

PAUL SCHERRER INSTITUT



EUROPEAN
SPALLATION
SOURCE

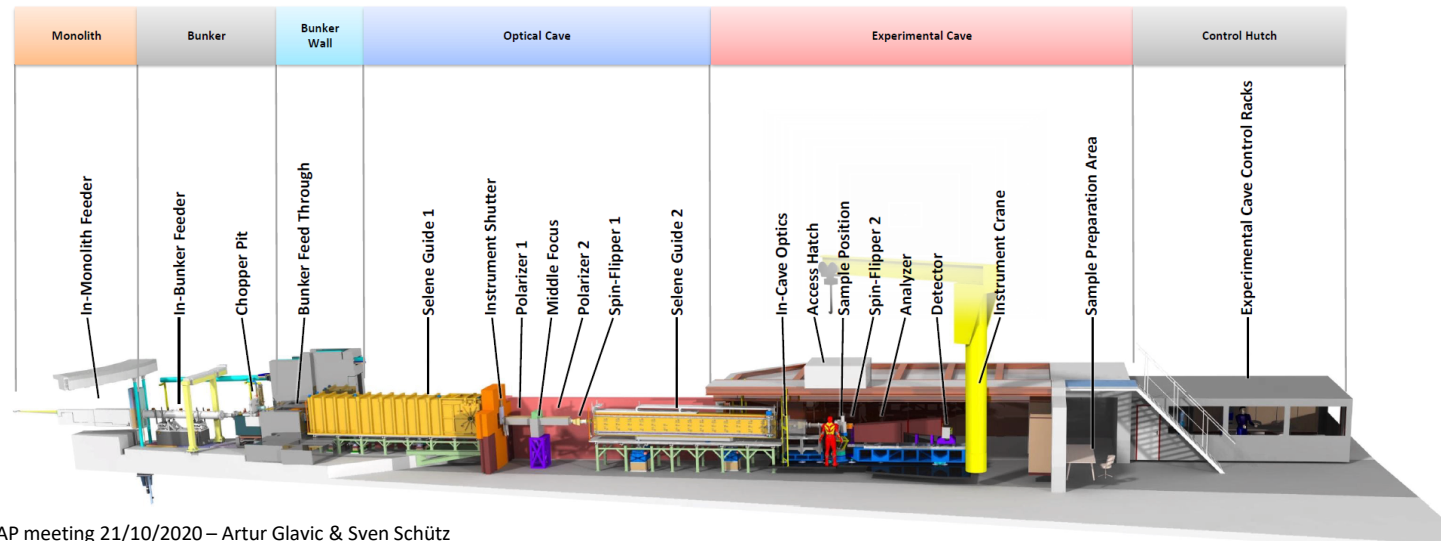
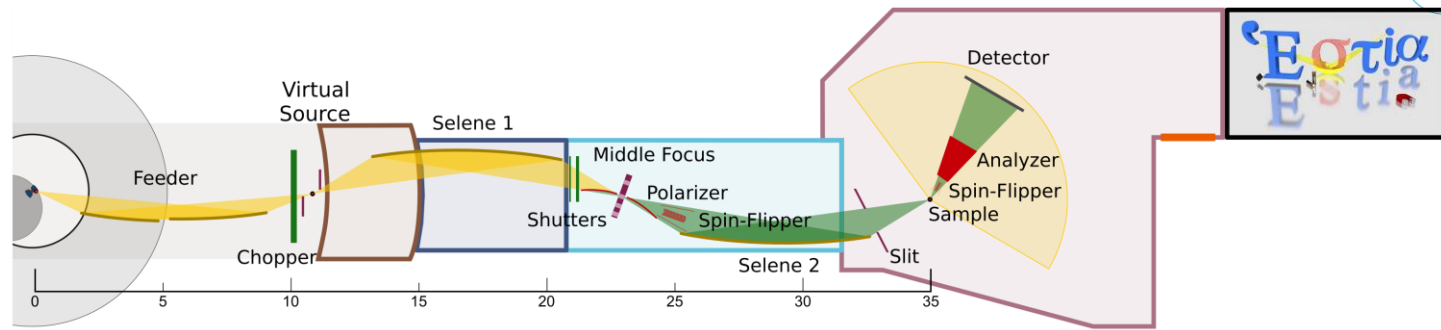


