



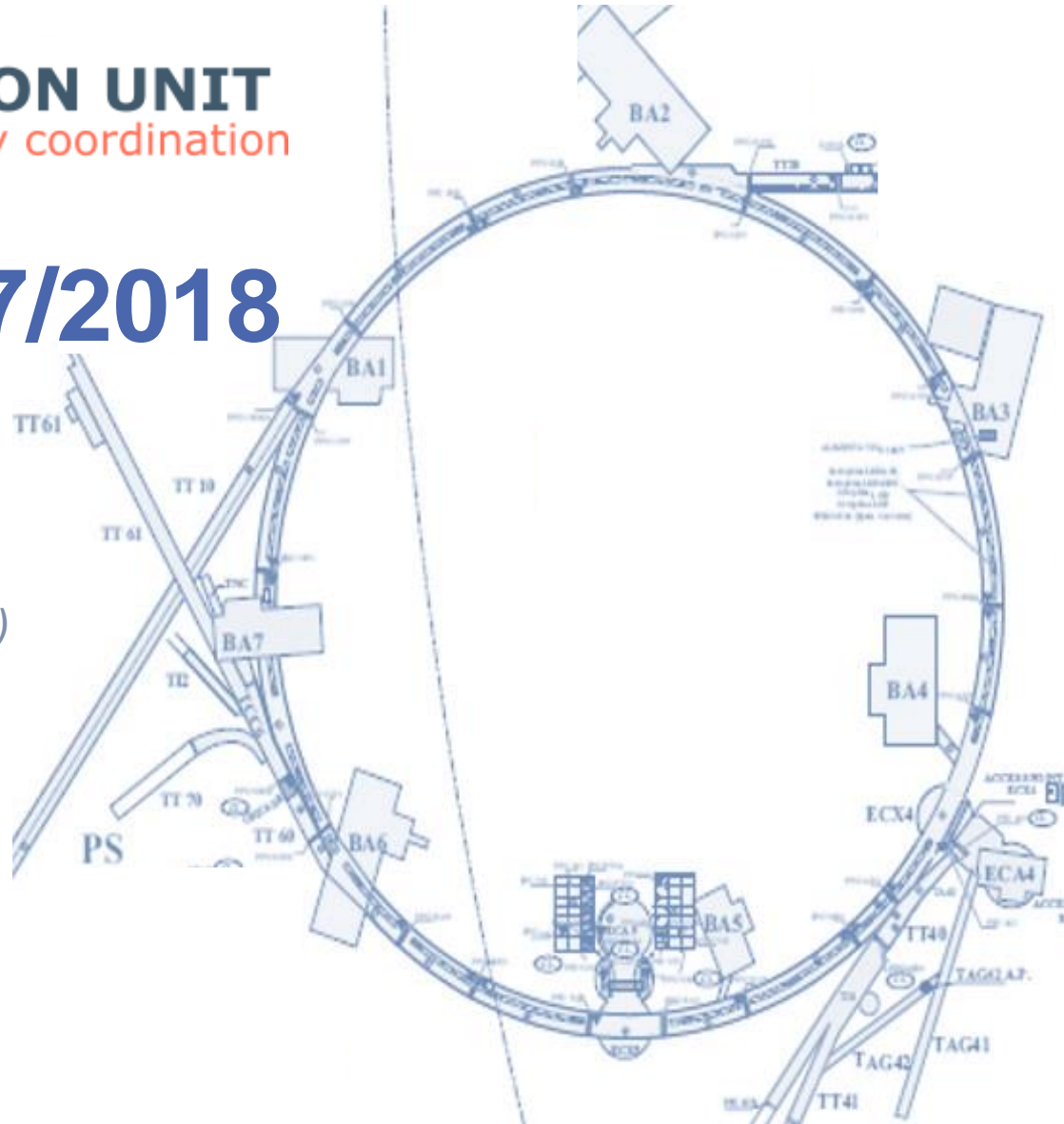
**ACE**  
**COORDINATION UNIT**  
Facility, Site & Safety coordination

