

## Is the X(3872) molecular hypothesis compatible with CDF data?

*Friday, July 17, 2009 3:40 PM (20 minutes)*

Assuming that the X(3872) is a  $D_0-\bar{D}_0^*$  molecule, we estimate its prompt production cross section at Tevatron and compare our results with the CDF data. We use different hadronization models, namely the ones implemented in Pythia and in Herwig, in order to have an estimate of the associated uncertainties. We give an upper bound for the theoretical cross section and a lower bound for the experimental one. According to our preliminary results, S-wave resonant scattering seems to be unlikely to allow the formation of a loosely bound molecule in high energy hadronic collisions. Some alternative mechanisms are discussed

**Primary authors:** Prof. GRINSTEIN, Benjamin (UC San Diego); Dr SABELLI, Chiara (Rome University La Sapienza); Dr BIGNAMINI, Christopher (University of Pavia - INFN); Dr PICCININI, Fulvio (INFN Pavia); Dr POLOSA, antonello (INFN Roma)

**Presenter:** Dr PICCININI, Fulvio (INFN Pavia)

**Session Classification:** VI. QCD in Hadronic Physics

**Track Classification:** QCD in hadronic physics