

# FLASH2020+

## Progress Review Meeting

Infrastructure Tunnel / I-Pillar

Olaf Rasmussen  
Hamburg, 18.10.2024

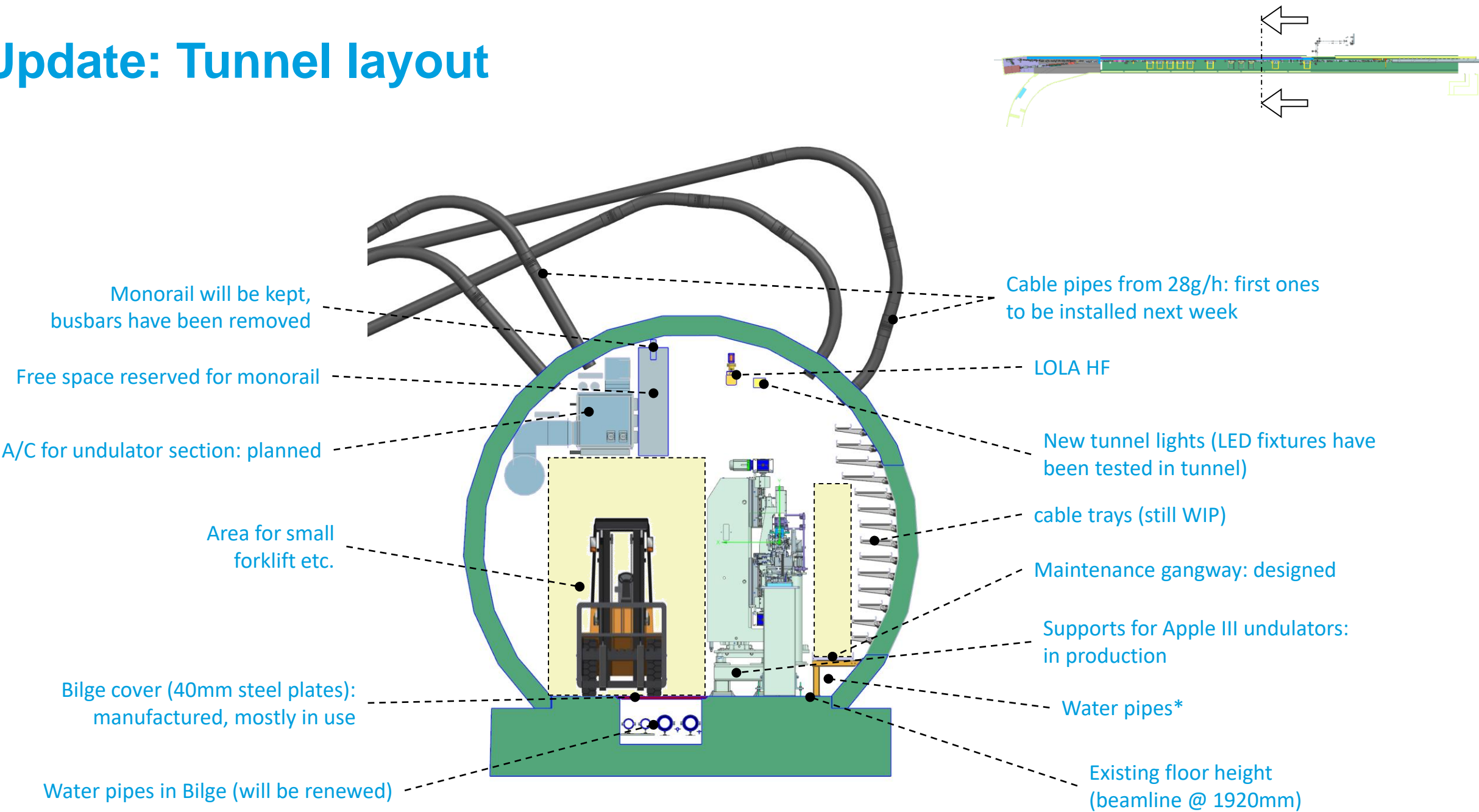
# Room book

- → please make sure that **all** your requirements are in the room book (incl. electrical power, cooling, IT, timing, ...)
- → this also includes existing infrastructure that you'll continue to need!
- → not only for Stage "0", but also for Stage "Full"!
- **Also: please check if all the  $\mu$ TCA crates for the racks are ordered by someone!**
  - → Racks will be provided by I10,  $\mu$ TCA crates will not!
- **Most technical groups have frozen their planning and will only accept new requests conditionally!**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Geometrie	Objekt	Objekt	Hersteller (P/N)	Hersteller (P/N)	Hersteller (P/N)	