Inventory of Covariances in ENDF/B-VIII.beta3

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(Dated: November 9, 2016)

CONTENTS

I. INTRODUCTION

ENDF has undergone a large number of changes since the ENDF/B-VII.1 release. Therefore we need a meaningful way to frame a covariance session discussion. Here we list all library commits since ENDF/B-VII.1 and prints out both a listing of covariance data and substantive subversion commit logs. This allowed us to identify evaluations that need covariance work.

Below we flag evaluation that were changed substantively since B-VII.1 in an observable that could/should have covariance data and evaluations whose covariance data was changed and needs review. This means that legacy evaluations that do not have covariance data but were not updated stay unflagged.

At CSEWG we will discuss the planned actions, but a quick scan reveals that work basically falls into 4 categories:

1. reviewing existing covariance data (mainly in the resonance region);
2. updating existing covariance data based on new data/evaluation;
3. regenerating covariance data for the remainder of the CIELO evaluations;
4. generating new covariance for revised evaluations otherwise lacking covariance.

A. Issues to address, including observations by Subgroup 39 in Ishikawa's paper (2014).

Discontinuities are seen in the 239Pu capture uncertainty at 2.5 keV - why? Above 2.5 keV the uncertainty increases to over 15% up to 10 keV, then it drops to about 7%, then increases to about 12% below 100 keV, and from 100 keV to 1 MeV increases form 10% to 20%. Question - how do these uncertainties compare with the capture changes above 30 keV made for CIEL0; and what are the uncertainties in the SG34 file used by CIELO in the resonance range?

235U. Question on fission unc. in the 0.5-2 keV region - VII.1 small uncertainties here (where JENDL4 was big $\sim$ 5%.). VII.1 has a seemingly unphysical peak to over 12% in unc. at 2 keV - an NJOY mistake? VII.1 shows an unc. increase to 3-4% in the approx. 1–25 keV region - why?

235U capture. Questions the rise in uncertainty above a keV to about 35%, which remains up to 100 keV and then decreases to about 15% at 1MeV. (MBC - in retrospect the VII.1 unc. in the 0.5-2 keV region might have

been too low, as we have made large changes here! The uncertainty from 2.25 keV - 1 MeV needs updating, and should now be much smaller - 10% say (MBC estimate) - Capote will provide from his 235 analysis.

238U capture. He notes that JENDL4 unc. is much higher than ENDF in the 20-100 keV region, and then smaller in the 100-150 keV region, and this needs to be better understood owing to the importance on breeding ratio and burnup reactivity loss in fast reactor calculations.

238U total inelastic cross sections. He notes that the JENDL4 and 7.1 total inelastic cross sections are reasonably similar but the uncertainties are "completely different". Threshold to 0.1 MeV 7.1 has over 20% while JENDL is more like 15%; 0.1- about 1. MeV, 7.1 is less than 10% unc, and 5% unc in some cases, while JENDL remains over 15%. Above 1 MeV 7.1 has over 20%, with JENDL much lower. (MBC - notes that above 6 MeV where the inelastic falls, the 7.1→ Cielo changed quite a lot - 2–30%, making the high 7.1 unc seem reasonable there; but in the plateau region perhaps ENDF 7.1 unc was too high and now it could be smaller in CIELO). Roberto will address this.

238U total elastic unc differ quite a lot between 7.1 and JENDL4, and the latter has some negative correlations not found in ENDF file.

56Fe. Total elastic scattering unc differ significantly between 7.1 and JENDL4, esp. above 30 keV (endf is double JENDL up to 1 MeV, then this swaps). Mubar unc much bigger in 7.1, eg at 100 keV, 7.1 is over 30%, JENDL under 5%.

B. Comparisons with insights from Subgroup39 adjustment project

Here we briefly summarize some of the cross section changes made for CIELO, compared to insights provided by the WPEC Subgroup 39 Adjustment project. That project takes as a starting point evaluated library data of cross sections, spectra, angular distributions, and their uncertainties (covariance data), and performs an adjustment of these data based on a least-squares process to optimally match a set of benchmark-quality integral critical assembly data; mainly criticality and reaction rate (spectral index) measurements. The Subgroup 39 researchers emphasize that the adjustments obtained do not necessarily point to physically-correct nuclear data, owing to limitations in the method, including non-unique solutions and compensating effects. Still, it is useful to compare Subgroup 39 insights with CIELO evaluation decisions:

- Fast reaction sodium worth reactivity measurement in Japan suggested a substantially (20-40%) reduced ^{235}U capture cross section in the 0.5-2 keV region, compared to ENDF/B-VII.1 (Yokoyama and Ishikawa). CIELO concurs with this, following corroborating cross section measurements at LANL/DANCE and RPI. CIELO also adopts a higher capture cross section from 2.25-50 KeV based on the Jandel DANCE data; This is partly consistent with the Japan adjustment guidance, except for the 6-20 keV where the adjustment goes in the opposite direction (however, we note that the sensitivity of the Japanese SWR measurements is almost negligible from 6-20 keV (Fukushima et al, 2016)).

- ^{238}U inelastic is suggested to be lower than VII.1 in the 2-5 MeV region, and in the 0.1-1 MeV region, according to Palmiotti. This is partly consistent with the CIELO changes, although in the lower neutron energy region although CIELO is lower from 0.2-0.6 MeV, it is higher from 0.6-1 MeV. The values in the CIELO file appear to be also consistent with the conclusions from Santamarinia in a JEFF adjustment study (NDS118, 118 (2014). We note though that changes in CIELO inelastic scattering were driven by fundamental improvements in nuclear reaction and structure modeling.

- ^{239}Pu capture is suggested to be higher in the 1-10 keV region, and in the region up to 100 keV, based on the impact of the PROFIL experiment (Palmiotti). CIELO has increased the capture in the fast region from 30-100 keV based on the recent Mosby and Jandel DANCE data, consistent with this. But CIELO has not yet addressed an upgrade of the unresolved resonance region up to 30 keV.

- ^{56}Fe. Palmiotti suggests a reduced inelastic scattering cross section in the 0.6-0.8 MeV range compared to ENDF/B-VII.1. In fact, the CIELO change near threshold goes in the opposite direction, an increase. We note JENDL4 remains significantly higher than VII.1 in the 0.9-3 MeV region.

II. NEW EVALUATIONS MISSING COVARIANCES

n + n

File: n-000_n_001.endf

MAT: 25

ZA: 1

Auth.: HALE, LIU

Lab: LANL

Date: EVAL-MAR06

Ener.: 1e-05-30000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r651 : dbrown, 2015-05-13
add neutron evaluation (yes, that's neutron as a target) fix first line to get svn keywords working

n + C12

File: n-006_C_012.endf

MAT: 625

ZA: 6012

Auth.: G.M. Hale, P.G. Young, C.Y. Fu

Lab: LANL,ORNL

Date: EVAL-AUG15

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r812 : dbrown, 2016-04-13
Hale & Paris's isotopic C evaluations

r885 : dbrown, 2016-07-25
2 fixes: 1. ZAI in the first isotope in the resonance region was set to 6000, not 6012 2. For the (n,n') levels, QM should have been all set to 0.0 MeV, QI should have been set to the -(level energy)

n + C13

File: n-006_C_013.endf

MAT: 628

ZA: 6013

Auth.: G.M. Hale, M.W. Paris

Lab: LANL, EVAL

Date: -AUG 2015

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r812 : dbrown, 2016-04-13
Hale & Paris's isotopic C evaluations

r819 : dbrown, 2016-04-22
In elastic angular distribution, LTT set to 3 indicating there were multiple regions in the angular distribution, yet only one was given. The one region given was given as Legendre moment data so LTT reset to 1.

r883 : cmattoon, 2016-06-01
Incident energy out of order in C13 elastic scattering angular distribution

r886 : dbrown, 2016-07-27
Andrej Trkov extended the LANL 13C evaluation using TENDL-2015 above 5 MeV. Results of Andrej's benchmarking of the HMI006 group of benchmarks:

r888 : dbrown, 2016-07-27
Andrej's fixes to AWR & removal of incorrect MF32 file

r890 : dbrown, 2016-07-28
Move out-of-order MF=4, MT=2 point to the correct place

r899 : dbrown, 2016-08-16
Revised 13C evaluation from M. Paris and G. Hale

n + O18

File: n-008_O_018.endf

MAT: 831

ZA: 8018

Auth.: M.N.NIKOLAEV

Lab: IPPE

Date: EVAL-NOV05

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r598 : dbrown, 2012-11-05
Add 18O evaluation from ROSFUND library

r616 : dbrown, 2013-09-10
Total width of 4.09 MeV resonance was off by factor of 10 from sum of GN and GG

r675 : dbrown, 2015-09-11
fixed the MAT number, resolving issue #934

n + Ar40

File: n-018_Ar_040.endf

MAT: 1837

ZA: 18040

Auth.: T.Kawano

Lab: LANL

Date: EVAL-Nov12

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r599 : tkawano, 2012-11-19
new evaluation above the resonance region, which fixes the EPMAX problem reported at CSEWG in 2011.

n + Fe54

File: n-026_Fe_054.endf

MAT: 2625

ZA: 26054

Auth.: Nobre,Herman,Leal,Trkov,Brown,...

Lab: CIELO

Date: EVAL-Oct16

Ener.: 1e-05-150000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r786 : dbrown, 2016-04-06
Minor Fe isotopes from the CIELO collaboration (54Fe, 57Fe and 58Fe).

r813 : dbrown, 2016-04-20
set the number or Legendre moments needed for convergence of the potential scattering in the resonance region

r822 : dbrown, 2016-04-22
Final 54Fe from CIELO Iron project (rev. 246)

r892 : dbrown, 2016-07-29
New CIELO 54Fe file with IRSN resonances to 1.2 MeV in LRF=7 format, file is merged with ENDF/B-VIII.beta1==older CIELO file for fast region

r903 : dbrown, 2016-08-19
Revised 54Fe from CIELO project. This evaluation includes revised resonance region from IRSN, EMPIRE calculation for fast region and capture cross section tuned to match average resonance cross section. DSD capture was added above the resonance region.

r1014 : dbrown, 2016-11-01
New Fe54 evaluation with the following: 1) IRSN resonances up to 1.036 MeV 2) New EMPIRE calculation from 1.036 MeV - 150 MeV 3) (n,2n), (n,p) and (n,a) cross sections taken from IRDFF, partial reactions scaled to match these totals

n + Fe56

File: n-026_Fe_056.endf

MAT: 2631

ZA: 26056

Auth.: Nobre,Herman,Leal,Trkov,Brown,...

Lab: CIELO

Date: EVAL-Oct16

Ener.: 1e-05-150000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r792 : dbrown, 2016-04-06
CEILO 56Fe file

r823 : dbrown, 2016-04-22
Final CIELO 56Fe before WPEC meetings (rev. 246)

r918 : dbrown, 2016-08-19
Revised 56Fe from the CIELO project. This evaluation includes revised resonance region from IRSN up to 850 keV in the LRF=7 format, elastic and inelastic cross sections and angular distributions from beta1 and EMPIRE calculation for the remainder of the fast region.

r1017 : dbrown, 2016-11-02
IAEA file fe56ib18b, IAEA-BNL Collaboration for CIELO: - Resolved resonance range up to 850 keV basically from JENDL-4.0 - The resonance energy at 766.7 kev was corrected. - The background near 800 keV was reduced by 50 percent. - Artificial "background" was added to capture around 24.5 keV, since capture in the hole of the elastic seems to be low and is HIGHLY SENSITIVE to many benchmarks. It was stipulated thet the broad dip in this energy region is caused by inappropriately placed bound states. The adjusted capture cross section now follows the 1/v behaviour. - The total cross section above the resonance range was taken from JEFF-3.2 because it is consistent with the Berthold measurements on Fe-nat. The contribution of the minor isotopes is taken into account. - The capture cross sections above 860 keV were taken from the RPI data presented by Y. Danon at the ND2016 Conference. - JEFF-3.2 contains inelastic cross sections measured by Dupont et al., but the authors discovered normalisation problems and the results were never published. New measurements were performed by Negret, but with a lower resolution. The Dupont and Negret data were binned over a suitable energy mesh. A piecewise linear scaling parameter was constructed to adjust Dupont data such that they agree on average with the Negret data. It was also found that the energy calibration of Negret data did not match the resonances of the total cross section. A correction was made to the energy scale which amounted to 2.5 keV at 1.8 MeV. Inelastic cross sections between 0.85e6 and 3.5e6 eV are taken from JEFF-3.2. - The elastic cross section is defined as the difference between the total and the remaining partial cross sections. By resolution-broadening of the elastic cross section to 0.3 percent, good agreement is observed with the measured Kinney data. - The elastic angular distributions in the resolved resonance range were reconstructed from the resonance parameters. The Legendre moments were resolution-broadened with a resolution function of constant width of 1 keV. For most applications the resolution-broadened Legendre coefficients are sufficient, but the user still has the option to reconstruct detailed distributions from the resonance parameters. Above the resonance range up to 4 MeV the angular distributions were taken from JEFF-3.2 because they accurately follow the Kinney data (with a correction for the minor isotopes). - The P2 Legendre coefficients of elastic scattering were increased linearl, starting with 0 at 0.3 MeV, peaking to 0.7 at 0.85 MeV and ending with 0 at 1.5 MeV. - Similarly, the P4 Legendre coefficients of elastic scattering were increased linearly, starting with 0 at 0.5 MeV, peaking to 0.2 at 0.85 MeV and ending with 0 at 1.5 MeV. - At higher energies all cross sections, angular distributions and spectra are taken from EMPIRE calculation, which was tuned to reproduce the important reaction channels and radionuclide production data.

n + Fe57

File: n-026_Fe_057.endf

MAT: 2634

ZA: 26057

Auth.: Nobre,Herman,Leal,Trkov,Brown,...

Lab: CIELO

Date: EVAL-Oct16

Ener.: 1e-05-150000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r786 : dbrown, 2016-04-06
Minor Fe isotopes from the CIELO collaboration (54Fe, 57Fe and 58Fe).

r821 : dbrown, 2016-04-22
Final 57Fe from CIELO iron project (rev 246)

r993 : dbrown, 2016-10-31
Fe57 revised with new EMPIRE calculation for fast region

n + Fe58

File: n-026_Fe_058.endf

MAT: 2637

ZA: 26058

Auth.: BNL/IAEA for CIELO collaboration

Lab: CIELO

Date: EVAL-Mar16

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r786 : dbrown, 2016-04-06
Minor Fe isotopes from the CIELO collaboration (54Fe, 57Fe and 58Fe).

n + Co59

File: n-027_Co_059.endf

MAT: 2725

ZA: 27059

Auth.: T.Kawano,G.Desaussure+

Lab: LANL,ORNL

Date: EVAL-JAN16

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r921 : dbrown, 2016-10-17
T. Kawano's re-evaluation of fast region, using CoH3

r982 : tkawano, 2016-10-25
comment section updated, and (n,nA) cross section modified.

n + Ni59

File: n-028_Ni_059.endf

MAT: 2828

ZA: 28059

Auth.: T.Kawano,A.Kahler

Lab: LANL

Date: EVAL-Oct12

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r600 : tkawano, 2012-11-19
All cross sections above the resonance regions were upgraded.

n + Ni61

File: n-028_Ni_061.endf

MAT: 2834

ZA: 28061

Auth.: T.Kawano,A.Kahler,A.Trkov

Lab: LANL,BNL

Date: EVAL-Oct12

Ener.: 1e-05-150000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r600 : tkawano, 2012-11-19
All cross sections above the resonance regions were upgraded.

n + Ni62

File: n-028_Ni_062.endf

MAT: 2837

ZA: 28062

Auth.: T.Kawano, A.Kahler, A.Trkov

Lab: LANL,BNL

Date: EVAL-Oct12

Ener.: 1e-05-150000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r600 : tkawano, 2012-11-19
All cross sections above the resonance regions were upgraded.

n + Ni64

File: n-028_Ni_064.endf

MAT: 2843

ZA: 28064

Auth.: T.Kawano, A.Kahler, A.Trkov

Lab: LANL,BNL

Date: EVAL-Oct12

Ener.: 1e-05-150000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r600 : tkawano, 2012-11-19
All cross sections above the resonance regions were upgraded.

n + As73

File: n-033_As_073.endf

MAT: 3319

ZA: 33073

Auth.: T. Kawano

Lab: LANL

Date: EVAL-MAR10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r887 : dbrown, 2016-07-27
New evaluation from T.Kawano

r889 : dbrown, 2016-07-28
Make sure the number of gammas is equal in corresponding MF12 and MF14 files Get BR's of some MF12 levels to sum up to 1.0

r891 : dbrown, 2016-07-28
first (n,p) excited state in MF=3 had wrong energy note: this file is missing the second (n,p) state in MF=3, but has it in MF=12 so MF=3 & MF=12 are out of sync

r893 : cmattoon, 2016-08-01
Fix mismatches between excited state energies for As73 (n,p*) reactions. See NNDCForge tracker item 998 for more info.

r925 : dbrown, 2016-10-17
T. Kawano's revised 73As evaluation using outgoing distributions generated by CoH3

r929 : dbrown, 2016-10-18
add in energy spectra for MT = 103 & 107

n + As74

File: n-033_As_074.endf

MAT: 3322

ZA: 33074

Auth.: T.Kawano, D.Brown, S.Mughabghab

Lab: LANL

Date: EVAL-OCT16

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r930 : dbrown, 2016-10-18
New evaluation using CoH. Cross sections were matched to old evaluation so now new distributions and cross sections are internally consistant

n + Kr78

File: n-036_Kr_078.endf

MAT: 3625

ZA: 36078

Auth.: T. Kawano

Lab: LANL

Date: EVAL-Oct16

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r604 : dbrown, 2013-01-08
applied Caleb's patch to fix background cross sections in resonance region

r959 : tkawano, 2016-10-21
high energy part replaced by CoH3 calculations

r978 : tkawano, 2016-10-22
(n,3n) section removed

n + Rh105

File: n-045_Rh_105.endf

MAT: 4531

ZA: 45105

Auth.: JNDC FP NUCLEAR DATA W.G.

Lab: JNDC

Date: EVAL-MAR90

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r787 : dbrown, 2016-04-06
Adopt 105Rh from JENDL-4.0

r967 : dbrown, 2016-10-21
Convert to MLBW

n + Te132

File: n-052_Te_132.endf

MAT: 5261

ZA: 52132

Auth.: Herman,Oblozinsky,Mughabghab

Lab: BNL

Date: EVAL-MAR06

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r961 : tkawano, 2016-10-21
Cross sections above resonance range updated by CoH3 calculations.

n + Xe124

File: n-054_Xe_124.endf

MAT: 5425

ZA: 54124

Auth.: T. Kawano

Lab: LANL

Date: EVAL-Oct16

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r604 : dbrown, 2013-01-08
applied Caleb's patch to fix background cross sections in resonance region

r664 : dbrown, 2015-09-08
recalculate the (n,tot) cross section with the correct energy grid that avoids interpolations troubles

r960 : tkawano, 2016-10-21
update high energy part with CoH3

n + Dy154

File: n-066_Dy_154.endf

MAT: 6619

ZA: 66154

Auth.: N.Iwamoto

Lab: JAEA

Date: EVAL-Nov09

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r676 : dbrown, 2015-09-11
add Dy and Hf isotopes from JENDL-4.0+, filling in holes in ENDF

n + Dy159

File: n-066_Dy_159.endf

MAT: 6634

ZA: 66159

Auth.: N.Iwamoto

Lab: JAEA

Date: EVAL-Nov09

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r676 : dbrown, 2015-09-11
add Dy and Hf isotopes from JENDL-4.0+, filling in holes in ENDF

n + Yb168

File: n-070_Yb_168.endf

MAT: 7025

ZA: 70168

Auth.: S.Kunieda, A.Ichihara, K.Shibata+

Lab: JAEA

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r678 : dbrown, 2015-09-11
Add Yb isotopes from JENDL-4.0+, Yb was not present in ENDF before

n + Yb170

File: n-070_Yb_170.endf

MAT: 7031

ZA: 70170

Auth.: S.Kunieda, A.Ichihara, K.Shibata+

Lab: JAEA

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r678 : dbrown, 2015-09-11
Add Yb isotopes from JENDL-4.0+, Yb was not present in ENDF before

n + Yb171

File: n-070_Yb_171.endf

MAT: 7034

ZA: 70171

Auth.: S.Kunieda, A.Ichihara, K.Shibata+

Lab: JAEA

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r678 : dbrown, 2015-09-11
Add Yb isotopes from JENDL-4.0+, Yb was not present in ENDF before

n + Yb172

File: n-070_Yb_172.endf

MAT: 7037

ZA: 70172

Auth.: S.Kunieda, A.Ichihara, K.Shibata+

Lab: JAEA

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r678 : dbrown, 2015-09-11
Add Yb isotopes from JENDL-4.0+, Yb was not present in ENDF before

n + Yb173

File: n-070_Yb_173.endf

MAT: 7040

ZA: 70173

Auth.: S.Kunieda, A.Ichihara, K.Shibata+

Lab: JAEA

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r678 : dbrown, 2015-09-11
Add Yb isotopes from JENDL-4.0+, Yb was not present in ENDF before

n + Yb174

File: n-070_Yb_174.endf

MAT: 7043

ZA: 70174

Auth.: S.Kunieda, A.Ichihara, K.Shibata+

Lab: JAEA

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r678 : dbrown, 2015-09-11
Add Yb isotopes from JENDL-4.0+, Yb was not present in ENDF before

n + Yb176

File: n-070_Yb_176.endf

MAT: 7049

ZA: 70176

Auth.: S.Kunieda, A.Ichihara, K.Shibata+

Lab: JAEA

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r678 : dbrown, 2015-09-11
Add Yb isotopes from JENDL-4.0+, Yb was not present in ENDF before

n + Hf174

File: n-072_Hf_174.endf

MAT: 7225

ZA: 72174

Auth.: R.Q. Wright, T. Kawano

Lab: ORNL/LANL

Date: EVAL-OCT16

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r938 : tkawano, 2016-10-19
new evaluation above the unresolved resonance range

n + Hf176

File: n-072_Hf_176.endf

MAT: 7231

ZA: 72176

Auth.: R.Q. Wright, T. Kawano

Lab: ORNL/LANL

Date: EVAL-OCT16

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r939 : tkawano, 2016-10-19
new evaluation based on CoH3 calculation above resonance region

n + Hf177

File: n-072_Hf_177.endf

MAT: 7234

ZA: 72177

Auth.: R.Q. Wright, T. Kawano

Lab: ORNL/LANL

Date: EVAL-OCT16

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r940 : tkawano, 2016-10-19
new evaluation above resonance range

r947 : tkawano, 2016-10-20
missing angular distribution recovered

n + Hf178

File: n-072_Hf_178.endf

MAT: 7237

ZA: 72178

Auth.: R.Q. Wright, T. Kawano

Lab: ORNL/LANL

Date: EVAL-OCT16

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r941 : tkawano, 2016-10-19
new evaluation above resonance range

n + Hf179

File: n-072_Hf_179.endf

MAT: 7240

ZA: 72179

Auth.: R.Q. Wright, T. Kawano

Lab: ORNL/LANL

Date: EVAL-OCT16

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r944 : tkawano, 2016-10-19
Cross sections and energy spectra above the resonance range updated

n + Hf180

File: n-072_Hf_180.endf

MAT: 7243

ZA: 72180

Auth.: R.Q. Wright, T. Kawano

Lab: ORNL/LANL

Date: EVAL-OCT16

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r948 : tkawano, 2016-10-20
final commit of Hf isotopes

n + Hf181

File: n-072_Hf_181.endf

MAT: 7246

ZA: 72181

Auth.: K. Shibata (JAEA)

Lab: JAEA

Date: EVAL-JUL09

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r676 : dbrown, 2015-09-11
add Dy and Hf isotopes from JENDL-4.0+, filling in holes in ENDF

n + Hf182

File: n-072_Hf_182.endf

MAT: 7249

ZA: 72182

Auth.: K. Shibata (JAEA)

Lab: JAEA

Date: EVAL-JUL09

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r676 : dbrown, 2015-09-11
add Dy and Hf isotopes from JENDL-4.0+, filling in holes in ENDF

n + Os184

File: n-076_Os_184.endf

MAT: 7625

ZA: 76184

Auth.: N.Iwamoto

Lab: JAEA

Date: EVAL-Jan10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r677 : dbrown, 2015-09-11
Adding Os isotopes from JENDL-4.0+, there was no Os in ENDF before

n + Os186

File: n-076_Os_186.endf

MAT: 7631

ZA: 76186

Auth.: N.Iwamoto

Lab: JAEA

Date: EVAL-Jan10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r677 : dbrown, 2015-09-11
Adding Os isotopes from JENDL-4.0+, there was no Os in ENDF before

n + Os187

File: n-076_Os_187.endf

MAT: 7634

ZA: 76187

Auth.: N.Iwamoto

Lab: JAEA

Date: EVAL-Jan10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r677 : dbrown, 2015-09-11
Adding Os isotopes from JENDL-4.0+, there was no Os in ENDF before

n + Os188

File: n-076_Os_188.endf

MAT: 7637

ZA: 76188

Auth.: N.Iwamoto

Lab: JAEA

Date: EVAL-Jan10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r677 : dbrown, 2015-09-11
Adding Os isotopes from JENDL-4.0+, there was no Os in ENDF before

n + Os189

File: n-076_Os_189.endf

MAT: 7640

ZA: 76189

Auth.: N.Iwamoto

Lab: JAEA

Date: EVAL-Jan10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r677 : dbrown, 2015-09-11
Adding Os isotopes from JENDL-4.0+, there was no Os in ENDF before

n + Os190

File: n-076_Os_190.endf

MAT: 7643

ZA: 76190

Auth.: N.Iwamoto

Lab: JAEA

Date: EVAL-Jan10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r677 : dbrown, 2015-09-11
Adding Os isotopes from JENDL-4.0+, there was no Os in ENDF before

n + Os192

File: n-076_Os_192.endf

MAT: 7649

ZA: 76192

Auth.: N.Iwamoto

Lab: JAEA

Date: EVAL-Jan10

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r677 : dbrown, 2015-09-11
Adding Os isotopes from JENDL-4.0+, there was no Os in ENDF before

n + Np236_m1

File: n-093_Np_236m1.endf

MAT: 9344

ZA: 93236

Auth.: T. Kawano, P.Talou

Lab: LANL

Date: EVAL-JAN27

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r592 : tkawano, 2012-10-12
New Np236 meta evaluation, performed at LANL in Jan. 2012.

r884 : cmattoon, 2016-06-01
Fix unit conversion problem on 2nd-order coefficients from MT458 fission energy release.

n + Pu239

File: n-094_Pu_239.endf

MAT: 9437

ZA: 94239

Auth.: LANL, ORNL, et al.

