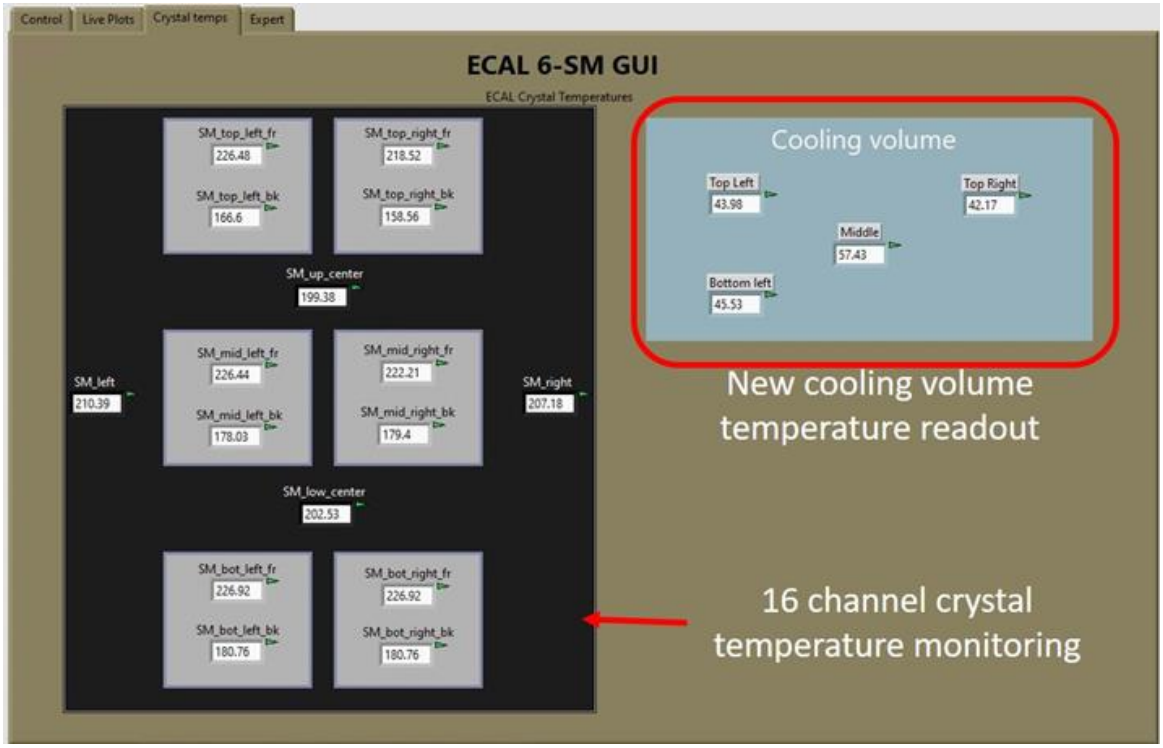
Hall A – ECAL Test Stand

Marc McMullen

- Added four thermocouple channels to the back of test stand to measure the cooling region

