

# HED progress and timelines

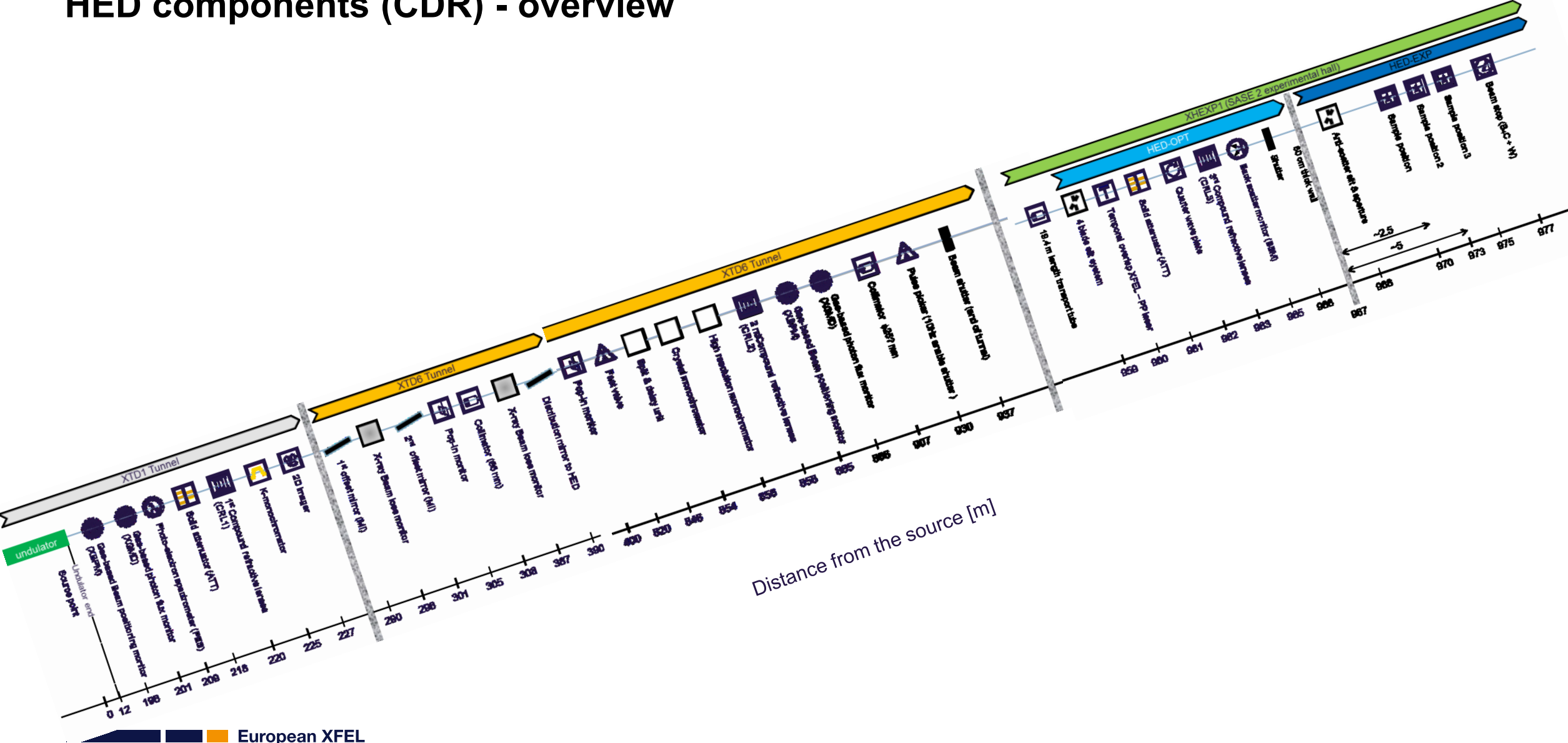


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on behalf of HED group and HIBEF UC  
European XFEL

