

Controls SW Group Meeting

July 18, 2024

Agenda

1. Downtime Update
2. Kukhee Kim:
EPICS meeting recap

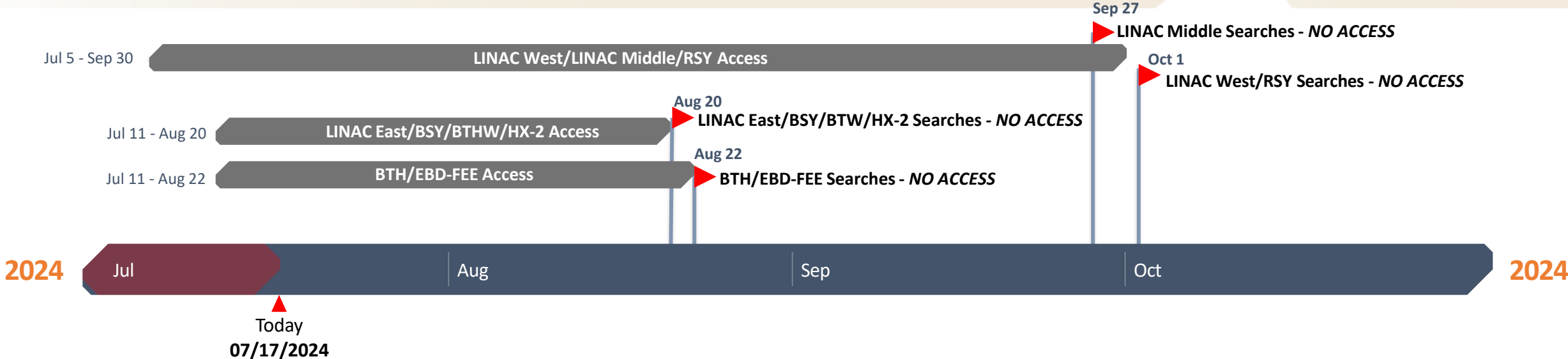
T. Summers

Summer Downtime Update

Edit	Start Date ↓	End Date	Program	Machine Status	Description
808	07/05/2024	09/30/2024	All Accelerators	Downtime	FACET & Linac West Summer Downtime, bucket closes 6/14 17:00
809	07/05/2024	08/21/2024	LCLS	Downtime	Linac East Summer Downtime, bucket closes 6/14 17:00

- **We're two weeks into the summer downtime**
- Thank you for updating all HW jobs to include planned start date and WPC completion date
 - This is very important to senior management - the lab director was at yesterday's downtime planning meeting
 - Please remember to close out your jobs when you're done!
- **Downtime dashboard:**
<https://slac.sharepoint.com/sites/AD/committees/iwp/Pages/IWP-Dashboard-2024-2025-Downtime.aspx>
 - Find a link to Sharon's latest downtime slides (highlights copied next)
 - Find a link to the lessons learned feedback form and list of comments so far
 - use Stanford account, click the 'Request Access' link and wait for them to add yo)
<https://app.smartsheet.com/dashboards/j2fq3WRMJ498XRXXPxHCqW58Jxxq9358j6gv6Q41>

Downtime LAF Timelines



Daily Tailgates must have representation for work planned each day:

- ✓ LINAC Sectors 0-30 07:00 at Sector 10
Area Managers: Al Owens (S0-10)/Emad Hamrah(S10-20)/Ted Martinez (S20-30)
- ✓ BSY 07:00 in front of Big Door
Area Manager: Brad Catania
- ✓ UND/LTU 07:00 at BTH East Entrance
Area Manager: Mike Zurawel
- ✓ EBD-FEE Zoom Tailgate 07:00 and 15:00 (*Mondays only*)
<https://stanford.zoom.us/j/94360741328?pwd=VStYQW9yVTkyQlQ0VHJUZTZwL3Fzdz09>
Area Managers: Kathy Burrows/Dan Peterswright

