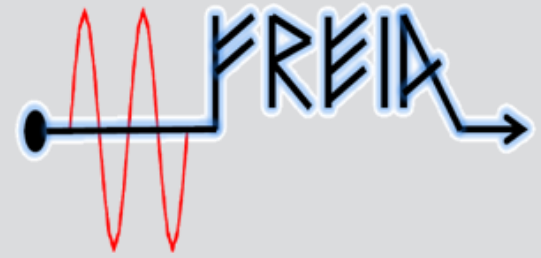




UPPSALA
UNIVERSITET



ESS weekly meeting (2022 W44)

M. Zhovner et al

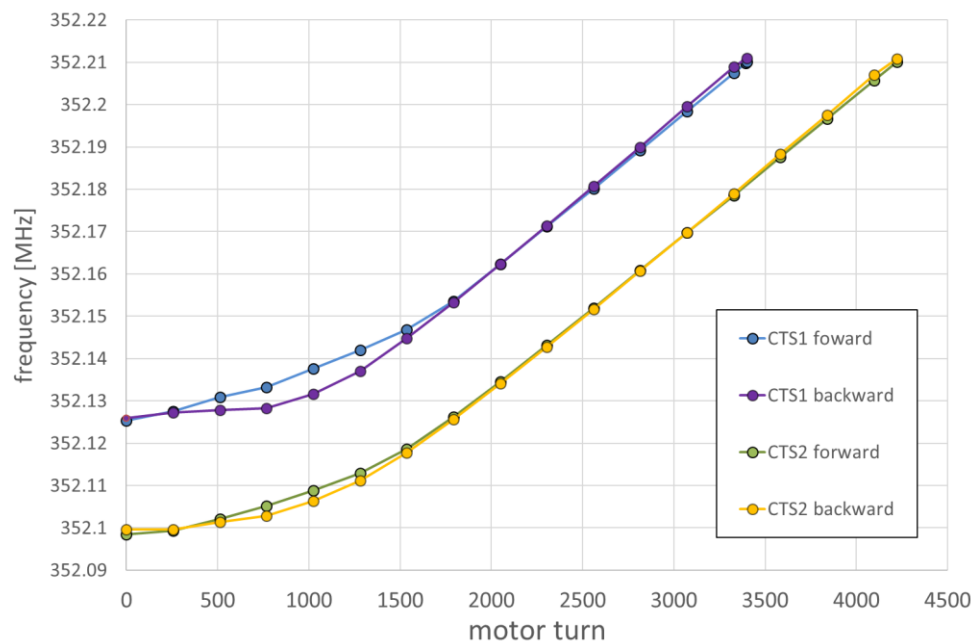


CM10_2: General planning update



week		W43											
date		MON		TUE		WED		THU		FRI		SAT	SUN
		24-Oct		25-Oct		26-Oct		27-Oct		28-Oct		29-Oct	30-Oct
		m	a	m	a	m	a	m	a	m	a		
present CM	CM10	start LHe cooling		4K filling		2K pumping		Coupler cold conditioning	RF calibration at cold	CTS			
next CM	CM09	Reception test						waiting in a docking area					
week		W44											
date		MON		TUE		WED		THU		FRI		SAT	SUN
		31-Oct		1-Nov		2-Nov		3-Nov		4-Nov		5-Nov	6-Nov
		m	a	m	a	m	a	m	a	m	a		
present CM	CM10	MP conditioning		Heat Load measurements				Start warm up		Break insulation vacuum	Official half day holliday	Warming up	
next CM	CM09	waiting at the docking area						Disassemble concrete wall					
week		W45											
date		MON		TUE		WED		THU		FRI		SAT	SUN
		7-Nov		8-Nov		9-Nov		10-Nov		11-Nov		12-Nov	13-Nov
		m	a	m	a	m	a	m	a	m	a		
present CM	CM10	disconnect cyogenic lines, waveguides		Swap the modules				dissconnect doorknobs		N2 filling			
next CM	CM09	connect doorknobs						connect waveguides, cryogenic lines					
week		W46											
date		MON		TUE		WED		THU		FRI		SAT	SUN
		14-Nov		15-Nov		16-Nov		17-Nov		18-Nov		19-Nov	20-Nov
		m	a	m	a	m	a	m	a	m	a		
previous CM	CM10	Outgoing test		departure to ESS		report writing		publish report		Close concrete wall.			
present CM	CM09	connect vacuum pumps				vacuum pumping							

