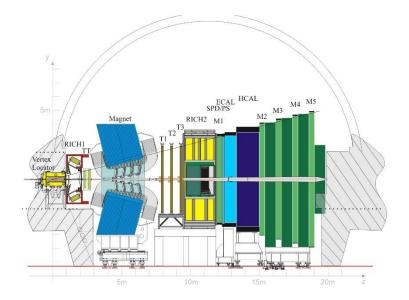
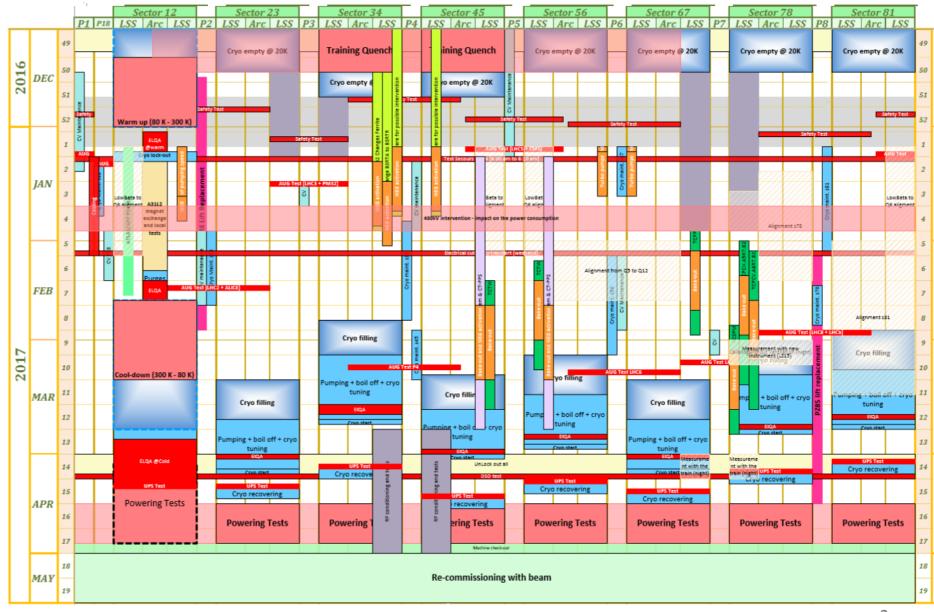
LHCb & EYETS

