



TC Report (Photon Systems)

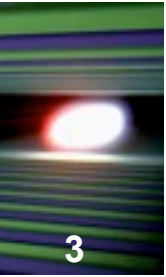
Tobias Haas
for the TC Team
TC Meeting
16 May 2012

XTD10 and XTD9 last week

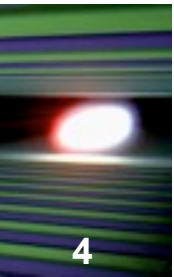


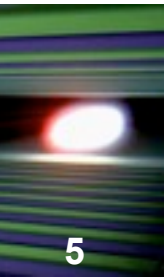
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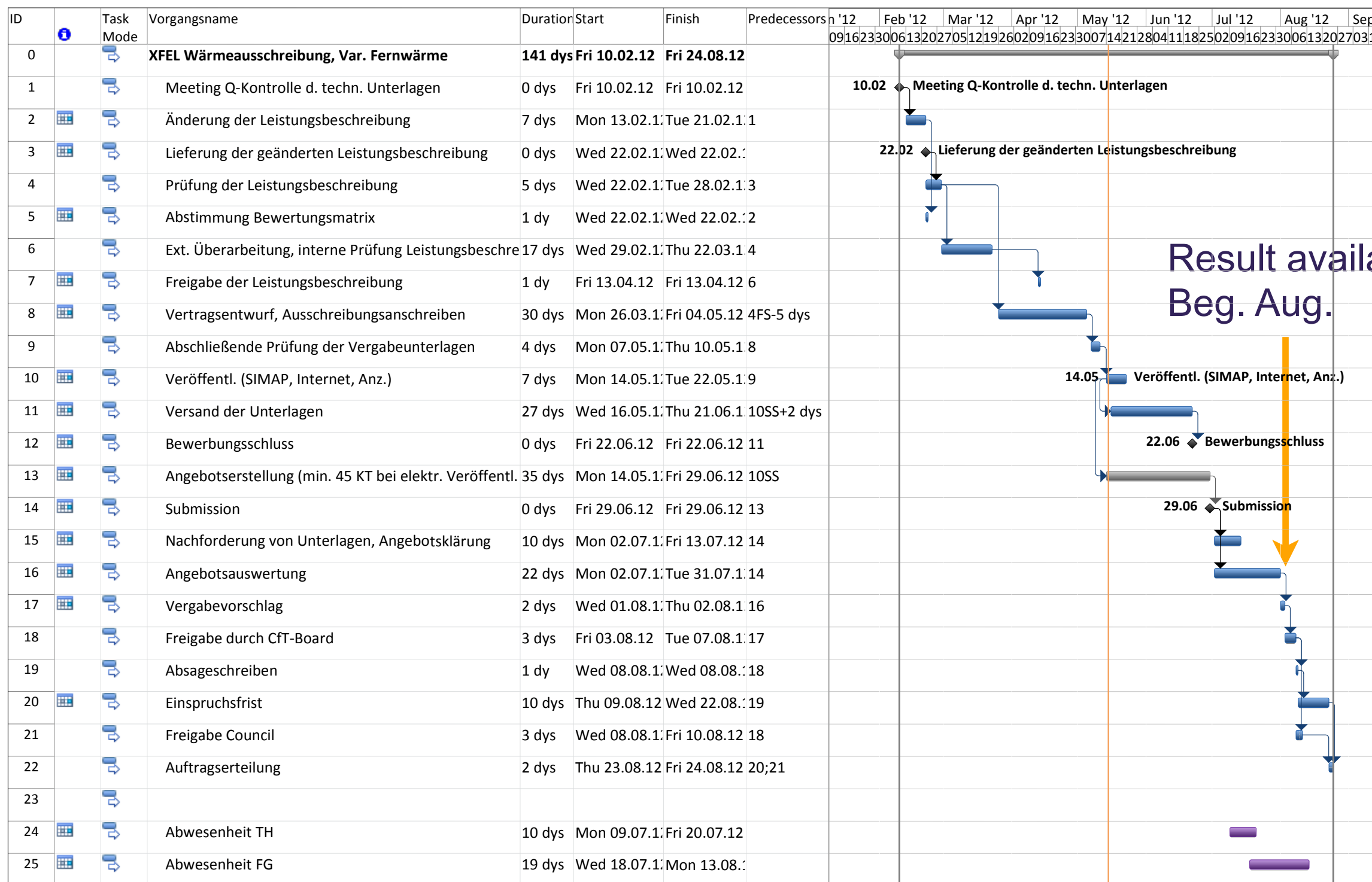
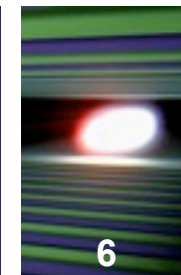
- XHQ and XHEXP1
 - Status District Heating CFT
 - Experimental Hall Layout
 - XHQ Labs
- Installation Planning XTDs and XHP (=XHEXP1)
- Next Steps



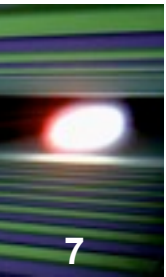


- Serves Schenefeld and Osdorf
- Three alternate scenarios:
 - A: connect in Schenefeld for both sites
 - B: connect in Osdorf for both sites
 - C: connect both in Schenefeld and Osdorf
- Options A&B require a connection between Schenefeld and Osdorf to be built by XFEL
- Option C needs two handover points but no connection
- Published on 14 May
- Dropped the BHKW option

Schedule



Result available:
Beg. Aug.



