



Contribution ID: 371

Type: **Parallel contribution**

Precision Calibration of the Luminosity Measurement in ATLAS

Thursday 11 August 2011 11:00 (30 minutes)

A precision luminosity measurement is of critical importance for the ATLAS physics program, both for searches for new physics as well as for precision measurements of Standard Model cross-sections. The calibration of the luminosity is based on three so-called van der Meer scans that were performed in 2010. These scans determine the convolved beam sizes in the vertical and horizontal directions, and together with precise knowledge of the beam currents are used to determine an absolute luminosity scale. Based on this analysis ATLAS has determined the luminosity with a total uncertainty of 3.4% for the 2010 data recorded at $\sqrt{s} = 7$ TeV.

Author: TORRENCE, Eric (University of Oregon)

Presenter: TORRENCE, Eric (University of Oregon)

Session Classification: Accelerator Physics

Track Classification: Accelerator Physics