

HALL C PLC TASKS REPORT (10/18/2018 – 10/24/2018)

- For PT2026 NMR unit, code added to SBC to automatically adjust the advanced RF parameters when PT2026 can't get a lock.
 - ★ New code will be tested when HMS Dipole field is changed.
 - Dipole presently at ~1.4 T; PT2026 has no issues getting lock at 1.4 T.
- Additional functions requested by Hall C added to Quadrupole Current Loop Regulation routine:
 - ★ Function to ramp MPS to 0 A if an interlock occurs.
 - ★ Function to hold power supply if operator turns off current loop.
- Hardware procured to upgrade HMS PLC controller firmware from version 16 to version 20 for Windows 10 compatibility, see Table 1 below.
 - ★ Software upgrade and PLC hardware installation for the upgrades will be done during the next shut down period.
 - ★ To upgrade firmware version of SHMS PLC controller from v.16 to v.20, no new communication or redundancy modules were needed.

Qt	Part #	Description	Location
2	AB-1756-EN2T	Ethernet module	Hall C counting house
2	AB-1756- CN2	Controlnet module	Hall C counting house
2	AB-1756-RM2	Redundancy module	Hall C counting house
1	AB-1756-RMC1	Fiber Optic cable for Redundancy module connections	Ordered; yet to receive.

Table 1: Hardware to update HMS PLC system from firmware version 16 to version 20.

- Hardware procured for swapping ControlNet modules on remote SHMS PLC chassis with Ethernet modules, see Table 2.
 - ★ SHMS PLC controller firmware upgrade completed over summer 2018 shutdown.
 - ★ Two PLC Ethernet modules installed for Q1 and HX PLC remote chassis during the firmware upgrade for the SHMS PLC controller.
 - ★ Four Ethernet modules will be installed in SHMS Q2, Q3, HB, and dipole PLC remote chassis during next shut down period.

Qt	Part #	Description	Location
1	AB-1756-EN2T	Ethernet module	SHMS-Q1 remote PLC chassis
1	AB-1756-ENBT	Ethernet module	SHMS-HX remote PLC chassis
4	AB-1756-EN2T	Ethernet modules	Hall C counting house

Table 2: Ethernet modules for replacing SHMS ControlNet modules.