

WPEC sub-group proposal
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Title

"Methods and issues for the combined use of integral experiments and covariance data"

Justification for a Subgroup

As a result of the work performed in the WPEC Subgroup 26 on "Nuclear Data Needs for Advanced Reactor Systems" many target accuracies for different reactions, isotopes, and energy ranges have been defined in order to satisfy design requirement uncertainty for many integral neutronic parameters. Many of these target accuracies are very tight and not likely to be achieved with current experimental measurement techniques. It has been suggested that a combined use of integral experiments and differential information (e. g., measurements, evaluation, uncertainty data) would make possible to provide designers with improved nuclear data that would be able to meet design target accuracies.

Subgroup Monitor

R.D. McKnight, ANL (ENDF)

Subgroup Coordinator

M. Salvatores, ANL&INL

Subgroup Participants (Proposal, to be revised, updated etc)

G. Palmiotti, INL (ENDF); Won Sik Yang, ANL (ENDF); P. Oblozinsky, BNL (ENDF); R. Little, LANL (ENDF); M. Dunn, ORNL (ENDF); M. Ishikawa, JAEA (JENDL); K. Shibata, JAEA (JENDL); R. Jacqmin, CEA (JEFF); G. Rimpault, CEA (JEFF); I. Kodeli, NEA Databank

(Note: Above names are placeholders. The data projects will identify appropriate participants from their community)

Definition of the project and proposed activities

It is proposed as a mandate for this new WPEC subgroup to study methods and issues of the combined use of integral experiments and covariance data. Indication should be provided how to best exploit existing integral experiments, define new ones if needed, provide trends and feedback to nuclear data evaluators and measurers. Participation of evaluators (to account for feedback to the files) and a close link to related activities like those coordinated by the WPNCS expert group on Uncertainty Analysis for Criticality Safety Assessment (UACSA) should be clearly established.

Relevance to Evaluated Data Files

Resource to advance the quality of Evaluated Data Files to meet accuracy requirements of Advance Reactor Systems

Time-Schedule and Deliverables:

It is anticipated that the experts of this SG could complete and document the activities (mandate) listed above within 2 years.

- | <u>Date</u> | <u>Deliverables</u> |
|--------------|---|
| • June, 2008 | <i>Review of SG Proposal by WPEC;
initiate Subgroup activities.</i> |
| • June, 2010 | <i>Present Draft Report of Subgroup activities;
WPEC consideration of potential implementation
of SG recommendations.</i> |