

XXVIII International Workshop on Deep Inelastic Scattering and Related Subjects



Contribution ID: 330

Type: **Invited Talk**

Upgrade plans of the ATLAS detector and expected performance in Run 3 and beyond

Tuesday, 24 March 2020 11:00 (20 minutes)

The Large Hadron Collider (LHC) has been successfully delivering proton-proton collision data at the unprecedented center of mass energy of 13 TeV. For the next period of data taking (Run 3), the LHC is expected to deliver an additional 300/fb with pile-up conditions similar or exceeding those of Run 2. A high-luminosity upgrade of the LHC - the High-Luminosity LHC (HL-LHC) - is planned after Run 3 to increase the instantaneous luminosity by a factor 5 to 7 compared to the nominal LHC conditions. The HL-LHC aims to deliver to the ATLAS detector an integrated luminosity between 3000 and 4000/fb at a center-of-mass energy of 14 TeV. To cope with the expected data-taking conditions ATLAS is planning major upgrades of all its detector systems. This contribution will review the status of the ongoing Phase-I upgrade construction, under completion for operations in Run 3, and the progress towards the HL-LHC upgrades. An overview of the physics objectives in Run 3 and at the HL-LHC, and of the expected performance of the upgraded ATLAS detector, will be also presented.

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Session Classification: Future Experiments

Track Classification: Future Experiments