



Detector Support Group

We choose to do these things "not because they are easy, but because they are hard".

Weekly Report, 2022-12-21

Hall A – SoLID

Mary Ann Antonioli, Pablo Campero, Mindy Leffel

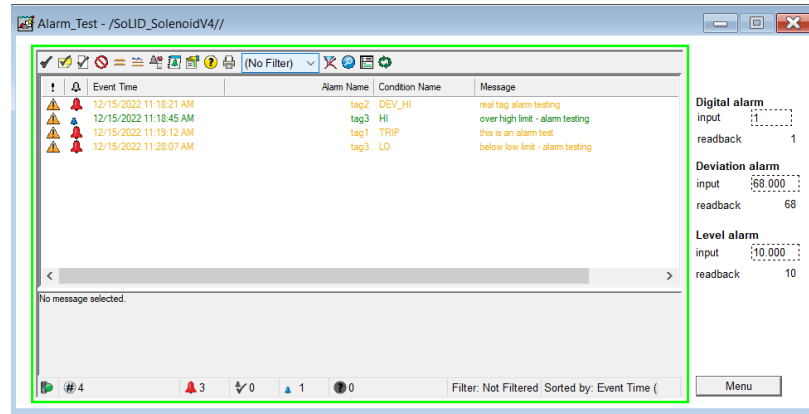
- Modified *Solenoid Valve Setup* Phoebus screen
 - ★ Rearranged valve information boxes on page and added input boxes for valves 9 and 10
 - ★ Added helium and nitrogen level status indicators
 - ★ Added input boxes to set PID parameters for JTV 3
 - ★ Debugged problem with missing title on JTV 3 pop-up screen
- Modified *Cryo Control Reservoir Expert* Phoebus screen
 - ★ Enlarged valve buttons and added labels
 - ★ Added three colors to valve buttons, dependent upon process variable
- Modified *Solenoid Valve Setup* HMI screen
 - ★ Added input boxes to set PID parameters for JTV 3
 - ★ Added label to show the process variable controlled by the aperture of JTV3
- Modified *Cryo Control Reservoir Expert* HMI screen
 - ★ Added helium and liquid nitrogen average temperature signals to data archiver system
 - ★ Added trends for helium and liquid nitrogen temperature average
- Modified *Solenoid Coils and Radiation Shield Temperature* HMI screen
 - ★ Removed reflection of the 3D image of temperature location
 - ★ Relocated temperature sensor indicators
 - ★ Added access to open screen that shows trends for inner, outer shields, and coils shell temperature sensors
- Created *Solenoid Inner Shield Temperatures Trends* HMI screen for two liquid nitrogen temperature sensors
- Created *Solenoid Outer Shield Temperatures Trends* HMI screen for five liquid nitrogen temperatures
- Created *Solenoid Coils Shell Temperature Trends* HMI screen for fourteen helium temperature sensors
- Changed layout and location of buttons on *Menu* Screen
- Set up alarm and event server on PHYCAD58 computer with FactoryTalk View Studio software
 - ★ Added Boolean and real PLC data type testing signals
- Created a testing HMI screen for different types of alarms
 - ★ Implemented alarm summary features
 - ★ Added acknowledgment option to clear alarms
 - ★ Testing conditions and severity for alarms



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Testing screen for FactoryTalk View alarm and events screen

Hall C – NPS

Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Brian Eng, Tyler Lemon, Marc McMullen

- Wrote manual for low voltage screen
- Tested and debugged low voltage IOC and Phoebus screen
 - ★ In IOC, corrected database records to have channel numbering scheme used by the MPOD
 - ★ Investigated and compiled IOC for only linux-x86_64 architecture rather than compiling for every architecture set up in the EPICS base; path to files for other architectures were too long, causing errors in EPICS's C compiler
 - ★ Wrote documentation on how to set up an EPICS IOC to communicate to an MPOD crate
 - ★ Wrote documentation on how to set up an EPICS database file

Hall D – JEF

Mindy Leffel

- Soldered wires to 58 PMT bases
- Wrapped ten Crytur crystals with 3M foil and Tedlar

EIC – DIRC

Tyler Lemon

- Created circuit diagram for laser interlock system
- Developed circuitry for installing/removing low power filter on a motorized mount
 - ★ Allows the system to move the filter into place after any interlock
 - ★ Allows the motorized mount's output signal to be used as an interlock input, ensuring filter is in place if needed



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DSG Website

Peter Bonneau

- Developed test program to verify the random picture selection script for the spotlight photo. Confirmed no picture repeats to the set memory depth of 35
- Developed an interface to play videos directly on the website
- Revised and consolidated the webpages for the Hall A SoLID Magnet Controls meetings and the DSG-SoLID Magnet PLC Programming meetings
- Updated DSG photolog database to include new pictures
 - ★ Added pictures to the EIC, Hall A CLEO, Hall C NPS, and Hall A SoLID sections of the photolog
 - ★ Compiled DSG photo album and uploaded to website
- Updated software memos on the website for September, October, and November.