TEFI STAP report

ATH 20/04/2020

Achievements

- The first technical annex for French in-kind contribution to Temperature and Field sample environment has been approved by the In Kind Review Committee. This covers the 8T wide aperture diffraction cryomagnet and associated ultra-low temperature equipment, along with a warm bore cryomagnet.
- The call for tender review for the 8T cryomagnet has been carried out, with help from ESS stakeholders, and internal and external experts, including STAP member Marek Bartkowiak.
- TEFI has participated in the DREAM cryocooler tender review process.
- The design of the helium recovery system has started, led by the infrastructure group, with input from NSS and cryogenics.
- ESS has joined a helium management cooperation agreement with HZB, ILL and STFC giving us access to their sophisticated helium management hardware and software.
- Outfitting of the E03 sample environment workshops has begun (or was just about to begin before COVID19), starting with the 100 level.
- Orange cryostat integration is progressing, with work started on the cold valve, and sample stick for the Huginn sub-cryostat.
- VM1B, the HZB 15T magnet is being prepared for transport to ESS. TEFI technician Richard Ammer was present for its final cooldown at HZB. Travel restrictions due to the COVID19 situation have prevented the final preparations.
- ATH attended experiments at D33, ILL.
- Purchased Ferromaster permeability meter for testing magnetic properties of materials.

Challenges

- COVID19 has delayed outfitting of workshop spaces, and prevented us from travelling to HZB to assist with dismantling and packing of the 15T cryomagnet, which increases the risk when putting it back together.
- In-kind procurement capacity at LLB is limited, and competes with instrument procurements.
- Helium recovery system has many stakeholders dispersed over almost entire ESS. The situation has improved with recent involvement of the infrastructure group.

Figure 1 Huginn vacuum can for VTI sample stick

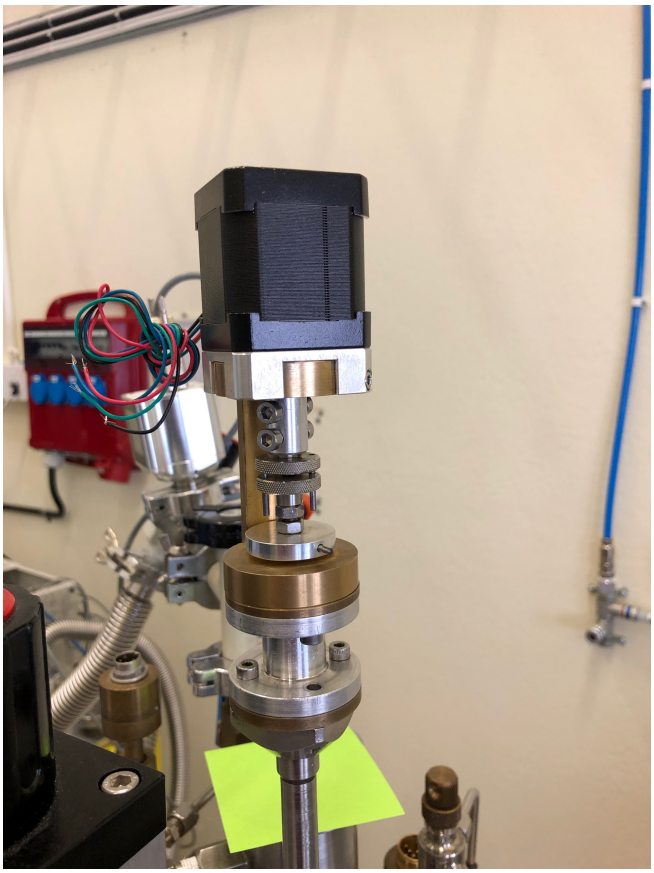

Figure 2 Cold valve adapted to ESS supported stepper motor