

A High-Pressure TPC Prototype

The understanding of neutrino nucleus interaction cross-sections is a dominant uncertainty for current neutrino oscillation experiments. Reductions in these uncertainties will be essential for future experiments. Detectors with low thresholds, such as a high pressure TPC (HPTPC), allow models to be compared in new regions of parameter space and as such for uncertainties to be reduced. A proto-type HPTPC which has been constructed at Royal Holloway University of London and will be tested this summer at CERN is described. This detector will be able to provide measurements of proton and pion cross-sections on a variety of nuclear targets to provide inputs for current cross-section models. This detector will also form a basis for the development of a future long baseline neutrino oscillation experiment near detector.

Session and Location

Wednesday Session, Poster Wall #123 (Auditorium Gallery Left)

Poster included in proceedings:

yes

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Track Classification: Poster (not participating in poster prize competition)