Abstract Submitted
for the NWS08 Meeting of
The American Physical Society

Hunting for Higgs at Fermilab DØ: Use of Multivariate Analysis Technique in Data Analysis RAKSHYA KHATIWADA, Linfield College, MICHAEL POGWIZD, University of Illinois Urbana Champaign, PUSHPA BHAT, Fermilab — Theorized by Peter Higgs, the Higgs boson still awaits to be discovered. It is believed to ultimately complete the current standard model which excludes gravity. There has been ongoing research on Higgs boson in High Energy laboratories like Fermilab and CERN. Data is the limiting factor in today's context so an effective way of analyzing data is necessary. The primary goal of this research was to compare the Multivariate Data Analysis technique to the conventional method of data analysis using simulated Higgs boson data. Our results show that the Multivariate Analysis technique is an improvement over the conventional method of data analysis, accurately and efficiently separating data from the background signal. In the future, it has a potential to be a major tool of data analysis whether it be in the field of Physics or other areas of research.

Rakshya Khatiwada
Linfield College

Date submitted: 21 Apr 2008 Electronic form version 1.4