

PAUL SCHERRER INSTITUT



EUROPEAN
SPALLATION
SOURCE



Artur Glavic & Jos Cooper :: ESTIA Core Team :: Paul Scherrer Institut

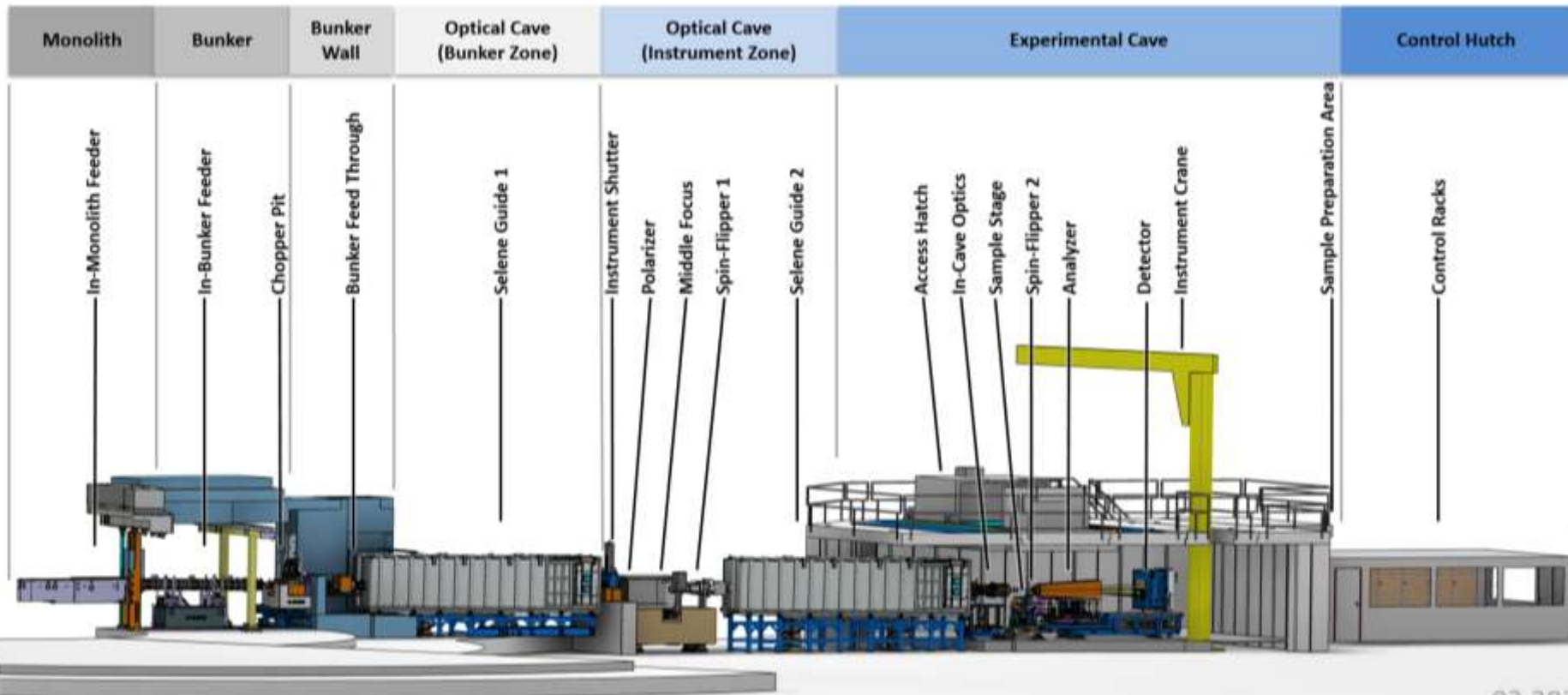
Estia – Project Update

STAP meeting 19/09/2023

- Joshaniel Cooper has taken over as Estia Instrument Scientist

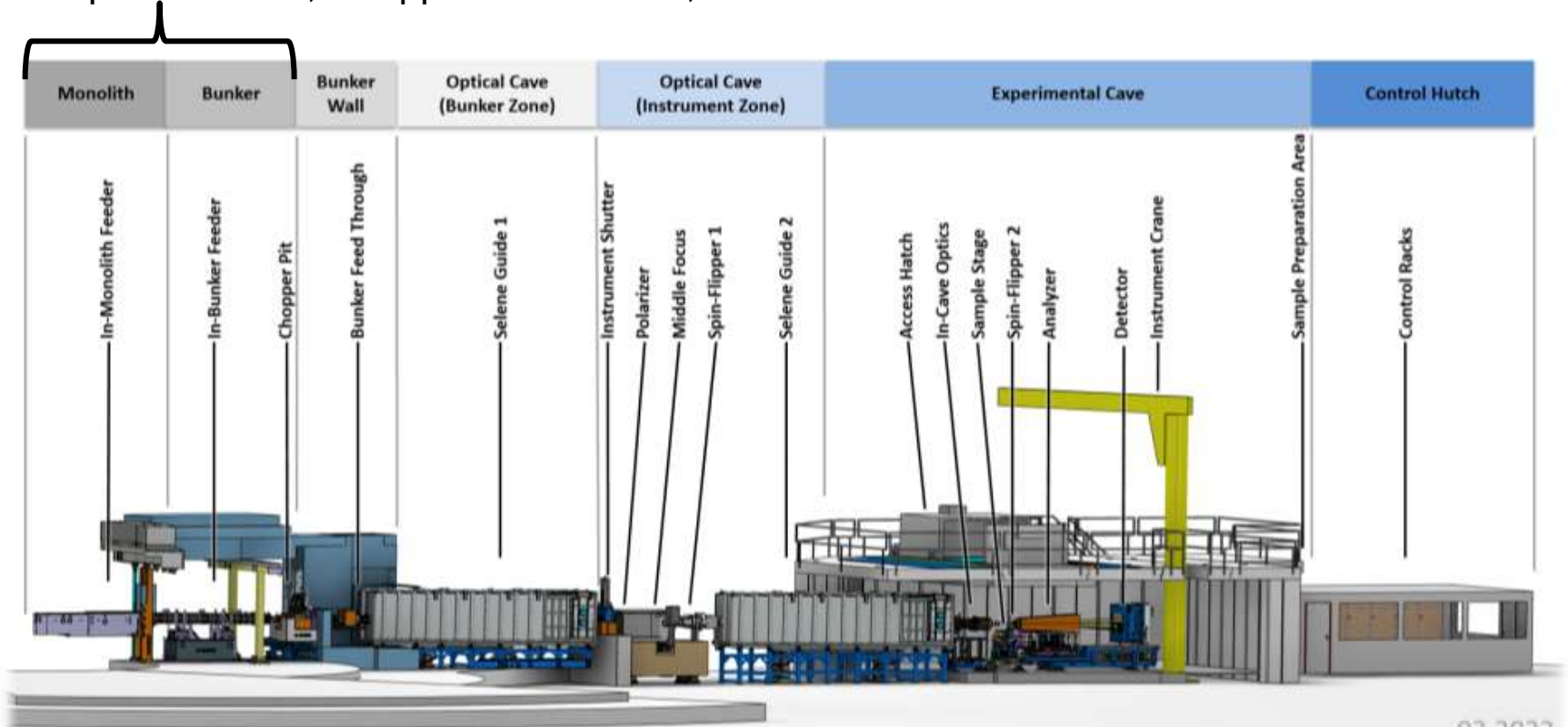
- Sven Schütz has decided to leave the Project
 - Peter Heimgartner (PSI) will lead the technical and design aspects
 - Harald Lang (technical writer @ PSI) will work on documentation
 - Hansdieter Schweiger (50% ESS) act as integration engineer
 - New IPL will support installation tasks

