Abstract Submitted
for the APR11 Meeting of
The American Physical Society

Measurement of $Z+b$ jet production at D0 ASHISH KUMAR, SUNY Buffalo, D0 COLLABORATION — The inclusive $Z + b$ jet production is an important background to searches for the Higgs boson in associated ZH production at the Fermilab Tevatron collider. We present measurements of the ratio of inclusive cross sections for $p\bar{p} \to Z + b$ jet to $p\bar{p} \to Z+$ jet production as well as the inclusive $Z + b$ jet cross section. The measurements use a data sample from $p\bar{p}$ collisions at $\sqrt{s} = 1.96$ TeV corresponding to an integrated luminosity of 6.2 fb^{-1} collected by the D0 detector. Z bosons are selected in the electron and muon decay modes. Events containing a Z plus at least one b jet are discriminated from $Z+$charm and light jet(s) events by a novel technique that exploits the properties of the tracks associated to the jet. The measurements are compared with the next-to-leading order theoretical predictions.

Marco Verzocchi
Fermilab

Date submitted: 12 Jan 2011 Electronic form version 1.4