

DREAM update for STAP

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DREAM instrument

- **Partners: FZJ 76%, LLB 20%, ESS 4%**
- **Construction budget: 13.66 M€**
- **TG5: December 2024**

Detectors (FZJ)

- **Endcap Installed**
- HR installation: May 2024
- Mantle: June 2024

Detector frame (FZJ)

- **Installed**

Experimental cave (LLB)

- **Installed**

Disc choppers (FZJ)

(PSC & BC)

FAT ongoing

Installation: Q2 2024

T0 Chopper (ESS)

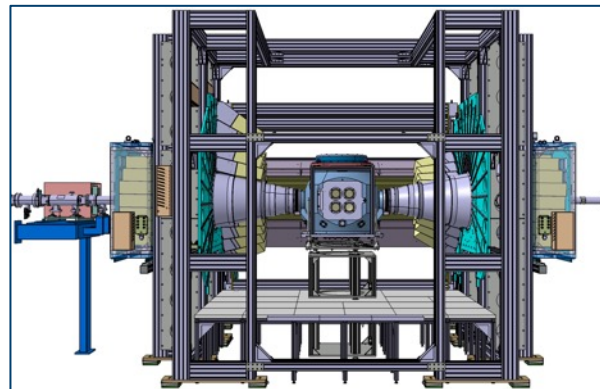
- **Installed**

Sample vessel (FZJ)

- **Installed**

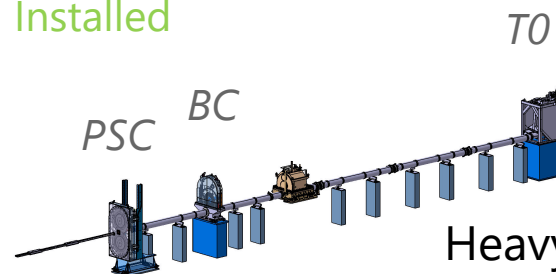
Vessel support (LLB)

- **Installed**



NBOA (FZJ)

- **Installed**



Inside the bunker

Heavy Shutter

- **Installed**

Neutron Guides & Shielding

(FZJ, ESS)

- **Installed**

Control hatch and sample prep lab (FZJ)

- **Installed**

CEP: **Installed**

CUP: **Installed**

PSS: Installation after CUP/CEP

*Bi-spectral switch
Beam monitors*

Chopper system

Pulse Shaping Chopper (308 Hz) & Overlap Chopper (14 Hz)

- PSC and BC choppers fully assembled at FZJ
- All three discs of PSC reached the target speed
- FAT tests are completed (> 500 hrs)
- Delivery to ESS in June

