

LS2 planning meeting

A.Tauro



COVID-19 news

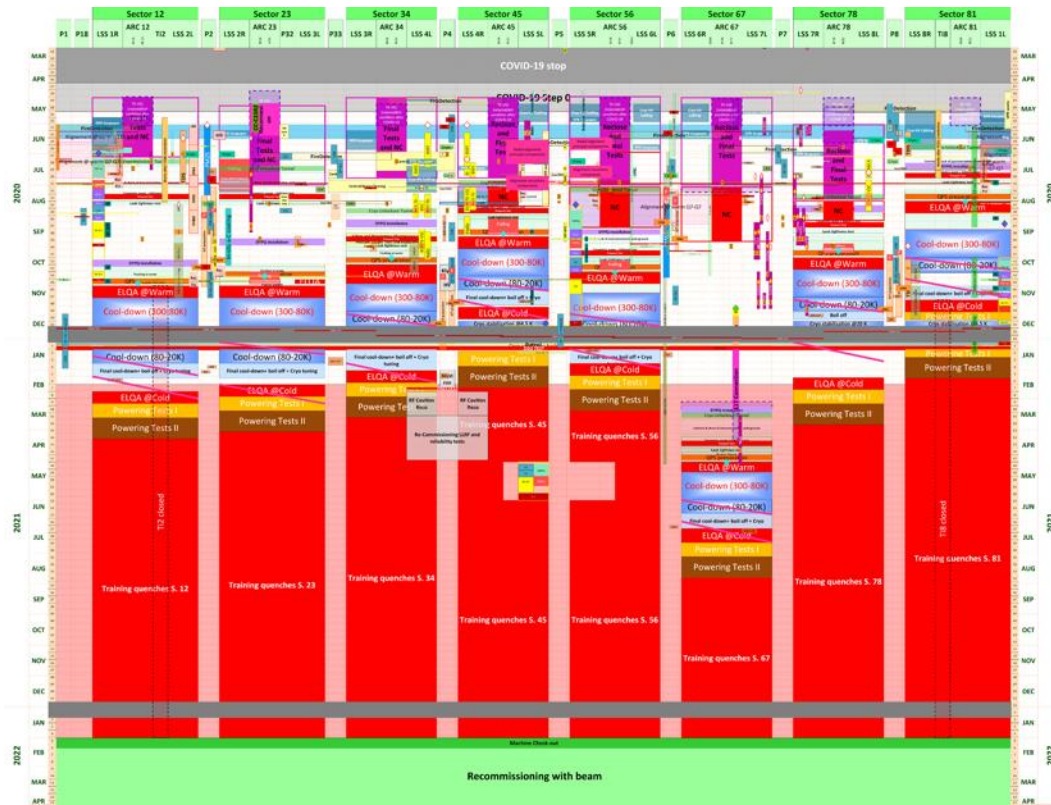
<https://hse.cern/covid-19-information>



- As of Monday, 2 November, all **employed members of the personnel** whose activity can be carried out remotely must **telework**. This measure also applies to certain categories of **associated members of the personnel** (i.e. associated members of personnel for the purpose of training and project associates). It does not apply to those members of the personnel who cannot telework or whose presence on the site is needed for carrying out the ongoing activities of the Organization. **Users** who are based in the local area should not come on site unless instructed to do so by their Technical Coordinator. On-site access is not allowed for persons aged **65 years** and above, unless they are called by their supervisor or Technical Coordinator for high-priority activities.
- Members of the personnel living in France, as well as those living in Switzerland who need to go to a CERN site in France, should carry a CERN attestation, which is equivalent to a French permanent *Justificatif de déplacement professionnel*. This can be generated on <https://cesaam.web.cern.ch/>. The relevant French authorities have confirmed that the CERN attestation is now sufficient and that no further attestations are necessary for travel for professional purposes.
- Please note that the **border between France and Switzerland remains open**.
- **Access to CERN:** the white list won't be re-introduced
- **Case declaration:** members of CERN personnel who have either tested positive for COVID-19 or are suspected cases (i.e. having possible COVID-19 symptoms but are untested or tested negative) are requested to inform the Medical Service (Tel: + 41 22 766 7777 or medical.service@cern.ch) urgently. The same applies if any household members show symptoms associated with COVID-19.
- **Close contacts** (>15' at less than 2m without mask) shall not come on the CERN site for 14 days from their identification as a close contact. Contact tracing is done for 4 days prior to the onset of the symptoms.
- **Quarantine:** access to CERN sites is not allowed for 10 days after arrival from a country/area that features on at least one of the lists (Switzerland or France) of high risk countries and areas for COVID-19 infection→ latest information [here](#)
- For any question please refer to Covid19.helpline@cern.ch or ALICE-covid19-coordination@cern.ch.

LHC LS2 Baseline V3.0

LHC-PM-MS-0018 v.3.0



The machine is (right now) celebrating the end of LS2!

End of LS2 Virtual Ceremony
Friday 4 Dec 2020, 10:00 → 12:00 Europe/Zurich
503/1-001 - Council Chamber (CERN)

Webcast There is a live webcast for this event [Watch](#)

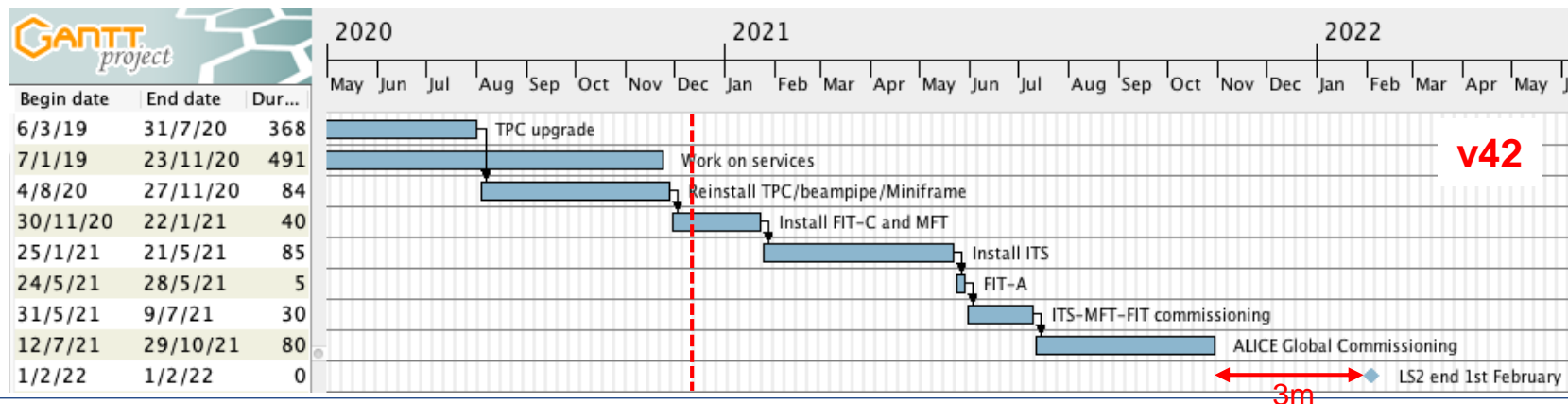
- 10:00 → 10:10 Introduction by the ATS Director**
Speaker: Frederick Bordry (CERN)
10m 503/1-001 - Council Chamber
- 10:10 → 10:25 Review of LS2 Challenges since 2015**
Speaker: Jose Miguel Jimenez (CERN)
15m 503/1-001 - Council Chamber
- 10:25 → 10:40 A Successful Methodology**
Speaker: Julie Coupard (CERN)
15m 503/1-001 - Council Chamber
- 10:40 → 10:55 Review of Master Schedules evolution since 2015**
Speaker: Katy Foraz (CERN)
15m 503/1-001 - Council Chamber
- 10:55 → 11:05 Picture-review of the PS Complex**
Speaker: Fernando Baltasar Dos Santos Pedrosa (CERN)
10m 503/1-001 - Council Chamber
- 11:05 → 11:15 Picture-review of the SPS Complex**
Speaker: David Mcfarlane (CERN)
10m 503/1-001 - Council Chamber
- 11:15 → 11:25 Picture-review of the LHC**
Speaker: Marzia Bernardini (CERN)
10m 503/1-001 - Council Chamber
- 11:25 → 11:35 Picture-review of Exemplary Proactive Safety Attitudes**
Speaker: Thomas Otto (CERN)
10m 503/1-001 - Council Chamber

...and already preparing for LS3

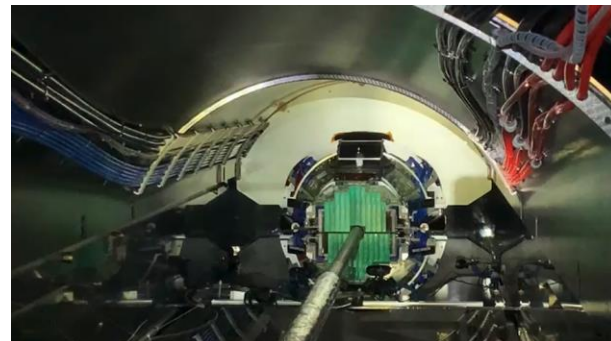


Current master schedule (v42)

- **Schedule v42:**
 - Stop ITS operation on Mon Jan 4th 2021
 - Stop MFT operation on Mon Nov 12th
 - 16w global commissioning at the end
- **LS2 end date 1st February 2022**
- ALICE vacuum closed by June 2021 → OK to inject low intensity beam by last week September 2021 (w39-40)
- This plan foresees **3 months contingency** with respect to the LS2 end date

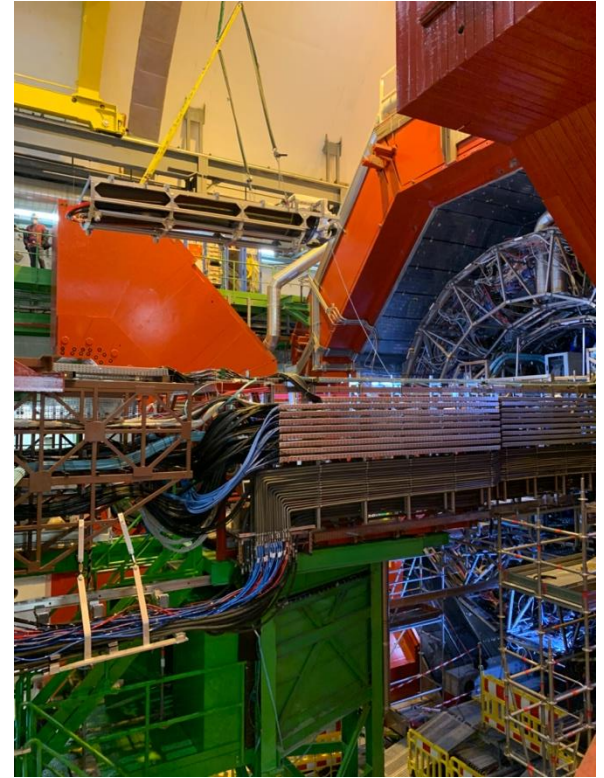
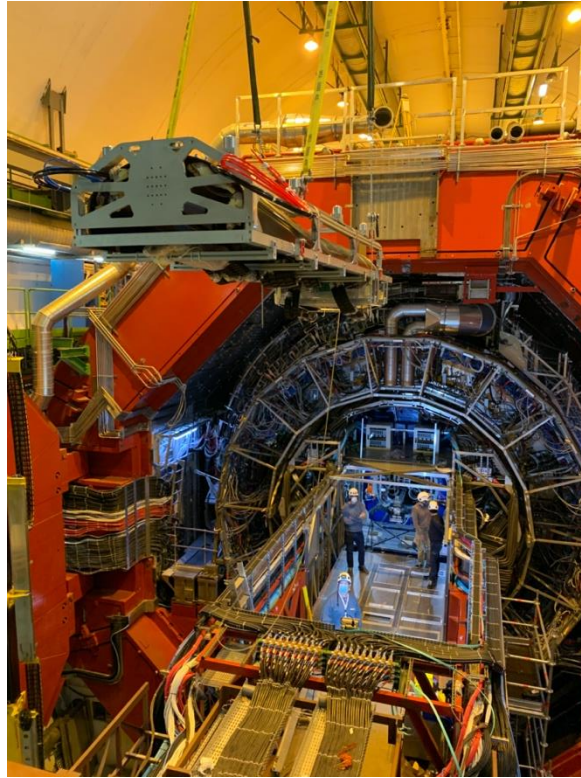


MFT & FIT-C installation complete !



Congratulations to the FIT & MFT groups and to the ALICE installation team for successfully accomplishing this task!