Artur Glavic & Sven Schütz :: Paul Scherrer Institut

Estia – STAP Update

Reflectometry STAP meeting 21/10/2020

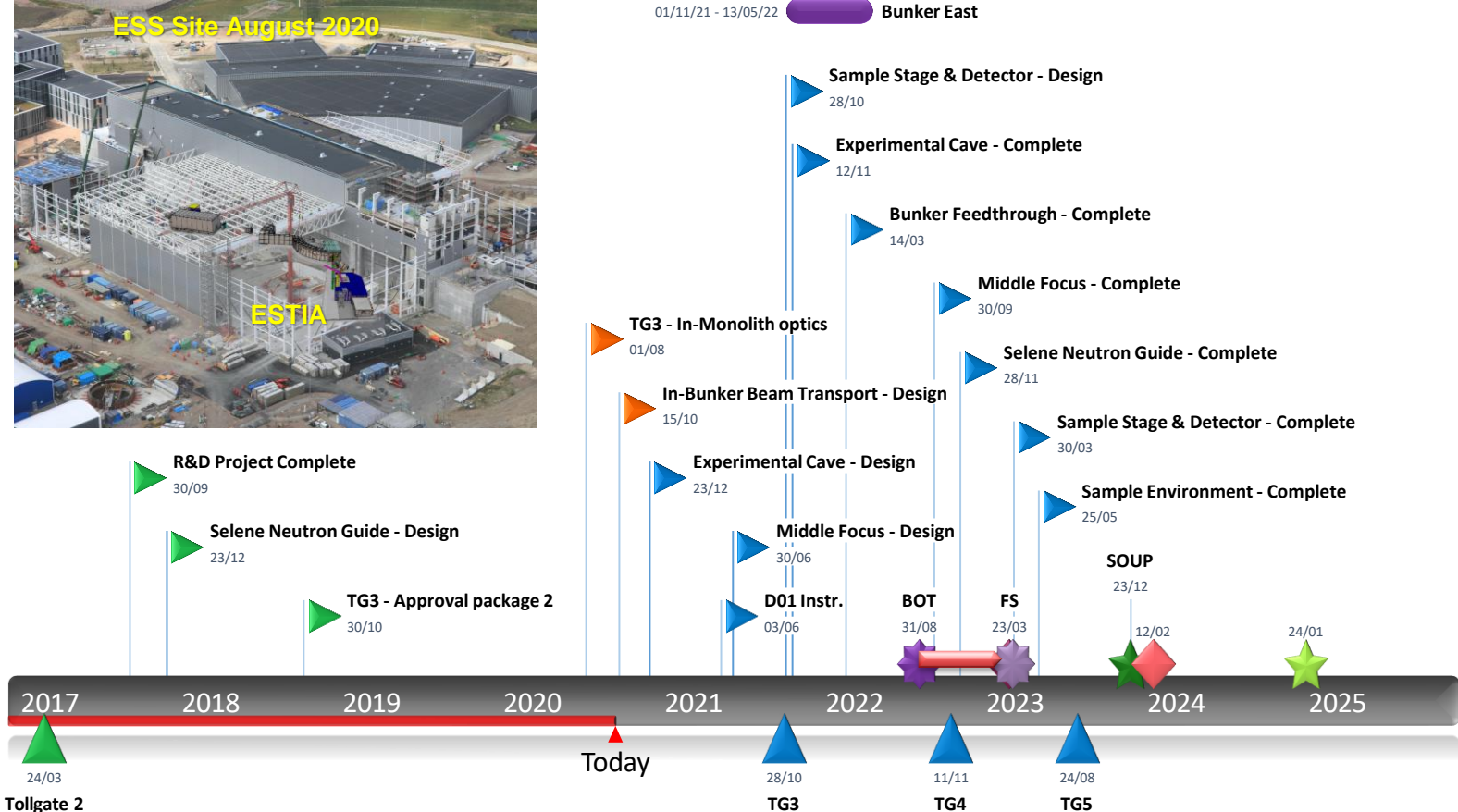
Estia instrument overview



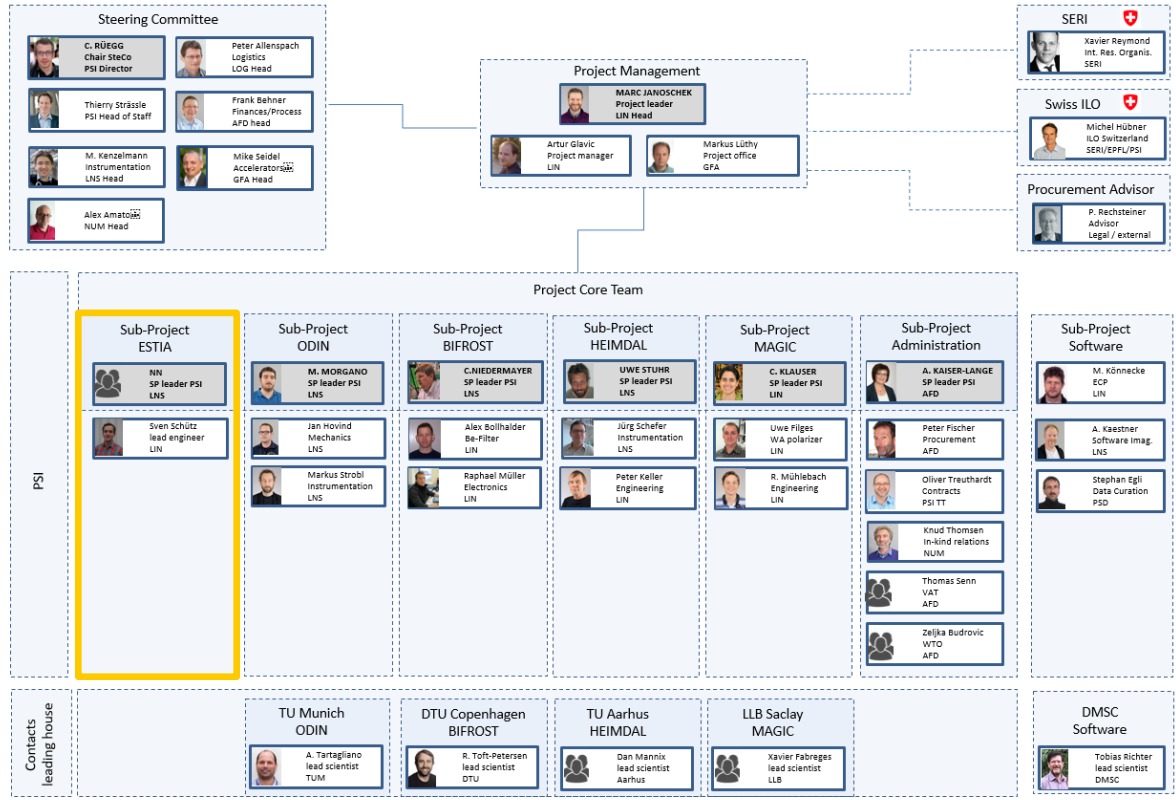


01/11/21 - 13/05/22 **Bunker East**

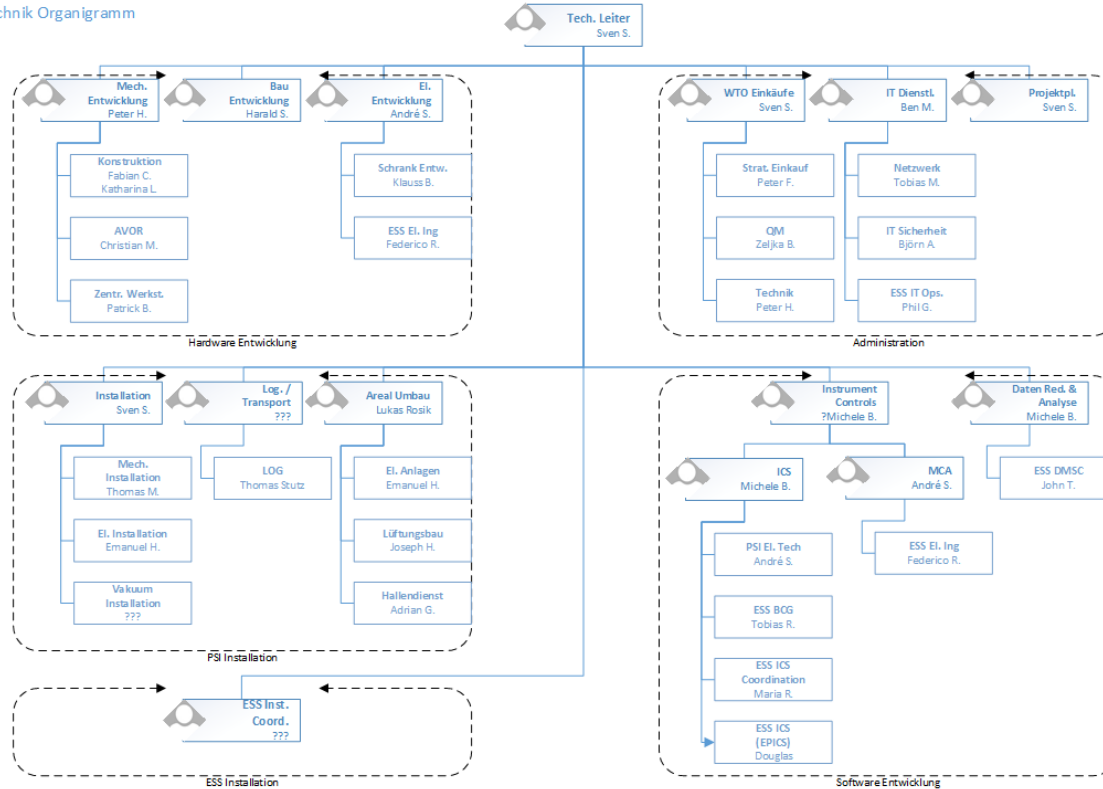
2017



| Phase Status | Sub System | Task Name | Start | Timeline | | | | | | | | | | | | | |
|-----------------|---------------|--|--------------|----------|--------------------|-----|-----|--------------------|-----|-----|--------------------|-----|-----|--|--|--|--|
| | | | | Sep | Qtr 4, 2020 Oct | Nov | Dec | Qtr 1, 2021 Jan | Feb | Mar | Qtr 2, 2021 Apr | May | Jun | | | | |
| 165 | | ▾ Design & Procurement | Tue 01.08.17 | | | | | | | | | | | | | | |
| 170 | DES | CP ▾ Chopper Pit | Tue 12.09.17 | | | | | | | | | | | | | | |
| 183 | DES | MF ▾ Middle Focus | Fri 16.10.20 | | | | | | | | | | | | | | |
