

ECR/Documents for Information and Approval

Giulia Romagnoli and Natalya Kahn for BE-EA, 2024-11-26

[EA Documents - Agile Board - CERN Central Jira](#)



LIST OF DOCUMENTS for Info

FOR INFORMATION EATM				
Summary	Reporter	EA Projects	EDMS number	EDMS Status
Pre-DEC from EN-EL following the office identification	Alicja Ostrega	North Area, NACONS	3165982 - SPSX-E-LST-0032	Under Approval
Consolidation Program for the XCED Detectors	Miguel Santos	North Area, NACONS	2742855 - SPSX-B-WD-0002	Under Approval
NACONS WP 3.4 - Supports Structures	Miguel Santos	North Area, NACONS	2798515 - SPSX-H-WD-0002	Under Approval
North Area Secondary Beam Areas (SBAs) Vacuum System Consolidation	Miguel Santos	North Area, NACONS	2488128 - SPSX-V-WD-0001	Under Approval
Consolidation of the SPS TT20 TED (Target External Dump) and TBSE (Target Beam Stopper External)	Matthew Fraser	North Area, NACONS, HI-ECN3	2780156 - SPSX-T-ES-0004	Engineering check
P42 Transfer Line Dump for the High Intensity ECN3 Facility	Aleksandr Gorn	North Area, HI-ECN3	3049242 - SPS-XT-SPC-0001	Engineering check
Clean Room Functional Specification	Krystian Sidorowski	North Area	3189466 - SPSX-J-SPC-0004	Engineering check
ANSYS Thermal Simulation of XCHV	Maud Wehrle, Naini Mandal	North Area	3065546 - SPSX-TC-ER-0001	Under Approval
Assembly Procedure for the Fast FISC	Eva Kamenicka	Experimental Areas	3178861	Engineering check
Disassembly Procedure for Fast FISC	Eva Kamenicka	Experimental Areas	3128634	Released
Template for Equipment Safety Assessment of BE-EA Group	Naini Mandal	Experimental Areas	3138858	Released
TemplateEA_Simulation Note	Naini Mandal	Experimental Areas	3175025	Released

LIST OF DOCUMENTS for Info

FOR INFORMATION EATM				
Summary	Reporter	EA Projects	EDMS number	EDMS Status
East Area Plan for YETS	Aboubakr Ebn Rahmoun	East Area	3191727 - PSZ-PM-MS-0001	Under Approval
Risk assessment for the Individual System Tests of East Area power converters at the end of the YETS	Stephane Reignier	East Area	3170222 - PSZ-RP-SYP-0001	Under Approval

LIST OF DOC for FUTURE APPROVAL

ECR INFO/FUTURE APPROVAL EATM				
Summary	Reporter	EA Projects	EDMS number	EDMS Status
Low-energy Beams in the T10 Beamline of the East Area	Maarten Van Dijk	East Area	3174332 - PSZ-L-EC-0003	In Work
Installation 5 additional units of BLMs on P42	Christos Zamantzas	North Area – NACONS	3167561 – SPSX-B-EC-0011	In Work
Creation of New Lorry and Personnel Doors in Building 911	Jean-Louis Grenard	North Area, HI-ECN3	3173295 – SPSX-J-EC-0008	In Work
GIF++ extension/ gas balcony	Sylvain Girod	North Area		In Work
AUG installation EHN2+ AUL removal EHN1, GIF++/H8 and EHN2/M2/BA82	Marcin Szewczyk	North Area	3178530 - SPSX-SF-EC-0016	Engineering check
PPE144 patch panel installation with passarelle modification	Sylvain Girod	North Area – NACONS	3121860 – SPSX-J-EC-0006	Under Approval
Installation of a New Hydrogen Buffer outside EHN1 for the NA61/SHINE Experiment	Bartosz Maksiak	North Area	3197663 – SPSX-J-EC-0009	Engineering check

