

Abstract Submitted  
for the APR12 Meeting of  
The American Physical Society

**Measurement of  $Z$  boson production in association with heavy flavor jets at D0** JOSEPH ZENNAMO, State University of New York, Buffalo, D0 COLLABORATION —  $Z$  boson production processes in association with  $b$  and  $c$  quarks provide important tests of Quantum Chromodynamic calculations. Several measurements based on data sample corresponding to an integrated luminosity of  $8 \text{ fb}^{-1}$  collected by D0 in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96 \text{ TeV}$  are discussed. They include measurements of  $Z + b$ -jet differential cross-sections and  $Z + b$ - and  $Z + c$ -jet rates in  $Z$  events with at least one jet.  $b$ - and  $c$ -jet fractions are determined by means of a dedicated algorithm that employs kinematic properties of tracks associated to the jet. Measurements are compared to the next-to-leading order theoretical predictions.

Marco Verzocchi  
Fermi National Accelerator Laboratory

Date submitted: 05 Jan 2012

Electronic form version 1.4