

ATLAS Electroweak Measurements with early data

The large W and Z cross sections expected at the LHC allow for several measurements involving electroweak bosons already in the early data. The W and Z cross sections can be measured with good accuracy with 10-100 pb⁻¹. These cross-sections are presently predicted with about 5% uncertainty. The ratio of W and Z cross-sections in particular is not affected by the uncertainty on the machine luminosity and will thus be one of the first tests of the detector and analysis chain performance. The Z momentum and rapidity distribution measurements will quickly surpass the predictions in precision, and thus allow to constrain PDFs and QCD calculations. Also the W charge asymmetry will quickly become precisely measured. ATLAS strategies and expectations shall be discussed, using selected examples of expectations for measurements.

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