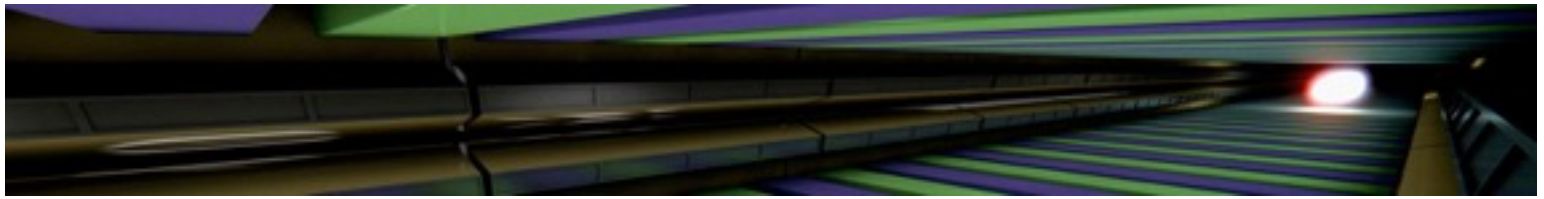


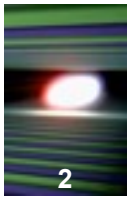
Introduction

Tobias Haas

Technical Meeting

31 Mar 2017

Topics

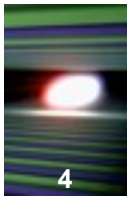


- Status Accelerator
- XHEXP1 status report
- Cost Increases SASE2/3
- Additional Cost Cabling Phase II
- Use of Halogen-Free Cables

Status Accelerator: Achievements

- 10 Hz beam operation with 30 bunches with energies up to 6 GeV@ 0.5 nC
  - Achieved on 19 Mar (week11)

Accelerator Status Cont'd



- Week 12 was a maintenance week
- Restart problems with the cryo plants
  - 4 cold compressors needed to be exchanged
- After fixing there were various quenches in L3 when trying to bring the beam to more than 2.4 GeV
- However, tuning of the modules and the RF system continues.
  - Machine is ready to go to 12 GeV
- Beam losses trigger fire alarms

Closing Schedule for the Northern Tunnels

new

03/09/2017 12:14 Hüning **Sperrungen Nordfächer**

Aufgrund einer weiterer Verzögerung bei den Installationsarbeiten gibt es Verschieb
Interlockinbetriebnahme. Der neue Zeitplan ist angehängt.

20.03.17	all tunnels(1)	ca. 15:30h-17:30h	closed
23.03.17	all tunnels(1)	7:00h-24:00h	closed
24.03.17	all tunnels(1)	0:00h-17:00h	closed
27.03.17	all tunnels(1)	from 15:00h	possibly closed, reserve
28.03.17	XTD2,XTD4,XS3	morning-noon	closed
03.04.17	all tunnels(2)	7:00h-24:00	closed, rehearsal
04.04.17	all tunnels(2)	0:00h-17:00	closed, rehearsal
12.04.17	all tunnels(2)	7:00h-24:00	closed, TÜV, XTL after 16:00h
13.04.17	all tunnels(2)	0:00h-17:00	closed, TÜV, XTL after 16:00h

(1)XTD2, XS3, XTD4, XTD9, XTD10, XSDU2
(2)XTIN, XSE, XTL, XS1, XTD2, XS3, XTD4, XTD9, XTD10, XSDU2
After that the northern tunnels are generally closed.

