



LHC Seminar

SPEAKER: Hasko Stenzel (Justus-Liebig-Universitaet Giessen (DE))

TITLE: **Measurement of the total cross section in pp collisions at $\sqrt{s}=7$ TeV with the ALFA subdetector of ATLAS**

DATE: Tue 22/07/2014 11:00

PLACE: Council Chamber

ABSTRACT

The total pp cross section is a fundamental parameter of the strong interaction which cannot be calculated in QCD but still can be measured using the optical theorem, which states that the total cross section can be obtained from the extrapolation to $t=0$ of the differential elastic cross section measured at small four-momentum transfer t .

The ATLAS Collaboration has collected 80 μb^{-1} of elastic data in a dedicated run with high

beta* optics at 7 TeV centre-of-mass energy with the ALFA Roman Pot detector in order to perform this measurement.

The analysis of the elastic scattering data and results for the total cross section determination

will be presented in this seminar.

Organised by: M. Mangano, C. Lourenco, G. Unal.....

Tea and Coffee will be served at 10h30