Hall A – ECAL Test Stand
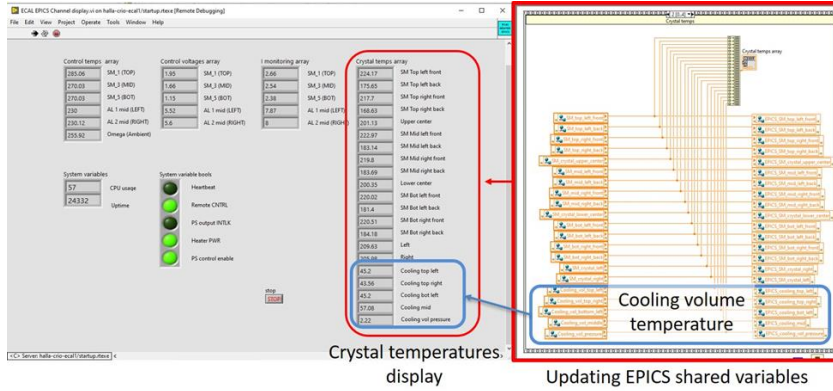### *Marc McMullen*

- Added EPICS shared variables for the cooling volume channels to the LabVIEW code
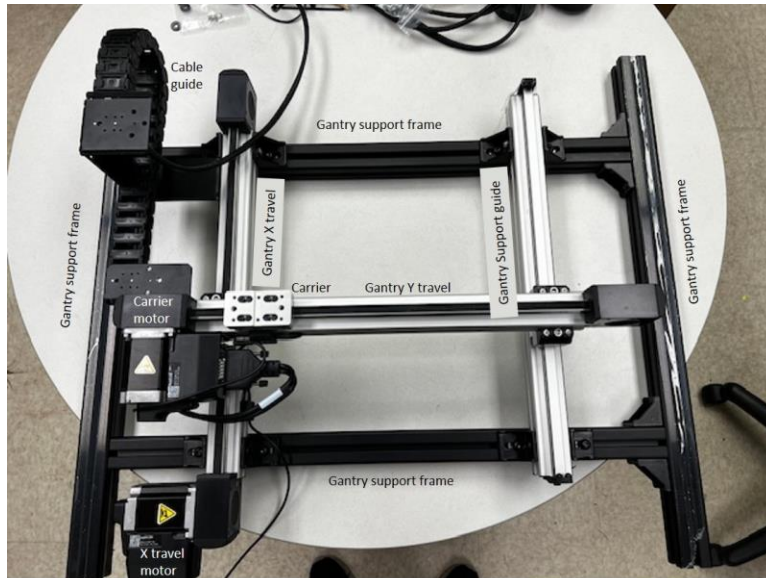

Crystal temperatures display   Updating EPICS shared variables

- Power supply interface chassis parts arrived; tested all connector and board mounting holes for correct fit

Hall A – LAPPD
Pablo Campero and Marc McMullen

- Assembled and attached extruded aluminum support frame to gantry

Bottom view of combined support frame (black) and gantry (silver)

- Completed second version of the LED box in NX 12
  - ✸ Made separate part for the LED support where the LED head will be placed
  - ✸ Modified LED base and LED top to assemble using bolts
  - ✸ Preparing model for 3D printing
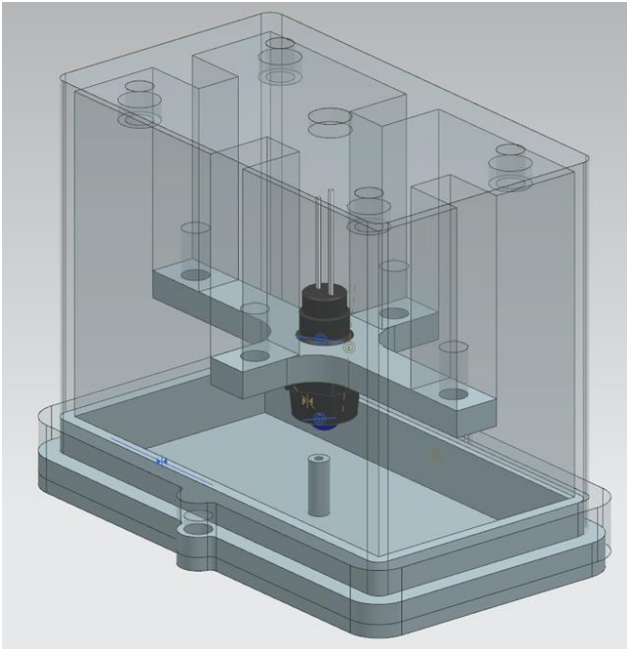
LAPPD LED box, isometric view, with modified LED support; transparent option applied to box for better visualization of internal parts

