Status of ENDF/B-VIIbeta2

M. Herman (NNDC-BNL)

- beta 2 release

- fixed deficiencies

- deficiencies to be fixed (hopefully)

- data verification (Ramon Arcilla Jr.)

beta 2 release (April 25, 2006)

First complete ENDF/B-VII library (14 sublibraries)

- massive changes in the neutron sublibrary (120 new/revised evaluations)

- 7 new/revised thermal scattering evaluations

- new standards sublibrary

- new decay sublibrary

- changes in proton, deuteron and photonuclear sublibraries

Fixed deficiencies (beta 3?)

Brown's list

- Interpolation :Xe123, I135

- Fission in RR: Xe134, Sm147, Sm148, Sm149

- Typo in MF=12: Eu153, F19, Zr90, Sn113, Gd153, Np237 (+ LANL RR)

Pronayev's list

- Negative resonance corrected: Kr78, Ru101, Ag109

- Negative resonance updated to Atlas: Te126

- RR updated to Atlas: Te124

- RR partials don't sum up: Ru100, Ru102, Cd110, I130, Xe124, Ba138, Ce139, Ce141, Ce142, Ce143

- Fissions in RR: Xe134

New evaluations (with covariances):
Tc99, Ir191, Ir193

Revised description:
Pu236 (x-sections), Pu239 (Young), U235 (Young + removed nu-bar covariance cross correlations), U238 (Young)

Revised fast neutron covariances:
Th232

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Deficiencies not fixed (yet)

- Energy balance (KERMA) in many evaluations (see www.nndc.bnl.gov/exfor2/4web/ebal/)

- Lost covariance for fission neutron spectrum for Cf252

- Interpolation law 22 in MF=5 (NJOY fix?)

- RR+UR covariances in Th232

- Incomplete Es253 (likely to be left as it is)

- RR could be improved in: As75, Se74, Se77, Br79, Rb87, Sr86, Mo100, Pd110, Cd114, Cd116, Ce144, Pr143, Nd145, Nd146, Eu155

- RR beta2 versus Atlas discrepancy in: Zr96, Sn115, Sn118, Sn122, Te122, Te125, Ba132, Ce140, Sm144

- All errors reported on www.nndc.bnl.gov/exfor2/4web/problems.html except those for Ir191,193 (evaluations replaced)

Library verification: Ramon ...