

XVth Quark Confinement and the Hadron Spectrum



Contribution ID: 190

Type: Oral

Mixing of heavy and light quarks in charmonium and light mesons

Tuesday 20 August 2024 14:30 (30 minutes)

We study the system of light mesons, charmonium and glueballs in the flavour singlet channels where they can mix. We use lattice QCD simulations with an almost physical charm quark and three degenerate light quarks for two values of the pion mass ($m_\pi \approx 420, 800$ MeV). Thanks to a variational basis which includes mesonic operators with profiles in distillation space, Wilson loops and two-pion operators we detect and show results of their mixing.

Primary author: KNECHTLI, Francesco Giacomo (Bergische Universitaet Wuppertal (DE))

Co-authors: FINKENRATH, Jacob Friedrich; URREA NINO, Juan Andres; PEARDON, Michael; Dr HÖLL-WIESER, Roman (University of Wuppertal); KORZEC, Tomasz

Presenter: KNECHTLI, Francesco Giacomo (Bergische Universitaet Wuppertal (DE))

Session Classification: Heavy Quarks

Track Classification: C: Heavy Quarks