



Contribution ID: 377

Type: Talk

Antistatic-antistatic-light-light tetraquark potentials with u , d and s quarks from lattice QCD

Tuesday, 30 July 2024 14:05 (20 minutes)

We report on our lattice QCD computation of the static-light $\bar{Q}\bar{Q}qq$ potentials, using the CLS configurations and the OpenQ*D codebase. We utilize a set of 24 creation operators, corresponding to 12 sectors characterized by isospin, angular momentum and parity quantum numbers for uu , ud or dd light quarks and 6 sectors for us or ds light quarks. We include off-axis separations of the static antiquarks and use tree-level improvement. The resulting potentials provide some indication for one-pion exchange at intermediate $|\bar{Q}\bar{Q}|$ separations.

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Session Classification: Hadronic and nuclear spectrum and interactions

Track Classification: Hadronic and Nuclear Spectrum and Interactions