LS2 planning meeting

A.Tauro

























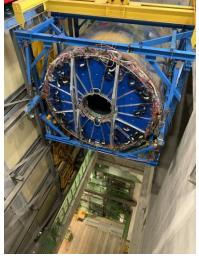


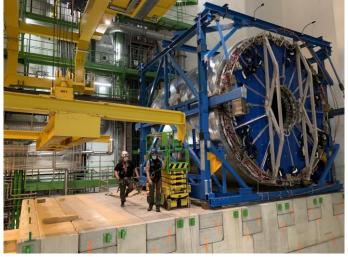




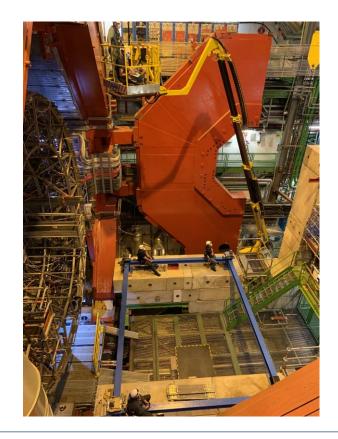






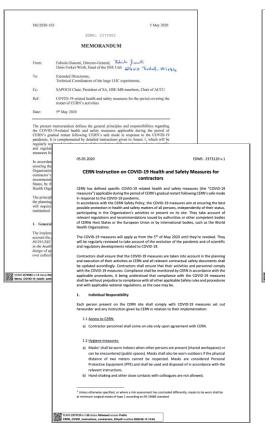








- HSE memo and instructions:
 - HSE Covid-19 directive EDMS 2370902
 - HSE Covid-19 directive contractors EDMS 2373120





MÉMORANDUM F. Gianotti, directrice générale D. Forkel-Wirth, chef de l'unité HSE Coordinateurs techniques des grandes expériences LHC Président du SAPOCO. Présidente de l'Association du personnel. membres de HSE-MB. Président de l'ACCU Mesures de santé et de sécurité relatives au COVID-19 pour la période de reprise des activités du CERN Le présent mémorandum définit les principes généraux et les responsabilités concernant les mesures de santé et de sécurité relatives au COVID-19 applicables au cours de la période de reprise progressive des activités à la suite de la mise en mode sécurisé du CERN en réponse à la pandémie de COVID-19. Il est complété par les instructions détaillées figurant à l'annexe 1, qui seront réexaminées régulièrement pou tenir compte de l'évolution de la pandémie et des évolutions scientifiques et réglementaires. Une fois le redémarrage du CERN mené à bien, les mesures de santé et 05.05.2020 FDMS: 2373120 v.1 Conform ont pour Instructions du CERN concernant les mesures de santé et de présente d'entrepr sécurité relatives au COVID-19 pour ce qui concerne les entreprises contractantes des États Le CERN a défini des mesures spécifiques de santé et de sécurité relatives au COVID-19 (ciaprès « mesures COVID-19 ») applicables au cours de la période de reprise progressive des activités à la suite de la mise en mode sécurisé du CERN en réponse à la pandémie de COVID-Conformément à la Politique de sécurité du CERN, les mesures COVID-19 ont pour but d'assurer la meilleure protection possible en matière de santé et de sécurité de toutes les personnes, quel que soit leur statut, qui participent aux activités de l'Organisation ou sont présentes sur son domaine. Ces mesures tiennent compte des réglementations et ecommandations pertinentes émises par les autorités ou d'autres organes compétents des La mise États hôtes du CERN, ou encore par l'Union européenne ou par des organismes compte o internationaux tels que l'Organisation mondiale de la santé. Les mesures COVID-19 s'appliqueront à compter du 5 mai 2020 et jusqu'à ce qu'elles soient abropées. Elles seront réexaminées régulièrement pour tenir compte de l'évolution de la pandémie et des évolutions scientifiques et réglementaires liées au COVID-19. Les entreprises contractantes doivent veiller à ce que les mesures COVID-19 soient prises en EDMS 2279992 v.1.8 star Morro, COVID-15 Mesur compte lors de la planification et de l'exécution de leurs activités au CERN. Tous les documents de sécurité contractuels concernés doivent être adaptés en ce sens. Les entreprises contractantes doivent veiller à ce que leurs activités et leur personnel se conforment aux mesures COVID-19. Le respect de ces règles sera vérifié par le CERN conformément aux procédures applicables, étant entendu que l'application des mesures COVID-19 est sans préjudice du respect des autres rècles et procédures de sécurité ainsi que des règlementations nationales applicables, le cas échéant. 1. Responsabilité individuelle Toute personne présente sur le domaine du CERN doit se conformer aux mesures COVID-19 énoncées ci-après, ainsi qu'aux instructions données par le CERN concernant leur mise en 1.1 Accès au CERN a) Le personnel des entreprises contractantes ne peut venir sur le domaine qu'avec l'accord du CERN. 1.2 Mesures d'hygiène a) Le port du masque est obligatoire¹ en intérieur quand d'autres personnes sont présentes (espaces de travail partagés) ou peuvent être croisées (espaces publics). Le Sauf indication contraire, ou si une évaluation des risques a abouti à une conclusion différente, les masques à porter sont au minimum des masques chirurgicaux de type 1 conformes à la norme EN 14683 CDVS 2273120 v.1.00 status Released access Public
CERN, COVID_Instructions_contractants_PR.pdf modified 2020-06-13 14:04

DG/2020-103

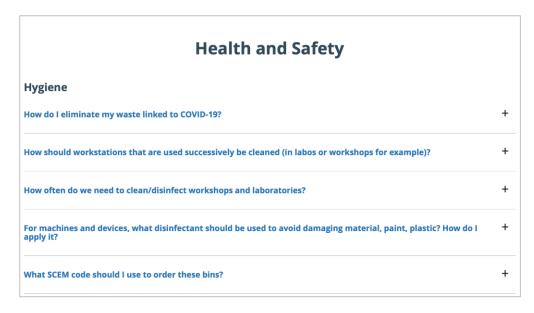
EN versions

FR versions



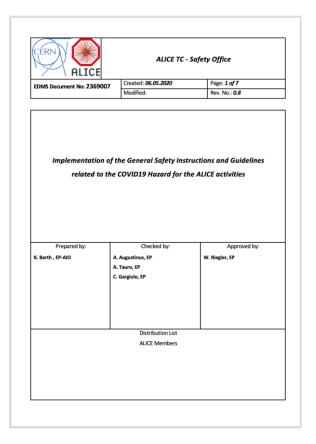


- HSE memo and instructions:
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- HSE FAQ: https://hse.cern/content/faq-covid-19





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 - HSE Covid-19 directive EDMS 2370902
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- HSE FAQ: https://hse.cern/content/faq-covid-19
- ALICE specific instructions:
 - EDMS 2369007



- HSF memo and instructions:
 - HSE Covid-19 directive EDMS 2370902
 - HSE Covid-19 directive contractors EDMS 2373120
- HSE FAQ: https://hse.cern/content/faq-covid-19
- ALICE specific instructions:
 - EDMS 2369007
- Mandatory to come to CERN:
 - Covid-19 safety course https://learninghub.cern.ch
 - Valid IMPACT
 - Being in ALICE white list (check O.C. 2 in ADAMS)



