

Abstract Submitted  
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**Search for Flavor Changing Neutral Current Charm Decays**

BRENDAN CASEY, Brown University, DZERO COLLABORATION — We study the flavor changing neutral current process  $c \rightarrow u\mu^+\mu^-$  using a large data sample of  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV recorded by the DØ detector operating at the Fermilab Tevatron. We observe a significant excess in the  $D_s^+ \rightarrow \pi^+\mu^+\mu^-$  channel where the  $\mu^+\mu^-$  system is consistent with production via the intermediate  $\phi(1020)$  resonance. This mode is used to normalize our search for the quark level processes  $D_s^+ \rightarrow K^+\mu^+\mu^-$  and  $D^+ \rightarrow \pi^+\mu^+\mu^-$ .

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