

University of Texas at Dallas Physics Colloquium

Wednesday, February 22, 2012 SLC 1.102
Coffee and Cookies: 3:45 PM Talk: 4:15 PM

An Excess of Needles in the Haystack? The Hunt for New Physics at ATLAS



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After the end of the LHC's 2011 proton-proton run, ATLAS is performing a wide range of exciting searches for new physics. I'll begin with a brief overview of the current state of the Standard Model, including some discussion of the many pieces of the theory that are incomplete or unsatisfactory. Next I will follow with some history of the techniques used for previous discoveries in particle physics, and will compare those analyses with the latest ATLAS searches; many, if not all, of the techniques are fundamentally the same. After discussing some more sophisticated searches for new physics, I will conclude with prospects for finding new physics during the 2012 LHC run.