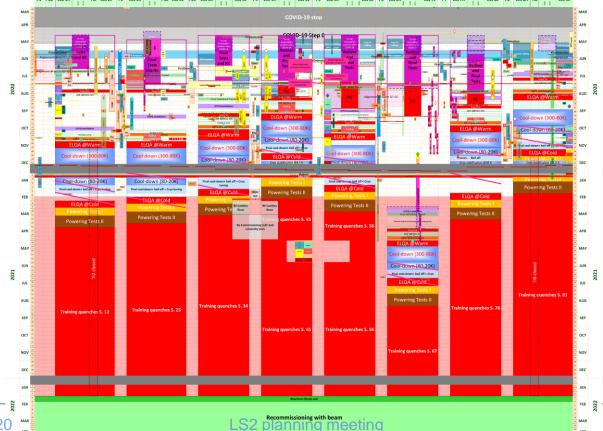






LHC LS2 Baseline V3.0 12th June LHC-PM-MS-0018 v.3.0



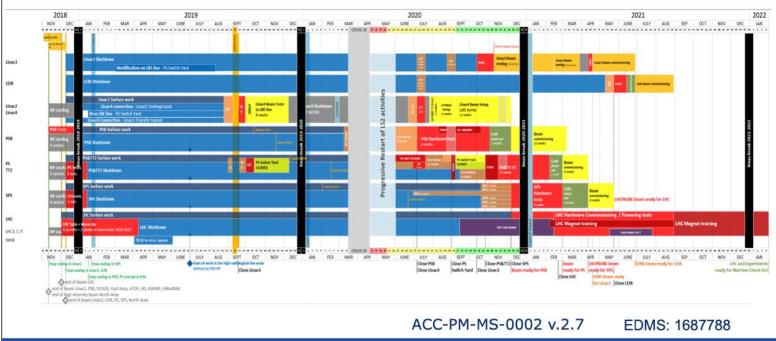


RELEAS



LS2 Master Schedule V2.7 approved on 12th June 2020





Update on the re-start plan Frédérick Bordry 29th June 2020

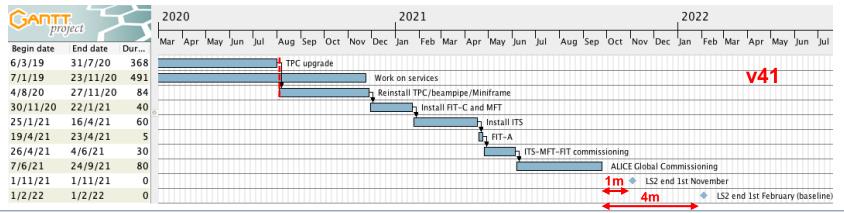
23



Detector installation sequence v41



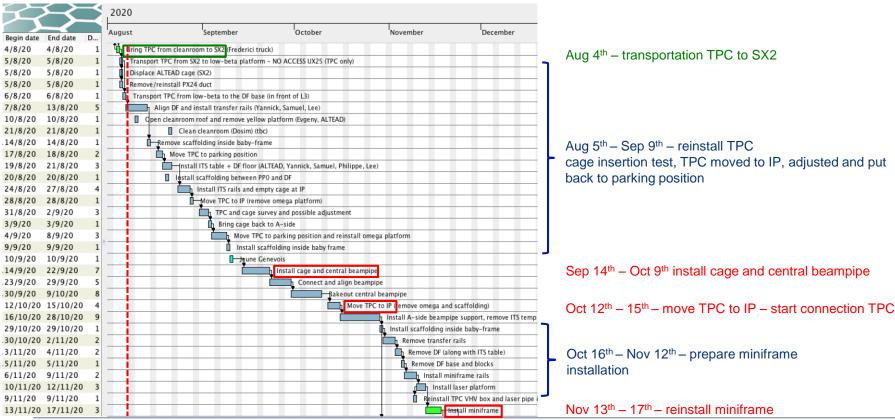
- Schedule v41:
 - TPC moved to SX2 on August 4th
 - Cage insertion test will be done in the UX25 cavern (instead of SXL2 cleanroom)
 - 16w global commissioning at the end (7 June to 24 September 2021)
- RB24 beampipe reinstalled by end May 2021 → OK to inject low intensity beam by September 2021
- This plan foresees 1 and 4 months contingency with respect to the LS2 end date of 1st November 2021 and 1st
 February 2022 respectively





TPC/beampipe/Miniframe reinstallation sequence (v41)

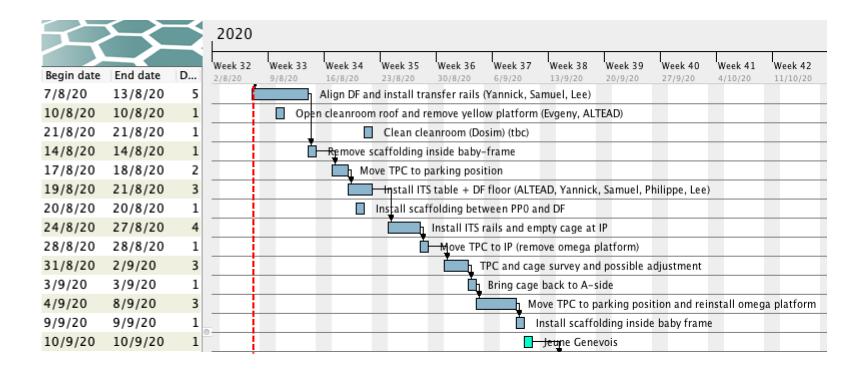






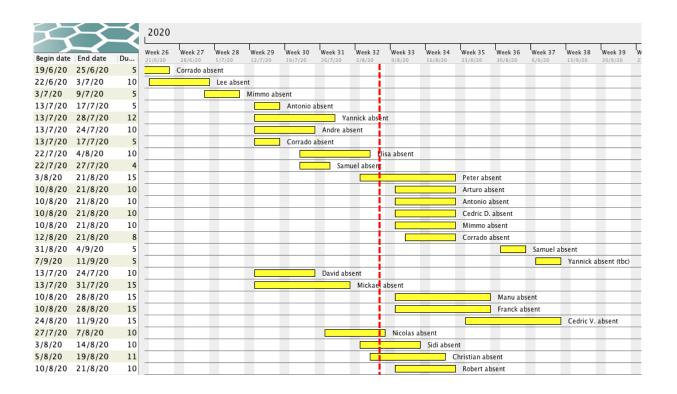
Zoom on coming weeks





Holidays





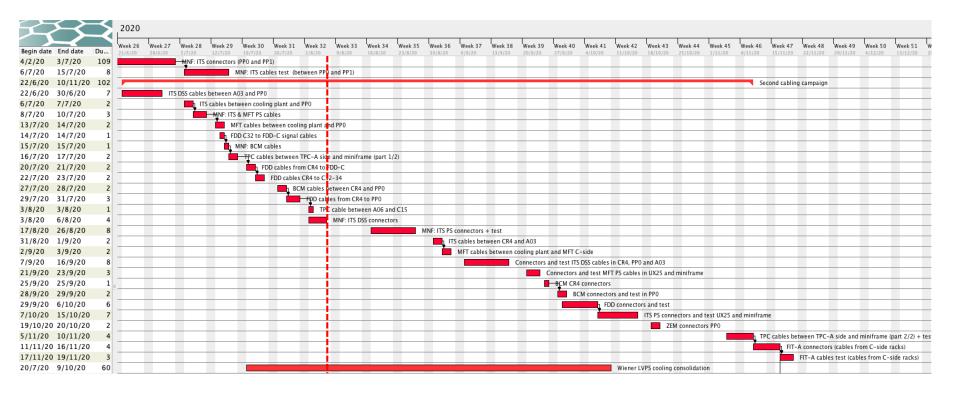
Key dates

	017
Activity	v41
Open cleanroom roof, cage insertion test	•
Move TPC to SX2	4 Aug
Install TPC (parking position)	5 Aug – 9 Sep
Install cage and central beampipe	14 Sep – 9 Oct
Move TPC to IP	12 – 15 Oct
Install Miniframe	13 – 17 Nov
FDD-C installation	4 – 15 Jan 2021
FDD-A installation	4 – 15 Jan 2021
MFT & FIT-C installation and checks	30 Nov – 22 Jan Disconnect MFT 26 Oct
ITS installation and checks	25 Jan – 16 Apr Disconnect ITS 12 Oct or 26 Oct (+2w installation)
FIT-A installation	19 – 23 Apr
ITS & MFT commissioning time	1 ½ months (6w)
ALICE global commissioning time	3.5 months (16w)
End of LS2 – stop UX25 access - baseline (contingency baseline option)	1 Feb 2022 (4 months)
End of LS2 – stop UX25 access - option 1 (contingency option 1)	1 Nov 2021 (1 month)



Cabling planning

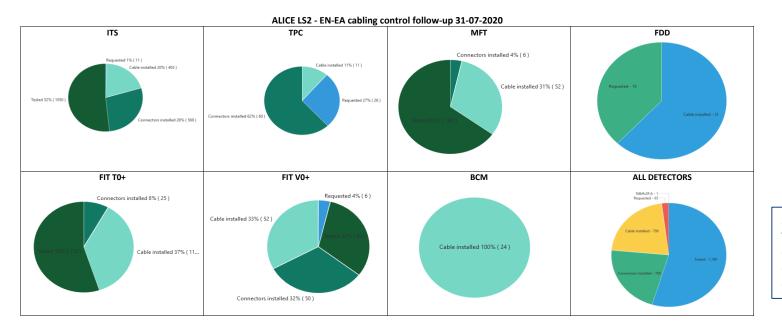






Cabling progress





3254 cables in total:

Tested: 55%

Connectors wo test: 22%

Cable only: 22%

Cables to be installed: 2%

EN-EL interventions



- 18kV, 3.3kV and LV network maintenance: 20-24 Jan 2020 Done
- AUG P2: Monday 27 Jan 2020 Done
- Auto transfer test: 20 Jul 2020 → Done
- Test secours (10 min at 6:00 AM): 30 Jul 2020 → Done
- Maintenance 66kV transformer (P2): 3-7 Aug 2020 → Done will be repowered on Mon 10 Aug
- AUG Meyrin (zone administrative): 4 Sep 2020 (tbc)

Optical fibers (EN-EL)



Done:

- Installation and test TPC fibers between CR4 and CR1
- Installation and test fibers for IT (for upgraded network) from CR2 starpoint to CR1 and to CR3
- Procurement 2 x FDD optical cables (requested in March 2020) → fibers ordered but not yet received
- Optical measurement fibers SR2-SX2

To be done:

- Test HMPID fibers → Giacinto to assess situation
- Installation 6 trunk cables between IT1-IT2 (CR0) → 1st week Nov
- Cleaning TRD trigger fibers connectors and replacement of damaged ones → Anastasia to assess situation
- Installation TPC optical fiber in the cavern between A and C-sides → September
- Unfold and connect ITS and TPC trunk cables → after Miniframe installation in November







ITS and MFT inox pipes



- Things to be done:
 - Cross check correct labels are installed on both extremities of pipes → done
 - Installation of 8 MFT pipes (MFT RO crates)
 - P test of all lines → ongoing (Philippe, Cedric)
 - Connections to ITS cooling plant will be done by Rampower after installation of ITS cooling plant







EN-CV interventions



Big maintenance:

- SF: from Nov 2019 to mid Jan 2020. NO impact on ALICE as both magnets will be OFF done
- UW: stop UX mixed water for 2 days in week 41/2019 (October) Tue 8 and Wed 9 Oct done
- SU: various small perturbations + 1 day stop all cooling UX + 1 day stop all cooling SXL2 in week 16/2020 (April) not done

Small maintenance:

- UW: from w34 to w37 2020. Stop mixed water UX for 1 day in week 37/2020 (September).
- SF+SU: weeks 44-47/2020: cleaning towers (stop SF 1 week) + 1 day stop all cooling UX + 1 day stop SXL2 cleanroom ventilation

Ventilation:

- ARC: done
- SG2:
- UX25 cavern:
- MCH and MTG:
- L3: replace extractor → done w31/2020 (cut flammable gas)
- ITS: → will be done before end October

CR3 status (A.Augustinus)



February

- Modify water circuit (add TA valves CR3 and CR4) kept DCS up and running DONE (10.02 21.02)
- Additional rack installed for extension of main network starpoint outside CR2
- Arrival of new racks (25.02)
- Installation 1st row of racks (26.02)

March, April, May

- COVID closure
- Arrival of new servers (28.04, originally foreseen end of March)
- Installation of the servers in the new racks DONE (finished 15.05)
- Remove TOF cluster DONE (26.05), last racks removed DONE (28.05)

