Introduction & Update

Diffraction STAP Meeting – April 2020

PRESENTED BY ANDREW JACKSON

2020-04

Welcome!

- We are now on a regular schedule
  - 2 STAP meetings per year, synchronised with SAC meetings
  - Reporting to SAC meeting
  - Spring:
    - Short video meeting
    - Written reports sent to SAC
  - Autumn:
    - A longer physical meeting
    - Held during 3 days before SAC meeting
    - All instrument STAPs meet at the same time
    - STAP chairs to attend SAC meeting and present summary
    - Written reports follow

- Format of this meeting:
  - Focused on status updates and current hot topics

Purpose & Remit of Instrument STAPs

- Scientific and Technical Advisory Panels
  - one per instrument class
- STAP: instrument advisory body
  - science case and functional requirements
  - all aspects which impact on scientific output of instrument (not just instrument project)
  - technical and project decisions
  - early science
- Advice to both NSS management and instrument teams
  - collaborative & non-adversarial setting
  - NSS management & instrument teams take advice constructively
  - allows NSS management & instrument teams to make good, informed decisions
- Each STAP meeting results in written recommendations
  - followed up in subsequent meeting(s)
  - presented at following SAC meeting
  - SAC report includes highlights of STAP reports – presented to Council

ESS Update

Organisation

- Re-organisation completed:
  - Staff from Neutron Instruments Division in the Science Directorate have transferred to new Instrument Scientists Group within NSS Project Division in the Technical Directorate.
  - Chopper Group, Experimental Control & Data Curation Group, & Detector Group all moved from Science Directorate to NSS Project Division in the Technical Directorate alongside new Instrument Scientists Group.
  - NSS Project Division has also Technical Projects Group (engineering), and Planning and Coordination Group
- Andrew Jackson replaces Ken Andersen who has moved to SNS
  - Group Leader for Instrument Scientists Group
  - Also represents instrument scientists and instrument operations within the Science Management Team (SMT – the team of division heads within the Science Directorate)
  - At least 20% of instrument scientists time is still allocated to research, outreach and community development to ensure adequate preparation for early science and start of user operations.
- Lead Scientist for DREAM (Mikhail Feygenson) to join ESS staff in mid-2021
- Judith Houston (at ESS since 2018) now Lead Scientist for LoKI
- Daria Noferini joining ESS in May to work on CSPEC

ESS Update

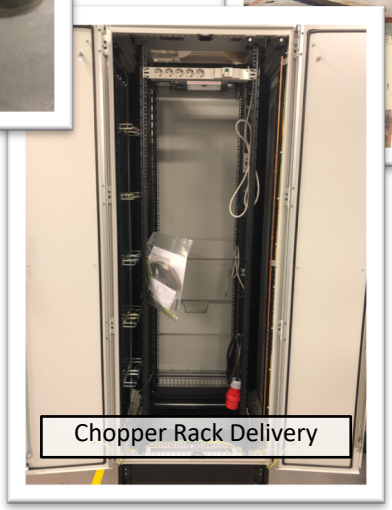
NSS Common Projects

- Bunker
  - R6 brackets being installed (supports for inner edge of bunker roof)
  - West wall being manufactured
- Common Shielding
  - Manufacture of shielding underway
  - First deliveries and installations
- Choppers
  - Agreements with instruments
  - First delivery of equipment for building racks
- Beam Monitors
  - Progress on development of V-foil monitors
  - Ongoing discussions with instrument teams


R6 brackets


CSPEC guide shielding base


Bunker West Wall sections

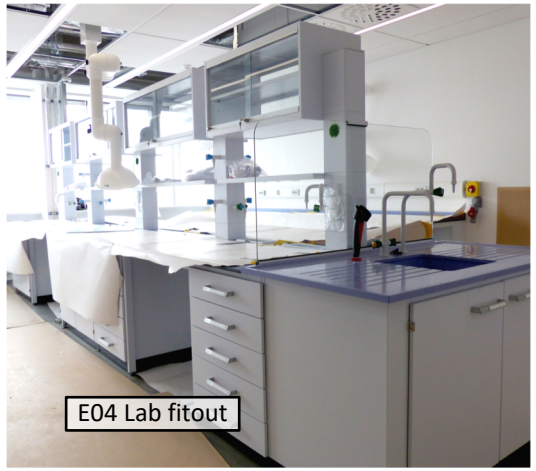

Chopper Rack Delivery

ESS Update

Construction and Installation Activities

- Buildings
  - D building structures are going up
  - D03 roof trusses on
  - D01 support wall frame erected
- Labs
  - Installation work on labs in E buildings has started. Successfully negotiated out of hours/unsocial hours work regime for supervisory staff to maximise work time of contractors. SAD team are on a rotation of supervision duties to cover the extended working day.
- Instruments
  - NMX : cave being installed
  - CSPEC : guide shielding base installed
  - BIFROST : control hutch installed