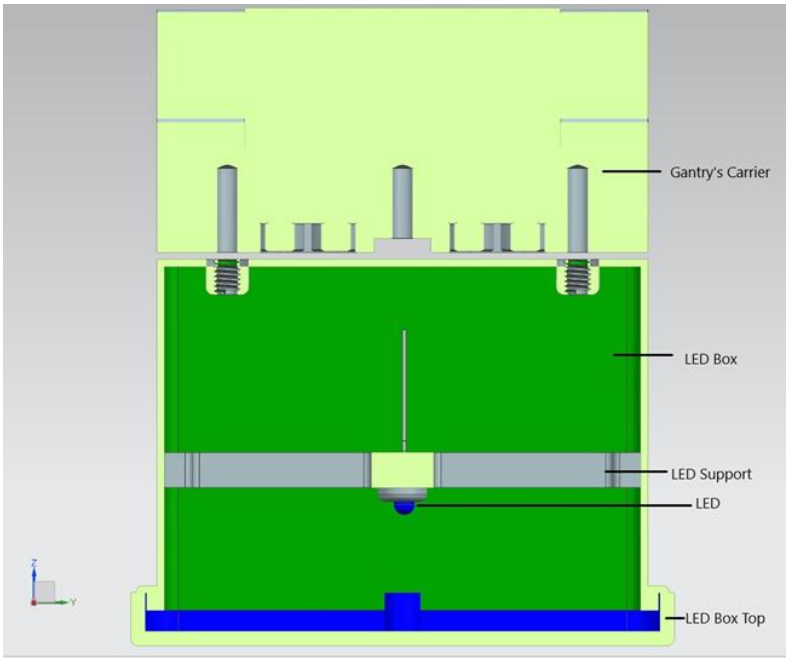


Monitoring tab for the six-supermodule crystal temperatures.

Hall A – LAPPD

Pablo Campero and Marc McMullen

- Added adjustable feet to the 3D model of the detector test stand
- Requested order of 40-mm, extruded aluminum to test compatibility with the gantry
- Reviewed specifications of waveform signal generator to be used to vary brightness of the LED
    - ✶ Current Agilent signal generator has been discontinued; the 2-channel, 30-MHz, Keysight model 33522B waveform generator will be ordered as a replacement
    - ✶ Agilent and Keysight models have same minimum pulse width of 16 ns
- Completed first version of the LED box in NX12
    - ✶ Modeled inner support for LED head placement
    - ✶ Added four threaded holes to the LED box base to attach to the gantry's carrier
    - ✶ Preparing NX12 model for 3D printing



NX12 model of LED box right side, cross-section, assembled to the gantry's carrier.

Hall A – Møller

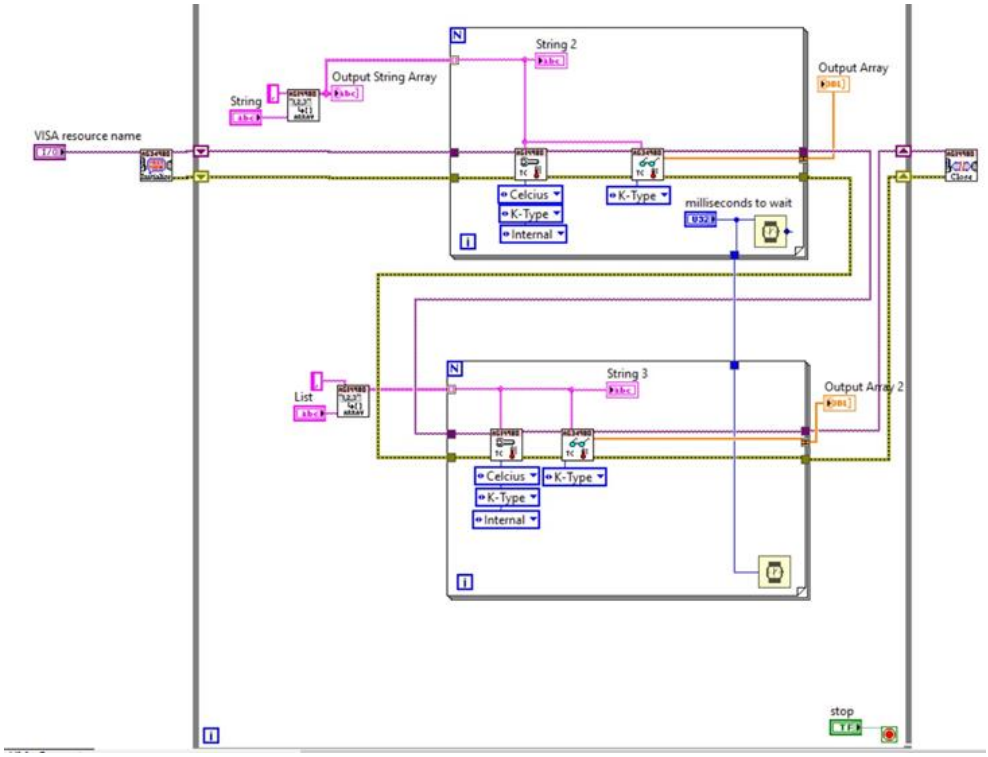
Brian Eng

- Wrote Python program to act as TCP/IP server in place of MPS, to test PLC communications
  - ✶ Allows for additional debugging
- Reviewed system acceptance testing data

