

High Energy Physics Seminar

Department of Physics

Wednesday, December 12, 2018

“Searches for Invisible Decays of the Higgs Boson with ATLAS”

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Abstract: Measurements of the visible decay channels of the Higgs allow for up to around 30% of the branching fraction to be from beyond the standard model decays. Dark matter motivates a decay of the Higgs to invisible final states. This talk will discuss the searches for invisible decays of the Higgs produced in all production modes. A comparison will be made between these searches and the constraints from the visible decay modes. I will put particular emphasis on the ATLAS results from vector boson fusion, the most sensitive search channel thus far. Finally, I will compare the results to direct detection dark matter experiments, assuming the Higgs portal model.

The seminar will be held at 11am in 2214 SES.