D03 frame & trusses


E04 Lab fitout


NMX Cave


BIFROST Hutch

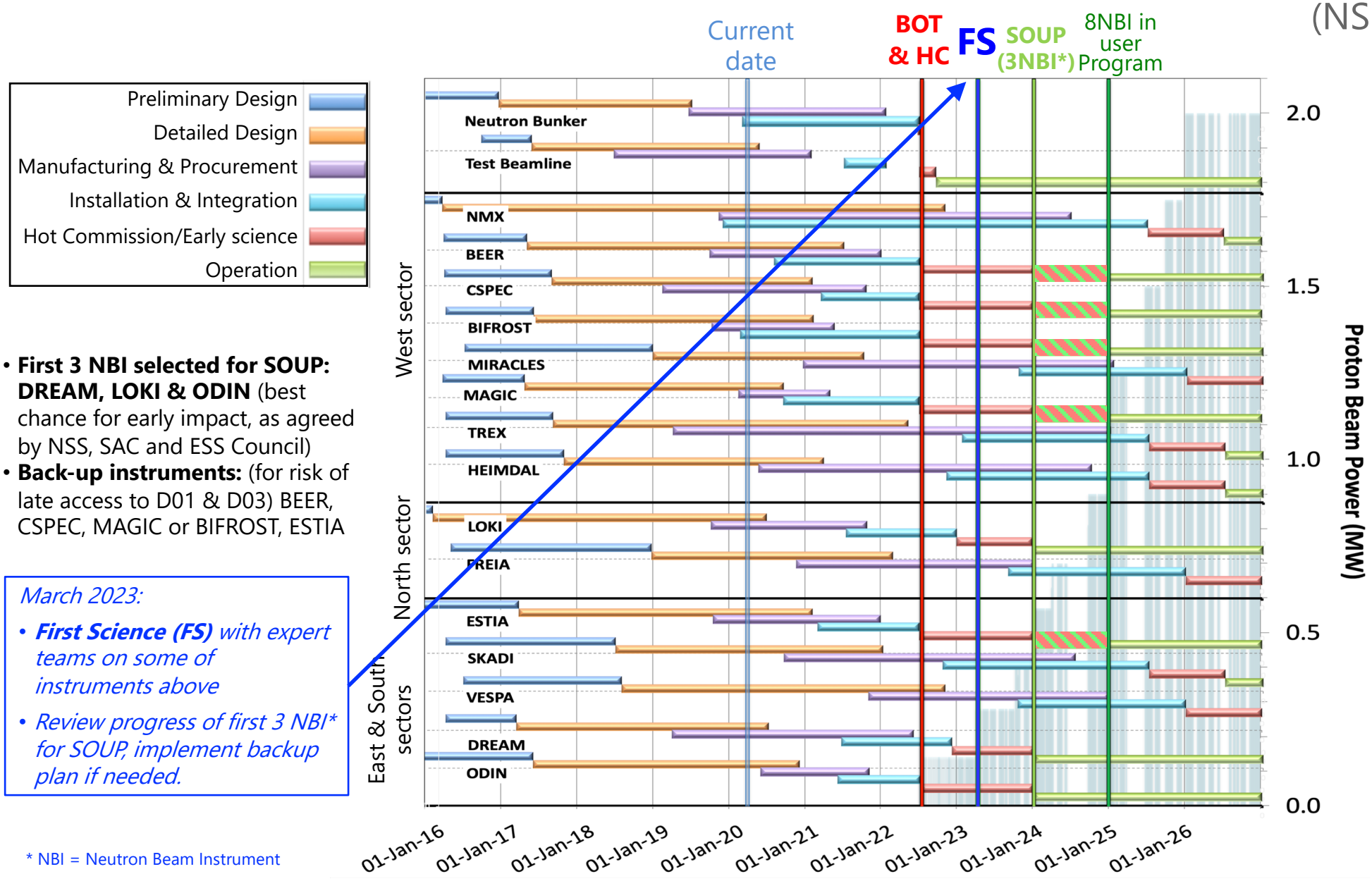
ESS Update

Coronavirus

- We have been on work-from-home since 19th March
- Sweden does not have severe lockdown, so some ESS activity on site is continuing e.g. NMX cave installation, Accelerator installation
- We are continuing to perform reviews (CTV, IDR, Tollgates) as most of these were by correspondence/video conference in any case.
- Partner countries do have more severe controls in place – this is the major challenge for the instrument projects.
- Skanska continue to work at ~80% level, so CF timeline is not going to be severely affected yet.
- Weekly updated tracking of impacts due to coronavirus is taking place. Of note so far:
  - Lab installation stopped due to installation team returning to UK
  - Engineering and procurement significantly slowed in France
  - Production of equipment (Monolith vessel, target wheel, instrument vacuum vessels) stopped in Spain
  - Production of beamport inserts will be delayed in Germany

Baseline schedule for Neutron Beam Instruments

(NSS MS V4.3)



- **First 3 NBI selected for SOUP: DREAM, LOKI & ODIN** (best chance for early impact, as agreed by NSS, SAC and ESS Council)
- **Back-up instruments:** (for risk of late access to D01 & D03) BEER, CSPEC, MAGIC or BIFROST, ESTIA

March 2023:

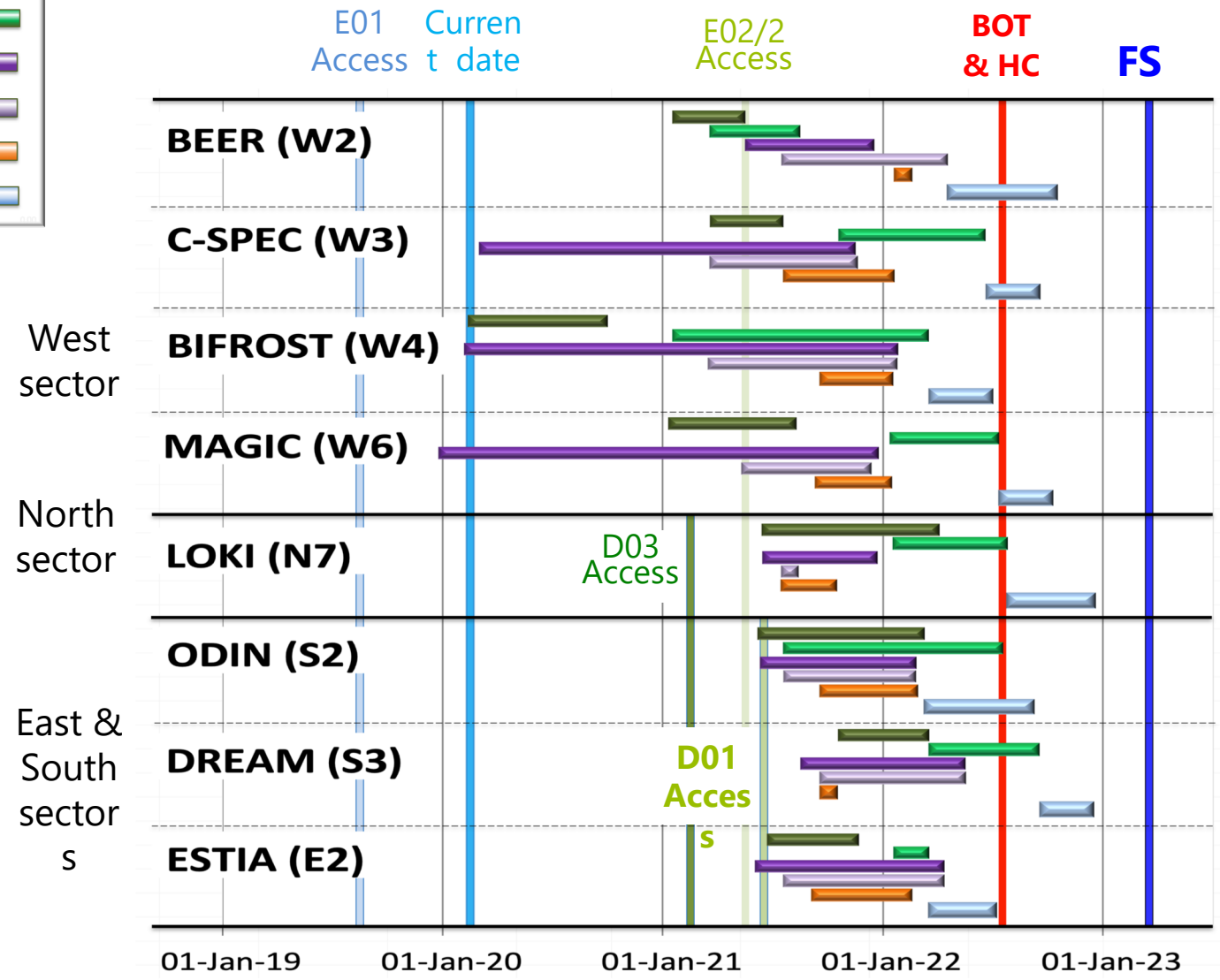
- ***First Science (FS)** with expert teams on some of instruments above*
- *Review progress of first 3 NBI* for SOUP, implement backup plan if needed.*

- ESS Major Milestones (BOT, FS, SOUP) have not changed since early 2018.
- NSS R-BOT currently has negative float of 8 weeks
- ESS is working to reduce this as far as possible
- Access to instrument areas is according to baseline.
  No delays foreseen.

* NBI = Neutron Beam Instrument

Detailed installation chart for first 8 instruments

(NSS MS V4.3)



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Charge for this meeting

- Instrument teams
  - Prepare status reports and present them
  - Identify hot topics and raise them
  - Provide feedback on actions
- NSS management
  - Organise the meeting
  - Inform of main developments since last meeting
  - Provide feedback on actions

- STAP
  - To what extent is the progress of the instrument projects consistent with the planned ESS timeline?
  - Comment on the ESS progress reports (Sample Environment, DMSC & Polarisation) in the context of the Diffraction instruments.
  - Provide advice on early science plans for the instruments if appropriate.
  - No need to consider effects of coronavirus on procurement and manufacturing – look at whether the instrument teams are ready to go when they can.

Thank you!

Aerial View of D01/D02/D03 February 14th 2020
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