

FLASH2020+

Progress Review Meeting

Infrastructure Tunnel / I-Pillar

Olaf Rasmussen
Hamburg, 08.03.2024

Days until shutdown: 94
Work days until shutdown: 61

Room book

- Room book for second shutdown has been (first) frozen on 05.04.2023
- Some minor updates since then; latest: 10.12.2023
- → 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 μ TCA crates for the racks are ordered by someone!
 - → Racks will be provided by I10, μ TCA crates not!

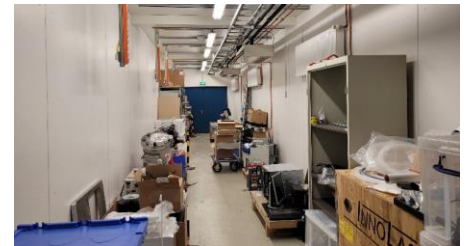
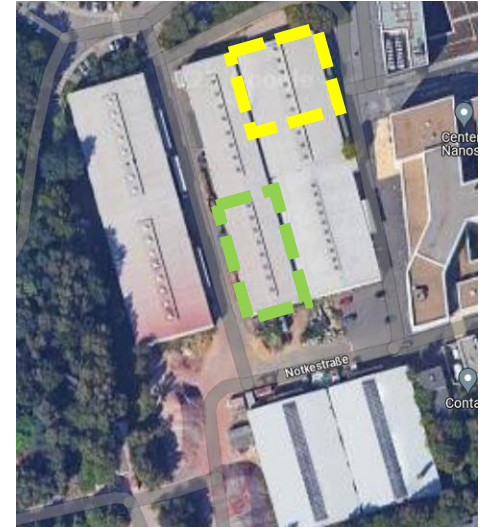
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Confluence: FLASH2020+ Project -> Project Pillars -> Infrastructure -> Raumbuch FLASH2020+

Infrastructure Tunnel

... some more housekeeping...

