



Handling of installation discrepancies

*M. Modena, M. Mendes
for WP15 Team:*

Context

- For previous LHC Installations (1st and LS1), we found missing a follow-up of the equipment “real configuration” details (i.e. “as Installed”) respect to what planned in the official installation documents (*TS, ECR, etc.*)
- Normally minor differences or discrepancies respect to nominal installation could concern aspects or ancillary equipment or services and for this reason (and due to the few available time of installation teams) they are usually not reported back to Projects, Integration teams and ICL.
- For LS2 (*and for LS3*) we are proposing to track the eventual “differences & discrepancies” in a more structured way.
- In order to not load the WPs and the Installation Teams of extra work, we propose to take care of this aspect in the following way:

Procedure

In case there is any deviation from what was foreseen in the **IRIAs**

(IRIA stay for “Integration Report for Installation Approval”, documents prepared by HL-WP15. These documents are the backbone of the ECR as concerning Integration study and feasibility. Up to now we have released 8 of them covering installation of: TANB, TCLD, 11T, TDIS, TCLIA, CC@IP2, BGC, Collimators@IP7)

- we ask **to send an email to HI-LUMI-LHC-WP15-LS2_INSTALLATION_DEVIATION@cern.ch**, providing the following information:
- System and location: (e.g.: TANB P8 Left)
- EDMS number of reference LHC ECR
- EDMS number of Reference IRIA
- Description of the problem: (e.g.: conflict with an existing electrical box that had to be further displaced respect to what foreseen in the IRIA)
- Involved parties: (e.g: EN-EL for electrical boxes, EN-HE for transport activities, other CERN groups)
- Status: (e.g: problem solved / waiting for feedback)
- Cost and schedule impact: (if known)

Status of highlighted and treated deviations will be available and visible at:



General Information

- HL-LHC Templates
- Logo Guidelines
- Publication Guidelines
- General Presentations

Management Bodies

- Project Management
- Scientific Advisory Committee (CERN MAC)
- TC Committee (TCC)
- Coordination Group (HLCG)

Working Groups

- Alignment WG
- Crab Cavity Failure Case Study
- ITHACA
- Magnet Circuit Forum

WP Leaders & Deputies

- Tasks Leaders

HiLumi Calendar

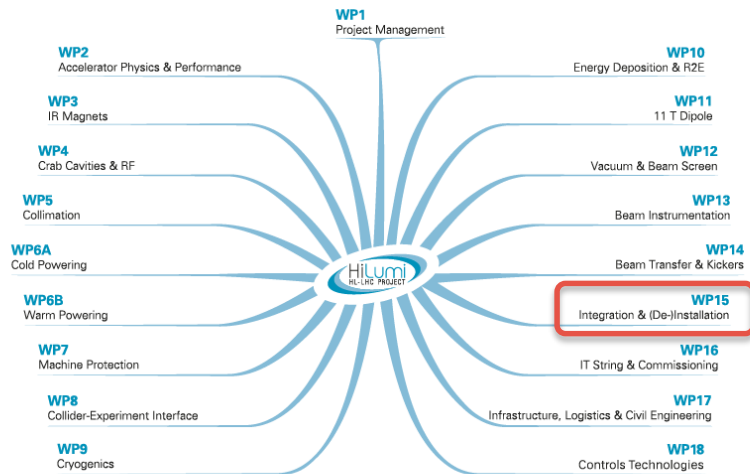
- Annual Meeting 2018
- Annual Meeting 2017
- Annual Meeting 2016
- Annual Meeting 2015
- Annual Meeting 2014
- Annual Meeting 2013
- Annual Meeting 2012
- Annual Meeting 2011

