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## Revisiting $\theta$ -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  $\theta$ -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)

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**Session Classification:** Quark and Lepton Flavor Physics

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