

# TS2 preparatory meeting

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# General information

- LHC- TS2: from Monday 31st August @ 6am, to Friday 4th September @ 5pm
- LHC beam stops on Monday morning at 6:00 AM. **Cavern access starts at 9:00 AM**, after the RP check.
  - SL → switch off both magnets at 6:00 AM – **take out interlock keys**
  - RP check → Klaus
  - Confined space tour inside L3 around 9:00 – 11:00
- Access mode: automatic **restricted** (with token)
- The underground access will stop on Friday at 16:00 PM
- Tunnel access (around P2): from Monday midday to Friday midday. **NO access to triplets area (ADC)**

# UX25 access

- Access possible from Mon 9:00 to Fri 16:00 except the following slots:
  - UX25:
    - Tue 6:00 - 8:45 (lift inspection)
    - Tue 18:30 - 22:00 (lift inspection)
    - Tue 22:00 PM – Wed 1:00 AM (acoustic noise measurement)
    - Wed 22:00 PM – Thu 1:00 AM (acoustic noise measurement - backup)
    - Thu 20:00 PM – Fri 00:00 AM (X-Ray on beampipe flange)
    - Fri 6:00 AM - 8:00 AM (AS-703 lift maintenance)
  - L3:
    - Mon 9:00 AM - 11:00 AM (confined space course)
  - Miniframe:
    - Wed 9:00 AM - 17:00 PM (beampipe survey)

# Detector activities

- DCS will be unavailable for most of the morning on Monday 31.08 (say 09:00 until 12:00):
  - Restart all projects and apply important patches
- FMD: replace FMD2 RCU. Wed afternoon, as soon as the beampipe survey is completed
- SSD: testing air speed ITS ventilation (inside L3) (requires CV support) + DDL 512 debug
- ITS: services verifications
- BPTX/BCM (Antonello, Pieter)
  - Check and reinstallation of BCM sensors on A and C sides
  - Check of BPTX system
- T0: replace LCC module (laser control and gates/clock distribution) in rack C34

# Detector activities

## TPC:

1. Replace 1 RCU1 in sector C01. Should take 3 hours. Maybe Tue?
2. OPTIONAL: Revert C08 to RCU1. Decision on Mon. Should take 1 day
3. OPTIONAL: Install RCU2 in different sector. Decision on Mon

If we do (3) we can do it on sector C01 and then activity (1) is cancelled

# Detector activities

## PHOS:

- Reprogram TRU firmware back to the previous version (still to be confirmed before TS2): it will take 3 hours in total, maybe in several accesses
- Filling C6F14 to the PHOS cooling plant – around 2 hours
- Test air ventilation for SRU cooling if a deflecting pipe would be ready

# Detector activities

## TOF:

- HV cable on sector 10 C-side broken, connector to be replaced
- HV cables on sector 3 (A and C side) and 16 (C side) problematic, to be investigated
- 2 TDC boards broken in sectors 9 and 13 A-side to be replaced. Maybe also boards in sectors 4, 5, 6 and 7 C-side (not clear if we will have access to these boards w/o moving the SMs, to be evaluated during the access).

Nb. of participants: 3

Working time: 3 days (morning + afternoon)

IMPACT: 68417

# Detector activities

## EMCal/DCal

- Install a busy cable for EMCAL STU
- Rotate 1 EMCAL SRU
- Swap EMCSL STU DDLs
- Replacement of EMCAL/DCAL FECs
- Visual checking of FEE inside and outside L3.

# L3 access

## Watcher in **bold**

	Mon	Tue	Wed	Thu	Fri
AM shift (9:00 – 12:30)	Confined space training	<b>TPC</b> TOF	<b>EMC/DCA</b> (TPC) TOF	<b>TOF</b> EMC/DCA SSD	<b>TOF</b> PHOS EMC/DCA
PM shift (13:30 – 17:00)	<b>EMC/DCA</b> TOF	<b>TPC</b> PHOS EMC/DCA	<b>TOF</b> (TPC) EMC/DCA	<b>PHOS</b> EMC/DCA TOF	Contingency

Access stops  
at 18:00

Access stops  
at 21:30

Access stops  
at 19:30

Access stops  
at 16:00

Please note the Solenoid will be ramped up on Tue night 23:30 (for 45')

# Detector activities

- MTK:
  - Change DE725 (on CH7R): need to open CH7R and need a nacelle INSIDE; we will change the slat on Tue
  - Change DE512 (CH5R): no specific need, except DIPOLE OFF
  - Check some LV connections
- MTG:
  - Replacement of a faulty local card (type = maintenance): P. Dupieux
  - Installation and test in situ of new regional cards (type=consolidation): C. Renard, JL Beney
  - Search and repair of a gas leak on the OUTSIDE (need nacelle) - Mon

