Boston University Physics Colloquium The Benson T. Chertok Lecture



From Discovery to Characterization: New Results for the Higgs-like Boson Discovered at the LHC

The Large Hadron Collider (LHC) at CERN near Geneva Switzerland has performed spectacularly well in its first major running period from December 2009 through February 2013. Data of unprecedented quality and quantity have been recorded for proton-proton collisions at energies of 7 and 8 Trillion electron Volts – the highest energies man has ever obtained. In this lecture, Joe Incandela will give an overview of the decades-long, worldwide effort to construct and operate the LHC accelerator and the ATLAS and CMS experiments that together represent the largest, most complex systems ever built for physics research. The scientific goals of the LHC program will be reviewed with emphasis on the Higgs boson whose role in defining the structure and evolution of our universe is profound, and whose unusual properties may have extraordinary implications. Highlights from the discovery announced July 4th will be shown but the emphasis of the talk will be on the most recent studies with much more data. This will be followed by a brief look at preparations, expectations and hopes for future results in years to come.

Joe Incandela UC Santa Barbara, CERN

March 28, 2013 (Thursday) at 3:30pm (Refreshments at 3:00pm) SCI 109, Metcalf Science Center, Boston University Call: Winna Somers (wsomers@bu.edu) (617) 353-9320 Host: Tulika Bose