Hall A – Møller
Brian Eng
- Continued adding 16-temperature readout command for PLC to send and receive from MPS

Hall B – ALERT
Marc McMullen
- Followed up on overdue Alicat mass flow controllers PR
  - ✦ Order is greater than $10 K

Hall B Magnets
Pablo Campero and Brian Eng
- Investigated multiple fast dumps on torus MPS
  - ✦ Seems to be water flow on MPS itself, but not yet clear why
  - ✦ https://logbooks.jlab.org/entry/4260908
    https://logbooks.jlab.org/entry/4261681

Hall C – NPS
Aaron Brown, Mary Ann Antonioli, and Peter Bonneau
- Studying day two of crystal temperature data to compare to plot from Mark Jones' talk
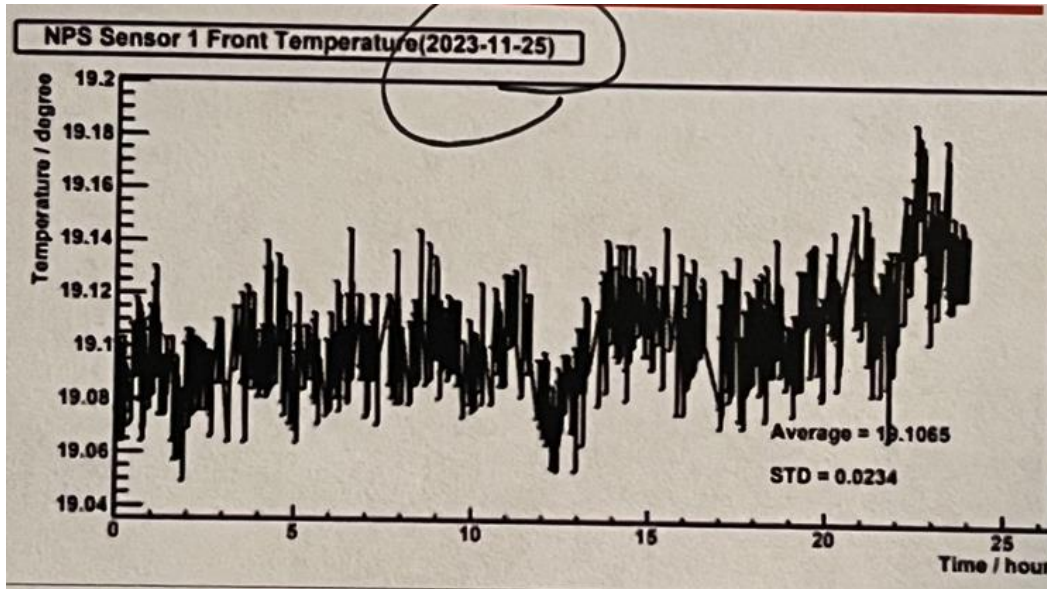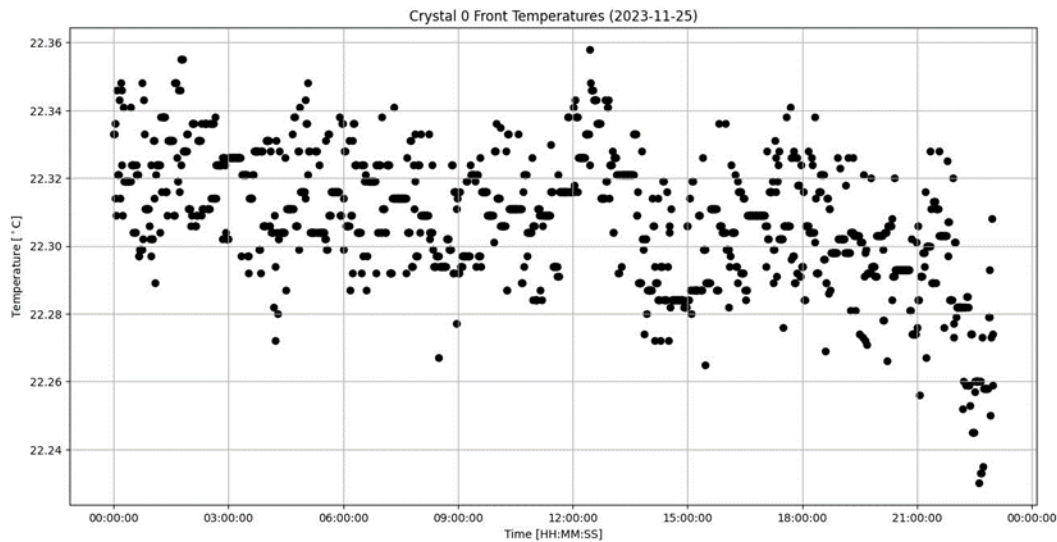 - ✦ The plot shown in the talk was of sensor 1, which is attached to crystal 0

