

LS2 planning meeting

A.Tauro



COVID-19 updates

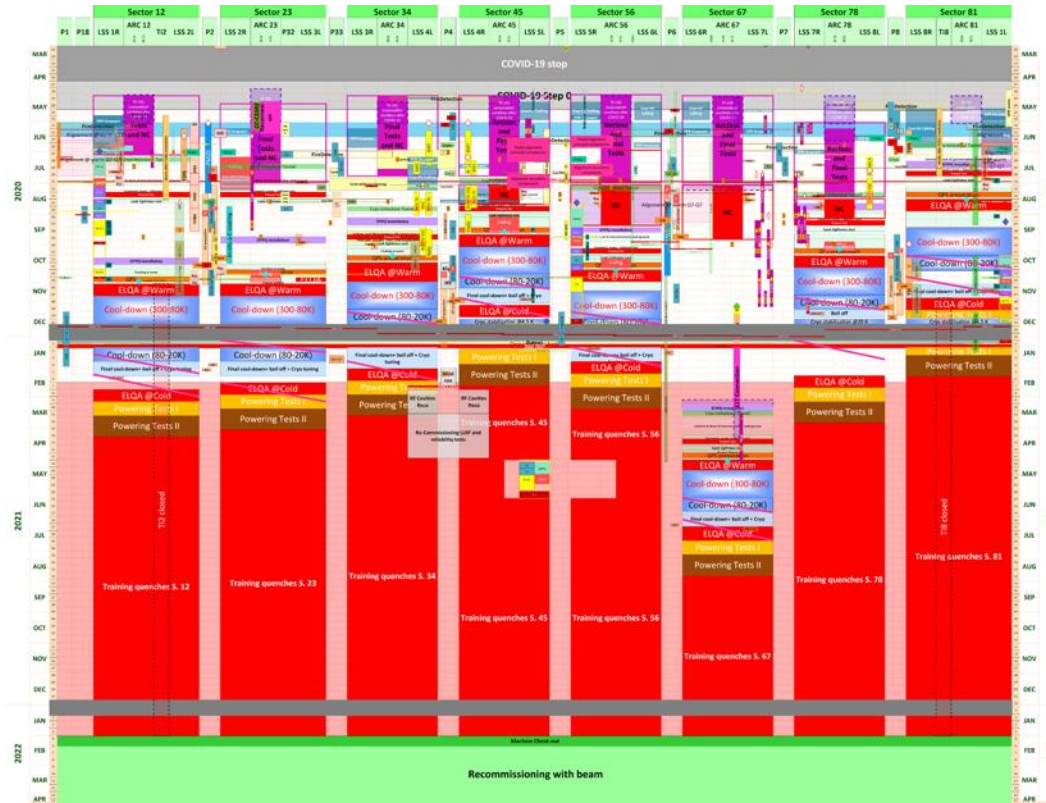
- In light of the stricter measures announced by CERN's Host States (France and Switzerland) to confront the escalating number of infections in their countries, CERN is adapting its framework for **on-site activities and telework**. The overarching objective remains to safeguard the health and safety of everybody on the CERN sites while enabling continued effective operation of the Laboratory, as far as feasible.
- The return on site of all categories of personnel is supported by COVID-19-specific health and safety measures and recommendations, which are collated and regularly updated on this webpage: <https://hse.cern/covid-19-information>
- If you suspect that you may have come into contact with the virus, use the **Tramed tool** to evaluate your situation. Using Tramed allows the Medical Service to keep track of the evolution of cases among the CERN community.
- **Curfew in France:** due to the evolution of the pandemic in France, **the French authorities have changed the hours of curfew to run daily from 6.00 p.m. to 6.00 a.m. across the country, starting from Saturday 16 January, for 15 days minimum**. More information can be found [here](#). Members of the personnel required to travel in France to carry out essential professional duties during curfew hours must carry an attestation provided by CERN. The document is available <https://cern.ch/cesaam>. This attestation is solely for professional purposes.
- **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.
- **The duration during which suspected or confirmed COVID-19 cases need to isolate and during which access to the CERN sites is prohibited, will be reduced as of Monday 18 January, unless the CERN Medical Service decides otherwise, to the following:**
 - Persons with COVID-19 symptoms who have tested negative for COVID-19 shall self-isolate and not come on to the CERN site for the duration of the symptoms plus two days without symptoms;
 - Confirmed COVID-19 cases shall self-isolate and not come on the CERN site for at least 12 days from the date of the first symptoms, with the last two days being symptom-free.
- **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.

Distribution ofproximeters

- CERN has decided to introduce the Proximeter device, a proximity sensing device designed to improve CERN's response to break chains of transmission of COVID-19. More information can be found here: <https://home.cern/news/news/cern/cern-introduces-proximity-detecting-device-personnel>
- This device has two functions:
 - 1) warn people that the social distance of 2 meters has been violated for more than 30 seconds;
 - 2) store such event in a database that might be used, in case of need, by the medical service to ensure efficient contact tracing.
- **This device will be mandatory from March 1st 2021.**
- The distribution of these devices has already started, you can fetch your device at different locations. You can book a slot to collect your Proximeter here: <http://www.cern.ch/proximeter-dist>.
- **For those at P2, the distribution will be done in 3294 R-002 every Tuesday in January and February.**
- A series of FAQs about the Proximeter has been published here: <https://hse.cern/content/faq-covid-19#proximeter>



	Mon	Tue	Wed	Thur	Fri
B55	X	X	X	X	X
R1	X				
R2		X		X	
R3			X		X
LHC1			X		
LHC2		X			
LHC5	X				X
LHC8				X	



ITS Installation Status and Plans

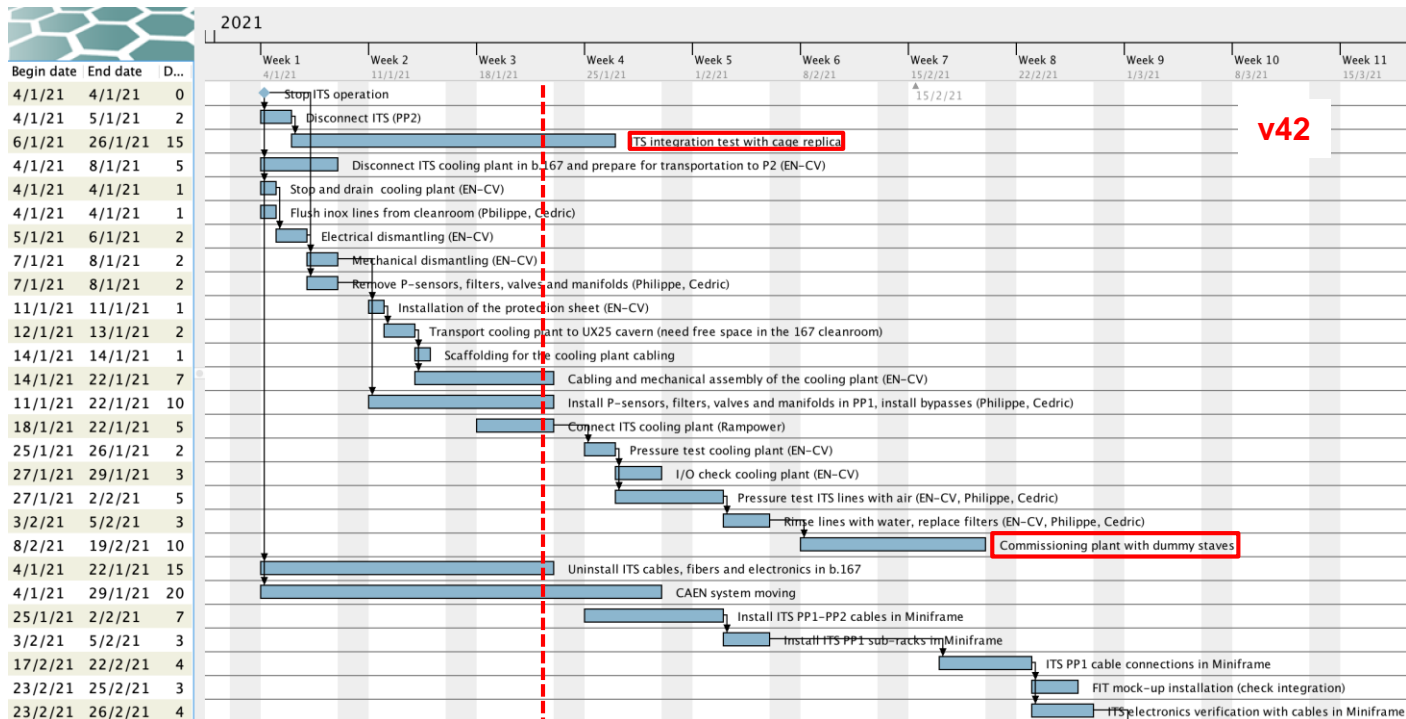
Status

- CAEN system
 - Fully cabled (except mains connection at CR-4, thanks to André for the A-side mains connections) and communication tested
 - Verification of hardware thresholds (voltage and current) ongoing
- Electronics (for PP1) and detector data and power cables (from PP1 to PP2):
 - Deinstallation, preparation and testing of cables: **done** (w/ help of 4 COMSA technicians)
 - Electronics deinstallation and packaging : **done**
- Transport of cables and electronics to P2 today
- PP-A to PP-1 cables **almost done**: 1 power cable connection at PP1 to be examined on Monday (thanks to Yannick and Philippe/EN-EA)
- Fibre installation in CR-1 started

Plans for next week

- CAEN system: attach patch cords to the front, verify hardware thresholds
- Installation of cable trays between PP1 and PP2 (Monday)
- Installation of power cables between PP1 and PP2 (from Tuesday on)
- Finalize fibre installation in CR-1
- Testing of ITS2S connections to CR-4

Detailed ITS moving plan (Jan & Feb 2021)



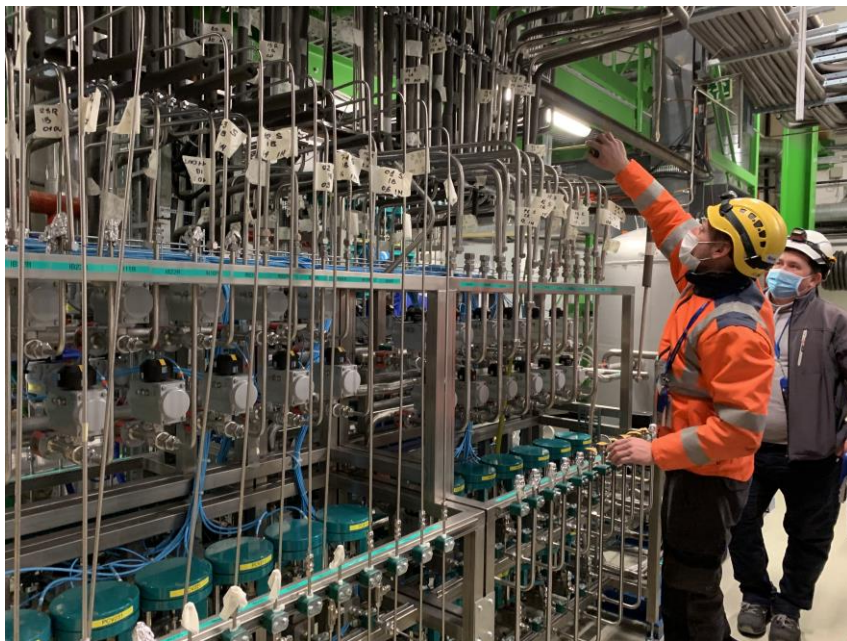
Jan 4th : stop ITS operation in b.167

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

Jan 14th – Feb 19th: connect and test ITS cooling plant

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

ITS cooling plant



Piping work will be completed today (Rampower)



Cabinet cabling ongoing (EN-CV)

ITS cooling (PP1)

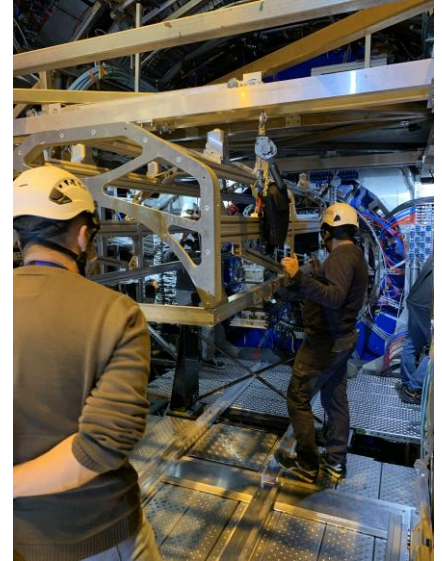


Installation pressure sensors, filters, manifold and valves

Status: all detector lines will be equipped by Monday, crates will be started on Tuesday.

