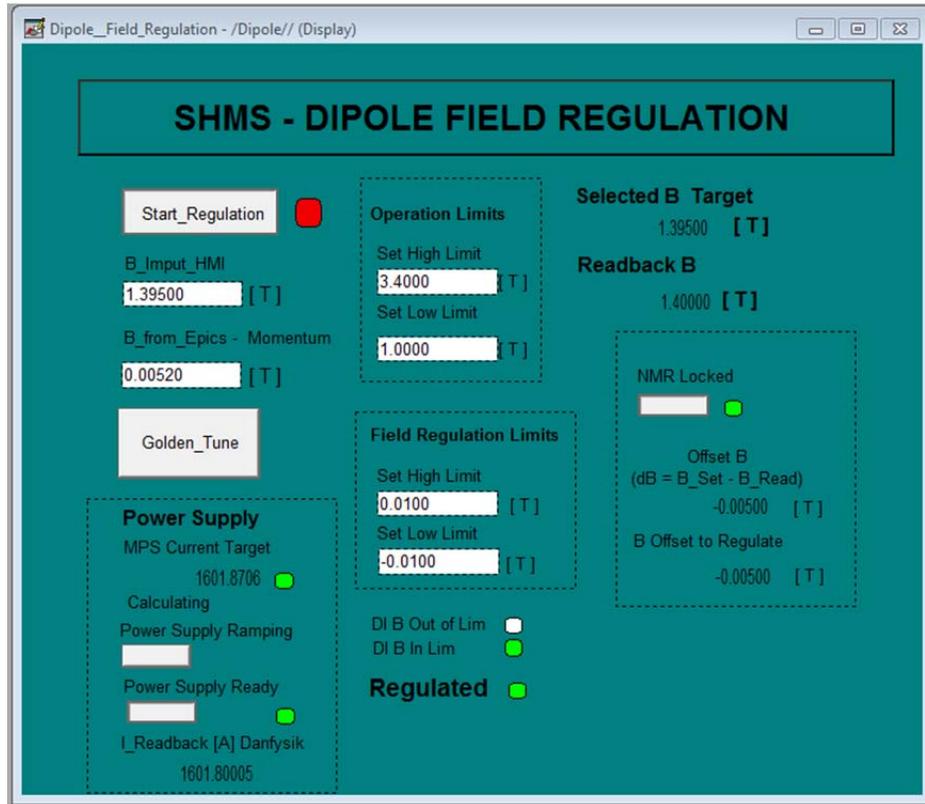


HALL C PLC TASKS REPORT (08/16/2018 – 08/22/2018)

