

KA
ARLSRUHE
CHARGED
PARTICLE
GROUP

DA-1310(7)
Information

KERNFORSCHUNGSZENTRUM · D-7500 KARLSRUHE · POSTFACH 3640 · TELEX 7826-484

8.3.1977

Memo CP-B/7

Subject: Comments on TRANS-TAPE A000

References: TRANS A000 and Memo CP-D/14

77103/16
INFORMATION COPY
ONLY

Blumfeld (+ email)

General Remarks, Concerning Several or all Subentries (SE)

1. Russian names should be transliterated consistently (e.g. following the IAEA-INIS transliteration rules) in order to make retrievals possible (cf. A0002: DMITRIEV; A 0004: DMITRIYEV)
2. References: cf. Memo CP-D/14 p.3 concerning repetition of coded information. In addition, the reference of the English translation should be given, whenever possible, which is more convenient for many users e.g.
(J, IZV, 39, 24, 75)
(J, BAS, 39, (1), 18, 75). ENGLISH TRANSLATION
3. Numerical Data: Data entered under DECAY-DATA or in the DATA-SECTION should be given only with as many significant decimal digits as quoted by the author (e.g. 108. instead of 108.0).
4. Data Errors: Due to the EXFOR-rule to give only those values quoted in the publication no absolute errors should be calculated and given under the heading DATA-ERR from percentage errors given by the author, especially in cases where only a global error for the entire excitation function is given. Such global errors should be given under ERR-ANALYSIS. If different global errors are given for the individual reactions, the keyword ERR-ANALYSIS must be specified in the respective subentries (cf. Entry A0001). In cases, where individual percentage errors are given for all data points, the rule of EXFOR-dictionary 25 should be applied. In addition, in the calculated errors of several subentries insignificant decimal digits and typing mistakes have occurred.

5. Private Communications: Several data given e.g. under the keywords METHOD and ERR-ANALYS are not contained in the original papers and must, therefore, be private communications from the authors. This should be mentioned e.g. in the free text of STATUS behind the code APRVD.
6. Use of Codes: If one code is used no further specifying code should be given; e.g., if the detector is coded as NAICR, the additional code SCIN must not be given. This could be misunderstood insofar as two detectors (e.g. a scintillator for betas) could have been used.
7. Isomeric Codes: We would prefer the code M instead of M1 if only one isomer is taken into account (see Memo CP-B/6).
8. Accelerator Energy: The maximum accelerator energy is of interest in cases where energy degradation by means of absorbers was applied and should be given in the free text under METHOD if the code EDEG is specified. In all other cases a quotation of this energy is not necessary.
9. Comments: It should be clearly distinguished between comments referring to subjects given in the publication and comments by the compiler (cf. SE A0001001, where the accelerators' E_{\max} is certainly no comment by the compiler but given in the publication).
10. Sources of Data: Since all numerical data except those of entry A0001 must have been obtained either from curves in the original papers or directly from the authors, this must be clearly stated under STATUS by the code CURVE or in the free text, respectively (cf. Memo CP-D/14).

Special remarks to individual entries

Entry A0001:

11. METHOD: (SE2-13) The code EDEG is missing together with the quotation of E_{\max} in free text.
12. ADD-RES: (SE2-7) The code COMP is missing since in all these cases the data were compared to theoretical calculations.
13. REACTION: (SE 2 and 5) In these two cases the code M+ is misused (cf. the explanations in Memo CP-B/6, p.5). Instead, the sum code
(.....M)+
(.....G) must be used.

Consequently, the data should be given under the heading SUM in the DATA-section of these subentries.

(SE 8) The code IND must be given in subfield 5 instead of SF 8 (see Dict. 36).

(SE 12) In this case an explanation of the (seldom occurring) combination of an isomer code in SF 4 together with the code M+ in SF 5, which states the inclusion of production of the short lived second isomer M2 ($T_{1/2} = 2.2$ s) via 100 % isomeric transition, should be given in the free text.

14. DECAY-DATA: (SE 3) The given abundance of 0.775 of the 203 keV γ -ray has not been corrected for the total conversion coefficient $\alpha_{\text{tot}} = 0.07$ as the abundances in the other subentries have.

15. DATA-ERR: (SE 10, first DATA-line) It is not meaningful to specify an error for a data-value which is only an upper limit.

(SE 12, first DATA-line) The error, if it is given at all (see item 4 above) should be 0.2 instead of 2.25.

Entry A0002

16. MONITOR: (SE 1) Since the two MONITOR-reactions refer to different subentries, they must not be given in SE 1 but each in that subentry to which it refers. The last comma before the closing parenthesis is abundant.

17. FACILITY: (SE 1) The code should read CYCLO instead of CICLO.

18. DECAY-DATA: (SE 2 and 5) Please refer to the proposal on coding unresolved γ -rays under DECAY-DATA in Memo CP-B/6 p.6. If this proposal is incorporated into the EXFOR-system, the COMMENT in SE 2 can be omitted.

