

HIE-ISOLDE

Status of the works at the ISOLDE hall
(and service buildings)

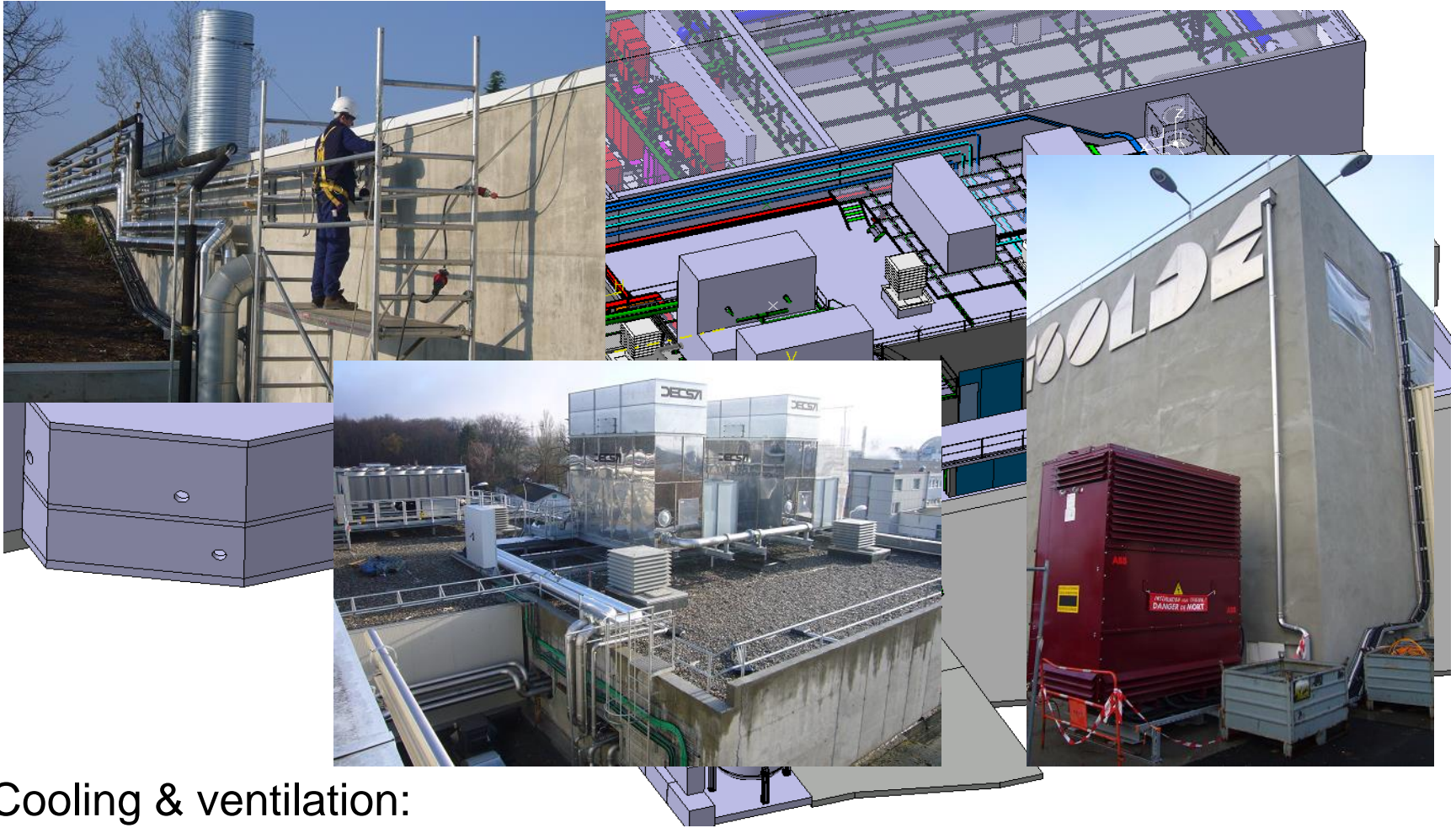
69th ISCC meeting

CERN, 31 March 2014

Erwin Siesling for the HIE ISOLDE integration team

- **Status Report HIE Installation March 2014:**
 - Progress since the last ISCC meeting in Oct '13
 - What to expect for this year
 - Have there been or are there any (new) delays
 - Are we on track with regard to the planning

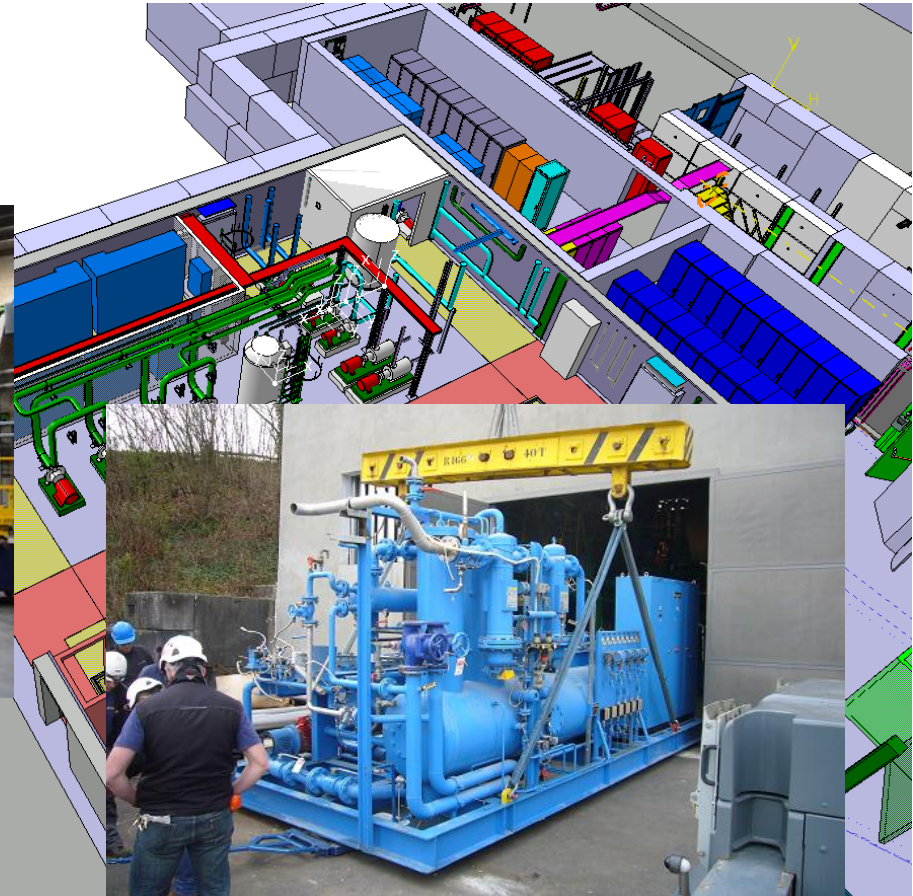




Cooling & ventilation:

Tubing finishing. Pressure tests done. Isolation of demineralized and chilled water tubes is finishing. Cooling towers operational. Roof extractors installed. CV cabling done.

EL systems: 440 V transformer installed, tested and cabled



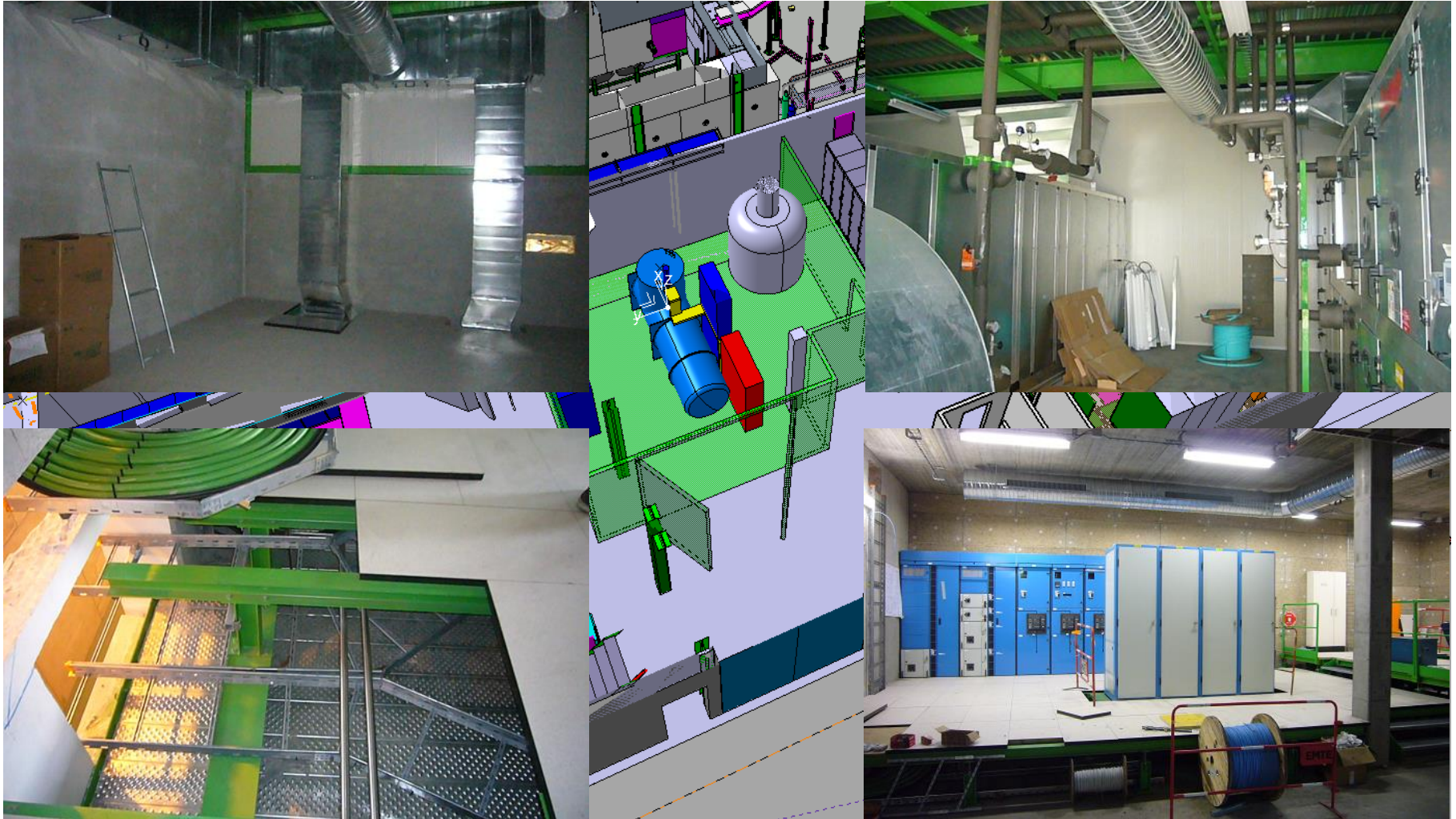
Cooling & Ventilation:

CV water and HVAC installation finished. Tests demineralized water ongoing.