Lab: LANL

Date: EVAL-

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r590 : ptalou, 2012-09-04
Fixed a small error in prompt fission neutron spectrum (MF5,MT18), where the 16.0 MeV incident neutron energy is replaced by 17.5 MeV.

r591 : dwiarda, 2012-09-27
UPDATED evaluation in the resolved range for 239-Pu L. Luiz et al. (ORNL) Features of the evaluation:

1. One single set of resonances parameters covering the energy range from 0.00001 eV to 2.5 keV.
2. SAMMY (Reich-Moore) analysis of the experimental data led to a set of resonance parameters that fit well the experimental data and improves benchmark calculations in the thermal region.
3. Integral quantities such as K1 and eta (nu*capture/fission) were the two major indicators on how to fix the problem with thermal benchmark results.
4. Experimental data used in the previous Pu-239 resonance were used. The experimental data were well represented with the new resonance evaluation.

r630 : ptalou, 2014-08-25
Fixed zero uncertainty in prompt nu-bar covariance matrix (MF31,MT456) at first energy point. The same fix was applied to the covariance matrix for the total nu-bar (MF31,MT452).

r791 : dbrown, 2016-04-06
CIELO 239Pu evaluation.

r824 : dbrown, 2016-04-22
Revert prompt and total nu-bar (MF1 MT456, 452) to ENDF/B-VII.1 values for ENDF/B-VIII beta1 release. This allows for establishing a baseline for future improvements.

r884 : cmattoon, 2016-06-01
Fix unit conversion problem on 2nd-order coefficients from MT458 fission energy release.

r895 : dbrown, 2016-08-12
file pu239lanlmbc2 ENDF/B-VIII beta2 file (mbc2) provided by A.C.(Skip) Kahler

r902 : dbrown, 2016-08-18
CIELO file pu239lanlmbc2v from IAEA-NDS website (https://www-nds.iaea.org/CIELO/) Description: ENDF/B-VIII beta2 file (mbc2) provided by A.C.(Skip) Kahler (LSSF=1) Added to IAEA-NDS: 18-Aug-2016, Downloaded 18-Aug-2016

r924 : dbrown, 2016-10-17
remove small negative cross section in MT=3 at 1150 keV

r996 : ptalou, 2016-10-31
October 31, 2016

III. NEW EVALUATIONS CONTAINING COVARIANCES

n + H1

File: n-001_H_001.endf

MAT: 125

ZA: 1001

Auth.: G.M.Hale

Lab: LANL

Date: EVAL-OCT05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + H1 → n + H1 (MT=2)
- $\sigma(E)$ for n + H1 → gamma + H2 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r610 : tkawano, 2013-04-12
covariance data replaced by Hale's high fidelity evaluation.

r651 : dbrown, 2015-05-13
add neutron evaluation (yes, that's neutron as a target) fix first line to get svn keywords working

n + O16

File: n-008_O_016.endf

MAT: 825

ZA: 8016

Auth.: Hale,Paris,Young,Chadwick

Lab: LANL

Date: EVAL-MAR16

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + O16 → n + O16 (MT=2)
- $\sigma(E)$ for n + O16 → He4 + C13 (MT=800)
- Angular dist. for n + O16 → n + O16 (MT=2)

Significant SVN commits since ENDF/B-VII.1

r627 : dbrown, 2014-07-25
New 16O evaluation from Luiz Leal (ORNL). The resonances are given in the LRF=7 format.

r629 : dbrown, 2014-08-22
Luiz Leal's new 16O evaluation

r788 : dbrown, 2016-04-06
Gerry Hale & company's latest 16O evaluation as part of CIELO project

r818 : tkawano, 2016-04-22
Mattoon patch applied

n + Cl35

File: n-017_Cl_035.endf

MAT: 1725

ZA: 17035

Auth.: Sayer,Guber,Leal,Larson,Young+

Lab: ORNL,LANL

Date: EVAL-OCT03

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)

Significant SVN commits since ENDF/B-VII.1

r665 : dbrown, 2015-09-08
More files with updated thermal capture gammas

r674 : dbrown, 2015-09-11
T. Kawano tweaked the (n,p) background cross section by one point to remove a discontinuity and resolve tracker item #845

r681 : cmattoon, 2015-09-28
Fix top end of MF=12 MT=102 gamma multiplicities: incorrectly entered as 2.000000+0 instead of 2.000000+7

r955 : tkawano, 2016-10-20
capture cross sections above 1.2 MeV recalculated with CoH3, and the total and elastic scattering cross sections were re-adjusted.

n + Cl37

File: n-017_Cl_037.endf

MAT: 1731

ZA: 17037

Auth.: Sayer,Guber,Leal,Larson,Young+

Lab: ORNL,LANL

Date: EVAL-OCT03

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)

Significant SVN commits since ENDF/B-VII.1

r665 : dbrown, 2015-09-08
More files with updated thermal capture gammas

r683 : cmattoon, 2015-10-14
Fix Cl37 (same error as Cl35, last energy in MF=12 MT=102 was 2 eV, should be 20 MeV)

r955 : tkawano, 2016-10-20
capture cross sections above 1.2 MeV recalculated with CoH3, and the total and elastic scattering cross sections were re-adjusted.

n + Ca40

File: n-020_Ca_040.endf

MAT: 2025

ZA: 20040

Auth.: **********

Lab: **********

Date: **********

Ener.: 1e-05-200000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Ca40 → n + Ca40 (MT=2)
- $\sigma(E)$ for n + Ca40 → gamma + Ca41 (MT=102)
- $\sigma(E)$ for n + Ca40 → H1 + K40 (MT=600)
- $\sigma(E)$ for n + Ca40 → He4 + Ar37 (MT=800)

Significant SVN commits since ENDF/B-VII.1

r596 : dbrown, 2012-10-31
Applied Caleb's patch that fixed the gap in the transition from the RR to the high energy region.

r898 : dwiarda, 2016-08-12
Ca-40 resolved resonance evaluation, performed in energy range from 1e-5 eV to 1.5 MeV with the SAMMY code in ORNL. Resonance parameter covariance matrices were also obtained in the SAMMY evaluation process in the energy region up to 1.5 MeV. The RML formalism (LRF=7) was used for the resonance parameters and the formalism (LCOMP=1) for the covariance matrix. Thermal cross sections (for reconstructed cross sections at T=293.6 K) are reported below

n + Ni58

File: n-028_Ni_058.endf

MAT: 2825

ZA: 28058

Auth.: T.Kawano,A.Kahler,L.Leal

Lab: LANL,ORNL

Date: EVAL-Aug12

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Ni58 → n + Ni58 (MT=2)
- $\sigma(E)$ for Non-elastic (MT=3)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ni58 → n + n + Ni57 (MT=16)
- $\sigma(E)$ for n + Ni58 → n + He4 + Fe54 (MT=22)
- $\sigma(E)$ for n + Ni58 → n + H1 + Co57 (MT=28)
- $\sigma(E)$ for n + Ni58 → n + Ni58_e1 (MT=51)
- $\sigma(E)$ for n + Ni58 → n + Ni58_e2 (MT=52)
- $\sigma(E)$ for n + Ni58 → n + Ni58_e3 (MT=53)
- $\sigma(E)$ for n + Ni58 → n + Ni58_e4 (MT=54)
- $\sigma(E)$ for n + Ni58 → n + Ni58_e5 (MT=55)
- $\sigma(E)$ for n + Ni58 → n + Ni58_e6 (MT=56)
- $\sigma(E)$ for n + Ni58 → n + Ni58_e7 (MT=57)
- $\sigma(E)$ for n + Ni58 → n + Ni58_e8 (MT=58)
- $\sigma(E)$ for n + Ni58 → n + Ni58_c (MT=91)
- $\sigma(E)$ for n + Ni58 → gamma + Ni59 (MT=102)
- $\sigma(E)$ for n + Ni58 → H1 + Co58 (MT=103)
- $\sigma(E)$ for n + Ni58 → H2 + Co57 (MT=104)
- $\sigma(E)$ for n + Ni58 → He4 + Fe55 (MT=107)

Significant SVN commits since ENDF/B-VII.1

r600 : tkawano, 2012-11-19
All cross sections above the resonance regions were upgraded.

n + Ni60

File: n-028_Ni_060.endf

MAT: 2831

ZA: 28060

Auth.: T.Kawano,A.Kahler,L.Leal

Lab: LANL,ORNL

Date: EVAL-Oct12

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Ni60 → n + Ni60 (MT=2)
- $\sigma(E)$ for Non-elastic (MT=3)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ni60 → n + n + Ni59 (MT=16)
- $\sigma(E)$ for n + Ni60 → n + He4 + Fe56 (MT=22)
- $\sigma(E)$ for n + Ni60 → n + H1 + Co59 (MT=28)
- $\sigma(E)$ for n + Ni60 → n + Ni60_e1 (MT=51)
- $\sigma(E)$ for n + Ni60 → n + Ni60_e2 (MT=52)
- $\sigma(E)$ for n + Ni60 → n + Ni60_e3 (MT=53)
- $\sigma(E)$ for n + Ni60 → n + Ni60_e4 (MT=54)
- $\sigma(E)$ for n + Ni60 → n + Ni60_e5 (MT=55)
- $\sigma(E)$ for n + Ni60 → n + Ni60_e6 (MT=56)
- $\sigma(E)$ for n + Ni60 → n + Ni60_e7 (MT=57)
- $\sigma(E)$ for n + Ni60 → n + Ni60_e8 (MT=58)
- $\sigma(E)$ for n + Ni60 → n + Ni60_e9 (MT=59)
- $\sigma(E)$ for n + Ni60 → n + Ni60_e10 (MT=60)
- $\sigma(E)$ for n + Ni60 → n + Ni60_e11 (MT=61)
- $\sigma(E)$ for n + Ni60 → n + Ni60_c (MT=91)
- $\sigma(E)$ for n + Ni60 → gamma + Ni61 (MT=102)
- $\sigma(E)$ for n + Ni60 → H1 + Co60 (MT=103)
- $\sigma(E)$ for n + Ni60 → H2 + Co59 (MT=104)
- $\sigma(E)$ for n + Ni60 → He4 + Fe57 (MT=107)

Significant SVN commits since ENDF/B-VII.1

r600 : tkawano, 2012-11-19
All cross sections above the resonance regions were upgraded.

n + Cu63

File: n-029_Cu_063.endf

MAT: 2925

ZA: 29063

Auth.: V.Sobes, L.C. Leal, T.Kawano

Lab: LANL,ORNL

Date: EVAL-OCT16

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cu63 → n + Cu63 (MT=2)
- $\sigma(E)$ for n + Cu63 → gamma + Cu64 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r620 : dwiarda, 2013-11-15
29-Cu- 63 ORNL, MIT Resonance Evaluation Including Covariance and Angular Distribution of Elastic Scattering

r900 : dwiarda, 2016-08-16
Updated resolved resonance region evaluation for cu63 and cu65. The high energy capture data normalization has been corrected and the resonance parameters refitted to eliminate the dip of the capture cross section at the end of the resolved resonance region.

r901 : tkawano, 2016-08-18
The upper resonance boundary was temporally changed to 100keV, and LANL evualaltion concatenated

r992 : dbrown, 2016-10-31
ORNL + LANL Evaluation merged at 300 keV. Resonance parameter covariance matrix has been added.

n + Cu65

File: n-029_Cu_065.endf

MAT: 2931

ZA: 29065

Auth.: V.Sobes, L.C. Leal, T.Kawano

Lab: LANL,ORNL

Date: EVAL-OCT16

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cu65 → n + Cu65 (MT=2)
- $\sigma(E)$ for n + Cu65 → gamma + Cu66 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r621 : dwiarda, 2013-11-15
29-Cu- 65 ORNL, MIT Resonance Evaluation Including Covariance and Angular Distribution of Elastic Scattering

r622 : dwiarda, 2014-04-17
The range of the resolved range in 65-Cu was erraneously set to 1.3e6 eV instead of 3e5 eV. This update fixes this error. We also eliminated repeated zeros in file 3 for the RR range.

r900 : dwiarda, 2016-08-16
Updated resolved resonance region evaluation for cu63 and cu65. The high energy capture data normalization has been corrected and the resonance parameters refitted to eliminate the dip of the capture cross section at the end of the resolved resonance region.

r901 : tkawano, 2016-08-18
The upper resonance boundary was temporally changed to 100keV, and LANL evualaltion concatenated

r992 : dbrown, 2016-10-31
ORNL + LANL Evaluation merged at 300 keV. Resonance parameter covariance matrix has been added.

n + W182

File: n-074_W_182.endf

MAT: 7431

ZA: 74182

Auth.:

Lab: IAEA

Date: Eval090806

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + W182 → n + W182 (MT=2)
- $\sigma(E)$ for Particle Production (MT=5)
- $\sigma(E)$ for n + W182 → n + n + W181 (MT=16)
- $\sigma(E)$ for n + W182 → n + n + n + W180 (MT=17)
- $\sigma(E)$ for n + W182 → n + H1 + Ta181 (MT=28)
- $\sigma(E)$ for n + W182 → n + n + n + n + W179 (MT=37)
- $\sigma(E)$ for n + W182 → n + n + H1 + Ta180 (MT=41)
- $\sigma(E)$ for n + W182 → n + W182_e1 (MT=51)
- $\sigma(E)$ for n + W182 → n + W182_e2 (MT=52)
- $\sigma(E)$ for n + W182 → n + W182_e3 (MT=53)
- $\sigma(E)$ for n + W182 → n + W182_e4 (MT=54)
- $\sigma(E)$ for n + W182 → n + W182_e5 (MT=55)
- $\sigma(E)$ for n + W182 → n + W182_e6 (MT=56)
- $\sigma(E)$ for n + W182 → n + W182_e7 (MT=57)
- $\sigma(E)$ for n + W182 → n + W182_e8 (MT=58)
- $\sigma(E)$ for n + W182 → n + W182_e9 (MT=59)
- $\sigma(E)$ for n + W182 → n + W182_c (MT=91)
- $\sigma(E)$ for n + W182 → gamma + W183 (MT=102)
- $\sigma(E)$ for n + W182 → H1 + Ta182 (MT=600)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e1 (MT=601)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e2 (MT=602)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e3 (MT=603)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e4 (MT=604)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e5 (MT=605)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e6 (MT=606)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e7 (MT=607)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e8 (MT=608)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e9 (MT=609)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e10 (MT=610)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e11 (MT=611)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e12 (MT=612)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e13 (MT=613)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e14 (MT=614)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e15 (MT=615)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e16 (MT=616)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e17 (MT=617)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e18 (MT=618)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e19 (MT=619)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e20 (MT=620)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e21 (MT=621)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e22 (MT=622)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e23 (MT=623)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e24 (MT=624)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e25 (MT=625)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e26 (MT=626)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e27 (MT=627)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e28 (MT=628)
- $\sigma(E)$ for n + W182 → H1 + Ta182_e29 (MT=629)
- $\sigma(E)$ for n + W182 → H1 + Ta182_c (MT=649)
- $\sigma(E)$ for n + W182 → He4 + Hf179 (MT=800)
- $\sigma(E)$ for n + W182 → He4 + Hf179_e1 (MT=801)
- $\sigma(E)$ for n + W182 → He4 + Hf179_e2 (MT=802)
- $\sigma(E)$ for n + W182 → He4 + Hf179_e3 (MT=803)
- $\sigma(E)$ for n + W182 → He4 + Hf179_e4 (MT=804)
- $\sigma(E)$ for n + W182 → He4 + Hf179_e5 (MT=805)
- $\sigma(E)$ for n + W182 → He4 + Hf179_e6 (MT=806)

- $\sigma(E)$ for n + W182 → He4 + Hf179_c (MT=849)
- $\sigma(E)$ for Lumped Covariance (MT=851)
- $\sigma(E)$ for Lumped Covariance (MT=852)
- $\sigma(E)$ for Lumped Covariance (MT=853)
- $\sigma(E)$ for Lumped Covariance (MT=854)
- $\sigma(E)$ for Lumped Covariance (MT=855)
- $\sigma(E)$ for Lumped Covariance (MT=856)
- Angular dist. for n + W182 → n + W182 (MT=2)
- Angular dist. for n + W182 → n + W182_e1 (MT=51)

Significant SVN commits since ENDF/B-VII.1

r633 : dwiarda, 2014-09-08
74-W- 182 ORNL Resonance Evaluation Including Covariance (ORNL AUG 2014)

n + U235

File: n-092_U_235.endf

MAT: 9228

ZA: 92235

Auth.: IAEA Consortium

Lab: IAEA

Date: FEB-2015

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + U235 → gamma + U236 (MT=102)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r631 : ptalou, 2014-08-29
Added a delayed neutron multiplicity covariance matrix (MF=31,MT=455) using a least-square fit of available data. The total neutron multiplicity covariance matrix (MF=31,MT=452) is now inferred from the prompt (MT=456) and delayed (MT=455). It fixes a problem observed with very large uncertainties in the total neutron multiplicity in the thermal and URR regions.[r700 :]dbrown, 2016-01-13

r815 : dbrown, 2016-04-20
CIELO 235U file from IAEA

r896 : dbrown, 2016-08-12
CIELO 235U File u235ib18o23g6cnu5ef1 from https://www-nds.iaea.org/CIELO/

n + U238

File: n-092_U_238.endf

MAT: 9237

ZA: 92238

Auth.: IAEA Consortium

Lab: IAEA

Date: DEC-2014

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + U238 → gamma + U239 (MT=102)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r790 : dbrown, 2016-04-06
CIELO 238U file. Documentation needs updating.

r814 : dbrown, 2016-04-20
Previous commit did not include updated documentation. This version contains the corrected documentation.

r884 : cmattoon, 2016-06-01
Fix unit conversion problem on 2nd-order coefficients from MT458 fission energy release.

r897 : dbrown, 2016-08-12
CIELO 238U from https://www-nds.iaea.org/CIELO/ IAEA Filename: ib46rlFs

IV. CHANGED EVALUATIONS CONTAINING COVARIANCES

n + Li6

File: n-003_Li_006.endf

MAT: 325

ZA: 3006

Auth.: G.M.Hale, P.G.Young

Lab: LANL

Date: EVAL-APR06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Li6 → n + Li6 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Li6 → n + n + He4 + H1 (MT=24)
- $\sigma(E)$ for n + Li6 → gamma + Li7 (MT=102)
- $\sigma(E)$ for n + Li6 → H1 + He6 (MT=103)
- $\sigma(E)$ for n + Li6 → H3 + He4 (MT=105)

Significant SVN commits since ENDF/B-VII.1

r639 : dbrown, 2015-03-12
New primary gamma evaluations based on EGAF library. By Brad Sleaford (LLNL) and Rick Firestone (LBNL).

r680 : dbrown, 2015-09-18
attempt to fix the energy balance issue with the thermal capture gammas

n + Li7

File: n-003_Li_007.endf

MAT: 328

ZA: 3007

Auth.: P.G.Young

Lab: LANL

Date: EVAL-AUG88

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Li7 → n + Li7 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Li7 → n + n + Li6 (MT=16)
- $\sigma(E)$ for n + Li7 → n + n + He4 + H2 (MT=24)
- $\sigma(E)$ for n + Li7 → n + n + n + He4 + H1 (MT=25)
- $\sigma(E)$ for n + Li7 → n + Li7_e1 (MT=51)
- $\sigma(E)$ for n + Li7 → n + Li7_e2 (MT=52)
- $\sigma(E)$ for n + Li7 → n + Li7_e3 (MT=53)
- $\sigma(E)$ for n + Li7 → n + Li7_e4 (MT=54)
- $\sigma(E)$ for n + Li7 → n + Li7_e5 (MT=55)
- $\sigma(E)$ for n + Li7 → n + Li7_e6 (MT=56)
- $\sigma(E)$ for n + Li7 → n + Li7_e7 (MT=57)
- $\sigma(E)$ for n + Li7 → n + Li7_e8 (MT=58)
- $\sigma(E)$ for n + Li7 → n + Li7_e9 (MT=59)
- $\sigma(E)$ for n + Li7 → n + Li7_e10 (MT=60)
- $\sigma(E)$ for n + Li7 → n + Li7_e11 (MT=61)
- $\sigma(E)$ for n + Li7 → n + Li7_e12 (MT=62)
- $\sigma(E)$ for n + Li7 → n + Li7_e13 (MT=63)
- $\sigma(E)$ for n + Li7 → n + Li7_e14 (MT=64)
- $\sigma(E)$ for n + Li7 → n + Li7_e15 (MT=65)
- $\sigma(E)$ for n + Li7 → n + Li7_e16 (MT=66)
- $\sigma(E)$ for n + Li7 → n + Li7_e17 (MT=67)
- $\sigma(E)$ for n + Li7 → n + Li7_e18 (MT=68)
- $\sigma(E)$ for n + Li7 → n + Li7_e19 (MT=69)
- $\sigma(E)$ for n + Li7 → n + Li7_e20 (MT=70)
- $\sigma(E)$ for n + Li7 → n + Li7_e21 (MT=71)
- $\sigma(E)$ for n + Li7 → n + Li7_e22 (MT=72)
- $\sigma(E)$ for n + Li7 → n + Li7_e23 (MT=73)
- $\sigma(E)$ for n + Li7 → n + Li7_e24 (MT=74)
- $\sigma(E)$ for n + Li7 → n + Li7_e25 (MT=75)
- $\sigma(E)$ for n + Li7 → n + Li7_e26 (MT=76)
- $\sigma(E)$ for n + Li7 → n + Li7_e27 (MT=77)
- $\sigma(E)$ for n + Li7 → n + Li7_e28 (MT=78)
- $\sigma(E)$ for n + Li7 → n + Li7_e29 (MT=79)
- $\sigma(E)$ for n + Li7 → n + Li7_e30 (MT=80)
- $\sigma(E)$ for n + Li7 → n + Li7_e31 (MT=81)
- $\sigma(E)$ for n + Li7 → n + Li7_e32 (MT=82)
- $\sigma(E)$ for n + Li7 → gamma + Li8 (MT=102)
- $\sigma(E)$ for n + Li7 → H2 + He6 (MT=104)
- $\sigma(E)$ for Lumped Covariance (MT=851)
- $\sigma(E)$ for Lumped Covariance (MT=852)
- $\sigma(E)$ for Lumped Covariance (MT=853)
- $\sigma(E)$ for Lumped Covariance (MT=854)
- $\sigma(E)$ for Lumped Covariance (MT=855)
- $\sigma(E)$ for Lumped Covariance (MT=856)
- $\sigma(E)$ for Lumped Covariance (MT=857)
- $\sigma(E)$ for Lumped Covariance (MT=858)
- $\sigma(E)$ for Lumped Covariance (MT=859)

Significant SVN commits since ENDF/B-VII.1

r660 : dbrown, 2015-08-07
7Li & 11B, with EGAF capture gamma spectra

n + Be7

File: n-004_Be_007.endf

MAT: 419

ZA: 4007

Auth.: I.Thompson, P.R.Page

Lab: LANL

Date: EVAL-JUN16

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Be7 → n + Be7 (MT=2)
- $\sigma(E)$ for n + Be7 → H1 + Li7 (MT=600)
- $\sigma(E)$ for n + Be7 → H1 + Li7_e1 (MT=601)
- $\sigma(E)$ for n + Be7 → H2 + Li6 (MT=650)
- $\sigma(E)$ for n + Be7 → He4 + He4 (MT=800)

Significant SVN commits since ENDF/B-VII.1

r811 : jlconlin, 2016-04-13
Replacing Be-7 with evaluation that goes up to 20 MeV.

r882 : cmattoon, 2016-06-01
Fix outgoing alpha multiplicities for n+Be7-¿a+a (two alpha products are listed, so each should have multiplicity=1)

r920 : dbrown, 2016-10-17
EXTENSION FROM 8.1 to 20 MeV maximum neutron energy: Cross sections for total, elastic, (n,p) and (n,a) extended to 20 MeV by rescaling the results of a defaults TALYS 1.6 calculation (without pre-equilibrium) to match the previous curves at 14 MeV. Ian Thompson. Jun 8, 2016

r928 : dbrown, 2016-10-18
fix documentation so author line in correct place

r945 : thompson97, 2016-10-19
Correct MF=15 MT=601 format error in new file, and temperature, n-004_Be_007.endf

n + B11

File: n-005_B_011.endf

MAT: 528

ZA: 5011

Auth.: P.G.Young

Lab: LANL

Date: EVAL-MAY89

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + B11 → n + B11 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + B11 → n + n + B10 (MT=16)
- $\sigma(E)$ for n + B11 → n + He4 + Li7 (MT=22)
- $\sigma(E)$ for n + B11 → n + H1 + Be10 (MT=28)
- $\sigma(E)$ for n + B11 → gamma + B12 (MT=102)
- $\sigma(E)$ for n + B11 → H1 + Be11 (MT=103)
- $\sigma(E)$ for n + B11 → H3 + Be9 (MT=105)
- $\sigma(E)$ for n + B11 → He4 + Li8 (MT=107)

Significant SVN commits since ENDF/B-VII.1

r660 : dbrown, 2015-08-07
7Li & 11B, with EGAF capture gamma spectra

r662 : dbrown, 2015-08-13
For MT=102, the number of gammas in MF=14 was 5. It should have been 9 like in MF=12.

r673 : dbrown, 2015-09-11
T. Kawano recomputed the elastic angular distribution with the same optical model, but with higher Lmax. This resolves tracker #925

n + Cnatural

File: n-006_C_000.endf

MAT: 600

ZA: 6000

Auth.: M.B.Chadwick, P.G.Young, C.Y. Fu

Lab: LANL,ORNL

Date: EVAL-JUN96

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + C_natural → n + C_natural (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for Particle Production (MT=5)
- $\sigma(E)$ for n + C_natural → n + H1 + Be999 (MT=28)
- $\sigma(E)$ for n + C_natural → gamma + C1 (MT=102)
- $\sigma(E)$ for n + C_natural → H1 + B_natural (MT=103)
- $\sigma(E)$ for n + C_natural → H2 + Be999 (MT=104)
- $\sigma(E)$ for n + C_natural → He4 + Li997 (MT=107)

Significant SVN commits since ENDF/B-VII.1

r628 : dbrown, 2014-08-01
In MT 5, Since the cross section is zero at and below 2e7, set the multiplicity to zero as well.

n + N15

File: n-007_N_015.endf

MAT: 728

ZA: 7015

Auth.: E.Arthur,P.Young,G.Hale

Lab: LANL

Date: EVAL-SEP83

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + N15 → n + N15 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + N15 → n + n + N14 (MT=16)
- $\sigma(E)$ for n + N15 → n + He4 + B11 (MT=22)
- $\sigma(E)$ for n + N15 → n + H1 + C14 (MT=28)
- $\sigma(E)$ for n + N15 → gamma + N16 (MT=102)
- $\sigma(E)$ for n + N15 → H1 + C15 (MT=103)
- $\sigma(E)$ for n + N15 → H2 + C14 (MT=104)
- $\sigma(E)$ for n + N15 → H3 + C13 (MT=105)
- $\sigma(E)$ for n + N15 → He4 + B12 (MT=107)

Significant SVN commits since ENDF/B-VII.1

r816 : dbrown, 2016-04-20
In n-007_N_015, MF 5 neutron energy distributions for MTs 16, 22, 28 and 91 all use flat interpolation along incident energy. This guarantees that energy will not be conserved, except possibly at the listed incident energies! This commit uses lin-lin unitbase interpolation instead.

n + F19

File: n-009_F_019.endf

MAT: 925

ZA: 9019

Auth.: Z.X.Zhao,C.Y.Fu,D.C.Larson, Leal+

Lab: CNDC,ORNL

Date: EVAL-OCT03

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + F19 → n + F19 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + F19 → n + n + F18 (MT=16)
- $\sigma(E)$ for n + F19 → n + He4 + N15 (MT=22)
- $\sigma(E)$ for n + F19 → n + H1 + O18 (MT=28)
- $\sigma(E)$ for n + F19 → gamma + F20 (MT=102)
- $\sigma(E)$ for n + F19 → H1 + O19 (MT=103)
- $\sigma(E)$ for n + F19 → H2 + O18 (MT=104)
- $\sigma(E)$ for n + F19 → H3 + O17 (MT=105)
- $\sigma(E)$ for n + F19 → He4 + N16 (MT=107)

Significant SVN commits since ENDF/B-VII.1

r639 : dbrown, 2015-03-12
New primary gamma evaluations based on EGAF library. By Brad Sleaford (LLNL) and Rick Firestone (LBNL).

r644 : dbrown, 2015-03-13
fix count of gammas in MT=102

n + Na23

File: n-011_Na_023.endf

MAT: 1125

ZA: 11023

Auth.: D.C.Larson

Lab: ORNL

Date: EVAL-DEC77

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Na23 → n + Na23 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Na23 → n + n + Na22 (MT=16)
- $\sigma(E)$ for n + Na23 → gamma + Na24 (MT=102)
- $\sigma(E)$ for n + Na23 → H1 + Ne23 (MT=103)
- $\sigma(E)$ for n + Na23 → He4 + F20 (MT=107)
- Angular dist. for n + Na23 → n + Na23 (MT=2)

Significant SVN commits since ENDF/B-VII.1

r665 : dbrown, 2015-09-08
More files with updated thermal capture gammas

r682 : cmattoon, 2015-10-14
Update NK in MF=14 MT=102 to agree with MF=12 MT=102

n + Al27

File: n-013_Al_027.endf

MAT: 1325

ZA: 13027

Auth.: M.B.Chadwick+,Derrien+

Lab: LANL,ORNL

Date: EVAL-FEB01

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Al27 → n + Al27 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Al27 → n + n + Al26 (MT=16)
- $\sigma(E)$ for n + Al27 → gamma + Al28 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r665 : dbrown, 2015-09-08
More files with updated thermal capture gammas

n + Si28

File: n-014_Si_028.endf

MAT: 1425

ZA: 14028

Auth.: M.B.Chadwick,P.G.Young,D.Hetrick

Lab: LANL,ORNL

Date: EVAL-DEC02

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Si28 → n + Si28 (MT=2)
- $\sigma(E)$ for Non-elastic (MT=3)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Si28 → n + n + Si27 (MT=16)
- $\sigma(E)$ for n + Si28 → n + He4 + Mg24 (MT=22)
- $\sigma(E)$ for n + Si28 → n + H1 + Al27 (MT=28)
- $\sigma(E)$ for n + Si28 → n + Si28_e1 (MT=51)
- $\sigma(E)$ for n + Si28 → n + Si28_e2 (MT=52)
- $\sigma(E)$ for n + Si28 → n + Si28_e3 (MT=53)
- $\sigma(E)$ for n + Si28 → n + Si28_e4 (MT=54)
- $\sigma(E)$ for n + Si28 → n + Si28_e5 (MT=55)
- $\sigma(E)$ for n + Si28 → n + Si28_e6 (MT=56)
- $\sigma(E)$ for n + Si28 → n + Si28_e7 (MT=57)
- $\sigma(E)$ for n + Si28 → n + Si28_e8 (MT=58)
- $\sigma(E)$ for n + Si28 → n + Si28_e9 (MT=59)
- $\sigma(E)$ for n + Si28 → n + Si28_e10 (MT=60)
- $\sigma(E)$ for n + Si28 → n + Si28_e11 (MT=61)
- $\sigma(E)$ for n + Si28 → n + Si28_e12 (MT=62)
- $\sigma(E)$ for n + Si28 → n + Si28_e13 (MT=63)
- $\sigma(E)$ for n + Si28 → n + Si28_e14 (MT=64)
- $\sigma(E)$ for n + Si28 → n + Si28_e15 (MT=65)
- $\sigma(E)$ for n + Si28 → n + Si28_e16 (MT=66)
- $\sigma(E)$ for n + Si28 → n + Si28_e17 (MT=67)
- $\sigma(E)$ for n + Si28 → n + Si28_c (MT=91)
- $\sigma(E)$ for n + Si28 → gamma + Si29 (MT=102)
- $\sigma(E)$ for n + Si28 → H1 + Al28 (MT=103)
- $\sigma(E)$ for n + Si28 → He4 + Mg25 (MT=107)

Significant SVN commits since ENDF/B-VII.1

r665 : dbrown, 2015-09-08
More files with updated thermal capture gammas

n + Y89

File: n-039_Y_089.endf

MAT: 3925

ZA: 39089

Auth.: Rochman,Chadwick,Herman,Kawano+

Lab: BNL-LANL

Date: EVAL-AUG06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Y89 → n + Y89 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Y89 → n + n + Y88 (MT=16)
- $\sigma(E)$ for n + Y89 → gamma + Y90 (MT=102)
- $\sigma(E)$ for n + Y89 → H1 + Sr89 (MT=103)
- $\sigma(E)$ for n + Y89 → He4 + Rb86 (MT=107)

Significant SVN commits since ENDF/B-VII.1

r613 : dbrown, 2013-05-10
Applied & checked Caleb's patch

r953 : gnobre, 2016-10-20
Changed Q value for MF=3,MT=107 in order to fix discrepancy pointed out by PSYCHE.

n + Zr90

File: n-040_Zr_090.endf

MAT: 4025

ZA: 40090

Auth.: H.I.Kim, S.Mughabghab, R.Capote

Lab: BNL,KAERI+

Date: EVAL-SEP11

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Zr90 → n + Zr90 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Zr90 → n + n + Zr89 (MT=16)
- $\sigma(E)$ for n + Zr90 → gamma + Zr91 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r617 : atrkov, 2013-09-17
Zr isotopes - Revised resonance parameters (ref. S. Mughabghab, March 2012)

r618 : atrkov, 2013-10-03
Zr isotopes 90, 92,94,96: change to LSSF=1

r926 : gnobre, 2016-10-17
Fixes related to tracker #1025.