LIST OF DOCs for APPROVAL

ECR APPROVAL EATM				
Summary	Reporter	EA Projects	EDMS number	EDMS Status
New Motorized Support for XEMC in PPE128 on H8 Beamline	Eva Kamenicka	North Area	3171836 - SPSX-H-EC-0001	Under Approval
New Buffer Zone in BA81	Iliasse Derrag	North Area	3151414 – SPSX-J-EC-0007	Under Approval
Asset Replacement Request - BSPI.045769	Aurelie Goldblatt	North Area	3189528 – SPSX-B-ARR-0002	Under Approval
User Requirements for the Vacuum System of the M2 Beamline in the North Area	Silvia Schuh-Erhard	North Area	3129053 – SPSX-V-ES-0002	Under Approval

ECR for Approval

SPSX-H-EC-0001

Version **0.2**

By Eva Kamenicka

New Motorized Support for XEMC in PPE128 on H8 Beamline

This document describes the new motorized support designed for the electromagnetic calorimeter installed in H8 beamline in position XEMC.X0420420. It will replace the standard yellow support which is currently being used.



Currently, the XEMC and frame must be dismantled from the support and manually carried out of the beamline area to install a vacuum pipe.

Figure 1 – Location of the XEMC.X0420420 in PPE128 on H8 beamline in EHN1.

Figure 2 – Existing installation of XEMC in position XEMC.X0420420.

ECR for Approval

SPSX-H-EC-0001
Version **0.2**

By Eva Kamenicka

New Motorized Support for XEMC in PPE128 on H8 Beamline

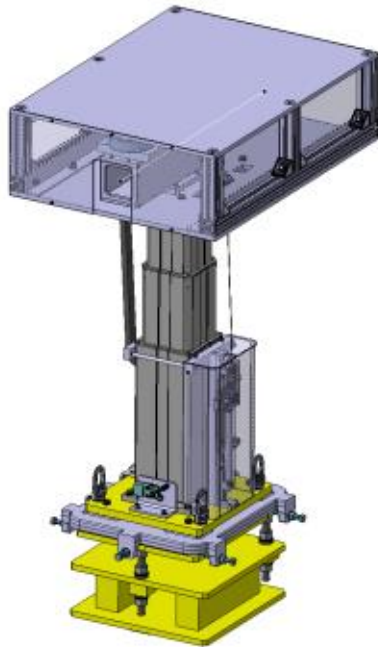


Figure 4 – New XEMC support in position IN.

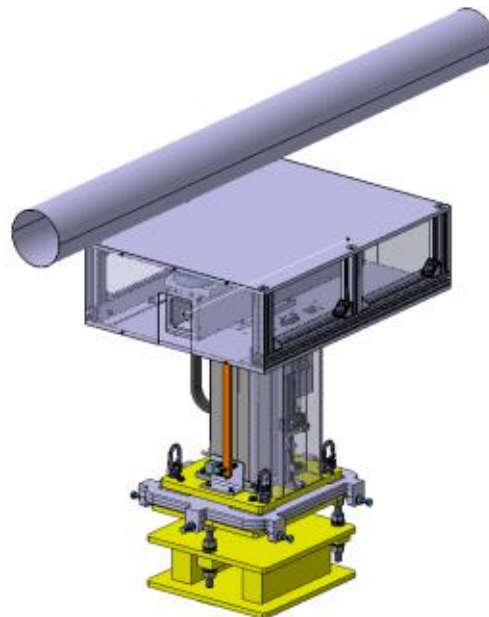


Figure 5 – New XEMC support in position OUT.

The new support will allow for remote vertical movement IN and OUT of the beamline.

