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Observation of approximate $SU(2)_{CS}$ and $SU(2 * n_f)$ symmetries in high temperature lattice QCD

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We study spatial isovector meson correlators in $n_f = 2$ QCD with dynamical domain-wall fermions on $32^3 \times 8$ lattices at temperatures $T = 220 - 380$ MeV. We measure the correlators of all spin-one ($J = 1$) isovector operators. We observe an approximate degeneracy of all considered correlators with increasing temperature. This approximate degeneracy suggests emergent $SU(2)_{CS}$ and $SU(2 * n_f)$ symmetries at high temperatures, that mix left- and right-handed quarks.

Content type

Theory

Collaboration

Centralised submission by Collaboration

Presenter name already specified

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