# Status

## Solenoid

- Hardware connections between feedthrough in magnet and Solenoid control systems verified by using Solenoid reference drawings.

- Correct functionality of control systems (LV Chassis, LV cRIO and PLC) confirmed.

- Problems with radial load cells readouts in control system debugged.
  - Sense voltage for load cells at DB-9 connectors in LV Chassis measured.
    - Measured voltages in LV Chassis compared with local readouts performed with hardware device FUTEK.
    - Noticed operational range for radial load cell sensors did not match specifications: noticed negative readback values in both systems.
    - Problem not yet fixed.

- Unsigned name in Cryocon #2 temperature monitor noticed during checkouts for new temperature sensor that was added on relief valve.
- Problem fixed
  - Channel D updated to have correct name and sensor type via built-in Cryocon website.
  - Correct curve (temperature vs resistance) for PT-100 temperature sensor configured via local control in Cryocon unit.

- Incorrect readings of PT-100 temperature sensors (~ 330 K).
- Problem fixed.
  - Resistance and temperature in lookup tables for PT100 sensors were swapped in cRIO program causing them all to return ~30 K instead of ~300 K.
  - A block of Cernox sensors had wrong serial numbers in LabVIEW interpolation lookup table (which matched Excel file). This was causing several sensors to read either low (160-170 K) or off-scale (330 K). Lookup table and Excel file were modified to match ETI drawing.
  - Load Cells read same on LV chassis as DMM measurement, but still need to be verified (negative voltage shouldn't be possible).

- Values of readbacks for Cernox temperature sensors out of range.
  - Problem fixed

- Ten incorrect Cernox serial numbers found in cRIO program.
  - Program corrected.

- DAq crash due to network problems when power was turned off without notice.
  - Restarted crashed Fast DAQ cRIOs.

- Main DNS server has changed from 129.57.32.100 to 129.57.90.255. In theory, this should be more robust since it uses anycast to map to three different servers; however NI MAX doesn't allow entry of this IP so it has to be done manually on cRIOs.

## RICH

- Computer reflectivity measurements configured.
  - Monochromator control and data acquisition programs for mirror measurements rebuilt, configured, and tested.
- EPICS Client mode added to Hardware Interlock System.
- THA and BList for spherical mirror optical tests created.
- Five 3-cm thick aerogel tiles arrive from Budker Institute of Nuclear Physics in Russia.
  - All tiles had small chips on corners.

## GAS Systems

LTCC

- Single-sector-P&I diagram updated.
- Single-sector-components spreadsheet updated.
- Pre-job planning for LTCC single sector ops completed.

DC

- Ordered $CO_2$ for.

## FT

- Developed subroutines for time over threshold interlock trip delay.
- Completed DSG note on interlock system

## Antonioli, Mary Ann
Vacation

## Arslan, Sahin
Absent

## Bonneau, Peter

### FT
- Developed subroutines for time over threshold interlock trip delay.
- Completed DSG note on interlock system

### RICH
- Worked with Amrit, Amanda, Tyler, Mindy, and Marco Contalbrigo on configuration, debug, and operation of reflectivity test station used for mirror measurements.
- Worked with Amanda on LabVIEW program for reflectivity test station.
  - ✶ Added capability of taking multiple acquisition measurements from photo diodes A and B while on a single wavelength setting.
  - ✶ Number of acquisitions is adjustable and mean is calculated from measurements.

- Held meetings on Hall D status and EPICS controls monitoring.
  - ✶ Turbo pump was added to U-tube going from $LN_2$ dewar to transfer line. With improved vacuum, liquid level began to rise rapidly as JT7 supply value closed to programmed minimum position of 12%. Setting for supply valve was adjusted from 12% to 6% and liquid level stabilized to ~ 53%.

## Campero, Pablo

### Solenoid
- Noticed unsigned name in Cryocon #2 temperature monitor during checkouts for new temperature sensor added on relief valve.
  - ✶ With Brian, updated channel D to have correct name and sensor type via built-in Cryocon website.
  - ✶ Configured correct curve (temperature vs resistance) for PT-100 temperature sensor via local control in Cryocon unit.
- With Brian, debugged radial load cells readouts in control system.
  - ✶ Verified hardware connections between feedthrough in magnet and Solenoid control systems by using Solenoid reference drawings.
  - ✶ Measured voltage sense for load cells at *DB-9* connectors in LV Chassis.
  - ✶ Compared measured voltages in LV Chassis with local readouts performed with hardware device *FUTEK*, noticed negative readback values in both systems and confirmed correct functionality of control systems (LV Chassis, LV cRIO and PLC).
  - ✶ Noticed that operational range for radial load cell sensors did not match specs.
- PT-100 temperature sensors had improper readings (~ 330 K).

- Resistance and temperature in lookup tables for PT100 sensors were swapped in cRIO program. Problem fixed.
- Checked readbacks for Cernox temperature sensors; they were out of range.
  - Found 10 incorrect Cernox serial numbers in cRIO program. Corrected program.

- Monitored and analyzed Logbook entries and EPICs screens daily.
  - On 6/30 CDC Low Voltage crates and VXS were powered on for signal hardware testing.

## Eng, Brian

- Both fast DAQ cRIOs started working again without making any changes. **Solenoid** one worked after bringing back to EEL and **Torus** went online after rebooting once. Both deployed FPGA bitfile and real-time executable without any issues

**Solenoid**

- Testing sensors (load cells, PT100 and Cernox).
- Found that for PT100, resistance and temperature were swapped causing them all to return ~30 K instead of ~300 K.
- A block of Cernox sensors had wrong serial numbers in LabVIEW interpolation lookup table (which matched Excel file). This was causing several sensors to read either low (160-170 K) or off-scale (330 K). Lookup table and Excel file were modified to match ETI drawing.
- Load Cells read same on LV chassis as DMM measurement, but still need to be verified (negative voltage shouldn't be possible).

- Main DNS server has changed from 129.57.32.100 to 129.57.90.255. In theory, this should be more robust since it uses anycast to map to three different servers; however NI MAX doesn't allow entry of this IP so it has to be done manually on cRIOs.

## Hoebel, Amanda

Vacation

## Jacobs, George

**GAS Systems**

- Updated LTCC-single-sector-P&I diagram.
- Updated LTCC-single-sector-components spreadsheet.
- Discussed MVT mixing system with DA.
- Completed pre-job planning for LTCC single sector ops.
- Ordered $CO_2$ for DC.

## Leffel, Mindy

Vacation

**Lemon, Tyler**
Vacation

**McMullen, Marc**
Vacation