

WPEC Subgroup 48

Advances in Thermal Scattering Law Analysis

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**33nd Meeting of the
NEA Working Party on International Nuclear Data Evaluation Co-operation
May 10 – 14, 2021 • Zoom Meeting**

WPEC Subgroup 48

Agenda

Duration	PDT	CEST	JST	Topic	
00:05	05:00	14:00	21:00	Welcome	A. Hawari, G. Noguère
00:15	05:05	14:05	21:05	Recent Advancements in DFT Calculations of Vibrational Properties	J. Bouchet
00:10	05:20	14:20	21:20	Update on ENDF-6 Mixed Elastic Scattering Format	M. Zerkle
00:15	05:30	14:30	21:30	Status of the TSL Activities in the Framework of the NAUSICAA Collaboration	G. Noguère
00:15	05:45	14:45	21:45	TSL Methods, Evaluations, and Benchmarks at NCSU	A. Hawari
00:15	06:00	15:00	22:00	Thermal Neutron Scattering Effects of Oxygen Bound in Light Water	A. Trainer
00:05	06:15	15:15	22:15	Break	
00:15	06:20	15:20	22:20	Atomic Scale Monte-Carlo Simulations of Neutron Diffraction Experiments on UO ₂ Up to 1664 K	S. Xu
00:15	06:35	15:35	22:35	Design of New Pulsed Neutron Die Away Experiments at LLNL	D. Siefman
00:15	06:50	15:50	22:50	Update of the ENDF/B-VIII.0 Evaluation for Thermal Scattering in Light Water with Extended Temperature Grid	J. Ignacio Marquez Damian
00:15	07:05	16:05	23:05	Update on NNL TSL Evaluations and Validation	M. Zerkle
00:15	07:20	16:20	23:20	Observations of Different Thermal Scattering Models in View of Graphite Based Materials	R. Dagan
00:15	07:35	16:35	23:35	Evaluation of Thermal Scattering Libraries with NJOY+NCrystal	K. Ramic
00:10	07:50	16:50	23:50	Discussion	All
	08:00	17:00	00:00	Close	

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Continued growth in the area of thermal neutron scattering data motivates the formation of a new subgroup within the WPEC nuclear data collaboration

- ⇒ **Motivate the TSL evaluation effort in support of various nuclear science and engineering applications**
 - ⇒ **Advanced reactors (e.g., various molten salts)**
 - ⇒ **Criticality safety (e.g., various U and Pu based fuels)**
 - ⇒ **Neutron science (e.g., cryogenic moderators)**

- ⇒ **Review the development of advanced TSL evaluation methods and tools with consideration of modern simulation approaches**

- ⇒ **Address issues related to data validation, covariance generation, and data formats, ...**

- ⇒ **Act as the focal point with other WPEC subgroups (SG44, SG45, GNDS, etc.)**

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Time-Schedule and Deliverables

During the 3-year period, discussion of new and upcoming TSL evaluations, that are being considered for release into the databases (ENDF, JEFF, etc.), will continue. Coordination with other WPEC subgroups will be ongoing.

In addition, the following deliverables will be pursued

- ⇒ **2020-2021: Review and documentation of advances in TSL evaluation methods and tools. Consideration will be given to emerging modern nuclear science and technology analysis modalities.**
- ⇒ **2021-2022: Review and documentation of TSL data validation, uncertainties, and formats.**
- ⇒ **2022-2023: Summary and formulation of the SG findings, conclusions and recommendations.**

Thank You