Compound-Nuclear Reactions and Related Topics (CNR*24)



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IAEA Neutron Data Standards

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Most neutron cross section measurements are made relative to cross sections that are referred to as the Neutron Data Standards (NDS). The conversion to absolute cross sections requires precise knowledge of the NDS, as any bias or uncertainty in the NDS will impact the quality of the resulting absolute cross sections. Moreover, the NDS uncertainties constitute a lower limit for these absolute cross sections. Due to this significant role of the NDS, both the rigorous assessment of experimental uncertainties and the statistical evaluation procedure are crucial aspects in the Neutron Data Standards project. This talk will present development activities towards the next NDS release undertaken since the last NDS release in 2017. Particular emphasis will be placed on a newly introduced Monte Carlo-based methodology for the rigorous consideration of non-linearities and unrecognized sources of uncertainty in the evaluation procedure.

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