CM10 2nd CTS tests



CTS-1

3400 motor turns

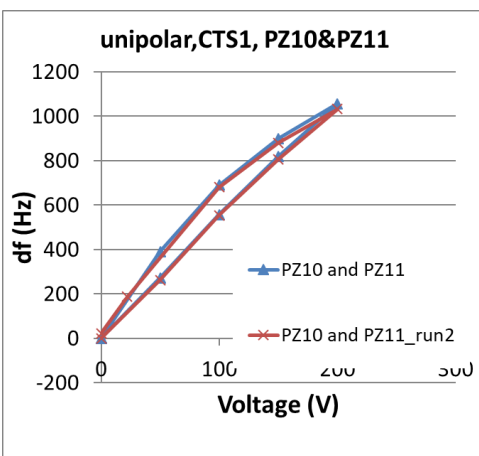
Hz/step =	0.177083333
kHz/mm=	90.66666667

CTS-2

4224 motor turns

Hz/step =	0.17421875
kHz/mm=	89.2

- Homing procedure work well.



PZ10 only

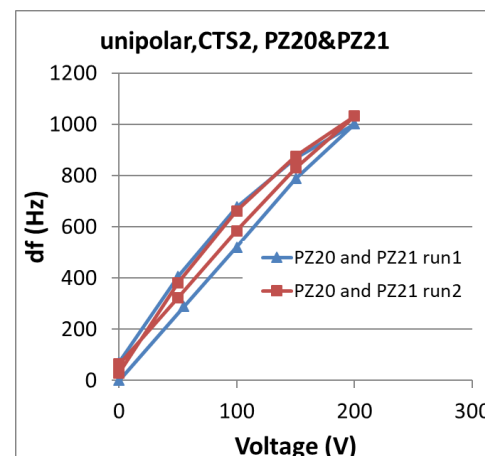
tuning range bp	811.9453
tuning range up	676.696

