

Summary of work done

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14 Mar 2019

Status of PSP projects

Machine	Description	People	Status
Pre-Acc	Improve neutralization in LEBT with N or Xe.	Dan	In process of getting test stand to work: solenoid water connected, waiting for impedance to improve. Source is running but sparking.
Pre-Acc	Penning source from RAL is in Illinois!	Haider/Dan/Pat	Finally shipped from UK.
Pre-Acc	Laser collimation of head/tail of longitudinal beam. (LDRD)	Dave	In contact with vendor for selection of optical engine.
Pre-Acc/Linac	Simulation of PreAcc + Linac	Valeriy/Kiyomi/ Dan	Scans were done during machine studies day (20 Feb)
Pre-Acc/Linac	Checking efficiency with increased current in LEBT corrector	Kiyomi/Dan/Pat	Scan of LEBT correctors were done during study period (23 Jan 2019). To be completed during next study period in February.
Booster	Flat injection porch	Bill/Kiyomi/ George/Howie/ Chris	Kiyomi is working on the ramp field amplitude jitter correction.
Booster	Adiabatic capture	Chandra/Tan	Phase slip from energy mismatch between Linac and Booster observed during DC studies and HEP. See today's talk.
Booster	2 nd harmonic	Robyn/Tan	Still waiting for MI 2 PA test to be complete. Nothing will happen until after PIP11 MAC
Booster	Wide bore cavities	Salah/Matt	See today's update
Booster	2 stage collimators	Valeriy/ Chandra	Had meeting on 12 Dec 2018 to decide on the length of the primary collimator. Work to see amount of shielding needed for tritium control in sump water.
Booster	Injection girder and injector civil construction to Booster	Dave/Salah/ Tan	Formed a group to make sure that the injector construction to Booster minimally impacts Booster.
Booster	Garnet loss improvements	Robyn/Tan	Got LDRD! (14 Jan 2018). Vendor submitted SBIR with help from us.
Booster	Mode 2 longitudinal damper	Nathan	Requires new broadband cavity. Also need specs. (benefits PIP1+)
LLRF	GMPS machine learning (get rid of reference magnet)	Bill	Got LDRD.
LLRF	Complete DDS upgrade, paraphase controller	Brian/Ed	Paraphase module has been tested. 1 st and 2 nd passes showed more understanding of the digital card is needed.
LLRF	Phase feedback	Brian/Ed/Bill/ Tan/Valeri/Craig	Ed is working on new module. Bill and Brian removed 75 ns of delay. System has become for stable in terms of phase and gain margin.

House keeping

Machine	Description	i/c	Comments
Linac	7835	Kiyomi/Tan	Req. was sent out. 1 new 7835 and 3 for TC&A.
Linac	Klystron	Kiyomi/Bill/ Tan	L3 still working on proposal. No production until Q4 2020. See email dated 02 Jan 2019.
Booster	BPM	Salah/Peter	Declared success on 8 March. Snapshot still needs work. TBT mostly ok.
Booster	Longitudinal coupled bunch mode dampers	Nathan/Bill	Work continues to add open loop transfer function capability. Should be done already. Nathan should start taking data this week.