Hersteller (P/N)	Hersteller (P/N)	Hersteller (P/N)	Hersteller (P/N)	Hersteller (P/N)	Hersteller (P/N)	Hersteller (P/N)	Hersteller (P/N)
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Confluence: FLASH2020+ Project -> Project Pillars -> Infrastructure -> Raumbuch FLASH2020+

# Update: Tunnel layout





# Emptying of the FLASH1 tunnel

Removal of beamline, supports, gangway, ... everything.

- From full accelerator to empty tunnel in less than 3 months
- Includes temporary suspension of the controlled area (radiation protection)
- Could only be done through joint effort of many DESY folk (THANKS A LOT!)

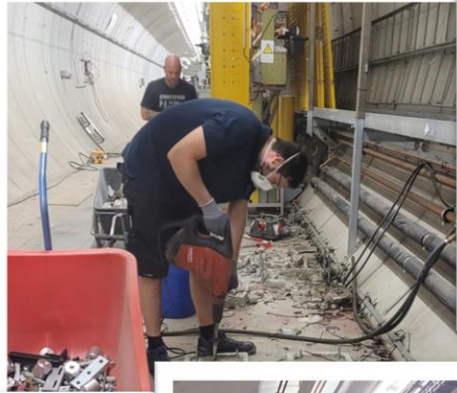




# Removal of FLASH1

From ~150m to dump

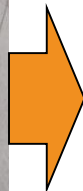
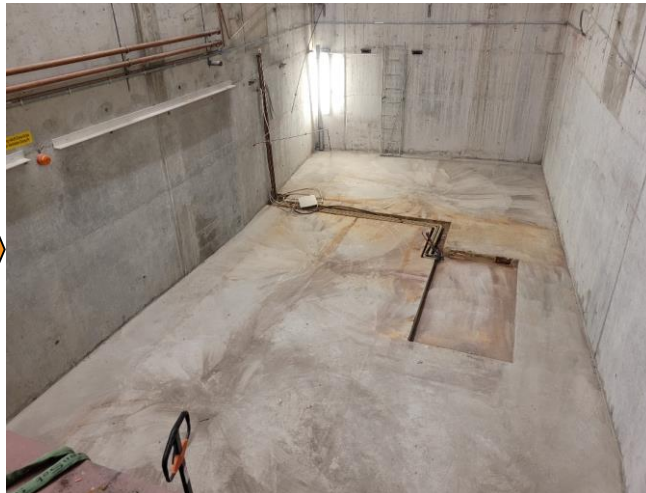
- Some impressions:





# FLASH1 dump pit

Has been emptied, and the new concrete filling is halfway\* done

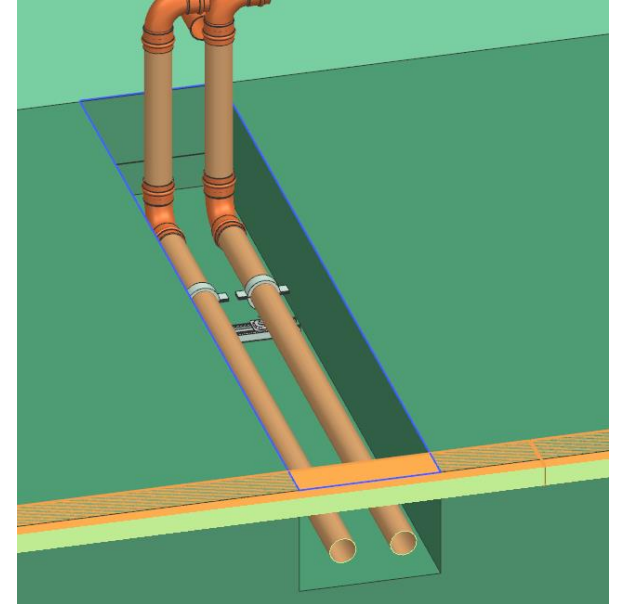


\* the easier half. Next step (3/4): probably next week.

# Slits in the floor

## For water pipes

- Positions were marked by MEA2
- External company (ABS) did the cutting and chiseling of the concrete
- PETRA maintenance week was used for concrete chiseling work (to avoid vibrations during user run)
- Some leveling/smoothing still to be done before installation of pipes

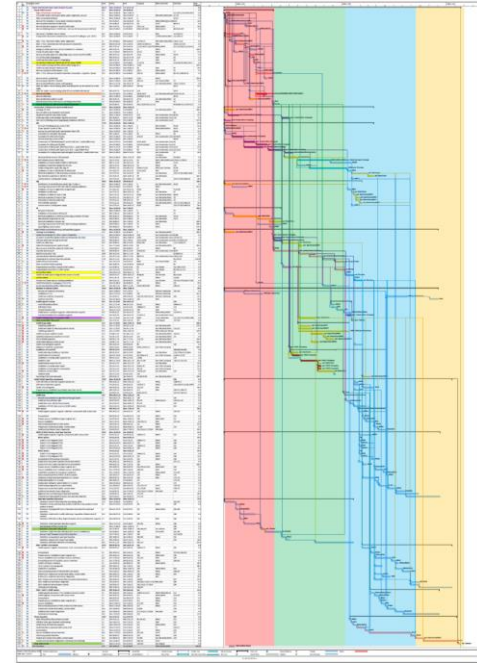




# Update: Shutdown schedule

## Where are we, and what will happen in the next weeks?

- We are currently in **construction phase** (until ~end of 2024)
- Up to now: some delays, but overall successful dismantling phase
- Some delays in construction work, but still manageable
- Updated schedule in confluence: <https://confluence.desy.de/x/rIHUF>  
*FLASH2020+ Project -> Project Pillars -> Infrastructure -> Schedule (Shutdown 2024/2025)*
- Next steps:
  - Core drillings for & installation of cable pipes (already started; will continue on Monday)
  - Paint tunnel walls (starting from 110 to 160m)
  - Concrete next step of dump pit (starting next week)
  - Mark & drill floor holes in Extraction Area (for laser beamline)
  - Plan cable trays, lighting positions, ...
  - Update schedule (soon)
  - ...