| 190 | DES | SSDA ▾ Sample Stage and Detector Arm | Fri 16.04.21 | | | | | | | | | | | | | | |
| 195 | DES | Final TG3 - Documentation | Fri 29.10.21 | | | | | | | | | | | | | | |
| 216 | | ▾ Installation at PSI | Mon 20.04.20 | | | | | | | | | | | | | | |
| 217 | IPSI | IBF ▾ In-Bunker Feeder | Tue 26.01.21 | | | | | | | | | | | | | | |
| 218 | IPSI | CP ▾ Chopper Pit Virtual Source | Fri 19.02.21 | | | | | | | | | | | | | | |
| 221 | IPSI | CP ▾ Chopper Pit Main Body | Fri 23.04.21 | | | | | | | | | | | | | | |
| 226 | IPSI | CP ▾ Chopper Pit - Mechanics and Software Commissioning and PSI Systems-Acceptance | Fri 18.06.21 | | | | | | | | | | | | | | |
| 227 | IPSI | SG1 ▾ Selene Guide 1 | Mon 20.04.20 | | | | | | | | | | | | | | |
| 300 | IPSI | SG2 ▾ Selene Guide 2 | Fri 12.03.21 | | | | | | | | | | | | | | |
| 308 | IPSI | MF ▾ Middle Focus | Fri 29.10.21 | | | | | | | | | | | | | | |
| 309 | IPSI | MF ▾ Middle Focus Shutter | Fri 29.10.21 | | | | | | | | | | | | | | |
