

DESIR project: status and timeline

J.-C. Thomas, GANIL, on behalf of the DESIR project management

Building and infrastructure - *Delivery and process installation*

Timeline - *DESIR project objectives*

Setup installation & commissioning - *How to, when?*

Beam purification - *RFQ-1P, HRS (status)*
- *GPIB, PIPERADE: c.f. C. Roumegou and G. Guignard
ISOL-France VIII ws, <https://indico.in2p3.fr/event/38353>*

Building and infrastructure

❑ Building reception: end of 2025

- ✓ Still a couple of issues related to water infiltration
- ✓ (Nuclear) ventilation ok, including the one of the 1st (white) laser room

❑ Building operation

- ✓ Waiting for general safety clearance
-> access to the building still restricted (on request)

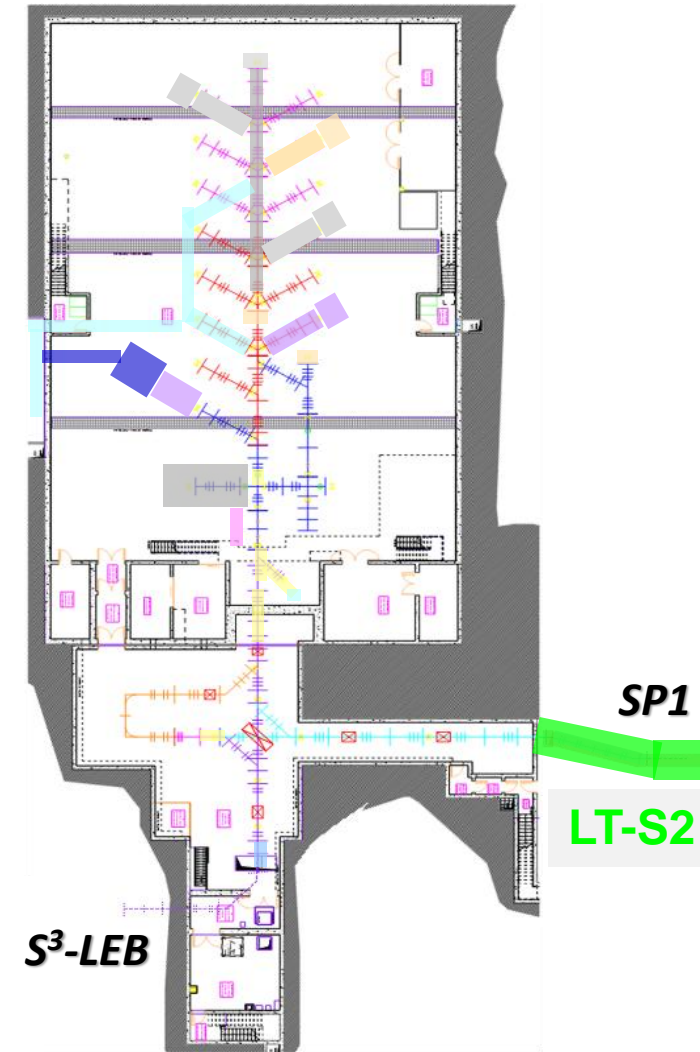
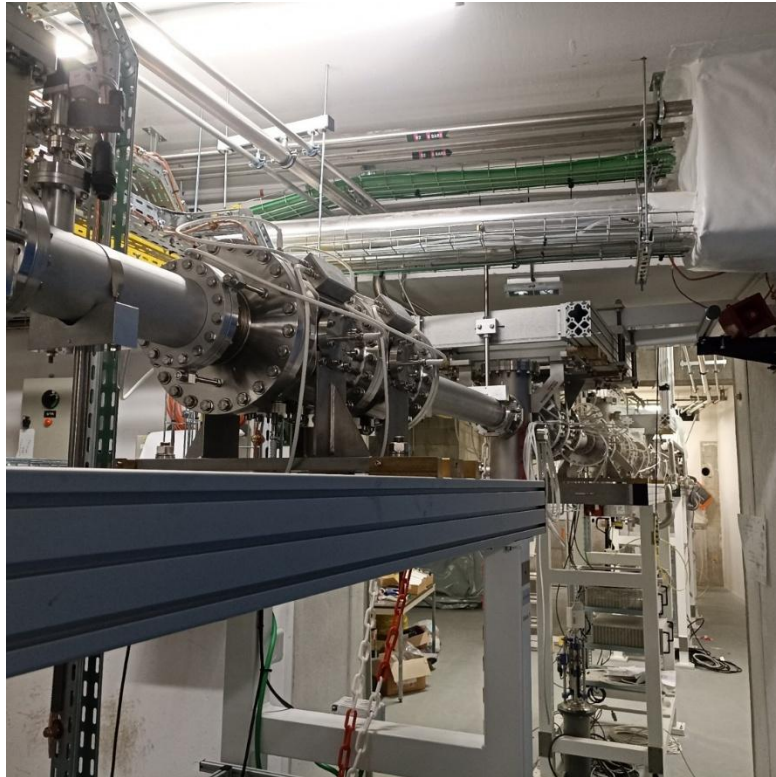


