

Weekly Report for 06/08/2015

APS Renewal and Upgrade

- Attended MBA Physics meeting; contributed to K. Harkay's presentation on abort kicker testing. (Jeff Dooling)

MCR Operations

Procedures

- Emergency Shut-Down for the PAR Water System (APS_1196066) (Randy Flood)
- Main Control Room (MCR) Emergency Action (APS_1260018) (Randy Flood)
- ACIS Radiation Monitor Masking and Replacement (APS_1193977) (Randy Flood)
- Quarterly Functionality Validation for the Advanced Photon Source Photoinjector Laser Access Control and Interlock System (LACIS) (APS_1196673) (Randy Flood)

Training

- Attended ISM day electrical safety presentation (Randy Flood)

MCR Operations administrative/misc.

- Approved operators' time cards (Randy Flood)
- Approved vacation requests, set up coverage and updated the online schedule (Randy Flood)
- Approve CTLs, IT and Other work requests (Randy Flood)

APS Machine Studies

Storage Ring Studies

- Working with A. Brill (ASD-DIA) found the inside SCU1 BLM detector (SCU1i) improperly connected to the EMCO HV supply, this channel had been off. (Jeff Dooling)
- Reconnected SCU1i detector to proper HV output channel and BLM now appears to be working. (Jeff Dooling)

APS Machine Research and Development

Linac Research and Development

- Presented status of laser repair at the PiP meeting Wednesday. (Jeff Dooling)
- Discussed plans for interleaving. (Jeff Dooling)
- Asked L. Erwin to have new thermally-conductive, insulation pads for the pump laser diodes fabricated using Kapton. (Jeff Dooling)
- Discovered that the footprint of our laser diodes differs from that presently available from Lasertel. (Jeff Dooling)
- Investigating whether differences in measurement geometry may have contributed to variations in slope efficiencies observed between old and new diode sets. (Jeff Dooling)
- Cleaned second laser rod with nitric acid solution; copper material was removed, but rod surfaces are etched. (Jeff Dooling)

- R. Wright reported a pH level 10-10.5 in the laser chiller coolant as expected now that OptiShield corrosion inhibitor has been added. Will monitor the pH weekly. (Jeff Dooling)
- Received formal report from the ACL on EDS/SEM testing of the laser rod surface contamination. (Jeff Dooling)
- Sent samples of this material to rod manufacturer Schott North America as requested. Also sent Schott the ACL report. (Jeff Dooling)

APS Machine Software

Storage Ring

- modified gap scan scripts due to ID01ds hardware changes which is SCU1, 1) increased the gap tolerance to 0.1 from 0.05 and gap return tolerance to 0.1 from 0.015 for APSPIDSwitchToMachinePhysicsMode pem because some IDs could not reach the previous limits. 2) removed ID01ds from gap taper set because it does not exist. 3) added setting SCU0 (ID06ds) to machine physics mode for switch to machine physics mode. 4) skipped checking the error message for ID01ds gap since it has different message than others because it does not have gap, we created the artificial gap for ID01ds which is converted from the current so that we can treat ID01ds (SCU1) same as others in gap scans. 5) forced the message for ID01ds to "Device Recovered" so that APSPIDCheckAndWaitForIDs can check the gap for ID01ds. 6) changed the maximum gap to 34 for full scan because of ID01ds 7) changed the gap limit to 10 from 19 for brief scan gap fit because the brief gap scan for ID01ds starts from 14mm. (Hairong Shang)
- Did machine studies with Nick and Louis, and made the gap scan works for ID01ds (SCU1). Tested and changed the valid scan range for SCU1 (ID01ds), which are 14 - 34mm for brief scan, 10.5 - 34 for full gap scan, because ID01ds gap become very unstable when gap is greater than 34.6mm due to the large fluctuation of SCU1 current readback. (Hairong Shang)
- added ID01ds:Gap and ID01ds:GapSet pvs to SCU1_Controls.mon (Hairong Shang)
- removed ID35ds from gap scans i.e, remove it from devices.sdds and IDdevices.com config file, per Karen's request because it is not functioning now. (Hairong Shang)
- assisted Karen for collecting gap feedforward data, collected data for all gaps except ID01ds (SCU1) and ID35ds. Put ID01us in gap scan default group and default A group, ID01ds is not in any default group now, user has to select it specifically in order to scan it. (Hairong Shang)
- Assisted operator with running orbit correction, noticed that operator selected vertical, but actually the orbit correction was started in h plane instead of vertical plane. Karen told me that it happened once in a while, to fix this problem, I removed the variable freezing when starting orbit correction. -- will test and install it later. (Hairong Shang)
- operator reported that booster SD and SF auto ramp correction continue aborts, went to control room, checked and found that the limits for SD and SF were too low, the correction could never reach it,. Increased the limits to reasonable range and the ramp correction for SD and SF runs fine since then. (Hairong Shang)

IOC/EPICS/Controls/Linux/Solaris/Linux Clusters/Data Loggers/Simulation software

- Administer the EPICS CVS repository to ensure current versions are installed and conflicts are tracked down and eliminated. (Randy Flood)

Meetings, workshops, conferences, committees, LMS related, and reviews

- Presented stats and operational issues to Ops Directorate meeting (Randy Flood)

Safety and Required Training

- Completed JHQ reivew. (Jeff Dooling)
- Gave N. Sereno a tour of the 411 Laser Controlled Area. Provided comments on Sereno?s ISM talk focusing on laser safety. (Jeff Dooling)