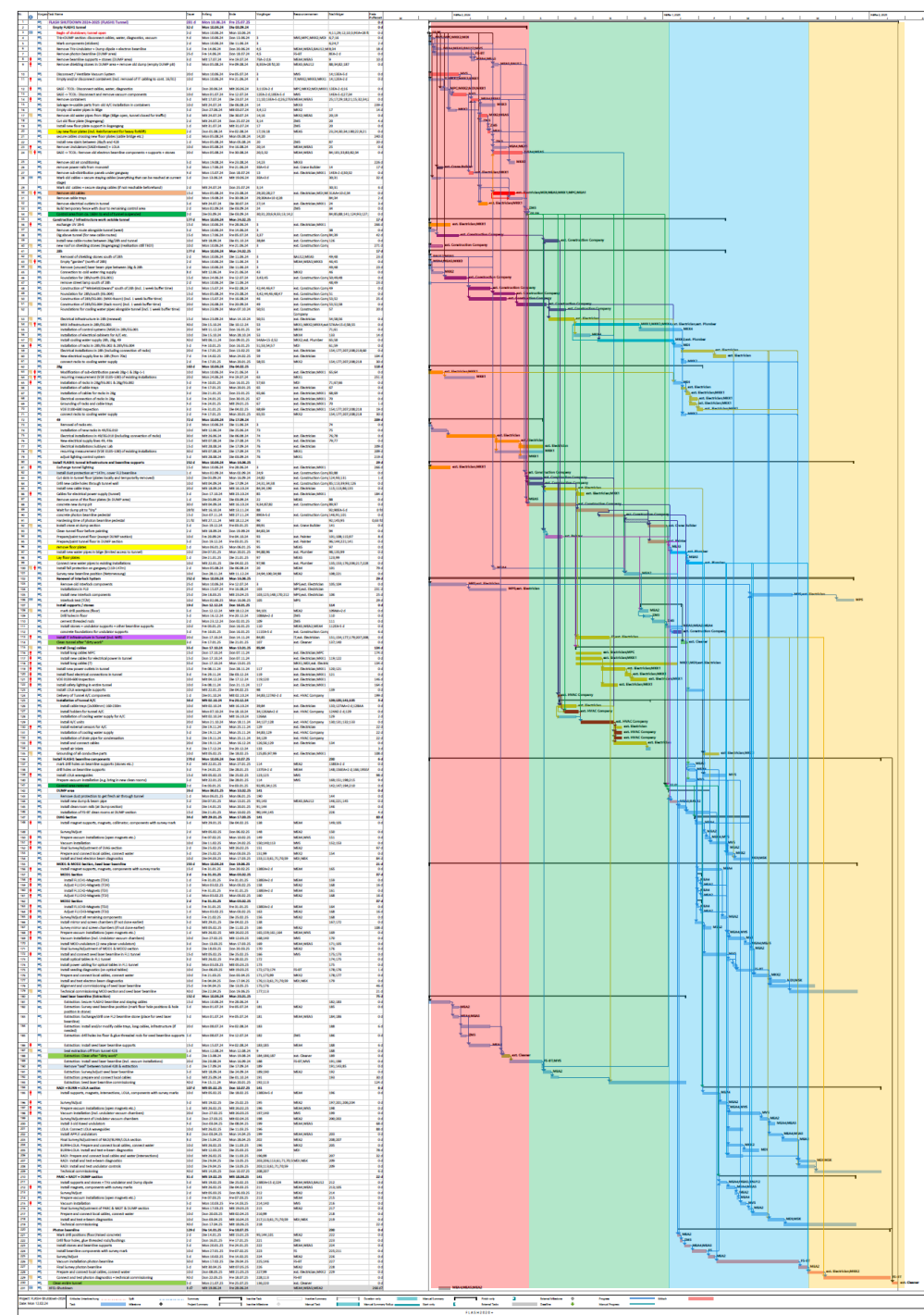
- All cabling requests should be made using KDS. **And they should be made soon!**
 - Holger Sokolinski has to order the cables in time!
-
- Storage space: potentially activated components (everything from the control area) will be brought to **Reemtsma 80b** (alarm secured hall) where D3 will measure them.
 - Karolin Baev managed to get some space in **Reemtsma 80d** for FLASH2020+ (non-activated components only; e.G. new stuff); Nils Mildner will administrate it.
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- Speaking of space: please remove your stuff from 28g EG.001 to enable preparation work prior to shutdown. For example: MKK1 will remove the unused electrical outlets.



Shutdown schedule

10.06.2024 – 03.08.2025

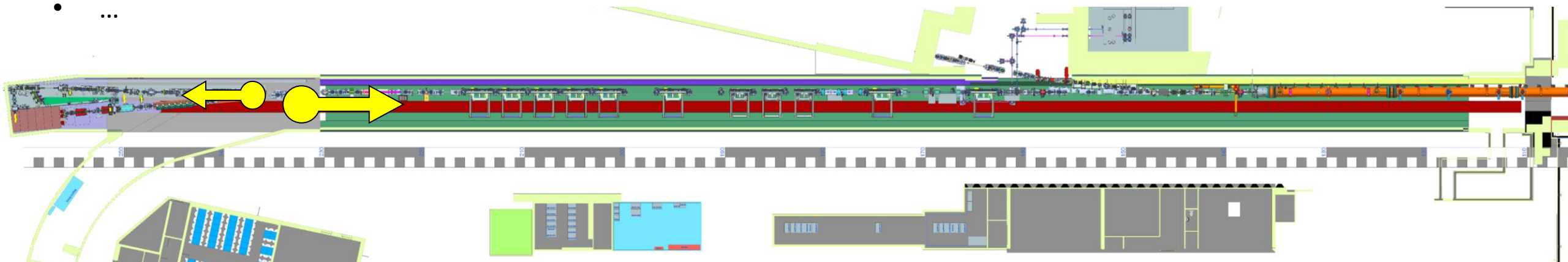
- In the past: done by Katja (who is temporarily sidelined)
- Coordination and meetings with stakeholders in January
- Currently more than 200 tasks included, still growing
- Rough overview: 4 phases
 - 1) Dismantling/removal
 - 2) Construction work
 - 3) Assembly/installation
 - 4) Commissioning
- Schedule published at confluence (first version 12.02.24):
 - FLASH2020+ project → Project Pillars → Infrastructure → Schedule (Shutdown 2024/2025)
 - <https://confluence.desy.de/x/rIHUF>
- Constructive input is always welcome!



