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Axial U(1) symmetry near the pseudocritical temperature in $N_f = 2 + 1$ lattice QCD with chiral fermions

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We study the $U(1)_A$ anomaly at high temperatures of $N_f = 2 + 1$ lattice QCD with chiral fermions. Gauge ensembles are generated with M\"obius domain-wall (MDW) fermions, and in the measurements, the determinant is reweighted to that of overlap fermions. We report the results for the Dirac spectra, the $U(1)_A$ susceptibility, and the topological susceptibility at temperatures, T=136, 153, 175, and 204 MeV.

Topical area

QCD at Non-zero Temperature

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