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Electroweak bosons in heavy-ion collisions measured with the ATLAS detector

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Electroweak bosons do not interact strongly with the dense and hot medium formed in nuclear collisions, and thus are sensitive to the nuclear modification of parton distribution functions (nPDFs). The ATLAS detector, optimised to search for new physics in proton-proton interactions, is well equipped to measure photons, W and Z bosons in the high occupancy environment produced in heavy-ion collisions. Results from the ATLAS experiment on photons, W, and Z boson yields in lead-lead and proton-lead collisions are presented. These results have particular importance in the context of understanding the collision geometry and nuclear initial state.

Experimental Collaboration

ATLAS Collaboration

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