ESTIA instrument overview



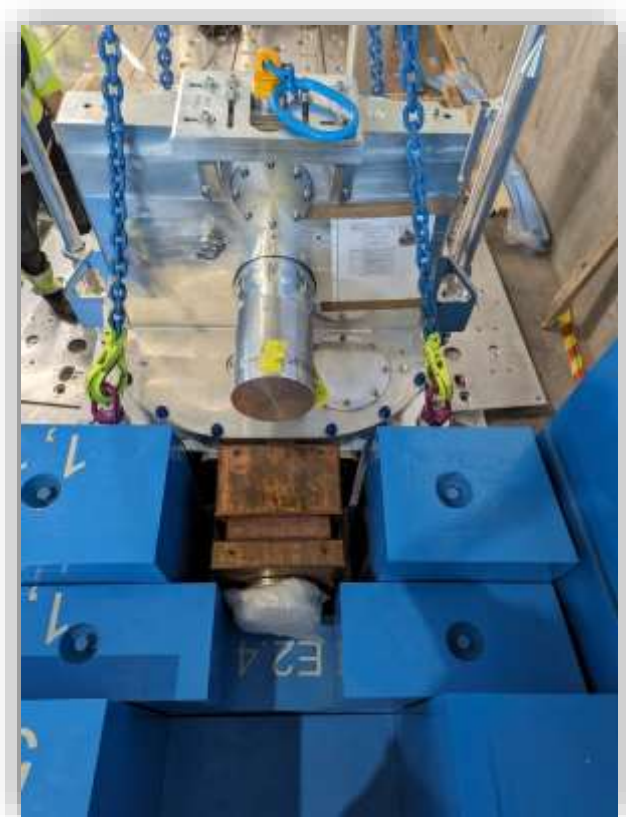
03.2022

Most parts at ESS, Chopper Pit installed, BBG FAT done



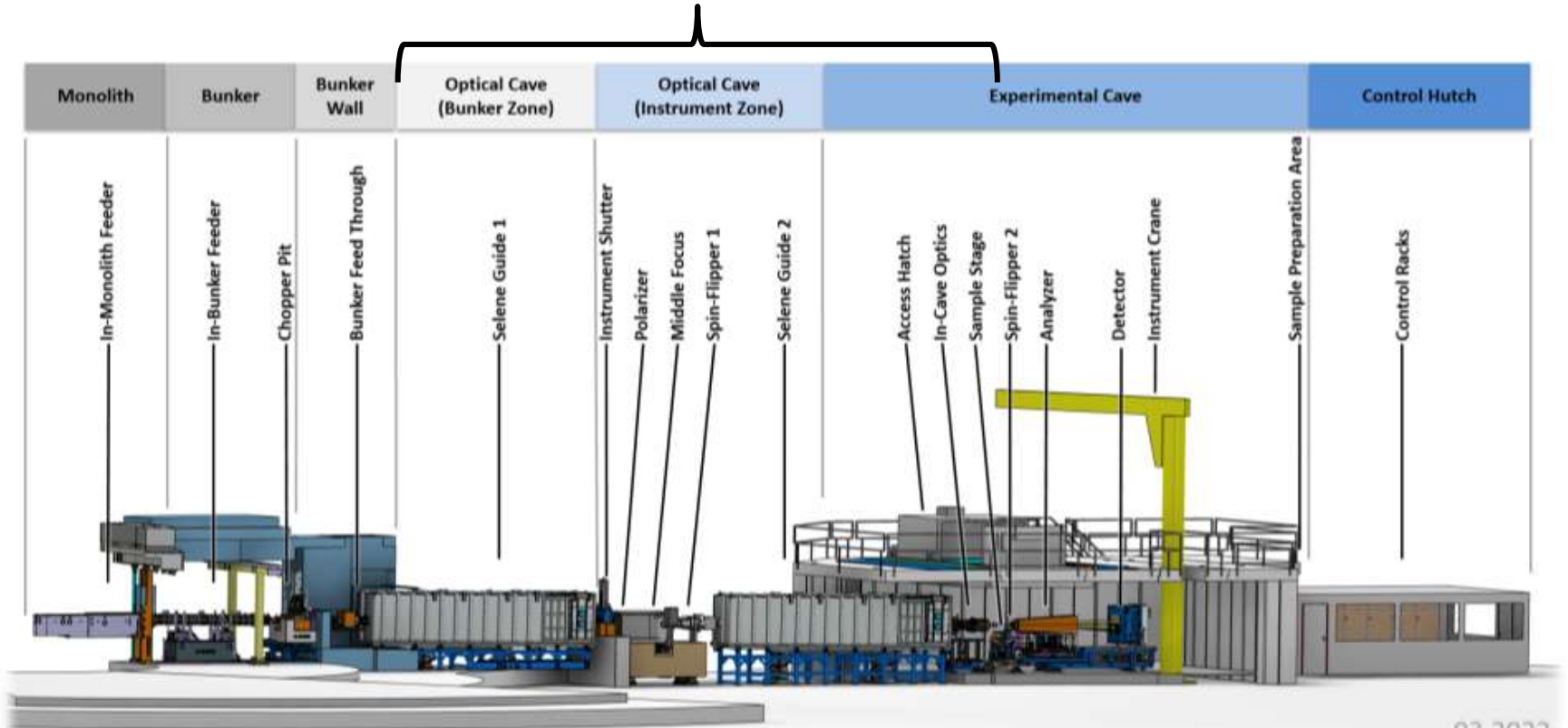
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- Chopper Pit installed within bunker
