

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 sufficient and that no further attestations are necessary for travel for professional purposes.
- Please note that the **border between France and Switzerland remains open**.
- **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.

CERN access during EOY closure

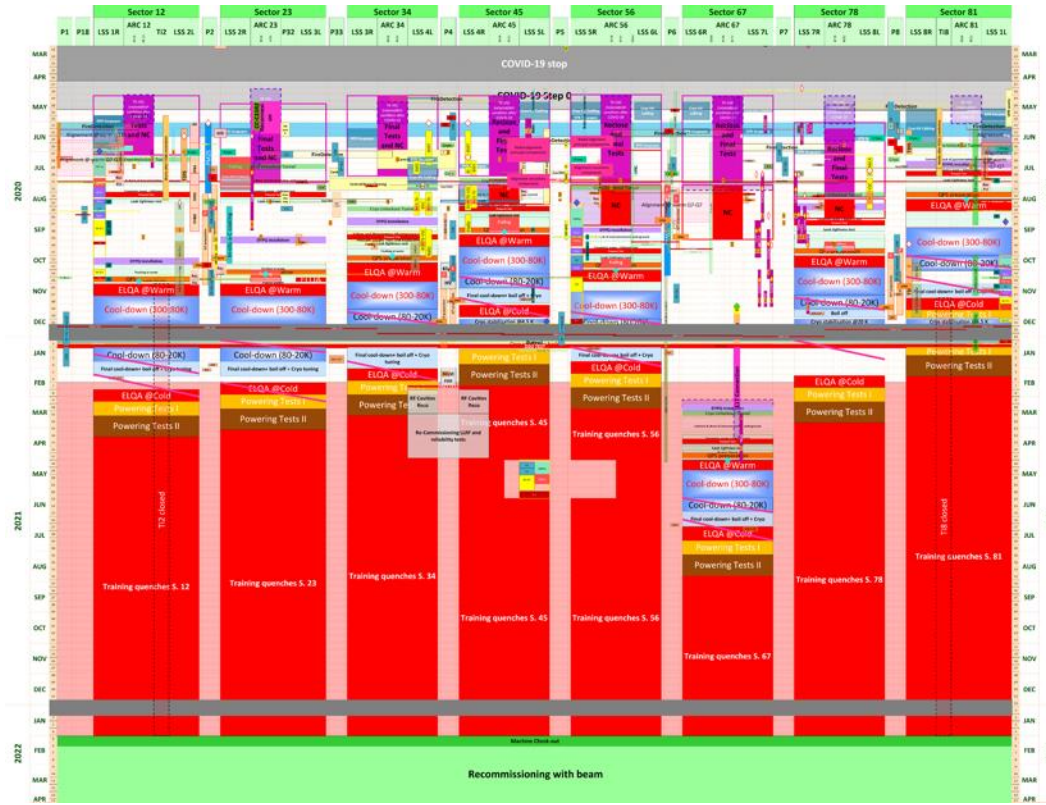
- Info here: <https://home.cern/news/official-news/cern/access-organizations-site-during-2020-end-year-closure>
- As for previous years, access to CERN sites during the annual end-of-year closure is restricted as follows:
 - The **COVID-19 related restrictions** remain applicable
 - **CERN personnel** (except contractors) shall address their requests to their department contact, who shall manage the appropriate e-group. For **ALICE** please send a request to Arturo and Werner. 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, anyone who needs to enter the CERN site for an **urgent reason** and without the prior authorization of her/his department or her/his experiment's technical coordinator will be obliged to submit an **access request in EDH** (select the "CERNXMAS*" permission) that can be signed by the Security Service or the CCC (TI) after assessing its merits.

Inspection tours during EOY closure

- There will be **regular tours** of P2 (CRs, cavern, SG, cleanroom (tbc), datacentre) and Meyrin (167/23 for ITS), every 2nd day.
Draft schedule:
 - Sat 19.12: Andre
 - Mon 21.12: Arturo
 - Wed 23.12: Andre
 - Fri 25.12: Sasha
 - Sun 27.12: Chilo
 - Tue 29.12: Chilo
 - Thu 31.12: Andre
 - Sat 02.01: Sasha
- Please contact Andre in case you want to have specific things checked.
- Other activities at P2:
 - 22/12: safety test, verification of sirens and ODH flashes
 - 31/12 (morning until 12:00): test of CSAM evacuation orders form the fire brigade station CSAM console

Status cooling and gas systems during Xmas

- Detector cooling: everything running: ITS (b.167)/ TOF / TRD / HMPID /TPC
- Gas:
 - TOF, TPC, TRD running
 - HMPID purge
 - MCH and MID stopped
 - Switch to ARCAL10 on Thursday 17/12. **No flammable gas during Xmas**
- **Please make sure to switch off as much equipment as possible before the CERN closure at the end of the year**



Optical fibers

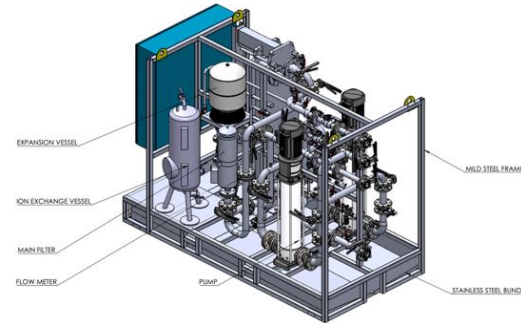
- All ITS & TPC Miniframe trunks routed to A19, connected and tested (test from CR1). Wrong installation in first instance, then corrected (M/F)
- **With the completion of the Miniframe, now all CR1-UX optical fibers are installed and tested!**
- **Thanks to Iacopo and Giuseppe for this accomplishment!**



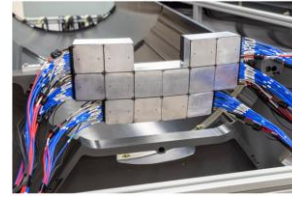
L3 doors & Magnet test



- This week we have **closed the magnet doors**, and verified that there is no mechanical interference with the Miniframe!
- The new cooling plant (EN-CV) for the L3 power converter will (hopefully) be ready by end January (w5).
- Magnet test planning:
 - w7: 15-19/2 → close and bolt both L3 doors, search inside L3
 - **w8: Mon 22/2 → ramp-up L3**
 - w8: Tue 23/2 - Thu25/2 → open both doors



FT0-C status and plans



- ✓ Detector tested in November, before transportation to P2
- ✓ Installation on Dec 1st (top half) and 3rd (bottom half)
- ✓ FT0-C fully connected (C-side patch panels)
- ✓ Optical splitter boxes installed, fibers still not connected
- ✓ Detector's integrity tested after installation (measuring impedance of each channel). Found one broken SMA connector on signal cable (118 cables in tot)
- ✓ **14 Dec – FIT Electronics PRR completed**
 - 14 PM units for FT0 will be assembled by mid-January 2021
 - FT0 PM units tested and calibrated February - March 2021
- Jan 2021: installation of FIT VME crates in rack C34
- Feb 2021: DCS tests; work at Point 2 with at least 2 PM and 1 TCM module
- Q1 2021: assembly of FT0-A (traveling schedule and availability of DSF clean room have to be synchronized)

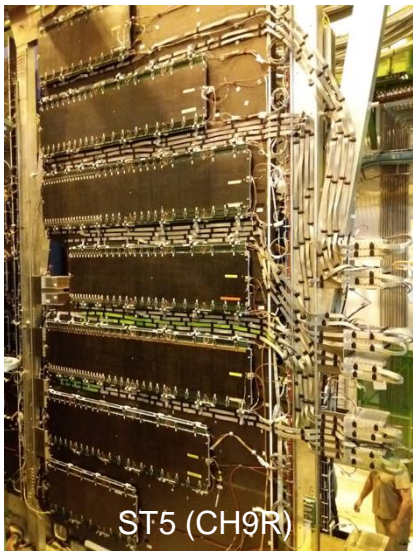


C-side patch panel (1 out of 4)

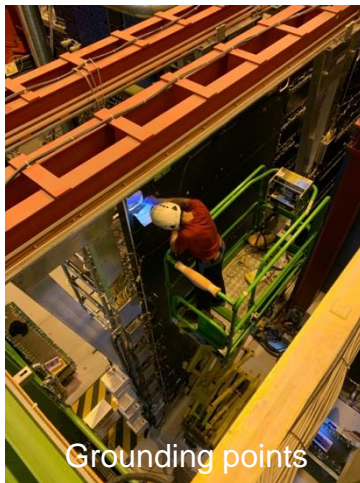


Splitter box (1 out of 2)

MCH status



ST5 (CH9R)



Grounding points



Electronics installation



- Remaining work on **ST5**:
 - Remove detectors from support panels
 - Install new electronics and SOLAR boards
 - Ground support panel (holes)
 - Route cables and optical fibers

- CH9R is at 80% of completion (started Dec 1st)
- CH10R: 04/01 to 22/01
- CH09L: 25/01 to 12/02
- CH10L: 15/02 to 05/03

} **Completion by end February**

- **2 technicians (COMSA) are helping since Dec 1st. They are booked until end February.**

- **ST1 plan:**
 - The quadrants of ST1 will arrive @ CERN 1st week of January (+ quadrant spare to be tested in X-Ray)
 - Mechanical installation in the 2nd week
 - Start cabling LV on 3rd week

Delivery EPN servers



1 truck with 93 servers (31 pallets) arrived yesterday

Other 2 trucks will arrive today, with 117 servers in total (39 pallets)

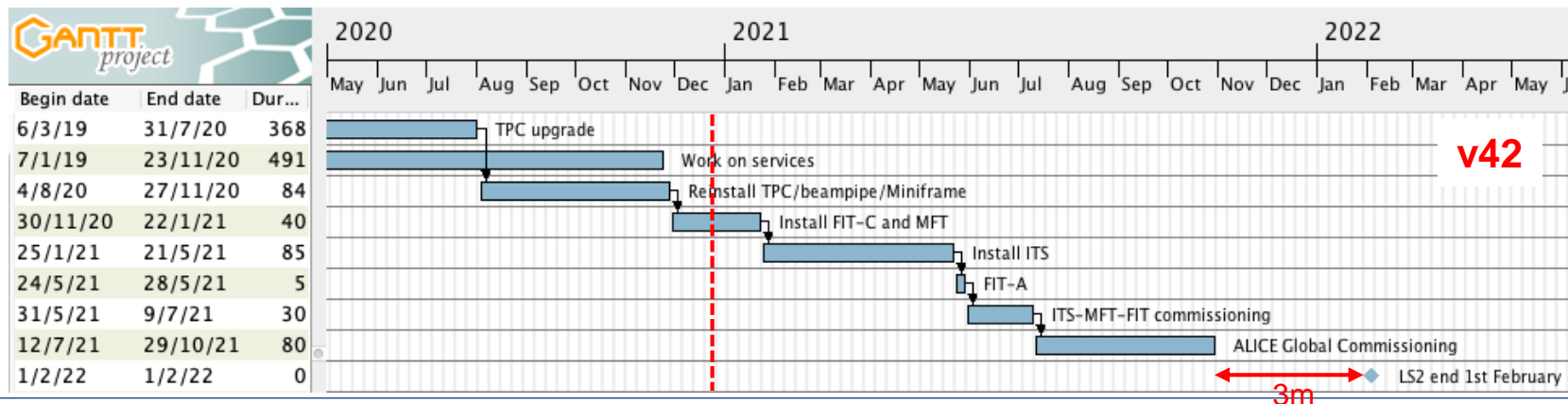
Unload directly at P2 (SX2)

The last 40 servers (14 pallets) will be delivered in January

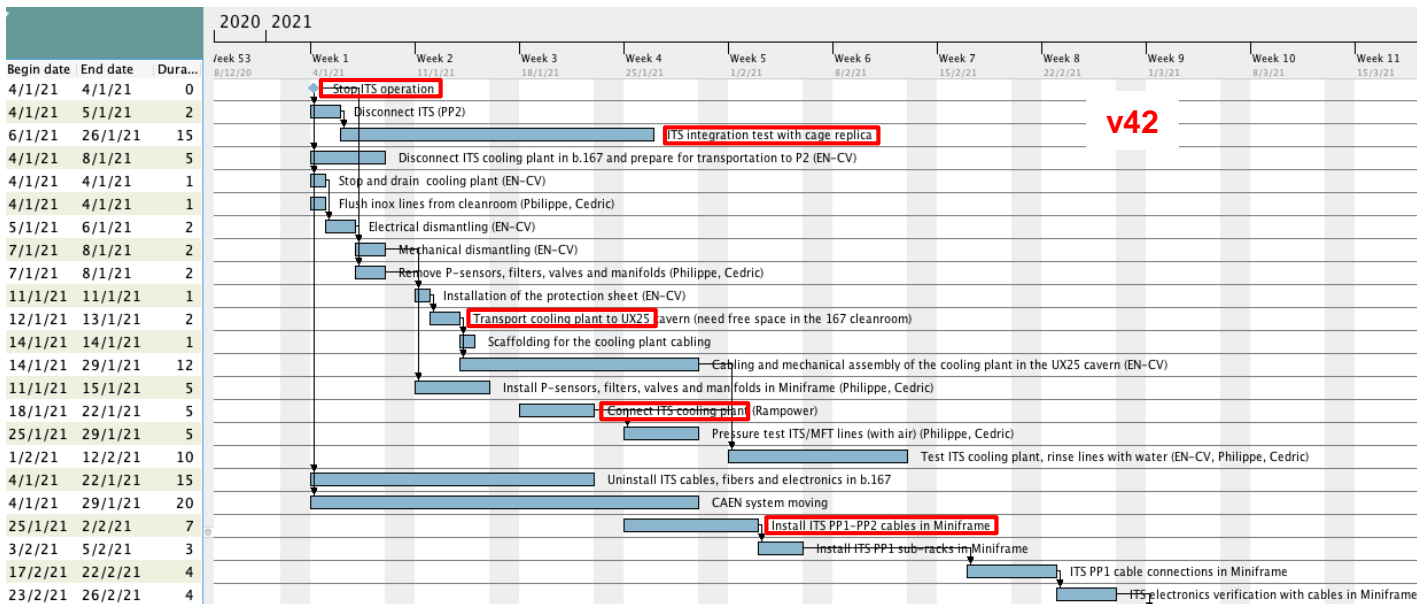
Installation in CR0 in w1, from January 4th

