Contribution ID: **14**   Type: **not specified**

Improving the Trigger Efficiency Calculation for the WH-lvbb analysis at the CDF experiment

Thursday, 14 June 2012 13:00 (15 minutes)

At CDF, we search for the associated production of a Higgs boson and a W boson, where the Higgs boson decays into a b + anti-b quark pair and the W boson decays into a lepton and the corresponding neutrino. Events are selected with a signature of a lepton, large missing transvers energy, and two or three jets. The events are selected by a variety of triggers, and those triggers are divided into several streams based on the types of requirements of the trigger. In previous WH searches we only use some of triggers, because the trigger efficiency can be calculated easily under those circumstances. In this presentation, we will describe two new triggers to select leptons and will demonstrate a new method using neural networks to calculate the trigger efficiency for a set of triggers. In this way, we maximized the acceptance of events selected, and the gain in the sensitivity of the WH analysis is about 5%.

Primary author: Mr LIU, Hao (University of Virginia)

Presenter: Mr LIU, Hao (University of Virginia)

Session Classification: Afternoon Session