Proposal to introduce a "Quality Score" in EXFOR

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1. Introduction

The WPEC Subgroup 30 (SG30) studied different ways to improve the accessibility and the quality of the EXFOR database [1]. During its lifetime (2007-2010), several batches of error reports have been sent to the NRDC [2-5]. The final SG30 report describes the translation process from EXFOR into more user-friendly tabulated data files, as well as the various methods developed to verify and correct the contents of the database. SG30 contributed to the long-term objective to establish EXFOR as an easily accessible and correct database. However, SG30 achievements were only the "end of the beginning" and SG30-like activities are still continuing at NRG and Data Centres, e.g.

- Distribution of EXFOR in C4 computational format (V. Zerkin, IAEA-NDS).
- Correction system to collect and apply evaluator's feedback on C4 data (V. Zerkin, IAEA-NDS).
- Compilation and monitoring by IAEA-NDS of coding mistakes reported by users and NRDC staff [6].
- Various checking performed at the IAEA-NDS on incident energies coded in MeV instead of keV, level energies higher than 20 MeV or lower than 10 keV, reactions violating charge or mass conservation, data above threshold of second level excitation without specification of level energy.
- Implementation of SG30 methods at the NEA DB as described in references [7] and in appendix A [8].
- Automatic test of C4 data and comparison with TALYS/TENDL at NRG as described in references [1,5] and in appendix A [8].

Today, the NRG review of EXFOR data goes far beyond the initial scope of SG30 and already includes a quality assignment of the EXFOR data.

The purpose of this working document is to present this quality classification to NRDC members and to discuss the opportunity and the technical solutions to store this valuable information in the EXFOR database.

2. Quality assignment

In a first step, quality scores are assessed automatically, by comparing the experimental values of the subentry with model calculations or other data libraries. In a second step, paper reviews and possible corrections are performed, and subentries may be finally placed in a scoring class which is different from the initial one. The appendix B describes in more details a quality classification that puts this into effect, as well as a strategy to come to an improved, verified EXFOR library. In this summary, we only briefly describe this quality classification system.

2.1 Calculation of the deviation factor

Automated comparison between evaluated and experimental data is done using the three following deviation factors, which are available per data point, per data set (as below), per reaction, per projectile and for the whole library:

$$F = 10^{\sqrt{\frac{1}{N}\sum_i^N \left(\log \frac{\sigma_T^i}{\sigma_E^i}\right)^2}}, \qquad \chi^2 = \frac{1}{N}\sum_i^N \left(\frac{\sigma_T^i - \sigma_E^i}{\Delta\sigma_E^i}\right)^2, \qquad \Delta = \frac{1}{N}\sum_i^N |\sigma_T^i - \sigma_E^i|,$$

where T stands for TALYS/library and E for experimental data (with N points).

2.2 Quality classification

The following quality classes are defined:

- Class 1 ($1 \leq F \leq 1.2$) for data deviating in average by less than 20%;
- Class 2 ($1.2 < F \leq 2$) for data deviating in average between 20% and a factor 2;
- Class 3 ($F > 2$) for data deviating by more than a factor 2.

Class 3 data should always be reviewed by an expert, while class 2 data should be reviewed only if Δ is more than 10% of the non-elastic cross-section and $\chi^2 > 20$.

In addition to this quantitative classification, subentries are sorted in 4 main categories:

- "T" for automated comparison of data with TALYS/TENDL and other evaluated libraries;
- "R" for data reviewed against the original publication;
- "E" for data erroneously stored in EXFOR;
- "N" for data that could not be cross-checked with the original publication (yet).

2.3 Review of activation cross-sections

For now 1 year, informal collaboration has started between NEA DB, NRG and IAEA-NDS to review all 6827 (n,2n), (n,p), (n,α) partial and total cross-sections available in the EXFOR database, i.e. 2866 (n,2n), 2561 (n,p) and 1400 (n,α) subentries (cf. Table 1). All these subentries were assigned a quality score after cross-checking with information from other measurements, libraries and/or calculations, as well as verification of the associated publications.

Table 1: Total number of neutron-induced cross-section subentries available in XC4 format.

Reaction	All	Reaction	Number	Reaction	Number	Reaction	Number
Composite	5791	Total	4493	Elastic	1118	Non-elastic	425
(n,γ)	5699	(n,γ) (tot)	4932	(n,γ)g	287	(n,γ)m	480
(n,f)	1259						
(n,n')	579	(n,n') (tot)	303	(n,n')g	7	(n,n')m	269
(n,n'$_k$)	1162	(n,n'$_1$)	517	(n,n'$_2$)	160	(n,n'$_3$)	64
(n,2n)	2866	(n,2n) (tot)	1677	(n,2n)g	402	(n,2n)m	787
(n,p)	2561	(n,p) (tot)	1878	(n,p)g	219	(n,p)m	464
(n,α)	1400	(n,α) (tot)	1081	(n,α)g	96	(n,α)m	223
part prod	515	(n,xn)	20	(n,xp)	94	(n,xα)	181
Other	665	(n,3n)	127	(n,nα)	83	(n,np)	116
Total	23490						

As an example, Figure 1 shows a comparison between experimental and evaluated data for the ^{72}Ge(n,p)^{72}Ga cross-section. This is judged together with the F-values given in Table 2. The data set measured by Paul, initially categorized in Class 2, was reviewed by checking the publication, and both the value and the reaction identifier stored in EXFOR were found to be correct. Finally, this data set was flagged as R2 (Reviewed). This exercise was extended to all (n,p), (n,α) and (n,2n) cross-sections.

Table 2: F-values for all 72Ge(n,p) data sets.

Author	F	TALYS	ENDF	JENDL	JEFF	CENDL	EAF	TENDL
Casanova	1.08	1.13	1.09	1.09	1.02	1.01	1.02	1.13
Konno	1.11	1.05	1.08	1.08	1.12	1.16	1.18	1.04
Changlin Lan	1.13	1.20	1.13	1.13	1.08	1.05	1.06	1.20
Hoang	1.15	1.19	1.18	1.18	1.13	1.05	1.03	1.18
Vinitskaya	1.16	1.16	1.05	1.05	1.13	1.24	1.23	1.15
Qaim	1.16	1.14	1.06	1.06	1.14	1.24	1.23	1.14
Rieppo	1.20	1.18	1.28	1.28	1.19	1.09	1.10	1.19
Zhong-Sheng	1.26	1.18	1.22	1.22	1.30	1.34	1.36	1.17
Wood	1.35	1.38	1.42	1.42	1.32	1.24	1.24	1.39
Vlastou	1.44	1.05	1.64	1.64	1.62	1.25	1.51	1.04
Paul	1.85	1.88	1.96	1.96	1.82	1.69	1.71	1.89
Average	1.29	1.21	1.33	1.33	1.31	1.21	1.30	1.21

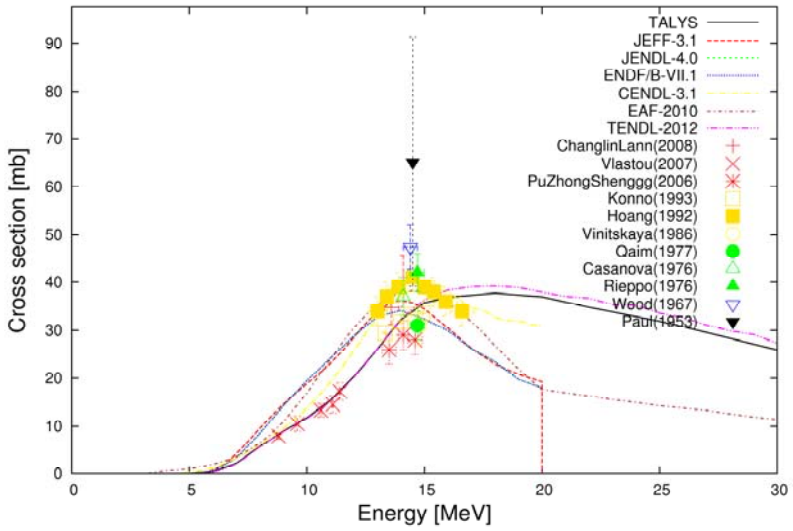

Figure 1: Comparison of experimental and evaluated data for ^{72}Ge(n,p)^{72}Ga.

Table 3 summarizes the current quality scoring for all (n,2n), (n,p) and (n,α) cross-sections. After completion of the full review the T3 line will be basically empty and the N3 articles will have to be scanned and reviewed with the highest priority. Of course, all subentries in the category E will have to be corrected.

Table 3: Quality scoring of (n,2n), (n,p) and (n,α) as of April 22, 2013

Score\reaction	**(n,2n)**	**(n,p)**	**(n,α)**
T1	684	320	153
T2	402	452	270
T3	100	95	127
R1	309	265	84
R2	292	454	179
R3	87	162	143
N1	495	277	116
N2	380	386	190
N3	80	120	115
E1	0	0	0
E2	4	5	1
E3	6	11	2

3. Conclusion

As already seen in the course of Subgroup 30 activities, there is a number of data in the EXFOR database that differ significantly from other measurements or theoretical values (cf. line “R3” in Table 3). Although these data are correct and properly stored in the EXFOR database, it would be useful to inform the users that they differ significantly from other measurements or theoretical values. This additional information on the quality of the data set should be provided in an unambiguous and systematic way using a specific Quality keyword.

References

[1] Nuclear Energy Agency (NEA), "Quality improvement of the EXFOR database", *International Evaluation Co-operation*, Vol. 30, NEA/WPEC-30, OECD/NEA, Paris (2011). See www.oecd-nea.org/science/wpec.

[2] "NRDC action to the list of EXFOR outliers", NRDC working paper WP2008-3 (2008).

[3] "EXFOR Outliers (Parts 4 and 5)", NRDC working paper WP2010-10 and memo CP-D/623 (2010).

[4] "Automatic test of EXFOR with TALYS", NRDC working paper WP2010-11 and memo CP-D/627,633 (2010).

[5] "Follow-up of WPEC Subgroup 30 activities on quality improvement of the EXFOR database", NRDC working paper WP2011-17 (2011).

[6] www-nds.iaea.org/nrdc/error.

[7] "Statistical methods for the verification of databases – Application to the international database of experimental nuclear reaction data (EXFOR)", NEA News Magazine 29.1, 30 (2011). See Publications at www.oecd-nea.org/nea-news.

[8] O. Zeydina *et al.*, "Cross-checking of large evaluated and experimental databases", Int. Conf. on Nuclear Data for Science and Technology (ND2013), New York, USA, March 4-8, 2013. See Appendix A.

Cross-checking of large evaluated and experimental databases

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This paper presents mathematical methods for the verification of large experimental and evaluated nuclear databases (e.g. EXFOR, JEFF, TENDL). These methods allow to assess the overall consistency of the data and to detect aberrant values in both evaluated and experimental database.

I. INTRODUCTION

The Nuclear Energy Agency (NEA) Data Bank is a member of the network of Nuclear Reaction Data Centre [1] that maintains large nuclear databases and makes them available to scientists and engineers worldwide. In the continuity of WPEC Subgroup 30 activities [2], the NEA Data Bank, the Societe de Calcul Mathematique (SCM) and the Nuclear Research and Consultancy Group (NRG) developed statistical methods to help improve the quality of these databases.

An outline of the NEA-SCM procedure to check the mutual consistency of experimental data is described in reference [3]. The focus of the present contribution is to describe methods developed by NEA-SCM and NRG to check the consistency of data from different evaluated libraries (e.g. JEFF, TENDL) and to cross-check these evaluated data with experimental data (EXFOR).

This approach aims to use the valuable information stored in both experimental and evaluated database. It helps assess the quality of evaluated data by comparison with experimental data (and vice-versa) and helps identify flaws in evaluated or experimental database.

II. DATABASE DESCRIPTION

In the present work, we only consider the case of differential cross-section $y = f(x)$, where x is the energy of the incident particle.

Experimental data (EXFOR) are the result of measurements and considered as a set of points, whereas the data stored in evaluated files are the result of modeling or expert evaluation and considered as continuous functions that can be complemented by additional points.

In addition, there are some particularities that must be taken into account: (i) an experimental point may be associated with an uncertainty and/or a resolution; (ii) both experimental and evaluated data may contain resonance regions characterized by large fluctuations in cross-section values; (iii) low value of cross-sections may lead to large relative discrepancies.

III. METHOD DEVELOPED BY NEA-SCM

The main idea of the consistency assessment is to calculate the mean distance between (i) two curves in the case of evaluated data; (ii) a curve and a set of points when comparing evaluated and experimental data.

The comparison is performed separately for each nuclear reaction by means of relative and absolute "distances" between experimental points and each of the evaluated curves. Subsequently, the available nuclear reactions are rated by combining the two types of distances. The same procedure is applied when checking the mutual consistency of evaluated data: each library is compared with all available evaluations of the same reaction and then rated according to its similarity with the others.

The absolute distance between two libraries describing the same reaction is calculated as the integral of the difference between two continuous functions:

$$d = \int_a^b |f(x) - g(x)|\, dx. \tag{1}$$

The absolute distance between a curve and a set of points is the average of the differences observed at the same abscissa (energy):

$$d = \frac{\sum_{i=1}^{N} |y_i - y'_i|}{N}, \tag{2}$$

where y_i is the experimental value, y'_i is the evaluated (interpolated) value, and N is the number of experimental

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data points. The relative distance is deduced by dividing the absolute distance by the average of compared values. This method is implemented in seven steps.
(1) *Representation of the data:* An essential point when representing the data is to define the optimal scales that allows plotting the data as evenly spaced as possible [3].
(2) *Energy range:* For a given reaction only energy values common to all data sets are taken into account.
(3) *Discretization:* The energy range is discretized with 50 subintervals of the same size.
(4) *Construction of the resonance indicator:* Before making a comparison, resonance regions must be distinguished. We calculate a "relative variance" for each discretization interval, i, using the formula:

$$var_i^{rel} = \frac{\sum_{n=1}^{N_i} \frac{|Y_n - \overline{Y}|}{(Y_n + \overline{Y})/2}}{N_i}, \; i = 1, 2 \ldots, \qquad (3)$$

where N_i is the number of measurements; Y_n and $\overline{Y}$ are respectively the cross-section and its average value. A resonance region is defined by a "relative variance" larger than a given threshold, which was empirically set to 0.18 (see example in Fig. 1).

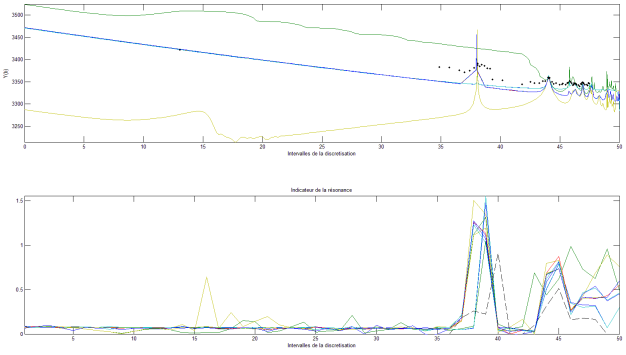

FIG. 1. Data available in the EXFOR database (points) and in evaluated libraries (lines) for the reaction $^{11}B(n,\gamma)$ (top) and the values of relative variance for each interval (bottom).

(5) *Consistency of evaluated and experimental data:* The comparison is performed subject to the value of the resonance indicator: (i) in a resonance region, the distance is computed as the difference of integrals:

$$d = \left| \int_a^b f(x)\,dx - \int_a^b g(x)\,dx \right|, \qquad (4)$$

where the integral for EXFOR data is made using interpolation between points from the same data set; (ii) otherwise Eq. (2) is applied.
(6) *Mutual consistency of evaluated data:* (i) in a resonance region, the distance is computed using Eq. (4); (ii) otherwise Eq. (1) is used. Figures 2 and 3 present the distances calculated for the reaction given in Fig. 1. The 2^{nd} and the 6^{th} evaluated libraries are the worst cases compared to other libraries and experimental data (see also curves in Fig. 1).

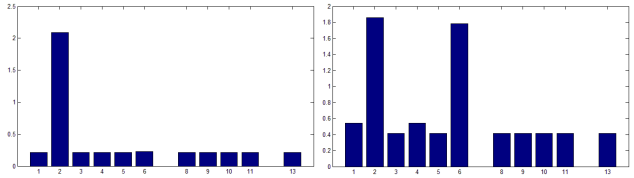

FIG. 2. Assessment of the self-consistency of evaluated data: absolute (left) and relative distances (right).

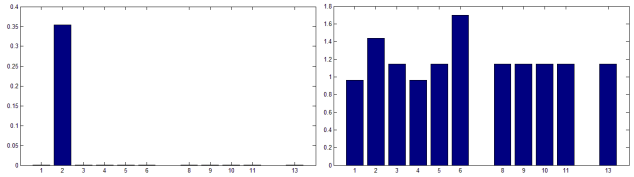

FIG. 3. Assessment of the consistency between measured and evaluated data: absolute (left) and relative distances (right).

(7) *Classification of nuclear reactions:* In order to rank nuclear data according to consistency criteria, an indicator combining the absolute and relative distances is implemented as follow: (i) using steps (5) and (6), compute the absolute (abs) and relative (rel) distances for each single library (average of all available libraries if needed); (ii) calculate $log_{10}\,abs$; (iii) using all examined reactions, normalize these values between [0.005-1.005]; (iv) the final indicator is given by $rel \times (log_{10}\,abs)^{norm}$. Note that this indicator is still relative in the sense that it only helps identifying on a consistency scale the best and the worst cases among all cases studied.

IV. METHOD DEVELOPED BY NRG FOR QUALITY ASSESSMENT AND CORRECTION

To efficiently verify and improve the EXFOR database, a quality score should be given to each subentry. This is no small task given the total size of the EXFOR database, which is summarized in Table I. Out of the 134941 subentries (data sets), 83084 have been translated by the IAEA into the extended computational format (XC4), which makes EXFOR more easily readable for further processing. Out of this, 97% has been identified as usable data and categorized in a directory-structured database developed at NRG, with the preliminary name "Newbase". Finally, 52% of these subentries, at the moment cross sections only, have been compared with the latest version of

TABLE I. Total contents of EXFOR and derived databases.

Database	# entries	# subentries	# data points
EXFOR	19764	134941	11882567
XC4	13621 (69%)	83084 (62%)	7572483 (64%)
Newbase	13342 (98%)	80660 (97%)	7471028 (99%)
TALYS + lib.	7829 (59%)	41958 (52%)	4062317 (54%)

TALYS and/or the ENDFB/VII.1, JEFF-3.1.1, JENDL-4.0, CENDL-3.1, EAF-2010, IRDFF-1.0 and TENDL-2012 databases, in pointwise format. In other words, for 4062317 data points we have an automated comparison between experiment and evaluation. The main goodness-of-fit estimator we are using is the F-factor

$$F = 10^{\sqrt{\frac{1}{N}\sum_i^N \left(\log \frac{\sigma_T^i}{\sigma_E^i}\right)^2}}, \tag{5}$$

though we also monitor the χ^2 estimator,

$$\chi^2 = \frac{1}{N}\sum_i^N \left(\frac{\sigma_T^i - \sigma_E^i}{\Delta\sigma_E^i}\right)^2, \tag{6}$$

and the absolute deviation

$$\Delta = \frac{1}{N}\sum_i^N |\sigma_T^i - \sigma_E^i|. \tag{7}$$

In these equations, the subscript T stands for TALYS/library and E for experimental. In all cases, we average over the number of energy points, N, in each data set. The F-factor can thus be given per data point, in which case it is just a twisted C/E factor, per data set summed over all points, per reaction summed over all data sets and/or nuclides, per projectile summed over all reactions, and finally for the whole EXFOR database, for each of the above mentioned libraries.

It is quite clear that if we want a *quality score* for each data set in such a large database, that initially these scores will be assigned automatically. Next, paper reviews and possible corrections may be performed, and subentries may be placed in a scoring class which is different from the initial one. A preliminary quality classification is proposed which puts this into effect:

- Class 1: $1 \leq F \leq 1.2$
- Class 2: $1.2 < F \leq 2$
- Class 3: $F > 2$

At the moment, we feel that quality class "3" should always be reviewed by checking the publication for possible compilation mistakes, while class "2" should be reviewed if in addition D is more that 10% of the total nonelastic cross section and if χ^2 is larger than 20. After that, the data set gets a "R" (reviewed) flag or an "E" (error) flag.

As an example, Fig. 4 shows a comparison between experimental data and libraries for ^{72}Ge(n,p). This is judged together with the numerical values of Table II. On the basis of that the data set by Paul was reviewed, and in this case it was concluded that it was indeed the reported value. This exercise could be performed for the entire EXFOR database.

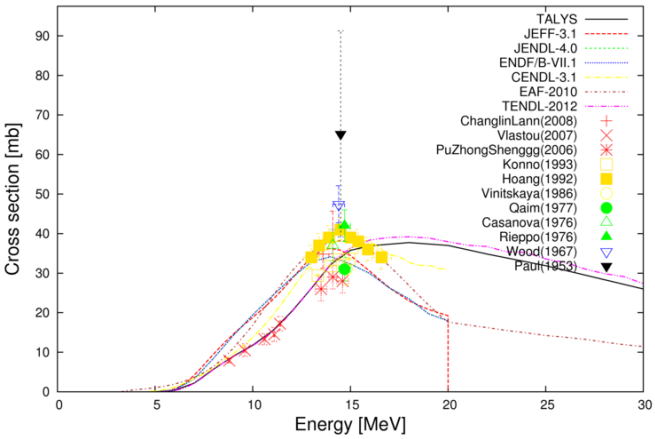

FIG. 4. Comparison of data for ^{72}Ge(n,p)

TABLE II. F-values for all ^{72}Ge(n,p) data sets.

Author	F	TALYS	ENDF	JENDL	JEFF	CENDL	EAF	TENDL
Casanova	1.08	1.13	1.09	1.09	1.02	1.01	1.02	1.13
Konno	1.11	1.05	1.08	1.08	1.12	1.16	1.18	1.04
Changlin Lan	1.13	1.20	1.13	1.13	1.08	1.05	1.06	1.20
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Qaim	1.16	1.14	1.06	1.06	1.14	1.24	1.23	1.14
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Zhong-Sheng	1.26	1.18	1.22	1.22	1.30	1.34	1.36	1.17
Wood	1.35	1.38	1.42	1.42	1.32	1.24	1.24	1.39
Vlastou	1.44	1.05	1.64	1.64	1.62	1.25	1.51	1.04
Paul	1.85	1.88	1.96	1.96	1.82	1.69	1.71	1.89
Average	1.29	1.21	1.33	1.33	1.31	1.21	1.30	1.21

V. CONCLUSIONS

The work presented here is a follow-up of previous activities initiated in the framework of WPEC Subgroup 30 [2]. The performance of the NEA-SCM method was verified on a selection of about two hundred cross-sections, which were all successfully analysed and ranked. Further testing is under way using full JANIS databases [4], including future JEFF test-libraries. The method developed at NRG is being used to assign quality scores to EXFOR data set with the ultimate objective to improve the accuracy of TENDL libraries. These initiatives will help improve the quality of the EXFOR database, JEFF and TENDL libraries for the benefit of all nuclear data users.

[1] N. Otuka *et al.*, NRDC, these proceedings.
[2] A.J. Koning *et al.*, NEA/WPEC-30 (2011).
[3] E. Dupont *et al.*, NEA News Magazine **29.1**, 30 (2011).
[4] N. Soppera *et al.*, JANIS, these proceedings.

Quality assignment of the EXFOR database

Version April 22 2013

Arjan Koning (NRG)

1 Quality scoring

To efficiently verify the EXFOR database, a quality score should be given to each subentry. Initially these scores will be given automatically, by comparing the experimental values of the subentry with model calculations or other data libraries. Next, paper reviews and possible corrections may be performed, and subentries may be placed in a scoring class which is different from the initial one. First, a quality classification is proposed which puts this into effect. Next, the order of steps to come to an improved, verified EXFOR library is outlined. In a later section, the numerical criteria for quality classes are defined.

1.1 Quality classes

Subentries which are not reviewed or not automatically compared (blank)

blank **Neither reviewed nor compared with models/evaluations.**
The subentry is not (yet) cross-checked with information from other measurements, libraries and/or calculations. This is the default quality score.

Subentries which are automatically compared with TALYS or data libraries (T)

T1 **Automatically compared with models/libraries: small deviations.**
The subentry contains (very) probably the reaction and data measured by the author, and although the associated publication has not been checked by the reviewer, the quantities have central values and uncertainties which are close to other measurements, libraries and/or calculations.

T2 **Automatically compared with models/libraries: questionable deviations**
The subentry contains maybe the reaction and data measured by the author, and the associated publication has not (yet) been checked by the reviewer. The quantities have central values and uncertainties which are deviating to some extent from other measurements, libraries and/or calculations.

T3 **Automatically compared with models/libraries: strong deviations** The subentry contains probably not the reaction and data measured by the author, and the associated publication has not (yet) been checked by the reviewer. The quantities have central values and uncertainties which are strongly deviating from other measurements, libraries and/or calculations.

Subentries which are reviewed by checking the publication (R or N)

R1 **Paper reviewed: small deviations.**
The subentry contains certainly the reaction and data measured by the author, since the associated publication has been checked by the reviewer. The quantities have central values and uncertainties, which are close to other measurements, libraries and/or calculations.

R2 **Paper reviewed: questionable deviations**
The subentry contains certainly the reaction and data measured by the author, since the associated publication has been checked by the reviewer. The quantities have central values and uncertainties which are deviating to some extent from other measurements, libraries and/or calculations.

R3 **Paper reviewed: strong deviations**
The subentry contains certainly the reaction and data measured by the author, since the associated publication has been checked by the reviewer. The quantities have central values and uncertainties which are strongly deviating from other measurements, libraries and/or calculations.

N1 **Automatic score T1, but pdf of paper not available for checking**

N2 **Automatic score T2, but pdf of paper not available for checking**

N3 **Automatic score T3, but pdf of paper not available for checking**

Subentries which contain errors and require specified action (E)

E1 **Error: subentry contains other/related quantity.**
The subentry does not contain the reaction or data measured by the author, but (very) probably a related quantity, since that related quantity agrees with other measurements, libraries and/or calculations and with the associated publication, which has been checked by the reviewer. Action: confirmation and correction by Data Centres.

E2 **Error: subentry contains correct reaction, but wrong values.**
The subentry contains (very) probably the reaction measured by the author, since the associated publication has been checked by the reviewer, but the values are wrong (e.g. wrong units). Action: confirmation and correction by Data Centres.

E3 **Error: subentry contains data which are unrecognizable**
The subentry contains reaction and data that do not agree at all with other measurements, libraries and/or calculations. Furthermore, no origin of the value or alternative meaning for the value could be found, although the associated publication has been checked by the reviewer. Action: further analysis by Data Centres.

For each subentry, a data block will be created including the basic information of the subentry, the date of the review and the quality score.

2 Various stages of quality assignment

Stage 1
All X4 entries that can be automatically compared with TALYS will get a quality score T1, T2 or T3. A quality score T1 will probably not be changed anymore. Only if unexpected new information comes to surface, from either the experimental or modelling side, this may change. Hence, the result of this stage is:

- T1: Definite assignment in database
- T2+T3: Should be reviewed.

Stage 2
The papers of subentries with quality score T2 and T3 will be reviewed. In the course of time, the boundary between T1, T2 and T3 may be altered. This depends on the number of false alarms in the T2 class, which determines whether the decision for a paper review should be more or less strict. After paper review, a subentry with an initial quality score of T2 will end up in R2, N2, E1 or E2, while a subentry with an initial quality score of T3 will end up in R3, N3, E1, E2 or E3. Hence, the result of this stage is:

- R2+R3: Definite assignment in database
- E1+E2+E3: Should be corrected
- N3 (and maybe N2): should have priority for acquiring the pdf file of the paper

Stage 3
Cases with quality score E1, E2, E3 will result in a message to the Data Centres with a recommended correction. After this correction, these subentries will be reviewed again after which they may be upgraded to R1, R2 or R3 in the next X4 update. Hence, the result of this stage is:

- R1+R2+R3: Definite assignment in database

Stage 4
The final quality scores, i.e. after all corrections, will be either 0, T1, N1, N2, N3, R1, R2 or R3.

Reaction	All	Reaction	Number	Reaction	Number	Reaction	Number
Composite	5791	Total	4493	Elastic	1118	Non-elastic	425
(n,γ)	5699	(n,γ) (tot)	4932	(n,γ)g	287	(n,γ)m	480
(n,f)	1259						
(n,n')	579	(n,n') (tot)	303	(n,n')g	7	(n,n')m	269
(n,n'$_k$)	1162	(n,n'$_1$)	517	(n,n'$_2$)	160	(n,n'$_3$)	64
(n,2n)	2866	(n,2n) (tot)	1677	(n,2n)g	402	(n,2n)m	787
(n,p)	2561	(n,p) (tot)	1878	(n,p)g	219	(n,p)m	464
(n,α)	1400	(n,α) (tot)	1081	(n,α)g	96	(n,α)m	223
part prod	515	(n,xn)	20	(n,xp)	94	(n,xα)	181
Other	665	(n,3n)	127	(n,nα)	83	(n,np)	116
Total	23490						

Table 1: Total number of neutron-induced *cross section* subentries available in XC4 format.

3 Goodness-of-fit estimators for EXFOR

To judge the quality of an experimental data point, we can compare it with predictions from TALYS and, for neutrons, also with values as evaluated in the nuclear data libraries ENDFB/V-II.1, JENDL-4.0, JEFF-3.1.2, CENDL-3.1, IRDFF1.0, EAF-2010 and TENDL-2012. Moreover, one can compare with other measurements of the same reaction. The existing nuclear data libraries + TALYS should be able to give a reasonably good prediction of many reaction data, and obviously we will always try to extend such predictions to as many reactions as possible in future versions. At first sight, the problem is simple: If we know that TALYS + libraries are usually within e.g. 30% of the experimental data for a certain reaction channel, alarm bells should start ringing if the deviation of a data set for such a channel is suddenly much larger. However, large deviations may also come from bad performance of the library or TALYS, and may even occur if the visual agreement on linear scale is good. For example, for reactions close to threshole the difference between evaluation and experiment may easily be a factor of 10. In general the rule holds that the smaller the cross section, the larger the relative error. It is therefore important to judge not only the calculation/experiment (C/E) values and the reported experimental uncertainty, but also the absolute deviation. In several cases, it turns out that there are problems in EXFOR, and many of them can not so easily be detected with ways other than by comparing

with a model code, which is why these EXFOR problems have not been discovered in the first place. Therefore, this first global attempt to classify EXFO problems in a consistent manner is timely. The EXFOR mistakes which are easiest to detect concern C/E values around 0.001 or 1000, suggesting the well known error of mistaking barns for millibarns. Unfortunately, the majority of cases is more difficult to judge. The current comparison should also help to solve one category of mistakes in EXFOR: reaction identifiers which are assigned in wrong, inconsistent or even multiple ways, which can be regarded as an "injustice" for otherwise good-quality experimental data, since they are wrongly coded or sometimes even untraceable. In other words, if TALYS + libraries are expected to give a reasonably good prediction for a reaction and we obtain a large deviation, it may be that we are not comparing the evaluated result with the correct experimental quantity, and the EXFOR reaction identifier should perhaps be corrected.

To discover and classify problems, we first define 3 goodness-of-fit estimators, which represent an average deviation between TALYS or data libraries and an experimental data set that runs over N data points. If they are all 3 very large, something is wrong somewhere. They are the F-factor

$$F = 10^{\sqrt{\frac{1}{N}\sum_i^N f_i}} \tag{1}$$

where the term for each individual data point is

$$f_i = \left(\log \frac{\sigma_T^i}{\sigma_E^i}\right)^2, \tag{2}$$

the χ^2 estimator,

$$\chi^2 = \frac{1}{N}\sum_i^N \chi_i^2, \tag{3}$$

where the term for each individual data point is

$$\chi_i^2 = \left(\frac{\sigma_T^i - \sigma_E^i}{\Delta\sigma_E^i}\right)^2, \tag{4}$$

and the absolute deviation

$$D = \frac{1}{N}\sum_i^N d_i, \tag{5}$$

where the term for each individual data point is

$$d_i = |\sigma_T^i - \sigma_E^i|. \tag{6}$$

In these equations, the subscript T stands for TALYS or libraries and E for experimental. Hence, each data set that contains a cross section excitation function, or only 1 point, is described by 3 average numbers: F, χ^2 and D, while in our analysis we also keep track of all individual components 10^{f_i}, χ_i^2 and D_i.

The F-factor is a kind of twisted C/E= σ_T/σ_E value. In fact, each f_i component of the sum inside F contributes to C/E if it is larger than 1, and E/C if it is smaller than 1. This is a more

appropriate quantity than the average C/E, since averaging C/E values over many points may not be very meaningful if the individual values cross unity at some point. Eq. (1) remedies this. A value of F=1.2 means that for the entire data set we are roughly 20% off on average. We use F as the leading indicator in our statistical study, i.e. we sort our results in order of increasing F to identify the worst cases. Note that the term "data set", i.e. the sum over N, can apply to one EXFOR subentry, e.g. one excitation function, all subentries for the same (Z,A) nuclide and reaction channel (MT), all subentries for the same (Z,A) nuclide, all subentries for the same reaction channel (MT), all subentries for the same projectile, and finally to the entire part of the EXFOR database that could be compared. For all this, we have average F-values. In addition, all these averages can be taken for each library or TALYS separately, or summed over all of them. For the purpose of checking EXFOR, the goodness-of-fitness for one subentry, i.e. one experimental data set for 1 or a range of incident energies, is used.

Another standard indicator is of course χ^2, and then the extra aspect for quality testing is that apart from the central values the uncertainties given in EXFOR need to be reliable as well. If χ^2 does not have the same rank as F, there may be something wrong with the reported uncertainty.

Finally, large F or χ^2 values may actually be acceptable, if the underlying quantities have a small value. This occurs often for measurements close to threshold. To identify those cases, the absolute deviation in mb, D is an additional helpful quantity.

In sum, for quality testing of EXFOR it is best to monitor all three indicators simultaneously.

Now that we have defined the goodness-of-fit estimators, we can give the current quality classification:

- T1, N1, R1 and E1: $1 \leq F \leq 1.2$
- T2, N2, R2 and E2: $1.2 < F \leq 2.$
- T3, N3, R3 and E3: $F > 2.$

At the moment of this writing, we feel that quality class '3' should always be reviewed by checking the associated documentation (publication), while class '2' should be reviewed if D is more that 10% of the total nonelastic cross section and if χ^2 is larger than 20.

Clearly, when testing EXFOR we need to be clever. Efficiency is maximal if we can minimize:

- False negative: the goodness-of-fit estimators suggest there is no problem, while in reality there is. The problem remains in EXFOR.
- False positive: the goodness-of-fit estimators suggest there is a problem, but checking the publication reveals that the correct data in entered into EXFOR. We may have wasted our time.

As in real life, we may be more worried about false negatives than false positives, so it may be wise, time permitting, to take a conservative approach towards a quality classification scheme. Actually, a false positive at least gives the possibility to assign a 'suspicious quality' label to the corresponding data set, since the compiler made no mistake, but the goodness-of-fit estimators are well away from the average. In an attempt to use all three goodness-of-fit estimators at once, we are currently investigating a new set of estimators, the K-factors, which should be more full-proof to identify whether a data point or set is "wrong". A K-factor for a data set of N data points is defined as

$$K^{(k)} = 10^{\sqrt{\frac{1}{N}\sum_i^N k_i^{(k)}}}, \tag{7}$$

where $k_i^{(k)}$ is the goodness-fit-estimator per point. The "0-th order" K-factor is just the F-factor, i.e.

$$k_i^{(0)} = f_i = \left(\log \frac{\sigma_T^i}{\sigma_E^i}\right)^2 \longrightarrow K^{(0)} = F \tag{8}$$

To minimize the false alarms for a wrong data set, we introduce various "penalties" into the definition of K, so that the K-distribution becomes more stretched than the F-distribution, and "true" outliers deviate even further from unity.

First, the weight of the absolute distance D can be taken into account by comparing the theoretical, or evaluated, result with the theoretical nonelastic cross section σ_{non}^i. Threshold problems or (very) weak channels are then inhibited, which for quality testing is justified since it is rather common to have a large relative deviation between theory and experiment, without one the two being clearly wrong. For each data point we define a factor

$$r_i = \left(1 + \frac{\sigma_T^i}{\sigma_{non}^i}\right)^{p_r} \tag{9}$$

where p_r is a power to scale the importance of this case. Currently, $p_r = 2$. The goodness-of-fit estimator $K^{(1)}$ is then given by Eq. (7) with

$$k_i^{(1)} = f_i.r_i \tag{10}$$

Next, the weight of the experimental error is taken into account by comparing it with the deviation of the evaluation from the central value, i.e.

$$e_i = \left(1 + \frac{f_i - 1}{d\sigma_E^i/\sigma_E^i}\right)^{p_e} \tag{11}$$

where p_e is a power to scale the importance of this case. Currently, $p_e = 2$. With this factor, we hope to catch cases where possibly the reported precision of the measurement was too optimistic, or a wrong compilation of the experimental error. In any case, it will amplify the deviation from the norm. Taking this into account, the goodness-of-fit estimator $K^{(2)}$ is then given by Eq. (7) with

$$k_i^{(2)} = f_i.r_i.e_i \tag{12}$$

Actually, a third penalty can be introduced, namely the deviation of an experimental data point from the other experimental points for the same reaction. So far, all deviations can be seen as "theoretical outlier" or "evaluated outlier", while comparing with similar measurements would lead to purely "experimental outliers". For example, it could happen that there are many experimental data sets for the same reaction with an F between 1 and 1.10, while one measurement has F=1.50. This value itself would not give rise to alarm, but the fact that it deviates from so many other sets does. For this extra test a second loop over the whole database is needed, i.e. after it has been created, and this is not yet implemented.

While we make the translation from the XC4 computational database to our own directory-structured database, we do our TALYS + library comparison, checks and statistical analyses on the fly. After a few hours, the conversion is done and all checking and statistical results are available.

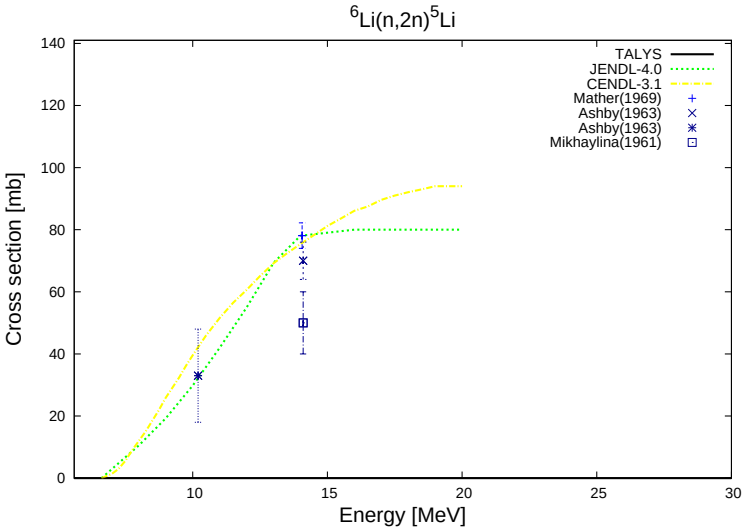
Score	(n,2n)	(n,p)	(n,α)
T1	684	320	153
T2	402	452	270
T3	100	95	127
R1	309	265	84
R2	292	454	179
R3	87	162	143
N1	495	277	116
N2	380	386	190
N3	80	120	115
E1	0	0	0
E2	4	5	1
E3	6	11	2

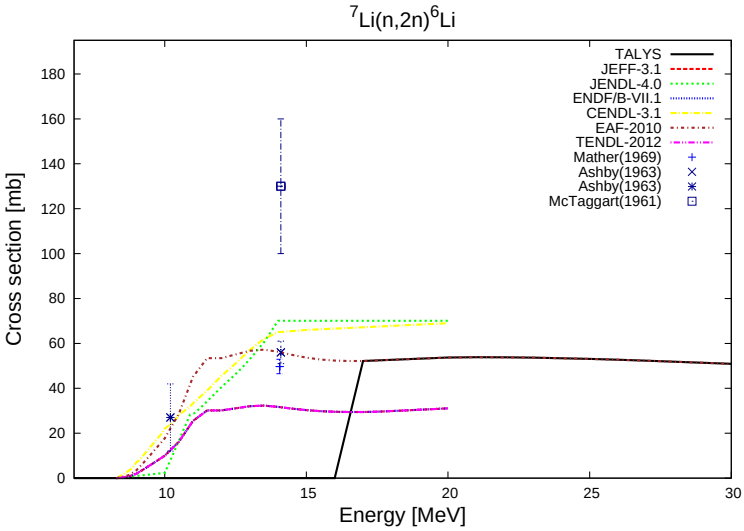
Table 2: Quality scoring of (n,2n), (n,p) and (n,α) scoring as of April 22 2013.

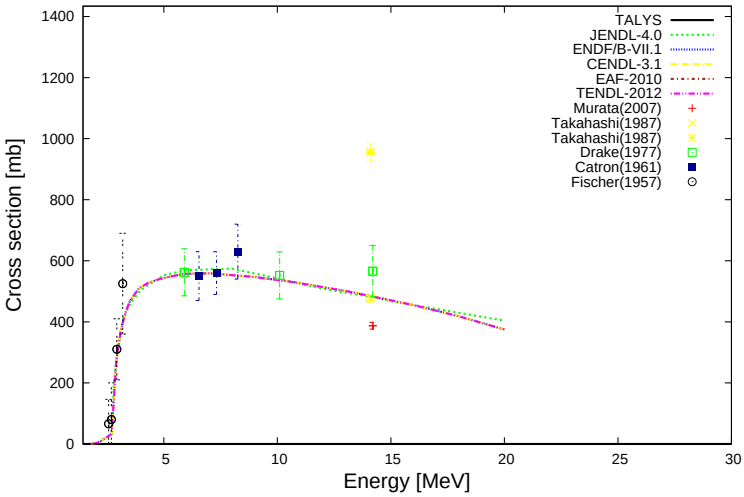
4 Graphical comparison

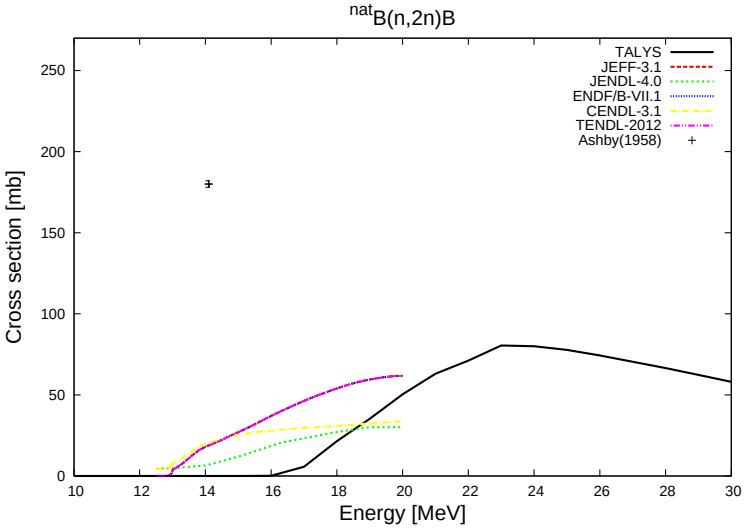
For each combination projectile - target nucleus - reaction channel, we produce an automatic plot in which all experimental data sets are compared with the most important nuclear data libraries and/or the latest TALYS calculations. This allows to test whether numerical outliers are also graphical outliers.

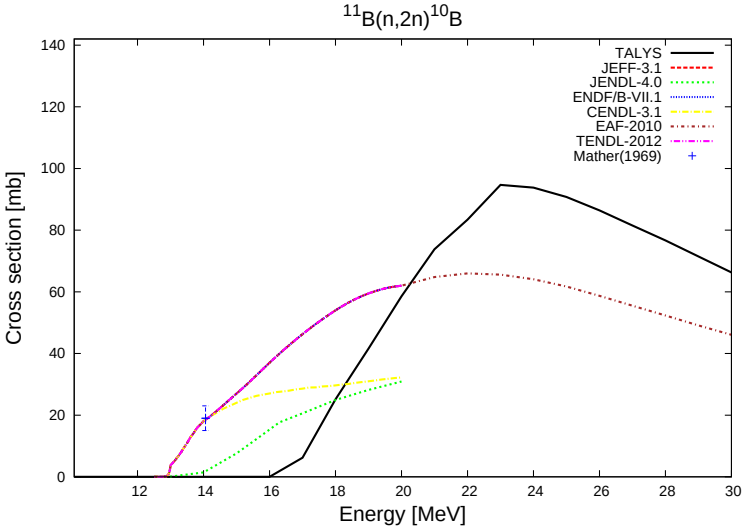
4.1 Activation cross sections: $(n, 2n)$, (n, p) and (n, α)

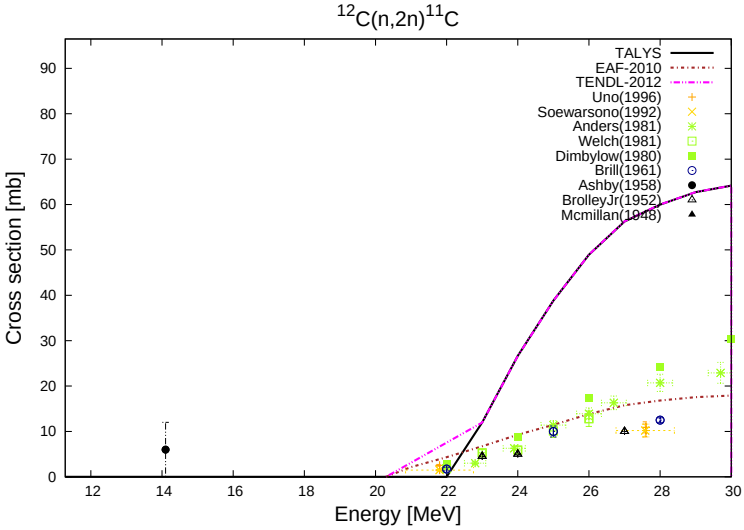

^{6}Li(n,2n)^{5}Li
TALYS
JENDL-4.0
CENDL-3.1
Mather(1969)
Ashby(1963)
Ashby(1963)
Mikhaylina(1961)
Cross section [mb]
Energy [MeV]

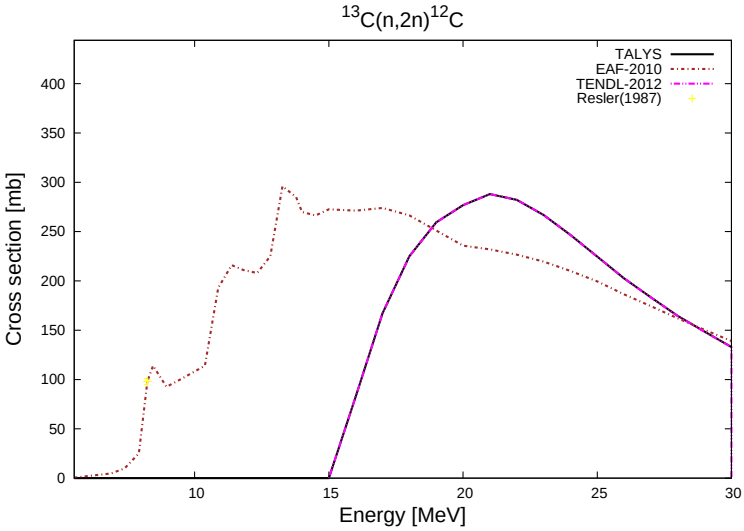

^{7}Li(n,2n)^{6}Li
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Mather(1969)
Ashby(1963)
Ashby(1963)
McTaggart(1961)
Cross section [mb]
Energy [MeV]

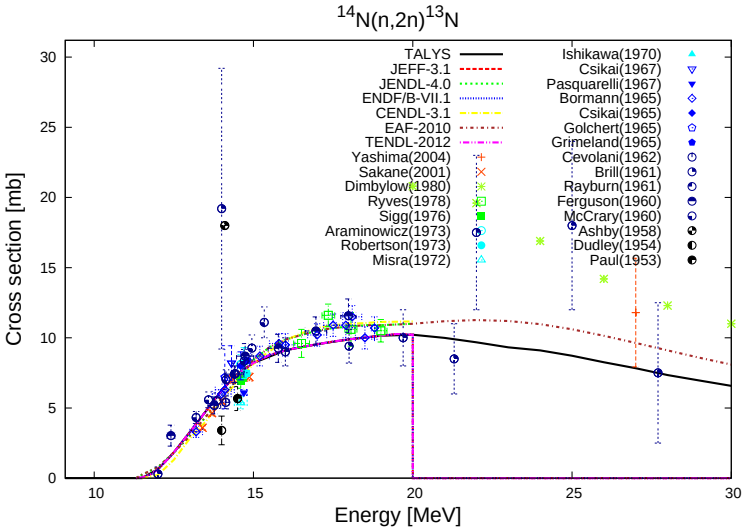

^{9}Be(n,2n)^{8}Be
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Murata(2007)
Takahashi(1987)
Takahashi(1987)
Drake(1977)
Catron(1961)
Fischer(1957)
Cross section [mb]
Energy [MeV]

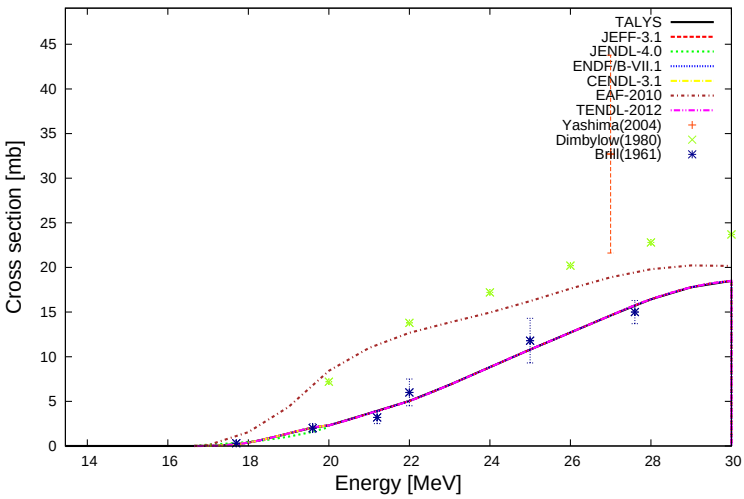

^{nat}B(n,2n)B
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Ashby(1958)
Cross section [mb]
Energy [MeV]

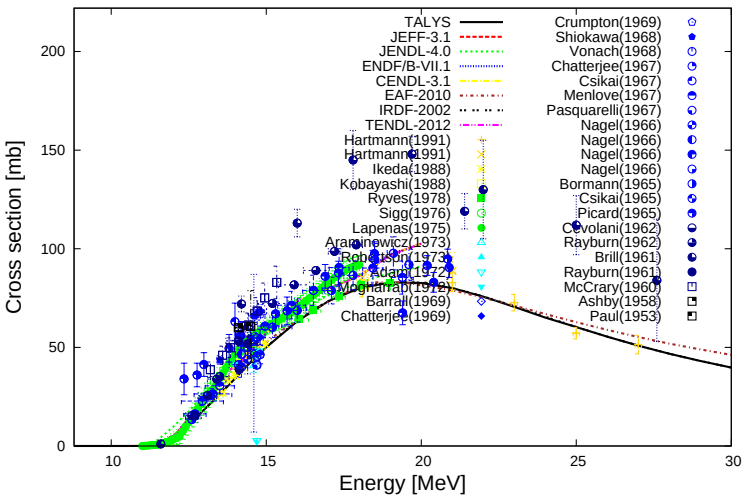

^{11}B(n,2n)^{10}B
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Mather(1969)
Cross section [mb]
Energy [MeV]

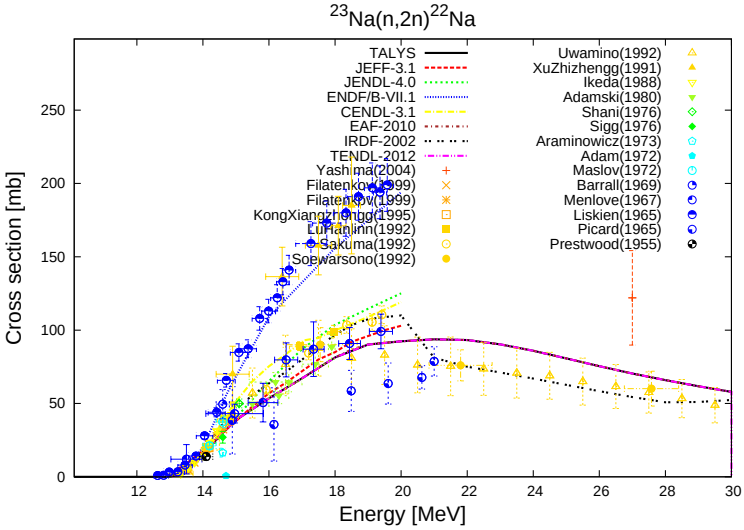

^{12}C(n,2n)^{11}C
TALYS
EAF-2010
TENDL-2012
Uno(1996)
Soewarsono(1992)
Anders(1981)
Welch(1981)
Dimbylow(1980)
Brill(1961)
Ashby(1958)
BrolleyJr(1952)
Mcmillan(1948)
Cross section [mb]
Energy [MeV]

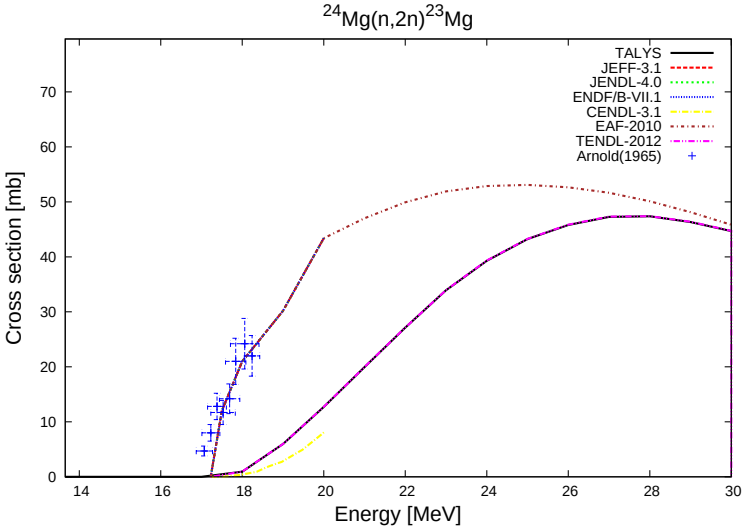

^{13}C(n,2n)^{12}C
TALYS
EAF-2010
TENDL-2012
Resler(1987)
Cross section [mb]
Energy [MeV]

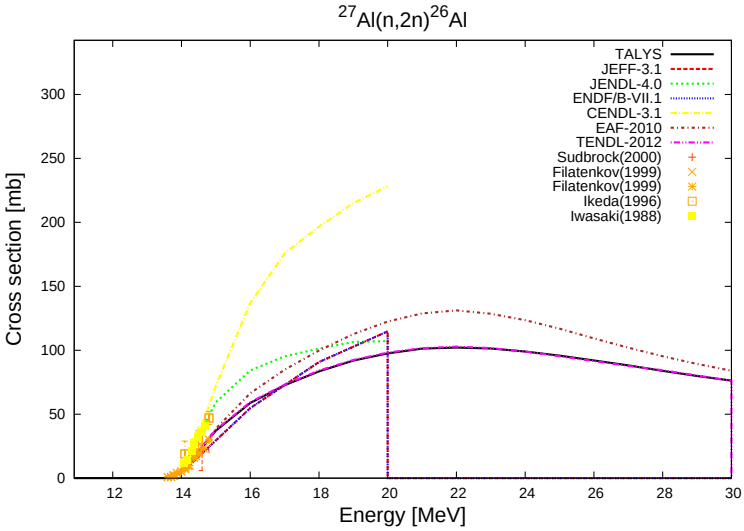

^{14}N(n,2n)^{13}N
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Yashima(2004)
Sakane(2001)
Dimbylow(1980)
Ryves(1978)
Sigg(1976)
Araminowicz(1973)
Robertson(1973)
Misra(1972)
Ishikawa(1970)
Csikai(1967)
Pasquarelli(1967)
Bormann(1965)
Csikai(1965)
Golchert(1965)
Grimeland(1965)
Cevolani(1962)
Brill(1961)
Rayburn(1961)
Ferguson(1960)
McCrary(1960)
Ashby(1958)
Dudley(1954)
Paul(1953)
Cross section [mb]
Energy [MeV]

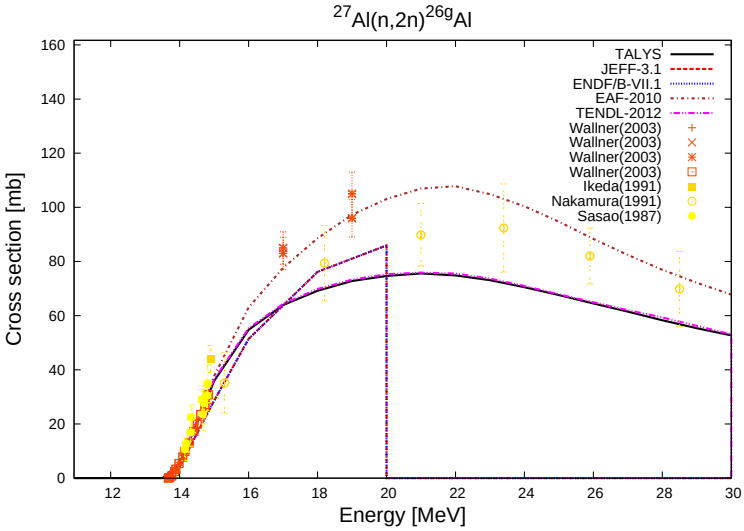

^{16}O(n,2n)^{15}O
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Yashima(2004)
Dimbylow(1980)
Brill(1961)
Cross section [mb]
Energy [MeV]

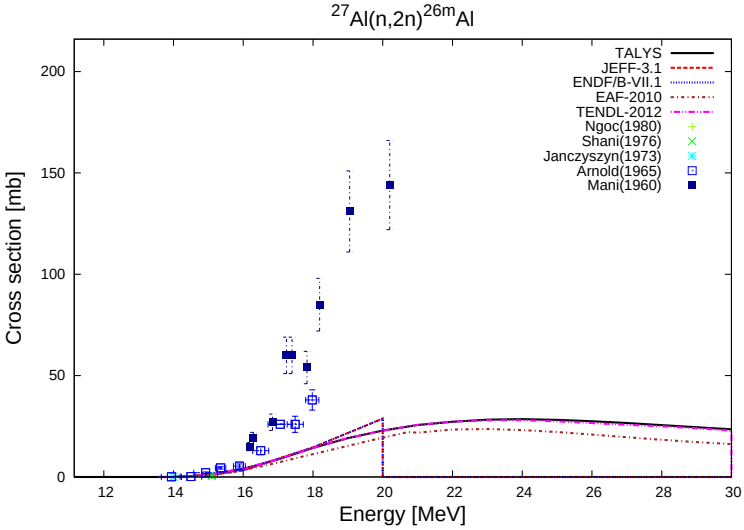

^{19}F(n,2n)^{18}F
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Hartmann(1991)
Hartmann(1991)
Ikeda(1988)
Kobayashi(1988)
Ryves(1978)
Sigg(1976)
Lapenas(1975)
Araminowicz(1973)
Robertson(1973)
Adam(1972)
Vonach(1968)
Barrall(1969)
Chatterjee(1969)
Crumpton(1969)
Shiokawa(1968)
Vonach(1968)
Chatterjee(1967)
Csikai(1967)
Menlove(1967)
Pasquarelli(1967)
Nagel(1966)
Nagel(1966)
Nagel(1966)
Nagel(1966)
Bormann(1965)
Csikai(1965)
Picard(1965)
Cevolani(1962)
Rayburn(1962)
Brill(1961)
Rayburn(1961)
McCrary(1960)
Ashby(1958)
Paul(1953)
Cross section [mb]
Energy [MeV]

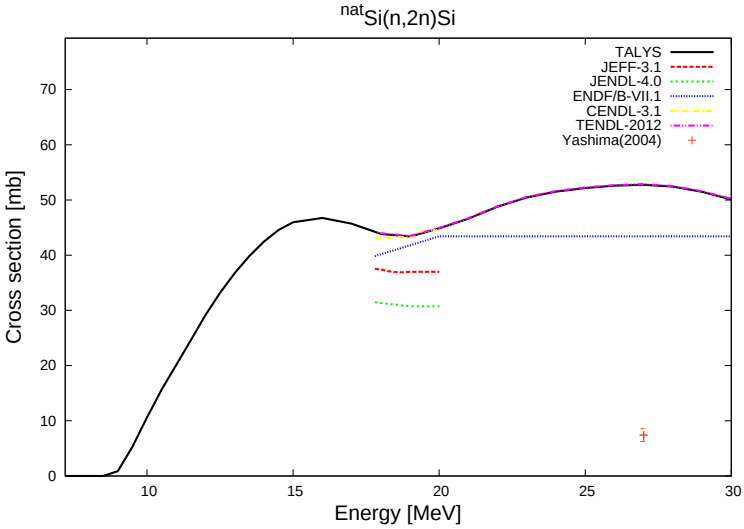

^{23}Na(n,2n)^{22}Na
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Yashima(2004)
Filatenkov(1999)
Filatenkov(1999)
KongXiangzhong(1995)
Luhanlinn(1992)
Sakuma(1992)
Sopwarsono(1992)
Uwamino(1992)
XuZhizhengg(1991)
Ikeda(1988)
Adamski(1980)
Shani(1976)
Sigg(1976)
Araminowicz(1973)
Adam(1972)
Maslov(1972)
Barrall(1969)
Menlove(1967)
Liskien(1965)
Picard(1965)
Prestwood(1955)
Cross section [mb]
Energy [MeV]

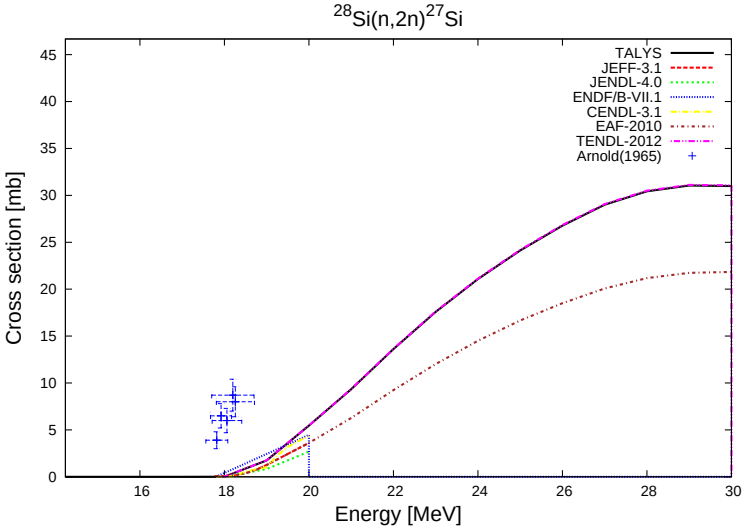

^{24}Mg(n,2n)^{23}Mg
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Arnold(1965)
Cross section [mb]
Energy [MeV]

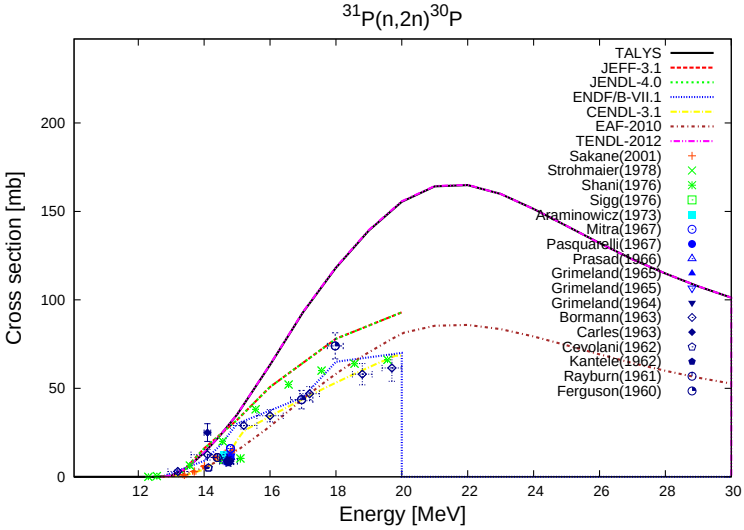

^{27}Al(n,2n)^{26}Al
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Sudbrock(2000)
Filatenkov(1999)
Filatenkov(1999)
Ikeda(1996)
Iwasaki(1988)

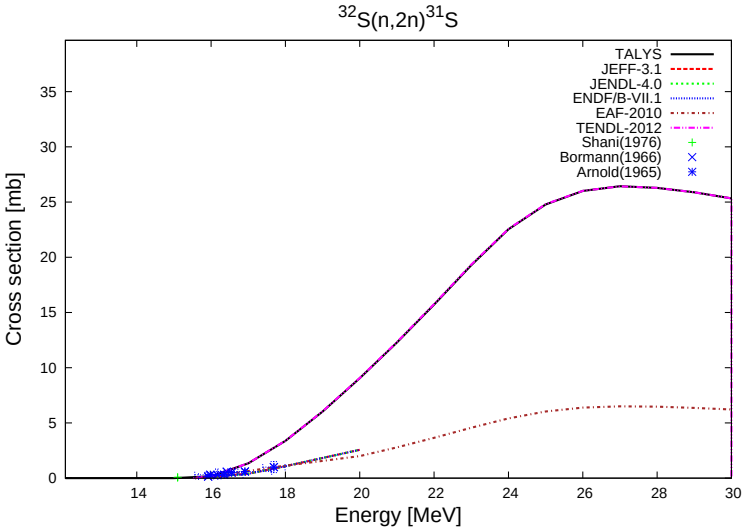

^{27}Al(n,2n)^{26g}Al
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Wallner(2003)
Wallner(2003)
Wallner(2003)
Wallner(2003)
Ikeda(1991)
Nakamura(1991)
Sasao(1987)

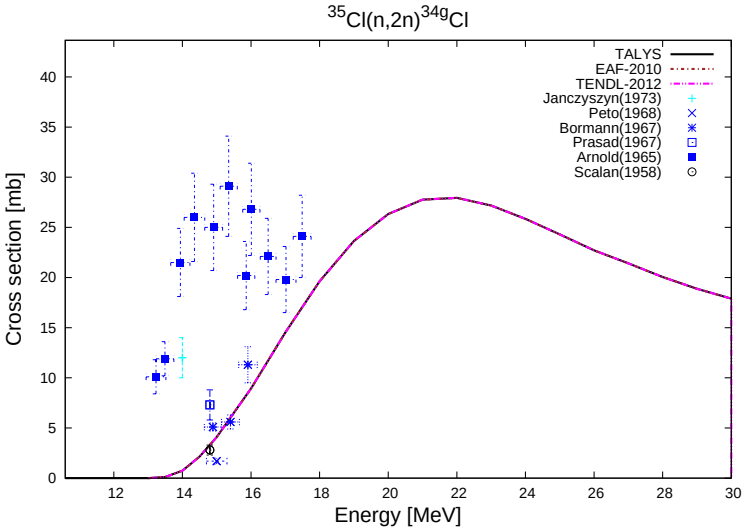

^{27}Al(n,2n)^{26m}Al
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Ngoc(1980)
Shani(1976)
Janczyszyn(1973)
Arnold(1965)
Mani(1960)

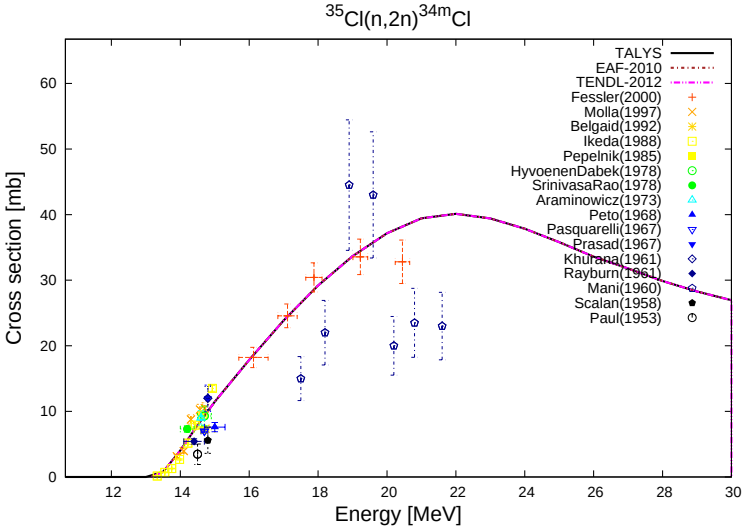

^{nat}Si(n,2n)Si
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Yashima(2004)

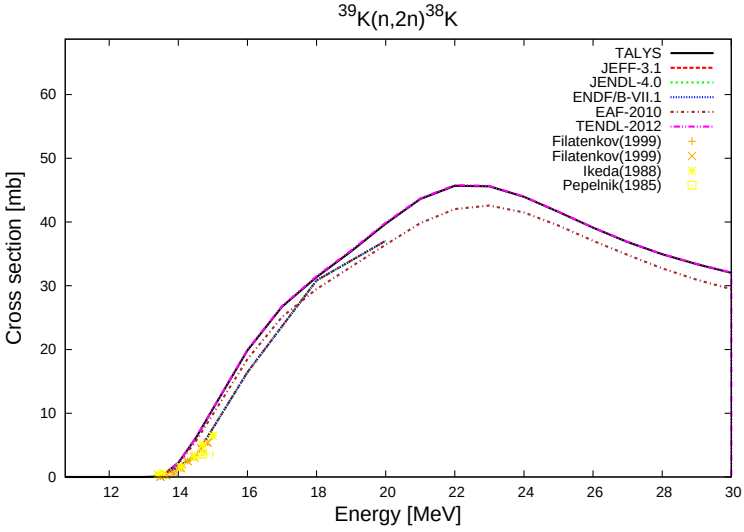

^{28}Si(n,2n)^{27}Si
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Arnold(1965)

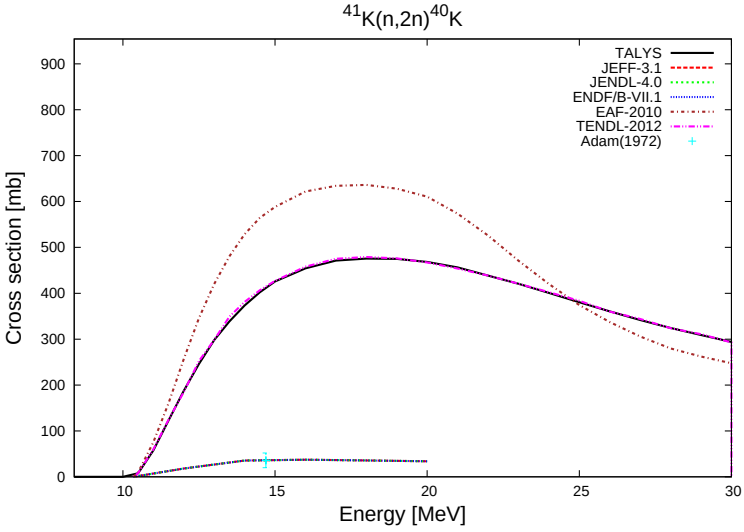

^{31}P(n,2n)^{30}P
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Sakane(2001)
Strohmaier(1978)
Shani(1976)
Sigg(1976)
Araminowicz(1973)
Mitra(1967)
Pasquarelli(1967)
Prasad(1966)
Grimeland(1965)
Grimeland(1965)
Grimeland(1964)
Bormann(1963)
Carles(1963)
Cevolani(1962)
Kantele(1962)
Rayburn(1961)
Ferguson(1960)

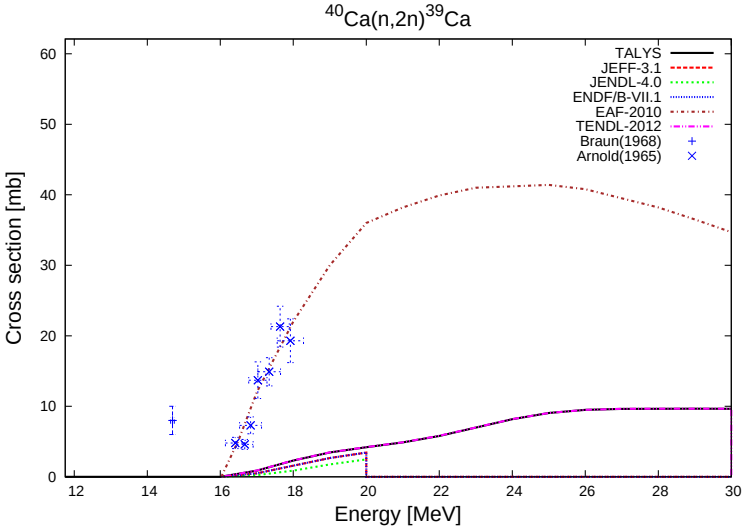

^{32}S(n,2n)^{31}S
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Shani(1976)
Bormann(1966)
Arnold(1965)
Cross section [mb]
Energy [MeV]

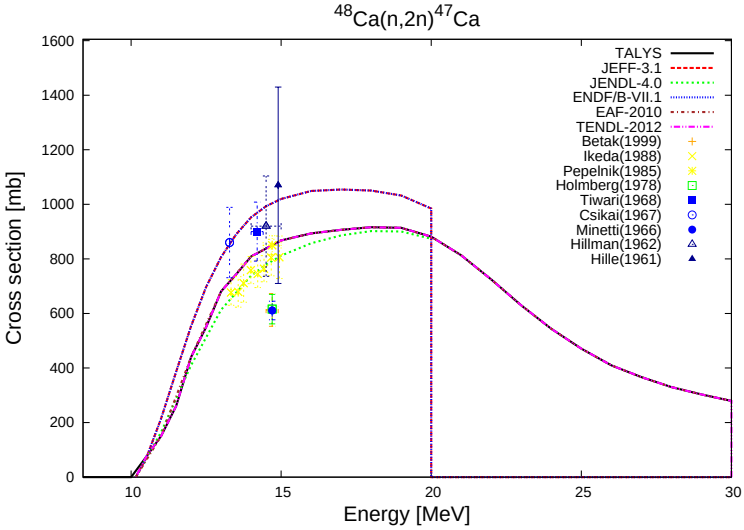

^{35}Cl(n,2n)^{34g}Cl
TALYS
EAF-2010
TENDL-2012
Janczyszyn(1973)
Peto(1968)
Bormann(1967)
Prasad(1967)
Arnold(1965)
Scalan(1958)
Cross section [mb]
Energy [MeV]

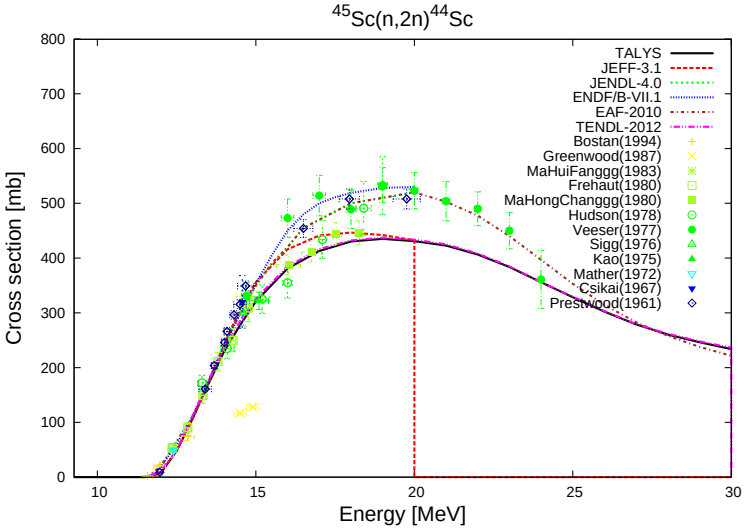

^{35}Cl(n,2n)^{34m}Cl
TALYS
EAF-2010
TENDL-2012
Fessler(2000)
Molla(1997)
Belgaid(1992)
Ikeda(1988)
Pepelnik(1985)
HyvoenenDabek(1978)
SrinivasaRao(1978)
Araminowicz(1973)
Peto(1968)
Pasquarelli(1967)
Prasad(1967)
Khurana(1961)
Rayburn(1961)
Mani(1960)
Scalan(1958)
Paul(1953)
Cross section [mb]
Energy [MeV]

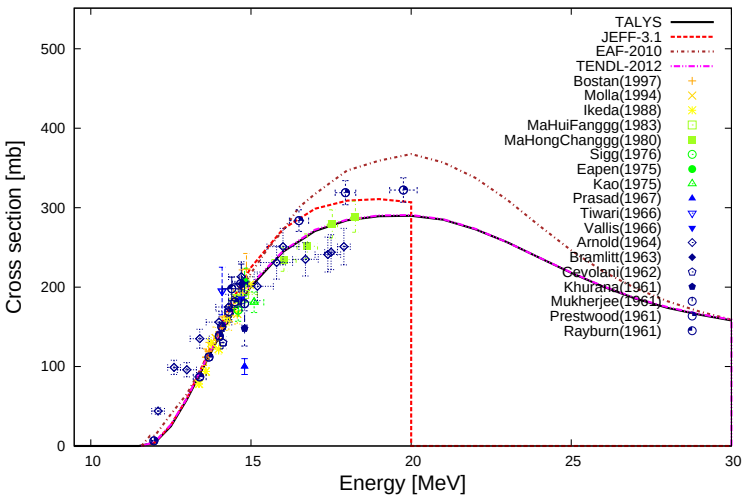

^{39}K(n,2n)^{38}K
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Ikeda(1988)
Pepelnik(1985)
Cross section [mb]
Energy [MeV]

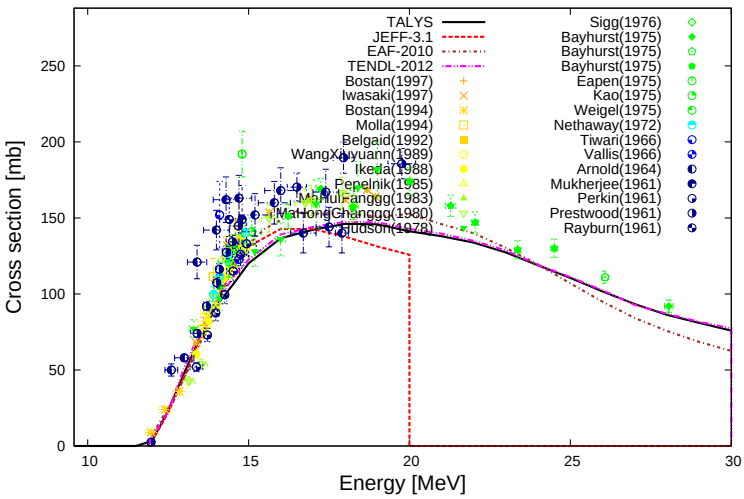

^{41}K(n,2n)^{40}K
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Adam(1972)
Cross section [mb]
Energy [MeV]

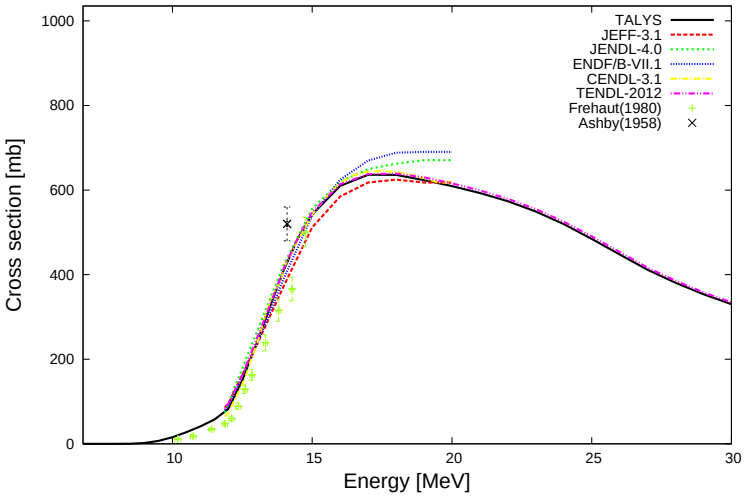

^{40}Ca(n,2n)^{39}Ca
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Braun(1968)
Arnold(1965)
Cross section [mb]
Energy [MeV]

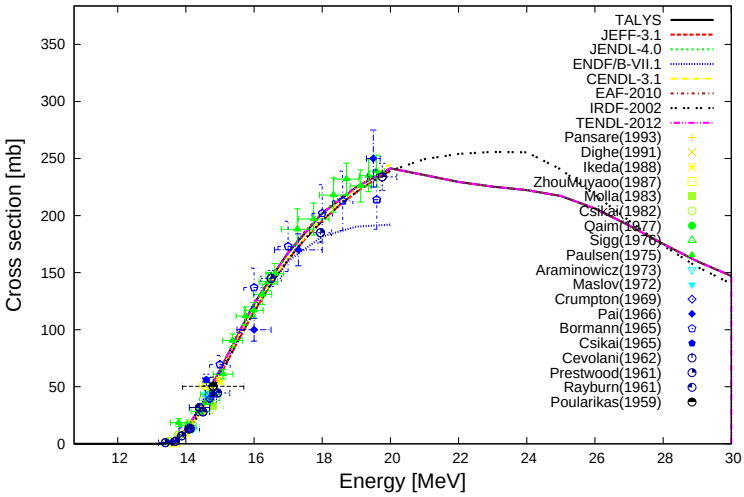

^{48}Ca(n,2n)^{47}Ca
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Betak(1999)
Ikeda(1988)
Pepelnik(1985)
Holmberg(1978)
Tiwari(1968)
Csikai(1967)
Minetti(1966)
Hillman(1962)
Hille(1961)

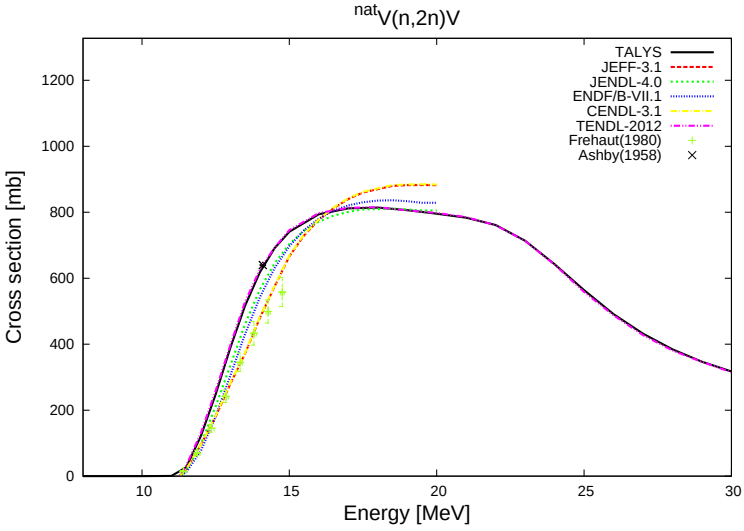

^{45}Sc(n,2n)^{44}Sc
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Bostan(1994)
Greenwood(1987)
MaHuiFanggg(1983)
Frehaut(1980)
MaHongChanggg(1980)
Hudson(1978)
Veeser(1977)
Sigg(1976)
Kao(1975)
Mather(1972)
Csikai(1967)
Prestwood(1961)

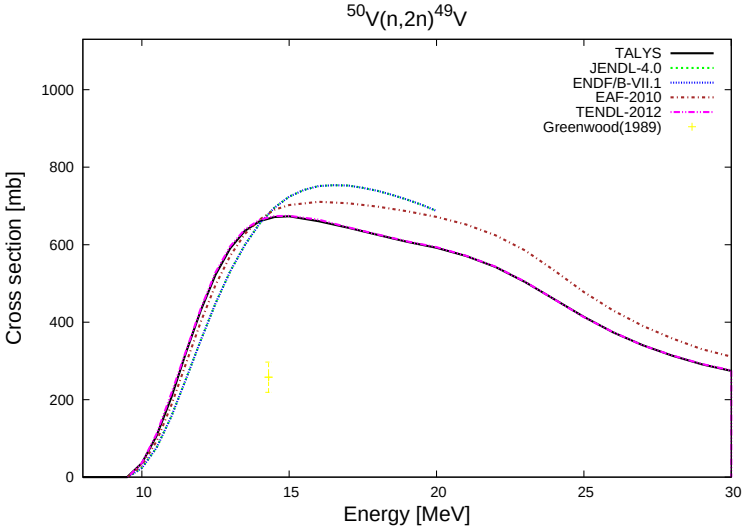

^{45}Sc(n,2n)^{44g}Sc
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
EAF-2010
TENDL-2012
Bostan(1997)
Molla(1994)
Ikeda(1988)
MaHuiFanggg(1983)
MaHongChanggg(1980)
Sigg(1976)
Eapen(1975)
Kao(1975)
Prasad(1967)
Tiwari(1966)
Vallis(1966)
Arnold(1964)
Bramlitt(1963)
Cevolani(1962)
Khurana(1961)
Mukherjee(1961)
Prestwood(1961)
Rayburn(1961)

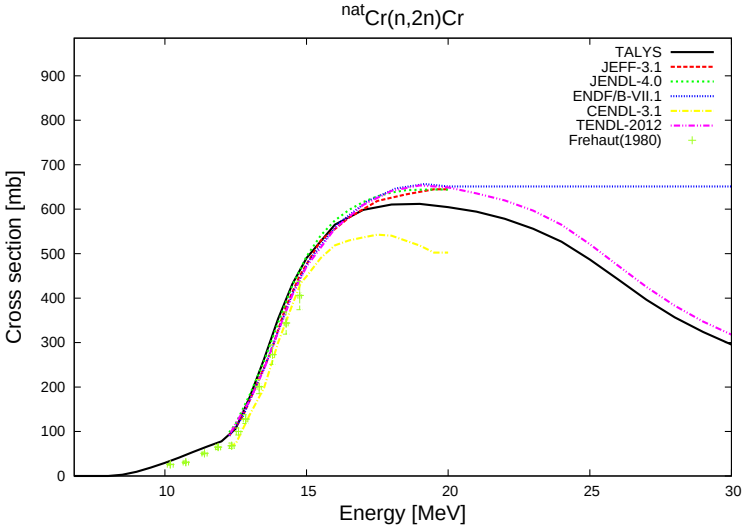

^{45}Sc(n,2n)^{44m}Sc
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
EAF-2010
TENDL-2012
Bostan(1997)
Iwasaki(1997)
Bostan(1994)
Molla(1994)
Belgaid(1992)
WangXiuyuann(1989)
Ikeda(1988)
Pepelnik(1985)
MaHuiFanggg(1983)
MaHongChanggg(1980)
Hudson(1978)
Sigg(1976)
Bayhurst(1975)
Bayhurst(1975)
Bayhurst(1975)
Eapen(1975)
Kao(1975)
Weigel(1975)
Nethaway(1972)
Tiwari(1966)
Vallis(1966)
Arnold(1964)
Mukherjee(1961)
Perkin(1961)
Prestwood(1961)
Rayburn(1961)

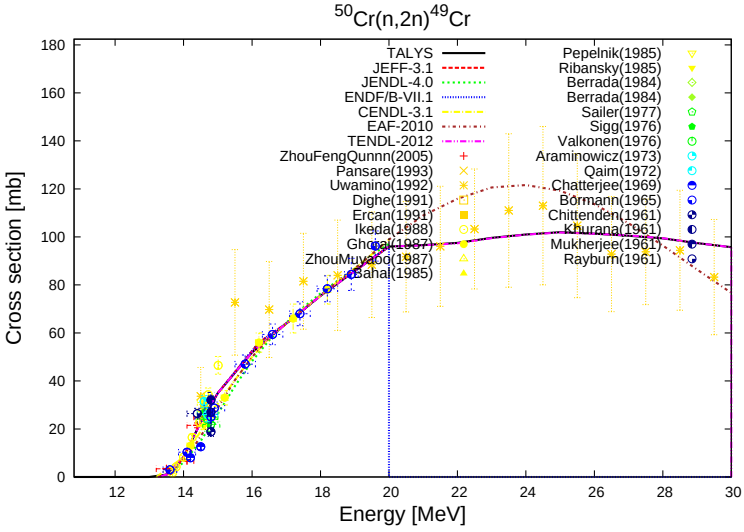

^{nat}Ti(n,2n)Ti
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Frehaut(1980)
Ashby(1958)

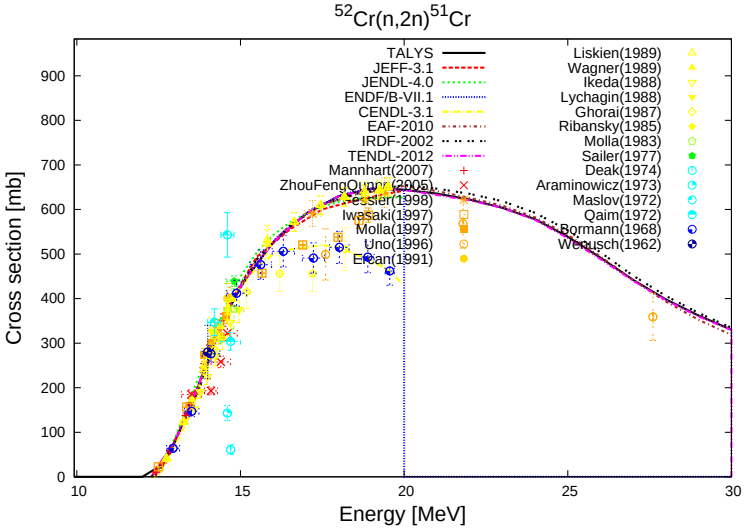

^{46}Ti(n,2n)^{45}Ti
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Pansare(1993)
Dighe(1991)
Ikeda(1988)
ZhouHuyaoo(1987)
Molla(1983)
Csikai(1982)
Qaim(1977)
Sigg(1976)
Paulsen(1975)
Araminowicz(1973)
Maslov(1972)
Crumpton(1969)
Pai(1966)
Bormann(1965)
Csikai(1965)
Cevolani(1962)
Prestwood(1961)
Rayburn(1961)
Poularikas(1959)

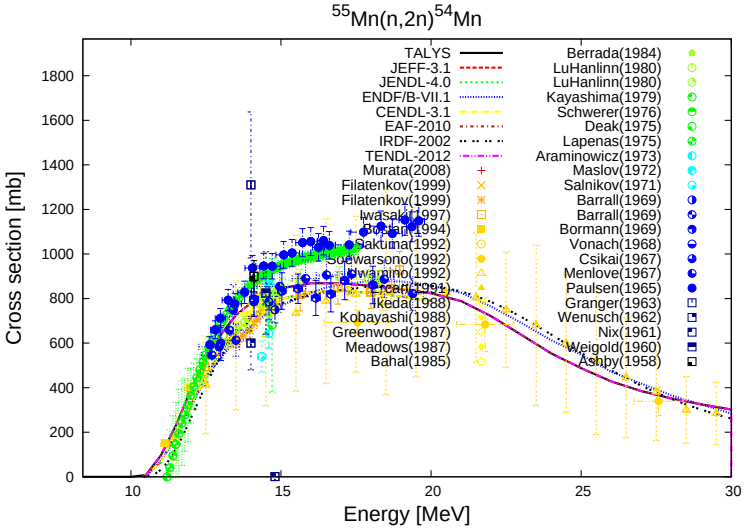

natV(n,2n)V
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Frehaut(1980)
Ashby(1958)
Cross section [mb]
Energy [MeV]

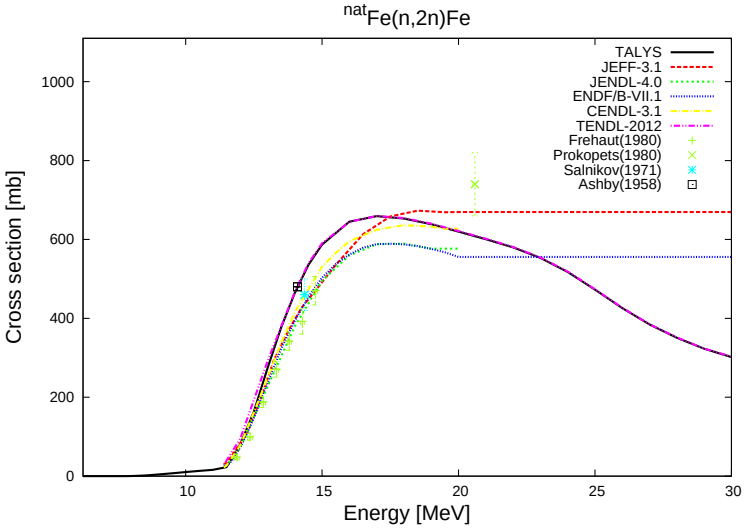

50V(n,2n)49V
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Greenwood(1989)
Cross section [mb]
Energy [MeV]

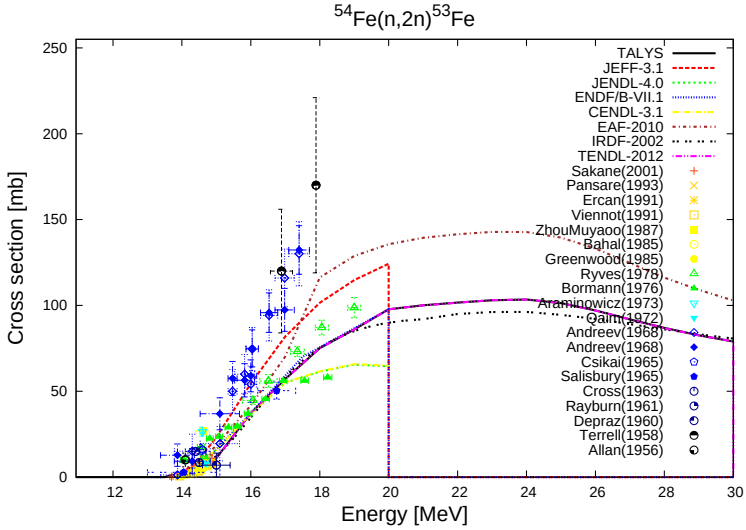

natCr(n,2n)Cr
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Frehaut(1980)
Cross section [mb]
Energy [MeV]

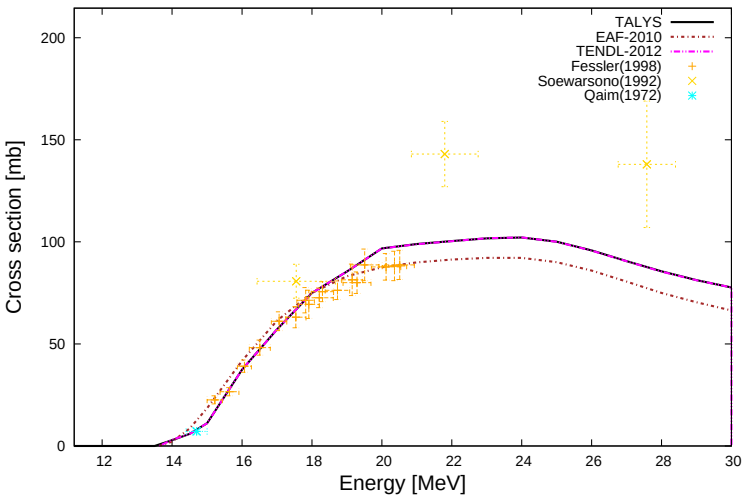

50Cr(n,2n)49Cr
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
ZhouFengQunnn(2005)
Pansare(1993)
Uwamino(1992)
Dighe(1991)
Ercan(1991)
Ikeda(1988)
Ghorai(1987)
ZhouMuyaoo(1987)
Bahal(1985)
Pepelnik(1985)
Ribansky(1985)
Berrada(1984)
Berrada(1984)
Sailer(1977)
Sigg(1976)
Valkonen(1976)
Araminowicz(1973)
Qaim(1972)
Chatterjee(1969)
Bormann(1965)
Chittenden(1961)
Khurana(1961)
Mukherjee(1961)
Rayburn(1961)
Cross section [mb]
Energy [MeV]

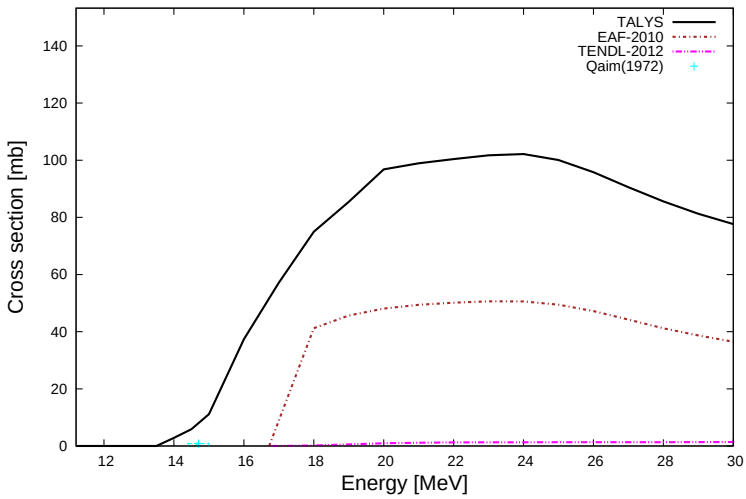

52Cr(n,2n)51Cr
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Mannhart(2007)
ZhouFengQunnn(2005)
Fessler(1998)
Iwasaki(1997)
Molla(1997)
Uno(1996)
Ercan(1991)
Liskien(1989)
Wagner(1989)
Ikeda(1988)
Lychagin(1988)
Ghorai(1987)
Ribansky(1985)
Molla(1983)
Sailer(1977)
Deak(1974)
Araminowicz(1973)
Maslov(1972)
Qaim(1972)
Bormann(1968)
Wenusch(1962)
Cross section [mb]
Energy [MeV]

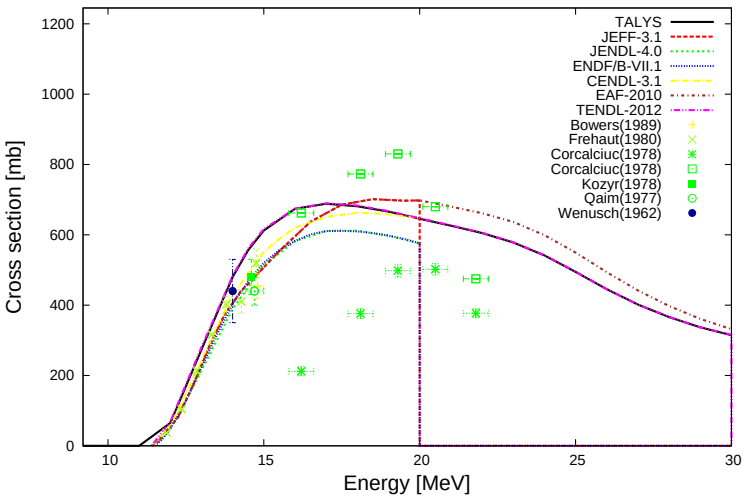

55Mn(n,2n)54Mn
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Murata(2008)
Filatenkov(1999)
Filatenkov(1999)
Iwasaki(1997)
Bormann(1994)
Sakuma(1992)
Soewarsono(1992)
Uwamino(1992)
Ercan(1991)
Ikeda(1988)
Kobayashi(1988)
Greenwood(1987)
Meadows(1987)
Bahal(1985)
Berrada(1984)
LuHanlinn(1980)
LuHanlinn(1980)
Kayashima(1979)
Schwerer(1976)
Deak(1975)
Lapenas(1975)
Araminowicz(1973)
Maslov(1972)
Salnikov(1971)
Barrall(1969)
Barrall(1969)
Bormann(1969)
Vonach(1968)
Csikai(1967)
Menlove(1967)
Paulsen(1965)
Granger(1963)
Wenusch(1962)
Nix(1961)
Weigold(1960)
Ashby(1958)
Cross section [mb]
Energy [MeV]

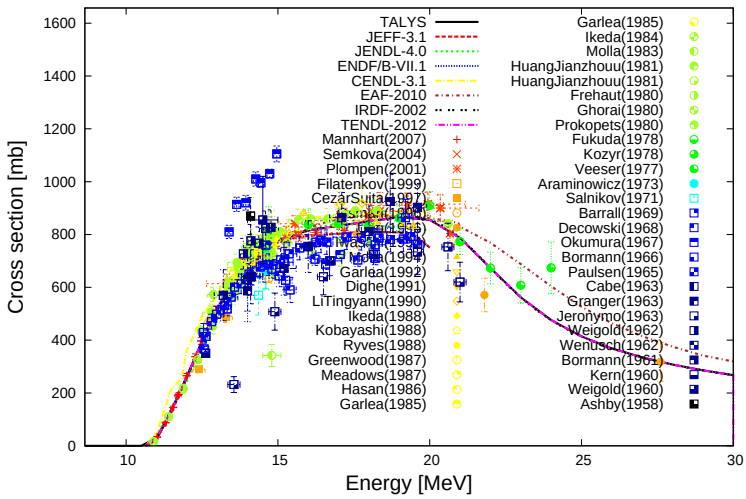

natFe(n,2n)Fe
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Frehaut(1980)
Prokopets(1980)
Salnikov(1971)
Ashby(1958)
Cross section [mb]
Energy [MeV]

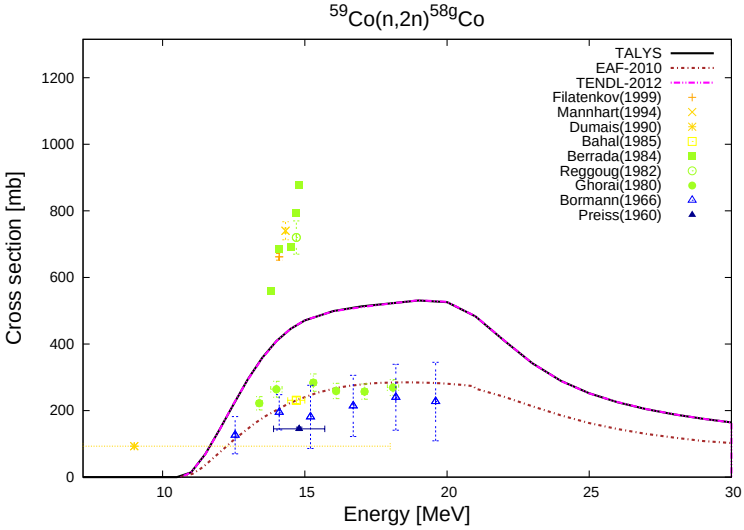

54Fe(n,2n)53Fe
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Sakane(2001)
Pansare(1993)
Ercan(1991)
Viennot(1991)
ZhouMuyaoo(1987)
Bahal(1985)
Greenwood(1985)
Ryves(1978)
Bormann(1976)
Araminowicz(1973)
Qaim(1972)
Andreev(1968)
Andreev(1968)
Csikai(1965)
Salisbury(1965)
Cross(1963)
Rayburn(1961)
Depraz(1960)
Terrell(1958)
Allan(1956)
Cross section [mb]
Energy [MeV]

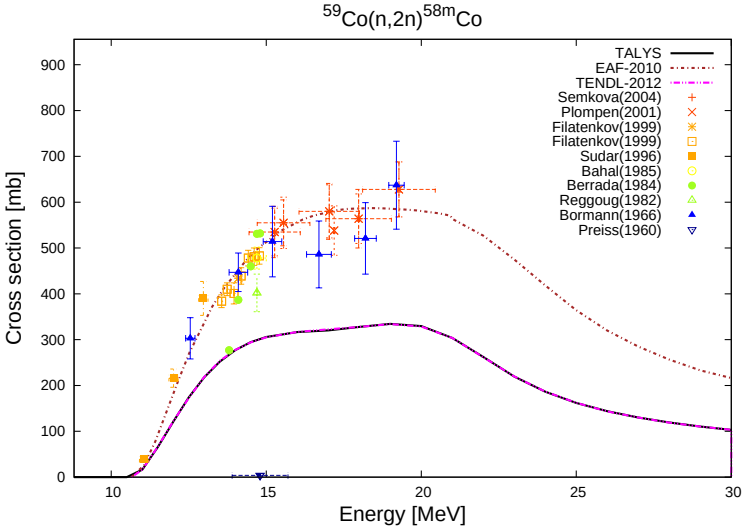

54Fe(n,2n)53gFe
TALYS
EAF-2010
TENDL-2012
Fessler(1998)
Soewarsono(1992)
Qaim(1972)
Cross section [mb]
Energy [MeV]

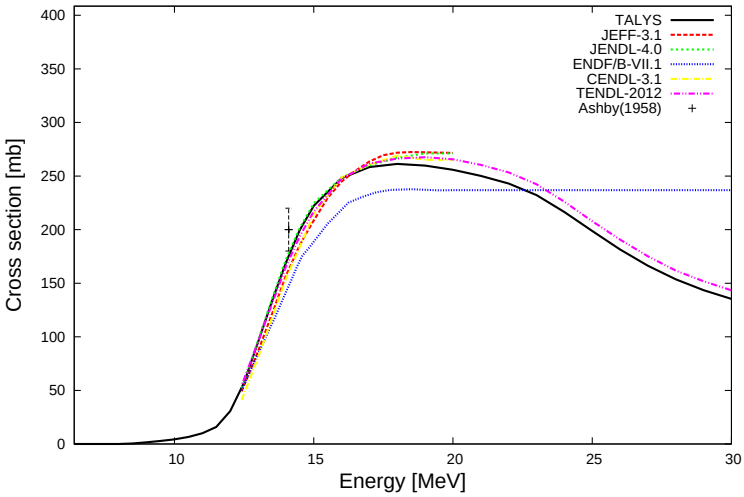

54Fe(n,2n)53mFe
TALYS
EAF-2010
TENDL-2012
Qaim(1972)
Cross section [mb]
Energy [MeV]

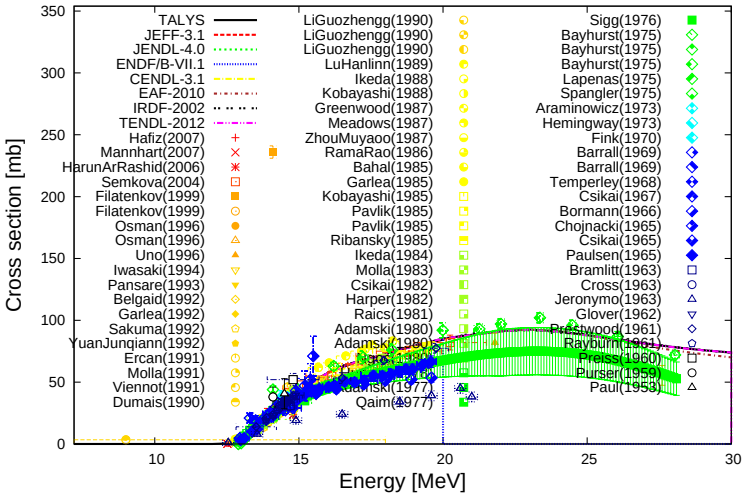

56Fe(n,2n)55Fe
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Bowers(1989)
Frehaut(1980)
Corcalciuc(1978)
Corcalciuc(1978)
Kozyr(1978)
Qaim(1977)
Wenusch(1962)
Cross section [mb]
Energy [MeV]

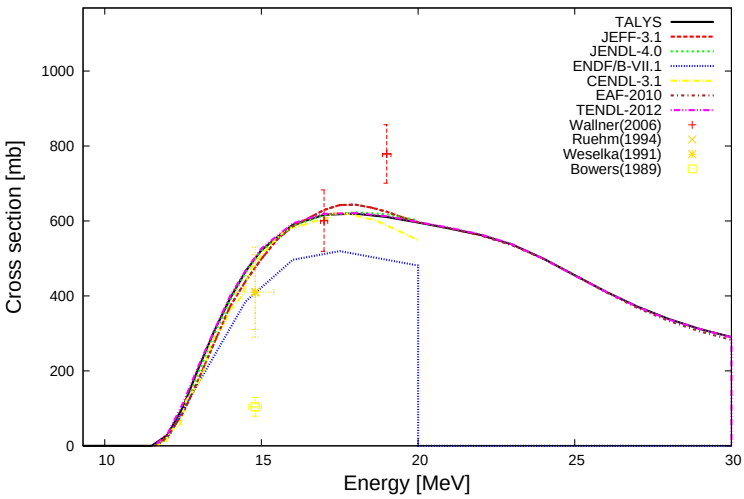

59Co(n,2n)58Co
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Mannhart(2007)
Semkova(2004)
Plompen(2001)
Filatenkov(1999)
Garlea(1992)
Dighe(1991)
LITingyann(1990)
Ikeda(1988)
Kobayashi(1988)
Ryves(1988)
Greenwood(1987)
Meadows(1987)
Hasan(1986)
Garlea(1985)
Garlea(1985)
Ikeda(1984)
Molla(1983)
HuangJianzhouu(1981)
HuangJianzhouu(1981)
Frehaut(1980)
Ghorai(1980)
Prokopets(1980)
Fukuda(1978)
Kozyr(1978)
Veeser(1977)
Araminowicz(1973)
Salnikov(1971)
Barrall(1969)
Decowski(1968)
Okumura(1967)
Bormann(1966)
Paulsen(1965)
Cabe(1963)
Granger(1963)
Jeronymo(1963)
Weigold(1962)
Wenusch(1962)
Bormann(1961)
Kern(1960)
Weigold(1960)
Ashby(1958)
Cross section [mb]
Energy [MeV]

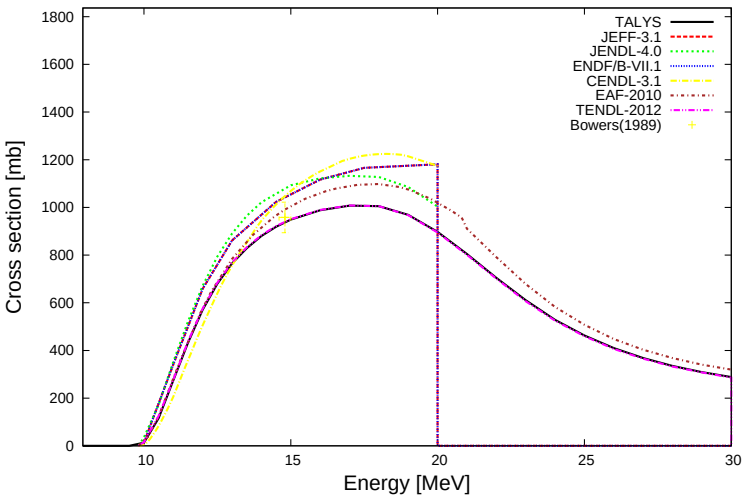

^{59}Co(n,2n)^{58g}Co
TALYS
EAF-2010
TENDL-2012
Filatenkov(1999)
Mannhart(1994)
Dumais(1990)
Bahal(1985)
Berrada(1984)
Reggoug(1982)
Ghorai(1980)
Bormann(1966)
Preiss(1960)
Cross section [mb]
Energy [MeV]

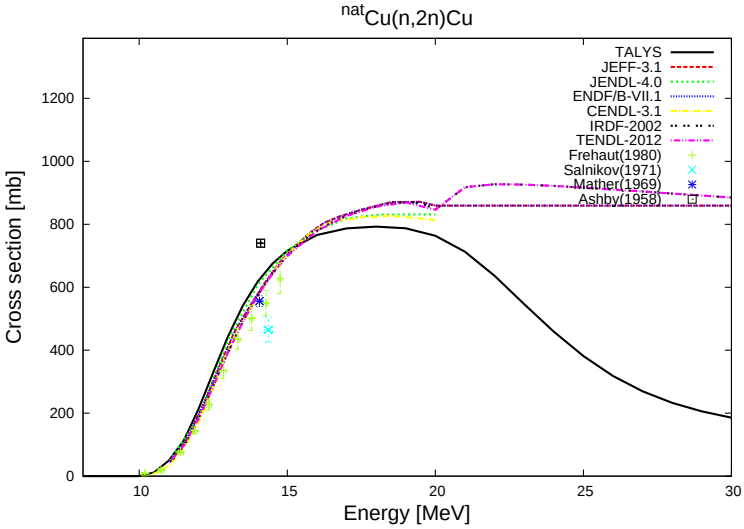

^{59}Co(n,2n)^{58m}Co
TALYS
EAF-2010
TENDL-2012
Semkova(2004)
Plompen(2001)
Filatenkov(1999)
Filatenkov(1999)
Sudar(1996)
Bahal(1985)
Berrada(1984)
Reggoug(1982)
Bormann(1966)
Preiss(1960)
Cross section [mb]
Energy [MeV]

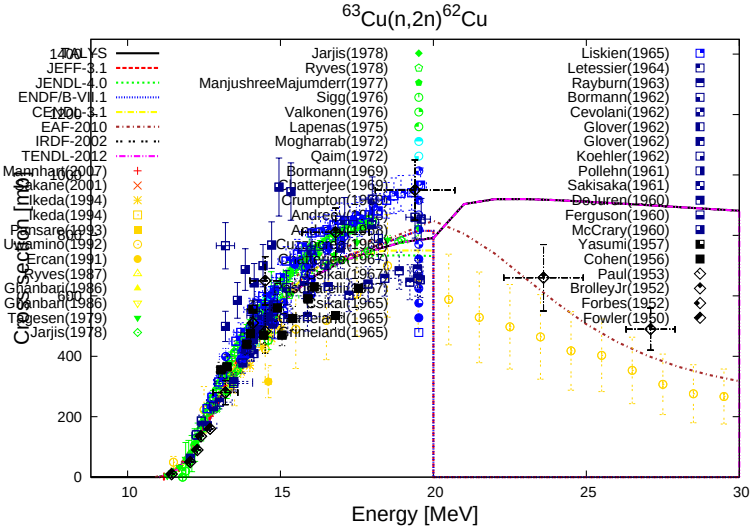

^{nat}Ni(n,2n)Ni
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Ashby(1958)
Cross section [mb]
Energy [MeV]

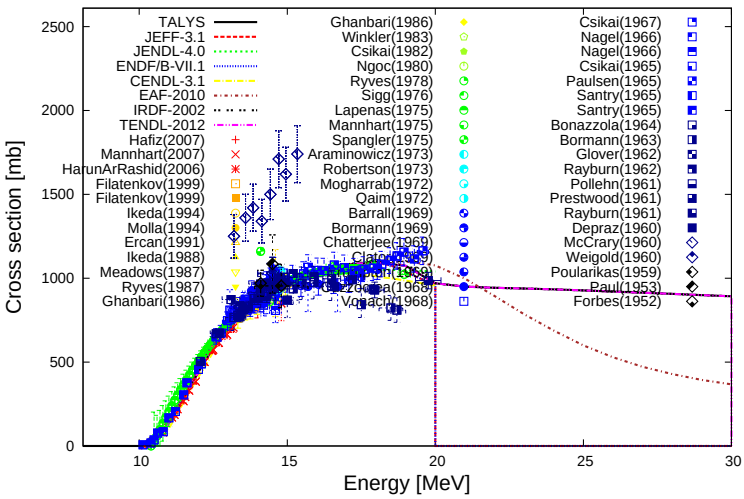

^{58}Ni(n,2n)^{57}Ni
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Hafiz(2007)
Mannhart(2007)
HarunArRashid(2006)
Semkova(2004)
Filatenkov(1999)
Filatenkov(1999)
Osman(1996)
Osman(1996)
Uno(1996)
Iwasaki(1994)
Pansare(1993)
Belgaid(1992)
Garlea(1992)
Sakuma(1992)
YuanJunqiann(1992)
Ercan(1991)
Molla(1991)
Viennot(1991)
Dumais(1990)
LiGuozhengg(1990)
LiGuozhengg(1990)
LiGuozhengg(1990)
LuHanlinn(1989)
Ikeda(1988)
Kobayashi(1988)
Greenwood(1987)
Meadows(1987)
ZhouMuyaoo(1987)
RamaRao(1986)
Bahal(1985)
Garlea(1985)
Kobayashi(1985)
Pavlik(1985)
Pavlik(1985)
Ribansky(1985)
Ikeda(1984)
Molla(1983)
Csikai(1982)
Harper(1982)
Raics(1981)
Adamski(1980)
Adamski(1980)
Adamski(1977)
Qaim(1977)
Sigg(1976)
Bayhurst(1975)
Bayhurst(1975)
Bayhurst(1975)
Lapenas(1975)
Spangler(1975)
Araminowicz(1973)
Hemingway(1973)
Fink(1970)
Barrall(1969)
Barrall(1969)
Temperley(1968)
Csikai(1967)
Bormann(1966)
Chojnacki(1965)
Csikai(1965)
Paulsen(1965)
Bramlitt(1963)
Cross(1963)
Jeronymo(1963)
Glover(1962)
Rayburn(1961)
Purser(1959)
Paul(1953)
Cross section [mb]
Energy [MeV]

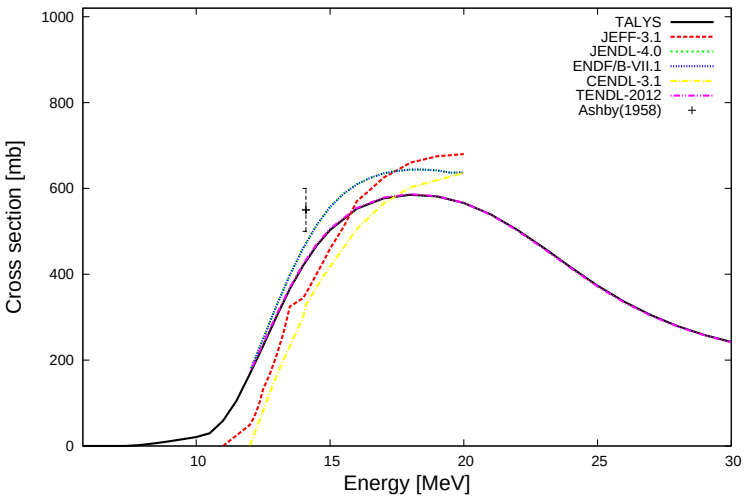

^{60}Ni(n,2n)^{59}Ni
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Wallner(2006)
Ruehm(1994)
Weselka(1991)
Bowers(1989)
Cross section [mb]
Energy [MeV]

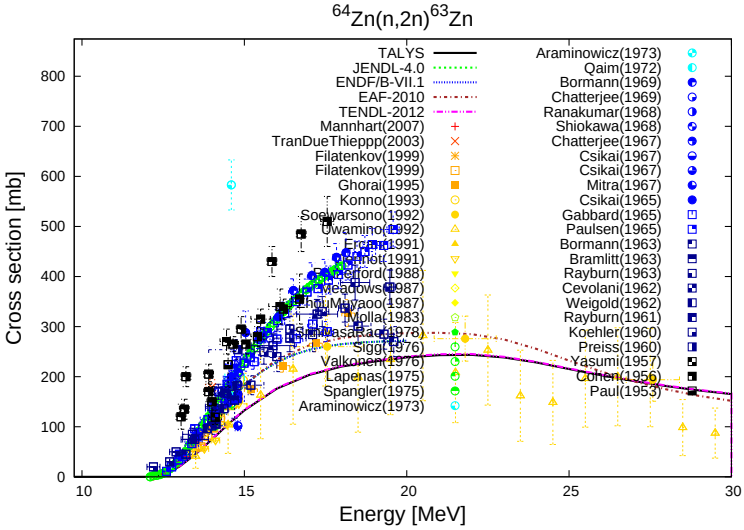

^{64}Ni(n,2n)^{63}Ni
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Bowers(1989)
Cross section [mb]
Energy [MeV]

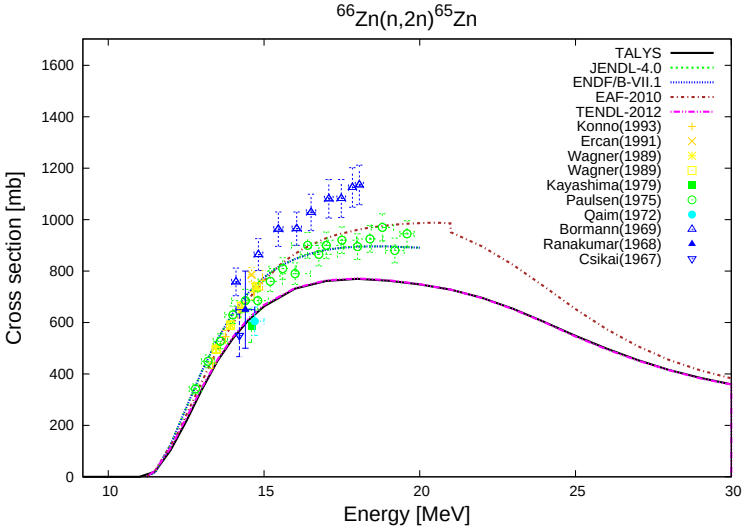

natCu(n,2n)Cu
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
IRDF-2002
TENDL-2012
Frehaut(1980)
Salnikov(1971)
Mather(1969)
Ashby(1958)
Cross section [mb]
Energy [MeV]

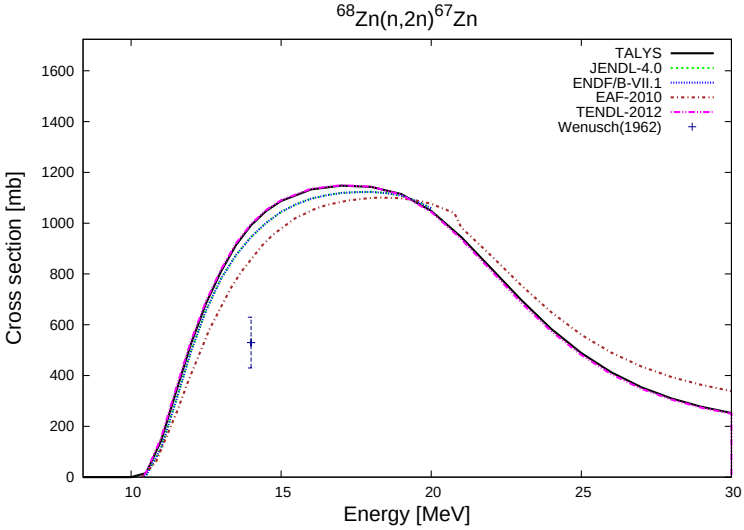

63Cu(n,2n)62Cu
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Jarjis(1978)
Ryves(1978)
ManjushreeMajumderr(1977)
Sigg(1976)
Valkonen(1976)
Lapenas(1975)
Mogharrab(1972)
Qaim(1972)
Bormann(1969)
Liskien(1965)
Letessier(1964)
Rayburn(1963)
Bormann(1962)
Cevolani(1962)
Glover(1962)
Glover(1962)
Koehler(1962)
Pollehn(1961)
Sakisaka(1961)
DeJuren(1960)
Ferguson(1960)
McCrary(1960)
Yasumi(1957)
Cohen(1956)
Paul(1953)
BrolleyJr(1952)
Forbes(1952)
Fowler(1950)
Cross section [mb]
Energy [MeV]

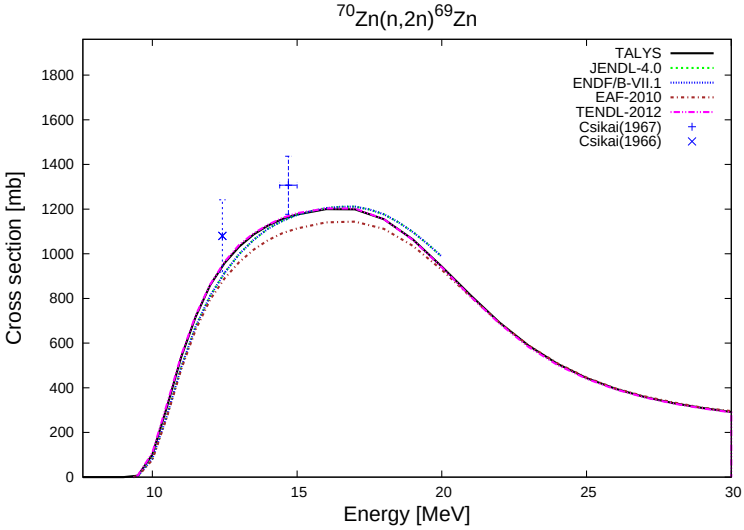

65Cu(n,2n)64Cu
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Hafiz(2007)
Mannhart(2007)
HarunArRashid(2006)
Filatenkov(1999)
Filatenkov(1999)
Ikeda(1994)
Molla(1994)
Ercan(1991)
Ikeda(1988)
Meadows(1987)
Ryves(1987)
Ghanbari(1986)
Ghanbari(1986)
Winkler(1983)
Csikai(1982)
Ngoc(1980)
Ryves(1978)
Sigg(1976)
Lapenas(1975)
Mannhart(1975)
Spangler(1975)
Araminowicz(1973)
Robertson(1973)
Mogharrab(1972)
Qaim(1972)
Barrall(1969)
Bormann(1969)
Chatterjee(1969)
Vonach(1968)
Csikai(1967)
Nagel(1966)
Nagel(1966)
Csikai(1965)
Paulsen(1965)
Santry(1965)
Santry(1965)
Bonazzola(1964)
Bormann(1963)
Glover(1962)
Rayburn(1962)
Pollehn(1961)
Prestwood(1961)
Rayburn(1961)
Depraz(1960)
McCrary(1960)
Weigold(1960)
Poularikas(1959)
Paul(1953)
Forbes(1952)
Cross section [mb]
Energy [MeV]

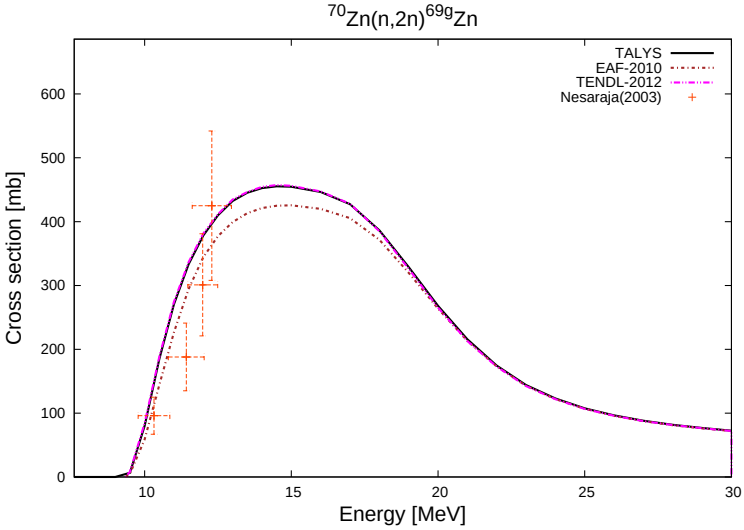

natZn(n,2n)Zn
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Ashby(1958)
Cross section [mb]
Energy [MeV]

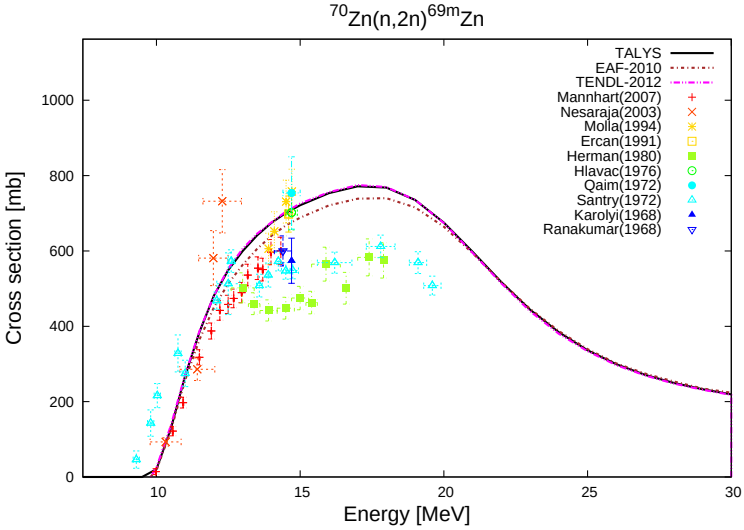

64Zn(n,2n)63Zn
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Mannhart(2007)
TranDueThieppp(2003)
Filatenkov(1999)
Filatenkov(1999)
Ghorai(1995)
Konno(1993)
Soewarsono(1992)
Uwamino(1992)
Ercan(1991)
Bramlitt(1991)
Rayburn(1963)
Cevolani(1962)
Weigold(1962)
Rayburn(1961)
Koehler(1960)
Preiss(1960)
Yasumi(1957)
Cohen(1956)
Paul(1953)
Araminowicz(1973)
Qaim(1972)
Bormann(1969)
Chatterjee(1969)
Ranakumar(1968)
Shiokawa(1968)
Chatterjee(1967)
Csikai(1967)
Csikai(1967)
Mitra(1967)
Csikai(1965)
Gabbard(1965)
Paulsen(1965)
Bormann(1963)
Cross section [mb]
Energy [MeV]

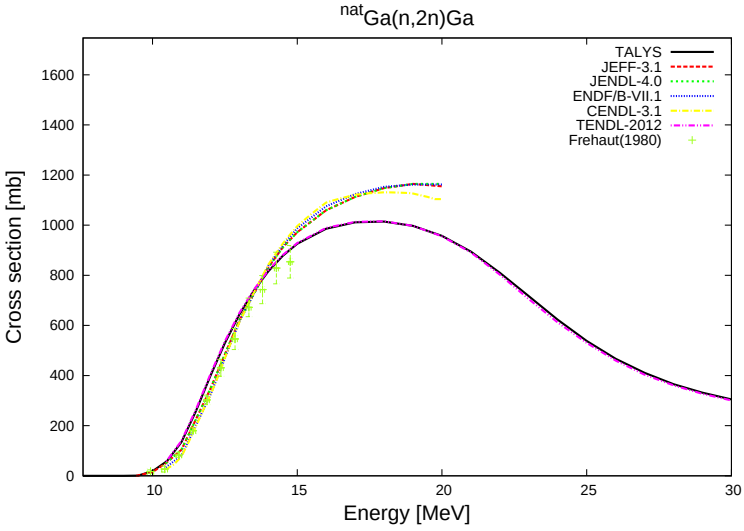

66Zn(n,2n)65Zn
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Konno(1993)
Ercan(1991)
Wagner(1989)
Wagner(1989)
Kayashima(1979)
Paulsen(1975)
Qaim(1972)
Bormann(1969)
Ranakumar(1968)
Csikai(1967)
Cross section [mb]
Energy [MeV]

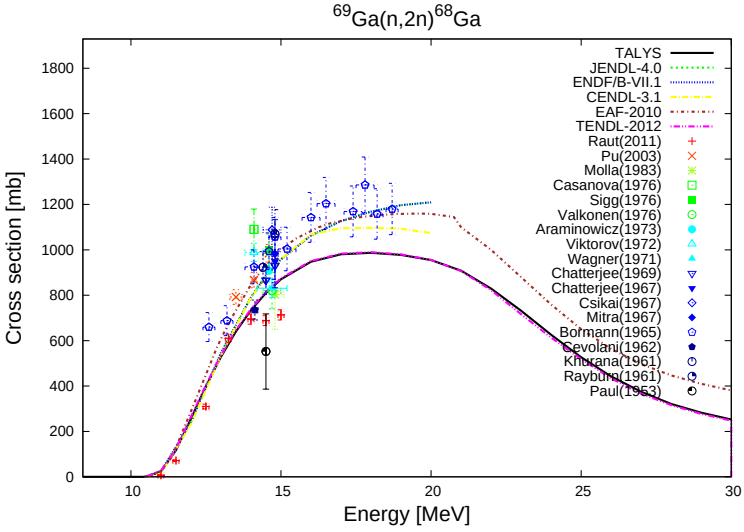

^{68}Zn(n,2n)^{67}Zn
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Wenusch(1962)
Cross section [mb]
Energy [MeV]

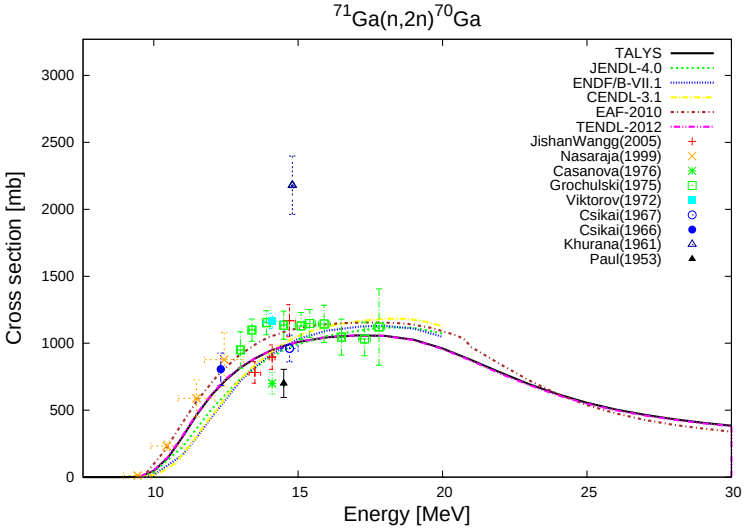

^{70}Zn(n,2n)^{69}Zn
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Csikai(1967)
Csikai(1966)
Cross section [mb]
Energy [MeV]

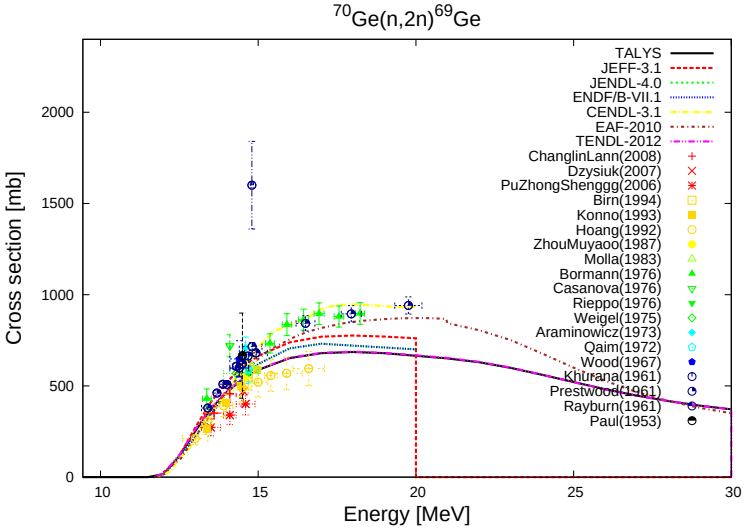

^{70}Zn(n,2n)^{69g}Zn
TALYS
EAF-2010
TENDL-2012
Nesaraja(2003)
Cross section [mb]
Energy [MeV]

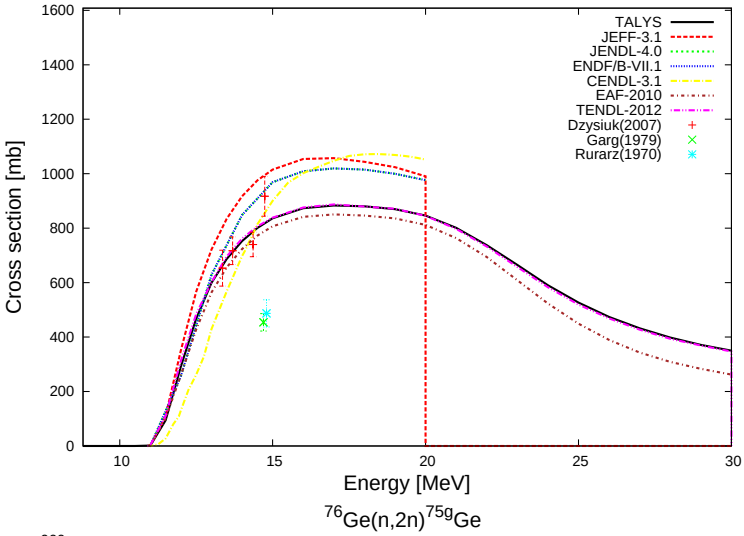

^{70}Zn(n,2n)^{69m}Zn
TALYS
EAF-2010
TENDL-2012
Mannhart(2007)
Nesaraja(2003)
Molla(1994)
Ercan(1991)
Herman(1980)
Hlavac(1976)
Qaim(1972)
Santry(1972)
Karolyi(1968)
Ranakumar(1968)
Cross section [mb]
Energy [MeV]

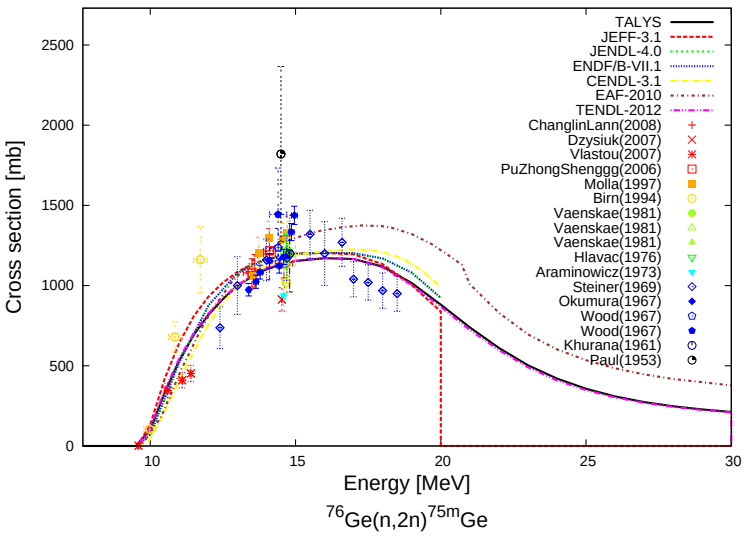

^{nat}Ga(n,2n)Ga
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Frehaut(1980)
Cross section [mb]
Energy [MeV]

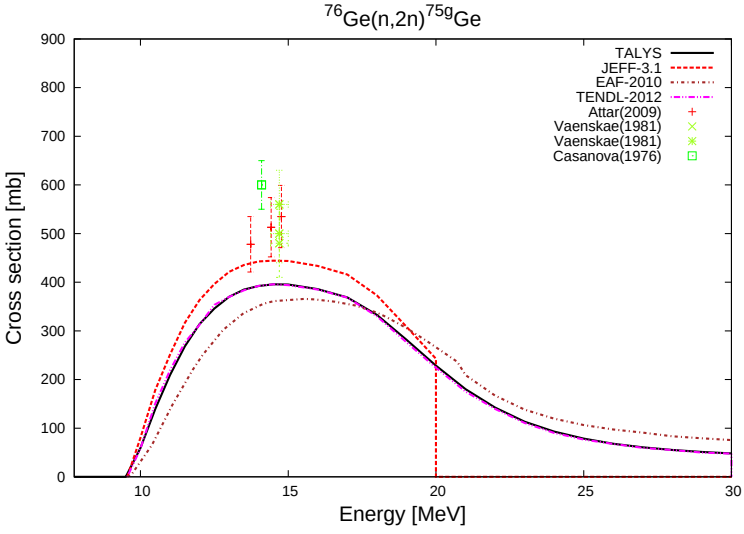

^{69}Ga(n,2n)^{68}Ga
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Raut(2011)
Pu(2003)
Molla(1983)
Casanova(1976)
Sigg(1976)
Valkonen(1976)
Araminowicz(1973)
Viktorov(1972)
Wagner(1971)
Chatterjee(1969)
Chatterjee(1967)
Csikai(1967)
Mitra(1967)
Bormann(1965)
Sevolani(1962)
Khurana(1961)
Raybum(1961)
Paul(1953)
Cross section [mb]
Energy [MeV]

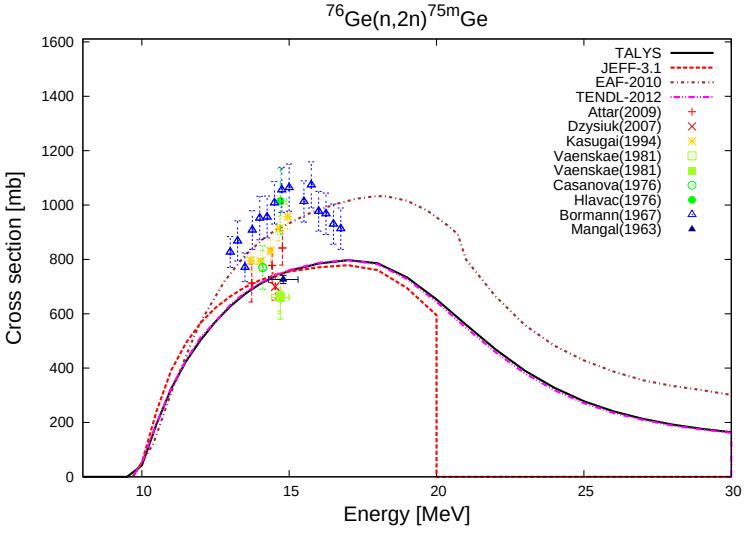

^{71}Ga(n,2n)^{70}Ga
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
JishanWangg(2005)
Nasaraja(1999)
Casanova(1976)
Grochulski(1975)
Viktorov(1972)
Csikai(1967)
Csikai(1966)
Khurana(1961)
Paul(1953)
Cross section [mb]
Energy [MeV]

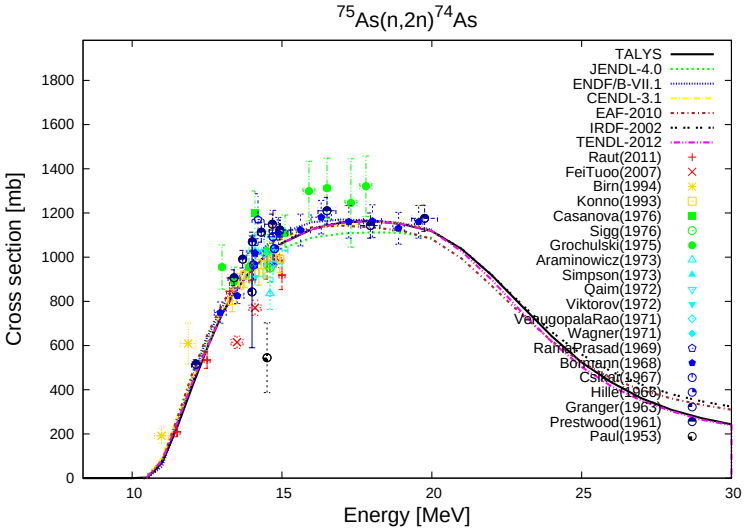

^{70}Ge(n,2n)^{69}Ge
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
ChanglinLann(2008)
Dzysiuk(2007)
PuZhongShenggg(2006)
Birn(1994)
Konno(1993)
Hoang(1992)
ZhouMuyaoo(1987)
Molla(1983)
Bormann(1976)
Casanova(1976)
Rieppo(1976)
Weigel(1975)
Araminowicz(1973)
Qaim(1972)
Wood(1967)
Khurana(1961)
Prestwood(1961)
Rayburn(1961)
Paul(1953)
Cross section [mb]
Energy [MeV]

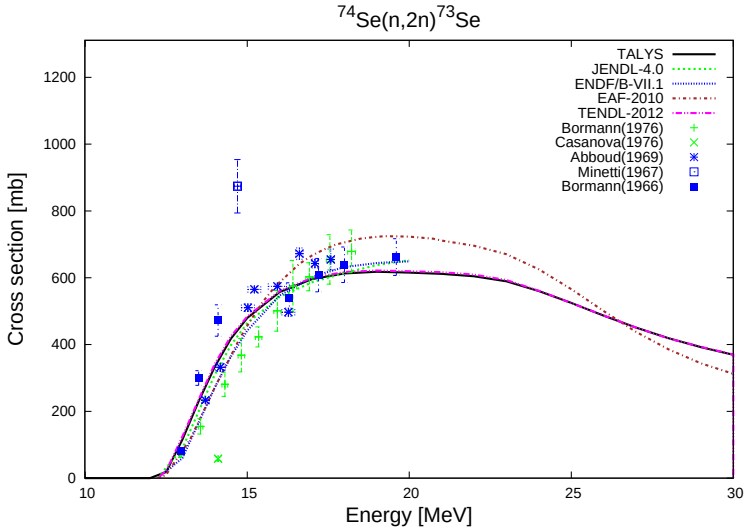

^{72}Ge(n,2n)^{71}Ge
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Dzysiuk(2007)
Garg(1979)
Rurarz(1970)
Cross section [mb]
Energy [MeV]

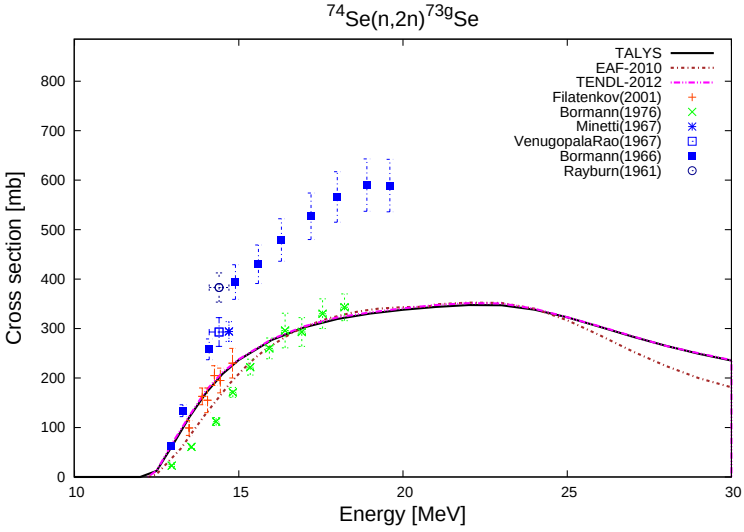

^{76}Ge(n,2n)^{75}Ge
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
ChanglinLann(2008)
Dzysiuk(2007)
Vlastou(2007)
PuZhongShenggg(2006)
Molla(1997)
Birn(1994)
Vaenskae(1981)
Vaenskae(1981)
Vaenskae(1981)
Hlavac(1976)
Araminowicz(1973)
Steiner(1969)
Okumura(1967)
Wood(1967)
Wood(1967)
Khurana(1961)
Paul(1953)
Cross section [mb]
Energy [MeV]

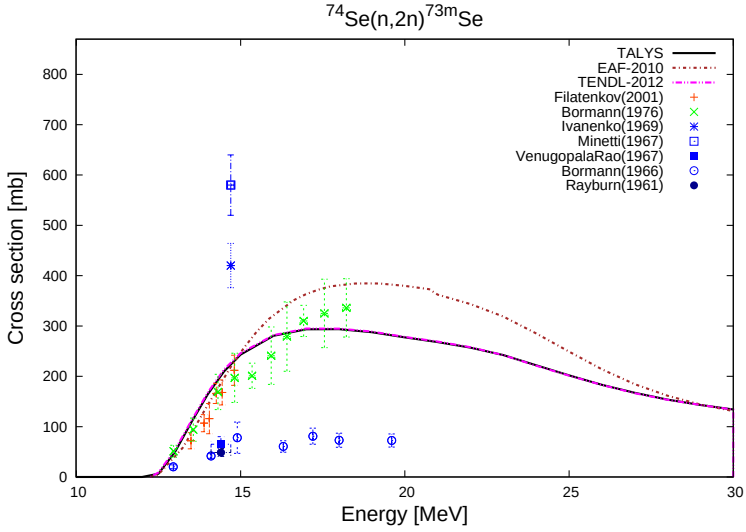

^{76}Ge(n,2n)^{75g}Ge
TALYS
JEFF-3.1
EAF-2010
TENDL-2012
Attar(2009)
Vaenskae(1981)
Vaenskae(1981)
Casanova(1976)
Cross section [mb]
Energy [MeV]

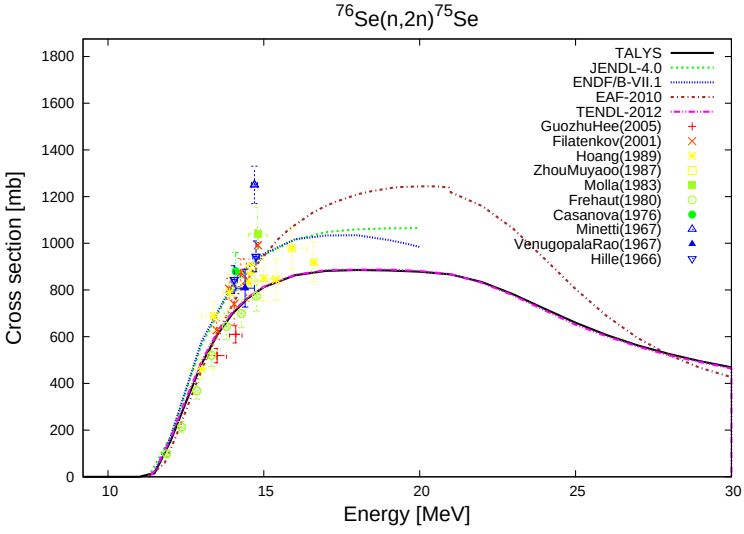

^{76}Ge(n,2n)^{75m}Ge
TALYS
JEFF-3.1
EAF-2010
TENDL-2012
Attar(2009)
Dzysiuk(2007)
Kasugai(1994)
Vaenskae(1981)
Vaenskae(1981)
Casanova(1976)
Hlavac(1976)
Bormann(1967)
Mangal(1963)
Cross section [mb]
Energy [MeV]

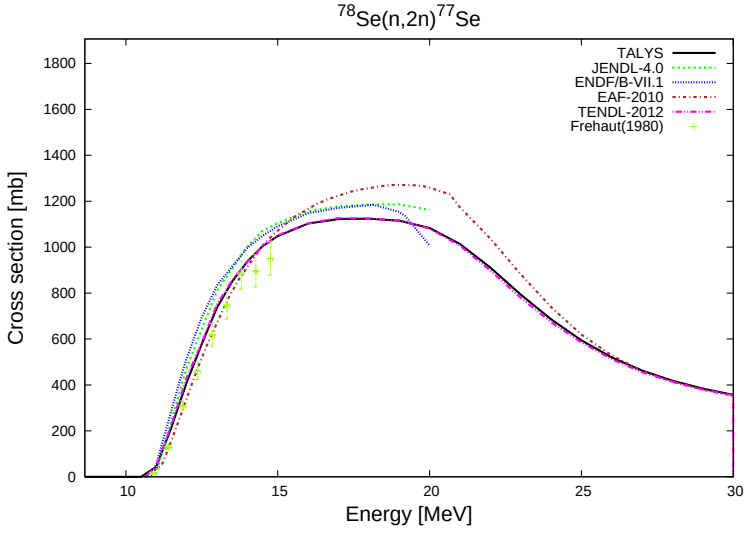

^{75}As(n,2n)^{74}As
Cross section [mb]
Energy [MeV]
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Raut(2011)
FeiTuoo(2007)
Birn(1994)
Konno(1993)
Casanova(1976)
Sigg(1976)
Grochulski(1975)
Araminowicz(1973)
Simpson(1973)
Qaim(1972)
Viktorov(1972)
VenugopalaRao(1971)
Wagner(1971)
RamaPrasad(1969)
Bormann(1968)
Csikai(1967)
Hille(1966)
Granger(1963)
Prestwood(1961)
Paul(1953)

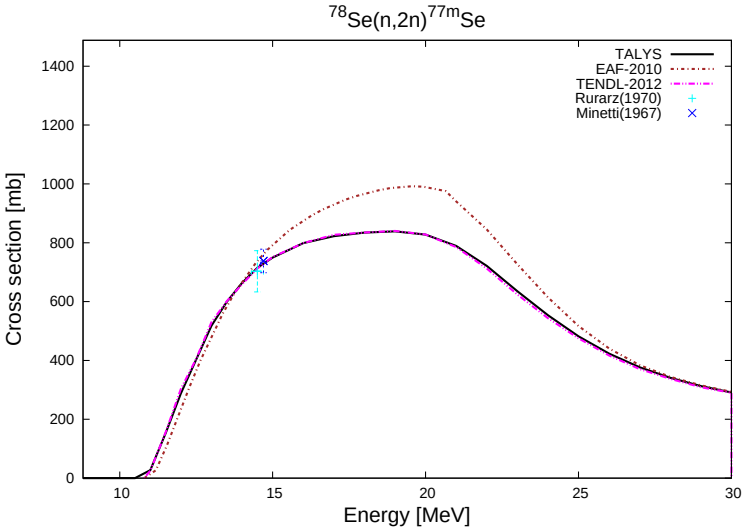

^{74}Se(n,2n)^{73}Se
Cross section [mb]
Energy [MeV]
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Bormann(1976)
Casanova(1976)
Abboud(1969)
Minetti(1967)
Bormann(1966)

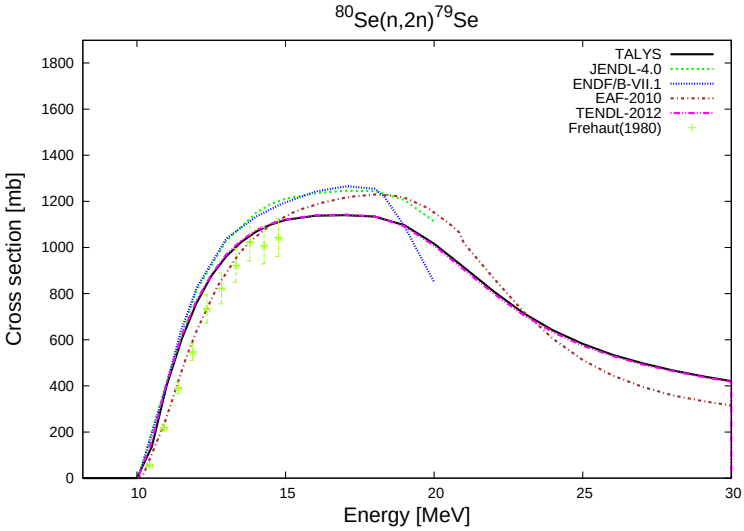

^{74}Se(n,2n)^{73g}Se
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Filatenkov(2001)
Bormann(1976)
Minetti(1967)
VenugopalaRao(1967)
Bormann(1966)
Rayburn(1961)

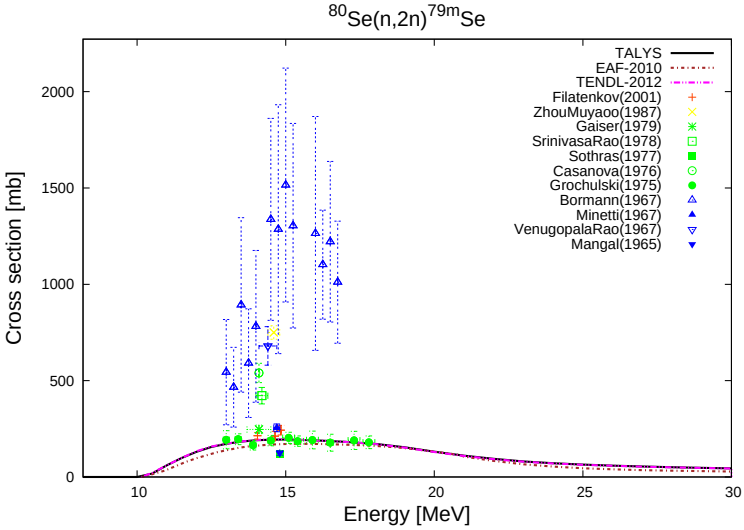

^{74}Se(n,2n)^{73m}Se
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Filatenkov(2001)
Bormann(1976)
Ivanenko(1969)
Minetti(1967)
VenugopalaRao(1967)
Bormann(1966)
Rayburn(1961)

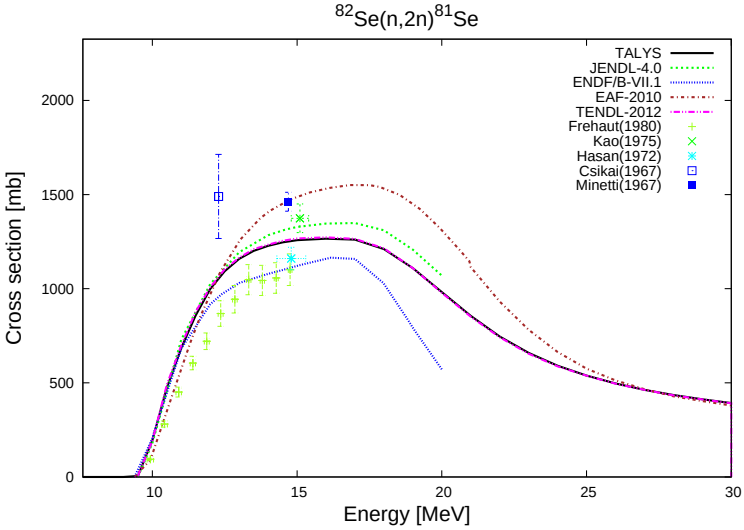

^{76}Se(n,2n)^{75}Se
Cross section [mb]
Energy [MeV]
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
GuozhuHee(2005)
Filatenkov(2001)
Hoang(1989)
ZhouMuyaoo(1987)
Molla(1983)
Frehaut(1980)
Casanova(1976)
Minetti(1967)
VenugopalaRao(1967)
Hille(1966)

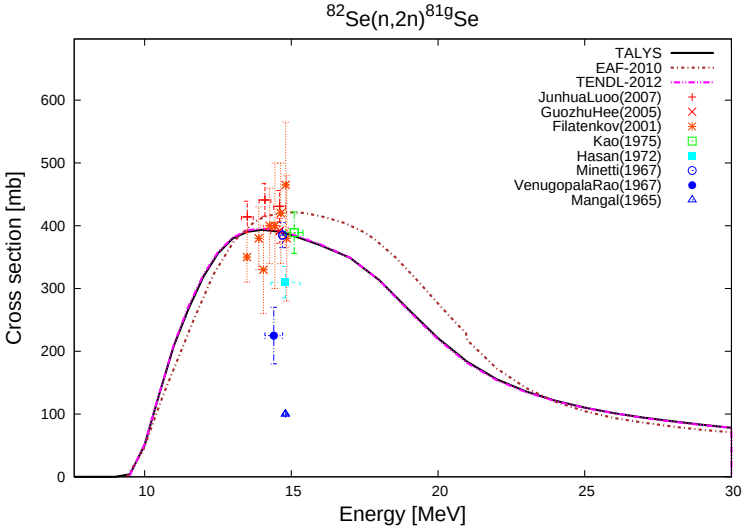

^{78}Se(n,2n)^{77}Se
Cross section [mb]
Energy [MeV]
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Frehaut(1980)

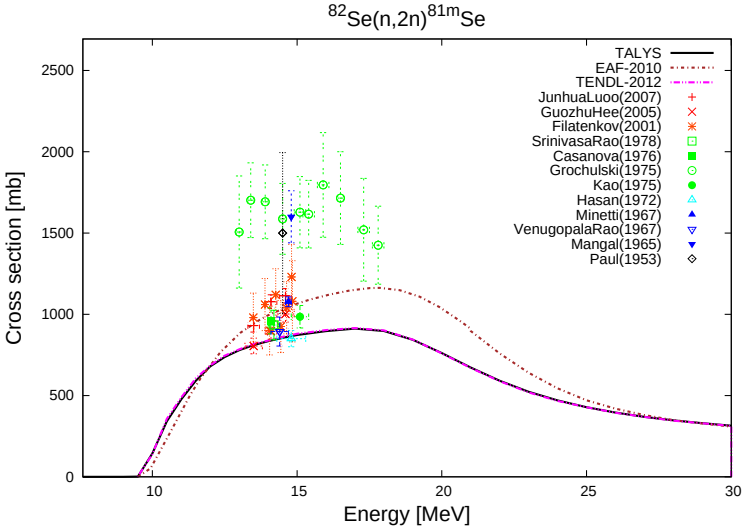

^{78}Se(n,2n)^{77m}Se
TALYS
EAF-2010
TENDL-2012
Rurarz(1970)
Minetti(1967)
Cross section [mb]
Energy [MeV]

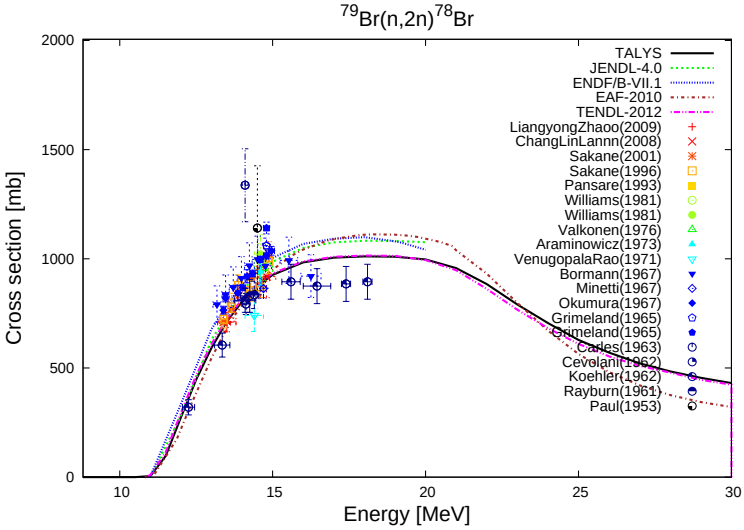

^{80}Se(n,2n)^{79}Se
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Frehaut(1980)
Cross section [mb]
Energy [MeV]

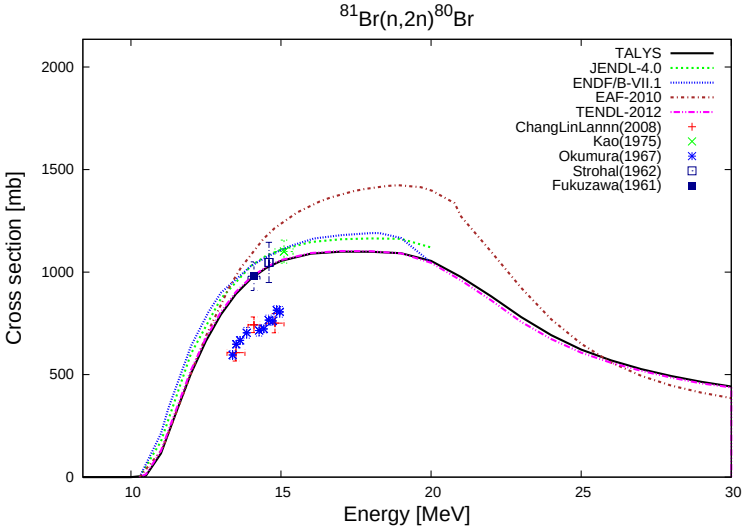

^{80}Se(n,2n)^{79m}Se
TALYS
EAF-2010
TENDL-2012
Filatenkov(2001)
ZhouMuyaoo(1987)
Gaiser(1979)
SrinivasaRao(1978)
Sothras(1977)
Casanova(1976)
Grochulski(1975)
Bormann(1967)
Minetti(1967)
VenugopalaRao(1967)
Mangal(1965)
Cross section [mb]
Energy [MeV]

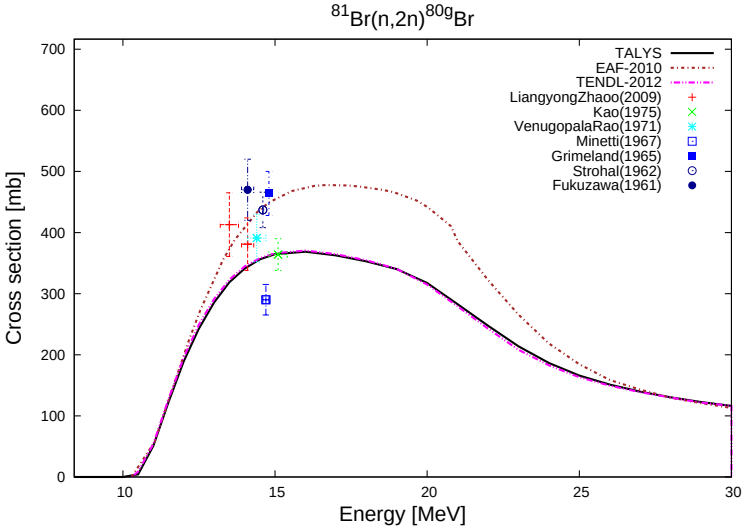

^{82}Se(n,2n)^{81}Se
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Frehaut(1980)
Kao(1975)
Hasan(1972)
Csikai(1967)
Minetti(1967)
Cross section [mb]
Energy [MeV]

