Modification of X(3872) production in high-multiplicity pp collisions at LHCb

J MATTHEW DURHAM, Los Alamos National Lab, LHCb COLLABORATION — Nearly 20 years after its discovery, the structure of the exotic hadron X(3872) is still not clear. Models have considered compact tetraquarks, hadronic molecules, and mixtures of exotic and conventional hadrons with varying levels of agreement with experimental data. Interactions of X(3872) hadrons with the dense QCD environment created in high-multiplicity pp collisions and heavy ion collisions offer a new method of probing the structure experimentally. Here we will present LHCb results on the relative production of X(3872) and psi(2S) hadrons as a function of charged particle multiplicity in pp collisions at 8 TeV, and discuss how the observed modifications can discriminate between models of exotic hadron structure.

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