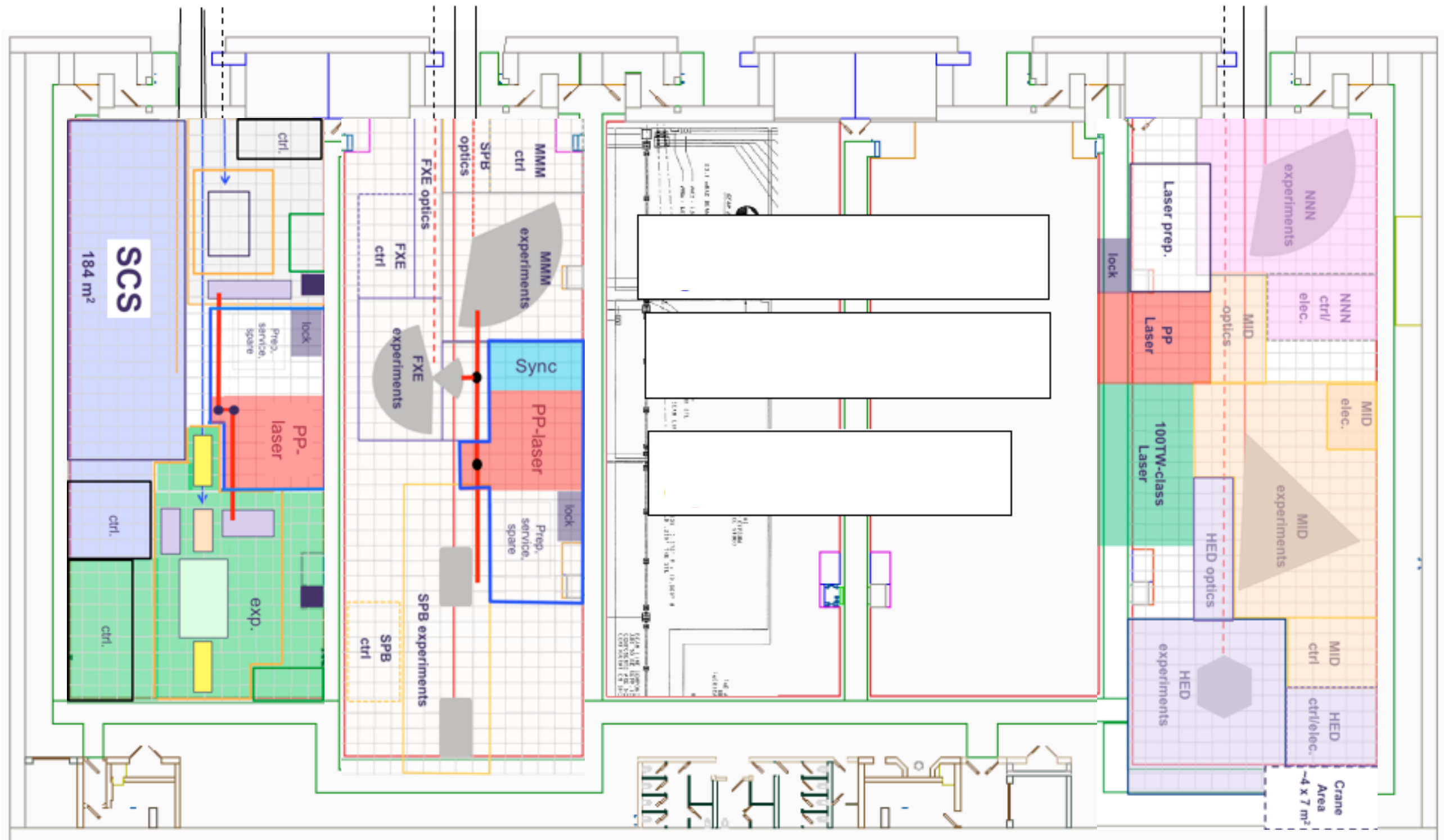
- Three necessary requirements
 - Plan approval order
 - Economics
 - Availability of gas
- If all three are satisfied:
 - CFT would be adapted to allow heat contracting via a BHKW
- None of the three requirements could be ascertained

