

Spacelike and Timelike electromagnetic structure of pseudoscalar mesons.

We present a computation of electromagnetic form factors for pseudoscalar mesons within the Bethe–Salpeter framework. For the spacelike region, we employ a flavor-dependent interaction kernel that accounts for dynamical quark mass effects through the quark-gluon vertex structure. This allows for a treatment of the electromagnetic current and accommodates mass asymmetries between quarks. In addition, we explore the pion’s timelike electromagnetic form factor using an alternative Bethe–Salpeter truncation adapted to capture resonant and analytic structure in this kinematic regime.

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Session Classification: Talks