| 310 | IPSI | MF ▾ Middle Focus Main Body | Fri 29.10.21 | | | | | | | | | | | | | | |
| 311 | IPSI | SSDA ▾ Sample Stage and Detector Arm | Fri 27.05.22 | | | | | | | | | | | | | | |
| 313 | TPR | ▾ Transportation to D01/D02 | Fri 17.04.20 | | | | | | | | | | | | | | |
| 327 | | ▾ Installation at ESS | Fri 19.03.21 | | | | | | | | | | | | | | |
| 328 | IESS | SG1 ▾ Selene Guide 1: placement prior to D02 access | Fri 19.03.21 | | | | | | | | | | | | | | |
| 336 | IESS | SG1 ▾ Selene Guide 1: initial settling time | Fri 16.04.21 | | | | | | | | | | | | | | |
| 337 | IESS | ▾ D02 Installations | Fri 24.09.21 | | | | | | | | | | | | | | |
| 353 | | ▾ D01 Installations | Fri 04.06.21 | | | | | | | | | | | | | | |
| 387 | IESS | ▾ Trouble Shooting at ESS | Fri 31.03.23 | | | | | | | | | | | | | | |
| 388 | | ▾ D01 Installations Independent of PSS | Fri 01.04.22 | | | | | | | | | | | | | | |

