

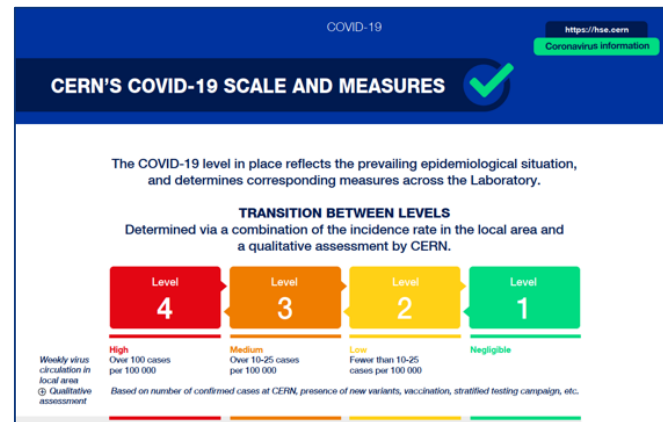
LS2 planning meeting

A.Tauro



CERN is in Level 3 - Orange

- CERN's COVID scale determining conditions for on-site access, telework and other measures based on a 4 levels scale
- **CERN will be moving to level 2 – Yellow on Monday 7 March**
- Applicable to all ages categories i.e. no more difference for the 65+
- Visits – see <https://hse.cern/content/access-cern-covid-19>



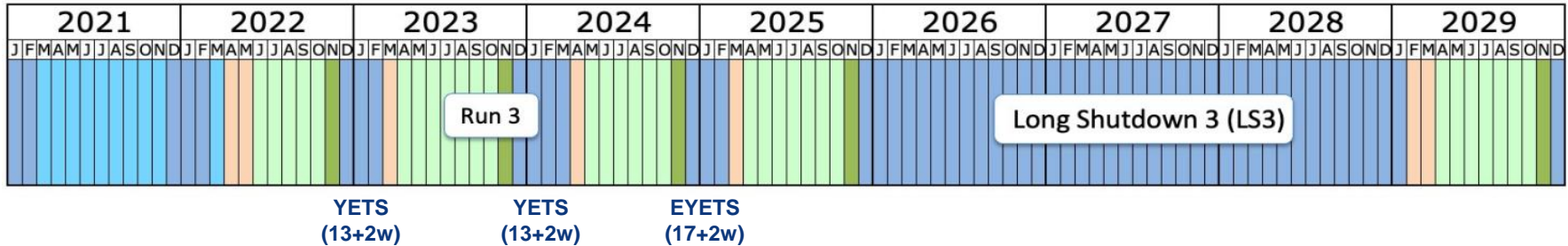
	High Over 100 cases per 100 000	Medium Over 10-25 cases per 100 000	Low Fewer than 10-25 cases per 100 000	Negligible
Weekly virus circulation in local area Ⓢ Qualitative assessment	Based on number of confirmed cases at CERN, presence of new variants, vaccination, stratified testing campaign, etc.			
Telework (TW) measures*	Members of personnel (MP) who can telework should telework, though one day per week on-site is possible.	MP who can telework should telework, though two days per week on-site are possible.	Normal working conditions apply. Telework may be exceptionally requested by the Organization.	Normal working conditions apply.
Access to CERN sites**	<ul style="list-style-type: none"> MP and honorary members are authorised, only for professional reasons and in consultation with their supervisors Retirees can access on-site facilities, such as bank safe deposit boxes, the CHIS office or the pension fund, only if strictly necessary Relatives of CERN Members of Personnel are not authorised CERN club members are not authorised 	<ul style="list-style-type: none"> MP and honorary members are authorised, in consultation with their supervisors Retirees can access on-site facilities Relatives of CERN MP are authorised CERN Club members are authorised, respecting rules for club activities 	<ul style="list-style-type: none"> MP and honorary members are authorised, in consultation with their supervisors Retirees can access on-site facilities Relatives of CERN MP are authorised CERN Club members are authorised, respecting rules for club activities 	Standard Access