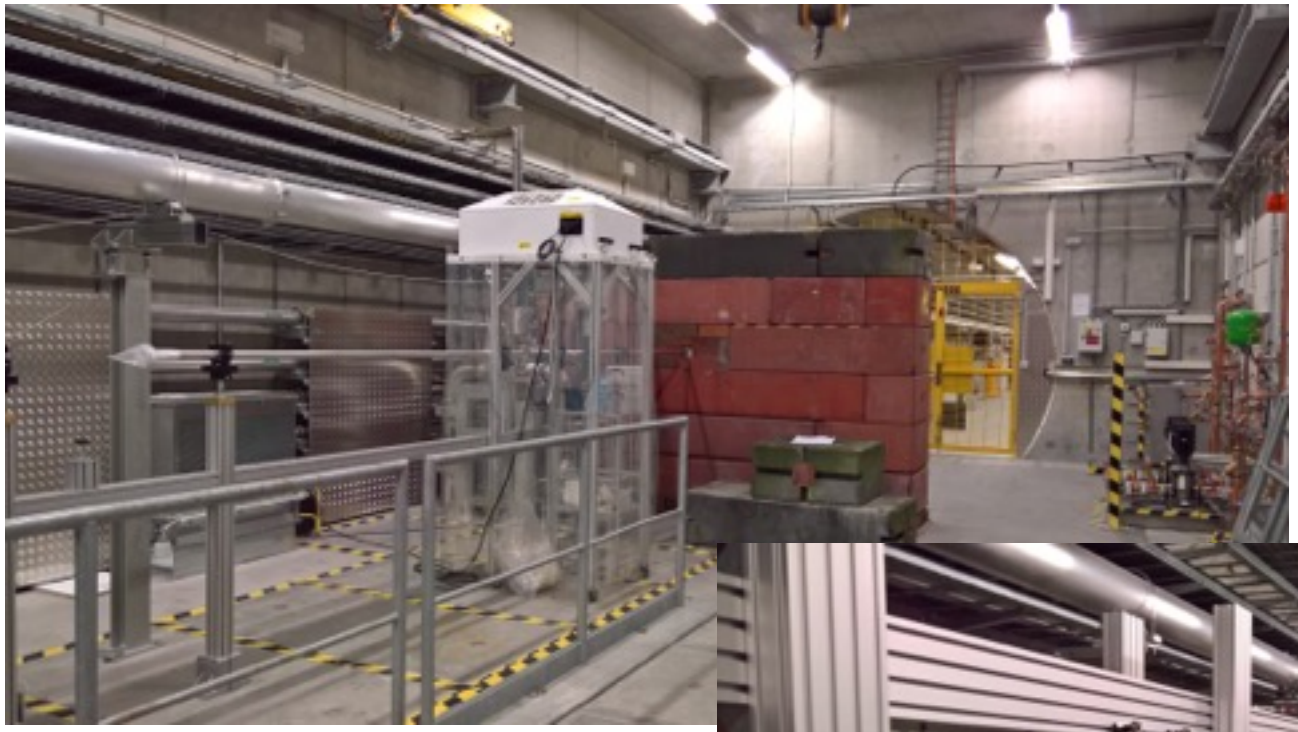
- After Easter: XTD2/4 closed for magnet tests
- XTD10 stays open until 24 April
- XTD9 stays open after 24 April until first lasing
  - Could be anything from 1 - 3 weeks

