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Results and prospects with the CMS-TOTEM Precision Proton Spectrometer

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The PPS (Precision Proton Spectrometer) detector system consists of silicon tracking stations as well as timing detectors to measure both the position and direction of protons and their time-of-flight with high precision. They are located at around 200 m from the interaction point in the very forward region on both sides of the CMS experiment. PPS is built to study Central Exclusive Production (CEP) in proton-proton collisions at the LHC, including the photon-photon production of W and Z boson pairs, high-mass diphoton and dilepton production, high-p_T jet production, as well as searches for anomalous couplings and new resonances. The PPS detector has taken data at high luminosity while fully integrated to the CMS experiment. The total data collected correspond to around 100 fb^{-1} during the LHC Run 2. In this presentation the PPS operation, commissioning and performance are discussed. We will also present the first results and the physics prospects from the CMS Precision Proton Spectrometers, in particular the observation of exclusive dileptons at high mass with 10 fb^{-1} of data accumulated in 2016. This result shows a good understanding, calibration and alignment of the new PPS detectors.

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