

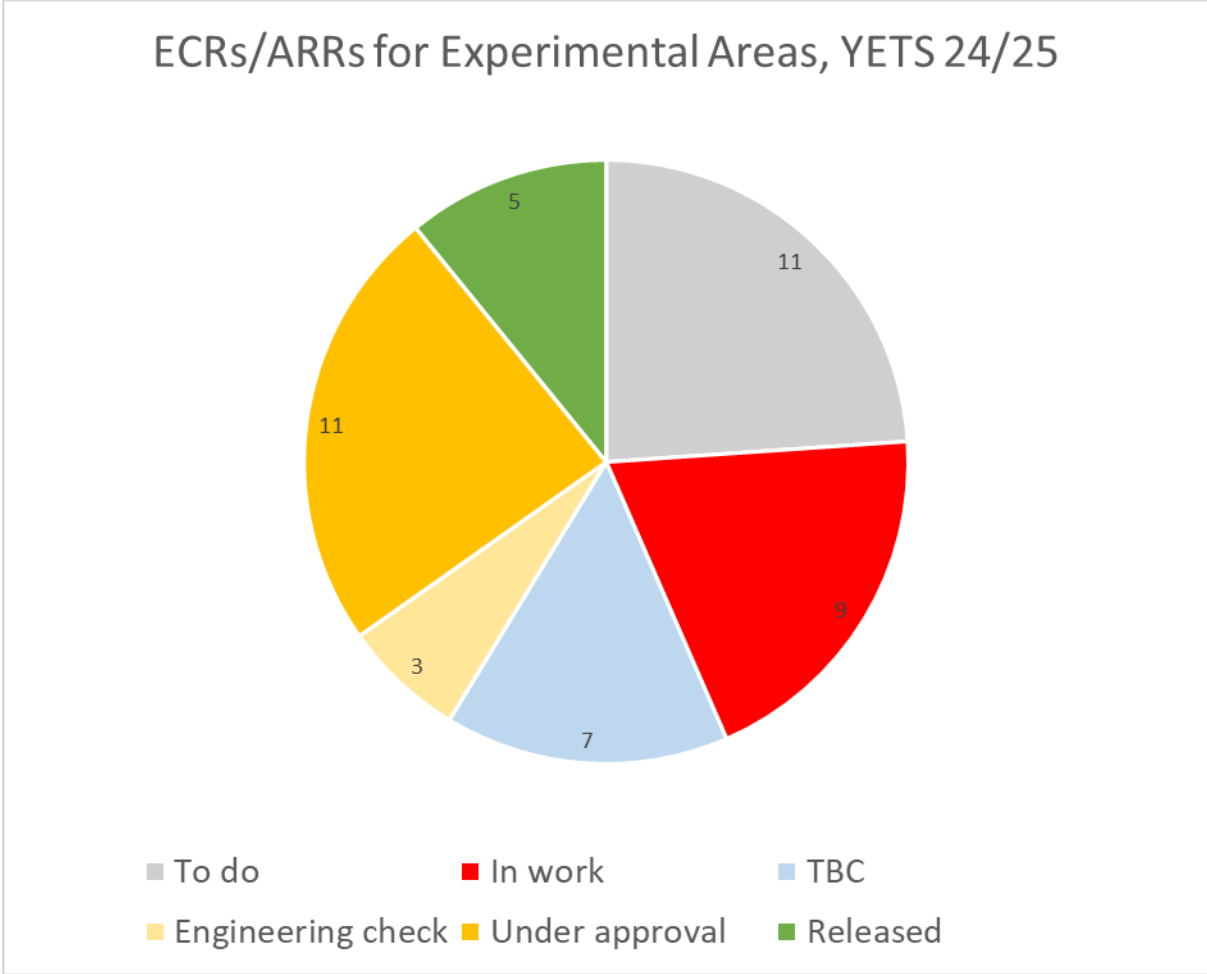


Integration and Configuration Management Status

Michael Lazzaroni and Giulia Romagnoli (BE-EA)

3 September 2024

ECRs for Experimental Areas YETS24-25



To do: activity in need of ECR from planning/PLAN, author contacted, waiting for answer

In work: draft version available/author is writing

TBC: activities still do be confirmed with the responsible group

Engineering check: document circulating for first round of comments

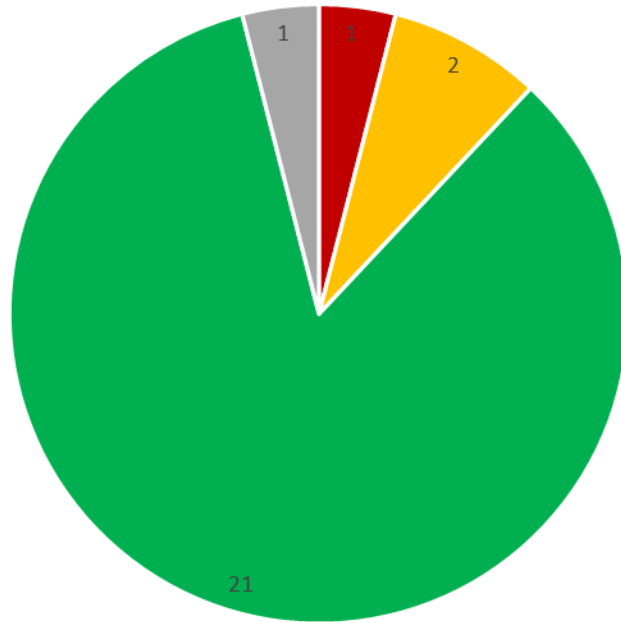
Under approval: document circulating for final approval

Released: document approved and presented to EATM/IEFC

	ECR	ARR	SRR	TOTAL
North Area	32	6	1	39
East Area	3	0	0	3
AD Complex	2	0	0	2
HiRadMat	2	0	0	2
TOTAL	39	6	1	46

Integration Studies Experimental Areas YETS24-25

Integration Studies for Experimental Areas, YETS 24/25



■ not started ■ in progress ■ completed ■ stand-by

Not started: activity needs an integration study, not yet started

In progress: integration study started

Stand-by: integration study started but in stand-by waiting for external inputs

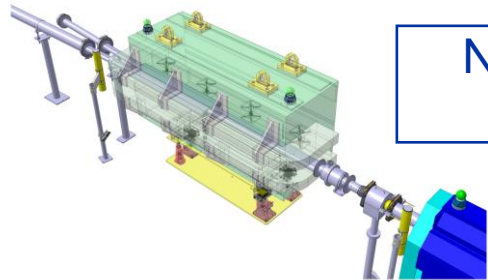
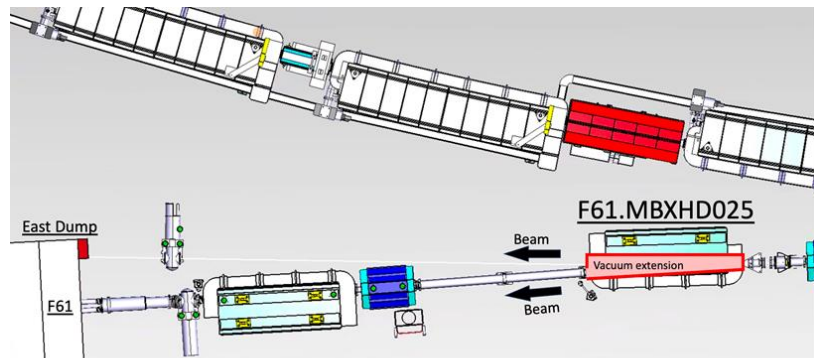
Completed: study completed and approved by ICEA* (where applicable)

	Integration Studies
North Area	21
East Area	2
AD Complex	1
HiRadMat	1
TOTAL	25

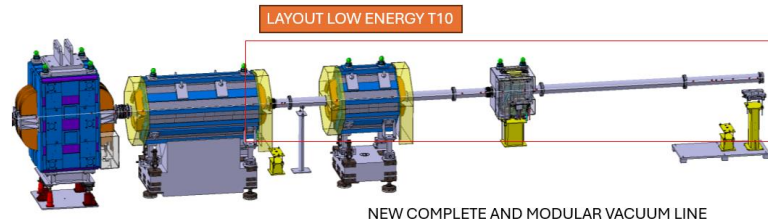
*Integration Committee for Experimental Areas (ICEA)
<https://indico.cern.ch/category/14476/>

ECRs and Integration East Area – YETS24-25

PERIOD	ZONE	REQUESTOR	TITLE	AUTHOR	TYPE	EDMS link	ECR STATUS	Integration Model NEEDED	Integration Status	ICL/EATM validation
YETS 24/25	East Area	Operation/users	Vacuum Chamber Installation in F61.MBXHD025 for CHIMERA/HEARTS	Dipanwita Banerjee	ECR	3138917 - PSZ-V-EC-0001	In work	YES	Completed	YES
YETS 24/25	East Area	Operation/users	Low-energy Beams in the T10 Beamline of the East Area	Maarten Van Dijk	ECR		In work	YES	Completed	N/A
YETS 24/25	East Area	CHARM	Installation of Multi-Wire Proportional Chamber (MWPC) in IRRAD Zone 1	Federico Ravotti	ECR	3136064 - PSZ-B-EC-0006	Under approval	NO		N/A



