

HPgTPC Fermilab Test Beam

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Goal

Confirm that low momentum hadron tracks are detectable with the ALICE OROCs operating at high pressure.

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- ▶ Fermilab MCenter beam test in 2020/2021

MCenter

- ▶ Tertiary beam line, pions and/or protons down to 200 MeV
- ▶ Experimental areas geared towards long term experiments

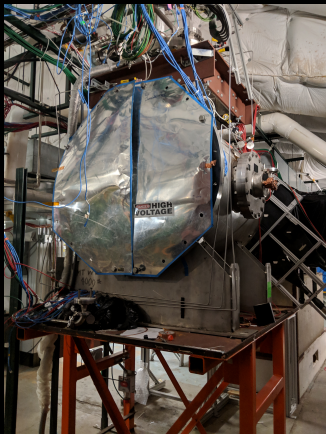


Different Possible Experimental Areas



Different Possible Experimental Areas

We can either go where LArIAT is currently or where the NOvA beam test is.



Additional Systems

Particle momentum and identification:

- ▶ ToF and dipole with multi wire proportional chamber available in both areas
- ▶ In the NOvA area there is an additional Čerenkov detector

Time-line

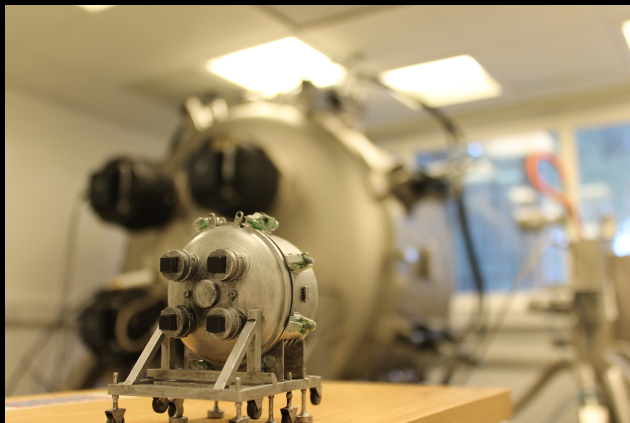
Dependent on the Fermilab beam shutdown schedule: tentatively June to late October 2020. The MTest/MCenter beam will come back up later - possibly November.

- ▶ June 2020 - September 2020 set up at Fermilab in clean area
- ▶ November 2020 - move to MCenter for 2020/2021 beam run

Set up phase

Need a clean(ish) room for the set up of the detector inside the pressure vessel. This will be done away from the MCenter experimental area.

- ▶ In discussion, possibly the MicroBooNE tent



Getting the Pressure Vessel in



Current Status

What we've done so far:

- ▶ In communication with Fermilab test beam coordinator who has us pencilled in for beam time, is aware of our needs re electricity, safety certification and gas supply
- ▶ In communication with FNAL computing
- ▶ See Alexander's talk for OROC readiness

This could be you!

Will be looking for more collaborators for the beam test