06	
	-7579	2			1.1	2			McM	81Co17	
$^{181}\text{Ta}(\text{d,t})^{180}\text{Ta}$	-1317.7	1.8	-1319.5	1.3	-1.0	2			NDm	79Ta.B	
$^{180}\text{Ta}^m(\text{n},\gamma)^{181}\text{Ta}$	7651.8	0.5	7652.08	0.19	0.6	2			MMn	81Co17 Z	
	7652.13	0.20			-0.2	2			ILn	84Fo.A Z	
$^{180}\text{W}(\text{d,p})^{181}\text{W}$	4468	15	4462	5	-0.4	1	11	9 ^{181}W	Kop	72Ca01	
$^{181}\text{Hg}(\text{ep})^{180}\text{Pt}$	6150	200	6485	19	1.7	F				72Ho19 *	
$^{181}\text{Hf}(\beta^-)^{181}\text{Ta}$	1023	8	1036.4	2.2	1.7	U				52Fa14 *	
	1020	5			3.3	B				53Ba81 *	
$^{181}\text{W}(\epsilon)^{181}\text{Ta}$	184	12	188	5	0.3	-				66Ra03	
	190	6			-0.3	-				83Se17	
ave.	189	5			-0.1	1	71	69 ^{181}W		average	
$^{181}\text{Os}(\beta^+)^{181}\text{Re}$	2990	200	2971	28	-0.1	U				67Go25 *	
$^{181}\text{Hg}^m(\text{IT})^{181}\text{Hg}$	212	50				2				09An17 *	
* $^{181}\text{Os-u}$	M-A=-43450(100) keV for mixture gs+m at 49.2 keV									Nub127 **	
* $^{181}\text{Os-u}$	M-A=-43529(28) keV for mixture gs+m at 49.2 keV									Nub127 **	
* $^{181}\text{Au}(\alpha)^{177}\text{Ir}$	$E_\alpha=5609(8)$, $5462(4)$ to ground state and $(3/2^-)$ level at 148.00 keV									Ens035 **	
	F : all lines in ^{181}Au and ^{183}Au shifted by 16-20keV									GAu **	
* $^{181}\text{Au}(\alpha)^{177}\text{Ir}$	$E_\alpha=5626(5)$ to gs; favored 5479(5) to $3/2^-$ level at 148.0 keV									Ens061 **	
* $^{181}\text{Hg}(\alpha)^{177}\text{Pt}$	$E_\alpha=6147.0(10,Z)$, $6005.0(5,Z)$ to ground state and $1/2^-$ level at 147.7 keV									Ens061 **	
* $^{181}\text{Hg}(\alpha)^{177}\text{Pt}$	$E_\alpha=6136.6(10,Z)$, $6005.6(10,Z)$ to ground state and $1/2^-$ level at 147.7 keV									Ens061 **	
* $^{181}\text{Hg}(\alpha)^{177}\text{Pt}$	$E_\alpha=5986(13)$ to $1/2^-$ level at 147.7 keV									Ens061 **	
* $^{181}\text{Tl}(\alpha)^{177}\text{Au}^m$	$E_\alpha=6566(20)$ $Q_\alpha=6956.2$ from $^{181}\text{Tl}^m$ at 835.9(0.4) to 241.5 above $^{177}\text{Au}^m$									Nub128 **	
* $^{181}\text{Tl}(\alpha)^{177}\text{Au}^m$	$E_\alpha=6578(10)$ $Q_\alpha=6968.5$ from $^{181}\text{Tl}^m$ at 835.9(0.4) to 241.5 above $^{177}\text{Au}^m$									Nub128 **	
* $^{181}\text{Tl}(\alpha)^{177}\text{Au}^m$	$E_\alpha=6818(15)$, $6578(7)$ from $^{181}\text{Tl}^m$ to $^{177}\text{Au}^m$ and level 241.5 above $^{177}\text{Au}^m$									09An14 **	
* $^{181}\text{Pb}(\alpha)^{177}\text{Hg}$	F : This α -line not found in same reaction									96To01 **	
* $^{181}\text{Pb}(\alpha)^{177}\text{Hg}$	Seen in correlation with ^{177}Hg $E_\alpha=6580$ keV									96To01 **	
* $^{181}\text{Pb}(\alpha)^{177}\text{Hg}$	$E_\alpha=7015(10)$ to level at 77.2 keV									09An20 **	
* $^{181}\text{Pb}(\alpha)^{177}\text{Hg}$	$E_\alpha=7016(15)$ to level at 77.2 keV									09An20 **	
* $^{181}\text{Ta}(\gamma,\text{n})^{180}\text{Ta}$	$Q=-7640(25)$ to $^{180}\text{Ta}^m$ at 75.3(1.4) keV									Nub127 **	
* $^{181}\text{Hg}(\text{ep})^{180}\text{Pt}$	F : retracted by authors in PrvCom									AHW **	
* $^{181}\text{Hf}(\beta^-)^{181}\text{Ta}$	$E_{\beta^-}=408(8)$ $405(5)$ respectively, to $^{181}\text{Ta}^n$ at 615.19 keV									Nub127 **	
* $^{181}\text{Os}(\beta^+)^{181}\text{Re}$	$E_{\beta^+}=1750(200)$ from $^{181}\text{Os}^m$ at 49.20(0.14) to $^{181}\text{Re}^m$ at 262.91(0.11) keV									Nub127 **	
* $^{181}\text{Hg}^m(\text{IT})^{181}\text{Hg}$	From cascade x+90.3+71.4, with x estimated 50#									09An17 **	
$^{182}\text{Re-u}$	-48311	65	-48790	110	-7.4	C			GS2	1.0	03Li.A *
$^{182}\text{Os-u}$	-47883	30	-47890	23	-0.2	1	61	61 ^{182}Os	GS2	1.0	05Li24
$^{182}\text{Ir-u}$	-41942	30	-41924	23	0.6	1	56	56 ^{182}Ir	GS2	1.0	05Li24
$^{182}\text{Pt-u}$	-38870	104	-38828	14	0.4	U			GS1	1.0	00Ra23
	-38860	30			1.1	1	22	22 ^{182}Pt	GS2	1.0	05Li24
$^{182}\text{Au-u}$	-30420	110	-30382	22	0.3	U			GS1	1.0	00Ra23
	-30412	30			1.0	R			GS2	1.0	05Li24
$^{182}\text{Hg-u}$	-25297	30	-25311	11	-0.5	1	12	12 ^{182}Hg	GS2	1.0	05Li24
$^{182}\text{Hg}-^{208}\text{Pb}_{.875}$	-4893	19	-4882	11	0.6	-			MA6	1.0	01Sc41
	-4898	21			0.8	-			MA6	1.0	01Sc41
ave.	-4895	14			1.0	1	56	55 ^{182}Hg			average
$^{182}\text{Pt}(\alpha)^{178}\text{Os}$	4928.5	30.	4951	5	0.7	U					63Gr08
	4948.9	20.			0.1	U					66Si08
	4952.0	5.			-0.2	1	97	76 ^{178}Os	ORa		95Bi01
$^{182}\text{Au}(\alpha)^{178}\text{Ir}$	5529	10	5526	4	-0.3	3					79Ha10 *
	5525.5	5.			0.1	3			ORa		95Bi01 *
$^{182}\text{Hg}(\alpha)^{178}\text{Pt}$	5998.1	5.	5996	5	-0.5	-					79Ha10 Z
	5989.8	13.3			0.4	-			Lvn		94Wa23
ave.	5997	5			-0.3	1	95	62 ^{178}Pt			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{182}\text{Tl}(\alpha)^{178}\text{Au}$	6550.2	10.	6593	15	4.3	F			GSa		86Ke03 *
	6593.1	15.									04Ra28 *
$^{182}\text{Tl}(\alpha)^{178}\text{Au}^p$	6186.2	20.									92Bo.D
$^{182}\text{Pb}(\alpha)^{178}\text{Hg}$	7076.8	10.	7066	6	-1.1	4			GSa		86Ke03
	7074.8	15.			-0.6	4			ORa		87To09
	7050.2	10.			1.5	4			Ara		99To11
	7066.6	10.			-0.1	4			Jya		00Je09
$^{180}\text{Hf}(t,p)^{182}\text{Hf}$	3931	6				2			McM		83Bu03
$^{180}\text{W}(t,p)^{182}\text{W}$	6265	5	6270.0	2.0	1.0	1	15	13 ^{180}W	LAl		76Ca10 *
$^{182}\text{W}(p,t)^{180}\text{W}$	-6261	10	-6270.0	2.0	-0.9	U			Min		73Oo01
$^{181}\text{Ta}(n,\gamma)^{182}\text{Ta}$	6063.0	0.4	6062.94	0.11	-0.2	-					71He13 Z
	6063.1	0.5			-0.3	-					77St15 Z
	6063.1	0.5			-0.3	-			MMn		81Co17 Z
	6062.95	0.2			-0.1	-			ILn		83Fo.B
	6062.89	0.14			0.3	-			Bdn		06Fi.A
$^{181}\text{Ta}(d,p)^{182}\text{Ta}$	3832	8	3838.37	0.11	0.8	U			MIT		64Er02
$^{181}\text{Ta}(n,\gamma)^{182}\text{Ta}$	ave.	6062.93	0.11	6062.94	0.11	0.0	1	100			average
$^{182}\text{W}(d,t)^{181}\text{W}$	-1809	10	-1808	5	0.1	1	22	22 ^{181}W	Kop		72Ca01
$^{182}\text{Hf}(\beta^-)^{182}\text{Ta}$	431	50	381	6	-1.0	U					74Wa14 *
$^{182}\text{Ta}(\beta^-)^{182}\text{W}$	1809	5	1814.5	1.7	1.1	-					64Da15 *
	1813	3			0.5	-					67Ba01 *
	ave.	1811.9	2.6		1.0	1	44	42 ^{182}Ta			average
$^{182}\text{Re}^m(\beta^+)^{182}\text{W}$	2860	20				2					63Ba37 *
$^{182}\text{Re}^m(\text{IT})^{182}\text{Re}$	60	100				3					63Ba37
$^{182}\text{Os}(\epsilon)^{182}\text{Re}^m$	848	15	779	30	-4.6	B					70Ak02 *
$^{182}\text{Ir}(\beta^+)^{182}\text{Os}$	5700	200	5560	30	-0.7	U					72We.A
$^{182}\text{Pt}(\beta^+)^{182}\text{Ir}$	2900	200	2883	25	-0.1	U					72We.A
$^{182}\text{Au}(\beta^+)^{182}\text{Pt}$	6850	200	7867	24	5.1	C					72We.A
$^{182}\text{Hg}(\beta^+)^{182}\text{Au}$	4950	200	4724	23	-1.1	U					72We.A
* $^{182}\text{Re-u}$	M-A=-44972(29) keV for mixture gs+m at 60(100) keV										Nub127 **
* $^{182}\text{Au}(\alpha)^{178}\text{Ir}$	$E_\alpha=5353(10)$ to 2^+ level at 54.4(0.5) keV										Ens097 **
* $^{182}\text{Au}(\alpha)^{178}\text{Ir}$	$E_\alpha=5403(5), 5352(5)$ to ground state, 54.4 level										95Bi01 **
* $^{182}\text{Tl}(\alpha)^{178}\text{Au}$	F : identification from excitation function assuming 100% α decay										WgM118**
* $^{182}\text{Tl}(\alpha)^{178}\text{Au}$	$E_\alpha=6403(15)$ in coincidence with 46 keV γ										04Ra28 **
* $^{180}\text{W}(t,p)^{182}\text{W}$	$Q-Q(^{170}\text{Y}(t,p))=112(5,\text{Ca}), Q(170)=-6153(4)$ keV										AHW **
* $^{182}\text{Hf}(\beta^-)^{182}\text{Ta}$	$E_{\beta^-}=970(70) 480(50)$ from $^{182}\text{Hf}^m$ at 1172.88 to 651.22 4^- , 1115.96 7^- levels										Ens109 **
* $^{182}\text{Ta}(\beta^-)^{182}\text{W}$	$E_{\beta^-}=520(5)$ to 2^- level at 1289.1498 keV										Ens109 **
* $^{182}\text{Ta}(\beta^-)^{182}\text{W}$	$E_{\beta^-}=1713(3)$ to 2^+ level at 100.10598 keV										Ens109 **
* $^{182}\text{Re}^m(\beta^+)^{182}\text{W}$	$E_{\beta^+}=1740(20), 550(20)$ to 2^+ level at 100.10598, 2^- at 1289.1498 keV										Ens109 **
* $^{182}\text{Os}(\epsilon)^{182}\text{Re}^m$	$pK=0.47(0.07)$ to 1^+ level at 726.97 keV above $^{182}\text{Re}^m$, recalculated Q										Ens109 **
$^{183}\text{Lu-u}$	-42637	98				2			GS3	1.0	12Sh.1
$^{183}\text{W O-C}_2 \text{ } ^{35}\text{Cl}_5$	100858.0	2.7	100874.0	0.9	2.4	U			H29	2.5	77Sh04
	100873.6	0.8			0.3	1	55	55 ^{183}W	H48	1.5	03Ba49
$^{183}\text{Re-u}$	-49151	30	-49180	9	-1.0	U			GS2	1.0	05Li24
$^{183}\text{Os-u}$	-46879	61	-46880	50	0.1	1	77	77 ^{183}Os	GS2	1.0	05Li24 *
$^{183}\text{Ir-u}$	-43160	104	-43160	26	0.0	U			GS1	1.0	00Ra23
	-43145	30			-0.5	1	76	76 ^{183}Ir	GS2	1.0	05Li24
$^{183}\text{Pt-u}$	-38440	107	-38403	17	0.3	U			GS1	1.0	00Ra23
	-38400	32			-0.1	1	27	27 ^{183}Pt	GS2	1.0	05Li24 *
$^{183}\text{Au-u}$	-32440	104	-32409	10	0.3	U			GS1	1.0	00Ra23
	-32371	30			-1.3	1	11	11 ^{183}Au	GS2	1.0	05Li24
$^{183}\text{Hg-u}$	-25537	35	-25555	8	-0.5	U			GS2	1.0	05Li24 *
$^{183}\text{Hg-}^{208}\text{Pb}_{.880}$	-5009	19	-5009	8	0.0	-			MA6	1.0	01Sc41
	-5002	19			-0.4	-			MA6	1.0	01Sc41
	ave.	-5006	13		-0.3	1	32	32 ^{183}Hg			average
$^{183}\text{Tl-}^{133}\text{Cs}_{1.376}$	112286	11	112291	10	0.4	1	83	83 ^{183}Tl	MA8	1.0	08We02
$^{183}\text{W O}_2\text{-}^{178}\text{Hf } ^{37}\text{Cl}$	30455.7	5.0	30443.6	2.1	-1.0	U			H35	2.5	80Sh06

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{183}\text{W O}_2\text{--}^{180}\text{W }^{35}\text{Cl}$	24421	9	24488.5	2.1	3.0	U			H24	2.5	73Ba40
	24509	6			-1.4	U			H28	2.5	77Sh04
$^{183}\text{W }^{35}\text{Cl--}^{181}\text{Ta }^{37}\text{Cl}$	5177.2	1.2	5177.1	1.8	0.0	1	37	36 ^{181}Ta	H35	2.5	80Sh06
$^{183}\text{W O}_2\text{ }^{37}\text{Cl--}^{182}\text{W }^{35}\text{Cl}_2$	20045.6	1.8	20045.28	0.11	-0.1	U			H28	2.5	77Sh04
$^{183}\text{Pt}(\alpha)^{179}\text{Os}$	4846.1	30.	4822	9	-0.8	U					63Gr08
	4835.9	20.0			-0.7	-					66Si08
	4819.4	10.0			0.3	-			ORa		95Bi01
	ave. 4823	9			-0.1	1	93	65 ^{179}Os			average
$^{183}\text{Au}(\alpha)^{179}\text{Ir}$	5462.6	5.	5465.3	2.9	0.5	-					68Si01 Z
	5465.5	5.			0.0	-			Bka		82Bo04 Z
	5449.3	10.			1.6	F					84Br.A *
	5468.8	5.			-0.7	-			ORa		95Bi01
	ave. 5465.6	3.0			-0.1	1	99	88 ^{179}Ir			average
$^{183}\text{Hg}(\alpha)^{179}\text{Pt}$	6043.4	6.	6038	4	-0.8	-			ORa		76To06
	6036.2	5.			0.5	-					79Ha10 Z
	ave. 6039	4			-0.1	1	98	93 ^{179}Pt			average
$^{183}\text{Tl}^m(\alpha)^{179}\text{Au}$	6593.4	30.	6605	9	0.4	U			GSa		80Sc09 *
	6600.6	30.			0.2	U			Jya		04Ra28 *
	6609.5	10.			-0.4	1	84	67 ^{179}Au	Anv		11Ve01 *
$^{183}\text{Pb}(\alpha)^{179}\text{Hg}$	6928	7				2		Anv		02Je09 *	
$^{183}\text{Pb}^m(\alpha)^{179}\text{Hg}$	6950.1	25.	7022	4	2.9	B			GSa		80Sc09
	7029	20			-0.3	U			GSa		84Sc.A *
	7026.9	10.			-0.5	2			GSa		86Ke03
	6868.4	10.			15.4	B			ORa		87To09
	7034	10			-1.2	2			ORa		89To01 *
	7018	5			0.8	2			Anv		02Je09 *
	$^{183}\text{W}(\text{p,t})^{181}\text{W}$	-5810	10	-5775	5	3.5	B		Min		73Oo01
	$^{182}\text{Ta}(\text{n},\gamma)^{183}\text{Ta}$	6934.18	0.20				2		ILn		83Fo.B
$^{182}\text{W}(\text{n},\gamma)^{183}\text{W}$	6191.6	2.0	6190.81	0.05	-0.4	U					67Sp03 Z
	6190.1	1.5			0.5	U					70Or.A
	6190.76	0.12			0.5	-			Ltn		93Pr.A
	6190.89	0.13			-0.6	-			Bdn		06Fi.A
	6190.81	0.06			0.1	-			ILn		11Bo09
	$^{183}\text{W}(\gamma,\text{n})^{182}\text{W}$	-6290	50	-6190.81	0.05	2.0	U		Phi		60Ge01
$^{182}\text{W}(\text{d,p})^{183}\text{W}$	3967	5	3966.25	0.05	-0.2	U			ANL		65Er03
	3979	10			-1.3	U			Kop		72Ca01
	57	15	66.42	0.05	0.6	U			Kop		72Ca01
$^{183}\text{W}(\text{d,t})^{182}\text{W}$											average
$^{182}\text{W}(\text{n},\gamma)^{183}\text{W}$	ave. 6190.81	0.05	6190.81	0.05	0.0	1	100	97 ^{182}W			71Lu01
$^{182}\text{W}(\text{ }^3\text{He,d})^{183}\text{Re}$	-610	40	-641	8	-0.8	U			Roc		72Ho19
$^{183}\text{Hg}(\text{ep})^{182}\text{Pt}$	5000	200	5075	15	0.4	F					67Mo13 *
$^{183}\text{Hf}(\beta^-)^{183}\text{Ta}$	2010	30				3					55Mu19 *
$^{183}\text{Ta}(\beta^-)^{183}\text{W}$	1068	10	1071.1	1.7	0.3	U					69Ku03 *
$^{183}\text{Re}(\epsilon)^{183}\text{W}$	556	8				2					70Be.A *
$^{183}\text{Ir}(\beta^+)^{183}\text{Os}$	3450	100	3460	50	0.1	1	28	23 ^{183}Os			11Ve.A
$^{183}\text{Tl}^m(\text{IT})^{183}\text{Tl}$	628.7	0.5	628.7	0.5	0.0	1	100	83 $^{183}\text{Tl}^m$			Nub127 **
* $^{183}\text{Os-u}$	M-A=-43582(28) keV for mixture gs+m at 170.71 keV										Ens93 **
* $^{183}\text{Pt-u}$	M-A=-35752(28) keV for mixture gs+m at 34.50 keV										Nub127 **
* $^{183}\text{Hg-u}$	Existence of isomeric state under discussion (see Nubase); not corrected										GAu **
* $^{183}\text{Au}(\alpha)^{179}\text{Ir}$	F : all lines in ^{181}Au and ^{183}Au shifted by 16-20keV										GAu **
* $^{183}\text{Tl}^m(\alpha)^{179}\text{Au}$	$E_\alpha=6449(15)$, error increased since partially summed with electrons										GAu **
* $^{183}\text{Tl}^m(\alpha)^{179}\text{Au}$	$E_\alpha=6456(15)$, error increased since partially summed with electrons										GAu **
* $^{183}\text{Tl}^m(\alpha)^{179}\text{Au}$	$E_\alpha=6400(10)$, 6378(10) summed with e^- , in coinc. with 62.4, 89.5 γ										GAu **
* $^{183}\text{Pb}(\alpha)^{179}\text{Hg}$	$E_\alpha=6775(7)$, 6570(10) to ground state, 217 level										02Je09 **
* $^{183}\text{Pb}^m(\alpha)^{179}\text{Hg}$	$E_\alpha=6868(20)$, 6715(20) to ground state, 171.4 isomer										02Je09 **
*	original assignment to ^{182}Pb changed										AHW **
* $^{183}\text{Pb}^m(\alpha)^{179}\text{Hg}$	$E_\alpha=6874(15)$, 6712(10) to ground state, 171.4 isomer; and an 6784(15) line										Nub128 **
* $^{183}\text{Pb}^m(\alpha)^{179}\text{Hg}$	$E_\alpha=6860(11)$, 6698(5) to ground state, 171.4 isomer										Nub128 **
* $^{183}\text{Hg}(\text{ep})^{182}\text{Pt}$	F : retracted by authors in PrvCom										AHW **
* $^{183}\text{Hf}(\beta^-)^{183}\text{Ta}$	$E_{\beta^-}=1540(30)$ to $5/2^+$ level at 459.07 keV, and other E_{β^-}										Ens917 **
* $^{183}\text{Ta}(\beta^-)^{183}\text{W}$	$E_{\beta^-}=615(10)$ to $7/2^-$ level at 453.0708 keV										Ens017 **
* $^{183}\text{Re}(\epsilon)^{183}\text{W}$	pK=0.40(0.07) to $7/2^-$ level at 453.07 keV										Ens017 **
* $^{183}\text{Ir}(\beta^+)^{183}\text{Os}$	$Q_{\beta^+}=3190(100)$ mainly to $3/2^-$ level at 258.38 keV										Ens917 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{184}\text{Ir-u}$	-42460 110	-42520 30	-0.6	U			GS1	1.0	00Ra23
	-42524 30			2			GS2	1.0	05Li24
$^{184}\text{Pt-u}$	-40120 104	-40085 17	0.3	U			GS1	1.0	00Ra23
	-40068 30		-0.6	1	30	30 ^{184}Pt	GS2	1.0	05Li24
$^{184}\text{Au-u}$	-32540 104	-32548 24	-0.1	U			GS1	1.0	00Ra23 *
	-32557 37		0.2	R			GS2	1.0	05Li24 *
$^{184}\text{Hg-u}$	-28230 110	-28286 11	-0.5	U			GS1	1.0	00Ra23
	-28296 30		0.3	-			GS2	1.0	05Li24
ave.	-28279 17		-0.4	1	39	39 ^{184}Hg			average
$^{184}\text{Hg}-^{204}\text{Pb}_{.902}$	-3986 20	-3972 11	0.7	1	29	29 ^{184}Hg	MA6	1.0	01Sc41
$^{184}\text{Hg}-^{208}\text{Pb}_{.885}$	-7620 19	-7624 11	-0.2	1	32	32 ^{184}Hg	MA6	1.0	01Sc41
$^{184}\text{Tl-u}$	-18115 112	-18114 22	0.0	U			GS2	1.0	05Li24 *
$^{184}\text{Tl}-^{133}\text{Cs}_{1.383}$	112645.4 23.2	112646 22	0.0	1	86	86 ^{184}Tl	MA8	1.0	12Bo.A *
$^{184}\text{W O}_2-^{181}\text{Ta }^{35}\text{Cl}$	23917.5 2.8	23911.7 1.8	-0.8	U			H35	2.5	80Sh06
$^{184}\text{W }^{35}\text{Cl}-^{182}\text{W }^{37}\text{Cl}$	5675 3	5677.05 0.29	0.3	U			H22	2.5	70Mc03
	5676.3 2.2		0.1	U			H28	2.5	77Sh04
$^{184}\text{W O}_2-^{37}\text{Cl}-^{183}\text{W }^{35}\text{Cl}_2$	18734.7 3.0	18734.65 0.29	0.0	U			H28	2.5	77Sh04
$^{184}\text{Pt}(\alpha)^{180}\text{Os}$	4579.8 20.	4598 8	0.9	-					63Gr08
	4600.2 20.		-0.1	-					66Si08
	4602.2 10.		-0.4	-			ORa		95Bi01
ave.	4598 8		0.0	1	94	66 ^{180}Os			average
$^{184}\text{Au}(\alpha)^{180}\text{Ir}$	5218.6 15.	5234 5	1.0	U			ISa		70Ha18 *
	5233.9 5.			3			ORa		95Bi01 *
$^{184}\text{Hg}(\alpha)^{180}\text{Pt}$	5658.2 15.	5662 4	0.2	2					70Ha18
	5662.2 5.		-0.1	2			ORa		76To06
	5662.2 10.		0.0	2			Lvn		93Wa03 Z
$^{184}\text{Tl}(\alpha)^{180}\text{Au}$	6299.4 5.	6296 26	-0.1	-			ORa		76To06 Z
	6292.9 10.		0.1	-			GSa		80Sc09 Z
ave.	6298 4		0.0	1	27	14 ^{184}Tl			average
$^{184}\text{Pb}(\alpha)^{180}\text{Hg}$	6765.4 10.	6774 3	0.8	-					80Du02
	6779.6 10.		-0.6	-			GSa		80Sc09
	6773.6 10.		0.0	-			GSa		84Sc.A
	6781.6 10.		-0.8	-			ORa		87To09
	6773.6 6.		0.1	-			Jya		98Co27
	6772.5 10.		0.1	-			Ara		99To11
	6773.6 6.		0.1	-			Anv		04An07
ave.	6774 3		0.0	1	99	70 ^{184}Pb			average
$^{184}\text{Bi}(\alpha)^{180}\text{Tl}$	8024.8 50.			7			Anv		03An27
$^{182}\text{W}(t,p)^{184}\text{W}$	5127 7	5120.68 0.26	-0.9	U			LAl		76Ca10
$^{184}\text{W}(p,t)^{182}\text{W}$	-5124 5	-5120.68 0.26	0.7	U			Min		73Oo01
$^{183}\text{W}(n,\gamma)^{184}\text{W}$	7411.2 0.5	7411.66 0.25	0.9	-					74Gr11 Z
	7411.8 0.3		-0.5	-					75Bu01 Z
	7411.15 0.16		3.2	C			Bdn		06Fi.A
$^{183}\text{W}(d,p)^{184}\text{W}$	5187 15	5187.10 0.25	0.0	U			Kop		72Ca01
$^{184}\text{W}(d,t)^{183}\text{W}$	-1154 10	-1154.43 0.25	0.0	U			Kop		72Ca01
$^{183}\text{W}(n,\gamma)^{184}\text{W}$	ave. 7411.64 0.26	7411.66 0.25	0.1	1	98	96 ^{184}W			average
$^{184}\text{Hf}(\beta^-)^{184}\text{Ta}$	1340 30			3					73Wa18 *
$^{184}\text{Ta}(\beta^-)^{184}\text{W}$	2866 26			2					73Ya02 *
$^{184}\text{Ir}(\beta^+)^{184}\text{Os}$	5100 250	4646 28	-1.8	U					70Be.A *
	4300 100		3.5	B					73Ho09 *
	4285 70		5.2	B					89Po09 *
$^{184}\text{Au}(\beta^+)^{184}\text{Pt}$	6380 50	7020 27	12.8	C					84Da.A *
$^{184}\text{Hg}(\beta^+)^{184}\text{Au}$	3760 30	3970 24	7.0	C					84Da.A *
* $^{184}\text{Au-u}$	M-A=-30280(100) keV for mixture gs+m at 68.46 keV								
* $^{184}\text{Au-u}$	M-A=-30292(28) keV for mixture gs+m at 68.46 keV								
* $^{184}\text{Tl-u}$	M-A=-16899(102) keV for mixture gs+m at -50(30) keV								
* $^{184}\text{Tl}-^{133}\text{Cs}_{1.383}$	$D_M=112618.6(6.2) \mu\text{u}$ for mixture gs+m at -50(30) keV; M-A=-16898.5(5.8) keV								
* $^{184}\text{Au}(\alpha)^{180}\text{Ir}$	$E_{\alpha}=5172(15)$ from $^{184}\text{Au}^m$ at 68.6(0.1) keV								
*	transition to ground state in ^{180}Ir								
* $^{184}\text{Au}(\alpha)^{180}\text{Ir}$	$E_{\alpha}=5187(5)$ from $^{184}\text{Au}^m$ at 68.6(0.1) keV								
* $^{184}\text{Hf}(\beta^-)^{184}\text{Ta}$	$E_{\beta^-}=1100(30)$ to 1^- level at 228.4 keV, and other E_{β^-}								
* $^{184}\text{Ta}(\beta^-)^{184}\text{W}$	$E_{\beta^-}=1165(26)$ to 6^+ level at 1746.03 keV, and other E_{β^-}								
* $^{184}\text{Ir}(\beta^+)^{184}\text{Os}$	$Q_{\beta^+}=4720(250)$ to 4^+ level at 383.68 keV								

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
* $^{184}\text{Ir}(\beta^+)^{184}\text{Os}$	$E_{\beta^+}=2900(100)$ to 4^+ level at 383.68 keV								Ens102 **
* $^{184}\text{Ir}(\beta^+)^{184}\text{Os}$	$E_{\beta^+}=2320(70)$ to 2^+ level at 942.86 keV								Ens102 **
* $^{184}\text{Au}(\beta^+)^{184}\text{Pt}$	$Q_{\beta^+}=6450(50)$ from $^{184}\text{Au}^m$ at 68.6(0.1) keV								94Ib01 **
$^{185}\text{Hf-u}$	-41138	98			2		GS3	1.0	12Sh.1
$^{185}\text{Os-u}$	-46037	31	-45958.3	1.4	2.5	F	GS2	1.0	03Li.A *
$^{185}\text{Ir-u}$	-43340	110	-43300	30	0.3	U	GS1	1.0	00Ra23
	-43302	30			2		GS2	1.0	05Li24
$^{185}\text{Pt-u}$	-39334	112	-39386	28	-0.5	U	GS1	1.0	00Ra23 *
	-39381	44			-0.1	1	40	40	^{185}Pt GS2 1.0 05Li24 *
$^{185}\text{Au-u}$	-34213	115	-34210	28	0.0	o	GS1	1.0	00Ra23 *
	-34224	69			0.2	R	GS2	1.0	05Li24 *
$^{185}\text{Hg-u}$	-28070	107	-28101	17	-0.3	U	GS1	1.0	00Ra23
	-28088	44			-0.3	R	GS2	1.0	05Li24 *
$^{185}\text{Hg}-^{208}\text{Pb}_{.889}$	-7373	29	-7345	17	1.0	R	MA6	1.0	01Sc41 *
$^{185}\text{Tl-u}$	-21354	145	-21211	22	1.0	U	GS2	1.0	05Li24 *
$^{185}\text{Re }^{16}\text{O}_2-^{182}\text{W }^{35}\text{Cl}$	25731	6	25727.1	1.0	-0.3	U	H22	2.5	70Mc03
$^{185}\text{Re }^{35}\text{Cl}-^{183}\text{W }^{37}\text{Cl}$	5695	3	5681.8	1.0	-1.8	U	H22	2.5	70Mc03
	5678.7	1.0			1.2	1	15	15	^{185}Re H28 2.5 77Sh04
$^{185}\text{Re}(\alpha, ^8\text{He})^{181}\text{Re}$	-26480	14	-26486	13	-0.5	2	INS		90Ka19
$^{185}\text{Pt}(\alpha)^{181}\text{Os}$	4436.6	10.2	4437	10	0.0	1	96	60	^{185}Pt ORa 91Bi04 *
$^{185}\text{Au}(\alpha)^{181}\text{Ir}$	5180.2	5.	5180	5	0.0	3			68Si01 Z
	5182.9	15.			-0.2	U			70Ha18 Z
	5179	10			0.1	3		ORa	91Bi04 *
$^{185}\text{Hg}(\alpha)^{181}\text{Pt}$	5777	15	5774	5	-0.2	3			70Ha18 *
	5775	5			-0.2	3		ORa	76To06 *
	5761	15			0.9	3			76Gr.A *
$^{185}\text{Tl}^m(\alpha)^{181}\text{Au}$	6112.6	7.	6143	5	4.4	C			75Co.A Z
	6143.3	5.				4		ORa	76To06 *
	6145.6	15.			-0.2	U		GSa	80Sc09 Z
$^{185}\text{Pb}(\alpha)^{181}\text{Hg}$	6693	15	6695	5	0.1	U		GSa	80Sc09 *
	6555.0	15.			2.8	B		ORa	87To09
	6695	5				2		Anv	02An15 *
$^{185}\text{Pb}^m(\alpha)^{181}\text{Hg}^m$	6622.9	20.	6550	5	-3.7	B		Ora	75Ca06
	6679.7	20.			-6.5	B		GSa	80Sc09
	6549.8	5.				3		Anv	02An15
$^{185}\text{Bi}^m(\alpha)^{181}\text{Tl}$	8258.9	30.	8218	12	-1.3	-		Ara	01Po05 *
	8207.6	15.			0.7	-		Anv	04An07
	8218	14			0.0	1	76	64	$^{185}\text{Bi}^m$ average
$^{184}\text{W}(n,\gamma)^{185}\text{W}$	5753.7	0.3	5753.71	0.30	0.0	1	98	96	^{185}W BNn 87Br05 Z
	5754.62	0.24			-3.8	C		Bdn	06Fi.A
$^{184}\text{W}(d,p)^{185}\text{W}$	3524	5	3529.14	0.30	1.0	U		ANL	65Er03
	3533	10			-0.4	U		Kop	72Ca01
$^{184}\text{W}(^3\text{He},d)^{185}\text{Re}$	-98	40	-89.4	0.9	0.2	U		Roc	71Lu01
$^{185}\text{Re}(d,t)^{184}\text{Re}-^{187}\text{Re}(\text{O})^{186}\text{Re}$	-310	4	-310	4	0.0	1	100	100	^{184}Re Roc 76El12
$^{184}\text{Os}(n,\gamma)^{185}\text{Os}$	6625.4	0.9	6624.52	0.28	-1.0	U			74Pr15
	6624.52	0.28			0.0	1	100	100	^{184}Os Bdn 06Fi.A
$^{185}\text{Bi}^m(p)^{184}\text{Pb}$	1669	50	1607	13	-1.2	o			95Da.A *
	1606.8	16.			0.0	1	67	36	$^{185}\text{Bi}^m$ Ara 01Po05 *
	1568.6	50.			0.8	o			03An27 *
	1591.7	5.			3.0	F			04An07 *
$^{185}\text{Ta}(\beta^-)^{185}\text{W}$	2013	20	1994	14	-1.0	2			69Ku07 *
$^{185}\text{W}(\beta^-)^{185}\text{Re}$	432.6	1.0	432.7	0.9	0.1	1	74	70	^{185}Re 67Wi19
$^{185}\text{Os}(\epsilon)^{185}\text{Re}$	1012.7	1.0	1012.8	0.4	0.1	-			67Sc15 *
	1012.8	0.5			-0.1	-			70Sc06 *
	ave.	1012.8			0.0	1	100	100	^{185}Os average
$^{185}\text{Au}(\beta^+)^{185}\text{Pt}$	4707	40	4820	40	2.9	F			86Da.A *
$^{185}\text{Tl}^m(\text{IT})^{185}\text{Tl}$	454.8	1.5				5			Nub127
* $^{185}\text{Os-u}$	F: contaminated by isomeric state AND by other nuclides								03Li.B **
* $^{185}\text{Pt-u}$	M-A=-36590(100) keV for mixture gs+m at 103.41 keV								Nub127 **
* $^{185}\text{Pt-u}$	M-A=-36631(28) keV for mixture gs+m at 103.41 keV								Nub127 **
* $^{185}\text{Au-u}$	M-A=-31820(90) keV for mixture gs+m at 100#100 keV								Nub127 **
* $^{185}\text{Au-u}$	M-A=-31829(28) keV for mixture gs+m at 100#100 keV								Nub127 **
* $^{185}\text{Hg-u}$	M-A=-26112(28) keV for mixture gs+m at 103.8(1.0) keV								Nub127 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
* ¹⁸⁵ Hg– ²⁰⁸ Pb, ₈₈₉	Original error (17keV) increased by 20 due to isomer+ground state lines in trap								01Sc41 **
* ¹⁸⁵ Tl-u	M–A=–19664(31) keV for mixture gs+m at 454.8(1.5) keV								Nub127 **
* ¹⁸⁵ Pt(α) ¹⁸¹ Os	E α =4444(10) assumed from (1/2 [–]) isomer at 103.41(0.05) keV								Nub127 **
* ¹⁸⁵ Au(α) ¹⁸¹ Ir	E α =5069(10), 4826(10) to ground state, 243.3 level								91Bi04 **
*	unhindered E α =5069(10) to ground state or very low level; from coinc.								95Bi01 **
* ¹⁸⁵ Hg(α) ¹⁸¹ Pt	E α =5653.4(15,Z), 5576.4(15,Z) to ground state, 3/2 [–] level at 79.41 keV								Ens061 **
*	and E α =5376.4(15,Z) from ¹⁸⁵ Hg ^m at 103.8 to 13/2 ⁺ level at 380.92 keV								Ens061 **
* ¹⁸⁵ Hg(α) ¹⁸¹ Pt	E α =5653(5), 5569(5) to ground state, 3/2 [–] level at 79.41 keV								Ens061 **
*	and 5371(10) from ¹⁸⁵ Hg ^m at 103.8 to 13/2 ⁺ level at 380.92 keV								Ens061 **
* ¹⁸⁵ Hg(α) ¹⁸¹ Pt	E α =5365(15) from ¹⁸⁵ Hg ^m at 103.8 to 13/2 ⁺ level at 380.92 keV								Ens061 **
* ¹⁸⁵ Tl ^m (α) ¹⁸¹ Au	E α =6010.2(5,Z); also an E α =5975.2(5,Z), 4 times stronger branch								76To06 **
* ¹⁸⁵ Tl ^m (α) ¹⁸¹ Au	E α =6012.5(15,Z); also an E α =5970.5(15,Z), 4 times stronger branch								80Sc09 **
* ¹⁸⁵ Pb(α) ¹⁸¹ Hg	E α =6485(15) to 64 level								02An15 **
* ¹⁸⁵ Pb(α) ¹⁸¹ Hg	E α =6486(5),6288(5) to 64, 269 levels								02An15 **
* ¹⁸⁵ Bi ^m (α) ¹⁸¹ Tl	E α =8030, by same authors, from only one event								96Da06 **
* ¹⁸⁵ Bi ^m (p) ¹⁸⁴ Pb	Read from graph								AHW **
* ¹⁸⁵ Bi ^m (p) ¹⁸⁴ Pb	Average by authors of E p =1618(11), and 1585(9) in reference								96Da06 **
* ¹⁸⁵ Bi ^m (p) ¹⁸⁴ Pb	As read from graph								GAu **
* ¹⁸⁵ Bi ^m (p) ¹⁸⁴ Pb	F : rejected by authors: no dedicated calibration with known proton activity								04An07 **
* ¹⁸⁵ Ta(β [–]) ¹⁸⁵ W	E β [–] =1770(20) to 7/2 [–] level at 243.62 keV								Ens061 **
* ¹⁸⁵ Os(ϵ) ¹⁸⁵ Re	L/K=0.600(0.006) to 3/2 ⁺ level at 874.81 and 1/2 ⁺ at 880.33 keV								Ens061 **
* ¹⁸⁵ Os(ϵ) ¹⁸⁵ Re	pK=0.109(0.005) to 3/2 ⁺ level at 931.06 keV, and other pK, recalculated								Ens061 **
* ¹⁸⁵ Au(β ⁺) ¹⁸⁵ Pt	F : insufficient information								GAu **
¹⁸⁶ Hf-u	–39103	59			2		GS3	1.0	12Sh.1
¹⁸⁶ W O–C ¹³ C ³⁵ Cl ₄ ³⁷ Cl	104592.7	3.2	104609.2	1.6	2.1	U	H29	2.5	77Sh04
¹⁸⁶ Ir-u	–42063	30	–42056	18	0.2	2	GS2	1.0	05Li24 *
¹⁸⁶ Pt-u	–40656	30	–40649	23	0.2	1	61	61 ¹⁸⁶ Pt	GS2 1.0 05Li24
¹⁸⁶ Au-u	–34029	30	–34047	23	–0.6	1	56	56 ¹⁸⁶ Au	GS2 1.0 05Li24
¹⁸⁶ Hg-u	–30660	104	–30638	13	0.2	U	GS1	1.0	00Ra23
	–30630	30			–0.3	1	17	17 ¹⁸⁶ Hg	GS2 1.0 05Li24
¹⁸⁶ Hg– ²⁰⁴ Pb, ₉₁₂	–6065	20	–6054	13	0.6	–			MA6 1.0 01Sc41
	ave.	–6058	17		0.2	1	56	56 ¹⁸⁶ Hg	average
¹⁸⁶ Tl-u	–21653	218	–21349	24	1.4	o	GS1	1.0	00Ra23 *
	–21513	105			1.6	U	GS2	1.0	05Li24 *
¹⁸⁶ Tl– ¹³³ Cs _{1,398}	110831	24	110829	24	–0.1	o	MA8	1.0	08We02 *
	110829	24				2	MA8	1.0	12Bo.A *
¹⁸⁶ Tl ^m – ¹³³ Cs _{1,398}	111254	34				2	MA8	1.0	12Bo.A
¹⁸⁶ W O ₂ – ¹⁸³ W ³⁵ Cl	25122	5	25116.6	1.4	–0.4	U	H28	2.5	77Sh04
¹⁸⁶ W ³⁵ Cl– ¹⁸⁴ W ³⁷ Cl	6374	3	6381.9	1.4	1.1	U	H22	2.5	70Mc03
	6382.0	1.4			0.0	1	15	15 ¹⁸⁶ W	H28 2.5 77Sh04
¹⁸⁶ Os(α) ¹⁸² W	2820.6	50.	2820.4	1.2	0.0	U			75Vi01
¹⁸⁶ Pt(α) ¹⁸² Os	4323.2	20.	4320	18	–0.2	1	79	39 ¹⁸² Os	63Gr08
¹⁸⁶ Au(α) ¹⁸² Ir	4907	15	4912	14	0.3	1	87	44 ¹⁸² Ir	ORa 90AK04 *
¹⁸⁶ Hg(α) ¹⁸² Pt	5206.2	15.	5204	10	–0.1	–			70Ha18
	5204.2	15.			0.0	–			96Ri12
	ave.	5205	11		–0.1	1	83	57 ¹⁸² Pt	average
¹⁸⁶ Tl ^m (α) ¹⁸² Au	5891.9	7.	6010	40	2.4	U			75Co.A
	5891.9	7.			2.4	U			ORa 77Ij01
¹⁸⁶ Pb(α) ¹⁸² Hg	6458.2	20.	6470	6	0.6	2			Ora 74Le02 Z
	6470.1	10.			0.0	2			GSa 80Sc09 Z
	6474.7	10.			–0.5	2			ORa 84To09 Z
	6476.5	15.			–0.4	2			ORa 97Ba25
	6459.2	15.			0.7	2			Anv 97An09
¹⁸⁶ Bi(α) ¹⁸² Tl	7760	20	7757	12	–0.2	6			Ara 97Ba21 *
	7755	15			0.1	6			Anv 03An27 *
¹⁸⁶ Bi ^m (α) ¹⁸² Tl ^p	7349.3	25.	7423	5	2.9	U			GSa 84Sc.A
	7420.9	20.			0.1	U			Ara 97Ba21
	7422.9	5.				7			Anv 03An27

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{186}\text{Po}(\alpha)^{182}\text{Pb}$	8493	30				5					05Hu.A *
$^{186}\text{W}(\text{p,t})^{184}\text{W}$	-4474	5	-4464.1	1.3	2.0	U			Min		73Oo01
$^{186}\text{W}(\text{p,t})^{184}\text{W}-^{184}\text{W}(\gamma)^{182}\text{W}$	660.1	1.6	656.6	1.3	-2.2	o					09Le03
	657.0	1.8			-0.2	1	49	46 ^{186}W			09Le.A
$^{186}\text{W}(\text{t},\alpha)^{185}\text{Ta}$	11430	20	11411	14	-1.0	R			LAl		80Lo10
$^{186}\text{W}(\gamma,\text{n})^{185}\text{W}$	-7120	60	-7192.2	1.3	-1.2	U			Phi		60Ge01
$^{186}\text{W}(\text{d,t})^{185}\text{W}$	-939	10	-934.9	1.3	0.4	U			Kop		72Ca01
$^{185}\text{Re}(\text{n},\gamma)^{186}\text{Re}$	6179.8	0.8	6179.35	0.18	-0.6	-			Tal		69La11 Z
	6178.6	1.5			0.5	U					70Or.A
	6179.34	0.18			0.1	-			Bdn		06Fi.A
$^{185}\text{Re}(\text{d,p})^{186}\text{Re}$	3939	25	3954.79	0.18	0.6	U			Tal		69La11
$^{185}\text{Re}(\text{n},\gamma)^{186}\text{Re}$	ave.	6179.36	0.18	6179.35	0.18	-0.1	1	99	88 ^{186}Re		average
$^{186}\text{Ta}(\beta^-)^{186}\text{W}$	3901	60				2					69Mo16 *
$^{186}\text{Re}(\beta^-)^{186}\text{Os}$	1064	2	1071.7	1.0	3.9	B					56Jo05
	1071.5	1.3			0.2	-					56Po28
	1076	3			-1.4	-					64Ma36
	1064	3			2.6	U					68An11
	ave.	1072.2	1.2		-0.4	1	71	59 ^{186}Os			average
$^{186}\text{Ir}(\beta^+)^{186}\text{Os}$	3760	200	3828	17	0.3	U					62Bo22 *
	3831	20			-0.2	R					63Em02
$^{186}\text{Au}(\beta^+)^{186}\text{Pt}$	5950	200	6150	30	1.0	U					72We.A
$^{186}\text{Hg}(\beta^+)^{186}\text{Au}$	3250	200	3176	24	-0.4	U					72We.A
$^{186}\text{Tl}^{\text{II}}(\text{IT})^{186}\text{Tl}^{\text{m}}$	373.9	0.5	374.00	0.20	0.2	o			Lvn		91Va04
	374.0	0.2				3					Ens036
* $^{186}\text{Ir-u}$	M-A=-39181(28) keV for mixture gs+m at 0.8 keV										Nub127 **
* $^{186}\text{Tl-u}$	M-A=-20030(180) keV for mixture gs+m+n at 22(39) and 396(39) keV										Nub12b **
* $^{186}\text{Tl-u}$	M-A=-19900(29) keV for mixture gs+m+n at 22(39) and 396(39) keV										Nub12b **
* $^{186}\text{Tl}-^{133}\text{Cs}_{1,398}$	$D_M=110842.1(9.2) \mu\text{u}$ for mixture gs+m at 22(39) keV; M-A=-19874.4(8.6) keV										Nub12b **
* $^{186}\text{Tl}-^{133}\text{Cs}_{1,398}$	$D_M=110840.4(8.6) \mu\text{u}$ for mixture gs+m at 22(39) keV; M-A=-19876.0(8.0) keV										Nub12b **
* $^{186}\text{Au}(\alpha)^{182}\text{Ir}$	$E_\alpha=4653(15)$ to 3^- level at 152.3 keV										95Sa42 **
* $^{186}\text{Bi}(\alpha)^{182}\text{Tl}$	$E_\alpha=7158(20)$ followed by $E(\gamma)=444$ keV										03An27 **
* $^{186}\text{Bi}(\alpha)^{182}\text{Tl}$	$E_\alpha=7152(15)$, $7085(15)$ followed by $E(\gamma)=444$, 520 keV										03An27 **
* $^{186}\text{Po}(\alpha)^{182}\text{Pb}$	Error is evaluator's educated guess										GAu **
* $^{186}\text{Ta}(\beta^-)^{186}\text{W}$	$E_{\beta^-}=2240(60)$ to $(2^-, 3^-)$ level at 1661.3817 keV										Ens036 **
* $^{186}\text{Ir}(\beta^+)^{186}\text{Os}$	$E_{\beta^+}=2600(200)$ assumed to 2^+ level at 137.159 keV, also other E_{β^+}										Ens036 **
* $^{186}\text{Ir}(\beta^+)^{186}\text{Os}$	$E_{\beta^+}=1940(20)$ to 6^+ level at 868.94 keV										Ens036 **
$^{187}\text{Ta-u}$	-39614	71				2			GS3	1.0	12Sh.1
$^{187}\text{Ir-u}$	-42458	30				2			GS2	1.0	05Li24
$^{187}\text{Pt-u}$	-39500	110	-39383	26	1.1	U			GS1	1.0	00Ra23
	-39413	30			1.0	1	74	74 ^{187}Pt	GS2	1.0	05Li24
$^{187}\text{Au-u}$	-35470	114	-35457	24	0.1	U			GS1	1.0	00Ra23 *
	-35441	30			-0.5	1	64	64 ^{187}Au	GS2	1.0	05Li24
$^{187}\text{Hg-u}$	-30188	109	-30186	15	0.0	U			GS1	1.0	00Ra23 *
	-30155	36			-0.8	1	17	17 ^{187}Hg	GS2	1.0	05Li24 *
$^{187}\text{Hg}-^{208}\text{Pb}_{,899}$	-9210	20	-9196	15	0.7	1	56	56 ^{187}Hg	MA6	1.0	01Sc41
$^{187}\text{Hg}^{\text{m}}-^{208}\text{Pb}_{,899}$	-9152	19	-9133	21	1.0	o			MA6	1.0	01Sc41 *
$^{187}\text{Tl-u}$	-24120	107	-24094	9	0.2	U			GS1	1.0	00Ra23
	-23928	109			-1.5	U			GS2	1.0	05Li24 *
$^{187}\text{Tl}^{\text{m}}-^{133}\text{Cs}_{1,406}$	109151	24	109200	8	2.1	F			MA8	1.0	08We02 *
$^{187}\text{Pb-u}$	-16076	45	-16089	5	-0.3	U			GS2	1.0	05Li24 *
$^{187}\text{Pb}-^{133}\text{Cs}_{1,406}$	116843.5	5.9	116845	5	0.3	1	86	86 ^{187}Pb	MA8	1.0	05We11 *
$^{187}\text{Pb}^{\text{m}}-^{133}\text{Cs}_{1,406}$	116871.6	5.6	116866	12	-1.0	o			MA8	1.0	05We11 *
$^{187}\text{Re O}_2-^{184}\text{W }^{35}\text{Cl}$	25797.4	3.5	25795.7	1.3	-0.2	U			H28	2.5	77Sh04
$^{187}\text{Re }^{35}\text{Cl}-^{185}\text{Re }^{37}\text{Cl}$	5737	3	5745.7	1.1	1.2	U			H22	2.5	70Mc03
	5744.2	1.2			0.5	1	15	12 ^{187}Re	H28	2.5	77Sh04
$^{187}\text{Au}(\alpha)^{183}\text{Ir}$	4792.7	20.	4751	29	-0.8	1	35	19 ^{183}Ir			68Si01 *
$^{187}\text{Hg}(\alpha)^{183}\text{Pt}$	5229.9	20.	5230	14	0.0	1	49	30 ^{183}Pt	ISa		70Ha18 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{187}\text{Hg}^m(\alpha)^{183}\text{Pt}$	5293.4	20.	5289	16	-0.2	1	64	49 $^{187}\text{Hg}^m$	ISa		70Ha18 *
$^{187}\text{Tl}^m(\alpha)^{183}\text{Au}$	5643	20	5656	6	0.6	-			ORa		76To06 *
	5661.5	10.			-0.6	-			GSa		80Sc09 *
	5645.1	12.			0.9	o			Lvn		85Co06 *
	5661.5	10.			-0.6	-			Lvn		91Wa21 *
$^{187}\text{Pb}(\alpha)^{183}\text{Hg}$	ave. 5659	7			-0.5	1	91	78 ^{183}Au			average
	6393.0	10.	6393	6	0.0	-			Ora		75Ca06 *
	6395.0	19.			-0.1	o			GSa		80Sc09 *
	6398.4	10.			-0.6	-			GSa		81Mi12 *
$^{187}\text{Pb}^m(\alpha)^{183}\text{Hg}^m$	ave. 6396	7			-0.4	1	77	63 ^{183}Hg			average
	6213.1	20.	6208	7	-0.2	o			Ora		74Le02
	6213.1	10.			-0.5	2			Ora		75Ca06
	6223.3	10.			-1.5	o			GSa		80Sc09
	6205.9	10.			0.2	2			GSa		81Mi12
	6202.9	15.			0.4	2			Anv		99An36
$^{187}\text{Bi}(\alpha)^{183}\text{Tl}^m$	7139.0	10.	7150	4	1.1	2			GSa		84Sc.A
	7153.3	8.			-0.4	2			ORa		99Ba45 *
	7158.4	10.			-0.8	o			Anv		03An27
	7147.2	8.			0.4	2			Jya		03Ke08 *
	7153.3	10.			-0.3	o			Anv		04An07
	7153.3	5.			-0.6	2			Anv		06An11 *
$^{187}\text{Bi}^m(\alpha)^{183}\text{Tl}$	7749.1	10.	7887	7	13.8	F			GSa		84Sc.A *
	7890.1	15.			-0.2	2			ORa		99Ba45
	7882.9	11.			0.4	2			Jya		03Ke08
	7890.1	10.			-0.3	2			Anv		06An11
$^{187}\text{Po}(\alpha)^{183}\text{Pb}$	7978.9	15.				3			Anv		06An11 *
$^{187}\text{Po}^m(\alpha)^{183}\text{Pb}^m$	7889.1	20.				3			Anv		06An11
$^{186}\text{W}(\text{n},\gamma)^{187}\text{W}$	5466.3	0.3	5466.79	0.05	1.6	U			BNn		87Br05 Z
	5467.22	0.15			-2.8	U			Ltn		92Be17 *
	5466.59	0.12			1.7	-			Bdn		06Fi.A
	5466.83	0.05			-0.7	-			Prn		08Bo26
$^{186}\text{W}(\text{d},\text{p})^{187}\text{W}$	3236	5	3242.23	0.05	1.2	U			ANL		65Er03
	3240	10			0.2	U			Kop		72Ca01
$^{186}\text{W}(\text{n},\gamma)^{187}\text{W}$	ave. 5466.79	0.05	5466.79	0.05	0.0	1	100	61 ^{187}W			average
$^{186}\text{W}(\text{}^3\text{He},\text{d})^{187}\text{Re}$	530	40	503.2	1.2	-0.7	U			Roc		71Lu01
$^{187}\text{Re}(\gamma,\text{n})^{186}\text{Re}$	-7180	80	-7359.2	1.1	-2.2	U			Phi		60Ge01
$^{187}\text{Re}(\text{d},\text{t})^{186}\text{Re}$	-1055	25	-1102.0	1.1	-1.9	U			Tal		69La11
$^{186}\text{Os}(\text{n},\gamma)^{187}\text{Os}$	6291.1	1.0	6289.9	0.6	-1.2	-					74Pr15 Z
	6289.4	0.8			0.7	-			Bdn		06Fi.A
$^{187}\text{W}(\beta^-)^{187}\text{Re}$	ave. 6290.1	0.6			-0.2	1	92	51 ^{187}Os			average
	1314	2	1312.3	1.2	-0.9	-					69Na03
	1310	2			1.1	-					70He14
$^{187}\text{Re}(\beta^-)^{187}\text{Os}$	ave. 1312.0	1.4			0.2	1	71	39 ^{187}W			average
	2.62	0.09	2.4667	0.0015	-1.7	U					65Br12
	2.64	0.05			-3.5	B					67Hu05
	2.667	0.020			-10.0	B					92Co23
	2.70	0.09			-2.6	U					93As02
	2.460	0.011			0.6	U					99Al20
	2.470	0.004			-0.8	-					01Ga01
	2.4661	0.0017			0.4	-					03Ar36
	ave. 2.4667	0.0016			0.0	1	93	51 ^{187}Re			average
$^{187}\text{Ir}(\beta^+)^{187}\text{Os}$	1550	200	1672	28	0.6	U					71Ma24 *
$^{187}\text{Os}(\text{}^3\text{He},\text{t})^{187}\text{Ir}$	-1521	6	-1690	28	-28.2	B			INS		90Ka27
$^{187}\text{Au}(\beta^+)^{187}\text{Pt}$	3600	40	3657	27	1.4	1	47	26 ^{187}Pt			83Gn01 *
$^{187}\text{Hg}^m(\text{IT})^{187}\text{Hg}$	54	21	59	16	0.2	1	60	51 $^{187}\text{Hg}^m$	MA6		01Sc41 *
$^{187}\text{Tl}^m(\text{IT})^{187}\text{Tl}$	330	5	335	3	1.0	1	48	38 ^{187}Tl			77Sc03
$^{187}\text{Pb}^m(\text{IT})^{187}\text{Pb}$	33	13	19	10	-1.1	1	61	61 $^{187}\text{Pb}^m$	MA8		05We11
* $^{187}\text{Au}-\text{u}$	M-A=-32980(100) keV for mixture gs+m at 120.33 keV										
* $^{187}\text{Hg}-\text{u}$	M-A=-28090(100) keV for mixture gs+m at 59(16) keV										
* $^{187}\text{Hg}-\text{u}$	M-A=-28060(28) keV for mixture gs+m at 59(16) keV										
* $^{187}\text{Hg}^m-^{208}\text{Pb}_{.899}$	Use instead their difference between ground state and $^{187}\text{Hg}^m$ lines										
* $^{187}\text{Tl}-\text{u}$	M-A=-22121(28) keV for mixture gs+m at 335(3) keV										
* $^{187}\text{Tl}^m-^{133}\text{Cs}_{1.406}$	F : contamination from ground state not resolved										
* $^{187}\text{Pb}-\text{u}$	M-A=-14965(41) keV for mixture gs+m at 19(10) keV										
* $^{187}\text{Pb}-^{133}\text{Cs}_{1.406}$	$D_M=116851.3(4.3) \mu\text{u}$ for mixture gs+m at 19(10) keV with R=0.62(0.02);										