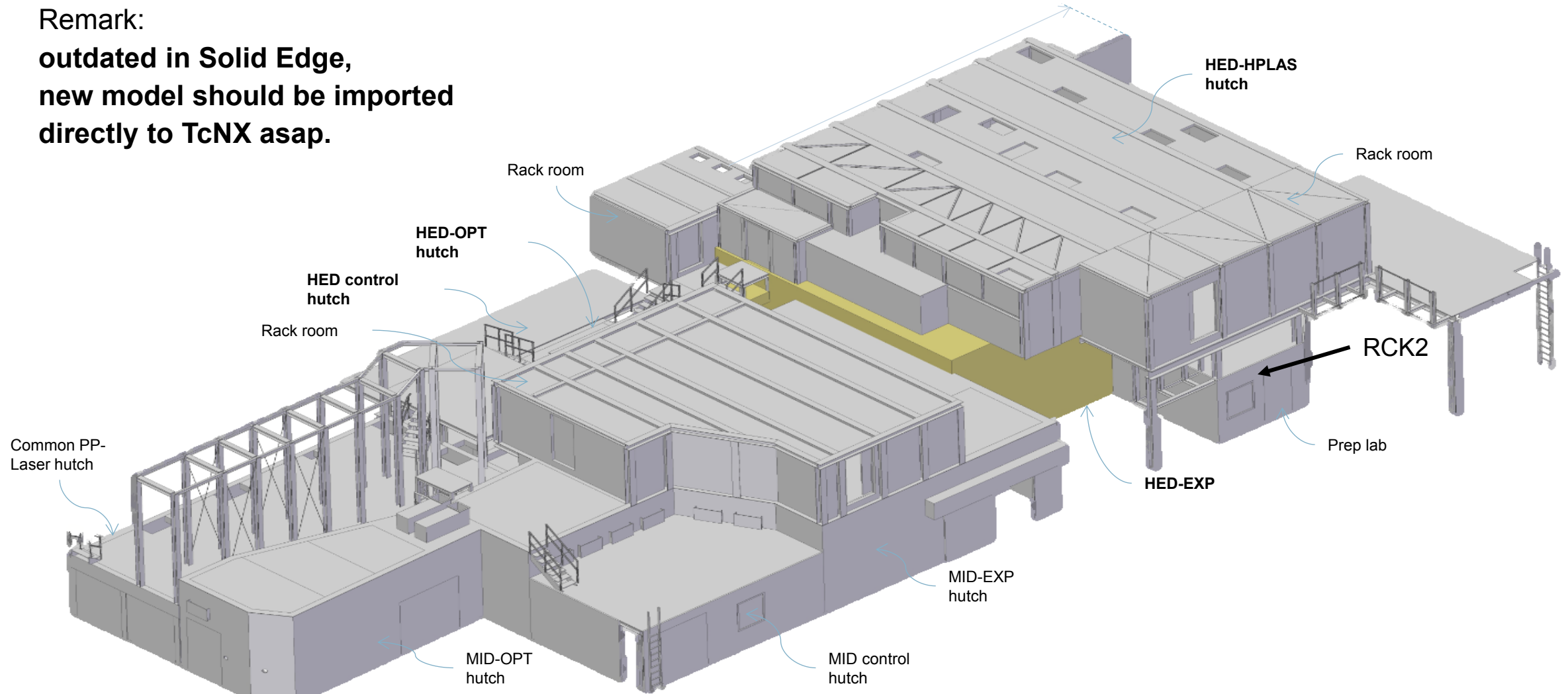
15. June 2018

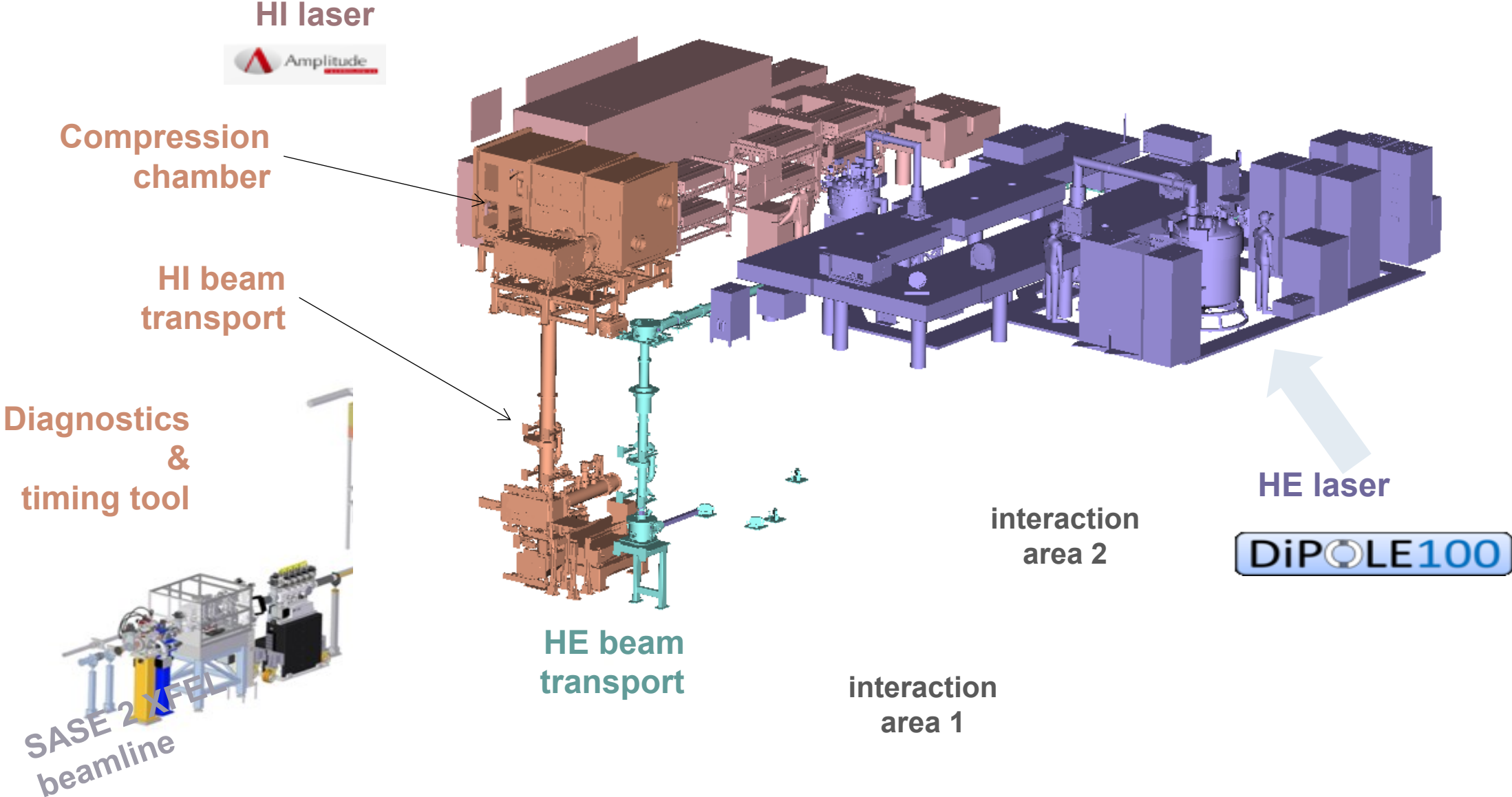
# HED components (CDR) - overview



# Infrastructure model

Remark:  
**outdated in Solid Edge,  
new model should be imported  
directly to TcNX asap.**



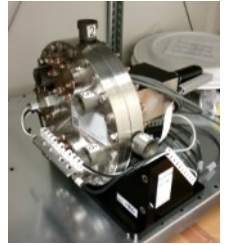


## SA2\_XTD1\_CRL (shared with MID)



<b>Location (source distance)</b>	<b>229 m</b>
<b>Installed</b>	✓
<b>Aligned</b>	✓
<b>Under vacuum</b>	✓
<b>Modules available</b>	✓
<b>Cables</b>	✓
<b>Local motion test</b>	✓
<b>Karabo test</b>	✓
<b>Ready to take beam</b>	✓

# Components in XTD6

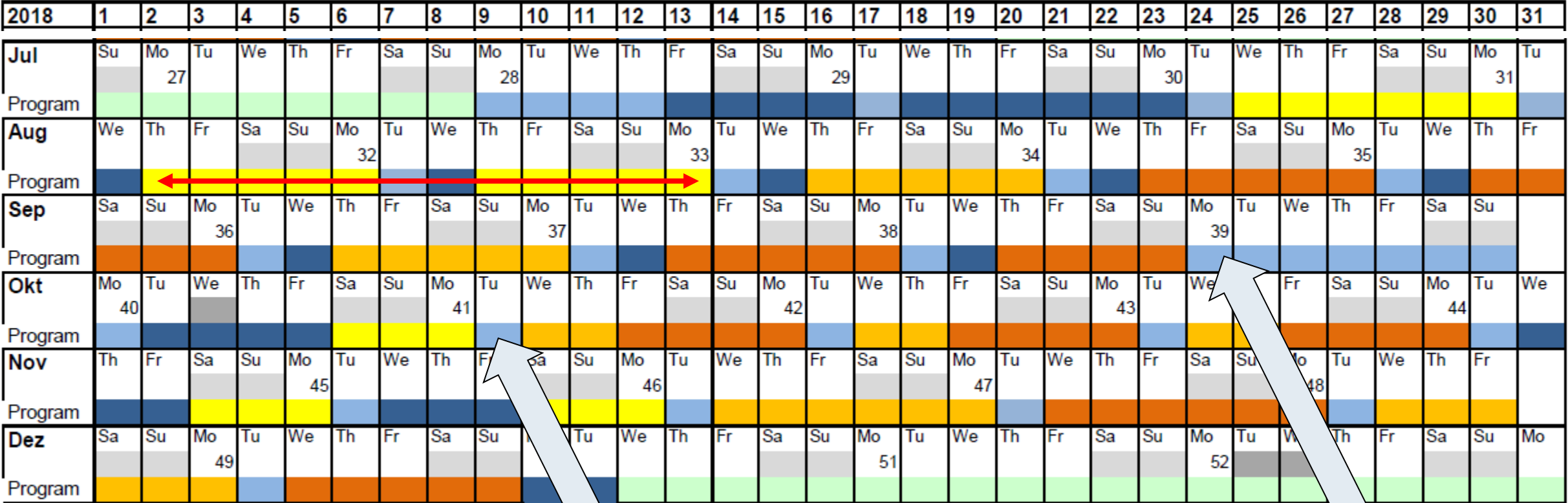


COMPONENT	Imagers IMGPII and I	SDL	SDLBM-1/2	MONO-1/2	HRMONO	CRL	XGM	PPU
Delivery	√	Postponed	√	√	Sept	√	√	√
Installation	√		In tunnel	√	Sept	√	√	√
Alignment	√		MEA		Sept	√	√	√
Vacuum test	√			√	Sept			
Modules ready (AE)	√				late	√		√
Cables installed	some				Not connected	Not connected		Not connected
Local motion test (Beckhoff)						KW 27-29		KW 27-29
Karabo test (E2E)						KW 27-29		KW 27-29
Ready to take beam								

## XTD1 & XTD6 Readiness

- XTD:1 ready including with CRL1
- XTD6: SDL vessel removed, thru vacuum pipe to be installed instead
- XTD6 be closed for beam to MID by July 20 (Friday in KW29)
  - Some day-1 HED components not finished,
  - Open XTD6 and install remainder from September 24 on
- XTD6 HED branch
  - “ready for beam” on Oct 9, 2018,
  - close tunnel
- XTD6 core commissioning time for SASE-2
  - MID: August 2-13
  - HED: latest Oct 9 onwards, maybe earlier?