Photo of plot from talk given by Mark Jones

✱ Plotted MYA archived temperature data from 2023-11-25 for front temperature data for crystal 0; it does not match the plot shown in the talk

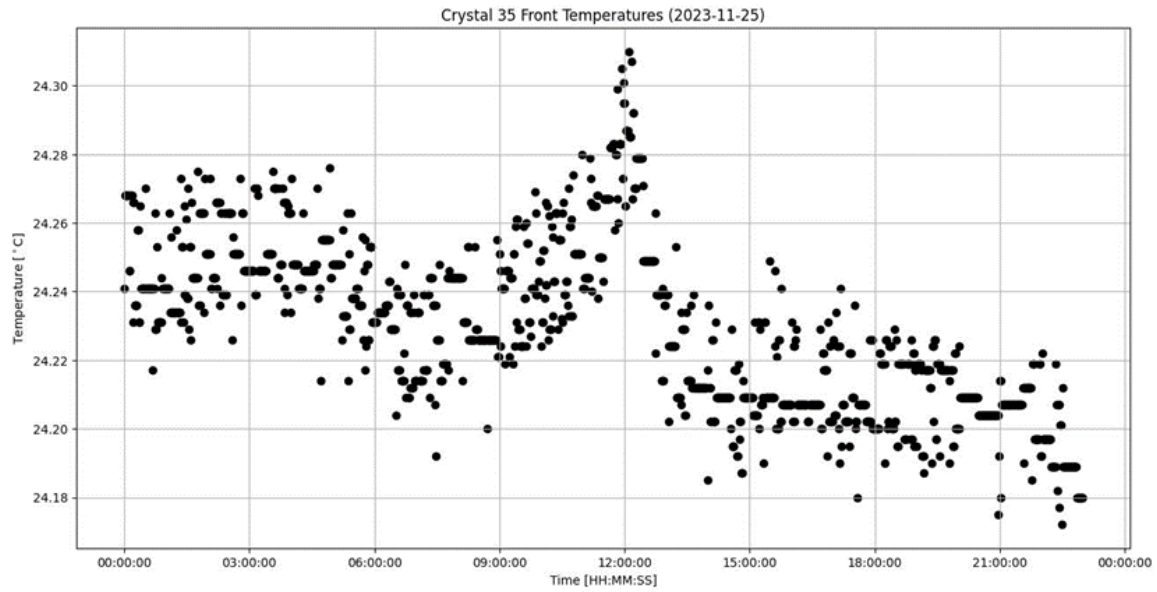Plot of crystal 0 front temperatures

✱ Plotted front temperature data for crystals at the four corners of the crystal array, crystals 0, 35, 1044, and 1079; none match the plot shown in the talk
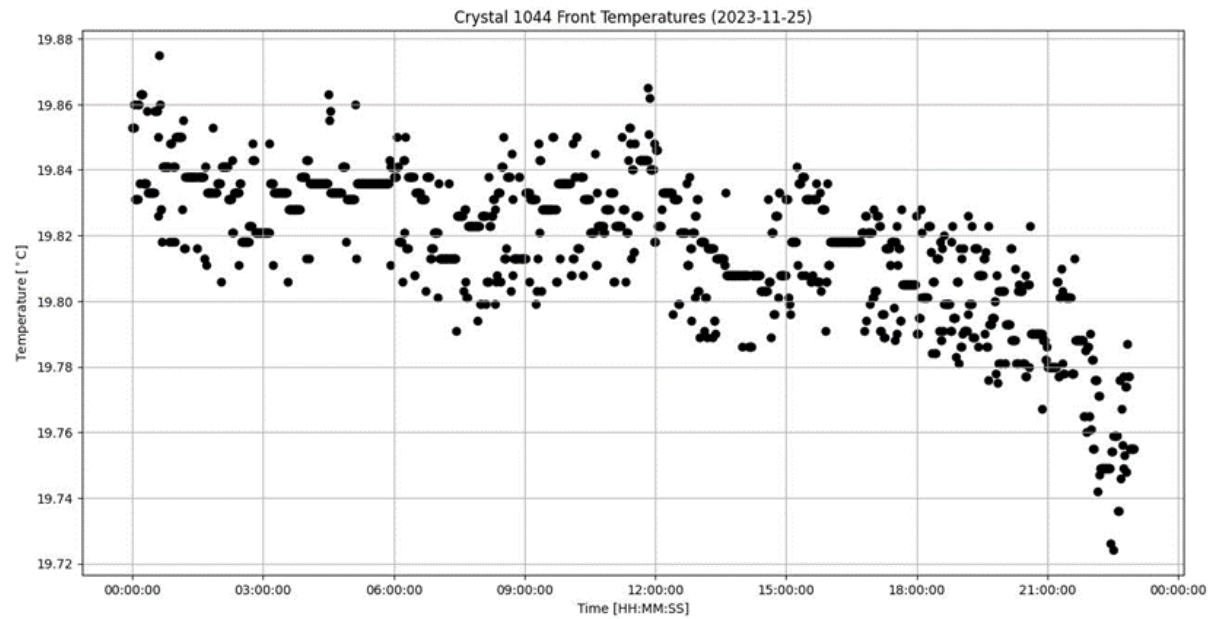
Plot of crystal 35 front temperatures

Plot of crystal 1044 front temperatures
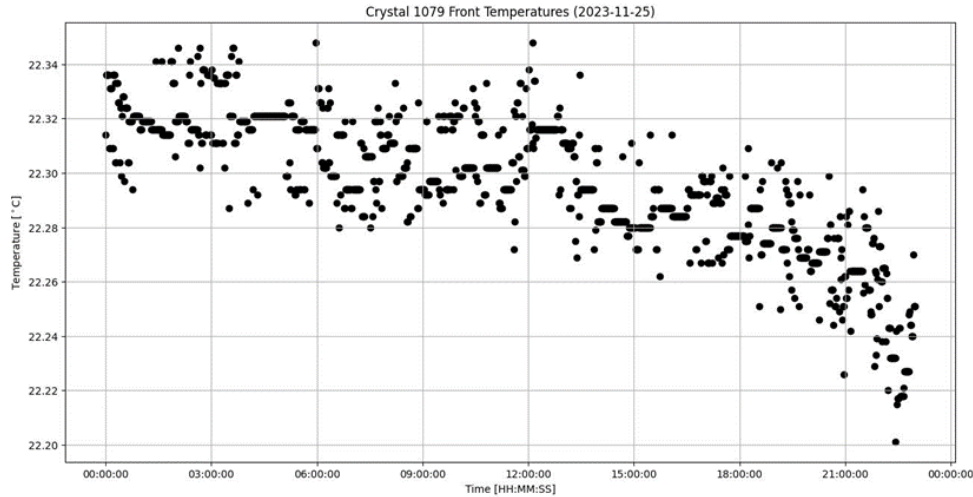
Plot of crystal 1079 front temperatures

  * ✶ Contacted Mark Jones to inquire if his plot was made using data other than MYA archived data; awaiting reply
* Debugging version 2 of control and monitoring program's failure to trip
* Working on version 3 of control and monitoring program
  * ✶ Made subVI showing cRIO and computer data, such as memory and CPU load; made subVI to test computer data subVI
  * ✶ Started subVI of Keysight actions

Hall D – FCAL2
George Jacobs and Mindy Leffel
* Populated 65 PMT bases
* Cut and stripped 300 wires
* Tested 134 PMT bases; 375 completed
  * ✶ Number tested with voltage regulators is 241; without is 134

EIC – DIRC
Tyler Lemon, Mary Ann Antonioli, and Peter Bonneau
* For the cRIO chassis that is being reused for the laser interlock Phoebus alarm handler, designed and 3D-printed a plate that allows the chassis' existing 120-VAC input port to be replaced by a locking, 24-VDC input port


