

The SiPM-on-Tile Section of the CMS High Granularity Calorimeter

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We present developments towards an engineering design of the phase 2 upgrade of the CMS endcap calorimeter with a focus on the section instrumented with scintillator tiles directly read by SiPMs. With respect to earlier developments targeted at a future e+e- collider, additional challenges in terms of radiation hardness, data rates and mechanical integration including cooling need to be addressed. We will present the evolving design, results on the performance of irradiated SiPMs, the optimisation of scintillator tiles, the status of active element prototypes with integrated electronics, and the preparations for automated production.

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