Experiment Hall Layout

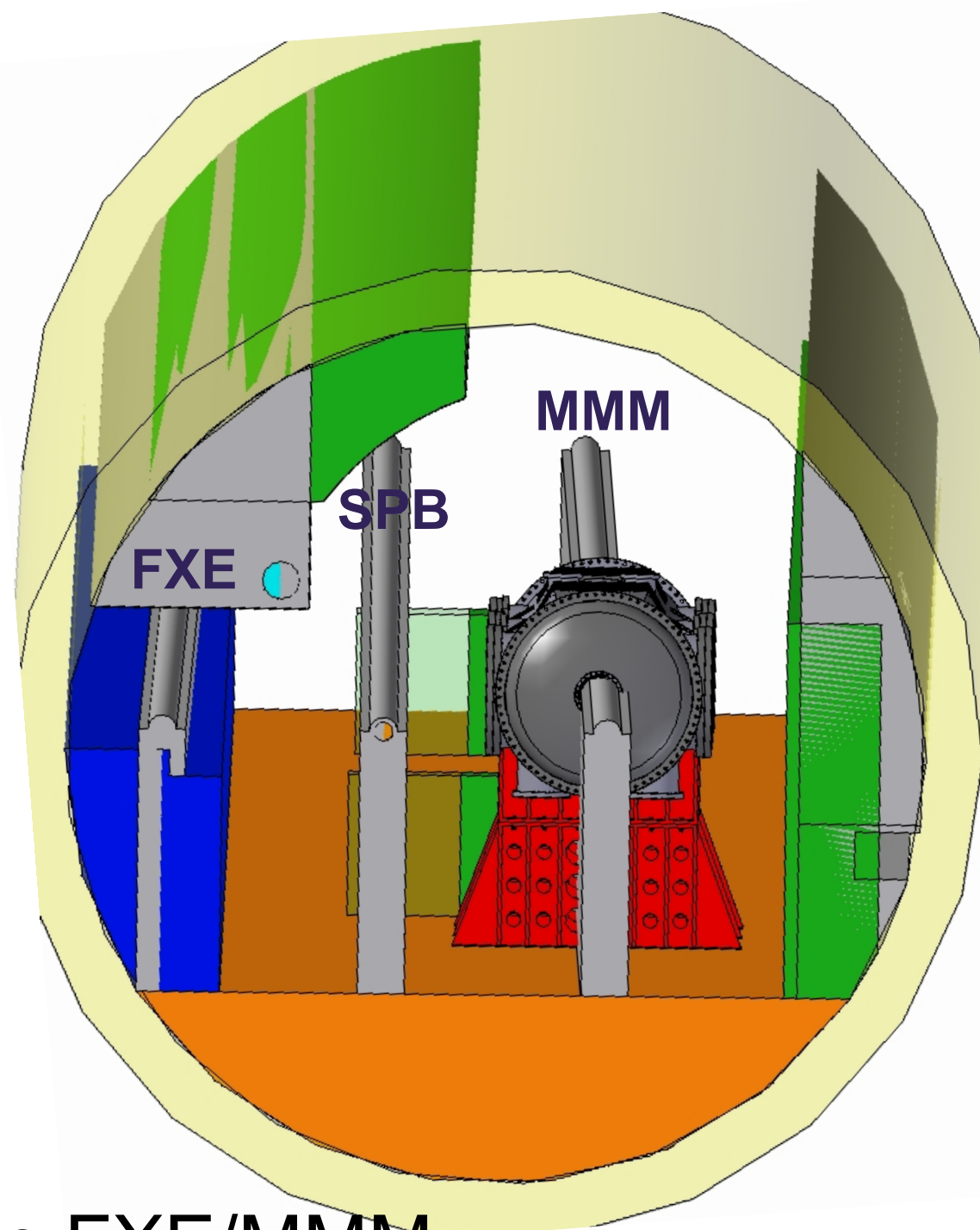
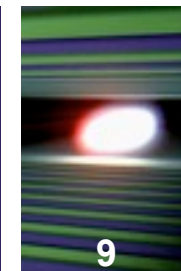
SASE3

SASE1

SASE2

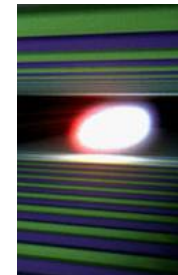


Tunnel Situation SASE 1



- Conclusion: Flip FXE/MMM

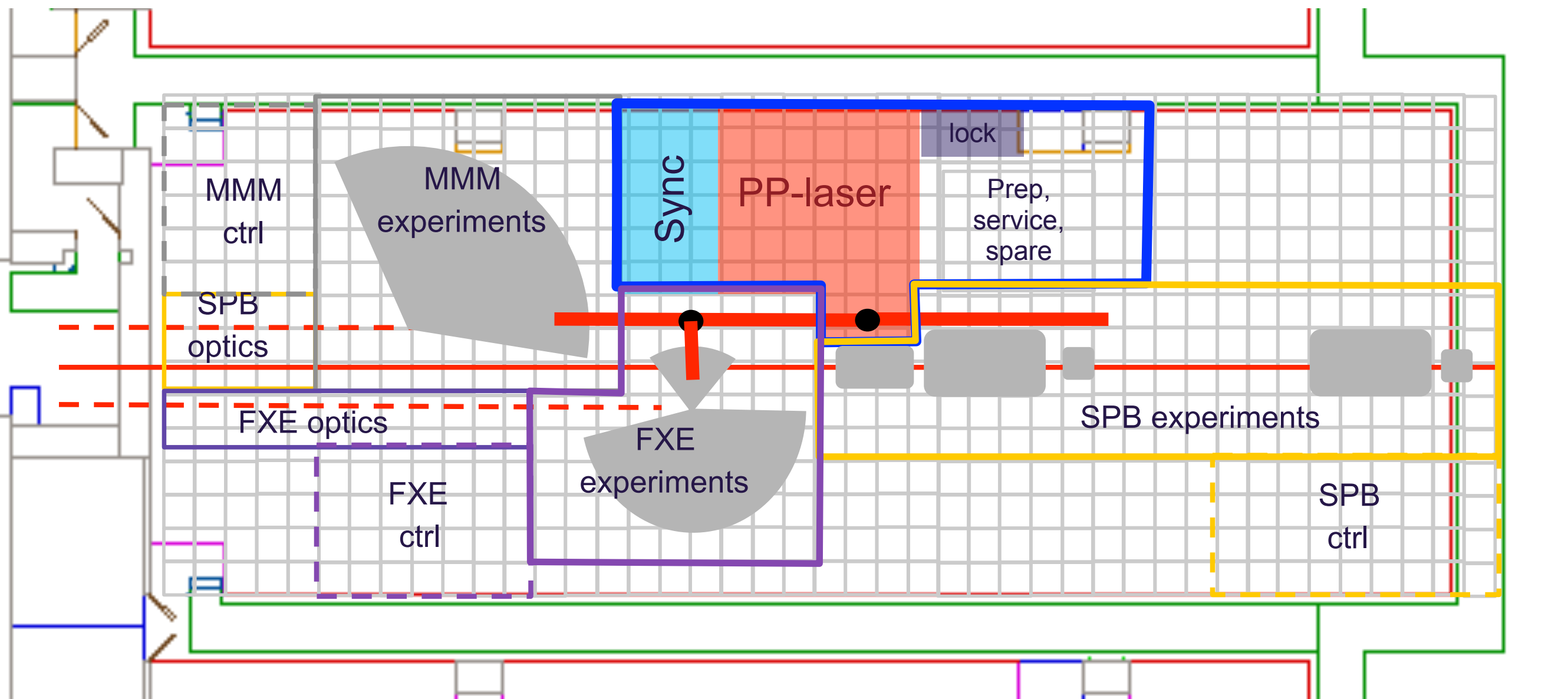
Conceptual floor plan for SASE 1 instruments