New vacuum chamber installation in F61



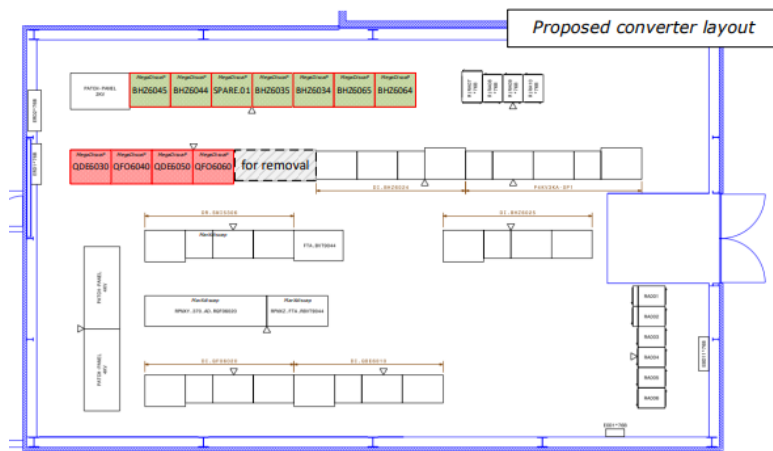
Low-energy configuration in T10, East Area



New MWPC CHARM

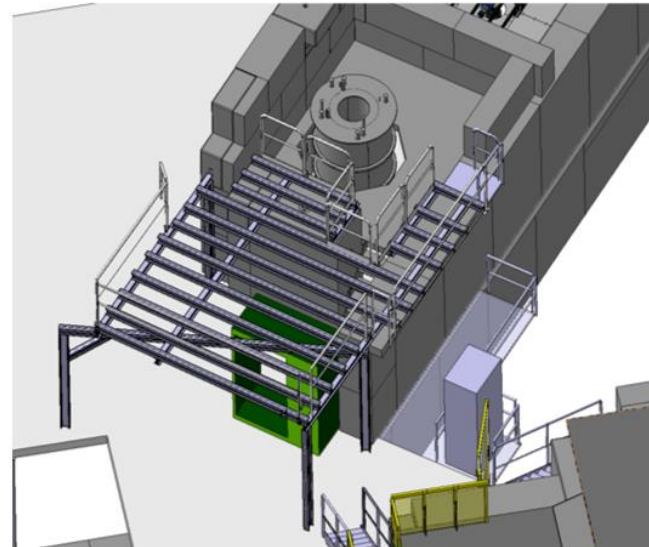
ECRs and Integration AD Complex – YETS24-25

PERIOD	ZONE	Requestor	TITLE	AUTHOR	TYPE	EDMS link	ECR STATUS	Integration Model NEEDED	Integration Status
YETS 24/25	AD	Operation/users	INSTALLATION OF "TELMAX", A NEW TEST BEAM EXPERIMENTAL AREA AT AD/ELENA	Francois Butin	ECR	2975107 - AD-LJ-EC-0026	Released	YES	Completed
YETS 24/25	AD	ADCONS	Power Converters for the Quadrupole Magnets DI.QDE6030, DI.QFO6040, DI.QDE6050 and DI.QFO6060 for AD injection	Jean-Marc Cravero	ECR	3076867 - AD-R-EC-0006	Released	NO	



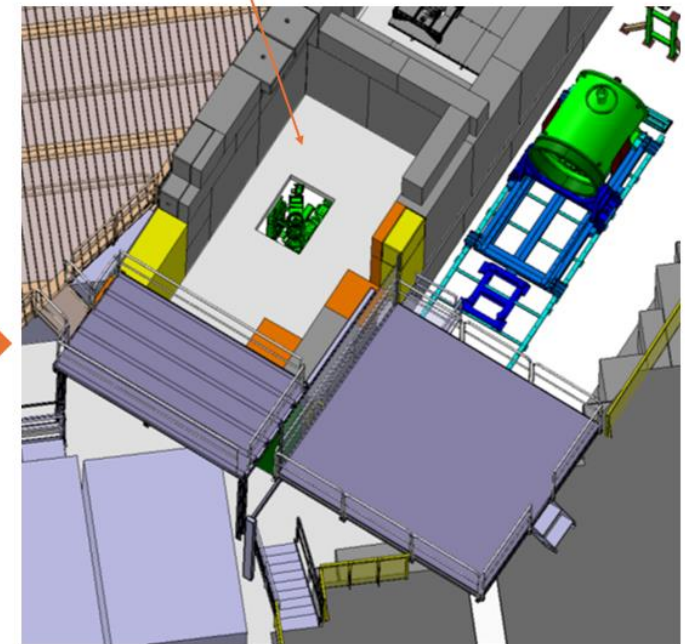
New Power Converter b.370

AD – BUILDING 193
SHIELDING AND STRUCTURE MODIFICATION
FOR NEW TELMAX AREA



Installation of TELMAX

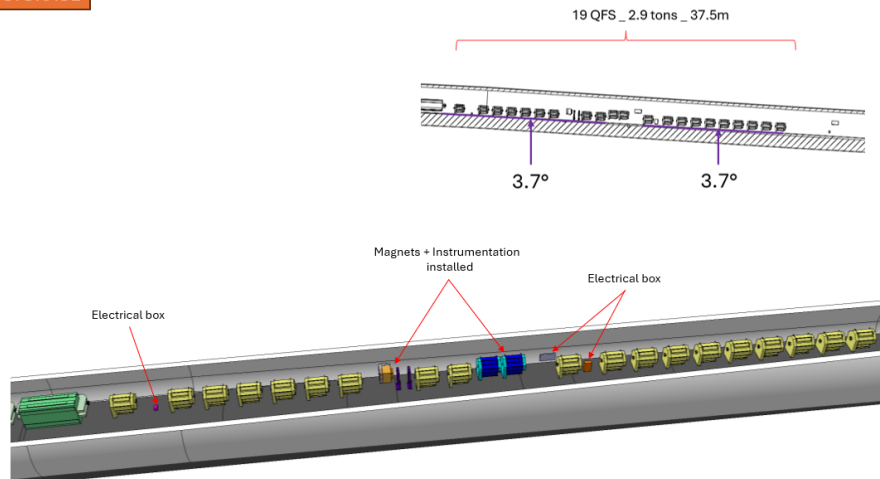
NEW EXPERIMENTAL AREA



ECRs and Integration HiRadMat/TT61 – YETS24-25

PERIOD	ZONE	PROJECT	TITLE	AUTHOR	TYPE	EDMS link	ECR STATUS	Integration Model NEEDED	Integration Status
YETS 24/25	HiRadMat	Einstein Telescope (ET) & BST	TT61 MAGNET STORAGE	Cedric Halbert	ECR		To do	YES	completed
YETS 24/25	HiRadMat		TT61 decabling	EN-EL	ECR		To do	NO	

QFS STORAGE

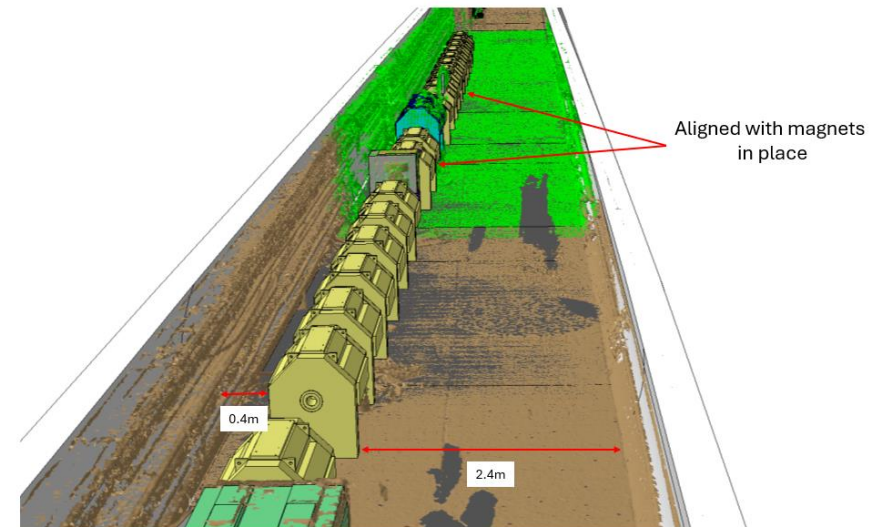


02.07.2024 Version 1

BE-EA-DC V.CLERC

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QFS STORAGE



02.07.2024 Version 1

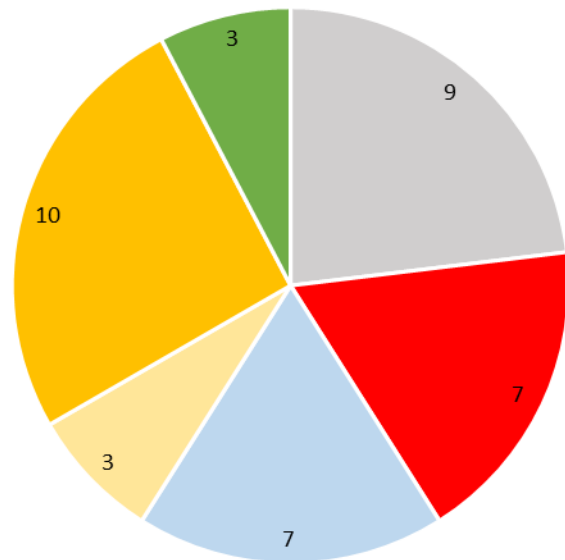
BE-EA-DC V.CLERC

12

TT61 magnets storage

ECRs for North Area YETS24-25

ECRs/ARRs for North Area, YETS 24/25



■ To do ■ In work ■ TBC
■ Engineering check ■ Under approval ■ Released

	ECR	ARR	SRR	TOTAL
North Area	32	6	1	39
East Area	3	0	0	3
AD Complex	2	0	0	2
HiRadMat	2	0	0	2
TOTAL	39	6	1	46