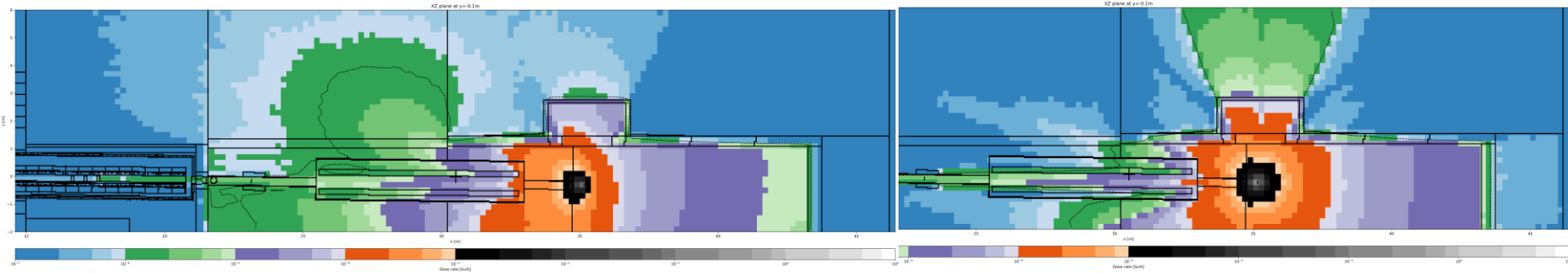


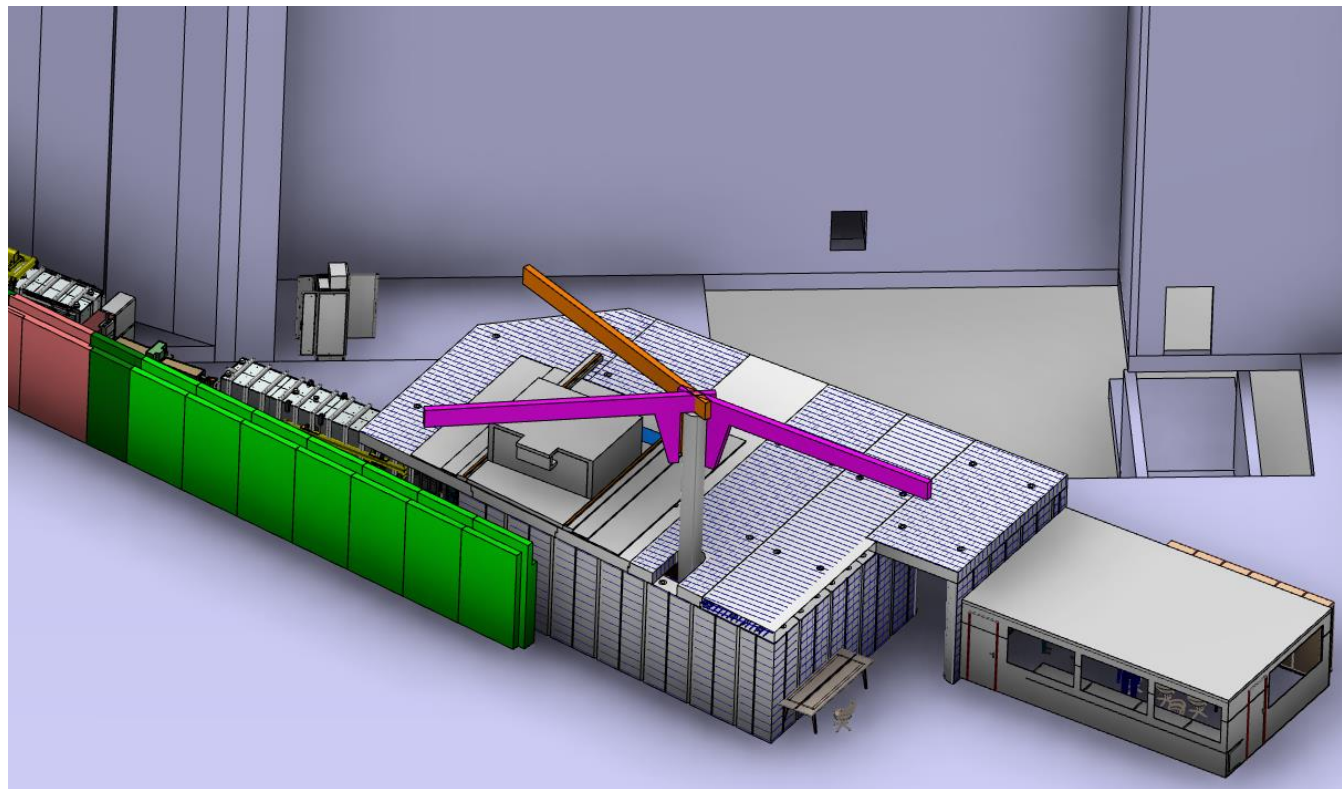
ESTIA Instrument
PSI Technik Organigramm

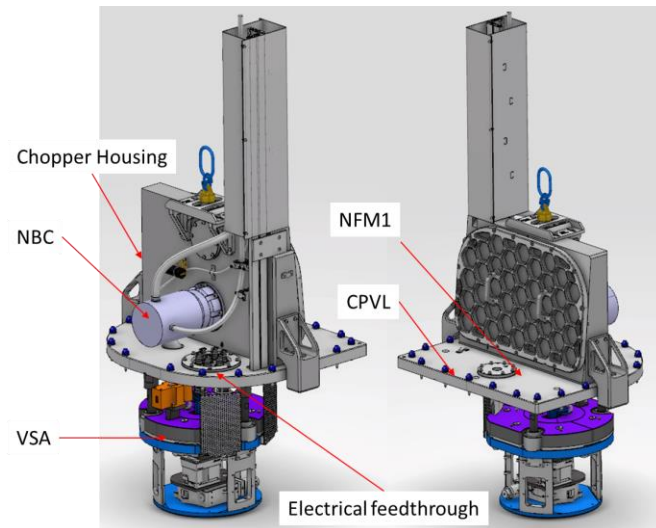
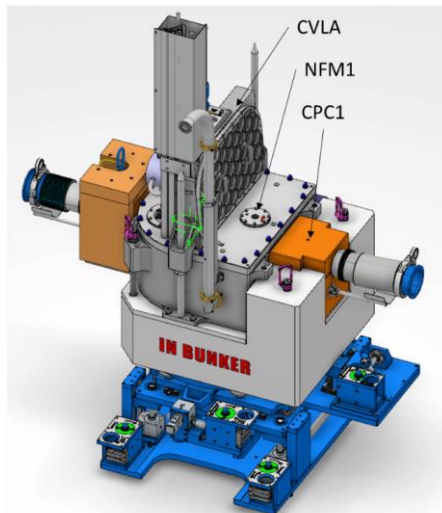
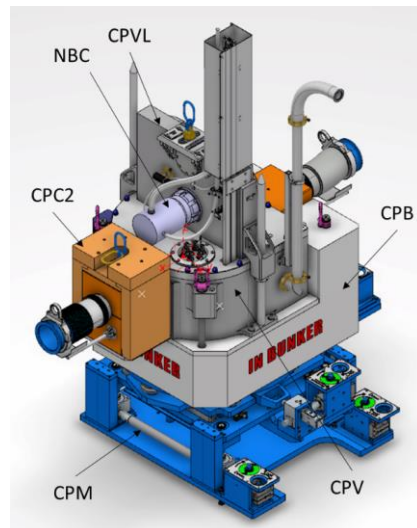


