

n_TOF Report at the 64th Meeting of the INTC

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Outlook

Update for the main LS2 activities

- Horizontal beam line
- Target exchange
- New control room

Main n_TOF LS2 activities - ongoing

Old sweeping magnet



Before lock-down in March,
now it is on the final position ready to receive the new magnet

Main n_TOF LS2 activities - ongoing

New sweeping magnet

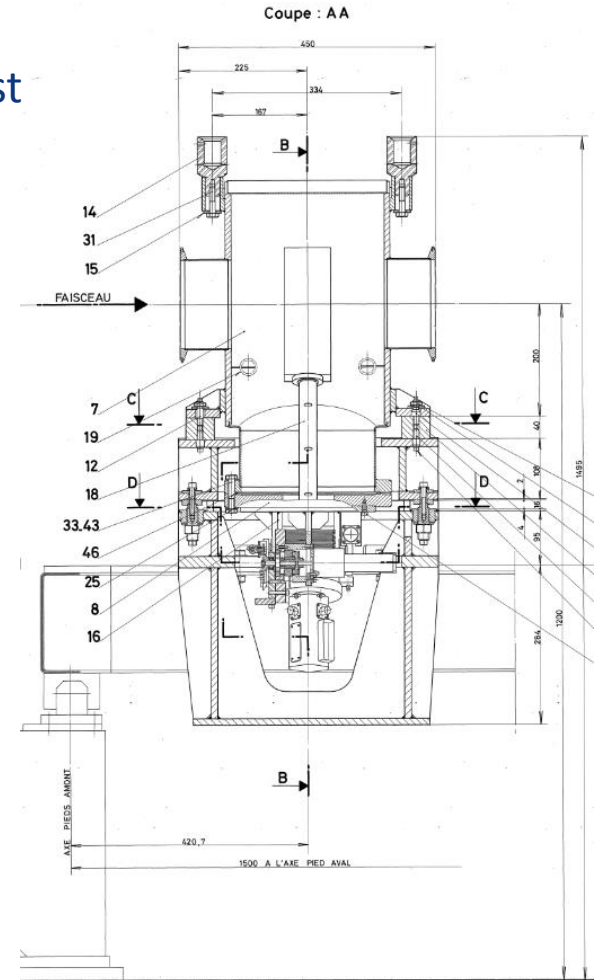
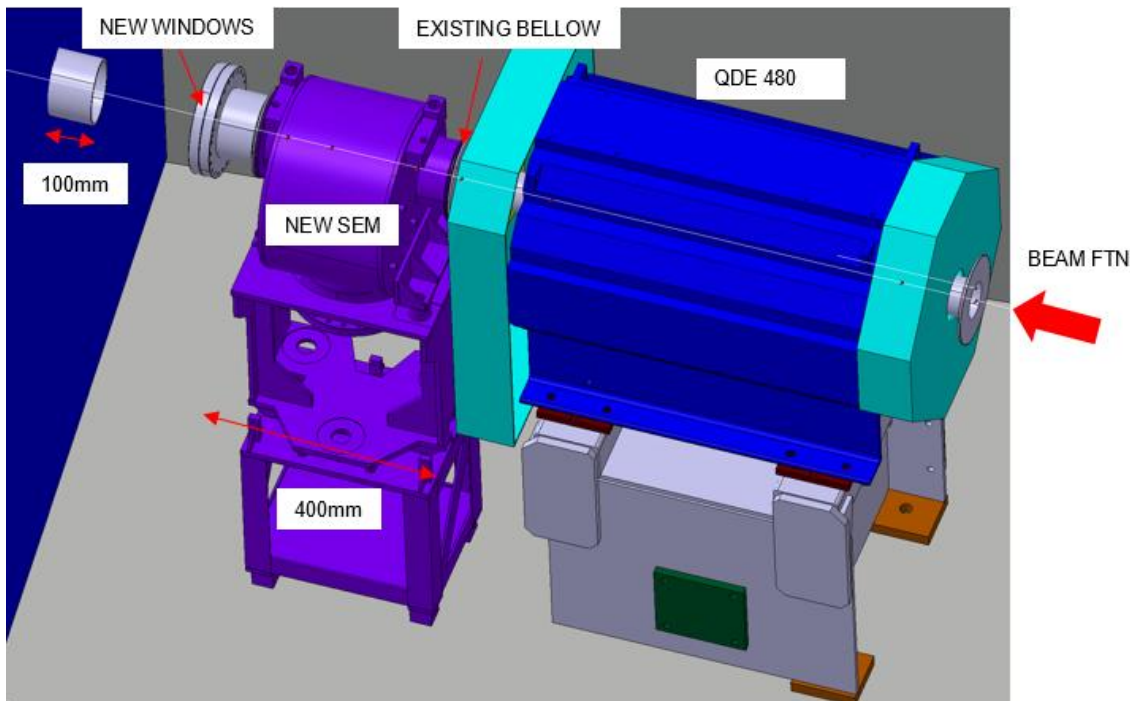
Cobalt-Samarium permanent magnet



