Contribution ID: **20** Type: **not specified**

Finite volume effects and meson scattering in the 2-flavour Schwinger model

Friday, 7 August 2020 14:00 (20 minutes)

We investigate the two-flavour Schwinger model in the canonical formulation with fixed fermion number.
We use Wilson fermions on the lattice and present a formalism which describes the Dirac operator with dimensionally reduced canonical operators.
These reduced operators allow the direct examination of different meson sectors and the determination of the energy spectrum in
each of the sectors. Using Lüscher's finite-volume mass-shift formula we discuss the 1-meson mass as well as the effective 3-meson coupling.
From the 2-meson energies we determine the scattering phase shifts and compare the 3-meson energies in the finite volume to various
predictions based on scattering theory.

Primary author: BÜHLMANN (*), Patrick (University of Bern)

Co-author: WENGER, Urs

Presenter: BÜHLMANN (*), Patrick (University of Bern)

Session Classification: Hadron Spectroscopy and Interactions

Track Classification: Hadron Spectroscopy and Interactions