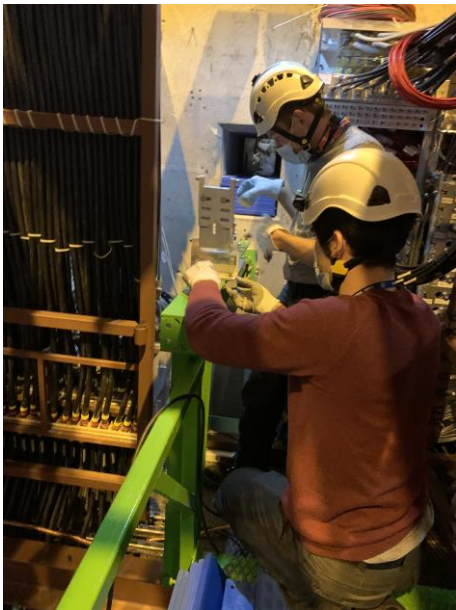
Pressure test will be started on Wednesday

ITS insertion tests



Handling test of the ITS chassis to simulate the installation of the Top and bottom ITS Half barrels inside the Cage

Beampipe (TE-VSC)

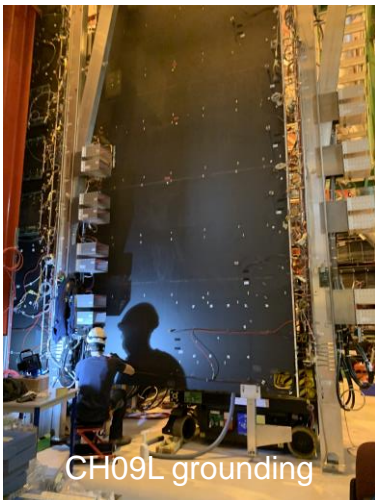


Installation 1/3 part RB24 beampipe



Adjustment central flange

Survey this afternoon



- Missing flat cables for SOLAR boards **received this week**
- CH9R readout commissioning **well advanced**
- CH10R:
 - All modifications to support panel done
 - **All detectors re-installed** on support
- CH09L:
 - All detectors dismantled, installation of new readout started
 - All modifications to support panel done
 - Re-installation of all detectors expected **early next week**
- Installation of SOLAR boards in parallel on CH10R and CH9L at beg. of February
 - **Two technicians from Saclay** will come for 1 week to help with the SOLAR installation
- Grounding of support panels in ST3 started

- **MW1 test quite successful for MCH:**
 - 3 FLPs for a total of 8 CRUs included in the test
 - Data collected in continuous mode with MCH User Logic
 - Online processing of a fraction of the data with the MCH O2 decoding and QC
 - Pedestal data also collected at the end of the tests

ST1 installation status 1/2

- Quadrants were ready for installation in October 2020, then...
- Resumed operations in mid-December 2020 (visit/access)
- 4 quadrants at point 2 on 6/1/2021
 - Mechanical installation 11-15/1
 - **Chamber 1 installed** (next slide)
- Planning:
 - 4 quadrants (chamber 2) will arrive 27/1
 - Chamber installation 1-5/2
 - Cabling starts 8/2



ST1 installation status 2/2

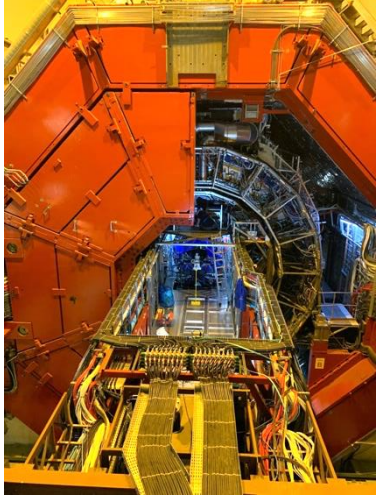
Chamber 1 (4 quadrants)
installation is completed.

Next Chamber 2...

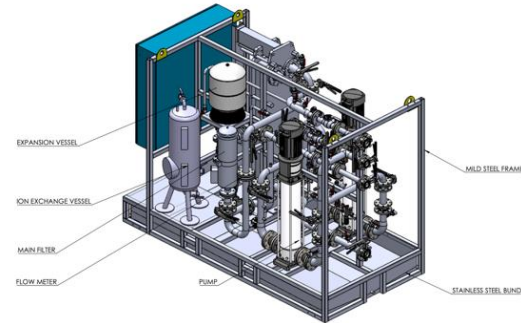
Cabling not started yet.



L3 doors & Magnet test

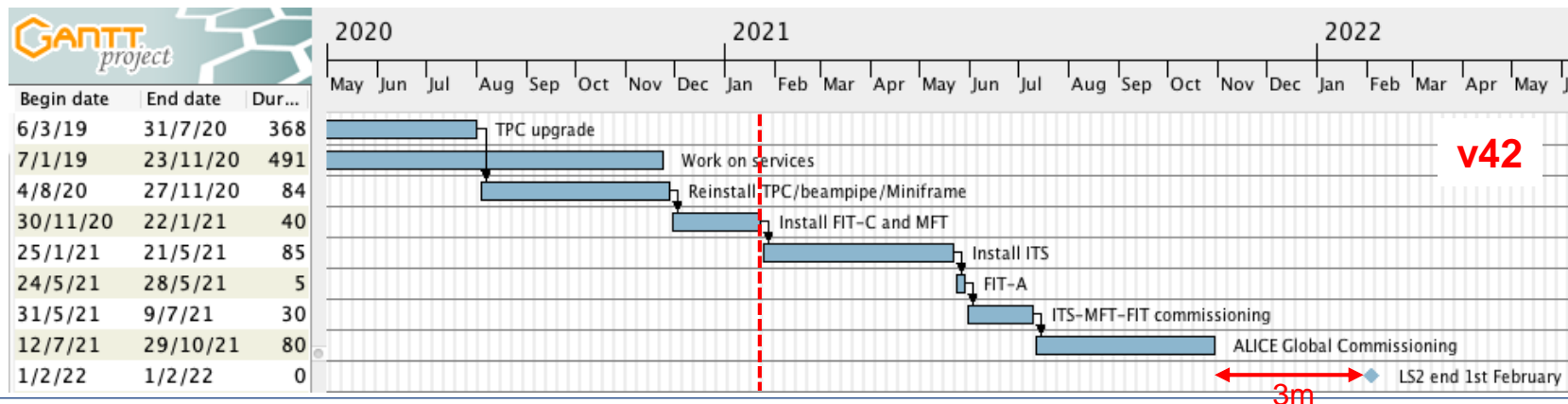


- In December we have **closed the magnet doors** to verify that there is no mechanical interference with the Miniframe
- ~~The new cooling plant (EN-CV) for the L3 power converter will be hopefully ready by end January (w5)~~ → **cooling plant seems (again) delayed, we have to make a new plan for the L3 magnet powering test**
- 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 - Thu 25/2~~ → open both doors

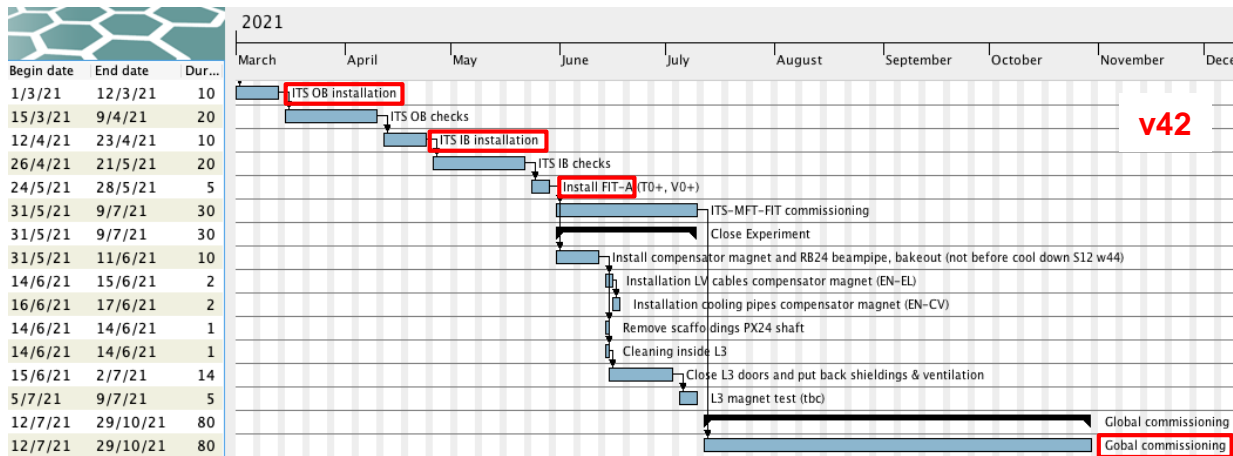


Current master schedule (v42)

- **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 – Schedule review 15 March 2021**
- 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



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



v42

Mar 1st – May 21st: ITS installation

May 24th – 28th: FIT-A installation

May 31st – Jul 9th: ITS-MFT-FIT commissioning & close Experiment

Jul 12th – Oct 29th: 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):**

- Cut and put connectors on **FIT-A** signal cables in Miniframe: ~~18-21 Jan~~ → Mar
- Complete **FDD-A** connectors: w5 (tbc)
- 10 BCM cables C-side (CR4-UX25): w5 (tbc)
- 8 RJ45 cables EN-CV (CR4-UX25): w5 (tbc)

- **Optical fibers (EN-EL):**

- Installation 3 **FDD** optical cables → 15 February (date tbc)

- **Cooling:**

- **MFT**: water circulating inside crates and detector
- **TPC**: several leaks fixed on A- and C-sides
- Connection of **ITS** and inox pipes to ITS cooling plant (Rampower) → ongoing

- **Rack turbines replacement:**

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

EN-EL interventions

- **12-year maintenance diesel generator**
 - Done this week (week 3)
- **Short preventive maintenance on UPS**
 - **Week 4** (preventively change a card, without power interruption but no battery backup during 45 mins/UPS)

