

Hybrids in a chiral approach

Thursday 6 February 2020 12:00 (30 minutes)

We extend a chiral model of QCD, the so-called extended Linear Sigma Model (eLSM), in order to include ground-state hybrids (with exotic quantum numbers 1^{-+}) and their axial-vector chiral partners. We then evaluate both masses and decays of these hybrid mesons into conventional quark-antiquark states, such as pseudoscalar and (pseudo)vector mesons. In particular, we also show that the decays of ground-state hybrids into eta-pion and etaprime-pion involve a term which follows from the chiral anomaly.

Primary author: GIACOSA, Francesco (Kielce University)

Presenter: GIACOSA, Francesco (Kielce University)