

The logo for DPF-PHENO 2024 features the text "DPF-PHENO 2024" in a bold, sans-serif font. The text is white and set against a blue rectangular background that has a subtle, light-colored cloud-like pattern.

Contribution ID: 580

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Revisiting θ -induced neutron EDM in QCD sum rule

Thursday 16 May 2024 17:15 (15 minutes)

We revisit the behavior of neutron interpolating currents under singlet chiral rotations and show that not all interpolating currents are good for calculating chirality-sensitive quantities. In particular, for the θ -induced neutron EDM, we show that the $\beta = 1$ and $\beta = -1$ current give physical answers that only depend on $\bar{\theta} = \theta_m + \theta_G$ after removing an overall phase, while the $\beta = 0$ current, on the other hand, leads to unphysical dependence on the chiral rotation angle.

Mini Symposia (Invited Talks Only)

Authors: RITZ, Adam; POSPELOV, Maxim; GAO, Ting (University of Minnesota); EMA, Yohei

Presenter: GAO, Ting (University of Minnesota)

Session Classification: Quark and Lepton Flavor Physics

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