

Neutron detectors

The XtremeD, D16, and D20 instruments have recently been equipped with large-area, curved, position-sensitive ^{33}He neutron detectors based on the Trench-MWPC (Multi-Wire Proportional Chamber) technique, initially introduced at the ILL in 2017. These detectors offer a unique combination of wide angular coverage, high spatial resolution, and excellent counting rate capabilities. Their development, along with selected characterization results, will be presented. The specific features of the Trench-MWPC design provide several advantages over conventional MWPCs, which will be described and discussed.

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