



X-Boxes Update

04.02.2025

The image shows a complex industrial environment, likely a particle accelerator facility. In the foreground, there are several robotic arms with red joints and silver bodies, mounted on a yellow frame. These arms are positioned around a large, rectangular, metallic component that is wrapped in silver insulation. The background is filled with various pipes, cables, and structural elements, creating a dense and technical atmosphere. A large blue circular graphic is overlaid on the right side of the image, containing the text.

XBOX2

Conditioning of TD31N3 and N4
Soon: refurbishing of the modulator

Currently in XBox2: upgrading of modulator

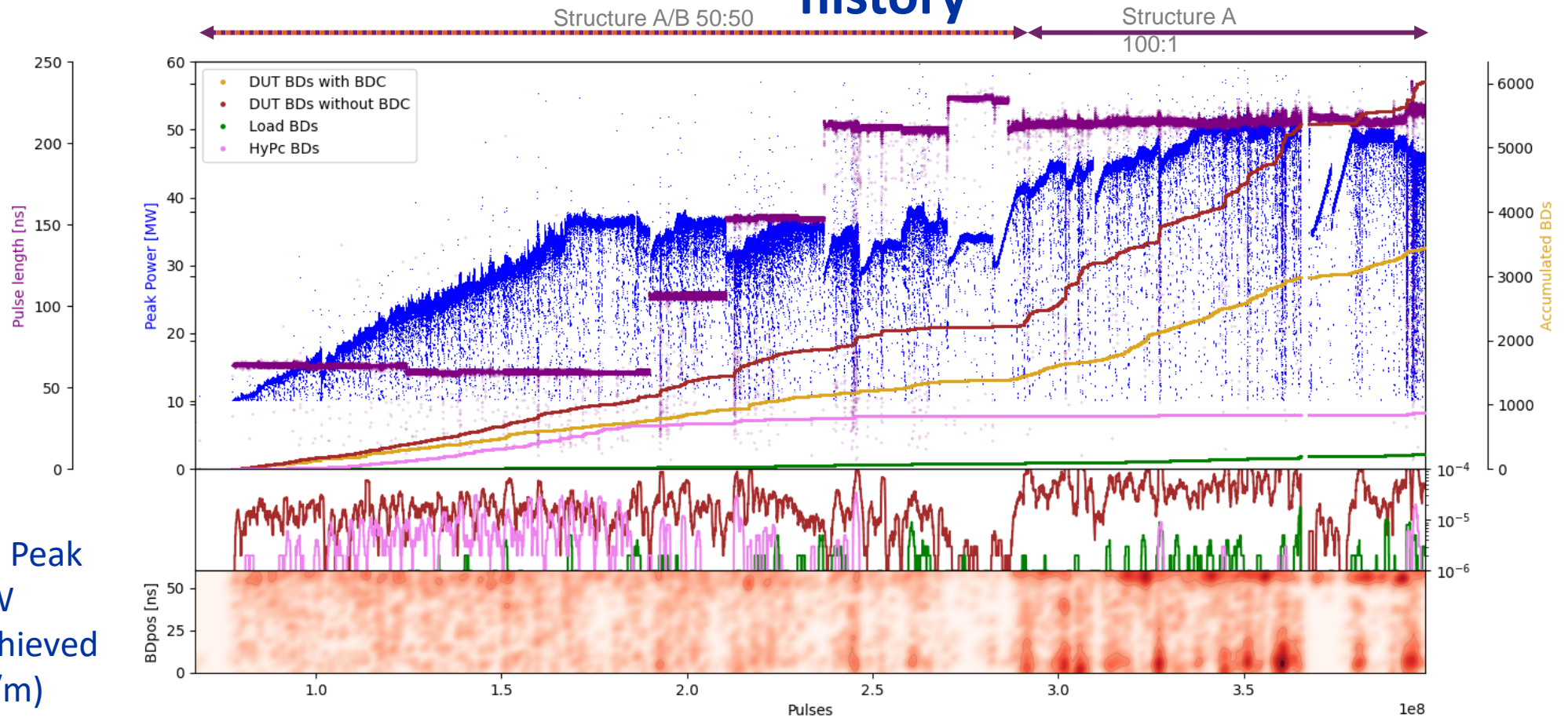
Dismounted SUs 1-10 from
modulator + 2 spares

Waiting for Transport...



