

Charged Particle Electric Dipole Moment Measurements at Storage Rings

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The searches for permanent Electric Dipole Moments (EDMs) of elementary particles constitute one of the most powerful tools to probe physics beyond the Standard Model (SM). The existence of EDM can provide an explanation of the dominance of matter over antimatter in the universe which still is considered as one of the most puzzling questions in physics.

The JEDI Collaboration is conducting experimental EDM searches on protons and deuterons at the Cooler Synchrotron (COSY) storage ring at Forschungszentrum Jülich (Germany).

This talk will report on some of the major milestones achieved so far by the the JEDI Collaboration, which in many aspects were world-first achievements including some intermediate and preliminary results of the last presursor EDM experiment conducted on deuterons. Furthermore, an overview of the activities towards a prototype ring of the newly formed CPEDM collaboration will also be briefly presented.

Are you are a member of the APS Division of Particles and Fields?

No

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