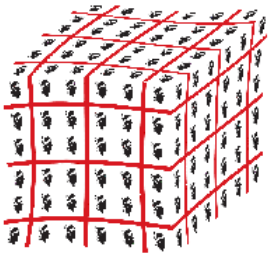

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Nucleon, Delta and Omega excited state spectra at three pion mass values

Tuesday, 15 June 2010 11:10 (20 minutes)

The energies of excited states of the Nucleon, Delta and Omega baryons are calculated for Nf = 2+1 QCD using a 16^3x128 lattice. The calculations are performed for three values of the light quark mass with the strange quark mass fixed at its physical value. The corresponding values of pion mass are: 392(4), 438(3) and 521(3) MeV. For each baryon, six states are obtained in each of the 6 irreps of the double-covered octahedral group using the variational method. Spectra are compared with the experimental baryon resonance spectra. The patterns of excited states are in reasonable agreement.

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talk

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