ARRs/SRR for North Area YETS24-25

Asset Replacement Requests:

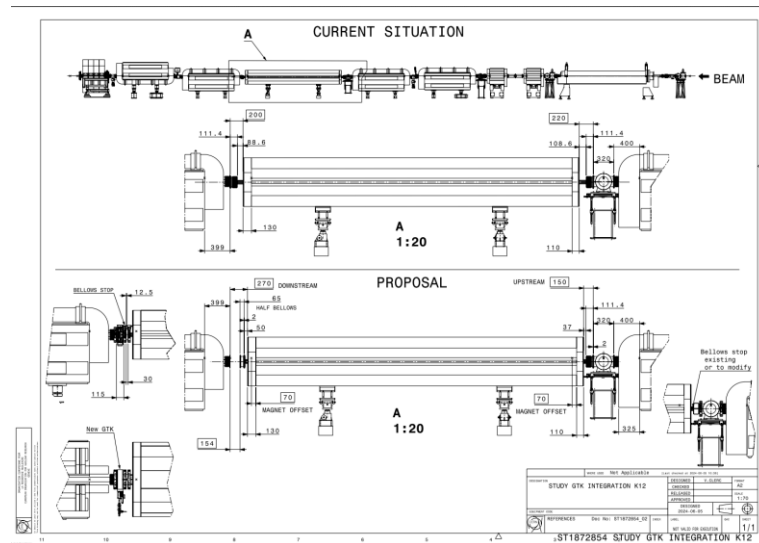
TITLE	AUTHOR	TYPE	EDMS link	JIRA link	STATUS
QNL.041.096 + LSXV.022134 replacement	Philip Schwarz	ARR			In work
Collimator replacement TBC TDC2/TCC2	Giulia Romagnoli	ARR			In work
Replacement/installation tables XTDV.041.528, XTDV.042.500, XTDV.021.612	Miguel Santos	ARR			In work
HVAC control cubicles installation BA81, TT84	Helmut Jena	ARR	3139745 - SPSX-U-ARR-0003	https://its.cern.ch/jira/browse/EADOC-497	Under approval
Pumping units in TCC2	Philippe Boisseaux-Bourgeois	ARR		https://its.cern.ch/jira/browse/EADOC-498	In work
Elevator installation B911	Damien Lafarge	ARR	3154271 - SPSX-J-ARR-0001	https://its.cern.ch/jira/browse/EADOC-521	Under approval

Space Reservation Request:

TITLE	AUTHOR	TYPE	EDMS link	JIRA link	STATUS
Fire doors Doors 21, 34, 35, 36, 37, 39, 55, 56, 57, 58a, 58b	Adem Kaymak	SRR	3119539 - SPSX-SF-EC-0010	https://its.cern.ch/jira/browse/EADOC-461	Under approval
Fire doors Doors 7, 32, 21, 34, 35, 36	Adem Kaymak	ECR	3120106 - SPSX-SF-EC-0011	https://its.cern.ch/jira/browse/EADOC-463	Under approval

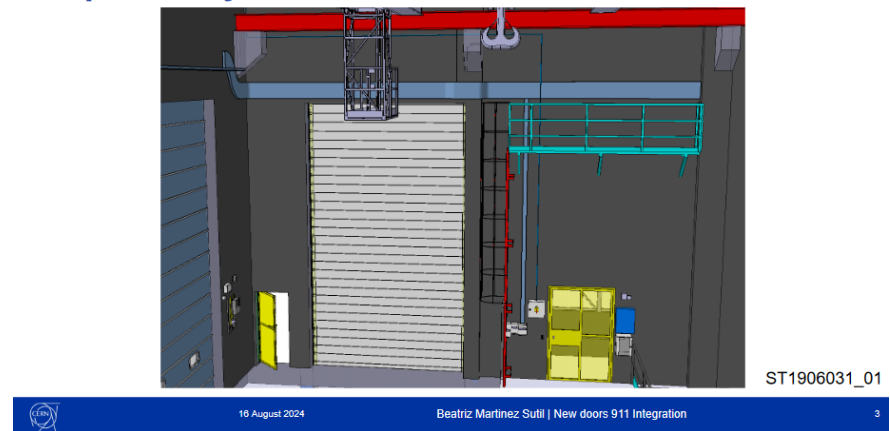
Integration North Area – YETS24-25 – ECN3

PERIOD	ZONE	REQUESTOR	TITLE	AUTHOR	TYPE	EDMS link	ECR STATUS	Integration Model NEED	Integration Status	ICEA/EATM Validation
YETS 24/25	North Area	Operation/users	Displacement of GTK 4 in ECN3/TCC8 (NA62)	Hans Danielsson	ECR		TBC	YES	Completed	NO
YETS 24/25	North Area	HI-ECN3	Bldg.911 door	Jean-Louis Grenard	ECR		To do	YES	Completed	YES



Displacement of GTK4 in ECN3

Proposed layout

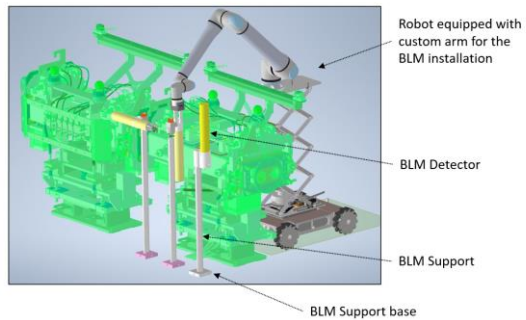


Bldg.911 door

Integration North Area – YETS24-25 – TTs

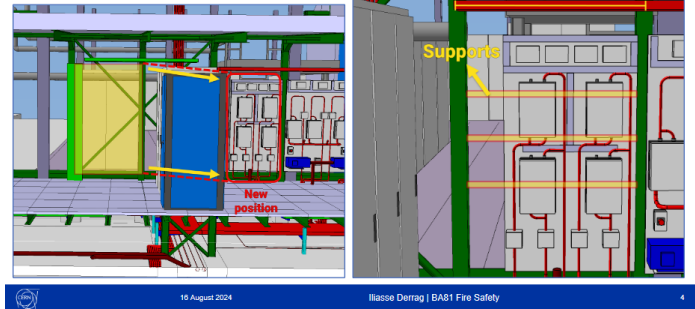
REQUESTOR	TITLE	AUTHOR	EDMS link	ECR STATUS	Integration Model NEED	Integration Status	ICEA/EATM validation	Dates	Duration
HI-ECN3	Installation 5 additional units of BLMs on P42	Christos Zamantzas		TBC (->LS3)	YES	Not started	NO	Start sept-24	1 week
NACONS	BA81 Extension	Mehdi Abdel Kebir, Rachid Haddad	3093423 - SPSX-SF-EC-0009	Under Approval	YES	Completed	YES		
NACONS	Ventilation for the BA81 Extension	Jani Lehtinen	3156846 - SPSX-U-EC-0001	To do	YES	Completed	YES		
Operation	Buffer zone BA81	Sylvain Girod, Iliasse Derrag	3151414 - SPSX-J-EC-0007	In work	YES	in progress	NO	End sept-24	1 week
NACONS	Fire Detection BA81	Rachid Haddad	3126083 - SPSX-SF-EC-0012	Under Approval	YES	completed	YES		
NACONS	Smoke Detection and Evacuation in BA81	Michael Jeckel	ECR	Engineering check	NO		YES		