@FZJ

@ESS



Testing pit at FZJ



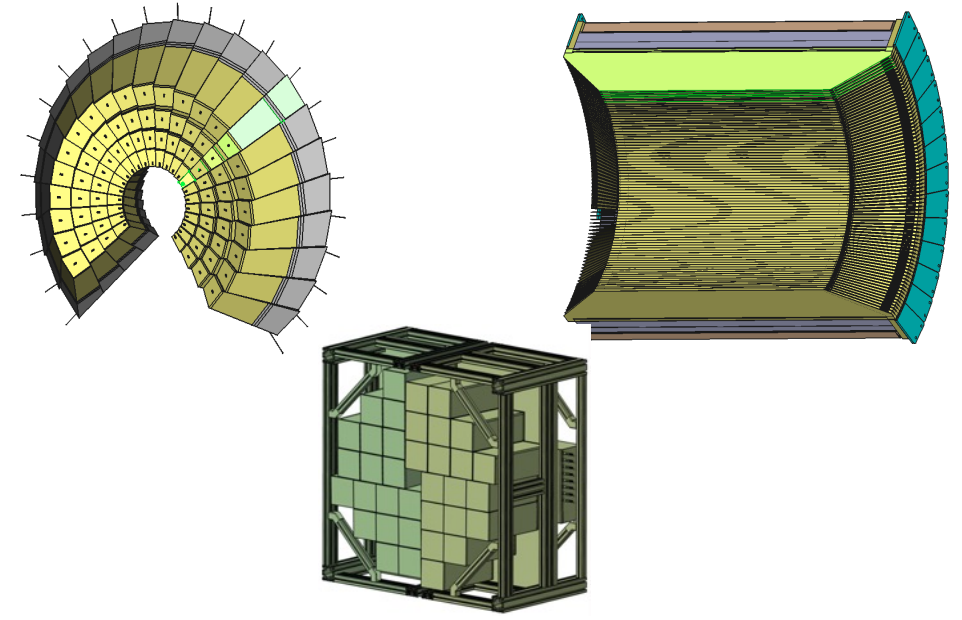
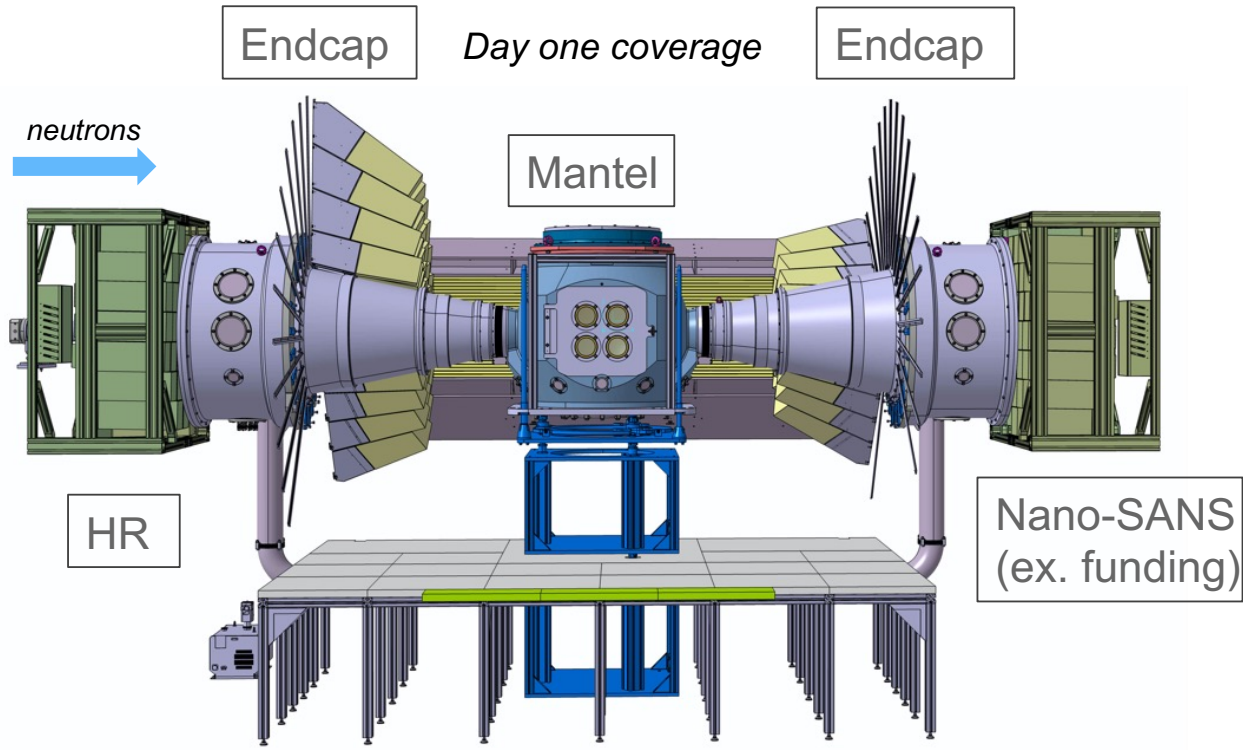
PSC remote handling at ESS




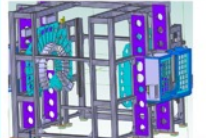
Band Control (112 Hz)

