



Contribution ID: 24

Type: **Poster**

The Search for Electric Dipole Moments of Charged Particles in Storage Rings

The matter-antimatter asymmetry present in the universe remains unexplained within the confines of the Standard Model of elementary particle physics. A. Sakharov proposed that phenomena causing CP violation are necessary to comprehend this disparity. Permanent Electric Dipole Moments (EDMs) of subatomic elementary particles defy both time reversal and parity asymmetries, consequently contravening CP if the CPT-theorem is upheld.

Storage rings provide an avenue to gauge EDMs of charged particles by observing the influence of the EDM on the particle's spin motion. Forschungszentrum Jülich's Cooler Synchrotron (COSY) offers polarized protons and deuterons at momenta up to 3.7 GeV/c, making it an optimal launchpad for the JEDI - Collaboration (Jülich Electric Dipole moment Investigations) to execute the inaugural direct measurement of the deuteron EDM.

This poster contribution presents recent results of the first deuteron EDM measurements.

Author: ANDRES, Achim

Presenter: ANDRES, Achim

Session Classification: Poster Session