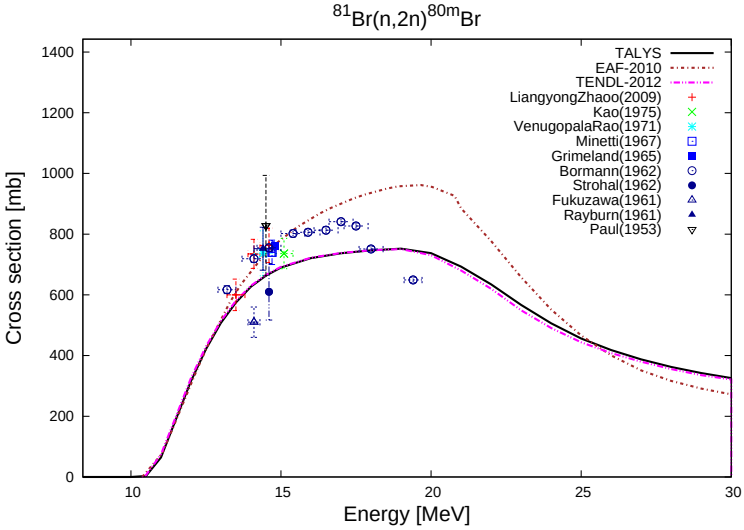

^{82}Se(n,2n)^{81g}Se
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2007)
GuozhuHee(2005)
Filatenkov(2001)
Kao(1975)
Hasan(1972)
Minetti(1967)
VenugopalaRao(1967)
Mangal(1965)
Cross section [mb]
Energy [MeV]

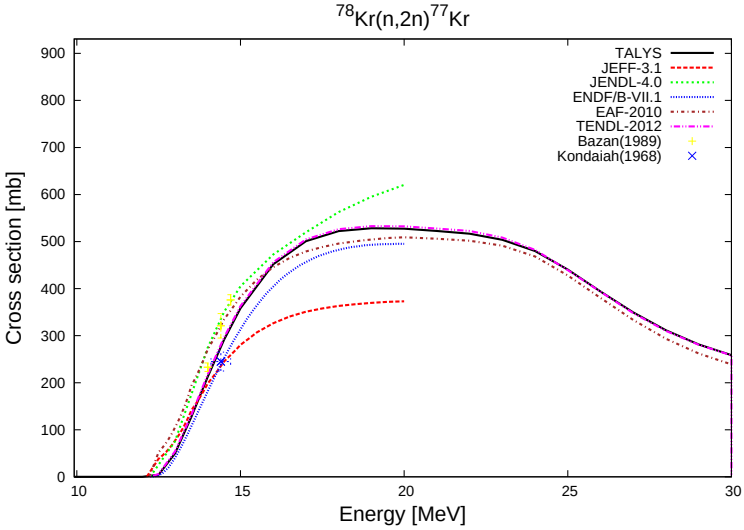

^{82}Se(n,2n)^{81m}Se
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2007)
GuozhuHee(2005)
Filatenkov(2001)
SrinivasaRao(1978)
Casanova(1976)
Grochulski(1975)
Kao(1975)
Hasan(1972)
Minetti(1967)
VenugopalaRao(1967)
Mangal(1965)
Paul(1953)
Cross section [mb]
Energy [MeV]

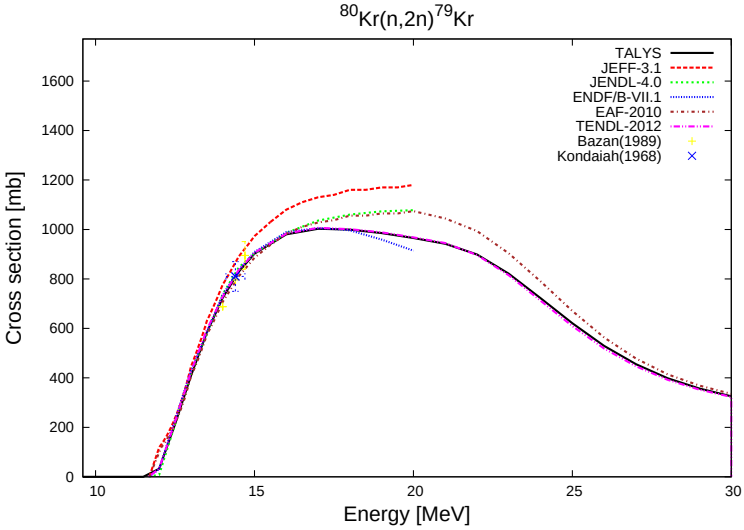

^{79}Br(n,2n)^{78}Br
Cross section [mb]
Energy [MeV]
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
LiangyongZhaoo(2009)
ChangLinLannn(2008)
Sakane(2001)
Sakane(1996)
Pansare(1993)
Williams(1981)
Williams(1981)
Valkonen(1976)
Araminowicz(1973)
VenugopalaRao(1971)
Bormann(1967)
Minetti(1967)
Okumura(1967)
Grimeland(1965)
Grimeland(1965)
Cades(1963)
Cevolani(1962)
Koehler(1962)
Rayburn(1961)
Paul(1953)

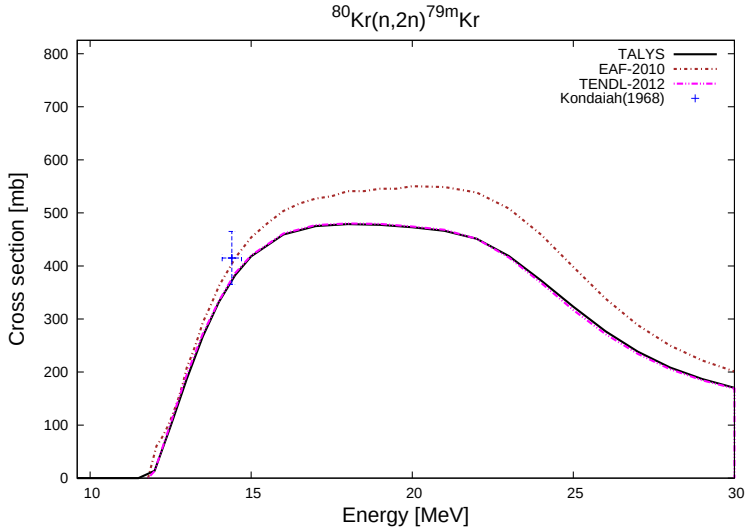

^{81}Br(n,2n)^{80}Br
Cross section [mb]
Energy [MeV]
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
ChangLinLannn(2008)
Kao(1975)
Okumura(1967)
Strohal(1962)
Fukuzawa(1961)

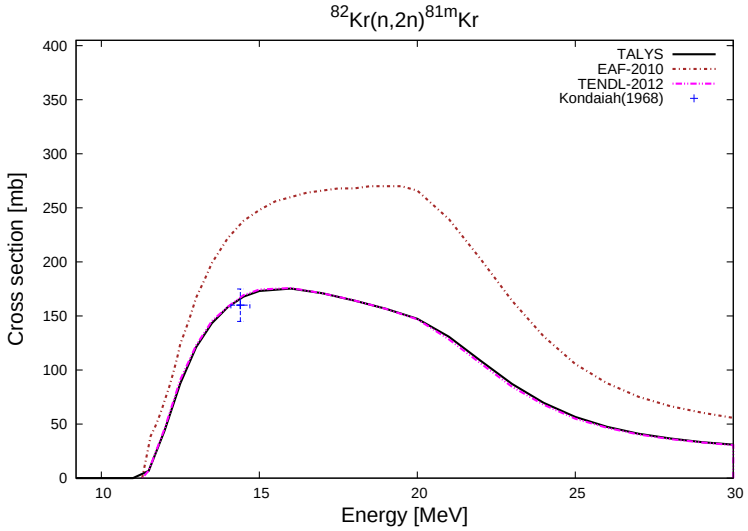

^{81}Br(n,2n)^{80g}Br
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
LiangyongZhaoo(2009)
Kao(1975)
VenugopalaRao(1971)
Minetti(1967)
Grimeland(1965)
Strohal(1962)
Fukuzawa(1961)

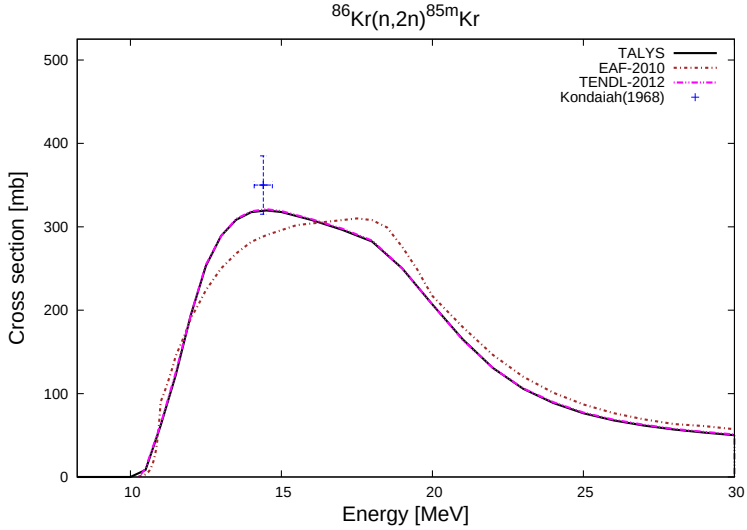

^{81}Br(n,2n)^{80m}Br
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
LiangyongZhaoo(2009)
Kao(1975)
VenugopalaRao(1971)
Minetti(1967)
Grimeland(1965)
Bormann(1962)
Strohal(1962)
Fukuzawa(1961)
Rayburn(1961)
Paul(1953)

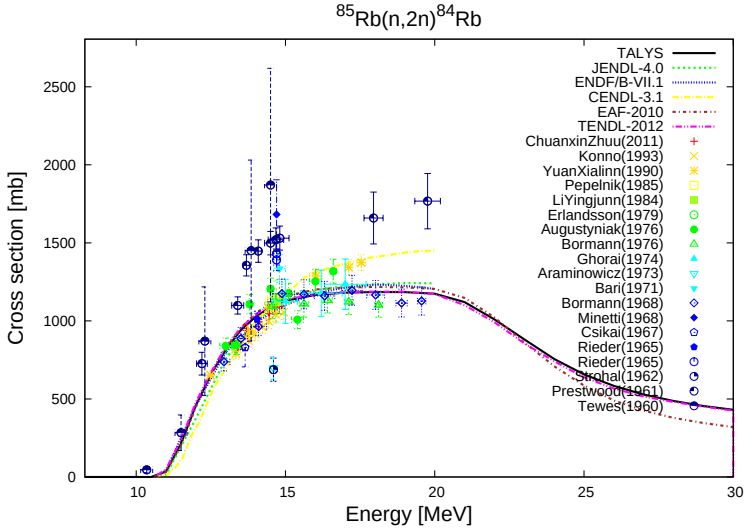

^{78}Kr(n,2n)^{77}Kr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Bazan(1989)
Kondaiah(1968)

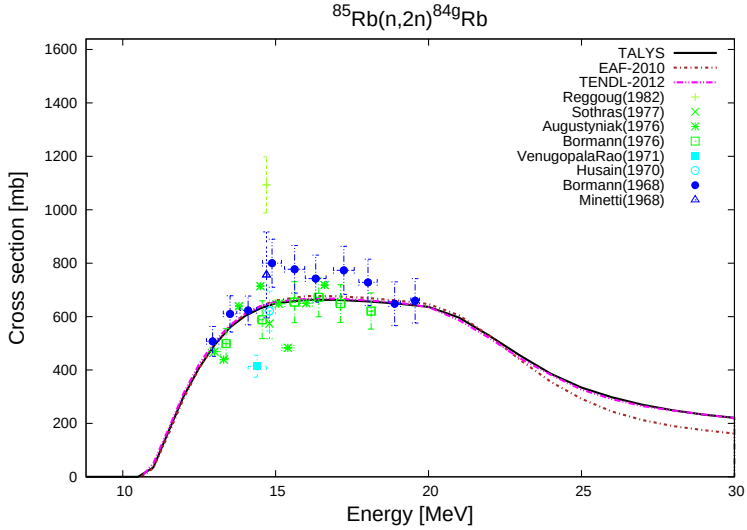

^{80}Kr(n,2n)^{79}Kr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Bazan(1989)
Kondaiah(1968)

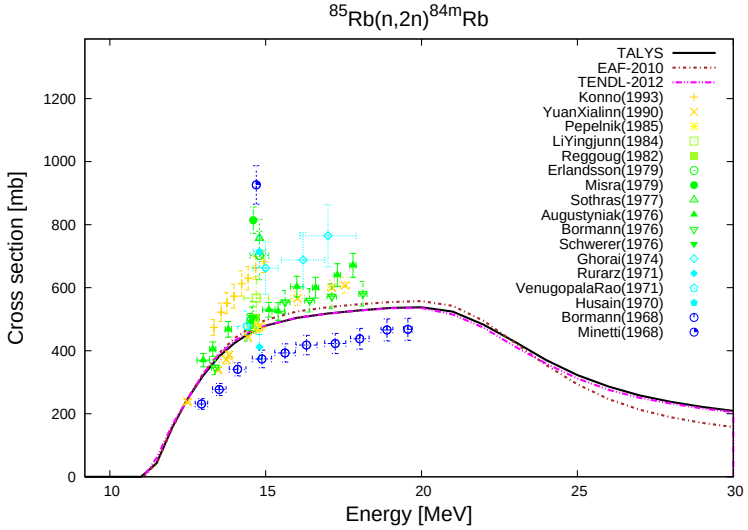

^{80}Kr(n,2n)^{79m}Kr
TALYS
EAF-2010
TENDL-2012
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

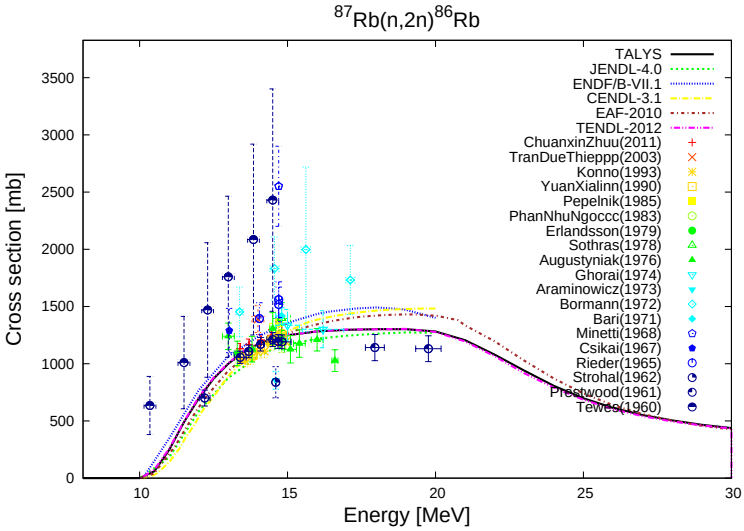

^{82}Kr(n,2n)^{81m}Kr
TALYS
EAF-2010
TENDL-2012
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

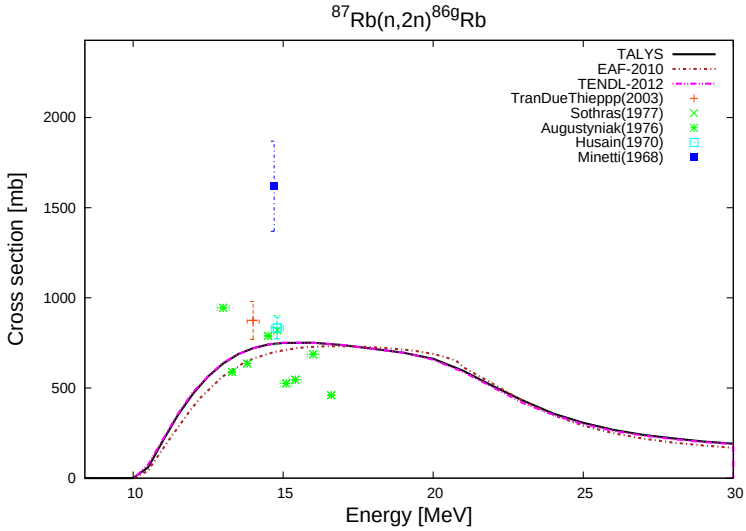

^{86}Kr(n,2n)^{85m}Kr
TALYS
EAF-2010
TENDL-2012
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

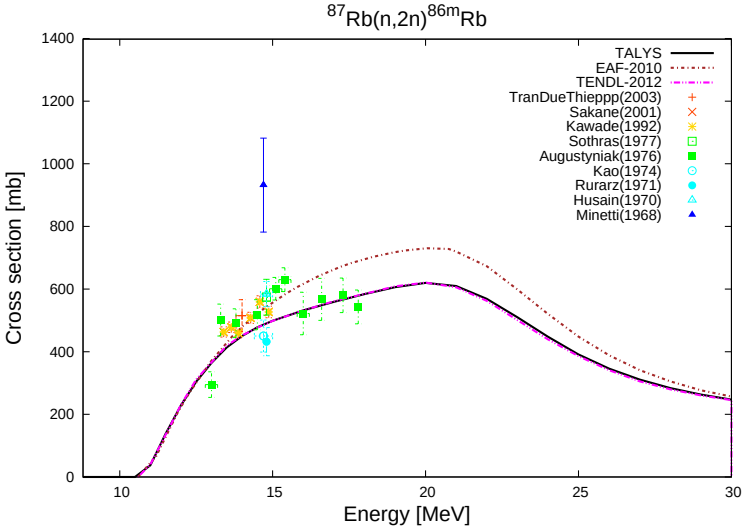

^{85}Rb(n,2n)^{84}Rb
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
ChuanxinZhuu(2011)
Konno(1993)
YuanXialinn(1990)
Pepelnik(1985)
LiYingjunn(1984)
Erlandsson(1979)
Augustyniak(1976)
Bormann(1976)
Ghorai(1974)
Araminowicz(1973)
Bari(1971)
Bormann(1968)
Minetti(1968)
Csikai(1967)
Rieder(1965)
Rieder(1965)
Strohal(1962)
Prestwood(1961)
Tewes(1960)
Cross section [mb]
Energy [MeV]

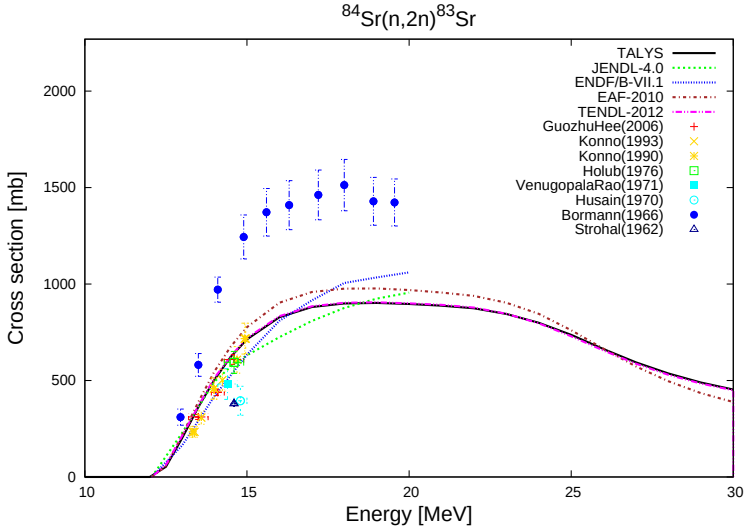

^{85}Rb(n,2n)^{84g}Rb
TALYS
EAF-2010
TENDL-2012
Reggoug(1982)
Sothras(1977)
Augustyniak(1976)
Bormann(1976)
VenugopalaRao(1971)
Husain(1970)
Bormann(1968)
Minetti(1968)
Cross section [mb]
Energy [MeV]

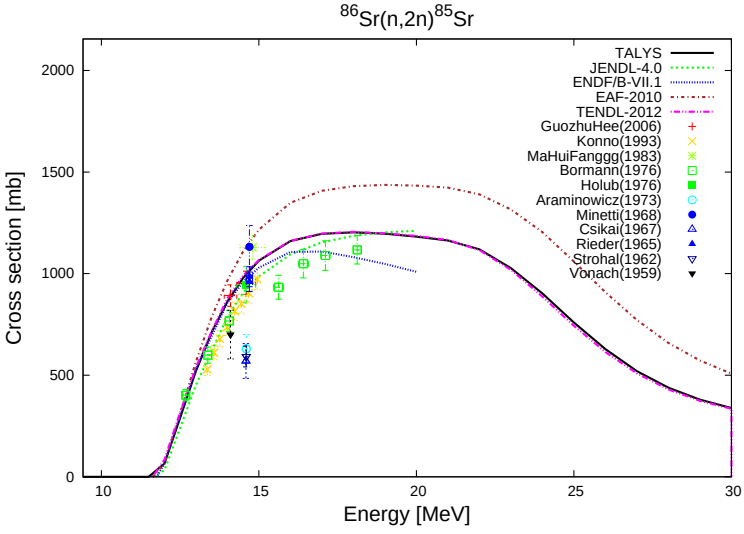

^{85}Rb(n,2n)^{84m}Rb
TALYS
EAF-2010
TENDL-2012
Konno(1993)
YuanXialinn(1990)
Pepelnik(1985)
LiYingjunn(1984)
Reggoug(1982)
Erlandsson(1979)
Misra(1979)
Sothras(1977)
Augustyniak(1976)
Bormann(1976)
Schwerer(1976)
Ghorai(1974)
Rurarz(1971)
VenugopalaRao(1971)
Husain(1970)
Bormann(1968)
Minetti(1968)
Cross section [mb]
Energy [MeV]

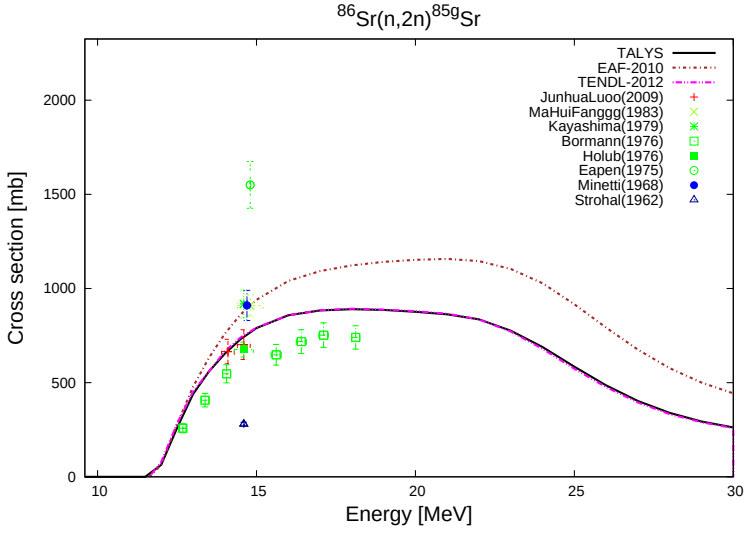

87Rb(n,2n)86Rb
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
ChuanxinZhuu(2011)
TranDueThieppp(2003)
Konno(1993)
YuanXialinn(1990)
Pepelnik(1985)
PhanNhuNgoccc(1983)
Erlandsson(1979)
Sothras(1978)
Augustyniak(1976)
Ghorai(1974)
Araminowicz(1973)
Bormann(1972)
Bari(1971)
Minetti(1968)
Csikai(1967)
Rieder(1965)
Strohal(1962)
Prestwood(1961)
Tewes(1960)
Cross section [mb]
Energy [MeV]

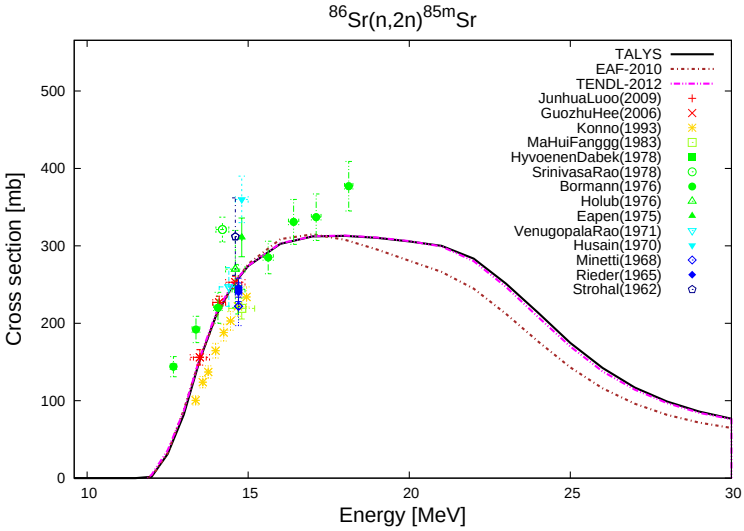

87Rb(n,2n)86gRb
TALYS
EAF-2010
TENDL-2012
TranDueThieppp(2003)
Sothras(1977)
Augustyniak(1976)
Husain(1970)
Minetti(1968)
Cross section [mb]
Energy [MeV]

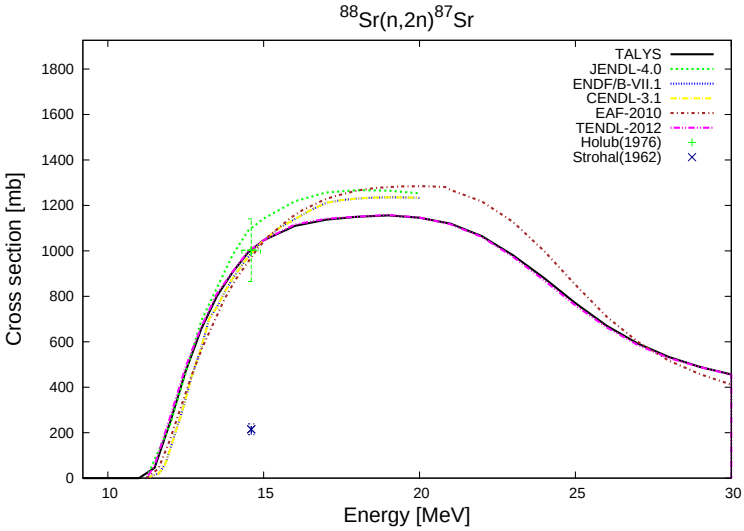

87Rb(n,2n)86mRb
TALYS
EAF-2010
TENDL-2012
TranDueThieppp(2003)
Sakane(2001)
Kawade(1992)
Sothras(1977)
Augustyniak(1976)
Kao(1974)
Rurarz(1971)
Husain(1970)
Minetti(1968)
Cross section [mb]
Energy [MeV]

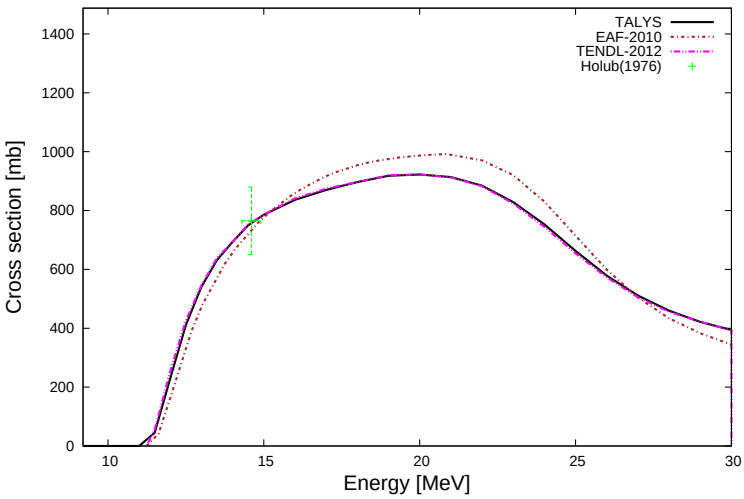

84Sr(n,2n)83Sr
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
GuozhuHee(2006)
Konno(1993)
Konno(1990)
Holub(1976)
VenugopalaRao(1971)
Husain(1970)
Bormann(1966)
Strohal(1962)
Cross section [mb]
Energy [MeV]

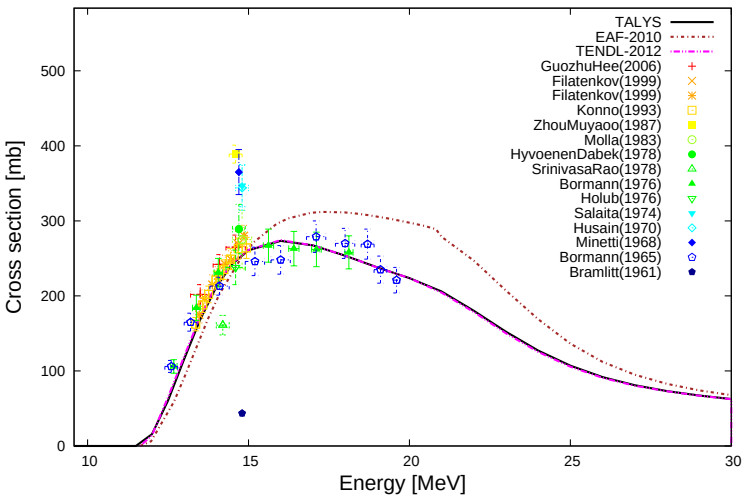

86Sr(n,2n)85Sr
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
GuozhuHee(2006)
Konno(1993)
MaHuiFanggg(1983)
Bormann(1976)
Holub(1976)
Araminowicz(1973)
Minetti(1968)
Csikai(1967)
Rieder(1965)
Strohal(1962)
Vonach(1959)
Cross section [mb]
Energy [MeV]

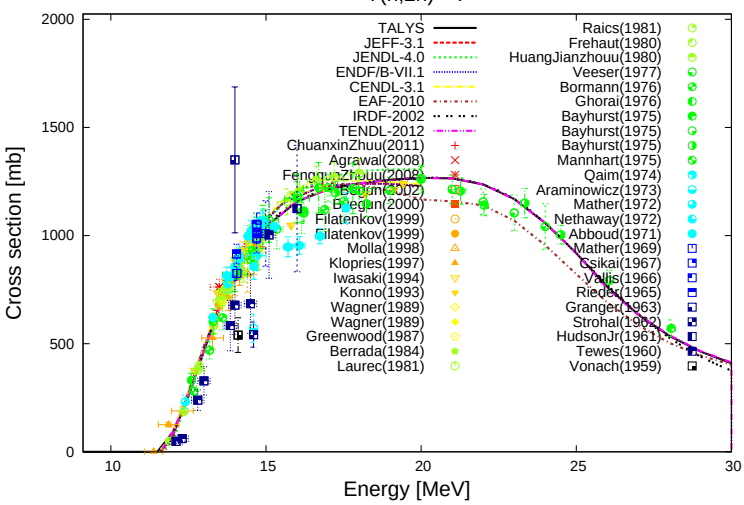

86Sr(n,2n)85gSr
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2009)
MaHuiFanggg(1983)
Kayashima(1979)
Bormann(1976)
Holub(1976)
Eapen(1975)
Minetti(1968)
Strohal(1962)
Cross section [mb]
Energy [MeV]

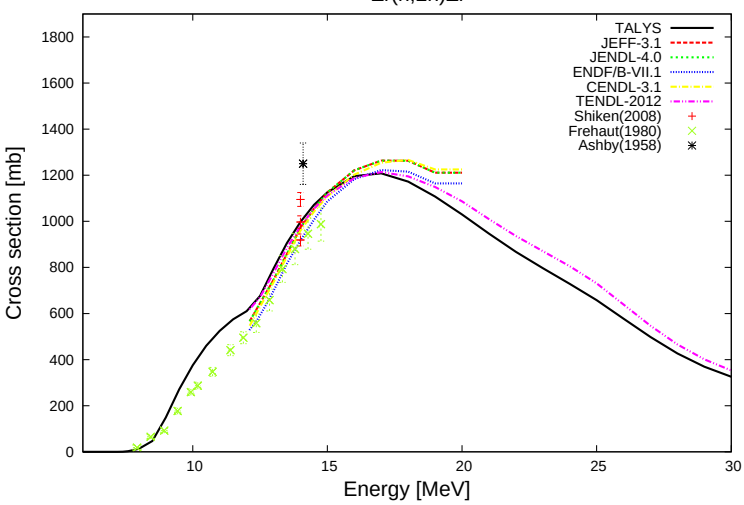

^{86}Sr(n,2n)^{85m}Sr
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2009)
GuozhuHee(2006)
Konno(1993)
MaHuiFanggg(1983)
HyvoenenDabek(1978)
SrinivasaRao(1978)
Bormann(1976)
Holub(1976)
Eapen(1975)
VenugopalaRao(1971)
Husain(1970)
Minetti(1968)
Rieder(1965)
Strohal(1962)

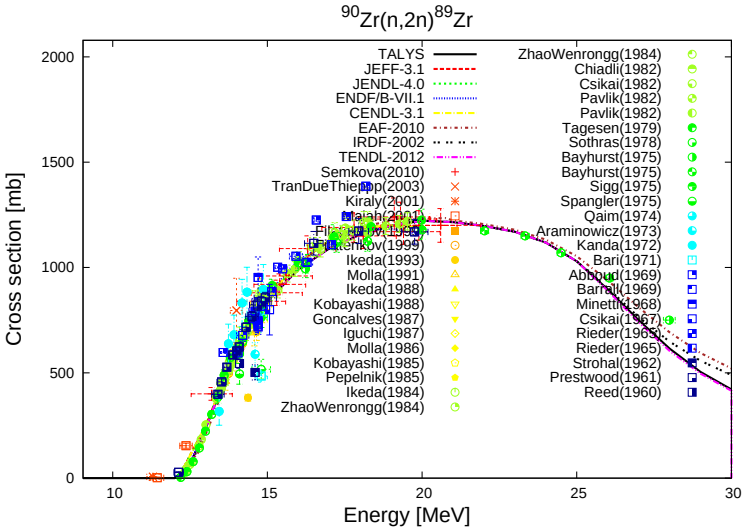

^{88}Sr(n,2n)^{87}Sr
Cross section [mb]
Energy [MeV]
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Holub(1976)
Strohal(1962)


^{88}Sr(n,2n)^{87g}Sr
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Holub(1976)


^{88}Sr(n,2n)^{87m}Sr
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
GuozhuHee(2006)
Filatenkov(1999)
Filatenkov(1999)
Konno(1993)
ZhouMuyaoo(1987)
Molla(1983)
HyvoenenDabek(1978)
SrinivasaRao(1978)
Bormann(1976)
Holub(1976)
Salaita(1974)
Husain(1970)
Minetti(1968)
Bormann(1965)
Bramlitt(1961)


^{89}Y(n,2n)^{88}Y
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
ChuanxinZhuu(2011)
Agrawal(2008)
FengquanZhouu(2008)
Begum(2002)
Begun(2000)
Filatenkov(1999)
Filatenkov(1999)
Molla(1998)
Klopries(1997)
Iwasaki(1994)
Konno(1993)
Wagner(1989)
Wagner(1989)
Greenwood(1987)
Berrada(1984)
Laurec(1981)
Raics(1981)
Frehaut(1980)
HuangJianzhouu(1980)
Veeser(1977)
Bormann(1976)
Ghorai(1976)
Bayhurst(1975)
Bayhurst(1975)
Bayhurst(1975)
Mannhart(1975)
Qaim(1974)
Araminowicz(1973)
Mather(1972)
Nethaway(1972)
Abboud(1971)
Mather(1969)
Csikai(1967)
Vallis(1966)
Rieger(1965)
Granger(1963)
Strohal(1962)
HudsonJr(1961)
Tewes(1960)
Vonach(1959)


^{nat}Zr(n,2n)Zr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Shiken(2008)
Frehaut(1980)
Ashby(1958)


^{90}Zr(n,2n)^{89}Zr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Semkova(2010)
TranDueThiepp(2003)
Kiraly(2001)
Majah(2001)
Filatenkov(1999)
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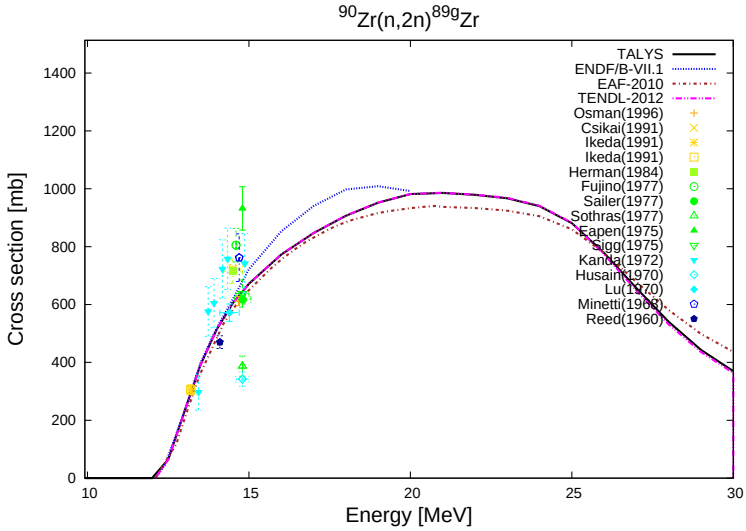
^{90}Zr(n,2n)^{89g}Zr
Cross section [mb]
Energy [MeV]
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
Osman(1996)
Csikai(1991)
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Herman(1984)
Fujino(1977)
Sailer(1977)
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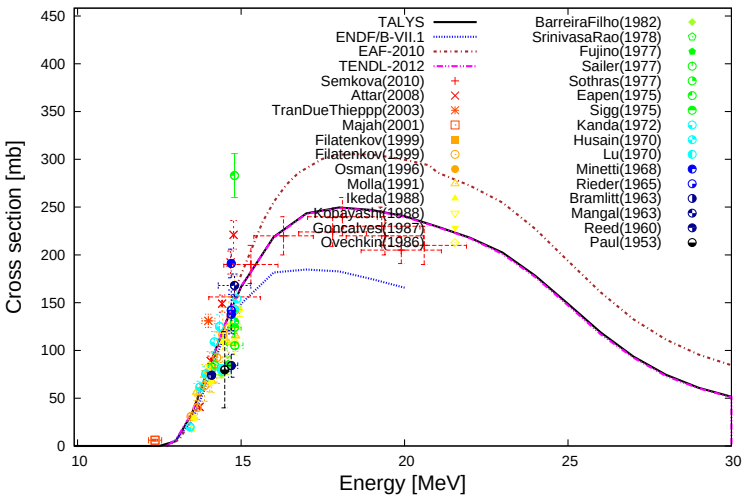
Reed(1960)


^{90}Zr(n,2n)^{89m}Zr
Cross section [mb]
Energy [MeV]
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
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Attar(2008)
TranDueThiepp(2003)
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Ovechkin(1986)
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Sailer(1977)
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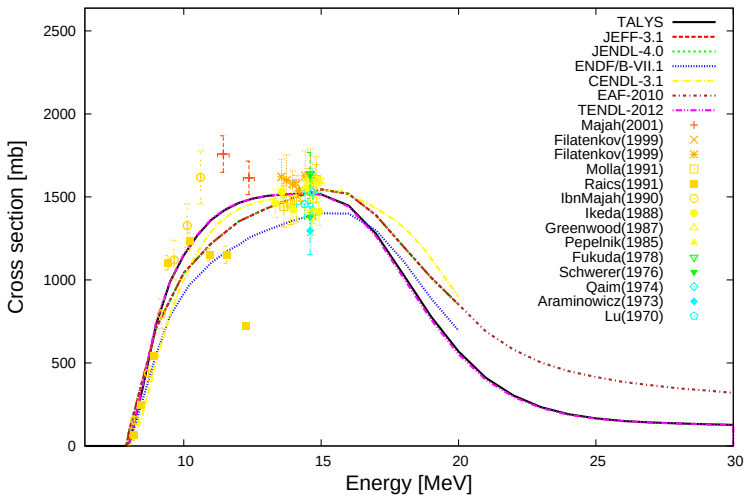
Mangal(1963)
Reed(1960)
Paul(1953)


^{96}Zr(n,2n)^{95}Zr
Cross section [mb]
Energy [MeV]
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JEFF-3.1
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ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
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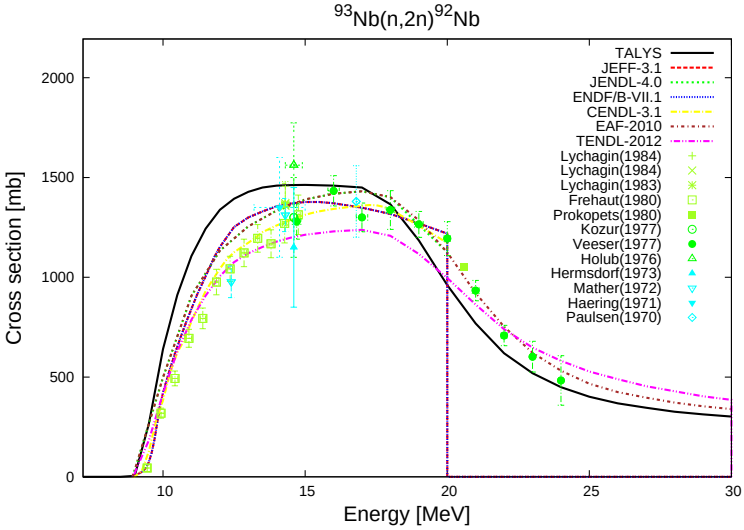
^{93}Nb(n,2n)^{92}Nb
Cross section [mb]
Energy [MeV]
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JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Lychagin(1984)
Lychagin(1984)
Lychagin(1983)
Frehaut(1980)
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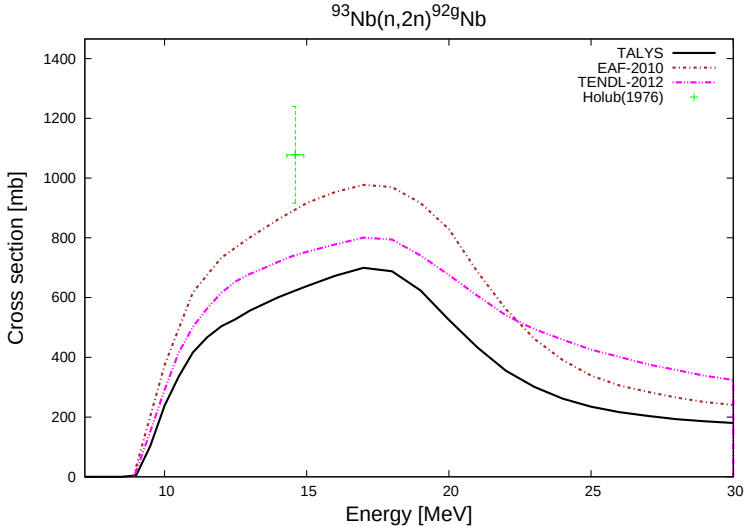
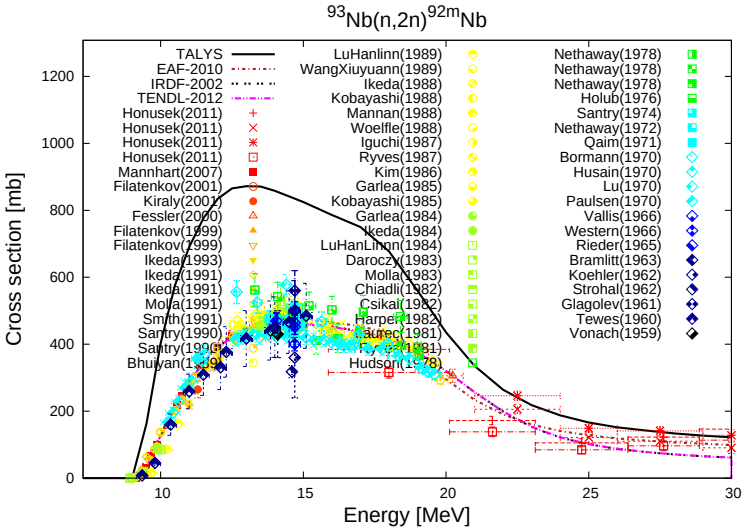

^{93}Nb(n,2n)^{92g}Nb
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Holub(1976)


^{93}Nb(n,2n)^{92m}Nb
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
IRDF-2002
TENDL-2012
Honusek(2011)
Honusek(2011)
Honusek(2011)
Honusek(2011)
Mannhart(2007)
Filatenkov(2001)
Kiraly(2001)
Fessler(2000)
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Ikeda(1993)
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Ikeda(1991)
Molla(1991)
Smith(1991)
Santry(1990)
Santry(1990)
Bhuiyan(1989)
LuHanlinn(1989)
WangXiuyuann(1989)
Ikeda(1988)
Kobayashi(1988)
Mannan(1988)
Woelfle(1988)
Iguchi(1987)
Ryves(1987)
Kim(1986)
Garlea(1985)
Kobayashi(1985)
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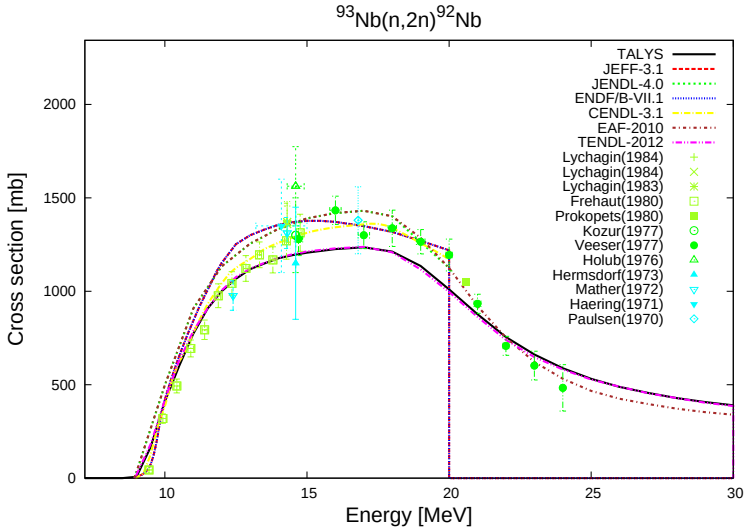
Daroczy(1983)
Molla(1983)
Chiadli(1982)
Csikai(1982)
Harper(1982)
Laurec(1981)
Ryves(1981)
Hudson(1978)
Nethaway(1978)
Nethaway(1978)
Nethaway(1978)
Holub(1976)
Santry(1974)
Nethaway(1972)
Qaim(1971)
Bormann(1970)
Husain(1970)
Lu(1970)
Paulsen(1970)
Vallis(1966)
Western(1966)
Rieder(1965)
Bramlitt(1963)
Koehler(1962)
Strohal(1962)
Glagolev(1961)
Tewes(1960)
Vonach(1959)


^{93}Nb(n,2n)^{92}Nb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Lychagin(1984)
Lychagin(1984)
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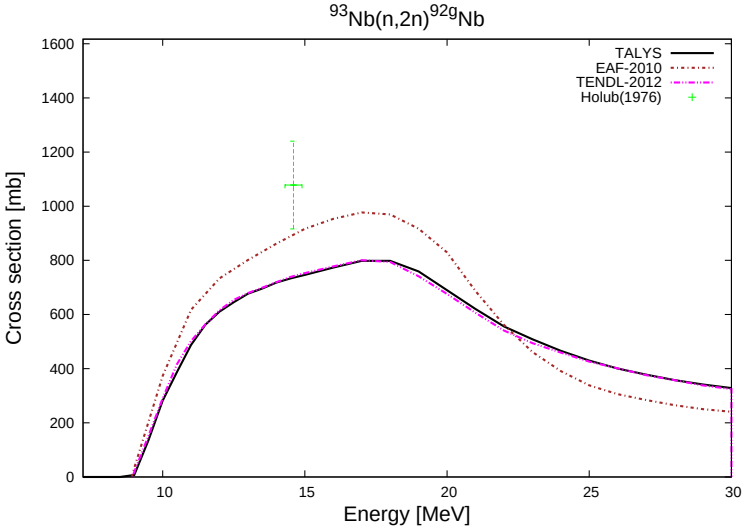
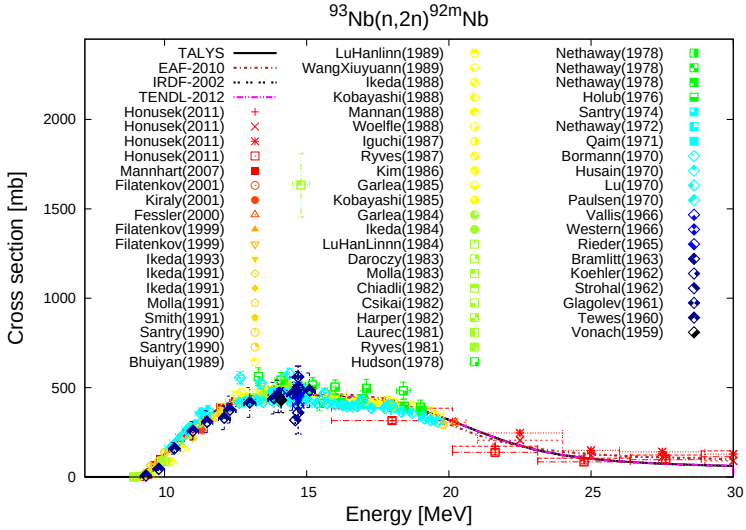
Mather(1972)
Haering(1971)
Paulsen(1970)


^{93}Nb(n,2n)^{92g}Nb
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Holub(1976)


^{93}Nb(n,2n)^{92m}Nb
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
IRDF-2002
TENDL-2012
Honusek(2011)
Honusek(2011)
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Mannhart(2007)
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Qaim(1971)
Bormann(1970)
Husain(1970)
Lu(1970)
Paulsen(1970)
Vallis(1966)
Western(1966)
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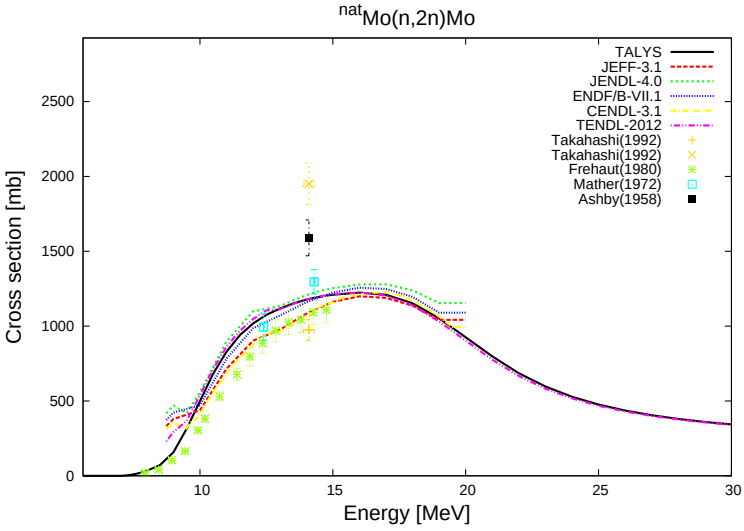
Bramlitt(1963)
Koehler(1962)
Strohal(1962)
Glagolev(1961)
Tewes(1960)
Vonach(1959)


^{nat}Mo(n,2n)Mo
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
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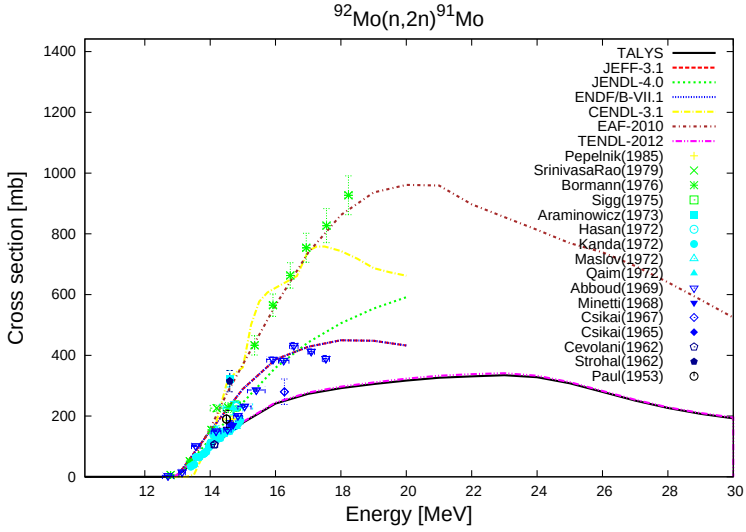
Takahashi(1992)
Frehaut(1980)
Mather(1972)
Ashby(1958)


^{92}Mo(n,2n)^{91}Mo
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Pepelnik(1985)
SrinivasaRao(1979)
Bormann(1976)
Sigg(1975)
Araminowicz(1973)
Hasan(1972)
Kanda(1972)
Maslov(1972)
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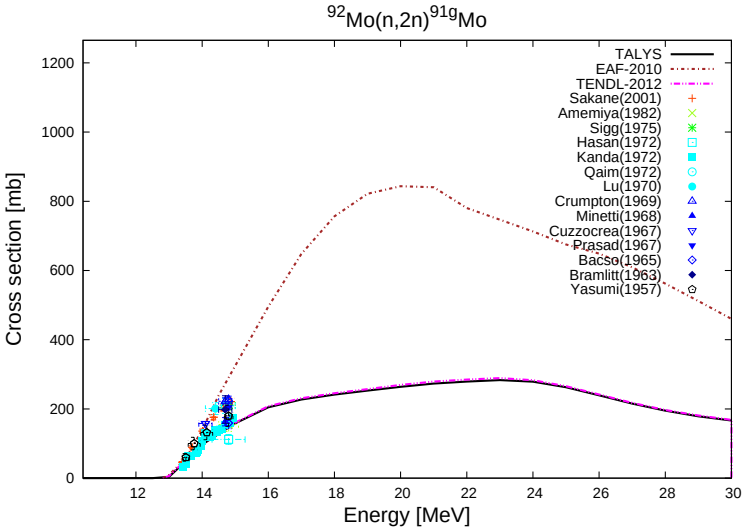
Paul(1953)


^{92}Mo(n,2n)^{91g}Mo
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
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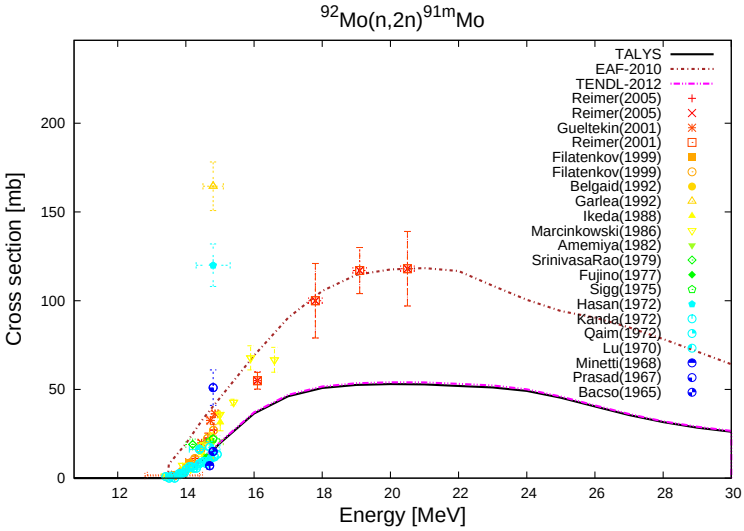
^{92}Mo(n,2n)^{91m}Mo
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Reimer(2005)
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Fujino(1977)
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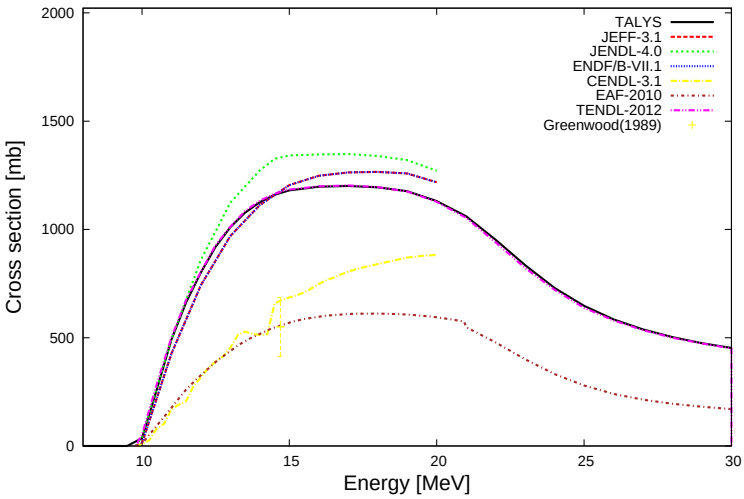
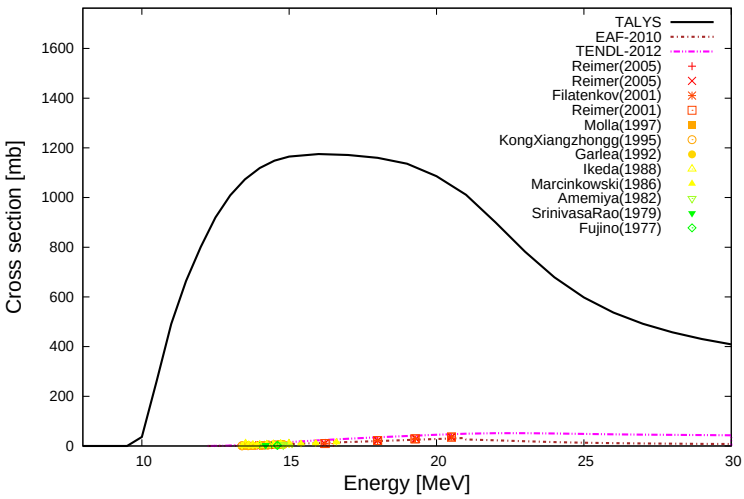
Minetti(1968)
Prasad(1967)
Bacso(1965)


^{94}Mo(n,2n)^{93}Mo
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Greenwood(1989)


^{94}Mo(n,2n)^{93m}Mo
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Reimer(2005)
Reimer(2005)
Filatenkov(2001)
Reimer(2001)
Molla(1997)
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Ikeda(1988)
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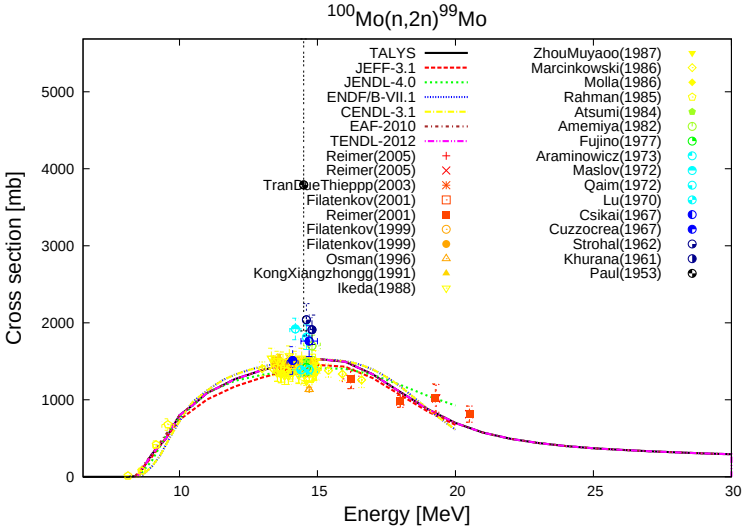
Amemiya(1982)
SrinivasaRao(1979)
Fujino(1977)


^{100}Mo(n,2n)^{99}Mo
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Reimer(2005)
Reimer(2005)
TranDucThieppp(2003)
Filatenkov(2001)
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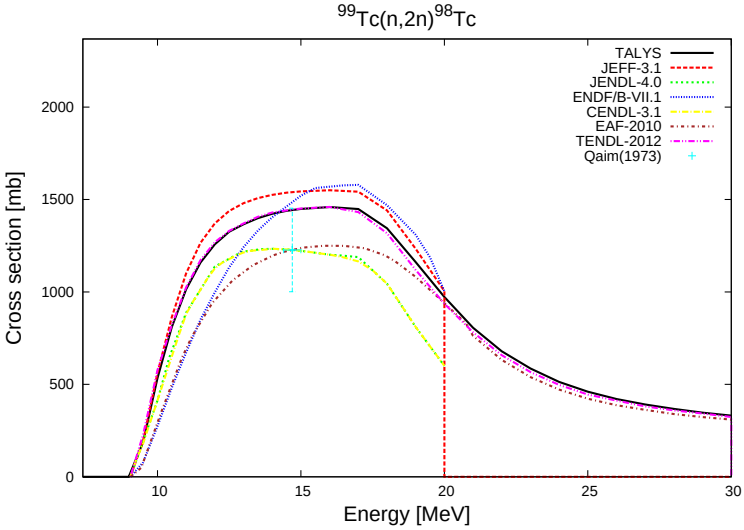
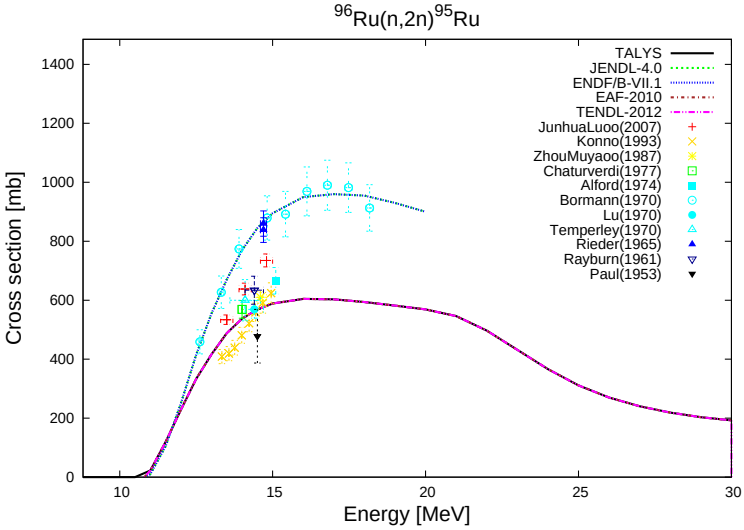
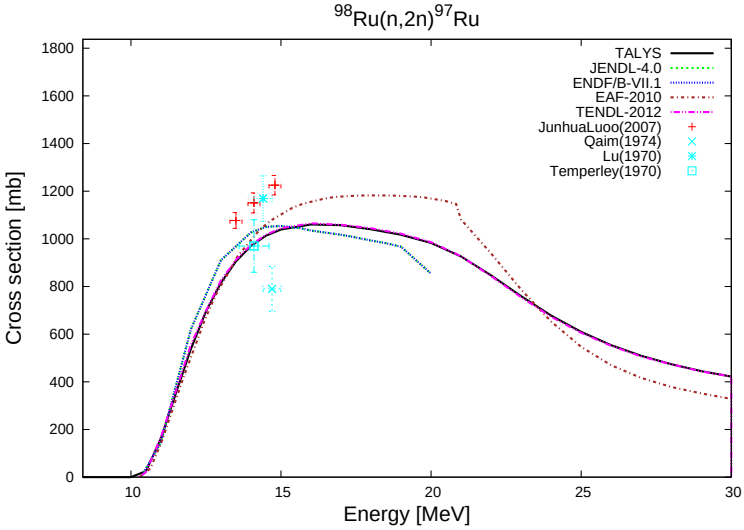
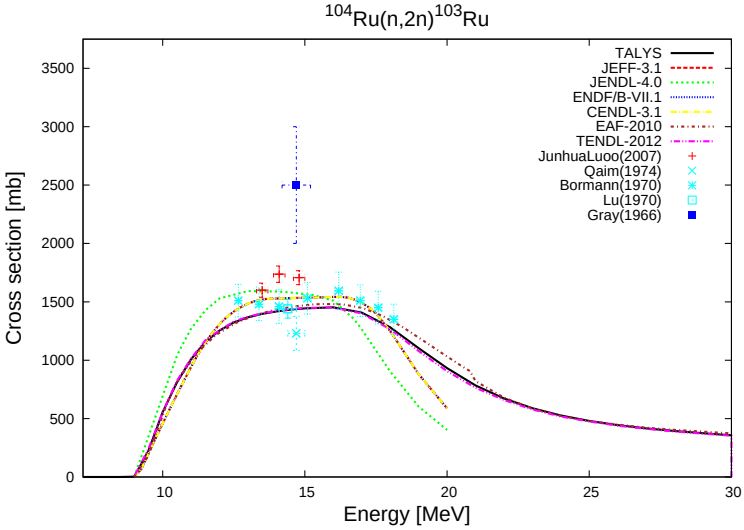
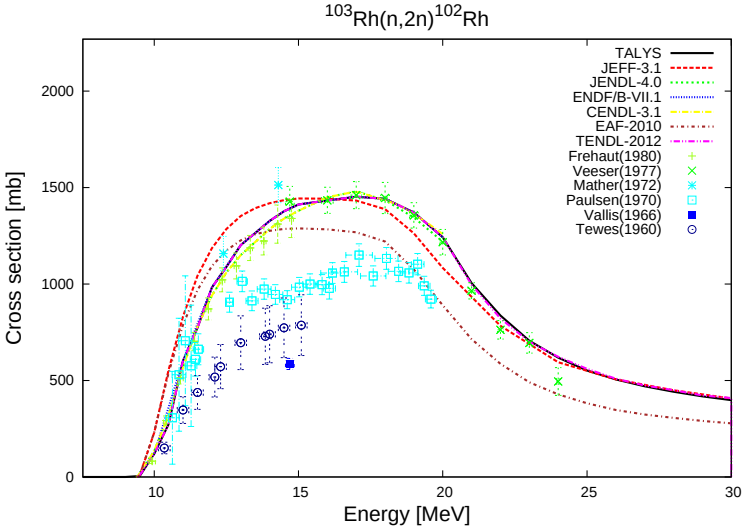
Paul(1953)

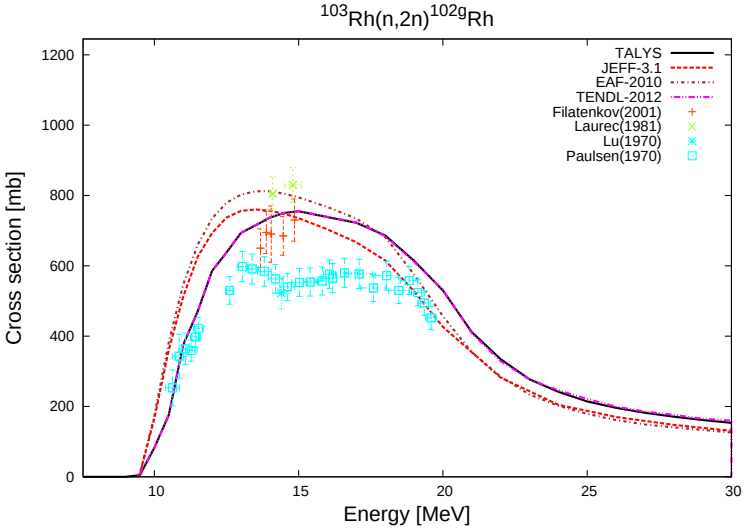

^{99}Tc(n,2n)^{98}Tc
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Qaim(1973)

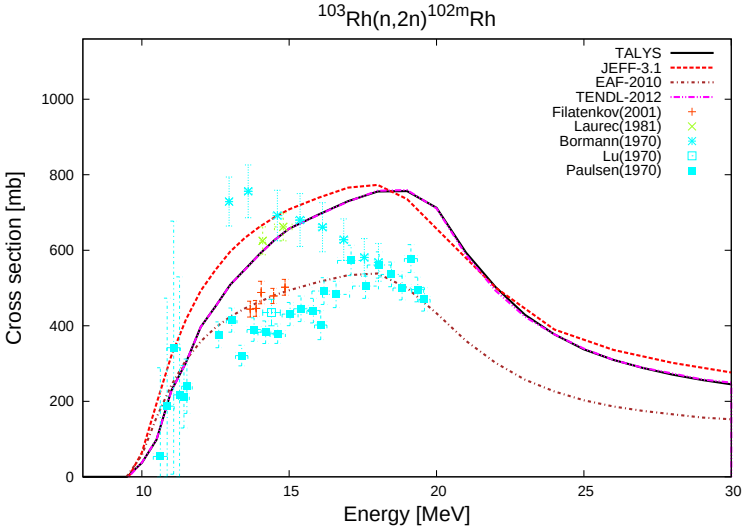

96Ru(n,2n)95Ru
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
JunhuaLuoo(2007)
Konno(1993)
ZhouMuyaoo(1987)
Chaturverdi(1977)
Alford(1974)
Bormann(1970)
Lu(1970)
Temperley(1970)
Rieder(1965)
Rayburn(1961)
Paul(1953)
Cross section [mb]
Energy [MeV]

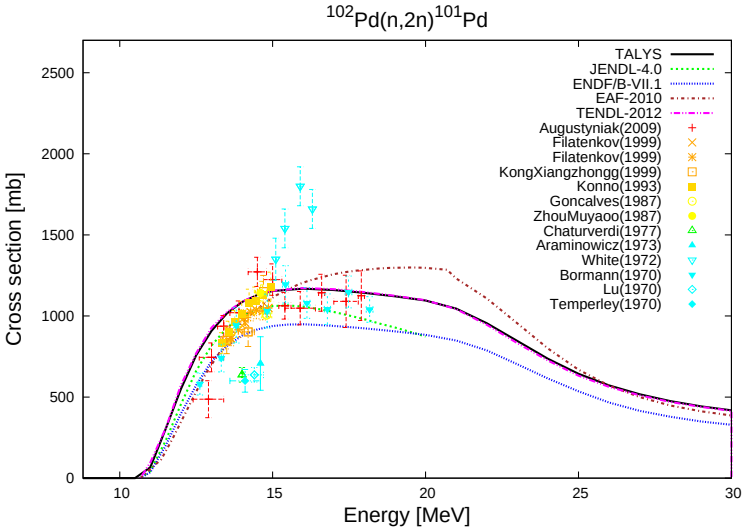

98Ru(n,2n)97Ru
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
JunhuaLuoo(2007)
Qaim(1974)
Lu(1970)
Temperley(1970)
Cross section [mb]
Energy [MeV]

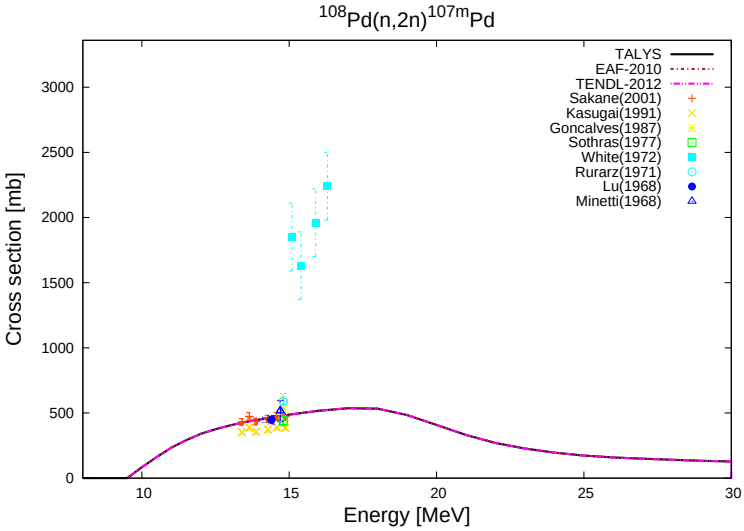

104Ru(n,2n)103Ru
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
JunhuaLuoo(2007)
Qaim(1974)
Bormann(1970)
Lu(1970)
Gray(1966)
Cross section [mb]
Energy [MeV]

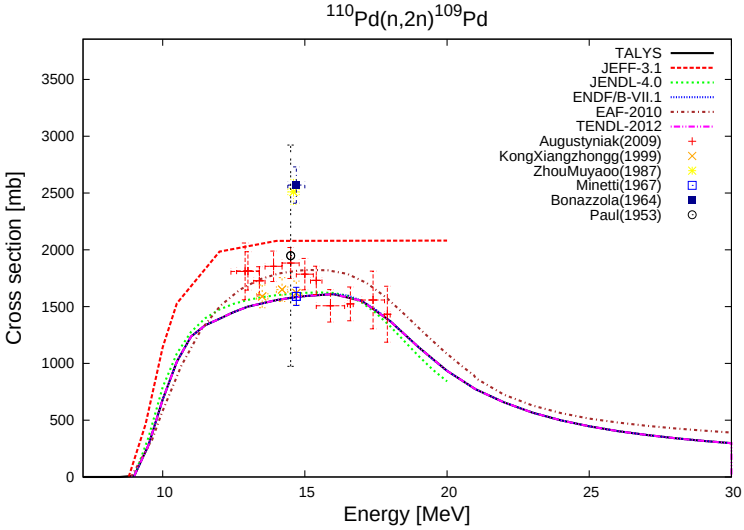

103Rh(n,2n)102Rh
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Frehaut(1980)
Veeser(1977)
Mather(1972)
Paulsen(1970)
Vallis(1966)
Tewes(1960)
Cross section [mb]
Energy [MeV]

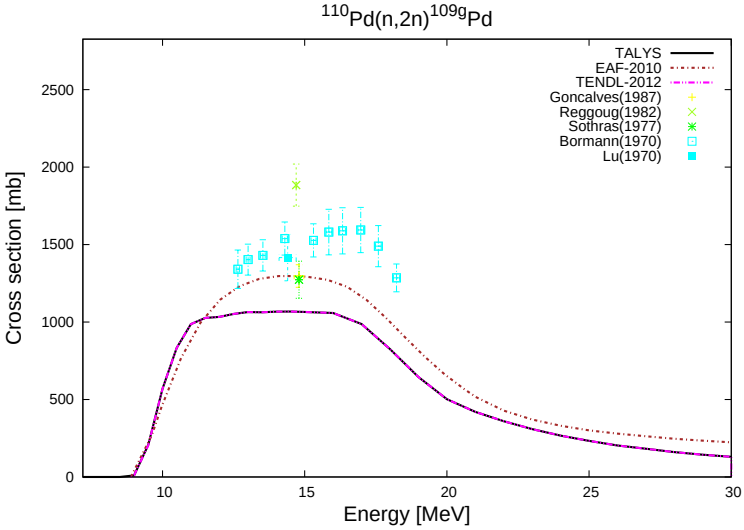

103Rh(n,2n)102gRh
TALYS
JEFF-3.1
EAF-2010
TENDL-2012
Filatenkov(2001)
Laurec(1981)
Lu(1970)
Paulsen(1970)
Cross section [mb]
Energy [MeV]

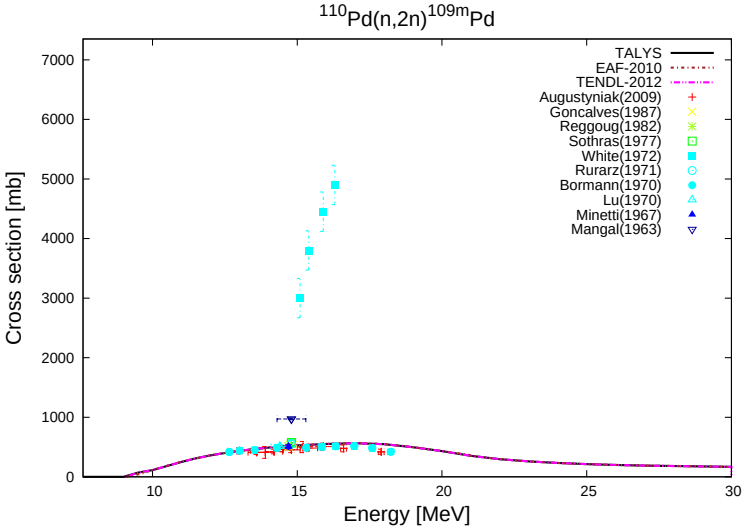

103Rh(n,2n)102mRh
TALYS
JEFF-3.1
EAF-2010
TENDL-2012
Filatenkov(2001)
Laurec(1981)
Bormann(1970)
Lu(1970)
Paulsen(1970)
Cross section [mb]
Energy [MeV]

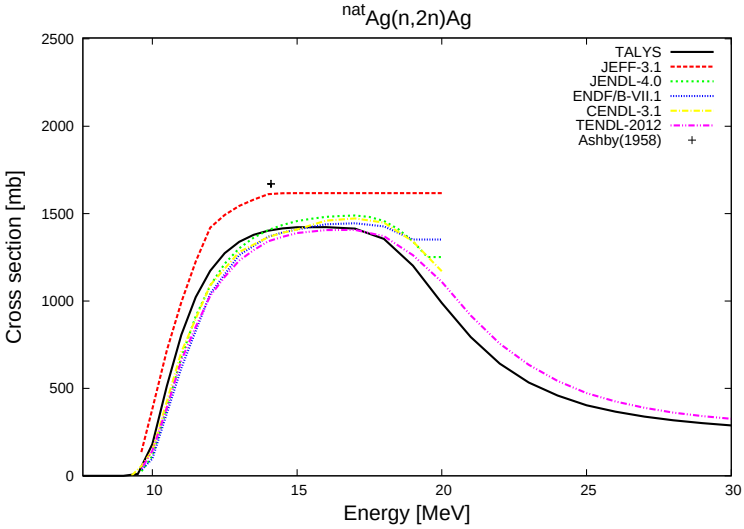

^{102}Pd(n,2n)^{101}Pd
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Augustyniak(2009)
Filatenkov(1999)
Filatenkov(1999)
KongXiangzhongg(1999)
Konno(1993)
Goncalves(1987)
ZhouMuyaoo(1987)
Chaturverdi(1977)
Araminowicz(1973)
White(1972)
Bormann(1970)
Lu(1970)
Temperley(1970)
Cross section [mb]
Energy [MeV]

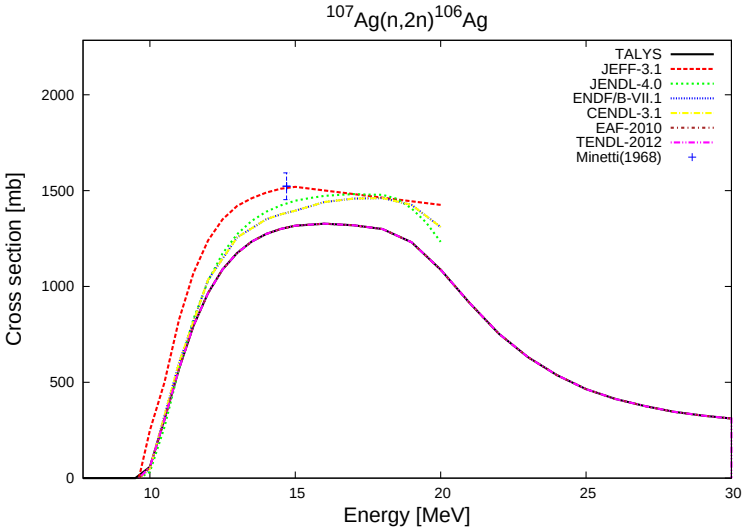

^{108}Pd(n,2n)^{107m}Pd
TALYS
EAF-2010
TENDL-2012
Sakane(2001)
Kasugai(1991)
Goncalves(1987)
Sothras(1977)
White(1972)
Rurarz(1971)
Lu(1968)
Minetti(1968)
Cross section [mb]
Energy [MeV]

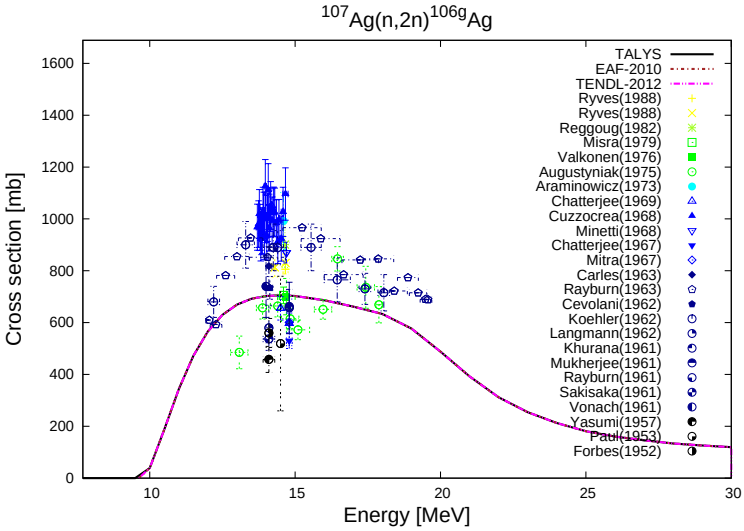

^{110}Pd(n,2n)^{109}Pd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Augustyniak(2009)
KongXiangzhongg(1999)
ZhouMuyaoo(1987)
Minetti(1967)
Bonazzola(1964)
Paul(1953)
Cross section [mb]
Energy [MeV]

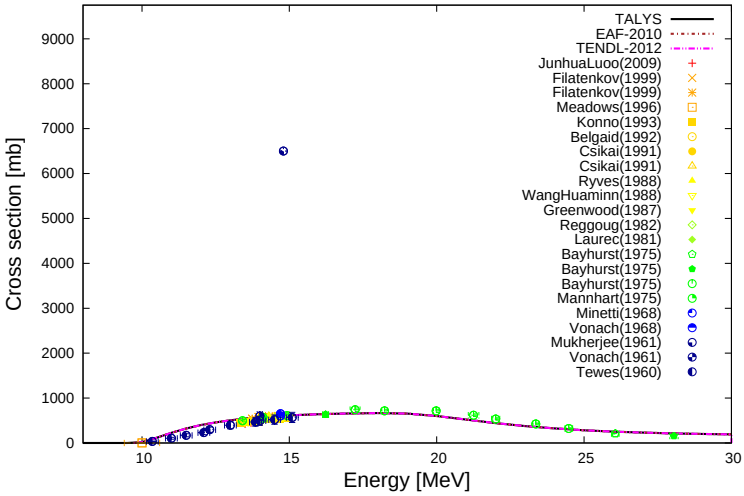

^{110}Pd(n,2n)^{109g}Pd
TALYS
EAF-2010
TENDL-2012
Goncalves(1987)
Reggoug(1982)
Sothras(1977)
Bormann(1970)
Lu(1970)
Cross section [mb]
Energy [MeV]


^{110}Pd(n,2n)^{109m}Pd
TALYS
EAF-2010
TENDL-2012
Augustyniak(2009)
Goncalves(1987)
Reggoug(1982)
Sothras(1977)
White(1972)
Rurarz(1971)
Bormann(1970)
Lu(1970)
Minetti(1967)
Mangal(1963)
Cross section [mb]
Energy [MeV]


^{nat}Ag(n,2n)Ag
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Ashby(1958)
Cross section [mb]
Energy [MeV]


^{107}Ag(n,2n)^{106}Ag
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Minetti(1968)


^{107}Ag(n,2n)^{106g}Ag
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Ryves(1988)
Ryves(1988)
Reggoug(1982)
Misra(1979)
Valkonen(1976)
Augustyniak(1975)
Araminowicz(1973)
Chatterjee(1969)
Cuzzocrea(1968)
Minetti(1968)
Chatterjee(1967)
Mitra(1967)
Carles(1963)
Rayburn(1963)
Cevolani(1962)
Koehler(1962)
Langmann(1962)
Khurana(1961)
Mukherjee(1961)
Rayburn(1961)
Sakisaka(1961)
Vonach(1961)
Yasumi(1957)
Paul(1953)
Forbes(1952)


^{107}Ag(n,2n)^{106m}Ag
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2009)
Filatenkov(1999)
Filatenkov(1999)
Meadows(1996)
Konno(1993)
Belgaid(1992)
Csikai(1991)
Csikai(1991)
Ryves(1988)
WangHuaminn(1988)
Greenwood(1987)
Reggoug(1982)
Laurec(1981)
Bayhurst(1975)
Bayhurst(1975)
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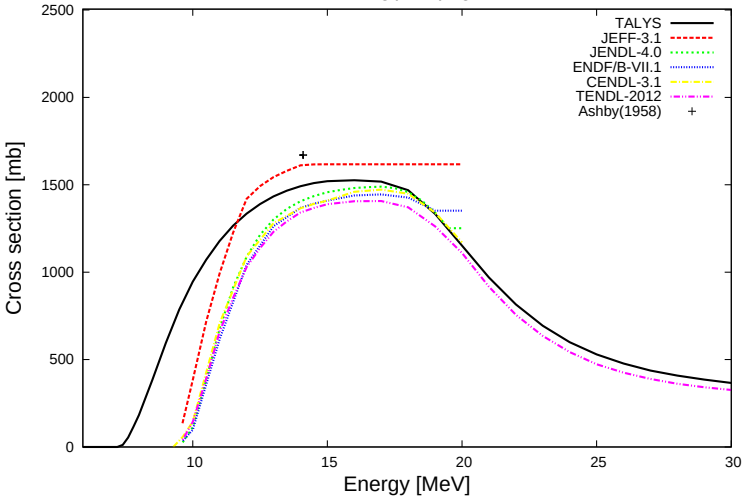
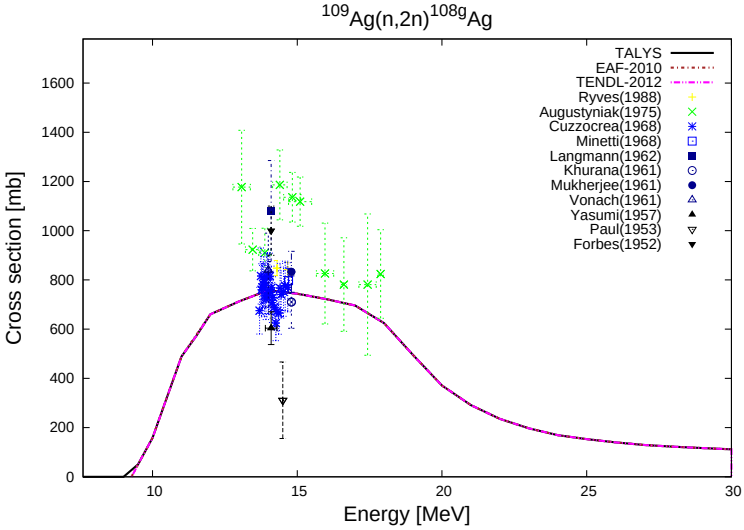
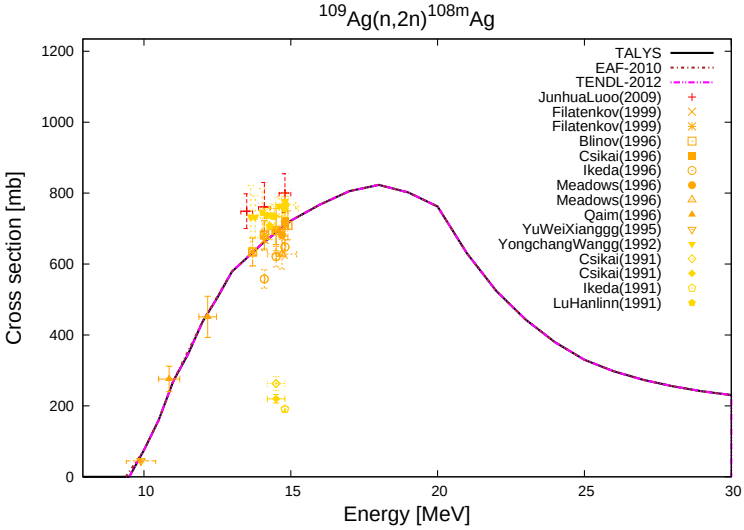
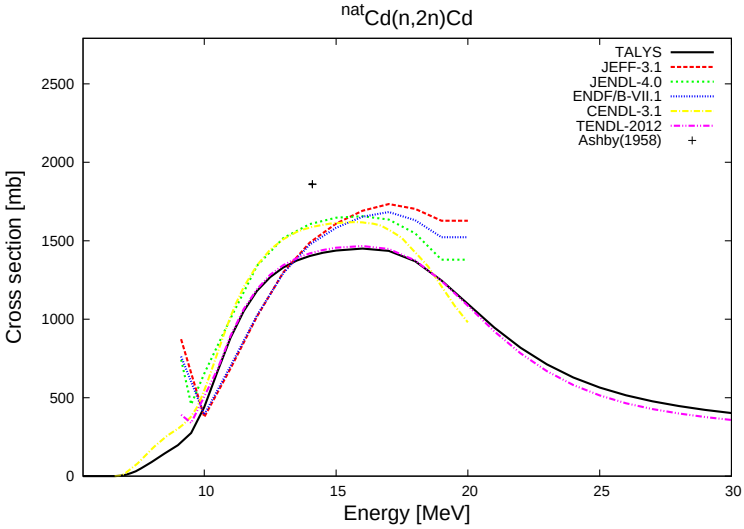
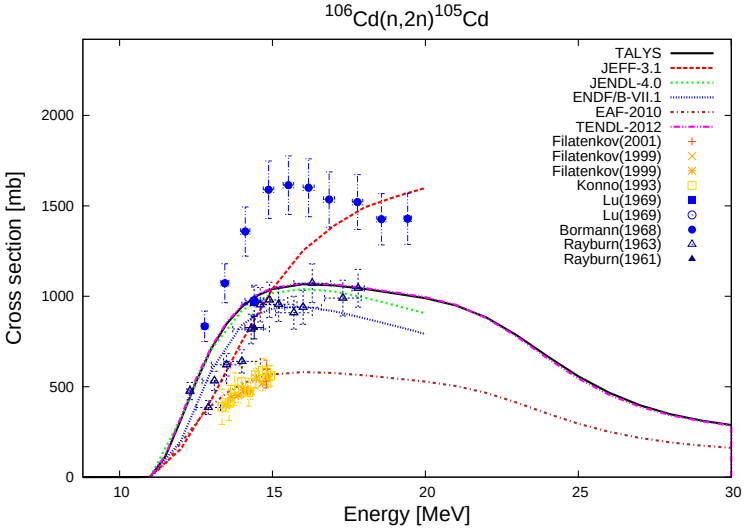
Mannhart(1975)
Minetti(1968)
Vonach(1968)
Mukherjee(1961)
Vonach(1961)
Tewes(1960)

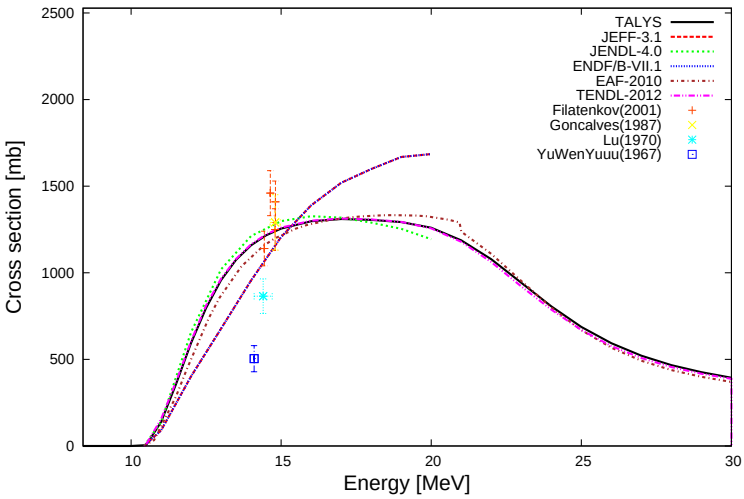

^{nat}Ag(n,2n)Ag
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Ashby(1958)

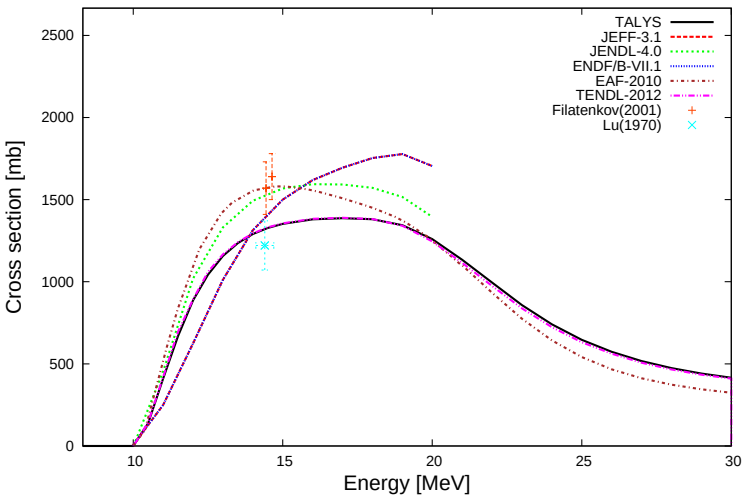

^{109}Ag(n,2n)^{108g}Ag
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Ryves(1988)
Augustyniak(1975)
Cuzzocrea(1968)
Minetti(1968)
Langmann(1962)
Khurana(1961)
Mukherjee(1961)
Vonach(1961)
Yasumi(1957)
Paul(1953)
Forbes(1952)

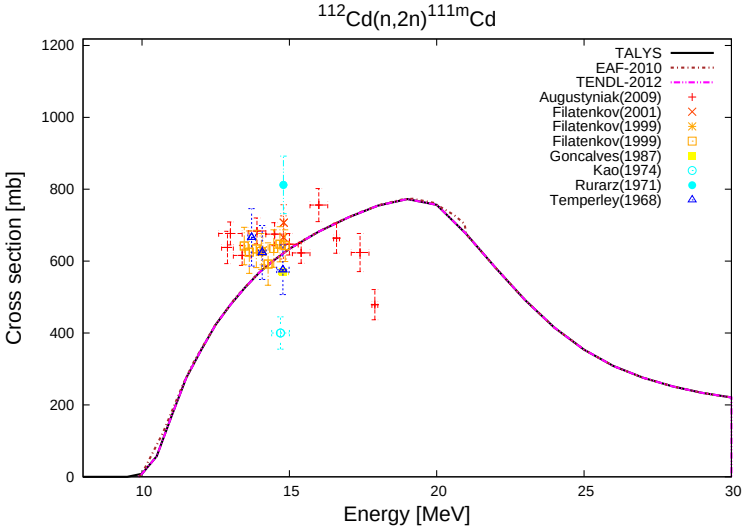

^{109}Ag(n,2n)^{108m}Ag
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2009)
Filatenkov(1999)
Filatenkov(1999)
Blinov(1996)
Csikai(1996)
Ikeda(1996)
Meadows(1996)
Meadows(1996)
Qaim(1996)
YuWeiXianggg(1995)
YongchangWangg(1992)
Csikai(1991)
Csikai(1991)
Ikeda(1991)
LuHanlinn(1991)

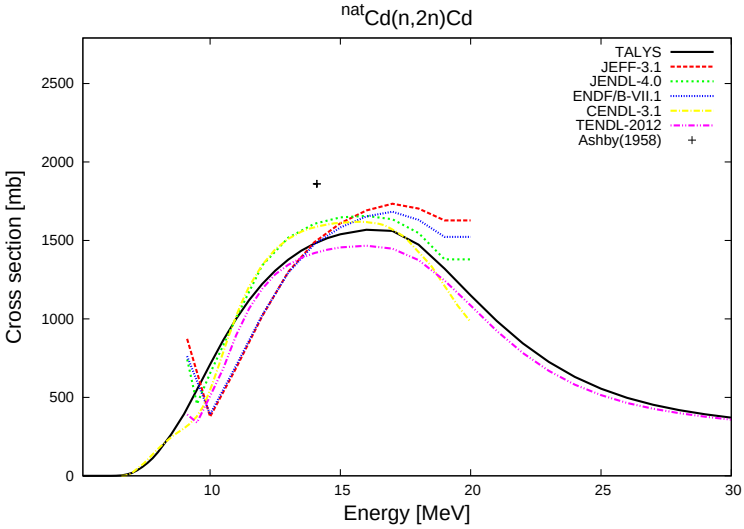

natCd(n,2n)Cd
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Ashby(1958)

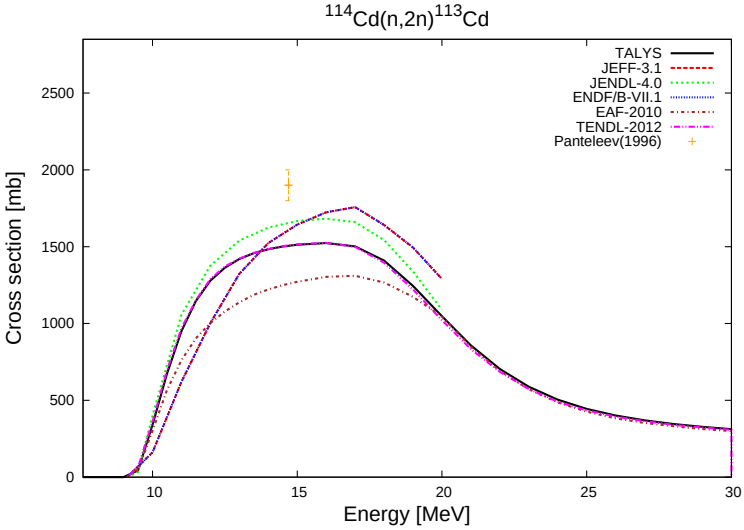

106Cd(n,2n)105Cd
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(2001)
Filatenkov(1999)
Filatenkov(1999)
Konno(1993)
Lu(1969)
Lu(1969)
Bormann(1968)
Rayburn(1963)
Rayburn(1961)

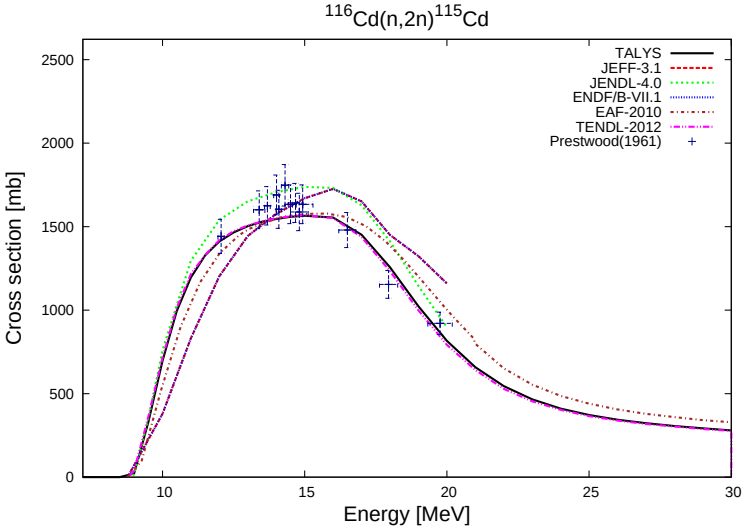

108Cd(n,2n)107Cd
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(2001)
Goncalves(1987)
Lu(1970)
YuWenYuuu(1967)

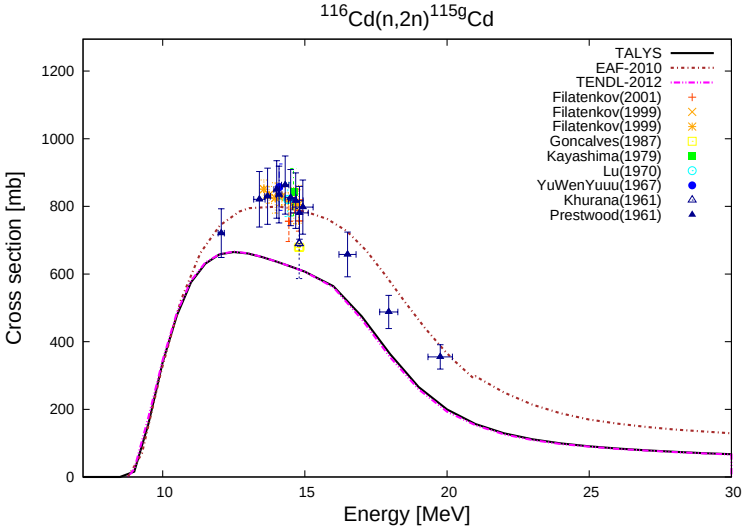

110Cd(n,2n)109Cd
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(2001)
Lu(1970)

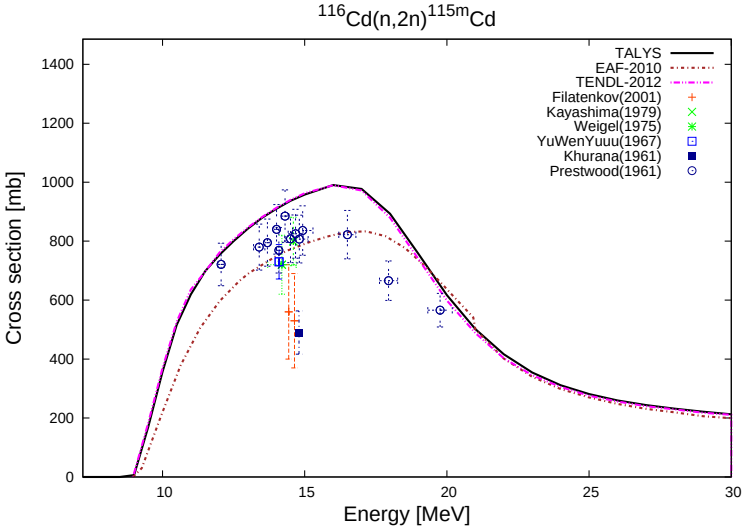

112Cd(n,2n)111mCd
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Augustyniak(2009)
Filatenkov(2001)
Filatenkov(1999)
Filatenkov(1999)
Goncalves(1987)
Kao(1974)
Rurarz(1971)
Temperley(1968)

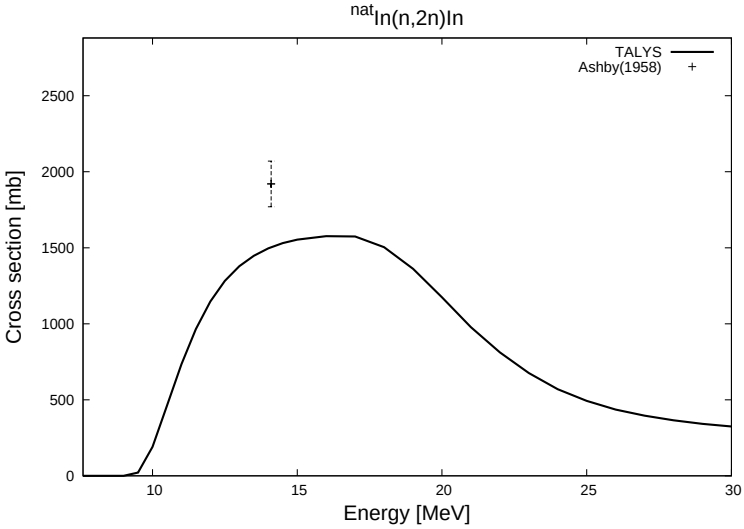

natCd(n,2n)Cd
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Ashby(1958)

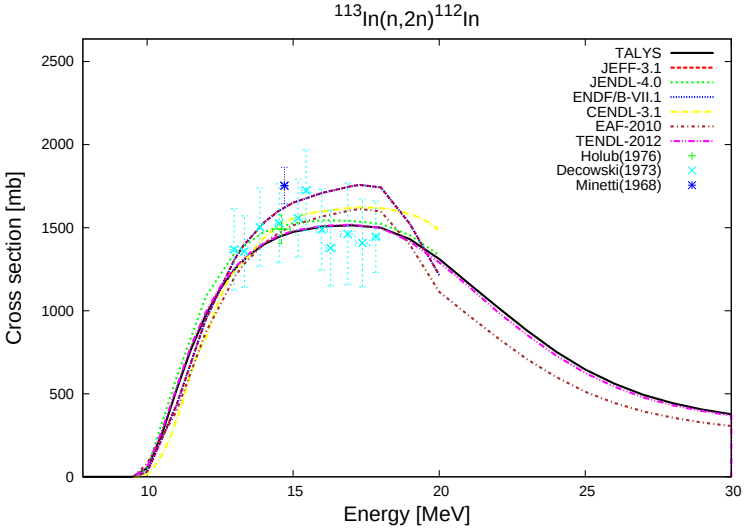

^{114}Cd(n,2n)^{113}Cd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Panteleev(1996)
Cross section [mb]
Energy [MeV]

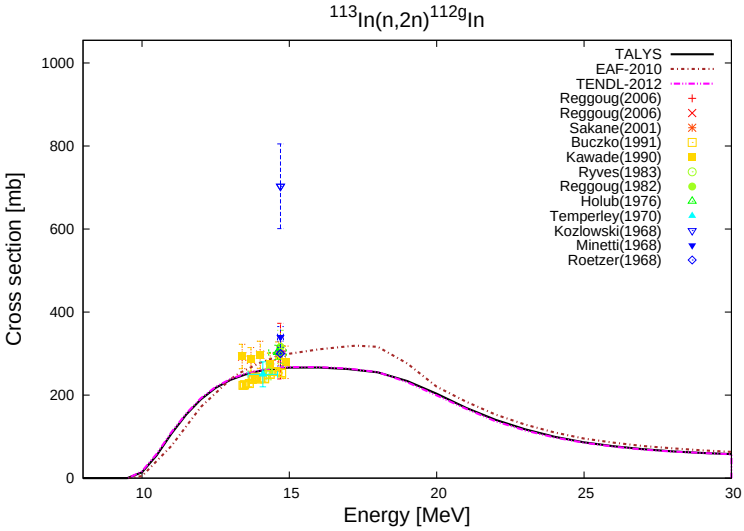

^{116}Cd(n,2n)^{115}Cd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Prestwood(1961)
Cross section [mb]
Energy [MeV]

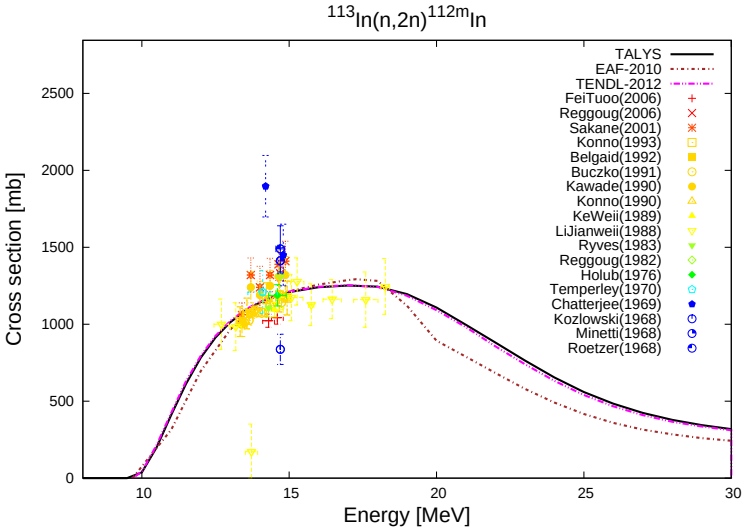

^{116}Cd(n,2n)^{115g}Cd
TALYS
EAF-2010
TENDL-2012
Filatenkov(2001)
Filatenkov(1999)
Filatenkov(1999)
Goncalves(1987)
Kayashima(1979)
Lu(1970)
YuWenYuuu(1967)
Khurana(1961)
Prestwood(1961)
Cross section [mb]
Energy [MeV]

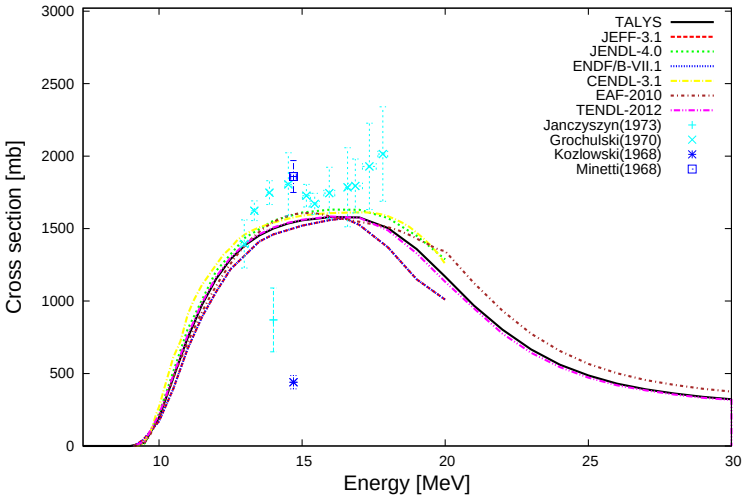

^{116}Cd(n,2n)^{115m}Cd
TALYS
EAF-2010
TENDL-2012
Filatenkov(2001)
Kayashima(1979)
Weigel(1975)
YuWenYuuu(1967)
Khurana(1961)
Prestwood(1961)
Cross section [mb]
Energy [MeV]

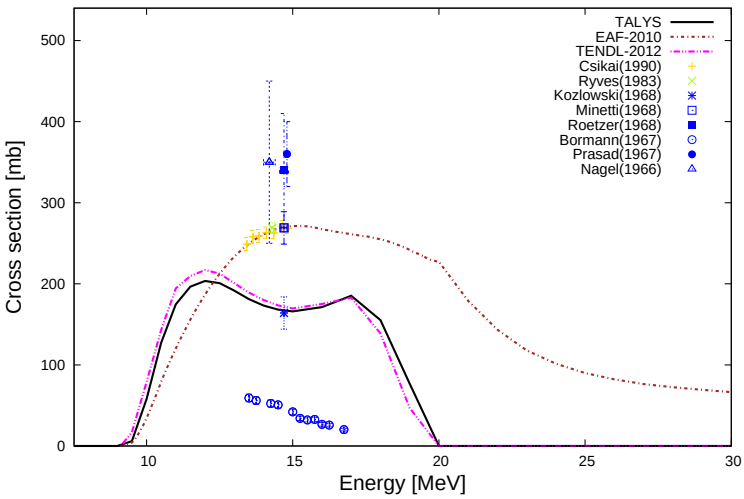

^{nat}In(n,2n)In
TALYS
Ashby(1958)
Cross section [mb]
Energy [MeV]

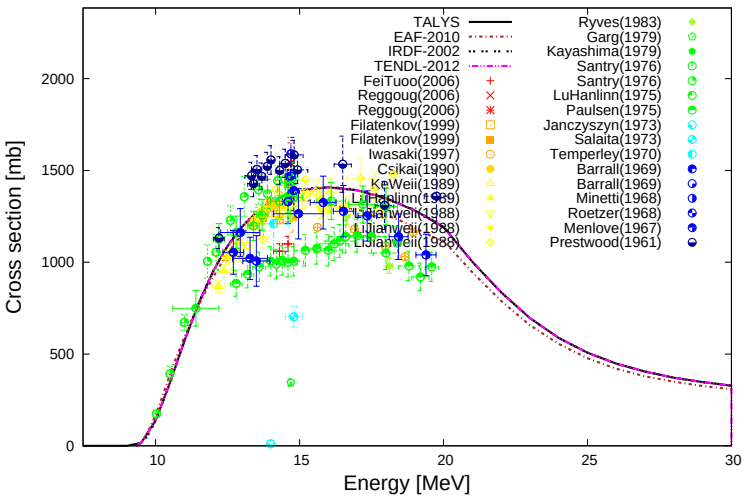

^{113}In(n,2n)^{112}In
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Holub(1976)
Decowski(1973)
Minetti(1968)
Cross section [mb]
Energy [MeV]

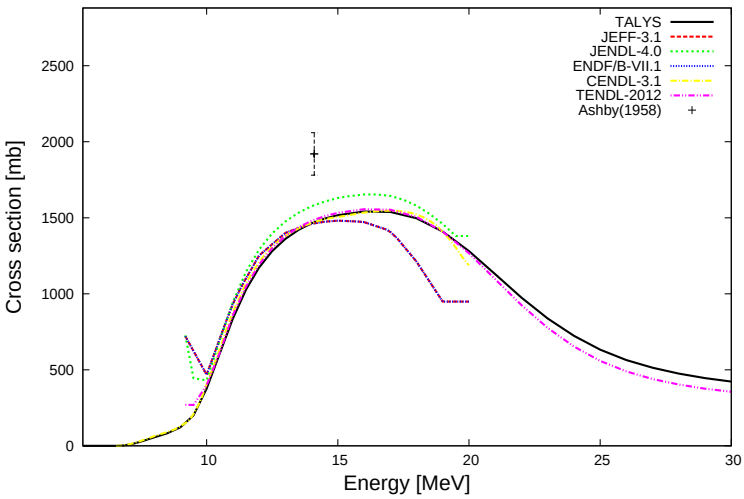

^{113}In(n,2n)^{112g}In
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Reggoug(2006)
Reggoug(2006)
Sakane(2001)
Buczko(1991)
Kawade(1990)
Ryves(1983)
Reggoug(1982)
Holub(1976)
Temperley(1970)
Kozlowski(1968)
Minetti(1968)
Roetzer(1968)

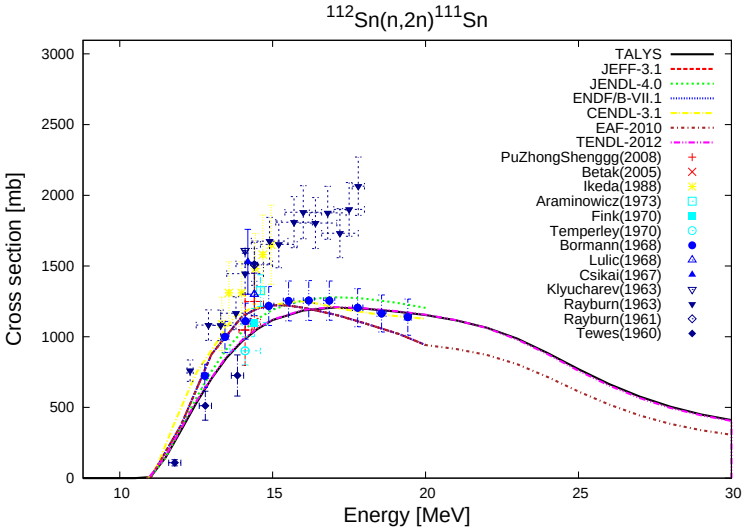

^{113}In(n,2n)^{112m}In
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
FeiTuoo(2006)
Reggoug(2006)
Sakane(2001)
Konno(1993)
Belgaid(1992)
Buczko(1991)
Kawade(1990)
Konno(1990)
KeWeii(1989)
LiJianweii(1988)
Ryves(1983)
Reggoug(1982)
Holub(1976)
Temperley(1970)
Chatterjee(1969)
Kozlowski(1968)
Minetti(1968)
Roetzer(1968)

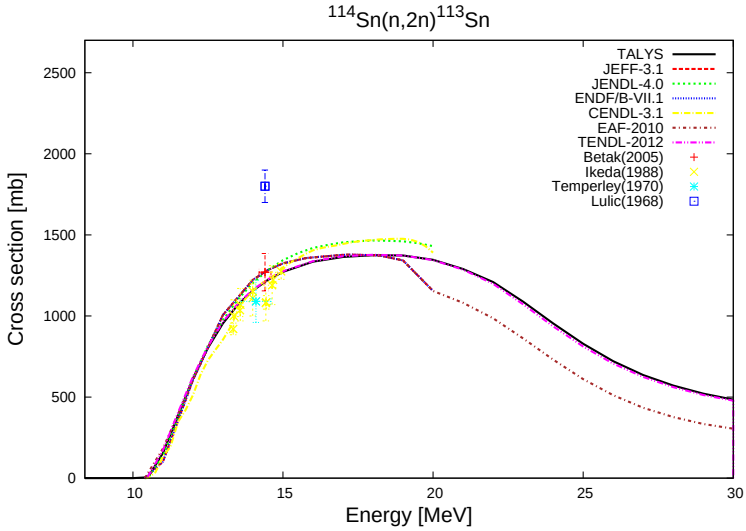

^{115}In(n,2n)^{114}In
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Janczyszyn(1973)
Grochulski(1970)
Kozlowski(1968)
Minetti(1968)

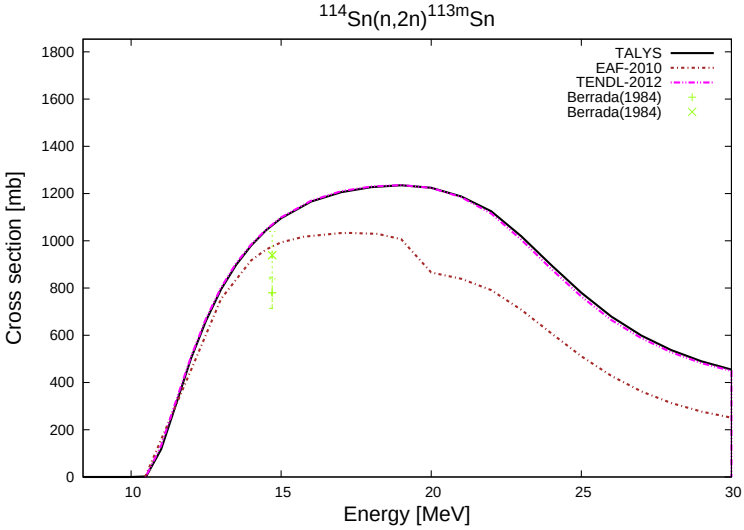

^{115}In(n,2n)^{114g}In
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Csikai(1990)
Ryves(1983)
Kozlowski(1968)
Minetti(1968)
Roetzer(1968)
Bormann(1967)
Prasad(1967)
Nagel(1966)

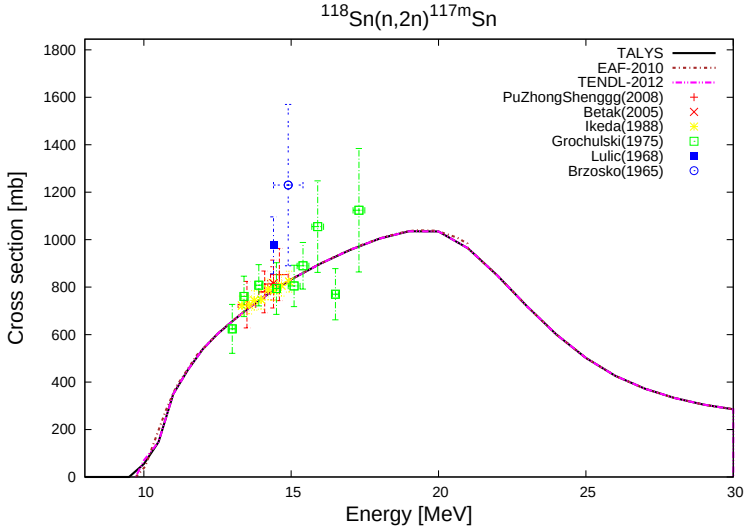

^{115}In(n,2n)^{114m}In
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
IRDF-2002
TENDL-2012
FeiTuoo(2006)
Reggoug(2006)
Reggoug(2006)
Filatenkov(1999)
Filatenkov(1999)
Iwasaki(1997)
Csikai(1990)
KeWeii(1989)
LuHanlinn(1989)
LiJianweii(1988)
LiJianweii(1988)
LiJianweii(1988)
Ryves(1983)
Garg(1979)
Kayashima(1979)
Santry(1976)
Santry(1976)
LuHanlinn(1975)
Paulsen(1975)
Janczyszyn(1973)
Salaita(1973)
Temperley(1970)
Barrall(1969)
Barrall(1969)
Minetti(1968)
Roetzer(1968)
Menlove(1967)
Prestwood(1961)

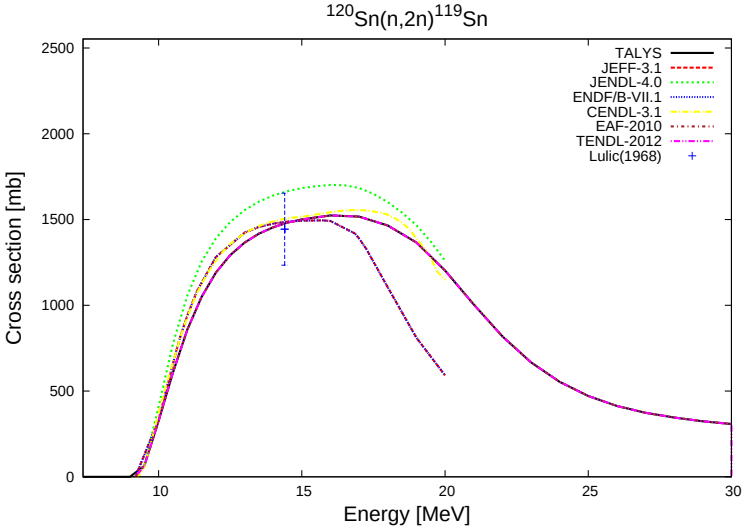

^{nat}Sn(n,2n)Sn
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Ashby(1958)

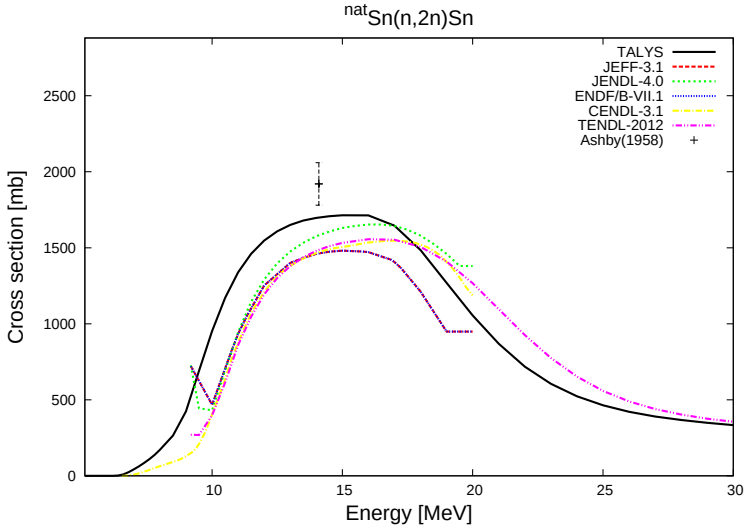

^{112}Sn(n,2n)^{111}Sn
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
PuZhongShenggg(2008)
Betak(2005)
Ikeda(1988)
Araminowicz(1973)
Fink(1970)
Temperley(1970)
Bormann(1968)
Lulic(1968)
Csikai(1967)
Klyucharev(1963)
Rayburn(1963)
Rayburn(1961)
Tewes(1960)

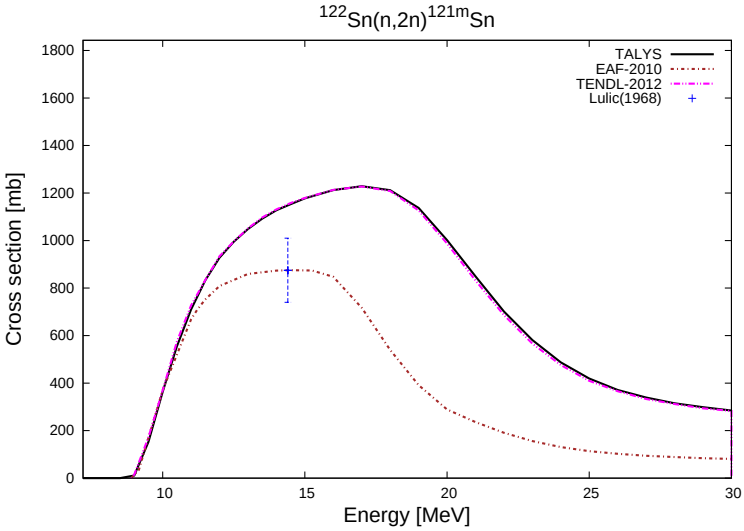

^{114}Sn(n,2n)^{113}Sn
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Betak(2005)
Ikeda(1988)
Temperley(1970)
Lulic(1968)

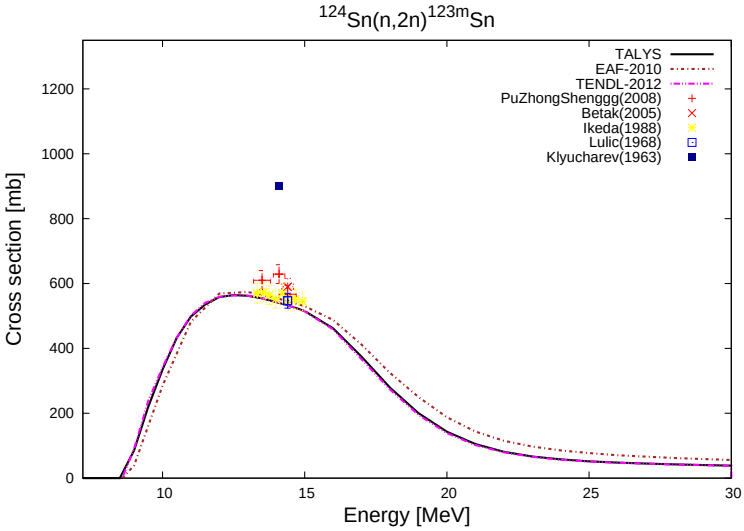

^{114}Sn(n,2n)^{113m}Sn
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Berrada(1984)
Berrada(1984)

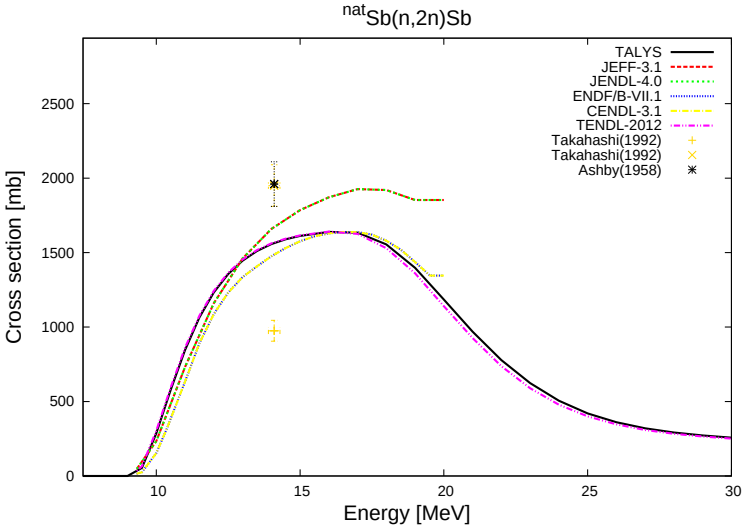

^{118}Sn(n,2n)^{117m}Sn
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
PuZhongShenggg(2008)
Betak(2005)
Ikeda(1988)
Grochulski(1975)
Lulic(1968)
Brzosko(1965)

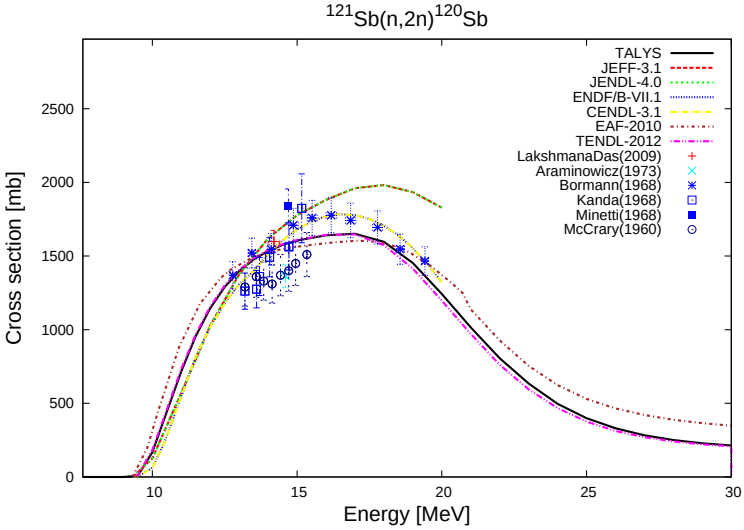

^{120}Sn(n,2n)^{119}Sn
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Lulic(1968)

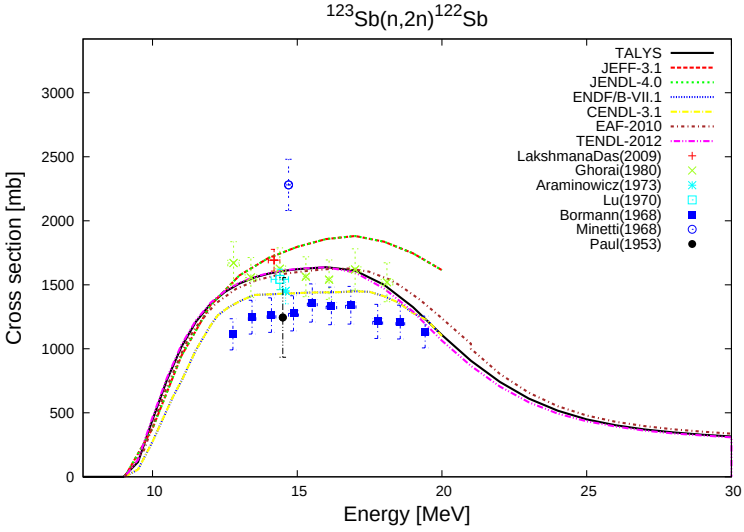

^{nat}Sn(n,2n)Sn
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Ashby(1958)

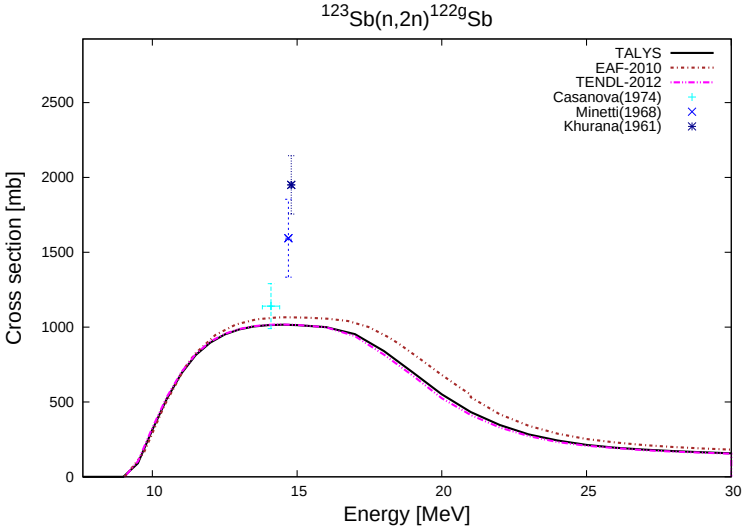

^{122}Sn(n,2n)^{121m}Sn
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Lulic(1968)

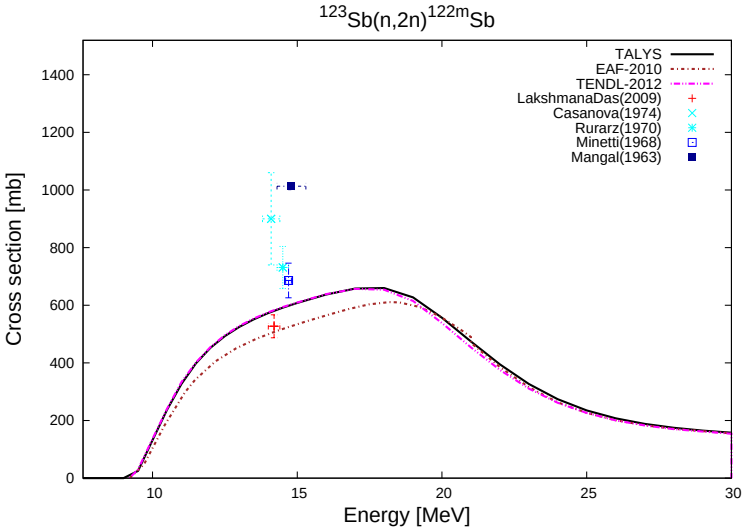

^{124}Sn(n,2n)^{123m}Sn
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
PuZhongShenggg(2008)
Betak(2005)
Ikeda(1988)
Lulic(1968)
Klyucharev(1963)

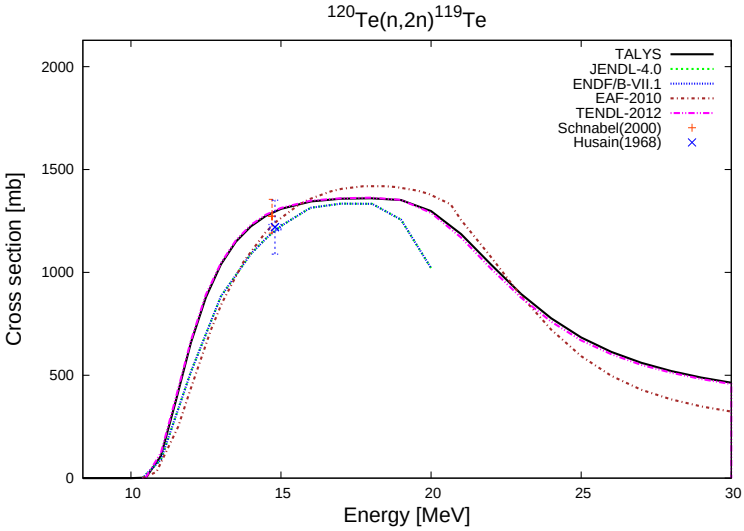

^{nat}Sb(n,2n)Sb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Takahashi(1992)
Takahashi(1992)
Ashby(1958)

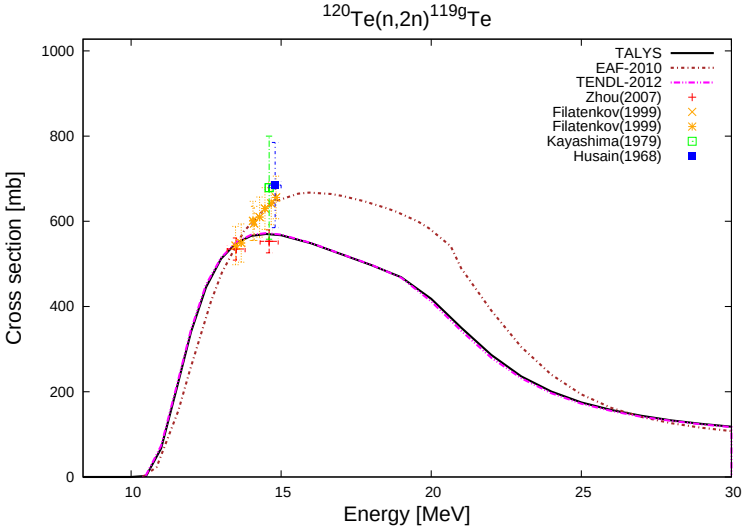

^{121}Sb(n,2n)^{120}Sb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
LakshmanaDas(2009)
Araminowicz(1973)
Bormann(1968)
Kanda(1968)
Minetti(1968)
McCrary(1960)

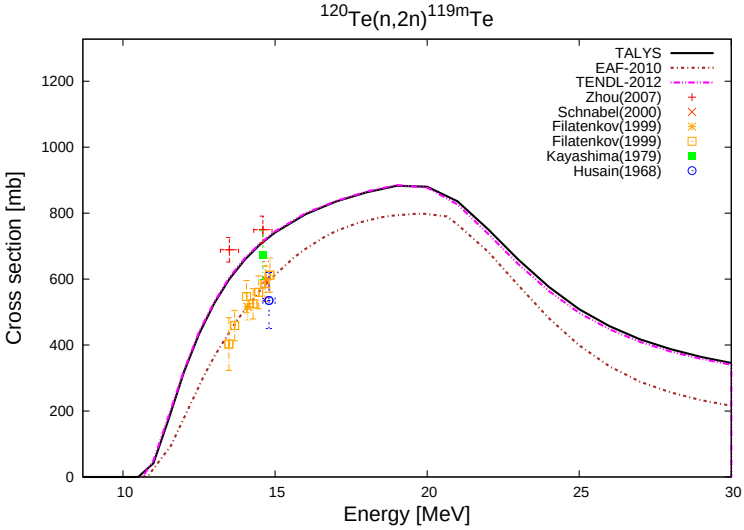

^{123}Sb(n,2n)^{122}Sb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
LakshmanaDas(2009)
Ghorai(1980)
Araminowicz(1973)
Lu(1970)
Bormann(1968)
Minetti(1968)
Paul(1953)

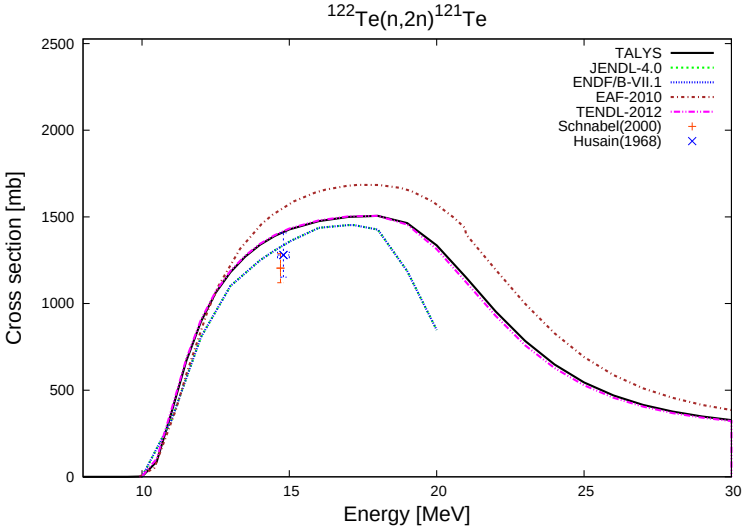

^{123}Sb(n,2n)^{122g}Sb
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Casanova(1974)
Minetti(1968)
Khurana(1961)

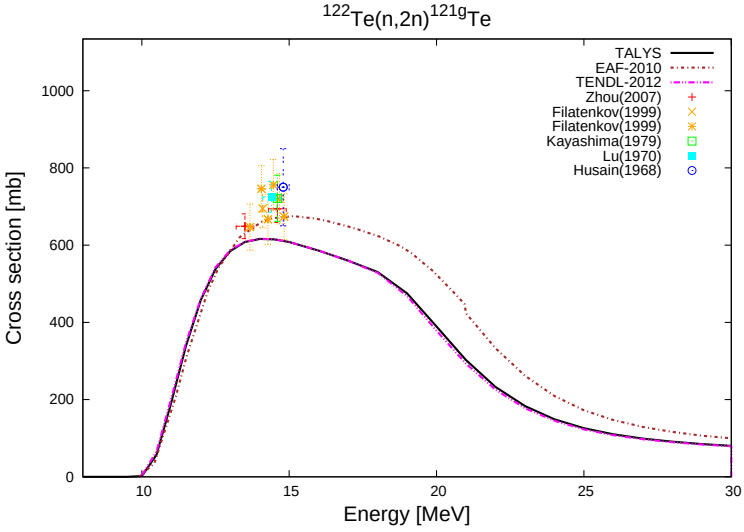

^{123}Sb(n,2n)^{122m}Sb
TALYS
EAF-2010
TENDL-2012
LakshmanaDas(2009)
Casanova(1974)
Rurarz(1970)
Minetti(1968)
Mangal(1963)
Cross section [mb]
Energy [MeV]

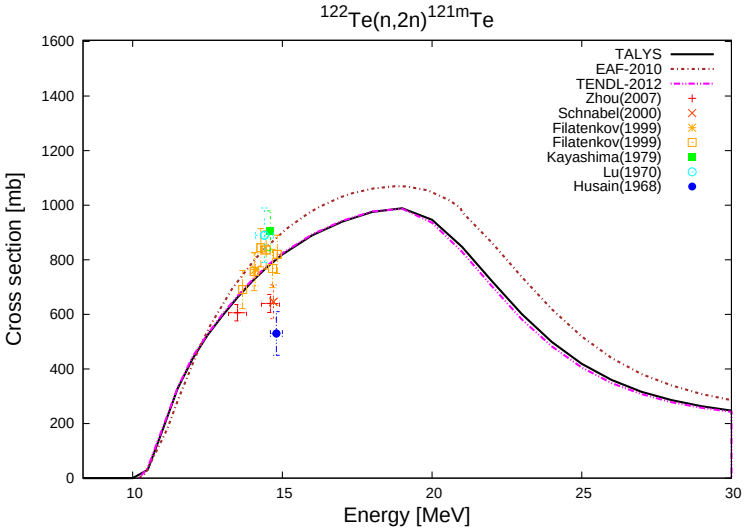

^{120}Te(n,2n)^{119}Te
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Schnabel(2000)
Husain(1968)
Cross section [mb]
Energy [MeV]

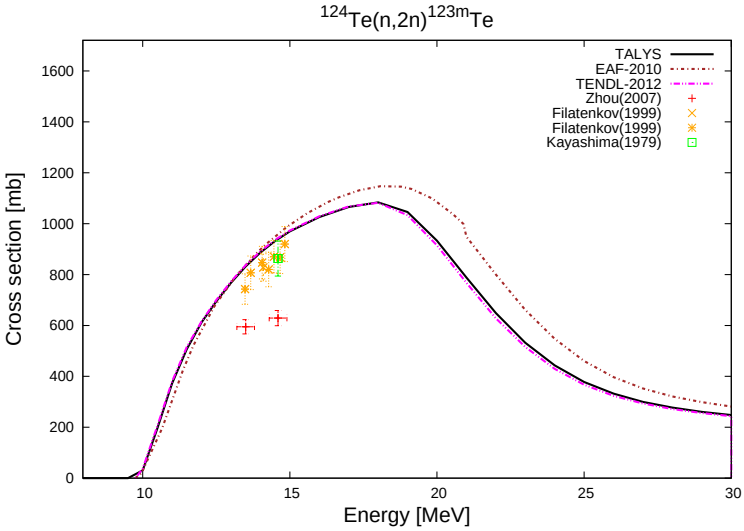

^{120}Te(n,2n)^{119g}Te
TALYS
EAF-2010
TENDL-2012
Zhou(2007)
Filatenkov(1999)
Filatenkov(1999)
Kayashima(1979)
Husain(1968)
Cross section [mb]
Energy [MeV]

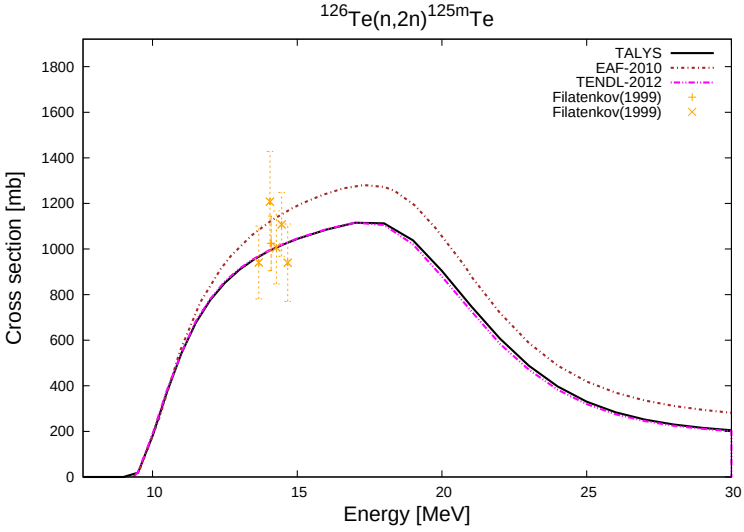

^{120}Te(n,2n)^{119m}Te
TALYS
EAF-2010
TENDL-2012
Zhou(2007)
Schnabel(2000)
Filatenkov(1999)
Filatenkov(1999)
Kayashima(1979)
Husain(1968)
Cross section [mb]
Energy [MeV]

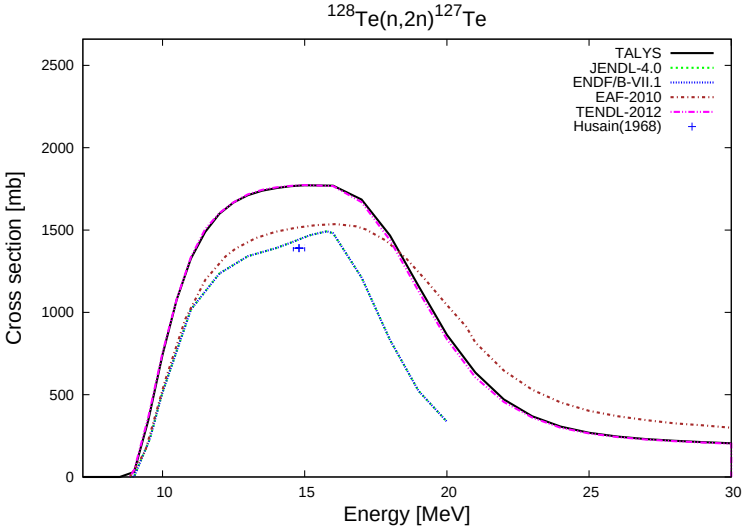

^{122}Te(n,2n)^{121}Te
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Schnabel(2000)
Husain(1968)
Cross section [mb]
Energy [MeV]

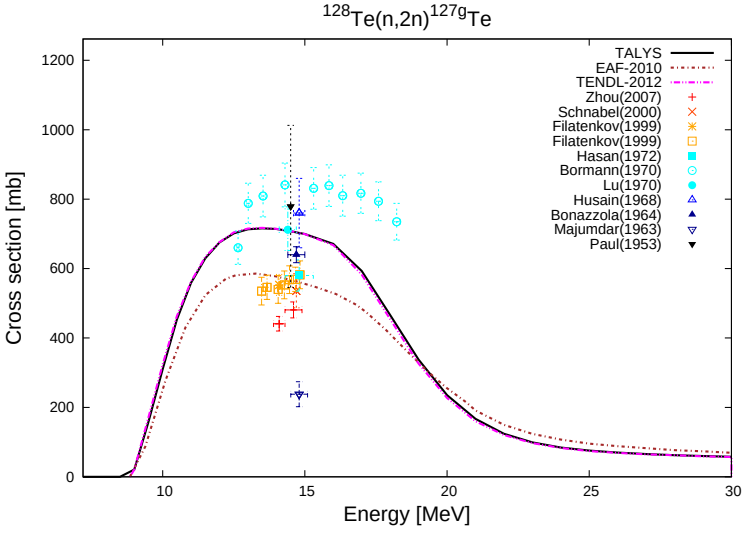

^{122}Te(n,2n)^{121g}Te
TALYS
EAF-2010
TENDL-2012
Zhou(2007)
Filatenkov(1999)
Filatenkov(1999)
Kayashima(1979)
Lu(1970)
Husain(1968)
Cross section [mb]
Energy [MeV]

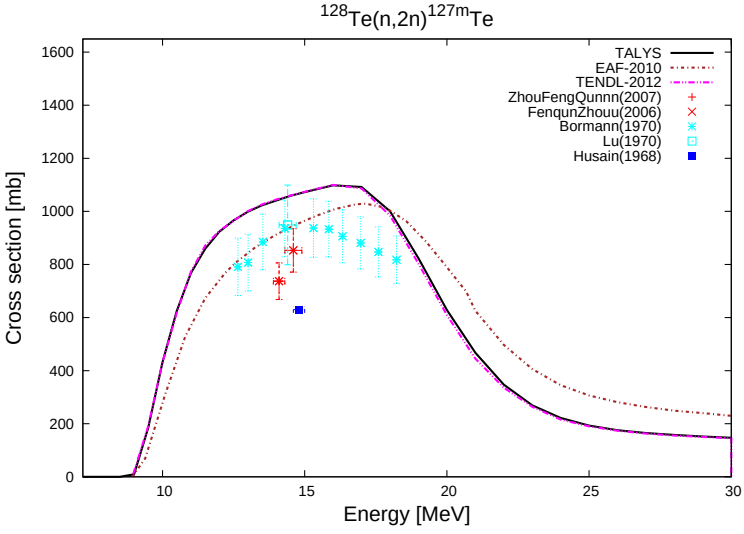

^{122}Te(n,2n)^{121m}Te
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Zhou(2007)
Schnabel(2000)
Filatenkov(1999)
Filatenkov(1999)
Kayashima(1979)
Lu(1970)
Husain(1968)

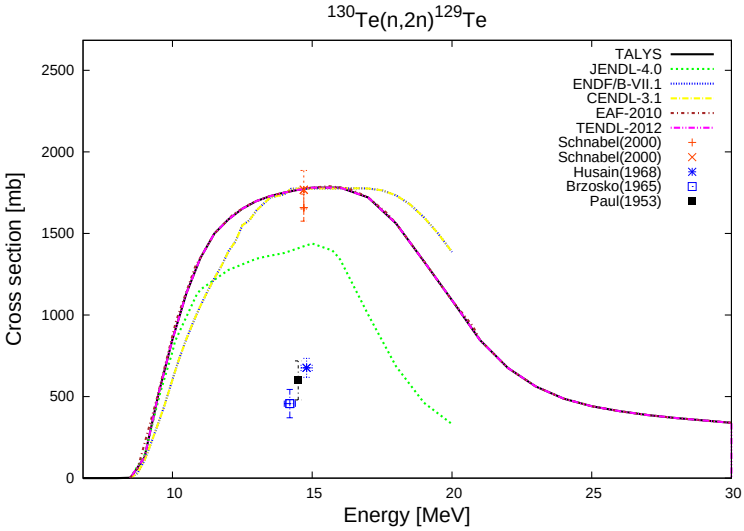

^{124}Te(n,2n)^{123m}Te
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Zhou(2007)
Filatenkov(1999)
Filatenkov(1999)
Kayashima(1979)

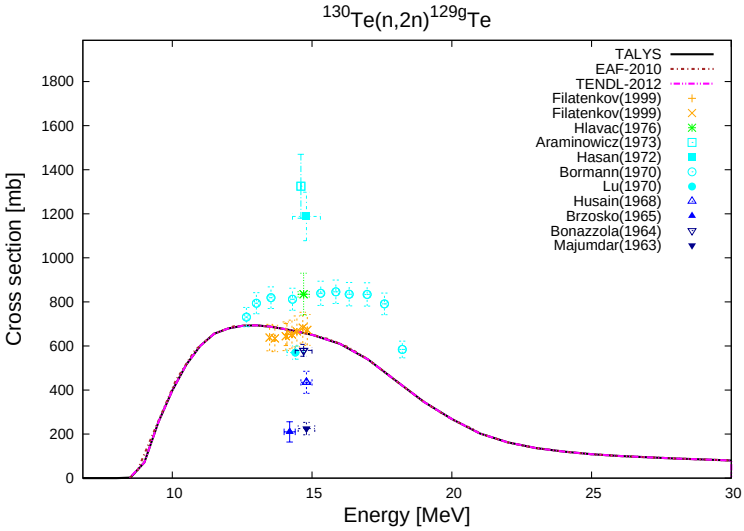

^{126}Te(n,2n)^{125m}Te
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)

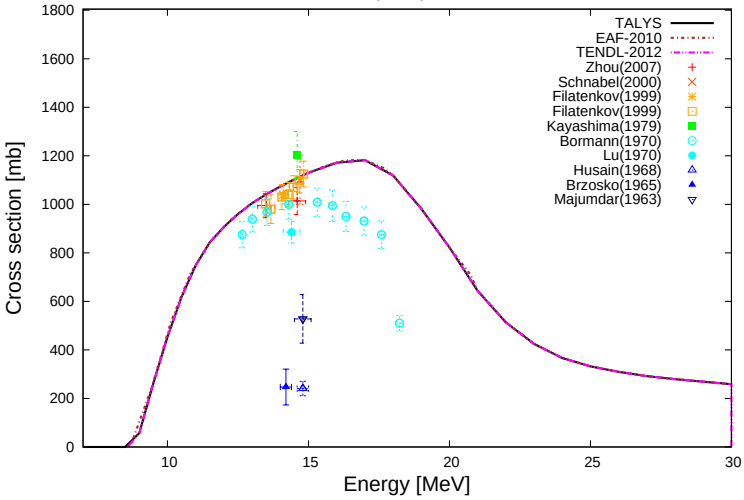

^{128}Te(n,2n)^{127}Te
Cross section [mb]
Energy [MeV]
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Husain(1968)

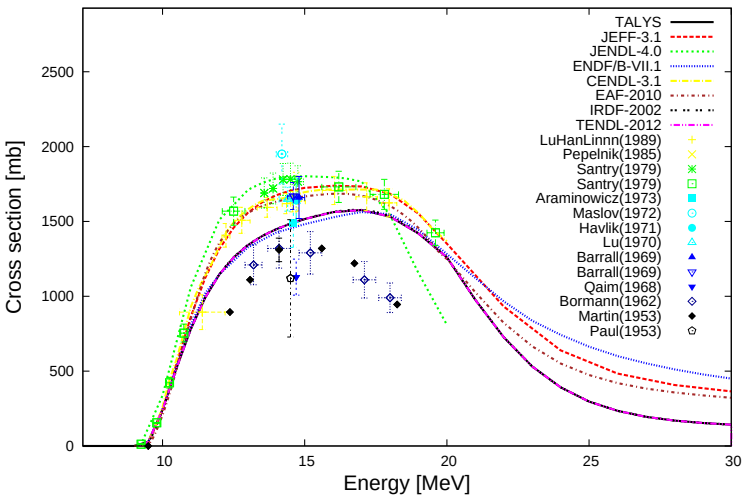

^{128}Te(n,2n)^{127g}Te
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Zhou(2007)
Schnabel(2000)
Filatenkov(1999)
Filatenkov(1999)
Hasan(1972)
Bormann(1970)
Lu(1970)
Husain(1968)
Bonazzola(1964)
Majumdar(1963)
Paul(1953)

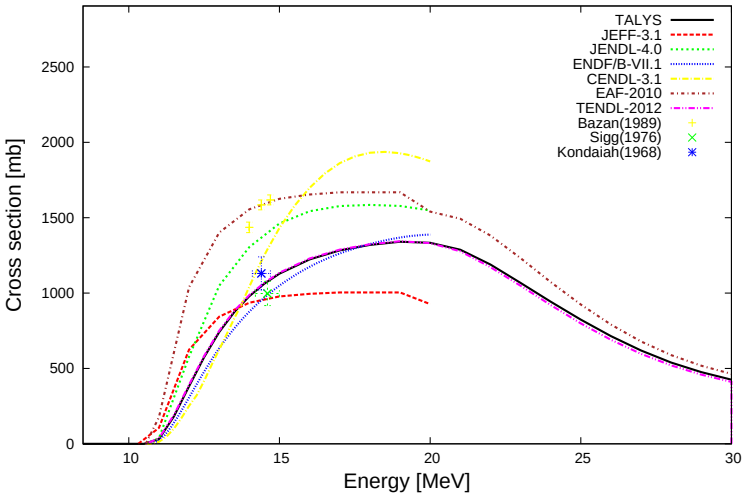

^{128}Te(n,2n)^{127m}Te
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
ZhouFengQunnn(2007)
FenqunZhouu(2006)
Bormann(1970)
Lu(1970)
Husain(1968)

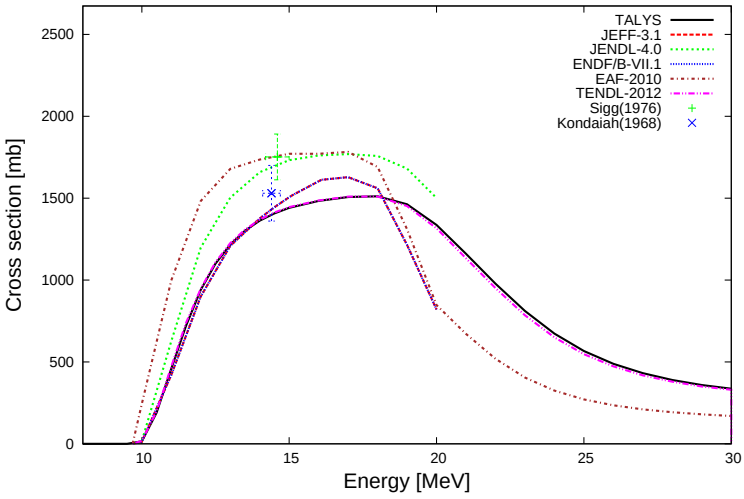

^{130}Te(n,2n)^{129}Te
Cross section [mb]
Energy [MeV]
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Schnabel(2000)
Schnabel(2000)
Husain(1968)
Brzosko(1965)
Paul(1953)

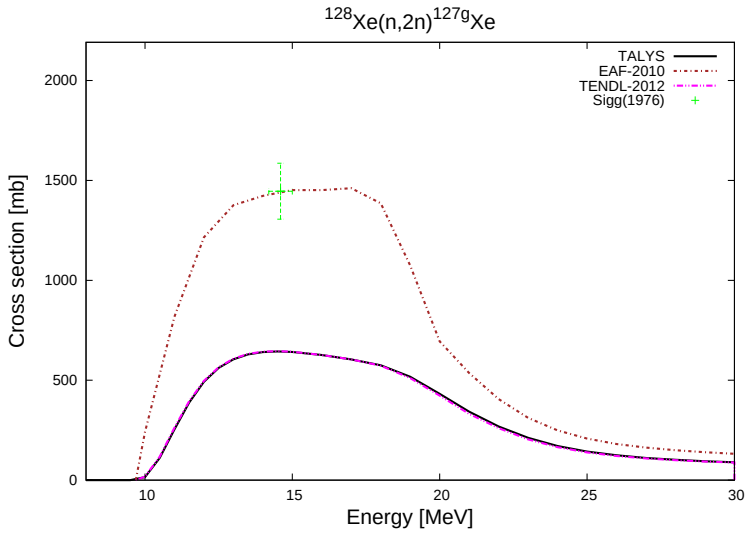

^{130}Te(n,2n)^{129g}Te
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Hlavac(1976)
Araminowicz(1973)
Hasan(1972)
Bormann(1970)
Lu(1970)
Husain(1968)
Brzosko(1965)
Bonazzola(1964)
Majumdar(1963)

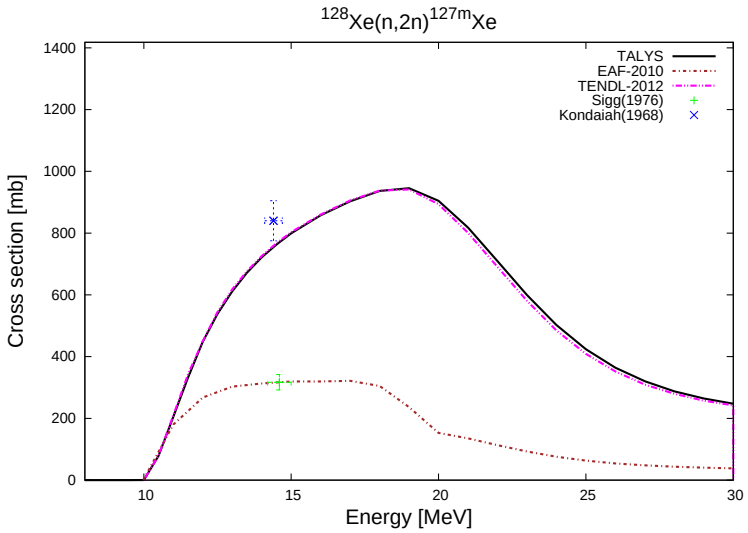

^{130}Te(n,2n)^{129m}Te
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Zhou(2007)
Schnabel(2000)
Filatenkov(1999)
Filatenkov(1999)
Kayashima(1979)
Bormann(1970)
Lu(1970)
Husain(1968)
Brzosko(1965)
Majumdar(1963)

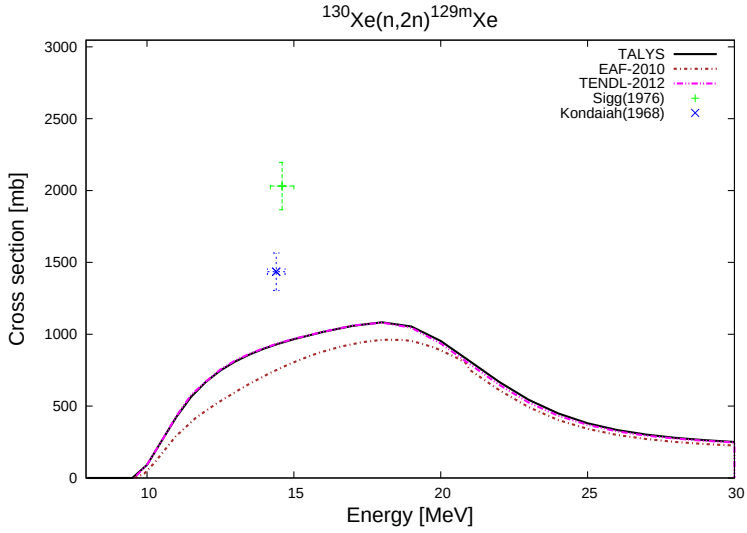

^{127}I(n,2n)^{126}I
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
LuHanLinnn(1989)
Pepelnik(1985)
Santry(1979)
Santry(1979)
Araminowicz(1973)
Maslov(1972)
Havlik(1971)
Lu(1970)
Barrall(1969)
Barrall(1969)
Qaim(1968)
Bormann(1962)
Martin(1953)
Paul(1953)

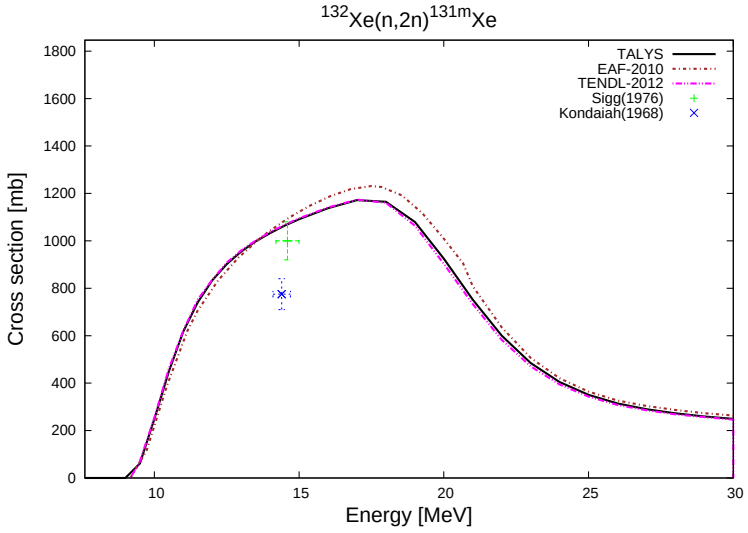

^{124}Xe(n,2n)^{123}Xe
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Bazan(1989)
Sigg(1976)
Kondaiah(1968)

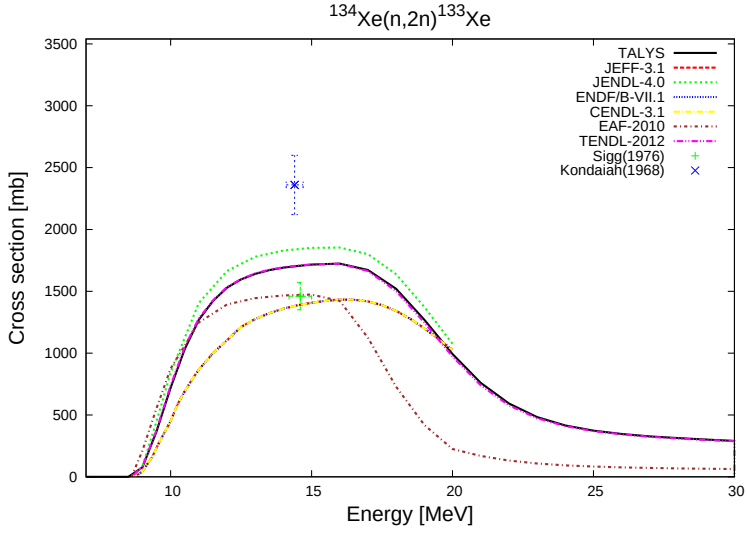

^{128}Xe(n,2n)^{127}Xe
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Sigg(1976)
Kondaiah(1968)

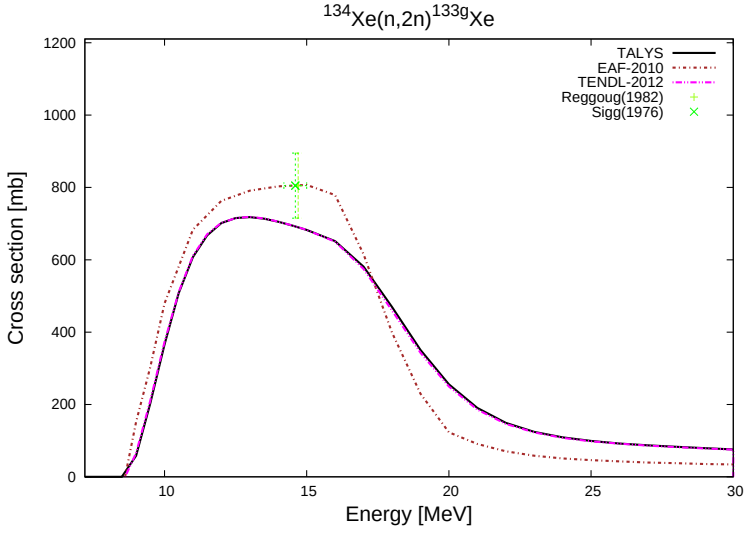

^{128}Xe(n,2n)^{127g}Xe
TALYS
EAF-2010
TENDL-2012
Sigg(1976)
Cross section [mb]
Energy [MeV]

