FAKT Workshop 2023: Particle Physics Retreat



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Nuclear data evaluation of light nuclear reaction systems

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The quantitative knowledge of reaction cross sections is an important prerequisite for the development of novel nuclear technologies as well as for research in several fields of science, e.g. medicine, astrophysics, space research etc. At present nuclear data evaluation techniques are well established for medium heavy and heavy nuclear systems. The situation of nuclear data evaluation of light nuclear systems is less satisfactory and its improvement is subject of worldwide efforts. In this presentation an overview of recent achievements in this field by the nuclear data group at TU Wien is given. Especially, recent developments in reduced R-matrix analyses and first R-matrix calculations of three-body breakup channels will be presented.

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