Main n_TOF LS2 activities - ongoing

New SEM grid

Chassis installed,
Cables in place in July/August



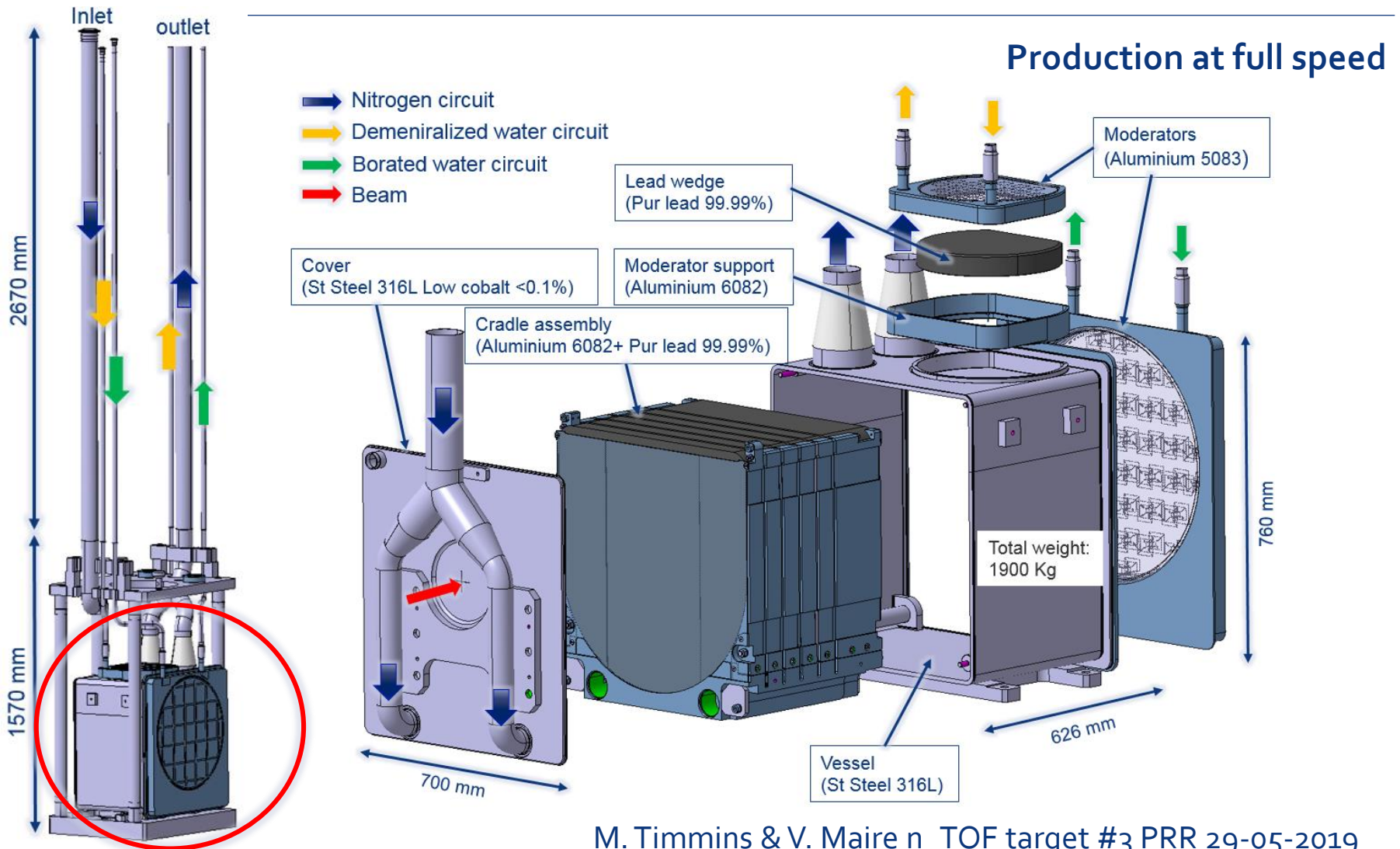
Tank installation in August, instrument in October

