**WAG LERF Schedule\***

**Kevin Jordan Aug. 12, 2020**

\*straw-person, subject to many changes

Minutes from meeting:

Test lab cryo systems can only support 2 of the 3 areas; VTA, CMTF, & UITF; UITF is now scheduled to operate through the end of the calendar year & VTA is needed to support cavity testing. The last of LCLS-II cryomodules CM 11, may be tested in the LERF – the official request is pending, should have an answer in the next week or so. Existing SSAs were to move in August to minimize impact on SAD resources, now this will likely be delayed until ~Thanksgiving time frame to support testing of CM 11. The new higher power SSAs (8) are to arrive at JLab within the next 4 weeks, these will go to storage (Blue Crab) until existing ones are removed & shipped back to SLAC. The AC power ampacities of cabling & breakers need to be confirmed for the new SSAs.

Over the next year there can be opportunistic running – once the SAD begins, in general CEBAF south linac will be at 4.2 K & can be pumped down to 2 K to facilitate isotope running periodically. Starting in the summer of 2021 the LCLS-II HE modules will be tested one every couple months for ~ 2 years until 2023.The current configuration requires a cold box trip to 4 K for U-Tube operations for connecting & disconnecting the LCLS-II CMs. Discussions between SRF & Cryo, for adding valves between the (U-Tubes) transferline & the LCLS-II existing cryo-can, are ongoing. This would further isolate the LCLS-II HE CMs from CEBAF.

Jonathan confirmed that the LERF can be configured to either the north or south linac (CHL 1 or 2) and as long as the linac is at 2 K the LERF can be at 2 K as well. In the event the south linac was warmed up (like the north) LCLS-II HE CMs could continue to be tested as well as isotope irradiations could proceed

The 1X dipole power supply was to be moved to the GTS to in August to support students work but this has been delayed until after the upcoming isotope run.

Aug 16 – 22

* Cancel 1X power supply move – change to end of September
* Finish LCLS-II CM 20 cryo testing

Aug 23 – 29

* Additional CM 20 LLRF testing?
* Check cathode Qe – receisiate as needed
* Check drive laser; upgrade laser when? Parts order placed Aug. 2020

Aug 30 – Sep 5

* HCO for Isotope run, ion pumps checked, crate fan repair, corrector repair (ISOR&D)
* Check SRF cavity tune
* LCLS-II HE higher power SSAs (8) arrive & go to storage

Sep 6 – 12

* Labor Day
* Re-Commission beam to 1G, then to 1X – What to use for tune beam dump at 1X?

Sep 13 – 19

* Expose Graphite & hBN blocks (already approved) to check survivability
  + ~1kw for 20 min
  + Get Beam Authorization for irradiation
* Expose 100 gram Ga; 1 kW for 30 hours
* Irradiate 100 milligrams of Ga71; 1 kw for 1 hour
  + Check gamma spec to validate models
* Remove shield blocks from LERF vault

Sep 20 – 26

* CEBAF physics run ends, SAD starts
* CEBAF to 4 K
* South linac to 4 K for 3 to 4 weeks
* Move 1X power supply to GTS

Sep 27 – Oct 3

* Pull U-Tubes from LCLS-II CM 20
* Remove CM 20 from LERF

Oct 4 – 10

* Move LCLS-II CM 11 & reinstall shield blocks
* Connect CM 11 cables & waveguide

Oct 11 – 17

* Cooldown CM 11 to 4.2 K

Oct 18 – 24

* CEBAF South Linac to 2 K
* Cooldown CM 11 to 2 K & refill

Oct 25 – 31

* CM 11 testing

Nov 1 – 7

* CM 11 testing

Nov 8 – 14

* CM 11 Testing

Nov 15 – 21

* Remove shield blocks, CM 11 & SSAs
* Ship SSAs back to SLAC

Nov 22 – 28

* Thanksgiving