n + Zr91

File: n-040_Zr_091.endf

MAT: 4028

ZA: 40091

Auth.: H.I.Kim, S.Mughabghab, R.Capote

Lab: BNL,KAERI+

Date: EVAL-SEP11

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Zr91 → n + Zr91 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Zr91 → n + n + Zr90 (MT=16)
- $\sigma(E)$ for n + Zr91 → gamma + Zr92 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r617 : atrkov, 2013-09-17
Zr isotopes - Revised resonance parameters (ref. S. Mughabghab, March 2012)[r646 :]cmattoon, 2015-03-23

r926 : gnobre, 2016-10-17
Fixes related to tracker #1025.

r942 : dbrown, 2016-10-19
Restore ENDF/B-VII.1 cross sections for capture, elastic and total in the URR, set the URR data for self-shielding calculations only

n + Zr92

File: n-040_Zr_092.endf

MAT: 4031

ZA: 40092

Auth.: H.I.Kim, S.Mughabghab, R.Capote

Lab: BNL,KAERI+

Date: EVAL-SEP11

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Zr92 → n + Zr92 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Zr92 → n + n + Zr91 (MT=16)
- $\sigma(E)$ for n + Zr92 → gamma + Zr93 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r617 : atrkov, 2013-09-17
Zr isotopes - Revised resonance parameters (ref. S. Mughabghab, March 2012)[r618 :]atrkov, 2013-10-03

n + Zr94

File: n-040_Zr_094.endf

MAT: 4037

ZA: 40094

Auth.: H.I.Kim, S.Mughabghab, R.Capote

Lab: BNL,KAERI+

Date: EVAL-SEP11

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Zr94 → n + Zr94 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Zr94 → n + n + Zr93 (MT=16)
- $\sigma(E)$ for n + Zr94 → gamma + Zr95 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r617 : atrkov, 2013-09-17
Zr isotopes - Revised resonance parameters (ref. S. Mughabghab, March 2012)[r618 :]atrkov, 2013-10-03

r926 : gnobre, 2016-10-17
Fixes related to tracker #1025.

r935 : dbrown, 2016-10-18
Fix "hole" in the elastic, total and capture cross sections by extending the fast region cross sections down to the top of the RRR, resolving tracker item [#1014]

n + Zr96

File: n-040_Zr_096.endf

MAT: 4043

ZA: 40096

Auth.: H.I.Kim, S.Mughabghab, R.Capote

Lab: BNL,KAERI+

Date: EVAL-SEP11

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Zr96 → n + Zr96 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Zr96 → n + n + Zr95 (MT=16)
- $\sigma(E)$ for n + Zr96 → gamma + Zr97 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r617 : atrkov, 2013-09-17
Zr isotopes - Revised resonance parameters (ref. S. Mughabghab, March 2012)[r618 :]atrkov, 2013-10-03

r936 : dbrown, 2016-10-18
extend the capture, total and elastic cross section down to the top of the RRR, resolving tracker item [#1013]

n + Nb93

File: n-041_Nb_093.endf

MAT: 4125

ZA: 41093

Auth.: M.Chadwick,P.Young,D.L.Smith

Lab: LANL,ANL

Date: EVAL-DEC97

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- Radionuclide prod. for Neutron Production (MT=4)

Significant SVN commits since ENDF/B-VII.1

r594 : dbrown, 2012-10-31
applied patch from Caleb Mattoon, resolving issue #693: The MT51, MF3 level energy didn't agree with those in MFs 8. 10 and 40

r956 : tkawano, 2016-10-20
resonance parameters updated

n + Mo95

File: n-042_Mo_095.endf

MAT: 4234

ZA: 42095

Auth.: Kim,Herman, Mughabghab+

Lab: BNL,KAERI

Date: EVAL-DEC10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Mo95 → n + Mo95 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Mo95 → n + n + Mo94 (MT=16)
- $\sigma(E)$ for n + Mo95 → gamma + Mo96 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r931 : dbrown, 2016-10-18
(n,el) Legendre angular moments were reconstructed from angular distributions and then matched onto EMPIRE calculations at higher energies

n + I127

File: n-053_I_127.endf

MAT: 5325

ZA: 53127

Auth.: Young, MacFarlane, Mughabghab

Lab: LANL,BNL

Date: EVAL-JAN05

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + I127 → n + I127 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + I127 → n + n + I126 (MT=16)
- $\sigma(E)$ for n + I127 → gamma + I128 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r612 : dbrown, 2013-05-10
Checked and applied Caleb's patch to fix the MF8 MT107 QI This cleared up a warning on ADVANCE.

n + Sm151

File: n-062_Sm_151.endf

MAT: 6246

ZA: 62151

Auth.: Kim,Mughabghab,Herman,Oblozinsky

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Sm151 → n + Sm151 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Sm151 → n + n + Sm150 (MT=16)
- $\sigma(E)$ for n + Sm151 → gamma + Sm152 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r667 : dbrown, 2015-09-09
Toshihiko's fixes to outgoing spectra

n + Eu153

File: n-063_Eu_153.endf

MAT: 6331

ZA: 63153

Auth.: Mughabghab,Oblozinsky,Herman+

Lab: BNL,KAERI

Date: EVAL-Sep02

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Eu153 → n + Eu153 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Eu153 → n + n + Eu152 (MT=16)
- $\sigma(E)$ for n + Eu153 → gamma + Eu154 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r615 : dbrown, 2013-08-01
(n,g)'s gamma multiplicity table (MT102, MF6, very top of MF) had zero gamma multiplicity at Ein=10e-5 eV. Copied down Ein=1 keV multiplicity (4.12535) and resolved a tracker item.

r666 : dbrown, 2015-09-09
Energy spectra and angular distributions recalculated using CoH

r667 : dbrown, 2015-09-09
Toshihiko's fixes to outgoing spectra

r671 : dbrown, 2015-09-10
T.K. made more spectral fixes

n + W183

File: n-074_W_183.endf

MAT: 7434

ZA: 74183

Auth.:

Lab: IAEA

Date: Eval090806

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + W183 → n + W183 (MT=2)
- $\sigma(E)$ for Particle Production (MT=5)
- $\sigma(E)$ for n + W183 → n + n + W182 (MT=16)
- $\sigma(E)$ for n + W183 → n + n + n + W181 (MT=17)
- $\sigma(E)$ for n + W183 → n + H1 + Ta182 (MT=28)
- $\sigma(E)$ for n + W183 → n + n + n + n + W180 (MT=37)
- $\sigma(E)$ for n + W183 → n + n + H1 + Ta181 (MT=41)
- $\sigma(E)$ for n + W183 → n + W183_e1 (MT=51)
- $\sigma(E)$ for n + W183 → n + W183_e2 (MT=52)
- $\sigma(E)$ for n + W183 → n + W183_e3 (MT=53)
- $\sigma(E)$ for n + W183 → n + W183_e4 (MT=54)
- $\sigma(E)$ for n + W183 → n + W183_e5 (MT=55)
- $\sigma(E)$ for n + W183 → n + W183_e6 (MT=56)
- $\sigma(E)$ for n + W183 → n + W183_e7 (MT=57)
- $\sigma(E)$ for n + W183 → n + W183_e8 (MT=58)
- $\sigma(E)$ for n + W183 → n + W183_e9 (MT=59)
- $\sigma(E)$ for n + W183 → n + W183_e10 (MT=60)
- $\sigma(E)$ for n + W183 → n + W183_e11 (MT=61)
- $\sigma(E)$ for n + W183 → n + W183_c (MT=91)
- $\sigma(E)$ for n + W183 → gamma + W184 (MT=102)
- $\sigma(E)$ for n + W183 → H1 + Ta183 (MT=600)
- $\sigma(E)$ for n + W183 → H1 + Ta183_e1 (MT=601)
- $\sigma(E)$ for n + W183 → H1 + Ta183_e2 (MT=602)
- $\sigma(E)$ for n + W183 → H1 + Ta183_e3 (MT=603)
- $\sigma(E)$ for n + W183 → H1 + Ta183_e4 (MT=604)
- $\sigma(E)$ for n + W183 → H1 + Ta183_e5 (MT=605)
- $\sigma(E)$ for n + W183 → H1 + Ta183_e6 (MT=606)
- $\sigma(E)$ for n + W183 → H1 + Ta183_e7 (MT=607)
- $\sigma(E)$ for n + W183 → H1 + Ta183_e8 (MT=608)
- $\sigma(E)$ for n + W183 → H1 + Ta183_e9 (MT=609)
- $\sigma(E)$ for n + W183 → H1 + Ta183_e10 (MT=610)
- $\sigma(E)$ for n + W183 → H1 + Ta183_e11 (MT=611)
- $\sigma(E)$ for n + W183 → H1 + Ta183_e12 (MT=612)
- $\sigma(E)$ for n + W183 → H1 + Ta183_e13 (MT=613)
- $\sigma(E)$ for n + W183 → H1 + Ta183_e14 (MT=614)
- $\sigma(E)$ for n + W183 → H1 + Ta183_c (MT=649)
- $\sigma(E)$ for n + W183 → He4 + Hf180 (MT=800)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e1 (MT=801)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e2 (MT=802)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e3 (MT=803)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e4 (MT=804)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e5 (MT=805)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e6 (MT=806)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e7 (MT=807)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e8 (MT=808)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e9 (MT=809)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e10 (MT=810)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e11 (MT=811)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e12 (MT=812)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e13 (MT=813)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e14 (MT=814)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e15 (MT=815)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e16 (MT=816)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e17 (MT=817)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e18 (MT=818)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e19 (MT=819)

- $\sigma(E)$ for n + W183 → He4 + Hf180_e20 (MT=820)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e21 (MT=821)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e22 (MT=822)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e23 (MT=823)
- $\sigma(E)$ for n + W183 → He4 + Hf180_e24 (MT=824)
- $\sigma(E)$ for n + W183 → He4 + Hf180_c (MT=849)
- $\sigma(E)$ for Lumped Covariance (MT=851)
- $\sigma(E)$ for Lumped Covariance (MT=852)
- $\sigma(E)$ for Lumped Covariance (MT=853)
- $\sigma(E)$ for Lumped Covariance (MT=854)
- $\sigma(E)$ for Lumped Covariance (MT=855)
- $\sigma(E)$ for Lumped Covariance (MT=856)
- Angular dist. for n + W183 → n + W183 (MT=2)
- Angular dist. for n + W183 → n + W183_e1 (MT=51)

Significant SVN commits since ENDF/B-VII.1

r634 : dwiarda, 2014-09-08
74-W- 183 ORNL Resonance Evaluation Including Covariance (ORNL AUG 2014)

n + W184

File: n-074_W_184.endf

MAT: 7437

ZA: 74184

Auth.:

Lab: IAEA

Date: Eval090806

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + W184 → n + W184 (MT=2)
- $\sigma(E)$ for Particle Production (MT=5)
- $\sigma(E)$ for n + W184 → n + n + W183 (MT=16)
- $\sigma(E)$ for n + W184 → n + n + n + W182 (MT=17)
- $\sigma(E)$ for n + W184 → n + H1 + Ta183 (MT=28)
- $\sigma(E)$ for n + W184 → n + n + n + n + W181 (MT=37)
- $\sigma(E)$ for n + W184 → n + n + H1 + Ta182 (MT=41)
- $\sigma(E)$ for n + W184 → n + W184_e1 (MT=51)
- $\sigma(E)$ for n + W184 → n + W184_e2 (MT=52)
- $\sigma(E)$ for n + W184 → n + W184_e3 (MT=53)
- $\sigma(E)$ for n + W184 → n + W184_e4 (MT=54)
- $\sigma(E)$ for n + W184 → n + W184_e5 (MT=55)
- $\sigma(E)$ for n + W184 → n + W184_e6 (MT=56)
- $\sigma(E)$ for n + W184 → n + W184_c (MT=91)
- $\sigma(E)$ for n + W184 → gamma + W185 (MT=102)
- $\sigma(E)$ for n + W184 → H1 + Ta184 (MT=600)
- $\sigma(E)$ for n + W184 → H1 + Ta184_c (MT=649)
- $\sigma(E)$ for n + W184 → He4 + Hf181 (MT=800)
- $\sigma(E)$ for n + W184 → He4 + Hf181_e1 (MT=801)
- $\sigma(E)$ for n + W184 → He4 + Hf181_e2 (MT=802)
- $\sigma(E)$ for n + W184 → He4 + Hf181_e3 (MT=803)

- $\sigma(E)$ for n + W184 → He4 + Hf181_e4 (MT=804)
- $\sigma(E)$ for n + W184 → He4 + Hf181_e5 (MT=805)
- $\sigma(E)$ for n + W184 → He4 + Hf181_e6 (MT=806)
- $\sigma(E)$ for n + W184 → He4 + Hf181_e7 (MT=807)
- $\sigma(E)$ for n + W184 → He4 + Hf181_c (MT=849)
- $\sigma(E)$ for Lumped Covariance (MT=851)
- $\sigma(E)$ for Lumped Covariance (MT=852)
- $\sigma(E)$ for Lumped Covariance (MT=853)
- $\sigma(E)$ for Lumped Covariance (MT=854)
- $\sigma(E)$ for Lumped Covariance (MT=855)
- $\sigma(E)$ for Lumped Covariance (MT=856)
- Angular dist. for n + W184 → n + W184 (MT=2)
- Angular dist. for n + W184 → n + W184_e1 (MT=51)

Significant SVN commits since ENDF/B-VII.1

r635 : dwiarda, 2014-09-08
74-W- 184 ORNL Resonance Evaluation Including Covariance (ORNL AUG 2014)

n + W186

File: n-074_W_186.endf

MAT: 7443

ZA: 74186

Auth.:

Lab: IAEA

Date: Eval090806

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + W186 → n + W186 (MT=2)
- $\sigma(E)$ for Particle Production (MT=5)
- $\sigma(E)$ for n + W186 → n + n + W185 (MT=16)
- $\sigma(E)$ for n + W186 → n + n + n + W184 (MT=17)
- $\sigma(E)$ for n + W186 → n + H1 + Ta185 (MT=28)
- $\sigma(E)$ for n + W186 → n + n + n + n + W183 (MT=37)
- $\sigma(E)$ for n + W186 → n + n + H1 + Ta184 (MT=41)
- $\sigma(E)$ for n + W186 → n + W186_e1 (MT=51)
- $\sigma(E)$ for n + W186 → n + W186_e2 (MT=52)
- $\sigma(E)$ for n + W186 → n + W186_e3 (MT=53)
- $\sigma(E)$ for n + W186 → n + W186_e4 (MT=54)
- $\sigma(E)$ for n + W186 → n + W186_e5 (MT=55)
- $\sigma(E)$ for n + W186 → n + W186_e6 (MT=56)
- $\sigma(E)$ for n + W186 → n + W186_e7 (MT=57)
- $\sigma(E)$ for n + W186 → n + W186_e8 (MT=58)
- $\sigma(E)$ for n + W186 → n + W186_e9 (MT=59)
- $\sigma(E)$ for n + W186 → n + W186_e10 (MT=60)
- $\sigma(E)$ for n + W186 → n + W186_e11 (MT=61)
- $\sigma(E)$ for n + W186 → n + W186_c (MT=91)
- $\sigma(E)$ for n + W186 → gamma + W187 (MT=102)
- $\sigma(E)$ for n + W186 → H1 + Ta186 (MT=600)

- $\sigma(E)$ for n + W186 → H1 + Ta186_c (MT=649)
- $\sigma(E)$ for n + W186 → He4 + Hf183 (MT=800)
- $\sigma(E)$ for n + W186 → He4 + Hf183_c (MT=849)
- $\sigma(E)$ for Lumped Covariance (MT=851)
- $\sigma(E)$ for Lumped Covariance (MT=852)
- $\sigma(E)$ for Lumped Covariance (MT=853)
- $\sigma(E)$ for Lumped Covariance (MT=854)
- $\sigma(E)$ for Lumped Covariance (MT=855)
- $\sigma(E)$ for Lumped Covariance (MT=856)
- Angular dist. for n + W186 → n + W186 (MT=2)
- Angular dist. for n + W186 → n + W186_e1 (MT=51)

Significant SVN commits since ENDF/B-VII.1

r636 : dwiarda, 2014-09-08
74-W- 186 ORNL Resonance Evaluation Including Covariance (ORNL AUG 2014)

n + Pb208

File: n-082_Pb_208.endf

MAT: 8237

ZA: 82208

Auth.: M.B.Chadwick, P.G.Young, C.Y.Fu

Lab: LANL,ORNL

Date: EVAL-AUG06

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pb208 → n + Pb208 (MT=2)
- $\sigma(E)$ for Non-elastic (MT=3)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pb208 → n + n + Pb207 (MT=16)
- $\sigma(E)$ for n + Pb208 → gamma + Pb209 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r663 : dbrown, 2015-09-08
Fix QM & QI for several levels in the 600-range

n + Ac225

File: n-089_Ac_225.endf

MAT: 8925

ZA: 89225

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Ac225 → n + Ac225 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ac225 → n + n + Ac224 (MT=16)
- $\sigma(E)$ for n + Ac225 → n + n + n + Ac223 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Ac225 → n + n + n + n + Ac222 (MT=37)
- $\sigma(E)$ for n + Ac225 → n + Ac225_e1 (MT=51)
- $\sigma(E)$ for n + Ac225 → n + Ac225_e2 (MT=52)
- $\sigma(E)$ for n + Ac225 → n + Ac225_e3 (MT=53)
- $\sigma(E)$ for n + Ac225 → n + Ac225_e4 (MT=54)
- $\sigma(E)$ for n + Ac225 → n + Ac225_e5 (MT=55)
- $\sigma(E)$ for n + Ac225 → n + Ac225_e6 (MT=56)
- $\sigma(E)$ for n + Ac225 → n + Ac225_e7 (MT=57)
- $\sigma(E)$ for n + Ac225 → n + Ac225_e8 (MT=58)
- $\sigma(E)$ for n + Ac225 → n + Ac225_e9 (MT=59)
- $\sigma(E)$ for n + Ac225 → n + Ac225_e10 (MT=60)
- $\sigma(E)$ for n + Ac225 → n + Ac225_e11 (MT=61)
- $\sigma(E)$ for n + Ac225 → n + Ac225_e12 (MT=62)
- $\sigma(E)$ for n + Ac225 → n + Ac225_e13 (MT=63)
- $\sigma(E)$ for n + Ac225 → n + Ac225_e14 (MT=64)
- $\sigma(E)$ for n + Ac225 → n + Ac225_c (MT=91)
- $\sigma(E)$ for n + Ac225 → gamma + Ac226 (MT=102)
- Angular dist. for n + Ac225 → n + Ac225 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Ac226

File: n-089_Ac_226.endf

MAT: 8928

ZA: 89226

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Ac226 → n + Ac226 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ac226 → n + n + Ac225 (MT=16)
- $\sigma(E)$ for n + Ac226 → n + n + n + Ac224 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Ac226 → n + n + n + n + Ac223 (MT=37)
- $\sigma(E)$ for n + Ac226 → n + Ac226_e1 (MT=51)
- $\sigma(E)$ for n + Ac226 → n + Ac226_e2 (MT=52)
- $\sigma(E)$ for n + Ac226 → n + Ac226_e3 (MT=53)
- $\sigma(E)$ for n + Ac226 → n + Ac226_e4 (MT=54)
- $\sigma(E)$ for n + Ac226 → n + Ac226_e5 (MT=55)
- $\sigma(E)$ for n + Ac226 → n + Ac226_e6 (MT=56)
- $\sigma(E)$ for n + Ac226 → n + Ac226_e7 (MT=57)
- $\sigma(E)$ for n + Ac226 → n + Ac226_c (MT=91)
- $\sigma(E)$ for n + Ac226 → gamma + Ac227 (MT=102)
- Angular dist. for n + Ac226 → n + Ac226 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Ac227

File: n-089_Ac_227.endf

MAT: 8931

ZA: 89227

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Ac227 → n + Ac227 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ac227 → n + n + Ac226 (MT=16)
- $\sigma(E)$ for n + Ac227 → n + n + n + Ac225 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Ac227 → n + n + n + n + Ac224 (MT=37)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e1 (MT=51)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e2 (MT=52)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e3 (MT=53)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e4 (MT=54)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e5 (MT=55)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e6 (MT=56)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e7 (MT=57)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e8 (MT=58)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e9 (MT=59)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e10 (MT=60)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e11 (MT=61)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e12 (MT=62)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e13 (MT=63)

- $\sigma(E)$ for n + Ac227 → n + Ac227_e14 (MT=64)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e15 (MT=65)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e16 (MT=66)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e17 (MT=67)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e18 (MT=68)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e19 (MT=69)
- $\sigma(E)$ for n + Ac227 → n + Ac227_e20 (MT=70)
- $\sigma(E)$ for n + Ac227 → n + Ac227_c (MT=91)
- $\sigma(E)$ for n + Ac227 → gamma + Ac228 (MT=102)
- Angular dist. for n + Ac227 → n + Ac227 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Th228

File: n-090_Th_228.endf

MAT: 9028

ZA: 90228

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Th228 → n + Th228 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Th228 → n + n + Th227 (MT=16)
- $\sigma(E)$ for n + Th228 → n + n + n + Th226 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Th228 → n + Th228_e1 (MT=51)
- $\sigma(E)$ for n + Th228 → n + Th228_e2 (MT=52)
- $\sigma(E)$ for n + Th228 → n + Th228_e3 (MT=53)
- $\sigma(E)$ for n + Th228 → n + Th228_e4 (MT=54)
- $\sigma(E)$ for n + Th228 → n + Th228_e5 (MT=55)
- $\sigma(E)$ for n + Th228 → n + Th228_e6 (MT=56)
- $\sigma(E)$ for n + Th228 → n + Th228_e7 (MT=57)
- $\sigma(E)$ for n + Th228 → n + Th228_e8 (MT=58)
- $\sigma(E)$ for n + Th228 → n + Th228_e9 (MT=59)
- $\sigma(E)$ for n + Th228 → n + Th228_e10 (MT=60)
- $\sigma(E)$ for n + Th228 → n + Th228_e11 (MT=61)
- $\sigma(E)$ for n + Th228 → n + Th228_e12 (MT=62)
- $\sigma(E)$ for n + Th228 → n + Th228_e13 (MT=63)
- $\sigma(E)$ for n + Th228 → n + Th228_e14 (MT=64)

- $\sigma(E)$ for n + Th228 → n + Th228_e15 (MT=65)
- $\sigma(E)$ for n + Th228 → n + Th228_e16 (MT=66)
- $\sigma(E)$ for n + Th228 → n + Th228_e17 (MT=67)
- $\sigma(E)$ for n + Th228 → n + Th228_e18 (MT=68)
- $\sigma(E)$ for n + Th228 → n + Th228_e19 (MT=69)
- $\sigma(E)$ for n + Th228 → n + Th228_e20 (MT=70)
- $\sigma(E)$ for n + Th228 → n + Th228_e21 (MT=71)
- $\sigma(E)$ for n + Th228 → n + Th228_e22 (MT=72)
- $\sigma(E)$ for n + Th228 → n + Th228_e23 (MT=73)
- $\sigma(E)$ for n + Th228 → n + Th228_e24 (MT=74)
- $\sigma(E)$ for n + Th228 → n + Th228_e25 (MT=75)
- $\sigma(E)$ for n + Th228 → n + Th228_e26 (MT=76)
- $\sigma(E)$ for n + Th228 → n + Th228_e27 (MT=77)
- $\sigma(E)$ for n + Th228 → n + Th228_e28 (MT=78)
- $\sigma(E)$ for n + Th228 → n + Th228_e29 (MT=79)
- $\sigma(E)$ for n + Th228 → n + Th228_c (MT=91)
- $\sigma(E)$ for n + Th228 → gamma + Th229 (MT=102)
- Angular dist. for n + Th228 → n + Th228 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Th230

File: n-090_Th_230.endf

MAT: 9034

ZA: 90230

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Th230 → n + Th230 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Th230 → n + n + Th229 (MT=16)
- $\sigma(E)$ for n + Th230 → n + n + n + Th228 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Th230 → n + n + n + n + Th227 (MT=37)
- $\sigma(E)$ for n + Th230 → n + Th230_e1 (MT=51)
- $\sigma(E)$ for n + Th230 → n + Th230_e2 (MT=52)
- $\sigma(E)$ for n + Th230 → n + Th230_e3 (MT=53)
- $\sigma(E)$ for n + Th230 → n + Th230_e4 (MT=54)
- $\sigma(E)$ for n + Th230 → n + Th230_e5 (MT=55)
- $\sigma(E)$ for n + Th230 → n + Th230_e6 (MT=56)
- $\sigma(E)$ for n + Th230 → n + Th230_e7 (MT=57)
- $\sigma(E)$ for n + Th230 → n + Th230_e8 (MT=58)
- $\sigma(E)$ for n + Th230 → n + Th230_e9 (MT=59)
- $\sigma(E)$ for n + Th230 → n + Th230_c (MT=91)
- $\sigma(E)$ for n + Th230 → gamma + Th231 (MT=102)
- Angular dist. for n + Th230 → n + Th230 (MT=2)
- Energy dist. for Fission (MT=18)

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

File: n-090_Th_231.endf

MAT: 9037

ZA: 90231

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Th231 → n + Th231 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Th231 → n + n + Th230 (MT=16)
- $\sigma(E)$ for n + Th231 → n + n + n + Th229 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Th231 → n + n + n + n + Th228 (MT=37)
- $\sigma(E)$ for n + Th231 → n + Th231_e1 (MT=51)
- $\sigma(E)$ for n + Th231 → n + Th231_e2 (MT=52)
- $\sigma(E)$ for n + Th231 → n + Th231_e3 (MT=53)
- $\sigma(E)$ for n + Th231 → n + Th231_e4 (MT=54)
- $\sigma(E)$ for n + Th231 → n + Th231_e5 (MT=55)
- $\sigma(E)$ for n + Th231 → n + Th231_e6 (MT=56)
- $\sigma(E)$ for n + Th231 → n + Th231_e7 (MT=57)
- $\sigma(E)$ for n + Th231 → n + Th231_e8 (MT=58)
- $\sigma(E)$ for n + Th231 → n + Th231_e9 (MT=59)
- $\sigma(E)$ for n + Th231 → n + Th231_e10 (MT=60)
- $\sigma(E)$ for n + Th231 → n + Th231_e11 (MT=61)
- $\sigma(E)$ for n + Th231 → n + Th231_e12 (MT=62)
- $\sigma(E)$ for n + Th231 → n + Th231_e13 (MT=63)

- $\sigma(E)$ for n + Th231 → n + Th231_e14 (MT=64)
- $\sigma(E)$ for n + Th231 → n + Th231_e15 (MT=65)
- $\sigma(E)$ for n + Th231 → n + Th231_e16 (MT=66)
- $\sigma(E)$ for n + Th231 → n + Th231_e17 (MT=67)
- $\sigma(E)$ for n + Th231 → n + Th231_e18 (MT=68)
- $\sigma(E)$ for n + Th231 → n + Th231_e19 (MT=69)
- $\sigma(E)$ for n + Th231 → n + Th231_e20 (MT=70)
- $\sigma(E)$ for n + Th231 → n + Th231_c (MT=91)
- $\sigma(E)$ for n + Th231 → gamma + Th232 (MT=102)
- Angular dist. for n + Th231 → n + Th231 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Th232

File: n-090_Th_232.endf

MAT: 9040

ZA: 90232

Auth.: CRP/Th-U Co-ordinator A. Trkov

Lab: IAEA

Date: Eval-Feb06

Ener.: 1e-05-60000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Th232 → n + Th232 (MT=2)
- $\sigma(E)$ for Particle Production (MT=5)
- $\sigma(E)$ for n + Th232 → n + n + Th231 (MT=16)
- $\sigma(E)$ for n + Th232 → n + n + n + Th230 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Th232 → n + He4 + Ra228 (MT=22)
- $\sigma(E)$ for n + Th232 → n + n + He4 + Ra227 (MT=24)
- $\sigma(E)$ for n + Th232 → n + H1 + Ac231 (MT=28)
- $\sigma(E)$ for n + Th232 → n + n + H1 + Ac230 (MT=41)
- $\sigma(E)$ for n + Th232 → n + Th232_e1 (MT=51)
- $\sigma(E)$ for n + Th232 → n + Th232_e2 (MT=52)
- $\sigma(E)$ for n + Th232 → n + Th232_e3 (MT=53)
- $\sigma(E)$ for n + Th232 → n + Th232_e4 (MT=54)
- $\sigma(E)$ for n + Th232 → n + Th232_e5 (MT=55)
- $\sigma(E)$ for n + Th232 → n + Th232_e6 (MT=56)
- $\sigma(E)$ for n + Th232 → n + Th232_e7 (MT=57)
- $\sigma(E)$ for n + Th232 → n + Th232_e8 (MT=58)
- $\sigma(E)$ for n + Th232 → n + Th232_e9 (MT=59)
- $\sigma(E)$ for n + Th232 → n + Th232_e10 (MT=60)
- $\sigma(E)$ for n + Th232 → n + Th232_e11 (MT=61)

