## Lattice calculation of neutron electric dipole moment with overlap fermions

Tuesday, 24 July 2018 18:45 (2 hours)

We report our calculation of the neutron electric dipole moment of the contribution from the $\theta$ term with overlap fermions on the $2+1$-flavor RBC/UKQCD domain wall lattices 24 I and 32ID. For the 24 I lattice the size is 2.65 fm and the pion mass is 337 MeV and for the 32ID lattice the size is 4.58 fm and the pion mass is 171 MeV . In order to solve the large-volume problem, the cluster-decomposition error reduction (CDER) technique is utilized to improve the signal-to-noise ratio especially for the lattice with larger volume.

Primary author: LIANG, Jian (University of Kentucky)
Co-authors: Prof. LIU, Keh-Fei (University of Kentucky); Prof. DRAPER, Terrence (University of Kentucky); Dr YANG, Yi-bo (Michigan state university)

Presenter: LIANG, Jian (University of Kentucky)
Session Classification: Poster reception

Track Classification: Hadron Structure