Xbox 2 TD31

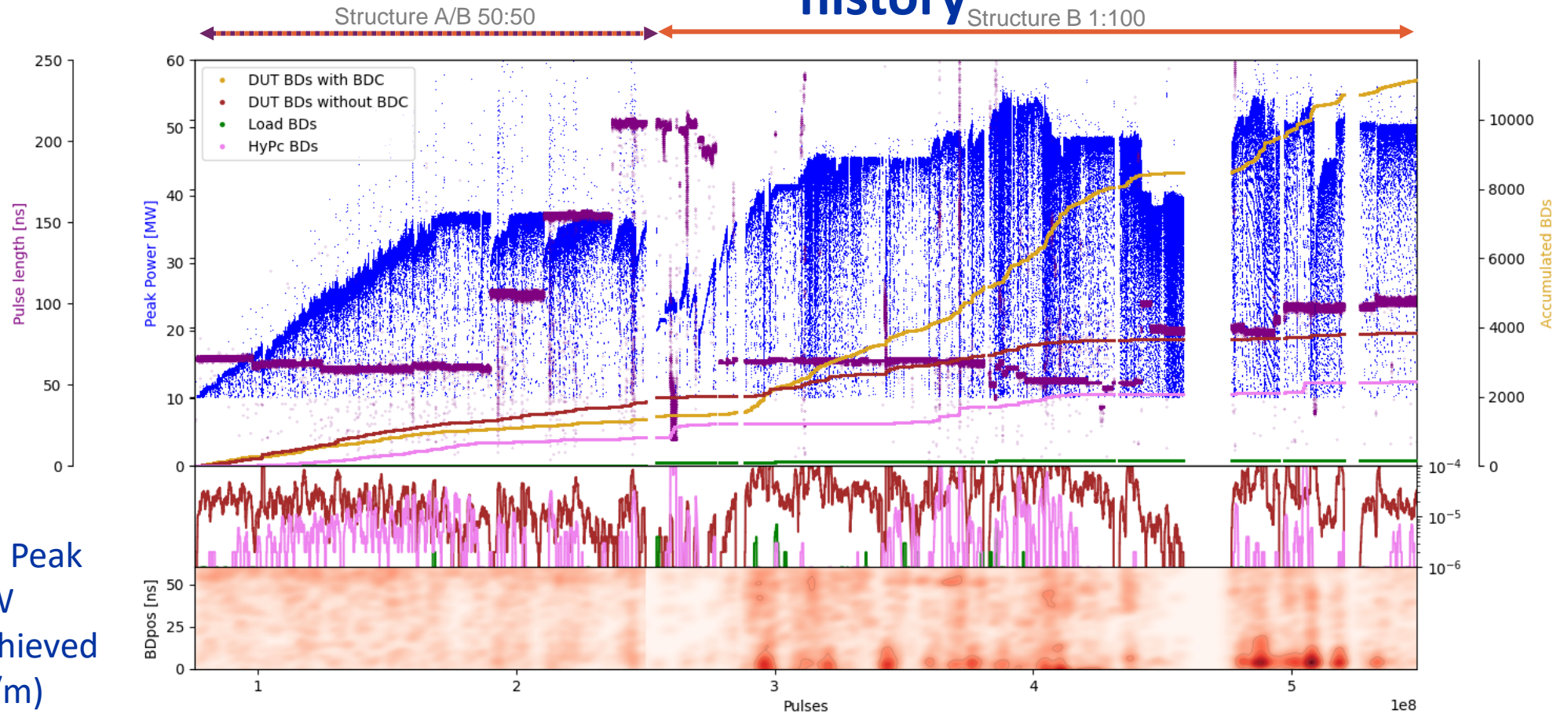
TD31N3 conditioning history



Achieved unloaded Peak Power 36.1MW
Max. Peak Power achieved 50MW (~80 MV/m)