- Last component BBG prepared to ship to ESS



ESTIA instrument overview

Selene Guide completed



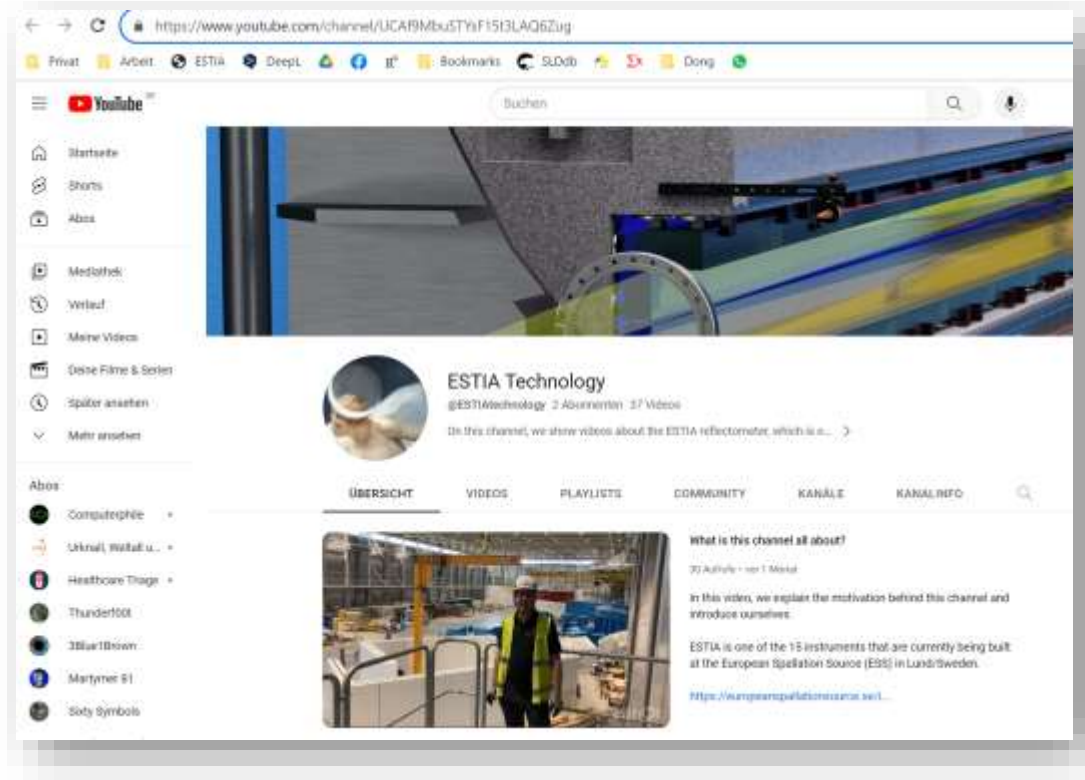
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ESTIA – Selene Guide Completion