Robot operation with BLM



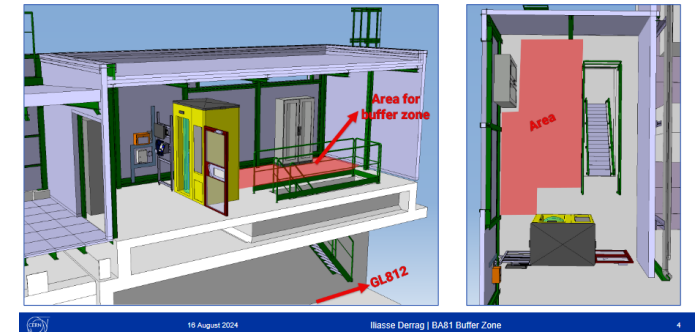
BLM studies

ASD Relocation Relocation proposal



BA81 extension (fire safety)

Proposal

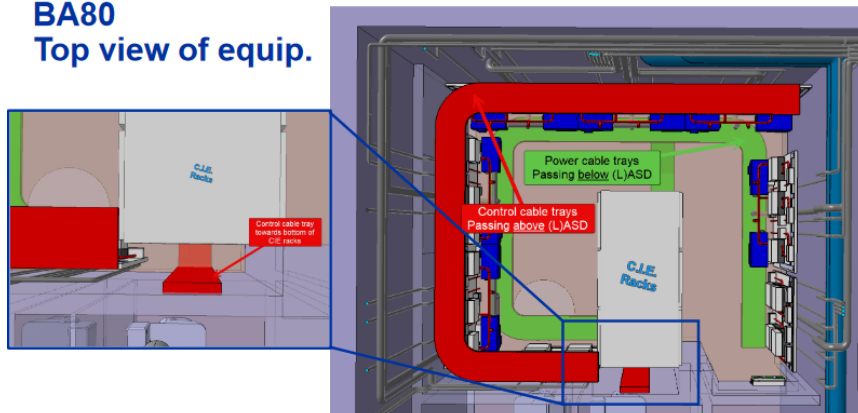


Buffer zone BA81

Integration North Area – YETS24-25 – TDC2/TCC2/BA80

REQUESTOR	TITLE	AUTHOR	EDMS link	ECR STATUS	Integration Model NEED	Integration Status	ICEA/EATM validation	Deadline	Duration
Operation/user	Mise en place blindage BA80/ BTV BDF installation	Sylvain Girod / Rui Ximenes		To do	TBC	completed	YES		
HI-ECN3	SX prototype Target heads in TCC2	Rui Franqueira Ximenes		TBC	NO				
NACONS	Fire Detection BA80	Rachid Haddad	3128278 - SPSX-SF-EC-0014	In work	YES	completed	YES		
NACONS	BA80 Fire Detection Building	Florian Deperraz	2997829 - SPSX-SF-EC-0005	Under approval	YES	completed	YES		
NACONS	Sprinkler installation TA801, PGT802 - GL802	Florian Deperraz	2930745 - SPSX-SF-EC-0004	Released	YES	completed	YES		

BA80
Top view of equip.



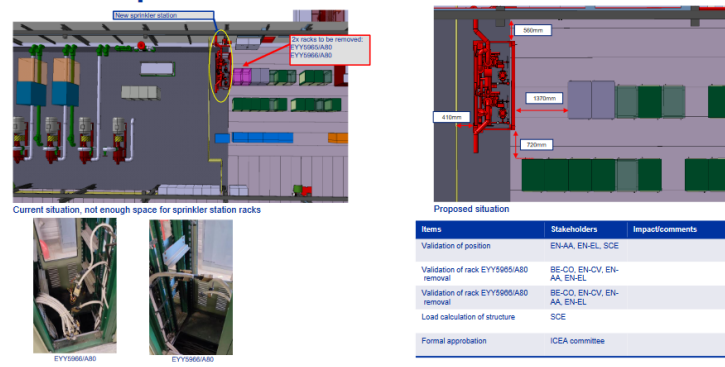
6 June 2024

Ilhassse Derrag | Fire safety & workshop refurbishment

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BA80 fire detection bldg.

BA80 – Sprinkler station

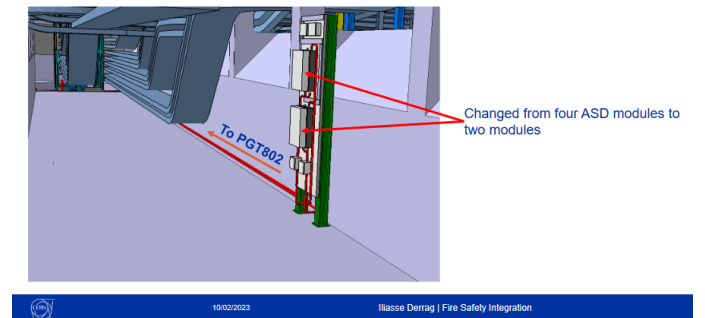


ENGINEERING DEPARTMENT

3

Sprinkler installation

BA80 Fire Safety Integration
PGT802 ASD Pipes



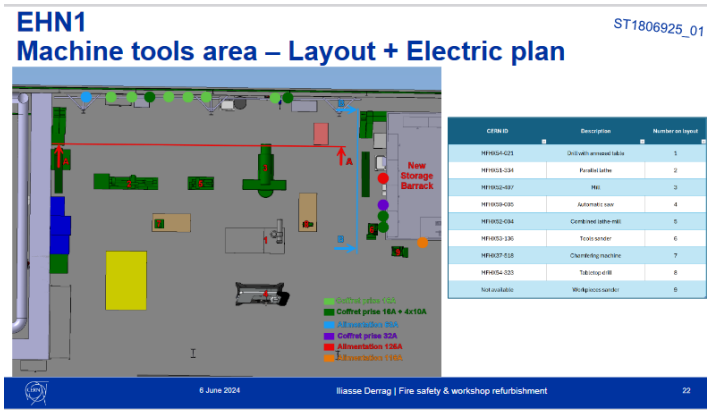
10/02/2023

Ilhassse Derrag | Fire Safety Integration

Fire detection BA80

Integration North Area – YETS24-25 – EHN1

REQUESTOR	TITLE	AUTHOR	EDMS link	ECR STATUS	Integration Model NEED	Integration Status	ICEA/EATM validation	Deadline	Duration
NACONS	Gas consolidation EHN1	David Jaillet	2973540 - SPSX-F-EC-0005	Released	YES	completed	YES		
Operation	Reorganisation atelier EHN1	Iliasse Derrag	3089621 - SPSX-J-EC-0005	Engineering check	YES	completed	YES		
Operation	Upgrade of XEMC support on H8 beamline	Eva Kamenicka		To do	YES	in progress	NO	Oct-24	2 weeks
NACONS	Consolidation project for gas extraction for EHN1 PJ_346	Jani Lehtinen		To do	YES	completed	YES		
NACONS	PPE144 patch panel installation with passarelle modification	Sylvain Girod	3121860 - SPSX-J-EC-0006	Under approval	YES	completed	YES		
Operation/users	Madmax TBC	Maarten Van Dijk		TBC	YES	stand-by	NO		
NACONS	Smoke Detector in EHN1 Galleries	Michael Jeckel	3072500 - SPSX-SF-EC-0008	Under approval	YES	completed	YES		
Operation/users	GIF++ extension / gas balcony	Martin Jaekel		To do	YES	completed	NO		
NACONS	Replacement turbine chauffage jura lausanne EHN1	Fred Juban		To do	NO				

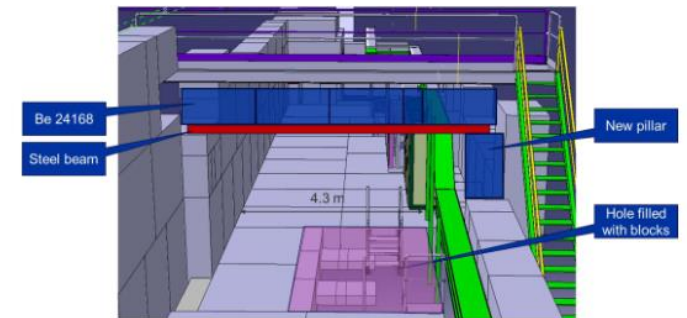


Reorganisation atelier EHN1



Figure 6: Gas distribution in Building 887 (Jura side), piping routing.