European XFEL

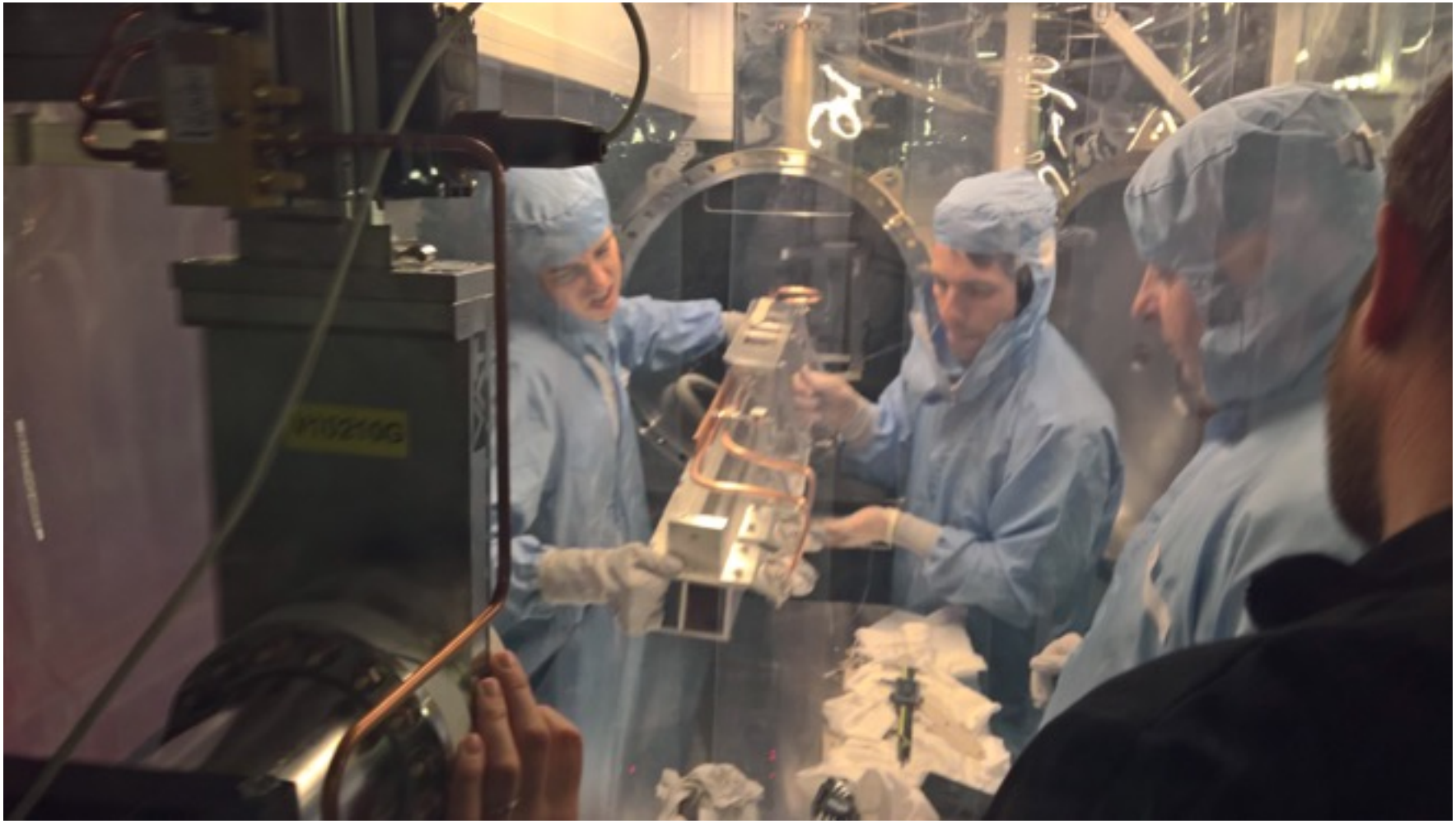
Rapid progress on Vacuum Cabling

European XFEL

Big progress in SASE3



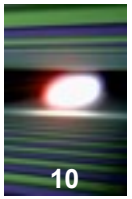
Installation of mirrors in SASE1 ongoing



Activities in XTDs

- Mechanical work in SASE1 is almost done
  - Big remaining item is the ongoing installation of the mirrors
- All cabling work in SASE1 is done
- Intense activity on Beckhoff and software integration
  - Karabo is running the Vacuum, the Motion and the EPS loops
  - There are still a lot of issues
  - Details will be discussed during the SASE1 Readiness meeting

