Boston University High Energy Experiment Seminar



Standard Model Higgs Searches with D0 in RunII (Why you should believe these two plots)

The Higgs boson is the last missing particle within the Standard Model of particle physics and the largest focus of research efforts at the Fermilab Tevatron collider. The combination of the searches for the Standard Model Higgs boson at a center-of-mass energy of sqrt(s)=1.96 TeV using up to 5.4 fb⁻¹ of data collected with the D0 detector will be presented. The major contributing processes include associated production (WH->I+nu+b+b, ZH->nu+nu+b+b, ZH->I+I+b+b, and WH->WWW^(*)) and gluon fusion (gg->H->WW^(*)). The significant improvements across the full mass range resulting from the larger data sets, improved analyses and inclusion of additional channels are discussed. The prospects for expanding the Higgs sensitivity region though the end of Tevatron operation will also be discussed.

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October 29, 2009 (Thursday) at 3:30pm 3 Cummington St., Room 595, Boston University