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The PANDA EDD prototype in Giessen Cosmic Station

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The PANDA detector at the future Facility for Antiproton and Ion Research (FAIR) is currently being constructed in Darmstadt, Germany. It contains a fixed proton target and an antiproton beam with a momentum range between 1.5 GeV/c to 15 GeV/c. Two Cherenkov detectors are used to identify charged hadrons. The Disc DIRC (EDD) covers polar angles between 5° to 22° in the endcap region. In order to test the performance of the EDD prototype, the experimental setup driven by cosmic muons was built at the JLU in Giessen. It is called the Giessen Cosmic Station (GCS) and contains four tracking boxes for tracking muons, two trigger plates, and a lead absorber. The prototype of the EDD detector is integrated to the GCS setup to reconstruct the Cherenkov angle of each muon tracked by the GCS hodoscope.

This talk covers the technical design of the GCS and the performance tests of the EDD prototype in the GCS.

TIPP2020 abstract resubmission?

No, this is an entirely new submission.

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