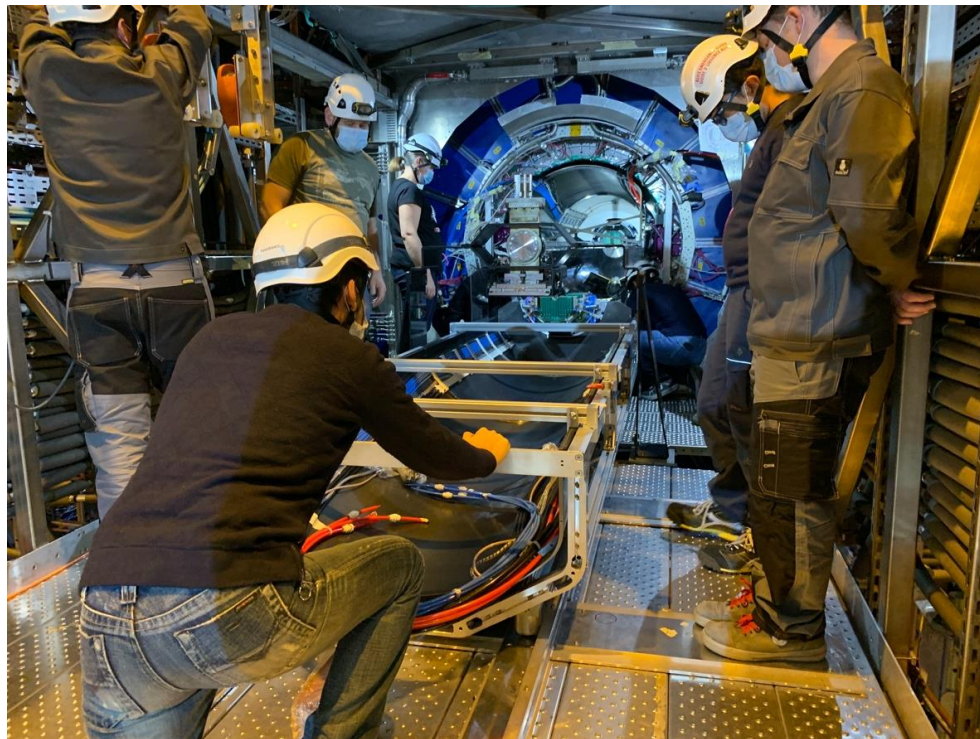
MFT & FIT-C installation 1/2



MFT & FIT-C installation 2/2



H1 installation (Tue)



H2 installation (Thu)

Optical fibers



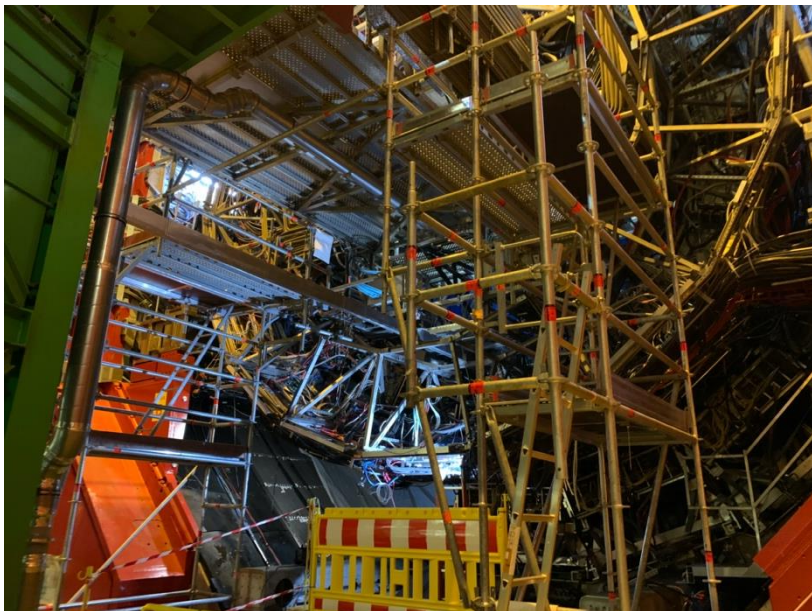
To be redone as Miniframe trunks installed wrongly (female and male connectors inverted)

New plan:

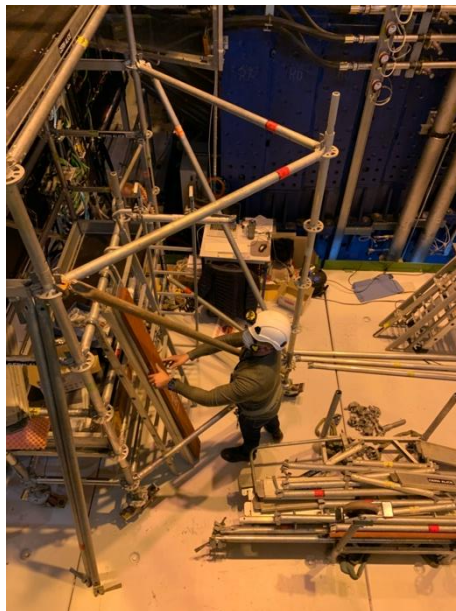
- W49: Thu: test and start uncabing A19
- W49 (today): extract and reinstall cables (I-side) - start at 10:00
- W50: Mon: extract and reinstall cables (I-side)
- W50: Tue-Wed: extract and reinstall cables (O-side)
- W50: Thu-Fri: connect
- W51: test



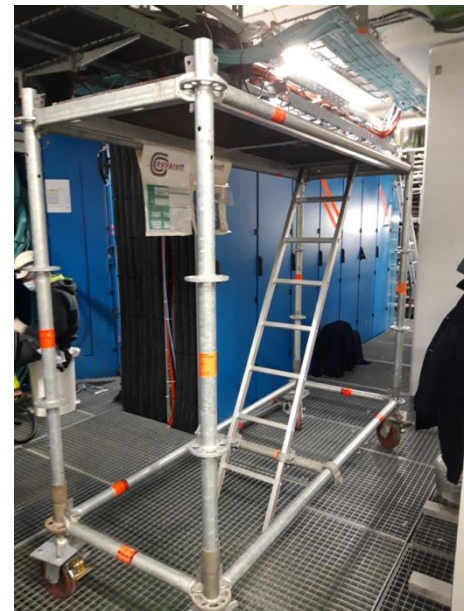
Scaffoldings



TPC A-side access



MCH (conformity)

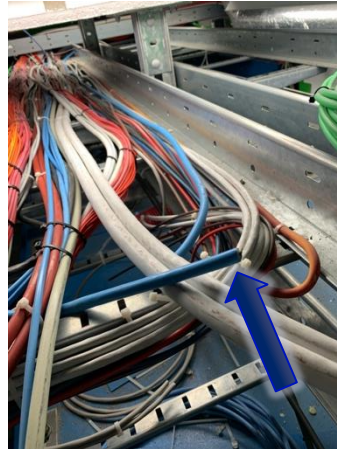


COMSA

TPC A-side services connection

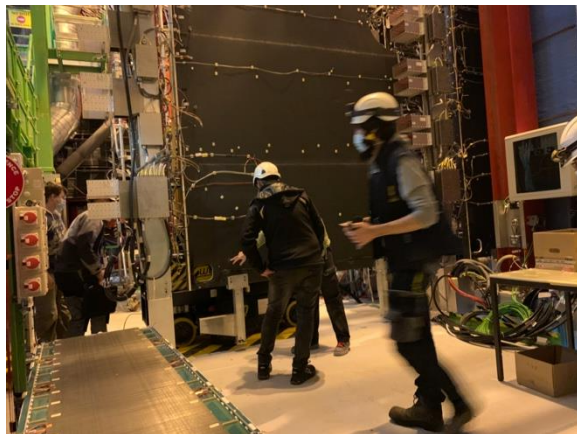


Tiring work in the gap



Junction box for accidentally cut P-sensor cable

MCH work

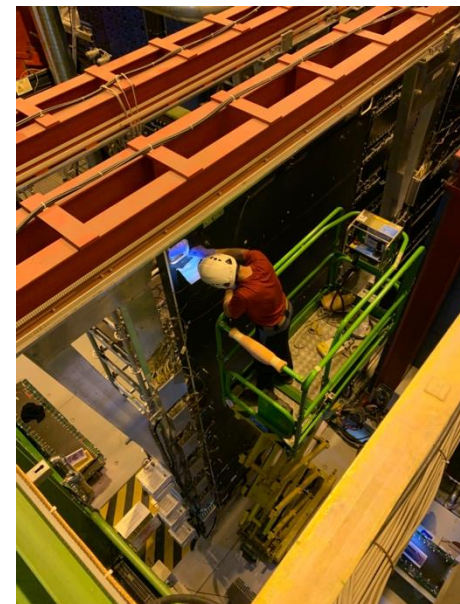


Slat removal ST5

From Dec 1st 2 technicians from EN-EA complement the MCH team

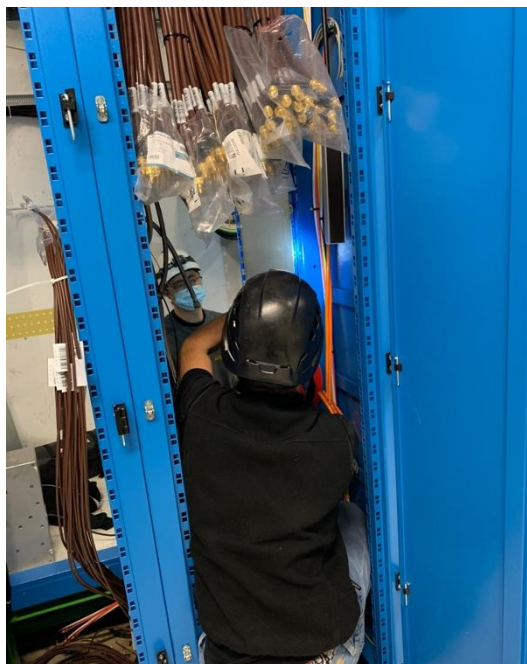


FEC replacement

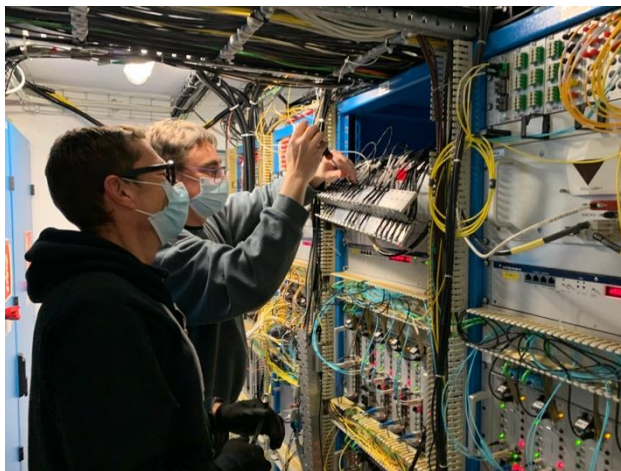


Grounding points

Other activities



C35 reconfiguration (FIT)

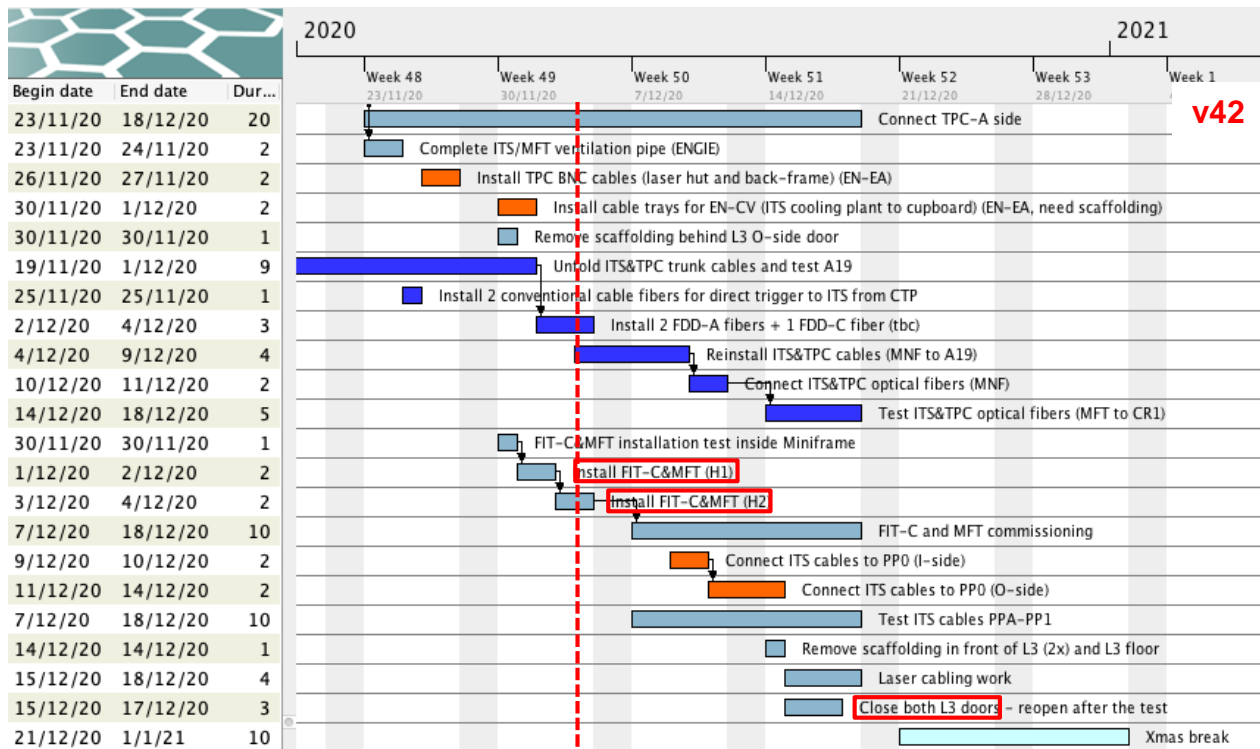


Move C25 trigger cables (CTP)