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



Detailed ITS moving plan (Jan & Feb 2021)



v42

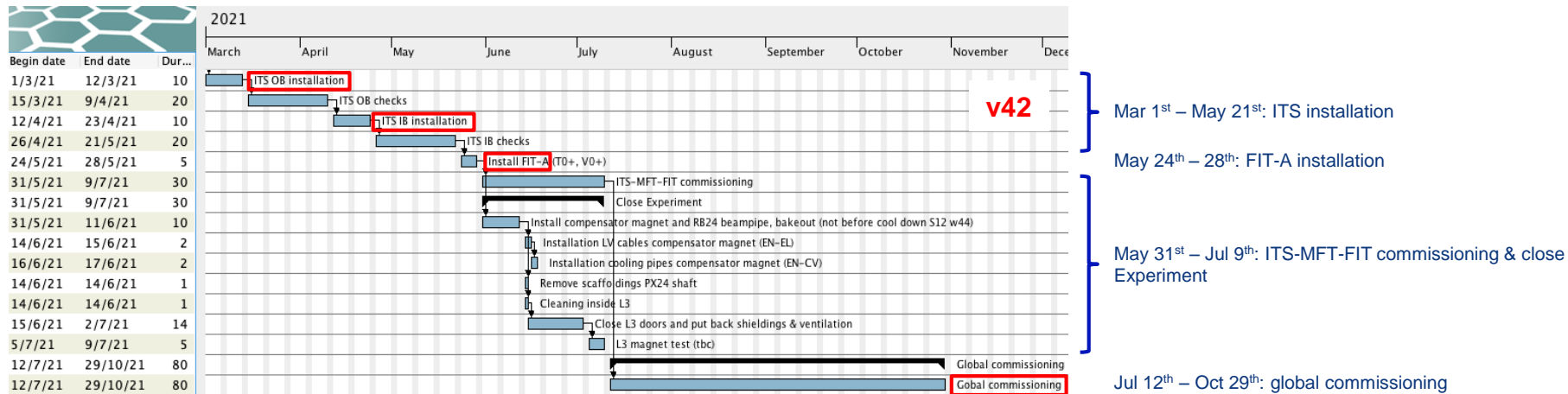
Jan 4th : stop ITS operation in b.167

Jan 4th – 13th: transfer ITS cooling plant from b.167 to P2

Jan 14th – Feb 12th: connect and test ITS cooling plant

Jan 4th – Feb 26th: transfer cables, fibers and electronics to P2

ITS & FIT-A installation, close Experiment, global commissioning



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 → done
- Complete **TPC BNC** (laser) cables (back-frame and laser-hut) → done
- Install cable trays for ITS cooling plant → done
- 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
- Unfold and connect **ITS** and **TPC** trunk cables and install 2 conventional cables for direct trigger **CTP-ITS** → done
- Installation 3 **FDD** optical cables → January/February (date tbc)

• Cooling:

- **ITS/MFT/TPC**: connections between Miniframe and PP0 → done
- **MFT**: water circulating inside crates – some leaks on detector lines fixed this week
- **TPC**: res.rods hoses installed this week
- 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)
- **192 have been processed (100%)**

• Rack turbines replacement:

- 80 units in total. 40 units already delivered to SX2, rest early next year
- Replacement next year, without cutting the power in the rack

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

LHC sector test 2021

- **SPS extraction and transfer line DSO test**
 - Fri 19 Mar (reserve Sat 20 Mar) → **No access UX25** (ALICE closed Thu 18 Mar evening)
- **LASS test**
 - Fri 4 Jun → **No access to UX25** (ALICE closed Thu 3 Jun evening)
- **Beam DSO test**
 - Fri 18 Jun → **No access to UX25** (ALICE closed Thu 17 Jun evening)
- **Sector test (beam through ALICE)**
 - Last week Sept (weekend w39-40) → **LHC closed**

Day-by-day sequence w51



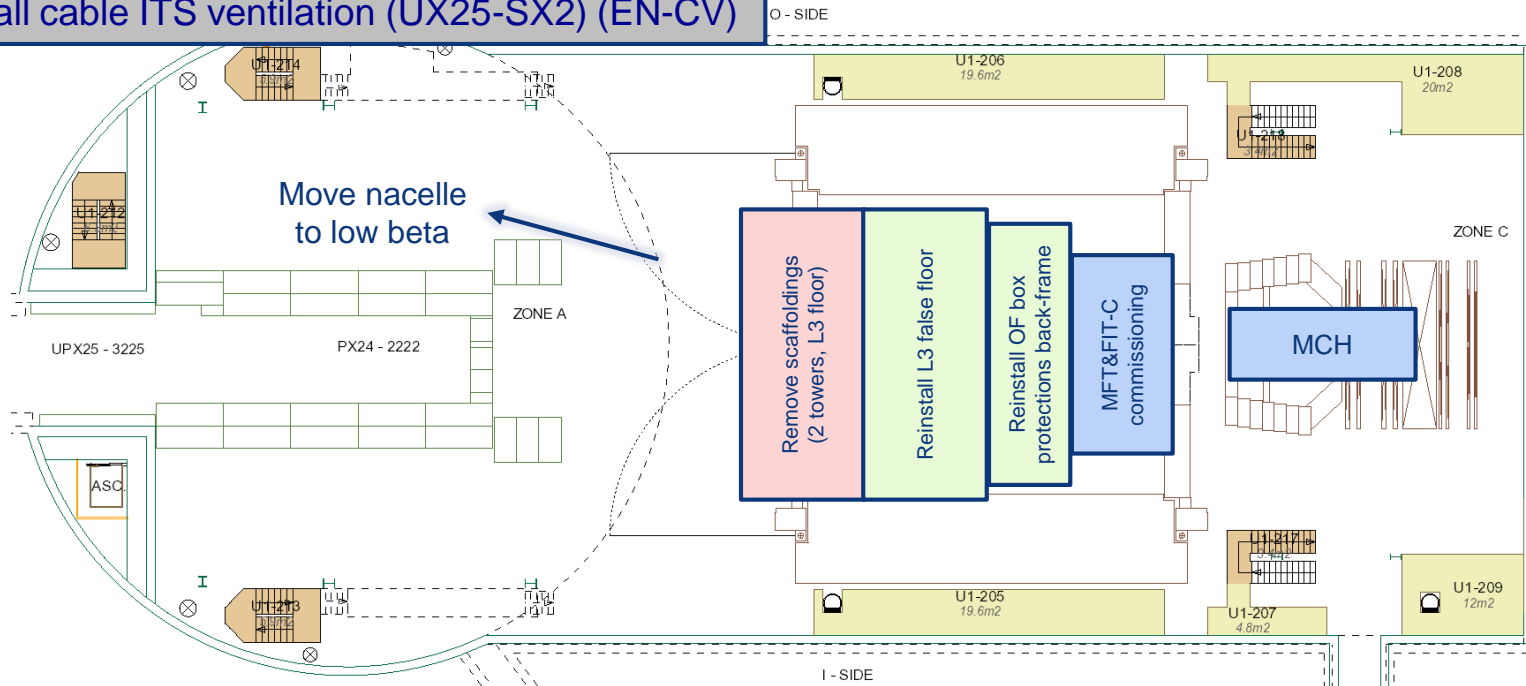
UX25 activities w51 – Mon 14 Dec 2020

Network intervention in SXL2 (replacement of a switch in one of the starpoints)

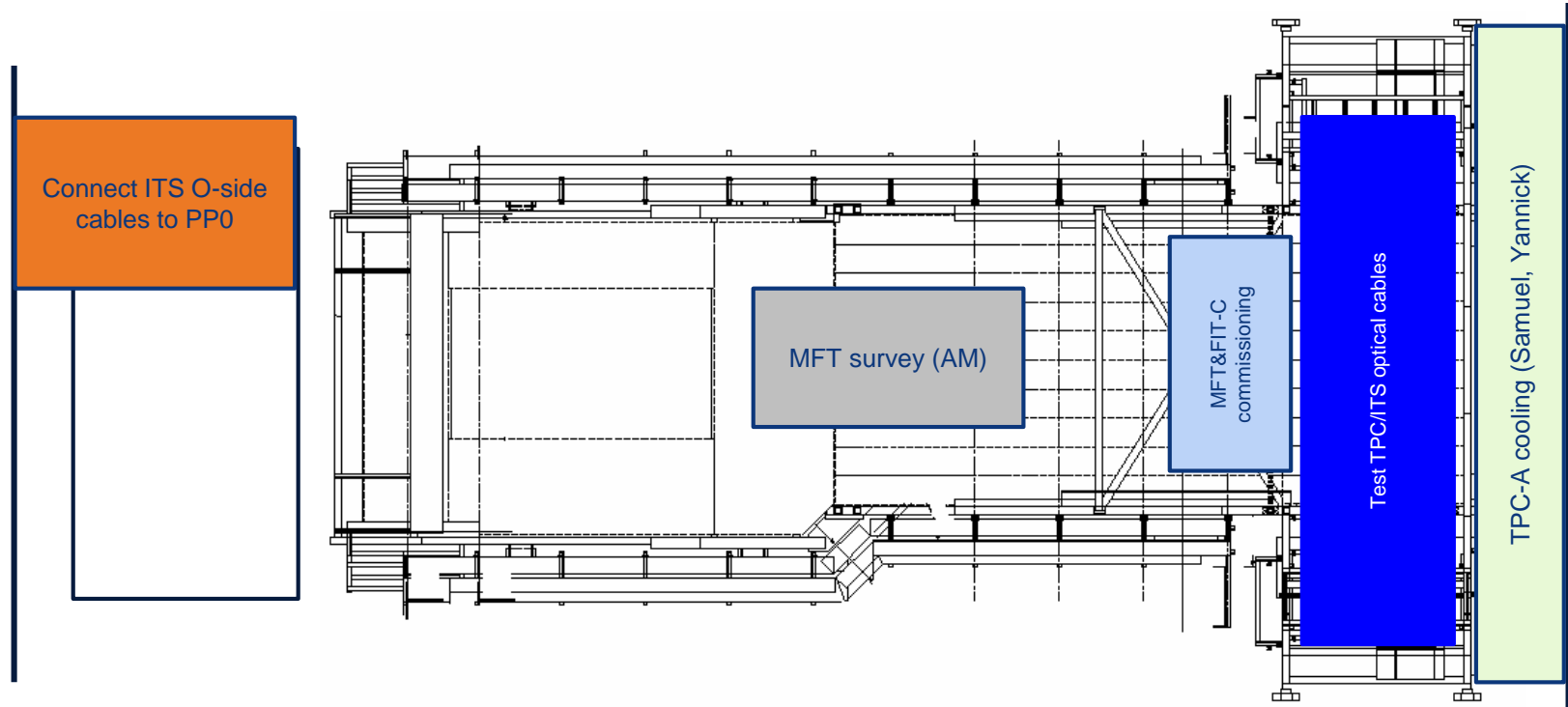
Test ITS cables PPA-PP1 (whole week)

CR0: commissioning T interlock (DCS)

Install cable ITS ventilation (UX25-SX2) (EN-CV)