Shutdown schedule

Phase 1: Dismantling/removal

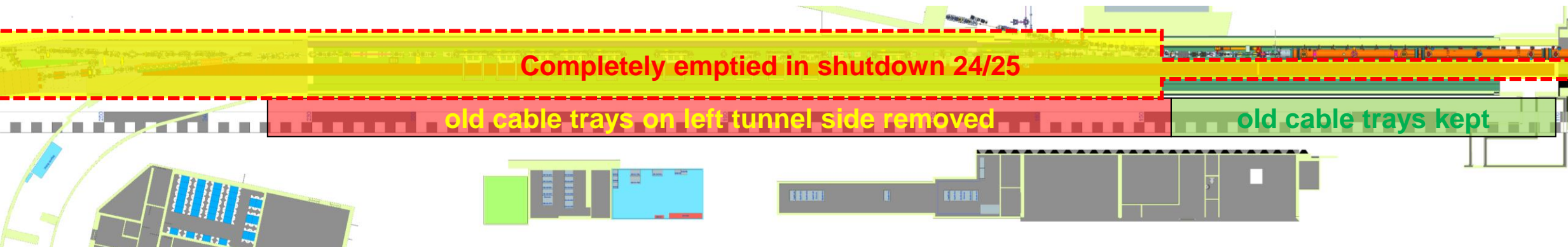
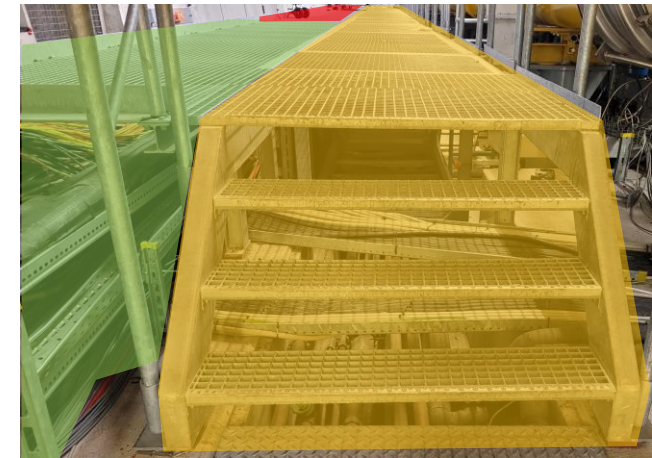
- Separation of machine vacuum
- Removal of containers
- Removal of old cooling water pipes (bilge)
- New floor plates installed (bilge cover) to create even working area
- Dismantling of undulators, beam delivery components, diagnostics, supports, ...
- Eviction of old cables
- ...