Hall C – NPS

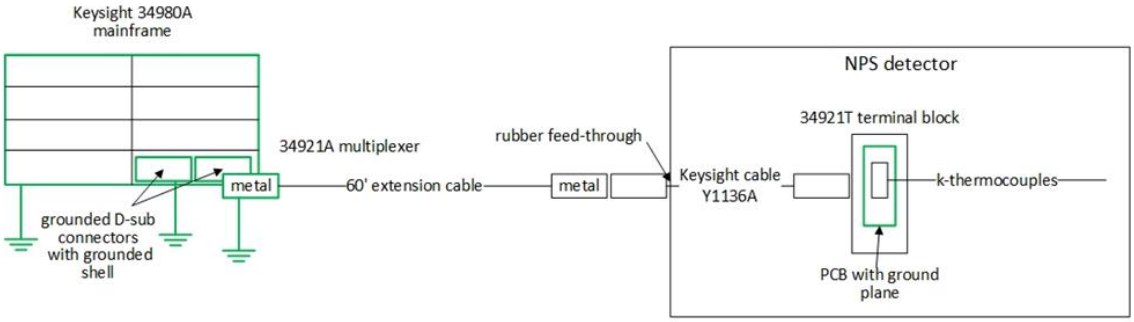
Aaron Brown, Mary Ann Antonioli, and Peter Bonneau

- Debugging version 2 of control and monitoring program's failure to trip
  - ✶ Interlock and average enable arrays were not updating properly at the end of the loop iteration
    - In a previous software change, arrays were initialized to have 155 elements, but at the end of the loop iteration, the arrays were not updated and only had 56 elements
  - ✶ Two instances of the *compare avg to limits* subVI were missing values for array index and length; adding values to the two subVIs resolved all issues in the latch sequence
  - ✶ Currently debugging program crashing after running through a couple of loop iterations
- Working on requested change to control and monitoring program currently in use that would insert a delay between the scan of each Keysight channel
  - ✶ Added delay by converting channel lists to arrays, looping over each channel list array, and adding in a delay for each loop iteration
  - ✶ Need to determine how implementing this delay would affect program execution time



Screenshot of block diagram of Keysight tester LabVIEW program that adds a scan delay.

- Developing grounding schematic of the Keysight mainframe, terminal blocks, manufacturer's cables, and extension cables in an effort to determine why the Keysight scans are failing so often in the Hall; Made Visio drawing of the schematic