Version 27/2: **old distribution**

New/advantages:

Disadvantages: FXE has total 17 m inside XHEXP for FXE beam del. comp.; this might be just enough space for pacing mono, but too little for add. high-res-mono





New/advantages: FXE gains access to placement of add. components inside XTD

Disadvantages: FXE has 5 m less for beam delivery, which go to MMM

OL footprint rather different. Possible ? Beam del. to far SPB-station diff.

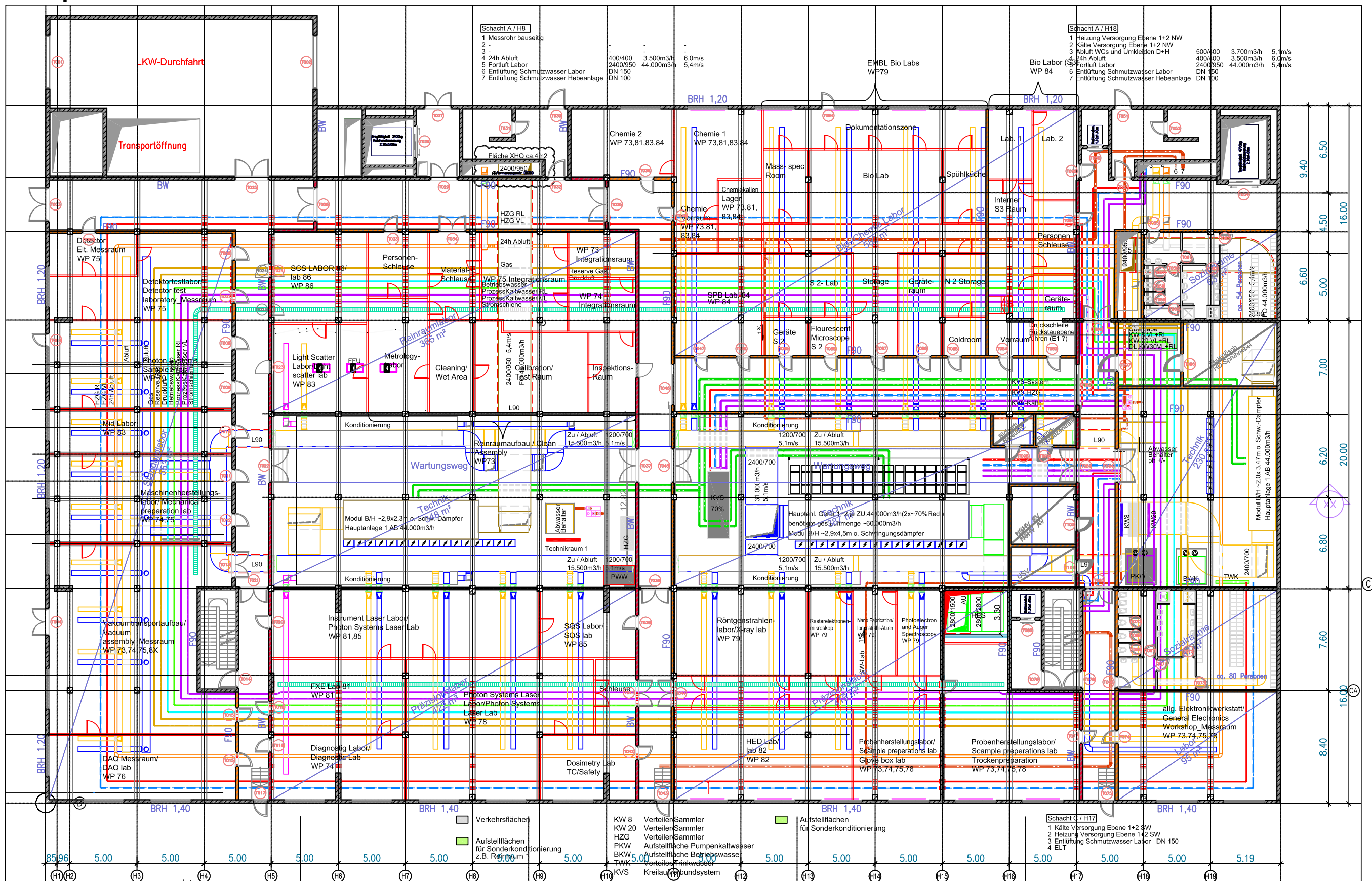


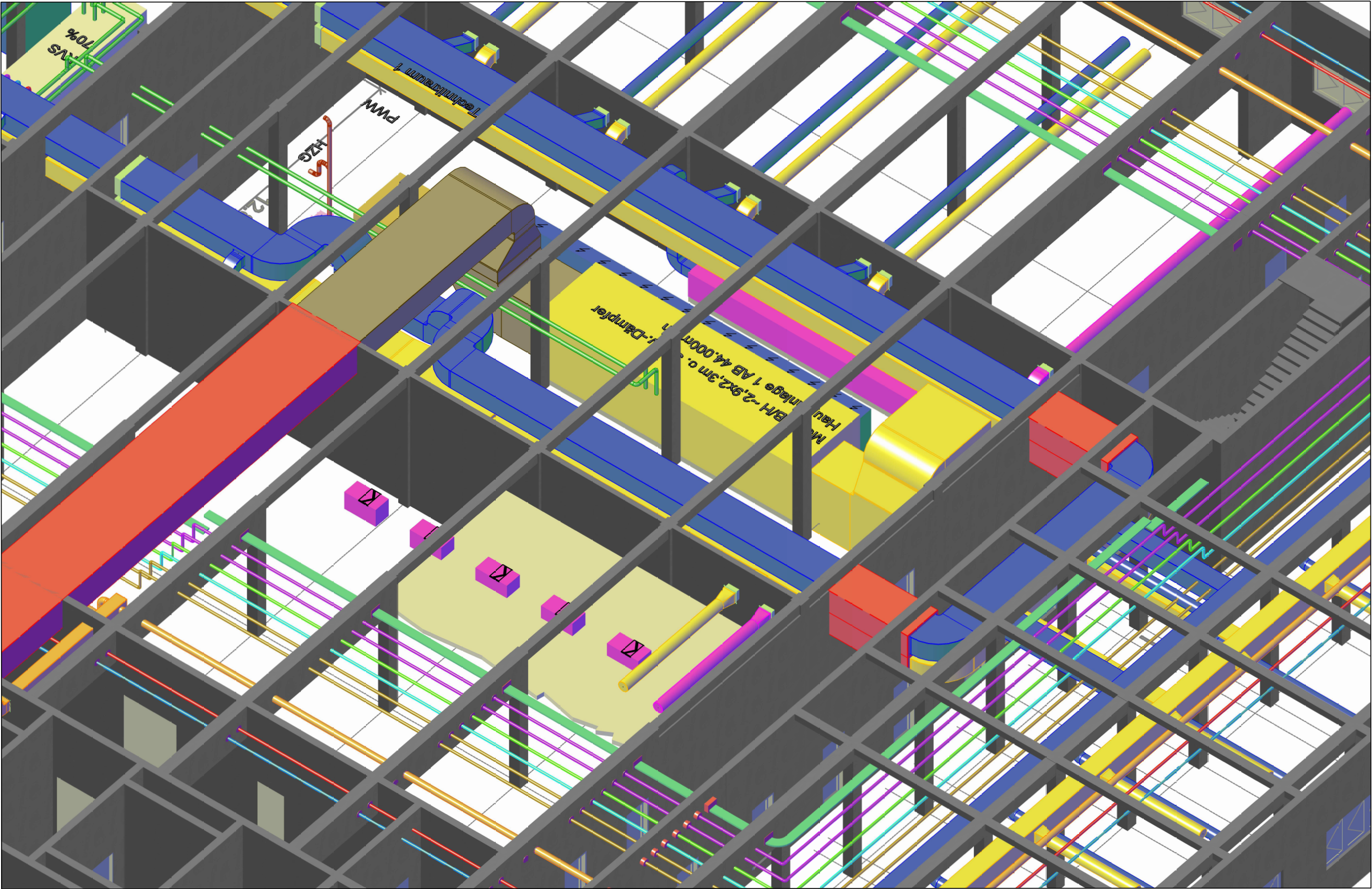
- Beamport Allocation SASE1 will be flipped
 - FXE and MMM change sides
- Current floor allocation still problematic:
 - Laser hutches
 - Crane Access
 - ...
- Details to be worked out and finalized by 25 May
- Power and ventilation needs:
 - worked out in detail for SPB (SASE1)
 - next instrument is SQS (SASE3)
- Will have a room book with hutches and TGA numbers

- TGA and Labs:
 - Feasibility Study (incl. cost estimate) was due 7 May
 - Delayed by two weeks
 - Current Planning
 - Internal presentation: 25 May
 - Public presentation: 15 June
 - Start of Approval process (ZBAU): July
 - Start of Civil Construction: Aug 2013
 - Move-in: Early 2015