Roof of the HRS room



□ Beam line installation inside the existing GANIL facility (LT-S2)

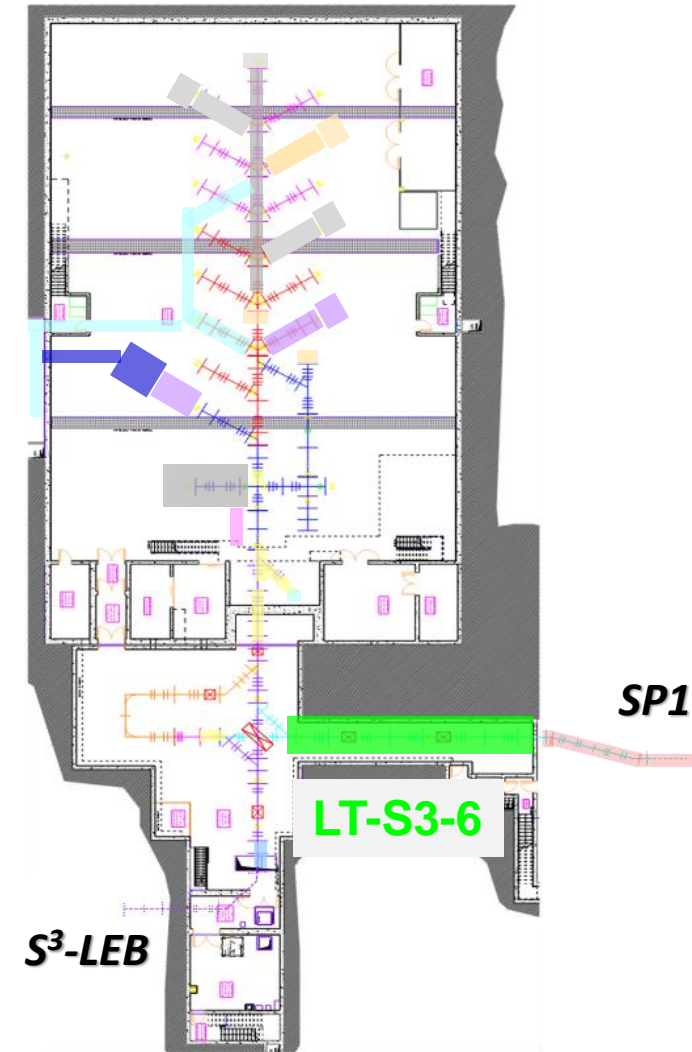
- ✓ Prototype section
- > vacuum ok
- > cabling ongoing
- > supplies and utilities to be integrated and tested
- => Commissioning asap (stable ion beam from SPIRAL1)



❑ **Beam line installation inside the DESIR building (LT-S3 to -S6)**

- ✓ Mechanical supports ok
- > vacuum chambers and optical equipment to be installed

=> Call for tender for cabling and fluidic supplies installation S2 2026
 Following the analysis of the work performed on the prototype section



