



Muons report

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Proton PMG / AEM

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<https://indico.fnal.gov/event/64515/>

Mu2e-docdb-48785-v1

Mu2e overview: solenoids and cryo

- Upstream Transport Solenoid (TSu) and downstream TS (TSd) are in the building
 - In process of welding TSd to TSu
 - Next: connect cryogenic transfer lines to the solenoids
- Cryo infrastructure underway
 - Access platforms being installed
 - Quench protection racks being installed
 - Power leads/heaters being installed
 - ODH analyses underway
 - Full Flow Purifier expected in May
 - LN2 refurbishments starting
 - Concrete pad poured for 2nd LN2 tank
- Soon to arrive: Production Solenoid (PS) and then Detector Solenoid (DS)

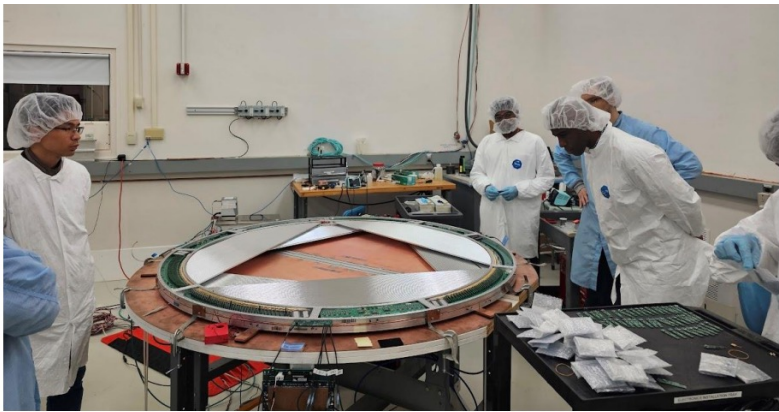


Mu2e overview: detectors

- Tracker
 - Advancing infrastructure for a productive summer of electronics installation
 - Developing procedures for loading stations into frame (18 total stations)
- Calorimeter
 - Readout board production to start in May
 - Calorimeter chiller out for bid
- DAQ
 - Plan for optical feedthroughs nearly done
 - Global Run #2 planned for mid-July
- At building
 - Tracker chiller under construction
 - Equipment Cooling Water system under construction
 - Detector cables + optical fibers being installed
 - Electrician “contract 3” begins mid-May



April 2024 Brian Beckford (OHEP Intensity Frontier Program Manager) visits Mu2e Tracker at Lab3