- $\sigma(E)$ for n + Th232 → n + Th232_e12 (MT=62)
- $\sigma(E)$ for n + Th232 → n + Th232_e13 (MT=63)
- $\sigma(E)$ for n + Th232 → n + Th232_e14 (MT=64)
- $\sigma(E)$ for n + Th232 → n + Th232_e15 (MT=65)
- $\sigma(E)$ for n + Th232 → n + Th232_e16 (MT=66)
- $\sigma(E)$ for n + Th232 → n + Th232_e17 (MT=67)
- $\sigma(E)$ for n + Th232 → n + Th232_e18 (MT=68)
- $\sigma(E)$ for n + Th232 → n + Th232_e19 (MT=69)
- $\sigma(E)$ for n + Th232 → n + Th232_e20 (MT=70)
- $\sigma(E)$ for n + Th232 → n + Th232_e21 (MT=71)
- $\sigma(E)$ for n + Th232 → n + Th232_e22 (MT=72)
- $\sigma(E)$ for n + Th232 → n + Th232_e23 (MT=73)
- $\sigma(E)$ for n + Th232 → n + Th232_e24 (MT=74)
- $\sigma(E)$ for n + Th232 → n + Th232_e25 (MT=75)
- $\sigma(E)$ for n + Th232 → n + Th232_e26 (MT=76)
- $\sigma(E)$ for n + Th232 → n + Th232_e27 (MT=77)
- $\sigma(E)$ for n + Th232 → n + Th232_e28 (MT=78)
- $\sigma(E)$ for n + Th232 → n + Th232_e29 (MT=79)
- $\sigma(E)$ for n + Th232 → n + Th232_e30 (MT=80)
- $\sigma(E)$ for n + Th232 → n + Th232_e31 (MT=81)
- $\sigma(E)$ for n + Th232 → n + Th232_e32 (MT=82)
- $\sigma(E)$ for n + Th232 → n + Th232_e33 (MT=83)
- $\sigma(E)$ for n + Th232 → n + Th232_e34 (MT=84)
- $\sigma(E)$ for n + Th232 → n + Th232_e35 (MT=85)
- $\sigma(E)$ for n + Th232 → n + Th232_e36 (MT=86)
- $\sigma(E)$ for n + Th232 → n + Th232_e37 (MT=87)
- $\sigma(E)$ for n + Th232 → n + Th232_e38 (MT=88)
- $\sigma(E)$ for n + Th232 → n + Th232_e39 (MT=89)
- $\sigma(E)$ for n + Th232 → n + Th232_c (MT=91)
- $\sigma(E)$ for n + Th232 → gamma + Th233 (MT=102)
- $\sigma(E)$ for n + Th232 → H1 + Ac232 (MT=600)
- $\sigma(E)$ for n + Th232 → H1 + Ac232_c (MT=649)
- $\sigma(E)$ for n + Th232 → He4 + Ra229 (MT=800)
- $\sigma(E)$ for n + Th232 → He4 + Ra229_c (MT=849)
- $\sigma(E)$ for Lumped Covariance (MT=851)
- $\sigma(E)$ for Lumped Covariance (MT=852)
- $\sigma(E)$ for Lumped Covariance (MT=853)
- $\sigma(E)$ for Lumped Covariance (MT=854)
- $\sigma(E)$ for Lumped Covariance (MT=855)
- Angular dist. for n + Th232 → n + Th232 (MT=2)
- Angular dist. for n + Th232 → n + Th232_e1 (MT=51)

Significant SVN commits since ENDF/B-VII.1

r606 : atrkov, 2013-02-03
Th-232 - densified energy grid at low energy tail of the fission spectra

n + Th233

File: n-090_Th_233.endf

MAT: 9043

ZA: 90233

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Th233 → n + Th233 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Th233 → n + n + Th232 (MT=16)
- $\sigma(E)$ for n + Th233 → n + n + n + Th231 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Th233 → n + n + n + n + Th230 (MT=37)
- $\sigma(E)$ for n + Th233 → n + Th233_e1 (MT=51)
- $\sigma(E)$ for n + Th233 → n + Th233_e2 (MT=52)
- $\sigma(E)$ for n + Th233 → n + Th233_e3 (MT=53)
- $\sigma(E)$ for n + Th233 → n + Th233_e4 (MT=54)
- $\sigma(E)$ for n + Th233 → n + Th233_e5 (MT=55)
- $\sigma(E)$ for n + Th233 → n + Th233_e6 (MT=56)
- $\sigma(E)$ for n + Th233 → n + Th233_e7 (MT=57)
- $\sigma(E)$ for n + Th233 → n + Th233_e8 (MT=58)
- $\sigma(E)$ for n + Th233 → n + Th233_e9 (MT=59)
- $\sigma(E)$ for n + Th233 → n + Th233_e10 (MT=60)
- $\sigma(E)$ for n + Th233 → n + Th233_e11 (MT=61)
- $\sigma(E)$ for n + Th233 → n + Th233_e12 (MT=62)
- $\sigma(E)$ for n + Th233 → n + Th233_e13 (MT=63)
- $\sigma(E)$ for n + Th233 → n + Th233_e14 (MT=64)
- $\sigma(E)$ for n + Th233 → n + Th233_e15 (MT=65)
- $\sigma(E)$ for n + Th233 → n + Th233_e16 (MT=66)
- $\sigma(E)$ for n + Th233 → n + Th233_e17 (MT=67)
- $\sigma(E)$ for n + Th233 → n + Th233_e18 (MT=68)
- $\sigma(E)$ for n + Th233 → n + Th233_e19 (MT=69)
- $\sigma(E)$ for n + Th233 → n + Th233_e20 (MT=70)
- $\sigma(E)$ for n + Th233 → n + Th233_c (MT=91)
- $\sigma(E)$ for n + Th233 → gamma + Th234 (MT=102)
- Angular dist. for n + Th233 → n + Th233 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Th234

File: n-090_Th_234.endf

MAT: 9046

ZA: 90234

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Th234 → n + Th234 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Th234 → n + n + Th233 (MT=16)
- $\sigma(E)$ for n + Th234 → n + n + n + Th232 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Th234 → n + n + n + n + Th231 (MT=37)
- $\sigma(E)$ for n + Th234 → n + Th234_e1 (MT=51)
- $\sigma(E)$ for n + Th234 → n + Th234_e2 (MT=52)
- $\sigma(E)$ for n + Th234 → n + Th234_e3 (MT=53)
- $\sigma(E)$ for n + Th234 → n + Th234_e4 (MT=54)
- $\sigma(E)$ for n + Th234 → n + Th234_c (MT=91)
- $\sigma(E)$ for n + Th234 → gamma + Th235 (MT=102)
- Angular dist. for n + Th234 → n + Th234 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert MeV^{-1} → eV^{-1} in energy release from fission (MT458) resolving issue #696.

n + Pa229

File: n-091_Pa_229.endf

MAT: 9125

ZA: 91229

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pa229 → n + Pa229 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pa229 → n + n + Pa228 (MT=16)
- $\sigma(E)$ for n + Pa229 → n + n + n + Pa227 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Pa229 → n + Pa229_e1 (MT=51)
- $\sigma(E)$ for n + Pa229 → n + Pa229_e2 (MT=52)
- $\sigma(E)$ for n + Pa229 → n + Pa229_e3 (MT=53)
- $\sigma(E)$ for n + Pa229 → n + Pa229_e4 (MT=54)
- $\sigma(E)$ for n + Pa229 → n + Pa229_e5 (MT=55)
- $\sigma(E)$ for n + Pa229 → n + Pa229_e6 (MT=56)
- $\sigma(E)$ for n + Pa229 → n + Pa229_e7 (MT=57)
- $\sigma(E)$ for n + Pa229 → n + Pa229_e8 (MT=58)
- $\sigma(E)$ for n + Pa229 → n + Pa229_e9 (MT=59)
- $\sigma(E)$ for n + Pa229 → n + Pa229_e10 (MT=60)
- $\sigma(E)$ for n + Pa229 → n + Pa229_c (MT=91)
- $\sigma(E)$ for n + Pa229 → gamma + Pa230 (MT=102)
- Angular dist. for n + Pa229 → n + Pa229 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $MeV^{-1} \rightarrow eV^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Pa230

File: n-091_Pa_230.endf

MAT: 9128

ZA: 91230

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pa230 → n + Pa230 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pa230 → n + n + Pa229 (MT=16)
- $\sigma(E)$ for n + Pa230 → n + n + n + Pa228 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Pa230 → n + n + n + n + Pa227 (MT=37)
- $\sigma(E)$ for n + Pa230 → n + Pa230_e1 (MT=51)
- $\sigma(E)$ for n + Pa230 → n + Pa230_c (MT=91)
- $\sigma(E)$ for n + Pa230 → gamma + Pa231 (MT=102)
- Angular dist. for n + Pa230 → n + Pa230 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $MeV^{-1} \rightarrow eV^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Pa232

File: n-091_Pa_232.endf

MAT: 9134

ZA: 91232

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pa232 → n + Pa232 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pa232 → n + n + Pa231 (MT=16)
- $\sigma(E)$ for n + Pa232 → n + n + n + Pa230 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Pa232 → n + n + n + n + Pa229 (MT=37)
- $\sigma(E)$ for n + Pa232 → n + Pa232_e1 (MT=51)
- $\sigma(E)$ for n + Pa232 → n + Pa232_c (MT=91)
- $\sigma(E)$ for n + Pa232 → gamma + Pa233 (MT=102)
- Angular dist. for n + Pa232 → n + Pa232 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + U230

File: n-092_U_230.endf

MAT: 9213

ZA: 92230

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + U230 → n + U230 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + U230 → n + n + U229 (MT=16)
- $\sigma(E)$ for n + U230 → n + n + n + U228 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + U230 → n + U230_e1 (MT=51)
- $\sigma(E)$ for n + U230 → n + U230_e2 (MT=52)
- $\sigma(E)$ for n + U230 → n + U230_e3 (MT=53)
- $\sigma(E)$ for n + U230 → n + U230_e4 (MT=54)
- $\sigma(E)$ for n + U230 → n + U230_e5 (MT=55)
- $\sigma(E)$ for n + U230 → n + U230_e6 (MT=56)
- $\sigma(E)$ for n + U230 → n + U230_e7 (MT=57)
- $\sigma(E)$ for n + U230 → n + U230_e8 (MT=58)
- $\sigma(E)$ for n + U230 → n + U230_c (MT=91)
- $\sigma(E)$ for n + U230 → gamma + U231 (MT=102)
- Angular dist. for n + U230 → n + U230 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + U231

File: n-092_U_231.endf

MAT: 9216

ZA: 92231

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + U231 → n + U231 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + U231 → n + n + U230 (MT=16)
- $\sigma(E)$ for n + U231 → n + n + n + U229 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + U231 → n + U231_e1 (MT=51)
- $\sigma(E)$ for n + U231 → n + U231_e2 (MT=52)
- $\sigma(E)$ for n + U231 → n + U231_e3 (MT=53)
- $\sigma(E)$ for n + U231 → n + U231_e4 (MT=54)
- $\sigma(E)$ for n + U231 → n + U231_e5 (MT=55)
- $\sigma(E)$ for n + U231 → n + U231_e6 (MT=56)
- $\sigma(E)$ for n + U231 → n + U231_c (MT=91)
- $\sigma(E)$ for n + U231 → gamma + U232 (MT=102)
- Angular dist. for n + U231 → n + U231 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Np234

File: n-093_Np_234.endf

MAT: 9337

ZA: 93234

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Np234 → n + Np234 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Np234 → n + n + Np233 (MT=16)
- $\sigma(E)$ for n + Np234 → n + n + n + Np232 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Np234 → n + Np234_e1 (MT=51)
- $\sigma(E)$ for n + Np234 → n + Np234_e2 (MT=52)
- $\sigma(E)$ for n + Np234 → n + Np234_e3 (MT=53)
- $\sigma(E)$ for n + Np234 → n + Np234_e4 (MT=54)
- $\sigma(E)$ for n + Np234 → n + Np234_c (MT=91)
- $\sigma(E)$ for n + Np234 → gamma + Np235 (MT=102)
- Angular dist. for n + Np234 → n + Np234 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Np235

File: n-093_Np_235.endf

MAT: 9340

ZA: 93235

Auth.: O.Iwamoto,T.Nakagawa,+

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Np235 → n + Np235 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Np235 → n + n + Np234 (MT=16)
- $\sigma(E)$ for n + Np235 → n + n + n + Np233 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Np235 → n + Np235_e1 (MT=51)
- $\sigma(E)$ for n + Np235 → n + Np235_e2 (MT=52)
- $\sigma(E)$ for n + Np235 → n + Np235_e3 (MT=53)
- $\sigma(E)$ for n + Np235 → n + Np235_e4 (MT=54)
- $\sigma(E)$ for n + Np235 → n + Np235_e5 (MT=55)
- $\sigma(E)$ for n + Np235 → n + Np235_e6 (MT=56)
- $\sigma(E)$ for n + Np235 → n + Np235_e7 (MT=57)
- $\sigma(E)$ for n + Np235 → n + Np235_c (MT=91)
- $\sigma(E)$ for n + Np235 → gamma + Np236 (MT=102)
- Angular dist. for n + Np235 → n + Np235 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Np236

File: n-093_Np_236.endf

MAT: 9343

ZA: 93236

Auth.: O.Iwamoto,T.Nakagawa,K.Furutaka,+

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Np236 → n + Np236 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Np236 → n + n + Np235 (MT=16)
- $\sigma(E)$ for n + Np236 → n + n + n + Np234 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Np236 → n + n + n + n + Np233 (MT=37)
- $\sigma(E)$ for n + Np236 → n + Np236_e1 (MT=51)
- $\sigma(E)$ for n + Np236 → n + Np236_e2 (MT=52)
- $\sigma(E)$ for n + Np236 → n + Np236_e3 (MT=53)
- $\sigma(E)$ for n + Np236 → n + Np236_e4 (MT=54)
- $\sigma(E)$ for n + Np236 → n + Np236_e5 (MT=55)
- $\sigma(E)$ for n + Np236 → n + Np236_e6 (MT=56)
- $\sigma(E)$ for n + Np236 → n + Np236_c (MT=91)
- $\sigma(E)$ for n + Np236 → gamma + Np237 (MT=102)
- Angular dist. for n + Np236 → n + Np236 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r951 : tkawano, 2016-10-20
R.Q.Wright's nu-p included, trial file for checking.

n + Np238

File: n-093_Np_238.endf

MAT: 9349

ZA: 93238

Auth.: O.Iwamoto,T.Nakagawa,K.Furutaka,+

Lab: JAEA+

Date: EVAL-JAN10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Np238 → n + Np238 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Np238 → n + n + Np237 (MT=16)
- $\sigma(E)$ for n + Np238 → n + n + n + Np236 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Np238 → n + n + n + n + Np235 (MT=37)
- $\sigma(E)$ for n + Np238 → n + Np238_e1 (MT=51)
- $\sigma(E)$ for n + Np238 → n + Np238_e2 (MT=52)
- $\sigma(E)$ for n + Np238 → n + Np238_e3 (MT=53)
- $\sigma(E)$ for n + Np238 → n + Np238_e4 (MT=54)
- $\sigma(E)$ for n + Np238 → n + Np238_e5 (MT=55)
- $\sigma(E)$ for n + Np238 → n + Np238_e6 (MT=56)
- $\sigma(E)$ for n + Np238 → n + Np238_e7 (MT=57)
- $\sigma(E)$ for n + Np238 → n + Np238_e8 (MT=58)
- $\sigma(E)$ for n + Np238 → n + Np238_e9 (MT=59)
- $\sigma(E)$ for n + Np238 → n + Np238_e10 (MT=60)
- $\sigma(E)$ for n + Np238 → n + Np238_e11 (MT=61)
- $\sigma(E)$ for n + Np238 → n + Np238_e12 (MT=62)

- $\sigma(E)$ for n + Np238 → n + Np238_e13 (MT=63)
- $\sigma(E)$ for n + Np238 → n + Np238_e14 (MT=64)
- $\sigma(E)$ for n + Np238 → n + Np238_e15 (MT=65)
- $\sigma(E)$ for n + Np238 → n + Np238_e16 (MT=66)
- $\sigma(E)$ for n + Np238 → n + Np238_e17 (MT=67)
- $\sigma(E)$ for n + Np238 → n + Np238_e18 (MT=68)
- $\sigma(E)$ for n + Np238 → n + Np238_e19 (MT=69)
- $\sigma(E)$ for n + Np238 → n + Np238_e20 (MT=70)
- $\sigma(E)$ for n + Np238 → n + Np238_e21 (MT=71)
- $\sigma(E)$ for n + Np238 → n + Np238_e22 (MT=72)
- $\sigma(E)$ for n + Np238 → n + Np238_e23 (MT=73)
- $\sigma(E)$ for n + Np238 → n + Np238_e24 (MT=74)
- $\sigma(E)$ for n + Np238 → n + Np238_e25 (MT=75)
- $\sigma(E)$ for n + Np238 → n + Np238_e26 (MT=76)
- $\sigma(E)$ for n + Np238 → n + Np238_e27 (MT=77)
- $\sigma(E)$ for n + Np238 → n + Np238_e28 (MT=78)
- $\sigma(E)$ for n + Np238 → n + Np238_e29 (MT=79)
- $\sigma(E)$ for n + Np238 → n + Np238_e30 (MT=80)
- $\sigma(E)$ for n + Np238 → n + Np238_e31 (MT=81)
- $\sigma(E)$ for n + Np238 → n + Np238_e32 (MT=82)
- $\sigma(E)$ for n + Np238 → n + Np238_e33 (MT=83)
- $\sigma(E)$ for n + Np238 → n + Np238_e34 (MT=84)
- $\sigma(E)$ for n + Np238 → n + Np238_e35 (MT=85)
- $\sigma(E)$ for n + Np238 → n + Np238_c (MT=91)
- $\sigma(E)$ for n + Np238 → gamma + Np239 (MT=102)
- Angular dist. for n + Np238 → n + Np238 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Np239

File: n-093_Np_239.endf

MAT: 9352

ZA: 93239

Auth.: O.Iwamoto,T.Nakagawa,+

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Np239 → n + Np239 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Np239 → n + n + Np238 (MT=16)
- $\sigma(E)$ for n + Np239 → n + n + n + Np237 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Np239 → n + n + n + n + Np236 (MT=37)
- $\sigma(E)$ for n + Np239 → n + Np239_e1 (MT=51)
- $\sigma(E)$ for n + Np239 → n + Np239_e2 (MT=52)
- $\sigma(E)$ for n + Np239 → n + Np239_e3 (MT=53)
- $\sigma(E)$ for n + Np239 → n + Np239_e4 (MT=54)
- $\sigma(E)$ for n + Np239 → n + Np239_e5 (MT=55)
- $\sigma(E)$ for n + Np239 → n + Np239_e6 (MT=56)
- $\sigma(E)$ for n + Np239 → n + Np239_e7 (MT=57)
- $\sigma(E)$ for n + Np239 → n + Np239_e8 (MT=58)
- $\sigma(E)$ for n + Np239 → n + Np239_e9 (MT=59)
- $\sigma(E)$ for n + Np239 → n + Np239_e10 (MT=60)
- $\sigma(E)$ for n + Np239 → n + Np239_e11 (MT=61)
- $\sigma(E)$ for n + Np239 → n + Np239_e12 (MT=62)
- $\sigma(E)$ for n + Np239 → n + Np239_e13 (MT=63)

- $\sigma(E)$ for n + Np239 → n + Np239_e14 (MT=64)
- $\sigma(E)$ for n + Np239 → n + Np239_e15 (MT=65)
- $\sigma(E)$ for n + Np239 → n + Np239_e16 (MT=66)
- $\sigma(E)$ for n + Np239 → n + Np239_e17 (MT=67)
- $\sigma(E)$ for n + Np239 → n + Np239_e18 (MT=68)
- $\sigma(E)$ for n + Np239 → n + Np239_e19 (MT=69)
- $\sigma(E)$ for n + Np239 → n + Np239_e20 (MT=70)
- $\sigma(E)$ for n + Np239 → n + Np239_c (MT=91)
- $\sigma(E)$ for n + Np239 → gamma + Np240 (MT=102)
- Angular dist. for n + Np239 → n + Np239 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Pu236

File: n-094_Pu_236.endf

MAT: 9428

ZA: 94236

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pu236 → n + Pu236 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pu236 → n + n + Pu235 (MT=16)
- $\sigma(E)$ for n + Pu236 → n + n + n + Pu234 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Pu236 → n + Pu236_e1 (MT=51)
- $\sigma(E)$ for n + Pu236 → n + Pu236_e2 (MT=52)
- $\sigma(E)$ for n + Pu236 → n + Pu236_e3 (MT=53)
- $\sigma(E)$ for n + Pu236 → n + Pu236_e4 (MT=54)
- $\sigma(E)$ for n + Pu236 → n + Pu236_e5 (MT=55)
- $\sigma(E)$ for n + Pu236 → n + Pu236_c (MT=91)
- $\sigma(E)$ for n + Pu236 → gamma + Pu237 (MT=102)
- Angular dist. for n + Pu236 → n + Pu236 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Pu237

File: n-094_Pu_237.endf

MAT: 9431

ZA: 94237

Auth.: O.Iwamoto,T.Nakagawa+

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pu237 → n + Pu237 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pu237 → n + n + Pu236 (MT=16)
- $\sigma(E)$ for n + Pu237 → n + n + n + Pu235 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e1 (MT=51)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e2 (MT=52)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e3 (MT=53)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e4 (MT=54)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e5 (MT=55)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e6 (MT=56)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e7 (MT=57)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e8 (MT=58)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e9 (MT=59)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e10 (MT=60)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e11 (MT=61)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e12 (MT=62)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e13 (MT=63)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e14 (MT=64)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e15 (MT=65)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e16 (MT=66)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e17 (MT=67)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e18 (MT=68)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e19 (MT=69)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e20 (MT=70)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e21 (MT=71)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e22 (MT=72)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e23 (MT=73)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e24 (MT=74)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e25 (MT=75)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e26 (MT=76)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e27 (MT=77)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e28 (MT=78)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e29 (MT=79)
- $\sigma(E)$ for n + Pu237 → n + Pu237_e30 (MT=80)
- $\sigma(E)$ for n + Pu237 → n + Pu237_c (MT=91)
- $\sigma(E)$ for n + Pu237 → gamma + Pu238 (MT=102)
- Angular dist. for n + Pu237 → n + Pu237 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Pu238

File: n-094_Pu_238.endf

MAT: 9434

ZA: 94238

Auth.: YOUNG,TALOU,KAWANO,KAHLER,CHADWIC

Lab: LANL

Date: EVAL-SEP10

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pu238 → n + Pu238 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pu238 → n + n + Pu237 (MT=16)
- $\sigma(E)$ for n + Pu238 → n + n + n + Pu236 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Pu238 → gamma + Pu239 (MT=102)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Pu244

File: n-094_Pu_244.endf

MAT: 9452

ZA: 94244

Auth.: O.Iwamoto, T.Nakagawa, +

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pu244 → n + Pu244 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pu244 → n + n + Pu243 (MT=16)
- $\sigma(E)$ for n + Pu244 → n + n + n + Pu242 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Pu244 → n + n + n + n + Pu241 (MT=37)
- $\sigma(E)$ for n + Pu244 → n + Pu244_e1 (MT=51)
- $\sigma(E)$ for n + Pu244 → n + Pu244_e2 (MT=52)
- $\sigma(E)$ for n + Pu244 → n + Pu244_e3 (MT=53)
- $\sigma(E)$ for n + Pu244 → n + Pu244_e4 (MT=54)
- $\sigma(E)$ for n + Pu244 → n + Pu244_e5 (MT=55)
- $\sigma(E)$ for n + Pu244 → n + Pu244_e6 (MT=56)
- $\sigma(E)$ for n + Pu244 → n + Pu244_e7 (MT=57)
- $\sigma(E)$ for n + Pu244 → n + Pu244_c (MT=91)
- $\sigma(E)$ for n + Pu244 → gamma + Pu245 (MT=102)
- Angular dist. for n + Pu244 → n + Pu244 (MT=2)
- Energy dist. for Fission (MT=18)

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Pu246

File: n-094_Pu_246.endf

MAT: 9458

ZA: 94246

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pu246 → n + Pu246 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pu246 → n + n + Pu245 (MT=16)
- $\sigma(E)$ for n + Pu246 → n + n + n + Pu244 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Pu246 → n + n + n + n + Pu243 (MT=37)
- $\sigma(E)$ for n + Pu246 → n + Pu246_e1 (MT=51)
- $\sigma(E)$ for n + Pu246 → n + Pu246_e2 (MT=52)
- $\sigma(E)$ for n + Pu246 → n + Pu246_e3 (MT=53)
- $\sigma(E)$ for n + Pu246 → n + Pu246_e4 (MT=54)
- $\sigma(E)$ for n + Pu246 → n + Pu246_e5 (MT=55)
- $\sigma(E)$ for n + Pu246 → n + Pu246_e6 (MT=56)
- $\sigma(E)$ for n + Pu246 → n + Pu246_e7 (MT=57)
- $\sigma(E)$ for n + Pu246 → n + Pu246_e8 (MT=58)
- $\sigma(E)$ for n + Pu246 → n + Pu246_e9 (MT=59)
- $\sigma(E)$ for n + Pu246 → n + Pu246_c (MT=91)
- $\sigma(E)$ for n + Pu246 → gamma + Pu247 (MT=102)
- Angular dist. for n + Pu246 → n + Pu246 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $MeV^{-1} \rightarrow eV^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Am240

File: n-095_Am_240.endf

MAT: 9540

ZA: 95240

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Am240 → n + Am240 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Am240 → n + n + Am239 (MT=16)
- $\sigma(E)$ for n + Am240 → n + n + n + Am238 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Am240 → n + Am240_e1 (MT=51)
- $\sigma(E)$ for n + Am240 → n + Am240_e2 (MT=52)
- $\sigma(E)$ for n + Am240 → n + Am240_e3 (MT=53)
- $\sigma(E)$ for n + Am240 → n + Am240_e4 (MT=54)
- $\sigma(E)$ for n + Am240 → n + Am240_e5 (MT=55)
- $\sigma(E)$ for n + Am240 → n + Am240_e6 (MT=56)
- $\sigma(E)$ for n + Am240 → n + Am240_e7 (MT=57)
- $\sigma(E)$ for n + Am240 → n + Am240_e8 (MT=58)
- $\sigma(E)$ for n + Am240 → n + Am240_e9 (MT=59)
- $\sigma(E)$ for n + Am240 → n + Am240_e10 (MT=60)
- $\sigma(E)$ for n + Am240 → n + Am240_e11 (MT=61)
- $\sigma(E)$ for n + Am240 → n + Am240_e12 (MT=62)
- $\sigma(E)$ for n + Am240 → n + Am240_e13 (MT=63)
- $\sigma(E)$ for n + Am240 → n + Am240_e14 (MT=64)
- $\sigma(E)$ for n + Am240 → n + Am240_e15 (MT=65)

- $\sigma(E)$ for n + Am240 → n + Am240_c (MT=91)
- $\sigma(E)$ for n + Am240 → gamma + Am241 (MT=102)
- Angular dist. for n + Am240 → n + Am240 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Am242_m1

File: n-095_Am_242m1.endf

MAT: 9547

ZA: 95242

Auth.: Talou,Young,Kawano

Lab: LANL

Date: EVAL-SEP05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for n + Am242 → n + Am242 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Am242 → n + n + Am241 (MT=16)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Am242 → gamma + Am243 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r645 : cmattoon, 2015-03-23
Fix level index (LIS) for the target. The metastable level in Am244 is the 2nd excited level, not the first

n + Am243

File: n-095_Am_243.endf

MAT: 9549

ZA: 95243

Auth.: S.F. Mughabghab,P.G.Young, Talou

Lab: LANL,BNL

Date: EVAL-JUL11

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for n + Am243 → n + Am243 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Am243 → n + n + Am242 (MT=16)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Am243 → gamma + Am244 (MT=102)

Significant SVN commits since ENDF/B-VII.1

r926 : gnobre, 2016-10-17
Fixes related to tracker #1025.

n + Cm240

File: n-096_Cm_240.endf

MAT: 9625

ZA: 96240

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cm240 → n + Cm240 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cm240 → n + n + Cm239 (MT=16)
- $\sigma(E)$ for n + Cm240 → n + n + n + Cm238 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cm240 → n + Cm240_e1 (MT=51)
- $\sigma(E)$ for n + Cm240 → n + Cm240_e2 (MT=52)
- $\sigma(E)$ for n + Cm240 → n + Cm240_e3 (MT=53)
- $\sigma(E)$ for n + Cm240 → n + Cm240_e4 (MT=54)
- $\sigma(E)$ for n + Cm240 → n + Cm240_c (MT=91)
- $\sigma(E)$ for n + Cm240 → gamma + Cm241 (MT=102)
- Angular dist. for n + Cm240 → n + Cm240 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Cm241

File: n-096_Cm_241.endf

MAT: 9628

ZA: 96241

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cm241 → n + Cm241 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cm241 → n + n + Cm240 (MT=16)
- $\sigma(E)$ for n + Cm241 → n + n + n + Cm239 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cm241 → n + Cm241_e1 (MT=51)
- $\sigma(E)$ for n + Cm241 → n + Cm241_e2 (MT=52)
- $\sigma(E)$ for n + Cm241 → n + Cm241_e3 (MT=53)
- $\sigma(E)$ for n + Cm241 → n + Cm241_e4 (MT=54)
- $\sigma(E)$ for n + Cm241 → n + Cm241_c (MT=91)
- $\sigma(E)$ for n + Cm241 → gamma + Cm242 (MT=102)
- Angular dist. for n + Cm241 → n + Cm241 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cm242

File: n-096_Cm_242.endf

MAT: 9631

ZA: 96242

Auth.: O.Iwamoto,T.Nakagawa,T.Ohsawa+

Lab: JAEA+

Date: EVAL-JAN10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cm242 → n + Cm242 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cm242 → n + n + Cm241 (MT=16)
- $\sigma(E)$ for n + Cm242 → n + n + n + Cm240 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cm242 → n + Cm242_e1 (MT=51)
- $\sigma(E)$ for n + Cm242 → n + Cm242_e2 (MT=52)
- $\sigma(E)$ for n + Cm242 → n + Cm242_e3 (MT=53)
- $\sigma(E)$ for n + Cm242 → n + Cm242_c (MT=91)
- $\sigma(E)$ for n + Cm242 → gamma + Cm243 (MT=102)
- Angular dist. for n + Cm242 → n + Cm242 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cm244