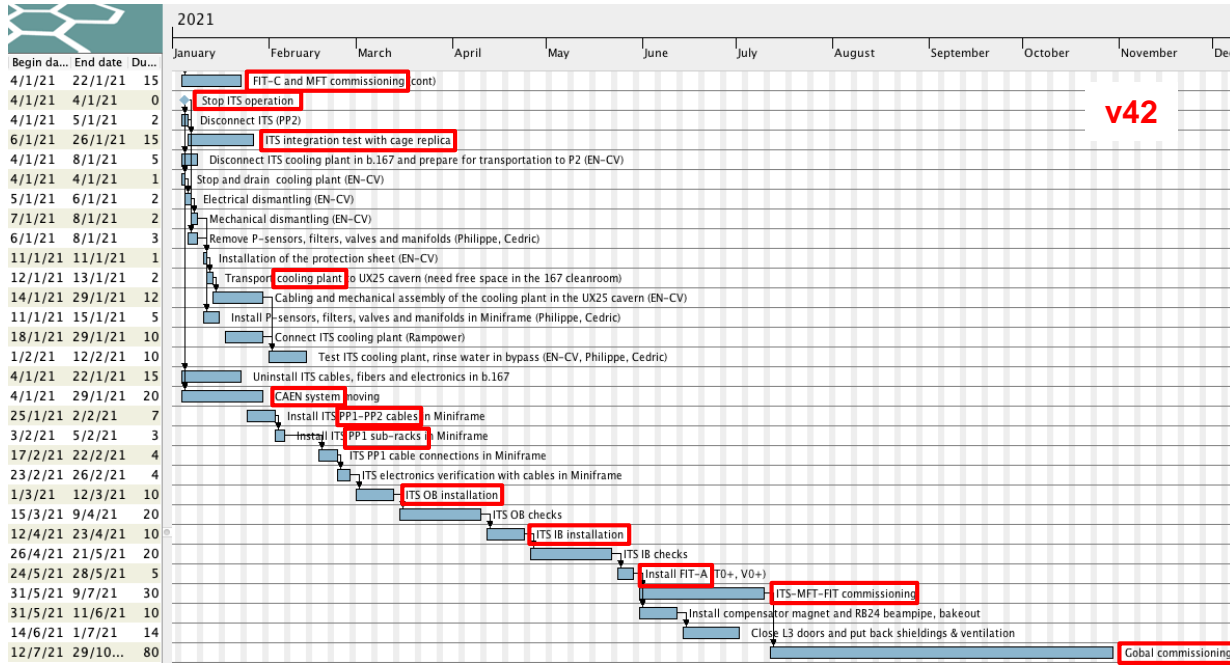


Test ITS cables PPA-PP1

Activities until end of year



Detailed plan 2021



Jan 4th : stop ITS operation in b.167

v42

Jan 5th – Feb 26th: transfer ITS services from b.167 to P2

Mar 1st – May 21st: ITS installation

May 24th – 28th: FIT-A installation

May 31st – Oct 29th: ITS-MFT-FIT commissioning / global commissioning / close Experiment

Key dates

| Activity | v42 |
|--|---|
| Install central beampipe | 16 Sep – 12 Oct |
| Move TPC to IP | 13 – 16 Oct |
| Install Miniframe | 16 Nov |
| MFT & FIT-C installation and checks | 30 Nov – 22 Jan 2021 Disconnect MFT 12 Nov |
| ITS installation and checks | 25 Jan – 21 May Disconnect ITS 4 Jan |
| FDD (A&C) installation | 8 Feb – 5 Mar |
| FIT-A installation | 24 – 28 May |
| ITS & MFT commissioning time | 1 ½ months (6w) |
| ALICE global commissioning time | 3.5 months (16w) |
| End of LS2 – stop UX25 access (contingency) | 1 Feb 2022 (3 months) |

Services status

• Cables (EN-EA):

- **All cables installed and tested**
- Unfold **Miniframe** cables: 18-19 Nov
- Complete **TPC BNC** (laser) cables (back-frame and laser-hut): → 30 Nov (connectors missing)
- Install cable trays for ITS cooling plant: 24-27 Nov
- Cut and put connectors on **FIT-A** signal cables in Miniframe: 18-21 Jan
- Complete **FDD-A** connectors: 22 Jan

• Optical fibers (EN-EL):

- Installation 6 trunk cables between **IT1-IT2 (CR0)** → **DONE** w46
- Unfold and connect **ITS** and **TPC** trunk cables and install 2 conventional cables for direct trigger **CTP-ITS** → **Ongoing**
- Installation 3 **FDD** optical cables → date ?

• Cooling:

- **MFT**: water circulating inside crates – detector: line P test next week
- **ITS/MFT/TPC**: connections between Miniframe and PP0 → w48-49 → **DONE**
- Connection of **ITS** and inox pipes to ITS cooling plant (Rampower) → w3

• Wiener LVPS consolidation (EN-EA):

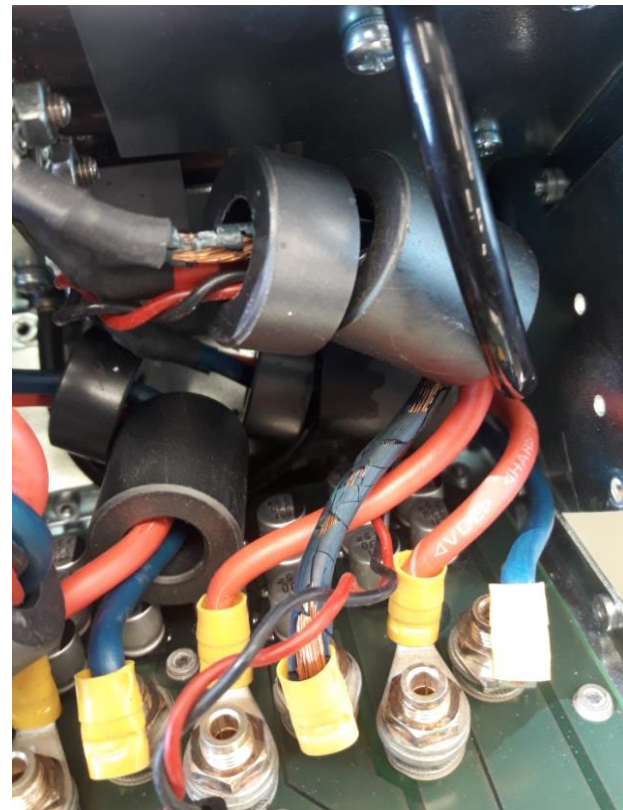
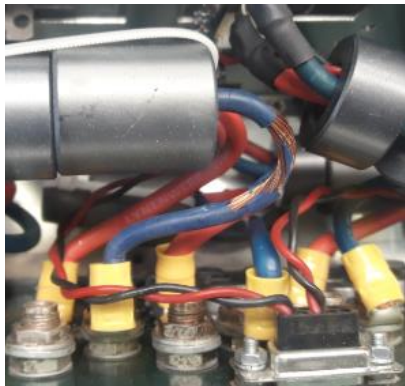
- 192 water cooled power supplies in total (LV and VME)
- Rework in batches (~16 units/week), was started in week 32
- **192 have been processed (100%)**

• Rack turbines replacement:

- 80 units in total, the first batch (30 units) delivered to SX2. 10 more have been delivered this week, rest early next year
- Replacement without cutting the power in the rack

Wiener PS – deteriorated internal wiring

- Discovered during the consolidation
 - 10 TPC units, 2 TRD, 1 DCAL
 - All affected units in EN-EA workshop (except 1 TRD that is with Wiener)
- Looks like damage due to overheating
- Will be repaired by EN-EA
 - In coordination with Wiener and pool
 - Extensive investigation to understand the root cause
 - Timescale to be decided



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)
- **Small maintenance:**
 - UW: from w34 to w37 2020. Stop UX mixed water on Monday 7 September 2020 – done
 - SF+SU: weeks 44-47/2020: cleaning towers (stop SF w44-45, no impact) + 1 day stop all cooling UX (9 Nov) + 1 day stop SXL2 cleanroom ventilation (9 Nov) – done
- **Ventilation:**
 - ARC – done
 - SXL2 CLR: w43 (19-21 Oct) – done
 - SG2: w44 (26-28 Oct) – done
 - UX25 cavern – done
 - MCH and MTG – done
 - L3: replace extractor – done
 - ITS – done

EN-EL interventions

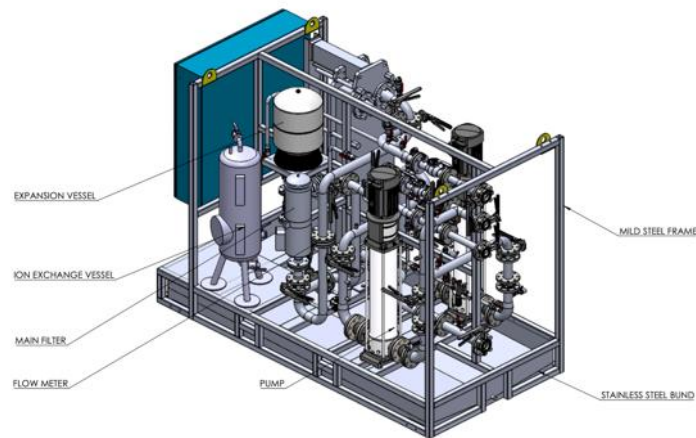
- **12-year maintenance diesel generator**
 - **Week 3** (some access restrictions outside working hours, need EL piquet on site)
- **Short preventive maintenance on UPS**
 - **Week 4** (preventively change a card, without power interruption but no battery backup during 45 mins/UPS)

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
 - TPC: O25, I25
 - Dcal, EMcal: A14, O12
 - MFT: I24a, I24b and A15
 - ITS: A03
- Detectors can be powered, compatible with current activities inside L3

L3 magnet test

- We had foreseen to ramp up the L3 magnet on January 14th, 2021. Unfortunately the new cooling plant for the L3 power converter will not be ready before end of January.
- We have therefore to postpone this test.
Tentative planning:
 - w7: 15-19/2 → close and bolt both L3 doors
 - w8: Mon 22/2 → ramp-up L3; Tue 23/2 - Thu25/2 → reopen both doors
- The closure of the magnet doors to verify that there are no mechanical interferences will be done anyway in **w51 (Tue-Thu)**



CERN access during EOY closure

- As for previous years, access to CERN sites during the Annual end-of-year closure during 2020/2021 is restricted as follows:
 - The **COVID-19 related restrictions** laid out in the [KB0006553](#) remain applicable
 - **All personnel** (except Contractors) shall require previous explicit authorization from their department
 - **CERN personnel** shall address their requests to their department contact, who shall manage the appropriate e-group. For **ALICE** please send the request to Arturo Tauro. Access is restricted to colleagues who have specific duties in the experiment. No authorisation for office work.
- **Contractors** shall require a valid AET (Avis d'Execution de Travaux) for this period:
 - Employers should complete the [AET form](#) and send a signed copy to access.surveillance@cern.ch
- **During the annual end-of-year closure**, urgent unplanned access for interventions may be requested via the CCC TI Operation Desk (Tel 72201)
- There will again be **regular tours** of P2 (UX25, SG2, SX2, SXL2, CR0), every 2nd day, and people can contact Andre in case they want to have specific things checked.