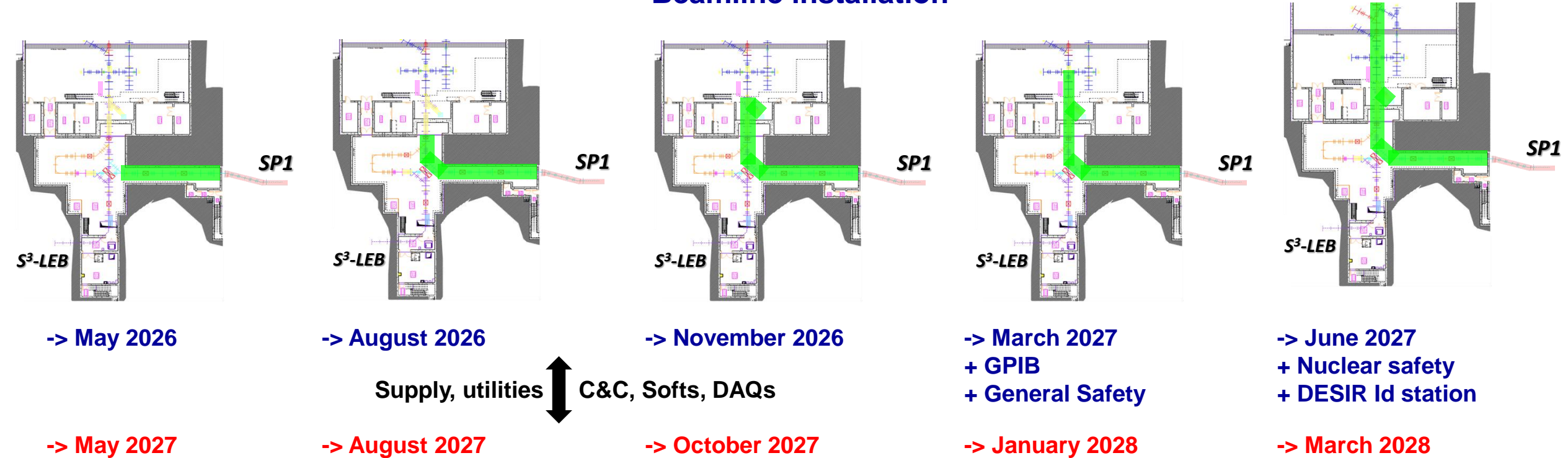
Timeline

❑ Commissioning license request from the Nuclear Safety Authority: sending mid-2026, authorization expected within 2 years

-> Strategy: installation and commissioning of the beam line equipment strictly required to bring a SPIRAL1 RIB after the GPIB by mid-2028 - **Main project objective**

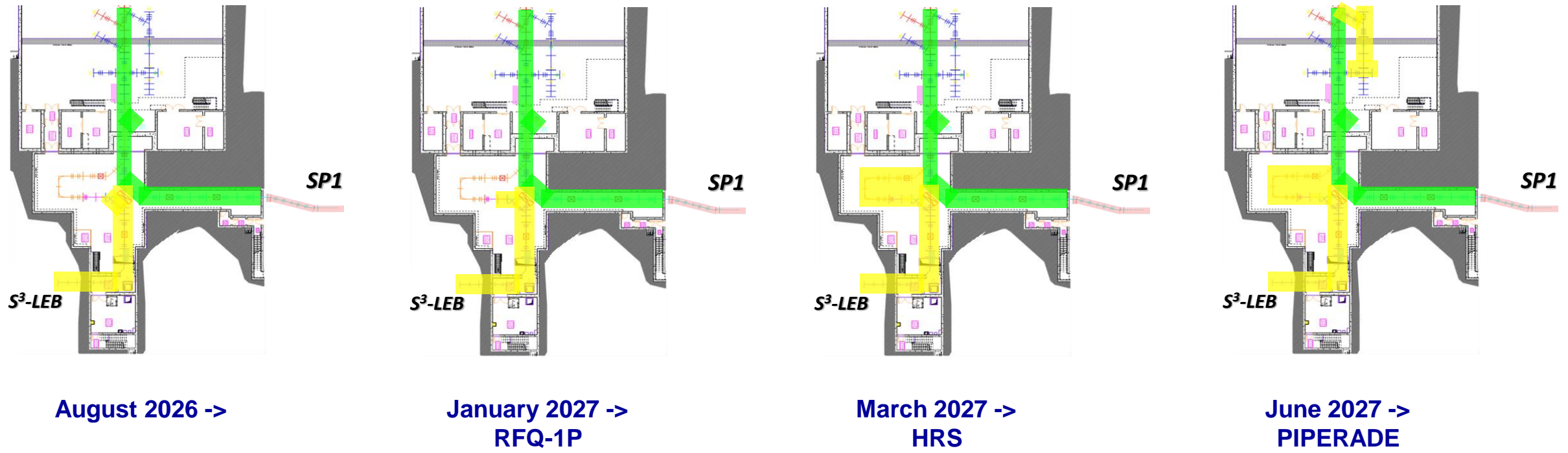
(NB: requires a HV platform operational at the entrance of the DESIR experimental hall)