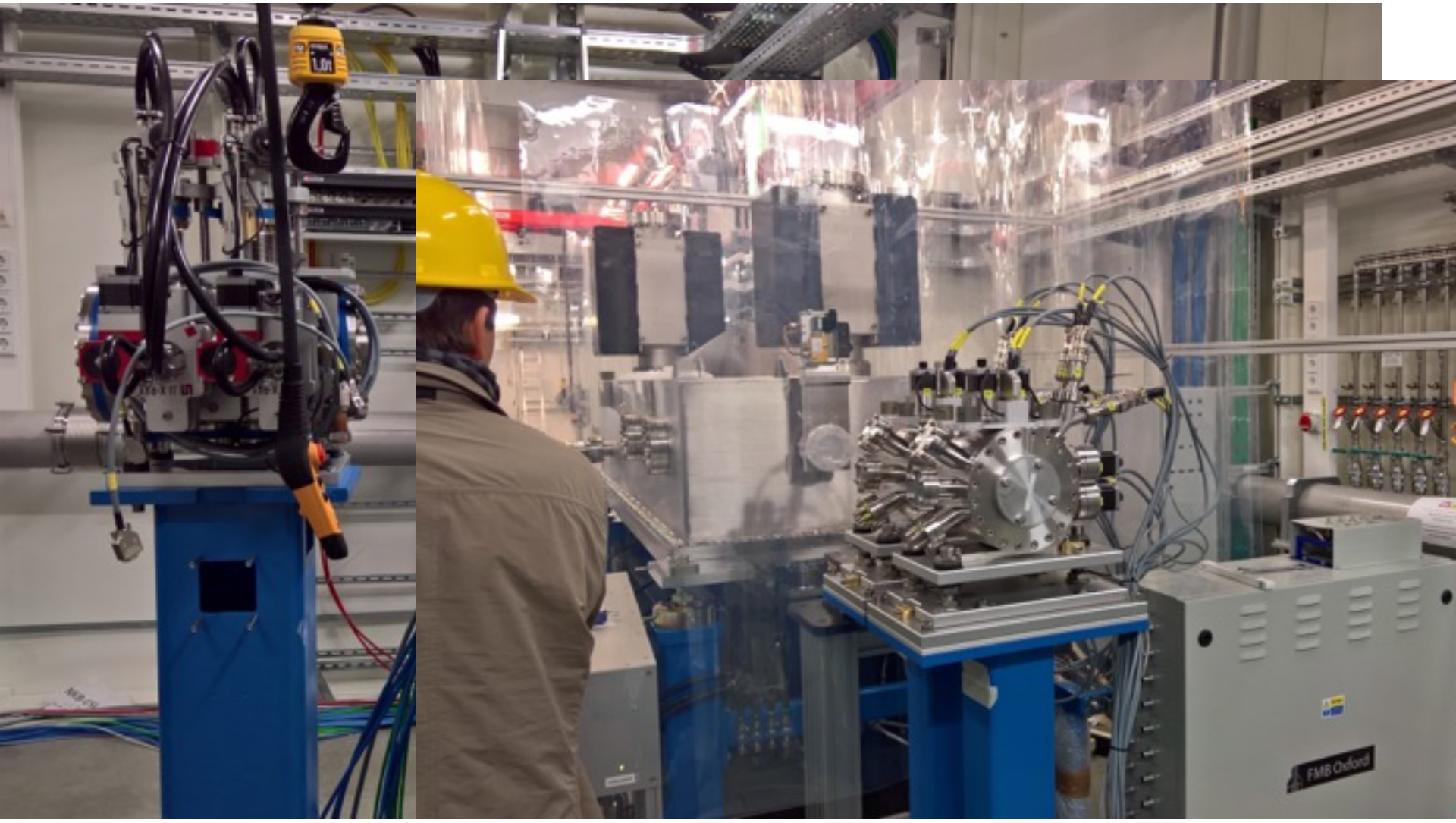
Experiment Hall



- Intense construction activity in both SASE2 and SASE3
  - Missing doors in SASE3 expected next week
- Intense Installation activity in SPB/SFX
- Commissioning of the SASE1 instruments has started
  - 2 Beckhoff loops are running for both SPB and FXE
- Big cost increases due to changes to plenums and clean room curtains in SASE2 and SASE3

