



**EUROPEAN
SPALLATION
SOURCE**



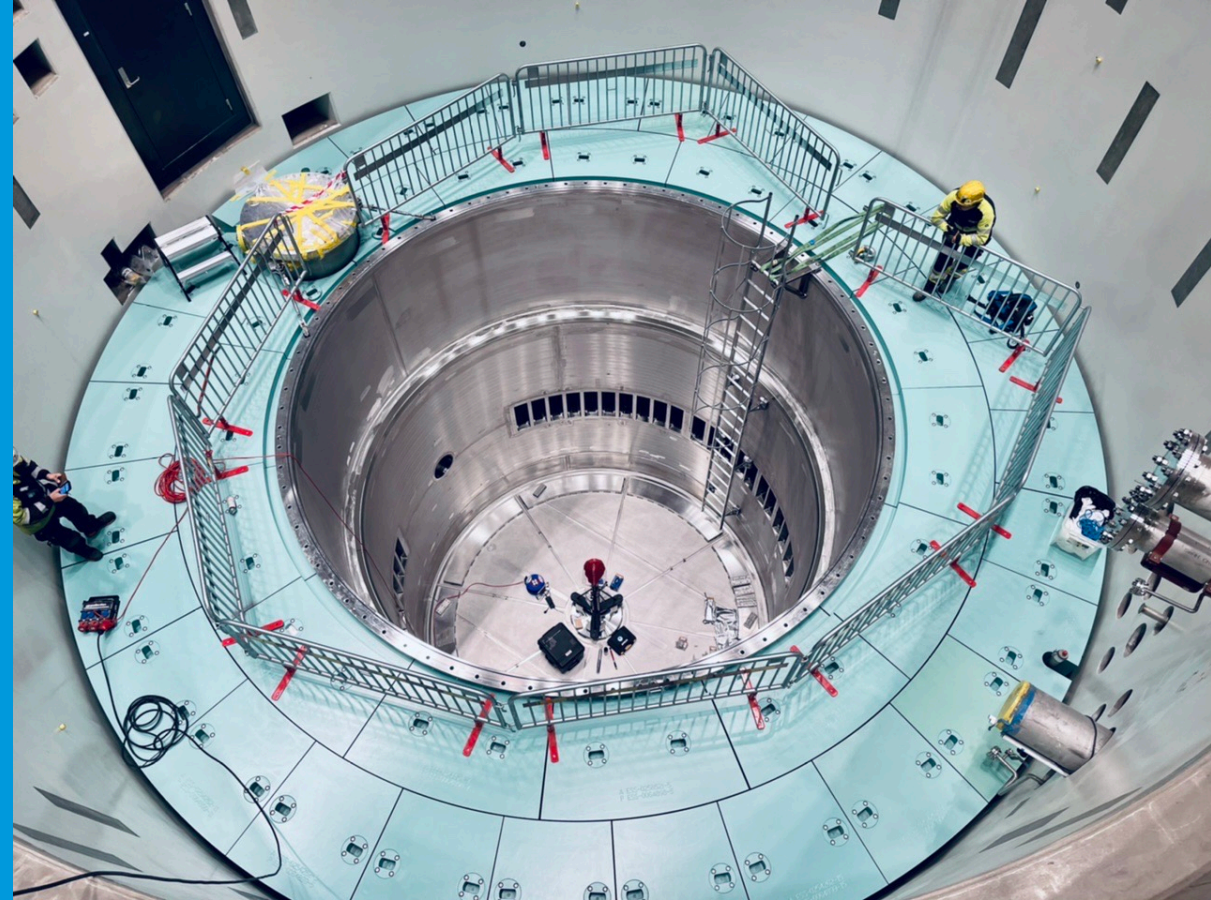
BrightnESS² Final General Assembly Meeting

HELMUT SCHOBER

13 June 2022

A few
achievements:

We continue to
role out the
project at a
sustained pace.