- Main changes in going to Yellow as being:
 - On-site working becomes the norm. Teleworking is possible according to OC7 with 40% of contractual hours telework permitted in any two-week period
 - Physical meetings: limited to 200 indoors and outdoors (50 in Orange)
- Self test available also at P2
 - You are encouraged to take a test at least once per week
 - Registration via plamed (<https://plamed.web.cern.ch/>)

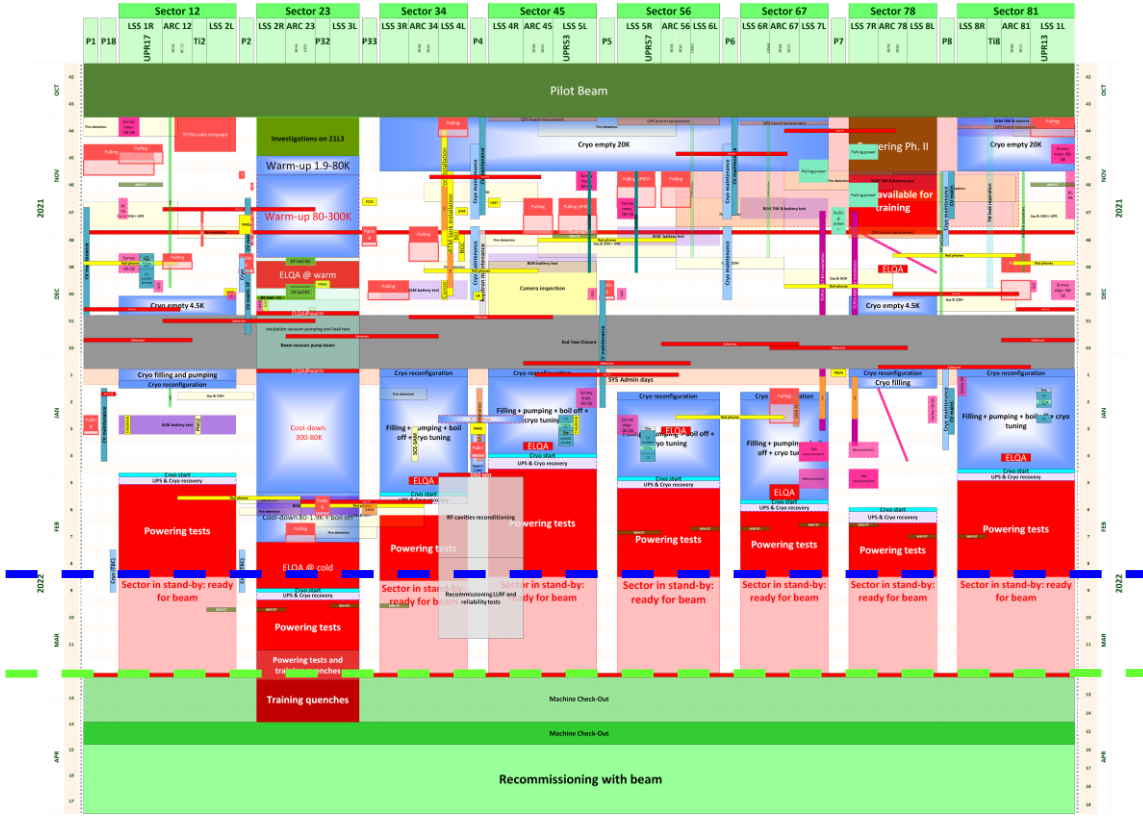


Run 3 and LS3 duration

- 2 technical stops in 2022:
 - TS1 (5 days) in September, in w37. LHCb requested a 2 weeks extension to install the C-side Upstream Tracker (UT)
 - TS2 (3 days) in November, in w45, right before the HI run
- **Run 3** extended by one year (2022 - 2025)
- **LS3** delayed by one year and extended by 6 months (2026 - 2028)
- **Run 4** delayed by 18 months (start 2029)
- Run 3 **YETS/EYETS** under discussion