Front of adapter plate with locking, DC power port installed

- Researched Milwaukee, 18-V compressor selected for shipping crates' air suspension system to determine how to limit pressure in tank to < 30 psi
  - ✦ Pressures > 30 psi qualify as a hazardous shipment, resulting in stricter regulations and higher shipping costs
  - ✦ The compressor's relief valve was changed to one that vents at 30 psi in an attempt to limit pressure in tank to < 30 psi, but the compressor is set up using a hardwired, normally-closed, pressure switch with a 90-psi set point that shuts the compressor off only when its tank pressure reaches 90 psi
  - ✦ With the 30-psi relief valve, the pressure in the tank will never reach 90 psi, so the compressor will run continuously
  - ✦ If the built-in pressure switch is disconnected from the controller, and a 30-psi pressure switch is added to the tank, the compressor should turn off when the tank pressure reaches 30 psi
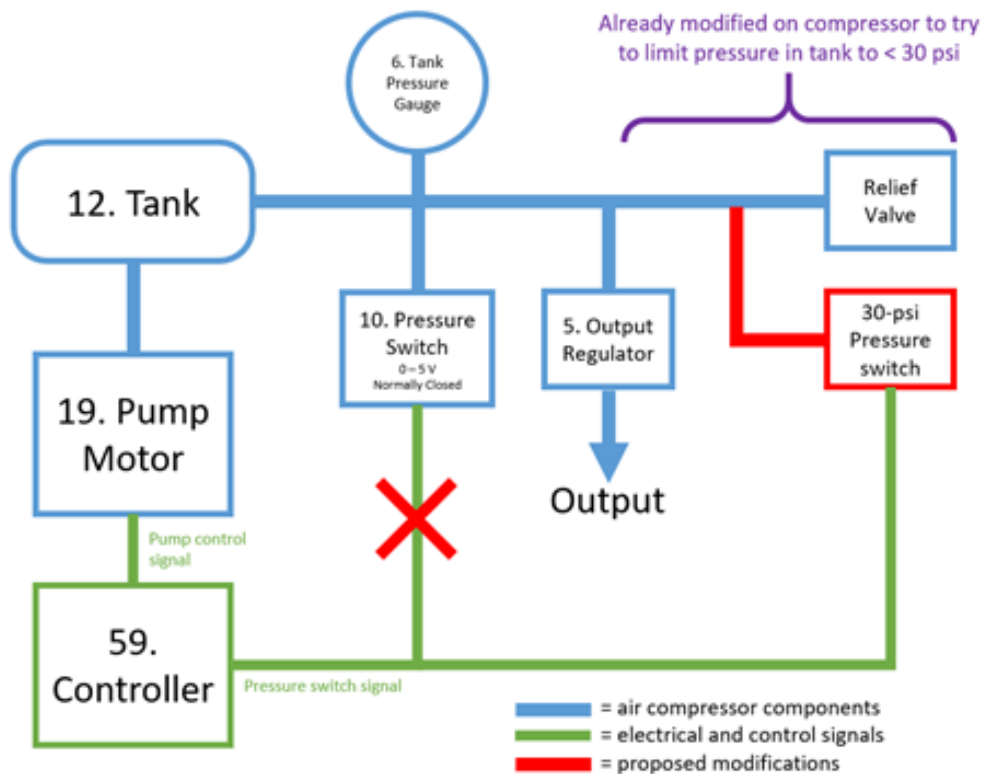
Simplified system diagram of components that the compressor uses to determine when the pump motor should run. The red X indicates that the existing pressure switch should be disconnected from the controller