IT-CS intervention on starpoint US25 and CR5

- IT-CS has installed new routers for ALICE in the starpoint in US25 (located on the LHC side) serving the C side of the cavern and in CR5, serving the A side
- They ask for an intervention window of ~1/2 a day where each network connection (in the racks in the cavern) will be cut for about 1 hr.
- Since access on the LHC side will become more and more restricted, they are asking to schedule this still this month.
- **C-side racks on Thursday 28 January 9:00 (~1hr blackout)**
 - Rack numbers 25 and above (TPC, TRD, TOF, MTR/MID) on the gangways (I and O) and all racks in zone C
- **A-side racks on Thursday 28 January after 10:00 or early PM (~1hr blackout)**
 - Rack numbers 24 and below (MFT, TRD, TOF, HMPID, EMC) on the gangways (I and O) and all racks in zone A
- **One should not plan any important tests on this day**
- Upcoming: change of GPN switch in starpoint SG2 (02/02) and 3294 (03/02); CERN-wide activity
 - 30 min interruption of GPN network between 8h – 10h

LHC sector test 2021

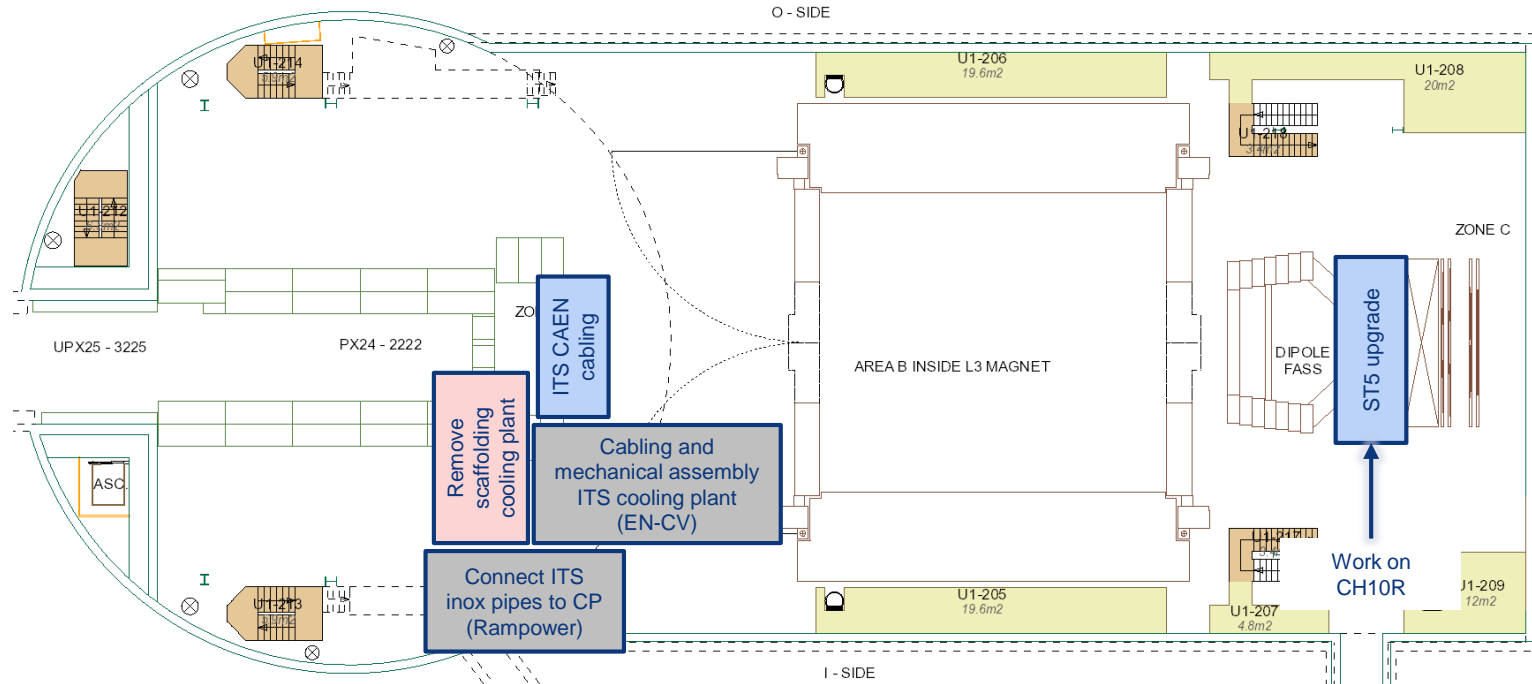
- **SPS extraction and transfer line DSO test**
 - Fri 19 Mar (reserve Sat 20 Mar) → **No access UX25** (ALICE closed Thu 18 Mar evening)
- **LASS test**
 - Fri 4 Jun → **No access to UX25** (ALICE closed Thu 3 Jun evening)
- **Beam DSO test**
 - Fri 18 Jun → **No access to UX25** (ALICE closed Thu 17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

Day-by-day sequence w3 2021

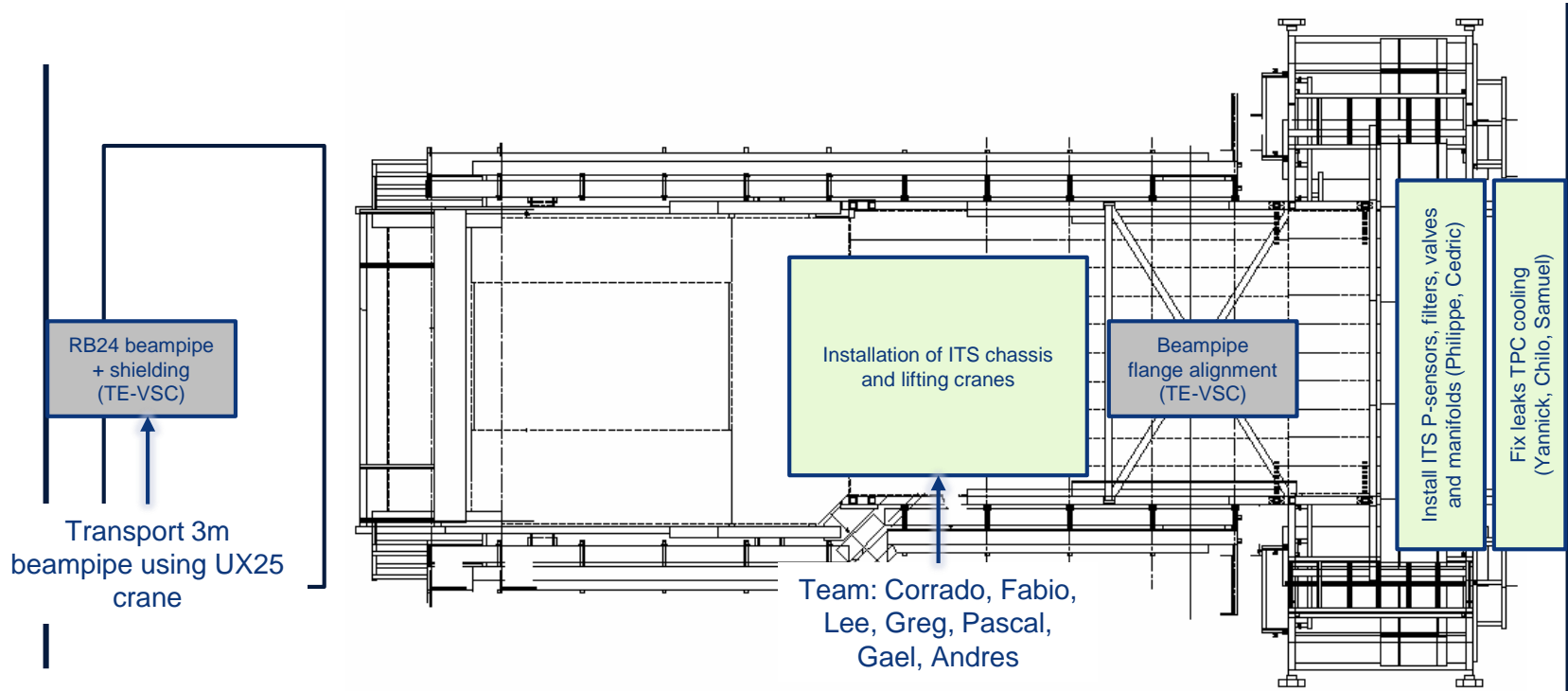


UX25 activities w3 – Mon 18 Jan 2021

EN-EL: 12-year maintenance diesel generator (whole week)