European XFEL

New Components SPB/SFX

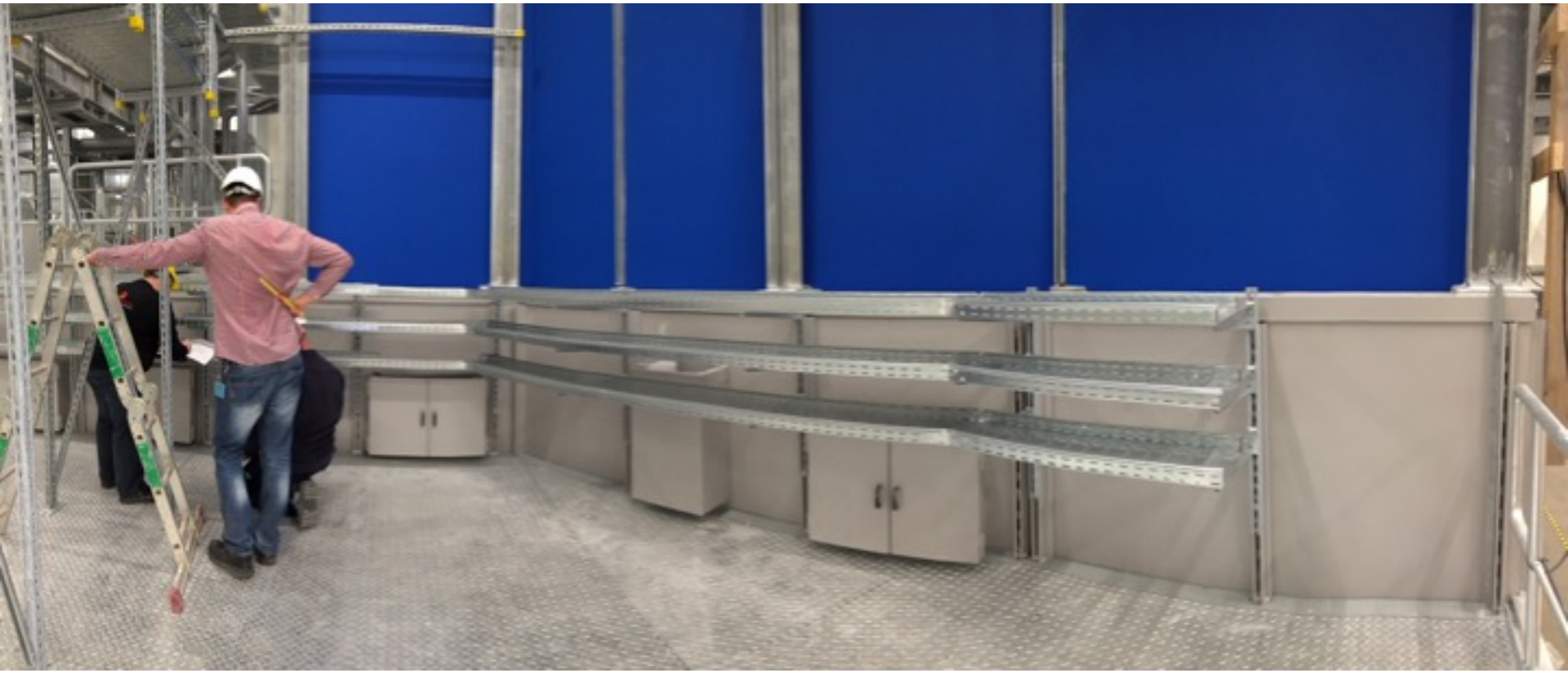


Support frame SPB (CSS)

Commissioning and Testing FXE

Phase I Cabling SASE3

TGA Installations SASE2



Remaining Civil Construction Activities SASE2

Cost Increases SASE2/3

- We received significant “Nachträge” for SASE2 and SASE3 recently:
  - SASE3: 360 k€ (210 k€ for changes to plenums)
  - SASE2: 580 k€ (360 k€ for changes to plenums)
- The costs are results of changes to the original planning developed between Caverion/Engie and the instruments
  - The magnitude of the cost comes as a surprise
  - PI states that they would have expected a factor 5 less
- There are other cost increases coming
- This is also a time issue

Recent Additional Information

- A number of meetings were held recently
  - Caverion on 23 Mar
  - SpeTec, MCRT and Engie on 28 Mar
- A large fraction of the additional costs originate from “Streifenvorhänge” (Clean room curtains)
  - These costs are due to user requests that require complex non-standard solutions
  - A cost reduction is possible only if all users reduce their requests
- A meeting has been called for 5 April with PI, SASE2 and SASE3 in order to simplify the requests
  - Information to Caverion/Engie before Easter

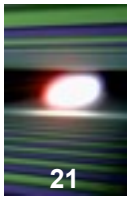
Additional Cost Cabling Phase II

- Actemium sent us one big “Nachtrag” for additional cables (105 k€)
- Actemium announced 2 further “Nachträge” for connectors and costs of confectioning and pulling with a similar total amount
  - This is due to the increase in the number of cables that went from 800 to 2500 in SPB
  - There is a smaller effect in FXE which has only 500 cables
  - 46 k€ is due to 23km of wrong encoder cable
- PSPO (Adriano) shall come around to the instruments to collect signatures for the Purchase Request

MB Decision on this topic (MB345)

- The MB agreed to implement the following: The additional cost for cabling Phase II including the cost for the wrong encoder cable has to be carried by the instruments according to the exact split-up of actual cables installed
- Practical implementation:
  - 46k€ will be split evenly 6 ways (7.7k€ each)
  - The remainder will be split according to the actual cables installed

Halogen-Free Cabling



- Permanently installed cabling in XHEXP1 needs to be halogen-free
  - There is a DESY guide line
- There was no guide line for cables that are not permanently installed
- PSPO asked a working group to write a guide line for the use of halogen-free cables in XHEXP1 (U. Brüggmann, P. Frankenberger, N. Coppola)
  - The MB approved the document in principle

MB Decision on Halogen-free Cabling

- The MB approved the principle exposed in the MBP and tasked PSPO to write a new text. It should be more concise such that it can be distributed to users.
- The MB also tasked Safety to provide a procedure related to the purchase and installation of halogen(-containing) cables, when this request is deemed necessary.
- My Interpretation:
  - The document should be applied from now on
  - It can be found here:
    - ➔ http://tinyurl.com/m2cjon9

Next Meetings

- SASE1 Readiness by invitation
  - Today 09:00 after TechMeet in this room
    - Discussion about readiness for closing the tunnels
- Plenums and Clean room Curtains SASE2/3
  - Wednesday 5 Apr 15:00
- Next XHEXP1 hall coordination meeting
  - Friday, 7 Apr 8:30