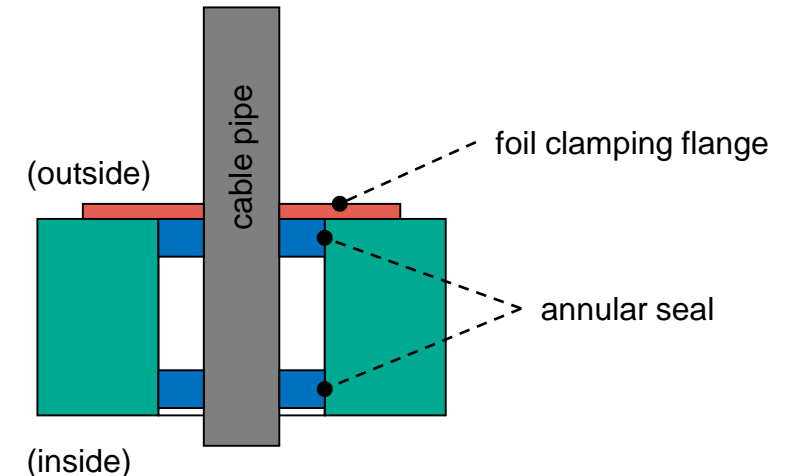
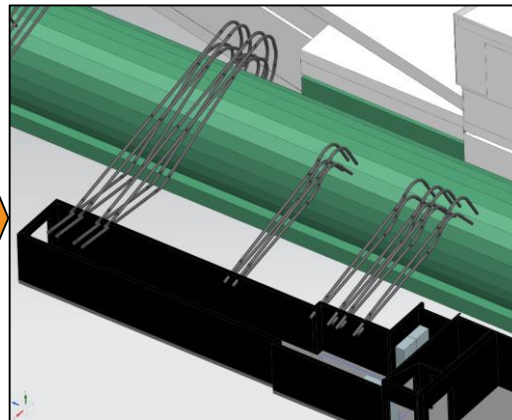
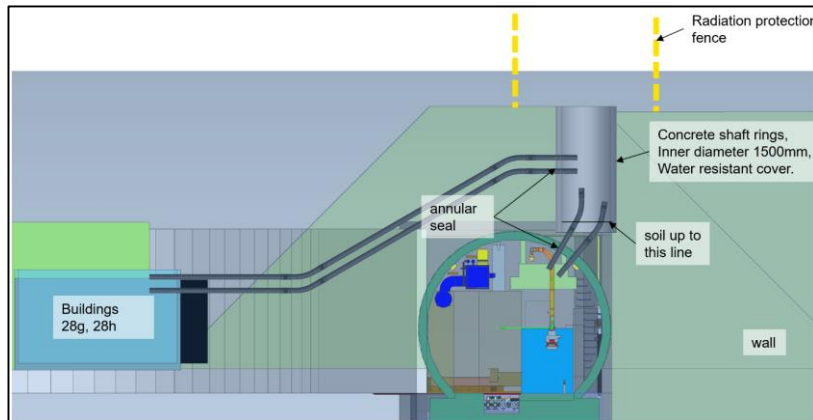




# Re-planning of cable routes between 28g/h and FL1 tunnel

Some changes since May...

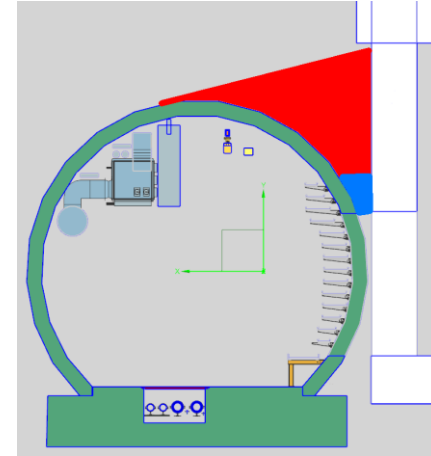
- The shafts had to be removed due to radiation protection concerns
- After digging the first hole, some concrete was found (where it shouldn't have been), so the first 12 cable pipes needed to be moved to the left side of the tunnel
- Structural Engineer revised his assessment: core drillings needed to be arranged in double-rows
- Additional sealing was deemed beneficial (foil clamping flange/„Folienklemmflansch“ on top of annular seal)



# Cable routes between 28g/h and FL1 tunnel

## Progress so far

- Digging started on 10.09.; next day: concrete wedge found (blue: expected concrete, red: surprise concrete)
- After some re-planning: first core drillings done this week, continuation next week.
- All needed cable pipes are on campus, as well as sealing gaskets.