File: n-096_Cm_244.endf

MAT: 9637

ZA: 96244

Auth.: O.Iwamoto,T.Nakagawa,T.Ohsawa+

Lab: JAEA+

Date: EVAL-JAN10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cm244 → n + Cm244 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cm244 → n + n + Cm243 (MT=16)
- $\sigma(E)$ for n + Cm244 → n + n + n + Cm242 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cm244 → n + Cm244_e1 (MT=51)
- $\sigma(E)$ for n + Cm244 → n + Cm244_e2 (MT=52)
- $\sigma(E)$ for n + Cm244 → n + Cm244_e3 (MT=53)
- $\sigma(E)$ for n + Cm244 → n + Cm244_e4 (MT=54)
- $\sigma(E)$ for n + Cm244 → n + Cm244_e5 (MT=55)
- $\sigma(E)$ for n + Cm244 → n + Cm244_e6 (MT=56)
- $\sigma(E)$ for n + Cm244 → n + Cm244_e7 (MT=57)
- $\sigma(E)$ for n + Cm244 → n + Cm244_e8 (MT=58)
- $\sigma(E)$ for n + Cm244 → n + Cm244_e9 (MT=59)
- $\sigma(E)$ for n + Cm244 → n + Cm244_e10 (MT=60)
- $\sigma(E)$ for n + Cm244 → n + Cm244_e11 (MT=61)
- $\sigma(E)$ for n + Cm244 → n + Cm244_c (MT=91)
- $\sigma(E)$ for n + Cm244 → gamma + Cm245 (MT=102)
- Angular dist. for n + Cm244 → n + Cm244 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cm246

File: n-096_Cm_246.endf

MAT: 9643

ZA: 96246

Auth.: O.Iwamoto,T.Nakagawa,T.Ohsawa,+

Lab: JAEA+

Date: EVAL-JAN10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cm246 → n + Cm246 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cm246 → n + n + Cm245 (MT=16)
- $\sigma(E)$ for n + Cm246 → n + n + n + Cm244 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e1 (MT=51)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e2 (MT=52)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e3 (MT=53)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e4 (MT=54)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e5 (MT=55)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e6 (MT=56)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e7 (MT=57)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e8 (MT=58)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e9 (MT=59)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e10 (MT=60)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e11 (MT=61)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e12 (MT=62)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e13 (MT=63)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e14 (MT=64)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e15 (MT=65)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e16 (MT=66)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e17 (MT=67)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e18 (MT=68)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e19 (MT=69)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e20 (MT=70)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e21 (MT=71)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e22 (MT=72)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e23 (MT=73)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e24 (MT=74)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e25 (MT=75)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e26 (MT=76)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e27 (MT=77)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e28 (MT=78)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e29 (MT=79)
- $\sigma(E)$ for n + Cm246 → n + Cm246_e30 (MT=80)
- $\sigma(E)$ for n + Cm246 → n + Cm246_c (MT=91)
- $\sigma(E)$ for n + Cm246 → gamma + Cm247 (MT=102)
- Angular dist. for n + Cm246 → n + Cm246 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cm247

File: n-096_Cm_247.endf

MAT: 9646

ZA: 96247

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cm247 → n + Cm247 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cm247 → n + n + Cm246 (MT=16)
- $\sigma(E)$ for n + Cm247 → n + n + n + Cm245 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cm247 → n + n + n + n + Cm244 (MT=37)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e1 (MT=51)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e2 (MT=52)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e3 (MT=53)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e4 (MT=54)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e5 (MT=55)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e6 (MT=56)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e7 (MT=57)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e8 (MT=58)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e9 (MT=59)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e10 (MT=60)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e11 (MT=61)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e12 (MT=62)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e13 (MT=63)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e14 (MT=64)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e15 (MT=65)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e16 (MT=66)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e17 (MT=67)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e18 (MT=68)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e19 (MT=69)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e20 (MT=70)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e21 (MT=71)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e22 (MT=72)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e23 (MT=73)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e24 (MT=74)
- $\sigma(E)$ for n + Cm247 → n + Cm247_e25 (MT=75)
- $\sigma(E)$ for n + Cm247 → n + Cm247_c (MT=91)
- $\sigma(E)$ for n + Cm247 → gamma + Cm248 (MT=102)
- Angular dist. for n + Cm247 → n + Cm247 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cm248

File: n-096_Cm_248.endf

MAT: 9649

ZA: 96248

Auth.: O.Iwamoto,T.Nakagawa,T.Ohsawa+

Lab: JAEA+

Date: EVAL-JAN10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cm248 → n + Cm248 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cm248 → n + n + Cm247 (MT=16)
- $\sigma(E)$ for n + Cm248 → n + n + n + Cm246 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cm248 → n + n + n + n + Cm245 (MT=37)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e1 (MT=51)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e2 (MT=52)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e3 (MT=53)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e4 (MT=54)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e5 (MT=55)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e6 (MT=56)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e7 (MT=57)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e8 (MT=58)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e9 (MT=59)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e10 (MT=60)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e11 (MT=61)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e12 (MT=62)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e13 (MT=63)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e14 (MT=64)
- $\sigma(E)$ for n + Cm248 → n + Cm248_e15 (MT=65)
- $\sigma(E)$ for n + Cm248 → n + Cm248_c (MT=91)
- $\sigma(E)$ for n + Cm248 → gamma + Cm249 (MT=102)
- Angular dist. for n + Cm248 → n + Cm248 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cm249

File: n-096_Cm_249.endf

MAT: 9652

ZA: 96249

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cm249 → n + Cm249 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cm249 → n + n + Cm248 (MT=16)
- $\sigma(E)$ for n + Cm249 → n + n + n + Cm247 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cm249 → n + n + n + n + Cm246 (MT=37)
- $\sigma(E)$ for n + Cm249 → n + Cm249_e1 (MT=51)
- $\sigma(E)$ for n + Cm249 → n + Cm249_e2 (MT=52)
- $\sigma(E)$ for n + Cm249 → n + Cm249_e3 (MT=53)
- $\sigma(E)$ for n + Cm249 → n + Cm249_e4 (MT=54)
- $\sigma(E)$ for n + Cm249 → n + Cm249_e5 (MT=55)
- $\sigma(E)$ for n + Cm249 → n + Cm249_e6 (MT=56)
- $\sigma(E)$ for n + Cm249 → n + Cm249_e7 (MT=57)
- $\sigma(E)$ for n + Cm249 → n + Cm249_e8 (MT=58)
- $\sigma(E)$ for n + Cm249 → n + Cm249_e9 (MT=59)
- $\sigma(E)$ for n + Cm249 → n + Cm249_e10 (MT=60)
- $\sigma(E)$ for n + Cm249 → n + Cm249_e11 (MT=61)
- $\sigma(E)$ for n + Cm249 → n + Cm249_e12 (MT=62)
- $\sigma(E)$ for n + Cm249 → n + Cm249_c (MT=91)
- $\sigma(E)$ for n + Cm249 → gamma + Cm250 (MT=102)
- Angular dist. for n + Cm249 → n + Cm249 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cm250

File: n-096_Cm_250.endf

MAT: 9655

ZA: 96250

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cm250 → n + Cm250 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cm250 → n + n + Cm249 (MT=16)
- $\sigma(E)$ for n + Cm250 → n + n + n + Cm248 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cm250 → n + n + n + n + Cm247 (MT=37)
- $\sigma(E)$ for n + Cm250 → n + Cm250_e1 (MT=51)
- $\sigma(E)$ for n + Cm250 → n + Cm250_e2 (MT=52)
- $\sigma(E)$ for n + Cm250 → n + Cm250_e3 (MT=53)
- $\sigma(E)$ for n + Cm250 → n + Cm250_e4 (MT=54)
- $\sigma(E)$ for n + Cm250 → n + Cm250_e5 (MT=55)
- $\sigma(E)$ for n + Cm250 → n + Cm250_c (MT=91)
- $\sigma(E)$ for n + Cm250 → gamma + Cm251 (MT=102)
- Angular dist. for n + Cm250 → n + Cm250 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Bk245

File: n-097_Bk_245.endf

MAT: 9740

ZA: 97245

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Bk245 → n + Bk245 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Bk245 → n + n + Bk244 (MT=16)
- $\sigma(E)$ for n + Bk245 → n + n + n + Bk243 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Bk245 → n + Bk245_e1 (MT=51)
- $\sigma(E)$ for n + Bk245 → n + Bk245_e2 (MT=52)
- $\sigma(E)$ for n + Bk245 → n + Bk245_e3 (MT=53)
- $\sigma(E)$ for n + Bk245 → n + Bk245_e4 (MT=54)
- $\sigma(E)$ for n + Bk245 → n + Bk245_e5 (MT=55)
- $\sigma(E)$ for n + Bk245 → n + Bk245_c (MT=91)
- $\sigma(E)$ for n + Bk245 → gamma + Bk246 (MT=102)
- Angular dist. for n + Bk245 → n + Bk245 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Bk246

File: n-097_Bk_246.endf

MAT: 9743

ZA: 97246

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Bk246 → n + Bk246 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Bk246 → n + n + Bk245 (MT=16)
- $\sigma(E)$ for n + Bk246 → n + n + n + Bk244 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Bk246 → n + n + n + n + Bk243 (MT=37)
- $\sigma(E)$ for n + Bk246 → n + Bk246_e1 (MT=51)
- $\sigma(E)$ for n + Bk246 → n + Bk246_e2 (MT=52)
- $\sigma(E)$ for n + Bk246 → n + Bk246_c (MT=91)
- $\sigma(E)$ for n + Bk246 → gamma + Bk247 (MT=102)
- Angular dist. for n + Bk246 → n + Bk246 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Bk247

File: n-097_Bk_247.endf

MAT: 9746

ZA: 97247

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Bk247 → n + Bk247 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Bk247 → n + n + Bk246 (MT=16)
- $\sigma(E)$ for n + Bk247 → n + n + n + Bk245 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Bk247 → n + Bk247_e1 (MT=51)
- $\sigma(E)$ for n + Bk247 → n + Bk247_e2 (MT=52)
- $\sigma(E)$ for n + Bk247 → n + Bk247_e3 (MT=53)
- $\sigma(E)$ for n + Bk247 → n + Bk247_e4 (MT=54)
- $\sigma(E)$ for n + Bk247 → n + Bk247_e5 (MT=55)
- $\sigma(E)$ for n + Bk247 → n + Bk247_e6 (MT=56)
- $\sigma(E)$ for n + Bk247 → n + Bk247_e7 (MT=57)
- $\sigma(E)$ for n + Bk247 → n + Bk247_e8 (MT=58)
- $\sigma(E)$ for n + Bk247 → n + Bk247_c (MT=91)
- $\sigma(E)$ for n + Bk247 → gamma + Bk248 (MT=102)
- Angular dist. for n + Bk247 → n + Bk247 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Bk248

File: n-097_Bk_248.endf

MAT: 9749

ZA: 97248

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Bk248 → n + Bk248 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Bk248 → n + n + Bk247 (MT=16)
- $\sigma(E)$ for n + Bk248 → n + n + n + Bk246 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Bk248 → n + n + n + n + Bk245 (MT=37)
- $\sigma(E)$ for n + Bk248 → n + Bk248_e1 (MT=51)
- $\sigma(E)$ for n + Bk248 → n + Bk248_e2 (MT=52)
- $\sigma(E)$ for n + Bk248 → n + Bk248_e3 (MT=53)
- $\sigma(E)$ for n + Bk248 → n + Bk248_e4 (MT=54)
- $\sigma(E)$ for n + Bk248 → n + Bk248_e5 (MT=55)
- $\sigma(E)$ for n + Bk248 → n + Bk248_e6 (MT=56)
- $\sigma(E)$ for n + Bk248 → n + Bk248_e7 (MT=57)
- $\sigma(E)$ for n + Bk248 → n + Bk248_c (MT=91)
- $\sigma(E)$ for n + Bk248 → gamma + Bk249 (MT=102)
- Angular dist. for n + Bk248 → n + Bk248 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Bk249

File: n-097_Bk_249.endf

MAT: 9752

ZA: 97249

Auth.: O.Iwamoto,T.Nakagawa,+

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Bk249 → n + Bk249 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Bk249 → n + n + Bk248 (MT=16)
- $\sigma(E)$ for n + Bk249 → n + n + n + Bk247 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Bk249 → n + n + n + n + Bk246 (MT=37)
- $\sigma(E)$ for n + Bk249 → n + Bk249_e1 (MT=51)
- $\sigma(E)$ for n + Bk249 → n + Bk249_e2 (MT=52)
- $\sigma(E)$ for n + Bk249 → n + Bk249_e3 (MT=53)
- $\sigma(E)$ for n + Bk249 → n + Bk249_e4 (MT=54)
- $\sigma(E)$ for n + Bk249 → n + Bk249_e5 (MT=55)
- $\sigma(E)$ for n + Bk249 → n + Bk249_e6 (MT=56)
- $\sigma(E)$ for n + Bk249 → n + Bk249_e7 (MT=57)
- $\sigma(E)$ for n + Bk249 → n + Bk249_e8 (MT=58)
- $\sigma(E)$ for n + Bk249 → n + Bk249_e9 (MT=59)
- $\sigma(E)$ for n + Bk249 → n + Bk249_e10 (MT=60)
- $\sigma(E)$ for n + Bk249 → n + Bk249_c (MT=91)
- $\sigma(E)$ for n + Bk249 → gamma + Bk250 (MT=102)
- Angular dist. for n + Bk249 → n + Bk249 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Bk250

File: n-097_Bk_250.endf

MAT: 9755

ZA: 97250

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Bk250 → n + Bk250 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Bk250 → n + n + Bk249 (MT=16)
- $\sigma(E)$ for n + Bk250 → n + n + n + Bk248 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Bk250 → n + n + n + n + Bk247 (MT=37)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e1 (MT=51)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e2 (MT=52)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e3 (MT=53)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e4 (MT=54)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e5 (MT=55)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e6 (MT=56)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e7 (MT=57)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e8 (MT=58)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e9 (MT=59)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e10 (MT=60)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e11 (MT=61)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e12 (MT=62)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e13 (MT=63)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e14 (MT=64)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e15 (MT=65)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e16 (MT=66)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e17 (MT=67)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e18 (MT=68)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e19 (MT=69)
- $\sigma(E)$ for n + Bk250 → n + Bk250_e20 (MT=70)
- $\sigma(E)$ for n + Bk250 → n + Bk250_c (MT=91)
- $\sigma(E)$ for n + Bk250 → gamma + Bk251 (MT=102)
- Angular dist. for n + Bk250 → n + Bk250 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cf246

File: n-098_Cf_246.endf

MAT: 9843

ZA: 98246

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cf246 → n + Cf246 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cf246 → n + n + Cf245 (MT=16)
- $\sigma(E)$ for n + Cf246 → n + n + n + Cf244 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cf246 → n + Cf246_e1 (MT=51)
- $\sigma(E)$ for n + Cf246 → n + Cf246_e2 (MT=52)
- $\sigma(E)$ for n + Cf246 → n + Cf246_e3 (MT=53)
- $\sigma(E)$ for n + Cf246 → n + Cf246_e4 (MT=54)
- $\sigma(E)$ for n + Cf246 → n + Cf246_c (MT=91)
- $\sigma(E)$ for n + Cf246 → gamma + Cf247 (MT=102)
- Angular dist. for n + Cf246 → n + Cf246 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert MeV^{-1} → eV^{-1} in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cf248

File: n-098_Cf_248.endf

MAT: 9849

ZA: 98248

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cf248 → n + Cf248 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cf248 → n + n + Cf247 (MT=16)
- $\sigma(E)$ for n + Cf248 → n + n + n + Cf246 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cf248 → n + Cf248_e1 (MT=51)
- $\sigma(E)$ for n + Cf248 → n + Cf248_e2 (MT=52)
- $\sigma(E)$ for n + Cf248 → n + Cf248_e3 (MT=53)
- $\sigma(E)$ for n + Cf248 → n + Cf248_e4 (MT=54)
- $\sigma(E)$ for n + Cf248 → n + Cf248_e5 (MT=55)
- $\sigma(E)$ for n + Cf248 → n + Cf248_e6 (MT=56)
- $\sigma(E)$ for n + Cf248 → n + Cf248_e7 (MT=57)
- $\sigma(E)$ for n + Cf248 → n + Cf248_e8 (MT=58)
- $\sigma(E)$ for n + Cf248 → n + Cf248_c (MT=91)
- $\sigma(E)$ for n + Cf248 → gamma + Cf249 (MT=102)
- Angular dist. for n + Cf248 → n + Cf248 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cf249

File: n-098_Cf_249.endf

MAT: 9852

ZA: 98249

Auth.: O.Iwamoto,T.Nakagawa,+

Lab: JAEA+

Date: EVAL-JAN10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cf249 → n + Cf249 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cf249 → n + n + Cf248 (MT=16)
- $\sigma(E)$ for n + Cf249 → n + n + n + Cf247 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cf249 → n + n + n + n + Cf246 (MT=37)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e1 (MT=51)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e2 (MT=52)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e3 (MT=53)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e4 (MT=54)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e5 (MT=55)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e6 (MT=56)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e7 (MT=57)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e8 (MT=58)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e9 (MT=59)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e10 (MT=60)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e11 (MT=61)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e12 (MT=62)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e13 (MT=63)

- $\sigma(E)$ for n + Cf249 → n + Cf249_e14 (MT=64)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e15 (MT=65)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e16 (MT=66)
- $\sigma(E)$ for n + Cf249 → n + Cf249_e17 (MT=67)
- $\sigma(E)$ for n + Cf249 → n + Cf249_c (MT=91)
- $\sigma(E)$ for n + Cf249 → gamma + Cf250 (MT=102)
- Angular dist. for n + Cf249 → n + Cf249 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cf250

File: n-098_Cf_250.endf
MAT: 9855
ZA: 98250
Auth.: O.Iwamoto,T.Nakagawa,+
Lab: JAEA+
Date: EVAL-FEB10
Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cf250 → n + Cf250 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cf250 → n + n + Cf249 (MT=16)
- $\sigma(E)$ for n + Cf250 → n + n + n + Cf248 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cf250 → n + n + n + n + Cf247 (MT=37)
- $\sigma(E)$ for n + Cf250 → n + Cf250_e1 (MT=51)
- $\sigma(E)$ for n + Cf250 → n + Cf250_e2 (MT=52)
- $\sigma(E)$ for n + Cf250 → n + Cf250_e3 (MT=53)
- $\sigma(E)$ for n + Cf250 → n + Cf250_e4 (MT=54)
- $\sigma(E)$ for n + Cf250 → n + Cf250_c (MT=91)
- $\sigma(E)$ for n + Cf250 → gamma + Cf251 (MT=102)
- Angular dist. for n + Cf250 → n + Cf250 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cf251

File: n-098_Cf_251.endf

MAT: 9858

ZA: 98251

Auth.: O.Iwamoto,T.Nakagawa,+

Lab: JAEA+

Date: EVAL-JAN10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cf251 → n + Cf251 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cf251 → n + n + Cf250 (MT=16)
- $\sigma(E)$ for n + Cf251 → n + n + n + Cf249 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cf251 → n + n + n + n + Cf248 (MT=37)
- $\sigma(E)$ for n + Cf251 → n + Cf251_e1 (MT=51)
- $\sigma(E)$ for n + Cf251 → n + Cf251_e2 (MT=52)
- $\sigma(E)$ for n + Cf251 → n + Cf251_e3 (MT=53)
- $\sigma(E)$ for n + Cf251 → n + Cf251_e4 (MT=54)
- $\sigma(E)$ for n + Cf251 → n + Cf251_e5 (MT=55)
- $\sigma(E)$ for n + Cf251 → n + Cf251_e6 (MT=56)
- $\sigma(E)$ for n + Cf251 → n + Cf251_e7 (MT=57)
- $\sigma(E)$ for n + Cf251 → n + Cf251_e8 (MT=58)
- $\sigma(E)$ for n + Cf251 → n + Cf251_e9 (MT=59)
- $\sigma(E)$ for n + Cf251 → n + Cf251_e10 (MT=60)
- $\sigma(E)$ for n + Cf251 → n + Cf251_e11 (MT=61)
- $\sigma(E)$ for n + Cf251 → n + Cf251_e12 (MT=62)
- $\sigma(E)$ for n + Cf251 → n + Cf251_e13 (MT=63)
- $\sigma(E)$ for n + Cf251 → n + Cf251_e14 (MT=64)
- $\sigma(E)$ for n + Cf251 → n + Cf251_c (MT=91)
- $\sigma(E)$ for n + Cf251 → gamma + Cf252 (MT=102)
- Angular dist. for n + Cf251 → n + Cf251 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cf252

File: n-098_Cf_252.endf

MAT: 9861

ZA: 98252

Auth.: O.Iwamoto,T.Nakagawa,+

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cf252 → n + Cf252 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cf252 → n + n + Cf251 (MT=16)
- $\sigma(E)$ for n + Cf252 → n + n + n + Cf250 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cf252 → n + n + n + n + Cf249 (MT=37)
- $\sigma(E)$ for n + Cf252 → n + Cf252_e1 (MT=51)
- $\sigma(E)$ for n + Cf252 → n + Cf252_e2 (MT=52)
- $\sigma(E)$ for n + Cf252 → n + Cf252_e3 (MT=53)
- $\sigma(E)$ for n + Cf252 → n + Cf252_e4 (MT=54)
- $\sigma(E)$ for n + Cf252 → n + Cf252_e5 (MT=55)
- $\sigma(E)$ for n + Cf252 → n + Cf252_e6 (MT=56)
- $\sigma(E)$ for n + Cf252 → n + Cf252_e7 (MT=57)
- $\sigma(E)$ for n + Cf252 → n + Cf252_e8 (MT=58)
- $\sigma(E)$ for n + Cf252 → n + Cf252_e9 (MT=59)
- $\sigma(E)$ for n + Cf252 → n + Cf252_e10 (MT=60)
- $\sigma(E)$ for n + Cf252 → n + Cf252_c (MT=91)
- $\sigma(E)$ for n + Cf252 → gamma + Cf253 (MT=102)
- Angular dist. for n + Cf252 → n + Cf252 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cf253

File: n-098_Cf_253.endf

MAT: 9864

ZA: 98253

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cf253 → n + Cf253 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cf253 → n + n + Cf252 (MT=16)
- $\sigma(E)$ for n + Cf253 → n + n + n + Cf251 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cf253 → n + n + n + n + Cf250 (MT=37)
- $\sigma(E)$ for n + Cf253 → n + Cf253_e1 (MT=51)
- $\sigma(E)$ for n + Cf253 → n + Cf253_e2 (MT=52)
- $\sigma(E)$ for n + Cf253 → n + Cf253_e3 (MT=53)
- $\sigma(E)$ for n + Cf253 → n + Cf253_e4 (MT=54)
- $\sigma(E)$ for n + Cf253 → n + Cf253_e5 (MT=55)
- $\sigma(E)$ for n + Cf253 → n + Cf253_e6 (MT=56)
- $\sigma(E)$ for n + Cf253 → n + Cf253_c (MT=91)
- $\sigma(E)$ for n + Cf253 → gamma + Cf254 (MT=102)
- Angular dist. for n + Cf253 → n + Cf253 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Cf254

File: n-098_Cf_254.endf

MAT: 9867

ZA: 98254

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cf254 → n + Cf254 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cf254 → n + n + Cf253 (MT=16)
- $\sigma(E)$ for n + Cf254 → n + n + n + Cf252 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cf254 → n + n + n + n + Cf251 (MT=37)
- $\sigma(E)$ for n + Cf254 → n + Cf254_e1 (MT=51)
- $\sigma(E)$ for n + Cf254 → n + Cf254_e2 (MT=52)
- $\sigma(E)$ for n + Cf254 → n + Cf254_e3 (MT=53)
- $\sigma(E)$ for n + Cf254 → n + Cf254_e4 (MT=54)
- $\sigma(E)$ for n + Cf254 → n + Cf254_c (MT=91)
- $\sigma(E)$ for n + Cf254 → gamma + Cf255 (MT=102)
- Angular dist. for n + Cf254 → n + Cf254 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Es260_m1

File: n-099_Es_251.endf

MAT: 9911

ZA: 99260

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Es260 → n + Es260 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Es260 → n + n + Es259 (MT=16)
- $\sigma(E)$ for n + Es260 → n + n + n + Es258 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Es260 → n + Es260_e1 (MT=51)
- $\sigma(E)$ for n + Es260 → n + Es260_e2 (MT=52)
- $\sigma(E)$ for n + Es260 → n + Es260_e3 (MT=53)
- $\sigma(E)$ for n + Es260 → n + Es260_e4 (MT=54)
- $\sigma(E)$ for n + Es260 → n + Es260_e5 (MT=55)
- $\sigma(E)$ for n + Es260 → n + Es260_c (MT=91)
- $\sigma(E)$ for n + Es260 → gamma + Es261 (MT=102)
- Angular dist. for n + Es260 → n + Es260 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Es260_m2

File: n-099_Es_252.endf

MAT: 9912

ZA: 99260

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Es260 → n + Es260 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Es260 → n + n + Es259 (MT=16)
- $\sigma(E)$ for n + Es260 → n + n + n + Es258 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Es260 → n + n + n + n + Es257 (MT=37)
- $\sigma(E)$ for n + Es260 → n + Es260_e1 (MT=51)
- $\sigma(E)$ for n + Es260 → n + Es260_e2 (MT=52)
- $\sigma(E)$ for n + Es260 → n + Es260_e3 (MT=53)
- $\sigma(E)$ for n + Es260 → n + Es260_e4 (MT=54)
- $\sigma(E)$ for n + Es260 → n + Es260_e5 (MT=55)
- $\sigma(E)$ for n + Es260 → n + Es260_e6 (MT=56)
- $\sigma(E)$ for n + Es260 → n + Es260_c (MT=91)
- $\sigma(E)$ for n + Es260 → gamma + Es261 (MT=102)
- Angular dist. for n + Es260 → n + Es260 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Es261

File: n-099_Es_253.endf

MAT: 9913

ZA: 99261

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Es261 → n + Es261 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Es261 → n + n + Es260 (MT=16)
- $\sigma(E)$ for n + Es261 → n + n + n + Es259 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Es261 → n + n + n + n + Es258 (MT=37)
- $\sigma(E)$ for n + Es261 → n + Es261_e1 (MT=51)
- $\sigma(E)$ for n + Es261 → n + Es261_e2 (MT=52)
- $\sigma(E)$ for n + Es261 → n + Es261_e3 (MT=53)
- $\sigma(E)$ for n + Es261 → n + Es261_e4 (MT=54)
- $\sigma(E)$ for n + Es261 → n + Es261_e5 (MT=55)
- $\sigma(E)$ for n + Es261 → n + Es261_c (MT=91)
- $\sigma(E)$ for n + Es261 → gamma + Es262 (MT=102)
- Angular dist. for n + Es261 → n + Es261 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Es261_m1

File: n-099_Es_254.endf

MAT: 9914

ZA: 99261

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-JAN10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Es261 → n + Es261 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Es261 → n + n + Es260 (MT=16)
- $\sigma(E)$ for n + Es261 → n + n + n + Es259 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Es261 → n + n + n + n + Es258 (MT=37)
- $\sigma(E)$ for n + Es261 → n + Es261_e1 (MT=51)
- $\sigma(E)$ for n + Es261 → n + Es261_e2 (MT=52)
- $\sigma(E)$ for n + Es261 → n + Es261_e3 (MT=53)
- $\sigma(E)$ for n + Es261 → n + Es261_e4 (MT=54)
- $\sigma(E)$ for n + Es261 → n + Es261_e5 (MT=55)
- $\sigma(E)$ for n + Es261 → n + Es261_e6 (MT=56)
- $\sigma(E)$ for n + Es261 → n + Es261_e7 (MT=57)
- $\sigma(E)$ for n + Es261 → n + Es261_c (MT=91)
- $\sigma(E)$ for n + Es261 → gamma + Es262 (MT=102)
- Angular dist. for n + Es261 → n + Es261 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Es262

File: n-099_Es_255.endf

MAT: 9916

ZA: 99262

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-DEC07

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Es262 → n + Es262 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Es262 → n + n + Es261 (MT=16)
- $\sigma(E)$ for n + Es262 → n + n + n + Es260 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Es262 → n + n + n + n + Es259 (MT=37)
- $\sigma(E)$ for n + Es262 → n + Es262_e1 (MT=51)
- $\sigma(E)$ for n + Es262 → n + Es262_e2 (MT=52)
- $\sigma(E)$ for n + Es262 → n + Es262_c (MT=91)
- $\sigma(E)$ for n + Es262 → gamma + Es263 (MT=102)
- Angular dist. for n + Es262 → n + Es262 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

n + Es268_m2

File: n-100_Fm_255.endf

MAT: 9936

ZA: 99268

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-JAN10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Es268 → n + Es268 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Es268 → n + n + Es267 (MT=16)
- $\sigma(E)$ for n + Es268 → n + n + n + Es266 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Es268 → n + n + n + n + Es265 (MT=37)
- $\sigma(E)$ for n + Es268 → n + Es268_e1 (MT=51)
- $\sigma(E)$ for n + Es268 → n + Es268_e2 (MT=52)
- $\sigma(E)$ for n + Es268 → n + Es268_e3 (MT=53)
- $\sigma(E)$ for n + Es268 → n + Es268_e4 (MT=54)
- $\sigma(E)$ for n + Es268 → n + Es268_e5 (MT=55)
- $\sigma(E)$ for n + Es268 → n + Es268_e6 (MT=56)
- $\sigma(E)$ for n + Es268 → n + Es268_e7 (MT=57)
- $\sigma(E)$ for n + Es268 → n + Es268_c (MT=91)
- $\sigma(E)$ for n + Es268 → gamma + Es269 (MT=102)
- Angular dist. for n + Es268 → n + Es268 (MT=2)
- Energy dist. for Fission (MT=18)

Significant SVN commits since ENDF/B-VII.1

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

V. CHANGED EVALUATIONS MISSING COVARIANCES

n + Sc45

File: n-021_Sc_045.endf

MAT: 2125

ZA: 21045

Auth.: A.B.Smith,R.J.Howerton

Lab: ANL,LLNL

Date: EVAL-JUL92

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r933 : tkawano, 2016-10-18
The resonance energy boundary fixed to match the pointwise cross sections. Set (n,p) cross sections zero below 96.94 keV. Reconstruct the total cross sections.

n + Co58

File: n-027_Co_058.endf

MAT: 2722

ZA: 27058

Auth.: Mughabghab, BNL, Kim, KAERI+

Lab: BNL

Date: EVAL-MAY11

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r595 : dbrown, 2012-10-31
Resolve the Co58 half of issue #709 with Caleb Mattoon's patch – it appears that the transition between RR and high energy region was goofed up, so Caleb patched the transition.

n + Zn68

File: n-030_Zn_068.endf

MAT: 3037

ZA: 30068

Auth.: N.Iwamoto

Lab: JAEA

Date: EVAL-Dec09

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r593 : dbrown, 2012-10-31
Applied Caleb Mattoon's patch: MF9 weights were incorrect in that they should have extended up to the first excited state (2.1 MeV) rather than the upper end of the MF=3 domain (2.0 MeV)

n + Sr88

File: n-038_Sr_088.endf

MAT: 3837

ZA: 38088

Auth.: Zhuang,Cai, Mughabghab

Lab: CNDC,BNL

Date: EVAL-FEB05

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r657 : dbrown, 2015-06-12
Revised 7 resonance widths that appear to have been mistranscribed when translating from the Atlas of Neutron Resonance into END/B-VII:

r926 : gnobre, 2016-10-17
Fixes related to tracker #1025.

n + Sn120

File: n-050_Sn_120.endf

MAT: 5049

ZA: 50120

Auth.: Mughabghab, Kawano

Lab: JNDC,BNL

Date: EVAL-DEC04

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r679 : tkawano, 2015-09-18
high energy part replaced by new CoH3 calculations to fix the reported energy balance problem.

r686 : dbrown, 2015-10-22
Adjust the gamma branching ratios out of level 18 (MT=68) so they sum to 1

r932 : tkawano, 2016-10-18
50keV data points in total, elastic, and capture removed

n + Sn122

File: n-050_Sn_122.endf

MAT: 5055

ZA: 50122

Auth.: JNDC FPND W.G., Mughabghab

Lab: JNDC,BNL

Date: EVAL-DEC04

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r684 : dbrown, 2015-10-22
Fix typo in original formatting of resonances during translation from the Atlas to ENDF This eliminates several warnings from PSYCHE and partly resolves ENDF tracker #220

n + Sn124

File: n-050_Sn_124.endf

MAT: 5061

ZA: 50124

Auth.: JNDC FPND W.G., Mughabghab

Lab: JNDC,BNL

Date: EVAL-DEC04

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r685 : dbrown, 2015-10-22
Fix typo in original formatting of resonances during translation from the Atlas to ENDF

n + Sb124

File: n-051_Sb_124.endf

MAT: 5134

ZA: 51124

Auth.: JNDC FP Nuclear Data W.G.

