
Conversion of ENDF/B-VI.8 to ENDF/B-VII

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Automatic Conversions

- Set MOD number to 0
- Set EMAX to 20 MeV if it is 0.0
- Change NVER to 7
- Reformat the material symbol field
- Left justify the laboratory field
- Set the distribution date to JUN05
- Change ENDF/B-VI to ENDF/B-VII in the free text
- Insert conversion documentation
- Sets all section MOD numbers in the directory to 0
- Remove elastic transformation matrix if it exists
- Calculate and insert the reaction product IZAP in each section of files 9 and 10

Further processing

- STANEF, CHECKR, FIZCON
- Errors corrected by hand
 - All non-zero values of MATP and ELFS in File 8 are removed.
 - Derived sections such as 203, 204, etc. are removed
 - The number of Legendre coefficients for elastic scattering was made even by adding a final 0.0 coefficient
- CHECKR and FIZCON errors not fixed were documented

Summary of Remaining Errors

- File 2
 - Potential scattering value outside range of systematics
 - Resonance parameters yield negative cross sections (mostly fission products)
- File 3
 - Points in a partial cross section not in the total
 - Sum up failures
- File 4
 - Continuum reactions have LCT not equal to 1
- File 5
 - Range of secondary energy distribution conflicts with the Q-value
 - Distribution not normalized to 1.0
- File 6
 - Distribution not normalized to 1.0

Summary of Remaining Errors

- File 7
 - Log interpolation when function is 0.0
- File 8
 - Decay mode energy sum up failures
- File 9/10
 - Sum up problems
- File 14
 - Number of subsections different from File 12 or 13
- File 33
 - Missing sub-sections.
 - Use of LB=4 with a symmetric matrix

Deficiencies List

- Mostly negative resonance cross sections for fission products.
- Resonance boundary problems for KAERI fission products
- Cross section not zero at threshold
- 1-458 prompt γ kinetic energy is 6 eV