

Controls SW Group Meeting

November 2, 2023

Agenda

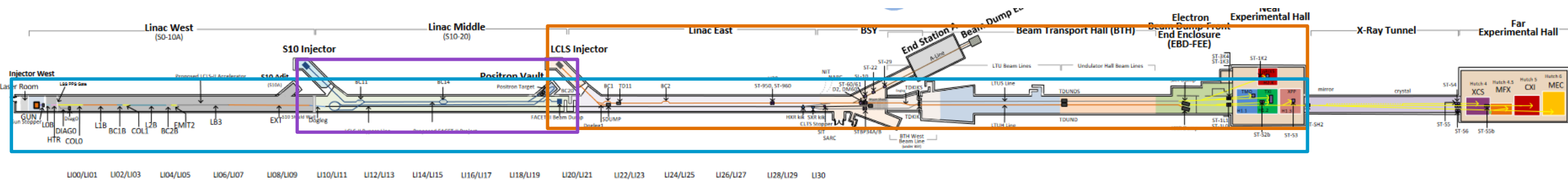
1. State of the machine
2. Schedule & upcoming work

T. Summers

State of the Accelerators

All operating

- **LCLS-SC: Tuning and characterizing beam to experiment areas**
 - Busy schedule, working through various smaller issues
 - Currently beam held off by BRB1 magnet monitoring MPS problem
- **FACET: Tuning beams and running to experiment area**
 - They've been having some intermittent control system sluggishness lately, and had to restart the SLCCAS process yesterday.
- **LCLS-Cu/NC: Running experiment program**
 - Business as usual




Upcoming maintenance periods

Next week: Last Linac PAMM of the year!

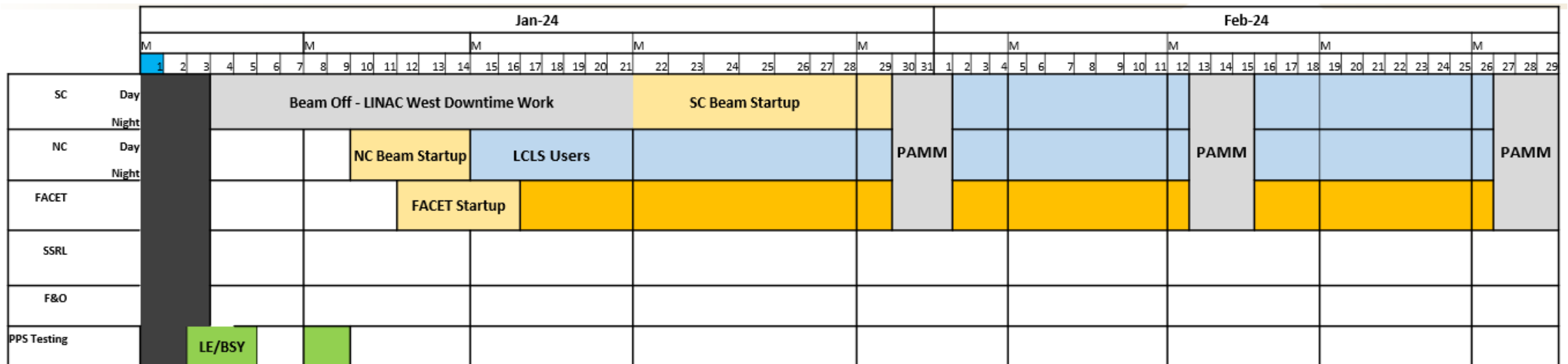
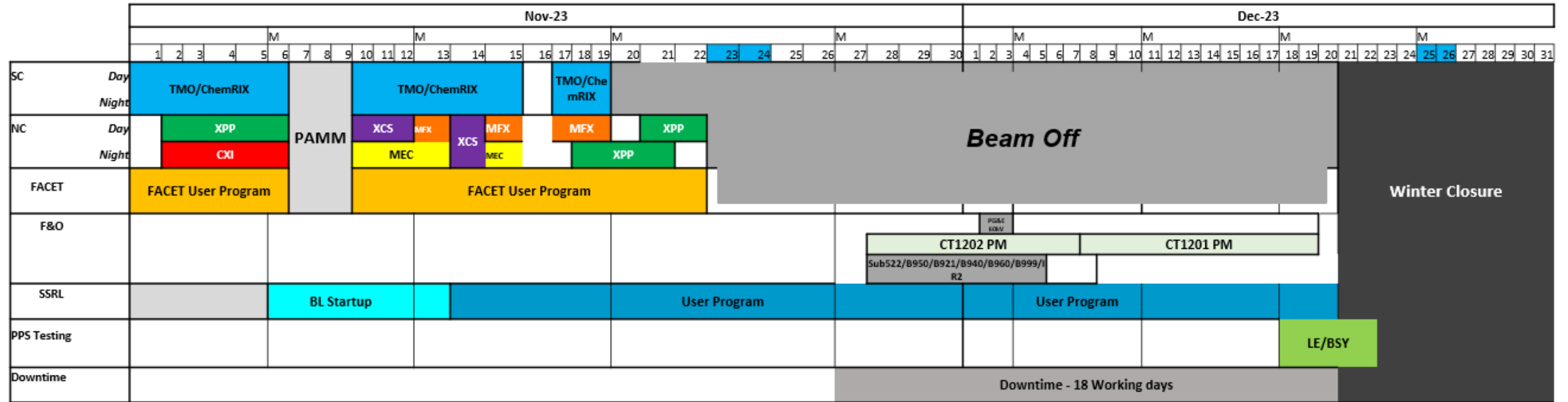
Edit	Start Date ↓	End Date	Program	Machine Status	Description	Job Control Status	View Jobs	Access Sched	P
777	11/27/2023	01/26/2024	AOSD LCLS	Downtime	Nov-Jan Linac West Downtime		View	View	
766	11/27/2023	12/20/2023	All Accelerators	Downtime	Nov-Dec FACET & LCLS Cu Downtime (includes BSY, BTH, and EBD-FEE)		View	View	
787	11/07/2023	11/09/2023	All Accelerators	PAMM	11/7 - 11/9 PAMM		View	View	
748	01/30/2023	04/30/5000	FACET-II	Downtime	FACET Linac Startup Tasks		View	View	