- FAT is completed
- Delivery to ESS in June

DREAM detectors



- Endcap & mantle first segments are successfully tested with neutrons
- Endcap: installed
- Mantel: installation in June/July, 2024
- HR: installation in May, 2024

<p>DREAM HR and SANS Detectors</p> <p>Report on Design and Adaptation for 0-Serial Production</p> <p>07.07.2022</p>	<p>JÜLICH FORSCHUNGSZENTRUM</p>  <p>CDT</p>
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Screenshot

Endcap detectors

Testing at Utgard by ESS DetG

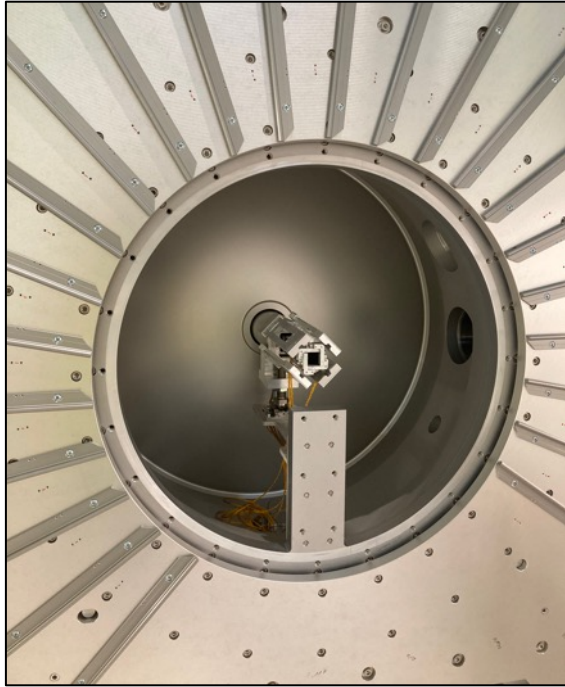


*Installation: DetG,
FZJ and CDT*



Neutron guide installation complete

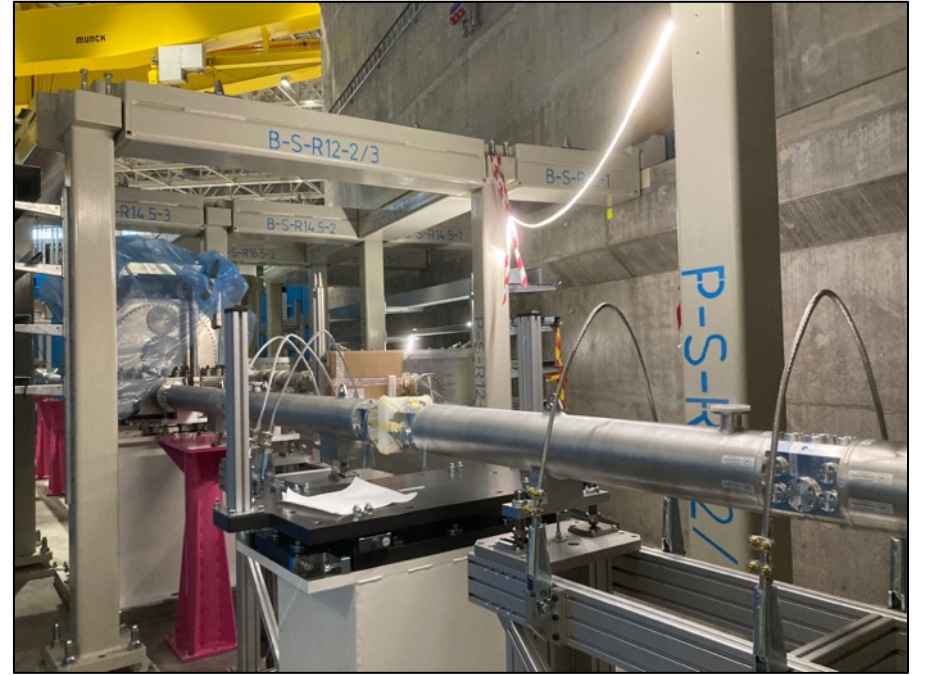
Slits & guide field



Polarizer support

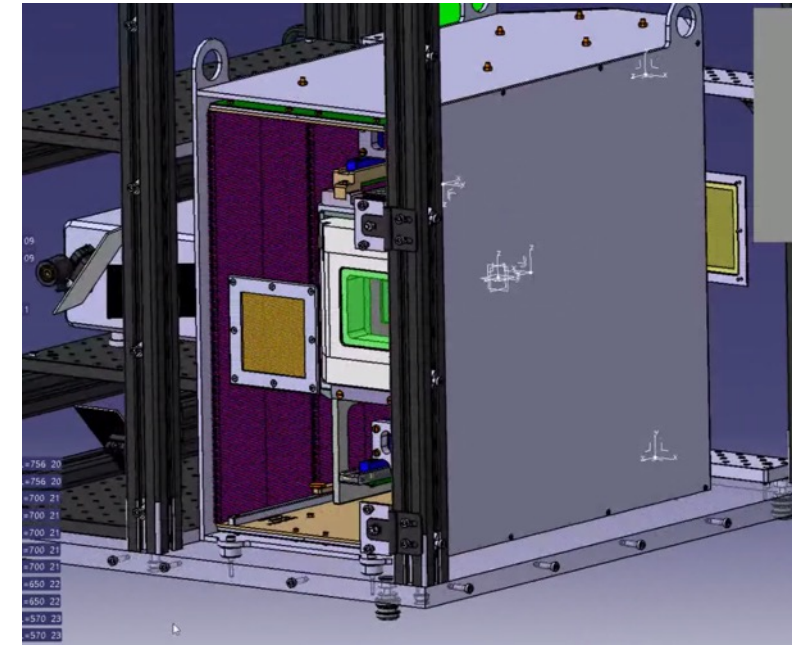
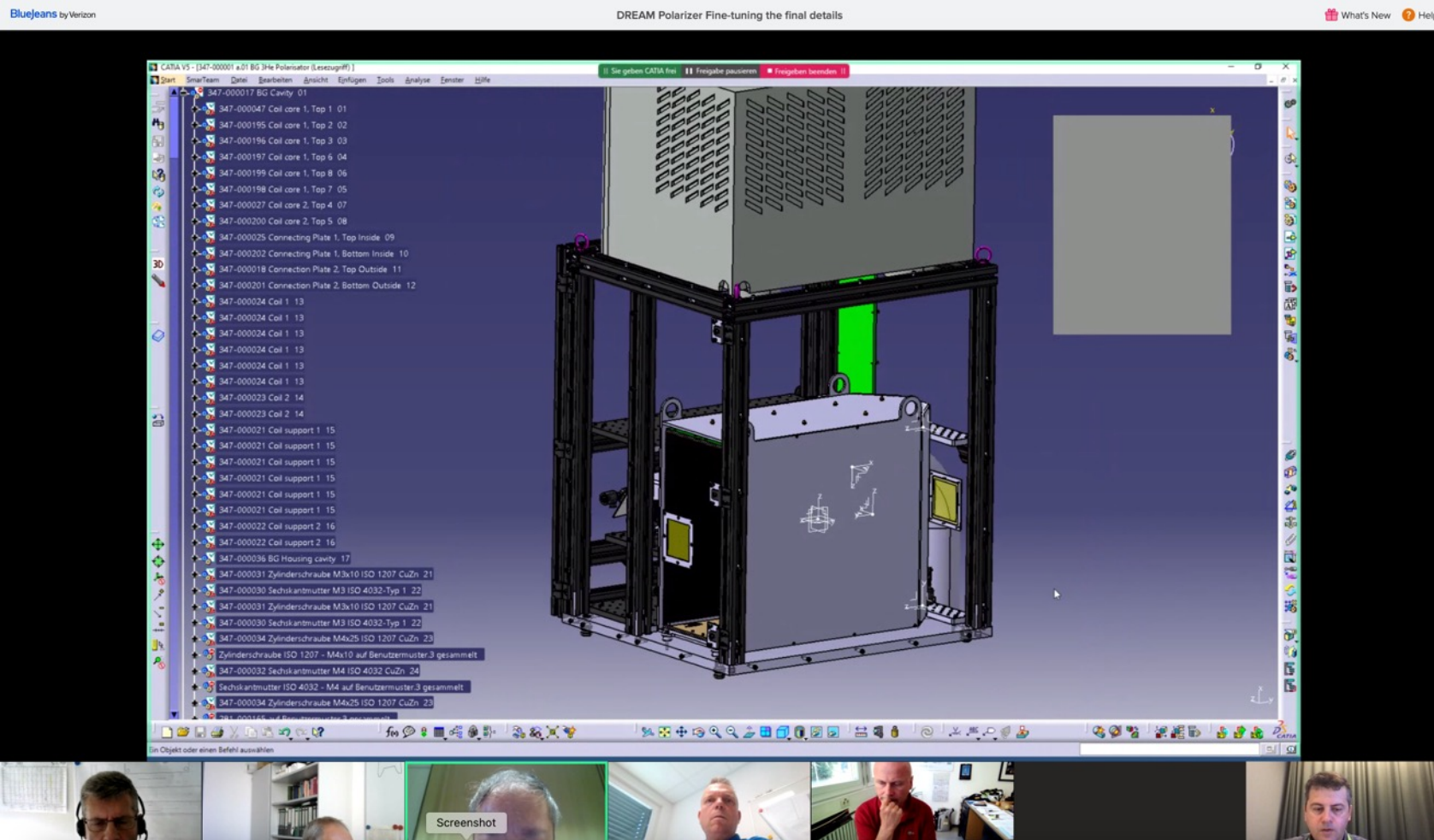


