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Nuclear data evaluation, status and perspectives

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The knowledge of nuclear reaction data is an important requisite for the development and advances in nuclear technologies, but also for several fields of basic sciences such as nuclear astrophysics, nuclear medicine and material sciences. Nuclear data evaluation aims to reveal the best knowledge of nuclear reactions combining available experimental data, theoretical knowledge and mathematical constraints. In this presentation a short introduction into the concept of Bayesian evaluation techniques and an overview of the status and advances of recent and upcoming nuclear data libraries will be given. Especially, the generation of reliable uncertainty information will be discussed which is one of the most important demands from the user community. In this context the difficulties of a unique treatment of the resolved resonance range and the range of intermediate energies will be addressed. Furthermore specific problems of evaluations of light nuclear systems will be outlined. In the outlook of the presentation there will be a focus on methods and proposals taking advantage of the availability of increased storage and computational power which enable a more streamlined generation of updates of evaluations.

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