Actions described in this ECR:

- Assembly of the HXEMC
- Removal of the currently used XEMC.Xo420420 support from the H8 beamline, PPE128.
- Installation of the new HXEMC support for the XEMC.Xo420420
- Alignment of the XEMC equipment and ISTs

ECR for Approval

SPSX-H-EC-0001
Version **0.2**

New Motorized Support for XEMC in PPE128 on H8 Beamline

By Eva Kamenicka

Seen by AHDIDA Claudia Christina (HSE-RP)	Creator
Seen	
Seen by VAXELAIRE Didier (EN-AA)	Creator
Accepted by FOLCH Ramon (BE-EA)	Creator
Seen by FUMEY Sylvain (EN-HE)	Creator
ok	
Seen by GENILLON Xavier (SY-EPC)	Creator
Seen	
Accepted by KAMENICKA Eva (BE-EA)	Creator
All comments from ENG check have been considered. The precision of XEMC is defined as +/- 0.5 mm. The link to HXEMC drawings and to EAM item is now added to the document. The equipment need to be traced on ground on site. The anti-collision switch has already been part of the design before (see chapter 6). A paragraph about transport has been added (see chapter 3 and figure 6).	
Seen by VENDEUVRE Camille (BE-GM)	Creator
Accepted by ORTEGA RUIZ Inaki (SY-BI)	Creator
All SY-BI control details have been defined in separate meetings. Replying to Maarten Van Dijk: the HV can be left on during movement, as in the other instruments.	
Seen by BEYNEL Alexandre (BE-GM)	Creator

Seeking approval from EATM



ECR for Approval

SPSX-J-EC-0007

Version **0.2**

By Iliasse Derrag

New Buffer Zone in BA8₁

This document describes the addition of a buffer zone in BA8₁.



Figure 1: GIS view of proposed location.

There is currently no buffer zone in BA8₁, but radioactive objects pass through it on their way to and from the transfer tunnels.

The new buffer zone will be:

- Fenced
- Access controlled (using a Dosimeter Key Access)

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SPSX-J-EC-0007

New Buffer Zone in BA81

Version **0.2**

By Iliasse Derrag

Some modifications will be necessary:

- Pivoting of dosimeter/display panel to be flush with the PAD/MAD.
- Addition of a Dosimeter Access controlled door at the edge of the PAD/MAD.
- Installation of new fences to delimitate the area while leaving enough space at the PAD/MAD's exit.
- Installation of a TREC PC connected to the network.
- Installation of a Gamma probe used for actively detecting radiation in the area.
- Placement of racks to be used as temporary storage within the buffer zone.

The work will involve the following groups:

- EN-EL for electrical cable pulling to power the TREC PC, as well as extension of cables for the pivoted dosimeter panel.
- IT-CS for the ethernet-wired connection of the TREC PC, as well as the extension of ethernet cables for the pivoted dosimeter panel.
- EN-ACE for the creation and installation of the new fences and door.
- EN-AA for the installation of the Dosimeter Key Access and related cable pulling.