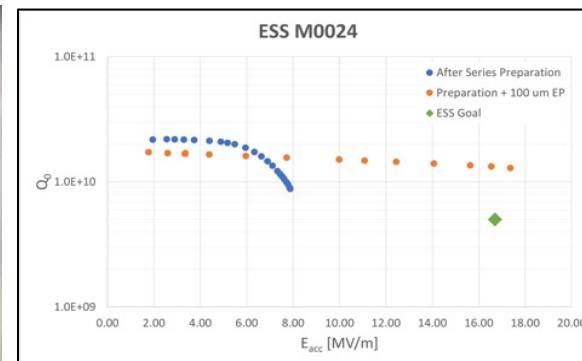
Accelerator



14 Cryomodules (spoke and elliptical) at ESS ready for installation



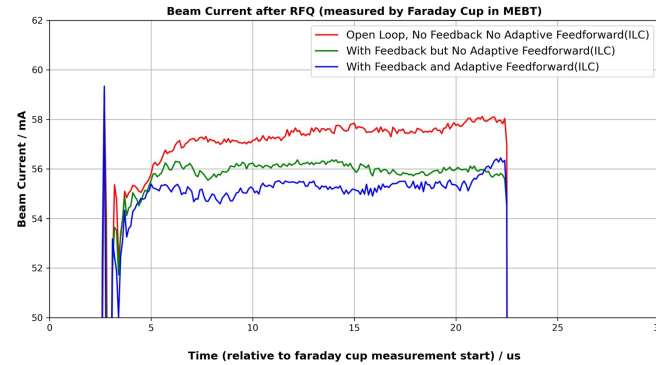
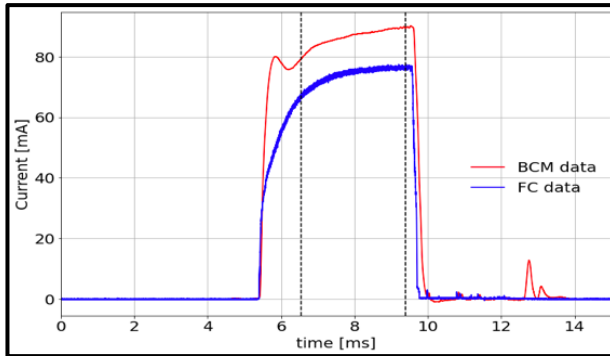
First failed medium beta cavity successfully recovered



Accelerator



RFQ conditioned and commissioned with beam



First DTL in the tunnel and conditioned



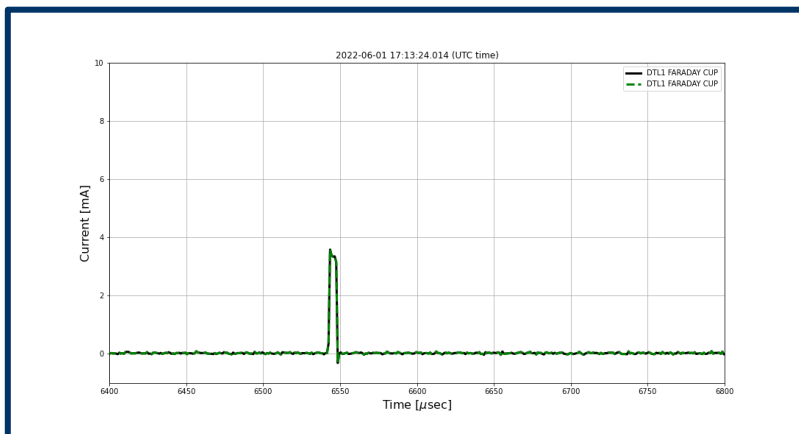
Transition to Operation with daily shifts in new control room



First Beam Through DTL1!

