

## SA2-XTD6 tech. commissioning status 31.5.2018 (KW22)

- Agreed on targets
  - Target 1: Beam radiation safety tests in MID optics hutch on 20.7.2018 (i.e. KW29)
  - Target 2: Beam to HED hutch shutter on 20.7.2018
  - Commissioning (Beckhoff & Karabo) order: vacuum, optics & diagnostics, then Expt. components
- Aimed for loop operation schedule
  - KW22: Integrate MID\_XTD1\_CRL into PLC MOV1 loop
  - KW22-23: Patch VAC loop and add available XTD6 Vacuum Sections
  - KW23: possibly patch and add vacuum and imager components EPS loop
  - KW24: Patch MOV2 loop. Needs export of Eplan definitions.
  - KW24: Patch XGM loop of HED\_XTD6\_XGM into existing XGM loop
- KW22
  - SA2 MOV1 PLC loop regenerated and deployed includes SA2\_XTD1\_CRL
  - CRL 90% commissioned (1 of 24 motors bad, 3 end switch issues...) by MID team (their 1<sup>st</sup>)
  - Fa. Wille connected power to all Beckhoff crates in racks – needed for KW23 VAC loop
  - All Beckhoff crates labelled.
  - XRO (M1 mirror insertion...), XPD (XGM...) and Vacuum component installation in progress
- Outlook
  - On schedule – KW23 is important for cabling and running SA2 VAC loop (all of XTD6?)
  - Updated SA2\_Vacuum (next slide) shows status of vacuum commissioning

# SA2-XTD6 Vacuum Status 31.5.2018 (from vacuum group, MP, MD...)

## Author:

Vacuum finished when 'Status Vacuum' and 'PLC-Karabo controlled columns are green.

Region	Section No	Between valves	Racks	Components	Status Vacuum	PLC-Karabo controlled	What is missing?
XTD1	VS20010	V20000M-V20020G	2.1	SRA, Fast Valve	pumped and leak tested	YES	---
XTD1	VS20020	V20020G-V20030G	2.1	K-Mono	pumped and leak tested	YES	---
XTD1	VS20030	V20030G-V20190G	2.2	XGM	pumped and leak tested	YES	SA2_XTD1_VAC/DCTRL/DP_XGM_DP_OK
XTD1	VS20040	V20190G- V20200G	2.3	Solid Att	pumped and leak tested	YES	---
XTD1	VS20050	V20200G-V20210G	2.3	CRL	pumped and leak tested	YES	---
XTD1	VS20060	V20210G-V20220G	2.4/2.5	XTD1->XS2	pumped and leak tested	YES	---
XTD1	VS20070	V20220G-V20230G	2.5/2.6	Frontend, XS2->XTD6	pumped and leak tested	YES	---
XTD6	VS20080	V20230G-V20240G	2.6	M1	not pumped	NO	Mirror installation in progress (X-Ray Optics Group)
XTD6	VS20090	V20240G-V20250G	2.6/2.7	PBLM/M2	pumped and leak tested	NO	Mirror installation (X-Ray Optics Group)
XTD6	VS20100	V20250G-V20260G	2.7	MCP	missing vacuum component	NO	can be connected only if M2 is installed
XTD6	VS20110	V20260G-V20270G	2.7/2.8	ABS	ready for pump-down	NO	
XTD6	VS20120	V20270G-V20280G	2.8/2.9	HIREX	ready for pump-down	NO	HIREX will be installed later
XTD6	VS20130	V20280G-V20290G	2.9	M3	ready for pump-down	NO	pump, Mirror
XTD6	VS20140	V20290G-V20300G	2.9	M4	pumped and leak tested	NO	M4 chamber not there yet, comes later
XTD6	VS20150	V20300G-V21010G-V22010G	2.9/2.10	Separation Chamber	pumped and leak tested	NO	
XTD6-MID	VS21010	V21010G-V21020G	2.10		pumped and leak tested	NO	---
XTD6-MID	VS21020	V21020G-V21040G	2.11/2.12	Fast VALVE	pumped and leak tested	NO	---
XTD6-MID	VS21030	V21040G-V21050G	2.12/2.13		pumped and leak tested	NO	---
XTD6-MID	VS21040	V21050G-V21060G	2.14/2.15/2.16/2.20	SLIT1 (P-SLIT?)	missing vacuum component	NO	Imager-MID not there yet, bellows for SLIT (expected in KW 24)
XTD6-MID	VS21050	V21060G-V21070G	2.20/2.21/2.22	ATT/SLIT2/PBLM	missing vacuum component	NO	Imager-MID not there yet, partly leak-tested (expectd in KW 24)
XTD6-MID	VS21060	V21070G-V21080G	2.22/2.23	SI Mono	pumped and leak tested	NO	
XTD6-MID	VS21070	V21080G-V21090G	2.23	CRL	pumped and leak tested	NO	
XTD6-MID	VS21080	V21090G-V21100M	2.23	Frontend	pumped and leak tested	NO	
XTD6-MID	MID_VAC_OK	V21200M-BlankFlange	2.23	MID	pumped and leak tested	NO	
XTD6-HED	VS22010	V22010G-V22020G	2.10		pumped and leak tested	NO	---
XTD6-HED	VS22020	V22020G-V22040G	2.11/2.12	Fast VALVE	pumped and leak tested	NO	---
XTD6-HED	VS22030	V22040G-V22050G	2.12/2.13/2.14/2.15		pumped and leak tested	NO	---
XTD6-HED	VS22040	V22050G-V22060G	2.15/2.16	BLM	pumped and leak tested	NO	
XTD6-HED	VS22050	V22060G-V22080G	2.16/2.20	SDL	pumped and leak tested	NO	RGA in progress, will be opened again
XTD6-HED	VS22060	V22080G-V22090G	2.20	MONO	pumped and leak tested	NO	---
XTD6-HED	VS22070	V22090G-V22100G	2.20	CRL	pumped and leak tested	NO	---
XTD6-HED	VS22080	V22100G-V22110G	2.20	POP_IN	missing vacuum component	NO	Bellows missing
XTD6-HED	VS22090	V22110G-V22430G	2.19	XGM	pumped and leak tested	NO	DPS in region of XGM will be commissioned KW26
XTD6-HED	VS22100	V22430G-V22440M	2.20/2.21/2.23	Frontend	missing vacuum component	NO	SA2_XTD6_VAC/DCTRL/DP_XGM_DP_OK
XTD6-HED	HED_VAC_OK	V22440M-BlankFlange	2.23		ready for pump-down	NO	6m-pipe is already in tunnel, but not mounted yet