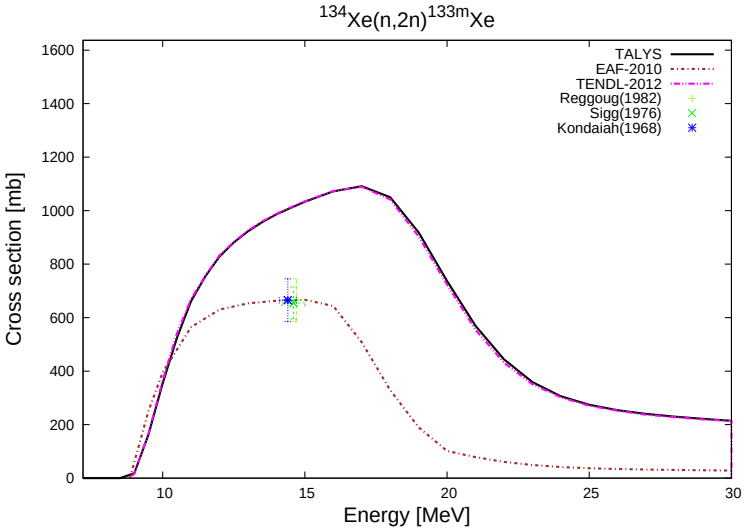

^{128}Xe(n,2n)^{127m}Xe
TALYS
EAF-2010
TENDL-2012
Sigg(1976)
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

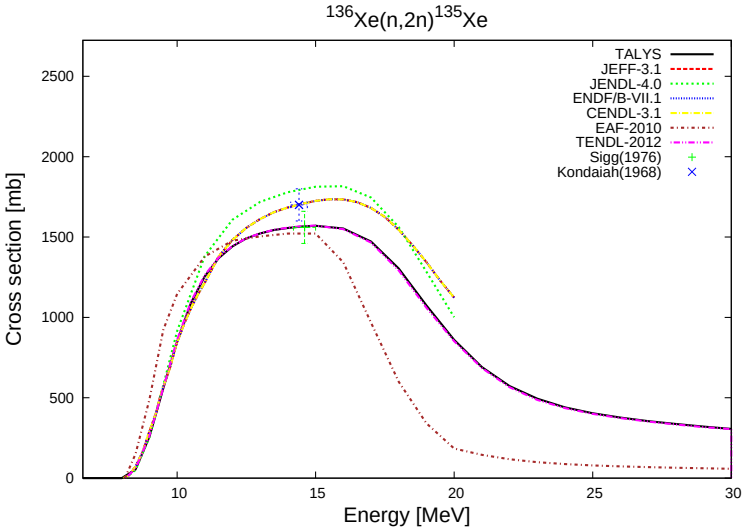

^{130}Xe(n,2n)^{129m}Xe
TALYS
EAF-2010
TENDL-2012
Sigg(1976)
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

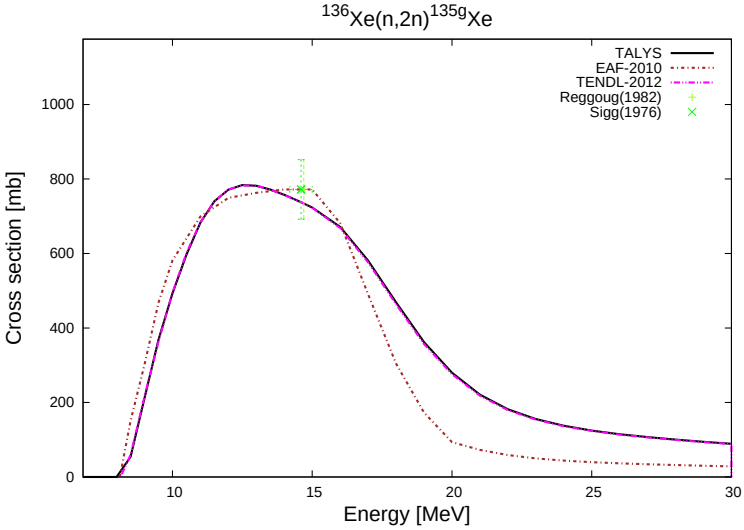

^{132}Xe(n,2n)^{131m}Xe
TALYS
EAF-2010
TENDL-2012
Sigg(1976)
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

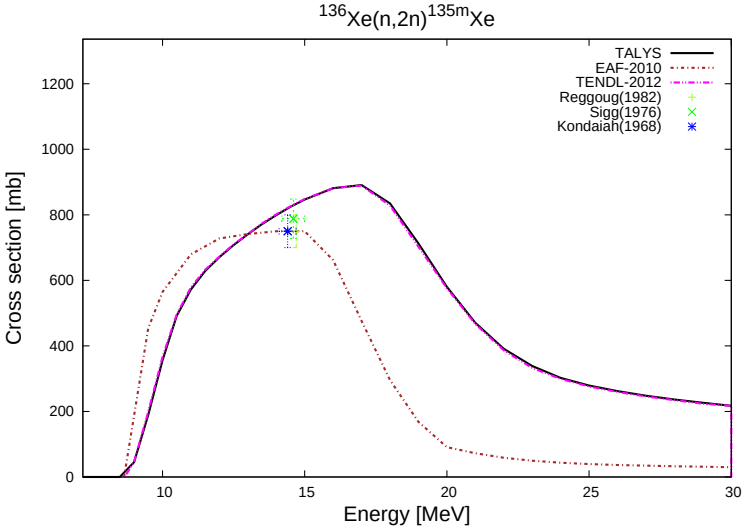

^{134}Xe(n,2n)^{133}Xe
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Sigg(1976)
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

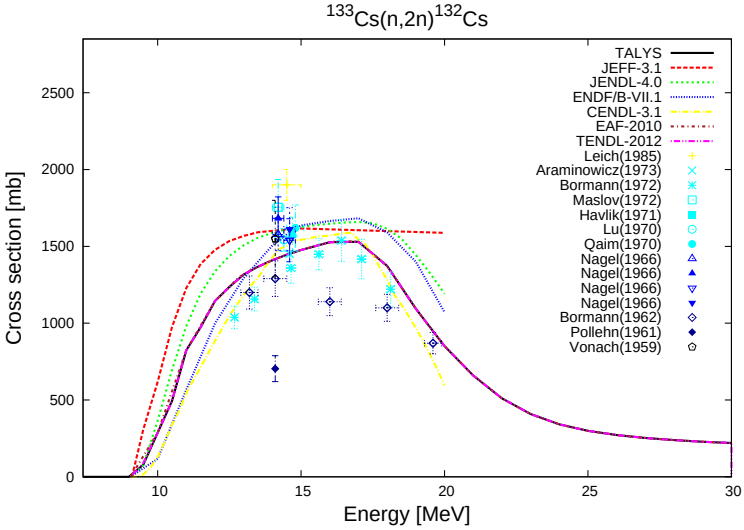

^{134}Xe(n,2n)^{133g}Xe
TALYS
EAF-2010
TENDL-2012
Reggoug(1982)
Sigg(1976)
Cross section [mb]
Energy [MeV]

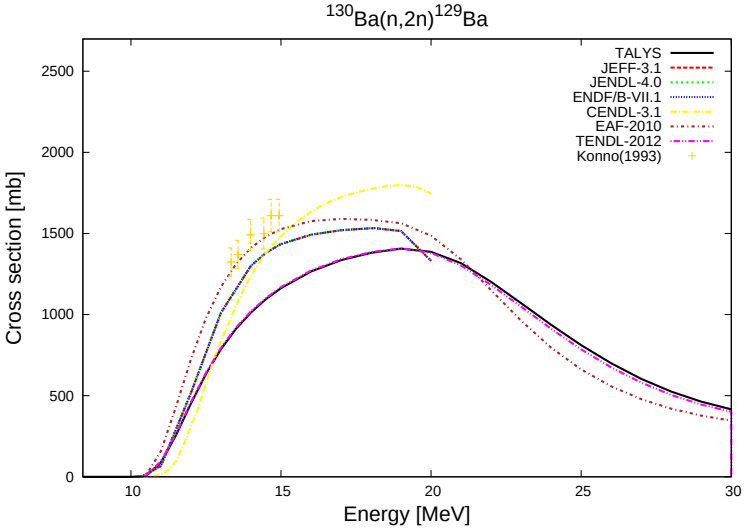

134Xe(n,2n)133mXe
TALYS
EAF-2010
TENDL-2012
Reggoug(1982)
Sigg(1976)
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

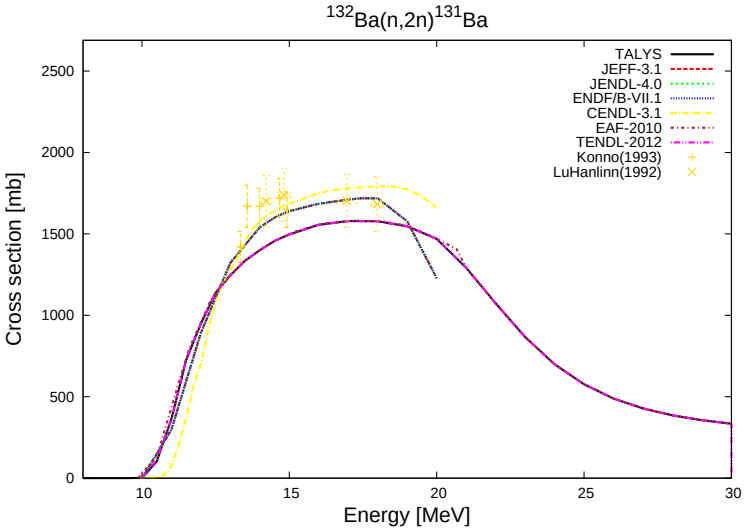

136Xe(n,2n)135Xe
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Sigg(1976)
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

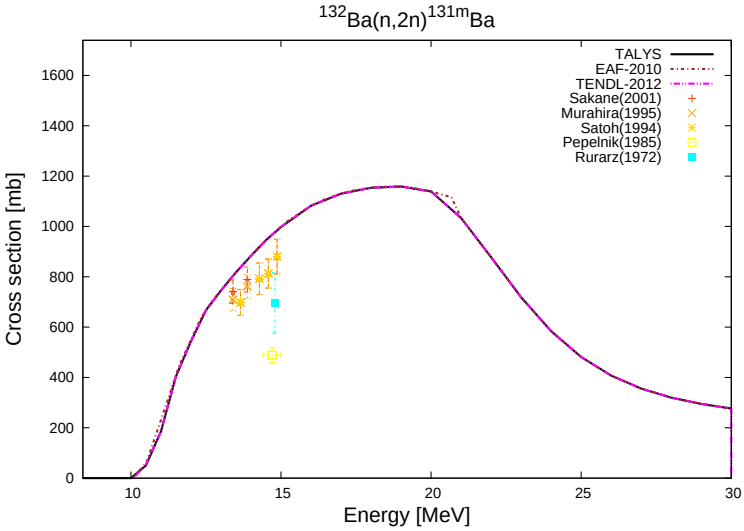

136Xe(n,2n)135gXe
TALYS
EAF-2010
TENDL-2012
Reggoug(1982)
Sigg(1976)
Cross section [mb]
Energy [MeV]

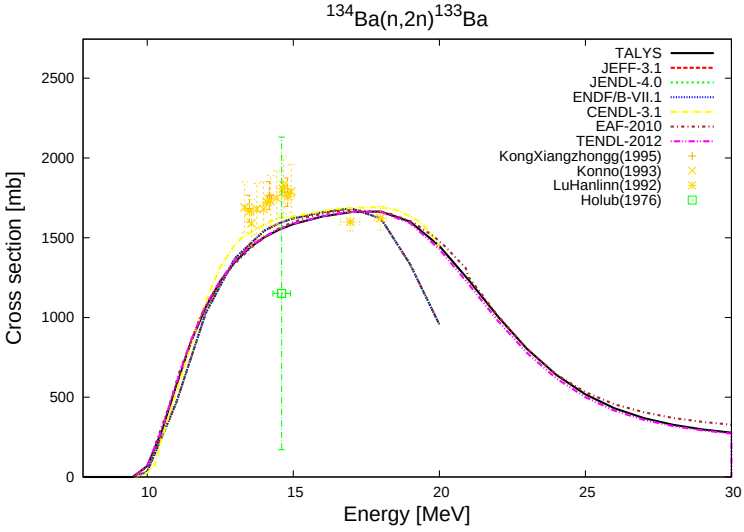

136Xe(n,2n)135mXe
TALYS
EAF-2010
TENDL-2012
Reggoug(1982)
Sigg(1976)
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

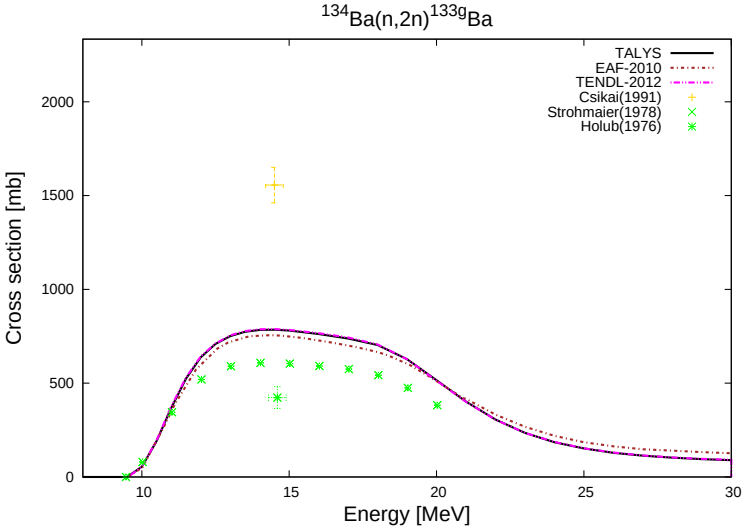

133Cs(n,2n)132Cs
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Leich(1985)
Araminowicz(1973)
Bormann(1972)
Maslov(1972)
Havlik(1971)
Lu(1970)
Qaim(1970)
Nagel(1966)
Nagel(1966)
Nagel(1966)
Nagel(1966)
Bormann(1962)
Pollehn(1961)
Vonach(1959)
Cross section [mb]
Energy [MeV]

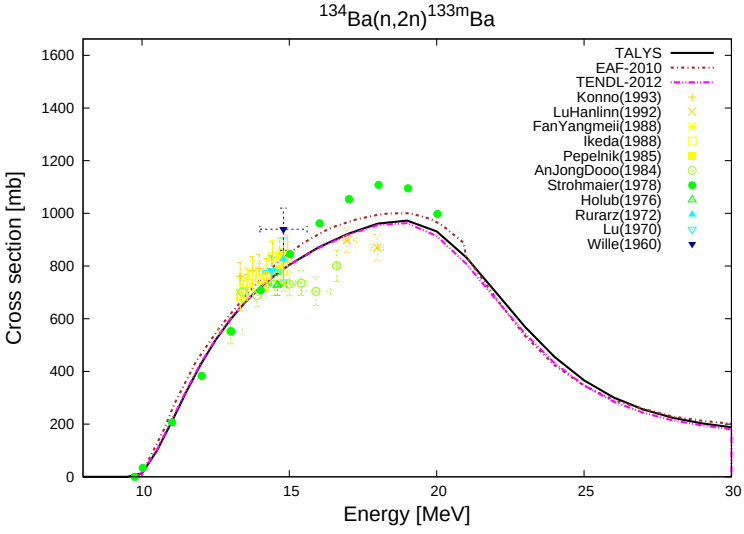

130Ba(n,2n)129Ba
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Konno(1993)
Cross section [mb]
Energy [MeV]

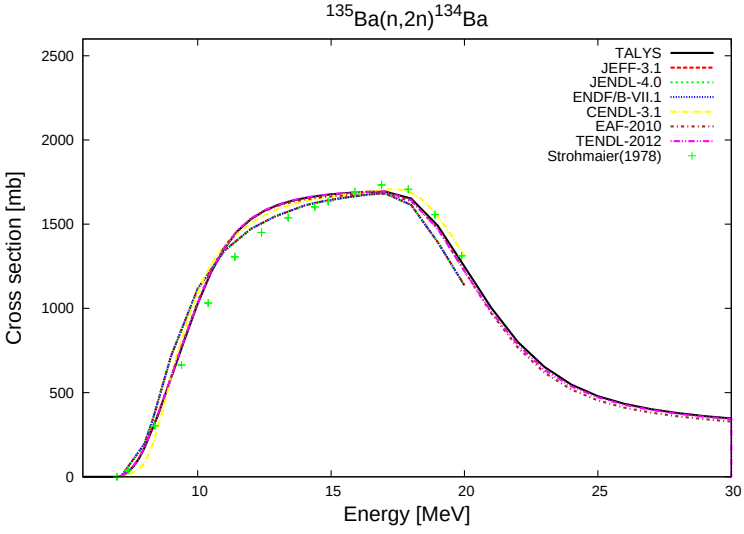

^{132}Ba(n,2n)^{131}Ba
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Konno(1993)
LuHanlinn(1992)
Cross section [mb]
Energy [MeV]

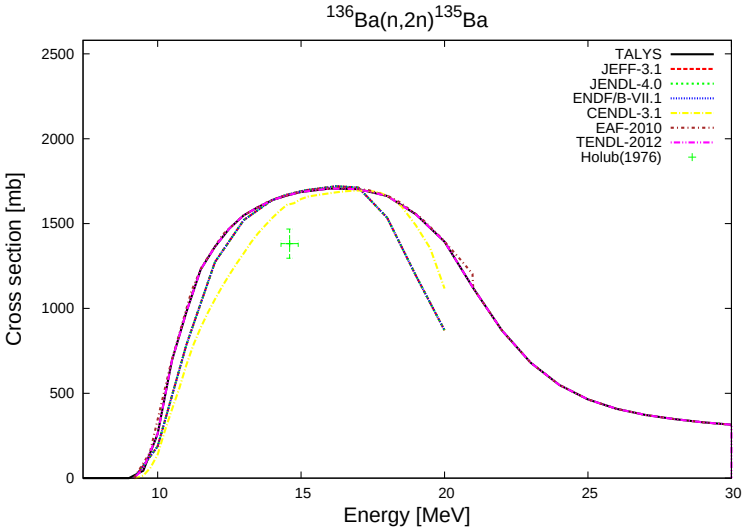

^{132}Ba(n,2n)^{131m}Ba
TALYS
EAF-2010
TENDL-2012
Sakane(2001)
Murahira(1995)
Satoh(1994)
Pepelnik(1985)
Rurarz(1972)
Cross section [mb]
Energy [MeV]

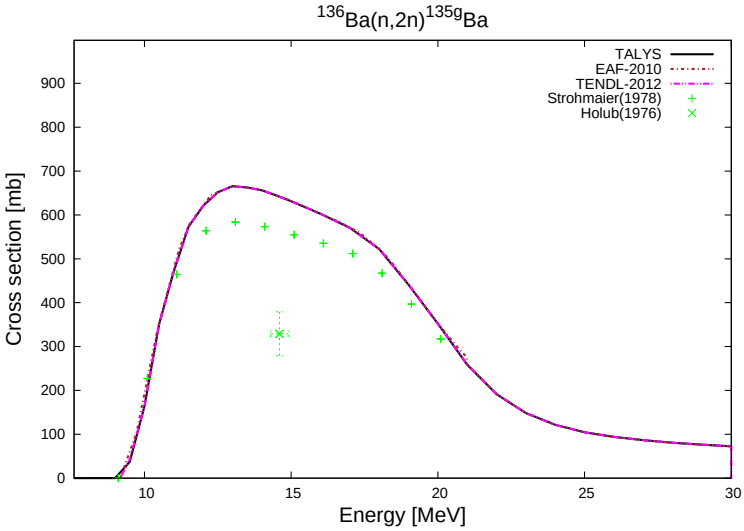

^{134}Ba(n,2n)^{133}Ba
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
KongXiangzhongg(1995)
Konno(1993)
LuHanlinn(1992)
Holub(1976)
Cross section [mb]
Energy [MeV]

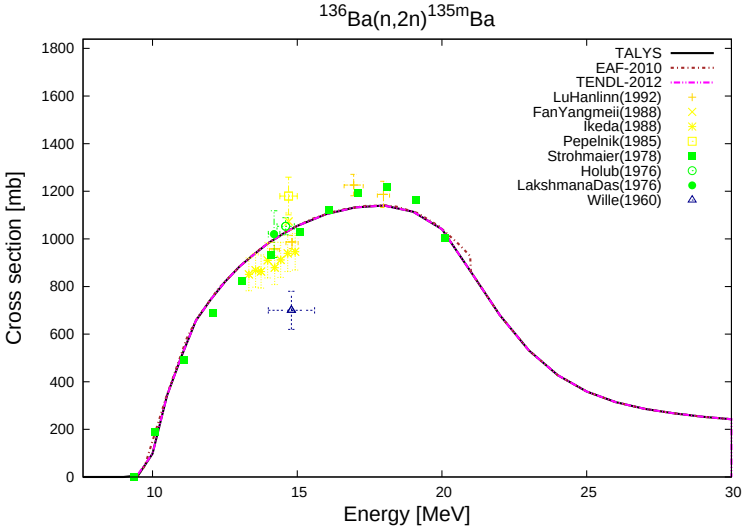

^{134}Ba(n,2n)^{133g}Ba
TALYS
EAF-2010
TENDL-2012
Csikai(1991)
Strohmaier(1978)
Holub(1976)
Cross section [mb]
Energy [MeV]

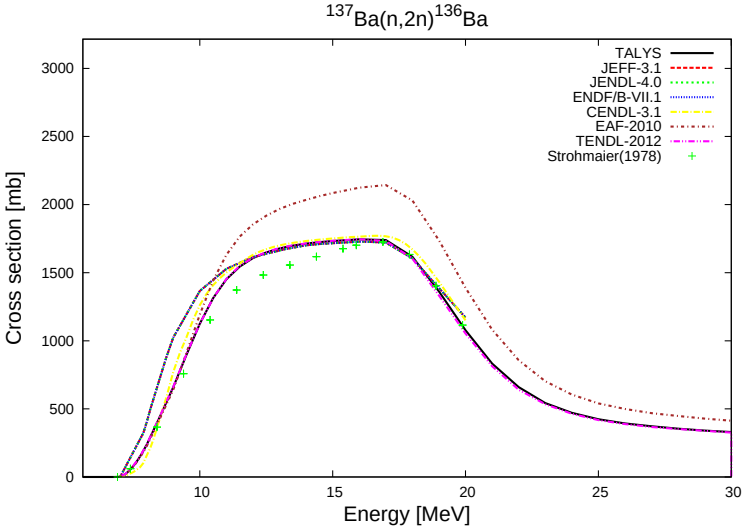

^{134}Ba(n,2n)^{133m}Ba
TALYS
EAF-2010
TENDL-2012
Konno(1993)
LuHanlinn(1992)
FanYangmeii(1988)
Ikeda(1988)
Pepelnik(1985)
AnJongDooo(1984)
Strohmaier(1978)
Holub(1976)
Rurarz(1972)
Lu(1970)
Wille(1960)
Cross section [mb]
Energy [MeV]

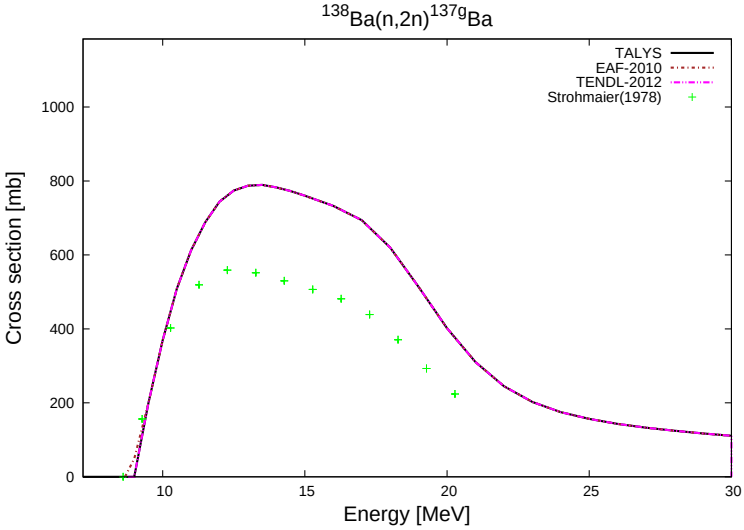

^{135}Ba(n,2n)^{134}Ba
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Strohmaier(1978)
Cross section [mb]
Energy [MeV]

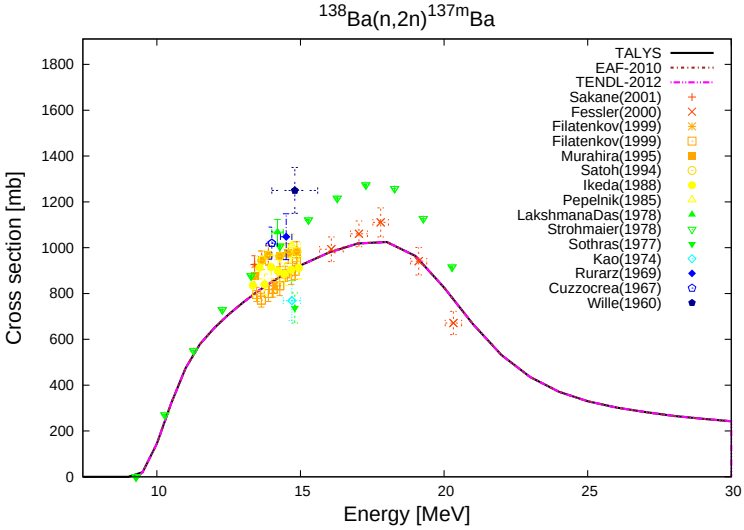

^{136}Ba(n,2n)^{135}Ba
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Holub(1976)
Cross section [mb]
Energy [MeV]

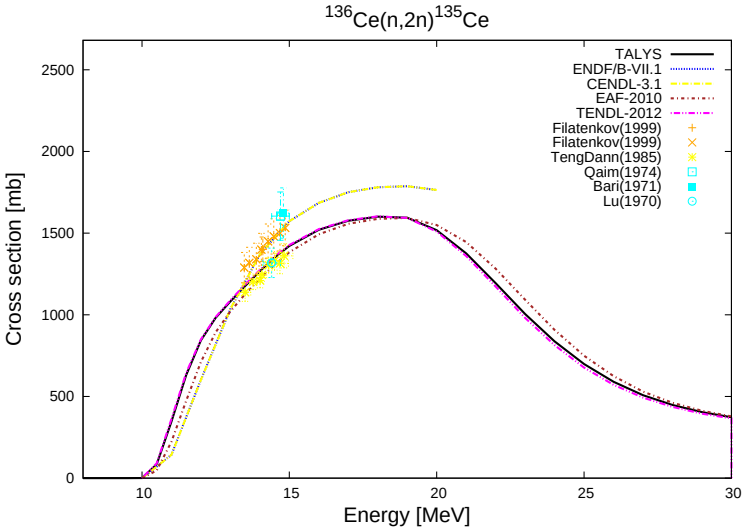

^{136}Ba(n,2n)^{135g}Ba
TALYS
EAF-2010
TENDL-2012
Strohmaier(1978)
Holub(1976)
Cross section [mb]
Energy [MeV]

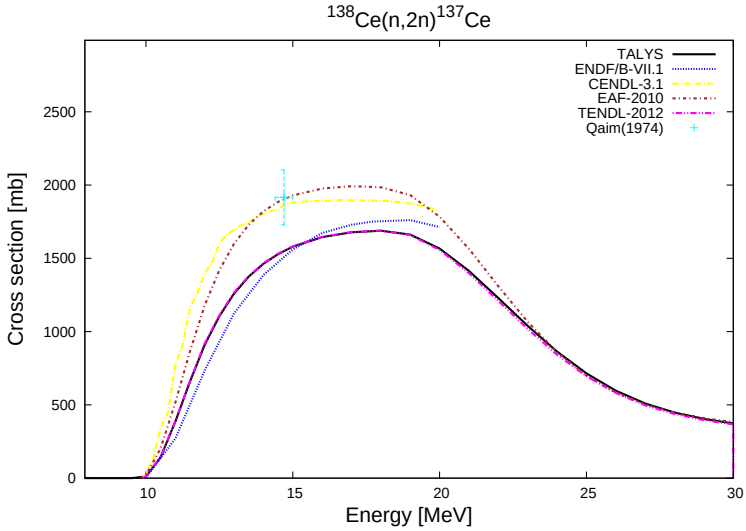

^{136}Ba(n,2n)^{135m}Ba
TALYS
EAF-2010
TENDL-2012
LuHanlinn(1992)
FanYangmeii(1988)
Ikeda(1988)
Pepelnik(1985)
Strohmaier(1978)
Holub(1976)
LakshmanaDas(1976)
Wille(1960)
Cross section [mb]
Energy [MeV]

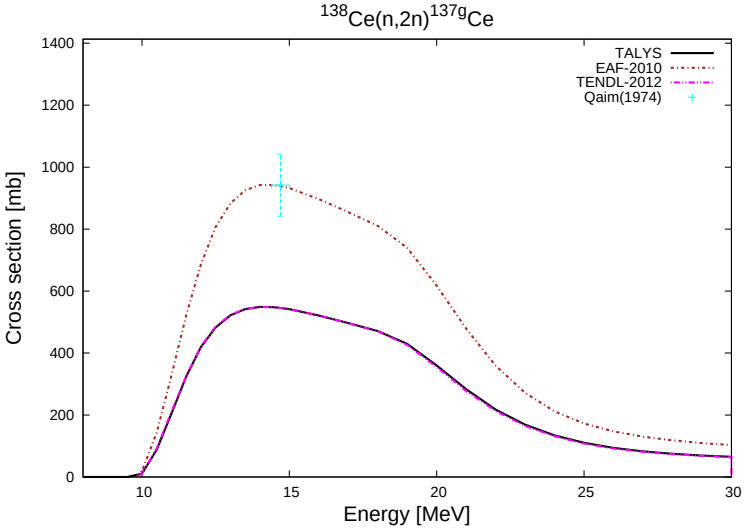

^{137}Ba(n,2n)^{136}Ba
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Strohmaier(1978)
Cross section [mb]
Energy [MeV]

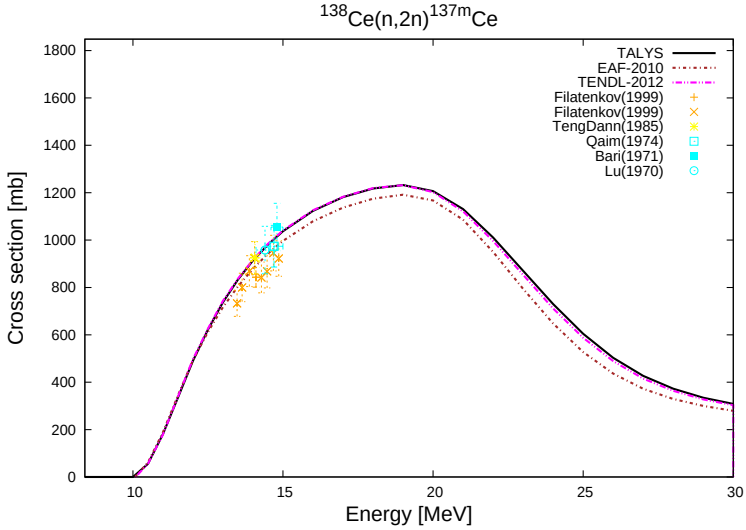

^{138}Ba(n,2n)^{137g}Ba
TALYS
EAF-2010
TENDL-2012
Strohmaier(1978)
Cross section [mb]
Energy [MeV]

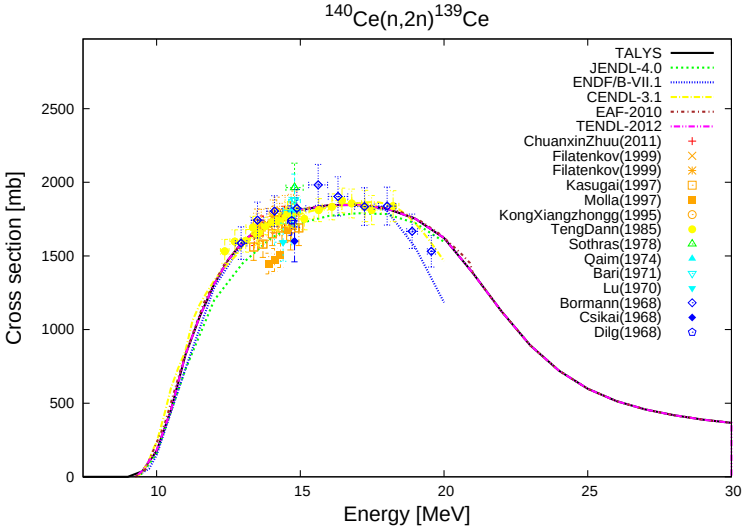

^{138}Ba(n,2n)^{137m}Ba
TALYS
EAF-2010
TENDL-2012
Sakane(2001)
Fessler(2000)
Filatenkov(1999)
Filatenkov(1999)
Murahira(1995)
Satoh(1994)
Ikeda(1988)
Pepelnik(1985)
LakshmanaDas(1978)
Strohmaier(1978)
Sothras(1977)
Kao(1974)
Rurarz(1969)
Cuzzocrea(1967)
Wille(1960)
Cross section [mb]
Energy [MeV]

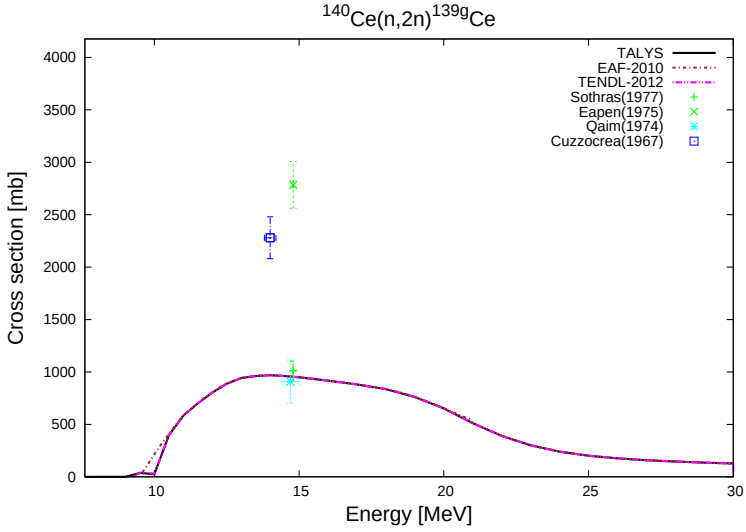

^{136}Ce(n,2n)^{135}Ce
TALYS
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
TengDann(1985)
Qaim(1974)
Bari(1971)
Lu(1970)
Cross section [mb]
Energy [MeV]

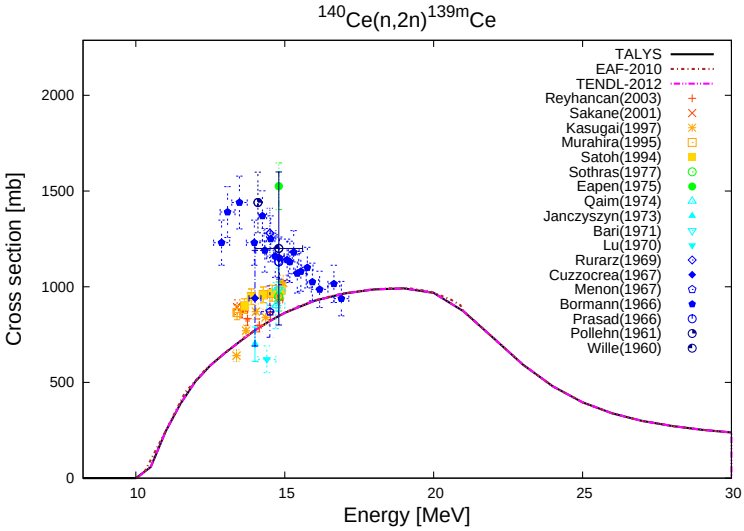

^{138}Ce(n,2n)^{137}Ce
TALYS
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Qaim(1974)
Cross section [mb]
Energy [MeV]

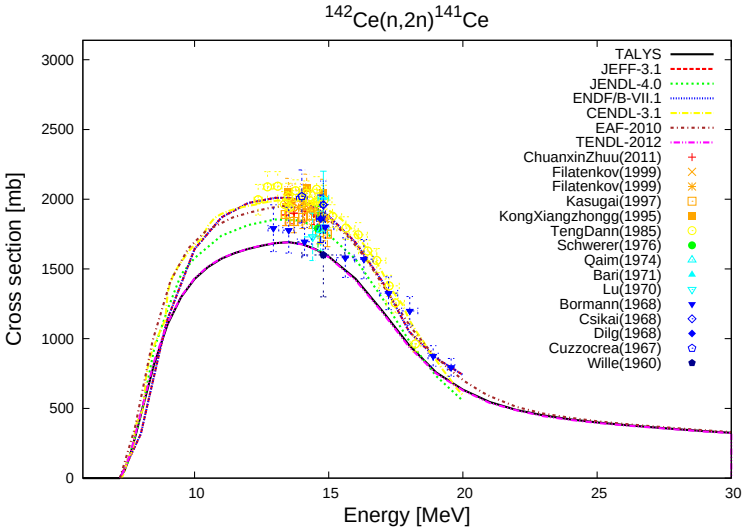

^{138}Ce(n,2n)^{137g}Ce
TALYS
EAF-2010
TENDL-2012
Qaim(1974)
Cross section [mb]
Energy [MeV]

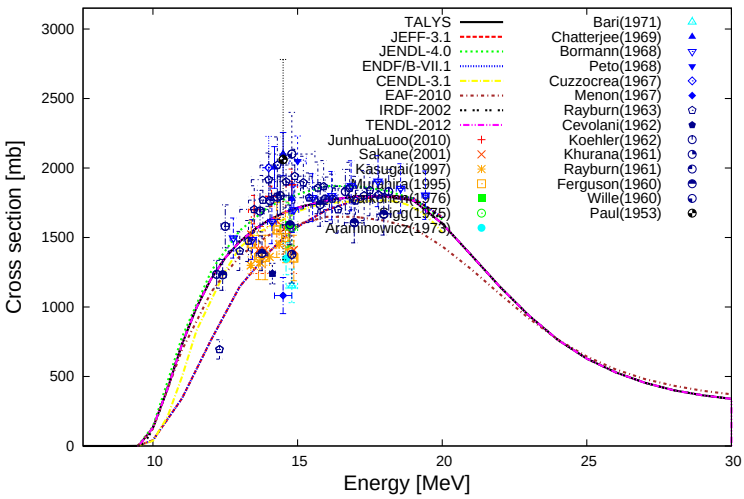

^{138}Ce(n,2n)^{137m}Ce
TALYS
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
TengDann(1985)
Qaim(1974)
Bari(1971)
Lu(1970)
Cross section [mb]
Energy [MeV]

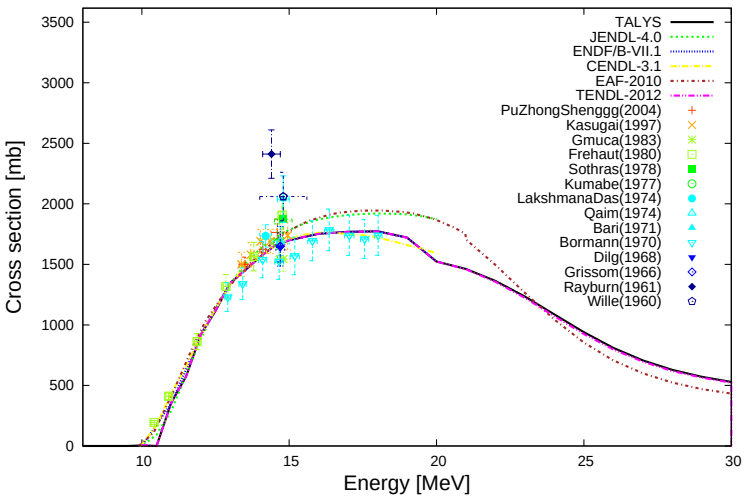

^{140}Ce(n,2n)^{139}Ce
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
ChuanxinZhuu(2011)
Filatenkov(1999)
Filatenkov(1999)
Kasugai(1997)
Molla(1997)
KongXiangzhongg(1995)
TengDann(1985)
Sothras(1978)
Qaim(1974)
Bari(1971)
Lu(1970)
Bormann(1968)
Csikai(1968)
Dilg(1968)
Cross section [mb]
Energy [MeV]

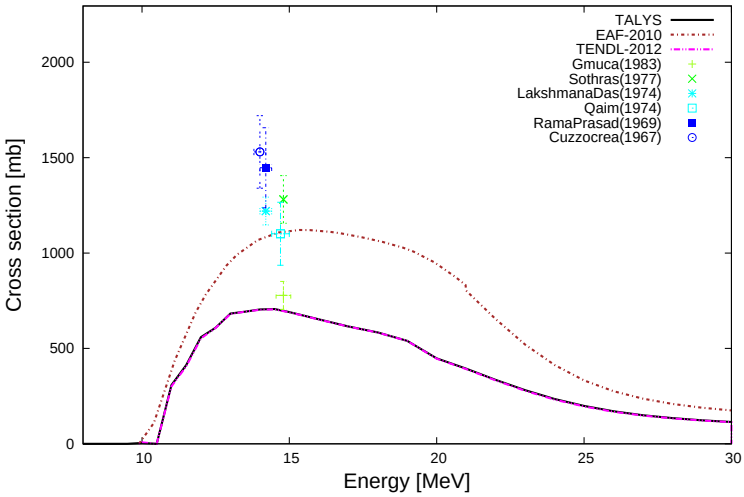

^{140}Ce(n,2n)^{139g}Ce
TALYS
EAF-2010
TENDL-2012
Sothras(1977)
Eapen(1975)
Qaim(1974)
Cuzzocrea(1967)
Cross section [mb]
Energy [MeV]

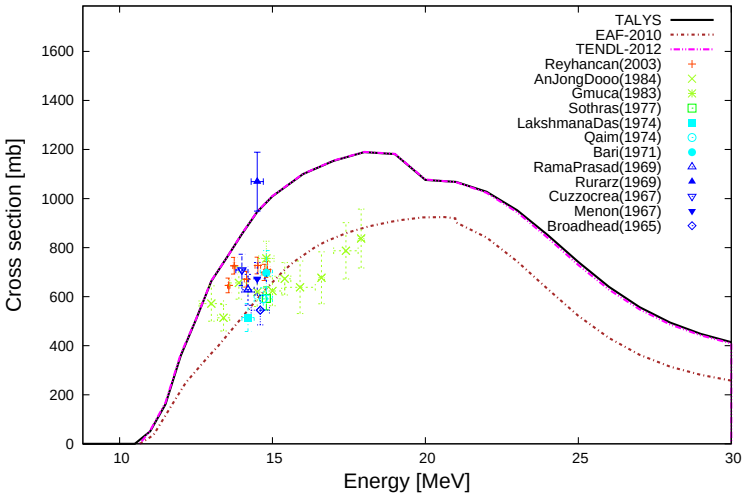

^{140}Ce(n,2n)^{139m}Ce
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Reyhancan(2003)
Sakane(2001)
Kasugai(1997)
Murahira(1995)
Satoh(1994)
Sothras(1977)
Eapen(1975)
Qaim(1974)
Janczyszyn(1973)
Bari(1971)
Lu(1970)
Rurarz(1969)
Cuzzocrea(1967)
Menon(1967)
Bormann(1966)
Prasad(1966)
Pollehn(1961)
Wille(1960)

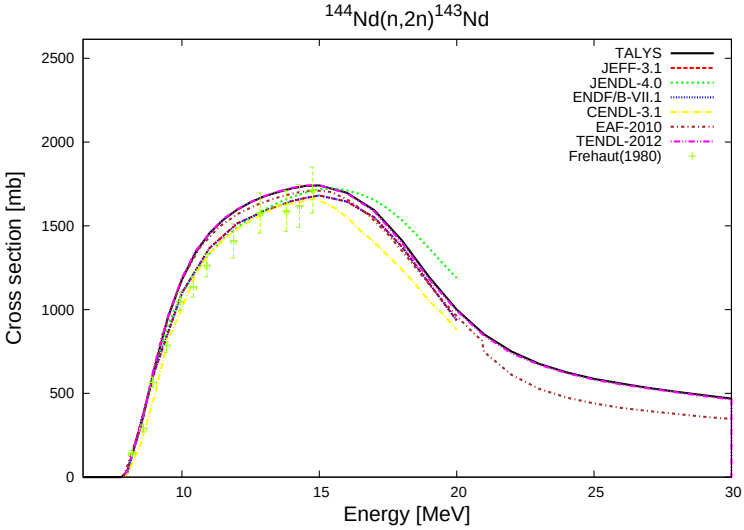

^{142}Ce(n,2n)^{141}Ce
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
ChuanxinZhuu(2011)
Filatenkov(1999)
Filatenkov(1999)
Kasugai(1997)
KongXiangzhongg(1995)
TengDann(1985)
Schwerer(1976)
Qaim(1974)
Bari(1971)
Lu(1970)
Bormann(1968)
Csikai(1968)
Dilg(1968)
Cuzzocrea(1967)
Wille(1960)

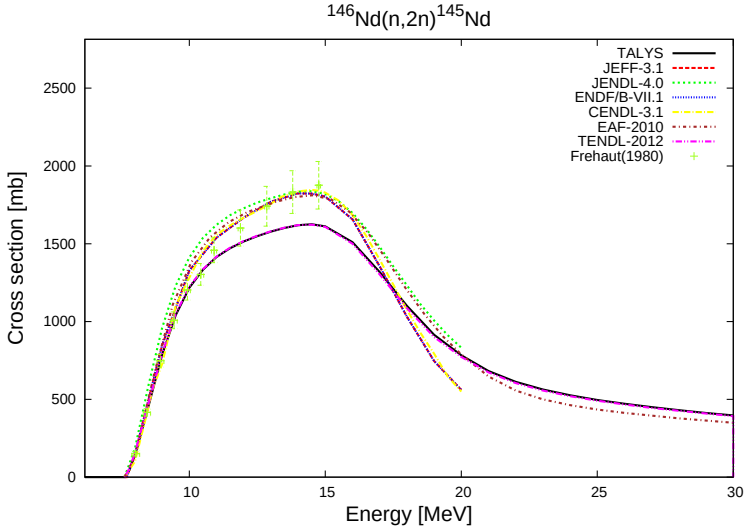

^{141}Pr(n,2n)^{140}Pr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
JunhuaLuoo(2010)
Sakane(2001)
Kasugai(1997)
Murahira(1995)
Qaim(1976)
Bigg(1975)
Arthinowicz(1975)
Bari(1971)
Chatterjee(1969)
Bormann(1968)
Peto(1968)
Cuzzocrea(1967)
Menon(1967)
Rayburn(1963)
Cevolani(1962)
Koehler(1962)
Khurana(1961)
Rayburn(1961)
Ferguson(1960)
Wille(1960)
Paul(1953)

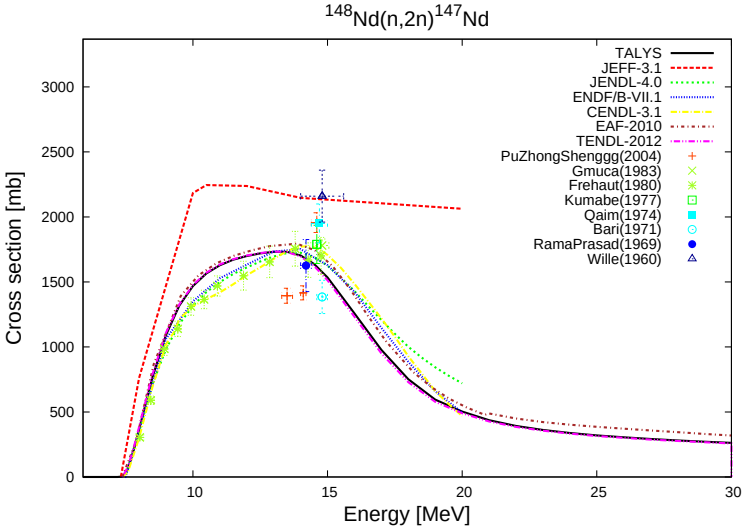

^{142}Nd(n,2n)^{141}Nd
Cross section [mb]
Energy [MeV]
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
PuZhongShenggg(2004)
Kasugai(1997)
Gmuca(1983)
Frehaut(1980)
Sothras(1978)
Kumabe(1977)
LakshmanaDas(1974)
Qaim(1974)
Bari(1971)
Bormann(1970)
Dilg(1968)
Grissom(1966)
Rayburn(1961)
Wille(1960)

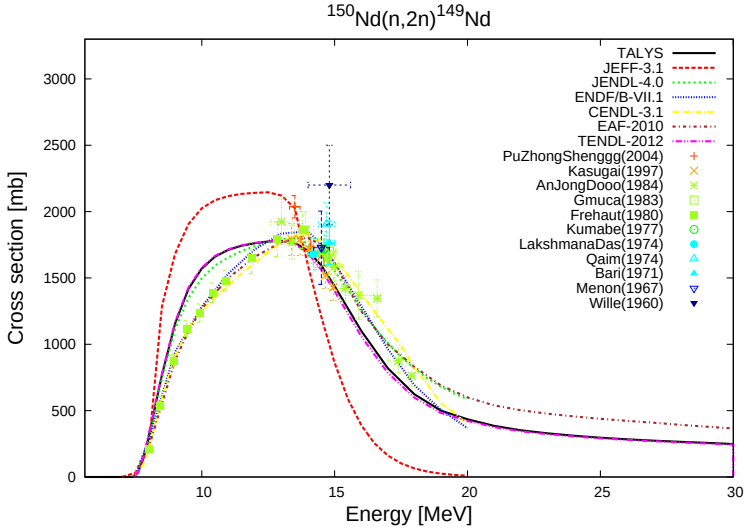

^{142}Nd(n,2n)^{141g}Nd
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Gmuca(1983)
Sothras(1977)
LakshmanaDas(1974)
Qaim(1974)
RamaPrasad(1969)
Cuzzocrea(1967)

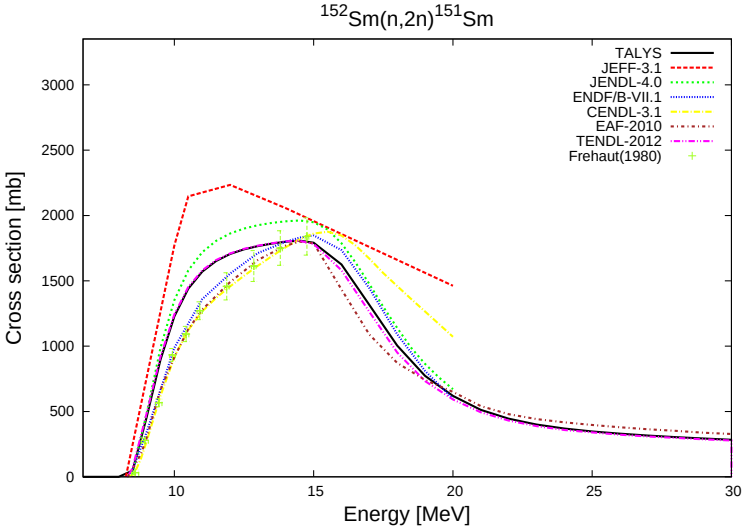

^{142}Nd(n,2n)^{141m}Nd
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Reyhancan(2003)
AnJongDooo(1984)
Gmuca(1983)
Sothras(1977)
LakshmanaDas(1974)
Qaim(1974)
Bari(1971)
RamaPrasad(1969)
Rurarz(1969)
Cuzzocrea(1967)
Menon(1967)
Broadhead(1965)

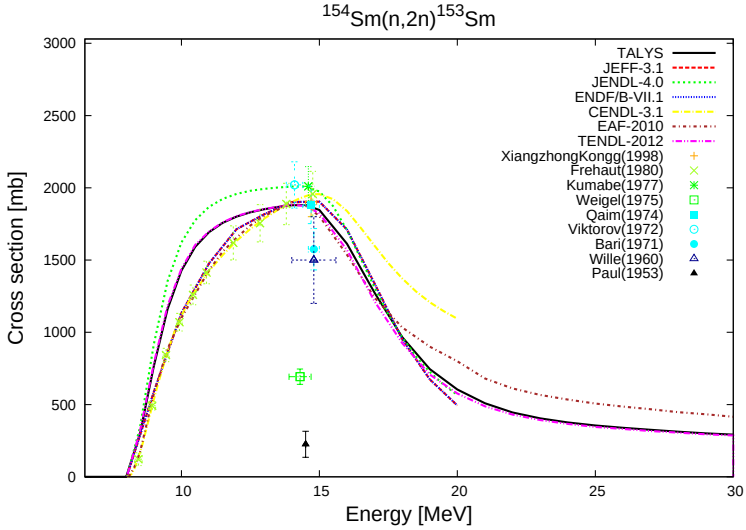

^{144}Nd(n,2n)^{143}Nd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Frehaut(1980)
Cross section [mb]
Energy [MeV]

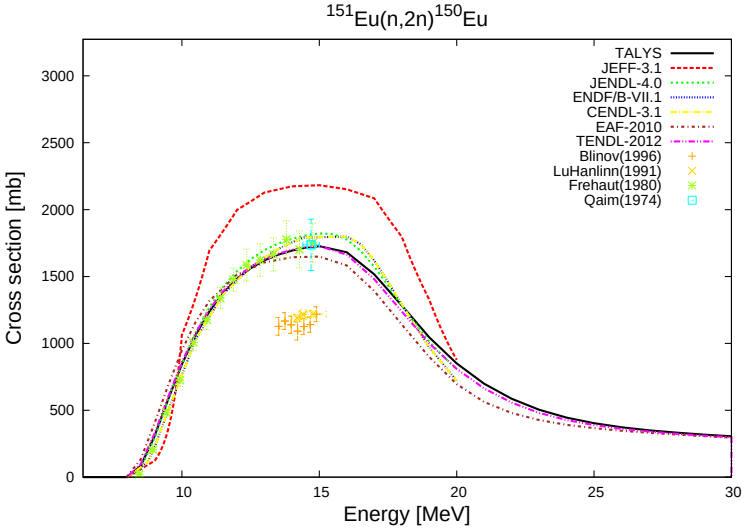

^{146}Nd(n,2n)^{145}Nd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Frehaut(1980)
Cross section [mb]
Energy [MeV]

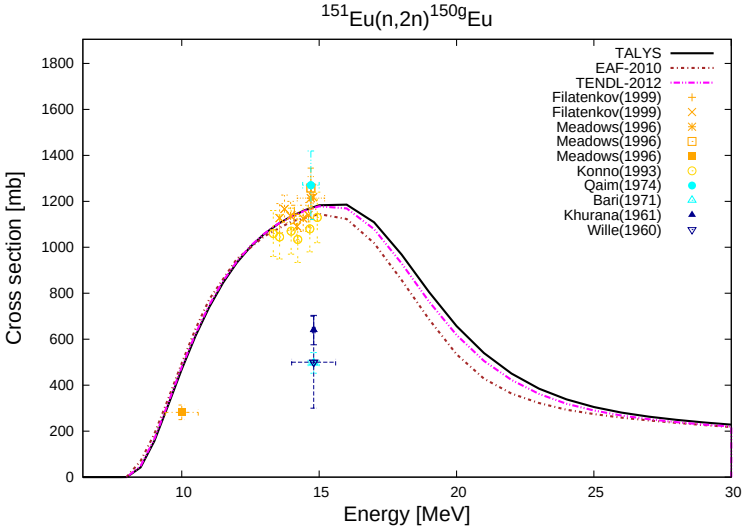

^{148}Nd(n,2n)^{147}Nd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
PuZhongShenggg(2004)
Gmuca(1983)
Frehaut(1980)
Kumabe(1977)
Qaim(1974)
Bari(1971)
RamaPrasad(1969)
Wille(1960)
Cross section [mb]
Energy [MeV]

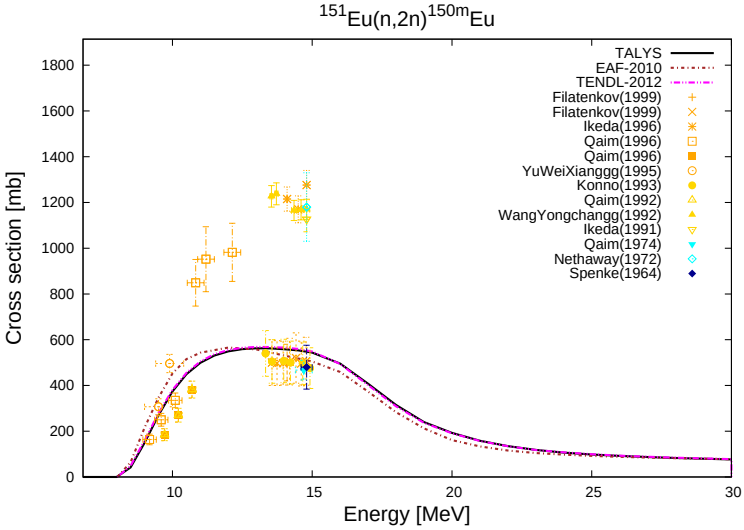

^{150}Nd(n,2n)^{149}Nd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
PuZhongShenggg(2004)
Kasugai(1997)
AnJongDooo(1984)
Gmuca(1983)
Frehaut(1980)
Kumabe(1977)
LakshmanaDas(1974)
Qaim(1974)
Bari(1971)
Menon(1967)
Wille(1960)
Cross section [mb]
Energy [MeV]

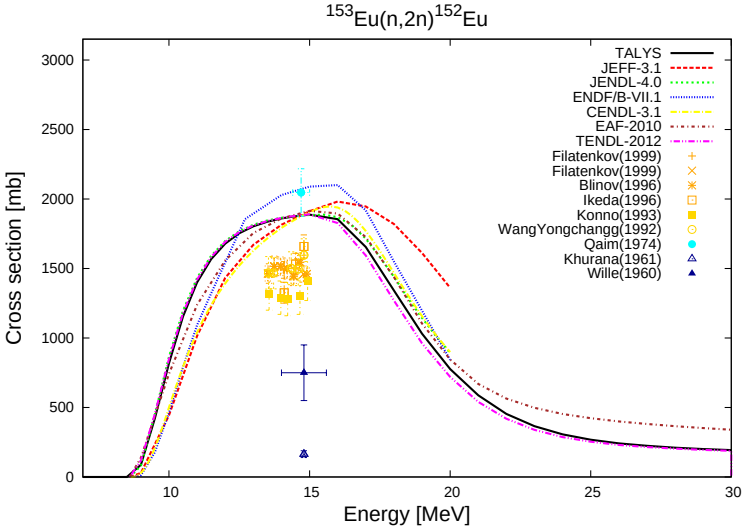

^{152}Sm(n,2n)^{151}Sm
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Frehaut(1980)
Cross section [mb]
Energy [MeV]

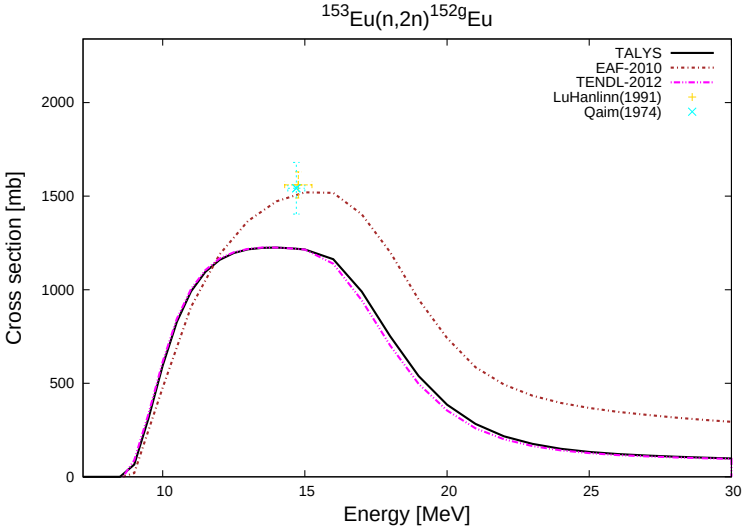

^{154}Sm(n,2n)^{153}Sm
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
XiangzhongKongg(1998)
Frehaut(1980)
Kumabe(1977)
Weigel(1975)
Qaim(1974)
Viktorov(1972)
Bari(1971)
Wille(1960)
Paul(1953)
Cross section [mb]
Energy [MeV]

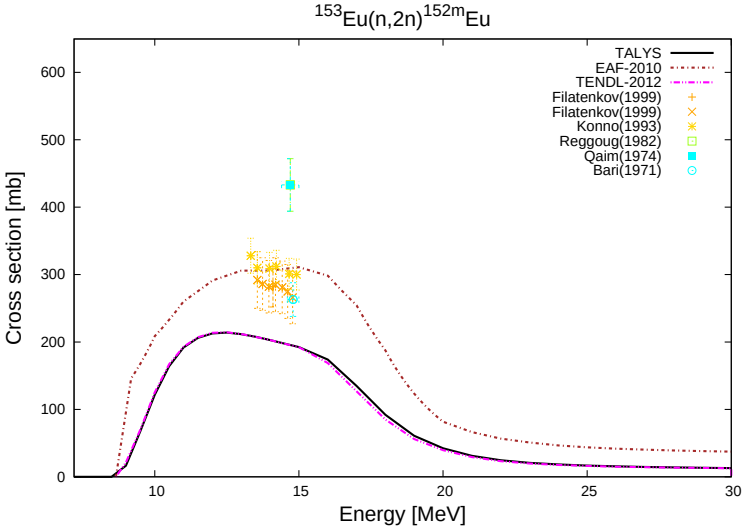

151Eu(n,2n)150Eu
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Blinov(1996)
LuHanlinn(1991)
Frehaut(1980)
Qaim(1974)
Cross section [mb]
Energy [MeV]

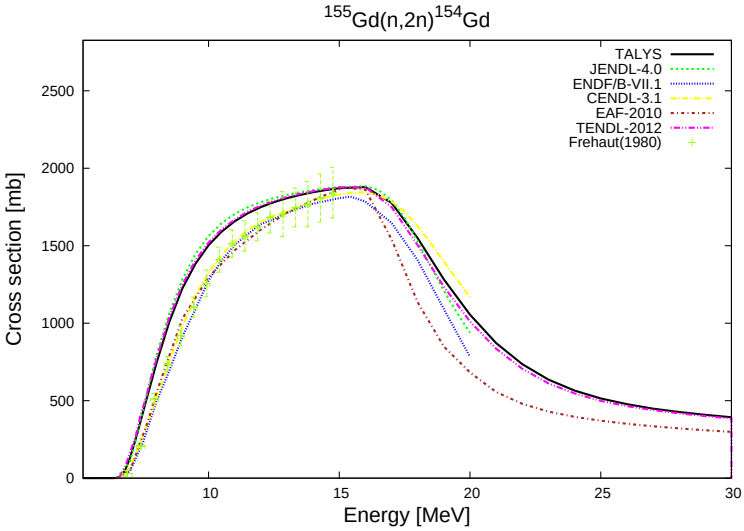

151Eu(n,2n)150gEu
TALYS
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Meadows(1996)
Meadows(1996)
Meadows(1996)
Konno(1993)
Qaim(1974)
Bari(1971)
Khurana(1961)
Wille(1960)
Cross section [mb]
Energy [MeV]

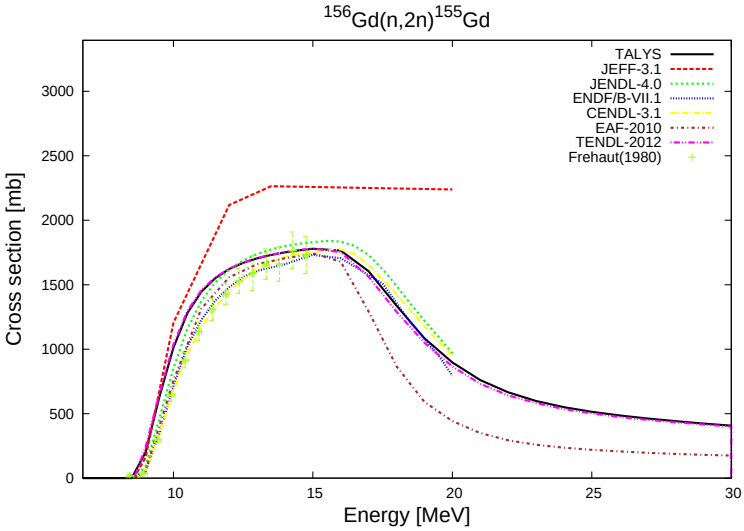

151Eu(n,2n)150mEu
TALYS
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Ikeda(1996)
Qaim(1996)
Qaim(1996)
YuWeiXianggg(1995)
Konno(1993)
Qaim(1992)
WangYongchangg(1992)
Ikeda(1991)
Qaim(1974)
Nethaway(1972)
Spenke(1964)
Cross section [mb]
Energy [MeV]

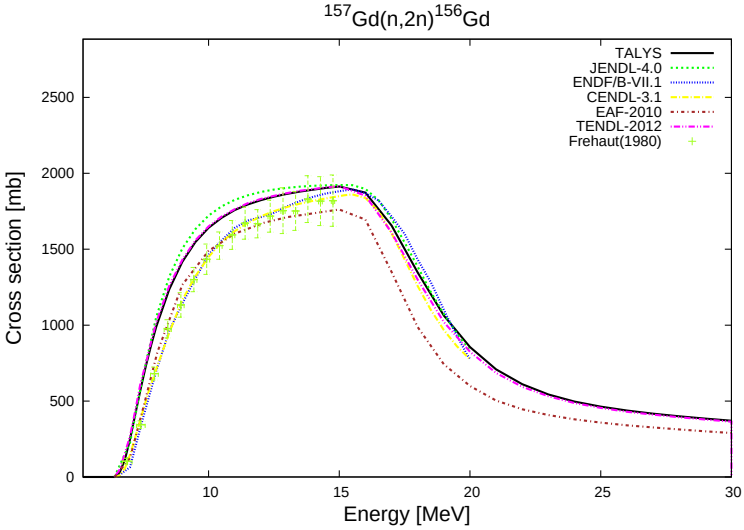

153Eu(n,2n)152Eu
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Blinov(1996)
Ikeda(1996)
Konno(1993)
WangYongchangg(1992)
Qaim(1974)
Khurana(1961)
Wille(1960)
Cross section [mb]
Energy [MeV]

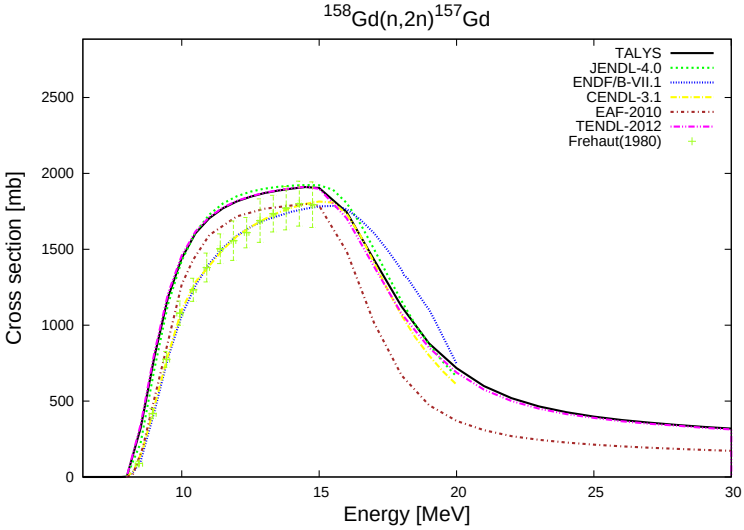

153Eu(n,2n)152gEu
TALYS
EAF-2010
TENDL-2012
LuHanlinn(1991)
Qaim(1974)
Cross section [mb]
Energy [MeV]

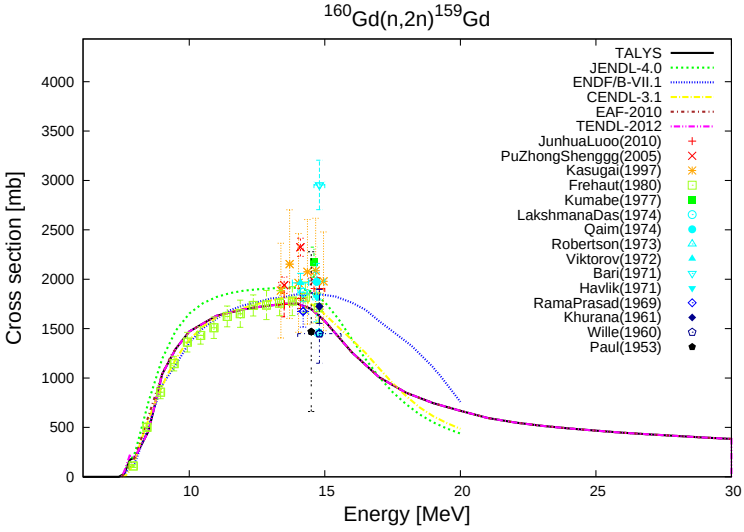

153Eu(n,2n)152mEu
TALYS
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Konno(1993)
Reggoug(1982)
Qaim(1974)
Bari(1971)
Cross section [mb]
Energy [MeV]

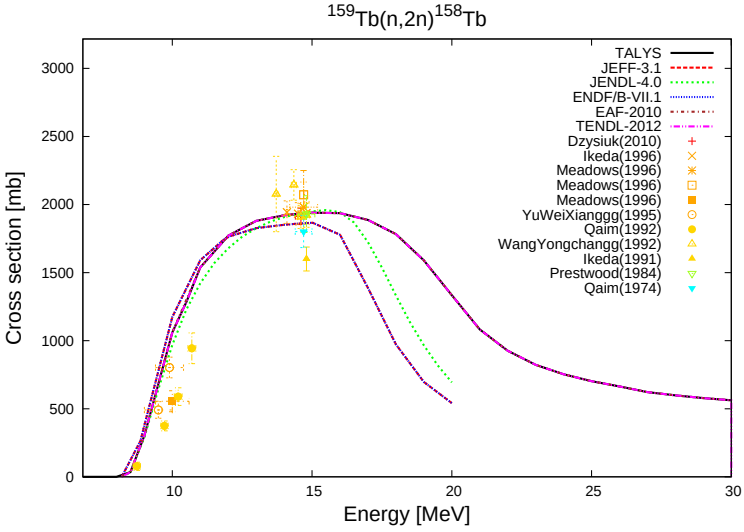

155Gd(n,2n)154Gd
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Frehaut(1980)
Cross section [mb]
Energy [MeV]

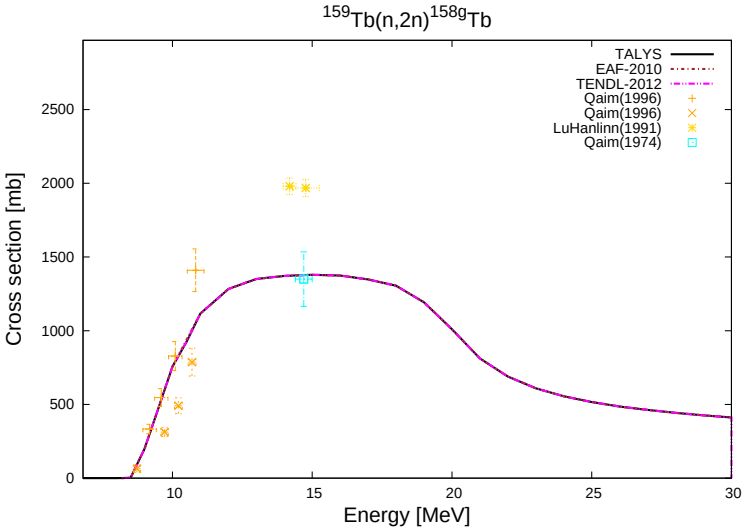

156Gd(n,2n)155Gd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Frehaut(1980)
Cross section [mb]
Energy [MeV]

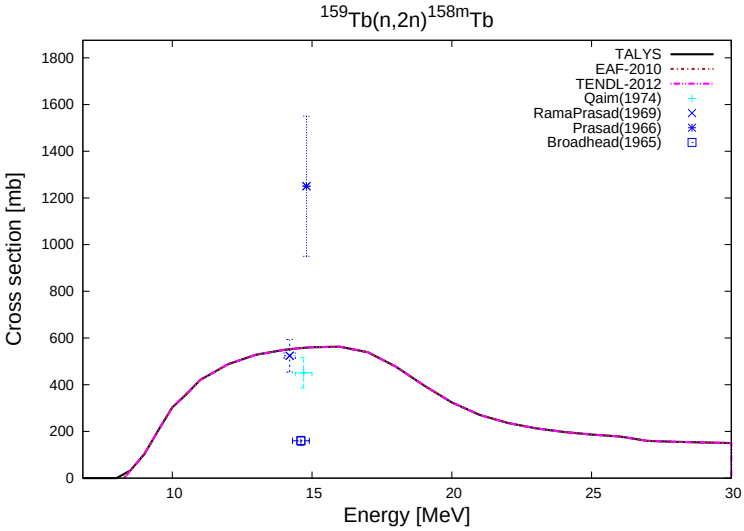

157Gd(n,2n)156Gd
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Frehaut(1980)
Cross section [mb]
Energy [MeV]

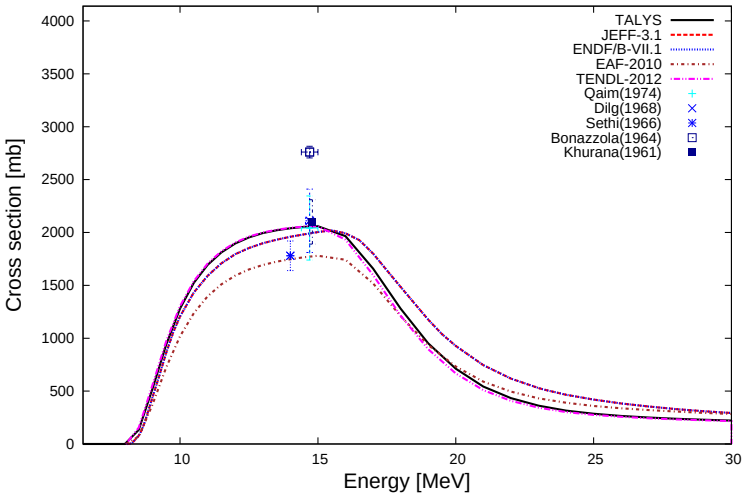

158Gd(n,2n)157Gd
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Frehaut(1980)
Cross section [mb]
Energy [MeV]

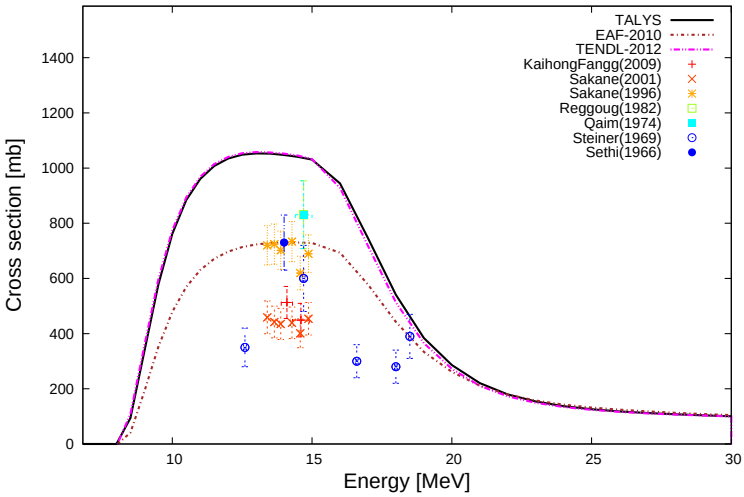

160Gd(n,2n)159Gd
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
JunhuaLuoo(2010)
PuZhongShenggg(2005)
Kasugai(1997)
Frehaut(1980)
Kumabe(1977)
LakshmanaDas(1974)
Qaim(1974)
Robertson(1973)
Viktorov(1972)
Bari(1971)
Havlik(1971)
RamaPrasad(1969)
Khurana(1961)
Wille(1960)
Paul(1953)
Cross section [mb]
Energy [MeV]

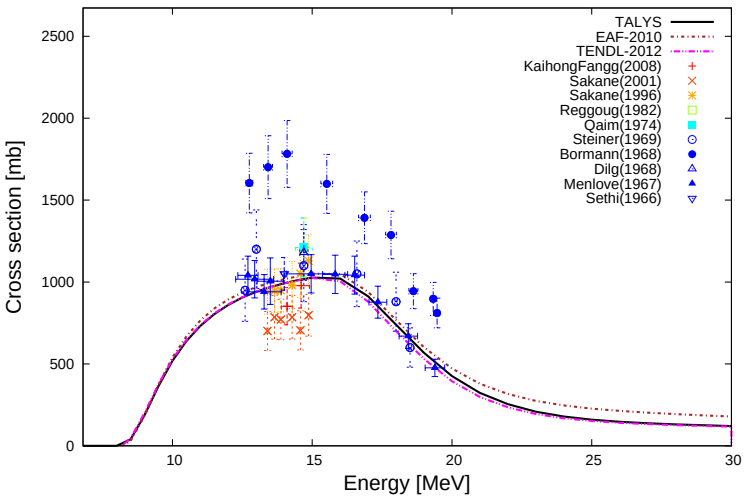

159Tb(n,2n)158Tb
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Dzysiuk(2010)
Ikeda(1996)
Meadows(1996)
Meadows(1996)
Meadows(1996)
YuWeiXianggg(1995)
Qaim(1992)
WangYongchangg(1992)
Ikeda(1991)
Prestwood(1984)
Qaim(1974)
Cross section [mb]
Energy [MeV]

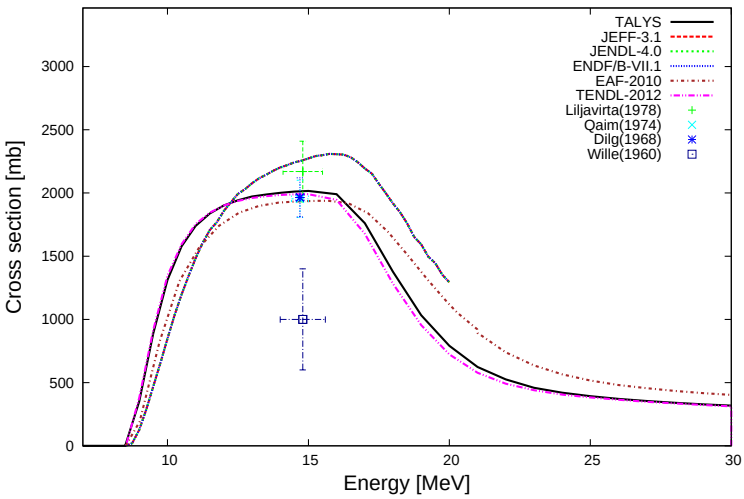

^{159}Tb(n,2n)^{158g}Tb
TALYS
EAF-2010
TENDL-2012
Qaim(1996)
Qaim(1996)
LuHanlinn(1991)
Qaim(1974)
Cross section [mb]
Energy [MeV]

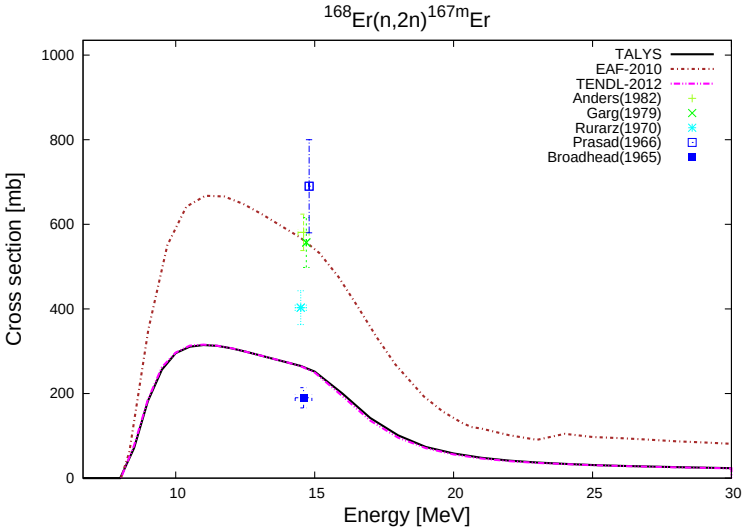

^{159}Tb(n,2n)^{158m}Tb
TALYS
EAF-2010
TENDL-2012
Qaim(1974)
RamaPrasad(1969)
Prasad(1966)
Broadhead(1965)
Cross section [mb]
Energy [MeV]

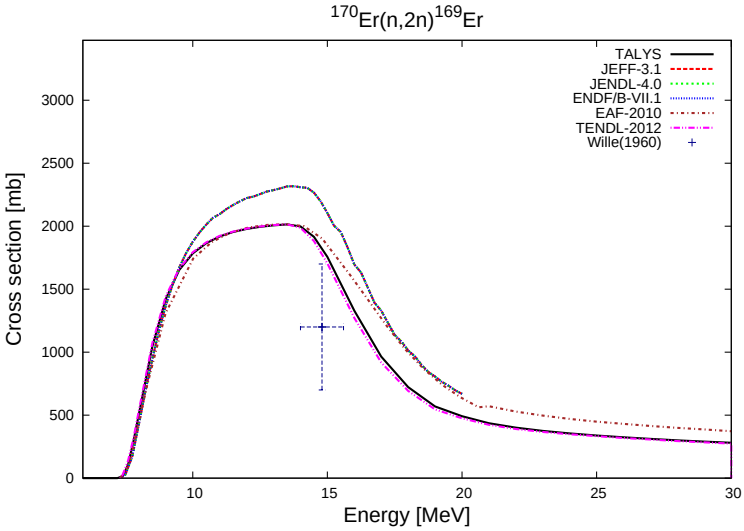

^{165}Ho(n,2n)^{164}Ho
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Qaim(1974)
Dilg(1968)
Sethi(1966)
Bonazzola(1964)
Khurana(1961)
Cross section [mb]
Energy [MeV]

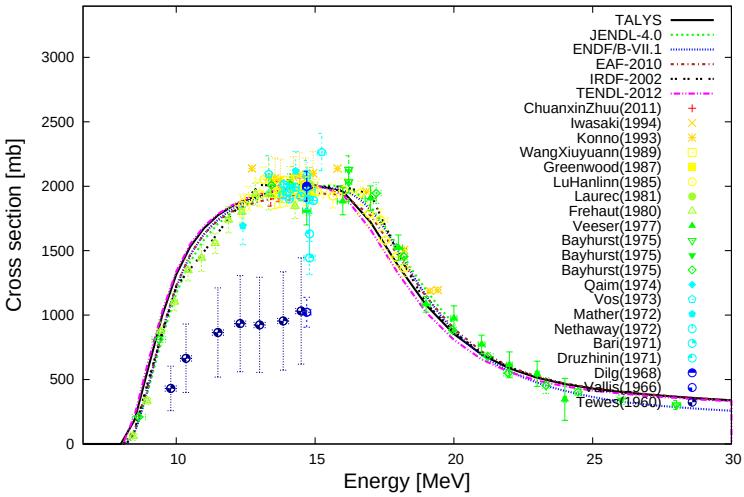

^{165}Ho(n,2n)^{164g}Ho
TALYS
EAF-2010
TENDL-2012
KaihongFangg(2009)
Sakane(2001)
Sakane(1996)
Reggoug(1982)
Qaim(1974)
Steiner(1969)
Sethi(1966)
Cross section [mb]
Energy [MeV]

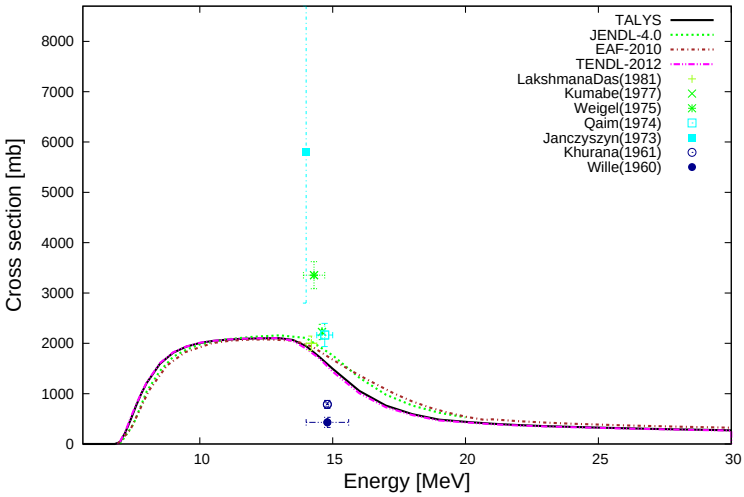

^{165}Ho(n,2n)^{164m}Ho
TALYS
EAF-2010
TENDL-2012
KaihongFangg(2008)
Sakane(2001)
Sakane(1996)
Reggoug(1982)
Qaim(1974)
Steiner(1969)
Bormann(1968)
Dilg(1968)
Menlove(1967)
Sethi(1966)
Cross section [mb]
Energy [MeV]

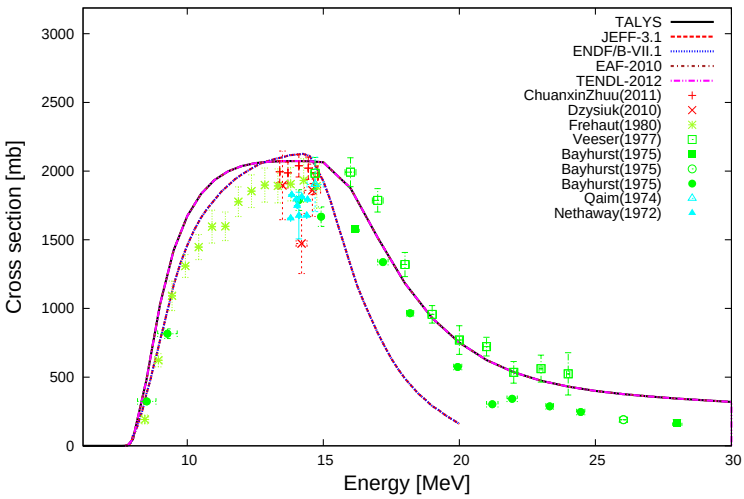

^{166}Er(n,2n)^{165}Er
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Liljavirta(1978)
Qaim(1974)
Dilg(1968)
Wille(1960)
Cross section [mb]
Energy [MeV]

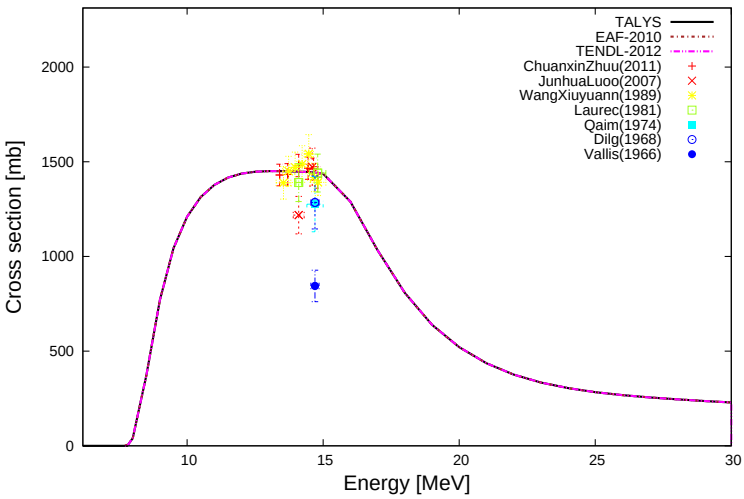

^{168}Er(n,2n)^{167m}Er
TALYS
EAF-2010
TENDL-2012
Anders(1982)
Garg(1979)
Rurarz(1970)
Prasad(1966)
Broadhead(1965)
Cross section [mb]
Energy [MeV]

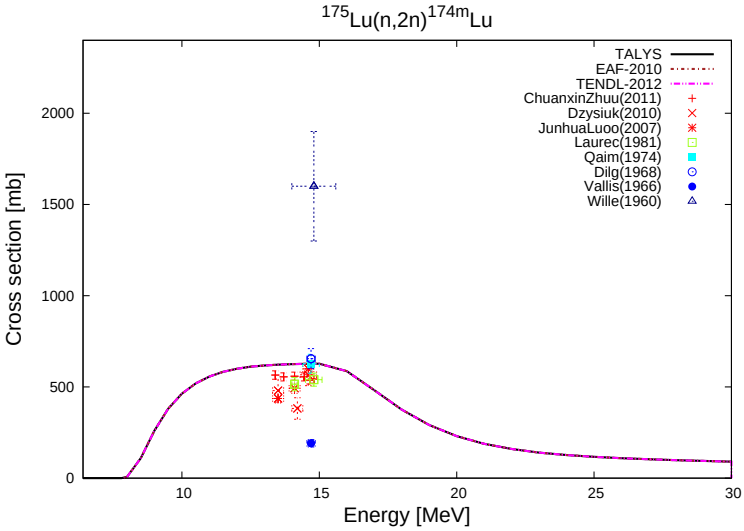

^{170}Er(n,2n)^{169}Er
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Wille(1960)
Cross section [mb]
Energy [MeV]

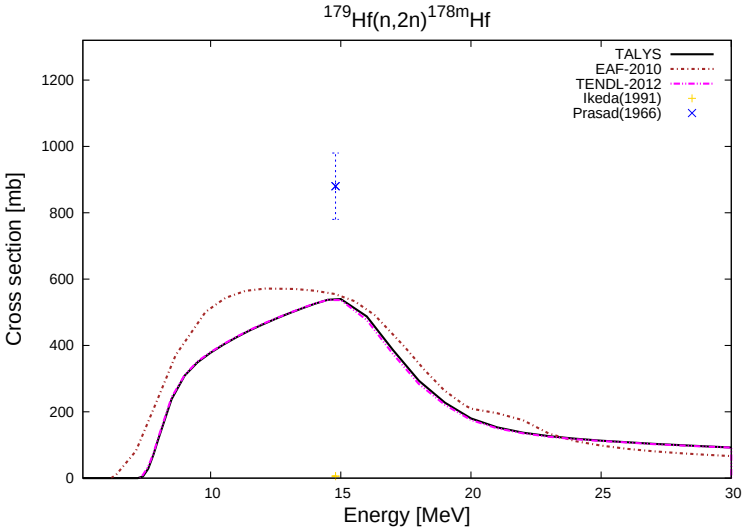

^{169}Tm(n,2n)^{168}Tm
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
IRDF-2002
TENDL-2012
ChuanxinZhuu(2011)
Iwasaki(1994)
Konno(1993)
WangXiuyuann(1989)
Greenwood(1987)
LuHanlinn(1985)
Laurec(1981)
Frehaut(1980)
Veeser(1977)
Bayhurst(1975)
Bayhurst(1975)
Bayhurst(1975)
Qaim(1974)
Vos(1973)
Mather(1972)
Nethaway(1972)
Bari(1971)
Druzhinin(1971)
Dilg(1968)
Vallis(1966)
Tewes(1960)
Cross section [mb]
Energy [MeV]

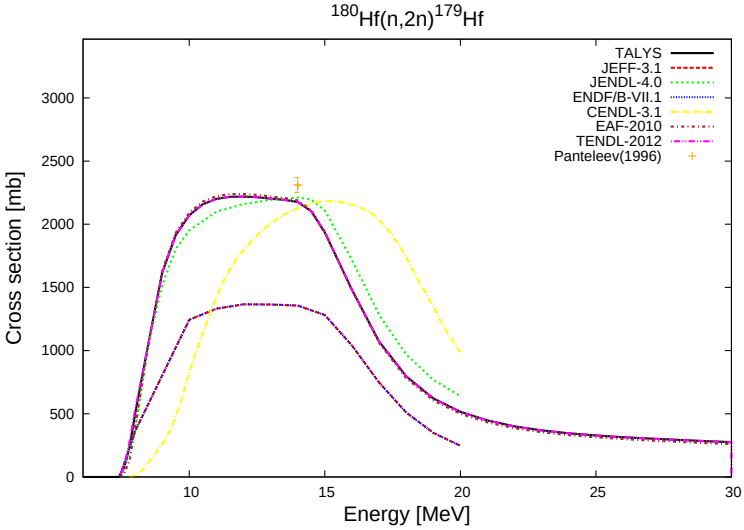

^{176}Yb(n,2n)^{175}Yb
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
LakshmanaDas(1981)
Kumabe(1977)
Weigel(1975)
Qaim(1974)
Janczyszyn(1973)
Khurana(1961)
Wille(1960)
Cross section [mb]
Energy [MeV]

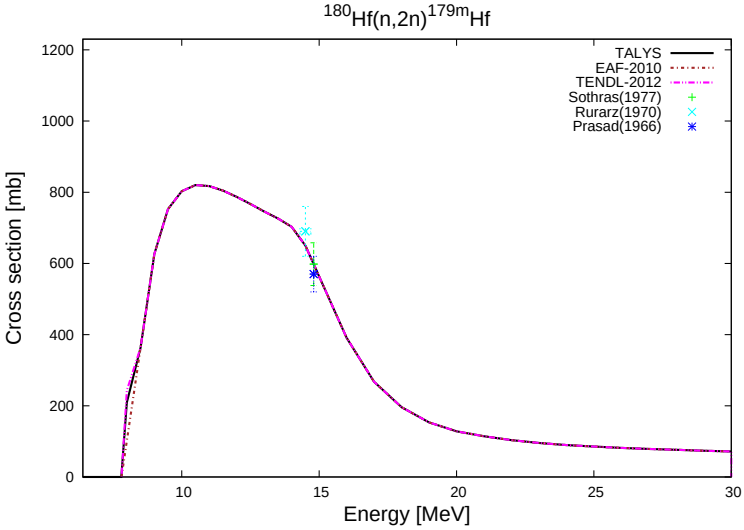

^{175}Lu(n,2n)^{174}Lu
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
ChuanxinZhuu(2011)
Dzysiuk(2010)
Frehaut(1980)
Veeser(1977)
Bayhurst(1975)
Bayhurst(1975)
Bayhurst(1975)
Qaim(1974)
Nethaway(1972)
Cross section [mb]
Energy [MeV]

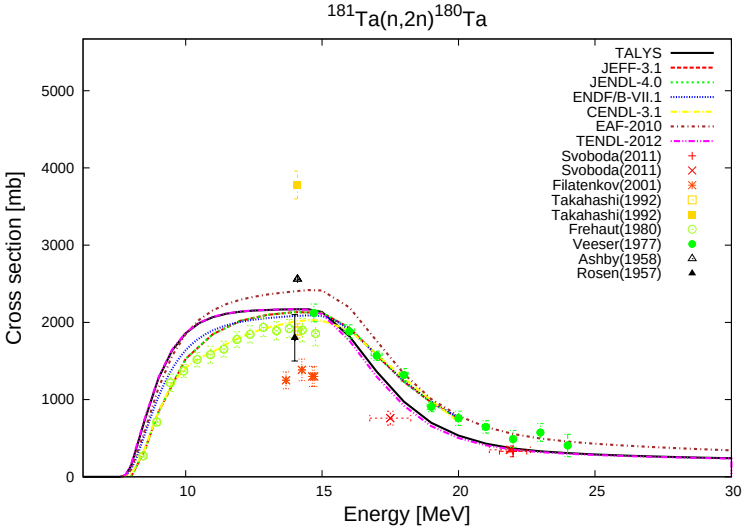

^{175}Lu(n,2n)^{174g}Lu
TALYS
EAF-2010
TENDL-2012
ChuanxinZhuu(2011)
JunhuaLuoo(2007)
WangXiuyuann(1989)
Laurec(1981)
Qaim(1974)
Dilg(1968)
Vallis(1966)
Cross section [mb]
Energy [MeV]

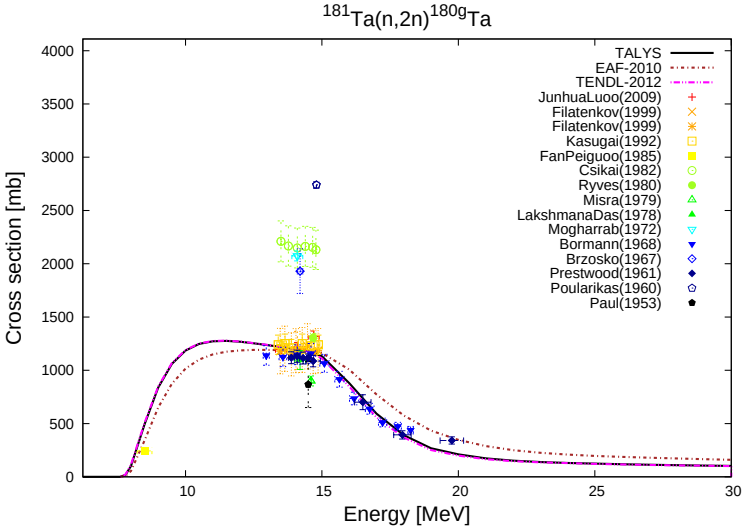

^{175}Lu(n,2n)^{174m}Lu
TALYS
EAF-2010
TENDL-2012
ChuanxinZhuu(2011)
Dzysiuk(2010)
JunhuaLuoo(2007)
Laurec(1981)
Qaim(1974)
Dilg(1968)
Vallis(1966)
Wille(1960)
Cross section [mb]
Energy [MeV]

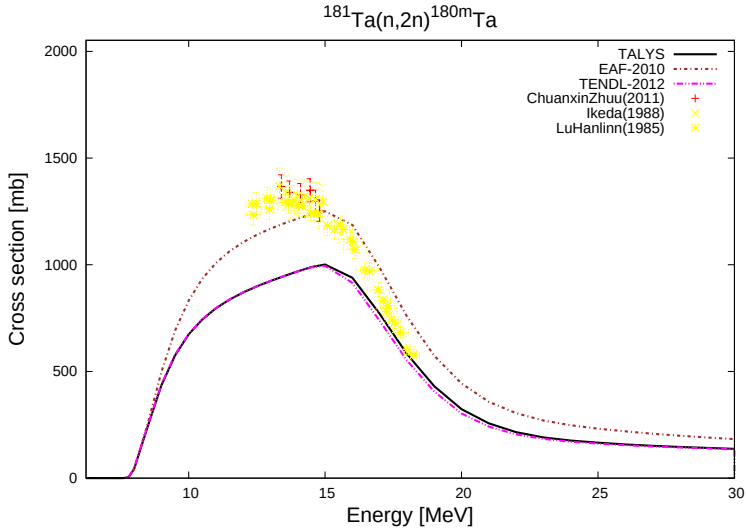

^{179}Hf(n,2n)^{178m}Hf
TALYS
EAF-2010
TENDL-2012
Ikeda(1991)
Prasad(1966)
Cross section [mb]
Energy [MeV]

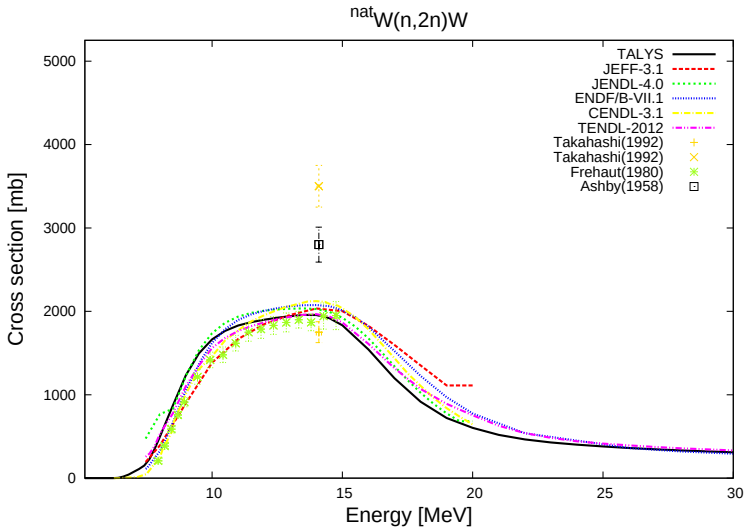

^{180}Hf(n,2n)^{179}Hf
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Panteleev(1996)
Cross section [mb]
Energy [MeV]

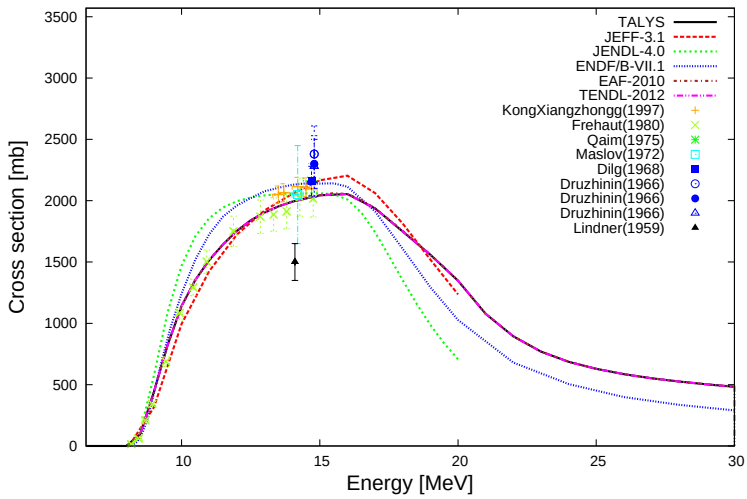

^{180}Hf(n,2n)^{179m}Hf
TALYS
EAF-2010
TENDL-2012
Sothras(1977)
Rurarz(1970)
Prasad(1966)
Cross section [mb]
Energy [MeV]

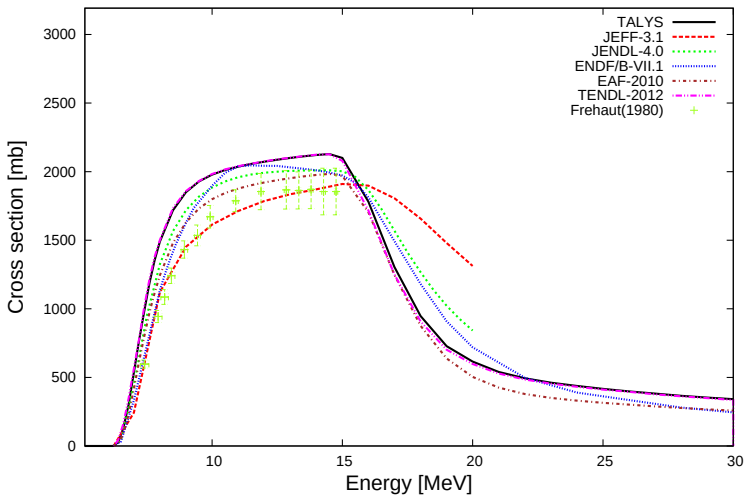

^{181}Ta(n,2n)^{180}Ta
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Svoboda(2011)
Svoboda(2011)
Filatenkov(2001)
Takahashi(1992)
Takahashi(1992)
Frehaut(1980)
Veeser(1977)
Ashby(1958)
Rosen(1957)
Cross section [mb]
Energy [MeV]

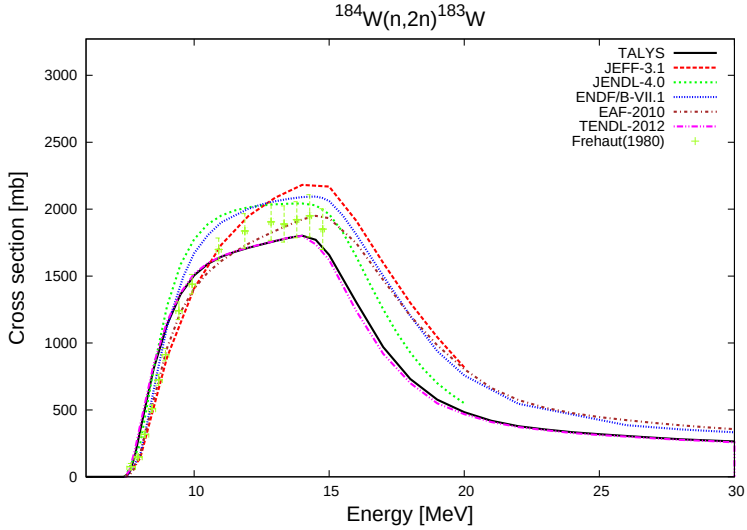

^{181}Ta(n,2n)^{180g}Ta
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2009)
Filatenkov(1999)
Filatenkov(1999)
Kasugai(1992)
FanPeiguoo(1985)
Csikai(1982)
Ryves(1980)
Misra(1979)
LakshmanaDas(1978)
Mogharrab(1972)
Bormann(1968)
Brzosko(1967)
Prestwood(1961)
Poularikas(1960)
Paul(1953)
Cross section [mb]
Energy [MeV]

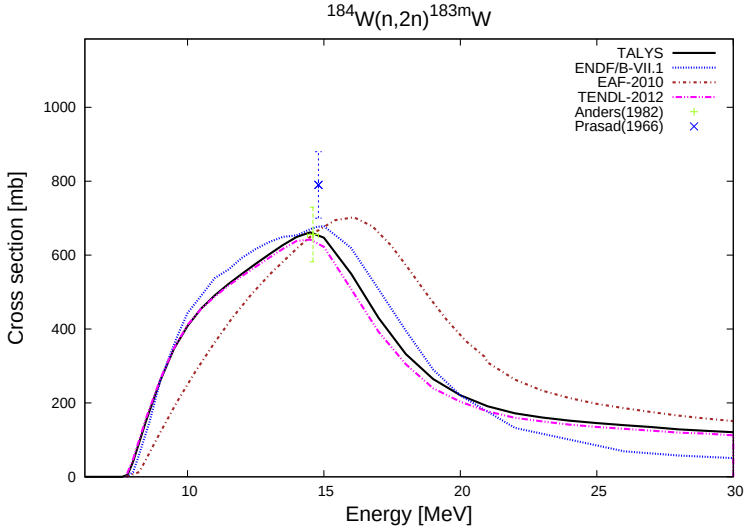

^{181}Ta(n,2n)^{180m}Ta
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
ChuanxinZhuu(2011)
Ikeda(1988)
LuHanlinn(1985)

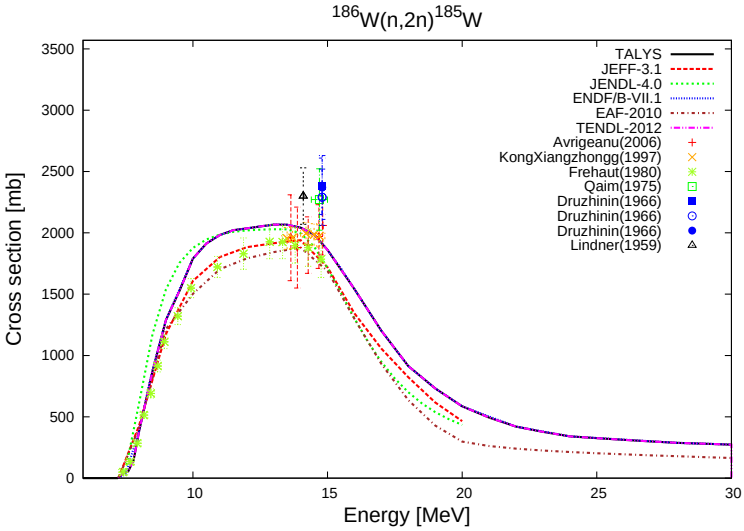

^{nat}W(n,2n)W
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Takahashi(1992)
Takahashi(1992)
Frehaut(1980)
Ashby(1958)

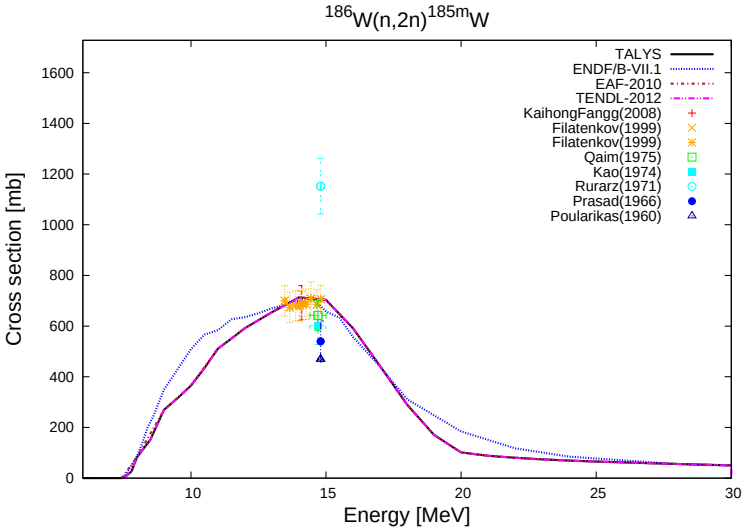

^{182}W(n,2n)^{181}W
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
KongXiangzhongg(1997)
Frehaut(1980)
Qaim(1975)
Maslov(1972)
Dilg(1968)
Druzhinin(1966)
Druzhinin(1966)
Druzhinin(1966)
Lindner(1959)

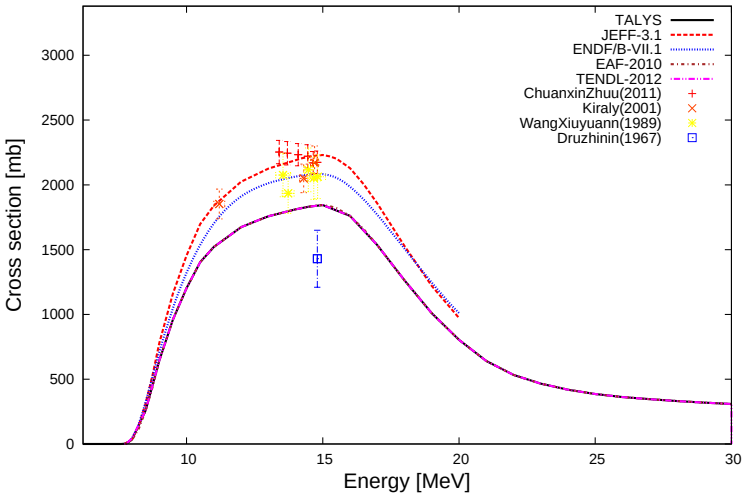

^{183}W(n,2n)^{182}W
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Frehaut(1980)

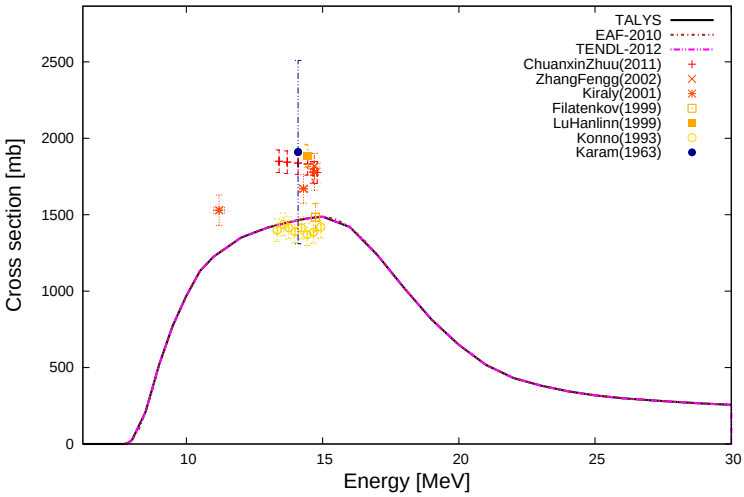

^{184}W(n,2n)^{183}W
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Frehaut(1980)

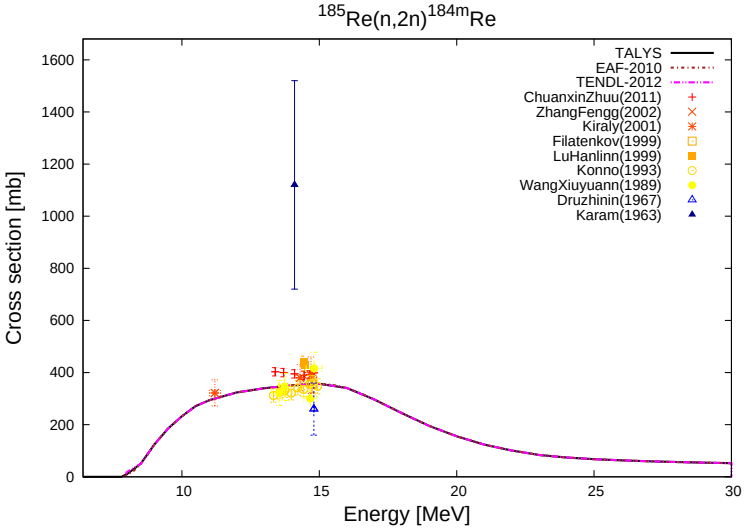

^{184}W(n,2n)^{183m}W
Cross section [mb]
Energy [MeV]
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
Anders(1982)
Prasad(1966)

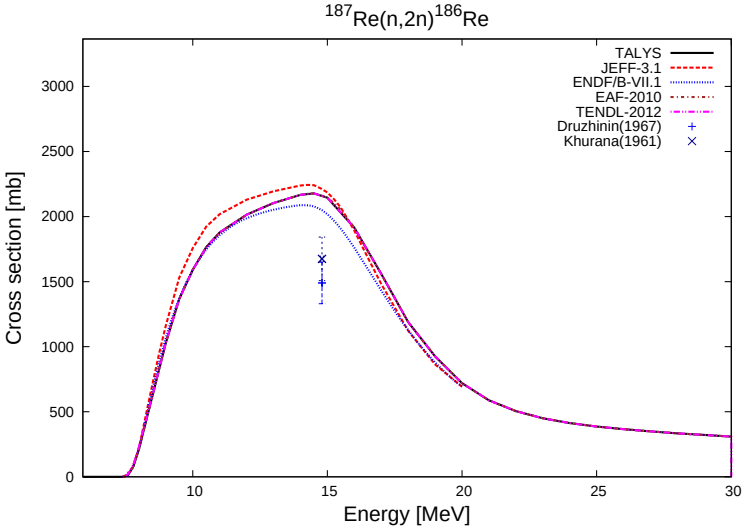

^{186}W(n,2n)^{185}W
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Avrigeanu(2006)
KongXiangzhongg(1997)
Frehaut(1980)
Qaim(1975)
Druzhinin(1966)
Druzhinin(1966)
Druzhinin(1966)
Lindner(1959)
Cross section [mb]
Energy [MeV]

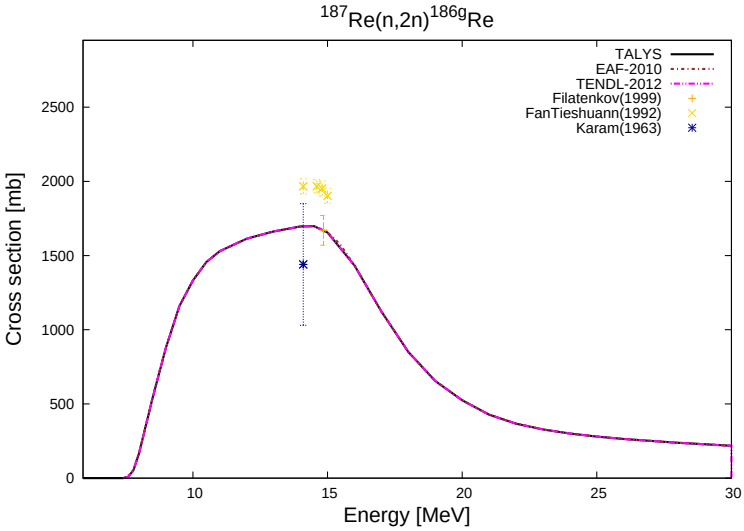

^{186}W(n,2n)^{185m}W
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
KaihongFangg(2008)
Filatenkov(1999)
Filatenkov(1999)
Qaim(1975)
Kao(1974)
Rurarz(1971)
Prasad(1966)
Poularikas(1960)
Cross section [mb]
Energy [MeV]

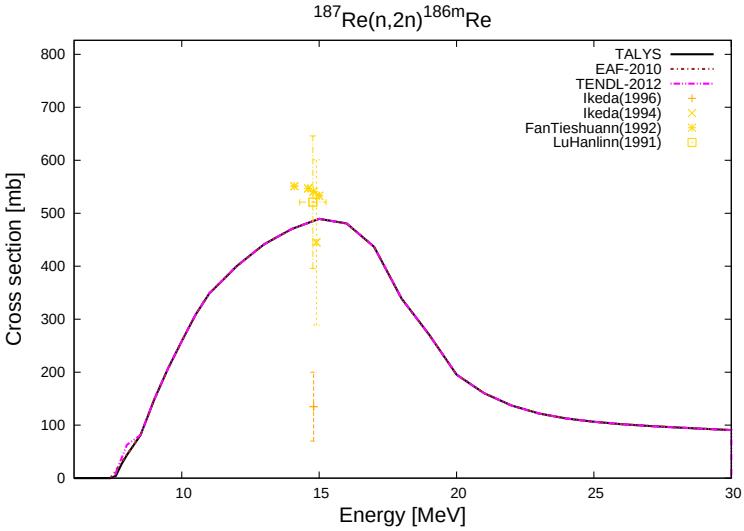

^{185}Re(n,2n)^{184}Re
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
ChuanxinZhuu(2011)
Kiraly(2001)
WangXiuyuann(1989)
Druzhinin(1967)
Cross section [mb]
Energy [MeV]

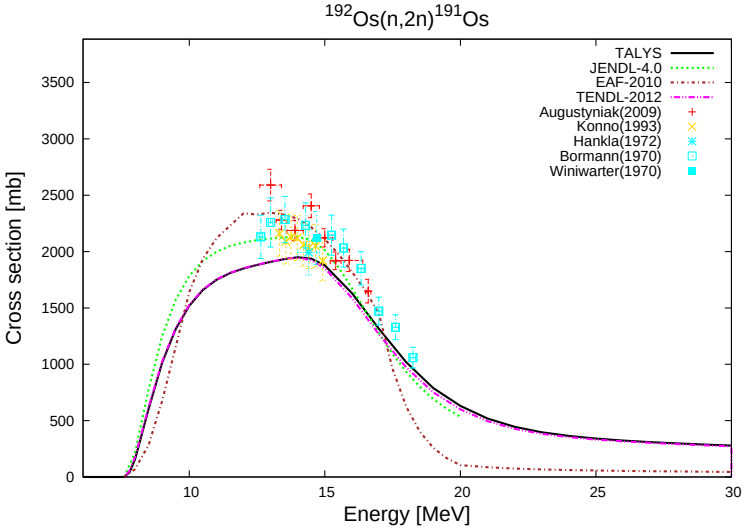

^{185}Re(n,2n)^{184g}Re
TALYS
EAF-2010
TENDL-2012
ChuanxinZhuu(2011)
ZhangFengg(2002)
Kiraly(2001)
Filatenkov(1999)
LuHanlinn(1999)
Konno(1993)
Karam(1963)
Cross section [mb]
Energy [MeV]

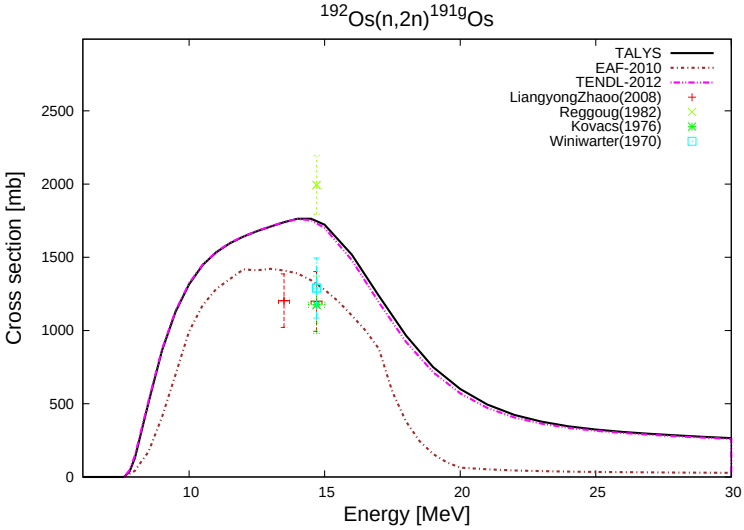

^{185}Re(n,2n)^{184m}Re
TALYS
EAF-2010
TENDL-2012
ChuanxinZhuu(2011)
ZhangFengg(2002)
Kiraly(2001)
Filatenkov(1999)
LuHanlinn(1999)
Konno(1993)
WangXiuyuann(1989)
Druzhinin(1967)
Karam(1963)
Cross section [mb]
Energy [MeV]

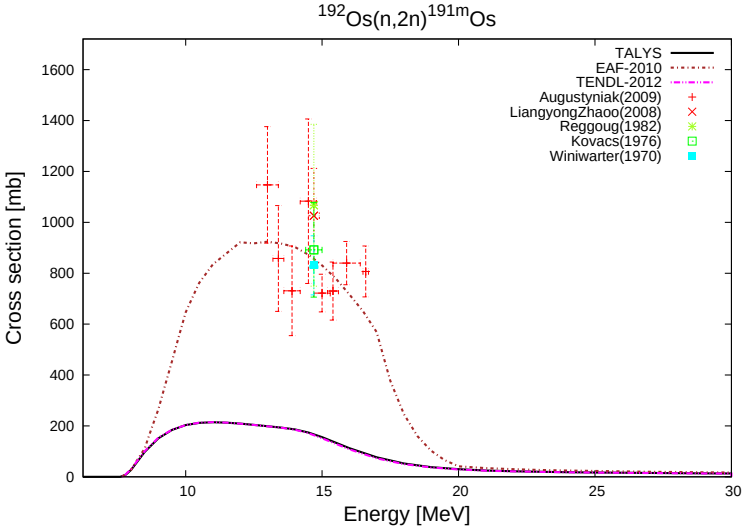

^{187}Re(n,2n)^{186}Re
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Druzhinin(1967)
Khurana(1961)
Cross section [mb]
Energy [MeV]

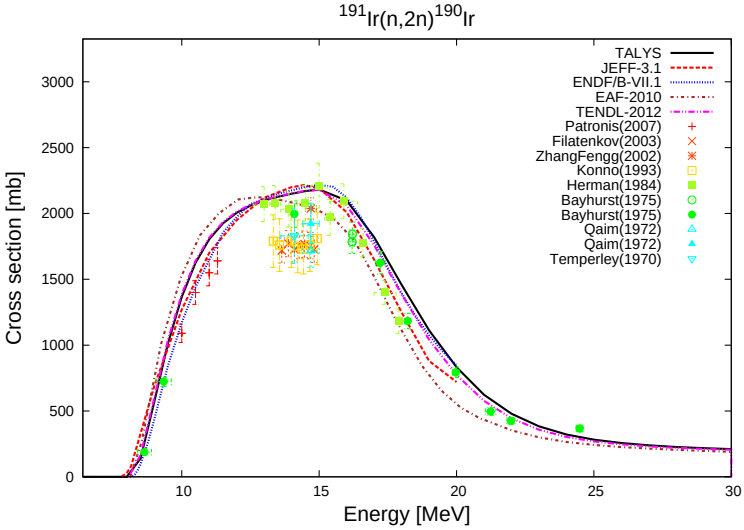

^{187}Re(n,2n)^{186g}Re
TALYS
EAF-2010
TENDL-2012
Filatenkov(1999)
FanTieshuann(1992)
Karam(1963)
Cross section [mb]
Energy [MeV]

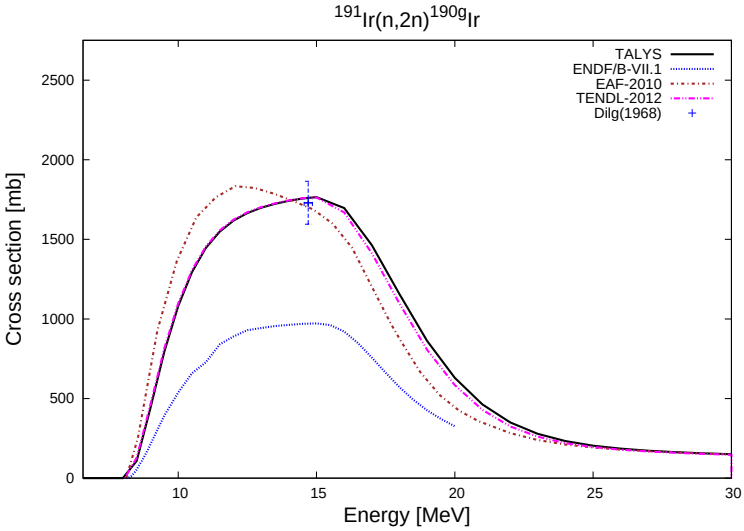

^{187}Re(n,2n)^{186m}Re
TALYS
EAF-2010
TENDL-2012
Ikeda(1996)
Ikeda(1994)
FanTieshuann(1992)
LuHanlinn(1991)
Cross section [mb]
Energy [MeV]

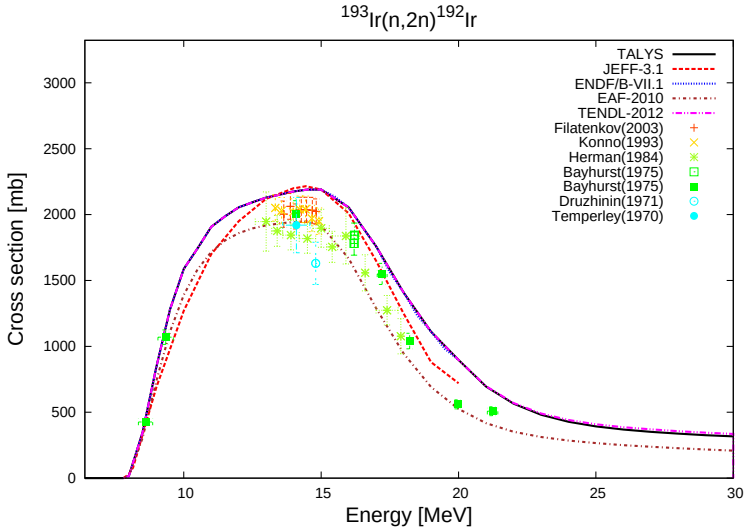

^{192}Os(n,2n)^{191}Os
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
Augustyniak(2009)
Konno(1993)
Hankla(1972)
Bormann(1970)
Winiwarter(1970)
Cross section [mb]
Energy [MeV]

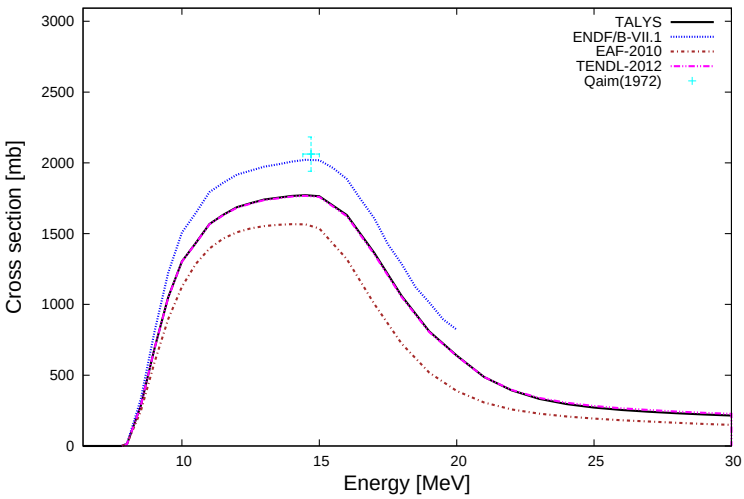

^{192}Os(n,2n)^{191g}Os
TALYS
EAF-2010
TENDL-2012
LiangyongZhaoo(2008)
Reggoug(1982)
Kovacs(1976)
Winiwarter(1970)
Cross section [mb]
Energy [MeV]

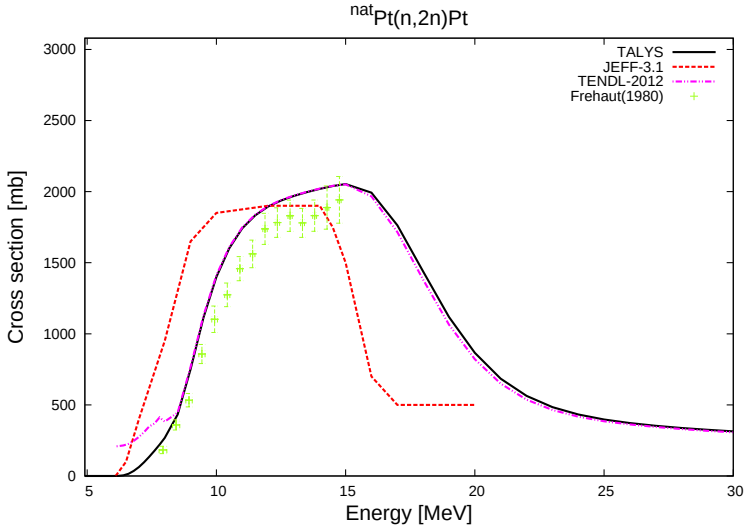

^{192}Os(n,2n)^{191m}Os
TALYS
EAF-2010
TENDL-2012
Augustyniak(2009)
LiangyongZhaoo(2008)
Reggoug(1982)
Kovacs(1976)
Winiwarter(1970)
Cross section [mb]
Energy [MeV]

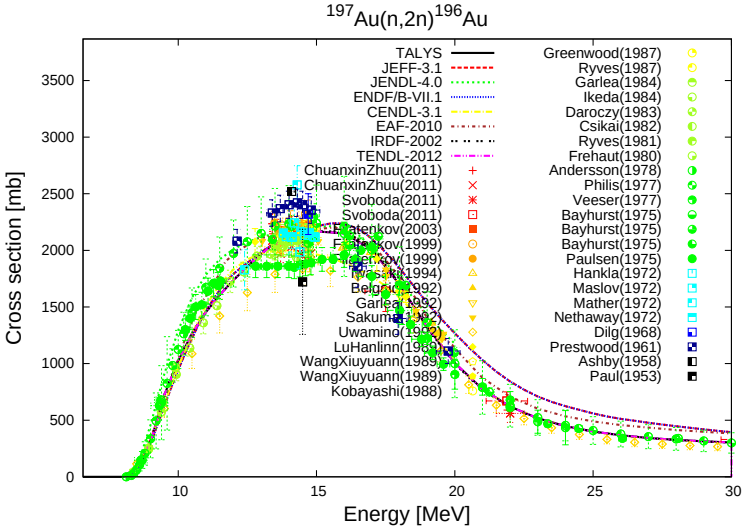

^{191}Ir(n,2n)^{190}Ir
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Patronis(2007)
Filatenkov(2003)
ZhangFengg(2002)
Konno(1993)
Herman(1984)
Bayhurst(1975)
Bayhurst(1975)
Qaim(1972)
Qaim(1972)
Temperley(1970)
Cross section [mb]
Energy [MeV]

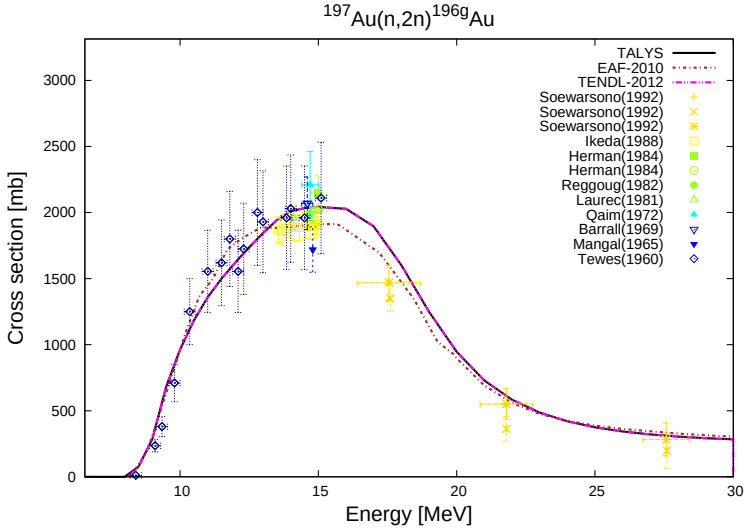

^{191}Ir(n,2n)^{190g}Ir
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
Dilg(1968)
Cross section [mb]
Energy [MeV]

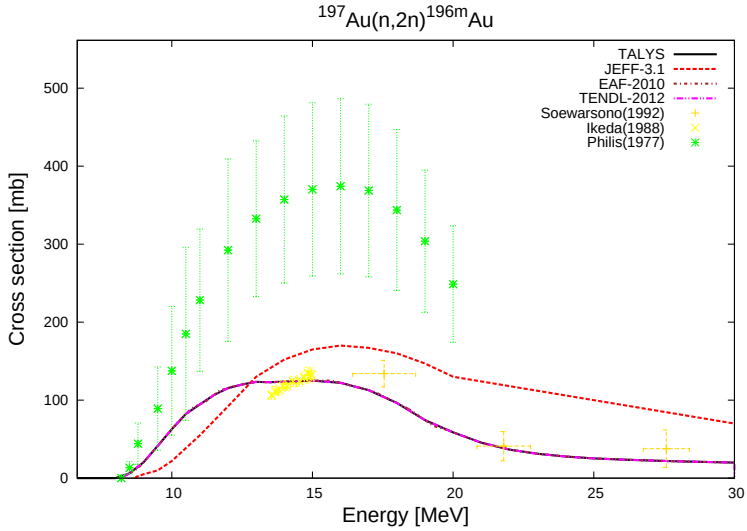

^{193}Ir(n,2n)^{192}Ir
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(2003)
Konno(1993)
Herman(1984)
Bayhurst(1975)
Bayhurst(1975)
Druzhinin(1971)
Temperley(1970)
Cross section [mb]
Energy [MeV]

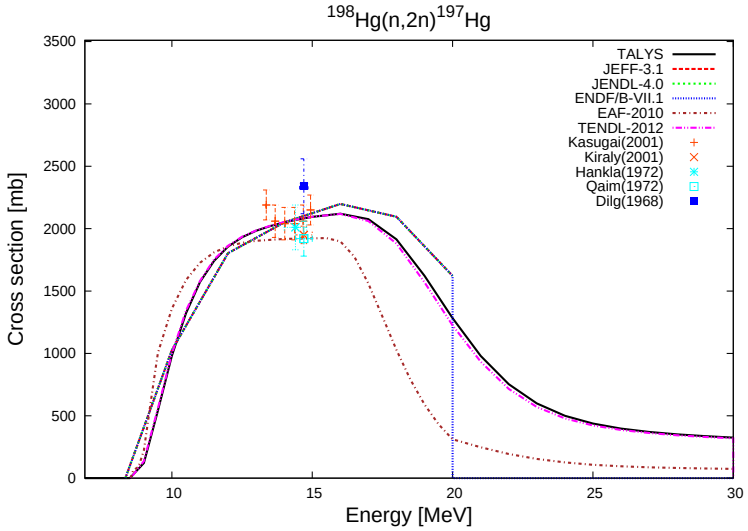

^{193}Ir(n,2n)^{192g}Ir
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
Qaim(1972)
Cross section [mb]
Energy [MeV]

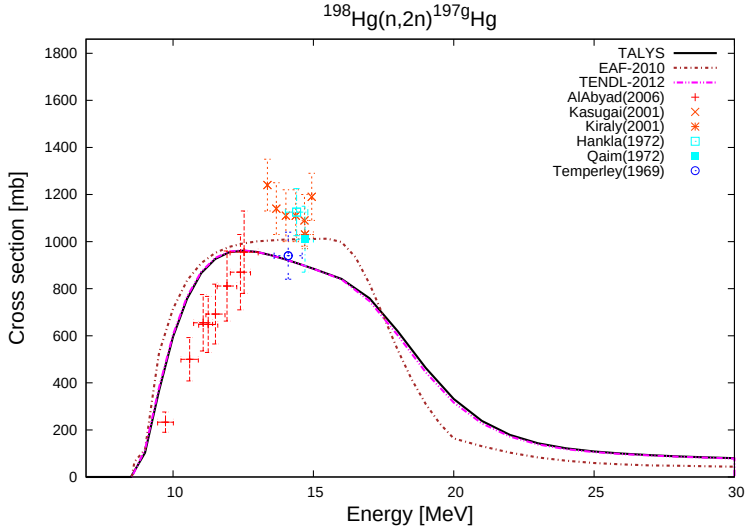

^{nat}Pt(n,2n)Pt
TALYS
JEFF-3.1
TENDL-2012
Frehaut(1980)
Cross section [mb]
Energy [MeV]

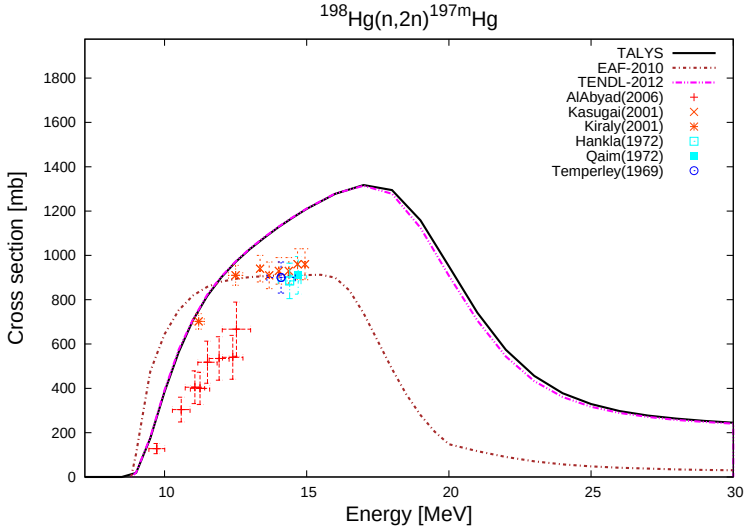

^{197}Au(n,2n)^{196}Au
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
ChuanxinZhuu(2011)
ChuanxinZhuu(2011)
Svoboda(2011)
Svoboda(2011)
Filatenkov(2003)
Greenwood(1987)
Ryves(1987)
Garlea(1984)
Ikeda(1984)
Daroczy(1983)
Csikai(1982)
Ryves(1981)
Frehaut(1980)
Andersson(1978)
Philis(1977)
Veeser(1977)
Bayhurst(1975)
Bayhurst(1975)
Bayhurst(1975)
Paulsen(1975)
Hankla(1972)
Maslov(1972)
Mather(1972)
Nethaway(1972)
Dilg(1968)
Prestwood(1961)
Ashby(1958)
Paul(1953)
WangXiuyuann(1989)
WangXiuyuann(1989)
Kobayashi(1988)
Cross section [mb]
Energy [MeV]

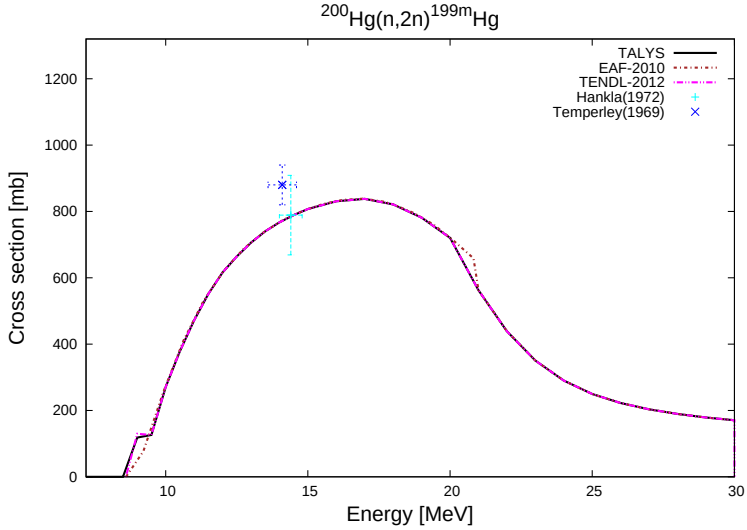

^{197}Au(n,2n)^{196g}Au
TALYS
EAF-2010
TENDL-2012
Soewarsono(1992)
Soewarsono(1992)
Soewarsono(1992)
Ikeda(1988)
Herman(1984)
Herman(1984)
Reggoug(1982)
Laurec(1981)
Qaim(1972)
Barrall(1969)
Mangal(1965)
Tewes(1960)
Cross section [mb]
Energy [MeV]

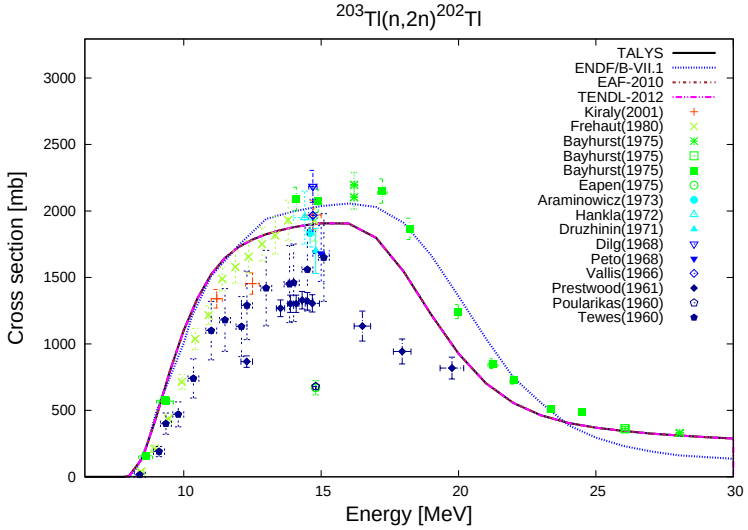

^{197}Au(n,2n)^{196m}Au
TALYS
JEFF-3.1
EAF-2010
TENDL-2012
Soewarsono(1992)
Ikeda(1988)
Philis(1977)
Cross section [mb]
Energy [MeV]

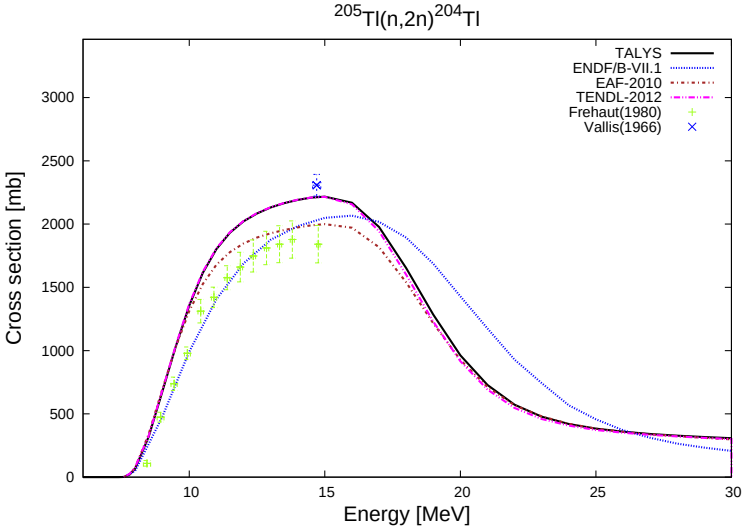

^{198}Hg(n,2n)^{197}Hg
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Kasugai(2001)
Kiraly(2001)
Hankla(1972)
Qaim(1972)
Dilg(1968)
Cross section [mb]
Energy [MeV]

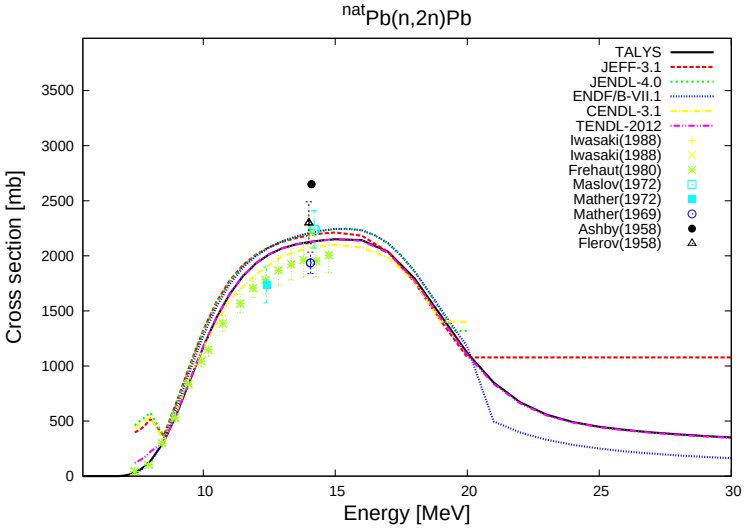

^{198}Hg(n,2n)^{197g}Hg
TALYS
EAF-2010
TENDL-2012
AlAbyad(2006)
Kasugai(2001)
Kiraly(2001)
Hankla(1972)
Qaim(1972)
Temperley(1969)
Cross section [mb]
Energy [MeV]

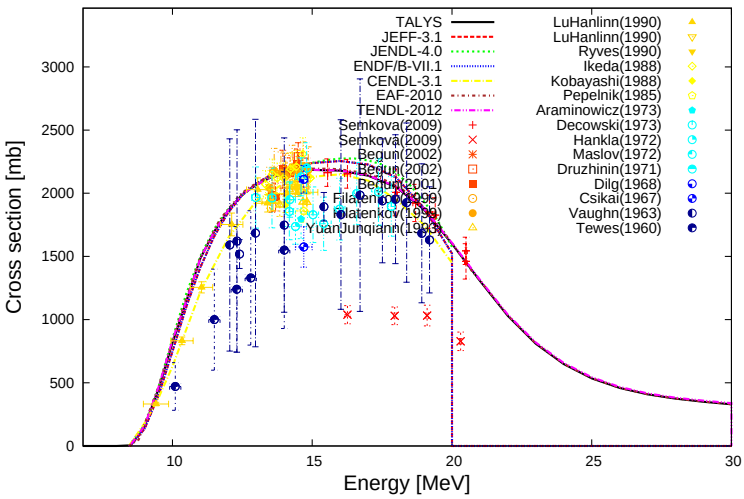

^{198}Hg(n,2n)^{197m}Hg
TALYS
EAF-2010
TENDL-2012
AlAbyad(2006)
Kasugai(2001)
Kiraly(2001)
Hankla(1972)
Qaim(1972)
Temperley(1969)
Cross section [mb]
Energy [MeV]

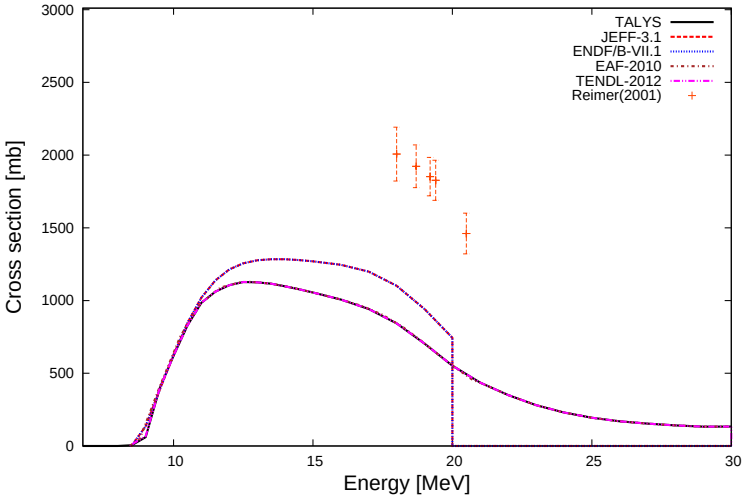

^{200}Hg(n,2n)^{199m}Hg
TALYS
EAF-2010
TENDL-2012
Hankla(1972)
Temperley(1969)
Cross section [mb]
Energy [MeV]

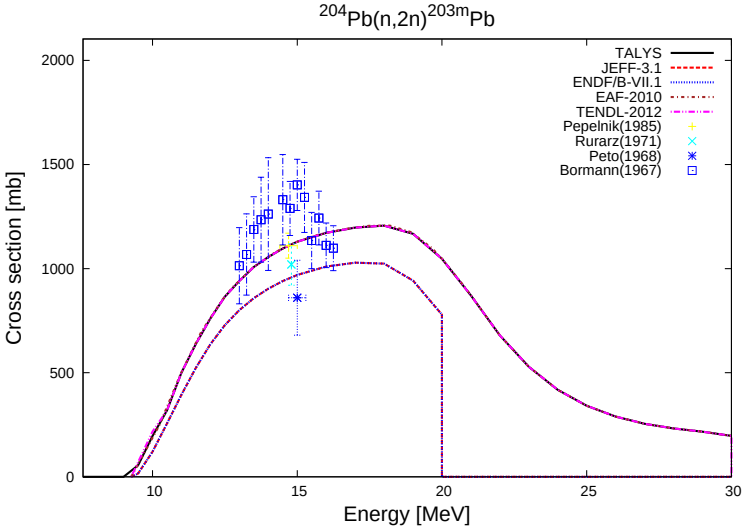

^{203}Tl(n,2n)^{202}Tl
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
Kiraly(2001)
Frehaut(1980)
Bayhurst(1975)
Bayhurst(1975)
Bayhurst(1975)
Eapen(1975)
Araminowicz(1973)
Hankla(1972)
Druzhinin(1971)
Dilg(1968)
Peto(1968)
Vallis(1966)
Prestwood(1961)
Poularikas(1960)
Tewes(1960)
Cross section [mb]
Energy [MeV]

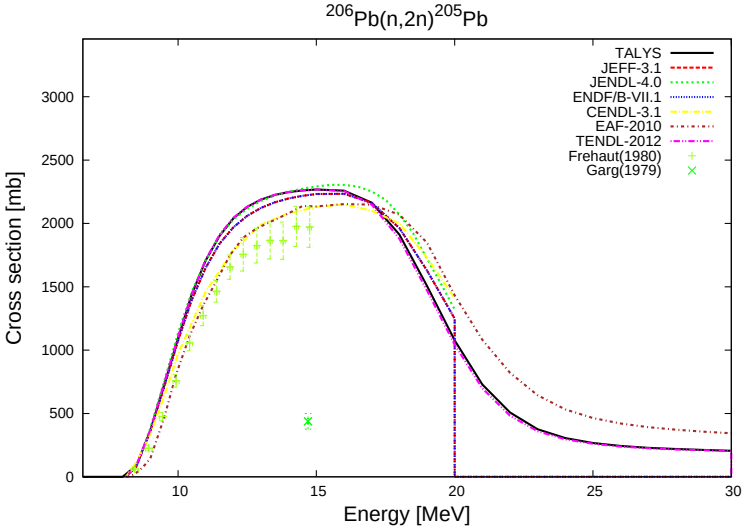

^{205}Tl(n,2n)^{204}Tl
Cross section [mb]
Energy [MeV]
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
Frehaut(1980)
Vallis(1966)

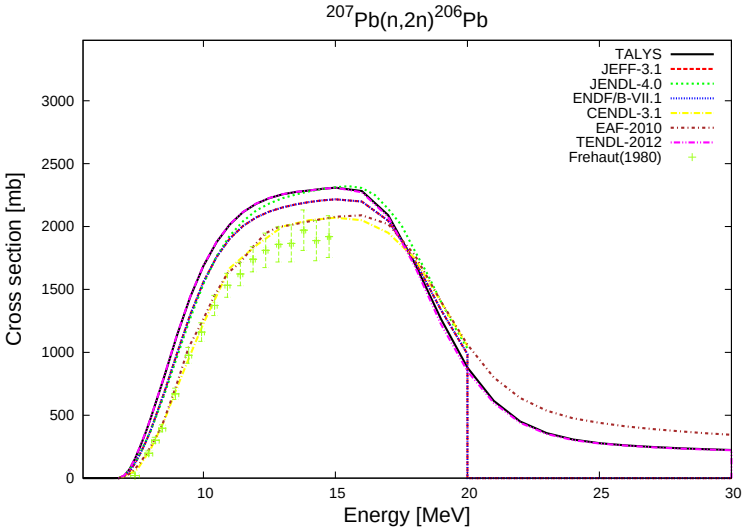

^{nat}Pb(n,2n)Pb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Iwasaki(1988)
Iwasaki(1988)
Frehaut(1980)
Maslov(1972)
Mather(1972)
Mather(1969)
Ashby(1958)
Flerov(1958)

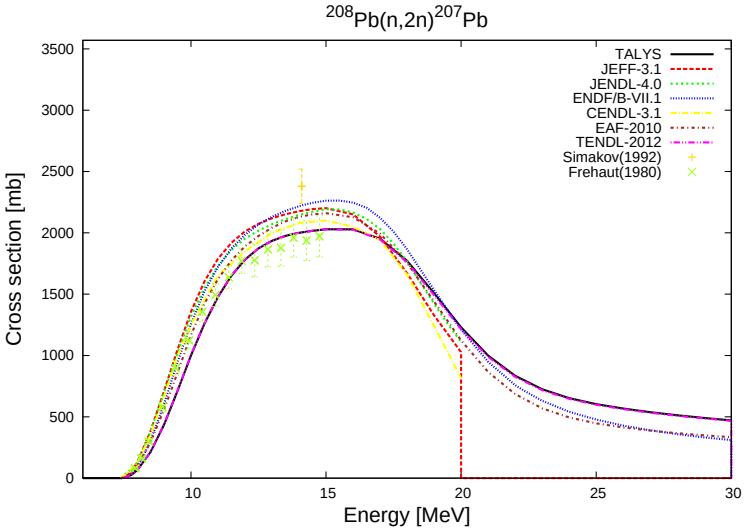

^{204}Pb(n,2n)^{203}Pb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Semkova(2009)
Semkova(2009)
Begum(2002)
Begum(2002)
Begum(2001)
Filatenkov(1999)
Filatenkov(1999)
YuanJunqian(1993)
LuHanlinn(1990)
LuHanlinn(1990)
Ryves(1990)
Ikeda(1988)
Kobayashi(1988)
Pepelnik(1985)
Araminowicz(1973)
Decowski(1973)
Hankla(1972)
Maslov(1972)
Druzhinin(1971)
Dilg(1968)
Csikai(1967)
Vaughn(1963)
Tewes(1960)

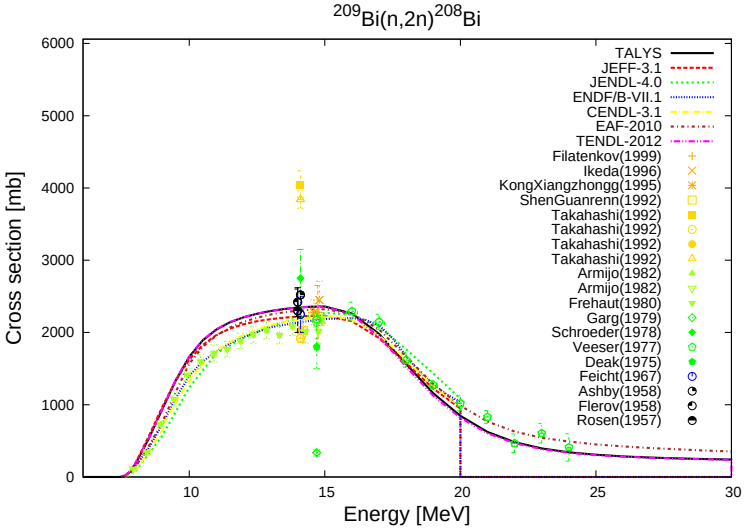

^{204}Pb(n,2n)^{203g}Pb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Reimer(2001)

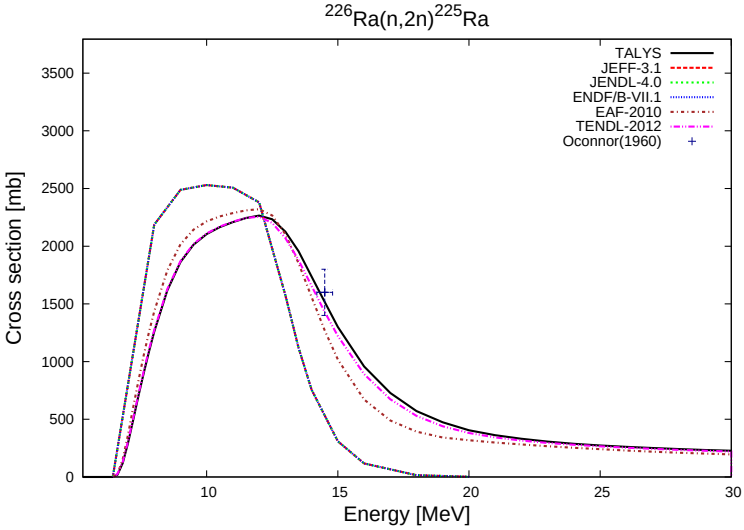

^{204}Pb(n,2n)^{203m}Pb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Pepelnik(1985)
Rurarz(1971)
Peto(1968)
Bormann(1967)

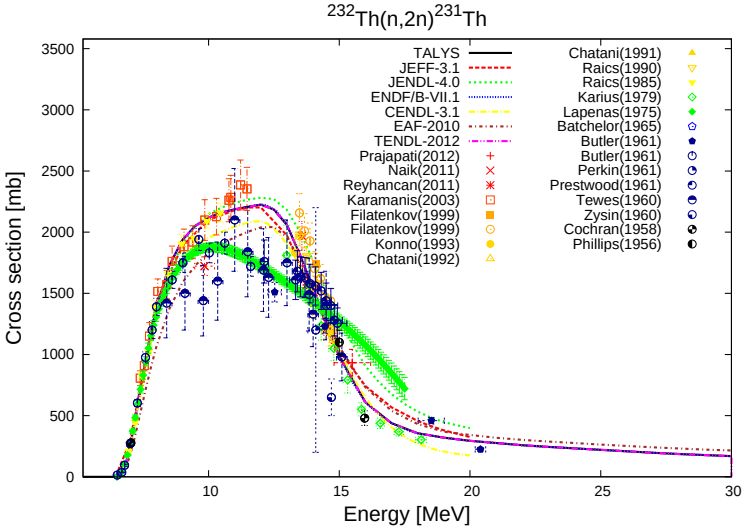

^{206}Pb(n,2n)^{205}Pb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Frehaut(1980)
Garg(1979)

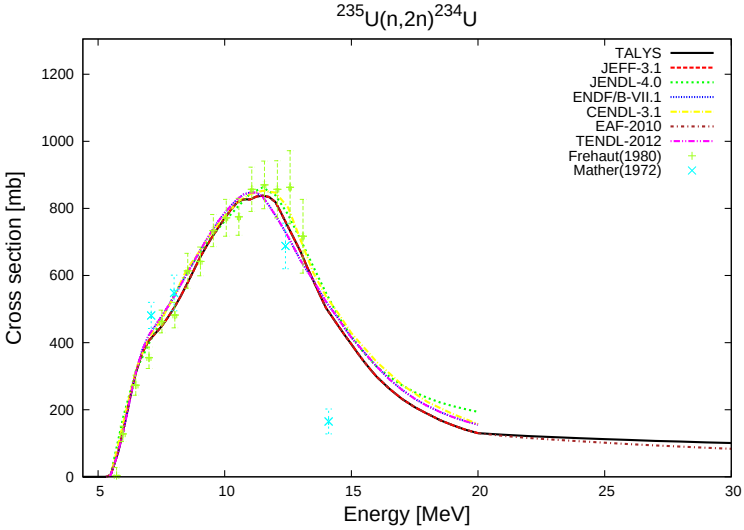

^{207}Pb(n,2n)^{206}Pb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Frehaut(1980)

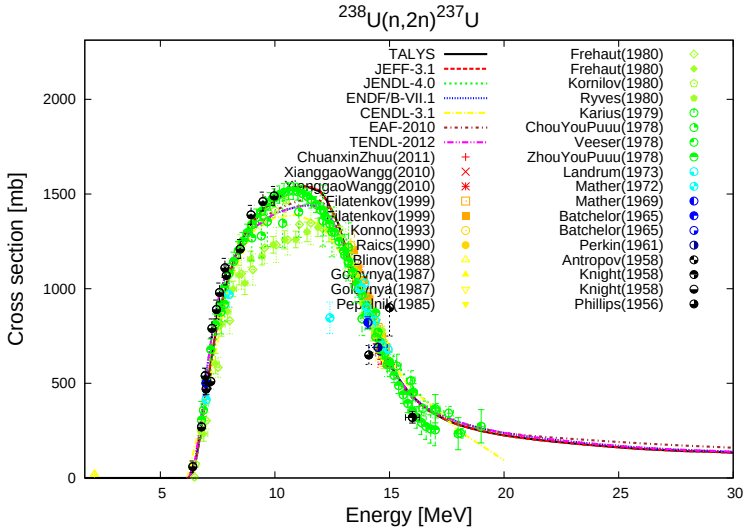

^{208}Pb(n,2n)^{207}Pb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Simakov(1992)
Frehaut(1980)

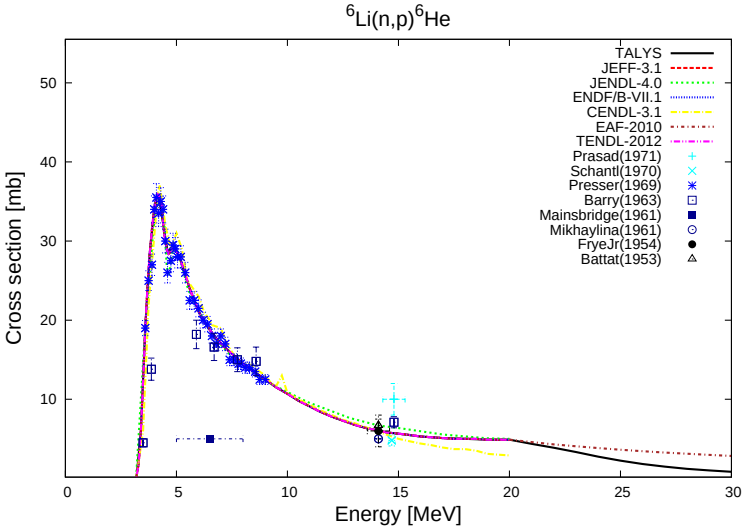

^{209}Bi(n,2n)^{208}Bi
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Filatenkov(1999)
Ikeda(1996)
KongXiangzhongg(1995)
ShenGuanrenn(1992)
Takahashi(1992)
Takahashi(1992)
Takahashi(1992)
Takahashi(1992)
Armijo(1982)
Armijo(1982)
Frehaut(1980)
Garg(1979)
Schroeder(1978)
Veeser(1977)
Deak(1975)
Feicht(1967)
Ashby(1958)
Flerov(1958)
Rosen(1957)

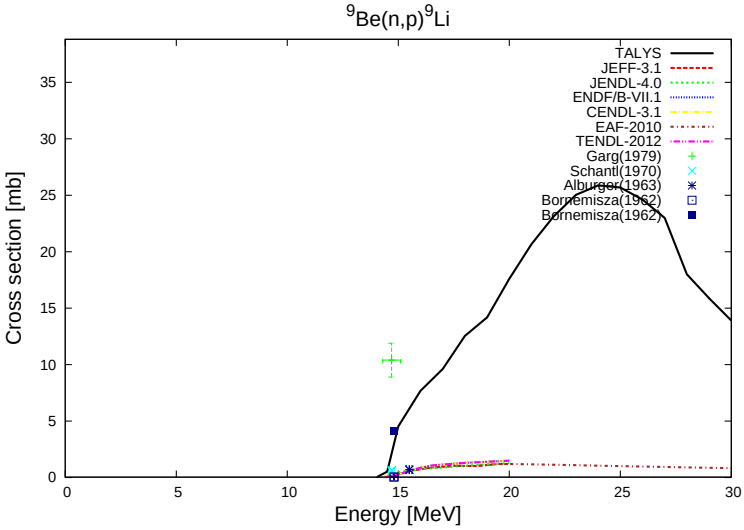

^{226}Ra(n,2n)^{225}Ra
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Oconnor(1960)

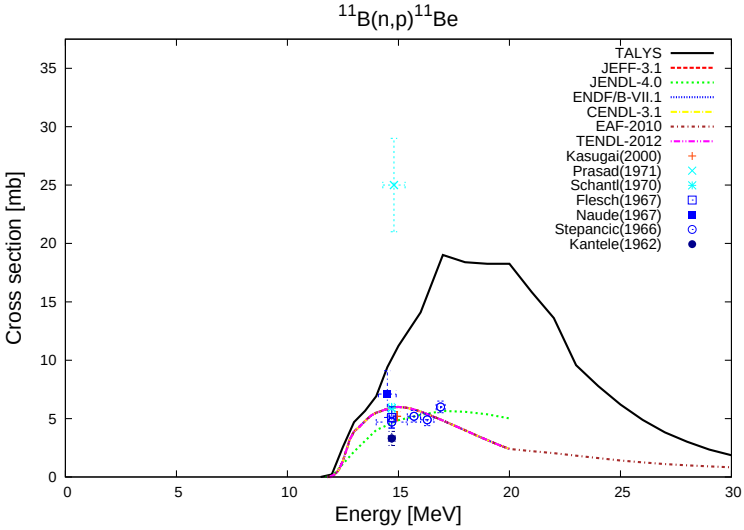

^{232}Th(n,2n)^{231}Th
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Prajapati(2012)
Naik(2011)
Reyhancan(2011)
Karamanis(2003)
Filatenkov(1999)
Filatenkov(1999)
Konno(1993)
Chatani(1992)
Chatani(1991)
Raics(1990)
Raics(1985)
Karius(1979)
Lapenas(1975)
Batchelor(1965)
Butler(1961)
Butler(1961)
Perkin(1961)
Prestwood(1961)
Tewes(1960)
Zysin(1960)
Cochran(1958)
Phillips(1956)