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
*		M-A=-14981.5(4.0) keV							GAu **
* ¹⁸⁷ Pb ^m - ¹³³ Cs _{1.406}		$D_M=116869.5(5.5)$ for mixture gs+m at 19(10) R=8.7(0.7); M-A=-14964.5(5.1) keV							Nub129 **
*		used are only the equations for the ¹⁸⁷ Pb doublet and ¹⁸⁷ Pb ^m (IT) ¹⁸⁷ Pb							GAu **
* ¹⁸⁷ Au(α) ¹⁸³ Ir		Assignment uncertain							Ens **
* ¹⁸⁷ Hg(α) ¹⁸³ Pt		$E_\alpha=5035(20)$ to 3/2 ⁻ level at 84.62 keV							Ens931 **
* ¹⁸⁷ Hg ^m (α) ¹⁸³ Pt		$E_\alpha=4870(20)$ to 13/2 ⁺ level at 316.7(0.5) level							Ens931 **
* ¹⁸⁷ Tl ^m (α) ¹⁸³ Au		$E_\alpha=5510(20)$ 5528(10) 5512(12) 5528(10) respectively, to 9/2 ⁻ at 12.4(0.4) keV							Ens995 **
* ¹⁸⁷ Pb(α) ¹⁸³ Hg		$E_\alpha=6190(10)$ to 3/2 ⁻ level at 67.16 keV							Ens00b **
* ¹⁸⁷ Pb(α) ¹⁸³ Hg		$E_\alpha=6194(10)$ 5993(10) to 3/2 ⁻ levels at 67.16 and 275.33 keV							Ens00b **
* ¹⁸⁷ Bi(α) ¹⁸³ Tl ^m		Also $E_\alpha=7612(15)$ keV to ground state							99Ba45 **
* ¹⁸⁷ Bi(α) ¹⁸³ Tl ^m		Also $E_\alpha=7605(16)$ keV to ground state							03Ke08 **
* ¹⁸⁷ Bi(α) ¹⁸³ Tl ^m		Also $E_\alpha=7612(5)$, 7342(15) keV to ground state, 273(1) keV							06An11 **
* ¹⁸⁷ Bi ^m (α) ¹⁸³ Tl		F : for T=700 μ s instead of Nubase=370(20) μ s							Nub127 **
* ¹⁸⁷ Po(α) ¹⁸³ Pb		$E_\alpha=7528(15)$ to 286(1) keV level; also 1 event $E_\alpha=7796(15)$ to ground state							06An11 **
* ¹⁸⁶ W(n, γ) ¹⁸⁷ W		Only statistical error 0.04 keV given; Z recalibrated							GAu **
* ¹⁸⁷ Ir(β^+) ¹⁸⁷ Os		$p^+ < 0.15(0.05)$, resulting Q<1550 keV							Ens095 **
* ¹⁸⁷ Au(β^+) ¹⁸⁷ Pt		$K/\beta^+=31.6(2.8)$ to 1/2 ⁺ level at 1341.07 keV, recalculated							Ens095 **
* ¹⁸⁷ Hg ^m (IT) ¹⁸⁷ Hg		Original error (7 keV) increased by 20 due to isomer+ground state lines in trap							01Sc41 **
¹⁸⁸ Ta-u	-36084	71					GS3	1.0	12Sh.1
¹⁸⁸ Au-u	-34750	104	-34651	17	1.0	U	GS1	1.0	00Ra23
	-34674	30			0.8	-	GS2	1.0	05Li24
	ave.	-34679	22		1.3	1	57	57 ¹⁸⁸ Au	average
¹⁸⁸ Hg-u	-32500	104	-32433	12	0.6	U	GS1	1.0	00Ra23
	-32428	30			-0.2	1	16	16 ¹⁸⁸ Hg	05Li24
¹⁸⁸ Hg- ²⁰⁸ Pb _{.904}	-11330	20	-11327	12	0.2	-	MA6	1.0	01Sc41
	ave.	-11317	17		-0.6	1	53	53 ¹⁸⁸ Hg	average
¹⁸⁸ Tl-u	-23827	110	-23980	30	-1.4	U	GS1	1.0	00Ra23 *
	-23994	38			0.4	2	GS2	1.0	05Li24 *
¹⁸⁸ Pb-u	-19070	110	-19125	11	-0.5	U	GS1	1.0	00Ra23
	-19144	30			0.6	R	GS2	1.0	05Li24
¹⁸⁸ Os ³⁵ Cl- ¹⁸⁶ W ³⁷ Cl	4426	3	4422.5	1.3	-0.5	U	H22	2.5	70Mc03
¹⁸⁸ Pt(α) ¹⁸⁴ Os	4015.7	10.	4003	6	-1.3	-			63Gr08
	4000.3	10.			0.2	-	ORa		78El11
	3990.1	15.			0.8	-			79Ha10
	ave.	4005	7		-0.3	1	71	71 ¹⁸⁸ Pt	average
¹⁸⁸ Hg(α) ¹⁸⁴ Pt	4710.4	20.	4703	15	-0.4	1	57	42 ¹⁸⁴ Pt	79Ha10
¹⁸⁸ Pb(α) ¹⁸⁴ Hg	6110.3	10.	6109	3	-0.1	2			74Le02 Z
	6109.2	10.			0.0	2	Ora		77De32 Z
	6120.5	15.			-0.8	2	GSa		80Sc09 Z
	6110.5	5.			-0.3	2	ORa		81To02 Z
	6109.3	10.			0.0	2	Lvn		93Wa03 Z
	6100.0	8.			1.1	2	Jya		03Ke04
¹⁸⁸ Bi(α) ¹⁸⁴ Tl	7274.5	25.	7264	5	-0.4	o	GSa		80Sc09 *
	7279.7	10.			-1.6	2	GSa		84Sc.A *
	7255.2	7.			1.2	2	Lvn		97Wa05 *
	7259.3	5.			0.9	o	Anv		03An26 *
	7264.8	10.			-0.1	2	Anv		06An04 *
¹⁸⁸ Bi ⁿ (α) ¹⁸⁴ Tl ^m	7462.9	5.				5	Anv		03An26 *
¹⁸⁸ Bi ⁿ (α) ¹⁸⁴ Tl ⁿ	6968.5	20.	6964	5	-0.2	o	GSa		80Sc09
	6968.5	10.			-0.4	5	GSa		84Sc.A
	6963.5	6.			0.2	5	Lvn		97Wa05
	6961.3	5.			0.6	o	Anv		03An26
	6963.5	5.			0.1	5	Anv		06An04
¹⁸⁸ Po(α) ¹⁸⁴ Pb	8087.4	25.	8082	15	-0.2	o	Anv		99An52
	8080.2	15.			0.1	o	Anv		01Va.B
	8082.3	15.				2	Anv		03Va16

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{188}\text{Os}(p,t)^{186}\text{Os}$	-5802	5	-5797.7	0.6	0.9	U	Min		73Oo01
	-5803	4			1.3	U	McM		75Th04
$^{187}\text{Re}(n,\gamma)^{188}\text{Re}$	5871.77	0.3	5871.65	0.04	-0.4	U			72Sh13 Z
	5871.75	0.13			-0.8	U	Bdn		06Fi.A
	5871.65	0.04			2		Prn		10Ba48
$^{188}\text{Os}(t,\alpha)^{187}\text{Re}$	12604	10	12604.16	0.15	0.0	U	McM		76Hi08
$^{187}\text{Os}(n,\gamma)^{188}\text{Os}$	7989.6	0.3	7989.58	0.15	-0.1	-			83Fe06 Z
	7989.58	0.17			0.0	-	Bdn		06Fi.A
ave.	7989.58	0.15			-0.1	1	100	95 ^{188}Os	average
$^{188}\text{W}(\beta^-)^{188}\text{Re}$	349	3			3				64Bu10
$^{188}\text{Re}(\beta^-)^{188}\text{Os}$	2116	2	2120.39	0.15	2.2	U			56Jo05
	2111	3			3.1	B			68An11
$^{188}\text{Ir}(\beta^+)^{188}\text{Os}$	2833	10	2788	9	-4.5	B			62Wa20 *
	2781	20			0.3	-			69Ya02 *
	2827	30			-1.3	-			70Ag03 *
ave.	2795	17			-0.4	1	33	32 ^{188}Ir	average
$^{188}\text{Pt}(\epsilon)^{188}\text{Ir}$	525	10	522	9	-0.3	1	76	68 ^{188}Ir	ORa
$^{188}\text{Au}(\beta^+)^{188}\text{Pt}$	5520	30	5552	16	1.1	R			84Da.A
$^{188}\text{Hg}(\beta^+)^{188}\text{Au}$	2040	20	2066	15	1.3	1	59	43 ^{188}Au	84Da.A
* $^{188}\text{Tl-u}$	M-A=-22180(100) keV for mixture gs+m at 30(40) keV								GAu **
* $^{188}\text{Tl-u}$	M-A=-22335(28) keV for mixture gs+m at 30(40) keV								GAu **
* $^{188}\text{Bi}(\alpha)^{184}\text{Tl}$	$E_\alpha=7005(25)$ 7010(10) 6987(6) respectively, to (3^+) level at 117.5(0.5) keV								Ens102 **
*	$E_\alpha=7029(7)$ 3 times weaker exists too, possible mixture in older results								97Wa05 **
* $^{188}\text{Bi}(\alpha)^{184}\text{Tl}$	$E_\alpha=7106(5)$, 6992(5), 6889(10) to ground state, 117.5, 216 levels								03An26 **
* $^{188}\text{Bi}(\alpha)^{184}\text{Tl}$	$E_\alpha=6995(10)$ to 117.5 level								06An04 **
* $^{188}\text{Bi}^m(\alpha)^{184}\text{Tl}^m$	$E_\alpha=7302(5)$, 7232(10), 6995(15) to ground state, 70.5, 320 levels								03An26 **
* $^{188}\text{Ir}(\beta^+)^{188}\text{Os}$	$E_{\beta^+}=1656(10)$ 1605(20) 1650(30) respectively, to 2^+ level at 155.021 keV								Ens024 **
* $^{188}\text{Pt}(\epsilon)^{188}\text{Ir}$	pL=0.67(0.05) to 1^+ level at 478.17 keV								Ens024 **
$^{189}\text{W-u}$	-38237	44				2	GS3	1.0	12Sh.1
$\text{C}_{14}\text{H}_{21}-^{189}\text{Os}$	206188.3	6.2	206181.5	1.7	-0.4	U	M23	2.5	79Ha32
$^{189}\text{Au-u}$	-36080	140	-36052	22	0.2	U	GS1	1.0	00Ra23 *
	-36045	31			-0.2	2	GS2	1.0	05Li24
	-36058	30			0.2	2	GS2	1.0	05Li24 *
$^{189}\text{Hg-u}$	-31788	111	-31810	30	-0.2	U	GS1	1.0	00Ra23 *
	-31791	42			-0.3	1	65	65 ^{189}Hg	GS2 1.0 05Li24 *
$^{189}\text{Hg}^m-^{208}\text{Pb}_{909}$	-10501	20	-10498	19	0.2	1	92	92 $^{189}\text{Hg}^m$	MA6 1.0 01Sc41
$^{189}\text{Tl-u}$	-26497	139	-26412	12	0.6	U	GS1	1.0	00Ra23 *
	-26313	93			-1.1	U	GS2	1.0	05Li24 *
$^{189}\text{Pb-u}$	-19206	99	-19190	40	0.1	U	GS1	1.0	00Ra23 *
	-19193	37				2	GS2	1.0	05Li24 *
$^{189}\text{Os } ^{35}\text{Cl}-^{187}\text{Re } ^{37}\text{Cl}$	5341	3	5344.2	0.6	0.4	U	H22	2.5	70Mc07
$^{189}\text{Pb}(\alpha)^{185}\text{Hg}$	5954.2	10.	5870	40	-8.2	B	Ora		72Ga27 *
	5943.9	10.			-7.1	B	Ora		74Le02 *
	5915	10			-4.3	C			05Fr.A *
$^{189}\text{Pb}^m(\alpha)^{185}\text{Hg}$	5958	10	5910#	50#	-4.6	C			05Fr.A *
$^{189}\text{Bi}(\alpha)^{185}\text{Tl}$	7269.4	10.	7268.1	2.7	-0.1	6	Ora		74Le02 *
	7274.5	10.			-0.6	6	GSa		84Sc.A *
	7271.2	5.			-0.6	6	Lvn		85Co06 *
	7271.8	15.			-0.2	U	Anv		97An09 *
	7268.1	6.			0.0	6	Lvn		97Wa05
	7271.5	5.			-0.7	o	Jya		02Hu14 *
	7264.2	4.5			0.9	6	Jya		03Ke08 *
$^{189}\text{Bi}^m(\alpha)^{185}\text{Tl}$	7362.1	20.	7452	4	1.8	U	GSa		84Sc.A *
	7499.0	30.			-1.6	U	Dbb		93An19
	7458.2	40.			-0.2	U	ORa		95Ba75
	7458.2	15.			-0.4	6	Anv		97An09
	7450.0	6.			0.4	6	Lvn		97Wa05
	7453.1	6.			-0.2	6	Jya		03Ke08

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{189}\text{Po}(\alpha)^{185}\text{Pb}$	7699.4	15.	7694	15	-0.3	o			Anv		99An52 *
	7694.3	15.				3			Anv		05Va04 *
$^{189}\text{Os}(\text{p,t})^{187}\text{Os}$	-5431	5	-5428.3	0.5	0.5	U			Min		73Oo01
	-5432	4			0.9	U			McM		75Th04
$^{188}\text{Os}(\text{n},\gamma)^{189}\text{Os}$	5920.8	2.	5920.5	0.5	-0.1	U					76Be50
	5920.6	0.5			-0.2	1	99	94 ^{189}Os	ILn		92Br17
	5922.0	0.4			-3.7	C			Bdn		06Fi.A
$^{188}\text{Os}(\text{d,p})^{189}\text{Os}$	3689	10	3695.9	0.5	0.7	U			Kop		75Mo29
$^{189}\text{Os}(\text{d,t})^{188}\text{Os}$	335	15	336.7	0.5	0.1	U			Tal		75Th06
$^{189}\text{W}(\beta^-)^{189}\text{Re}$	2500	200	2360	40	-0.7	U					65Ka07
$^{189}\text{Re}(\beta^-)^{189}\text{Os}$	1000	20	1008	8	0.4	R					63Cr06
	1015	20			-0.4	R					65BI06
$^{189}\text{Pt}(\beta^+)^{189}\text{Ir}$	1950	20	1971	14	1.1	1	49	29 ^{189}Ir			71PI08 *
$^{189}\text{Au}(\beta^+)^{189}\text{Pt}$	3160	300	2903	23	-0.9	U					75Un.A
$^{189}\text{Hg}(\beta^+)^{189}\text{Au}$	4200	200	3960	40	-1.2	U					75Un.A
$^{189}\text{Hg}^m(\text{IT})^{189}\text{Hg}$	100	50	80	30	-0.4	1	43	35 ^{189}Hg	MA6		01Sc41
$^{189}\text{Tl}^m(\beta^+)^{189}\text{Hg}$	5460	200	5310	30	-0.8	U					75Un.A *
* $^{189}\text{Au-u}$	M-A=-33490(100) keV for mixture gs+m at 247.23 keV										
* $^{189}\text{Au-u}$	M-A=-33341(28) keV for $^{189}\text{Au}^m$ at 247.23 keV										
* $^{189}\text{Hg-u}$	M-A=-29570(100) keV for mixture gs+m at 80(30) keV										
* $^{189}\text{Hg-u}$	M-A=-29573(28) keV for mixture gs+m at 80(30) keV										
* $^{189}\text{Tl-u}$	M-A=-24540(100) keV for mixture gs+m at 283(6) keV										
* $^{189}\text{Tl-u}$	M-A=-24369(28) keV for mixture gs+m at 283(6) keV										
* $^{189}\text{Pb-u}$	M-A=-17870(90) keV for mixture gs+m at 40#30 keV										
* $^{189}\text{Pb-u}$	M-A=-17858(29) keV for mixture gs+m at 40#30 keV										
* $^{189}\text{Pb}(\alpha)^{185}\text{Hg}$	$E_\alpha=5730.1(10,Z)$ possibly from ground state, to $3/2^-$ level at 26.1 keV										
* $^{189}\text{Pb}(\alpha)^{185}\text{Hg}$	$E_\alpha=5720(10)$ possibly from ground state, to $3/2^-$ level at 26.1 keV										
* $^{189}\text{Pb}(\alpha)^{185}\text{Hg}$	$E_\alpha=5761$ to $3/2^-$ level at 26.1 and $E_\alpha=5623$ to 173.8 level										
* $^{189}\text{Pb}^m(\alpha)^{185}\text{Hg}$	$E_\alpha=5730$ to 103.8 level										
* $^{189}\text{Bi}(\alpha)^{185}\text{Tl}$	$E_\alpha=6670.1(10,Z)$ to $^{185}\text{Tl}^m$ at 454.8(1.5) keV										
* $^{189}\text{Bi}(\alpha)^{185}\text{Tl}$	$E_\alpha=6675(10)$ to $^{185}\text{Tl}^m$ at 454.8(1.5) keV										
* $^{189}\text{Bi}(\alpha)^{185}\text{Tl}$	$E_\alpha=7115.6(15,Z)$ and $6671.6(5,Z)$ to $^{185}\text{Tl}^m$ at 454.8(1.5) keV										
* $^{189}\text{Bi}(\alpha)^{185}\text{Tl}$	$E_\alpha=7120(15)$, $6670(15)$ to ground state and $^{185}\text{Tl}^m$ at 454.8(1.5) keV										
* $^{189}\text{Bi}(\alpha)^{185}\text{Tl}$	$E_\alpha=6674(5)$ to $^{185}\text{Tl}^m$ at 452.8(2.0) keV										
* $^{189}\text{Bi}(\alpha)^{185}\text{Tl}$	$E_\alpha=6667(4)$ to $^{185}\text{Tl}^m$ at 452.8(2.0) keV										
*	and also $E_\alpha=7114(6)$ to ground state										
* $^{189}\text{Bi}^m(\alpha)^{185}\text{Tl}$	Only one event; not seen in reference										
* $^{189}\text{Po}(\alpha)^{185}\text{Pb}$	$E_\alpha=7264(15)$ to 278(1) level										
* $^{189}\text{Po}(\alpha)^{185}\text{Pb}$	$E_\alpha=7259(15)$ to 278(1) level										
* $^{189}\text{Pt}(\beta^+)^{189}\text{Ir}$	$E_{\beta^+}=885(10)$ to ground state, $1/2^+$ level at 94.34 and $3/2^+$ at 176.53 keV										
* $^{189}\text{Tl}^m(\beta^+)^{189}\text{Hg}$	$E_{\beta^+}=4140(200)$ to several levels around 300 keV										
$^{190}\text{W-u}$	-36915	43	-36910	40	0.1	1	94	94 ^{190}W	GS3	1.0	12Sh.1
$^{190}\text{Au-u}$	-35213	106	-35302	17	-0.8	U			GS2	1.0	05Li24 *
$^{190}\text{Hg-u}$	-33670	107	-33677	17	-0.1	U			GS1	1.0	00Ra23
$^{190}\text{Hg}-^{208}\text{Pb}_{913}$	-12361	20	-12361	17	0.0	1	73	73 ^{190}Hg	MA6	1.0	01Sc41
$^{190}\text{Tl}^m\text{-u}$	-26055	107	-26076	7	-0.2	o			GS1	1.0	00Ra23 *
	-26048	30			-0.9	U			GS2	1.0	05Li24 *
$^{190}\text{Tl}^m\text{-}^{133}\text{Cs}_{1,429}$	109033.5	6.9				2			MA8	1.0	12Bo.A
$^{190}\text{Pb-u}$	-21940	104	-21918	13	0.2	U			GS1	1.0	00Ra23
	-21905	30			-0.4	R			GS2	1.0	05Li24
$^{190}\text{Bi}^m\text{-}^{133}\text{Cs}_{1,429}$	123800	27	123870	30	2.5	F			MA8	1.0	08We02 *
$^{190}\text{Os}\text{-}^{35}\text{Cl}\text{-}^{188}\text{Os}\text{-}^{37}\text{Cl}$	5557	3	5558.6	0.6	0.2	U			H22	2.5	70Mc03
$^{190}\text{Os}\text{-C}_{14}\text{H}_{21}$	-205897.8	5.8	-205882.0	1.7	1.1	U			M23	2.5	79Ha32
$^{190}\text{Os}\text{-}^{189}\text{Os}$	285.2	5.2	299.54	0.20	1.1	U			M24	2.5	79Ha32
$^{190}\text{Pt}(\alpha)^{186}\text{Os}$	3238.3	20.	3252	6	0.7	-					61Pe23
	3248.5	20.			0.2	-					63Gr08
	ave.	3243	14		0.6	1	16	15 ^{190}Pt			average
$^{190}\text{Pb}(\alpha)^{186}\text{Hg}$	5699.8	10.	5697	5	-0.2	2			Ora		74Le02 Z
	5697.0	5.			0.1	2			ORa		81EI03 Z
$^{190}\text{Bi}(\alpha)^{186}\text{Tl}$	6862.2	5.	6863	4	0.1	3			Lvn		91Va04 *
	6863.3	5.			-0.1	3			Anv		03An26 *
$^{190}\text{Bi}^m(\alpha)^{186}\text{Tl}^m$	6967.9	5.	6968	3	0.0	4			Lvn		91Va04 *
	6969.1	5.			-0.2	4			Anv		03An26 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{190}\text{Bi}^m(\alpha)^{186}\text{Tl}^n$	6589.0	10.	6594	3	0.5	R			Ora		74Le02
$^{190}\text{Po}(\alpha)^{186}\text{Pb}$	7643.2	20.	7693	7	2.5	U			GSa		88Qu.A
	7651.4	40.			1.0	U			ORa		96Ba35
	7691.2	10.			0.2	3			ORa		97Ba25
	7695.3	10.			-0.2	3			Anv		00An14 *
$^{190}\text{Os}(\text{p,t})^{188}\text{Os}$	-5234	5	-5231.0	0.5	0.6	U			Min		73Oo01
	-5237	4			1.5	U			McM		75Th04
$^{190}\text{Pt}(\text{p,t})^{188}\text{Pt}$	-7150	10	-7157	7	-0.7	1	45	24 ^{190}Pt	Ors		78Ve10
$^{190}\text{Os}(\text{t},\alpha)^{189}\text{Re}$	11796	10	11796	8	0.0	2			McM		76Hi08
$^{189}\text{Os}(\text{n},\gamma)^{190}\text{Os}$	7791.8	1.0	7792.30	0.19	0.5	U			BNn		79Ca02 Z
	7792.31	0.19			-0.1	1	100	94 ^{190}Os	Bdn		06Fi.A
$^{190}\text{Os}(\text{d,t})^{189}\text{Os}$	-1541	10	-1535.06	0.19	0.6	U			Kop		75Mo29
	-1530	4			-1.3	U			Tal		76Be50
$^{190}\text{Pt}(\text{p,d})^{189}\text{Pt}$	-6693	11	-6687	10	0.6	1	84	80 ^{189}Pt	Ors		80Ka19
$^{190}\text{W}(\beta^-)^{190}\text{Re}$	1270	70	1250	60	-0.2	1	82	77 ^{190}Re			76Ha39 *
$^{190}\text{Re}(\beta^-)^{190}\text{Os}$	3090	300	3070	70	-0.1	-					55At21 *
	3190	300			-0.4	-					69Ha44 *
	3146	200			-0.4	-					64Fl02 *
ave.	3140	150			-0.5	1	24	23 ^{190}Re			average
$^{190}\text{Ir}(\beta^+)^{190}\text{Os}$	2000	200	1953.8	1.2	-0.2	U					60Ka14 *
$^{190}\text{Au}(\beta^+)^{190}\text{Pt}$	4442	15				2					73Jo11
	4380	55	4442	15	1.1	U					74Di.A
	4380	200			0.3	U					75Un.A
$^{190}\text{Hg}(\beta^+)^{190}\text{Au}$	2105	80	1513	23	-7.4	C					74Di.A
$^{190}\text{Tl}(\beta^+)^{190}\text{Hg}$	7000	400	6990#	50#	0.0	U					75Un.A *
$^{190}\text{Tl}^m(\beta^+)^{190}\text{Hg}$	6975	300	7081	17	0.4	U					76Bi09 *
$^{190}\text{Bi}(\beta^+)^{190}\text{Pb}$	8700	500	9818	26	2.2	F					76Bi09 *
* $^{190}\text{Au-u}$	M-A=-32701(28) keV for mixture gs+m at 200#150 keV										
* $^{190}\text{Tl}^m-u$	Assumed by evaluator to be the 7+ excited isomer										
* $^{190}\text{Bi}^m-^{133}\text{Cs}_{1,429}$	F : contamination due to ground state not resolved										
* $^{190}\text{Bi}(\alpha)^{186}\text{Tl}$	$E_\alpha=6716(5), 6507(5), 6431(5)$ to ground state, 215.2, 293.7 levels										
* $^{190}\text{Bi}(\alpha)^{186}\text{Tl}$	$E_\alpha=6431(5)$ to 293.7 level										
* $^{190}\text{Bi}^m(\alpha)^{186}\text{Tl}^m$	$E_\alpha=6819(5), 6734(5), 6456(5)$ to levels 0, 89.5, 373.9 above $^{186}\text{Tl}^m$										
* $^{190}\text{Bi}^m(\alpha)^{186}\text{Tl}^m$	$E_\alpha=6456(5)$ to 374.0 level above $^{186}\text{Tl}^m$										
* $^{190}\text{Po}(\alpha)^{186}\text{Pb}$	$E_\alpha=7545(15)$ same dataset as in reference 2000An14										
* $^{190}\text{W}(\beta^-)^{190}\text{Re}$	$E_{\beta^-}=950(70)$ to 1^+ level at 319.7 keV										
* $^{190}\text{Re}(\beta^-)^{190}\text{Os}$	$E_{\beta^-}=1700(300)$ 1800(300) respectively, to 3^- level at 1387.00 keV										
* $^{190}\text{Re}(\beta^-)^{190}\text{Os}$	$E_{\beta^-}=1600(200)$ from isomer at 204(10) to several levels around 1750 keV										
* $^{190}\text{Ir}(\beta^+)^{190}\text{Os}$	$p^+=6(1)\times 10^{-5}$ to 4^+ levels at 1163.19 and 955.37 keV, level at 1872.15 keV fed										
* $^{190}\text{Tl}(\beta^+)^{190}\text{Hg}$	$E_{\beta^+}=5700(400)$ to ground state and 2^+ level at 416.32 keV										
* $^{190}\text{Tl}^m(\beta^+)^{190}\text{Hg}$	$E_{\beta^+}=4180(300)$ to 6^+ level at 1772.94 keV										
* $^{190}\text{Bi}(\beta^+)^{190}\text{Pb}$	F : $E_{\beta^+}=5700(300)$ to a level around 2000 at least										
$^{191}\text{W-u}$	-33469	48				2			GS3	1.0	12Sh.1
$^{191}\text{Au-u}$	-36180	88	-36300	40	-1.3	1	20	20 ^{191}Au	GS2	1.0	05Li24 *
$^{191}\text{Hg-u}$	-32811	51	-32843	24	-0.6	1	23	23 ^{191}Hg	GS2	1.0	05Li24 *
$^{191}\text{Hg}-^{208}\text{Pb}_{,918}$	-11414	29	-11410	24	0.1	1	70	70 ^{191}Hg	MA6	1.0	01Sc41 *
$^{191}\text{Tl-u}$	-28340	130	-28216	8	1.0	U			GS1	1.0	00Ra23 *
	-28234	30			0.6	U			GS2	1.0	05Li24 *
	-28192	31			-0.8	U			GS2	1.0	05Li24 *
$^{191}\text{Pb-u}$	-21770	110	-21720	40	0.4	U			GS1	1.0	00Ra23 *
	-21724	41				2			GS2	1.0	05Li24 *
$^{191}\text{Bi}-^{133}\text{Cs}_{1,436}$	121552.1	8.6	121558	8	0.6	1	87	87 ^{191}Bi	MA8	1.0	08We02
$^{191}\text{Pb}^m(\alpha)^{187}\text{Hg}^m$	5403.4	20.				2			Ora		74Le02
$^{191}\text{Bi}(\alpha)^{187}\text{Tl}$	6780.8	5.	6778	3	-0.5	-			Lvn		85Co06 Z
	6785.3	10.2			-0.7	-			ORa		98Bi.A
	6782.2	10.			-0.4	-			Anv		99An36
ave.	6782	4			-0.8	1	64	62 ^{187}Tl			average
$^{191}\text{Bi}(\alpha)^{187}\text{Tl}^m$	6440.0	5.	6443.6	2.2	0.7	-					67Tr06 Z
	6455.0	10.			-1.1	U			Ora		74Le02 Z
	6445.9	5.			-0.4	-			Lvn		85Co06 Z
	6447	10			-0.3	U			ORa		98Bi.A
	6458.5	20.			-0.7	U			RIa		99Ta20
	6445	10			-0.1	U			Anv		99An36

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{191}\text{Bi}(\alpha)^{187}\text{Tl}^m$	6443.2	3.	6443.6	2.2	0.2	–	Jya		03Ke04	
ave.	6443.0	2.3			0.3	1	88	77 $^{187}\text{Tl}^m$	average	
$^{191}\text{Bi}^m(\alpha)^{187}\text{Tl}$	7022.8	5.	7018.6	2.6	–0.8	2	Lvn		85Co06 Z	
	7023.4	10.			–0.5	U	ORa		98Bi.A	
	7016.2	20.			0.1	U	RIa		99Ta20	
	7017.2	3.			0.5	2	Jya		03Ke04	
$^{191}\text{Po}(\alpha)^{187}\text{Pb}$	7470.8	20.	7493	5	1.1	F	GSa		93Qu03 *	
	7487.1	15.			0.4	U	ORa		97Ba25	
	7491.2	5.			0.4	1	94 ^{191}Po	Anv	02An19 *	
$^{191}\text{Po}(\alpha)^{187}\text{Pb}^m$	7493.2	15.	7474	10	–1.2	1	45	39 $^{187}\text{Pb}^m$	Anv	02An19 *
$^{191}\text{Po}^m(\alpha)^{187}\text{Pb}^m$	7535	5				2		Anv	02An19 *	
$^{191}\text{At}(\alpha)^{187}\text{Bi}^m$	7713.9	11.				3		Jya	03Ke08	
$^{191}\text{At}^m(\alpha)^{187}\text{Bi}$	7880.4	15.				3		Jya	03Ke08	
$^{191}\text{Ir}(p,t)^{189}\text{Ir}$	–5903	15	–5915	13	–0.8	1	71	71 ^{189}Ir	McM	78Lo07
$^{190}\text{Os}(n,\gamma)^{191}\text{Os}$	5758.2	2.	5758.74	0.11	0.3	U			77Be15	
	5759.1	1.5			–0.2	U			77Ca19	
	5758.67	0.16			0.4	–		ILn	91Bo35 Z	
	5758.81	0.15			–0.5	–		Bdn	06Fi.A	
ave.	5758.74	0.11			–0.1	1	100	94 ^{191}Os	average	
$^{190}\text{Os}(\alpha,t)^{191}\text{Ir}$	–14569	15	–14523.5	1.2	3.0	U		McM	71Pr13	
$^{191}\text{Ir}(d,t)^{190}\text{Ir}$	–1769.3	0.4				2			95Ga04 *	
$^{191}\text{Os}(\beta^-)^{191}\text{Ir}$	313.3	3.	314.0	1.2	0.2	–			48Sa18 *	
	314.3	2.			–0.2	–			51Ko17 *	
	316.3	3.			–0.8	–			58Na15 *	
	314.3	3.			–0.1	–			60Fe03 *	
	318.3	3.			–1.4	–			63Pl01 *	
ave.	315.1	1.2			–0.9	1	92	86 ^{191}Ir	average	
$^{191}\text{Pt}(\epsilon)^{191}\text{Ir}$	1000	15	1009	4	0.6	U			70Sc20 *	
$^{191}\text{Au}(\beta^+)^{191}\text{Pt}$	1830	50	1890	40	1.2	1	55	54 ^{191}Au	76Vi.A *	
$^{191}\text{Hg}(\beta^+)^{191}\text{Au}$	3430	200	3220	40	–1.1	U			75Un.A *	
	3180	70			0.5	1	33	25 ^{191}Au	76Vi.A *	
$^{191}\text{Tl}^m(\beta^+)^{191}\text{Hg}$	5178	200	4607	24	–2.9	C			75Un.A *	
* ^{191}Au -u	M–A=–33568(28) keV for mixture gs+m at 266.2 keV									
* ^{191}Hg -u	M–A=–30499(28) keV for mixture gs+m at 128(22) keV									
* ^{191}Hg – $^{208}\text{Pb}_{918}$	Original error (19keV) increased by 20 due to isomer+ground state lines in trap									
* ^{191}Tl -u	M–A=–26250(90) keV for mixture gs+m at 297(7) keV									
* ^{191}Tl -u	M–A=–25964(28) keV for $^{191}\text{Tl}^m$ at 297(7) keV									
* ^{191}Pb -u	Possible isomeric contamination									
* ^{191}Pb -u	M–A=–20226(28) keV for mixture gs+m at 20(50) keV									
* $^{191}\text{Po}(\alpha)^{187}\text{Pb}$	F : probably mainly $^{189}\text{Bi}^m$									
* $^{191}\text{Po}(\alpha)^{187}\text{Pb}$	$E_\alpha=7334(10)$, $6960(15)$ to ground state, $375(1)$ superseded by 02An19									
* $^{191}\text{Po}^m(\alpha)^{187}\text{Pb}^m$	$E_\alpha=7376(5)$, $6888(5)$ to $^{187}\text{Pb}^m$ and $494(1)$ above									
* $^{191}\text{Po}^m(\alpha)^{187}\text{Pb}^m$	$E_\alpha=7378(10)$, $6888(15)$ superseded by 02An19									
* $^{191}\text{Ir}(d,t)^{190}\text{Ir}$	Feeds ground state									
* $^{191}\text{Os}(\beta^-)^{191}\text{Ir}$	$E_{\beta^-}=142(3)$ $143(2)$ $145(3)$ $143(3)$ $147(3)$ respectively, to $11/2^-$ level at 171.29 keV									
* $^{191}\text{Pt}(\epsilon)^{191}\text{Ir}$	$pL=0.73(0.12)$ to $(1/2^+, 3/2, 5/2^+)$ at 935.46 keV, no K capture									
* $^{191}\text{Au}(\beta^+)^{191}\text{Pt}$	$E_{\beta^+}=850(30)$ to ground state and $(5/2^-, 7/2^-)$ level at 9.547 keV; also $E_{\beta^+}=470(60)$ to $(3/2^-, 5/2^-)$ level at 277.88 and $5/2^-$ level at 293.458 keV									
*	Reassigned by evaluator to mainly ground state, partly $3/2^+$ 207.9 level									
* $^{191}\text{Hg}(\beta^+)^{191}\text{Au}$	$E_{\beta^+}=3820(200)$ to level $(5/2^-)$ at 336.32 keV									
* $^{191}\text{Tl}^m(\beta^+)^{191}\text{Hg}$										
^{192}Re -u	–33912	82				2		GS3	1.0	12Sh.1
^{192}Hg -u	–34440	104	–34365	17	0.7	U		GS1	1.0	00Ra23
	–34342	30			–0.8	R		GS2	1.0	05Li24
^{192}Hg – $^{208}\text{Pb}_{923}$	–12826	20	–12816	17	0.5	2		MA6	1.0	01Sc41
^{192}Tl -u	–27815	121	–27780	30	0.3	U		GS1	1.0	00Ra23 *
	–27775	34				2		GS2	1.0	05Li24
^{192}Pb -u	–24280	104	–24225	13	0.5	U		GS1	1.0	00Ra23
	–24185	30			–1.3	R		GS2	1.0	05Li24

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{192}\text{Bi-u}$	-14788	128	-14530	30	2.0	U			GS1	1.0	00Ra23 *
	-14494	60			-0.6	R			GS2	1.0	05Li24 *
$^{192}\text{Bi}^m - ^{133}\text{Cs}_{1,444}$	122143.5	9.6				2			MA8	1.0	08We02
$^{192}\text{Os O}_2 - ^{189}\text{Os } ^{35}\text{Cl}$	24301	6	24309.4	2.4	0.6	U			H22	2.5	70Mc03
$^{192}\text{Os } ^{35}\text{Cl} - ^{190}\text{Os } ^{37}\text{Cl}$	5984	3	5983.4	2.4	-0.1	U			H22	2.5	70Mc03
$^{192}\text{Pb}(\alpha)^{188}\text{Hg}$	5221.0	5.				2			ORa		79To06 Z
$^{192}\text{Bi}(\alpha)^{188}\text{Tl}$	6376.0	5.				3			Lvn		91Va04 *
$^{192}\text{Bi}^m(\alpha)^{188}\text{Tl}^m$	6481.4	5.	6485	3	0.7	3					67Tr06 *
	6491.6	10.			-0.7	3			Ora		74Le02 *
	6483.3	5.			0.3	3			Lvn		91Va04 *
	6494	8			-1.1	3			Jya		03Ke04 *
$^{192}\text{Po}(\alpha)^{188}\text{Pb}$	7322.8	20.	7320	3	-0.2	U					81Le23
	7319.8	7.			0.0	3			Lvn		93Wa04
	7364.6	35.			-1.3	U			RIa		95Mo14
	7349.4	30.			-1.0	U			RIa		97Pu01
	7319.8	11.			0.0	o			Jya		01Ke06
	7318.8	8.			0.1	3			Jya		03Ke04
	7319.8	4.			0.0	3			Anv		03Va16
$^{192}\text{At}(\alpha)^{188}\text{Bi}$	7695.6	25.				3			Anv		06An04
$^{192}\text{At}(\alpha)^{188}\text{Bi}^m$	7629.3	15.				4			Anv		06An04 *
$^{192}\text{At}^m(\alpha)^{188}\text{Bi}$	7695.6	25.				3			Anv		06An04
$^{192}\text{At}^m(\alpha)^{188}\text{Bi}^n$	7542.4	15.				4			Anv		06An04 *
$^{192}\text{Os}(p,t)^{190}\text{Os}$	-4835	5	-4835.3	2.2	-0.1	-			Min		73Oo01
	-4837	4			0.4	-			McM		75Th04
ave.	-4836	3			0.3	1	51	50 ^{192}Os			average
$^{192}\text{Pt}(p,t)^{190}\text{Pt}$	-6629	7	-6628	6	0.2	1	63	57 ^{190}Pt	Ors		80Ka19
$^{192}\text{Os}(t,\alpha)^{191}\text{Re}$	10993	10				2			McM		76Hi08
$^{192}\text{Os}(d,t)^{191}\text{Os}$	-1265	15	-1301.2	2.2	-2.4	U			Tal		77Be15
$^{191}\text{Ir}(n,\gamma)^{192}\text{Ir}$	6197.7	0.3	6198.13	0.11	1.4	o			ILn		87Ke.A
	6198.1	0.2			0.1	-			ILn		91Ke10
	6198.14	0.13			-0.1	-			Bdn		06Fi.A
ave.	6198.13	0.11			0.0	1	100	88 ^{192}Ir			average
$^{192}\text{Pt}(p,d)^{191}\text{Pt}$	-6448	6	-6437	3	1.8	1	28	36 ^{191}Pt	Ors		80Ka19
$^{192}\text{Pt}(p,d)^{191}\text{Pt} - ^{194}\text{Pt}()^{193}\text{Pt}$	-307	3	-309.8	2.7	-0.9	1	82	64 ^{191}Pt	Ors		78Be09
$^{192}\text{Ir}(\beta^+)^{192}\text{Os}$	1468	10	1046.3	2.4	-42.2	B					60An04 *
$^{192}\text{Ir}(\beta^-)^{192}\text{Pt}$	1456.7	4.	1454.5	2.3	-0.5	-					65Jo04 *
	1453.3	3.			0.4	-					77Ra17 *
ave.	1454.5	2.4			0.0	1	96	94 ^{192}Pt			average
$^{192}\text{Au}(\beta^+)^{192}\text{Pt}$	3514	20	3516	16	0.1	2					66Ny01
	3520	25			-0.1	2					74Di.A
$^{192}\text{Hg}(\beta^+)^{192}\text{Au}$	1745	30	765	22	-32.7	F					74Di.A *
$^{192}\text{Tl}(\beta^+)^{192}\text{Hg}$	6380	200	6140	40	-1.2	U					75Un.A *
* $^{192}\text{Tl-u}$	M-A=-25830(100) keV for mixture gs+m at 160(50) keV										
* $^{192}\text{Bi-u}$	M-A=-13700(110) keV for mixture gs+m at 150(30) keV										
* $^{192}\text{Bi-u}$	M-A=-13426(31) keV for mixture gs+m at 150(30) keV										
* $^{192}\text{Bi}(\alpha)^{188}\text{Tl}$	$E_\alpha=6245(5)$, $6060(5)$ to ground state, 184.6 level										
* $^{192}\text{Bi}^m(\alpha)^{188}\text{Tl}^m$	$E_\alpha=6050(5)$ to (10^-) level, 302.4 above $^{188}\text{Tl}^m$										
* $^{192}\text{Bi}^m(\alpha)^{188}\text{Tl}^m$	$E_\alpha=6060(10)$ to (10^-) level, 302.4 above $^{188}\text{Tl}^m$										
* $^{192}\text{Bi}^m(\alpha)^{188}\text{Tl}^m$	$E_\alpha=6348(5)$, $6253(5)$, $6081(10)$, $6052(5)$ to $^{188}\text{Tl}^m$ and to levels 103.2, 268.8, 302.4 above $^{188}\text{Tl}^m$										
* $^{192}\text{Bi}^m(\alpha)^{188}\text{Tl}^m$	$E_\alpha=6062(5)$ to level 302.4 above $^{188}\text{Tl}^m$										
* $^{192}\text{At}(\alpha)^{188}\text{Bi}^m$	Also $E_\alpha=7435(15)$ keV followed by 36 keV γ										
* $^{192}\text{At}^m(\alpha)^{188}\text{Bi}^n$	Also $E_\alpha=7224(15)$, $7195(15)$ keV followed by 165 and 188 keV γ										
* $^{192}\text{Ir}(\beta^+)^{192}\text{Os}$	$E_{\beta^+}=240(10)$ to 2^+ level at 205.79 keV										
* $^{192}\text{Ir}(\beta^-)^{192}\text{Pt}$	$E_{\beta^-}=672(4)$ $666(2)$ respectively, to 4^+ level at 784.58, and other E_{β^-}										
* $^{192}\text{Hg}(\beta^+)^{192}\text{Au}$	F : most probably due to backscattering of 2.5 MeV Au positons										
* $^{192}\text{Tl}(\beta^+)^{192}\text{Hg}$	$E_{\beta^+}=4940(200)$ to 2^+ level at 422.79 keV										

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{193}\text{Re-u}$	-32459	41					GS3	1.0	12Sh.1
$^{193}\text{Au-u}$	-35736	96	-35863	9	-1.3	U	GS2	1.0	05Li24 *
$^{193}\text{Hg-u}$	-33288	53	-33347	17	-1.1	U	GS2	1.0	05Li24 *
$^{193}\text{Hg}-^{208}\text{Pb}_{.928}$	-11673	29	-11681	17	-0.3	1	33	33 ^{193}Hg	MA6 1.0 01Sc41 *
$^{193}\text{Tl-u}$	-29690	158	-29498	7	1.2	U	GS1	1.0	00Ra23 *
	-29329	120			-1.4	U	GS2	1.0	05Li24 *
$^{193}\text{Tl}-^{133}\text{Cs}_{1.451}$	107691.2	7.2					MA8	1.0	12Bo.A *
$^{193}\text{Pb-u}$	-23865	125	-23830	50	0.3	o	GS1	1.0	00Ra23 *
	-23846	66			0.3	2	GS2	1.0	05Li24 *
$^{193}\text{Bi-u}$	-16980	110	-17040	10	-0.5	U	GS1	1.0	00Ra23 *
	-17025	30			-0.5	R	GS2	1.0	05Li24 *
$^{193}\text{Bi}-^{133}\text{Cs}_{1.451}$	120147	11	120149	10	0.2	2	MA8	1.0	08We02 *
$^{193}\text{Bi}(\alpha)^{189}\text{Tl}$	6304.5	5.					Lvn		85Co06 Z
$^{193}\text{Bi}(\alpha)^{189}\text{Tl}^m$	6017.8	5.	6021	3	0.7	3			67Tr06 Z
	6024.6	10.			-0.3	3	Ora		74Le02 Z
	6023.7	5.			-0.5	3	Lvn		85Co06 Z
$^{193}\text{Bi}^m(\alpha)^{189}\text{Tl}$	6617.4	10.	6613	5	-0.4	4	Ora		74Le02 Z
	6611.9	5.			0.2	4	Lvn		85Co06 Z
	6618.4	14.			-0.4	U	Jya		05Uu02 Z
$^{193}\text{Po}(\alpha)^{189}\text{Pb}$	7128.1	20.	7094	4	-1.7	U			67Si09
	7087.1	20.			0.3	U	Ora		77De32
	7096.4	5.			-0.5	3	Lvn		93Wa04
	7093.3	30.			0.0	U	RIa		95Mo14
	7089.2	6.			0.8	3	Jya		96En02
	7096.4	10.			-0.3	3	Anv		02Va13
$^{193}\text{Po}^m(\alpha)^{189}\text{Pb}^m$	7143.3	10.	7154	3	1.0	4	Ora		77De32
	7148.4	20.			0.3	U			81Le23
	7152.5	5.			0.2	4	Lvn		93Wa04
	7139.2	30.			0.5	U	RIa		95Mo14
	7159.7	6.			-1.0	4	Jya		96En02
	7152.5	10.			0.1	4	Anv		02Va13
$^{193}\text{At}(\alpha)^{189}\text{Bi}^m$	7388.5	5.					Jya		03Ke08
$^{193}\text{At}^m(\alpha)^{189}\text{Bi}$	7556.9	20.	7580	5	1.2	o	Jya		95Le15
	7490	6			15.1	C	Jya		98En.A
	7580.4	5.					Jya		03Ke08 *
$^{193}\text{At}^n(\alpha)^{189}\text{Bi}$	7614.3	5.					Jya		03Ke08 *
$^{193}\text{Rn}(\alpha)^{189}\text{Po}$	8040.0	12.					Anv		06An36 *
$^{193}\text{Ir}(p,t)^{191}\text{Ir}$	-5490	15	-5488.32	0.23	0.1	U	McM		78Lo07
$^{192}\text{Os}(n,\gamma)^{193}\text{Os}$	5583.5	2.	5583.42	0.20	0.0	U			78Be22
	5583.40	0.20			0.1	1	100	81 ^{193}Os	79Wa04
	5584.01	0.16			-3.7	C			06Fi.A
$^{192}\text{Os}(\alpha,t)^{193}\text{Ir}$	-13923	15	-13870.5	2.4	3.5	B	Bdn		06Fi.A
$^{193}\text{Ir}(t,\alpha)^{192}\text{Os}-^{191}\text{Ir}(\gamma)^{190}\text{Os}$	-661	4	-653.0	2.2	2.0	1	31	31 ^{192}Os	71Pr13
$^{192}\text{Ir}(n,\gamma)^{193}\text{Ir}$	7772.0	0.2	7771.99	0.20	0.0	1	100	89 ^{193}Ir	LAL 82La22
$^{193}\text{Ir}(\gamma,n)^{192}\text{Ir}$	-7790	50	-7771.99	0.20	0.4	U	Phi		85Co.B Z
$^{192}\text{Pt}(n,\gamma)^{193}\text{Pt}$	6247	3	6260.8	2.4	4.6	B			60Ge01
$^{193}\text{Os}(\beta^-)^{193}\text{Ir}$	1132	5	1142.3	2.4	2.1	1	23	19 ^{193}Os	68Sa13
$^{193}\text{Pt}(\epsilon)^{193}\text{Ir}$	56.6	0.3	56.63	0.30	0.1	1	100	92 ^{193}Pt	58Na15
$^{193}\text{Au}(\beta^+)^{193}\text{Pt}$	1355	20	1076	9	-14.0	B			83Jo04
$^{193}\text{Hg}(\beta^+)^{193}\text{Au}$	2341	30	2343	14	0.1	-			76Di15 *
	2340	20			0.2	-			58Br88 *
	ave.	2340	17		0.2	1	75	67 ^{193}Hg	76Di15 *
* $^{193}\text{Au-u}$	M-A=-33143(29) keV for mixture gs+m at 290.19 keV								
* $^{193}\text{Hg-u}$	M-A=-30937(28) keV for mixture gs+m at 140.76 keV								
* $^{193}\text{Hg}-^{208}\text{Pb}_{.928}$	Original error (18keV) increased by 20 due to isomer+ground state lines in trap								
* $^{193}\text{Tl-u}$	M-A=-27470(100) keV for mixture gs+m at 372(4) keV								
* $^{193}\text{Tl-u}$	M-A=-27134(28) keV for mixture gs+m at 372(4) keV								
* $^{193}\text{Tl}-^{133}\text{Cs}_{1.451}$	$D_M=108091.5(5.6) \mu\text{u}$ for $^{193}\text{Tl}^m$ at 372(4) keV; M-A=-27104.3(5.2) keV								
* $^{193}\text{Pb-u}$	M-A=-22160(100) keV for mixture gs+m at 130#80 keV								
* $^{193}\text{Pb-u}$	M-A=-22147(28) keV for mixture gs+m at 130#80 keV								
* $^{193}\text{At}^m(\alpha)^{189}\text{Bi}$	$E_\alpha=7423(5), 7325(5)$ to g.s.and 99.6(5) level								
* $^{193}\text{At}^n(\alpha)^{189}\text{Bi}$	$E_\alpha=7106(5)$ to 357.6(0.5) $^{189}\text{Bi}^n$ level								
* $^{193}\text{Rn}(\alpha)^{189}\text{Po}$	$E_\alpha=7875(20), 7685(15)$ to ground state and 194 level								
* $^{193}\text{Au}(\beta^+)^{193}\text{Pt}$	$E_{\beta^+}=153(15)$ to $3/2^-$ level at 187.81 keV, and other E_{β^+}								
* $^{193}\text{Hg}(\beta^+)^{193}\text{Au}$	$E_{\beta^+}=1170(30)$ from $^{193}\text{Hg}^m$ at 140.76 to $11/2^-$ level at 290.19 keV								

