

CAPTAIN 4QFY2014 Progress Report

During the 4th quarter of FY14, the CAPTAIN group carried out a second filling of the Mini-CAPTAIN detector with liquid nitrogen to continue the shake-out of the electronics chain. The run was quite successful with the first cold full-system test of all channels on all wire planes.

DAQ development continued and finally culminated with the ability to read all channels on a trigger and write-out distinct events. During Q3, we had been limited to a channel-by-channel read-out.

The major hardware effort during Q4 was the preparation and commissioning of the in-line liquid argon filter. Several argon cryogenic lines were also prepared. The connections and first demonstration of the argon purity measurement devices were carried out. Subsequent to the regeneration of the in-line filter, we filled the Mini-CAPTAIN detector with liquid argon for the very first time. The fill was carried out on 30 September, so most of the subsequent studies were completed in the first quarter of FY15.

Finally, on August 22nd, we received the CAPTAIN cryostat at LANL.