Beamline installation



Offline commissioning

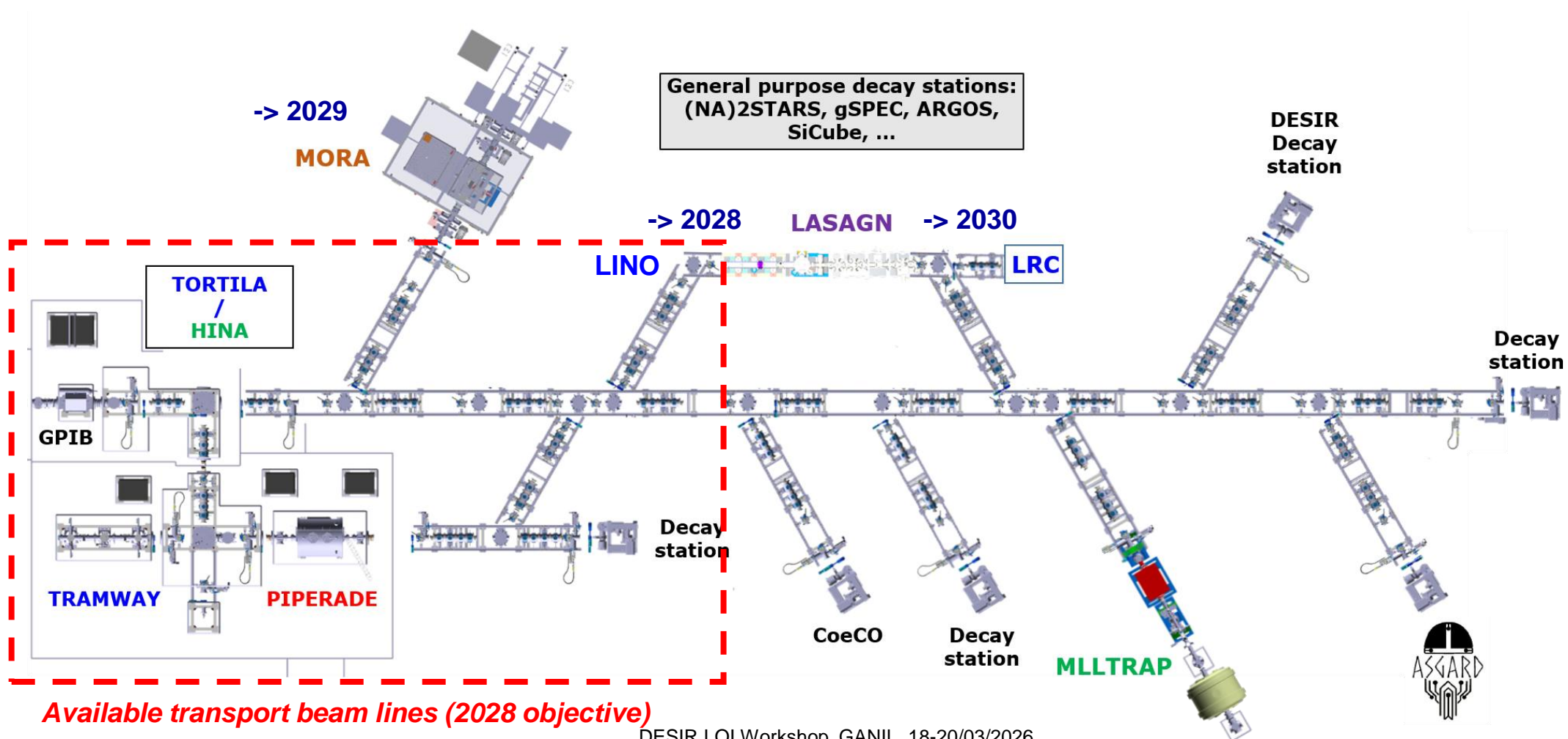
- ❑ 2nd project objective (in parallel, depending on available human resources)
 - ❑ S³-LEB -> DESIR beam line
 - ❑ Beam purification devices
 - ❑ Laser lab (starting)