# YETS-SPS-2017/2018

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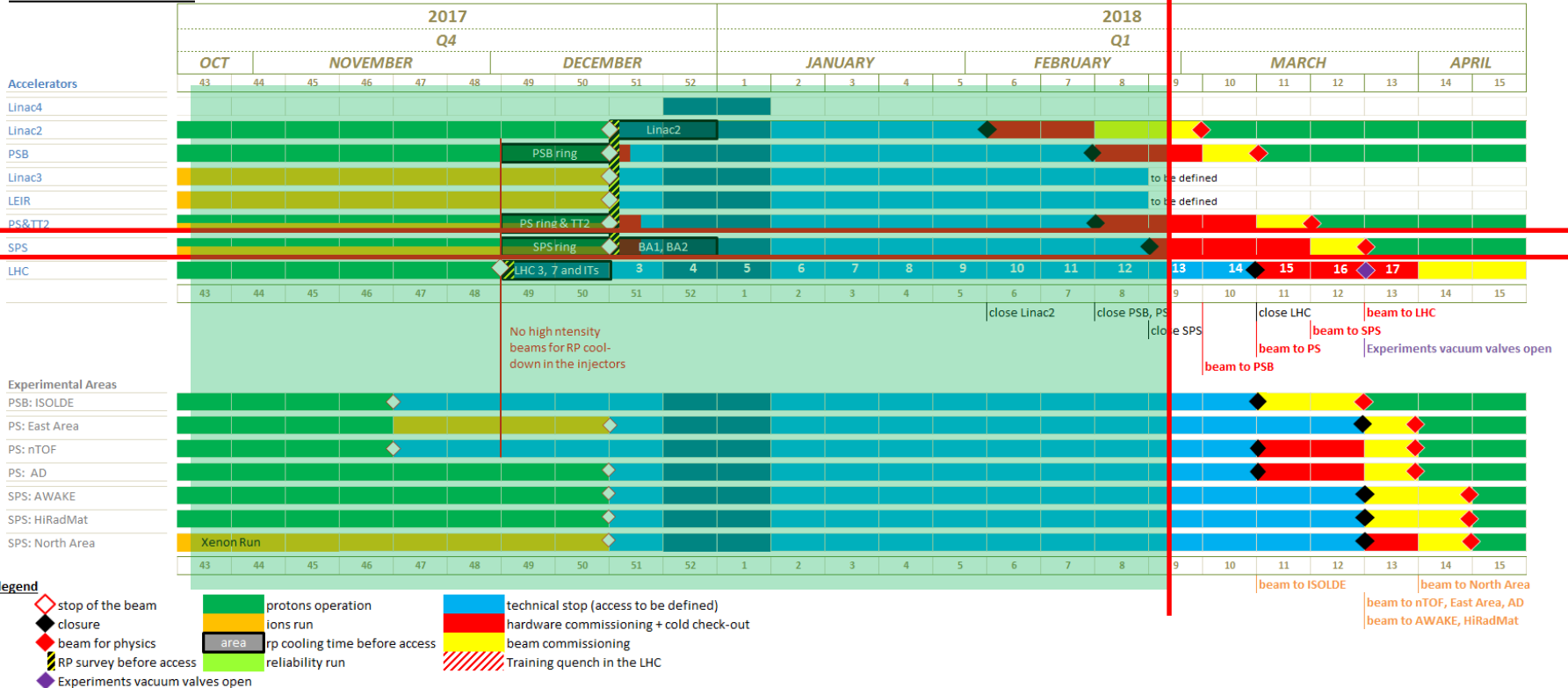
ENGINEERING  
DEPARTMENT