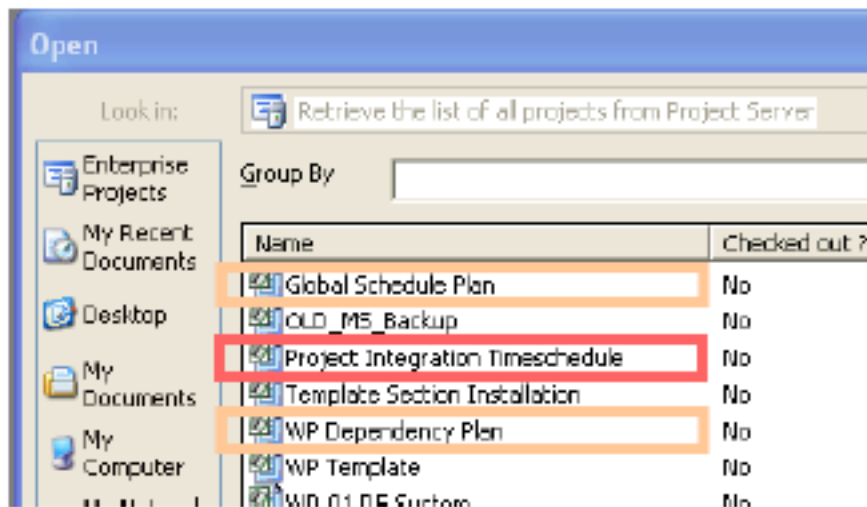


European XFEL GmbH - XHQ





Project Integration Timeschedule PIT



- to have an overview of the scheduling of all the different parts of the project
- to link the major / top level milestones to their constituent sub-projects
- not meant for detailed planning

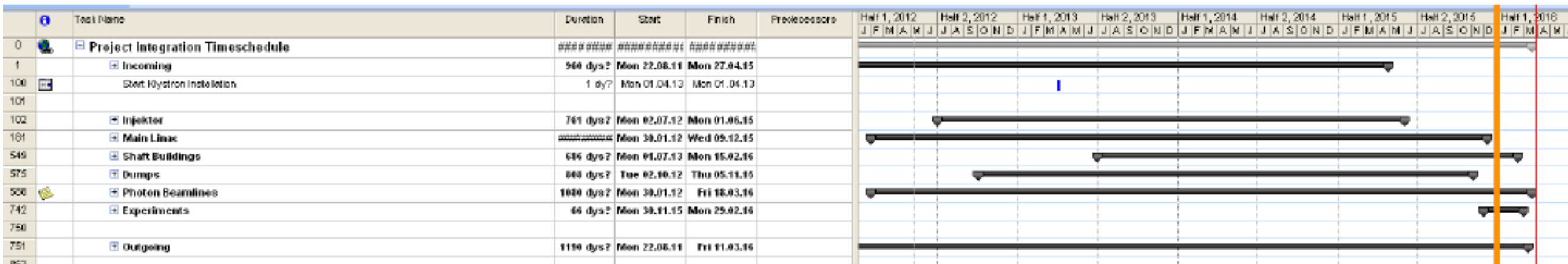
	Task Name	Duration	Start	Finish	Free Slack	Total	Sep C
0	Project Integration Timeschedule	#####	#####	#####	0 dys?	0	
1	Incoming	960 dys?	Mon 22.03.11	Mon 27.04.15	235 dys?	235	
107							
108	Start Klystron Installation	1 dy?	Mon 01.04.13	Mon 01.04.13	0 dys?	49	
109							
110	Injektor	761 dys?	Mon 02.07.12	Mon 01.06.15	209 dys?	209	
169	Main Linac	72,33 dys?	Mon 30.01.12	Wed 09.12.15	72,33 dys?	72,33	
557	Shaft Buildings	686 dys?	Mon 01.07.13	Mon 15.02.16	24 dys?	24	
583	Dumps	96 dys?	Tue 02.10.12	Thu 05.11.15	96 dys?	96	
596	Photon Beamlines	1030 dys?	Mon 30.01.12	Fri 18.03.16	0 dys?	0	
754							
755	Machine commissioning	10 dys	Wed 25.11.15	Wed 09.12.15	72,33 dys	72,3	
757							
758	Instruments	300 dys	Tue 06.01.15	Mon 29.02.16	14 dys	1	
765							
766	Outgoing	1190 dys?	Mon 22.03.11	Fri 11.03.16	5 dys?	5	
868							
890							
944							

- already 960 lines (944 + 16 top level milestones) in the PIT
 - incoming milestones ca. 100
 - outgoing milestones ca. 180
 - 79 for Injector (90 m)
 - 388 for main Linac (2.1 km)
 - ca. 120 for infrastructure
 - ca. 230 for Linac
 - 150 for Photon beamlines
 - (ca. 10 per tunnel)

