

Physics Colloquium

Search for the Higgs Particle in the ATLAS Experiment

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The field of High Energy Physics seeks to understand the fundamental constituents of matter and the forces between them. The current theory of the particle physics, the Standard Model, has been very successful and endured scrutiny to a very high precision yet we have not found the Higgs particle, the manifestation of the mechanism that gives mass to vector bosons and fundamental particles. The Large Hadron Collider at CERN provides sufficiently wide kinematic phase space for the Higgs particle to be discovered, if such a particle exists as the Standard Model predicts. I will present the search strategies for the Higgs particle in ATLAS and the preliminary results in understanding photon identification algorithm performances using cosmic ray in the detector for searching for the Higgs in its two photon final states.

**Thursday, October 8, 3:30pm,
SCI 234**

Refreshments will be served in Sci 103 at 3:00pm