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Beam test of 2S module prototypes for the Phase-2 CMS Outer Tracker

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The CMS detector will be upgraded in the Phase-2 Upgrade for the operation at the HL-LHC. Among others, the silicon tracking system will be completely replaced by a new system providing an extended acceptance, an improved granularity and the feature to include tracking information into the level-1 trigger. The new Outer Tracker will consist of 2S modules with two strip sensors and PS modules with a macro-pixel sensor and a strip sensor, specialized detector modules with onboard p_T discrimination.

The functionality of current generation prototype 2S modules has been tested at the test beam facility at DESY Hamburg. With a 4 GeV electron beam, various studies are performed like efficiency scans at different positions of the module or at varying inclination angles to mimic different p_T particles. In this talk, module related preparations for the test beam are presented and first results are shown.

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