

Measurement of electroweak boson production in pp, p+Pb and Pb+Pb collisions with the ATLAS detector

Thursday, 25 October 2018 16:50 (20)

Measurement of electroweak boson production in different collision systems are of great interest to understanding the partonic structure of heavy nuclei, and serve as a constraint on the initial state in larger collision systems. Their production yields in Pb+Pb with respect to pp collisions provide direct tests of both binary collision scaling and possible modification of parton distribution functions (nPDF) due to nuclear effects. Further, the p+Pb collisions provide a relatively clean environment to study nPDFs in detail. The ATLAS detector has a broad acceptance with excellent performance even in the high occupancy environment of central heavy-ion collisions. In this talk the latest ATLAS results on W and Z boson production at the center-of-mass energy of 5.02 TeV are presented, including updated precise result production in pp collisions. Also photon yields are reported in 8.16 TeV p+Pb collision data, and the production rates are compared to an extrapolated pp reference based on existing 8 TeV collision data.

Primary author(s) : Mr. JANUS, Piotr

Presenter(s) : Mr. JANUS, Piotr

Session Classification : Heavy Ion Physics