Cryo System:

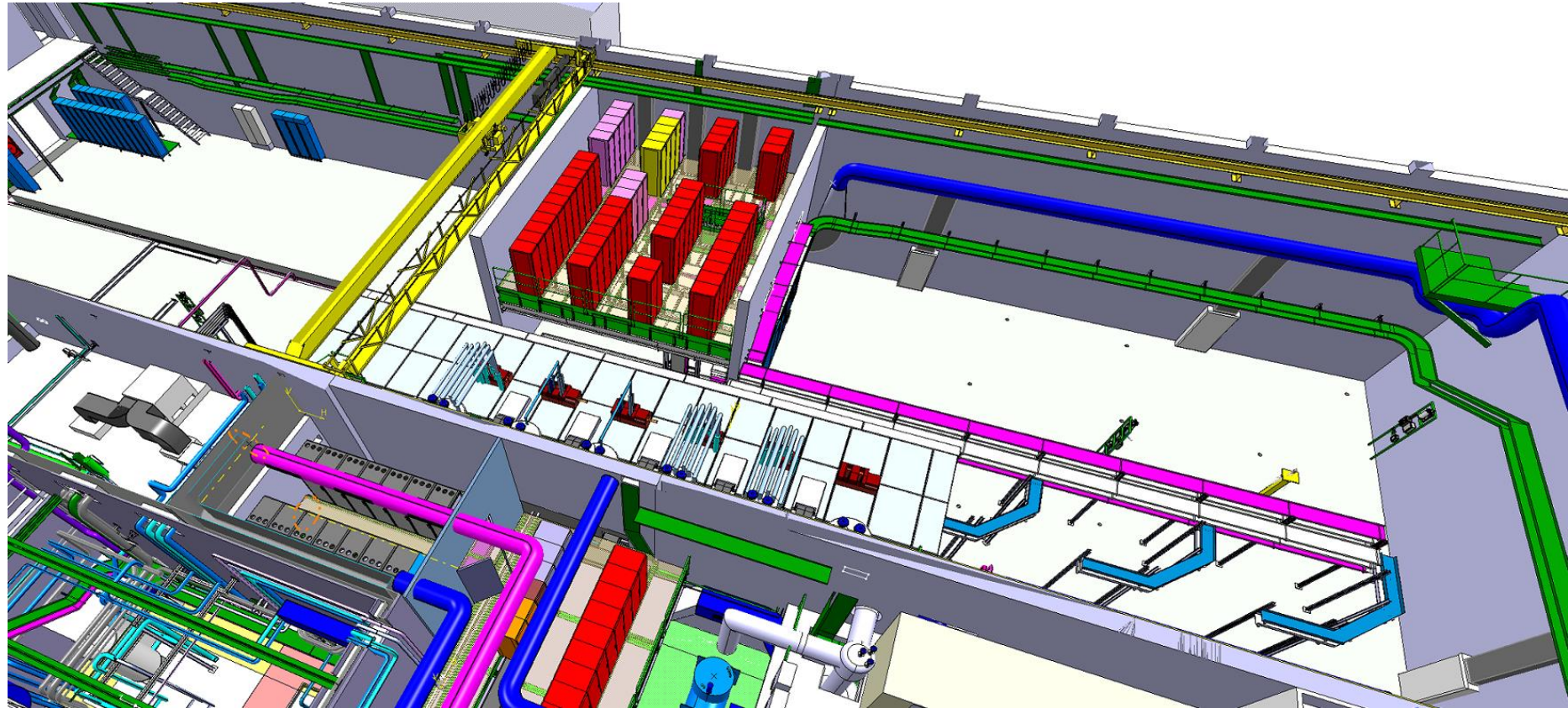
Cryo tubing installation chilled water done.

Compressors installation prepared: Compressor skit/frame arrived



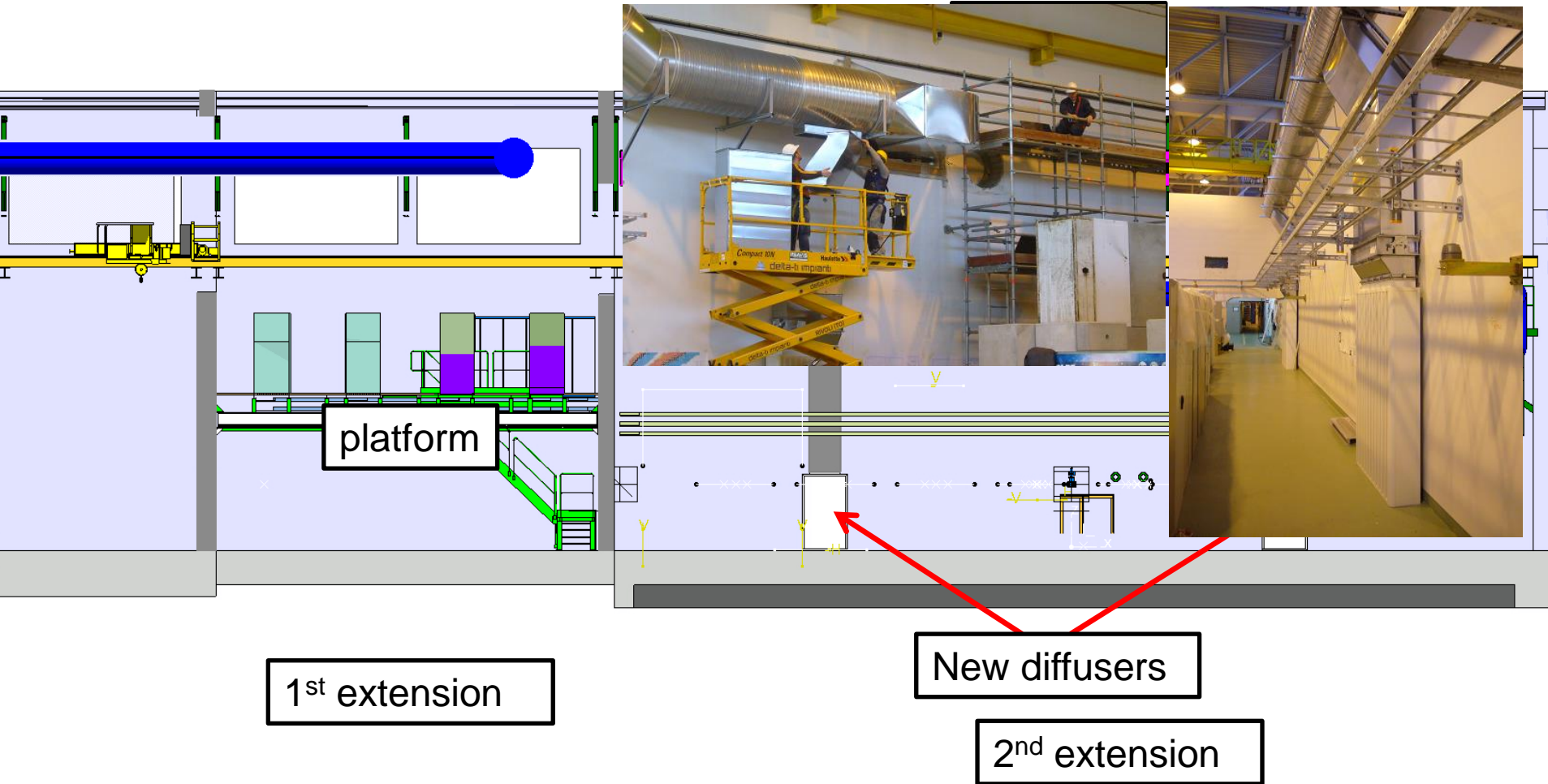
EL and CV systems:

Power distribution racks in place. Racks & cabling ongoing. Air ducts all in place. HVAC units installed and tubing done.

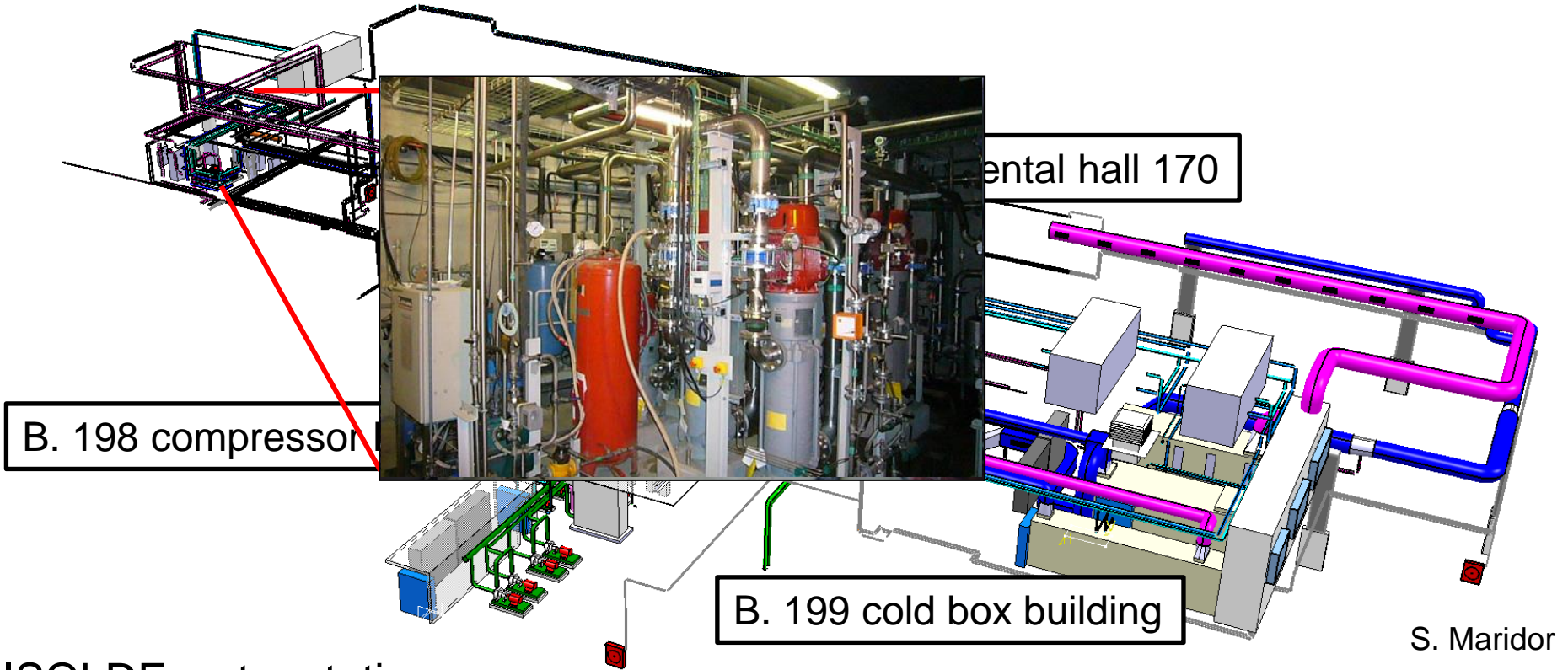


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ISOLDE hall 170:
 Civil engineering, metal structures, cooling and ventilation, cabling and equipment installation



