

Spin-flipping within the Frequency Domain method of searching for particle electric dipole moment

Wednesday, 6 September 2023 09:30 (25 minutes)

The present work is part of a research devoted to the development of a method to search for particle EDMs in an existing storage ring. This method involves a flipping of the beam's polarization axis as part of its energy fitting sub-procedure (to realize the "Quasi-Frozen Spin" condition). Generally, the preservation of the polarization requires that spin-flipping be done adiabatically; but ours is not the case. In this investigation we get a sense and a measure of the methodologically-required rapidity of spin-flipping.

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Session Classification: Plenary