Setup installation & commissioning

□ Goal by 2030

- ✓ All permanent setups operational
- ✓ General purpose beam lines available for temporary setups



❑ Setup installation: General info

✓ DESIR hall almost ready for setup installation

-> possible asap provided it is taken care of by the setup collaboration (+ local help)

=> Funding requests: PEPPER (P. Ascher et al., PIPERADE, 2 Post-docs + 1 PhD), LILAS (L. Lalanne, LASAGN, 1 Post-doc),
ASGARD (L. Hayen)

=> Ongoing project: MORA ACCLAIM (P. Delahaye et al.), HINA (S. Naimi et al.), CaeSAR (L. Canete, L. Hayen)

✓ It will take a little bit of time before the setup can be linked to the main beam line, supplies and utilities

-> funding is needed for the construction of the beam lines beyond ~LINO

✓ Regular updates are welcomed with respect to the timeline foreseen by the collaborations + specific needs

❑ Setup commissioning

✓ Stable beams: local (setup owner) or SPIRAL1/DESIR ion source(s)

✓ Radioactive beams: request to the GANIL directorate through the DESIR Collaboration committee (2028-2029)

❑ Experiments

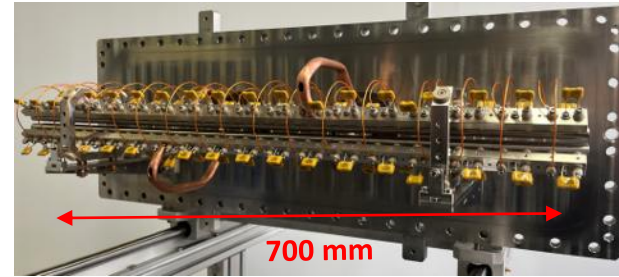
✓ Proposal discussion 2027 - GANIL PAC 2028

✓ Synergies with S³

Beam purification

❑ To be moved to DESIR in 2027

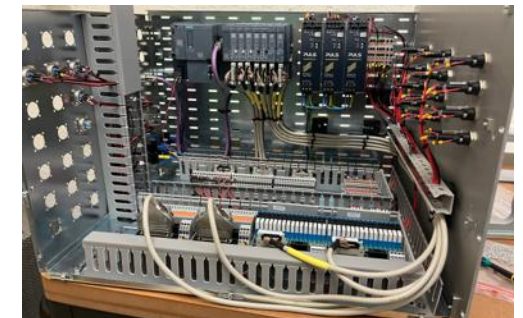
- ✓ Mechanical assembly done
- ✓ Ongoing RF test and C&C cabling
- ✓ HV cage designed
- > offline commissioning at LPC Caen S2-2026



