Imperial College London

BTTB7 Workshop debrief

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(with parts stolen from Lorenzo Uplegger)

HPTPC Analysis Meeting 23/01/19

Introduction

- The Fermilab Test Beam Facility has been in operation since 2005
  - Over 1000 users from over 30 different countries
  - Broad program spanning multiple research topics
- 2 Beamlines (MTest and MCenter)
  - Energies range from 120 GeV protons in the primary line down to 200 MeV particles in the tertiary line
- Available typically from October to June (~9 months/year)

Beam Details and Infrastructure

- MTest Beam line
  - 120 GeV protons (primary)
  - 1 – 60 GeV secondary beam
  - Spot size about 2cm
  - Energy can be changed in just a few minutes

- MCenter Beam line
  - Tertiary beamline down to 200 MeV
  - Mainly used for longer term (~months) experiments
- Infrastructure available
  - Remote controlled motion tables, Gas hookups (including flammable) cameras, signal/HV/ethernet patch panels
  - Cables, supplies, test benches for prep work
  - Much more, just ask!

Procedure for Getting Beam and Typical Setup

- First step is to write the TSW (Technical Scope of Work) and contact facility manager (Mandy Rominsky)
  - Agreement between test beam collaboration and the lab over what resources are used.
    - Do you need significant engineering or tech support? Computing support?
    - Will you have enough users to cover your shifts?
  - TSW information can be found here: http://programplanning.fnal.gov/tsw_orc/
    - Email: rominsky@fnal.gov
    - Can be a broad document, cover multiple years and uses
    - Approval process typically takes 4-6 weeks, but can be faster, depending on needs.

HPTPC Talk

- Was well received
- Lots of interest in the optical readout and ToF systems
- People were very impressed/surprised that we managed to perform a beam test so quickly
- They were interested to hear that an HPTPC is part of the official DUNE design

Interest from DESY

- A lot of interest from Mengqing Wu at DESY
  - Works on an EU-AIDA2020 project building a beam telescope for use with an LP-TPC
  - Is heavily involved eith the DAQ side of the work
- I have put her in touch with people who worked on the DAQ for ToF/TPC
- She is coming to Oxford in early April and would potentially be interested to visit London and come meet us to find out more about HPTPC