June

- Installation of 2nd row of new racks DONE (03.06)
- Re-installation TOF cluster DONE and tested (08.06)
- Installation network fibres for network DONE (25.06)

July – August – September

- Adapt electrical installation for (extended) starpoint outside CR2 DONE week 28
- Reconnection new racks to electricity DONE week 30
- Installation of network infrastructure (some network interruptions to be foreseen, details to be defined with IT-CS) dates t.b.c.
 - Temporary, network solution available, start commissioning new servers in August
- Migration from old servers to new servers (first central systems, then detector systems)

October – November

Removal of old servers and last old racks



Racks status



- Racks currently powered on:
 - HMPID: I01, I02
 - PHOS-CPV: A16, A17
 - CTP: C21, C22, C24, C25, C26, C27 (CTP) (and VME crates on)
 - MCH: C08, C09, C10, C11, C36, C37, C38, C39
 - TOF: O03, O04, O05, O30, O31, O32, I03, I04, I05, I30, I31, I32
 - TRD: O06, O08, O26-29, I06, I08, I26-29, C16-19, C29
 - Dcal, EMcal: A14, O12
- Detectors can be powered, compatible with current activities inside L3

Consolidation Wiener LVPS



- 193 water cooled power supplies in total (LV and VME)
- 22 LV supplies done (MCH, TRD)
- Rework in batches (~15 units/week), to be started next week (wk 32):
 - Disconnection and deinstallation → detectors
 - 2. Conditioning → ALTEAD + P2tech
 - 3. Transport to EN-EA (Meyrin)
 - Rework and test → EN-EA + P2tech (Evgeny and Philippe)
 - 5. Transport to P2
 - 6. Reinstallation → detectors
- Preliminary plan is drafted, first batches (TRD) are prepared. All supplies would be done by mid-October
 - Andre will contact each detector to establish a detailed planning



6 modules Wiener LVPS



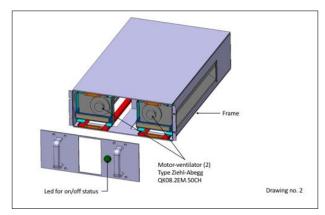
TRD batch already prepared

LV	VME
	11
8	
	6
	2
17	
8	2
9	1
	2
	3
22	
101	1
165	28
	8 17 8 9

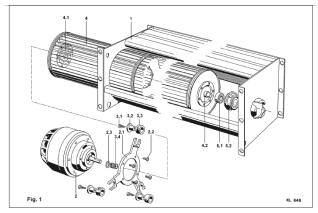
New rack turbines



- All 85 units (200kCHF) ordered: https://edh.cern.ch/Document/SupplyChain/MAG/8289388
- Technical specifications: EDMS 1963491
- ALICE units will be made available in October 2020
- Installation immediately afterwards, transparent for users (ALTEAD + P2 tech.)



Ventilation unit front view



Pluggable motor

IMPACT list (1/2)



Activity	Status	Resp. Group	Facility	System	Title
158572	In progress	EP-DT-FS	Alice	GAS	ALICE TPC Gas power supply work
158552	In progress	EP-UAI	Alice	HLT	CR0 - network installation and tests
158493	In progress	EN-CV-LHC	Alice	SPD	MFT - Visite sur site pour travaux fin aout
158384	In progress	EP-DT-FS	Alice	GAS	ALICE TPC pompe demontage et transport
158352 ↓ ⇒	In progress	EP-AID-DA	Alice	Other	TPC descent FB live repérage and recording
158325	Approved	EN-HE-HEM	Alice	Lifts	PX24 L3 AUGUST LIFT MAINTENANCE
158324	Approved	EN-HE-HEM	Alice	Lifts	PX24 ALICE AUGUST LIFT MAINTENANCE
158113	In progress	EP-UAI	Alice	Muon Tracker	ALICE MUON TRACKING: work in cavern (from 03/08 to 14/08)
158089	In progress	EP-UAI	Alice	DAQ	Installation of DAQ services
157869	In progress	EN-EA-DC	Alice	Tech. Infrastructure	EN-EA CAD Support
157698	Approved	EP-UAI	Alice	TPC	TPC laser maintenance
157668	In progress	EP-AIO	Alice	Other	MFT crate fit check C-side
156968	In progress	EP-UAI	Alice	TPC	TPC Upgrade. Preparation for TPC installation. Heat screen work (C
156960	In progress	EP-UAI	Alice	TPC	TPC/TRD installation and maintenace in LS2
156563	In progress	EP-UAI	Alice	TPC	TPC Upgrade in the SXL2 cleanroom (Covid Restart Phases 1 and 2)
156549	Approved	BE-ICS-AS	Alice	S - General Safety	Annual Maintenance Red Emergency Phones (Point 2 - ALICE)
156519	In progress	EN-EA-AS	Alice	Tech. Infrastructure	ALICE - Cabling activities EA - connectors assembly
156248	In progress	EN-EA-AS	Alice	Tech. Infrastructure	ALICE - Cabling activities EA - tests HV cables TPC miniframe-UX25
155550 ↓ ⇒	In progress	EP-AIO	Alice	DAQ	CR1 Network Equipment reception
155340	In progress	EP-AIO	Alice	Other	Miniframe modification TC technicians



IMPACT list (2/2)



Activity		Status	Resp. Group	Facility	System	Title
154732		In progress	EP-UAI	Alice	Other	the data analysis
154510		In progress	EP-AIO	Alice	Other	TSO access to bldg 301/160/161
154490		In progress	EP-UAI	Alice	TRD	TRD Wiener PSUs labelling and disconnection
154395		In progress	EP-UAI	Alice	TPC	CR1 access during TPC Upgrade in the cleanroom (Covid Restart Ph
154283		In progress	EP-ADE-TK	Alice	X - Experimental and	FASER Tracker Plane Commissioning
153997		In progress	EP-UAI	Alice	Other	MFT activities (Covid Restart Phase 1)
153825		In progress	EN-EA-AS	Alice	TRD	Montage/démontage échafaudages en UX25.
153782		In progress	EP-DT-EO	Alice	ITS (all)	Cage interface verification in the SXL2 (Covid Restart Phase 1)
147211		In progress	EN-SMM-ESA	Alice	Other	ALICE - SURVEY LS2 - 2020
147068		In progress	EP-AID-DC	Alice	DCS	DCS/DSS support interventions LS2 (2020)
146929		In progress	SMB-SSL-CS	Alice	Other	Nettoyage caverne Alice et sanitaires
145419		In progress	EN-HE-HH	Alice	Lifting equipment	Activites transport UX25
130410		In progress	EP-AID-DA	Alice	DAQ	CR1 FLP team access
130340		In progress	EP-UAI	Alice	TPC	TPC Upgrade in the SXL2 cleanroom (CORE)
122717		In progress	EP-AIO	Alice	Other	RP Survey ALICE Cavern during LS2 2018-2021
107531		In progress	EP-DT-EO	Alice	Other	P2 coordination and technicians activities
11042	Δ	In progress	EP-AIO	Alice	ITS (all)	Cavern supervision

Other activities



2020:

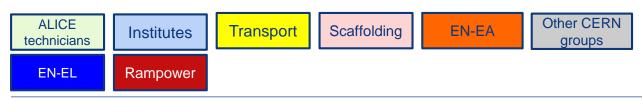
- Renovation PX24 access system (PAD-MAD): w33-34 (10-21 Aug) → access with CSA guardian and "access" briefcase
- Renovation PM25 access system (PAD-MAD): w41-43 (5-23 Oct)
- LASS functional test: no access to UX25 on Friday 30 Oct 2020 whole day (weekend 31 Oct /1 Nov as contingency)
- LASS global verification of entire LHC: 1 day no access to UX25 (date tbc)
- BIW test: no access underground on 5 and 6 Oct 2020 from 18:00 to 00:00

2021:

- For powering permit: w1 2021 (tbc) (needed to start LHC powering test)
- For RF recommissioning LSS4: w7 2021
- For powering permit, following UPR53 installation: date tbd
- For beam permit: date tbd
- LHC sector test (beam through ALICE): no access to UX25 from 26 to 29 March 2021



Day-by-day sequence w32





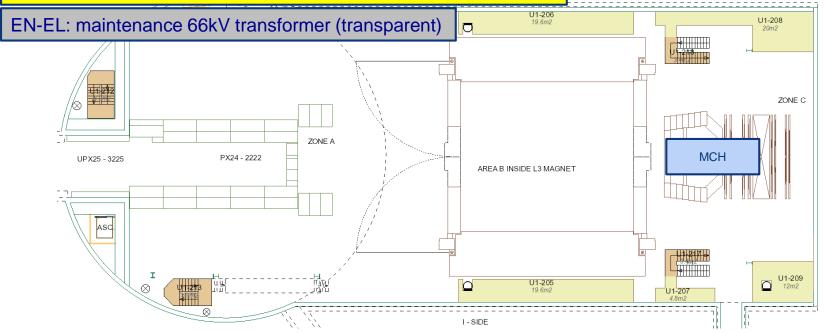
UX25 activities w32 – Mon 3 Aug 2020



Replacement PM25 lift (until 4 August) → LHC access via ALICE (PX24)

IR-ECO: preparation for Facebook live (install cameras) at 9:30

Fence off P2 parking areas in view of TPC transportation (Franck)



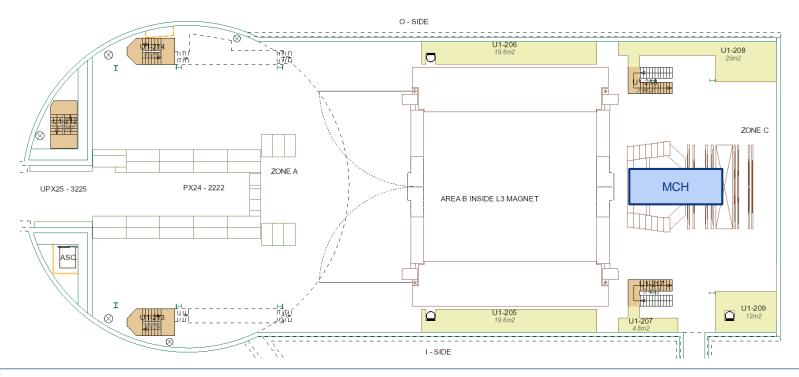


UX25 activities w32 – Tue 4 Aug 2020



Cleaning cavern (Topnet): 13:00 to 15:00

LHC tunnel access: switch back to access via PM25 lift (PM)