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
* $^{193}\text{Hg}(\beta^+)^{193}\text{Au}$	$E_{\beta^+}=1287(15)$ reinterpreted by AHW as going to ground state and $1/2^+$ level at 38.22keV								Ens062 **	
$^{194}\text{Au-u}$	-34768	114	-34582.2	2.3	1.6	U	GS2	1.0	05Li24 *	
$^{194}\text{Hg-u}$	-34527	30	-34551	3	-0.8	U	GS2	1.0	05Li24	
$^{194}\text{Hg}-^{133}\text{Cs}_{1.459}$	103394.7	3.1					MA8	1.0	10E111	
$^{194}\text{Hg}-^{208}\text{Pb}_{.933}$	-12766	19	-12768	3	-0.1	U	MA6	1.0	01Sc41	
$^{194}\text{Tl-u}$	-28803	135	-28919	15	-0.9	o	GS1	1.0	00Ra23 *	
	-28778	87			-1.6	U	GS2	1.0	05Li24 *	
$^{194}\text{Tl}-^{133}\text{Cs}_{1.459}$	109027	15					MA8	1.0	12Bo.A	
$^{194}\text{Tl}^m-^{133}\text{Cs}_{1.459}$	109306.4	4.1					MA8	1.0	12Bo.A	
$^{194}\text{Pb-u}$	-25980	104	-25988	19	-0.1	U	GS1	1.0	00Ra23	
$^{194}\text{Bi-u}$	-17162	128	-17220#	50#	-0.4	o	GS1	1.0	00Ra23 *	
	-17178	76			-0.5	U	GS2	1.0	05Li24 *	
$^{194}\text{Bi}^m-^{133}\text{Cs}_{1.459}$	120900	54					MA8	1.0	08We02 *	
$^{194}\text{Pt}-^{197}\text{Au}_{.985}$	-4396.4	3.2	-4389.4	0.7	2.2	U	CP1	1.0	05Sh52	
$^{194}\text{Au}-^{197}\text{Au}_{.985}$	-1652.5	2.2					MA8	1.0	10E111	
$^{194}\text{Pb}(\alpha)^{190}\text{Hg}$	4737.9	20.	4738	17	0.0	1	67	40 ^{194}Pb	ORa	87E109
$^{194}\text{Bi}(\alpha)^{190}\text{Tl}$	5918.3	5.							Lvn	91Va04 *
$^{194}\text{Bi}^m(\alpha)^{190}\text{Tl}^m$	6015.7	5.							Lvn	91Va04 *
$^{194}\text{Po}(\alpha)^{190}\text{Pb}$	6991.5	10.	6987	3	-0.4	3				67Si09 Z
	6990.9	7.			-0.5	3				67Tr06 Z
	6984.4	5.			0.5	3			Ora	77De32 Z
	6990.0	5.			-0.6	o			Lvn	85Va03 Z
	6986.3	6.			0.1	3			Lvn	93Wa04
	6993.4	4.			-1.6	o			Jya	96En02
	6987.3	14.			0.0	3			Jya	05Uu02
$^{194}\text{At}(\alpha)^{190}\text{Bi}$	7290.6	20.	7462	15	8.6	B			Jya	95Le15
	7462.5	15.				4			Anv	09An11 *
$^{194}\text{At}^m(\alpha)^{190}\text{Bi}^m$	7362.1	20.	7339	11	-1.2	o				80Ya.A
	7351.9	20.			-0.7	5				84Ya.A
	7341.7	20.			-0.2	5			Jya	95Le15
	7329.2	15.			0.6	5			Anv	09An11
$^{194}\text{Rn}(\alpha)^{190}\text{Po}$	7862.5	10.				4			Anv	06An36
$^{193}\text{Ir}(n,\gamma)^{194}\text{Ir}$	6067.0	0.4	6066.79	0.11	-0.5	2				82Ra.A
	6066.9	0.2			-0.6	2				98Ba85
	6066.71	0.14			0.6	2			Bdn	06Fi.A
$^{194}\text{Pt}(t,\alpha)^{193}\text{Ir}$	12286	20	12300.6	2.1	0.7	U			Tal	78Ya07
$^{194}\text{Pt}(d,t)^{193}\text{Pt}$	-2126	20	-2095.0	2.1	1.6	U			Pit	64Co11
$^{194}\text{Pt}(p,d)^{193}\text{Pt}-^{196}\text{Pt}^{195}\text{Pt}$	-445	3	-430.3	2.1	4.9	B			Ors	78Be09
$^{194}\text{Os}(\beta^-)^{194}\text{Ir}$	96.6	2.				3				64Wi07 *
$^{194}\text{Ir}(\beta^-)^{194}\text{Pt}$	2254	4	2228.8	2.1	-6.3	B				76Ra33
$^{194}\text{Ir}^m(\beta^-)^{194}\text{Pt}$	2600	70				2				68Su02 *
$^{194}\text{Au}(\beta^+)^{194}\text{Pt}$	2465	20	2549.4	2.2	4.2	B				56Th11
	2509	15			2.7	U				60Ba17
	2485	30			2.1	U				70Ag03 *
$^{194}\text{Hg}(\epsilon)^{194}\text{Au}$	40	20	29	4	-0.5	U				81Ho18
* $^{194}\text{Au-u}$	M-A=-32192(29) keV for mixture gs+m+n at 107.4 and 475.8 keV								Nub127 **	
* $^{194}\text{Tl-u}$	M-A=-26700(100) keV for mixture gs+m at 260(15) keV								Nub126 **	
* $^{194}\text{Tl-u}$	M-A=-26677(28) keV for mixture gs+m at 260(15) keV								Nub126 **	
* $^{194}\text{Bi-u}$	M-A=-15870(100) keV for mixture gs+m+n at 160#70 and 190#50 keV								Nub127 **	
* $^{194}\text{Bi-u}$	M-A=-15885(28) keV for mixture gs+m+n at 160#70 and 190#50 keV								Nub127 **	
* $^{194}\text{Bi}^m-^{133}\text{Cs}_{1.459}$	Original error 16 μu increased to include possible 3^+ and 10^- contam.								08We02 **	
* $^{194}\text{Bi}(\alpha)^{190}\text{Tl}$	$E_\alpha=5799(5)$, $5645(5)$ to ground state, 151.3 level								91Va04 **	
* $^{194}\text{Bi}^m(\alpha)^{190}\text{Tl}^m$	$E_\alpha=5892(5)$, $5781(5)$ to levels 0, 112.2 above $^{190}\text{Tl}^m$								91Va04 **	
* $^{194}\text{At}(\alpha)^{190}\text{Bi}$	$E_\alpha=7190(15)$ to 121(15); further E_α : 7310(15), 7266(15), 7145(15) keV								09An11 **	
* $^{194}\text{Os}(\beta^-)^{194}\text{Ir}$	$E_\beta^- = 54.5(2.0)$ to 0^- level at 43.119 keV, and other E_β^-								Ens066 **	
* $^{194}\text{Ir}^m(\beta^-)^{194}\text{Pt}$	$E_\beta^- < 250$ to 10^+ level at 2438.41 keV								Ens066 **	
* $^{194}\text{Au}(\beta^+)^{194}\text{Pt}$	$E_{\beta^+}=1230(30)$ to 2^+ level at 328.464 keV, and other E^+								Ens066 **	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{195}\text{Os-u}$	-31682	65				2			GS3	1.0	12Sh.1
$^{195}\text{Hg-u}$	-33283	62	-33279	25	0.1	U			GS2	1.0	05Li24 *
$^{195}\text{Hg}-^{208}\text{Pb}_{.938}$	-11362	28	-11379	25	-0.6	1	79	79 ^{195}Hg	MA6	1.0	01Sc41 *
$^{195}\text{Tl-u}$	-30320	200	-30226	12	0.5	U			GS1	1.0	00Ra23 *
	-30209	40			-0.4	-			GS2	1.0	05Li24
	-30264	33			1.2	-			GS2	1.0	05Li24 *
	ave.	-30242	25		0.6	1	22	22 ^{195}Tl			average
$^{195}\text{Tl}-^{133}\text{Cs}_{1.466}$	108375	27	108382	12	0.2	-			MA8	1.0	12Bo.A
	108472	79			-1.1	-			MA8	1.0	12Bo.A *
	ave.	108385	26		-0.1	1	22	22 ^{195}Tl			average
$^{195}\text{Pb-u}$	-25423	150	-25457	25	-0.2	o			GS1	1.0	00Ra23 *
	-25461	70			0.1	2			GS2	1.0	05Li24 *
$^{195}\text{Bi-u}$	-19320	100	-19351	6	-0.3	U			GS1	1.0	00Ra23
	-19537	128			1.5	U			GS2	1.0	05Li24 *
$^{195}\text{Bi}-^{133}\text{Cs}_{1.466}$	119258.2	6.0	119256	6	-0.3	1	89	89 ^{195}Bi	MA8	1.0	08We02
$^{195}\text{Pt}-^{197}\text{Au}_{.990}$	-2119.9	3.2	-2111.4	0.7	2.7	U			CP1	1.0	05Sh52
$^{195}\text{Bi}(\alpha)^{191}\text{Tl}$	5832.5	5.				2			Lvn		85Co06 Z
$^{195}\text{Bi}(\alpha)^{191}\text{Tl}^m$	5542.9	10.	5535	5	-0.8	2			Ora		74Le02 Z
	5533.3	5.			0.4	2			Lvn		85Co06 Z
$^{195}\text{Bi}^m(\alpha)^{191}\text{Tl}$	6228.1	5.	6232	3	0.7	3					67Tr06 Z
	6238.4	10.			-0.6	3			Ora		74Le02 Z
	6233.7	5.			-0.4	3			Lvn		85Co06 Z
$^{195}\text{Po}(\alpha)^{191}\text{Pb}$	6763.1	8.	6749.9	2.8	-1.6	3					67Si09 Z
	6747.4	5.			0.5	3					67Tr06 Z
	6744.6	5.			1.0	3			Lvn		93Wa04
	6752.8	14.			-0.2	o			Jya		96Le09
	6744.6	10.			0.5	3			Anv		02Va13
	6755.9	6.			-1.0	3			Jya		05Uu02
$^{195}\text{Po}^m(\alpha)^{191}\text{Pb}^m$	6850.8	10.	6840.6	2.9	-1.0	3					67Si09
	6839.4	5.			0.2	3					67Tr06 Z
	6839.6	5.			0.2	3			Lvn		93Wa04
	6852.8	10.			-1.2	o			Jya		96Le09
	6839.6	10.			0.1	3			Anv		02Va13
	6840.6	6.			0.0	3			Jya		05Uu02
$^{195}\text{At}(\alpha)^{191}\text{Bi}^m$	7095.8	20.	7099	3	0.2	U			Jya		95Le15
	7105	20			-0.3	U			RIa		99Ta20
	7098.9	3.				3			Jya		03Ke04 *
$^{195}\text{At}^m(\alpha)^{191}\text{Bi}$	7340.9	30.	7372	4	1.1	U					83Le.A *
	7371.5	30.			0.0	U			Jya		95Le.A
	7403	30			-1.0	U			RIa		99Ta20 *
	7372.5	4.0				2			Jya		03Ke04 *
$^{195}\text{Rn}(\alpha)^{191}\text{Po}$	7694.1	11.				2			Jya		01Ke06
$^{195}\text{Rn}^m(\alpha)^{191}\text{Po}^m$	7713.5	11.				3			Jya		01Ke06
$^{194}\text{Ir}(n,\gamma)^{195}\text{Ir}$	7231.92	0.11	7231.86	0.06	-0.5	o			ILn		87Ci.A
	7231.86	0.06				3			ILn		87Co08 Z
$^{194}\text{Pt}(n,\gamma)^{195}\text{Pt}$	6105.06	0.12	6105.06	0.12	0.0	1	100	98 ^{194}Pt	ILn		81Ho.B Z
	6109.17	0.13			-31.7	F			Bdn		06Fi.A
$^{195}\text{Pt}(\gamma,n)^{194}\text{Pt}$	-6205	44	-6105.06	0.12	2.3	U			Phi		60Ge01
$^{194}\text{Pt}(d,p)^{195}\text{Pt}$	3908	20	3880.49	0.12	-1.4	U			Pit		64Co11
$^{195}\text{Pt}(d,t)^{194}\text{Pt}$	140	20	152.18	0.12	0.6	U			Pit		64Co11
$^{195}\text{Os}(\beta^-)^{195}\text{Ir}$	2000	500	2180	60	0.4	U					57Ba08
$^{195}\text{Ir}(\beta^-)^{195}\text{Pt}$	1116	20	1102.0	2.1	-0.7	U					73Ja10 *
$^{195}\text{Au}(\epsilon)^{195}\text{Pt}$	226.8	1.0	226.8	1.0	0.0	1	100	100 ^{195}Au			Averag *
$^{195}\text{Hg}(\beta^+)^{195}\text{Au}$	1510	50	1570	23	1.2	1	21	21 ^{195}Hg			71Fr03 *
$^{195}\text{Tl}(\beta^+)^{195}\text{Hg}$	3000	300	2845	26	-0.5	U					78Go15 *
$^{195}\text{Pb}^m(\text{IT})^{195}\text{Pb}$	202.9	0.7				3			Oak		91Gr12
$^{195}\text{Bi}(\beta^+)^{195}\text{Pb}$	4850	550	5688	24	1.5	U			Oak		91Gr12
* $^{195}\text{Hg-u}$	M-A=-30914(28) keV for mixture gs+m at 176.07 keV										Nub127 **
* $^{195}\text{Hg}-^{208}\text{Pb}_{.938}$	Corrected 40(20) keV for isomeric mixture R=0.3(0.2) E=176.07 keV										Nub127 **
* $^{195}\text{Tl-u}$	M-A=-28000(100) keV for mixture gs+m at 482.63 keV										Nub126 **
* $^{195}\text{Tl-u}$	M-A=-27708(31) keV for $^{195}\text{Tl}^m$ at 482.63 keV										Nub126 **
* $^{195}\text{Tl}-^{133}\text{Cs}_{1.466}$	$D_M=108990(79) \mu\text{u}$ for $^{195}\text{Tl}^m$ at 482.63 keV; M-A=-27589(73) keV										Nub126 **
* $^{195}\text{Pb-u}$	M-A=-23580(100) keV for mixture gs+m at 202.9 keV										Nub127 **
* $^{195}\text{Pb-u}$	M-A=-23615(28) keV for mixture gs+m at 202.9 keV										Nub127 **
* $^{195}\text{Bi-u}$	M-A=-17999(28) keV for mixture gs+m at 399(6) keV										Nub127 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
* ¹⁹⁵ At(α) ¹⁹¹ Bi ^m	Correlated with $E_\alpha=6313$ of ¹⁹¹ Bi ^m										03Ke04 **
* ¹⁹⁵ At ^m (α) ¹⁹¹ Bi	$E_\alpha=7190(30)$ to 148.7(0.5) level										03Ke04 **
*	correlated with α of 12 s ¹⁹¹ Bi ground state										95Le15 **
* ¹⁹⁵ At ^m (α) ¹⁹¹ Bi	$E_\alpha=7105(30)$ to 148.7(0.5) level										03Ke04 **
* ¹⁹⁵ At ^m (α) ¹⁹¹ Bi	$E_\alpha=7221(4)$ and 7075(4) to 148.7(0.5) level										03Ke04 **
* ¹⁹⁵ Ir(β^-) ¹⁹⁵ Pt	$E_{\beta^-}=980(30)$ to 3/2 ⁻ level at 98.882 keV and 5/2 ⁻ level at 129.777 keV,										Ens074 **
*	and $E_{\beta^-}=410(20)$ from ¹⁹⁵ Ir ^m at 100(5) to 9/2 ⁻ at 814.52, and other E_{β^-}										Ens074 **
* ¹⁹⁵ Au(ϵ) ¹⁹⁵ Pt	Average $pK=0.179(0.006)$ to 5/2 ⁻ level at 129.777 from the following references:										Ens074 **
*	$pK=0.195(0.015)$ to 129.78 level										65De20 **
*	$pK=0.166(0.020)$ to 129.78 level										68Ja11 **
*	$pK=0.160(0.017)$ to 129.78 level										73Go05 **
*	$pK=0.183(0.009)$ to 129.78 level										80Sa11 **
*	$pK=0.176(0.012)$ to 129.78 level										82Be.A **
* ¹⁹⁵ Hg(β^+) ¹⁹⁵ Au	Assuming 511 γ is annihilation of β^+ to ground state and 1/2 ⁺ level at 61.44 keV										Ens074 **
* ¹⁹⁵ Tl(β^+) ¹⁹⁵ Hg	$K/\beta^+=6(1)$ to ground state and 3/2 ⁻ level at 37.08 keV										Ens074 **
¹⁹⁶ Hg– ²⁰⁸ Pb, ₉₄₂	-12178	20	-12174	3	0.2	U			MA6	1.0	01Sc41
¹⁹⁶ Tl-u	-29188	126	-29519	13	-2.6	U			GS2	1.0	05Li24 *
¹⁹⁶ Tl– ¹³³ Cs _{1.474}	109845	13				2			MA8	1.0	08We02 *
¹⁹⁶ Pb– ²⁰⁸ Pb, ₉₄₂	-5228	22	-5232	15	-0.2	2			MA6	1.0	01Sc41
¹⁹⁶ Pb-u	-27200	104	-27226	15	-0.2	U			GS1	1.0	00Ra23
	-27232	30			0.2	R			GS2	1.0	05Li24
¹⁹⁶ Bi-u	-19309	137	-19333	26	-0.2	o			GS1	1.0	00Ra23 *
	-19325	30			-0.3	2			GS2	1.0	05Li24
	-19361	54			0.5	2			MA8	1.0	08We02 *
¹⁹⁶ Pt– ¹⁹⁷ Au, ₉₉₅	-1781.1	3.0	-1783.9	0.7	-0.9	U			CP1	1.0	05Sh52
¹⁹⁶ Bi(α) ¹⁹² Tl ^p	5260.6	5.				3			Lvn		91Va04
¹⁹⁶ Po(α) ¹⁹² Pb	6662.2	8.	6658.0	2.4	-0.5	3					67Si09 Z
	6653.7	5.			0.8	3					67Tr06 Z
	6658.4	8.			0.0	3					71Ho01 Z
	6656.7	5.			0.3	o		Lvn			85Va03 Z
	6656.7	5.			0.3	3		Lvn			93Wa04
	6653.1	18.			0.3	o		Ara			95Le04
	6657.1	10.			0.1	o		Jya			96Le09
	6654.0	5.0			0.8	3		Ara			96Ta18 *
	6669.4	6.			-1.8	3		Jya			05Uu02
	6658.2	25.			0.0	U		Anv			10He25
¹⁹⁶ At(α) ¹⁹² Bi	7202.3	7.	7198	4	-0.6	4					67Tr06
	7187.0	25.			0.4	U		Jya			95Le15
	7200.2	30.			-0.1	U		RIa			95Mo14
	7191.0	7.			1.0	o		Jya			96En01
	7195.1	5.			0.6	4		Jya			00Sm06
	7202.3	12.			-0.3	4		Anv			05De01
¹⁹⁶ At ^m (α) ¹⁹² Bi ^m	7023.6	15.				3		Jya			96En01 *
¹⁹⁶ Rn(α) ¹⁹² Po	7583.1	35.	7617	9	0.9	o		RIa			95Mo14
	7648.4	30.			-1.1	U		RIa			97Pu01
	7616.7	9.				4		Jya			01Ke06
¹⁹⁶ Pt(t, α) ¹⁹⁵ Ir	11565	20	11572.3	2.1	0.4	U		Tal			78Ya07
	11545	20			1.4	U		LAL			81Fl.A
¹⁹⁵ Pt(n, γ) ¹⁹⁶ Pt	7921.96	0.20	7921.93	0.13	-0.1	-		ILn			81Ho.B Z
	7921.92	0.17			0.1	-		Bdn			06Fi.A
¹⁹⁶ Pt(γ ,n) ¹⁹⁵ Pt	-8290	140	-7921.93	0.13	2.6	U		Phi			60Ge01
¹⁹⁵ Pt(d,p) ¹⁹⁶ Pt	5712	25	5697.37	0.13	-0.6	U		Pit			64Co11
¹⁹⁶ Pt(d,t) ¹⁹⁵ Pt	-1686	20	-1664.70	0.13	1.1	U		Pit			64Co11
¹⁹⁵ Pt(n, γ) ¹⁹⁶ Pt	ave.	7921.94	7921.93	0.13	0.0	1	100	98 ¹⁹⁵ Pt			average
¹⁹⁶ Os(β^-) ¹⁹⁶ Ir	900	40	1160	60	6.5	B					77Ha32 *
¹⁹⁶ Ir(β^-) ¹⁹⁶ Pt	3150	60	3210	40	1.0	2					66Vo05 *
	3250	50			-0.8	2					67Mo10

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{196}\text{Ir}^m(\beta^-)^{196}\text{Pt}$	3418	20				2					65Bi04 *
	3630	100	3418	20	-2.1	U					68Ja06 *
$^{196}\text{Au}(\beta^+)^{196}\text{Pt}$	1498	7	1507.0	3.0	1.3	1	18	17 ^{196}Au			63Ik01 *
$^{196}\text{Au}(\epsilon)^{196}\text{Pt}$	1490	10			1.7	U					62Wa16 *
$^{196}\text{Au}(\beta^-)^{196}\text{Hg}$	685	4	687	3	0.5	1	61	31 ^{196}Au			62Li03 *
* $^{196}\text{Tl-u}$	M-A=-26991(28) keV for mixture gs+m at 394.2 keV										Nub127 **
* $^{196}\text{Tl}-^{133}\text{Cs}_{1.474}$	Q=110268(13) μu M-A=-27103(12) keV for $^{196}\text{Tl}^m$ at 394.2 keV										Nub127 **
* $^{196}\text{Bi-u}$	M-A=-17850(100) keV for mixture gs+n at 272(3) keV										Nub127 **
* $^{196}\text{Bi-u}$	Q=120182(15) μu for $^{196}\text{Bi}^m-^{133}\text{Cs}_{1.474}$, $M(^{196}\text{Bi}^m)=-17868(14)$ keV at 167(3) keV; error increased to include possible 3^+ and 10^- contam.										08We02 **
*											08We02 **
* $^{196}\text{Po}(\alpha)^{192}\text{Pb}$	Including systematic uncertainty 5 keV										96Ta18 **
* $^{196}\text{At}^m(\alpha)^{192}\text{Bi}^m$	Correlated with $E_\alpha=7550$ of $^{200}\text{Fr}(\alpha)$										96En01 **
* $^{196}\text{Os}(\beta^-)^{196}\text{Ir}$	$E_{\beta^-}=435(20)$ to $(0,1)^+$ levels at 407.88, 522.37 keV										Ens076 **
* $^{196}\text{Ir}(\beta^-)^{196}\text{Pt}$	Original value 3170(60) recalibrated using ^{62}Cu										AHW **
* $^{196}\text{Ir}^m(\beta^-)^{196}\text{Pt}$	$E_{\beta^-}=950(20)$ to $(10^-,11^-)$ level at 2468.0 keV										Ens076 **
* $^{196}\text{Ir}^m(\beta^-)^{196}\text{Pt}$	$E_{\beta^-}=1160(100)$ to $(10^-,11^-)$ level at 2468.0 keV										Ens076 **
* $^{196}\text{Au}(\beta^+)^{196}\text{Pt}$	$\text{KL}/\beta^+=2.0(0.4)e6$ to 2^+ level at 355.68 keV, recalculated										Ens076 **
* $^{196}\text{Au}(\epsilon)^{196}\text{Pt}$	$\text{pL}=0.64(0.06)$ to 3^- level at 1447.043 keV										Ens076 **
* $^{196}\text{Au}(\beta^-)^{196}\text{Hg}$	$E_{\beta^-}=259(4)$ to 2^+ level at 425.98 keV										Ens076 **
$^{197}\text{Hg-u}$	-32766	30	-32787	3	-0.7	U			GS2	1.0	05Li24
	-32765	30			-0.7	U			GS2	1.0	05Li24 *
$^{197}\text{Hg}-^{208}\text{Pb}_{.947}$	-10664	30	-10677	4	-0.4	U			MA6	1.0	01Sc41
$^{197}\text{Tl-u}$	-30450	30	-30424	18	0.9	R			GS2	1.0	05Li24
$^{197}\text{Pb-u}$	-26520	110	-26569	6	-0.4	U			GS1	1.0	00Ra23
	-26609	30			1.3	U			GS2	1.0	05Li24
	-26543	30			-0.9	U			GS2	1.0	05Li24 *
$^{197}\text{Pb}^m-^{133}\text{Cs}_{1.481}$	113799.6	6.0				2			MA8	1.0	08We02
$^{197}\text{Bi}-^{208}\text{Pb}_{.947}$	982	22	975	9	-0.3	R			MA6	1.0	01Sc41
$^{197}\text{Bi-u}$	-21373	188	-21135	9	1.3	U			GS1	1.0	00Ra23 *
	-21187	31			1.7	U			GS2	1.0	05Li24
$^{197}\text{Bi}-^{133}\text{Cs}_{1.481}$	118870	26	118891	9	0.8	R			MA8	1.0	08We02 *
$^{197}\text{Po-u}$	-14434	145	-14340	50	0.6	o			GS1	1.0	00Ra23 *
	-14305	90			-0.4	R			GS2	1.0	05Li24 *
$^{197}\text{Au}-\text{C}_{16}$	-33432.5	7.3	-33431.2	0.7	0.1	o			TG1	1.5	09Ke.A
	-33432.9	5.4			0.2	U			TG1	1.5	10Ke09
$^{197}\text{Au}(\alpha,^8\text{He})^{193}\text{Au}$	-26919	9	-26920	9	-0.1	1	93	93 ^{193}Au			89Ka04
$^{197}\text{Bi}^m(\alpha)^{193}\text{Tl}$	5890.8	10.	5898	5	0.7	o			Ora		72Ga27
	5889.7	10.			0.8	3			Ora		74Le02 Z
	5899.6	5.			-0.4	3			Lvn		85Co06 Z
$^{197}\text{Po}(\alpha)^{193}\text{Pb}$	6420.7	10.	6412	3	-0.9	3					67Si09 Z
	6410.1	5.			0.3	3					67Tr06 Z
	6409.4	9.			0.2	3					71Ho01 Z
	6411.4	5.0			0.0	3			Ara		96Ta18 *
$^{197}\text{Po}^m(\alpha)^{193}\text{Pb}^m$	6510.1	5.	6514.7	2.1	0.9	4					67Tr06 Z
	6511.4	9.			0.4	U					71Ho01 Z
	6518.0	3.			-1.1	4			Bka		82Bo04 Z
	6512.4	5.0			0.4	4			Ara		96Ta18 *
	6517.6	10.			-0.3	o			Anv		02Va13
	6516.6	30.			-0.1	U			Anv		10He25
	6512.9	4.7			0.4	4			Tex		12Fo09
$^{197}\text{At}(\alpha)^{193}\text{Bi}$	7103.0	5.	7100	50	0.0	3					67Tr06 Z
	7100.5	5.			0.1	o			Jya		96En01
	7104.5	5.			0.0	3			Jya		99Sm07
	7103.5	6.			0.0	3			Jya		05Uu02
$^{197}\text{At}^m(\alpha)^{193}\text{Bi}^m$	6846.2	10.	6846	4	0.0	o			Lvn		86Co12
	6846.2	5.			0.0	5			Jya		99Sm07
	6845.2	9.			0.1	5			Jya		05Uu02

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	ν_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{197}\text{Rn}(\alpha)^{193}\text{Po}$	7410.8	20.	7411	7	0.0	o	RIa		95No.A	
	7411.8	30.			0.0	U	RIa		95Mo14	
	7410.8	7.				4	Jya		96En02	
$^{197}\text{Rn}^m(\alpha)^{193}\text{Po}^m$	7523.1	30.	7509	6	-0.5	U	RIa		95Mo14	
	7508.7	7.			0.1	5	Jya		96En02	
	7510.7	14.			-0.1	5	Jya		05Uu02	
$^{196}\text{Pt}(n,\gamma)^{197}\text{Pt}$	5846.4	0.4	5846.35	0.27	-0.1	-			78Ya07 Z	
	5846.0	0.9			0.4	-	ILn		81Ho.B Z	
	5846.6	0.5			-0.5	-	BNn		83Ca04 Z	
	5846.0	0.7			0.5	-	Bdn		06Fi.A	
$^{196}\text{Pt}(d,p)^{197}\text{Pt}$	3627	20	3621.79	0.27	-0.3	U	Pit		64Co11	
	3606	20			0.8	U	Tal		78Ya07	
$^{196}\text{Pt}(n,\gamma)^{197}\text{Pt}$	ave.	5846.36	0.27	5846.35	0.27	0.0	1	100	97 ^{196}Pt	average
$^{197}\text{Au}(\gamma,n)^{196}\text{Au}$	-8057	22	-8072.4	2.9	-0.7	U	Phi		60Ge01	
	-8080	5			1.5	-	McM		79Ba06	
	-8072	7			-0.1	-			79Be.A	
$^{197}\text{Au}(d,t)^{196}\text{Au}$	-1820	30	-1815.1	2.9	0.2	U	Pit		64Co11	
$^{197}\text{Au}(\gamma,n)^{196}\text{Au}$	ave.	-8077	4	-8072.4	2.9	1.2	1	52	52 ^{196}Au	average
$^{196}\text{Hg}(n,\gamma)^{197}\text{Hg}$	6785.3	1.5	6785.6	1.5	0.2	1	97	84 ^{197}Hg	BNn	78Zg.A Z
$^{197}\text{Ir}(\beta^-)^{197}\text{Pt}$	2000	200	2156	20	0.8	U			61Ho10	
$^{197}\text{Pt}(\beta^-)^{197}\text{Au}$	719.0	0.6	719.0	0.6	0.0	1	97	96 ^{197}Pt	71Pr03	
$^{197}\text{Hg}(\epsilon)^{197}\text{Au}$	415	20	600	3	9.2	B			65De20 *	
	610	100			-0.1	U			92Da14 *	
$^{197}\text{Tl}(\beta^+)^{197}\text{Hg}$	2220	100	2201	17	-0.2	U			61Ju05	
$^{197}\text{Pb}^m(\text{IT})^{197}\text{Pb}$	319.31	0.11				3			Ens01	
* $^{197}\text{Hg-u}$	M-A=-30221(28) keV for $^{197}\text{Hg}^m$ at 298.93 keV								Nub127 **	
* $^{197}\text{Pb-u}$	M-A=-24405(28) keV for $^{197}\text{Pb}^m$ at 319.31 keV								Nub127 **	
* $^{197}\text{Bi-u}$	M-A=-19650(90) keV for mixture gs+m at 517(12) keV								Nub127 **	
* $^{197}\text{Bi}-^{133}\text{Cs}_{1.481}$	Q=118887(12) μu M=-19690(11) keV corrected by -16(22) keV due to possible contamination from $^{197}\text{Bi}^m$								08We02 **	
* $^{197}\text{Po-u}$	M-A=-13330(110) keV for mixture gs+m at 230#80 keV								Nub127 **	
* $^{197}\text{Po-u}$	M-A=-13210(32) keV for mixture gs+m at 230#80 keV								Nub127 **	
* $^{197}\text{Po}(\alpha)^{193}\text{Pb}$	Also $E_\alpha=6283(5)$ keV from uncorrelated decays								96Ta18 **	
* $^{197}\text{Po}^m(\alpha)^{193}\text{Pb}^m$	Also $E_\alpha=6381(5)$ keV from uncorrelated decays								96Ta18 **	
* $^{197}\text{Hg}(\epsilon)^{197}\text{Au}$	pK=0.54(0.06) to $3/2^+$ level at 268.788 keV								Ens053 **	
* $^{197}\text{Hg}(\epsilon)^{197}\text{Au}$	pK=0.746(0.033) to 268.75 level -> Q=574(+139-62) keV								Ens053 **	
$^{198}\text{Hg}-^{161}\text{Dy } ^{37}\text{Cl}$	74130	60	73925.5	2.1	-0.9	U			R04 4.0 64De15	
$^{198}\text{Hg}-^{163}\text{Dy } ^{35}\text{Cl}$	68979	37	69177.6	2.1	1.3	U			R04 4.0 64De15	
$^{198}\text{Hg-u}$	-33231.6	0.6	-33231.4	0.5	0.3	1	74	74 ^{198}Hg	ST2 1.0 02Bf02	
$^{198}\text{Pb}-^{208}\text{Pb}_{.952}$	-5748	23	-5739	16	0.4	2			MA6 1.0 01Sc41	
$^{198}\text{Pb-u}$	-27990	104	-27966	16	0.2	U			GS1 1.0 00Ra23	
	-27951	30			-0.5	R			GS2 1.0 05Li24	
$^{198}\text{Bi-u}$	-21063	162	-20790	30	1.7	o			GS1 1.0 00Ra23 *	
	-20794	30				2			GS2 1.0 05Li24	
$^{198}\text{Bi}^n\text{-u}$	-20222	30				2			GS2 1.0 05Li24	
$^{198}\text{Po}-^{208}\text{Pb}_{.952}$	5616	24	5616	19	0.0	1	61	61 ^{198}Po	MA6 1.0 01Sc41	
$^{198}\text{Po-u}$	-16600	104	-16611	19	-0.1	U			GS1 1.0 00Ra23	
$^{198}\text{Hg } ^{35}\text{Cl}-^{196}\text{Hg } ^{37}\text{Cl}$	3885.91	1.66	3886	3	0.1	1	57	57 ^{196}Hg	H33 2.5 80Ko25	
$^{198}\text{Pt}-^{197}\text{Au}_{1.005}$	1494.7	3.0	1493.3	2.2	-0.5	1	55	54 ^{198}Pt	CP1 1.0 05Sh52	
$^{198}\text{Po}(\alpha)^{194}\text{Pb}$	6312.8	5.	6309.6	1.4	-0.6	U			67Si09 Z	
	6305.7	5.			0.8	U			67Tr06 Z	
	6301.2	8.			1.0	U			71Ho01 Z	
	6311.1	3.			-0.5	-		Bka	82Bo04 Z	
	6307.7	5.			0.4	U		Lvn	93Wa04	
	6309.7	5.0			0.0	U		Ara	96Ta18 *	
	6309.3	1.7			0.2	-		Tex	12Fo09	
	ave.	6309.6	1.4			0.0	1	100	60 ^{194}Pb	average
	$^{198}\text{At}(\alpha)^{194}\text{Bi}$	6887.5	5.	6889.8	2.1	0.5	5			67Tr06 Z
		6904.9	7.			-2.2	U		Ora	75Ba.B Z
	6889.4	15.			0.0	U			80Ew03 Z	
	6893.3	3.5			-1.0	5		Lvn	92Hu04 *	
	6892.5	4.			-0.6	o		Jya	96En01	
	6887.4	6.			0.4	5		Jya	05Uu02	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{198}\text{At}(\alpha)^{194}\text{Bi}$	6888.4	3.6	6889.8	2.1	0.4	5			Tex		12Fo09
$^{198}\text{At}^m(\alpha)^{194}\text{Bi}^n$	6990.0	5.	6994.9	2.3	1.0	4					67Tr06 Z
	6997.5	10.			-0.3	4					80Ew03 Z
	6997.6	4.			-0.7	4		Lvn			92Hu04
	6996.6	4.			-0.4	4		Jya			96En01
	6991.5	6.			0.6	4		Jya			05Uu02
$^{198}\text{Rn}(\alpha)^{194}\text{Po}$	7344.7	10.	7349	4	0.5	4					84Ca32
	7353.8	5.			-0.9	4		Lvn			95Bi17
	7344.7	6.			0.8	4		Jya			96En02
$^{198}\text{Pt}(^{14}\text{C}, ^{16}\text{O})^{196}\text{Os}$	6130	40				2		BNL			83Bo29
$^{198}\text{Pt}(t, \alpha)^{197}\text{Ir}$	10885	20				2		LAI			83Ci01
$^{198}\text{Pt}(p, d)^{197}\text{Pt}$	-5332	3	-5330.5	2.1	0.5	1	48	46 ^{198}Pt	Ors		78Be09 *
$^{198}\text{Pt}(d, t)^{197}\text{Pt}$	-1305	20	-1297.8	2.1	0.4	U			Pit		64Co11
	-1311	20			0.7	U			Tal		78Ya07
$^{197}\text{Au}(n, \gamma)^{198}\text{Au}$	6512.35	0.11	6512.34	0.09	-0.1	-			ILn		79Br26 Z
	6512.32	0.16			0.1	-			Bdn		06Fi.A
$^{197}\text{Au}(d, p)^{198}\text{Au}$	4282	30	4287.77	0.09	0.2	U			Pit		64Co11
	4298	5			-2.0	U			MIT		67Sp09
$^{197}\text{Au}(n, \gamma)^{198}\text{Au}$	ave.	6512.34	0.09	6512.34	0.09	0.0	1	100	99 ^{197}Au		average
$^{198}\text{Au}(\beta^-)^{198}\text{Hg}$	1372.3	0.7	1372.9	0.5	0.8	-					65Ke04 *
	1372.8	1.2			0.0	-					65Pa08 *
	ave.	1372.4	0.6		0.7	1	78	66 ^{198}Au			average
$^{198}\text{Tl}(\beta^+)^{198}\text{Hg}$	3460	80				2					61Gu02
$^{198}\text{Bi}^n(\text{IT})^{198}\text{Bi}^m$	248.5	0.5				3			Lvn		92Hu04
* $^{198}\text{Bi-u}$	M-A=-19350(100) keV for mixture gs+m+n at 280(40) and 530(40) keV										
* $^{198}\text{Po}(\alpha)^{194}\text{Pb}$	Also $E_\alpha=6182(5)$ keV from uncorrelated decays										
* $^{198}\text{At}(\alpha)^{194}\text{Bi}$	$E_\alpha=6755(4), 6539(10), 6360(10)$ to ground state, 218, 396 levels										
* $^{198}\text{Pt}(p, d)^{197}\text{Pt}$	$Q-Q(^{196}\text{Pt}(p, d))=365(3)$ keV										
* $^{198}\text{Au}(\beta^-)^{198}\text{Hg}$	$E_{\beta^-}=960.5(0.7) 961.0(1.2)$ respectively, to 2^+ level at 411.803 keV										
											Ens09a **
$^{199}\text{Hg-C}_2\ ^{35}\text{Cl}_5$	124023.43	0.53	124017.2	0.4	-4.7	B			H34	2.5	80Ko25
	124017.21	0.37			0.0	1	63	60 ^{199}Hg	H48	1.5	03Ba49
$^{199}\text{Hg}-^{183}\text{W O}$	23144.4	0.9	23143.3	0.9	-0.8	1	45	39 ^{183}W	H48	1.5	03Ba49
$^{199}\text{Hg}-^{162}\text{Dy } ^{37}\text{Cl}$	75661	41	75572.5	2.1	-0.5	U			R04	4.0	64De15
$^{199}\text{Hg}-^{164}\text{Dy } ^{35}\text{Cl}$	70087	31	70246.1	2.1	1.3	U			R04	4.0	64De15
$^{199}\text{Hg}-^{164}\text{Er } ^{35}\text{Cl}$	70310	80	70219.2	2.1	-0.3	U			R04	4.0	64De15
$^{199}\text{Tl-u}$	-30123	30				2			GS2	1.0	05Li24
$^{199}\text{Pb-u}$	-27028	137	-27087	11	-0.4	U			GS2	1.0	05Li24 *
$^{199}\text{Bi-u}$	-22328	31	-22327	11	0.0	-			GS2	1.0	05Li24
	-22263	30			-2.1	-			GS2	1.0	05Li24 *
	ave.	-22294	22		-1.5	1	28	28 ^{199}Bi			average
$^{199}\text{Po-u}$	-16248	144	-16333	25	-0.6	U			GS1	1.0	00Ra23 *
	-16327	38			-0.2	R			GS2	1.0	05Li24
	-16338	38			0.1	R			GS2	1.0	05Li24 *
$^{199}\text{Bi}^m(\alpha)^{195}\text{Tl}$	5598.7	6.	5599	6	0.1	1	93	56 ^{195}Tl			66Ma51
$^{199}\text{Po}(\alpha)^{195}\text{Pb}$	6074.1	2.	6074.2	1.9	0.1	3			DbA		68Go.B Z
	6075.3	5.0			-0.2	3			Ara		96Ta18
$^{199}\text{Po}^m(\alpha)^{195}\text{Pb}^n$	6190.7	5.	6181.2	1.6	-1.9	4					67Si09 Z
	6177.5	5.			0.7	4					67Tr06 Z
	6182.2	3.			-0.3	4			DbA		68Go.B Z
	6183.5	3.			-0.7	4			BkA		82Bo04 Z
	6183.5	5.0			-0.4	4			Ara		96Ta18 *
	6173.3	3.6			2.3	4			Tex		12Fo09
$^{199}\text{At}(\alpha)^{195}\text{Bi}$	6775.1	5.	6777.2	1.2	0.4	-					67Tr06 Z
	6781.3	3.			-1.3	-			Ora		75Ba.B Z
	6775.4	5.0			0.4	-			Ara		96Ta18
	6779.4	6.			-0.4	U			Jya		05Uu02
	6776.8	1.5			0.3	-			Tex		12Fo09
	ave.	6777.3	1.2		-0.1	1	100	89 ^{199}At			average
$^{199}\text{Rn}(\alpha)^{195}\text{Po}$	7133.7	15.	7140	50	0.1	4					80Di07
	7132.7	10.			0.1	4					82Hi14
	7138.8	10.			-0.1	4					84Ca32
	7112.2	15.			0.5	o			Jya		96Le09
	7137.0	6.			0.0	4			Jya		05Uu02

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{199}\text{Rn}^m(\alpha)^{195}\text{Po}^m$	7205.1	15.	7205	4	0.0	4					80Di07
	7205.1	10.			0.0	4					82Hi14
	7204.1	10.			0.1	4					84Ca32
	7205.1	15.			0.0	o			Jya		96Le09
	7205.1	6.			0.0	4			Jya		05Uu02
$^{199}\text{Fr}(\alpha)^{195}\text{At}$	7812.3	40.				4					99Ta20
$^{199}\text{Hg}(\text{p,t})^{197}\text{Hg}$	-6734	29	-6666	3	2.3	U			Pri		81Ko13
	-6658	8			-1.0	1	16	16 ^{197}Hg	Ors		82Be21
$^{198}\text{Pt}(^{18}\text{O},^{17}\text{F})^{199}\text{Ir}$	-8240	41				2					95Zh10
$^{198}\text{Pt}(\text{n},\gamma)^{199}\text{Pt}$	5602	3	5556.0	0.5	-15.3	B					68Sa13
	5556.0	0.5				2			BNn		83Ca04 Z
$^{198}\text{Pt}(\text{d,p})^{199}\text{Pt}$	3347	20	3331.4	0.5	-0.8	U			Pit		64Co11
$^{198}\text{Au}(\text{n},\gamma)^{199}\text{Au}$	7584.27	0.15	7584.27	0.06	0.0	o			ILn		79Br26 Z
	7584.28	0.06			-0.1	1	100	67 ^{199}Au	ILn		91Ma65
$^{198}\text{Hg}(\text{n},\gamma)^{199}\text{Hg}$	6665.2	0.5	6662.9	0.5	-4.7	B			CRn		75Lo03
$^{199}\text{Hg}(\gamma,\text{n})^{198}\text{Hg}$	-6590	90	-6662.9	0.5	-0.8	U			Phi		60Ge01
$^{199}\text{Pt}(\beta^-)^{199}\text{Au}$	1690	50	1704.6	2.1	0.3	U					64Jo09
$^{199}\text{Au}(\beta^-)^{199}\text{Hg}$	453.0	1.0	451.4	0.6	-1.6	1	42	33 ^{199}Au			68Be06
$^{199}\text{Tl}(\beta^+)^{199}\text{Hg}$	1420	150	1487	28	0.4	U					75Ma05 *
$^{199}\text{Pb}(\beta^+)^{199}\text{Tl}$	2870	110	2828	30	-0.4	U					70Do.A *
$^{199}\text{Bi}^m(\text{IT})^{199}\text{Bi}$	667	5	667	3	-0.1	-					80Br23
	667	5			-0.1	-					85St02
ave.	667	4			-0.1	1	98	64 $^{199}\text{Bi}^m$			average
* $^{199}\text{Pb-u}$	M-A=-24961(28) keV for mixture gs+m at 429.5(2.7) keV										Nub127 **
* $^{199}\text{Bi-u}$	M-A=-20071(28) keV for $^{199}\text{Bi}^m$ at 667(3) keV										Nub127 **
* $^{199}\text{Po-u}$	M-A=-14980(100) keV for mixture gs+m at 309.9(2.6) keV										Nub127 **
* $^{199}\text{Po-u}$	M-A=-14909(35) keV for $^{199}\text{Po}^m$ at 309.9(2.6) keV										Nub127 **
* $^{199}\text{Po}^m(\alpha)^{195}\text{Pb}^m$	Also $E_\alpha=6059(5)$ keV from uncorrelated decays										96Ta18 **
* $^{199}\text{Tl}(\beta^+)^{199}\text{Hg}$	KL+<500(100) giving Q<1620, (1/2 ⁻ , 3/2 ⁻) level at 1221.17 fed. Reanalyzed										Ens073 **
* $^{199}\text{Pb}(\beta^+)^{199}\text{Tl}$	$p^+ = 0.04(0.01)$ to 3/2 ⁺ level at 366.89 keV, recalculated										Ens073 **
$^{200}\text{Au-u}$	-29237	34	-29244	29	-0.2	1	71	71 ^{200}Au	GS3	1.0	08Ch.A
$^{200}\text{Au}^m\text{-u}$	-28135	33	-28163	28	-0.8	1	73	73 $^{200}\text{Au}^m$	GS3	1.0	08Ch.A
$^{200}\text{Hg-C }^{13}\text{C }^{35}\text{Cl}_{15}$	120707.97	1.22	120708.3	0.5	0.1	U			H34	2.5	80Ko25
$^{200}\text{Hg-}^{165}\text{Ho }^{35}\text{Cl}$	69116	33	69145.1	2.2	0.2	U			R04	4.0	64De15
$^{200}\text{Hg-}^{163}\text{Dy }^{37}\text{Cl}$	73527	42	73685.7	2.1	0.9	U			R04	4.0	64De15
$^{200}\text{Pb-u}$	-28179	30	-28181	12	-0.1	R			GS2	1.0	05Li24
$^{200}\text{Bi-u}$	-21888	57	-21869	24	0.3	R			GS2	1.0	05Li24 *
$^{200}\text{Po-u}$	-18170	104	-18201	15	-0.3	U			GS1	1.0	00Ra23
	-18204	30			0.1	R			GS2	1.0	05Li24
$^{200}\text{Hg-}^{208}\text{Pb}_{962}$	-9205	28	-9213.1	1.3	-0.3	U			MA6	1.0	01Sc41
$^{200}\text{Hg }^{35}\text{Cl-}^{198}\text{Hg }^{37}\text{Cl}$	4525	2	4508.1	0.6	-2.1	U			H17	4.0	64Mc07
	4508.80	0.48			-0.6	1	25	13 ^{198}Hg	H33	2.5	80Ko25
$^{200}\text{Po}(\alpha)^{196}\text{Pb}$	5979.8	5.	5981.4	1.9	0.3	3					67Si09 Z
	5980.0	3.			0.5	3					67Tr06 Z
	5983.4	3.			-0.6	3					70Ra14 Z
	5981.8	5.0			-0.1	3			Ara		96Ta18 *
$^{200}\text{At}(\alpha)^{196}\text{Bi}$	6594.9	5.	6596.1	1.3	0.3	3					67Tr06 Z
	6596.9	2.			-0.4	3			Ora		75Ba.B Z
	6593.1	5.			0.6	o			Lvn		87Va09
	6596.1	2.			0.0	3			Lvn		92Hu04
	6593.1	5.0			0.6	3			Ara		96Ta18
	6599.1	6.			-0.5	U			Jya		05Uu02
$^{200}\text{At}^m(\alpha)^{196}\text{Bi}$	6708.3	5.	6709.0	2.6	0.2	3			Ora		75Ba.B Z
	6705.4	5.			0.7	o			Lvn		87Va09
	6709.5	3.			-0.1	3			Lvn		92Hu04
$^{200}\text{At}^m(\alpha)^{196}\text{Bi}^m$	6542.8	5.	6542.6	1.3	0.0	4					67Tr06 Z
	6542.9	2.			-0.1	4			Ora		75Ba.B Z
	6540.0	5.			0.5	o			Lvn		87Va09
	6542.1	2.			0.3	4			Lvn		92Hu04
	6545.1	5.0			-0.5	4			Ara		96Ta18
$^{200}\text{At}^m(\alpha)^{196}\text{Bi}^n$	6544.1	6.			-0.2	U		Jya		05Uu02	
$^{200}\text{At}^m(\alpha)^{196}\text{Bi}^n$	6439.5	5.	6437.5	2.0	-0.4	4					67Tr06 *
	6438.5	5.			-0.2	4			Ora		75Ba.B *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{200}\text{At}^m(\alpha)^{196}\text{Bi}^n$	6433.8	5.	6437.5	2.0	0.7	o			Lvn		87Va09 *
	6439.2	3.			-0.6	4			Lvn		92Hu04 *
	6430.5	5.0			1.4	4			Ara		96Ta18 *
	6436.7	6.			0.1	4			Jya		05Uu02 *
$^{200}\text{Rn}(\alpha)^{196}\text{Po}$	7020.6	10.	7043.3	2.1	2.3	U					67Va.A
	7050.3	8.			-0.9	U					71Ho01
	7040.1	10.			0.3	U			Lvn		84Co.A
	7043.5	2.5			-0.1	4			Lvn		93Wa04
	7042.1	12.			0.1	o			Ara		95Le04
	7039.0	10.			0.4	o			Jya		96Le09
	7042.0	5.0			0.2	4			Ara		96Ta18
	7044.1	6.			-0.1	4			Jya		05Uu02
	7055.4	30.			-0.4	U			Anv		10He25
	$^{200}\text{Fr}(\alpha)^{196}\text{At}$	7653.4	30.	7620	50	-0.6	U			Rla	
7620.7		9.			0.0	5			Jya		96En01
7625.8		12.			-0.1	5			Anv		05De01
$^{200}\text{Fr}^m(\alpha)^{196}\text{At}^m$	7704.4	15.				4		Jya		96En01 *	
$^{198}\text{Pt}(t,p)^{200}\text{Pt}$	4356	20				2				81Ci01	
$^{199}\text{Hg}(n,\gamma)^{200}\text{Hg}$	8029.1	0.3	8028.52	0.11	-1.9	-			BNn		67Sc30 Z
	8029.6	0.5			-2.2	U			CRn		75Lo03 Z
	8028.51	0.18			0.0	-			ILn		79Br25 Z
	8028.37	0.17			0.9	-			Bdn		06Fi.A
	ave.	8028.53	0.11			-0.1	1	98	78 ^{200}Hg		average
$^{200}\text{Au}(\beta^-)^{200}\text{Hg}$	2273	100	2263	27	-0.1	-					59Ro53 *
	2200	100			0.6	-					60Gi01
	2260	70			0.0	-					72He36 *
	ave.	2250	50			0.3	1	29	29 ^{200}Au		average
$^{200}\text{Au}^m(\beta^-)^{200}\text{Hg}$	3202	50	3270	26	1.4	1	27	27 $^{200}\text{Au}^m$			72Cu07 *
$^{200}\text{Tl}(\beta^+)^{200}\text{Hg}$	2450	10	2456	6	0.6	2					57He43 *
	2459	7			-0.4	2					62Va10 *
$^{200}\text{At}^n(\text{IT})^{200}\text{At}^m$	230.9	0.2				4			Lvn		92Hu04
* $^{200}\text{Bi-u}$	M-A=-20338(28) keV for mixture gs+m at 100#70 keV										Nub127 **
* $^{200}\text{Po}(\alpha)^{196}\text{Pb}$	Also $E_\alpha=5863(5)$ keV from uncorrelated decays										96Ta18 **
* $^{200}\text{At}^m(\alpha)^{196}\text{Bi}^n$	$E_\alpha=6536.7(5,Z)$ from $^{200}\text{At}^n$ 230.9 above $^{200}\text{At}^m$										92Hu04 **
* $^{200}\text{At}^m(\alpha)^{196}\text{Bi}^n$	$E_\alpha=6535.8(5,Z)$ from $^{200}\text{At}^n$ 230.9 above $^{200}\text{At}^m$										92Hu04 **
* $^{200}\text{At}^m(\alpha)^{196}\text{Bi}^n$	$E_\alpha=6301(5); 6535(5)$ from $^{200}\text{At}^n$ 230.9 above $^{200}\text{At}^m$										92Hu04 **
* $^{200}\text{At}^m(\alpha)^{196}\text{Bi}^n$	$E_\alpha=6306(5); 6538(3)$ from $^{200}\text{At}^n$ 230.9 above $^{200}\text{At}^m$										92Hu04 **
* $^{200}\text{At}^m(\alpha)^{196}\text{Bi}^n$	$E_\alpha=6528(5)$ from $^{200}\text{At}^n$ 230.9 above $^{200}\text{At}^m$										92Hu04 **
* $^{200}\text{At}^m(\alpha)^{196}\text{Bi}^n$	$E_\alpha=6534(6)$ from $^{200}\text{At}^n$ 230.9 above $^{200}\text{At}^m$										92Hu04 **
* $^{200}\text{Fr}^m(\alpha)^{196}\text{At}^m$	Correlated with $^{196}\text{At}^m$ $E_\alpha=6880(15)$; two events only										96En01 **
* $^{200}\text{Au}(\beta^-)^{200}\text{Hg}$	$E_{\beta^-}=2250(200)$ to ground state, and $700(100)$ to levels 1^+ at 1570.275, 2^+ at 1573.663, 2^+ at 1593.423 keV										Ens077 **
* $^{200}\text{Au}(\beta^-)^{200}\text{Hg}$	$E_{\beta^-}=2260(100), 670(70)$ to ground state, 2^+ level at 1593.423 keV										Ens077 **
* $^{200}\text{Au}^m(\beta^-)^{200}\text{Hg}$	$E_{\beta^-}=560(50)$ to 11^- level at 2641.54 keV										Ens077 **
* $^{200}\text{Tl}(\beta^+)^{200}\text{Hg}$	$E_{\beta^+}=1052(10) 1069(7)$ respectively, to 2^+ level at 367.943 keV, and other E_{β^+}										Ens077 **
$^{201}\text{Hg}-^{185}\text{Re O}$	22440	5	22433.7	1.4	-0.8	U			H48	1.5	03Ba49
$^{201}\text{Hg}-\text{C}_2^{35}\text{Cl}_4^{37}\text{Cl}$	128995.43	0.61	128989.5	0.7	-3.9	B			H34	2.5	80Ko25
$^{201}\text{Hg}-^{164}\text{Dy}^{37}\text{Cl}$	75086	42	75218.4	2.1	0.8	U			R04	4.0	64De15
$^{201}\text{Hg}-^{166}\text{Er}^{35}\text{Cl}$	71186	35	71150.6	2.3	-0.3	U			R04	4.0	64De15
$^{201}\text{Pb-u}$	-27418	198	-27117	23	1.5	U			GS2	1.0	05Li24 *
$^{201}\text{Bi-u}$	-22935	30	-22990	16	-1.8	R			GS2	1.0	05Li24
	-22995	30			0.2	R			GS2	1.0	05Li24 *
$^{201}\text{Po-u}$	-17760	190	-17740	6	0.1	U			GS1	1.0	00Ra23 *
	-17649	30			-3.0	U			GS2	1.0	05Li24
$^{201}\text{Po}^m-u$	-17305	30	-17285	6	0.7	U			GS2	1.0	05Li24
$^{201}\text{At-u}$	-11573	31	-11583	9	-0.3	U			GS2	1.0	05Li24
$^{201}\text{Hg}^{35}\text{Cl}-^{199}\text{Hg}^{37}\text{Cl}$	4981	2	4972.3	0.6	-1.1	U			H17	4.0	64Mc07
	4972.65	0.37			-0.4	1	40	36 ^{201}Hg	H33	2.5	80Ko25
	4971.8	1.0			0.3	1	15	14 ^{201}Hg	H48	1.5	03Ba49