2016-2017





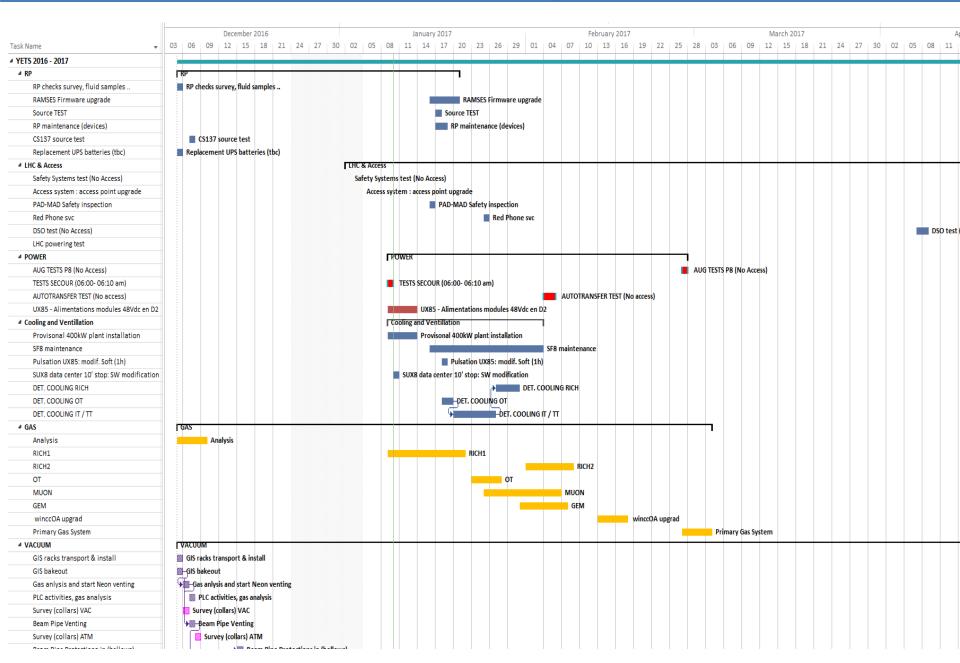
LHC planning





- VELO: Fix CO2 pump
- **RICH1+2:** HPD box RICH1 A-side out (FE electronics & HPD). HPD exchange (RICH2).
- **TT:** Repair broken bonds (3 modules removed and shipped to Zurich). Replace dead VCSEL.
- **Dipole:** Tightening current feed connectors, MSS PLC upgrade.
- IT: -
- OT: -
- ECAL/HCAL: Change PMTs, CS 137 Scan, passive dosimeters exchange
- **PS/SPD:** fix SPD VFE LV distribution, PRS VFE replacement, passive dosimeters exchange
- M1: A Side open fix chamber M20A1 (FEB) + other FE issues
- M2-M5: Fix FE electronic issue on M2-front and M5-back, debugging of some electronic Boards (Towers). HV training...
- Herschel LO/Scintillators replacement







													January 2017 February 2017 March 201																														
	December 2016										January 2017 February 2017																																
Task Name 👻	03	(06 ()9	12	15	18	1	21	24	2	7 3	30	02	05	0	8	11	14	17	2	0	23	26	29	01)4	07	10	13	16	19	22	2	25	28	03	06	09	12	15	18
Primary Gas System																																						Pr	imary	Gas Sy	stem		
▲ VACUUM		VA	CUUM													-									-				_														
GIS racks transport & install		G	ilS rack	s tra	nspo	rt &	nstall																																				
GIS bakeout			iS bak																																								
Gas anlysis and start Neon venting			Gas a						ting																																		
PLC activities, gas analysis			🛛 PLC	acti	vitie	s, gas	analys	is																																			
Survey (collars) VAC			Surve			·																																					
Beam Pipe Venting		4	Bea	ım P	ipe V	entir	g																																				
Survey (collars) ATM			S 🛛	urve	y (co	llars)	ATM																																				
Beam Pipe Protections in (bellows)					đ	E	leam I	ipe	Prote	ction	ns in	(bell	ows)																													
Beam Pipe protections Out																						Bea	m Pip	e pro	tecti	ons O	ut																
SMOG gas exchange and purity check																																											
Beam Pipe Pump down																						4			-								_		-								
Ionization Gauge Integration in Vac Sect A1L8.X		🔳 la	onizati	on G	auge	Integ	ration	in V	'ac Se	ct A1	118.	x																															
▲ VELO																						Г	VELO																				
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ECAL opening (A and C)			¥ ₽	CAL	open	ing (/	A and	C)																																			
ECAL work - nacelles			F			E	CAL w	ork	- nace	lles																																	
Open HCAL A or C						Юр	en HC	AL A	or C																																		
HCAL A or C work					Ģ				HCA	L A o	or C	work																															
Open HCAL C or A						Ор	en HC	AL C	or A																																		
HCAL C or A work																					HCAL	C or	A wo	rk																			
Close Calorimeters																					Clos	se Ca	lorim	eters																			
PS A side Elect.																			PS A s	ide E	lect.																						
▲ MUON		MU	ON													-				-					-		-		_														
open M1 A				ope	en M:	LA																																					
