

The Precision Tracker of the OPERA Detector

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The long-baseline neutrino oscillation experiment OPERA has been designed for the direct observation of ν_τ appearance in the CNGS ν_μ beam.

The OPERA detector, located at the LNGS underground laboratory, consists of two identical Super Modules (SM): A target region composed of about 75000 Emulsion Cloud Chamber modules - providing micrometric resolution - and scintillator strips, followed by a magnetic spectrometer that consists of dipole magnets, Resistive Plate Chamber detectors (RPC) and the Precision Tracker drift tube detector (PT).

The main task of the PT is the determination of the muon momentum and charge sign - thereby suppressing the important background from charmed particle decays to the muonic signal decay channel $\tau^- \rightarrow \mu^+ \overline{\nu}_\tau \nu_\mu$.

Details on the PT architecture and performance will be presented.

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