

Abstract Submitted
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Charmonium Hybrids from QCD Sum-Rules¹ DEREK HARNETT, University of the Fraser Valley, TOM STEELE, ROBIN KLEIV, University of Saskatchewan, TIMOTHY RICHARDS, JASON HO, BRENDAN BULTHUIS, University of the Fraser Valley, HONG-YING JIN, Zhejiang Institute of Modern Physics — Over the past decade or so, over a dozen new charmonium-like resonances have been discovered. Many of these particles, collectively dubbed the XYZ resonances, do not fit neatly into conventional quarkonium assignments. Not surprisingly, this has fueled a great deal of speculation that some of the resonances may lie outside of the quark model. Hybrids, hadrons admitting explicit quark and gluon degrees of freedom, represent one such possibility. We use QCD Laplace sum-rules to predict ground state masses of charmonium hybrids and comment on potential phenomenological implications.

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Derek Harnett
University of the Fraser Valley

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