FP7 HiLumi LHC

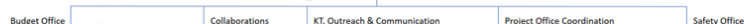
- List of Participants

Home

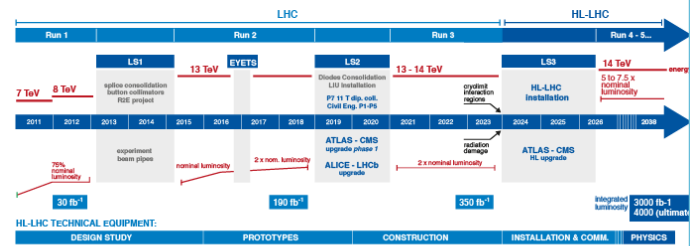
High Luminosity LHC Project Structure



HL-LHC Project Office



HL-LHC Plan



Calendar

- 04.06.2019 14:30 HL-LHC PSM WP3/WP11
- 06.06.2019 15:30 HL-LHC TCC
- 13.06.2019 08:30 HL-LHC PRR of MgB2 cable assemblies for the HL-LHC SC Links
- 18.06.2019 15:30 HL-LHC PSM WP6B
- 19.06.2019 14:00 HL-LHC Crab Cavities Review
- 20.06.2019 15:30 HL-LHC TCC
- 28.06.2019 09:00 HL-LHC PSM WP5
- 28.06.2019 14:00 HL-LHC PSM WP16
- 02.07.2019 14:00 HL-LHC PSM WP6A/WP9
- 04.07.2019 14:00 HL-LHC PSM WP7
- 04.07.2019 15:30 HL-LHC TCC
- 15.07.2019 08:30 HL-LHC MQXF International Review
- 18.07.2019 14:00 HL-LHC PSM WP17
- 18.07.2019 15:30 HL-LHC TCC
- 25.07.2019 15:30 HL-LHC TCC



Home

- WP15 EDMS
- Weekly meetings
- SMRs
- IRIA as Built
- HL-LHC Vertical Cores
- CATIA Models
- 1st LS3 Cabling Analysis
- Rack Requirement Form
- Machine Layout
- Shared documents
- Spare Policy
- WP15 Mailing Lists
- WP15.4 Survey
- WP15 Document Approval
- Recent
 - HL-LHC Cores - Library of Documents
 - HL-LHC Cores - List of Actions
- EDIT LINKS
- Site Contents

High Luminosity LHC Project Intranet > HiLumi LHC Work Package 15 - Integration & (De-)Installation

WP15: Integration & (De-) Installation

WP15 is divided in the following sub-work packages:

- 15.1 Integration
- 15.2 Installation
- 15.3 De-installation
- 15.4 Survey

You can read [here](#) the full WP15 mandate

Weekly meetings

[+](#) new item or [edit](#) this list

Current View

✓	Date	Topic	Number	Indico
	07/06/2019	<ul style="list-style-type: none"> • Advancement on DFX/S.Link integration. (Closed meeting at 10.00) • Discussion of D2 beam inter distance and BPM integration. <i>R. Tavares</i> • Possible implication of changing direction of Q4. <i>R. de Maria, H. Prin, S. Claudet, P. Fessia</i> 	130	
	14/06/2019	<ul style="list-style-type: none"> • Advancement on DFX/S.Link integration. (Closed meeting at 10.00) • Conclusions on cabling exercise. 	131	
	21/06/2019	<ul style="list-style-type: none"> • Advancement on DFX/S.Link integration. (Closed meeting at 10.00) • Integration of BGC 2nd phase design. <i>J. Oliveira</i> • Possible extension of the rail in inner triplet areas. <i>J.L. Grenard</i> 		
	28/06/2019	<ul style="list-style-type: none"> • Advancement on DFX/S.Link integration. (Closed meeting at 10.00) 		
	05/07/2019	<ul style="list-style-type: none"> • Advancement on DFX/S.Link integration. (Closed meeting at 10.00) • TAXS and Q1 layout, integration and services. (July) <i>F. Sanchez</i> 		
	12/07/2019			

Calendar

June 2019

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
27	28	29	30	31 10:30 - 12 HL-LHC II	1	2
3	4	5	6	7 10:30 - 12 HL-LHC II	8	9
10	11	12	13	14 10:30 - 12 HL-LHC II	15	16
17	18	19	20	21 10:30 - 12 HL-LHC II	22	23
24	25	26	27	28 10:30 - 12 HL-LHC II	29	30

Links

URL	Notes
Indico page	Integration Indico page for the WP15
WP15 EDMS	EDMS page for WP15
Site I.C.L. EN-MEF-INT Intégration	ICL page
Layout database	Select "LS3" WARNING: under development
Underground integration list	EDMS document with the underground integration list
WP7 Circuits table	Excel table with the latest version of the circuits



