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- Injector racks
- MO racks
- XTL racks
- Patch Panels
- Racks AC power and cables ducts
- Inner racks cabling
- Outer cabling
- Cables trays in XTL
- Racks Assembly and Test Facility
- Summary



## **XFEL** Injector racks









- 3 cabinets with 3 racks 16U under I1A1 Accelerating Module
- All cabinets present at DESY (UG07, UG05, 3/306)
- Common Radiation Shielding (design ready)
- Inlet/Outlet for cables on left and right sides
- Space between cabinets ~200 mm







- All 8 racks are at DESY in XTIN UG05/011
- 2 racks are on right position
- The rest of racks will be placed properly till end of this week (16.05.14)
- AC power connection has been ordered (including UPS) till 23.05.14
- Cooling water connection has been ordered till 23.05.14
- Ethernet connection has been ordered till 30.05.14
- Cabling of necessary cables and to Laser Room can start 02.06.14 – need a list of signals very soon to organize a firm





12-13.05.2014, MSK Collaboration Workshop, DESY, Hamburg, Germany W.Wierba, MSK, INP PAN, Cracow, Poland





- 48 standard LLRF cabinets with 3 racks 28U each present at DESY (~20%, ~80% rest in Elmshorn warehouse)
- 2 special LLRF cabinets with 3 racks 28U each for L1 (main and spare systems) are in XSE on UG03 and UG05
- All cabinets have frames (Wanne) on the top to support patch panels and DCM
- Lower rear side patch panel will be used for Piezo cables
- Front-rear cables openings designed, prototypes ready foreseen one opening if necessary
- Front-rear openings have brush to stop air flow









- 4 types of PP (different signals and location)
- All designs ready
- PP for L1 ordered, will be deliver 06.06.2014
- Signal/cables names will be laser engraved
- Accelerating Module will have 3 PP:
- Probe 1,2,3,4 and Piezo 1,2,3,4 (left from rear side)
  - Probe 5,6,7,8 and Piezo 5,6,7,8 (right from rear side)
  - Forward and Reflected for Module and HF arms (left or right)







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European

#### Inner cables ducts and AC power outlets



Brackets for cables ducts and AC outlets designed and prototypes for L1 ordered (end of May 2014)

- Some brackets for L1 and rack cabling example made ourselves
- L1 cables ducts and AC power will be ready just after Workshop till 20.05.2014



#### European XFEL

#### Inner rack cabling











# EuropeanCables trays in XTL

XTL Synchro cables connections to LLRF Racks











### **XFEL** Racks Assembly and Test Facility





- RATF is placed in XSE on UG05 room 020, 021 and part of 014 (in front of lift)
- The space will be limited with fences (solid walls not possible because of air condition) ready end of May 2014
- 12 transport platforms (for 6 cabinets) are ordered will be deliver end of May 2014
- AC power and Ethernet will be connected first days of June 2014
- Tables, cupboards, shelves will be ordered mid of June 2014 (after fences are ready)







- Installation of racks for Injector, MO and XTL is in good shape
- Delays in installation are not foreseen, but...

Near future tasks:

- Preparation of inner rack cables ducts and AC power connection model Wille firm can prepare the work
- Assembly of inner rack cables ducts and AC power connection for L1 Master and Slave cabinets (end of May 2014
- Mass production of top patch panels for L2 & L3 (find a manufacturer including N-to-SMA feedthrough assembly)
- Mass production of brackets supporting inner cables ducts and AC power outlets (find a manufacturer – may be Wille can do that also)
- Implementation of place holders of RF Synchronization cables trays in 3D XFEL model
- Implementation of all cables in KDS started, but that is a big work

