Contribution ID: **60** Type: **not specified**

Exploring the Strange-Meson Spectrum with COMPASS

Thursday, 18 August 2022 17:15 (25 minutes)

The excitation spectrum of light mesons; which are composed of up, down, and strange quarks; allows us to study QCD at low energies. While the non-strange light-meson spectrum is already mapped out rather well, many predicted strange mesons have not yet been observed experimentally and many potentially observed states still need further confirmation. Hence, the strange-meson spectrum still holds many surprises that need to be discovered.
The COMPASS experiment at CERN has studied so far mainly non-strange mesons of the a_J and π_J families with high precision, using the dominating π^- component of the beam. Using the smaller K^- component allows us to investigate also the spectrum of strange mesons. The flagship channel is the $K^-\pi^-\pi^+$ final state, for which COMPASS has acquired the so-far world's largest data set. Based on this data set, we performed a partial-wave analysis in order to disentangle the produced mesons by their spin-parity quantum numbers.
In this talk, we will focus on recent results from this analysis of COMPASS data.

Category

talk

Primary author: WALLNER, Stefan (Technical University of Munich)

Presenter: WALLNER, Stefan (Technical University of Munich)

Session Classification: Session 2