PZ11 only

tuning range bp	760.946
tuning range up	581.4373

PZ10 + PZ11

tuning range bp	1362.379
tuning range up	1032.119



PZ20 only

tuning range bp	771.154
tuning range up	571.5513

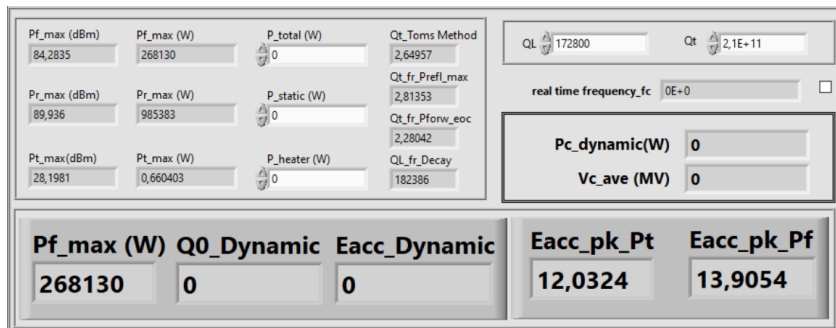
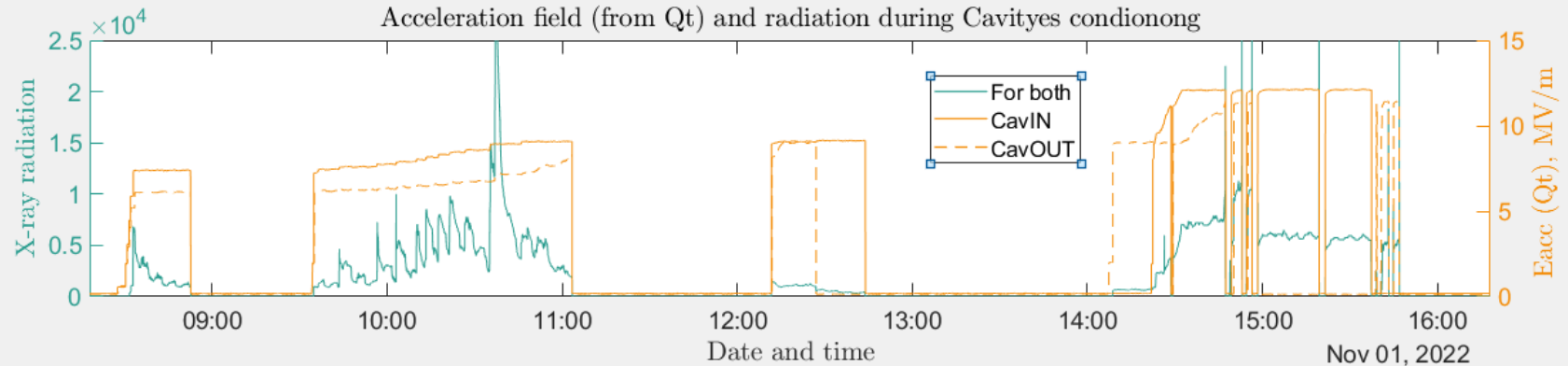
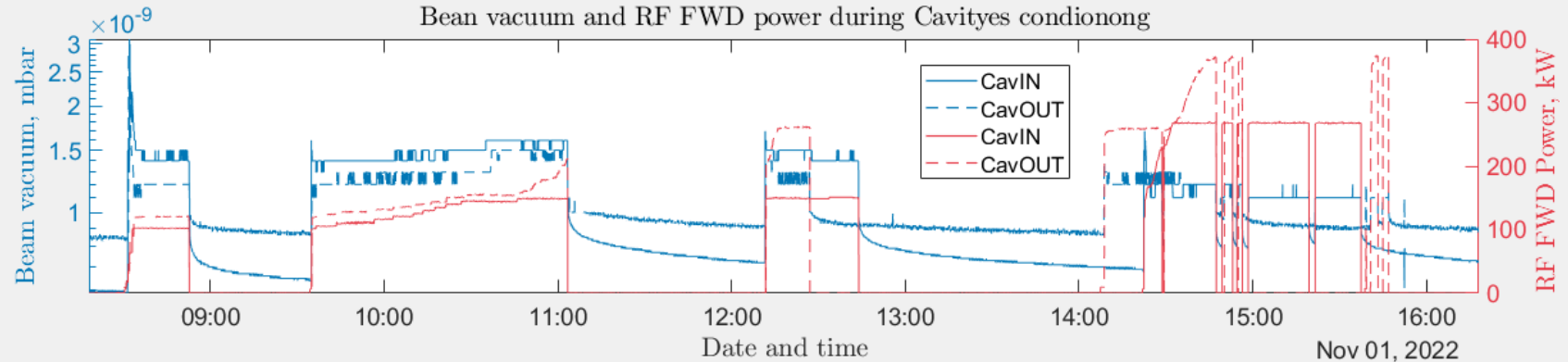
PZ21 only