IRIA As Built

- Home
- WP15 EDMS
- Weekly meetings
- SMRs
- IRIA as Built**
- HL-LHC Vertical Cores
- CATIA Models
- 1st LS3 Cabling Analysis
- Rack Requirement Form
- Machine Layout
- Shared documents
- Spare Policy
- WP15 Mailing Lists
- WP15.4 Survey
- WP15 Document Approval
- Recent
 - HL-LHC Cores - Library of Documents
 - HL-LHC Cores - List of Actions
- EDIT LINKS
- Site Contents

In case there is any deviation from what was foreseen in the IRIAs, we ask you to send an email to HI-LUMI-LHC-WP15-LS2_INSTALLATION_DEVIATION@cern.ch, answering the following questions:

- System and location (e.g.: TANB P8 Left)
- LHC ECR EDMS number
- IRIA EDMS number
- Description of the problem (e.g.: conflict with an existing electrical box that had to be further displaced than what was foreseen in the IRIA)
- Involved parties (e.g.: EN-EL for electrical boxes, EN-HE for transport activities, other CERN groups)
- Status (e.g.: problem solved / waiting for feedback)
- Cost and schedule impact (if known)

Modifications to IRIA

[+ new item or edit this list](#)

#	ID	System	Location	Importance	Description	LHC ECR EDMS	HL-IRIA EDMS	Date	Involved Parties	Status	Cost and Schedule Impact	References	Comments
✓	1	BGC	UL44	Minor	Need to move EN-HE Panel in UL44	2025553	1959700	23/01/2019	EN-HE	ICL endorsed in discussion with EN-HE	Unknown	Email UL44	
	2	BGC	LHC tunnel LSS4 Left	Minor	Addition of bake-out equipment (mini-rack and 2 pumps), as requested by P. Prieto of TE-VSC	2025553	1959700	25/04/2019	TE-VSC, EN-EL	To be added to the ECR	Unknown	BGC Bake-out	Equipment Codes: VPGFC ST0029295_01 VYCTP ST0081048_01
	3	CC	LHC tunnel DS 2 Left and 2 Right	Minor	Modification of insulation vacuum protection scheme (5 double spring loaded valves and 1 non-spring loaded). This implies limited stay zones at the level of the non-spring loaded valve.	1995583	1904996	01/02/2019	TE-VSC	New information already contained in the CC ECR (tables), 3D models and IRIA to be updated	Unknown	LHC-LE-EC-0005	Double spring loaded (ST1109940_01) Limited stay zone (ST1101145_01)
	4	TDIS	LHC tunnel LSS2 Left and LSS8 Right	Minor	New position for transformer boxes in P8 and P2, closer to the TDIS pumps. Request raised by P. Prieto of TE-VSC	1936580	1904983	17/04/2019	TE-VSC, EN-EL	IRIA and 3D models to be updated with final position	Unknown		Model of 3 VRJIA + support (ST1154132_01)
	5	TANB	LHC tunnel LSS8 Left	Medium	New position for electrical boxes on LSS8L, 2.5 meters towards the IP	1970117	1903915	10/05/2019	EN-EL	ICL to endorse; IRIA and 3D models to be updated with final position ; G.Girardot (EL) va demonter les coffrets et les reinstallera apres installation Supprot BPM, tourné de 90deg.	500 CHF	Presentation at HL-LHC Integration Meeting	
	6	TDIS	LHC tunnel LSS2 Left and LSS8 Right	Minor	3D model of BLM support (to be attached to the TDIS frame) has been provided	1936580	1904983	17/05/2019	BE-BI	IRIA and 3D models to be updated with the final position	Unknown		step file provided
	7	TDIS	4R8, 4L8	Minor	For the new configuration of TDIS, the BLMED have to be displaced in	1936580	1904983	24/05/2019	BE-BI	IRIA, Layout DB and 3D models to be updated with the final position	Unknown	Email Christos Zamtas	To be added to the integration models



In conclusion

WP15 will collect and classify all comments received from the WPs, equipment owners etc. and follow their “status” (depending by the items, the proposed solution could require passing through some discussion/approval as with ICL or similar).

Where necessary, with all these information, final IRIA versions “as Installed” will be released at the end of the installation phase and this will keep memory of the real equipment installation configuration in the LHC.

IT IS IMPORTANT that GL, WPs, equipment owners, etc. pass the message to the installation teams to report in the above mentioned way to WP15 on the “differences & discrepancies” handled !...

THANKS!