Lab: JNDC

Date: EVAL-MAR90

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r667 : dbrown, 2015-09-09
Toshihiko's fixes to outgoing spectra

n + Xe123

File: n-054_Xe_123.endf

MAT: 5422

ZA: 54123

Auth.: W.E. Ormand and N.C. Summers

Lab: LLNL

Date: EVAL-Jan11

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r664 : dbrown, 2015-09-08
recalculate the (n,tot) cross section with the correct energy grid that avoids interpolations troubles

r937 : tkawano, 2016-10-18
total, elastic, and capture cross sections at 10^{-5} eV given by considering the 1/v shape in capture.

n + Xe135

File: n-054_Xe_135.endf

MAT: 5458

ZA: 54135

Auth.: JNDC FP Nuclear Data W.G.

Lab: JNDC

Date: EVAL-MAR90

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r949 : dbrown, 2016-10-20
Convert 135Xe's sole SLBW resonance to MLBW
Fix minor formatting problems

n + Pm148_m1

File: n-061_Pm_148m1.endf

MAT: 6153

ZA: 61148

Auth.: You-Xiang Zhuang, Qing-Biao Shen

Lab: CNDC

Date: EVAL-SEP01

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r950 : dbrown, 2016-10-20
Convert the sole resonance to MLBW Fix minor formatting problems

r952 : dbrown, 2016-10-20
Fix J of lone resonance

n + Sm144

File: n-062_Sm_144.endf

MAT: 6225

ZA: 62144

Auth.: Kim,Mughabghab,Herman,Oblozinsky

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r934 : tkawano, 2016-10-18
URR energies fixed to make sure all points are inside URR (not required). Total cross sections reconstructed from all partial cross sections.

n + Eu154

File: n-063_Eu_154.endf

MAT: 6334

ZA: 63154

Auth.: Ge+, Mughabghab

Lab: CNDC,BNL

Date: EVAL-JAN05

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r943 : tkawano, 2016-10-19
The first resonance energy changed into 0.188 eV.

n + Tm168

File: n-069_Tm_168.endf

MAT: 6922

ZA: 69168

Auth.: G.P.A.Nobre, A.Palumbo, et al.

Lab: BNL

Date: EVAL-OCT11

Ener.: 1e-05-30000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r614 : gnobre, 2013-07-29
Fix MF=6 MT=102, first energy point was replaced by an actual distribution, which is the same of the next incident energy (30eV), but with 30eV subtracted in the last two outgoing energies.

n + Ta180

File: n-073_Ta_180.endf

MAT: 7325

ZA: 73180

Auth.: I.J. Thompson and N.C. Summers

Lab: LLNL

Date: EVAL-Jan11

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r664 : dbrown, 2015-09-08
recalculate the (n,tot) cross section with the correct energy grid that avoids interpolations troubles

r957 : thompson97, 2016-10-20
Pointwise values for MF=3 at 1e-5 eV fixed by Ian Thompson, LLNL

n + Ta181

File: n-073_Ta_181.endf

MAT: 7328

ZA: 73181

Auth.: I.J. Thompson and N.C. Summers

Lab: LLNL

Date: EVAL-Jan11

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r664 : dbrown, 2015-09-08
recalculate the (n,tot) cross section with the correct energy grid that avoids interpolations troubles

r672 : dbrown, 2015-09-10
I.Thompson made more fixes to cross sections & distributions to get energy ranges to match

n + Re185

File: n-075_Re_185.endf

MAT: 7525

ZA: 75185

Auth.: I.J. Thompson and N.C. Summers

Lab: LLNL

Date: EVAL-Jan11

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r604 : dbrown, 2013-01-08
applied Caleb's patch to fix background cross sections in resonance region

r664 : dbrown, 2015-09-08
recalculate the (n,tot) cross section with the correct energy grid that avoids interpolations troubles

r672 : dbrown, 2015-09-10
I.Thompson made more fixes to cross sections & distributions to get energy ranges to match

r687 : dbrown, 2015-10-26
Modified R', the potential scattering radius, to match the latest fits from S. Mughabghab: R' = 8.25+/-0.19 fm, S0 = 1.93+/-0.06, and S2 = 2.08+/-0.33. S1 is too small to determine For details, see S.F. Mughabghab, Nuclear Data Sheets, 118, 287, 2014

n + Re187

File: n-075_Re_187.endf

MAT: 7531

ZA: 75187

Auth.: I.J. Thompson and N.C. Summers

Lab: LLNL

Date: EVAL-Jan11

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r604 : dbrown, 2013-01-08
applied Caleb's patch to fix background cross sections in resonance region

r664 : dbrown, 2015-09-08
recalculate the (n,tot) cross section with the correct energy grid that avoids interpolations troubles

r672 : dbrown, 2015-09-10
I.Thompson made more fixes to cross sections & distributions to get energy ranges to match

r687 : dbrown, 2015-10-26
Modified R', the potential scattering radius, to match the latest fits from S. Mughabghab: R' = 8.25+/-0.19 fm, S0 = 1.93+/-0.06, and S2 = 2.08+/-0.33. S1 is too small to determine For details, see S.F. Mughabghab, Nuclear Data Sheets, 118, 287, 2014

n + Pa231

File: n-091_Pa_231.endf

MAT: 9131

ZA: 91231

Auth.: CRP/Th-U Co-ordinator A. Trkov

Lab: IAEA

Date: EVAL-FEB06

Ener.: 1e-05-60000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $MeV^{-1} \rightarrow eV^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + Pa233

File: n-091_Pa_233.endf

MAT: 9137

ZA: 91233

Auth.: CRP/Th-U Co-ordinator A. Trkov

Lab: IAEA

Date: Eval-Mar06

Ener.: 1e-05-60000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $MeV^{-1} \rightarrow eV^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + U237

File: n-092_U_237.endf

MAT: 9234

ZA: 92237

Auth.: P.G.Young, M.B.Chadwick

Lab: LANL

Date: EVAL-FEB09

Ener.: 1e-05-30000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $MeV^{-1} \rightarrow eV^{-1}$ in energy release from fission (MT458) resolving issue #696.

n + U239

File: n-092_U_239.endf

MAT: 9240

ZA: 92239

Auth.: Thompson,Brown,Younes,Trkov

Lab: LLNL

Date: EVAL-AUG11

Ener.: 1e-05-30000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $MeV^{-1} \rightarrow eV^{-1}$ in energy release from fission (MT458) resolving issue #696.

r927 : thompson97, 2016-10-17
Resonance and URR regions now include 3+ resonance spins as well as the 2+ previous spins. Points above 10 keV patched to merge on these. Specifications adjusted at URR lower boundary. I.J. Thompson, LLNL, Oct 2016

n + U240

File: n-092_U_240.endf

MAT: 9243

ZA: 92240

Auth.: Young,Chadwick,MacFarlane+

Lab: LANL

Date: EVAL-FEB05

Ener.: 1e-05-30000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r958 : gnobre, 2016-10-21
Changing the resonance flag for the U-240 file from Single-Level Breit-Wigner to Multi-Level Breit Wigner (LRF=1 to LRF=2).

n + U241

File: n-092_U_241.endf

MAT: 9246

ZA: 92241

Auth.: P.G.Young, M.B.Chadwick

Lab: LANL

Date: EVAL-FEB05

Ener.: 1e-05-30000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $\mathrm{MeV}^{-1} \rightarrow \mathrm{eV}^{-1}$ in energy release from fission (MT458) resolving issue #696.

r962 : gnobre, 2016-10-21
Change resonance spins in U-241 from 0.5 to 1.0.

r965 : dbrown, 2016-10-21
add documentation, make MLBW

n + Pu243

File: n-094_Pu_243.endf

MAT: 9449

ZA: 94243

Auth.: Benjamin,McCrosson,Howerton

Lab: SRL,LLNL

Date: EVAL-JUL76

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $MeV^{-1} \rightarrow eV^{-1}$ in energy release from fission (MT458) resolving issue #696.

r954 : tkawano, 2016-10-20
nu-p proposed by R.Q.Wright added, and nu-total recalculated.

r966 : gnobre, 2016-10-21
Changed resonance spins from 3.5 and 2.5 to 4.0 and 3.0 respectively. Also changed to LRF=2 (MLBW).

n + Am242

File: n-095_Am_242.endf

MAT: 9546

ZA: 95242

Auth.: Talou,Young,Kawano

Lab: LANL

Date: EVAL-DEC04

Ener.: 1e-05-20000000.0 (eV)

NEEDS COVARIANCE DATA

Significant SVN commits since ENDF/B-VII.1

r597 : dbrown, 2012-10-31
Convert $MeV^{-1} \rightarrow eV^{-1}$ in energy release from fission (MT458) resolving issue #696.

VI. UNCHANGED EVALUATIONS CONTAINING COVARIANCES

n + H2

File: n-001_H_002.endf

MAT: 128

ZA: 1002

Auth.: P.G.Young,G.M.Hale,M.B.Chadwick

Lab: LANL

Date: EVAL-FEB97

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + H2 → n + H2 (MT=2)
- $\sigma(E)$ for n + H2 → n + n + H1 (MT=16)
- $\sigma(E)$ for n + H2 → gamma + H3 (MT=102)

No significant changes since ENDF/B-VII.1

n + He4

File: n-002_He_004.endf

MAT: 228

ZA: 2004

Auth.: Hale

Lab: LANL

Date: EVAL-SEP10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + He4 → n + He4 (MT=2)

No significant changes since ENDF/B-VII.1

n + Be9

File: n-004_Be_009.endf

MAT: 425

ZA: 4009

Auth.: G.HALE,PERKINS ET AL,FRANKLE

Lab: LLNL,LANL

Date: EVAL-OCT09

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Be9 → n + Be9 (MT=2)
- $\sigma(E)$ for n + Be9 → n + n + Be8 (MT=16)
- $\sigma(E)$ for n + Be9 → gamma + Be10 (MT=102)
- $\sigma(E)$ for n + Be9 → H1 + Li9 (MT=103)
- $\sigma(E)$ for n + Be9 → H2 + Li8 (MT=104)
- $\sigma(E)$ for n + Be9 → H3 + Li7 (MT=105)
- $\sigma(E)$ for n + Be9 → He4 + He6 (MT=107)
- $\sigma(E)$ for n + Be9 → H1 + Li9 (MT=600)
- $\sigma(E)$ for n + Be9 → H2 + Li8 (MT=650)
- $\sigma(E)$ for n + Be9 → H3 + Li7 (MT=700)
- $\sigma(E)$ for n + Be9 → H3 + Li7_e1 (MT=701)
- $\sigma(E)$ for n + Be9 → He4 + He6 (MT=800)

No significant changes since ENDF/B-VII.1

n + B10

File: n-005_B_010.endf

MAT: 525

ZA: 5010

Auth.: G.M.Hale,P.G.Young

Lab: LANL

Date: EVAL-APR06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + B10 → n + B10 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + B10 → gamma + B11 (MT=102)
- $\sigma(E)$ for n + B10 → H1 + Be10 (MT=103)
- $\sigma(E)$ for n + B10 → H2 + Be9 (MT=104)
- $\sigma(E)$ for n + B10 → He4 + Li7 (MT=107)
- $\sigma(E)$ for random reaction (MT=113)
- $\sigma(E)$ for n + B10 → He4 + Li7 (MT=800)
- $\sigma(E)$ for n + B10 → He4 + Li7_e1 (MT=801)

No significant changes since ENDF/B-VII.1

n + Mg24

File: n-012_Mg_024.endf

MAT: 1225

ZA: 12024

Auth.: M.Hatchya(DEC),T.Asami(NEDAC)

Lab: DEC,NEDAC

Date: EVAL-MAR87

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Mg24 → n + Mg24 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Mg24 → n + n + Mg23 (MT=16)
- $\sigma(E)$ for n + Mg24 → gamma + Mg25 (MT=102)

No significant changes since ENDF/B-VII.1

n + Mg25

File: n-012_Mg_025.endf

MAT: 1228

ZA: 12025

Auth.: M.Hatchya(DEC),T.Asami(NEDAC)

Lab: DEC,NEDAC

Date: EVAL-MAR87

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Mg25 → n + Mg25 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Mg25 → n + n + Mg24 (MT=16)
- $\sigma(E)$ for n + Mg25 → gamma + Mg26 (MT=102)

No significant changes since ENDF/B-VII.1

n + Mg26

File: n-012_Mg_026.endf

MAT: 1231

ZA: 12026

Auth.: M.Hatchya(DEC),T.Asami(NEDAC)

Lab: DEC,NEDAC

Date: EVAL-MAR87

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Mg26 → n + Mg26 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Mg26 → n + n + Mg25 (MT=16)
- $\sigma(E)$ for n + Mg26 → gamma + Mg27 (MT=102)

No significant changes since ENDF/B-VII.1

n + Si29

File: n-014_Si_029.endf

MAT: 1428

ZA: 14029

Auth.: M.B.Chadwick,P.G.Young,D.Hetrick

Lab: LANL,ORNL

Date: EVAL-JUN97

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Si29 → n + Si29 (MT=2)
- $\sigma(E)$ for Non-elastic (MT=3)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Si29 → n + n + Si28 (MT=16)
- $\sigma(E)$ for n + Si29 → n + He4 + Mg25 (MT=22)
- $\sigma(E)$ for n + Si29 → n + H1 + Al28 (MT=28)
- $\sigma(E)$ for n + Si29 → n + Si29_e1 (MT=51)
- $\sigma(E)$ for n + Si29 → n + Si29_e2 (MT=52)
- $\sigma(E)$ for n + Si29 → n + Si29_e3 (MT=53)
- $\sigma(E)$ for n + Si29 → n + Si29_e4 (MT=54)
- $\sigma(E)$ for n + Si29 → n + Si29_e5 (MT=55)
- $\sigma(E)$ for n + Si29 → n + Si29_e6 (MT=56)
- $\sigma(E)$ for n + Si29 → n + Si29_e7 (MT=57)
- $\sigma(E)$ for n + Si29 → n + Si29_e8 (MT=58)
- $\sigma(E)$ for n + Si29 → n + Si29_e9 (MT=59)
- $\sigma(E)$ for n + Si29 → n + Si29_e10 (MT=60)
- $\sigma(E)$ for n + Si29 → n + Si29_e11 (MT=61)
- $\sigma(E)$ for n + Si29 → n + Si29_e12 (MT=62)
- $\sigma(E)$ for n + Si29 → n + Si29_e13 (MT=63)
- $\sigma(E)$ for n + Si29 → n + Si29_e14 (MT=64)
- $\sigma(E)$ for n + Si29 → n + Si29_c (MT=91)
- $\sigma(E)$ for n + Si29 → gamma + Si30 (MT=102)
- $\sigma(E)$ for n + Si29 → H1 + Al29 (MT=103)
- $\sigma(E)$ for n + Si29 → He4 + Mg26 (MT=107)

No significant changes since ENDF/B-VII.1

n + Si30

File: n-014_Si_030.endf

MAT: 1431

ZA: 14030

Auth.: M.B.Chadwick,P.G.Young,D.Hetrick

Lab: LANL,ORNL

Date: EVAL-JUN97

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Si30 → n + Si30 (MT=2)
- $\sigma(E)$ for Non-elastic (MT=3)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Si30 → n + n + Si29 (MT=16)
- $\sigma(E)$ for n + Si30 → n + He4 + Mg26 (MT=22)
- $\sigma(E)$ for n + Si30 → n + H1 + Al29 (MT=28)
- $\sigma(E)$ for n + Si30 → n + Si30_e1 (MT=51)
- $\sigma(E)$ for n + Si30 → n + Si30_e2 (MT=52)
- $\sigma(E)$ for n + Si30 → n + Si30_e3 (MT=53)
- $\sigma(E)$ for n + Si30 → n + Si30_e4 (MT=54)
- $\sigma(E)$ for n + Si30 → n + Si30_e5 (MT=55)
- $\sigma(E)$ for n + Si30 → n + Si30_e6 (MT=56)
- $\sigma(E)$ for n + Si30 → n + Si30_c (MT=91)
- $\sigma(E)$ for n + Si30 → gamma + Si31 (MT=102)
- $\sigma(E)$ for n + Si30 → H1 + Al30 (MT=103)
- $\sigma(E)$ for n + Si30 → He4 + Mg27 (MT=107)

No significant changes since ENDF/B-VII.1

n + K39

File: n-019_K_039.endf

MAT: 1925

ZA: 19039

Auth.: R.SAYER,K.GUBER,L.LEAL,N.LARSON

Lab: ORNL

Date: EVAL-OCT08

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)

No significant changes since ENDF/B-VII.1

n + K41

File: n-019_K_041.endf

MAT: 1931

ZA: 19041

Auth.: R.SAYER,K.GUBER,L.LEAL,N.LARSON

Lab: ORNL

Date: EVAL-OCT08

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for n + K41 → n + K41 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + K41 → n + n + K40 (MT=16)
- $\sigma(E)$ for n + K41 → gamma + K42 (MT=102)

No significant changes since ENDF/B-VII.1

n + Ti46

File: n-022_Ti_046.endf

MAT: 2225

ZA: 22046

Auth.: T.Kawano, L. Leal, A.Kahler

Lab: LANL

Date: EVAL-Feb09

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Ti46 → n + Ti46 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ti46 → n + n + Ti45 (MT=16)
- $\sigma(E)$ for n + Ti46 → n + He4 + Ca42 (MT=22)
- $\sigma(E)$ for n + Ti46 → n + H1 + Sc45 (MT=28)
- $\sigma(E)$ for n + Ti46 → gamma + Ti47 (MT=102)
- $\sigma(E)$ for n + Ti46 → H1 + Sc46 (MT=103)
- $\sigma(E)$ for n + Ti46 → He4 + Ca43 (MT=107)

No significant changes since ENDF/B-VII.1

n + Ti47

File: n-022_Ti_047.endf

MAT: 2228

ZA: 22047

Auth.: T.Kawano, L. Leal, A.Kahler

Lab: LANL

Date: EVAL-Feb09

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Ti47 → n + Ti47 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ti47 → n + n + Ti46 (MT=16)
- $\sigma(E)$ for n + Ti47 → n + He4 + Ca43 (MT=22)
- $\sigma(E)$ for n + Ti47 → n + H1 + Sc46 (MT=28)
- $\sigma(E)$ for n + Ti47 → gamma + Ti48 (MT=102)
- $\sigma(E)$ for n + Ti47 → H1 + Sc47 (MT=103)
- $\sigma(E)$ for n + Ti47 → He4 + Ca44 (MT=107)

No significant changes since ENDF/B-VII.1

n + Ti48

File: n-022_Ti_048.endf

MAT: 2231

ZA: 22048

Auth.: T.Kawano, L.Leal, A.Kahler

Lab: LANL,ORNL

Date: EVAL-Aug10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Ti48 → n + Ti48 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ti48 → n + n + Ti47 (MT=16)
- $\sigma(E)$ for n + Ti48 → n + He4 + Ca44 (MT=22)
- $\sigma(E)$ for n + Ti48 → n + H1 + Sc47 (MT=28)
- $\sigma(E)$ for n + Ti48 → gamma + Ti49 (MT=102)
- $\sigma(E)$ for n + Ti48 → H1 + Sc48 (MT=103)
- $\sigma(E)$ for n + Ti48 → He4 + Ca45 (MT=107)

No significant changes since ENDF/B-VII.1

n + Ti49

File: n-022_Ti_049.endf

MAT: 2234

ZA: 22049

Auth.: T.Kawano, L. Leal, A.Kahler

Lab: LANL

Date: EVAL-Feb09

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Ti49 → n + Ti49 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ti49 → n + n + Ti48 (MT=16)
- $\sigma(E)$ for n + Ti49 → n + He4 + Ca45 (MT=22)
- $\sigma(E)$ for n + Ti49 → n + H1 + Sc48 (MT=28)
- $\sigma(E)$ for n + Ti49 → gamma + Ti50 (MT=102)
- $\sigma(E)$ for n + Ti49 → H1 + Sc49 (MT=103)
- $\sigma(E)$ for n + Ti49 → He4 + Ca46 (MT=107)

No significant changes since ENDF/B-VII.1

n + Ti50

File: n-022_Ti_050.endf

MAT: 2237

ZA: 22050

Auth.: T.Kawano, L. Leal, A.Kahler

Lab: LANL

Date: EVAL-Feb09

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Ti50 → n + Ti50 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ti50 → n + n + Ti49 (MT=16)
- $\sigma(E)$ for n + Ti50 → n + n + n + Ti48 (MT=17)
- $\sigma(E)$ for n + Ti50 → n + He4 + Ca46 (MT=22)
- $\sigma(E)$ for n + Ti50 → n + H1 + Sc49 (MT=28)
- $\sigma(E)$ for n + Ti50 → gamma + Ti51 (MT=102)
- $\sigma(E)$ for n + Ti50 → H1 + Sc50 (MT=103)
- $\sigma(E)$ for n + Ti50 → He4 + Ca47 (MT=107)

No significant changes since ENDF/B-VII.1

n + Cr50

File: n-024_Cr_050.endf

MAT: 2425

ZA: 24050

Auth.: S.Chiba,M.Chadwick,D.Hetrick

Lab: LANL,ORNL

Date: EVAL-OCT97

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cr50 → n + Cr50 (MT=2)
- $\sigma(E)$ for Non-elastic (MT=3)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cr50 → n + n + Cr49 (MT=16)
- $\sigma(E)$ for n + Cr50 → n + He4 + Ti46 (MT=22)
- $\sigma(E)$ for n + Cr50 → n + H1 + V49 (MT=28)
- $\sigma(E)$ for n + Cr50 → n + Cr50_e1 (MT=51)
- $\sigma(E)$ for n + Cr50 → n + Cr50_e2 (MT=52)
- $\sigma(E)$ for n + Cr50 → n + Cr50_e3 (MT=53)
- $\sigma(E)$ for n + Cr50 → n + Cr50_e4 (MT=54)
- $\sigma(E)$ for n + Cr50 → n + Cr50_e5 (MT=55)
- $\sigma(E)$ for n + Cr50 → n + Cr50_e6 (MT=56)
- $\sigma(E)$ for n + Cr50 → n + Cr50_c (MT=91)
- $\sigma(E)$ for n + Cr50 → gamma + Cr51 (MT=102)
- $\sigma(E)$ for n + Cr50 → H1 + V50 (MT=103)
- $\sigma(E)$ for n + Cr50 → H2 + V49 (MT=104)
- $\sigma(E)$ for n + Cr50 → He4 + Ti47 (MT=107)

No significant changes since ENDF/B-VII.1

n + Cr52

File: n-024_Cr_052.endf

MAT: 2431

ZA: 24052

Auth.: S.Chiba,M.Chadwick,D.Hetrick

Lab: LANL,ORNL

Date: EVAL-OCT97

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cr52 → n + Cr52 (MT=2)
- $\sigma(E)$ for Non-elastic (MT=3)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cr52 → n + n + Cr51 (MT=16)
- $\sigma(E)$ for n + Cr52 → n + He4 + Ti48 (MT=22)
- $\sigma(E)$ for n + Cr52 → n + H1 + V51 (MT=28)
- $\sigma(E)$ for n + Cr52 → n + Cr52_e1 (MT=51)
- $\sigma(E)$ for n + Cr52 → n + Cr52_e2 (MT=52)
- $\sigma(E)$ for n + Cr52 → n + Cr52_e3 (MT=53)
- $\sigma(E)$ for n + Cr52 → n + Cr52_e4 (MT=54)
- $\sigma(E)$ for n + Cr52 → n + Cr52_e5 (MT=55)
- $\sigma(E)$ for n + Cr52 → n + Cr52_e6 (MT=56)
- $\sigma(E)$ for n + Cr52 → n + Cr52_e7 (MT=57)
- $\sigma(E)$ for n + Cr52 → n + Cr52_e8 (MT=58)
- $\sigma(E)$ for n + Cr52 → n + Cr52_e9 (MT=59)
- $\sigma(E)$ for n + Cr52 → n + Cr52_e10 (MT=60)
- $\sigma(E)$ for n + Cr52 → n + Cr52_c (MT=91)
- $\sigma(E)$ for n + Cr52 → gamma + Cr53 (MT=102)
- $\sigma(E)$ for n + Cr52 → H1 + V52 (MT=103)
- $\sigma(E)$ for n + Cr52 → He4 + Ti49 (MT=107)

No significant changes since ENDF/B-VII.1

n + Cr53

File: n-024_Cr_053.endf

MAT: 2434

ZA: 24053

Auth.: S.Chiba,M.Chadwick,K.Shibata

Lab: LANL,ORNL

Date: EVAL-OCT97

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cr53 → n + Cr53 (MT=2)
- $\sigma(E)$ for Non-elastic (MT=3)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cr53 → n + n + Cr52 (MT=16)
- $\sigma(E)$ for n + Cr53 → n + He4 + Ti49 (MT=22)
- $\sigma(E)$ for n + Cr53 → n + H1 + V52 (MT=28)
- $\sigma(E)$ for n + Cr53 → n + Cr53_e1 (MT=51)
- $\sigma(E)$ for n + Cr53 → n + Cr53_e2 (MT=52)
- $\sigma(E)$ for n + Cr53 → n + Cr53_e3 (MT=53)
- $\sigma(E)$ for n + Cr53 → n + Cr53_e4 (MT=54)
- $\sigma(E)$ for n + Cr53 → n + Cr53_e5 (MT=55)
- $\sigma(E)$ for n + Cr53 → n + Cr53_e6 (MT=56)
- $\sigma(E)$ for n + Cr53 → n + Cr53_e7 (MT=57)
- $\sigma(E)$ for n + Cr53 → n + Cr53_e8 (MT=58)
- $\sigma(E)$ for n + Cr53 → n + Cr53_e9 (MT=59)
- $\sigma(E)$ for n + Cr53 → n + Cr53_e10 (MT=60)
- $\sigma(E)$ for n + Cr53 → n + Cr53_e11 (MT=61)
- $\sigma(E)$ for n + Cr53 → n + Cr53_e12 (MT=62)
- $\sigma(E)$ for n + Cr53 → n + Cr53_e13 (MT=63)
- $\sigma(E)$ for n + Cr53 → n + Cr53_c (MT=91)
- $\sigma(E)$ for n + Cr53 → gamma + Cr54 (MT=102)
- $\sigma(E)$ for n + Cr53 → H1 + V53 (MT=103)
- $\sigma(E)$ for n + Cr53 → He4 + Ti50 (MT=107)

No significant changes since ENDF/B-VII.1

n + Cr54

File: n-024_Cr_054.endf

MAT: 2437

ZA: 24054

Auth.: S.Chiba,M.Chadwick,D.Hetrick

Lab: LANL,ORNL

Date: EVAL-OCT97

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)

No significant changes since ENDF/B-VII.1

n + Mn55

File: n-025_Mn_055.endf

MAT: 2525

ZA: 25055

Auth.: IAEA Evaluation Consortium

Lab: IAEA

Date: Eval-Feb11

Ener.: 1e-05-60000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Mn55 → n + Mn55 (MT=2)
- $\sigma(E)$ for Particle Production (MT=5)
- $\sigma(E)$ for n + Mn55 → n + n + Mn54 (MT=16)
- $\sigma(E)$ for n + Mn55 → n + n + n + Mn53 (MT=17)
- $\sigma(E)$ for n + Mn55 → n + n + n + n + Mn52 (MT=37)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e1 (MT=51)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e2 (MT=52)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e3 (MT=53)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e4 (MT=54)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e5 (MT=55)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e6 (MT=56)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e7 (MT=57)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e8 (MT=58)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e9 (MT=59)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e10 (MT=60)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e11 (MT=61)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e12 (MT=62)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e13 (MT=63)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e14 (MT=64)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e15 (MT=65)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e16 (MT=66)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e17 (MT=67)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e18 (MT=68)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e19 (MT=69)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e20 (MT=70)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e21 (MT=71)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e22 (MT=72)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e23 (MT=73)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e24 (MT=74)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e25 (MT=75)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e26 (MT=76)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e27 (MT=77)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e28 (MT=78)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e29 (MT=79)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e30 (MT=80)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e31 (MT=81)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e32 (MT=82)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e33 (MT=83)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e34 (MT=84)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e35 (MT=85)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e36 (MT=86)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e37 (MT=87)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e38 (MT=88)
- $\sigma(E)$ for n + Mn55 → n + Mn55_e39 (MT=89)
- $\sigma(E)$ for n + Mn55 → n + Mn55_c (MT=91)
- $\sigma(E)$ for n + Mn55 → gamma + Mn56 (MT=102)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55 (MT=600)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e1 (MT=601)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e2 (MT=602)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e3 (MT=603)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e4 (MT=604)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e5 (MT=605)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e6 (MT=606)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e7 (MT=607)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e8 (MT=608)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e9 (MT=609)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e10 (MT=610)

- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e11 (MT=611)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e12 (MT=612)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e13 (MT=613)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e14 (MT=614)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e15 (MT=615)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e16 (MT=616)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e17 (MT=617)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e18 (MT=618)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e19 (MT=619)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e20 (MT=620)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e21 (MT=621)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e22 (MT=622)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e23 (MT=623)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e24 (MT=624)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e25 (MT=625)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e26 (MT=626)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e27 (MT=627)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e28 (MT=628)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e29 (MT=629)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e30 (MT=630)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e31 (MT=631)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_e32 (MT=632)
- $\sigma(E)$ for n + Mn55 → H1 + Cr55_c (MT=649)
- $\sigma(E)$ for n + Mn55 → He4 + V52 (MT=800)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e1 (MT=801)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e2 (MT=802)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e3 (MT=803)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e4 (MT=804)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e5 (MT=805)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e6 (MT=806)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e7 (MT=807)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e8 (MT=808)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e9 (MT=809)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e10 (MT=810)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e11 (MT=811)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e12 (MT=812)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e13 (MT=813)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e14 (MT=814)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e15 (MT=815)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e16 (MT=816)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e17 (MT=817)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e18 (MT=818)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e19 (MT=819)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e20 (MT=820)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e21 (MT=821)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e22 (MT=822)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e23 (MT=823)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e24 (MT=824)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e25 (MT=825)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e26 (MT=826)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e27 (MT=827)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e28 (MT=828)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e29 (MT=829)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e30 (MT=830)
- $\sigma(E)$ for n + Mn55 → He4 + V52_e31 (MT=831)
- $\sigma(E)$ for Lumped Covariance (MT=851)
- $\sigma(E)$ for Lumped Covariance (MT=852)
- $\sigma(E)$ for Lumped Covariance (MT=853)
- $\sigma(E)$ for Lumped Covariance (MT=854)
- $\sigma(E)$ for Lumped Covariance (MT=855)
- $\sigma(E)$ for Lumped Covariance (MT=856)
- Angular dist. for n + Mn55 → n + Mn55 (MT=2)
- Angular dist. for n + Mn55 → n + Mn55_e1 (MT=51)

No significant changes since ENDF/B-VII.1

n + Zr93

File: n-040_Zr_093.endf

MAT: 4034

ZA: 40093

Auth.: H.I.Kim, S.Mughabghab, R.Capote

Lab: BNL,KAERI+

Date: EVAL-SEP11

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Zr93 → n + Zr93 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Zr93 → n + n + Zr92 (MT=16)
- $\sigma(E)$ for n + Zr93 → gamma + Zr94 (MT=102)

No significant changes since ENDF/B-VII.1

n + Zr95

File: n-040_Zr_095.endf

MAT: 4040

ZA: 40095

Auth.: H.I.Kim, S.Mughabghab, R.Capote

Lab: BNL,KAERI+

Date: EVAL-SEP11

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Zr95 → n + Zr95 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Zr95 → n + n + Zr94 (MT=16)
- $\sigma(E)$ for n + Zr95 → gamma + Zr96 (MT=102)

No significant changes since ENDF/B-VII.1

n + Nb95

File: n-041_Nb_095.endf

MAT: 4131

ZA: 41095

Auth.: JNDC FP Nuclear Data W.G.