tuning range bp	658.7727
tuning range up	498.168

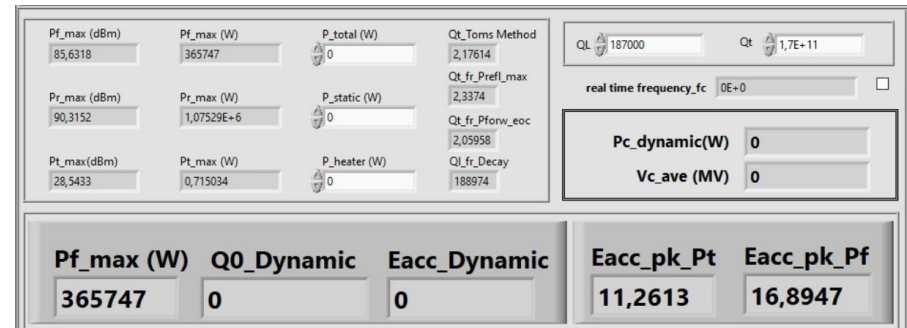
PZ20 + PZ21

tuning range bp	1290.708
tuning range up	1001.578

CM10_2: Cavities MP conditioning

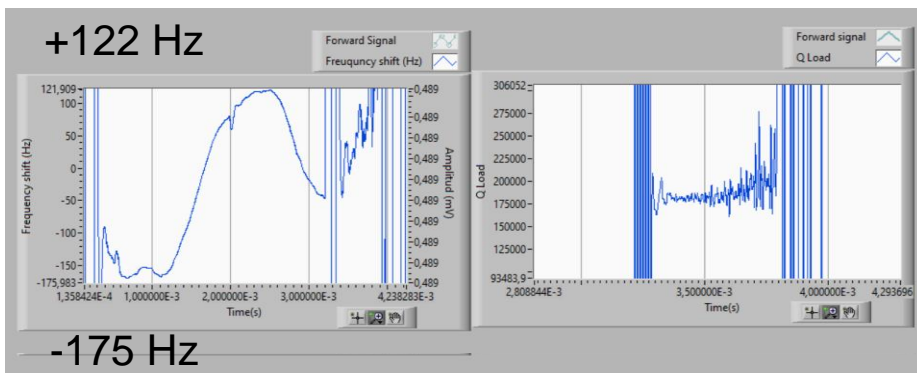
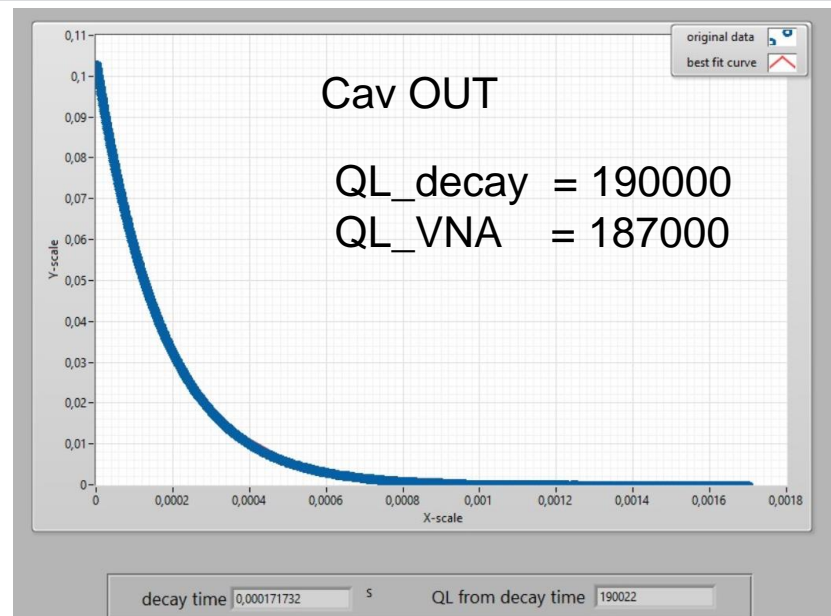
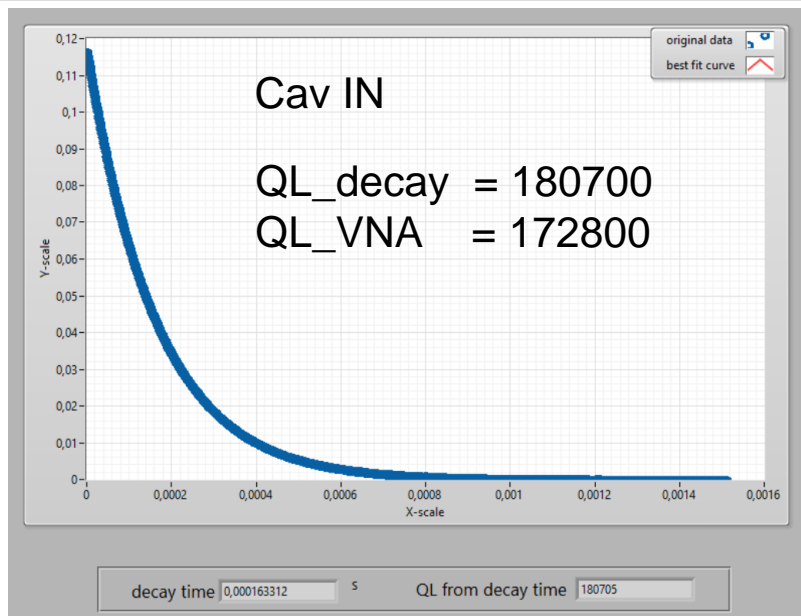