- **Nov. 7-9th PAMM Planning meeting is next today at 11 am**
 - Staggered lock-up times for all accelerators
- Enter your PAMM and Downtime jobs **asap** to help with planning
 - Note the 2 buckets, both starting Nov. 27th
 - bucket ending Dec. 20th for Linac Middle, Linac East, BSY & downstream
 - bucket ending Jan. 26th for Linac West (STCAV and LCSL-II-HE work)



Most up to date job list and access schedule (see Chris's email yesterday)

Big picture through November – February (copied from last week)



Looking ahead – November (copied from last week)

- All accelerators plan to run the next few weeks
- Electrical substation maintenance Sub 521/B033/B081 Nov. 13-17th – beam programs unaffected
 - B081 is the Magnet Measurement Facility (undulators), plus Shipping/Receiving
- Things get interesting after the Thanksgiving 4-day weekend (*calendars and outage info from Sharon's slides**)

Monday	Tuesday	Wednesday	Thursday	Friday	Sat/Sun
11/20/2023 • LCLS SC Beam off – prep for Downtime/Access • LINAC West Access – STCAV2/LCLS-II-HE • LINAC Cu User Program • FACET II User Program • SSRL User Program	11/21/2023 • LINAC West Access – STCAV2/LCLS-II-HE • LINAC Cu User Program • FACET II User Program • SSRL User Program	11/22/2023 Downtime Planning Mtg • LINAC West Access – STCAV2/LCLS-II-HE • LINAC Cu User Program – 6pm – 12pm Characterize/Beam Off • FACET II User Program – Characterize/Beam Off • SSRL User Program DEADLINE for Winter Closure Work Requests	11/23/2023 Thanksgiving Holiday	11/24/2023 Thanksgiving Holiday • SSRL User Program	11/25 & 11/26 • SSRL User Program
11/27/2023 • SSRL User Program • Electrical PM Sub522/IR2 – Preparations tentative Downtime – S0-S30, BSY, BTHW,BTH,EBD-FEE	11/28/2023 • SSRL User Program • Electrical PM Sub522/IR2 starting ~12pm Downtime – S0-S30, BSY, BTHW,BTH,EBD-FEE	11/29/2023 Downtime Planning Mtg • SSRL User Program • Electrical PM Sub522/IR2 – power outage Downtime – S0-S30, BSY, BTHW,BTH,EBD-FEE	11/30/2023 • SSRL User Program • Electrical PM Sub522/IR2 – power outage Downtime – S0-S30, BSY, BTHW,BTH,EBD-FEE		

Looking ahead – December (copied from last week)

- December we're in the downtime, with Substation 522/IR2 electrical maintenance outage continuing from the last week of November until recovery December 8th.
- Another 60kV switchover scheduled Dec. 2-3 due to continuing maintenance on 230kV line (carried over from last week). Machines not running and Cryoplant idling at 4K so lower impact.

