

12th Beam Telescopes and Test Beams Workshop



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Summary of HGCAL beam tests in 2023

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As part of its HL-LHC upgrade program, CMS is developing a High Granularity Calorimeter (HGCAL) to replace the existing endcap calorimeters. The HGCAL will be realized as a sampling calorimeter equipped with silicon and SiPM-on-tile modules. For the validation of the HGCAL, prototype of various silicon modules types have been exposed to beam of electrons, muons and pions at the CERN SPS H4 beam line. In 2023, the full electronic chain was assembled and tested for the first time. The front-end electronics, including readout and concentrator ASICs, were controlled and readout by a prototype board of the final back-end. The experimental setup and first results will be discussed.

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