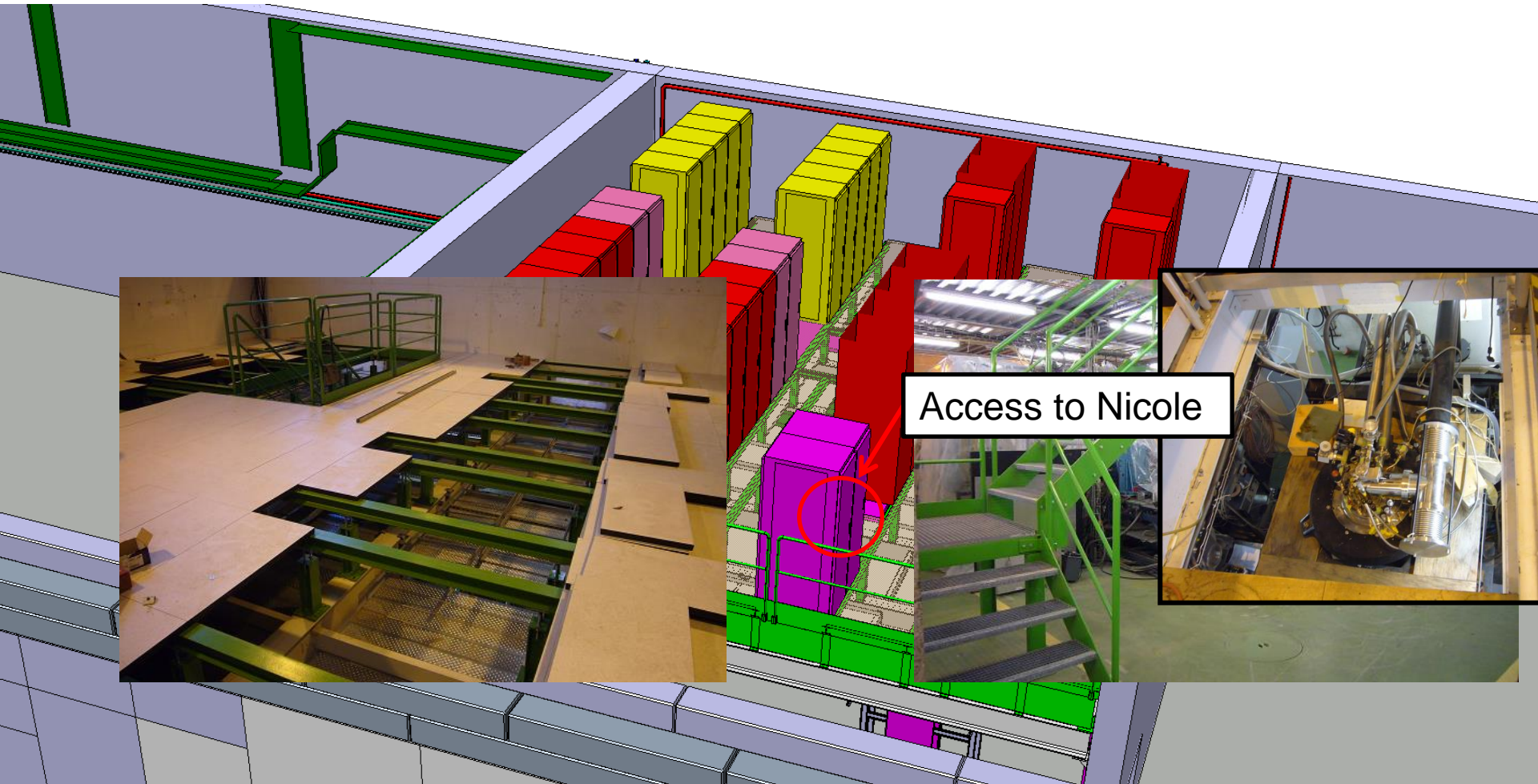
ISOLDE hall 170: Ventilation ducts in place (remaining platform)



ISOLDE water station:

Tests and commissioning for 27C demi water finishing – water cooling system operational 10 April. In time for ISOLDE Low Energy start-up.

Operational date has been relaxed slightly (14 March to 10 April) in agreement with ISOLDE Technical and Physics coordination – start up Low E not hampered.

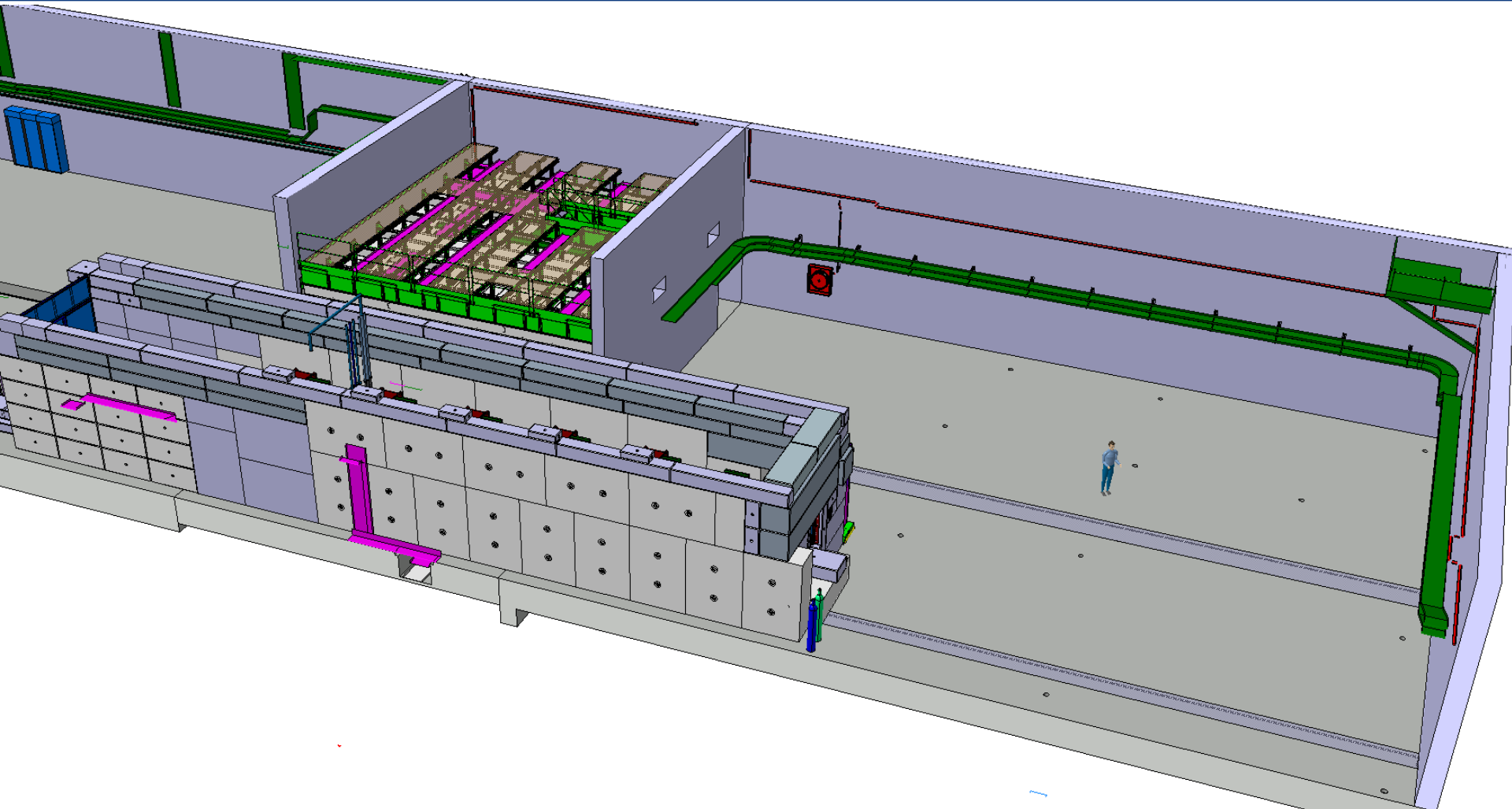


Rack platform:

Modification of the future rack platform done. Cable trays installation finishing – cabling will follow

