Contribution ID: **27** Type: **not specified**

Low mass Higgs boson searches at CDF

Tuesday 18 August 2009 14:00 (1 minute)

Please give a brief summary of your poster

We present searches for standard model Higgs boson production for Higgs masses between 100 and 135 GeV/c^2 using approximately 4 fb-1 of data collected by the CDF detector at the Fermilab Tevatron. Precision electroweak fits of the standard model combined with direct searches prefer a Higgs boson mass close to, but greater than 114 GeV/c^2. Tevatron experiments are currently the only experiments capable of searching in this mass region. To achieve the best sensitivity for masses less than 135 GeV/c^2, we search for Higgs bosons decaying into b quarks, in association with a vector boson decaying into leptons. These analyses rely on advanced tools for b-quark jet, charged lepton, and neutrino identification, as well as background discrimination using multivariate approaches. We will present results from the main analyses of WH -> lvbb, ZH->vvbb, ZH->llbb, as well as secondary analyses, and will present the result of combining the individual analyses to achieve improved limits on standard model Higgs production.

Primary author: Dr KILMINSTER, Ben (Fermilab)

Presenter: Dr KILMINSTER, Ben (Fermilab)

Session Classification: Poster Session

Track Classification: Poster Session