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Performance of the Prototype Readout System for the CMS Endcap Hadron Calorimeter Upgrade NATE CHAVERIN, JAY DITTMANN, KENICHI HATAKEYAMA, NATHANIEL PASTIKA, Baylor Univ, CMS COLLABORATION — The Compact Muon Solenoid (CMS) experiment at the CERN Large Hadron Collider (LHC) will upgrade the photodetectors and readout systems of the endcap hadron calorimeter during the technical stop scheduled for late 2016 and early 2017. A major milestone for this project was a highly successful testbeam run at CERN in August 2015. The testbeam run served as a full integration test of the electronics, allowing a study of the response of the preproduction electronics to the true detector light profile, as well as a test of the light yield of various new plastic scintillator materials. We present implications for the performance of the hadron calorimeter front-end electronics based on testbeam data, and we report on the production status of various components of the system in preparation for the upgrade.

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