

Abstract Submitted
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Analysis of Performance of a Radiation-Hard, Highly-Segmented Shashlik Electromagnetic Calorimeter in the CERN H4 Testbeam ERIC CULBERTSON, CHRIS NEU, GAGE DEZOORT, ALEXANDER LEDOVSKOY, TUTANON SINTHUPRASITH, University of Virginia — A shashlik style calorimeter with alternating tungsten and LYSO crystal plates underwent testbeam analysis to determine its energy resolution. A single shashlik module is a tiny rectangular prism composed of 28 2.5 mm thick tungsten plates alternating with 29 1.5 mm thick LYSO crystals, which each have a length and width of 14 mm. The expected stochastic energy resolution of this design was predicted to be $10\%/\sqrt{E}$ by standalone GEANT4 simulations and subsequent beam tests. A 4x4 array of shashlik modules has been tested using the H4 beamline at CERN. Following a correction to the nonlinearity of SiPM response, the energy resolution was determined.

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