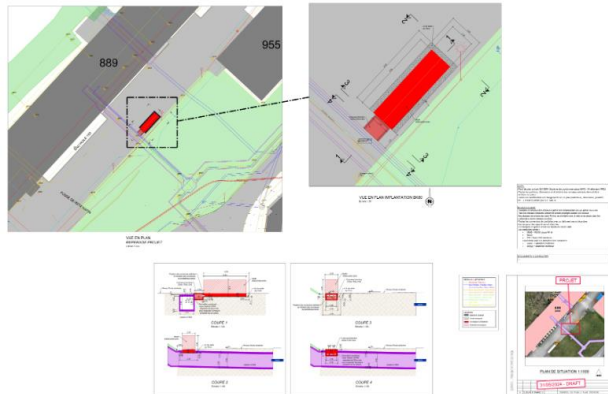
Gas consolidation EHN1



PPE144 modification

Integration North Area – YETS24-25 – All

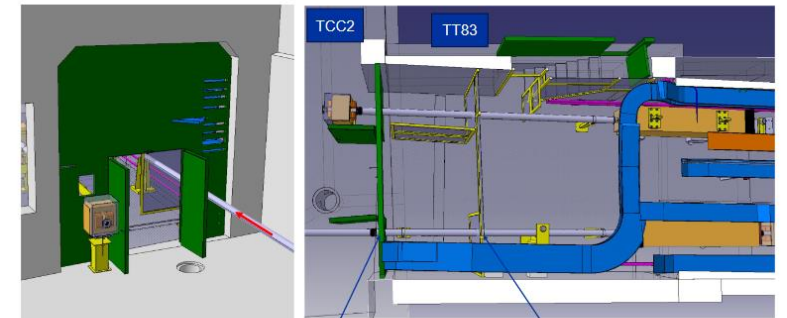
REQUESTOR	TITLE	AUTHOR	EDMS link	ECR STATUS	Integration Model NEED	Integration Status	ICEA	Deadline	Durati on
NACONS	Installation of BK80, BK81, BK82 electrical substations in the NA during run 3 (works for YETS 24-25)	Eva Cano Gonzalez	3126108 - SPSX-E-EC-0005	Under approval	YES	completed	YES		
NACONS	Fire doors Doors 21, 34, 35, 36, 37, 39, 55, 56, 57, 58a, 58b	Adem Kaymak	3119539 - SPSX-SF-EC-0010	Under approval	YES	completed	YES		
NACONS	Fire doors Doors 7, 32, 21, 34, 35, 36	Adem Kaymak	3120106 - SPSX-SF-EC-0011	Under approval	YES	completed	YES		
NACONS	Optical fibre installation EHN1, EHN2, BA82 (IT), BX83 918 (IT) ECN3	Jeremy Blanc		To do	TBC	Stand-by			
NACONS	Rad hard profile monitors TBC	Inaki Ortega		To do	TBC	Stand-by			
NACONS	XBPF Installation	Inaki Ortega		To do	YES	Stand-by			
NACONS	Protection against accidental contacts for normal conducting magnets (149/290)	Olivier Crettiez	3124339 - SPSX-M-EC-0004	Under approval	NO				
NACONS	CESAR renovation	Maciej Peryt	3095571 - SPSX-C-EC-0002	Released	NO				



P42 dump

WP 5.1.3 Fire-resistant partition

Study model : ST1887952_01
Proposal for new sector door: To 2,10m TT83 side.

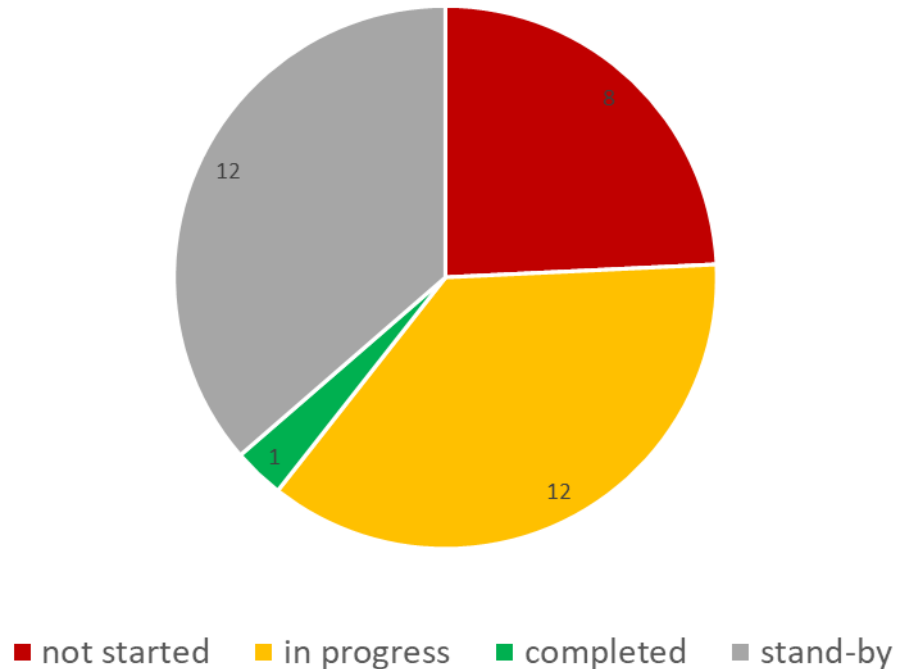


Fire doors

© Sedat ALTUN (BE/EA)

Integration Studies Experimental Areas LS3

Integration Studies for Experimental Areas, LS3



Not started: activity needs an integration study, not yet started

In progress: integration study started

Stand-by: integration study started but in stand-by waiting for external inputs

Completed: study completed and approved by ICEA* (where applicable)

	Integration Studies
North Area	27
East Area	2
AD Complex	4
HiRadMat	0
TOTAL	33

*Integration Committee for Experimental Areas (ICEA)
<https://indico.cern.ch/category/14476/>

ECRs for Experimental Areas LS3

To do: activity in need of ECR from planning/PLAN, author contacted, waiting for answer

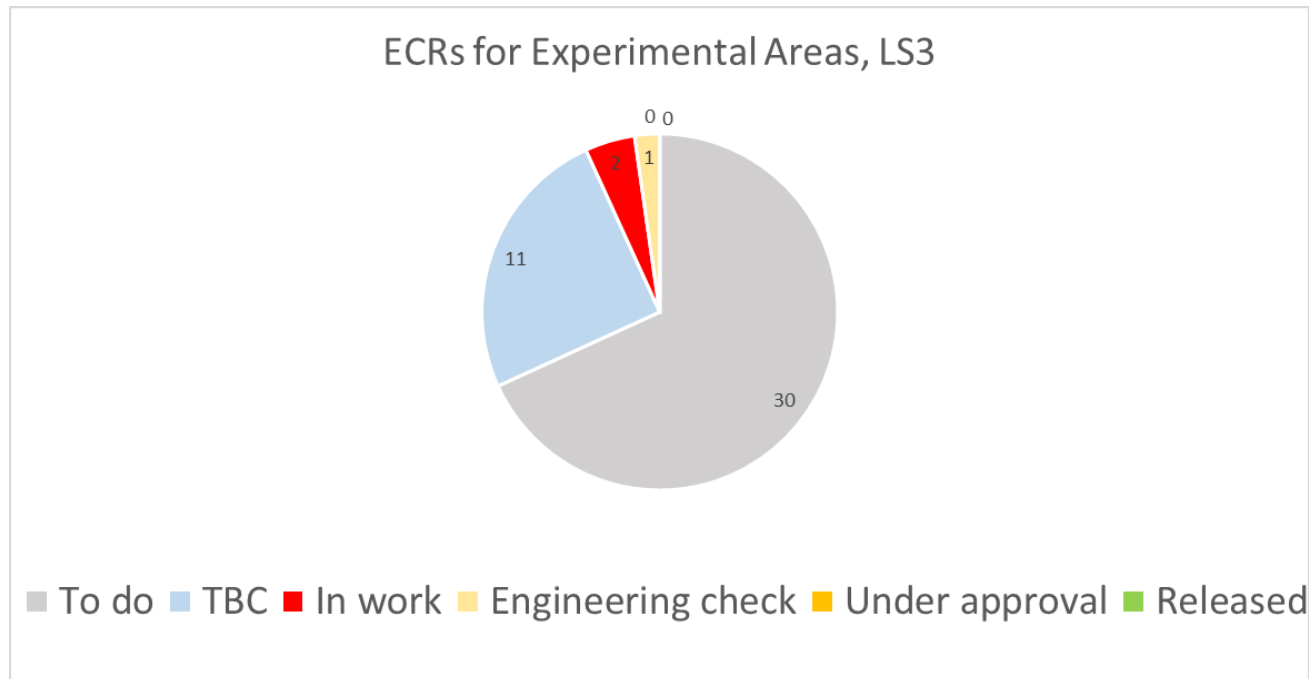
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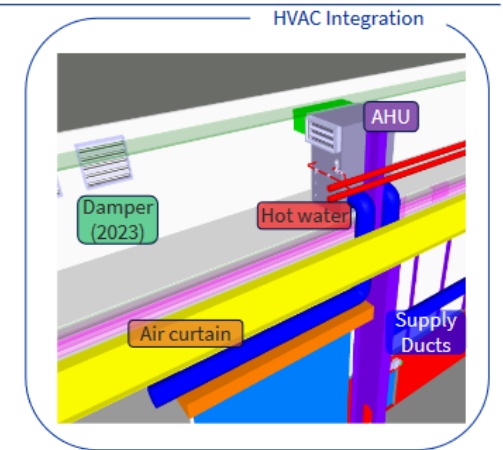
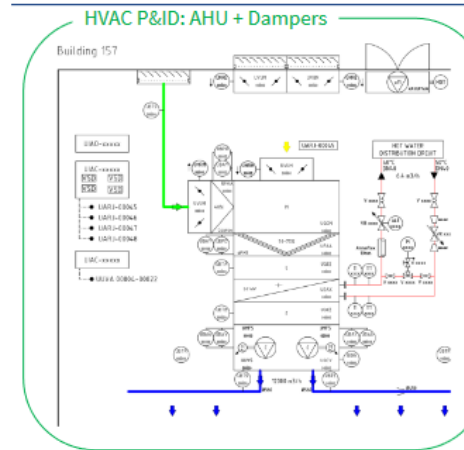