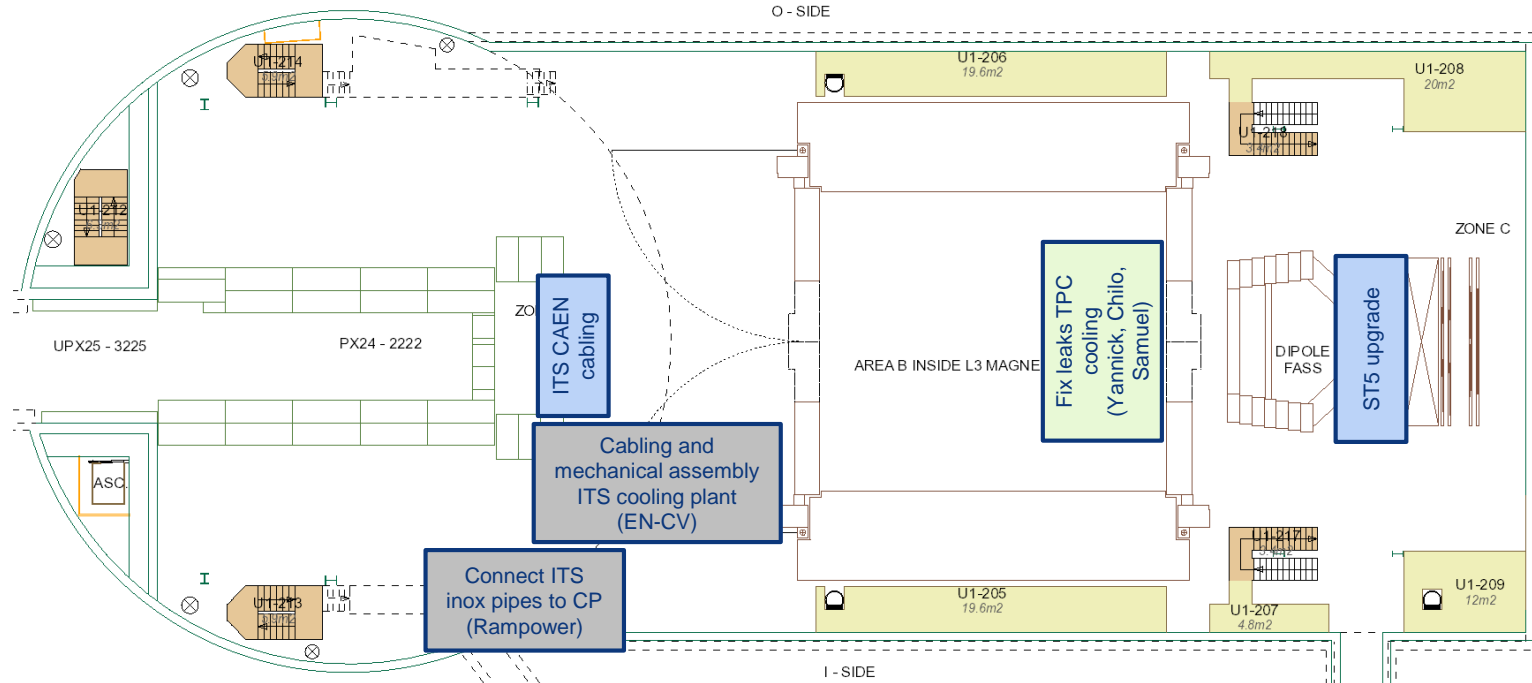


Miniframe activities w3 – Mon 18 Jan 2021

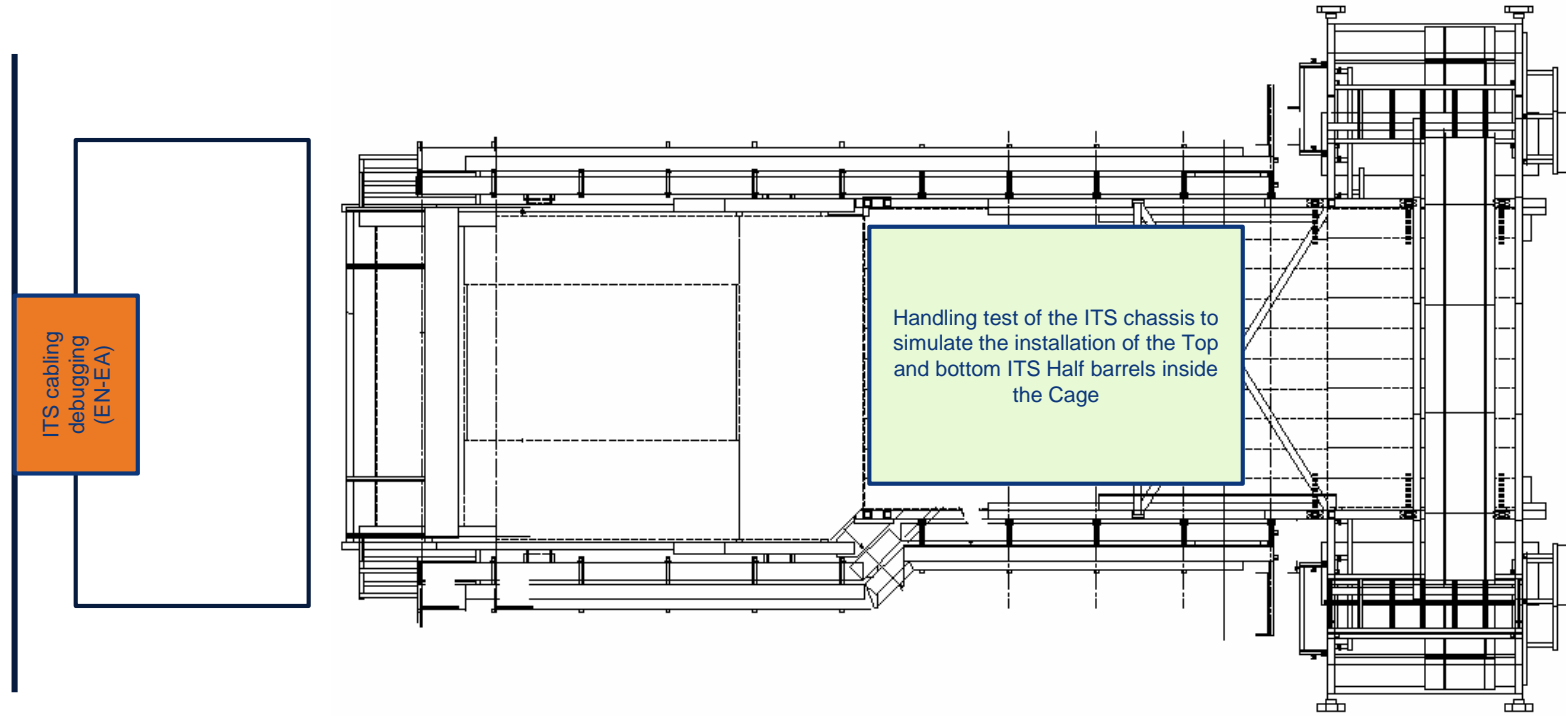


UX25 activities w3 – Tue 19 Jan 2021

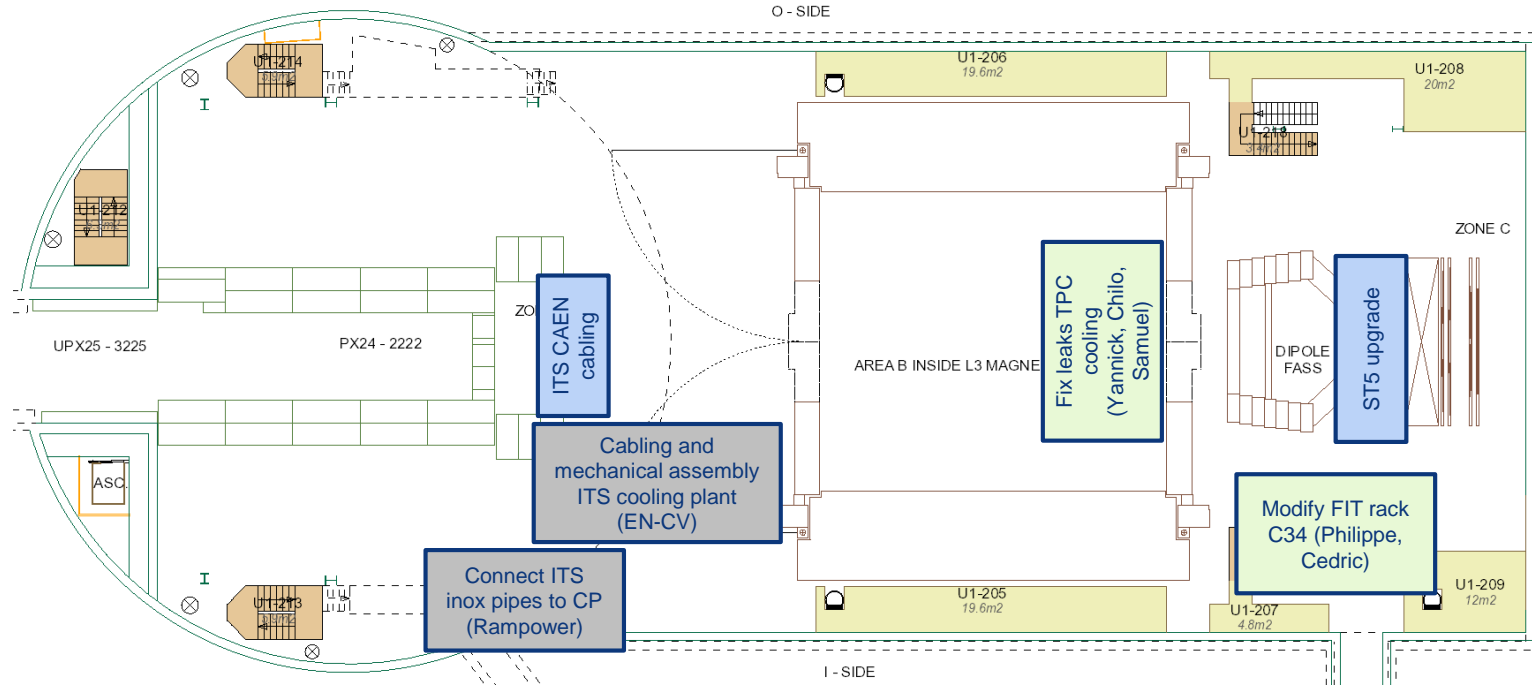
Cleaning cavern (Topnet): 13:00 to 15:00



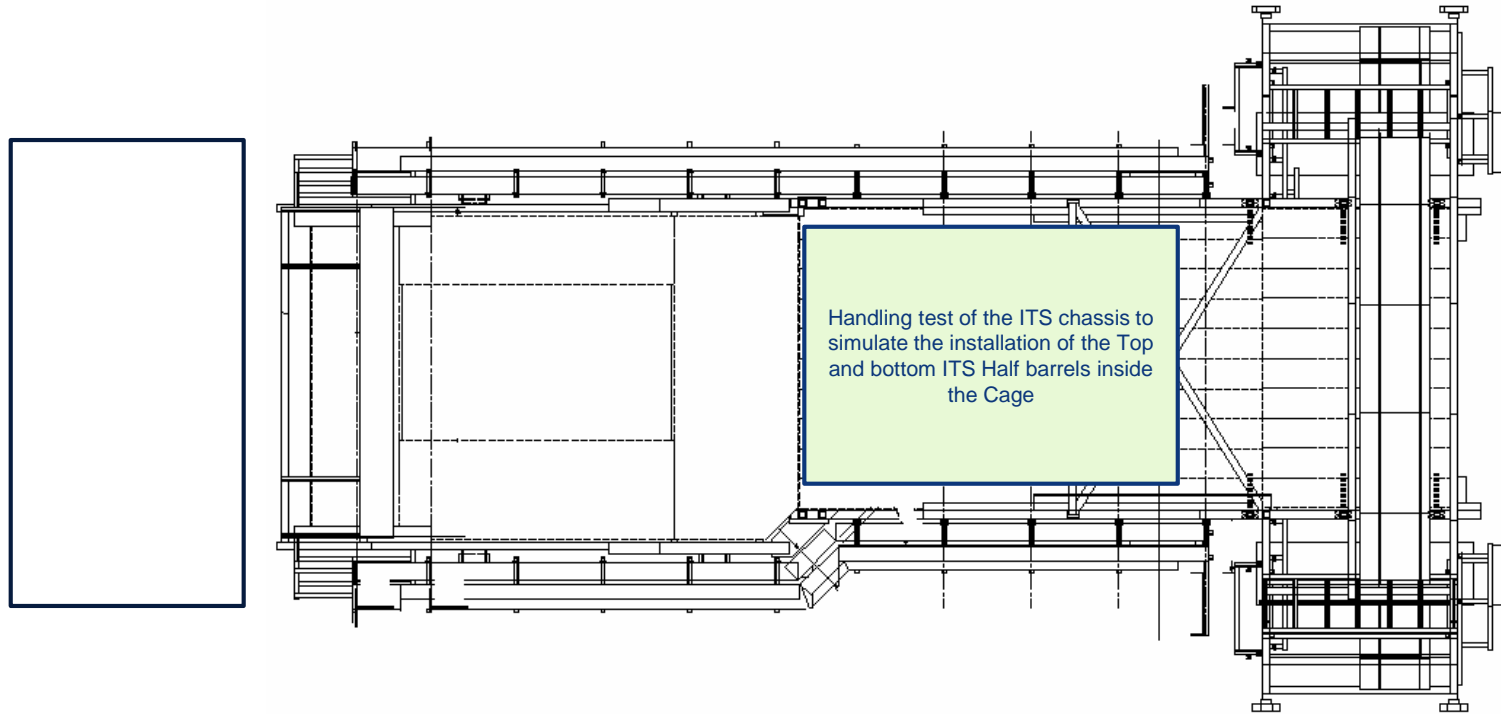
Miniframe activities w3 – Tue 19 Jan 2021