Xbox 2 TD31

TD31N4 conditioning history

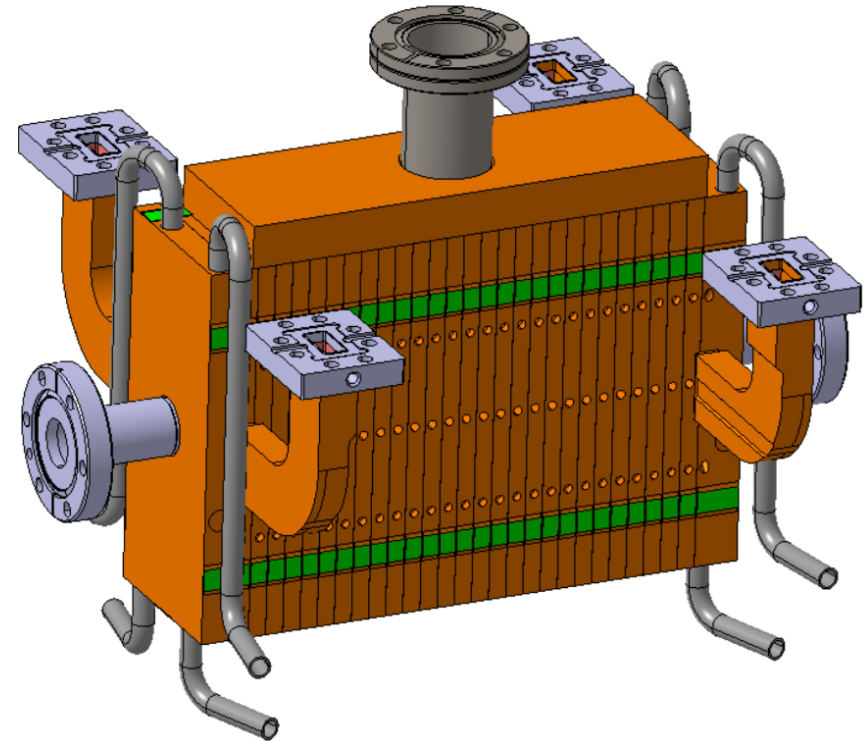


Achieved unloaded Peak Power 36.1MW
Max. Peak Power achieved 54MW (~89 MV/m)

Xbox 2 future plans



Integration of Barrel Open Cavity pulse compressor for high power testing



Integration and high-power testing of Smartcell



XBOX3

Canon E37117 klystron tested
Next: new integration (TD31 and TD26)

