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# Electromagnetic calorimeter for HADES experiment

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## Collaboration

HADES

## Abstract content

Electromagnetic calorimeter (ECAL) is being developed to complement dilepton spectrometer HADES currently operating on the beam of the SIS18 heavy-ion synchrotron at GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt, Germany. ECAL will enable the HADES@FAIR experiment to measure data on neutral meson production in heavy ion collisions at the energy range of 2-10 A GeV on the beam of future accelerator SIS100@FAIR. Calorimeter will consist of 978 modules divided into 6 sectors and it will cover forward angles $12^\circ < \theta < 45^\circ$ and almost full azimuthal angle. Each module consists of a lead glass Cherenkov counter, photomultiplier, HV divider and optical fiber. We will report results of the last beam test in MAMI facility at Johannes Gutenberg Universität Mainz. Detector response of the setup consisting of several modules were studied using secondary photon beam with energies ranging from 81 MeV up to 1399 MeV (eight different triggers were used). The photon beam hitted the setup at three different positions (-4cm, -2cm, center of the module = 0cm, +2cm) and under three inclinations (angles $0^\circ$, $6^\circ$ and $12^\circ$ with respect to the module's longitudinal axe). Various prototypes of front-end boards ("Cracow" and PaDiWa AMPS) were tested as well.

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