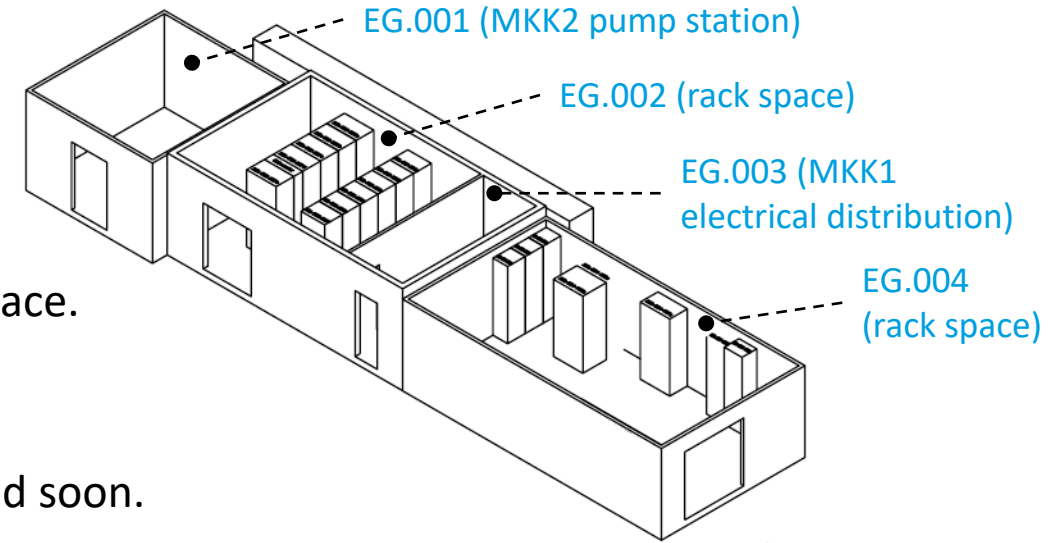




# New container building(s) next to 28h

## Rackspace & cooling water supply for 28g, 28h, 49/010 et al.

- Cooling water for buildings 28g, 28h, 49 (rack room 010) will be supplied from cooling water ring outside 49d via pump station in new container annex to 28h (28h EG.001).
- New container annex south of 28h (28h EG.004) will provide rack space.
- Floor in 28h/EG.002 needed repair (water damage).
- Status: EG.004 is finished\*, EG.002 is finished, EG.001 will be finished soon.



\* some minor rework needed

# New container building(s) next to 28h

## Some impressions

- EG.001:



- EG.004:

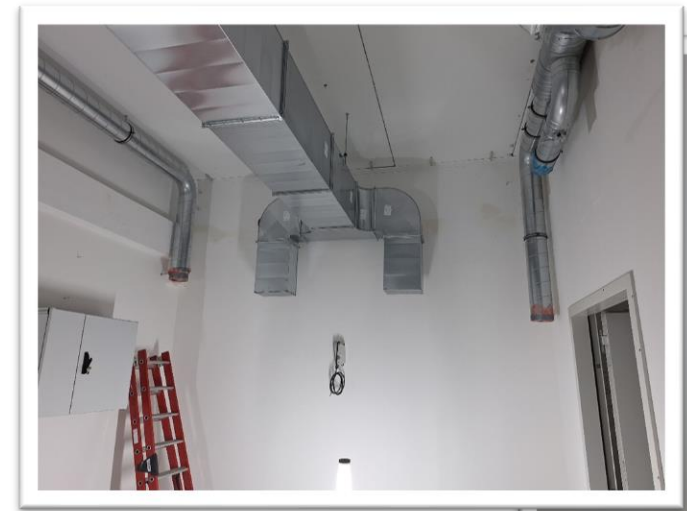




# Building 49

## Rack room & SubSync Lab

- Rack room EG.010:
  - All old installations gone, room is cleaned & painted
  - FS and MDI racks were delivered, as well as power distribution
  - Next: installation of infrastructure (electrical power, cooling water, cable trays)
- SubSync Lab EG.008c-e:
  - Partitioning of lab rooms via drywall construction is done
  - Ventilation ducts are installed (will be finished after suspended ceiling)
  - Water is being installed, electrical power to come next
  - Raised floor to be installed soon, finished after delivery of optical table