- Selene 2 cabled and tested
 - Motion commissioned
 - Software Commissioned
 - Optics Installed
- (More details this afternoon)





Hansdieter & Sven recorded >30 videos to document installation tasks and Selene guide technology

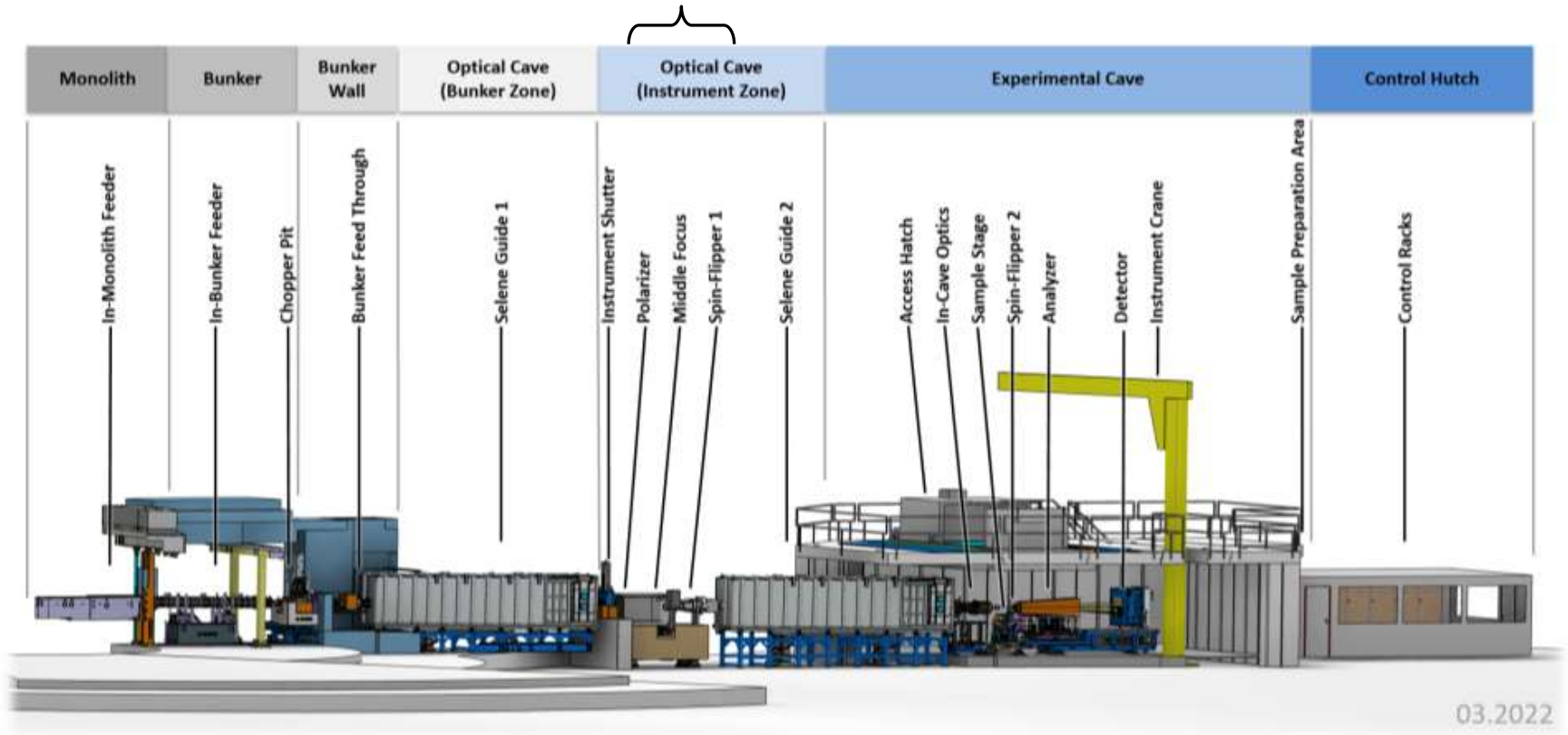
(~5min each subject)