- Made Visio wiring diagram of laser interlock system's exterior control unit
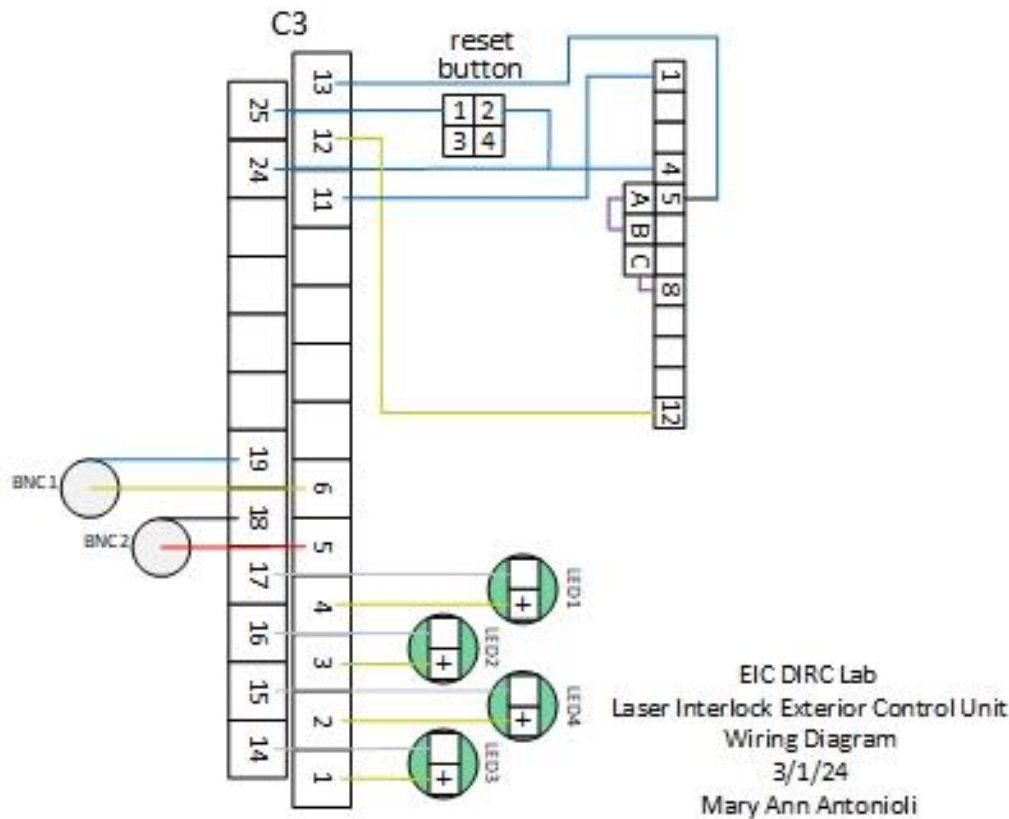
- Laser interlock test with Phoebus alarm system
  - ✶ Built and tested cloned Phoebus V4.6.10 alarm development system for laser interlock
  - ✶ Installed latest software tests
  - ✶ Drive used for remote debugging and backup
  - ✶ Installed system on external USB C – SSD

EIC – RICH
Tyler Lemon

- Designed and 3D-printed an optics holder with integrated kinematic mount for better alignment capabilities of reflectivity's test station's optics over the mirror to be tested
  - ✶ Optics holder design uses findings from previous DSG R&D efforts
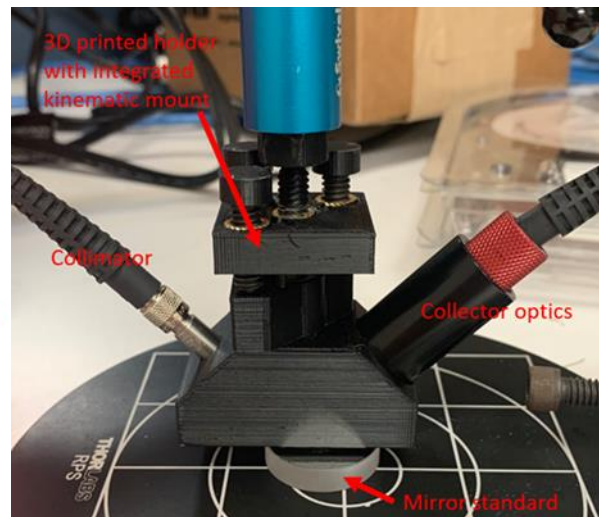   - ▪ Heat-set, threaded inserts and 3D-printed Kinematic mount

Designed and printed optics holder kinematic mount attached to an adjustable arm for positioning over the mirror under test

Close-up of optics holder with integrated

DSG – Website

Peter Bonneau and Aaron Brown

- Made a combined Notes & Talks webpage and disabled old Notes and Talks webpages
  - ✱ Copying the source code for the search filter from the DSG homepage to the new page caused Drupal to corrupt search source code
  - ✱ Restored an old copy of the source code, but formatting for all talks was incorrect
  - ✱ Reformatted the links for all talks before 2020
- Revised mailing list and subscribers' webpages