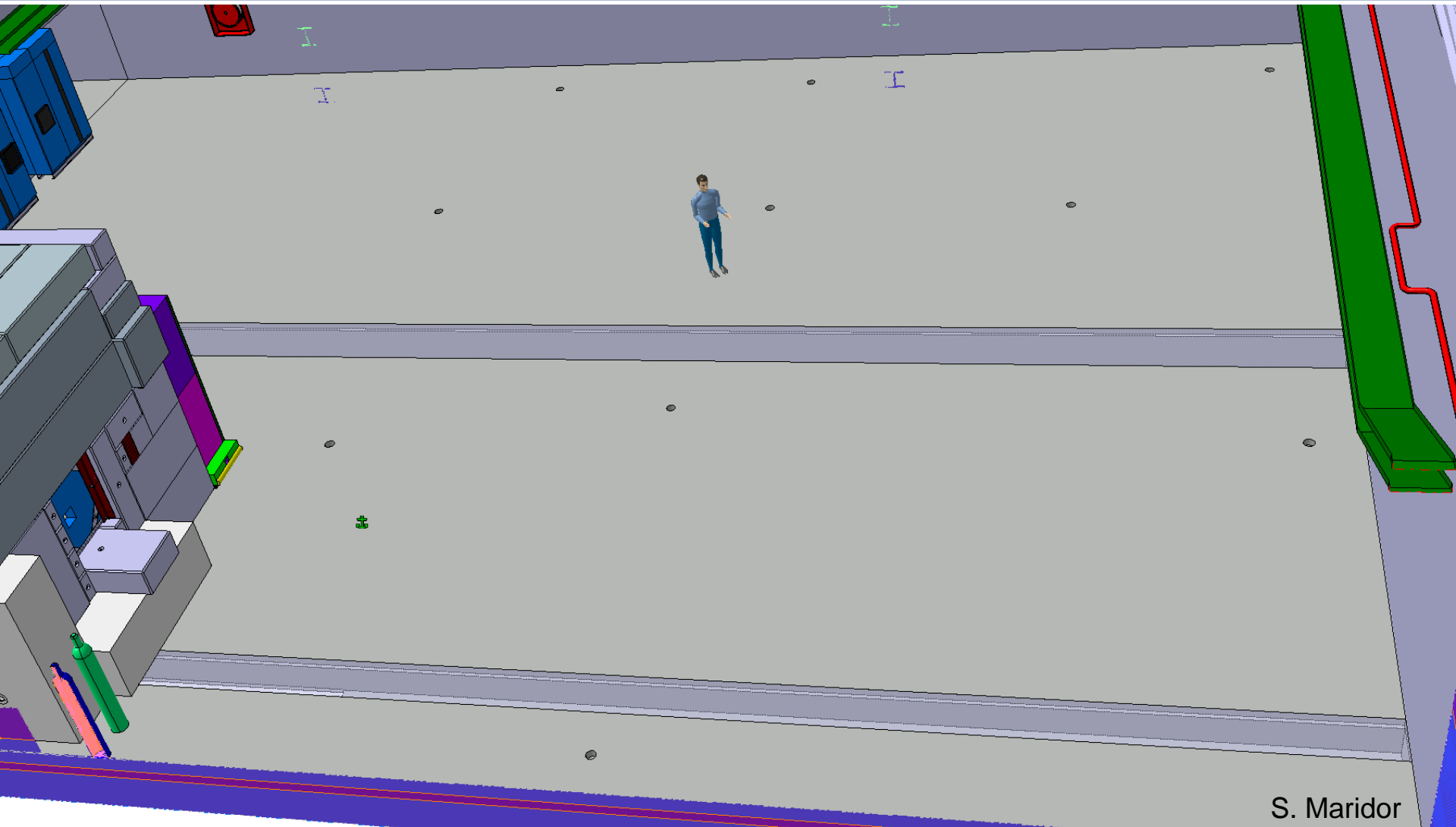
Equipment (EPC, BI, WIC) to arrive as of September

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ISOLDE hall 170: Metal structures

HEBT carrying structure for cable trays and infrastructure being installed



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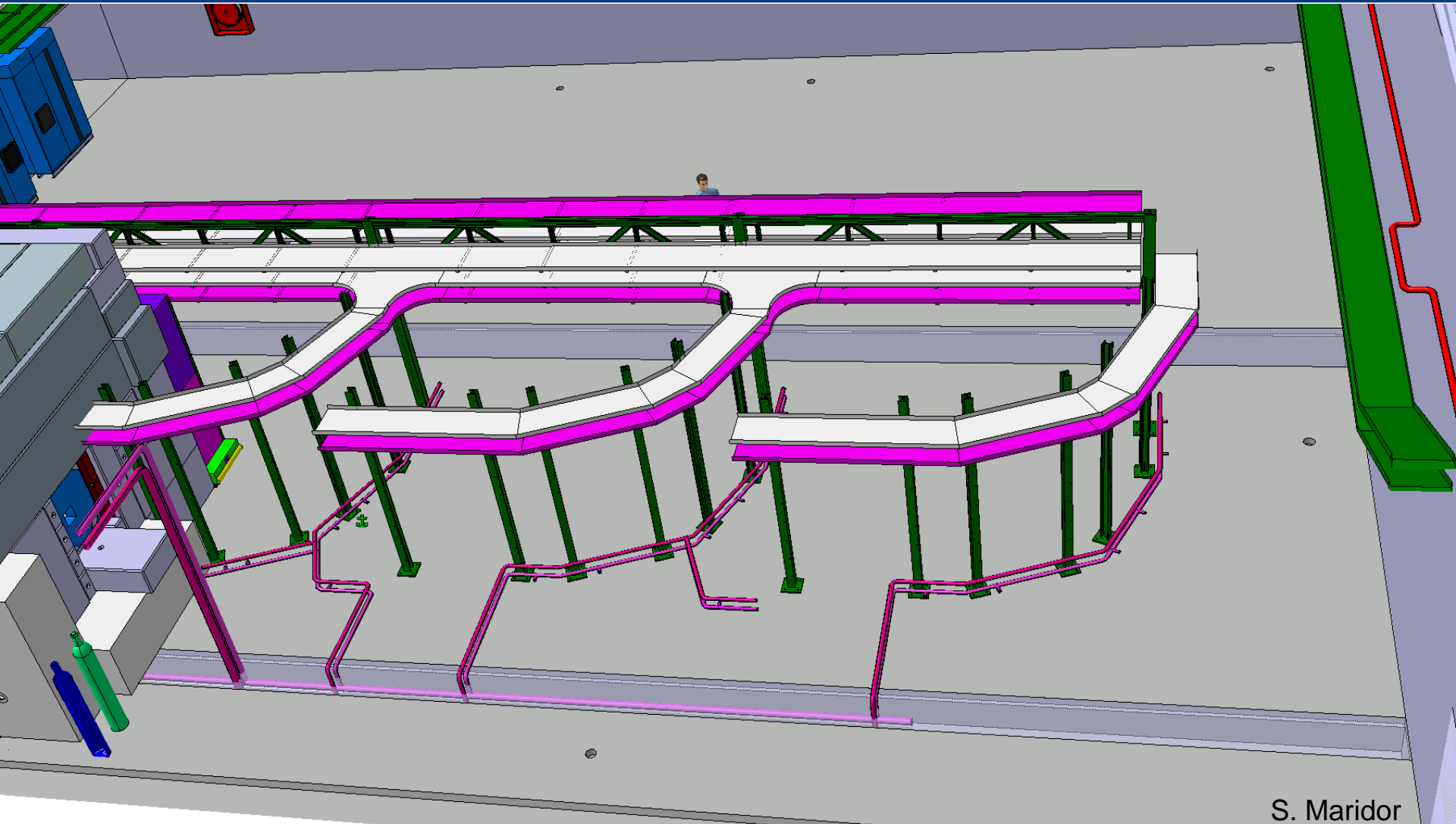
ISOLDE hall 170: Metal structures

HEBT carrying structure for cable trays and infrastructure being installed



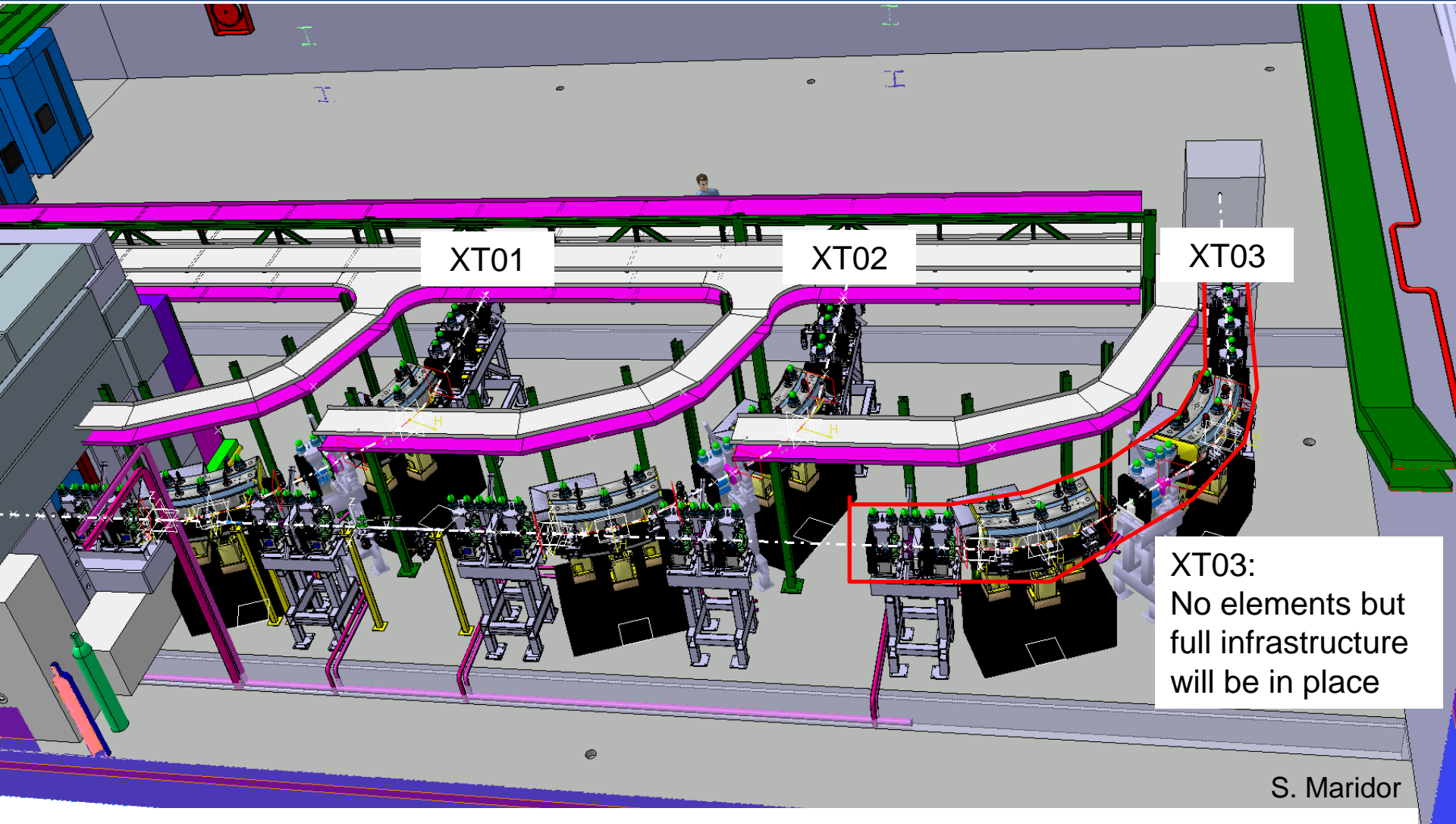
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ISOLDE hall 170: Metal structures
HEBT carrying structure for cable trays and infrastructure being installed



