



# Joint EP/PP/LPCC seminars

SPEAKER: Prof. T. Sako (Nagoya University)

TITLE: **First LHCf measurement of photon spectra at pseudorapidity  $>8.8$  in LHC 7TeV pp collisions**

DATE: Tue 17/05/2011 11:00

PLACE: Council Chamber

## ABSTRACT

The Large Hadron Collider forward (LHCf) experiment is designed to measure neutral particles emitted very forward in LHC collisions. This is motivated to calibrate hadron interaction models used in the simulation of air showers induced by Ultra-High Energy Cosmic-Rays. LHCf has finished data taking at LHC 7TeV operation in July 2010.

As the first analysis, LHCf derived energy spectra of single photons at pseudorapidity ranges of 8.8 to 9.0 and 10.9 to infinity. Detail analysis procedure and comparison of the energy spectra between LHCf measurements and MC predictions using major interaction models are presented. A brief summary of recent UHECR observations and a preliminary work of the impact of LHCf measurements to the UHECR interpretation will be also presented.