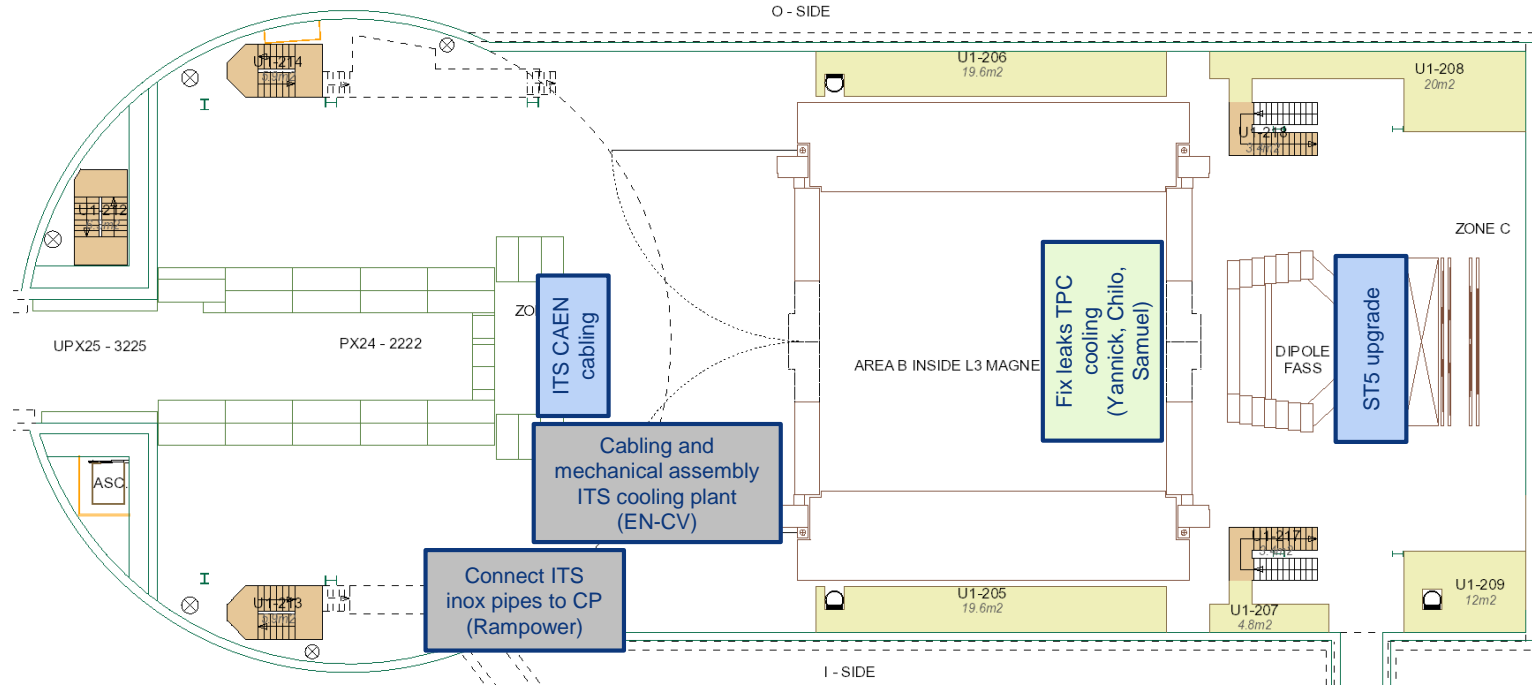
UX25 activities w3 – Wed 20 Jan 2021



Miniframe activities w3 – Wed 20 Jan 2021

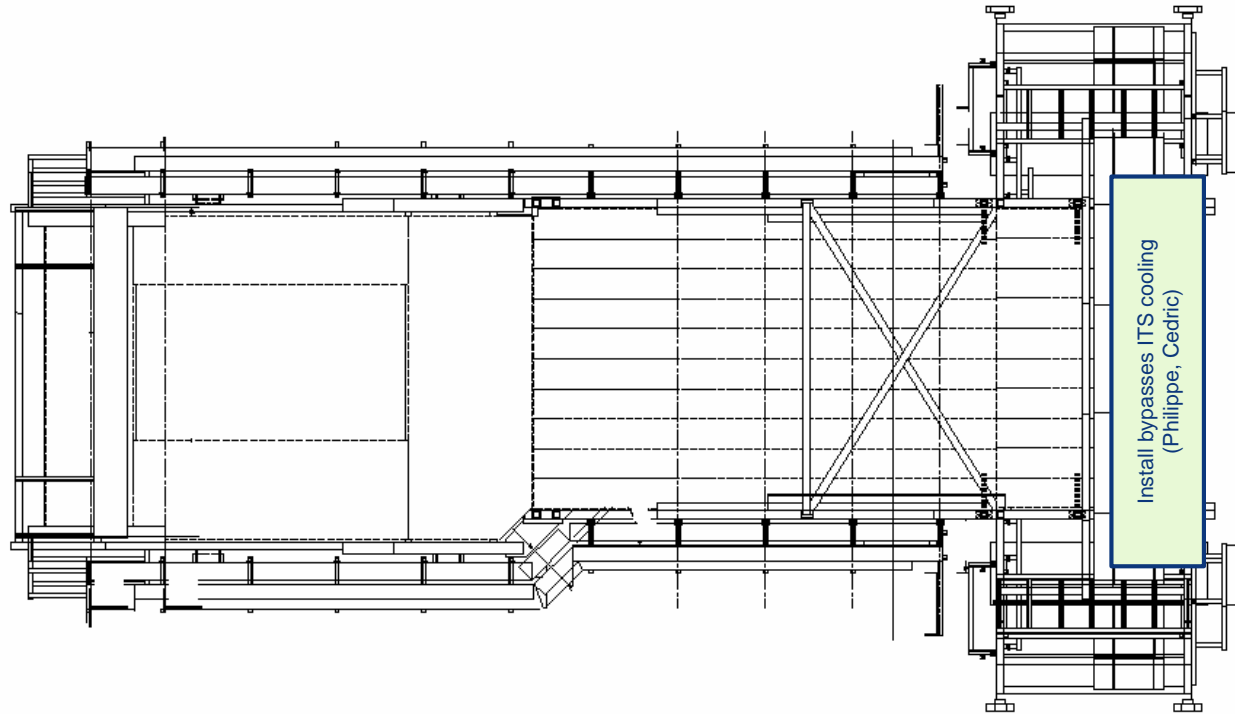


UX25 activities w3 – Thu 21 Jan 2021



Miniframe activities w3 – Thu 21 Jan 2021

EN-EL: reception with COMSA of Miniframe optical fibers (9:00)