Downtime Meetings and Control Rooms

Weekly Meetings:

Mondays & Thursdays 8:15 am Maintenance Meetings

B052 Mad River Conf Rm 103/Zoom Meeting ID: 742 958 069, Passcode: 002151

Wednesdays 11 am Downtime Planning Meetings

B052 Mad River Conf Rm 103/Zoom Meeting ID: 975 2610 6850, Passcode: 768977

Control Room staffing:

Accelerator Control Room (ACR)

M-F 07/05 until 08/16 7am-5pm with On-call EOIC reachable 24/7 *Ext 2151*

Facilities Operation Center (FOC)

Daily coverage 24/7 *Ext 2034*

Cryopant Control Room

Daily coverage 24/7 *Ext 4519*

SPEAR

24/7 staffing continuous until 08/07 when RA Substation Power Outage begins with Duty Engineer walk throughs during Power Outage

Lessons Learned Feedback Form

Objective:

To collect Lessons Learned during the Short Down Time for continuous improvement. Provides Immediate and direct feedback to Senior Leadership on what went well, areas for improvement and potential solutions to issues. This will help inform the followings weeks work and in preparation for the Long Down Time.

Process:

- In tailgate meetings and huddles ask:
 - What Went well?
 - What needs to be improved?
 - How should we improve it?
- Enter this information into the form. For mobile submissions scan the QR code with your cell phone.
- For computer submissions [click here](#)
- The information submitted will be reviewed and discussed at least weekly by Senior Leadership and the Laboratory Director.
- Your input is essential to improvement. This form will make sure we capture ideas and issues immediately, so they are not forgotten or overshadowed by other events.
- Updates with responses and submissions will be sent out weekly to be shared at morning tailgates.
- Escalations/Flagged submissions will be sent directly to the Senior Leader in the department Identified for discretionary follow up.
- Access to the dashboard will be provided to SLAC employees on the Short Down Time Planning Page.

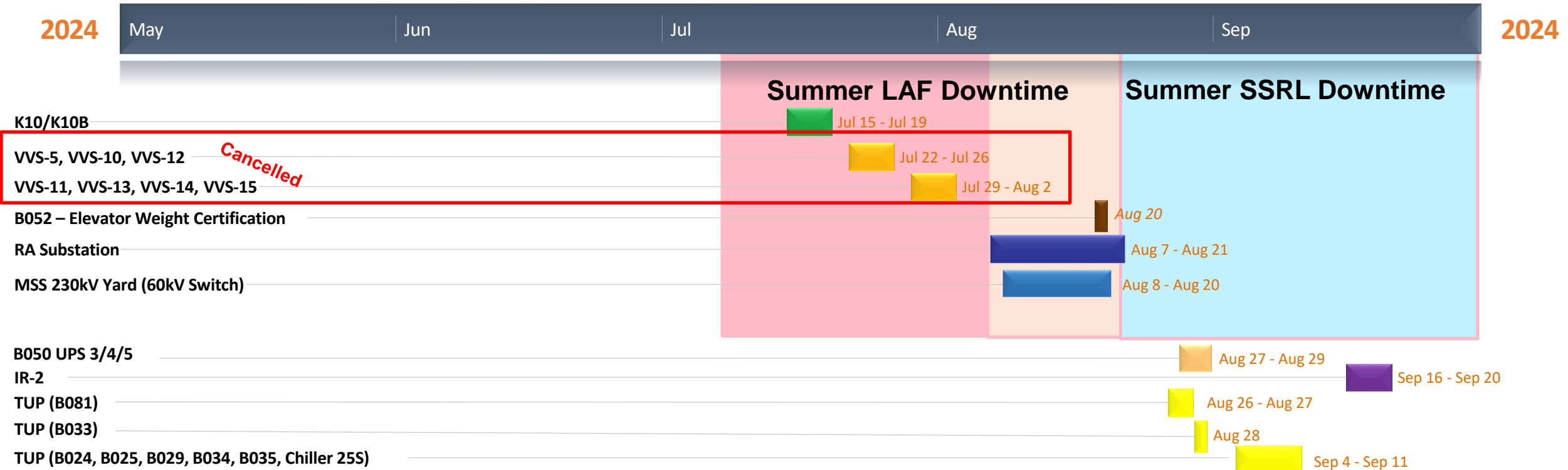


Payoff:

- The information collected will be used to learn and improve for both following week and for the upcoming Long Down Time.
- This form provides real time suggestions and feedback that can be shared with other teams weekly.
- Having QR codes available in the field allows all staff to provide direct and specific feedback to leadership.



Electrical Preventative Maintenance – Schedules 2024



- Development of work packages in progress
- RA Substation dates aligned with Summer LAF Downtime Jul 5 – Aug 21, SSRL Downtime August 7 – October 6
- Site 60kV Switch needed for MSS 230kV Yard PM work and SW-275 Repair
- Temporary Utility Power (TUP) Project outages are in planning

K10/K10B - Electrical PM

CATER 171151

F&O WO for CEFOE FWKD0090210

POWER OUTAGE IN S19/20 GALLERY AND TUNNEL

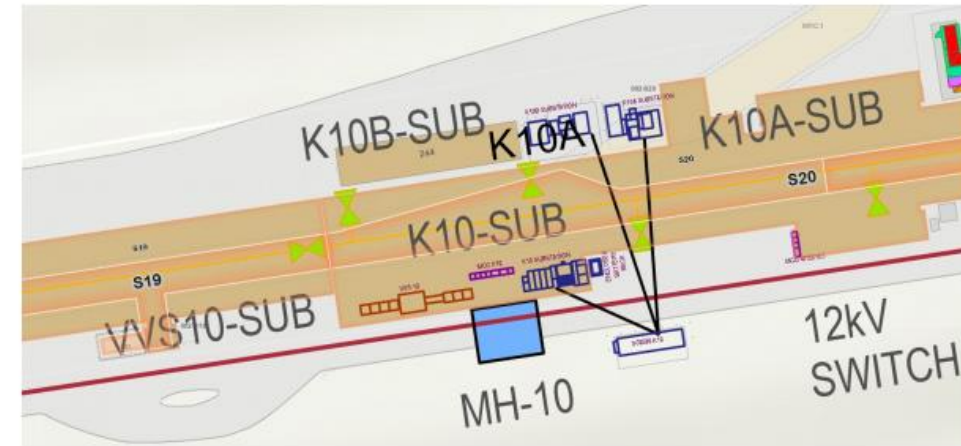
Scope of Work:

- Medium voltage breakers
- Switchgear
- Transformers for both
- 480V switchgear
- Distribution panels
- K10 battery bank
- Integrated Power Centers

Impacted by Outage

- Laser Rooms: LCLS & FACET II
- FACET-II trailer (B244)
- HVAC Laser Rooms
- S20 RF Hut (*affects NLCTA timing*)
- Klystrons in Sectors 19/20
- S20 Tunnel Radio
- Vacuum – *no generator required (solar powered generator to be used)*
- LCW outage
- BSOICs
- BTMs
- Fire Alarms and ODM
- Lighting Inverter
- PPS – week long outage