Other activities

2020:

- Renovation PX24 access system (PAD-MAD): w33-34 (10-21 Aug) → done
- Maintenance PX24 access system (8-11 Sep) → done
- Renovation PM25 access system (PAD-MAD): w41-43 (5-23 Oct) → done
- LASS contractor test (26-28 Oct): short access perturbations → done
- LASS functional test: no access to UX25 on Friday 30 Oct 2020 (weekend 31 Oct /1 Nov as contingency) → done
- LASS global verification of entire LHC: 1 day no access to UX25 (date tbd)
- Test of the beam imminent warning (BIW) on Sunday 12 December → no access during the test

LHC sector test 2021 (dates tbc):

- Friday 04.06.2021: **LASS test**, machine closed Thursday 03.06.2021, ALICE closed Thursday 03.06.2021 evening
- Friday 18.06.2021: **DSO test**, machine closed Thursday 17.06.2021, ALICE closed Thursday 17.06.2021 evening
- LHC sector test (beam through ALICE): ~~no access to UX25 from 26 to 29 March 2021 (date tbd)~~

Scaffoldings

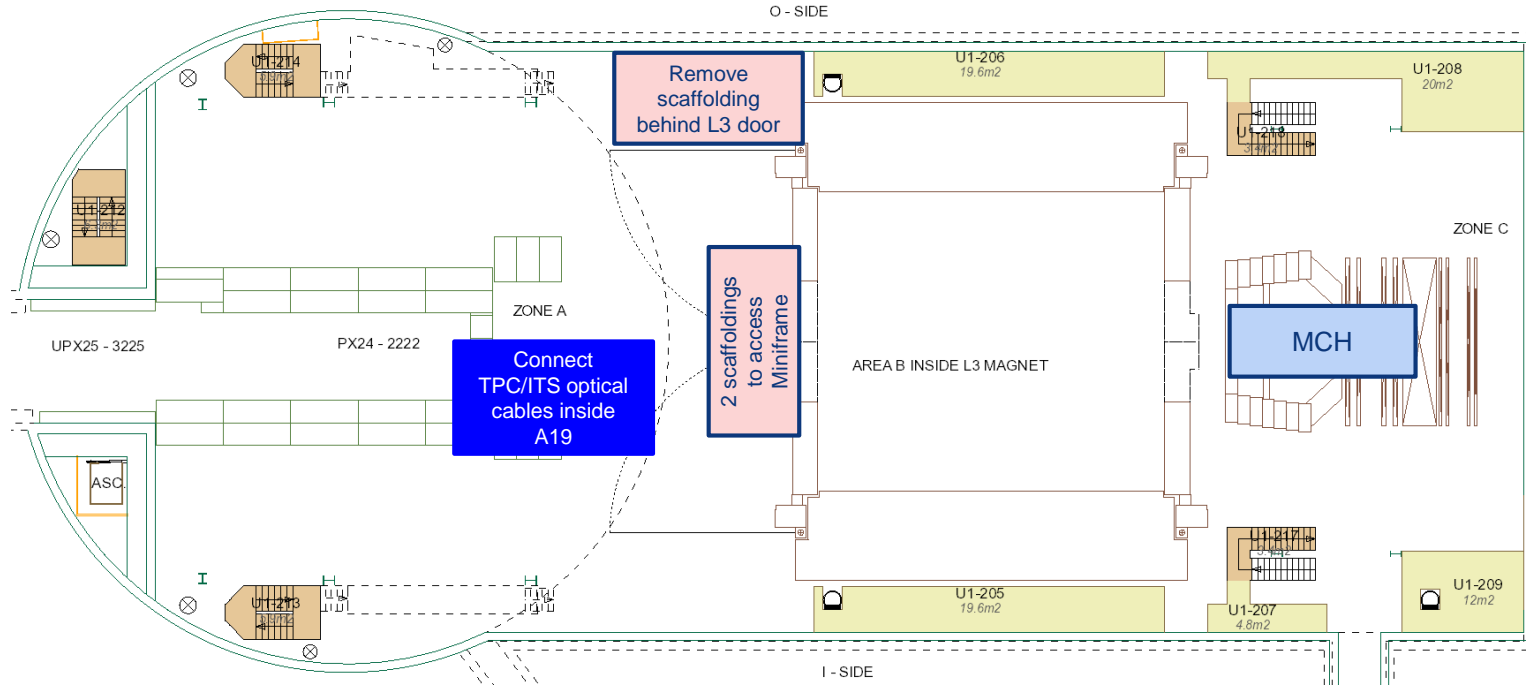
- Sem.49
 - Lun 30 Nov: dépose échafaudage derriere porte aimant L3 (coté O)
- Sem.51
 - Lun 14 Dec: dépose plancher L3 + dépose deux tours devant L3 (pour Gianluca)
- Sem.5
 - Lun 1 Feb: dépose jonction au fond de L3 (partie basse)

Day-by-day sequence w49

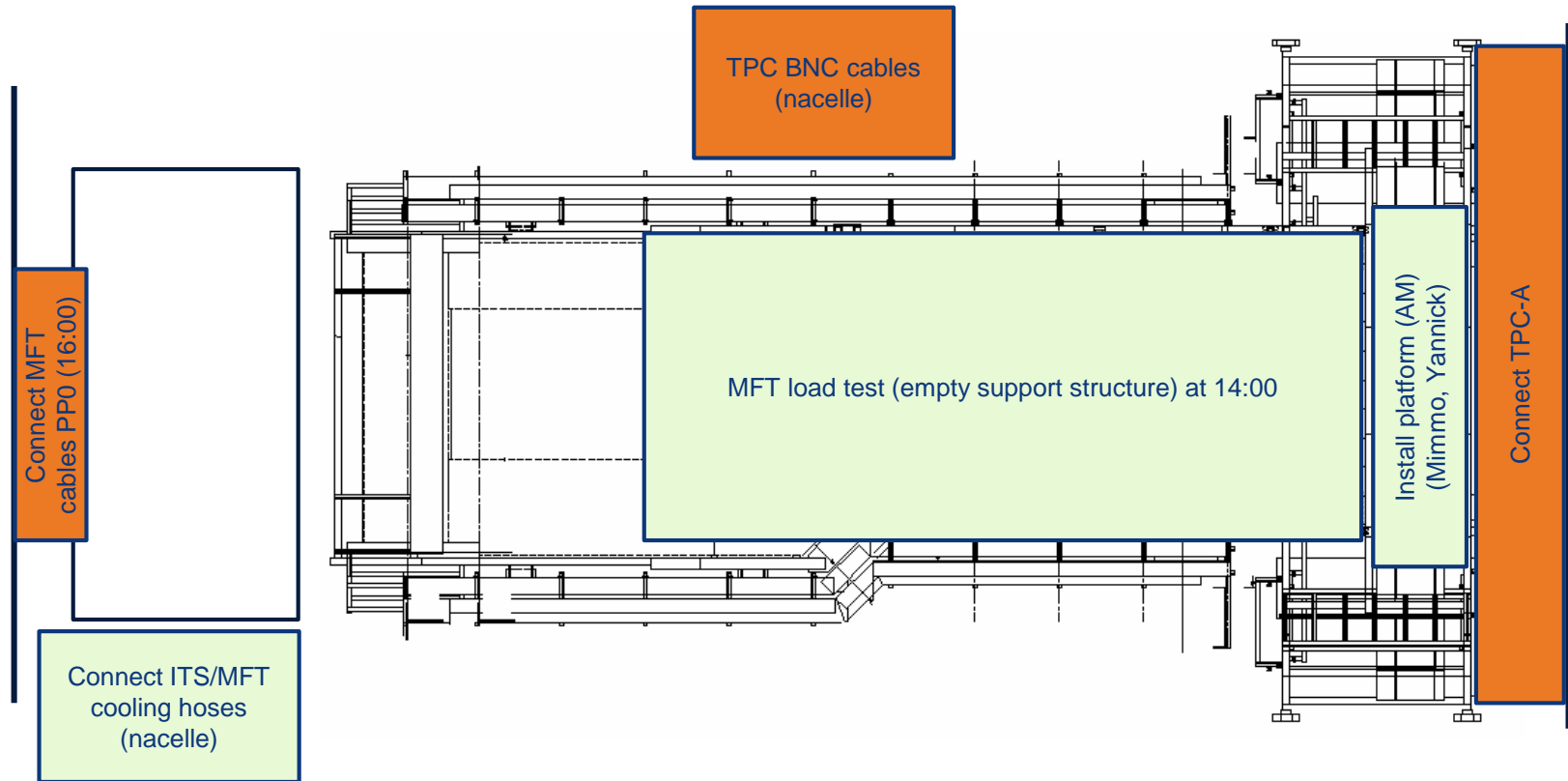


UX25 activities w49 – Mon 30 Nov 2020

Annual maintenance red emergency phones



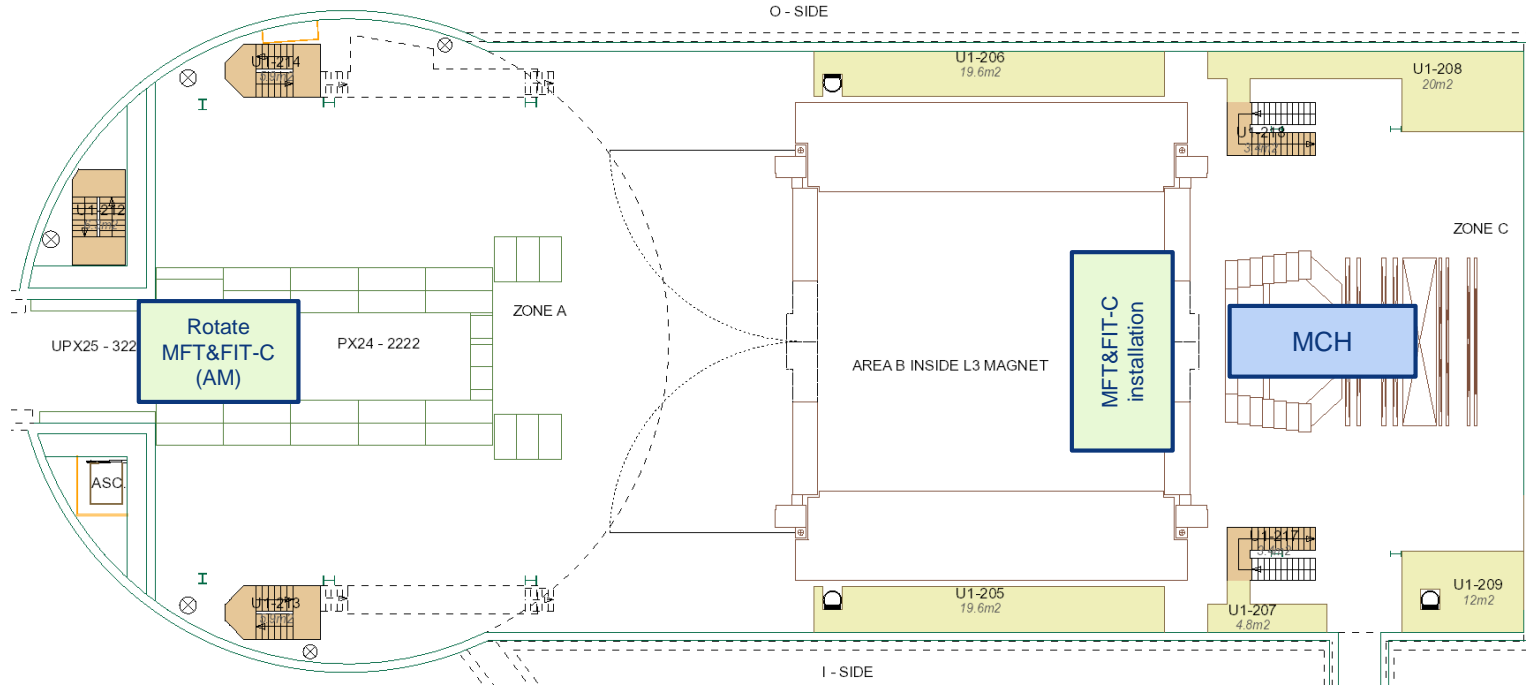
Miniframe activities w49 – Mon 30 Nov 2020



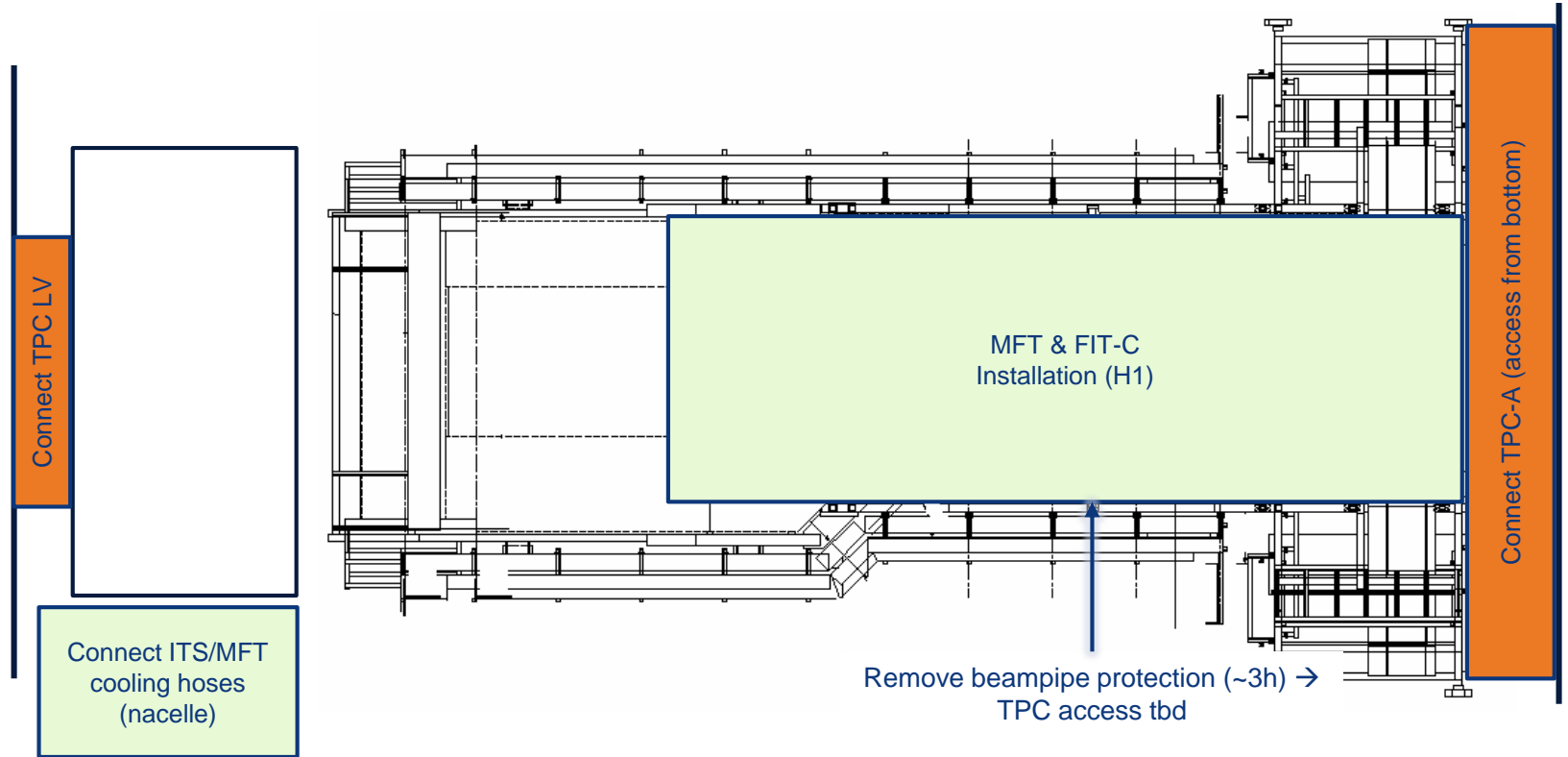
UX25 activities w49 – Tue 1 Dec 2020

Transportation MFT&FIT-C (H1) from b.167 to P2 (4:00 AM)

