

Hybrid decays in a chiral model

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We study hybrid mesons in the framework of the extended Linear Sigma Model (eLSM). In particular, we consider the ground-state hybrids (with exotic quantum numbers 1^-+ , to which $\Pi_1(1600)$ belongs, other members till unknown) and their (also unknown) axial-vector chiral partners. We evaluate both masses and decays of these hybrid mesons into conventional quark-antiquark states, such as pseudoscalar and (pseudo)vector mesons. We also show that the decays of ground-state hybrids into $\eta - \pi$ and $\eta' - \pi$ can be understood by an interaction term arising from the chiral anomaly.

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