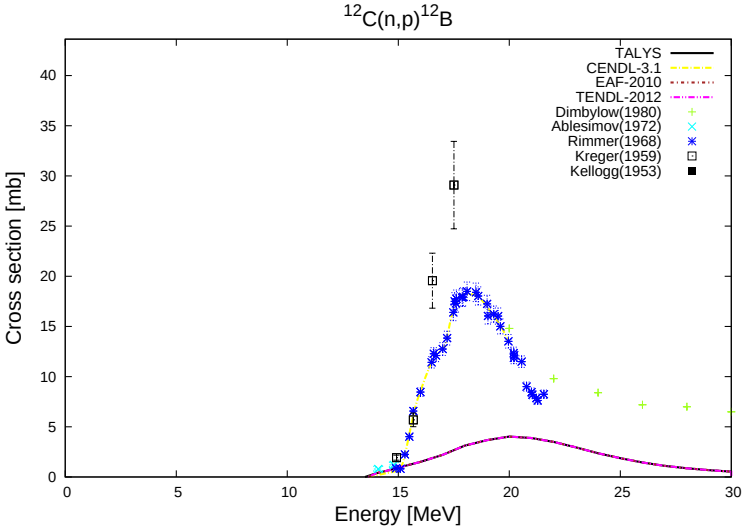

^{235}U(n,2n)^{234}U
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Frehaut(1980)
Mather(1972)

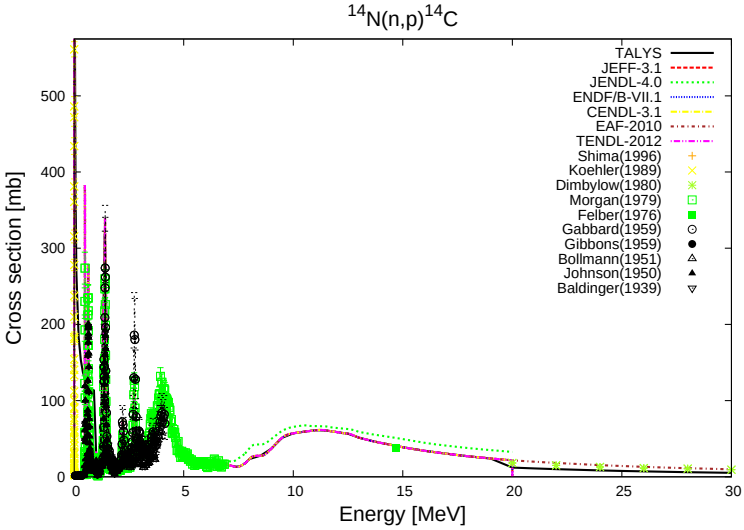

238U(n,2n)237U
Cross section [mb]
Energy [MeV]
0
500
1000
1500
2000
5
10
15
20
25
30
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
ChuanxinZhuu(2011)
XianggaoWangg(2010)
XianggaoWangg(2010)
Filatenkov(1999)
Filatenkov(1999)
Konno(1993)
Raics(1990)
Blinov(1988)
Go...nya(1987)
Go...nya(1987)
Pe...nik(1985)
Frehaut(1980)
Frehaut(1980)
Kornilov(1980)
Ryves(1980)
Karius(1979)
ChouYouPuuu(1978)
Veeser(1978)
ZhouYouPuuu(1978)
Landrum(1973)
Mather(1972)
Mather(1969)
Batchelor(1965)
Batchelor(1965)
Perkin(1961)
Antropov(1958)
Knight(1958)
Knight(1958)
Phillips(1956)

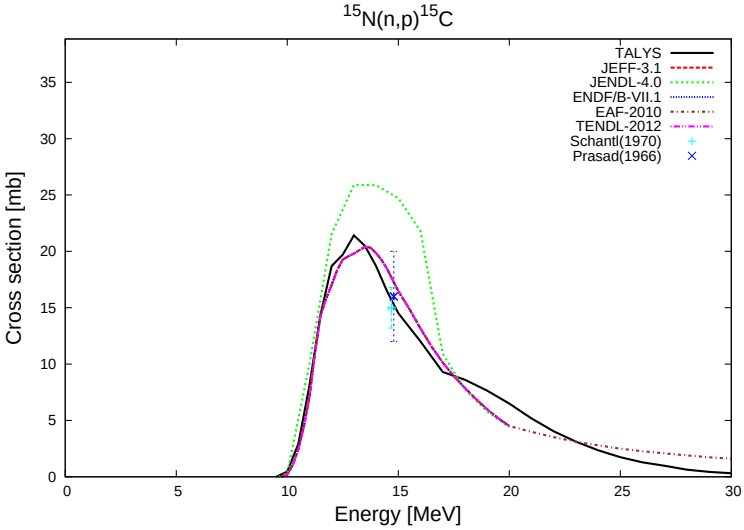

^{6}Li(n,p)^{6}He
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Prasad(1971)
Schantl(1970)
Presser(1969)
Barry(1963)
Mainsbridge(1961)
Mikhaylina(1961)
FryeJr(1954)
Battat(1953)
Cross section [mb]
Energy [MeV]

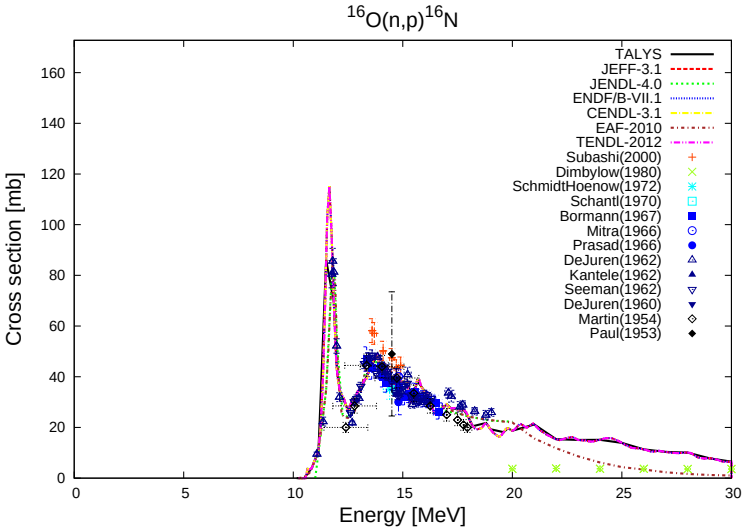

^{9}Be(n,p)^{9}Li
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Garg(1979)
Schantl(1970)
Alburger(1963)
Bornemisza(1962)
Bornemisza(1962)
Cross section [mb]
Energy [MeV]

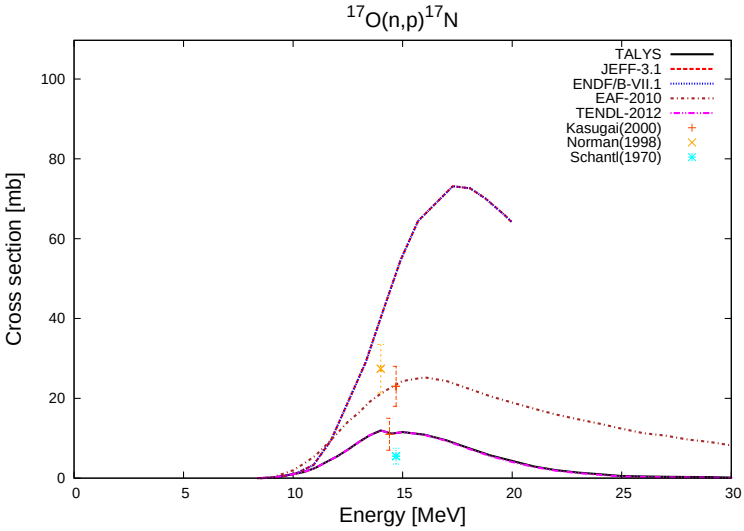

^{11}B(n,p)^{11}Be
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Kasugai(2000)
Prasad(1971)
Schantl(1970)
Flesch(1967)
Naude(1967)
Stepancic(1966)
Kantele(1962)
Cross section [mb]
Energy [MeV]

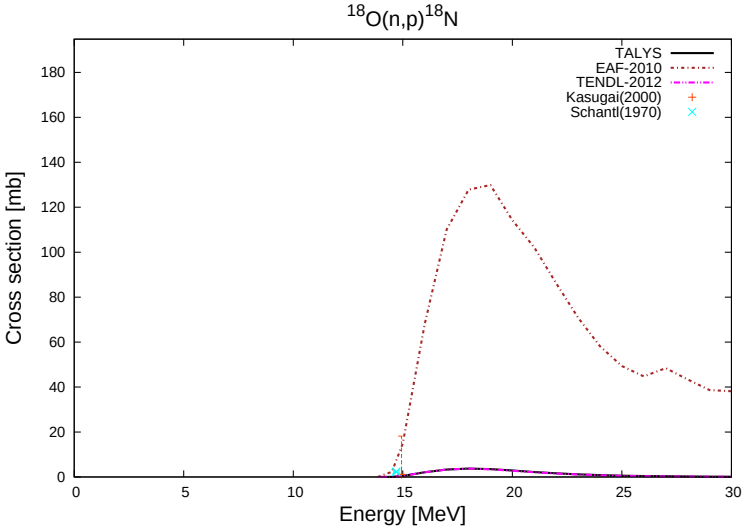

^{12}C(n,p)^{12}B
TALYS
CENDL-3.1
EAF-2010
TENDL-2012
Dimbylow(1980)
Ablesimov(1972)
Rimmer(1968)
Kreger(1959)
Kellogg(1953)
Cross section [mb]
Energy [MeV]

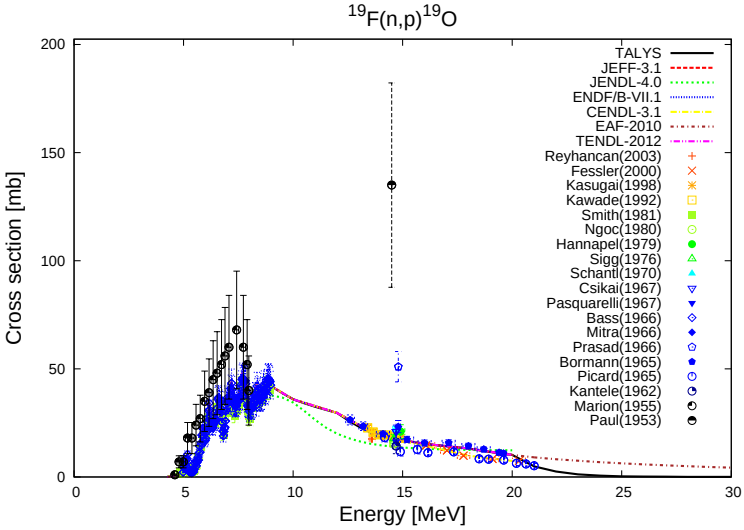

^{14}N(n,p)^{14}C
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Shima(1996)
Koehler(1989)
Dimbylow(1980)
Morgan(1979)
Felber(1976)
Gabbard(1959)
Gibbons(1959)
Bollmann(1951)
Johnson(1950)
Baldinger(1939)
Cross section [mb]
Energy [MeV]

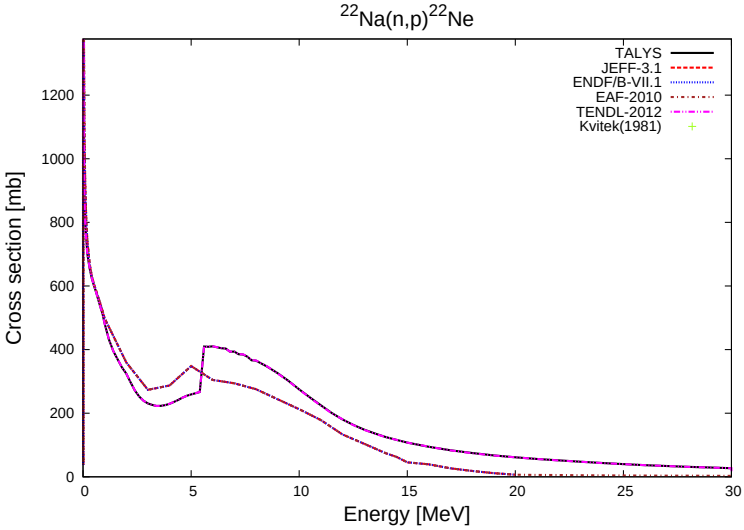

^{15}N(n,p)^{15}C
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Schantl(1970)
Prasad(1966)
Cross section [mb]
Energy [MeV]

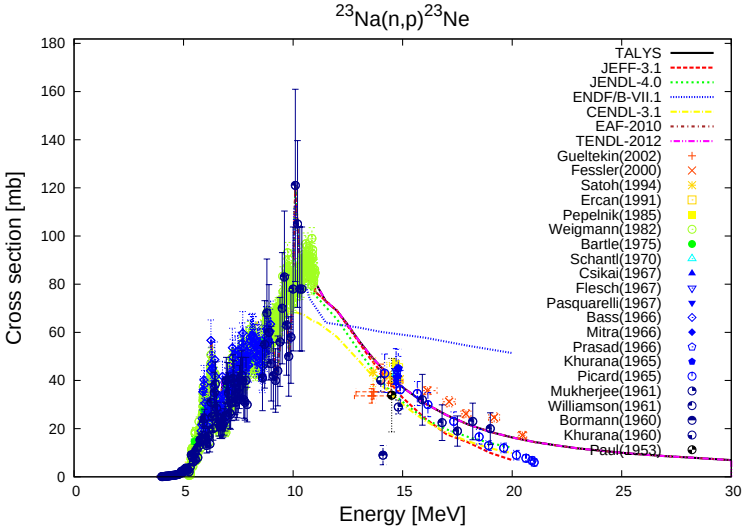

^{16}O(n,p)^{16}N
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Subashi(2000)
Dimbylow(1980)
SchmidtHoenow(1972)
Schantl(1970)
Bormann(1967)
Mitra(1966)
Prasad(1966)
DeJuren(1962)
Kantele(1962)
Seeman(1962)
DeJuren(1960)
Martin(1954)
Paul(1953)

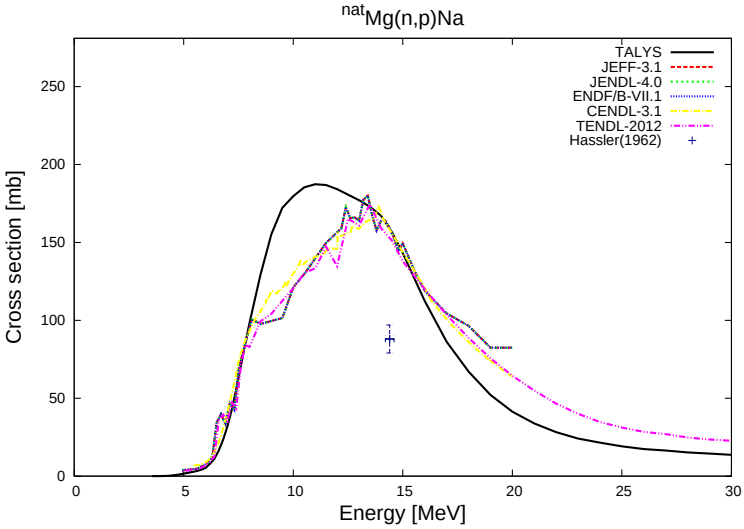

^{17}O(n,p)^{17}N
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Kasugai(2000)
Norman(1998)
Schantl(1970)

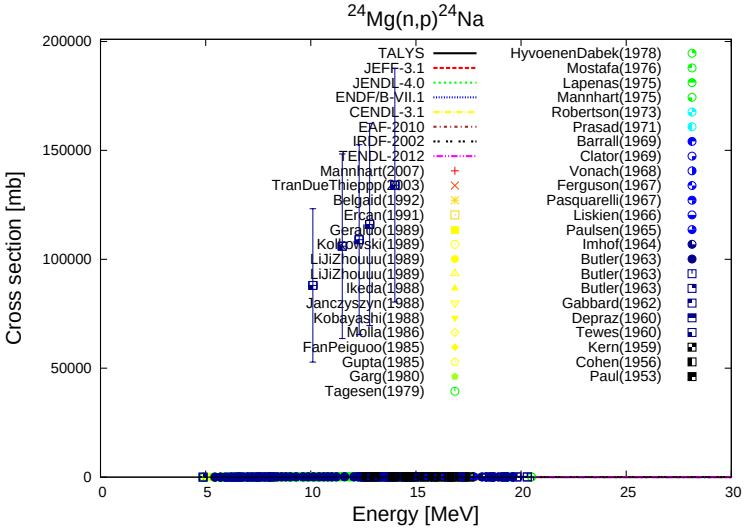

^{18}O(n,p)^{18}N
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Kasugai(2000)
Schantl(1970)

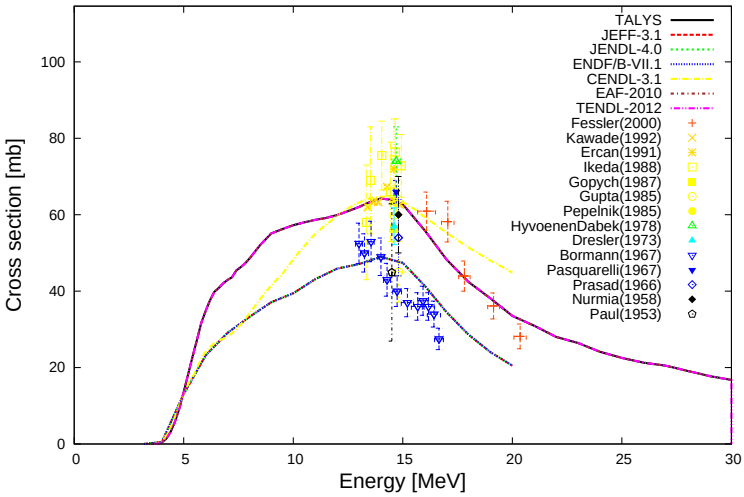

^{19}F(n,p)^{19}O
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Reyhancan(2003)
Fessler(2000)
Kasugai(1998)
Kawade(1992)
Smith(1981)
Ngoc(1980)
Hannapel(1979)
Sigg(1976)
Schantl(1970)
Csikai(1967)
Pasquarelli(1967)
Bass(1966)
Mitra(1966)
Prasad(1966)
Bormann(1965)
Picard(1965)
Kantele(1962)
Marion(1955)
Paul(1953)

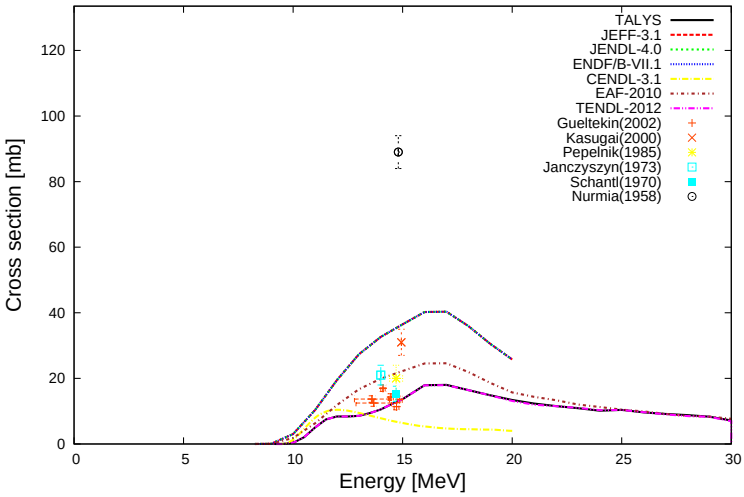

^{22}Na(n,p)^{22}Ne
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Kvitek(1981)

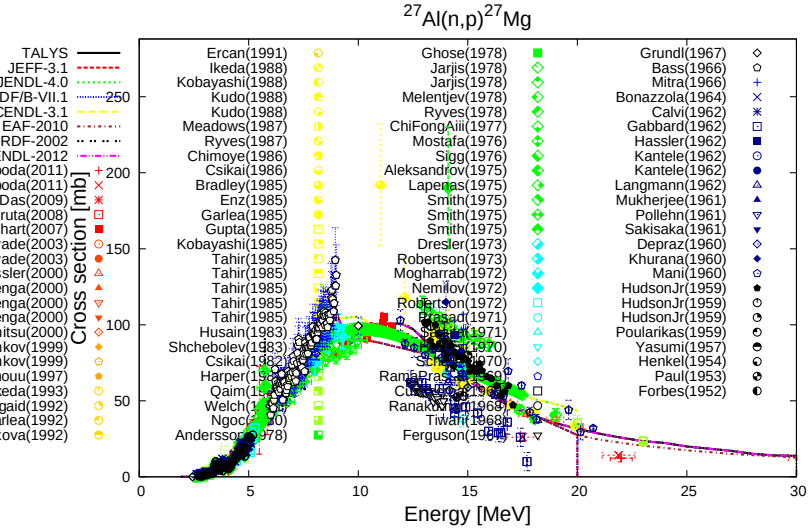

^{23}Na(n,p)^{23}Ne
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Gueltekin(2002)
Fessler(2000)
Satoh(1994)
Ercan(1991)
Pepelnik(1985)
Weigmann(1982)
Bartle(1975)
Schantl(1970)
Csikai(1967)
Flesch(1967)
Pasquarelli(1967)
Bass(1966)
Mitra(1966)
Prasad(1966)
Khurana(1965)
Picard(1965)
Mukherjee(1961)
Williamson(1961)
Bormann(1960)
Khurana(1960)
Paul(1953)


natMg(n,p)Na
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Hassler(1962)


24Mg(n,p)24Na
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Mannhart(2007)
Belgaid(1992)
Ercan(1991)
Molla(1986)
Gupta(1985)
Garg(1980)
Tagesen(1979)
HyvoenenDabek(1978)
Mostafa(1976)
Lapenas(1975)
Mannhart(1975)
Robertson(1973)
Prasad(1971)
Barrall(1969)
Clator(1969)
Vonach(1968)
Ferguson(1967)
Pasquarelli(1967)
Liskien(1966)
Paulsen(1965)
Imhof(1964)
Butler(1963)
Gabbard(1962)
Depraz(1960)
Tewes(1960)
Kern(1959)
Cohen(1956)
Paul(1953)


25Mg(n,p)25Na
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Fessler(2000)
Kawade(1992)
Ercan(1991)
Ikeda(1988)
Gopych(1987)
Gupta(1985)
Pepelnik(1985)
HyvoenenDabek(1978)
Dresler(1973)
Bormann(1967)
Pasquarelli(1967)
Prasad(1966)
Nurmia(1958)
Paul(1953)


26Mg(n,p)26Na
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Gueltekin(2002)
Kasugai(2000)
Pepelnik(1985)
Janczyszyn(1973)
Schantl(1970)
Nurmia(1958)


27Al(n,p)27Mg
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Ercan(1991)
Ikeda(1988)
Kobayashi(1988)
Kudo(1988)
Meadows(1987)
Ryves(1987)
Chimoye(1986)
Csikai(1986)
Bradley(1985)
Enz(1985)
Garlea(1985)
Gupta(1985)
Kobayashi(1985)
Husain(1983)
Harper(
Qaim(
Welch(
Ngoc(
Andersson(1978)
Ghose(1978)
Jarjis(1978)
Jarjis(1978)
Melentjev(1978)
Ryves(1978)
ChiFongAiii(1977)
Mostafa(1976)
Sigg(1976)
Aleksandrov(1975)
Lapenas(1975)
Smith(1975)
Smith(1975)
Smith(1975)
Dresler(1973)
Robertson(1973)
Mogharrab(1972)
Nemilov(1972)
Robertson(1972)
Prasad(1971)
Tiwari(1968)
Ferguson(1967)
Grundl(1967)
Bass(1966)
Mitra(1966)
Bonazzola(1964)
Calvi(1962)
Gabbard(1962)
Hassler(1962)
Kantele(1962)
Kantele(1962)
Langmann(1962)
Mukherjee(1961)
Pollehn(1961)
Sakisaka(1961)
Depraz(1960)
Khurana(1960)
Mani(1960)
HudsonJr(1959)
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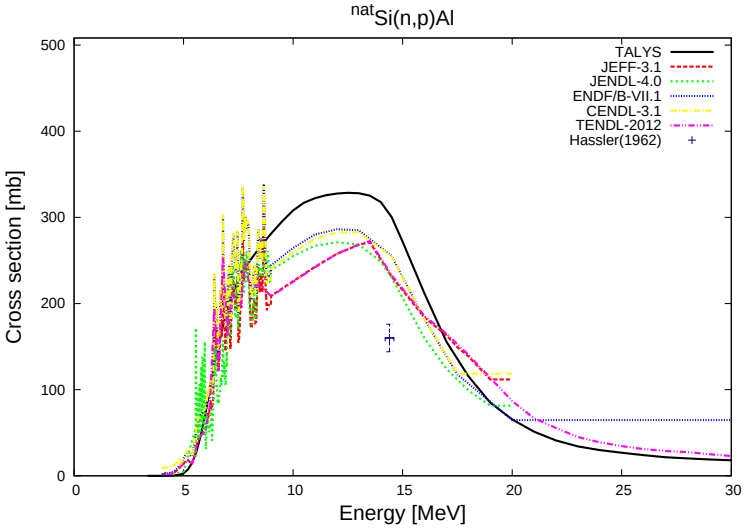
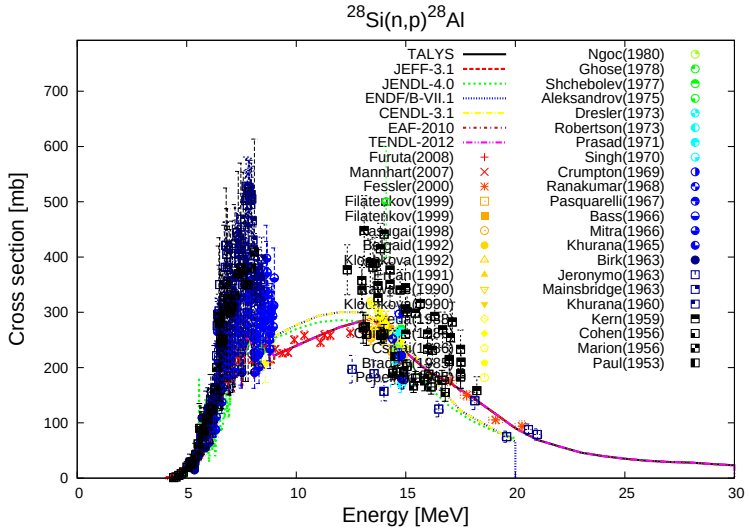
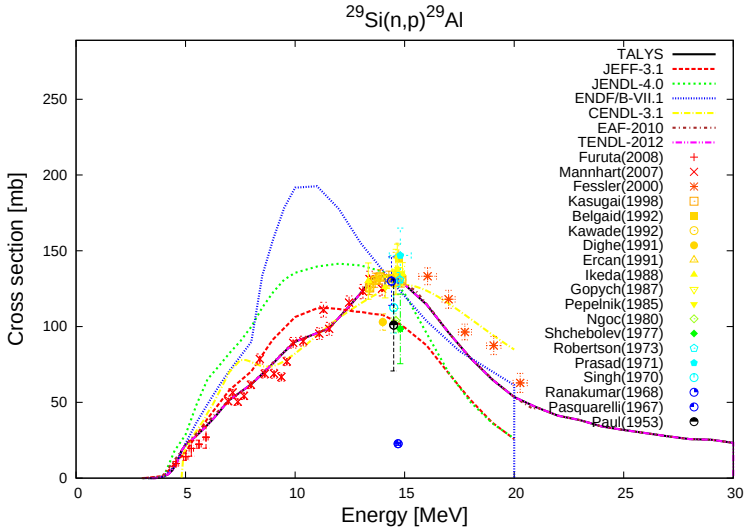
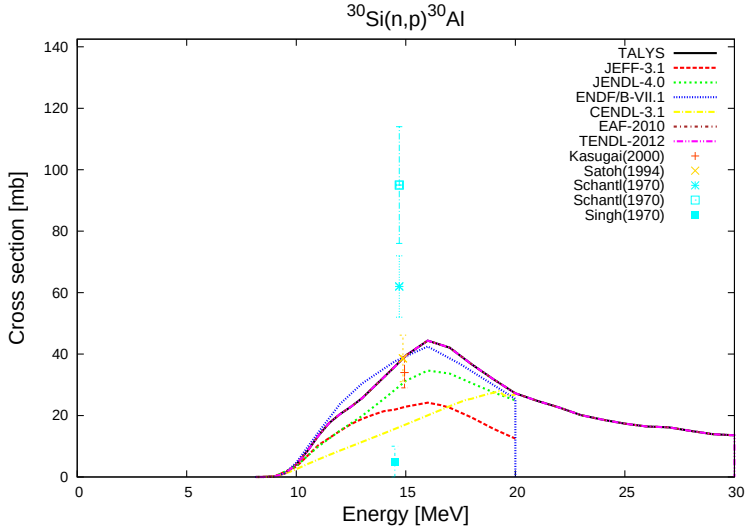
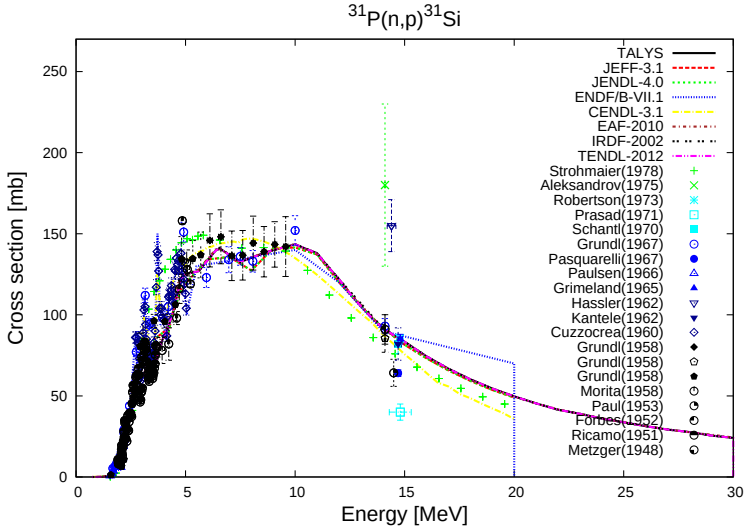
Poularikas(1959)
Yasumi(1957)
Henkel(1954)
Paul(1953)
Forbes(1952)


natSi(n,p)Al
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Hassler(1962)


^{28}Si(n,p)^{28}Al
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Furuta(2008)
Mannhart(2007)
Fessler(2000)
Filatenkov(1999)
Filatenkov(1999)
Kasugai(1998)
Belgaid(1992)
Klochkova(1992)
Ercan(1991)
Ikeda(1990)
Klochkova(1990)
Csikai(1989)
Bragadireanu(1989)
Pepelnik(1985)
Ngoc(1980)
Ghose(1978)
Shchebolev(1977)
Aleksandrov(1975)
Dresler(1973)
Robertson(1973)
Prasad(1971)
Singh(1970)
Crumpton(1969)
Ranakumar(1968)
Pasquarelli(1967)
Bass(1966)
Mitra(1966)
Khurana(1965)
Birk(1963)
Jeronymo(1963)
Mainsbridge(1963)
Khurana(1960)
Kern(1959)
Cohen(1956)
Marion(1956)
Paul(1953)


^{29}Si(n,p)^{29}Al
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Furuta(2008)
Mannhart(2007)
Fessler(2000)
Kasugai(1998)
Belgaid(1992)
Kawade(1992)
Dighe(1991)
Ercan(1991)
Ikeda(1988)
Gopych(1987)
Pepelnik(1985)
Ngoc(1980)
Shchebolev(1977)
Robertson(1973)
Prasad(1971)
Singh(1970)
Ranakumar(1968)
Pasquarelli(1967)
Paul(1953)


^{30}Si(n,p)^{30}Al
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Kasugai(2000)
Satoh(1994)
Schantl(1970)
Schantl(1970)
Singh(1970)


^{31}P(n,p)^{31}Si
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Strohmaier(1978)
Aleksandrov(1975)
Robertson(1973)
Prasad(1971)
Schantl(1970)
Grundl(1967)
Pasquarelli(1967)
Paulsen(1966)
Grimeland(1965)
Hassler(1962)
Kantele(1962)
Cuzzocrea(1960)
Grundl(1958)
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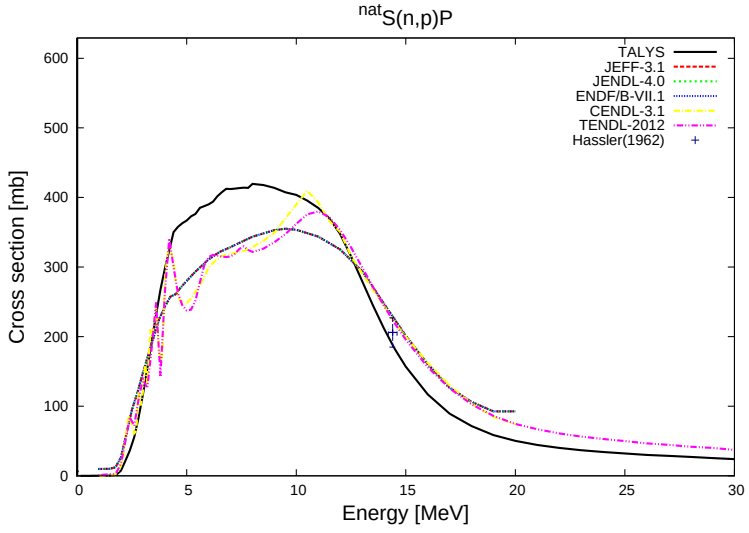
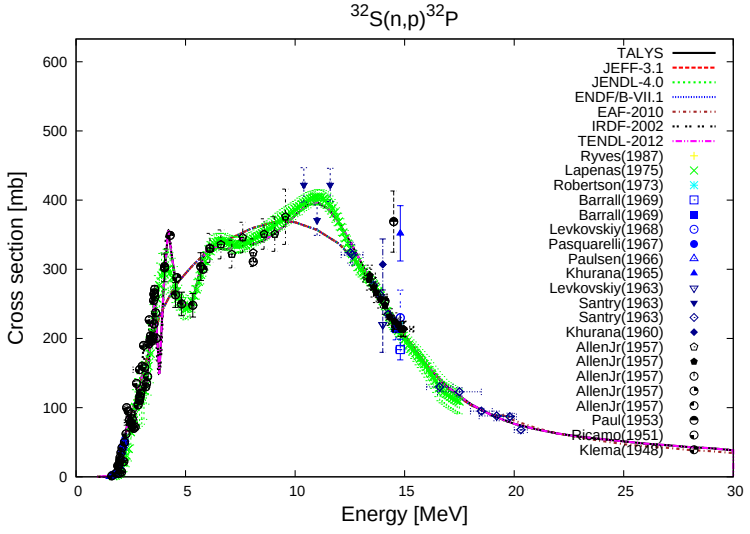
Grundl(1958)
Morita(1958)
Paul(1953)
Forbes(1952)
Ricamo(1951)
Metzger(1948)


^{nat}S(n,p)P
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Hassler(1962)


^{32}S(n,p)^{32}P
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
IRDF-2002
TENDL-2012
Ryves(1987)
Lapenas(1975)
Robertson(1973)
Barrall(1969)
Barrall(1969)
Levkovskiy(1968)
Pasquarelli(1967)
Paulsen(1966)
Khurana(1965)
Levkovskiy(1963)
Santry(1963)
Santry(1963)
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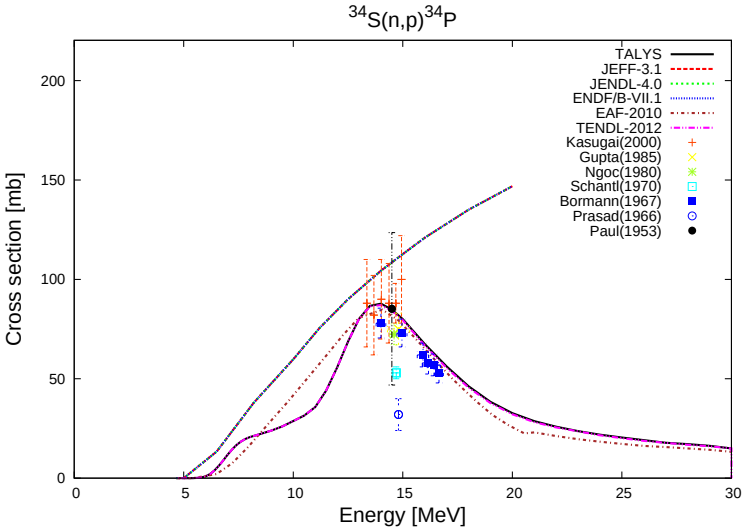
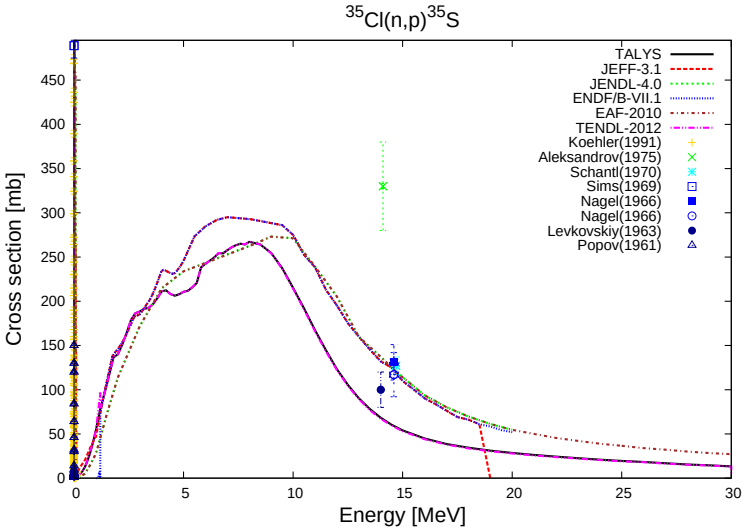
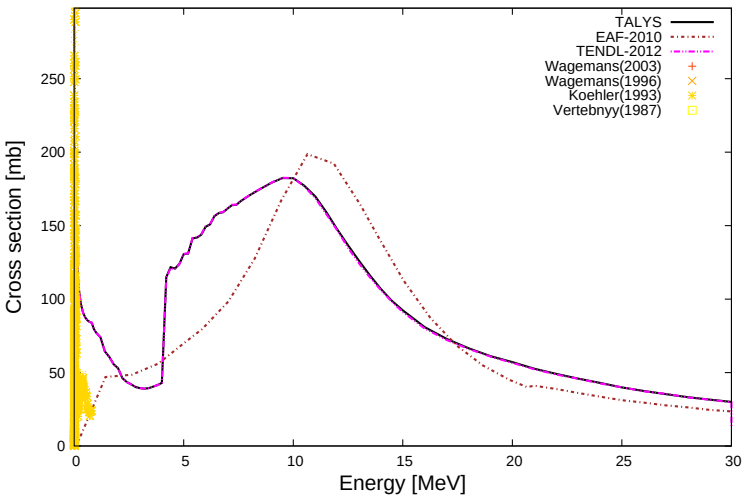
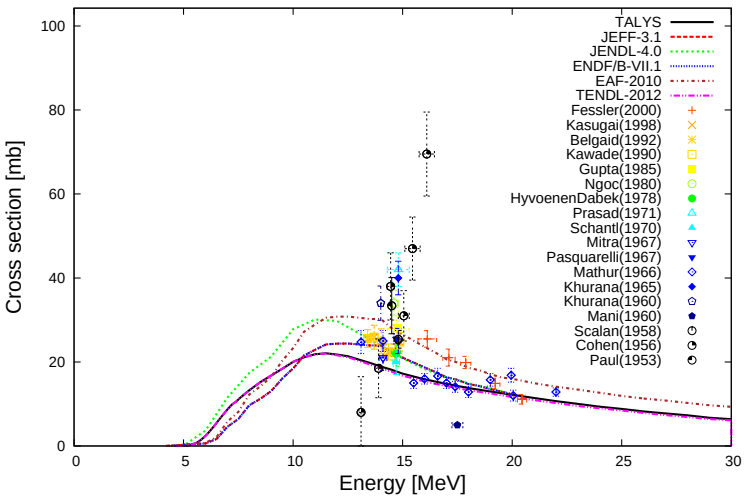
AllenJr(1957)
Paul(1953)
Ricamo(1951)
Klema(1948)


^{34}S(n,p)^{34}P
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Kasugai(2000)
Gupta(1985)
Ngoc(1980)
Schantl(1970)
Bormann(1967)
Prasad(1966)
Paul(1953)


^{35}Cl(n,p)^{35}S
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Koehler(1991)
Aleksandrov(1975)
Schantl(1970)
Sims(1969)
Nagel(1966)
Nagel(1966)
Levkovskiy(1963)
Popov(1961)


^{36}Cl(n,p)^{36}S
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Wagemans(2003)
Wagemans(1996)
Koehler(1993)
Vertebnyy(1987)


^{37}Cl(n,p)^{37}S
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Fessler(2000)
Kasugai(1998)
Belgaid(1992)
Kawade(1990)
Gupta(1985)
Ngoc(1980)
HyvoenenDabek(1978)
Prasad(1971)
Schantl(1970)
Mitra(1967)
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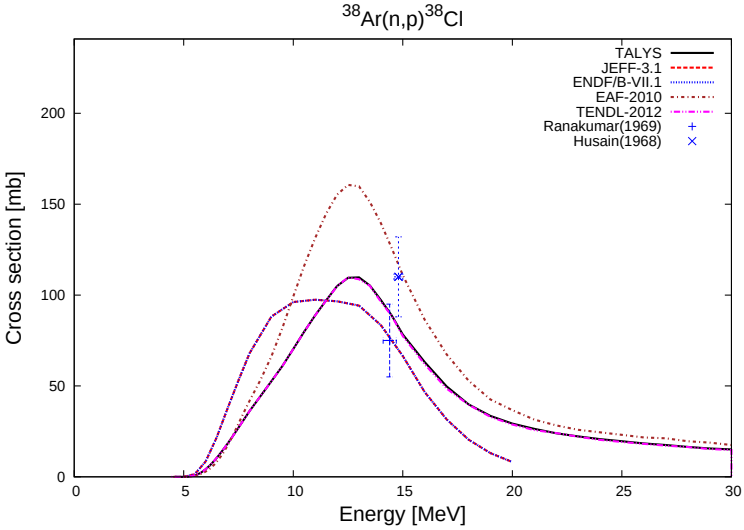
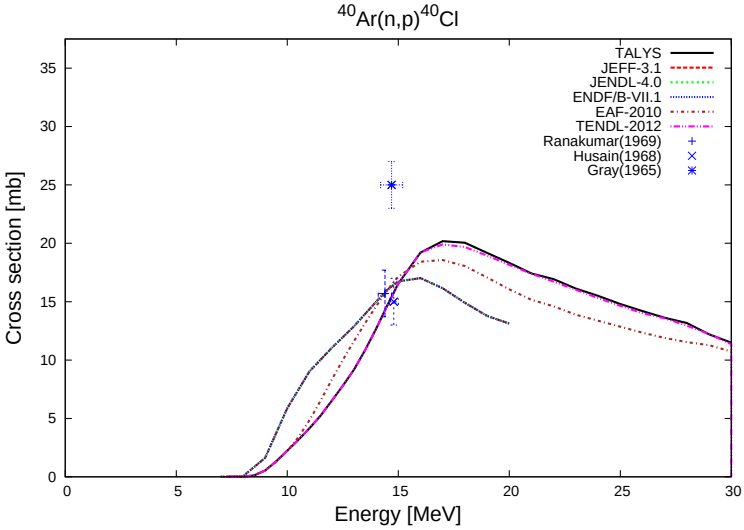
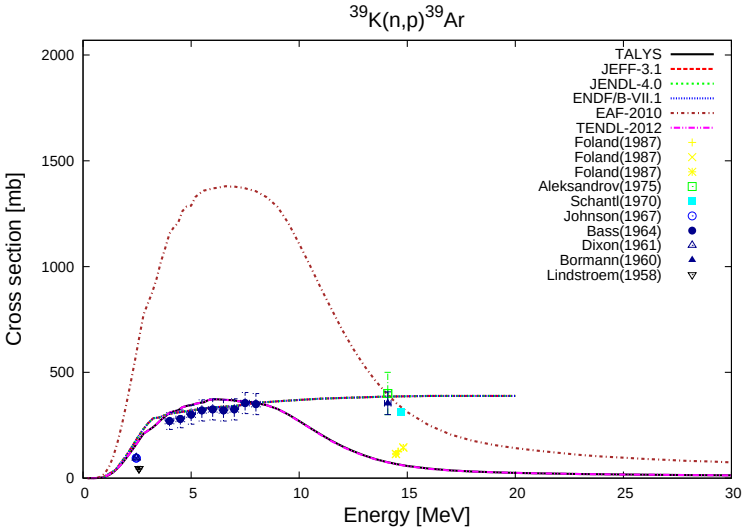
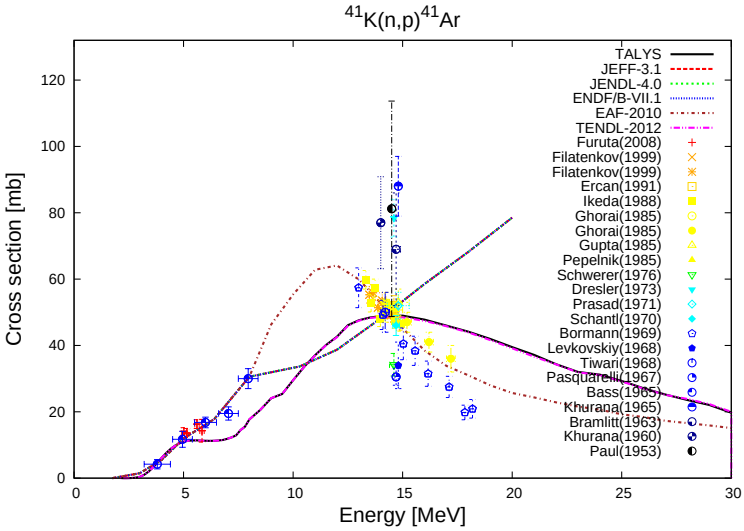
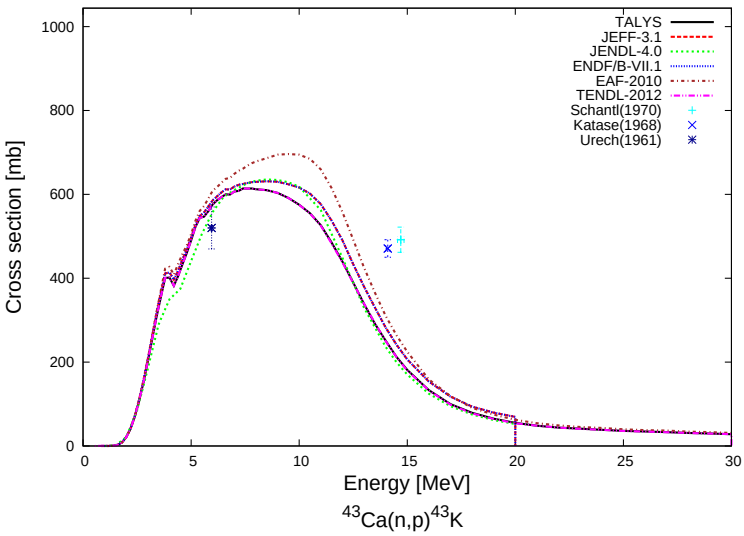
Mathur(1966)
Khurana(1965)
Khurana(1960)
Mani(1960)
Scalan(1958)
Cohen(1956)
Paul(1953)

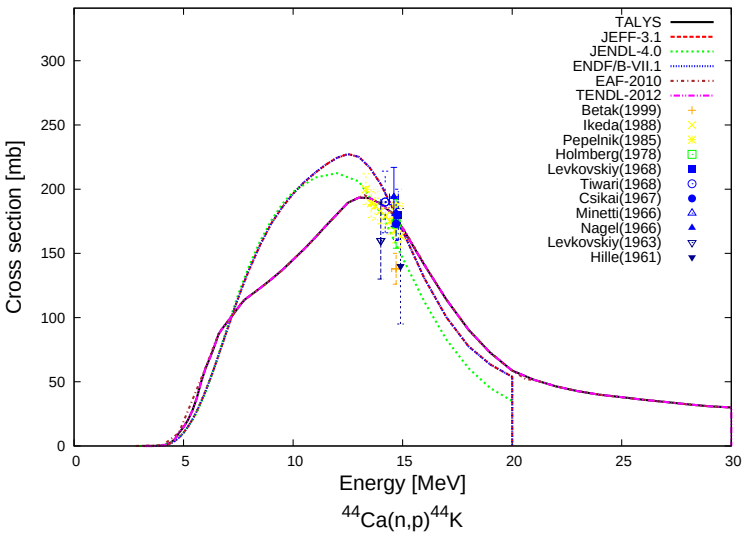

^{38}Ar(n,p)^{38}Cl
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Ranakumar(1969)
Husain(1968)

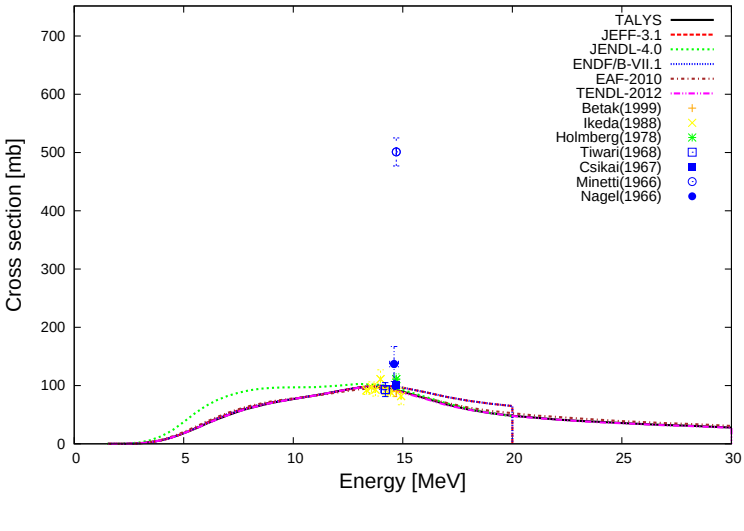

^{40}Ar(n,p)^{40}Cl
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Ranakumar(1969)
Husain(1968)
Gray(1965)

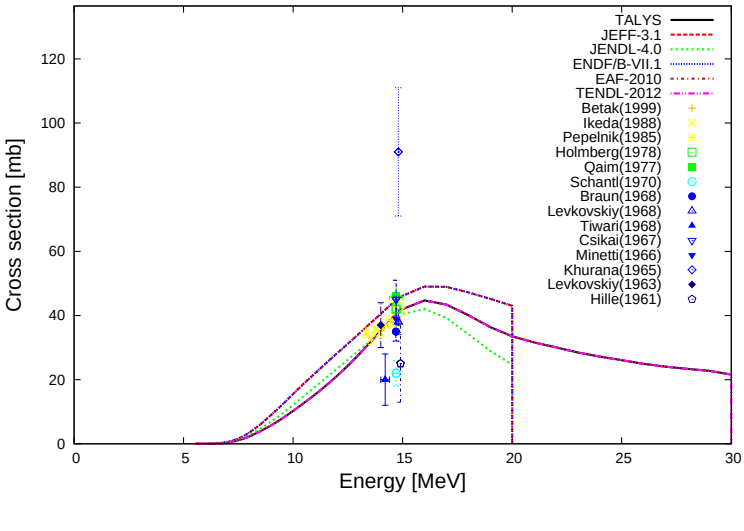

^{39}K(n,p)^{39}Ar
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Foland(1987)
Foland(1987)
Foland(1987)
Aleksandrov(1975)
Schantl(1970)
Johnson(1967)
Bass(1964)
Dixon(1961)
Bormann(1960)
Lindstroem(1958)

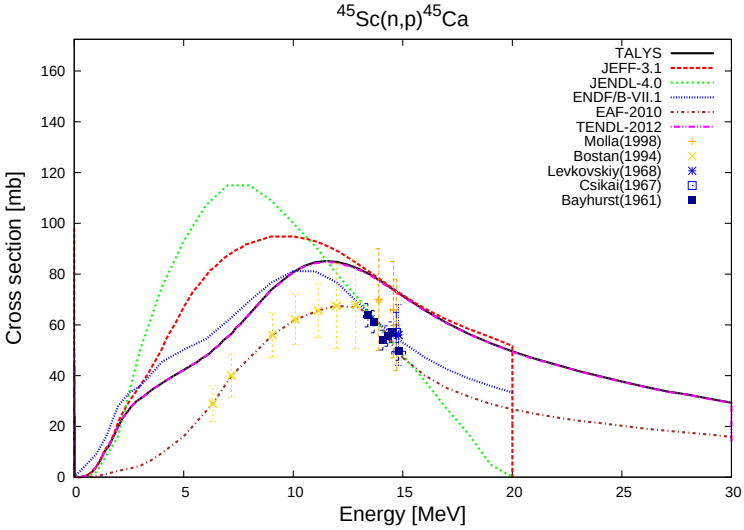

^{41}K(n,p)^{41}Ar
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Furuta(2008)
Filatenkov(1999)
Filatenkov(1999)
Ercan(1991)
Ikeda(1988)
Ghorai(1985)
Ghorai(1985)
Gupta(1985)
Pepelnik(1985)
Schwerer(1976)
Dresler(1973)
Prasad(1971)
Schantl(1970)
Bormann(1969)
Levkovskiy(1968)
Tiwari(1968)
Pasquarelli(1967)
Bass(1965)
Khurana(1965)
Bramlitt(1963)
Khurana(1960)
Paul(1953)

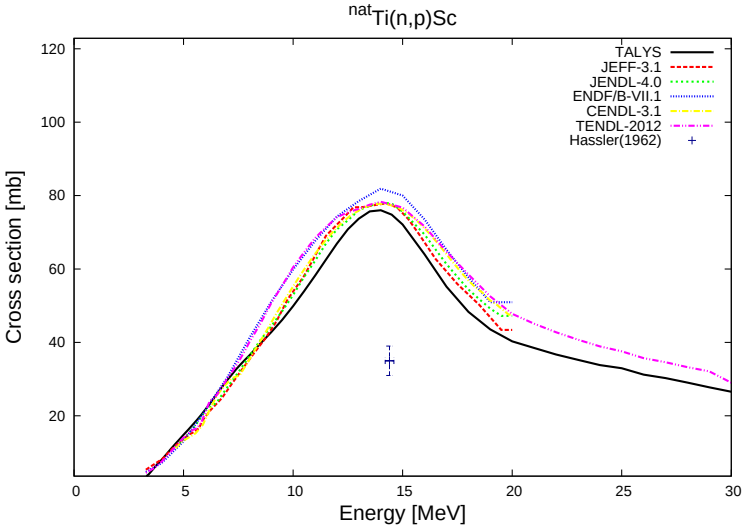

^{40}Ca(n,p)^{40}K
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Schantl(1970)
Katase(1968)
Urech(1961)

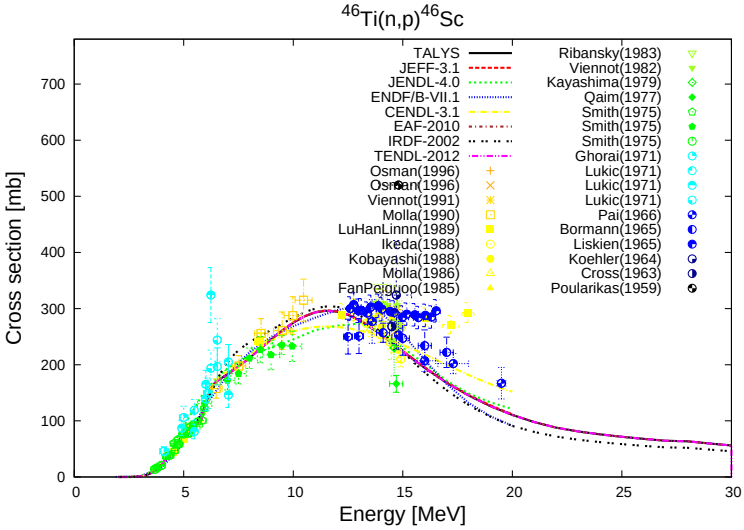

^{42}Ca(n,p)^{42}K
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Betak(1999)
Ikeda(1988)
Pepelnik(1985)
Holmberg(1978)
Levkovskiy(1968)
Tiwari(1968)
Csikai(1967)
Minetti(1966)
Nagel(1966)
Levkovskiy(1963)
Hille(1961)

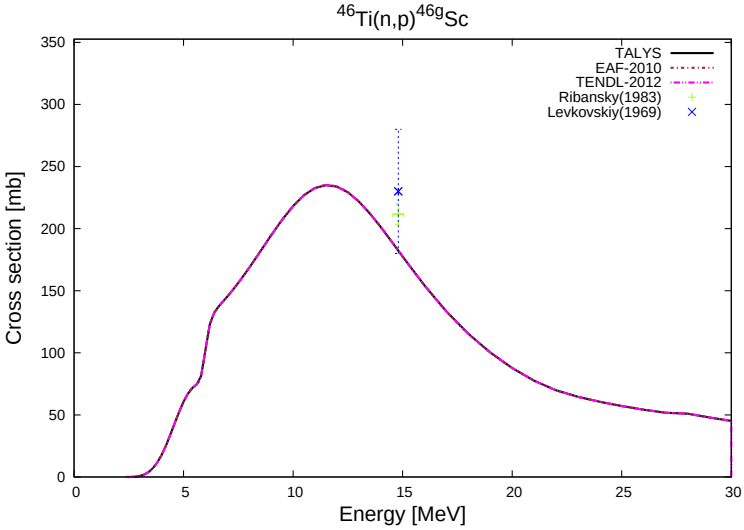

^{43}Ca(n,p)^{43}K
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Betak(1999)
Ikeda(1988)
Holmberg(1978)
Tiwari(1968)
Csikai(1967)
Minetti(1966)
Nagel(1966)

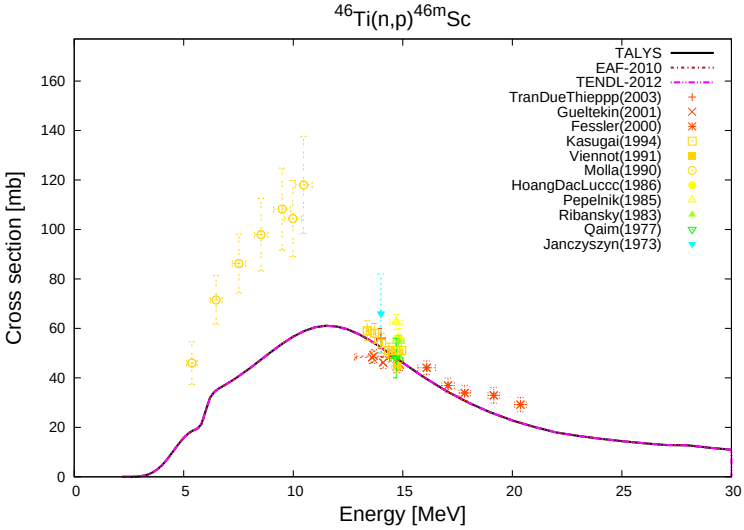

^{44}Ca(n,p)^{44}K
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Betak(1999)
Ikeda(1988)
Pepelnik(1985)
Holmberg(1978)
Qaim(1977)
Schantl(1970)
Braun(1968)
Levkovskiy(1968)
Tiwari(1968)
Csikai(1967)
Minetti(1966)
Khurana(1965)
Levkovskiy(1963)
Hille(1961)

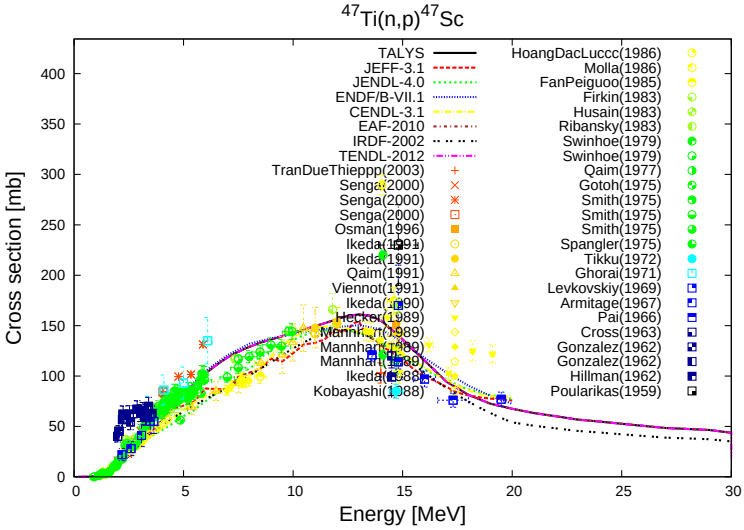

^{45}Sc(n,p)^{45}Ca
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Molla(1998)
Bostan(1994)
Levkovskiy(1968)
Csikai(1967)
Bayhurst(1961)


^{nat}Ti(n,p)Sc
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Hassler(1962)


^{46}Ti(n,p)^{46}Sc
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Osman(1996)
Osman(1996)
Viennot(1991)
Molla(1990)
LuHanLinnn(1989)
Ikeda(1988)
Kobayashi(1988)
Molla(1986)
FanPeiguoo(1985)
Ribansky(1983)
Viennot(1982)
Kayashima(1979)
Qaim(1977)
Smith(1975)
Smith(1975)
Smith(1975)
Ghorai(1971)
Lukic(1971)
Lukic(1971)
Lukic(1971)
Pai(1966)
Bormann(1965)
Liskien(1965)
Koehler(1964)
Cross(1963)
Poularikas(1959)


^{46}Ti(n,p)^{46g}Sc
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Ribansky(1983)
Levkovskiy(1969)


^{46}Ti(n,p)^{46m}Sc
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
TranDueThieppp(2003)
Gueltekin(2001)
Fessler(2000)
Kasugai(1994)
Viennot(1991)
Molla(1990)
HoangDacLuccc(1986)
Pepelnik(1985)
Ribansky(1983)
Qaim(1977)
Janczyszyn(1973)


^{47}Ti(n,p)^{47}Sc
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
TranDueThieppp(2003)
Senga(2000)
Senga(2000)
Senga(2000)
Osman(1996)
Ikeda(1991)
Ikeda(1991)
Qaim(1991)
Viennot(1991)
Ikeda(1990)
Hecker(1989)
Mannhart(1989)
Mannhart(1988)
Mannhart(1988)
Ikeda(1988)
Kobayashi(1988)
HoangDacLuccc(1986)
Molla(1986)
FanPeiguoo(1985)
Firkin(1983)
Husain(1983)
Ribansky(1983)
Swinhoe(1979)
Swinhoe(1979)
Qaim(1977)
Gotoh(1975)
Smith(1975)
Smith(1975)
Smith(1975)
Spangler(1975)
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Ghorai(1971)
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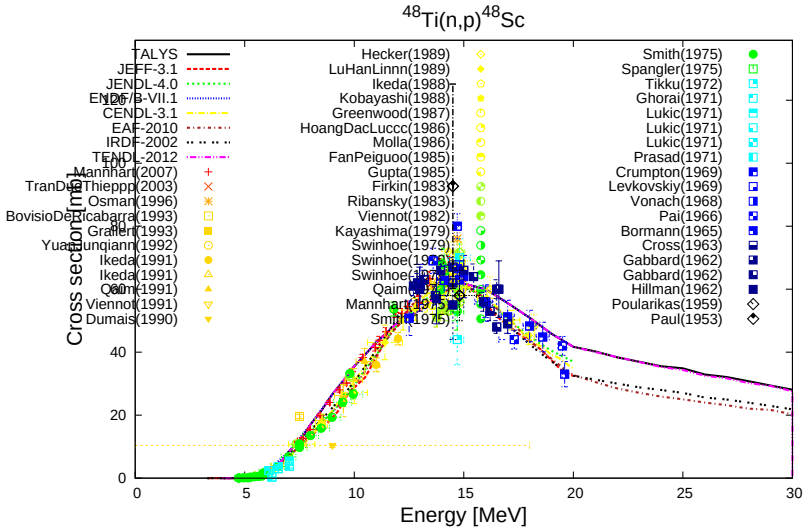
Cross(1963)
Gonzalez(1962)
Gonzalez(1962)
Hillman(1962)
Poularikas(1959)


^{48}Ti(n,p)^{48}Sc
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Mannhart(2007)
TranDueThieppp(2003)
Osman(1996)
BovisioDeEricabarra(1993)
Graleri(1993)
Yuanduniann(1992)
Ikeda(1991)
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Qaim(1991)
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Dumais(1990)
Hecker(1989)
LuHanLinnn(1989)
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Kobayashi(1988)
Greenwood(1987)
HoangDacLuccc(1986)
Molla(1986)
FanPeiguoo(1985)
Gupta(1985)
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Kayashima(1979)
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Spangler(1975)
Tikku(1972)
Ghorai(1971)
Lukic(1971)
Lukic(1971)
Lukic(1971)
Prasad(1971)
Crumpton(1969)
Levkovskiy(1969)
Vonach(1968)
Pai(1966)
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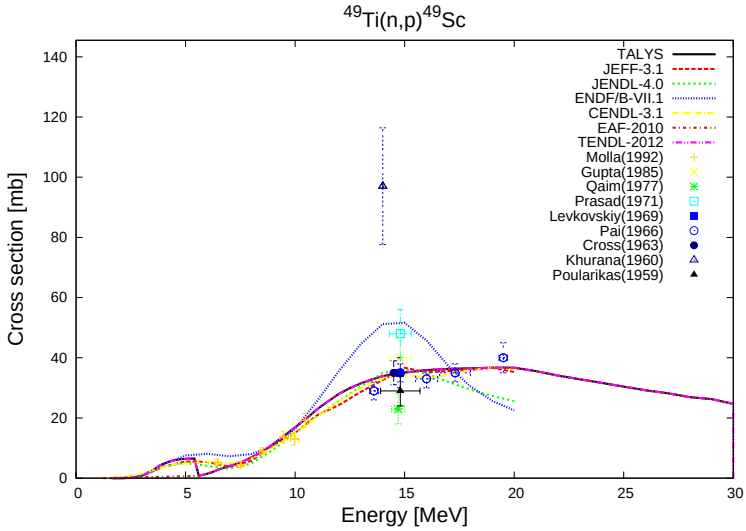
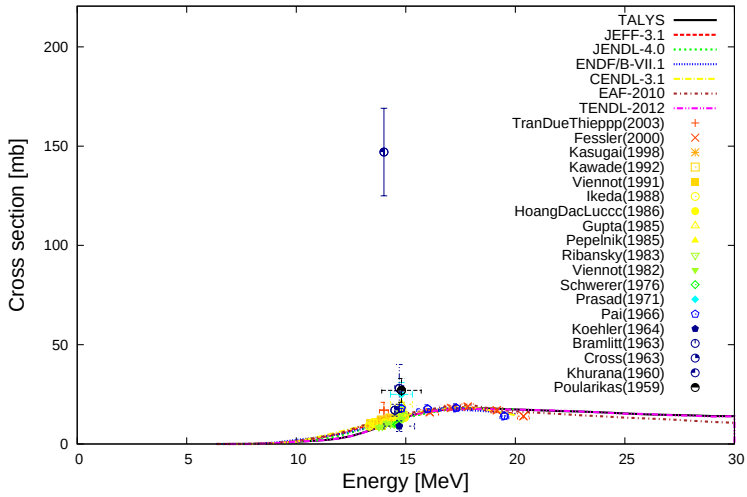
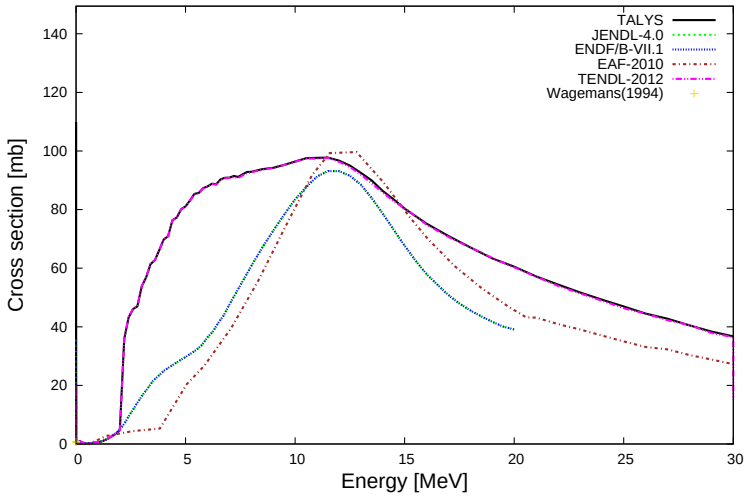
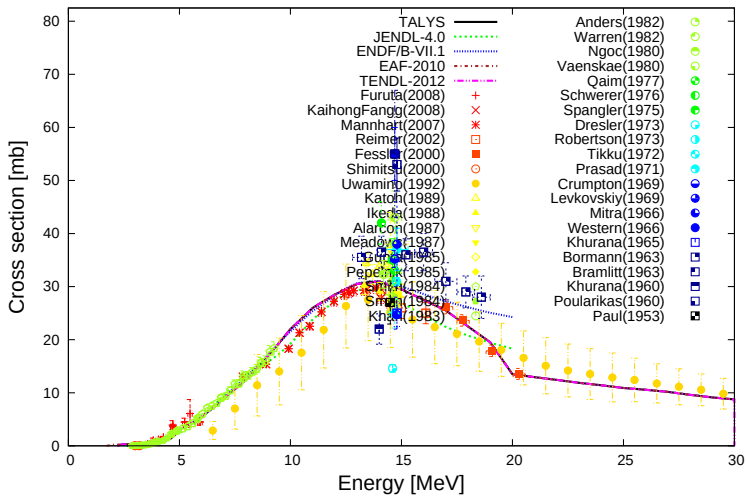
Cross(1963)
Gabbard(1962)
Gabbard(1962)
Hillman(1962)
Poularikas(1959)
Paul(1953)


^{49}Ti(n,p)^{49}Sc
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Molla(1992)
Gupta(1985)
Qaim(1977)
Prasad(1971)
Levkovskiy(1969)
Pai(1966)
Cross(1963)
Khurana(1960)
Poularikas(1959)


^{50}Ti(n,p)^{50}Sc
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
TranDueThieppp(2003)
Fessler(2000)
Kasugai(1998)
Kawade(1992)
Viennot(1991)
Ikeda(1988)
HoangDacLuccc(1986)
Gupta(1985)
Pepelnik(1985)
Ribansky(1983)
Viennot(1982)
Schwerer(1976)
Prasad(1971)
Pai(1966)
Koehler(1964)
Bramlitt(1963)
Cross(1963)
Khurana(1960)
Poularikas(1959)


^{50}V(n,p)^{50}Ti
Cross section [mb]
Energy [MeV]
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Wagemans(1994)


^{51}V(n,p)^{51}Ti
Cross section [mb]
Energy [MeV]
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Furuta(2008)
KaihongFangg(2008)
Mannhart(2007)
Reimer(2002)
Fessler(2000)
Shimitsu(2000)
Uwamino(1992)
Katoh(1989)
Ikeda(1988)
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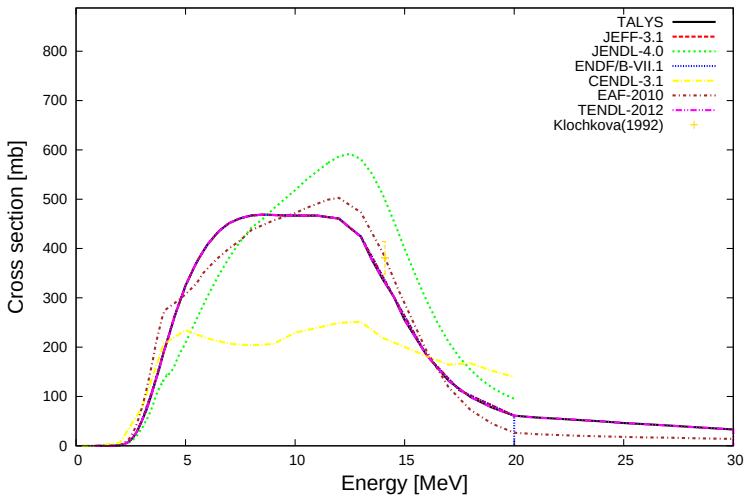
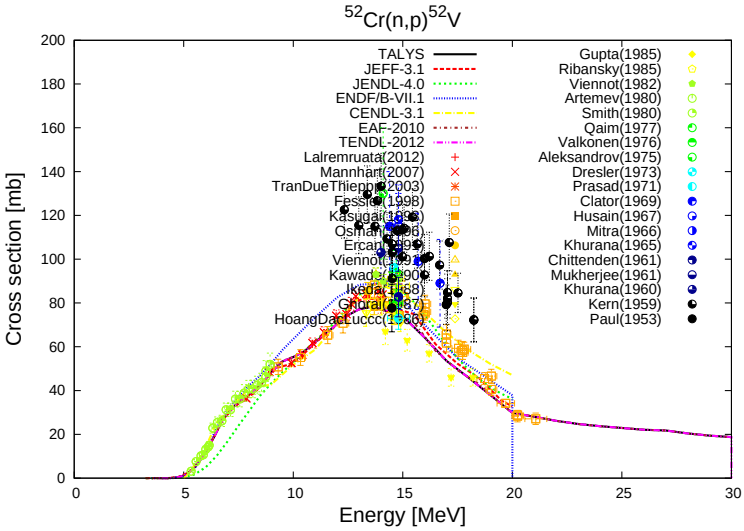
Smith(1984)
Khu(1983)
Anders(1982)
Warren(1982)
Ngoc(1980)
Vaenskae(1980)
Qaim(1977)
Schwerer(1976)
Spangler(1975)
Dresler(1973)
Robertson(1973)
Tikku(1972)
Prasad(1971)
Crumpton(1969)
Levkovskiy(1969)
Mitra(1966)
Western(1966)
Khurana(1965)
Bormann(1963)
Bramlitt(1963)
Khurana(1960)
Poularikas(1960)
Paul(1953)


^{50}Cr(n,p)^{50}V
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Klochkova(1992)


^{52}Cr(n,p)^{52}V
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Lalremruata(2012)
Mannhart(2007)
TranDueThieppp(2003)
Fessler(1998)
Kasugai(1998)
Osman(1996)
Ercan(1991)
Viennot(1991)
Kawade(1990)
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Gibral(1987)
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Gupta(1985)
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Smith(1980)
Qaim(1977)
Valkonen(1976)
Aleksandrov(1975)
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Clator(1969)
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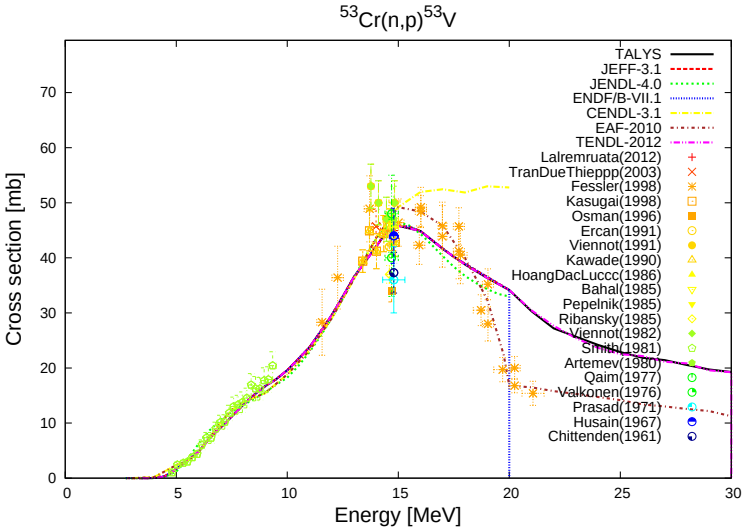
Kern(1959)
Paul(1953)


^{53}Cr(n,p)^{53}V
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
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Fessler(1998)
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Osman(1996)
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Pepelnik(1985)
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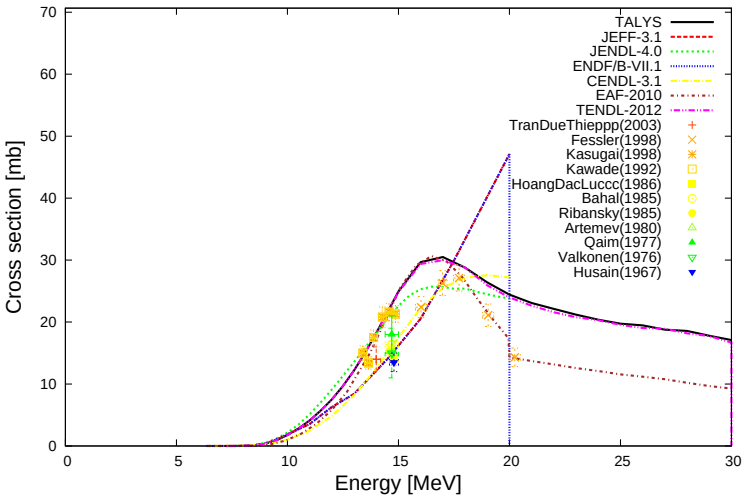
Qaim(1977)
Valkonen(1976)
Prasad(1971)
Husain(1967)
Chittenden(1961)


^{54}Cr(n,p)^{54}V
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
TranDueThieppp(2003)
Fessler(1998)
Kasugai(1998)
Kawade(1992)
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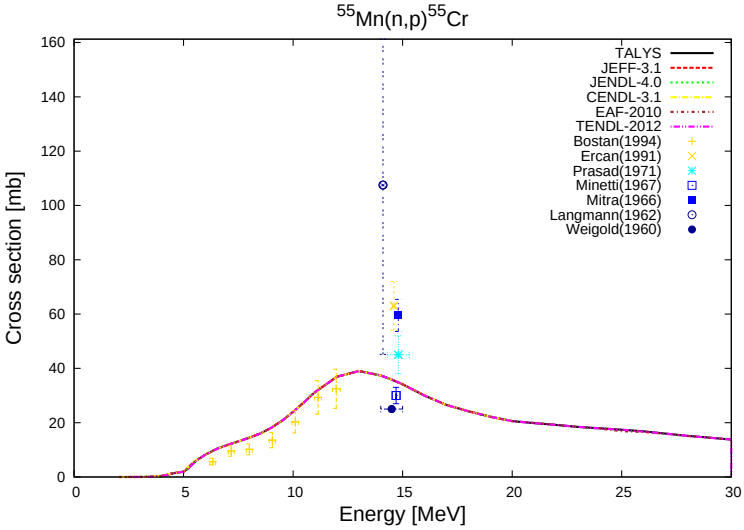
Artemev(1980)
Qaim(1977)
Valkonen(1976)
Husain(1967)


^{55}Mn(n,p)^{55}Cr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
CENDL-3.1
EAF-2010
TENDL-2012
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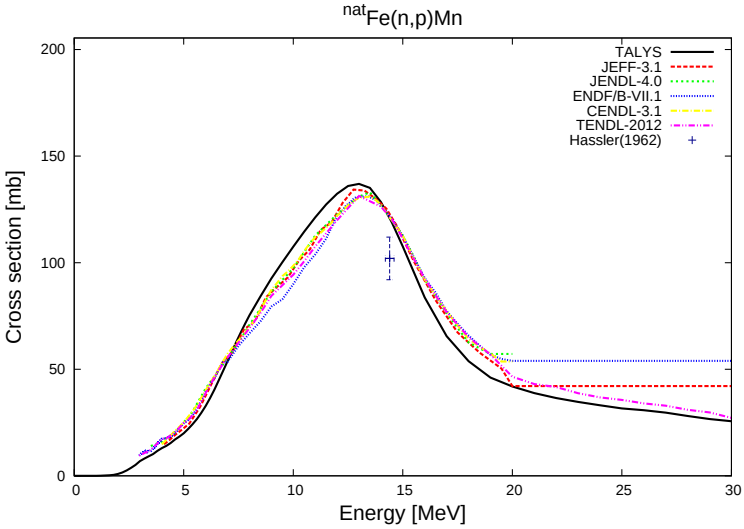
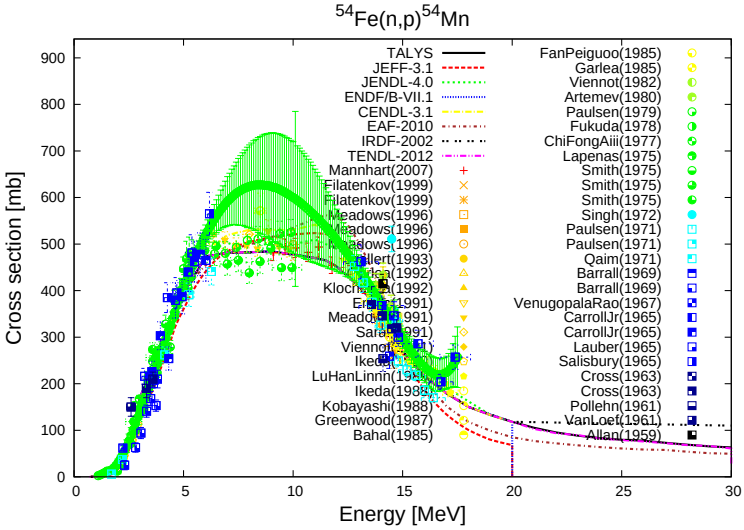
Mitra(1966)
Langmann(1962)
Weigold(1960)


^{nat}Fe(n,p)Mn
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Hassler(1962)


^{54}Fe(n,p)^{54}Mn
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Mannhart(2007)
Filatenkov(1999)
Filatenkov(1999)
Meadows(1996)
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Ikeda(1992)
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LuHanLinn(19
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Kobayashi(1988)
Greenwood(1987)
Bahal(1985)
FanPeiguoo(1985)
Garlea(1985)
Viennot(1982)
Artemev(1980)
Paulsen(1979)
Fukuda(1978)
ChiFongAiii(1977)
Lapenas(1975)
Smith(1975)
Smith(1975)
Smith(1975)
Singh(1972)
Paulsen(1971)
Paulsen(1971)
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Barrall(1969)
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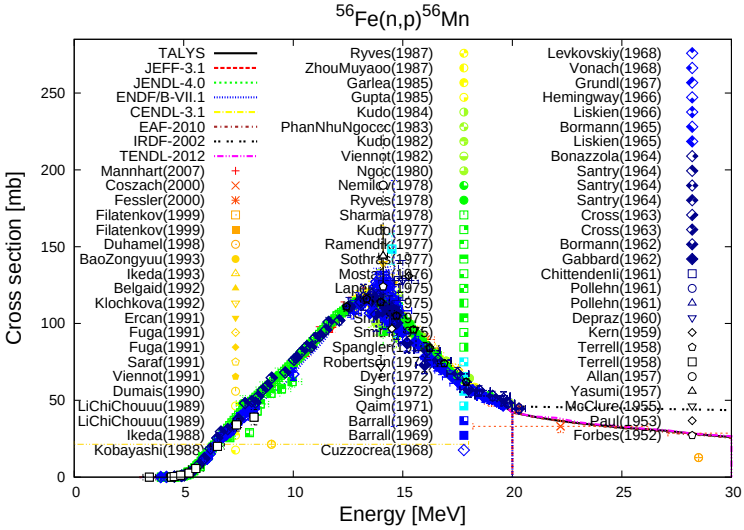
VanLoef(1961)
Allan(1959)


^{56}Fe(n,p)^{56}Mn
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Mannhart(2007)
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Fessler(2000)
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Filatenkov(1999)
Duhamel(1998)
BaoZongyuu(1993)
Ikeda(1993)
Belgaid(1992)
Klochkova(1992)
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Fuga(1991)
Saraf(1991)
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Dumais(1990)
LiChiChouuu(1989)
LiChiChouuu(1989)
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Kobayashi(1988)
Ryves(1987)
ZhouMuyaoo(1987)
Garlea(1985)
Gupta(1985)
Kudo(1984)
PhanNhuNgocc(1983)
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Ryves(1978)
Sharma(1978)
Kudo(1977)
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Singh(1972)
Qaim(1971)
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Cuzzocrea(1968)
Levkovskiy(1968)
Vonach(1968)
Grundl(1967)
Hemingway(1966)
Liskien(1966)
Bormann(1965)
Liskien(1965)
Bonazzola(1964)
Santry(1964)
Santry(1964)
Santry(1964)
Cross(1963)
Cross(1963)
Bormann(1962)
Gabbard(1962)
Chittendenli(1961)
Pollehn(1961)
Pollehn(1961)
Depraz(1960)
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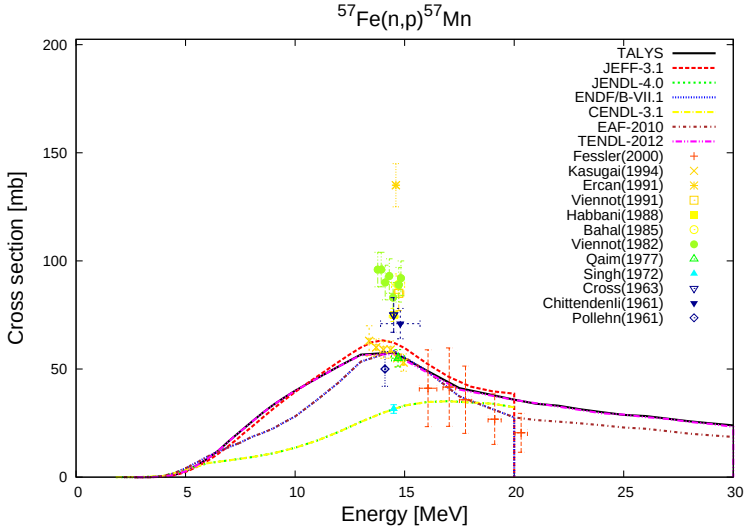
Yasumi(1957)
McClure(1955)
Paul(1953)
Forbes(1952)


^{57}Fe(n,p)^{57}Mn
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Fessler(2000)
Kasugai(1994)
Ercan(1991)
Viennot(1991)
Habbani(1988)
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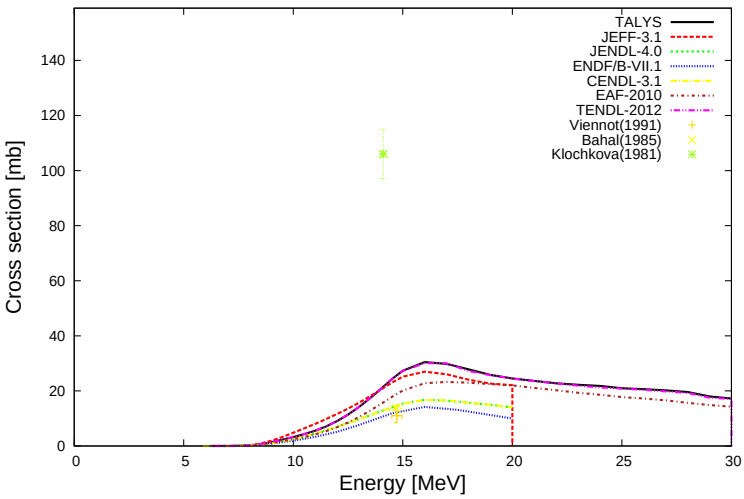
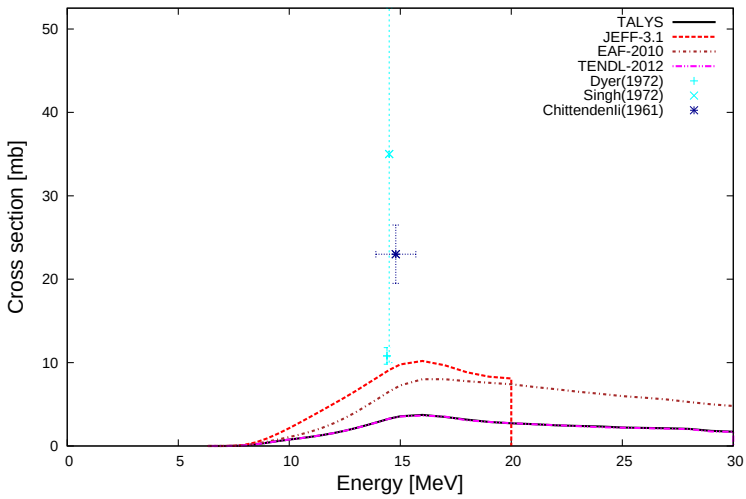
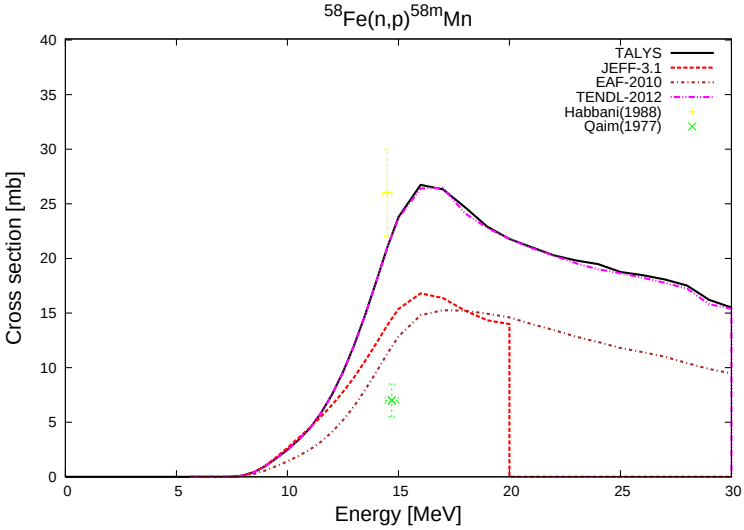
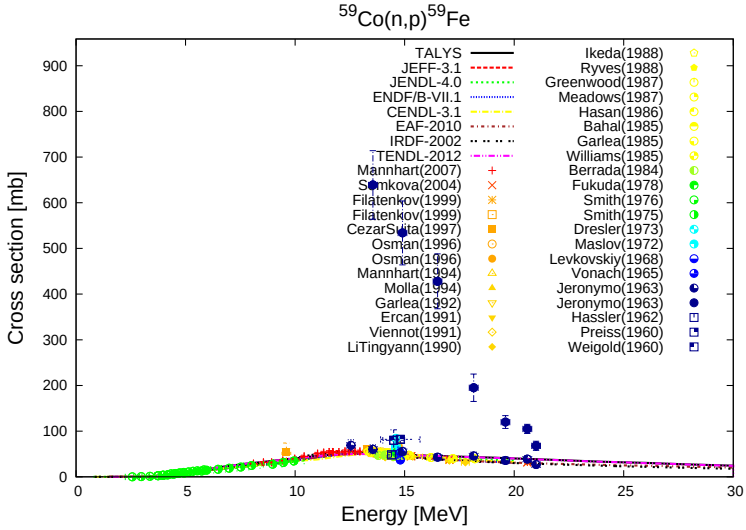
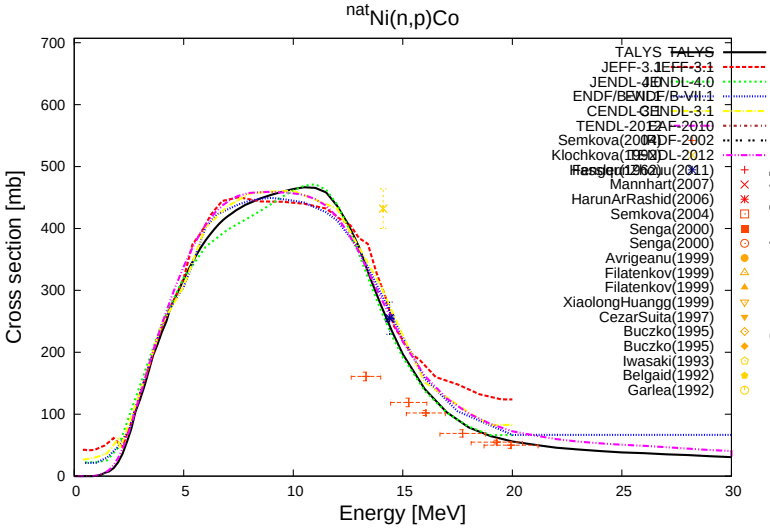
Viennot(1982)
Qaim(1977)
Singh(1972)
Cross(1963)
Chittendenli(1961)
Pollehn(1961)


^{58}Fe(n,p)^{58}Mn
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Viennot(1991)
Bahal(1985)
Klochkova(1981)


^{58}Fe(n,p)^{58g}Mn
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
EAF-2010
TENDL-2012
Dyer(1972)
Singh(1972)
Chittendenli(1961)


^{58}Fe(n,p)^{58m}Mn
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
EAF-2010
TENDL-2012
Habbani(1988)
Qaim(1977)


^{59}Co(n,p)^{59}Fe
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Mannhart(2007)
Semkova(2004)
Filatenkov(1999)
Filatenkov(1999)
CezarSaita(1997)
Osman(1996)
Osman(1996)
Mannhart(1994)
Molla(1994)
Garlea(1992)
Ercan(1991)
Viennot(1991)
LiTingyann(1990)
Ikeda(1988)
Ryves(1988)
Greenwood(1987)
Meadows(1987)
Hasan(1986)
Bahal(1985)
Garlea(1985)
Williams(1985)
Berrada(1984)
Fukuda(1978)
Smith(1976)
Smith(1975)
Dresler(1973)
Maslov(1972)
Levkovskiy(1968)
Vonach(1965)
Jeronymo(1963)
Jeronymo(1963)
Hassler(1962)
Preiss(1960)
Weigold(1960)


natNi(n,p)Co
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
EAF-2010
IRDF-2002
Mannhart(2007)
HarunArRashid(2006)
Semkova(2004)
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Senga(2000)
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Filatenkov(1999)
Filatenkov(1999)
XiaolongHuangg(1999)
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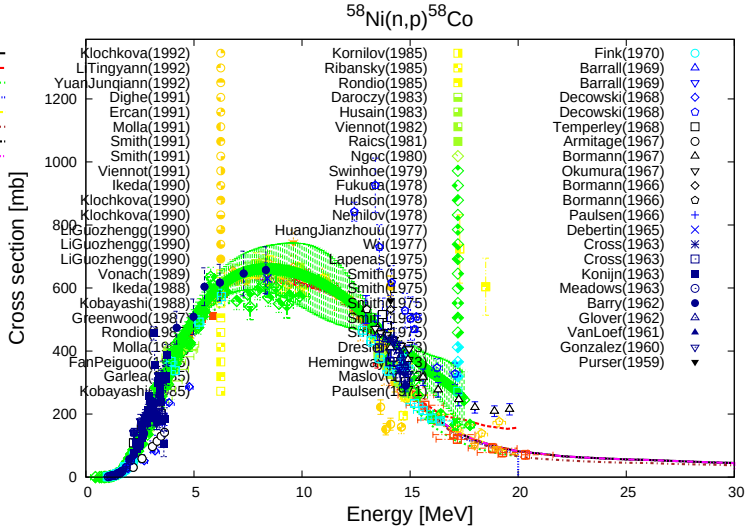
Belgaid(1992)
Garlea(1992)


58Ni(n,p)58Co
Cross section [mb]
Energy [MeV]
Klochkova(1992)
LiTingyann(1992)
YuanJunqiann(1992)
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FanPeiguoo(
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Bormann(1966)
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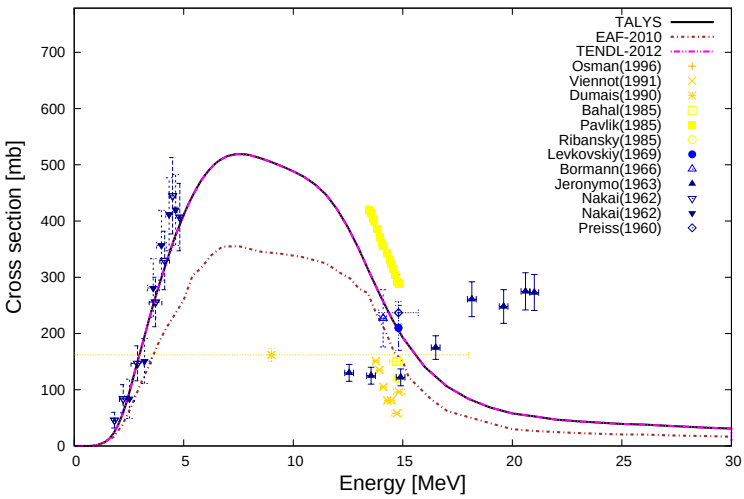
VanLoef(1961)
Gonzalez(1960)
Purser(1959)


58Ni(n,p)58gCo
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Osman(1996)
Viennot(1991)
Dumais(1990)
Bahal(1985)
Pavlik(1985)
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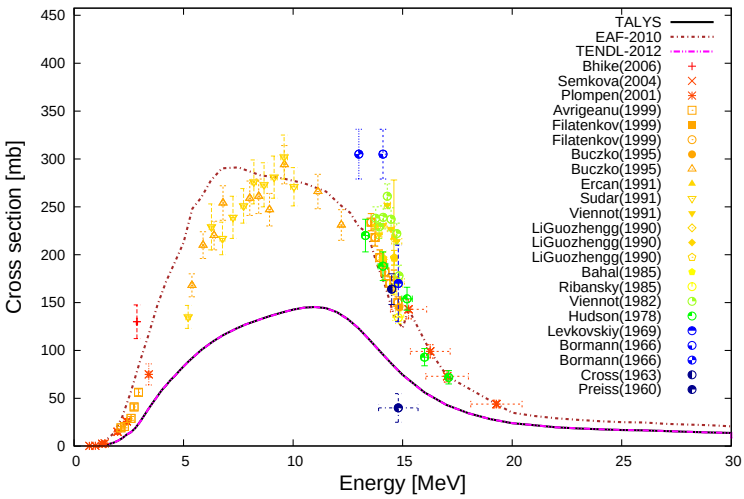
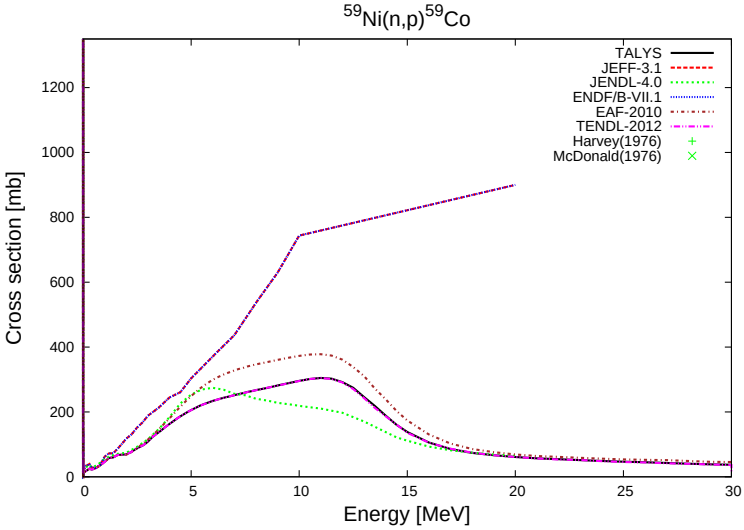
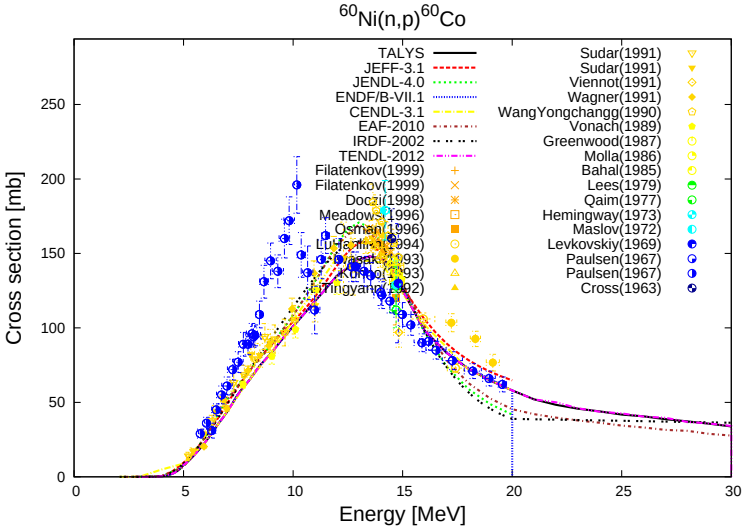
Jeronymo(1963)
Nakai(1962)
Nakai(1962)
Preiss(1960)


58Ni(n,p)58mCo
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Bhike(2006)
Semkova(2004)
Plompen(2001)
Avrigeanu(1999)
Filatenkov(1999)
Filatenkov(1999)
Buczko(1995)
Buczko(1995)
Ercan(1991)
Sudar(1991)
Viennot(1991)
LiGuozhengg(1990)
LiGuozhengg(1990)
LiGuozhengg(1990)
Bahal(1985)
Ribansky(1985)
Viennot(1982)
Hudson(1978)
Levkovskiy(1969)
Bormann(1966)
Bormann(1966)
Cross(1963)
Preiss(1960)


59Ni(n,p)59Co
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Harvey(1976)
McDonald(1976)


60Ni(n,p)60Co
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Doczi(1998)
Meadows(1996)
Osman(1996)
Lu Hanlin(1994)
Qaim(1993)
Kuno(1993)
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Viennot(1991)
Wagner(1991)
WangYongchangg(1990)
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Greenwood(1987)
Molla(1986)
Bahal(1985)
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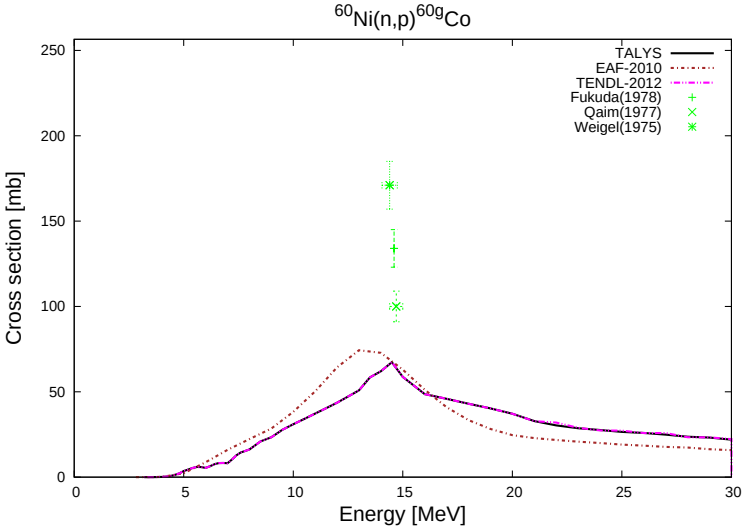
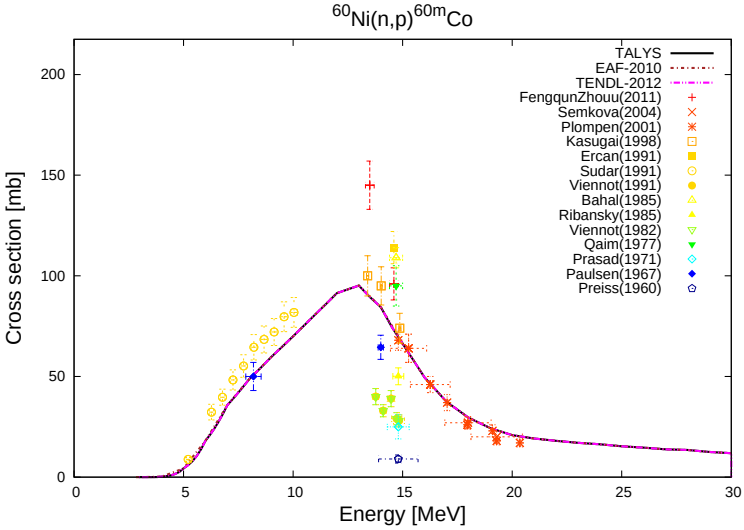
Maslov(1972)
Levkovskiy(1969)
Paulsen(1967)
Paulsen(1967)
Cross(1963)


^{60}Ni(n,p)^{60g}Co
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Fukuda(1978)
Qaim(1977)
Weigel(1975)


^{60}Ni(n,p)^{60m}Co
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
FengqunZhouu(2011)
Semkova(2004)
Plompen(2001)
Kasugai(1998)
Ercan(1991)
Sudar(1991)
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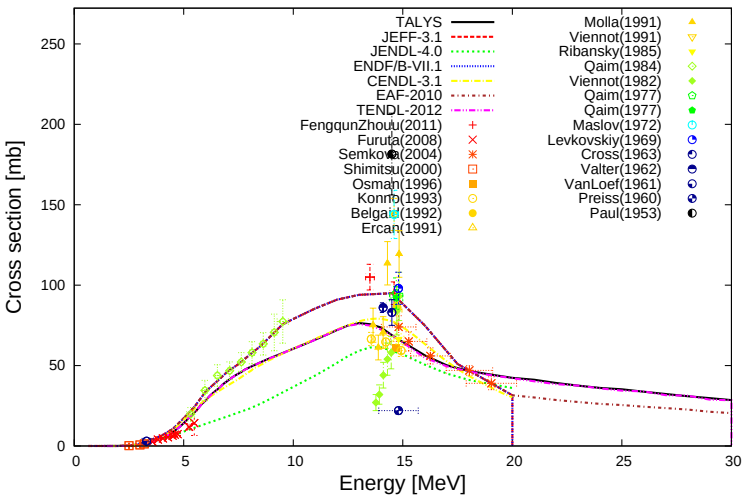
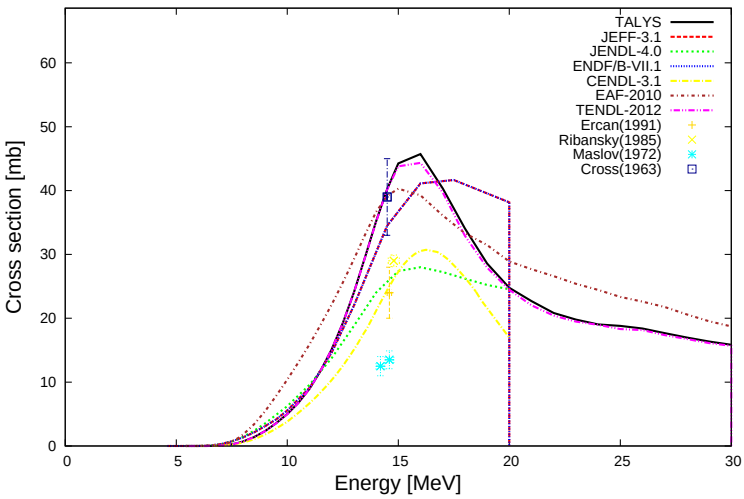
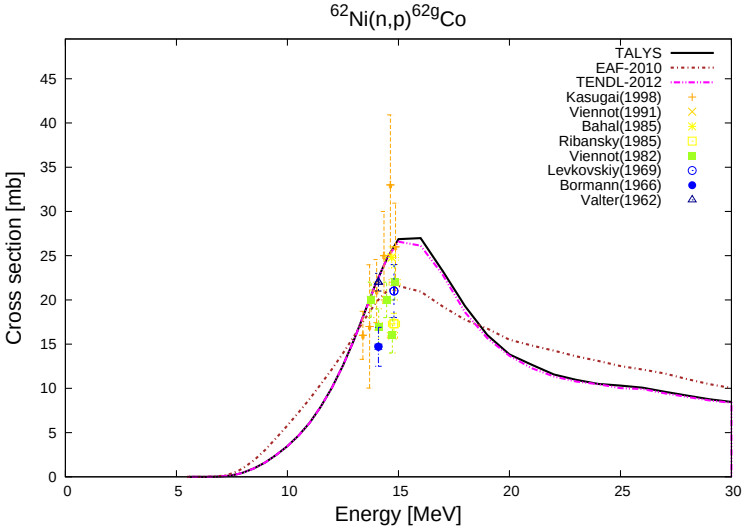
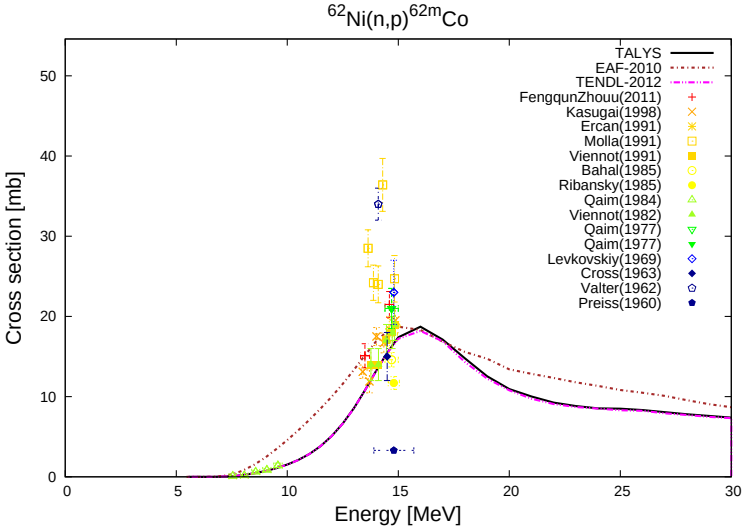
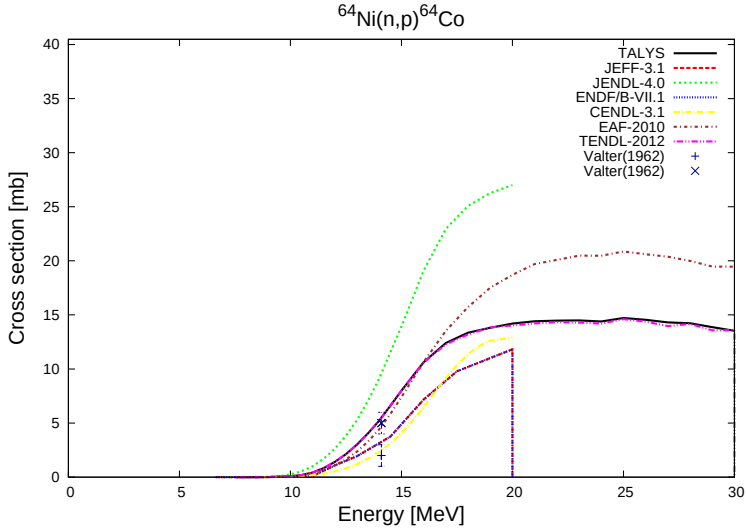
Bahal(1985)
Ribansky(1985)
Viennot(1982)
Qaim(1977)
Prasad(1971)
Paulsen(1967)
Preiss(1960)

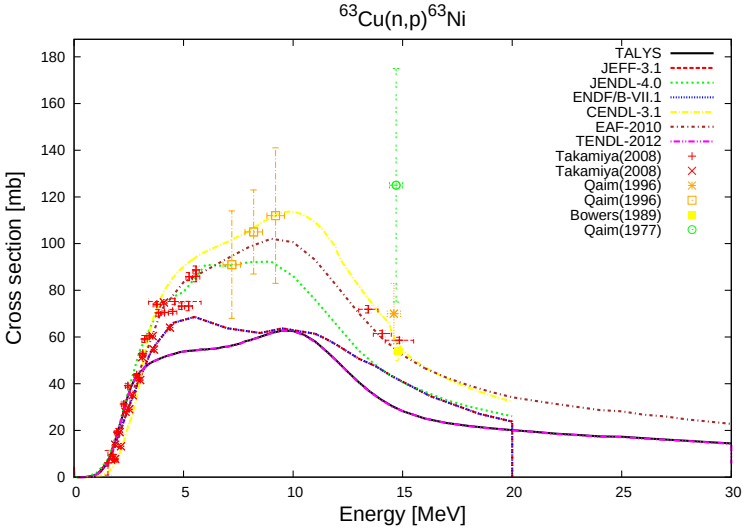

^{61}Ni(n,p)^{61}Co
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
FengqunZhouu(2011)
Furuta(2008)
Semkova(2004)
Shimitsu(2000)
Osman(1996)
Konno(1993)
Belgaid(1992)
Ercan(1991)
Molla(1991)
Viennot(1991)
Ribansky(1985)
Qaim(1984)
Viennot(1982)
Qaim(1977)
Qaim(1977)
Maslov(1972)
Levkovskiy(1969)
Cross(1963)
Valter(1962)
VanLoef(1961)
Preiss(1960)
Paul(1953)

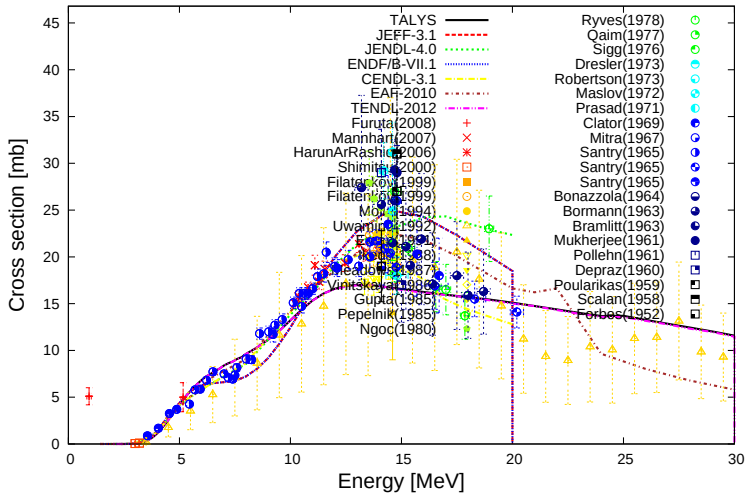

^{62}Ni(n,p)^{62}Co
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Ercan(1991)
Ribansky(1985)
Maslov(1972)
Cross(1963)

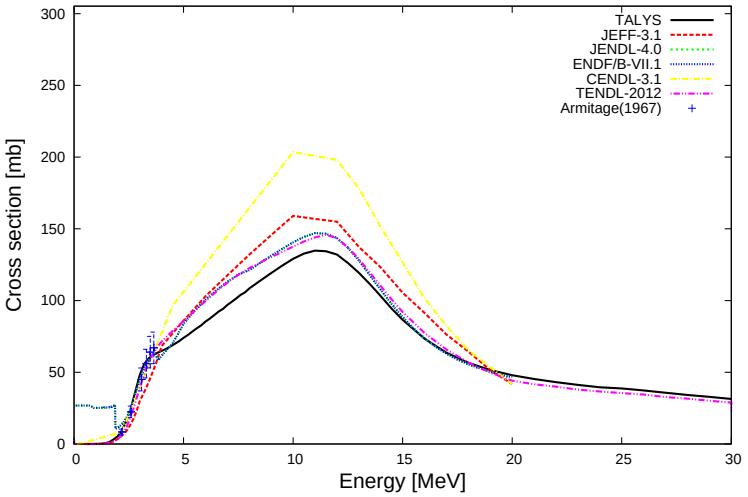

^{62}Ni(n,p)^{62g}Co
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Kasugai(1998)
Viennot(1991)
Bahal(1985)
Ribansky(1985)
Viennot(1982)
Levkovskiy(1969)
Bormann(1966)
Valter(1962)

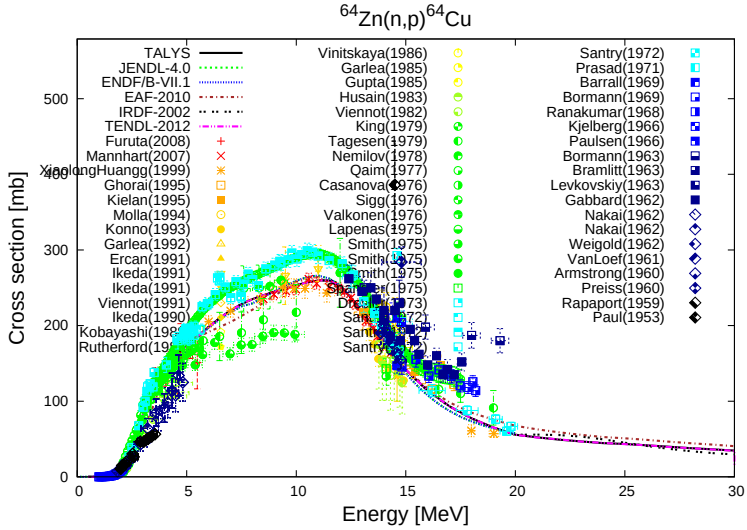

^{62}Ni(n,p)^{62m}Co
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
FengqunZhouu(2011)
Kasugai(1998)
Ercan(1991)
Molla(1991)
Viennot(1991)
Bahal(1985)
Ribansky(1985)
Qaim(1984)
Viennot(1982)
Qaim(1977)
Qaim(1977)
Levkovskiy(1969)
Cross(1963)
Valter(1962)
Preiss(1960)

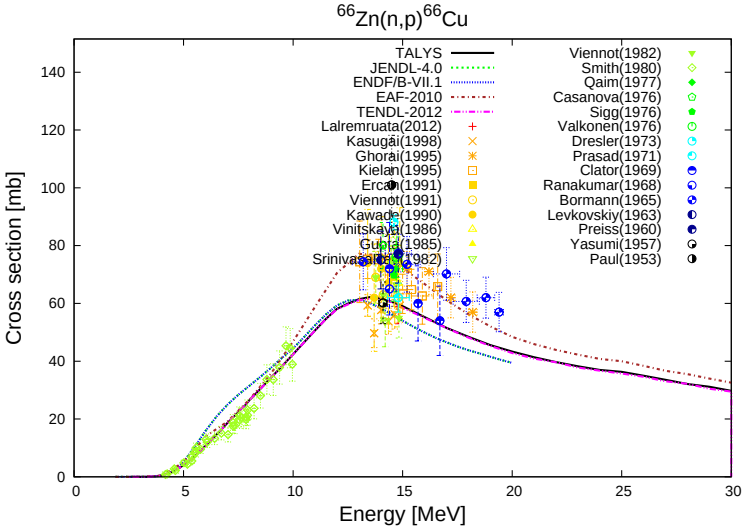

^{64}Ni(n,p)^{64}Co
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Valter(1962)
Valter(1962)

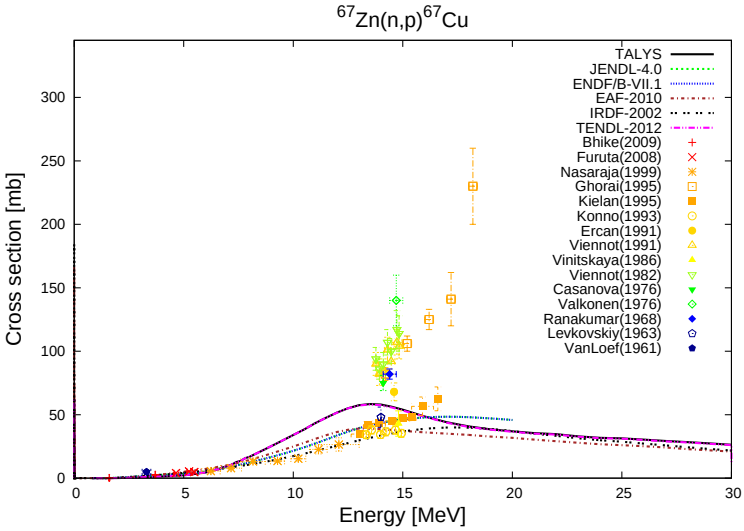

^{63}Cu(n,p)^{63}Ni
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Takamiya(2008)
Takamiya(2008)
Qaim(1996)
Qaim(1996)
Bowers(1989)
Qaim(1977)

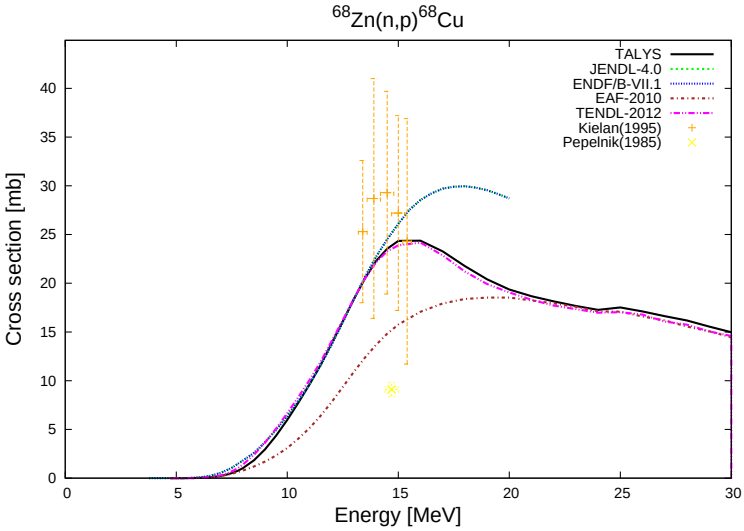

^{65}Cu(n,p)^{65}Ni
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Furuta(2008)
Mannhart(2007)
HarunArRashid(2006)
Shimizu(2000)
Filatenkov(1999)
Filatenkov(1999)
Mo(1994)
Uwamino(1992)
Ryves(1978)
Qaim(1977)
Sigg(1976)
Dresler(1973)
Robertson(1973)
Maslov(1972)
Prasad(1971)
Clator(1969)
Mitra(1967)
Santry(1965)
Santry(1965)
Santry(1965)
Bonazzola(1964)
Bormann(1963)
Bramlitt(1963)
Mukherjee(1961)
Pollehn(1961)
Depraz(1960)
Poularikas(1959)
Scalan(1958)
Forbes(1952)
Vinitskaya(1986)
Gupta(1985)
Pepelnik(1985)
Ngoc(1980)

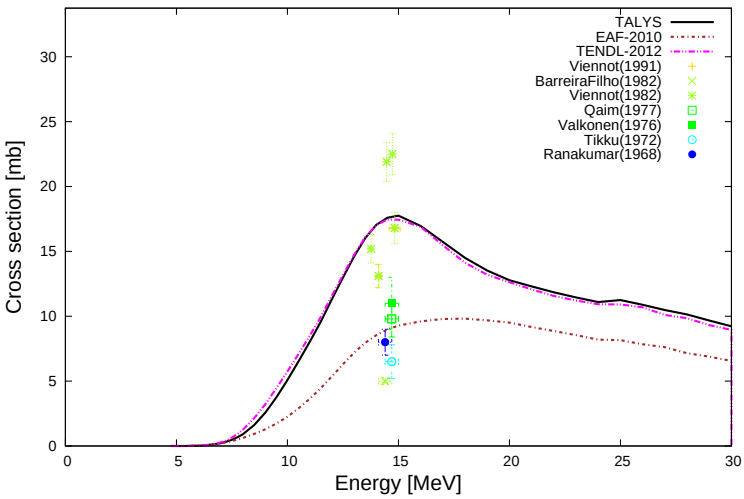

^{nat}Zn(n,p)Cu
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Armitage(1967)

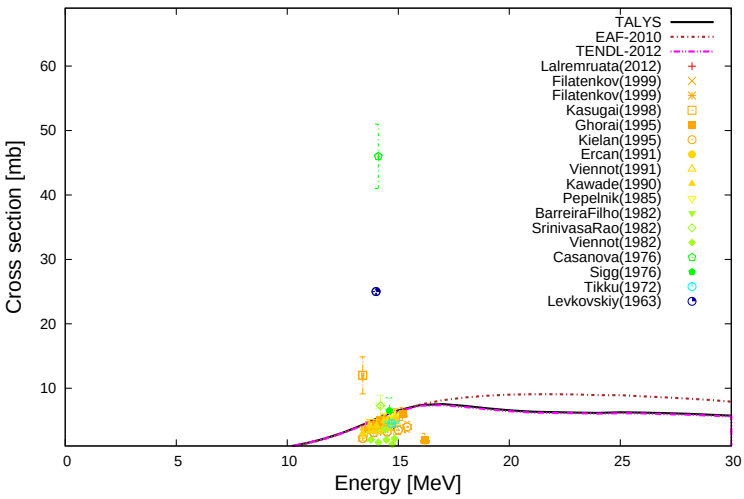

^{64}Zn(n,p)^{64}Cu
Cross section [mb]
Energy [MeV]
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
IRDF-2002
TENDL-2012
Furuta(2008)
Mannhart(2007)
XiaolongHuangg(1999)
Ghorai(1995)
Kielan(1995)
Molla(1994)
Konno(1993)
Garlea(1992)
Ercan(1991)
Ikeda(1991)
Ikeda(1991)
Viennot(1991)
Ikeda(1990)
Kobayashi(198
Rutherford(19
Vinitskaya(1986)
Garlea(1985)
Gupta(1985)
Husain(1983)
Viennot(1982)
King(1979)
Tagesen(1979)
Nemilov(1978)
Qaim(1977)
Casanova(1976)
Sigg(1976)
Valkonen(1976)
Lapenas(1975)
Smith(1975)
Smith(1975)
Smith(1975)
Santry(1972)
Santry(1972)
Santry(1972)
Santry(1972)
Prasad(1971)
Barrall(1969)
Bormann(1969)
Ranakumar(1968)
Kjelberg(1966)
Paulsen(1966)
Bormann(1963)
Bramlitt(1963)
Levkovskiy(1963)
Gabbard(1962)
Nakai(1962)
Nakai(1962)
Weigold(1962)
VanLoef(1961)
Armstrong(1960)
Preiss(1960)
Rapaport(1959)
Paul(1953)

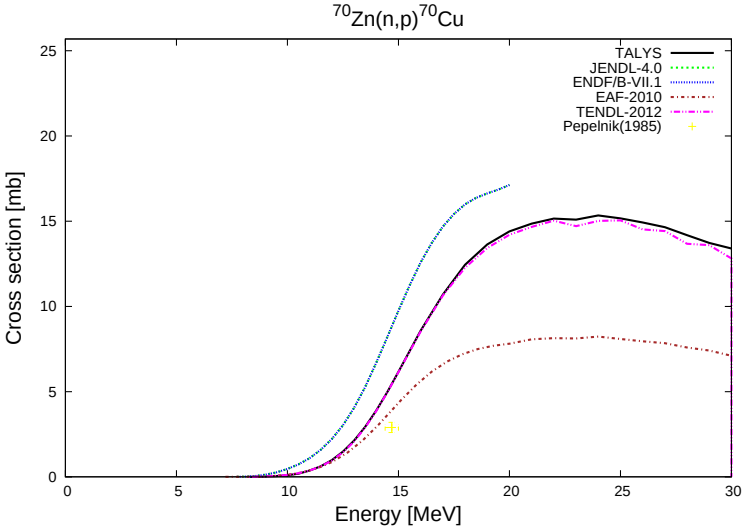

^{66}Zn(n,p)^{66}Cu
Cross section [mb]
Energy [MeV]
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Lalremruata(2012)
Kasugai(1998)
Ghorai(1995)
Kielan(1995)
Ercan(1991)
Viennot(1991)
Kawade(1990)
Vinitskaya(1986)
Gupta(1985)
Srinivasan(1982)
Viennot(1982)
Smith(1980)
Qaim(1977)
Casanova(1976)
Sigg(1976)
Valkonen(1976)
Dresler(1973)
Prasad(1971)
Clator(1969)
Ranakumar(1968)
Bormann(1965)
Levkovskiy(1963)
Preiss(1960)
Yasumi(1957)
Paul(1953)

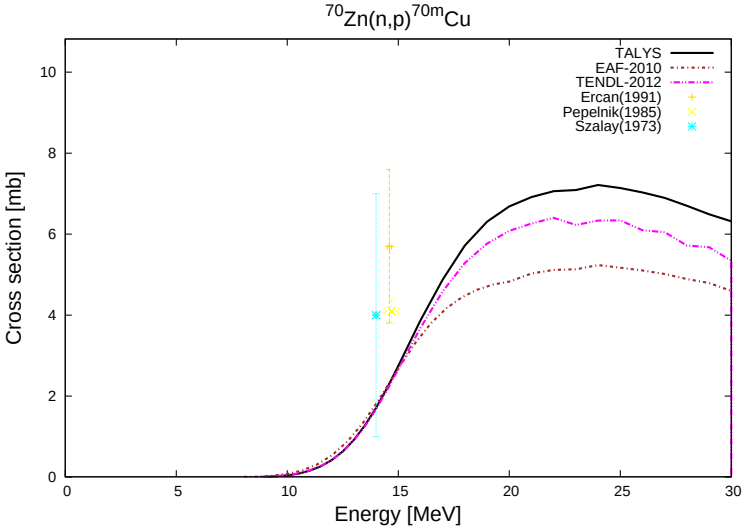

^{67}Zn(n,p)^{67}Cu
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
IRDF-2002
TENDL-2012
Bhike(2009)
Furuta(2008)
Nasaraja(1999)
Ghorai(1995)
Kielan(1995)
Konno(1993)
Ercan(1991)
Viennot(1991)
Vinitskaya(1986)
Viennot(1982)
Casanova(1976)
Valkonen(1976)
Ranakumar(1968)
Levkovskiy(1963)
VanLoef(1961)
Cross section [mb]
Energy [MeV]

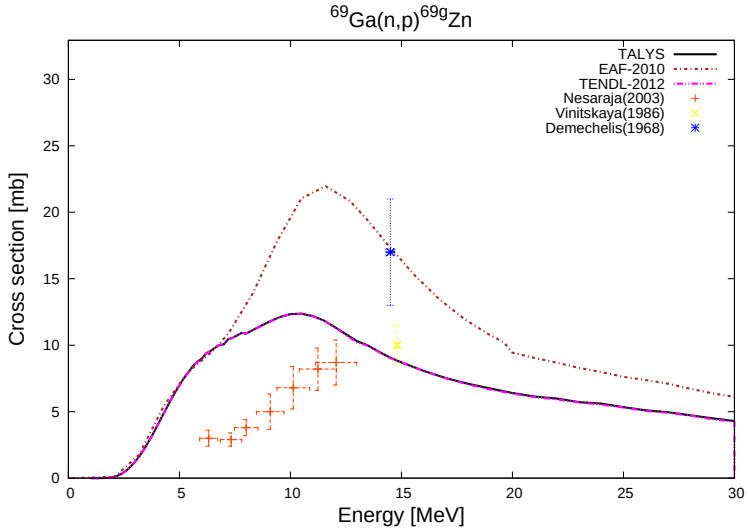

^{68}Zn(n,p)^{68}Cu
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Kielan(1995)
Pepelnik(1985)
Cross section [mb]
Energy [MeV]

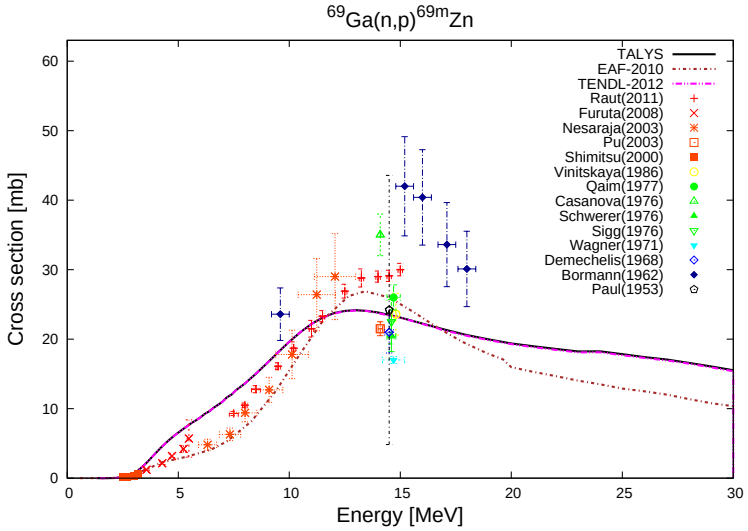

^{68}Zn(n,p)^{68g}Cu
TALYS
EAF-2010
TENDL-2012
Viennot(1991)
BarreiraFilho(1982)
Viennot(1982)
Qaim(1977)
Valkonen(1976)
Tikku(1972)
Ranakumar(1968)
Cross section [mb]
Energy [MeV]

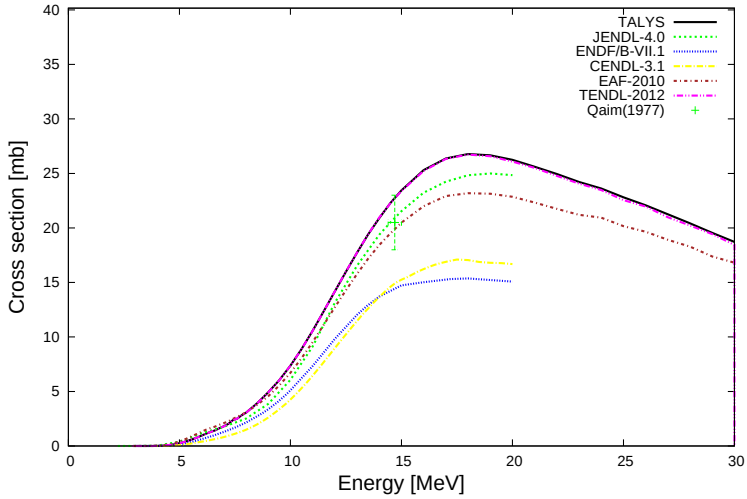

^{68}Zn(n,p)^{68m}Cu
TALYS
EAF-2010
TENDL-2012
Lalremruata(2012)
Filatenkov(1999)
Filatenkov(1999)
Kasugai(1998)
Ghorai(1995)
Kielan(1995)
Ercan(1991)
Viennot(1991)
Kawade(1990)
Pepelnik(1985)
BarreiraFilho(1982)
SrinivasaRao(1982)
Viennot(1982)
Casanova(1976)
Sigg(1976)
Tikku(1972)
Levkovskiy(1963)
Cross section [mb]
Energy [MeV]

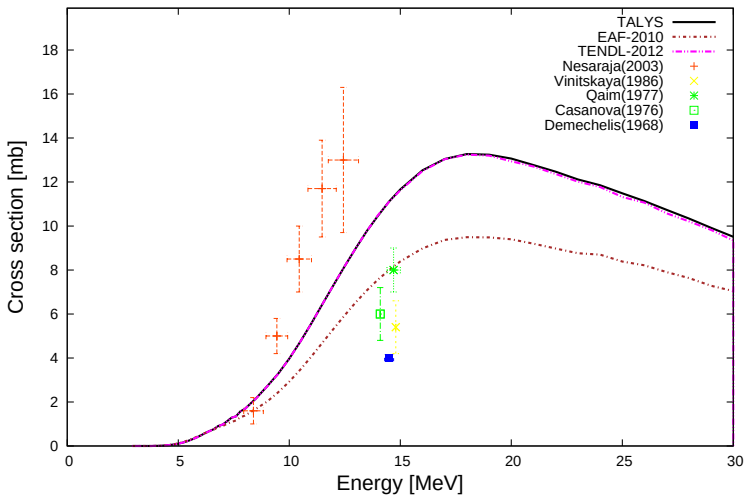

^{70}Zn(n,p)^{70}Cu
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Pepelnik(1985)
Cross section [mb]
Energy [MeV]

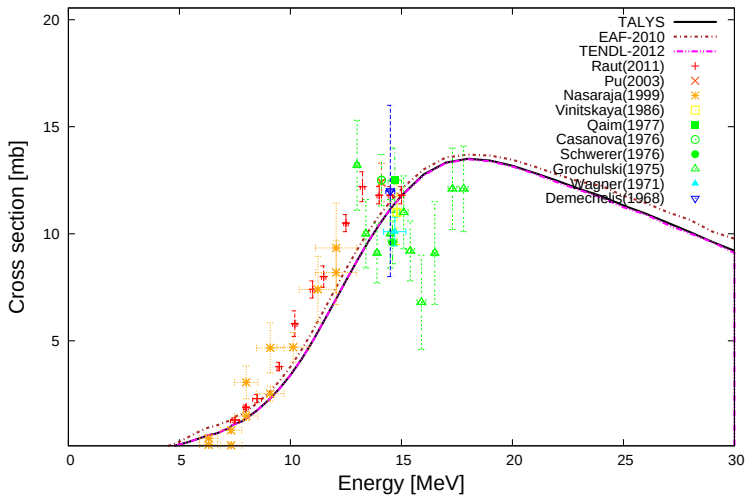

^{70}Zn(n,p)^{70m}Cu
TALYS
EAF-2010
TENDL-2012
Ercan(1991)
Pepelnik(1985)
Szalay(1973)
Cross section [mb]
Energy [MeV]

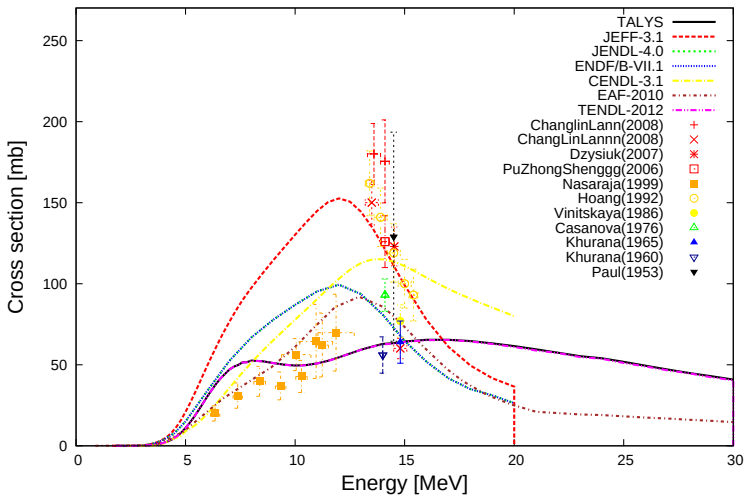

^{69}Ga(n,p)^{69g}Zn
TALYS
EAF-2010
TENDL-2012
Nesaraja(2003)
Vinitskaya(1986)
Demechelis(1968)
Cross section [mb]
Energy [MeV]

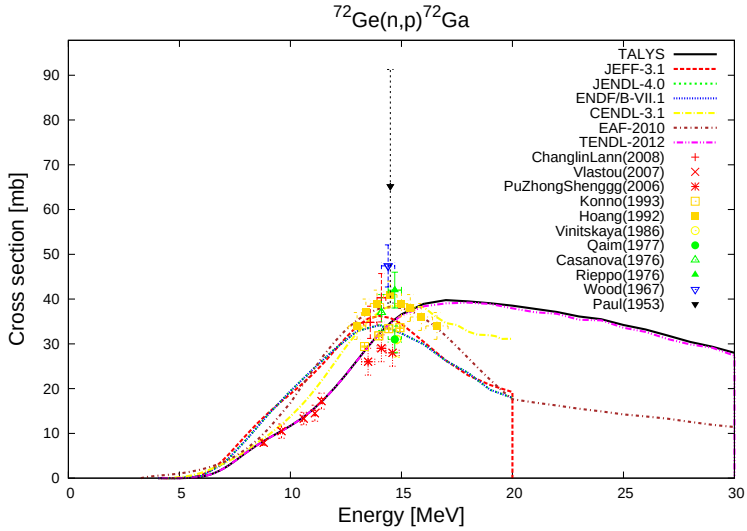

^{69}Ga(n,p)^{69m}Zn
TALYS
EAF-2010
TENDL-2012
Raut(2011)
Furuta(2008)
Nesaraja(2003)
Pu(2003)
Shimitsu(2000)
Vinitskaya(1986)
Qaim(1977)
Casanova(1976)
Schwerer(1976)
Sigg(1976)
Wagner(1971)
Demechelis(1968)
Bormann(1962)
Paul(1953)
Cross section [mb]
Energy [MeV]

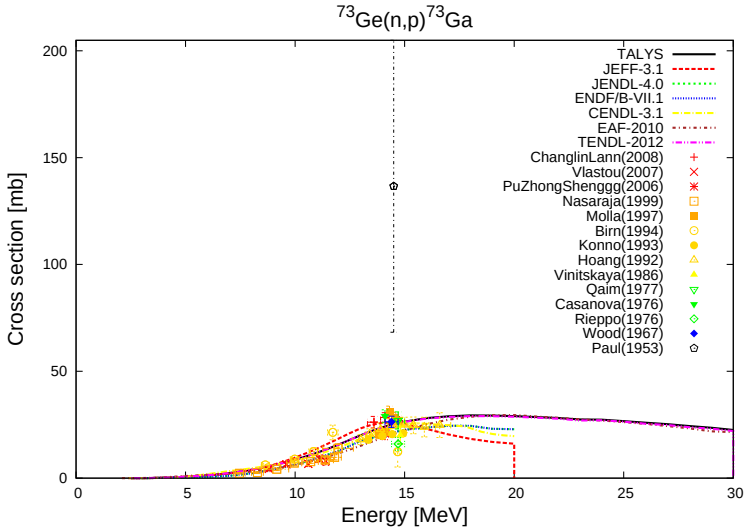

^{71}Ga(n,p)^{71}Zn
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Qaim(1977)
Cross section [mb]
Energy [MeV]

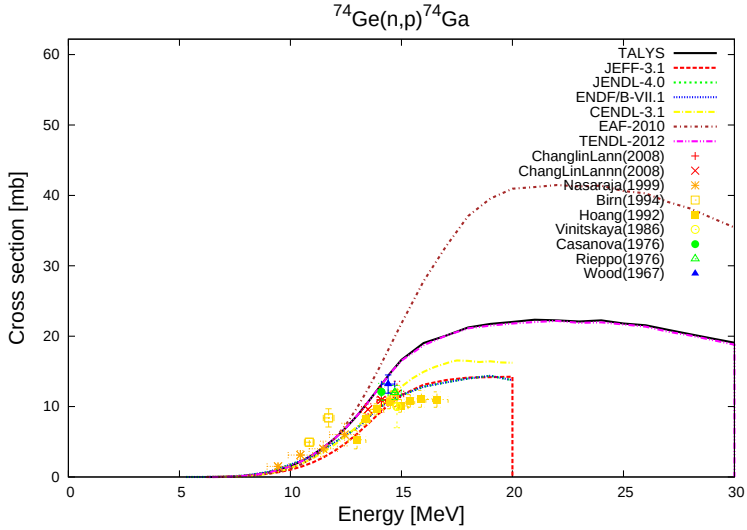

^{71}Ga(n,p)^{71g}Zn
TALYS
EAF-2010
TENDL-2012
Nesaraja(2003)
Vinitskaya(1986)
Qaim(1977)
Casanova(1976)
Demechelis(1968)
Cross section [mb]
Energy [MeV]

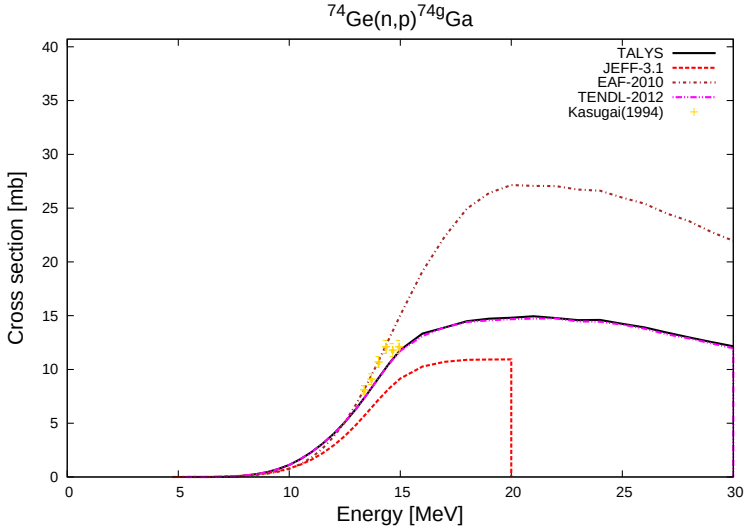

^{71}Ga(n,p)^{71m}Zn
TALYS
EAF-2010
TENDL-2012
Raut(2011)
Pu(2003)
Nasaraja(1999)
Vinitskaya(1986)
Qaim(1977)
Casanova(1976)
Schwerer(1976)
Grochulski(1975)
Wagner(1971)
Demechelis(1968)
Cross section [mb]
Energy [MeV]

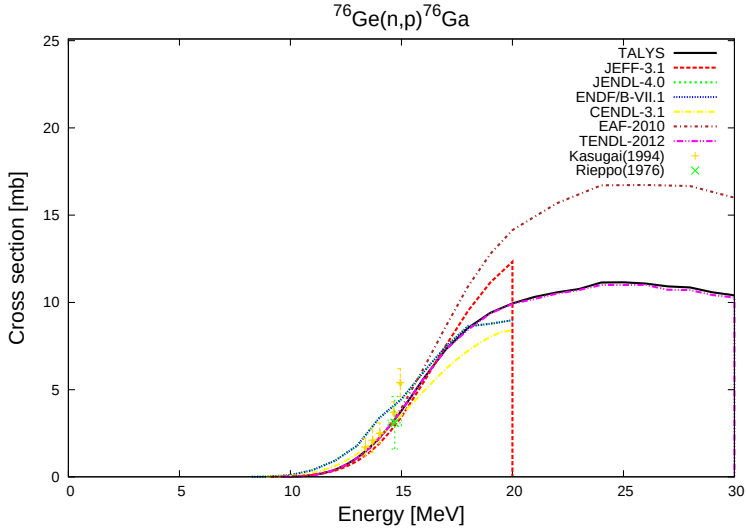

^{70}Ge(n,p)^{70}Ga
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
ChanglinLann(2008)
ChangLinLannn(2008)
Dzysiuk(2007)
PuZhongShenggg(2006)
Nasaraja(1999)
Hoang(1992)
Vinitskaya(1986)
Casanova(1976)
Khurana(1965)
Khurana(1960)
Paul(1953)
Cross section [mb]
Energy [MeV]

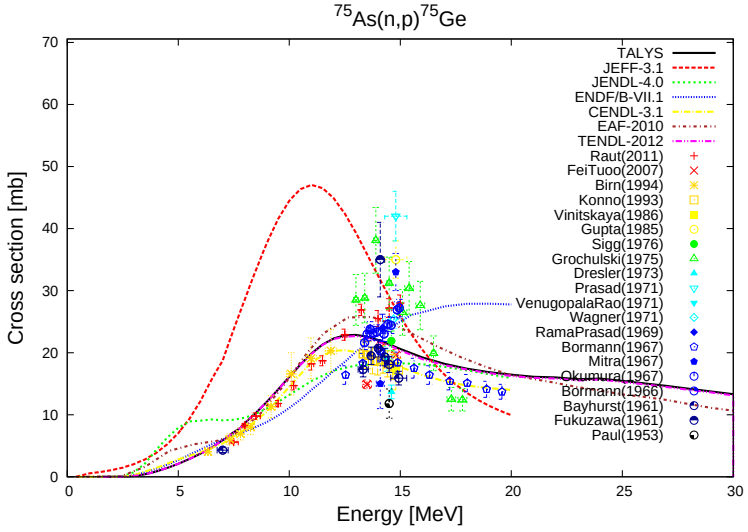

^{72}Ge(n,p)^{72}Ga
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
ChanglinLann(2008)
Vlastou(2007)
PuZhongShenggg(2006)
Konno(1993)
Hoang(1992)
Vinitskaya(1986)
Qaim(1977)
Casanova(1976)
Rieppo(1976)
Wood(1967)
Paul(1953)

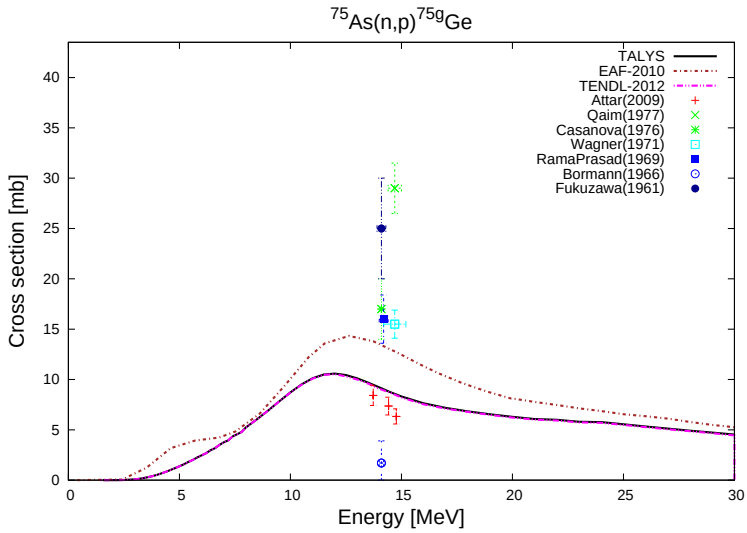

^{73}Ge(n,p)^{73}Ga
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
ChanglinLann(2008)
Vlastou(2007)
PuZhongShenggg(2006)
Nasaraja(1999)
Molla(1997)
Birn(1994)
Konno(1993)
Hoang(1992)
Vinitskaya(1986)
Qaim(1977)
Casanova(1976)
Rieppo(1976)
Wood(1967)
Paul(1953)

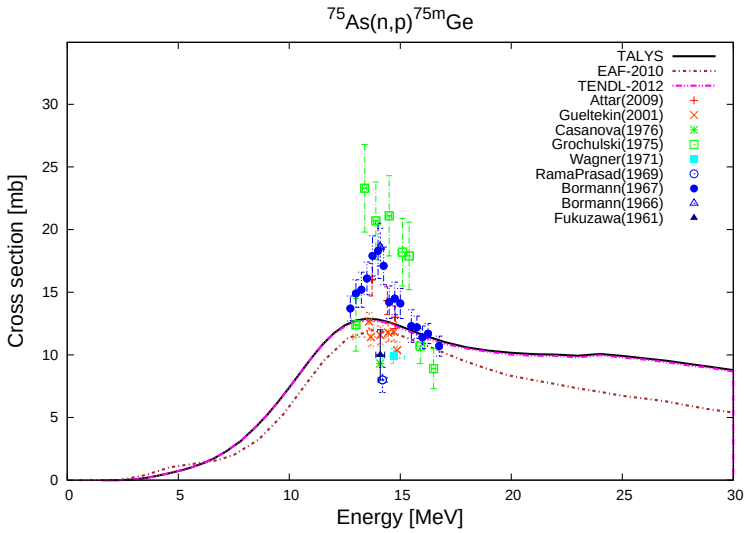

^{74}Ge(n,p)^{74}Ga
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
ChanglinLann(2008)
ChangLinLannn(2008)
Nasaraja(1999)
Birn(1994)
Hoang(1992)
Vinitskaya(1986)
Casanova(1976)
Rieppo(1976)
Wood(1967)

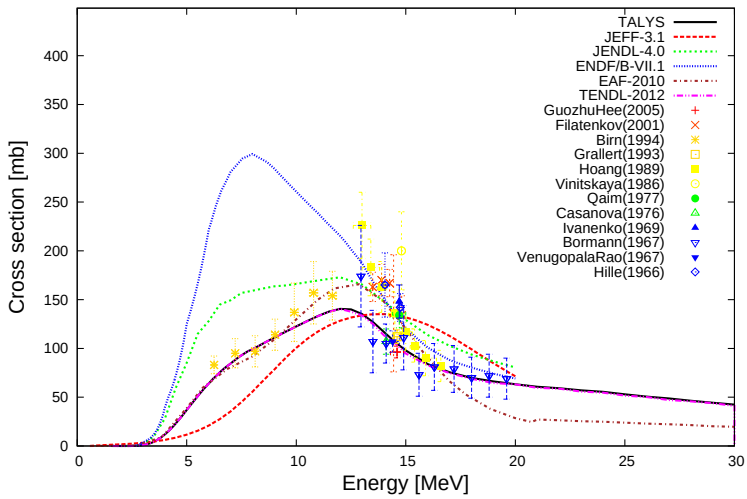

^{74}Ge(n,p)^{74g}Ga
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
EAF-2010
TENDL-2012
Kasugai(1994)

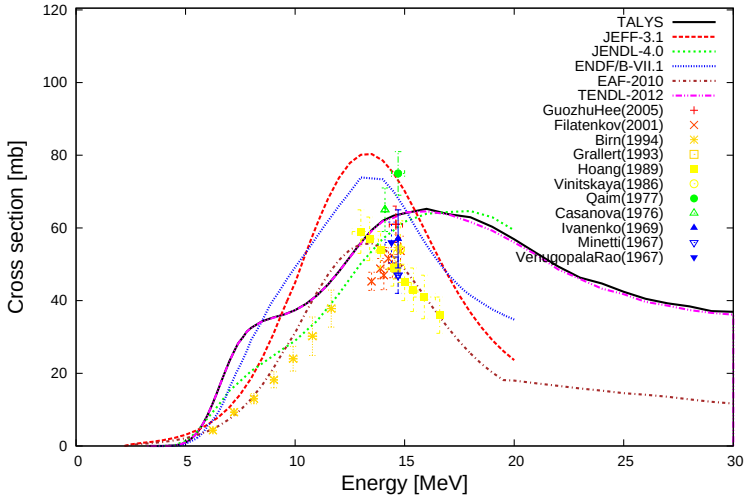

^{76}Ge(n,p)^{76}Ga
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Kasugai(1994)
Rieppo(1976)

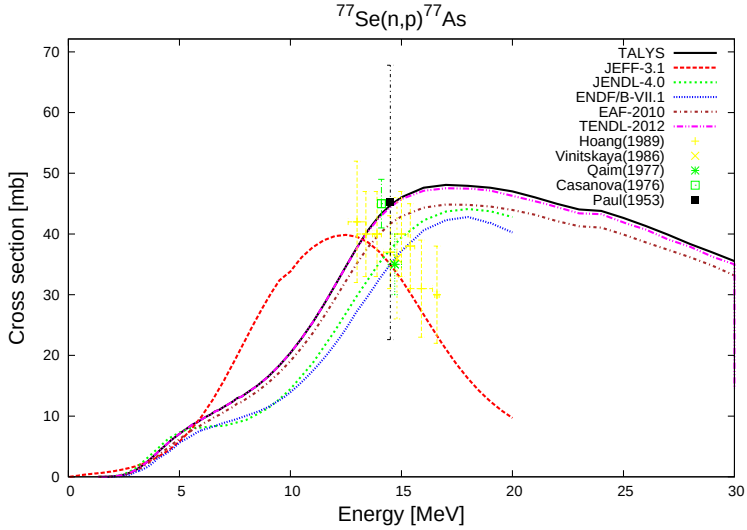

^{75}As(n,p)^{75}Ge
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Raut(2011)
FeiTuoo(2007)
Birn(1994)
Konno(1993)
Vinitskaya(1986)
Gupta(1985)
Sigg(1976)
Grochulski(1975)
Dresler(1973)
Prasad(1971)
VenugopalaRao(1971)
Wagner(1971)
RamaPrasad(1969)
Bormann(1967)
Mitra(1967)
Okumura(1967)
Bormann(1966)
Bayhurst(1961)
Fukuzawa(1961)
Paul(1953)

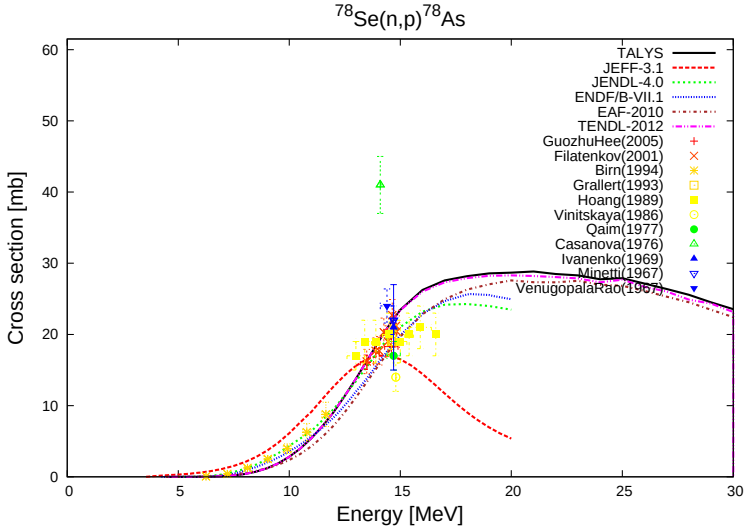

^{75}As(n,p)^{75g}Ge
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Attar(2009)
Qaim(1977)
Casanova(1976)
Wagner(1971)
RamaPrasad(1969)
Bormann(1966)
Fukuzawa(1961)

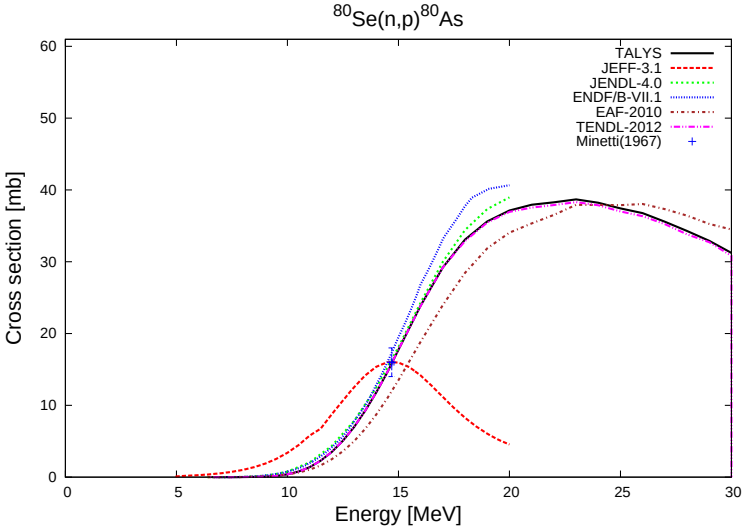

^{75}As(n,p)^{75m}Ge
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Attar(2009)
Gueltekin(2001)
Casanova(1976)
Grochulski(1975)
Wagner(1971)
RamaPrasad(1969)
Bormann(1967)
Bormann(1966)
Fukuzawa(1961)

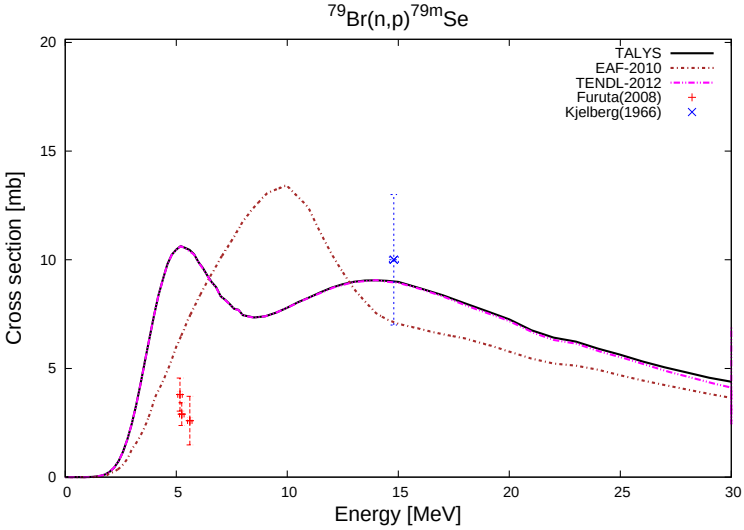

^{74}Se(n,p)^{74}As
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
GuozhuHee(2005)
Filatenkov(2001)
Birn(1994)
Grallert(1993)
Hoang(1989)
Vinitskaya(1986)
Qaim(1977)
Casanova(1976)
Ivanenko(1969)
Bormann(1967)
VenugopalaRao(1967)
Hille(1966)

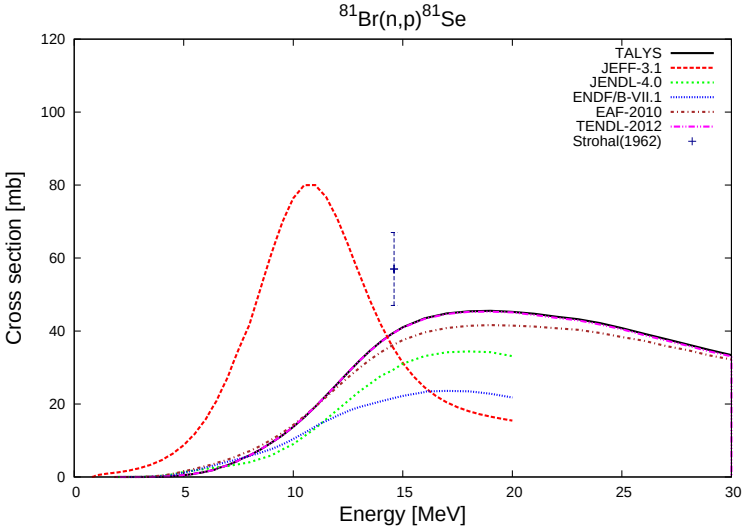

^{76}Se(n,p)^{76}As
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
GuozhuHee(2005)
Filatenkov(2001)
Birn(1994)
Grallert(1993)
Hoang(1989)
Vinitskaya(1986)
Qaim(1977)
Casanova(1976)
Ivanenko(1969)
Minetti(1967)
VenugopalaRao(1967)

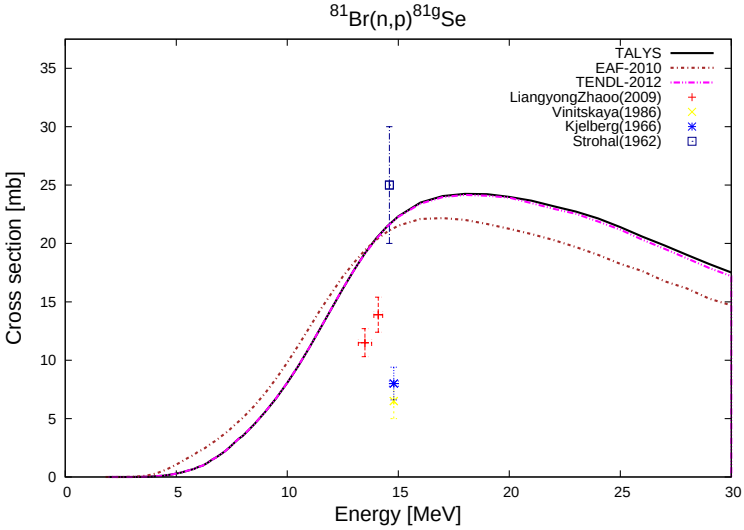

^{77}Se(n,p)^{77}As
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Hoang(1989)
Vinitskaya(1986)
Qaim(1977)
Casanova(1976)
Paul(1953)

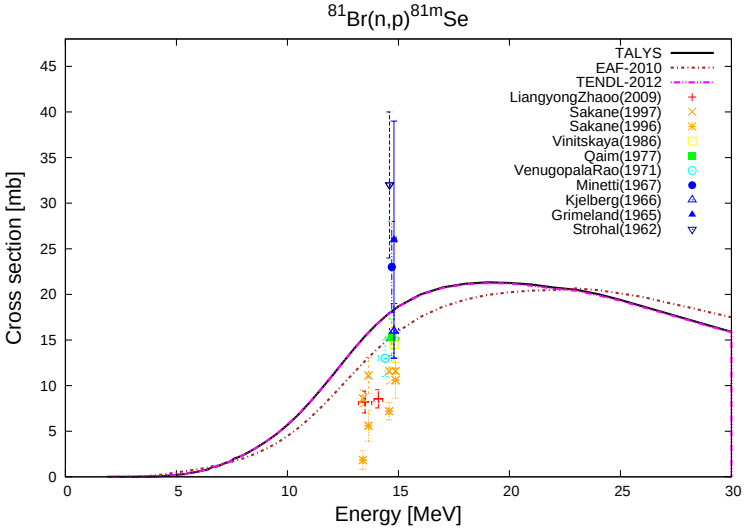

^{78}Se(n,p)^{78}As
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
GuozhuHee(2005)
Filatenkov(2001)
Birn(1994)
Grallert(1993)
Hoang(1989)
Vinitskaya(1986)
Qaim(1977)
Casanova(1976)
Ivanenko(1969)
Minetti(1967)
VenugopalaRao(1967)