Hall C - PLC Tasks List								
Item	Description	Priority	Primary Person	Start Date	Status	Comments	DSG Note	Suggested Duration (days) by Hall C
1	HMS & SHMS Dipole field regulation routine	1	Pablo	14-Jun-18	In Progress	Testing PLC code with Python code, which simulates MPS current readouts.	Pablo	10
2	New NMR communication through PLC to PSU	1	Brian	10-May-18	In Progress	NMR installed in Hall C dipole, ran cable from NMR unit to HMS rack to power cycle NMR remotely. Got lock for B< 2T (rampdown ~1.5T)	Brian	5
3	Test Ethernet vs Controlnet interface.	1	Pablo	7-Jun-18	Completed	Completed on 06/13/ 2018	Pablo	N/A
4	Swapping of Controlnet by Ethernet modules in SHMS	1	Pablo Brian	3-Jul-18	Completed	Completed on 7/13/2018	Brian	N/A
5	Add spectrometer rotation electric break control	2	Hall C	N/A	Completed	Completed on 08/03/2018	N/A	5
6	Add HMS Spectrometer Vacuum to controls	2	Tyler	29-May-18	Completed	Completed on 07/23/2018. To be downloaded to PLC by Steve or Mike.	Tyler	2
7	Data Logging upgrade, install and make operational	2	Pablo	12-Jul-18	Holding	Access to SHMS and HMS HMI screens denied	Pablo	20
8	Develop "on loop" current regulation routine for quads' (3) PSU.	2	Amanda	14-Jun-18	Completed	Completed on 08/06/2018. Sent PLC code with modification required, waiting to be checked	Amanda	10
9	Tune valve responses	2	Amanda	-	Not started	Need more information	Amanda	5
10	Wire UPS status to controls	2	Tyler	30-May-18	Waiting	PLC channels must be assigned by Hall C. Cabling in place for PLC controllers' UPS. Hall C must make final connections to 24 V supply and PLC channel. For Detector Hut UPS units, cables fabricated, but routing most likely postponed until next downtime.	Tyler	2
11	Modify SHMS shutter not in place status	2	Hall C	N/A	Completed	Completed on 08/03, 2018	N/A	1
12	Add HMS shutter controls and status	3	Hall C	N/A	Completed	Completed on 08/03, 2018	N/A	1
13	Alarm notification to on-call staff	3	TBD	-	Not started	Should be done in EPICS		4
14	Add HMS quadrupoles hall probe readouts to PLC	3	Tyler	17-Jul-18	Waiting	Email sent requesting information on task, probes and availability of spare probe	Tyler	3
15	Change SHMS LVDT I/O module from Differential to Single ended	3	Amanda	-	Not started	Need information about available hardware	Amanda	4
16	End of life for Windows 7 upgrade to windows 10 (next year?)	4	Pablo	12-Jul-18	In Progress	RSLOGIX5000 upgraded to v20 on Skylla7. Computer center needs to upgrade Skylla to windows 10.	Pablo	10
17	Upgrade SHMS PLC from version 16 to version 20	1	Pablo Brian Amanda Tyler	3-Jul-18	Completed	Completed on 7/13/2018	Pablo	N/A
18	Upgrade HMS PLC from version 16 to version 20	N/A	Pablo Brian Tyler	19-Jul-18	Waiting	Identified modules needed. Waiting for Hall C to procure the modules.	Brian	N/A

- Dipole field regulation PLC program in progress
 - ★ Testing PLC code with Python code which simulates MPS current readouts.
 - Installed Python program and RS-232 Serial Libraries on “dsg-hallc-2” computer
 - Debugged timing issues in python code, noticed delays to transfer data from serial port to PLC.
 - ★ Evaluated the possibility of adding PID control to the Dipole Regulation PLC program.
 - ★ Modified HMI test screen.



HMI screen developed to test dipole field regulation PLC code

- Debugged SBC card program used to read magnetic field from PT2026 NMR unit and send data readouts to SHMS and HMS PLCs.
 - ★ Continued developing Python code to read NMR and update tags on PLC.
 - ★ SBC card program unable to send field readouts to HMS and SHMS PLCs.
 - Error: “Insufficient memory”.
 - Found that the default module for interfacing with a PLC assumes controller is in slot 0, for both HMS & SHMS systems. Currently, SHMS PLC controller located in slot 1 and HMS PLC controller located in Slot 2.
 - ★ SBC code corrected and magnetic field readout from PT2026 NMR unit are available in the HMS and SHMS PLCs.
- Tested remote reset functionality of PT2026 NMR unit
 - ★ Reset function command sent remotely and noticed that command worked even when PT2026 was frozen.
- Moved SBC to 2nd floor of counting house since its IP address was changed to the Hall C subnet.
 - ★ New IP address assigned: 129.57.165.21
- Installed terminal block and wires to set up connection between UPS and HMS and SHMS PLCs.
 - ★ Cabling to monitor 24 V signal for PLC controllers’ UPS installed in counting house rack.
 - Ends of cables still need to be connected to PLC channel and 24 V supply.
 - Hall C must make final connections to PLC and power supply.
 - ★ Cabling with appropriate connectors on hand for detector hut UPS monitoring, but due to limited time before run starts, this part of the task may be postponed until next downtime period.
 - ★ Final connection to the PLC modules is waiting to be completed by Hall C tech.

- Completed PLC routine for monitoring UPS units.
 - ★ Code given to Hall C as PDF to be checked and downloaded to PLCs.
- DSG is waiting for information from Hall C on:
 - ★ What they mean by “Valve tune responses”
 - ★ SHMS LVDT I/O module.
 - ★ HMS quadrupoles.