# Time plan, SASE-2 tunnel commissioning



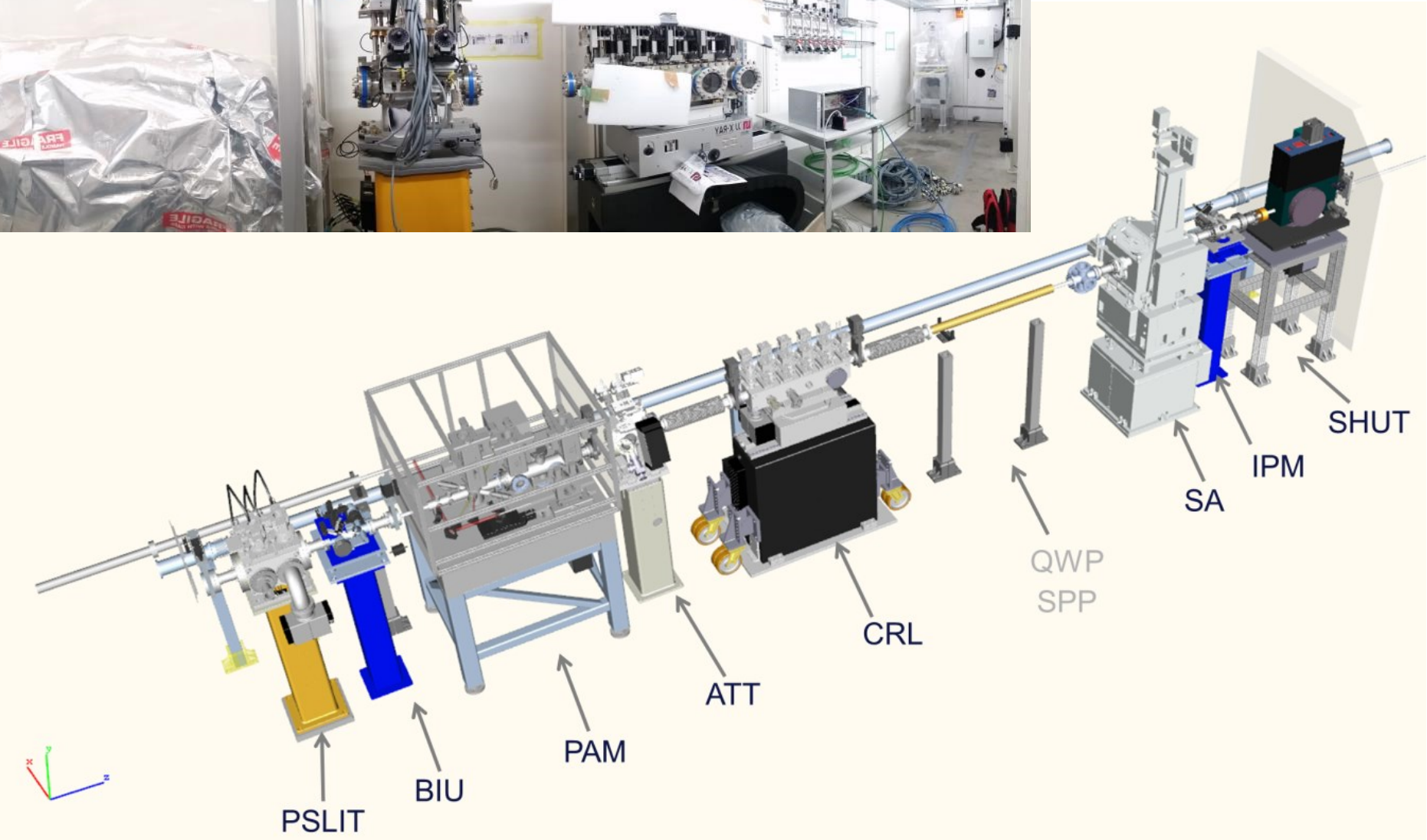
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Ready for beam

Need access to XTD6: 1 day grouting, 1 day MEA alignment, then hr-mono installation + establish vacuum in HED