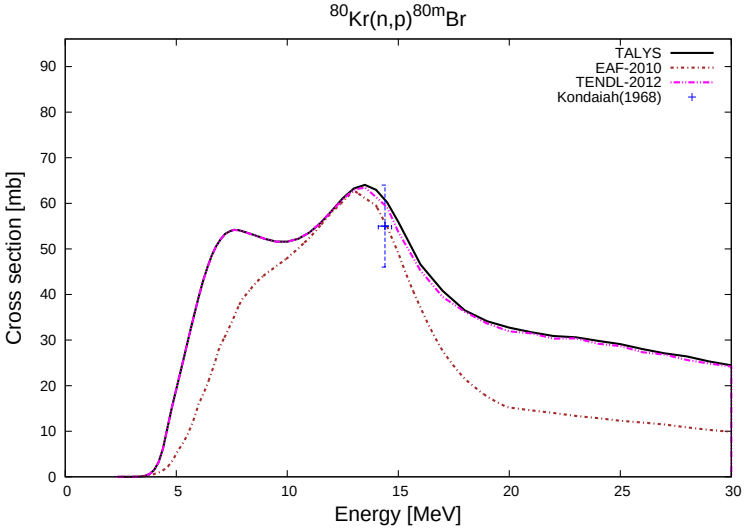

^{80}Se(n,p)^{80}As
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Minetti(1967)
Cross section [mb]
Energy [MeV]

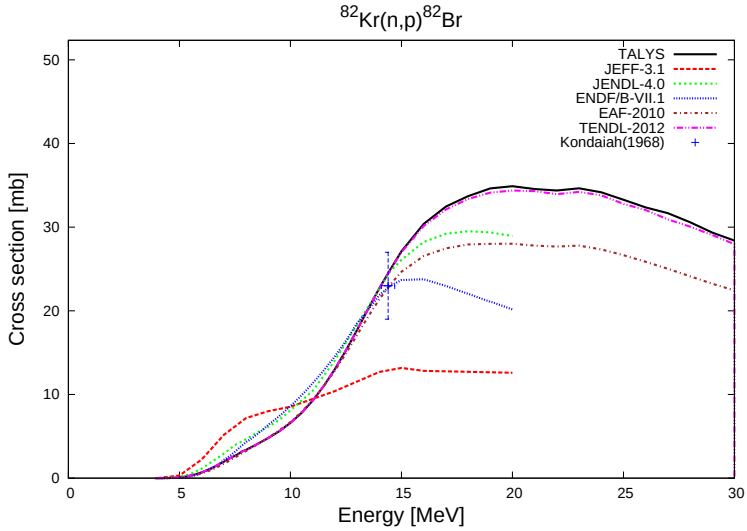

^{79}Br(n,p)^{79m}Se
TALYS
EAF-2010
TENDL-2012
Furuta(2008)
Kjelberg(1966)
Cross section [mb]
Energy [MeV]

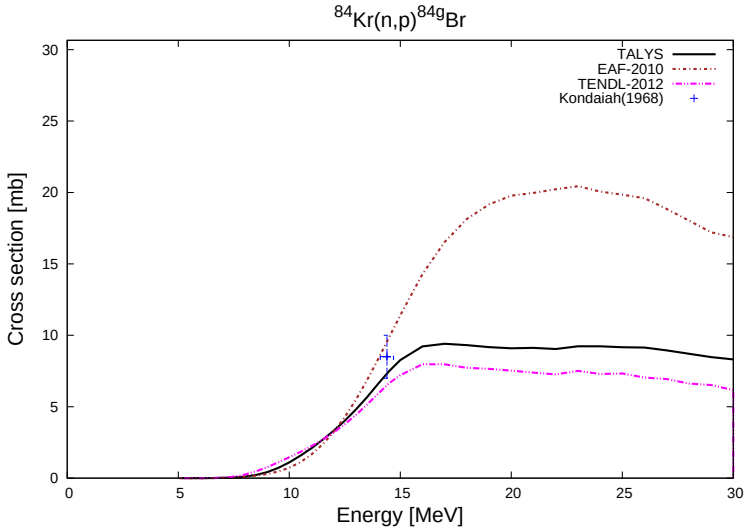

^{81}Br(n,p)^{81}Se
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Strohal(1962)
Cross section [mb]
Energy [MeV]

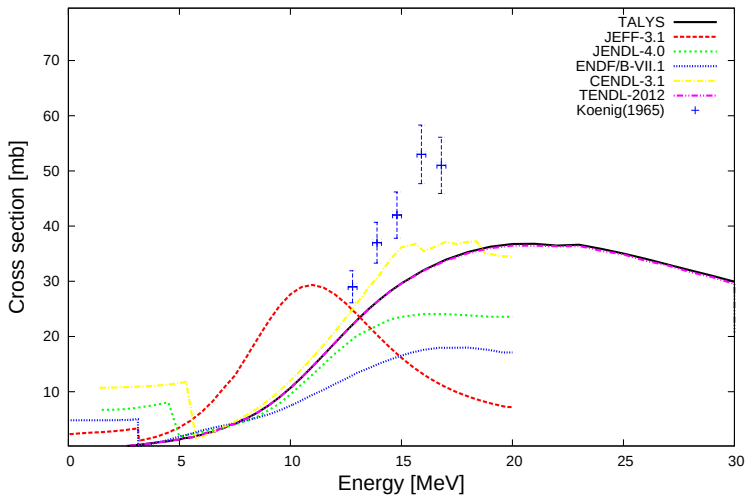

^{81}Br(n,p)^{81g}Se
TALYS
EAF-2010
TENDL-2012
LiangyongZhaoo(2009)
Vinitskaya(1986)
Kjelberg(1966)
Strohal(1962)
Cross section [mb]
Energy [MeV]

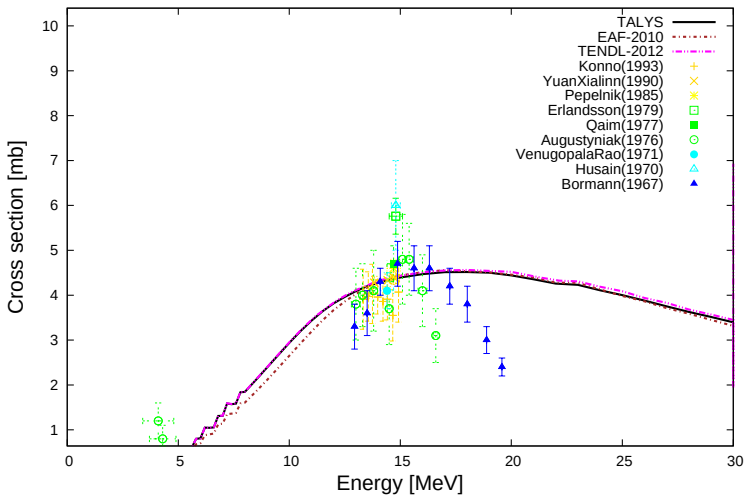

^{81}Br(n,p)^{81m}Se
TALYS
EAF-2010
TENDL-2012
LiangyongZhaoo(2009)
Sakane(1997)
Sakane(1996)
Vinitskaya(1986)
Qaim(1977)
VenugopalaRao(1971)
Minetti(1967)
Kjelberg(1966)
Grimeland(1965)
Strohal(1962)
Cross section [mb]
Energy [MeV]

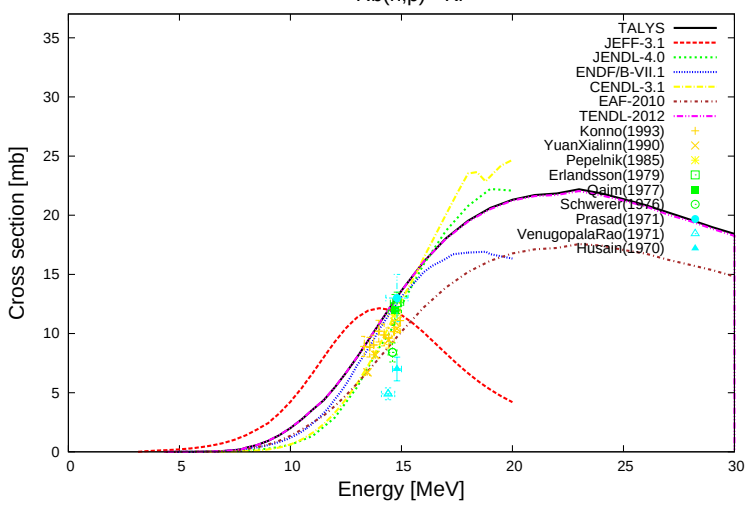

^{80}Kr(n,p)^{80m}Br
TALYS
EAF-2010
TENDL-2012
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

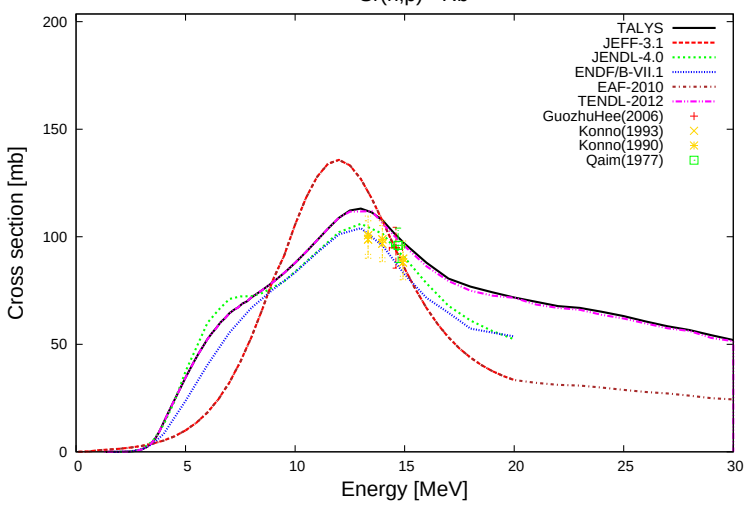

^{82}Kr(n,p)^{82}Br
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

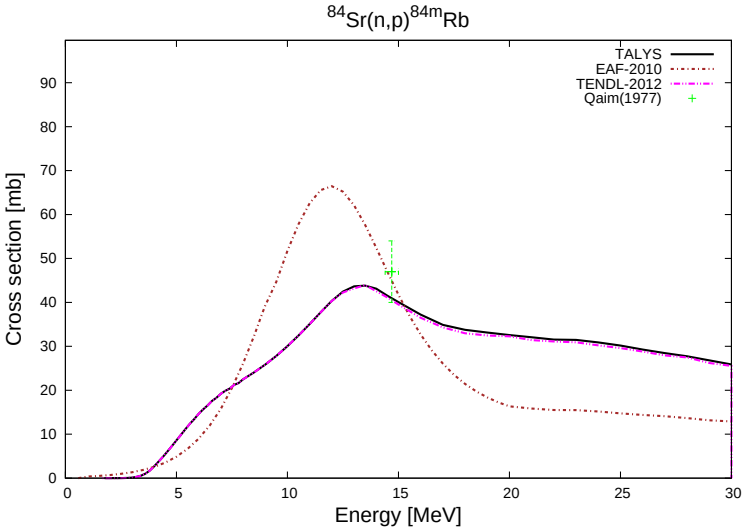

^{84}Kr(n,p)^{84g}Br
TALYS
EAF-2010
TENDL-2012
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

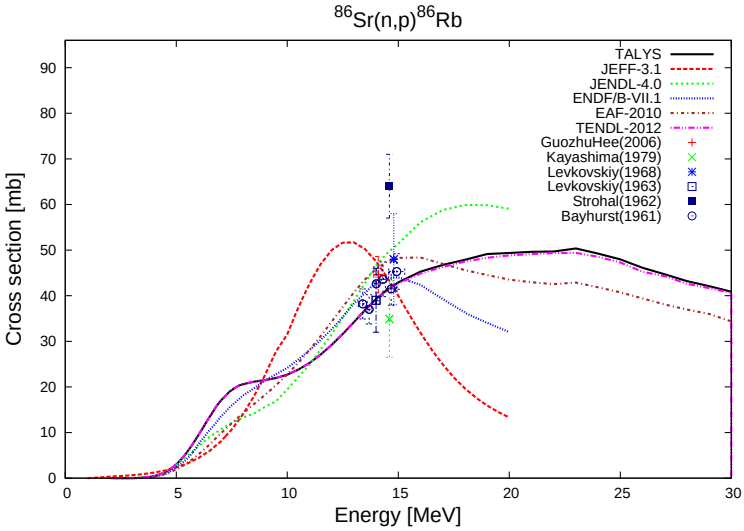

^{nat}Rb(n,p)Kr
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Koenig(1965)
Cross section [mb]
Energy [MeV]

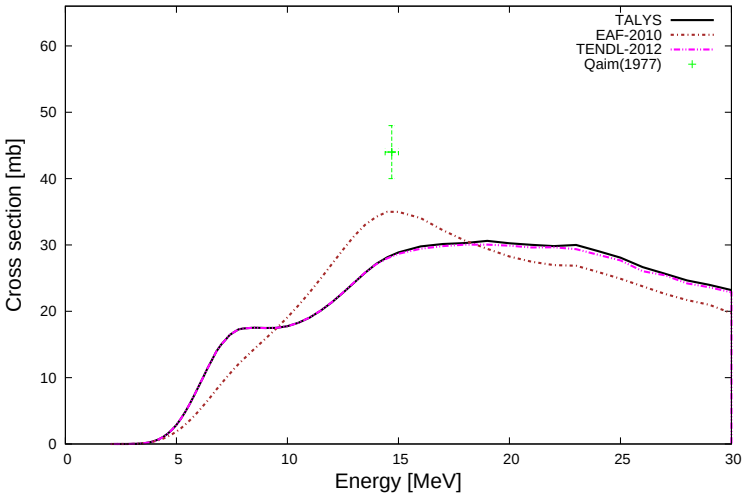

^{85}Rb(n,p)^{85m}Kr
TALYS
EAF-2010
TENDL-2012
Konno(1993)
YuanXialinn(1990)
Pepelnik(1985)
Erlandsson(1979)
Qaim(1977)
Augustyniak(1976)
VenugopalaRao(1971)
Husain(1970)
Bormann(1967)
Cross section [mb]
Energy [MeV]

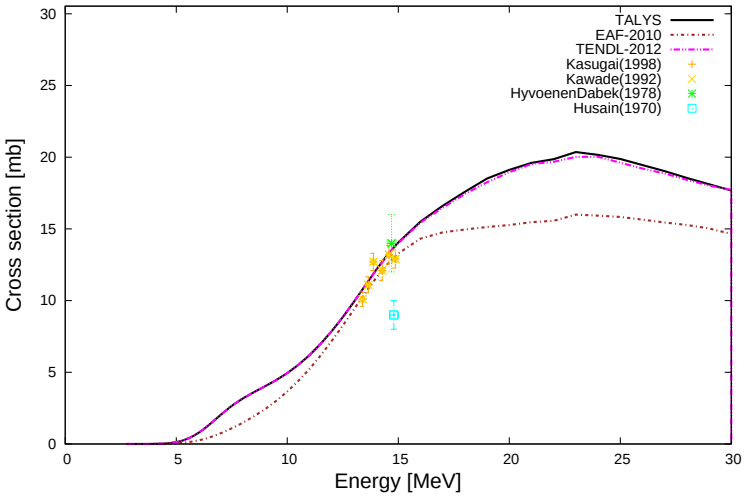

^{87}Rb(n,p)^{87}Kr
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Konno(1993)
YuanXialinn(1990)
Pepelnik(1985)
Erlandsson(1979)
Qaim(1977)
Schweer(1976)
Prasad(1971)
VenugopalaRao(1971)
Husain(1970)
Cross section [mb]
Energy [MeV]

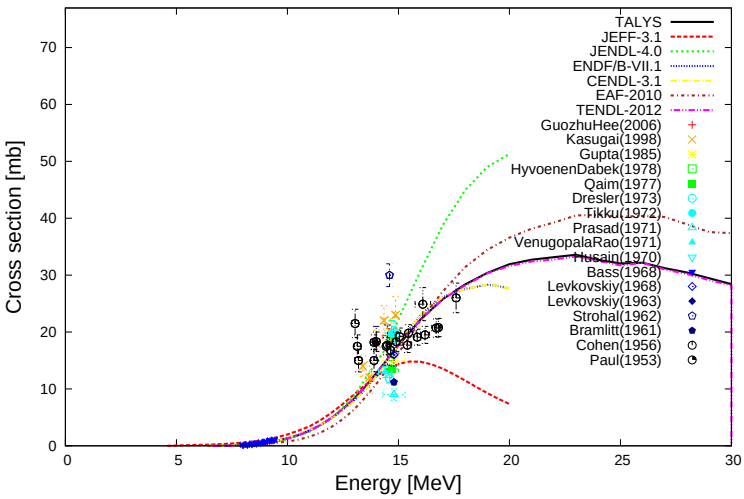

^{84}Sr(n,p)^{84}Rb
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
GuozhuHee(2006)
Konno(1993)
Konno(1990)
Qaim(1977)
Cross section [mb]
Energy [MeV]

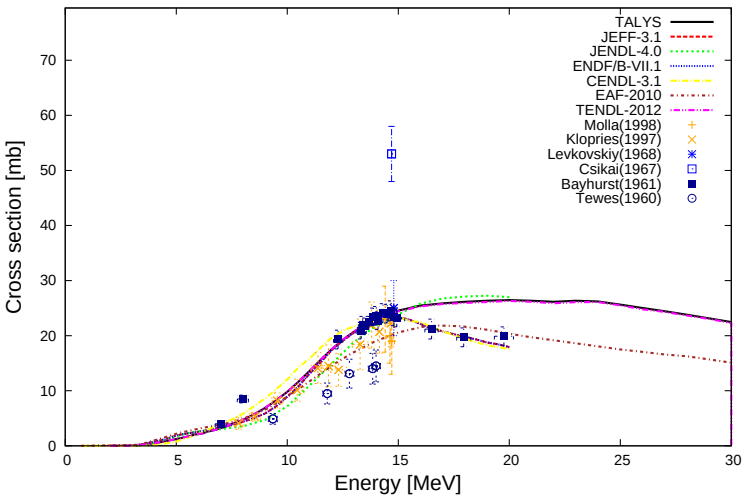

^{84}Sr(n,p)^{84m}Rb
TALYS
EAF-2010
TENDL-2012
Qaim(1977)
Cross section [mb]
Energy [MeV]

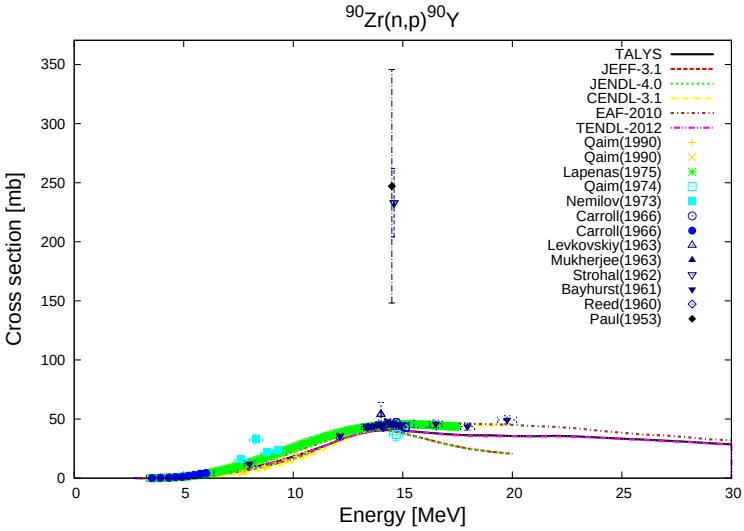

^{86}Sr(n,p)^{86}Rb
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
GuozhuHee(2006)
Kayashima(1979)
Levkovskiy(1968)
Levkovskiy(1963)
Strohal(1962)
Bayhurst(1961)
Cross section [mb]
Energy [MeV]

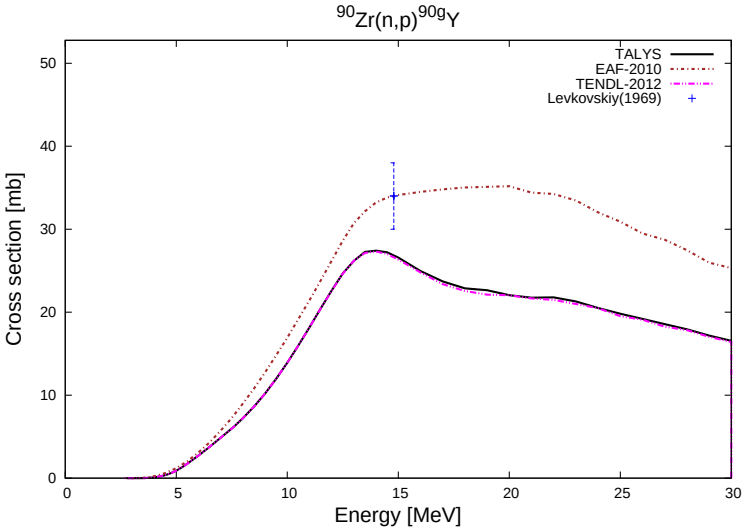

^{86}Sr(n,p)^{86g}Rb
TALYS
EAF-2010
TENDL-2012
Qaim(1977)
Cross section [mb]
Energy [MeV]

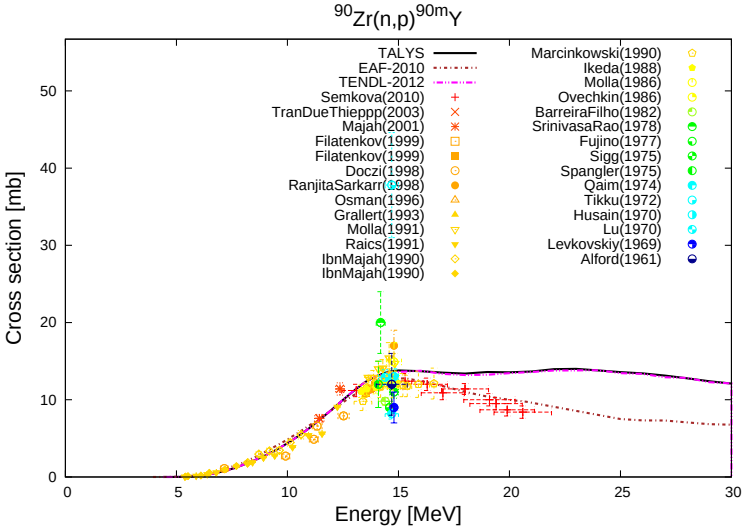

^{86}Sr(n,p)^{86m}Rb
TALYS
EAF-2010
TENDL-2012
Kasugai(1998)
Kawade(1992)
HyvoenenDabek(1978)
Husain(1970)
Cross section [mb]
Energy [MeV]

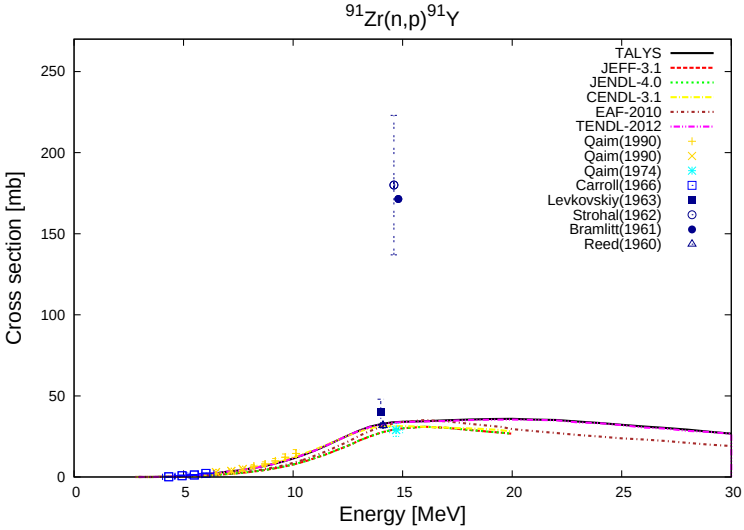

^{88}Sr(n,p)^{88}Rb
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
GuozhuHee(2006)
Kasugai(1998)
Gupta(1985)
HyvoenenDabek(1978)
Qaim(1977)
Dresler(1973)
Tikku(1972)
Prasad(1971)
VenugopalaRao(1971)
Husain(1970)
Bass(1968)
Levkovskiy(1968)
Levkovskiy(1963)
Strohal(1962)
Bramlitt(1961)
Cohen(1956)
Paul(1953)
Cross section [mb]
Energy [MeV]

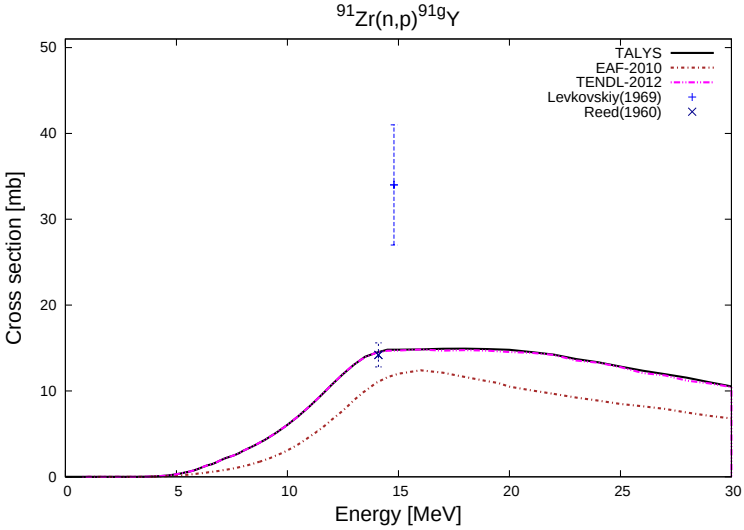

^{89}Y(n,p)^{89}Sr
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Molla(1998)
Klopries(1997)
Levkovskiy(1968)
Csikai(1967)
Bayhurst(1961)
Tewes(1960)
Cross section [mb]
Energy [MeV]

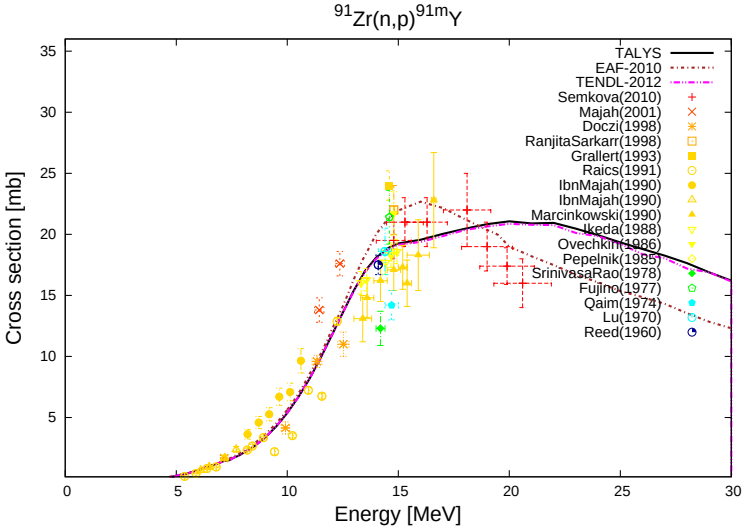

^{90}Zr(n,p)^{90}Y
TALYS
JEFF-3.1
JENDL-4.0
CENDL-3.1
EAF-2010
TENDL-2012
Qaim(1990)
Qaim(1990)
Lapenas(1975)
Qaim(1974)
Nemilov(1973)
Carroll(1966)
Carroll(1966)
Levkovskiy(1963)
Mukherjee(1963)
Strohal(1962)
Bayhurst(1961)
Reed(1960)
Paul(1953)
Cross section [mb]
Energy [MeV]

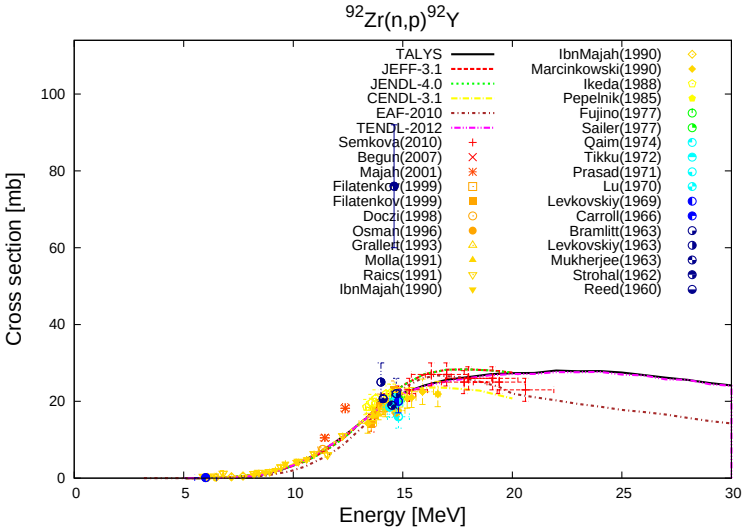

^{90}Zr(n,p)^{90g}Y
TALYS
EAF-2010
TENDL-2012
Levkovskiy(1969)
Cross section [mb]
Energy [MeV]

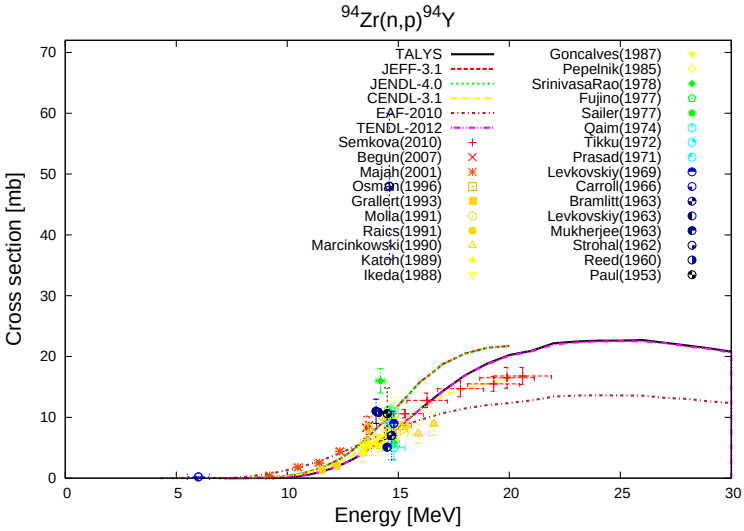

^{90}Zr(n,p)^{90m}Y
TALYS
EAF-2010
TENDL-2012
Semkova(2010)
TranDueThiepp(2003)
Majah(2001)
Filatenkov(1999)
Filatenkov(1999)
Doczi(1998)
RanjitaSarkarr(1998)
Osman(1996)
Grallert(1993)
Molla(1991)
Raics(1991)
IbnMajah(1990)
IbnMajah(1990)
Marcinkowski(1990)
Ikeda(1988)
Molla(1986)
Ovechkin(1986)
BarreiraFilho(1982)
SrinivasaRao(1978)
Fujino(1977)
Sigg(1975)
Spangler(1975)
Qaim(1974)
Tikku(1972)
Husain(1970)
Lu(1970)
Levkovskiy(1969)
Alford(1961)
Cross section [mb]
Energy [MeV]

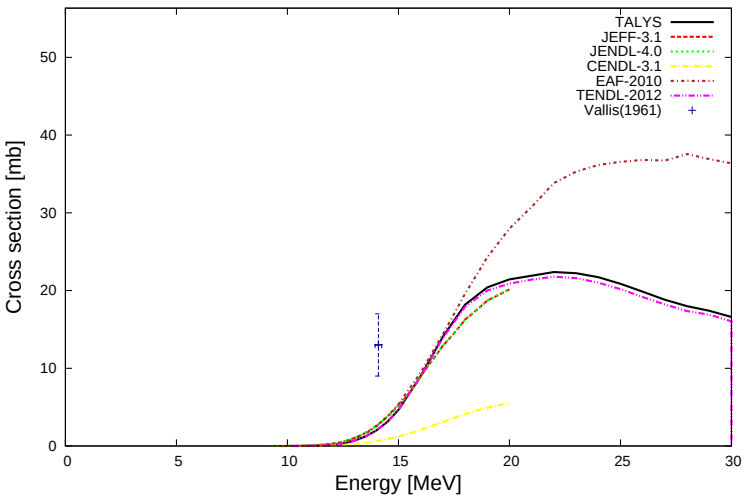

^{91}Zr(n,p)^{91}Y
TALYS
JEFF-3.1
JENDL-4.0
CENDL-3.1
EAF-2010
TENDL-2012
Qaim(1990)
Qaim(1990)
Qaim(1974)
Carroll(1966)
Levkovskiy(1963)
Strohal(1962)
Bramlitt(1961)
Reed(1960)
Cross section [mb]
Energy [MeV]

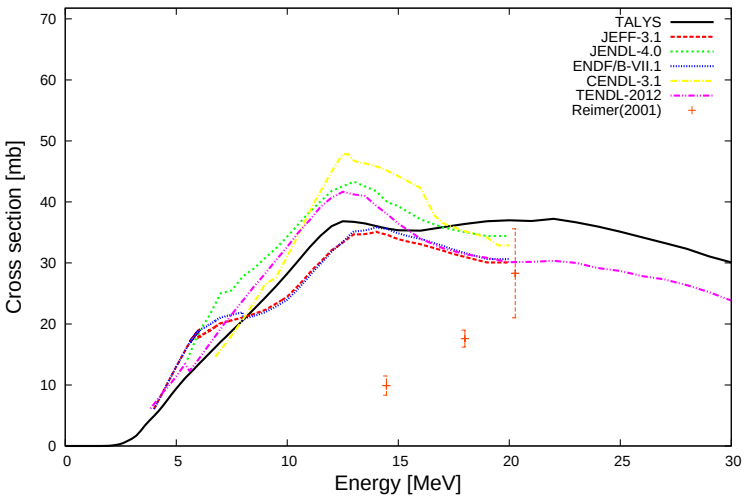

^{91}Zr(n,p)^{91g}Y
TALYS
EAF-2010
TENDL-2012
Levkovskiy(1969)
Reed(1960)
Cross section [mb]
Energy [MeV]

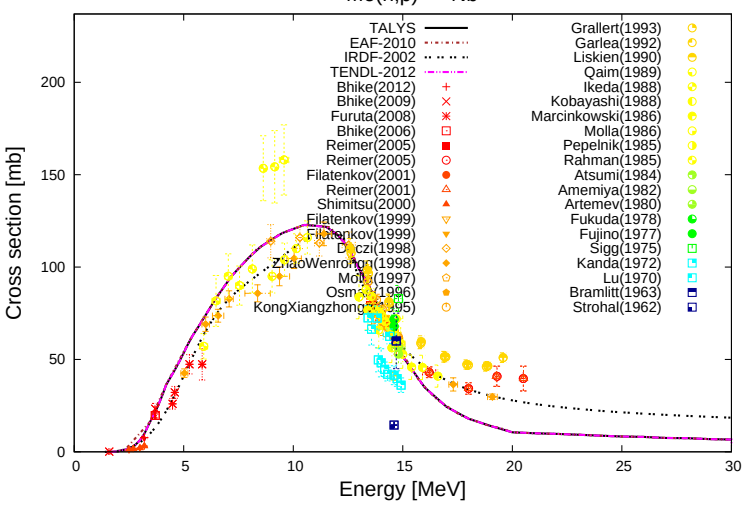

^{91}Zr(n,p)^{91m}Y
TALYS
EAF-2010
TENDL-2012
Semkova(2010)
Majah(2001)
Doczi(1998)
RanjitaSarkarr(1998)
Grallert(1993)
Raics(1991)
IbnMajah(1990)
IbnMajah(1990)
Marcinkowski(1990)
Ikeda(1988)
Ovechkin(1986)
Pepelnik(1985)
SrinivasaRao(1978)
Fujino(1977)
Qaim(1974)
Lu(1970)
Reed(1960)
Cross section [mb]
Energy [MeV]


92Zr(n,p)92Y
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
CENDL-3.1
EAF-2010
TENDL-2012
Semkova(2010)
Begun(2007)
Majah(2001)
Filatenkov(1999)
Filatenkov(1999)
Doczi(1998)
Osman(1996)
Grallert(1993)
Molla(1991)
Raics(1991)
IbnMajah(1990)
IbnMajah(1990)
Marcinkowski(1990)
Ikeda(1988)
Pepelnik(1985)
Fujino(1977)
Sailer(1977)
Qaim(1974)
Tikku(1972)
Prasad(1971)
Lu(1970)
Levkovskiy(1969)
Carroll(1966)
Bramlitt(1963)
Levkovskiy(1963)
Mukherjee(1963)
Strohal(1962)
Reed(1960)


94Zr(n,p)94Y
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
CENDL-3.1
EAF-2010
TENDL-2012
Semkova(2010)
Begun(2007)
Majah(2001)
Osman(1996)
Grallert(1993)
Molla(1991)
Raics(1991)
Marcinkowski(1990)
Katoh(1989)
Ikeda(1988)
Goncalves(1987)
Pepelnik(1985)
SrinivasaRao(1978)
Fujino(1977)
Sailer(1977)
Qaim(1974)
Tikku(1972)
Prasad(1971)
Levkovskiy(1969)
Carroll(1966)
Bramlitt(1963)
Levkovskiy(1963)
Mukherjee(1963)
Strohal(1962)
Reed(1960)
Paul(1953)


96Zr(n,p)96Y
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
CENDL-3.1
EAF-2010
TENDL-2012
Vallis(1961)


natMo(n,p)Nb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Reimer(2001)


92Mo(n,p)92mNb
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
IRDF-2002
TENDL-2012
Bhike(2012)
Bhike(2009)
Furuta(2008)
Bhike(2006)
Reimer(2005)
Reimer(2005)
Filatenkov(2001)
Reimer(2001)
Shimitsu(2000)
Filatenkov(1999)
Filatenkov(1999)
Doczi(1998)
ZhaoWenrong(1998)
Molla(1997)
Osman(1996)
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Grallert(1993)
Garlea(1992)
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Qaim(1989)
Ikeda(1988)
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Marcinkowski(1986)
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Atsumi(1984)
Amemiya(1982)
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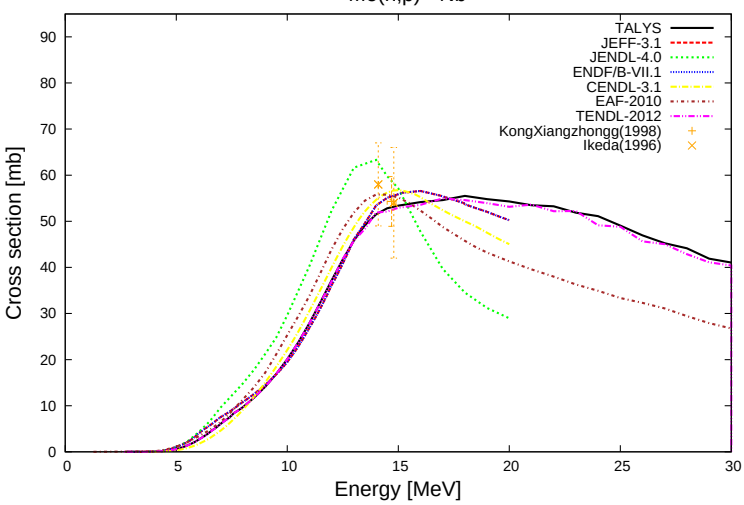
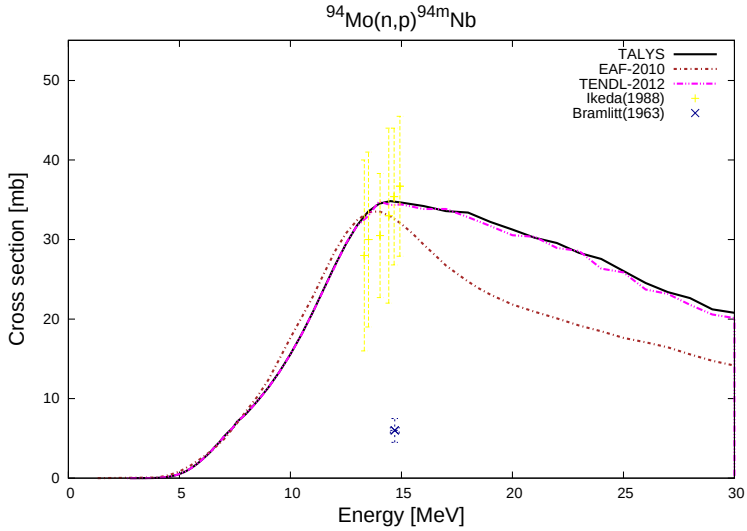
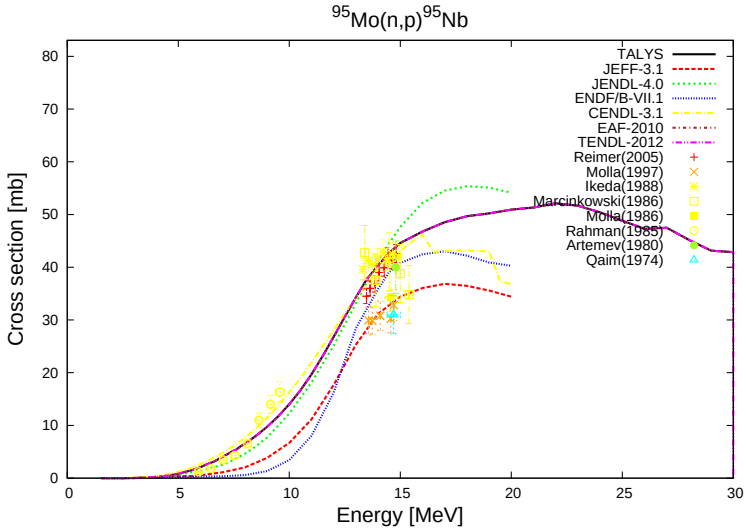
Fujino(1977)
Sigg(1975)
Kanda(1972)
Lu(1970)
Bramlitt(1963)
Strohal(1962)


94Mo(n,p)94Nb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
KongXiangzhongg(1998)
Ikeda(1996)


^{94}Mo(n,p)^{94m}Nb
TALYS
EAF-2010
TENDL-2012
Ikeda(1988)
Bramlitt(1963)
Cross section [mb]
Energy [MeV]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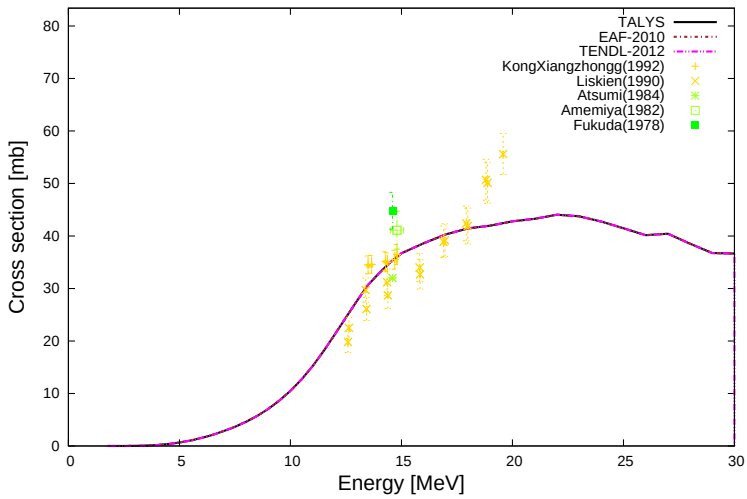
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Reimer(2005)
Molla(1997)
Ikeda(1988)
Marcinkowski(1986)
Molla(1986)
Rahman(1985)
Artemev(1980)
Qaim(1974)
Cross section [mb]
Energy [MeV]


^{95}Mo(n,p)^{95g}Nb
TALYS
EAF-2010
TENDL-2012
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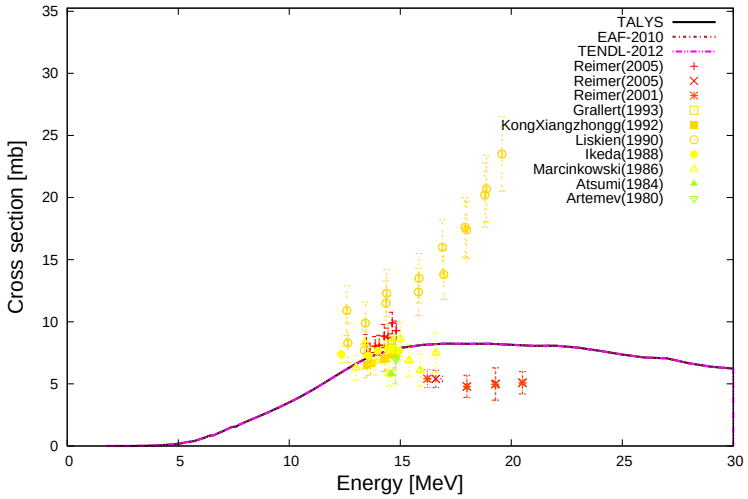
Liskien(1990)
Atsumi(1984)
Amemiya(1982)
Fukuda(1978)
Cross section [mb]
Energy [MeV]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TALYS
EAF-2010
TENDL-2012
Reimer(2005)
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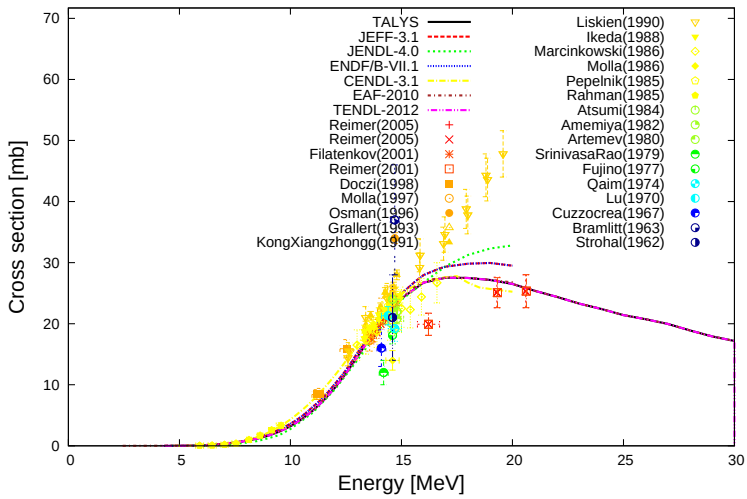
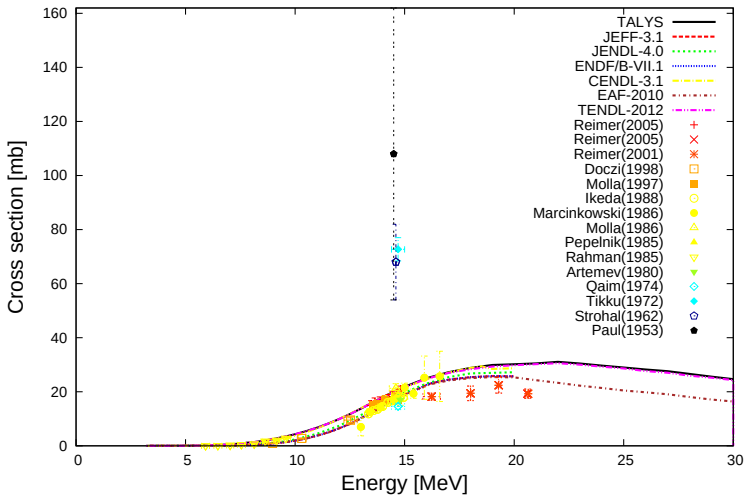
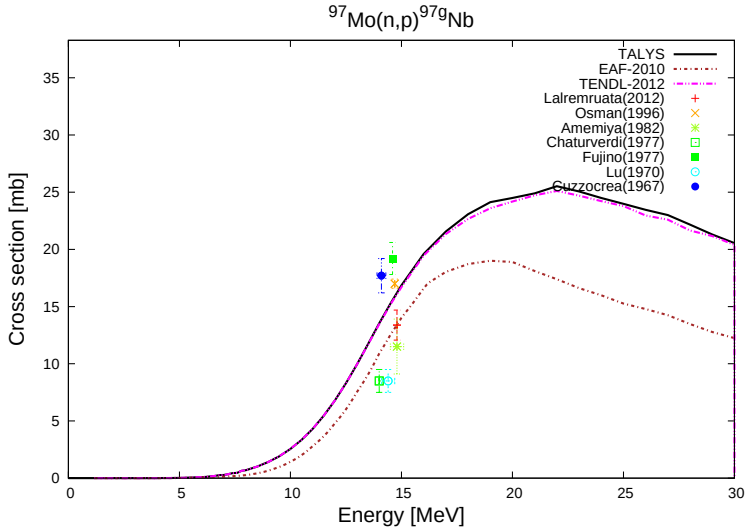
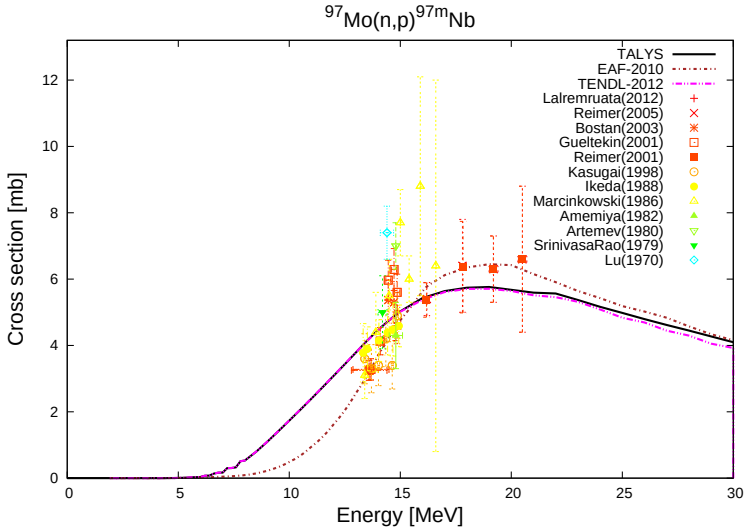
Reimer(2001)
Grallert(1993)
KongXiangzhongg(1992)
Liskien(1990)
Ikeda(1988)
Marcinkowski(1986)
Atsumi(1984)
Artemev(1980)
Cross section [mb]
Energy [MeV]


^{96}Mo(n,p)^{96}Nb
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Reimer(2005)
Reimer(2005)
Filatenkov(2001)
Reimer(2001)
Doczi(1998)
Molla(1997)
Osman(1996)
Grallert(1993)
KongXiangzhongg(1991)
Liskien(1990)
Ikeda(1988)
Marcinkowski(1986)
Molla(1986)
Pepelnik(1985)
Rahman(1985)
Atsumi(1984)
Amemiya(1982)
Artemev(1980)
SrinivasaRao(1979)
Fujino(1977)
Qaim(1974)
Lu(1970)
Cuzzocrea(1967)
Bramlitt(1963)
Strohal(1962)
Cross section [mb]
Energy [MeV]


^{97}Mo(n,p)^{97}Nb
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Reimer(2005)
Reimer(2005)
Reimer(2001)
Doczi(1998)
Molla(1997)
Ikeda(1988)
Marcinkowski(1986)
Molla(1986)
Pepelnik(1985)
Rahman(1985)
Artemev(1980)
Qaim(1974)
Tikku(1972)
Strohal(1962)
Paul(1953)
Cross section [mb]
Energy [MeV]


^{97}Mo(n,p)^{97g}Nb
TALYS
EAF-2010
TENDL-2012
Lalremruata(2012)
Osman(1996)
Amemiya(1982)
Chaturverdi(1977)
Fujino(1977)
Lu(1970)
Cuzzocrea(1967)
Cross section [mb]
Energy [MeV]


^{97}Mo(n,p)^{97m}Nb
TALYS
EAF-2010
TENDL-2012
Lalremruata(2012)
Reimer(2005)
Bostan(2003)
Gueltekin(2001)
Reimer(2001)
Kasugai(1998)
Ikeda(1988)
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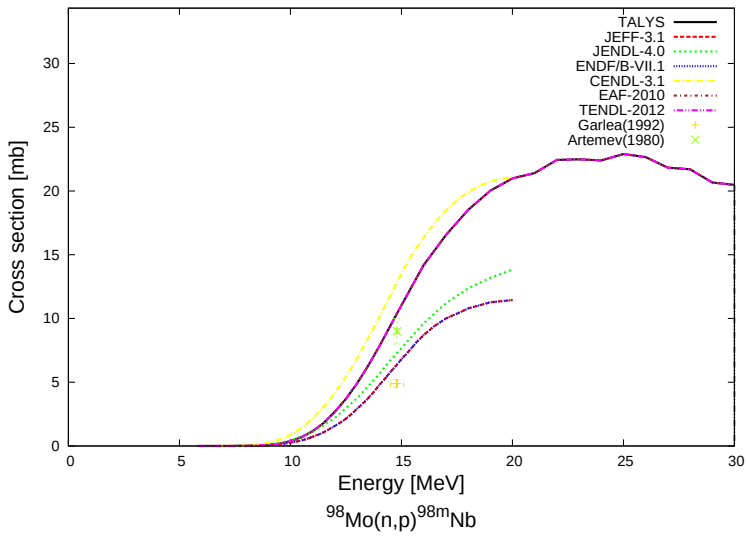
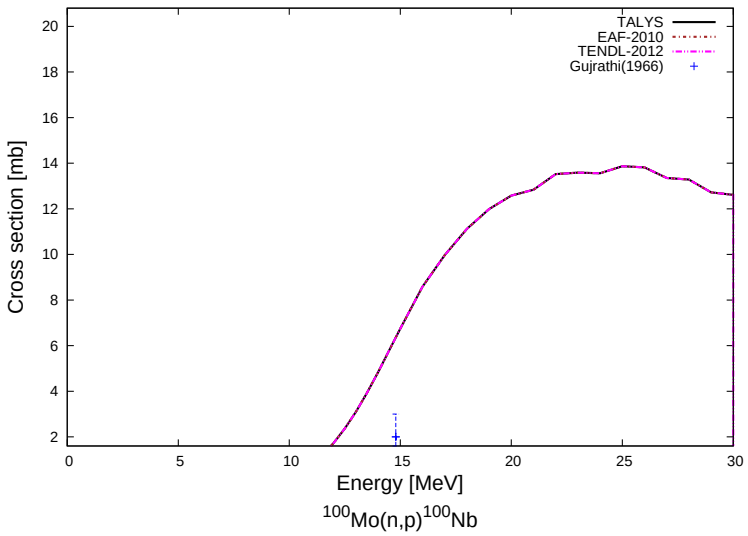
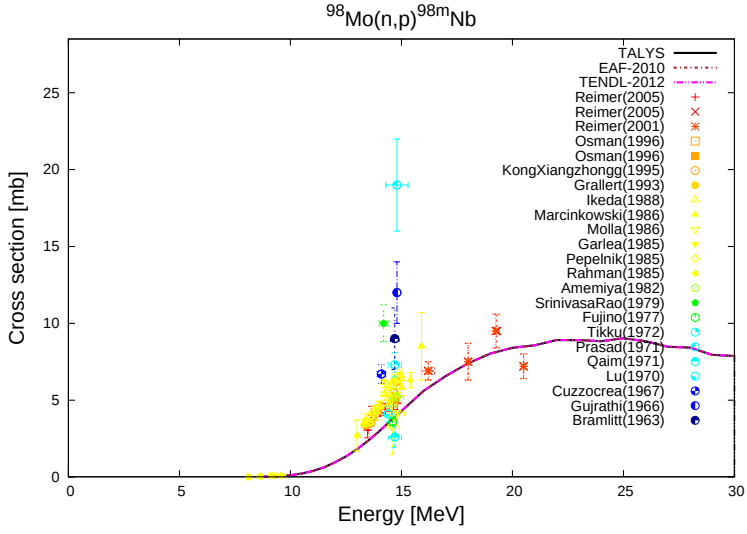
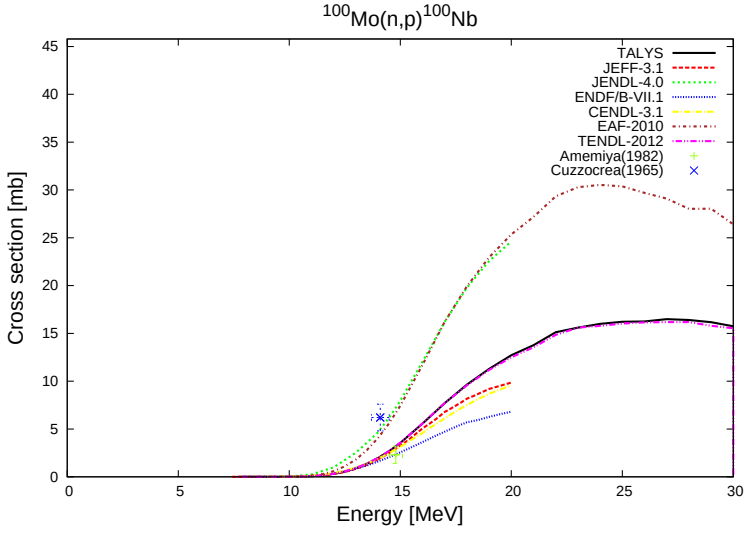
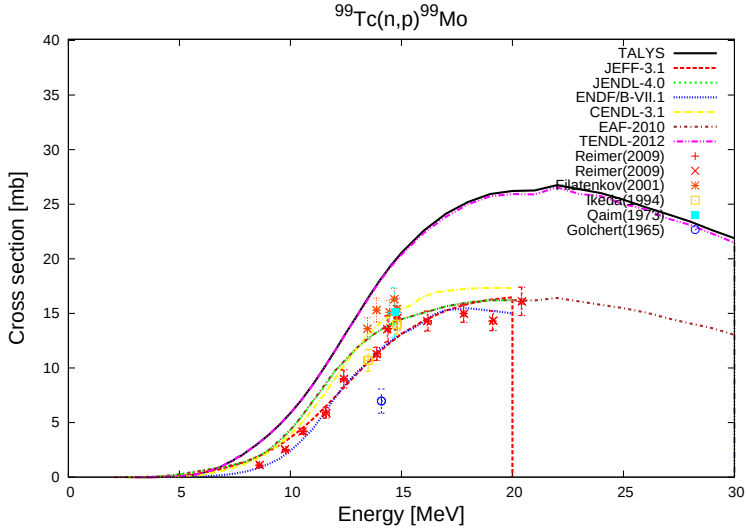
Amemiya(1982)
Artemev(1980)
SrinivasaRao(1979)
Lu(1970)
Cross section [mb]
Energy [MeV]

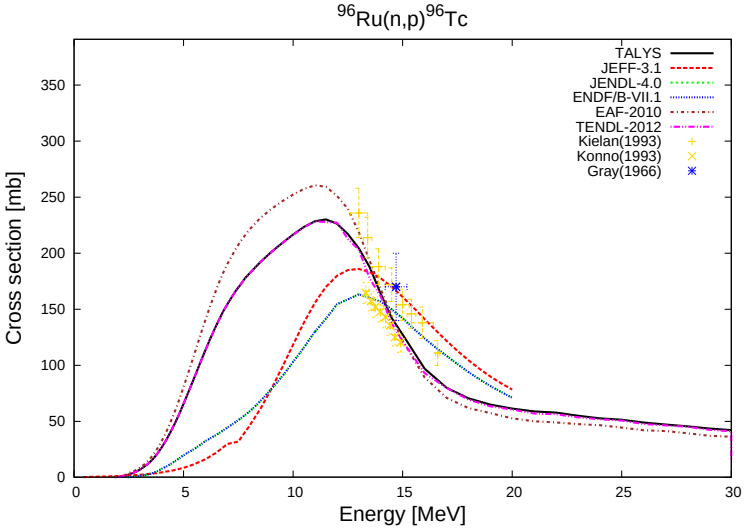

^{98}Mo(n,p)^{98}Nb
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Garlea(1992)
Artemev(1980)
Cross section [mb]
Energy [MeV]

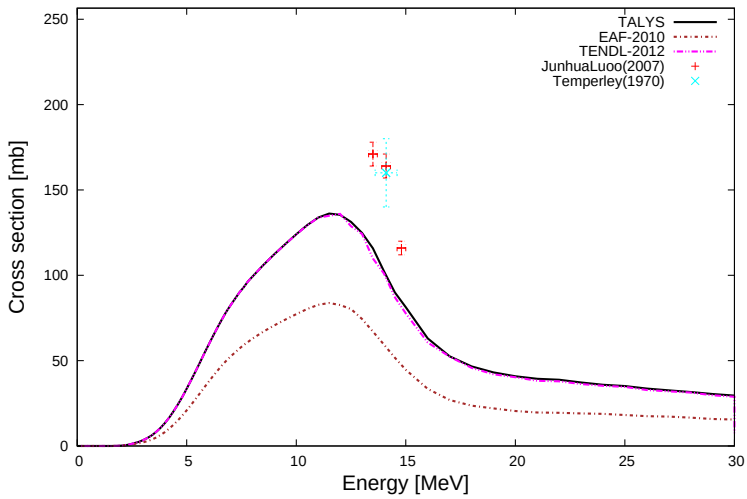

^{98}Mo(n,p)^{98g}Nb
TALYS
EAF-2010
TENDL-2012
Gujrathi(1966)
Cross section [mb]
Energy [MeV]

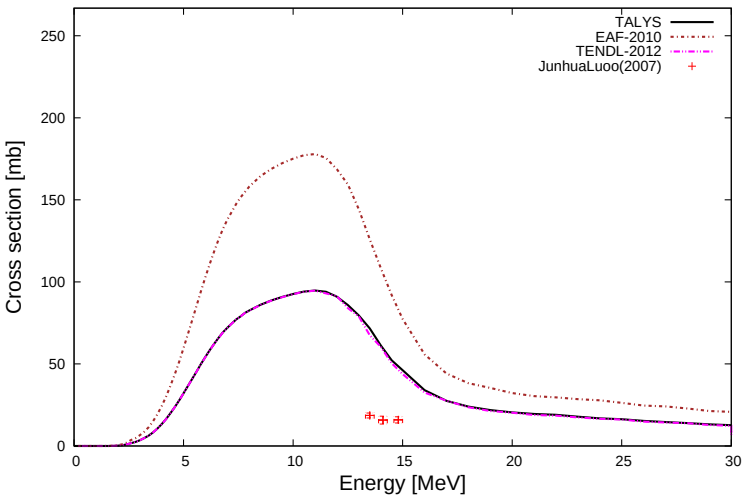

^{98}Mo(n,p)^{98m}Nb
TALYS
EAF-2010
TENDL-2012
Reimer(2005)
Reimer(2005)
Reimer(2001)
Osman(1996)
Osman(1996)
KongXiangzhongg(1995)
Grallert(1993)
Ikeda(1988)
Marcinkowski(1986)
Molla(1986)
Garlea(1985)
Pepelnik(1985)
Rahman(1985)
Amemiya(1982)
SrinivasaRao(1979)
Fujino(1977)
Tikku(1972)
Prasad(1971)
Qaim(1971)
Lu(1970)
Cuzzocrea(1967)
Gujrathi(1966)
Bramlitt(1963)
Cross section [mb]
Energy [MeV]

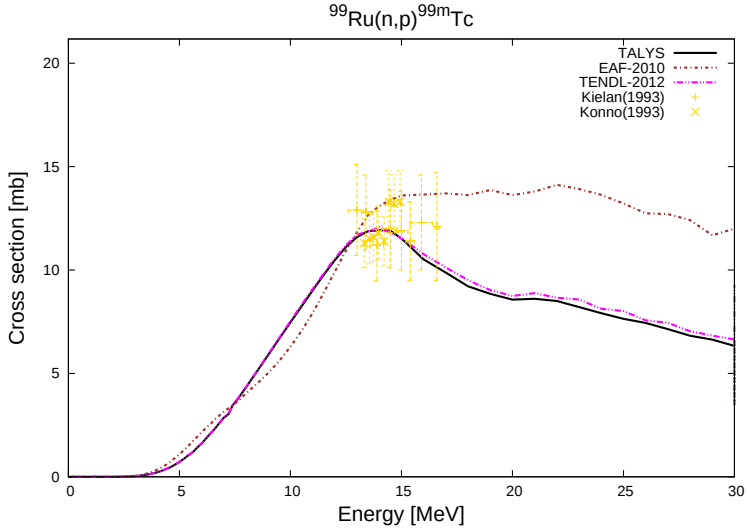

^{100}Mo(n,p)^{100}Nb
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Amemiya(1982)
Cuzzocrea(1965)
Cross section [mb]
Energy [MeV]

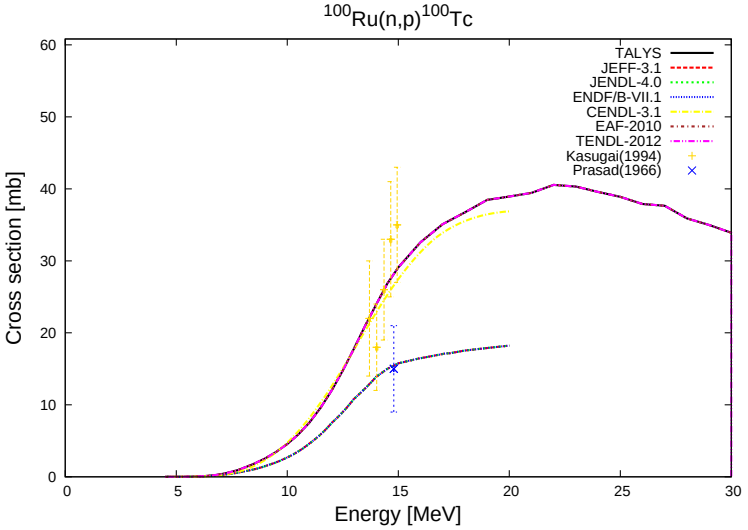

^{99}Tc(n,p)^{99}Mo
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Reimer(2009)
Reimer(2009)
Filatenkov(2001)
Ikeda(1994)
Qaim(1973)
Golchert(1965)
Cross section [mb]
Energy [MeV]

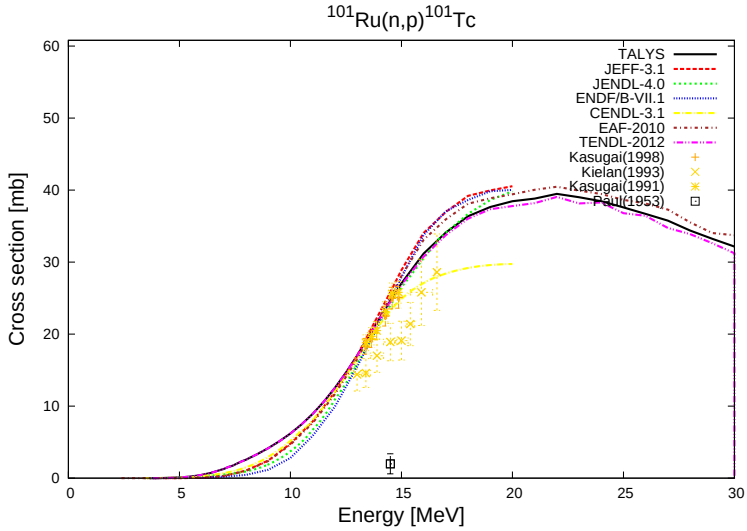

^{96}Ru(n,p)^{96}Tc
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Kielan(1993)
Konno(1993)
Gray(1966)
Cross section [mb]
Energy [MeV]

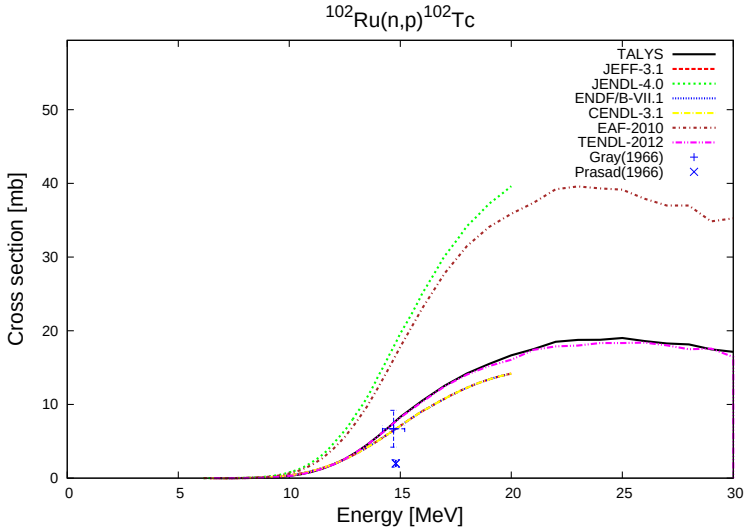

^{96}Ru(n,p)^{96g}Tc
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2007)
Temperley(1970)
Cross section [mb]
Energy [MeV]

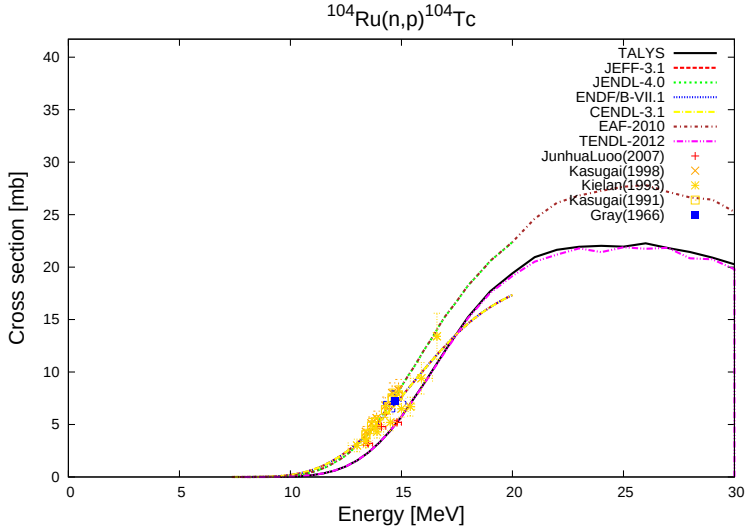

^{96}Ru(n,p)^{96m}Tc
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2007)
Cross section [mb]
Energy [MeV]

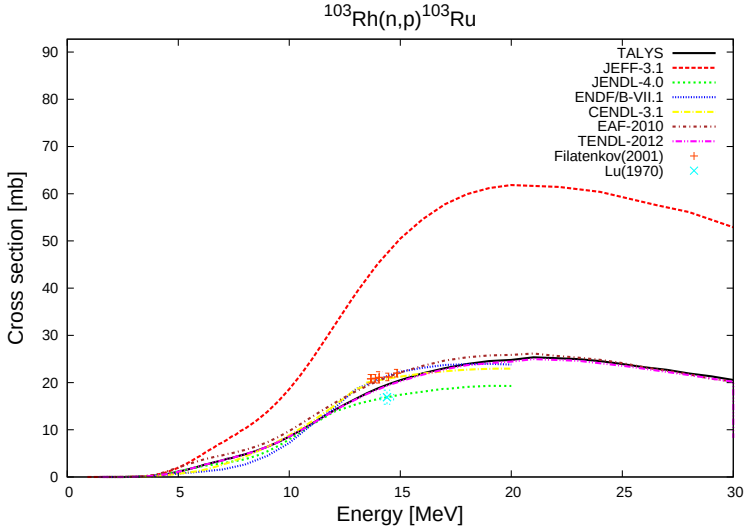

^{99}Ru(n,p)^{99m}Tc
TALYS
EAF-2010
TENDL-2012
Kielan(1993)
Konno(1993)
Cross section [mb]
Energy [MeV]

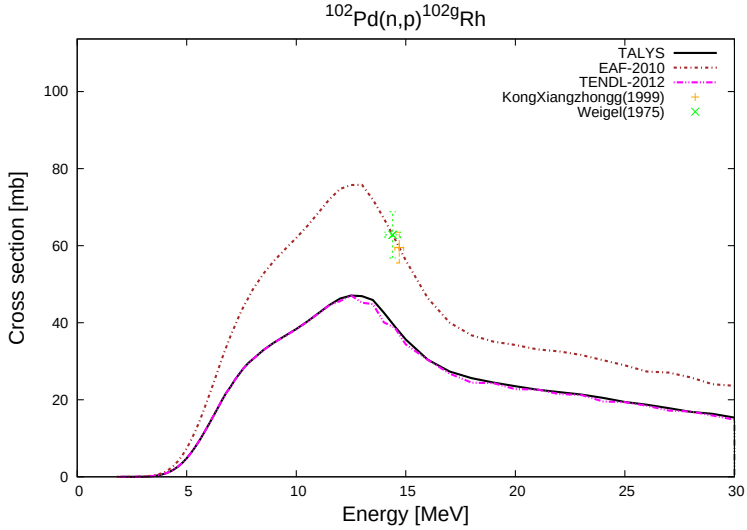

^{100}Ru(n,p)^{100}Tc
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Kasugai(1994)
Prasad(1966)
Cross section [mb]
Energy [MeV]

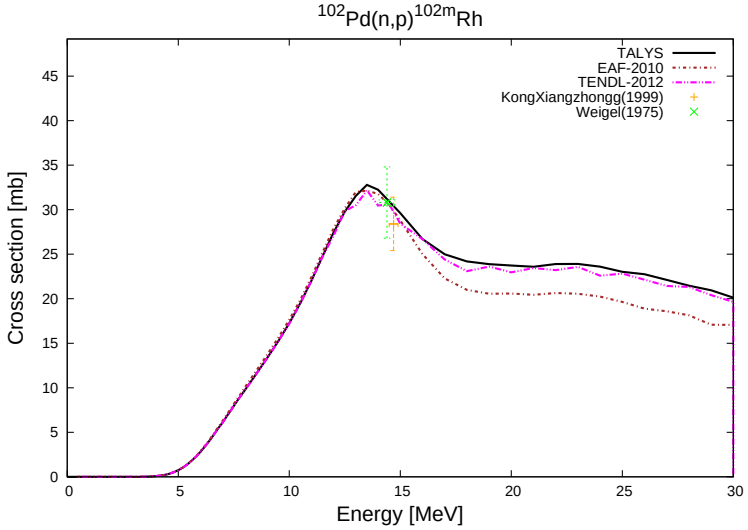

^{101}Ru(n,p)^{101}Tc
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Kasugai(1998)
Kielan(1993)
Kasugai(1991)
Paul(1953)
Cross section [mb]
Energy [MeV]

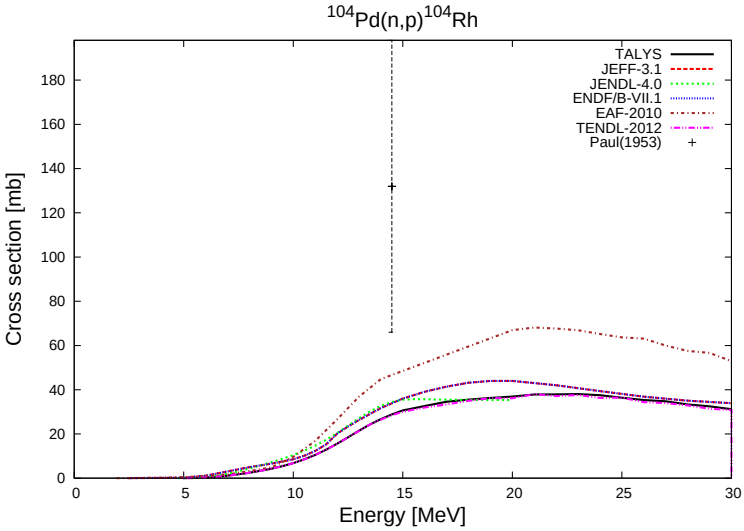

^{102}Ru(n,p)^{102}Tc
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Gray(1966)
Prasad(1966)
Cross section [mb]
Energy [MeV]

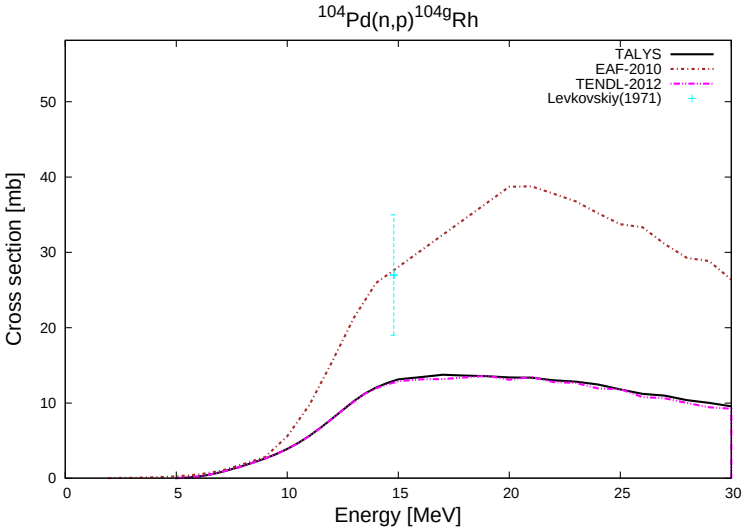

^{104}Ru(n,p)^{104}Tc
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
JunhuaLuoo(2007)
Kasugai(1998)
Kielan(1993)
Kasugai(1991)
Gray(1966)
Cross section [mb]
Energy [MeV]


^{103}Rh(n,p)^{103}Ru
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Filatenkov(2001)
Lu(1970)
Cross section [mb]
Energy [MeV]


^{102}Pd(n,p)^{102g}Rh
TALYS
EAF-2010
TENDL-2012
KongXiangzhongg(1999)
Weigel(1975)
Cross section [mb]
Energy [MeV]


^{102}Pd(n,p)^{102m}Rh
TALYS
EAF-2010
TENDL-2012
KongXiangzhongg(1999)
Weigel(1975)
Cross section [mb]
Energy [MeV]


^{104}Pd(n,p)^{104}Rh
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Paul(1953)
Cross section [mb]
Energy [MeV]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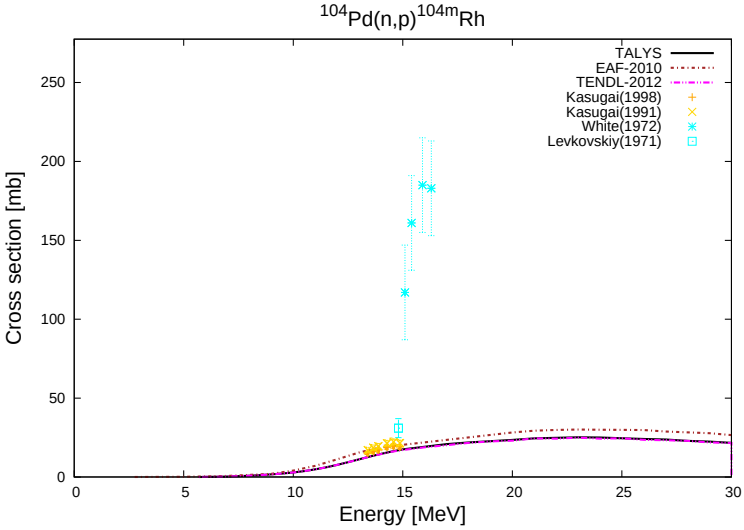
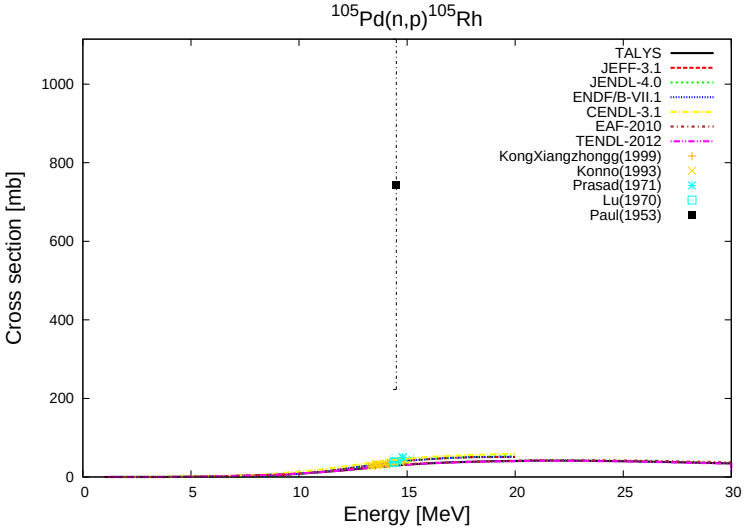
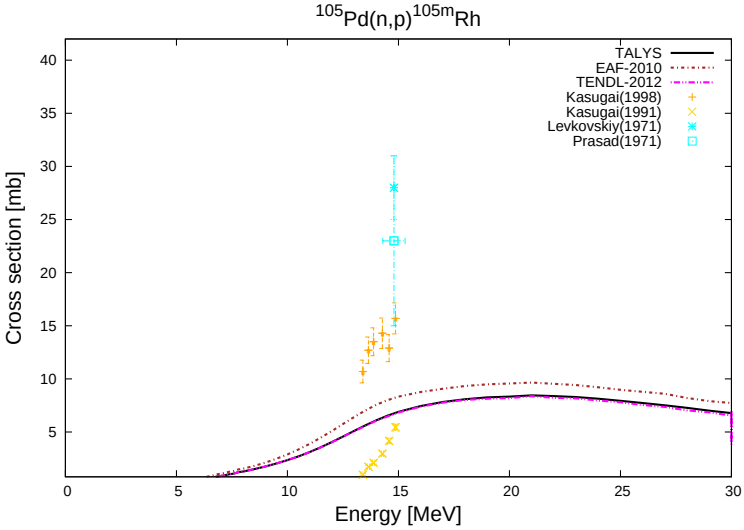
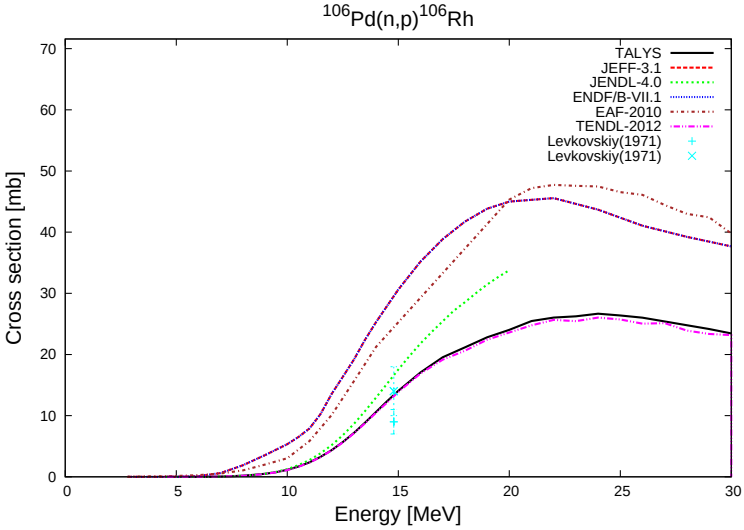
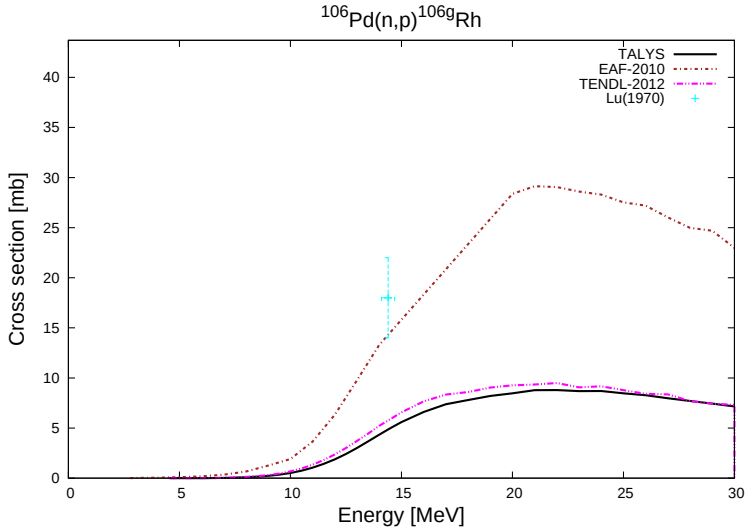
TALYS
EAF-2010
TENDL-2012
Levkovskiy(1971)
Cross section [mb]
Energy [MeV]

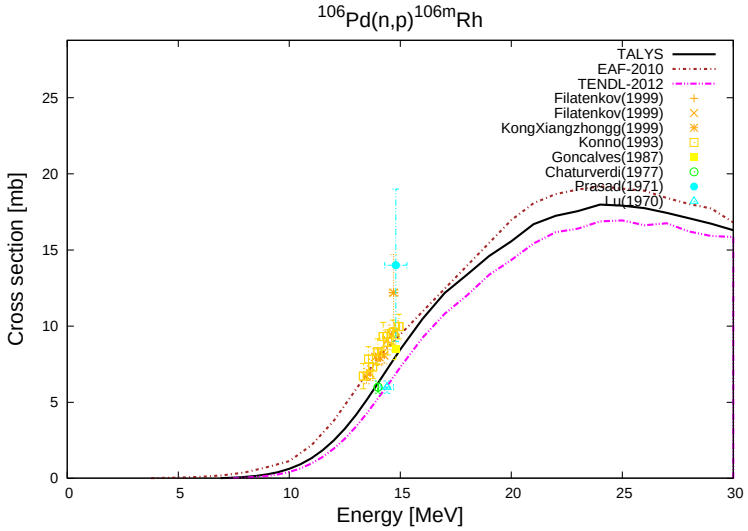

^{104}Pd(n,p)^{104m}Rh
TALYS
EAF-2010
TENDL-2012
Kasugai(1998)
Kasugai(1991)
White(1972)
Levkovskiy(1971)
Cross section [mb]
Energy [MeV]

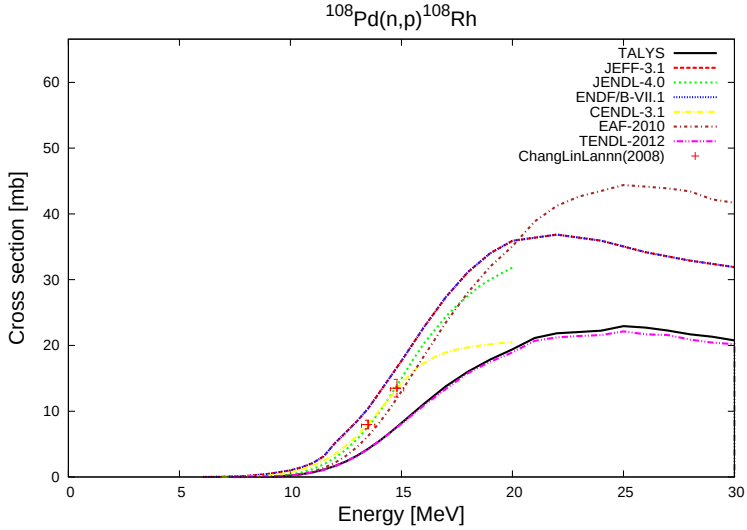

^{105}Pd(n,p)^{105}Rh
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
KongXiangzhongg(1999)
Konno(1993)
Prasad(1971)
Lu(1970)
Paul(1953)
Cross section [mb]
Energy [MeV]

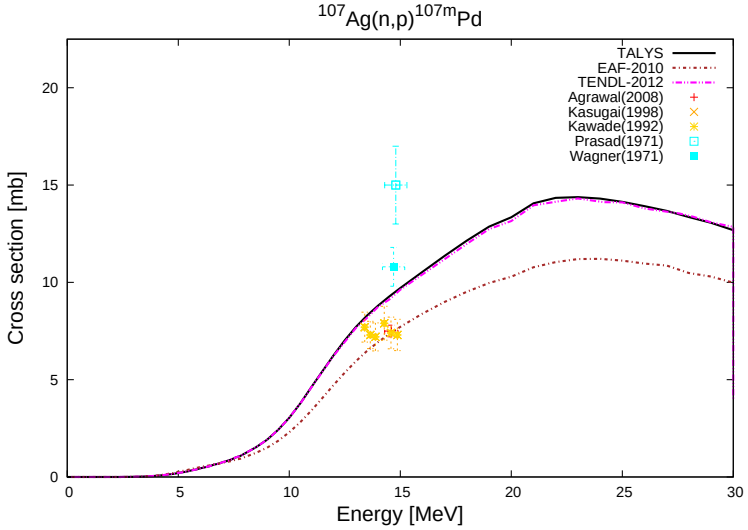

^{105}Pd(n,p)^{105m}Rh
TALYS
EAF-2010
TENDL-2012
Kasugai(1998)
Kasugai(1991)
Levkovskiy(1971)
Prasad(1971)
Cross section [mb]
Energy [MeV]

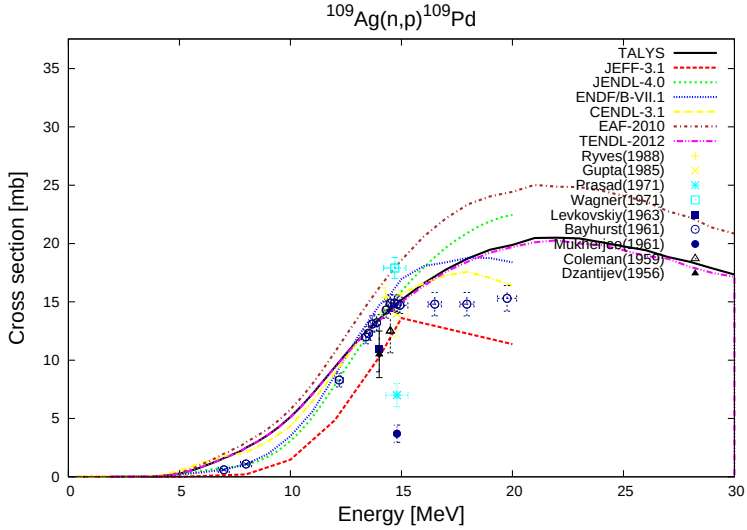

^{106}Pd(n,p)^{106}Rh
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Levkovskiy(1971)
Levkovskiy(1971)
Cross section [mb]
Energy [MeV]

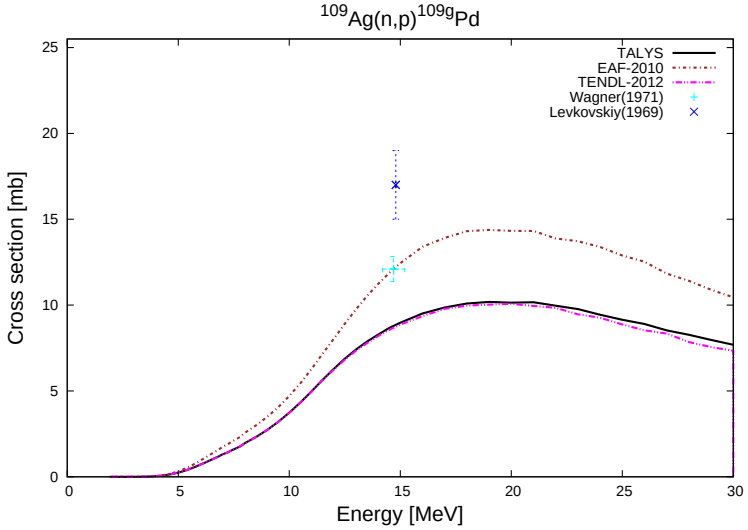

^{106}Pd(n,p)^{106g}Rh
TALYS
EAF-2010
TENDL-2012
Lu(1970)
Cross section [mb]
Energy [MeV]

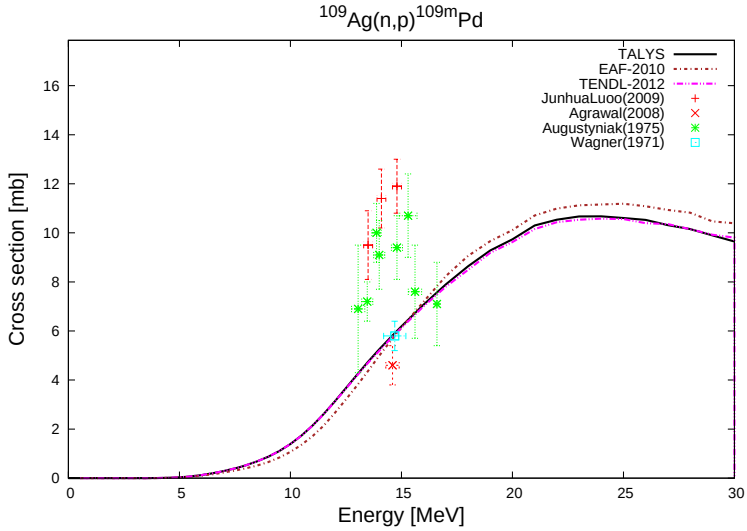

^{106}Pd(n,p)^{106m}Rh
TALYS
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
KongXiangzhongg(1999)
Konno(1993)
Goncalves(1987)
Chaturverdi(1977)
Prasad(1971)
Lu(1970)
Cross section [mb]
Energy [MeV]

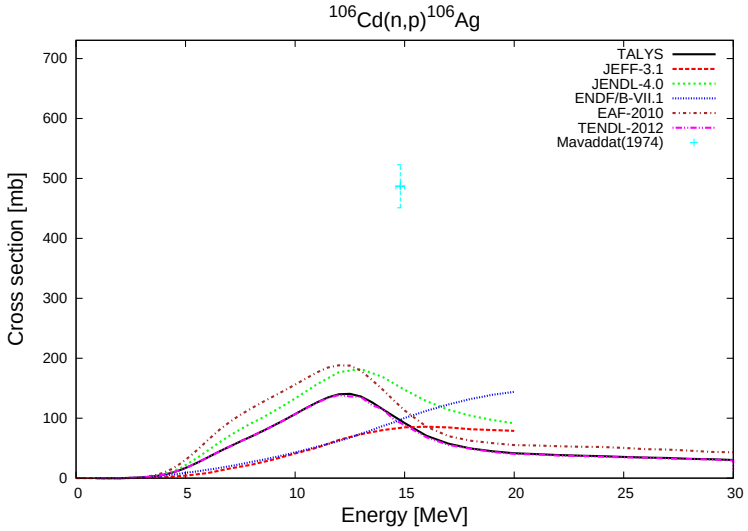

^{108}Pd(n,p)^{108}Rh
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
ChangLinLannn(2008)
Cross section [mb]
Energy [MeV]

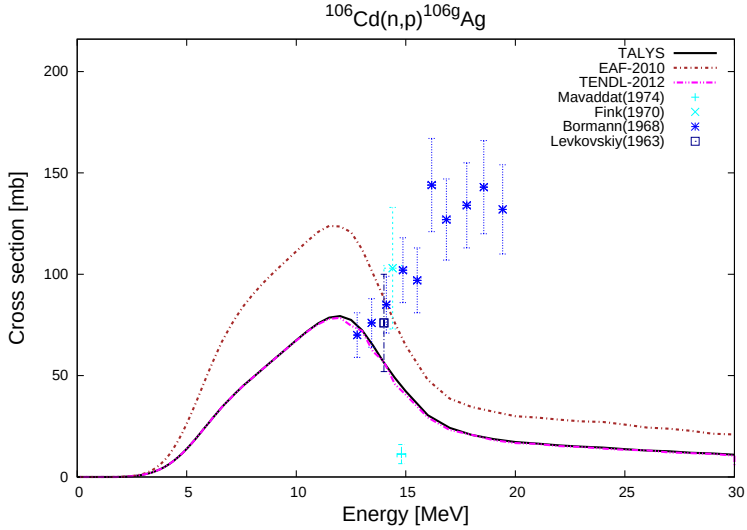

^{107}Ag(n,p)^{107m}Pd
TALYS
EAF-2010
TENDL-2012
Agrawal(2008)
Kasugai(1998)
Kawade(1992)
Prasad(1971)
Wagner(1971)
Cross section [mb]
Energy [MeV]

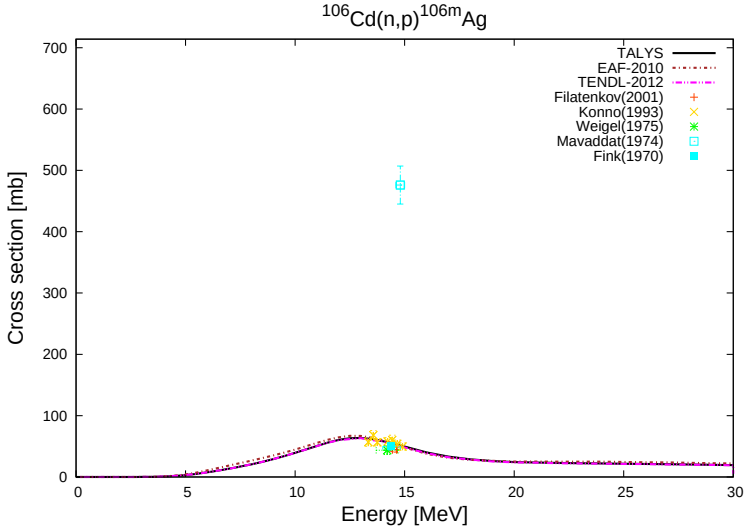

^{109}Ag(n,p)^{109}Pd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Ryves(1988)
Gupta(1985)
Prasad(1971)
Wagner(1971)
Levkovskiy(1963)
Bayhurst(1961)
Mukherjee(1961)
Coleman(1959)
Dzantijev(1956)
Cross section [mb]
Energy [MeV]

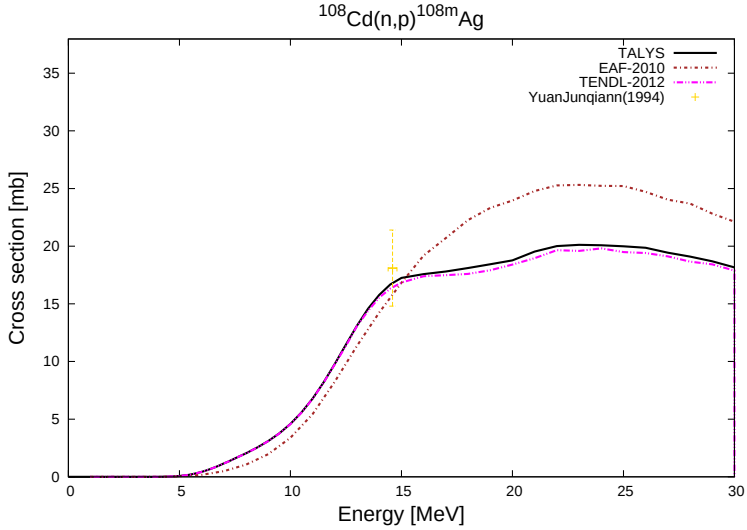

^{109}Ag(n,p)^{109g}Pd
TALYS
EAF-2010
TENDL-2012
Wagner(1971)
Levkovskiy(1969)
Cross section [mb]
Energy [MeV]

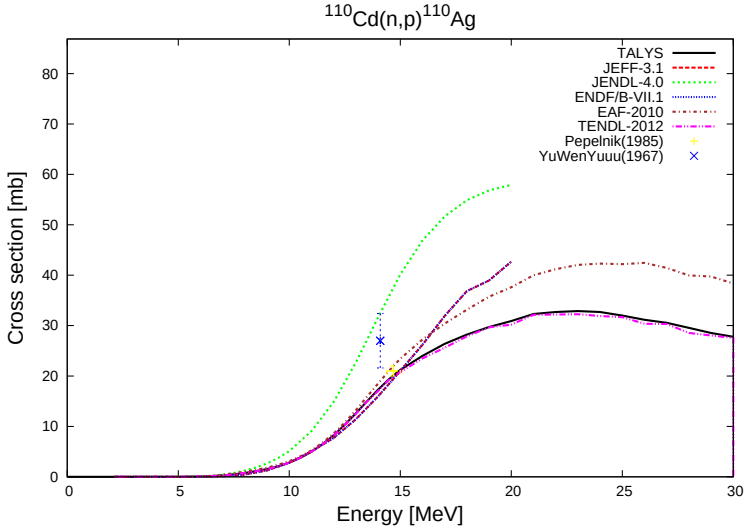

^{109}Ag(n,p)^{109m}Pd
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2009)
Agrawal(2008)
Augustyniak(1975)
Wagner(1971)
Cross section [mb]
Energy [MeV]

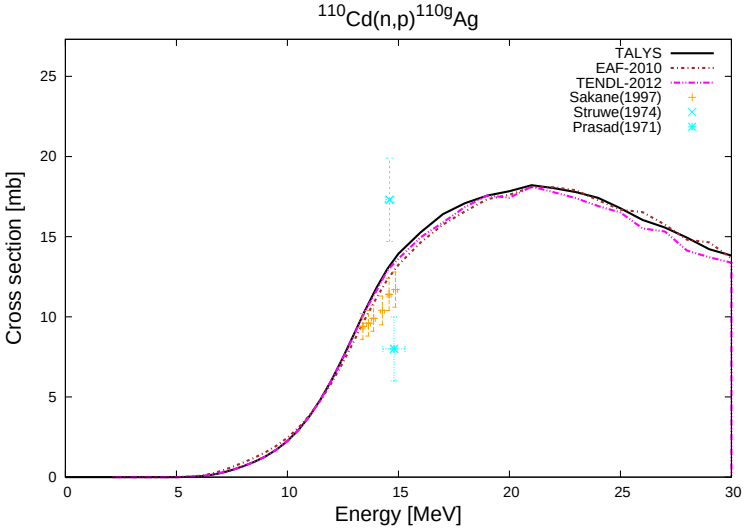

^{106}Cd(n,p)^{106}Ag
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Mavaddat(1974)
Cross section [mb]
Energy [MeV]

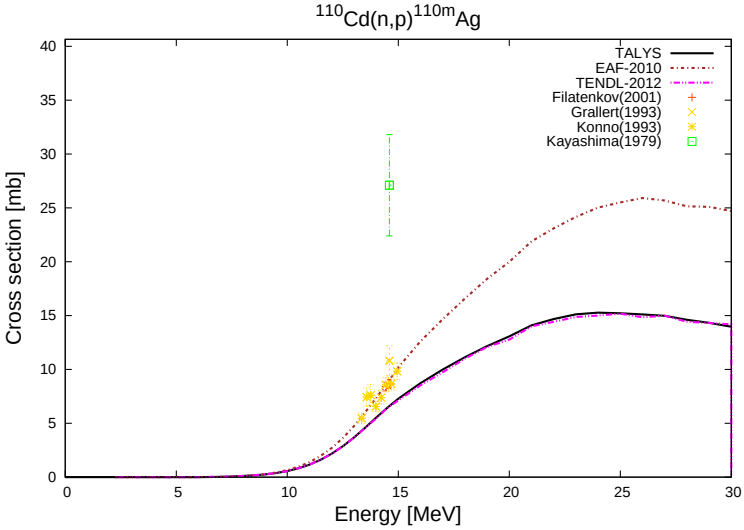

^{106}Cd(n,p)^{106g}Ag
TALYS
EAF-2010
TENDL-2012
Mavaddat(1974)
Fink(1970)
Bormann(1968)
Levkovskiy(1963)
Cross section [mb]
Energy [MeV]

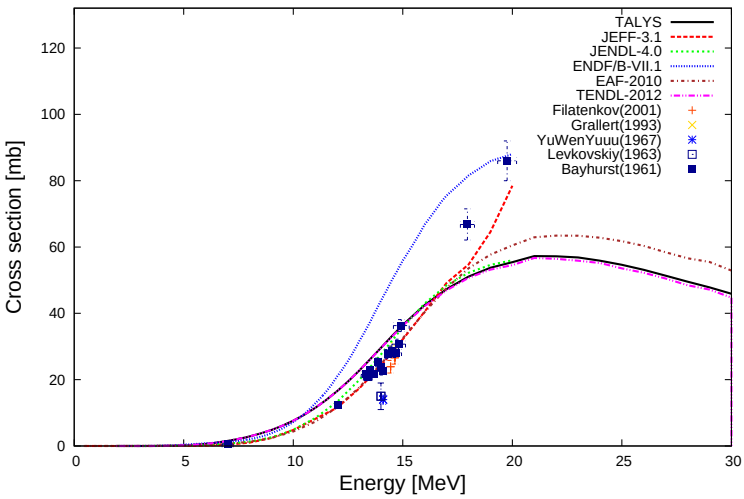

^{106}Cd(n,p)^{106m}Ag
TALYS
EAF-2010
TENDL-2012
Filatenkov(2001)
Konno(1993)
Weigel(1975)
Mavaddat(1974)
Fink(1970)
Cross section [mb]
Energy [MeV]

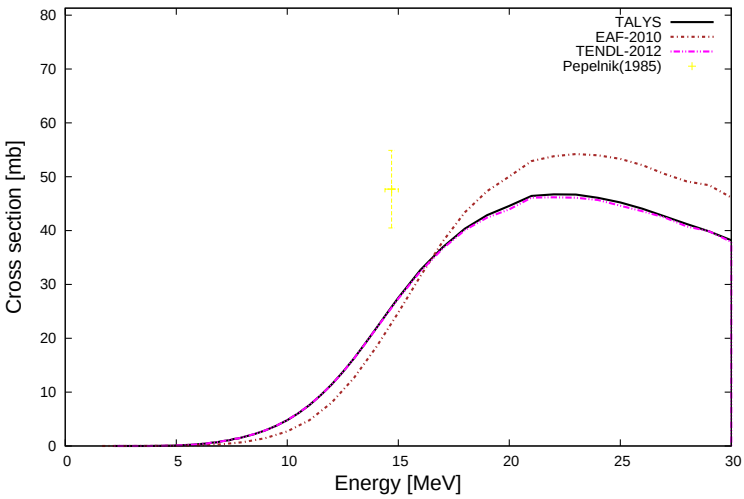

^{108}Cd(n,p)^{108m}Ag
TALYS
EAF-2010
TENDL-2012
YuanJunqiann(1994)
Cross section [mb]
Energy [MeV]

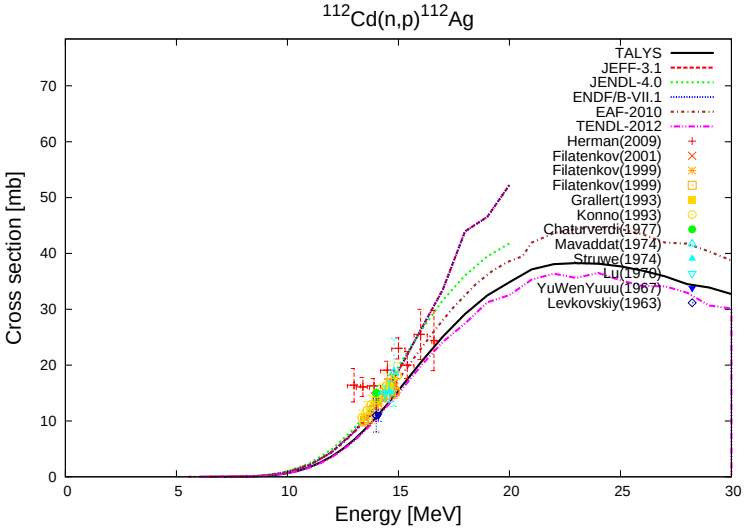

^{110}Cd(n,p)^{110}Ag
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Pepelnik(1985)
YuWenYuuu(1967)
Cross section [mb]
Energy [MeV]

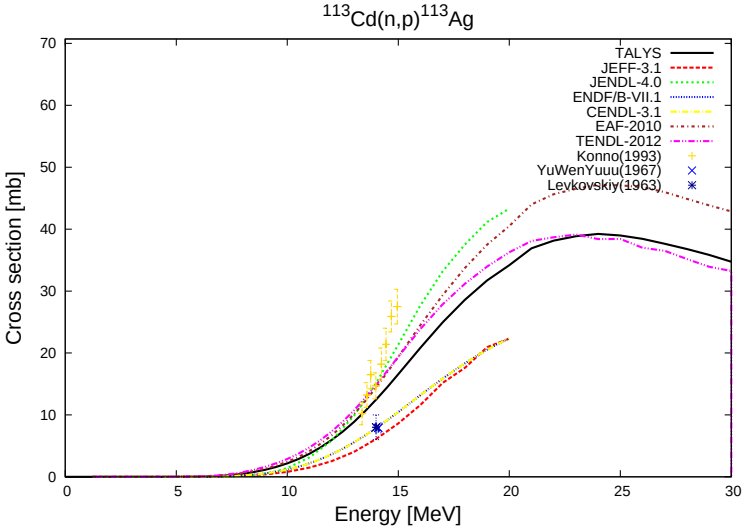

^{110}Cd(n,p)^{110g}Ag
TALYS
EAF-2010
TENDL-2012
Sakane(1997)
Struwe(1974)
Prasad(1971)
Cross section [mb]
Energy [MeV]

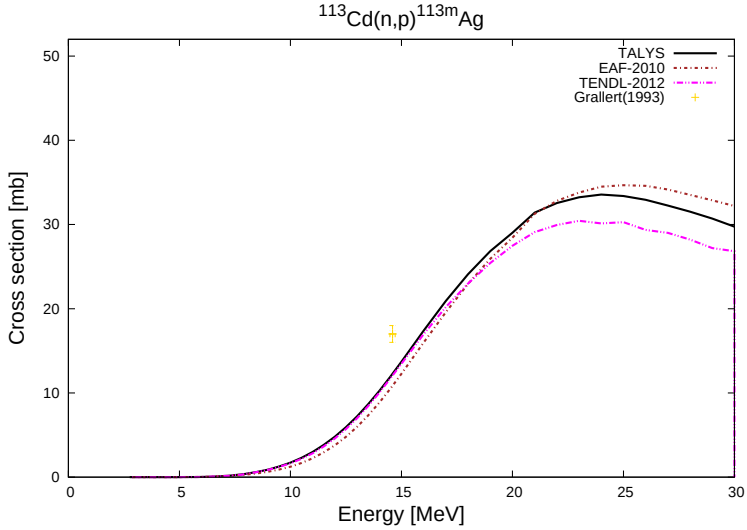

^{110}Cd(n,p)^{110m}Ag
TALYS
EAF-2010
TENDL-2012
Filatenkov(2001)
Grallert(1993)
Konno(1993)
Kayashima(1979)
Cross section [mb]
Energy [MeV]

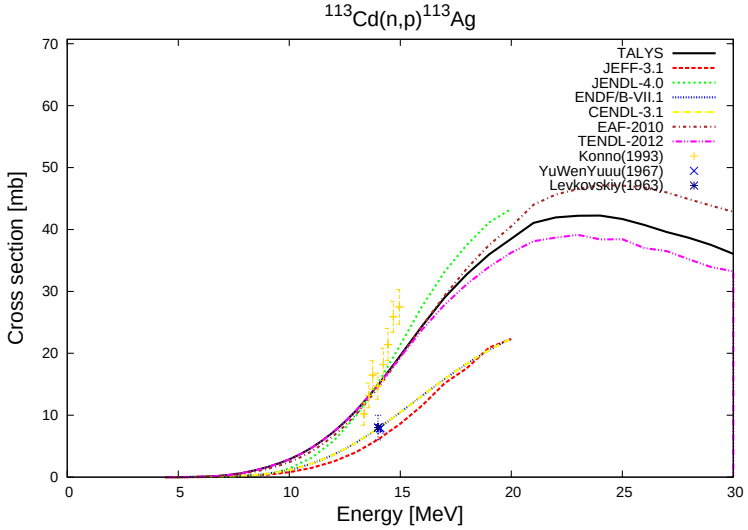

^{111}Cd(n,p)^{111}Ag
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(2001)
Grallert(1993)
YuWenYuuu(1967)
Levkovskiy(1963)
Bayhurst(1961)
Cross section [mb]
Energy [MeV]

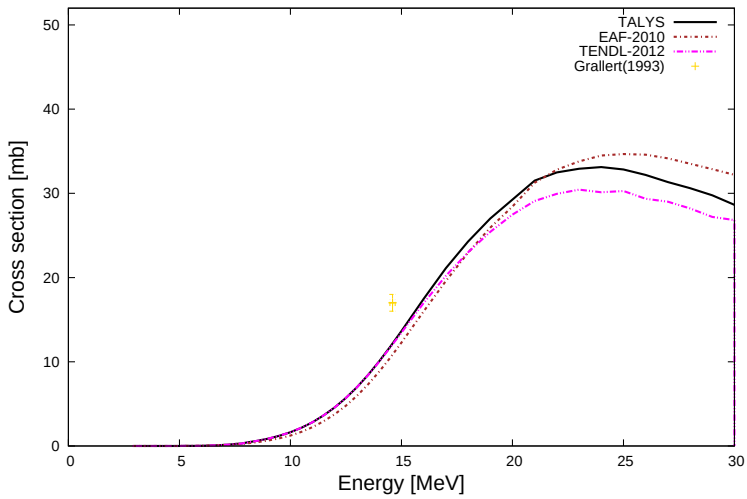

^{111}Cd(n,p)^{111m}Ag
TALYS
EAF-2010
TENDL-2012
Pepelnik(1985)
Cross section [mb]
Energy [MeV]


^{112}Cd(n,p)^{112}Ag
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Herman(2009)
Filatenkov(2001)
Filatenkov(1999)
Filatenkov(1999)
Grallert(1993)
Konno(1993)
Chaturverdi(1977)
Mavaddat(1974)
Struwe(1974)
Lu(1976)
YuWenYuuu(1967)
Levkovskiy(1963)
Cross section [mb]
Energy [MeV]


^{113}Cd(n,p)^{113}Ag
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Konno(1993)
YuWenYuuu(1967)
Levkovskiy(1963)
Cross section [mb]
Energy [MeV]


^{113}Cd(n,p)^{113m}Ag
TALYS
EAF-2010
TENDL-2012
Grallert(1993)
Cross section [mb]
Energy [MeV]


^{113}Cd(n,p)^{113}Ag
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Konno(1993)
YuWenYuuu(1967)
Levkovskiy(1963)
Cross section [mb]
Energy [MeV]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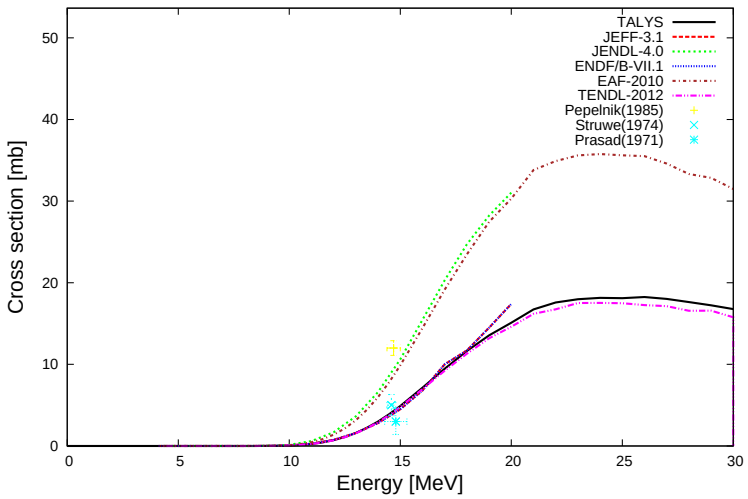
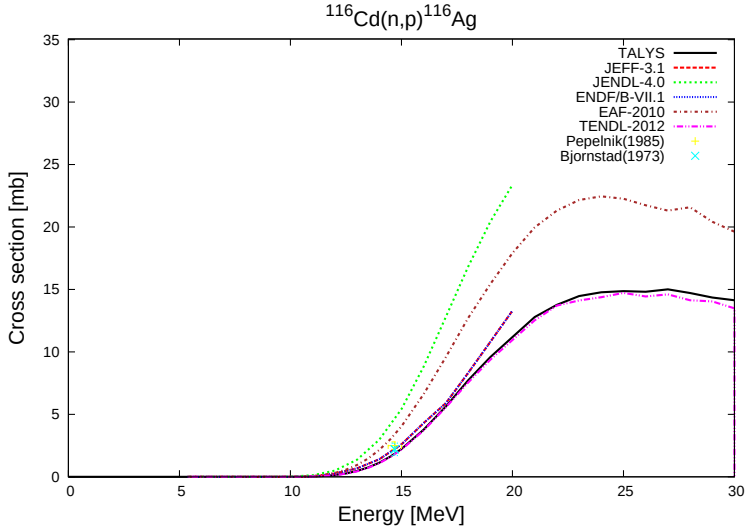
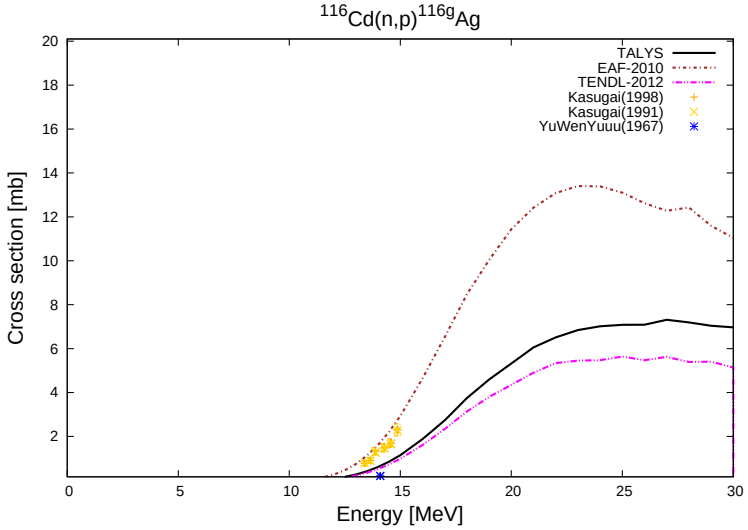
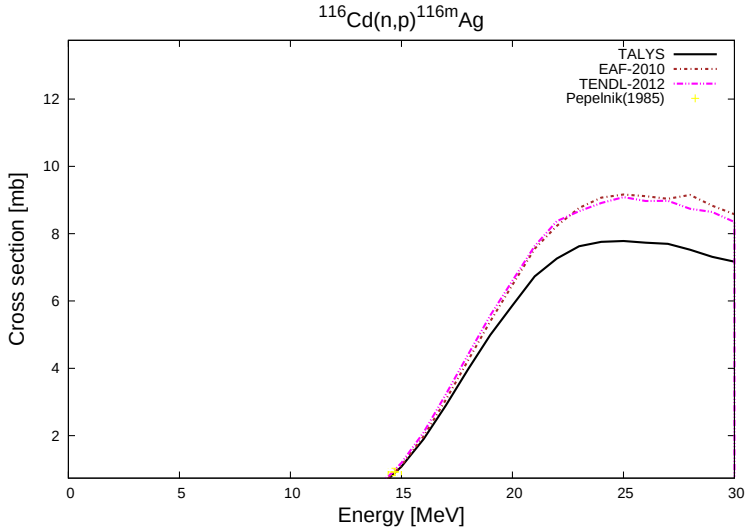
TALYS
EAF-2010
TENDL-2012
Grallert(1993)
Cross section [mb]
Energy [MeV]


^{114}Cd(n,p)^{114}Ag
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Pepelnik(1985)
Struwe(1974)
Prasad(1971)
Cross section [mb]
Energy [MeV]


^{116}Cd(n,p)^{116}Ag
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Pepelnik(1985)
Bjornstad(1973)
Cross section [mb]
Energy [MeV]


^{116}Cd(n,p)^{116g}Ag
TALYS
EAF-2010
TENDL-2012
Kasugai(1998)
Kasugai(1991)
YuWenYuuu(1967)
Cross section [mb]
Energy [MeV]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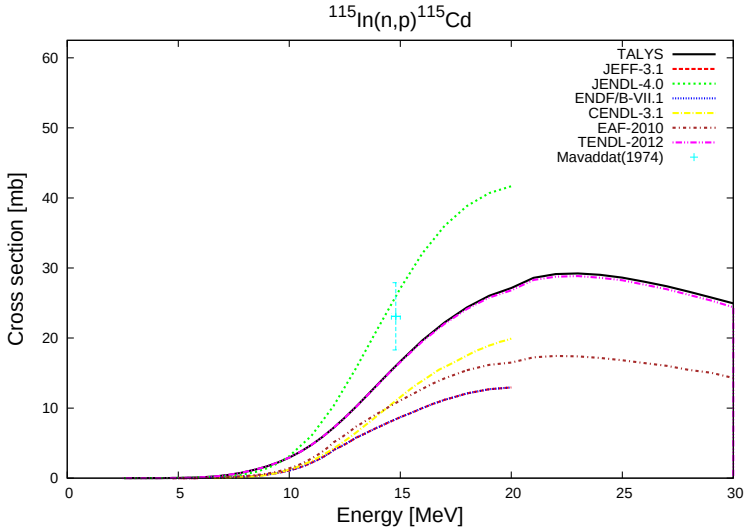
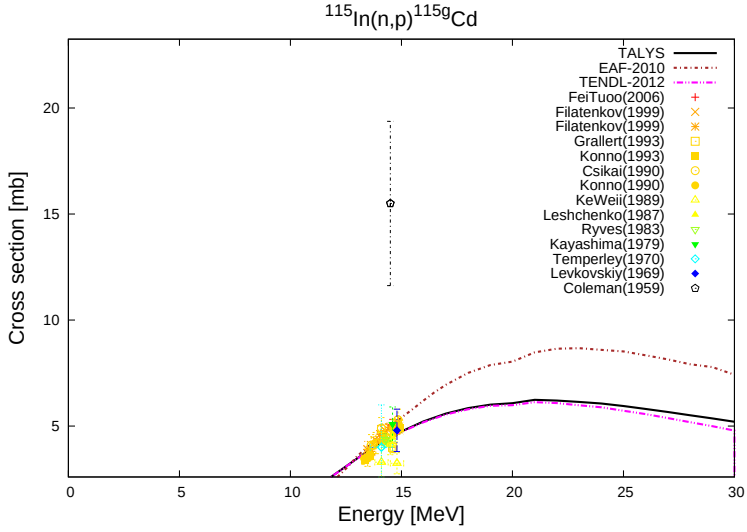
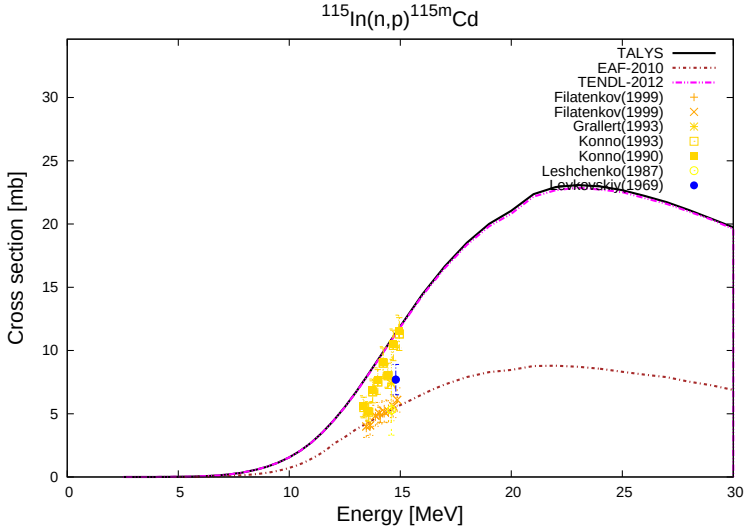
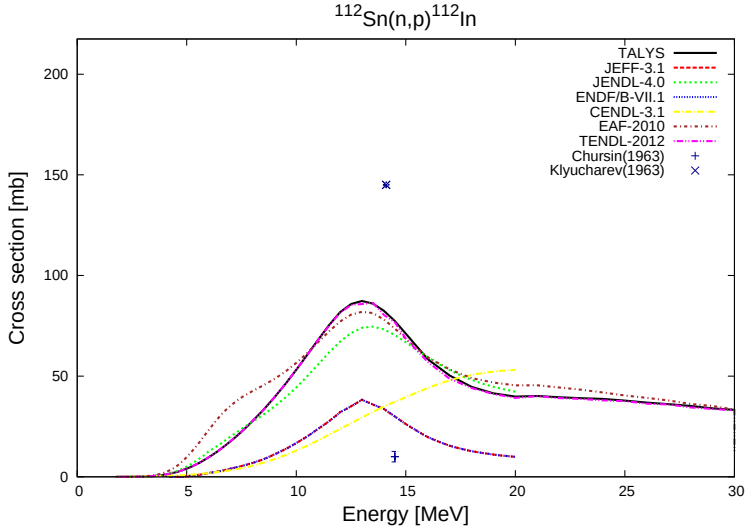
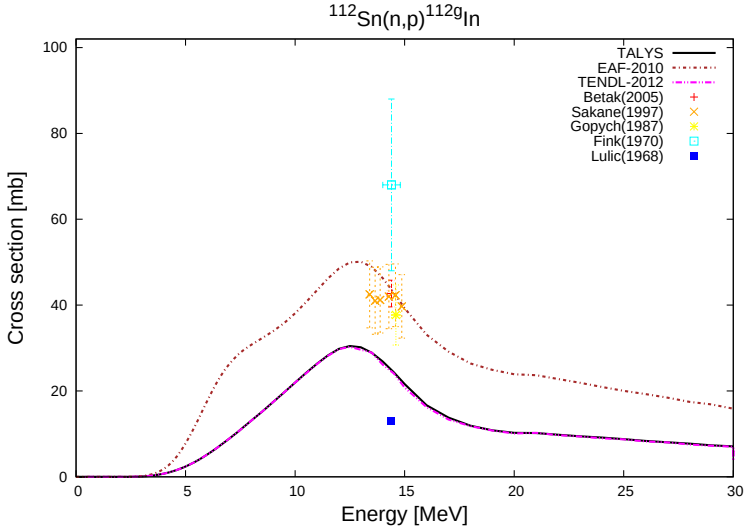
TALYS
EAF-2010
TENDL-2012
Pepelnik(1985)
Cross section [mb]
Energy [MeV]

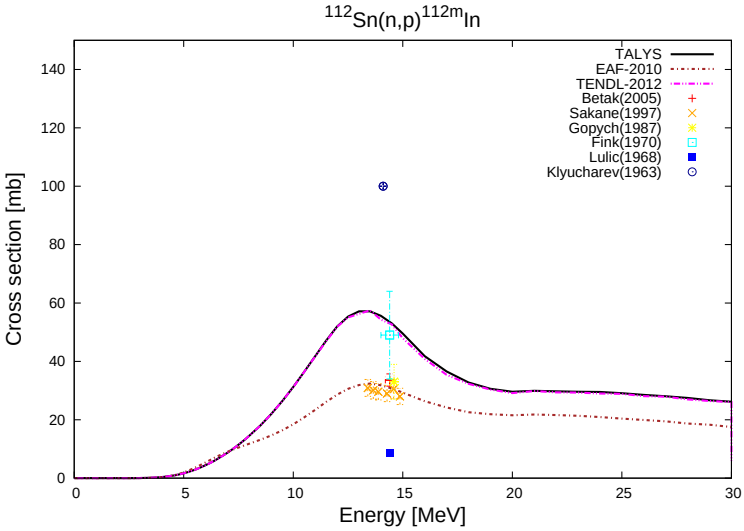

^{115}In(n,p)^{115}Cd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Mavaddat(1974)
Cross section [mb]
Energy [MeV]

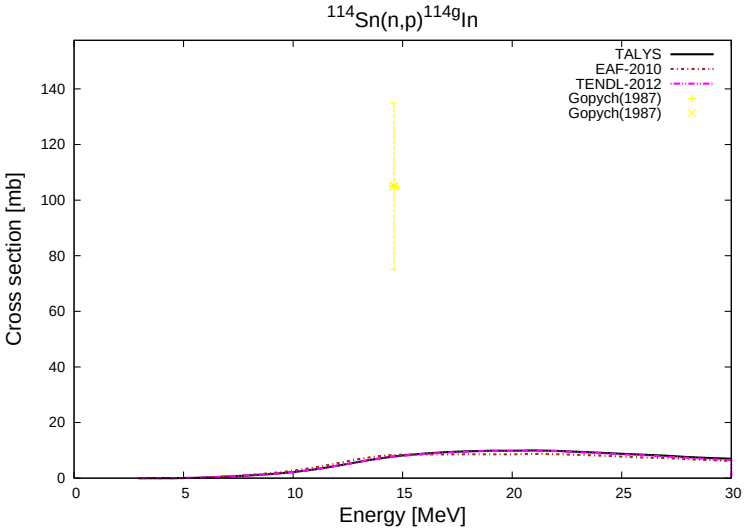

^{115}In(n,p)^{115g}Cd
TALYS
EAF-2010
TENDL-2012
FeiTuoo(2006)
Filatenkov(1999)
Filatenkov(1999)
Grallert(1993)
Konno(1993)
Csikai(1990)
Konno(1990)
KeWeii(1989)
Leshchenko(1987)
Ryves(1983)
Kayashima(1979)
Temperley(1970)
Levkovskiy(1969)
Coleman(1959)
Cross section [mb]
Energy [MeV]

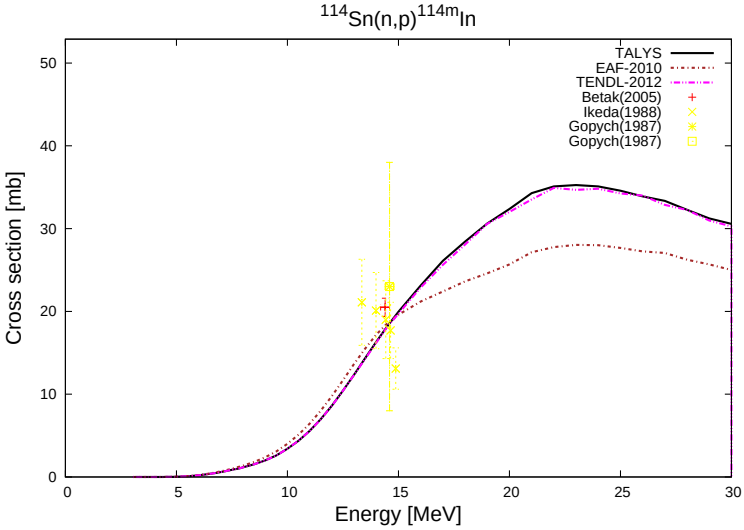

^{115}In(n,p)^{115m}Cd
TALYS
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Grallert(1993)
Konno(1993)
Konno(1990)
Leshchenko(1987)
Levkovskiy(1969)
Cross section [mb]
Energy [MeV]

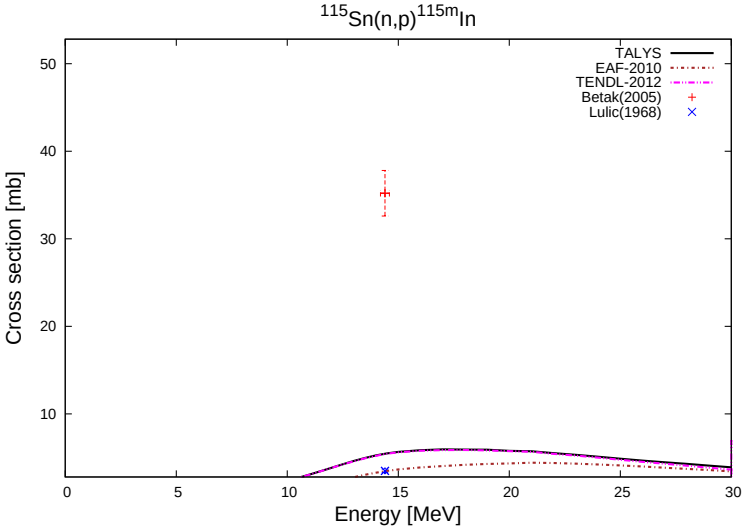

^{112}Sn(n,p)^{112}In
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Chursin(1963)
Klyucharev(1963)
Cross section [mb]
Energy [MeV]

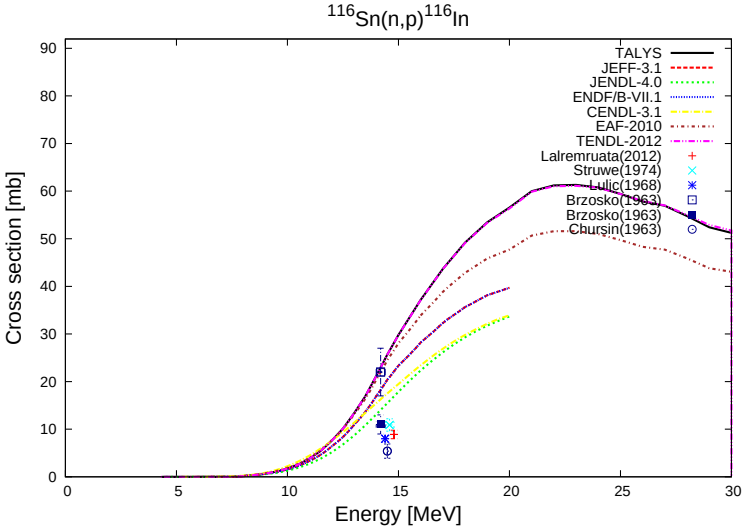

^{112}Sn(n,p)^{112g}In
TALYS
EAF-2010
TENDL-2012
Betak(2005)
Sakane(1997)
Gopych(1987)
Fink(1970)
Lulic(1968)
Cross section [mb]
Energy [MeV]

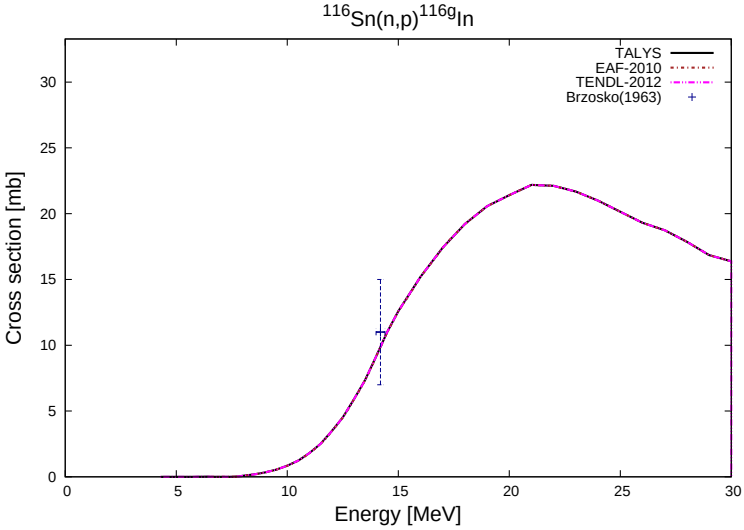

^{112}Sn(n,p)^{112m}In
TALYS
EAF-2010
TENDL-2012
Betak(2005)
Sakane(1997)
Gopych(1987)
Fink(1970)
Lulic(1968)
Klyucharev(1963)
Cross section [mb]
Energy [MeV]

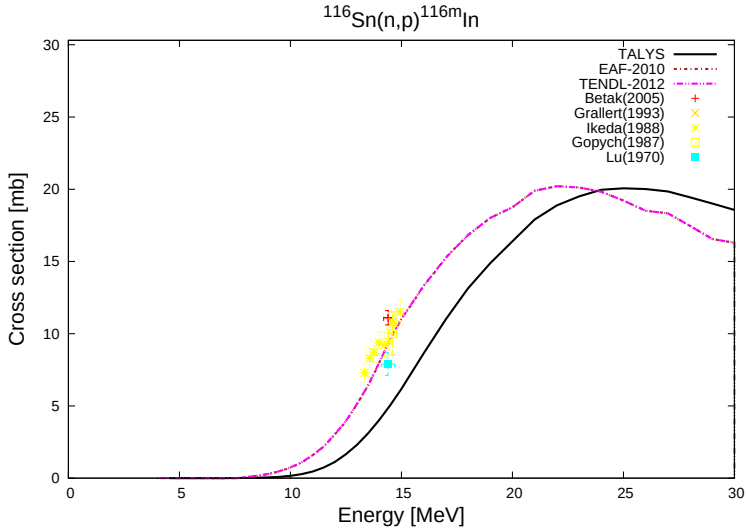

^{114}Sn(n,p)^{114g}In
TALYS
EAF-2010
TENDL-2012
Gopych(1987)
Gopych(1987)
Cross section [mb]
Energy [MeV]

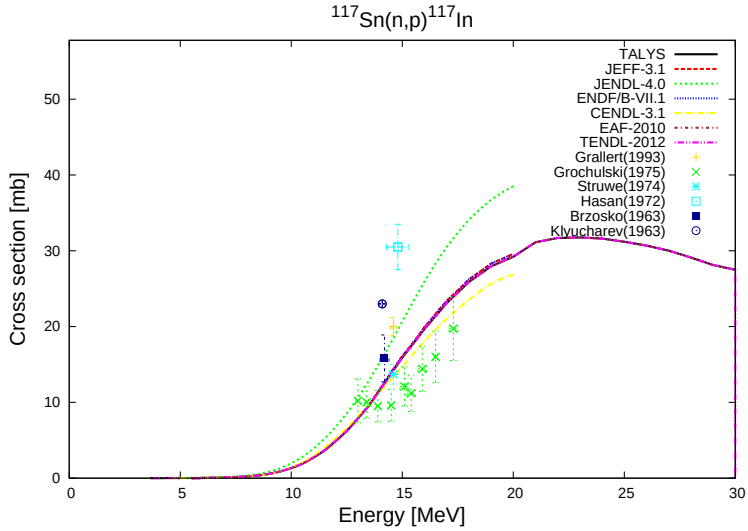

^{114}Sn(n,p)^{114m}In
TALYS
EAF-2010
TENDL-2012
Betak(2005)
Ikeda(1988)
Gopych(1987)
Gopych(1987)
Cross section [mb]
Energy [MeV]

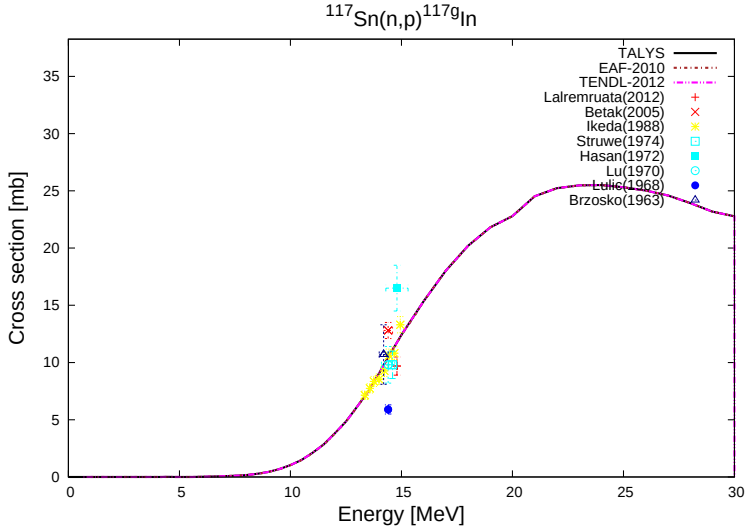

^{115}Sn(n,p)^{115m}In
TALYS
EAF-2010
TENDL-2012
Betak(2005)
Lulic(1968)
Cross section [mb]
Energy [MeV]

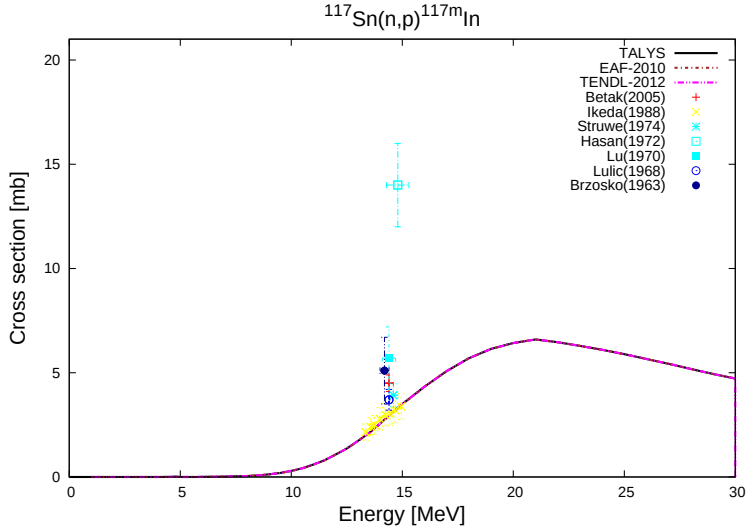

^{116}Sn(n,p)^{116}In
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Lalremruata(2012)
Struwe(1974)
Lulic(1968)
Brzosko(1963)
Brzosko(1963)
Chursin(1963)
Cross section [mb]
Energy [MeV]

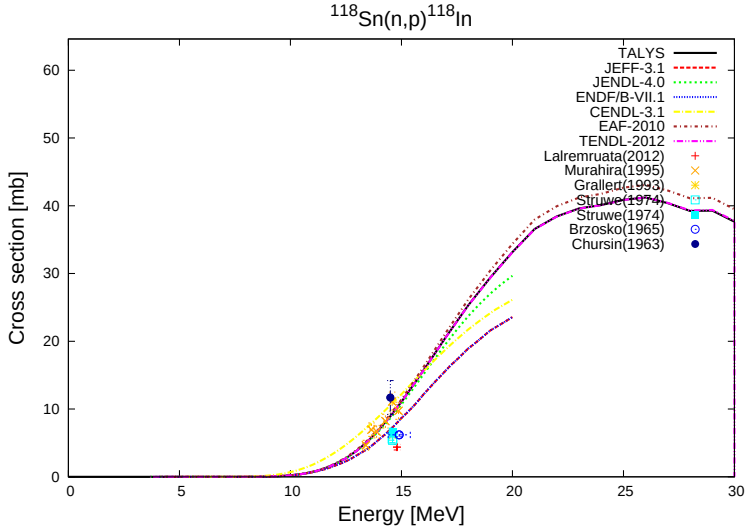

^{116}Sn(n,p)^{116g}In
TALYS
EAF-2010
TENDL-2012
Brzosko(1963)
Cross section [mb]
Energy [MeV]

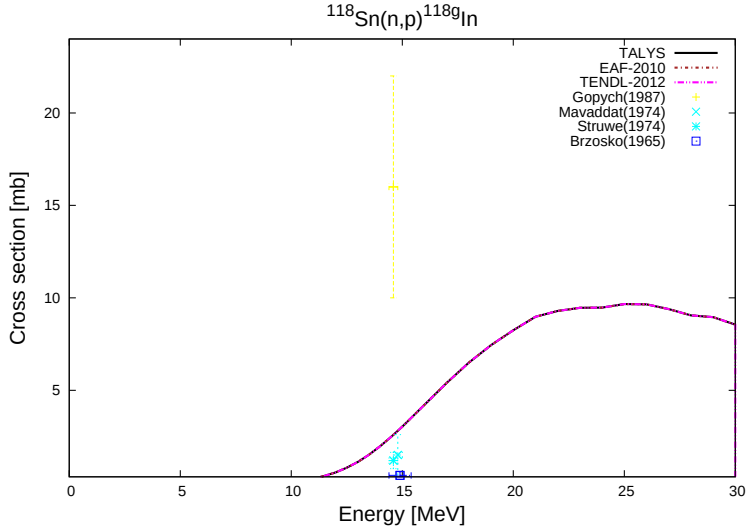

^{116}Sn(n,p)^{116m}In
TALYS
EAF-2010
TENDL-2012
Betak(2005)
Grallert(1993)
Ikeda(1988)
Gopych(1987)
Lu(1970)
Cross section [mb]
Energy [MeV]

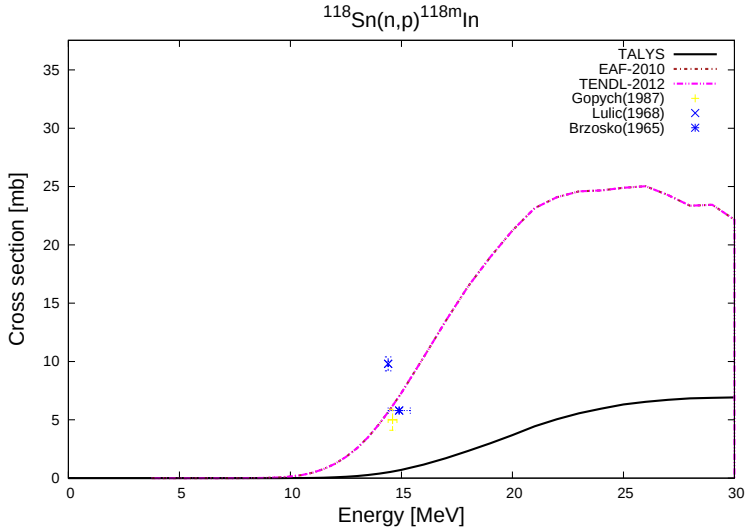

^{117}Sn(n,p)^{117}In
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Grallert(1993)
Grochulski(1975)
Struwe(1974)
Hasan(1972)
Brzosko(1963)
Klyucharev(1963)
Cross section [mb]
Energy [MeV]

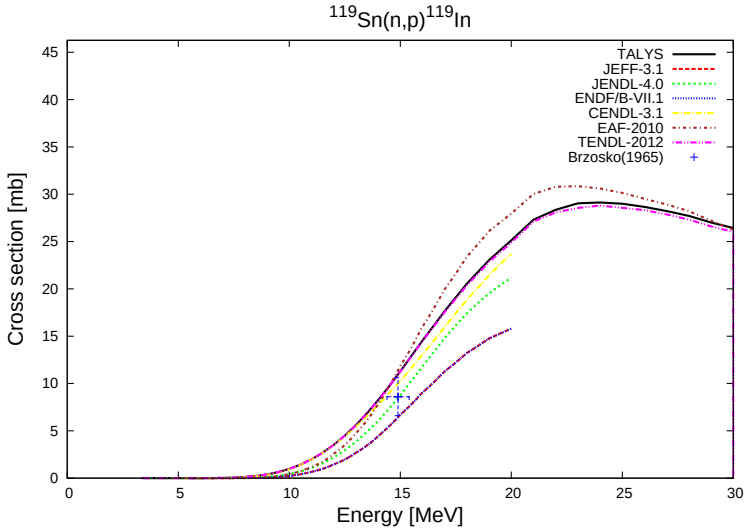

^{117}Sn(n,p)^{117g}In
TALYS
EAF-2010
TENDL-2012
Lalremruata(2012)
Betak(2005)
Ikeda(1988)
Struwe(1974)
Hasan(1972)
Lu(1970)
Lulic(1968)
Brzosko(1963)
Cross section [mb]
Energy [MeV]

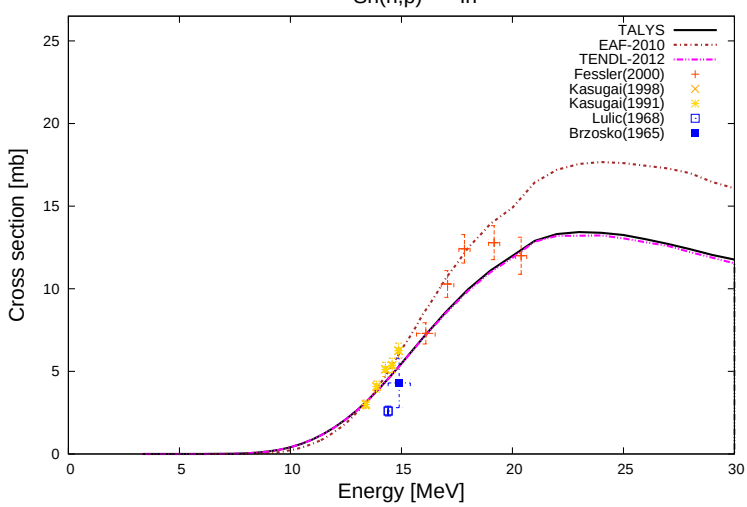

^{117}Sn(n,p)^{117m}In
TALYS
EAF-2010
TENDL-2012
Betak(2005)
Ikeda(1988)
Struwe(1974)
Hasan(1972)
Lu(1970)
Lulic(1968)
Brzosko(1963)
Cross section [mb]
Energy [MeV]

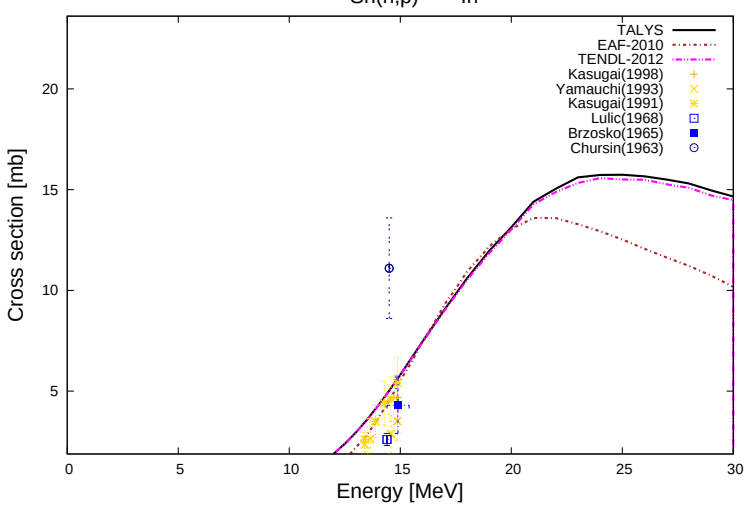

^{118}Sn(n,p)^{118}In
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Lalremruata(2012)
Murahira(1995)
Grallert(1993)
Struwe(1974)
Struwe(1974)
Brzosko(1965)
Chursin(1963)
Cross section [mb]
Energy [MeV]

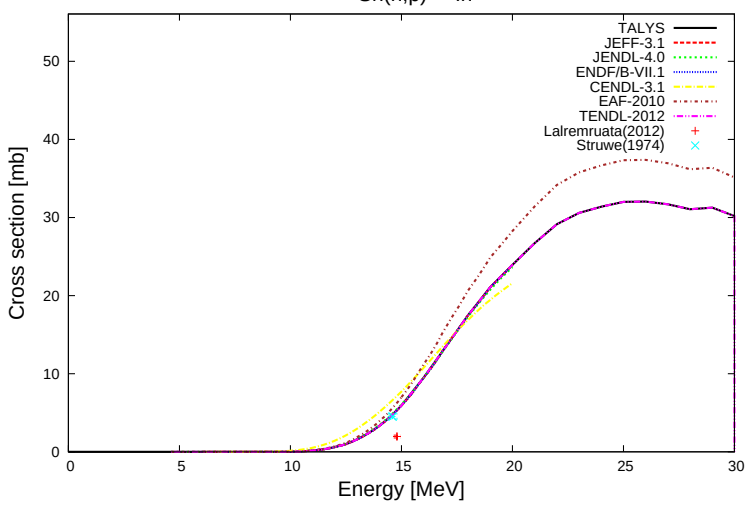

^{118}Sn(n,p)^{118g}In
TALYS
EAF-2010
TENDL-2012
Gopych(1987)
Mavaddat(1974)
Struwe(1974)
Brzosko(1965)
Cross section [mb]
Energy [MeV]

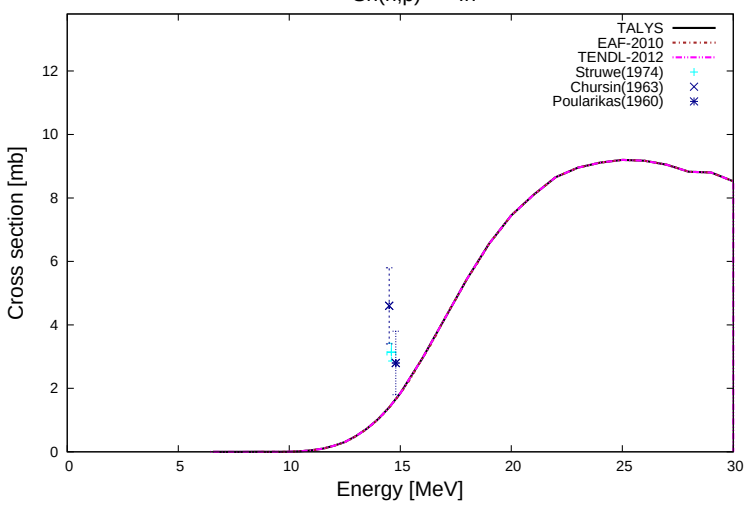

^{118}Sn(n,p)^{118m}In
TALYS
EAF-2010
TENDL-2012
Gopych(1987)
Lulic(1968)
Brzosko(1965)
Cross section [mb]
Energy [MeV]

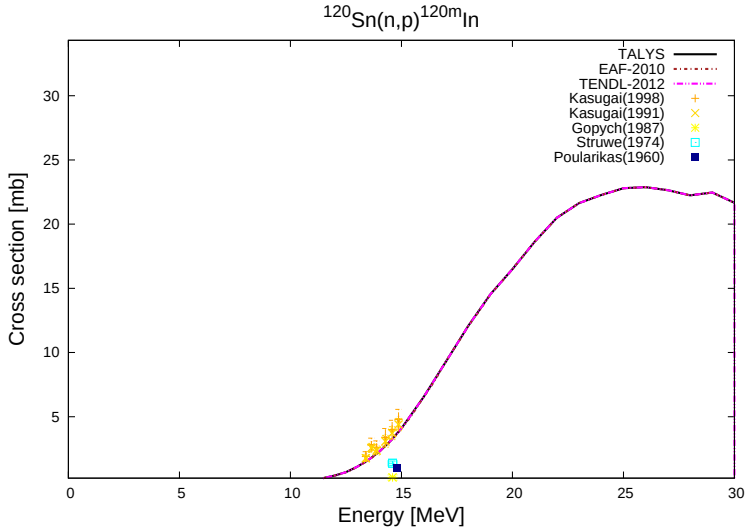

^{119}Sn(n,p)^{119}In
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Brzosko(1965)
Cross section [mb]
Energy [MeV]

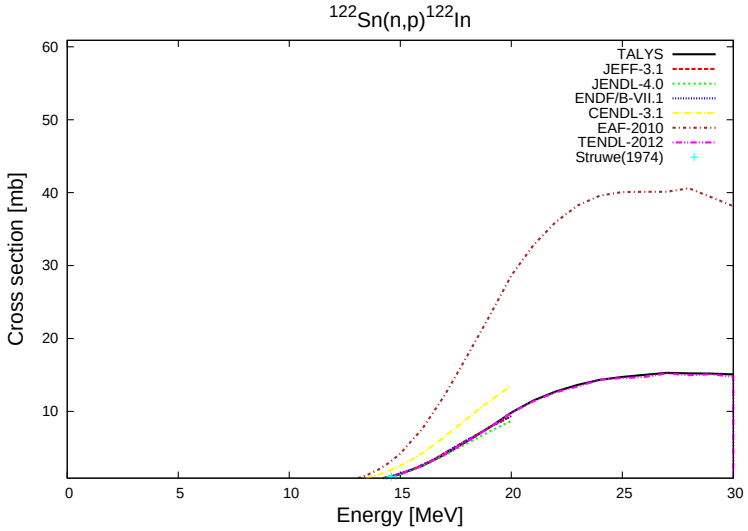

^{119}Sn(n,p)^{119g}In
TALYS
EAF-2010
TENDL-2012
Fessler(2000)
Kasugai(1998)
Kasugai(1991)
Lulic(1968)
Brzosko(1965)
Cross section [mb]
Energy [MeV]

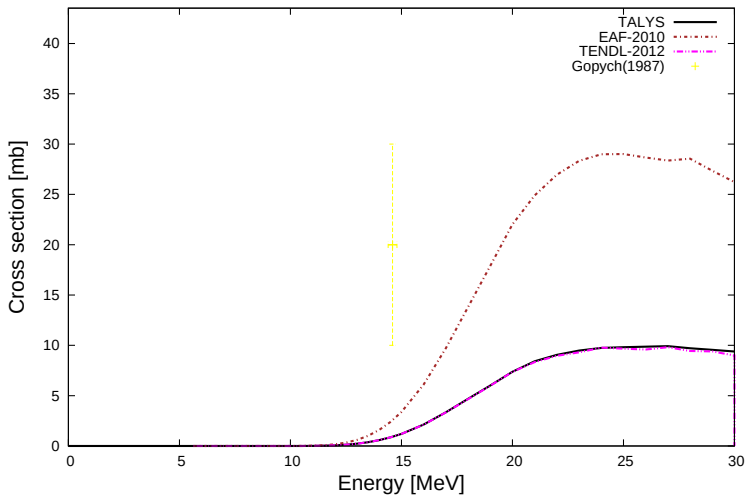

^{119}Sn(n,p)^{119m}In
TALYS
EAF-2010
TENDL-2012
Kasugai(1998)
Yamauchi(1993)
Kasugai(1991)
Lulic(1968)
Brzosko(1965)
Chursin(1963)
Cross section [mb]
Energy [MeV]

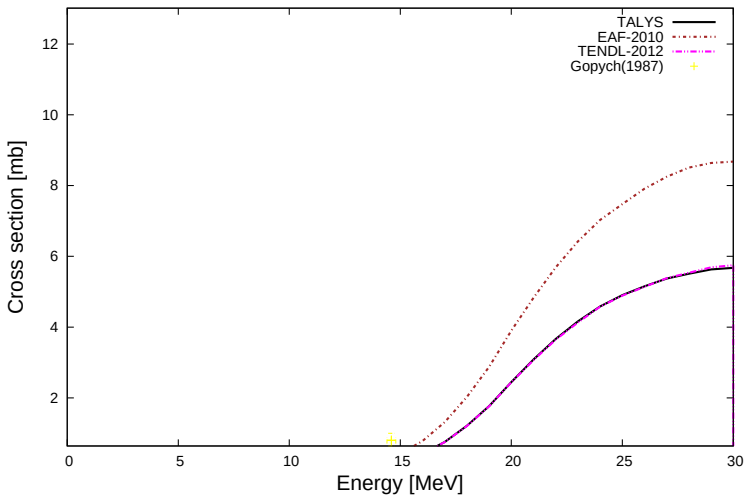

^{120}Sn(n,p)^{120}In
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Lalremruata(2012)
Struwe(1974)
Cross section [mb]
Energy [MeV]

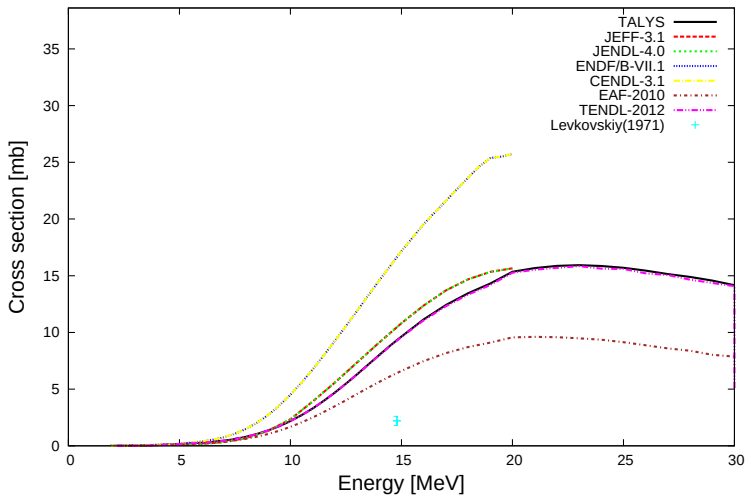

^{120}Sn(n,p)^{120g}In
TALYS
EAF-2010
TENDL-2012
Struwe(1974)
Chursin(1963)
Poularikas(1960)
Cross section [mb]
Energy [MeV]

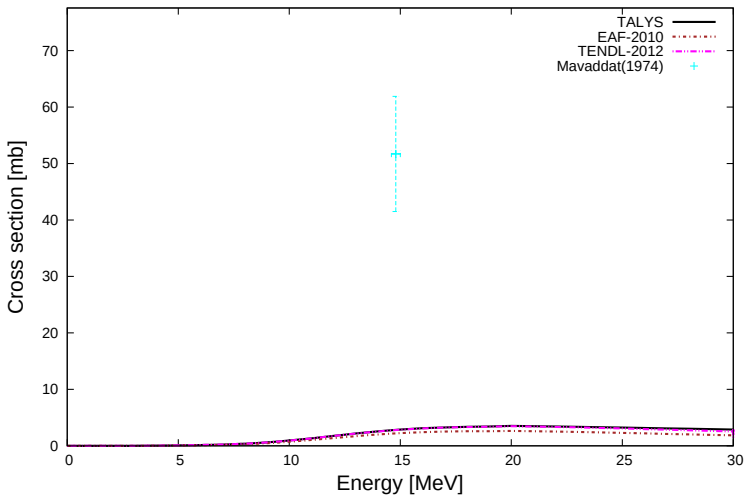

^{120}Sn(n,p)^{120m}In
TALYS
EAF-2010
TENDL-2012
Kasugai(1998)
Kasugai(1991)
Gopych(1987)
Struwe(1974)
Poularikas(1960)
Cross section [mb]
Energy [MeV]

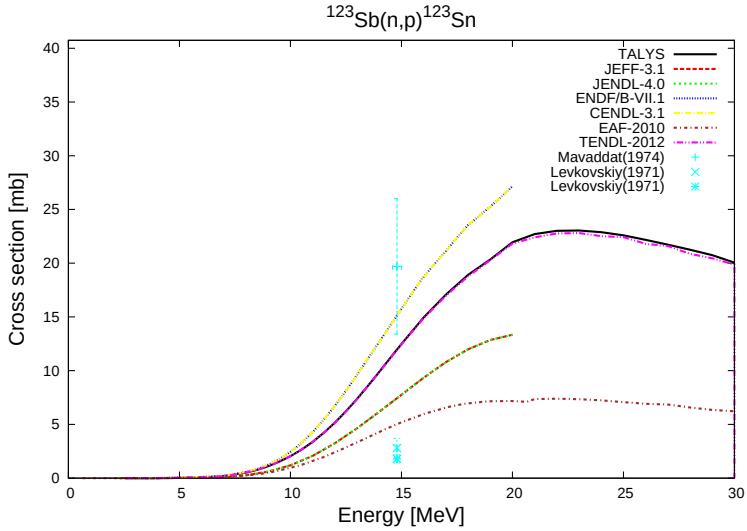

^{122}Sn(n,p)^{122}In
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Struwe(1974)
Cross section [mb]
Energy [MeV]

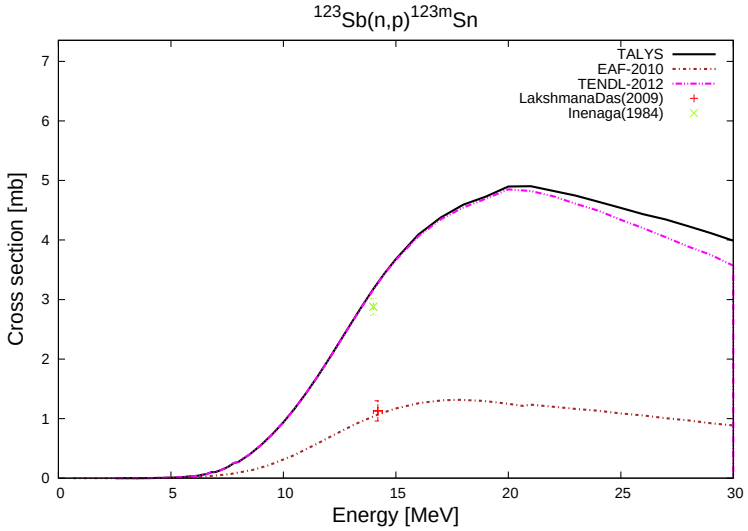

^{122}Sn(n,p)^{122g}In
TALYS
EAF-2010
TENDL-2012
Gopych(1987)
Cross section [mb]
Energy [MeV]

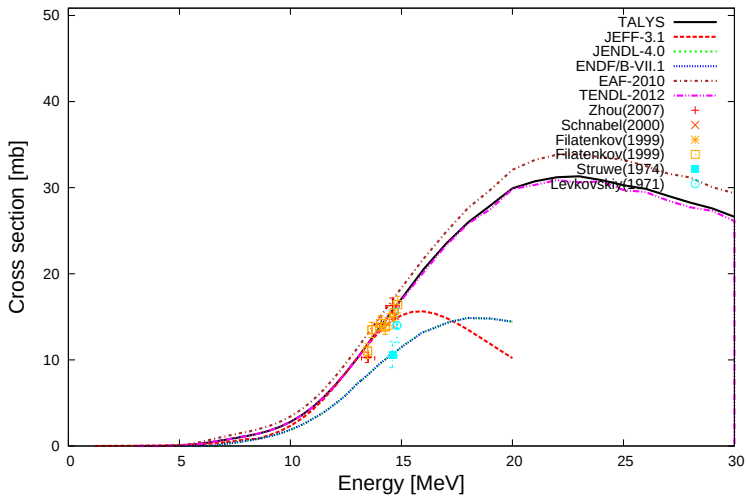

^{122}Sn(n,p)^{122m}In
TALYS
EAF-2010
TENDL-2012
Gopych(1987)
Cross section [mb]
Energy [MeV]