Cav IN



Cav OUT

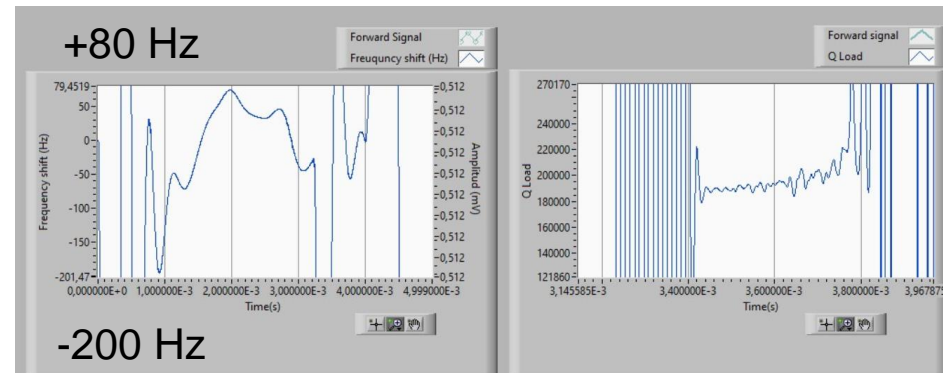
CM10_2: Decay and LFD measurements



Tot_abs: 300 Hz

PZ11 only

tuning range bp 760.946
tuning range up 581.4373

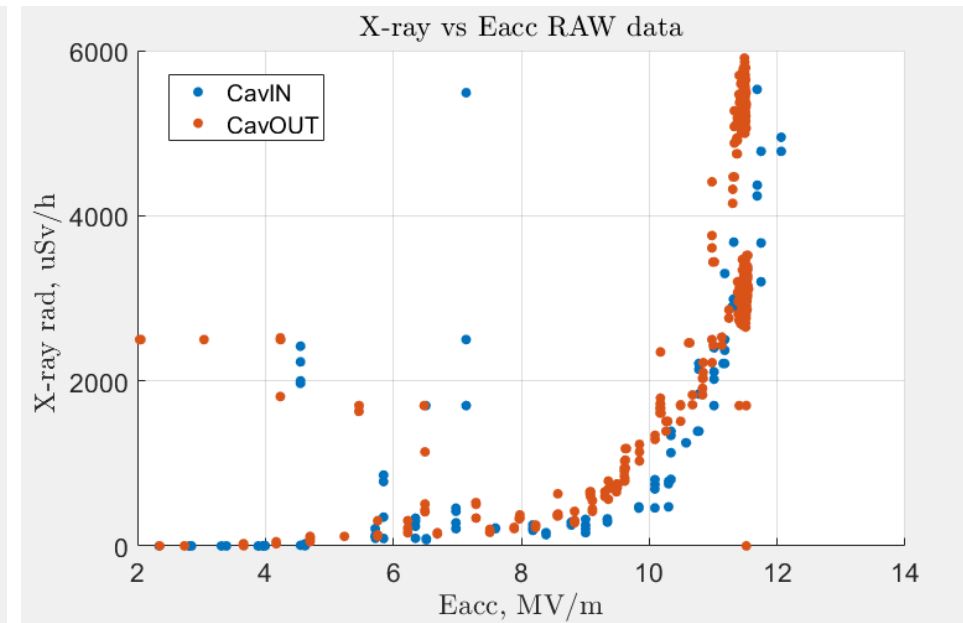
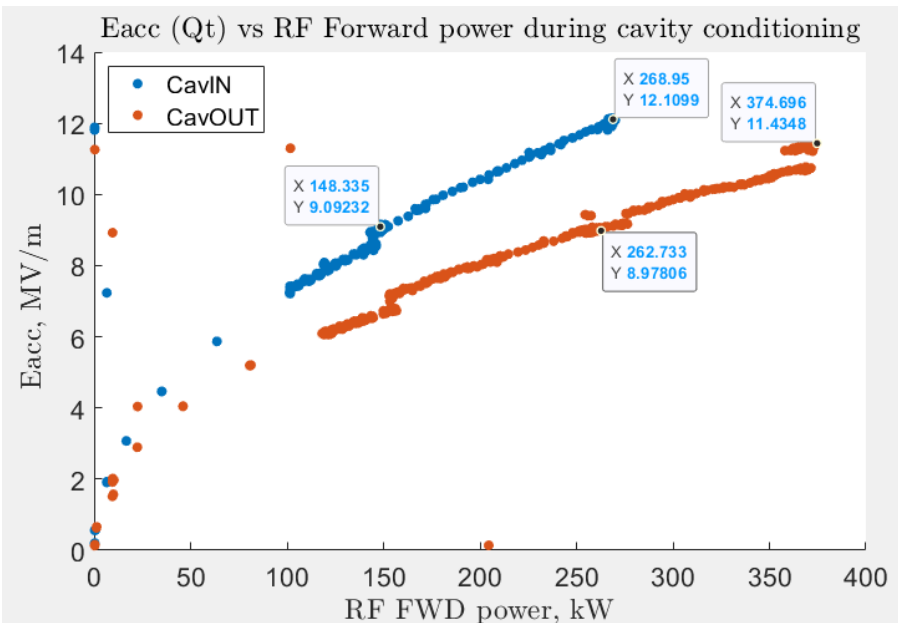


Tot_abs: 280 Hz

PZ21 only

tuning range bp 658.7727
tuning range up 498.168

CM10_2: Cavities MP conditioning



- Both cavities reach 9 MV/m.
- Cav1 max tested field is 12 MV/m. Cav2 max tested field is 11.5 MV/m.
- “OK level” field emission founded in both cavities with ~8 MV/m offset.



CM10_2: Heat Load measurements



Value name	Dynamic	Dynamic	Static	Dynamic	Dynamic	Static	Dynamic	Dymanic
Cav 1	9 MV/m	9 MV/m	0 MV/m	0 MV/m	12 MV/m	0 MV/m	0 MV/m	12 MV/m
Cav 2	9 MV/m	0 MV/m	0 MV/m	9 MV/m	0 MV/m	0 MV/m	11.5 MV/m	0 MV/m
Heat Load [W]	18.19 +/- 1.24	18.9 +/- 2.87	19.43 +/- 1.38	17.83 +/- 1.25	18.05 +/- 2.43	18.57 +/- 0.81	19.88 +/- 1	19.88 +/- 0.78