	ECR
North Area	34
East Area	5
AD Complex	5
HiRadMat	0
TOTAL	44

Integration/ECRs East Area – LS3

REQUESTOR	ZONE	TITLE	AUTHOR	TYPE	STATUS	Integration Model	Integration Status	ICL/EATM validation	Period for integration study	Duration
BE-EA	East Area	XCET body exchange	Giulia Romagnoli	ECR	To do	NO	not needed	N/A		
EAR	East Area	Renovation HVAC of the building 157	Francesco Dragoni	WPD	Released	YES	Stand-by	NO	in discussion with GL	
BE-EA	East Area	Electron beam in T10 Beamline of the East Area	Maarten Van Dijk	ECR	To do	TBC	Stand-by	NO		
User	East Area	P349 in T11 experimental area		ECR	TBC	TBC	Stand-by			
HEARTS	East Area	T08 beamline modifications		ECR	TBC	TBC	Stand-by			

B157 Technical Solution: HVAC – [EDMS 2081618](#)

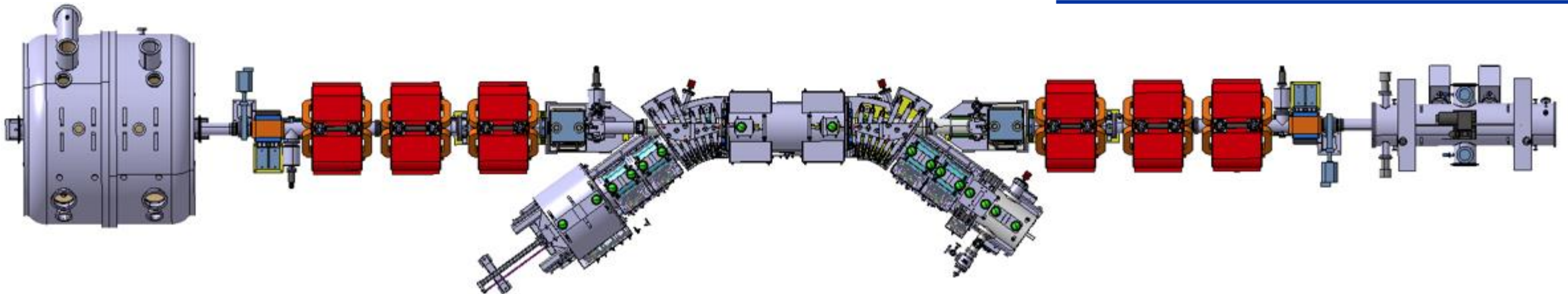


Renovation HVAC of the building

Integration/ECRs AD – LS3

PERIOD	ZONE	TITLE	AUTHOR	TYPE	ECR STATUS	Integration Model	Integration Status	EATM validation	Period for integration study	Duration
LS3	AD	New AD e-cooler installation	Adriana Rossi	ECR	To do	YES	in progress	NO	2024-2025	2 month?
LS3	AD	Power converters and magnets to be changed in line DI	EPC	ECR	TBC	NO	not needed			
LS3	AD	Equipment BCCCA	BI	ECR	TBC	TBC	TBC		2025	1 week
LS3	AD	Exp. Telmax 2nd part "ligne horizontale"	Francois Butin	ECR	TBC	TBC	TBC		2025	4 weeks
LS3	AD	ALPHA control room 2nd floor	Francois Butin	ECR	TBC	TBC	TBC		2025	3 weeks

AD	2024	2025
Total Integration study with ECR	~1 months	~3 months

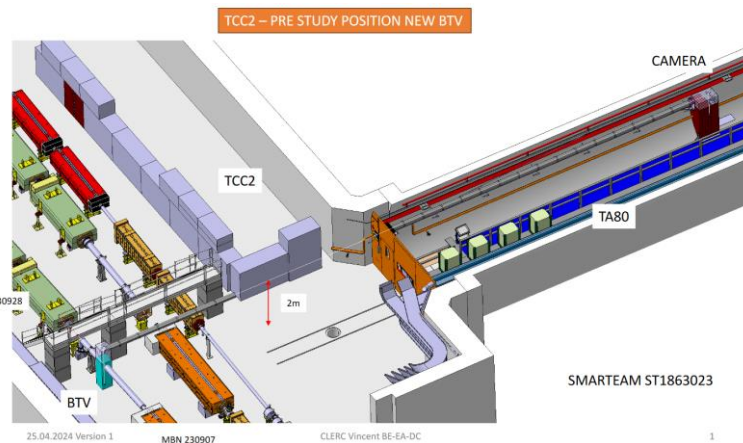


New AD e-cooler installation

Integration/ECRs North Area TDC2/TCC2 – LS3

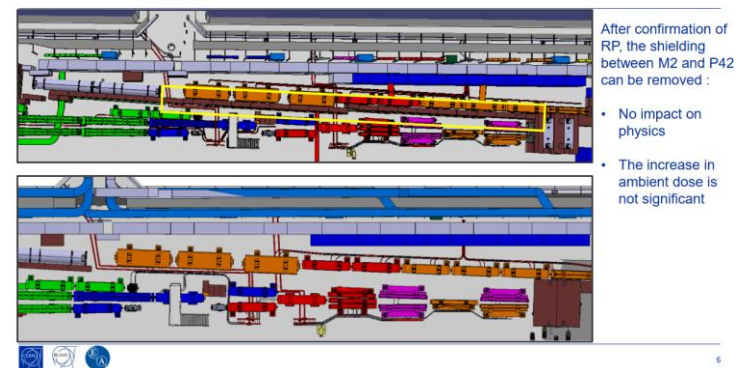
REQUESTOR	TITLE	AUTHOR	EDMS link	JIRA link	ECR STATUS	Integration Model	Integration Status	ICEA/EATM validation	Period for integration study	Duration
NACONS	(Re)installation of BSP.043167 and BSP.043062	AURELIE GOLDBLATT			In work	YES	stand-by	NO	2024-2025	2 weeks
NACONS	XTAX New Design in TCC2	Miguel Lino			To do	YES	in progress	NO	2024	2 weeks
NACONS	BA80 Power converters	Ivan Josifovic			To do	YES	in progress	NO	2024-mid25	3 months
NACONS	BTv 230925 installation in TCC2	Nikos Charitonidis			To do	YES	in progress	NO	2024	2 weeks
NACONS	New Layout TCC2	Michael Lazzaroni			To do	YES	in progress	NO	2024	1 month
NACONS	BA80 Cooling Station Consolidation	Laurentiu Vlasceanu			To do	YES	stand-by	NO	2025	1 month
NACONS	Overpressure system TDC2	Jani/Serge			To do	TBC	stand-by		2025	1 month

NORH AREA	2024	2025	2026
Total Integration study with ECR	~2 months	~5 months	



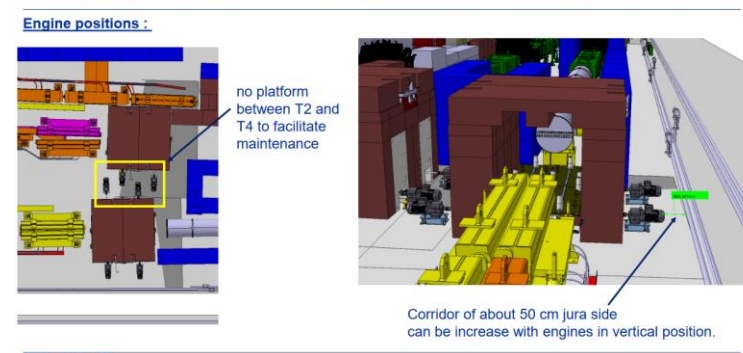
BTv installation in TCC2

Follow-up shielding organization



New TCC2 Layout

Integration of new XTAX prototype (T2 T4)