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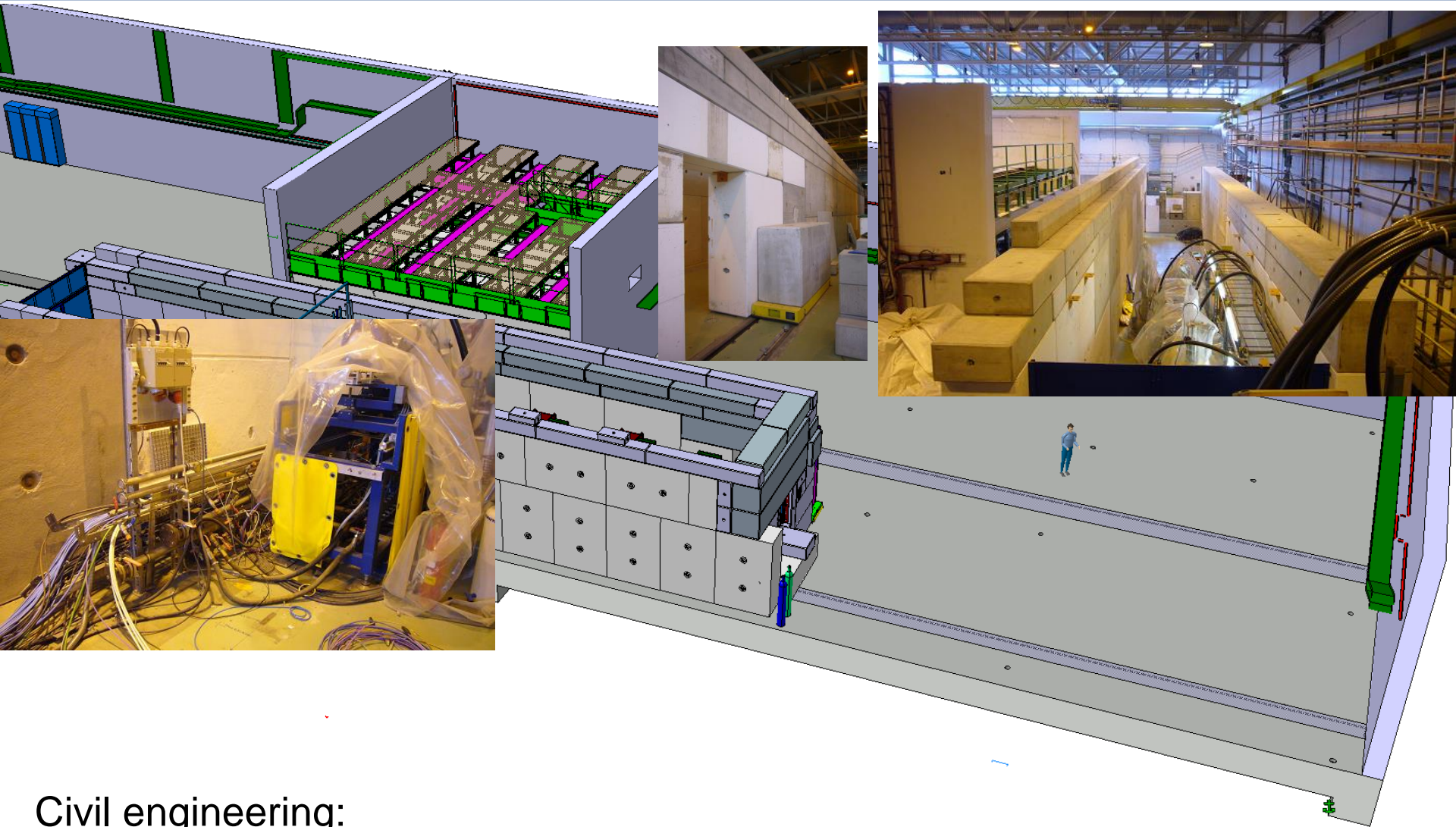
HEBT cable trays and cabling installation as of April
water cooling and vacuum infrastructure as of May



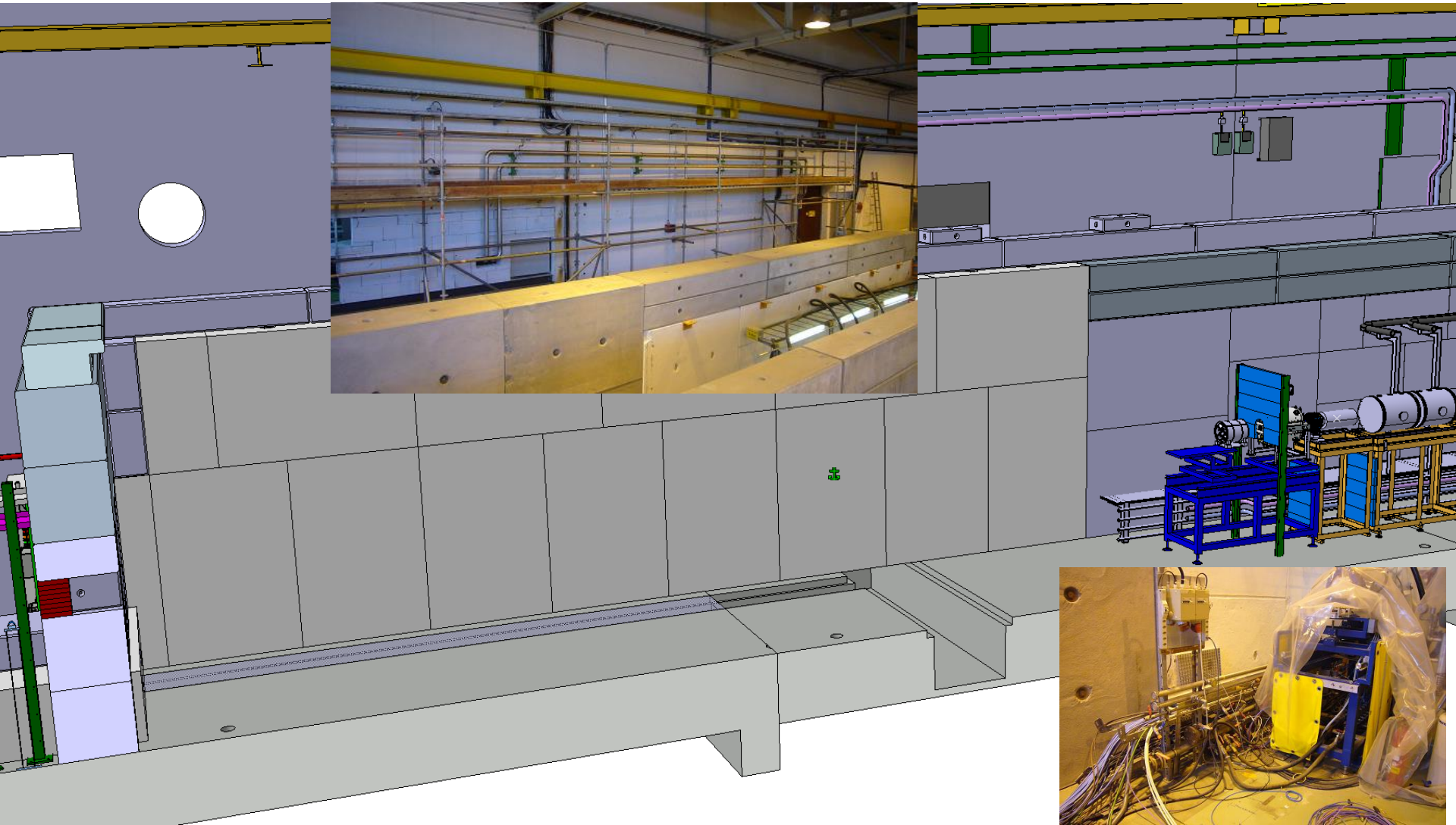
HEBT supports installed as of April

HEBT elements will arrive as of September: Prioritized installation:

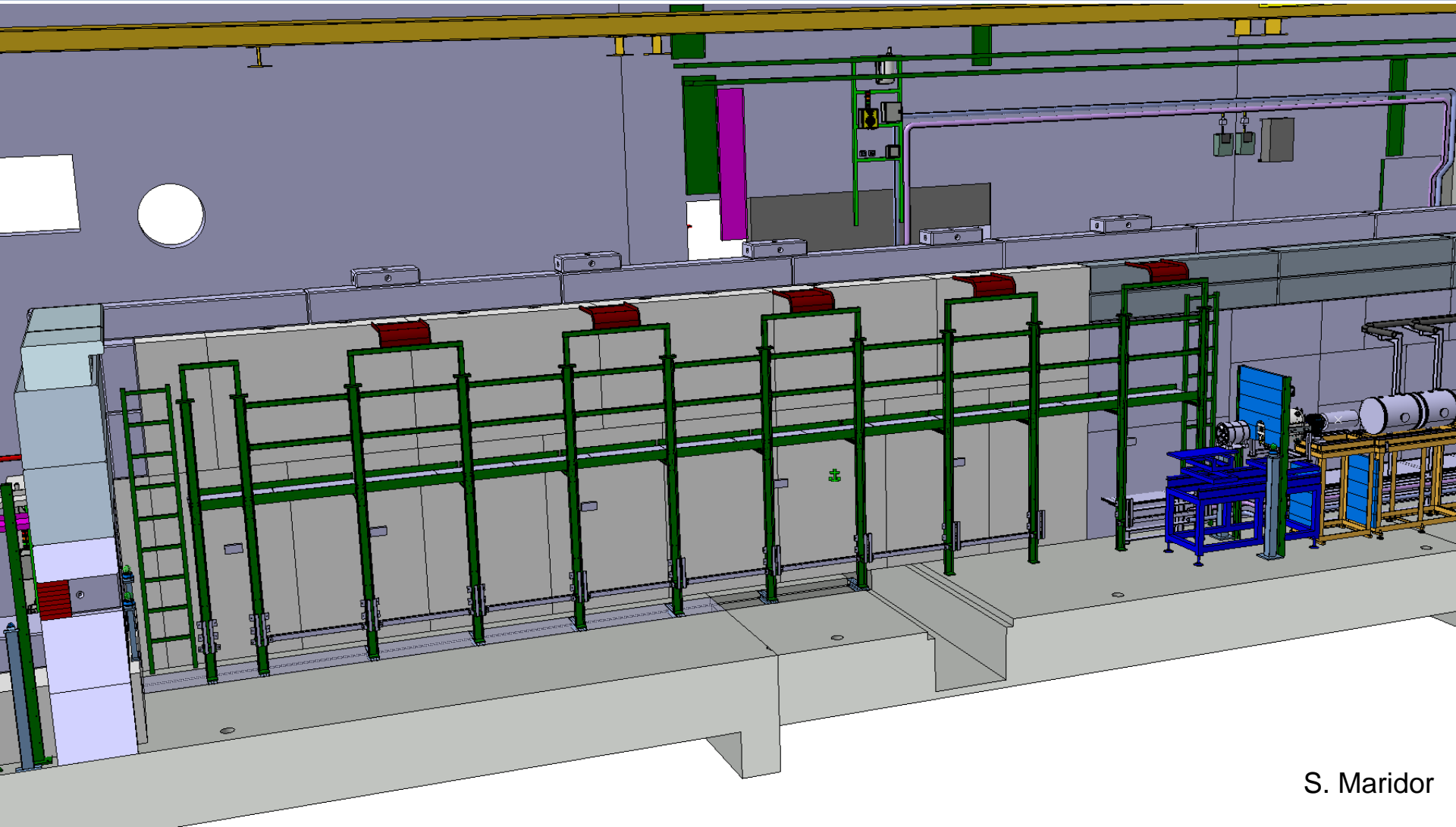
XT00/01 to be ready by mid-Feb 2015, XT02 by mid- April 2015



