Detector Support Group

Weekly Report, 2017-08-23

Status

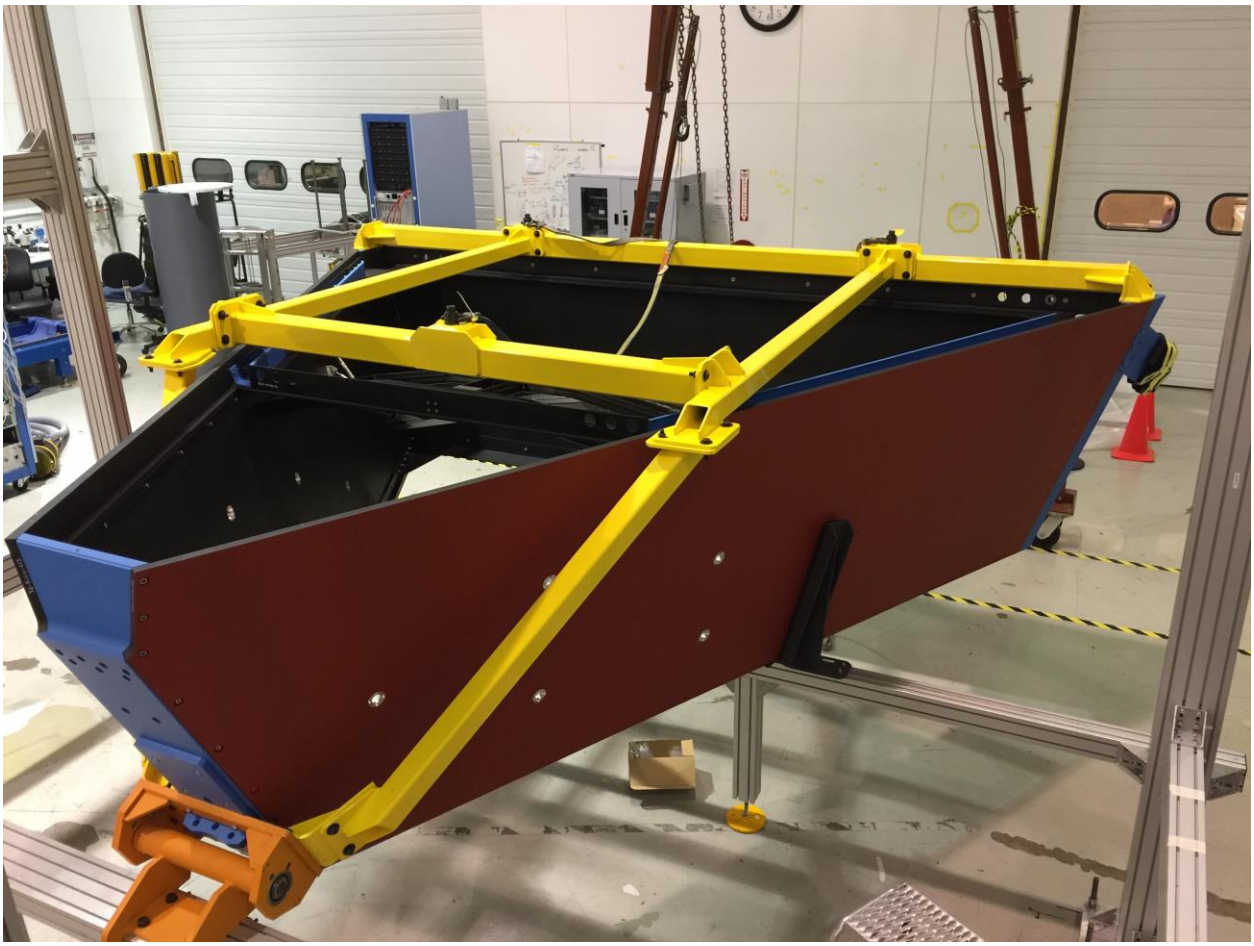
Solenoid

- Vacuum Guard pressure transducer PT8677 checked.
  - ✶ Verified hardware, PLC program, and readouts in EPICS.
- Temperatures between coil 1 and coil 2 not the same as expected.
  - ✶ |T1-T2| was ~8 K, after turning on heater ~6 K.
- Eleven of thirty-two pre-power-up interlock checks completed.
- Blown fuse replaced in LV chassis #2 electronic board.