<https://www.youtube.com/channel/UCAf9MbuSTYsF15t3LAQ6Zug>



ESTIA - Middle Focus

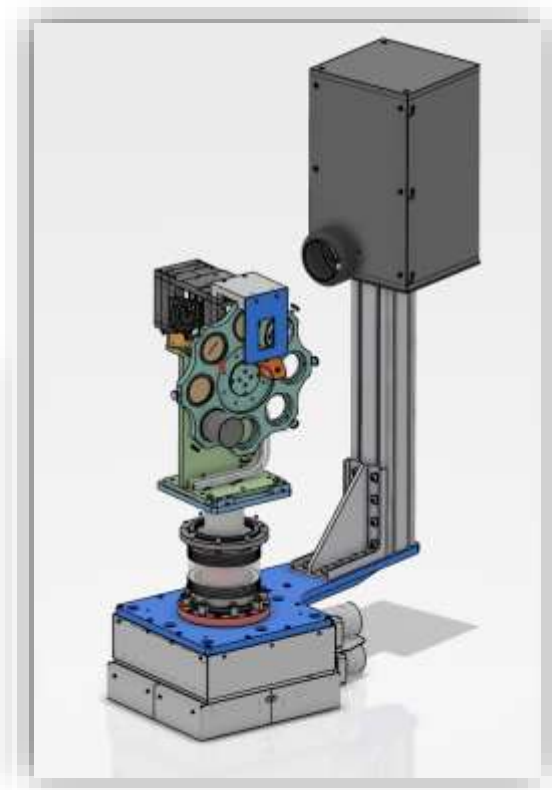
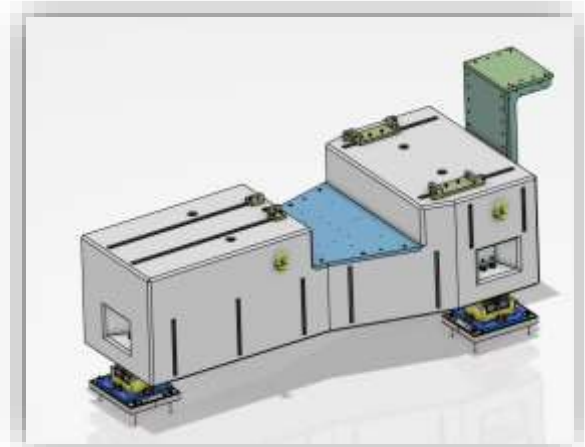
Design of the Middle Focus nearly done, most items in assembly



03.2022

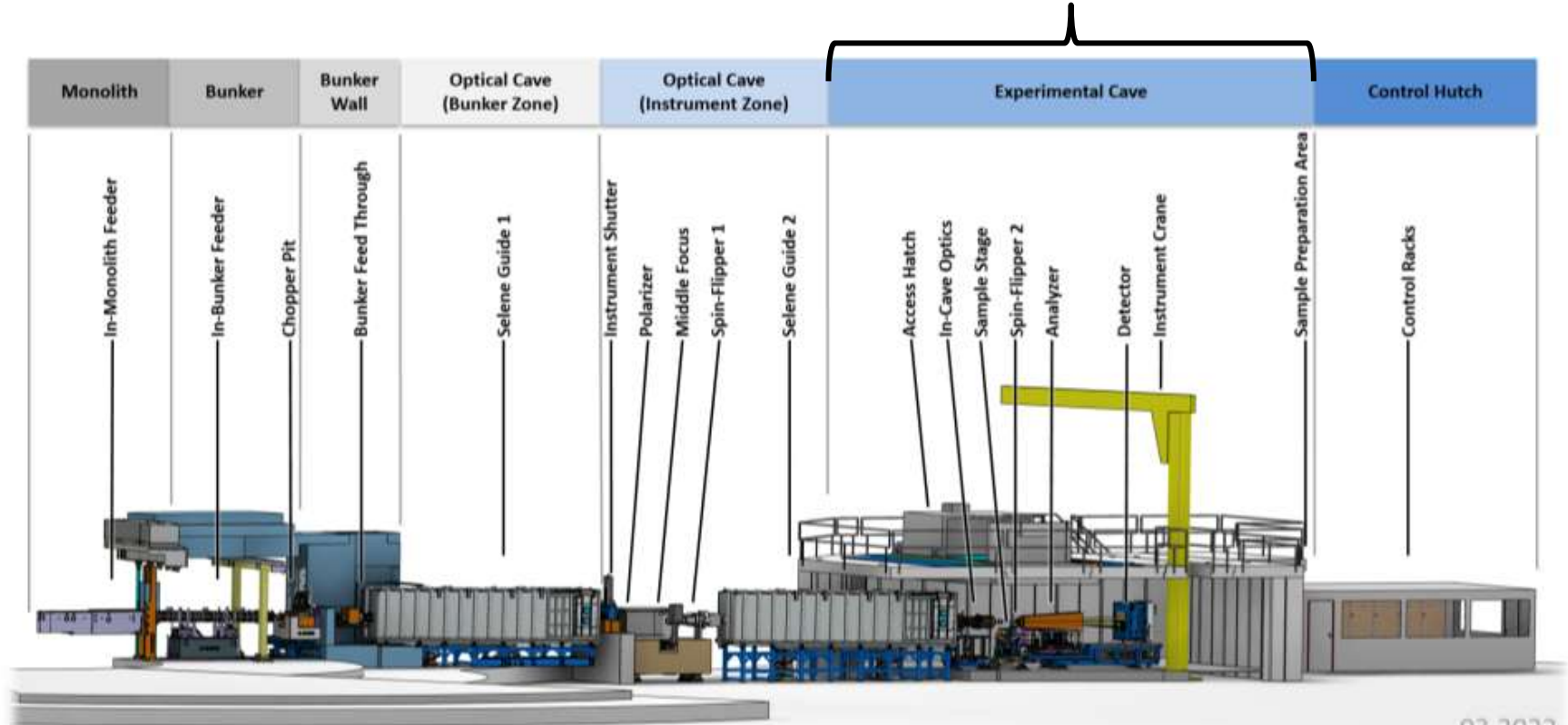
ESTIA - Middle Focus

- Support, vacuum tank manufactured incl. FAT
- Mask changer in assembly at PSI
- Polarizer and spin-flipper design complete, needs to be validated
- Pre-assembly at PSI planned October-December
- Delivery of first components to ESS planned by January 2024