Hall D – FCAL2

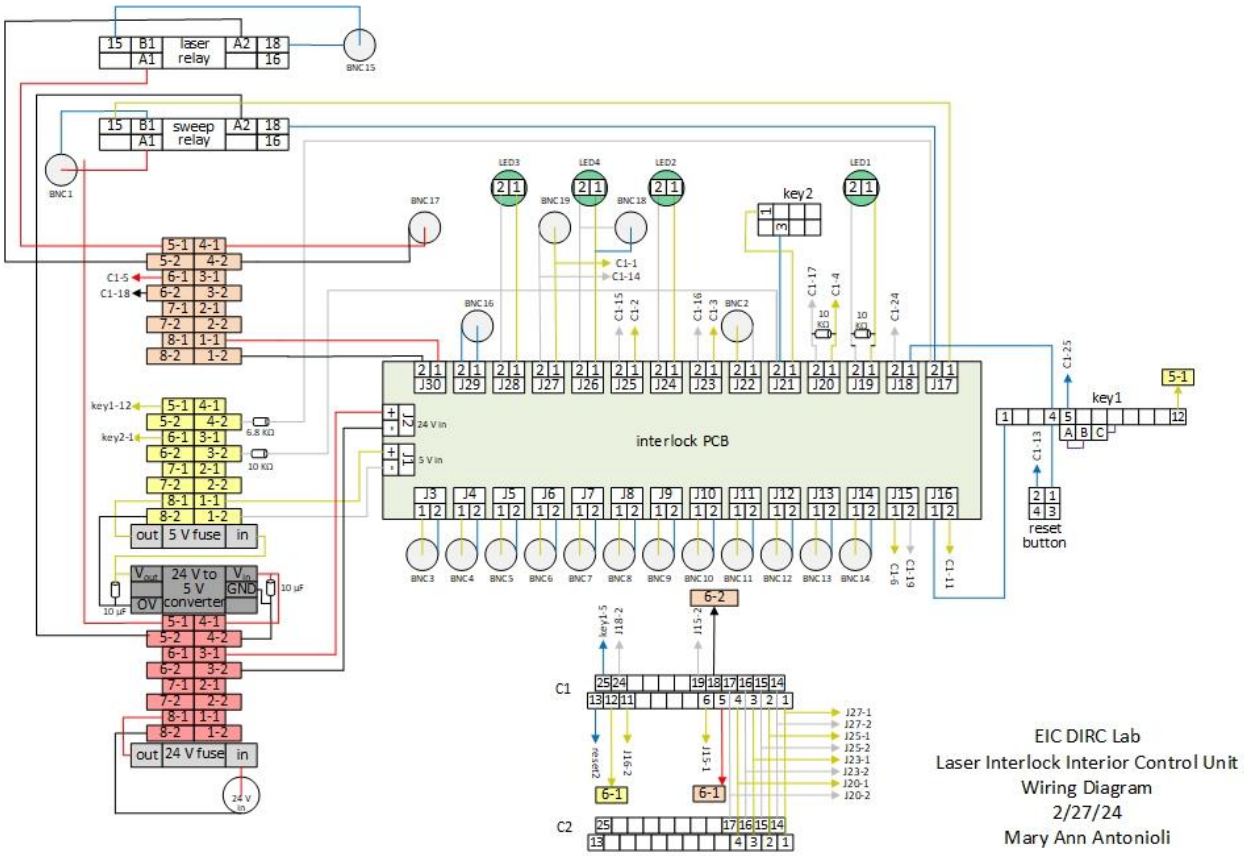
George Jacobs and Mindy Leffel

- Populated 80 PMT bases; completed 1585 of 1650
- Stripped 390 wires
- Tested 40 PMT bases; 281 completed

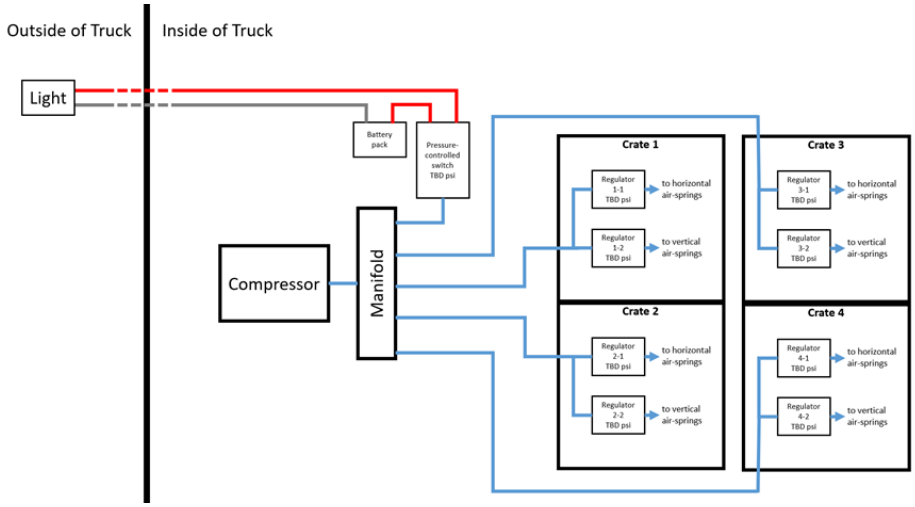
EIC – DIRC

Tyler Lemon, Mary Ann Antonioli, and Peter Bonneau

- Printing horseshoe clamps for holding quartz bars in laser lab; three of eight completed
- Made Visio wiring diagram of laser interlock system's interior control unit