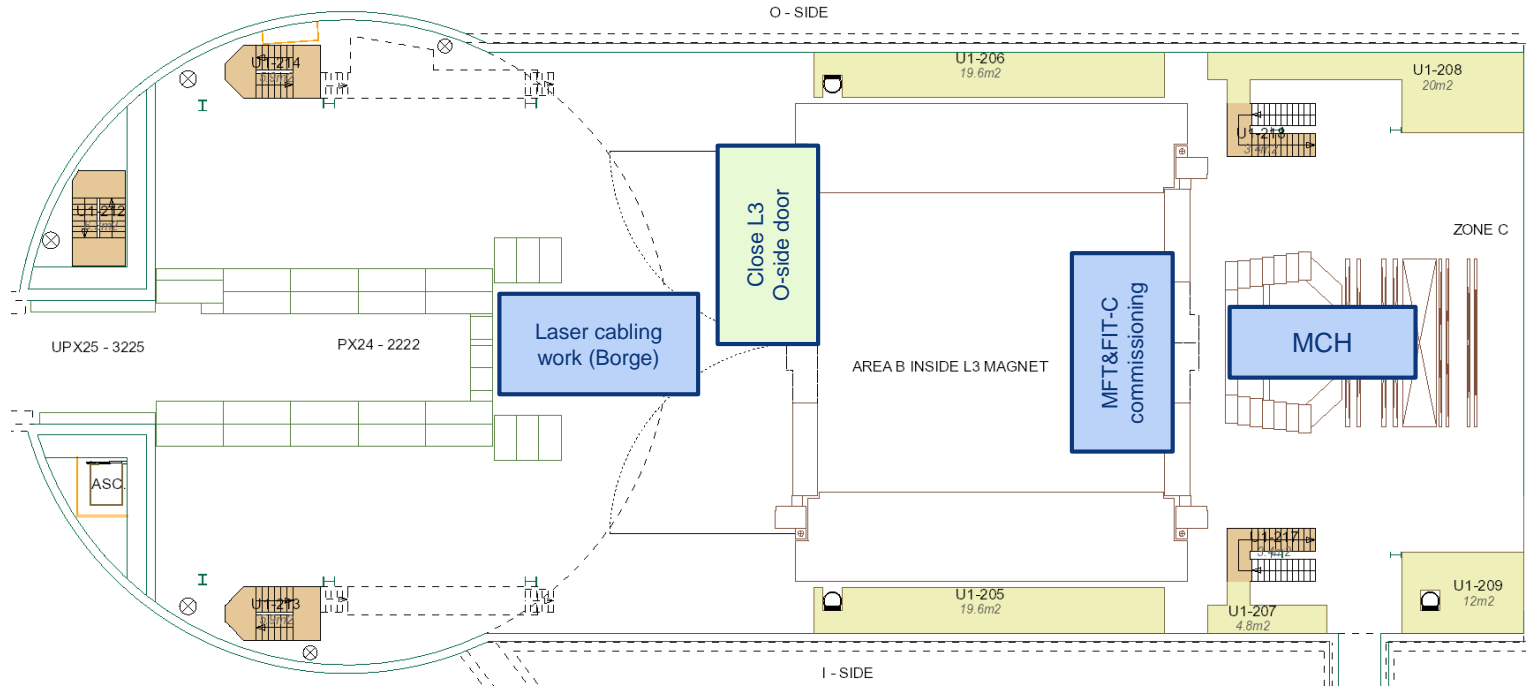


Miniframe activities w51 – Mon 14 Dec 2020

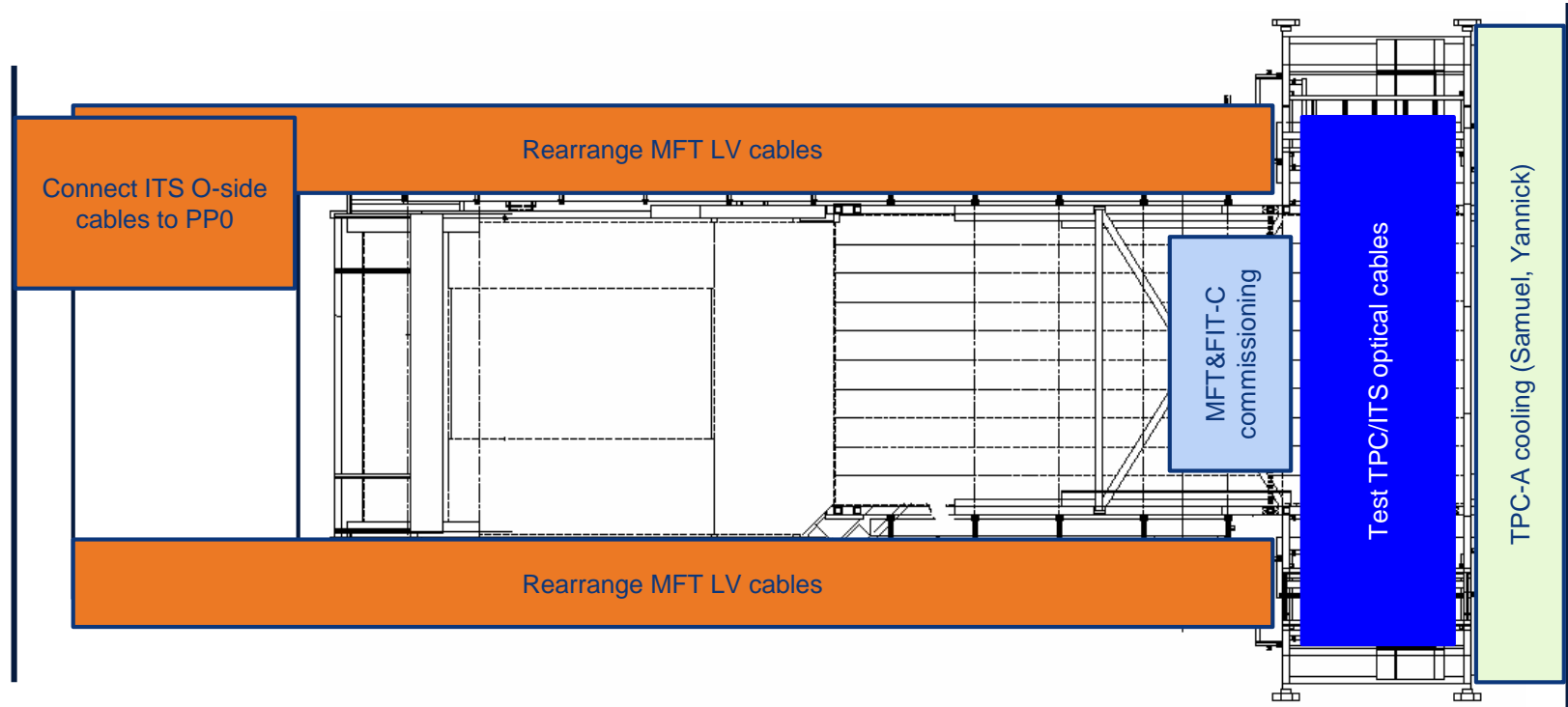


UX25 activities w51 – Tue 15 Dec 2020

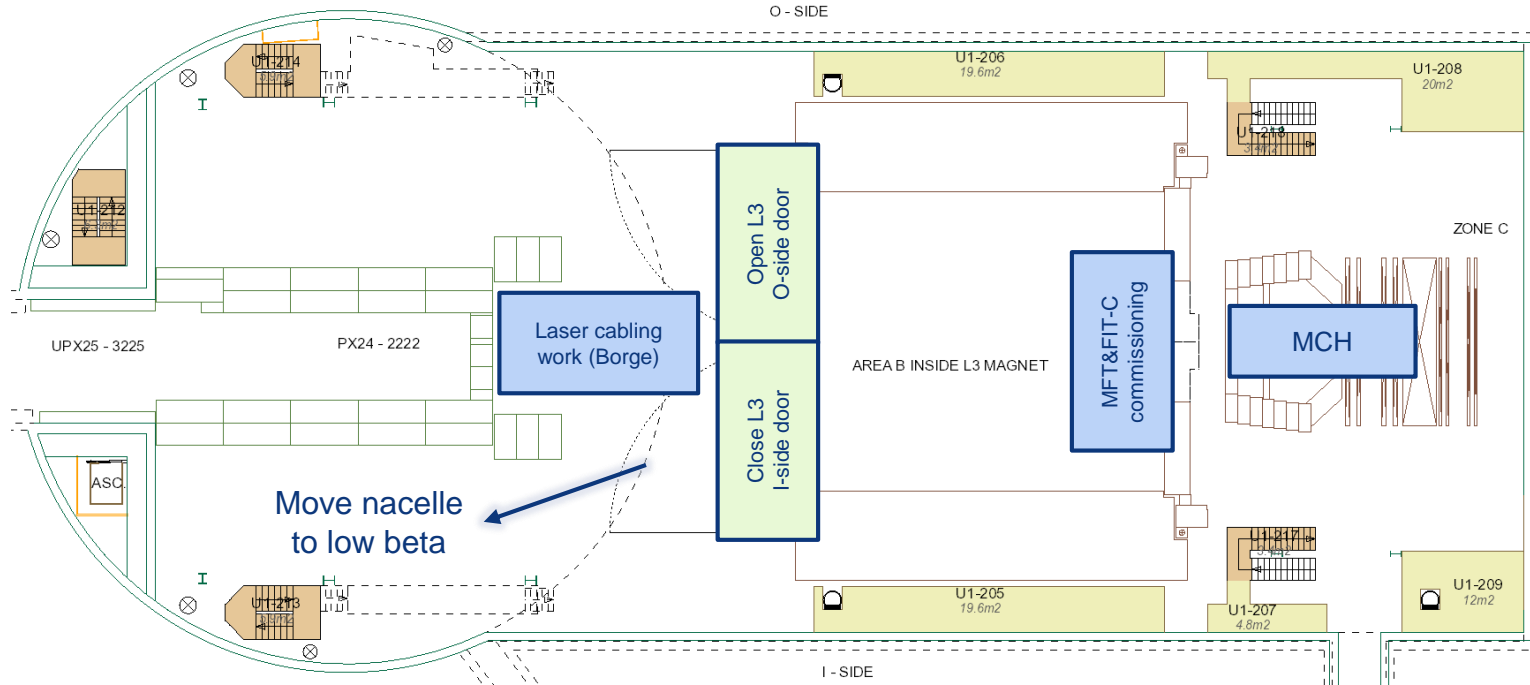
Cleaning cavern (Topnet): 13:00 to 15:00



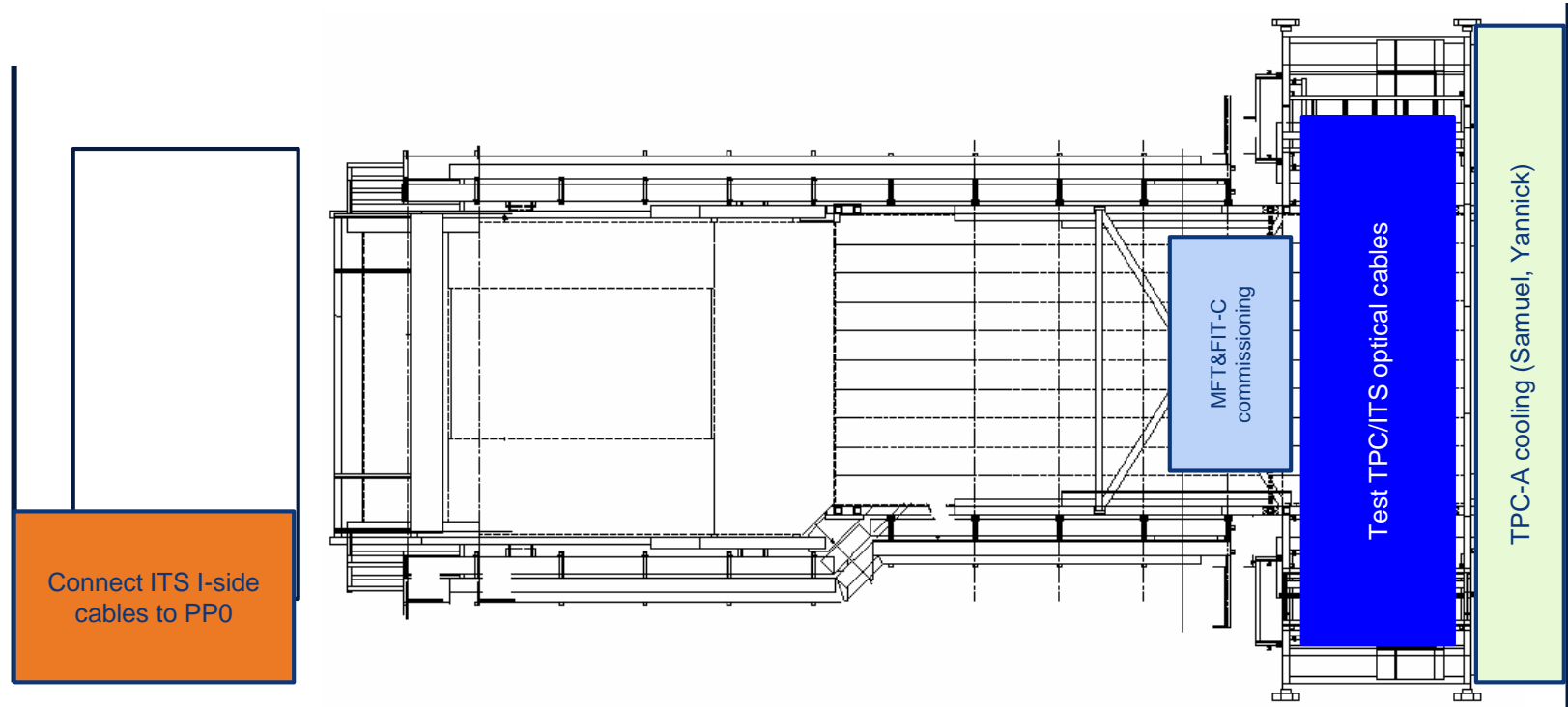
Miniframe activities w51 – Tue 15 Dec 2020



UX25 activities w51 – Wed 16 Dec 2020



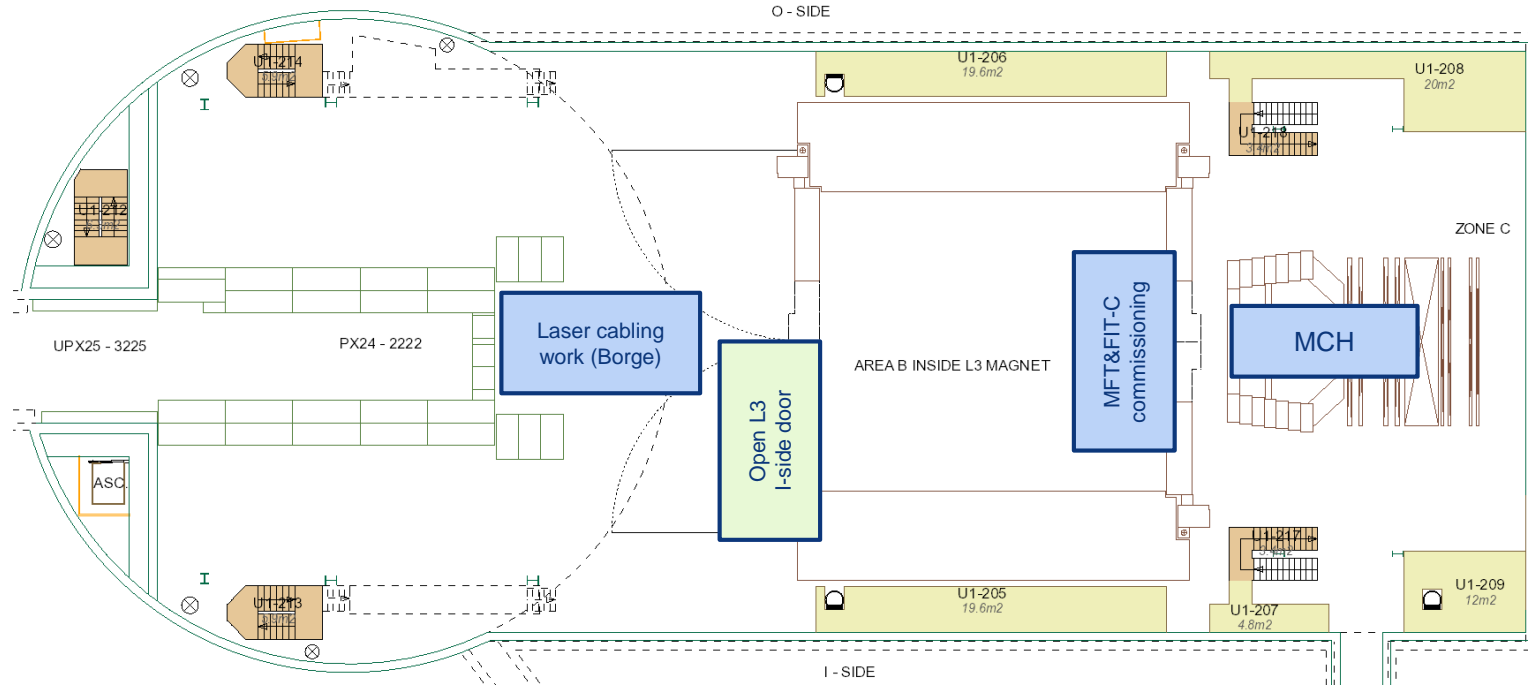
Miniframe activities w51 – Wed 16 Dec 2020



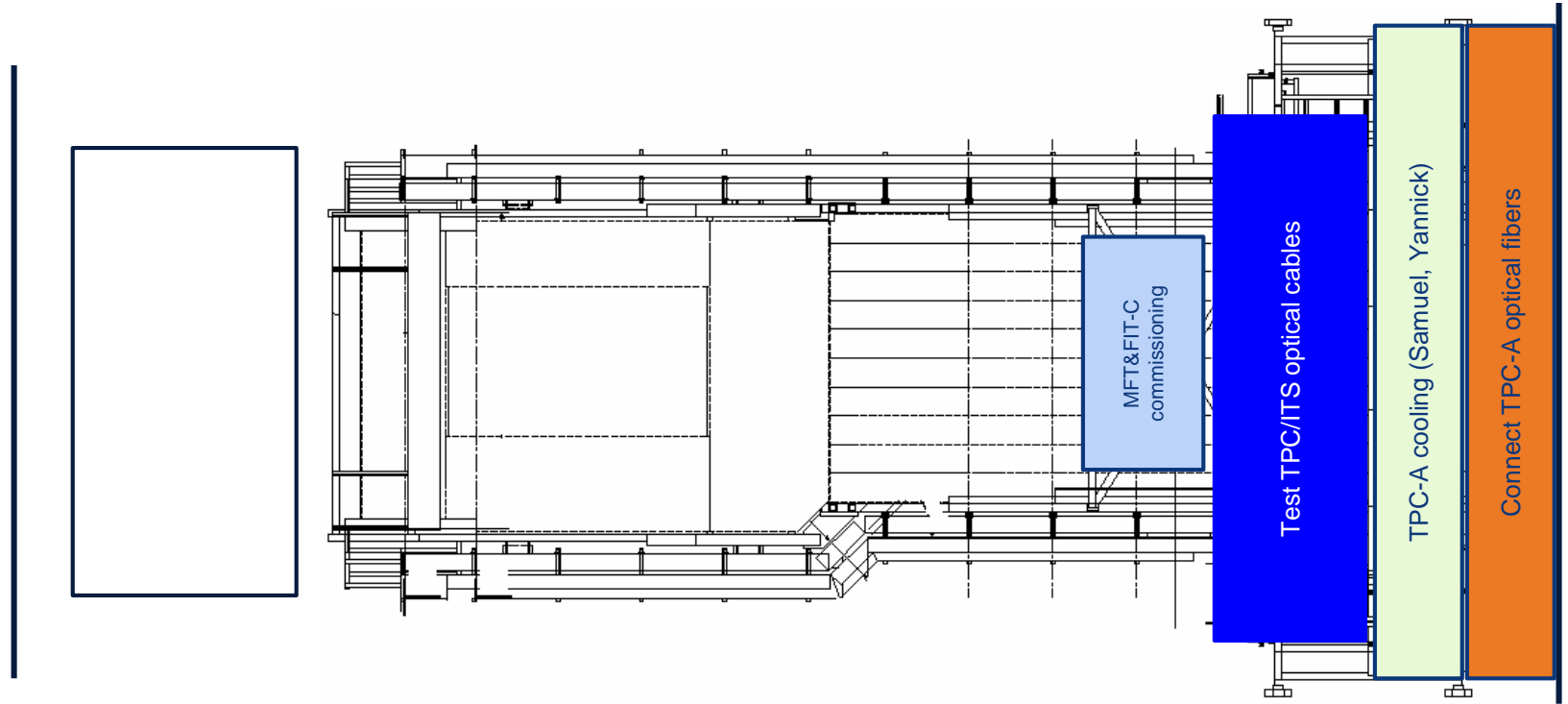
UX25 activities w51 – Thu 17 Dec 2020

Switch to ARCAL10 (switch back to ARCAL15 on January 4th)