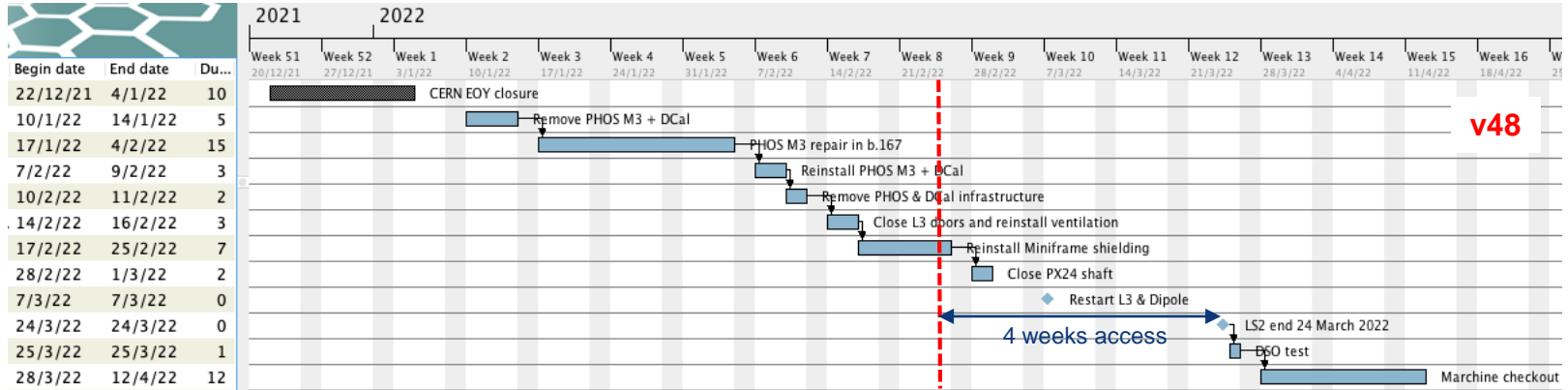
LHC schedule



Powering tests
Today
Machine checkout

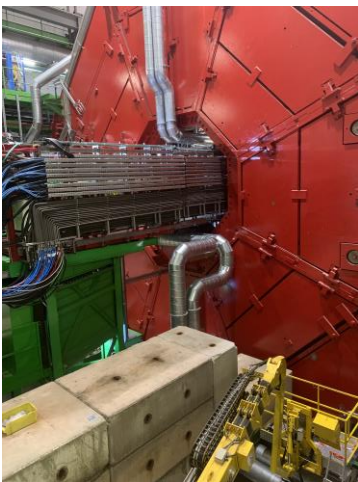
ALICE LS2 schedule

- Underground access ends on **Thursday 24th March 2022 PM**
 - Still **4 weeks** of access
- ALICE closed** by week 9 (March 2nd) and **restart magnets** in week 10 (March 7th)
 - Both magnets will be switched off on Wed 16.3 and Thu 17.3 to allow MCH to work in the FASS**
- DSO test** on March 25th, followed by 2 weeks machine checkout & S23 powering (punctual access possible)
- Machine commissioning with beam expected to start on April 13th (Easter week)



L3 doors & shieldings

- **L3 doors** closed February 14, ventilation reinstalled February 15 → Access inside L3 possible with watcher
- **Miniframe shielding** reinstalled this week
 - Evacuation nacelles, transport boxes and other items today (the 2 MCH nacelles will remain on the C-side)
 - Stabiliser bars will be installed next Monday
- → **Cavern access possible today, Friday, and Monday**
- **PX24 shaft** will be closed next Tuesday, March 1st → **No access UX25 cavern, CRs and Exhibition**



Activities – detectors 1/2

- **TOF:**

- All RO boards are on (no more cooling bottlenecks). Inspection crate 35 this week with Corrado, intervention to unclog crate 35 planned for the next YETS
- 3 ethernet cables redone by BE-EA this week
- Installation last 4DCDC → 1h Tuesday 22.2 after 17:30 (because of shielding blocks)
- Cooling plant modification next week to decouple CPV from TOF/Dcal and allow increasing the pump pressure by 1bar CR3 access on Monday 21.2 to displace TOF DCS cluster

- **TRD:**

- Remove gas backup system (access in baby-frame). Test stop-restart done this week with EP-DT
- Clean Wiener LVPS cooling hoses because they became too warm