Monday	Tuesday	Wednesday	Thursday	Friday	Sat/Sun
				12/01/2023 • SSRL User Program- prep for 60kV Switchover • Electrical PM Sub522/IR2 – power outage Downtime – S0-S30, BSY, BTHW,BTH,EBD-FEE	12/02 & 12/03 • Planning – 60kV Switchover for PG&E 230kV maintenance • Electrical PM Sub522/IR2 – power outage Downtime – S0-S30, BSY, BTHW,BTH,EBD-FEE
12/04/2023 • SSRL PAMM • Electrical PM Sub522/IR2 – power outage Downtime – S0-S30, BSY, BTHW,BTH,EBD-FEE	12/05/2023 • SSRL AP • Electrical PM Sub522/IR2 – completion & recovery Downtime – S0-S30, BSY, BTHW,BTH,EBD-FEE <i>ALD/Division Directors Review job requests for Winter Closure</i>	12/06/2023 Downtime Planning Mtg • SSRL User Program • LCLS-BTH Recovery from Power Outage Downtime – S0-S30, BSY, BTHW,BTH,EBD-FEE	12/07/2023 • SSRL User Program Downtime – S0-S30, BSY, BTHW,BTH,EBD-FEE	12/08/2023 • SSRL User Program • LCLS-BTH Recovery from Power Outage Downtime – S0-S30, BSY, BTHW,BTH,EBD-FEE	12/09 & 12/10 • SSRL User Program Downtime – S0-S30, BSY, BTHW,BTH,EBD-FEE

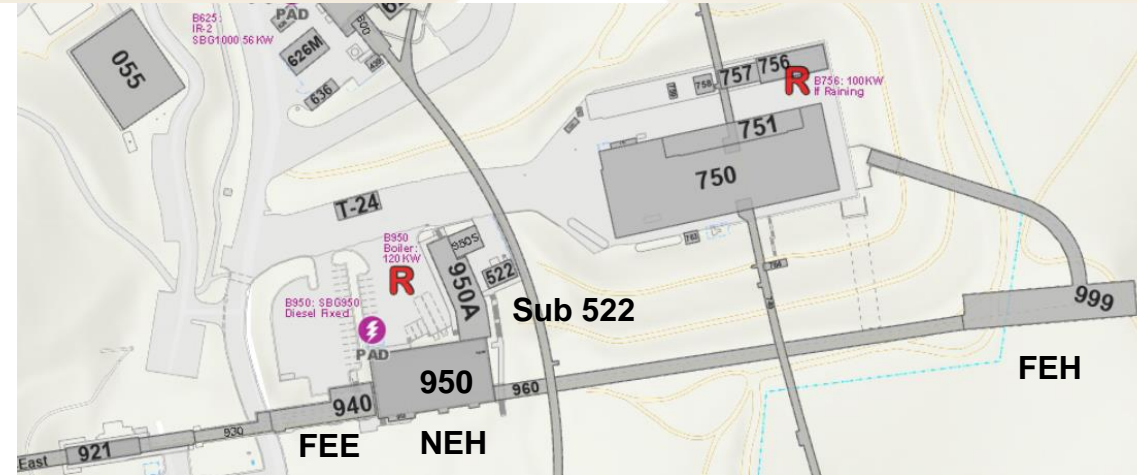
Electrical PM - Sub522/B950/B921/B930/B940/B960/B999

Scope of Work:

- 4x 12kV Substation maintenance
- All PM work for B950 and B921

Impacted by Outage:

- B522/B950
 - Central Utility Plant (CUP) at B950, (*generator required for B950 Boiler*)
 - B950 Lights, HVAC, Power, PCW, Chilled Water from B911 to FEH (rack cooling impacted) including B901, MPS/PPS, FA/ODM
 - Card Readers/Cameras
 - NEH Hutches and Labs
 - Lighting Inverter
 - Electric Vehicle Chargers
 - B950A PCW skid (*K.Chan*)



