

Release notes for ENDF/B-VII.1 neutrons sublibrary

December 20, 2011

ERROR SUMMARY

NJOY99 A cumulative probability table decreases, indicating a goof in a spectrum: n-063_Eu_153.endf

NJOY99 An unidentified mismatch in a photon production sum: n-063_Eu_153.endf

NJOY99 Main energy grid is not monotonic: n-042_Mo_097.endf, n-095_Am_243.endf

NJOY99 Outgoing energy E' not energetically allow: E' .le. E-Q.: n-006_C_000.endf, n-007_N_014.endf, n-008_O_016.endf, n-013_Al_027.endf, n-014_Si_028.endf, n-014_Si_029.endf, n-014_Si_030.endf, n-015_P_031.endf, n-020_Ca_040.endf, n-020_Ca_043.endf, n-020_Ca_046.endf, n-020_Ca_048.endf, n-024_Cr_050.endf, n-024_Cr_052.endf, n-024_Cr_053.endf, n-024_Cr_054.endf, n-026_Fe_054.endf, n-026_Fe_056.endf, n-026_Fe_057.endf, n-028_Ni_058.endf, n-028_Ni_060.endf, n-028_Ni_061.endf, n-028_Ni_062.endf, n-028_Ni_064.endf, n-029_Cu_063.endf, n-029_Cu_065.endf, n-041_Nb_093.endf, n-073-Ta_180.endf, n-080_Hg_198.endf, n-080_Hg_199.endf, n-080_Hg_200.endf, n-080_Hg_201.endf, n-080_Hg_202.endf, n-080_Hg_204.endf, n-082_Pb_204.endf, n-082_Pb_206.endf, n-082_Pb_207.endf, n-082_Pb_208.endf, n-083_Bi_209.endf

checkr The incident particle Emax does not extend far enough (should be 20 MeV for neutrons): n-004_Be_007.endf

fizcon A level's energy is somehow off: n-091_Pa_229.endf

fizcon All probability distributions should be normalized to 1, this one isn't.: n-023_V_050.endf, n-030_Zn_065.endf, n-030_Zn_067.endf, n-030_Zn_068.endf, n-030_Zn_070.endf, n-041_Nb_093.endf

fizcon Outgoing energy E' not energetically allow: E' .le. E-Q.: n-018_Ar_040.endf, n-050_Sn_120.endf, n-072_Hf_174.endf, n-072_Hf_176.endf, n-072_Hf_177.endf, n-072_Hf_178.endf, n-072_Hf_179.endf, n-072_Hf_180.endf

fudge Wrong interpolation mode used.: n-001_H_002.endf, n-001_H_002.endf, n-082_Pb_208.endf, n-082_Pb_208.endf

psyche Missing total and/or elastic so can not do cross section sanity tests: n-004_Be_007.endf

psyche PSYCHE attempted to compute average Eg, found something unusual: n-017_Cl_035.endf, n-017_Cl_037.endf, n-020_Ca_040.endf, n-020_Ca_042.endf, n-020_Ca_043.endf, n-020_Ca_044.endf, n-020_Ca_046.endf, n-020_Ca_048.endf, n-082_Pb_204.endf, n-082_Pb_206.endf, n-082_Pb_207.endf

n-001_H_001.endf

- **fizcon** Non-errors:
 1. 2-body MT102 OK for 1H: 1H(n,g)2H

ERROR(S) FOUND IN MAT= 125, MF= 6, MT=102
 DISCRETE 2-BODY LAW NOT PERMITTED FOR MT= 102 SEQUENCE NUMBER 2

n-001_H_002.endf

- **fudge** Errors:
 1. Wrong interpolation mode used.

WARNING: Some interpolation changed for angular data from 2 to 4.
 2. Wrong interpolation mode used.

WARNING: Some interpolation flags changing to 2 for MF = 4, LTT = 2 or 3

n-001_H_003.endf

- Passed All Checks!

n-002_He_003.endf

- Passed All Checks!

n-002_He_004.endf

- Passed All Checks!

n-003_Li_006.endf

- **fizcon** Non-errors:
 1. 2-body MT105 OK for 6Li: 6Li(n,t)a

ERROR(S) FOUND IN MAT= 325, MF= 6, MT=105
 DISCRETE 2-BODY LAW NOT PERMITTED FOR MT= 105 SEQUENCE NUMBER 2

n-003_Li_007.endf

- Passed All Checks!

n-004_Be_007.endf

- **checkr** Errors:
 1. The incident particle Emax does not extend far enough (should be 20 MeV for neutrons)

ERROR(S) FOUND IN MAT= 419, MF= 1, MT=451
 EMAX = 8.10E+06 OUT OF RANGE 2.00E+07 - 5.00E+08 SEQUENCE NUMBER 3
 DIST-DEC06 20111222

- psyche Errors:

1. Missing total and/or elastic so can not do cross section sanity tests

CANNOT PERFORM WICK LIMIT TEST BECAUSE TOTAL AND/OR ELASTIC CROSS SECTIONS ARE MISSING

_____n-004_Be_009.endf_____

- Passed All Checks!

_____n-005_B_010.endf_____

- Passed All Checks!

_____n-005_B_011.endf_____

- Passed All Checks!

_____n-006_C_000.endf_____

- NJ0Y99 Errors:

1. Outgoing energy E' not energetically allow: E' .le. E-Q.

energy distributions

ep.gt.epmax 8.509482E-12 with q.lt.0 for (n,x) at e 1.000000E-11 -> 1.000000E-11
 awr.lt.180---this is probably an error.

_____n-007_N_014.endf_____

- NJ0Y99 Errors:

1. Outgoing energy E' not energetically allow: E' .le. E-Q.

energy distributions

ep.gt.epmax 8.701311E-12 with q.lt.0 for (n,x) at e 1.000000E-11 -> 1.000000E-11
 awr.lt.180---this is probably an error.

energy distributions

...

awr.lt.180---this is probably an error.

_____n-007_N_015.endf_____

- Passed All Checks!

_____n-008_0_016.endf_____

- fizcon Non-errors:

1. Nested NC-type cov. OK

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ERROR(S) FOUND IN MAT= 825, MF=33, MT=103
      BAD NC-TYPE SUB-SUBSECTION          SEQUENCE NUMBER      4
      CONFLICTS WITH SUB-SUBSECTION AT      4
      DERIVED MT=  4 USED AS AN MTI IN MT=103
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• NJOY99 Errors:

1. Outgoing energy E' not energetically allow: E' .le. E-Q.

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energy distributions
ep.gt.epmax 8.848774E-12 with q.lt.0 for (n,x) at e  1.000000E-11 -> 1.000000E-11
awr.lt.180---this is probably an error.

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n-008_0_017.endf

• Passed All Checks!

n-009_F_019.endf

• Passed All Checks!

n-011_Na_022.endf

• psyche Unknown:

1. Level density in URR not in agreement with PSYCHE's, possibly misguided, expectations

DENSITY 6.84072E+04 SHOULD BE 4.18453E+04

DENSITY 6.84072E+04 SHOULD BE 4.18453E+04

...

2. Strength function in URR not in agreement with PSYCHE's, possibly misguided, expectations

LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04

LIES OUTSIDE LIMITS 1.00000E-05 TO 2.00000E-04

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3. Non-threshold reaction with Q value differing from PSYCHE's, possibly misguided, expectations