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Charmonium Hybrid Masses From QCD Sum-Rules TIMOTHY RICHARDS, JASON HO, BRENDAN BULTHUIS, DEREK HARNETT, University of the Fraser Valley, ROBIN KLEIV, TOM STEELE, University of Saskatchewan — Over the past decade or so, more than a dozen new charmonium-like resonances, the so-called XYZ resonances, have been discovered due largely to work done by the Belle and BaBar collaborations. Few of these resonances fit neatly into a conventional charmonium interpretation as there are significant discrepancies between predicted and observed masses and widths. As such, there has been considerable speculation that some of these new states may lie outside of the constituent quark model. Hybrids, hadrons with explicit quark and gluon degrees of freedom, represent one such possibility. Using QCD sum-rules, we predict charmoniun hybrid masses for a variety of J^{PC} quantum numbers, and comment on possible phenomenological implications.

Derek Harnett
University of the Fraser Valley

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