

Weekly Report for 04/28/2014

Highlights

- Performed integrated simulation study for MBA Injection, including incoming beam mismatch and jitters. (Aimin Xiao)
- Completed first draft on the CDR injection section. Waiting simulation results to finish it. (Aimin Xiao)

APS Renewal and Upgrade

- Performed integrated simulation study for MBA Injection, including incoming beam mismatch and jitters. (Aimin Xiao)
- Completed first draft on the CDR injection section. Waiting simulation results to finish it. (Aimin Xiao)

APS Machine Studies

ITS Studies

- Tried to restart the laser but could not get the Gate Valve / ACIS Bypass key to turn in the LACIS chassis. Notified K. Belcher via e-mail. (Jeff Dooling)
- On Friday, observed an excursion on the turbidity meter reading. Normally this has been holding steady at 0.05-0.06 NTU; however starting just before 7:00 AM Wednesday morning, noted a drop in both flow rate and turbidity (flow first) for 5-10 minutes followed by a recovery of the flow and a sharp spike in turbidity to approximately 4.0 units. Turbidity dropped to 1.4-1.5 for 6 hrs, dropped again, then began a steady rise. As of Friday 5/2 18:00, near 2.4 units. Notified R. Wright (AES-MOM). (Jeff Dooling)

APS Machine Research and Development

Linac Research and Development

- Attended the TCAV/PCGun meeting. (Jeff Dooling)
- Regarding pcgun linac installation work, A. Zholents suggested we have SI survey the linac tunnel ceiling for the transport line during the present shutdown. (Jeff Dooling)
- Regarding laser design for the linac installation, A. Zholents requested that I make a layout of the optics table and asked that I do a radiation calculation for the ITS based on the new pc gun configuration; i.e. bendline. Will assume 30 nA at 7 MeV. (Jeff Dooling)

APS Machine Software

Storage Ring

- debugged and fixed FPGALabTurnHistory so that it could continue when channel access error occurred at reading RF frequency since it is not important for lab BPM testing. (Hairong Shang)
- modified ID gap scan and feedforward table generation software so that only ID01us or ID01ds can be selected, and the other gap will be fixed at 180mm when one gap is selected for scanning. (Hairong Shang)

Injectors

- Wrote two scripts to 1) analyze quad scan data from the pcgun for emittance calculations and 2) fit single-shot autocorrelator data for pcgun IR pulsewidth measurement. (Jeff Dooling)

- modified Booster IRamp reference generator to make IRef as a link to keep the history of IRef generations. (Hairong Shang)
- working with Shifu on new IOC software for booster IRamp correction. (Hairong Shang)

General

- studying 2d fft. (Hairong Shang)

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

- Attended SATIF-12 at Fermilab Monday, Tuesday, and half-day Wednesday. (Jeff Dooling)

Miscellaneous

- Performed the second review on one PRSTAB paper. (Aimin Xiao)
- Discuss CPU measurement results with Isaac. (Aimin Xiao)