Lab: JNDC

Date: EVAL-MAR90

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Nb95 → n + Nb95 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Nb95 → n + n + Nb94 (MT=16)
- $\sigma(E)$ for n + Nb95 → gamma + Nb96 (MT=102)

No significant changes since ENDF/B-VII.1

n + Mo92

File: n-042_Mo_092.endf

MAT: 4225

ZA: 42092

Auth.: 11 S. F. MUGHABGHAB+ JENDL3.3

Lab:

Date: EVAL-MAY 20

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Mo92 → n + Mo92 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Mo92 → n + n + Mo91 (MT=16)
- $\sigma(E)$ for n + Mo92 → gamma + Mo93 (MT=102)

No significant changes since ENDF/B-VII.1

n + Mo94

File: n-042_Mo_094.endf

MAT: 4231

ZA: 42094

Auth.: JNDC FPND W.G., Mughabghab

Lab: JNDC,BNL

Date: EVAL-FEB05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Mo94 → n + Mo94 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Mo94 → n + n + Mo93 (MT=16)
- $\sigma(E)$ for n + Mo94 → gamma + Mo95 (MT=102)

No significant changes since ENDF/B-VII.1

n + Mo96

File: n-042_Mo_096.endf

MAT: 4237

ZA: 42096

Auth.: JNDC FP Nuclear Data W.G.

Lab: JNDC

Date: EVAL-AUG89

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Mo96 → n + Mo96 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Mo96 → n + n + Mo95 (MT=16)
- $\sigma(E)$ for n + Mo96 → gamma + Mo97 (MT=102)

No significant changes since ENDF/B-VII.1

n + Mo97

File: n-042_Mo_097.endf

MAT: 4240

ZA: 42097

Auth.: JNDC FPND W.G., Mughabghab

Lab: JNDC,BNL

Date: EVAL-FEB05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Mo97 → n + Mo97 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Mo97 → n + n + Mo96 (MT=16)
- $\sigma(E)$ for n + Mo97 → gamma + Mo98 (MT=102)

No significant changes since ENDF/B-VII.1

n + Mo98

File: n-042_Mo_098.endf

MAT: 4243

ZA: 42098

Auth.: JNDC FP Nuclear Data W.G.

Lab: JNDC

Date: EVAL-AUG89

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Mo98 → n + Mo98 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Mo98 → n + n + Mo97 (MT=16)
- $\sigma(E)$ for n + Mo98 → gamma + Mo99 (MT=102)

No significant changes since ENDF/B-VII.1

n + Mo100

File: n-042_Mo_100.endf

MAT: 4249

ZA: 42100

Auth.: Chong-Hai Cai and Qi-Chang Liang

Lab: CNDC

Date: EVAL-AUG00

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Mo100 → n + Mo100 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Mo100 → n + n + Mo99 (MT=16)
- $\sigma(E)$ for n + Mo100 → gamma + Mo101 (MT=102)

No significant changes since ENDF/B-VII.1

n + Tc99

File: n-043_Tc_099.endf

MAT: 4325

ZA: 43099

Auth.: Herman,Oblozinsky,Mughabghab+

Lab: BNL-LANL

Date: EVAL-MAY06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Tc99 → n + Tc99 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Tc99 → n + n + Tc98 (MT=16)
- $\sigma(E)$ for n + Tc99 → gamma + Tc100 (MT=102)
- $\sigma(E)$ for n + Tc99 → H1 + Mo99 (MT=103)

No significant changes since ENDF/B-VII.1

n + Ru101

File: n-044_Ru_101.endf

MAT: 4440

ZA: 44101

Auth.: Kim,Herman,Oh,Mughabghab+

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Ru101 → n + Ru101 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ru101 → n + n + Ru100 (MT=16)
- $\sigma(E)$ for n + Ru101 → gamma + Ru102 (MT=102)

No significant changes since ENDF/B-VII.1

n + Ru102

File: n-044_Ru_102.endf

MAT: 4443

ZA: 44102

Auth.: Qi-Chang Liang+, Mughabghab

Lab: CNDC,BNL

Date: EVAL-FEB05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Ru102 → n + Ru102 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ru102 → n + n + Ru101 (MT=16)
- $\sigma(E)$ for n + Ru102 → gamma + Ru103 (MT=102)

No significant changes since ENDF/B-VII.1

n + Ru103

File: n-044_Ru_103.endf

MAT: 4446

ZA: 44103

Auth.: Z.G.Ge+, Mughabghab

Lab: CNDC,BNL

Date: EVAL-FEB05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Ru103 → n + Ru103 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ru103 → n + n + Ru102 (MT=16)
- $\sigma(E)$ for n + Ru103 → gamma + Ru104 (MT=102)

No significant changes since ENDF/B-VII.1

n + Ru104

File: n-044_Ru_104.endf

MAT: 4449

ZA: 44104

Auth.: Z.J.Zhang,Q.C.Liang,Q.Shen,X.Sun

Lab: CNDC

Date: EVAL-JUN99

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Ru104 → n + Ru104 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ru104 → n + n + Ru103 (MT=16)
- $\sigma(E)$ for n + Ru104 → gamma + Ru105 (MT=102)

No significant changes since ENDF/B-VII.1

n + Ru106

File: n-044_Ru_106.endf

MAT: 4455

ZA: 44106

Auth.: JNDC FP Nuclear Data W.G.

Lab: JNDC

Date: EVAL-MAR90

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Ru106 → n + Ru106 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ru106 → n + n + Ru105 (MT=16)
- $\sigma(E)$ for n + Ru106 → gamma + Ru107 (MT=102)

No significant changes since ENDF/B-VII.1

n + Rh103

File: n-045_Rh_103.endf

MAT: 4525

ZA: 45103

Auth.: Mughabghab,Kim,Herman,Oblozinsky

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Rh103 → n + Rh103 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Rh103 → n + n + Rh102 (MT=16)
- $\sigma(E)$ for n + Rh103 → gamma + Rh104 (MT=102)

No significant changes since ENDF/B-VII.1

n + Pd105

File: n-046_Pd_105.endf

MAT: 4634

ZA: 46105

Auth.: Kim,Herman,Oh,Mughabghab+

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Pd105 → n + Pd105 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pd105 → n + n + Pd104 (MT=16)
- $\sigma(E)$ for n + Pd105 → gamma + Pd106 (MT=102)

No significant changes since ENDF/B-VII.1

n + Pd106

File: n-046_Pd_106.endf

MAT: 4637

ZA: 46106

Auth.: P.G.Young, Mughabghab

Lab: LANL,BNL

Date: EVAL-MAR05

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Pd106 → n + Pd106 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pd106 → n + n + Pd105 (MT=16)
- $\sigma(E)$ for n + Pd106 → gamma + Pd107 (MT=102)

No significant changes since ENDF/B-VII.1

n + Pd107

File: n-046_Pd_107.endf

MAT: 4640

ZA: 46107

Auth.: JNDC FP Nuclear Data W.G.

Lab: JNDC

Date: EVAL-MAR90

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Pd107 → n + Pd107 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pd107 → n + n + Pd106 (MT=16)
- $\sigma(E)$ for n + Pd107 → gamma + Pd108 (MT=102)

No significant changes since ENDF/B-VII.1

n + Pd108

File: n-046_Pd_108.endf

MAT: 4643

ZA: 46108

Auth.: P.G.Young, Mughabghab

Lab: LANL,BNL

Date: EVAL-MAR05

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Pd108 → n + Pd108 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pd108 → n + n + Pd107 (MT=16)
- $\sigma(E)$ for n + Pd108 → gamma + Pd109 (MT=102)

No significant changes since ENDF/B-VII.1

n + Ag109

File: n-047_Ag_109.endf

MAT: 4731

ZA: 47109

Auth.: Mughabghab,Kim,Herman,Oblozinsky

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Ag109 → n + Ag109 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ag109 → n + n + Ag108 (MT=16)
- $\sigma(E)$ for n + Ag109 → gamma + Ag110 (MT=102)

No significant changes since ENDF/B-VII.1

n + I129

File: n-053_I_129.endf

MAT: 5331

ZA: 53129

Auth.: JNDC FPND W.G., Mughabghab

Lab: JNDC,BNL

Date: EVAL-JAN05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + I129 → n + I129 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + I129 → n + n + I128 (MT=16)
- $\sigma(E)$ for n + I129 → gamma + I130 (MT=102)

No significant changes since ENDF/B-VII.1

n + Xe131

File: n-054_Xe_131.endf

MAT: 5446

ZA: 54131

Auth.: Kim,Herman,Oh,Mughabghab+

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Xe131 → n + Xe131 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Xe131 → n + n + Xe130 (MT=16)
- $\sigma(E)$ for n + Xe131 → gamma + Xe132 (MT=102)

No significant changes since ENDF/B-VII.1

n + Xe132

File: n-054_Xe_132.endf

MAT: 5449

ZA: 54132

Auth.: B.S.Yu+, Mughabghab

Lab: CNDC,BNL

Date: EVAL-JAN05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Xe132 → n + Xe132 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Xe132 → n + n + Xe131 (MT=16)
- $\sigma(E)$ for n + Xe132 → gamma + Xe133 (MT=102)

No significant changes since ENDF/B-VII.1

n + Xe134

File: n-054_Xe_134.endf

MAT: 5455

ZA: 54134

Auth.: B.S.Yu+, Mughabghab

Lab: CNDC,BNL

Date: EVAL-JAN05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Xe134 → n + Xe134 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Xe134 → n + n + Xe133 (MT=16)
- $\sigma(E)$ for n + Xe134 → gamma + Xe135 (MT=102)

No significant changes since ENDF/B-VII.1

n + Cs133

File: n-055_Cs_133.endf

MAT: 5525

ZA: 55133

Auth.: Mughabghab,Kim,Herman,+

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cs133 → n + Cs133 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cs133 → n + n + Cs132 (MT=16)
- $\sigma(E)$ for n + Cs133 → gamma + Cs134 (MT=102)

No significant changes since ENDF/B-VII.1

n + Cs135

File: n-055_Cs_135.endf

MAT: 5531

ZA: 55135

Auth.: JNDC FPND W.G., Mughabghab

Lab: JNDC,BNL

Date: EVAL-JAN05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cs135 → n + Cs135 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cs135 → n + n + Cs134 (MT=16)
- $\sigma(E)$ for n + Cs135 → gamma + Cs136 (MT=102)

No significant changes since ENDF/B-VII.1

n + La139

File: n-057_La_139.endf

MAT: 5728

ZA: 57139

Auth.: J.W.Zhao+, Mughabghab

Lab: CNDC,BNL

Date: EVAL-JAN05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + La139 → n + La139 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + La139 → n + n + La138 (MT=16)
- $\sigma(E)$ for n + La139 → gamma + La140 (MT=102)

No significant changes since ENDF/B-VII.1

n + Ce141

File: n-058_Ce_141.endf

MAT: 5840

ZA: 58141

Auth.: Zhang+, Mughabghab

Lab: CNDC,BNL

Date: EVAL-JAN05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Ce141 → n + Ce141 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ce141 → n + n + Ce140 (MT=16)
- $\sigma(E)$ for n + Ce141 → gamma + Ce142 (MT=102)

No significant changes since ENDF/B-VII.1

n + Pr141

File: n-059_Pr_141.endf

MAT: 5925

ZA: 59141

Auth.: Kim,Mughabghab,Herman,Oblozinsky

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pr141 → n + Pr141 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pr141 → n + n + Pr140 (MT=16)
- $\sigma(E)$ for n + Pr141 → gamma + Pr142 (MT=102)

No significant changes since ENDF/B-VII.1

n + Nd143

File: n-060_Nd_143.endf

MAT: 6028

ZA: 60143

Auth.: Kim,Herman,Chang,Mughabghab+

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Nd143 → n + Nd143 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Nd143 → n + n + Nd142 (MT=16)
- $\sigma(E)$ for n + Nd143 → gamma + Nd144 (MT=102)

No significant changes since ENDF/B-VII.1

n + Nd145

File: n-060_Nd_145.endf

MAT: 6034

ZA: 60145

Auth.: Mughabghab,Kim,Herman,Oblozinsky

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Nd145 → n + Nd145 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Nd145 → n + n + Nd144 (MT=16)
- $\sigma(E)$ for n + Nd145 → gamma + Nd146 (MT=102)

No significant changes since ENDF/B-VII.1

n + Nd146

File: n-060_Nd_146.endf

MAT: 6037

ZA: 60146

Auth.: Kim,Mughabghab,Herman,Oblozinsky

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Nd146 → n + Nd146 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Nd146 → n + n + Nd145 (MT=16)
- $\sigma(E)$ for n + Nd146 → gamma + Nd147 (MT=102)

No significant changes since ENDF/B-VII.1

n + Nd148

File: n-060_Nd_148.endf

MAT: 6043

ZA: 60148

Auth.: Kim,Mughabghab,Herman,Oblozinsky

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Nd148 → n + Nd148 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Nd148 → n + n + Nd147 (MT=16)
- $\sigma(E)$ for n + Nd148 → gamma + Nd149 (MT=102)

No significant changes since ENDF/B-VII.1

n + Pm147

File: n-061_Pm_147.endf

MAT: 6149

ZA: 61147

Auth.: JNDC FP Nuclear Data W.G.

Lab: JNDC

Date: EVAL-MAR90

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Pm147 → n + Pm147 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pm147 → n + n + Pm146 (MT=16)
- $\sigma(E)$ for n + Pm147 → gamma + Pm148 (MT=102)

No significant changes since ENDF/B-VII.1

n + Sm149

File: n-062_Sm_149.endf

MAT: 6240

ZA: 62149

Auth.: Kim,Mughabghab,Herman,Oblozinsky

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Sm149 → n + Sm149 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Sm149 → n + n + Sm148 (MT=16)
- $\sigma(E)$ for n + Sm149 → gamma + Sm150 (MT=102)

No significant changes since ENDF/B-VII.1

n + Sm152

File: n-062_Sm_152.endf

MAT: 6249

ZA: 62152

Auth.: Kim,Mughabghab,Herman,Oblozinsky

Lab: BNL,KAERI

Date: EVAL-FEB06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Sm152 → n + Sm152 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Sm152 → n + n + Sm151 (MT=16)
- $\sigma(E)$ for n + Sm152 → gamma + Sm153 (MT=102)

No significant changes since ENDF/B-VII.1

n + Eu155

File: n-063_Eu_155.endf

MAT: 6337

ZA: 63155

Auth.: You-Xiang Zhuang and Zhi-Gang Ge

Lab: CNDC

Date: EVAL-FEB99

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Eu155 → n + Eu155 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Eu155 → n + n + Eu154 (MT=16)
- $\sigma(E)$ for n + Eu155 → gamma + Eu156 (MT=102)

No significant changes since ENDF/B-VII.1

n + Gd152

File: n-064_Gd_152.endf

MAT: 6425

ZA: 64152

Auth.: Rochman,Mughabghab,Leal,Kawano+

Lab: BNL,ORNL+

Date: EVAL-APR06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Gd152 → n + Gd152 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Gd152 → n + n + Gd151 (MT=16)
- $\sigma(E)$ for n + Gd152 → gamma + Gd153 (MT=102)
- $\sigma(E)$ for n + Gd152 → H1 + Eu152 (MT=103)

No significant changes since ENDF/B-VII.1

n + Gd153

File: n-064_Gd_153.endf

MAT: 6428

ZA: 64153

Auth.: Rochman,Mughabghab,Leal,Kawano+

Lab: BNL,ORNL+

Date: EVAL-APR06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Gd153 → n + Gd153 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Gd153 → n + n + Gd152 (MT=16)
- $\sigma(E)$ for n + Gd153 → gamma + Gd154 (MT=102)
- $\sigma(E)$ for n + Gd153 → H1 + Eu153 (MT=103)

No significant changes since ENDF/B-VII.1

n + Gd154

File: n-064_Gd_154.endf

MAT: 6431

ZA: 64154

Auth.: Rochman,Mughabghab,Leal,Kawano+

Lab: BNL,ORNL+

Date: EVAL-APR06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Gd154 → n + Gd154 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Gd154 → n + n + Gd153 (MT=16)
- $\sigma(E)$ for n + Gd154 → gamma + Gd155 (MT=102)
- $\sigma(E)$ for n + Gd154 → H1 + Eu154 (MT=103)
- $\sigma(E)$ for n + Gd154 → He4 + Sm151 (MT=107)

No significant changes since ENDF/B-VII.1

n + Gd155

File: n-064_Gd_155.endf

MAT: 6434

ZA: 64155

Auth.: Rochman,Mughabghab,Leal,Kawano+

Lab: BNL,ORNL+

Date: EVAL-APR06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Gd155 → n + Gd155 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Gd155 → n + n + Gd154 (MT=16)
- $\sigma(E)$ for n + Gd155 → gamma + Gd156 (MT=102)
- $\sigma(E)$ for n + Gd155 → H1 + Eu155 (MT=103)

No significant changes since ENDF/B-VII.1

n + Gd156

File: n-064_Gd_156.endf

MAT: 6437

ZA: 64156

Auth.: Rochman,Mughabghab,Leal,Kawano+

Lab: BNL,ORNL+

Date: EVAL-APR06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Gd156 → n + Gd156 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Gd156 → n + n + Gd155 (MT=16)
- $\sigma(E)$ for n + Gd156 → gamma + Gd157 (MT=102)

No significant changes since ENDF/B-VII.1

n + Gd157

File: n-064_Gd_157.endf

MAT: 6440

ZA: 64157

Auth.: Mughabghab,Rochman,Leal,Kawano+

Lab: BNL,ORNL+

Date: EVAL-SEP11

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Gd157 → n + Gd157 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Gd157 → n + n + Gd156 (MT=16)
- $\sigma(E)$ for n + Gd157 → gamma + Gd158 (MT=102)
- $\sigma(E)$ for n + Gd157 → H1 + Eu157 (MT=103)

No significant changes since ENDF/B-VII.1

n + Gd158

File: n-064_Gd_158.endf

MAT: 6443

ZA: 64158

Auth.: Rochman,Mughabghab,Leal,Kawano+

Lab: BNL,ORNL+

Date: EVAL-APR06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Gd158 → n + Gd158 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Gd158 → n + n + Gd157 (MT=16)
- $\sigma(E)$ for n + Gd158 → gamma + Gd159 (MT=102)

No significant changes since ENDF/B-VII.1

n + Gd160

File: n-064_Gd_160.endf

MAT: 6449

ZA: 64160

Auth.: Rochman,Mughabghab,Leal,Kawano+

Lab: BNL,ORNL+

Date: EVAL-APR06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Gd160 → n + Gd160 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Gd160 → n + n + Gd159 (MT=16)
- $\sigma(E)$ for n + Gd160 → gamma + Gd161 (MT=102)
- $\sigma(E)$ for n + Gd160 → H1 + Eu160 (MT=103)
- $\sigma(E)$ for n + Gd160 → He4 + Sm157 (MT=107)

No significant changes since ENDF/B-VII.1

n + Er166

File: n-068_Er_166.endf

MAT: 6837

ZA: 68166

Auth.: Harun-Ar-Rashid+, Mughabghab

Lab: TIT,BNL

Date: EVAL-JAN05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Er166 → n + Er166 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Er166 → n + n + Er165 (MT=16)
- $\sigma(E)$ for n + Er166 → gamma + Er167 (MT=102)

No significant changes since ENDF/B-VII.1

n + Er167

File: n-068_Er_167.endf

MAT: 6840

ZA: 68167

Auth.: Harun-Ar-Rashid+, Mughabghab

Lab: TIT,BNL

Date: EVAL-JAN05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Er167 → n + Er167 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Er167 → n + n + Er166 (MT=16)
- $\sigma(E)$ for n + Er167 → gamma + Er168 (MT=102)

No significant changes since ENDF/B-VII.1

n + Er168

File: n-068_Er_168.endf

MAT: 6843

ZA: 68168

Auth.: Harun-Ar-Rashid+, Mughabghab

Lab: TIT,BNL

Date: EVAL-JAN05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Er168 → n + Er168 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Er168 → n + n + Er167 (MT=16)
- $\sigma(E)$ for n + Er168 → gamma + Er169 (MT=102)

No significant changes since ENDF/B-VII.1

n + Er170

File: n-068_Er_170.endf

MAT: 6849

ZA: 68170

Auth.: Harun-Ar-Rashid+, Mughabghab

Lab: TIT,BNL

Date: EVAL-JAN05

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for n + Er170 → n + Er170 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Er170 → n + n + Er169 (MT=16)
- $\sigma(E)$ for n + Er170 → gamma + Er171 (MT=102)

No significant changes since ENDF/B-VII.1

n + Tm169

File: n-069_Tm_169.endf

MAT: 6925

ZA: 69169

Auth.: G.P.A.Nobre, A.Palumbo, et al.

Lab: BNL

Date: EVAL-OCT11

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)
- $\sigma(E)$ for n + Tm169 $\rightarrow$ n + n + Tm168 (MT=16)

No significant changes since ENDF/B-VII.1

n + Tm170

File: n-069_Tm_170.endf

MAT: 6928

ZA: 69170

Auth.: G.P.A.Nobre, A.Palumbo, et al.

Lab: BNL

Date: EVAL-OCT11

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)

No significant changes since ENDF/B-VII.1

n + W180

File: n-074_W_180.endf

MAT: 7425

ZA: 74180

Auth.:

Lab: IAEA

Date: Eval090806

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + W180 → n + W180 (MT=2)
- $\sigma(E)$ for Particle Production (MT=5)
- $\sigma(E)$ for n + W180 → n + n + W179 (MT=16)
- $\sigma(E)$ for n + W180 → n + n + n + W178 (MT=17)
- $\sigma(E)$ for n + W180 → n + H1 + Ta179 (MT=28)
- $\sigma(E)$ for n + W180 → n + n + n + n + W177 (MT=37)
- $\sigma(E)$ for n + W180 → n + n + H1 + Ta178 (MT=41)
- $\sigma(E)$ for n + W180 → n + W180_e1 (MT=51)
- $\sigma(E)$ for n + W180 → n + W180_e2 (MT=52)
- $\sigma(E)$ for n + W180 → n + W180_e3 (MT=53)
- $\sigma(E)$ for n + W180 → n + W180_e4 (MT=54)
- $\sigma(E)$ for n + W180 → n + W180_e5 (MT=55)
- $\sigma(E)$ for n + W180 → n + W180_e6 (MT=56)
- $\sigma(E)$ for n + W180 → n + W180_e7 (MT=57)
- $\sigma(E)$ for n + W180 → n + W180_e8 (MT=58)
- $\sigma(E)$ for n + W180 → n + W180_c (MT=91)
- $\sigma(E)$ for n + W180 → gamma + W181 (MT=102)
- $\sigma(E)$ for n + W180 → H1 + Ta180 (MT=600)
- $\sigma(E)$ for n + W180 → H1 + Ta180_e1 (MT=601)
- $\sigma(E)$ for n + W180 → H1 + Ta180_e2 (MT=602)
- $\sigma(E)$ for n + W180 → H1 + Ta180_e3 (MT=603)
- $\sigma(E)$ for n + W180 → H1 + Ta180_e4 (MT=604)
- $\sigma(E)$ for n + W180 → H1 + Ta180_e5 (MT=605)
- $\sigma(E)$ for n + W180 → H1 + Ta180_e6 (MT=606)
- $\sigma(E)$ for n + W180 → H1 + Ta180_e7 (MT=607)
- $\sigma(E)$ for n + W180 → H1 + Ta180_e8 (MT=608)
- $\sigma(E)$ for n + W180 → H1 + Ta180_e9 (MT=609)
- $\sigma(E)$ for n + W180 → H1 + Ta180_e10 (MT=610)
- $\sigma(E)$ for n + W180 → H1 + Ta180_e11 (MT=611)
- $\sigma(E)$ for n + W180 → H1 + Ta180_e12 (MT=612)
- $\sigma(E)$ for n + W180 → H1 + Ta180_e13 (MT=613)
- $\sigma(E)$ for n + W180 → H1 + Ta180_e14 (MT=614)
- $\sigma(E)$ for n + W180 → H1 + Ta180_c (MT=649)
- $\sigma(E)$ for n + W180 → He4 + Hf177 (MT=800)
- $\sigma(E)$ for n + W180 → He4 + Hf177_e1 (MT=801)
- $\sigma(E)$ for n + W180 → He4 + Hf177_e2 (MT=802)
- $\sigma(E)$ for n + W180 → He4 + Hf177_e3 (MT=803)
- $\sigma(E)$ for n + W180 → He4 + Hf177_e4 (MT=804)
- $\sigma(E)$ for n + W180 → He4 + Hf177_e5 (MT=805)
- $\sigma(E)$ for n + W180 → He4 + Hf177_e6 (MT=806)
- $\sigma(E)$ for n + W180 → He4 + Hf177_e7 (MT=807)
- $\sigma(E)$ for n + W180 → He4 + Hf177_e8 (MT=808)
- $\sigma(E)$ for n + W180 → He4 + Hf177_e9 (MT=809)
- $\sigma(E)$ for n + W180 → He4 + Hf177_e10 (MT=810)
- $\sigma(E)$ for n + W180 → He4 + Hf177_e11 (MT=811)
- $\sigma(E)$ for n + W180 → He4 + Hf177_e12 (MT=812)
- $\sigma(E)$ for n + W180 → He4 + Hf177_e13 (MT=813)
- $\sigma(E)$ for n + W180 → He4 + Hf177_e14 (MT=814)
- $\sigma(E)$ for n + W180 → He4 + Hf177_c (MT=849)
- $\sigma(E)$ for Lumped Covariance (MT=851)
- $\sigma(E)$ for Lumped Covariance (MT=852)
- $\sigma(E)$ for Lumped Covariance (MT=853)
- $\sigma(E)$ for Lumped Covariance (MT=854)
- $\sigma(E)$ for Lumped Covariance (MT=855)
- $\sigma(E)$ for Lumped Covariance (MT=856)
- Angular dist. for n + W180 → n + W180 (MT=2)
- Angular dist. for n + W180 → n + W180_e1 (MT=51)