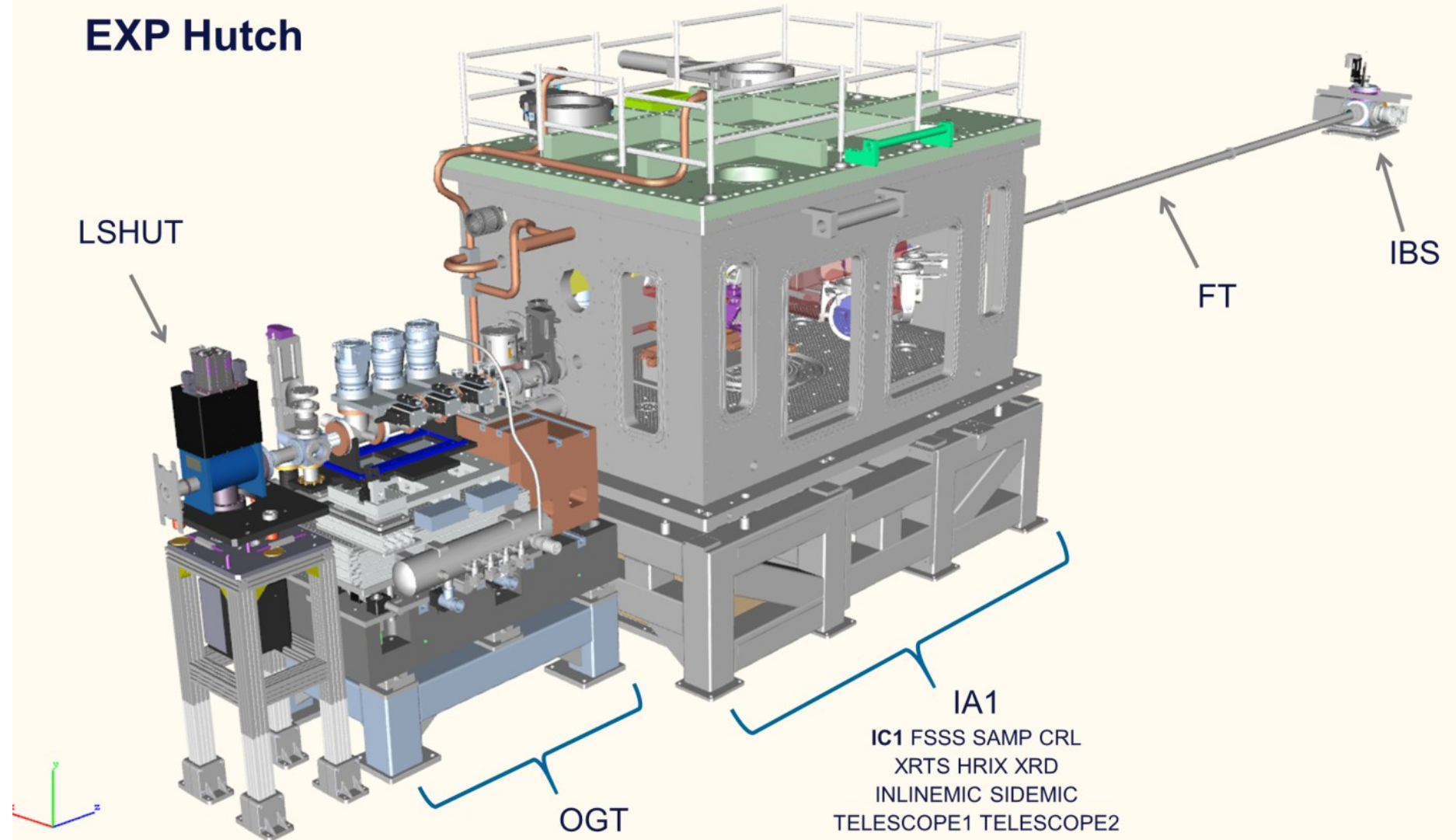
# HED optics hutch



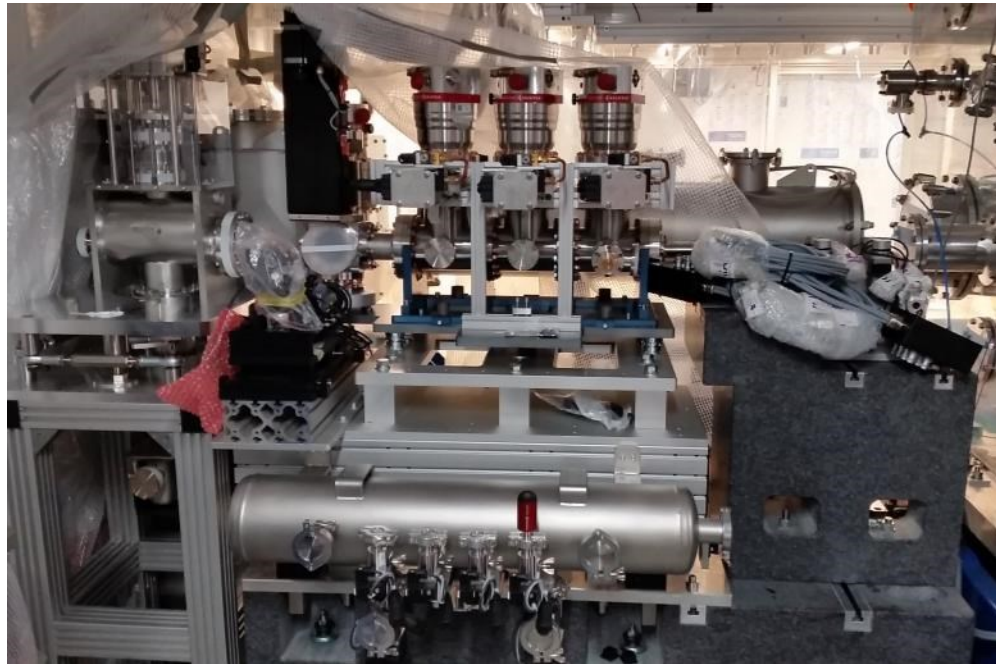
## Components Optics Hutch (OPT)

COMPONENT	PSLIT	BIU	PAM	ATT	CRL	SBM	SSP	IPM	SHUT
Delivery	√	√	√	√	√	design	CAEP	In E0 lab	√
Installation	√	√	In progress	√	√				√
Alignment	MEA	MEA	coarse	MEA	MEA	MEA	MEA	MEA	Lift 4mm
Vacuum test									
Modules ready (AE)	Sept	Sept	Sept	Sept	Sept	Sept	Sept	Sept	SRP
Cables installed	Sept	Sept	Sept	Sept	Sept	Sept	Sept	Sept	SRP
Local motion test									
Karabo test (E2E)									
Ready to take beam									

