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【372】 MiniFIT, The Small-Scale Version of the HERD Tracking System, From Design to Performance

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The High-Energy cosmic-Radiation Detection facility (HERD) will be the largest calorimetric experiment for the direct detection of cosmic rays. HERD aims at probing dark-matter signatures in the electron and photon spectra up to 100 TeV. It will also measure the flux of cosmic protons and heavier nuclei up to a few PeV. HERD will be equipped with a scintillating-fiber tracker (FIT) for the reconstruction of charged particle trajectories, the measurement of their absolute charge, and the enhancement of photon conversion into electron-positron pairs. A miniature version of the FIT sector, MiniFIT, was designed, built, and tested with particle beams. Its design and physics performance will be presented in this contribution.

Author: Dr PERRINA, Chiara (EPFL - Ecole Polytechnique Federale Lausanne (CH))

Presenter: Dr PERRINA, Chiara (EPFL - Ecole Polytechnique Federale Lausanne (CH))

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