In-bunker guides



Cold neutron polarizer (RAC funding)

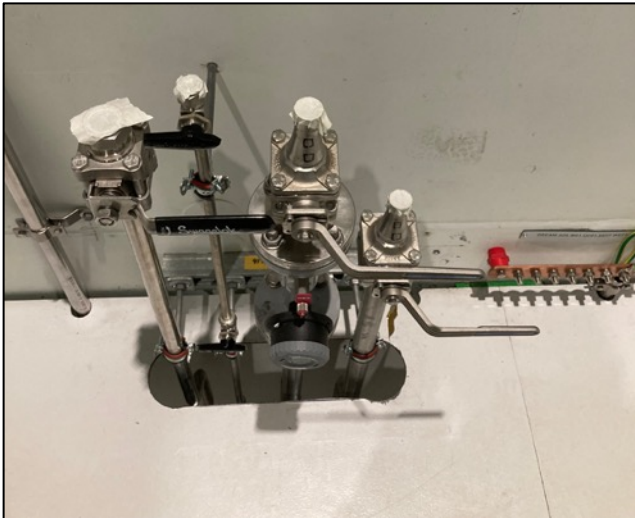
- Manufacturing ongoing
- Installation in 2024



Cave & hutch

- Common Electrical Project (CEP): completed
- Common Utility Project (CUP): completed
- Instrument control installation starting soon
- Procurement of the control hutch furniture
- Bi-monthly meeting with IDS (Céline) and ad-hoc meetings with ICS, ECDC
- ICS, PSS, Vacuum cabinets frames installed

Utility panel outside the cave



Utility panel inside the cave



Cabinet frames install at DREAM



Issues

- Detection gas solution needs to be agreed with ESS
- Cave is not permanently energized (current plan in May 2024)
- Problems with the procurement of sample changer cryofurnace (backup option: capillary changer developed internally)
- Documentation requirements of TG5 are not very clear (work in progress)