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Symmetries of the light hadron spectrum in high temperature QCD

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Properties of QCD matter change significantly around the chiral crossover temperature, and the effects on $U(1)_A$ and topological susceptibilities, as well as the meson spectrum have been studied with much care. Baryons and the effect of parity doubling in this temperature range have been studied perviously by various other groups employing different setups. Here we construct suitable operators to investigate chiral and axial $U(1)$ symmetries in the baryon spectrum. Measurements are done with two flavors of chirally symmetric domain-wall fermions at temperatures above the critical one, for different volumes and quark-masses. The possibility of emergent $SU(4)$ and $SU(2)_{CS}$ symmetries will be discussed.

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