Infrastructure tunnel

Tunnel layout – reminder

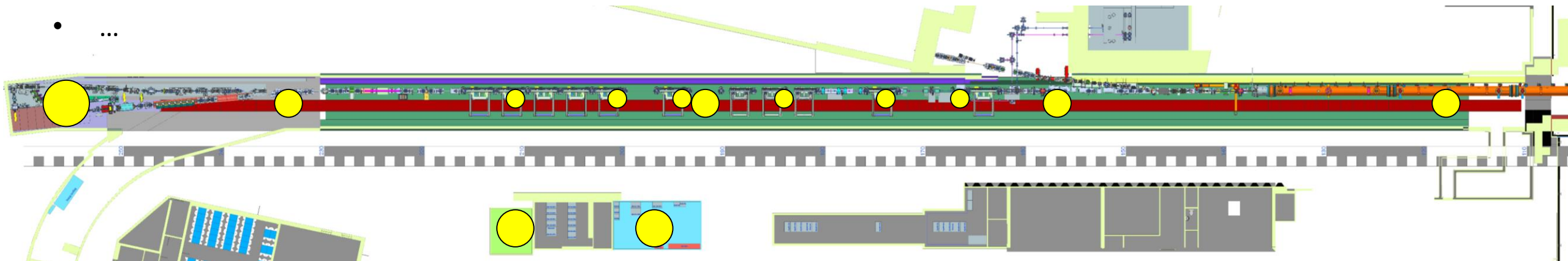
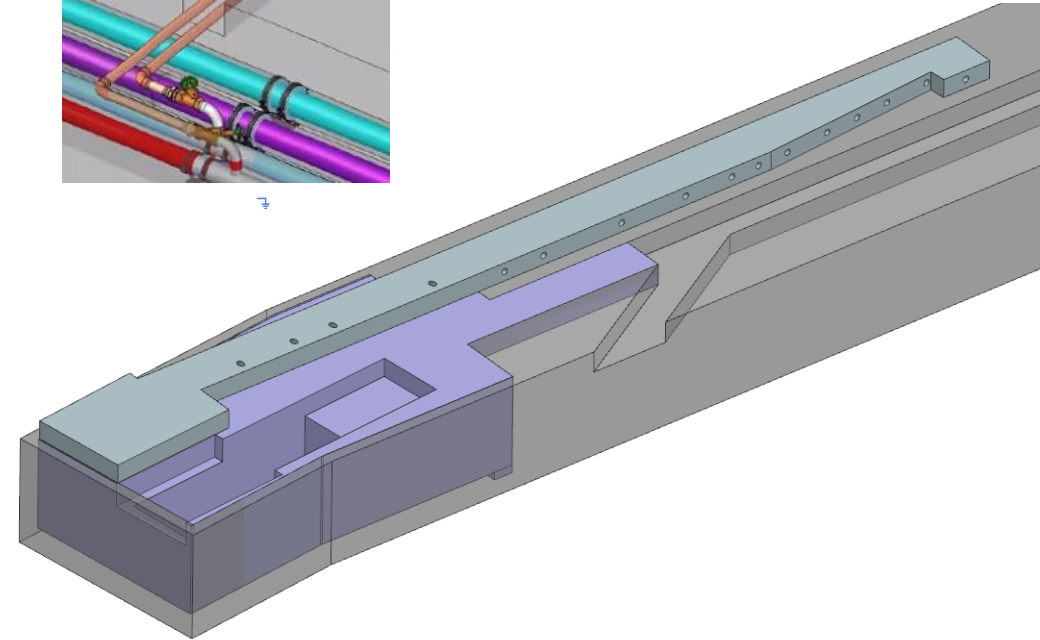
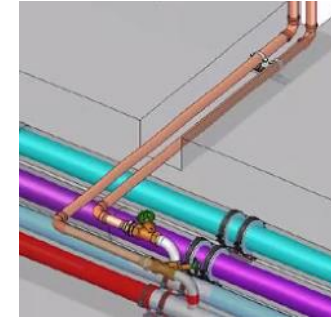
- Tunnel (428) will be emptied completely from extraction (~147m) to dump area
 - → all components will have to be either stored or disposed of
 - → please use every opportunity to mark your components ● ● ● ●
- Containers (incl. gangway) will be removed in entire round tunnel
 - → new walk-/driveway at tunnel floor level
- Cable trays on left side of tunnel will be removed starting at extraction
 - → Cables have to be removed or rerouted
 - → DESY staff is needed to support the removal of old cables