# HED EXP hutch IA1



## Components Experimental Hutch (LSHUT and OGT)



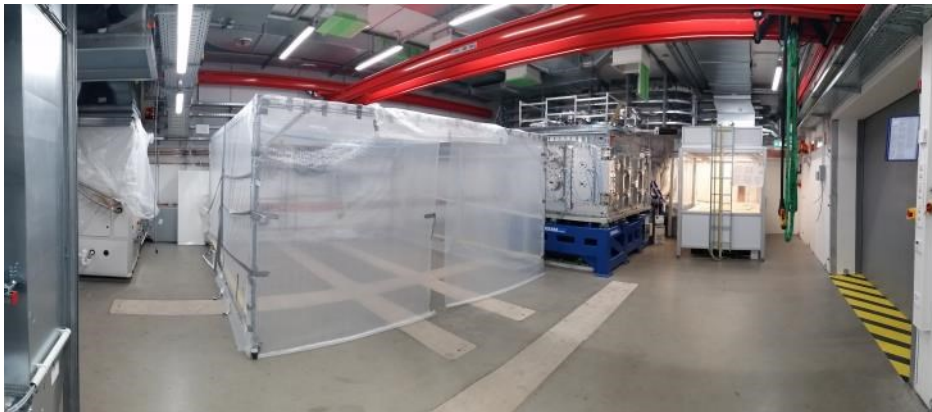
COMPONENT	LSHUT	ALAS	DPS	CSLIT-1/2	IPM
Delivery	√	√	√	√	Design
Installation	√	√	√	(√)	
Alignment	Lift 5mm	MEA	MEA	n/a	
Vacuum test					
Modules ready (AE)	Feb 19	Feb 19	Feb 19	Feb 19	Feb 19
Cables installed	Feb 19	Feb 19	Feb 19	Feb 19	Feb 19
Local motion test					
Karabo test (E2E)					
Ready to take beam					

# Components Experimental Hutch (IA1)



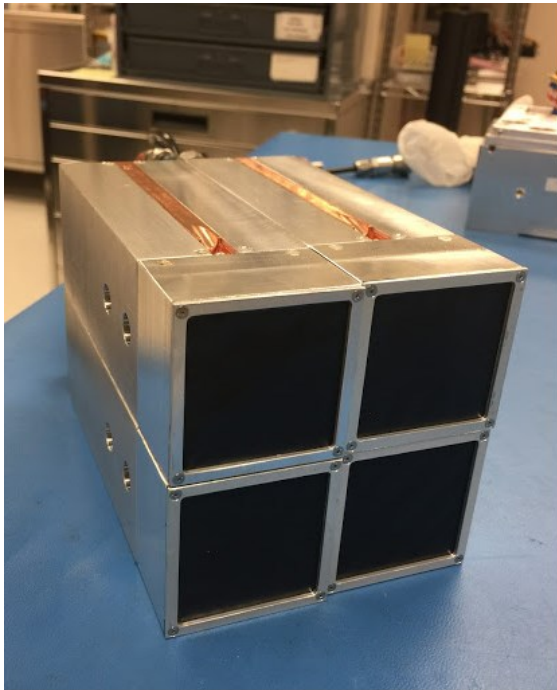
COMPONENT	IC	FSSS	SAMP stage+HEXAPOD	INLINEMIC	LT laser transport	DETM detector motion	TELESC-1/2 Questars
Delivery	√	Out for quote	√	Soon to be ordered	Mirrors ok, stages not		√ (stages missing)
Installation	√	Feb 19	In progress				
Alignment	√	n/a	n/a	n/a			n/a
Vacuum test	√	n/a	n/a	n/a			n/a
Modules ready (AE)							
Cables							
Local motion test							
Karabo test (E2E)							
Ready to take beam							

