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Light-yield simulation for HGCal scintillating tiles YI-MU CHEN, SARAH ENO, University of Maryland, College Park — The present CMS endcap calorimeters will be replaced with a High Granularity Calorimeter (HGCAL) during the third long shutdown of the LHC in preparation for the intense environment of the High Luminosity LHC. The hadronic part of the HGCAL will include 240,000 scintillating tiles. Each trapezoidally-shaped tile will be read out by a silicon photomultiplier (SiPM) positioned inside a "dimple" in the scintillator. In this poster, results from a Geant4 simulation of the expected light yield are used to explore critical parameters that affect the overall performance of the system. The quality of the reflective wrapping around tiles is found to be the most critical parameter for improving light-yield performance.

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