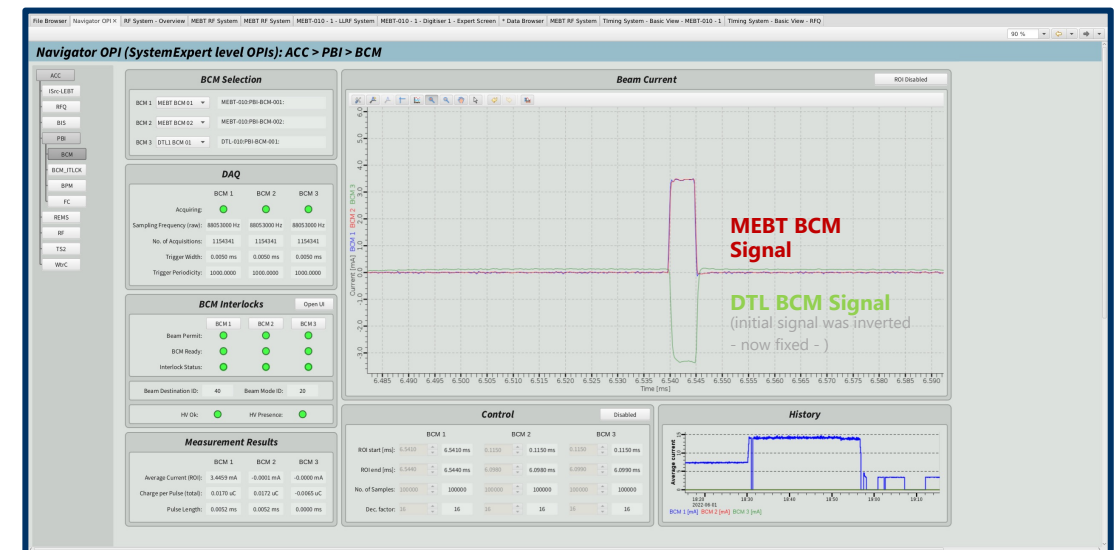
SRR2B Scope

- A pilot beam to **DTL1 FC** was established on **01 June 2022 - 3mA, 1Hz, 5us**.
- **Important milestone:** more than a decade of development, effort and close collaboration.
- Verification with beam of protection functions, sub-systems, optimisations, etc. to follow.



