

Controls SW Group Meeting

May 11th, 2023

T. Summers

State of the Accelerators

Getting closer to machines making beam again...

- Operations is in the process of closing out administrative prerequisites to turning on machine hazards
 - As of Wednesday, there are 17 RSWCFs still open.
 - Work toward activating the Beam Authorization Sheet (BAS) is underway
 - Goal is to turn on SC Gun RF Monday 5/14 (Friday & weekend shifts were removed from calendar)
- Power outages:
 - K12 (S23/S24) was shut off Tuesday, expect power back close of business Friday. We can recover Monday.
 - K11 (S21/S22) planned for upcoming Tuesday 5/15, we will shut down necessary controls equipment Monday – ATCA, CAMAC, VME, and motion controls. There is no dependence on this equipment for running SC Gun RF (ATCA off means MPS won't make up its loop and will prevent beam permit). Power restored maybe Wednesday/Thursday.
 - Planning for other outages underway, possibility to have them done simultaneously - but not confirmed.
- Cryoplant 1 insulating vacuum checks were successful, and they achieved 4K yesterday
 - They are currently doing the partial warm-ups / fast cooldowns, plan is to be at nominal 2K by Tuesday
 - Follow along here - https://pswww.slac.stanford.edu/swdoc/ecs_dashboards/cryomodule.html

Work Schedule and Planning

LAF PAMM scheduled for next week Tues-Thurs, but with limited accelerator access

SC Linac in controlled access. FACET, HX2, BTH, EBD-FEE permitted. All others No Access.

Next PAMM in 2 weeks.

Reminder that Monday 5/29 is a holiday, PAMM starts Tues.

- Please continue to add your jobs into the appropriate buckets

08/01/2023	09/16/2023	All Accelerators	Downtime	2023 Summer downtime (LCLS SC, FACET, LCLS Cu)
05/30/2023	06/01/2023	All Accelerators	PAMM	5/30-6/1 PAMM
05/16/2023	05/18/2023	All Accelerators	PAMM	5/16-5/18 PAMM
05/08/2023	05/12/2023	All Accelerators	Downtime	LCLS-II, FACET, and LCLS work for the week of 5/8-5/12.

Controls work or other things that may impact you

- Power outage in S21/S22 means no klystron gallery access to those sectors.
 - Since PPS PLC is off, downstream areas don't know hazards (VVSs*) are off so system will not allow access.
- Another one (of the 6) lcls archive appliance getting upgraded to RHEL7 ~soon~

Access next week

Detailed access schedule at this intuitive address (also linked from OpsWiki):