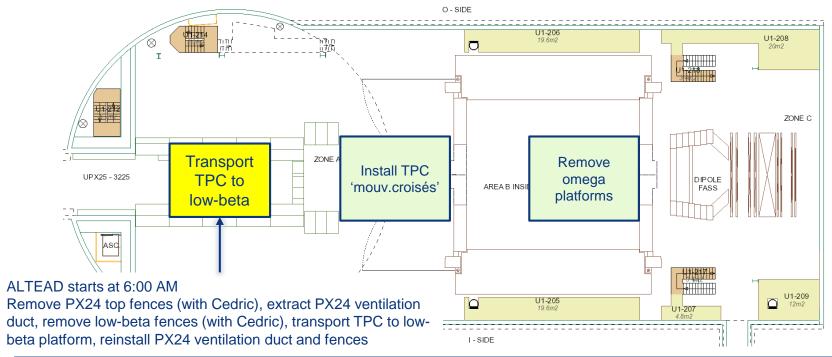




UX25 activities w32 – Wed 5 Aug 2020



No access to UX25 entire day (except transport, P2tech and TPC)



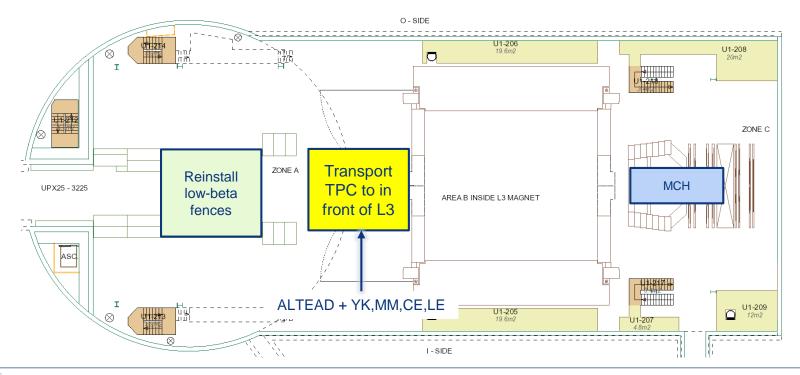


UX25 activities w32 – Thu 6 Aug 2020



No access to UX25 - A-side

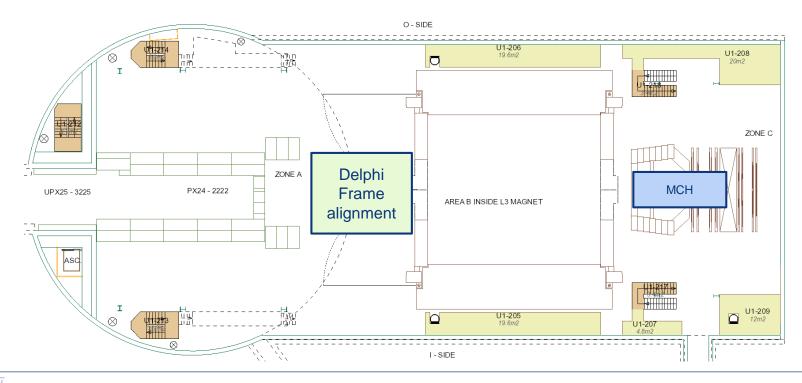
EN-EL: cabling new IT starpoint in SX2





UX25 activities w32 – Fri 7 Aug 2020



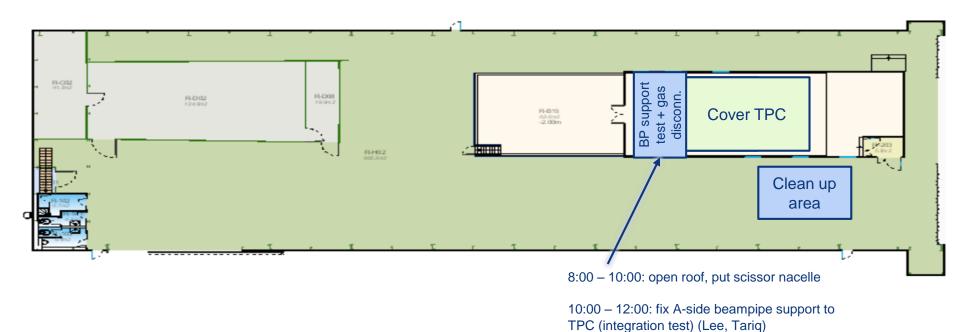




SXL2 activities w32 – Mon 3 Aug 2020



Stop cleanroom ventilation (8:00 AM): Christian to call Dominique

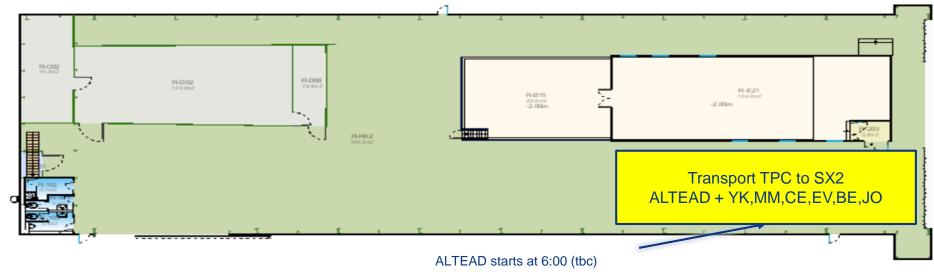




14:00 – 16:00: disconnect TPC drift gas (Chilo)

SXL2 activities w32 – Tue 4 Aug 2020



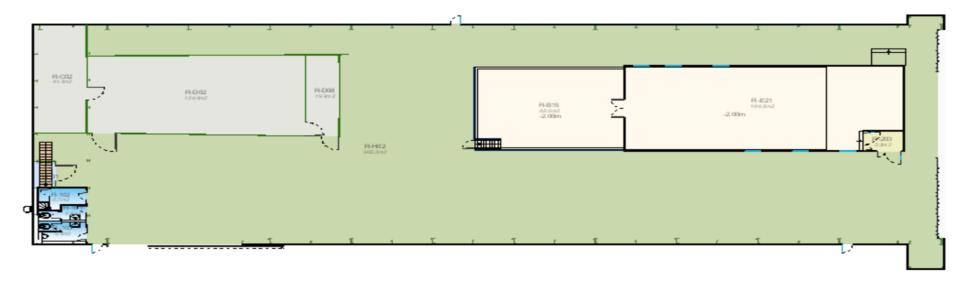


Frederici truck arrives at 8:00 AM
Remove roof back panels, extract TPC, transport TPC to SX2, unload TPC in SX2
Extract also 2 HV racks and Heinzinger power supply
Move laser to a better position
Remove 'mouv.croisés' (Evgeny)