K10/K10A/K10B Substation Outage



Duration: 5 Days

Proposed: July 15-19

Planning Meeting 03/14 @ 10:30am

Planning Meeting 05/31 @ 9am

Script Review 06/25 @ 11am

Tailgate 07/15 @ 6:30am B035 Mech Area

Task #	Location	Task Activity	Assigned Task Group	Task FOC	Start Date/Time	Completed Time and Notes
		Pre-work Substation K10/K10B Sec 19, 20 PM's 7/15/24				
1-01	Sec 20	Ted install temp cord to experimental equipment powered by solar generator (Notify FOC when complete)	AD	Ted		Ted Martinez 408 891-2250
1-02	Sec 20	Fire install temp cord to FACP/AES (Notify FOC when complete)	Fire/LV Elect	Dan/Jeff		
1-03	Sec 19-20	Sec 19-20 PPS has been By-Passed	ACR	Ed Chin		Ed Chin 510 909-6990
		Tail Gate/PIB Substation K10/K10B Sec 19, 20 PM's				
2-01	B035	Tail Gate meeting B035 Mech Area	All	6:30am		
2-02	Sec 20 Door # 20-5	Shops proceed to work locations and perform PIB's	Shop leads	7:15am		
		Shut Down Substation K10/K10B Sec 19, 20 PM's				FOC Sal Delgado 415 562-5035
2-01	Remote	FOC Notify IT (Sec 19 & 20) Networking will be off line within 1hr.	FOC/IT	FOC/IT		IT Hot Line 650-926-6200
2-02	Remote	FOC Notify ACR Sec 19 & 20 power outage within 1hr	FOC/ACR/SPEAR	Sal		
		FOC Notify Security of Sec 19 & 20 power outage.				

CATER 171513 Planned Graceful Turn Off and Recovery of S19/20 Controls Equipment

RA Substation Phase 1 - Electrical PM

SSRL/SPEAR3

Sub515 – B140

Sub 507 - B130, B131, B121, B122, B120, B118, B117, B116, B100

B137 E, B137W, Gate 17 Guard House (B086)

ESA

B060, B061

CATER 171157

F&O WO for CEFOE FWKD0090215

NLCTA & ESB

B128, B129, B062

Beam Transport Hall (LTU, UND)

B910, B911, B912, B913

CryoEM

B006

Data Center (B050)

During outage down to single source, 550s

Entire Research Yard and CT404

Planning Meetings:

03/08/2024 @ 12:30pm

04/02/2024 @ 1pm

04/30/2024 @ 3pm

05/20/2024 @ 11am

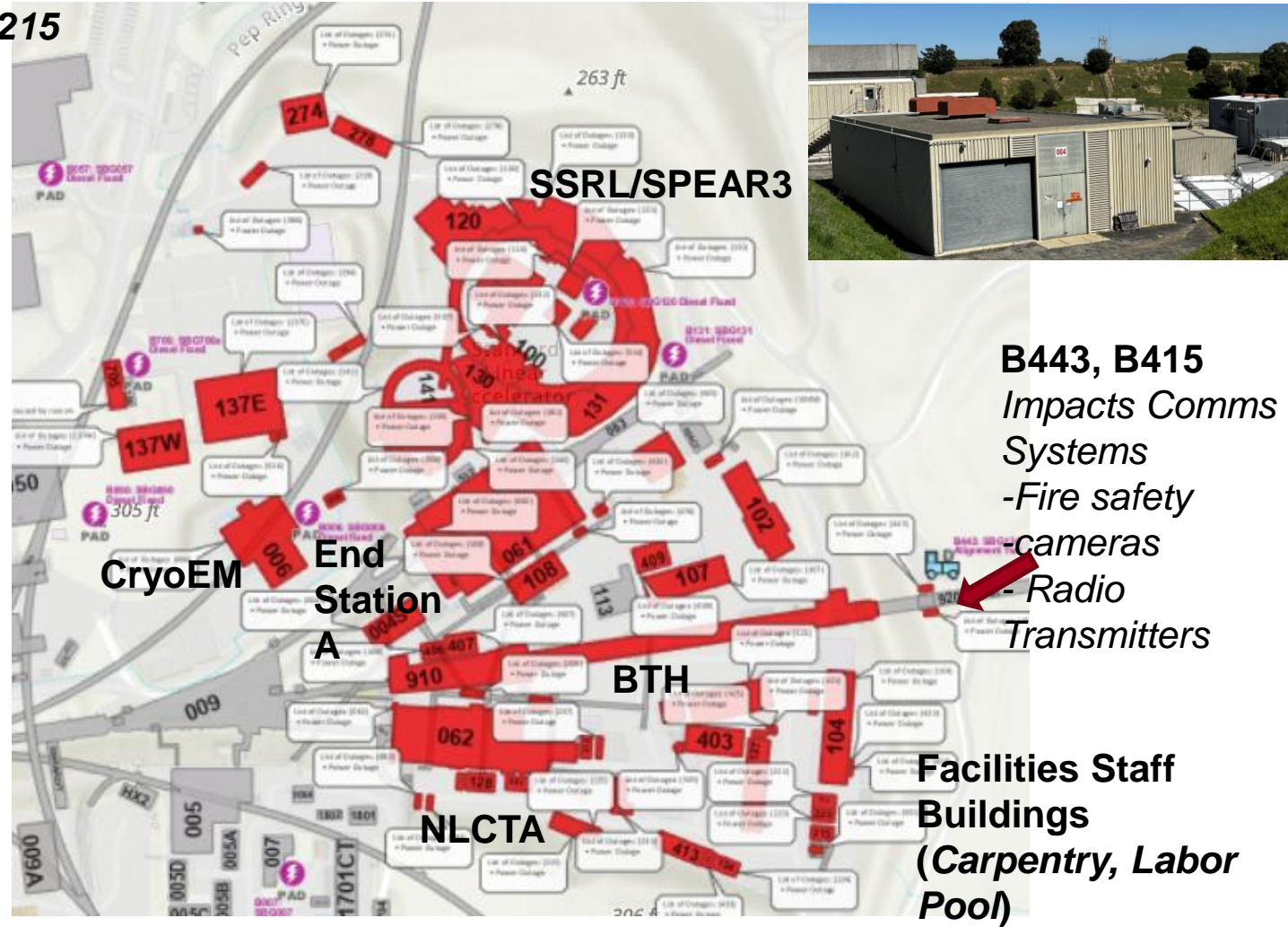
06/11/2024 @10am

Power Outage Readiness Review 07/02/2024 @ 1pm

Duration: 5 days

Dates: Aug 7-14, 2024

RA Substation Phase 1 power outage mapped:



RA Substation Phase 2 - Electrical PM

End Station A

B060, B061

CATER 171157

F&O WO for CEFOE FWKD0090215

RA Substation Phase 2 power outage mapped:

NLCTA

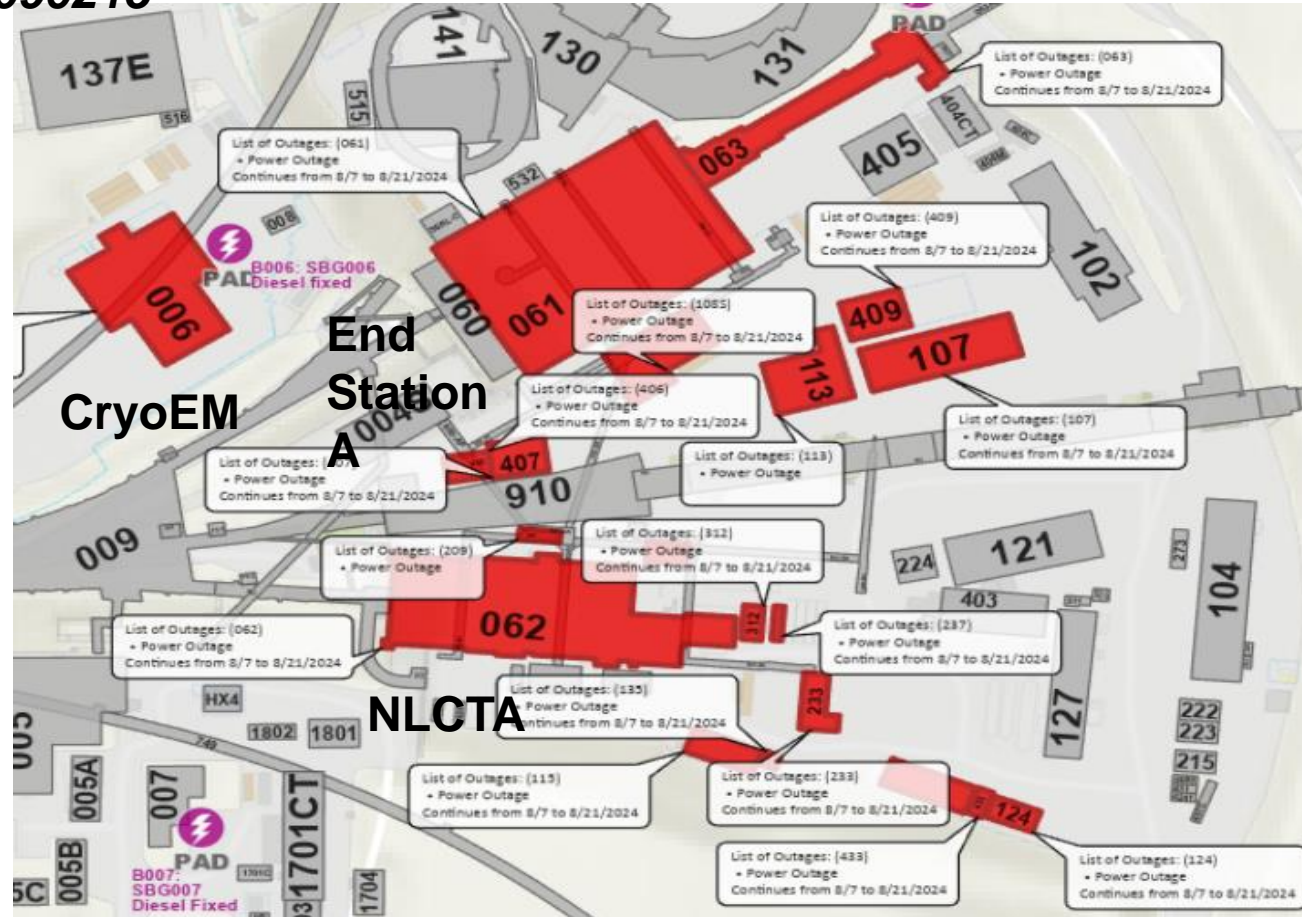
B128, B129, B062 (ESB)

CryoEM

B006

Research Yard support Buildings

B107, B108, B113, B115, B124, B209, B225, B233, B312, B406, B407, B409, B433



Planning Meetings:

03/08/2024 @ 12:30pm

04/02/2024 @ 1pm

04/30/2024 @ 3pm

05/20/2024 @ 11am

06/11/2024 @ 10am

Duration: 5 days

Dates: Aug 14-21, 2024

Power Outage Readiness Review 07/02/2024 @ 1pm

LCLS-II-HE K-Sub 04 Outage

Where

- Sectors 07 -10 in the Klystron Gallery & Linac Housing

When

- Monday 7/29/24 through Tuesday 9/3/24

Why

- K-Sub 04 will be down for 5 weeks to allow for electrical re-routing to avoid conflicts with new structural steel associated with the new cupola that will house a new cryo-distribution box

What will be affected

- All Power in sectors 07-08 will be down, and several racks will be impacted in sectors 09-10

Mitigations

Generators (plus N+1 back ups) will be provided to ensure power to:

- Sector 07-10 I&C Alcoves
- Distribution Panel in Sector 08 serving S08 racks
- Sector 07 Air handling unit
- Sec. 07 ODH
- Cryo Control racks
- **Each Generator will take about 1 hour to transfer loads, during which, power will be completely off**

Extension Cords will be run to provide power to:

- Cryo Control racks 14&15 in sec. 07
Task lighting will be provided in the Linac Housing
- **No Linac Housing Access in sectors 07-08 6am-Noon on 7/29/24**

What will remain down:

- L2KG071-38
- Lighting and house power in sectors 07-08
- SSAs in sectors 07-08

PM: *Miles Bianchi*

CM: *Mike Vukman*

LCLS-II-HE 3-Week Look Ahead

Sector 07 gallery Slab Demo

- 5'x5' square at VTL location – 7/18-7/20 (potential Saturday work, HCA request submitted)

VTL Drilling

- Drill Rig Mobilization Monday 7/22/24
- Drilling Monday 7/22/24 – 7/24/24
- **Casing Install (Crane Pick) – 7/24/24**
- Linac housing ceiling demo – 7/24/24-7/29/24
- Install Shoring in Linac Housing – 8/1/24-8/2/24
- **VTL Sleeve Install – 8/5/24-8/6/24**

Structural Steel Installation

- To begin 8/7/24

Electrical Lotos

- Sec. 07 LPA/B – 7/16/24-7/17/24
- K-Sub 04 – 7/29/24-9/3/24

Crane Pick Stay Clear



PM: *Miles Bianchi*
CM: *Mike Vukman*

CT1201 & CT1202 PM

CT1201 – LCW outage LINAC S0-S15

Friday, Jul 19 to Tuesday, Jul 30 with CT1201 *back online by Jul 30th*

NOTE: LINAC Pumps OFF during outage



CT1202 – LCW outage LINAC S16-S30

Monday, Jul 8 to Thursday, Jul 18 with CT1202 *back online by Jul 18th*

COMPLETED



Additional PM Work

- Replace single filter ACS, WCS, KCS, ICS and S30 MCS
- Replace filters KCS, ICS and S30 MCS filter pots
- Oil change on KCS, ICS and LCS pumps
- CT1201 Drift Eliminator replacement



FRAC Tanks Staged South Side of the Gallery 3 Tanks @ S09 & 3 Tanks @ S23

Master Substation 230kV Electrical PM/ 60kV Switchover

MSS 230kV PM

Scope of Work:

- Switches
- Transformers
- Breakers
- Potential Transformers (PT)
- Insulators
- Load Tap Chargers (LTC) (*with oil samples*)

Duration: 9 days (+1 day contingency)

Proposed: Aug 8 – 20 (Aug 21 contingency)

Impacts:

- SLAC must be switched to 60kV during the PM work (planning ~6am 08/07/2024)
- Switching back to 230kV line 08/20 – pending MSS 230kV PM work completion

60kV Switchover Planning Meetings:

05/17/2024 @ 2:15pm

06/17/2024 @ 10:30am

07/18/2024 @ 12pm

Task #	Location	Task Activity	Assigned Task	Task POC	Date	Estimated Start Time	Completed Time and Notes
		SLAC Site Preparation 08/06/24					
1-01	CT1201/CT1202	Turn off CT1201 one pump (remote) and CT1202 one pump (Field), CT1201/CT1202 fan motors	Mech/FOC	Jovanne Alcause/Sal Delgado			
1-02	Cryoplant	Cryoplant confirms the LINAC at 4K operation and energy conservation mode	CRYO	Swapnil Shrishrimal			
1-03	ACR/FOC	Confirmation LCW Heaters OFF LINAC Middle and LINAC East (remote) Field Verify Heater contactors open.	FOC/I&C	Sal Delgado			
1-04	ACR	Verify/ Turn off Modulators & VVSs (LINAC Middle&LINAC East), XTCAV HVPS & open contactor, all Klystron focus supplies (LINAC Middle & LINAC East)	OPS	Matt Gibbs			
		HOLD - Confirmation from OPS on status of all magnets turned off before proceeding with turn	Mech, (HV Elect support	Jovanne			

Special Presentation

Kukhee Kim (TID) – recap of spring EPICS meeting.