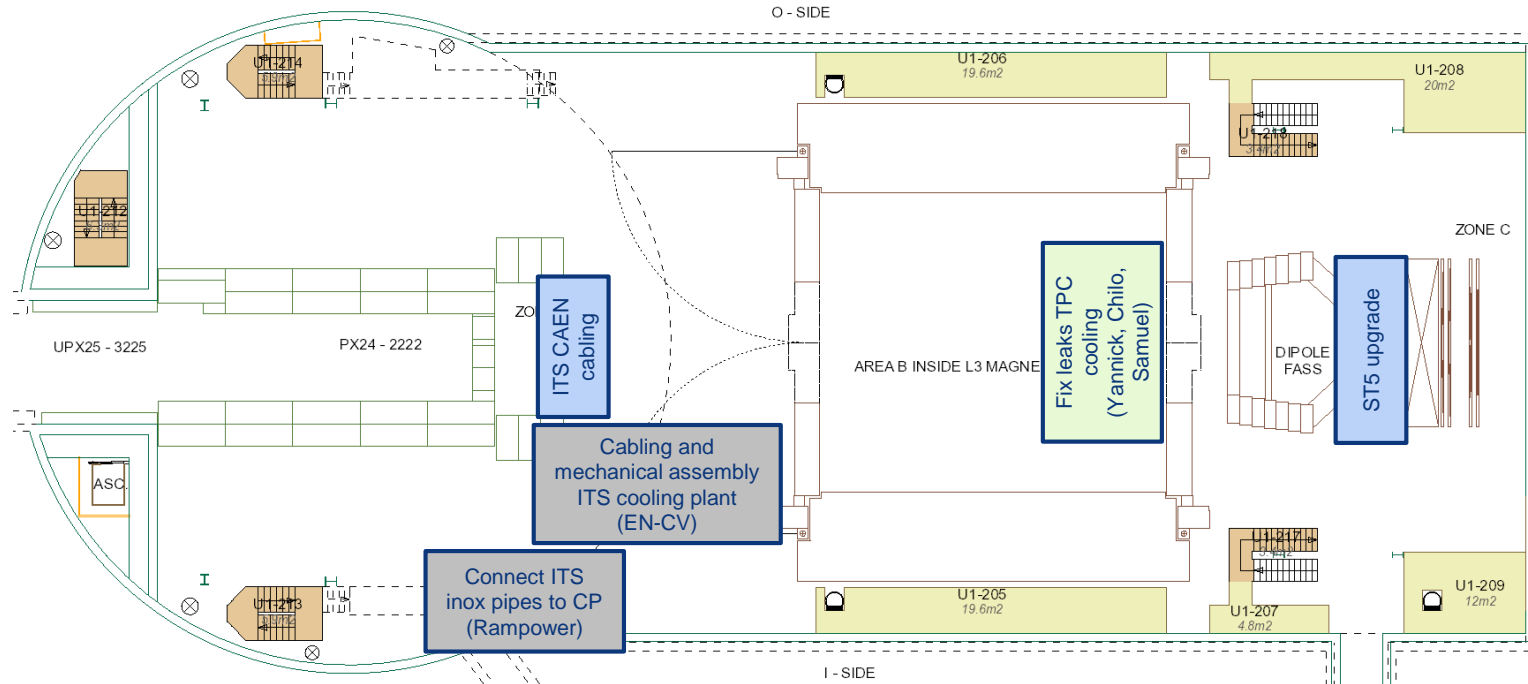


UX25 activities w3 – Fri 22 Jan 2021

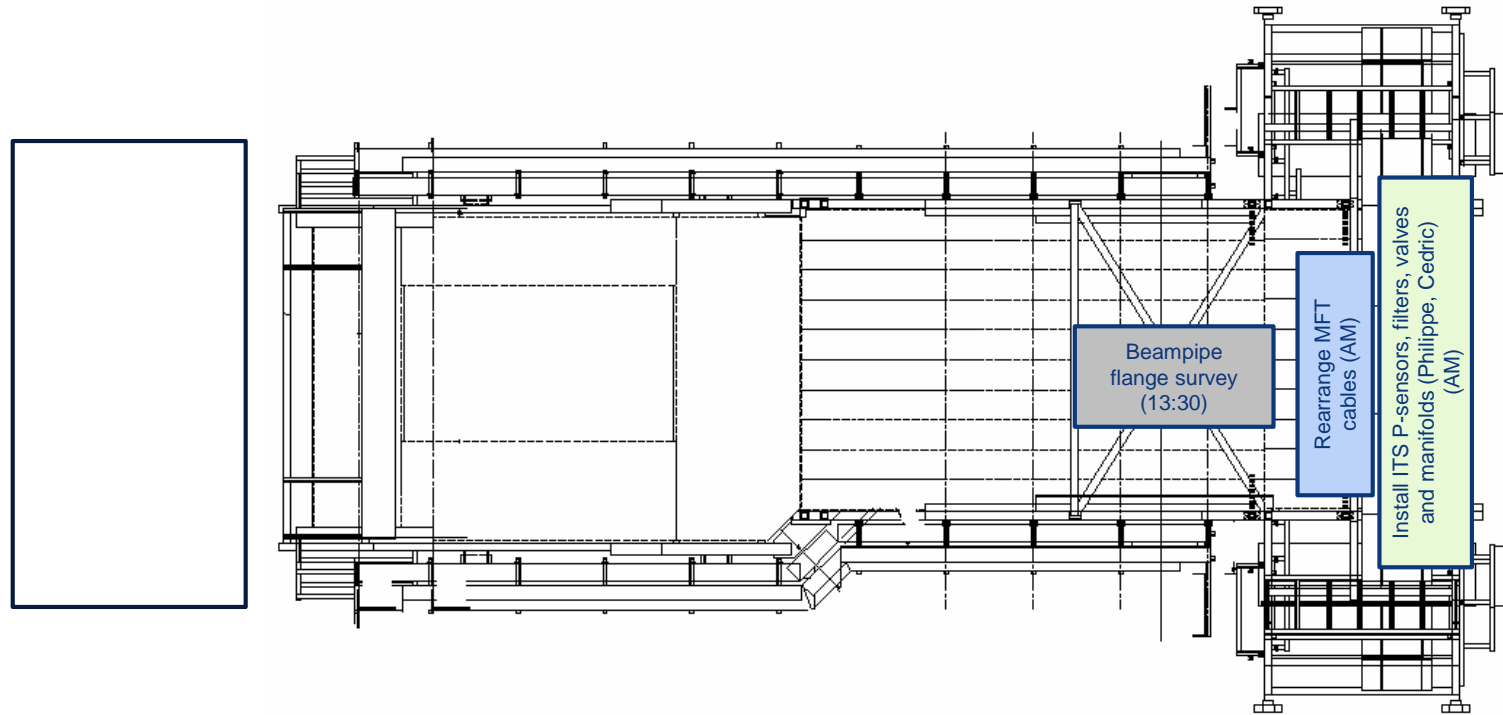
Rotation SNIFFER modules

Delivery 30 ITS boxes to SX2

Delivery to SX2 5 pallets (3 remaining) with 13 EPN servers



Miniframe activities w3 – Fri 22 Jan 2021



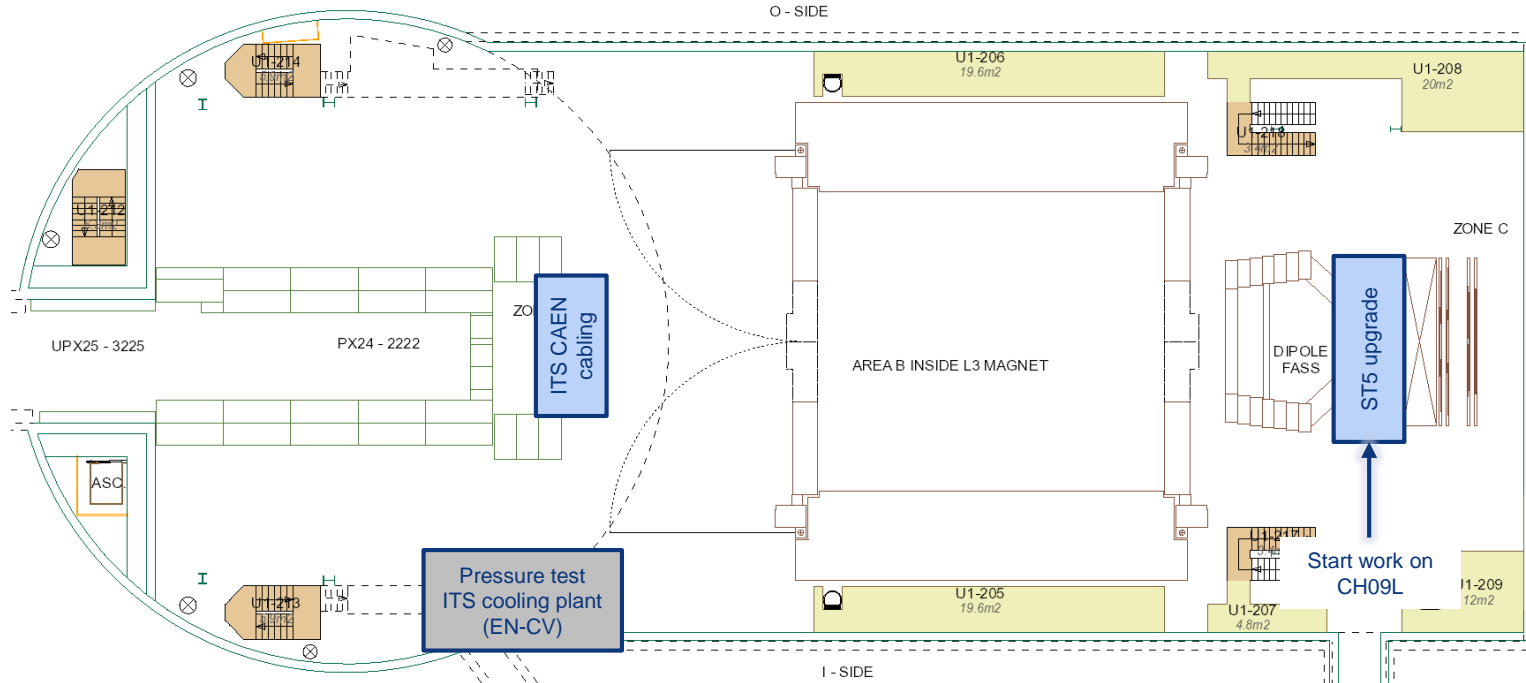
Day-by-day sequence w4 2021



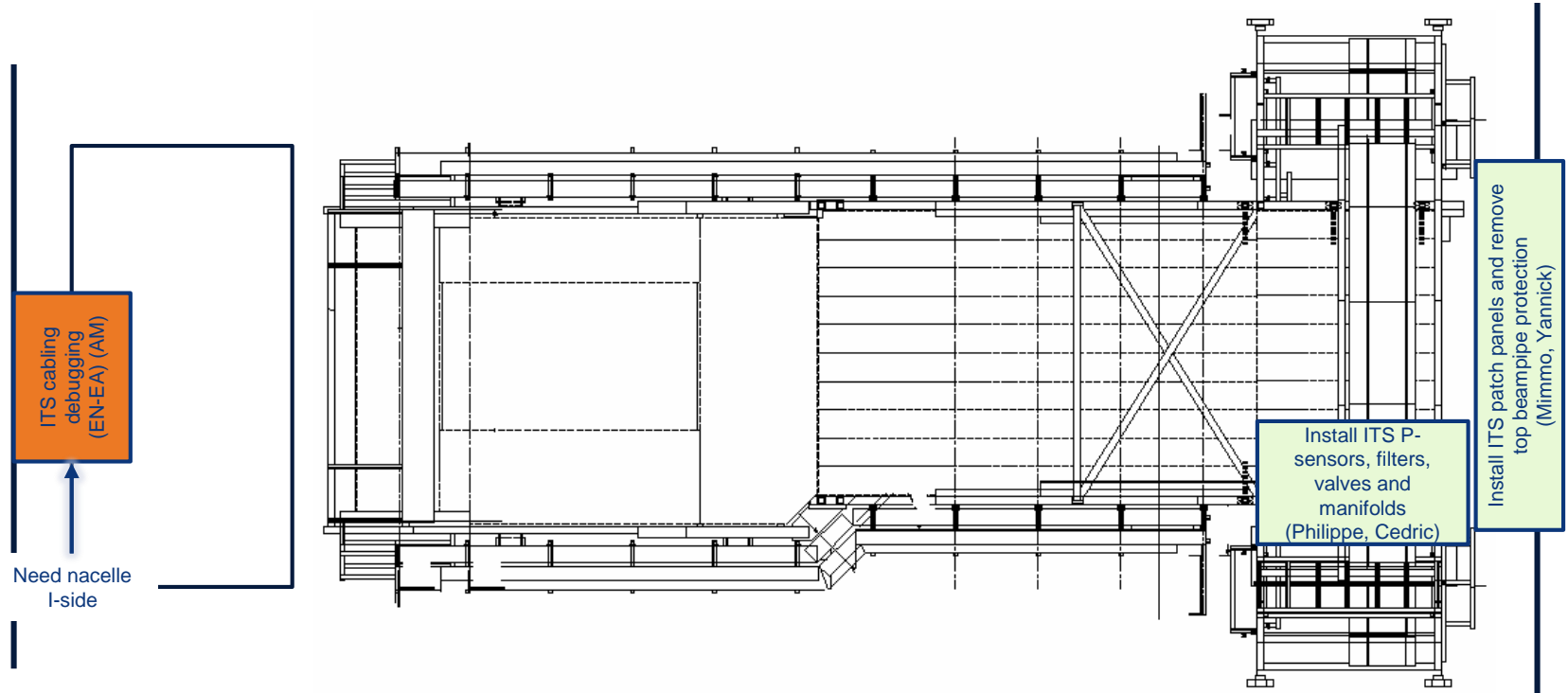
UX25 activities w4 – Mon 25 Jan 2021

EN-EL: short preventive maintenance on UPS (whole week)

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



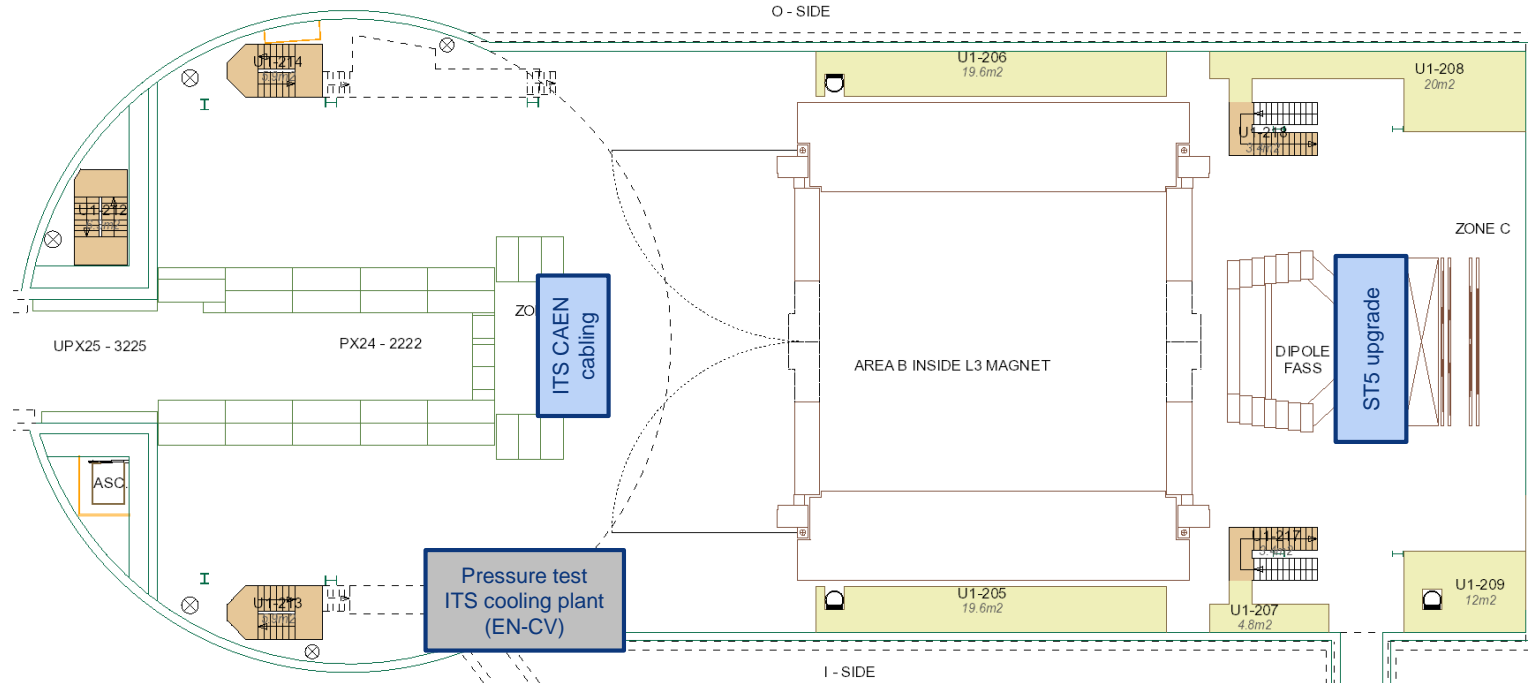
Miniframe activities w4 – Mon 25 Jan 2021