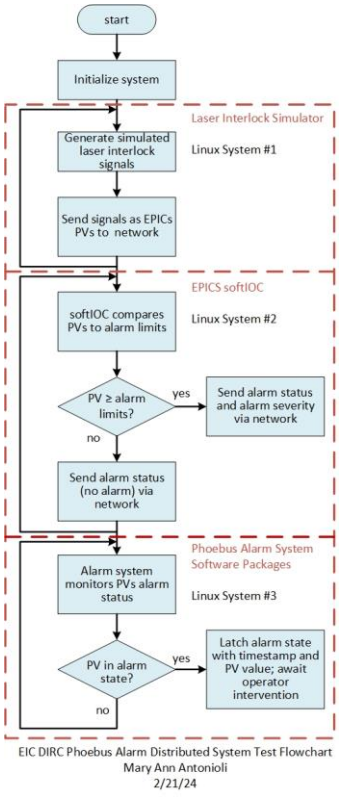


- Developed system for indicating compressor status to driver during shipment of quartz bars from SLAC to JLab; compressor used in the shipping crate air suspension system
  - ✶ Dwyer A6-553221 pressure-actuated switch, with a 14–24 psi actuation setpoint range, will be connected to the manifold that routes air from compressor to crates
  - ✶ If pressure at manifold drops to switch's setpoint, the switch is toggled, completing the circuit to turn on a battery-powered light
  - ✶ Light will be placed on outside of truck so drivers can see it



System diagram for air suspension system status indicator. All regulator setpoints and pressure switch setpoints will be determined during testing of the suspension system in March 2024.

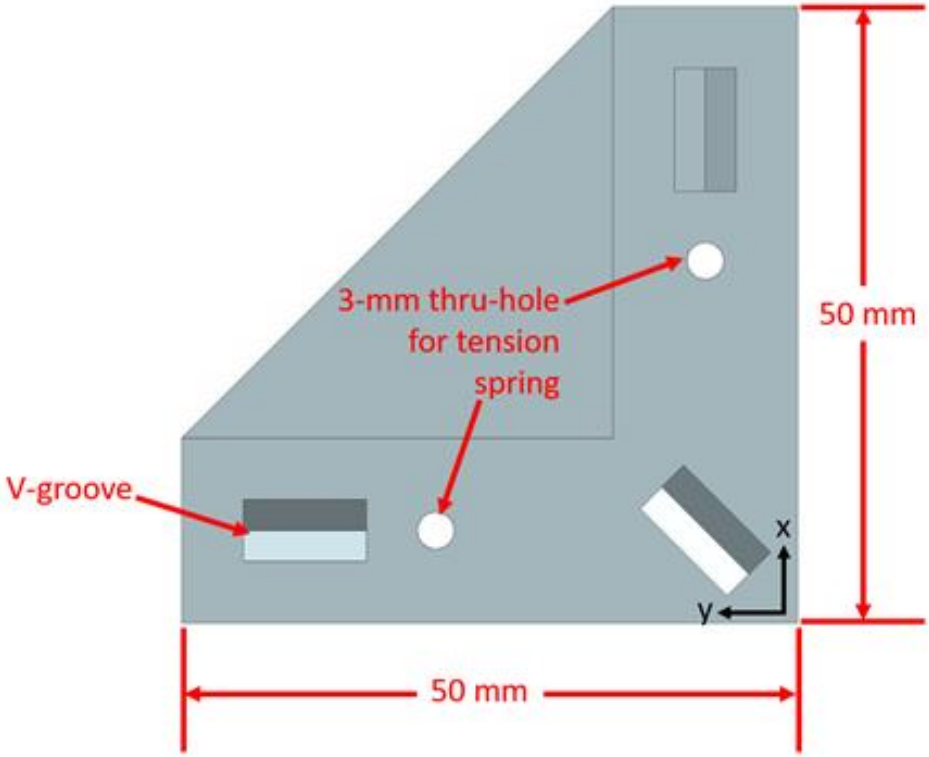
- Completed development and testing of the automated startup sequence of the Phoebus alarm system software packages using Linux systemd commands
    - ✶ Automatically starts Phoebus alarm software and the EPICS softIOC upon booting of the Linux computer
- Made Visio flowchart of alarm system test