1st delivery EPN servers (storage inside SX2)

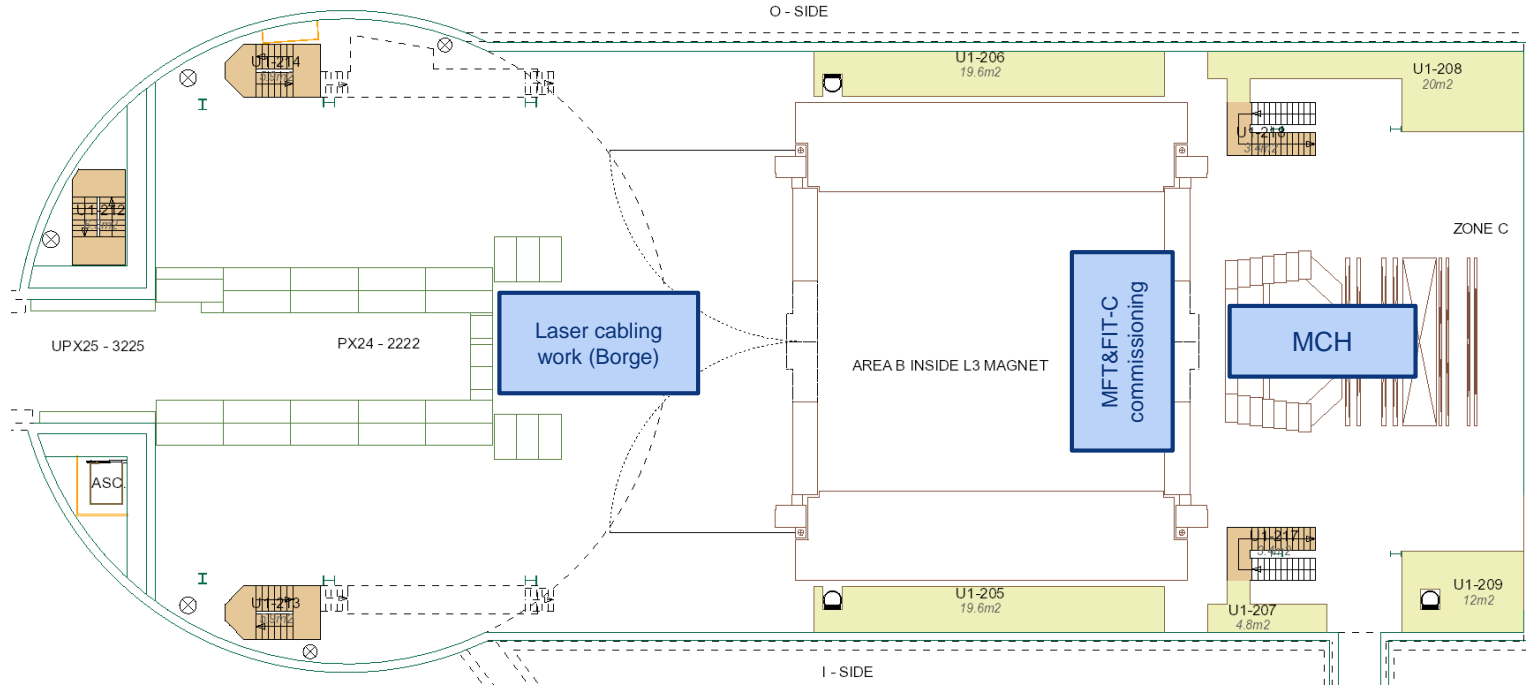


Miniframe activities w51 – Thu 17 Dec 2020

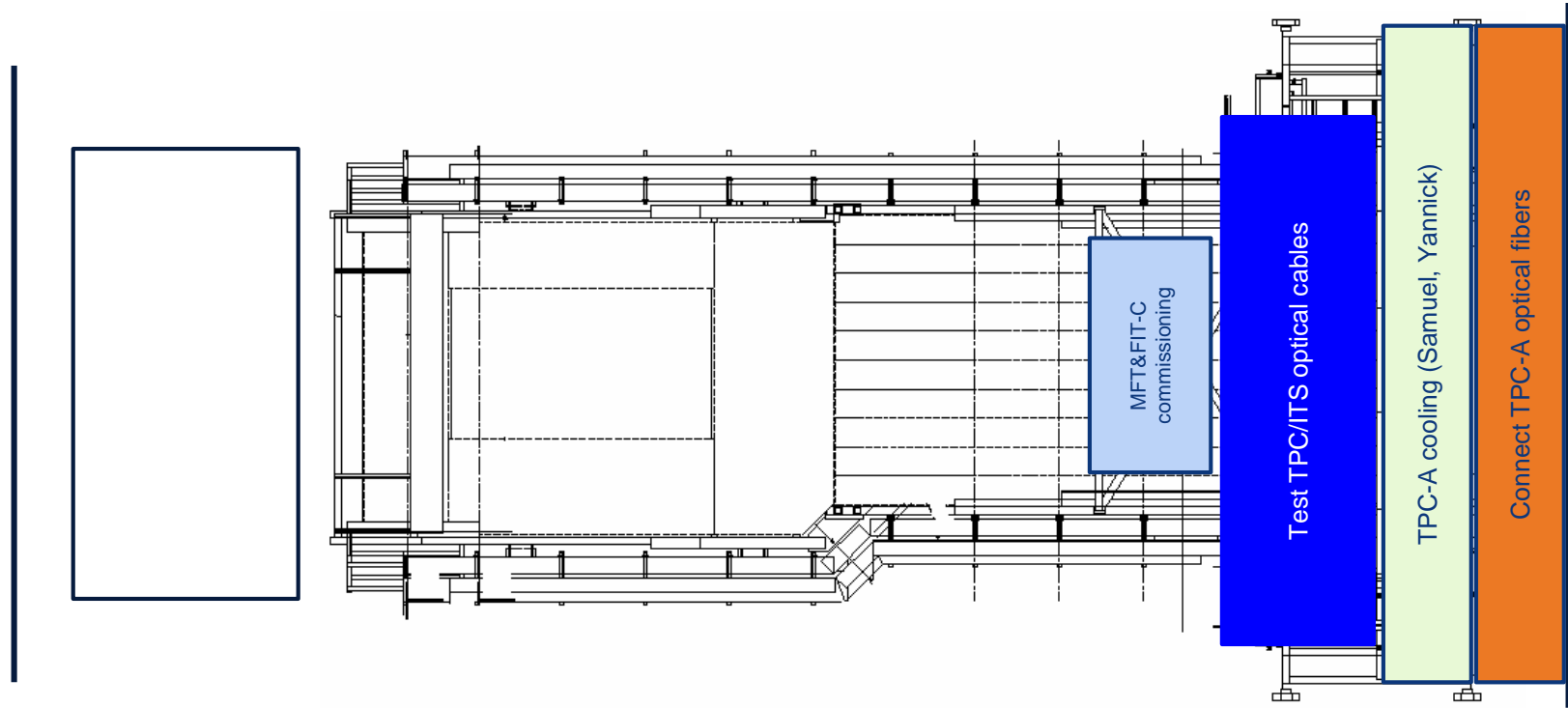


UX25 activities w51 – Fri 18 Dec 2020

2nd and 3rd delivery EPN servers (storage inside SX2)



Miniframe activities w51 – Fri 18 Dec 2020



Day-by-day sequence w1 2021



UX25 activities w1 – Mon 4 Jan 2021

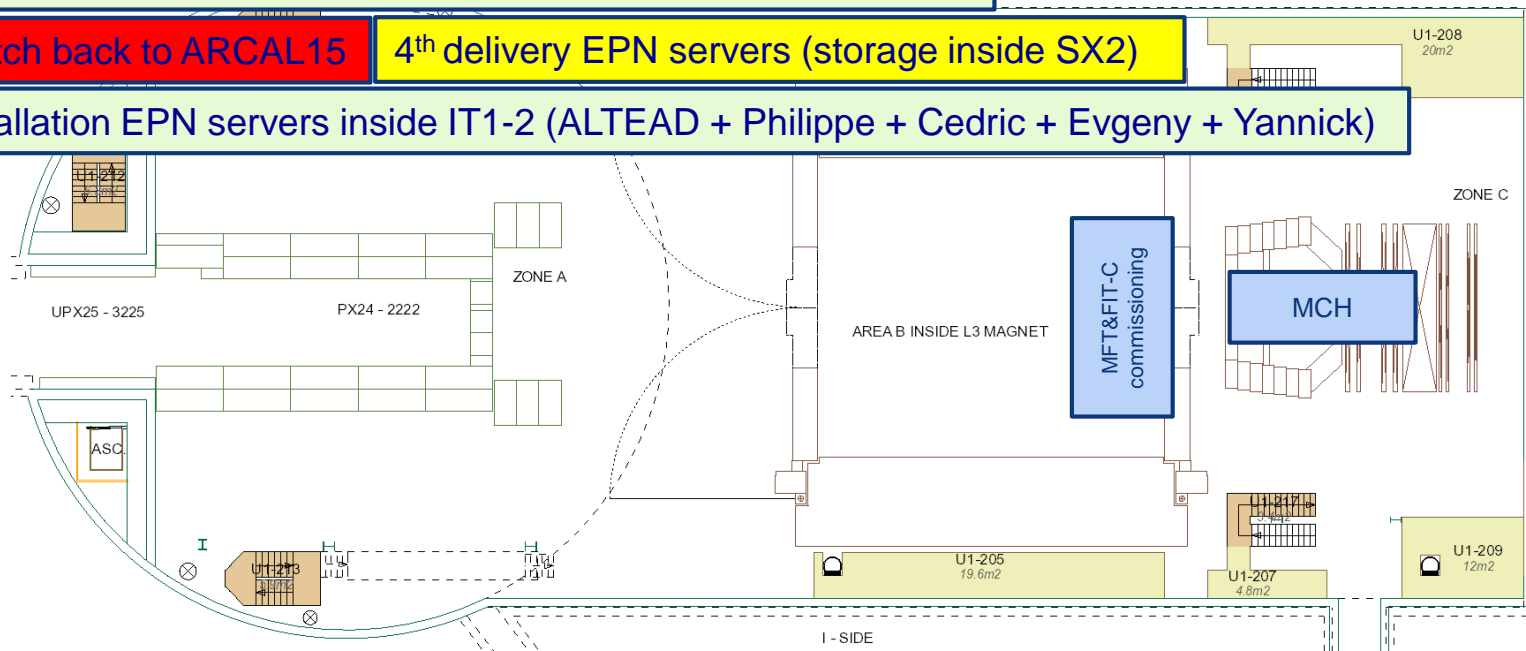
Stop ITS operation in b.167. Uninstall ITS cables, fibers and electronics in b.167 (ITS, whole week)

Stop ITS cooling plant in b.167: open lines, drain water, disconnect lines (EN-CV)

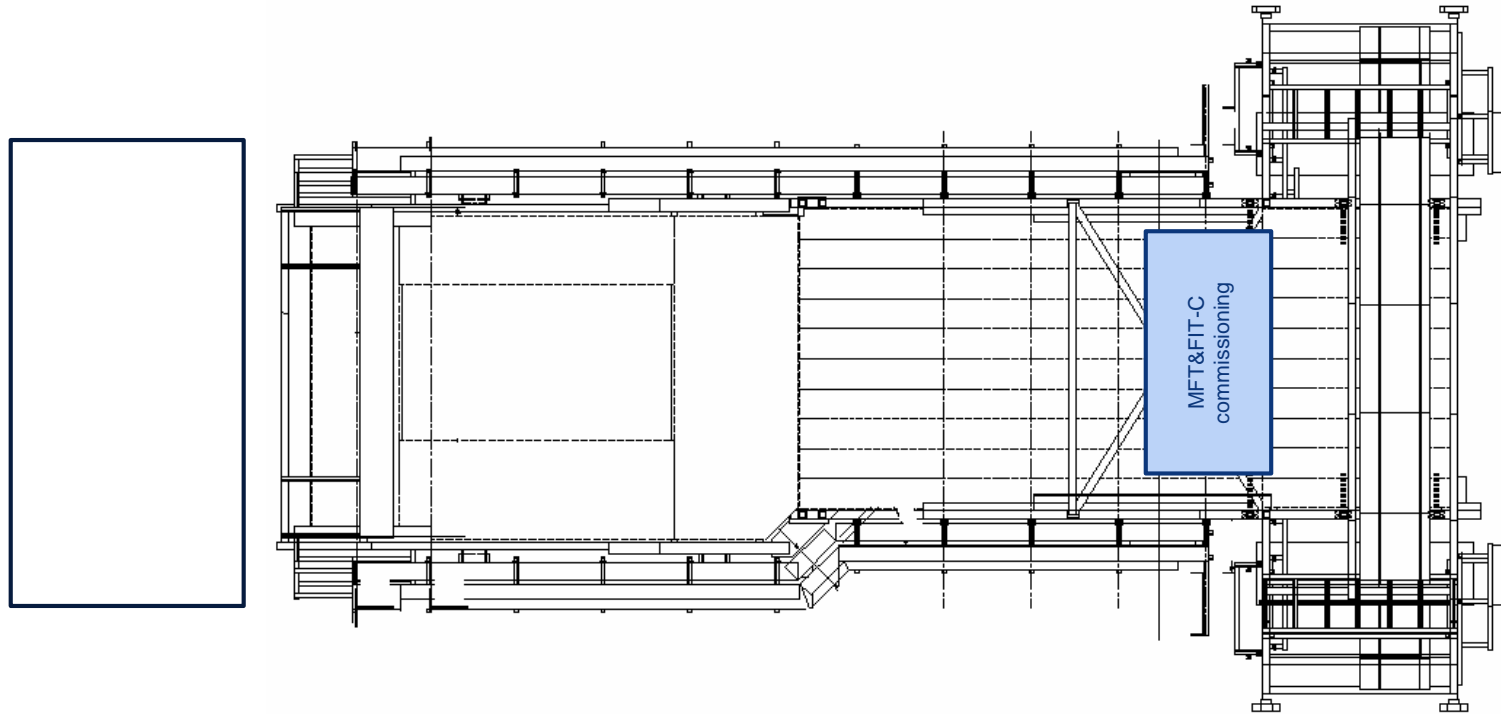
Flush ITS inox lines from cleanroom in b.167 (Philippe, Cedric)

Switch back to ARCAL15 4th delivery EPN servers (storage inside SX2)

Installation EPN servers inside IT1-2 (ALTEAD + Philippe + Cedric + Evgeny + Yannick)



