

## Hall C CAEN-SY4527 Test Results Meeting

**Date:** August 8, 2019

**Time:** 13:15 – 14:00

*Attendees: Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, Brad Sawatzky, Marc McMullen and Tyler Lemon*

1. [HVCAEN-SY4527 EPICS Test Station talk presented by Pablo Campero to show results and status of the EPICS test performed for mainframes and HV boards.](#)
  - 1.1. Discussed about test procedure and CSS-BOY screen developed to test mainframe/boards.
  - 1.2. Mainframe with service name *hvcaentest2* has CAEN software issues.
    - 1.2.1. Software issues found at EPICS Server process running on system mainframe.
    - 1.2.2. Discrepancies between GECO2020 and EPICS PVs
    - 1.2.3. Some channels' parameters arbitrarily change from its pre-set values (set values at test time) to random values while boards were running on *hvcaentes2* mainframe but not when boards were running on *hvcaentes1* mainframe.
  - 1.3. Brad Sawatzky mentioned that mainframe *hvcaentes1* (running without fails) has firmware version 2.0.1, while failed *hvcaentest2* mainframe is running version 2.0.2.
    - 1.3.1. Pablo Campero will re-check firmware version for both mainframes (GECO + PV).
  - 1.4. CAEN-A1535-S/N: 556 has hardware issues. Board will be send back to CAEN for repair.
  - 1.5. Developing of Java scrips (to run as part of the CSS screens) to test all boards connected at simultaneously is in progress.
  - 1.6. Future task for DSG will be the development of a code by using CSS-Scan System to automate EPICS test on the boards.
2. [Discussion about Load Box components acquisition to test HV boards.](#)
  - 2.1. Load box #1 for hardware test — used to test CAEN voltage and current readouts by using external measuring devices is in progress. Load box developing by Marc McMullen.
    - 2.1.1. Keithley instrument requires load box with electrical components (HV resistors, relay, connectors, and cables) to fit voltage and current readouts into its specs.
  - 2.2. Load box #2 for CAEN EPICS server built-in test — resistor loads required to enable the testing of the current readouts via CSS/EPICS screens.
    - 2.2.1. Test to be performed based PVs generated by CAEN monitored values.
    - 2.2.2. No external measuring devices needed for this test.
3. [Information about HV boards and system mainframe to be tested, scope for DSG test Stations.](#)
  - 3.1. CAEN CPU/mainframe firmware upgrades to be done by DSG on SY4527 systems only if their firmware are below version 2.0.1
  - 3.2. Upgrades will be done by DSG during the Hall C down period.
  - 3.3. Discussed about HV board/mainframe models currently used in Hall C.
    - 3.3.1. Based on *Hall C Standard Equipment Manual* there are CAEN SY403 HV boards that are used in the detectors. These boards/mainframes will not be tested by DSG.
    - 3.3.2. New SY4527 system will be replacing CAEN SY403 systems.
4. [New CAEN HV boards and mainframes purchased](#)
  - 4.1. Brad Sawatzky provided the list of all HV boards ordered and to be tested by DSG
    - 4.1.1. CAEN-SY4527 system mainframe (x1)
    - 4.1.2. CAEN-A7030TN HV boards (x17)
    - 4.1.3. CAEN-A7435 HV boards (x2; 1 Pos. and 1 Neg. polarity).