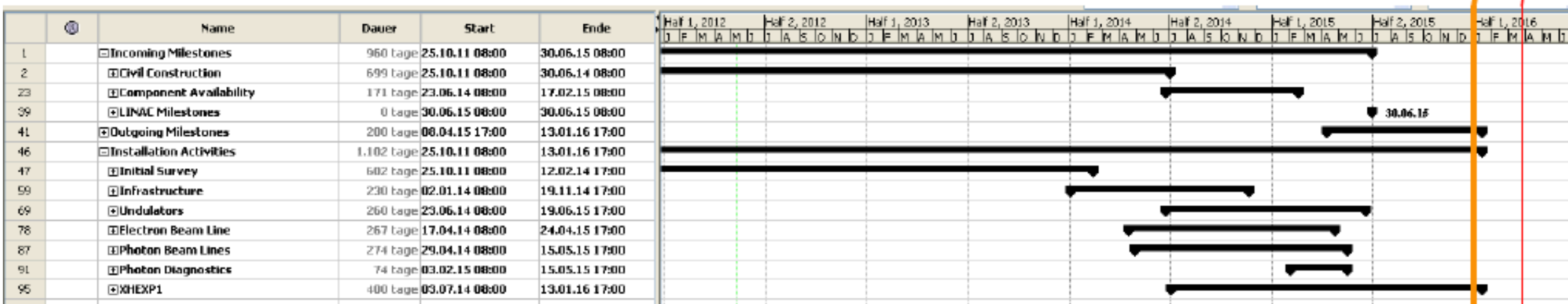
Shifting completion dates

Milestones and tasks should not be pushed further

Current view of the PIT

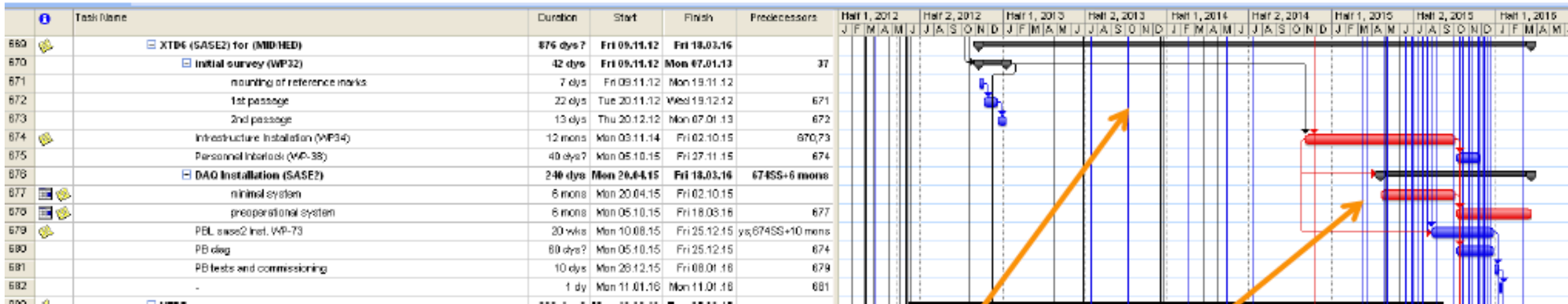


PBS-Installation Plan from one year ago



Current Critical Path

A recent look at the critical path in the PIT

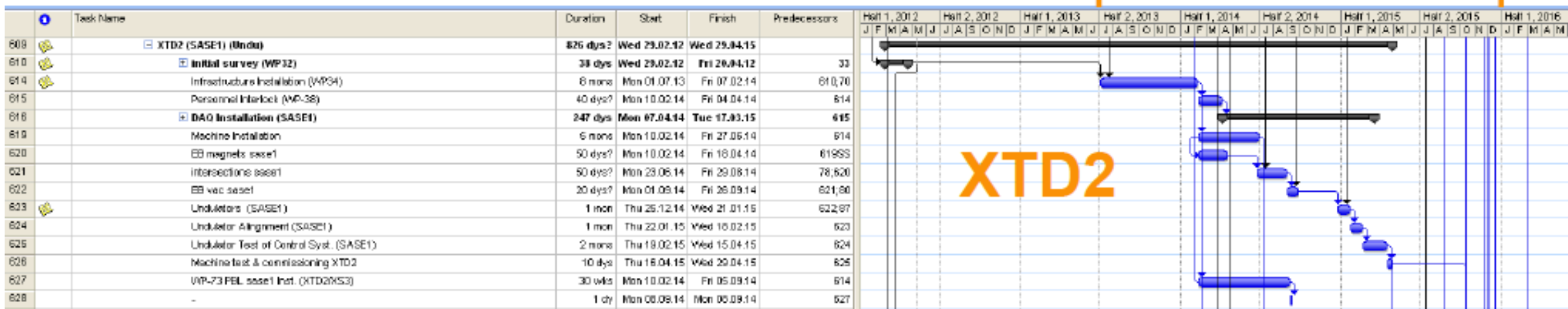


long pauses between activities

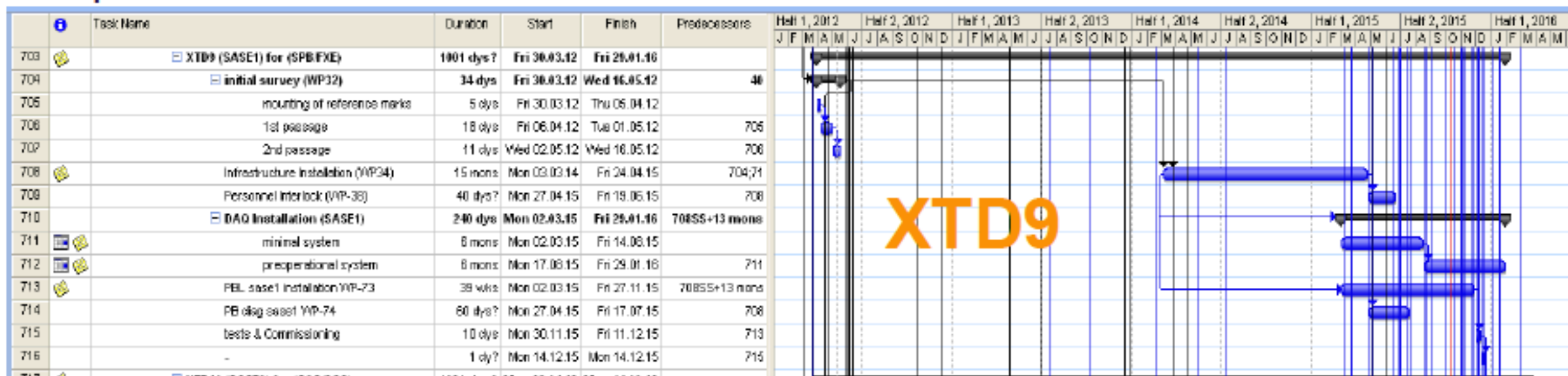
even arbitrarily introduced overlaps
don't slacken the situation