Miniframe activities w1 – Mon 4 Jan 2021

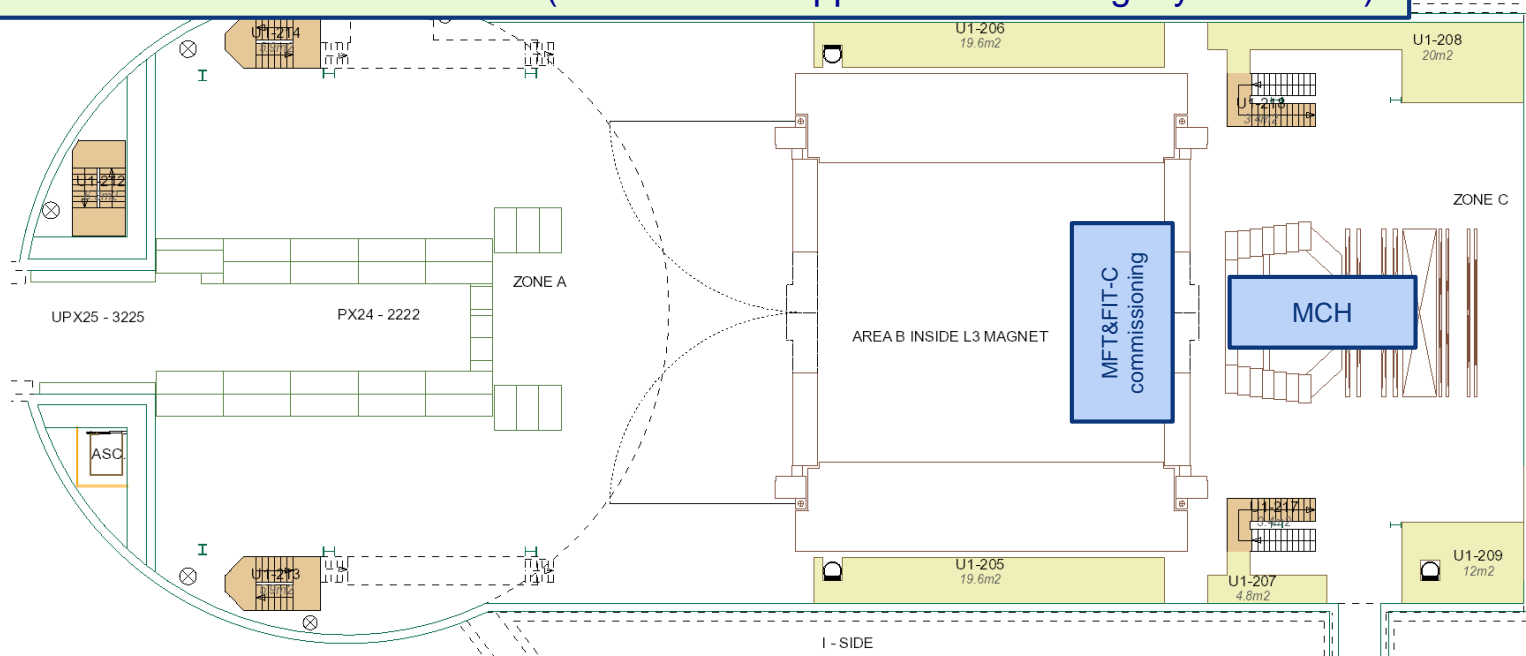


UX25 activities w1 – Tue 5 Jan 2021

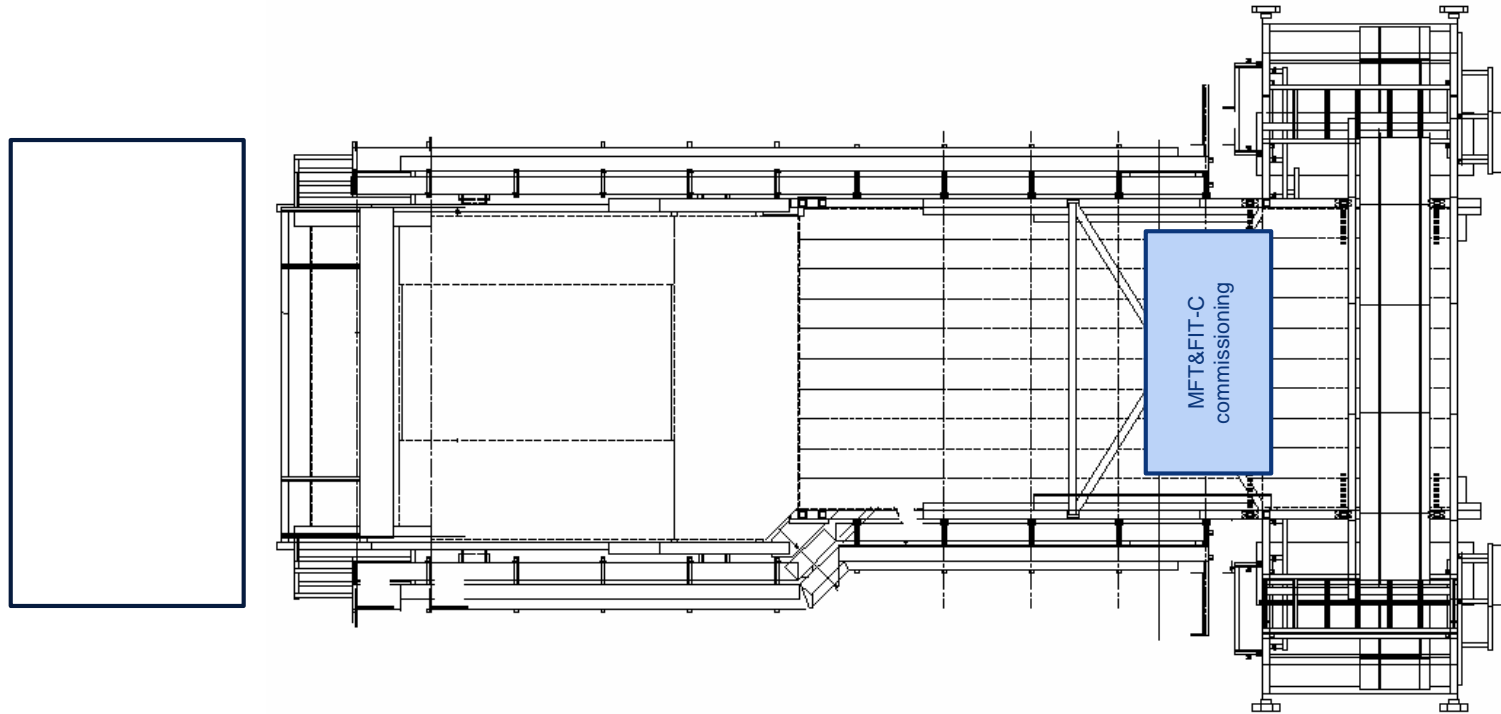
Cleaning cavern (Topnet): 13:00 to 15:00

Electrical disconnection ITS cooling plant in b.167 (EN-CV)

Installation EPN servers inside IT1-2 (ALTEAD + Philippe + Cedric + Evgeny + Yannick)



Miniframe activities w1 – Tue 5 Jan 2021



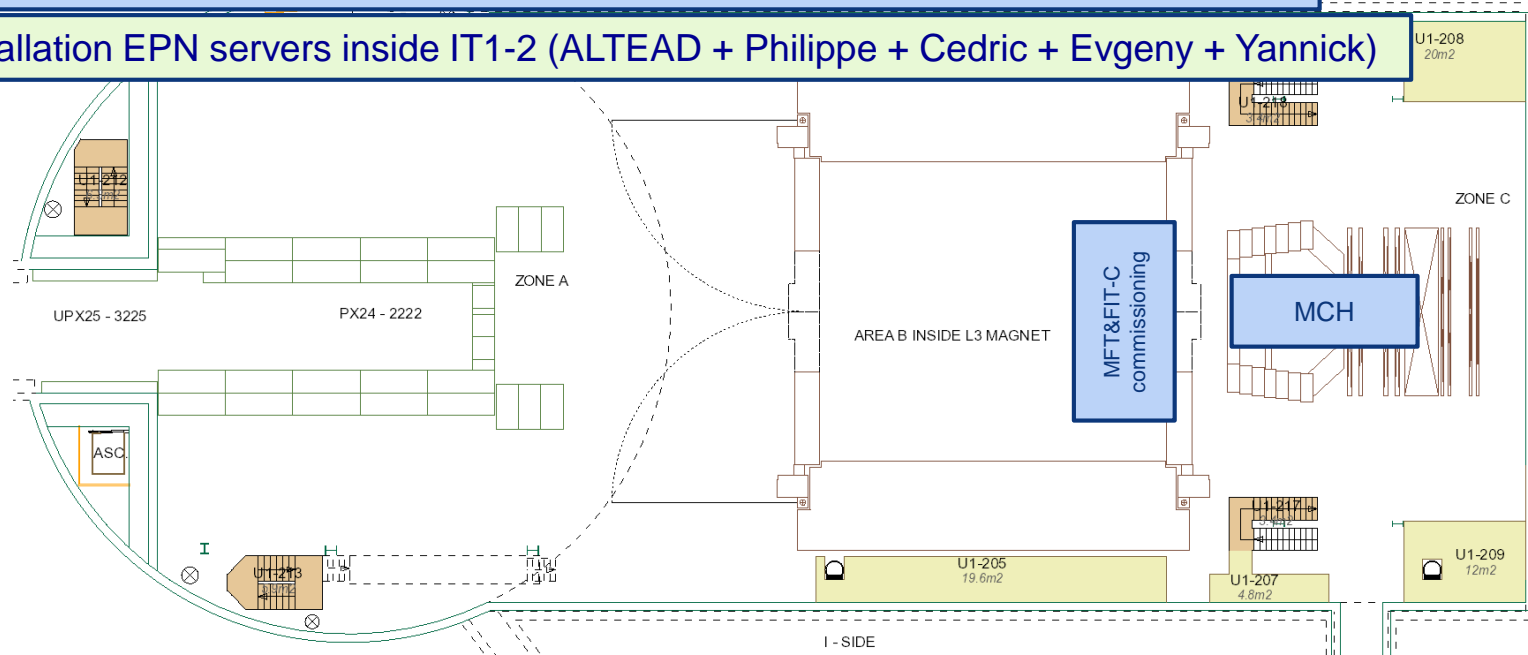
UX25 activities w1 – Wed 6 Jan 2021

Electrical disconnection ITS cooling plant in b.167 (EN-CV)

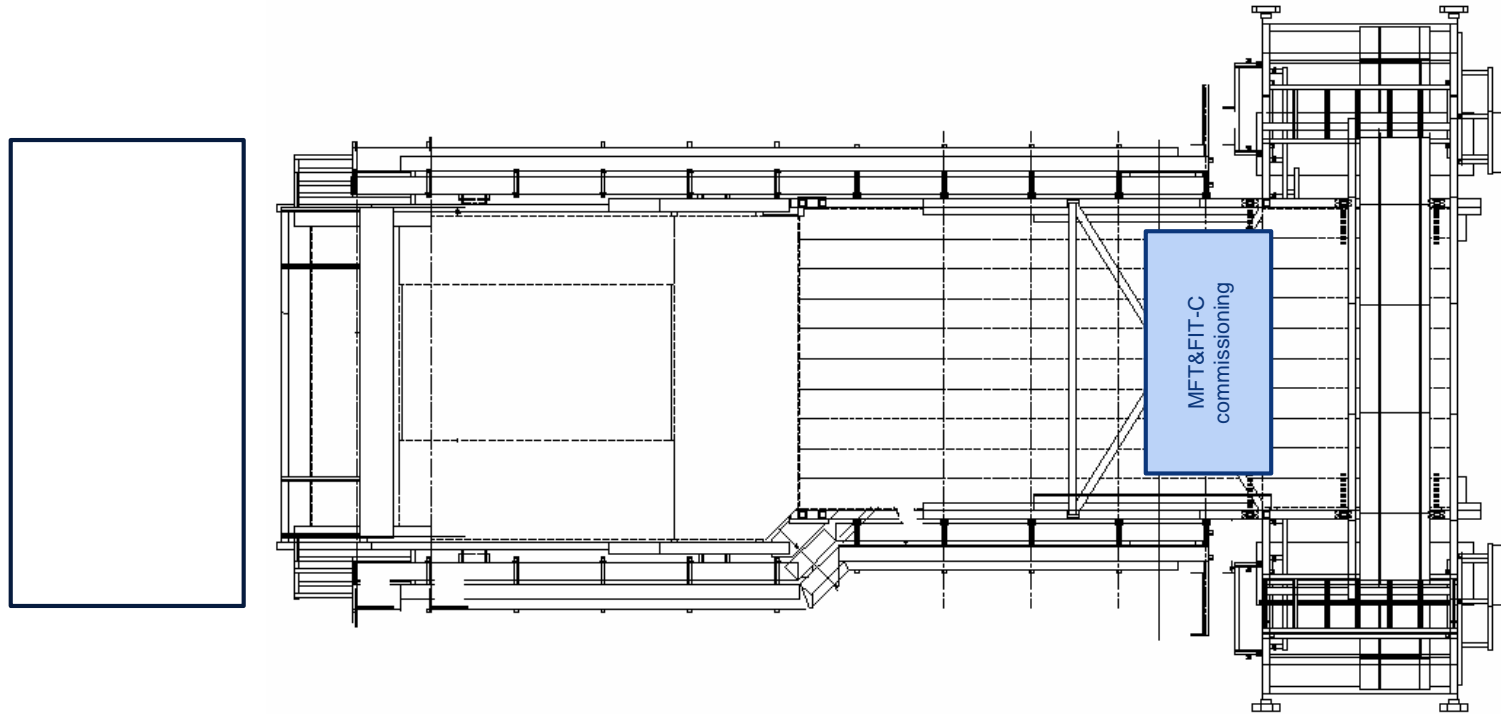
Start ITS integration test with cage replica in b.167

Delivery to P2 4 quadrants MCH ST1, transport boxes to O-side (ALTEAD, 15:00)

Installation EPN servers inside IT1-2 (ALTEAD + Philippe + Cedric + Evgeny + Yannick)



Miniframe activities w1 – Wed 6 Jan 2021



UX25 activities w1 – Thu 7 Jan 2021

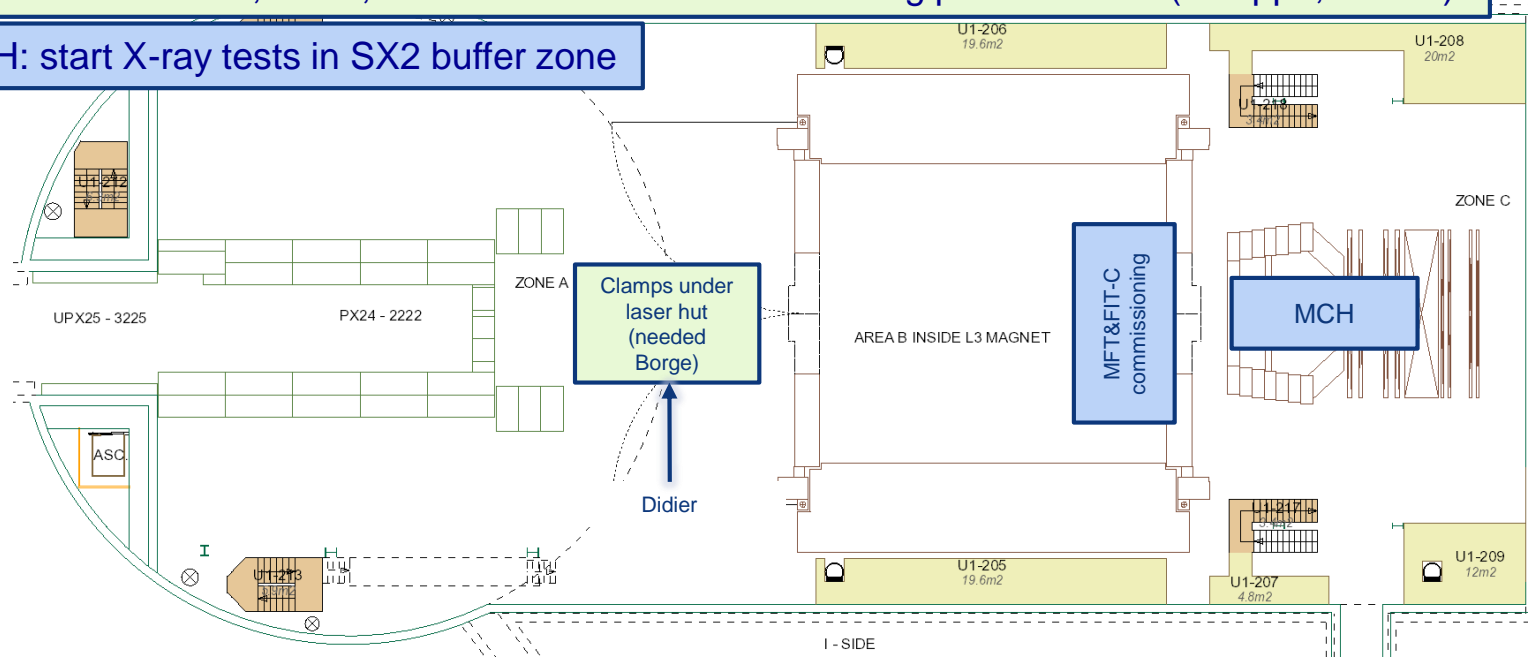
Inspection lifting systems (HSE + ALTEAD)