# Year-End Technical Stop 2017-2018

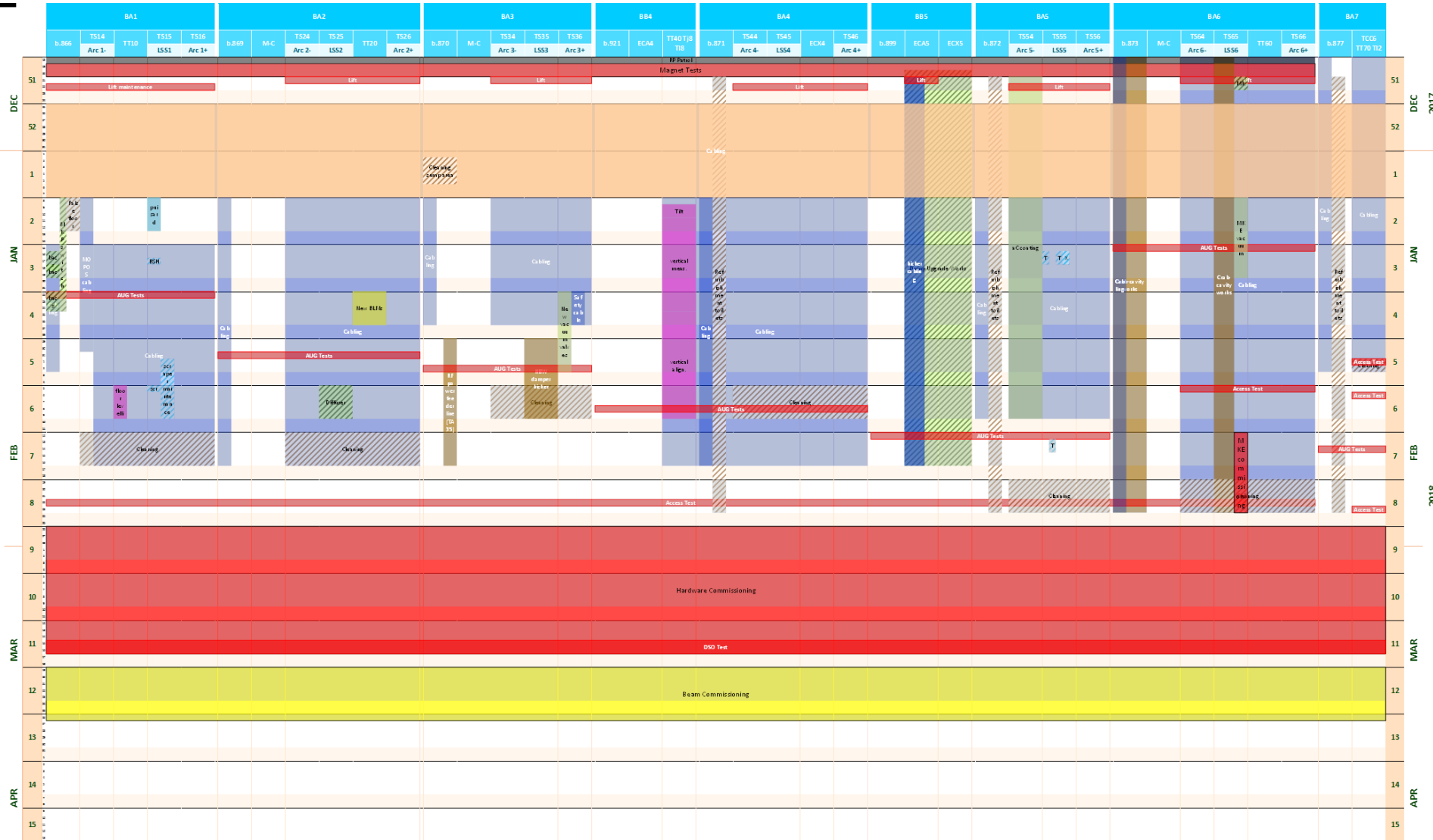
- 17 weeks beam to beam stop for the LHC
- Xenon physics for the North Area
- 5 weeks for commissioning (hardware tests + cold check-out + beam commissioning) in the injectors (PSB, PS, SPS) before beam ready for the LHC
- 2 to 3 days of diagnostic tests in the injectors with machine closed
- The LHC Experiments vacuum valves are opened on Monday 26<sup>th</sup> March 2018

Machines	Machine access (weeks) (not including the 2 weeks of annual closure)
LINAC2	4
PSB	6.5
PS	6.5
SPS	7.4
LHC	13

YETS 2017-2018 v.5.0



# SPS YETS 2017/2018 Overview



# Key dates

- Beam off at 06:00 on Monday the 18<sup>th</sup> December
  - Access into BA7, TI2, TAG41, TAG42 & TI8:
    - Monday the 18<sup>th</sup> December until Friday the **23<sup>rd</sup> February 2018.**
    - 8 weeks of access. (Any access before this date must be coordinated by OP)
  - Access into BA3,4,5 & 6:
    - Thursday the 21<sup>st</sup> December until Friday the **23<sup>rd</sup> February 2018.**
    - 7.4 weeks of access.
  - XMAS holidays: Saturday the 23<sup>rd</sup> December to Sunday the 7<sup>th</sup> January inclusive.
  - Access into BA1 & BA2:
    - Monday the 8<sup>th</sup> January until Friday the **23<sup>rd</sup> February 2018.**
    - 7 weeks of access.
  - **Closure of the SPS: Friday the 23<sup>rd</sup> February 2018 at 16:00Hrs!!!!**
- 
- 3 weeks foreseen for EPC tests and cold-checkout by OP.
  - DSO tests on Chain 1 (Monday the 12<sup>th</sup> March)
  - SPS will take beam from the PS on Friday the **16<sup>th</sup> March 2018,** followed by 2 week for beam setup.
  - SPS ready to give beam to the LHC on Monday the **4<sup>th</sup> April 2018!**

EN/ACE/OSS

BE/OP

# Statistics

- 7.4 weeks of access.
  - 1 day per point lost to AUG tests
  - 1.5 days per point lost to Access tests.
  - 0.5 days per point due to lift maintenance
- 554 IMPACTs were processed
- 29 VICs carried out with the support of EROS.
- 16 planning and coordination meetings.
- 17 Engineering Change Requests.