XTAX new design in TCC2

Integration/ECRs North Area EHN1/EHN2/ALL – LS3

REQUESTOR	TITLE	AUTHOR	EDMS link	JIRA link	ECR STATUS	Integration Model	Integration Status	ICEA/EATM validation	Period for integration study	Duration
Operation	Patch panel PPE211 EHN2/M2/BA82 and othe modifications to PPE211	Sylvain Girod			To do	YES	not started	NO	Jan25-Dec25	2 weeks
Operation	Shielding Improvement for the High Intensity Hadron Operation of M2	Dipanwita Banerjee	2868386	DOC-304	Eng. check	YES	completed	YES		
Operation/users	ILC Beam Dump on the H4 beamline	Krystian Sidorowski			TBC	YES	in progress	NO		
NACONS	XCET gas control and gas panel upgrade	Giulia Romagnoli			To do	NO	not needed			
NACONS	XCET gas racks, N2 flushing and GHG gas lines installation	David Jaillet			To do	YES	not started	NO	Jan25-Jun25	3 months
REQUESTOR	TITLE	AUTHOR	EDMS link	JIRA link	ECR STATUS	Integration Model	Integration Status	ICEA/EATM validation	Period for integration study	Duration
NACONS	Fire doors Doors	Adem Kaymak			To do	YES	in progress	Partially	2024-2026	2 months
NACONS	XPBF Installation	Inaki Ortega			To do	YES	in progress	NO	2024-2025	1 month
NACONS	BIS/WIC implementation	Ivan/Richard			To do	YES	in progress	NO	2024-mid25	1 week
NACONS	Pulsed/stable network renovation	Eva Cano			To do	TBC				
NACONS	SCADA/UPS/AUG	Eva Cano			To do	TBC				
NACONS	Dry risers , CAFS installation (2x TDC8,2x R-270 EHN1, 2x R-290 EHN1, 2x EHN2, 2x bottom of 911, 2x bottom of 912 2 x PA80), fire damper and duct modification	Jani Lehtinen/Miikka Leinonen			To do	YES	in progress	Partially	2024-mid25	1 month

NORH AREA	2024	2025	2026
Total Integration study with ECR	~ 1 month	~ 4 months	~ 3 months

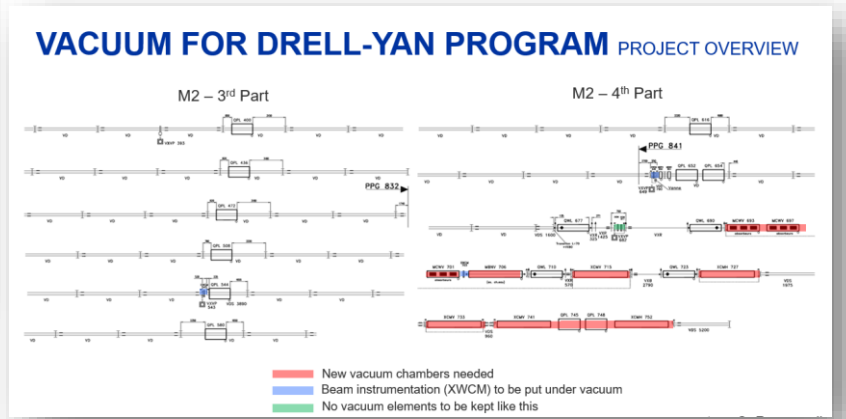
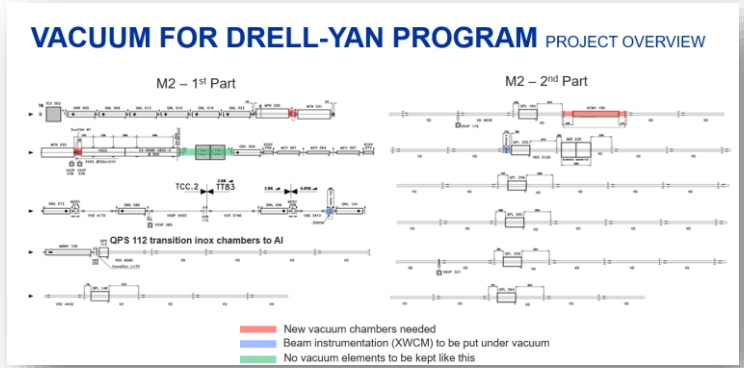
Integration/ECRs North Area M2– LS3

REQUESTOR	TITLE	AUTHOR	EDMS link	JIRA link	ECR STATUS	Integration Model	Integration Status	ICEA/EATM validation	Period for integration study	Duration
NACONS	Replacement and installation of XCSV on M2 instead of XCBV	Giulia Romagnoli			To do	YES	not started	NO	Jan25-Dec25	2 weeks
NACONS	Consolidation of XCM collimators in M2 beamline	Giulia Romagnoli			To do	YES	not started	NO	Jan25-Dec25	6 months
NACONS	M2 Vacuum Upgrade	Giulia Romagnoli			To do	YES	not started	NO	Jan25-Dec25	6 months

NORH AREA	2024	2025	2026
Total Integration study with ECR		~12 months	

M2 Vacuum Requirements and Engineering Options/Plans

AMBER Collaboration Meeting
28 November 2023
Giulia Romagnoli
Dipanwita Banerjee, Philippe Boisseaux-Bourgeois, Sylvain Girod, Michael Lazzaroni, Miguel Lino Dos Santos, Vincent Marchand, Fabian Metzger, Jan Buesa Orgaz, Ramon Folch,.....

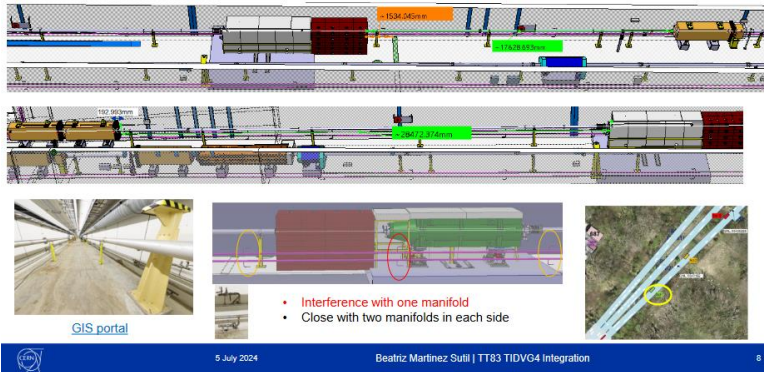


Engineering specifications for M2 vacuum

Integration/ECRs North Area (HI)ECN3 – LS3

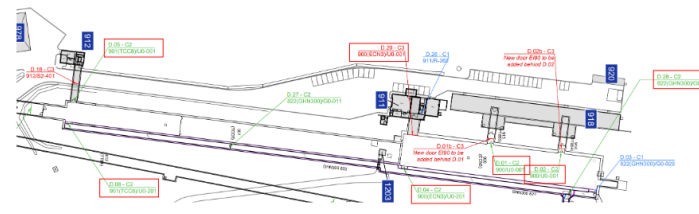
REQUESTOR	ZONE	TITLE	AUTHOR	TYPE	EDMS link	JIRA link	ECR STATUS	Integration Model	Integration Status	ICEA/EATM validation	Period for integration study	Duration
HI-ECN3	North Area	Service trench rerouting	Fernando Pedrosa	ECR			To do	YES	in progress	NO	2024	2 weeks?
HI-ECN3	North Area	P42 Dump	Rui Franqueira Ximenes	ECR			To do	YES	in progress	NO	2024	2 weeks
HI-ECN3	North Area	XTAX, VXSS and magnets change for P4 line	Laurence Nevay	ECR			To do	YES	in progress	NO	2024-2025	1 month ?
HI-ECN3	North Area	P42 Beam instrumentation re-installation	Laurence Nevay	ECR			To do	YES	not started	NO	2024-2025	2 weeks?
HI-ECN3	North Area	P42 XTCX/XCHV removal	Giulia Romagnoli	ECR			To do	NO	not needed			
HI-ECN3	North Area	NA62 Dimountling	Hans Danielsson	ECR			To do	YES	not started	NO	2025	2 months
NACONS	North Area	Fire Detection ECN3	Rachid Haddad	ECR	3126099	EADOC-471	In work	YES	stand-by	NO	2025	2 months
HI-ECN3	North Area	Installation beam stopper P4 line	Rui Franqueira Ximenes	ECR			TBC					
HI-ECN3	North Area	Installation new BLM system for K12 TDC2, for ECN3 (part 2) TT83, TT85	Christos Zamantzas	ECR			To do	YES	not started		Start sept-24	1 month
NACONS	North Area	Fire door 11	Adem Kaymak				To do	YES	stand-by	NO	2025-2026	1 week