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{201}\text{Bi}(\alpha)^{197}\text{Tl}$	4500.3	6.				5					66Ma51 *
$^{201}\text{Po}(\alpha)^{197}\text{Pb}$	5793.9	5.	5798.9	1.7	1.0	4					67Tr06 Z
	5799.4	2.			-0.2	4			DbA		68Go.B Z
	5800.4	4.			-0.4	4					70Ra14 Z
$^{201}\text{Po}^m(\alpha)^{197}\text{Pb}^m$	5898.9	5.	5903.7	1.7	0.9	3					67Tr06 Z
	5904.4	2.			-0.4	3			DbA		68Go.B Z
	5903.8	4.			0.0	3					70Ra14 Z
$^{201}\text{At}(\alpha)^{197}\text{Bi}$	6470.7	3.	6472.8	1.6	0.7	4					67Tr06 Z
	6476.2	5.			-0.7	U					74Ho27 Z
	6474.0	2.			-0.6	4			Ora		75Ba.B Z
	6471.0	5.0			0.4	U			Ara		96Ta18
	6472.0	4.			0.2	4			Anv		05De01
$^{201}\text{Rn}(\alpha)^{197}\text{Po}$	6862.8	8.	6860.7	2.3	-0.3	U					67Va.A
	6858.8	8.			0.2	U					71Ho01
	6866.9	20.			-0.3	U			GSa		87He10
	6860.5	2.5			0.1	4			Lvn		93Wa04
	6863.8	7.			-0.4	o			Ara		95Le04
	6861.8	5.0			-0.2	4			Ara		96Ta18
$^{201}\text{Rn}^m(\alpha)^{197}\text{Po}^m$	6906.8	5.	6909.4	2.1	0.5	5					67Va17 Z
	6909.0	8.			0.1	U					71Ho01 Z
	6907.7	20.			0.1	U			GSa		87He10
	6909.9	2.5			-0.1	5			Lvn		93Wa04
	6915.9	7.			-0.9	o			Ara		95Le04
	6910.7	5.0			-0.3	5			Ara		96Ta18
	6925.1	30.			-0.5	U			Anv		10He25
$^{201}\text{Fr}(\alpha)^{197}\text{At}$	7538.0	15.	7520	50	-0.3	4					80Ew03
	7510.8	7.			0.2	4			Jya		96En01
	7529.1	7.			-0.2	4			Anv		05De01
	7519.0	8.			0.0	4			Jya		05Uu02
$^{201}\text{Fr}^m(\alpha)^{197}\text{At}^m$	7605.7	8.				6			Jya		05Uu02
$^{201}\text{Ra}^m(\alpha)^{197}\text{Rn}^m$	8065.8	20.				6			Jya		05Uu02
$^{201}\text{Hg}(\gamma,n)^{200}\text{Hg}$	-6210	70	-6230.5	0.6	-0.3	U			Phi		60Ge01
$^{201}\text{Pt}(\beta^-)^{201}\text{Au}$	2660	50				2					63Go06
$^{201}\text{Au}(\beta^-)^{201}\text{Hg}$	1270	100	1262	3	-0.1	U					72Pa24
$^{201}\text{Tl}(\epsilon)^{201}\text{Hg}$	470	70	484	14	0.2	U					60Gu05 *
$^{201}\text{Pb}(\beta^+)^{201}\text{Tl}$	1900	40	1920	24	0.5	1	35	^{26}Pb			79Do09 *
* $^{201}\text{Pb-u}$	M-A=-25225(28) keV for mixture gs+m at 629.1 keV										Nub127 **
* $^{201}\text{Bi-u}$	M-A=-20573(28) keV for $^{201}\text{Bi}^m$ at 846.35 keV										Nub127 **
* $^{201}\text{Po-u}$	M-A=-16330(100) keV for mixture gs+m at 424.1(2.4) keV										Nub127 **
* $^{201}\text{Bi}(\alpha)^{197}\text{Tl}$	$E_\alpha=5240(6)$ from $^{201}\text{Bi}^m$ at 846.35 keV										Nub127 **
* $^{201}\text{Tl}(\epsilon)^{201}\text{Hg}$	$pK=0.70(0.04)$ to $1/2^-$ level at 167.47 keV, recalculated										Ens073 **
* $^{201}\text{Pb}(\beta^+)^{201}\text{Tl}$	$p^+ = 10(2) \times 10^{-3}$ to $3/2^+$ level at 331.16 keV										Ens073 **
$^{202}\text{Pt-u}$	-24425	34	-24361	27	1.9	o			GS3	1.0	08Ch.A
	-24361	27				2			GS3	1.0	12Ch19
$^{202}\text{Au-u}$	-26202	34	-26144	25	1.7	o			GS3	1.0	08Ch.A
	-26144	25				2			GS3	1.0	12Ch19
$^{202}\text{Hg-C }^{13}\text{C }^{35}\text{Cl}_4 \text{ }^{37}\text{Cl}$	125976.01	1.32	125975.2	0.7	-0.2	U			H34	2.5	80Ko25
$\text{C}_{16} \text{H}_{10} - ^{202}\text{Hg}$	107663	40	107606.9	0.7	-0.9	U			R08	1.5	69De19
$\text{C}_{15} \text{ }^{13}\text{C } \text{H}_9 - ^{202}\text{Hg}$	103102	60	103136.7	0.7	0.4	U			R08	1.5	69De19
$^{202}\text{Hg} - ^{167}\text{Er } ^{35}\text{Cl}$	69740	60	69736.1	2.3	0.0	U			R04	4.0	64De15
$^{202}\text{Hg} - ^{165}\text{Ho } ^{37}\text{Cl}$	74470	50	74412.0	2.2	-0.3	U			R04	4.0	64De15
$^{202}\text{Pb-u}$	-27823	30	-27848	4	-0.8	U			GS2	1.0	05Li24 *
$^{202}\text{Pb} - ^{133}\text{Cs}_{1.519}$	115773.4	3.6	115771	4	-0.8	o			MA8	1.0	10Bo.A
	115769.2	4.4			0.3	1	84	^{84}Pb	MA8	1.0	12Bo.A
$^{202}\text{Bi-u}$	-22282	30	-22266	17	0.5	1	30	^{202}Bi	GS2	1.0	05Li24
$^{202}\text{Po-u}$	-19270	104	-19242	16	0.3	U			GS1	1.0	00Ra23
	-19243	30			0.0	R			GS2	1.0	05Li24

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{202}\text{Hg } ^{35}\text{Cl}_2 - ^{198}\text{Hg } ^{37}\text{Cl}_2$	9774.87	1.06	9775.0	0.8	0.0	U	H33	2.5	80Ko25		
$^{202}\text{Hg } ^{35}\text{Cl} - ^{200}\text{Hg } ^{37}\text{Cl}$	5271	3	5266.9	0.6	-0.3	U	H17	4.0	64Mc07		
	5266.76	0.43			0.1	1	30	27	^{202}Hg H33	2.5	80Ko25
$^{202}\text{Po}(\alpha)^{198}\text{Pb}$	5700.9	2.	5701.0	1.7	0.1	3	Db		68Go.B	Z	
	5701.6	3.			-0.2	3			70Ra14	Z	
$^{202}\text{At}(\alpha)^{198}\text{Bi}$	6355.8	3.	6353.8	1.3	-0.6	3			63Ho18	Z	
	6351.7	3.			0.7	3			67Tr06	Z	
	6353.2	5.			0.1	3			74Ho27	Z	
	6353.9	2.			0.0	3	Ora		75Ba.B	Z	
	6354	5			0.0	3	Lvn		92Hu04	*	
	6355.0	6.0			-0.2	3	Ara		96Ta18		
$^{202}\text{At}^m(\alpha)^{198}\text{Bi}^m$	6259.9	2.	6258.9	1.3	-0.5	4			63Ho18	Z	
	6256.8	3.			0.7	4			67Tr06	Z	
	6257.2	5.			0.3	U			74Ho27	Z	
	6259.0	2.			0.0	4	Ora		75Ba.B	*	
	6260.0	5.			-0.2	U	Lvn		92Hu04	*	
	6257.1	6.0			0.3	U	Ara		96Ta18		
$^{202}\text{Rn}(\alpha)^{198}\text{Po}$	6771.0	3.	6773.7	1.8	0.9	2			67Va17	Z	
	6772.3	10.			0.1	U	GSa		87He10		
	6775.3	2.5			-0.6	2	Lvn		93Wa04		
	6773.4	7.			0.1	o	Ara		95Le04		
	6775.4	5.0			-0.3	2	Ara		96Ta18		
$^{202}\text{Fr}(\alpha)^{198}\text{At}$	7397.7	15.	7389	4	-0.6	6			80Ew03	*	
	7382.5	11.			0.6	6	Lvn		92Hu04	*	
	7389.6	6.			-0.2	6	Jya		96En01	*	
	7387.6	8.			0.1	6	Jya		05Uu02		
$^{202}\text{Fr}^m(\alpha)^{198}\text{At}^m$	7382.5	11.	7385	4	0.3	5	Lvn		92Hu04	*	
	7388.6	6.			-0.5	5	Jya		96En01		
	7381.5	8.			0.5	5	Jya		05Uu02		
$^{202}\text{Ra}(\alpha)^{198}\text{Rn}$	8019.1	60.	7897	20	-2.0	o	Jya		96Le09		
	7896.7	20.				5	Jya		05Uu02		
$^{202}\text{Hg}(t,\alpha)^{201}\text{Au}$	11567	15	11580	3	0.9	U	LAl		81Fl05		
$^{202}\text{Hg}(d,^3\text{He})^{201}\text{Au} - ^{206}\text{Pb}(\gamma)^{205}\text{Tl}$	-979.9	3.1	-980	3	0.0	1	100	100	^{201}Au	94Gr07	
$^{201}\text{Hg}(n,\gamma)^{202}\text{Hg}$	7754.9	0.5	7754.09	0.20	-1.6	-			BNn	75Br02	Z
	7756.4	0.5			-4.6	B			CRn	75Lo03	Z
	7753.93	0.22			0.7	-			Bdn	06Fi.A	
$^{202}\text{Hg}(\gamma,n)^{201}\text{Hg}$	-7600	130	-7754.09	0.20	-1.2	U	Phi		60Ge01		
$^{201}\text{Hg}(n,\gamma)^{202}\text{Hg}$	ave.	7754.09	0.20	7754.09	0.20	0.0	1	96	49	^{201}Hg	average
$^{202}\text{Au}(\beta^-)^{202}\text{Hg}$	3500	300	2993	23	-1.7	U				67Wa23	
	2700	300			1.0	U				72Bu05	
$^{202}\text{Tl}(\epsilon)^{202}\text{Hg}$	1245	25	1359	14	4.6	B				66Le06	*
$^{202}\text{Pb}(\epsilon)^{202}\text{Tl}$	55	20	46	14	-0.4	1	51	49	^{202}Tl	54Hu61	
$^{202}\text{At}^n(\text{IT})^{202}\text{At}^m$	391.7	0.2				5			Lvn	92Hu04	
* $^{202}\text{Pb-u}$	M-A=-23747(28) keV for $^{202}\text{Pb}^m$ at 2169.85 keV									Nub127	**
* $^{202}\text{At}(\alpha)^{198}\text{Bi}$	$E_\alpha=6228(5)$, $6070(10)$, $5929(10)$ to ground state, 164, 303 levels									92Hu04	**
* $^{202}\text{At}^m(\alpha)^{198}\text{Bi}^m$	Assignment to $^{202}\text{At}^m$ in reference; Z recalibrated									92Hu04	**
* $^{202}\text{At}^m(\alpha)^{198}\text{Bi}^m$	$E_\alpha=6135(5)$; and $6277(5)$ from $^{202}\text{At}^n(\alpha)^{198}\text{Bi}^n$, with									92Hu04	**
*	$^{202}\text{At}^n(\text{IT})^{202}\text{At}^m=391.7(0.2)$ and $^{198}\text{Bi}^n(\text{IT})^{198}\text{Bi}^m=248.5(0.5)$ keV									Nub12a	**
* $^{202}\text{Fr}(\alpha)^{198}\text{At}$	$E_\alpha=7251(10)$ has a doublet structure									92Hu04	**
* $^{202}\text{Fr}(\alpha)^{198}\text{At}$	$E_\alpha=7237(8)$, is a doublet									92Hu04	**
* $^{202}\text{Fr}(\alpha)^{198}\text{At}$	^{202}Fr E_α 's in correlation with At daughters									96En01	**
* $^{202}\text{Fr}^m(\alpha)^{198}\text{At}^m$	$E_\alpha=7237(8)$, is a doublet									92Hu04	**
* $^{202}\text{Tl}(\epsilon)^{202}\text{Hg}$	pK=0.305(0.020) to 2^+ level at 959.94 keV									Ens083	**
$\text{C}_{16} \text{H}_{11} - ^{203}\text{Tl}$	113735	43	113730.8	1.4	-0.1	U	R08	1.5	69De19		
$\text{C}_{15} ^{13}\text{C} \text{H}_{10} - ^{203}\text{Tl}$	109216	95	109260.6	1.4	0.3	U	R08	1.5	69De19		
$\text{C}_{14} \text{N}_2 \text{H}_7 - ^{203}\text{Tl}$	88540	48	88578.6	1.4	0.5	U	R08	1.5	69De19		
$^{203}\text{Tl} - ^{166}\text{Er } ^{37}\text{Cl}$	76190	48	76142.5	2.6	-0.7	U	R08	1.5	69De19		

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{203}\text{Tl}-^{168}\text{Er } ^{35}\text{Cl}$	71069	36	71115.2	2.6	0.9	U			R08	1.5	69De19
$^{203}\text{Pb-u}$	-26594	30	-26609	7	-0.5	U			GS2	1.0	05Li24
$^{203}\text{Po-u}$	-18581	30	-18584	9	-0.1	U			GS2	1.0	05Li24
$^{203}\text{At-u}$	-13042	30	-13057	11	-0.5	1	14	14 ^{203}At	GS2	1.0	05Li24
$^{203}\text{Fr}-^{133}\text{Cs}_{1.526}$	145205	17	145221	7	0.9	1	15	15 ^{203}Fr	MA8	1.0	08We02
$^{203}\text{At}-^{208}\text{Pb}_{.976}$	9690	25	9730	11	1.6	1	21	21 ^{203}At	MA6	1.0	01Sc41
$^{203}\text{Tl } ^{35}\text{Cl}-^{201}\text{Hg } ^{37}\text{Cl}$	4997	3	4991.8	1.3	-0.4	U			H17	4.0	64Mc07
	4995.23	1.49			-0.9	1	11	11 ^{203}Tl	H36	2.5	85De40
$^{202}\text{Hg H}-^{203}\text{Tl}$	6154	34	6123.8	1.2	-0.6	U			R08	1.5	69De19
$^{203}\text{Tl}-^{167}\text{Er } ^{35}\text{Cl}$	71436	36	71437.3	2.6	0.0	U			R08	1.5	69De19
$^{167}\text{Er } ^{37}\text{Cl}-^{203}\text{Tl}$	-74404	33	-74387.4	2.6	0.3	U			R08	1.5	69De19
$^{169}\text{Tm } ^{35}\text{Cl}-^{203}\text{Tl}$	-69257	29	-69274.0	2.6	-0.4	U			R08	1.5	69De19
$^{203}\text{Tl}-^{202}\text{Hg}$	1722	20	1701.2	1.2	-0.7	U			R08	1.5	69De19
$^{203}\text{Tl}-^{201}\text{Hg}$	1999	29	2041.8	1.3	1.0	U			R08	1.5	69De19
$^{203}\text{Po}(\alpha)^{199}\text{Pb}$	5496	5				5			DbA		68Go.B *
$^{203}\text{At}(\alpha)^{199}\text{Bi}$	6210.3	1.	6210.0	0.8	-0.2	-					63Ho18 Z
	6208.7	3.			0.5	-					67Tr06 Z
	6209.4	2.			0.3	-			DbA		68Go.B Z
	6211.7	3.			-0.5	-			Ora		75Ba.B
	6210.6	5.0			-0.1	U			Ara		96Ta18
	ave.	6210.1	0.8		0.0	1	100	61 ^{203}At			average
$^{203}\text{Rn}(\alpha)^{199}\text{Po}$	6628.6	5.	6629.8	2.1	0.3	4					67Va17 Z
	6630.2	2.5			-0.1	4			Lvn		93Wa04
	6630	10			0.0	U			Jya		95Uu01
	6629.8	5.0			0.0	4			Ara		96Ta18
$^{203}\text{Rn}^m(\alpha)^{199}\text{Po}^m$	6679.5	3.	6680.4	1.6	0.3	5					67Va17 Z
	6681.9	10.			-0.2	U			GSa		87He10
	6680.9	2.5			-0.2	5			Lvn		93Wa04
	6683.9	7.			-0.5	o			Ara		95Le04
	6679.8	3.			0.2	5			Jya		96Le09
	6682.9	5.0			-0.5	5			Ara		96Ta18
$^{203}\text{Fr}(\alpha)^{199}\text{At}$	7275.6	5.	7275	4	-0.1	-					67Va20 Z
	7281.7	10.			-0.7	-					80Ew03 Z
	7263.4	25.			0.5	o			Jya		94Le05
	7273.6	6.			0.2	-			Jya		05Uu02
	ave.	7276	4		-0.2	1	95	85 ^{203}Fr			average
$^{203}\text{Ra}(\alpha)^{199}\text{Rn}$	7729.6	20.	7740	50	0.2	o			Jya		96Le09
	7741.8	8.				5			Jya		05Uu02
$^{203}\text{Ra}^m(\alpha)^{199}\text{Rn}^m$	7768.4	20.	7765	8	-0.2	o			Jya		96Le09
	7765.3	8.				5			Jya		05Uu02
$^{203}\text{Tl}(\text{p,t})^{201}\text{Tl}$	-6240	15	-6243	14	-0.2	1	91	91 ^{201}Tl	Yal		71Ki01
$^{202}\text{Hg}(\text{d,p})^{203}\text{Hg}-^{204}\text{Hg}(\text{c})^{205}\text{Hg}$	325	5	326	4	0.2	1	53	47 ^{205}Hg	Pit		72Mo12
$^{203}\text{Tl}(\text{p,d})^{202}\text{Tl}$	-5630	20	-5621	14	0.4	1	51	51 ^{202}Tl	Yal		71Ki01
$^{203}\text{Au}(\beta^-)^{203}\text{Hg}$	2040	60	2125	3	1.4	U					94We02
$^{203}\text{Hg}(\beta^-)^{203}\text{Tl}$	489.2	2.	492.1	1.2	1.4	-					54Th17 *
	493.2	2.			-0.6	-					55Ma40 *
	493.2	3.			-0.4	-					58Ni28 *
	ave.	491.6	1.3		0.4	1	92	84 ^{203}Hg			average
$^{203}\text{Pb}(\epsilon)^{203}\text{Tl}$	940	50	975	6	0.7	U					55Ha.A *
	980	20			-0.3	1	10	10 ^{203}Pb			65Le07 *
$^{203}\text{Bi}(\beta^+)^{203}\text{Pb}$	3260	50	3262	14	0.0	U					58No30 *
$^{203}\text{At}(\beta^+)^{203}\text{Po}$	5060	200	5148	14	0.4	U					87Se04
$^{*203}\text{Po}(\alpha)^{199}\text{Pb}$	$E_\alpha=5383.8(3,Z)$ to $4(4)$ level (this is level $x<9.3$ in Ensdf)										
$^{*203}\text{Hg}(\beta^-)^{203}\text{Tl}$	$E_\beta=210(2)$ $214(2)$ $214(3)$ respectively, to $3/2^+$ level at 279.1958 keV										
$^{*203}\text{Pb}(\epsilon)^{203}\text{Tl}$	$pK=0.36(0.07)$ $0.71(0.01)$ respectively, to $5/2^+$ level at 680.5164 keV										
$^{*203}\text{Bi}(\beta^+)^{203}\text{Pb}$	$E_{\beta^+}=1350(50)$, $740(50)$ to levels around 840, 1550 keV										
$^{204}\text{Hg}-^{13}\text{C } ^{35}\text{Cl}_3 \text{ } ^{37}\text{Cl}_2$	131776.05	1.25	131775.9	0.5	0.0	U			H34	2.5	80Ko25
$^{204}\text{Hg}-^{169}\text{Tm } ^{35}\text{Cl}$	70420	100	70423.4	2.3	0.0	U			R04	4.0	64De15
$^{204}\text{Hg}-^{167}\text{Er } ^{37}\text{Cl}$	75430	60	75536.8	2.2	0.4	U			R04	4.0	64De15

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{204}\text{Hg-u}$	-26505.8	0.6	-26506.0	0.5	-0.4	1	77	77 ^{204}Hg	ST2	1.0	02Bf02
$^{204}\text{Po-u}$	-19689	30	-19690	12	0.0	R			GS2	1.0	05Li24
$^{204}\text{At-u}$	-12748	30	-12749	24	0.0	-			GS2	1.0	05Li24
	ave.	-12752	27		0.1	1	81	81 ^{204}At			average
$^{204}\text{Hg } ^{35}\text{Cl}_2\text{-}^{200}\text{Hg } ^{37}\text{Cl}_2$	11066.85	0.55	11067.6	0.6	0.5	1	20	12 ^{204}Hg	H33	2.5	80Ko25
$^{204}\text{Pb-}^{208}\text{Pb}_{981}$	-4047	21	-4052.10	0.18	-0.2	U			MA6	1.0	01Sc41
$^{204}\text{Hg } ^{35}\text{Cl-}^{202}\text{Hg } ^{37}\text{Cl}$	5807	2	5800.7	0.8	-0.8	U			H17	4.0	64Mc07
		5800.67	0.53		0.0	1	32	22 ^{202}Hg	H33	2.5	80Ko25
$^{204}\text{Hg-}^{203}\text{Tl}$	1161	25	1149.4	1.4	-0.3	U			R08	1.5	69De19
$^{204}\text{Pb}(\alpha)^{200}\text{Hg}$	2650	100	1969.3	1.2	-6.8	B					58Ri23
$^{204}\text{Pb}(\alpha, ^8\text{He})^{200}\text{Pb}$	-28043	13	-28044	11	0.0	2			INS		90Ka10
$^{204}\text{Po}(\alpha)^{200}\text{Pb}$	5484.6	1.5	5484.8	1.4	0.2	3			Db		69Go23 *
		5486.3	3.		-0.5	3					70Ra14 Z
$^{204}\text{At}(\alpha)^{200}\text{Bi}$	6069.9	3.	6070.3	1.2	0.2	2					63Ho18 Z
		6066.2	3.		1.4	2					67Tr06 Z
		6071.3	3.		-0.3	2			Ora		75Ba.B
		6071.1	2.		-0.4	2					79Sc.A
		6072.0	3.		-0.5	2			Db		81Va27 Z
$^{204}\text{Rn}(\alpha)^{200}\text{Po}$	6544.3	3.	6546.4	1.8	0.7	4					67Va17 Z
		6547.5	2.5		-0.4	4			Lvn		93Wa04
		6537.4	7.		1.3	o			Ara		95Le04
		6548.6	5.0		-0.4	4			Ara		96Ta18
$^{204}\text{Fr}(\alpha)^{200}\text{At}$	7170.4	5.	7170.4	2.5	0.0	4					67Va20 Z
		7169.4	5.		0.2	4					74Ho27 Z
		7170.6	5.		0.0	4			Lvn		92Hu04 *
		7179.0	6.		-1.4	o			Jya		94Le05
		7167.8	7.		0.4	4			Ara		95Le04
		7173.9	6.		-0.6	4			Jya		05Uu02
$^{204}\text{Fr}^m(\alpha)^{200}\text{At}$	7218.8	8.	7222	4	0.3	o			Lvn		92Hu04
$^{204}\text{Fr}^m(\alpha)^{200}\text{At}^m$	7108.2	5.	7108.6	2.1	0.1	4					74Ho27 Z
		7105.5	3.		1.1	4			Bka		82Bo04 Z
		7108.4	5.		0.0	4			Lvn		92Hu04 *
		7115.6	7.		-1.0	o			Jya		94Le05 *
		7114.7	7.		-0.8	4			Ara		95Le04
		7117.7	6.		-1.5	4			Jya		05Uu02 *
$^{204}\text{Fr}^n(\alpha)^{200}\text{At}^n$	7157.5	6.	7153.8	2.1	-0.6	o			Jya		05Uu02
$^{204}\text{Ra}(\alpha)^{200}\text{Rn}$	7638.1	12.	7637	7	-0.1	5			Ara		95Le04
		7638.1	25.		-0.1	o			Jya		95Le15
		7634.0	10.		0.3	o			Jya		96Le09
		7636.1	8.		0.1	5			Jya		05Uu02
		7638.1	25.		-0.1	U			Anv		10He25
$^{204}\text{Pb}(p,t)^{202}\text{Pb}$	-6835	10	-6830	4	0.5	1	15	14 ^{202}Pb	Yal		71Ki01
$^{204}\text{Hg}(t,\alpha)^{203}\text{Au}$	10962	15	10978	3	1.1	U			LAl		81Fl05
$^{204}\text{Hg}(d, ^3\text{He})^{203}\text{Au-}^{206}\text{Pb}(\gamma)^{205}\text{Tl}$	-1582.0	3.0	-1582.0	3.0	0.0	1	100	100 ^{203}Au			94Gr07
$^{204}\text{Hg}(d,t)^{203}\text{Hg}$	-1242	5	-1235.5	1.7	1.3	1	12	11 ^{203}Hg	Ald		70An14
$^{203}\text{Tl}(n,\gamma)^{204}\text{Tl}$	6656.0	0.3	6656.09	0.29	0.3	1	94	76 ^{203}Tl	MMn		74Co21 Z
		6654.88	0.14		8.7	C			Bdn		06Fi.A
$^{204}\text{Pb}(p,d)^{203}\text{Pb}$	-6165	10	-6170	6	-0.5	-			Yal		71Ki01
$^{204}\text{Pb}(d,t)^{203}\text{Pb}$	-2160	20	-2137	6	1.1	-			Ald		67Bj01
$^{204}\text{Pb}(p,d)^{203}\text{Pb}$	ave.	-6171	9	-6170	6	0.0	1	52	52 ^{203}Pb		average
$^{204}\text{Au}(\beta^-)^{204}\text{Hg}$	4500	300	4040#	200#	-1.5	F					67Wa23 *
$^{204}\text{Tl}(\epsilon)^{204}\text{Hg}$	314	20	344.6	1.3	1.5	U					64Ch17
		332	20		0.6	U					66Kl02
		385	20		-2.0	U					73La17
$^{204}\text{Tl}(\beta^-)^{204}\text{Pb}$	764.24	0.31	763.75	0.18	-1.6	-					67Pa08
		763.47	0.22		1.3	-					68Wo02
	ave.	763.73	0.18		0.1	1	97	79 ^{204}Tl			average
$^{204}\text{At}(\beta^+)^{204}\text{Po}$	6220	160	6465	25	1.5	U					86Ve.B *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{204}\text{Fr}^n(\text{IT})^{204}\text{Fr}^m$	276.1	0.5		5					Nub127
$*^{204}\text{Po}(\alpha)^{200}\text{Pb}$	Printing error in reference: ^{204}Po not ^{206}Po ; Z recalibrated								AHW **
$*^{204}\text{Fr}(\alpha)^{200}\text{At}$	$E_\alpha=7031(5)$, $6916(8)$ to ground state, 113 level								92Hu04 **
$*^{204}\text{Fr}^m(\alpha)^{200}\text{At}^m$	$E_\alpha=6969(5)$; and $7013(5)$ from $^{204}\text{Fr}^n$ 276.1 above $^{204}\text{Fr}^m$ to $^{200}\text{At}^n$								95Bi.A **
*	230.9 above $^{200}\text{At}^m$								92Hu04 **
$*^{204}\text{Fr}^m(\alpha)^{200}\text{At}^m$	$E_\alpha=7020(7)$ from $^{204}\text{Fr}^n$ 276.1 above Fr^m to $^{200}\text{At}^n$ 230.9 above $^{200}\text{At}^m$								95Bi.A **
$*^{204}\text{Fr}^m(\alpha)^{200}\text{At}^m$	$E_\alpha=6976(6)$; and $7017(6)$ from $^{204}\text{Fr}^n$ 276.1 above $^{204}\text{Fr}^m$ to $^{200}\text{At}^n$								GAU **
$*^{204}\text{Au}(\beta^-)^{204}\text{Hg}$	F : reported 4 s activity does not exist								Ens87a **
$*^{204}\text{At}(\beta^+)^{204}\text{Po}$	$E_{\beta^+}=2950(160)$ to 8^+ level at 2248.17 keV								Ens102 **
$\text{C}_{16} \text{H}_{13} - ^{205}\text{Tl}$	127345	29	127297.6	1.4	-1.1	U	R08	1.5	69De19
$\text{C}_{14} \text{N}_2 \text{H}_9 - ^{205}\text{Tl}$	102091	36	102145.5	1.4	1.0	U	R08	1.5	69De19
$^{205}\text{Tl} - ^{168}\text{Er} - ^{37}\text{Cl}$	76198	44	76148.5	2.6	-0.7	U	R08	1.5	69De19
$^{205}\text{Tl} - ^{170}\text{Er} - ^{35}\text{Cl}$	70034	23	70104.9	2.9	2.1	U	R08	1.5	69De19
$^{205}\text{Tl} - ^{133}\text{Cs}_{1.541}$	120129	11	120126.3	1.4	-0.2	U	MA8	1.0	08We02
$^{205}\text{Bi-u}$	-22559	30	-22613	5	-1.8	U	GS2	1.0	05Li24
$^{205}\text{Po-u}$	-18773	30	-18797	22	-0.8	-	GS2	1.0	05Li24
	ave.	-18790	25		-0.3	1	79	^{205}Po	average
$^{205}\text{Fr} - ^{133}\text{Cs}_{1.541}$	144293.8	9.7	144292	8	-0.1	2	MA8	1.0	08We02
$^{205}\text{Tl} - ^{35}\text{Cl} - ^{203}\text{Tl} - ^{37}\text{Cl}$	5040	4	5033.3	0.6	-0.4	U	H17	4.0	64Mc07
	5031.43	1.07			0.7	-	H36	2.5	85De40
	5032.88	1.01			0.3	-	H42	1.5	93Si05
	ave.	5032.5	1.3		0.6	1	19	^{205}Tl	average
$^{205}\text{Tl} - ^{167}\text{Er} - ^{37}\text{Cl}$	76426	47	76470.6	2.6	0.6	U	R08	1.5	69De19
$^{205}\text{Tl} - ^{169}\text{Tm} - ^{35}\text{Cl}$	71355	25	71357.2	2.6	0.1	U	R08	1.5	69De19
$^{169}\text{Tm} - ^{37}\text{Cl} - ^{205}\text{Tl}$	-74316	32	-74307.3	2.6	0.2	U	R08	1.5	69De19
$^{205}\text{Tl} - ^{204}\text{Hg}$	938	27	933.8	1.5	-0.1	U	R08	1.5	69De19
$^{205}\text{Tl} - ^{203}\text{Tl}$	2092	20	2083.2	0.6	-0.3	U	R08	1.5	69De19
$^{205}\text{Po}(\alpha)^{201}\text{Pb}$	5324.1	10.	5325	10	0.1	1	96	^{201}Pb	67Ti04
$^{205}\text{At}(\alpha)^{201}\text{Bi}$	6016.3	4.	6019.5	1.7	0.8	4			63Ho18 Z
	6020.5	2.			-0.5	4	DbA		68Go.B Z
	6018.9	5.			0.1	4			74Ho27 Z
$^{205}\text{Rn}(\alpha)^{201}\text{Po}$	6386.6	3.	6390	50	0.0	5			67Va17 Z
	6386.6	6.			0.0	5			71Ho01 Z
	6385.7	2.5			0.0	5	Lvn		93Wa04
$^{205}\text{Fr}(\alpha)^{201}\text{At}$	7056.5	5.	7054.6	2.4	-0.3	3			67Va20 Z
	7052.2	5.			0.5	3			74Ho27 Z
	7057.3	5.			-0.5	3	ORa		81Ri04 Z
	7052.9	7.			0.3	3	Ara		95Le04
	7053.9	5.			0.2	3	Anv		05De01
$^{205}\text{Ra}(\alpha)^{201}\text{Rn}$	7506.7	20.	7490	50	-0.4	F	GSa		87He10 *
	7496.6	25.			-0.2	o	Jya		95Le15
	7486.4	20.				5	Jya		96Le09
$^{205}\text{Ra}^m(\alpha)^{201}\text{Rn}^m$	7501.7	10.	7505	9	0.3	6	Ara		95Le04
	7522.1	25.			-0.7	o	Jya		95Le15
	7517.0	20.			-0.6	6	Jya		96Le09
	7526.1	30.			-0.7	U	Anv		10He25
$^{204}\text{Hg}(\text{d,p})^{205}\text{Hg}$	3443	5	3444	4	0.2	1	53	^{205}Hg	Ald
$^{205}\text{Tl}(\gamma,n)^{204}\text{Tl}$	-7515	29	-7546.0	0.5	-1.1	U			Phi
	-7548	3			0.7	U			McM
$^{205}\text{Tl}(\text{d,t})^{204}\text{Tl}$	-1288.7	0.6	-1288.8	0.5	-0.2	1	64	^{205}Tl	Mun
$^{204}\text{Pb}(\text{n},\gamma)^{205}\text{Pb}$	6731.53	0.15	6731.66	0.11	0.9	-			ILn
	6731.80	0.16			-0.8	-			Bdn
$^{204}\text{Pb}(\text{d,p})^{205}\text{Pb}$	4516	20	4507.10	0.11	-0.4	U			Ald
$^{204}\text{Pb}(\text{n},\gamma)^{205}\text{Pb}$	ave.	6731.66	0.11	6731.66	0.11	0.1	1	99	^{204}Pb
$^{205}\text{Hg}(\beta^-)^{205}\text{Tl}$	1620	200	1533	4	-0.4	U			40Kr08
	1750	200			-1.1	U			51Ly10

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{205}\text{Pb}(\varepsilon)^{205}\text{Tl}$	41.4	1.1	50.6	0.5	8.4	B					78Pe08
$^{205}\text{Bi}(\beta^+)^{205}\text{Pb}$	2701.4	10.	2706	5	0.4	–					62Bo25 *
	2715.4	10.			–1.0	–					62Pe08 *
	ave.	7			–0.4	1	52	51 ^{205}Bi			average
$^{205}\text{Po}(\beta^+)^{205}\text{Bi}$	3390	150	3555	21	1.1	U					69Ho37 *
$^{205}\text{Ra}(\alpha)^{201}\text{Rn}$	F : possibly mixed with $^{205}\text{Ra}^m(\alpha)^{201}\text{Rn}^m$										
$^{205}\text{Bi}(\beta^+)^{205}\text{Pb}$	$E_{\beta^+}=976(10)$ 990(10) respectively, to $7/2^-$ level at 703.427 keV										
$^{205}\text{Po}(\beta^+)^{205}\text{Bi}$	$p^+=3(1)\times 10^{-3}$ to $7/2^-$ level at 849.84 and $7/2^-$ at 1001.22 keV										
											87He10 **
											Ens044 **
											Ens044 **
$^{206}\text{Bi-u}$	–21429	30	–21501	8	–2.4	U			GS2	1.0	05Li24
$^{206}\text{Po-u}$	–19471	30	–19526	4	–1.8	U			GS2	1.0	05Li24
$^{206}\text{At-u}$	–13305	30	–13343	16	–1.3	1	29	^{206}At	GS2	1.0	05Li24
$^{206}\text{Pb }^{35}\text{Cl}_2\text{--}^{202}\text{Hg }^{37}\text{Cl}_2$	9722.09	0.57	9722.4	1.2	0.2	1	71	^{206}Pb	H36	2.5	85De40
$^{206}\text{Pb }^{35}\text{Cl--}^{204}\text{Hg }^{37}\text{Cl}$	3929	4	3921.8	1.4	–0.5	U			H17	4.0	64Mc07
$^{206}\text{Pb }^{35}\text{Cl--}^{204}\text{Pb }^{37}\text{Cl}$	4378	3	4371.78	0.15	–0.5	U			H17	4.0	64Mc07
	4370.72	1.17			0.4	U			H36	2.5	85De40
	4371.29	0.81			0.4	U			H42	1.5	93Si05
$^{206}\text{Po}(\alpha)^{202}\text{Pb}$	5327.4	4.	5326.9	1.3	–0.1	2					67Ti04 Z
	5327.4	1.5			–0.3	2			Db		69Go23 *
	5325.1	3.			0.6	2					70Ra14 Z
$^{206}\text{At}(\alpha)^{202}\text{Bi}$	5884.4	3.6	5887	5	0.7	o			Db		68Go.B *
	5886.4	5.			0.1	1	98	^{202}Bi	Db		81Va27 *
$^{206}\text{Rn}(\alpha)^{202}\text{Po}$	6381.8	3.	6383.8	1.6	0.7	4					67Va17 Z
	6384.6	3.			–0.2	4			Db		71Go35 Z
	6384.8	2.5			–0.4	4			Lvn		93Wa04
$^{206}\text{Fr}(\alpha)^{202}\text{At}$	6925.9	7.	6923	4	–0.4	4					67Va20 *
	6918.9	7.			0.6	4					74Ho27 *
	6924.0	7.			–0.1	4			ORa		81Ri04 *
	6924.8	7.			–0.2	4			Lvn		92Hu04 *
$^{206}\text{Fr}^n(\alpha)^{202}\text{At}^n$	7068.8	5.	7068	4	–0.2	6			ORa		81Ri04 Z
	7067.1	5.			0.2	6			Lvn		92Hu04 *
$^{206}\text{Ra}(\alpha)^{202}\text{Rn}$	7416.3	5.	7415	4	–0.2	3					67Va22 Z
	7414.3	10.			0.1	3			GSa		87He10
	7412.2	10.			0.3	o			Jya		95Le15
	7406	15			0.6	o			Jya		95Uu01
	7412.2	10.			0.3	3			Jya		96Le09
$^{206}\text{Ac}(\alpha)^{202}\text{Fr}$	7944.6	30.				7			Jya		98Es02
$^{206}\text{Ac}^m(\alpha)^{202}\text{Fr}^m$	7903.8	30.				6			Jya		98Es02
$^{204}\text{Pb}(t,p)^{206}\text{Pb}$	6322	20	6336.53	0.12	0.7	U			Ald		67Ha.A
$^{204}\text{Pb}(\alpha,d)^{206}\text{Bi}$	–15798.	11.5	–15792	8	0.5	R			Pit		76Da20
$^{205}\text{Tl}(n,\gamma)^{206}\text{Tl}$	6503.7	0.4	6503.8	0.4	0.3	1	93	^{206}Tl	MMn		74Co21 Z
	6502.87	0.27			3.5	C			Bdn		06Fi.A
$^{205}\text{Tl}(d,p)^{206}\text{Tl}$	4276	5	4279.2	0.4	0.6	U			ANL		65Er02
$^{205}\text{Tl}(^3\text{He},d)^{206}\text{Pb}$	1761.7	1.4	1760.2	0.5	–1.1	1	13	^{205}Tl	Mun		90Li40
$^{205}\text{Pb}(n,\gamma)^{206}\text{Pb}$	8086.66	0.06	8086.66	0.06	0.0	1	100	^{205}Pb			96Ra16 Z
$^{206}\text{Pb}(\gamma,n)^{205}\text{Pb}$	–8090	70	–8086.66	0.06	0.0	U			Phi		60Ge01
	–8087	3			0.1	U			McM		79Ba06
$^{206}\text{Pb}(d,t)^{205}\text{Pb}$	–1830	100	–1829.43	0.06	0.0	U			MIT		53Ha66
	–1831.2	0.5			3.5	B			Mun		90Li40
$^{206}\text{Hg}(\beta^-)^{206}\text{Tl}$	1240	62	1308	20	1.1	U					68Wo09 *
$^{206}\text{Tl}(\beta^-)^{206}\text{Pb}$	1534	5	1532.2	0.6	–0.4	U					71Pe23
	1527	4			1.3	U					72Wi18
$^{206}\text{Bi}(\beta^+)^{206}\text{Pb}$	3683	33	3757	8	2.3	U					62Pe08 *
$^{206}\text{Bi}(\varepsilon)^{206}\text{Pb}$	3753	10			0.4	2					74Go20 *
$^{206}\text{At}(\beta^+)^{206}\text{Po}$	5687	150	5759	16	0.5	U					77Li16 *
$^{206}\text{Fr}^n(\text{IT})^{206}\text{Fr}^m$	531	2				7			ORa		81Ri04
$^{206}\text{Fr}^n(\text{IT})^{206}\text{Fr}$	100	100				5					AHW *
$^{206}\text{Po}(\alpha)^{202}\text{Pb}$	Printing error in reference: ^{206}Po not ^{211}Po ; Z recalibrated										
$^{206}\text{At}(\alpha)^{202}\text{Bi}$	$E_{\alpha}=5702.8(2,Z)$ to $(5)^+$ level at 68(3) keV										
$^{206}\text{At}(\alpha)^{202}\text{Bi}$	$E_{\alpha}=5773.8(5,Z)$, $5702.8(5,Z)$ to ground state and $(5)^+$ level at 68(3) keV										
$^{206}\text{Fr}(\alpha)^{202}\text{At}$	$E_{\alpha}=6793.1(5,Z)$; correction -2 for being a doublet										
$^{206}\text{Fr}(\alpha)^{202}\text{At}$	$E_{\alpha}=6786.3(5,Z)$; correction -2 for being a doublet										
$^{206}\text{Fr}(\alpha)^{202}\text{At}$	$E_{\alpha}=6791.3(5,Z)$; correction -2 for being a doublet										
$^{206}\text{Fr}(\alpha)^{202}\text{At}$	$E_{\alpha}=6792(5)$; correction -2 for being a doublet										

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
* ²⁰⁶ Fr ⁿ (α) ²⁰² At ⁿ	E α =6930(5) and 6792(7) combined with E(γ)'s 531, 391.7 keV										92Hu04 **
* ²⁰⁶ Hg(β^-) ²⁰⁶ Tl	E β^- =935(62) to 1 ⁻ level at 304.896 keV										Ens085 **
* ²⁰⁶ Bi(β^+) ²⁰⁶ Pb	E β^+ =977(33) to 4 ⁺ level at 1683.99 keV										Ens085 **
* ²⁰⁶ Bi(ϵ) ²⁰⁶ Pb	LK=0.509(0.015) to 5 ⁻ level at 3562.92 keV, original error 22, recalculated										Ens085 **
* ²⁰⁶ At(β^+) ²⁰⁶ Po	E β^+ =3092(150) to 6 ⁺ level at 1573.38 keV										Ens085 **
* ²⁰⁶ Fr ⁱ (IT) ²⁰⁶ Fr	Assuming a 0.15(0.20)% isomeric mixture										AHW **
²⁰⁷ Hg-u	-17721	33	-17700	30	0.6	o			GS3	1.0	08Ch.A
	-17700	32				2			GS3	1.0	12Ch19
²⁰⁷ Fr- ¹³³ Cs _{1.556}	144062	20	144063	19	0.1	1	88	88 ²⁰⁷ Fr	MA8	1.0	12Bo.A
²⁰⁷ Pb- ³⁵ Cl- ²⁰⁵ Tl- ³⁷ Cl	4413	4	4419.6	0.6	0.4	U			H17	4.0	64Mc07
	4415.60	2.40			0.7	U			H36	2.5	85De40
	4417.32	1.40			1.1	U			H42	1.5	93Si05
²⁰⁶ Pb H- ²⁰⁷ Pb	6394.2	1.1	6393.42	0.10	-0.3	U			C4	2.5	71Ke02
²⁰⁶ Fr ^r - ²⁰⁷ Fr ₄₉₈ ²⁰⁵ Fr ₅₀₂	930	90	930	100	0.0	U			P24	2.5	82Au01
²⁰⁷ Po(α) ²⁰³ Pb	5216.0	2.5	5215.8	2.5	0.0	1	96	59 ²⁰⁷ Po	DbA		70Af.A
²⁰⁷ At(α) ²⁰³ Bi	5872.5	3.				3			DbA		69Go23 Z
²⁰⁷ Rn(α) ²⁰³ Po	6256.3	3.	6251.1	1.6	-1.6	4					67Va20 Z
	6247.3	3.			1.3	4			DbA		71Go35 Z
	6250.4	2.5			0.3	4			Lvn		93Wa04
²⁰⁷ Fr(α) ²⁰³ At	6907.8	5.	6893	20	-0.3	-					67Va20 Z
	6895.8	5.			-0.1	-					74Ho27 Z
	6900.9	5.			-0.2	-			ORa		81Ri04 Z
	ave.	6901.5	2.9		-0.2	1	16	12 ²⁰⁷ Fr			average
²⁰⁷ Ra(α) ²⁰³ Rn	7273.8	5.	7270	50	0.0	5					67Va22 Z
	7268.7	10.			0.1	5			GSa		87He10
	7276.7	12.			-0.1	5			Jya		95Uu01
²⁰⁷ Ra ^m (α) ²⁰³ Rn ^m	7464.4	10.2	7468	8	0.3	6			GSa		87He10
	7474.7	15.			-0.4	o			Jya		95Le15
	7475.7	15.			-0.5	6			Jya		96Le09
²⁰⁷ Ac(α) ²⁰³ Fr	7864.3	25.	7840	50	-0.4	o			Jya		94Le05
	7844.9	25.				2			Jya		98Es02
²⁰⁵ Tl(t,p) ²⁰⁷ Tl	4880	15	4874	5	-0.4	1	13	13 ²⁰⁷ Tl	Ald		69Ha11
²⁰⁷ Pb(t, α) ²⁰⁶ Tl	12321	25	12326.2	0.6	0.2	U			Ald		67Ha.A
²⁰⁶ Pb(n, γ) ²⁰⁷ Pb	6737.85	0.15	6737.78	0.10	-0.5	-			MMn		81Ke11 Z
	6737.72	0.18			0.3	-			ILn		83Hu13 Z
	6737.74	0.17			0.2	-			Bdn		06Fi.A
²⁰⁷ Pb(γ ,n) ²⁰⁶ Pb	-6742	3	-6737.78	0.10	1.4	U			McM		79Ba06
²⁰⁶ Pb(d,p) ²⁰⁷ Pb	4480	30	4513.21	0.10	1.1	U			MIT		53Ha66
	4510	20			0.2	U					58Mc64
	4526	30			-0.4	U			Pit		64Co11
²⁰⁶ Pb(n, γ) ²⁰⁷ Pb	ave.	6737.78	0.10	6737.78	0.10	0.0	1	100	89 ²⁰⁷ Pb		average
²⁰⁷ Hg(β^-) ²⁰⁷ Tl	4815	150	4550	30	-1.8	U					81Jo.B *
²⁰⁷ Tl(β^-) ²⁰⁷ Pb	1431	8	1418	5	-1.6	1	46	45 ²⁰⁷ Tl			67Da10
²⁰⁷ Bi(ϵ) ²⁰⁷ Pb	2392	10	2397.4	2.1	0.5	U					Averag *
²⁰⁷ Po(β^+) ²⁰⁷ Bi	2907	10	2909	7	0.2	1	44	41 ²⁰⁷ Po			58Ar56 *
²⁰⁷ Rn(β^+) ²⁰⁷ At	4617	70	4592	15	-0.4	U					75Ze.A *
* ²⁰⁷ Hg(β^-) ²⁰⁷ Tl	E β^- =1800(150), 14%, 32%, 16%, 7% to (7/2 ⁻ , 9/2) level at 2911.83 keV										81Jo.B **
*	(9/2) ⁺ at 2985.23 and 3104.43, (7/2 ⁻ , 9/2, 11/2) at 3143.1 keV										Ens112 **
* ²⁰⁷ Bi(ϵ) ²⁰⁷ Pb	Average pL=0.61(0.05) to 7/2 ⁻ level at 2339.921 keV from two references:										Ens112 **
*	pL=0.663(0.014)										64De16 **
*	pL=0.56(0.04); original error 0.08 is 2 σ										82Ta18 **
* ²⁰⁷ Po(β^+) ²⁰⁷ Bi	E β^+ =893(10) to 7/2 ⁻ level at 992.43 keV, and other E β^+										Ens112 **
* ²⁰⁷ Rn(β^+) ²⁰⁷ At	E β^+ =3250(70) to 7/2 ⁻ level at 344.55 keV										Ens112 **
²⁰⁸ Hg-u	-14241	33	-14240	30	0.0	o			GS3	1.0	08Ch.A
	-14241	33				2			GS3	1.0	09Ch08
²⁰⁸ Pb- ¹³³ Cs _{1.564}	124532.0	5.6	124525.6	1.3	-1.1	U			MA8	1.0	08We02
	124524.3	5.5			0.2	U			MA8	1.0	12Bo.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{208}\text{Po-u}$	-18710	31	-18753.9	1.9	-1.4	U			GS2	1.0	05Li24
$^{208}\text{Fr}-^{133}\text{Cs}_{1.564}$	144984	20	145011	12	1.4	-			MA8	1.0	12Bo.A
	145030	16			-1.2	-			MA8	1.0	12Bo.A
	ave.	145012			-0.1	1	96	96 ^{208}Fr			average
$^{208}\text{Pb } ^{35}\text{Cl}-^{206}\text{Pb } ^{37}\text{Cl}$	5136	2	5136.88	0.14	0.1	U			H17	4.0	64Mc07
	5136.23	1.08			0.2	U			H36	2.5	85De40
	5136.93	0.41			-0.1	U			H42	1.5	93Si05
$^{207}\text{Fr}-^{208}\text{Fr}_{.498} \quad ^{206}\text{Fr}_{.502}$	-890	60	-940	60	-0.4	U			P24	2.5	82Au01
$^{208}\text{Po}(\alpha)^{204}\text{Pb}$	5216.3	2.	5215.3	1.3	-0.5	2			DbA		69Go23 Z
	5214.0	3.			0.5	2					70Ra14 Z
	5215.1	2.			0.1	2					89Ma05
$^{208}\text{At}(\alpha)^{204}\text{Bi}$	5750.6	3.	5751.0	2.2	0.2	3			DbA		69Go23 Z
	5751.6	3.			-0.2	3			DbA		81Va27 Z
$^{208}\text{Rn}(\alpha)^{204}\text{Po}$	6269.3	4.	6260.7	1.7	-2.1	4					55Mo69 Z
	6260.0	3.			0.2	4			DbA		71Go35 Z
	6257.5	5.			0.6	4					74Ho27
	6258.7	2.5			0.8	4			Lvn		93Wa04
$^{208}\text{Fr}(\alpha)^{204}\text{At}$	6778.3	5.	6785	24	0.1	-					67Va20 Z
	6767.7	5.			0.3	-					74Ho27 Z
	6767.7	5.			0.3	-			ORa		81Ri04 Z
	ave.	6771.2			0.3	1	23	19 ^{204}At			average
$^{208}\text{Ra}(\alpha)^{204}\text{Rn}$	7273.1	5.				5					67Va22 Z
$^{208}\text{Ac}(\alpha)^{204}\text{Fr}$	7720.8	15.	7730	50	0.1	5			Jya		94Le05
	7769.7	40.			-0.9	5			JAa		96Ik01
$^{208}\text{Ac}^m(\alpha)^{204}\text{Fr}^m$	7892.1	20.	7899	14	0.3	6			DbB		94An01
	7910.4	20.			-0.6	6			Jya		94Le05
	7871.7	50.			0.5	6			JAa		96Ik01
$^{208}\text{Th}(\alpha)^{204}\text{Ra}$	8202.0	30.				6			Anv		10He25
$^{206}\text{Pb}(t,p)^{208}\text{Pb}$	5622	30	5623.85	0.11	0.1	U			Ald		67Ha.A
$^{207}\text{Pb}(n,\gamma)^{208}\text{Pb}$	7367.95	0.15	7367.87	0.05	-0.5	-			MMn		81Ke11 Z
	7367.96	0.10			-0.9	-					81Su.A Z
	7367.81	0.11			0.5	-			ILn		83Hu13 Z
	7367.774	0.098			1.0	-					98Be19 Z
	7367.92	0.16			-0.3	-			Bdn		06Fi.A
$^{208}\text{Pb}(\gamma,n)^{207}\text{Pb}$	-7370	3	-7367.87	0.05	0.7	U			McM		79Ba06
$^{208}\text{Pb}(d,t)^{207}\text{Pb}$	-1114	25	-1110.64	0.05	0.1	U			Pit		64Co11
$^{207}\text{Pb}(n,\gamma)^{208}\text{Pb}$	ave.	7367.87			0.05	0.0	1	100	90 ^{208}Pb		average
$^{208}\text{Tl}(\beta^-)^{208}\text{Pb}$	4989.7	7.	4998.9	1.7	1.3	U					48Ma29 *
	4997.7	10.			0.1	U					54El24 *
$^{208}\text{Bi}(\epsilon)^{208}\text{Pb}$	2810	4	2878.4	2.0	17.1	B					59Mi19 *
* $^{208}\text{Tl}(\beta^-)^{208}\text{Pb}$	$E_{\beta^-} = 1792(7) \text{ 1800(10)}$ respectively, to 5^- level at 3197.711 keV										Ens077 **
* $^{208}\text{Bi}(\epsilon)^{208}\text{Pb}$	$pK = 0.24(0.01)$ to 3^- level at 2614.522 keV, recalculated										Ens077 **
$^{209}\text{Bi}-^{133}\text{Cs}_{1.571}$	128937.6	4.7	128934.0	1.6	-0.8	U			MA8	1.0	08We02
$^{209}\text{Fr}-^{226}\text{Ra}_{.925}$	-27584	36	-27550	16	1.0	2			MA3	1.0	92Bo28
$^{209}\text{Bi } ^{35}\text{Cl}-^{207}\text{Pb } ^{37}\text{Cl}$	7444	3	7451.9	0.8	0.7	U			H17	4.0	64Mc07
	7454.13	1.51			-0.6	U			H36	2.5	85De40
$^{208}\text{Fr}-^{209}\text{Fr}_{.498} \quad ^{207}\text{Fr}_{.502}$	720	60	638	16	-0.5	U			P24	2.5	82Au01
$^{209}\text{Bi}(\alpha)^{205}\text{Tl}$	3137.0	2.2	3137.3	0.8	0.1	1	12	10 ^{209}Bi			03De11
$^{209}\text{Po}(\alpha)^{205}\text{Pb}$	4974	5	4979.2	1.4	1.0	2					66Ha29 *
	4980.0	2.			-0.4	2			DbA		69Go23 *
	4979.3	2.			0.0	2					89Ma05 *
$^{209}\text{At}(\alpha)^{205}\text{Bi}$	5757.2	2.	5756.9	2.0	-0.1	1	96	49 ^{205}Bi	DbA		69Go23 Z
$^{209}\text{Rn}(\alpha)^{205}\text{Po}$	6157.5	3.	6155.5	2.0	-0.6	2			DbA		71Go35 Z
	6154.2	2.5			0.5	2			Lvn		93Wa04
$^{209}\text{Fr}(\alpha)^{205}\text{At}$	6777.7	5.	6777	4	0.0	3					67Va20 Z
	6777.3	5.			0.0	3					74Ho27 Z
$^{209}\text{Ra}(\alpha)^{205}\text{Rn}$	7147.0	5.	7143.0	2.7	-0.8	6					67Va22 Z
	7141	5			0.4	6			GSa		03He06 *
	7142.0	4.			0.3	6					08Ha12
$^{209}\text{Ac}(\alpha)^{205}\text{Fr}$	7733.3	15.	7730	50	-0.1	3					68Va04
	7738.4	20.			-0.2	3			DbB		94An01
	7729.2	15.			0.0	3			Jya		94Le05
	7728.2	40.			0.0	U			JAa		96Ik01

