

STAP CHARGE – 27+28 April 2021 –version 07 April 2021

In view of ESS current challenges and in view of our path towards hot commissioning and first science during the persisting Covid-19 pandemic, the STAPs are invited to comment and to provide advice on both common topics, and those specific to Samples & Users and Sample Environment.

Advice/comments are welcome on Common Topics for both STAPS:

- Our progress towards completion of construction project “science support systems”, including remaining in-kind deliveries and commissioning activities.
- How to build a line organisation with capabilities to tackle the operational challenges?
- How do we balance construction deliverables with operational activities towards hot commissioning and first science throughout the Covid-19 pandemic?

Advice/comments from STAP on Samples and Users:

- Comment on our implementation of available functionalities of the user office software: proposal submission and evaluation.
- Advice on priorities for adding further functionalities to the user office software and integrating it to other ESS software tools (e.g. sample shipping, scheduling, visit management).
- Comment on our approach and initial findings in preparing for industrial users including costing for proprietary research – supported by the BrightnESS2 grant.
- Advice on how to stay active in method development for deuteration and crystallisation to meet the needs for First Science and the User Program,
- Considering funding and timeline constraints how do we maintain credibility in keeping current users & collaborators engaged and interested in DEMAX/ESS.
- If and how do we issue additional pilot sub-calls for deuteration services to keep momentum and develop? Should we aim at specific types of support and/or molecules, especially considering the current schedule towards hot commissioning and first science?
- How do we balance DEMAX core business with all the orthogonal tasks going on at ESS with very limited staff?.
- SULF status: Is the progress of the on-site user labs installations and the sample handling/sample management on track for first science? Is the staffing sufficient for the next three years?
- SULF instruments/equipment: How to best equip the user labs in the next three years to cover a broad range of science with a limited budget and in view of the upcoming neutron scattering instruments.
- SULF support of ESS project: What is useful for ESS? How do we balance the work load with limited staff? How does SULF benefit from ESS-internal collaborations? What are the advantages of providing service vs. providing training?
- SULF work balance: How do we keep the scope of the user labs to the core business, i.e. how do we avoid being drawn into too many directions with limited resources? When should we wait on other teams at ESS to solve the pending issues vs. solving the issue ourselves?

Advice/comments from STAP on Sample Environment:

- Our progress on - and prioritisation - of individual sample environment systems (in-house and in-kind) for the initial instrument suite to support hot commissioning and first science.
- Advice on prioritisation of 'Day 1' sample environment systems and the proposed strategy for its integration in view of schedule and available resources to support hot commissioning and first science on instruments #1-15.
- Advise on the need for helium recovery infrastructure: there are high up-front costs but save money and is more sustainable over the long term. Please evaluate the importance of this infrastructure particularly in the light of experience at STAP's own facilities.
- Comment on ways of working related to sample environment system integration, especially in view of 'best practice' at the STAPs facilities and from a user perspective.
- Advise on magnetic force measurement: Is the approach of a specially designed device for force measurement proportionate to the risk mitigation achieved? Or would an ad-hoc solution (ropes and force gauges) be more appropriate?
- Comment on the pumping cart project .
- Advice on how operational support should look like: setting up experiment, user support on mounting and sample handling at the equipment. What should be the roles of the user, the instrument team and / or the sample environment support team?
- Current constraints on budget and resources are driving the focus on a subset of identified, near-term priorities. How do we retain balanced investment (both in equipment and expertise) in equally important, but longer-term, priorities?