**Hall D Work Log**

**PLC programs**

* Completed cabling and alarm code for PS
* Assembled and wired controls for PS
* Added analog channel for FDC chiller
* Added heartbeat code to HV reset for Tagger, CDC, FDC, SC
* Added SC thermocouple read-back code for FDC, CDC, SC
* Added CDC temperature data to database.
* Implemented CDC temperature monitoring system
* Completed and tested SC thermocouple code
* Ran cable for beam-ready signal
* Completed Tagger cabling/wiring
* Tested TaggerHV reset
* Troubleshooting communication chain
* Wrote structured text code
* Rewired power supply
* Installed target PLC
* Installed network and power
* Generated Rockwell system reports
* Updated solenoid PLC
* Updated system spares spreadsheet
* Compiled layout files

**Solenoid**

* Updated ramp control program
* Improved the cryo valve control
* Performed five-day stress test
* Created code for ramping up/down current
* Programmed supply communication
* Fabricated cables for valves
* Temperature change code for solenoid
* Troubleshot Coil 2
* Enabled 10 new voltage taps
* Worked on solenoid
* Tested PXI system
* Ordered accelerometer
* Tested accelerometer for “listening” to solenoid during possible quench
* Installed PXI ADC modules
* Fabricated cables
* Reset interlocks for more efficient warm up of magnet
* Created monitoring tags
* Installed upgraded PXI chassis
* Debugged controls issue caused by network maintenance
* Debugged temperature monitoring issues
* Modified alarm system thresholds
* Monitored magnet slow controls
* Tested quench detectors
* Debugged PXI time offset
* Debugged PXI fast DAq system
* Fabricated chiller reset
* Troubleshooting of slow dumps
* Checked solenoid valves for vapor-cooled leads
* Troubleshooting of cryo faults
* Troubleshooting of interlock trips
* Updated interlock system
* Coded PLC for environmental sensors

**Pair Spectrometer**

* Created thermocouple cables
* Provided temporary test setup
* Monitor temperature coils
* Working on adding temperature monitoring
* Measured channels
* Epoxying of scintillators
* Assembled converter
* Assisted in installation
* Optimized PLC software

**BCAL**

* Implement new heartbeat code
* Made EPICS requested changes to alarm interface
* Programmed temperature alarm monitoring
* Completed interlock system chiller modifications
* Performed interlock test
* FADC debugging
* Voltage and environment monitoring
* Chiller operation
* Environment control systems

**FDC**

* Implemented bar graphs for Cell Pressures
* Fixed low voltage connector
* Assisted with installation
* Monitored gas system
* Reviewed LV distribution
* Maintained chiller system
* Monitored interlocks
* Implemented new gas system alarms
* Reviewed piping and instrumentation diagram
* Prepared control system for planned power outages
* Installed cables
* Assisted relocation of spare packages for rad. testing
* Improved chiller interlocks
* Designed interlock manual override for restarting chiller
* Tested spare packages
* Implemented new interlocks
* Wrote gas system DSG note
* Updated PLC HMI
* Reviewed and approved gas system procedures
* Added environmental sensors to PLC code
* Tested environmental sensor PLC code
* Developed troubleshooting plan for new chiller
* Updated interlock system
* Debugged HV problems
* Monitored gas system
* Updated gas flow control code
* Monitored on logbook and EPICS
* Generated PLC system report
* Covered spare packages in hall with aluminum protective cover
* Modified end window on spare package to improve monitoring
* Created Mya configuration file
* Reviewed FADC firmware updates

**CDC**

* Monitored slow control systems
* Reviewed LV power distribution
* Reviewed cooling safety system
* Maintained control system
* Reconfigured transition boards
* Implemented new gas system alarms
* Reviewed piping and instrumentation diagram
* Tested interlock system
* Maintained interlock system
* Gas system maintenance
* Specified and ordered environmental sensors
* Added thermocouple to gas system slow controls
* Fabricated cables
* Walkthrough system check
* Wrote DSG Note on Gas System
* Updated PLC HMI
* Reviewed and approved gas systems procedures
* Monitored gas system
* Monitored on Logbook and EPICS
* Generated PLC system report
* Reviewed FADC firmware updates

**FCAL**

* HV base debugging
* Signal Analysis
* Gas system maintenance
* Dark room interlock operation
* Monitored control screens
* Fabricated cables
* Documentation of PLC layout and tags
* HV supply debugging

**Start Counter**

* Implement new heartbeat code
* Added SC thermocouple read back code
* Wired thermocouples
* Generated PLC system reports
* Monitored on logbook and EPICS
* Generated PLC system reports

**Tagger**

* Created files for new heartbeat code
* Optimized PLC software
* Monitored slow controls system
* Debugged HV reset issues
* Monitored on logbook and EPICS
* Generated PLC system reports

**Target**

* Made changes toVisio flowcharts
* Assembled the 4 cartridges
* Fabricated RS232 cable
* Filled target using PLC HMI
* Troubleshoot compressor flow meter display scaling.
* Installed new RTD meters
* Configured/tested temperature set-point alarm
* Databased values
* Re-fabricated longer RS232 cable
* Cabled and powered supply flow meter
* Wrote LabVIEW code to calculate command to compressor
* Made "Target Turn Off" flowchart
* Implemented changes to flowcharts
* Created signals list
* Assisted target group by answering questions about cRIO
* Wrote PLC controls for LH2 cryotarget
* Monitored on logbook and EPICS
* Documented PLC layout and tags
* Generated PLC system reports

**Slow controls**

* Completed program for Pair Spectrometer
* Drew top-level diagram in Visio
* Moved network switches
* Drew flowcharts in Visio
* PLC programming for detectors
* Created spreadsheet of voltage taps
* Monitored EPICS
* Monitored slow control systems daily
* Assisted in fixing slow controls PC
* Tested magnet vapor-cooled lead flow controls
* Installed development slow controls system in counting house
* Generated spreadsheet of spare PLC components
* Reviewed GUIs
* Compiled PLC tag list for EPICS error handling system
* Installed temperature and humidity sensors for HV reset PLC
* Coded temperature and humidity sensor software
* Labeled and routed cables for PLC systems
* Monitored on logbook and EPICS
* Compiled PLC systems layout diagrams
* Generated PLC system reports
* Documented PLC systems
* Updated slow control PCs

**Gas Systems**

* Programmed serial communication for digital potentiometer
* Completed N2 monitoring system for BCAL
* Programmed controls for pressure flow system
* Made strip chart for mixing tanks
* Databased Argon/CO2 inlet pressure
* Purged FDC/CDC gas system.
* Provided serial communication code
* Added new pressure alarms
* Assisted with FDC pressure testing
* Fabricated cables
* Separated CDC and FDC scanning
* Developed GUI for turn off/turn on