Contribution ID: **178** Type: **Talk**

Hybrid static potentials and gluelumps on $N_f = 3 + 1$ ensembles

Tuesday, 30 July 2024 14:45 (20 minutes)

QCD permits the existence of hybrid mesons that are made up of both quarks and gluons, including exotic states, i.e., quantum numbers prohibited for pure quark-antiquark states, with possible candidates found in experiments. We present static hybrid potentials measured via Laplace trial states together with static-light meson thresholds on $N_f = 3 + 1$ dynamical fermion ensembles with 420 MeV pions. Furthermore, we measure corresponding gluelump masses which refer to the $R \to 0$ limit of the hybrid potentials and are essential input parameters for effective models to describe hybrid mesons.

Primary authors: KNECHTLI, Francesco (University of Wuppertal); URREA NINO, Juan Andres (Bergische Universität Wuppertal); STRUCKMEIER, Laura; PEARDON, Michael (Trinity College Dublin); HÖLLWIESER, Roman (University of Wuppertal); KORZEC, Tomasz (Bergische Universität Wuppertal)

Presenter: HÖLLWIESER, Roman (University of Wuppertal)

Session Classification: Hadronic and nuclear spectrum and interactions

Track Classification: Hadronic and Nuclear Spectrum and Interactions