

LArFCS Cryogenic System Progress

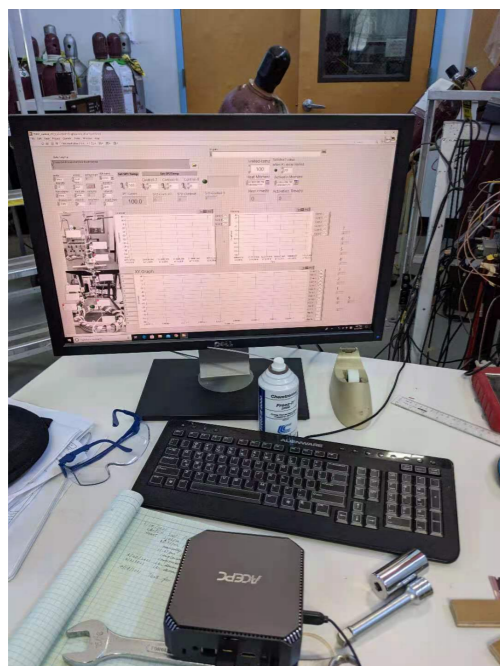
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6/29/21

LArFCS Construction

► Preparation for the purity run

- Inline filter status check
 - Controlling microPC and LabVIEW program functioning well
 - RS 485 port occasionally time out when communicating to the LabVIEW control program
 - Heaters can be operated manually by pressing controller buttons
- Hot getter status check
 - Operation well with power cycle
 - No consumption for a long time, large absorption lifetime remains
- Gas analyzers
 - Turning on with no problem
 - Arranging a dry run using compressed GAr with the hot getter to validate the functionalities
 - Then another dry run to check the inline filter cartridge filtration capacity



LArFCS Construction

▸ LArFCS construction

- Xeon PO initiated in the system
 - Entered as an emergency requisition
 - Please approve asap once PS notification arrived
- LAr Heater troubleshooting
 - Cut the tube open at joint with the pinhole by welding
 - Clear burning observed inside
 - The correct resistance on the heater leads still measured right at ~ 20 Ohm
 - LAr gets into the tube and caused short circuit by vigorous evaporation when turning on
 - No observed in LN2 test because there was no long term immersion in cold to allow liquid into the tube
 - Will implement better QC for the next version in production



6000 Gallon LN2 tank

► Preparations for the commissioning following lab safety guidance

- Painting the tank to white
 - WO #EP1134602 still pending in the system
- Airgas site survey for bring it back for operation
 - Person in charge on vacation, returning tomorrow
 - Estimated time for service call is 4 hours;
 - Tech Service Hourly Rate – Portal to Portal \$175.00/Normal
 - Tech Service Hourly Rate – Portal to Portal \$262.50/Outside Normal
 - Four (4) hr minimal service charge: cost of \$700
 - Parts/other services or materials will be billed at market pricing as needed

The screenshot displays the Maximo Work Order interface for Brookhaven National Laboratory. At the top, it shows the Brookhaven National Laboratory logo and the Facility Operations Center header. The work order number EP1134602 is prominently displayed in red. Below this, there is a navigation bar with various menu items. A row of status icons is shown, with 'In Progress' (6/9/2021) highlighted in green. The 'General' section provides details: Status: In Progress (INPRG) *, Description: Paint liquid nitrogen tank installed next to 510 high bay. see below, Work Type: C (CHARGE BACK), Location: 0510 (PHYSICS), FPM: Doyle, Thomas J (631/344-7556) [merc@bnl.gov], Asset: Reported By: Li, Yichen (631/344-7405) [Yichen@bnl.gov], On Behalf Of: Doyle, Thomas J (631/344-7556) [merc@bnl.gov], and Costs: (Project-Activity: 70079-70079 - O FD ColdEI Coldata).

Lab Clean up

- ▶ **Highbay corner RM1-144 clean up**
 - Brandon is calling a meeting on July 1st 4:30-5:00pm
 - All are welcomed to join the discussion
 - We should have sufficient room in the basement to save the useful items