# CERN groups activities

- EN-CV: install magnetic filter PX24 mixed water network (Wed)
- EN-CV-DC: RP check (with DGS-RP) + change resin TPC\_ROD
- EN-CV and TE-EPC: joint test on the Solenoid cooling flow-meter
- EN-EL-BT: UPS battery testing
- EN-HE: reinstall crane electronics Mon 9:00, remove it on Fri 15:00
- EN-HE (ALTEAD): move nacelle to C/O-side (Mon) and bring it back on A-side (Fri)
- TE-VSC:
  - Close beampipe valve: Monday 9:00 AM
  - X-Ray on beampipe flange (A-side, on Thu between 20:00 and 00:00)
  - Open beampipe valve: Friday 15:00 PM
- EN-MEF: survey beampipe flanges on Tue whole day (Wed as backup)
- EN-HE: lift inspection(Vestner) (Tue between 6:00 and 8:45 and between 18:30 and 22:00, tbc) + lift maintenance (Fri between 6:00 AM and 8:00 AM)

# CERN groups activities

- GS-ASE: gas detection maintenance (SG2, CR5 and UX25) (Mon) + SNIFFER FW upgrade (Thu/Fri)
- PH-DT: software upgrade to bring on line the monitoring of the liquid level (through weight measurement) of liquid gas storage batteries/bottles (C<sub>2</sub>H<sub>2</sub>F<sub>4</sub>, Isobutane, Xenon). This intervention is planned for Fri
- SOGEDO: cut drinking water whole P2 on Thu 8:30 – 12:00

# Acoustic noise measurement campaign

## LHC PA2

(Tuesday evening 1.9.2015)

- Noise measurement campaign during the TS2 on Tue evening (Wed as backup) following complaints from the neighborhoods of LHC PA2 concerning the high level of noise emission from CERN installations.
- These measurements require the cooperation of several groups, in particular HSE, TE-EPC, TE-CRG, EN-CV and Alice
- TS2: electrical equipment, chillers and Alice ventilation
- TS3 or YETS: Cryogenics and cooling towers
- Remarks:
  - During the measurement campaign, cryogenics and cooling towers are always on.
  - Concerning the SVC: we will not switch off/on the harmonic filters during the measurement campaign, to minimise risk for cryo.
- In case of rain (=additional source of acoustic noise!), the measurements will be moved to Wed evening

# Acoustic noise measurement campaign LHC PA2 (Tuesday evening 1.9.2015)

		Meas. 1	Meas. 2	Meas. 3	Meas. 4a	Meas. 4b	Meas. 5	Meas. 6	Meas. 7	Meas. 8	Meas. 9
		22:00	22:15	22:30	22:45	23:00	23:30	0:15	0:30	0:45	1:00
1	Ventilation b. 2282 extraction caverne Alice	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
2	Groupe froid b. 2280 exterieur (chillers)	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
3	Bobines TCR	ON	ON	ON	ON	ON (pulsing)	OFF	OFF	OFF	OFF	ON
4	Injection tunnel T12 (converter RBI22.134 with transfos EMT610/2R)	OFF	OFF	OFF	ON (stand-by)	ON (pulsing)	OFF	OFF	OFF	OFF	OFF
5	Alice solenoid power converter with transfos EMT407/2X	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF

No access UX25 between Tue 22:00 PM and Wed 1:00 AM (backup on Wed)

# Activities – P2 tech

- Philippe + Didier: drill hole + install valve in Dipole water leak tray
- Yannick, Philippe, Greg: test fix on Dipole cooling system
  - RP analysis on Mon 10:00 (results at 15:00). Empty circuit at 15:00
  - Intervention starts on Tue 9h00, test afterwards
  - Access with MCH scaffolding on wheel
- Philippe: protect L3 level sensor (busbars) + check leaks (black-hoses)
- Philippe: install cooling hoses for PHOS SRU ventilation (Mon)
- Installation of ‘connection boxes’ on various ‘general purpose’ cables (in UX, CR, SX, ARC). UX: Arturo + Andre to meet SPIE on Mon at 11:00 (connection work)
- Pieter: install platform to access beampipe valve (Mon) + beam to clamp X-ray system + displace RP samples

# Visits

- Press visit (M.S.) on Wed afternoon (tbc)

# TS3

- Vibration measurements (TPC)
- Arturo: check that there are no gaps in the beampipe protection close-by SSW
- EYTS
  - IT: IP renumbering of the ALICE bypass services (tbc)
  - Modify all Wiener PS
  - New lift UX25 cavern (AS-703) – open PX24 shielding
  - Install TPC RCU2 (tbc)
  - New ITS dehumidifier unit + pipe