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{209}\text{Ac}(\alpha)^{205}\text{Fr}$	7725.1	10.	7730	50	0.1	3			GSA	00He17	
$^{209}\text{Th}(\alpha)^{205}\text{Ra}$	8238.0	50.	8270	50	0.7	6			JAA	96Ik01 *	
	8281.8	25.			-0.2	6			Anv	10He25 *	
$^{207}\text{Pb}(t,p)^{209}\text{Pb}$	2814	12	2823.4	1.3	0.8	U			Ald	68Bj03	
$^{209}\text{Bi}(p,t)^{207}\text{Bi}$	-5864.8	2.0	-5864.9	2.0	0.0	1	98	97 ^{207}Bi	MSU	76Be.B *	
$^{208}\text{Pb}(d,p)^{209}\text{Pb}$	1705	15	1712.8	1.3	0.5	U			MIT	64Sp12	
	1700	10			1.3	U				67Mu16	
	1718	4			-1.3	1	11	11 ^{209}Pb	Pit	72Ko03 *	
	1715	10			-0.2	U			Yal	74Ko20	
$^{209}\text{Bi}(t,\alpha)^{208}\text{Pb}$	16003	25	16014.8	0.8	0.5	U			Ald	68Bj01	
$^{209}\text{Bi}(\gamma,n)^{208}\text{Bi}$	-7432	10	-7459.8	1.9	-2.8	U			Phi	60Ge01	
	-7460	2			0.1	2			McM	79Ba06	
$^{209}\text{Bi}(d,t)^{208}\text{Bi}$	-1216	30	-1202.5	1.9	0.4	U			Pit	64Co11	
	-1201	5			-0.3	2			ANL	64Er06	
$^{209}\text{Pb}(\beta^-)^{209}\text{Bi}$	644.6	1.2	644.0	1.1	-0.5	1	91	87 ^{209}Pb		72Be44	
$^{209}\text{Rn}(\beta^+)^{209}\text{At}$	3928	40	3954	21	0.6	R				74Vy01 *	
$^{*209}\text{Po}(\alpha)^{205}\text{Pb}$	$E_{\alpha}=4876.8(5,Z)$ 4882.8(2,Z) respectively, to (20% ground state + 80% $^{205}\text{Pb}^m$ at 2.329 keV)									Ens044 **	
$^{*209}\text{Po}(\alpha)^{205}\text{Pb}$	$E_{\alpha}=4882.6(2.0)$ 4622(5) to (ground state + 80% $^{205}\text{Pb}^m$ at 2.329), 3/2 ⁻ at 262.8keV									Ens044 **	
$^{*209}\text{Ra}(\alpha)^{205}\text{Rn}$	$E_{\alpha}=7003(10)$ to ground state, 6625(5) to 387.0 level									03He06 **	
$^{*209}\text{Th}(\alpha)^{205}\text{Ra}$	Trends from Mass Surface TMS suggest ^{209}Th 220 more bound									GAU **	
$^{*209}\text{Bi}(p,t)^{207}\text{Bi}$	$Q-Q(^{208}\text{Pb}(p,t))=-241(2,\text{Be})$, $Q(\text{Pb})=-5623.82(0.20)$ keV									AHW **	
$^{*208}\text{Pb}(d,p)^{209}\text{Pb}$	$Q-Q(^{209}\text{Bi}(d,p))=-662(4)$, $Q(\text{Bi})=2380.01(0.14)$ keV									AHW **	
$^{*209}\text{Rn}(\beta^+)^{209}\text{At}$	$E_{\beta^+}=2160(40)$ to 7/2 ⁻ level at 745.78 keV									Ens91b **	
$^{210}\text{Fr}-^{226}\text{Ra}_{929}$	-27198	24	-27184	16	0.6	1	46	46 ^{210}Fr	MA3	1.0	92Bo28
$^{209}\text{Fr}-^{210}\text{Fr}_{498}$ $^{208}\text{Fr}_{502}$	-770	50	-770	17	0.0	U			P24	2.5	82Au01
$^{210}\text{Pb}(\alpha)^{206}\text{Hg}$	3792.4	20.				2					62Ka27
$^{210}\text{Bi}(\alpha)^{206}\text{Tl}$	5042.8	2.	5036.5	0.8	-3.2	B			Orm		60Wa14 *
	5037.3	1.1			-0.8	1	50	33 ^{210}Bi			76Tu.A *
$^{210}\text{Po}(\alpha)^{206}\text{Pb}$	5407.53	0.07	5407.45	0.07	0.0	1	100	98 ^{210}Po			73Go39 Z
	5407.7	2.			-0.1	U					89Ma05
$^{210}\text{At}(\alpha)^{206}\text{Bi}$	5630.9	1.5	5631.2	1.0	0.2	3			DbA		69Go23 *
	5631.4	1.3			-0.2	3			DbA		81Va27 *
$^{210}\text{Rn}(\alpha)^{206}\text{Po}$	6162.1	3.	6158.9	2.2	-1.0	3					55Mo69 Z
	6155.9	3.			1.0	3			DbA		71Go35 Z
$^{210}\text{Fr}(\alpha)^{206}\text{At}$	6699.9	5.	6672	5	-5.7	B					67Va20 *
	6672.3	5.			-0.1	1	97	54 ^{210}Fr	GSA		05Ku06
$^{210}\text{Ra}(\alpha)^{206}\text{Rn}$	7156.6	5.	7151	3	-1.1	5					67Va22 Z
	7147	5			0.8	5			GSA		03He06 *
	7146.4	5.			0.6	5			Jya		07Le14
$^{210}\text{Ac}(\alpha)^{206}\text{Fr}$	7607.2	8.	7610	50	0.0	5					68Va04
	7607.2	10.			0.0	5			GSA		00He17
$^{210}\text{Th}(\alpha)^{206}\text{Ra}$	8052.7	17.	8069	6	0.9	4			Jya		95Uu01
	7962.0	50.			2.1	F			JAA		96Ik01 *
	8071.0	6.			-0.3	4			Anv		10He25
$^{208}\text{Pb}(t,p)^{210}\text{Pb}$	628	12	640.7	0.9	1.1	U			Ald		68Bj03
$^{209}\text{Bi}(n,\gamma)^{210}\text{Bi}$	4604.5	0.3	4604.63	0.08	0.4	-					71Mo03
	4604.68	0.14			-0.3	-			MMn		83Ts01 Z
	4604.63	0.10			0.0	-			Bdn		06Fi.A
$^{209}\text{Bi}(d,p)^{210}\text{Bi}$	2369	10	2380.07	0.08	1.1	U			MIT		64Sp12
$^{209}\text{Bi}(n,\gamma)^{210}\text{Bi}$	ave.	4604.64	0.08	4604.63	0.08	0.0	1	100	86 ^{209}Bi		average
$^{210}\text{Tl}(\beta^-)^{210}\text{Pb}$	5500	100	5482	12	-0.2	U					64We06 *
$^{210}\text{Pb}(\beta^-)^{210}\text{Bi}$	63.5	0.5	63.5	0.5	0.0	1	100	98 ^{210}Pb			67Ha03 *
$^{210}\text{Bi}(\beta^-)^{210}\text{Po}$	1160.5	1.5	1161.2	0.8	0.5	-					62Da03
	1161.5	1.5			-0.2	-					67Hs01
	ave.	1161.0	1.1		0.2	1	52	51 ^{210}Bi			average
$^{210}\text{At}(\epsilon)^{210}\text{Po}$	3870	30	3981	8	3.7	B					63Sc15 *
$^{*210}\text{Bi}(\alpha)^{206}\text{Tl}$	$E_{\alpha}=4685.3(2,Z)$, 4648.3(2,Z) to 2 ⁻ level at 265.832, 1 ⁻ at 304.896 keV									Ens91b **	
$^{*210}\text{Bi}(\alpha)^{206}\text{Tl}$	$E_{\alpha}=4946(1)$, 4909(1) from $^{210}\text{Bi}^m$ at 271.31 keV									Nub127 **	
*	to 2 ⁻ level at 265.83, 1 ⁻ level at 304.896 keV									Ens037 **	
$^{*210}\text{At}(\alpha)^{206}\text{Bi}$	$E_{\alpha}=5523.8$, 5464.8, 5441.8(1.5,Z) to ground state, 4 ⁺ at 59.897, 5 ⁺ at 82.818									Ens037 **	
$^{*210}\text{At}(\alpha)^{206}\text{Bi}$	$E_{\alpha}=5524.1$, 5465.3, 5442.8(1.3,Z) to ground state, 4 ⁺ at 59.897, 5 ⁺ at 82.818									Ens037 **	
$^{*210}\text{Fr}(\alpha)^{206}\text{At}$	$E_{\alpha}=6572.0(5,Z)$ 6542(5,Z) to ground state and level at 31.05 keV									Ens085 **	
$^{*210}\text{Ra}(\alpha)^{206}\text{Rn}$	$E_{\alpha}=7003(10)$ to ground state, 6447(5) to 574.9 level									03He06 **	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
* $^{210}\text{Th}(\alpha)^{206}\text{Ra}$	F : Low energy; may be escape										96Ik01 **
* $^{210}\text{Tl}(\beta^-)^{210}\text{Pb}$	$E_{\beta^-}=1870(100)$ to $3625(19)$ level, and other E_{β^-}										Ens037 **
* $^{210}\text{Pb}(\beta^-)^{210}\text{Bi}$	$E_{\beta^-}=17.0(0.5)$ to 0^- level at 46.539 keV										Ens037 **
* $^{210}\text{At}(\epsilon)^{210}\text{Po}$	$pK=0.46(0.10)$ to 6^- level at 3727.28 keV										Ens037 **
$^{211}\text{Tl-u}$	-6525	45				2			GS3	1.0	08Ch.A
$^{211}\text{Fr}_{-133}\text{Cs}_{1.586}$	145517	15	145509	13	-0.5	1	74	74 ^{211}Fr	MA8	1.0	09Ko35
$^{211}\text{Fr}_{-226}\text{Ra}_{.934}$	-28200	25	-28178	13	0.9	1	27	26 ^{211}Fr	MA3	1.0	92Bo28
$^{211}\text{Ra}_{-133}\text{Cs}_{1.586}$	150846.4	8.5				2			MA8	1.0	09Ko35
$^{207}\text{Fr}_{-211}\text{Fr}_{.327}$ $^{205}\text{Fr}_{.673}$	-930	100	-609	19	1.3	U			P24	2.5	82Au01
$^{208}\text{Fr}_{-211}\text{Fr}_{.394}$ $^{206}\text{Fr}_{.606}$	-260	50	-340	60	-0.7	U			P24	2.5	82Au01
$^{210}\text{Fr}_{-211}\text{Fr}_{.498}$ $^{209}\text{Fr}_{.502}$	580	50	621	18	0.3	U			P24	2.5	82Au01
$^{211}\text{Bi}(\alpha)^{207}\text{Tl}$	6749.5	0.7	6750.3	0.5	1.2	-					61Ry02 Z
	6751.1	0.6			-1.2	-					71Gr17 Z
	ave. 6750.4	0.5			-0.1	1	100	58 ^{211}Bi			average
$^{211}\text{Po}(\alpha)^{207}\text{Pb}$	7594.5	0.5				2			Orm		62Wa18 Z
	7594.3	3.	7594.5	0.5	0.1	U			DbA		69Go23 Z
	7600.6	2.			-3.1	B					85La17 Z
$^{211}\text{Po}^m(\alpha)^{207}\text{Pb}$	9056.8	5.				2			Bka		82Bo04
$^{211}\text{At}(\alpha)^{207}\text{Bi}$	5979.4	2.	5982.4	1.3	1.5	2			DbA		69Go23 Z
	5981.6	3.			0.3	2			Bka		82Bo04 *
	5985.9	2.			-1.7	2					85La17 Z
$^{211}\text{Rn}(\alpha)^{207}\text{Po}$	5967.9	2.	5965.4	1.4	-1.2	2					55Mo69 Z
	5963.1	2.			1.2	2			DbA		71Go35 Z
$^{211}\text{Fr}(\alpha)^{207}\text{At}$	6660.3	5.	6662	3	0.4	2					67Va20 Z
	6663.5	4.			-0.3	2			GSa		05Ku06
$^{211}\text{Ra}(\alpha)^{207}\text{Rn}$	7045.3	5.	7042	3	-0.7	3					67Va22 Z
	7040	5			0.4	3			GSa		03He06 *
	7039.7	6.			0.4	3			Jya		07Le14
$^{211}\text{Ac}(\alpha)^{207}\text{Fr}$	7624.8	8.	7620	50	-0.1	2					68Va04
	7616.7	10.			0.1	2			GSa		00He17
$^{211}\text{Th}(\alpha)^{207}\text{Ra}$	7942.9	14.				6			Jya		95Uu01
$^{211}\text{Pb}(\beta^-)^{211}\text{Bi}$	1378	8	1367	6	-1.4	1	47	42 ^{211}Bi			65Co06
* $^{211}\text{At}(\alpha)^{207}\text{Bi}$	Recalibrated as in reference										91Ry01 **
* $^{211}\text{Ra}(\alpha)^{207}\text{Rn}$	Average of $E_{\alpha}=6907(5)$ and several branches to known levels										03He06 **
$^{212}\text{Bi}^n-u$	-7127	32				2			GS3	1.0	08Ch.A
$^{212}\text{Fr}_{-133}\text{Cs}_{1.594}$	146938	10	146935	9	-0.3	1	89	89 ^{212}Fr	MA8	1.0	09Ko35
$^{212}\text{Fr}_{-226}\text{Ra}_{.938}$	-27631	28	-27609	10	0.8	1	12	11 ^{212}Fr	MA3	1.0	92Bo28
$^{209}\text{Fr}_{-212}\text{Fr}_{.563}$ $^{205}\text{Fr}_{.437}$	-1270	70	-1216	16	0.3	U			P24	2.5	82Au01
$^{206}\text{Fr}_{-212}\text{Fr}_{.139}$ $^{205}\text{Fr}_{.861}$	340	130	470	100	0.4	U			P24	2.5	82Au01
$^{207}\text{Fr}_{-212}\text{Fr}_{.163}$ $^{206}\text{Fr}_{.837}$	-1150	70	-1320	90	-0.9	U			P24	2.5	82Au01
$^{212}\text{Bi}(\alpha)^{208}\text{Tl}$	6207.12	0.04	6207.262	0.028	3.5	B			BIP		61Ry02 Z
	6207.09	0.08			2.1	o			BIP		69Gr28 *
	6207.262	0.028				2			BIP		72Go.A *
$^{212}\text{Bi}^m(\alpha)^{208}\text{Tl}$	6458.1	30.				3					78Ba44
$^{212}\text{Po}(\alpha)^{208}\text{Pb}$	8953.6	0.8	8954.12	0.11	0.6	U					61Ry02 Z
	8953.85	0.31			1.1	-					71De52 Z
	8953.3	0.6			1.4	U					71Gr17 Z
	8954.25	0.12			-0.4	-					74Hu15 Z
	ave. 8954.12	0.11			0.0	1	100	92 ^{212}Po			average
$^{212}\text{Po}^m(\alpha)^{208}\text{Pb}$	11874.6	20.	11877	4	0.1	2					62Pe15
	11859.3	15.			1.2	o					75Fr.B
	11884.6	10.			-0.7	2					76Fr.A
	11875.5	5.1			0.3	2			GSa		12Ho12
$^{212}\text{At}(\alpha)^{208}\text{Bi}$	7829.0	9.	7817.0	0.6	-1.3	U					70Re02 *
	7817.0	0.6				3					76Fr.A *
	7828.0	10.			-1.1	U					96Li37 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference		
$^{212}\text{At}^m(\alpha)^{208}\text{Bi}$	8049.3	10.	8039.9	0.6	-0.9	U			68Va18		
	8054.3	9.			-1.6	U			70Re02 *		
	8039.9	0.6				3			76Fr.A *		
	8051.2	10.			-1.1	U			96Li37 *		
$^{212}\text{Rn}(\alpha)^{208}\text{Po}$	6392.3	5.	6385.0	2.6	-1.4	3			55Mo69 Z		
	6382.5	3.			0.9	3	DbA		71Go35 Z		
$^{212}\text{Fr}(\alpha)^{208}\text{At}$	6531.3	3.	6528.9	1.6	-0.7	2			66Va.A Z		
	6528.0	3.			0.3	2	DbA		81Va27		
	6527.5	3.			0.5	2	Bka		82Bo04 *		
	6529.5	4.			-0.1	2	GSa		05Ku06		
$^{212}\text{Ra}(\alpha)^{208}\text{Rn}$	7030.0	5.	7031.6	1.7	0.3	5			67Va22 Z		
	7034.0	5.			-0.4	5			74Ho27 Z		
	7032.2	2.			-0.3	5	Bka		82Bo04 Z		
	7028	5			0.7	5	GSa		03He06 *		
$^{212}\text{Ac}(\alpha)^{208}\text{Fr}$	7521.2	8.	7520	50	0.0	2			68Va04		
	7515.1	10.			0.1	2	GSa		00He17		
$^{212}\text{Th}(\alpha)^{208}\text{Ra}$	7952.3	10.	7958	5	0.6	6			80Ve01		
	7959.5	5.			-0.3	6	Anv		10He25		
$^{212}\text{Pa}(\alpha)^{208}\text{Ac}$	8429.4	30.				6	JAA		97Mi03		
$^{210}\text{Pb}(t,p)^{212}\text{Pb}$	515	25	480.1	2.3	-1.4	U			71El05		
$^{212}\text{Pb}(\beta^-)^{212}\text{Bi}$	569.3	2.5	569.8	1.9	0.2	-			48Ma30 *		
	576.6	5.			-1.4	-			58Se71 *		
$^{212}\text{Bi}(\beta^-)^{212}\text{Po}$	ave.	570.8	2.2		-0.4	1	72	44 ^{212}Pb	average		
	2256	3	2252.0	1.7	-1.3	-			48Fe09		
	2250.5	2.5			0.6	-			48Ma30		
ave.	2252.8	1.9			-0.4	1	80	72 ^{212}Bi	average		
$*^{212}\text{Bi}(\alpha)^{208}\text{Tl}$	E $_{\alpha}$ =6089.86(0.08,Z), 6050.57(0.07,Z) to ground state, 4 ⁺ level at 39.858 keV								Ens053 **		
$*^{212}\text{Bi}(\alpha)^{208}\text{Tl}$	E $_{\alpha}$ =6089.883(0.037,Z), 6050.837(0.028,Z) to ground state, 4 ⁺ level at 39.858 keV								72Go.A **		
$*^{212}\text{At}(\alpha)^{208}\text{Bi}$	Original E $_{\alpha}$ =7679(8); calibration ^{211}Po 7448(1), now 7450.3(0.5) keV								AHW **		
$*^{212}\text{At}(\alpha)^{208}\text{Bi}$	Original E $_{\alpha}$ =7669.0(0.2); calibration ^{211}Po 7450(2), now 7450.3(0.5)								05Ma.A **		
$*^{212}\text{At}(\alpha)^{208}\text{Bi}$	E $_{\alpha}$ =7679(10) to ground state, 7618(10) to 63.3 level								96Li37 **		
*	error estimated by the evaluators								GAu **		
$*^{212}\text{At}^m(\alpha)^{208}\text{Bi}$	Original E $_{\alpha}$ =7900(8); calibration ^{211}Po 7448(1), now 7450.3(0.5) keV								GAu **		
$*^{212}\text{At}^m(\alpha)^{208}\text{Bi}$	Original E $_{\alpha}$ =7887.7(0.2); calibration ^{211}Po 7450(2), now 7450.3(0.5)								GAu **		
$*^{212}\text{At}^m(\alpha)^{208}\text{Bi}$	E $_{\alpha}$ =7897(10) to ground state, 7837(10) to 63.3 level								96Li37 **		
*	error estimated by the evaluators								GAu **		
$*^{212}\text{Fr}(\alpha)^{208}\text{At}$	E $_{\alpha}$ =6341(3) (recalibrated as in reference) to 63.70 level								91Ry01 **		
$*^{212}\text{Ra}(\alpha)^{208}\text{Rn}$	E $_{\alpha}$ =6898(5) to ground state, 6269(5) to 635.1 level								03He06 **		
$*^{212}\text{Pb}(\beta^-)^{212}\text{Bi}$	E $_{\beta^-}$ =330.7(2.5) 338(5) respectively to 0 ⁻ level at 238.63 keV								Ens037 **		
$^{213}\text{Tl-u}$	1893	65	1915	29	0.3	o		GS3	1.0	10Ch19	
	1915	29				2		GS3	1.0	12Ch19	
$^{213}\text{Fr}-^{133}\text{Cs}_{1,602}$	147649.1	7.4	147652	5	0.4	1	55	55 ^{213}Fr	MA8	1.0	09Ko35
$^{207}\text{Fr}-^{213}\text{Fr}_{324}$ $^{204}\text{Fr}_{676}$	-2540	330	-2104	24	0.5	U			P24	2.5	82Au01 *
$^{208}\text{Fr}-^{213}\text{Fr}_{279}$ $^{206}\text{Fr}_{721}$	-700	60	-850	80	-1.0	U			P24	2.5	82Au01
$^{209}\text{Fr}-^{213}\text{Fr}_{327}$ $^{207}\text{Fr}_{673}$	-670	60	-692	19	-0.1	U			P24	2.5	82Au01
$^{209}\text{Fr}-^{213}\text{Fr}_{196}$ $^{208}\text{Fr}_{804}$	-980	60	-928	17	0.3	U			P24	2.5	82Au01
$^{211}\text{Fr}-^{213}\text{Fr}_{330}$ $^{210}\text{Fr}_{670}$	-830	60	-735	16	0.6	U			P24	2.5	82Au01
$^{212}\text{Fr}-^{213}\text{Fr}_{498}$ $^{211}\text{Fr}_{502}$	270	50	332	11	0.5	U			P24	2.5	82Au01
$^{213}\text{Bi}(\alpha)^{209}\text{Tl}$	5982.6	6.				2					64Gr11
$^{213}\text{Po}(\alpha)^{209}\text{Pb}$	8537.1	5.	8536.1	2.6	-0.2	-					64Va20 Z
	8536.5	3.			-0.1	-			Bka		82Bo04 Z
ave.	8536.6	2.6			-0.2	1	95	93 ^{213}Po	average		
$^{213}\text{At}(\alpha)^{209}\text{Bi}$	9254.2	12.	9254	5	0.0	2					70Bo13
	9254.2	5.			0.0	2			Lvn		87De.A
$^{213}\text{Rn}(\alpha)^{209}\text{Po}$	8245.1	8.	8243	5	-0.3	3					67Va20
	8240.0	10.			0.3	3					70Va13
	8242	10			0.1	3			GSa		00He17 *
	8218.6	44.			0.5	U					05Li17
$^{213}\text{Fr}(\alpha)^{209}\text{At}$	6904.0	5.	6904.8	1.2	0.2	-					67Va20 Z
	6908.0	5.			-0.6	-					74Ho27 Z
	6904.6	2.			0.1	-			Bka		82Bo04 Z
	6904.9	1.7			0.0	-			GSa		05Ku06
ave.	6904.9	1.2			-0.1	1	99	53 ^{209}At	average		

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{213}\text{Ra}(\alpha)^{209}\text{Rn}$	6860.3	5.	6861.8	2.3	0.3	3					67Va22 *
	6862.4	5.			-0.1	3					76Ra37 *
	6862.2	3.			-0.1	3			GSa		06Ku26 *
$^{213}\text{Ra}^m(\alpha)^{209}\text{Rn}$	8630.4	5.	8630	4	-0.1	3					76Ra37
	8629.3	5.			0.1	3			GSa		06Ku26 *
$^{213}\text{Ac}(\alpha)^{209}\text{Fr}$	7505.2	8.	7500	50	-0.1	3					68Va04 *
	7497.0	10.			0.0	o			GSa		00He17
	7497.0	5.			0.0	3			GSa		02He.A
$^{213}\text{Th}(\alpha)^{209}\text{Ra}$	7841.5	10.	7840	50	-0.1	7					68Va18 *
	7836.5	10.			0.0	7					80Ve01
$^{213}\text{Pa}(\alpha)^{209}\text{Ac}$	8393.9	15.				4			GSa		00He17
$^{213}\text{Bi}(\beta^-)^{213}\text{Po}$	1430	10	1423	6	-0.7	1	31	24 ^{213}Bi			68Va17 *
$^{207}\text{Fr}-^{213}\text{Fr}_{.324} \text{ } ^{204}\text{Fr}$.	$D_M=-2470(330)$ keV for $^{204}\text{Fr}^x$ at estimated 100(70) keV										
$^{213}\text{Rn}(\alpha)^{209}\text{Po}$	$E_\alpha=8088(10), 7550(15)$ to ground state, 540.3 level										
$^{213}\text{Ra}(\alpha)^{209}\text{Rn}$	$E_\alpha=6730.7, 6623.7, 6520.7(3,Z)$ to ground state, $1/2^-$ at 110.1, $3/2^-$ at 214.7keV										
$^{213}\text{Ra}(\alpha)^{209}\text{Rn}$	$E_\alpha=6731.9, 6624.9, 6523.9(5,Z)$ to ground state, $1/2^-$ at 110.1, $3/2^-$ at 214.7keV										
$^{213}\text{Ra}(\alpha)^{209}\text{Rn}$	$E_\alpha=6733(3), 6625(3)$ to ground state and $1/2^-$ level at 110.1 keV										
$^{213}\text{Ra}^m(\alpha)^{209}\text{Rn}$	$E_\alpha=8467(5) 8358(10)$ to ground state and $1/2^-$ level at 110.1 keV										
$^{213}\text{Ac}(\alpha)^{209}\text{Fr}$	Original Q increased by 2 keV, as in reference										
$^{213}\text{Th}(\alpha)^{209}\text{Ra}$	Original Q increased by 2 keV, as in reference										
$^{213}\text{Bi}(\beta^-)^{213}\text{Po}$	$E_{\beta^-}=1420(10) 1018(15)$ to ground state and $7/2^+$ level at 440.45 keV										
$^{214}\text{Ra}-^{133}\text{Cs}_{1.609}$	152235	22	152228	6	-0.3	U			MA8	1.0	08We02
$^{214}\text{Bi}(\alpha)^{210}\text{Tl}$	5621.3	3.0				2					91Ry01 *
$^{214}\text{Po}(\alpha)^{210}\text{Pb}$	7833.54	0.06	7833.46	0.06	0.0	1	100	98 ^{214}Po			71Gr17 Z
$^{214}\text{At}(\alpha)^{210}\text{Bi}$	8987.2	4.				2			Bka		82Bo04 Z
$^{214}\text{At}^m(\alpha)^{210}\text{Bi}$	9046.4	8.				2					82Ew01
$^{214}\text{At}^n(\alpha)^{210}\text{Bi}$	9220.8	5.				2					82Ew01 *
$^{214}\text{Rn}(\alpha)^{210}\text{Po}$	9212.6	20.	9208	9	-0.2	2					70To07
	9207.5	10.			0.1	2					70Va13
$^{214}\text{Fr}(\alpha)^{210}\text{At}$	8585.5	8.	8589	4	0.4	4					68Va18 *
	8590.9	5.			-0.5	4					70To18 *
	8583.8	10.			0.5	4			Dbb		89An.A
	8590.8	20.			-0.1	U			GSa		90Ni05
	8578.7	48.			0.2	U					05Li17
$^{214}\text{Fr}^m(\alpha)^{210}\text{At}$	8711.7	8.	8710	3	-0.2	4					68Va04 Z
	8711.7	5.			-0.3	4					70To18 *
	8708.1	5.			0.4	4			GSa		05Ku06
$^{214}\text{Ra}(\alpha)^{210}\text{Rn}$	7271.7	5.	7272.5	2.6	0.2	4					67Va22 Z
	7275.6	5.			-0.6	4					74Ho27 Z
	7273.2	10.			-0.1	4			GSa		00He17 *
	7271.2	4.			0.3	4			GSa		06Ku26 *
$^{214}\text{Ra}(\alpha)^{210}\text{Rn}^m$	5563.9	30.				5			GSa		06Ku26 *
$^{214}\text{Ac}(\alpha)^{210}\text{Fr}$	7351.7	5.	7352.1	2.5	0.1	2					68Va04 Z
	7347.6	10.			0.5	2			Dbb		89An13
	7347.6	10.			0.5	o			GSa		00He17 *
	7349.6	5.			0.5	o			GSa		02He.A
	7352.7	3.			-0.2	2			GSa		04Ku24 *
$^{214}\text{Th}(\alpha)^{210}\text{Ra}$	7828.6	10.	7827	5	-0.1	6					68Va18
	7823.5	10.			0.4	6					80Ve01
	7828.6	8.			-0.2	6					07Le14
$^{214}\text{Pa}(\alpha)^{210}\text{Ac}$	8270.9	15.				6			Jya		00He17
$^{214}\text{Pb}(\beta^-)^{214}\text{Bi}$	1024	20	1019	11	-0.2	1	32	31 ^{214}Bi			52Be78 *
$^{214}\text{Bi}(\beta^-)^{214}\text{Po}$	3260	30	3270	11	0.3	-					56Da06
	3275	15			-0.3	-					60Lu07
ave.	3272	13			-0.2	1	69	69 ^{214}Bi			average
$^{214}\text{Bi}(\alpha)^{210}\text{Tl}$	$E_\alpha=5516(3)$ recommended in place of the following E_α :										
*	$E_\alpha=5510.5(1.0)$ keV										
*	$E_\alpha=5515.8(3.0)$ keV										
$^{214}\text{At}^n(\alpha)^{210}\text{Bi}$	$E_\alpha=8782(5)$ to 9^- level at 271.31 keV										
$^{214}\text{Fr}(\alpha)^{210}\text{At}$	$E_\alpha=8425.5, 8352.5(8,Z)$ to ground state, 4^+ level at 72.65 keV										
$^{214}\text{Fr}(\alpha)^{210}\text{At}$	$E_\alpha=8428.3, 8360.3(5,Z)$ to ground state, 4^+ level at 72.65 keV										
$^{214}\text{Fr}^m(\alpha)^{210}\text{At}$	$E_\alpha=8546.8, 8477.8(5,Z)$ to ground state, 4^+ level at 72.65 keV										
$^{214}\text{Ra}(\alpha)^{210}\text{Rn}$	$E_\alpha=7137(10), 6505(15)$ to ground state, 641.9 level										

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
* ²¹⁴ Ra(α) ²¹⁰ Rn	Also $E_\alpha=8950(30)$ keV $Q_\alpha=9120.9$ keV from ²¹⁴ Ra ⁿ at 1865.2 keV										
* ²¹⁴ Ra(α) ²¹⁰ Rn ^m	$E_\alpha=7290(30)$ $Q_\alpha=7429.1$ from ²¹⁴ Ra ⁿ at 1865.2 keV										
* ²¹⁴ Ac(α) ²¹⁰ Fr	$E_\alpha=7210(10)$, 7080(15) to ground state, 138.6 level										
* ²¹⁴ Ac(α) ²¹⁰ Fr	Also $E_\alpha=7081(4)$ keV to 139.0(1) level										
* ²¹⁴ Pb(β^-) ²¹⁴ Bi	$E_{\beta^-}=670(20)$ to (0 ⁻ , 1 ⁻) level at 351.9324 keV, and another branch										
²¹⁵ Bi- ¹³³ Cs _{1.617}	154654	16				2			MA8	1.0	08We02
²¹⁵ Po(α) ²¹¹ Pb	7526.45	0.8	7526.3	0.8	-0.1	1	99	94 ²¹¹ Pb			71Gr17 Z
²¹⁵ At(α) ²¹¹ Bi	8178.5	4.				2			Bka		82Bo04 Z
²¹⁵ Rn(α) ²¹¹ Po	8834.7	20.	8839	8	0.2	3			ORa		69Ha32
	8839.8	8.			-0.1	3					70Va13
²¹⁵ Fr(α) ²¹¹ At	9543.0	15.	9540	7	-0.2	3					70Bo13
	9532.7	10.			0.8	3					74No02
	9546.9	10.			-0.6	3					84De16
²¹⁵ Ra(α) ²¹¹ Rn	8862.7	5.	8864	3	0.3	3					68Va18 Z
	8865.5	5.			-0.2	3					70To18 Z
	8865.3	10.			-0.1	3			GSa		00He17
	8865.3	46.			0.0	U					05Li17
²¹⁵ Ac(α) ²¹¹ Fr	7748.4	5.	7746	3	-0.5	2					68Va04 Z
	7746	10			0.0	o			GSa		00He17 *
	7740.3	5.			1.1	o			GSa		02He.A
	7744.4	4.			0.4	2			GSa		04Ku24
²¹⁵ Th(α) ²¹¹ Ra	7664.9	8.	7665	4	0.0	3					68Va18
	7667.0	10.			-0.2	o			GSa		89He03
	7664	15			0.0	o			GSa		00He17 *
	7665	5			-0.1	3			GSa		05Ku31 *
	7662.8	10.			0.2	3			Jya		07Le14 *
²¹⁵ Pa(α) ²¹¹ Ac	8238.6	15.	8240	50	0.1	3					79Sc09
	8244.7	15.			-0.1	3			GSa		00He17
* ²¹⁵ Ac(α) ²¹¹ Fr	$E_\alpha=7602(10)$ 7026(15) 6960(15) to ground state, 11/2 ⁻ at 583.2, 13/2 ⁻ at 652.62										
* ²¹⁵ Th(α) ²¹¹ Ra	$E_\alpha=7520(15)$, 7387(15), 7336(15) to ground state, 133.6, 192.4 levels										
* ²¹⁵ Th(α) ²¹¹ Ra	$E_\alpha=7523(5)$, 7392(4), 7335(5), 7236(7) to ground state, 133.9, 194.5, 295.1 levels										
* ²¹⁵ Th(α) ²¹¹ Ra	Also $E_\alpha=7399(20)$ keV to 133.9 level										
²¹⁶ Bi- ¹³³ Cs _{1.624}	159852	12				2			MA8	1.0	08We02
²¹⁶ Po(α) ²¹² Pb	6906.44	0.5	6906.3	0.5	-0.1	1	99	56 ²¹² Pb			71Gr17 Z
²¹⁶ At(α) ²¹² Bi	7949.7	3.				2			Bka		82Bo04 Z
²¹⁶ At ^m (α) ²¹² Bi	8110.5	10.				2					71Br13
²¹⁶ Rn(α) ²¹² Po	8199.2	10.	8197	6	-0.2	2					61Ru06
	8201.2	10.			-0.4	2					70Va13
	8192.1	10.			0.5	2					71Br13
²¹⁶ Fr(α) ²¹² At	9175.3	12.	9174	3	-0.1	4					70Bo13
	9174.1	5.			0.0	4					96Li37 *
	9174.3	5.			0.0	4			GSa		07Ku30
²¹⁶ Fr ^m (α) ²¹² At ^m	9170.2	5.				4			GSa		07Ku30
²¹⁶ Ra(α) ²¹² Rn	9525.8	8.				4					73No09
²¹⁶ Ac(α) ²¹² Fr	9243.3	8.	9235	6	-1.0	2					70To18 Z
	9223.1	10.			1.2	2			GSa		00He17
	9241.4	50.9			-0.1	U					05Li17
²¹⁶ Ac ^m (α) ²¹² Fr	9280.0	5.	9279	4	-0.2	2					70To18 Z
	9284	10			-0.5	o			GSa		00He17 *
	9278.2	5.			0.2	o			GSa		02He.A
	9277.2	7.			0.3	2			GSa		04Ku24 *
²¹⁶ Th(α) ²¹² Ra	8070.7	8.	8072	4	0.2	6					68Va18
	8071	10			0.1	o			GSa		00He17 *
	8073	5			-0.1	6			GSa		05Ku31 *
	8069.7	44.			0.1	U					05Li17
²¹⁶ Th ^m (α) ²¹² Ra	10099.4	20.	10116	8	0.8	6					83Hi08
	10107.4	40.			0.2	U			Dbb		93An07
	10120.8	15.			-0.3	6			GSa		00He17
	10117.5	10.			-0.2	6					05Ku31 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{216}\text{Pa}(\alpha)^{212}\text{Ac}$	8013.7	20.	8097	15	4.2	B					79Sc09	
	8110.5	50.			-0.3	U			JAA		98Ik01	
	8097	15				3			GSa		00He17 *	
$*^{216}\text{Fr}(\alpha)^{212}\text{At}$	E $_{\alpha}$ =9004(5); and E $_{\alpha}$ =8933(8) from 133.3 level to 205.6 keV										96Li37 **	
$*^{216}\text{Ac}^m(\alpha)^{212}\text{Fr}$	E $_{\alpha}$ =9110(10), 9026(15), 8586(15) to ground state, 82.4, 542.2 levels										00He17 **	
$*^{216}\text{Ac}^m(\alpha)^{212}\text{Fr}$	Also E $_{\alpha}$ =9029(7) keV to 82.6(1) level										04Ku24 **	
$*^{216}\text{Th}(\alpha)^{212}\text{Ra}$	E $_{\alpha}$ =7923(10), 7302(15) to ground state, 618.3 level										00He17 **	
$*^{216}\text{Th}(\alpha)^{212}\text{Ra}$	E $_{\alpha}$ =7923(5), 7304(4) to ground state, 629.3(1) level										05Ku31 **	
$*^{216}\text{Th}^m(\alpha)^{212}\text{Ra}$	E $_{\alpha}$ =9930(10), 9312(12) to ground state, 629.3(1) level										05Ku31 **	
$*^{216}\text{Pa}(\alpha)^{212}\text{Ac}$	E $_{\alpha}$ =7948(15), 7815(15) to ground state, 133.6 level										00He17 **	
$^{217}\text{Bi-u}$	9420	32	9372	19	-1.5	o			GS3	1.0	08Ch.A	
	9372	19				2			GS3	1.0	12Ch19	
$^{217}\text{Po}(\alpha)^{213}\text{Pb}$	6660.3	4.	6662.1	2.4	0.5	4			DBa		77Vy02 Z	
	6660.0	4.			0.5	4			Orm		97Li23	
	6666.0	4.			-1.0	4			Anv		03Ku25	
$^{217}\text{At}(\alpha)^{213}\text{Bi}$	7200.3	3.	7201.3	1.2	0.4	-					60Vo05 Z	
	7200.3	2.			0.5	-			Orm		62Wa28 Z	
	7204.6	5.			-0.6	-					64Va20 Z	
	7193.1	5.			1.6	-			DBa		77Vy02 Z	
	7204.0	2.			-1.3	-			Bka		82Bo04	
	ave.	7201.4	1.2			-0.1	1	99	76 ^{213}Bi			average
$^{217}\text{Rn}(\alpha)^{213}\text{Po}$	7887.5	4.	7887.1	2.9	-0.1	2					61Ru06 Z	
	7886.9	4.			0.1	2			Bka		82Bo04 Z	
$^{217}\text{Fr}(\alpha)^{213}\text{At}$	8471.5	8.	8469	4	-0.3	3					70Bo13	
	8468.4	5.			0.2	3			Lvn		87De.A	
$^{217}\text{Ra}(\alpha)^{213}\text{Rn}$	9159.1	8.	9161	6	0.2	4					70To07	
	9163.2	10.			-0.2	4					70Va13	
$^{217}\text{Ac}(\alpha)^{213}\text{Fr}$	9831.6	10.				2					73No09	
$^{217}\text{Ac}^m(\alpha)^{213}\text{Fr}$	11843.8	17.				2					85De14	
$^{217}\text{Th}(\alpha)^{213}\text{Ra}$	9424.1	10.	9435	4	1.1	4					68Va18	
	9424.1	20.			0.6	U					73Ha32	
	9421.1	15.			0.9	U					00Ni02	
	9442	15			-0.4	o			GSa		00He17 *	
	9435.6	5.			-0.1	4			GSa		02He29 *	
	9443.5	9.			-0.9	4			GSa		05Ku31	
	9424.1	47.			0.2	U					05Li17	
	$^{217}\text{Pa}(\alpha)^{213}\text{Ac}$	8486.7	10.	8489	4	0.2	4					68Va18
		8489.8	15.			-0.1	U					79Sc09
		8486.7	50.			0.0	U			JAA		98Ik01
8490.8		15.			-0.1	U			GSa		00He17	
8489.3		5.			-0.1	4			GSa		02He29 *	
$^{217}\text{Pa}^m(\alpha)^{213}\text{Ac}$	10351	20	10349	5	-0.1	U					79Sc09	
	10330.8	50.			0.4	U			JAA		98Ik01	
	10346.1	15.			0.2	o			GSa		00He17	
	10349.1	5.				4			GSa		02He29 *	
$^{217}\text{U}(\alpha)^{213}\text{Th}^p$	8155.6	20.	8170	50	0.3	9					00Ma65	
	8174.8	14.			-0.1	9			Jya		05Le42 *	
$*^{217}\text{Th}(\alpha)^{213}\text{Ra}$	E $_{\alpha}$ =9268(15), 8731(15), 8459(15) to ground state, 546.35, 822.7 levels										00He17 **	
$*^{217}\text{Th}(\alpha)^{213}\text{Ra}$	E $_{\alpha}$ =9261(5), 8725(5), 8455(5) to ground state, 546.35, 822.7 levels										02He29 **	
$*^{217}\text{Pa}(\alpha)^{213}\text{Ac}$	E $_{\alpha}$ =8337(5), 7873(5), 7728(5), 7710(5) to ground state, 466.1, 612.5, 634.3 levels										02He29 **	
$*^{217}\text{Pa}^m(\alpha)^{213}\text{Ac}$	Average of 5 E $_{\alpha}$'s to known levels										02He29 **	
$*^{217}\text{U}(\alpha)^{213}\text{Th}^p$	Only one event. Not reported in later publication 07Le14										WgM115**	
$^{218}\text{Bi-u}$	14178	34	14188	29	0.3	o			GS3	1.0	08Ch.A	
	14188	29				2			GS3	1.0	12Ch19	
$^{218}\text{Po}(\alpha)^{214}\text{Pb}$	6114.76	0.09	6114.68	0.09	0.0	1	100	99 ^{214}Pb			71Gr17 Z	

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{218}\text{At}(\alpha)^{214}\text{Bi}$	6874	3				2			Orm		58Wa.A *
$^{218}\text{Rn}(\alpha)^{214}\text{Po}$	7265.0	5.	7262.5	1.9	-0.5	-					56As38 Z
	7262.4	2.			0.1	-			Bka		82Bo04 Z
ave.	7262.7	1.9			-0.1	1	96	$94\ ^{218}\text{Rn}$			average
$^{218}\text{Fr}(\alpha)^{214}\text{At}$	8014.0	2.				3			Bka		82Bo04 Z
$^{218}\text{Fr}^m(\alpha)^{214}\text{At}$	8099.9	5.	8100	4	0.1	3					82Ew01 Z
	8100.9	5.			-0.1	3					99Sh03
$^{218}\text{Ra}(\alpha)^{214}\text{Rn}$	8549.1	8.	8546	6	-0.4	3					70To07
	8541.0	10.			0.5	3					70Va13
$^{218}\text{Ac}(\alpha)^{214}\text{Fr}$	9377.4	15.				5					70Bo13
$^{218}\text{Th}(\alpha)^{214}\text{Ra}$	9861.2	20.	9849	9	-0.6	5					73Ha32
	9846.1	10.			0.3	5					73No09
$^{218}\text{Pa}(\alpha)^{214}\text{Ac}$	9794.1	20.	9815	10	1.0	F					79Sc09 *
	9815	10				3		GSa			00He17 *
$^{218}\text{U}(\alpha)^{214}\text{Th}$	8786.6	25.	8775	9	-0.5	7			Dbb		92An04
	8773.2	9.			0.2	7		Jya			07Le14
$^{218}\text{U}^m(\alpha)^{214}\text{Th}$	10878.1	17.				7		Jya			07Le14
$^{218}\text{At}(\alpha)^{214}\text{Bi}$	$E_\alpha=6696.3(3.0,Z)$ to 2^- level at 53.2282 keV										Ens062 **
$^{218}\text{Pa}(\alpha)^{214}\text{Ac}$	$E_\alpha=9614(20)$; F : probably piled-up with e^-										00He17 **
$^{218}\text{Pa}(\alpha)^{214}\text{Ac}$	$E_\alpha=9544(10)$ to 91.8 level										00He17 **
$^{219}\text{Po-u}$	13601	32	13614	17	0.4	o			GS3	1.0	08Ch.A
	13614	17				2			GS3	1.0	12Ch19
$^{219}\text{At}(\alpha)^{215}\text{Bi}$	6390.9	50.	6324	15	-1.3	U					53Hy83
$^{219}\text{Rn}(\alpha)^{215}\text{Po}$	6946.21	0.3	6946.1	0.3	-0.1	1	100	$95\ ^{215}\text{Po}$			71Gr17 Z
$^{219}\text{Fr}(\alpha)^{215}\text{At}$	7448.7	2.0	7448.5	1.8	-0.1	3			Orm		68Ba73 Z
	7448.2	4.			0.1	3			Bka		82Bo04 Z
$^{219}\text{Ra}(\alpha)^{215}\text{Rn}$	8139.0	20.	8138	3	-0.1	U			ORa		69Ha32
	8128.7	10.			0.9	U					70Va13
	8128.7	20.			0.5	U			Dbb		89An13
	8138.0	3.				4					94Sh02
$^{219}\text{Ac}(\alpha)^{215}\text{Fr}$	8826.5	10.				4					70Bo13
$^{219}\text{Th}(\alpha)^{215}\text{Ra}$	9514.1	20.				4					73Ha32
$^{219}\text{Pa}(\alpha)^{215}\text{Ac}$	10084.6	50.				3					87Fa.A
$^{219}\text{U}(\alpha)^{215}\text{Th}$	9860.4	40.	9940	50	1.6	4			Dbb		93An07
	9956.2	18.			-0.3	4			Jya		07Le14
$^{220}\text{Po-u}$	16420	32	16386	19	-1.1	o			GS3	1.0	08Ch.A
	16386	19				2			GS3	1.0	12Ch19
$^{220}\text{At-u}$	15427	32	15433	15	0.2	o			GS3	1.0	08Ch.A
	15433	15				2			GS3	1.0	12Ch19
$^{220}\text{Rn}-^{133}\text{Cs}_{1.654}$	167777	11	167776.6	2.3	0.0	U			MA8	1.0	09Ne03
$^{210}\text{Fr}-^{220}\text{Fr}_{159}$ $^{208}\text{Fr}_{841}$	-2930	60	-2916	18	0.1	U			P24	2.5	82Au01
$^{211}\text{Fr}-^{220}\text{Fr}_{240}$ $^{208}\text{Fr}_{761}$	-4850	70	-4867	15	-0.1	U			P24	2.5	82Au01
$^{212}\text{Fr}-^{220}\text{Fr}_{321}$ $^{208}\text{Fr}_{679}$	-5450	60	-5392	12	0.4	U			P24	2.5	82Au01
$^{212}\text{Fr}-^{220}\text{Fr}_{263}$ $^{209}\text{Fr}_{738}$	-3730	60	-3755	14	-0.2	U			P24	2.5	82Au01
$^{213}\text{Fr}-^{220}\text{Fr}_{352}$ $^{209}\text{Fr}_{649}$	-5170	50	-5149	11	0.2	U			P24	2.5	82Au01
$^{212}\text{Fr}-^{220}\text{Fr}_{193}$ $^{210}\text{Fr}_{808}$	-3160	60	-3039	15	0.8	U			P24	2.5	82Au01
$^{220}\text{At}(\alpha)^{216}\text{Bi}^m$	6053.3	6.				3					89Bu09
$^{220}\text{Rn}(\alpha)^{216}\text{Po}$	6404.75	0.10	6404.66	0.10	0.0	1	100	$57\ ^{216}\text{Po}$			71Gr17 Z
$^{220}\text{Fr}(\alpha)^{216}\text{At}$	6799.0	2.	6800.7	1.9	0.9	3			Orm		68Ba73 *
	6811.6	5.			-2.2	3					74Ho27 *
$^{220}\text{Ra}(\alpha)^{216}\text{Rn}$	7593.3	10.	7592	6	-0.1	3					61Ru06
	7595.3	10.			-0.3	3					70Va13
	7598.3	20.			-0.3	3			Dbb		90An19
	7587.2	10.			0.5	3			GSa		00He17
$^{220}\text{Ac}(\alpha)^{216}\text{Fr}$	8347.1	10.	8348	4	0.1	5					70Bo13
	8348	5			0.0	5					97Sh09 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{223}\text{At-u}$	25172	32	25151	15	-0.7	o			GS3	1.0	08Ch.A
	25151	15				2			GS3	1.0	12Ch19
$^{223}\text{Rn}-^{133}\text{Cs}_{1.677}$	180453	11	180446	8	-0.6	1	58	58 ^{223}Rn	MA8	1.0	09Ne03
$^{223}\text{Rn-u}$	21899	32	21889	8	-0.3	o			GS3	1.0	08Ch.A
	21880	13			0.7	1	42	42 ^{223}Rn	GS3	1.0	12Ch19
$^{213}\text{Fr}-^{223}\text{Fr}_{.087}$ $^{212}\text{Fr}_{.913}$	-1900	60	-1942	9	-0.3	U			P24	2.5	82Au01
$^{222}\text{Fr}-^{223}\text{Fr}_{.498}$ $^{221}\text{Fr}_{.502}$	790	100	529	21	-1.0	U			P34	2.5	86Au02
$^{223}\text{Fr}(\alpha)^{219}\text{At}$	5431.6	80.	5562	3	1.6	U					55Ad10
	5562	3				3					01Li44
$^{223}\text{Ra}(\alpha)^{219}\text{Rn}$	5978.9	0.3	5978.99	0.21	0.3	-			Orm		62Wa18 *
	5979.1	0.3			-0.4	-			BIP		71Gr17 *
ave.	5979.00	0.21			0.0	1	100	95 ^{219}Rn			average
$^{223}\text{Ac}(\alpha)^{219}\text{Fr}$	6783.2	1.0				4			Orm		69Le.A *
$^{223}\text{Th}(\alpha)^{219}\text{Ra}$	7602	23	7567	4	-1.5	U			ORa		69Ha32 *
	7589	14			-1.6	U					70Va13 *
	7570	25			-0.1	U					84Mi.A *
	7568	10			-0.1	5					87E102 *
	7567.4	10.			-0.1	5			Dbb		90An19 *
	7566.1	5.			0.1	5					92Li09 *
	8345.0	10.	8330	50	-0.4	5					70Bo13
	8340.1	10.			-0.3	o			Dbb		89An.A
8350.0	15.			-0.5	U			Dbb		90An19	
8339.9	15.			-0.3	U			GSa		95Ho.C	
8321.6	5.			0.1	5			Jya		99Ho28	
$^{223}\text{U}(\alpha)^{219}\text{Th}$	8940.9	40.				5			Dbb		91An10
$^{223}\text{Fr}(\beta^-)^{223}\text{Ra}$	1170	10	1149.2	0.8	-2.1	U					75We23 *
$^{223}\text{Ra}(\alpha)^{219}\text{Rn}$	$E_\alpha=5747.0(0.4,Z)$, $5715.7(0.3,Z)$, $5606.7(0.3,Z)$ keV										62Wa18 **
*	to $11/2^+$ level at 126.77, $7/2^+$ at 158.64, $3/2^+$ at 269.48 keV										Ens01a **
$^{223}\text{Ra}(\alpha)^{219}\text{Rn}$	$E_\alpha=5747.0(0.40,Z)$, $5716.23(0.29,Z)$, $5606.73(0.30,Z)$ keV										71Gr17 **
*	to $11/2^+$ level at 126.77, $7/2^+$ at 158.64, $3/2^+$ at 269.48 keV										Ens01a **
$^{223}\text{Ac}(\alpha)^{219}\text{Fr}$	$E_\alpha=6661.6$, 6646.7 , $6563.7(1.0,Z)$ to ground state, $5/2^+$ at 15.0, $7/2^-$ at 98.58										Ens01a **
$^{223}\text{Th}(\alpha)^{219}\text{Ra}$	$E_\alpha=7330(20)$ to mixture of excited states at 138(10) keV										GAu **
$^{223}\text{Th}(\alpha)^{219}\text{Ra}$	$E_\alpha=7317(10)$ to mixture of excited states at 138(10) keV										GAu **
$^{223}\text{Th}(\alpha)^{219}\text{Ra}$	$E_\alpha=7324(10)$ to 113.8, 7285(10) 55% to 140.0, 26% to 152.0 level										92Li09 **
$^{223}\text{Th}(\alpha)^{219}\text{Ra}$	$E_\alpha=7290(10)$ 55% to 140.0, 26% to 152.0 level										92Li09 **
$^{223}\text{Th}(\alpha)^{219}\text{Ra}$	$E_\alpha=7318(5)$, $7293(5)$, $7281(5)$ to 113.8, 140.0, 152.0 levels										92Li09 **
$^{223}\text{Fr}(\beta^-)^{223}\text{Ra}$	$E_{\beta^-}=1120(10)$ to $3/2^-$ level at 50.128 keV										Ens01a **
$^{224}\text{At-u}$	29744	63	29749	24	0.1	o			GS3	1.0	10Ch19
	29749	24				2			GS3	1.0	12Ch19
$^{224}\text{Rn}-^{133}\text{Cs}_{1.684}$	183304	16	183315	11	0.7	1	43	43 ^{224}Rn	MA8	1.0	09Ne03
$^{224}\text{Rn-u}$	24073	32	24096	11	0.7	o			GS3	1.0	08Ch.A
	24104	14			-0.6	1	57	57 ^{224}Rn	GS3	1.0	12Ch19
$^{224}\text{Fr-u}$	23399	32	23398	14	0.0	o			GS3	1.0	08Ch.A
	23398	14				2			GS3	1.0	12Ch19
$^{224}\text{Ra}-^{133}\text{Cs}_{1.684}$	179430	30	179430.9	2.3	0.0	U			MA8	1.0	12Bo.A
$^{223}\text{Fr}-^{224}\text{Fr}_{.747}$ $^{220}\text{Fr}_{.253}$	-620	70	-802	10	-1.0	U			P34	2.5	86Au02
$^{222}\text{Fr}-^{224}\text{Fr}_{.496}$ $^{220}\text{Fr}_{.505}$	10	70	-310#	50#	-1.8	U			P24	2.5	82Au01
$^{223}\text{Fr}-^{224}\text{Fr}_{.747}$ $^{220}\text{Fr}_{.253}$	-410	70	-880#	80#	-2.7	B			P24	2.5	82Au01
$^{223}\text{Fr}-^{224}\text{Fr}_{.664}$ $^{221}\text{Fr}_{.336}$	780	110	-550	9	-4.8	F			P34	2.5	86Au02 *
$^{223}\text{Fr}-^{224}\text{Fr}_{.664}$ $^{221}\text{Fr}_{.336}$	-110	70	-620#	70#	-2.9	B			P24	2.5	82Au01
$^{224}\text{Ra}(\alpha)^{220}\text{Rn}$	5788.93	0.15	5788.85	0.15	0.0	1	100	57 ^{220}Rn			71Gr17 Z
$^{224}\text{Ac}(\alpha)^{220}\text{Fr}$	6326.9	0.7				4			Orm		69Le.A *
$^{224}\text{Th}(\alpha)^{220}\text{Ra}$	7304.7	10.	7298	6	-0.6	4					61Ru06
	7304.7	10.			-0.6	4					70Va13
	7300.7	20.			-0.1	U			Dbb		89An13
	7286.4	10.			1.2	4			GSa		00He17
	7695.2	10.	7694	4	-0.2	6					70Bo13 *
7692.6	10.			0.1	F			Dbb		90An19 *	
7680	15			0.9	U			GSa		95Ho.C	
7693.3	5.			0.1	6						96Li05 *
$^{224}\text{U}(\alpha)^{220}\text{Th}$	8624.3	15.	8620	12	-0.3	6			Dbb		91An10
	8612.1	20.			0.4	6			ORa		92To02

