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The Silicon Microstrip Tracker for Mini.PAN experiment

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The Penetrating particle ANalyzer (PAN) is an astroparticle instrument designed to operate in space to measure and to monitor the flux, the composition and the direction of highly penetrating particles with energy ranging from 100MeV/n to 20 GeV/n. The main parts of the PAN spectrometer are: a high field permanent magnet, a Silicon Microstrip Tracker (SMT), a Time-of-Flight counter and an active Pixel detector. Here we report on the design, construction and test of the Silicon Tracker built for a demonstrator, called MiniPAN, in the framework of the the EU H2020 FETOPEN program. The SMT is composed of three tracking planes of single sided thin miscrostrip sensors with fine readout pitch of 25um on x-coordinate (bending plane in the magnetic field) alternated with sensor with readout pitch of 400 um on y-coordinate. The SMT characteristics and assembly will be described and the quality and performance of the complete detector will be reported.

Collaboration

PAN Collaboration

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