Rare B decays from the CDF experiment

William Trischuk

University of Toronto
CDF Collaboration

June 5, 1998

Abstract

The enormous b–quark production cross–section in $p\bar{p}$ collisions at the Tevatron make it an ideal place to search for very rare decays of B–hadrons. This talk will describe CDF's recently published discovery of the B_c meson – the combination of a bottom and a charm quark. This particle has been discovered in partially reconstructed J/ψ + lepton decay channels. The production cross–section, mass and lifetime determination of the observed signal will be discussed. The talk will also include a brief review of other rare B decays recently seen (or not seen) by CDF. These will include decays that include $\psi(2S)$ mesons in the final state as well as limits from searches for $B \rightarrow \mu^+ e^-$ and $B \rightarrow \mu^+ \mu^-$.