n_TOF spallation target #3

- Project well in the target construction phase, having passed a series of reviews during 2018 and 2019
- Going ahead with a sliced pure Pb target, cooled by N₂ flow at slightly above atmospheric pressure, ~800 m³/h
 - Dedicated neutron moderation circuits, with borated water and demineralized (light) water
- Matching the physics requirements of the n_TOF collaboration
- On good track for target installation during November/December 2020

n_TOF target #3

Mechanical design overview



n_TOF target #3

Cradle assembly

- Blank Assembly done
- Metrology ongoing
- Tooling for lifting & assembly finished

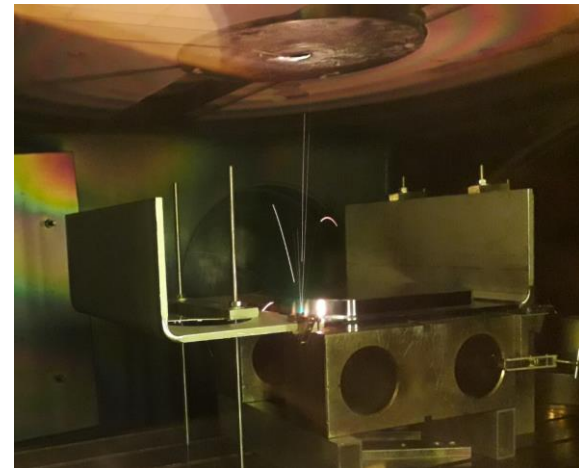
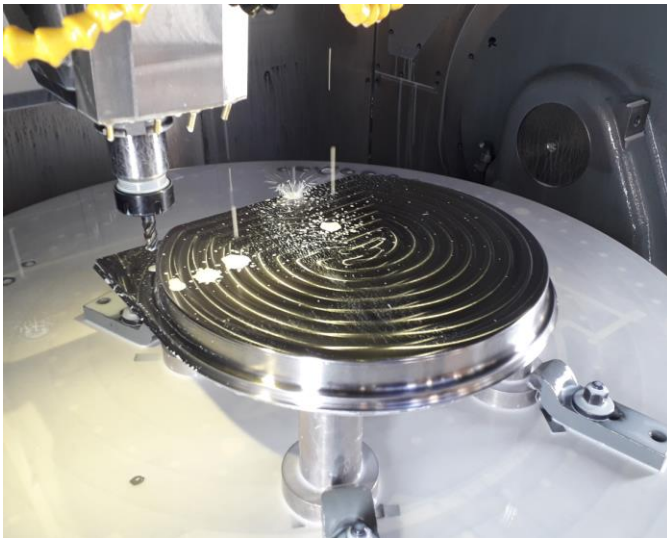