SXL2 activities w32 – Wed 5 Aug 2020

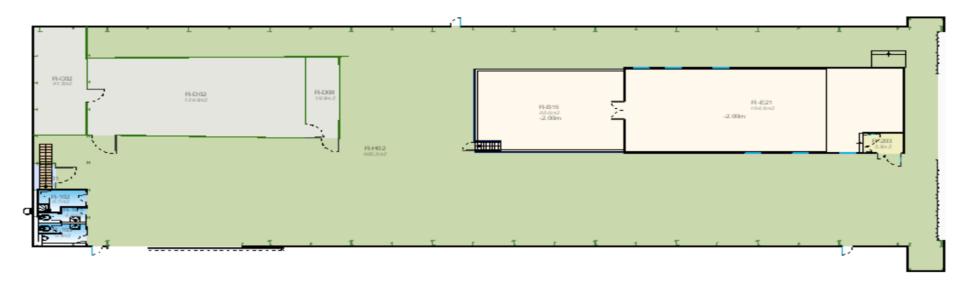






SXL2 activities w32 – Thu 6 Aug 2020

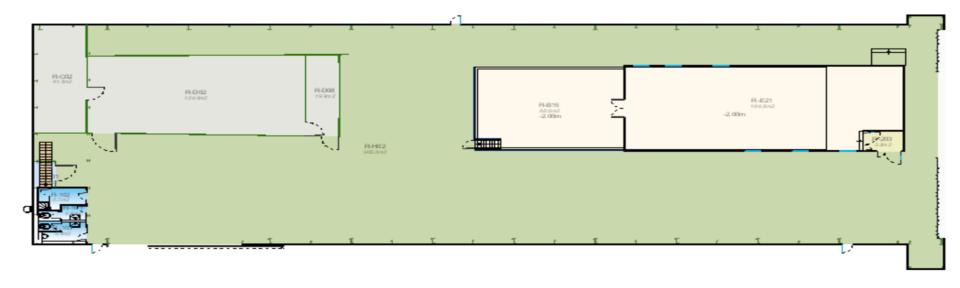






SXL2 activities w32 – Fri 7 Aug 2020



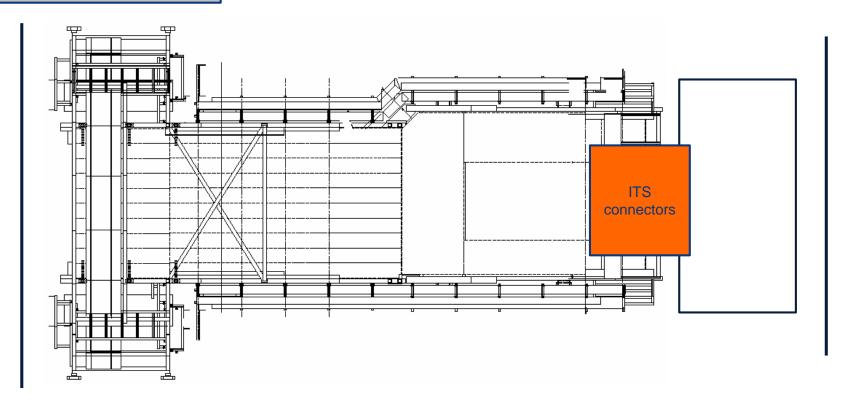




Miniframe activities w32 – Mon 3 Aug 2020



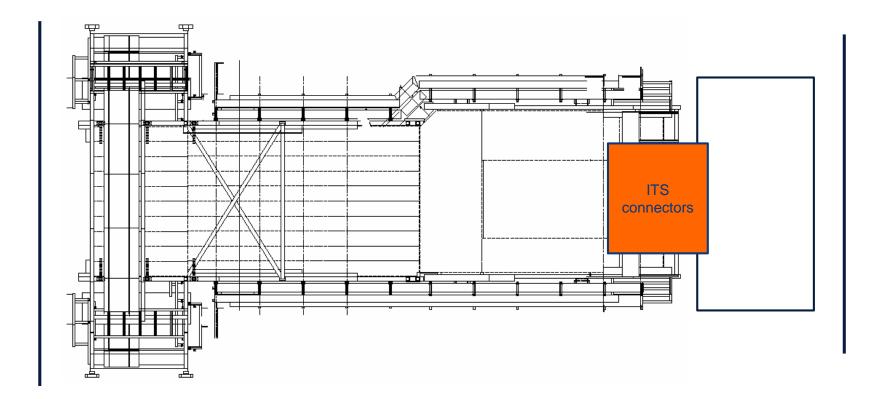
Cleaning Miniframe (Elior)





Miniframe activities w32 – Tue 4 Aug 2020

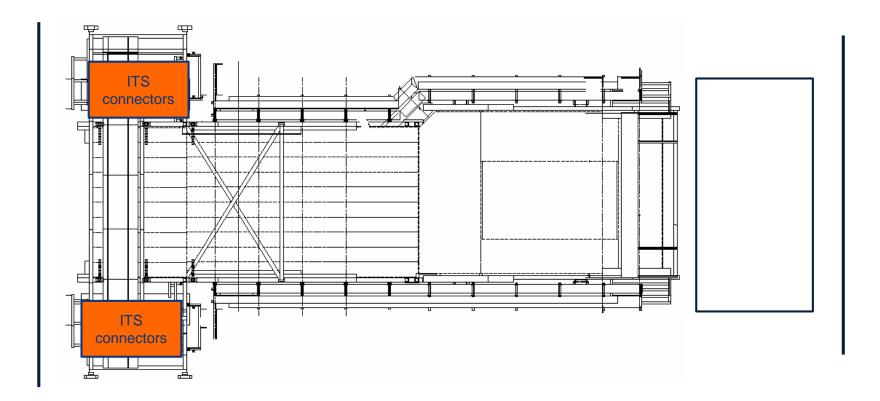






Miniframe activities w32 – Wed 5 Aug 2020

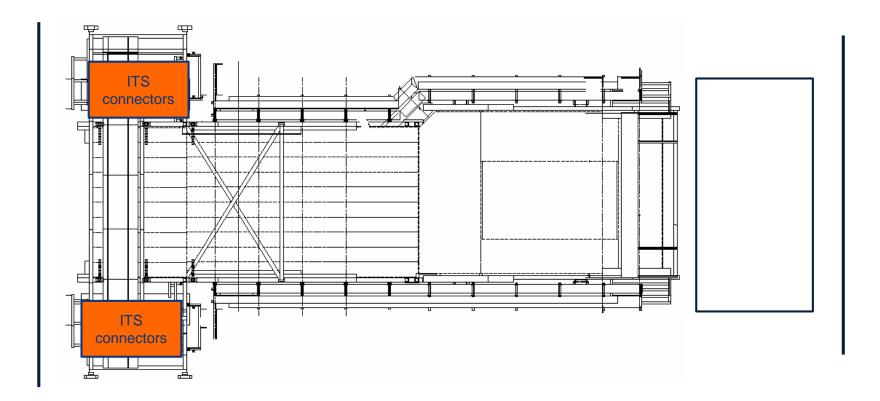






Miniframe activities w32 – Thu 6 Aug 2020

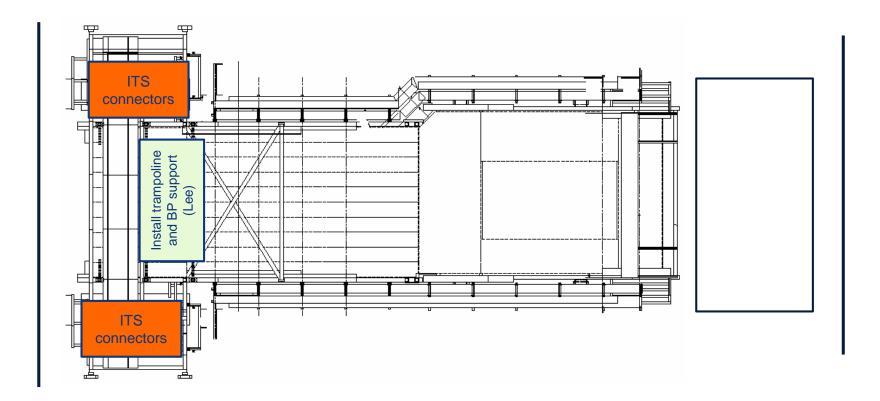






Miniframe activities w32 – Fri 7 Aug 2020

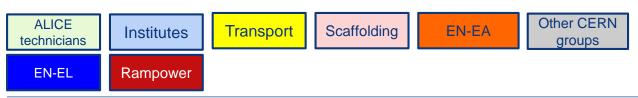








Day-by-day sequence w33



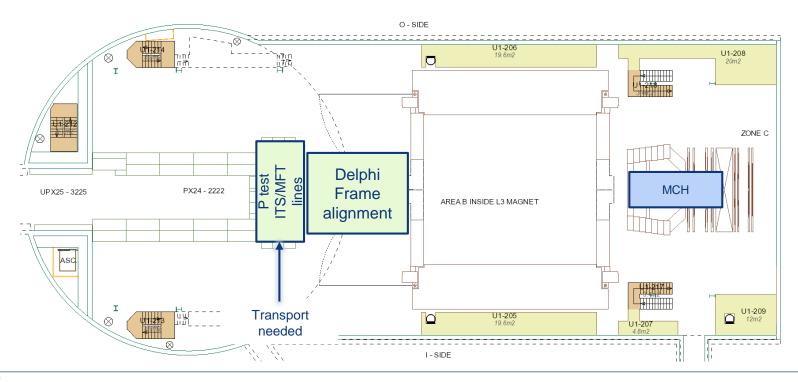


UX25 activities w33 – Mon 10 Aug 2020

ALICE

Renovation PX24 access system (PAD-MAD): w33-34 access with CSA guard and "access" briefcase

ALTEAD: bring DF floor from SU to UX25



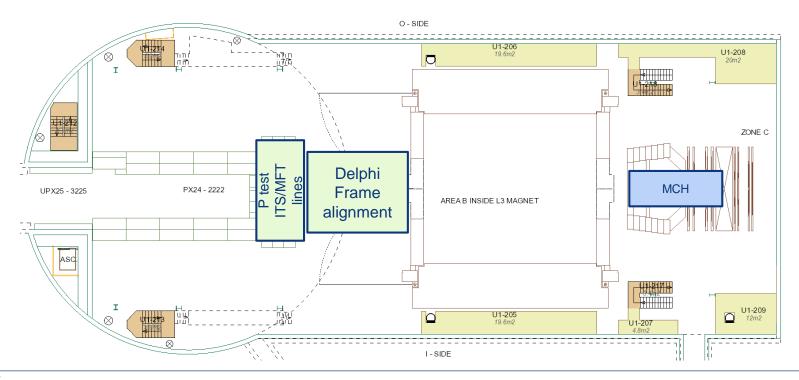


UX25 activities w33 – Tue 11 Aug 2020



Cleaning cavern (Topnet): 13:00 to 15:00

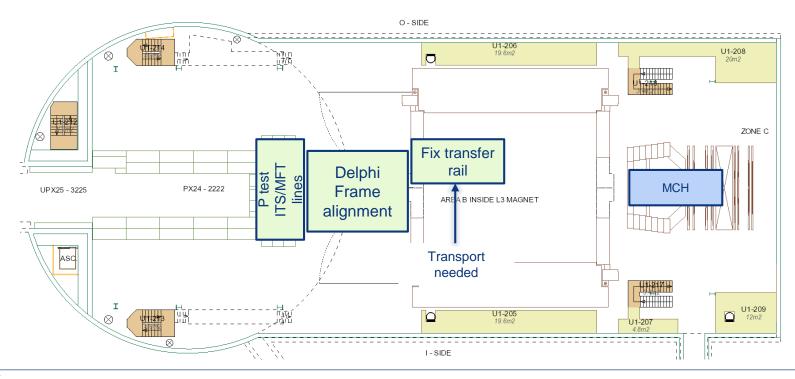
ALTEAD: extract TPC pump in CR5 (maintenance)





