

Cross section measurements related to the astrophysical p-process

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After tremendous experimental and theoretical efforts and significant progress in astrophysical modeling, the origin of the heavy, proton rich isotopes – the p nuclei – is still not fully understood. One thing is certain: improved knowledge of the nuclear reactions rates entering the p-process models is crucial. A systematic study of low energy proton and alpha induced reactions on heavy isotopes has been going on for about two decades at Atomki in Debrecen, Hungary. The measured cross sections are compared to theoretical calculations with the aim of improving the reliability of the calculated reaction rates for the astrophysical models. In this talk the recent activities in this field will be summarized. Experimental techniques of cross section measurements on e.g. $^{121,123}\text{Sb}$, ^{124}Xe , $^{191,193}\text{Ir}$, ^{197}Au as well as some results will be presented.

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