New positions– P42: Solution 1



P42 dump

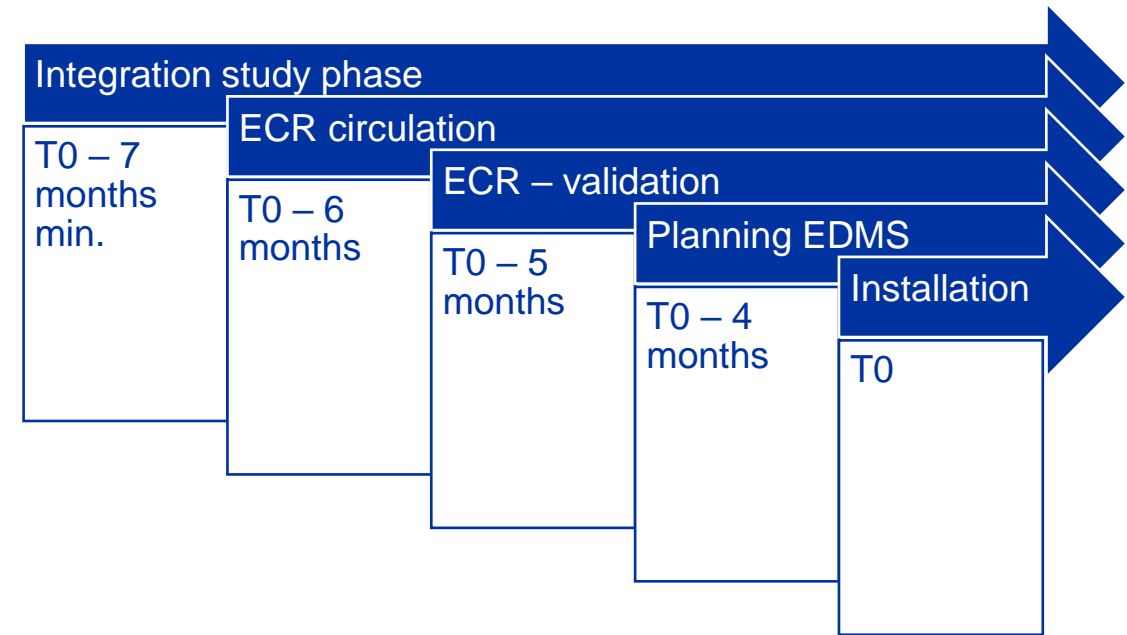
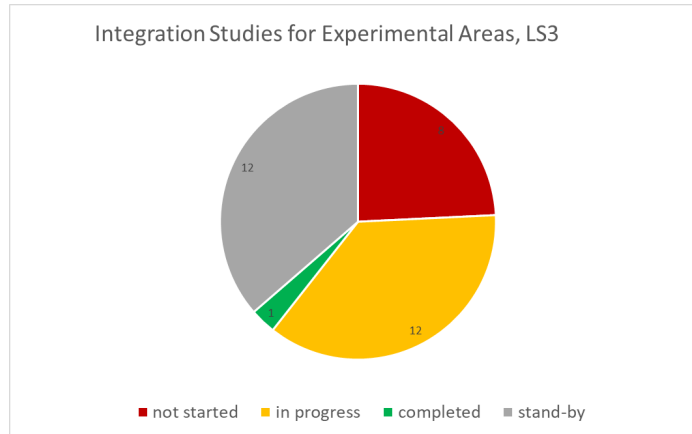
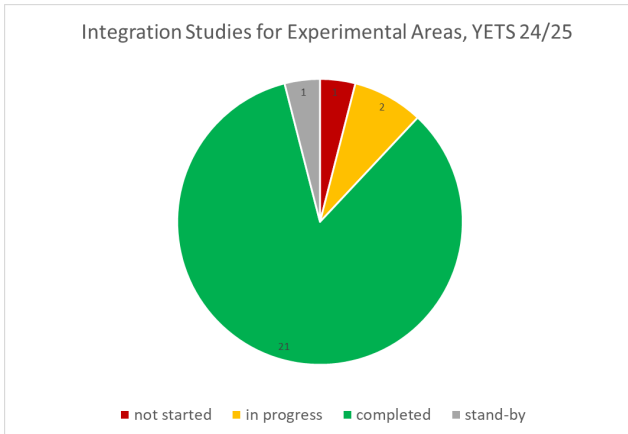
Fire-resistant partition – Integration evolution around TCC8 & ECN3 : Stude model : ST1843658_01



Fire detection ECN3

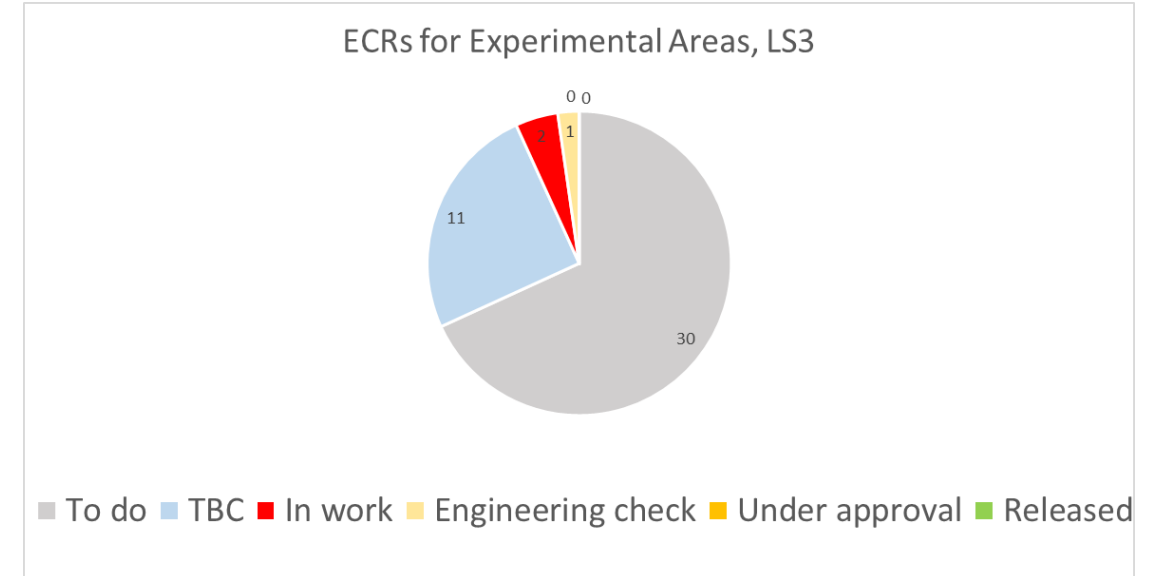
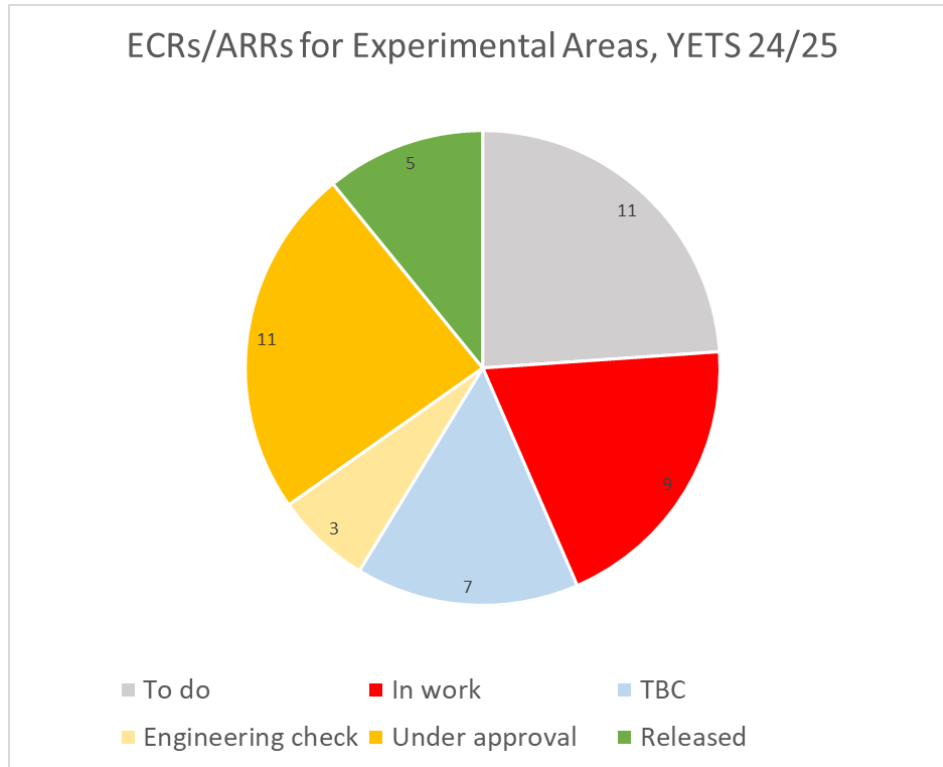
HIECN3	2024	2025
Total Integration study with ECR	~2 months	~6 months

Conclusions - Integration



- Follow-up :
 - ECR → EATM, IEFC, coordination meeting
 - Integration → ICEA, ICL, EATM
 - NACONS project (TCC, project boards, WPs meetings, etc...) + HI-ECN3 Project
 - Tools → JIRA-KANBAN, EVM
- Activities inventory: PLAN, IMPACT, Meetings (SBA, EATM...)
- 2024, 25 & 26 Integration studies (listed above) duration compatible with the current workforce (Design offices, Origins, STAFF) and the others design works of BE-EA design office

Conclusions ECRs



Discussion with groups and authors on going....to finalized the “to do”, “TBC” and “in work”

→ **Deadline for first circulation for YETS24/25 = end of September 2024**

→ **Deadline for first circulation for LS3 = 17th November 2025**

THANK YOU!!



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