

Workshop on Advanced Radiation Detector and Instrumentation in Nuclear and Particle Physics (Online)



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Straw Tube Studies and Prototype Assembly for DUNE

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Straw tubes are drift chambers made of a gas-filled conducting cylinder acting as cathode, and a wire stretched along the axis of the cylinder acting as an anode. The Straw Tube Trackers (STTs) are a low mass tracking system with excellent vertex, momentum, angular and time resolution and particle identification. Straw Tube based tracking detector is proposed for one of the Near Detectors in the long baseline neutrino experiment, DUNE (Deep Underground Neutrino Experiment) at Fermilab. The SAND (System for on-Axis Neutrino Detection) detector, one of the Near Detectors, will have the tracking system completely based on Straw Tubes modules. We report on the activity, as part of the DUNE-India-ND collaboration, on the plan to assemble and test the SAND STT modules at Panjab University. One test ST chamber is being operated by the group for setting up the readout and characterization facility. New Straws are being assembled for developing a prototype of 1.8m x 50cm.

What is your experiment?

DUNE

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