M1 Chamber exchange				4	-	м1 с	hamb	er ex	chan	ge																																	
M1 Survey						⊢	_	-									++		H	M	L Surv	/ey																					
M1 service boards debug							M1 s	ervio	e bo	ards	deb	ug																															
Fix FE M1-front M2-front, M5-back																						Fix I	FE M1	-front	t M2	-front,	M5-	back															
Fix Off detector electronics M1-5 (towers+bunker)																																											
HC training MWPC																																											
4 Π					П											+																											
digitiser board exchange in AB6						digiti	ser bo	ard (excha	nge i	in Al	B6																															
TT Module removal																Π	Nodu	ule re	mova	al																							
TT Module re-installation																						Π	/lodul	e re-i	nstal	lation																	
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	03 06 09 12 15 18 21 24 27 30 02 05 08 11 14 17 20 23 26 29 01 04 07 10 13 16 19 22 25 28 03 06 09 12 15 18 21 24 27 30 02 05 08 11 14
▲ RICH1	
Prepare workspace in UXB	Prépare workspace in UXB
Prepare - transport tooling, extraction box	Prepare - transport tooling, extraction box
Open shielding side A	- Open shielding side A
RP checks survey, fluid samples	→ RP checks survey, fluid samples
Disconnect services	
Take lower box out	State lower box out
work on lower box	work on lower box
move back lower box	here box
reconnect services	Teconnect services
close shielding	Close shielding
▲ RICH2	
Change HPD RICH2 A side	Change HPD RICH2 A side
VELO-UT Transfer lines	VELO-UT Transfer lines
Supports: risk assesment by RP	Supports: risk assessment by RP
Supports: Transport of material	Supports: Transport of material
VIC Supports and Shielding	-VIC Supports and Shielding
Dismantling iron plates shielding wall A&B	See - Dismanting iron plates shielding wall A&B
Remove sand bags and concreteblocs (?) - local storage	Final Remove sand bags and concreteblocs (?) - local storage
Marking position of support	Marking position of support
Installation of Supports	Generation of Supports
VIC Line Installation Cryosystem	-VIC Line Installation Cryosystem
Open Shielding wall	-Open Shielding wall
Transport material CRYOSYSTEM	Transport material CRYOSYSTEM
LINE INSTALLATION Cryosystem	TINE INSTALLATION Cryosystem
Welding exam	
Pipes assembly	Pipes assembly
Process pipe orbital welding	Process pipe orbital welding
RT and Helium Leak test	RT and Helium Leak test
Welding for pipes 26,67x2,87	Welding for pipes 26,67x2,87
He leak test	He leak test
Armaflex wrapping	Armaflex wrapping
Pressure test	Pressure test
Close Shielding wall	Close Shielding wall
Junction box installation	
PR720&721 Revamping, AS713	[PR7208/21 Revamping, A5/13
detector protection : net	detector protection : net
detector protection : Scaff: transport	detector protection : Scaff: transport
Detector protections: Scaff : install	-Petector protections: Scaff : install
Work PR	Wor
Test and qualification	
Protections removal	
VIC AS713 replacement	VIC AS713 replacement
AS713 replacement	