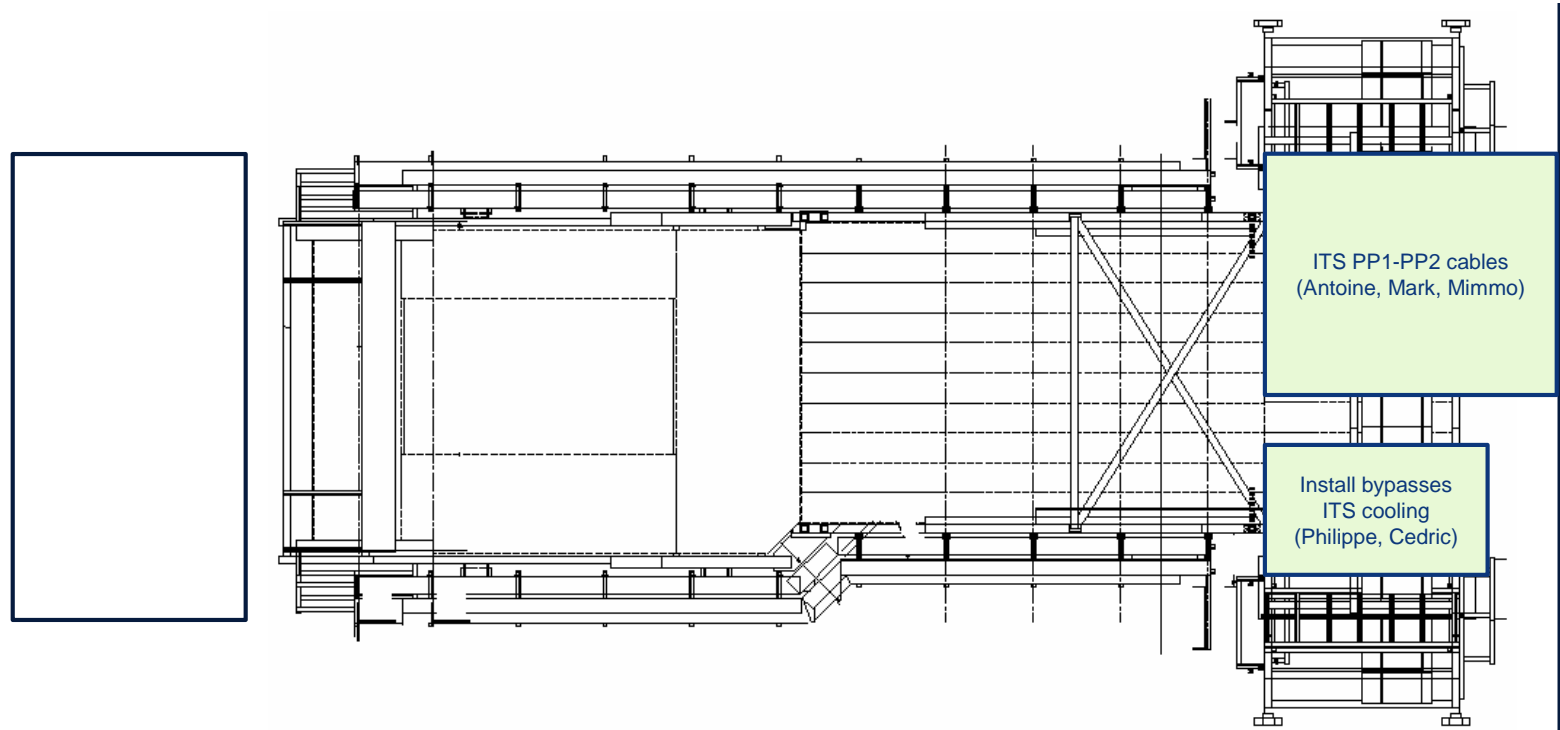
UX25 activities w4 – Tue 26 Jan 2021

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

Gas detection maintenance (UX25 cavern)



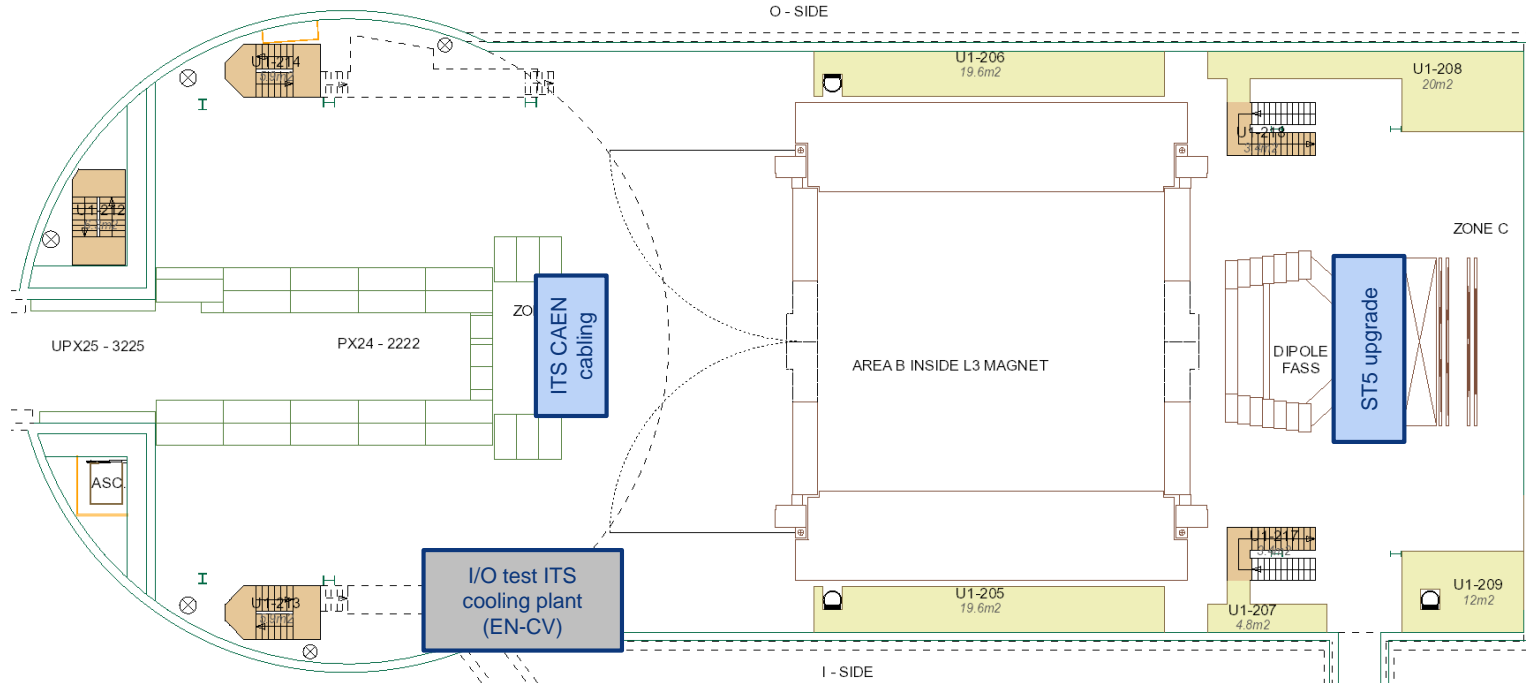
Miniframe activities w4 – Tue 26 Jan 2021



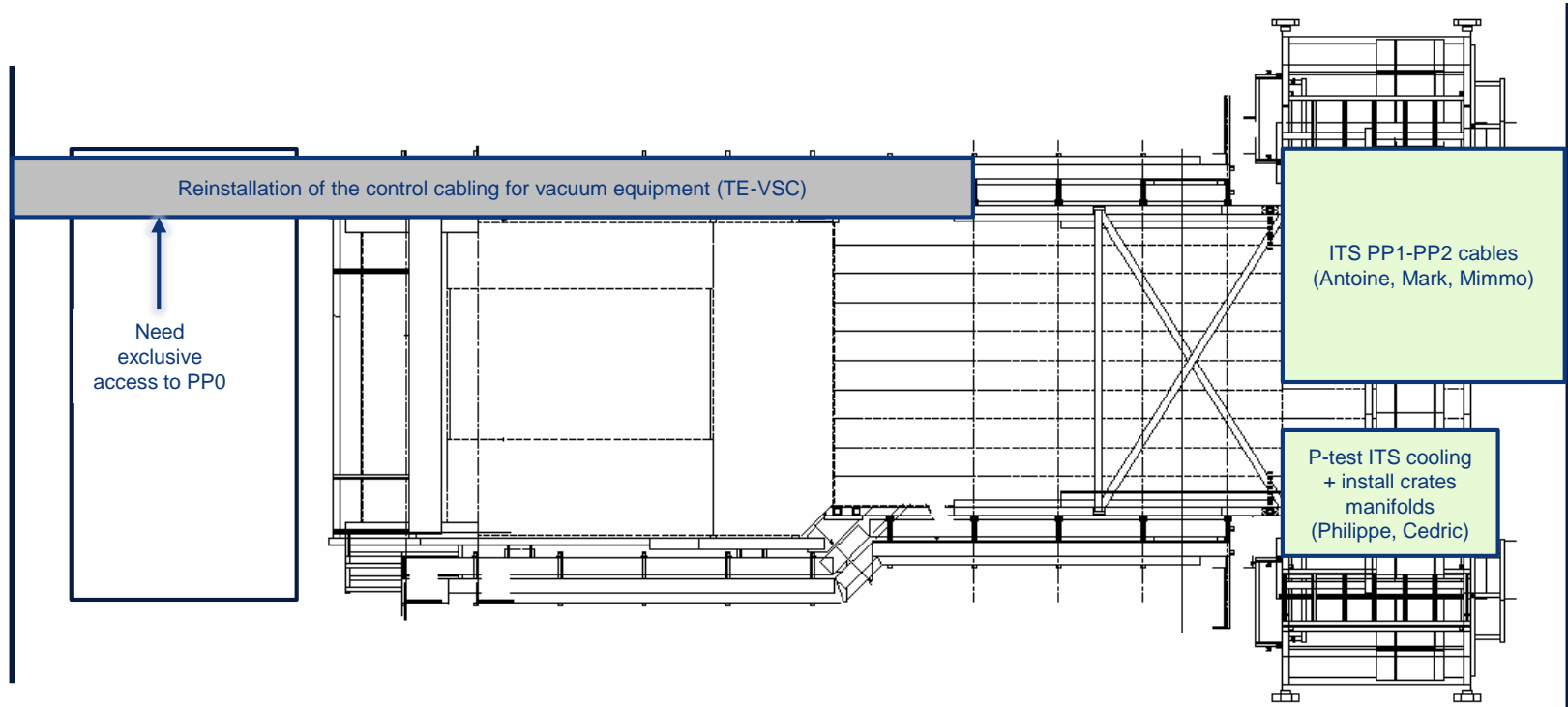
UX25 activities w4 – Wed 27 Jan 2021

Gas detection maintenance (SG2)