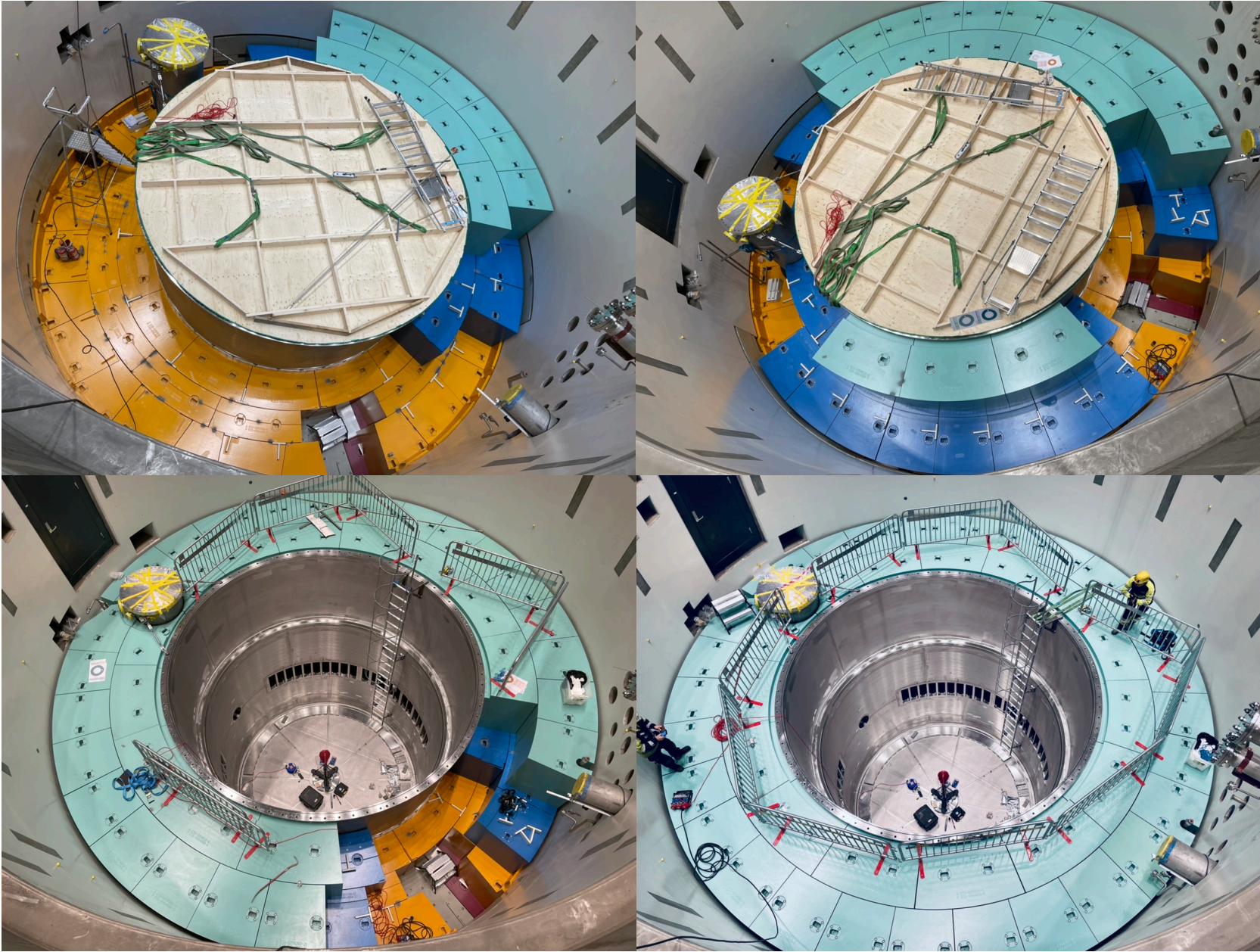
First beam observed on the DTL1 FC

ESS and INFN colleagues celebrating in the MCR



First beam observed on the DTL1 BCM

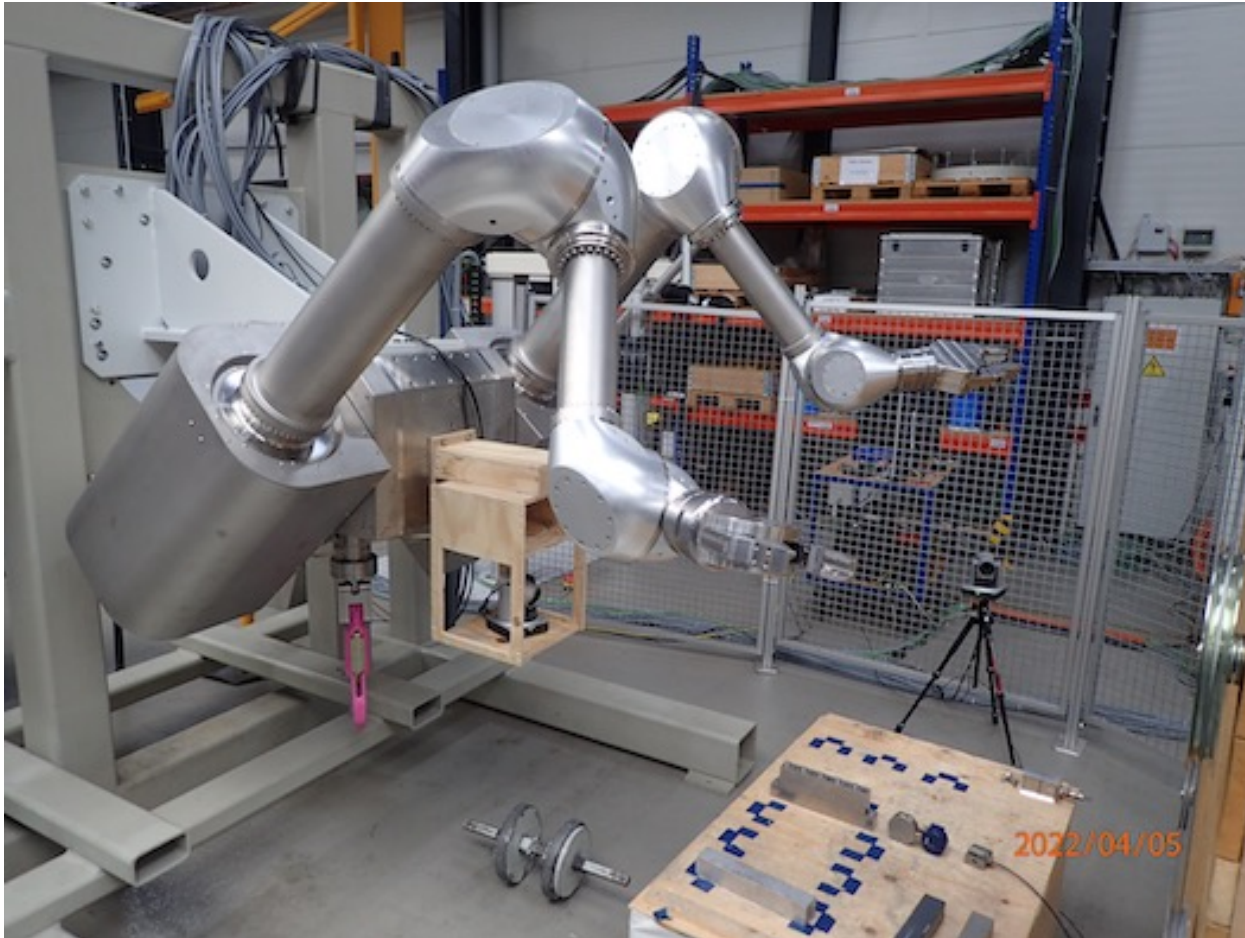
Target Monolith



All shielding outside the monolith vessel is in place. Roughly 1700 tonnes in the form of stacked cast iron blocks.