Backup

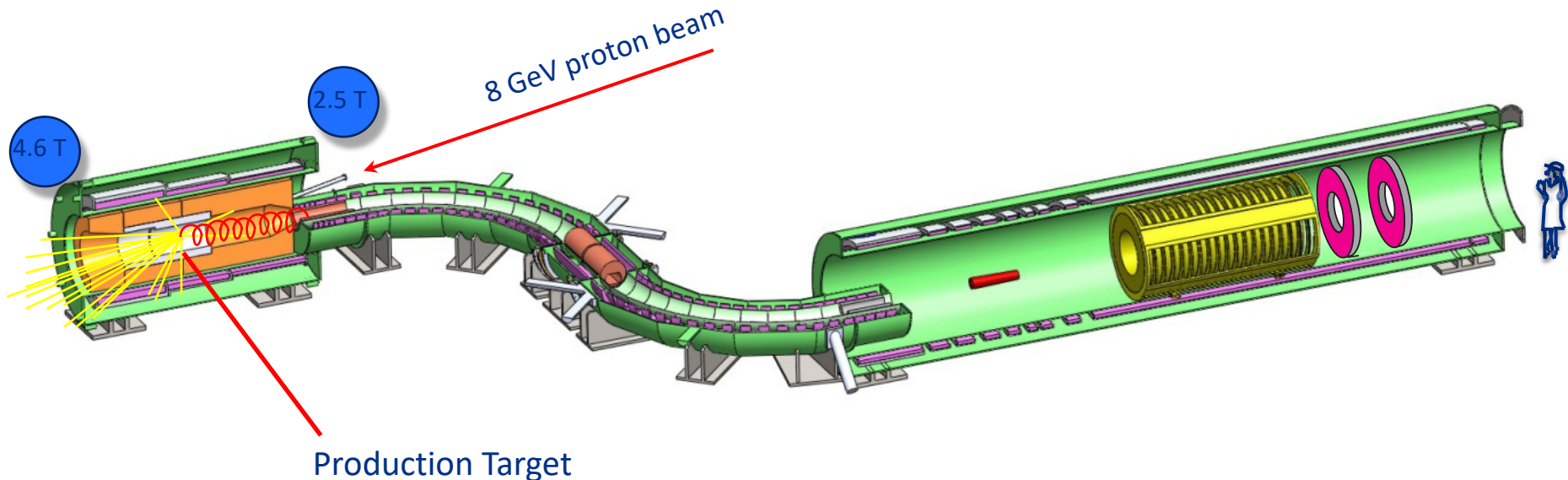
Incoming

- 28-31 May: Low tempo week
- 25-27 June: Mu2e Independent Project Review (IPR)
- 01-05 July: Low tempo week
- 08-12 July: Mu2e Global Run #2
- 10-12 July: FNAL Users Meeting
- 16-18 July: DOE review of Intensity Frontier FNAL Detector and Computing Operations
- 23-27 Sept: Mu2e Collaboration meeting

Mu2e Production Solenoid

Production Solenoid

- Houses Production Target
- Inner bore lined with a bronze and water heat and radiation shield to limit radiation damage to the PS coils
- Captures pions and accelerates them towards the other solenoids



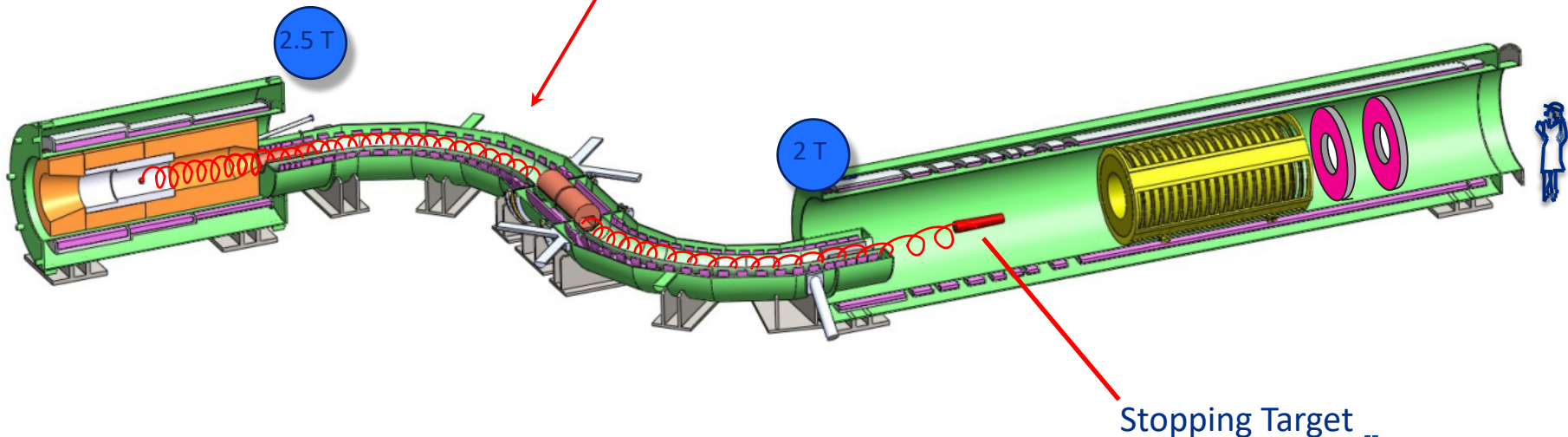
Mu2e upstream and downstream Transport Solenoids

Production Solenoid

- Houses Production Target
- Inner bore lined with a bronze and water heat and radiation shield to limit radiation damage to the PS coils
- Captures pions and accelerates them towards the other solenoids

Transport Solenoid

- Collimation system selects muon charge and momentum range
- Pbar windows upstream of first collimator and in the middle of central collimators



Mu2e Detector Solenoid

Detector Solenoid

- Graded upstream field to improve acceptance and reject backgrounds
- Uniform field downstream for momentum analysis