CV551 = 80%

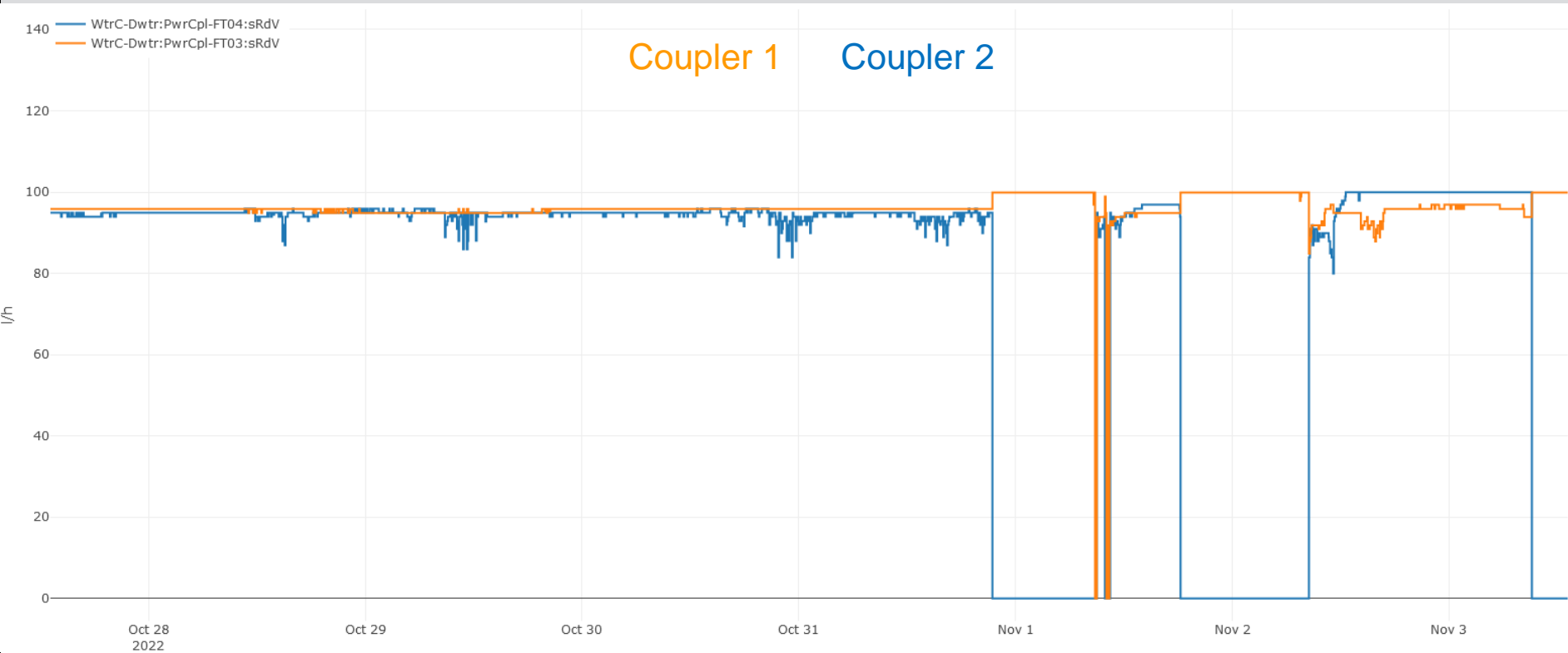
CV01 = 0%

CV03 = 30%

CV04 = reg

- Thanks to our ESS colleagues for the help.

