

What can a W boson and some jets reveal at CMS?

Dr. Jake Anderson, FermiLab

Tuesday, November 27 ❖ 4:00 P.M. ❖ 415 NSH

The final state with a leptonic decay of a W boson and a few high pt jets is a fertile area to probe important physics questions at the LHC.

Starting with the known standard model, I explore WW and WZ production in the semi-leptonic final state and anomalous triple-gauge coupling. Moving to a search for the enhancement reported by CDF near 150 GeV, I detail the CMS result of a search for this final state. Finally I'll report the latest high-mass Higgs boson searches in decays $H \rightarrow WW \rightarrow l\nu jj$. All of these topics have made important contributions to our understanding of the electroweak physics and beyond.