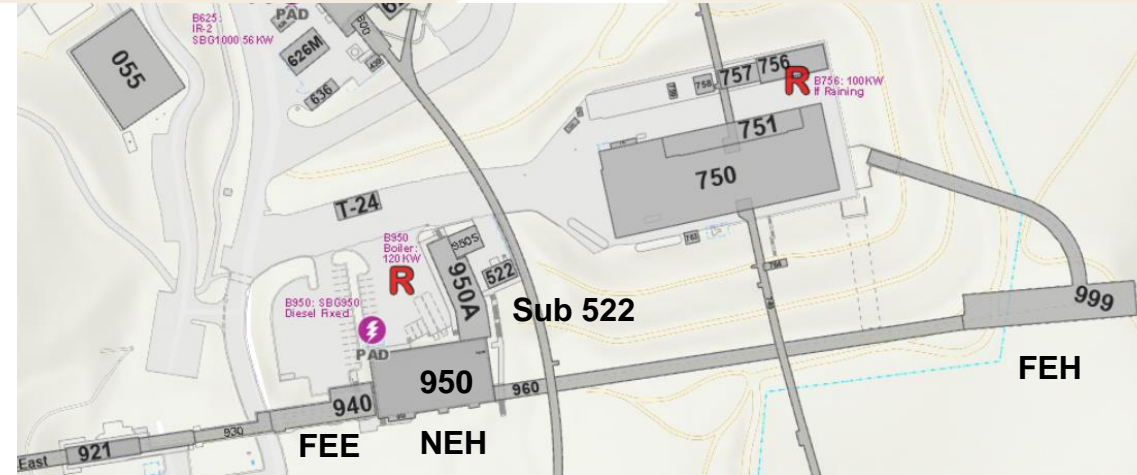
Duration: 8 Days

***Proposing: Nov 28 – Dec 7
(assessing impacts to Downtime work
planning – potential weekend work
needs review)***

Electrical PM - Sub522/B950/B921/B930/B940/B960/B999

Impacted by Outage:

- B930/B940
 - EBD-FEE area – Lights, HVAC, power, PCW, Chilled Water, MPS/PPS
 - *Downtime FEE work and auxiliary utilities required in discussion*
- B960/B999
 - XRT/FEH area – Lights, HVAC, power, PCW, Chilled Water, MPS/PPS, FA/ODM
 - Lighting Inverters
 - FEH Hutches and Labs
 - Card Readers/Cameras
- B921
 - XTCAV
 - half Undulator Hall – requires controlled systems shutdown/recovery (*motion control, vacuum, BPM, magnet PS*)
 - B921 FA
 - Undulator Hall HVAC and Lighting
 - Card Readers/Cameras



Duration: 8 Days

Proposed: Nov 28 – Dec 7

(assessing impacts to Downtime work planning - potential weekend work needs review)

Electrical PM – IR2/B055/B730



Duration: 8 Days
Proposed: Nov 28 – Dec 7

Scope of Work:

- 12kV Substation Maintenance

Impacted by Outage:

- B620 – LSST Cleanroom (*egress temporary lighting requested*)
- B621/B624/B626/B625
- B055 – ARCAS Gym (*any scheduled classes will be cancelled the week of the outage*)
- B730 – SSRL shop space/elevator sump pump (*generator required*)
- Pumps in the tunnels to move water out to the polytank (cord and plug)
- FA/ODM – need to be secured by CEFFT
- PMS Radiation Monitors fed from B625 (*notification to Ann Harris, RP*)

What do we need to prepare for the power outages?

Full shift? Half shift?

- **Access to undulator hall to power off equipment**
 - Wed. 6-12 pm - LCLS-Cu scheduled for characterization and shutdown
 - How much time do we need?
 - Requested for 2 shifts!
 - Goal is Monday day shift ACCESS. Namrata main point of contact
- **Are we also shutting down ATCA crates?**
 - What time/access do we need for that? Yes, a couple in undulator hall, others above ground.
 - They will shut off sensitive power supplies.

- **Good news is that we don't need to rush to recover once the power is restored since we're in winter downtime.**

Week-long PAMM recovery post-mortem review

“Disastrous”

- **Main takeaways**
 - Recovery scheduled for Friday evening was not good. Users the next day especially not good.
 - Most issues appear unrelated to power outage or planned work – was mostly series of unfortunate events!
 - Some issues could have been identified earlier so recovery could have been during more normal hours
 - We were not prepared to need so many system experts responding during the night/weekend – bad assumption was that the machine would ‘just work’
- **Your thoughts and feedback...**
 - Dedicate/scheduled system expert checkout time after outages and longer maintenances

Request from Ops: please make sure that all IOC CONTACT and INFO fields are filled in

- **This is very important for IOCs that should only be rebooted by experts!**
 - Should we instead have a separate IOC admin template without the reboot button? YES!

AD Great Halloween Dessert Heroes! Well done :D

Yekta The Tower of Spiders

Tyler Graveyard Butter Mochi with Ghost Meringue