RICH

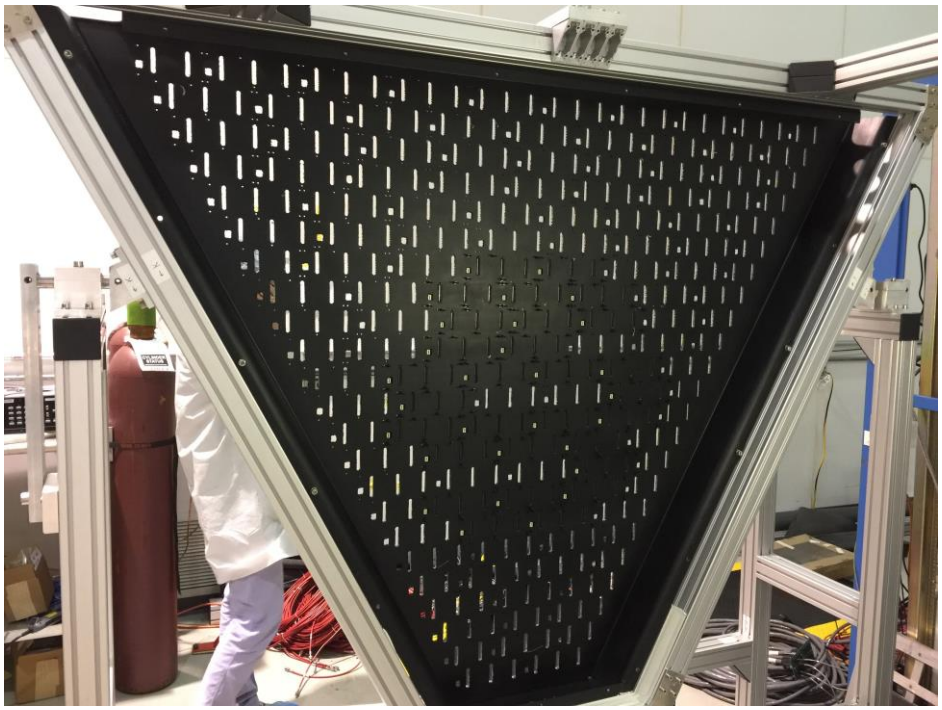
- Reflectivity of Mirror 4 tested at spots that looked bad.
  - ✶ All spots had reflectivity lower than previous measurements of good spots.
    - Bad spot reflectivity = ~ 65-80%
    - Previous good spot = ~ 90%
- Stiffening tool assembled and test-fit onto detector.

Brian Eng and Tyler Lemon installing lateral arm of stiffening tool



Assembled stiffening tool on RICH detector shell

- Modifications of carbon-fiber electronic panel completed.
  - ✶ Cutouts on electronic panel required enlargement to allow good connection between electronic boards.
  - ✶ Dremel used to enlarge 391cutouts.



RICH electronic panel after enlarging cutouts. Electronic boards are now able to be installed on to panel.

- Twenty-five 2-cm thick aerogel tiles inspected.
  - ✶ All tiles photographed and appearance logged.
  - ✶ All tiles had minor faults (chips on corners, small bubbles on side).
    - Minor faults like all other aerogel tiles received.

423f41 - large chip on corner

- ✶ All tiles stored in EEL 124 dry box.

Tile Thickness	Tile Geometry	Number Required	Number at Jlab	Number Still Needed
2-cm	Whole	24	25	0
	Partial	14	0	14
3-cm	Whole	72	50	22
	Large Partial	8	3	5
	Small Partial	8	5	3

Summary of aerogel tiles needed for RICH.

FT

- Analog card tested with spare SVT Lauda chiller.
  - ✶ Enabling input for pump power caused pump power to drop to lowest setting.
    - Input to analog card was 0 mA since analog controller cable was not connected.
    - Setting pump power to lowest setting at 0 mA is how the card is supposed to work. Card worked correctly.
  - ✶ Configuring analog card with SVT chiller did not vary temperature.
- FT group procuring either Lauda LRZ 915 or LRZ 914 chiller digital interface modules.

MVT

- New pressure relief valve installed on the Ar/C_4H_{10} gas line outside of EEL.
  - ✶ Line leak-tested and gas pressure monitored before and after the weekend.
    - 22 psi on 8/11, 13psi on 8/14.