UX25 activities w33 – Wed 12 Aug 2020

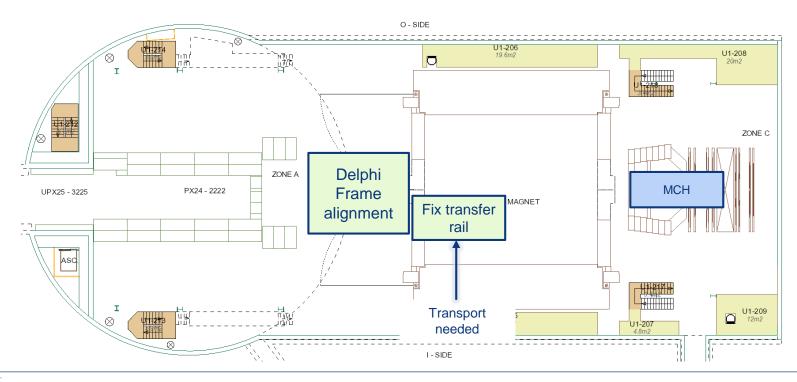






UX25 activities w33 – Thu 13 Aug 2020

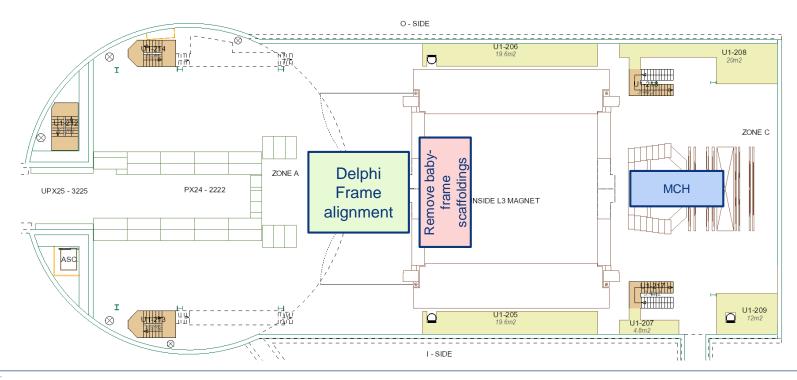






UX25 activities w33 - Fri 14 Aug 2020

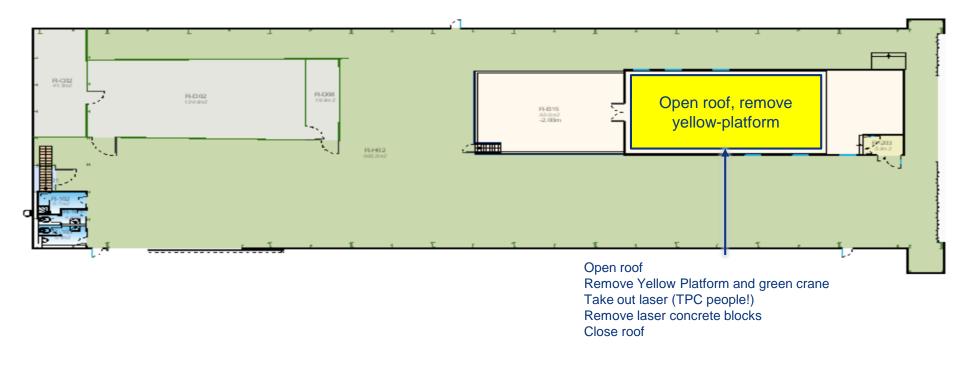






SXL2 activities w33 – Mon 10 Aug 2020



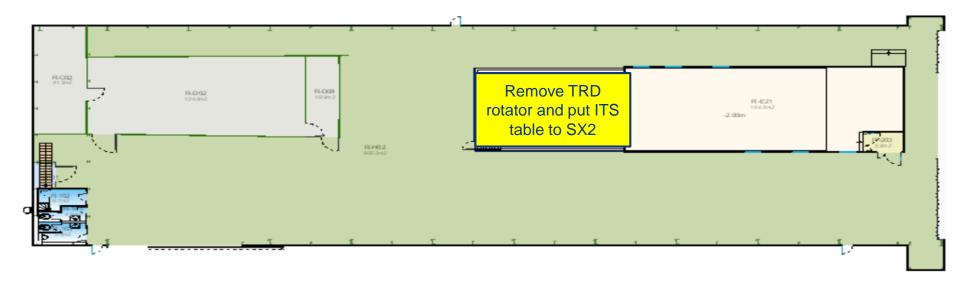




SXL2 activities w33 – Tue 11 Aug 2020



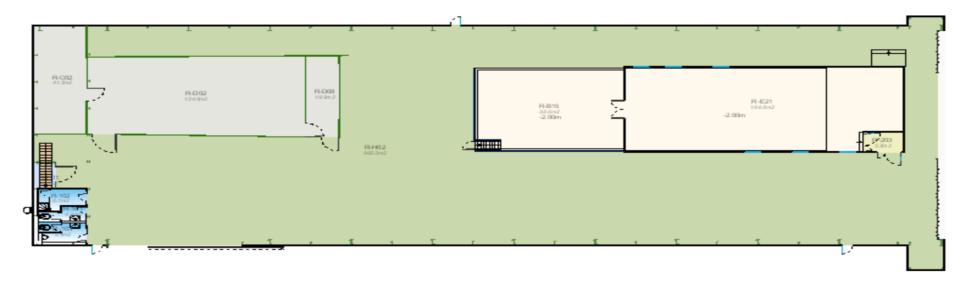
Borge at CERN (tbc)





SXL2 activities w33 – Wed 12 Aug 2020

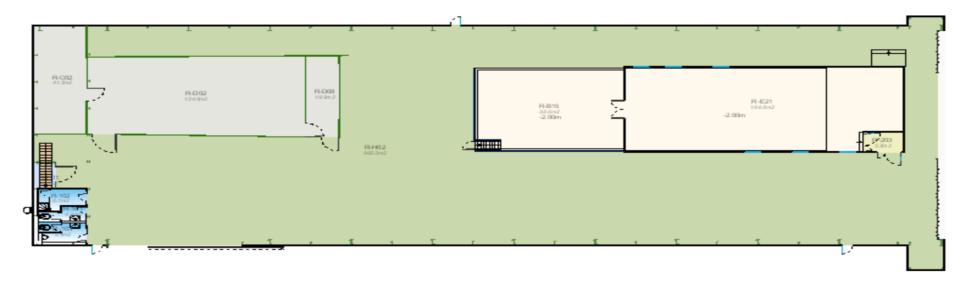






SXL2 activities w33 – Thu 13 Aug 2020

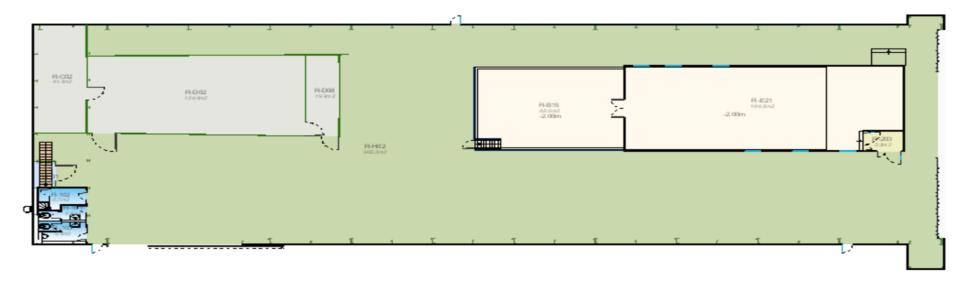






SXL2 activities w33 – Fri 14 Aug 2020



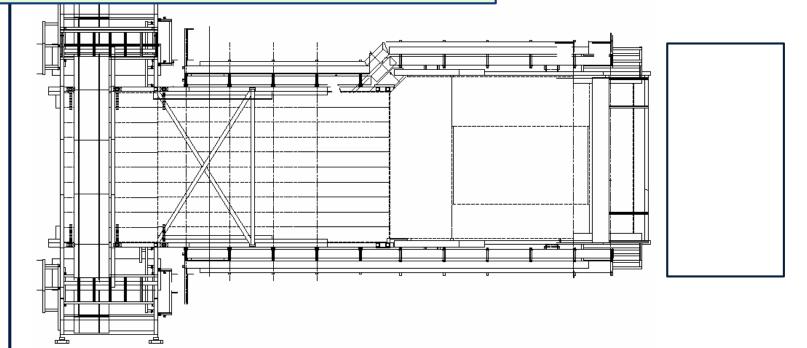


Miniframe activities w33 – Mon 10 Aug 2020



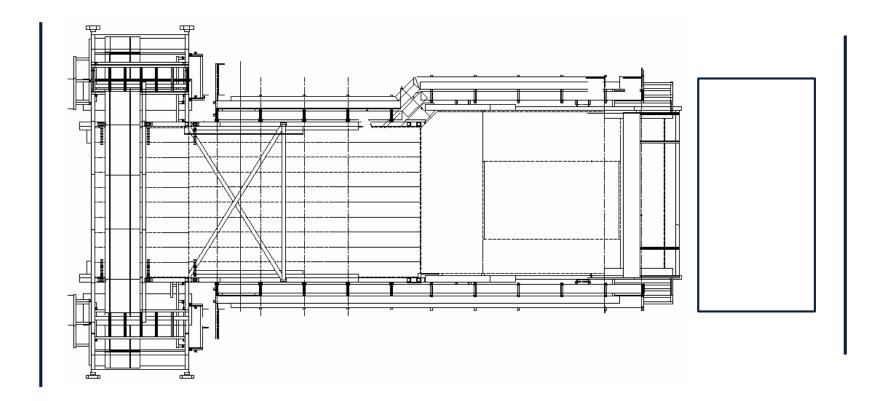
Cleaning Miniframe (Elior)

Rework ITS/MFT cooling lines (PP1) (whole week) (Philippe)