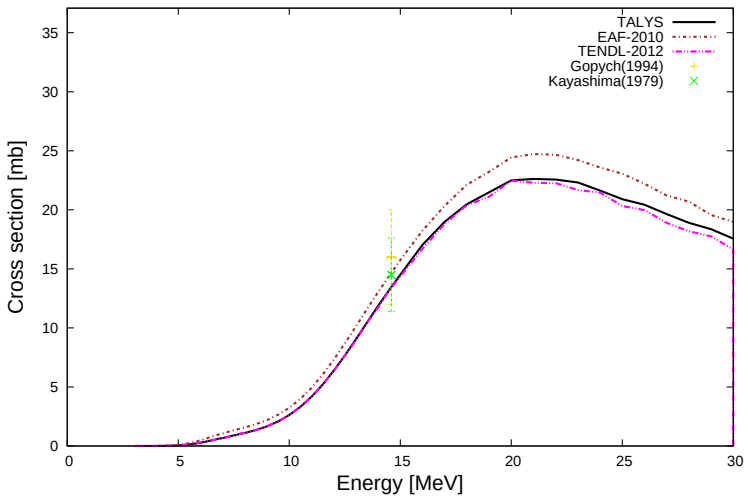

^{121}Sb(n,p)^{121}Sn
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Levkovskiy(1971)
Cross section [mb]
Energy [MeV]

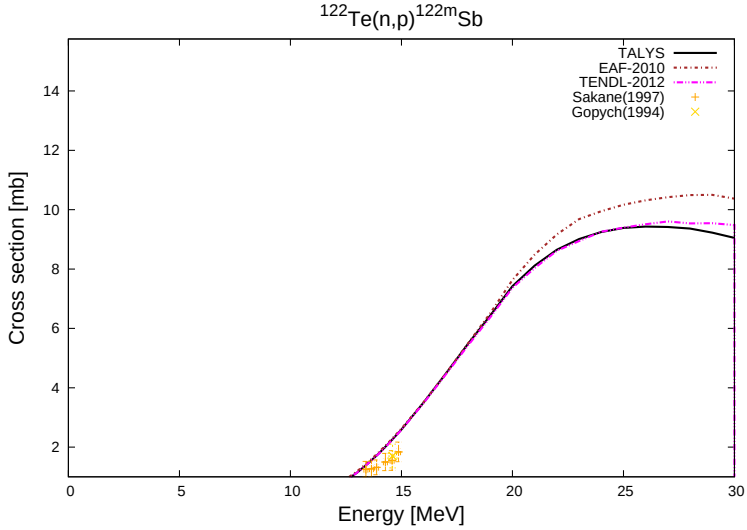

^{121}Sb(n,p)^{121g}Sn
TALYS
EAF-2010
TENDL-2012
Mavaddat(1974)
Cross section [mb]
Energy [MeV]

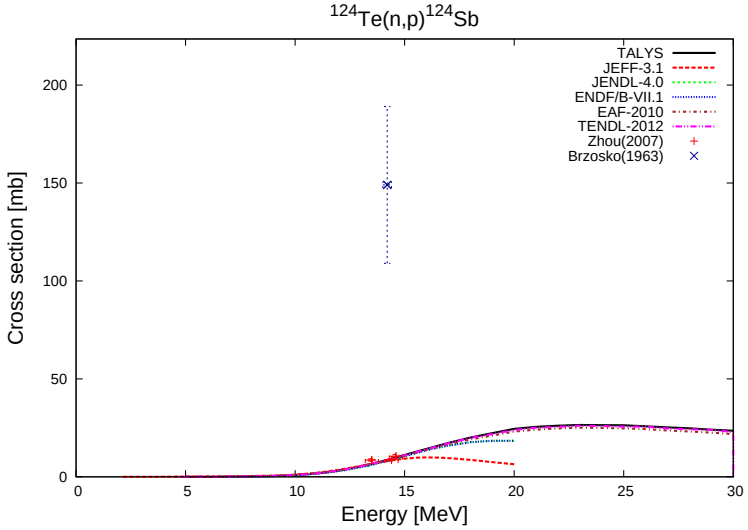

^{123}Sb(n,p)^{123}Sn
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Mavaddat(1974)
Levkovskiy(1971)
Levkovskiy(1971)
Cross section [mb]
Energy [MeV]

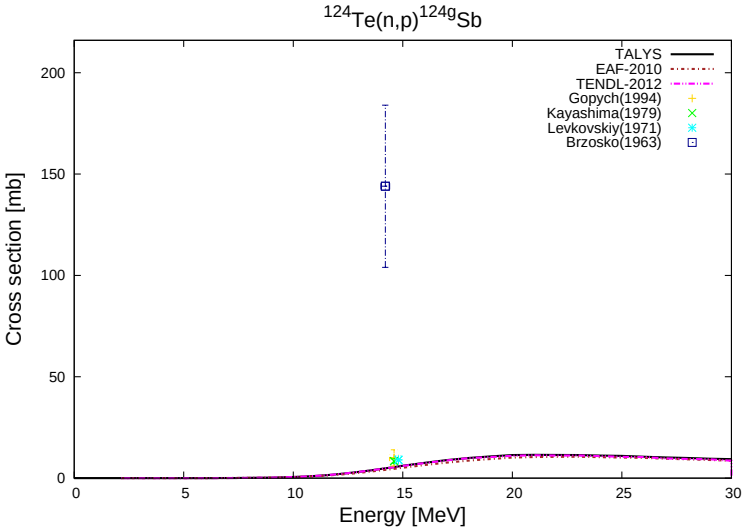

^{123}Sb(n,p)^{123m}Sn
TALYS
EAF-2010
TENDL-2012
LakshmanaDas(2009)
Inenaga(1984)
Cross section [mb]
Energy [MeV]

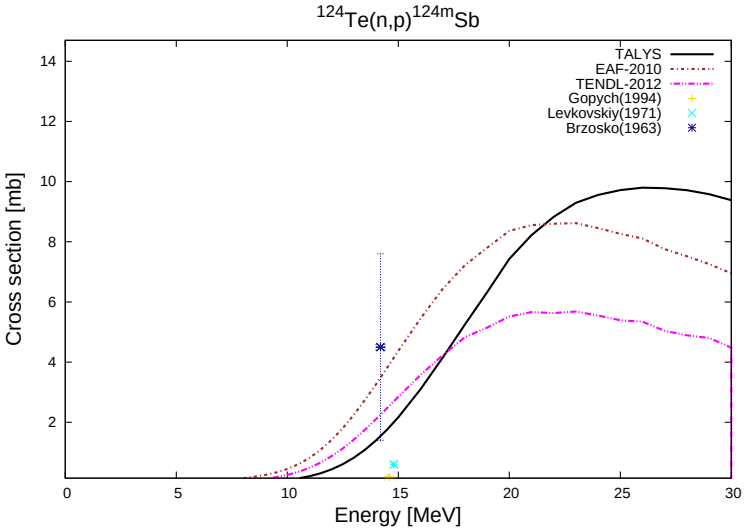

^{122}Te(n,p)^{122}Sb
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Zhou(2007)
Schnabel(2000)
Filatenkov(1999)
Filatenkov(1999)
Struwe(1974)
Levkovskiy(1971)
Cross section [mb]
Energy [MeV]

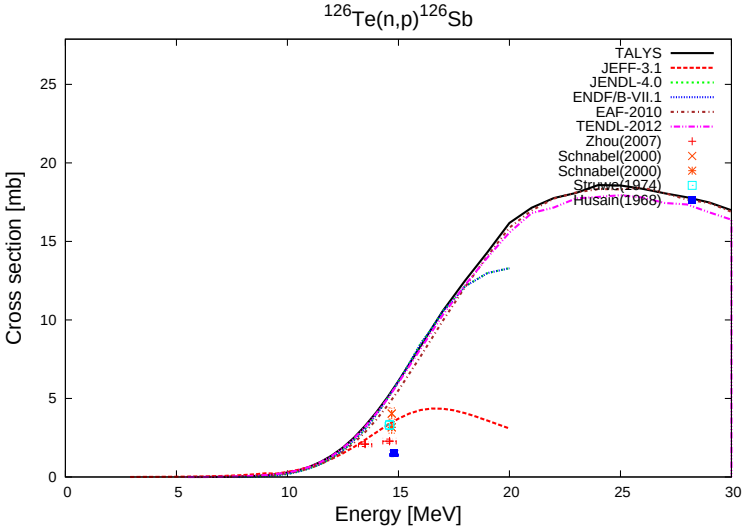

^{122}Te(n,p)^{122g}Sb
TALYS
EAF-2010
TENDL-2012
Gopych(1994)
Kayashima(1979)
Cross section [mb]
Energy [MeV]

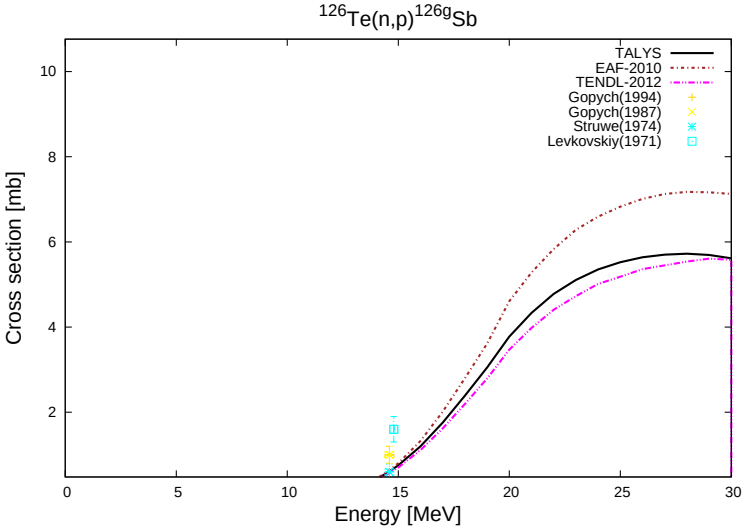

^{122}Te(n,p)^{122m}Sb
TALYS
EAF-2010
TENDL-2012
Sakane(1997)
Gopych(1994)
Cross section [mb]
Energy [MeV]

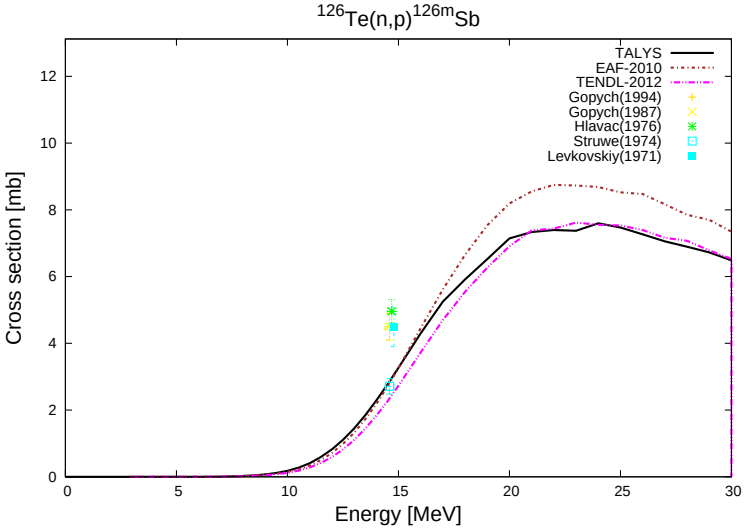

^{124}Te(n,p)^{124}Sb
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Zhou(2007)
Brzosko(1963)
Cross section [mb]
Energy [MeV]

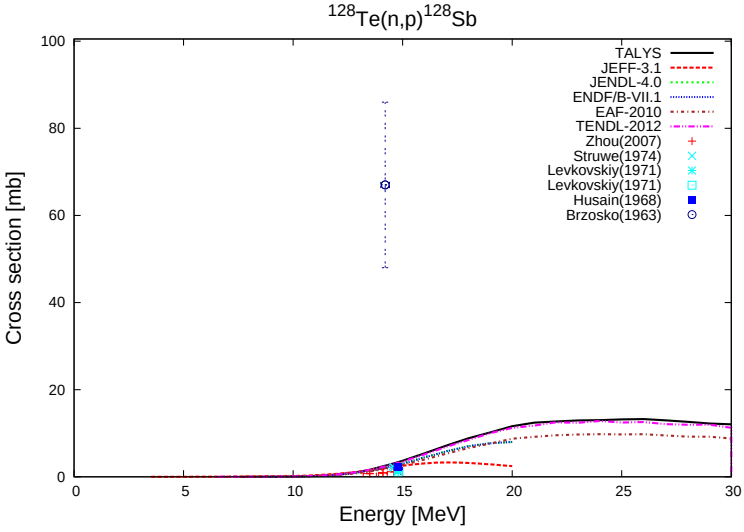

^{124}Te(n,p)^{124g}Sb
TALYS
EAF-2010
TENDL-2012
Gopych(1994)
Kayashima(1979)
Levkovskiy(1971)
Brzosko(1963)
Cross section [mb]
Energy [MeV]

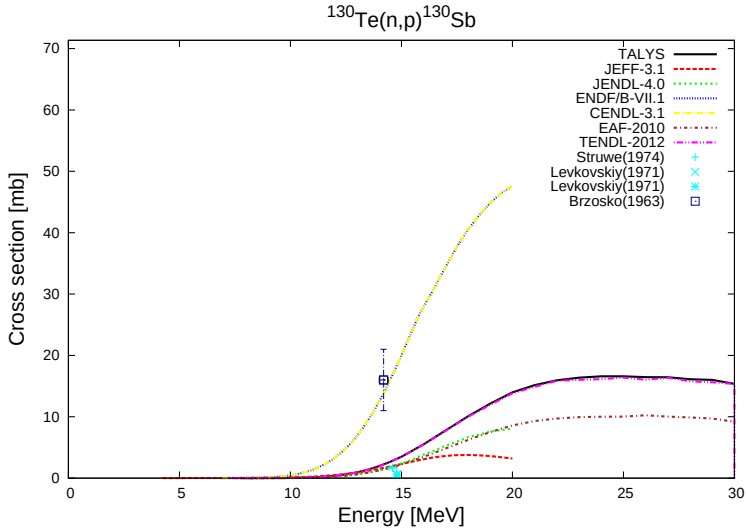

^{124}Te(n,p)^{124m}Sb
TALYS
EAF-2010
TENDL-2012
Gopych(1994)
Levkovskiy(1971)
Brzosko(1963)
Cross section [mb]
Energy [MeV]

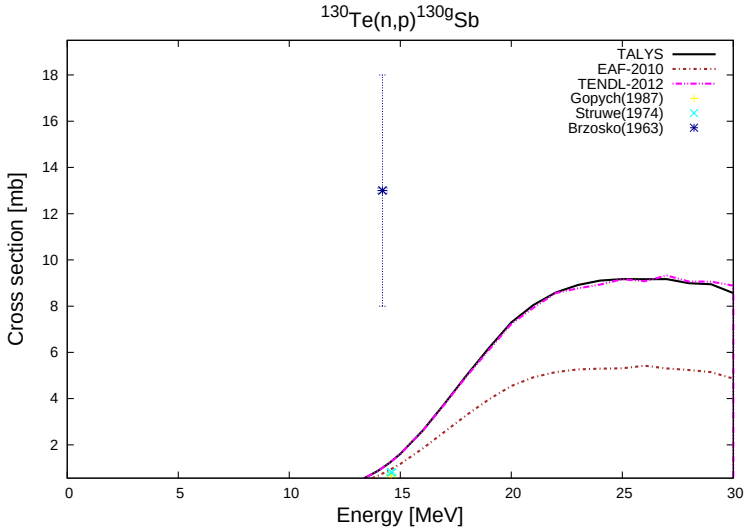

^{126}Te(n,p)^{126}Sb
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Zhou(2007)
Schnabel(2000)
Schnabel(2000)
Struwe(1974)
Husain(1968)
Cross section [mb]
Energy [MeV]

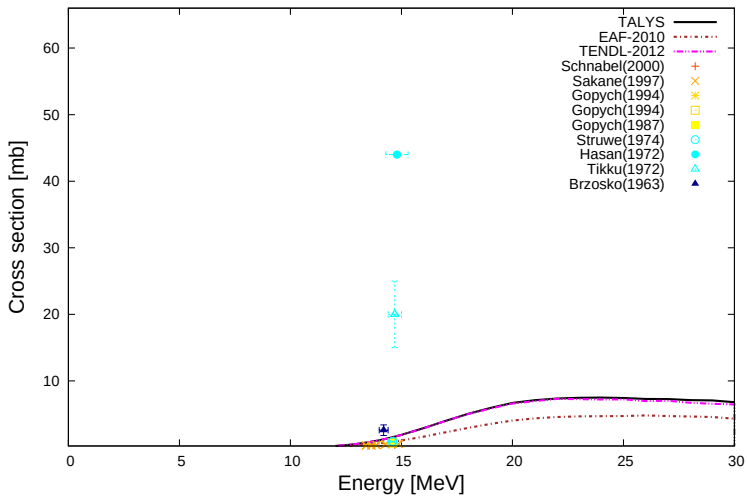

^{126}Te(n,p)^{126g}Sb
TALYS
EAF-2010
TENDL-2012
Gopych(1994)
Gopych(1987)
Struwe(1974)
Levkovskiy(1971)
Cross section [mb]
Energy [MeV]

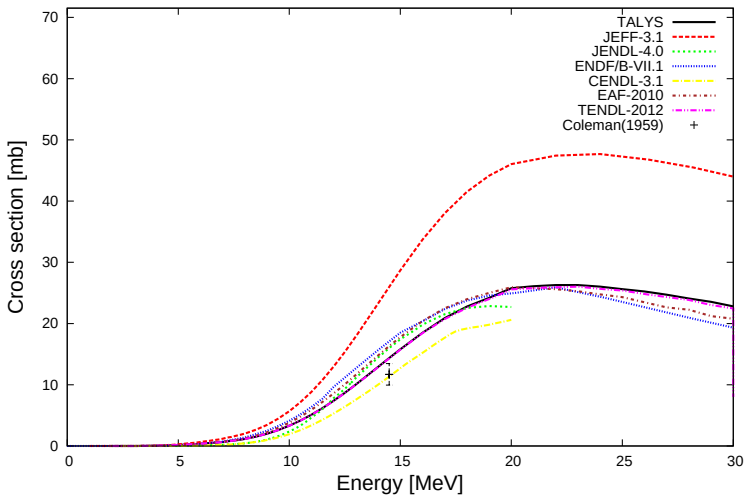

^{126}Te(n,p)^{126m}Sb
TALYS
EAF-2010
TENDL-2012
Gopych(1994)
Gopych(1987)
Hlavac(1976)
Struwe(1974)
Levkovskiy(1971)
Cross section [mb]
Energy [MeV]

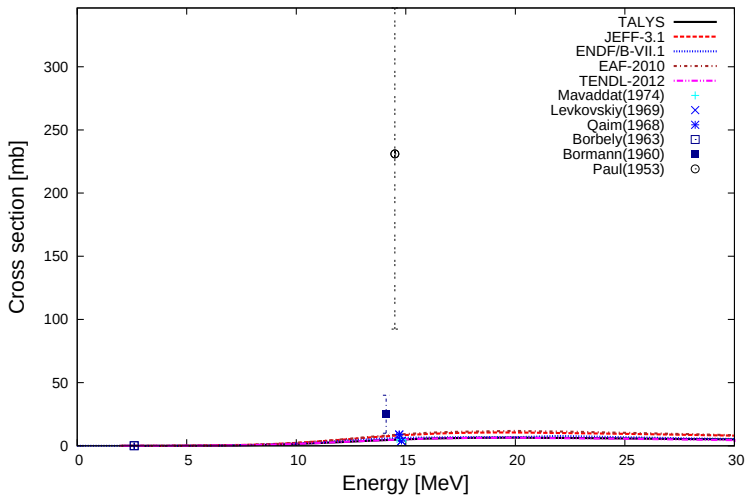

^{128}Te(n,p)^{128}Sb
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Zhou(2007)
Struwe(1974)
Levkovskiy(1971)
Levkovskiy(1971)
Husain(1968)
Brzosko(1963)
Cross section [mb]
Energy [MeV]

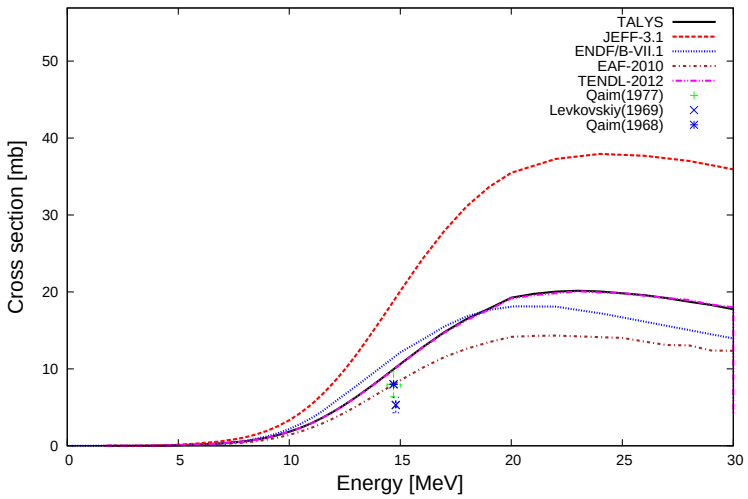

^{130}Te(n,p)^{130}Sb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Struwe(1974)
Levkovskiy(1971)
Levkovskiy(1971)
Brzosko(1963)

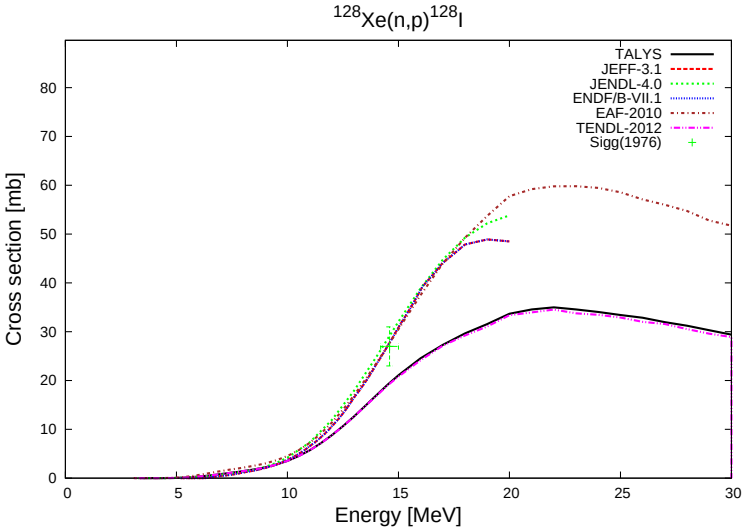

^{130}Te(n,p)^{130g}Sb
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Gopych(1987)
Struwe(1974)
Brzosko(1963)

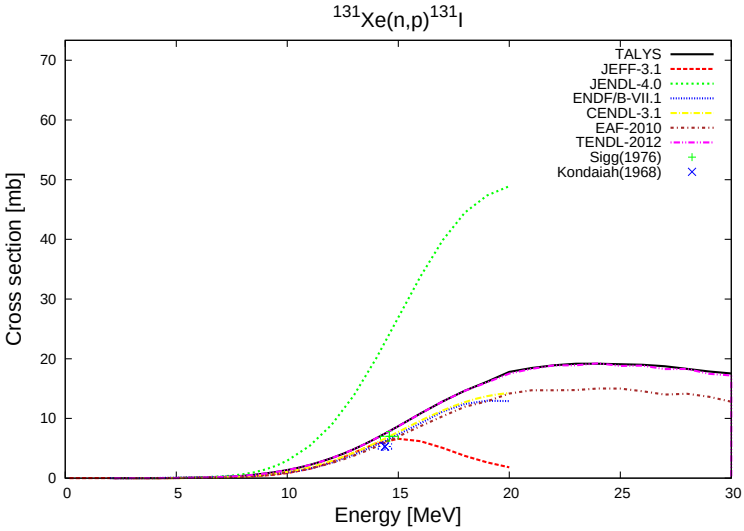

^{130}Te(n,p)^{130m}Sb
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Schnabel(2000)
Sakane(1997)
Gopych(1994)
Gopych(1994)
Gopych(1987)
Struwe(1974)
Hasan(1972)
Tikku(1972)
Brzosko(1963)

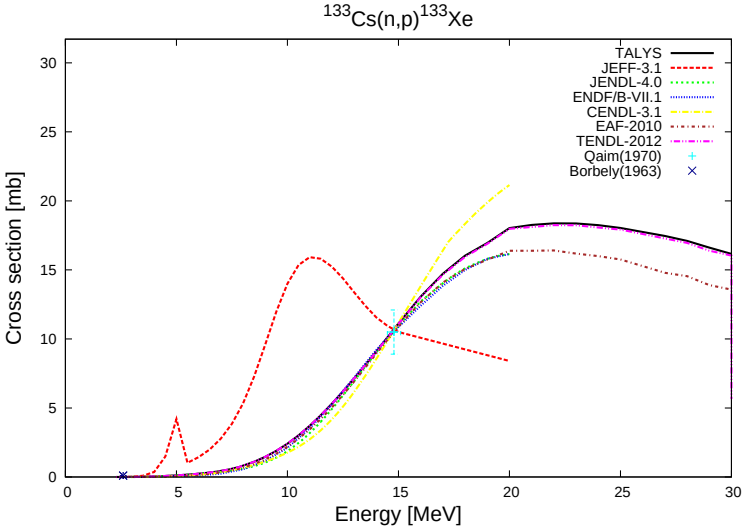

^{127}I(n,p)^{127}Te
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Coleman(1959)

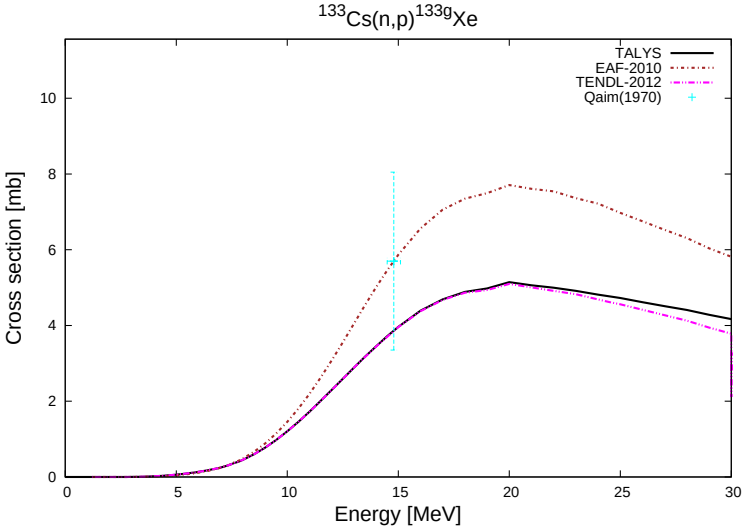

^{127}I(n,p)^{127g}Te
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Mavaddat(1974)
Levkovskiy(1969)
Qaim(1968)
Borbely(1963)
Bormann(1960)
Paul(1953)

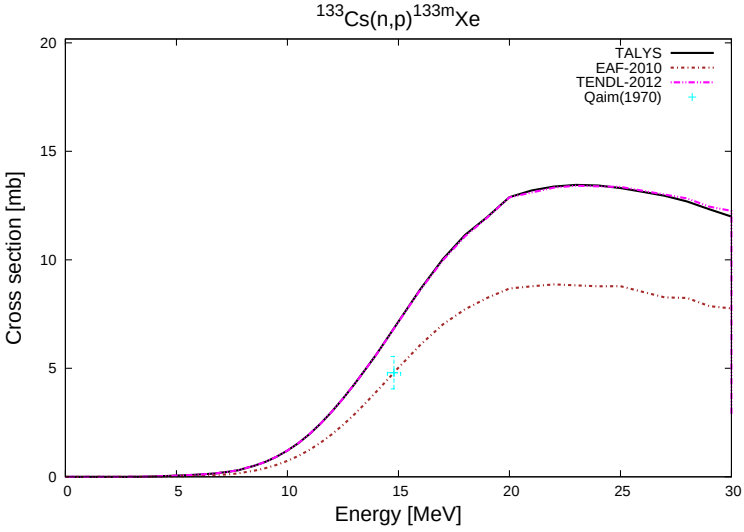

^{127}I(n,p)^{127m}Te
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Qaim(1977)
Levkovskiy(1969)
Qaim(1968)

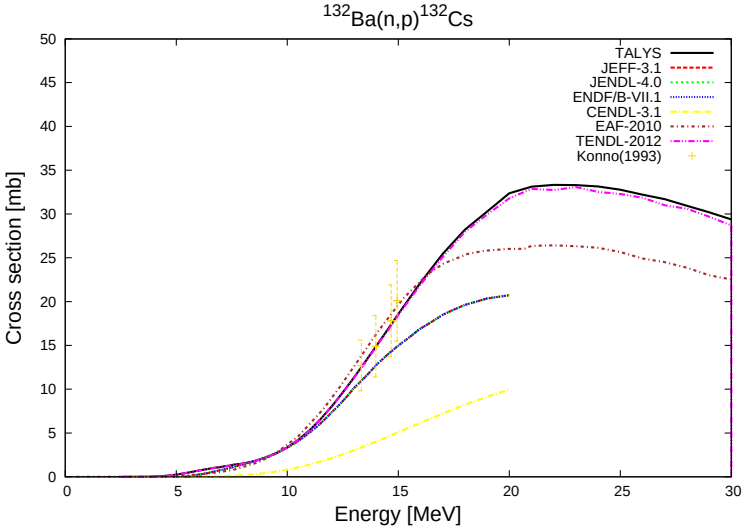

^{128}Xe(n,p)^{128}I
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Sigg(1976)
Cross section [mb]
Energy [MeV]

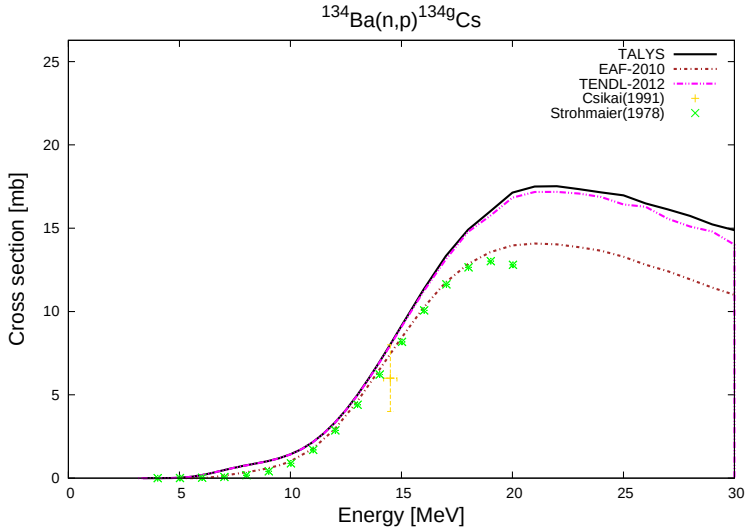

^{131}Xe(n,p)^{131}I
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Sigg(1976)
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

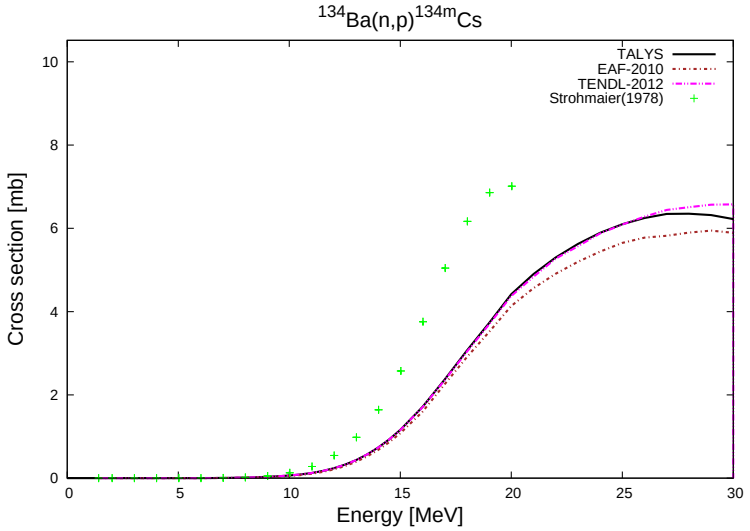

^{133}Cs(n,p)^{133}Xe
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Qaim(1970)
Borbely(1963)
Cross section [mb]
Energy [MeV]

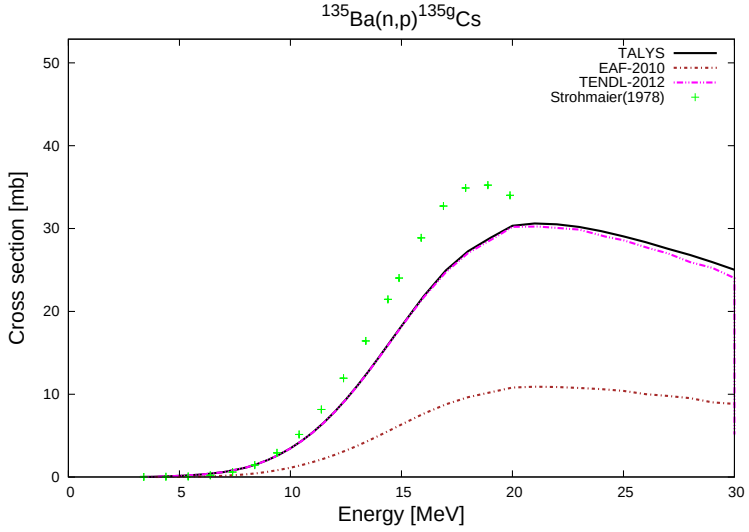

^{133}Cs(n,p)^{133g}Xe
TALYS
EAF-2010
TENDL-2012
Qaim(1970)
Cross section [mb]
Energy [MeV]

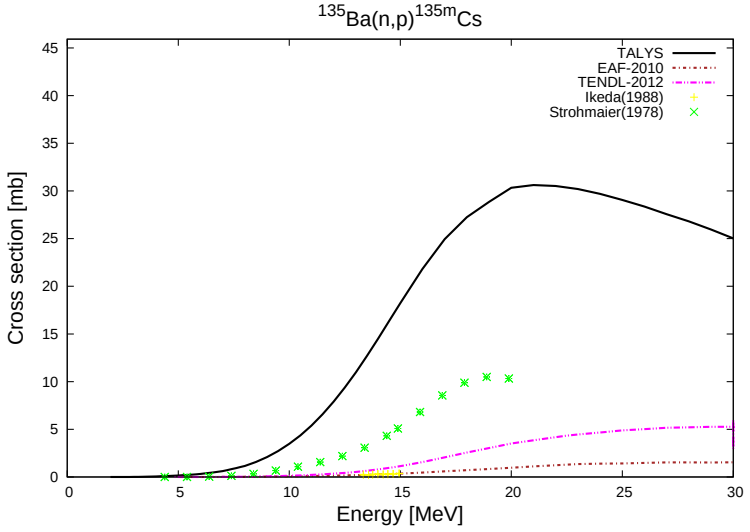

^{133}Cs(n,p)^{133m}Xe
TALYS
EAF-2010
TENDL-2012
Qaim(1970)
Cross section [mb]
Energy [MeV]

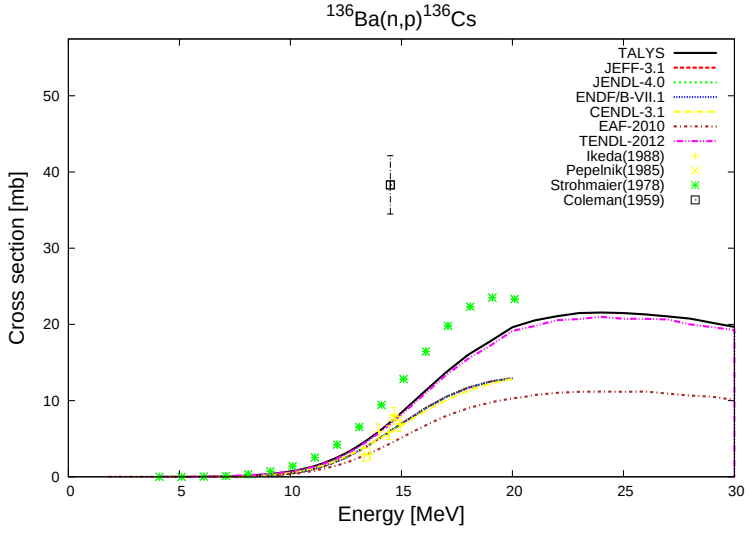

^{132}Ba(n,p)^{132}Cs
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Konno(1993)
Cross section [mb]
Energy [MeV]

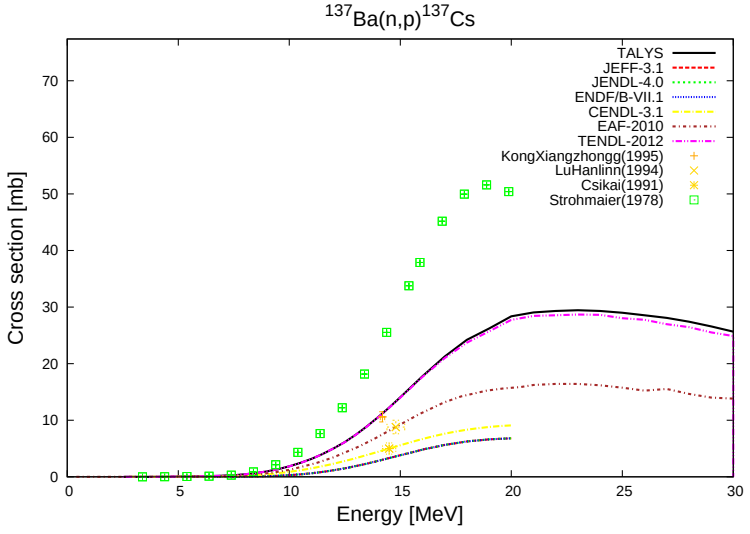

134Ba(n,p)134gCs
TALYS
EAF-2010
TENDL-2012
Csikai(1991)
Strohmaier(1978)
Cross section [mb]
Energy [MeV]

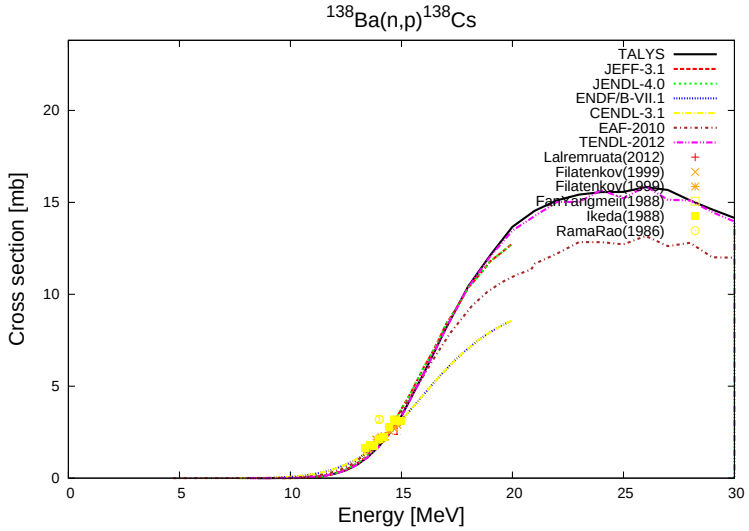

134Ba(n,p)134mCs
TALYS
EAF-2010
TENDL-2012
Strohmaier(1978)
Cross section [mb]
Energy [MeV]

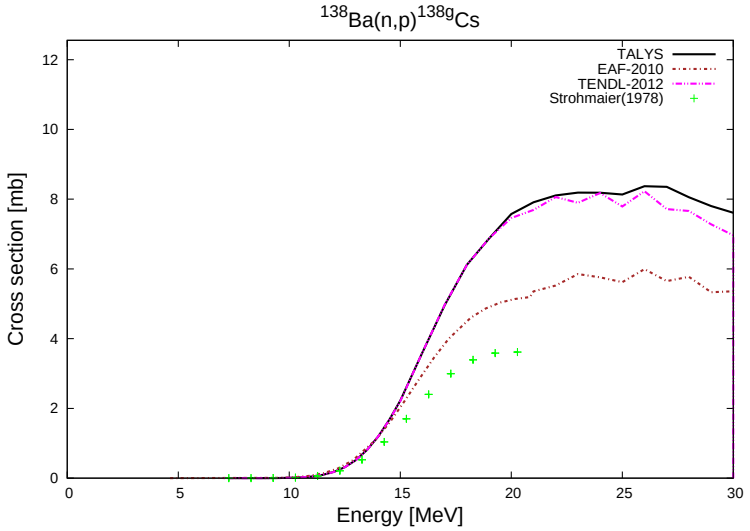

135Ba(n,p)135gCs
TALYS
EAF-2010
TENDL-2012
Strohmaier(1978)
Cross section [mb]
Energy [MeV]

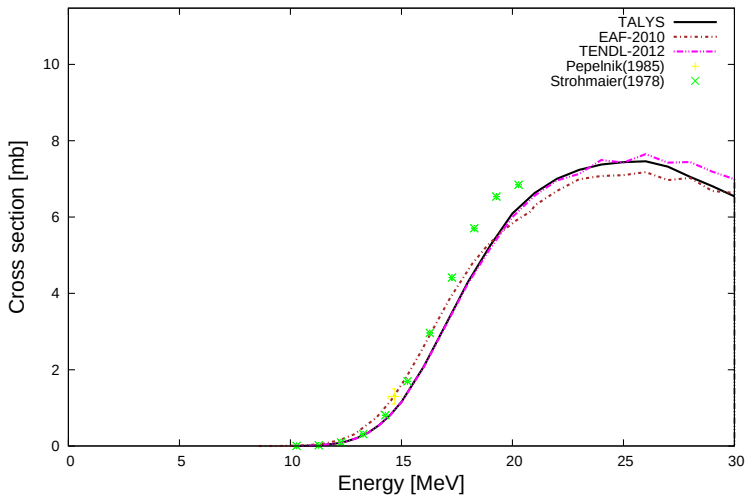

135Ba(n,p)135mCs
TALYS
EAF-2010
TENDL-2012
Ikeda(1988)
Strohmaier(1978)
Cross section [mb]
Energy [MeV]

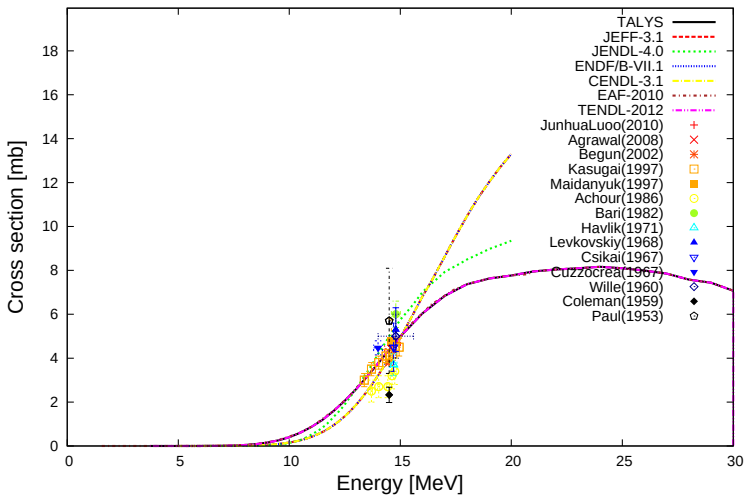

136Ba(n,p)136Cs
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Ikeda(1988)
Pepelnik(1985)
Strohmaier(1978)
Coleman(1959)
Cross section [mb]
Energy [MeV]

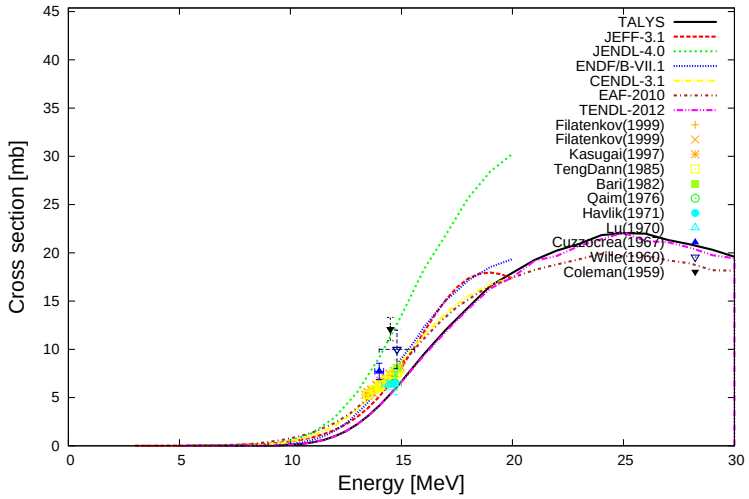

137Ba(n,p)137Cs
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
KongXiangzhongg(1995)
LüHanlinn(1994)
Csikai(1991)
Strohmaier(1978)
Cross section [mb]
Energy [MeV]

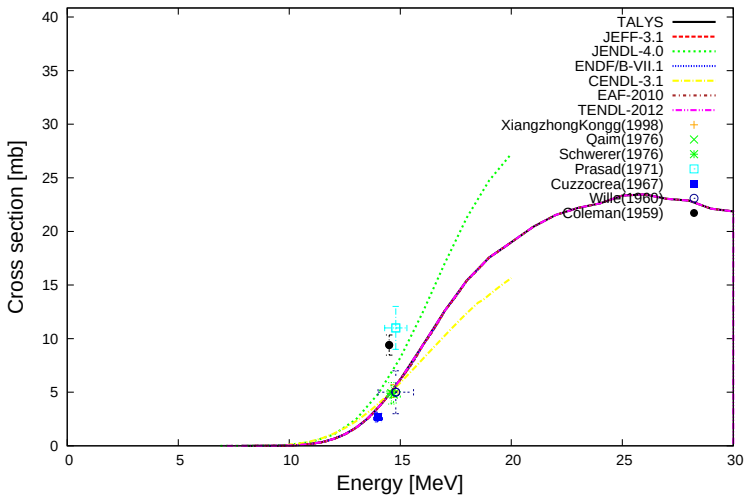

^{138}Ba(n,p)^{138}Cs
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Lalremruata(2012)
Filatenkov(1999)
Filatenkov(1999)
FanTangmeii(1988)
Ikeda(1988)
RamaRao(1986)

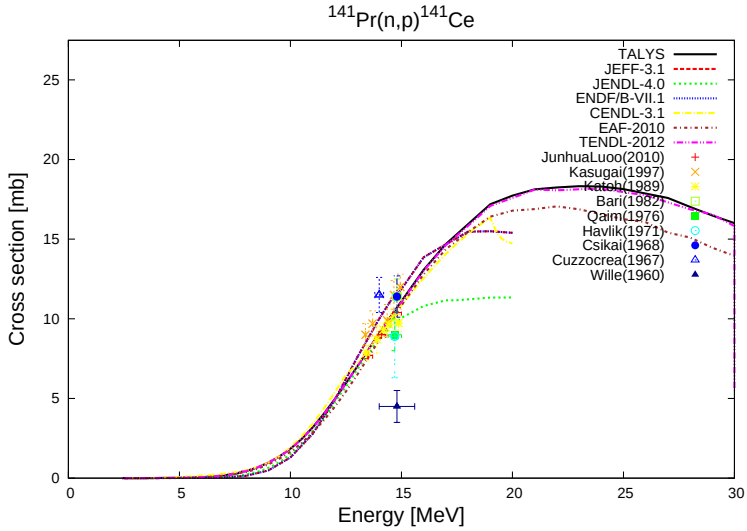

^{138}Ba(n,p)^{138g}Cs
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Strohmaier(1978)

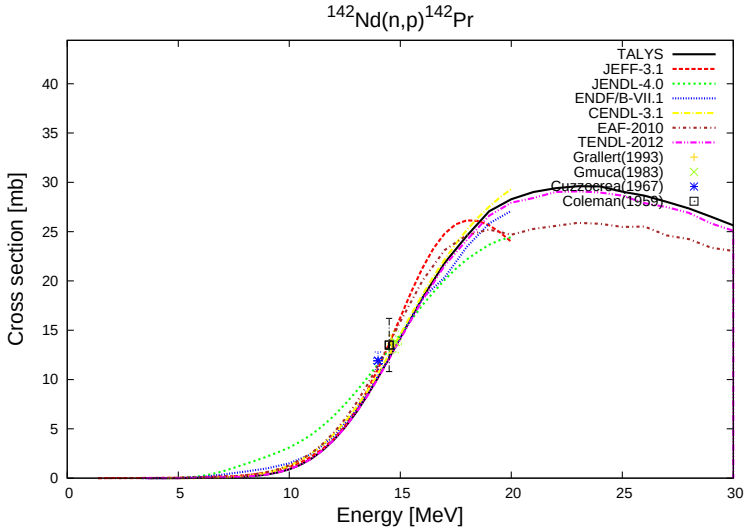

^{138}Ba(n,p)^{138m}Cs
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Pepelnik(1985)
Strohmaier(1978)

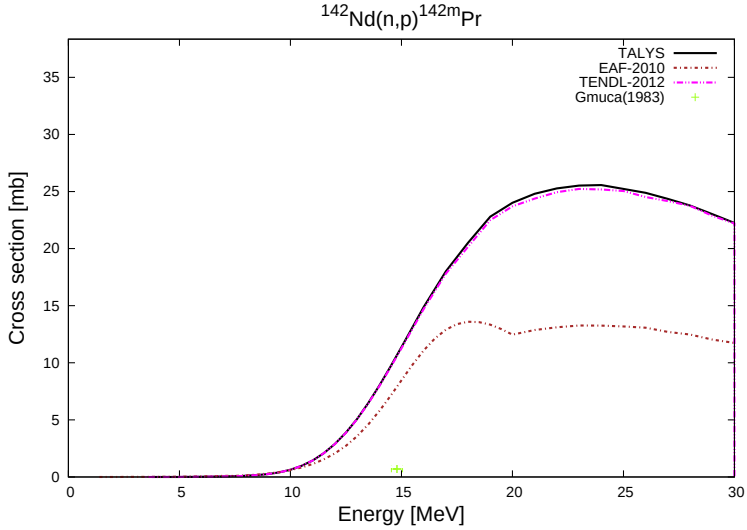

^{139}La(n,p)^{139}Ba
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
JunhuaLuoo(2010)
Agrawal(2008)
Begun(2002)
Kasugai(1997)
Maidanyuk(1997)
Achour(1986)
Bari(1982)
Havlik(1971)
Levkovskiy(1968)
Csikai(1967)
Cuzzocrea(1967)
Wille(1960)
Coleman(1959)
Paul(1953)

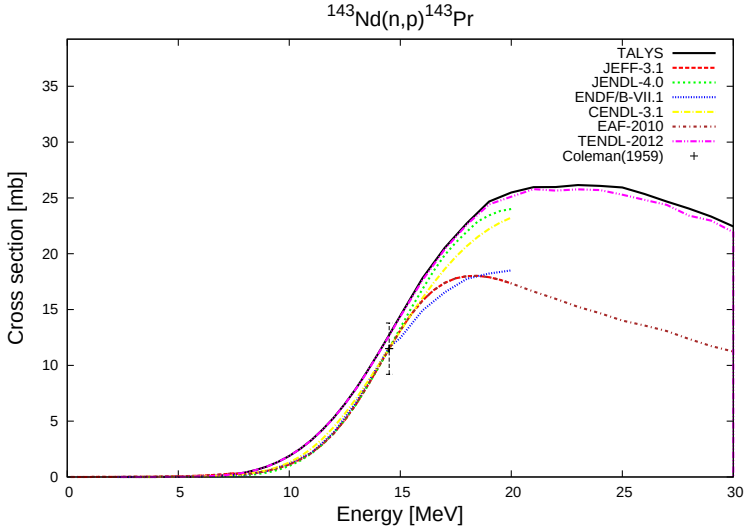

^{140}Ce(n,p)^{140}La
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Kasugai(1997)
TengDann(1985)
Bari(1982)
Qaim(1976)
Havlik(1971)
Lu(1970)
Cuzzocrea(1967)
Wille(1960)
Coleman(1959)

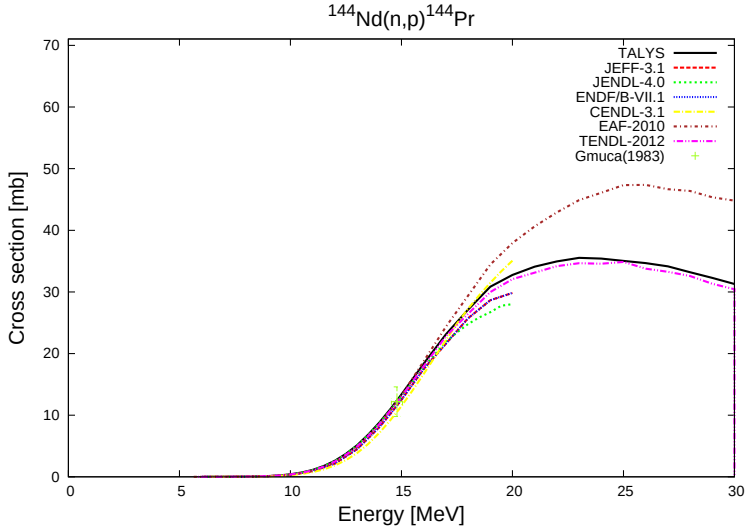

^{142}Ce(n,p)^{142}La
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
XiangzhongKongg(1998)
Qaim(1976)
Schwerer(1976)
Prasad(1971)
Cuzzocrea(1967)
Wille(1960)
Coleman(1959)

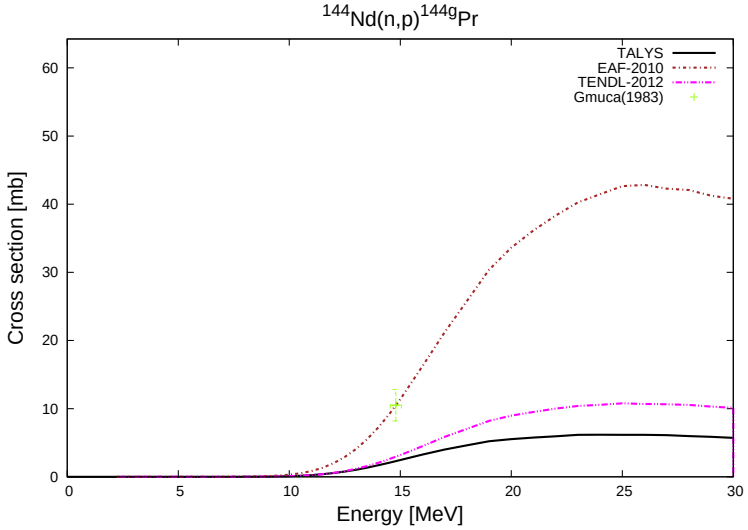

^{141}Pr(n,p)^{141}Ce
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
JunhuaLuoo(2010)
Kasugai(1997)
Katoh(1989)
Bari(1982)
Qaim(1976)
Havlik(1971)
Csikai(1968)
Cuzzocrea(1967)
Wille(1960)
Cross section [mb]
Energy [MeV]

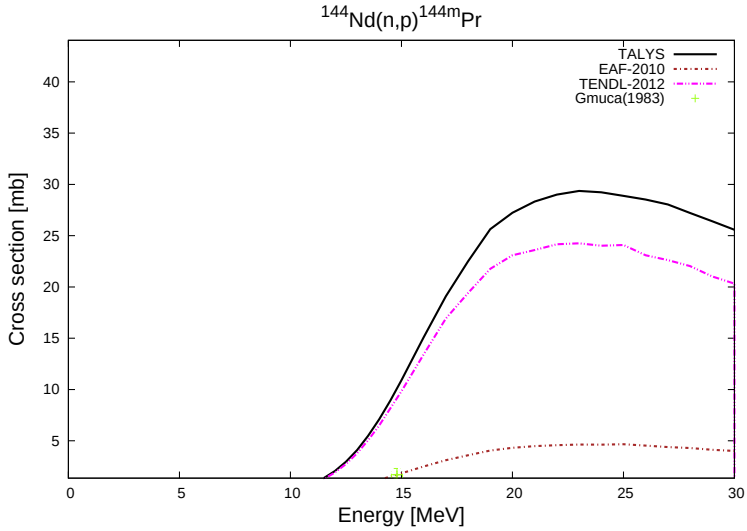

^{142}Nd(n,p)^{142}Pr
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Grallert(1993)
Gmuca(1983)
Cuzzocrea(1967)
Coleman(1959)
Cross section [mb]
Energy [MeV]

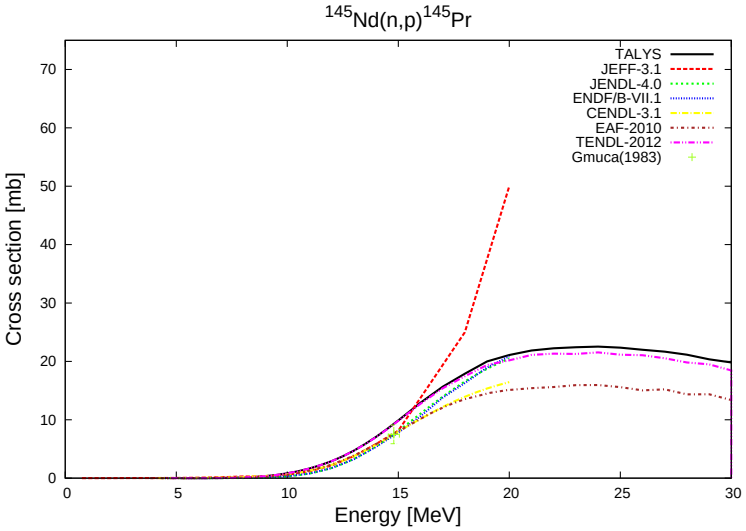

^{142}Nd(n,p)^{142m}Pr
TALYS
EAF-2010
TENDL-2012
Gmuca(1983)
Cross section [mb]
Energy [MeV]

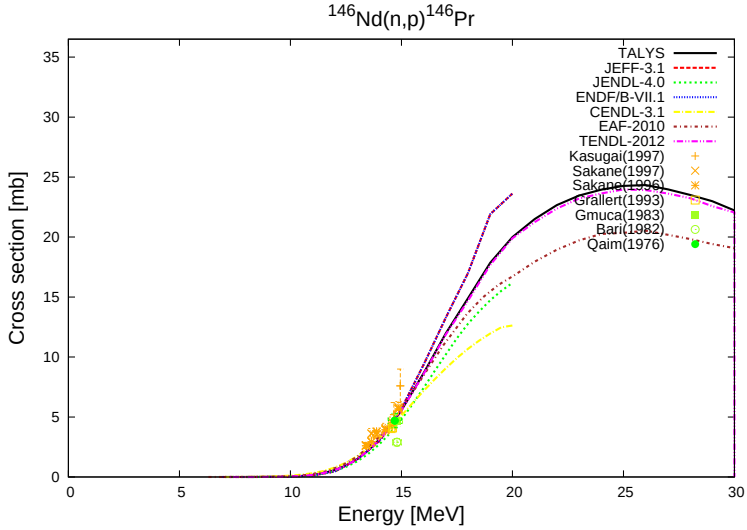

^{143}Nd(n,p)^{143}Pr
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Coleman(1959)
Cross section [mb]
Energy [MeV]

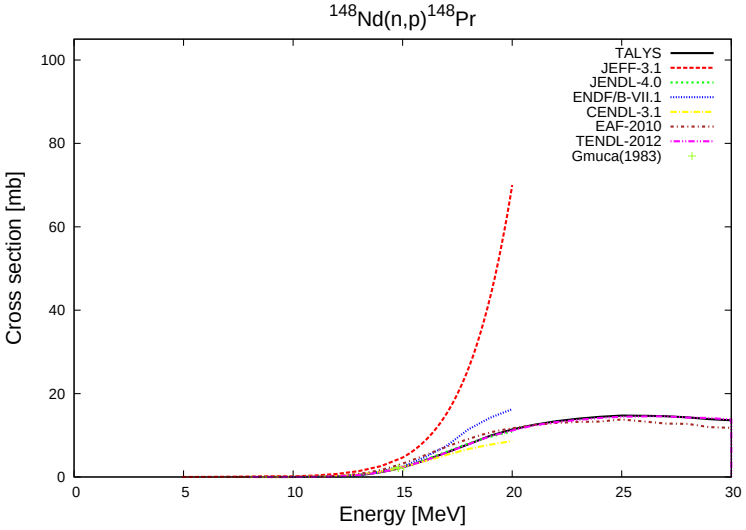

^{144}Nd(n,p)^{144}Pr
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Gmuca(1983)
Cross section [mb]
Energy [MeV]

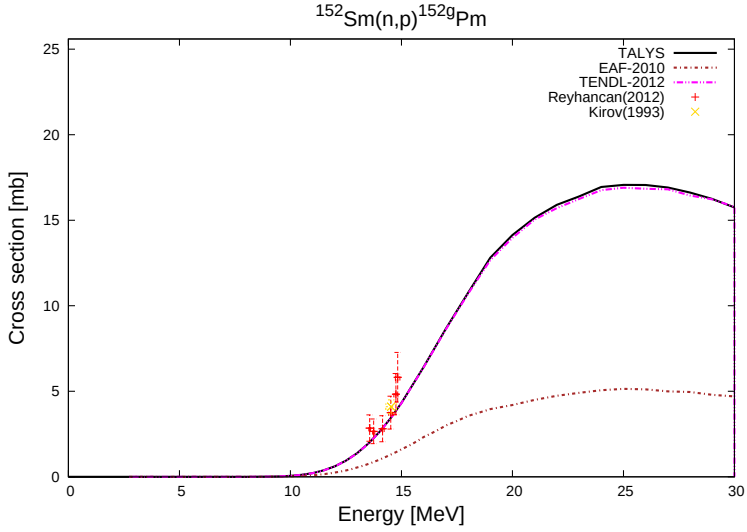

^{144}Nd(n,p)^{144g}Pr
TALYS
EAF-2010
TENDL-2012
Gmuca(1983)
Cross section [mb]
Energy [MeV]

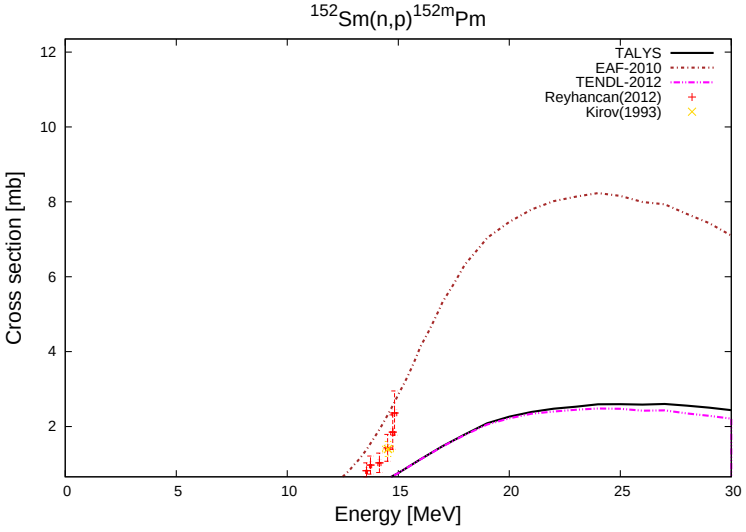

^{144}Nd(n,p)^{144m}Pr
TALYS
EAF-2010
TENDL-2012
Gmuca(1983)
Cross section [mb]
Energy [MeV]

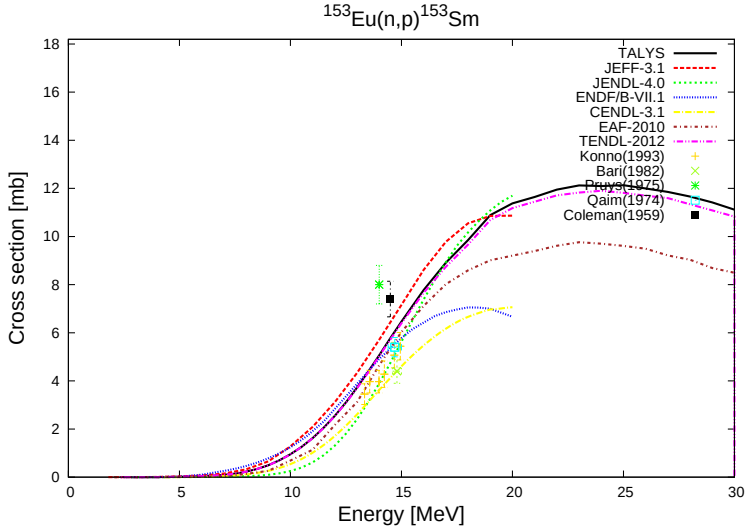

^{145}Nd(n,p)^{145}Pr
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Gmuca(1983)
Cross section [mb]
Energy [MeV]

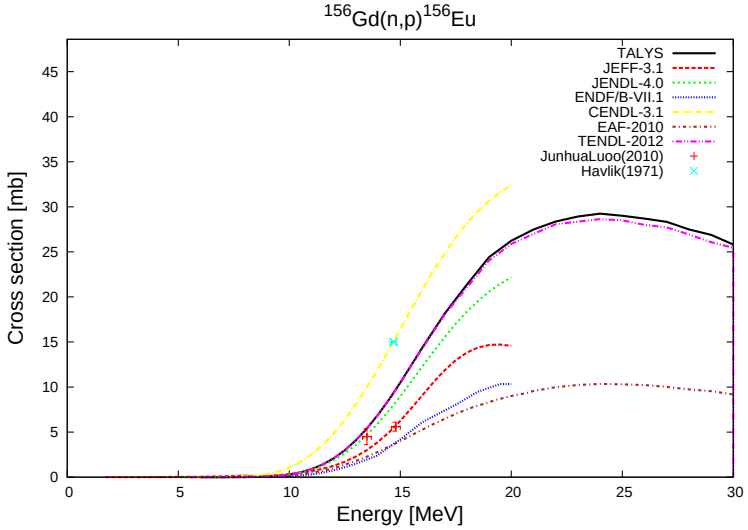

^{146}Nd(n,p)^{146}Pr
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Kasugai(1997)
Sakane(1997)
Sakane(1996)
Grallert(1993)
Gmuca(1983)
Bari(1982)
Qaim(1976)
Cross section [mb]
Energy [MeV]

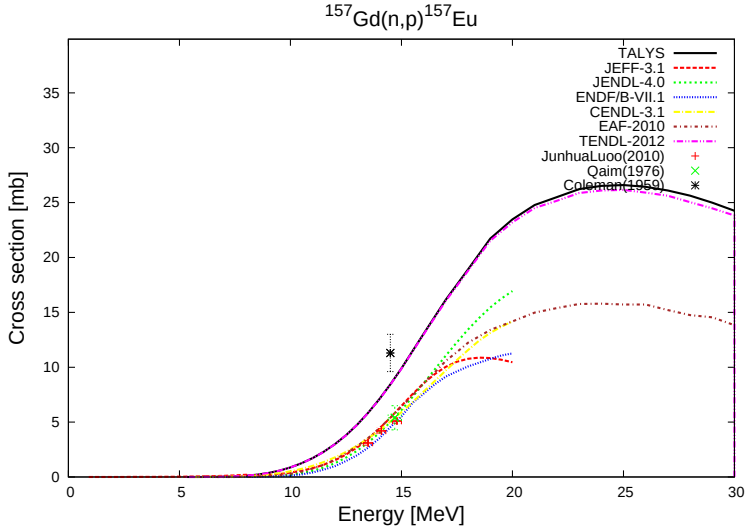

^{148}Nd(n,p)^{148}Pr
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Gmuca(1983)
Cross section [mb]
Energy [MeV]

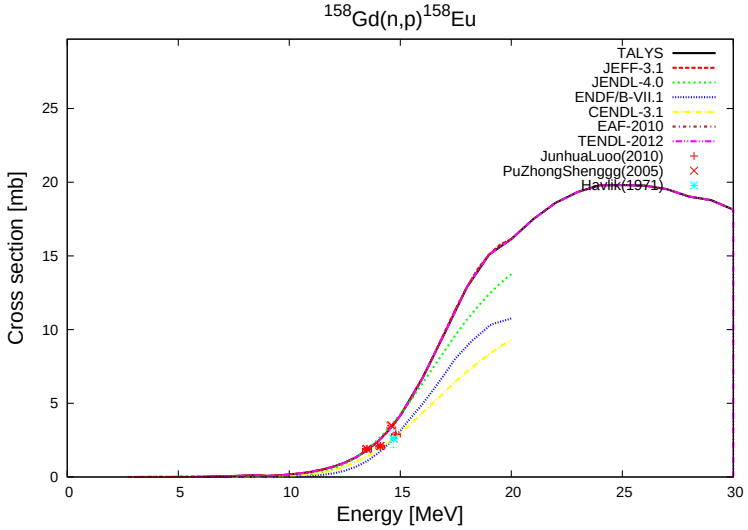

^{152}Sm(n,p)^{152g}Pm
TALYS
EAF-2010
TENDL-2012
Reyhancan(2012)
Kirov(1993)
Cross section [mb]
Energy [MeV]

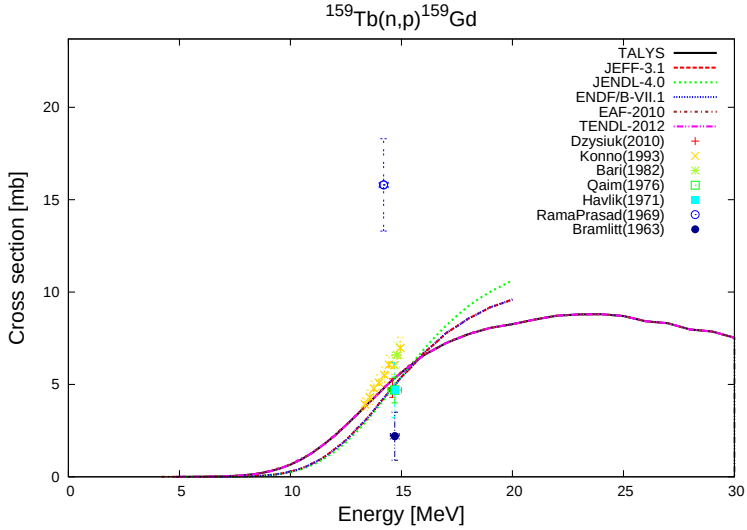

^{152}Sm(n,p)^{152m}Pm
TALYS
EAF-2010
TENDL-2012
Reyhancan(2012)
Kirov(1993)
Cross section [mb]
Energy [MeV]

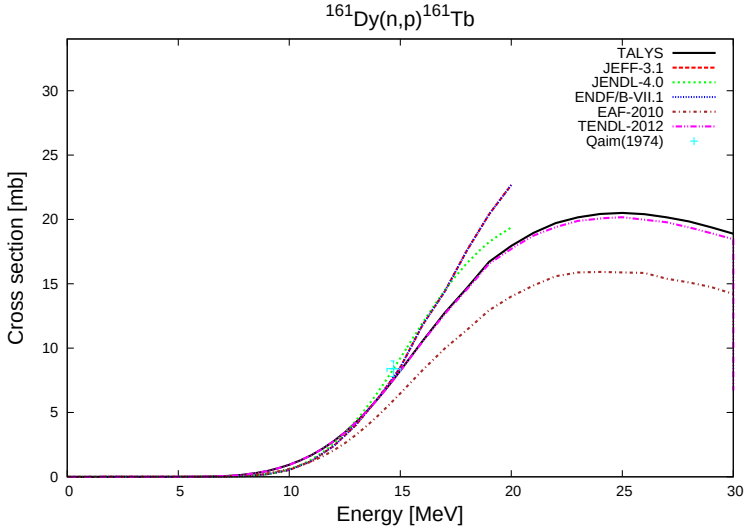

^{153}Eu(n,p)^{153}Sm
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Konno(1993)
Bari(1982)
Pruys(1975)
Qaim(1974)
Coleman(1959)
Cross section [mb]
Energy [MeV]

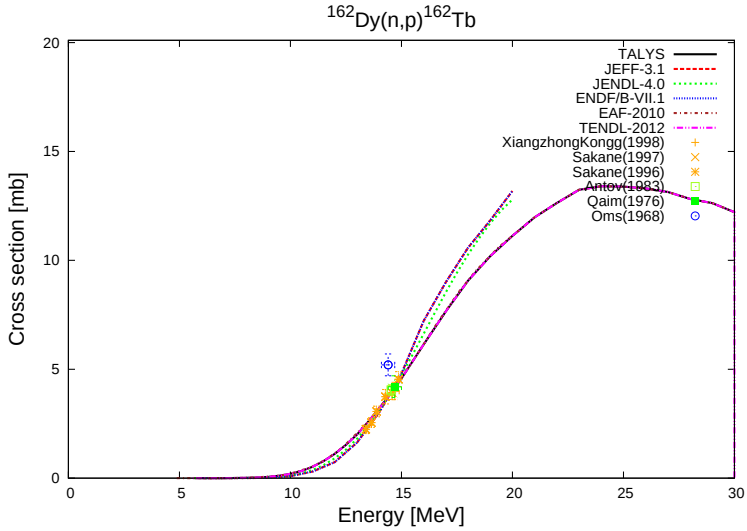

^{156}Gd(n,p)^{156}Eu
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
JunhuaLuoo(2010)
Havlik(1971)
Cross section [mb]
Energy [MeV]

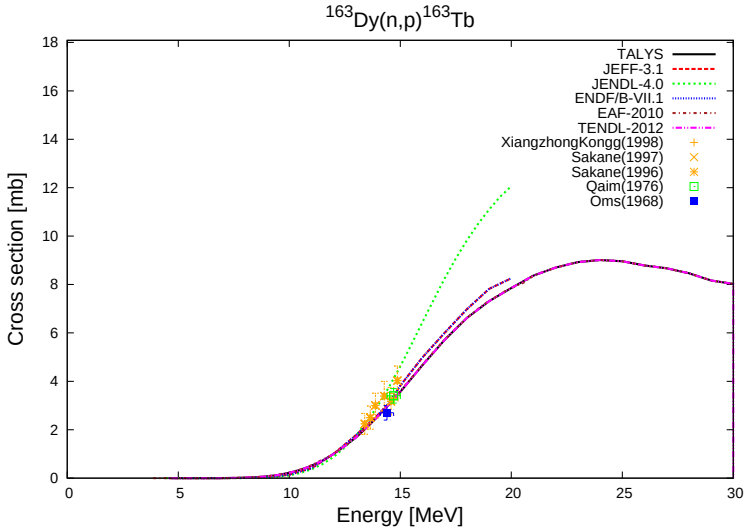

^{157}Gd(n,p)^{157}Eu
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
JunhuaLuoo(2010)
Qaim(1976)
Coleman(1959)
Cross section [mb]
Energy [MeV]

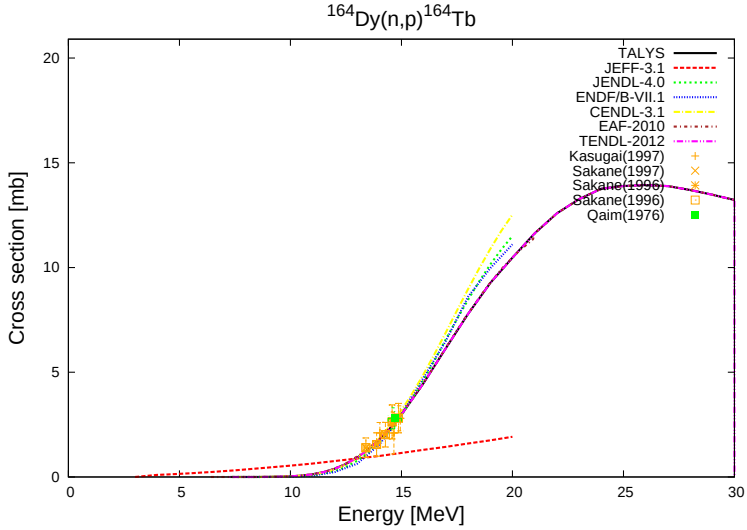

^{158}Gd(n,p)^{158}Eu
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
JunhuaLuoo(2010)
PuZhongShenggg(2005)
Havlik(1971)
Cross section [mb]
Energy [MeV]

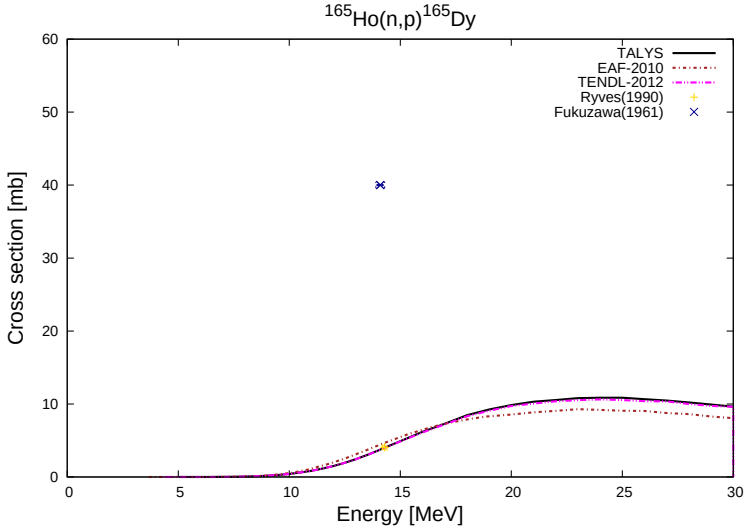

^{159}Tb(n,p)^{159}Gd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Dzysiuk(2010)
Konno(1993)
Bari(1982)
Qaim(1976)
Havlik(1971)
RamaPrasad(1969)
Bramlitt(1963)
Cross section [mb]
Energy [MeV]

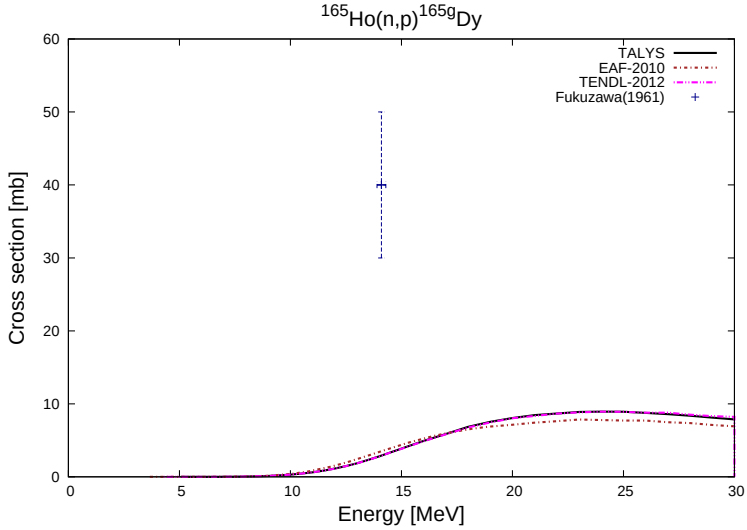

^{161}Dy(n,p)^{161}Tb
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Qaim(1974)
Cross section [mb]
Energy [MeV]

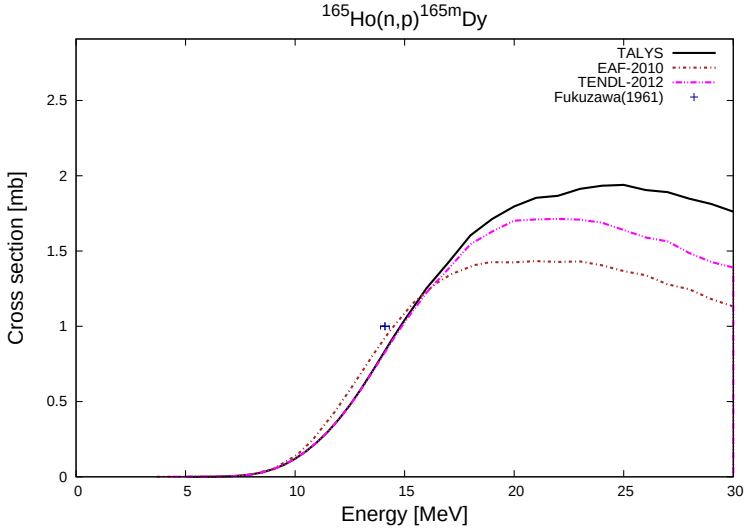

^{162}Dy(n,p)^{162}Tb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
XiangzhongKongg(1998)
Sakane(1997)
Sakane(1996)
Antov(1983)
Qaim(1976)
Oms(1968)

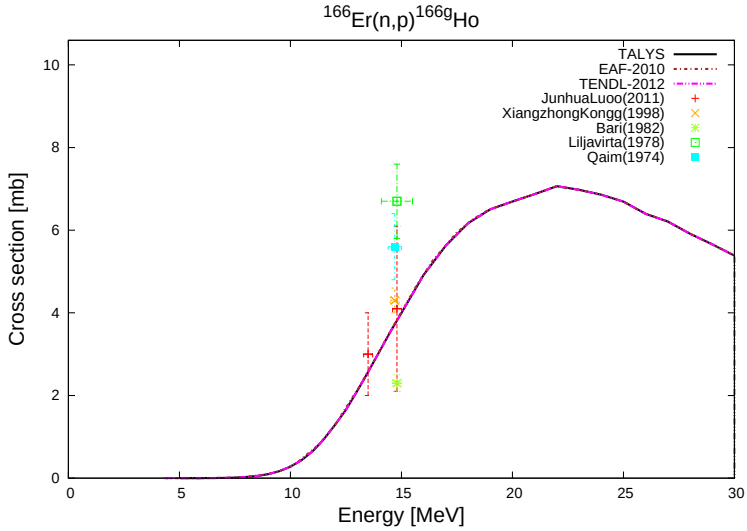

^{163}Dy(n,p)^{163}Tb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
XiangzhongKongg(1998)
Sakane(1997)
Sakane(1996)
Qaim(1976)
Oms(1968)

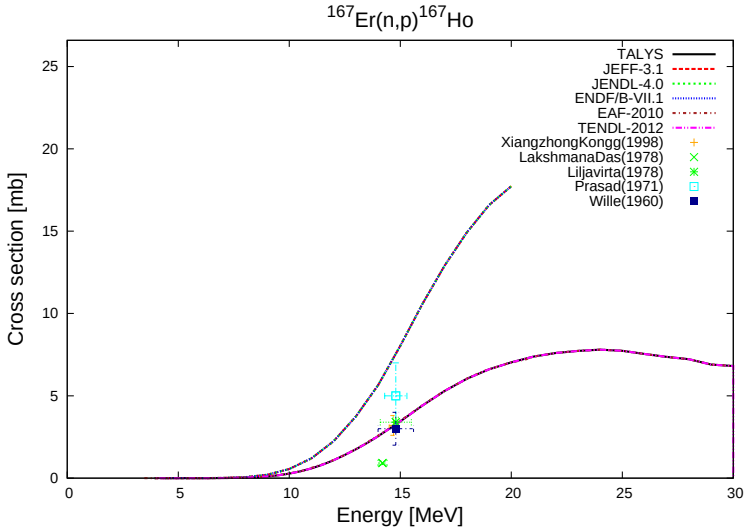

^{164}Dy(n,p)^{164}Tb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Kasugai(1997)
Sakane(1997)
Sakane(1996)
Sakane(1996)
Qaim(1976)

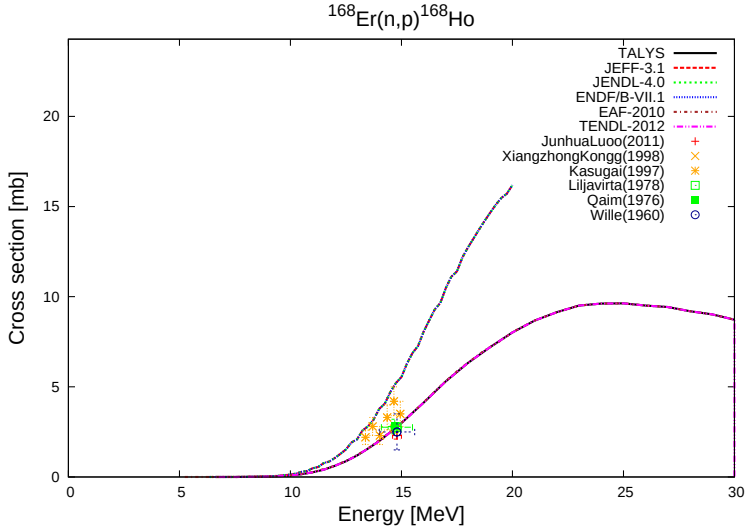

^{165}Ho(n,p)^{165}Dy
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Ryves(1990)
Fukuzawa(1961)

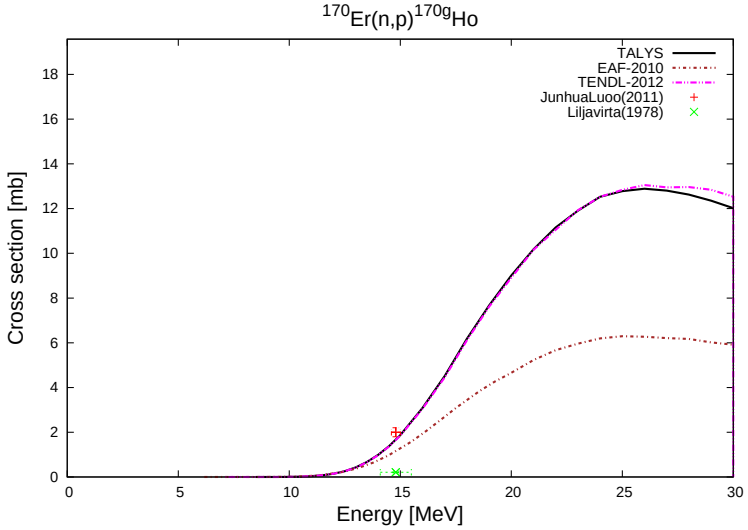

^{165}Ho(n,p)^{165g}Dy
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Fukuzawa(1961)

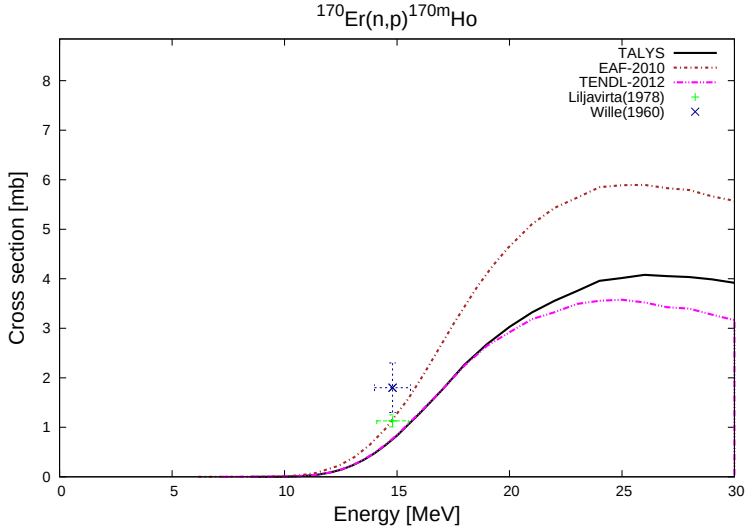

^{165}Ho(n,p)^{165m}Dy
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Fukuzawa(1961)

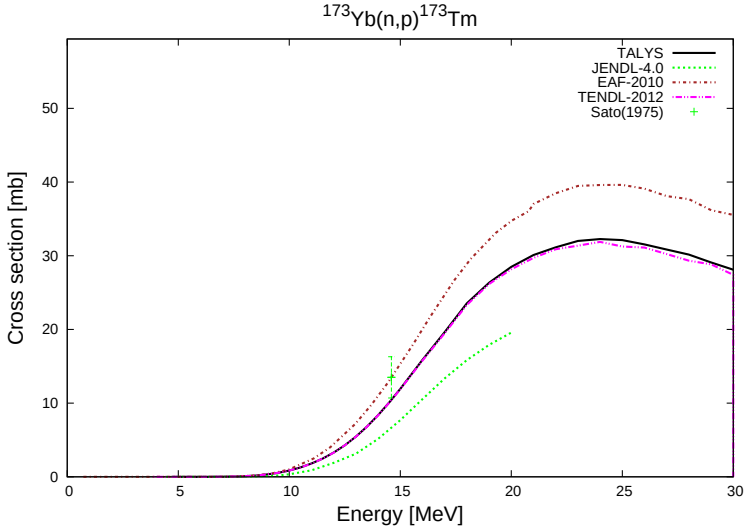

166Er(n,p)166gHo
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2011)
XiangzhongKongg(1998)
Bari(1982)
Liljavirta(1978)
Qaim(1974)
Cross section [mb]
Energy [MeV]

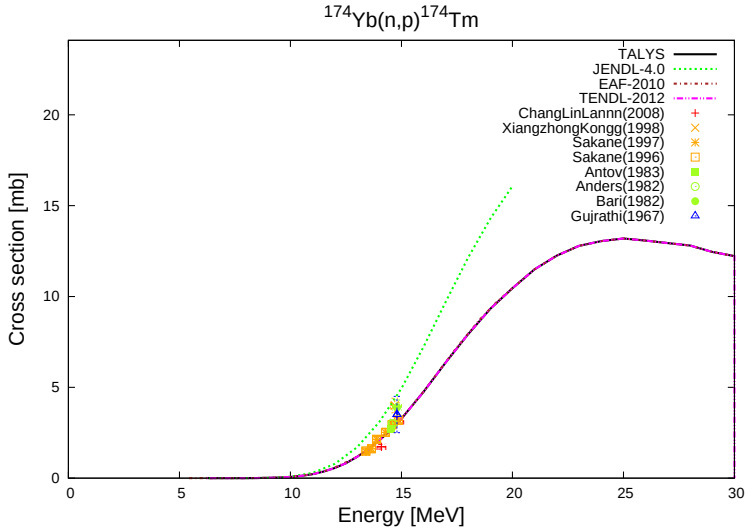

167Er(n,p)167Ho
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
XiangzhongKongg(1998)
LakshmanaDas(1978)
Liljavirta(1978)
Prasad(1971)
Wille(1960)
Cross section [mb]
Energy [MeV]

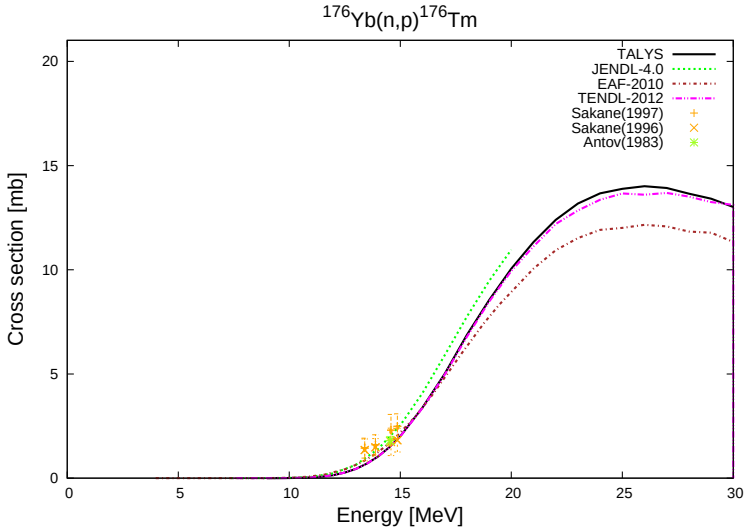

168Er(n,p)168Ho
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
JunhuaLuoo(2011)
XiangzhongKongg(1998)
Kasugai(1997)
Liljavirta(1978)
Qaim(1976)
Wille(1960)
Cross section [mb]
Energy [MeV]

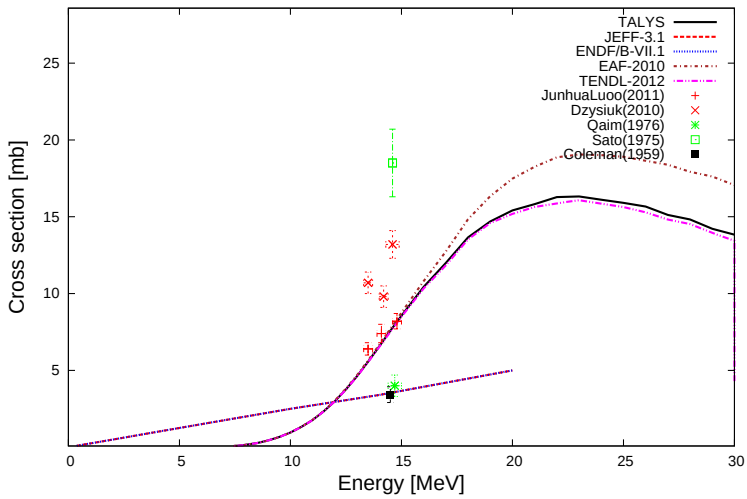

170Er(n,p)170gHo
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2011)
Liljavirta(1978)
Cross section [mb]
Energy [MeV]

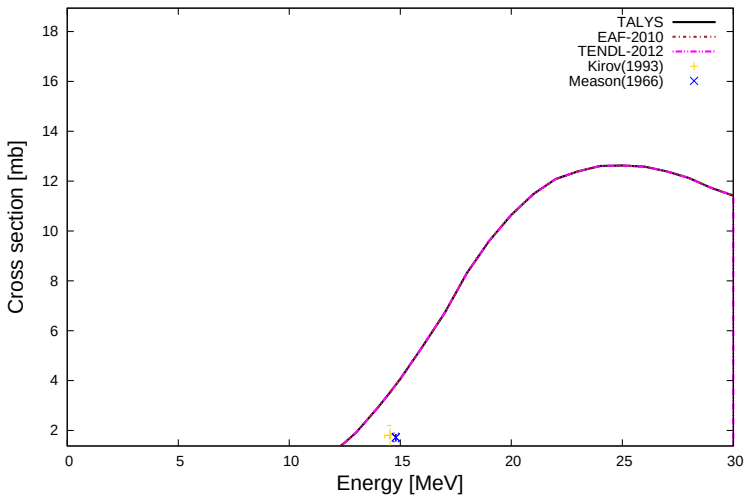

170Er(n,p)170mHo
TALYS
EAF-2010
TENDL-2012
Liljavirta(1978)
Wille(1960)
Cross section [mb]
Energy [MeV]

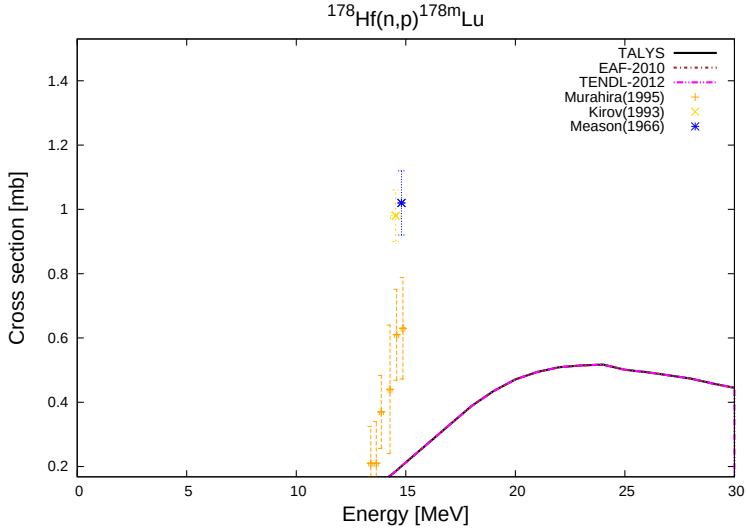

173Yb(n,p)173Tm
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
Sato(1975)
Cross section [mb]
Energy [MeV]

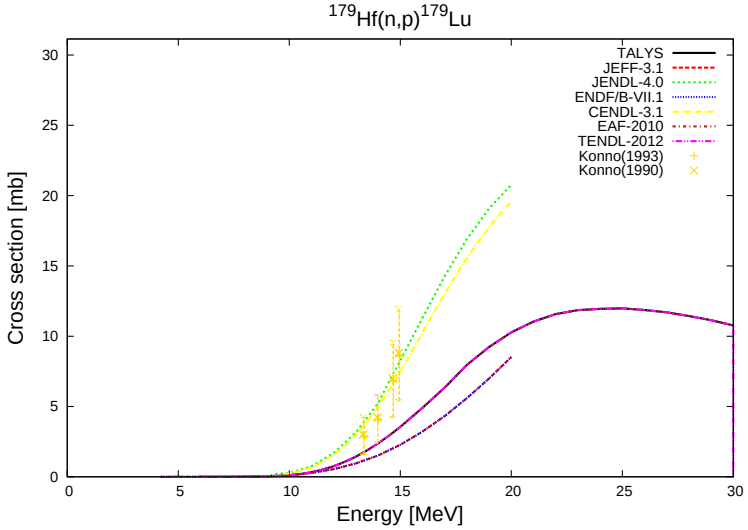

^{174}Yb(n,p)^{174}Tm
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
ChangLinLannn(2008)
XiangzhongKongg(1998)
Sakane(1997)
Sakane(1996)
Antov(1983)
Anders(1982)
Bari(1982)
Gujrathi(1967)
Cross section [mb]
Energy [MeV]

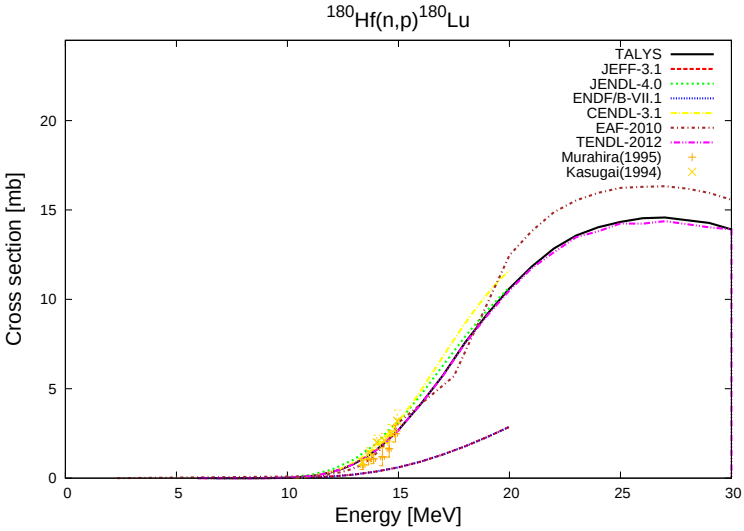

^{176}Yb(n,p)^{176}Tm
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
Sakane(1997)
Sakane(1996)
Antov(1983)
Cross section [mb]
Energy [MeV]

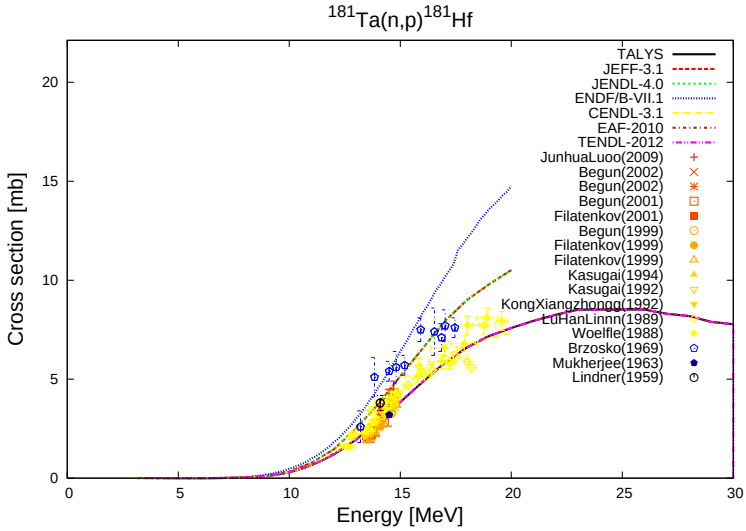

^{175}Lu(n,p)^{175}Yb
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
JunhuaLuoo(2011)
Dzysiuk(2010)
Qaim(1976)
Sato(1975)
Coleman(1959)
Cross section [mb]
Energy [MeV]

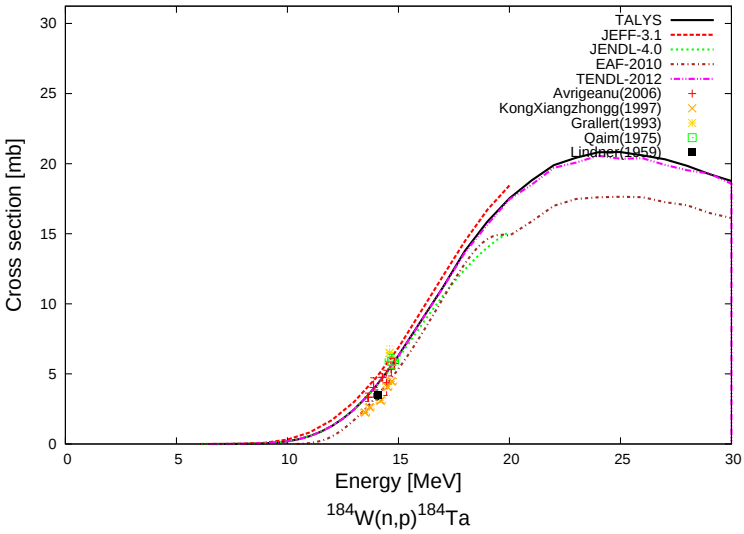

^{178}Hf(n,p)^{178g}Lu
TALYS
EAF-2010
TENDL-2012
Kirov(1993)
Meason(1966)
Cross section [mb]
Energy [MeV]

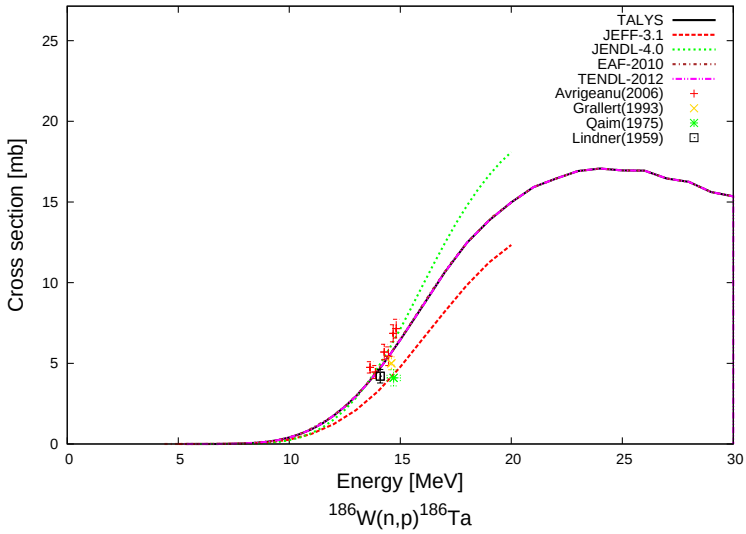

^{178}Hf(n,p)^{178m}Lu
TALYS
EAF-2010
TENDL-2012
Murahira(1995)
Kirov(1993)
Meason(1966)
Cross section [mb]
Energy [MeV]

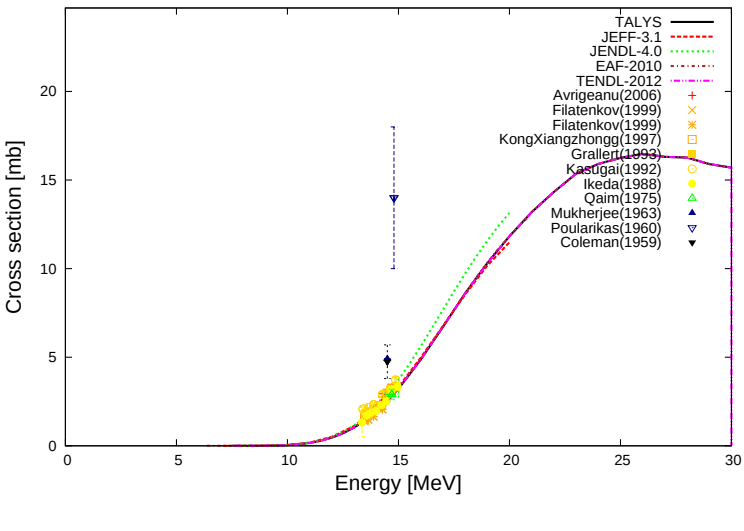

^{179}Hf(n,p)^{179}Lu
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Konno(1993)
Konno(1990)
Cross section [mb]
Energy [MeV]

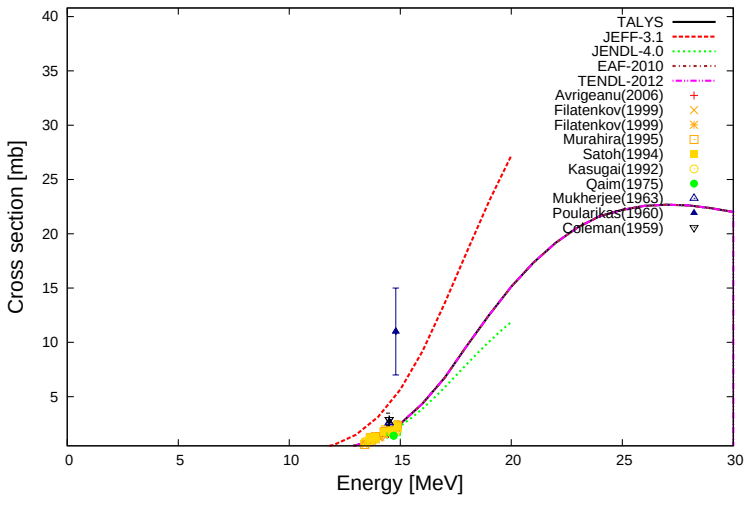

^{180}Hf(n,p)^{180}Lu
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Murahira(1995)
Kasugai(1994)
Cross section [mb]
Energy [MeV]

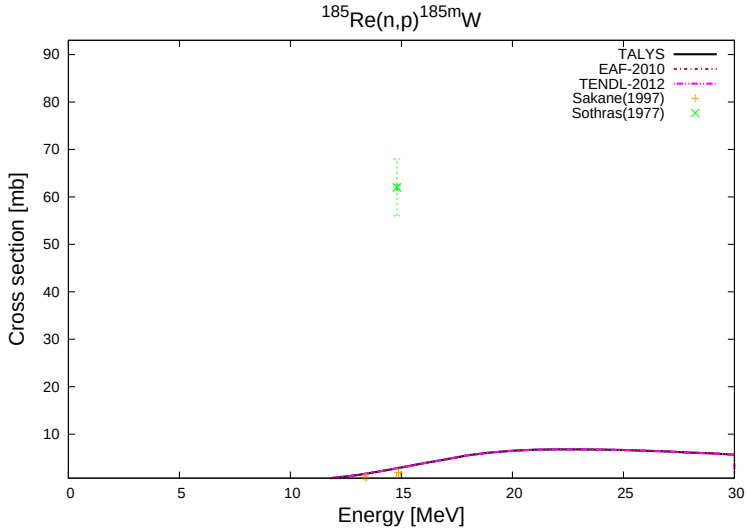

^{181}Ta(n,p)^{181}Hf
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
JunhuaLuoo(2009)
Begun(2002)
Begun(2002)
Begun(2001)
Filatenkov(2001)
Begun(1999)
Filatenkov(1999)
Filatenkov(1999)
Kasugai(1994)
Kasugai(1992)
KongXiangzhongg(1992)
LuHanLinnn(1989)
Woelfle(1988)
Brzosko(1969)
Mukherjee(1963)
Lindner(1959)
Cross section [mb]
Energy [MeV]

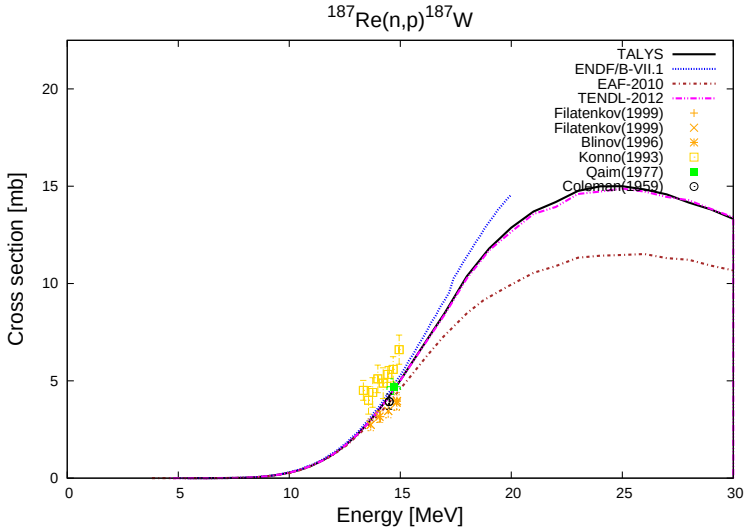

^{182}W(n,p)^{182}Ta
TALYS
JEFF-3.1
JENDL-4.0
EAF-2010
TENDL-2012
Avrigeanu(2006)
KongXiangzhongg(1997)
Grallert(1993)
Qaim(1975)
Lindner(1959)
Cross section [mb]
Energy [MeV]

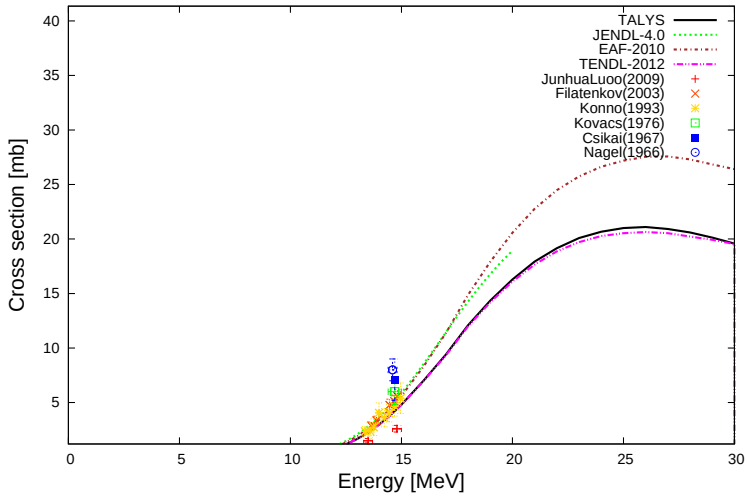

^{183}W(n,p)^{183}Ta
TALYS
JEFF-3.1
JENDL-4.0
EAF-2010
TENDL-2012
Avrigeanu(2006)
Grallert(1993)
Qaim(1975)
Lindner(1959)
Cross section [mb]
Energy [MeV]

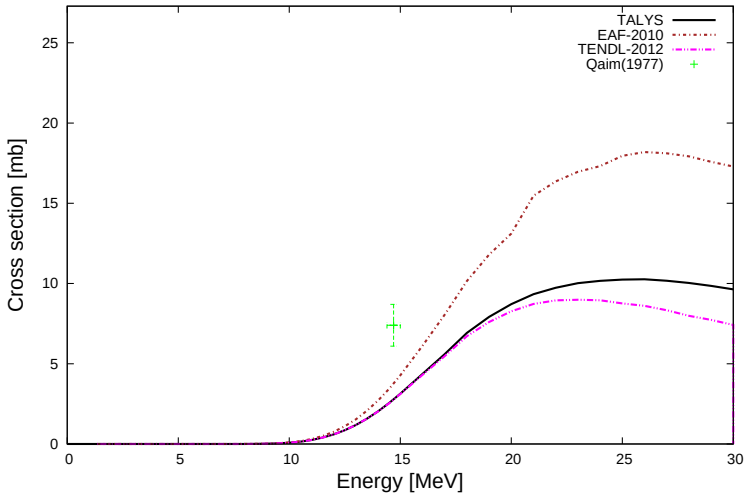

^{184}W(n,p)^{184}Ta
TALYS
JEFF-3.1
JENDL-4.0
EAF-2010
TENDL-2012
Avrigeanu(2006)
Filatenkov(1999)
Filatenkov(1999)
KongXiangzhongg(1997)
Grallert(1993)
Kasugai(1992)
Ikeda(1988)
Qaim(1975)
Mukherjee(1963)
Poularikas(1960)
Coleman(1959)
Cross section [mb]
Energy [MeV]

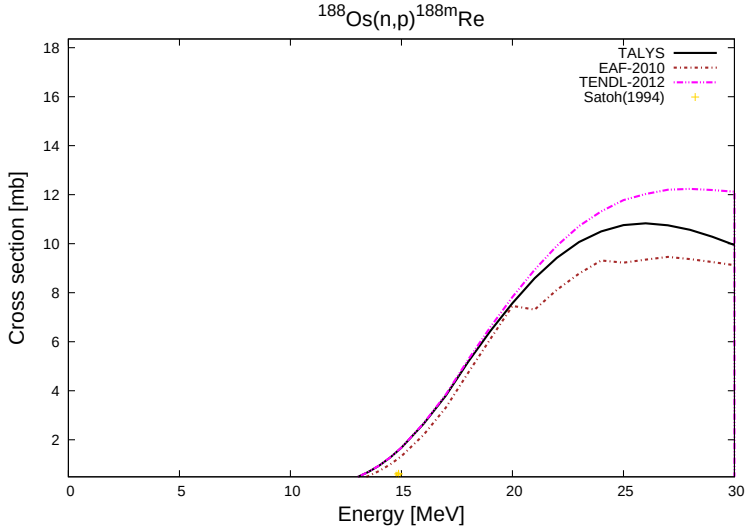

^{186}W(n,p)^{186}Ta
TALYS
JEFF-3.1
JENDL-4.0
EAF-2010
TENDL-2012
Avrigeanu(2006)
Filatenkov(1999)
Filatenkov(1999)
Murahira(1995)
Satoh(1994)
Kasugai(1992)
Qaim(1975)
Mukherjee(1963)
Poularikas(1960)
Coleman(1959)
Cross section [mb]
Energy [MeV]

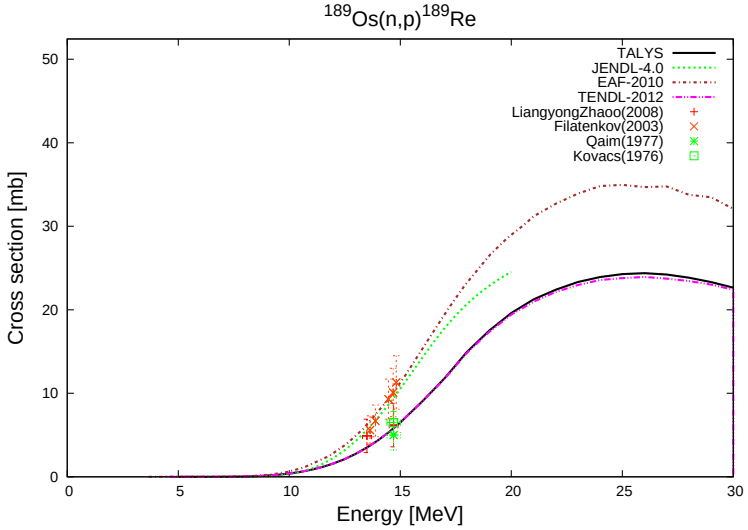

^{185}Re(n,p)^{185m}W
TALYS
EAF-2010
TENDL-2012
Sakane(1997)
Sothras(1977)
Cross section [mb]
Energy [MeV]

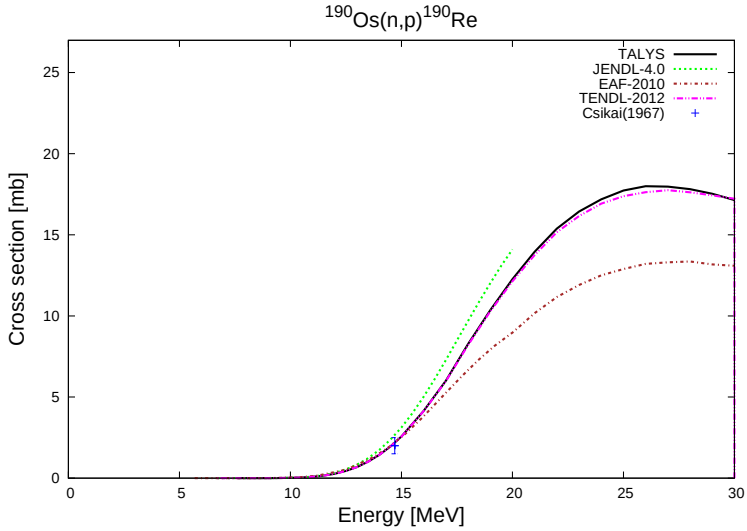

^{187}Re(n,p)^{187}W
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Blinov(1996)
Konno(1993)
Qaim(1977)
Coleman(1959)
Cross section [mb]
Energy [MeV]

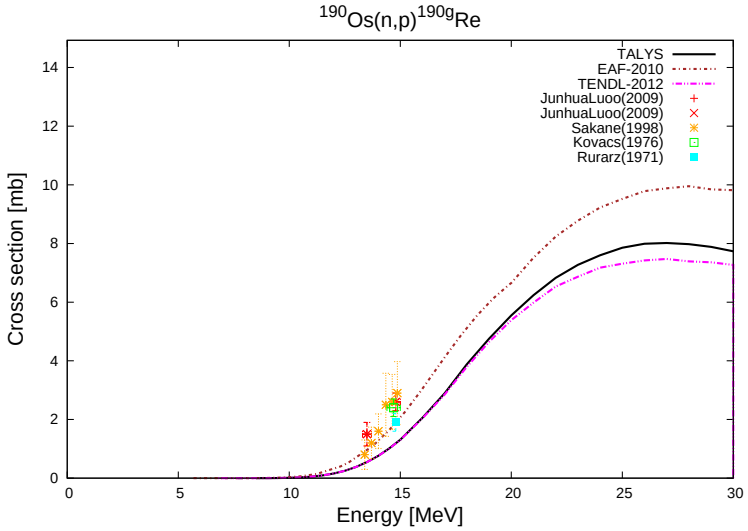

^{188}Os(n,p)^{188}Re
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
JunhuaLuoo(2009)
Filatenkov(2003)
Konno(1993)
Kovacs(1976)
Csikai(1967)
Nagel(1966)
Cross section [mb]
Energy [MeV]

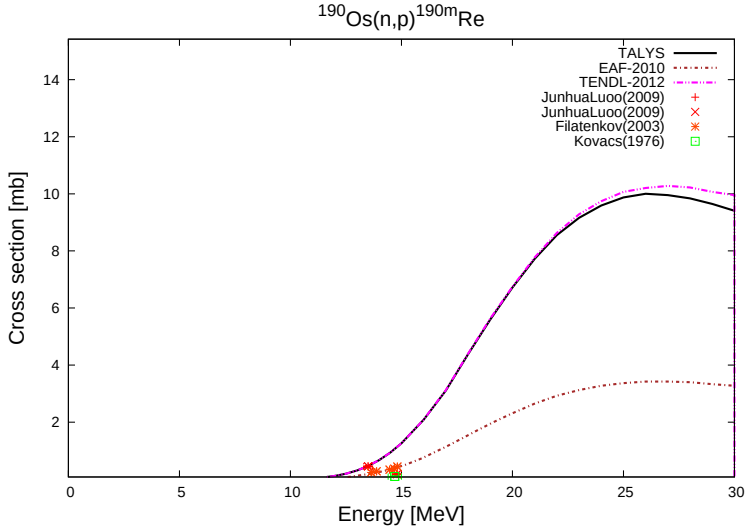

^{188}Os(n,p)^{188g}Re
TALYS
EAF-2010
TENDL-2012
Qaim(1977)
Cross section [mb]
Energy [MeV]

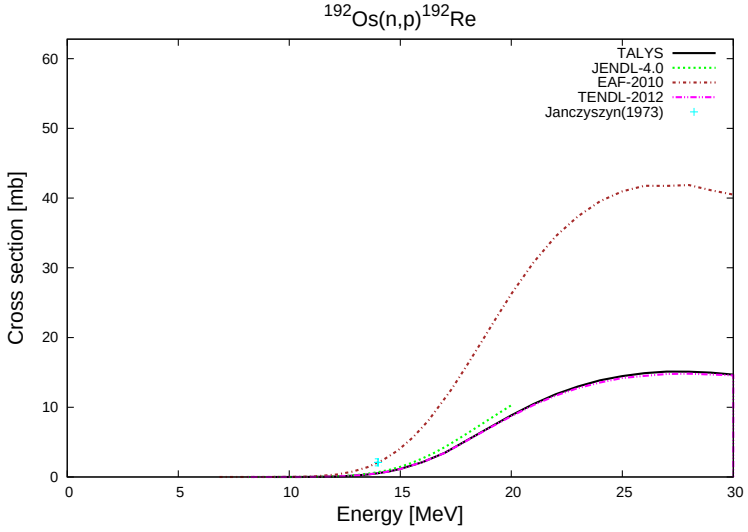

^{188}Os(n,p)^{188m}Re
TALYS
EAF-2010
TENDL-2012
Satoh(1994)
Cross section [mb]
Energy [MeV]

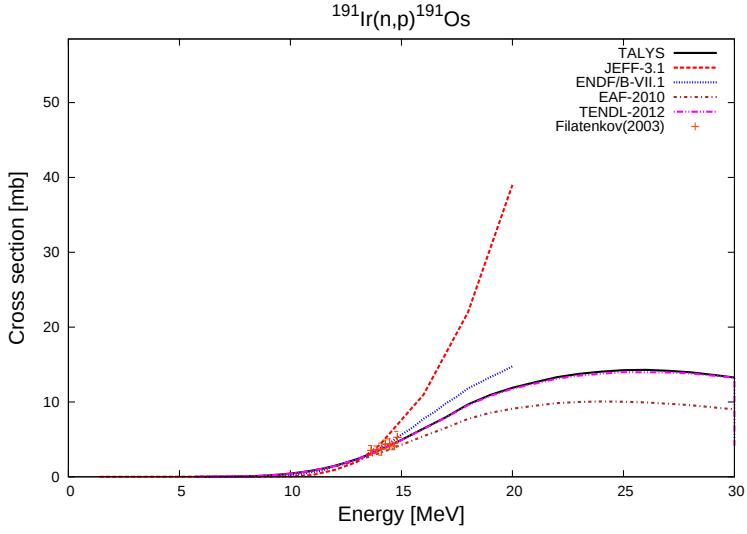

^{189}Os(n,p)^{189}Re
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
LiangyongZhaoo(2008)
Filatenkov(2003)
Qaim(1977)
Kovacs(1976)
Cross section [mb]
Energy [MeV]

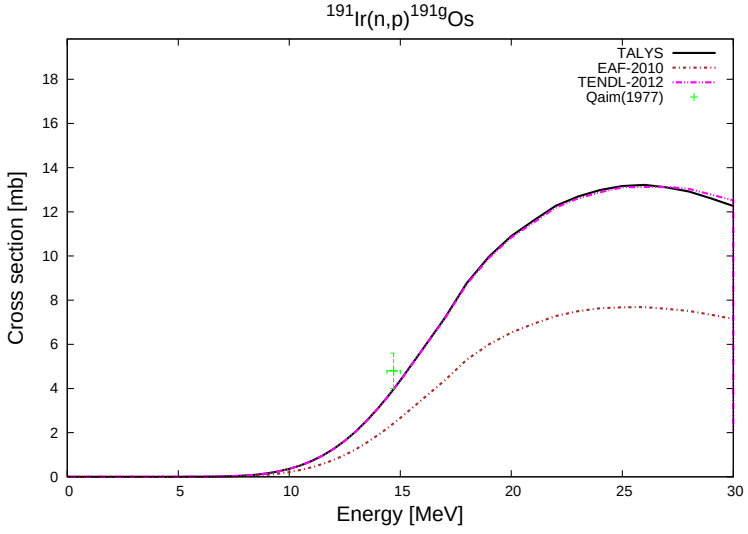

^{190}Os(n,p)^{190}Re
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
Csikai(1967)
Cross section [mb]
Energy [MeV]

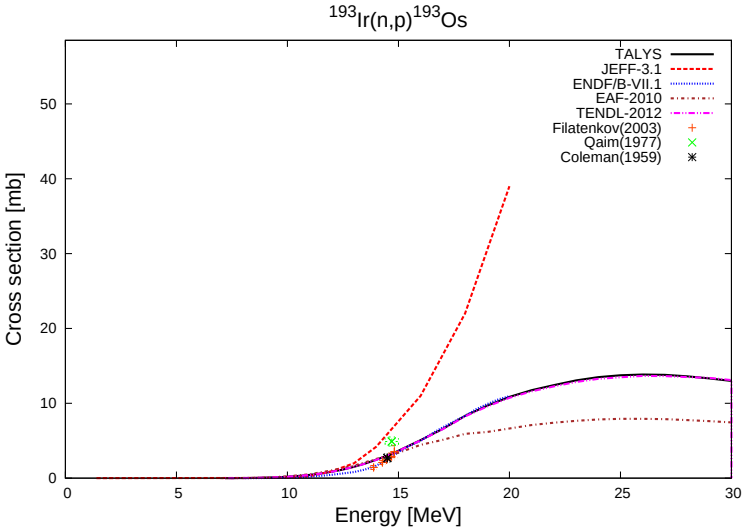

^{190}Os(n,p)^{190g}Re
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2009)
JunhuaLuoo(2009)
Sakane(1998)
Kovacs(1976)
Rurarz(1971)
Cross section [mb]
Energy [MeV]

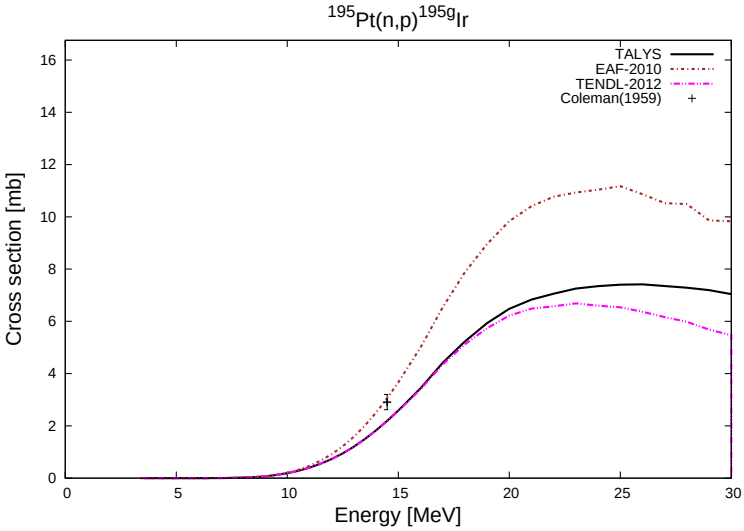

^{190}Os(n,p)^{190m}Re
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2009)
JunhuaLuoo(2009)
Filatenkov(2003)
Kovacs(1976)
Cross section [mb]
Energy [MeV]

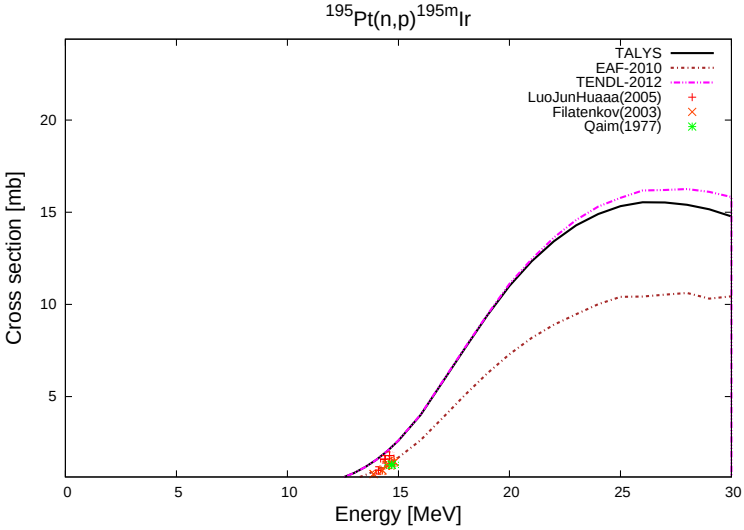

^{192}Os(n,p)^{192}Re
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
Janczyszyn(1973)
Cross section [mb]
Energy [MeV]

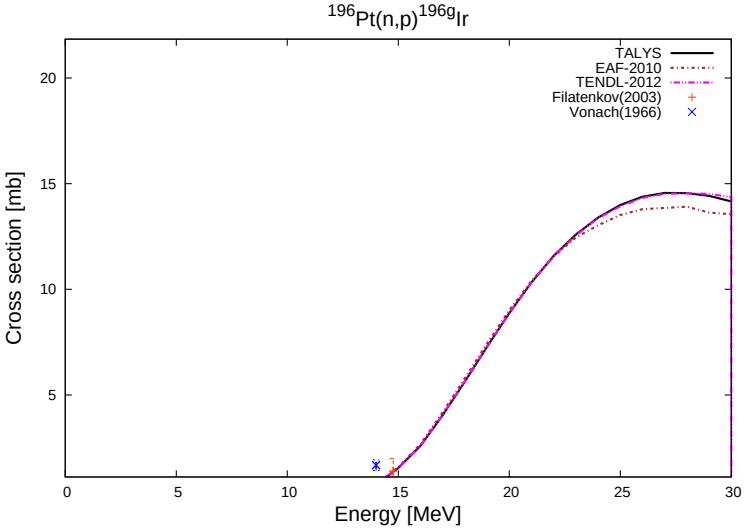

^{191}Ir(n,p)^{191}Os
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(2003)
Cross section [mb]
Energy [MeV]

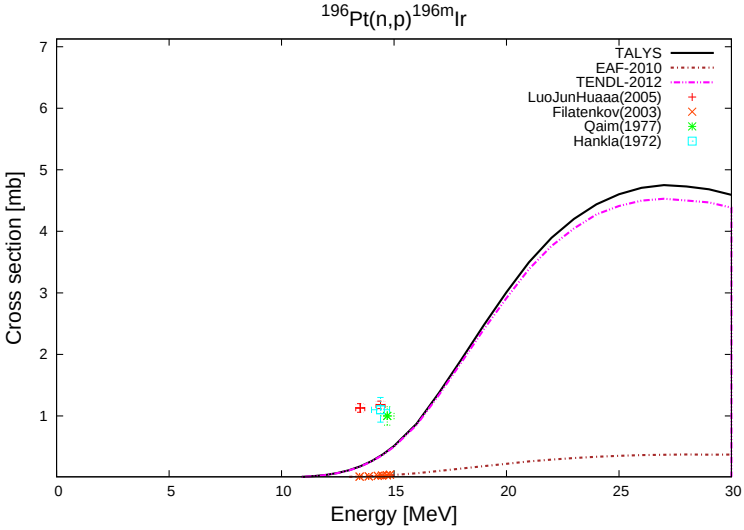

^{191}Ir(n,p)^{191g}Os
TALYS
EAF-2010
TENDL-2012
Qaim(1977)
Cross section [mb]
Energy [MeV]

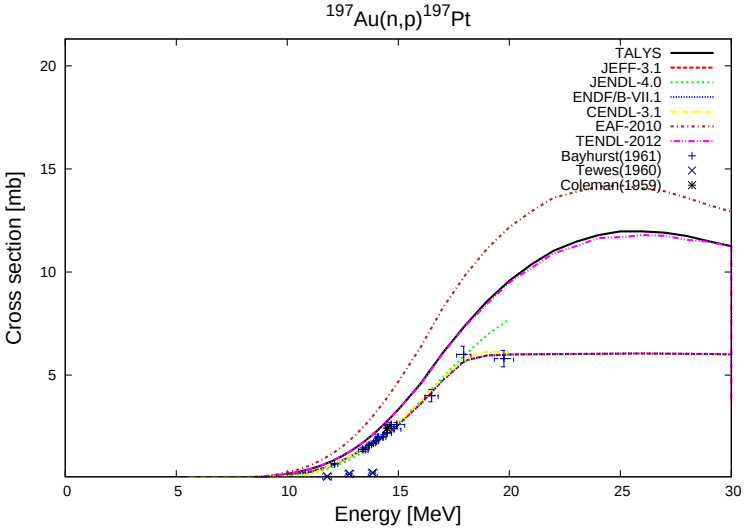

193Ir(n,p)193Os
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(2003)
Qaim(1977)
Coleman(1959)
Cross section [mb]
Energy [MeV]

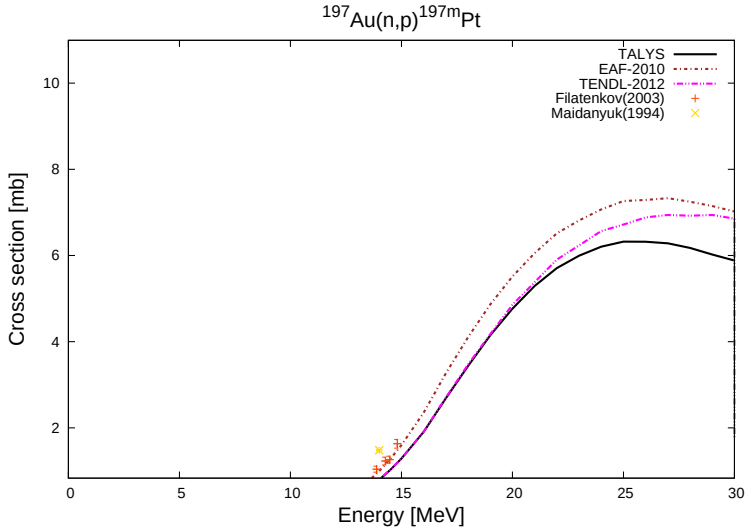

195Pt(n,p)195gIr
TALYS
EAF-2010
TENDL-2012
Coleman(1959)
Cross section [mb]
Energy [MeV]

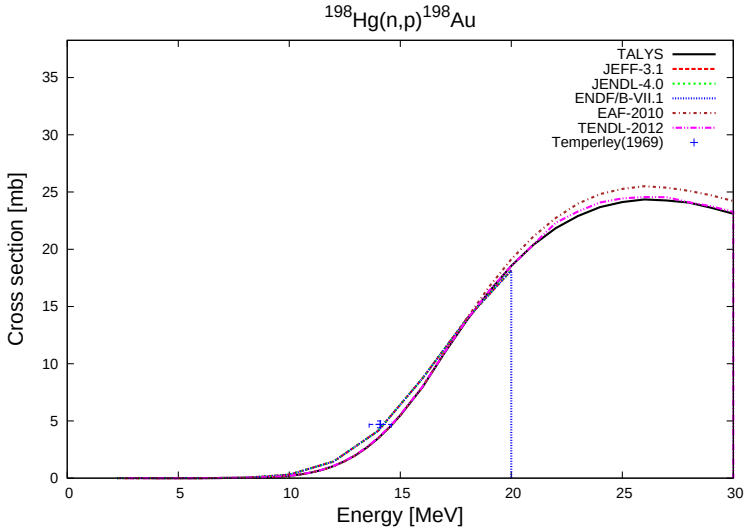

195Pt(n,p)195mIr
TALYS
EAF-2010
TENDL-2012
LuoJunHuaaa(2005)
Filatenkov(2003)
Qaim(1977)
Cross section [mb]
Energy [MeV]

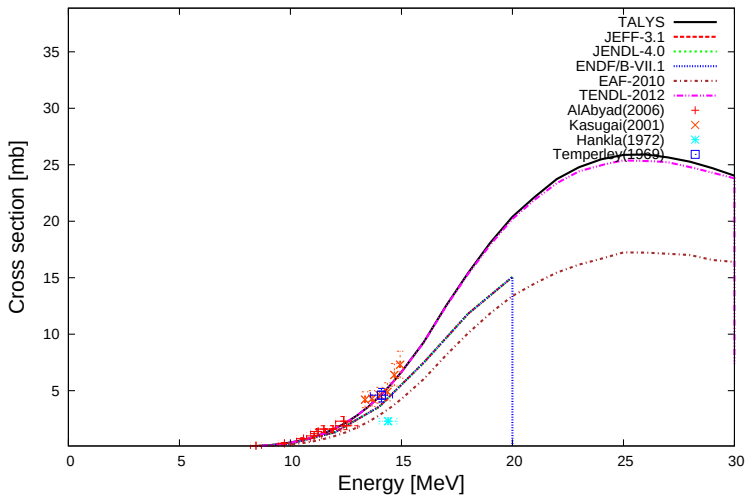

196Pt(n,p)196gIr
TALYS
EAF-2010
TENDL-2012
Filatenkov(2003)
Vonach(1966)
Cross section [mb]
Energy [MeV]

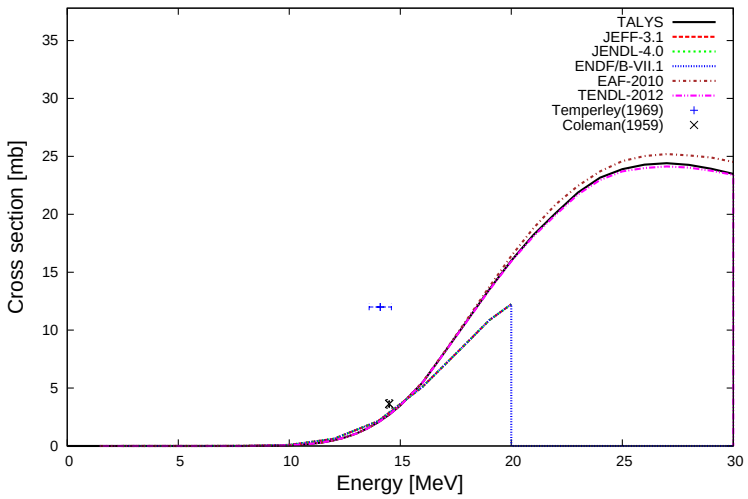

196Pt(n,p)196mIr
TALYS
EAF-2010
TENDL-2012
LuoJunHuaaa(2005)
Filatenkov(2003)
Qaim(1977)
Hankla(1972)
Cross section [mb]
Energy [MeV]

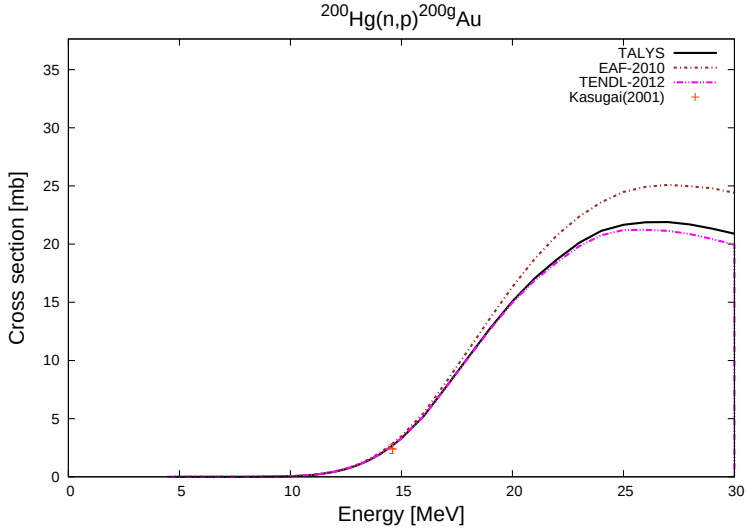

197Au(n,p)197Pt
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Bayhurst(1961)
Tewes(1960)
Coleman(1959)
Cross section [mb]
Energy [MeV]

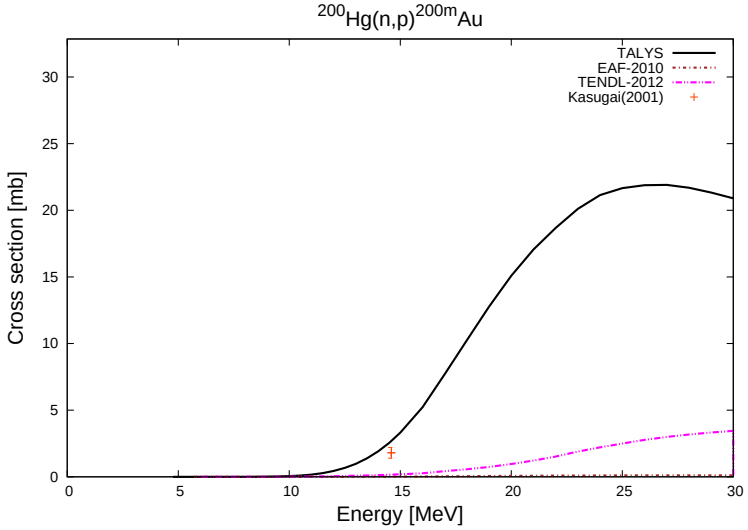

^{197}Au(n,p)^{197m}Pt
TALYS
EAF-2010
TENDL-2012
Filatenkov(2003)
Maidanyuk(1994)
Cross section [mb]
Energy [MeV]

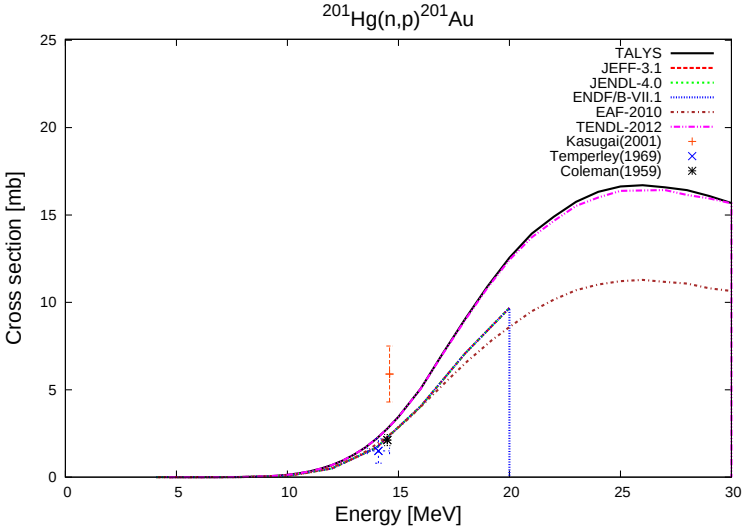

^{198}Hg(n,p)^{198}Au
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Temperley(1969)
Cross section [mb]
Energy [MeV]

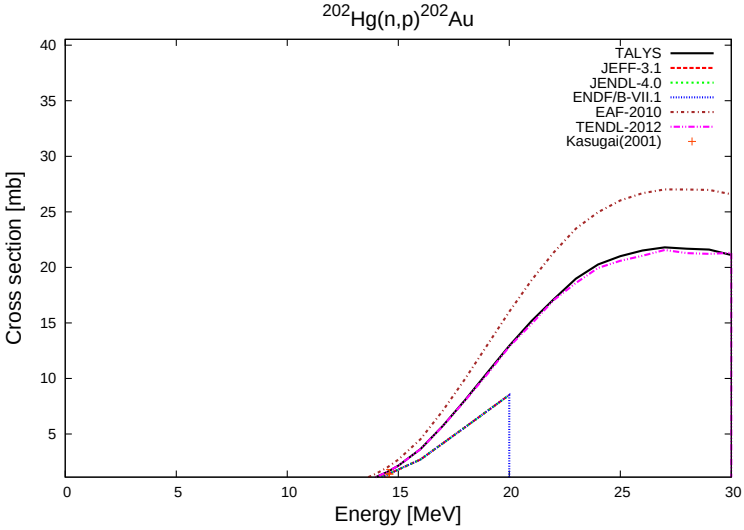

^{199}Hg(n,p)^{199}Au
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
AlAbyad(2006)
Kasugai(2001)
Hankla(1972)
Temperley(1969)
Cross section [mb]
Energy [MeV]

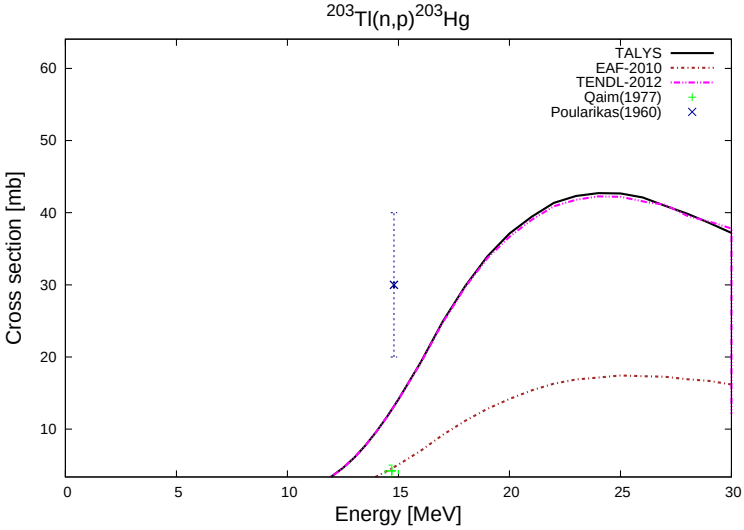

^{200}Hg(n,p)^{200}Au
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Temperley(1969)
Coleman(1959)
Cross section [mb]
Energy [MeV]

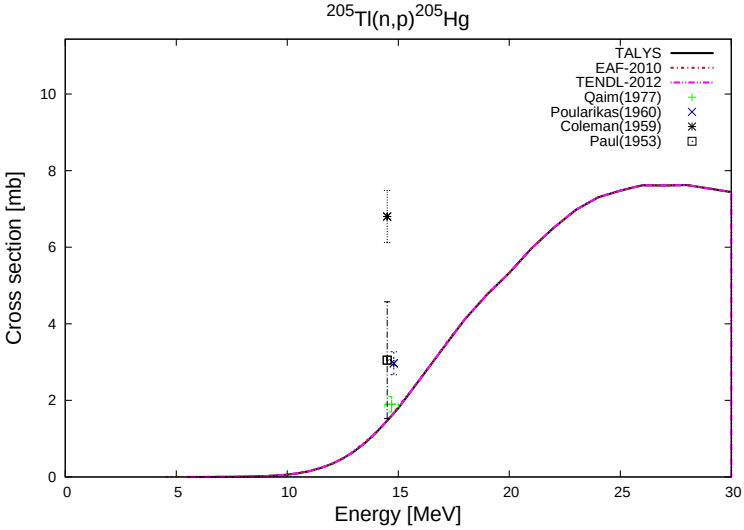

^{200}Hg(n,p)^{200g}Au
TALYS
EAF-2010
TENDL-2012
Kasugai(2001)
Cross section [mb]
Energy [MeV]

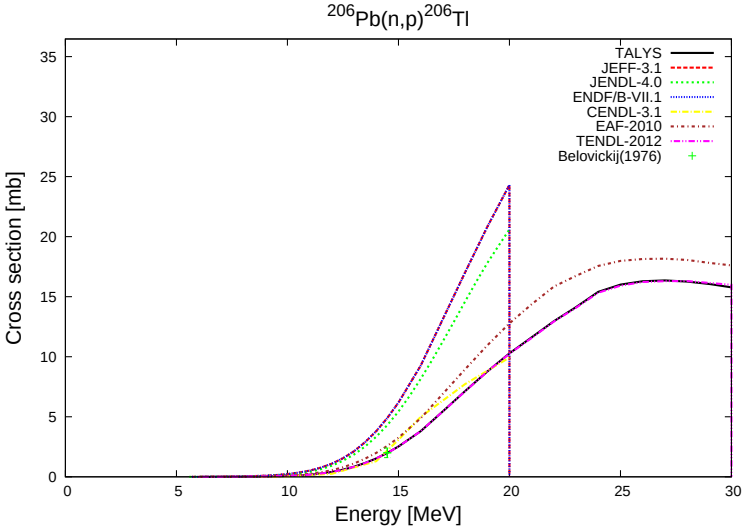

^{200}Hg(n,p)^{200m}Au
TALYS
EAF-2010
TENDL-2012
Kasugai(2001)
Cross section [mb]
Energy [MeV]

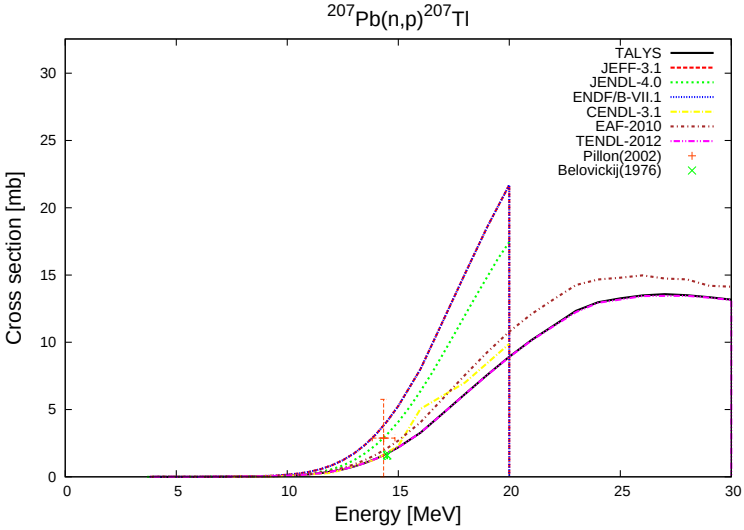

^{201}Hg(n,p)^{201}Au
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Kasugai(2001)
Temperley(1969)
Coleman(1959)
Cross section [mb]
Energy [MeV]

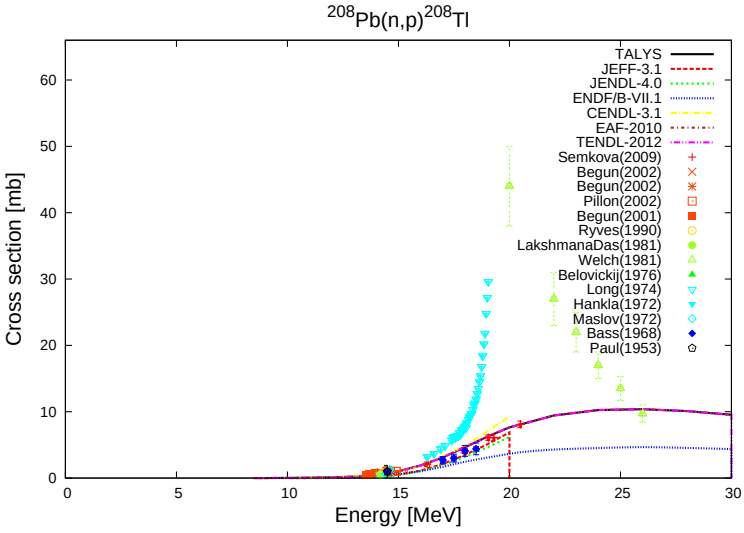

^{202}Hg(n,p)^{202}Au
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Kasugai(2001)
Cross section [mb]
Energy [MeV]

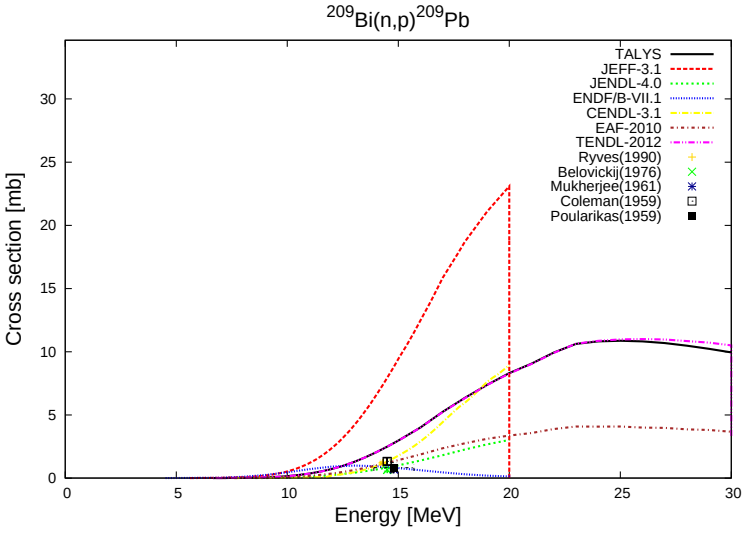

^{203}Tl(n,p)^{203}Hg
TALYS
EAF-2010
TENDL-2012
Qaim(1977)
Poularikas(1960)
Cross section [mb]
Energy [MeV]

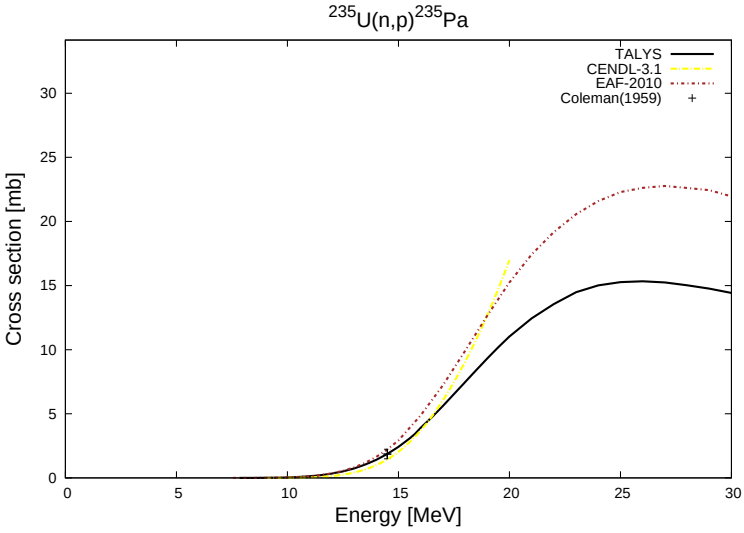

^{205}Tl(n,p)^{205}Hg
TALYS
EAF-2010
TENDL-2012
Qaim(1977)
Poularikas(1960)
Coleman(1959)
Paul(1953)
Cross section [mb]
Energy [MeV]

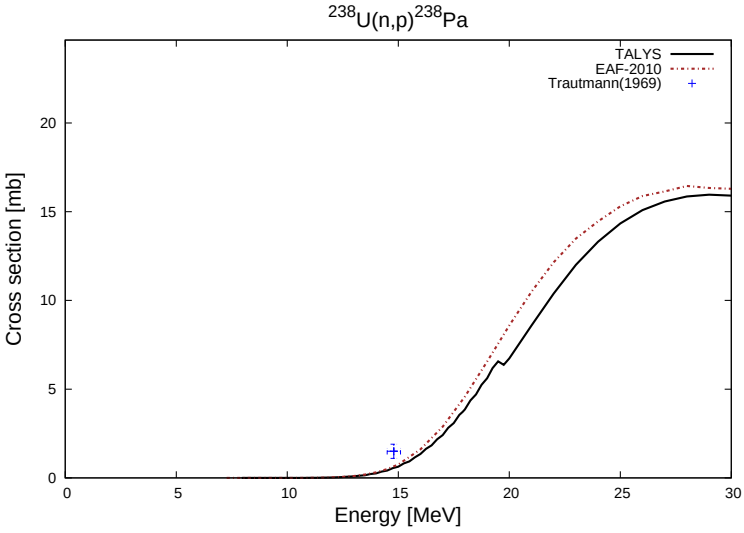

^{206}Pb(n,p)^{206}Tl
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Belovickij(1976)
Cross section [mb]
Energy [MeV]

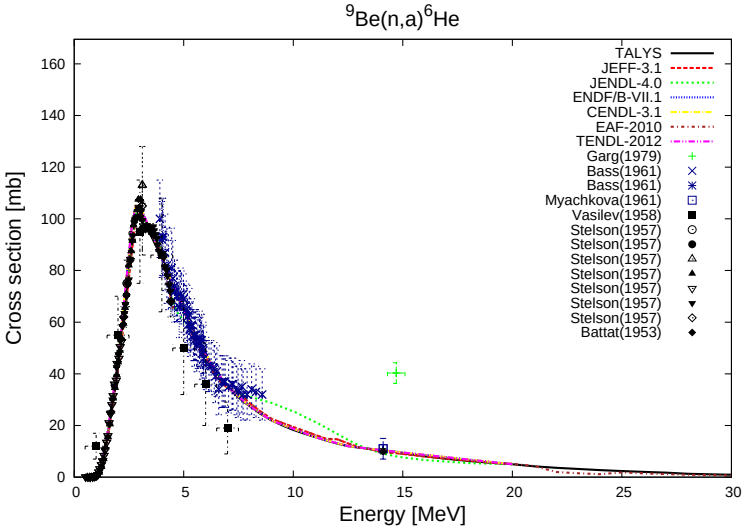

^{207}Pb(n,p)^{207}Tl
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Pillon(2002)
Belovickij(1976)
Cross section [mb]
Energy [MeV]

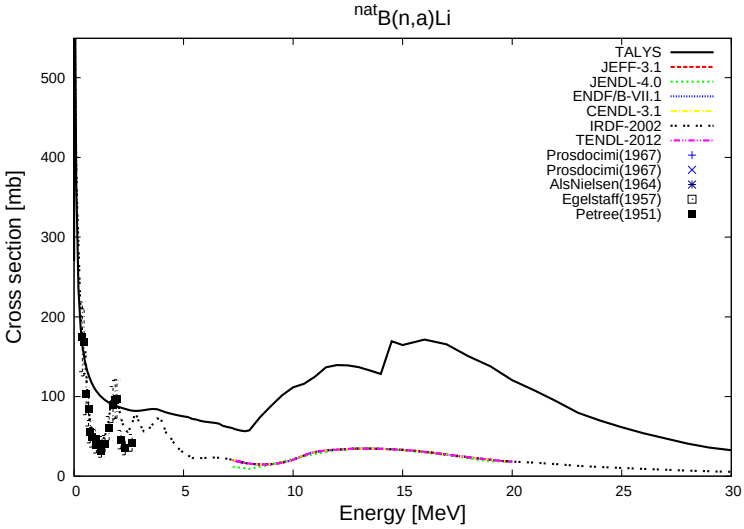

^{208}Pb(n,p)^{208}Tl
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Semkova(2009)
Begun(2002)
Begun(2002)
Pillon(2002)
Begun(2001)
Ryves(1990)
LakshmanaDas(1981)
Welch(1981)
Belovickij(1976)
Long(1974)
Hankla(1972)
Maslov(1972)
Bass(1968)
Paul(1953)

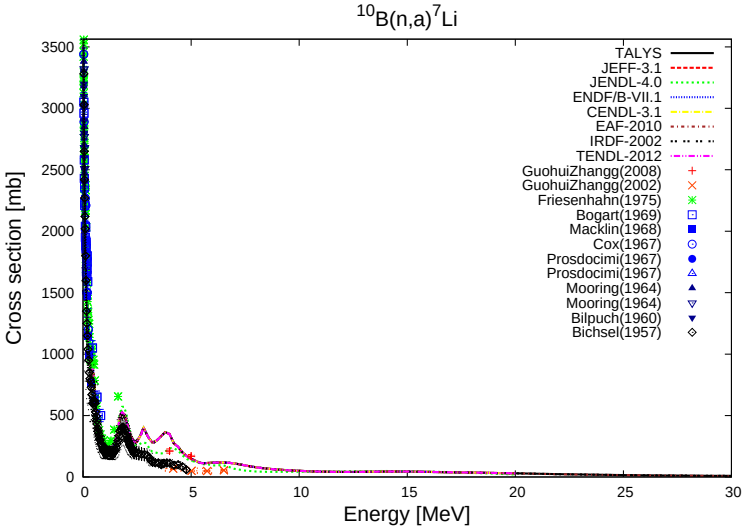

^{209}Bi(n,p)^{209}Pb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Ryves(1990)
Belovickij(1976)
Mukherjee(1961)
Coleman(1959)
Poularikas(1959)

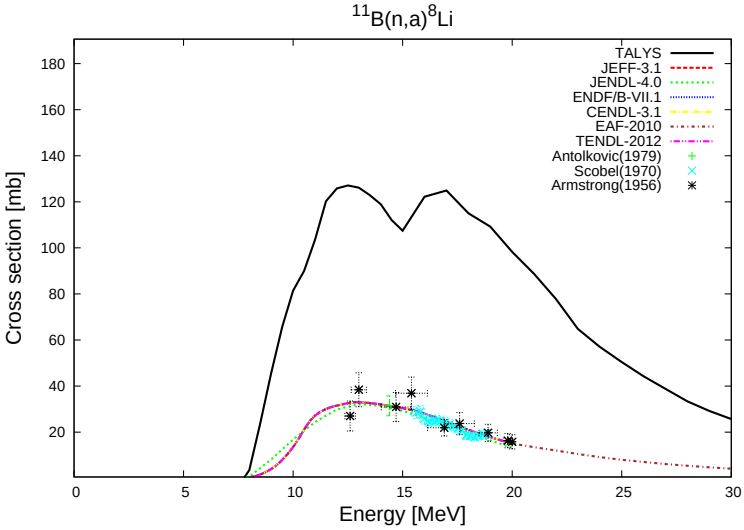

^{235}U(n,p)^{235}Pa
Cross section [mb]
Energy [MeV]
TALYS
CENDL-3.1
EAF-2010
Coleman(1959)

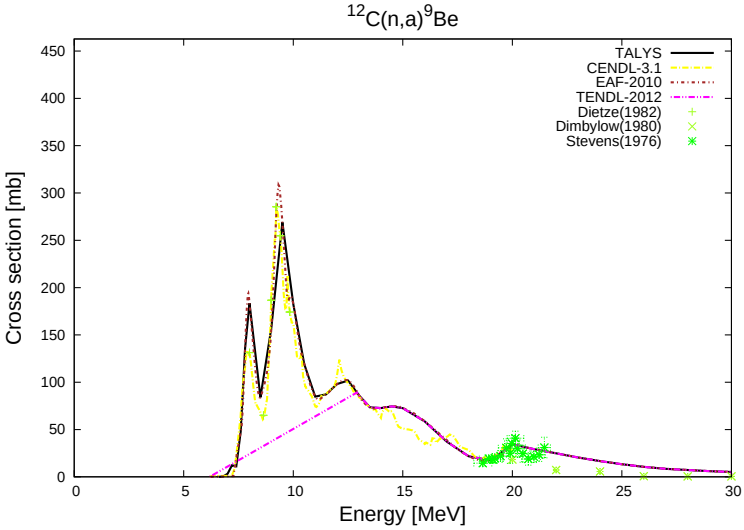

^{238}U(n,p)^{238}Pa
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
Trautmann(1969)

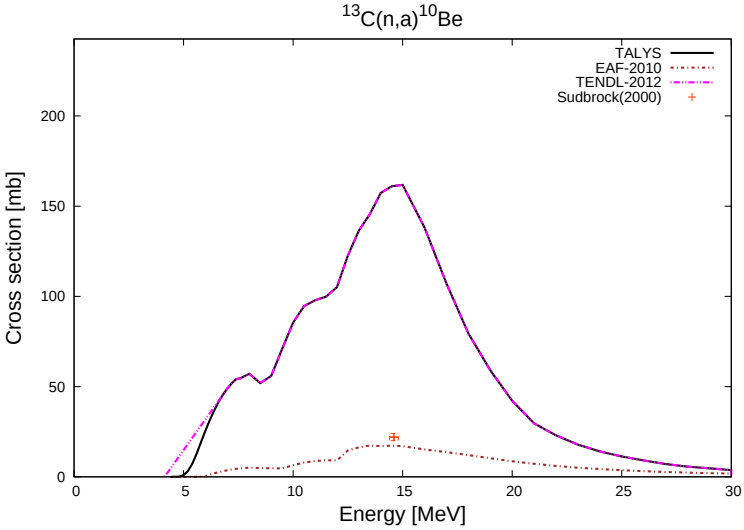

^{9}Be(n,a)^{6}He
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Garg(1979)
Bass(1961)
Bass(1961)
Myachkova(1961)
Vasilev(1958)
Stelson(1957)
Stelson(1957)
Stelson(1957)
Stelson(1957)
Stelson(1957)
Stelson(1957)
Stelson(1957)
Battat(1953)

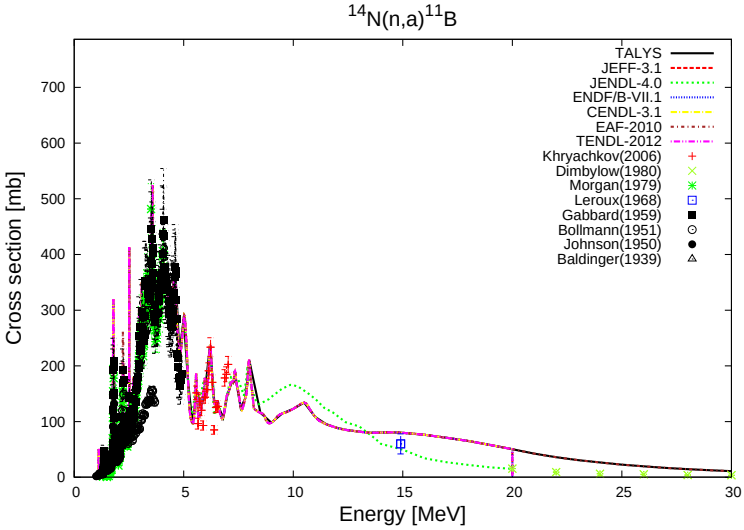

^{nat}B(n,a)Li
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
IRDF-2002
TENDL-2012
Prosdocimi(1967)
Prosdocimi(1967)
AlsNielsen(1964)
Egelstaff(1957)
Petree(1951)

