



HEP 2013
Stockholm
18-24 July 2013



Contribution ID: 152

Type: **Talk presentation**

W + Heavy Flavor Jet Measurements with CMS

Thursday 18 July 2013 12:30 (15 minutes)

Production and hadronization of heavy quarks (b and c) in association with the W boson in proton-proton collisions is only partially understood. Experimental measurements are necessary to choose amongst the phenomenological models and parameters. Using the LHC proton-proton collision data collected in 2011 at a centre of mass energy of 7 TeV, we present two studies (1) W+c production, where charm jet is identified by reconstruction of a secondary vertex with an identified charmed meson, or a muon-tagged jet and (2) W+bb production, where both b-jets are tagged by the secondary vertices. In both cases, the W-boson is tagged by the presence of one isolated lepton accompanied by missing transverse energy. A precise W+c measurement at the LHC may significantly reduce the uncertainties on the strange parton distribution function (PDF). A thorough understanding of the Wbb measurement is required to improve search for W-associated Higgs to bb production, or BSM searches in modes tagged by a W and a pair of b-jets.

Author: Dr BORRAS, Kerstin (Deutsches Elektronen-Synchrotron (DE))

Presenter: OJALVO, Isabel (University of Wisconsin (US))

Session Classification: Top and Electroweak Physics

Track Classification: Top and Electroweak Physics