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## Joint ATLAS/CMS ZDC upgrade project for the High Luminosity LHC

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The high luminosity LHC, or HL-LHC provides the opportunity to study heavy ion, proton-nucleus, photon-nucleus and photon-photon collisions with unprecedented luminosities. The LHC heavy ion community has mapped out a large range of physics measurements at the HL-LHC that will push forward our understanding of both QCD, QED and even electroweak physics. The measurement of forward neutrons and photons in Zero Degree Calorimeters, or ZDCs, is essential for event classification and triggering. In order to reach the required luminosities, the LHC interaction regions will be completely remodeled, necessitating the need to build new ZDCs that are both thinner and much more radiation hard. This challenge motivated the formation of a joint project between ATLAS and CMS to build new ZDCs for Run 4. The ZDCs are based on very radiation hard fused silica rods that produce Cherenkov light. These rods have been developed in collaboration with the LHC BRAN group and private companies. The Run 4 ZDCs are the first joint detector project between CMS and ATLAS. This talk will present the capabilities of the new ZDCs and recent test beam analysis.

### **Present via**

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