RF system



Test bench at LPC Caen



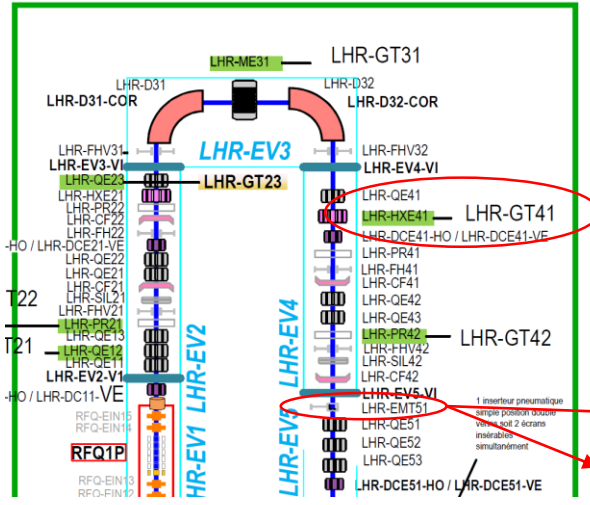
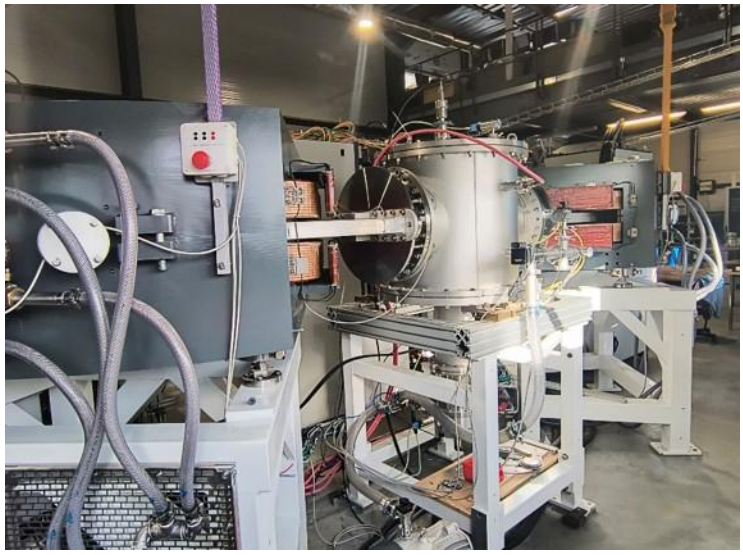
Remote control system

❑ To be moved to DESIR end 2026 - beginning 2027

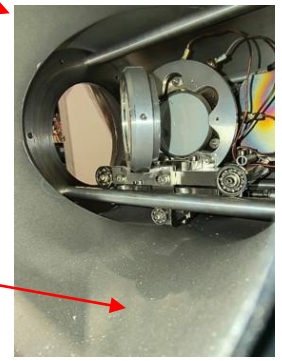
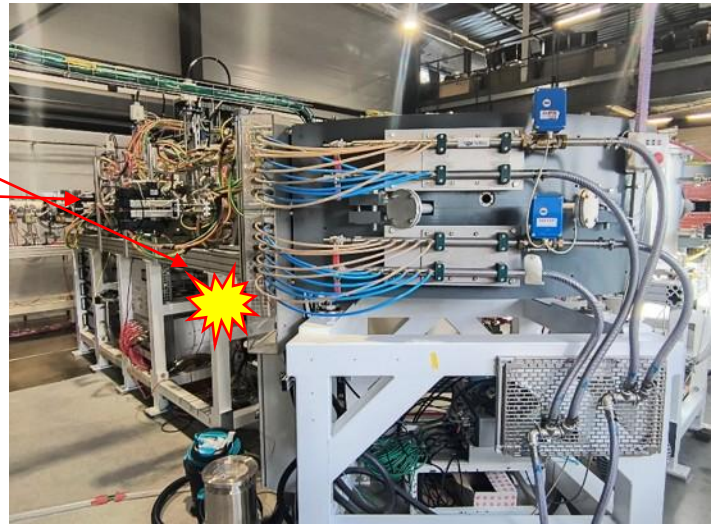
- ✓ Offline commissioning done - J. Michaud et al. *NIM B541 (2023) 243*
- ✓ “Cleaning” required before dismantling and shipment



Clean side



Dirty side



Metallic dust

Photographs: L. Daudin, A. Balana, C. Berteloite

Thanks for your attention

