

# CU Physics Department Particle Seminar

Wednesday, March 31, 2010 831 Pupin Hall 2:30 PM



## Searching for a low-mass Higgs Boson at CDF



Confirming or excluding the existence of a standard model (SM) Higgs boson remains one of the highest priorities of experimental particle physics. Indirect constraints indicate the most likely mass of a SM Higgs boson is lower than 150 GeV. The Fermilab Tevatron has delivered more than 8/fb of integrated luminosity to the CDF and D0 experiments and prospects for seeing evidence or excluding the existence of a low-mass Higgs boson remain good. In this talk I will introduce the main search channels at CDF as well as discussing the tools and strategies in place, focusing on the  $ZH \rightarrow llbb$  channel. I will conclude by summarizing the status of these searches as well as the most current combination of Higgs boson search results from both CDF and D0.

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