Courtesy T. Coiffet

n_TOF target #3

Vessel

- Upper part milling & EBW done
- RT ongoing
- Next Step: EBW lower part

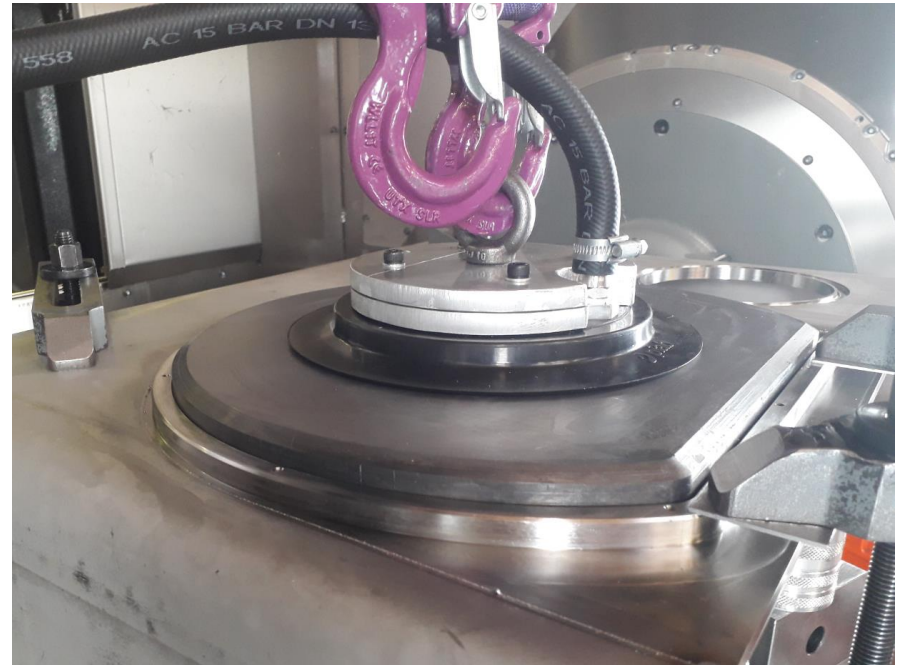


Courtesy
T. Coiffet

n_TOF target #3

Vessel

- Lead insertion test ok
- Milling the stainless-steel insert to adjust the gap



Courtesy T. Coiffet

Modification of the target side shielding

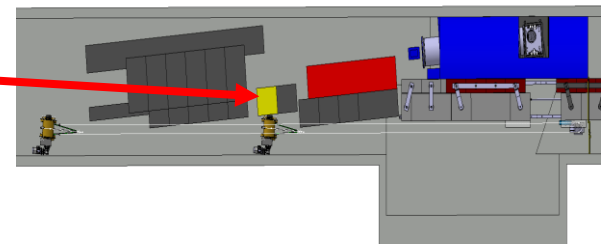
Shielding wall status



Modification of the target side shielding

Remaining actions

- Installation of 2 tow bars bellow the shielding -> 1/2 day
- Re-installation of pulley on the floor -> 1h
- Change of end stop position -> 1h
- Installation of drainage pipe -> 1h
- Installation of shielding plates in big hole and round bars -> 1/2 day
- Installation of remaining shielding bricks after target (~35) -> 1/2 day
- Test of opening -> 1/2 day

