

ICEBERG Status Update

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Links

- [ICEBERG Elog](#)
- [SP FD Cold Electronics Test Stands Wiki](#)
- [Run Plan and Project Schedule](#)
- [ICEBERG Documentation DUNE Electrical and Grounding Approval](#)

ICEBERG TPC

- Every resistor and capacitor that we could access with a probe in the TPC from the Tee to APA have been tested.
 - All of them have been found to be ok.
- All wires have been verified with schematics, of schematics have been updated.
- Electrical Review of the TPC Wire Bias and Cathode/Field Cage Power was on 12/4/2019.
 - Awaiting approval to turn on TPC without CE.
- Field Cage Power Box and Return circuit have been upgraded to make it fail safe.
- A Hardware and Software interlock to stop TPC wire and cathode planes from being turned on when 48 V for CE Power is off is being designed.
 - This will also turn off TPC if 48 V trips.
 - Details being investigated

FEMB Repair

- All the X-Plane channels were found dead on the ICEBERG FEMBs at BNL.
- BNL has repaired 5/10 damaged FEMBs.
 - It will be shipped to Fermilab in the week of 12/9

ICEBERG Cryogenic Upgrade

- Internal Filter
 - In the final stage of assembly at the Fermilab Machine Shop.
 - Scheduled to finish 12/6/2019
 - New Heater has been assembled and ready for electrical review
 - Scheduled on 12/6/2019.
 - Regeneration of media to start at MicroBooNE 12/10/2019
- Condenser Upgrade
 - All parts for the snorkel are in hand and getting ready for installation
 - 20 micron Sintered Metal Rod and Mole Sieve for the condenser return are in hand
 - Mole sieve heater will go through electrical review 12/16/2019
- All the RTDs is being replaced after calibration in CTS

Photon Detector

- Both PD have been pulled out of the TPC.
- We have measured the wiring of the PD from the Power and Signal Distribution Box (PD-PSDB) in Detector Power Rack to Tee
- Using a mock up insert wiring has also been measured from Tee to the where detector gets inserted.
 - Details are in the ICEBERG elog
- We are working on a new design of PD-PSDB.
- Plan remains that PD will inserted in the TPC and wired up to the Tee inside the cryostat for the Run-2C.
 - PD will not be powered in Run-2C

Reviews and Schedule

- We have submitted all the documents requested for the Electrical and Grounding reviews.
- Review of the electrical sub-systems has started.
- No system will be turned on without written approval from Terri.
- Following Tests and Approval are planned before FEMBs gets installed on TPC.

Task Name	Duration	Start	Finish
Test of MPOD Power Supplies with 0 Volt no SHV connected	3 days	Tue 12/3/19	Thu 12/5/19
Test of PL506 with 0 Volts with no cables connected	2 days	Thu 12/5/19	Fri 12/6/19
Test of TPC Wire Bias and CP/FC HV system (Without CE)	0.5 days	Thu 12/5/19	Thu 12/5/19
Test of Internal Filter Heater and RTD System (Stand Alone Bench Test)	1 day	Thu 12/5/19	Thu 12/5/19
Test of Sintered Metal Rod/Mole Sieve Heater (Stand Alone Bench Test)	0.5 days	Tue 12/10/19	Tue 12/10/19
Test of Internal Filter (IF) Installed on Top Plate (without CE installed) (Stand Alone)	1 day	Mon 12/16/19	Mon 12/16/19
Test of Internal Filter Installed on Top Plate and TPC Wire Bias and CP/FC HV System (Without CE)	1 day	Tue 12/17/19	Tue 12/17/19
Test of IF and Sintered Metal Heater power and TPC Wire Bias and CP/FC HV System (Without CE)	1 day	Wed 12/18/19	Wed 12/18/19

- FEMBs could be installed on TPC starting 12/19