38th INTERNATIONAL CONFERENCE
ON HIGH ENERGY PHYSICS
AUGUST 3 - 10, 2016
CHICAGO

Contribution ID: **370** Type: **Oral Presentation**

Measurement of WW and WZ production in the lepton plus heavy flavor jets final state at CDF (13' + 2')

Friday, 5 August 2016 17:20 (15 minutes)

We present the CDF measurement of the diboson WW and WZ production cross section in a final state consistent with leptonic W decay and jets originating from heavy flavor quarks, based on the full Tevatron Run II dataset.
The analysis of the di-jet invariant mass spectrum allows the observation of 3.7 sigma evidence for the combined
production processes of either WW or WZ bosons. The different heavy flavor decay pattern of the W and Z bosons
and the analysis of the secondary-decay vertex properties allow to independently measure the WW and WZ production
cross section in a hadronic final state. The measured cross sections are consistent with the standard model predictions and correspond to signal significances of 2.9 and 2.1 sigma for WW and WZ production, respectively.

Primary author: LEONE, Sandra (Universita di Pisa & INFN (IT))

Co-author: CDF COLLABORATION, on behalf (Fermilab)

Presenters: LEONE, Sandra (Universita di Pisa & INFN (IT)); CDF COLLABORATION, on behalf (Fermilab)

Session Classification: Top Quark and Electroweak Physics

Track Classification: Top Quark and Electroweak Physics