# ECRs for YETS 2017-2018

ECRs for YETS 2017-2018 ordered by Group						
EDMS reference	EDMS Status	Title	Group	Authors/contact person	LIU Project	Deadline Date / Released Date
<a href="#">SPS-BLM-EC-0002</a>	Approval Accepted	BLM installation in the TT20 transfer line	BE-BI	E. Effinger	NO	2018-01-23
<a href="#">SPS-Y-EC-0004</a>	Released	Access System Modification to Interface with the Crab Cavity Test Stand	BE-ICS	T. Ladzinski	NO	2018-01-12
<a href="#">SPS-ADKSV-EC-0001</a>	Released	Slotted Line Kicker in LSS3 of the SPS	BE-RF	P. Parrado, E. Montesinos	YES	2017-09-25
<a href="#">SPS-LI-EC-0005</a>	Released	New RF power feeder lines in SPS point 3 shaft (PA3) and GT10 for LIU-SPS	BE-RF	P. Parrado, E. Montesinos	YES	2017-11-06
<a href="#">SPS-LI-EC-0010</a>	Released	HL-LHC SPS crab-cavity test stand – installation in YETS	BE-RF	G. Vandoni	NO	2017-12-18
<a href="#">SPS-LJ-EC-0007*</a>	Released	HL-LHC crab-cavity SPS test stand, changes in surface building	BE-RF	G. Vandoni	NO	2017-05-26
<a href="#">SPS-LI-EC-0011</a>	Released	Installation of cumulated distance indicators in the SPS main ring	EN-ACE	S. Chemli	NO	2017-12-12
<a href="#">SPS-E-EC-0002</a>	Released	Cable tray for safety-related cables in SPS arcs	EN-EL	G. Velázquez Gutiérrez	NO	2018-01-17
<a href="#">SPS-TACW-EC-0001</a>	Released	Installation of Target Absorber Collimator with Tungsten jaw in half-period 51710-51810 of the SPS	EN-STI	S. Montesano	NO	2017-12-20
<a href="#">SPS-CC-EC-0001</a>	Released	Replacement of Telecom Radiating Cable in the SPS tunnel	IT-CS	S. Agosta	NO	2017-12-06
<a href="#">SPS-SFDR-EC-0001</a>	Released	SPS Fire doors partition trial in BA4	SMB-SE	R. Morton	NO	2018-02-09
<a href="#">SPS-E-EC-0001</a>	Released	Displacement of central cable trays in LSS5 half-period 519	TE-ABT	E. Carlier, G. Georgiev (EN-EL)	YES	2017-12-22
<a href="#">SPS-LI-EC-0008</a>	Released	SPS beam dumping system kicker platform, transmission cable trays and cables installation in SPS point 5	TE-ABT	E. Carlier, P. Van Trappen	YES	2018-01-12
<a href="#">SPS-MKE-EC-0002</a>	Released	Upgrading of kicker magnets of the SPS west extraction system, MKE6	TE-ABT	M. Barnes	YES	2017-12-19
<a href="#">SPS-TPSWA-EC-0001</a>	Released	Diffuser for LSS2 ZS electrostatic septa	TE-ABT	B. Bahlan, J. Borburgh	NO	2017-12-20
<a href="#">SPS-VC-EC-0002</a>	Released	SPS amorphous carbon coating in YETS 2017-2018	TE-VSC	W. Vollenberg	YES	2017-12-12
<a href="#">SPS-VC-EC-0003</a>	Released	Temporary modification of 3 QD Short Straight Sections configuration for aperture restriction assessment	TE-VSC	C. Pasquino	YES	2018-01-29
<a href="#">SPS-V-EC-0005*</a>	Released	Modification of the SPS sectorization in long vacuum sectors (arcs) (EYETS 2016-2017) - BA3	TE-VSC	C. Pasquino, J. Ferreira	YES	2016-12-02
<a href="#">SPS-VF-EC-0003</a>	Released	SPS Flange Impedance Reduction in YETS 2017-2018	TE-VSC	J. Perez Espinos	YES	2017-12-12