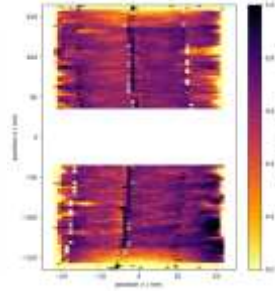


ESTIA instrument overview

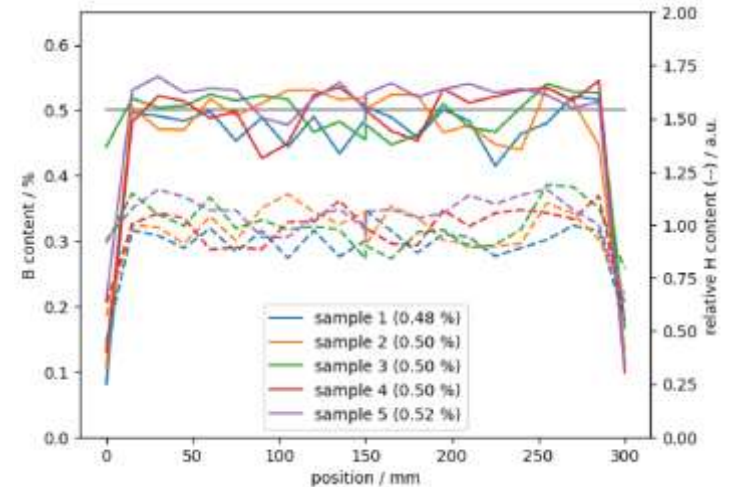
Experimental Cave walls installed, roof produced



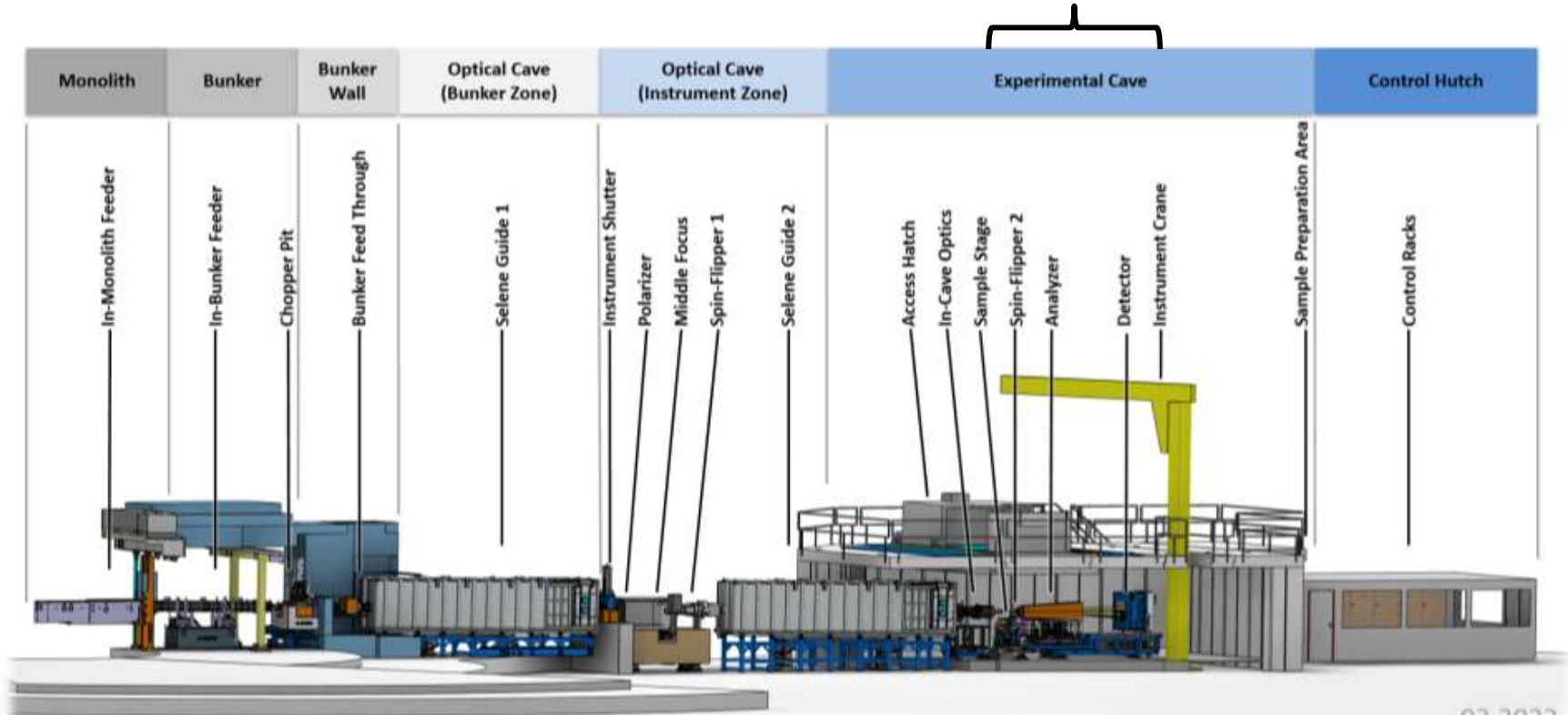
03.2022



- Cave walls and crane installed at ESS
- Test-cast drill cores have homogenous B_4C
- Roof being installed now
- Delay for “Tanzboden” to end Q1 2024