VIC ST1 installation

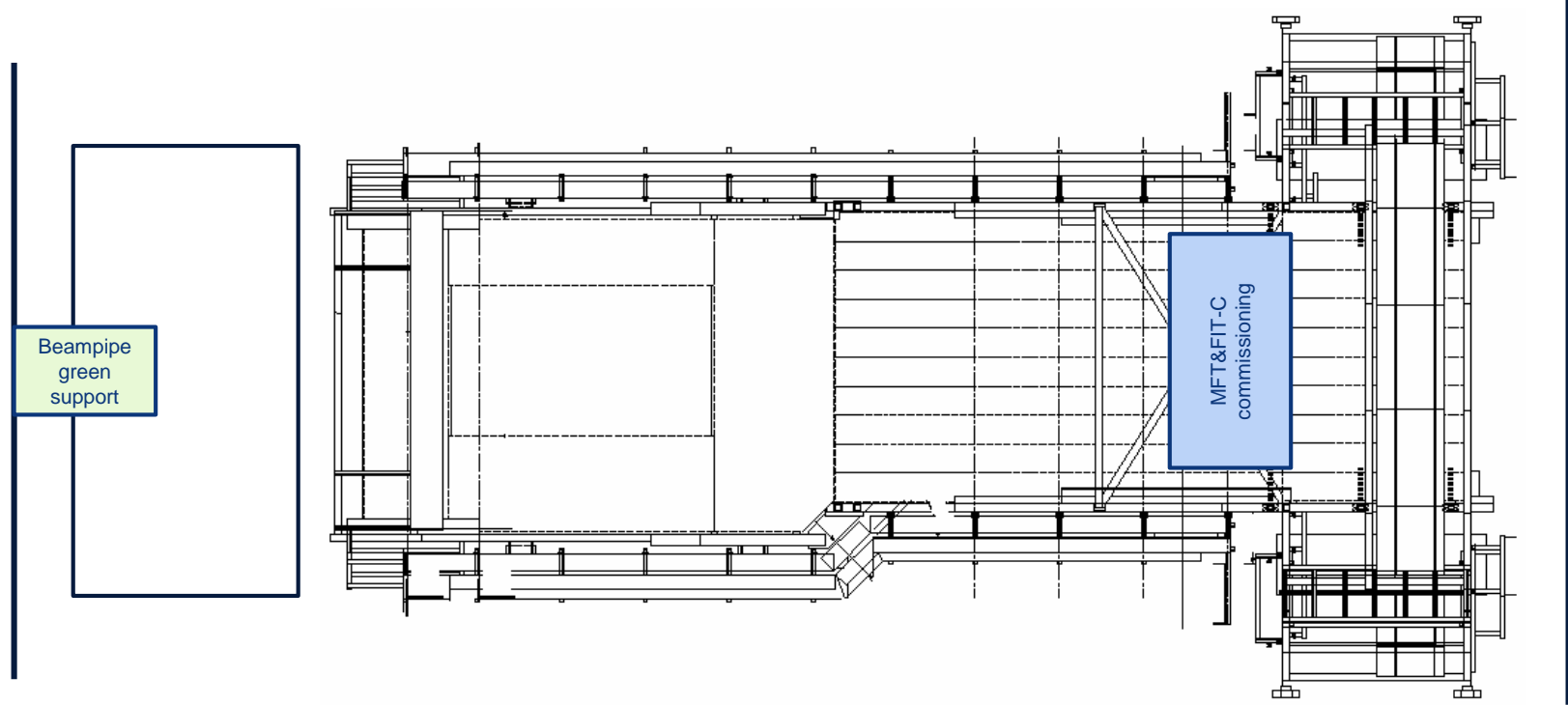
Mechanical disconnection ITS cooling plant in b.167 (EN-CV)

Remove P-sensors, filters, valves and manifolds ITS cooling plant in b.167 (Philippe, Cedric)

MCH: start X-ray tests in SX2 buffer zone



Miniframe activities w1 – Thu 7 Jan 2021



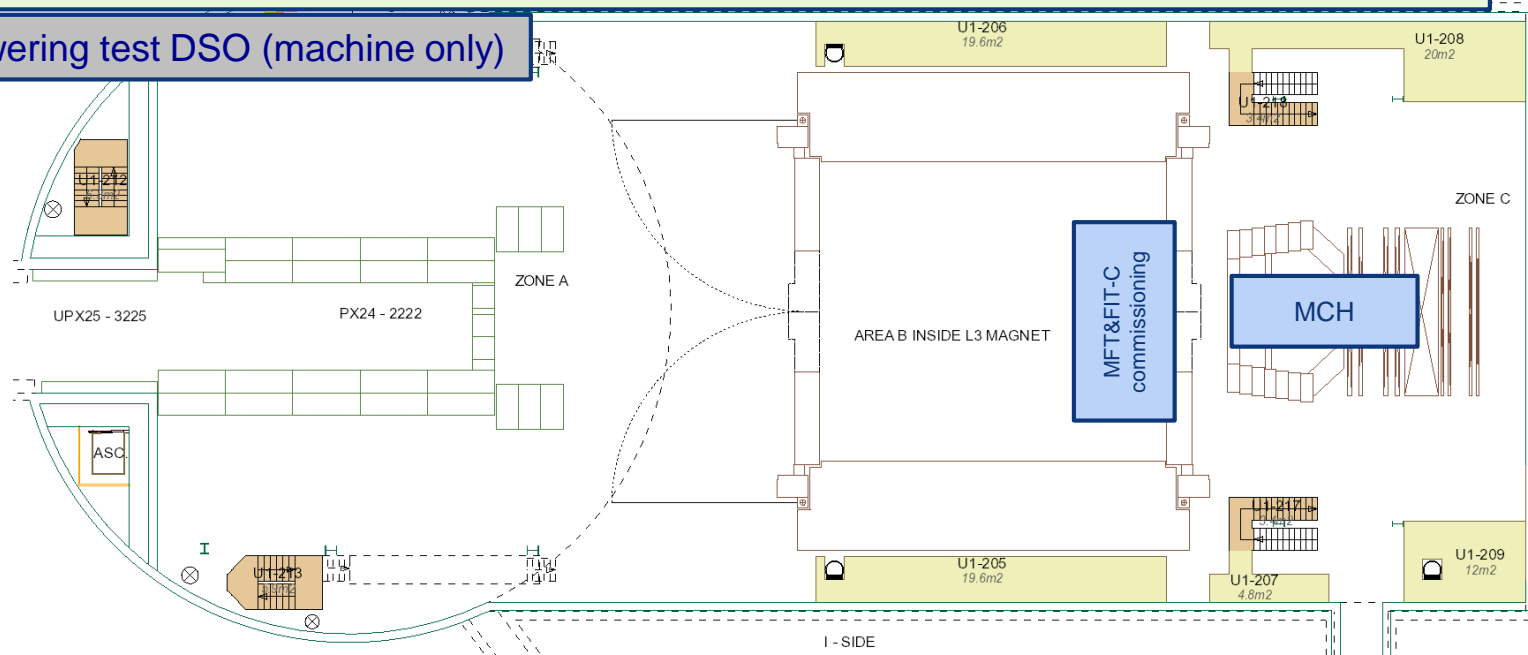
UX25 activities w1 – Fri 8 Jan 2021

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

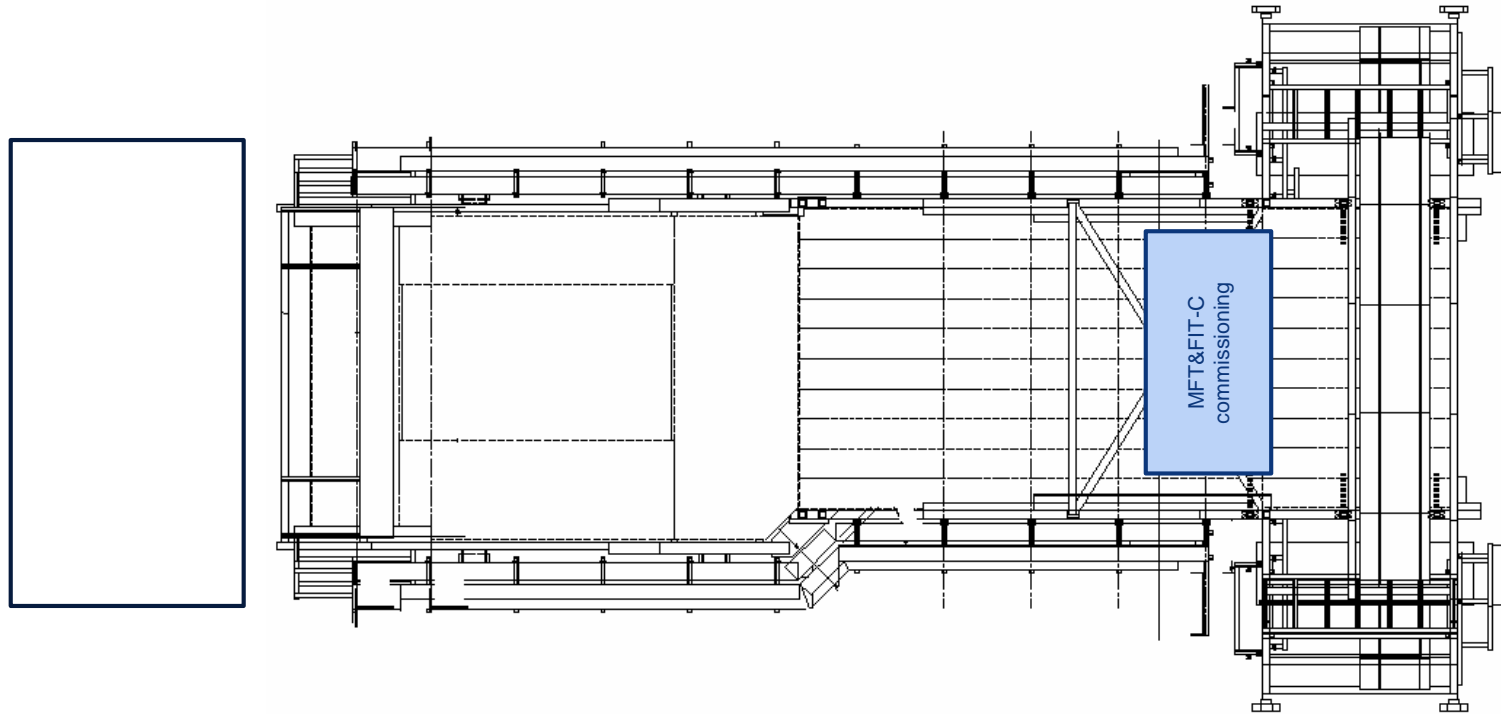
Mechanical disconnection ITS cooling plant in b.167 (EN-CV)

Remove P-sensors, filters, valves and manifolds ITS cooling plant in b.167 (Philippe, Cedric)

Powering test DSO (machine only)