**19 ECRs approved for YETS 2017-2018 activities.**  
*(The 2 ECRs marked with \* where already approved during the EYETS 2016-2017)*

# YETS activities

## SPS

### BA1

- Cabling campaign
- MOPOS project TS1-
- SPS MKP TMR1 réparation de la tête HT

### BA2

- Cable campaign
- Replace transformer
- Installation of 6 SPS BLMs (TT20)
- Installation of TPSWA\_21602 (Diffuser)
- Repair water infiltrations in TT20

### BA3

- Cable campaign
- Prep works for RF upgrade in LS2
- Repair asbestos pipe (will be removed in LS2)
- Installation of a new High bandwidth damper kicker

### BA4

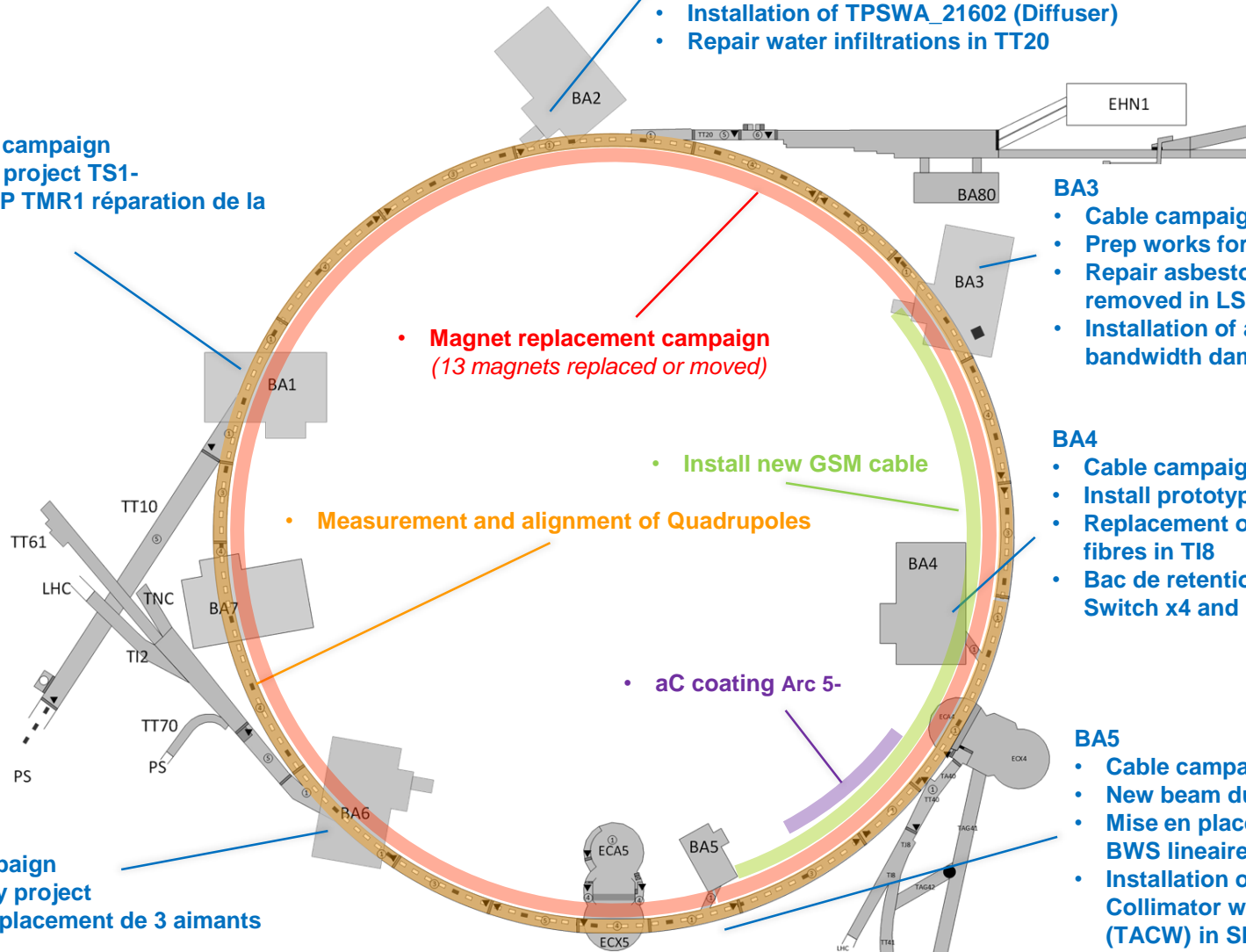
- Cable campaign
- Install prototype Fire Door
- Replacement of radiation sensitive fibres in T18
- Bac de retention MKE4 ECA4 Switch x4 and De-Coupling Box X2

