

ATLAS ZDC for Run3 and Run4

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The ATLAS Zero Degree Calorimeters (ZDCs) detect neutral particles emitted at very forward rapidities in nuclear collisions at the LHC. The ZDCs consist of modules of sampling hadronic calorimeters made up of alternating tungsten-fused silica rod layers that act as Cherenkov radiators. They have been upgraded for LHC Run 3 with new fused silica rods for better radiation hardness, along with low-attenuation air-core cables and new readout electronics. A new Reaction Plane Detector(RPD) was also implemented. The ATLAS and CMS ZDC groups have proposed a joint project to build a next-generation HL-ZDC that will include an Electromagnetic and Hadronic section, as well as an RPD, all enclosed in a monolithic mechanical design that should simplify installation and thus reduce radiation exposure. This talk will review the performance of the ATLAS ZDC in the first year of Run 3, and provide an outlook of the HL-ZDC detector, with particular attention to the upgraded EM section.

Alternate track

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