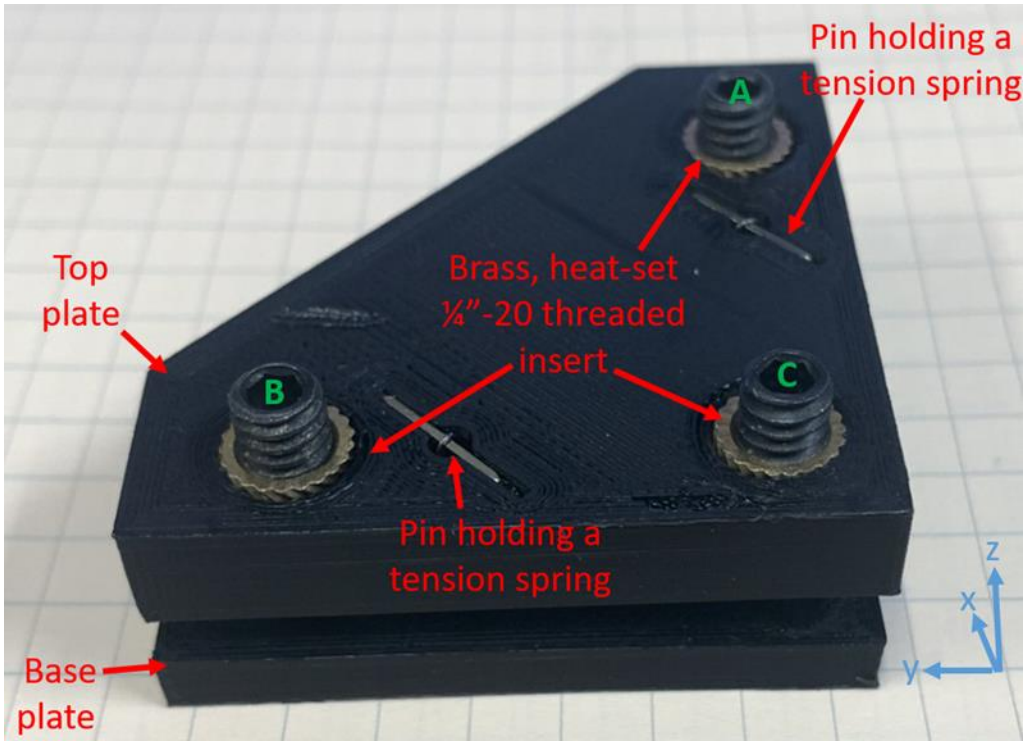
DSG – R&D

Tyler Lemon

- To test heat set, threaded inserts in a 3D printed model, and try a version for future projects, researched and designed a 3D-printed kinematic mount
    - ✶ Design allows adjustments of component position by rotating around the *x*- and *y*-axes and translation along the *z*-axis position by turning set screws
        - Set screws held in place by heat set, threaded inserts that are heated with a soldering iron and pressed into the 3D-printed part after fabrication
    - ✶ Design uses three v-shaped grooves oriented to constrain translation of the top plate in *x* and *y* while still allowing rotation around the *x*- and *y*-axis and translation along the *z*-axis



NX model of base plate for kinematic mount showing v-grooves. Tension springs in the mount hold the top plate to the base plate and stabilize the mount with no load. Top plate is not pictured in model.



Final product of kinematic mount designed and 3D-printed. Base plate pictured in NX model is under top plate. Set screw labeled A allows adjustment of top plate by rotating around *y*-axis. Set screw labeled B allows adjustment by rotating around *x*-axis. Set screw labeled C allows translation of top plate along *z*-axis. Both A and B must be adjusted to obtain correct orientation after adjusting C.

DSG – Website

Pablo Campero

- Created dsg-halla_lappd mailing list
- Created DSG website pages for LAPPD technical documentation and meeting minutes