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## Precision measurement of the eta-mass at ANKE-COSY

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Measurements on the mass of the eta-meson performed at different experimental facilities over the last decade have resulted in very precise results but differ by up to 0.5 MeV/c<sup>2</sup>. In order to clarify this situation a new high precision measurement of the  $dp \rightarrow 3\text{He} \eta$  reaction was conducted at the COoler SYNchrotron - COSY - of the Forschungszentrum Juelich using the ANKE magnetic spectrometer, with the aim to achieve a mass resolution of < 50 keV/c<sup>2</sup>.

The main idea of this experiment is to measure at different excess energies, both the momenta of the circulating deuteron beam in COSY as well as the momenta of the emitted  $3\text{He}$  nucleus. With the precise knowledge of these momenta the eta mass can be determined by pure kinematics. The method for determination of the eta mass, as well as results will be discussed in this presentation.

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