Miniframe activities w1 – Fri 8 Jan 2021



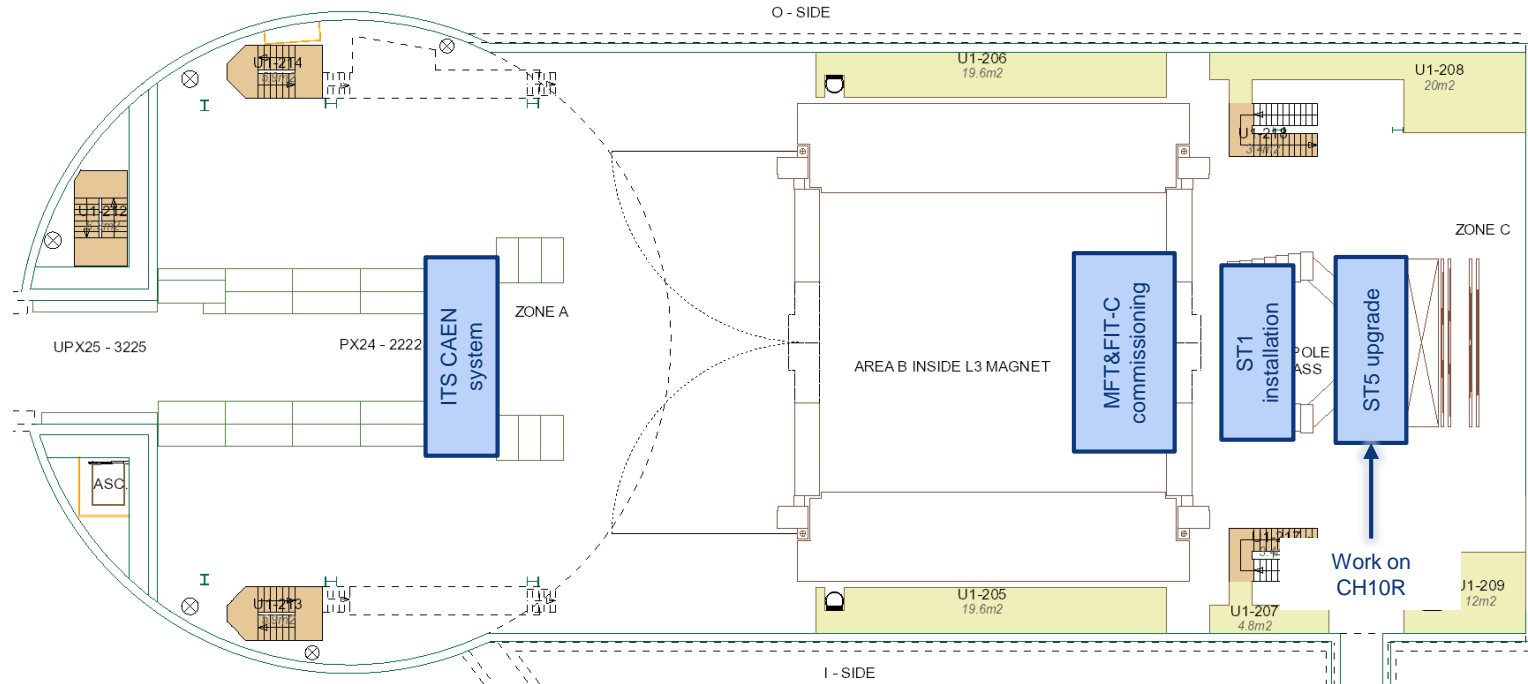
Day-by-day sequence w2 2021



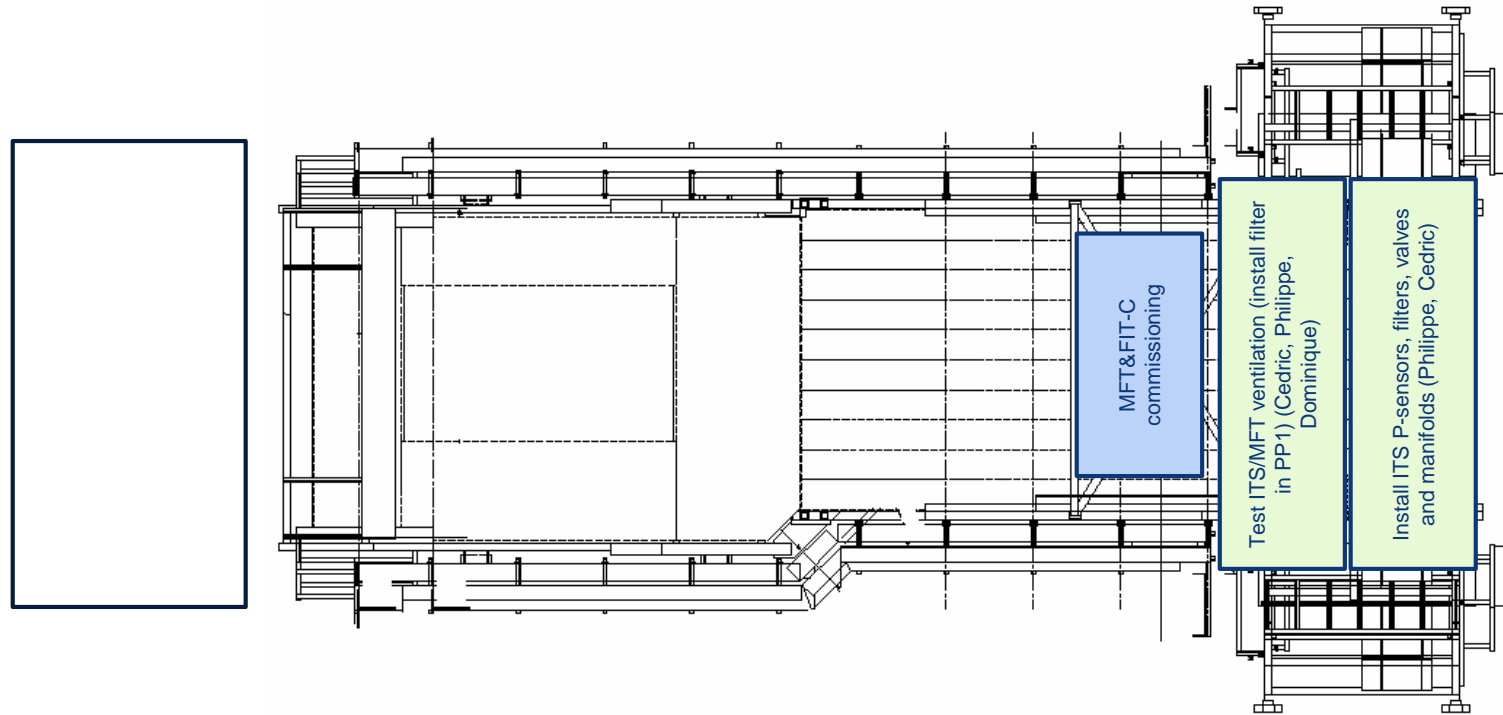
UX25 activities w2 – Mon 11 Jan 2021

Prepare ITS cooling plant for transportation n b.167 (EN-CV) (put mechanical protections)

ITS integration test with cage replica in b.167 (whole week)



Miniframe activities w2 – Mon 11 Jan 2021

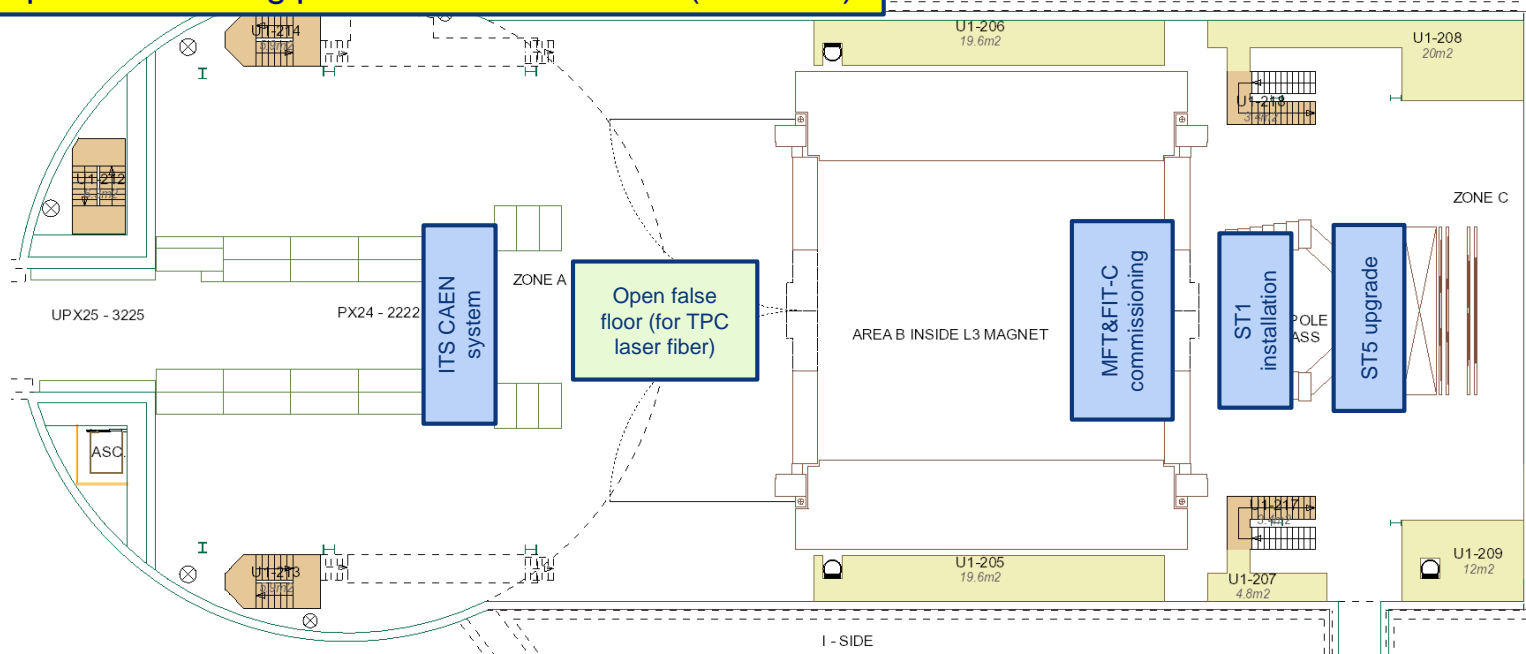


UX25 activities w2 – Tue 12 Jan 2021

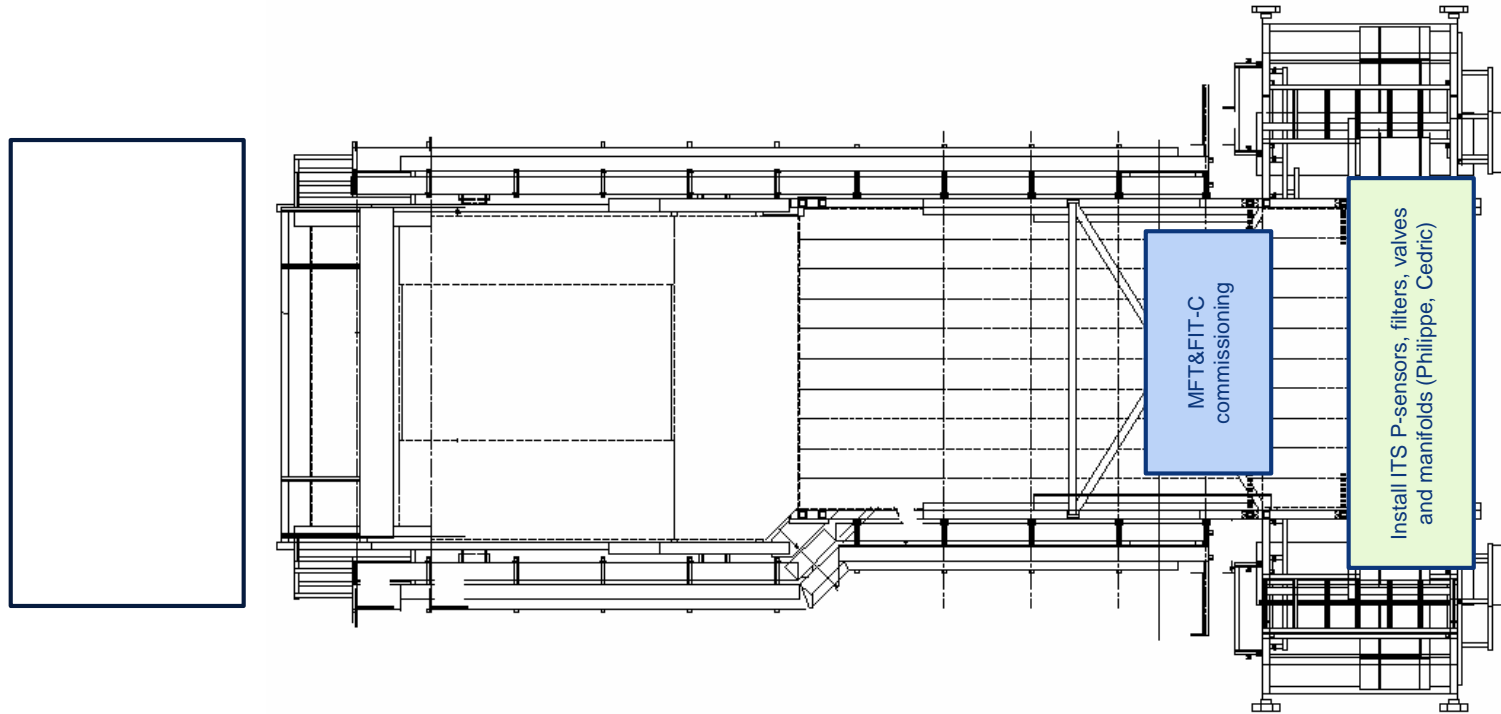
Cleaning cavern (Topnet): 13:00 to 15:00

Remove tent b.6952 (Spaciotempo)

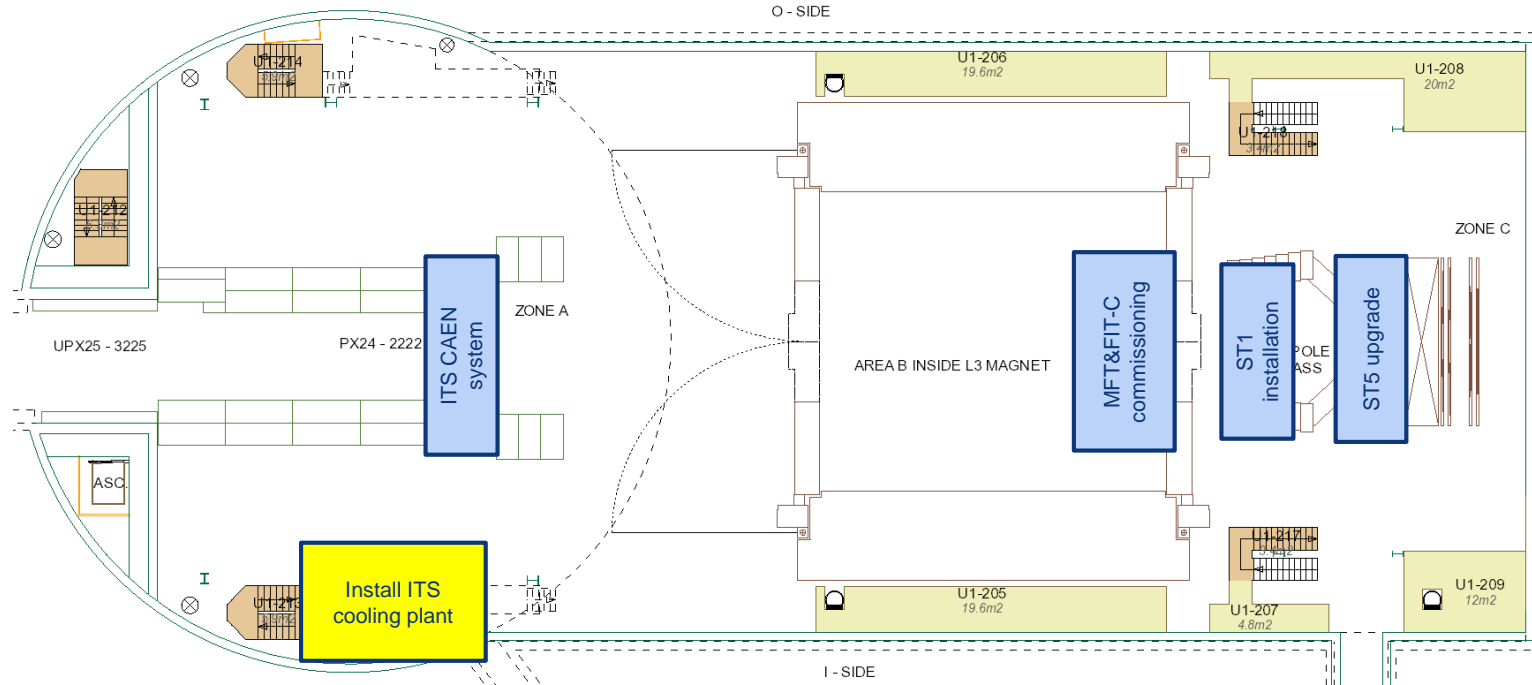
Transport ITS cooling plant from b167 to SX2 (ALTEAD)



