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The CMS Outer Tracker Upgrade for the High Luminosity LHC

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The era of High Luminosity LHC will pose unprecedented challenges for detector design and operation. The planned luminosity of the upgraded machine is 5*10ˆ34cmˆ-2sˆ-1, possibly reaching an integrated luminosity of 3000fb-1 by the end of 2037. CMS Tracker detector will have to be replaced in order to fully exploit the delivered luminosity and cope with the demanding operating conditions. The new detector will provide robust tracking as well as input for the first level trigger. The focus of this talk is the replacement of the CMS outer tracker system, describing new layout and technological choices together with some highlights of R&D activities.

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