

# Weekly Report for 09/08/2014

## APS Renewal and Upgrade

- Met with N. Grossman, K. Harkay and G. Decker to discuss swap-out/beam abort dumps and radiation issues associated with shorter lifetimes in the MBA. (Jeff Dooling)
- Was asked to estimate pressure present during the gas bremsstrahlung study discussed in technical note AOP-TN-2012-020. (Jeff Dooling)

## MCR Operations

### Linac Operations

- Discussed linac tunnel schedule after the PIP meeting Wednesday. (Jeff Dooling)
- Emergency repairs and RG2 conditioning takes priority over PCGun. Will be conditioning RG2 the evenings of Tuesday and Wednesday next week. (Jeff Dooling)
- Y. Sun pointed out that PCGun and RG2 conditioning can be done simultaneously. (Jeff Dooling)
- Met separately with J. Gagliano (MOM-AES) and J. Lang (ESH-ASD) to discuss allowing the pressurization of the laser transport line to linac to be raised to 5 psi (presently, relief valve is set for 0.5 psi). This coupled with a new regulator should provide better control of the helium fill used to suppress ionization in the transport line. (Jeff Dooling)
- Began population of Linac optics table for PCGun installation. (Jeff Dooling)

## APS Machine Studies

### Storage Ring Studies

- Continued with data analysis for FO BLM calibration technote. (Jeff Dooling)

## APS Machine Research and Development

### Storage Ring Research and Development

- Concerning new ID installation of ID30, discussed BPLD limits with Sajaev and Mohan. Installed an unpublished BPLD limits internal note from 2006. Participated in a meeting where I gave BPLD limits and alignment possibilities. Approved suggestion of Wasserman (MD) of displacing the ID and VC by 0.4 mm to improve the spectrum produced by the IDs. Wrote memo to Srajer on 0.4 mm ID realignment and -0.4 orbit bump. Made a few slides on this topic. (Louis Emery)
- Discussed with Sajaev possible impedance asymmetry in ID vacuum chamber indicated by recent local impedance measurements some of us took. Examined transverse wake potentials in general, and had some discussions with Sajaev and Lindberg, who reminded me of some things. (Louis Emery)
- Ran some tracking of MBA lattice to examine trajectories and phase space. Showed at meeting the different shapes of the invariant in the straight section of every other section. (Louis Emery)
- Provided J. Grimmer (MD-ASD) with FO for BLM in ID1. Discussed location of fiber mount; planning to place on strongback girders at beam elevation. (Jeff Dooling)
- Working to obtain scope for the FO BLM. (Jeff Dooling)

## APS Machine Software

### AOP Applications Software

- Continued work on the APSSStatus Android app. (Robert Soliday)

## General

- Fixed a bug in combineBRampLogFiles and getPOFBTune that resulted in many error emails being sent while in maintenance mode. (Robert Soliday)
- Reset all the Access Control Lists (ACLs) on our helios files. (Robert Soliday)
- 1, computed beamline station down time for 2014 physical year. (Hairong Shang)
- 2, finished implementing sddscomplexpseudoinverse, debugging and testing (Hairong Shang)

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

- Got siocpss04id into the PV crawler so that our data loggers could start monitoring it's PVs. (Robert Soliday)
- Installed the gsl library on the execution nodes of the cluster so that Dooling could run his MARS software. (Robert Soliday)
- One node of the lustre file system has a failed RAID card. A replacement has been ordered. (Robert Soliday)
- Moved data loggers from luna to gladiator after the helios upgrade. (Robert Soliday)
- Added various PVs to the data loggers. (Robert Soliday)
- Brought most of the linux execution nodes down temporarily so that the heat load in the computer room would be lessened while work was being done on the cooling system. (Robert Soliday)
- Ordered two new spare drives for the linux cluster after having to replace a failed drive in lustre4. (Robert Soliday)

## Web Site

- Expanded the allowed plottable time frame on the data logger web interface to a span of 60 days. The limit was initially imposed because some plot requests were putting a high load on the web server. (Robert Soliday)
- Noted that some ICMS full text searches do not return all the matching documents. I forwarded an example onto Dave Caulton. (Robert Soliday)
- Updated APSICMS.tcl code to work with the upgraded web server. (Robert Soliday)
- Had Dave Wallis install a few packages to allow sddsplot to run on the new web server. (Robert Soliday)

## Miscellaneous

- Added Nancy Grossman to the tech note notification list. (Robert Soliday)
- Helped Dooling with a script for calculating the lost charge per bunch script. (Robert Soliday)
- Chaired a POC-HP meeting reviewing one case. Attended special meeting with management on five promotion cases. (Louis Emery)
- Spent quite some time emailing with AES-IS staff ICMS search methods which give me zero

results. It turns out that there are two search boxes on the ICMS home page with different syntax. One is a google-type search (a small box off to the right that is hard to notice), then other more centrally positioned requiring wildcards. Hopefully the feedback given to IS will help others. (Louis Emery)

- Prepared for the Low-Emittance Ring Workshop in Frascati, in particular last minute trip changes. Talked to Safranek of SLAC on possible experiments with low emittance lattices. (Louis Emery)