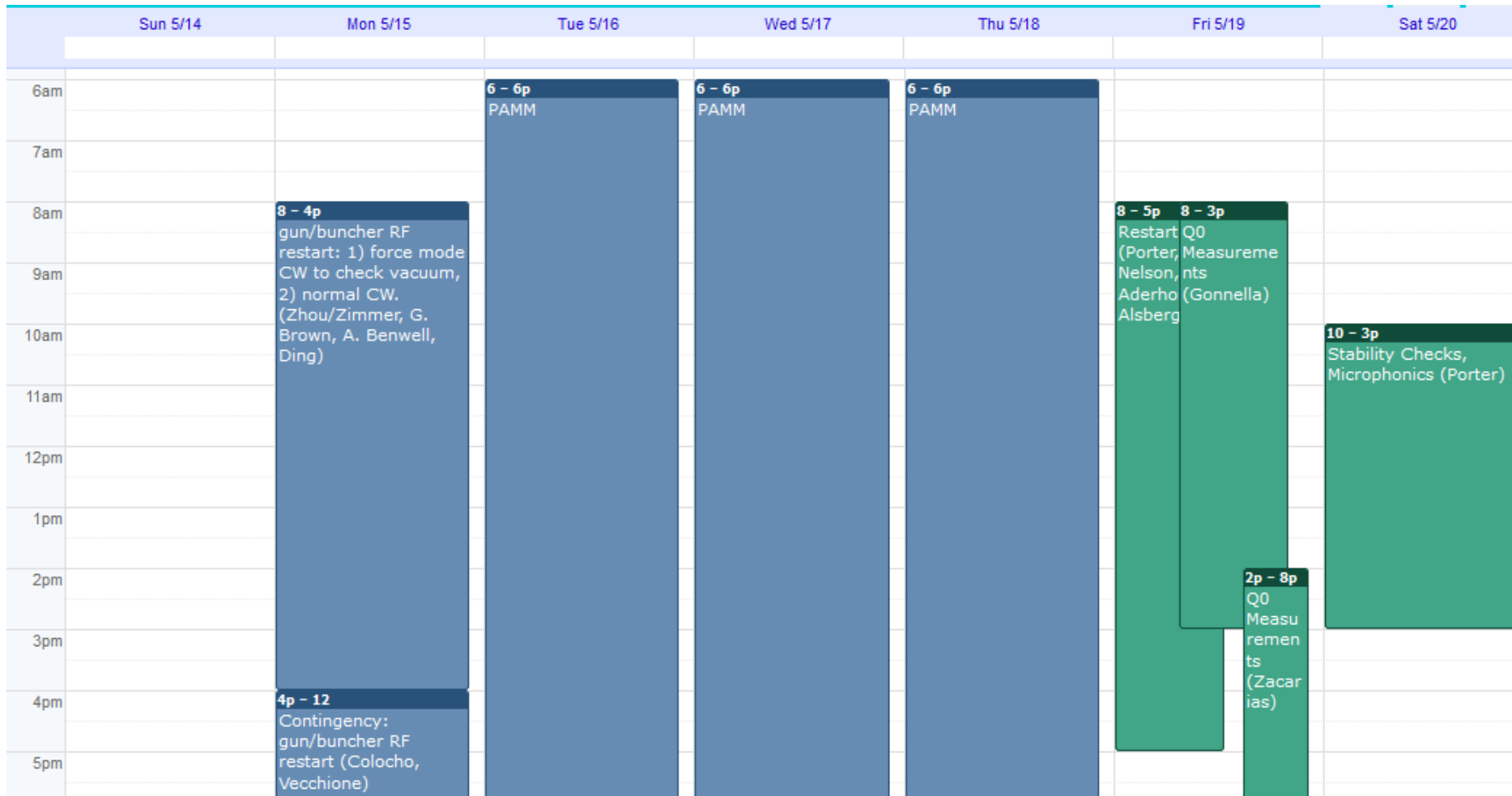
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	Mon 5/15/23 8am-12pm	Mon 5/15/23 12pm-4pm		Tue 5/16/23 8am-12pm	Tue 5/16/23 12pm-4pm		Wed 5/17/23 8am-12pm	Wed 5/17/23 12pm-4pm		Thu 5/18/23 8am-12pm	Thu 5/18/23 12pm-4pm		Fri 5/19/23 8am-12pm	Fri 5/19/23 12pm-4pm	
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Looking ahead to SC Linac restart – next week

Find the schedule at this similarly intuitive address:

https://calendar.google.com/calendar/u/0/embed?height=600&wkst=1&mode=WEEK&bgcolor=%2300CCDD&ctz=America/Los_Angeles&title=LCLS+SC+Linac+Schedule&src=Z285ZH0MmZqOWc2OTUxcXZpcDA1cGJpMzBAZ3JvdXAuY2FsZW5kYXluZ29vZ2xlLmNvbQ&src=bnE3ajQzdHRicjY2cGU4NzFyMmVtZ2ZvcjBAZ3JvdXAuY2FsZW5kYXluZ29vZ2xlLmNvbQ&color=%237986CB&color=%23009688