Miniframe activities w33 – Tue 11 Aug 2020

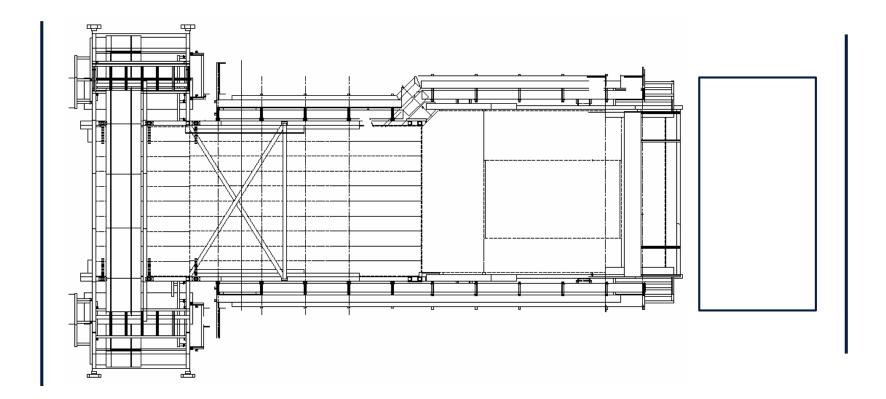






Miniframe activities w33 – Wed 12 Aug 2020

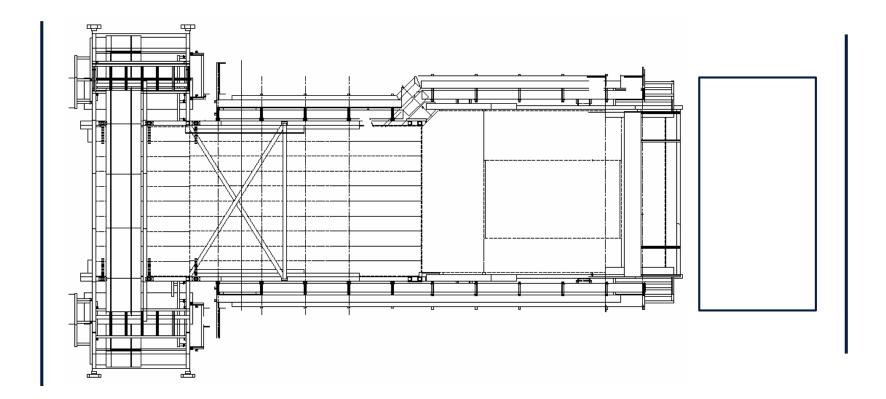






Miniframe activities w33 – Thu 13 Aug 2020

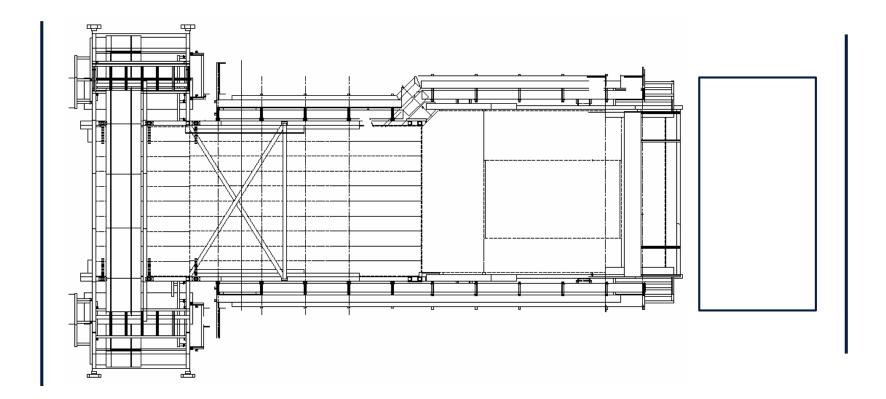






Miniframe activities w33 – Fri 14 Aug 2020

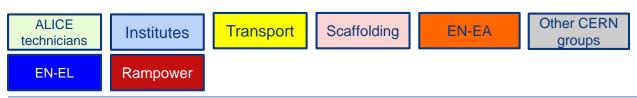








Day-by-day sequence w34



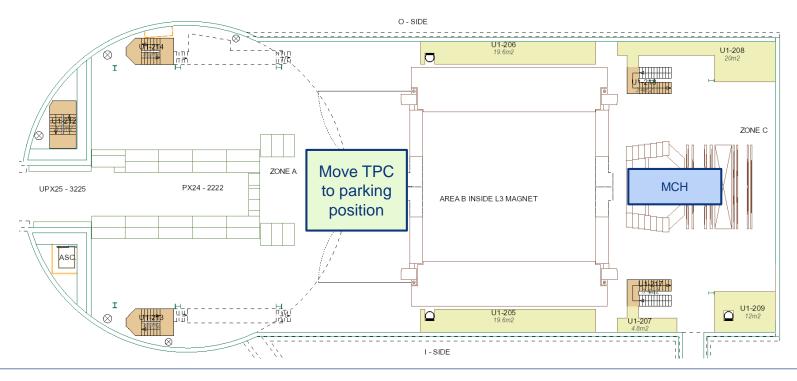


UX25 activities w33 – Mon 17 Aug 2020



65

Renovation PX24 access system (PAD-MAD): w33-34 access with CSA guard and "access" briefcase

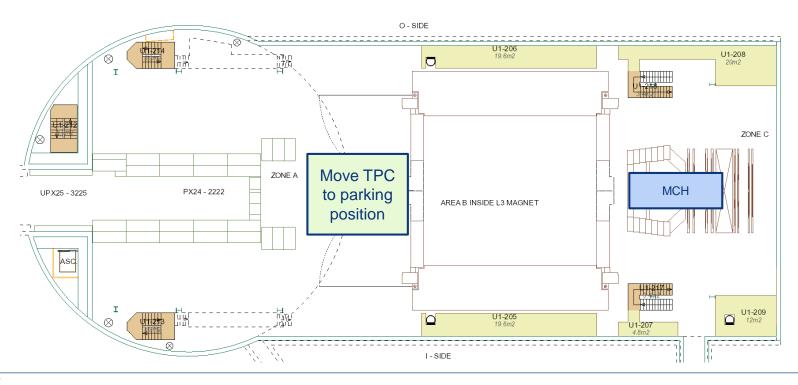




UX25 activities w34 – Tue 18 Aug 2020



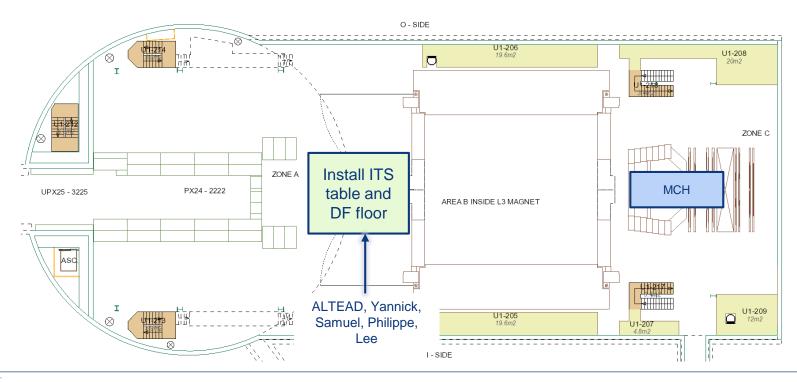
Cleaning cavern (Topnet): 13:00 to 15:00





UX25 activities w34 – Wed 19 Aug 2020



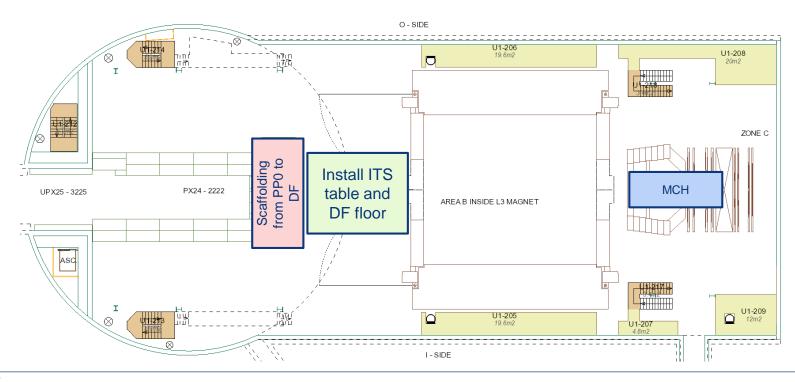




UX25 activities w34 – Thu 20 Aug 2020



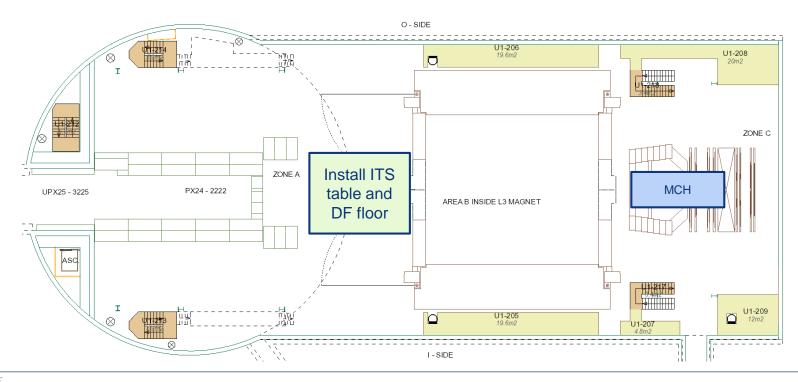
Transport ITS cage from b.167 to P2 (install box in UX25 cavern)





