

CAPTAIN Report – FY16 Q1

1. Preparations for Neutron Run at LANSCE

The Mini-CAPTAIN detector and supporting systems were moved from the commissioning location in the old LSND hall to the WNR facility at LANSCE in November 2015. The detector was filled with liquid argon in December and the circulation system that continues to purify the detector was started. The neutron beam run has been extended in to February 2016 and the current plan is to move the detector into the beamline in early February and take beam at the end of that month.



Figure 1: Mini-CAPTAIN detector being filled outside the neutron beamline at the WNR facility at LANSCE in December 2015. The beam is on the other side of the yellow shielding blocks in the background.

2. CAPTAIN Collaboration Meeting

In mid-November, the collaboration met in Santa Fe, NM to continue to plan for the Mini-CAPTAIN neutron run and confirm the order of the CAPTAIN physics program. The collaboration agreed to pursue the medium energy program at the Fermilab NuMi beamline under the CAPTAIN/MINERvA effort

first while continuing to pursue plans to then move the full CAPTAIN detector to a location capable of examining low energy neutrinos that will provide valuable information for supernova physics detection. Discussions were also held on the collaboration structure with MINERvA. The CAPTAIN Collaboration Council was also formally established with Keith Rielage (LANL) elected as chair and Lisa Whitehead (Univ. of Houston) as deputy chair. In addition, the University of Pennsylvania and New Mexico State University were added as new collaboration institutions.