SASE 1: XTD2 and XTD9

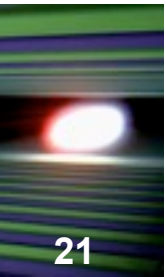
electron beamline



photon beamline



Time Planning



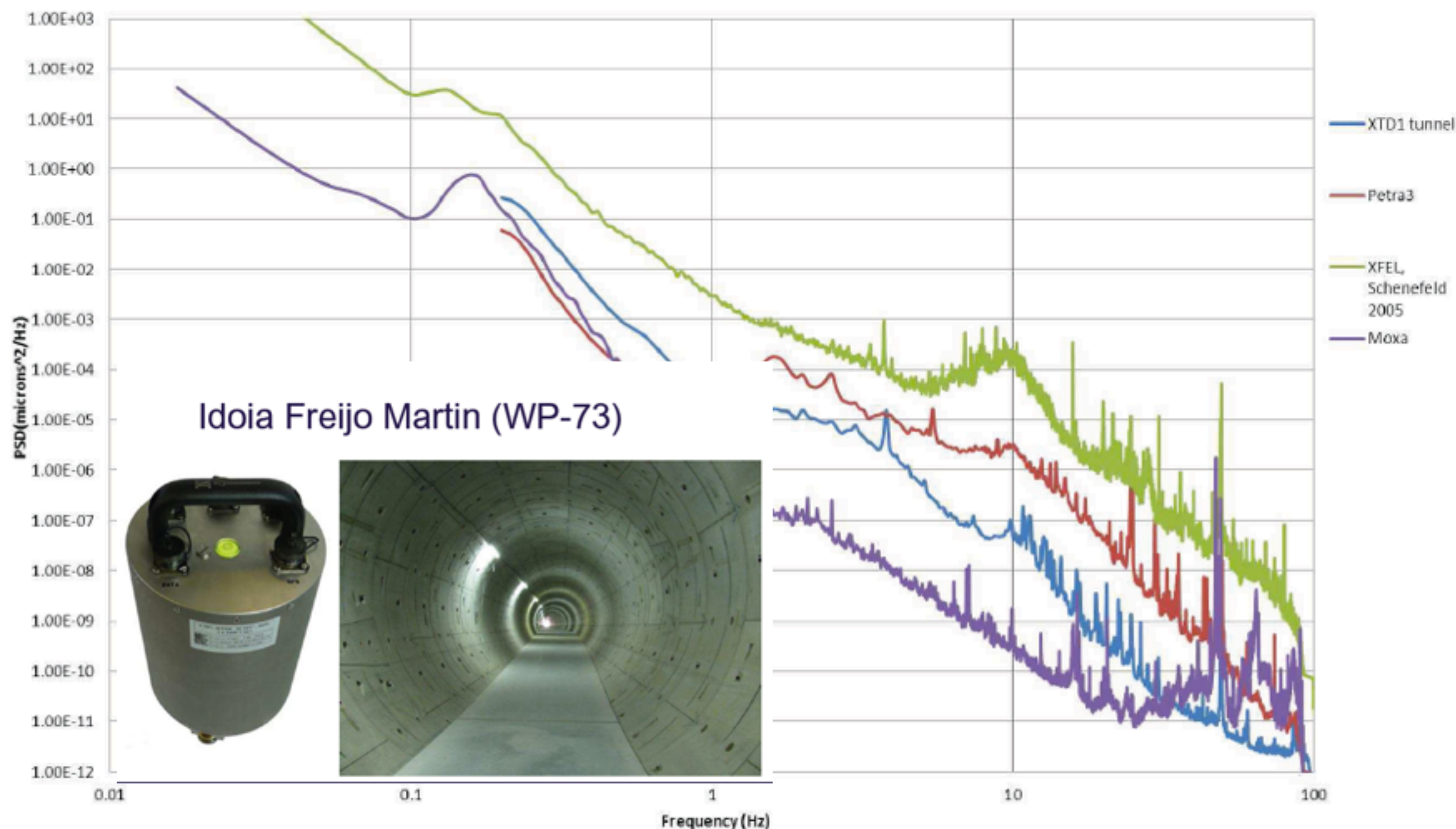
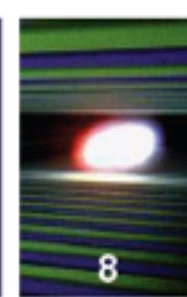
- Large gaps between availability of buildings and start of infrastructure installation
- Will work on the details of this in the next months
 - S. Cunis will come around and discuss this with the respective WPLs

Next (big) Steps



- Finalize floor layout in XHEXP1 and fill the room books
- Work on the details of time planning
- Engineering Team Instruments
 - One engineer hired
 - Need a team leader and four more (interviews end of May)
- Cable Planning
 - KDS planner to be hired (interviews in June)
- Strengthen the TC team
 - Advertise additional positions
- Agree on the use of DACHS for XFEL
- PRR undulator intersections
 - Formal agreements on assembly and installation
- Vibration baseline measurement

Analysis of the measurements



Power spectral density of vertical ground motion, quiet period at the XTD1 tunnel.
Petra-3 2011 experimental floor (Gerd Wellenreuther), Schenefeld 2005 .Moxa
(reference for an extremely quiet location). <http://vibration.desy.de/sites/measured/>