

## Contribution submission to the conference Münster 2017

**The EDM polarimeter development at COSY-Jülich** —  
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The JEDI (Jülich Electric Dipole moment Investigations) collaboration performs a set of experiments at the COSY storage ring in Jülich, within the R&D phase to search for the Electric Dipole Moments (EDM) of charged particles. A measurement of proton and deuteron EDMs is a sensitive probe of yet unknown CP violation. The method of charged particle EDM search will exploit stored polarized beams and observe a miniscule rotation of the polarization axis as a function of time due to the interaction of a finite EDM with large electric fields. Key challenge is the provision of a sensitive and efficient method to determine the tiny change of the beam polarization. Elastic scattering of the beam particles on carbon nuclei will provide the polarimetry reaction.

This requires a solid data base: the corresponding measurements have been started at COSY and first preliminary results will be shown. In addition the EDM polarimeter needs to be developed. The polarimetry concept is based on a heavy crystal hadron calorimeter (LYSO). Results of beam tests with polarized deuterons of the new developed LYSO modules will be presented.

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