Water

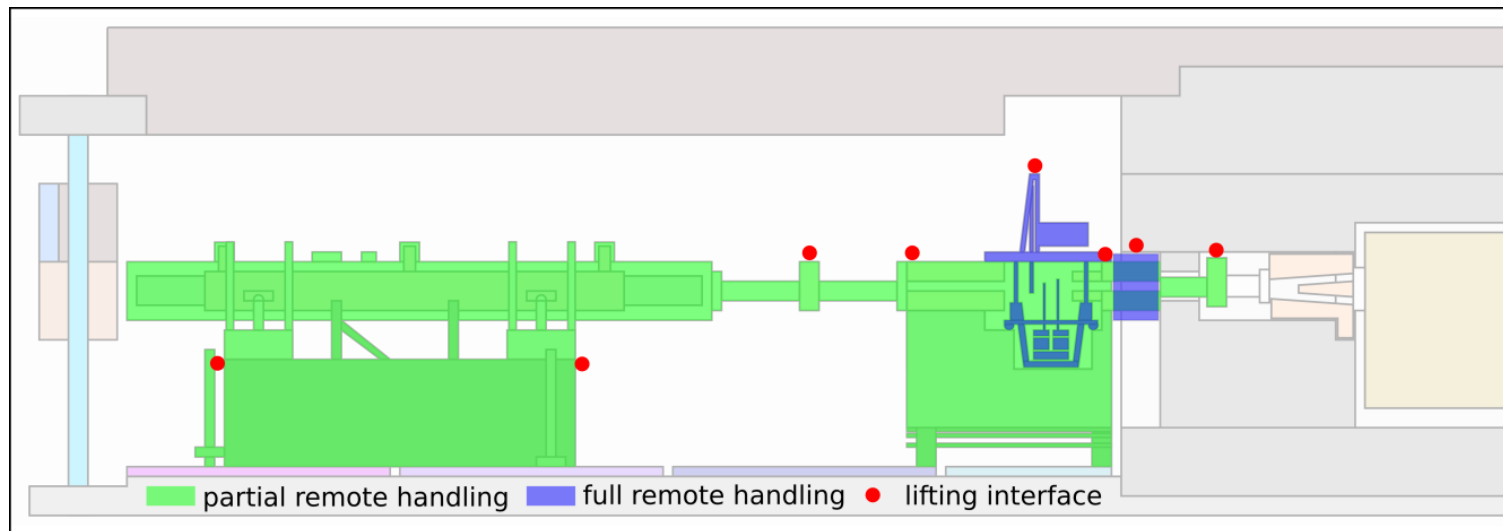
Cadmium



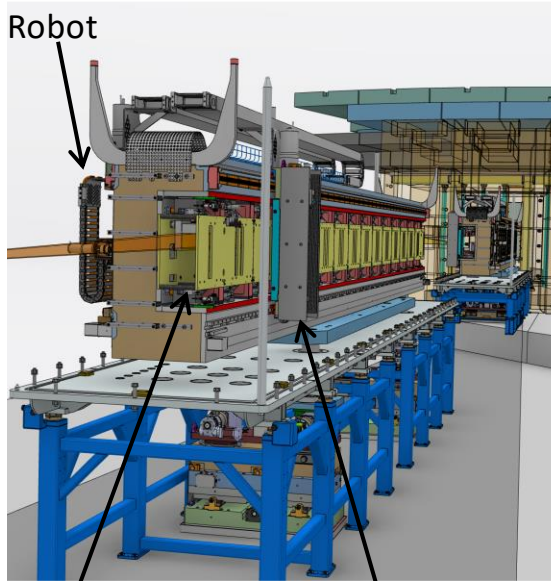




Chopper Pit & In Bunker Feeder



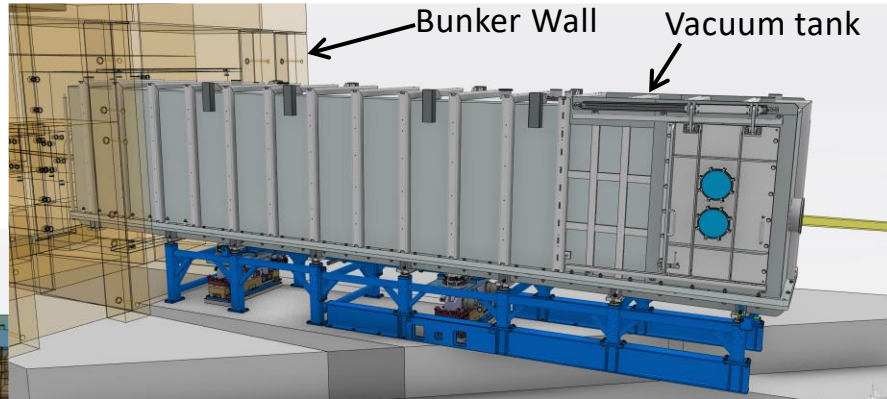
Selene Neutron Guide



Robot

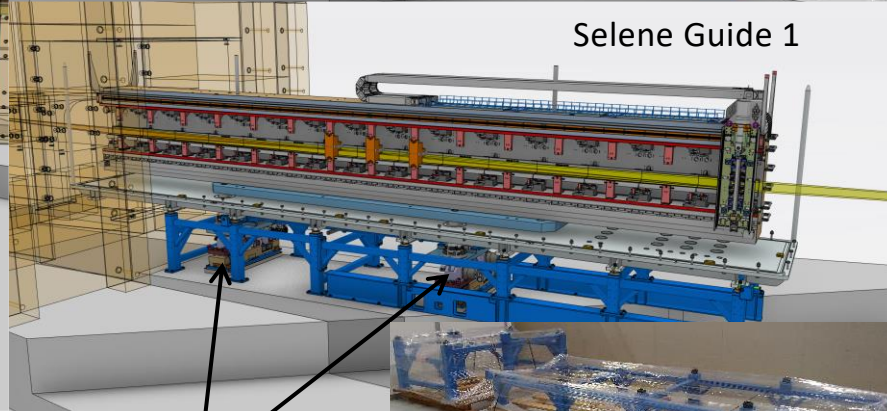
Guide Field

Metrology Cart



Bunker Wall

Vacuum tank

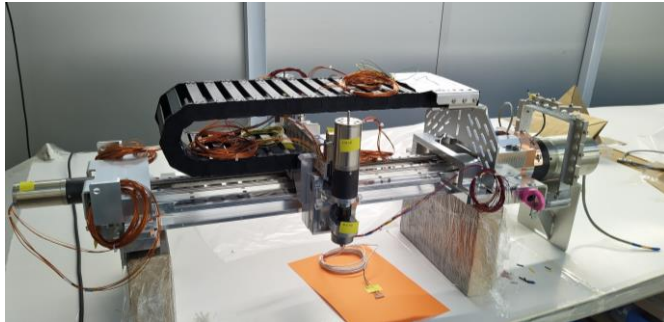


Selene Guide 1

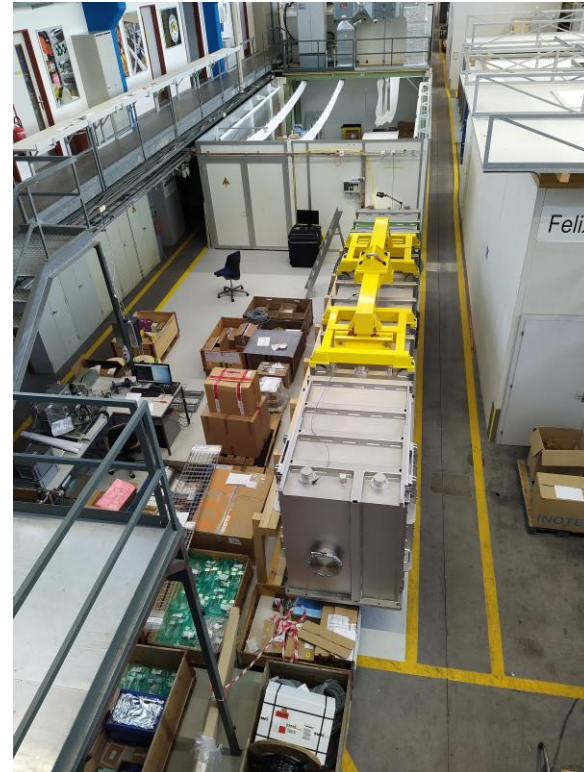
Motorized Support

Frame@PSI

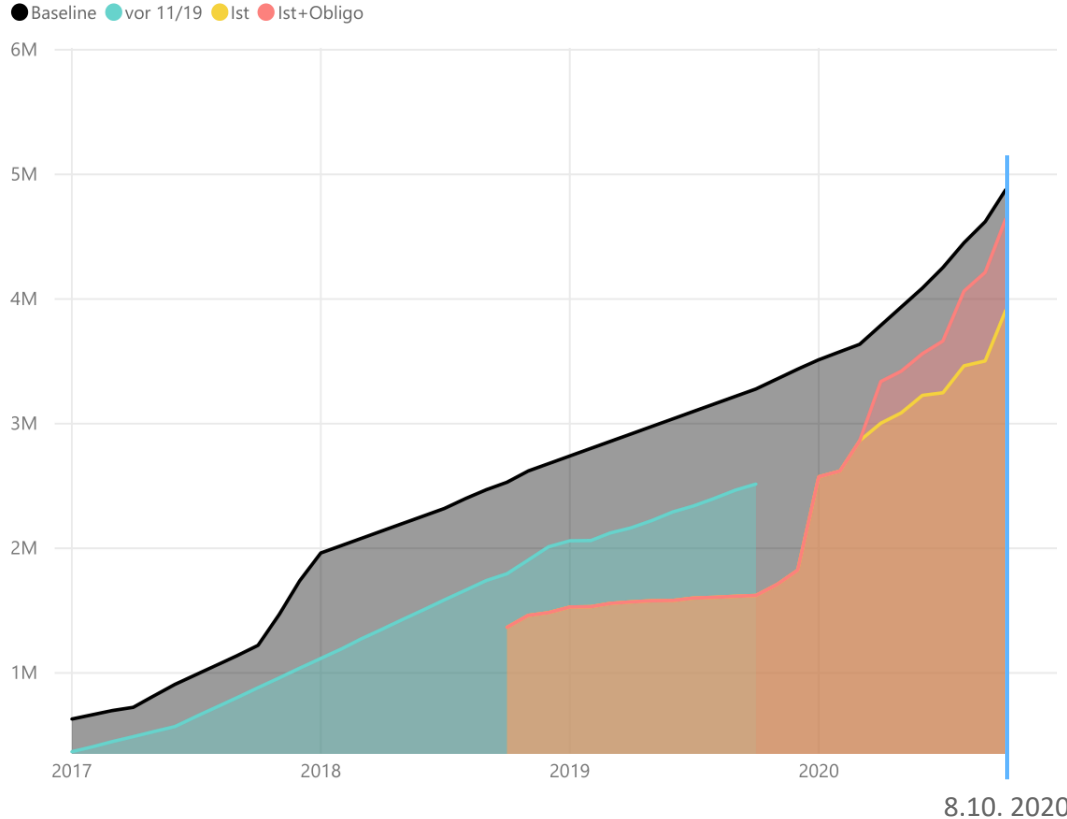
- Vacuum floor currently is used as installation-table
 - metrology cart
 - Alignment robot
 - In-vacuum cabling



- Preparations for Test Cabinet installation