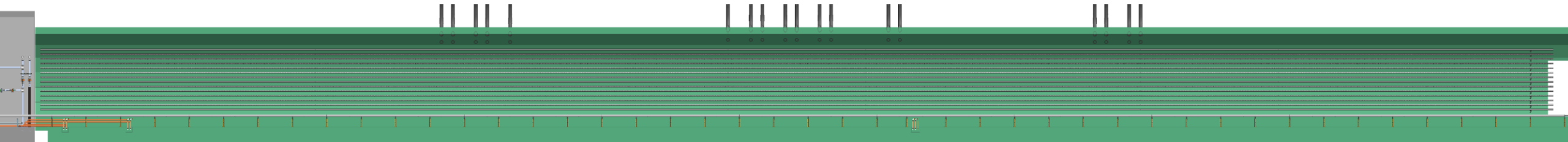
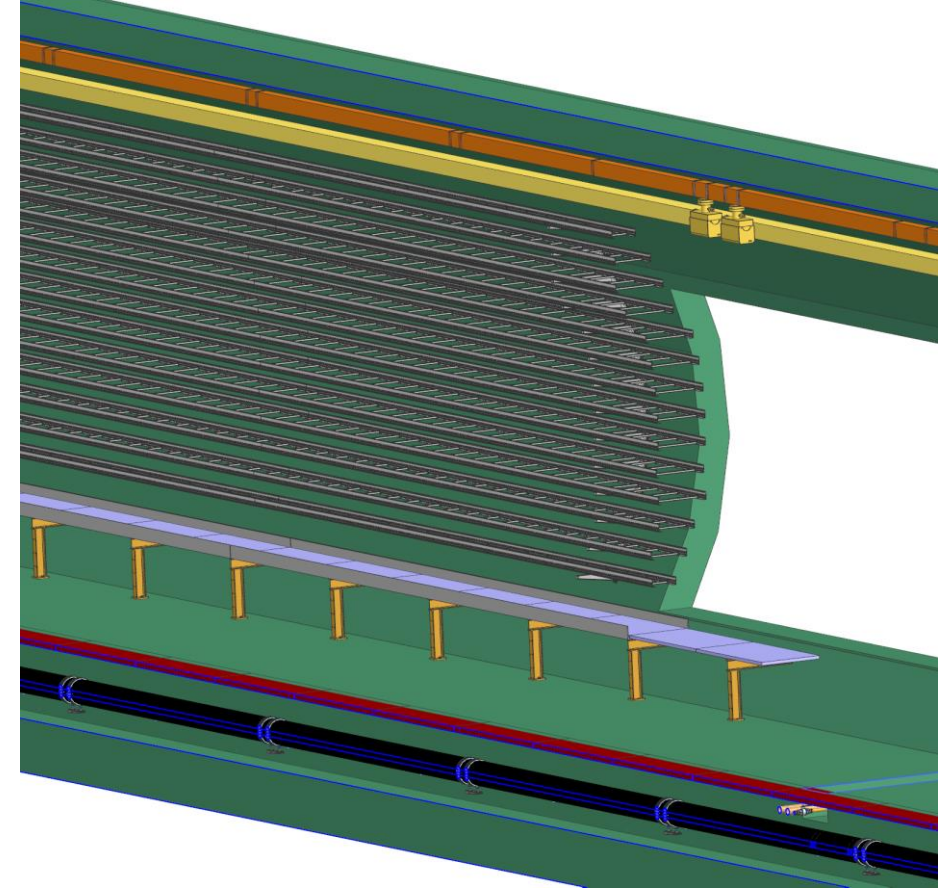


[thanks to Jörg Hanik]

# Cable trays

## In tunnel 428

- Up to 14 cable trays possible on right tunnel wall
  - mostly 400mm wide, some 300/200
  - Need to be installed after tunnel has been painted
  - Next step: find out who needs what amount, and where
- Buildings 28g/h: basically same
- → We'll come up with a system to allocate cable tray space & contact the biggest stakeholders soon.





# „Panta rhei.“

[Heraklit]

## Contact

**DESY.** Deutsches  
Elektronen-Synchrotron

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