

Contribution ID: 237 Type: Oral presentation

Power divergences of the quark-chromo electric dipole moment operator with the gradient flow

Wednesday 28 July 2021 07:45 (15 minutes)

The quark-chromo electric dipole moment (qCEDM) operator is one of the possible beyond-the-standard-model (BSM) contributions to the electric dipole moment (EDM). Power divergences of lower dimensional operators are introduced to the qCEDM operator by operator mixing. We compute non-perturbatively the qCEDM power divergence coefficient with the gradient flow, allowing us to control the power divergences and perform the continuum and chiral extrapolation. We present the comparison between non-perturbative computation and perturbation theory as a function of bare and renormalized coupling.

Primary authors: Dr KIM, Jangho (Forschungszentrum Jülich); LUU, Thomas (Forshungszentrum Jülich); Mr RIZIK, Matthew (Facility for Rare Isotope Beams, Physics Department, Michigan State University); Prof. SHINDLER, Andrea (Facility for Rare Isotope Beams, Physics Department, Michigan State University)

Presenter: Dr KIM, Jangho (Forschungszentrum Jülich)

Session Classification: QCD in searches for physics beyond the Standard Model

Track Classification: QCD in searches for physics beyond the Standard Model