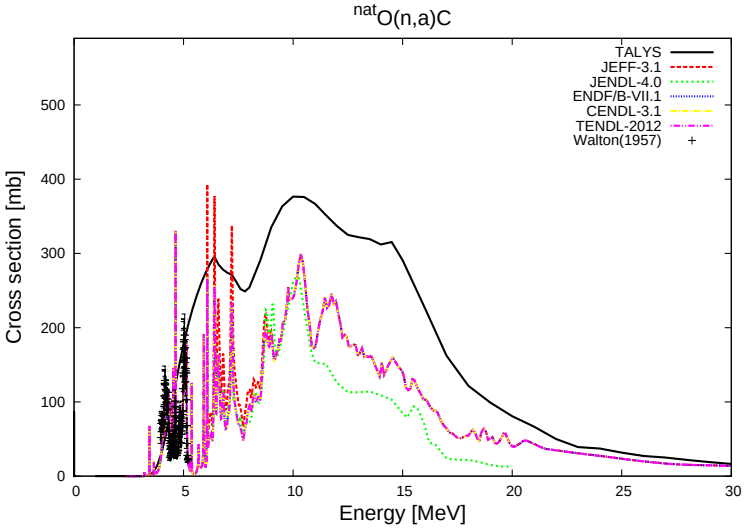

^{10}B(n,a)^{7}Li
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
GuohuiZhangg(2008)
GuohuiZhangg(2002)
Friesenhahn(1975)
Bogart(1969)
Macklin(1968)
Cox(1967)
Prosdocimi(1967)
Prosdocimi(1967)
Mooring(1964)
Mooring(1964)
Bilpuch(1960)
Bichsel(1957)

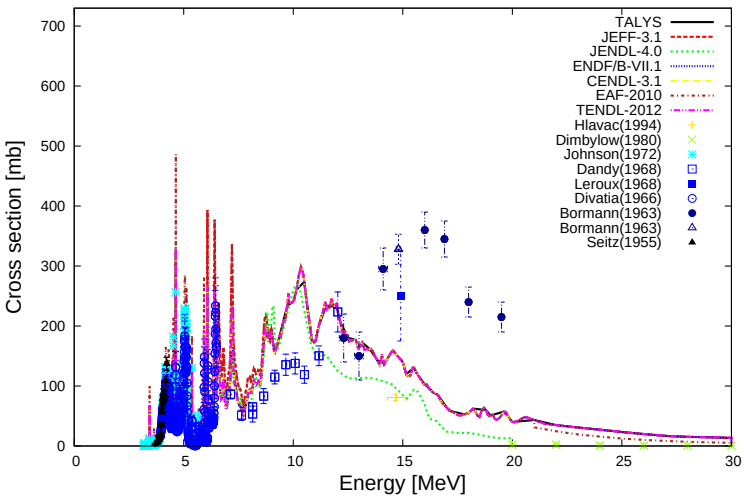

^{11}B(n,a)^{8}Li
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Antolkovic(1979)
Scobel(1970)
Armstrong(1956)

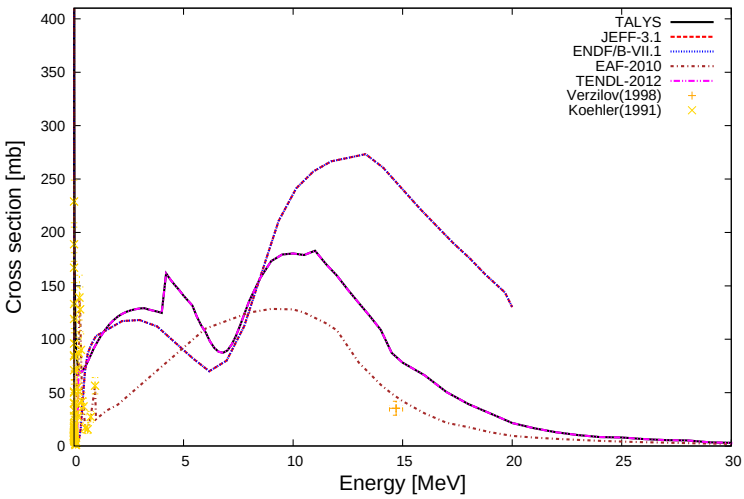

^{12}C(n,a)^{9}Be
Cross section [mb]
Energy [MeV]
TALYS
CENDL-3.1
EAF-2010
TENDL-2012
Dietze(1982)
Dimbylow(1980)
Stevens(1976)

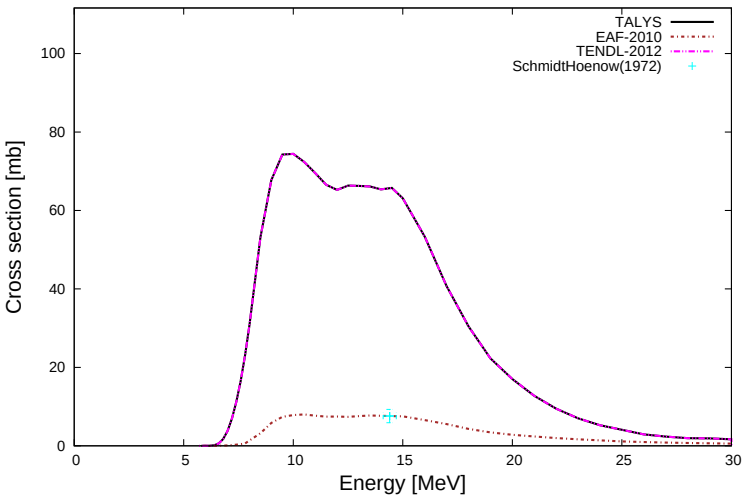

^{13}C(n,a)^{10}Be
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Sudbrock(2000)

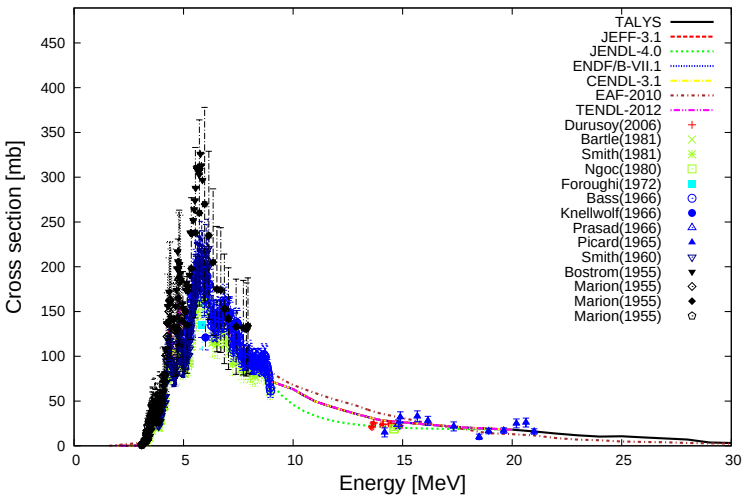

^{14}N(n,a)^{11}B
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Khryachkov(2006)
Dimbylow(1980)
Morgan(1979)
Leroux(1968)
Gabbard(1959)
Bollmann(1951)
Johnson(1950)
Baldinger(1939)

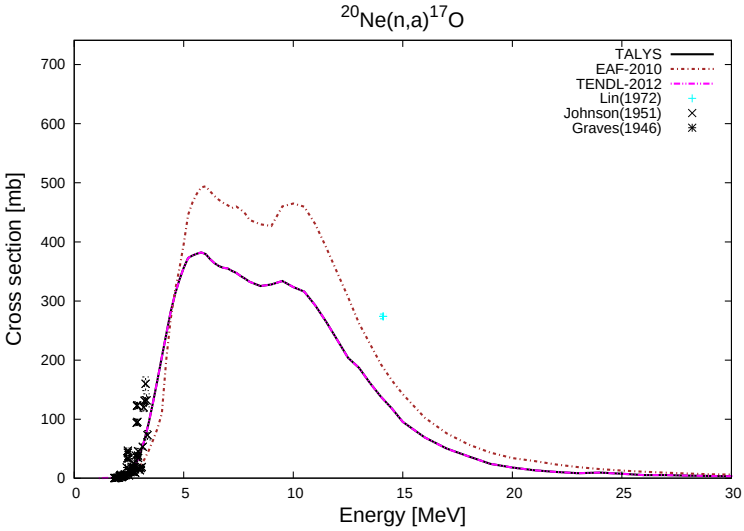

^{nat}O(n,a)C
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Walton(1957)

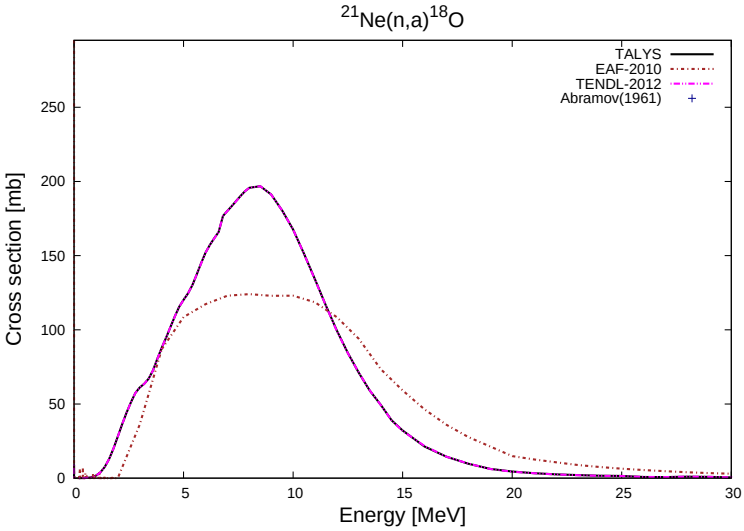

^{16}O(n,a)^{13}C
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Hlavac(1994)
Dimbylow(1980)
Johnson(1972)
Dandy(1968)
Leroux(1968)
Divatia(1966)
Bormann(1963)
Bormann(1963)
Seitz(1955)

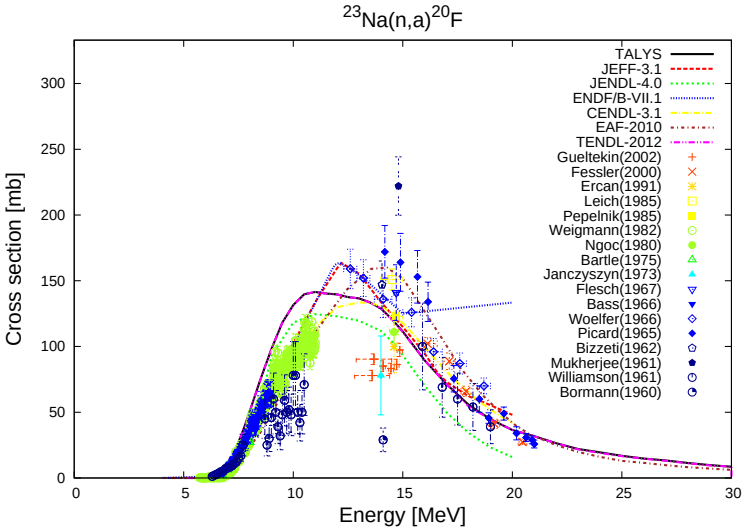

^{17}O(n,a)^{14}C
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Verzilov(1998)
Koehler(1991)

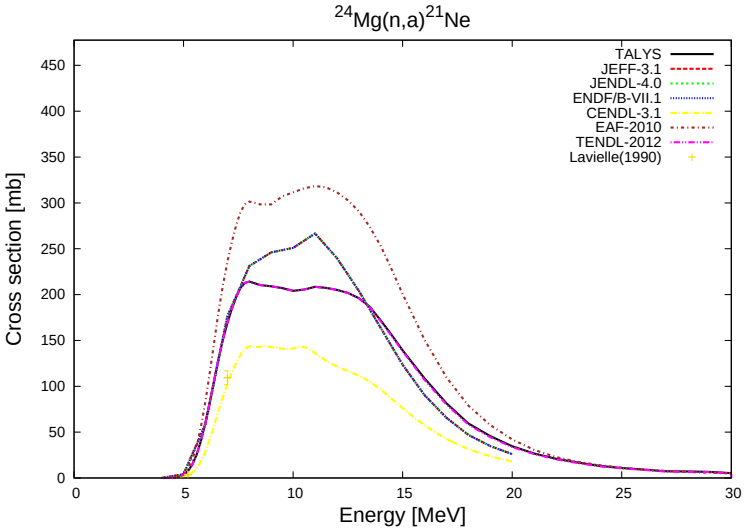

^{18}O(n,a)^{15}C
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
SchmidtHoenow(1972)

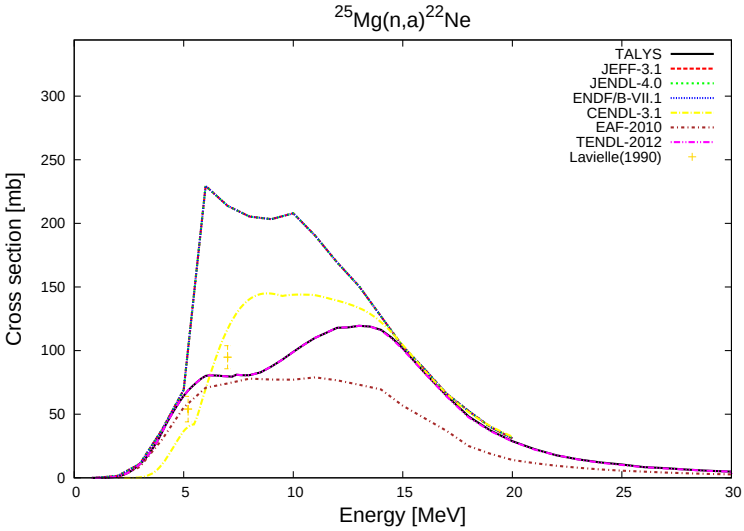

^{19}F(n,a)^{16}N
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Durusoy(2006)
Bartle(1981)
Smith(1981)
Ngoc(1980)
Foroughi(1972)
Bass(1966)
Knellwolf(1966)
Prasad(1966)
Picard(1965)
Smith(1960)
Bostrom(1955)
Marion(1955)
Marion(1955)
Marion(1955)

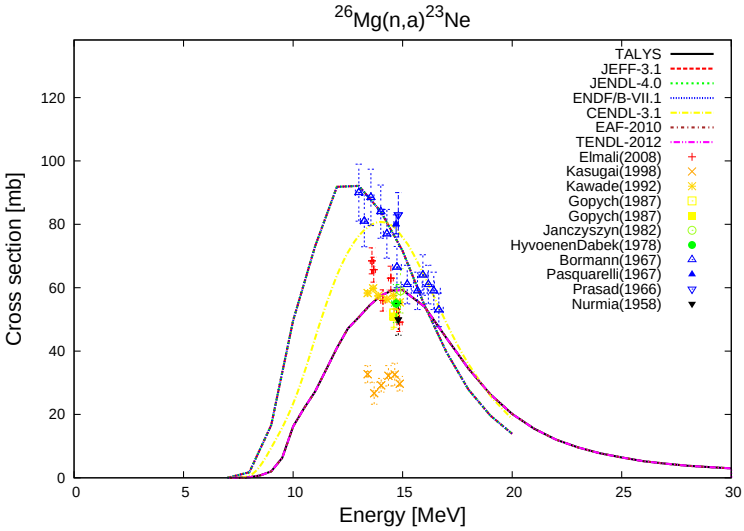

^{20}Ne(n,a)^{17}O
TALYS
EAF-2010
TENDL-2012
Lin(1972)
Johnson(1951)
Graves(1946)
Cross section [mb]
Energy [MeV]

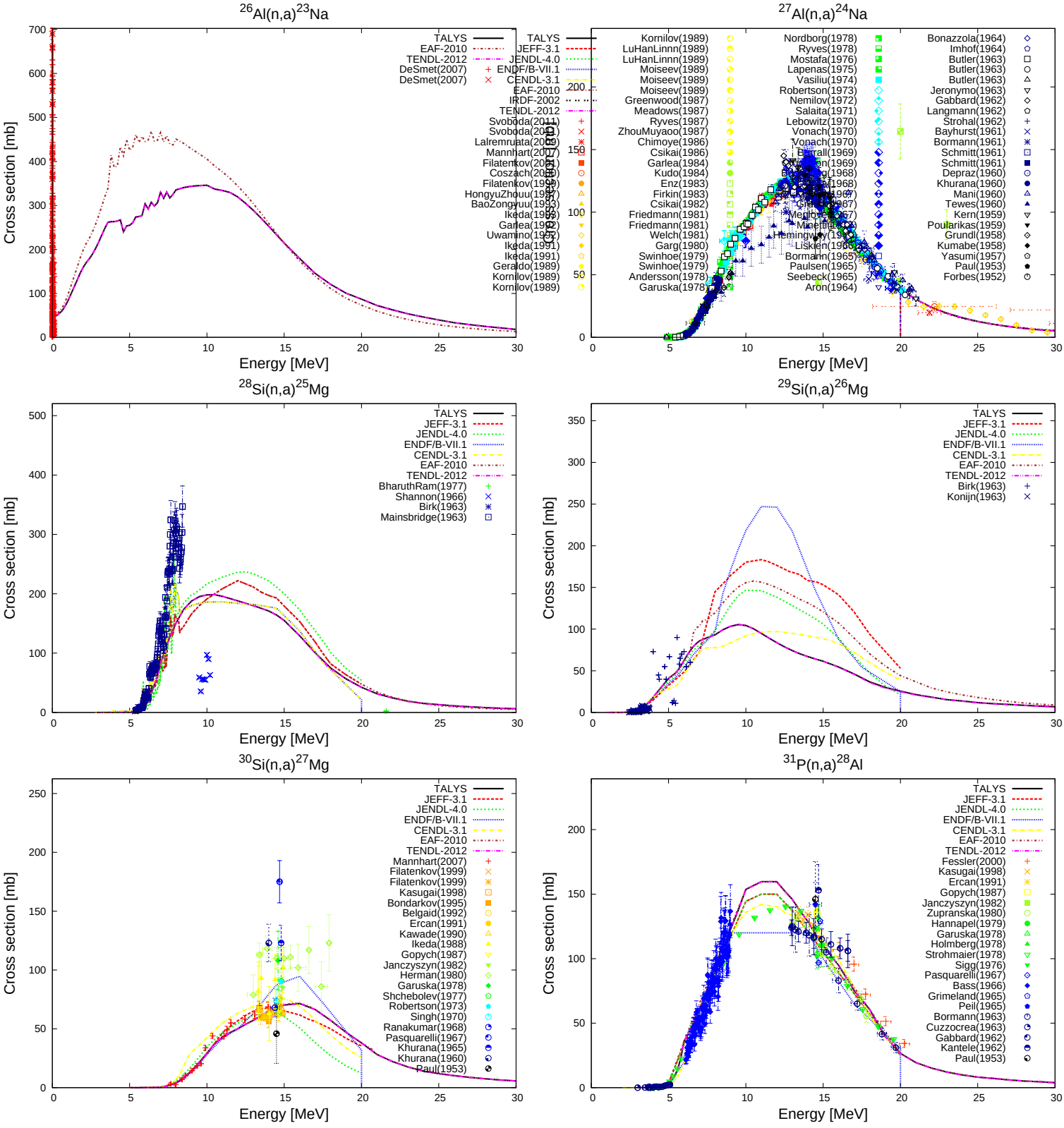

^{21}Ne(n,a)^{18}O
TALYS
EAF-2010
TENDL-2012
Abramov(1961)
Cross section [mb]
Energy [MeV]

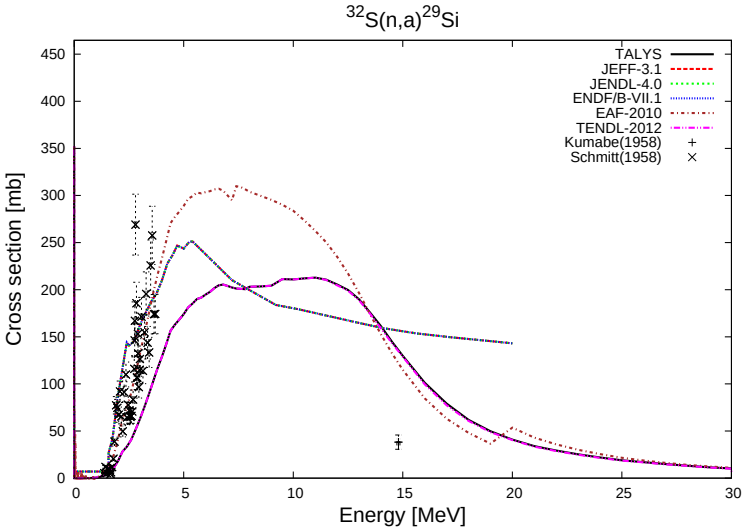

^{23}Na(n,a)^{20}F
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Gueltekin(2002)
Fessler(2000)
Ercan(1991)
Leich(1985)
Pepelnik(1985)
Weigmann(1982)
Ngoc(1980)
Bartle(1975)
Janczyszyn(1973)
Flesch(1967)
Bass(1966)
Woelfer(1966)
Picard(1965)
Bizzeti(1962)
Mukherjee(1961)
Williamson(1961)
Bormann(1960)
Cross section [mb]
Energy [MeV]

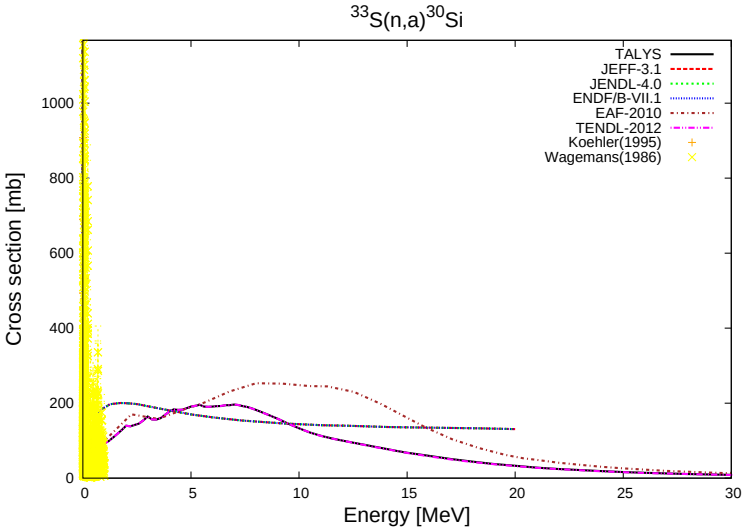

^{24}Mg(n,a)^{21}Ne
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Lavielle(1990)
Cross section [mb]
Energy [MeV]

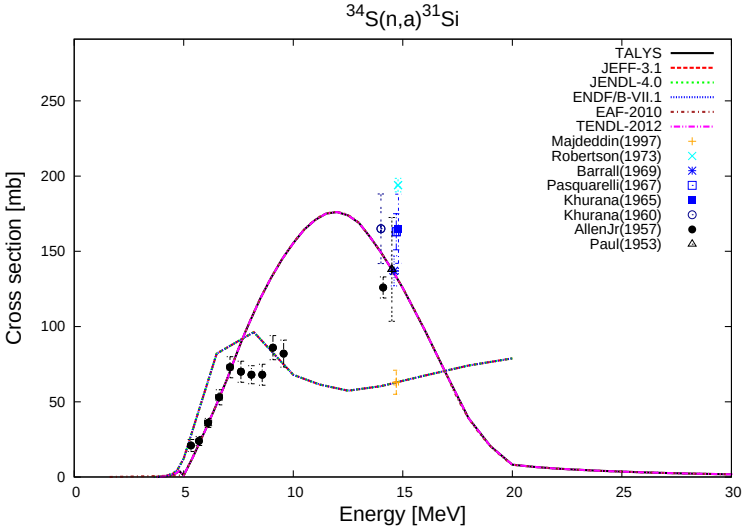

^{25}Mg(n,a)^{22}Ne
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Lavielle(1990)
Cross section [mb]
Energy [MeV]

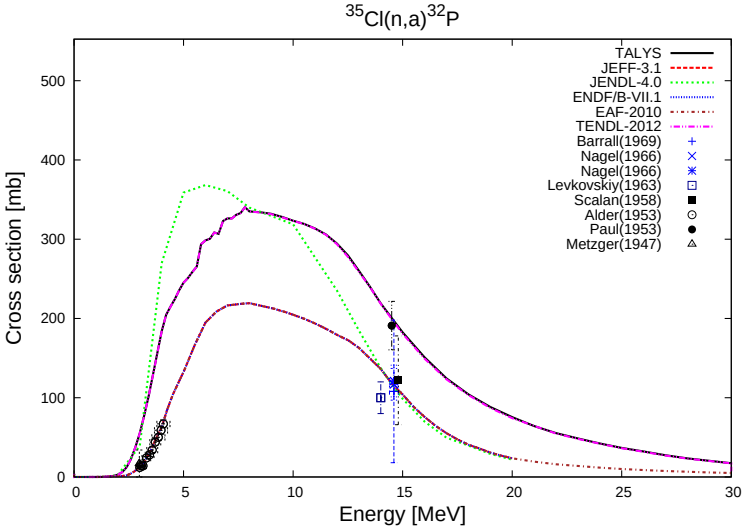

^{26}Mg(n,a)^{23}Ne
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Elmali(2008)
Kasugai(1998)
Kawade(1992)
Gopych(1987)
Gopych(1987)
Janczyszyn(1982)
HyvoenenDabek(1978)
Bormann(1967)
Pasquarelli(1967)
Prasad(1966)
Nurmia(1958)
Cross section [mb]
Energy [MeV]

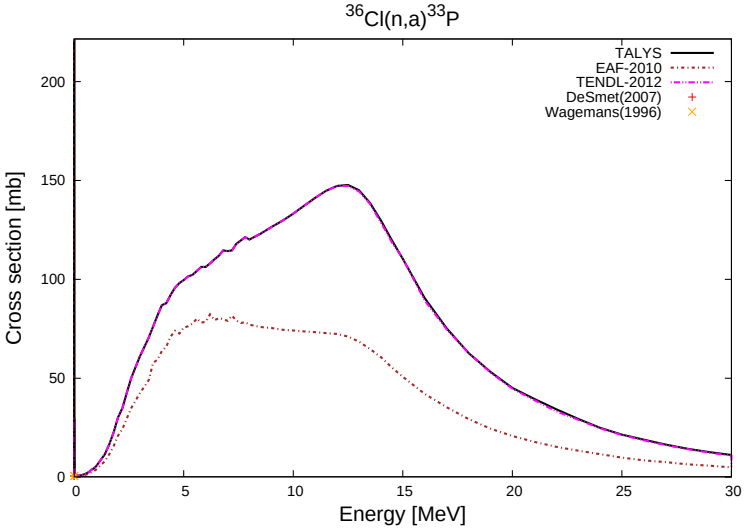

^{26}Al(n,a)^{23}Na
^{27}Al(n,a)^{24}Na
^{28}Si(n,a)^{25}Mg
^{29}Si(n,a)^{26}Mg
^{30}Si(n,a)^{27}Mg
^{31}P(n,a)^{28}Al
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
DeSmet(2007)
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
IRDF-2002
BharuthRam(1977)
Shannon(1966)
Birk(1963)
Mainsbridge(1963)
Konijn(1963)
Mannhart(2007)
Fessler(2000)

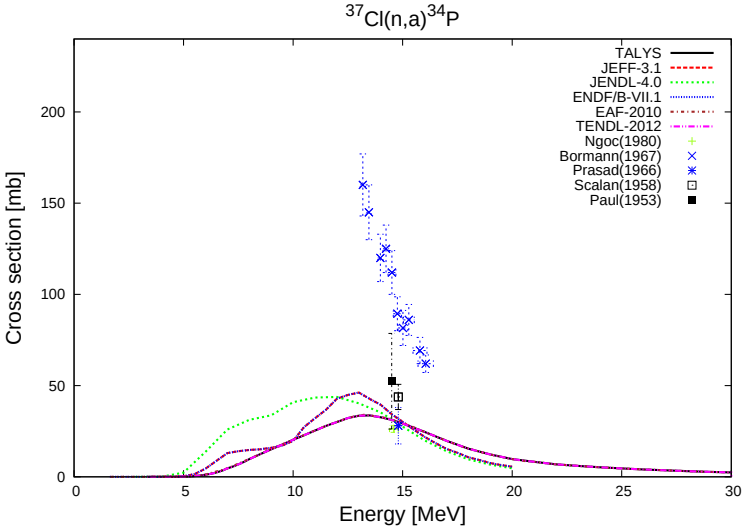

^{32}S(n,a)^{29}Si
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Kumabe(1958)
Schmitt(1958)

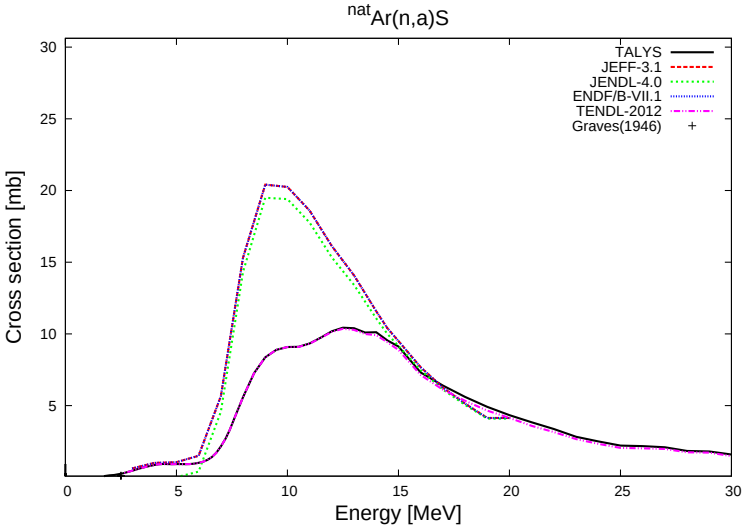

^{33}S(n,a)^{30}Si
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Koehler(1995)
Wagemans(1986)

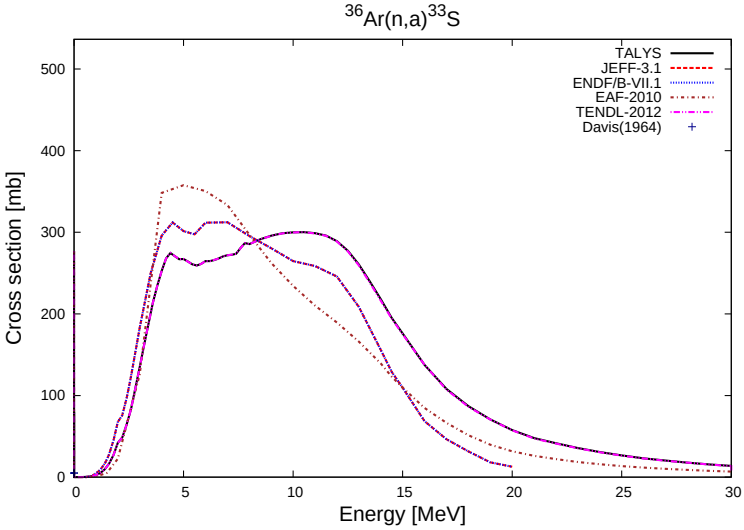

^{34}S(n,a)^{31}Si
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Majdeddin(1997)
Robertson(1973)
Barrall(1969)
Pasquarelli(1967)
Khurana(1965)
Khurana(1960)
AllenJr(1957)
Paul(1953)

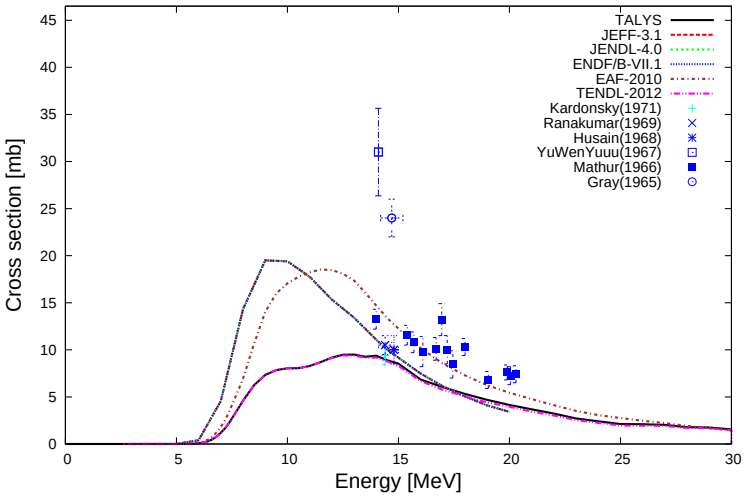

^{35}Cl(n,a)^{32}P
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Barrall(1969)
Nagel(1966)
Nagel(1966)
Levkovskiy(1963)
Scalan(1958)
Alder(1953)
Paul(1953)
Metzger(1947)

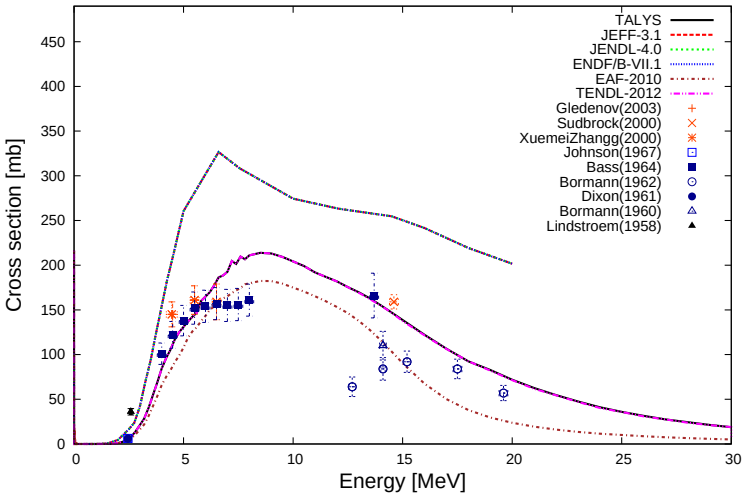

^{36}Cl(n,a)^{33}P
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
DeSmet(2007)
Wagemans(1996)

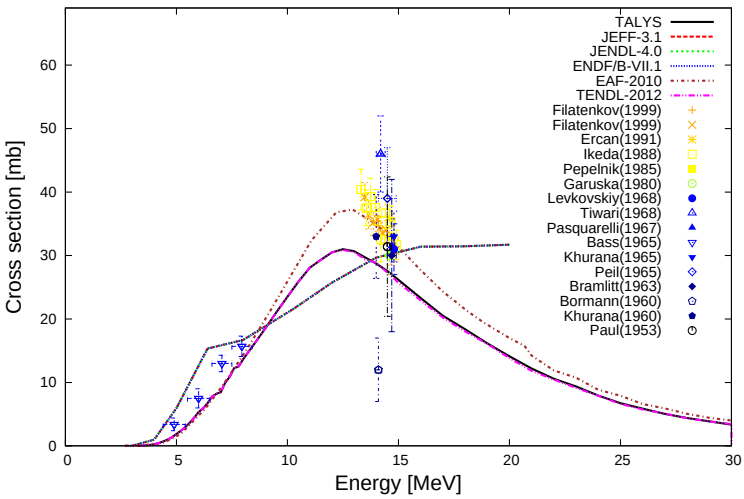

^{37}Cl(n,a)^{34}P
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Ngoc(1980)
Bormann(1967)
Prasad(1966)
Scalan(1958)
Paul(1953)

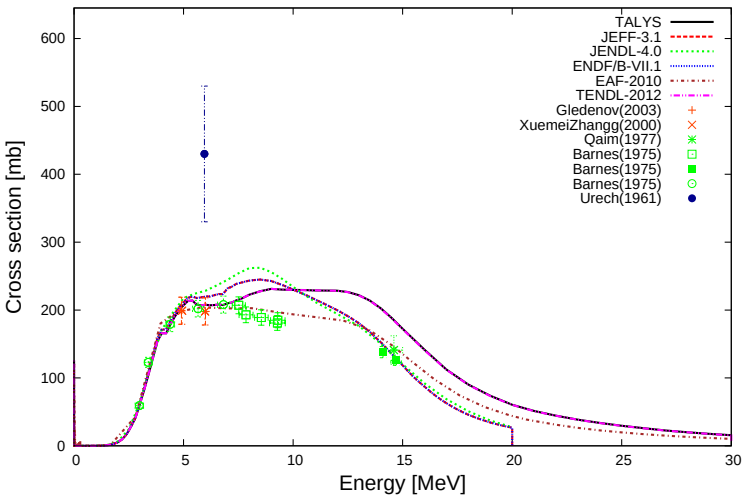

^{nat}Ar(n,a)S
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
TENDL-2012
Graves(1946)

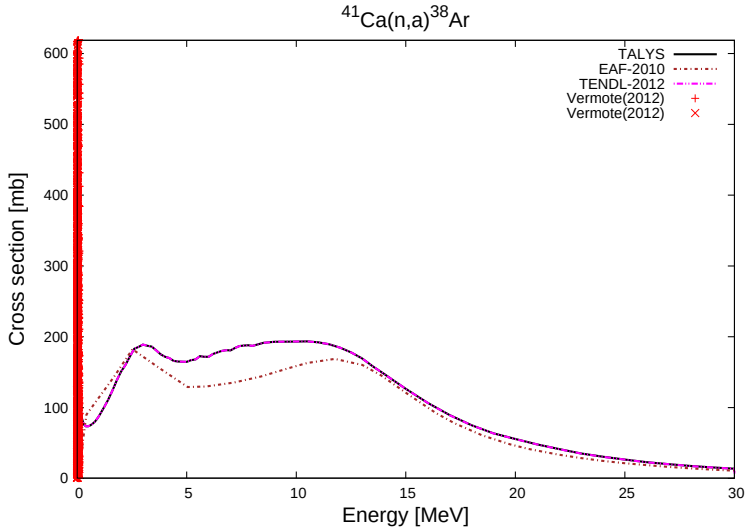

^{36}Ar(n,a)^{33}S
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Davis(1964)

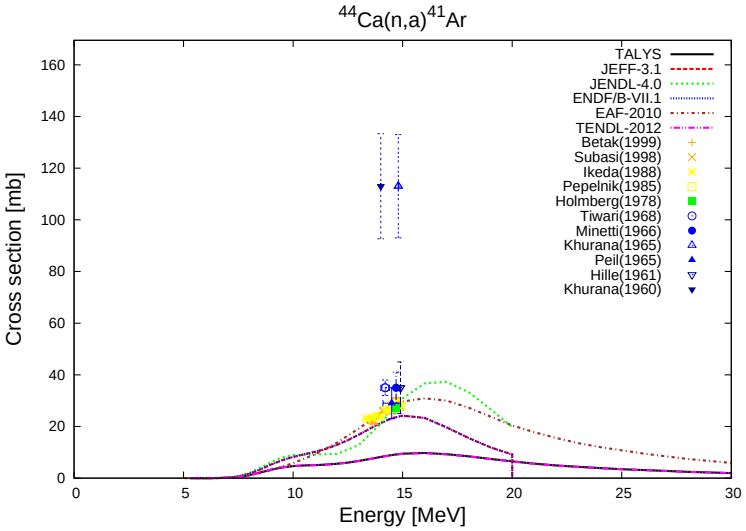

^{40}Ar(n,a)^{37}S
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Kardonsky(1971)
Ranakumar(1969)
Husain(1968)
YuWenYuuu(1967)
Mathur(1966)
Gray(1965)

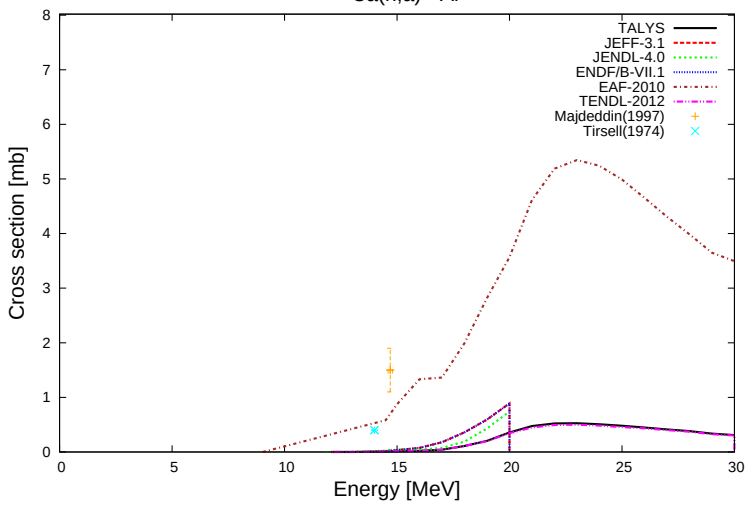

^{39}K(n,a)^{36}Cl
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Gledenov(2003)
Sudbrock(2000)
XuemeiZhangg(2000)
Johnson(1967)
Bass(1964)
Bormann(1962)
Dixon(1961)
Bormann(1960)
Lindstroem(1958)

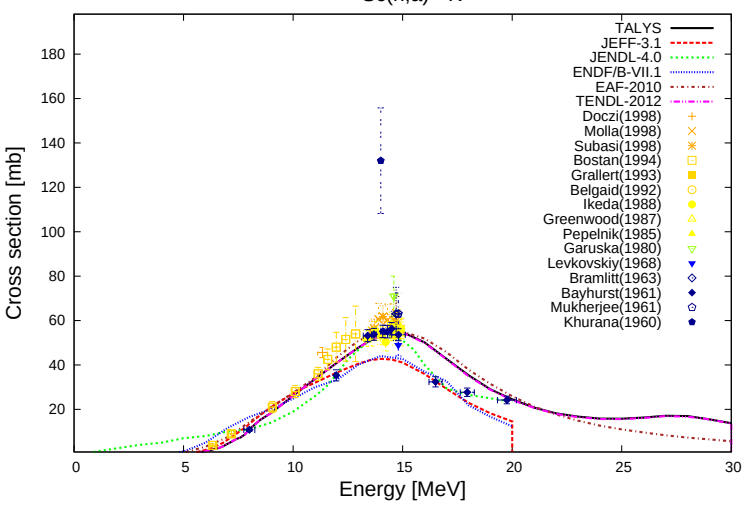

^{41}K(n,a)^{38}Cl
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Ercan(1991)
Ikeda(1988)
Pepelnik(1985)
Garuska(1980)
Levkovskiy(1968)
Tiwari(1968)
Pasquarelli(1967)
Bass(1965)
Khurana(1965)
Peil(1965)
Bramlitt(1963)
Bormann(1960)
Khurana(1960)
Paul(1953)

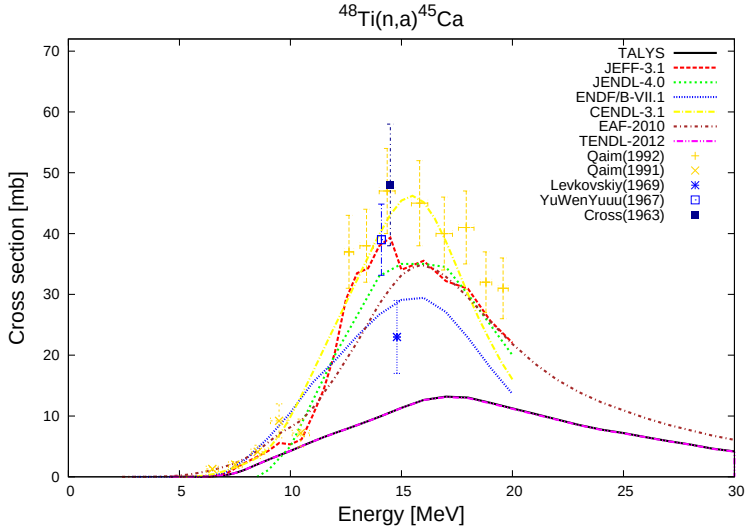

^{40}Ca(n,a)^{37}Ar
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Gledenov(2003)
XuemeiZhangg(2000)
Qaim(1977)
Barnes(1975)
Barnes(1975)
Barnes(1975)
Urech(1961)

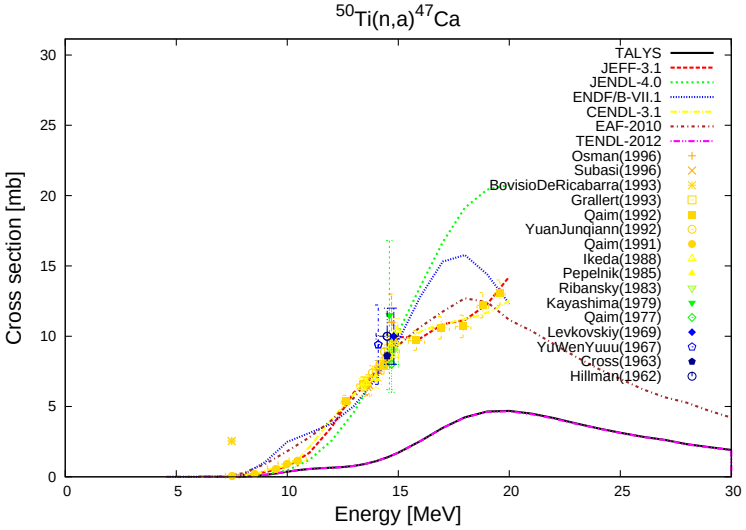

^{41}Ca(n,a)^{38}Ar
TALYS
EAF-2010
TENDL-2012
Vermote(2012)
Vermote(2012)
Cross section [mb]
Energy [MeV]

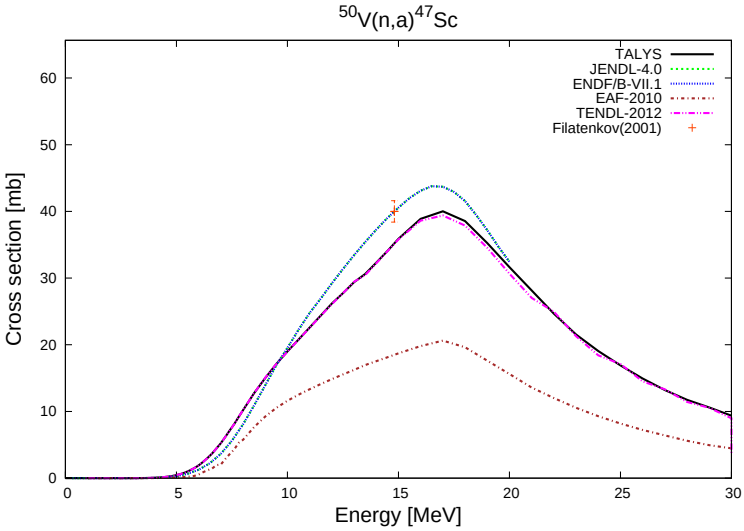

^{44}Ca(n,a)^{41}Ar
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Betak(1999)
Subasi(1998)
Ikeda(1988)
Pepelnik(1985)
Holmberg(1978)
Tiwari(1968)
Minetti(1966)
Khurana(1965)
Peil(1965)
Hille(1961)
Khurana(1960)
Cross section [mb]
Energy [MeV]

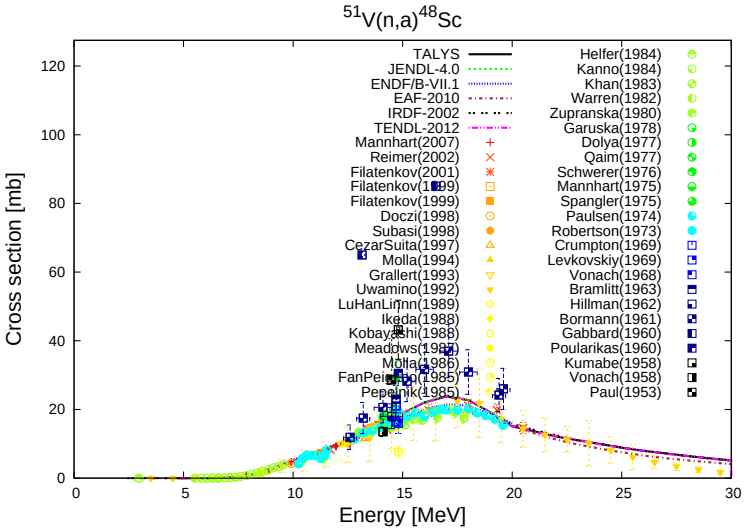

^{48}Ca(n,a)^{45}Ar
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Majdeddin(1997)
Tirsell(1974)
Cross section [mb]
Energy [MeV]

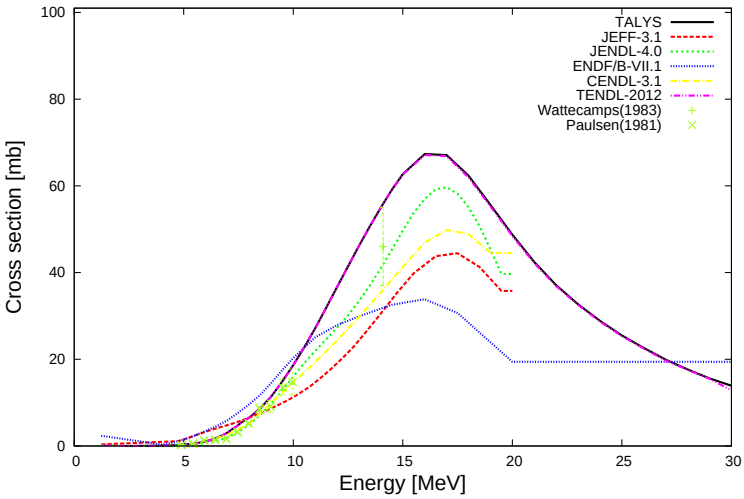

^{45}Sc(n,a)^{42}K
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Doczi(1998)
Molla(1998)
Subasi(1998)
Bostan(1994)
Grallert(1993)
Belgaid(1992)
Ikeda(1988)
Greenwood(1987)
Pepelnik(1985)
Garuska(1980)
Levkovskiy(1968)
Bramlitt(1963)
Bayhurst(1961)
Mukherjee(1961)
Khurana(1960)
Cross section [mb]
Energy [MeV]

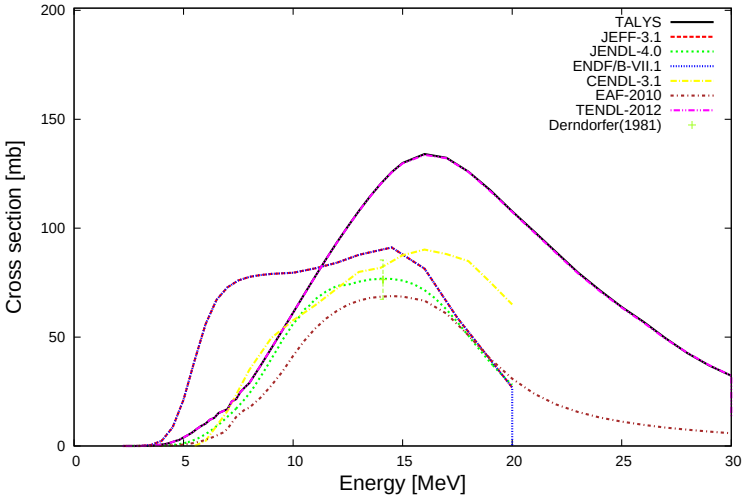

^{48}Ti(n,a)^{45}Ca
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Qaim(1992)
Qaim(1991)
Levkovskiy(1969)
YuWenYuuu(1967)
Cross(1963)
Cross section [mb]
Energy [MeV]

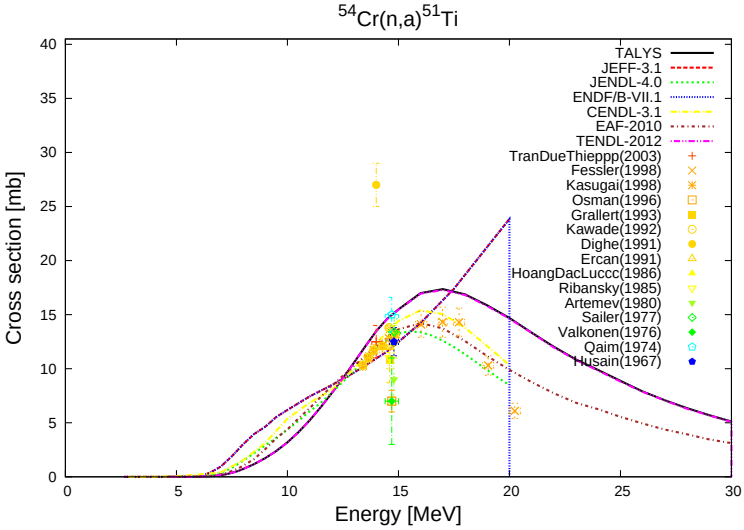

^{50}Ti(n,a)^{47}Ca
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Osman(1996)
Subasi(1996)
BovisioDeRicabarra(1993)
Grallert(1993)
Qaim(1992)
YuanJunqiann(1992)
Qaim(1991)
Ikeda(1988)
Pepelnik(1985)
Ribansky(1983)
Kayashima(1979)
Qaim(1977)
Levkovskiy(1969)
YuWenYuuu(1967)
Cross(1963)
Hillman(1962)
Cross section [mb]
Energy [MeV]

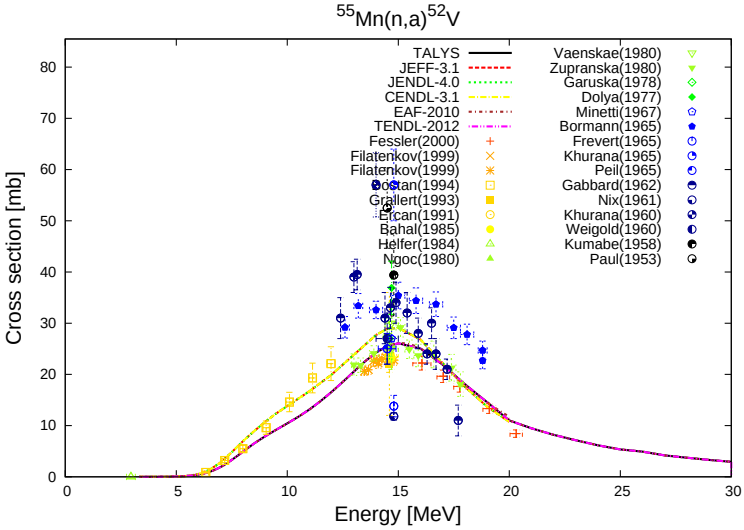

^{50}V(n,a)^{47}Sc
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(2001)
Cross section [mb]
Energy [MeV]

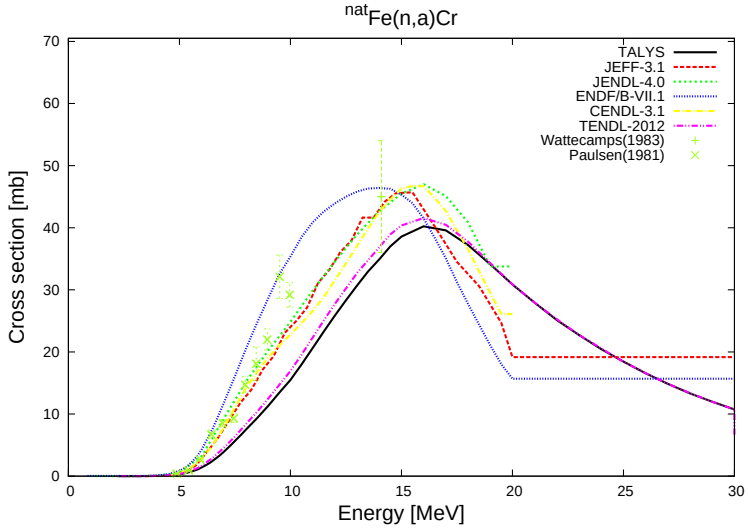

^{51}V(n,a)^{48}Sc
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
IRDF-2002
TENDL-2012
Mannhart(2007)
Reimer(2002)
Filatenkov(2001)
Filatenkov(1999)
Filatenkov(1999)
Doczi(1998)
Subasi(1998)
CezarSuita(1997)
Molla(1994)
Grallert(1993)
Uwamino(1992)
LuHanLinnn(1989)
Ikeda(1988)
Kobayashi(1988)
Meadows(1982)
Molla(1986)
FanPeigen(1985)
Pepelnik(1985)
Helfer(1984)
Kanno(1984)
Khan(1983)
Warren(1982)
Zupranska(1980)
Garuska(1978)
Dolya(1977)
Qaim(1977)
Schwerer(1976)
Mannhart(1975)
Spangler(1975)
Paulsen(1974)
Robertson(1973)
Crumpton(1969)
Levkovskiy(1969)
Vonach(1968)
Bramlitt(1963)
Hillman(1962)
Bormann(1961)
Gabbard(1960)
Poularikas(1960)
Kumabe(1958)
Vonach(1958)
Paul(1953)
Cross section [mb]
Energy [MeV]

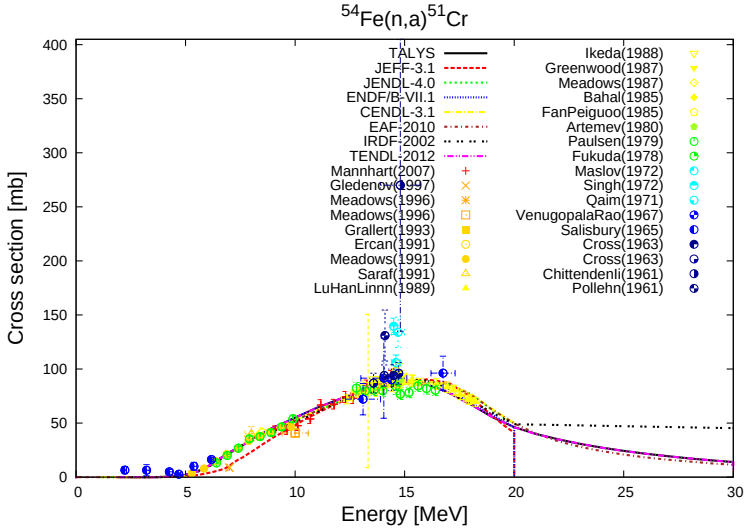

^{nat}Cr(n,a)Ti
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Wattecamps(1983)
Paulsen(1981)
Cross section [mb]
Energy [MeV]

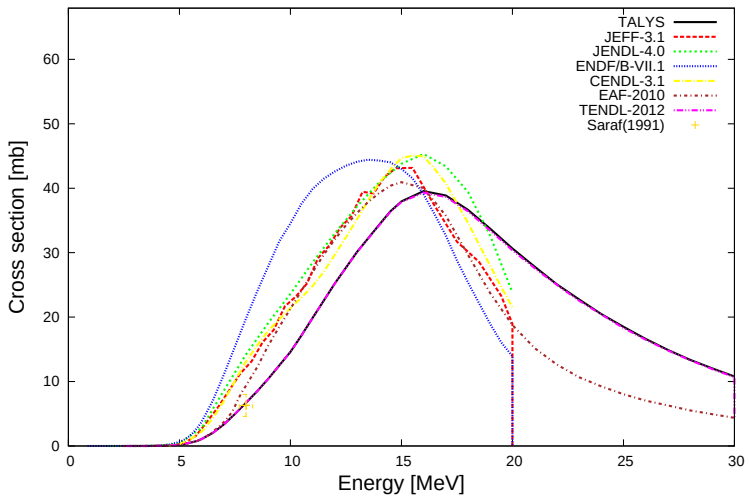

^{50}Cr(n,a)^{47}Ti
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Derndorfer(1981)
Cross section [mb]
Energy [MeV]

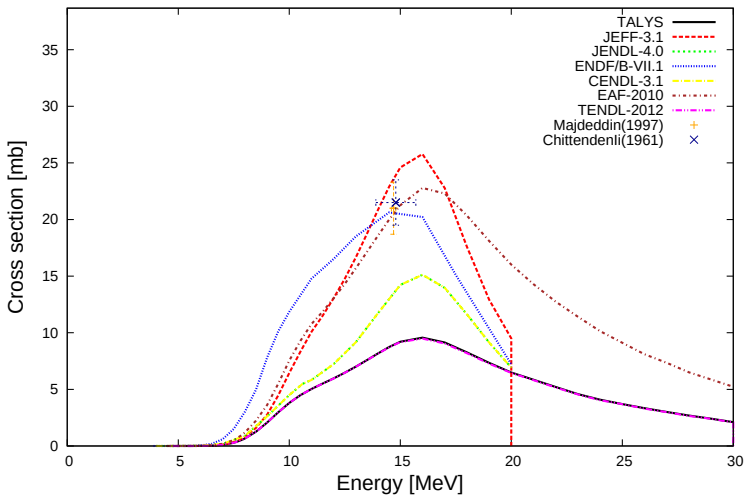

^{54}Cr(n,a)^{51}Ti
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
TranDueThieppp(2003)
Fessler(1998)
Kasugai(1998)
Osman(1996)
Grallert(1993)
Kawade(1992)
Dighe(1991)
Ercan(1991)
HoangDacLuccc(1986)
Ribansky(1985)
Artemev(1980)
Sailer(1977)
Valkonen(1976)
Qaim(1974)
Husain(1967)
Cross section [mb]
Energy [MeV]

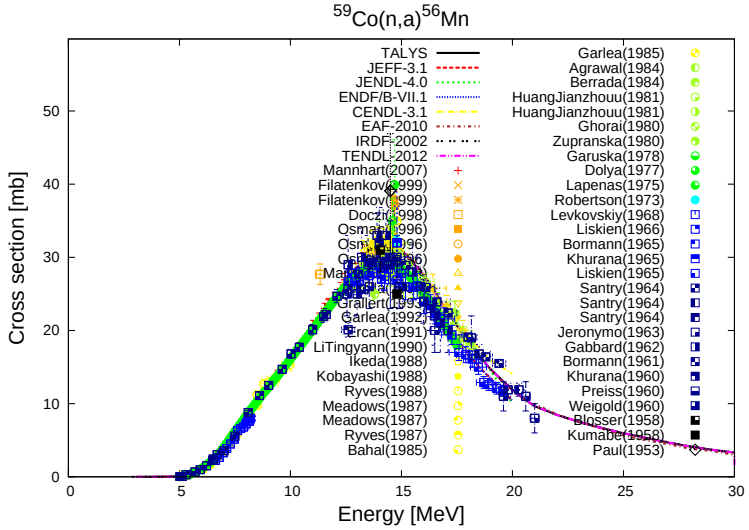

^{55}Mn(n,a)^{52}V
TALYS
JEFF-3.1
JENDL-4.0
CENDL-3.1
EAF-2010
TENDL-2012
Fessler(2000)
Filatenkov(1999)
Filatenkov(1999)
Bostan(1994)
Grallert(1993)
Ercan(1991)
Bahal(1985)
Helfer(1984)
Ngoc(1980)
Vaenskae(1980)
Zupranska(1980)
Garuska(1978)
Dolya(1977)
Minetti(1967)
Bormann(1965)
Frevert(1965)
Khurana(1965)
Peil(1965)
Gabbard(1962)
Nix(1961)
Khurana(1960)
Weigold(1960)
Kumabe(1958)
Paul(1953)
Cross section [mb]
Energy [MeV]

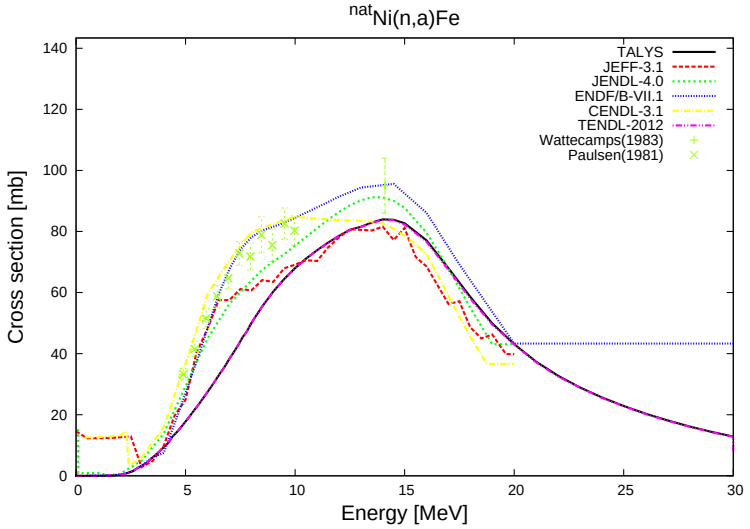

natFe(n,a)Cr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Wattecamps(1983)
Paulsen(1981)

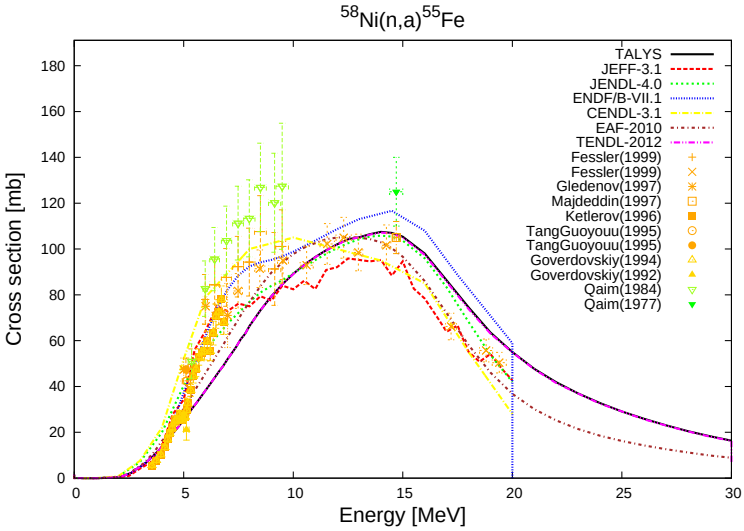

54Fe(n,a)51Cr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Mannhart(2007)
Gledenov(1997)
Meadows(1996)
Meadows(1996)
Grallert(1993)
Ercan(1991)
Meadows(1991)
Saraf(1991)
LuHanLinnn(1989)
Ikeda(1988)
Greenwood(1987)
Meadows(1987)
Bahal(1985)
FanPeiguoo(1985)
Artemev(1980)
Paulsen(1979)
Fukuda(1978)
Maslov(1972)
Singh(1972)
Qaim(1971)
VenugopalaRao(1967)
Salisbury(1965)
Cross(1963)
Cross(1963)
Chittendenli(1961)
Pollehn(1961)

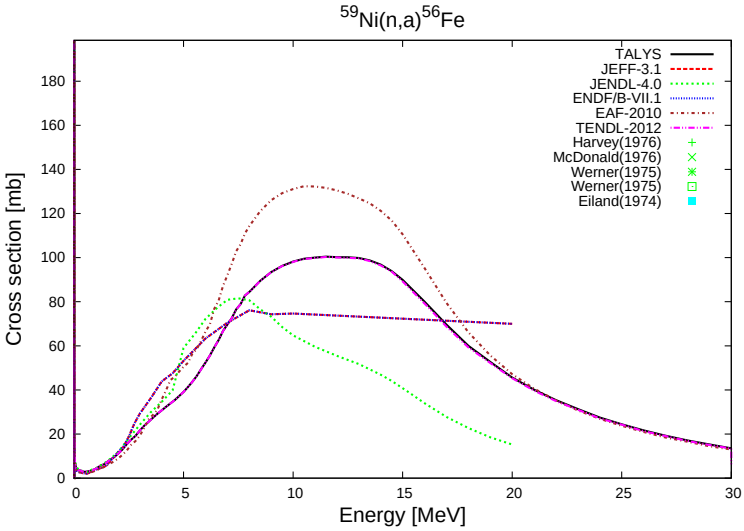

56Fe(n,a)53Cr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Saraf(1991)

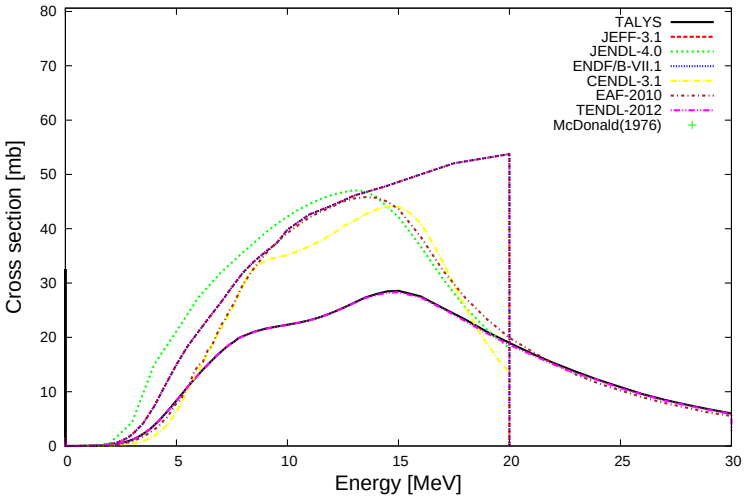

58Fe(n,a)55Cr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Majdeddin(1997)
Chittendenli(1961)

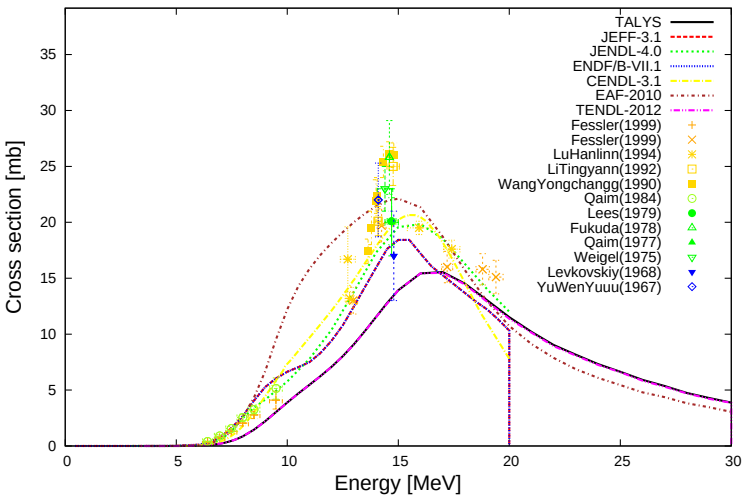

59Co(n,a)56Mn
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Mannhart(2007)
Grallert(1992)
Ercan(1991)
LiTingyann(1990)
Ikeda(1988)
Kobayashi(1988)
Ryves(1988)
Meadows(1987)
Meadows(1987)
Ryves(1987)
Bahal(1985)
Garlea(1985)
Agrawal(1984)
Berrada(1984)
HuangJianzhouu(1981)
HuangJianzhouu(1981)
Ghorai(1980)
Zupranska(1980)
Garuska(1978)
Dolya(1977)
Lapenas(1975)
Robertson(1973)
Levkovskiy(1968)
Liskien(1966)
Bormann(1965)
Khurana(1965)
Liskien(1965)
Santry(1964)
Santry(1964)
Santry(1964)
Jeronymo(1963)
Gabbard(1962)
Bormann(1961)
Khurana(1960)
Preiss(1960)
Weigold(1960)
Blosser(1958)
Kumabe(1958)
Paul(1953)

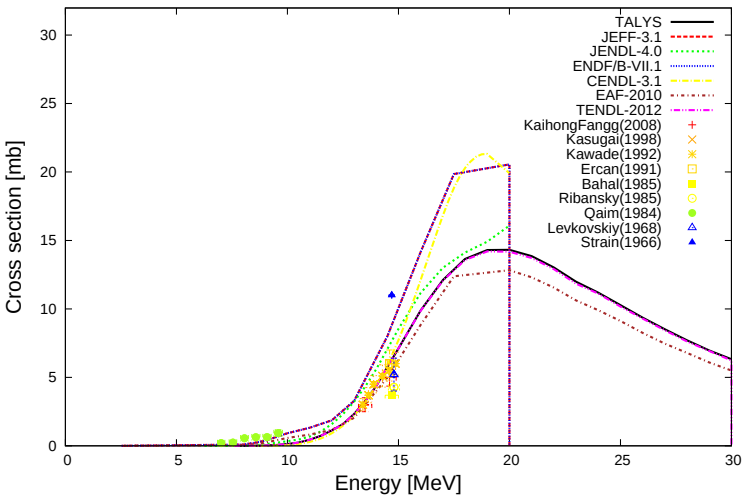

natNi(n,a)Fe
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Wattecamps(1983)
Paulsen(1981)

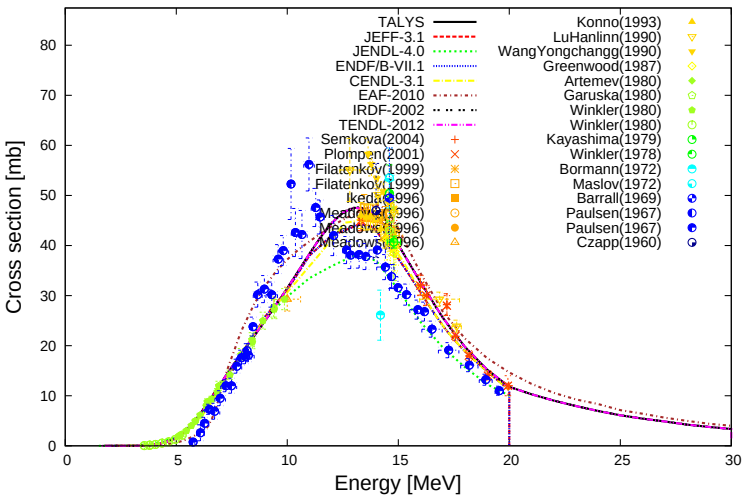

58Ni(n,a)55Fe
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Fessler(1999)
Fessler(1999)
Gledenov(1997)
Majdeddin(1997)
Ketlerov(1996)
TangGuoyouu(1995)
TangGuoyouu(1995)
Goverdovskiy(1994)
Goverdovskiy(1992)
Qaim(1984)
Qaim(1977)

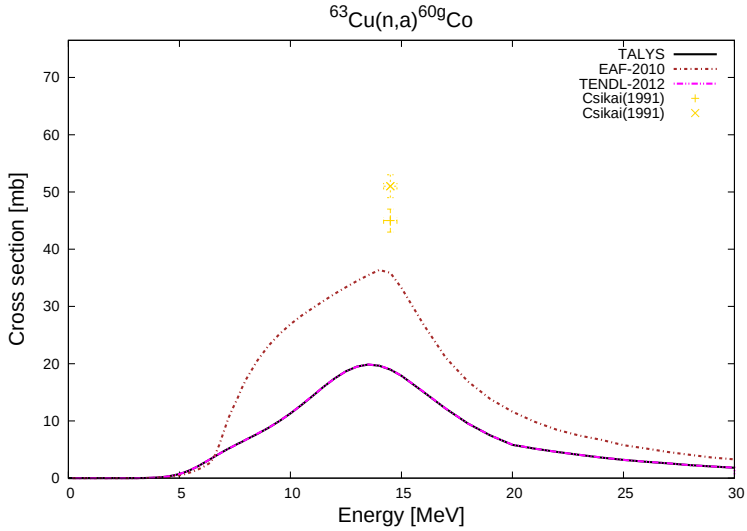

59Ni(n,a)56Fe
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Harvey(1976)
McDonald(1976)
Werner(1975)
Werner(1975)
Eiland(1974)

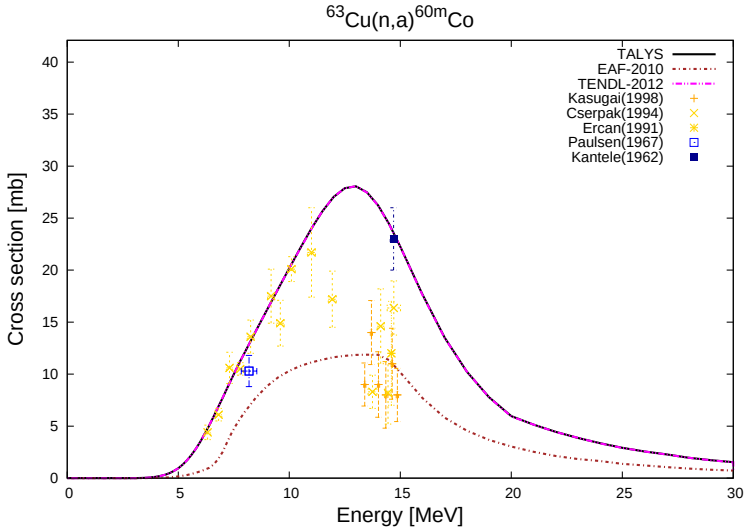

61Ni(n,a)58Fe
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
McDonald(1976)

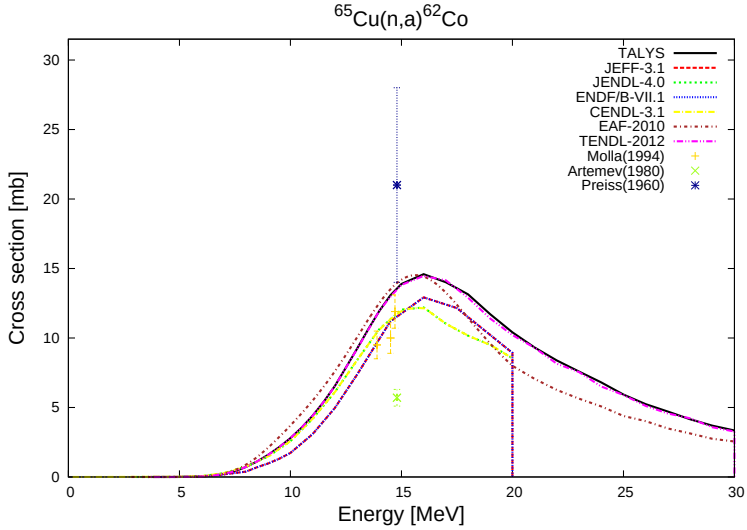

62Ni(n,a)59Fe
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Fessler(1999)
Fessler(1999)
LuHanlinn(1994)
LiTingyann(1992)
WangYongchangg(1990)
Qaim(1984)
Lees(1979)
Fukuda(1978)
Qaim(1977)
Weigel(1975)
Levkovskiy(1968)
YuWenYuuu(1967)

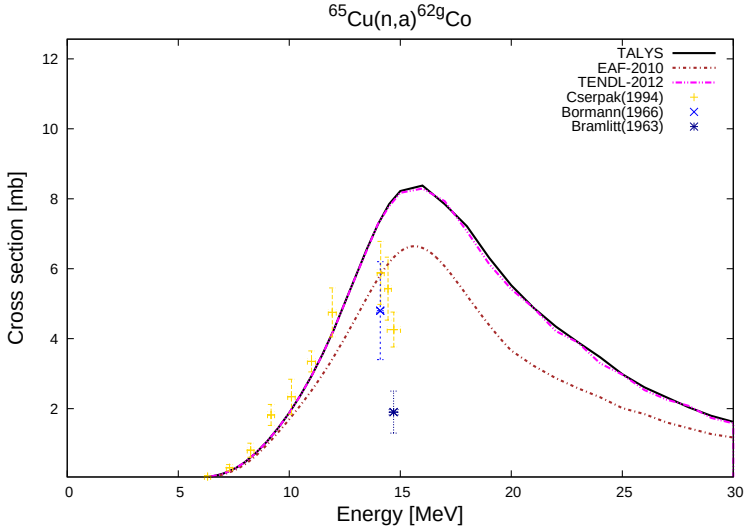

64Ni(n,a)61Fe
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
KaihongFangg(2008)
Kasugai(1998)
Kawade(1992)
Ercan(1991)
Bahal(1985)
Ribansky(1985)
Qaim(1984)
Levkovskiy(1968)
Strain(1966)

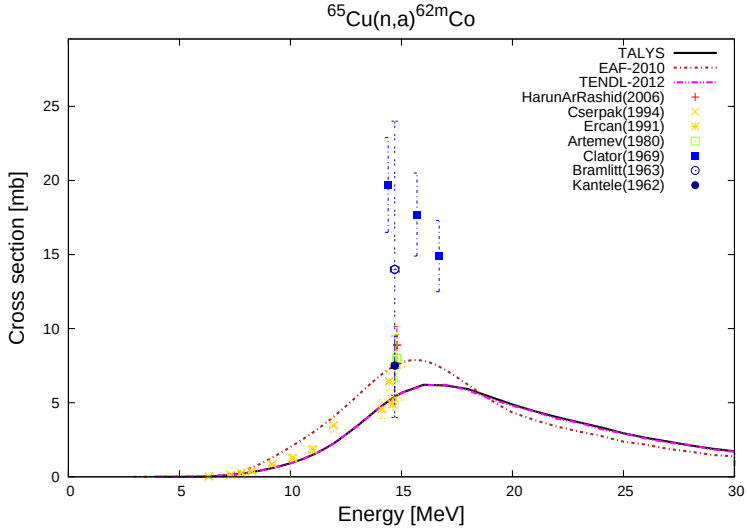

63Cu(n,a)60Co
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
IRDF-2002
TENDL-2012
Semkova(2004)
Plompen(2001)
Filatenkov(1999)
Filatenkov(1999)
Ikeda(1996)
Meadows(1996)
Meadows(1996)
Meadows(1996)
Konno(1993)
LuHanlinn(1990)
WangYongchangg(1990)
Greenwood(1987)
Artemev(1980)
Garuska(1980)
Winkler(1980)
Winkler(1980)
Kayashima(1979)
Winkler(1978)
Bormann(1972)
Maslov(1972)
Barrall(1969)
Paulsen(1967)
Paulsen(1967)
Czapp(1960)

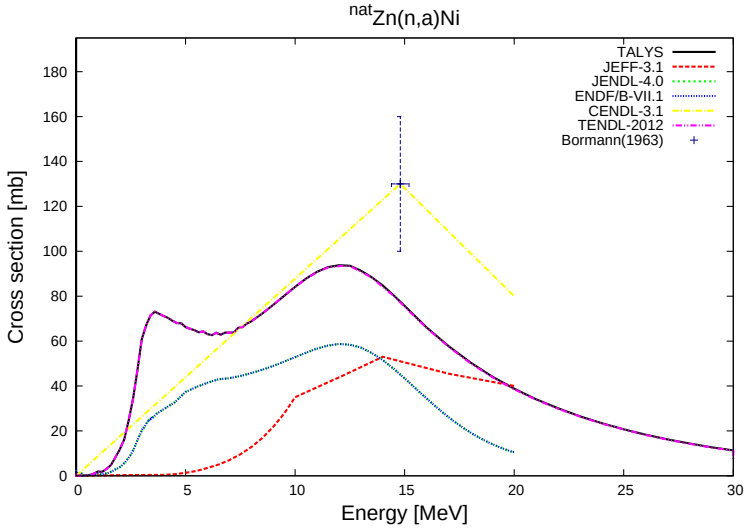

^{63}Cu(n,a)^{60g}Co
TALYS
EAF-2010
TENDL-2012
Csikai(1991)
Csikai(1991)
Cross section [mb]
Energy [MeV]

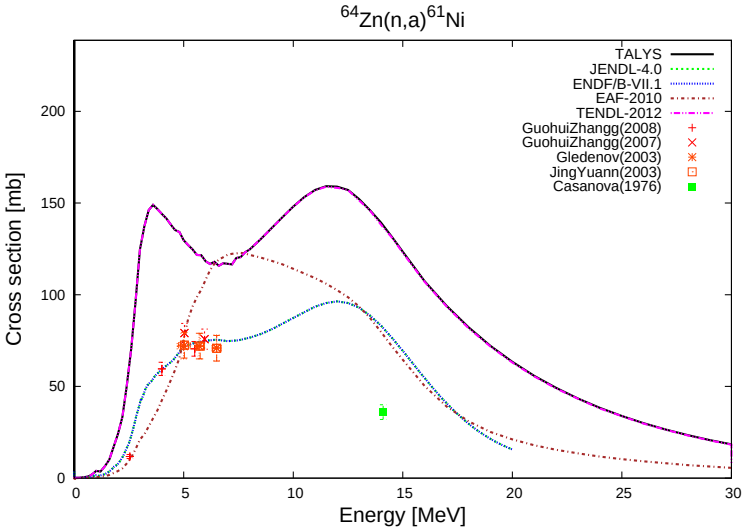

^{63}Cu(n,a)^{60m}Co
TALYS
EAF-2010
TENDL-2012
Kasugai(1998)
Cserpak(1994)
Ercan(1991)
Paulsen(1967)
Kantele(1962)
Cross section [mb]
Energy [MeV]

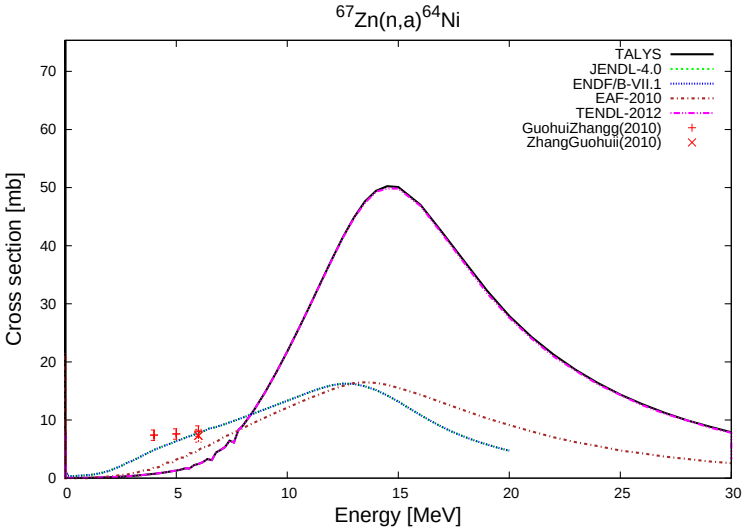

^{65}Cu(n,a)^{62}Co
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Molla(1994)
Artemev(1980)
Preiss(1960)
Cross section [mb]
Energy [MeV]

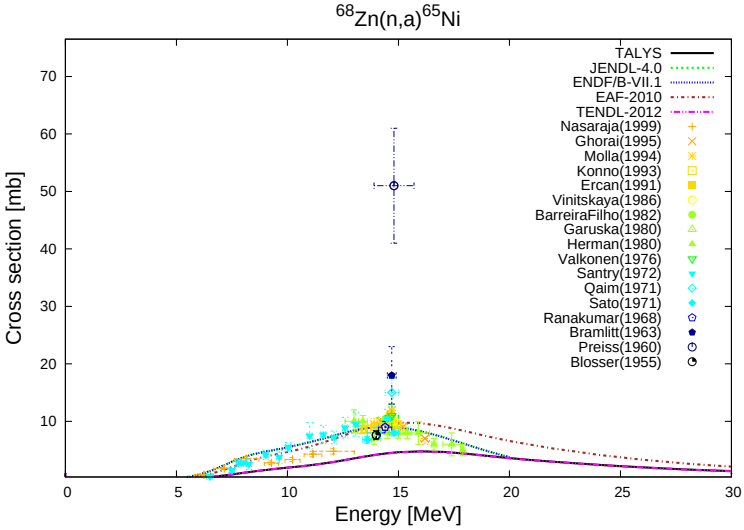

^{65}Cu(n,a)^{62g}Co
TALYS
EAF-2010
TENDL-2012
Cserpak(1994)
Bormann(1966)
Bramlitt(1963)
Cross section [mb]
Energy [MeV]

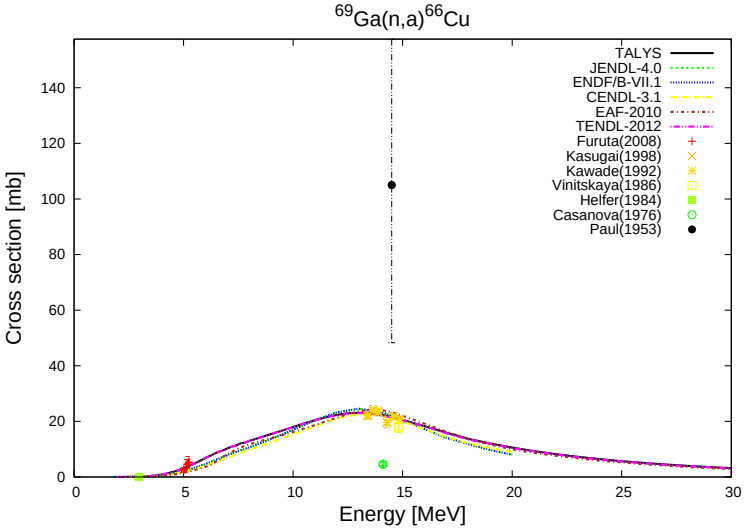

^{65}Cu(n,a)^{62m}Co
TALYS
EAF-2010
TENDL-2012
HarunArRashid(2006)
Cserpak(1994)
Ercan(1991)
Artemev(1980)
Clator(1969)
Bramlitt(1963)
Kantele(1962)
Cross section [mb]
Energy [MeV]

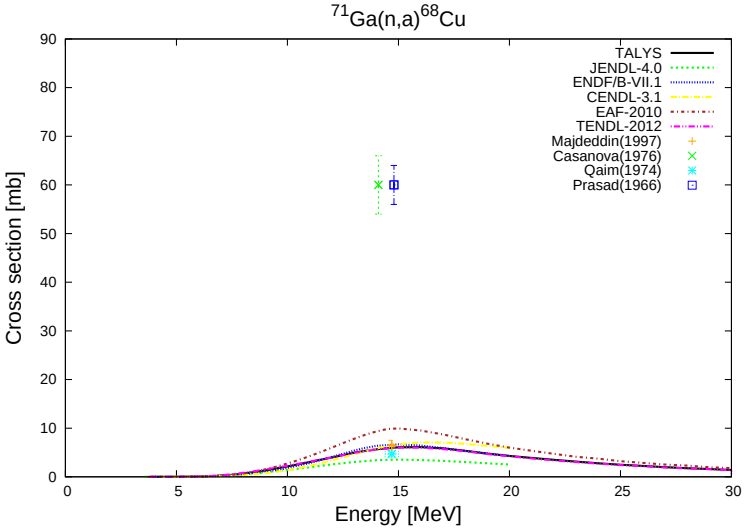

^{nat}Zn(n,a)Ni
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Bormann(1963)
Cross section [mb]
Energy [MeV]

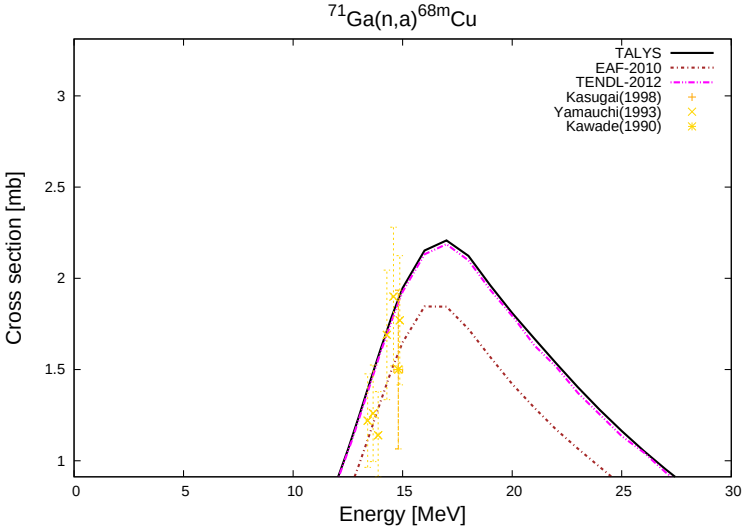

^{64}Zn(n,a)^{61}Ni
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
GuohuiZhangg(2008)
GuohuiZhangg(2007)
Gledenov(2003)
JingYuann(2003)
Casanova(1976)
Cross section [mb]
Energy [MeV]

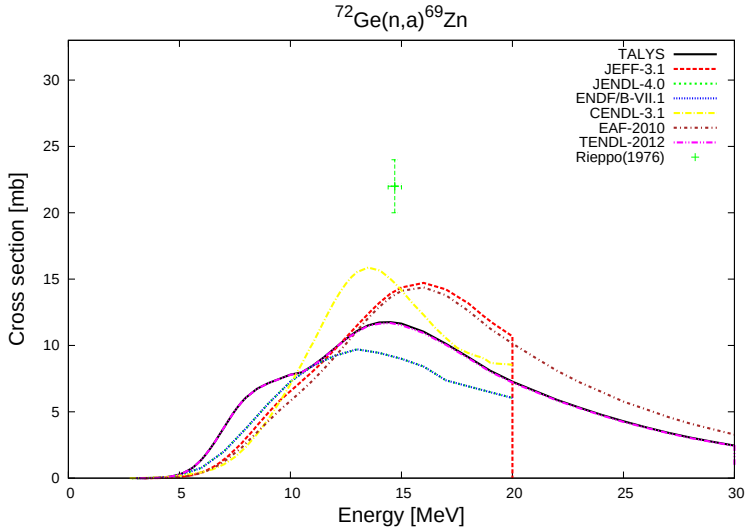

^{67}Zn(n,a)^{64}Ni
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
GuohuiZhangg(2010)
ZhangGuohuii(2010)
Cross section [mb]
Energy [MeV]

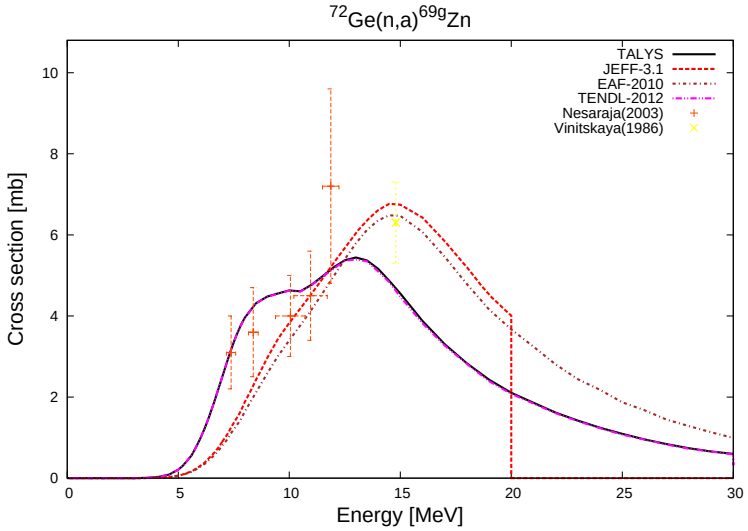

^{68}Zn(n,a)^{65}Ni
TALYS
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Nasaraja(1999)
Ghorai(1995)
Molla(1994)
Konno(1993)
Ercan(1991)
Vinitskaya(1986)
BarreiraFilho(1982)
Garuska(1980)
Herman(1980)
Valkonen(1976)
Santry(1972)
Qaim(1971)
Sato(1971)
Ranakumar(1968)
Bramlitt(1963)
Preiss(1960)
Blosser(1955)
Cross section [mb]
Energy [MeV]

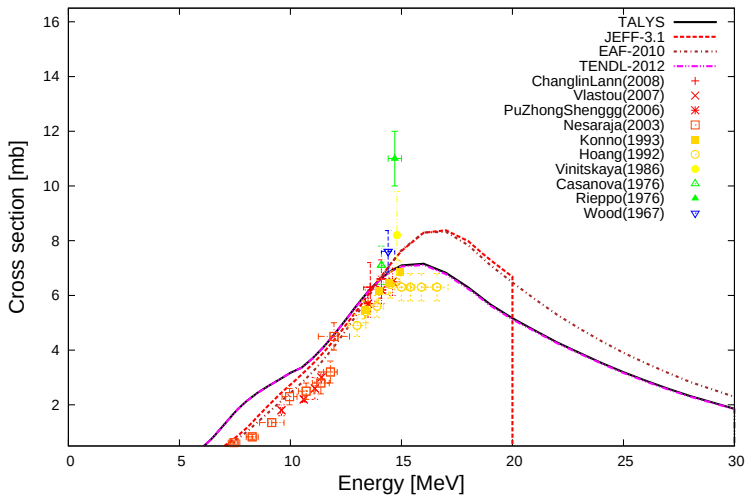

^{69}Ga(n,a)^{66}Cu
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Furuta(2008)
Kasugai(1998)
Kawade(1992)
Vinitskaya(1986)
Helfer(1984)
Casanova(1976)
Paul(1953)
Cross section [mb]
Energy [MeV]

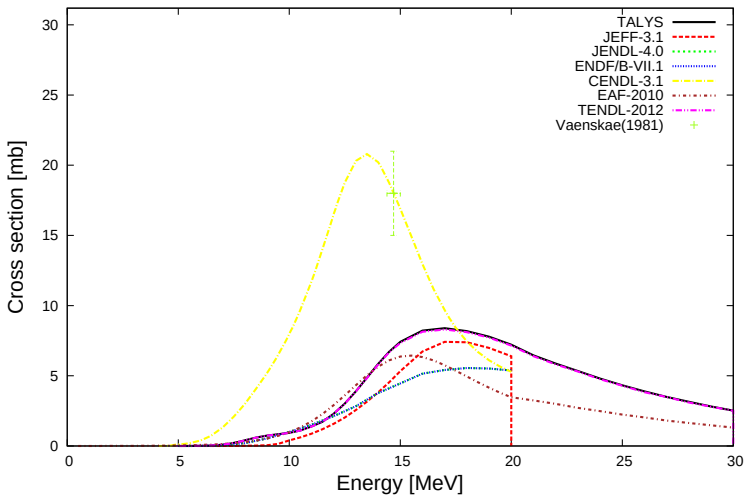

^{71}Ga(n,a)^{68}Cu
TALYS
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Majdeddin(1997)
Casanova(1976)
Qaim(1974)
Prasad(1966)
Cross section [mb]
Energy [MeV]

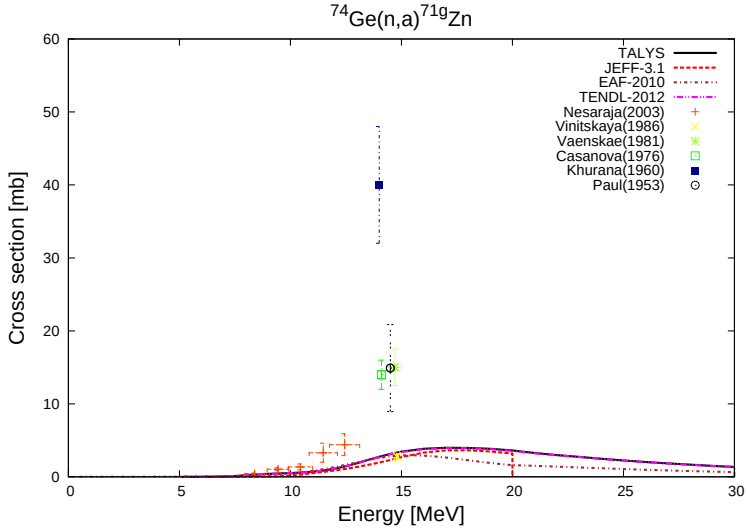

^{71}Ga(n,a)^{68m}Cu
TALYS
EAF-2010
TENDL-2012
Kasugai(1998)
Yamauchi(1993)
Kawade(1990)
Cross section [mb]
Energy [MeV]

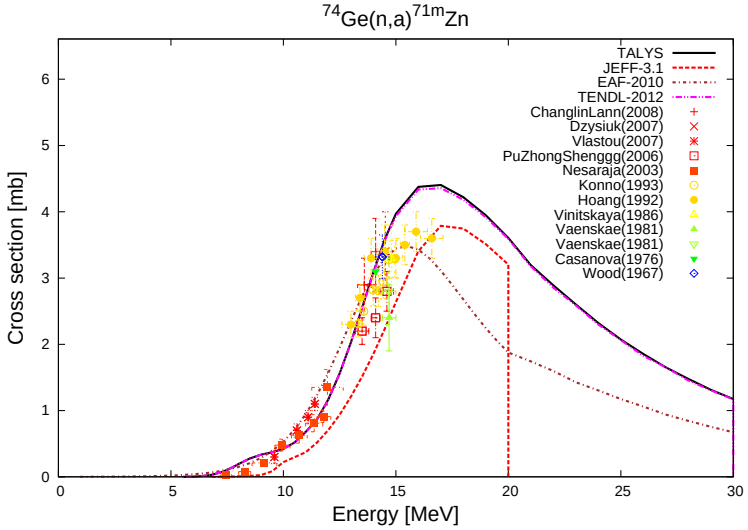

^{72}Ge(n,a)^{69}Zn
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Rieppo(1976)
Cross section [mb]
Energy [MeV]

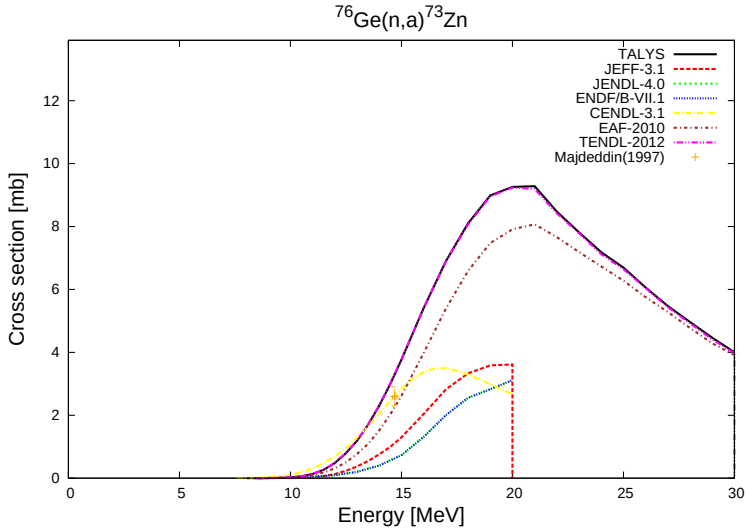

^{72}Ge(n,a)^{69g}Zn
TALYS
JEFF-3.1
EAF-2010
TENDL-2012
Nesaraja(2003)
Vinitskaya(1986)
Cross section [mb]
Energy [MeV]

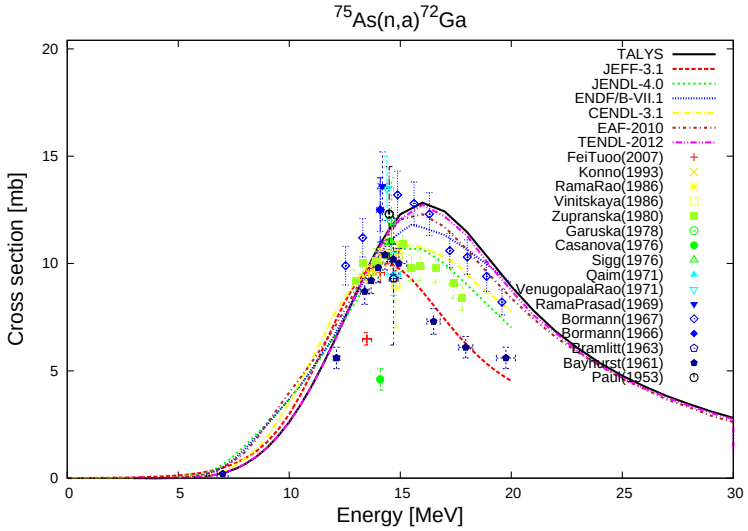

^{72}Ge(n,a)^{69m}Zn
TALYS
JEFF-3.1
EAF-2010
TENDL-2012
ChanglinLann(2008)
Vlastou(2007)
PuZhongShenggg(2006)
Nesaraja(2003)
Konno(1993)
Hoang(1992)
Vinitskaya(1986)
Casanova(1976)
Rieppo(1976)
Wood(1967)
Cross section [mb]
Energy [MeV]

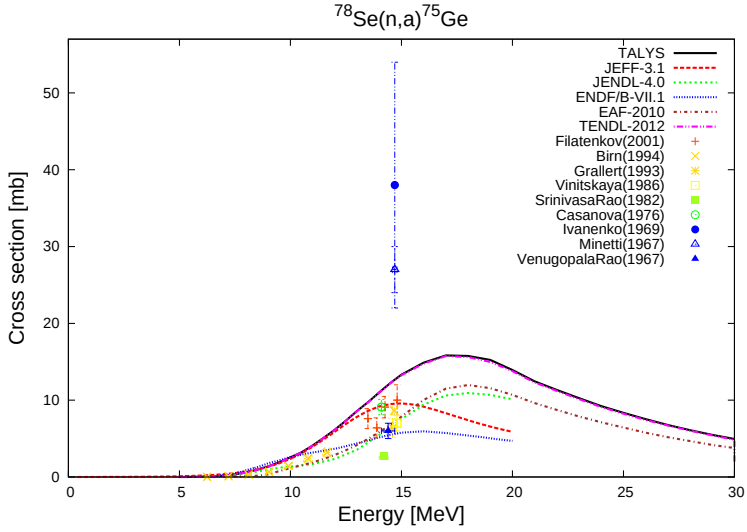

^{74}Ge(n,a)^{71}Zn
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Vaenskae(1981)
Cross section [mb]
Energy [MeV]

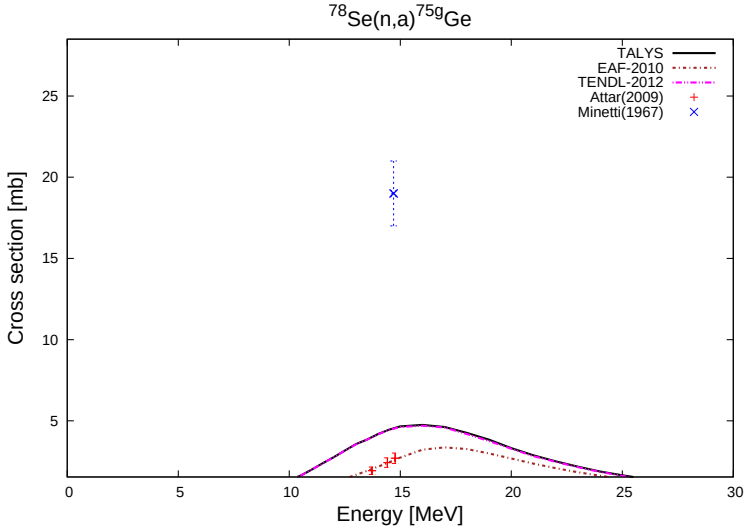

^{74}Ge(n,a)^{71g}Zn
TALYS
JEFF-3.1
EAF-2010
TENDL-2012
Nesaraja(2003)
Vinitskaya(1986)
Vaenskae(1981)
Casanova(1976)
Khurana(1960)
Paul(1953)
Cross section [mb]
Energy [MeV]

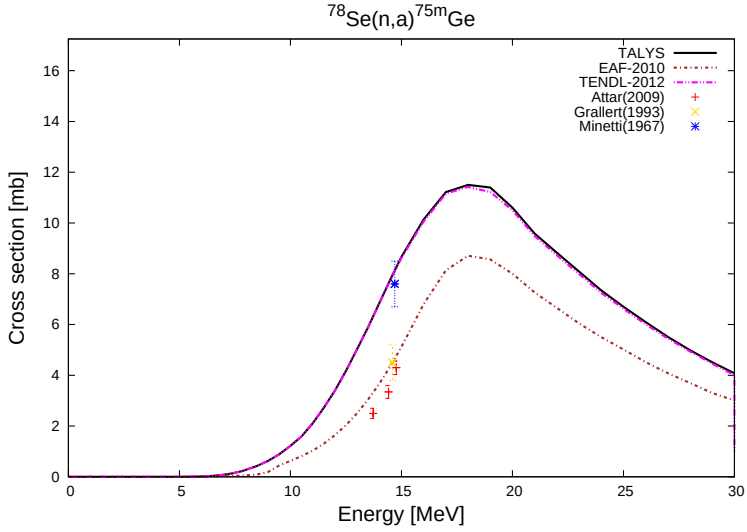

^{74}Ge(n,a)^{71m}Zn
TALYS
JEFF-3.1
EAF-2010
TENDL-2012
ChanglinLann(2008)
Dzysiuk(2007)
Vlastou(2007)
PuZhongShenggg(2006)
Nesaraja(2003)
Konno(1993)
Hoang(1992)
Vinitskaya(1986)
Vaenskae(1981)
Vaenskae(1981)
Casanova(1976)
Wood(1967)
Cross section [mb]
Energy [MeV]

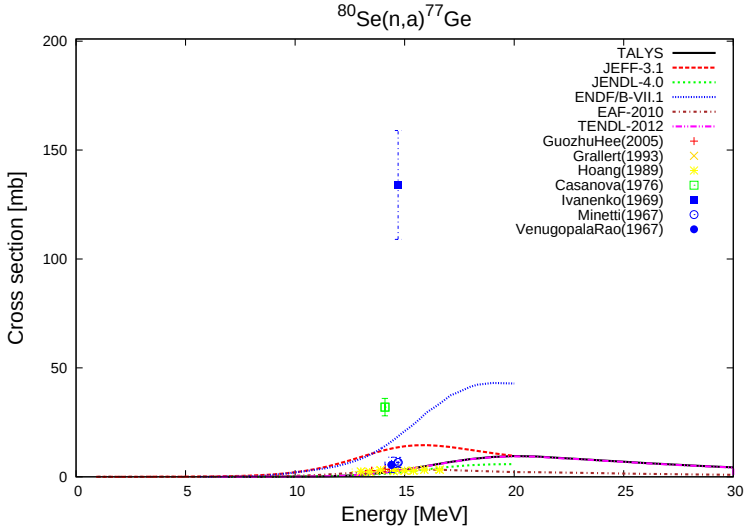

^{76}Ge(n,a)^{73}Zn
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Majdeddin(1997)
Cross section [mb]
Energy [MeV]

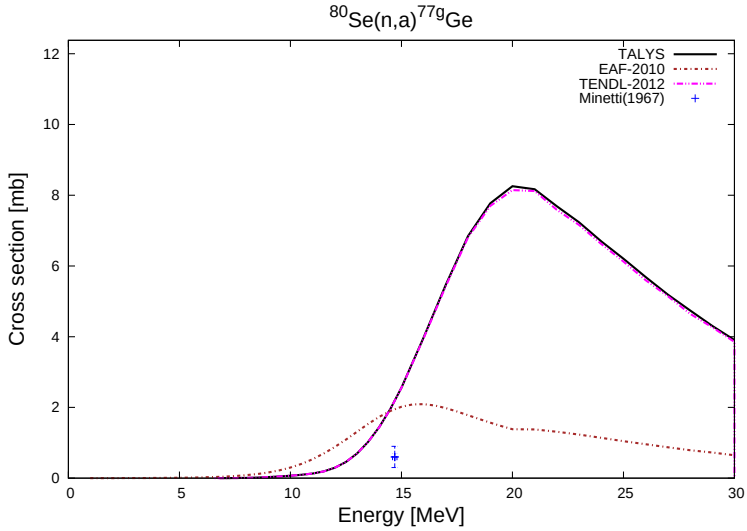

^{75}As(n,a)^{72}Ga
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
FeiTuoo(2007)
Konno(1993)
RamaRao(1986)
Vinitskaya(1986)
Zupranska(1980)
Garuska(1978)
Casanova(1976)
Sigg(1976)
Qaim(1971)
VenugopalaRao(1971)
RamaPrasad(1969)
Bormann(1967)
Bormann(1966)
Bramlitt(1963)
Baymyrst(1961)
Paul(1953)
Cross section [mb]
Energy [MeV]

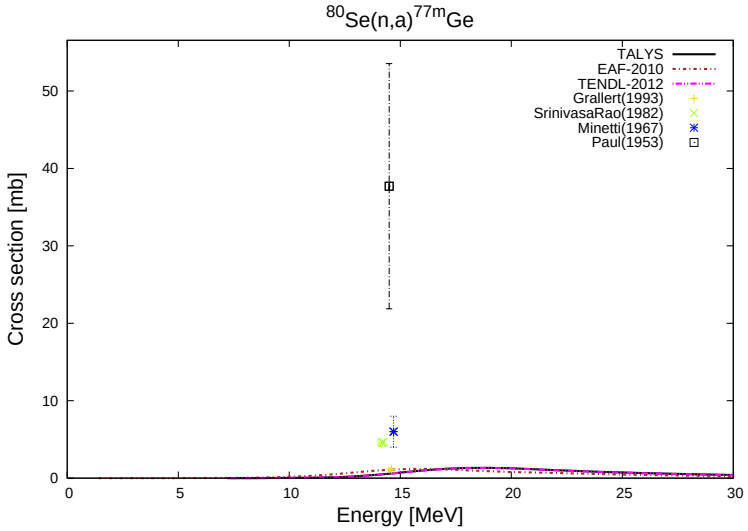

^{78}Se(n,a)^{75}Ge
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(2001)
Birn(1994)
Grallert(1993)
Vinitskaya(1986)
SrinivasaRao(1982)
Casanova(1976)
Ivanenko(1969)
Minetti(1967)
VenugopalaRao(1967)
Cross section [mb]
Energy [MeV]

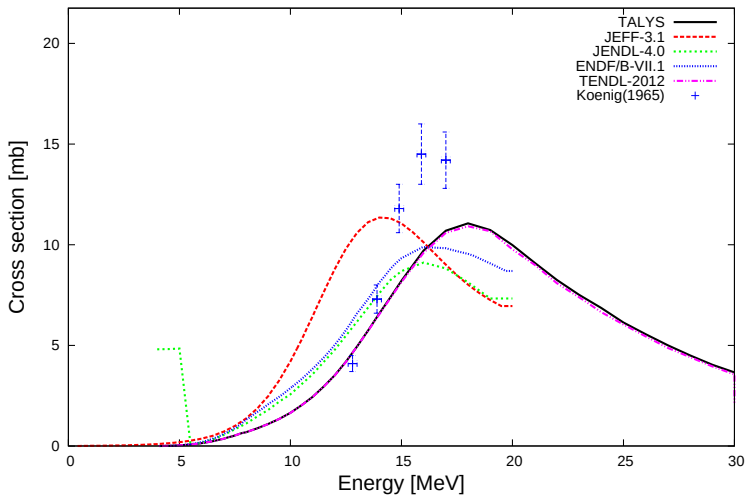

^{78}Se(n,a)^{75g}Ge
TALYS
EAF-2010
TENDL-2012
Attar(2009)
Minetti(1967)
Cross section [mb]
Energy [MeV]

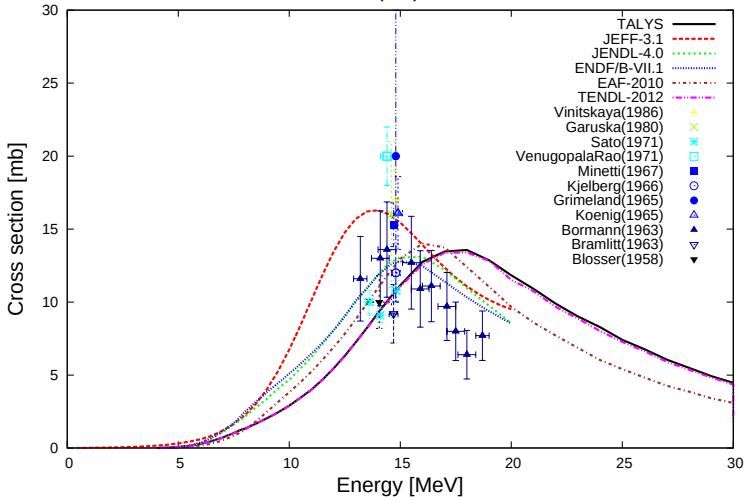

^{78}Se(n,a)^{75m}Ge
TALYS
EAF-2010
TENDL-2012
Attar(2009)
Grallert(1993)
Minetti(1967)
Cross section [mb]
Energy [MeV]

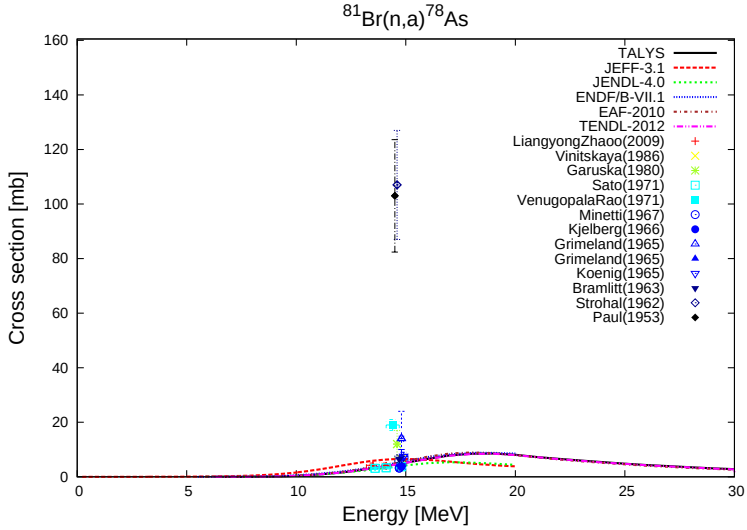

^{80}Se(n,a)^{77}Ge
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
GuozhuHee(2005)
Grallert(1993)
Hoang(1989)
Casanova(1976)
Ivanenko(1969)
Minetti(1967)
VenugopalaRao(1967)
Cross section [mb]
Energy [MeV]

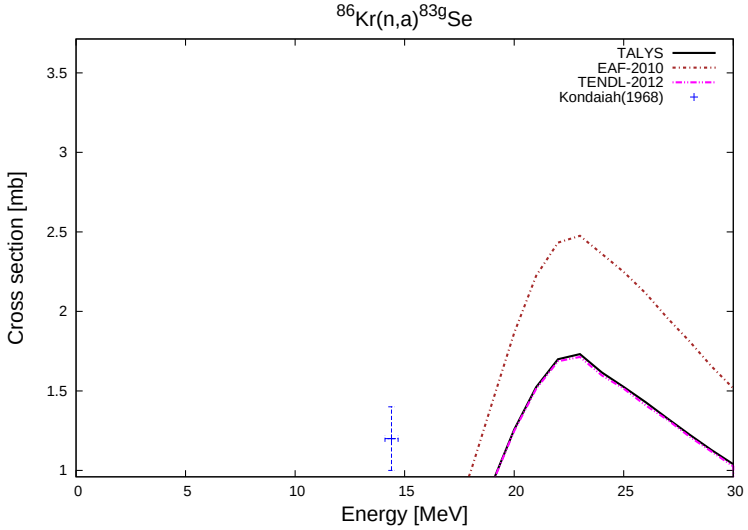

^{80}Se(n,a)^{77g}Ge
TALYS
EAF-2010
TENDL-2012
Minetti(1967)
Cross section [mb]
Energy [MeV]

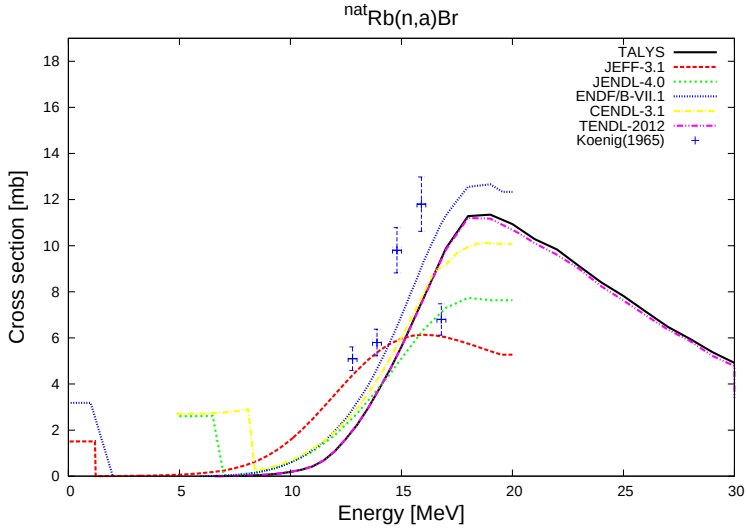

^{80}Se(n,a)^{77m}Ge
TALYS
EAF-2010
TENDL-2012
Grallert(1993)
SrinivasaRao(1982)
Minetti(1967)
Paul(1953)
Cross section [mb]
Energy [MeV]

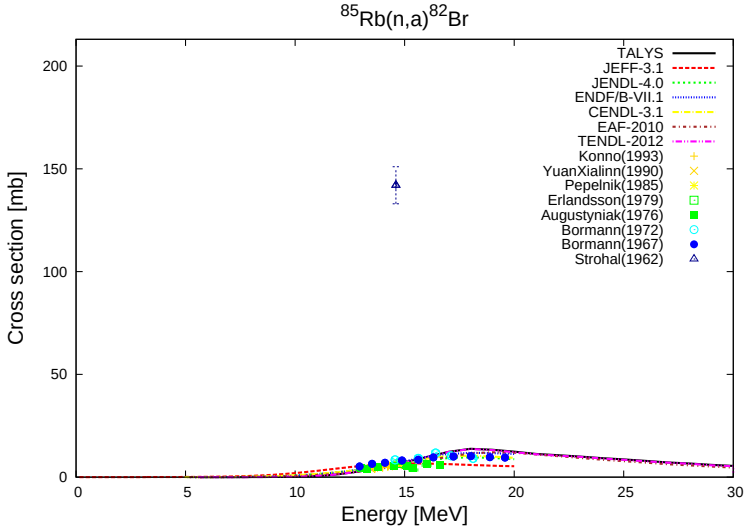

^{nat}Br(n,a)As
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
TENDL-2012
Koenig(1965)
Cross section [mb]
Energy [MeV]

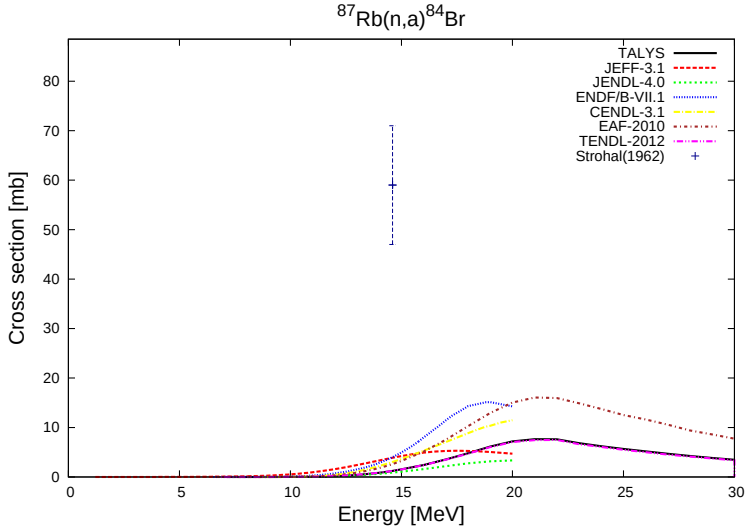

^{79}Br(n,a)^{76}As
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Vinitskaya(1986)
Garuska(1980)
Sato(1971)
VenugopalaRao(1971)
Minetti(1967)
Kjelberg(1966)
Grimeland(1965)
Koenig(1965)
Bormann(1963)
Bramlitt(1963)
Blosser(1958)
Cross section [mb]
Energy [MeV]

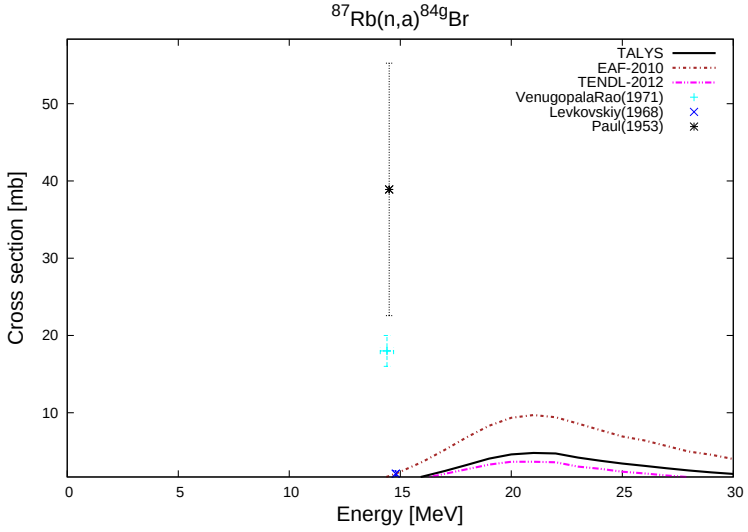

^{81}Br(n,a)^{78}As
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
LiangyongZhaoo(2009)
Vinitskaya(1986)
Garuska(1980)
Sato(1971)
VenugopalaRao(1971)
Minetti(1967)
Kjelberg(1966)
Grimeland(1965)
Grimeland(1965)
Koenig(1965)
Bramlitt(1963)
Strohal(1962)
Paul(1953)
Cross section [mb]
Energy [MeV]

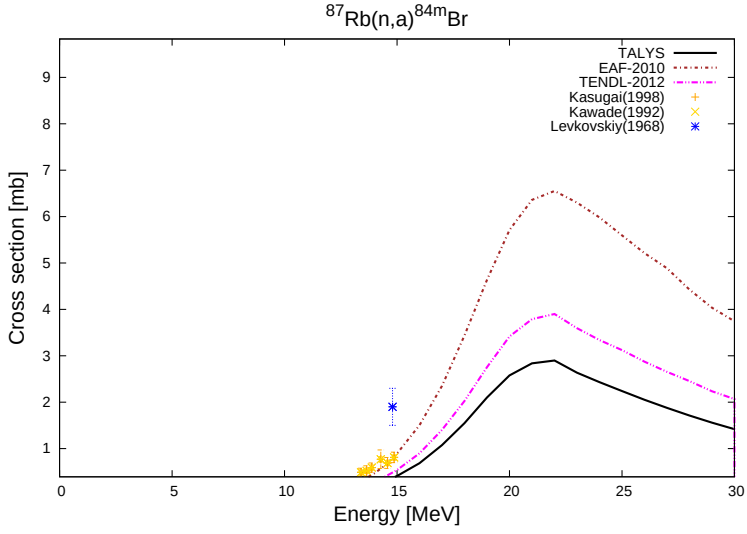

^{86}Kr(n,a)^{83g}Se
TALYS
EAF-2010
TENDL-2012
Kondaiah(1968)
Cross section [mb]
Energy [MeV]

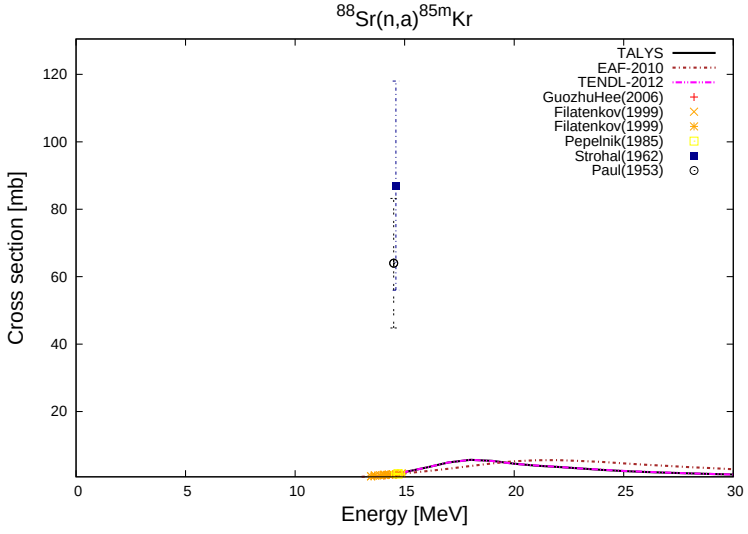

^{nat}Rb(n,a)Br
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Koenig(1965)
Cross section [mb]
Energy [MeV]

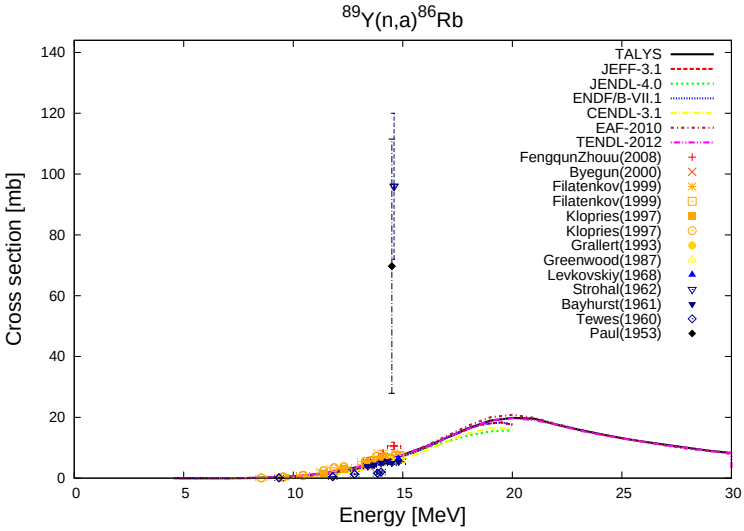

^{85}Rb(n,a)^{82}Br
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Konno(1993)
YuanXialinn(1990)
Pepelnik(1985)
Erlandsson(1979)
Augustyniak(1976)
Bormann(1972)
Bormann(1967)
Strohal(1962)
Cross section [mb]
Energy [MeV]

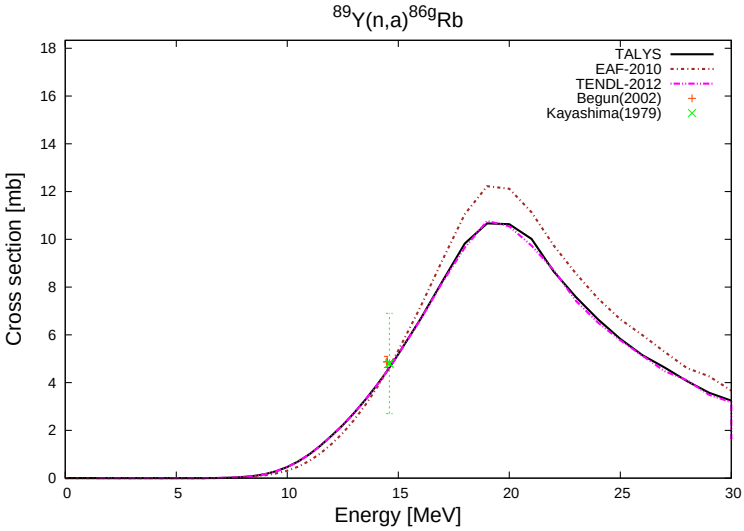

^{87}Rb(n,a)^{84}Br
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Strohal(1962)
Cross section [mb]
Energy [MeV]

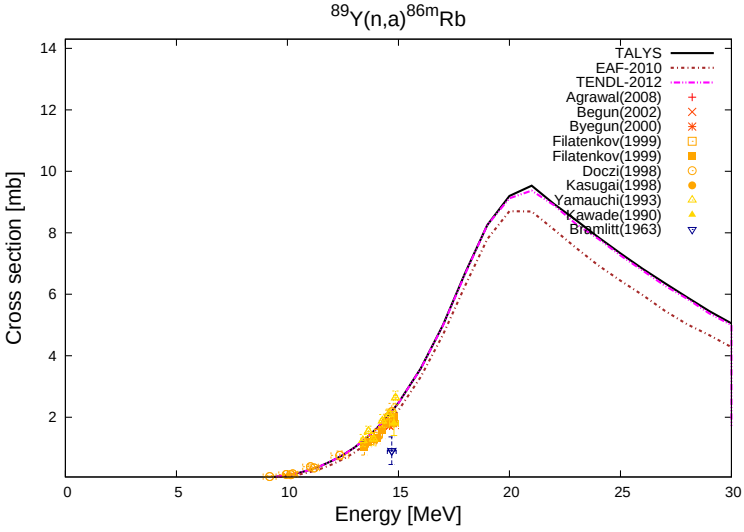

^{87}Rb(n,a)^{84g}Br
TALYS
EAF-2010
TENDL-2012
VenugopalaRao(1971)
Levkovskiy(1968)
Paul(1953)
Cross section [mb]
Energy [MeV]

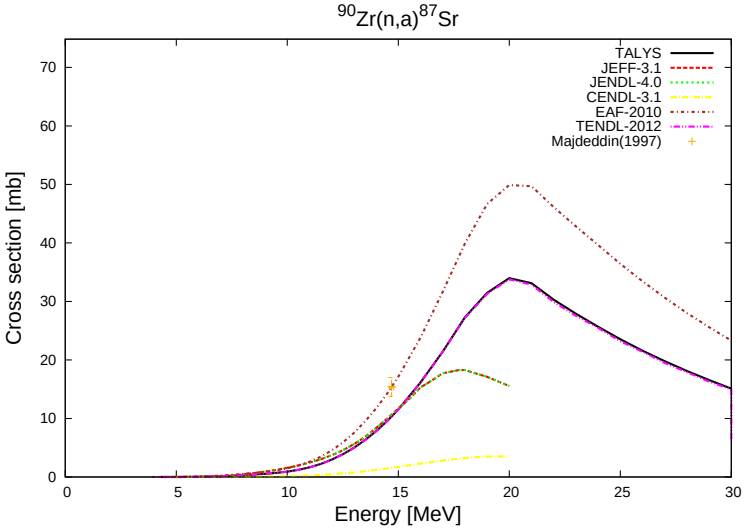

^{87}Rb(n,a)^{84m}Br
TALYS
EAF-2010
TENDL-2012
Kasugai(1998)
Kawade(1992)
Levkovskiy(1968)
Cross section [mb]
Energy [MeV]

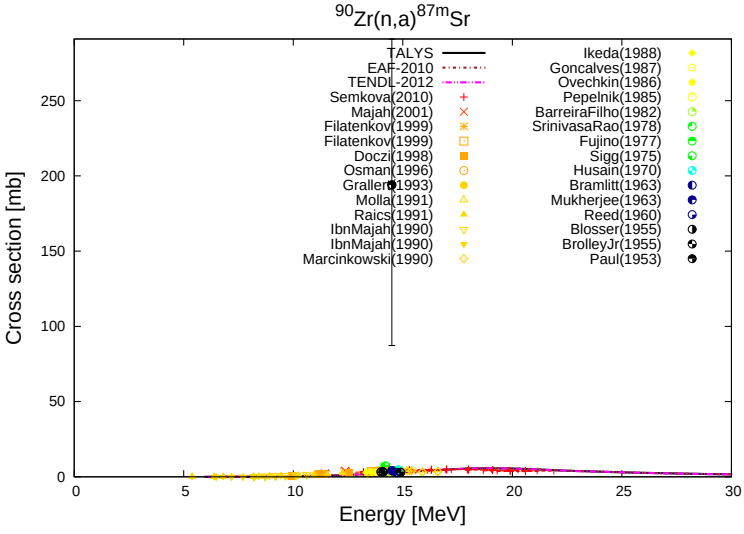

^{88}Sr(n,a)^{85m}Kr
TALYS
EAF-2010
TENDL-2012
GuozhuHee(2006)
Filatenkov(1999)
Filatenkov(1999)
Pepelnik(1985)
Strohal(1962)
Paul(1953)
Cross section [mb]
Energy [MeV]

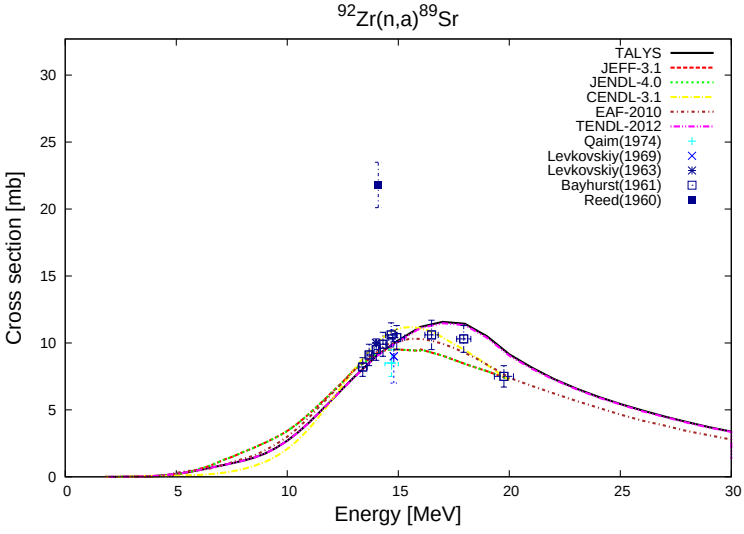

^{89}Y(n,a)^{86}Rb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
FengqunZhouu(2008)
Byegun(2000)
Filatenkov(1999)
Filatenkov(1999)
Klopries(1997)
Klopries(1997)
Grallert(1993)
Greenwood(1987)
Levkovskiy(1968)
Strohal(1962)
Bayhurst(1961)
Tewes(1960)
Paul(1953)

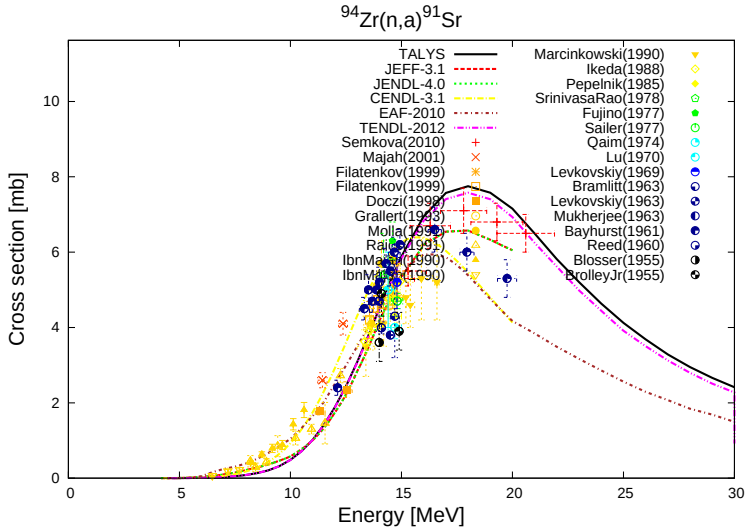

^{89}Y(n,a)^{86g}Rb
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Begun(2002)
Kayashima(1979)

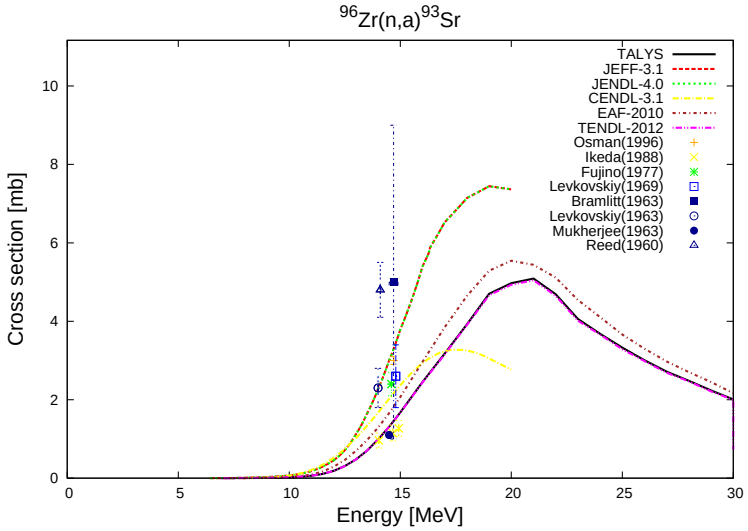

^{89}Y(n,a)^{86m}Rb
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Agrawal(2008)
Begun(2002)
Byegun(2000)
Filatenkov(1999)
Filatenkov(1999)
Doczi(1998)
Kasugai(1998)
Yamauchi(1993)
Kawade(1990)
Bramlitt(1963)

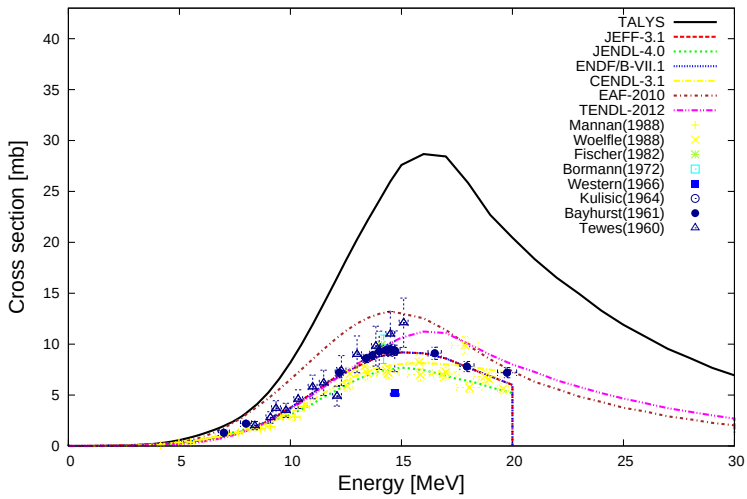

^{90}Zr(n,a)^{87}Sr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
CENDL-3.1
EAF-2010
TENDL-2012
Majdeddin(1997)

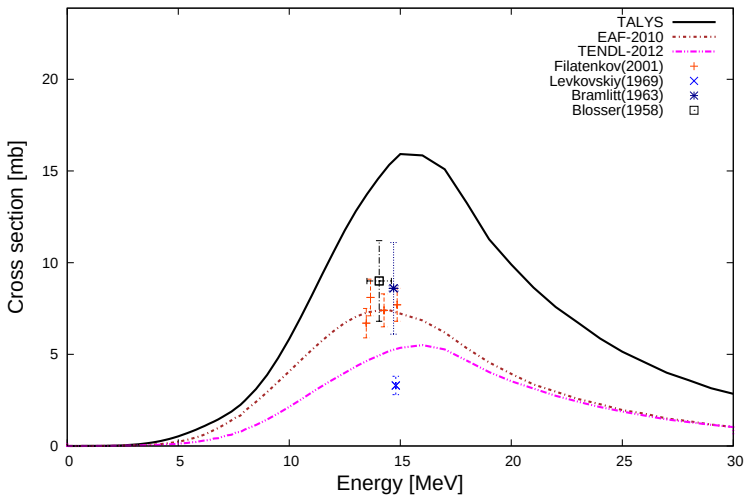

^{90}Zr(n,a)^{87m}Sr
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Semkova(2010)
Majah(2001)
Filatenkov(1999)
Filatenkov(1999)
Doczi(1998)
Osman(1996)
Graller(1993)
Molla(1991)
Raics(1991)
IbnMajah(1990)
IbnMajah(1990)
Marcinkowski(1990)
Ikeda(1988)
Goncalves(1987)
Ovechkin(1986)
Pepelnik(1985)
BarreiraFilho(1982)
SrinivasaRao(1978)
Fujino(1977)
Sigg(1975)
Husain(1970)
Bramlitt(1963)
Mukherjee(1963)
Reed(1960)
Blosser(1955)
BrolleyJr(1955)
Paul(1953)

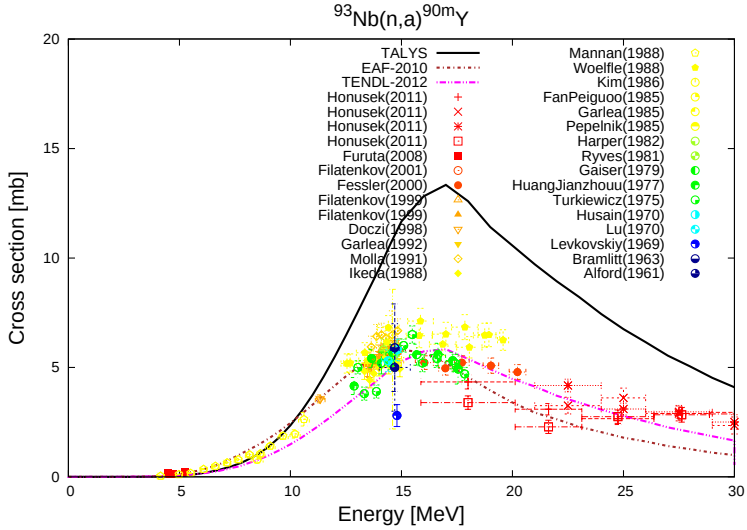

^{92}Zr(n,a)^{89}Sr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
CENDL-3.1
EAF-2010
TENDL-2012
Qaim(1974)
Levkovskiy(1969)
Levkovskiy(1963)
Bayhurst(1961)
Reed(1960)

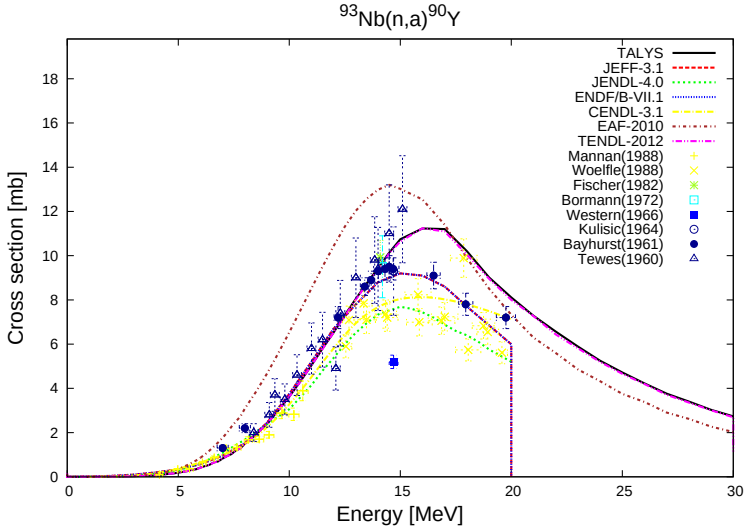

^{94}Zr(n,a)^{91}Sr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
CENDL-3.1
EAF-2010
TENDL-2012
Semkova(2010)
Majah(2001)
Filatenkov(1999)
Filatenkov(1999)
Doczi(1998)
Grallert(1993)
Molla(1991)
Raics(1991)
IbnMajah(1990)
IbnMajah(1990)
Marcinkowski(1990)
Ikeda(1988)
Pepelnik(1985)
SrinivasaRao(1978)
Fujino(1977)
Sailer(1977)
Qaim(1974)
Lu(1970)
Levkovskiy(1969)
Bramlitt(1963)
Levkovskiy(1963)
Mukherjee(1963)
Bayhurst(1961)
Reed(1960)
Blosser(1955)
BrolleyJr(1955)

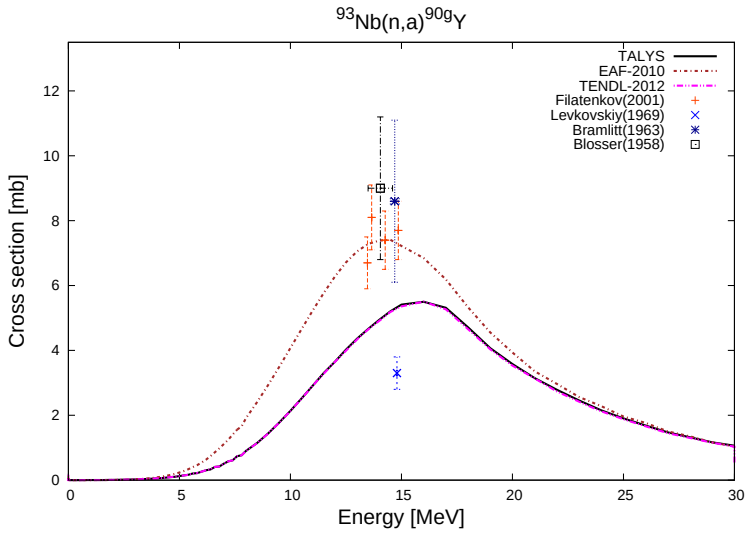

^{96}Zr(n,a)^{93}Sr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
CENDL-3.1
EAF-2010
TENDL-2012
Osman(1996)
Ikeda(1988)
Fujino(1977)
Levkovskiy(1969)
Bramlitt(1963)
Levkovskiy(1963)
Mukherjee(1963)
Reed(1960)

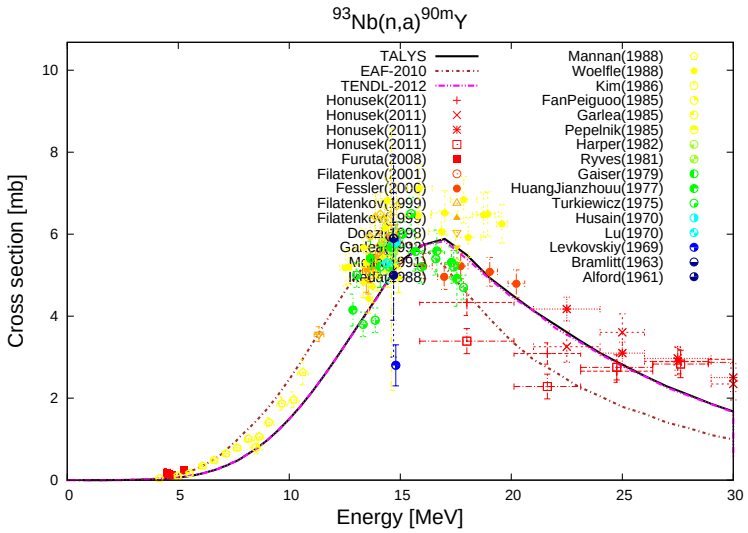

^{93}Nb(n,a)^{90}Y
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Mannan(1988)
Woelfle(1988)
Fischer(1982)
Bormann(1972)
Western(1966)
Kulisic(1964)
Bayhurst(1961)
Tewes(1960)

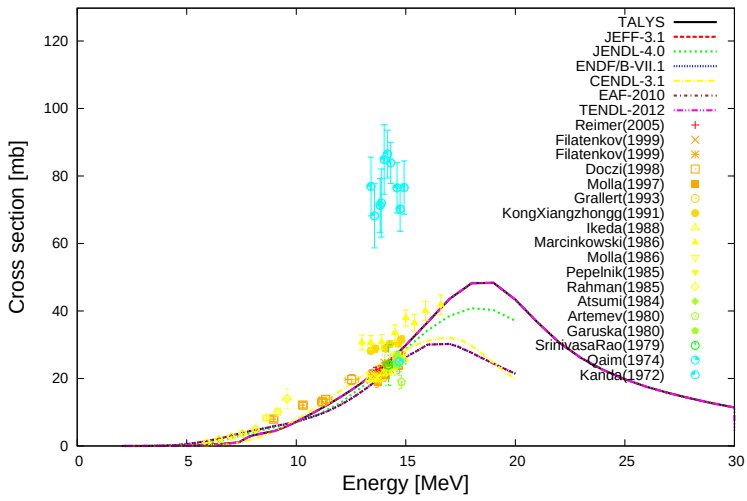

^{93}Nb(n,a)^{90g}Y
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Filatenkov(2001)
Levkovskiy(1969)
Bramlitt(1963)
Blosser(1958)

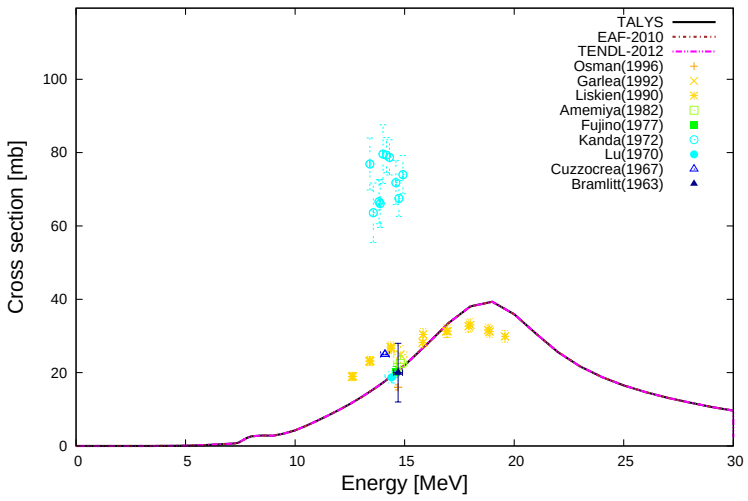

^{93}Nb(n,a)^{90m}Y
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Honusek(2011)
Honusek(2011)
Honusek(2011)
Honusek(2011)
Furuta(2008)
Filatenkov(2001)
Fessler(2000)
Filatenkov(1999)
Filatenkov(1999)
Doczi(1998)
Garlea(1992)
Molla(1991)
Ikeda(1988)
Mannan(1988)
Woelfle(1988)
Kim(1986)
FanPeiguoo(1985)
Garlea(1985)
Pepelnik(1985)
Harper(1982)
Ryves(1981)
Gaiser(1979)
HuangJianzhouu(1977)
Turkiewicz(1975)
Husain(1970)
Lu(1970)
Levkovskiy(1969)
Bramlitt(1963)
Alford(1961)

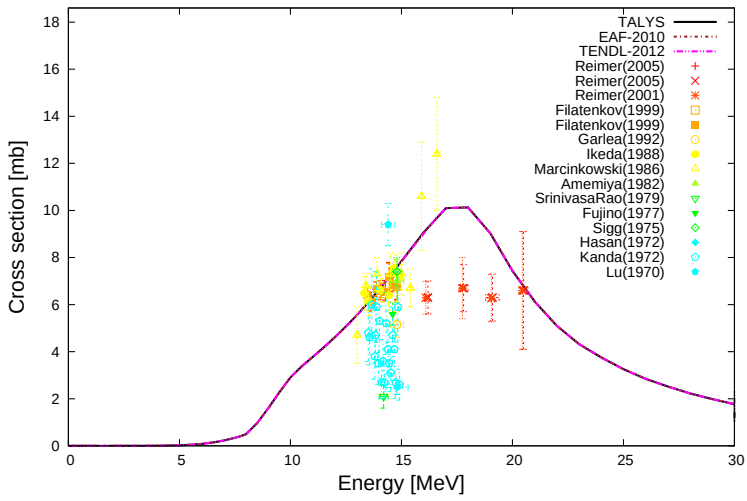

^{93}Nb(n,a)^{90}Y
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Mannan(1988)
Woelfle(1988)
Fischer(1982)
Bormann(1972)
Western(1966)
Kulisic(1964)
Bayhurst(1961)
Tewes(1960)

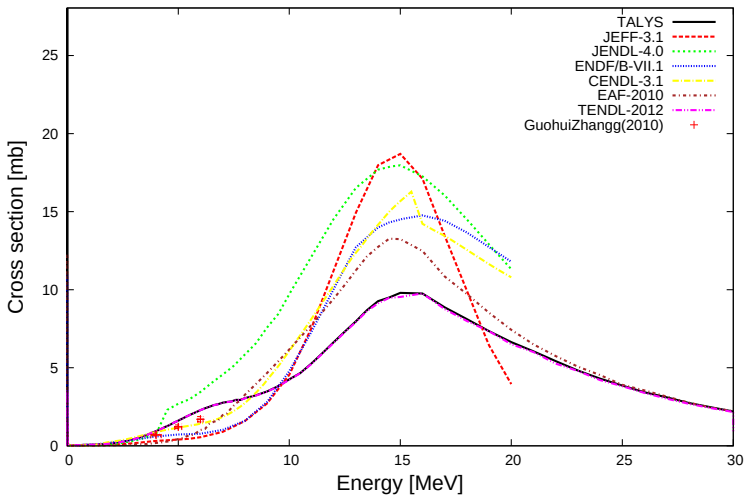

^{93}Nb(n,a)^{90g}Y
TALYS
EAF-2010
TENDL-2012
Filatenkov(2001)
Levkovskiy(1969)
Bramlitt(1963)
Blosser(1958)
Cross section [mb]
Energy [MeV]

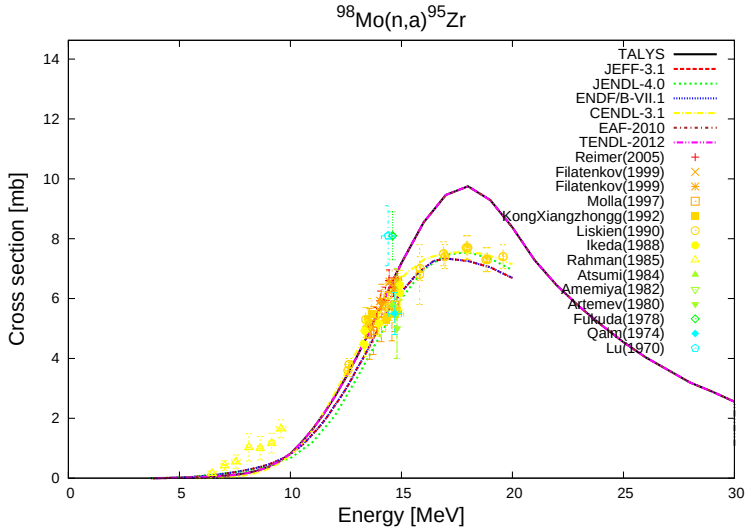

^{93}Nb(n,a)^{90m}Y
TALYS
EAF-2010
TENDL-2012
Honusek(2011)
Honusek(2011)
Honusek(2011)
Honusek(2011)
Furuta(2008)
Filatenkov(2001)
Fessler(2000)
Filatenkov(1999)
Filatenkov(1999)
Doczi(1998)
Garlea(1992)
Molla(1991)
Ikeda(1988)
Mannan(1988)
Woelfle(1988)
Kim(1986)
FanPeiguoo(1985)
Garlea(1985)
Pepelnik(1985)
Harper(1982)
Ryves(1981)
Gaiser(1979)
HuangJianzhouu(1977)
Turkiewicz(1975)
Husain(1970)
Lu(1970)
Levkovskiy(1969)
Bramlitt(1963)
Alford(1961)
Cross section [mb]
Energy [MeV]

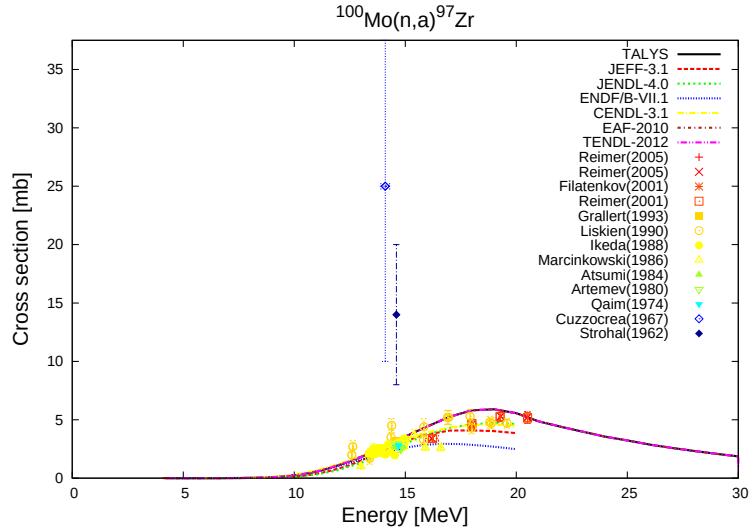

^{92}Mo(n,a)^{89}Zr
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Reimer(2005)
Filatenkov(1999)
Filatenkov(1999)
Doczi(1998)
Molla(1997)
Grallert(1993)
KongXiangzhongg(1991)
Ikeda(1988)
Marcinkowski(1986)
Molla(1986)
Pepelnik(1985)
Rahman(1985)
Atsumi(1984)
Artemev(1980)
Garuska(1980)
SrinivasaRao(1979)
Qaim(1974)
Kanda(1972)
Cross section [mb]
Energy [MeV]

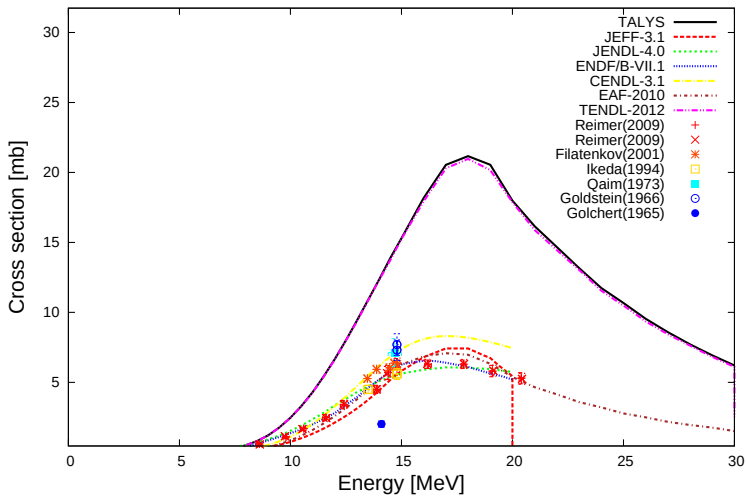

^{92}Mo(n,a)^{89g}Zr
TALYS
EAF-2010
TENDL-2012
Osman(1996)
Garlea(1992)
Liskien(1990)
Amemiya(1982)
Fujino(1977)
Kanda(1972)
Lu(1970)
Cuzzocrea(1967)
Bramlitt(1963)
Cross section [mb]
Energy [MeV]

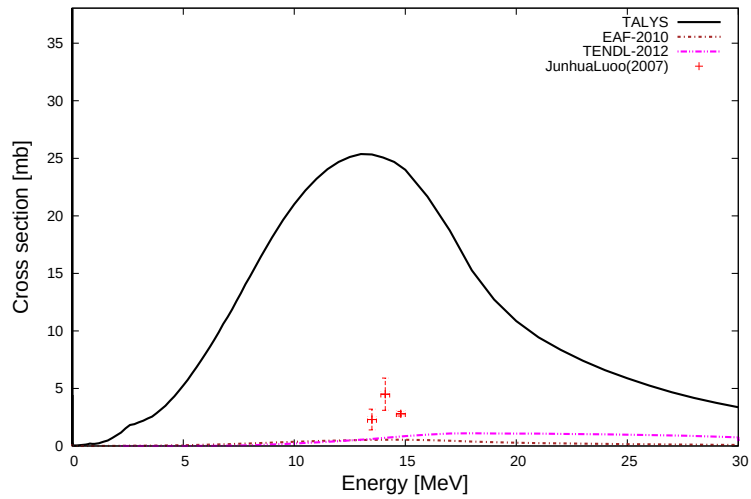

^{92}Mo(n,a)^{89m}Zr
TALYS
EAF-2010
TENDL-2012
Reimer(2005)
Reimer(2005)
Reimer(2001)
Filatenkov(1999)
Filatenkov(1999)
Garlea(1992)
Ikeda(1988)
Marcinkowski(1986)
Amemiya(1982)
SrinivasaRao(1979)
Fujino(1977)
Sigg(1975)
Hasan(1972)
Kanda(1972)
Lu(1970)
Cross section [mb]
Energy [MeV]

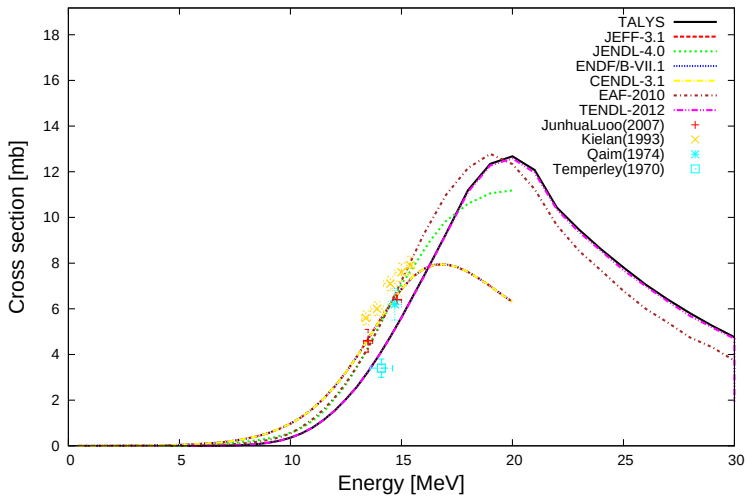

^{95}Mo(n,a)^{92}Zr
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
GuohuiZhangg(2010)
Cross section [mb]
Energy [MeV]

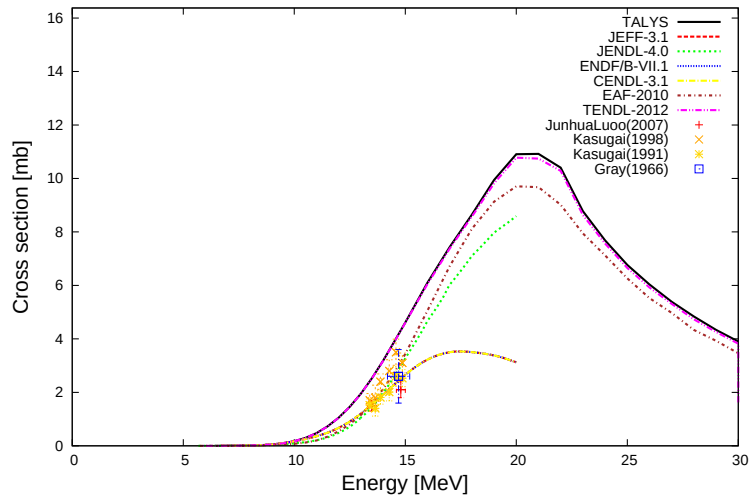

^{98}Mo(n,a)^{95}Zr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Reimer(2005)
Filatenkov(1999)
Filatenkov(1999)
Molla(1997)
KongXiangzhongg(1992)
Liskien(1990)
Ikeda(1988)
Rahman(1985)
Atsumi(1984)
Amemiya(1982)
Artemev(1980)
Fukuda(1978)
Qaim(1974)
Lu(1970)

