Angular Distribution of Muon Pairs Produced by the Drell-Yan Mechanism Compared to an Exotic Model of Contact Interactions for High Energy p-p Collisions

CHAMATH KOTTACHCHI, Wayne State University — The Pythia Monte Carlo program is used to simulate the angular distributions of oppositely charged pairs of muons produced in p-p collision at $\sqrt{s}=7$ TeV. The distributions are evaluated in the context of standard model Drell-Yan production and an exotic left-handed current model of quark-lepton interactions. The angular distribution in the rest-frame of the muon pair is characterized by the mean cosine of the angle between the negative muon and the boost direction. We report the dependence of the mean cosine on the invariant mass of the pair and the energy scale parameter of the exotic model.

Chamath Kottachchi
Wayne State University

Date submitted: 09 Jan 2012

Electronic form version 1.4