

XVI International Symposium on Very High Energy Cosmic Ray Interactions  
(ISVHECRI 2010)



Contribution ID: 17

Type: **Invited**

## Status and Prospects from the ATLAS Detector

*Monday, 28 June 2010 14:30 (30 minutes)*

Since the startup of the LHC in December 2009, the ATLAS detector has been accumulating data from collisions at center of mass energies of 900 GeV and 7 TeV. Although the integrated luminosity is still low, it is increasing at an accelerated pace. The data have already made it possible to commission and calibrate the various subdetectors, understand their performance in detail and refine the trigger and software reconstruction algorithms. Initial measurements on charged particle multiplicities at  $\sqrt{s} = 900$  GeV and 7 TeV as a function of pseudorapidity and transverse momentum have allowed comparisons to results from other experiments at the lower center of mass energy and to various Monte Carlo models of minimum bias events. Standard Model electroweak processes are also being used as benchmarks for validating the analysis and simulation tools. With the higher luminosity expected in the coming year, stringent tests of higher order QCD processes could be achieved. Various models of new physics could be probed and significant constraints obtained. The status of the detector will be summarized, and a brief review of physics results and expectations from early analyses will be given.

**If this is a contributed presentation, please indicate preference for Oral (O) or Poster (P):**

O

**Primary author:** Prof. AZUELOS, Georges (Univ. de Montreal)

**Presenter:** Prof. AZUELOS, Georges (Univ. de Montreal)

**Session Classification:** Recent relevant accelerator data and results

**Track Classification:** Accelerator data