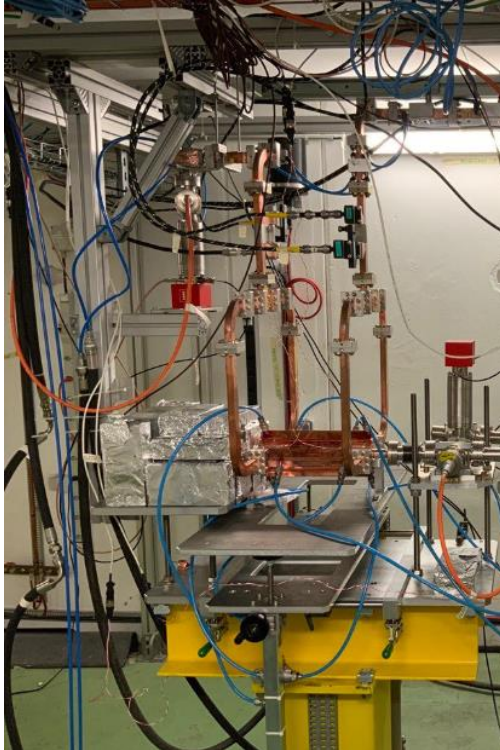
Currently in Xbox 3 – Integration

Tas	Task2	Description	Previou	Responsible	Resources	status
A	Opening of Xboxes	(No a task) Waiting end of IMPACT for electrical works				done
B	Leak detector	(Not a task) Waiting for answer for repairing or buying leak detector				waiting for response
1	Klystron/modulator system					
1.1	Test of TDK Lambda	Previous test of units before installation	A	AC	PAA/SGA	cancelled
1.2	Installation of TDK Lambda	Installation and configuration for remote control	1.1	PAA	AC/ SGA	waiting for transitions
1.3	Test of TDK Lambda	Test after installation	1.2	PAA		
1.4	Gain curves KLYA and KLYB	Curves @(nominal freq, nominal voltage)	1.3	PAA		
2	Test of structures TD26 and TD31					
2.1	Leak test of TD26		B	SGA		
2.2	Leak test of TD31		B	SGA		
2.3	RF test of TD26		2.1	PAA		
2.4	RF test of TD31		2.2	PAA		
3	Integration of structures					
3.1	Integration plan for TD26	Define components needed and define plan		PMS	SGA, PAA	done
3.2	Search components needed	Search components listed in integration plan and do shopping list	3.1	KSK		waiting for list
3.3	Search ion pump supports		3.1			
3.4	Search RF structure supports	search in stock for supports for both structures	3.1			
3.5	Manufacture support for ion pump	only if no supports available	3.3			
3.6	Manufacture support for structures	only if no supports available	3.4			
3.7	Pulse compressor pipes	Manufacture and install new pipes	A			
3.8	Order/Buy components needed		3.2	PMS	SGA	
3.9	Break vacuum		A	SGA		done
3.10	Deinstall HPDCs+loads in lines 1 and 2		3.9	SGA	KSK, PAA	done
3.11	Install structure TD26 and components		3.10	SGA	PAA, KSK	
3.12	Check structure TD31 and line2		A	SGA	KSK, PAA	

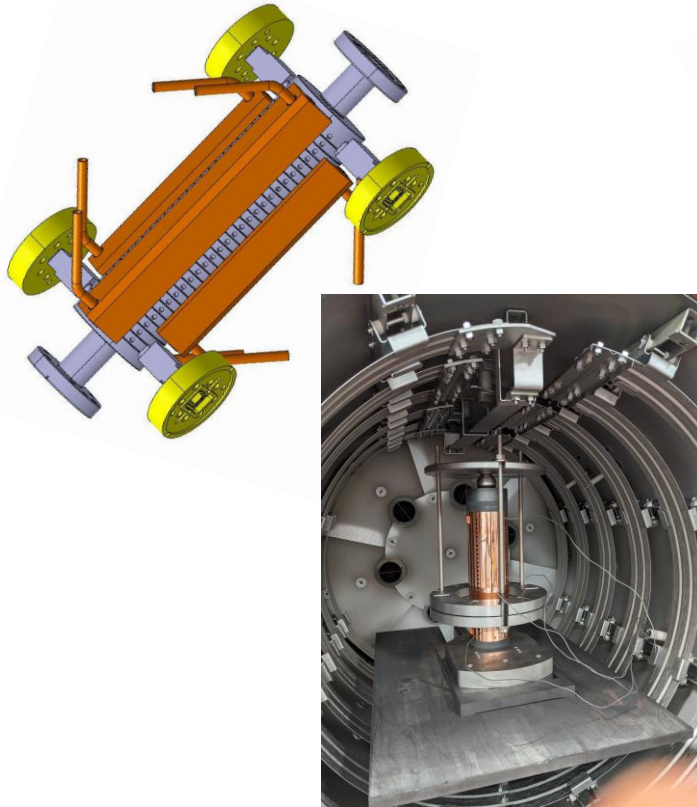
Currently in Xbox 3 – Integration

3.12	Check structure TD31 and line2		A	SGA	KSK, PAA	
3.13	Baking of waveguides		3.11,3.12	SGA	PAA, KSK	
3.14	Start pumping lines		3.13	SGA	KSK	
4	RF channels					
4.1	Define RF channels needed			PAA		done
4.2	Verify RF cables	Verify labels and channel in ACQ system for every RF cable+ meas. Attenuation	A, 4.1	PAA		in progress
4.3	Calibration of ADC cards	High power calibration of cards	4.2	PAA		
5	Chillers					
5.1	Test chillers			SGA	AC	done
5.2	Manufacture new extended wiring			AC	KSK	
5.3	Upgrade switchboard		A	AC	SGA, KSK	

Xbox 3 future plans



Continue conditioning of TD31 N1



Conditioning of structure TD26 from CIEMAT



LP test of iFast accelerating structure + conditioning (?)



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X-Box 2: Reminder on BD classification

