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Testbeam Results for the sPHENIX TPC Prototype

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A Time Projection Chamber (TPC) will be the central tracking detector in the sPHENIX experiment. Its main task is to provide a high tracking efficiency and excellent momentum resolution for precise upilon spectroscopy and jet measurements. The TPC will cover the full azimuth and a pseudorapidity range of up to ± 1.1 .

A small scale prototype TPC with a radial extension of 40 cm and a similar drift length has been manufactured which can accommodate a full size amplification module as for the sPHENIX TPC.

The prototype has been exposed to a 120 GeV proton beam at the Fermilab Test Beam Facility (FTBF). The results of the test-beam campaigns including SAMPA readout electronics will be presented.

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