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Standard Model measurements at the High-Luminosity LHC with CMS

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The High-Luminosity Large Hadron Collider (HL-LHC) is expected to deliver an integrated luminosity of up to 3000 fb-1. The very high instantaneous luminosity will lead to about 200 proton-proton collisions per bunch crossing ("pileup") superimposed to each event of interest, therefore providing extremely challenging experimental conditions. Prospects for selected Standard Model (SM) measurements at the High-Luminosity LHC are presented. In particular, the performance of the upgraded CMS detector at the HL-LHC for precision measurements of the global SM parameters, top mass, and electroweak mixing angle is studied. Prospects for flavour changing neutral currents search in single top quark production and also for QCD-oriented measurements are also presented.

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