	D	December 2016			Jai	nuary 2017			Fe	bruary 201	.7					Marc	h 2017							April 20
Task Name 👻	03 06 09 1	12 15 18	21 24 27 30 02	05 (08 11	14 17 20	23 26 2	29 01 04	07 10	13 1	5 19	22 2	5 28	03 06	09	12 1	15 18	21	24 27	30	02	05 0	3 11	14
detector protection : net						detecto	or protection :	net																
detector protection : Scaff: transport						det	ector protecti	ion : Scaff: trans	port															
Detector protections: Scaff : install							-Det	tector protection	ons: Scaff : in	stall														
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Test and qualification																							9	
Protections removal																								
VIC AS713 replacement						VIC AS713 replace	ment																	
AS713 replacement																								AST
4 DIPOLE					DIPOLE																			
MSS HW change and tests																								
CHECK/TIGHT power connectors					СНЕ	CK/TIGHT power o	onnectors																	
▲ Moedal	M	Noedal																						
Water UGC1		Water UGC1																						
MoEDAL Detector Maintenance		MoEDAI	L Detector Maintenance																					
▲ Herschel					He	schel																		
Removal scintillators and PMTs						Removal scintillat	ors and PMTs																	
4 Micellaneous																								
Cranes electronic install	Cranes electro	onic install																						
Hi-FOG water mist (UX+barracks)					H	i-FOG water mist (UX+barracks)																	
Maintenance DI and Marimils								Maintenanc		mils														
Maintenance DI racks								두 Maintena	nce DI racks															
Maintenance Gas SG8												M	aintenance	Gas SG8										
▲ Survey	Survey																							
SURVEY Mesure deformation poutre Beton D4	SURVEY	/ Mesure deforma	ation poutre Beton D4																					
SURVEY replacement of the WPS sensor cables of the survey monitoring system			SURVEY replacement of the	WPS senso	or cables of	the survey monito	oring system																	
3d scan of infrastructure running from the shielding wall	3d sc	can of infrastructu	ure running from the shieldin	g wall																				
Survey Network Measurement						Sur	vey Network N	Measurement																
▲ Visits	Visits																							
Visit EPFL (16:00)		Visit EPFL (16:	:00)																					
Visit EPFL JBL	Visit EPFL	. JBL																						
Visit EPFL vetterli						Visit EPFL vetterli																		
Visit Frei		Visit Fre	ei																					
Visit french officials (jacobsson)							Visit french	officials (jacobs	son)															
Visit UK parliament								Visit U	JK parliamen	t														

