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Future Hadronic Spectroscopy at JLAB and J-PARC

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Hadronic spectroscopy data provide crucial information about QCD in the nonperturbative regime. One important issue concerns how many internal degrees of freedom are really needed to describe baryon resonances. Essentially all of the known baryon resonances can be described as quark-diquark states, whereas quark models predict a much richer spectrum than observed experimentally involving three dynamical quark degrees of freedom. It is important to confirm whether these “missing states” exist. A related question concerns whether there are exotics and hybrid mesons and baryons, and if so, what are their spectra. Some of these questions might be answered by future experiments at JLAB and J-PARC. My talk will focus mainly on the prospect of making dramatic improvements in our knowledge of hyperon resonances, which could be studied by production and/or formation mechanisms at these two facilities.