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{224}\text{Fr}(\beta^-)^{224}\text{Ra}$	2830	50	2968	13	2.8	U					75We23 *
* $^{223}\text{Fr}-^{224}\text{Fr}_{.664}$ ^{221}Fr .	F : rejection based on line-shape analysis										86Au02 **
* $^{224}\text{Ac}(\alpha)^{220}\text{Fr}$	$E_\alpha=6213.8, 6207.0, 6141.7, 6059.8(0.7,Z)$ keV										69Le.A **
*	to ground state, 3^+ at 6.92, 3^+ at 72.99, 2^- at 156.82 keV										Ens114 **
* $^{224}\text{Pa}(\alpha)^{220}\text{Ac}$	$E_\alpha=7490(10)$ to 5^- level at 68.71 keV										Ens114 **
* $^{224}\text{Pa}(\alpha)^{220}\text{Ac}$	F : intensities in contradiction with reference										96Li05 **
* $^{224}\text{Pa}(\alpha)^{220}\text{Ac}$	$E_\alpha=7488(5), 7375(5)$ to (5^-) level at 68.71 keV and 184.21 level										Ens114 **
* $^{224}\text{Fr}(\beta^-)^{224}\text{Ra}$	$E_{\beta^-}=1780(50)$ to 1^- level at 1052.95 keV, and other E_{β^-}										Ens979 **
$^{225}\text{Rn}-^{133}\text{Cs}_{1.692}$	188484	23	188461	12	-1.0	1	27	27 ^{225}Rn	MA8	1.0	09Ne03
$^{225}\text{Rn-u}$	28498	32	28486	12	-0.4	o			GS3	1.0	08Ch.A
	28477	14			0.6	1	73	73 ^{225}Rn	GS3	1.0	12Ch19
$^{225}\text{Fr-u}$	25574	14	25573	13	-0.1	1	84	84 ^{225}Fr	GS3	1.0	12Ch19
$^{221}\text{Fr}-^{225}\text{Fr}_{.655}$ $^{213}\text{Fr}_{.346}$	-1110	60	-1095	9	0.1	U			P24	2.5	82Au01
$^{224}\text{Fr}^x-^{225}\text{Fr}_{.747}$ $^{221}\text{Fr}_{.253}$	50	80	740#	100#	3.5	B			P24	2.5	82Au01
$^{224}\text{Fr}^x-^{225}\text{Fr}_{.498}$ $^{223}\text{Fr}_{.502}$	190	80	800#	100#	3.1	B			P24	2.5	82Au01
$^{225}\text{Ra}(\alpha)^{221}\text{Rn}$	5096.7	5.1				2					00Li37
$^{225}\text{Ac}(\alpha)^{221}\text{Fr}$	5936.1	2.	5935.1	1.4	-0.5	-			Orm		67Ba51 Z
	5934.5	2.			0.3	-					67Dz02 Z
	ave.	5935.2	1.4		-0.1	1	99	78 ^{221}Fr			average
$^{225}\text{Th}(\alpha)^{221}\text{Ra}$	6920.7	3.	6921.4	2.1	0.2	4					61Ru06 *
	6922.1	3.			-0.2	4					87Li.A *
$^{225}\text{Pa}(\alpha)^{221}\text{Ac}$	7381.5	20.	7390	50	0.2	B			ORa		68Ha14
	7376.4	10.			0.3	F					70Bo13 *
	7392.5	5.				5			Lvn		87De.A
	7383.5	19.			0.2	U					00Sa52
$^{225}\text{U}(\alpha)^{221}\text{Th}$	8012.7	20.	8015	7	0.1	o			Dbb		89An13
	8022.9	20.			-0.4	6			GSa		89He13
	8021.9	15.			-0.5	6			ORa		92To02
	8012.6	20.4			0.1	6			Dbb		94Ye08
	8010	10			0.5	6			GSa		00He17 *
$^{225}\text{Np}(\alpha)^{221}\text{Pa}$	8786.5	20.				4			Dbb		94Ye08
$^{225}\text{Fr}(\beta^-)^{225}\text{Ra}$	1820	30	1826	12	0.2	1	17	16 ^{225}Fr			75We23 *
$^{225}\text{Ra}(\beta^-)^{225}\text{Ac}$	360	10	356	5	-0.4	1	25	20 ^{225}Ac			55Ma.A *
	360	30			-0.1	U					55Pe24 *
* $^{225}\text{Th}(\alpha)^{221}\text{Ra}$	$E_\alpha=6800.2, 6746.2, 6503.2, 6480.2, 6443.2(3,Z)$ keV										61Ru06 **
*	to ground state, $7/2^+$ 53.14, $7/2^+$ 299.16, $3/2^+$ 321.39, $5/2^+$ 359.02 levels										Ens075 **
* $^{225}\text{Th}(\alpha)^{221}\text{Ra}$	$E_\alpha=6799.3, 6745.3, 6504.3, 6483.3, 6447.3(3,Z)$ keV										87Li.A **
*	to ground state, $7/2^+$ 53.14, $7/2^+$ 299.16, $3/2^+$ 321.39, $5/2^+$ 359.02 levels										Ens075 **
* $^{225}\text{Pa}(\alpha)^{221}\text{Ac}$	F : average of two branches										87De.A **
* $^{225}\text{U}(\alpha)^{221}\text{Th}$	$E_\alpha=7868(15), 7621(15)$ to ground state, 250.9 level										00He17 **
* $^{225}\text{Fr}(\beta^-)^{225}\text{Ra}$	$E_{\beta^-}=1640(10)$. 28% to 225.2 level (reference)										89An02 **
*	but lower levels also fed directly										Ens906 **
* $^{225}\text{Ra}(\beta^-)^{225}\text{Ac}$	$E_{\beta^-}=320(10)$ 320(30) respectively, to $3/2^+$ level at 40.09 keV										Ens095 **
$^{226}\text{Rn}-^{133}\text{Cs}_{1.699}$	191490	17	191498	11	0.5	1	44	44 ^{226}Rn	MA8	1.0	09Ne03
$^{226}\text{Rn-u}$	30864	32	30861	11	-0.1	o			GS3	1.0	08Ch.A
	30868	15			-0.4	1	56	56 ^{226}Rn	GS3	1.0	12Ch19
$^{226}\text{Fr-u}$	29565	32	29566	13	0.0	o			GS3	1.0	08Ch.A
	29566	13				2			GS3	1.0	12Ch19
$^{133}\text{Cs}-^{226}\text{Ra}_{.588}$	-109487	9	-109489.3	1.5	-0.3	U			MA3	1.0	92Bo28
	-109499	13			0.7	U			MA4	1.0	99Am05
$^{223}\text{Fr}-^{226}\text{Fr}_{.493}$ $^{220}\text{Fr}_{.507}$	-800	80	-1015	7	-1.1	U			P24	2.5	82Au01
$^{225}\text{Fr}-^{226}\text{Fr}_{.796}$ $^{221}\text{Fr}_{.204}$	-570	100	-810	15	-1.0	U			P24	2.5	82Au01
$^{225}\text{Fr}-^{226}\text{Fr}_{.498}$ $^{224}\text{Fr}_{.502}$	-260	90	-890#	50#	-2.8	B			P24	2.5	82Au01
$^{226}\text{Ra}(\alpha)^{222}\text{Rn}$	4870.70	0.25	4870.62	0.25	0.0	1	100	99 ^{222}Rn			71Gr17 Z
$^{226}\text{Ac}(\alpha)^{222}\text{Fr}$	5496.1	5.	5536	21	0.8	1	18	18 ^{222}Fr	DbA		75Va.A Z
$^{226}\text{Th}(\alpha)^{222}\text{Ra}$	6448.5	3.0	6450.9	2.2	0.8	-					56As38 *
	6454.8	3.6			-1.1	-			DbA		75Va.A *
	ave.	6451.1	2.3		-0.1	1	94	59 ^{226}Th			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{226}\text{Pa}(\alpha)^{222}\text{Ac}$	6986.9	10.				5					64Mc21
$^{226}\text{U}(\alpha)^{222}\text{Th}$	7747.4	30.	7701	4	-1.5	U					73Vi10 *
	7706.6	15.			-0.4	5		Dbb			90An22
	7701.6	5.			-0.1	5		Jya			99Gr28
	7691.4	10.			0.9	o		GSa			00He17
	7696.5	10.			0.4	5		GSa			01Ca.B
$^{226}\text{Np}(\alpha)^{222}\text{Pa}$	8189.1	20.	8200	50	0.2	8		GSa			90Ni05
	8205.5	20.			-0.2	8		Dbb			94Ye08
$^{226}\text{Ra}(\text{p,t})^{224}\text{Ra}$	-2816	15	-2818.6	1.9	-0.2	U		ANL			74Fr01
$^{226}\text{Ra}(\text{d,t})^{225}\text{Ra}$	-146	10	-138.8	2.9	0.7	U					83Ny01
$^{226}\text{Fr}(\beta^-)^{226}\text{Ra}$	3804	330	3871	12	0.2	U					75We23 *
	3704	100			1.7	U					87Ve.A *
$^{226}\text{Ac}(\beta^-)^{226}\text{Th}$	1115	7	1113	5	-0.3	-					68Va17 *
	ave.	1115	6		-0.3	1	55	41 ^{226}Th			average
$^{226}\text{Th}(\alpha)^{222}\text{Ra}$	$E_\alpha=6334.6(3,Z)$, $6224.6(3,Z)$ to ground state, 2^+ level at 111.12 keV										Ens11b **
$^{226}\text{Th}(\alpha)^{222}\text{Ra}$	$E_\alpha=6337.1(1.0,Z)$, $6233.6(1.0,Z)$ to ground state, 2^+ level at 111.12 keV										Ens11b **
$^{226}\text{U}(\alpha)^{222}\text{Th}$	$E_\alpha=7430(30)$ to 2^+ level at 183.3(0.3) keV										94Ye08 **
$^{226}\text{Fr}(\beta^-)^{226}\text{Ra}$	$E_\beta=3550(330)$ $3450(100)$ respectively, to 1^- level at 253.73 keV										Ens964 **
$^{226}\text{Ac}(\beta^-)^{226}\text{Th}$	$E_\beta=885(7)$ to 1^- level at 230.37 keV										Ens964 **
$^{227}\text{Rn}-^{133}\text{Cs}_{1.707}$	196686	19	196698	15	0.6	1	63	63 ^{227}Rn	MA8	1.0	09Ne03
$^{227}\text{Rn-u}$	35288	33	35304	15	0.5	o			GS3	1.0	08Ch.A
	35325	25			-0.8	1	37	37 ^{227}Rn	GS3	1.0	12Ch19
$^{227}\text{Fr-u}$	31868	32	31869	14	0.0	o			GS3	1.0	08Ch.A
	31869	14				2			GS3	1.0	12Ch19
$^{225}\text{Fr}-^{227}\text{Fr}_{.708}$ $^{220}\text{Fr}_{.292}$	-410	130	-550	15	-0.4	U			P24	2.5	82Au01
$^{224}\text{Fr}^+-^{227}\text{Fr}_{.493}$ $^{221}\text{Fr}_{.507}$	-220	80	530#	100#	3.7	B			P24	2.5	82Au01
$^{227}\text{Ac}(\alpha)^{223}\text{Fr}$	5043.0	2.0	5042.19	0.14	-0.4	U					66Ba19 Z
	5042.27	0.14				2					86Ry04 Z
$^{227}\text{Th}(\alpha)^{223}\text{Ra}$	6146.60	0.10	6146.60	0.10	0.0	1	100	95 ^{223}Ra	BIP		71Gr17 *
$^{227}\text{Pa}(\alpha)^{223}\text{Ac}$	6581.5	3.	6580.4	2.1	-0.4	5					63Su.A *
	6579.3	3.			0.4	5					90Sh15 *
$^{227}\text{U}(\alpha)^{223}\text{Th}$	7230	30	7211	14	-0.6	6			ORa		69Ha32 *
	7206	16			0.3	6					91Ho05
$^{227}\text{Np}(\alpha)^{223}\text{Pa}$	7818.0	10.	7816	14	0.0	o			Dbb		90An19
	7815.0	20.			0.1	6			GSa		90Ni05
	7818.0	20.			-0.1	6			Dbb		94Ye08
$^{226}\text{Ra}(\text{n},\gamma)^{227}\text{Ra}$	4561.43	0.27				2			ILn		81Vo03 Z
$^{227}\text{Fr}(\beta^-)^{227}\text{Ra}$	2476	100	2506	13	0.3	U					75We23 *
$^{227}\text{Ra}(\beta^-)^{227}\text{Ac}$	1345	20	1328.4	2.3	-0.8	U					53Bu63 *
	1335	15			-0.4	U					71Lo15 *
$^{227}\text{Ac}(\beta^-)^{227}\text{Th}$	45.5	1.0	44.8	0.8	-0.7	-					55Be20
	43.5	1.5			0.8	-					59No41
	ave.	44.9	0.8		-0.1	1	99	95 ^{227}Th			average
$^{227}\text{Th}(\alpha)^{223}\text{Ra}$	$E_\alpha=6038.01(0.15,Z)$, $5977.72(0.10,Z)$, $5756.89(0.15,Z)$ keV										71Gr17 **
*	to ground state, $7/2^+$ at 61.424, $1/2^+$ at 286.182 keV										Ens01a **
$^{227}\text{Pa}(\alpha)^{223}\text{Ac}$	$E_\alpha=6465.8(3,Z)$, $6423.8(3,Z)$, $6415.8(3,Z)$, $6401.7(3,Z)$, $6356.7(3,Z)$										63Su.A **
*	to ground state, $7/2^-$ at 42.4, $5/2^-$ at 50.7, $5/2^+$ at 64.62, $7/2^+$ at 110.06										Ens01a **
$^{227}\text{Pa}(\alpha)^{223}\text{Ac}$	$E_\alpha=6463$, 6421 , 6355 keV (all errors 3 keV, estimated by evaluator)										90Sh15 **
*	to ground state, $7/2^-$ at 42.4, $5/2^-$ at 50.7, $7/2^+$ at 110.06 keV										Ens01a **
$^{227}\text{U}(\alpha)^{223}\text{Th}$	$E_\alpha=6860(30)$ to $3/2^+$ level at 247(1) keV										Ens01a **
$^{227}\text{Fr}(\beta^-)^{227}\text{Ra}$	$E_\beta=1800(100)$ to $1/2^-$ level at 675.862 keV										Ens01a **
$^{227}\text{Ra}(\beta^-)^{227}\text{Ac}$	$E_\beta=1310(20)$ $1300(15)$ respectively, to $3/2^+$ level at 27.37 and $5/2^+$ at 46.35 keV										Ens01a **
$^{228}\text{Rn}-^{133}\text{Cs}_{1.714}$	199897	24	199891	19	-0.3	1	63	63 ^{228}Rn	MA8	1.0	09Ne03
$^{228}\text{Rn-u}$	37856	33	37835	19	-0.6	o			GS3	1.0	08Ch.A
	37825	31			0.3	1	37	37 ^{228}Rn	GS3	1.0	12Ch19
$^{228}\text{Fr-u}$	35833	34	35823	14	-0.3	2			MA8	1.0	11Kr.A
	35852	32			-0.9	o			GS3	1.0	08Ch.A
	35821	16			0.1	2			GS3	1.0	12Ch19

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{224}\text{Fr}^+ - ^{228}\text{Fr}_{.491} \text{ } ^{220}\text{Fr}_{.509}$	-540	320	-330#	100#	0.3	U			P24	2.5	82Au01
$^{228}\text{Th}(\alpha) ^{224}\text{Ra}$	5520.17	0.22	5520.08	0.22	0.0	1	100	58 ^{224}Ra			71Gr17 Z
$^{228}\text{Pa}(\alpha) ^{224}\text{Ac}$	6266.7	3.	6264.5	1.5	-0.7	5					58Hi.A *
	6264.7	3.			-0.1	5					93Sh07 *
	6263.5	2.			0.5	5					94Ah03 *
$^{228}\text{U}(\alpha) ^{224}\text{Th}$	6803.6	10.				5					61Ru06
$^{228}\text{Np}(\alpha) ^{224}\text{Pa}$	7308.5	36.				7			JAa		03Ni10
$^{228}\text{Pu}(\alpha) ^{224}\text{U}$	7949.7	20.	7940	18	-0.5	7			Dbb		94An02
	7911.0	35.			0.8	7			JAa		03Ni10
$^{228}\text{Ra}(\beta^-) ^{228}\text{Ac}$	46.7	2.	45.8	0.7	-0.4	3					61To10 *
	45.7	1.			0.1	3					72He.A *
	45.7	1.0			0.1	3					95So11 *
$^{228}\text{Ac}(\beta^-) ^{228}\text{Th}$	2240	20	2124.1	2.6	-5.8	B					53Ky19 *
	2158	20			-1.7	U					57Bj56 *
$^{228}\text{Pa}(\epsilon) ^{228}\text{Th}$	2109	15	2152	4	2.9	B					73Ku09 *
* $^{228}\text{Pa}(\alpha) ^{224}\text{Ac}$	$E_\alpha=6119.2(3,Z), 6106.2(3,Z), 6079.2(3,Z)$ to 37.2, 51.9, 78.4 levels										93Sh07 **
* $^{228}\text{Pa}(\alpha) ^{224}\text{Ac}$	$E_\alpha=6118(3)$ to 37.2 level										93Sh07 **
* $^{228}\text{Pa}(\alpha) ^{224}\text{Ac}$	$E_\alpha=6117(2)$ to 37.1 level										94Ah03 **
* $^{228}\text{Ra}(\beta^-) ^{228}\text{Ac}$	$E_{\beta^-}=40(2) 39(1)$ respectively, to 1^+ level at 6.67 keV, and other E_{β^-}										Ens974 **
* $^{228}\text{Ra}(\beta^-) ^{228}\text{Ac}$	$E_{\beta^-}=39.0(1.0)$ to 1^+ level at 6.67 keV										Ens974 **
* $^{228}\text{Ac}(\beta^-) ^{228}\text{Th}$	$E_{\beta^-}=2180(20)$ to 2^+ level at 57.759 keV, and other E_{β^-}										Ens979 **
* $^{228}\text{Ac}(\beta^-) ^{228}\text{Th}$	$E_{\beta^-}=2100(20), 1760, 1180$ to 2^+ at 57.759, 3^- at 396.078, 2^+ at 968.968										Ens979 **
* $^{228}\text{Pa}(\epsilon) ^{228}\text{Th}$	$pK=0.33(0.08)$ to 3^+ level at 1944.895 keV, recalculated										Ens979 **
$^{229}\text{Rn}-^{133}\text{Cs}_{1.722}$	205069	14				2			MA8	1.0	09Ne03
$^{229}\text{Fr}-^{133}\text{Cs}_{1.722}$	201262	40	201110	15	-3.8	B			MA8	1.0	08We02 *
$^{229}\text{Fr-u}$	38343	32	38298	15	-1.4	o			GS3	1.0	08Ch.A
	38298	15				2			GS3	1.0	12Ch19
$^{229}\text{Ra}-^{133}\text{Cs}_{1.722}$	197782	21	197754	16	-1.3	-			MA8	1.0	08We02
	197746	27			0.3	-			MA8	1.0	05He26
ave.	197768	17			-0.9	1	88	88 ^{229}Ra			average
$^{229}\text{Ac-u}$	32947	13	32956	13	0.7	1	93	93 ^{229}Ac	GS3	1.0	12Ch19
$^{229}\text{Th}(\alpha) ^{225}\text{Ra}$	5167.4	1.2	5167.6	1.0	0.1	-			Kum		71Bb10 *
	5168.2	2.			-0.3	-					87He28 Z
ave.	5167.6	1.0			-0.1	1	99	94 ^{225}Ra			average
$^{229}\text{Pa}(\alpha) ^{225}\text{Ac}$	5835.6	5.	5835	4	-0.1	1	73	59 ^{225}Ac			63Su.A *
$^{229}\text{U}(\alpha) ^{225}\text{Th}$	6475.5	3.				5					61Ru06 Z
$^{229}\text{Np}(\alpha) ^{225}\text{Pa}$	7012.7	20.	7010	50	0.0	6			ORa		68Ha14
	7015.8	23.			0.0	6					00Sa52
$^{229}\text{Pu}(\alpha) ^{225}\text{U}$	7592.9	30.	7590	50	0.0	7			Dbb		94An02
	7598.0	10.			-0.1	o			GSa		01Ca.B
	7589.8	20.			0.0	7			GSa		10Kh06
$^{229}\text{Ra}(\beta^-) ^{229}\text{Ac}$	1760	40	1850	18	2.3	1	19	12 ^{229}Ra			75We23
$^{229}\text{Ac}(\beta^-) ^{229}\text{Th}$	1140	150	1111	12	-0.2	U					73Ch24
	1090	50			0.4	U					75We23
* $^{229}\text{Fr}-^{133}\text{Cs}_{1.722}$	Could be influenced by ^{229}Rn contaminant										08We02 **
* $^{229}\text{Th}(\alpha) ^{225}\text{Ra}$	$E_\alpha=4978.3(1.2,Z), 4967.3(1.2,Z), 4845.1(1.2,Z)$ keV to 100.60, 111.60, 236.25 levels										71Gr17 **
* $^{229}\text{Th}(\alpha) ^{225}\text{Ra}$	$E_\alpha=4979.3(2,Z), 4968.3(2,Z), 4845.1(2,Z)$ keV to $9/2^+$ level at 100.50, $7/2^+$ at 111.60, $5/2^+$ at 236.25 keV										71Gr17 **
*	calibrated with 71BaB2 value for 4845 level										87He28 **
*											Ens095 **
* $^{229}\text{Pa}(\alpha) ^{225}\text{Ac}$	$E_\alpha=5670.2, 5630.2, 5615.2, 5580.2, 5536.2$ (all 3,Z) keV to $5/2^+$ 64.70, $7/2^+$ 105.06, $5/2^-$ 120.80, $5/2^+$ 155.65, $7/2^+$ 199.85										AHW **
*											63Su.A **
											Ens095 **
$^{230}\text{Fr}-^{133}\text{Cs}_{1.729}$	205878	32	205890	17	0.4	1	28	28 ^{230}Fr	MA8	1.0	05He26
$^{230}\text{Fr-u}$	42401	34	42416	17	0.5	o			GS3	1.0	08Ch.A
	42421	20			-0.2	1	72	72 ^{230}Fr	GS3	1.0	12Ch19
$^{230}\text{Ra}-^{133}\text{Cs}_{1.729}$	200530	13	200528	11	-0.1	2			MA8	1.0	08We02
	200524	21			0.2	2			MA8	1.0	05He26

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{230}\text{Ac-u}$	36328	32	36327	17	0.0	o			GS3	1.0	08Ch.A
	36327	17				2			GS3	1.0	12Ch19
$^{230}\text{Ra}-^{226}\text{Ra}_{1.018}$	11225	35	11187	11	-1.1	U			MA3	1.0	92Bo28
$^{230}\text{Th}(\alpha)^{226}\text{Ra}$	4770.1	1.5	4769.8	1.5	-0.2	1	99	97 ^{226}Ra	Orm		66Ba14 Z
$^{230}\text{Pa}(\alpha)^{226}\text{Ac}$	5439.5	0.7	5439.4	0.7	0.0	1	99	86 ^{226}Ac	Orm		66Ba14 Z
$^{230}\text{U}(\alpha)^{226}\text{Th}$	5992.8	0.7				2			Orm		66Ba14 Z
$^{230}\text{Np}(\alpha)^{226}\text{Pa}$	6778.1	20.				6			ORa		68Ha14
$^{230}\text{Pu}(\alpha)^{226}\text{U}$	7175.0	15.	7180	8	0.3	6			Dbb		90An22
	7180.1	17.			0.0	6			Jya		99Gr28
	7182.2	10.			-0.2	6			GSa		01Ca.B
$^{230}\text{Th}(\text{p,t})^{228}\text{Th}$	-3550	15	-3568.9	1.1	-1.3	U			ANL		74Fr01
$^{230}\text{Th}(\text{p,t})^{228}\text{Th}-^{232}\text{Th}^{230}\text{Th}$	-493.5	1.0	-492.5	0.5	1.0	o					91Gr13
	-492.5	0.5			-0.1	1	99	59 ^{230}Th			94Le22
$^{230}\text{Th}(\text{p,t})^{228}\text{Th}-^{184}\text{W}^{182}\text{W}$	1564.0	1.6	1551.8	1.2	-7.6	B					09Le03
	1564.0	1.8			-6.8	C					09Le.A
$^{230}\text{Th}(\text{d,t})^{229}\text{Th}$	-541	6	-536.6	2.2	0.7	-					90Bu17
	-525	6			-1.9	-			ANL		67Er02 *
	ave.	-533	4		-0.9	1	28	27 ^{229}Th			average
$^{230}\text{Ra}(\beta^-)^{230}\text{Ac}$	710	300	678	19	-0.1	U					80Gi04 *
$^{230}\text{Ac}(\beta^-)^{230}\text{Th}$	2700	100	2974	16	2.7	U					80Gi04 *
$^{230}\text{Pa}(\epsilon)^{230}\text{Th}$	1310.3	3.	1310.5	2.8	0.1	1	90	87 ^{230}Pa			70Lo02 *
$^{230}\text{Pa}(\beta^-)^{230}\text{U}$	561	15	560	5	-0.1	R					70Lo02
$^{230}\text{Th}(\text{d,t})^{229}\text{Th}$	Q=-525(6) to $^{229}\text{Th}^m$ at 0.0035(0.0010) keV										94He08 **
$^{230}\text{Ra}(\beta^-)^{230}\text{Ac}$	$E_{\beta^-}=500(200)$ to level at 211.78 keV										Ens07a **
$^{230}\text{Ac}(\beta^-)^{230}\text{Th}$	$E_{\beta^-}=1400(100)$ to level at 1297.14 keV										Ens07a **
$^{230}\text{Pa}(\epsilon)^{230}\text{Th}$	pK=0.42(0.01) to 3^- level at 1127.789, recalculated										Ens07a **
$^{231}\text{Fr-u}$	45191	39	45158	27	-0.8	o			GS3	1.0	08Ch.A
	45158	27				2			GS3	1.0	12Ch19
$^{231}\text{Ra}-^{133}\text{Cs}_{1.737}$	205267	21	205257	12	-0.5	1	34	34 ^{231}Ra	MA8	1.0	05He26
$^{231}\text{Ra-u}$	41052	32	41027	12	-0.8	o			GS3	1.0	08Ch.A
	41022	15			0.3	1	66	66 ^{231}Ra	GS3	1.0	12Ch19
$^{231}\text{Ac-u}$	38404	32	38393	14	-0.3	o			GS3	1.0	08Ch.A
	38393	14				2			GS3	1.0	12Ch19
$^{231}\text{Pa}(\alpha)^{227}\text{Ac}$	5150.2	1.5	5150.0	0.8	-0.2	o			Orm		66Ba14
	5146.9	1.0			3.1	o			Kum		68Ba25 *
	5150.7	1.5			-0.5	-			Orm		69Le.A *
	5149.8	1.0			0.2	-			Kum		76Ba99 *
ave.	5150.1	0.8			-0.1	1	99	96 ^{227}Ac			average
$^{231}\text{U}(\alpha)^{227}\text{Th}$	5551.3	50.	5576.3	1.7	0.5	U					53Cr.A
	5576.9	3.			-0.2	2					94Li12 *
	5576	2			0.1	2					97Mu08
$^{231}\text{Np}(\alpha)^{227}\text{Pa}$	6368.4	8.				6				73Ja06	
$^{231}\text{Pu}(\alpha)^{227}\text{U}$	6838.6	20.				7				99La14	
$^{231}\text{Pa}(\text{p,t})^{229}\text{Pa}$	-4133	3	-4133.3	2.8	-0.1	1	90	87 ^{229}Pa	Mun		91Gr13 *
$^{230}\text{Th}(\text{n},\gamma)^{231}\text{Th}$	5118.00	0.20	5118.02	0.20	0.1	1	98	84 ^{231}Th	ILn		87Wh01 Z
$^{230}\text{Th}(\text{d,p})^{231}\text{Th}$	2907	7	2893.45	0.20	-1.9	U			ANL		67Er02
$^{231}\text{Ac}(\beta^-)^{231}\text{Th}$	2100	100	1945	13	-1.5	U					60Ta19
$^{231}\text{Th}(\beta^-)^{231}\text{Pa}$	389.2	2.	391.6	1.5	1.2	1	55	51 ^{231}Pa			75Ho14 *
$^{231}\text{Pa}(\alpha)^{227}\text{Ac}$	$E_{\alpha}=5057.6(1.0,Z)$, $4985.9(1.0,Z)$, $4950.4(1.0,Z)$ to ground state, $7/2^-$ at 74.14, and $9/2^+$ at 109.94 keV										Ens07a **
*											Ens07a **
$^{231}\text{Pa}(\alpha)^{227}\text{Ac}$	$E_{\alpha}=5015.9(1.5,Z)$, $4735.9(1.5,Z)$ to $5/2^+$ at 46.35, $3/2^-$ at 330.04 keV										Ens018 **
$^{231}\text{Pa}(\alpha)^{227}\text{Ac}$	$E_{\alpha}=4736.2(1.0,Z)$ to 330.04 level										Ens018 **
$^{231}\text{U}(\alpha)^{227}\text{Th}$	$E_{\alpha}=5471(3)$, $5456(3)$, $5404(3)$ to 9.3, 24.4, 77.7 levels										94Li12 **
$^{231}\text{Pa}(\text{p,t})^{229}\text{Pa}$	Q=-4145(3) to 11.6 level										98Le15 **
$^{231}\text{Th}(\beta^-)^{231}\text{Pa}$	$E_{\beta^-}=305(2)$ to $5/2^+$ level at 84.21 keV										Ens01a **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{232}\text{Ra}-^{133}\text{Cs}_{1.744}$	208368	13	208367	10	-0.1	1	57	57 ^{232}Ra	MA8	1.0	05He26
$^{232}\text{Ra-u}$	43518	32	43475	10	-1.3	o			GS3	1.0	08Ch.A
	43474	15			0.1	1	43	43 ^{232}Ra	GS3	1.0	12Ch19
$^{232}\text{Ac-u}$	42052	32	42034	14	-0.6	o			GS3	1.0	08Ch.A
	42034	14				2			GS3	1.0	12Ch19
$\text{C}_{18} \text{H}_{16}-^{232}\text{Th}$	87142.4	2.	87144.8	2.1	0.5	1	18	18 ^{232}Th	M20	2.5	73Br06
$\text{C}_{24} \text{H}_{16}-^{232}\text{Th} \text{ } ^{37}\text{Cl} \text{ } ^{35}\text{Cl}$	152393.4	1.8	152389.5	2.1	-0.9	1	22	22 ^{232}Th	M20	2.5	73Br06
$^{232}\text{Th}(\alpha)^{228}\text{Ra}$	4082.5	5.	4081.6	1.4	-0.2	U					57Ha08 Z
	4084.6	5.			-0.6	U					61Ko11 Z
	4083.5	5.			-0.4	U					62Ko12 Z
	4081.6	1.4				2					89Sa01 *
$^{232}\text{U}(\alpha)^{228}\text{Th}$	5413.63	0.09	5413.63	0.09	0.0	1	100	99 ^{232}U	BIP		72Go33 *
$^{232}\text{Pu}(\alpha)^{228}\text{U}$	6716.0	10.				6					73Ja06
$^{232}\text{Th}(\text{p,t})^{230}\text{Th}$	-3070	15	-3076.4	1.1	-0.4	U			ANL		74Fr01
$^{232}\text{Th}(\text{p,t})^{230}\text{Th}-^{184}\text{W}(\text{)}^{182}\text{W}$	2056.4	1.6	2044.3	1.1	-7.6	B					09Le03
	2056.5	1.8			-6.8	B					09Le.A
$^{232}\text{Th}(\text{d,t})^{231}\text{Th}$	-174	6	-182.9	1.1	-1.5	U			ANL		67Er02
	-187	10			0.4	U			MIT		72Gr19
$^{232}\text{Ac}(\beta^-)^{232}\text{Th}$	3700	100	3706	13	0.1	U					90Be.B
$^{232}\text{Pa}(\beta^-)^{232}\text{U}$	1344	20	1337	7	-0.3	2					63Bj01 *
	1336	8			0.1	2					71Ka42 *
$^{*232}\text{Th}(\alpha)^{228}\text{Ra}$	$E_\alpha=4012.3(1.4), 3947.2(2.0)$ to ground state, 2^+ level at 63.823 keV										Ens974 **
$^{*232}\text{U}(\alpha)^{228}\text{Th}$	$E_\alpha=5320.12(0.14,Z), 5263.36(0.09,Z)$ to ground state, 2^+ level at 57.759 level										Ens979 **
$^{*232}\text{Pa}(\beta^-)^{232}\text{U}$	$E_{\beta^-}=1295(20)$ to 2^+ level at 47.573 keV, and other E_{β^-}										Ens06a **
$^{*232}\text{Pa}(\beta^-)^{232}\text{U}$	$E_{\beta^-}=314(8)$ to 2^- level at 1016.85 keV, and other E_{β^-}										Ens06a **
$^{233}\text{Ra-u}$	47602	32	47582	17	-0.6	o			GS3	1.0	08Ch.A
	47582	17				2			GS3	1.0	12Ch19
$^{233}\text{Ac-u}$	44363	32	44346	14	-0.5	o			GS3	1.0	08Ch.A
	44346	14				2			GS3	1.0	12Ch19
$^{233}\text{U}(\alpha)^{229}\text{Th}$	4908.4	1.2	4908.6	1.2	0.2	1	93	68 ^{229}Th	Kum		68Ba25 Z
$^{233}\text{Np}(\alpha)^{229}\text{Pa}$	5626.7	50.9				2					50Ma14
$^{233}\text{Pu}(\alpha)^{229}\text{U}$	6416.3	20.				6					57Th10
$^{233}\text{Am}(\alpha)^{229}\text{Np}^p$	6898.6	17.3				8					00Sa52
$^{233}\text{Cm}(\alpha)^{229}\text{Pu}$	7468.5	10.	7470	50	0.1	o			GSa		01Ca.B
	7473.5	20.				8			GSa		10Kh06
$^{232}\text{Th}(\text{n},\gamma)^{233}\text{Th}$	4786.69	0.25	4786.39	0.09	-1.2	-					74Ke13 Z
	4786.34	0.10			0.5	-			Bdn		06Fi.A
$^{232}\text{Th}(\text{d,p})^{233}\text{Th}$	2555	10	2561.82	0.09	0.7	U			MIT		72Gr19
	2567	7			-0.7	U			ANL		72Vo08
$^{232}\text{Th}(\text{n},\gamma)^{233}\text{Th}$	ave.	4786.39	0.09	4786.39	0.09	0.0	1	100	93 ^{233}Th		average
$^{233}\text{Th}(\beta^-)^{233}\text{Pa}$	1245	3	1243.6	1.3	-0.5	1	20	13 ^{233}Pa			57Fr.A *
$^{233}\text{Pa}(\beta^-)^{233}\text{U}$	568	4	569.8	2.0	0.4	-					54Br37 *
	568	5			0.4	-					55On05 *
	566	5			0.8	-					63Bi03 *
	ave.	567.4	2.6		0.9	1	58	48 ^{233}U			average
$^{*233}\text{Th}(\beta^-)^{233}\text{Pa}$	PrvCom to reference										58St50 **
$^{*233}\text{Pa}(\beta^-)^{233}\text{U}$	$E_{\beta^-}=568(5), 256(4)$ to ground state, $3/2^+$ level at 311.904 keV										Ens057 **
$^{*233}\text{Pa}(\beta^-)^{233}\text{U}$	$E_{\beta^-}=568(5), 257(5)$ to ground state, $3/2^+$ level at 311.904 keV										Ens057 **
$^{*233}\text{Pa}(\beta^-)^{233}\text{U}$	$E_{\beta^-}=254(5)$ to $3/2^+$ level at 311.904 keV										Ens057 **
$^{234}\text{Ra-u}$	50358	33	50340	30	-0.5	o			GS3	1.0	08Ch.A
	50342	33				2			GS3	1.0	12Ch19
$^{234}\text{Ac-u}$	48137	32	48139	15	0.1	o			GS3	1.0	08Ch.A
	48139	15				2			GS3	1.0	12Ch19
$^{234}\text{U}(\alpha)^{230}\text{Th}$	4857.4	1.0	4857.7	0.7	0.4	-					55Go.A Z
	4860.4	2.			-1.3	-			Kum		67Ba43 Z
	ave.	4857.9	0.9		-0.3	1	57	36 ^{234}U			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{234}\text{Pu}(\alpha)^{230}\text{U}$	6310.1	5.							60Ho.A *	
$^{234}\text{Am}(\alpha)^{230}\text{Np}$	6572.6	20.	6800#	150#	11.4	F			90Ha02 *	
$^{234}\text{Cm}(\alpha)^{230}\text{Pu}$	7365.2	10.					GSa		01Ca.B	
$^{234}\text{Bk}(\alpha)^{230}\text{Am}$	7986.9	50.					RIa		02Mo.B	
$^{232}\text{Th}(\text{t,p})^{234}\text{Th}$	2487	20	2495	3	0.4	U	LA1		69Br11	
$^{234}\text{U}(\text{p,t})^{232}\text{U}$	-4099	15	-4124.9	1.6	-1.7	U	ANL		74Fr01	
$^{234}\text{U}(\text{p,t})^{232}\text{U}-^{184}\text{W}(\text{O})^{182}\text{W}$	1007.6	1.6	995.8	1.6	-7.4	B			09Le03	
	1007.6	1.8			-6.6	C			09Le.A	
$^{233}\text{U}(\text{d,p})^{234}\text{U}$	4656	15	4620.2	2.0	-2.4	U	Kop		68Bj05	
$^{234}\text{U}(\text{d,t})^{233}\text{U}$	-579	6	-587.5	2.0	-1.4	1	12	11 ^{233}U	ANL	67Er02
$^{234}\text{Th}(\beta^-)^{234}\text{Pa}^m$	192	2	195.1	1.0	1.5	3			55De40 *	
	193	2			1.0	3			63Bj02 *	
	198.	1.5			-1.9	3			73Go40 *	
$^{234}\text{Pa}^m(\text{IT})^{234}\text{Pa}$	79	3				4			Nub127	
$^{234}\text{Pa}(\beta^-)^{234}\text{U}$	2230	40	2194	4	-0.9	U			62Bj01	
$^{234}\text{Pa}^m(\beta^-)^{234}\text{U}$	2290	20	2273	3	-0.9	U			63Bj02	
$^{234}\text{Np}(\beta^+)^{234}\text{U}$	1812	10	1810	8	-0.2	2			67Ha04 *	
	1805	15			0.3	2			67Wa09 *	
* $^{234}\text{Pu}(\alpha)^{230}\text{U}$	With correction similar to reference									
* $^{234}\text{Am}(\alpha)^{230}\text{Np}$	F : not believed to be measured in this work, replaced by estimate									
* $^{234}\text{Th}(\beta^-)^{234}\text{Pa}^m$	$E_{\beta^-}=100(2)$ $100(2)$ $104.0(1.5)$ respectively, to 1^- 92.38 above $^{234}\text{Pa}^m$, and other E_{β^-}									
* $^{234}\text{Np}(\beta^+)^{234}\text{U}$	$E_{\beta^+}=790(10)$ $\text{pK}=0.48(0.03)$ respectively, to 1^+ at 1570.69 and 1^+ at 1601.8 keV									
$^{235}\text{Ac-u}$	50872	32	50840	15	-1.0	o		GS3	1.0	08Ch.A
	50840	15				2		GS3	1.0	12Ch19
$^{235}\text{Th-u}$	47252	32	47255	14	0.1	o		GS3	1.0	08Ch.A
	47255	14				2		GS3	1.0	12Ch19
$^{235}\text{Pa-u}$	45421	32	45399	15	-0.7	o		GS3	1.0	08Ch.A
	45399	15				2		GS3	1.0	12Ch19
$^{235}\text{U}-^{206}\text{Pb}$ C_2 H_5	30341.0	10.	30339.3	2.1	-0.1	U		C4	2.5	71Ke02
$^{235}\text{U}-\text{C}_{18}$ H_{18}	-96932.8	3.8	-96920.4	1.9	1.3	U		M20	2.5	73Br06
C_{18} $\text{H}_{20}-^{235}\text{U}$	112584.2	4.8	112570.5	1.9	-1.1	U		M20	2.5	73Br06
$^{235}\text{U}(\alpha)^{231}\text{Th}$	4678	2	4678.2	0.7	0.1	-		Kum		60Ba44 *
	4681	3			-0.9	-				60Vo07 *
	4675.5	3.0			0.9	-				64Sc27 *
	4677	3			0.4	-				66Ga03 *
ave.	4677.9	1.3			0.2	1	29	17 ^{235}U		average
$^{235}\text{Np}(\alpha)^{231}\text{Pa}$	5197.2	2.0	5194.0	1.5	-1.6	1	56	42 ^{231}Pa	Bka	73Br12 *
$^{235}\text{Pu}(\alpha)^{231}\text{U}$	5951.5	20.				3				57Th10
$^{235}\text{Am}(\alpha)^{231}\text{Np}$	6559	100	6576	13	0.2	o		JAa		99Sa.D *
	6576	15			0.0	o		JAa		04Sa05 *
	6576	13				7		JAa		04As12 *
$^{233}\text{U}(\text{t,p})^{235}\text{U}$	3668	10	3660.4	2.0	-0.8	U				67Ri.A *
$^{234}\text{U}(\text{n},\gamma)^{235}\text{U}$	5297.1	0.5	5297.49	0.23	0.8	-				72Ri08 Z
	5297.4	0.3			0.3	-				77Ko15 Z
$^{234}\text{U}(\text{d,p})^{235}\text{U}$	3075	7	3072.92	0.23	-0.3	U		ANL		70Br01
$^{235}\text{U}(\text{d,t})^{234}\text{U}$	935	15	959.74	0.23	1.6	U		Kop		68Bj05
$^{234}\text{U}(\text{n},\gamma)^{235}\text{U}$	ave.	5297.32	0.26	5297.49	0.23	0.7	1	81	49 ^{234}U	average
$^{235}\text{Th}(\beta^-)^{235}\text{Pa}$	1470	80	1729	19	3.2	B				89Yu01
$^{235}\text{Pa}(\beta^-)^{235}\text{U}$	1410	50	1368	14	-0.8	U				68Tr07
$^{235}\text{Np}(\epsilon)^{235}\text{U}$	123.5	2.	124.2	0.9	0.4	-				58Gi05
	123.6	1.			0.6	-				72Mc25
ave.	123.6	0.9			0.7	1	91	86 ^{235}Np		average
* $^{235}\text{U}(\alpha)^{231}\text{Th}$	$E_{\alpha}=4596$ 4398 $4372(\text{all } 2,Z)$ to ground state, $7/2^-$ at 205.309, $9/2^-$ at 236.893keV									
* $^{235}\text{U}(\alpha)^{231}\text{Th}$	$E_{\alpha}=4598.6(3,Z)$, $4402.6(3,Z)$ to ground state, $7/2^-$ at 205.309 keV									
* $^{235}\text{U}(\alpha)^{231}\text{Th}$	$E_{\alpha}=4595$ 4394 $4364(\text{all } 3,Z)$ to ground state, $7/2^-$ at 205.309, $9/2^-$ at 236.893keV									
* $^{235}\text{U}(\alpha)^{231}\text{Th}$	$E_{\alpha}=4595.3$, 4397.3 , $4365.3(\text{all } 3,Z)$ to ground state, $7/2^-$ level at 205.309 keV									
*	and $9/2^-$ at 236.893 keV									
* $^{235}\text{Np}(\alpha)^{231}\text{Pa}$	$E_{\alpha}=5105.2(3)$, $5097.2(3)$, $5050.8(2,Z)$, $5024.8(2,Z)$, $4924.8(2,Z)$ to ground state,									
*	$1/2^-$ level at 9.21, $7/2^-$ at 58.57, $5/2^+$ at 84.21, $5/2^+$ at 183.50 keV									
* $^{235}\text{Am}(\alpha)^{231}\text{Np}$	$E_{\alpha}=6440(100)$ to level below 15 keV									
* $^{235}\text{Am}(\alpha)^{231}\text{Np}$	$E_{\alpha}=6457(14)$ to level below 15 keV									
* $^{235}\text{Am}(\alpha)^{231}\text{Np}$	$E_{\alpha}=6457(12)$ to level below 15 keV									
* $^{233}\text{U}(\text{t,p})^{235}\text{U}$	$Q=3335(10,\text{Ri})$ to $5/2^+$ level at 332.845 keV									

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{236}\text{Ac-u}$	55037	73	54990	40	-0.7	o			GS3	1.0	10Ch19
	54988	41				2			GS3	1.0	12Ch19
$^{236}\text{Th-u}$	49665	32	49657	15	-0.3	o			GS3	1.0	08Ch.A
	49657	15				2			GS3	1.0	12Ch19
$^{236}\text{Pa-u}$	48666	32	48668	15	0.1	o			GS3	1.0	08Ch.A
	48668	15				2			GS3	1.0	12Ch19
$^{236}\text{U}(\alpha)^{232}\text{Th}$	4572.2	3.	4572.9	0.9	0.2	o					60Ko04 Z
	4569.9	3.			1.0	-					61Ko11 Z
	4573.1	1.0			-0.2	-			Kum		78Ba.C
	ave. 4572.8	1.0			0.1	1	80	71 ^{232}Th			average
$^{236}\text{Pu}(\alpha)^{232}\text{U}$	5867.15	0.08	5867.07	0.08	0.0	1	100	99 ^{236}Pu			84Ry02 Z
$^{236}\text{Am}(\alpha)^{232}\text{Np}$	6256.2	40.				3			JAa		04Sa05
$^{236}\text{Cm}(\alpha)^{232}\text{Pu}$	7074.1	20.	7067	5	-0.4	U			GSa		10Kh06
	7066.9	5.				7			JAa		10As.A
$^{236}\text{U}(\text{p,t})^{234}\text{U}$	-3330	15	-3361.1	0.3	-2.1	U			ANL		74Fr01
$^{235}\text{U}(\text{n},\gamma)^{236}\text{U}$	6545	2	6545.46	0.26	0.2	U					70Ka22
	6545.1	0.5			0.7	-					74Ju.B Z
	6545.4	0.5			0.1	-					75We.A Z
$^{236}\text{U}(\text{d,t})^{235}\text{U}$	-281	6	-288.22	0.26	-1.2	U			ANL		70Br01
$^{235}\text{U}(\text{n},\gamma)^{236}\text{U}$	ave. 6545.3	0.4	6545.46	0.26	0.6	1	54	32 ^{236}U			average
$^{236}\text{Pa}(\beta^-)^{236}\text{U}$	3350	100	2887	14	-4.6	B					63Wo04
	2900	200			-0.1	U					68Tr07 *
$^{236}\text{Np}^m(\text{IT})^{236}\text{Np}$	60	50				3					Ens06a
$^{236}\text{Np}^m(\beta^-)^{236}\text{Pu}$	525	10	537	6	1.2	2					56Gr11 *
	544	8			-0.9	2					69Le05 *
$^{236}\text{Pa}(\beta^-)^{236}\text{U}$	$E_{\beta^-}=2000(200)$ to 1^- level at 687.59 keV, and other E_{β^-} , reinterpreted										Ens06a **
$^{236}\text{Np}^m(\beta^-)^{236}\text{Pu}$	$E_{\beta^-}=518(10)$ 537(8) respectively, to ground state and 2^+ level at 44.63 keV										Ens06a **
$^{237}\text{Th-u}$	53690	32	53629	17	-1.9	o			GS3	1.0	08Ch.A
	53629	17				2			GS3	1.0	12Ch19
$^{237}\text{Pa-u}$	51038	32	51023	14	-0.5	o			GS3	1.0	08Ch.A
	51023	14				2			GS3	1.0	12Ch19
$^{237}\text{Np}(\alpha)^{233}\text{Pa}$	4959.9	3.	4958.5	1.1	-0.5	-					61Ba44 *
	4956.7	1.5			1.2	-			Kum		68Ba25 *
	4959.9	3.			-0.5	-					69Va06 *
	ave. 4957.8	1.2			0.6	1	80	78 ^{233}Pa			average
$^{237}\text{Pu}(\alpha)^{233}\text{U}$	5753.3	20.	5748.3	2.3	-0.3	U					57Th10
	5747	5			0.3	1	21	15 ^{233}U	Db		93Dm02
$^{237}\text{Am}(\alpha)^{233}\text{Np}^p$	6146.2	5.				4					75Ah05 Z
$^{237}\text{Cm}(\alpha)^{233}\text{Pu}$	6774.5	10.	6770	50	-0.1	o			JAa		02As08
	6770.4	10.				7			JAa		06As03
$^{237}\text{Cf}(\alpha)^{233}\text{Cm}$	8220	20				9			GSa		10Kh06
$^{235}\text{U}(\text{t,p})^{237}\text{U}$	3206	20	3189.4	0.5	-0.8	U			Ald		64Mi.A *
	3178	20			0.6	U			LAL		69Br11
$^{237}\text{Np}(\text{p,t})^{235}\text{Np}$	-3816	15	-3832.2	0.9	-1.1	U			ANL		74Fr01
$^{236}\text{U}(\text{n},\gamma)^{237}\text{U}$	5125.9	0.5	5125.8	0.5	-0.2	1	85	85 ^{237}U	BNn		79Vo05 Z
$^{236}\text{U}(\text{d,p})^{237}\text{U}$	2898	8	2901.2	0.5	0.4	U			ANL		67Er02
$^{237}\text{Pa}(\beta^-)^{237}\text{U}$	2250	100	2136	13	-1.1	U					74Ka05
$^{237}\text{U}(\beta^-)^{237}\text{Np}$	520	5	518.6	0.5	-0.3	U					53Wa05 *
	524	5			-1.1	U					56Ba39 *
	523	5			-0.9	U					57Ra04 *
	222	8	220.0	1.3	-0.2	U					58Ho02 *
$^{237}\text{Pu}(\epsilon)^{237}\text{Np}$	207	18			0.7	U					59Gi54 *
$^{237}\text{Np}(\alpha)^{233}\text{Pa}$	$E_{\alpha}=4876.7$ 4774.2 4769.1(3,Z) to ground state, $7/2^+$ at 103.635, $9/2^+$ 109.07 keV										Ens057 **
$^{237}\text{Np}(\alpha)^{233}\text{Pa}$	$E_{\alpha}=4787.9(1.5,Z)$ to $5/2^+$ level at 86.48 keV										Ens057 **
$^{237}\text{Np}(\alpha)^{233}\text{Pa}$	$E_{\alpha}=4791.0(3,Z)$, 4774.0(3,Z), 4770.0(3,Z) keV										69Va06 **
	to $5/2^+$ at 86.468, $7/2^+$ at 103.635, $9/2^+$ at 109.07 keV										Ens057 **
$^{235}\text{U}(\text{t,p})^{237}\text{U}$	$Q=2980(20)$ to $7/2^+$ level at 426.15 keV										Ens068 **
$^{237}\text{U}(\beta^-)^{237}\text{Np}$	$E_{\beta^-}=245(5)$, 249(5), 248(5) respectively, to 53% $3/2^-$ level at 267.556, and										Ens068 **
	43% $1/2^-$ level at 281.356 keV										Ens068 **
$^{237}\text{Pu}(\epsilon)^{237}\text{Np}$	LK=2.8(0.8) capture to $5/2^-$ level at 59.541 keV, recalculated										Ens068 **
$^{237}\text{Pu}(\epsilon)^{237}\text{Np}$	pK=0.38(0.06) to ground state, $7/2^+$ level at 33.196, $5/2^-$ at 59.541 keV										Ens068 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{238}\text{Pa-u}$	54648	32	54637	17	-0.3	o			GS3	1.0	08Ch.A
	54637	17				2			GS3	1.0	12Ch19
$^{238}\text{U}_{-206}\text{Pb } ^{32}\text{S}$	104253.9	10.	104251.6	2.2	-0.1	U			C4	2.5	71Ke02
$\text{C}_{18}\text{H}_{22}-^{238}\text{U}$	121366.0	2.4	121362.3	2.0	-0.6	1	11	11 ^{238}U	M20	2.5	73Br06
$\text{C}_{24}\text{H}_{20}-^{238}\text{U } ^{35}\text{Cl}_2$	168010.8	1.4	168006.9	2.0	-1.1	1	33	33 ^{238}U	M20	2.5	73Br06
$^{238}\text{U}_{-235}\text{U}$	6858.6	10.	6858.3	1.3	0.0	U			C4	2.5	71Ke02
$^{238}\text{U}(\alpha)^{234}\text{Th}$	4271.5	5.	4269.7	2.9	-0.3	2					57Ha08 Z
	4265.1	5.			0.9	2					60Vo07 Z
	4272.9	5.			-0.6	2					61Ko11 Z
$^{238}\text{Pu}(\alpha)^{234}\text{U}$	5593.20	0.2	5593.20	0.19	0.4	1	90	75 ^{238}Pu			71Gr17 Z
$^{238}\text{Am}(\alpha)^{234}\text{Np}$	6041.7	30.				3					72Ah04
$^{238}\text{Cm}(\alpha)^{234}\text{Pu}$	6611.5	50.	6670	10	1.2	U					48St.A *
	6632.0	50.			0.8	U					52Hi.A
	6672.3	10.			-0.2	o			JAa		02As08
	6670.3	10.				4			JAa		06As03
$^{238}\text{U}(\text{n},\alpha)^{235}\text{Th}$	8700	50	8938	13	4.8	B					81Wa11
$^{236}\text{U}(\text{t},\text{p})^{238}\text{U}$	2900	20	2798.2	1.2	-5.1	F			Ald		64Mi.A *
	2782	10			1.6	U			ANL		67Er02
	2780	20			0.9	U			LAl		69Br11
$^{238}\text{U}(\text{p},\text{t})^{236}\text{U}$	-2765	15	-2798.2	1.2	-2.2	U			ANL		74Fr01
$^{238}\text{U}(\text{p},\text{d})^{237}\text{U}$	-3951	20	-3929.7	1.3	1.1	U			Ald		64Mi.A
$^{238}\text{U}(\text{d},\text{t})^{237}\text{U}$	116	6	103.0	1.3	-2.2	U			ANL		67Er02
$^{237}\text{Np}(\text{n},\gamma)^{238}\text{Np}$	5488.32	0.20				2			BNn		79Io01 Z
$^{238}\text{Pu}(\text{d},\text{t})^{237}\text{Pu}$	-746	10	-742.6	1.3	0.3	U			Kop		73Gr26
$^{238}\text{Pa}(\beta^-)^{238}\text{U}$	3600	300	3585	16	-0.1	U					68Tr07 *
	3460	60			2.1	U					85Ba57 *
$^{238}\text{Np}(\beta^-)^{238}\text{Pu}$	1295	10	1291.5	0.4	-0.3	U					55Ra27 *
	1300	15			-0.6	U					56Ba95 *
* $^{238}\text{Cm}(\alpha)^{234}\text{Pu}$	PrvCom to reference										58St50 **
* $^{236}\text{U}(\text{t},\text{p})^{238}\text{U}$	F : authors not satisfied with target material										AHW **
* $^{238}\text{Pa}(\beta^-)^{238}\text{U}$	$E_{\beta^-}=1700(300)$ to 3^- level at 1992.2 keV, and other E_{β^-} , reinterpreted										Ens02b **
* $^{238}\text{Pa}(\beta^-)^{238}\text{U}$	Reports result from thesis										82Gi.A **
* $^{238}\text{Np}(\beta^-)^{238}\text{Pu}$	$E_{\beta^-}=270(10)$ $280(10)$ respectively, to 2^+ level at 1028.544 keV, and other E_{β^-}										Ens02b **
$^{239}\text{Pu}(\alpha)^{235}\text{U}$	5244.60	0.25	5244.50	0.21	-0.4	1	68	44 ^{239}Pu			79Ry.A *
$^{239}\text{Am}(\alpha)^{235}\text{Np}$	5924.6	2.0	5922.4	1.4	-1.1	2			Bka		71Go01 *
	5920.2	2.0			1.1	2					75Ah05 *
$^{239}\text{Cm}(\alpha)^{235}\text{Pu}$	6539.7	140.				4			JAa		02Sh.C *
$^{239}\text{Cf}(\alpha)^{235}\text{Cm}^p$	7760.1	25.				10			GSa		81Mu12
$^{238}\text{U}(\text{n},\gamma)^{239}\text{U}$	4806.55	0.30	4806.38	0.17	-0.6	2			ANL		72Bo46 Z
	4806.30	0.21			0.4	2			ILn		79Br25 Z
$^{238}\text{U}(\text{d},\text{p})^{239}\text{U}$	2588	20	2581.82	0.17	-0.3	U			Ald		64Mi.A
	2579	7			0.4	U			Tal		66Sh16
	2585	6			-0.5	U			ANL		67Er02
$^{238}\text{Pu}(\text{n},\gamma)^{239}\text{Pu}$	5646.7	0.5	5646.2	0.3	-1.0	1	38	24 ^{238}Pu			75Ma.A Z
$^{238}\text{Pu}(\text{d},\text{p})^{239}\text{Pu}$	3432	10	3421.6	0.3	-1.0	U			Kop		73Gr26
$^{239}\text{Pu}(\text{d},\text{t})^{238}\text{Pu}$	604	10	611.0	0.3	0.7	U			ANL		73Fr01
$^{239}\text{U}(\beta^-)^{239}\text{Np}$	1290	20	1261.5	1.6	-1.4	U					64B111 *
$^{239}\text{Np}(\beta^-)^{239}\text{Pu}$	722.5	1.0	722.5	1.0	0.0	1	98	98 ^{239}Np			59Co63 *
* $^{239}\text{Pu}(\alpha)^{235}\text{U}$	$E_{\alpha}=5156.59(0.25,Z)$ to $1/2^+$ level at 0.0765 keV										Ens035 **
* $^{239}\text{Am}(\alpha)^{235}\text{Np}$	$E_{\alpha}=5824.6(4,Z)$ $5775.6(2,Z)$ $5733.6(2,Z)$ to ground state, $5/2^-$ 49.10, $7/2^-$ 91.6										Ens035 **
* $^{239}\text{Am}(\alpha)^{235}\text{Np}$	$E_{\alpha}=5772.7(2,Z)$ to $5/2^-$ level at 49.10 keV										Ens035 **
* $^{239}\text{Cm}(\alpha)^{235}\text{Pu}$	Private communication to reference										08Q103 **
* $^{239}\text{U}(\beta^-)^{239}\text{Np}$	$E_{\beta^-}=1211(20)$ to $5/2^-$ level at 74.664 keV, and other E_{β^-}										Ens035 **
* $^{239}\text{Np}(\beta^-)^{239}\text{Pu}$	$E_{\beta^-}=437(1)$ to $5/2^+$ level at 285.46 keV, and other E_{β^-}										Ens035 **
$^{240}\text{Pu}(\alpha)^{236}\text{U}$	5255.88	0.15	5255.76	0.14	-0.3	1	90	59 ^{236}U			72Go33 Z
$^{240}\text{Am}(\alpha)^{236}\text{Np}^p$	5468.9	1.0				3					70Go42 Z
$^{240}\text{Cm}(\alpha)^{236}\text{Pu}$	6397.8	0.6	6397.8	0.6	0.0	1	100	99 ^{240}Cm	Kum		71Bb10 *
$^{240}\text{Cf}(\alpha)^{236}\text{Cm}$	7718.9	10.	7711	4	-0.8	8					70Si19
	7713.8	20.			-0.1	U			GSa		10Kh06
	7709.6	4.2			0.3	8			JAa		10As.A