No significant changes since ENDF/B-VII.1

n + Ir191

File: n-077_Ir_191.endf

MAT: 7725

ZA: 77191

Auth.: Talou,Kawano,Chadwick,Rochman+

Lab: LANL-BNL

Date: EVAL-AUG06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Ir191 → n + Ir191 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ir191 → n + n + Ir190 (MT=16)
- $\sigma(E)$ for n + Ir191 → gamma + Ir192 (MT=102)
- $\sigma(E)$ for n + Ir191 → H1 + Os191 (MT=103)

No significant changes since ENDF/B-VII.1

n + Ir193

File: n-077_Ir_193.endf

MAT: 7731

ZA: 77193

Auth.: Rochman,Chadwick,Talou,Kawano+

Lab: LANL,BNL

Date: EVAL-AUG06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Ir193 → n + Ir193 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Ir193 → n + n + Ir192 (MT=16)
- $\sigma(E)$ for n + Ir193 → gamma + Ir194 (MT=102)
- $\sigma(E)$ for n + Ir193 → H1 + Os193 (MT=103)

No significant changes since ENDF/B-VII.1

n + Au197

File: n-079_Au_197.endf

MAT: 7925

ZA: 79197

Auth.: P.G.Young

Lab: LANL

Date: EVAL-JAN84

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Au197 $\rightarrow$ gamma + Au198 (MT=102)

No significant changes since ENDF/B-VII.1

n + Tl203

File: n-081_Tl_203.endf

MAT: 8125

ZA: 81203

Auth.:

Lab: BNL

Date: EVAL-Oct11

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)

No significant changes since ENDF/B-VII.1

n + Tl205

File: n-081_Tl_205.endf

MAT: 8131

ZA: 81205

Auth.:

Lab: BNL

Date: EVAL-Oct11

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- Resonance for Resonances (MT=151)

No significant changes since ENDF/B-VII.1

n + Pb204

File: n-082_Pb_204.endf

MAT: 8225

ZA: 82204

Auth.: A.J. Koning

Lab: NRG

Date: EVAL-DEC04

Ener.: 1e-05-200000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pb204 $\rightarrow$ n + Pb204 (MT=2)
- $\sigma(E)$ for Non-elastic (MT=3)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pb204 $\rightarrow$ n + n + Pb203 (MT=16)
- $\sigma(E)$ for n + Pb204 $\rightarrow$ gamma + Pb205 (MT=102)

No significant changes since ENDF/B-VII.1

n + Pb206

File: n-082_Pb_206.endf

MAT: 8231

ZA: 82206

Auth.: A.J. Koning

Lab: NRG

Date: EVAL-DEC04

Ener.: 1e-05-200000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pb206 → n + Pb206 (MT=2)
- $\sigma(E)$ for Non-elastic (MT=3)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pb206 → n + n + Pb205 (MT=16)
- $\sigma(E)$ for n + Pb206 → gamma + Pb207 (MT=102)

No significant changes since ENDF/B-VII.1

n + Pb207

File: n-082_Pb_207.endf

MAT: 8234

ZA: 82207

Auth.: A.J. Koning

Lab: NRG

Date: EVAL-DEC04

Ener.: 1e-05-200000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pb207 → n + Pb207 (MT=2)
- $\sigma(E)$ for Non-elastic (MT=3)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pb207 → n + n + Pb206 (MT=16)
- $\sigma(E)$ for n + Pb207 → gamma + Pb208 (MT=102)

No significant changes since ENDF/B-VII.1

n + Bi209

File: n-083_Bi_209.endf

MAT: 8325

ZA: 83209

Auth.: M.Chadwick,P.Young,A.Smith

Lab: LANL,ANL

Date: EVAL-JUL98

Ener.: 1e-05-150000000.0 (eV)

Available covariance data

- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Bi209 → n + Bi209 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Bi209 → n + n + Bi208 (MT=16)
- $\sigma(E)$ for n + Bi209 → gamma + Bi210 (MT=102)

No significant changes since ENDF/B-VII.1

n + Th227

File: n-090_Th_227.endf

MAT: 9025

ZA: 90227

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-JAN10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Th227 → n + Th227 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Th227 → n + n + Th226 (MT=16)
- $\sigma(E)$ for n + Th227 → n + n + n + Th225 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Th227 → n + n + n + n + Th224 (MT=37)
- $\sigma(E)$ for n + Th227 → n + Th227_e1 (MT=51)
- $\sigma(E)$ for n + Th227 → n + Th227_e2 (MT=52)
- $\sigma(E)$ for n + Th227 → n + Th227_e3 (MT=53)
- $\sigma(E)$ for n + Th227 → n + Th227_e4 (MT=54)
- $\sigma(E)$ for n + Th227 → n + Th227_e5 (MT=55)
- $\sigma(E)$ for n + Th227 → n + Th227_e6 (MT=56)
- $\sigma(E)$ for n + Th227 → n + Th227_e7 (MT=57)
- $\sigma(E)$ for n + Th227 → n + Th227_e8 (MT=58)
- $\sigma(E)$ for n + Th227 → n + Th227_e9 (MT=59)
- $\sigma(E)$ for n + Th227 → n + Th227_e10 (MT=60)
- $\sigma(E)$ for n + Th227 → n + Th227_e11 (MT=61)
- $\sigma(E)$ for n + Th227 → n + Th227_e12 (MT=62)
- $\sigma(E)$ for n + Th227 → n + Th227_e13 (MT=63)

- $\sigma(E)$ for n + Th227 → n + Th227_e14 (MT=64)
- $\sigma(E)$ for n + Th227 → n + Th227_c (MT=91)
- $\sigma(E)$ for n + Th227 → gamma + Th228 (MT=102)
- Angular dist. for n + Th227 → n + Th227 (MT=2)
- Energy dist. for Fission (MT=18)

No significant changes since ENDF/B-VII.1

n + Th229

File: n-090_Th_229.endf

MAT: 9031

ZA: 90229

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-JAN10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Th229 → n + Th229 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Th229 → n + n + Th228 (MT=16)
- $\sigma(E)$ for n + Th229 → n + n + n + Th227 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Th229 → n + n + n + n + Th226 (MT=37)
- $\sigma(E)$ for n + Th229 → n + Th229_e1 (MT=51)
- $\sigma(E)$ for n + Th229 → n + Th229_e2 (MT=52)
- $\sigma(E)$ for n + Th229 → n + Th229_e3 (MT=53)
- $\sigma(E)$ for n + Th229 → n + Th229_e4 (MT=54)
- $\sigma(E)$ for n + Th229 → n + Th229_e5 (MT=55)
- $\sigma(E)$ for n + Th229 → n + Th229_e6 (MT=56)
- $\sigma(E)$ for n + Th229 → n + Th229_e7 (MT=57)
- $\sigma(E)$ for n + Th229 → n + Th229_e8 (MT=58)
- $\sigma(E)$ for n + Th229 → n + Th229_e9 (MT=59)
- $\sigma(E)$ for n + Th229 → n + Th229_e10 (MT=60)
- $\sigma(E)$ for n + Th229 → n + Th229_e11 (MT=61)
- $\sigma(E)$ for n + Th229 → n + Th229_e12 (MT=62)

- $\sigma(E)$ for n + Th229 → n + Th229_e13 (MT=63)
- $\sigma(E)$ for n + Th229 → n + Th229_e14 (MT=64)
- $\sigma(E)$ for n + Th229 → n + Th229_e15 (MT=65)
- $\sigma(E)$ for n + Th229 → n + Th229_e16 (MT=66)
- $\sigma(E)$ for n + Th229 → n + Th229_e17 (MT=67)
- $\sigma(E)$ for n + Th229 → n + Th229_e18 (MT=68)
- $\sigma(E)$ for n + Th229 → n + Th229_e19 (MT=69)
- $\sigma(E)$ for n + Th229 → n + Th229_e20 (MT=70)
- $\sigma(E)$ for n + Th229 → n + Th229_e21 (MT=71)
- $\sigma(E)$ for n + Th229 → n + Th229_e22 (MT=72)
- $\sigma(E)$ for n + Th229 → n + Th229_e23 (MT=73)
- $\sigma(E)$ for n + Th229 → n + Th229_e24 (MT=74)
- $\sigma(E)$ for n + Th229 → n + Th229_e25 (MT=75)
- $\sigma(E)$ for n + Th229 → n + Th229_e26 (MT=76)
- $\sigma(E)$ for n + Th229 → n + Th229_e27 (MT=77)
- $\sigma(E)$ for n + Th229 → n + Th229_e28 (MT=78)
- $\sigma(E)$ for n + Th229 → n + Th229_e29 (MT=79)
- $\sigma(E)$ for n + Th229 → n + Th229_e30 (MT=80)
- $\sigma(E)$ for n + Th229 → n + Th229_c (MT=91)
- $\sigma(E)$ for n + Th229 → gamma + Th230 (MT=102)
- Angular dist. for n + Th229 → n + Th229 (MT=2)
- Energy dist. for Fission (MT=18)

No significant changes since ENDF/B-VII.1

n + U232

File: n-092_U_232.endf

MAT: 9219

ZA: 92232

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-JAN10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + U232 → n + U232 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + U232 → n + n + U231 (MT=16)
- $\sigma(E)$ for n + U232 → n + n + n + U230 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + U232 → n + U232_e1 (MT=51)
- $\sigma(E)$ for n + U232 → n + U232_e2 (MT=52)
- $\sigma(E)$ for n + U232 → n + U232_e3 (MT=53)
- $\sigma(E)$ for n + U232 → n + U232_e4 (MT=54)
- $\sigma(E)$ for n + U232 → n + U232_e5 (MT=55)
- $\sigma(E)$ for n + U232 → n + U232_e6 (MT=56)
- $\sigma(E)$ for n + U232 → n + U232_e7 (MT=57)
- $\sigma(E)$ for n + U232 → n + U232_e8 (MT=58)
- $\sigma(E)$ for n + U232 → n + U232_e9 (MT=59)
- $\sigma(E)$ for n + U232 → n + U232_e10 (MT=60)
- $\sigma(E)$ for n + U232 → n + U232_e11 (MT=61)
- $\sigma(E)$ for n + U232 → n + U232_e12 (MT=62)
- $\sigma(E)$ for n + U232 → n + U232_e13 (MT=63)
- $\sigma(E)$ for n + U232 → n + U232_e14 (MT=64)
- $\sigma(E)$ for n + U232 → n + U232_e15 (MT=65)

- $\sigma(E)$ for n + U232 → n + U232_e16 (MT=66)
- $\sigma(E)$ for n + U232 → n + U232_e17 (MT=67)
- $\sigma(E)$ for n + U232 → n + U232_c (MT=91)
- $\sigma(E)$ for n + U232 → gamma + U233 (MT=102)
- Angular dist. for n + U232 → n + U232 (MT=2)
- Energy dist. for Fission (MT=18)

No significant changes since ENDF/B-VII.1

n + U233

File: n-092_U_233.endf

MAT: 9222

ZA: 92233

Auth.: Young,Chadwick,Talou,Leal,Derrien

Lab: LANL,ORNL

Date: EVAL-SEP06

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + U233 → n + U233 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + U233 → n + n + U232 (MT=16)
- $\sigma(E)$ for n + U233 → n + n + n + U231 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + U233 → n + n + n + n + U230 (MT=37)
- $\sigma(E)$ for n + U233 → gamma + U234 (MT=102)

No significant changes since ENDF/B-VII.1

n + U234

File: n-092_U_234.endf

MAT: 9225

ZA: 92234

Auth.: Young,Kawano,Chadwick,MacFarlane

Lab: ORNL,LANL+

Date: EVAL-APR06

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for n + U234 → n + U234 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + U234 → n + n + U233 (MT=16)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + U234 → gamma + U235 (MT=102)

No significant changes since ENDF/B-VII.1

n + U236

File: n-092_U_236.endf

MAT: 9231

ZA: 92236

Auth.: Young,Chadwick,MacFarlane+

Lab: LANL

Date: EVAL-FEB05

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for n + U236 → n + U236 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + U236 → n + n + U235 (MT=16)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + U236 → gamma + U237 (MT=102)

No significant changes since ENDF/B-VII.1

n + Np237

File: n-093_Np_237.endf

MAT: 9346

ZA: 93237

Auth.: P.Young,E.Arthur,F.Mann,T.Kawano

Lab: LANL

Date: EVAL-MAR06

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Np237 → n + Np237 (MT=2)
- $\sigma(E)$ for Non-elastic (MT=3)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Np237 → n + n + Np236 (MT=16)
- $\sigma(E)$ for n + Np237 → n + n + n + Np235 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Np237 → gamma + Np238 (MT=102)

No significant changes since ENDF/B-VII.1

n + Pu240

File: n-094_Pu_240.endf

MAT: 9440

ZA: 94240

Auth.: YOUNG,TALOU,CHADWICK,KAHLER,KAWAN

Lab: LANL

Date: EVAL-SEP09

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pu240 → n + Pu240 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pu240 → n + n + Pu239 (MT=16)
- $\sigma(E)$ for n + Pu240 → n + n + n + Pu238 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Pu240 → gamma + Pu241 (MT=102)
- Energy dist. for Fission (MT=18)

No significant changes since ENDF/B-VII.1

n + Pu241

File: n-094_Pu_241.endf

MAT: 9443

ZA: 94241

Auth.: L.Weston,R.Wright,H.Derrien +

Lab: ORNL

Date: EVAL-OCT03

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for n + Pu241 → n + Pu241 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pu241 → n + n + Pu240 (MT=16)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Pu241 → gamma + Pu242 (MT=102)

No significant changes since ENDF/B-VII.1

n + Pu242

File: n-094_Pu_242.endf

MAT: 9446

ZA: 94242

Auth.: S.F. MUGHABGHAB + O.Iwamoto,etal

Lab: BNL+JAEA

Date: EVAL-AUG11

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Pu242 → n + Pu242 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Pu242 → n + n + Pu241 (MT=16)
- $\sigma(E)$ for n + Pu242 → n + n + n + Pu240 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Pu242 → n + n + n + n + Pu239 (MT=37)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e1 (MT=51)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e2 (MT=52)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e3 (MT=53)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e4 (MT=54)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e5 (MT=55)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e6 (MT=56)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e7 (MT=57)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e8 (MT=58)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e9 (MT=59)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e10 (MT=60)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e11 (MT=61)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e12 (MT=62)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e13 (MT=63)

- $\sigma(E)$ for n + Pu242 → n + Pu242_e14 (MT=64)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e15 (MT=65)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e16 (MT=66)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e17 (MT=67)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e18 (MT=68)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e19 (MT=69)
- $\sigma(E)$ for n + Pu242 → n + Pu242_e20 (MT=70)
- $\sigma(E)$ for n + Pu242 → n + Pu242_c (MT=91)
- $\sigma(E)$ for n + Pu242 → gamma + Pu243 (MT=102)
- Angular dist. for n + Pu242 → n + Pu242 (MT=2)
- Energy dist. for Fission (MT=18)

No significant changes since ENDF/B-VII.1

n + Am241

File: n-095_Am_241.endf

MAT: 9543

ZA: 95241

Auth.: T.Kawano,M.B.Chadwick

Lab: LANL

Date: EVAL-Oct10

Ener.: 1e-05-30000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Am241 → n + Am241 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Am241 → n + n + Am240 (MT=16)
- $\sigma(E)$ for n + Am241 → n + n + n + Am239 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Am241 → n + n + n + n + Am238 (MT=37)
- $\sigma(E)$ for n + Am241 → gamma + Am242 (MT=102)

No significant changes since ENDF/B-VII.1

n + Cm243 *No significant changes since ENDF/B-VII.1*

File: n-096_Cm_243.endf

MAT: 9634

ZA: 96243

Auth.: O.Iwamoto,T.Nakagawa,T.Ohsawa,+

Lab: JAEA+

Date: EVAL-JAN10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cm243 → n + Cm243 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cm243 → n + n + Cm242 (MT=16)
- $\sigma(E)$ for n + Cm243 → n + n + n + Cm241 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cm243 → n + Cm243_e1 (MT=51)
- $\sigma(E)$ for n + Cm243 → n + Cm243_e2 (MT=52)
- $\sigma(E)$ for n + Cm243 → n + Cm243_e3 (MT=53)
- $\sigma(E)$ for n + Cm243 → n + Cm243_e4 (MT=54)
- $\sigma(E)$ for n + Cm243 → n + Cm243_e5 (MT=55)
- $\sigma(E)$ for n + Cm243 → n + Cm243_e6 (MT=56)
- $\sigma(E)$ for n + Cm243 → n + Cm243_e7 (MT=57)
- $\sigma(E)$ for n + Cm243 → n + Cm243_e8 (MT=58)
- $\sigma(E)$ for n + Cm243 → n + Cm243_e9 (MT=59)
- $\sigma(E)$ for n + Cm243 → n + Cm243_e10 (MT=60)
- $\sigma(E)$ for n + Cm243 → n + Cm243_c (MT=91)
- $\sigma(E)$ for n + Cm243 → gamma + Cm244 (MT=102)
- Angular dist. for n + Cm243 → n + Cm243 (MT=2)
- Energy dist. for Fission (MT=18)

n + Cm245

File: n-096_Cm_245.endf

MAT: 9640

ZA: 96245

Auth.: O.Iwamoto,T.Nakagawa,T.Ohsawa,+

Lab: JAEA+

Date: EVAL-JAN10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- Resonance for Resonances (MT=151)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Cm245 → n + Cm245 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Cm245 → n + n + Cm244 (MT=16)
- $\sigma(E)$ for n + Cm245 → n + n + n + Cm243 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Cm245 → n + n + n + n + Cm242 (MT=37)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e1 (MT=51)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e2 (MT=52)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e3 (MT=53)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e4 (MT=54)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e5 (MT=55)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e6 (MT=56)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e7 (MT=57)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e8 (MT=58)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e9 (MT=59)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e10 (MT=60)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e11 (MT=61)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e12 (MT=62)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e13 (MT=63)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e14 (MT=64)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e15 (MT=65)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e16 (MT=66)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e17 (MT=67)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e18 (MT=68)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e19 (MT=69)
- $\sigma(E)$ for n + Cm245 → n + Cm245_e20 (MT=70)
- $\sigma(E)$ for n + Cm245 → n + Cm245_c (MT=91)
- $\sigma(E)$ for n + Cm245 → gamma + Cm246 (MT=102)
- Angular dist. for n + Cm245 → n + Cm245 (MT=2)
- Energy dist. for Fission (MT=18)

No significant changes since ENDF/B-VII.1

n + Es261_m2

File: n-099_Es_254m1.endf

MAT: 9915

ZA: 99261

Auth.: O.Iwamoto, T.Nakagawa, et al.

Lab: JAEA+

Date: EVAL-FEB10

Ener.: 1e-05-20000000.0 (eV)

Available covariance data

- Fission $\bar{\nu}$ for Fission (MT=452)
- Fission $\bar{\nu}$ for Fission (MT=455)
- Fission $\bar{\nu}$ for Fission (MT=456)
- $\sigma(E)$ for Total (MT=1)
- $\sigma(E)$ for n + Es261 → n + Es261 (MT=2)
- $\sigma(E)$ for Neutron Production (MT=4)
- $\sigma(E)$ for n + Es261 → n + n + Es260 (MT=16)
- $\sigma(E)$ for n + Es261 → n + n + n + Es259 (MT=17)
- $\sigma(E)$ for Fission (MT=18)
- $\sigma(E)$ for n + Es261 → n + n + n + n + Es258 (MT=37)
- $\sigma(E)$ for n + Es261 → n + Es261_e1 (MT=51)
- $\sigma(E)$ for n + Es261 → n + Es261_e2 (MT=52)
- $\sigma(E)$ for n + Es261 → n + Es261_e3 (MT=53)
- $\sigma(E)$ for n + Es261 → n + Es261_e4 (MT=54)
- $\sigma(E)$ for n + Es261 → n + Es261_e5 (MT=55)
- $\sigma(E)$ for n + Es261 → n + Es261_e6 (MT=56)
- $\sigma(E)$ for n + Es261 → n + Es261_e7 (MT=57)
- $\sigma(E)$ for n + Es261 → n + Es261_c (MT=91)
- $\sigma(E)$ for n + Es261 → gamma + Es262 (MT=102)
- Angular dist. for n + Es261 → n + Es261 (MT=2)
- Energy dist. for Fission (MT=18)

No significant changes since ENDF/B-VII.1

VII. UNCHANGED EVALUATIONS MISSING COVARIANCES

H: n-001_H_003.endf (MAT=131)

He: n-002_He_003.endf (MAT=225)

N: n-007_N_014.endf (MAT=725)

O: n-008_O_017.endf (MAT=828)

Na: n-011_Na_022.endf (MAT=1122)

P: n-015_P_031.endf (MAT=1525)

S: n-016_S_032.endf (MAT=1625), n-016_S_033.endf (MAT=1628), n-016_S_034.endf (MAT=1631), n-016_S_036.endf (MAT=1637)

Ar: n-018_Ar_036.endf (MAT=1825), n-018_Ar_038.endf (MAT=1831)

K: n-019_K_040.endf (MAT=1928)

Ca: n-020_Ca_042.endf (MAT=2031), n-020_Ca_043.endf (MAT=2034), n-020_Ca_044.endf (MAT=2037), n-020_Ca_046.endf (MAT=2043), n-020_Ca_048.endf (MAT=2049)

V: n-023_V_050.endf (MAT=2325), n-023_V_051.endf (MAT=2328)

Co: n-027_Co_058m1.endf (MAT=2723)

Zn: n-030_Zn_064.endf (MAT=3025), n-030_Zn_065.endf (MAT=3028), n-030_Zn_066.endf (MAT=3031), n-030_Zn_067.endf (MAT=3034), n-030_Zn_070.endf (MAT=3043)

Ga: n-031_Ga_069.endf (MAT=3125), n-031_Ga_071.endf (MAT=3131)

Ge: n-032_Ge_070.endf (MAT=3225), n-032_Ge_072.endf (MAT=3231), n-032_Ge_073.endf (MAT=3234), n-032_Ge_074.endf (MAT=3237), n-032_Ge_076.endf (MAT=3243)

As: n-033_As_075.endf (MAT=3325)

Se: n-034_Se_074.endf (MAT=3425), n-034_Se_076.endf (MAT=3431), n-034_Se_077.endf (MAT=3434), n-034_Se_078.endf (MAT=3437), n-034_Se_079.endf (MAT=3440), n-034_Se_080.endf (MAT=3443), n-034_Se_082.endf (MAT=3449)

Br: n-035_Br_079.endf (MAT=3525), n-035_Br_081.endf (MAT=3531)

Kr: n-036_Kr_080.endf (MAT=3631), n-036_Kr_082.endf (MAT=3637), n-036_Kr_083.endf (MAT=3640), n-036_Kr_084.endf (MAT=3643), n-036_Kr_085.endf (MAT=3646), n-036_Kr_086.endf (MAT=3649)

Rb: n-037_Rb_085.endf (MAT=3725), n-037_Rb_086.endf (MAT=3728), n-037_Rb_087.endf (MAT=3731)

Sr: n-038_Sr_084.endf (MAT=3825), n-038_Sr_086.endf (MAT=3831), n-038_Sr_087.endf (MAT=3834), n-038_Sr_089.endf (MAT=3840), n-038_Sr_090.endf (MAT=3843)

Y: n-039_Y_090.endf (MAT=3928), n-039_Y_091.endf (MAT=3931)

Nb: n-041_Nb_094.endf (MAT=4128)

Mo: n-042_Mo_099.endf (MAT=4246)

Ru: n-044_Ru_096.endf (MAT=4425), n-044_Ru_098.endf (MAT=4431), n-044_Ru_099.endf (MAT=4434), n-044_Ru_100.endf (MAT=4437), n-044_Ru_105.endf (MAT=4452)

Pd: n-046_Pd_102.endf (MAT=4625), n-046_Pd_104.endf (MAT=4631), n-046_Pd_110.endf (MAT=4649)

Ag: n-047_Ag_107.endf (MAT=4725), n-047_Ag_110m1.endf (MAT=4735), n-047_Ag_111.endf (MAT=4737)

Cd: n-048_Cd_106.endf (MAT=4825), n-048_Cd_108.endf (MAT=4831), n-048_Cd_110.endf (MAT=4837), n-048_Cd_111.endf (MAT=4840), n-048_Cd_112.endf (MAT=4843), n-048_Cd_113.endf (MAT=4846), n-048_Cd_114.endf (MAT=4849), n-048_Cd_115m1.endf (MAT=4853), n-048_Cd_116.endf (MAT=4855)

In: n-049_In_113.endf (MAT=4925), n-049_In_115.endf (MAT=4931)

Sn: n-050_Sn_112.endf (MAT=5025), n-050_Sn_113.endf (MAT=5028), n-050_Sn_114.endf (MAT=5031), n-050_Sn_115.endf (MAT=5034), n-050_Sn_116.endf (MAT=5037), n-050_Sn_117.endf (MAT=5040), n-050_Sn_118.endf (MAT=5043), n-050_Sn_119.endf (MAT=5046), n-050_Sn_123.endf (MAT=5058), n-050_Sn_125.endf (MAT=5064), n-050_Sn_126.endf (MAT=5067)

Sb: n-051_Sb_121.endf (MAT=5125), n-051_Sb_123.endf (MAT=5131), n-051_Sb_125.endf (MAT=5137), n-051_Sb_126.endf (MAT=5140)

Te: n-052_Te_120.endf (MAT=5225), n-052_Te_122.endf (MAT=5231), n-052_Te_123.endf (MAT=5234), n-052_Te_124.endf (MAT=5237), n-052_Te_125.endf (MAT=5240), n-052_Te_126.endf (MAT=5243), n-052_Te_127m1.endf (MAT=5247), n-052_Te_128.endf (MAT=5249), n-052_Te_129m1.endf (MAT=5253), n-052_Te_130.endf (MAT=5255)

I: n-053_I_130.endf (MAT=5334), n-053_I_131.endf (MAT=5337), n-053_I_135.endf (MAT=5349)

Xe: n-054_Xe_126.endf (MAT=5431), n-054_Xe_128.endf (MAT=5437), n-054_Xe_129.endf (MAT=5440), n-054_Xe_130.endf (MAT=5443), n-054_Xe_133.endf (MAT=5452), n-054_Xe_136.endf (MAT=5461)

Cs: n-055_Cs_134.endf (MAT=5528), n-055_Cs_136.endf (MAT=5534), n-055_Cs_137.endf (MAT=5537)

Ba: n-056_Ba_130.endf (MAT=5625), n-056_Ba_132.endf (MAT=5631), n-056_Ba_133.endf (MAT=5634), n-056_Ba_134.endf (MAT=5637), n-056_Ba_135.endf (MAT=5640), n-056_Ba_136.endf (MAT=5643), n-056_Ba_137.endf (MAT=5646), n-056_Ba_138.endf (MAT=5649), n-056_Ba_140.endf (MAT=5655)

La: n-057_La_138.endf (MAT=5725), n-057_La_140.endf (MAT=5731)

Ce: n-058_Ce_136.endf (MAT=5825), n-058_Ce_138.endf (MAT=5831), n-058_Ce_139.endf (MAT=5834), n-058_Ce_140.endf (MAT=5837), n-058_Ce_142.endf (MAT=5843), n-058_Ce_143.endf (MAT=5846), n-058_Ce_144.endf (MAT=5849)

Pr: n-059_Pr_142.endf (MAT=5928), n-059_Pr_143.endf (MAT=5931)

Nd: n-060_Nd_142.endf (MAT=6025), n-060_Nd_144.endf (MAT=6031), n-060_Nd_147.endf (MAT=6040), n-060_Nd_150.endf (MAT=6049)

Pm: n-061_Pm_148.endf (MAT=6152), n-061_Pm_149.endf (MAT=6155), n-061_Pm_151.endf (MAT=6161)

Sm: n-062_Sm_147.endf (MAT=6234), n-062_Sm_148.endf (MAT=6237), n-062_Sm_150.endf (MAT=6243), n-062_Sm_153.endf (MAT=6252), n-062_Sm_154.endf (MAT=6255)

Eu: n-063_Eu_151.endf (MAT=6325), n-063_Eu_152.endf (MAT=6328), n-063_Eu_156.endf (MAT=6340), n-063_Eu_157.endf (MAT=6343)

Tb: n-065_Tb_159.endf (MAT=6525), n-065_Tb_160.endf (MAT=6528)

Dy: n-066_Dy_156.endf (MAT=6625), n-066_Dy_158.endf (MAT=6631), n-066_Dy_160.endf (MAT=6637), n-066_Dy_161.endf (MAT=6640), n-066_Dy_162.endf (MAT=6643), n-066_Dy_163.endf (MAT=6646), n-066_Dy_164.endf (MAT=6649)

Ho: n-067_Ho_165.endf (MAT=6725), n-067_Ho_166m1.endf (MAT=6729)

Er: n-068_Er_162.endf (MAT=6825), n-068_Er_164.endf (MAT=6831)

Lu: n-071_Lu_175.endf (MAT=7125), n-071_Lu_176.endf (MAT=7128)

Ta: n-073_Ta_182.endf (MAT=7331)

Hg: n-080_Hg_196.endf (MAT=8025), n-080_Hg_198.endf (MAT=8031), n-080_Hg_199.endf (MAT=8034), n-080_Hg_200.endf (MAT=8037), n-080_Hg_201.endf (MAT=8040), n-080_Hg_202.endf (MAT=8043), n-080_Hg_204.endf (MAT=8049)

Ra: n-088_Ra_223.endf (MAT=8825), n-088_Ra_224.endf (MAT=8828), n-088_Ra_225.endf (MAT=8831), n-088_Ra_226.endf (MAT=8834)

Am: n-095_Am_244.endf (MAT=9552), n-095_Am_244m1.endf (MAT=9553)