19. In order to compare Figs. 1 and 2 of the paper we calculated the isomeric ratios σ_m/σ_g using the tabulated values of the EXFOR entry in the following way:

$$\frac{\sigma_m}{\sigma_g} = \frac{(\Delta y_m (E_2 - E_1)) \cdot T_{1/2}(m)}{(\Delta y_g (E_2 - E_1)) \cdot T_{1/2}(g)}$$

The results are indicated on the attached copy of fig. 2 of the paper. What's wrong in our calculation?

Entry A0003

20. TITLE: (SE 1) In our opinion, the translation of the title seems to be ambiguous. We would propose: Excitation Functions for the Ground s-ates of Tc-95 and Tc-94 for (d,n) and (d,2n) Reactions.
21. FACILITY: (SE 1) The correct code is CYCLO. The maximum energy should not be given here, but - together with EDEG - under method. If it is present, it must be preceded by a point or start on a new line to ensure expansion of the codes in parentheses (cf. EXFOR-manual p.IV.2).
22. METHOD: (SE 1) Due to the original paper, the code INTB should be EXTB. The codes MOSEP and EDEG (together with specification of E_{\max} in the free text) are missing.
23. ERR-ANALYS: (SE 1) In addition to the total error of $\pm 15\%$ a relative error of $\pm 5\%$ is given by the authors. This should be mentioned here.
24. MONITOR: (SE 1) The reference of the monitor reaction is H.F. Röhm et al. J. inorg. Nucl. Chem. 31, 3345 (1969) (ref. 5 of the paper). The last comma before the closing parenthesis is abundant.
25. DECAY-DATA: (SE 2 and 3) The decay-data used are not specified in the paper. It should be mentioned, where they were taken from.
26. DATA: (SE 3) The first data point (at 8.0 MeV) should be 0.5 mb instead of 0.4 mb (the respective error value would be 0.07, but cf. item 4 above). The cross section of about 8 mb at 9.0 MeV is missing.

Entry A0004

27. TITLE: (SE 1) It should read SN-117M instead of SN-117. For clearness it should be translated by: Yields of SN-113 and SN-117M
28. FACILITY: (SE 1) The correct code is CYCLO.
29. MONITOR: (SE 1) The different monitor reactions must not be given in SE 1 but in those subentries to which they refer. The third monitor reaction should not be coded as a sum, since in the reference the two reactions are given separately (and will, lateron, have two different accession numbers when incorporated into the EXFOR-file). Instead, they should

be coded separately, and the use of the sum as monitor should be mentioned in the free text.

The reference of the first monitor reaction seems to have a wrong page number (AE,18,184,65 instead of 124). The last commas before the closing parentheses are abundant.

The comment should probably read: the references, not given in the paper, ...

30. METHOD: (SE 1) The code BCINT is missing.
31. SAMPLE: (SE 1) The different samples used should be given in those subentries to which they refer.
32. REACTION: (SE 2,3,5) The code M+ in SF 5 is missing in these cases (cf. Memo CP-B/6).
33. DECAY-DATA: (SE 2,3,5) With respect to item 32, the following data should be added under DECAY-DATA.
(50-SN-113-M,20.MIN).91 PER-CENT ISOMERIC TRANSITION, HALF-LIFE 20 MIN
(COMMENT BY THE COMPILER)
(50-SN-113-G,115.D). 100 PER-CENT DECAY TO IN-113-M
(COMMENT BY THE COMPILER)
34. DATA: (SE 2-6) The source of the EN-ERR data should be given. In table 1 of the publication only the error of one energy value for each excitation function is given (which is only half as large as quoted in the compilation at the respective energy). In addition, there are too many decimal digits when compared to the respective energy and yield values. The numbers should be identical to those given in the paper.
35. REACTION: (SE 4) Since in the given energy range only the reaction 49-IN-115(A,N+P)50-SN-117-M can occur, the reaction should be coded in this way. Since the data have probably not been corrected for 100 % abundance of IN-115 (natural targets were used), they should be marked as relative by the code REL in branch SF 5. An appropriate comment should then be given in the free text or under COMMENT. (We will propose this procedure in our next memo for general use).
Generally, in cases where for natural targets the coding Z-EL-0(P,X) is used, the contributing reactions (stating explicitly the different possibilities for X) should be given under COMMENT if possible, at least

CP-B/7
1977/3/8

if they are quoted in the publication (applies e.g. to subentries 2,3,5, and 6 of Entry A0004).

Since these four entries shall be incorporated into the KACHAPAG-file and it is very important to have consistent forms of compilations (e.g. for retrievals etc.), we would appreciate very much, if on the next transtape A001 the entries would be altered according to our above comments.

i.v. H. Ullrich-Deh

Distributions

- | | |
|---------------------------|---------------------------|
| A. F.E. Chukreev, CaJaD | G. H. Behrens, ZAED |
| B. H. Münzel, KaChaPaG | H. A. Marcinkowski, IBJ |
| C. S. Pearlstein, NNCSN | I. L. Lesca, NDCC |
| D. J. Schmidt, NDS | K. D.C. Agrawal, Varanasi |
| E. H. Tanaka, Study Group | 4. V.N. Manokhin, CJD |
| F. G. Dearnaley, AERE | |

*cc/ Ullrich
Münzel
Lesca
Lorey
Okamoto
Schmidt
Schweizer
Smith
Yaphurkian*