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Hadron physics from Lattice QCD

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I will describe recent calculations using lattice Quantum Chromodynamics to determine hadron masses and hadronic decay rates that probe internal structure. Current calculations allow percent level tests of QCD when compared to experiment and enable the parameters of QCD, quark masses and the strong coupling constant, to be accurately determined. The figure below shows, as an example, the status of the 'gold-plated' mesons from lattice QCD calculations.

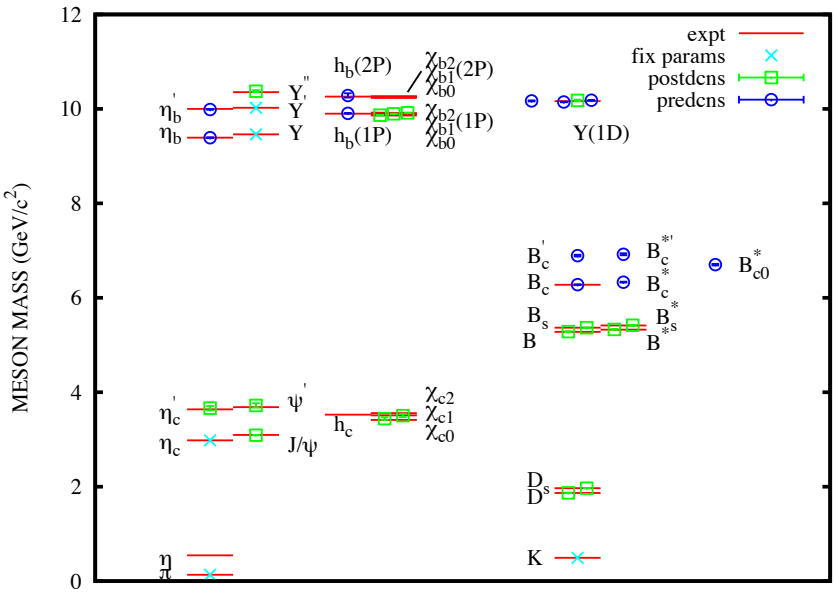

Figure 1: *The spectrum of 'gold-plated' mesons from lattice QCD compared to experiment.*

I will also describe prospects for the future now that lattice QCD calculations are able to work at physical values of the up/down quark masses on large volumes.