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Spin dynamics in storage rings in application to searches for EDM

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Understanding high precision spin dynamics in storage rings is one of major concerns for the JEDI collaboration's EDM experimentation at COSY. We report here recent results on the impact of synchrotron oscillations on spin rotations at large spin coherence time needed for enhancing feeble EDM signal. A particular emphasis will be on salient features of the Spin Echo phenomenon in storage rings. We also review briefly a recent activity in studies of the gravity induced background to the EDM signal in all-electric magic rings.

Primary author: Prof. NIKOLAEV, Nikolai (Landau Institute for Theoretical Physics)

Co-authors: Dr SALEEV, Artem (IKP, Forschungszentrum Juelich); Prof. RATHMANN, Frank (IKP, Forschungszentrum Juelich)

Presenter: Prof. NIKOLAEV, Nikolai (Landau Institute for Theoretical Physics)

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