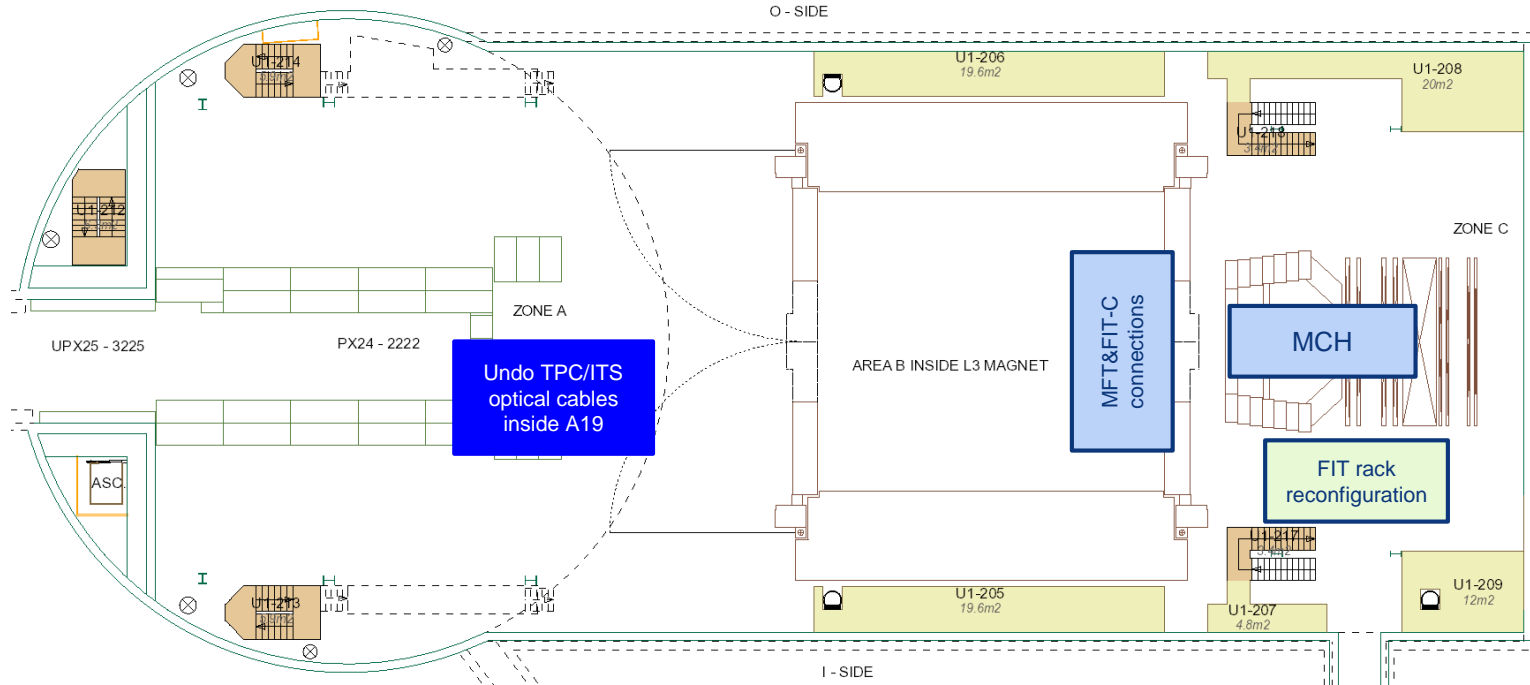
Cleaning cavern (Topnet): 13:00 to 15:00



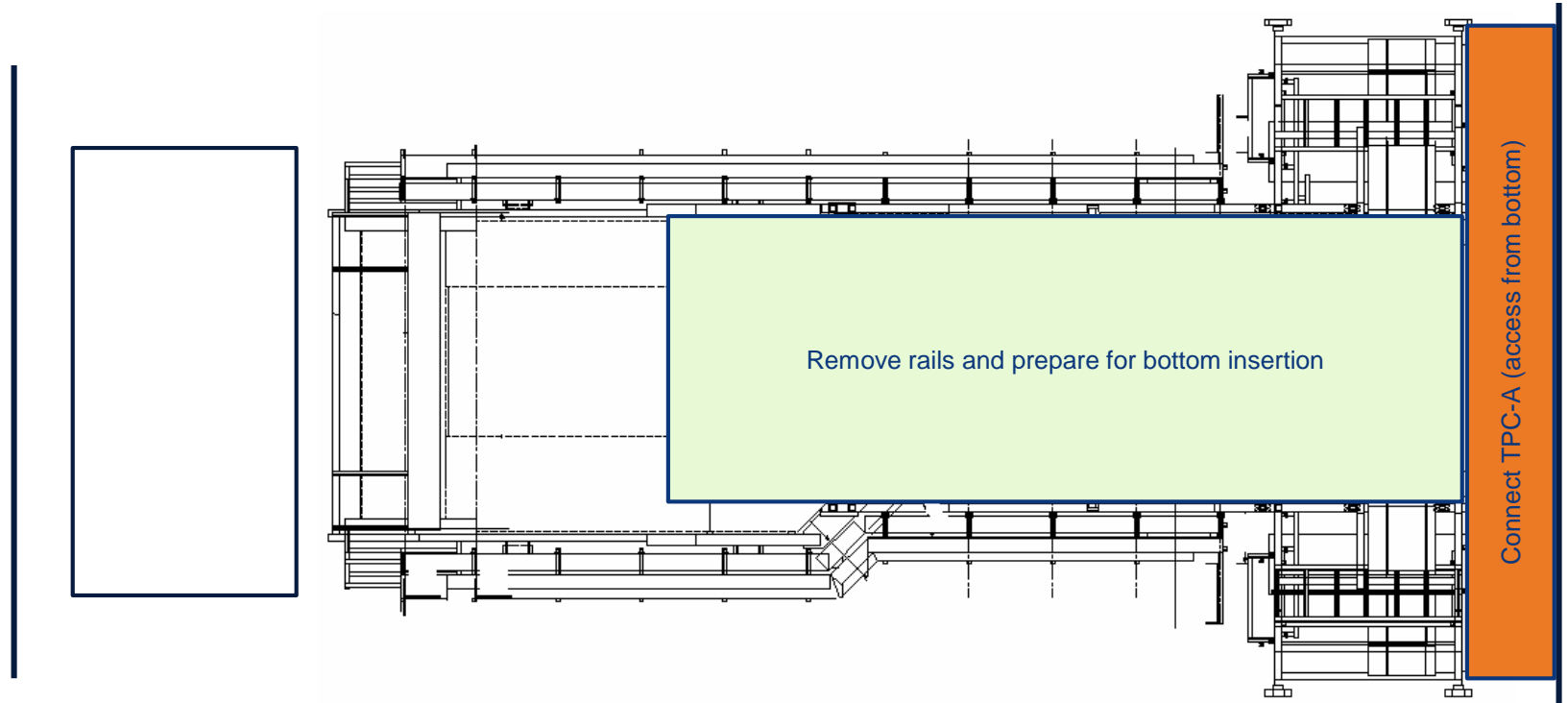
Miniframe activities w49 – Tue 1 Dec 2020



UX25 activities w49 – Wed 2 Dec 2020



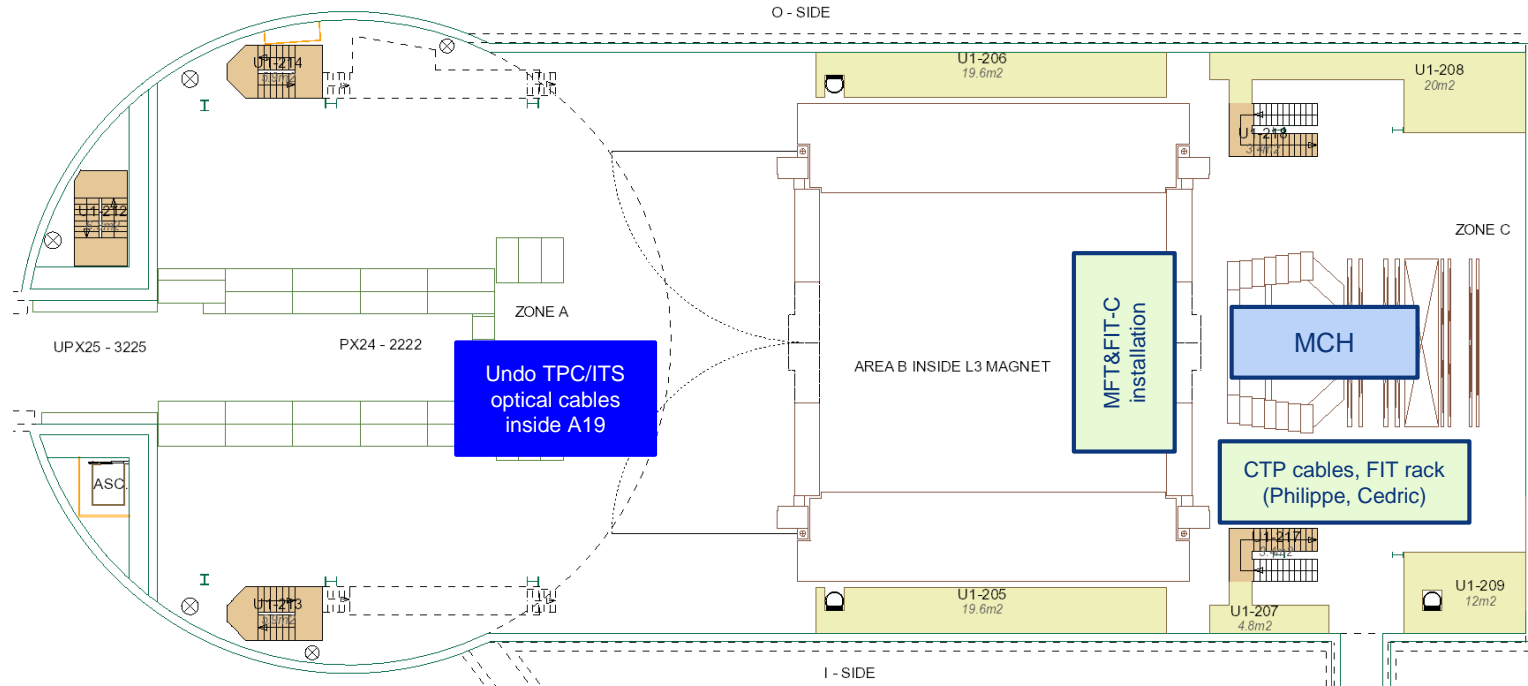
Miniframe activities w49 – Wed 2 Dec 2020