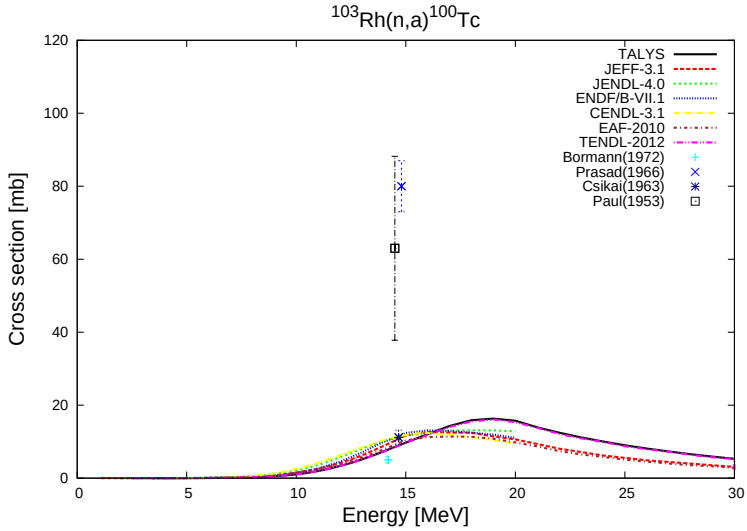

^{100}Mo(n,a)^{97}Zr
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Reimer(2005)
Reimer(2005)
Filatenkov(2001)
Reimer(2001)
Grallert(1993)
Liskien(1990)
Ikeda(1988)
Marcinkowski(1986)
Atsumi(1984)
Artemev(1980)
Qaim(1974)
Cuzzocrea(1967)
Strohal(1962)

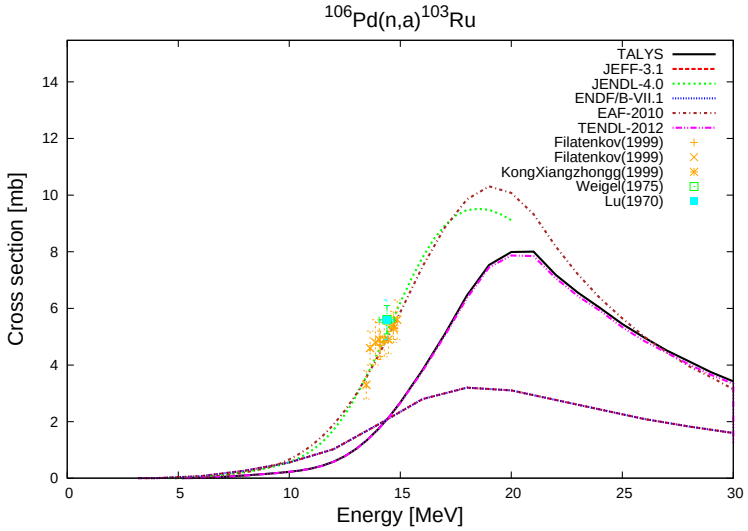

^{99}Tc(n,a)^{96}Nb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Reimer(2009)
Reimer(2009)
Filatenkov(2001)
Ikeda(1994)
Qaim(1973)
Goldstein(1966)
Golchert(1965)

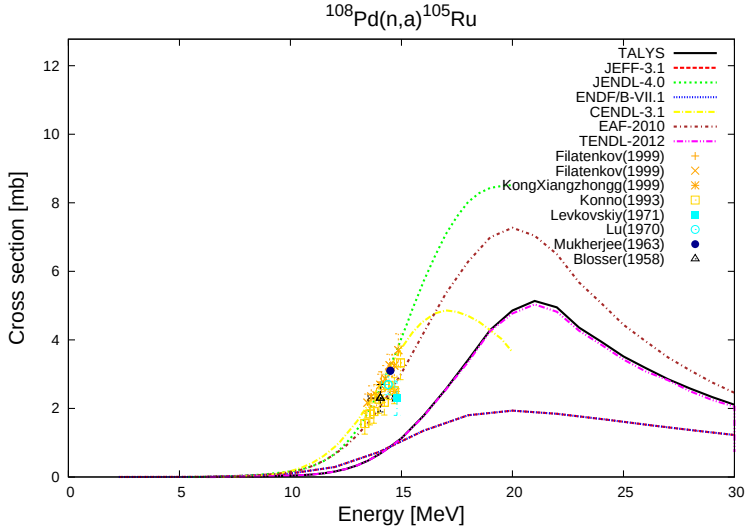

^{96}Ru(n,a)^{93m}Mo
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2007)

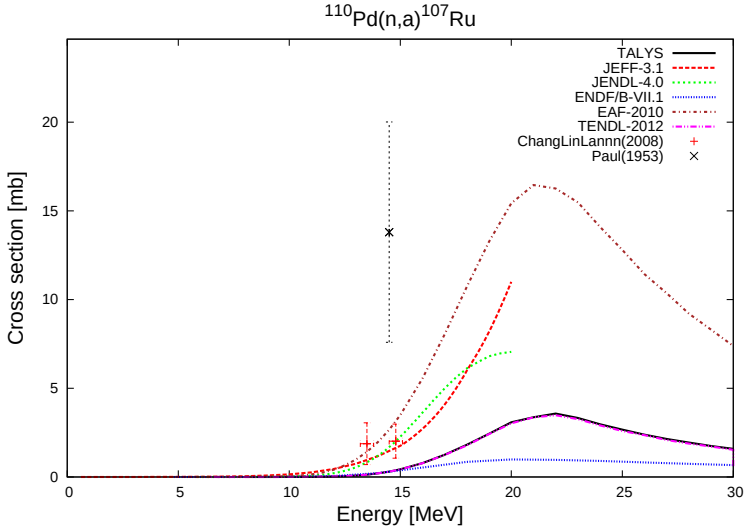

^{102}Ru(n,a)^{99}Mo
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
JunhuaLuoo(2007)
Kielan(1993)
Qaim(1974)
Temperley(1970)

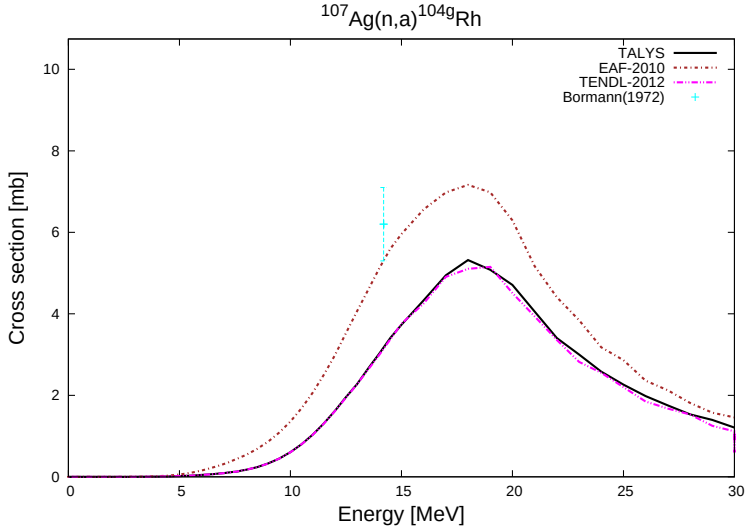

^{104}Ru(n,a)^{101}Mo
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
JunhuaLuoo(2007)
Kasugai(1998)
Kasugai(1991)
Gray(1966)

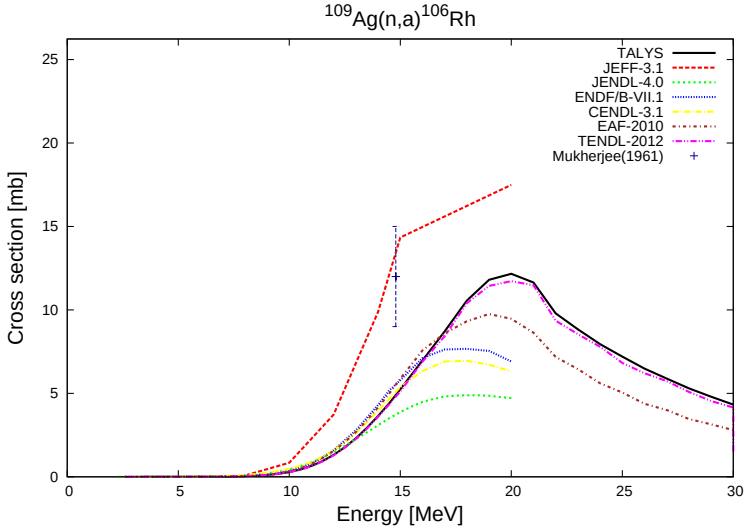

^{103}Rh(n,a)^{100}Tc
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Bormann(1972)
Prasad(1966)
Csikai(1963)
Paul(1953)
Cross section [mb]
Energy [MeV]

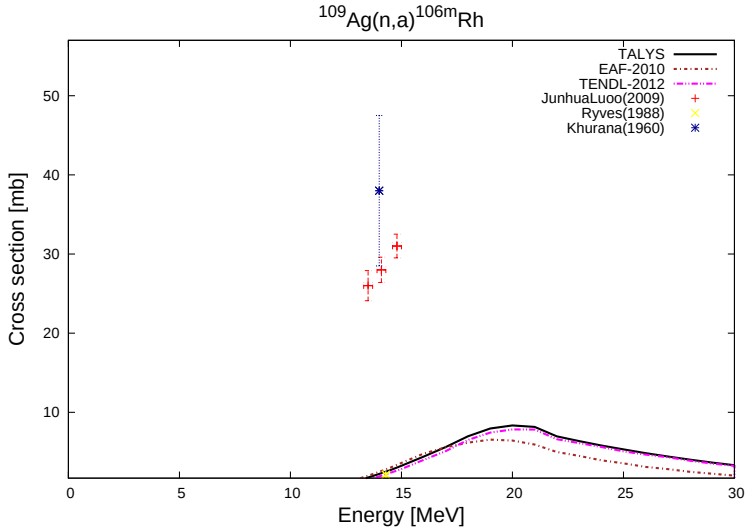

^{106}Pd(n,a)^{103}Ru
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
KongXiangzhongg(1999)
Weigel(1975)
Lu(1970)
Cross section [mb]
Energy [MeV]

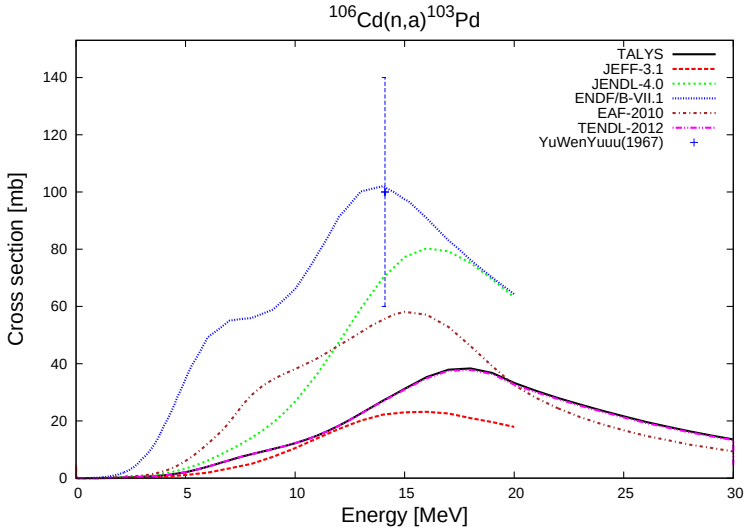

^{108}Pd(n,a)^{105}Ru
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
KongXiangzhongg(1999)
Konno(1993)
Levkovskiy(1971)
Lu(1970)
Mukherjee(1963)
Blosser(1958)
Cross section [mb]
Energy [MeV]

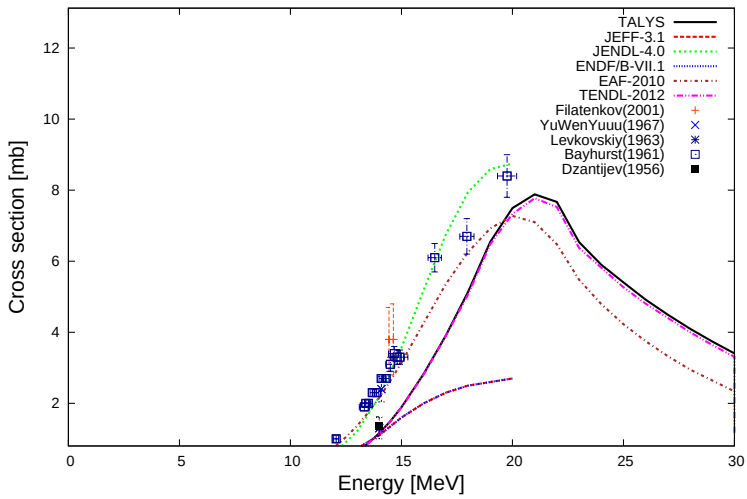

^{110}Pd(n,a)^{107}Ru
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
ChangLinLannn(2008)
Paul(1953)
Cross section [mb]
Energy [MeV]

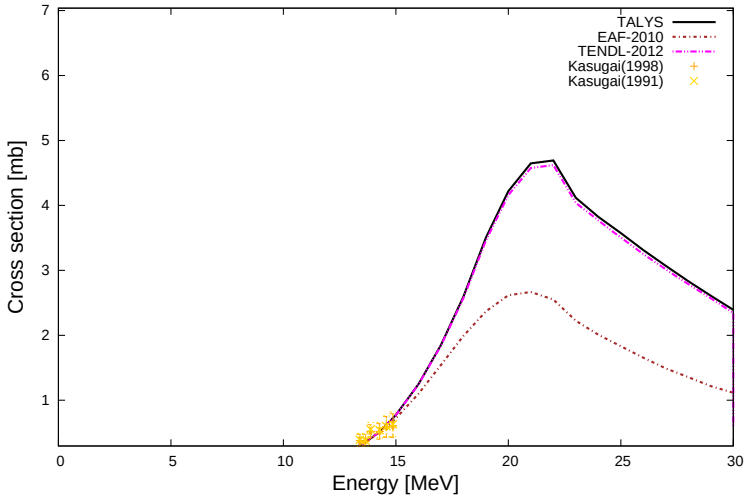

^{107}Ag(n,a)^{104g}Rh
TALYS
EAF-2010
TENDL-2012
Bormann(1972)
Cross section [mb]
Energy [MeV]

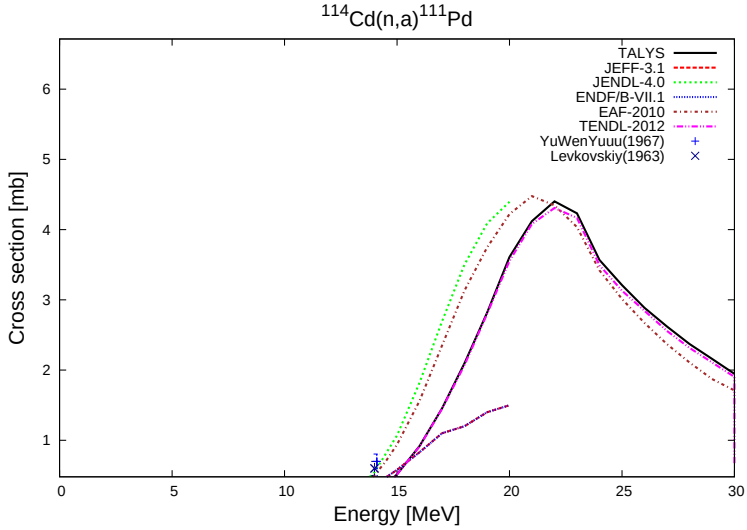

^{109}Ag(n,a)^{106}Rh
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Mukherjee(1961)
Cross section [mb]
Energy [MeV]

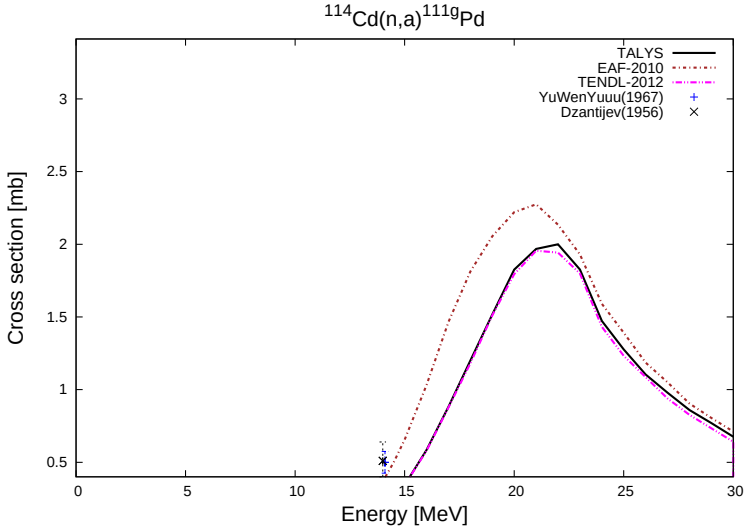

^{109}Ag(n,a)^{106m}Rh
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2009)
Ryves(1988)
Khurana(1960)
Cross section [mb]
Energy [MeV]

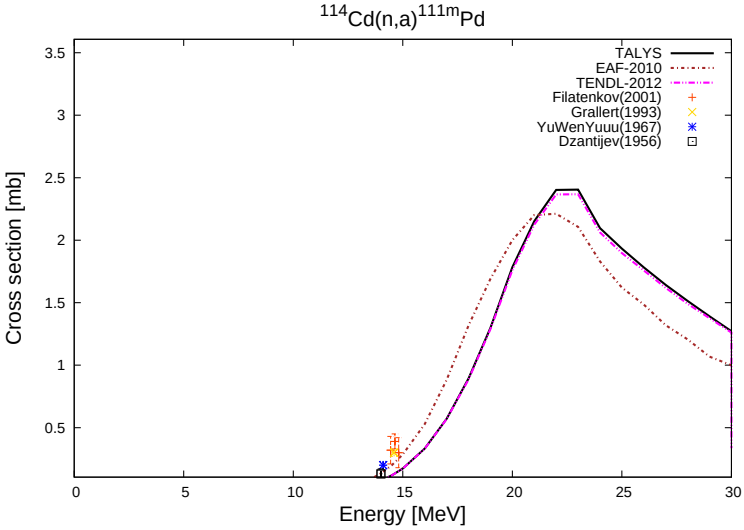

^{106}Cd(n,a)^{103}Pd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
YuWenYuuu(1967)
Cross section [mb]
Energy [MeV]

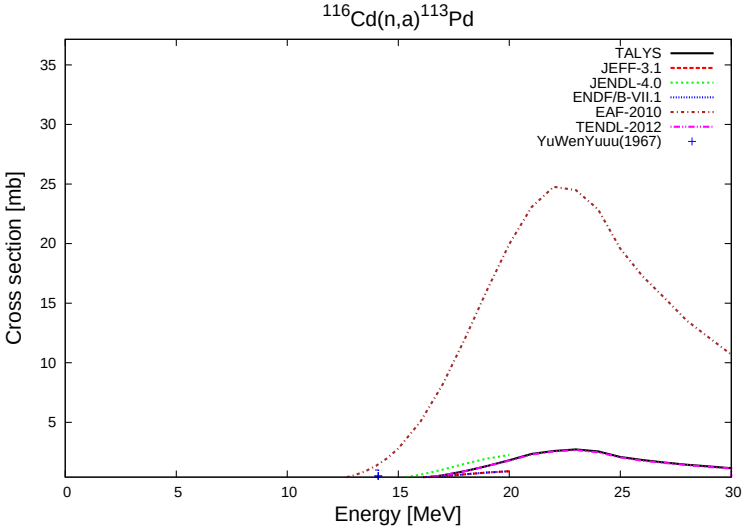

^{112}Cd(n,a)^{109}Pd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(2001)
YuWenYuuu(1967)
Levkovskiy(1963)
Bayhurst(1961)
Dzantijev(1956)
Cross section [mb]
Energy [MeV]

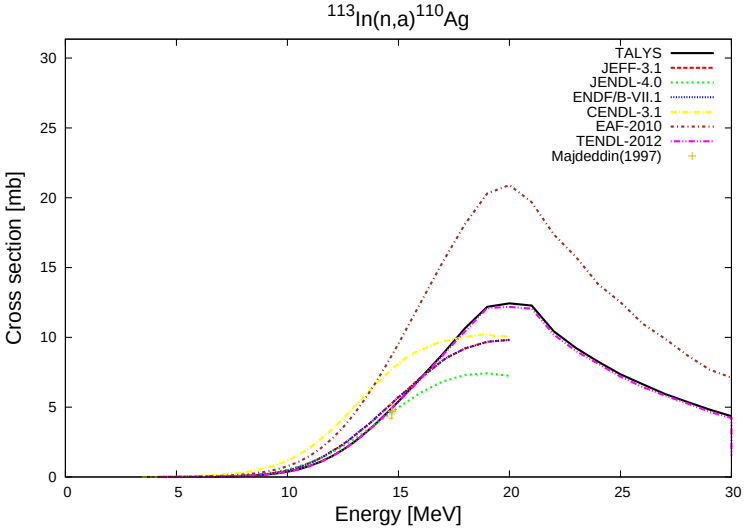

^{112}Cd(n,a)^{109m}Pd
TALYS
EAF-2010
TENDL-2012
Kasugai(1998)
Kasugai(1991)
Cross section [mb]
Energy [MeV]

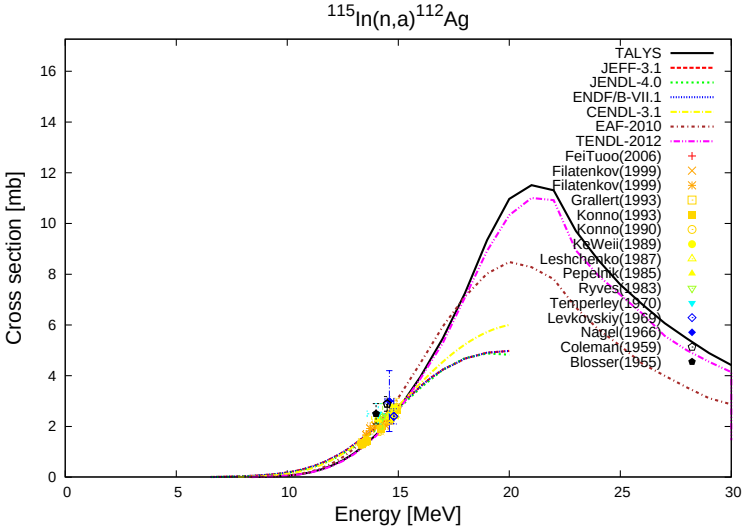

^{114}Cd(n,a)^{111}Pd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
YuWenYuuu(1967)
Levkovskiy(1963)
Cross section [mb]
Energy [MeV]

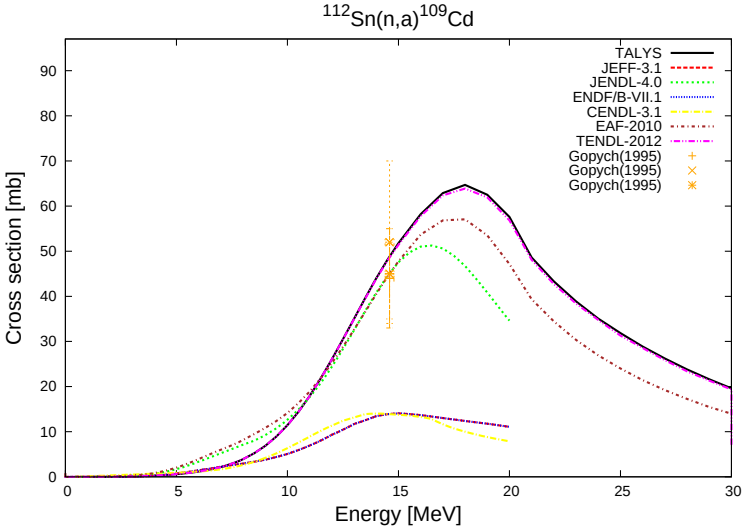

^{114}Cd(n,a)^{111g}Pd
TALYS
EAF-2010
TENDL-2012
YuWenYuuu(1967)
Dzantijev(1956)
Cross section [mb]
Energy [MeV]

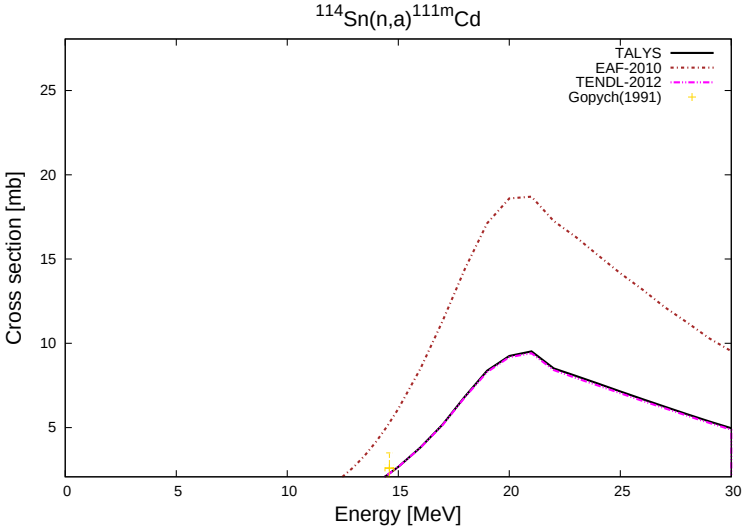

^{114}Cd(n,a)^{111m}Pd
TALYS
EAF-2010
TENDL-2012
Filatenkov(2001)
Grallert(1993)
YuWenYuuu(1967)
Dzantijev(1956)
Cross section [mb]
Energy [MeV]

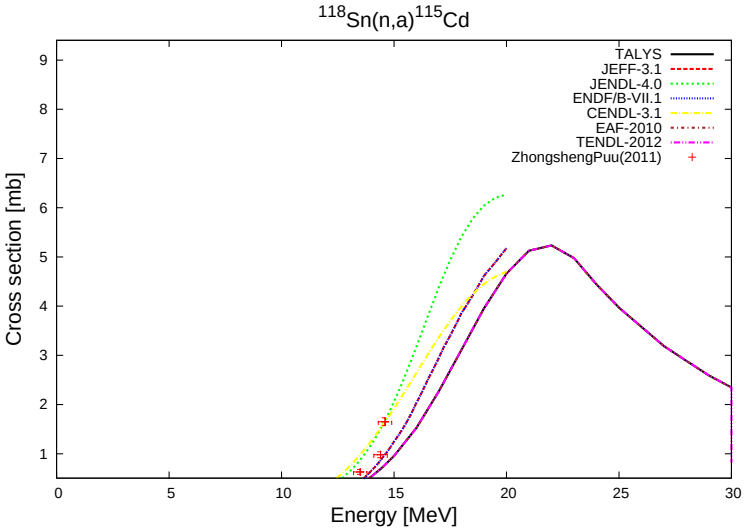

^{116}Cd(n,a)^{113}Pd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
YuWenYuuu(1967)
Cross section [mb]
Energy [MeV]

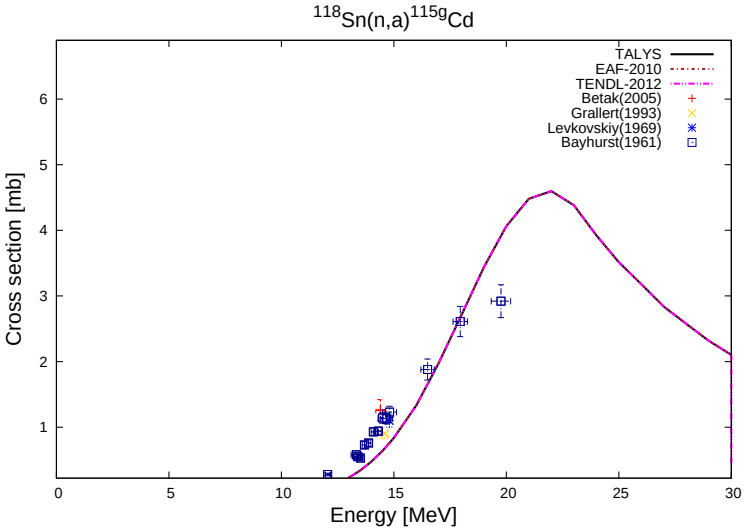

^{113}In(n,a)^{110}Ag
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Majdeddin(1997)
Cross section [mb]
Energy [MeV]

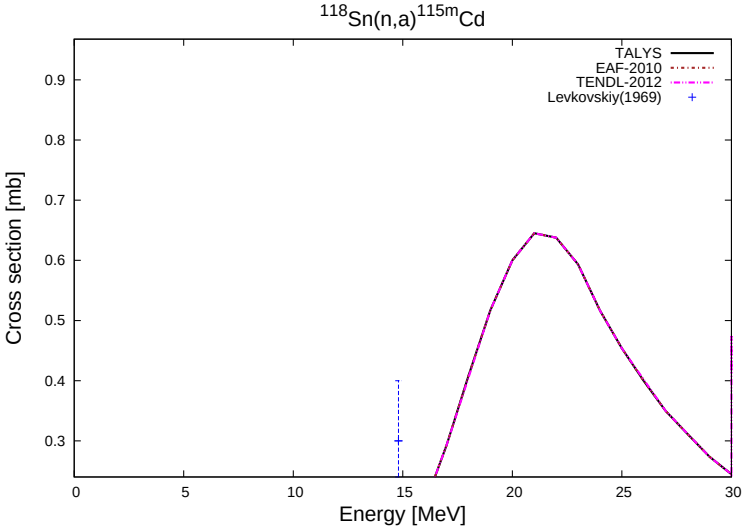

^{115}In(n,a)^{112}Ag
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
FeiTuoo(2006)
Filatenkov(1999)
Filatenkov(1999)
Grallert(1993)
Konno(1993)
Konno(1990)
KaWeii(1989)
Leshchenko(1987)
Pepelnik(1985)
Ryves(1983)
Temperley(1970)
Levkovskiy(1969)
Nagel(1966)
Colemart(1959)
Blosser(1955)
Cross section [mb]
Energy [MeV]

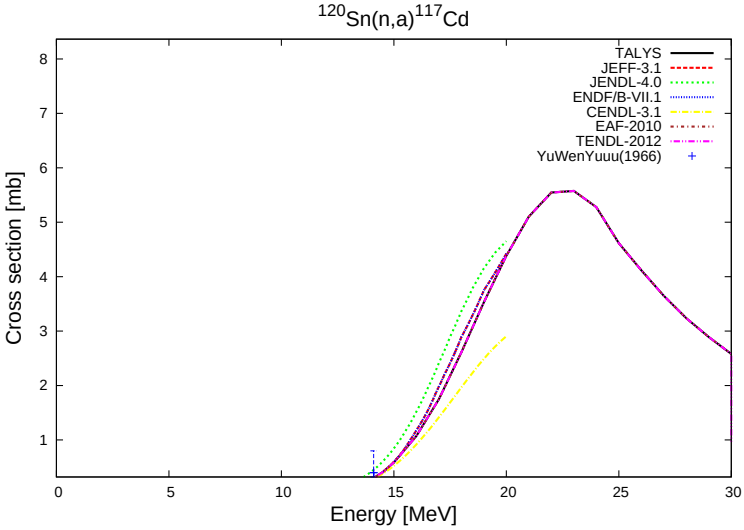

^{112}Sn(n,a)^{109}Cd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Gopych(1995)
Gopych(1995)
Gopych(1995)
Cross section [mb]
Energy [MeV]

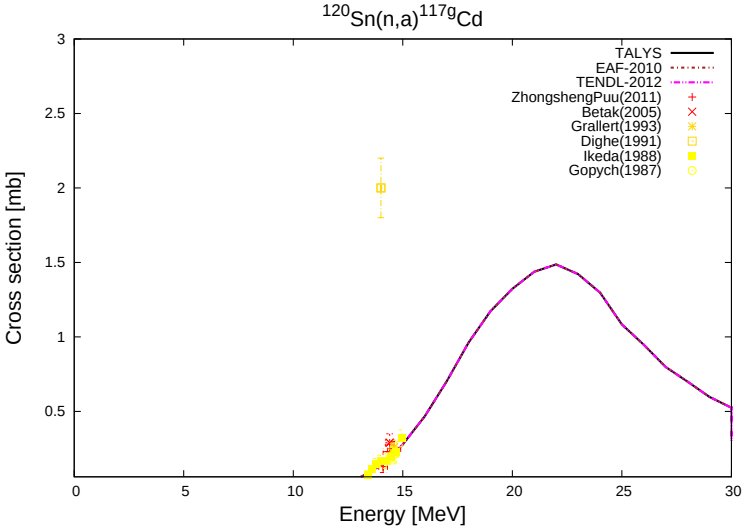

^{114}Sn(n,a)^{111m}Cd
TALYS
EAF-2010
TENDL-2012
Gopych(1991)
Cross section [mb]
Energy [MeV]

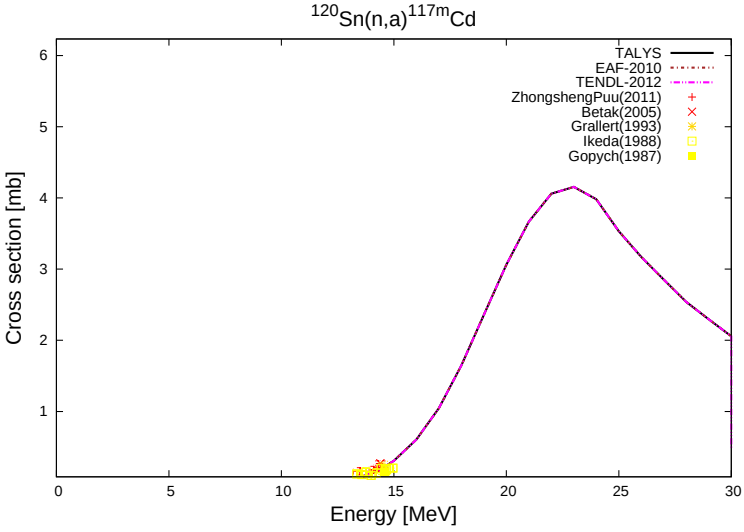

^{118}Sn(n,a)^{115}Cd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
ZhongshengPuu(2011)
Cross section [mb]
Energy [MeV]

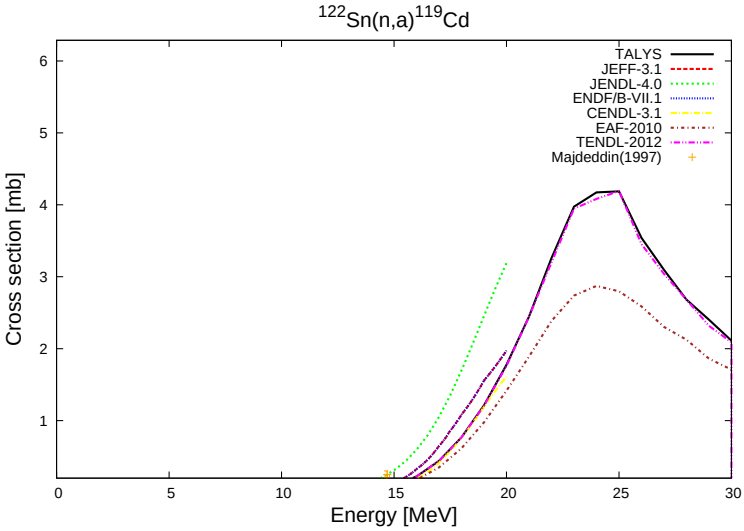

^{118}Sn(n,a)^{115g}Cd
TALYS
EAF-2010
TENDL-2012
Betak(2005)
Grallert(1993)
Levkovskiy(1969)
Bayhurst(1961)
Cross section [mb]
Energy [MeV]

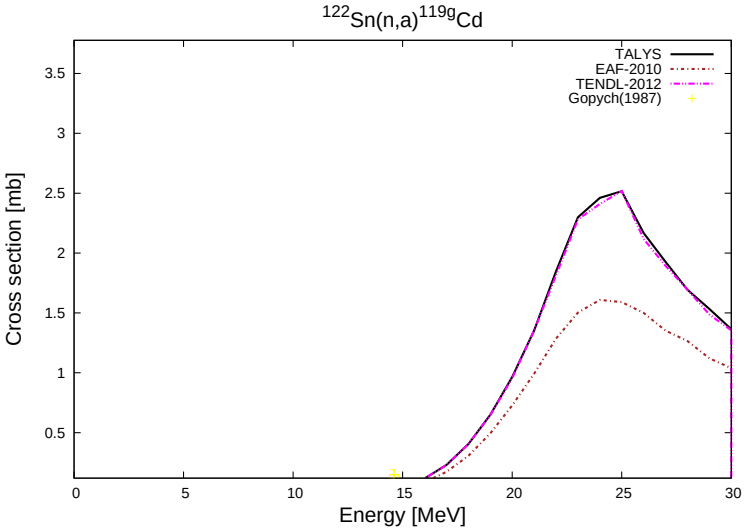

^{118}Sn(n,a)^{115m}Cd
TALYS
EAF-2010
TENDL-2012
Levkovskiy(1969)
Cross section [mb]
Energy [MeV]

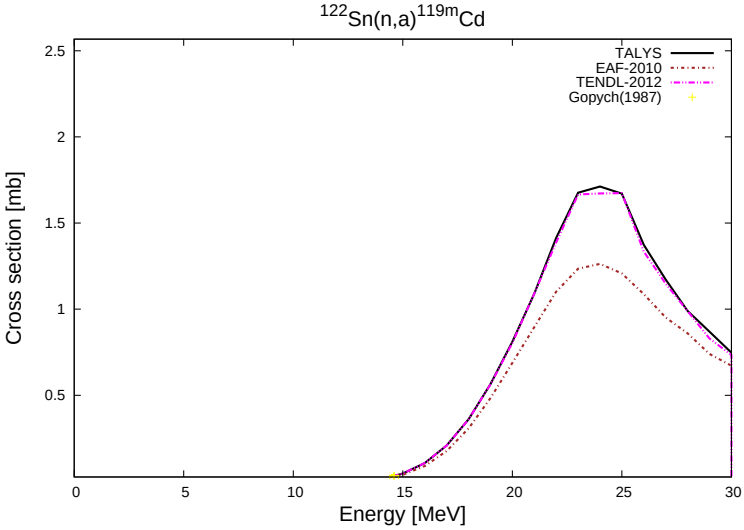

^{120}Sn(n,a)^{117}Cd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
YuWenYuuu(1966)
Cross section [mb]
Energy [MeV]

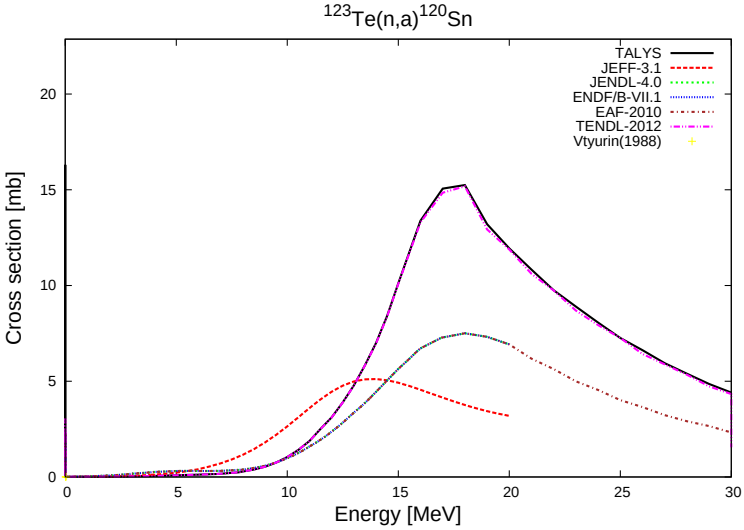

^{120}Sn(n,a)^{117g}Cd
TALYS
EAF-2010
TENDL-2012
ZhongshengPuu(2011)
Betak(2005)
Grallert(1993)
Dighe(1991)
Ikeda(1988)
Gopych(1987)
Cross section [mb]
Energy [MeV]

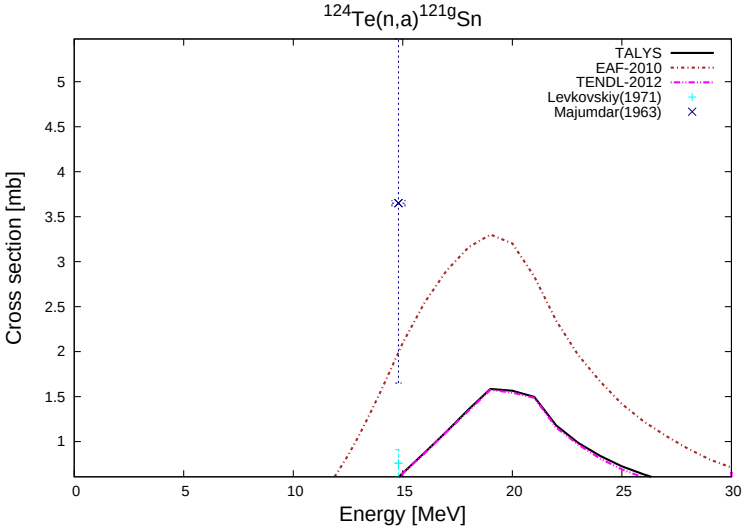

^{120}Sn(n,a)^{117m}Cd
TALYS
EAF-2010
TENDL-2012
ZhongshengPuu(2011)
Betak(2005)
Grallert(1993)
Ikeda(1988)
Gopych(1987)
Cross section [mb]
Energy [MeV]

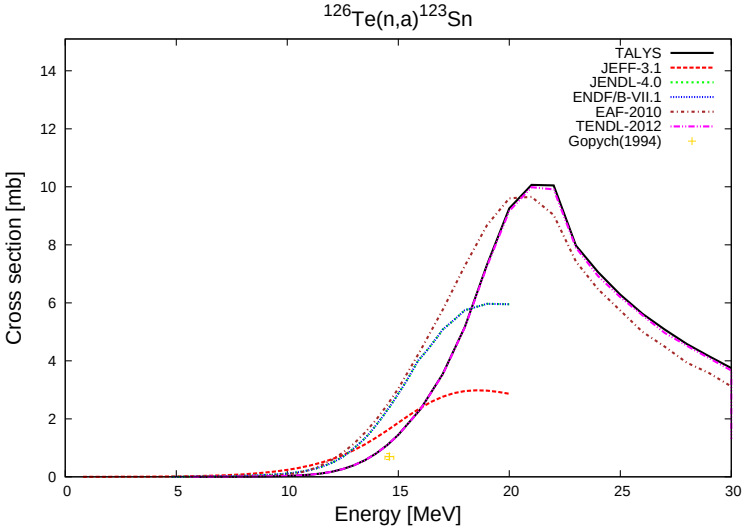

^{122}Sn(n,a)^{119}Cd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Majdeddin(1997)
Cross section [mb]
Energy [MeV]

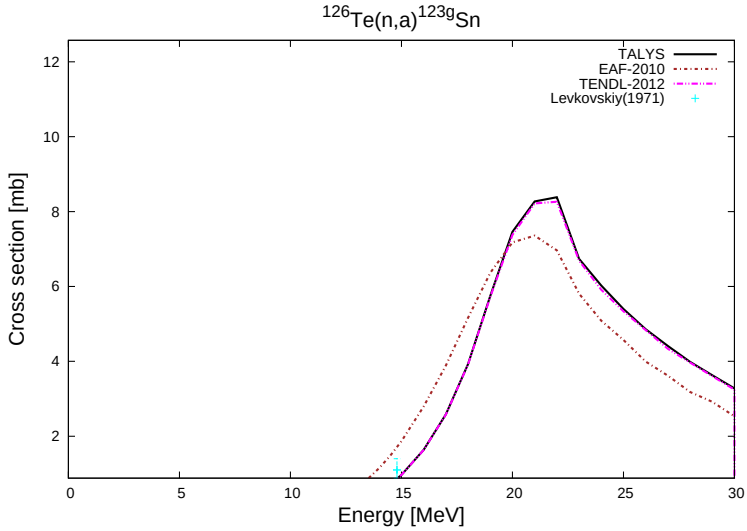

^{122}Sn(n,a)^{119g}Cd
TALYS
EAF-2010
TENDL-2012
Gopych(1987)
Cross section [mb]
Energy [MeV]

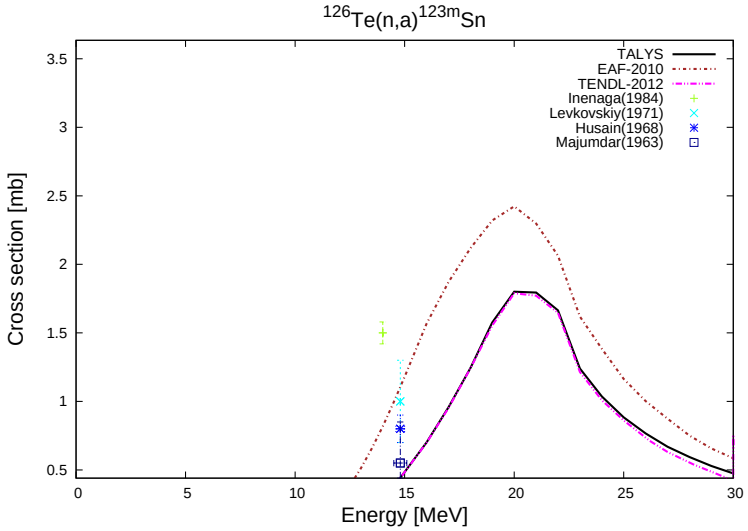

^{122}Sn(n,a)^{119m}Cd
TALYS
EAF-2010
TENDL-2012
Gopych(1987)
Cross section [mb]
Energy [MeV]

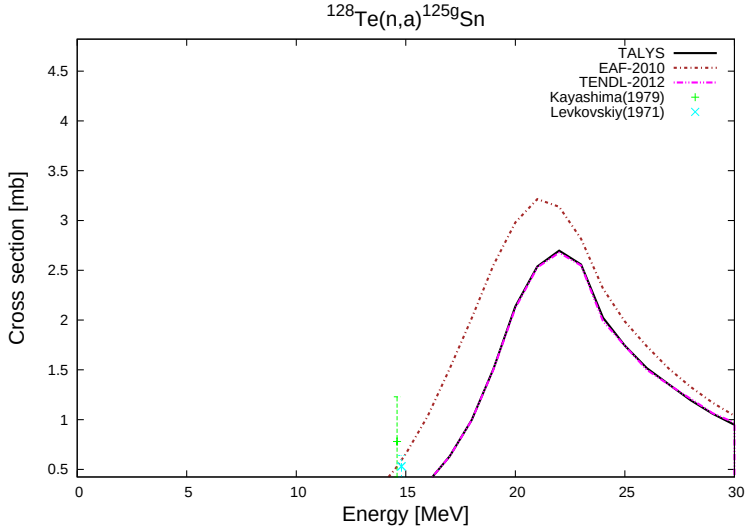

^{123}Te(n,a)^{120}Sn
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Vtyurin(1988)
Cross section [mb]
Energy [MeV]

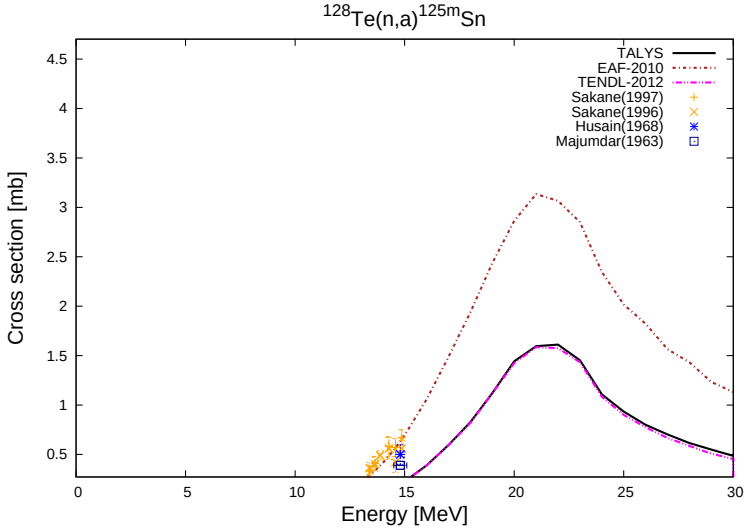

^{124}Te(n,a)^{121g}Sn
TALYS
EAF-2010
TENDL-2012
Levkovskiy(1971)
Majumdar(1963)
Cross section [mb]
Energy [MeV]

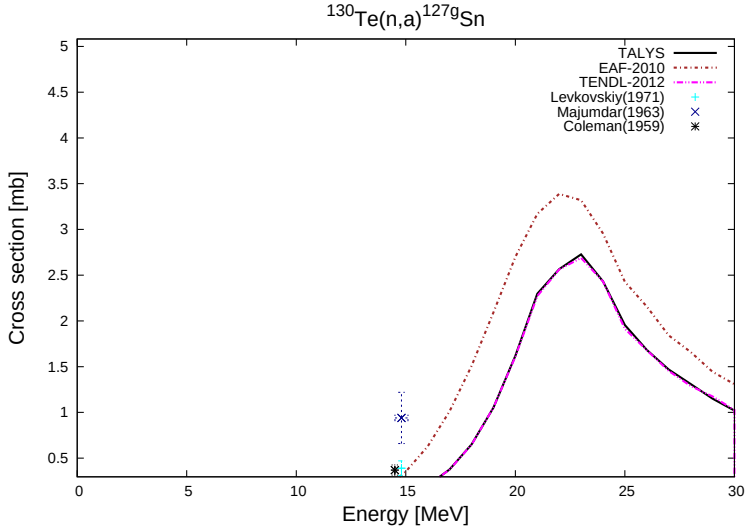

^{126}Te(n,a)^{123}Sn
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Gopych(1994)
Cross section [mb]
Energy [MeV]

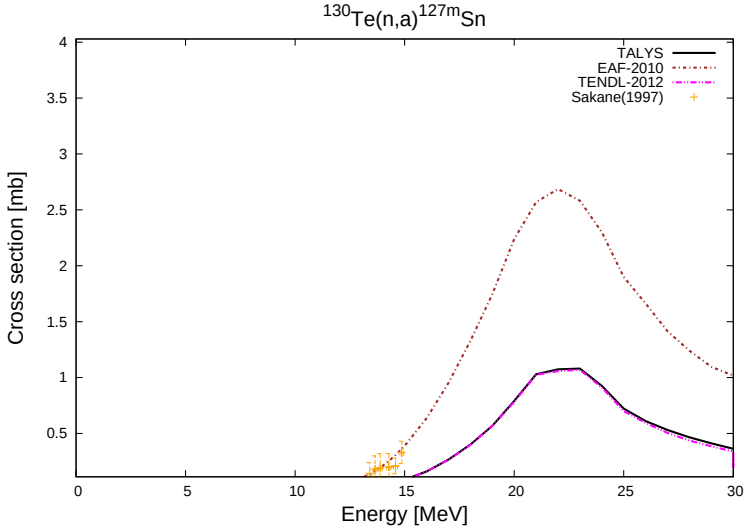

^{126}Te(n,a)^{123g}Sn
TALYS
EAF-2010
TENDL-2012
Levkovskiy(1971)
Cross section [mb]
Energy [MeV]

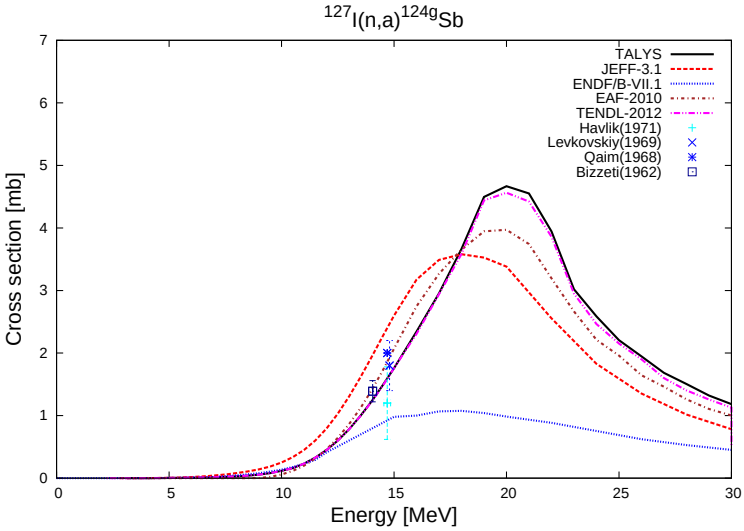

^{126}Te(n,a)^{123m}Sn
TALYS
EAF-2010
TENDL-2012
Inenaga(1984)
Levkovskiy(1971)
Husain(1968)
Majumdar(1963)
Cross section [mb]
Energy [MeV]

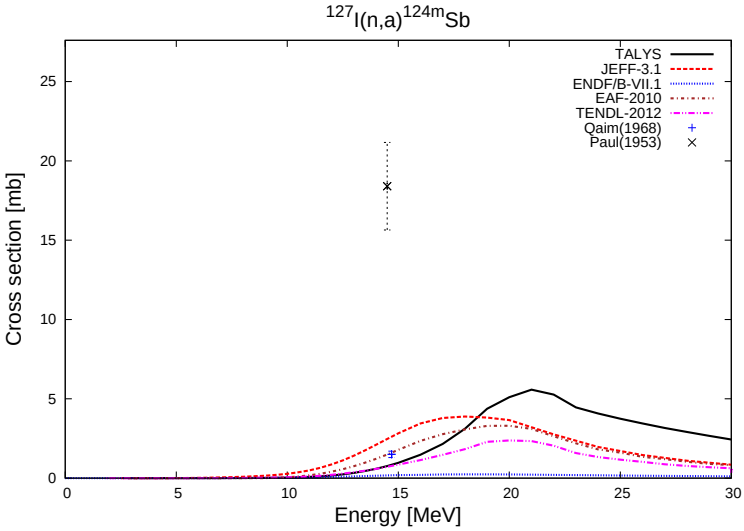

^{128}Te(n,a)^{125g}Sn
TALYS
EAF-2010
TENDL-2012
Kayashima(1979)
Levkovskiy(1971)
Cross section [mb]
Energy [MeV]

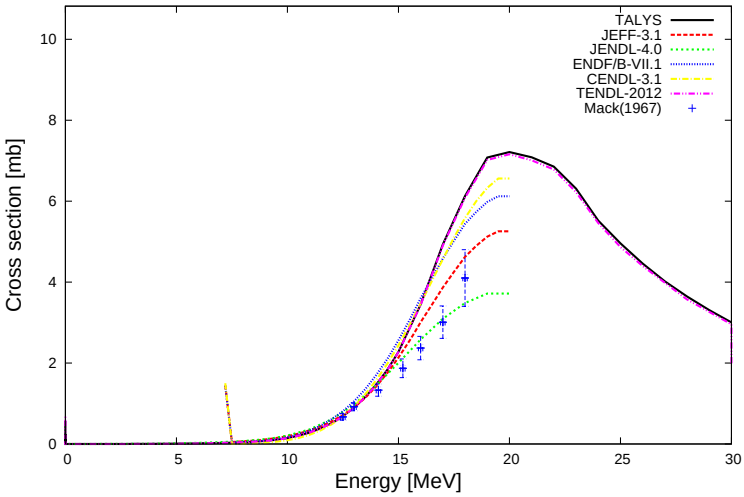

^{128}Te(n,a)^{125m}Sn
TALYS
EAF-2010
TENDL-2012
Sakane(1997)
Sakane(1996)
Husain(1968)
Majumdar(1963)
Cross section [mb]
Energy [MeV]

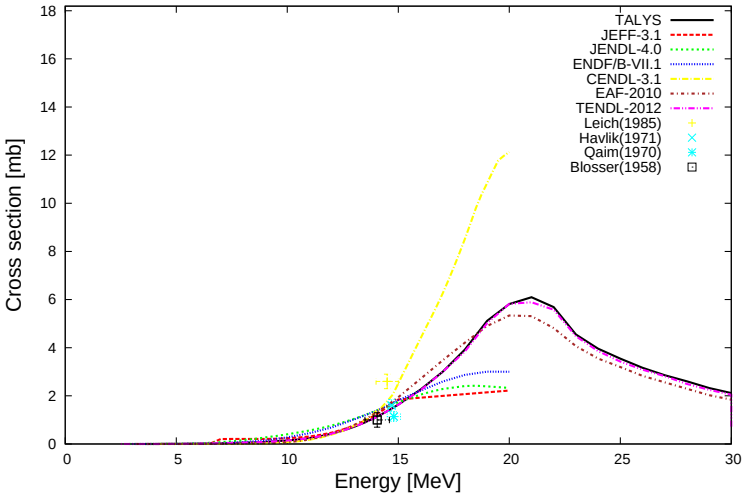

^{130}Te(n,a)^{127g}Sn
TALYS
EAF-2010
TENDL-2012
Levkovskiy(1971)
Majumdar(1963)
Coleman(1959)
Cross section [mb]
Energy [MeV]

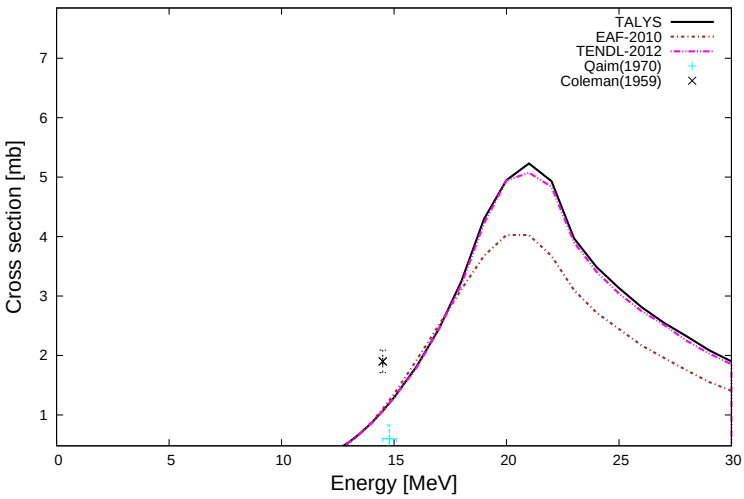

^{130}Te(n,a)^{127m}Sn
TALYS
EAF-2010
TENDL-2012
Sakane(1997)
Cross section [mb]
Energy [MeV]

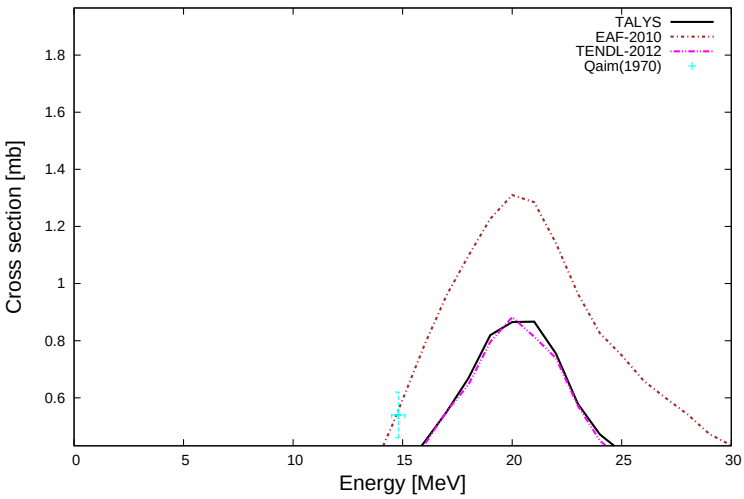

^{127}I(n,a)^{124g}Sb
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Havlik(1971)
Levkovskiy(1969)
Qaim(1968)
Bizzeti(1962)
Cross section [mb]
Energy [MeV]

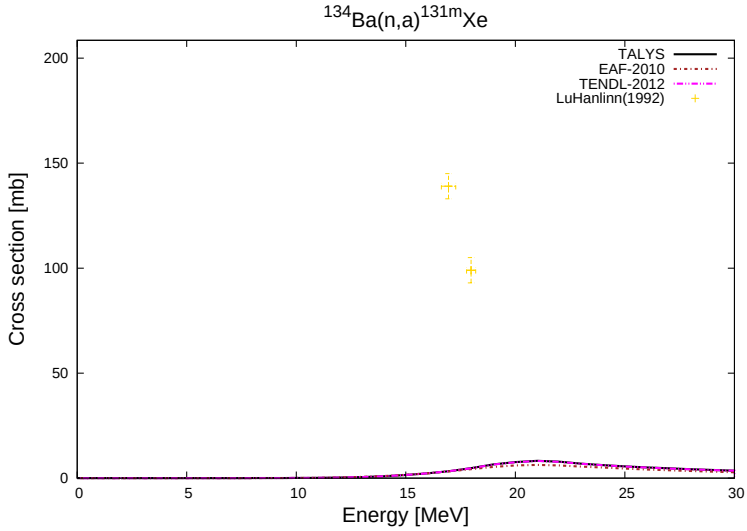

^{127}I(n,a)^{124m}Sb
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Qaim(1968)
Paul(1953)
Cross section [mb]
Energy [MeV]

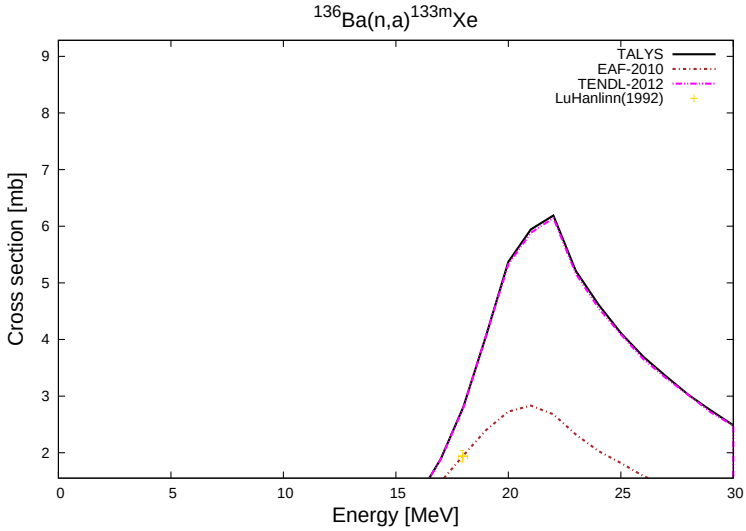

^{nat}Xe(n,a)Te
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
TENDL-2012
Mack(1967)
Cross section [mb]
Energy [MeV]

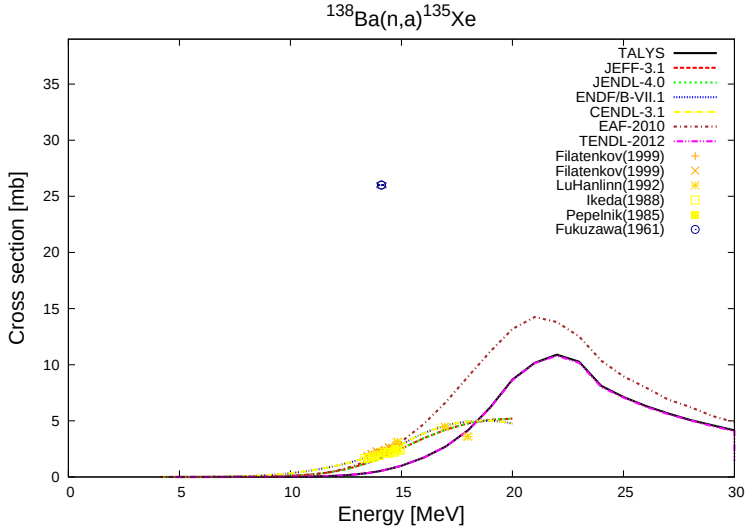

^{133}Cs(n,a)^{130}I
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Leich(1985)
Havlik(1971)
Qaim(1970)
Blosser(1958)
Cross section [mb]
Energy [MeV]

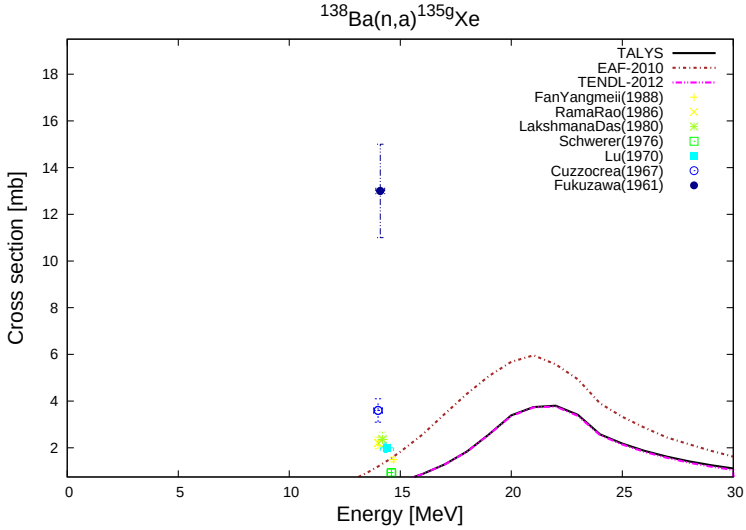

^{133}Cs(n,a)^{130g}I
TALYS
EAF-2010
TENDL-2012
Qaim(1970)
Coleman(1959)
Cross section [mb]
Energy [MeV]

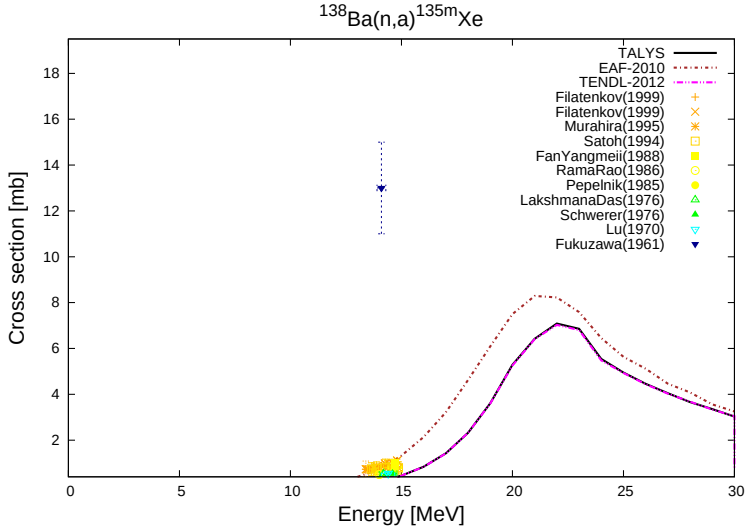

^{133}Cs(n,a)^{130m}I
TALYS
EAF-2010
TENDL-2012
Qaim(1970)
Cross section [mb]
Energy [MeV]

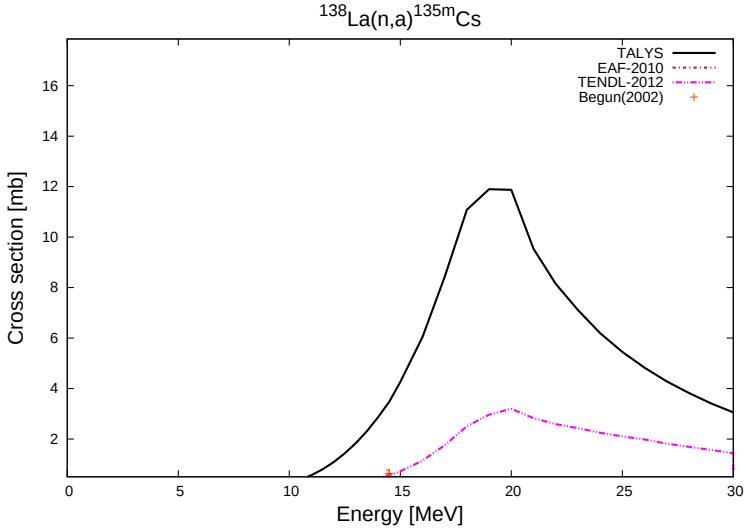

134Ba(n,a)131mXe
TALYS
EAF-2010
TENDL-2012
LuHanlinn(1992)
Cross section [mb]
Energy [MeV]

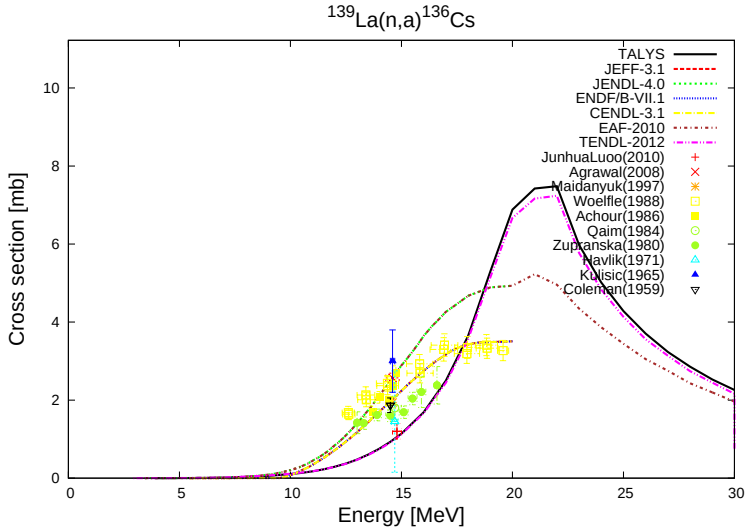

136Ba(n,a)133mXe
TALYS
EAF-2010
TENDL-2012
LuHanlinn(1992)
Cross section [mb]
Energy [MeV]

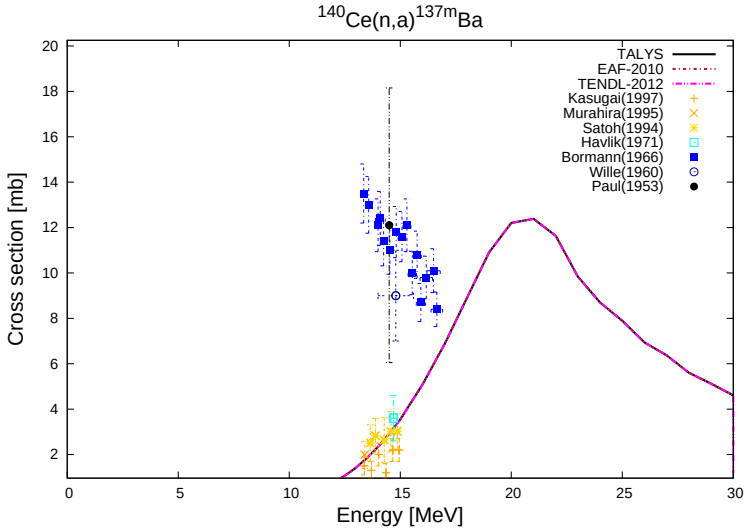

138Ba(n,a)135Xe
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
LuHanlinn(1992)
Ikeda(1988)
Pepelnik(1985)
Fukuzawa(1961)
Cross section [mb]
Energy [MeV]

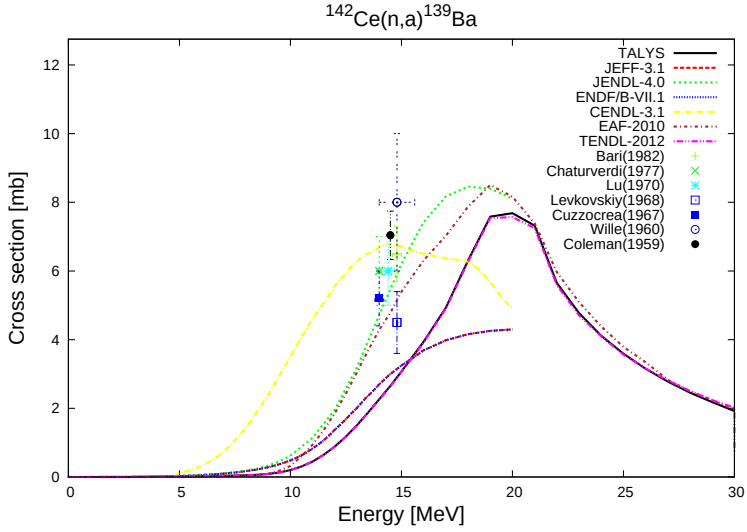

138Ba(n,a)135gXe
TALYS
EAF-2010
TENDL-2012
FanYangmeii(1988)
RamaRao(1986)
LakshmanaDas(1980)
Schwerer(1976)
Lu(1970)
Cuzzocrea(1967)
Fukuzawa(1961)
Cross section [mb]
Energy [MeV]

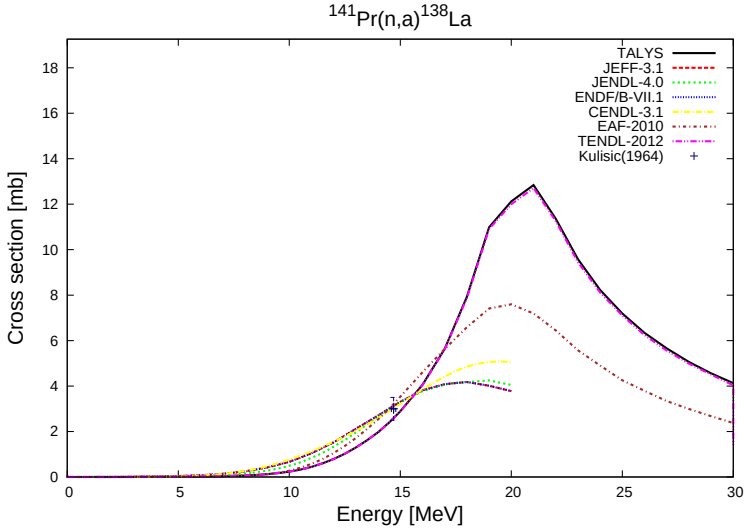

138Ba(n,a)135mXe
TALYS
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Murahira(1995)
Satoh(1994)
FanYangmeii(1988)
RamaRao(1986)
Pepelnik(1985)
LakshmanaDas(1976)
Schwerer(1976)
Lu(1970)
Fukuzawa(1961)
Cross section [mb]
Energy [MeV]

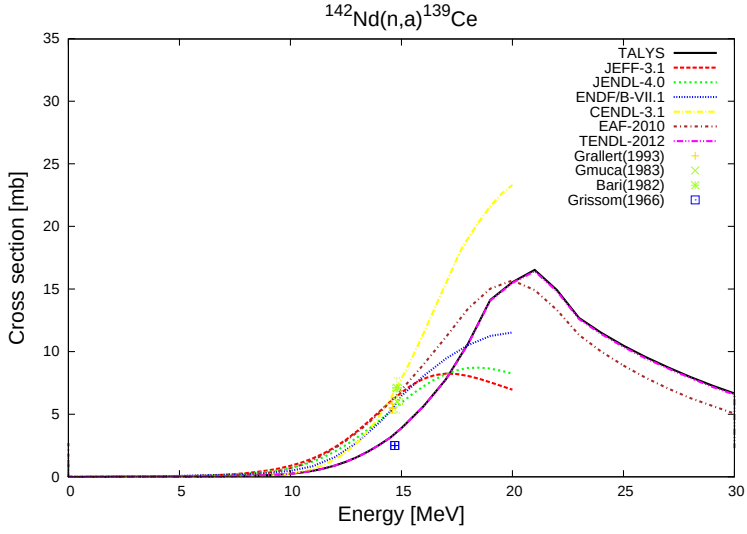

138La(n,a)135mCs
TALYS
EAF-2010
TENDL-2012
Begun(2002)
Cross section [mb]
Energy [MeV]

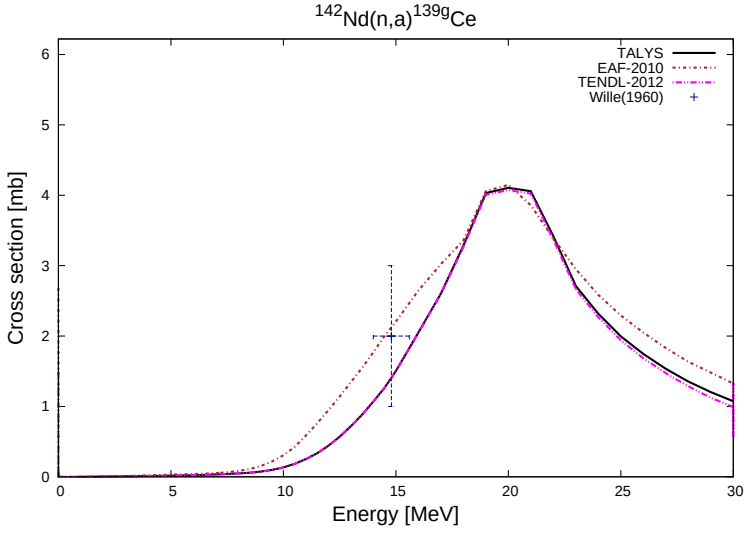

^{139}La(n,a)^{136}Cs
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
JunhuaLuoo(2010)
Agrawal(2008)
Maidanyuk(1997)
Woelfle(1988)
Achour(1986)
Qaim(1984)
Zuprianska(1980)
Havlik(1971)
Kulisic(1965)
Coleman(1959)
Cross section [mb]
Energy [MeV]

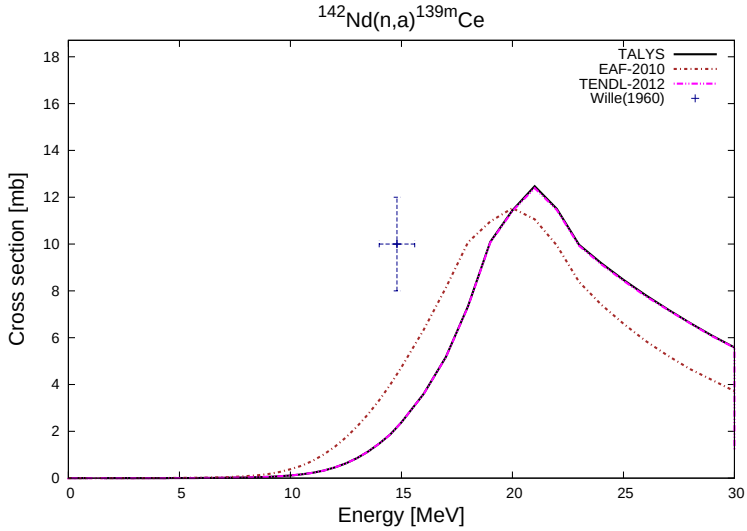

^{140}Ce(n,a)^{137m}Ba
TALYS
EAF-2010
TENDL-2012
Kasugai(1997)
Murahira(1995)
Satoh(1994)
Havlik(1971)
Bormann(1966)
Wille(1960)
Paul(1953)
Cross section [mb]
Energy [MeV]

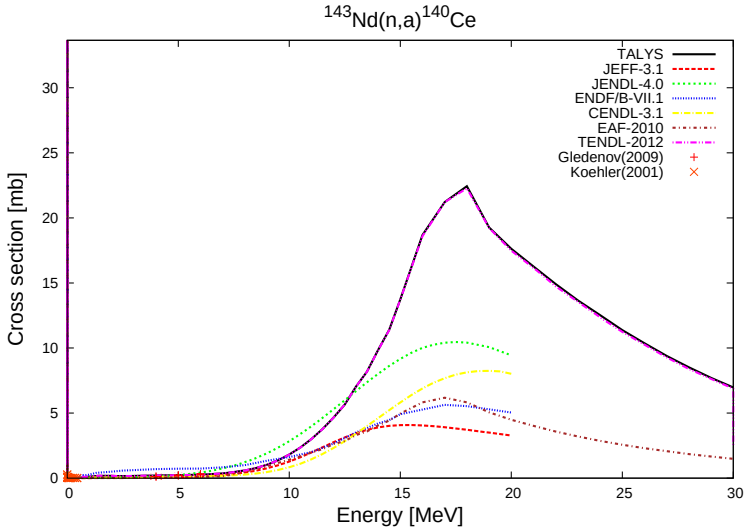

^{142}Ce(n,a)^{139}Ba
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Bari(1982)
Chaturverdi(1977)
Lu(1970)
Levkovskiy(1968)
Cuzzocrea(1967)
Wille(1960)
Coleman(1959)
Cross section [mb]
Energy [MeV]

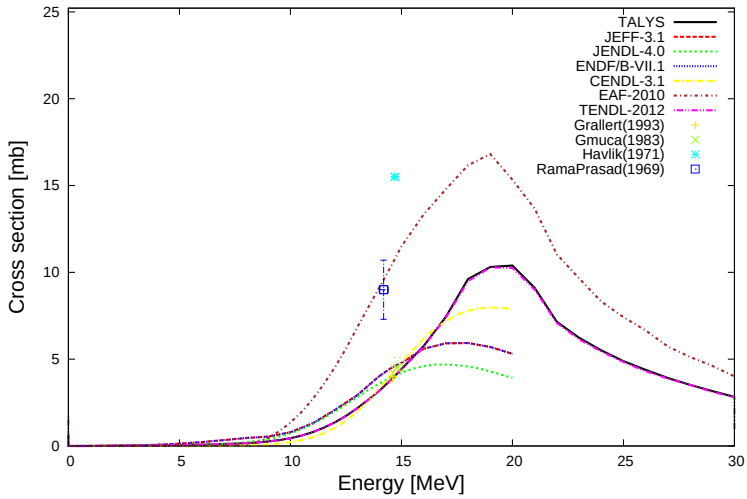

^{141}Pr(n,a)^{138}La
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Kulisic(1964)
Cross section [mb]
Energy [MeV]

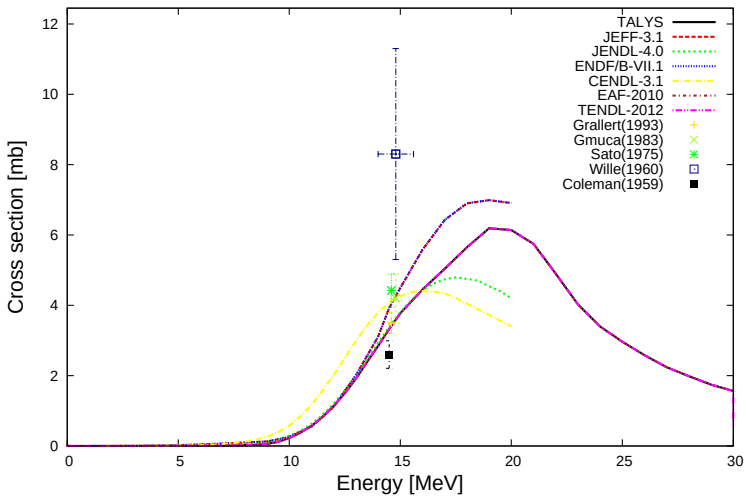

^{142}Nd(n,a)^{139}Ce
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Grallert(1993)
Gmuca(1983)
Bari(1982)
Grissom(1966)
Cross section [mb]
Energy [MeV]

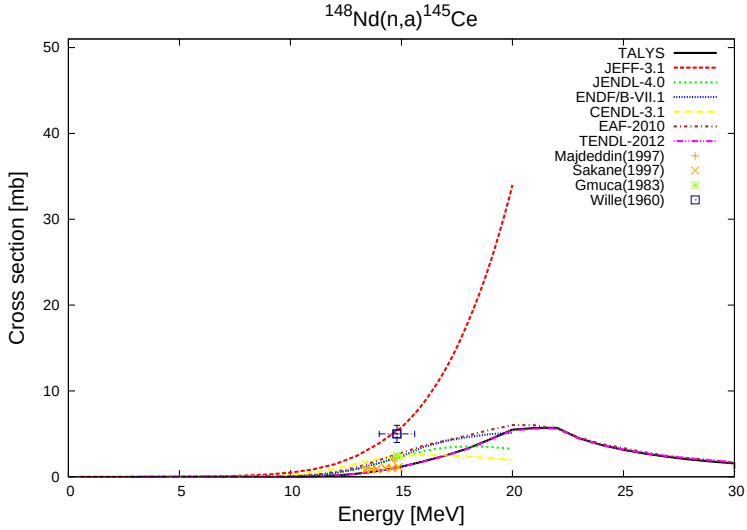

^{142}Nd(n,a)^{139g}Ce
TALYS
EAF-2010
TENDL-2012
Wille(1960)
Cross section [mb]
Energy [MeV]

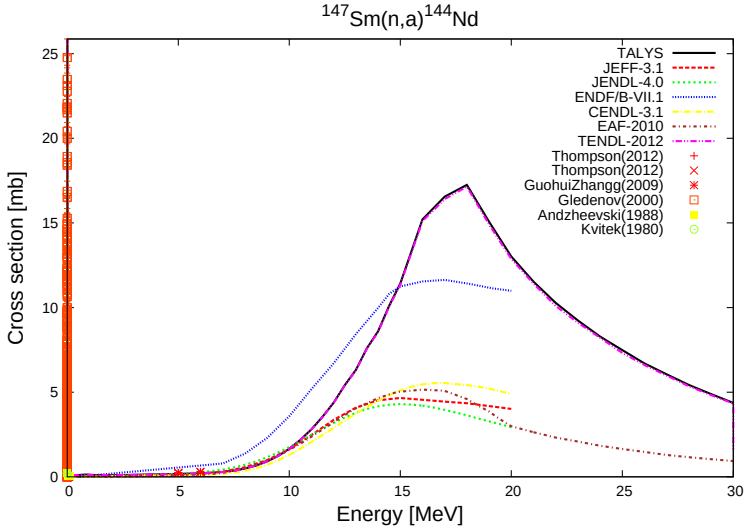

142Nd(n,a)139mCe
TALYS
EAF-2010
TENDL-2012
Wille(1960)
Cross section [mb]
Energy [MeV]

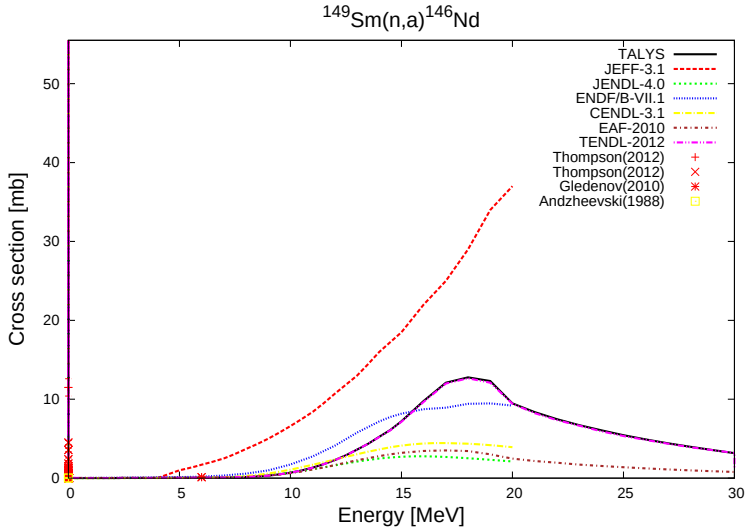

143Nd(n,a)140Ce
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Gledenov(2009)
Koehler(2001)
Cross section [mb]
Energy [MeV]

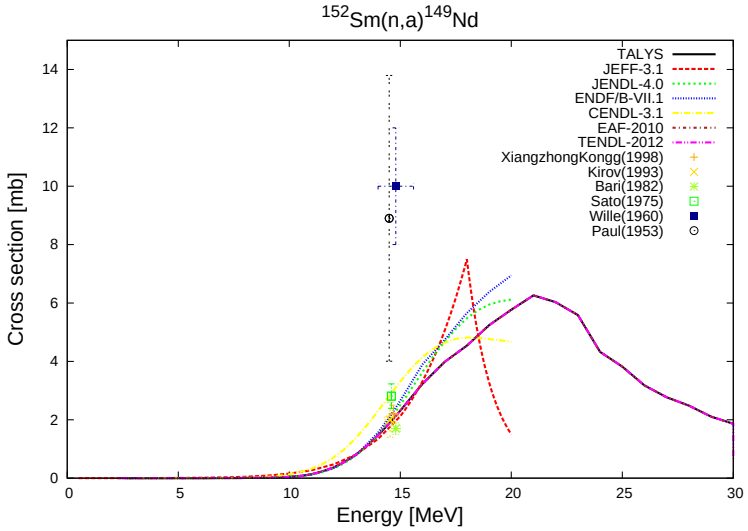

144Nd(n,a)141Ce
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Grallert(1993)
Gmuca(1983)
Havlik(1971)
RamaPrasad(1969)
Cross section [mb]
Energy [MeV]

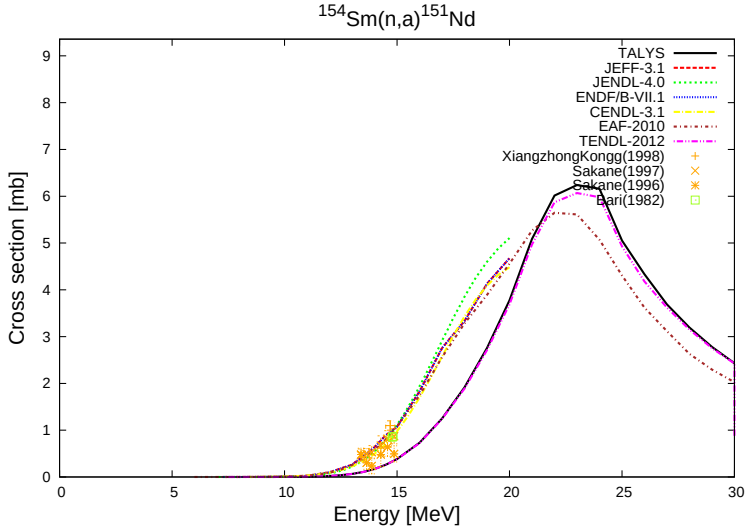

146Nd(n,a)143Ce
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Grallert(1993)
Gmuca(1983)
Sato(1975)
Wille(1960)
Coleman(1959)
Cross section [mb]
Energy [MeV]

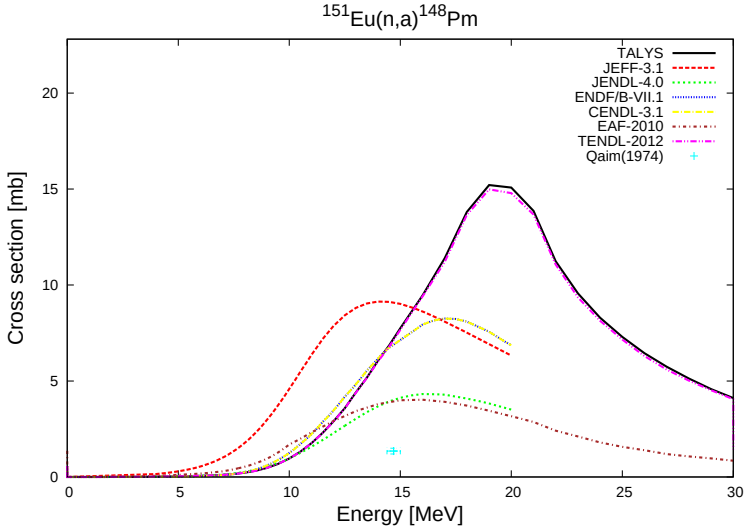

148Nd(n,a)145Ce
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Majdeddin(1997)
Sakane(1997)
Gmuca(1983)
Wille(1960)
Cross section [mb]
Energy [MeV]

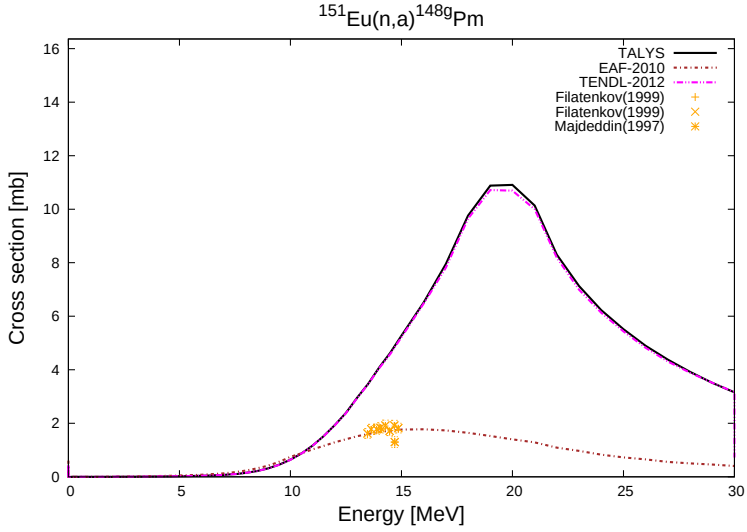

147Sm(n,a)144Nd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Thompson(2012)
Thompson(2012)
GuohuiZhangg(2009)
Gledenov(2000)
Andzheevski(1988)
Kvitek(1980)
Cross section [mb]
Energy [MeV]

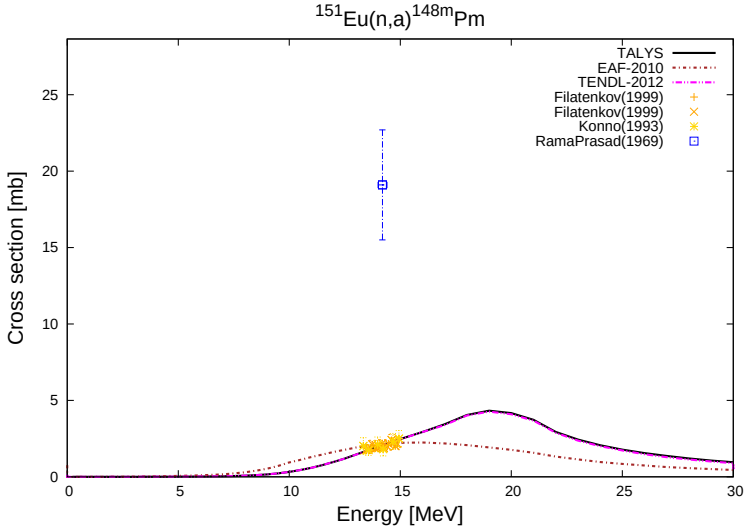

^{149}Sm(n,a)^{146}Nd
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Thompson(2012)
Thompson(2012)
Gledenov(2010)
Andzheevski(1988)

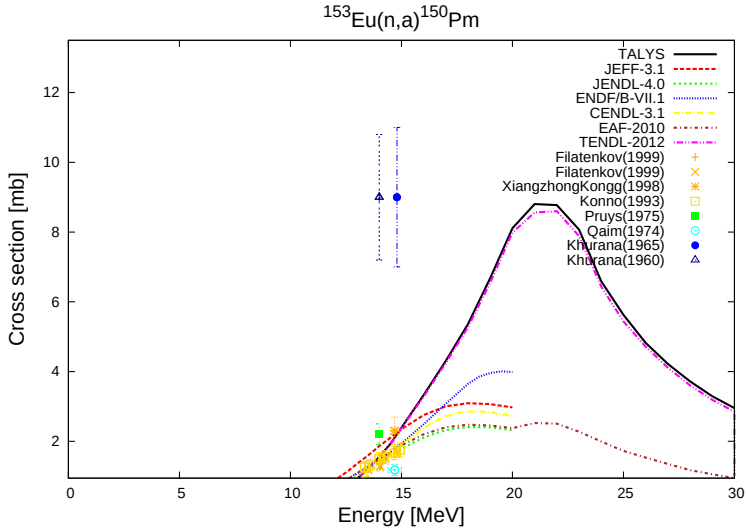

^{152}Sm(n,a)^{149}Nd
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
XiangzhongKongg(1998)
Kirov(1993)
Bari(1982)
Sato(1975)
Wille(1960)
Paul(1953)

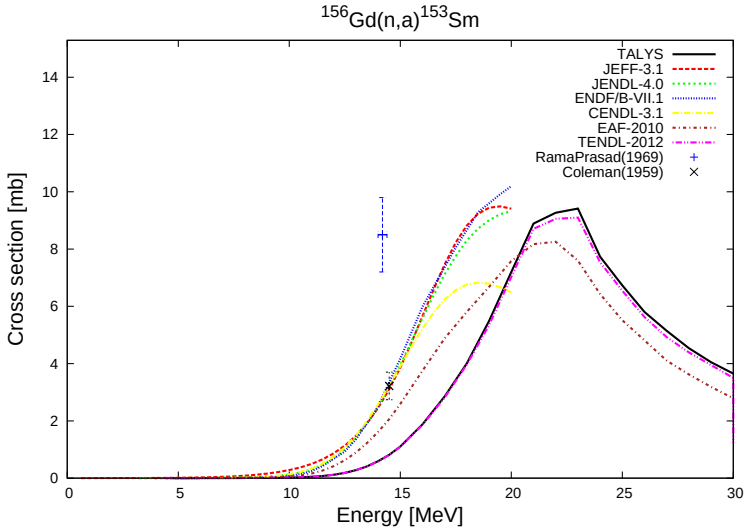

^{154}Sm(n,a)^{151}Nd
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
XiangzhongKongg(1998)
Sakane(1997)
Sakane(1996)
Bari(1982)

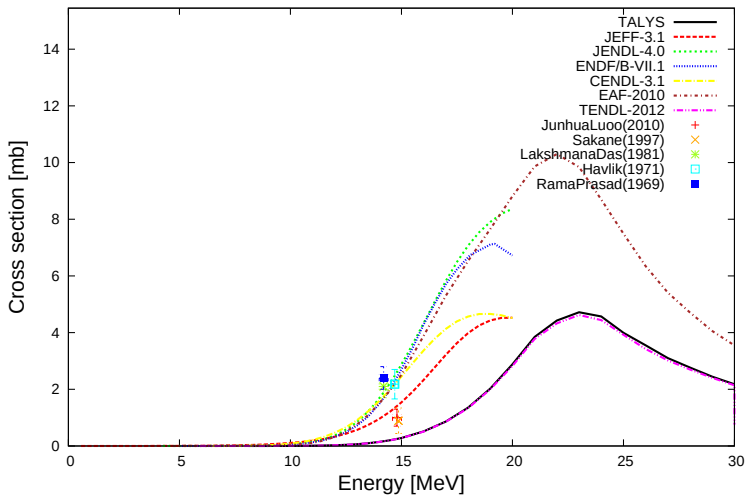

^{151}Eu(n,a)^{148}Pm
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Qaim(1974)

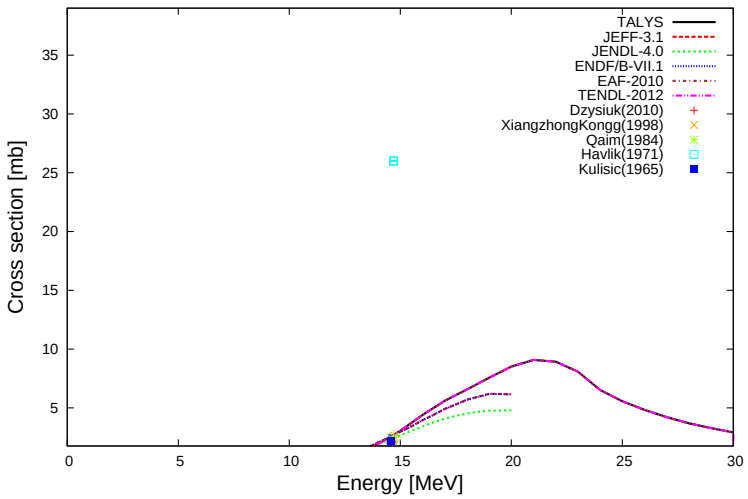

^{151}Eu(n,a)^{148g}Pm
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Majdeddin(1997)

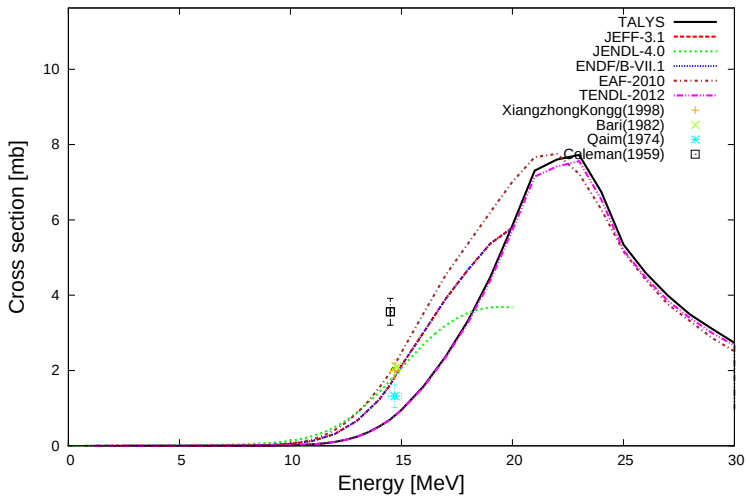

^{151}Eu(n,a)^{148m}Pm
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Konno(1993)
RamaPrasad(1969)

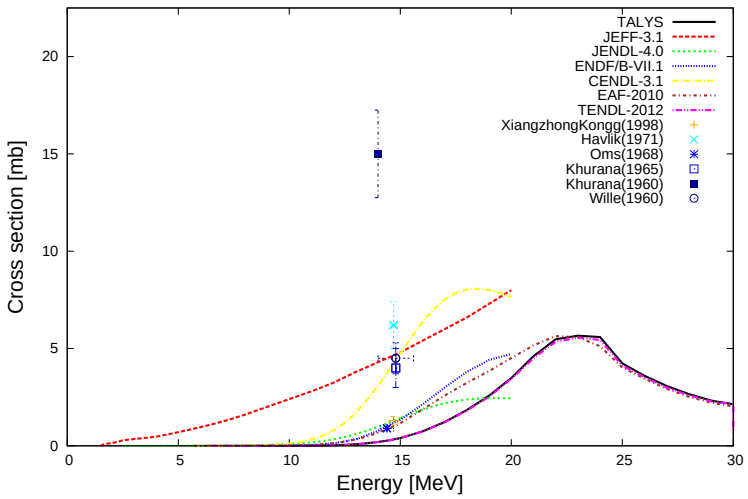

^{153}Eu(n,a)^{150}Pm
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
XiangzhongKongg(1998)
Konno(1993)
Pruys(1975)
Qaim(1974)
Khurana(1965)
Khurana(1960)
Cross section [mb]
Energy [MeV]

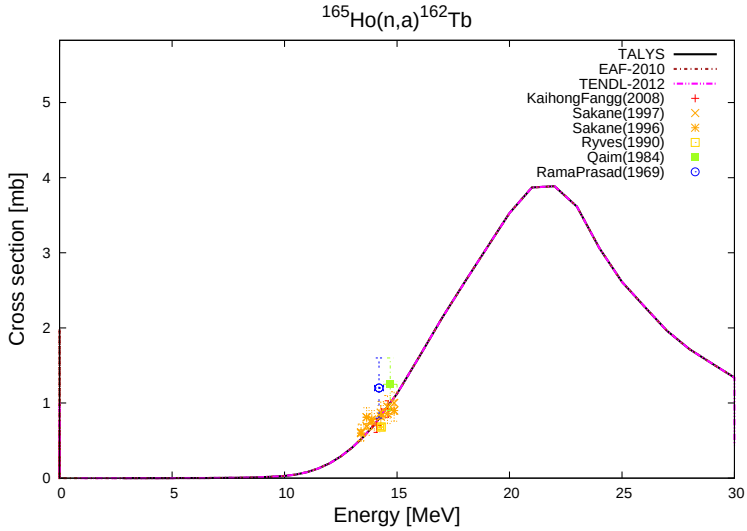

^{156}Gd(n,a)^{153}Sm
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
RamaPrasad(1969)
Coleman(1959)
Cross section [mb]
Energy [MeV]

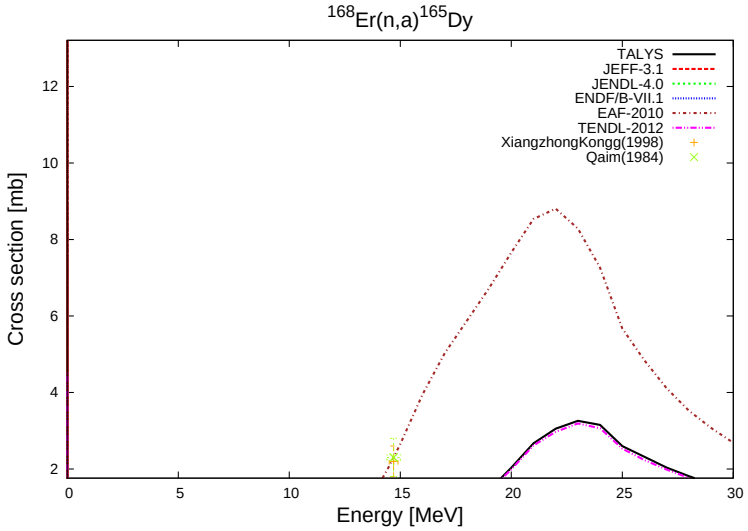

^{158}Gd(n,a)^{155}Sm
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
JunhuaLuoo(2010)
Sakane(1997)
LakshmanaDas(1981)
Havlik(1971)
RamaPrasad(1969)
Cross section [mb]
Energy [MeV]

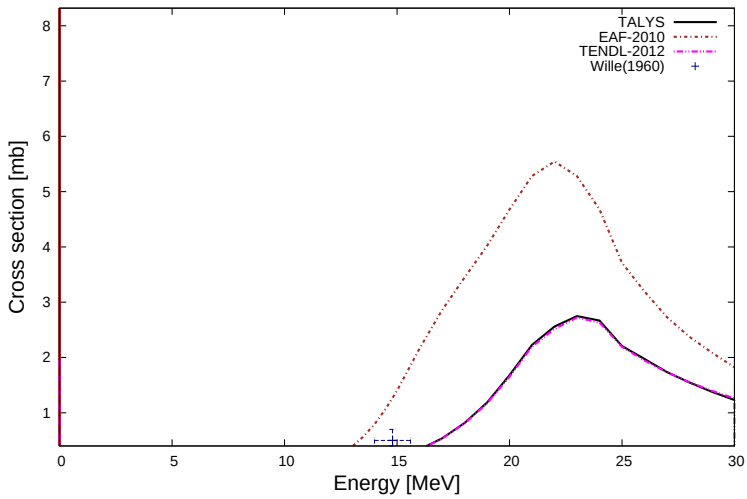

^{159}Tb(n,a)^{156}Eu
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Dzysiuk(2010)
XiangzhongKongg(1998)
Qaim(1984)
Havlik(1971)
Kulisic(1965)
Cross section [mb]
Energy [MeV]

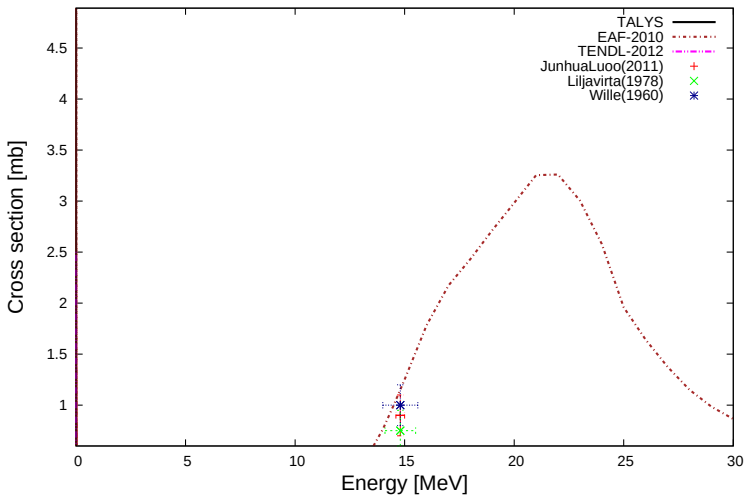

^{162}Dy(n,a)^{159}Gd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
XiangzhongKongg(1998)
Bari(1982)
Qaim(1974)
Coleman(1959)
Cross section [mb]
Energy [MeV]

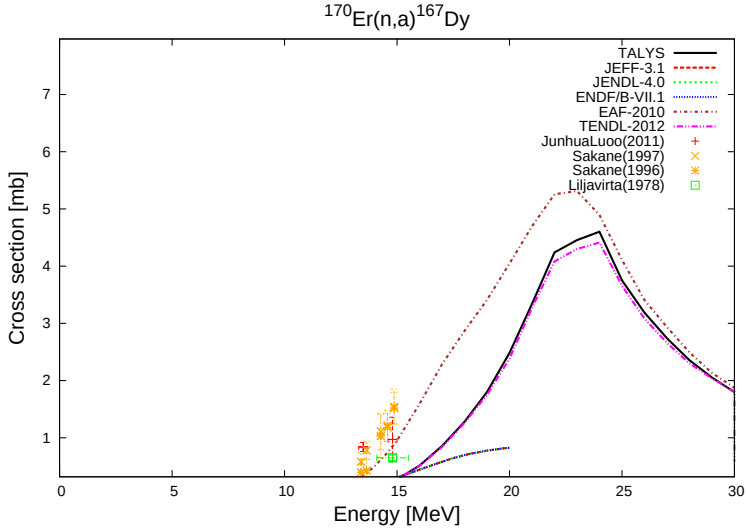

^{164}Dy(n,a)^{161}Gd
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
XiangzhongKongg(1998)
Havlik(1971)
Oms(1968)
Khurana(1965)
Khurana(1960)
Wille(1960)
Cross section [mb]
Energy [MeV]

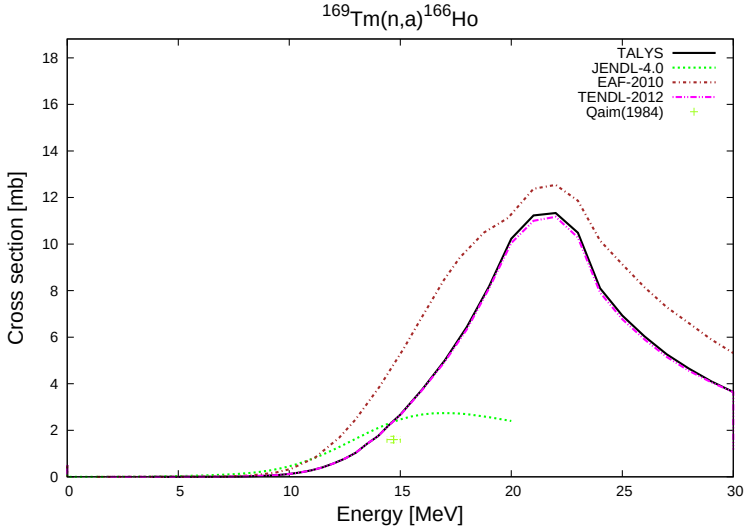

^{165}Ho(n,a)^{162}Tb
TALYS
EAF-2010
TENDL-2012
KaihongFangg(2008)
Sakane(1997)
Sakane(1996)
Ryves(1990)
Qaim(1984)
RamaPrasad(1969)
Cross section [mb]
Energy [MeV]

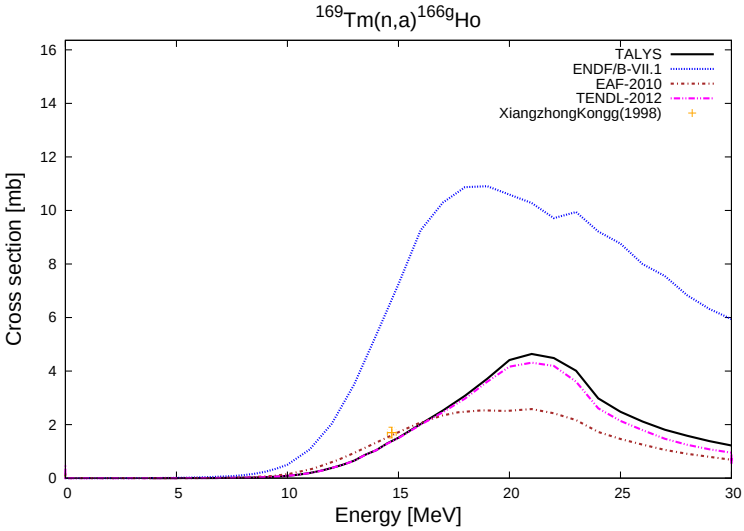

^{168}Er(n,a)^{165}Dy
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
XiangzhongKongg(1998)
Qaim(1984)
Cross section [mb]
Energy [MeV]

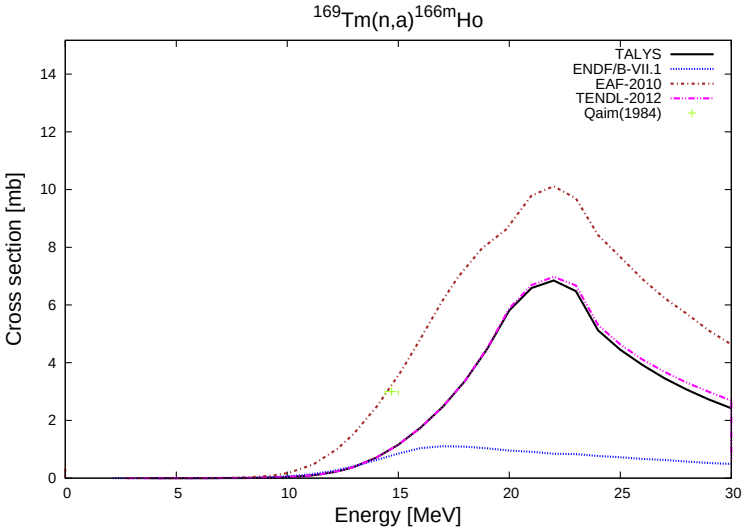

^{168}Er(n,a)^{165g}Dy
TALYS
EAF-2010
TENDL-2012
Wille(1960)
Cross section [mb]
Energy [MeV]

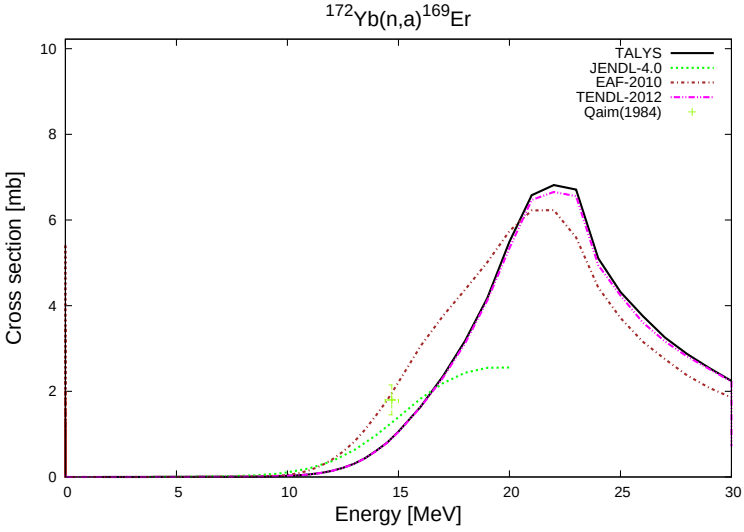

^{168}Er(n,a)^{165m}Dy
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2011)
Liljavirta(1978)
Wille(1960)
Cross section [mb]
Energy [MeV]

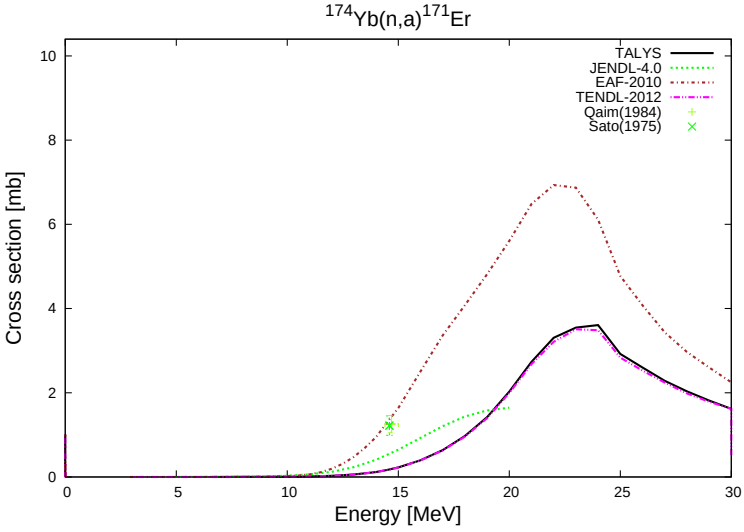

^{170}Er(n,a)^{167}Dy
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
JunhuaLuoo(2011)
Sakane(1997)
Sakane(1996)
Liljavirta(1978)
Cross section [mb]
Energy [MeV]

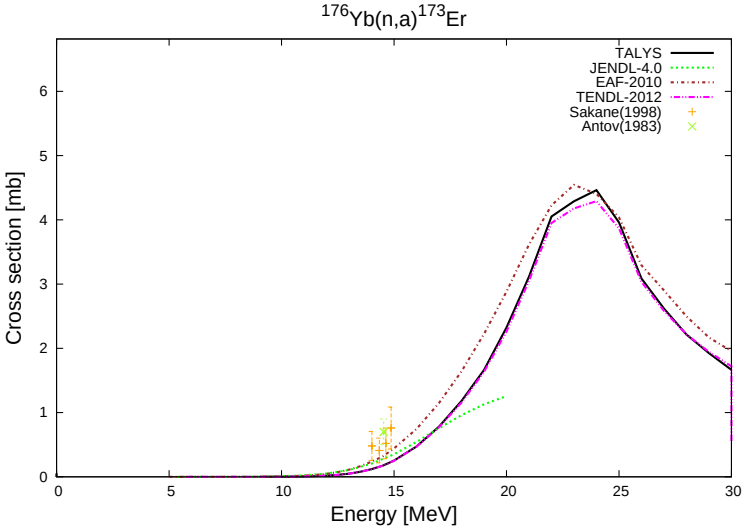

^{169}Tm(n,a)^{166}Ho
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
Qaim(1984)
Cross section [mb]
Energy [MeV]

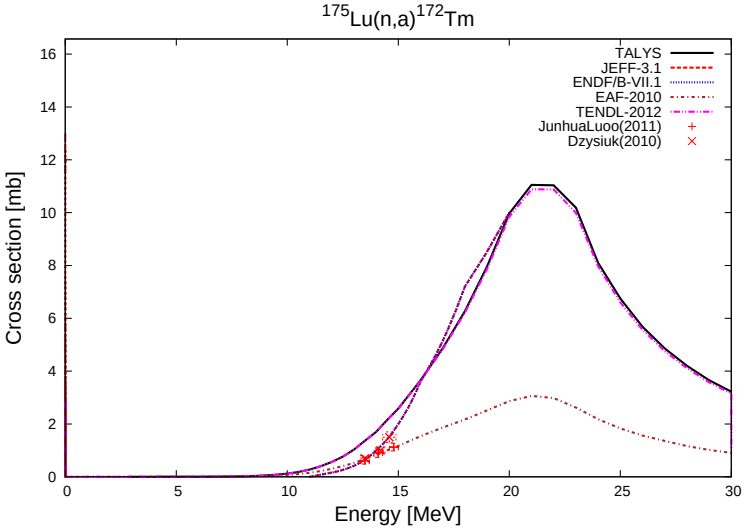

^{169}Tm(n,a)^{166g}Ho
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
XiangzhongKongg(1998)
Cross section [mb]
Energy [MeV]

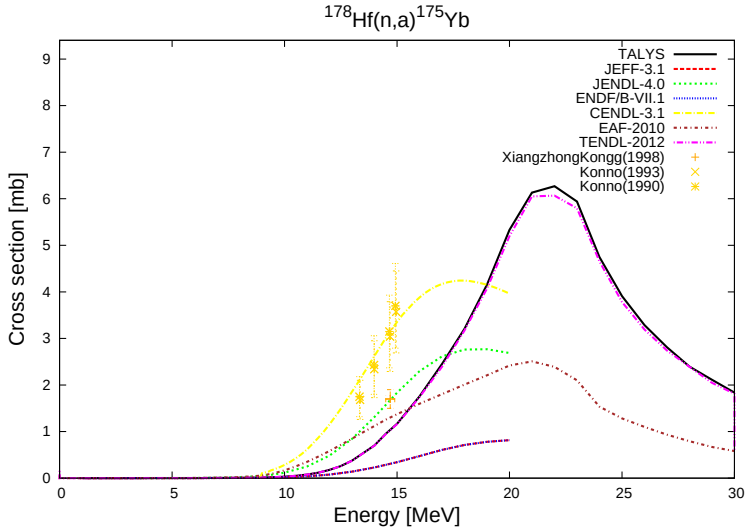

^{169}Tm(n,a)^{166m}Ho
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
Qaim(1984)
Cross section [mb]
Energy [MeV]

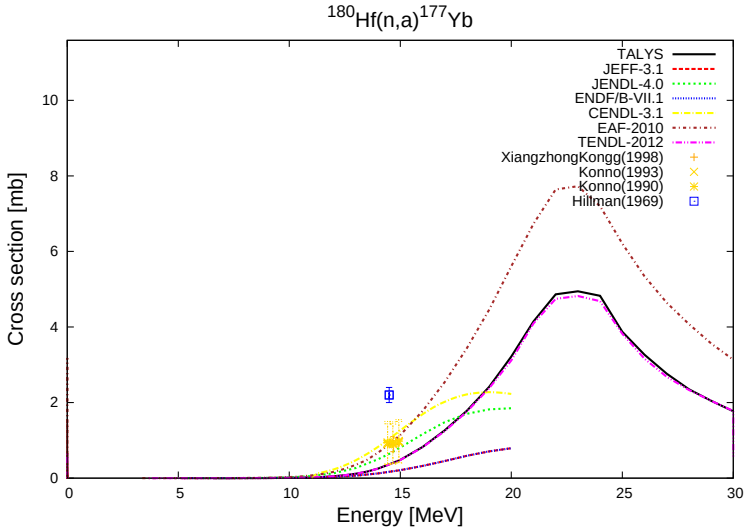

^{172}Yb(n,a)^{169}Er
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
Qaim(1984)
Cross section [mb]
Energy [MeV]

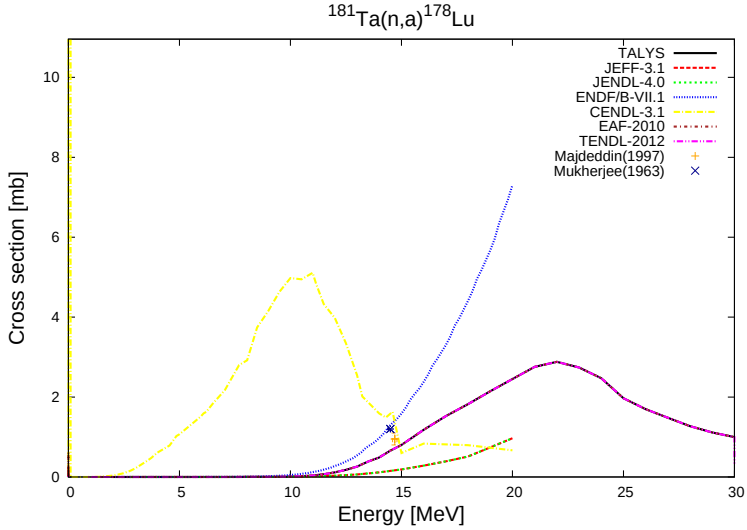

^{174}Yb(n,a)^{171}Er
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
Qaim(1984)
Sato(1975)
Cross section [mb]
Energy [MeV]

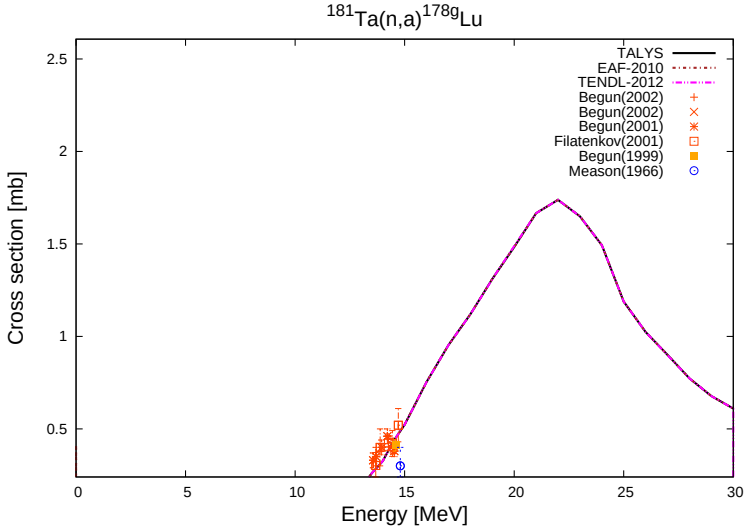

^{176}Yb(n,a)^{173}Er
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
Sakane(1998)
Antov(1983)
Cross section [mb]
Energy [MeV]

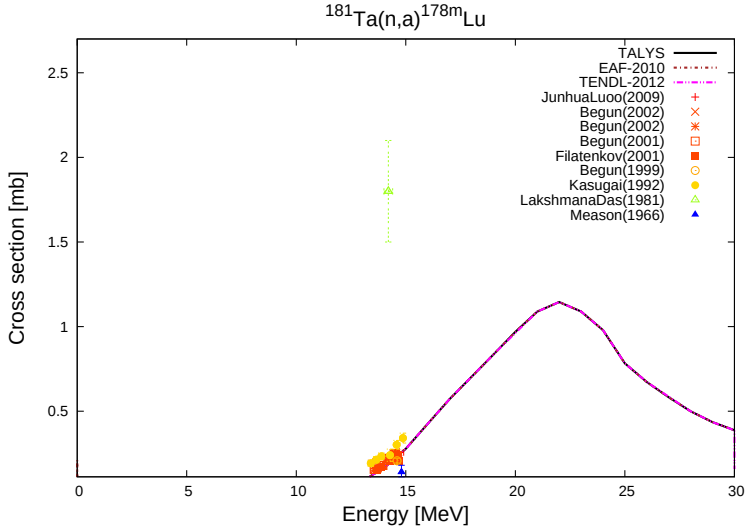

^{175}Lu(n,a)^{172}Tm
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
JunhuaLuoo(2011)
Dzysiuk(2010)
Cross section [mb]
Energy [MeV]

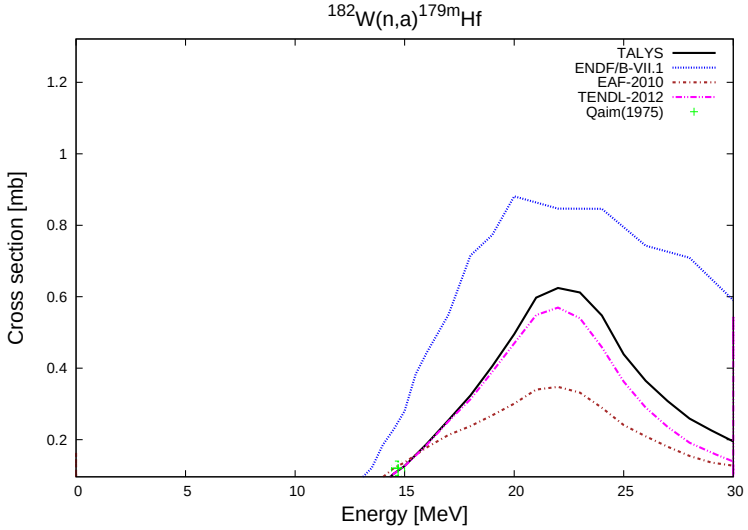

^{178}Hf(n,a)^{175}Yb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
XiangzhongKongg(1998)
Konno(1993)
Konno(1990)

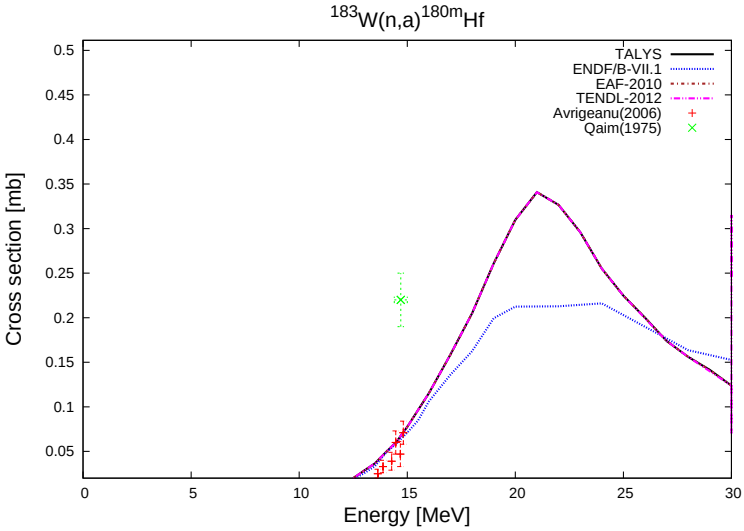

^{180}Hf(n,a)^{177}Yb
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
XiangzhongKongg(1998)
Konno(1993)
Konno(1990)
Hillman(1969)

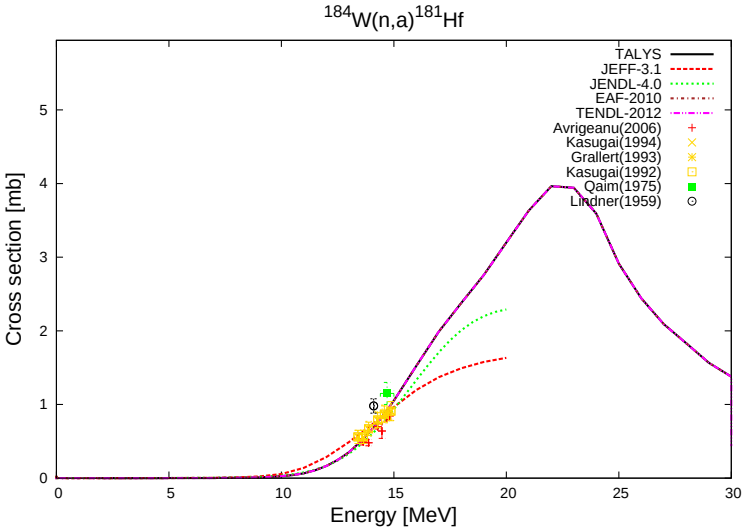

^{181}Ta(n,a)^{178}Lu
Cross section [mb]
Energy [MeV]
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Majdeddin(1997)
Mukherjee(1963)

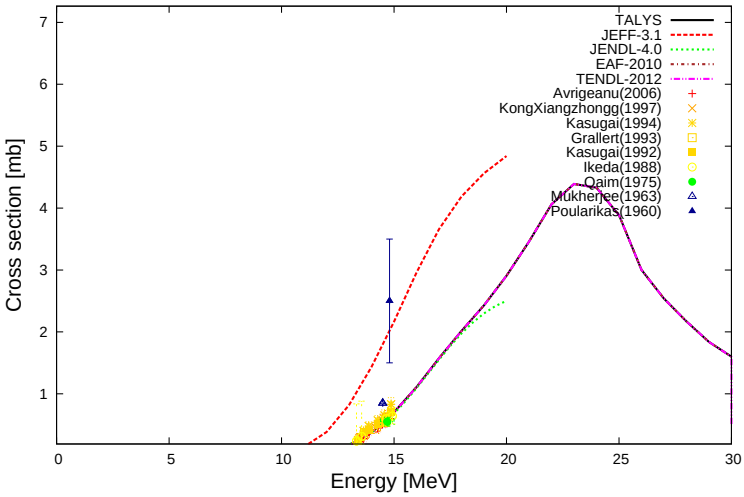

^{181}Ta(n,a)^{178g}Lu
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
Begun(2002)
Begun(2002)
Begun(2001)
Filatenkov(2001)
Begun(1999)
Meason(1966)

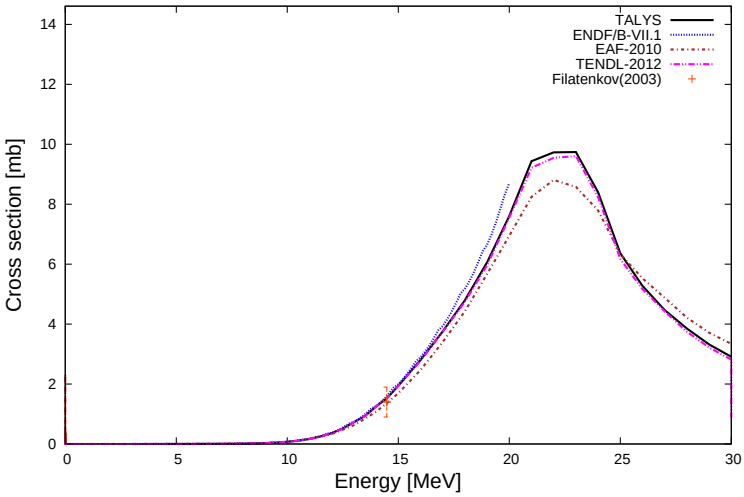

^{181}Ta(n,a)^{178m}Lu
Cross section [mb]
Energy [MeV]
TALYS
EAF-2010
TENDL-2012
JunhuaLuoo(2009)
Begun(2002)
Begun(2002)
Begun(2001)
Filatenkov(2001)
Begun(1999)
Kasugai(1992)
LakshmanaDas(1981)
Meason(1966)

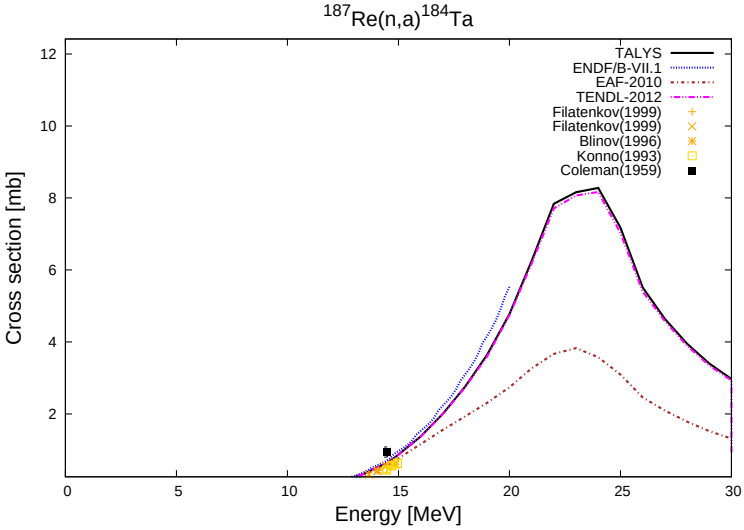

^{182}W(n,a)^{179m}Hf
Cross section [mb]
Energy [MeV]
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
Qaim(1975)

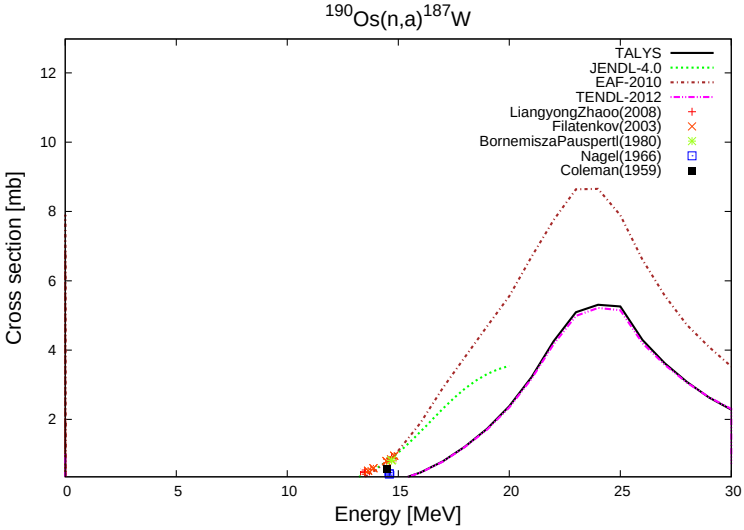

^{183}W(n,a)^{180m}Hf
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
Avrigeanu(2006)
Qaim(1975)
Cross section [mb]
Energy [MeV]

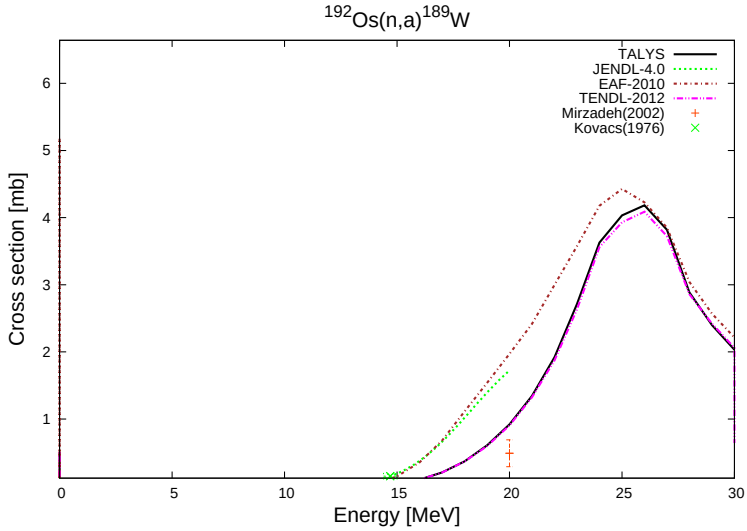

^{184}W(n,a)^{181}Hf
TALYS
JEFF-3.1
JENDL-4.0
EAF-2010
TENDL-2012
Avrigeanu(2006)
Kasugai(1994)
Grallert(1993)
Kasugai(1992)
Qaim(1975)
Lindner(1959)
Cross section [mb]
Energy [MeV]

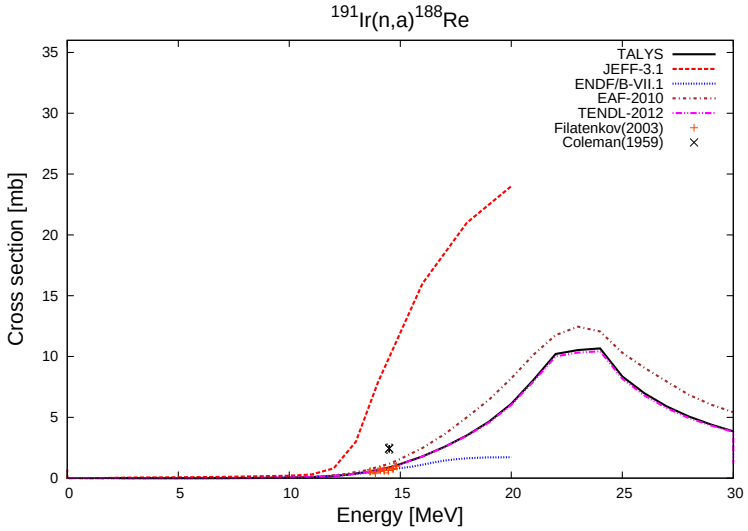

^{186}W(n,a)^{183}Hf
TALYS
JEFF-3.1
JENDL-4.0
EAF-2010
TENDL-2012
Avrigeanu(2006)
KongXiangzhongg(1997)
Kasugai(1994)
Grallert(1993)
Kasugai(1992)
Ikeda(1988)
Qaim(1975)
Mukherjee(1963)
Poularikas(1960)
Cross section [mb]
Energy [MeV]

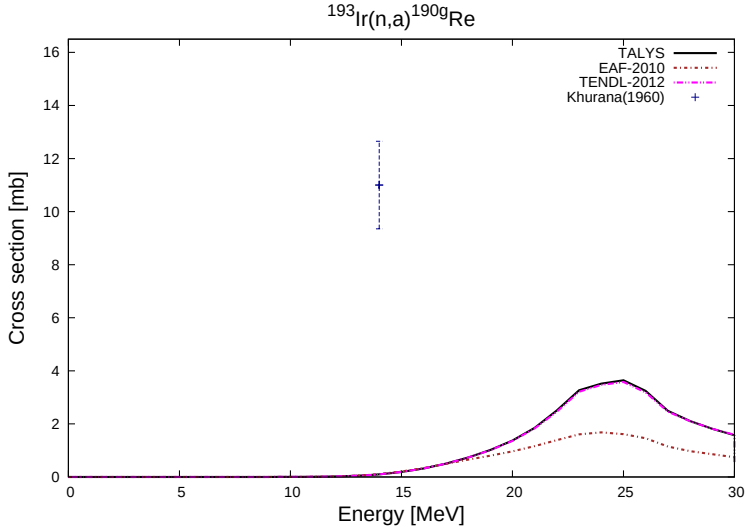

^{185}Re(n,a)^{182}Ta
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(2003)
Cross section [mb]
Energy [MeV]

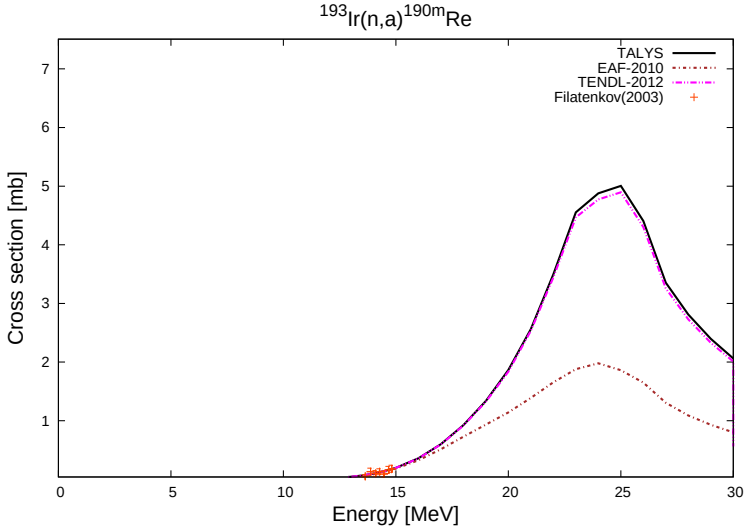

^{187}Re(n,a)^{184}Ta
TALYS
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(1999)
Filatenkov(1999)
Blinov(1996)
Konno(1993)
Coleman(1959)
Cross section [mb]
Energy [MeV]

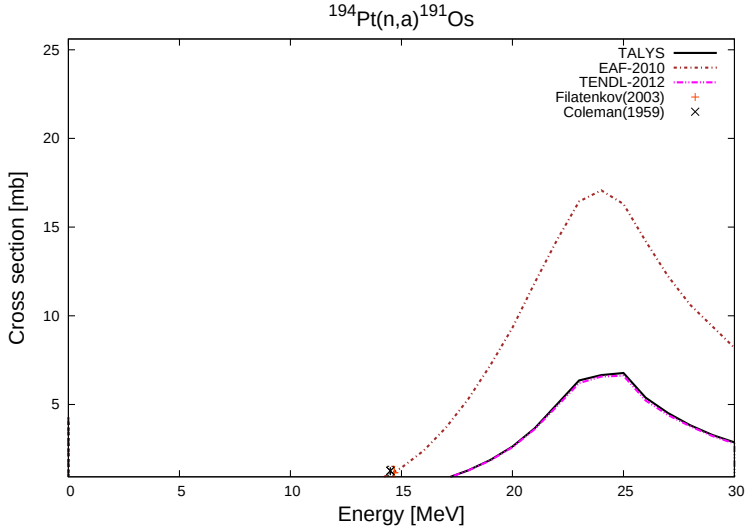

^{190}Os(n,a)^{187}W
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
LiangyongZhaoo(2008)
Filatenkov(2003)
BornemiszaPauspertl(1980)
Nagel(1966)
Coleman(1959)
Cross section [mb]
Energy [MeV]

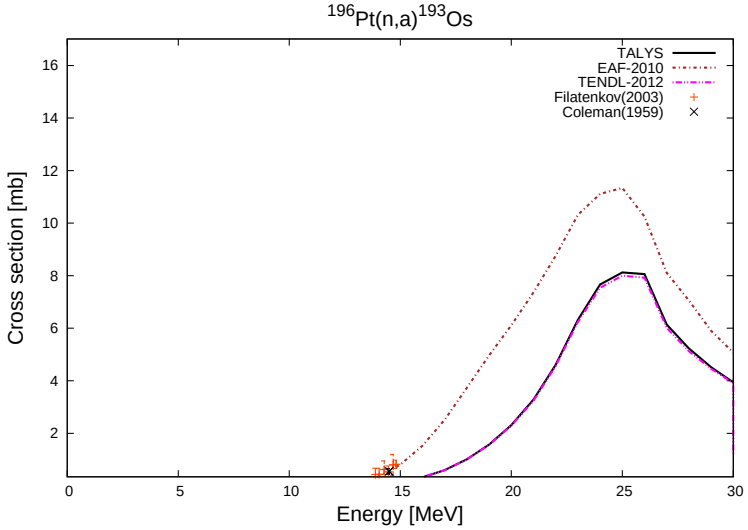

^{192}Os(n,a)^{189}W
TALYS
JENDL-4.0
EAF-2010
TENDL-2012
Mirzadeh(2002)
Kovacs(1976)
Cross section [mb]
Energy [MeV]

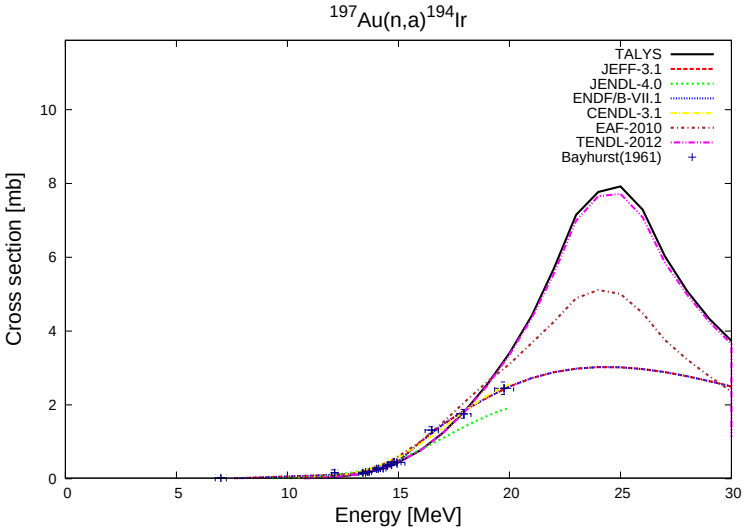

^{191}Ir(n,a)^{188}Re
TALYS
JEFF-3.1
ENDF/B-VII.1
EAF-2010
TENDL-2012
Filatenkov(2003)
Coleman(1959)
Cross section [mb]
Energy [MeV]

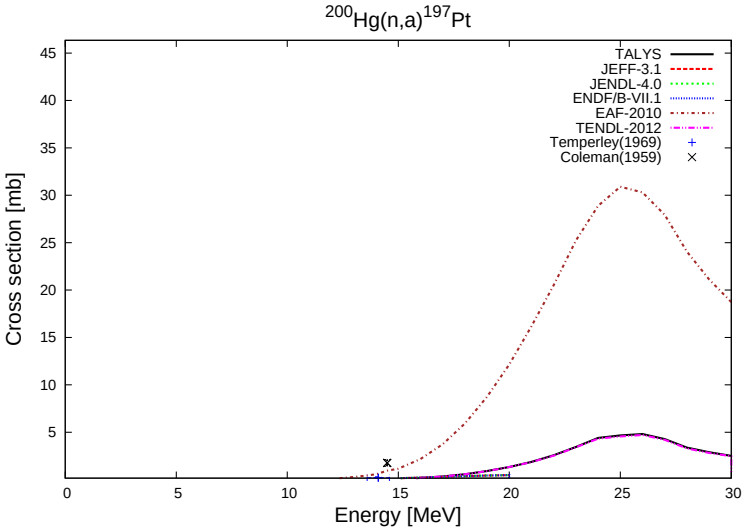

^{193}Ir(n,a)^{190g}Re
TALYS
EAF-2010
TENDL-2012
Khurana(1960)
Cross section [mb]
Energy [MeV]

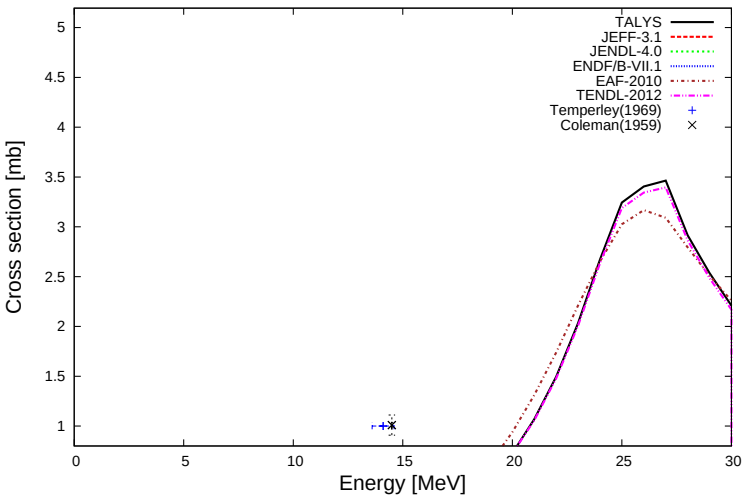

^{193}Ir(n,a)^{190m}Re
TALYS
EAF-2010
TENDL-2012
Filatenkov(2003)
Cross section [mb]
Energy [MeV]

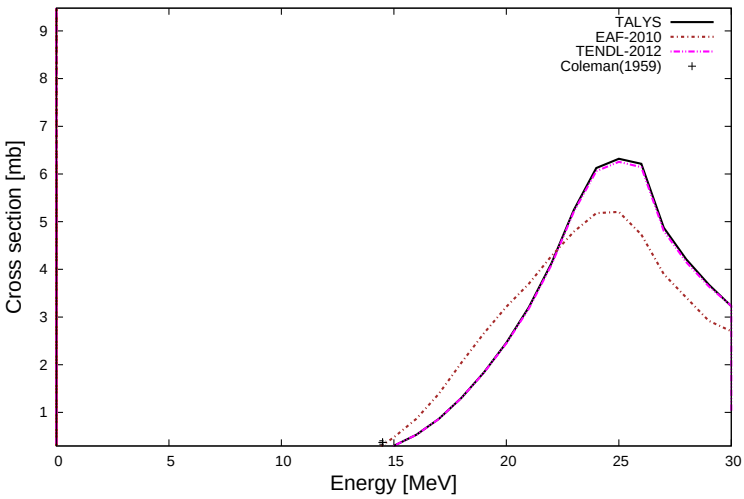

^{194}Pt(n,a)^{191}Os
TALYS
EAF-2010
TENDL-2012
Filatenkov(2003)
Coleman(1959)
Cross section [mb]
Energy [MeV]

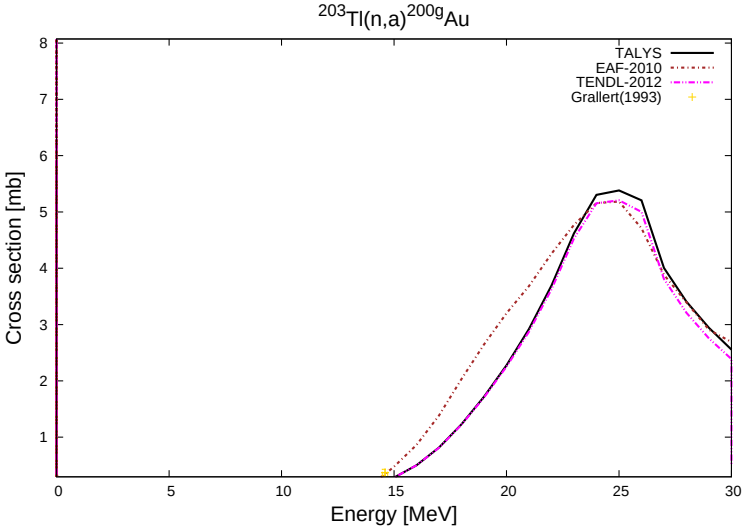

^{196}Pt(n,a)^{193}Os
TALYS
EAF-2010
TENDL-2012
Filatenkov(2003)
Coleman(1959)
Cross section [mb]
Energy [MeV]

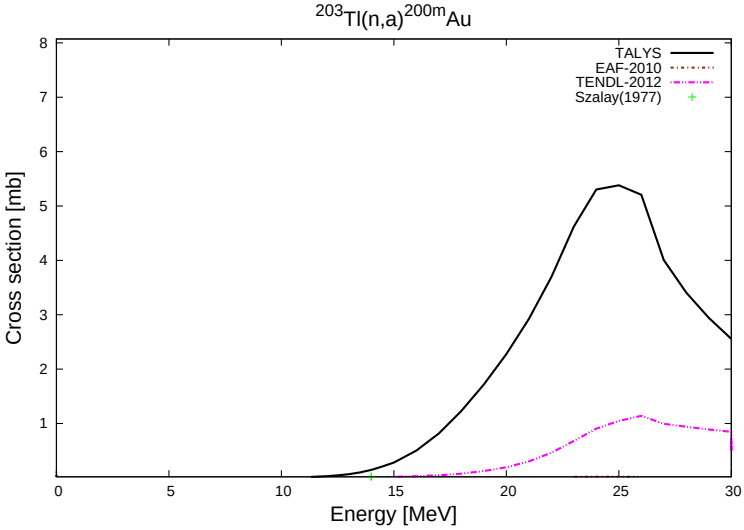

^{197}Au(n,a)^{194}Ir
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Bayhurst(1961)
Cross section [mb]
Energy [MeV]

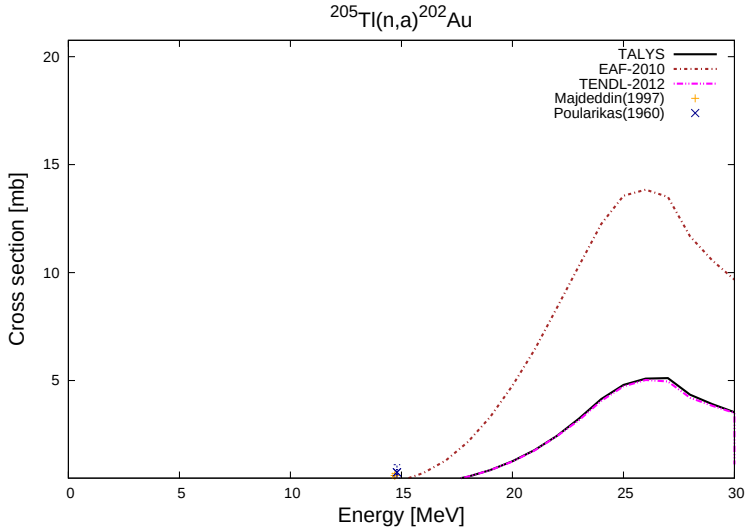

^{200}Hg(n,a)^{197}Pt
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Temperley(1969)
Coleman(1959)
Cross section [mb]
Energy [MeV]

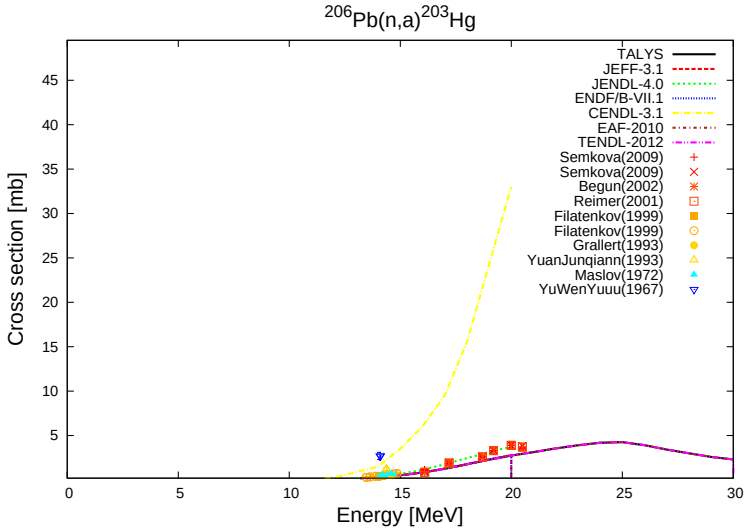

^{202}Hg(n,a)^{199}Pt
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
EAF-2010
TENDL-2012
Temperley(1969)
Coleman(1959)
Cross section [mb]
Energy [MeV]

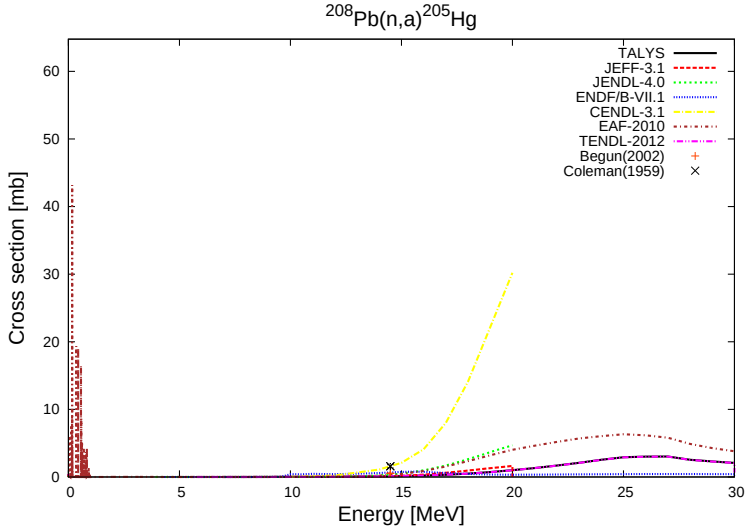

^{203}Tl(n,a)^{200}Au
TALYS
EAF-2010
TENDL-2012
Coleman(1959)
Cross section [mb]
Energy [MeV]

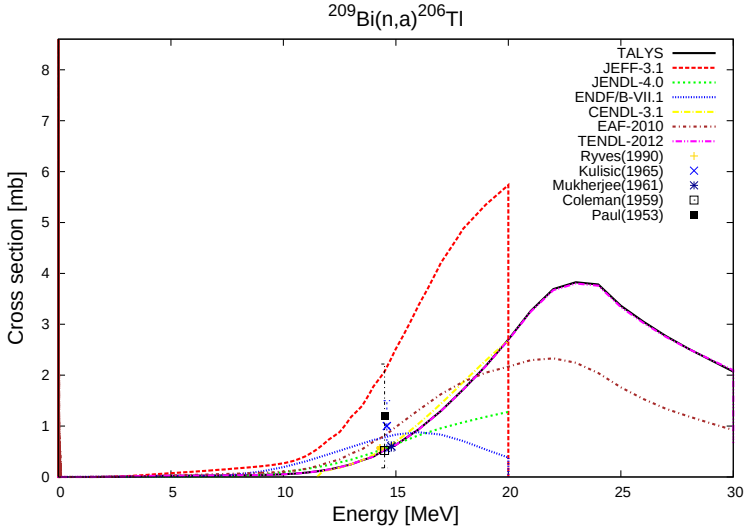

^{203}Tl(n,a)^{200g}Au
TALYS
EAF-2010
TENDL-2012
Grallert(1993)
Cross section [mb]
Energy [MeV]

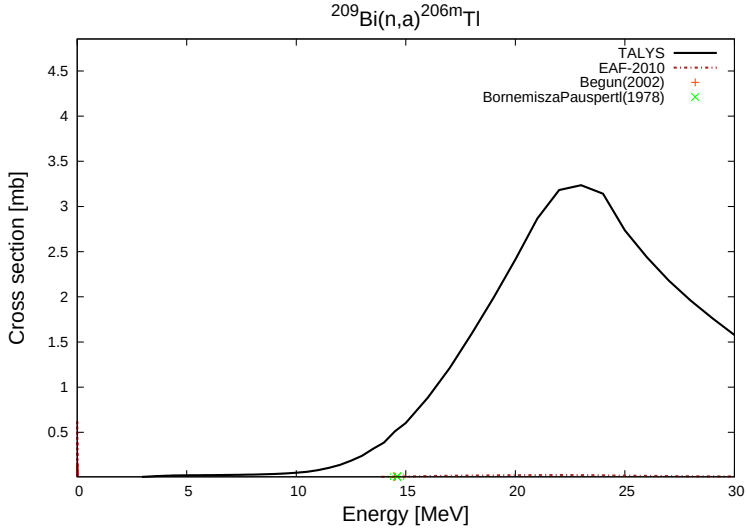

^{203}Tl(n,a)^{200m}Au
TALYS
EAF-2010
TENDL-2012
Szalay(1977)
Cross section [mb]
Energy [MeV]

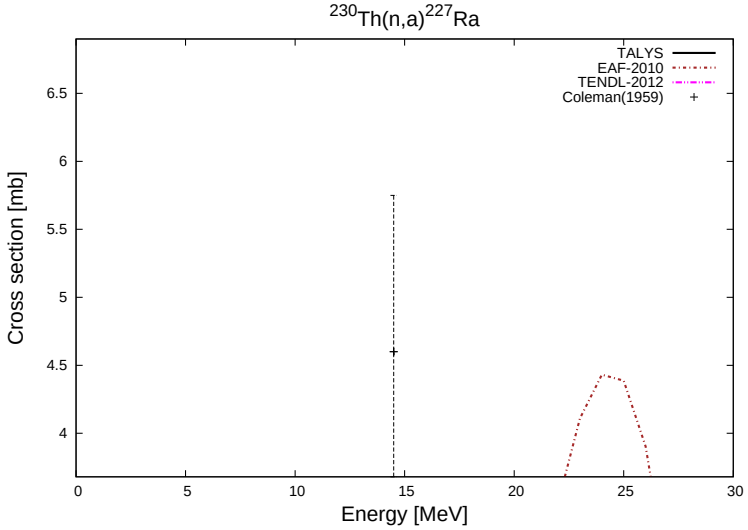

^{205}Tl(n,a)^{202}Au
TALYS
EAF-2010
TENDL-2012
Majdeddin(1997)
Poularikas(1960)
Cross section [mb]
Energy [MeV]

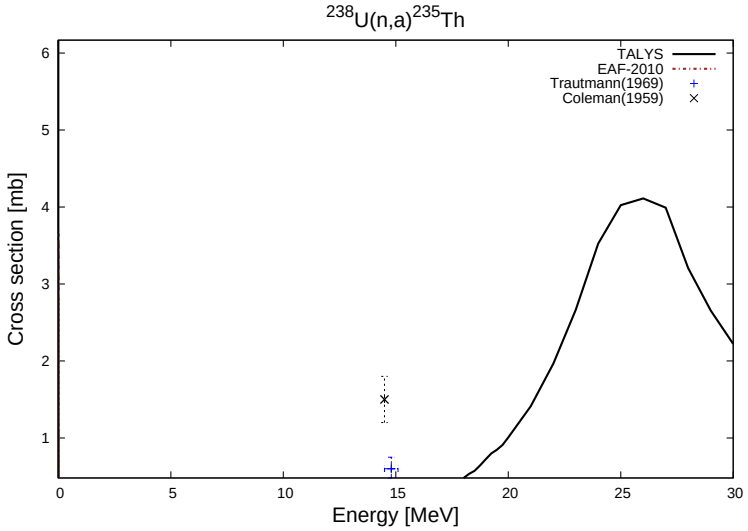

^{206}Pb(n,a)^{203}Hg
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Semkova(2009)
Semkova(2009)
Begun(2002)
Reimer(2001)
Filatenkov(1999)
Filatenkov(1999)
Grallert(1993)
YuanJunqiann(1993)
Maslov(1972)
YuWenYuuu(1967)
Cross section [mb]
Energy [MeV]


^{208}Pb(n,a)^{205}Hg
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Begun(2002)
Coleman(1959)
Cross section [mb]
Energy [MeV]


^{209}Bi(n,a)^{206}Tl
TALYS
JEFF-3.1
JENDL-4.0
ENDF/B-VII.1
CENDL-3.1
EAF-2010
TENDL-2012
Ryves(1990)
Kulisic(1965)
Mukherjee(1961)
Coleman(1959)
Paul(1953)
Cross section [mb]
Energy [MeV]


^{209}Bi(n,a)^{206m}Tl
TALYS
EAF-2010
Begun(2002)
BornemiszaPauspertl(1978)
Cross section [mb]
Energy [MeV]


^{230}Th(n,a)^{227}Ra
TALYS
EAF-2010
TENDL-2012
Coleman(1959)
Cross section [mb]
Energy [MeV]


^{238}U(n,a)^{235}Th
TALYS
EAF-2010
Trautmann(1969)
Coleman(1959)
Cross section [mb]
Energy [MeV]
0
5
10
15
20
25
30
1
2
3
4
5
6