



Contribution ID: 159

Type: **Leading parallel**

## The excited nucleon on the lattice: overlap vs clover.

The notable absence of a low-lying energy level in the positive parity sector of the nucleon excitation spectrum in lattice QCD has been a point of interest for some time. Speculation about the potential role of chiral symmetry in the lattice nucleon spectrum has arisen recently as a possible explanation for this absence. We endeavour to address this issue through a systematic comparison of the clover and overlap fermion actions through direct ratios of mass-matched nucleon correlators and state of the art correlation matrix techniques. In particular, these results have implications for our understanding of the nature of the  $N^*(1440)$ , or Roper resonance.

**Primary author:** KAMLEH, Waseem (University of Adelaide)

**Co-authors:** VIRGILI, Adam (University of Adelaide); LEINWEBER, Derek (University of Adelaide)

**Presenter:** KAMLEH, Waseem (University of Adelaide)

**Track Classification:** Session 2: Baryon spectroscopy