ΣΕΜΙΝΑΡΙΟ
ΤΜΗΜΑ ΦΥΣΙΚΗΣ

Τετάρτη 9 Νοεμβρίου 2016

ώρα 12:30

Αίθουσα Α31

ΑΡΙΣΤΟΤΕΛΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΕΣΣΑΛΟΝΙΚΗΣ
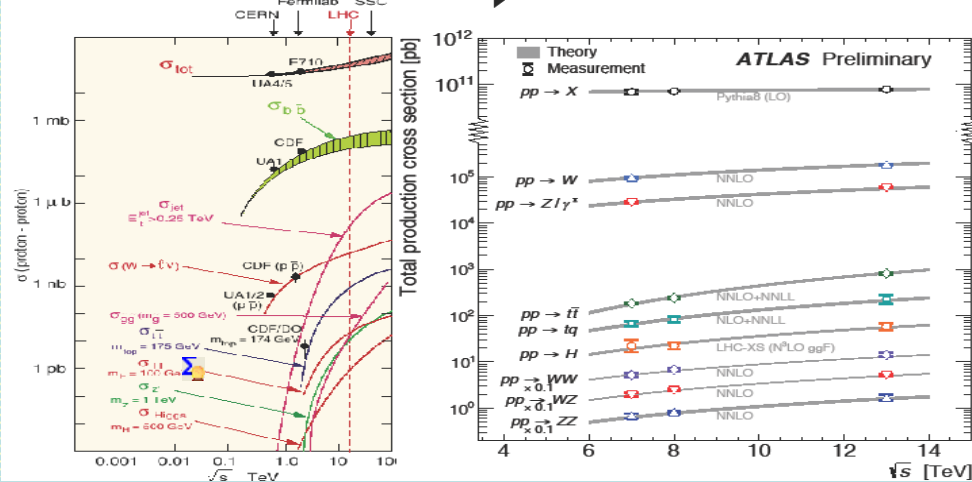
Κύκλος σεμιναρίων

... ένα ταξίδι στον κόσμο της σύγχρονης Φυσικής

στο Τμήμα Φυσικής

## Overview of LHC status: experimental measurements and interplay with theory

Dr. Daniel Froidevaux
CERN

In this colloquium, I will attempt to illustrate the incredible performance of the LHC accelerator complex and of the general-purpose experiments ATLAS and CMS over the past six-seven years. I will focus on the interplay between the most important experimental measurements and the theory progress which has also been amazing over the past ten-twenty years. The colloquium will be at the level of undergraduate physics students and there will hopefully be ample time for discussion and questions about the present and future of our field.

Το προφίλ του ομιλητή
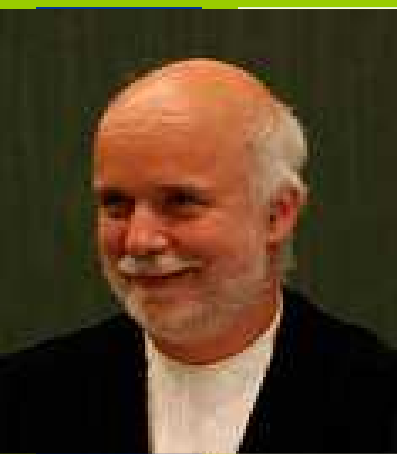
Dr. Daniel Froidevaux, of French nationality, chose experimental particle physics as his lifetime project in 1976 at the age of 22 after a stay as a summer student at CERN. His Ph.D. experiment was the WA2 experiment at the newly constructed CERN SPS. The goal was to provide a measurement of the Cabibbo angle through multiple measurements of semileptonic decays of hyperons. After completing his PhD at LAL, Orsay, France in 1981, he moved to the UA2 experiment at the CERN proton-antiproton collider. He contributed in 1983/1984 to the discovery by UA1 and UA2 of the W and Z vector bosons, and pursued the measurements of their properties until the final publication in 1989 of the first ever electroweak measurements in the rapidly developing Standard Model of particle physics. Over the last 30 years, he has been exclusively working on the preparation of the LHC physics programme, from simulation of the physics, benchmarked by the search for the Higgs boson and for new physics beyond the Standard Model, to the design and construction of the ATLAS detector, and since 2010 the operation, performance assessment, and physics analysis of the extremely rich bounty of physics collected over five years of LHC operation at 0.9, 7, 8 and 13 TeV