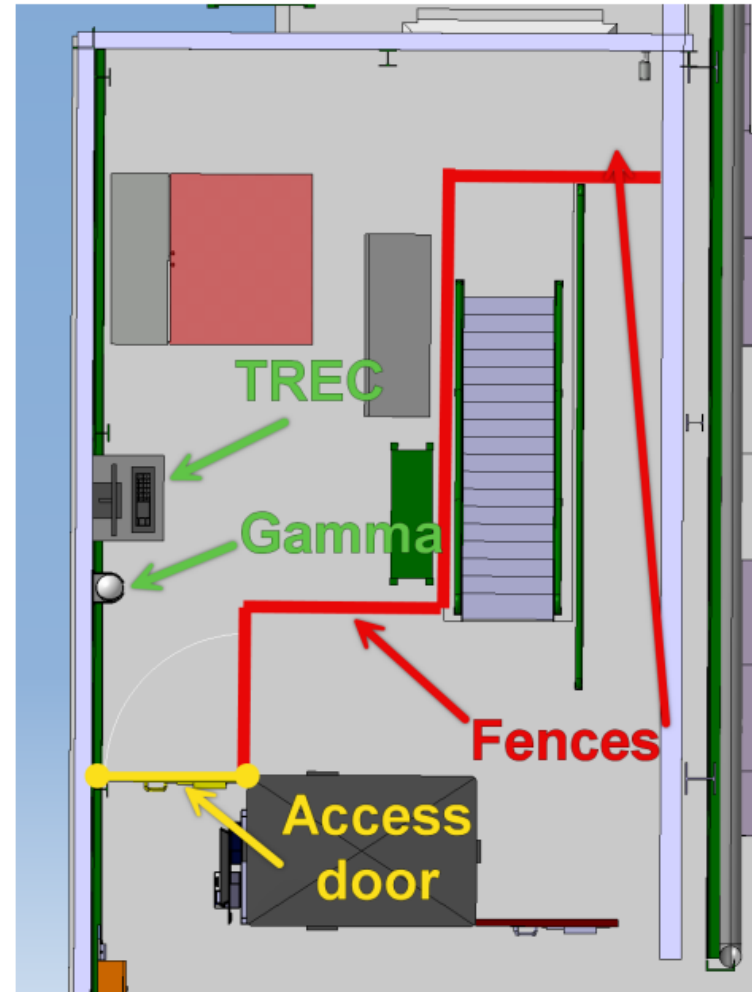


Figure 3: Top view of proposed solution for the new buffer zone.

ECR for Approval

SPSX-J-EC-0007

Version **0.2**

By Iliasse Derrag

New Buffer Zone in BA81

— Seen by GROS Guillaume (EN-EL)

vu

— Seen by GENILLON Xavier (SY-EPC)

Seen

— Seen by LEHTINEN Jani (EN-CV)

— Seen by GAILLARD Yves (SY-EPC)

⚠ Accepted with Warning by VAXELAIRE Didier (EN-AA)

Bonjour,

Ne serait il pas plus interessant de placer les équipements (Lecteur DMC, Dosimetre et ecran d'information) sur le mur extérieur plutôt que contre le PAD? L'alimentation et le reseau sont desservi depuis le mur extérieur.

Le passage va etre relativement étroit, en les placant sur le mur extérieur on peut gagner un peu d'espace en les logeant dans la structure métallique.

⚠ Accepted with Warning by KADI Yacine (BE-EA)

this activity is not currently budgeted nor included/considered in the NA-CONS project baseline

— Seen by BEYNEL Alexandre (BE-GM)

— Seen by SCHWARZ Philip (TE-MSD)

— Seen by GRECARD Jean-Louis (SY-STI)

⚠ Accepted with Warning by ABERLE Frederic Lionel (HSE-RP)

Bonjour Iliasse,

Merci beaucoup pour le document. Je pense que l'idée de Didier est bonne, d'autant plus que les lecteurs dosimètres et écrans seraient plus visibles!

— Seen by BERTONE Caterina (EN-HE)

