



Contribution ID: 125

Type: Poster

Predictions for HQSS and Strange Partners of Hidden-Charm and Hidden-Beauty States

Wednesday, 15 September 2021 14:05 (5 minutes)

In recent years, hadron spectroscopy has led to the discovery of some exotic states found in the hidden-charm and hidden-bottom sectors, like the $Z_c(3900)$, $Z_c(4020)$, $Z_b(10610)$ and $Z_b(10650)$. These states do not fit the conventional constituent-quark models given that they are expected to contain hidden-charm or hidden-bottom components respectively, but they are also found to be charged. The most recently discovered one, reported by the BESIII collaboration at the end of last year, has even been found to contain a strange component. Although there exist several exotic structures which could describe these states, the molecular one is prominent due to the closeness of these states to the thresholds of some $D^{(*)}D^{(*)}$ and $B^{(*)}B^{(*)}$ channels. The molecular picture also permits an analytic treatment of these states via Heavy Quark Effective Field Theory (HQEFT). Within this framework and making use of SU(3) light flavor symmetry, we have been able to describe all the measured Z_c and Z_b states mentioned before, as well as predict the masses and widths of some of their yet-to-be-seen symmetric partners.

Presenter: MONTESINOS LLÁCER, Victor (IFIC (centro mixto UV-CSIC))

Session Classification: Poster Session