



Contribution ID: 210

Type: Poster

## Calculation of Quark Condensates and Chirality using Improved Staggered Fermions

*Tuesday, July 26, 2016 7:00 PM (1 hour)*

We study quark condensates using improved staggered fermions, where zero modes of the Dirac operator give simple poles in the chiral limit. We present a new method to identify the zero modes and to subtract their contribution from the quark condensates. Meanwhile we also identify the quantum numbers of the zero modes in the staggered fermion formalism, using the spectral flow method. All the numerical results are calculated using HYP-smearred staggered fermions on MILC asqtad lattices and on MILC HISQ lattices.

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**Session Classification:** Poster

**Track Classification:** Chiral Symmetry