ASD Weekly Highlights for the Week Ending 9-June-2006

Operations

- Shane Passmore Operability/Maintenance Coordinator for ASD Operations
    - Work with Datastream Maintenance Tracking and Work Control
    - We will re-Advertise the Chief Operator Position
- We are in the June shutdown, we are tracking activities against the Operations developed Shutdown Plan
- 3 Accelerator Operators are reporting for work at SNS this month
- Chipmunk procedures are being re-written
- Assisting Paul Wright with our first Level 1 (Change to a CEC Work Process)
- The Bypass System is being revised
- Beam Accounting System is being revised for weekly and monthly reporting
- The FY 07 and 08 Site AC Power usage model is being developed
- Operations contributions to the SNS Project Closeout Report were completed

Accelerator Physics

RF Systems

Ring RF

- We have replaced the failed Redi-Panel local control panels with touch screens. We are proceeding to modify the software to accommodate these new screens.
- We have been able to record simulated beam current waveforms into the LLRF System Wall Current Monitor input data array. This is a first step in utilizing a sample of the circulating beam current to compensate for beam loading and will provide valuable input toward future Ring LLRF improvements.

Ion Source

- The Front End ion source has been turned over to us. The ion source was removed from the Front End to be reconditioned.

- We have repaired the LBNL Allison emittance scanner that could not hold suppressor voltage. After disassembly we found that the discharge, which damaged the suppressor cable, also extensively damaged the suppressor holder. All carbon was removed, new insulator were installed before the unit was reassembled.

- Chief operator Adrian Arvin has started to work with us. While helping us with Front End maintenance and improvements, he will also be cross-trained on our ion source reconditioning procedures. Adrian has worked extensively on the

filament-driven surface converter H- source at LANL. We are looking forward to comparing notes with him.

- Justin R. Carmichael, a summer student, has started to work with us. He is being mentored by Robert Welton.

Instrumentation and Controls

- Work on scheduled shutdown tasks proceeded slowly this week, primarily because of unexpected fallout for the series of (planned) power outages and other, non-controls shutdown activities.

- The PPS PLC code modifications were made (to address the Chipmunk "flatline" problem) and testing is scheduled for next week. The PPS IOC was changed, upgraded to the current system and retested.

- All of the remote power cyclers in the Klystron Gallery Communication Rooms have been configured and installed.

- Reconfiguration of Front End and CER server rooms is 80% complete. All four Physics servers have been upgraded.

- Design of the insulating vacuum control system is 50% complete. Design started on controls for the SRF test stand. This work deflected effort from planned maintenance activities in the Cryo and Target systems.

- Planned work for HFIR was further specified, and a HFIR site tour was conducted.

- Logging of target alarm events was moved to a "headless" server." Alarm events from the alarm log are now available as a database report from the Controls Group ROCS system.

- Work on power monitoring was completed to the point where substation status information is summarized on an EPICS screen for the operators to be able to see a high level view of all substations. This is particularly useful right now as we attempt to keep the demand charges low.

- A number of miscellaneous small improvements and bug fixes: a bug in the ControlLogix driver was identified and fixed; a tool was ported from KEK to recreate damaged archive index files; alarm handler log files were modified to be "parsable" by Java for the ROCS reports; a script was developed to allow collection of LLRF waveforms.

- In troubleshooting the SCL Vac IOC reboot problem with interlocking the CCG OK signals to the LLRF, it was discovered that the information over the serial

link is causing the gauge controllers to turn off high voltage to the vacuum gauges for ~40msec. It is still unclear why this is occurring.

- As several controls group members will be at the EPICS Collaboration Meeting next week, some effort went into preparing presentations for that meeting.

SRF Facility

Project Upgrade

Survey and Alignment

Cryo Systems

Mechanical Systems

Water

- Gasket, bolts, and expansion joint replacement in the DTL area of the Klystron.
- New filter manifold for Front end chillers is being fabricated.
- Gaskets and bolts replacement in the basement of the RSB.
- Drain pumps are being installed in Ring tunnels.
- Remaining half cell bus flow valves have been replaced in the ring.

Vacuum

- The Doublet between RING extraction kickers was removed and work started on the Kicker Vacuum seal replacement. 50% complete.

Electrical Systems

Power Supplies

- Installed covers over exposed 208 VAC in extraction kicker control racks
- Installed shroud cover on extraction kicker #9 in the ring tunnel for noise suppression
- Installed ground braid over high voltage charging cable in the PFN room
- Installed ground buss on horizontal cable trays in the PFN room
- Added ground strapping to the tray-to-ground mat grounding plane
- Made modifications to the PFN tank output cable noise suppression shroud
- Changed out the DCCT and associated cabling on extraction kicker #12
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Modulators

- Transformer subcontract awarded for Boost Transformers (replacements for failing units)

- Completed Semi-annual, Annual & 6000hr maintenance on DTLMod5, CCLMod1, CCLMod2
- Completed Semi-annual, Annual CCLMod3, CCLMod4, SCLMod1, SCLMod5, SCLMod9, SCLMod12, SCLMod21
- Installed New SCR fuses in SCLMod12

AC Power/cable installation

- Shared neutral problem resolved for on lighting panel will complete one emergency lighting panel next week.
- Support ME on Front end chiller temporary feeds during maintenance period.
- Performing Panel Maintenance in Front End
- Installed Six New 208VAC Circuits in Front End for RF
- Moved cables for HEBT Maze PPS
- LINAC LOTO for S&A and Ventilation Holes in Covers
- LEDP Cable Verification
- Field work on modification to CUB tower water pumps was completed. Final DeviceNet work interface at main HUB only remain item needing completed.
    - New logic and HMI interface for four tower water pump operation was completed and will be tested the week of June 12.
    - Parts required for repair of failed components were order and will be installed during June.
    - Fail components in the Target PLC cabinet was repaired and correct signal verified in EPICS.
    - PA as-built effort continues and several drawings submitted to drafting.
    - Power monitoring in the Switch house and CUB clients are back on-line.
- Power monitoring Iconics graphics for UPS and generators sent to EPICS developers
- Reviewed Design Change Notice (DCN) for Target Building Remote Handling Control Room relocation. the Lilly Co. in Knoxville, TN
- Initiated DCN for relocating power distribution panels outside of High Bay area.
- Reviewed and approved DCN for Camera addition to monitor Beam Line 5 construction.
- Reviewed schedule for Beam Line 5 and Beam Line 7 construction.
- Reviewed and commented 90% design drawings for Target Building Mezzanine and Air Curtain addition.

Target/XFD

- Laser Relocation from Target to CLO for Target Instruments
- Transmitter / PLC problems in Target with Randall Woods.

Other

- Joey Weaver attended a demonstration of electric vehicles for possible use at the SNS at