Measurements of quark fragmentation using kaons produced in association with prompt $D_{(s)}^+$ mesons at CDF

NIHARIKA RANJAN, Purdue University, CDF COLLABORATION — We report the first study of quark fragmentation through identification of kaons produced during the fragmentation of charm quarks, produced in 1.96 TeV $p\bar{p}$ collisions, to form $D_s^+$ or $D^+$ mesons. We apply particle identification techniques to measure the fraction of events in which a track produced in association with the prompt charm meson is a kaon and compare the observed kinematic properties with predictions of fragmentation models implemented in standard Monte Carlo event generators providing valuable validation and tuning information.

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Date submitted: 10 Jan 2012