Remote Handling Systems

The factory acceptance tests for the two power manipulator arms for the Active Cells Facility was successfully completed.



The grapple crane for the Active Cells Facility was hoisted down into its rails in the Maintenance Cell. Functional commissioning of the crane is ongoing.

Key Target Systems

The factory acceptance tests of the moderator/reflector unit was completed successfully. This included flowing liquid nitrogen and water, as well as establishing the insulating vacuum jacket.



The Cryogenic Moderator System coldbox is now connected to the Cryogenic Transfer Lines as well as the Hydrogen Transfer Lines (HTL).



The HTL Valve Distribution Box installed just outside the monolith connection cell





ess



ESS
bilbao

A rare view of the Target Wheel disk from beneath

Neutron Scattering Systems



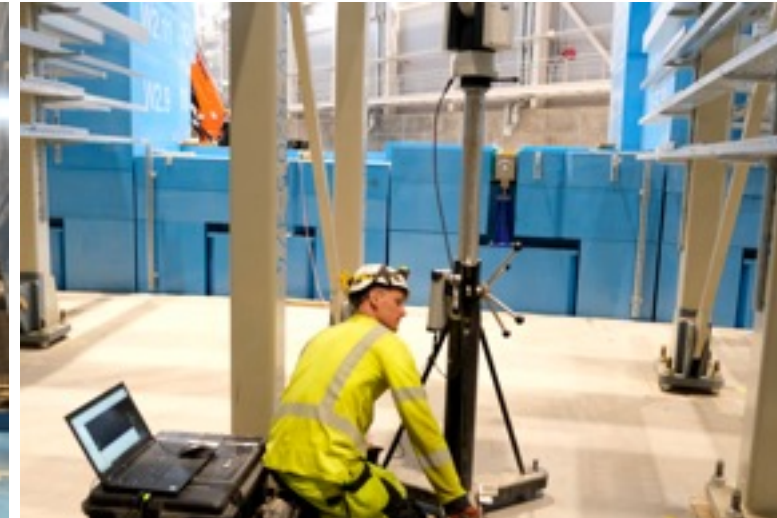
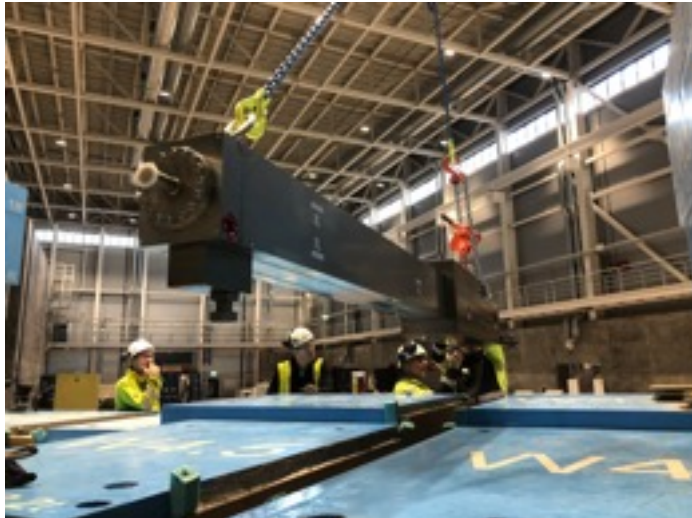
Guide installations started!

Bunker wall feedthroughs

- 1) Inserts successfully installed for LOKI, BIFROST, CSPEC, ODIN and NMX.
- 2) DREAM bunker wall sleeve installed (optics to be installed Q3)

First in-bunker guide installation, BIFROST, completed ODIN in-bunker guide installation to start in the next week.

The first three Neutron Beam Port Inserts (LOKI, ODIN and TBL) delivered to site end of May. Optics assembly started in the E01 integration tent.



Photos: BIFROST (in-bunker guide and bunker wall insert installation)

Neutron Scattering Systems

Collection of additional progress made on site



LOKI

vessel, shielding, hutch and platform to access cave installed



Choppers

Top: First chopper installed: LOKI

Bottom: Base structure for the BIFROST bandwidth chopper in place in E02



ODIN

Hutch completed, cave construction started, guide shielding on-going, guide installation to start

DREAM

Construction of DREAM instrument cave and hutch. Internal crane installed. Guide shielding ongoing



Reaching out to
our stakeholders





We create trust and excitement with our stakeholders

We receive a large number of high-level visits.

