

# The CMS Muon Endcap (ME0) GEM Detector

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The CMS Muon system is undergoing significant upgrades for High-Luminosity LHC operation, including the installation of the Muon Endcap 0 (ME0) detector. ME0 is a 6-layer station, scheduled for production starting in 2024, that will expand the geometrical acceptance for muons in the pseudorapidity range  $2.03 < |\eta| < 2.8$ . Comprising 18 chambers per endcap, each housing 6 triple-GEM detectors, ME0 enhances muon measurement by adding six hits per track, crucial for robust track reconstruction at the first trigger level. Production and quality control are distributed across various sites to expedite the process. Lessons from prior upgrades inform the design improvements for ME0, aligned with the overall objectives of strengthening muon triggering and reconstruction capabilities. This presentation provides an overview of the ME0 upgrade and its current status.

## Alternate track

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