- **TPC:**

- Requested to CV to increase L3 air cooling T by 1C (18C instead of 17C) → being processed by EN-ACE
- Replacement 2 faulty FEC on the A-side → done last week. Now 100% FEC working!
- Laser: one laser shows some problems and needs inspection → intervention planned 5-7 March (Borge)
- Noise investigation on the C-side → additional tests to be done

Activities – detectors 2/2

- **ITS cooling plant:**
 - Connection to chilled water done → the connection to the chilled water improved the available cooling power
 - Valves on return lines will be delivered only by mid April, making an installation before the cavern closure impossible → plan to run 2022 without the additional valves and to install them during the YETS 2022/2023. Installation during a technical stop only in case of unforeseen problems
 - PP1 filters replacement → 3 March
- **HMPID:**
 - Inspection liquid system inside L3 (Cosimo, Mimmo) → done
- **FDD:**
 - Install samples plastic scintillators next to Radmon locations
- **MID:**
 - Intervention on two RPCs: one needs a new HV connector and the other one has a broken gas inlet that has to be replaced. Both interventions will be done on the outside half planes and will require the nacelle → Mar 2 -3
 - Install and connect P sensor (cable installation done last Monday (BE-EA) → Mar 2 (EP-DT)
- **MCH:**
 - See next slides
 - Reinstall green fences (Philippe, Cedric) → tbd
 - Cleanout C-side area → ongoing
 - Search inside Dipole → Friday 4 March (Andrea, Arturo)

MCH Status and Plans



- Station 1 :
 - Week 7 (15-18/02) : Orsay team at CERN, fixed LV issue on DE102NB
 - Week 11 (15-17/03) : work on remaining readout issues, need **magnets OFF**
- Station 2 :
 - DE301 and DE401 (faulty HVs) replaced – **HV OK on all detectors up to 1700V**
 - >99% readout boards validated – work on remaining issues up to 2nd of March
- Stations 345 :
 - Work on readout issues seen during pilot run
 - ST45 R done, ST3 and ST45 L starting next week (at least 2 weeks needed)
 - Priority on ST34 while magnets are OFF
 - Few days with dipole OFF might be still be needed during week 10 – to be re-discussed next week
 - Few faulty HV cables still need to be replaced

MCH VTRx cooling

- Installation of manifolds well advanced – 58 out of 62 installed (4 missing in the FASS)
- About 2/3 already connected to air ducts via flexible hoses
- Completion of the installation planned for next week
- First test with ventilation unit ON foreseen this morning



MCH Status and Plans



Week	6	7	8	9	10	11	12
ST1 commissioning LV commissioning on DE102 Readout commissioning							
ST2 commissioning							
ST345 commissioning readout commissioning							
HV filters assembly & installation							
VTRx cooling manifolds installation							
commissioning							
Solenoid and Dipole restart							
LS2 end							

Other activities

- IT-CS: fiber connection starpoint 2109-2127-2102-2148 (PX24) → done last week
- CR0: visit Stulz representatives (FR+ES) → last Wednesday
- EN-EL: maintenance SF2 electrical switchboards → 22 Feb. Transparent for us

- **EN-EL: energize spare 66/18kV → 28 Feb. Transparent for us (provided that magnets are off)**

- EN-CV: disconnect CPV from TOF/EMCal cooling → 2 March
- EN-HE: maintenance UX25 crane on Thursday 3 March
- EN-EL: test de l'alimentation électrique des équipements sécurité machine LHC S23 Fri March 4th
 - 10 min. cuts → the cooling plants and the services généraux in the cavern will be affected (including light inside L3 etc.). Racks shall not be affected
- EN-ACE: modify CR5 fences between 7-11 March (week 10)
- EN-HEM: maintenance UX25 lift (AS-724): Tue 15 March between 6:00 AM and 8:00 AM
- TE-VSC: open beampipe manual valve (L3 magnet should be off) → Thu 17 Mar
- EP-DT: install gas chromatograph in CR5 MID rack → w14-15
- Install additional light miniframe (staircase) (Philippe/Cedric)

Access restrictions until end of LS2

- **17-24 February 2022:** close miniframe shielding – no access to UX25 cavern (except for MCH)
- **1 March 2022:** close PX24 shaft – no access UX25 cavern, CRs and Exhibition