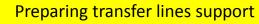


Day 1 (Dec 5)

 \checkmark

 \checkmark

- ✓ Material for
- TT
- CO2 cooling/control box/cable





New (rented) nacelle for CALO







 \checkmark

PR787 crane electronic (RICH1)



















CO2 transfer lines









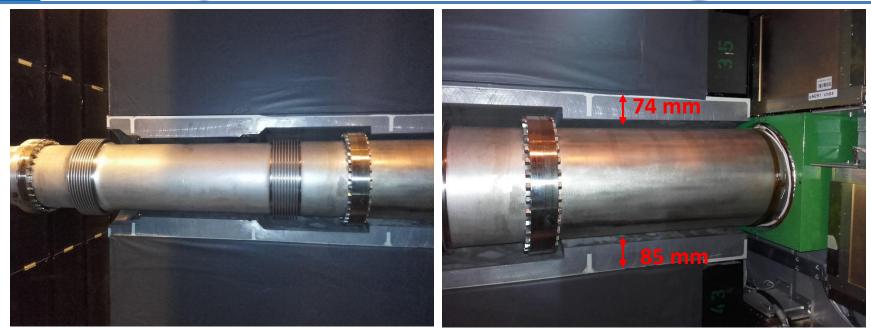


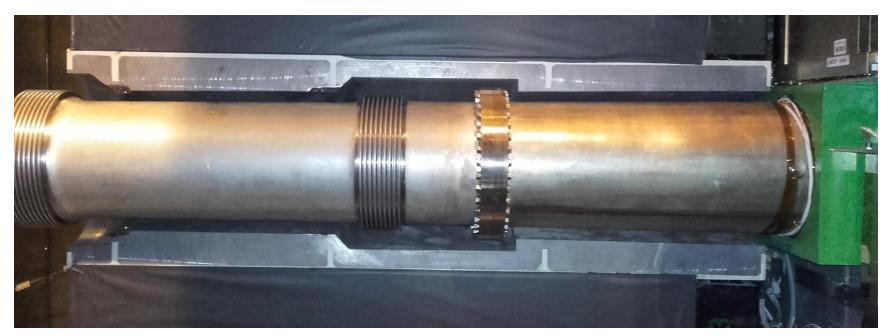




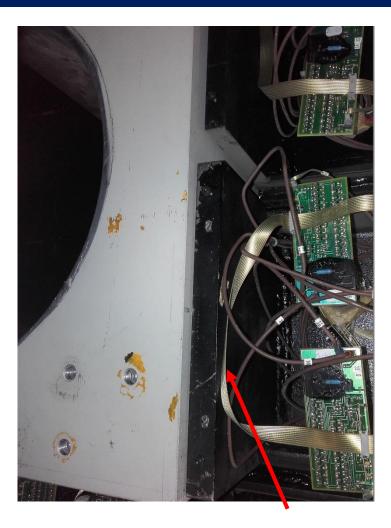
Improved Muon Shielding

LHCb





Back side of HCAL







M2-5 HV training





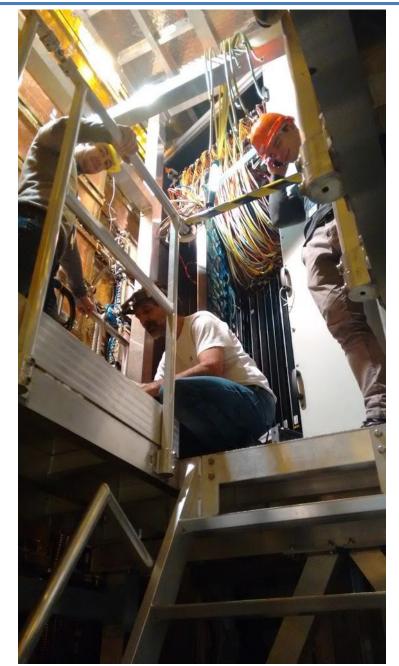








RICH2 HPD













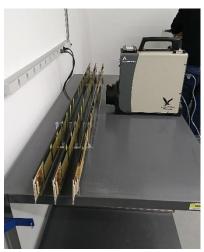






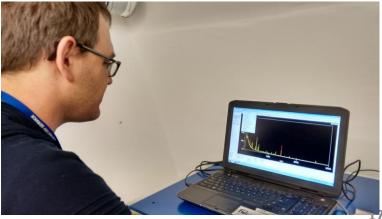
Opening TT





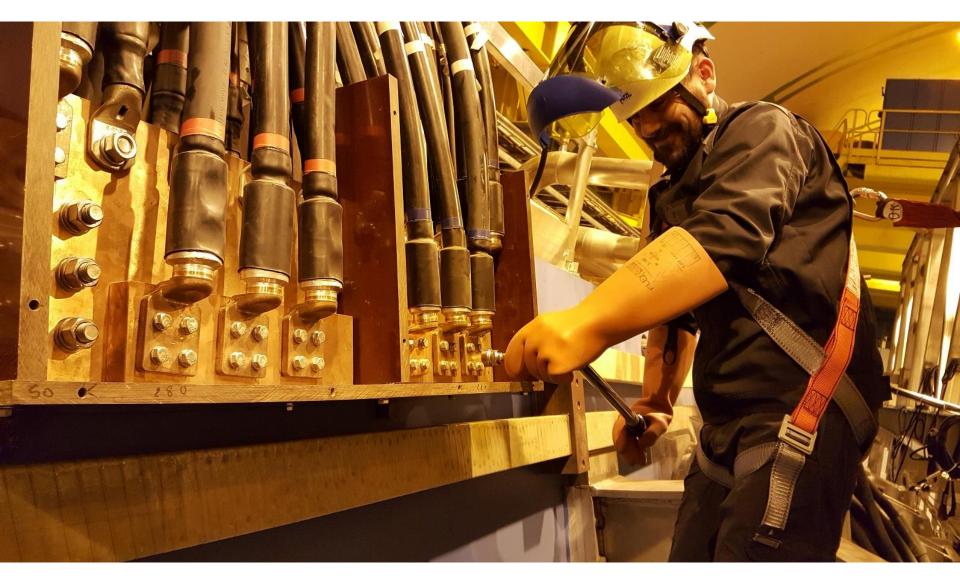














Cranes revamp.



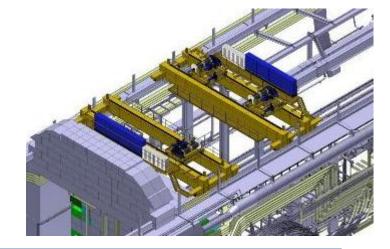


EYETS: Main tasks and constraints

- Replacement AS713 (PZ85 lift) by EN-HE
 - Schedule: 06/02/17 -14/04/17
 - Access via PM85 shaft
 - Access condition EDMS1682496
- Revamping PR720&PR721 (UX85 80t overhead cranes) by EN-HE
 - Schedule: Jan 30 14/04/17
 - Limited access to detector

Very limited Time window for detector work : <u>From Dec 5 2016 to Jan 22 2017</u>

