Abstract Submitted
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Study of $\chi_b' \to \chi_b$ Transitions KEN WEAVER, Cornell University, CLEO COLLABORATION — We have investigated the charged di-pion transition $\chi_b' \to \pi^+\pi^-\chi_b$ in the CLEO III sample of 6 million Υ(3S) decays using two techniques. In the first we observe both of the charged pions and use the recoil mass against them and the photon energy in the initial $\Upsilon(3S) \to \gamma_1\chi_b'$ decay to distinguish the signal from background. In the second we require only one of the pions to be reconstructed and use the missing mass instead of the recoil mass as a discriminating variable. For comparisons we have used the well-established channels $\Upsilon(3S) \to \pi^+\pi^-\Upsilon(2S)$, with either $\Upsilon(2S) \to \ell^+\ell^-$ or $\Upsilon(2S) \to \gamma\chi_b$. Preliminary results on yields, branching fractions, and di-pion distributions will be presented.

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