

Consultants' Meeting on Neutron Data Standards
12-16 October 2020
(virtual event)

ADOPTED AGENDA

Monday, 12 October

13:50 Technical setup and checks

14:00 Opening (IAEA)

A. Koning, R. Capote, G. Schnabel (IAEA)

**14:10 Election of Chairman and Rapporteur
Adoption of the Agenda**

14:20 **Introduction**

R. Capote

14:35 Participants' Presentations

14:35 Recent work on neutron standards, A. Carlson (NIST, USA)

15:10 ${}^6\text{Li}(n,t)$ R matrix fit of the CSNS Back-n data with RAC code, Chen Zhenpeng (TSU, China)

15:35 ${}^{235}\text{U}(n,f)$ cross section from thermal to 170 keV, Paolo Finocchiaro (INFN, Italy)

16:05 Break

16:15 Recent LANL work on reactions in the ${}^7\text{Li}$ system, G. Hale (LANL, USA)

16:40 EDA R-matrix evaluations of NN and ${}^{17}\text{O}$ systems, M. Paris (LANL, USA)

17:05 ${}^{11}\text{B}$ compound nucleus reactions: ${}^{10}\text{B}(n,Z)$ reactions, T. Massey (OU, USA)

17:30 Discussion

Tuesday, 13 October

14:00 Participants' Presentations (cont'd)

14:00 Reference prompt discrete γ -ray production and high energy fission cross sections, S. Simakov (KIT, Germany)

14:30 Measurement of ${}^{235}\text{U}(n,f)$ relative to ${}^1\text{H}(n,n)$ in the energy range from 30 to 150 MeV at n_TOF, E. Pirovano (PTB, Germany)

14:55 FissionTPC cross section ratio results, L. Snyder (LLNL, USA)

15:25 Break

15:35 ${}^6\text{Li}(n,t)$ and ${}^{235}\text{U}(n,f)$ sub-thermal measurements via an absolute cold neutron flux monitor, P. Mumm (NIST, USA)

16:00 RPI measurements that can help improve cross section standards, Y. Danon (RPI, USA)

16:30 Carbon scattering cross section, J. Vanhoy (USNA, USA)

17:00 Discussion

Wednesday, 14 October

14:00 Participants' Presentations (cont'd)

- 14:00 Multigroup evaluation of the $^{235}\text{U}(n,f)$, $^{238}\text{U}(n,\gamma)$, $^{238}\text{U}(n,f)$ and $^{239}\text{Pu}(n,f)$ cross sections with the CONRAD code by using the GMA database: preliminary results, G. Noguere (CEA, France)
- 14:30 Review of gold capture data, R. Reifarh (UF, Germany)
- 15:00 $^{197}\text{Au}(n,\gamma)$ 30 keV Maxwellian: absolute integral measurements, J. Praena (UG, Spain)
- 15:25 On the thermal and resonance integrals as standards for neutron induced fission on major actinides, I. Duran (USC, Spain)

15:50 Break

- 16:00 $^{238}\text{U}(n,\gamma)$ and $^{197}\text{Au}(n,\gamma)$ cross sections, P. Schillebeeckx (EC-JRC Geel)
- 16:30 Status on AMS experiments: (1) $^{235}\text{U}(n,\gamma)$ at thermal and sub-thermal energies, (2) systematic differences between AMS & TOF, and (3) ^{235}U -PFNS – the threshold reaction $^{27}\text{Al}(n,2n)$, A. Wallner (HZDR)

16:55 Discussion

Thursday, 15 October

14:00 Participants' Presentations (cont'd)

- 14:00 Ad hoc approach for construction of USU covariances for GMA fit, V. Pronyaev (Russia)
- 14:30 Variance analysis of the experimental data with prescribed statistical uncertainties, S. Badikov (Atomstandard, Russia)
- 15:00 Updating the $^{239}\text{Pu}(n,f)$ covariances in GMA with templates of expected uncertainties, D. Neudecker (LANL, USA)
- 15:25 Prototype of a new Bayesian evaluation system - development and validation, G. Schnabel (IAEA)

15:55 Break

- 16:05 Identifying physics reasons for outliers and systematic discrepancies in experimental $^{239}\text{Pu}(n,f)$ cross-section data using machine learning, D. Neudecker (LANL, USA)

16:30 Discussion

Friday, 16 October

14:00 Discussion (cont'd)

17:30 Closing of the meeting