Shutdown schedule

Phase 2: construction work

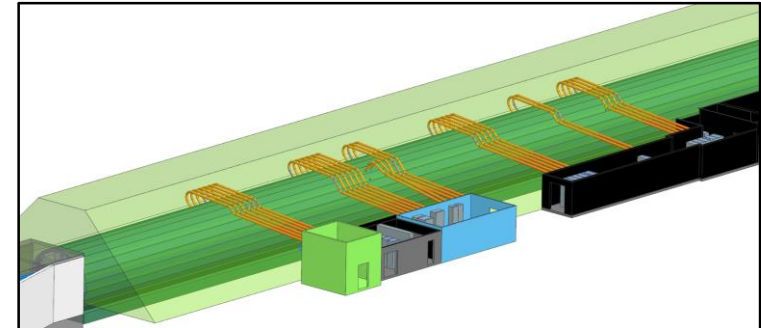
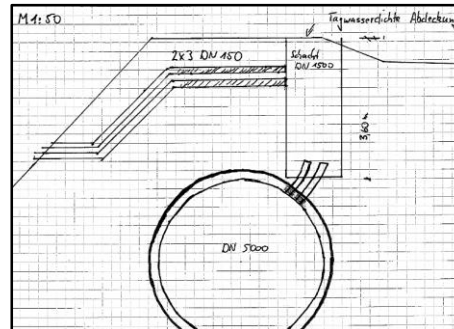
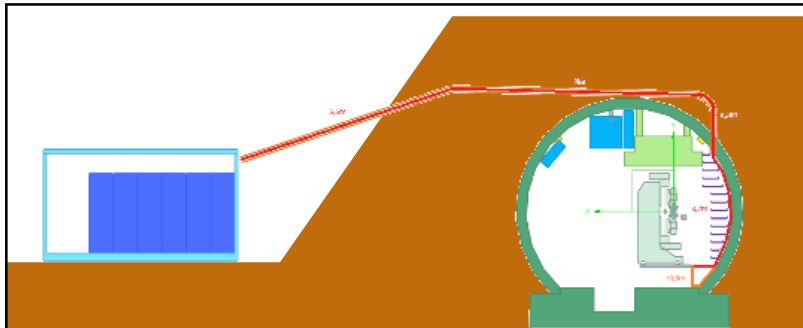
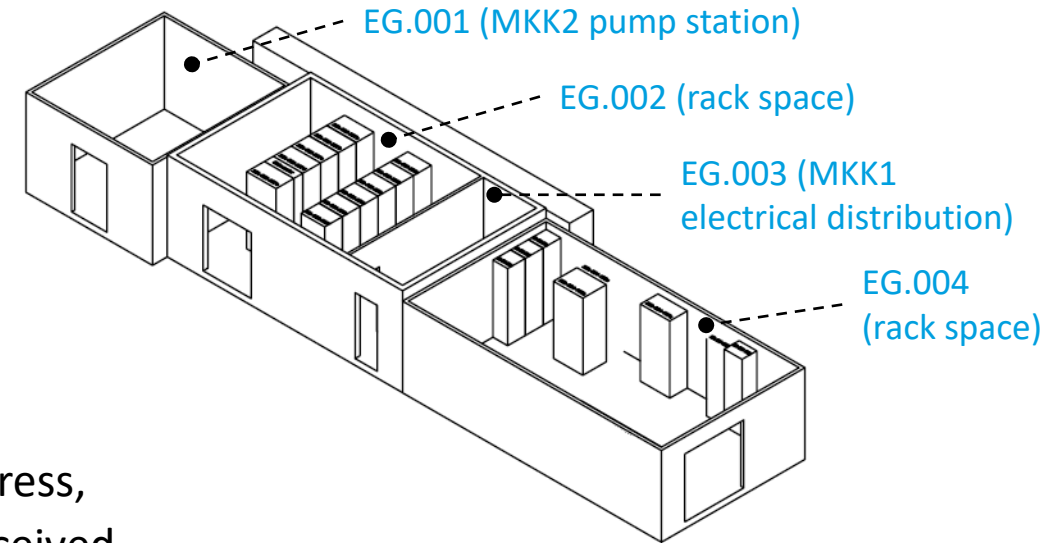
- 28h building extensions (north & south)
- Control area in tunnel suspended (~160m to dump) ~Sept.-Dec.
- Cutouts for cooling water pipes (from bilge)
- Drilling of holes for cable routes from buildings alongside the tunnel
- Concrete the dump pit & „bar“ for photon beamline
- New crane in dump area (quotation requests in preparation)
- Painting of tunnel (for dust reduction)
- ...