Civil engineering:
Shielding tunnel walls and door in place. Preparing for infrastructure inside the tunnel.

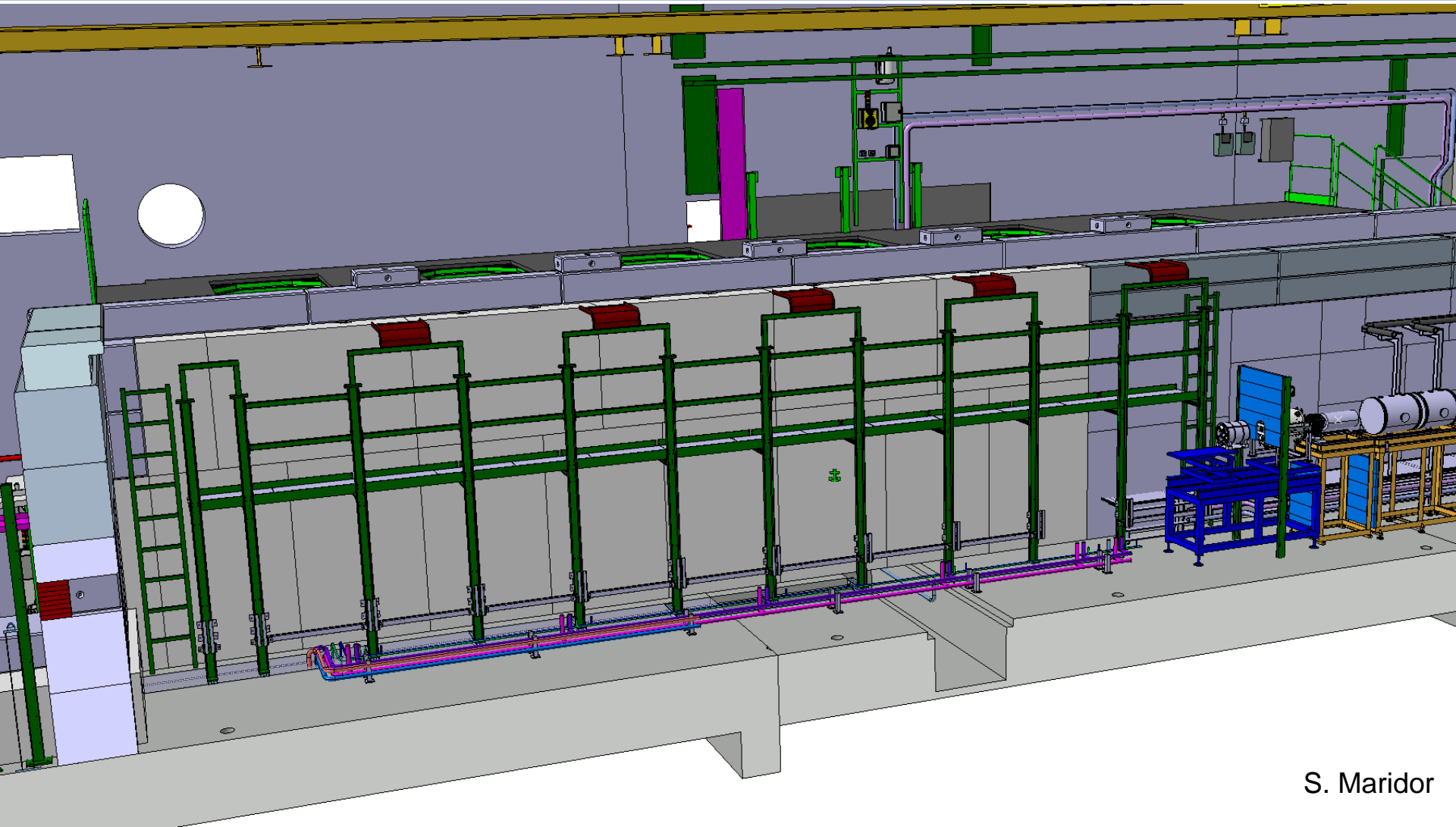


Preparations tunnel infrastructure ongoing



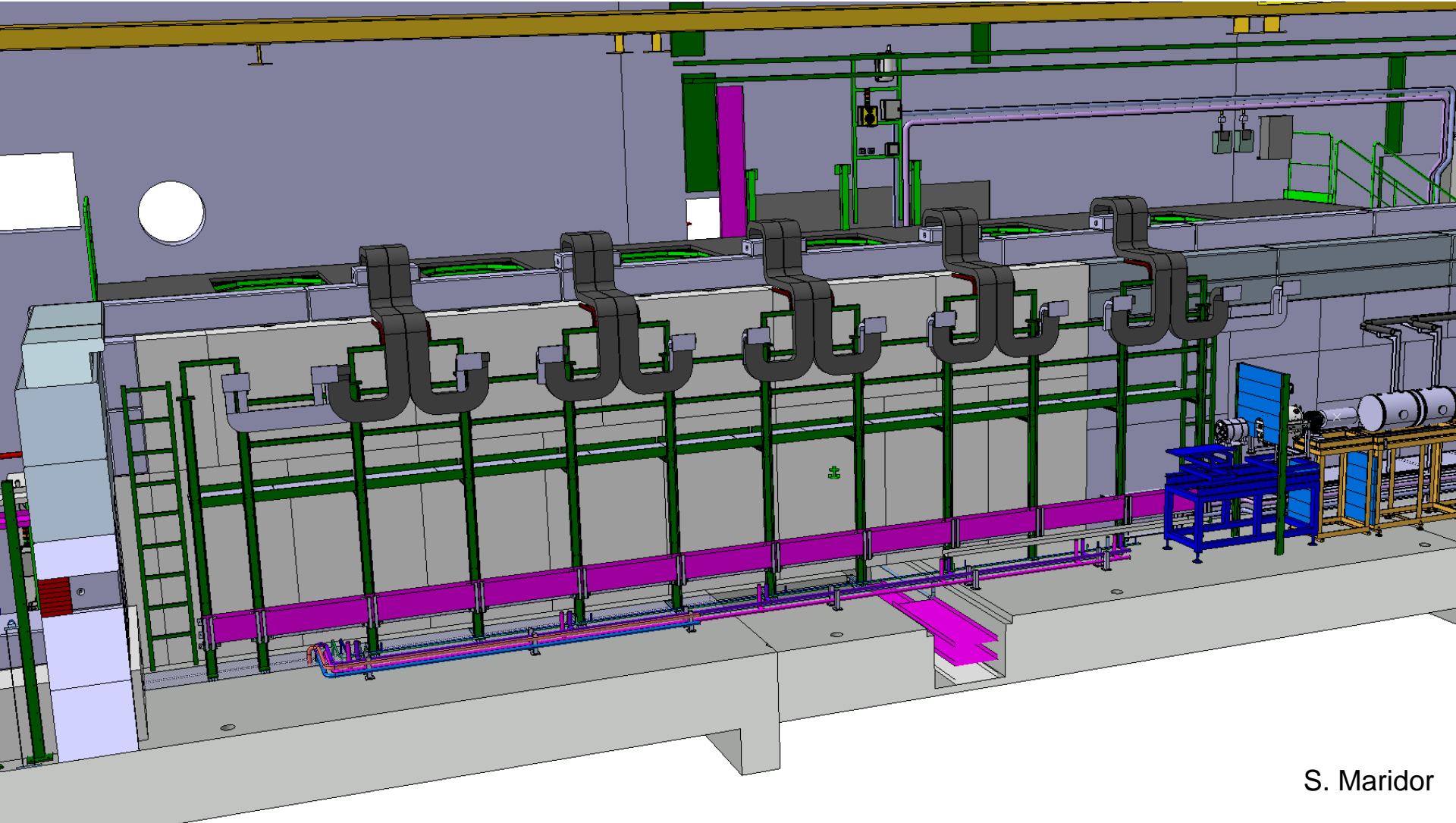
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Inside metal structure – starts as of end April



