

Abstract Submitted  
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**Study of orbitally excited B mesons at CDF** JENNIFER PURSLEY,  
Johns Hopkins University, CDF COLLABORATION — Using data collected by the  
Run II Collider Detector at Fermilab (CDF), we study the properties of the lowest  
orbitally excited ( $L = 1$ ) B mesons, collectively denoted as the  $B^{**}$ . We reconstruct  
 $B^{**}$  candidates in two  $B^+$  decay channels:  $B^+ \rightarrow J/\psi K^+$ ,  $J/\psi \rightarrow \mu^+ \mu^-$  and  
 $B^+ \rightarrow \bar{D}^0 \pi^+$ ,  $\bar{D}^0 \rightarrow^+ \pi^-$ . Through a simultaneous fit of both channels, we measure  
the masses of the two narrow  $B^{**}$  states.

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