

WPEC Subgroup 44 Proposal *Investigation of Covariance Data in General Purpose Nuclear Data Libraries*

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Subgroup Participants

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- **IAEA-NDS**

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Major Contributions

1. Establish quality criteria in the nuclear data evaluation community through a best practices document including:
 - a. Establish guidance on the quality/fidelity of documentation of new covariance evaluations.
 - b. Define a nuclear data covariance validation procedure. Construct a frame work that will be able to identify if evaluated nuclear data uncertainty proposed for inclusion in a nuclear data library is “way too small” or “way too large.” Collaborate with SG46.
 - c. Comment on the place of integral experiments in general purpose nuclear data libraries.
2. Consider new types of data for covariance:
 - a. Secondary distributions, angular distributions, $S(a,b)$, PFNS. Collaborate with SG42.
 - b. Correlations, energy, reaction, data type, isotopes.
3. Opportunity to redefine the covariance format working with GND. Collaborate with SG43 and EG-GNDS.

Deliverables

- **2018-2019:** Review of discrepant covariance data across major nuclear data projects and establishment of a high priority list for nuclear data covariance evaluation.
- **2019-2020:** Draft version of Best Practices Document for General Purpose Nuclear Data Library covariance evaluations.
- **2020-2021:** Final version of Best Practices Document for General Purpose Nuclear Data Library covariance evaluations complete with examples.