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First results of beamtests of a MAPS based ElectroMagnetic calorimeter

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A prototype of an Si-W EM calorimeter was built with Monolithic Active Pixel Sensors as the active elements. With a pixelsize of 30 μm it allows digital calorimetry, i.e. the particle's energy is determined by counting pixels, not by measuring the energy deposited. Although of modest size, only 4 Moliere radii wide, it has 39 million pixels and its calibration appears far from trivial.

The calorimeter has been tested at DESY (electrons) and at CERN PS and SPS (mixed beams) with energies from 2 to 200 GeV. We'll present the shape of showers caused by electrons and pions, as well as tracks by pions and cosmic muons in unprecedented detail. Preliminary results for energy and position resolution will also be given

Primary author: Dr NOOREN, gerardus (utrecht university / nikhef)

Co-author: Dr ROCCO, Elena (Utrecht University)

Presenters: Dr ROCCO, Elena (Utrecht University); Dr NOOREN, gerardus (utrecht university / nikhef)