



Contribution ID: 333

Type: **Parallel Talk**

Towards hadronic D decays at the SU(3) flavour symmetric point

Thursday, 3 August 2023 14:50 (20 minutes)

We present progress towards extracting multi-hadron D decay amplitudes, such as $D \rightarrow \pi\pi$, in a pilot study using three ensembles of stabilised Wilson fermions at the SU(3) flavour symmetric point, with $M_\pi = 410$ MeV. As the three ensembles differ only in the lattice spacing, with well matched physical volumes, it is possible to perform a continuum limit for finite-volume energies (and eventually weak-decay matrix elements) at fixed physical volume. The talk will summarise the work-flow and challenges of the ongoing calculation with a focus on results for the a^2 -dependence and continuum limit of the two-to-two pseudoscalar S-wave scattering amplitude, determined via the GEVP+Lüscher approach in an exact distillation setup implemented in the Grid and Hadrons software libraries.

Topical area

Quark and Lepton Flavor Physics

Primary authors: PORTELLI, Antonin (University of Edinburgh); JOSWIG, Fabian (University of Edinburgh); HANSEN, Maxwell; ERBEN, Felix; PITANGA LACHINI, Nelson (University of Edinburgh); PAUL, SRIJIT (The Cyprus Institute)

Presenter: HANSEN, Maxwell

Session Classification: Quark and Lepton Flavor Physics