support of transport services is not requested in this doc

Seeking approval from EATM



ARR for Approval

SPSX-B-ARR-0002

Version **0.2**

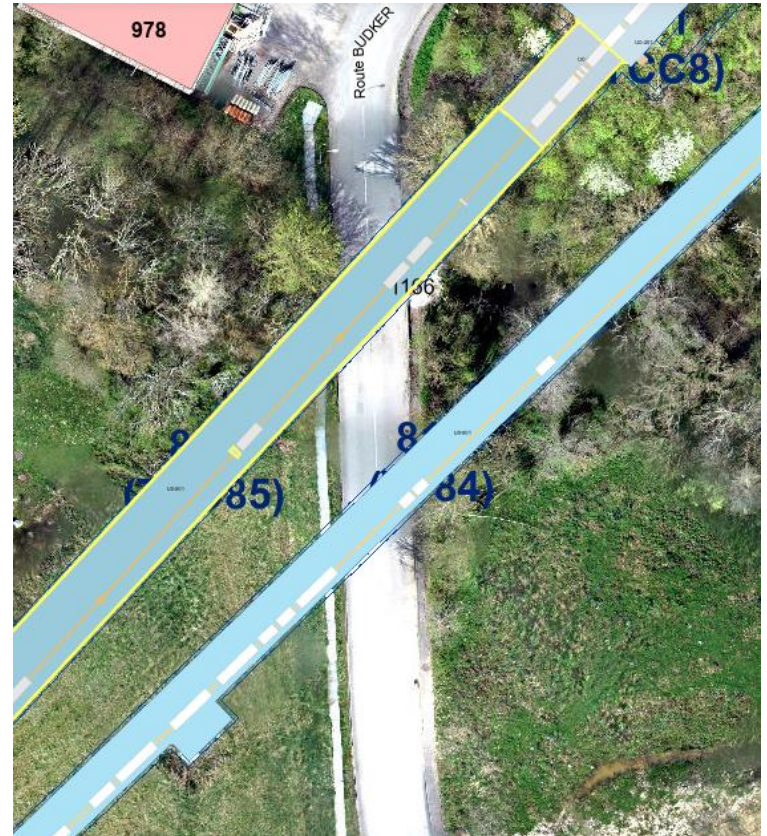
By Aurelie Goldblatt

Asset Replacement Request - BSPl.04576g

BSP.X045076g is damaged and there is no signal. It will be replaced by a spare (SPBSAPA003-CR000063).

Modus operandi once vacuum is opened:

- Cables disconnection
- Removal from the beam line of the full tank with its support
- Installation of the spare (full tank + support)
- Cables reconnection
- IST



ARR for Approval

SPSX-B-ARR-0002

Asset Replacement Request - BSPI.04576g

Version **0.2**

By Aurelie Goldblatt

— Seen by DURAFFOURG Michel (SY-BI)

seen

✓ Accepted by BOISSEAUX-BOURGEOIS Philippe (BE-EA)

ok for vacuum

— Seen by VENDEUVRE Camille (BE-GM)

— Seen by GENILLON Xavier (SY-EPC)

Seen

— Seen by BLANC Jeremy (EN-EL)

— Seen by BEYNEL Alexandre (BE-GM)

Comments from previous version

— Seen by VAXELAIRE Didier (EN-AA)

— Seen by BEYNEL Alexandre (BE-GM)

— Seen by KADI Yacine (BE-EA)

OK as far as NA-CONS is concerned

— Seen by GENILLON Xavier (SY-EPC)

Seen

✓ Accepted by BOISSEAUX-BOURGEOIS Philippe (BE-EA)

ok for the vacuum

— Seen by VENDEUVRE Camille (BE-GM)

Functional position does not correspond to layout one
Asset IDs are functional positions so we don't know if the full tank is changed or only the instrumentation.

✗ Rejected by ROMAGNOLI Giulia (BE-EA)

Please provide more details about the change.
Please add also a valuable functional position and ASSETS numbers.

Seeking approval from EATM



UR for Approval

SPSX-V-ES-0002
Version 0.2

By Silvia Schuh-Erhard

User Requirements for the Vacuum System of the M2 Beamline in the North Area

This document outlines the user requirements for the consolidation and upgrade of the vacuum system in the M2 beamline to facilitate a hadron beam of higher intensity to be delivered to the EHN2 experimental hall.

The current M2 beamline design includes a number of beam sections in air in which the beam scatters off the air molecules leading to an incoherent increase of the beam emittance. This cannot be improved with optics. Overall, there is a reduced number of accumulated kaons.

Currently there are 44 vacuum windows installed in the line, of which:

- 20 – AL 0.1mm
- 5 – AL 0.2mm
- 19 – Mylar 0.175 mm

The M2 beamline is almost completely built with non-standard chambers, flanges and collars, which increases maintenance time.