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{238}\text{U}(\text{t,p})^{240}\text{U}$	2242	20	2254	5	0.6	U			Ald		64Mi.A
	2253	20			0.0	U			LAL		69Br11
$^{240}\text{Pu}(\text{p,t})^{238}\text{Pu}$	-3692	15	-3698.6	0.4	-0.4	U			ANL		74Fr01
$^{239}\text{Pu}(\text{n},\gamma)^{240}\text{Pu}$	6534.1	1.0	6534.20	0.23	0.1	-					70Ch.A
	6534.3	0.4			-0.2	-					74Ju.B Z
	6534.2	0.4			0.0	-					75We.A Z
$^{239}\text{Pu}(\text{d,p})^{240}\text{Pu}$	4300	10	4309.64	0.23	1.0	U			ANL		73Fr01
$^{239}\text{Pu}(\text{n},\gamma)^{240}\text{Pu}$	ave.	6534.24	0.27	6534.20	0.23	-0.1	1	73	41 ^{239}Pu		average
$^{240}\text{U}(\beta^-)^{240}\text{Np}^m$	386	20	381	13	-0.3	1	45		41 $^{240}\text{Np}^m$		53Kn23 *
$^{240}\text{Np}^m(\text{IT})^{240}\text{Np}$	20	15	18	14	-0.1	1	83		68 ^{240}Np		81Hs02 *
$^{240}\text{Np}(\beta^-)^{240}\text{Pu}$	2199	30	2191	17	-0.3	1	32		32 ^{240}Np		51Or.A *
$^{240}\text{Np}^m(\beta^-)^{240}\text{Pu}$	2210	20	2208	13	-0.1	1	44		44 $^{240}\text{Np}^m$		59Bu20 *
$^{240}\text{Am}(\epsilon)^{240}\text{Pu}$	1395	35	1385	14	-0.3	R					72Ah07 *
$^{240}\text{Cm}(\alpha)^{236}\text{Pu}$	$E_{\alpha}=6290.5, 6247.7(0.6,Z)$ to ground state, 2^+ level at 44.63 keV										Ens06a **
$^{240}\text{U}(\beta^-)^{240}\text{Np}^m$	$E_{\beta^-}=360(20)$ to $^{240}\text{Np}^m$, and 1^+ level at 44.17 keV above										Ens08a **
$^{240}\text{Np}^m(\text{IT})^{240}\text{Np}$	From fraction IT=0.0012(0.0001)										AHW **
$^{240}\text{Np}(\beta^-)^{240}\text{Pu}$	$E_{\beta^-}=890(30)$ to 5^- level at 1308.74 keV										Ens08a **
$^{240}\text{Np}^m(\beta^-)^{240}\text{Pu}$	$E_{\beta^-}=2180(20)$ to ground state and 2^+ level at 42.824 keV, and other E_{β^-}										Ens08a **
$^{240}\text{Am}(\epsilon)^{240}\text{Pu}$	$pK=0.635(0.020)$ to 3^+ level at 1030.55 keV, recalculated										Ens08a **
$^{241}\text{Pu}(\alpha)^{237}\text{U}$	5139.6	3.	5140.0	0.5	0.1	U					68Ah01 *
	5139.3	1.2			0.6	1	16	15 ^{237}U	Kum		68Ba25 *
$^{241}\text{Am}(\alpha)^{237}\text{Np}$	5637.81	0.12	5637.82	0.12	0.1	1	100	98 ^{237}Np			71Gr17 *
$^{241}\text{Cm}(\alpha)^{237}\text{Pu}$	6182.8	2.0	6185.2	0.6	1.2	U			Kum		67Ba42 *
	6185.2	0.6			0.0	-			Kum		71Bb10 *
	6185.0	2.0			0.1	-					75Ah05 *
	6185.2	0.6			0.0	1	99	94 ^{237}Pu			average
	7459.0	5.	7455	3	-0.9	9					70Si19
$^{241}\text{Cf}(\alpha)^{237}\text{Cm}^p$	7451.8	4.			0.7	9			JAA		10As.A
	8064.1	30.	8250	20	6.2	C			GSa		85Hi.A *
$^{241}\text{Es}(\alpha)^{237}\text{Bk}$	8250.2	20.				10			GSa		96Ni09
	3242	20	3293.93	0.23	2.6	U			LAL		69Br11
$^{239}\text{Pu}(\text{t,p})^{241}\text{Pu}$	5241.3	0.7	5241.521	0.030	0.3	U					75Ma.A
$^{240}\text{Pu}(\text{n},\gamma)^{241}\text{Pu}$	5241.52	0.03			0.0	1	100	62 ^{241}Pu	ILn		98Wh01 Z
$^{240}\text{Pu}(\text{d,p})^{241}\text{Pu}$	3018	6	3016.955	0.030	-0.2	U			ANL		67Er02
$^{241}\text{Am}(\text{d,t})^{240}\text{Am}$	-388	15	-390	14	-0.1	2			Kop		76Gr19
$^{241}\text{Np}(\beta^-)^{241}\text{Pu}$	1360	100	1300	70	-0.6	2					59Va32
	1250	100			0.5	2					66Qa02
	20.8	0.2	20.78	0.13	-0.1	-					56Sh31
	20.7	0.3			0.3	-					99Dr13
	20.78	0.20			0.0	-					99Ya.A
$^{241}\text{Pu}(\beta^-)^{241}\text{Am}$	21.6	0.5			-1.6	U					10Lo14 *
	ave.	20.77	0.13		0.1	1	100	96 ^{241}Am			average
$^{241}\text{Cm}(\epsilon)^{241}\text{Am}$	767.5	1.2	767.4	1.2	-0.1	1	95	93 ^{241}Cm			89Su.A *
$^{241}\text{Pu}(\alpha)^{237}\text{U}$	$E_{\alpha}=4896.6(3,Z), 4853.6(3,Z)$ to $5/2^+$ at 159.962, $11/2^+$ at 204.06 keV										Ens068 **
$^{241}\text{Pu}(\alpha)^{237}\text{U}$	$E_{\alpha}=4896.3(1.2,Z), 4853.3(1.2,Z)$ to $5/2^+$ at 159.962, $11/2^+$ at 204.06 keV										Ens068 **
$^{241}\text{Am}(\alpha)^{237}\text{Np}$	$E_{\alpha}=5485.56(0.12,Z), 5442.80(0.13,Z)$ to $5/2^-$ at 59.54, $7/2^-$ at 102.96										Ens068 **
$^{241}\text{Cm}(\alpha)^{237}\text{Pu}$	$E_{\alpha}=6080.6(2,Z), 5926.6(2,Z)$ to ground state, $3/2^+$ level at 155.456 keV										Ens068 **
$^{241}\text{Cm}(\alpha)^{237}\text{Pu}$	$E_{\alpha}=5939.0(0.6,Z), 5884.7(0.6,Z)$ to $1/2^+$ at 145.543, $5/2^+$ at 201.179 keV										Ens068 **
$^{241}\text{Cm}(\alpha)^{237}\text{Pu}$	$E_{\alpha}=5938.7(2,Z), 5884.7(2,Z)$ to $1/2^+$ at 145.543, $5/2^+$ at 201.179 keV										Ens068 **
$^{241}\text{Es}(\alpha)^{237}\text{Bk}$	C : new data from same group (next item) is more reliable										96Ni09 **
$^{241}\text{Pu}(\beta^-)^{241}\text{Am}$	No quoted uncertainty, estimated by evaluator										BPf126 **
$^{241}\text{Cm}(\epsilon)^{241}\text{Am}$	$Q(\epsilon)=5.5(1.2)$ to $3/2^-$ level at 636.86 keV										Ens05c **
$^{242}\text{Pu}(\alpha)^{238}\text{U}$	4987.3	2.0	4984.5	1.0	-1.4	-					53As.A *
	4989.5	3.0			-1.7	U					56Ko67 *
	4982.9	1.2			1.4	-			Kum		68Ba25 *
	ave.	4984.1	1.0			0.5	1	93	55 ^{238}U		average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{242}\text{Am}(\alpha)^{238}\text{Np}$	5587.5	0.8	5588.50	0.25	1.2	U			Kum		79Ba67 *
	5589.9	0.8			-1.8	U					90Ho02 *
$^{242}\text{Cm}(\alpha)^{238}\text{Pu}$	6215.63	0.08	6215.56	0.08	0.0	1	100	99 ^{242}Cm			71Gr17 Z
$^{242}\text{Cf}(\alpha)^{238}\text{Cm}$	7516.9	4.				5					70Si19 Z
$^{242}\text{Es}(\alpha)^{238}\text{Bk}$	8160.2	20.				9			GSa		10An08
$^{240}\text{Pu}(t,p)^{242}\text{Pu}$	3043	20	3069.4	0.7	1.3	U			LAI		69Br11
$^{242}\text{Pu}(p,t)^{240}\text{Pu}$	-3045	15	-3069.4	0.7	-1.6	U			ANL		74Fr01
$^{241}\text{Pu}(n,\gamma)^{242}\text{Pu}$	6309.5	0.7	6309.7	0.7	0.3	1	96	62 ^{242}Pu			72Ma.A
$^{242}\text{Pu}(d,t)^{241}\text{Pu}$	-49	7	-52.5	0.7	-0.5	U			ANL		67Er02
$^{241}\text{Am}(n,\gamma)^{242}\text{Am}$	5541.5	1.5	5537.64	0.10	-2.6	U					75Ij.A
	5537.64	0.1				2			ILn		88Sa18 Z
$^{241}\text{Am}(d,p)^{242}\text{Am}$	3308	15	3313.07	0.10	0.3	U			Kop		76Gr19
$^{242}\text{Np}(\beta^-)^{242}\text{Pu}$	2700	200				2					79Ha26
$^{242}\text{Am}(\beta^-)^{242}\text{Cm}$	651	5	664.5	0.4	2.7	U					50Ok52 *
	667	5			-0.5	U					55Ba.A
* $^{242}\text{Pu}(\alpha)^{238}\text{U}$	$E_\alpha=4904.6, 4860.6(2,Z)$ to ground state, 2^+ level at 44.916 keV										Ens02b **
* $^{242}\text{Pu}(\alpha)^{238}\text{U}$	$E_\alpha=4905.2(3,Z), 4863.2(3,Z)$ to ground state, 2^+ level at 44.916 keV										Ens02b **
* $^{242}\text{Pu}(\alpha)^{238}\text{U}$	$E_\alpha=4900.4(1.2,Z), 4856.1(1.2,Z)$ to ground state, 2^+ level at 44.916 keV										Ens02b **
* $^{242}\text{Am}(\alpha)^{238}\text{Np}$	$E_\alpha=5206.6(0.5,Z), 5144.4(0.5,Z)$ from $^{242}\text{Am}^m$ at 48.60 to 5^- at 342.439, and 6^- at 407.59 keV; error increased due to conflict with next item										Ens02b **
*											GAU **
* $^{242}\text{Am}(\alpha)^{238}\text{Np}$	$E_\alpha=5208.3(0.8,Z), 5144.3(0.9,Z)$ from $^{242}\text{Am}^m$ to 5^- 6^- levels (see above)										Ens02b **
* $^{242}\text{Am}(\beta^-)^{242}\text{Cm}$	$E_{\beta^-}=628(5)$ to ground state and 2^+ level at 42.13 keV										Ens02b **
$^{243}\text{Am}(\alpha)^{239}\text{Np}$	5438.8	1.0	5438.8	1.0	0.0	1	98	96 ^{243}Am	Kum		68Ba25 *
$^{243}\text{Cm}(\alpha)^{239}\text{Pu}$	6165.4	3.0	6168.8	1.0	1.1	U					57As.A *
	6165.7	3.0			1.0	U					63Dz07 *
	6165.4	3.0			1.1	o			Kum		66Ba07 *
	6168.8	1.0				2					69Ba57 *
$^{243}\text{Bk}(\alpha)^{239}\text{Am}$	6874.4	4.				3			Bka		66Ah.A Z
$^{243}\text{Cf}(\alpha)^{239}\text{Cm}^p$	7178	10				6					67Fi04 *
$^{243}\text{Es}(\alpha)^{239}\text{Bk}$	8072.1	10.				9			RIa		89Ha27
$^{243}\text{Es}(\alpha)^{239}\text{Bk}^p$	8022.3	20.	8030.9	2.9	0.4	U					73Es02
	8031.4	3.			-0.2	10			RIa		89Ha27
	8027.3	20.			0.2	o			GSa		93Ho.A
	8025.4	10.			0.6	10			GSa		10An08
$^{243}\text{Fm}(\alpha)^{239}\text{Cf}$	8689.1	25.	8690	50	0.1	o			GSa		81Mu12
	8693.2	20.				11			GSa		08Kh10
$^{243}\text{Am}(p,t)^{241}\text{Am}$	-3407	15	-3420.7	1.4	-0.9	U			ANL		74Fr01
$^{242}\text{Pu}(n,\gamma)^{243}\text{Pu}$	5034.2	3.	5033.9	2.6	-0.1	1	77	76 ^{243}Pu			76Ca25
$^{242}\text{Pu}(d,p)^{243}\text{Pu}$	2807	8	2809.3	2.6	0.3	U			ANL		67Er02
$^{243}\text{Am}(d,t)^{242}\text{Am}$	-111	15	-107.6	1.4	0.2	U			Kop		76Gr19
$^{243}\text{Pu}(\beta^-)^{243}\text{Am}$	578	10	579.7	2.9	0.2	-					69Ho10
	580	10			0.0	-					77Dr07
ave.	579	7			0.1	1	17	14 ^{243}Pu			average
* $^{243}\text{Am}(\alpha)^{239}\text{Np}$	$E_\alpha=5275.2(1.0,Z), 5233.3(1.0,Z)$ to $5/2^-$ level at 74.66, $7/2^-$ at 117.84										Ens035 **
* $^{243}\text{Cm}(\alpha)^{239}\text{Pu}$	$E_\alpha=6063.7, 5989.7, 5782.7, 5738.7(3,Z)$ to ground state, $7/2^+$ level at 75.705, $5/2^+$ at 285.46, and $7/2^+$ at 330.124 keV										Ens035 **
*											Ens035 **
* $^{243}\text{Cm}(\alpha)^{239}\text{Pu}$	$E_\alpha=5990.5, 5783.5, 5738.5(3,Z)$ to $7/2^+$ level at 75.705, $5/2^+$ at 285.46, and $7/2^+$ at 330.124 keV										Ens035 **
*											Ens035 **
* $^{243}\text{Cm}(\alpha)^{239}\text{Pu}$	$E_\alpha=6067.4, 5992.4(2,Z)$ to ground state, $7/2^+$ at 75.705 keV										Ens035 **
* $^{243}\text{Cm}(\alpha)^{239}\text{Pu}$	$E_\alpha=5785.7(1.0,Z), 5742.8(1.0,Z)$ to $5/2^+$ at 285.46, $7/2^+$ at 330.124 keV										Ens035 **
* $^{243}\text{Cf}(\alpha)^{239}\text{Cm}^p$	Unhindered $E_\alpha=7060(10)$; there is a weaker $E_\alpha=7170(10)$ keV										AHW **
$^{244}\text{Pu}(\alpha)^{240}\text{U}$	4665.6	1.0	4665.5	1.0	0.0	1	100	96 ^{240}U			69Be06 Z
$^{244}\text{Cm}(\alpha)^{240}\text{Pu}$	5901.74	0.05				2			BIP		71Gr17 *
$^{244}\text{Bk}(\alpha)^{240}\text{Am}$	6778.8	4.				3					66Ah.B *
$^{244}\text{Cf}(\alpha)^{240}\text{Cm}$	7327.1	2.	7328.9	1.8	0.9	-					67Fi04 Z
	7336.4	4.			-1.8	-					67Si08 Z
	7330.4	20.			-0.1	U			GSa		08Kh10
ave.	7328.9	1.8			0.0	1	99	98 ^{244}Cf			average

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference	
$^{244}\text{Es}(\alpha)^{240}\text{Bk}^p$	7696.4	20.							73Es02	
$^{242}\text{Pu}(\text{t,p})^{244}\text{Pu}$	2576	20	2573	5	-0.2	U	LAI		69Br11	
$^{244}\text{Pu}(\text{p,t})^{242}\text{Pu}$	-2560	15	-2573	5	-0.8	U	ANL		72Ma15	
$^{244}\text{Pu}(\text{t},\alpha)^{243}\text{Np}^p$	12405	10							79FI02	
$^{244}\text{Pu}(\text{d,t})^{243}\text{Pu}$	234	5	237	4	0.6	1	72 ^{244}Pu	ANL	76Ca25	
$^{243}\text{Am}(\text{n},\gamma)^{244}\text{Am}^m$	5277.90	0.07						ILn	84Vo07 Z	
$^{244}\text{Cm}(\text{d,t})^{243}\text{Cm}$	-530	7	-544.0	1.0	-2.0	U	ANL		67Er02	
$^{244}\text{Am}^m(\text{IT})^{244}\text{Am}$	85.0	1.0	88.6	1.7	3.6	F			84Ho02 *	
$^{244}\text{Am}(\beta^-)^{244}\text{Cm}$	1427.3	1.0							62Va08 *	
* $^{244}\text{Cm}(\alpha)^{240}\text{Pu}$	E $_{\alpha}$ =5804.77(0.05,Z), 5762.16(0.03,Z) to ground state, 2 $^{+}$ level at 42.824 keV									
* $^{244}\text{Bk}(\alpha)^{240}\text{Am}$	E $_{\alpha}$ =6667.5(4,Z), 6625.5(3,Z) to ground state, 2 $^{+}$ level at 42.824 keV									
* $^{244}\text{Am}^m(\text{IT})^{244}\text{Am}$	F : value in Fig. 1 only, no source no error									
* $^{244}\text{Am}(\beta^-)^{244}\text{Cm}$	E $_{\beta^-}$ =387(1) to 6 $^{+}$ level at 1040.188 keV; also E $_{\beta^-}$ =1498(10) from									
*	$^{244}\text{Am}^m$ at 88.6(1.7) to ground state and 2 $^{+}$ at 42.965 keV, not used									
$^{245}\text{Cm}(\alpha)^{241}\text{Pu}$	5623	1	5623.0	1.0	0.0	1	100	100 ^{245}Cm	Kum	75Ba65 *
$^{245}\text{Bk}(\alpha)^{241}\text{Am}$	6454.7	4.	6454.5	1.4	0.0	2				74Po08 *
	6454.5	1.5			0.0	2		Kum		75Ba25 *
$^{245}\text{Cf}(\alpha)^{241}\text{Cm}$	7257.5	2.0	7258.4	1.8	0.5	-				67Fi04 *
	7265	5			-1.3	-				96Ma72 *
	7260.8	11.			-0.2	U		GSa		04He28
ave.	7258.5	1.9			-0.1	1	98	96 ^{245}Cf		average
$^{245}\text{Es}(\alpha)^{241}\text{Bk}$	7858.5	20.	7909	3	1.0	U				73Es01
	7884.0	20.			0.5	U		GSa		85He22
	7909.4	3.				3		RIa		89Ha27
$^{245}\text{Es}(\alpha)^{241}\text{Bk}^p$	7827.9	30.	7858.4	1.0	1.0	U				67Mi06
	7858.5	1.				4		RIa		89Ha27
$^{245}\text{Fm}(\alpha)^{241}\text{Cf}^p$	8285.5	20.				11				67Nu01
$^{245}\text{Md}(\alpha)^{241}\text{Es}^p$	8824.3	20.				12		GSa		96Ni09 *
$^{244}\text{Pu}(\text{d,p})^{245}\text{Pu}$	2469	15	2474	13	0.3	2		ANL		75Er.A *
$^{244}\text{Cm}(\text{d,p})^{245}\text{Cm}$	3297	7	3295.7	1.0	-0.2	U		ANL		67Er02
$^{245}\text{Pu}(\beta^-)^{245}\text{Am}$	1257	30	1277	15	0.7	R				68Da02 *
$^{245}\text{Am}(\beta^-)^{245}\text{Cm}$	905	5	897.4	2.4	-1.5	1	24	24 ^{245}Am		55Br02
$^{245}\text{Es}^p(\text{IT})^{245}\text{Es}$	283	15				4				Nub127
* $^{245}\text{Cm}(\alpha)^{241}\text{Pu}$	E $_{\alpha}$ =5529.0, 5488.5, 5436.1(0.5,Z), 5361.8, 5303.6(1.2,Z) keV									
*	to ground state, 7/2 $^{+}$ 41.97, 9/2 $^{+}$ 95.78, 7/2 $^{+}$ 175.05, 9/2 $^{+}$ 231.935 levels									
*	Q $_{\alpha}$ differing rather much; unweighted average 5613.2(0.82) keV									
* $^{245}\text{Bk}(\alpha)^{241}\text{Am}$	E $_{\alpha}$ =6349.0, 6309.0, 6146.0, 5886.0 (all 4,Z)									
*	to ground state, 7/2 $^{-}$ at 41.176, 5/2 $^{+}$ at 205.88, 3/2 $^{-}$ at 471.81 keV									
* $^{245}\text{Bk}(\alpha)^{241}\text{Am}$	E $_{\alpha}$ =6347.8, 6307.8, 6146.8, 5885.8 recalibrated as in reference									
*	to ground state, 7/2 $^{-}$ at 41.176, 5/2 $^{+}$ at 205.88, 3/2 $^{-}$ at 471.81 keV									
* $^{245}\text{Cf}(\alpha)^{241}\text{Cm}$	E $_{\alpha}$ =7136.8(2.0,Z), 7083.8(2.0,Z) to gs+5.6 and 56.1 level									
* $^{245}\text{Cf}(\alpha)^{241}\text{Cm}$	E $_{\alpha}$ =7145(5), 7090(5) to gs+5.6 and 56.1 level									
* $^{245}\text{Md}(\alpha)^{241}\text{Es}^p$	Second E $_{\alpha}$ 8635(20) keV									
* $^{244}\text{Pu}(\text{d,p})^{245}\text{Pu}$	Q=2252(15) to 217 level (estimated energy for 15/2 $^{-}$ level)									
* $^{245}\text{Pu}(\beta^-)^{245}\text{Am}$	E $_{\beta^-}$ =1210(40), 930(30) to (9/2 $^{+}$) level at 47.07, 7/2 $^{+}$ at 327.428 keV									
$^{246}\text{Cm}(\alpha)^{242}\text{Pu}$	5475.2	4.	5475.1	0.9	0.0	U				63Dz07 Z
	5474.9	2.			0.1	-		Kum		66Ba07 *
	5475.2	1.			-0.1	-				84Sh31 *
ave.	5475.1	0.9			0.0	1	99	99 ^{246}Cm		average
$^{246}\text{Cf}(\alpha)^{242}\text{Cm}$	6871.0	1.0	6861.6	1.0	-9.4	B				63Fr04 *
	6861.6	1.			0.0	1	100	99 ^{246}Cf	Kum	77Ba69 *
$^{246}\text{Es}(\alpha)^{242}\text{Bk}^p$	7451.2	30.	7492	4	1.4	U				67Mi06
	7481.9	30.			0.3	U				73Es01
	7492.0	4.				4		RIa		89Ha27
$^{246}\text{Fm}(\alpha)^{242}\text{Cf}$	8371.4	20.	8377	8	0.3	6				66Ak01
	8376.5	20.			0.0	6		Bka		67Nu01
	8386.7	20.			-0.5	o		GSa		96Ni09
	8378.4	10.			-0.2	6		GSa		10An08

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{246}\text{Md}(\alpha)^{242}\text{Es}$	8884.7	20.	8890	40	0.1	o			GSa		96Ni09 *
	8888.8	40.				10			GSa		10An08
$^{246}\text{Md}^m(\alpha)^{242}\text{Es}$	8944.5	50.				10			GSa		10An08 *
$^{244}\text{Pu}(\text{t,p})^{246}\text{Pu}$	2085	20	2072	15	-0.7	1	57	54 ^{246}Pu	LAI		79Br19
$^{246}\text{Cm}(\text{d,t})^{245}\text{Cm}$	-196	6	-200.4	1.5	-0.7	U			ANL		67Er02
$^{246}\text{Pu}(\beta^-)^{246}\text{Am}^m$	374	10	371	9	-0.3	1	89	46 ^{246}Pu			56Ho23 *
$^{246}\text{Am}^m(\beta^-)^{246}\text{Cm}$	2300	100	2407	15	1.1	U					55En16 *
	2420	20			-0.7	1	57	57 $^{246}\text{Am}^m$			56Sm85 *
$^{246}\text{Bk}(\epsilon)^{246}\text{Cm}$	1350	60				2					89Sc.A
$^{246}\text{Cm}(\alpha)^{242}\text{Pu}$	$E_\alpha=5385.3(2,Z)$, $5342.3(2,Z)$ to ground state, 2^+ level at 44.54 keV										Ens026 **
$^{246}\text{Cm}(\alpha)^{242}\text{Pu}$	$E_\alpha=5385.6(1,Z)$, $5342.6(1,Z)$ to ground state, 2^+ level at 44.54 keV										Ens026 **
$^{246}\text{Cf}(\alpha)^{242}\text{Cm}$	$E_\alpha=6757.4(1.0,Z)$, $6718.4(0.7,Z)$ to ground state, 2^+ level at 42.13 keV										Ens026 **
$^{246}\text{Cf}(\alpha)^{242}\text{Cm}$	$E_\alpha=6750.0(1.0,Z)$, $6708.2(1.0,Z)$ to ground state, 2^+ level at 42.13 keV										Ens026 **
$^{246}\text{Md}(\alpha)^{242}\text{Es}$	Also a lower $E_\alpha=8530(30)$ keV										96Ni09 **
$^{246}\text{Md}^m(\alpha)^{242}\text{Es}$	$E_\alpha=8178(10)$ to level at $531+x$; x estimated to be 100#50 keV										10An08 **
$^{246}\text{Pu}(\beta^-)^{246}\text{Am}^m$	$E_{\beta^-}=150(10)$ to 1^+ level at 223.74 keV above $^{246}\text{Am}^m$										Ens118 **
$^{246}\text{Am}^m(\beta^-)^{246}\text{Cm}$	$E_{\beta^-}=1222(100)$ $1350(20)$ respectively, to 1^- level at 1078.845, 2^- level at 1104.854										Ens118 **
$^{247}\text{Cm}(\alpha)^{243}\text{Pu}$	5354.6	4.	5354	3	-0.3	1	71	64 ^{247}Cm			71Fi01 *
$^{247}\text{Bk}(\alpha)^{243}\text{Am}$	5889.6	5.				2					69Fr01 *
$^{247}\text{Cf}(\alpha)^{243}\text{Cm}^p$	6399.6	5.				5					84Ah02 Z
$^{247}\text{Es}(\alpha)^{243}\text{Bk}^p$	7450.7	30.	7443.7	1.0	-0.2	U					67Mi06
	7430.5	30.			0.4	U					73Es01
	7443.8	1.				5			RIa		89Ha27
$^{247}\text{Fm}(\alpha)^{243}\text{Cf}$	8060.8	50.	8258	10	3.9	B			DbA		67Fi15
	8213	18			2.5	o			GSa		89He03 *
	8287.3	20.			-1.5	o			GSa		04He28 *
	8268.1	10.			-1.1	o			GSa		06He27 *
$^{247}\text{Fm}^m(\alpha)^{243}\text{Cf}$	8314.9	30.	8307	5	-0.3	U			DbA		67Fi15 *
	8260.0	30.			1.5	o			GSa		97He29 *
	8304.8	11.			0.2	o			GSa		04He28
	8306.8	5.				7			GSa		06He27
$^{247}\text{Md}(\alpha)^{243}\text{Es}$	8776.6	25.	8764	10	-0.5	o			GSa		81Mu12 *
	8772.5	20.			-0.4	o			GSa		93Ho.A *
	8770.5	10.			-0.6	o			GSa		05He27 *
	8764.4	10.				10			GSa		10An08 *
$^{247}\text{Md}^m(\alpha)^{243}\text{Es}$	9027.9	40.				10			GSa		10An08 *
$^{246}\text{Cm}(\text{d,p})^{247}\text{Cm}$	2931	8	2931	4	0.0	1	25	24 ^{247}Cm	ANL		67Er02
$^{247}\text{Cf}(\epsilon)^{247}\text{Bk}$	646	6	613	16	-5.5	C					56Ch.A *
$^{247}\text{Cm}(\alpha)^{243}\text{Pu}$	$E_\alpha=5267.3(4,Z)$ $5212.3(4,Z)$ $4870.3(4,Z)$ to ground state, $9/2^+$ 58.1, $9/2^-$ 402.6										Ens04c **
$^{247}\text{Bk}(\alpha)^{243}\text{Am}$	$E_\alpha=5794$, 5710 , $5688(5,Z)$ to ground state, $5/2^+$ level at 84.0, $7/2^+$ at 109.2 keV										Ens04c **
$^{247}\text{Fm}(\alpha)^{243}\text{Cf}$	$E_\alpha=8060(15)$ summed with e^-										AHW **
$^{247}\text{Fm}(\alpha)^{243}\text{Cf}$	$E_\alpha=7840(20)$ to 318 level										04He28 **
$^{247}\text{Fm}(\alpha)^{243}\text{Cf}$	$E_\alpha=7824(10)$ to 315 level										06He27 **
$^{247}\text{Fm}^m(\alpha)^{243}\text{Cf}$	Only one event										97He29 **
$^{247}\text{Fm}^m(\alpha)^{243}\text{Cf}$	Not observed in later work on ^{251}No decay										01He35 **
$^{247}\text{Md}(\alpha)^{243}\text{Es}$	$E_\alpha=8428(25)$ to 209.6 level										10An08 **
$^{247}\text{Md}(\alpha)^{243}\text{Es}$	$E_\alpha=8424(20)$ to 209.6 level										10An08 **
$^{247}\text{Md}(\alpha)^{243}\text{Es}$	$E_\alpha=8422(10)$ to 209.6 level										10An08 **
$^{247}\text{Md}(\alpha)^{243}\text{Es}$	$E_\alpha=8616(20)$, $8416(10)$ to ground state, 209.6 level										10An08 **
$^{247}\text{Md}^m(\alpha)^{243}\text{Es}$	$E_\alpha=8783(40)$ to $1/2^-$ level at 100 keV										10An08 **
$^{247}\text{Cf}(\epsilon)^{247}\text{Bk}$	LMK=10(3) assuming first-forbidden to $(5/2^-)$ level at 447.8 keV, yields 646.8										Ens048 **
*	contradicts LMK=75 allowed to $(5/2)^+$ level at 334.9 keV, yields 550;										WgM10a**
*	both conflict with 613 from Shiptap data to ^{255}No plus α chain										WgM10a**
$^{248}\text{Cm}(\alpha)^{244}\text{Pu}$	5161.81	0.25	5161.73	0.25	0.0	1	100	76 ^{248}Cm	Kum		77Ba69 Z
$^{248}\text{Cf}(\alpha)^{244}\text{Cm}$	6364.7	5.	6361	5	-0.7	o					78Gr10
	6361.2	5.				3					84Ah02 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{248}\text{Es}(\alpha)^{244}\text{Bk}$	7165.8	20.	7160#	50#	-0.3	F					84Li.A *
$^{248}\text{Es}(\alpha)^{244}\text{Bk}^p$	6982.8	15.	7020	5	2.5	U					56Ch67
	6982.8	10.			3.8	B					70Ah01
	7020.4	5.				5			RIa		89Ha27
$^{248}\text{Fm}(\alpha)^{244}\text{Cf}$	8009.4	30.	7994	8	-0.5	-					66Ak01
	7999.3	20.			-0.2	-					67Nu01
	8002.3	15.			-0.5	o			GSa		85He.A
	7992.2	11.			0.2	-			GSa		04He28
ave.	7995	9			-0.1	1	79	77 ^{248}Fm			average
$^{248}\text{Md}(\alpha)^{244}\text{Es}^p$	8497.3	30.				6					73Es01
$^{248}\text{Cm}(p,t)^{246}\text{Cm}$	-2894	15	-2886	5	0.5	U			ANL		74Fr01
$^{248}\text{Cm}(d,t)^{247}\text{Cm}$	49	8	45	5	-0.5	1	36	24 ^{248}Cm	ANL		67Er02
$^{248}\text{Bk}^m(\beta^-)^{248}\text{Cf}$	870	20				4					78Gr10
* $^{248}\text{Cf}(\alpha)^{244}\text{Cm}$	E $_{\alpha}$ =6257.8(5,Z), 6216.8(5,Z) to ground state, 2 $^{+}$ level at 42.965 keV										Ens036 **
* $^{248}\text{Es}(\alpha)^{244}\text{Bk}$	F : this line is not observed in more recent works										AHW **
$^{249}\text{Bk}(\alpha)^{245}\text{Am}$	5520.4	2.0	5523.4	2.1	1.5	-			Bka		66Ah.A *
	5526.1	1.0			-2.7	-			Kum		71Bb10 *
ave.	5525.0	2.3			-0.7	1	84	76 ^{245}Am			average
$^{249}\text{Cf}(\alpha)^{245}\text{Cm}$	6296.0	0.7	6296.1	0.7	0.2	1	99	99 ^{249}Cf	Kum		71Bb10 *
$^{249}\text{Es}(\alpha)^{245}\text{Bk}^p$	6881.3	5.	6886.0	1.9	0.9	4					70Ah01 Z
	6886.8	2.			-0.4	4			RIa		89Ha27
$^{249}\text{Fm}(\alpha)^{245}\text{Cf}$	7718.3	20.	7709	6	-0.5	-					73Es01 *
	7705.1	23.			0.2	o			GSa		85He06 *
	7705.0	14.			0.3	-			GSa		04He28 *
	7710.2	8.1			-0.2	-			Orm		11Lo06 *
ave.	7710	7			-0.2	1	80	76 ^{249}Fm			average
$^{249}\text{Md}(\alpha)^{245}\text{Es}^p$	8161.3	20.	8158	9	-0.2	5					73Es01
	8157.3	20.			0.0	o			GSa		85He22
	8165	20			-0.3	o			GSa		01He35 *
	8157.3	10.			0.1	o			GSa		05He27
	8157.3	10.			0.1	5			GSa		09He20
$^{249}\text{Md}^m(\alpha)^{245}\text{Es}^q$	8212.2	20.				7			GSa		01He35
$^{248}\text{Cm}(n,\gamma)^{249}\text{Cm}$	4713.37	0.25				2			ILn		82Ho07 Z
$^{248}\text{Cm}(d,p)^{249}\text{Cm}$	2488	6	2488.80	0.25	0.1	U			ANL		67Er02
$^{249}\text{Cm}(\beta^-)^{249}\text{Bk}$	870	100	901	5	0.3	U					58Ea06 *
	885	15			1.1	U			ANB		05Ah03 *
$^{249}\text{Bk}(\beta^-)^{249}\text{Cf}$	125	2	124.6	1.4	-0.2	-					59Va02
	123	2			0.8	-					74G110
ave.	124.0	1.4			0.4	1	94	92 ^{249}Bk			average
* $^{249}\text{Bk}(\alpha)^{245}\text{Am}$	E $_{\alpha}$ =5431.8, 5412.8, 5384.8(all 2,Z) to ground state, 7/2 $^{+}$ 19.20, 9/2 $^{+}$ 47.07 keV										Ens112 **
* $^{249}\text{Bk}(\alpha)^{245}\text{Am}$	E $_{\alpha}$ =5437.1(1.0,Z) to gs. Energies of higher branches										71Bb10 **
*	rather different from reference, calibrated with same ground state α										75Ba27 **
* $^{249}\text{Cf}(\alpha)^{245}\text{Cm}$	E $_{\alpha}$ =6193.8(0.7,Z), 5813.3(1.0,Z) to ground state, 9/2 $^{-}$ level at 388.181 keV										Ens112 **
* $^{249}\text{Fm}(\alpha)^{245}\text{Cf}$	E $_{\alpha}$ =7540(20) to corresponding 7/2 $^{+}$ [624] level at 55(10) keV										04He28 **
* $^{249}\text{Fm}(\alpha)^{245}\text{Cf}$	E $_{\alpha}$ =7527(23) to corresponding 7/2 $^{+}$ [624] level at 55(10) keV										04He28 **
* $^{249}\text{Fm}(\alpha)^{245}\text{Cf}$	Also E $_{\alpha}$ =7530(10) keV to 7/2 $^{+}$ [624] level at 57(4) keV										11Lo06 **
* $^{249}\text{Fm}(\alpha)^{245}\text{Cf}$	E $_{\alpha}$ =7530(7) to 7/2 $^{+}$ [624] level at 57(4) keV										11Lo06 **
* $^{249}\text{Md}(\alpha)^{245}\text{Es}^p$	E $_{\alpha}$ =8022(20) partly summed with conversion electrons										01He35 **
* $^{249}\text{Cm}(\beta^-)^{249}\text{Bk}$	E $_{\beta^-}$ =860(100) 876(15) respectively, to 3/2 $^{-}$ level at 8.777 keV										Ens118 **
$^{250}\text{Cf}(\alpha)^{246}\text{Cm}$	6129.1	0.6	6128.44	0.19	-1.1	2			Kum		71Bb10 *
	6128.44	0.2			0.4	2					86Ry04 Z
$^{250}\text{Fm}(\alpha)^{246}\text{Cf}$	7550.9	50.	7557	8	0.1	U					57Am47
	7540.7	30.			0.5	-					66Ak01
	7561.1	30.			-0.2	-					73Es01
	7560.1	15.			-0.2	-			ORb		77Be36
	7556.0	35.			0.0	o			GSa		81Mu06
	7555.0	12.			0.1	-			GSa		04He28
	7544.8	35.			0.3	U			Bka		06Fo02
ave.	7556	9			0.1	1	81	80 ^{250}Fm			average
$^{250}\text{Md}(\alpha)^{246}\text{Es}^p$	7947.4	30.	7955	24	0.2	6					73Es01
	7964.7	20.			-0.5	o			GSa		85He22

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{250}\text{Md}(\alpha)^{246}\text{Es}^p$	7967.7	40.	7955	24	-0.3	6			GSa		08An16
$^{248}\text{Cm}(\text{t,p})^{250}\text{Cm}$	2064	10				2					73Ba72
$^{250}\text{Bk}(\beta^-)^{250}\text{Cf}$	1760	15	1780	3	1.3	U					59Va02 *
* $^{250}\text{Cf}(\alpha)^{246}\text{Cm}$	E $_{\alpha}$ =6030.6(0.6,Z), 5988.9(0.6,Z) to ground state, 2 $^{+}$ level at 42.852 keV										Ens118 **
* $^{250}\text{Bk}(\beta^-)^{250}\text{Cf}$	E $_{\beta^-}$ =725(15) to 2 $^{+}$ level at 1031.852 keV and 3 $^{+}$ level at 1071.37 keV										Ens01c **
$^{251}\text{Cf}(\alpha)^{247}\text{Cm}$	6177.2	1.0	6177.0	0.9	-0.2	2			Kum		71Bb10 *
	6176	2			0.5	2					03Ah07 *
$^{251}\text{Es}(\alpha)^{247}\text{Bk}$	6593.5	5.	6598	3	0.9	o					70Ah01 *
	6597.8	3.				3					79Ah03 *
$^{251}\text{Fm}(\alpha)^{247}\text{Cf}$	7425.1	2.0				4					73Ah02 *
$^{251}\text{Md}(\alpha)^{247}\text{Es}$	7965.5	20.	7963	4	-0.1	U					73Es01 *
	7955.2	10.			0.8	4		GSa			05He27 *
	7965.5	5.			-0.4	4		Jya			06Ch52 *
$^{251}\text{No}(\alpha)^{247}\text{Fm}$	8739.5	20.	8752	4	0.6	U		Bka			67Gh01 *
	8732.4	15.			1.3	o		GSa			89He03 *
	8762.9	20.			-0.6	o		GSa			97He29 *
	8760.9	20.			-0.9	o		GSa			01He35 *
	8747.7	11.			0.4	o		GSa			04He28 *
	8751.8	4.				10		GSa			06He27 *
$^{251}\text{No}^m(\alpha)^{247}\text{Fm}^m$	8619.6	30.	8809	4	6.3	F		GSa			97He29 *
	8805.5	13.			0.2	o		GSa			04He28 *
	8808.6	4.				8		GSa			06He27 *
$^{251}\text{Cm}(\beta^-)^{251}\text{Bk}$	1420	20				4					78Lo13 *
$^{251}\text{Bk}(\beta^-)^{251}\text{Cf}$	1093	10				3					84Li05 *
$^{251}\text{No}^m(\text{IT})^{251}\text{No}$	106	6				9		GSa			06He27 *
* $^{251}\text{Cf}(\alpha)^{247}\text{Cm}$	E $_{\alpha}$ =5680.1(1.0,Z) to 1/2 $^{+}$ level at 404.90(0.03) keV										Ens048 **
* $^{251}\text{Cf}(\alpha)^{247}\text{Cm}$	E $_{\alpha}$ =6078(2), 5679(2) to ground state, 1/2 $^{+}$ level at 404.90 keV, and others										Ens048 **
* $^{251}\text{Es}(\alpha)^{247}\text{Bk}$	E $_{\alpha}$ =6488.5(5,Z), 6458.5(5,Z) to ground state, 5/2 $^{-}$ level at 29.9 keV										Ens048 **
* $^{251}\text{Es}(\alpha)^{247}\text{Bk}$	E $_{\alpha}$ =6492.8(3,Z), 6462.8(3,Z) to ground state, 5/2 $^{-}$ level at 29.9 keV										Ens048 **
* $^{251}\text{Fm}(\alpha)^{247}\text{Cf}$	E $_{\alpha}$ =7305.7(3,Z), 6833.7(2,Z) to ground state and 9/2 $^{-}$ level at 480.4 keV										Ens048 **
* $^{251}\text{Md}(\alpha)^{247}\text{Es}$	E $_{\alpha}$ =7550(20) 7540(10) 7550(1) respectively, to 7/2 $^{-}$ level at 293.7 keV										06Ch52 **
* $^{251}\text{Md}(\alpha)^{247}\text{Es}$	Original error 1 keV in third reference increased for calibration										GAu **
* $^{251}\text{No}^m(\alpha)^{247}\text{Fm}^m$	Only two events. See $^{255}\text{Rf}^m(\alpha)$										97He29 **
* $^{251}\text{No}^m(\alpha)^{247}\text{Fm}^m$	F : not observed in later work on ^{251}No decay										01He35 **
* $^{251}\text{Bk}(\beta^-)^{251}\text{Cf}$	E $_{\beta^-}$ =915(10) to 3/2 $^{+}$ level at 177.60 keV										Ens066 **
$^{252}\text{No}-^{133}\text{Cs}_{1,895}$	268111	34	268135	10	0.7	o			SH1	1.0	10Dw01
	268133	18			0.1	1	31	31 ^{252}No	SH1	1.0	10Mi.A
$^{252}\text{Cf}(\alpha)^{248}\text{Cm}$	6216.9	0.5	6216.87	0.04	-0.1	U			Kum		71Bb10 Z
	6216.95	0.04				2					86Ry04 Z
$^{252}\text{Es}(\alpha)^{248}\text{Bk}^p$	6739.5	3.				4					73Fi06 *
$^{252}\text{Fm}(\alpha)^{248}\text{Cf}$	7152.7	2.				4					84Ah02 *
$^{252}\text{No}(\alpha)^{248}\text{Fm}$	8545.9	20.	8548	5	0.1	U		Bka			67Gh01 *
	8545.9	30.			0.1	U		DbA			67Mi03 *
	8551.0	6.			-0.4	-					77Be09 *
	8542.8	15.			0.4	o		GSa			85He.A
	8538.7	13.			0.7	-		GSa			04He28 *
ave.	8549	6			0.0	1	92	69 ^{252}No			average
$^{252}\text{Lr}(\alpha)^{248}\text{Md}$	9163.8	20.	9164	17	0.0	7			GSa		01He35 *
	9165.8	30.			0.0	7			Bka		08Ne01 *
$^{252}\text{Es}(\epsilon)^{252}\text{Cf}$	1260	50				3					73Fi06 *
* $^{252}\text{Es}(\alpha)^{248}\text{Bk}^p$	E $_{\alpha}$ =6632.1(3,Z), 6522.1(3,Z) to 0, 7 $^{+}$ level at 70.65 keV above $^{248}\text{Bk}^p$										Ens998 **
* $^{252}\text{Fm}(\alpha)^{248}\text{Cf}$	E $_{\alpha}$ =7038.9(2,Z), 6998.1(2,Z) to ground state, 2 $^{+}$ level at 41.53 keV										Ens998 **
* $^{252}\text{Lr}(\alpha)^{248}\text{Md}$	Other E $_{\alpha}$ =9610(20) unexplained, and 8990, 8820 keV										08Ne01 **
* $^{252}\text{Es}(\epsilon)^{252}\text{Cf}$	pK=0.45(0.10) to 3 $^{+}$ level at 969.8 keV, recalculated for non-unique first forbidden or allowed transition; unique first forbidden would give 1440(100)										Ens061 **
*											AHW **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{253}\text{No}-^{133}\text{Cs}_{1,902}$	270390	13	270394	7	0.3	1	33	33 ^{253}No	SH1	1.0	10Dw01
$^{253}\text{Cf}(\alpha)^{249}\text{Cm}$	6127.3	5.	6126	4	-0.3	3					66Rg01 *
	6124.6	5.			0.3	3					68Be21 *
$^{253}\text{Es}(\alpha)^{249}\text{Bk}$	6739.24	0.05				2					71Gr17 Z
$^{253}\text{Fm}(\alpha)^{249}\text{Cf}$	7199	3	7198.0	2.7	-0.3	2					67Ah02 *
	7194.2	6.			0.6	2			Orm		11Lo06 *
$^{253}\text{Md}(\alpha)^{249}\text{Es}$	7567.5	15.	7573	8	0.4	o			GSa		05He27 *
	7574.0	10.			-0.1	5			Orm		11Lo06 *
	7571	15			0.1	5			GSa		12He09 **
$^{253}\text{No}(\alpha)^{249}\text{Fm}$	8419	20	8414	4	-0.2	U			Bka		67Gh01 *
	8419	30			-0.2	U			DbA		67Mi03 *
	8430	20			-0.8	o			GSa		85He.A *
	8420	10			-0.6	o			GSa		01He.A *
	8412.5	11.			0.2	o			GSa		04He28 **
	8411.5	5.			0.6	o			Orm		06Lo12 *
	8415.6	5.0			-0.2	-			Orm		11Lo06 *
	8412.4	11.			0.2	-			GSa		12He09 **
	ave.	5			-0.1	1	91	67 ^{253}No			average
$^{253}\text{Lr}(\alpha)^{249}\text{Md}$	8941.6	20.	8918	20	-1.2	o			GSa		85He22
	8935.6	10.			-1.7	o			GSa		01He35
	8927.4	15.			-0.6	o			GSa		09He20
	8918.3	20.				6			GSa		10He11
$^{253}\text{Lr}^m(\alpha)^{249}\text{Md}^m$	8862.4	20.	8850	20	-0.6	o			GSa		85He22
	8862.4	10.			-1.2	o			GSa		01He35
	8859.4	15.			-0.6	o			GSa		09He20
	8850.2	20.				7			GSa		10He11
$^{253}\text{Cf}(\beta^-)^{253}\text{Es}$	270	50	288	6	0.4	U					59Gh.A
* $^{253}\text{Cf}(\alpha)^{249}\text{Cm}$	$E_\alpha=5981(5,Z)$ to $7/2^+$ level at 48.76 keV										
* $^{253}\text{Cf}(\alpha)^{249}\text{Cm}$	$E_\alpha=5978.4(5,Z)$, $5920.4(5,Z)$ to $7/2^+$ at 48.76, $7/2^+$ at 110.173 keV										
* $^{253}\text{Fm}(\alpha)^{249}\text{Cf}$	$E_\alpha=7083.2(4,Z)$, $6943.2(3,Z)$, $6846.2(3,Z)$, $6673.2(3,Z)$ keV										
*	to ground state and levels $5/2^+$ at 144.98, $9/2^+$ at 243.13, $1/2^+$ at 416.8 keV										
* $^{253}\text{Fm}(\alpha)^{249}\text{Cf}$	$E_\alpha=6670(6)$ to 416.8 level										
* $^{253}\text{Md}(\alpha)^{249}\text{Es}$	$E_\alpha=7100(15)$ to 353.2(0.4) level										
* $^{253}\text{Md}(\alpha)^{249}\text{Es}$	$E_\alpha=7105(10)$ to 354.6(0.6) level										
* $^{253}\text{Md}(\alpha)^{249}\text{Es}$	$E_\alpha=7103(15)$ to 353.2(0.4) level										
* $^{253}\text{No}(\alpha)^{249}\text{Fm}$	$E_\alpha=8010(20)$ to 279.7 level										
* $^{253}\text{No}(\alpha)^{249}\text{Fm}$	$E_\alpha=8010(30)$ to 279.7 level										
* $^{253}\text{No}(\alpha)^{249}\text{Fm}$	$E_\alpha=8021(20)$ to 279.7 level										
* $^{253}\text{No}(\alpha)^{249}\text{Fm}$	$E_\alpha=8011(10)$ to 279.7 level										
* $^{253}\text{No}(\alpha)^{249}\text{Fm}$	$E_\alpha=8004(11)$ to 279.7(5) level										
* $^{253}\text{No}(\alpha)^{249}\text{Fm}$	$E_\alpha=8003(5)$ to 279.7(5) level; and $8280(10)$ to ground state										
* $^{253}\text{No}(\alpha)^{249}\text{Fm}$	$E_\alpha=8007(4)$ to 279.8(0.2) level; also $E_\alpha=7615(30)$ to 669(3) and										
*	$E_\alpha=8080(10)$ to 209.5(0.5) levels										
* $^{253}\text{No}(\alpha)^{249}\text{Fm}$	$E_\alpha=8004(10)$ to 279.5(5) level										
$^{254}\text{No}-^{133}\text{Cs}_{1,910}$	271552	15	271542	11	-0.6	o			SH1	1.0	10Dw01
	271544	16			-0.1	1	45	45 ^{254}No	SH1	1.0	10Mi.A
$^{254}\text{Cf}(\alpha)^{250}\text{Cm}$	5926.9	5.				3					68Be21 Z
$^{254}\text{Es}(\alpha)^{250}\text{Bk}$	6615.7	1.5				6			Kum		72Bb24 *
$^{254}\text{Es}(\alpha)^{250}\text{Bk}^n$	6531.6	1.5				7			Kum		72Bb24 *
$^{254}\text{Es}^m(\alpha)^{250}\text{Bk}$	6699.9	2.0				5					73Ah04 *
$^{254}\text{Fm}(\alpha)^{250}\text{Cf}$	7306.8	5.	7307.5	1.9	0.2	3			Bka		64As01 Z
	7307.6	2.			-0.1	3					84Ah02 *
$^{254}\text{No}(\alpha)^{250}\text{Fm}$	8229.8	20.	8226	9	-0.2	o			Bka		67Gh01
	8240.0	30.			-0.5	U			DbA		67Mi03
	8215.6	20.			0.5	o			GSa		85He22
	8177.0	30.			1.6	U			Bka		06Fo02
	8225.7	10.			0.1	1	75	55 ^{254}No	GSa		10He10