UX25 activities w34 – Fri 21 Aug 2020

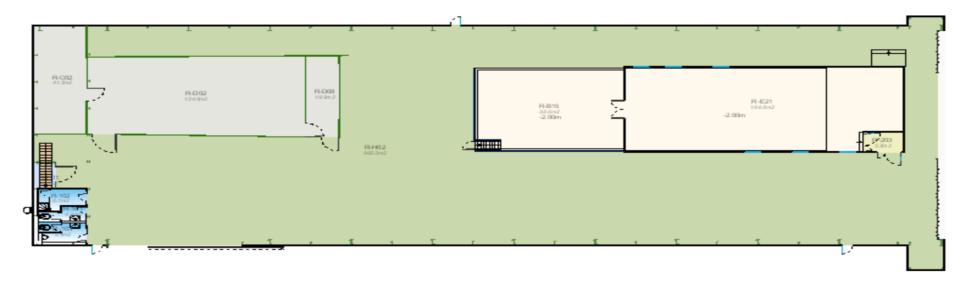






SXL2 activities w34 – Mon 17 Aug 2020

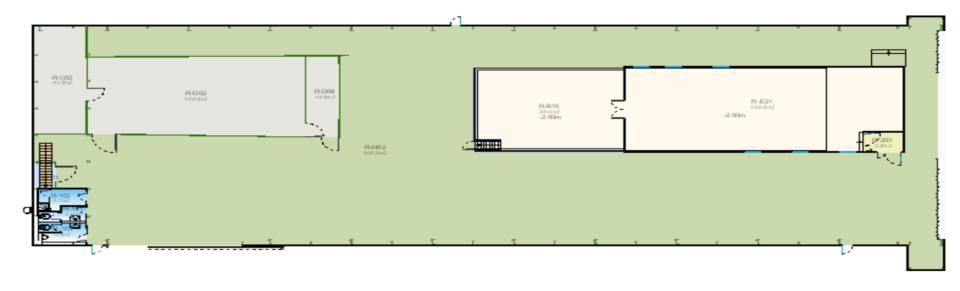






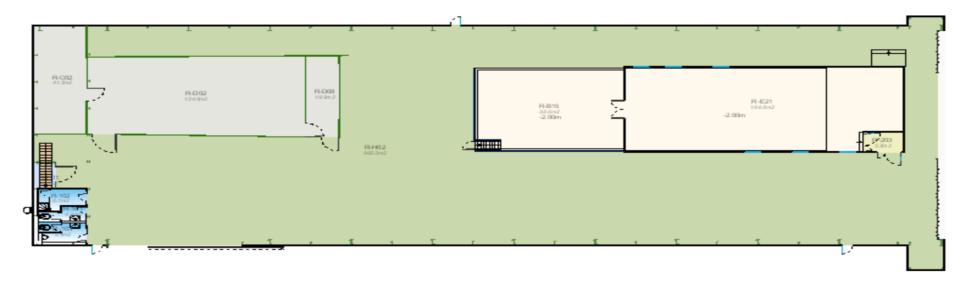
SXL2 activities w34 – Tue 18 Aug 2020





SXL2 activities w34 – Wed 19 Aug 2020

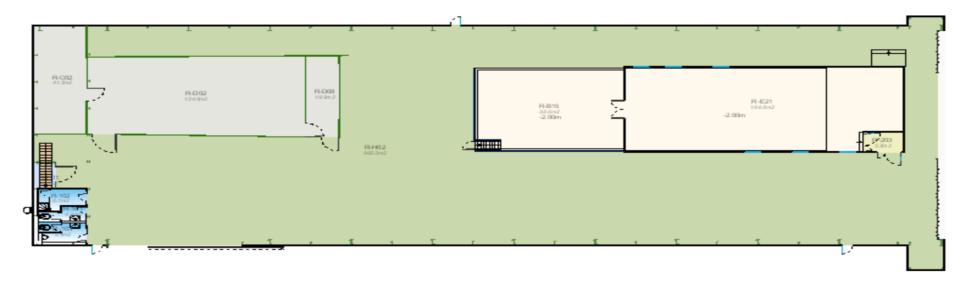






SXL2 activities w34 – Thu 20 Aug 2020

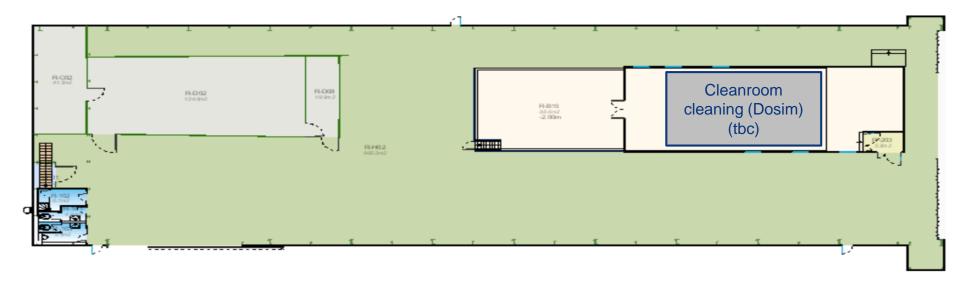






SXL2 activities w34 – Fri 21 Aug 2020



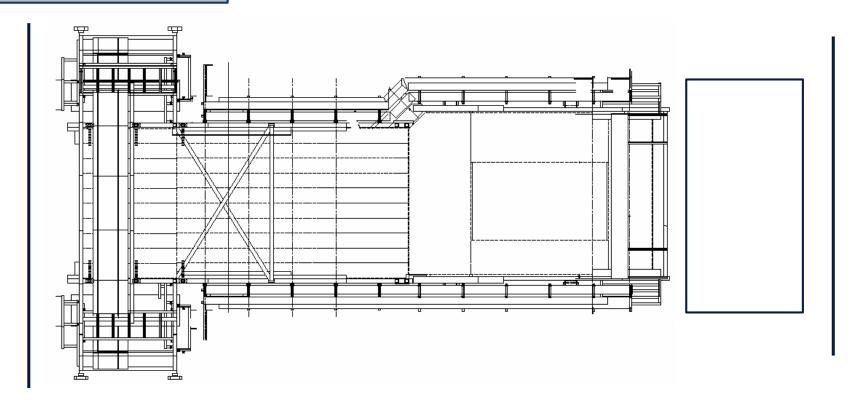




Miniframe activities w34 – Mon 17 Aug 2020



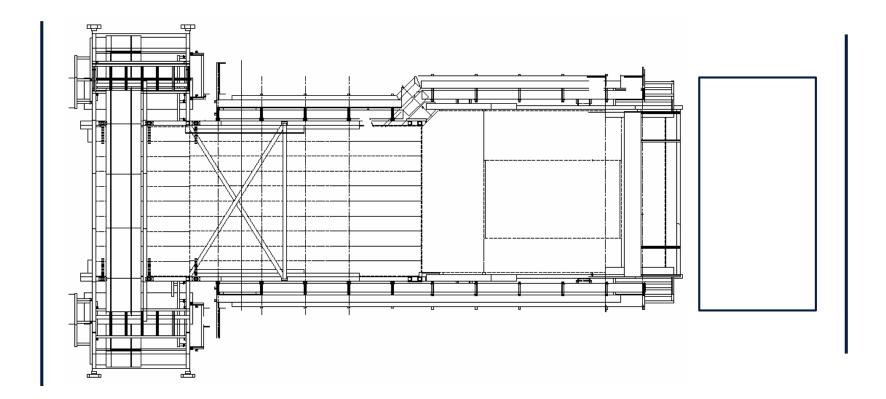
Cleaning Miniframe (Elior)





Miniframe activities w34 – Tue 18 Aug 2020

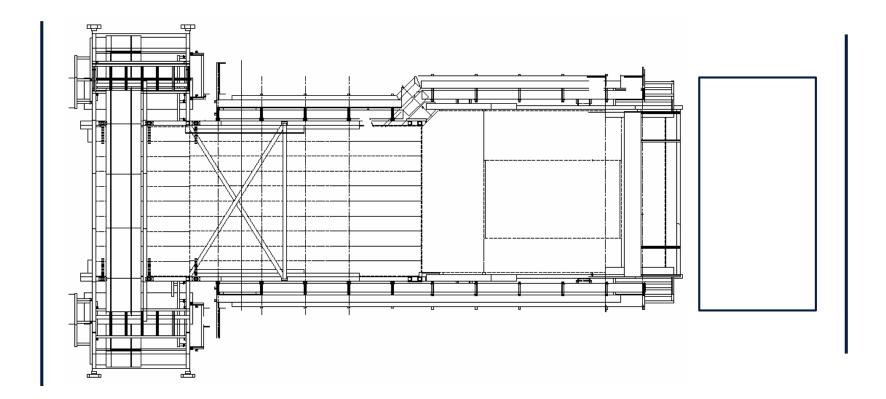






Miniframe activities w34 – Wed 19 Aug 2020

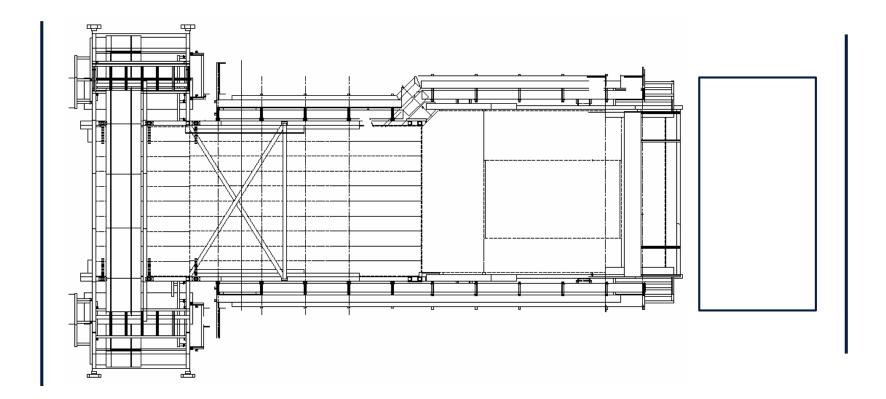






Miniframe activities w34 – Thu 20 Aug 2020

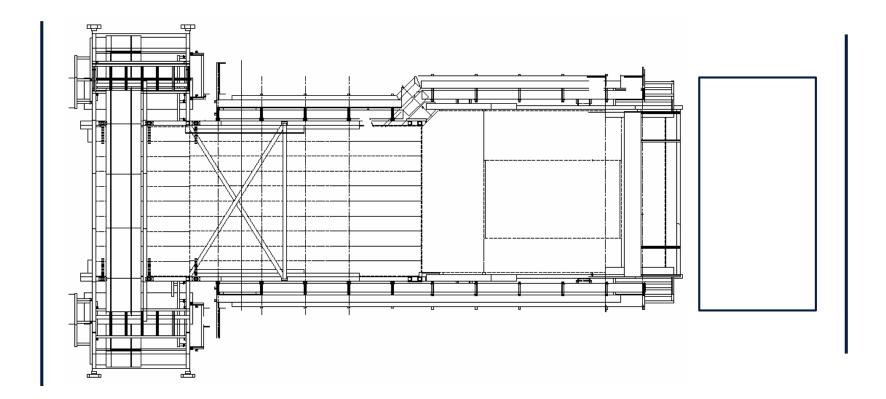






Miniframe activities w34 – Fri 21 Aug 2020







AOB



Next LS2 planning meeting on Friday August 28st