Figure 2: Non-standard vacuum chambers of the M2 beamline compared with the standard stainless-steel chambers used in the other North Area beamlines.

UR for Approval

SPSX-V-ES-0002
Version 0.2

By Silvia Schuh-Erhard

User Requirements for the Vacuum System of the M2 Beamline in the North Area

User Requirements

- A gas pressure at the level of 1×10^{-3} mbar would be adequate to transport the highest number of kaons at a good purity level to the AMBER experiment.
- The vacuum upgrade needs to be completed by the end of LS3
- Vacuum level: 9×10^{-3} – 1×10^{-3} mbar or better; as low as can be reasonably optimised using primary pumping technology.
- Leak rate: 10^{-7} mbar/l/s for the individual vacuum hardware components.
- Sectorisation should allow for a vacuum recovery within 4 hours after an intervention that breaks the vacuum. In explicit terms, pumping down from atmospheric to 0.1 mbar should not take more than 3–4 hours, at which time beam operation can already be resumed while further pumping down to the nominal vacuum pressure could take up to 12 hours.
- Any use of vacuum windows shall be minimised and the strategy discussed before implementation. The simulation assumed 24 vacuum windows of 200 μm Mylar each which correspond to an overall divergence increase along the beamline of 1.4 μrad .
- No particular material constraints have been identified for the vacuum chambers, except for the normal material constraints for a beamline. Simulations were performed to compare aluminium and stainless steel and no beam performance difference was found.
- Should the current aluminium vacuum chambers (185 mm internal/198 mm external diameter) need to be replaced, the upper standard DN219 rather than DN159 shall be used.
- Addition of one collimator at 300 m downstream the T6 target, integrated in vacuum.

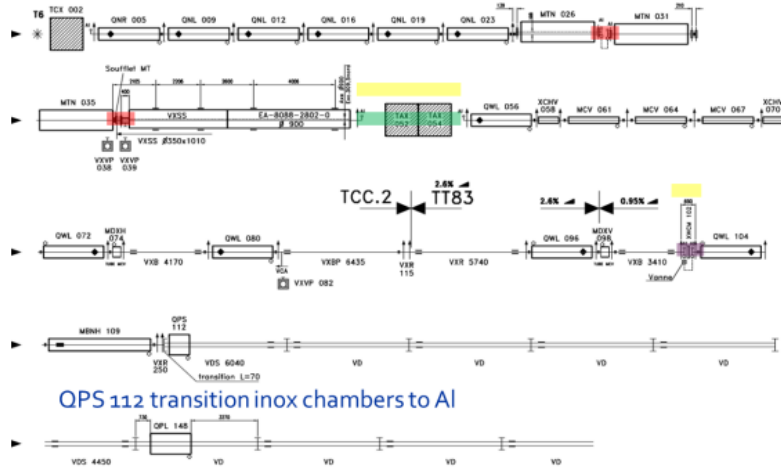


Figure 6: M2 beamline 1st part. In red, vacuum missing; in blue, beam instrumentation not in vacuum; in green, no vacuum needed; in yellow, the parts not under vacuum in simulations.

UR for Approval

SPSX-V-ES-0002

Version **0.2**

By Silvia Schuh-Erhard

User Requirements for the Vacuum System of the M2 Beamline in the North Area

— Seen by GENILLON Xavier (SY-EPC)

Seen

✓ Accepted by ORTEGA RUIZ Inaki (SY-BI)

— Seen by VAXELAIRE Didier (EN-AA)

— Seen by BEYNEL Alexandre (BE-GM)

— Seen by BLANC Jeremy (EN-EL)

— Seen by PETRELLESE Angelo (BE-EA)

✓ Accepted by SCHWARZ Philip (TE-MS)

Ok for MSC.

— Seen by SEITZ Bjorn (EP-UFT)

Seems good to me

— Seen by AHDIDA Claudia Christina (HSE-RP)

Seen

Seeking approval from EATM

Thank you!

