Contribution ID: **123**   Type: **not specified**

Mesons and baryons masses with low mode averaging

Monday, 14 June 2010 17:00 (20 minutes)

We describe and test a method known in the literature as low-mode averaging
to improve Euclidean two-point functions in lattice QCD using the
low-lying eigenmodes of the Wilson-Dirac operator. The contribution from the
low modes is averaged over all positions of the quark sources while the contribution
from high modes is estimated in the traditional way using one source point per lattice.
We apply this method to different baryon and meson two point functions and we compare the
improvements using either the eigenmodes of the non-hermitian Dirac operator D or the eigenmodes
of the hermitian operator $Q = \gamma_5 D$. The convergence strongly depends on the parity
of the states.

Please, insert your presentation type (talk, poster)

talk

Primary authors: Prof. BALI, Gunnar (University of Regensburg); CASTAGNINI, Luca (University of Regensburg); COLLINS, Sara (University of Regensburg)

Presenter: CASTAGNINI, Luca (University of Regensburg)

Session Classification: Parallel 10: Hadron spectroscopy

Track Classification: Hadron spectroscopy