Blue is injector and beam setup

Green is SRF work

Looking ahead to SC Linac restart – following week

	Sun 5/21	Mon 5/22	Tue 5/23	Wed 5/24	Thu 5/25	Fri 5/26	Sat 5/27
8am		8 – 4p Gun restart: 1) force mode CW to check vacuum, 2) normal CW, 3) e-beam generation, 4) gold buncher's phase and then confirm with beam (Zhou, Zimmer)	8 – 4p Gun/Injector: e-beam to diag0 dump, Timing/BPM (Zhou, Carolina B., Sonya H., Jeremy M., Justin M.)	8 – 4p injector emittance optimization/calibration 50pc/20pc (Osman, Zhou)	8 – 4p Beam to BSY 10Hz, Timing (Colocho, Ding, Carolina B., Sonya H., Jeremy M.)	8 – 4p Beam to BSY 10Hz, Timing (Colocho, Ding, Carolina B., Sonya H., Jeremy M.)	8 – 4p Beam to BSY alignment (Sudar, X. Huang, Decker)
9am							
10am							
11am							
12pm							
1pm							
2pm							
3pm							
4pm		4p – 12 Gun/Injector: Restart, e-beam? (Vecchione, Halavanau)	4p – 12 Injector BLEN: 50pc: -20, -25, -30, -40 deg buncher with sol-1 settings; (Zhang, Tang, Fisher)	4p – 12 Injector tuning compromise (Zhang, Halavanau, Littleton)	4p – 12 L1/L2/L3 phasing and calibration (Osman, Nelson)	4p – 12 Beam to BSY 10Hz, RFAL/feedback, phasing (Zimmer, Nelson)	4p – 12 Beam to BSY, linac/injector collimator (Zhang, Zhou, Littleton)
5pm							
6pm							

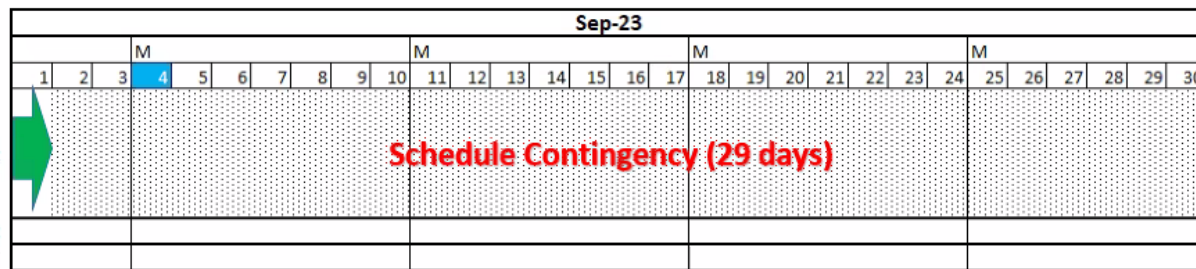
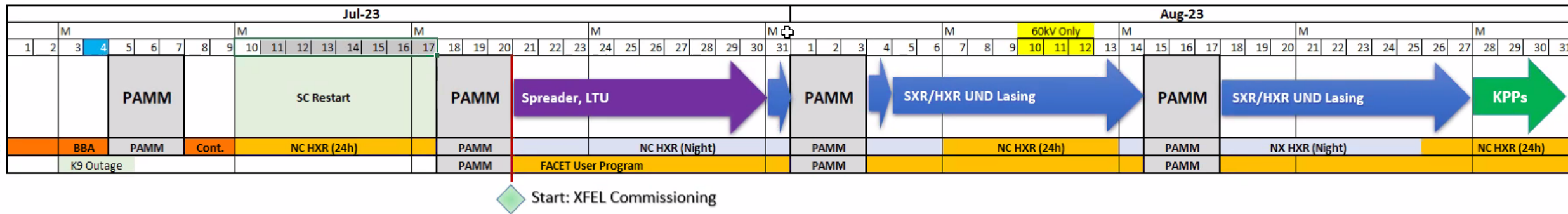
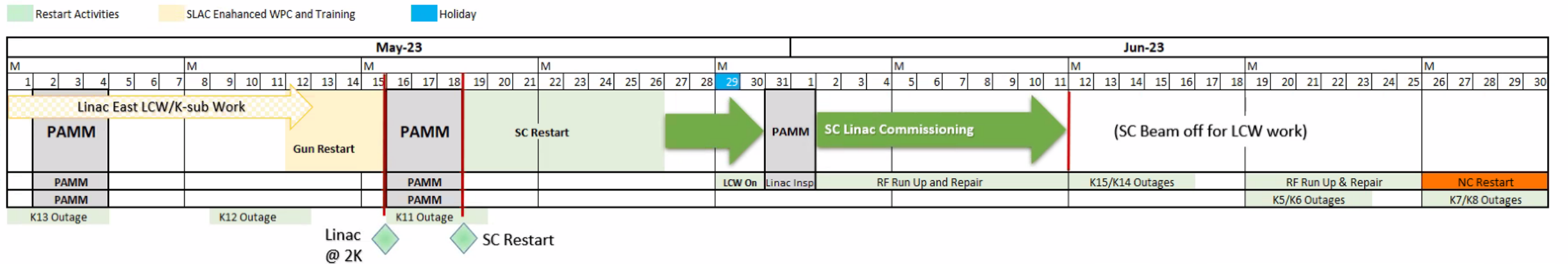
Shifts are:

8am – 4pm

4pm – 12pm

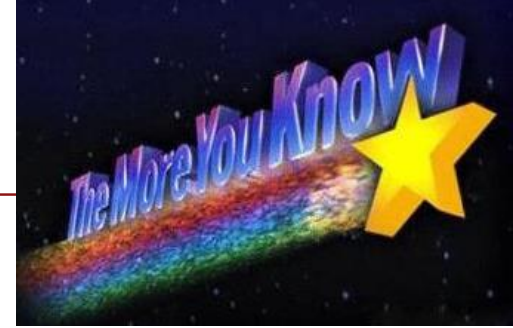
Looking ahead – big picture for following months

*** Usual disclaimer with about schedules these days – includes words like ‘tentative’ and ‘aspirational’ ***



L4 First Light/KPPs

What are RSWCFs?



Radiation Safety Work Control Forms

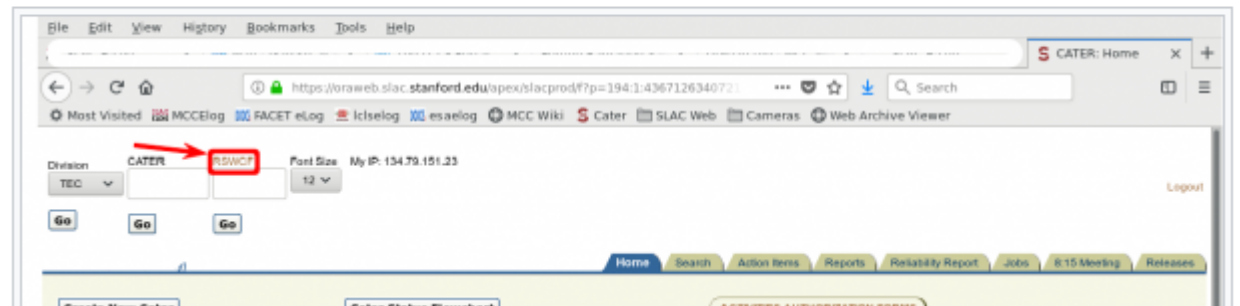
- From the Control Room OpsWiki (great resource of information and explanations for regular humans)
[https://aosd.slac.stanford.edu/wiki/index.php/Radiation_Safety_Work_Control_Forms_\(RSWCF\)](https://aosd.slac.stanford.edu/wiki/index.php/Radiation_Safety_Work_Control_Forms_(RSWCF))

“Radiation Safety Work Control Forms (RSWCF) are documents that control work flow on radiation protection safety systems, for example any PPS device and anything with a **Radiation Protection Safety Item** sticker. CATERs sometimes have related RSWCFs that need to be “work approved” before the work is started. We also often have to review RSWCFs for particular areas for various activities including IATs.”

- Before Operations can begin turning on hazards (i.e. preparing for beam) they need to confirm all relevant RSWCFs are completed and closed out by knowledgeable people. This can take several days of “herding cats”.

How to Navigate to RSWCFs

Open CATER and in the top left-hand corner of the page click on the red RSWCF link.



Special Presentation

Greg White – Updates from the EPICS collaboration

Greg will give a summary of the spring EPICS meeting, giving very short summaries of some talks, top line conclusions, plus a very short summary of the EPICS cyber security workshop.