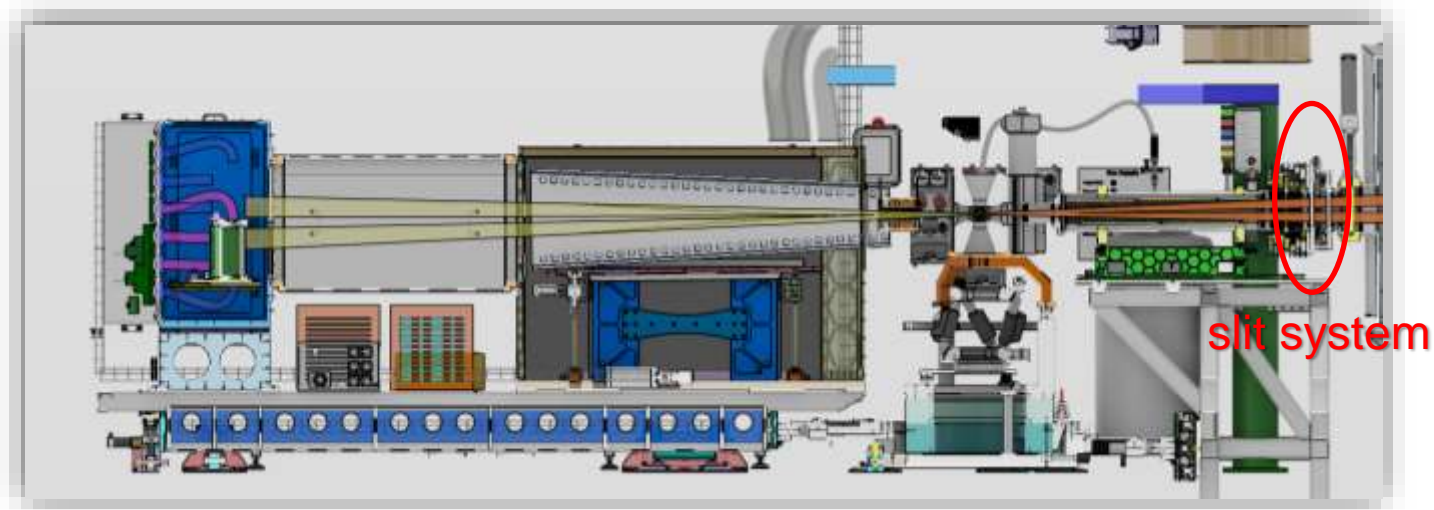


Sample stage and detector arm design is progressing

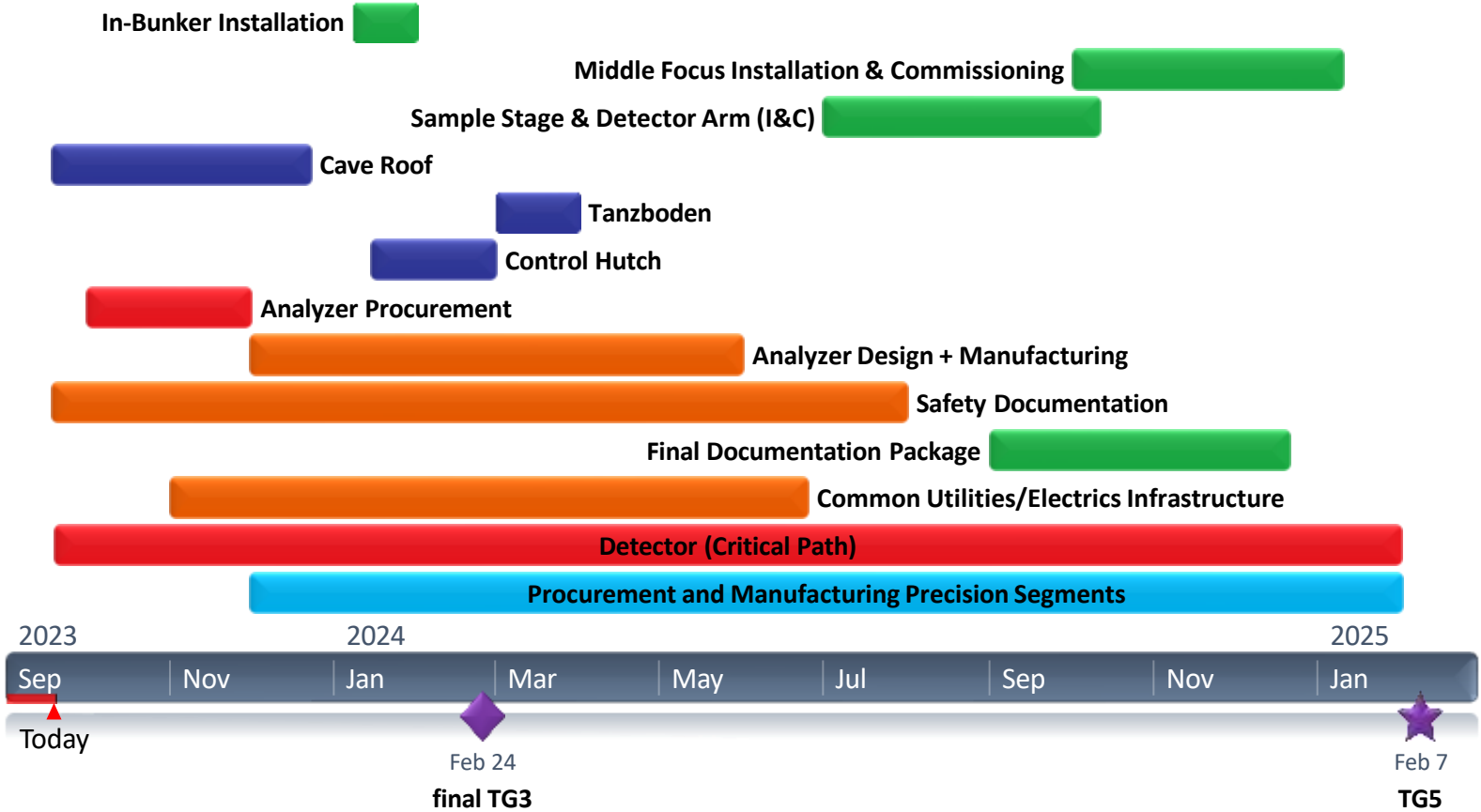


03.2022

- Slit system FAT this week (JJ-Xray)
- Design for flight tube and guide field up-stream of sample finished
- Support structure detector arm design finished
- Sample stage design complete
- Sub-TG3 scheduled for 6th of October



ESTIA – Schedule & Critical Path



2025

Current Risk Register

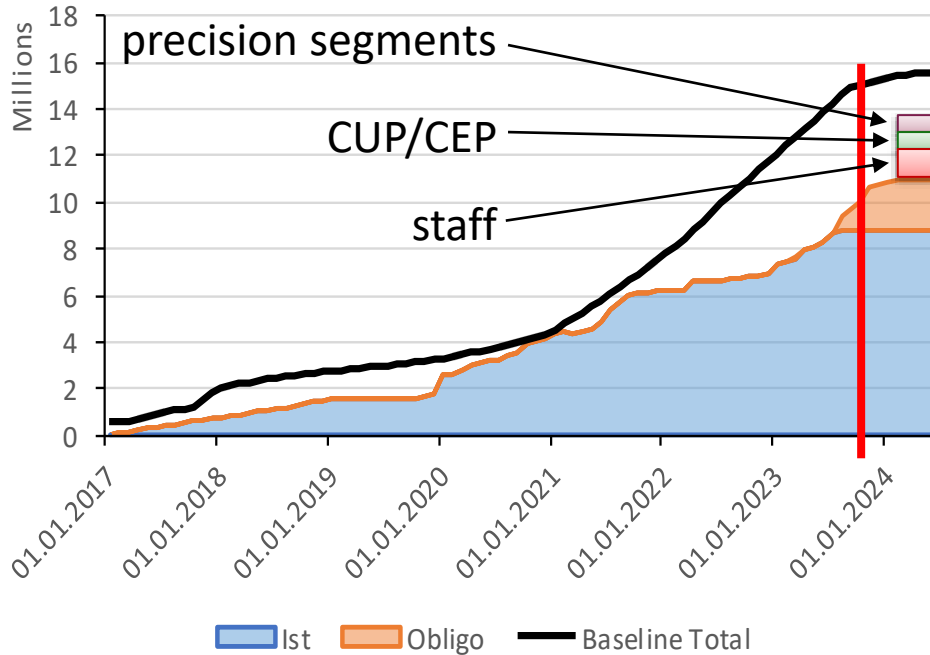
Top 5 Risks				
Title	Rating	Category	Partner	Treatment
Delay in Detector delivery	12	Schedule	ESS	Reduce
Shared ESTIA / Skadi Shielding	3	Schedule	ESS	Avoid
Lack of Detector Cabling and backend electronics definition	2	Schedule	ESS	Reduce

Top 5 Issues			
Title	Rating	Category	Partner
Material procurement cost increase and delivery time overrun due to geopolitical events	16	Schedule	PSI
Potential delays and increased cost for components already delivered to ESS due to grounding-zone redefinition	9	Schedule	ESS
Procurement delay of the Analyzer procurement	9	Schedule	PSI
Design Delay for Common Utilities Project	9	Schedule	ESS
Lack of clarity when it comes to ESS roles and responsibilities	4	Schedule	ESS

Risk Register from previous STAP meeting

Top 5 Risks				
Title	Rating	Category	Partner	Treatment
Common Electrical Project	10	Schedule	ESS	Observe
Common Utilities Project	10			
Radiation Safety Analysis	9			
Analyzer procurement	8			
PSS Project	8			

Top 5 Issues						
Title	Rating	Category	Partner	Cost	Delay	Quality
Impacts from geopolitical events	16	Cost	PSI	300-1000k€	7-12 months	N/A
ESS roles and responsibility	9	Schedule	ESS	25-100k€	4-6 months	N/A
Language of user instruction	4	Cost	PSI	25-100k€	1-3 months	N/A



Budget		
CHF	15.527	Mio

Ausgaben		
CHF	8.749	Mio

Verpflichtet		
CHF	11.225	Mio

Verpflichtet in %		
72.293		

Thank you for your attention!

Any questions?

