

Weekly Report for 06/29/2015

APS Renewal and Upgrade

- Summarize new injection simulation results. Updated presentation for director CD-1 review. (Aimin Xiao)
- Calculated 3PW kickmap from field map. (Aimin Xiao)

MCR Operations

Linac Operations

- Began reassembly of pc gun regen laser heads. (Jeff Dooling)
- Received quote for new laser rods from Kigre Glass. (Jeff Dooling)

APS Machine Studies

Storage Ring Studies

- Performed orbit switch from hybrid to 324. (Aimin Xiao)
- Investigated coupling variation from CPU. (Aimin Xiao)
- On Sunday July 5th, conducted SCU1 fast BLM calibration study with K. Harkay; this time calibrating the inside BLM (HV power supply issues kept us from calibrating this detector earlier). (Jeff Dooling)

Linac Studies

- Provided draft schedule of laser work for the upcoming injector studies period. (Jeff Dooling)

APS Machine Software

Storage Ring

- continue testing SR gap and mobo scan for SCU1, improved the blade rate and offset fit for SCU1, the SCU1 blades offset are obtained from blade voltage readings with gap open, and these offsets are fixed for SCU1 blade rates fitting. collected data, installed blade rate and offset for SCU1, and installed SCU1 feedforward table. (Hairong Shang)
- modified APSMpCheckAndWaitForIDs for ID01ds (SCU1) to use its own message to check and wait for SCU1 reaching the current/gap setpoint: if the message is "OK", then check the gap difference between readback and setpoint; otherwise, return error messages. (Hairong Shang)
- Per Louis' suggestion, changed cavget to capitalize the column names of SDDS file for statistics option to avoid breaking the rpn command. (Hairong Shang)
- fixed a bug of MpBPMWaveformViewer in changing commutation mode, improved the "center" buttons so that it centers by the actual turn marker interval instead of fixed value of 324, and reduced the height of control bits widget so that the whole screen can be shown on oxygen workstations. (Hairong Shang)
- updated dualGapConfig.sdds for ID01ds to fix ID01us at 180mm when scanning ID01ds. (Hairong Shang)

Injectors

- added BBPMWaveform to Booster SCR. (Hairong Shang)

- added booster presets configuration to MpBPMWaveformViewer which only contains single bunches, and fixed the problem that for "booster x (or y) single bunch with no commutation" preset, it gave negative scope trigger index offset and caused the problem in generating scope control bits. The negative offset was caused by the smaller turn marker offset (108 for booster) and small turns per wrap (1 for x or y plane), increased the looping range until finding the positive offset and thus fixed the problems. (Hairong Shang)
- updated booster corrector bump time region for booster BSP100 BPM testing to leave more time space between nearby regions and avoid leaking. (Hairong Shang)
- added start and kill booster corrector loader sever button to boosterResponseMeasurement so that user can start/kill the server as needed. Tested and collected booster BSP100 bpm response data, the data did not look correct and found that the trigger event was wrong, set it to injection trigger (4) and collected one set of data, which looked correct. will continue. (Hairong Shang)

General

- modified sddsxref to accept other integer format (for example %02ld) for editing column names. (Hairong Shang)
- wrote sddsprocess command to compute the x, y coordinates of sddscongen output for CY. (Hairong Shang)
- wrote calculateTripleCoadImpdedianceEfield GUI for CY. (Hairong Shang)

Safety and Required Training

- Accomplished ESH114 training (Aimin Xiao)

Miscellaneous

- Half day vacation off. (Aimin Xiao)
- On Annual Leave during this period. (Jeff Dooling)