



Contribution ID: 254

Type: **not specified**

Central Exclusive Production in pp^- Collisions at CDF II

Tuesday 27 March 2012 14:00 (20 minutes)

We report central exclusive production results studied at the Run II Collider Detector at Fermilab with focus on our recently published paper on the first observation of exclusive $\gamma\gamma$ production in pp^- collisions at $\sqrt{s} = 1.96$ TeV at the Tevatron. In particular, starting from earlier studies by the CDF collaboration, we discuss exclusive dijet, dilepton, Z, J/ Ψ and χ_c productions and finally our recent observation of exclusive diphoton production. Whereas the lepton pairs and Z are purely QED processes, the J/ Ψ is produced by photo-production, mediated by photon-pomeron exchange ($\gamma + IP$). The double pomeron exchange producing the exclusive dijet, Charmonium and diphotons via quark-loop is of great interest looking towards the possibilities of finding an exclusive Higgs at the Large Hadron Collider (if it exists). The production mechanism for an exclusive Higgs is similar via a heavy quark-loop with no other particles produced.

Primary author: Dr BRÜCKEN, Erik (Helsinki Institute of Physics (FI))

Presenter: Dr BRÜCKEN, Erik (Helsinki Institute of Physics (FI))

Session Classification: Diffraction and vector mesons

Track Classification: Diffraction and vector mesons