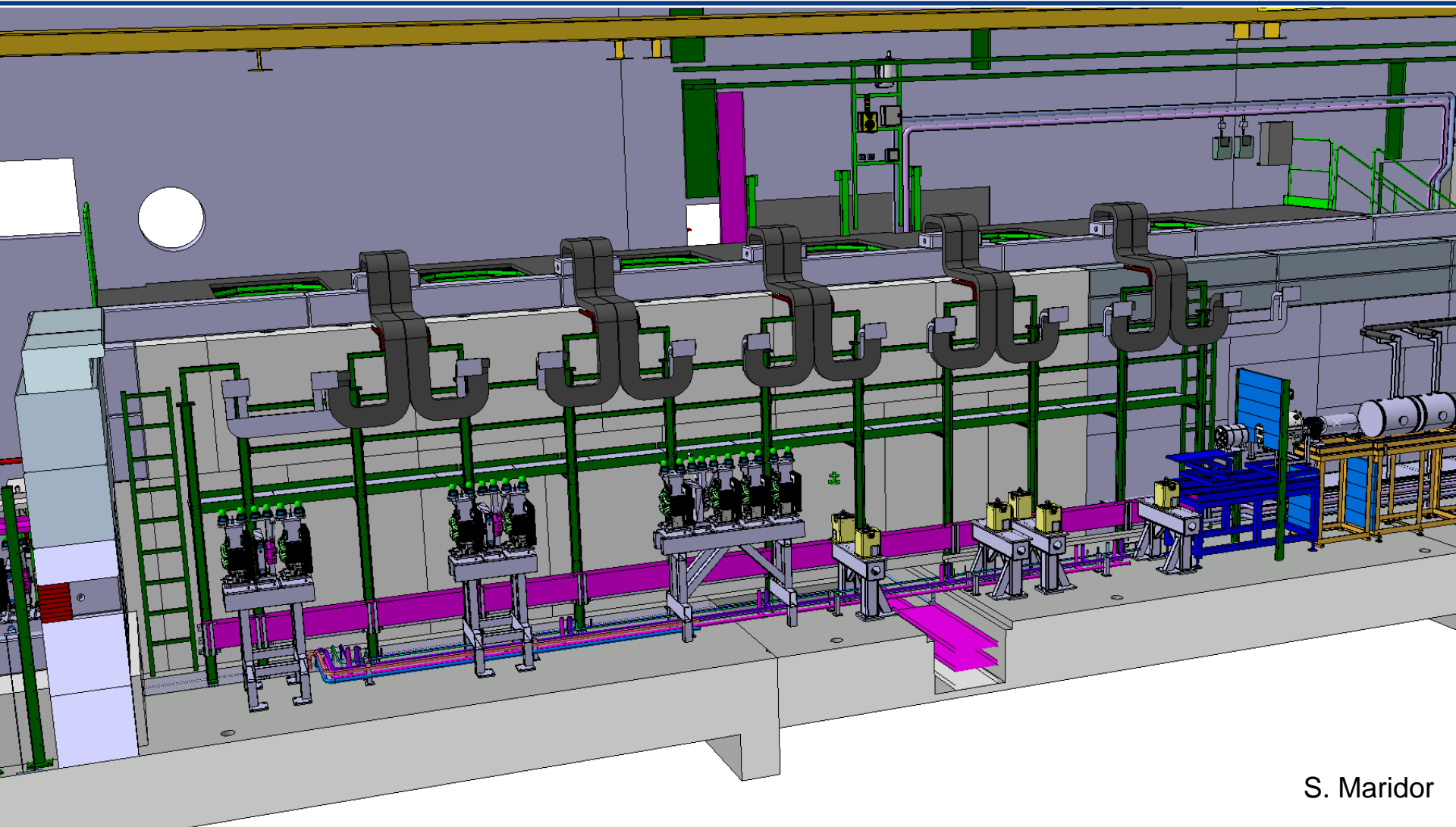
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Jumper boxes platform installation as of beginning May (3 wks)
 Vacuum and water infrastructure – May/June



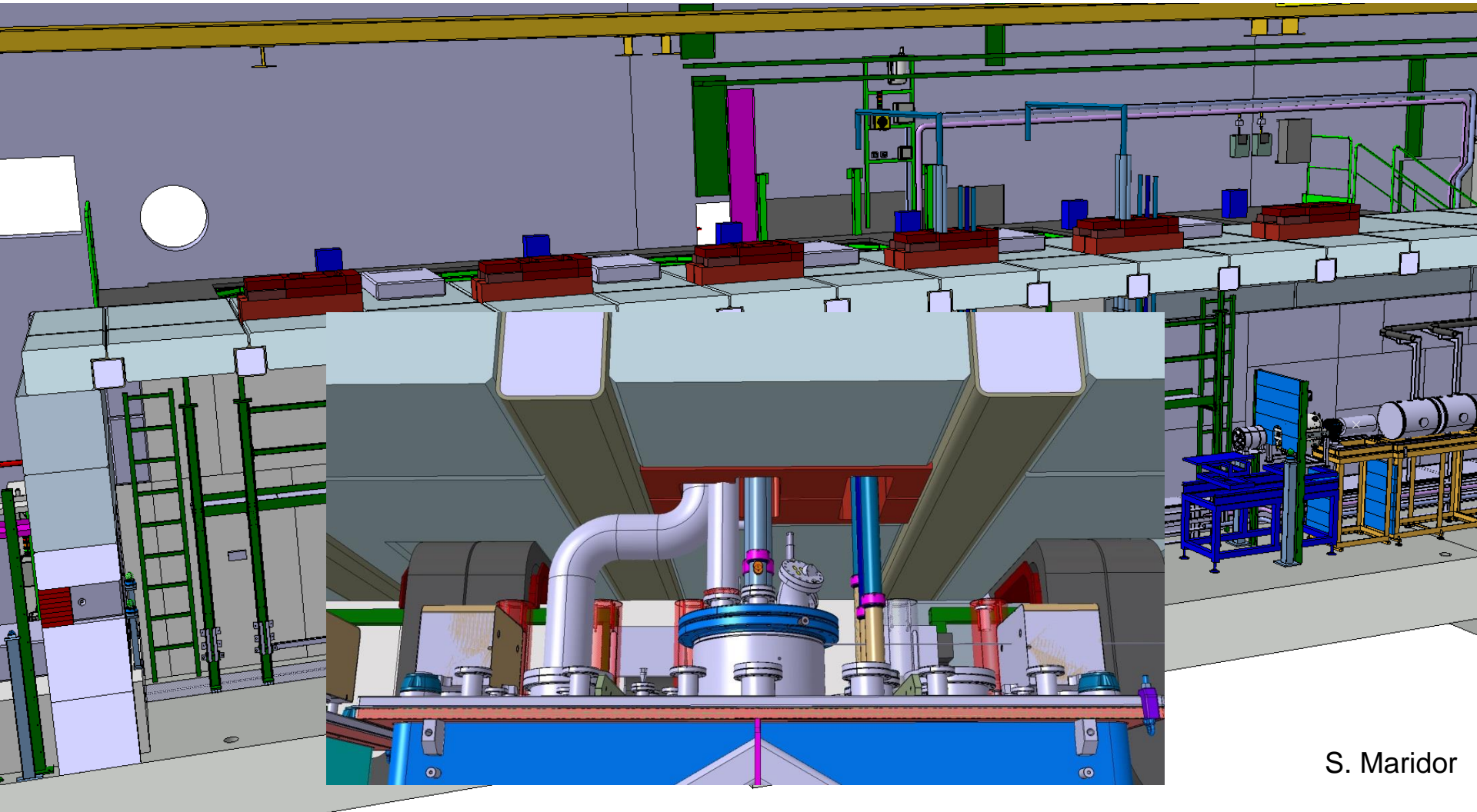
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Cable trays and cabling – May/July



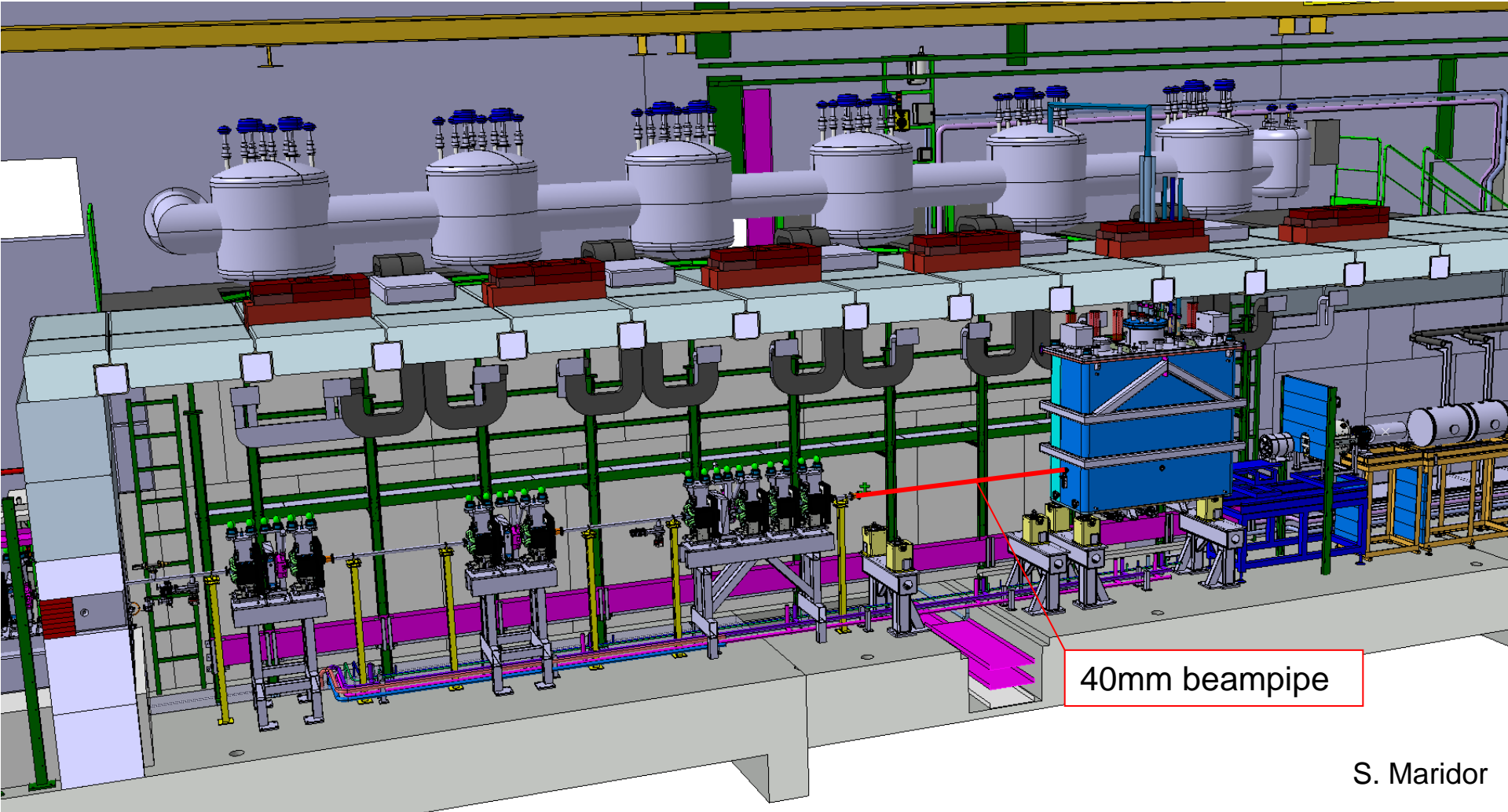
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Linac/HEBT supports in tunnel in place – by August
 Linac/HEBT Elements arriving as of September