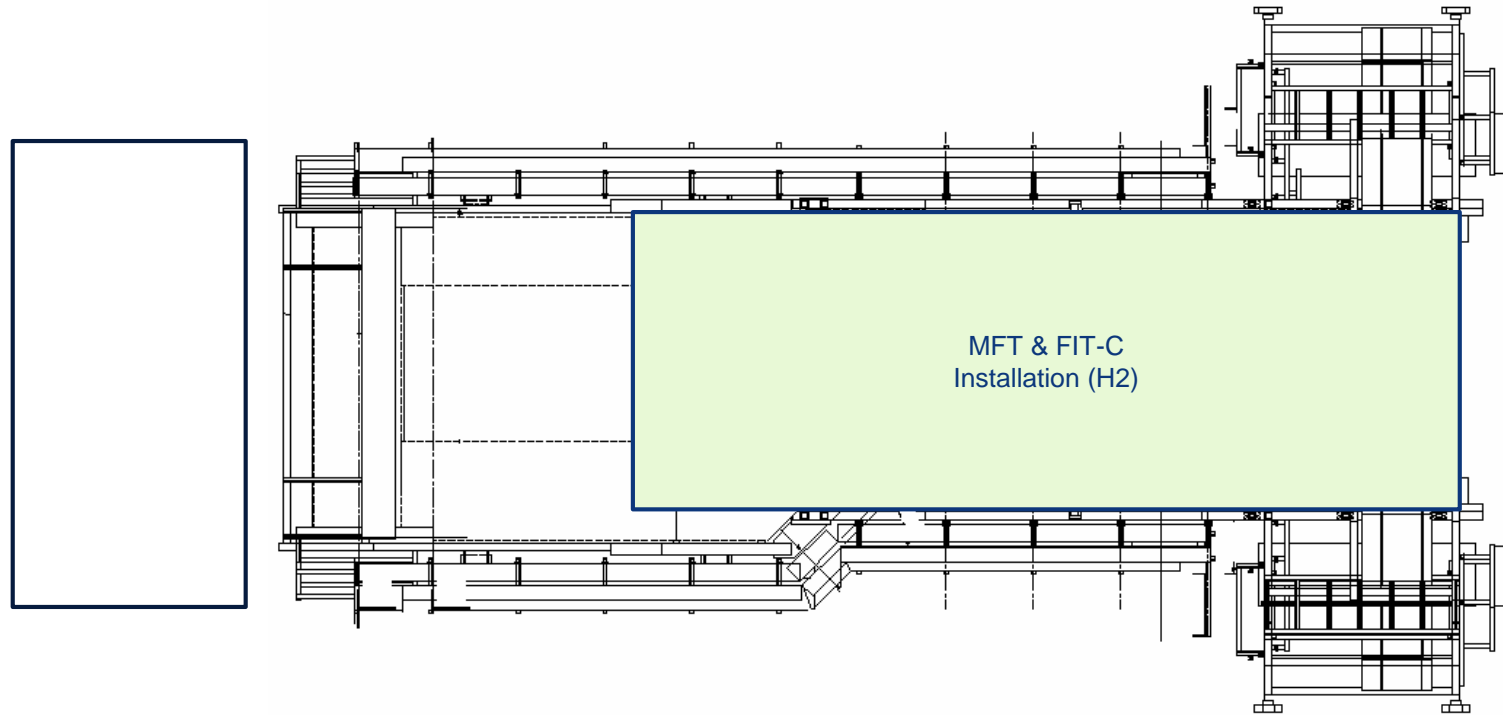
UX25 activities w49 – Thu 3 Dec 2020

Transportation MFT&FIT-C (H2) from b.167 to P2 (4:00 AM)

CR0: move old servers from IT2 to IT3 (Philippe, Cedric, 2 ALTEAD, Johannes) (start at 8:30)

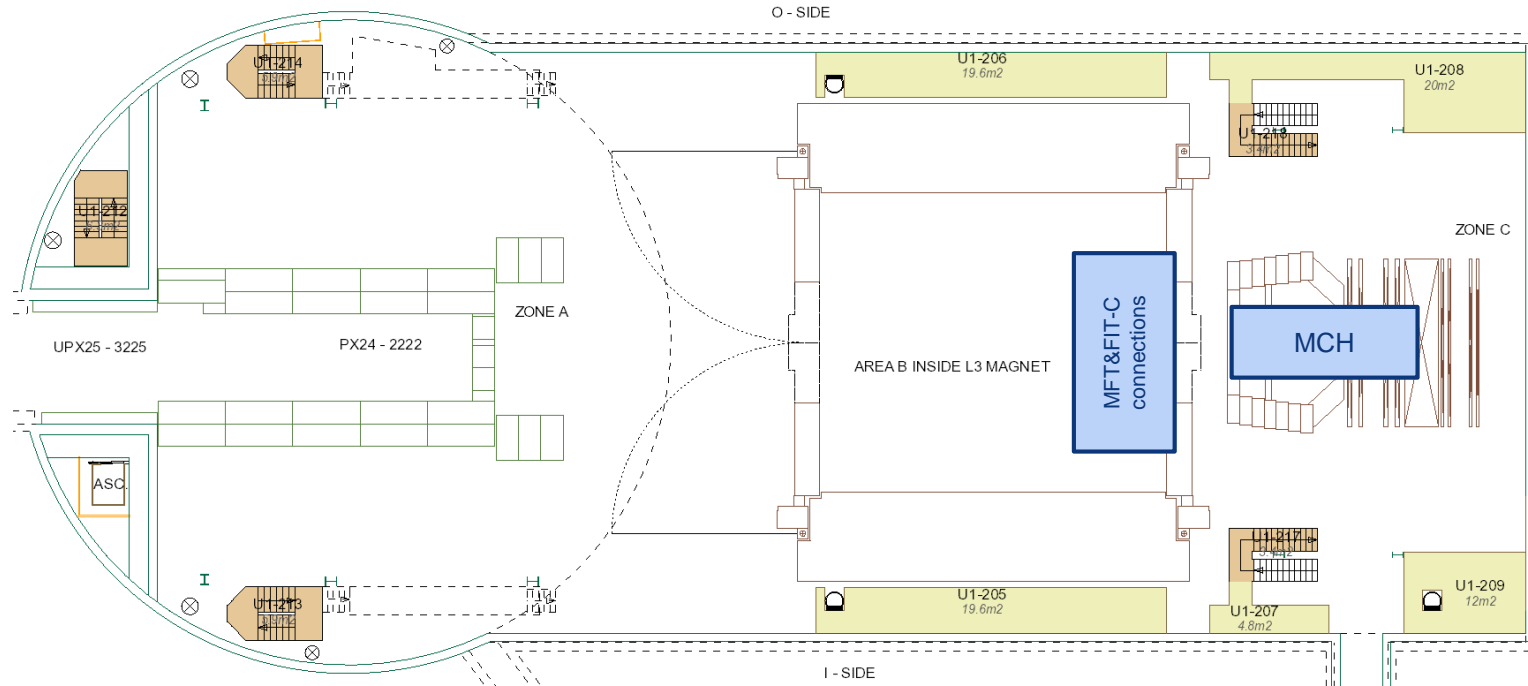


Miniframe activities w49 – Thu 3 Dec 2020



UX25 activities w49 – Fri 4 Dec 2020

Cavern lift maintenance (AS-724): no access to UX25 from 6:00 AM to 8:00 AM



Miniframe activities w49 – Fri 4 Dec 2020

Cavern lift maintenance (AS-724): no access to UX25 from 6:00 AM to 8:00 AM

P test MFT detector cooling lines (3 bar) (PM) tbc

Connect last 5 ITS
cooling hoses
(nacelle)

Remove MFT rails and
transportation frame

Reinstall top beampipe
protection, remove false floor,
reinstall ladder, reinstall top
TPC LV plates

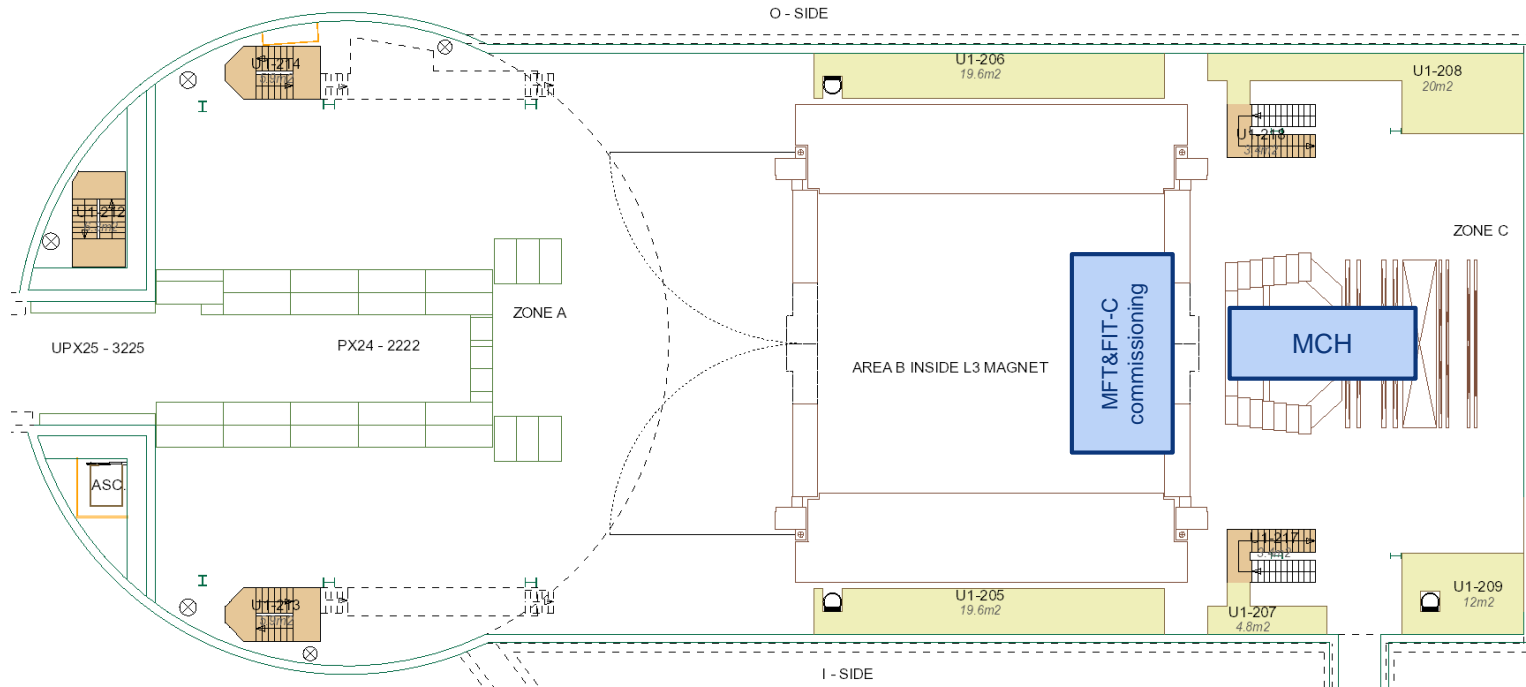
Remove and reinstall TPC/ITS optical cables (start at 10:00)

Day-by-day sequence w50

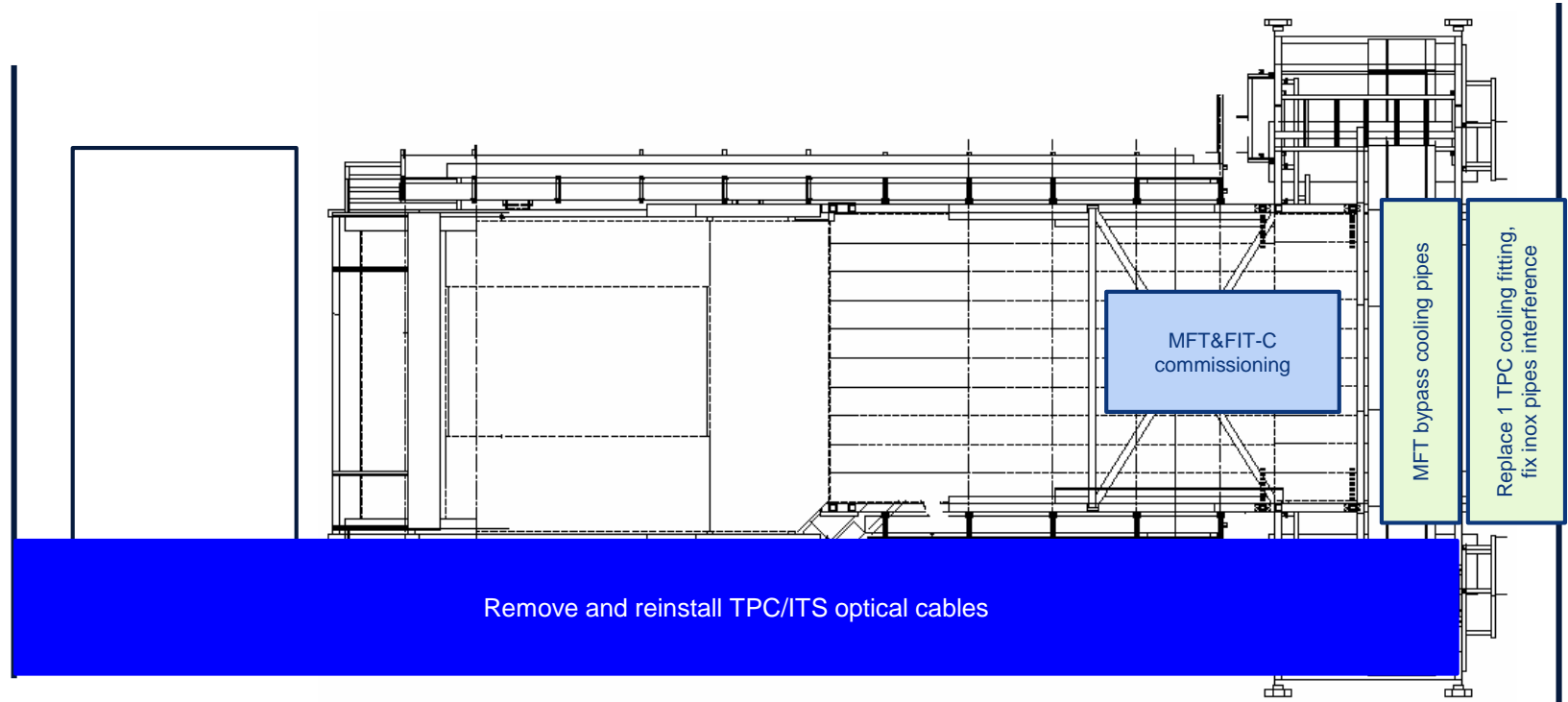


UX25 activities w50 – Mon 7 Dec 2020

Delivery first batch 125 EPN servers (2nd batch next week).
Installation this week (ALTEAD + Philippe + Cedric) – DATE TBC

