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Abstract for an Invited Paper for the HAW14 Meeting of the American Physical Society

New hadrons from Lattice QCD JOZEF DUDEK, Jefferson Lab / Old Dominion University

Recent calculations using the lattice regularised approach to QCD can reproduce many of the systematics observed in the experimental spectrum of mesons and baryons. This pattern can, in the main, be efficiently described considering mesons as $q\bar{q}$ and baryons as qqq, but these calculations also predict a spectrum of hadrons featuring an excitation of the gluonic field, the hybrid mesons and baryons. Other meson states which seem to lie outside of a simple $q\bar{q}$ picture, which might be explained in terms of higher quark Fock state configurations, or as loosely bound hadron-hadron molecules, will be discussed, as will progress toward addressing the challenge of studying excited hadrons as resonances, decaying into lighter hadrons.