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{254}\text{Lr}(\alpha)^{250}\text{Md}$	8804.7 20.	8816 12	0.6	o			GSa		85He22 *
	8804.7 20.		0.6	7			Lnz		01Ga20 *
	8820.6 25.7		-0.2	7			Bka		06Fo02 *
	8825.2 20.		-0.4	7			GSa		08An16 *
$^{254}\text{Es}^m(\beta^-)^{254}\text{Fm}$	1172 2			4					62Un01 *
$^{*254}\text{Es}(\alpha)^{250}\text{Bk}$	$E_\alpha=6415.4(1.5,Z)$ to 5^- level at 97.49 keV								Ens01c **
$^{*254}\text{Es}^m(\alpha)^{250}\text{Bk}$	$E_\alpha=6558.9(2,Z), 6383.9(2,Z)$ to 4^+ at 35.59, 2^+ at 211.82 keV								Ens01c **
$^{*254}\text{Fm}(\alpha)^{250}\text{Cf}$	$E_\alpha=7192.3(2,Z), 7150.3(2,Z)$ to ground state, 5^+ level at 42.721 keV								Ens01c **
$^{*254}\text{Lr}(\alpha)^{250}\text{Md}$	$E_\alpha=8460(20)$ to 209.1 level								08An16 **
$^{*254}\text{Lr}(\alpha)^{250}\text{Md}$	$E_\alpha=8460(20)$ to 209.1 level								08An16 **
$^{*254}\text{Lr}(\alpha)^{250}\text{Md}$	$E_\alpha=8437(50)$ to 209.1 and $E_\alpha=8394(30)$ to 306.2 keV								08An16 **
$^{*254}\text{Lr}(\alpha)^{250}\text{Md}$	$E_\alpha=8480(20)$ to 209.1 and $E_\alpha=8385(20)$ to 306.2 keV								08An16 **
$^{*254}\text{Es}^m(\beta^-)^{254}\text{Fm}$	$E_{\beta^-}=1127(2)$ to 2^+ level at 45.000 keV								Ens05b **
$^{255}\text{No}-^{133}\text{Cs}_{1,917}$	274440 16			2			SH1 1.0		10Mi.A
$^{255}\text{Lr}-^{133}\text{Cs}_{1,917}$	277811 19			2			SH1 1.0		10Mi.A *
$^{255}\text{Es}(\alpha)^{251}\text{Bk}$	6439.3 3.0	6436.3 1.3	-1.0	4					66Rg01 *
	6435.6 1.5		0.5	4			Kum		71Bb10 *
$^{255}\text{Fm}(\alpha)^{251}\text{Cf}$	7237.0 4.	7239.7 1.8	0.7	3					64As01 *
	7240.4 2.		-0.3	3					75Ah01 *
$^{255}\text{Md}(\alpha)^{251}\text{Es}$	7901.8 5.	7905.9 2.6	0.8	4					70Fi12 *
	7910.7 5.		-1.0	4					71Ho16 *
	7905.4 4.		0.1	4			Ara		00Ah02 *
	7891.2 15.		1.0	U			GSa		05He27 *
$^{255}\text{No}(\alpha)^{251}\text{Fm}$	8451.1 6.	8428 3	-3.8	B			ORb		71Di03 *
	8426.4 20.		0.1	o			GSa		98Ho13 *
	8391.9 35.		1.0	U			RIa		04Mo40 *
	8449.3 20.		-1.0	U			Bka		04Fo08 *
	8426.4 10.		0.2	U			GSa		06He20 *
	8403.8 60.		0.4	U			Bka		06Gr24 *
	8428.4 3.			3			JAA		11As03 *
	8563.6 18.	8556 7	-0.4	3			ORb		76Be.A *
$^{255}\text{Lr}(\alpha)^{251}\text{Md}$	8534.1 30.		0.7	U			Lnz		01Ga20 *
	8554.4 10.		0.1	3			Jya		06Ch52
	8554.4 10.		0.1	3			Orm		08Ha31 *
	8503.6 18.	8501 4	-0.1	3			ORb		76Be.A *
$^{255}\text{Lr}(\alpha)^{251}\text{Md}^p$	8442.7 50.		1.2	F			Bka		95Gh04 *
	8493.5 30.		0.2	U			Lnz		01Ga20 *
	8498.6 5.		0.5	3			Jya		06Ch52
	8506.7 11.		-0.5	3			GSa		08An16 *
	8504.6 10.		-0.4	3			Orm		08Ha31
	8592.0 5.	8594 4	0.5	4			Jya		06Ch52 *
$^{255}\text{Lr}^m(\alpha)^{251}\text{Md}$	8602.2 11.		-0.7	4			GSa		08An16
	8598.1 10.		-0.4	4			Orm		08Ha31
	9042 20	9055 4	0.7	10			Bka		69Gh01 *
$^{255}\text{Rf}(\alpha)^{251}\text{No}$	9053 15		0.2	o			GSa		85He06 *
	9064 20		-0.4	o			GSa		97He29 *
	9062 10		-0.7	o			GSa		01He35 *
	9056 4		-0.1	10			GSa		06He27 *
$^{255}\text{Rf}^m(\alpha)^{251}\text{No}^m$	8864.3 15.			9			GSa		97He29 *
$^{*255}\text{Lr}-^{133}\text{Cs}_{1,917}$	$D_M=277822(17)$ μu for mixture 71% ground state + 29% $^{255}\text{Lr}^m$ at 39(8); $M-A=89958(16)$ keV								Nub127 **
$^{*255}\text{Es}(\alpha)^{251}\text{Bk}$	$E_\alpha=6303(3,Z) 6299.3(1.5,Z)$ respectively, to $7/2^+$ level at 35.5 keV								Ens066 **
$^{*255}\text{Fm}(\alpha)^{251}\text{Cf}$	$E_\alpha=7121.5, 7018.5(4,Z)$ to ground state, $7/2^+$ level at 106.309 keV								Ens066 **
$^{*255}\text{Fm}(\alpha)^{251}\text{Cf}$	$E_\alpha=7126.8, 7021.8(2,Z)$ to ground state, $7/2^+$ level at 106.309 keV								Ens066 **
$^{*255}\text{Md}(\alpha)^{251}\text{Es}$	$E_\alpha=7323.5(5,Z) 7332.3(5,Z) 7327(4) 7313(15)$ respectively, to $7/2^-$ at 461.5 keV								Ens066 **
$^{*255}\text{No}(\alpha)^{251}\text{Fm}$	$E_\alpha=8312(9), 8121(6)$ to ground state and 199.9 level								06He20 **
$^{*255}\text{No}(\alpha)^{251}\text{Fm}$	$E_\alpha=8296(20), 8092(20)$ to ground state and 199.9 level								06He20 **
$^{*255}\text{No}(\alpha)^{251}\text{Fm}$	$E_\alpha=8060$ to 199.9 level; also $E_\alpha=7800$ keV								04Mo40 **
$^{*255}\text{No}(\alpha)^{251}\text{Fm}$	$E_\alpha=8341, 8092$ to ground state and 199.9 level; also $E_\alpha=7873$ keV								06He20 **
$^{*255}\text{No}(\alpha)^{251}\text{Fm}$	$E_\alpha=8290(20), 8095(10)$ to ground state and 199.9 level								06He20 **
$^{*255}\text{No}(\alpha)^{251}\text{Fm}$	$E_\alpha=8150, 8000$ to 199.9 level								06He20 **
$^{*255}\text{No}(\alpha)^{251}\text{Fm}$	$E_\alpha=8100(3)$ to $^{251}\text{Fm}^m$ at 200.09(0.11) keV								11As03 **
$^{*255}\text{Lr}(\alpha)^{251}\text{Md}$	This is the faint α from long-lived isomer to the $7/2^-$ ground state								06Ch52 **
$^{*255}\text{Lr}(\alpha)^{251}\text{Md}$	Line is mixed with ^{254}Lr 's α								01Ga20 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
* ²⁵⁵ Lr(α) ²⁵¹ Md	As interpreted from Fig. 1								08Ha31 **
* ²⁵⁵ Lr(α) ²⁵¹ Md ^p	This is the most intense α from long-lived isomer to 1/2 ⁻								06Ch52 **
* ²⁵⁵ Lr(α) ²⁵¹ Md ^p	F : one event in a questionable ²⁶⁷ Ds decay chain								AHW **
* ²⁵⁵ Lr(α) ²⁵¹ Md ^p	No γ observed in coincidence								08An16 **
* ²⁵⁵ Lr ^m (α) ²⁵¹ Md	Original error 2 keV increased for calibration								GAu **
* ²⁵⁵ Rf(α) ²⁵¹ No	E α =8700(20) to 203 level								01He35 **
* ²⁵⁵ Rf(α) ²⁵¹ No	E α =8766(15), 8715(15) to 142, 203 levels,								01He35 **
* ²⁵⁵ Rf(α) ²⁵¹ No	E α =8905(20), 8739(20) to ground state, 203 level								01He35 **
* ²⁵⁵ Rf(α) ²⁵¹ No	E α =8722(10) to 203(3) level								01He35 **
* ²⁵⁵ Rf(α) ²⁵¹ No	E α =8716(4) to 203.6(0.2) level								06He27 **
* ²⁵⁵ Rf ^m (α) ²⁵¹ No ^m	Tentative assignment; correlated with ²⁵¹ No ^m								97He29 **
*	not found in later work on ²⁵¹ No decay								01He35 **
²⁵⁶ Lr- ¹³³ Cs _{1,925}	280499	89			2		SH1	1.0	10Mi.A
²⁵⁶ Fm(α) ²⁵² Cf	7027.3	5.			3				68Ho13 Z
²⁵⁶ Md ^m (α) ²⁵² Es	7834.6	20.	7900	50	1.2	B			71Ho16 *
	7896.6	16.				4			93Mo18 *
	7798.0	8.			2.0	B			00Ah02
²⁵⁶ No(α) ²⁵² Fm	8553.9	30.	8581	5	0.9	U			67Fl05 *
	8553.9	20.			1.4	U	Bka		67Gh01 *
	8578.3	12.			0.3	5			81Be03
	8582.3	6.			-0.1	5			90Ho03
²⁵⁶ Lr(α) ²⁵² Md ^p	8787.6	20.	8771	11	-0.8	3			71Es01
	8761.1	25.			0.4	o	ORb		76Be.A
	8777.4	20.			-0.3	3	ORb		76Di.A
	8767.2	35.			0.1	3	RIa		04Mo26
	8749.9	20.			1.0	3	Bka		04Fo08
²⁵⁶ Rf(α) ²⁵² No	8952.1	23.	8926	15	-1.1	o	GSa		85He06
	8929.8	20.			-0.2	o	GSa		97He29
	8925.8	15.				2	GSa		10St14
²⁵⁶ Db(α) ²⁵² Lr	9336.2	20.				8	Bka		08Ne01
²⁵⁶ Db(α) ²⁵² Lr ^p	9157.4	20.	9168	14	0.6	9	GSa		01He35
	9179.7	20.			-0.6	9	Bka		08Ne01 *
* ²⁵⁶ Md ^m (α) ²⁵² Es	Also E α =7210(5,Z) keV to 520(20) level								70Fi12 **
* ²⁵⁶ Md ^m (α) ²⁵² Es	Very weak line; more precise E α to excited levels								93Mo18 **
*	α summed with electrons								WgM129**
* ²⁵⁶ No(α) ²⁵² Fm	Probably mixture of two branches								AHW **
* ²⁵⁶ Db(α) ²⁵² Lr ^p	5 events E α =9030 9060 9020 9040 9030 keV								08Ne01 **
²⁵⁷ Fm(α) ²⁵³ Cf	6862.7	2.	6863.5	1.4	0.4	4	Bka		67As02 *
	6864.4	2.			-0.4	4			82Ah01 *
²⁵⁷ Md(α) ²⁵³ Es	7549.3	5.	7557.6	1.0	1.7	U			70Fi12 *
	7557.6	1.				3			93Mo18 *
²⁵⁷ No(α) ²⁵³ Fm	8474.1	30.	8477	6	0.1	U			70Es02 *
	8480	30			-0.1	U	GSa		96Ho13 *
	8476.6	6.				3	JAa		05As05 *
²⁵⁷ Lr(α) ²⁵³ Md ^p	9020.6	20.	9008	9	-0.6	7			71Es01
	9001.3	12.			0.5	o	ORb		76Be.A
	9001.3	12.			0.5	7	ORb		77Be36
	9015.5	15.2			-0.5	o	GSa		97He29
	9030.8	50.			-0.5	U	Lnz		04Ga29
	9010.4	15.			-0.2	7	GSa		10St14
²⁵⁷ Rf(α) ²⁵³ No	9079.8	15.	9083	8	0.2	2	ORb		73Be33 *
	9083.7	15.			-0.1	o	GSa		85He06
	9044.0	15.			2.6	U	GSa		97He29
	9084.1	20.			-0.1	o	GSa		07St12 *
	9084.1	10.			-0.1	2	GSa		10St14 *
	9106.2	100.			-0.2	U	Ara		09Qi04 *
²⁵⁷ Rf ^m (α) ²⁵³ No	9142.5	20.	9156	7	0.7	2	Bka		69Gh01
	9158.8	15.			-0.2	o	ORb		73Be33
	9155.8	8.			0.0	2	ORb		90Be.A
	9163.9	15.			-0.5	2	GSa		97He29
	9144.0	100.			0.1	U	Ara		09Qi04 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{257}\text{Db}(\alpha)^{253}\text{Lr}$	9112.1	20.	9206	20	4.7	B	GSa		85He22
	9218	10			-1.2	o	GSa		01He35 *
	9209.2	20.			-0.1	o	GSa		09He20 *
	9206.6	20.				7	GSa		10He11
$^{257}\text{Db}^m(\alpha)^{253}\text{Lr}^m$	9305.1	20.	9313	20	0.4	o	GSa		85He22
	9308.2	10.			0.5	o	GSa		01He35
	9300.1	20.			0.7	o	GSa		09He20
	9313.3	20.				8	GSa		10He11
$^{257}\text{Rf}^i(\text{IT})^{257}\text{Rf}^m$	1082	4				3			10Be16
$*^{257}\text{Fm}(\alpha)^{253}\text{Cf}$	$E_\alpha=6518.5(2,Z)$ to $9/2^+$ level at 241.01 keV								Ens067 **
$*^{257}\text{Fm}(\alpha)^{253}\text{Cf}$	$E_\alpha=6756.5(3,Z), 6520.5(2,Z)$ to ground state, $9/2^+$ level at 241.01 keV								Ens99a **
$*^{257}\text{Md}(\alpha)^{253}\text{Es}$	$E_\alpha=7066(5,Z)$ to 371.4 level								93Mo18 **
$*^{257}\text{Md}(\alpha)^{253}\text{Es}$	$E_\alpha=7440(2), 7074(1)$ to ground state, 371.4 level								93Mo18 **
$*^{257}\text{No}(\alpha)^{253}\text{Fm}$	$E_\alpha=8320(30)$ to 22.3 keV								05As05 **
$*^{257}\text{No}(\alpha)^{253}\text{Fm}$	$E_\alpha=8340(20)$; one event only; may be summing with e^-								AHW **
$*^{257}\text{No}(\alpha)^{253}\text{Fm}$	$E_\alpha=8222(6)$ to 124.1(1) level; also $E_\alpha=8323(7)$ to 22.3 keV								05As05 **
$*^{257}\text{Rf}(\alpha)^{253}\text{No}$	$E_\alpha=8778(15)$ to 166.7 level								07St12 **
$*^{257}\text{Rf}(\alpha)^{253}\text{No}$	$E_\alpha=8778(20)$ and 8495(20) to 166.7 and 455 level								07St12 **
$*^{257}\text{Rf}(\alpha)^{253}\text{No}$	$E_\alpha=8778(10)$ to 166.7; and 8950(15) to ground state is sum with conversion e^-								10St14 **
$*^{257}\text{Rf}(\alpha)^{253}\text{No}$	$E_\alpha=8800(100)$ to 166.7 level								09Qi04 **
$*^{257}\text{Rf}^m(\alpha)^{253}\text{No}$	$E_\alpha=9000(100)$ and 8950(100) to ground state and 54(14) level								09Qi04 **
$*^{257}\text{Db}(\alpha)^{253}\text{Lr}$	$E_\alpha=9074(10)$ partly summed with conversion e^-								01He35 **
$*^{257}\text{Db}(\alpha)^{253}\text{Lr}$	$E_\alpha=8965(20)$ coinc. $E(\gamma)=102.2$; $E_\alpha=9066(20)$ summed with conversion e^-								09He20 **
$^{258}\text{Md}(\alpha)^{254}\text{Es}$	7266.8	5.	7271.3	1.9	0.9	7			70Fi12 *
	7272	2			-0.4	7			93Mo18 *
$^{258}\text{Lr}(\alpha)^{254}\text{Md}$	8870	50	8904	19	0.7	5	ORb		76Be.A *
	8910	20			-0.3	5			88Gr30 *
$^{258}\text{Rf}(\alpha)^{254}\text{No}$	9192.6	30.				2			08Ga08
$^{258}\text{Db}(\alpha)^{254}\text{Lr}$	9531.0	50.	9500	50	-0.6	o	GSa		97Ho14
	9500.6	15.				8	GSa		09He20
$^{258}\text{Db}(\alpha)^{254}\text{Lr}^p$	9445.7	15.	9436	14	-0.6	o	GSa		85He22
	9446.8	20.			-0.5	9	Lnz		01Ga20
	9426.3	20.			0.5	9	GSa		09He20
$^{258}\text{Db}^m(\alpha)^{254}\text{Lr}^d$	9341.1	10.				10	GSa		09He20
$*^{258}\text{Md}(\alpha)^{254}\text{Es}$	$E_\alpha=6713(5)$ to 447.9 level								93Mo18 **
$*^{258}\text{Md}(\alpha)^{254}\text{Es}$	$E_\alpha=6763(4), 6718(2)$ to 403.8, 447.9 levels								93Mo18 **
$*^{258}\text{Lr}(\alpha)^{254}\text{Md}$	$E_\alpha=8648(10)$ in coincidence with X(L) not X(K) -> $E(\gamma)=90(50)$ keV								AHW **
$*^{258}\text{Lr}(\alpha)^{254}\text{Md}$	$E_\alpha=8752$ observed as sum of α 's and conversion electrons								AHW **
$*^{258}\text{Lr}(\alpha)^{254}\text{Md}$	Mass assignment confirmed								92Gr02 **
$^{259}\text{No}(\alpha)^{255}\text{Fm}^p$	7617.8	10.	7635	4	1.7	5			73Si40 *
	7638.2	4.			-0.7	5			93Mo18 *
$^{259}\text{Lr}(\alpha)^{255}\text{Md}^p$	8582.8	20.	8574	9	-0.4	6			71Es01
	8571.6	10.			0.2	6			92Ha22
	8577.7	29.			-0.1	U			92Kr01
$^{259}\text{Rf}(\alpha)^{255}\text{No}^p$	8999.2	20.	9030	11	1.5	o	Bka		69Gh01
	9030	20			0.0	4	Bka		81Be03 *
	9034.7	20.			-0.2	4	GSa		98Ho13
	9026.6	35.			0.1	4	RIa		04Mo40
	9026.6	20.3			0.2	4	Bka		04Fo08
	9017	60			0.2	U	Bka		06Gr24
	8940.4	11.			8.1	F	GSa		10Ni14 *
	8968.8	50.			1.2	U			12Zh04
$^{259}\text{Db}(\alpha)^{255}\text{Lr}$	9618.8	20.				3	Lnz		01Ga20
$^{259}\text{Sg}(\alpha)^{255}\text{Rf}$	9771	30	9804	21	0.7	o	GSa		85Mu11
	9807.7	23.			-0.1	11	Bka		09Fo02 *
	9784	50			0.4	11	GSa		09He20 *
$*^{259}\text{No}(\alpha)^{255}\text{Fm}^p$	Favored E_α ; highest seen 7685(10) keV								73Si40 **
$*^{259}\text{No}(\alpha)^{255}\text{Fm}^p$	Or $E(\text{favored})=7551(4)$ if Coriolis mixed								Ens902 **
$*^{259}\text{Rf}(\alpha)^{255}\text{No}^p$	$E_\alpha=8870(20)$; partly summed $E_\alpha=8770(20)$ and e^-								AHW **
$*^{259}\text{Rf}(\alpha)^{255}\text{No}^p$	F : lifetime 107 ms is much shorter than $T=2.63$ s in Nubase								Nub128 **
$*^{259}\text{Sg}(\alpha)^{255}\text{Rf}$	One event only, resolution 23 keV; also a wide group at lower 9593(46)keV								09Fo02 **
$*^{259}\text{Sg}(\alpha)^{255}\text{Rf}$	One event with E_α 9050 in coincidence with 593 γ ; also groups at								09He20 **
*	$E_\alpha=9607(10), 9550(10)$ keV								09He20 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{260}\text{Lr}(\alpha)^{256}\text{Md}^p$	8155.6 20.3				6				71Es01
$^{260}\text{Db}(\alpha)^{256}\text{Lr}$	9191.5 30.	9500# 40#	10.3	F			RIa		04Mo26 *
	9516.5 30.		-0.5	F			RIa		04Mo26 *
	9563.2 20.		-3.1	F			Bka		04Fo08 *
$^{260}\text{Db}(\alpha)^{256}\text{Lr}^p$	9283.1 20.	9271 13	-0.6	4			Bka		70Gh02
	9262.8 17.		0.5	4			ORb		77Be36
	9316.5 60.		-0.8	U			GSa		95Ho04 *
	9285.1 60.		-0.2	U			GSa		02Ho11 *
	9181.3 60.		1.5	U			Lnz		04Ga29 *
	9310.4 60.		-0.7	U			RIa		04Mo26 *
$^{260}\text{Sg}(\alpha)^{256}\text{Rf}$	9923.0 30.	9901 10	-0.7	o			GSa		85Mu11
	9900.6 10.			3			GSa		09He20
$^{260}\text{Bh}(\alpha)^{256}\text{Db}$	10400.4 30.			9					08Ne01 *
* $^{260}\text{Db}(\alpha)^{256}\text{Lr}$	Highest energy event; other two $E_\alpha=8810$ and 8500 keV								
* $^{260}\text{Db}(\alpha)^{256}\text{Lr}$	F : not observed in experiments with greater statistics								
* $^{260}\text{Db}(\alpha)^{256}\text{Lr}^p$	Two events $E_\alpha=9200$ and 9146 ; error estimated by evaluator								
* $^{260}\text{Db}(\alpha)^{256}\text{Lr}^p$	Two events $E_\alpha=9156$ and 9129 ; error estimated by evaluator								
* $^{260}\text{Db}(\alpha)^{256}\text{Lr}^p$	Eight events out of 14, $E_\alpha=9170$ 9050 9340 9400 9010 9100 9140 9130 keV								
* $^{260}\text{Db}(\alpha)^{256}\text{Lr}^p$	Two longer-lived α -escapes are assigned to the daughter								
* $^{260}\text{Bh}(\alpha)^{256}\text{Db}$	Other events $E_\alpha=10170$, 10170 and 10190 ; 10080 and 10030								
$^{261}\text{Rf}(\alpha)^{257}\text{No}$	8652.9 20.	8650 50	-0.1	o			GSa		96Ho13
	8652.9 20.		-0.1	o			GSa		02Ho11
	8659 52		-0.3	o			GSa		03Tu05 *
	8642.6 50.		0.1	4			GSa		08Dv02
	8652.9 50.		-0.1	4			RIm		11Ha13 *
	8642.6 60.		0.1	4			RIm		12Ha05 *
$^{261}\text{Rf}^m(\alpha)^{257}\text{No}^p$	8409.1 20.	8415 15	0.3	6			Bka		70Gh01
	8388.8 30.		0.9	o			GSa		98Tu01 *
	8429.5 30.		-0.5	6			DbA		00La34
	8470.0 50.		-1.1	U					08Ga08 *
	8419.3 50.		-0.1	6			GSa		08Dv02
	8409.1 50.		0.1	6			RIm		11Ha13
$^{261}\text{Db}(\alpha)^{257}\text{Lr}^p$	9069.2 20.	9068 14	-0.1	9			Bka		71Gh01
	9069.2 40.		0.0	9			Lnz		04Ga29
	9066.2 20.		0.1	9			GSa		10St14
$^{261}\text{Sg}(\alpha)^{257}\text{Rf}$	9709.0 30.	9714 15	0.2	o			GSa		85Mu11
	9713.1 20.		0.0	F			GSa		95Ho03 *
	9769.8 20.		-2.8	o			GSa		07St12
	9713.7 15.			3			GSa		10St14 *
$^{261}\text{Bh}(\alpha)^{257}\text{Db}$	10562.1 25.	10500 50	-1.2	o			GSa		89Mu09
	10507.3 75.		-0.1	o			Bka		06Fo02 *
	10492.1 75.		0.2	8			Bka		08Ne08 *
	10504.3 40.		-0.1	8			GSa		10He11 *
* $^{261}\text{Rf}(\alpha)^{257}\text{No}$	Two events with $E_\alpha=8500(+70-30)$ keV								
* $^{261}\text{Rf}(\alpha)^{257}\text{No}$	From direct production (fusion-evaporation)								
* $^{261}\text{Rf}(\alpha)^{257}\text{No}$	Decay chain of ^{265}Sg , observation is independent of previous item								
* $^{261}\text{Rf}^m(\alpha)^{257}\text{No}^p$	In addition 60% $E_\alpha=8380(30)$ keV								
* $^{261}\text{Rf}^m(\alpha)^{257}\text{No}^p$	Single event, decay time 103.2 s								
* $^{261}\text{Sg}(\alpha)^{257}\text{Rf}$	F : α 's to 157 level summed with conversion electron								
* $^{261}\text{Sg}(\alpha)^{257}\text{Rf}$	$E_\alpha=9410(15)$ to $157(1)$ level								
* $^{261}\text{Bh}(\alpha)^{257}\text{Db}$	$E_\alpha=10346(75)$ one event; error estimated by evaluator								
* $^{261}\text{Bh}(\alpha)^{257}\text{Db}$	Highest E_α ; error estimated; others 10054, 10285, 10113, 10165, 9989								
* $^{261}\text{Bh}(\alpha)^{257}\text{Db}$	Average of 2 highest 10331, 10355 as read from graph; error estimated								
$^{262}\text{Db}(\alpha)^{258}\text{Lr}^p$	8794.5 20.	8808 11	0.7	7			Bka		71Gh01
	8815.8 20.		-0.4	7					88Gr30
	8804.7 20.		0.2	7			GSa		99Dr09
	8875.8 20.		-1.3	7			RIa		09Mo12
$^{262}\text{Sg}(\alpha)^{258}\text{Rf}$	9599.7 15.			3			GSa		10Ac.A
$^{262}\text{Bh}(\alpha)^{258}\text{Db}$	10216.2 25.	10319 15	4.1	F			GSa		89Mu09 *
	10300.5 25.4		0.7	o			GSa		97Ho14
	10231.4 25.4		3.5	B			Bka		06Fo02
	10239.2 30.		2.7	U			Bka		08Ne08 *
	10319.5 15.			9			GSa		09He20 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		ν_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{262}\text{Bh}^m(\alpha)^{258}\text{Db}$	10531.7	25.	10530	50	0.1	o			GSa		89Mu09
	10605.3	25.			-1.4	o			GSa		97Ho14
	10509.3	75.			0.5	o			Bka		06Fo02 *
	10544.9	75.			-0.2	9			Bka		08Ne08
	10534.1	15.			0.0	9			GSa		09He20
* $^{262}\text{Bh}(\alpha)^{258}\text{Db}$	F : not highest line, see reference										97Ho14 **
* $^{262}\text{Bh}(\alpha)^{258}\text{Db}$	$E_\alpha=10096, 10025, 10125$ keV										08Ne08 **
* $^{262}\text{Bh}(\alpha)^{258}\text{Db}$	$E_\alpha=10008(15)$ to 156.5 level										09He20 **
* $^{262}\text{Bh}^m(\alpha)^{258}\text{Db}$	Single event, error estimated by evaluator										BPf098 **
$^{263}\text{Rf}(\alpha)^{259}\text{No}^p$	8022	40	8022	29	0.0	7					93Gr.C
	8022	40			0.0	7					99Ga.A
$^{263}\text{Db}(\alpha)^{259}\text{Lr}^p$	8484.3	27.							Bka		92Kr01
$^{263}\text{Sg}(\alpha)^{259}\text{Rf}$	9393.1	40.	9400	60	0.3	o			Bka		74Gh04
	9403.3	60.				5			Bka		06Gr24 *
$^{263}\text{Sg}(\alpha)^{259}\text{Rf}^q$	9200.2	40.	9200	60	-0.1	o			Bka		74Gh04
	9149.2	60.			0.8	o			Bka		94Gr08
	9198.0	60.				6			Bka		06Gr24 *
$^{263}\text{Sg}^m(\alpha)^{259}\text{Rf}^p$	9391.1	20.	9390	13	-0.1	8			GSa		98Ho13
	9382.9	50.8			0.1	o			Bka		03Gi05
	9393.1	35.			-0.1	8			RIa		04Mo40 *
	9388.0	20.			0.1	8			Bka		04Fo08
	9198.1	11.			17.4	F			GSa		10Ni14 *
$^{263}\text{Hs}(\alpha)^{259}\text{Sg}$	10733.5	60.				12			Bka		09Dr02
$^{263}\text{Hs}^m(\alpha)^{259}\text{Sg}$	11058.5	60.				12			Bka		09Dr02 *
* $^{263}\text{Sg}(\alpha)^{259}\text{Rf}$	Two events $E_\alpha=9290$ and 9230 keV										06Gr24 **
* $^{263}\text{Sg}(\alpha)^{259}\text{Rf}^q$	Four events $E_\alpha=9010, 9100, 9060$ and 9060 keV										06Gr24 **
* $^{263}\text{Sg}^m(\alpha)^{259}\text{Rf}^p$	Also lower $E_\alpha=9130, 9040, 9150$ keV										04Mo40 **
* $^{263}\text{Sg}^m(\alpha)^{259}\text{Rf}^p$	F : the α chain originating from ^{267}Hs is in conflict with other data										10Ni14 **
* $^{263}\text{Hs}^m(\alpha)^{259}\text{Sg}$	Assignment assumed by evaluator										GAu **
$^{264}\text{Bh}(\alpha)^{260}\text{Db}^p$	9767.3	20.	9760	18	-0.4	6			GSa		95Ho04 *
	9636.0	60.			2.1	U			Lnz		04Ga29 *
	9737.9	35.			0.6	6			RIa		04Mo26 *
$^{264}\text{Hs}(\alpha)^{260}\text{Sg}$	10870	210	10591	20	-1.3	o			GSa		87Mu15 *
	10590.8	20.				4			GSa		95Ho.B
	10966.4	80.			-4.7	B			Ria		11Sa41 *
* $^{264}\text{Bh}(\alpha)^{260}\text{Db}^p$	Three more events in reference $E_\alpha=9365, 9514$ and 9113 keV										02Ho11 **
* $^{264}\text{Bh}(\alpha)^{260}\text{Db}^p$	Three more events $E_\alpha=9501, 9481, 9440$ keV										04Ga29 **
* $^{264}\text{Bh}(\alpha)^{260}\text{Db}^p$	Six events; also two $E_\alpha=9830$ keV										04Mo26 **
* $^{264}\text{Hs}(\alpha)^{260}\text{Sg}$	$Q_\alpha=11000(+100-300)$ derived from T(1/2), one event only										87Mu15 **
* $^{264}\text{Hs}(\alpha)^{260}\text{Sg}$	Also $E_\alpha=10610(40)$ keV										11Sa41 **
$^{265}\text{Sg}(\alpha)^{261}\text{Rf}^m$	8945.3	60.	8980	50	0.7	F			DbA		94La22 *
	8904.7	30.			1.5	F			GSa		96Ho13 *
	8975.7	30.			0.1	o			GSa		98Tu01
	9077.3	30.			-1.9	F			GSa		98Tu01 *
	9036.6	50.8			-1.1	o			GSa		03Tu05
	8985.9	50.			-0.1	6			GSa		08Du09
	8975.6	50.			0.1	6			RIm		12Ha05
	$^{265}\text{Sg}^m(\alpha)^{261}\text{Rf}^p$	8823.5	50.	8820	40	0.0	o			GSa	
8813.3		40.			0.3	o			GSa		06Dv01
8823.5		50.			0.0	6			GSa		08Dv02
8843.8		40.			-0.5	o			RIa		08Mo09
8823.5		50.			0.0	6			RIm		12Ha05
$^{265}\text{Bh}(\alpha)^{261}\text{Db}^p$	9381.9	50.				11			Lnz		04Ga29
$^{265}\text{Hs}(\alpha)^{261}\text{Sg}$	10524.2	25.	10470	15	-2.1	o			GSa		87Mu15
	10468.3	20.			0.1	o			GSa		95Ho03
	10459.2	15.			0.7	o			GSa		99He11 *
	10470.2	15.				4			GSa		09He20 *

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value	Adjusted value	v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{265}\text{Hs}^m(\alpha)^{261}\text{Sg}$	10712.0	20.	10700	15	-0.6	o	GSa		95Ho03
	10734.2	15.2			-2.3	o	GSa		99He11 *
	10699.8	15.				4	GSa		09He20
* $^{265}\text{Sg}(\alpha)^{261}\text{Rf}^m$	F : average but probably due to several groups, see reference								98Tu01 **
* $^{265}\text{Sg}(\alpha)^{261}\text{Rf}^m$	F : this event is not trusted, see reference from same group								02Ho11 **
* $^{265}\text{Sg}(\alpha)^{261}\text{Rf}^m$	F : most probably not from ^{265}Sg								GAu **
* $^{265}\text{Hs}(\alpha)^{261}\text{Sg}$	Also $E_\alpha=10426(15)$ keV								99He11 **
* $^{265}\text{Hs}(\alpha)^{261}\text{Sg}$	Most intense line, also $E_\alpha=10282(15), 10428(15), 10573(15)$ keV								09He20 **
* $^{265}\text{Hs}^m(\alpha)^{261}\text{Sg}$	Also $E_\alpha=10726(15)$ keV								99He11 **
$^{266}\text{Sg}(\alpha)^{262}\text{Rf}$	8762.0	50.	8800#	100#	0.8	F	DBa		94La22 *
	8904.1	40.			-2.6	F	GSa		98Tu01 *
	8853.4	50.			-1.1	F	GSa		02Tu05 *
$^{266}\text{Bh}(\alpha)^{262}\text{Db}^p$	9432	50	9380	30	-1.1	9	Bka		00Wi15
	9245	80			1.6	9	Lnz		06Qi03
	9371.2	50.			0.1	9	RIa		09Mo12 *
$^{266}\text{Hs}(\alpha)^{262}\text{Sg}$	10335.6	20.	10346	16	0.5	4	GSa		01Ho06
	10360	24			-0.6	4	GSa		11Ac.A
$^{266}\text{Hs}^m(\alpha)^{262}\text{Sg}^m$	10592.6	20.				7	GSa		11Ac.A
$^{266}\text{Mt}(\alpha)^{262}\text{Bh}$	10995.7	25.				10	GSa		97Ho14
$^{266}\text{Mt}^m(\alpha)^{262}\text{Bh}^m$	11269.7	50.	11920	50	13.0	B	GSa		84Mu07 *
	11168.1	30.			25.0	B	GSa		89Mu16
	11918.6	50.				10	GSa		97Ho14 *
* $^{266}\text{Sg}(\alpha)^{262}\text{Rf}$	Average of two groups								02Tu05 **
* $^{266}\text{Sg}(\alpha)^{262}\text{Rf}$	F : no α decay from ^{266}Sg , all re-assigned to ^{265}Sg								08Dv02 **
* $^{266}\text{Bh}(\alpha)^{262}\text{Db}^p$	Also $E_\alpha=9770(40), 9080(40)$ keV from ^{278}Ed decay chain								08Mo09 **
* $^{266}\text{Mt}^m(\alpha)^{262}\text{Bh}^m$	One E_α only; may be ground state								AHW **
* $^{266}\text{Mt}^m(\alpha)^{262}\text{Bh}^m$	One $E_\alpha=11739(50)$, one 11306; several smaller								AHW **
$^{267}\text{Sg}(\alpha)^{263}\text{Rf}^p$	8325.0	50.				9	GSa		08Dv02
$^{267}\text{Bh}(\alpha)^{263}\text{Db}^p$	8964.4	30.5	8970	26	0.2	10	Bka		00Wi15
	8984.8	50.			-0.3	10	GSa		02Tu05
$^{267}\text{Hs}(\alpha)^{263}\text{Sg}$	10015.3	60.	10037	13	0.4	6	DBa		95La20 *
	10032.6	20.			0.2	6	GSa		98Ho13
	10035.7	50.			0.0	o	Bka		03Gi05
	10069.1	35.			-0.9	6	RIa		04Mo40 *
	10034.6	20.			0.1	6	Bka		04Fo08 *
	10145.2	50.			-2.2	U	GSa		10Ni14 *
	9978.8	20.	9987	13	0.4	7	GSa		98Ho13 *
$^{267}\text{Hs}(\alpha)^{263}\text{Sg}^m$	9979.8	35.			0.2	7	RIa		04Mo40 *
	9997.0	20.			-0.5	7	Bka		04Fo08 *
	9979.8	20.				9	Bka		04Fo08
$^{267}\text{Ds}(\alpha)^{263}\text{Hs}$	11776.5	50.				13	Bka		95Gh04 *
* $^{267}\text{Hs}(\alpha)^{263}\text{Sg}$	Selecting two events at $E_\alpha=9860, 9870$; and one $E_\alpha=9740(60)$ keV								95La20 **
* $^{267}\text{Hs}(\alpha)^{263}\text{Sg}$	Selecting four events at $E_\alpha=9970, 9890, 9900, 9910$ keV								04Mo40 **
* $^{267}\text{Hs}(\alpha)^{263}\text{Sg}$	Selecting two events at $E_\alpha=9880, 9888$ keV								04Fo08 **
* $^{267}\text{Hs}(\alpha)^{263}\text{Sg}$	Directly produced ^{267}Hs ; daughter and grand-daughter also conflicting								10Ni14 **
* $^{267}\text{Hs}(\alpha)^{263}\text{Sg}^m$	And one $E_\alpha=9749(20)$ at 13 ms								98Ho13 **
* $^{267}\text{Hs}(\alpha)^{263}\text{Sg}^m$	Selecting 7 events at $E_\alpha=9830, 9820, 9820, 9860, 9820, 9830, 9830$ keV								04Mo40 **
* $^{267}\text{Hs}(\alpha)^{263}\text{Sg}^m$	Selecting 2 events at $E_\alpha=9864, 9830$ keV								04Fo08 **
* $^{267}\text{Ds}(\alpha)^{263}\text{Hs}$	Maybe the upper isomer at about 250 keV excitation energy								AHW **
$^{268}\text{Hs}(\alpha)^{264}\text{Sg}$	9622.9	16.				8	GSa		10Ni14
$^{268}\text{Mt}(\alpha)^{264}\text{Bh}^p$	10395.5	20.	10438	19	2.1	o	GSa		95Ho04 *
	10431.9	20.			0.3	8	GSa		02Ho11 *
	10476.7	50.			-0.8	8	RIa		04Mo26 *
	10268	20			8.5	B	Bka		04Fo08 *
* $^{268}\text{Mt}(\alpha)^{264}\text{Bh}^p$	Two events $E_\alpha=10221$ coinc. $E(\gamma)=93$ and 10259; event #3 $E_\alpha=10097$ keV could be decay of an isomer with lifetime=171 ms								95Ho04 **
*									02Ho11 **
* $^{268}\text{Mt}(\alpha)^{264}\text{Bh}^p$	Average of event 95Ho04 $E_\alpha=10259$ and present 10294 keV								02Ho11 **
* $^{268}\text{Mt}(\alpha)^{264}\text{Bh}^p$	Also $E_\alpha=10340$ keV								04Mo26 **
* $^{268}\text{Mt}(\alpha)^{264}\text{Bh}^p$	One event only								04Fo08 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{269}\text{Sg}(\alpha)^{265}\text{Rf}$	8699.6	100.				7					10El06
$^{269}\text{Hs}(\alpha)^{265}\text{Sg}^m$	9369.6	30.	9300	40	-2.4	o		GSa			96Ho13 *
	9349.3	30.			-1.8	o		GSa			02Ho11 *
	9278.3	50.			0.3	o		GSa			03Tu05 *
	9207.0	30.			2.9	o		GSa			06Dv01
	9267.9	30.			0.5	7		GSa			08Dv02
	9349.2	71.1			-0.8	7		RIa			08Mo09
$^{269}\text{Ds}(\alpha)^{265}\text{Hs}^m$	11280.1	20.				5		GSa			95Ho03
$^{*269}\text{Hs}(\alpha)^{265}\text{Sg}^m$	Event number 2 only; first event rejected, see reference										02Ho11 **
$^{*269}\text{Hs}(\alpha)^{265}\text{Sg}^m$	Two events $E_\alpha=9230, 9180$ both following $300 \mu\text{s } ^{273}\text{Ds}$										02Ho11 **
$^{*269}\text{Hs}(\alpha)^{265}\text{Sg}^m$	Three events $E_\alpha=9180, 9100, 8880$; latter probably due to energy loss										03Tu05 **
$^{270}\text{Bh}(\alpha)^{266}\text{Db}$	9064	80				10			DbA		07Og02
$^{270}\text{Hs}(\alpha)^{266}\text{Sg}$	9324.3	52.8	9050	40	-5.3	B		GSa			03Tu05 *
	9024	52			0.7	o		GSa			06Dv01
	9013.8	50.			0.6	7		GSa			08Dv02
	9123.4	77.			-1.0	7		GSa			10Gr04 *
$^{270}\text{Mt}(\alpha)^{266}\text{Bh}$	10181.1	70.				10			RIa		08Mo09
$^{270}\text{Ds}(\alpha)^{266}\text{Hs}$	11196	50	11117	28	-1.6	o		GSa			01Ho06
	11116.9	28.				5		GSa			11Ac.A
$^{270}\text{Ds}^m(\alpha)^{266}\text{Hs}$	12333	50	12510	50	3.5	B		GSa			01Ho06
	12508.6	20.				5		GSa			11Ac.A
$^{270}\text{Ds}^m(\alpha)^{266}\text{Hs}^m$	11318	50	11410	50	1.7	o		GSa			01Ho06
	11405.2	52.				6		GSa			11Ac.A
$^{*270}\text{Hs}(\alpha)^{266}\text{Sg}$	Symmetrized from $E_\alpha=9160(+70-30)$; also $E_\alpha=8970$ keV										GAu **
$^{*270}\text{Hs}(\alpha)^{266}\text{Sg}$	Symmetrized from $E_\alpha=9020(+50-100)$; independent from previous item										GAu **
$^{271}\text{Sg}(\alpha)^{267}\text{Rf}^p$	8658	80	8670	50	0.2	o			DbA		04Og12
	8668	80				10			DbA		06Og05
$^{271}\text{Bh}(\alpha)^{267}\text{Db}$	9490.2	162.				8			DbA		12St.A
$^{271}\text{Hs}(\alpha)^{267}\text{Sg}^p$	9440	50				11			GSa		08Dv02
$^{271}\text{Ds}(\alpha)^{267}\text{Hs}$	10869.8	20.	10870	18	0.0	7		GSa			98Ho13
	10870.8	35.			0.0	7		RIa			04Mo40 *
$^{271}\text{Ds}^m(\alpha)^{267}\text{Hs}$	10937.8	20.				7			Bka		04Fo08 *
	10803.8	50.	10938	20	2.7	F					12Zh04 *
$^{271}\text{Ds}^m(\alpha)^{267}\text{Hs}^m$	10899.2	20.	10899	13	0.0	8		GSa			98Ho13
	10880.8	50.			0.3	o		Bka			03Gi05
	10883.0	35.			0.4	8		RIa			04Mo40 *
	10903.3	20.			-0.2	8		Bka			04Fo08 *
$^{*271}\text{Ds}(\alpha)^{267}\text{Hs}$	Decay chain number 6 for the long-lived isomer, GAu interpretation										04Mo40 **
$^{*271}\text{Ds}^m(\alpha)^{267}\text{Hs}$	Decay chain number 6, GAu interpretation										04Fo08 **
$^{*271}\text{Ds}^m(\alpha)^{267}\text{Hs}$	F : α escaped ?										BPf126 **
$^{*271}\text{Ds}^m(\alpha)^{267}\text{Hs}^m$	GAu : average of decay chains number 2, 5, 10, 13 for short-lived isomer										04Mo40 **
$^{*271}\text{Ds}^m(\alpha)^{267}\text{Hs}^m$	Decay chains number 5 and 7, GAu interpretation										04Fo08 **
$^{272}\text{Bh}(\alpha)^{268}\text{Db}^p$	9154.9	60.	9140	50	-0.2	o			DbA		04Og03
	9144.6	60.				9			DbA		12Og02
$^{272}\text{Rg}(\alpha)^{268}\text{Mt}$	10981.9	20.	11197	13	10.8	B		GSa			95Ho04 *
	11191.9	20.			0.3	9		GSa			02Ho11 *
	11184.7	35.			0.4	9		RIa			04Mo26 *
	11207.2	20.			-0.5	9		Bka			04Fo08 *
$^{*272}\text{Rg}(\alpha)^{268}\text{Mt}$	B : one event only; E(K) in coincidence may explain disagreement										GAu **
$^{*272}\text{Rg}(\alpha)^{268}\text{Mt}$	Two events $E_\alpha=11008$ and 11046 keV										02Ho11 **
$^{*272}\text{Rg}(\alpha)^{268}\text{Mt}$	Also others up to $E_\alpha=11560$ keV										04Mo26 **
$^{*272}\text{Rg}(\alpha)^{268}\text{Mt}$	One event only										04Fo08 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{273}\text{Hs}(\alpha)^{269}\text{Sg}$	9732.9	40.					8				10El06
$^{273}\text{Ds}(\alpha)^{269}\text{Hs}$	9875.0	20.	11370	50	29.9	F		GSa			96Ho13 *
	11248.1	30.			2.4	F		GSa			96Ho13 *
	11519.1	60.			-3.0	F		DbA			96La12 *
	11367.9	20.				8		GSa			02Ho11 *
	11311.0	70.			1.1	U		RIa			08Mo09
* $^{273}\text{Ds}(\alpha)^{269}\text{Hs}$	F : this event is distrusted, see reference										02Ho11 **
* $^{273}\text{Ds}(\alpha)^{269}\text{Hs}$	F : event number 2, probably to excited state in ^{269}Hs										GAu **
* $^{273}\text{Ds}(\alpha)^{269}\text{Hs}$	F : this event is distrusted, see reference; average 4 others $E_\alpha=11720$ keV										02Ho11 **
* $^{273}\text{Ds}(\alpha)^{269}\text{Hs}$	And one $E_\alpha=11080$ keV										02Ho11 **
$^{274}\text{Bh}(\alpha)^{270}\text{Db}$	8932	100					6		DbA		11Og04 *
$^{274}\text{Mt}(\alpha)^{270}\text{Bh}^p$	9906	100					12		DbA		07Og02
$^{274}\text{Rg}(\alpha)^{270}\text{Mt}$	11477.9	70.					11		RIa		08Mo09 *
* $^{274}\text{Bh}(\alpha)^{270}\text{Db}$	All results from this work were first published in reference										10Og01 **
* $^{274}\text{Rg}(\alpha)^{270}\text{Mt}$	Also one $E_\alpha=11150(70)$ keV										08Mo09 **
$^{275}\text{Hs}(\alpha)^{271}\text{Sg}$	9437.6	60.	9440	50	0.0	o			DbA		04Og12
	9437.6	60.					11		DbA		06Og05
$^{275}\text{Mt}(\alpha)^{271}\text{Bh}$	10482.8	90.	10210#	150#	-5.5	o			DbA		04Og03 *
	10503.0	60.			-5.9	D			DbA		12St.A
* $^{275}\text{Mt}(\alpha)^{271}\text{Bh}$	Trends from Mass Surface TMS suggest ^{275}Mt 290 more bound										GAu **
$^{276}\text{Mt}(\alpha)^{272}\text{Bh}^p$	9853.1	60.	9810	50	-0.8	o			DbA		04Og03
	9812.4	80.					11		DbA		12Og02 *
$^{276}\text{Mt}^m(\alpha)^{272}\text{Bh}^p$	9954.4	80.					11		DbA		12Og02
* $^{276}\text{Mt}(\alpha)^{272}\text{Bh}^p$	And one $Q_\alpha=9260(64)$ keV										12Og02 **
$^{277}\text{Ds}(\alpha)^{273}\text{Hs}^p$	10725.2	40.					10				10El06
$^{277}\text{Cn}(\alpha)^{273}\text{Ds}$	11622.2	30.					9		GSa		96Ho13 *
	11821.0	30.	11620	50	-4.0	F			GSa		96Ho13 *
	11486.0	40.			2.7	C			RIa		04MoZU
	11486.2	40.			2.7	B			RIa		08Mo09 *
* $^{277}\text{Cn}(\alpha)^{273}\text{Ds}$	And one $E_\alpha=11170(20)$ $Q_\alpha=11334.(20.)$ keV										02Ho11 **
* $^{277}\text{Cn}(\alpha)^{273}\text{Ds}$	F : this event is distrusted, see reference										02Ho11 **
* $^{277}\text{Cn}(\alpha)^{273}\text{Ds}$	And one $E_\alpha=11090(70)$ keV										08Mo09 **
$^{278}\text{Mt}(\alpha)^{274}\text{Bh}$	9689.7	190.	9460#	200#	-4.6	D			DbA		11Og04 *
$^{278}\text{Rg}(\alpha)^{274}\text{Mt}$	10847	80					13		DbA		07Og02
$^{278}\text{Ed}(\alpha)^{274}\text{Rg}$	11850.8	40.					12		RIa		08Mo09 *
	11992.8	61.	11850	50	-2.8	o			RIa		12Mo25 *
* $^{278}\text{Mt}(\alpha)^{274}\text{Bh}$	Trends from Mass Surface TMS suggest ^{278}Mt 230 more bound										GAu **
* $^{278}\text{Ed}(\alpha)^{274}\text{Rg}$	Also one $E_\alpha=11520(40)$ keV										08Mo09 **
* $^{278}\text{Ed}(\alpha)^{274}\text{Rg}$	Post-deadline, disagrees with previous result from same group										GAu **
$^{279}\text{Ds}(\alpha)^{275}\text{Hs}^p$	9844	60	9840	50	0.0	o			DbA		04Og12
	9844	60					13		DbA		06Og05
$^{279}\text{Rg}(\alpha)^{275}\text{Mt}$	10524	160					10		DbA		04Og03
$^{280}\text{Rg}(\alpha)^{276}\text{Mt}^p$	9891.6	60.	9890	50	0.0	o			DbA		04Og03
	9891.6	60.					13		DbA		12Og02
$^{281}\text{Ds}(\alpha)^{277}\text{Hs}^p$	8957.8	180.	8850	50	-2.1	F			DbA		99Og10 *
	8825.9	100.			0.5	F			DbA		04Mo15 *
	8856.4	30.			-0.1	o			GSt		10Du06
	8853.3	25.			0.0	5			GSt		11Ga19
	8853.3	15.			0.0	5			GSa		12Ho12
$^{281}\text{Ds}^m(\alpha)^{277}\text{Hs}^m$	9449.8	15.					5		GSa		12Ho12 *
$^{281}\text{Cn}(\alpha)^{277}\text{Ds}$	10459.2	40.					11				10El06
* $^{281}\text{Ds}(\alpha)^{277}\text{Hs}^p$	F : wrong α chain, see ^{285}Cn and ^{289}Fl										GAu **
* $^{281}\text{Ds}(\alpha)^{277}\text{Hs}^p$	F : non traceable information										GAu **
* $^{281}\text{Ds}^m(\alpha)^{277}\text{Hs}^m$	Assignment of $^{293}\text{Lv}^m$ - $^{289}\text{Fl}^m$ - $^{285}\text{Cn}^m$ - $^{281}\text{Ds}^m$ - $^{277}\text{Hs}^m$ chain is tentative										12Ho12 **

Table I. Comparison of input data and adjusted values (continued, Explanation of Table on page 1335)

Item	Input value		Adjusted value		v_i	Dg	Signf.	Main infl.	Lab	F	Reference
$^{288}\text{Fl}(\alpha)^{284}\text{Cn}$	9968.8	50.	10072	13	2.1	F			Db		01Og01 *
	9958.8	100.			1.1	F			Db		04Mo15 *
	10090.3	80.			-0.2	o			Db		04Og07
	10090.3	70.			-0.3	o			Db		04Og12
	10080.2	60.8			-0.1	11			Db		07Og01
	10090.3	30.			-0.6	o			GSt		10Du06
	10090.3	30.			-0.6	11			GSt		11Ga19
	10067.0	15.			0.3	11			GSa		12Ho12
$^{288}\text{Ef}(\alpha)^{284}\text{Ed}$	10607.7	60.	10630	50	0.4	o			Db		04Og03
	10627.8	60.				16			Db		12Og02
* $^{288}\text{Fl}(\alpha)^{284}\text{Cn}$	F : T=1800(+2100-600) ms, later work yields shorter half-lives re-assigned to ^{289}Fl										GAu **
* $^{288}\text{Fl}(\alpha)^{284}\text{Cn}$	F : non tracable information										GAu **
$^{289}\text{Fl}(\alpha)^{285}\text{Cn}$	9846.6	50.	9970	50	2.4	F			Db		99Og10 *
	9846.6	100.			2.4	F			Db		04Mo15 *
	9958.1	60.			0.2	o			Db		04Og07
	9958.1	50.			0.2	7			Db		07Og01
	10008.8	30.			-0.9	o			GSt		10Du06
	10008.8	30.			-0.9	7			GSt		11Ga19
	9955.9	15.			0.2	7			GSa		12Ho12
	$^{289}\text{Fl}^m(\alpha)^{285}\text{Cn}^m$	10169.9	15.				7		GSa		12Ho12 *
$^{289}\text{Ef}(\alpha)^{285}\text{Ed}$	10455.0	90.	10520	50	1.4	o			Db		11Og04
	10522.8	62.				12			Db		12Og02 *
* $^{289}\text{Fl}(\alpha)^{285}\text{Cn}$	F : one event at 30.4 s, later work yields much shorter half-lives										GAu **
* $^{289}\text{Fl}(\alpha)^{285}\text{Cn}$	F : non tracable information										GAu **
* $^{289}\text{Fl}^m(\alpha)^{285}\text{Cn}^m$	Assignment of $^{293}\text{Lv}^m-^{289}\text{Fl}^m-^{285}\text{Cn}^m-^{281}\text{Ds}^m-^{277}\text{Hs}^m$ chain is tentative										12Ho12 **
* $^{289}\text{Ef}(\alpha)^{285}\text{Ed}$	Also $E_{\alpha}=10310(90)$ keV										12Og02 **
$^{290}\text{Ef}(\alpha)^{286}\text{Ed}^p$	10089.5	400.				12			Db		11Og04
$^{290}\text{Lv}(\alpha)^{286}\text{Fl}$	10920.9	100.	10990	80	1.4	F			Db		04Mo15 *
	11000	80			-0.2	o			Db		04Og07
	10991.8	81.1				12			Db		06Og05
* $^{290}\text{Lv}(\alpha)^{286}\text{Fl}$	F : non tracable information										GAu **
$^{291}\text{Lv}(\alpha)^{287}\text{Fl}$	10890	70	10890	50	0.0	o			Db		04Og07
	10890	70				17			Db		06Og05
$^{292}\text{Lv}(\alpha)^{288}\text{Fl}$	10707.0	50.	10774	15	1.3	F			Db		01Og01 *
	10676.5	100.			1.0	F			Db		04Mo15 *
	10808.2	70.			-0.5	12			Db		04Og12
	10772.7	15.			0.1	12			GSa		12Ho12
* $^{292}\text{Lv}(\alpha)^{288}\text{Fl}$	F : daughter and grand-daughter re-assigned to ^{289}Fl and ^{285}Cn										GAu **
* $^{292}\text{Lv}(\alpha)^{288}\text{Fl}$	F : non tracable information										GAu **
$^{293}\text{Lv}(\alpha)^{289}\text{Fl}$	10676	60	10680	50	0.1	o			Db		04Og07
	10686	60			-0.1	8			Db		07Og01
	10678.9	15.			0.0	8			GSa		12Ho12
$^{293}\text{Lv}^m(\alpha)^{289}\text{Fl}^m$	10647	15				8		GSa		12Ho12 *	
$^{293}\text{Eh}(\alpha)^{289}\text{Ef}$	11182.8	80.				13		Db		11Og04	
* $^{293}\text{Lv}^m(\alpha)^{289}\text{Fl}^m$	Assignment of $^{293}\text{Lv}^m-^{289}\text{Fl}^m-^{285}\text{Cn}^m-^{281}\text{Ds}^m-^{277}\text{Hs}^m$ chain is tentative										12Ho12 **
$^{294}\text{Eh}(\alpha)^{290}\text{Ef}^p$	10959.4	100.				14			Db		11Og04
$^{294}\text{Ei}(\alpha)^{290}\text{Lv}$	11800.9	100.	11810	60	0.1	F			Db		04Mo15 *
	11810.9	60.			0.0	o			Db		04Og12
	11810.9	60.				13			Db		06Og05
* $^{294}\text{Ei}(\alpha)^{290}\text{Lv}$	F : non tracable information										GAu **
$^{295}\text{Ei}(\alpha)^{291}\text{Lv}$	11810.9	70.	11700#	200#	-2.2	F			Db		04Og05 *