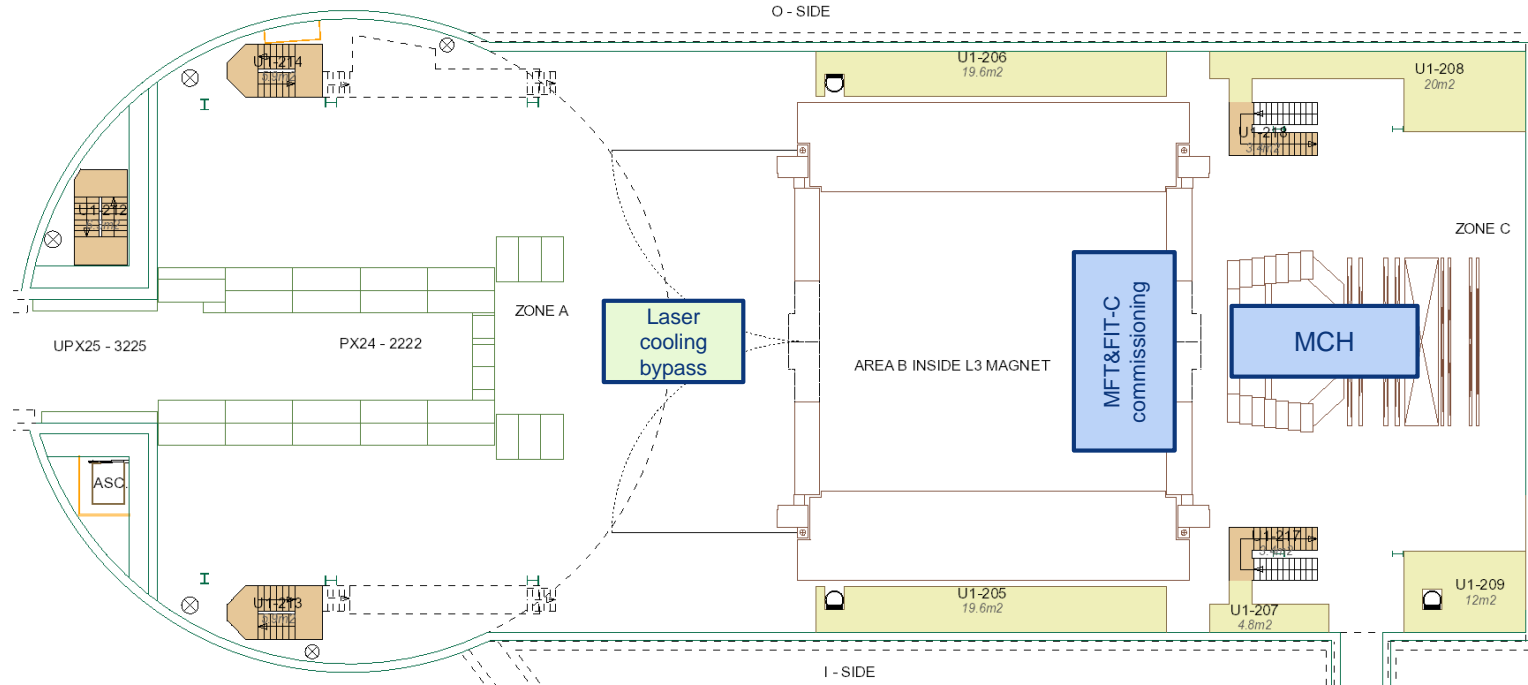


Miniframe activities w50 – Mon 7 Dec 2020

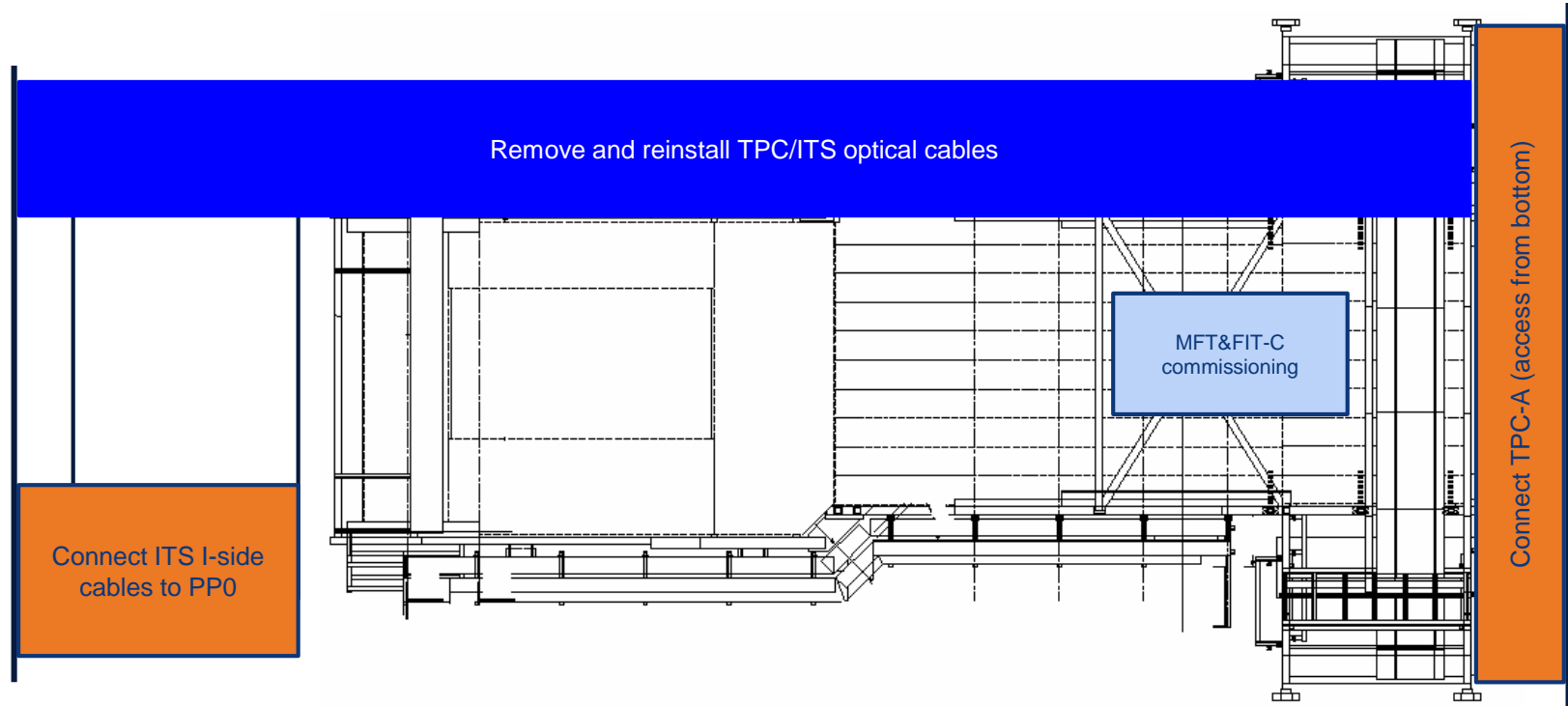


UX25 activities w40 – Tue 8 Dec 2020

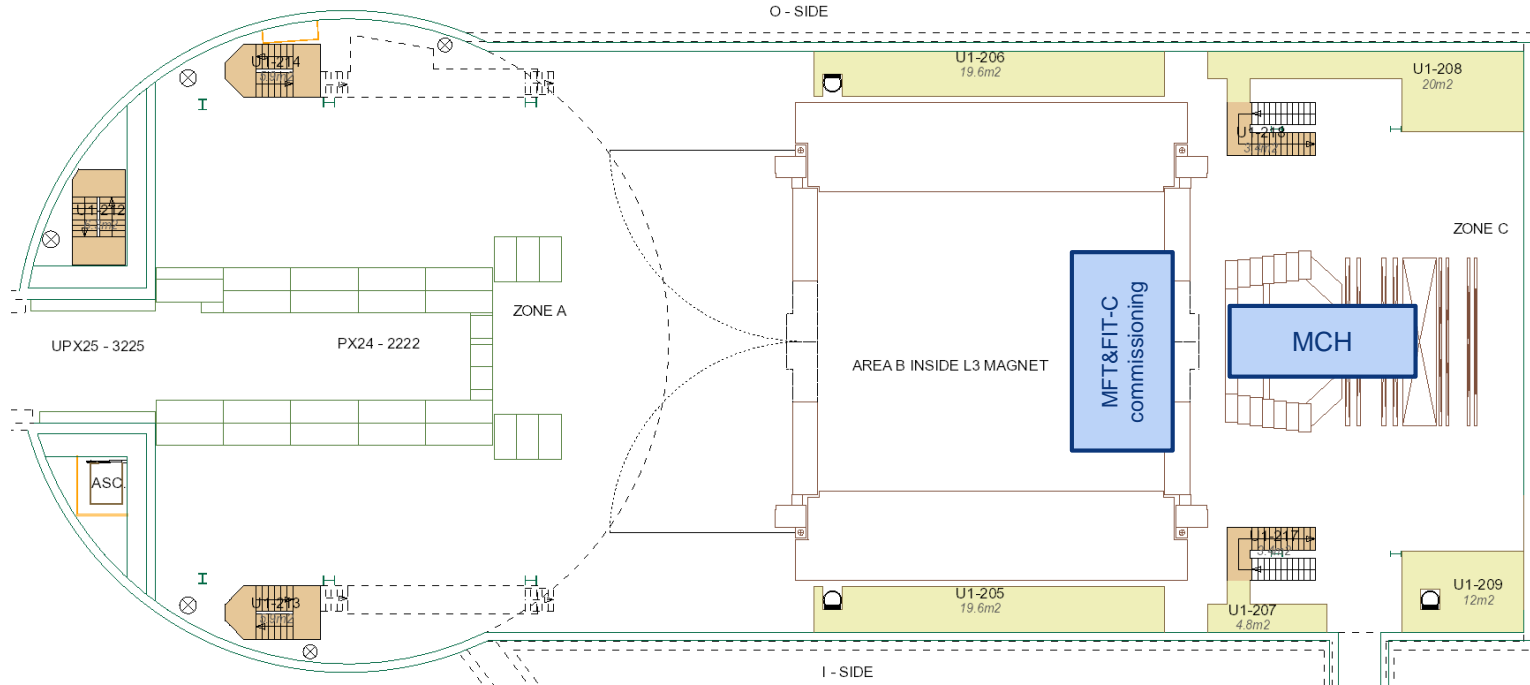
Cleaning cavern (Topnet): 13:00 to 15:00



