



International Workshop on Nuclear Data Covariances

April 28 – May 1, 2014
Santa Fe, New Mexico, USA

First Circular

This is the first announcement of the “International Workshop on Nuclear Data Covariances” (CW2014). The workshop will take place in the center of the beautiful city of Santa Fe from April 28 to May 1, 2014. It is the third workshop in a series that started with the 'Workshop on Neutron Cross Section Covariances' (Port Jefferson, USA, 2008) and continued with the 'Second Workshop on Neutron Cross Section Covariances' (Vienna, Austria, 2011).

The purpose of this workshop is to bring together scientists in the field of nuclear data evaluation, nuclear reaction theory, reactor physics and associated experiments to review recent developments in nuclear data evaluation methodology as well as assess and discuss open questions regarding uncertainty estimates and associated formatting requirements from the point of view of the experimentalist, the theoretician, the evaluator as well as from application side.

Topics:

The workshop is open to contributions on nuclear data observables (including e.g. cross sections, energy and angle spectra, yields, resonance parameter) from the resonance up to the high energy range as well as for light to heavy nuclei.

Covariance evaluation methodology:

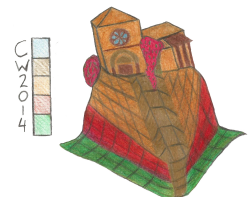
- Statistical basis of data evaluation - Bayesian techniques, Estimation of priors, Unified Monte Carlo, Total Monte Carlo, etc.
- Methods for the estimation of covariance matrices
- Evaluation tools including uncertainty information
- Open issues: small evaluated uncertainties, model defect uncertainties, linearization in transport calculations, etc.

Covariance for and from nuclear data measurements:

- Covariance matrices coming from experiments, estimation procedure, details of analysis, problems specific to certain energy ranges (i.e. resonance range)
- Needs of evaluators concerning experimental uncertainty information
- Covariances between different experiments
- Numerical tools for estimating experimental covariances
- Dedicated experiments
- Integral experiments

Data evaluations including covariance matrices:

- Recent nuclear data evaluations
- Resonance analysis of nuclear cross sections



- Assessment of covariances in recent ENDF, JEFF, JENDL, etc. evaluated files, priority areas for improvements

Formatting for experimental and evaluated data:

- EXFOR
- ENDF, GND
- NJOY

Application of nuclear data covariances:

- Use of nuclear data covariances in fission and fusion research
- Neutron dosimetry in conventional and in fusion reactors
- Requirements on nuclear data covariances for safety, reactor and fuel cycle assessments
- Use of nuclear data covariances in medicine and material research
- Transport codes
- Use and impact of covariance data in nuclear data adjustments
- Benchmarking using covariance matrices
- Impact and needs of covariances for sensitivity calculations
- Nuclear data covariances for astrophysics applications

Venue:

The workshop will take place in the hotel [La Fonda on the Plaza](#) right in the center of Santa Fe: [La Fonda on the Plaza](#), 100 East San Francisco Street, Santa Fe, New Mexico 87501, USA.

Registration:

The workshop registration will start in the first week of November, 2013. As **the number of workshop attendees is limited to about 60 persons**, please register at your earliest convenience until December 31, 2013. A registration fee of 100 USD applies to regular participants and is waived for students.

Support for lodging:

A limited support for lodging will be available. Please contact us at your earliest convenience at cw2014@lanl.gov concerning this matter, at least until December 31, 2013. Those applying for support are also asked to submit an abstract. Especially students and PostDocs are encouraged to apply.

Abstract submission:

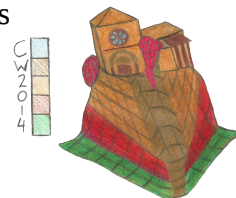
Abstract submission will be opened at the same time as the workshop registration. Please submit your abstract until December 31, 2013.

Proceedings:

We are planning to publish the contributions to this workshop in a refereed journal. A final decision will be announced by the end of November 2013, and further details will be provided on the website of the workshop shortly after.

Accommodation:

A block of 30 rooms has been reserved in advance at the workshop hotel [La Fonda on the Plaza](#). The room rate will correspond to the allowed per-diem rate for Santa Fe, i.e. 83 USD plus taxes per night from earliest 4/27/2014 to latest 5/2/2014. Please consult the workshop homepage for more information.



International advisory board:

- E. Bauge: CEA, France
- R. Capote: IAEA Vienna, Austria
- C. de Saint-Jean: CEA, France
- D. Higdon: LANL, USA
- O. Iwamoto: JAEA, Japan
- A. Koning: NRG Petten, The Netherlands
- D. McNabb: LLNL, USA
- G. Palmiotti: INL, USA
- P. Schillebeeckx: JRC-IRMM, Belgium
- A. Trkov: IJS, Slovenia
- T. Burr: LANL, USA
- A. Carlson: NIST, USA
- M. Herman: BNL, USA
- M. Ishikawa: JAEA, Japan
- B. Kiedrowski: LANL, USA
- H. Leeb: VUT, Austria
- P. Oblozinsky: Slovak Academy of Sciences, Slovakia
- M. Salvatores: INL, USA
- D. Smith: ANL, USA

Local organizing committee: (LANL, USA)

- Denise Neudecker (chair)
- Toshihiko Kawano
- Patrick Talou
- Mark Chadwick

Key Dates:

Abstract submission & registration until: December 31, 2013

Speaker notification: January 15, 2014

Registration fee payment until: February 15, 2014

Workshop hotel room reservation until: March 31, 2014

Beginning of workshop: April 28, 2014

End of workshop: May 1, 2014

Proceedings submission until: May 15, 2014

Conference homepage: t2.lanl.gov/cw2014

Conference e-mail: cw2014@lanl.gov

We are looking forward to seeing you at the workshop!
CW2014 Local Organizing Committee

