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Light Exotic Mesons

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Studies of meson spectra via strong decays provide insight regarding QCD at the confinement scale. These studies have led to phenomenological models for QCD such as the constituent quark model. However, QCD allows for a much richer spectrum of meson states which include extra states such as hybrids, exotics, multi-quarks, and glueballs. Within the past two decades a number of experiments have put forth tantalizing evidence for the existence of light quark exotic hybrid mesons in the mass range below 2 GeV . Recent Lattice QCD calculations of the light-quark meson spectrum indicate a constituent gluon-like excitation contributing an additional $J^{PC} = 1^{+-}$ and mass $1 - 1.5 \text{ GeV}$ resulting in the lightest hybrid nonets with masses near 2.0 GeV . High statistical yields from recent experiments along with new advances in analysis techniques have shed a new light towards the understanding the latest experimental exotic candidates. Recent results from hadro-production and photo-production will be presented followed by an overview of ongoing and future efforts to search for light exotic mesons.