New container building(s) next to 28h

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

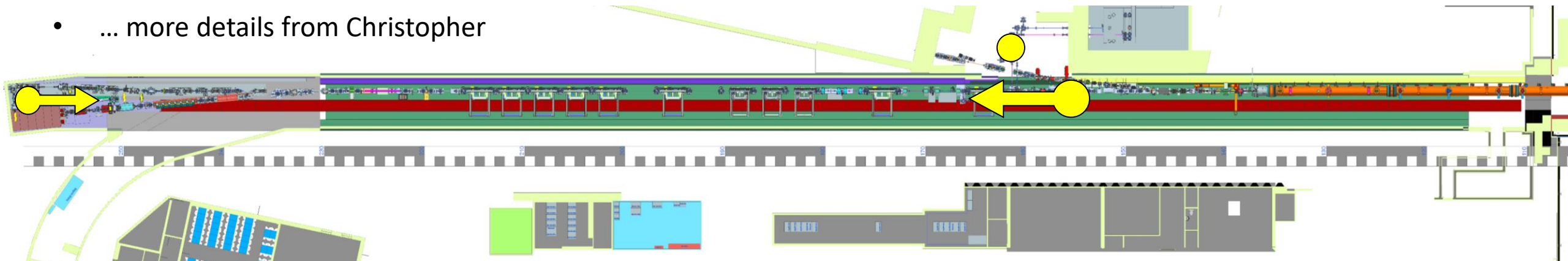
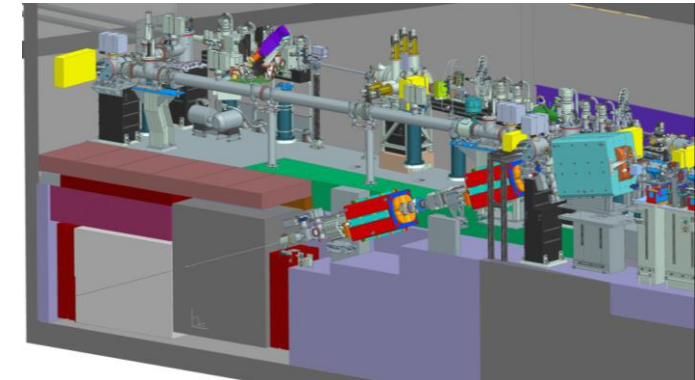
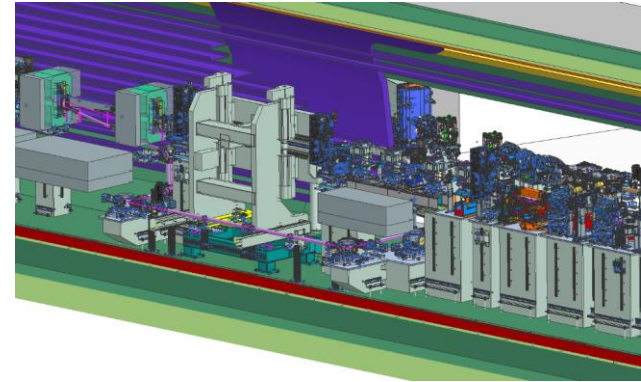
- Cooling water for buildings 28g, 28h, 49 (rack room 010) will be supplied from cooling water ring outside 49d via pump station in new container annex to 28h (28h EG.001)
- Cooling water system is being planned by MKK2 (internally)
- Container annex to 28h (rack space; 28h EG.004) will be built (south of existing 28h)
- Planning of additional container for pumps/heat exchangers in progress, building permit application (Marjorie Vialis-Kula / BAU) has been received
- Cable routes to tunnel still in concept phase (ongoing discussions about pipe types, shafts, ...)