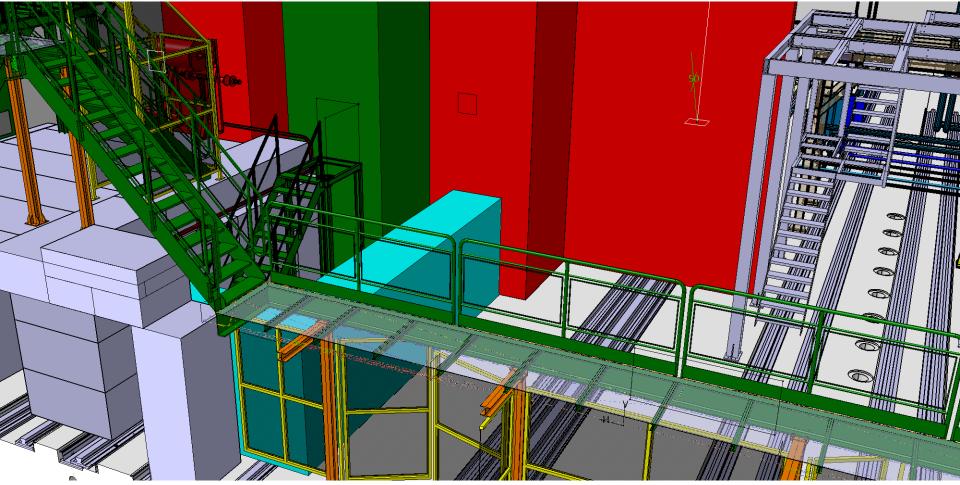






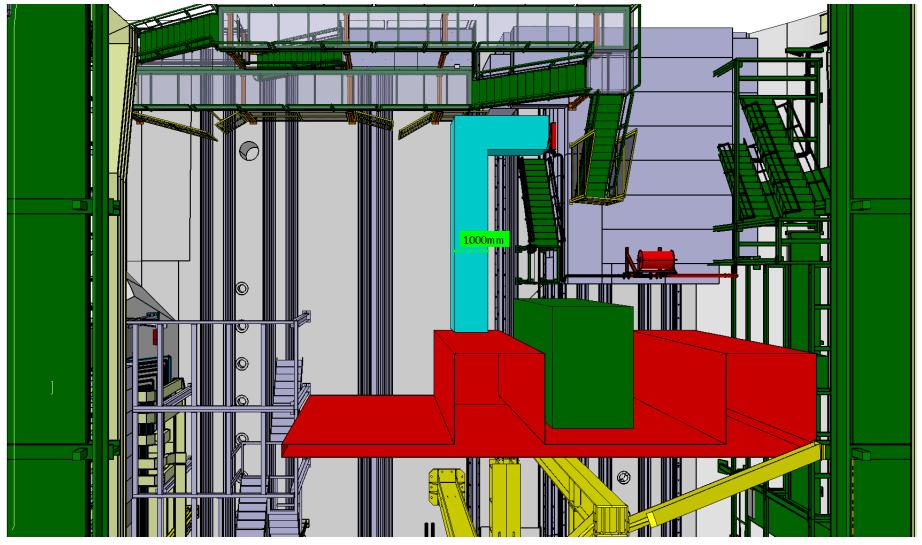


Access to UXA during Cranes revamping (provisional design)





Access to UXA during Cranes revamping (provisional design)





- EYETS from 5th of December 2016 @6am until April 30th
- LHC back to OP on 14th April (powering tests) (No access to CERN, incl. surfaces, offices ...)
- Experiments closed on 30th April

NO ACCESS during ->

- > AUG test P8: Feb 27th (incl. surface)
- Auto Transfer test Feb. 4-5th 2017
- DSO test April 7-8th (!Warning Patrol w14)

CV / P8 yearly maintenance

Weeks 3-4-5 From Jan 16^{th} to Feb 3^{rd} 2017

- Stop of SF, SU, UW facilities
- Mechanical cleaning of towers
- Mechanical and electrical maintenance

Back-up cooling power: limited to 400kW