### BA5

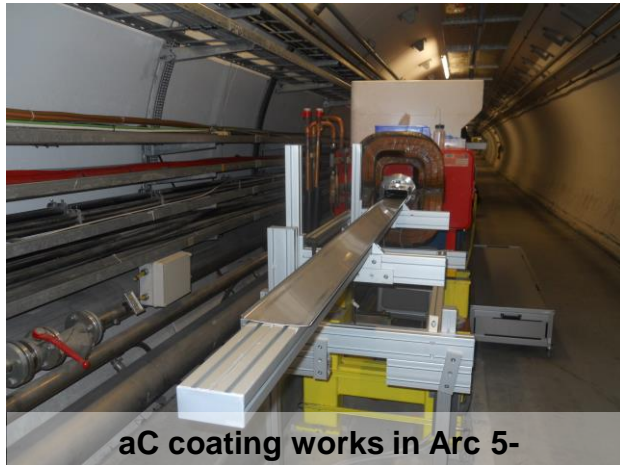
- Cable campaign
- New beam dump works
- Mise en place nouveau wire sur BWS lineaire 521
- Installation of Target Absorber Collimator with Tungsten jaw (TACW) in SPS (UA9)

### BA6

- Cable campaign
- Crab Cavity project
- MKE 6 remplacement de 3 aimants



# Photos



**aC coating works in Arc 5-**



**Exchange of MKE6 in LSS6**



**Installation of new Diffuser in LSS2**



**Repair works of water infiltration in TT20**



**Fire Door prototype in LSS4-**



**Installation of new GSM cable**

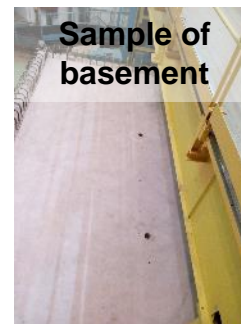


# LIU Beam Dump activities

## Main Activities Completed

- 1) Removal of three doors between ECX5 & ECA5 and a metallic ladder, ECX5, for the installation of the new cable trays
  - Re-installation of two modified doors and installation of a temporary hand rail up to the new ladder during LS2
- 2) Sample of the concrete basement for the new dump
- 3) Sample of the tunnel for the enlargement of the tunnel eye in LSS 5+
- 4) Removal of obsolete cooling systems (pump, pipes)
- 5) Installation of the new cable trays
  - Installation and removal of scaffolds
- 6) Modification of cable trays in LSS 5+ → **Partial lock-out** of BA5 was done affecting nearby areas during the activity
- 7) Installation of 20 cables for the kickers
- 8) Installation of kicker platform in ECA5 → Agreement with BE-OP and BE-ICS to finish the installation of the kicker platform during weeks 9 and 10 (access by BB5 lift)
 

**The HW commissioning of SPS is not affected**
- 9) Installation of the crane, 1Ton, on top of the kicker platform (week 9)



Installation of the kicker platform in ECA5

# Crab Cavities activities during the YETS



port items



BA6 – surf

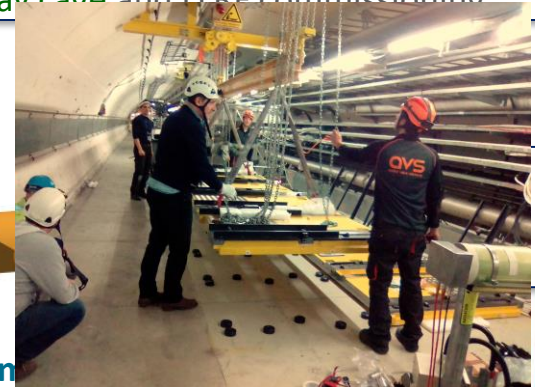
IOT amplif  
Cryogenic  
Oil remova  
Faraday cage and IGBT commissioning



5



20 team  
distributed cabling and ODH)



to cryogenic  
guides



l-Box  
connection  
phase se  
xibles an  
G.Vand



***On behalf of the SPS coordination team I would like to thank all the groups and teams involved in a successful YETS.***



# Questions?