- Preassembly of sub-components







Budget
CHF 15.526 Mio

Spent
CHF 3.907 Mio


Committed
CHF 4.640 Mio


Verpflichtet in %
29.885


| Top 5 Risks | | | | | |
|------------------------------|----------|----------|-------------|----------|--------|
| Title | Severity | Category | Responsible | Response | Trend |
| Detector Cost Overrun | 24 | Quality | ESS | Avoid | New |
| Electrical Documentation | 12 | Schedule | ESS | Observe | New |
| Communication to ESS | 12 | Schedule | ESS | Reduce | Steady |
| SG1 not ready for TPR | 10 | Quality | PSI | Observe | New |
| Shared shielding ESTIA/Skadi | 9 | Schedule | | | New |

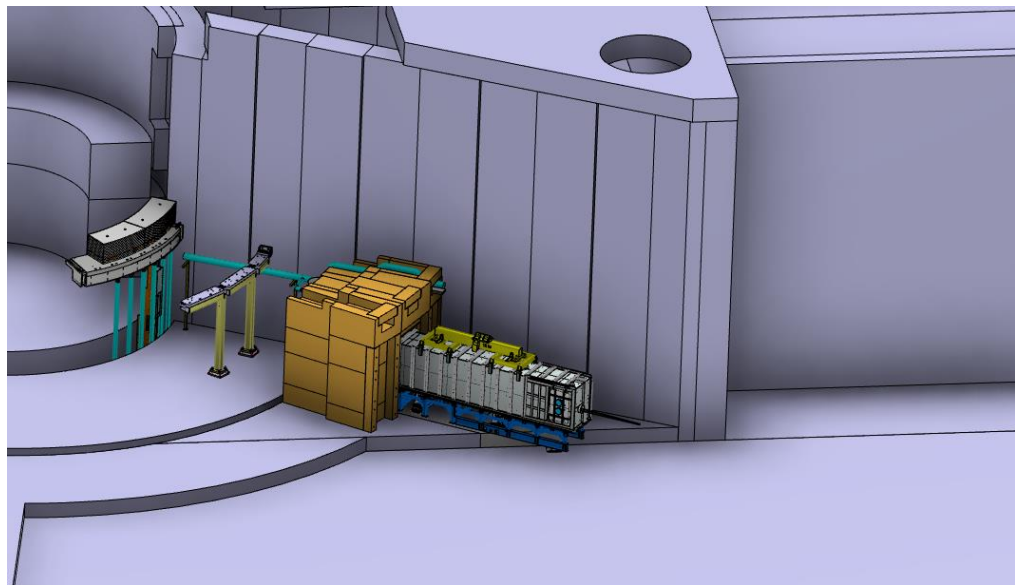
- Artur Glavic has moved to new position as PSI-ESS project coordinator
- New Instrument Scientist hiring to be concluded soon
- Selene Guide optics contract is published
- Feeder Support Assembly and Virtual Source Stages procured

- PSI is going back into COVID-19 related limited operations (LO II)
 - We don't expect direct impact on Estia installations as these are excluded from limitation thus far
 - Increasing Corona incidence may impact future deliveries

- Done
 -  - DES Selene Guide
 - DES Chopper Pit

- In Progress
 -  - SubTG3 Chopper Pit
 - DES Middle Focus
 - DES Exp. Cave

- Outlook
 -  - TPR Selene Guide 1
 - INST-ESS SG1



Thank you!

