

Mr Michael Papenbrock

Type of Participation:
Contribution

Title:

Investigations on the tensor analyzing power t_{20} in the reaction $d(\text{pol}) + p \rightarrow \text{He}^3 + \eta$

Abstract:

Detailed studies on the reaction $d + p \rightarrow \text{He}^3 + \eta$ with unpolarized particles have been performed in former measurements at the ANKE spectrometer. The observed rapid rise of the total cross section within the first 0.5 MeV excess energy above threshold implies a very strong final state interaction and is possibly caused by the presence of a quasi-bound η -mesic state close to threshold. However, for a more detailed interpretation of the data it is necessary to investigate the role of possible spin dependent contributions to the production amplitude. One signature for this would be an energy dependence of the tensor analyzing power t_{20} close to the He^3 - η -threshold. Hence, a follow-up experiment with a tensor polarized beam was performed and an extensive data set on t_{20} has been analyzed. Recent results will be presented and discussed. Supported by the COSY FFE program.