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Heavy quark mesons and baryons (incl. lattice calculations)

Hadron spectroscopy and exotics (experiment and theory)

Experiment: -

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# Production of missing $c\bar{c}$ and $b\bar{b}$ states at $e^+e^-$ colliders

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## Abstract

The heavy quarkonium  $c\bar{c}$  and  $b\bar{b}$  resonances have a rich spectroscopy with numerous narrow  $S$ ,  $P$ , and  $D$ -wave levels below the production threshold of open charm and beauty mesons. The mass predictions for these states are an important test of QCD calculations. Many heavy quarkonium resonances remain undiscovered. In this talk I review recent work describing the production of missing  $\eta_b(nS)$ ,  $1^3D_J(b\bar{b})$  and  $1^1P_1(c\bar{c})$  and  $1^1P_1(b\bar{b})$  states. We conclude that many of these states should be found in data produced in the recent CLEO/CESR run, at the B-Factories, and in the future by CLEO-c/CESR-c.

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