

CSEWG 2016 – Covariance Session

Goal: Review the status of neutron reaction covariance data to be considered for or included in ENDF/B-VIII.0.

Procedure: Dave Brown has generated a 163-page PDF document that organizes the “n + Material” information to be considered into 6 distinct categories (Sections II to VII) based on their status with respect to covariance data:

II. New evaluations missing covariances

III. New evaluations containing covariances

IV. Changed evaluations missing covariances

V. Changed evaluations containing covariances

VI. Unchanged evaluations containing covariances

VII. Unchanged evaluations missing covariances

This PDF document has been sent by email to the CSEWG distribution list. The number of entries is far too long to consider during this 3-hour session so the focus will be on the items mentioned in the next slide in the order shown.

Selected Priority Topics for Discussion

- Covariance data for CIELO (WPEC SG-40) materials: H-1, O-16, Fe-54,56,57,58, U-235, U-238, and Pu-239.
 - This will include a discussion of Ishikawa's comparisons of SG-39 and CIELO uncertainties, comments from the LANL group on Pu-239 evaluation (including PFNS), Capote and Trkov work on U-235 and U-238, etc.
- Covariances for the recent Hale et al. and other timely resonance evaluations for the new library.
 - Li-6, etc.
- Covariances for fission yield evaluations from ORNL (Pigni et al.).
- New evaluations containing covariances (Section III) not included above, e.g., Cl, Ca, Ni, Cu, and W isotopes.
- New evaluations missing covariances (Section II) not included above, e.g., Ar, Co, Ni, As, Kr, Rh, Te, Xe, Dy, Yb, Hf, Os, and Np.
- Changed evaluations containing covariances (Section V) not mentioned above, e.g., C, Sc, Zn, Sr, Sn, Xe, Pm, Sm, Eu, Tm, Ta, Re, Pa, U, Pu, and Am.
- If there is any time remaining on the clock (unlikely), we can have a general discussion about what realistically may or may not get done in providing covariances for ENDF/B-VIII.0.