Scientific and Technical Advisory Panel (STAP) Report for BEER and ODIN April 20, 2021

Panel Members:
Sven Vogel (Chair), LANSCE
Javier Santisteban, CNEA
Francesco Grazzi, CNR
Stephen Hall, Lund University
Nikolay Kardjilov, HZB

(it was announced that Mark Daymond, Queens University, Canada, joined the STAP to replace Luise Theil-Kuhn)

Zoom meeting with all five STAP members and representatives of ESS, Hereon & NPI, TUM & PSI participating

BEER: Crisis averted, back on track

- All contract issues resolved for both NPI and Hereon
- Premek discussed with Gleeble how machine can be run in diffraction instrument, discussed installation on synchrotron beam line in Brazil, Gleeble is adapting their design to neutron and X-ray in situ diffraction
- Hiring of dedicated engineer eminent once contracts are in place
- Hereon (formerly Hereon) team can start working on BEER again in August
  - Detector development slowed down by pandemic
  - Detector project extended to summer to allow continuation
- Re-baseline of entire ESS project, in particular for bunker schedule, awill allow space to adapt BEER schedule
- Summary: BEER project on track again, if no other issues arise BEER will remain on track to be part of the first eight instruments as planned.

ODIN: On track

- Most sub-items are on track (manufacture, delivery, installation on going)
  - August 2021 ex-bunker installation starts
  - February 2022 in-bunker installation starts
- Floor loading issue with cave shielding resolved (some delay, but back on track for installation window in 2021/2022)
- Bi-weekly installation coordination meetings with ESS
- Open items:
  - Utilities supply (common project)
  - Power distribution (common project)
  - Covid travel restrictions and delays
  - T_0 chopper: Quote was about 3 times higher than original book value budget. Maximum available budget TUM/ESS: 540KEuros. New open tender soon (May/June).
- 45 day work limit for TUM and PSI staff in Lund has been mitigated.
- Action Item: ESS should finalize offers for common projects to avoid delays, ESS is aware.

DMSC/Søren

- Meeting once per week with ODIN, discussing hot commissioning
- Discussion on defining NEXUS standard for imaging ongoing
- Development of MuhReC (CT) and TOFLib (Bragg-edges) moving and showing results (comparing with independent measurements of e.g. weight fractions)

Sample environments/Robin

- Integration of sample environments and BEER/ODIN ongoing
- Load frames for ODIN and BEER available
- Interaction with electrochemistry early users to provide dedicated sample environment for that application
- Interactions with university sample environment projects, like Aarhus Neutron Induction Furnace Setup
- Michi suggested to check on availability of magnet for ODIN using the polarized neutron imaging setup
- High temperature deformation option explored with academic collaborators