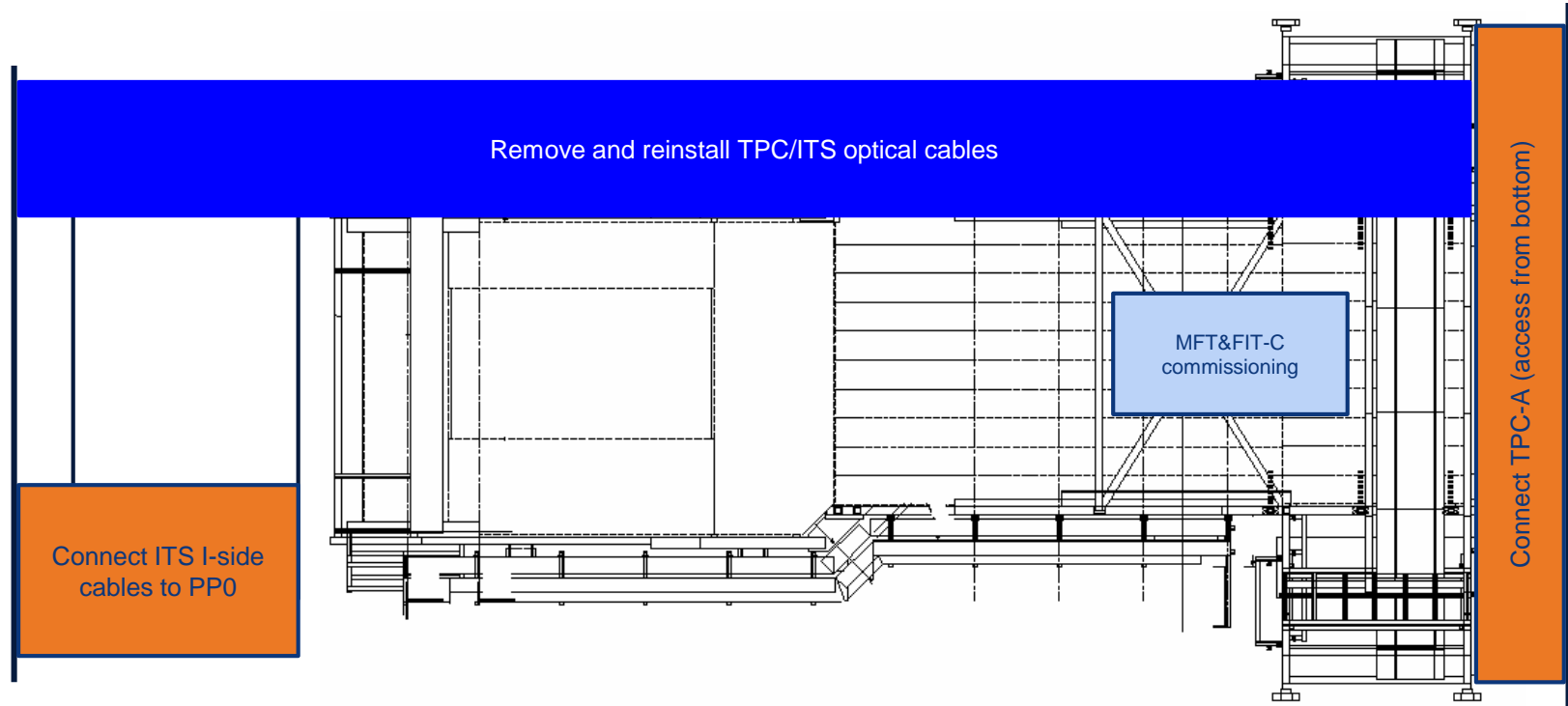
Miniframe activities w50 – Tue 8 Dec 2020



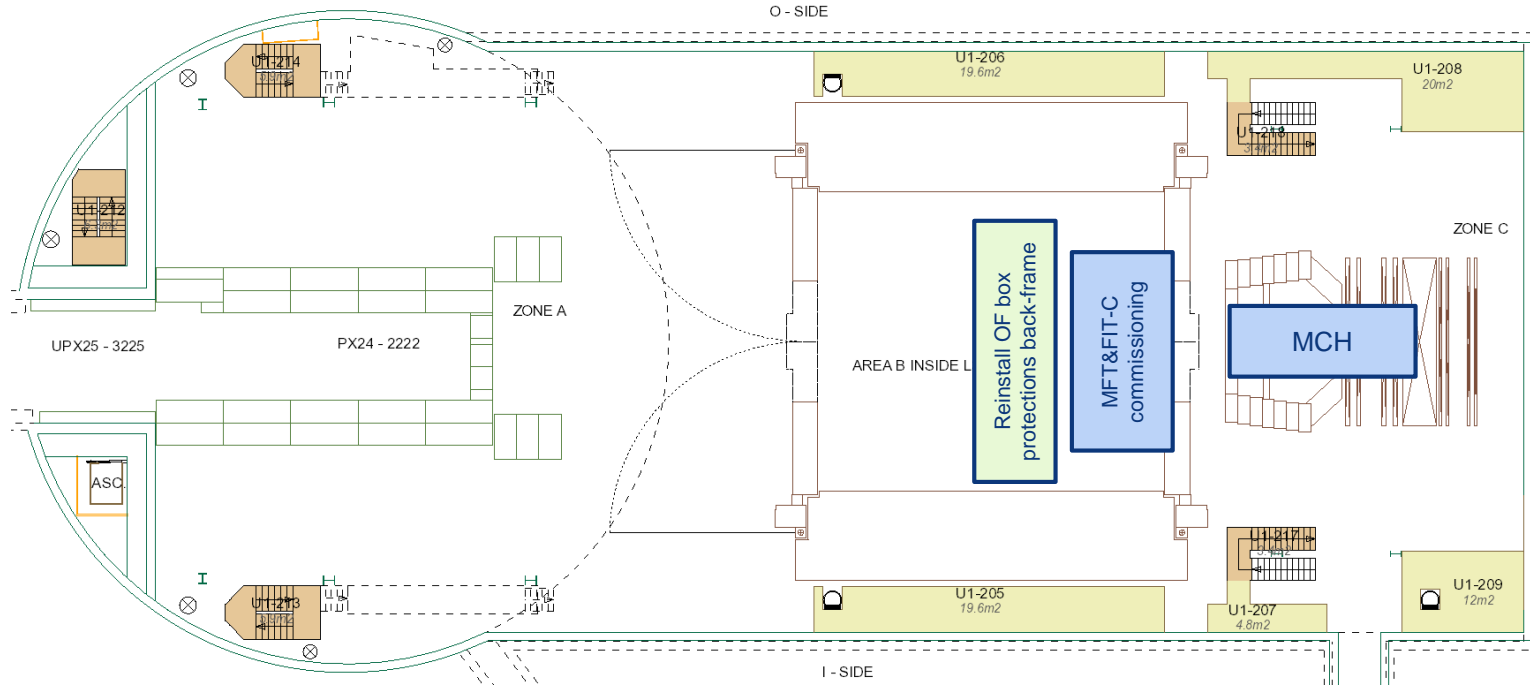
UX25 activities w50 – Wed 9 Dec 2020



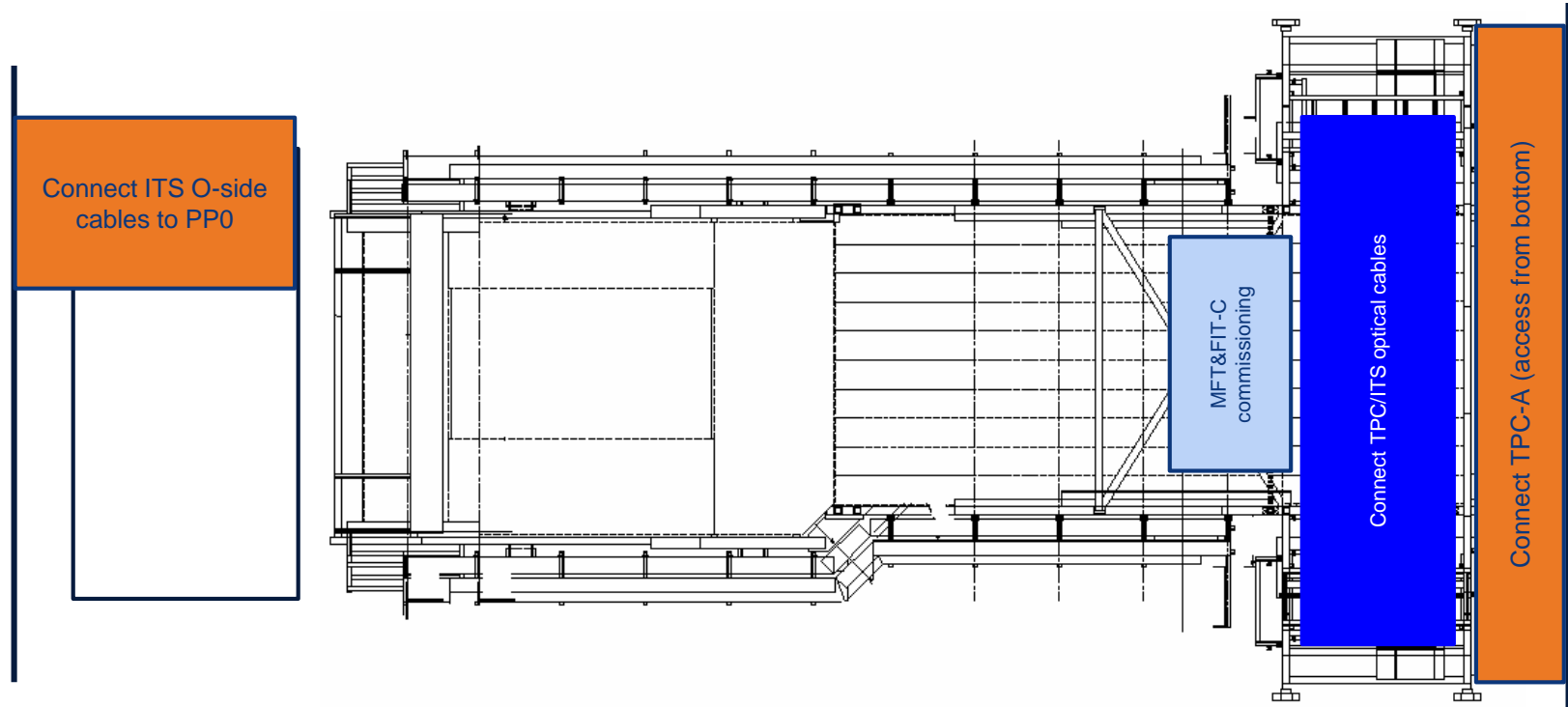
Miniframe activities w50 – Wed 9 Dec 2020



UX25 activities w50 – Thu 10 Dec 2020

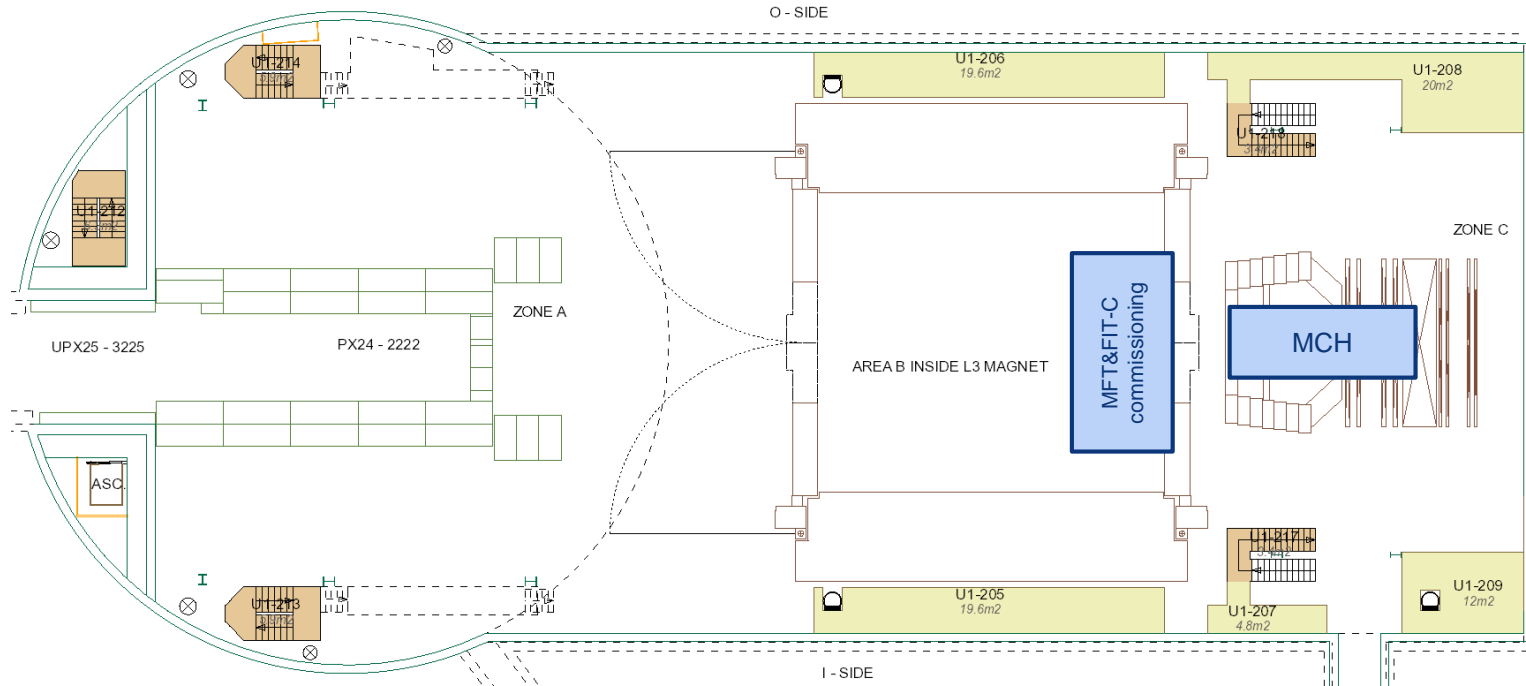


Miniframe activities w50 – Thu 10 Dec 2020



UX25 activities w50 – Fri 11 Dec 2020

Equip CR4 Y05 (MFT) with cooling manifolds (Cedric, Philippe)



Miniframe activities w50 – Fri 11 Dec 2020

