

## Heavy electroweak boson production in Pb+Pb collisions with ATLAS

*Wednesday 3 October 2018 10:00 (20 minutes)*

Electroweak bosons produced in Pb+Pb collisions are an excellent tool to constrain initial state effects which affect hard scattering process rates in nucleon-nucleon interactions. The production yields of massive electroweak bosons, observed via their leptonic decay channels, offer a high-precision test of the binary collision scaling expected in Pb+Pb and a way to quantify nuclear modifications of the parton distribution functions. The large sample of Pb+Pb data at  $\sqrt{s_{NN}} = 5.02$  TeV obtained by the ATLAS experiment in 2015, and the corresponding high-statistics  $pp$  data at the same collision energy used as a baseline, allow for a detailed experimental study of these phenomena and comparisons to predictions from a variety of theoretical calculations. This talk presents the latest ATLAS results on electroweak boson production, including updated results on Z production and high-precision W boson results in lead-lead collisions.

### Summary

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