Contribution ID: **82** Type: **Talk**

Hadron Spectroscopy at BESIII

Tuesday, 17 October 2023 09:30 (30 minutes)

Despite mesons being one of the longest known type of particles, there are still many open ques- tions. Besides well understood states that can be clearly attributed to meson nonets, there are many candidates which could have an exotic nature instead. Such exotic particles e.g. glueballs, hybrids and tetraquarks can be especially studied in clean, gluon-rich environments.
The BESIII experiment, which is in operation at the BEPCII electron-positron collider in Beijing since 2009, has collected world leading high statistic data samples in the charmonium region. This allows to study rare reactions that are considered to be suppressed. This offers unique possibilities to study exotic QCD states in the charmonium sector at BESIII, but also the light meson spectrum which can be accessed via charmonium decays. Especially radiative J/ψ decays offer a gluon-rich environment in which gluebells and hybrid states can be expected. Since these states are often hard to identify and disentangle, partial wave analysis are needed to determine the different contributions.
In the talk recent studies carried out by the BESIII experiment will be discussed and their implications pointed out. Special focus will be put on recent results from sophisticated amplitude analyses.

Parallel Session

Hadron Spectroscopy

Primary author: KÜSSNER, Meike (Ruhr-Uni Bochum)

Presenter: KÜSSNER, Meike (Ruhr-Uni Bochum)

Session Classification: Plenary talk