12 GeV Commissioning Plan for Injector through end of 2014

Main Points

- Aim to have injector ready by Sept 15th
- SOP recovery (130 keV gun + 6.2 MeV to FC2)
- Recovery after 0L03 a BIG deal; this is Reza's focus, will benefit from our support
- Commissioning sequence stable, but dates may move/flex
- Things that may happen outside of the commissioning plan

Summary from http://opsweb.acc.jlab.org/TJ3/12GeV_CEBAF/

(red = outside of commissioning plan)

Date	Arne's Goal	Injector Required	EGG/Injector Goals
Sep 15 – 16	PSS Certification	EGG PSS ready	Gun HV on
Sep 16 – Oct 28	Hot Checkout	Sys. avail for HCO	Early Beam to FC1 (kicker cert.) Early Beam to FC2
Oct 28 – Nov 11	LEM Data Collection	Sys. avail for HCO	n/a
Nov 4 – 11	Accelerator I • Beam to FC2	1 laser tune to FC2	3 laser + 130kV gun + photocathode Test scripts/controls work 6.2 MeV setup to FC2 Precision energies 3-8 MeV Commission Mott polarimeter High current 200uA checkout FC2
Nov 11 – Dec 21	Accelerator I • 1-pass Setup	1 laser tune to ILD	Commission full injector • Brand new C100 • 130 MeV spectrometer • New chicane/beamline 20 uA CW beam to ILD
Dec 21 – Jan 2	Holiday Shutdown	n/a	n/a
Jan 2 – Feb 5	SAD I	n/a	Mott target ladder swap PEPPo/Bubble swap?
Feb 5 – May 7	Accelerator II • Multi-Pass • Hall A detector • Hall D 5.5 pass	1 laser tune ILD 130 MeV capable 20uA Hall A	Recover 3-laser to ILD >20uA CW 130 MeV setup required
May 7 – Sept 21	SAD II	n/a	PEPPo/Bubble swap
Sept 21 – Dec 19	Accelerator III • Energy push • In Hall D	3 laser cw 130 MeV beam	

Must

- Test spare 150kV HVPS
- Test a version of a laser pulse-picker scheme for 4-hall operations
- Commission Mott polarimeter modifications (DAQ, target, dump)
- Define parasitic PQB plan (new PC mount, Kerr cell, PQB setup)
- EES-RF complete 0L02 receiver upgrade
- Evaluate useful layout of RadMon
- Test new way in which Wien HV is applied
- Sleuth 2-3 deg azimuthal spin rotation

Should

- Test transmission at higher bias voltage
- Replace keV-Mott w/ Brock cavity and test
- Mott experiment
- Bubble Chamber experiment
- Upgrade helicity magnets per Suleiman specs + improve "packaging"

Like

- Evaluate noisy JLAB style ADC cards (channel to channel, grounding, sampling)
- Eliminate Gun3

Injector Upgrade

- Upgrade HV/PSS system
- Replace Gun2 SS electrode w/ BCP large grain Nb
- Install/commission 200kV HVPS
- Do we want one long HV cable that can get to oil tank (hi-pot) or direct to gun
- Work to support – new injector layout, w/ prebuncher downstream of wien filters
- Replace Gun2 NEG tube => NEG + 2 BPM + Extra solenoid?
- New chopper slits w/ actuators that do no wobble
- Hunt/eliminate ~60Hz AC through MeV region
- Upgrade camera system (per Hansknecht request)
- Upgrade UHV ion pump supplies throughout injector
- Integrate Canberra radiation monitors to EPICS
- Replace ion pumps or NEGs
- Replace old MAD's for new MBH's
- Replace any leaky valves?