Summary

Hall A – Super BigBite HCAL
- Completed 97% of 1888 BNC-to-LEMO cables.

Hall A – GEM
- Completed 3D modeling of Honeywell Zephyr flow sensor in NX12

NX12 isometric view of flow sensor for GEM gas system

Hall B – Magnets
- Upgraded firmware of all Cryo-con units to version 3.03.
- For LV Chassis improvements, found that adding a generic Cyclone V HPS Linux core to existing FPGA program fails compilation.
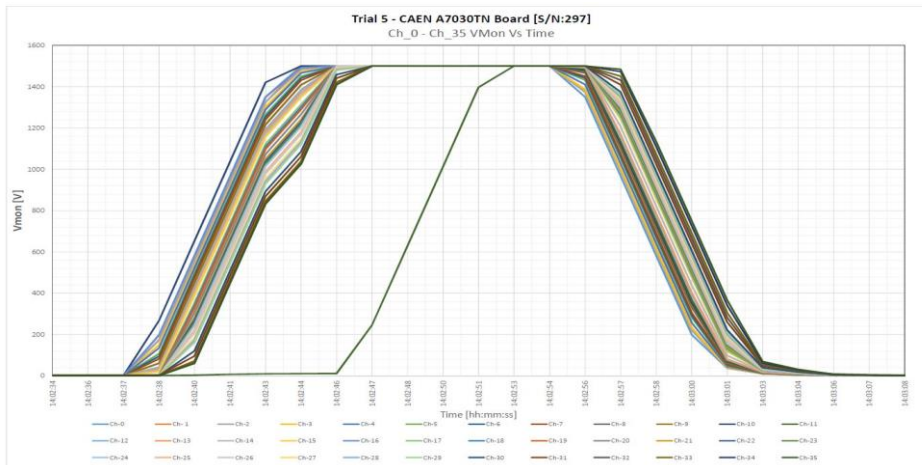
Hall B - SVT
- Verified hardware limits of seven MPOD channels by measuring voltage max and current max parameters with a DMM.

Hall C – CAEN HV Test Station
- Developed LabVIEW program to sequence 48 relays of the HV multiplexer to perform scan of individual channels and record all channel data.
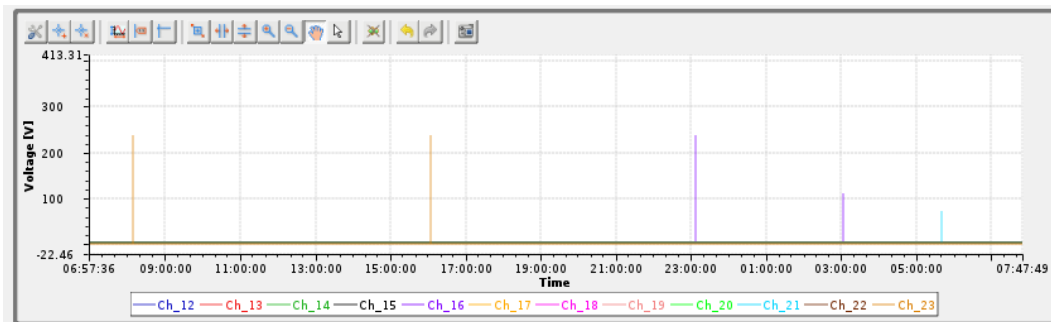
Hall C – CAEN EPICS Test Station
- Repeated automated test for A7030TN board S/N 297 in GECO 2020
  - ✶ Added *Status* parameter to be recorded in addition to all previous parameters.
  - ✶ Noted two latency events for channel 11 and one for channel 25 in 100 ramp up/down cycles.

Plot from GECO data-logged *VMon* values for all channels showing a latency event for channel 11 (dark green).

- Performed two stability tests (24 hours, 64 hours) for A7030TN board S/N 297 with all channels on and set to 0 V.
  - ✶ During 64-hour test, observed spikes in *VMon* parameter in both CSS-BOY monitor and GECO-logged file.

CSS-BOY screen showing voltage spikes on some channels during stability test
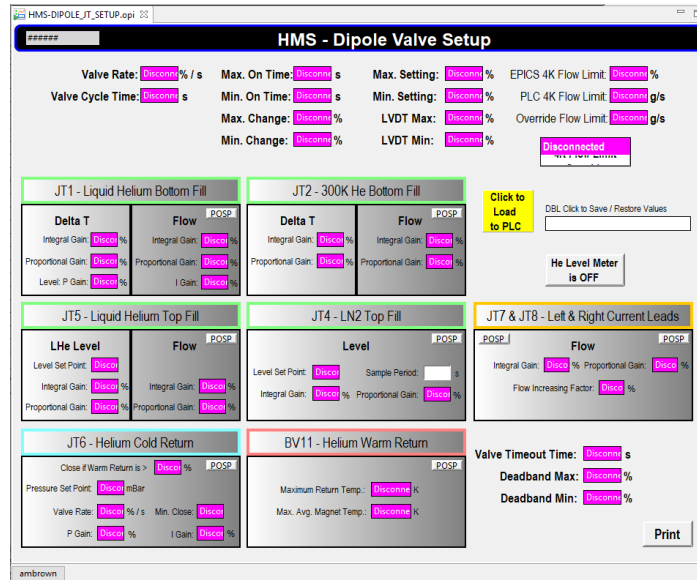
- Performed 24-hour stability test for A7030TN board S/N 297 with all 36 channels on and set at 1500 V with no load.
  - ✶ Observed no changes in set values for all monitored/set parameters.
  - ✶ Voltages monitored was 1500 ± 0.3 V.

Hall C – EPICS
- Converted existing HMI screens for HMS Dipole Valve Setup and HMS Dipole Valve monitoring to CSS-BOY.
  - ✶ Screens reorganized to group helium return, helium supply, nitrogen return, and nitrogen supply together.
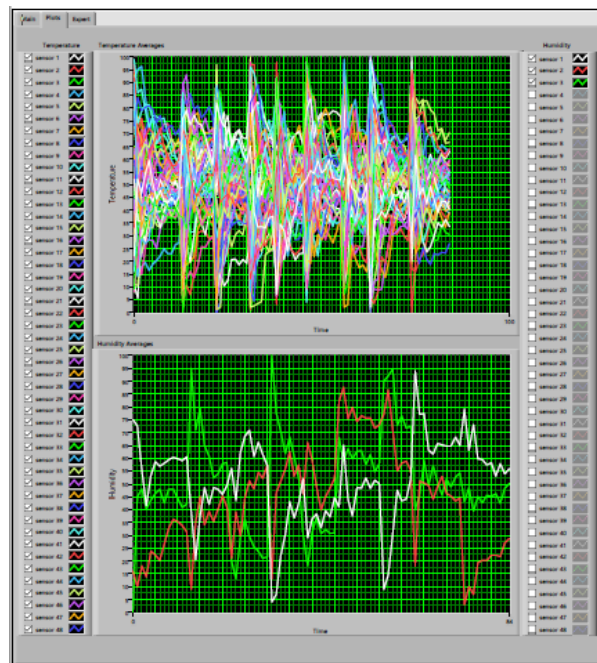
CSS-BOY HMS Dipole Valve Setup screen. Pink color of indicators show PVs are disconnected.

Engineering Division

- Soldered 200 capacitors on beam position monitor PCBs

DSG R&D – Analysis Package for Hardware Interlock Data

- Added charts for relative humidity averages and temperature averages to LabVIEW code with option to choose which sensors to plot.

Charts displaying sensor averages for analysis package. User can use checkbox controls on left or right of chart to select sensors to display.

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