## Components Experimental Hutch (IA2) day-1



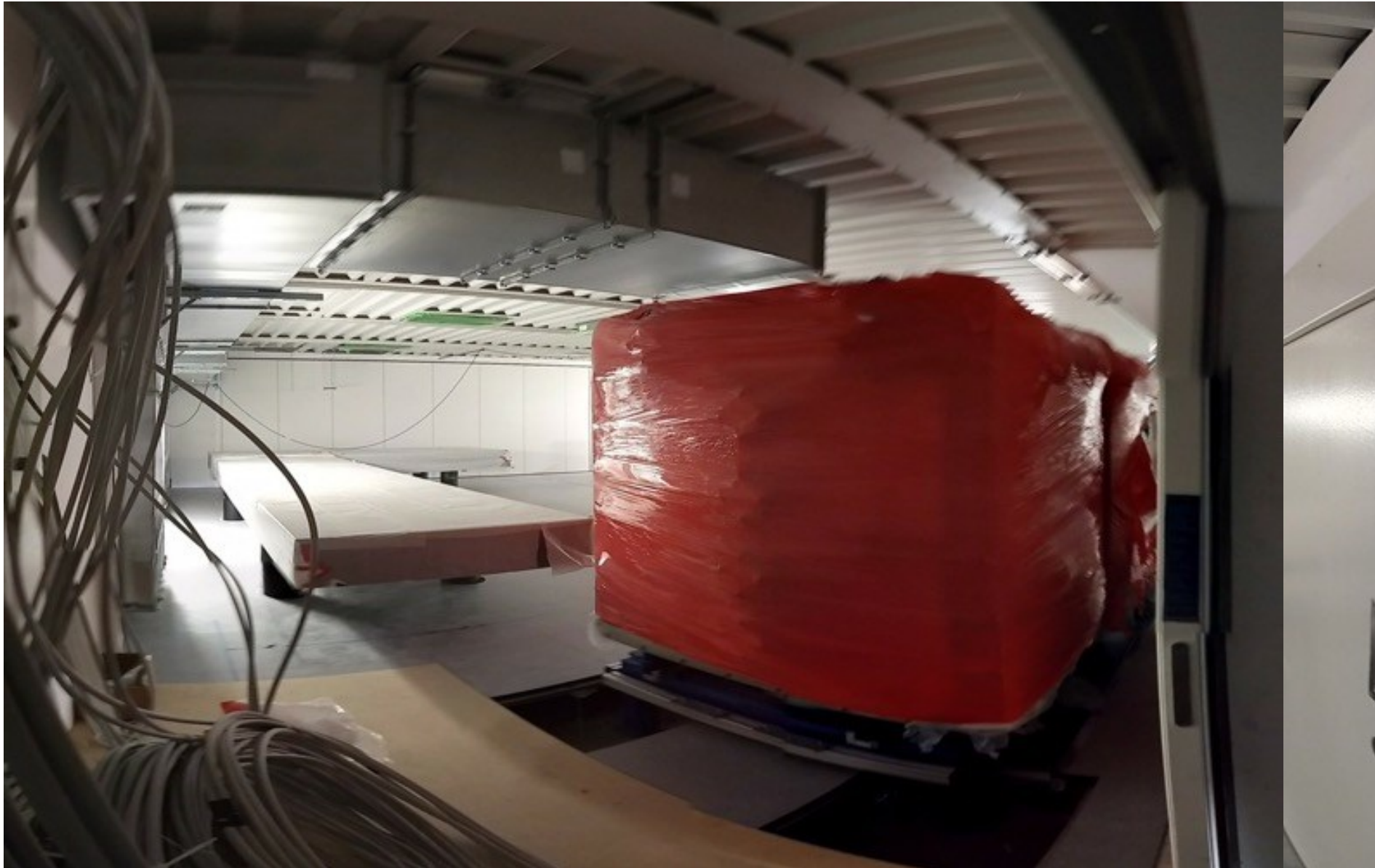
Component	rails	IC2 vessel	DAC Inner parts	DETB	AGIPD	IBS
Delivered	Before Sept	Sept 18	design	design	2019	√
Installed	Before Sept	Oct 18	2019			
Aligned	Before Sept					
Under vacuum	n/a			n/a		
Modules available	n/a					
Cables	n/a					
Local motion test	n/a					
Karabo test	n/a					
Ready to take beam	n/a					

# Detectors



Component	AGIPD	ePIX100	Jungfrau
Delivered	2019	√	In customs
Installed	Det bench	IC1	IC1
Aligned		n/a	n/a
Under vacuum		n/a	n/a
Modules available			
Cables			
Local (motion) test			
Karabo test		Hera-S	
Ready to take beam			