April 12:
Swedens Minister for
Education Anna Ekström



June 1:
Norway's Minister of
Research & Higher Education
Ola Borten Moe



We create trust and excitement with our stakeholders

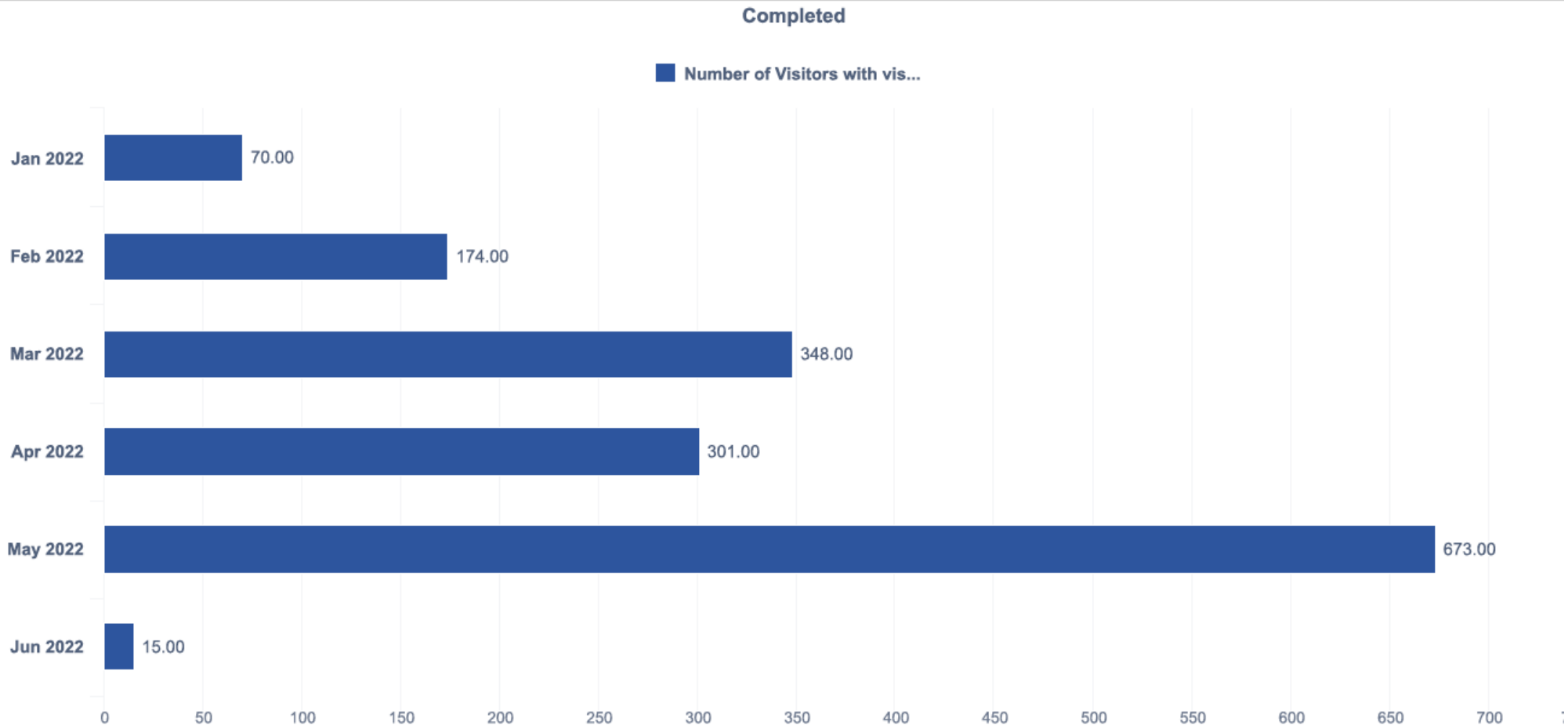
High interest from scientific community



We create trust and excitement with our stakeholders



January 1st – June 1st ESS received 1581 visits. (2019 ESS hosted 2054 visits)



We create trust and excitement with our stakeholders

Strengthening collaboration



May 25
STFC Management visit
to ESS
discussing collaboration

June 7-8
Institut Laue-Langevin (ILL)
Signing an extension of the
MoU

June 8
ESS - J-PARC
Signing a renewal of the
Memorandum of
Collaboration

Planned High-level Ceremony
planned at ESS in August



Photo: 2017 J-PARC Director and ESS
Council Chair at ceremony in Stockholm



*We thank you
for helping us achieving our goal*