



LBNF Primary Beam Project Update

Anne Norrick

Friday 9am

31 May 2024

Primary Beam

Magnets

What is included

All conventional magnets needed for extracting the beam from the Main Injector/Recycler and moving the protons to the target. Includes stands to hold the magnets, and plans for installation.

Ongoing Work

- » HAB Hi-bay has been cleared, and the dipole coil winder fixtures are starting to be moved in.
- » Kicker prototype assembly has started, there have been some troubles with the alignment pins on the box, so it has gone back to the machine shop.
- » Magnet vehicle specifications reviewed by group.
- » Magnet and multiwire stands being finalized.
- » Quad installation procedure in process.

Magnet Power Supplies

What is included

Power supplies needed for any and all magnets used in the primary beam.

Ongoing Work

- » Kicker magnet mechanical drawings of NuMI kickers being updated, with work on electrical simulations beginning.
- » Working with APS-TD on the kicker prototype: pulse testing and LV/HV tests.
- » Work on power supplies for the correctors beginning.
- » Work to define a replacement dielectric fluid for Fluorinert is ongoing.
- » Q207 power supply specification document in progress.

Primary Beam

Primary Water System

What is included

All water cooling for all magnets and power supplies.

Ongoing Work

- » Ongoing work on the layout of the pump room and overall flow diagrams.
- » Developing interconnections for the magnet LCW and electrical connections.
- » Received a quote back for the bus, so working to get that finalized and into the schedule.

Vacuum

What is included

Beam pipes and all of equipment needed to create and maintain vacuum in the beam pipes.

Ongoing Work

- » Completed outgassing tests of the ceramic beam tube coatings.
- » Continuing to release vacuum drawings.
- » Finalization of MI components expected mid-June.
- » Continuing to work on plans for transporting the ceramic beam tubes.