## Evolution of the A.23 laser bay



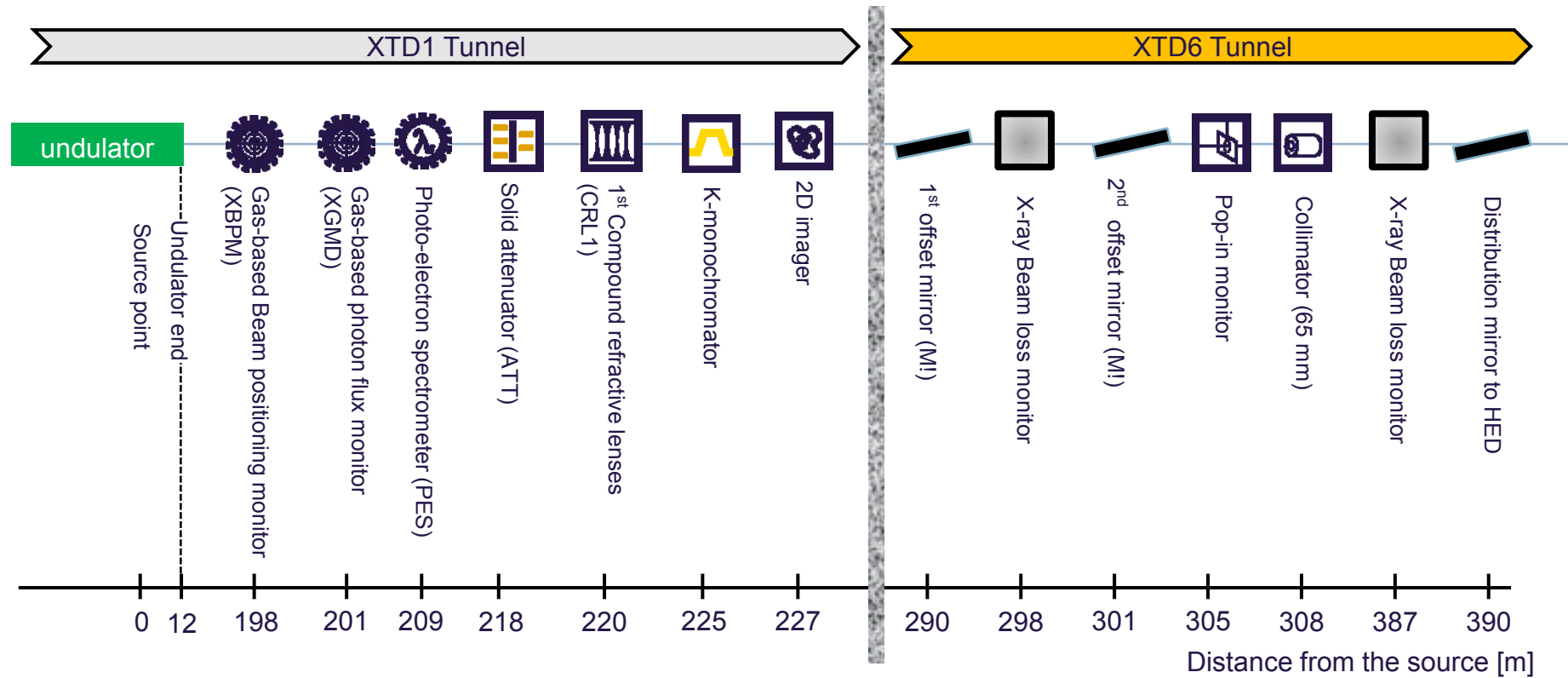


## SDL vessel removal for cleaning

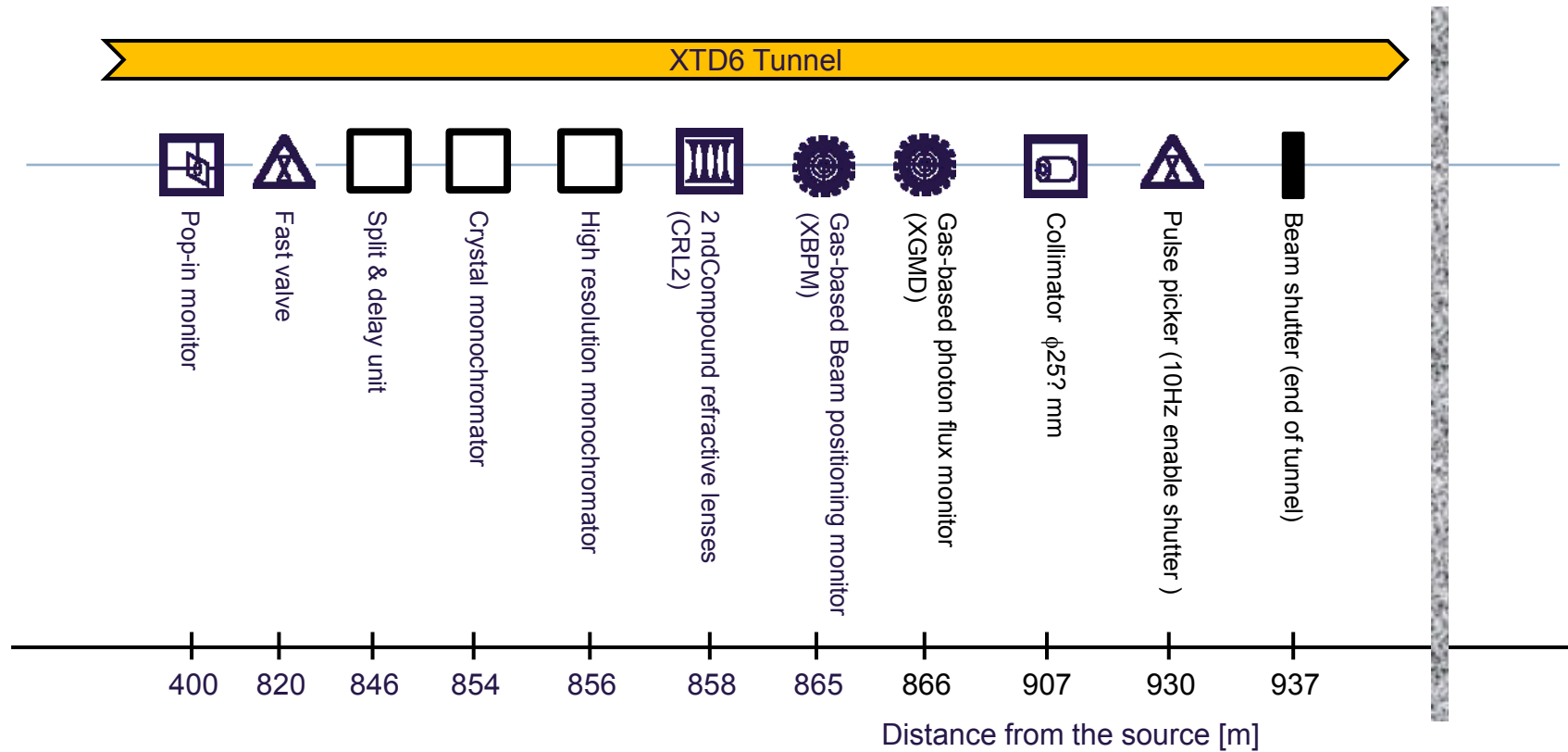


**END**

## HED tunnel components I/III



## HED tunnel components II/III



# HED XHEXP components III/III