Arrival 4 quadrants MCH ST1 (CH2)

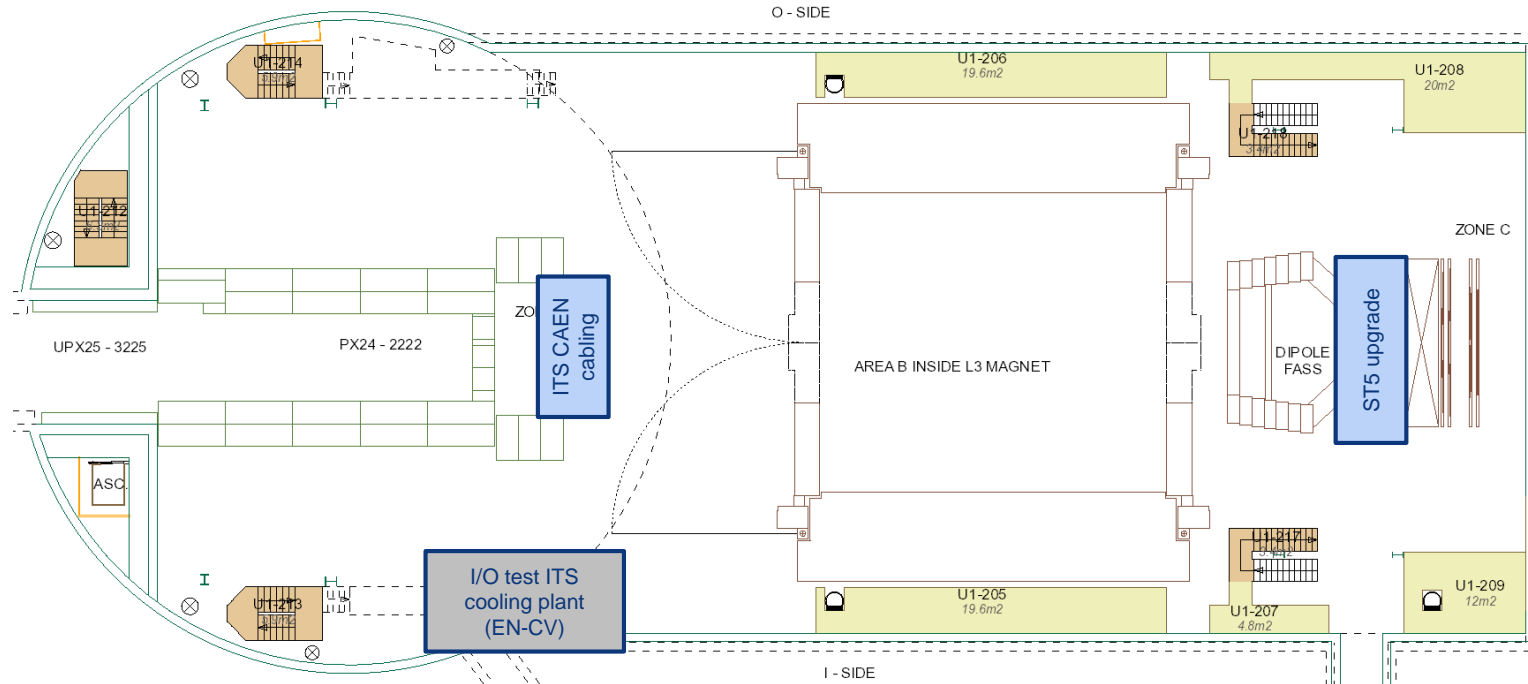


Miniframe activities w4 – Wed 27 Jan 2021

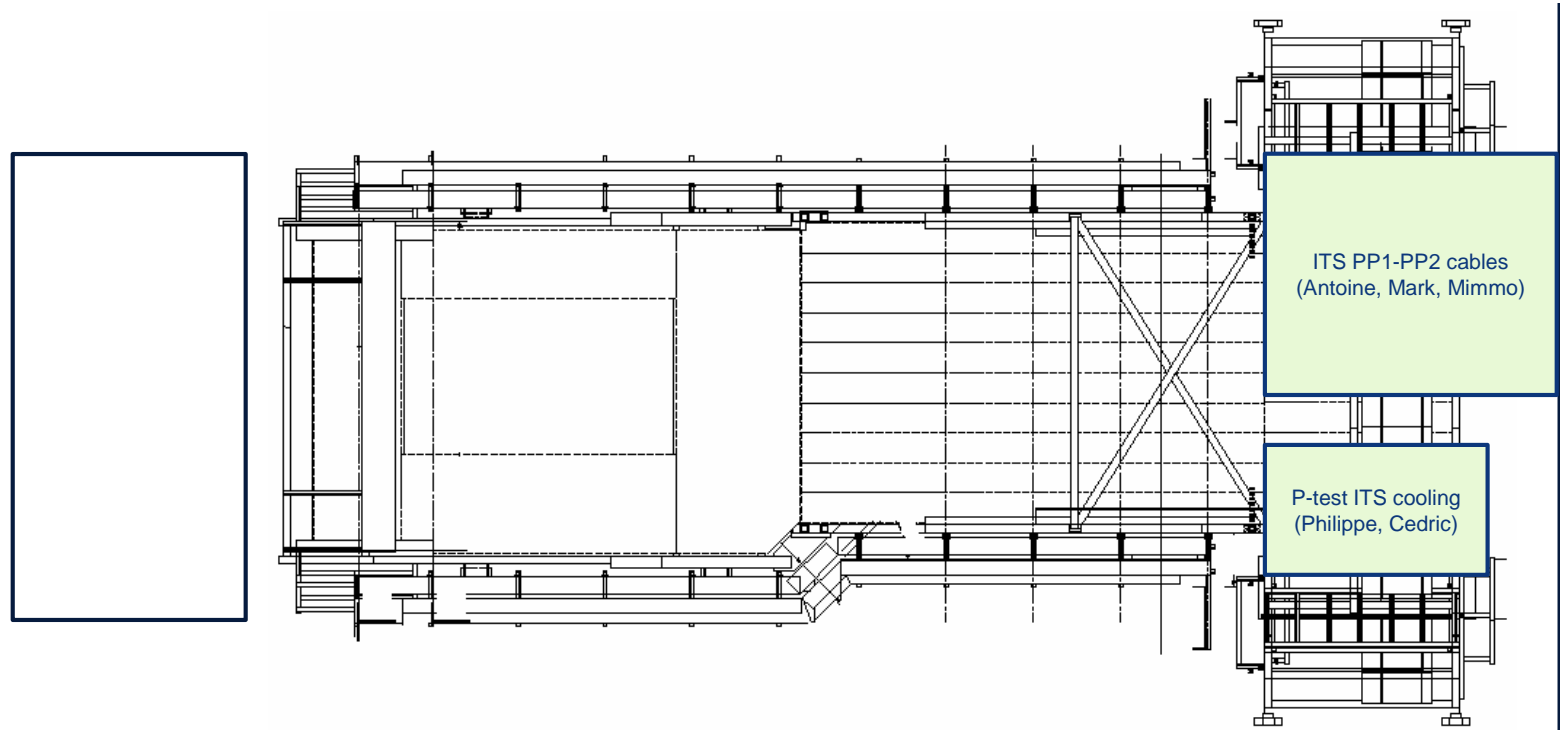


UX25 activities w4 – Thu 28 Jan 2021

IT-CS intervention on starpoint US25

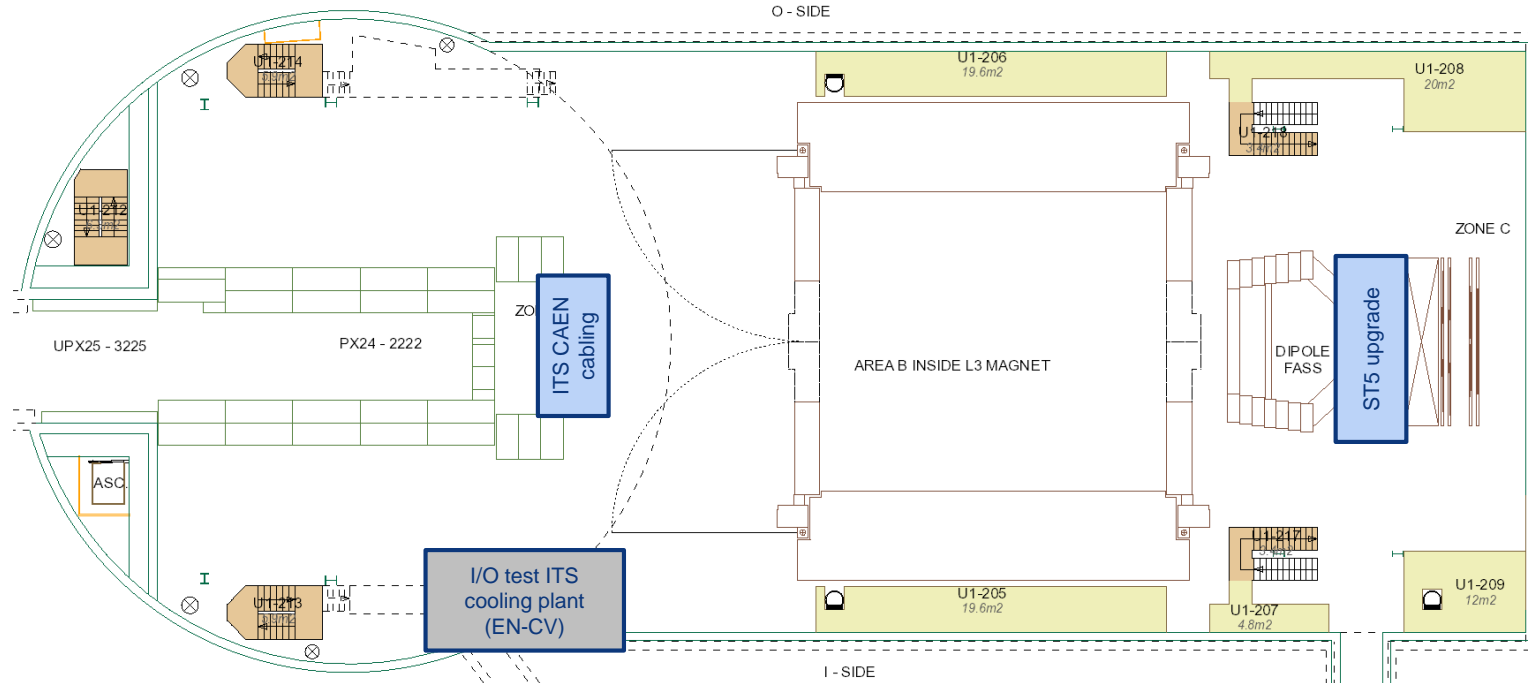


Miniframe activities w4 – Thu 28 Jan 2021



UX25 activities w4 – Fri 29 Jan 2021

Rotation SNIFFER modules



Miniframe activities w4 – Fri 29 Jan 2021

