

Total and Differential Cross Sections of the Reaction $pd \rightarrow {}^3\text{He} + \eta$ at 49 and 60 MeV Excess Energy*

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The $p + d \rightarrow {}^3\text{He} + \eta$ reaction has been used recently for various precision experiments at COSY-Jülich, *e.g.* for the investigation of the η -nucleus final state interaction, the search for possible η -mesic nuclei as well as for the η -mass determination with highest accuracy. A remarkable feature of this reaction is the unexpected shape of the excitation function which is strongly influenced by the η - ${}^3\text{He}$ final state interaction. While close to threshold ($Q \leq 11\text{ MeV}$) a rich data sample has been provided by the ANKE collaboration, only limited information are available at higher excess energies. Therefore, new measurements at $Q = 49$ and 60 MeV with high statistics have been performed at the WASA-at-COSY experiment. Due to the large angular acceptance of the detector detailed investigations on angular distributions as well as their energy dependance have been performed. Final results on total and differential cross sections will be presented and discussed.

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