Shutdown schedule

Phase 3: Assembly/installation

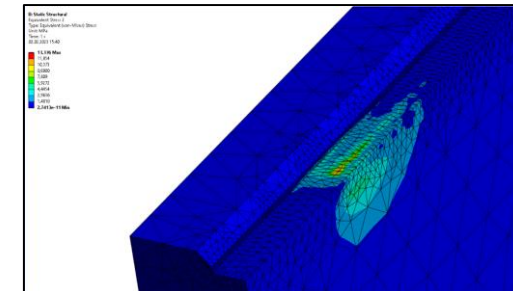
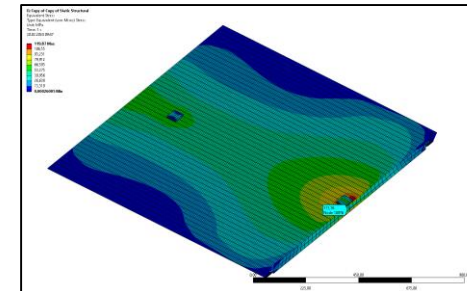
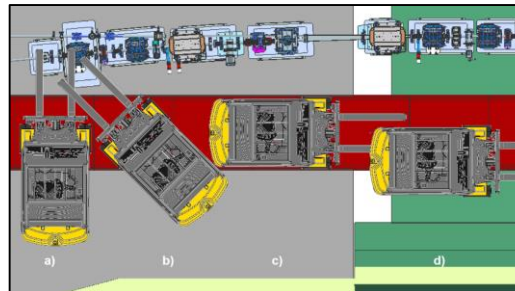
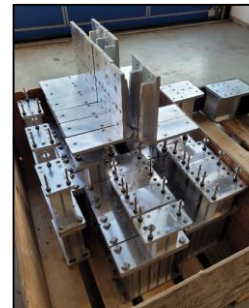
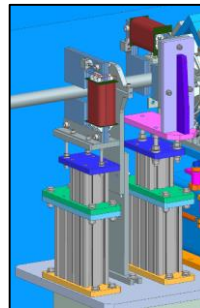
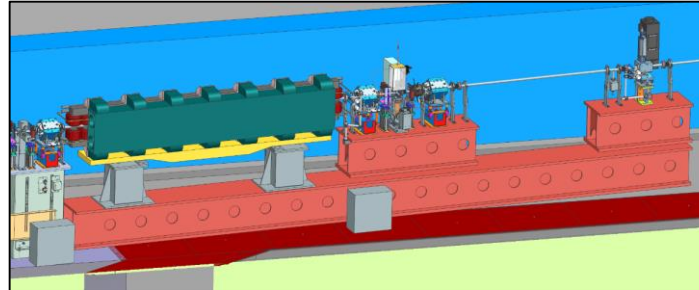
- Measurements of alignment point network
- Mounting of infrastructure components (cable trays, lighting, ...)
- Place support structures, concrete stones etc. in tunnel
- Installation & alignment of undulators & beam delivery components
- Assembly of seed laser beamline (@ extraction)
- Installation of dump & dump cover
- Assembly of photon beamline (@ dump section)
- ... more details from Christopher



Some progress

(since this is a progress review meeting)

- Bridge for THz undulator (“flea market girder”) has successfully been cut at Lürssen, holes will be drilled by MEA4.
- Supports for steerers have been manufactured by MEA4 (but the water jet cutter is still not working...).
- FE analysis of floor plates refined further.



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Work days until shutdown: 61

Contact

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