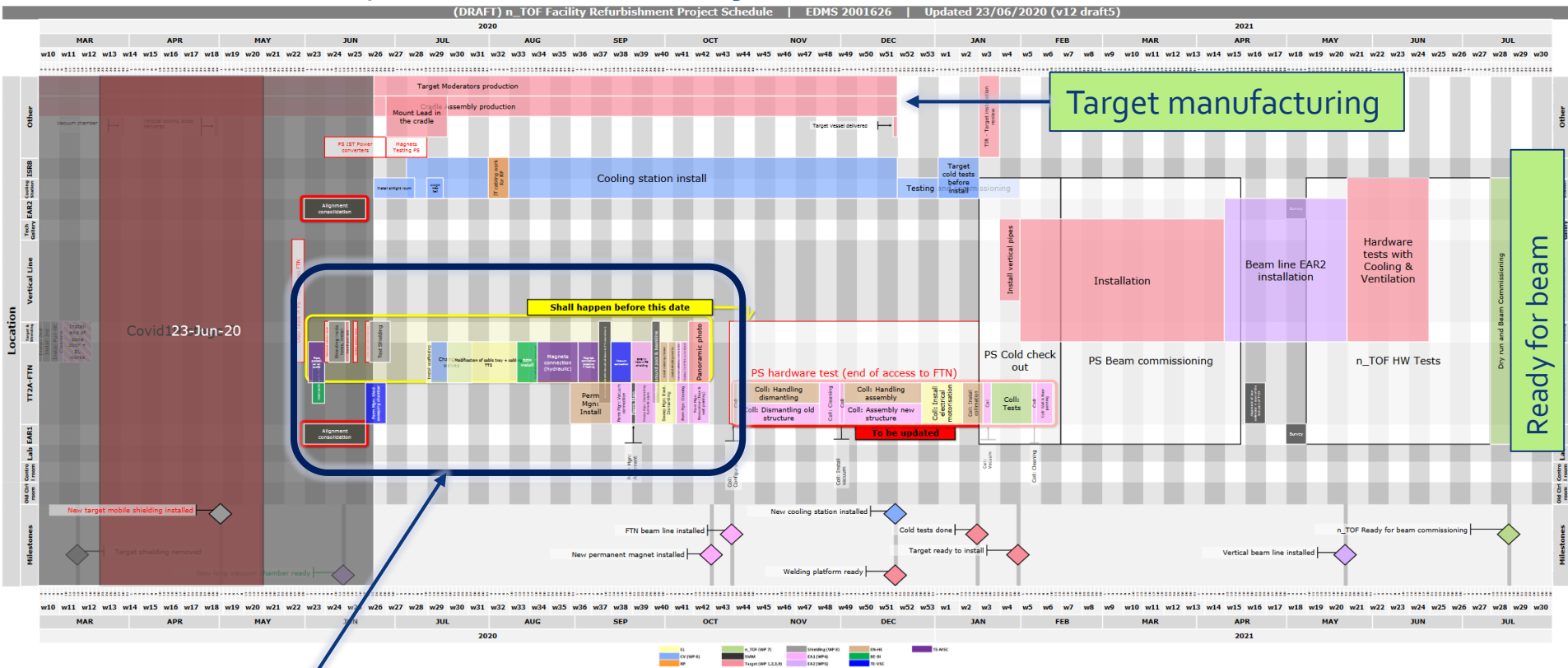


n_TOF Experiment LS2 Coordination Meeting

- Projects followed up until now:
 - Experimental Areas Preparation for the LS2 work. In particular,
 - remove all radioactive samples and sources to be stored by RP
 - Contamination control performed by RP confirms absence of contamination
 - Cabling campaign in EAR₁ (remove the old sweeping magnet cables, replace the detector cables in the rack/bunker area)
 - Implementation of the ASN-OFSP safety recommendations in EAR₂
 - Consolidation of the gas system in EAR₂, hardware installed
 - Consolidation of the alignment system
 - Upgrade of the n_TOF electronics laboratory and control room
 - DAQ upgrade
 - Consolidation and R&D program for detectors

Schedule and coordination

- n_TOF Facility Refurbishment Project Schedule: EDMS 2001626



FTN line completion until October

Summary

- Main activities for LS2 - Facility
 - Horizontal beam line modifications ongoing
 - Target production going well
 - New target shielding close to completion

- Restart after lock-down smooth and on track

Thank you Enrico!

Welcome Alberto



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Thank you