

The CMS Outer Tracker Upgrade for the High Luminosity LHC

Friday, 26 October 2018 17:25 (10 minutes)

The LHC will be upgraded to the High Luminosity (HL-LHC) in the late 2020 to further increase the discovery potential of the machine. During the HL-LHC the instantaneous luminosity will be as high as $7 \times 10^{34} \text{ cm}^{-2} \text{ s}^{-1}$ in order to collect 10x more proton-proton collision data than at the LHC. The HL-LHC upgrade will set unprecedented challenges from the point of view of both detector and electronics capabilities and radiation hardness. In order to maintain its physics reach, the CMS detector will be significantly upgraded. The design choices of the new CMS Outer Tracker will be presented along with the ongoing R&D activities.

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Session Classification: Young Physicists' Lightning Round Session 4