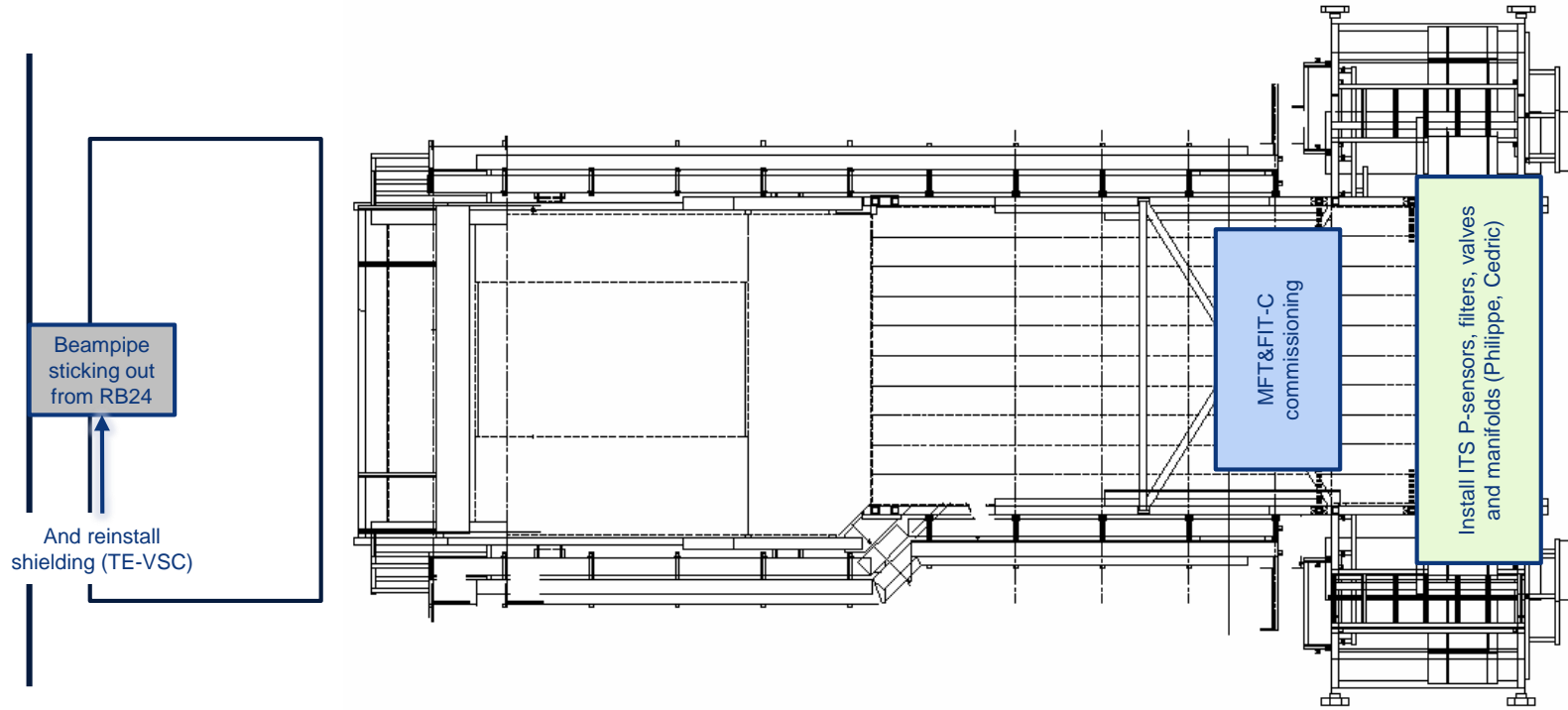
Miniframe activities w2 – Tue 12 Jan 2021



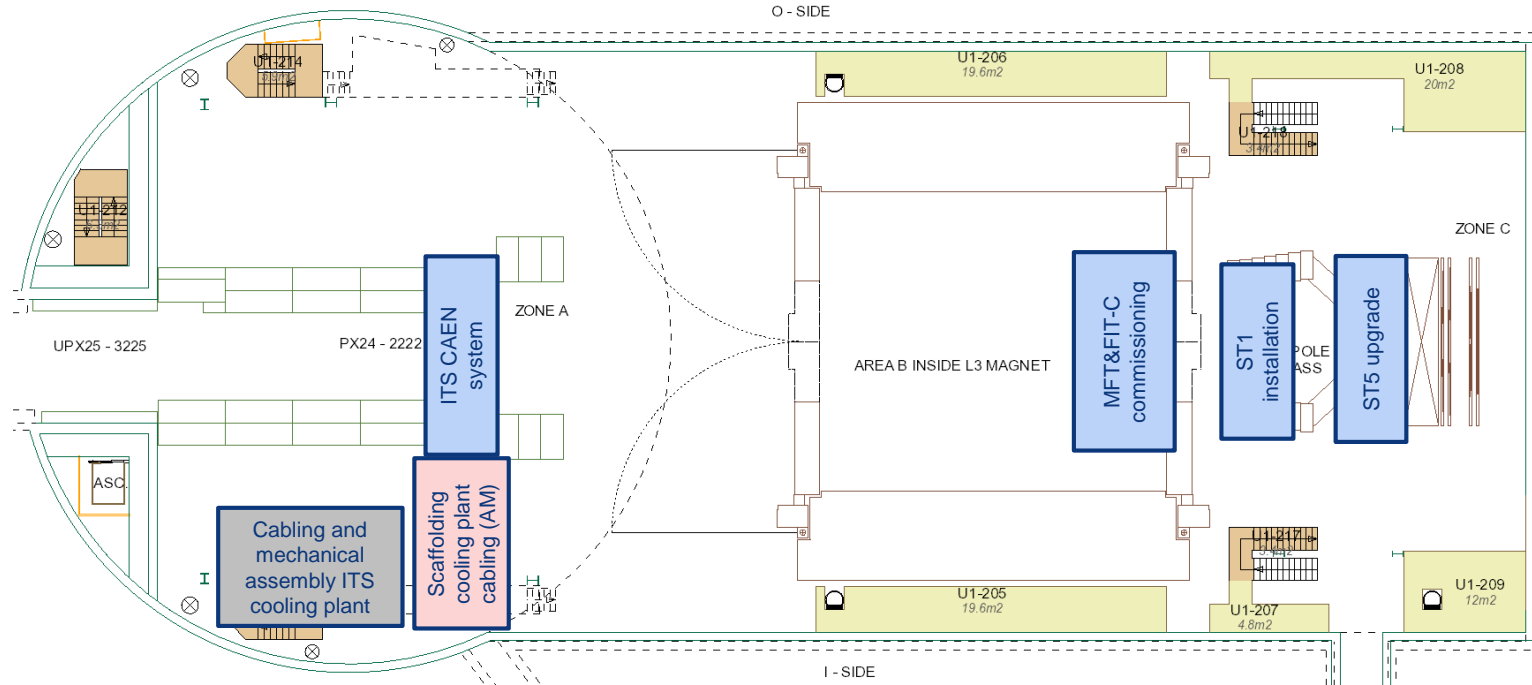
UX25 activities w2 – Wed 13 Jan 2021



Miniframe activities w2 – Wed 13 Jan 2021

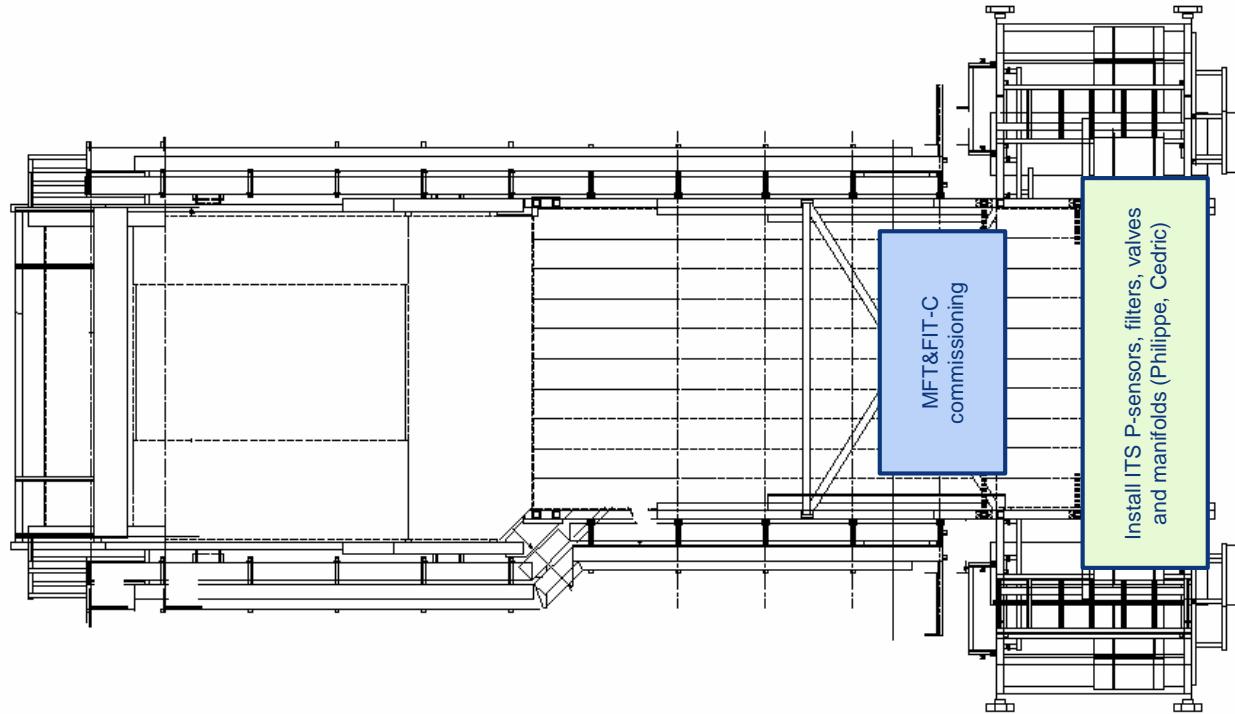


UX25 activities w2 – Thu 14 Jan 2021



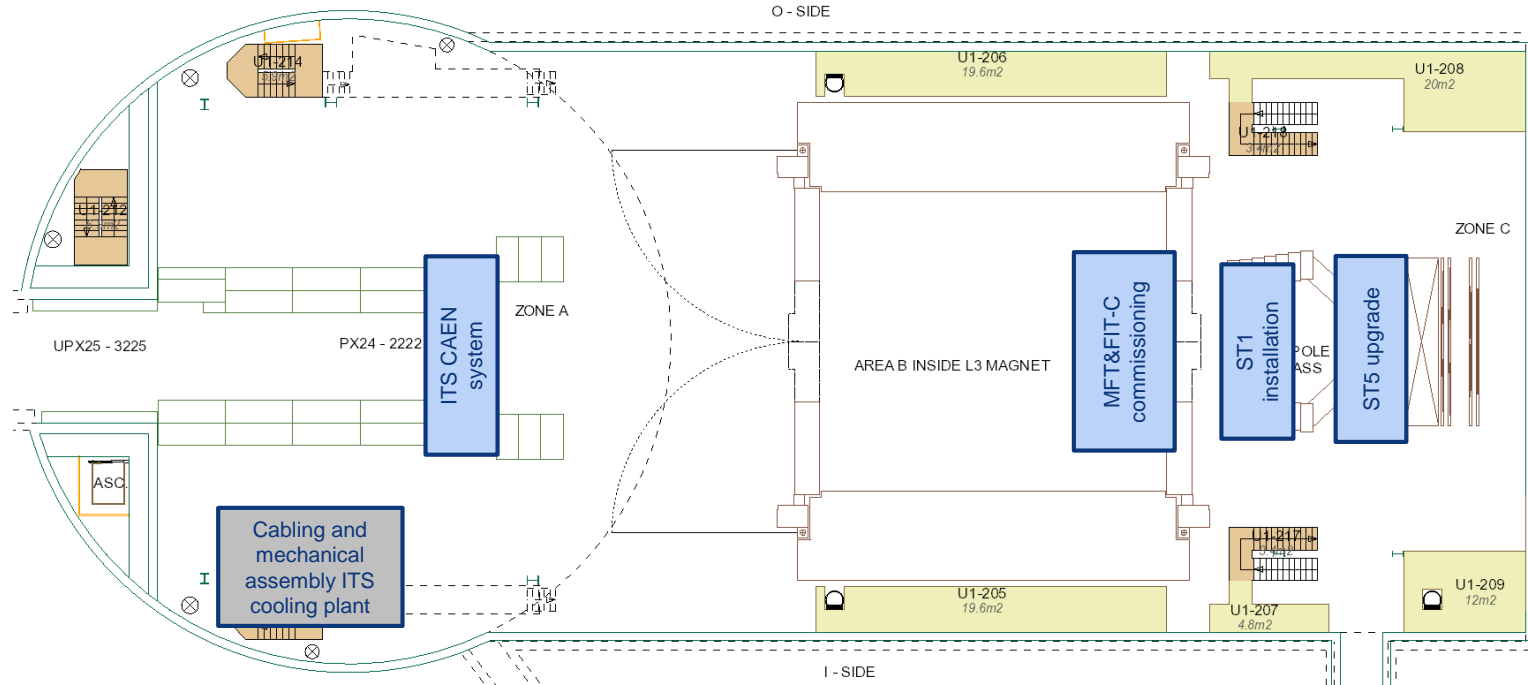
Miniframe activities w2 – Thu 14 Jan 2021

Remove scaffolding inside MCTS

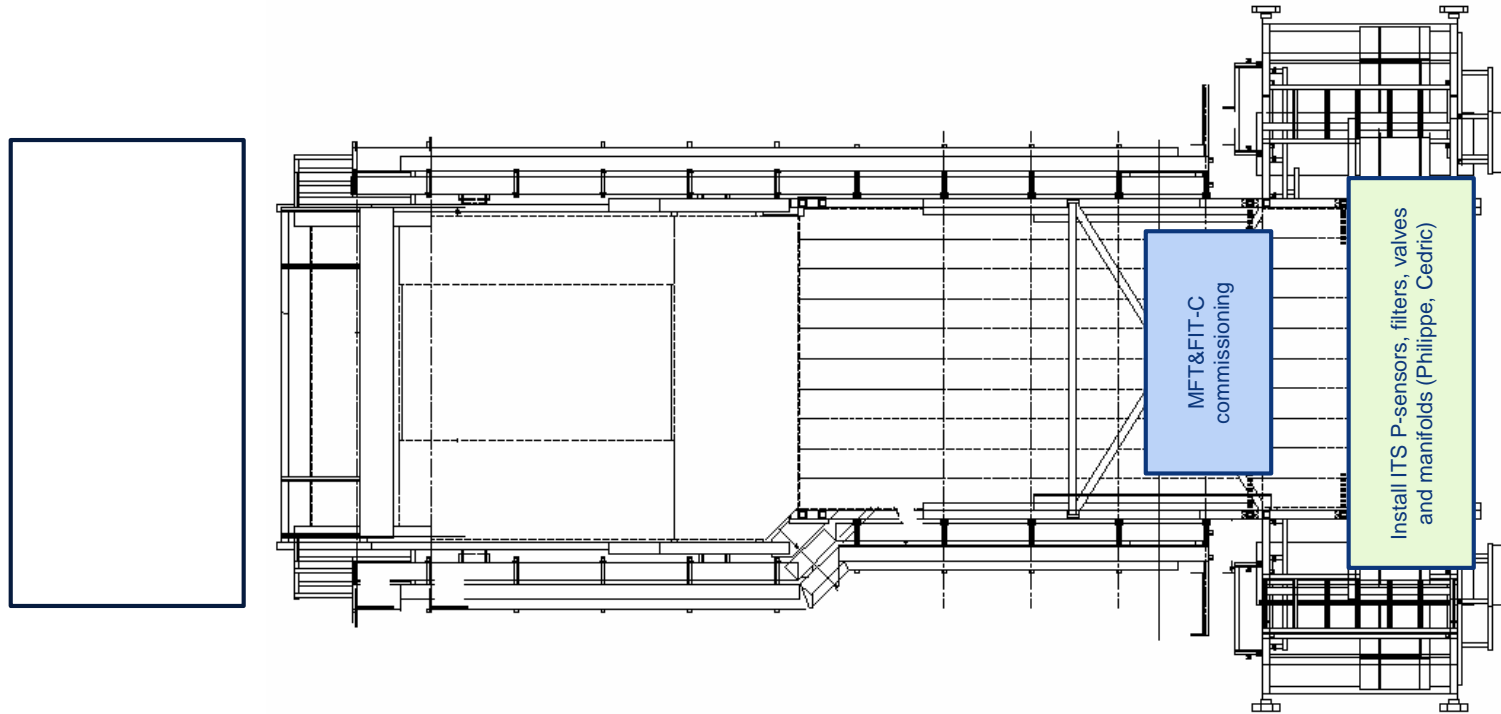


UX25 activities w2 – Fri 15 Jan 2021

Rotation SNIFFER modules



Miniframe activities w2 – Fri 15 Jan 2021



Merry Christmas and Happy New Year