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Tunnel concrete roof parts have been on hold awaiting a solution for the cryo modules He release from the top:
 Roof now validated & ordered, arrival May (fitting tests)



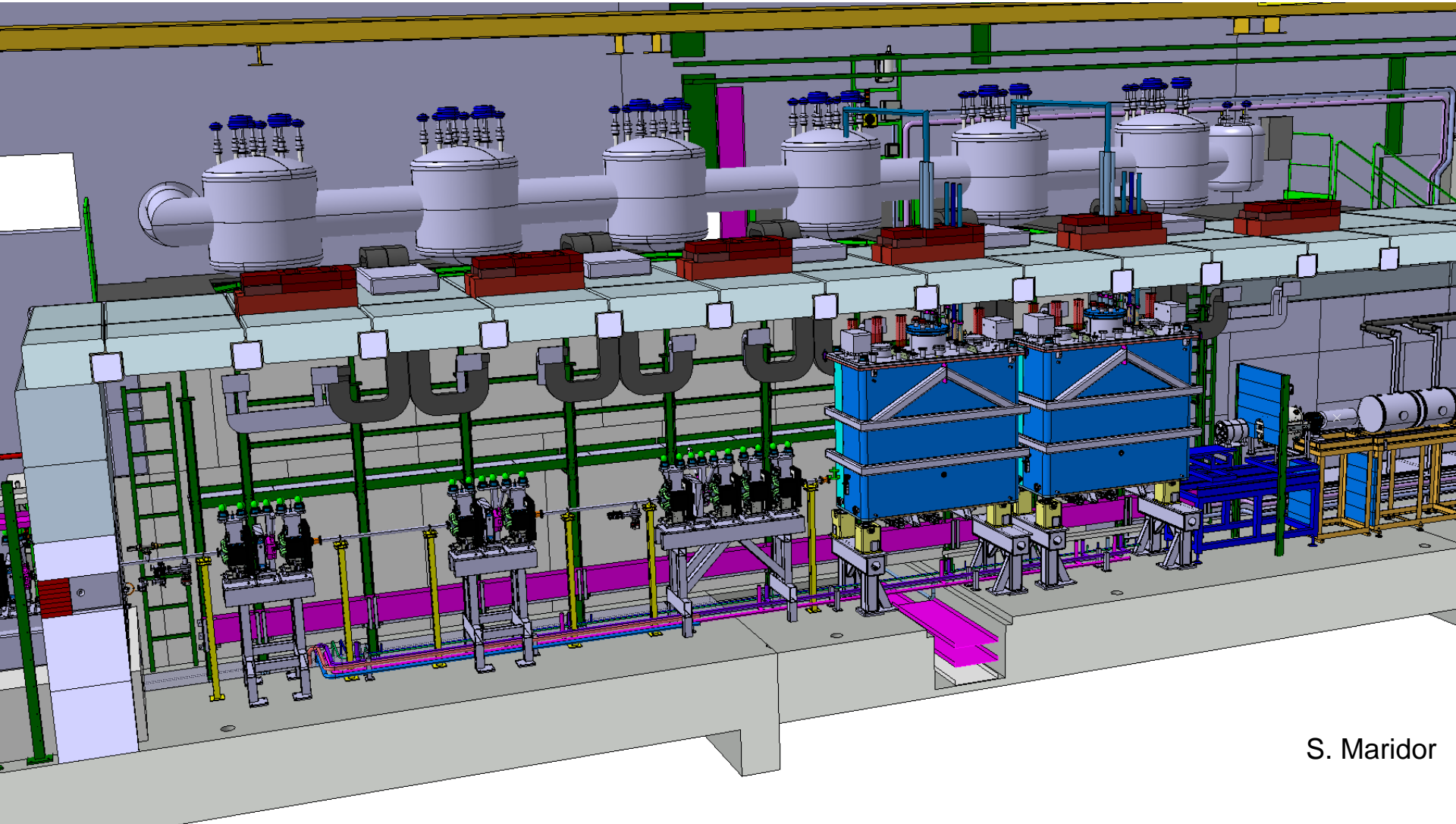
40mm beampipe

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Cryo Cold Line & Jumper Boxes installation: Sept 2014 – Jan 2015

Cryo Module 1 installation: April – June 2015

Scenario: Physics at $\sim 4\text{MeV/u}$ with 1 CM as of October 2015



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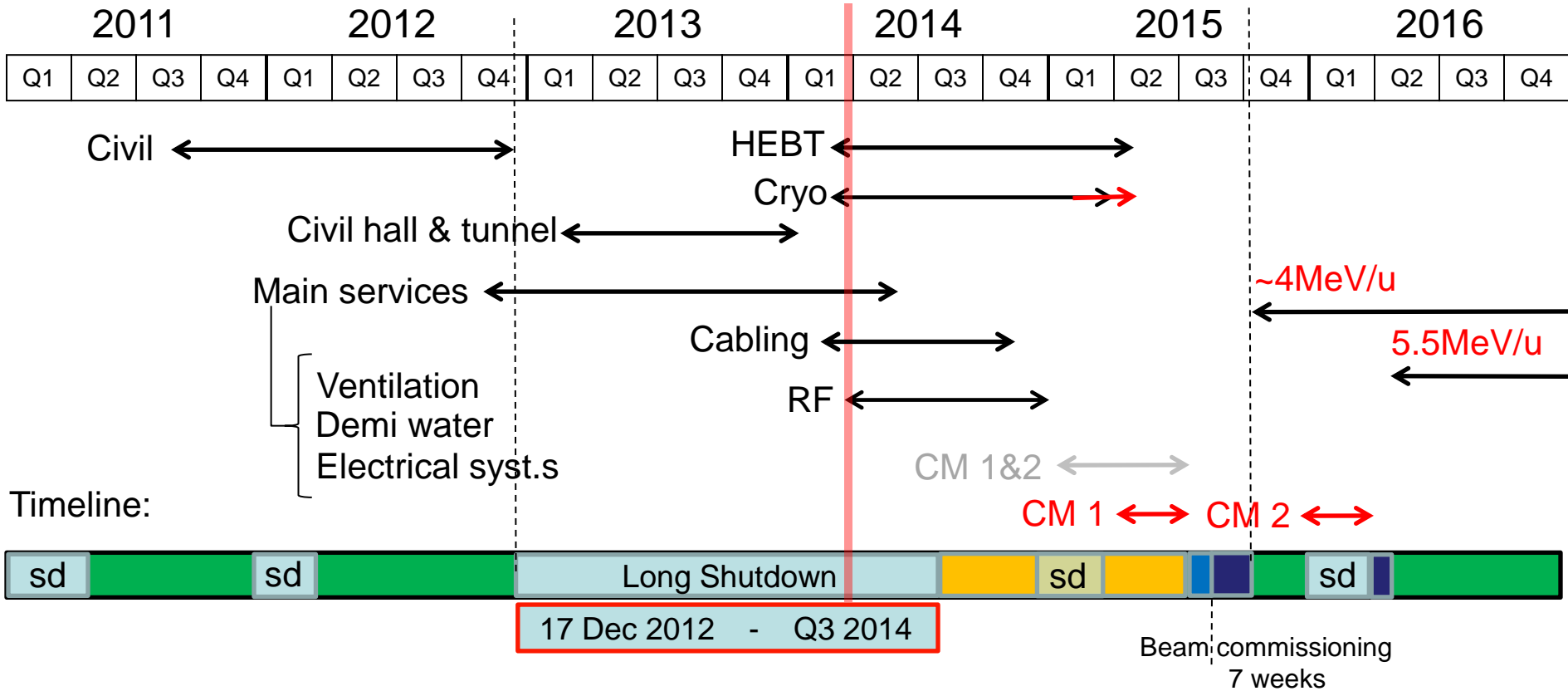
Cryo Module 2 installation: Shutdown 2015/16: Jan – March 2015
 Scenario: 2nd commissioning at 5.5Mev/u with 2 CM's as of May 2015

Start Isolde shutdown
17 dec 2012

We are here
March 2014

End LS1: Start
Low E physics
July 2014

HIE physics at
5.5MeV/u
October 2015



Timeline:

- shutdown
- Isolde Ops
- HIE installations and tests (Isolde normal operations)
- Machine Check-Out (Isolde normal operations)
- Beam Commissioning (Isolde normal operations)

Activities	Identified delay		building	Finishing date	Comment
Cooling & ventilation: Installation units and piping	4 months	Introduced by the contractor	198, 199, 170	May 2014	Water station ISOLDE 14 March ^{10 April} ready for Isolde Low Energy startup
Electrical systems: service buildings	2 months	Due to CV contractor delay	198,199	June 2014	No impact
Integration tunnel infrastructure	- Solved	Open actions on metal structure, vacuum and water piping routing, He shielding, CM supports	170	Aug 2014	No impact
Tunnel roof	1 month	On hold for CM top He release integration	170	May 2014	No impact
Metal Structures: rack platform	2 months	Due to LS1 load	170	March 2014	No impact
Metal Structures: jumper boxes platform	4 months Solved	Design needs finishing: Data missing from Cryo due to late Cryo Line procurement	170	May 2014	No impact
Civil Engineering: trench & tunnel	2 months	Unforeseen difficulties with trench cutting	170	Aug 2013	No impact
Cabling: trays and cables	4 months	Due to late modif rack platform + delay service buildings CV installations + late cable info diff groups	199, 170	Nov 2014	No impact
Cryogenics: Performance tests	1 month	Limited resources due to LHC LS1: Compressor & Cold Box installation taking 3 months longer	198, 199, 170	April 2015	margin 1.5 months

- **Status Report HIE Installation March 2014:**
 - **Progress since the last ISCC meeting in October**
Installation has continued according to plan and there is a steady progress in the construction of HIE ISOLDE
 - **What to expect for this year**
High activity in the hall and service buildings will continue
Challenge: Having ISOLDE low energy physics in parallel
 - **Have there been or are there any delays**
Yes. Indicated and installation planning has been adapted
 - **Are we on track with regard to the planning**
Yes, on track and the start of the ISOLDE low energy physics foreseen for 2014 will not be hampered by the HIE ISOLDE installation works

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