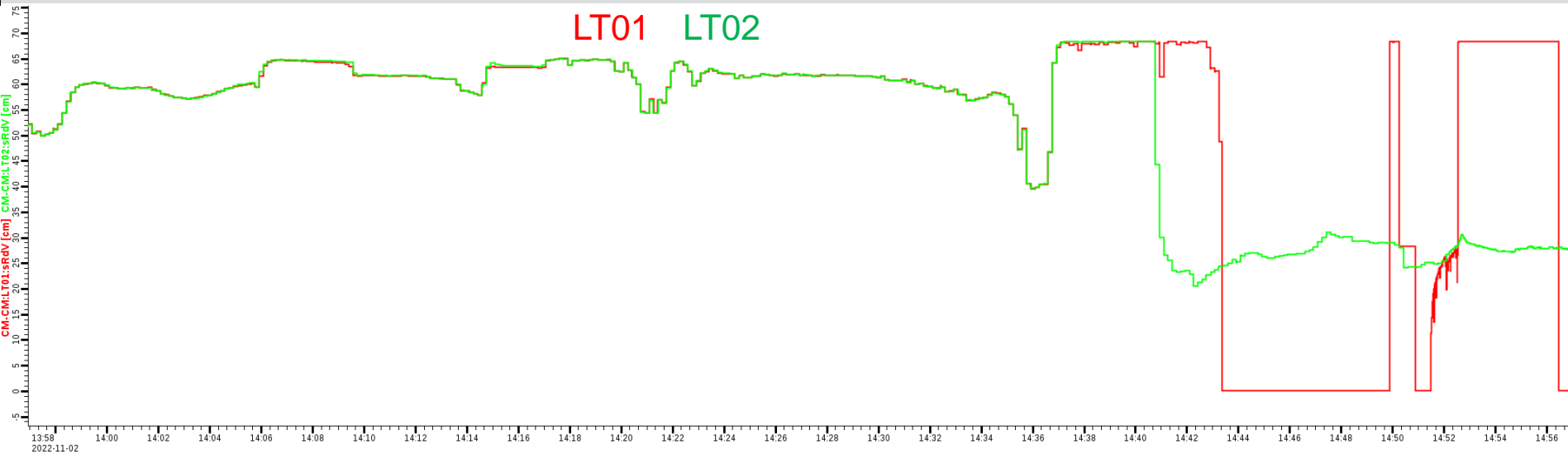
CM10_2: Coupler cooling line issue



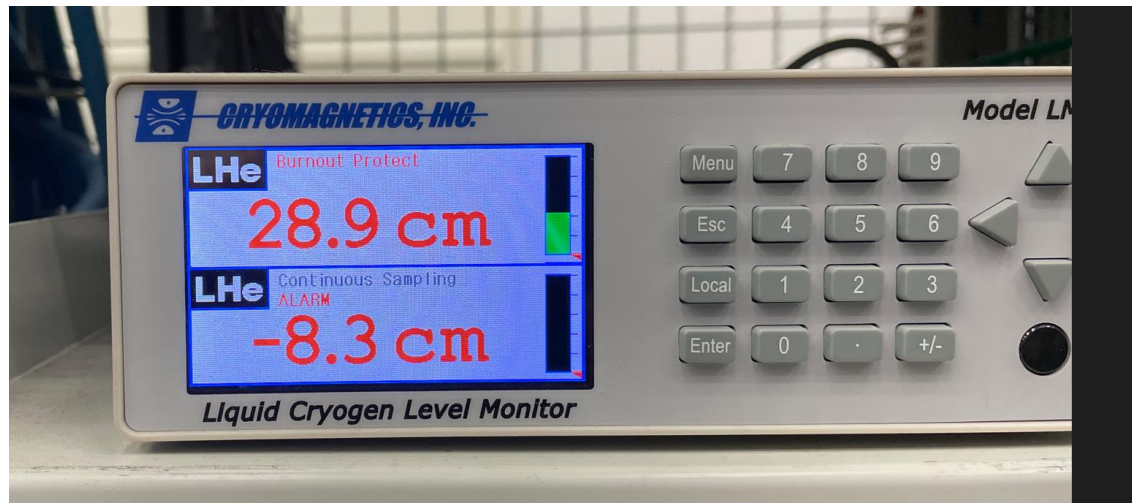
- We start often detect a absence of water flow in **Couple 2** cooling line.
- To fix this we several times drain water from cooling line.
- Expected caus: Contamination by products of corrosion from coupler side.



CM10_2: LT01 LHe level sensor issue

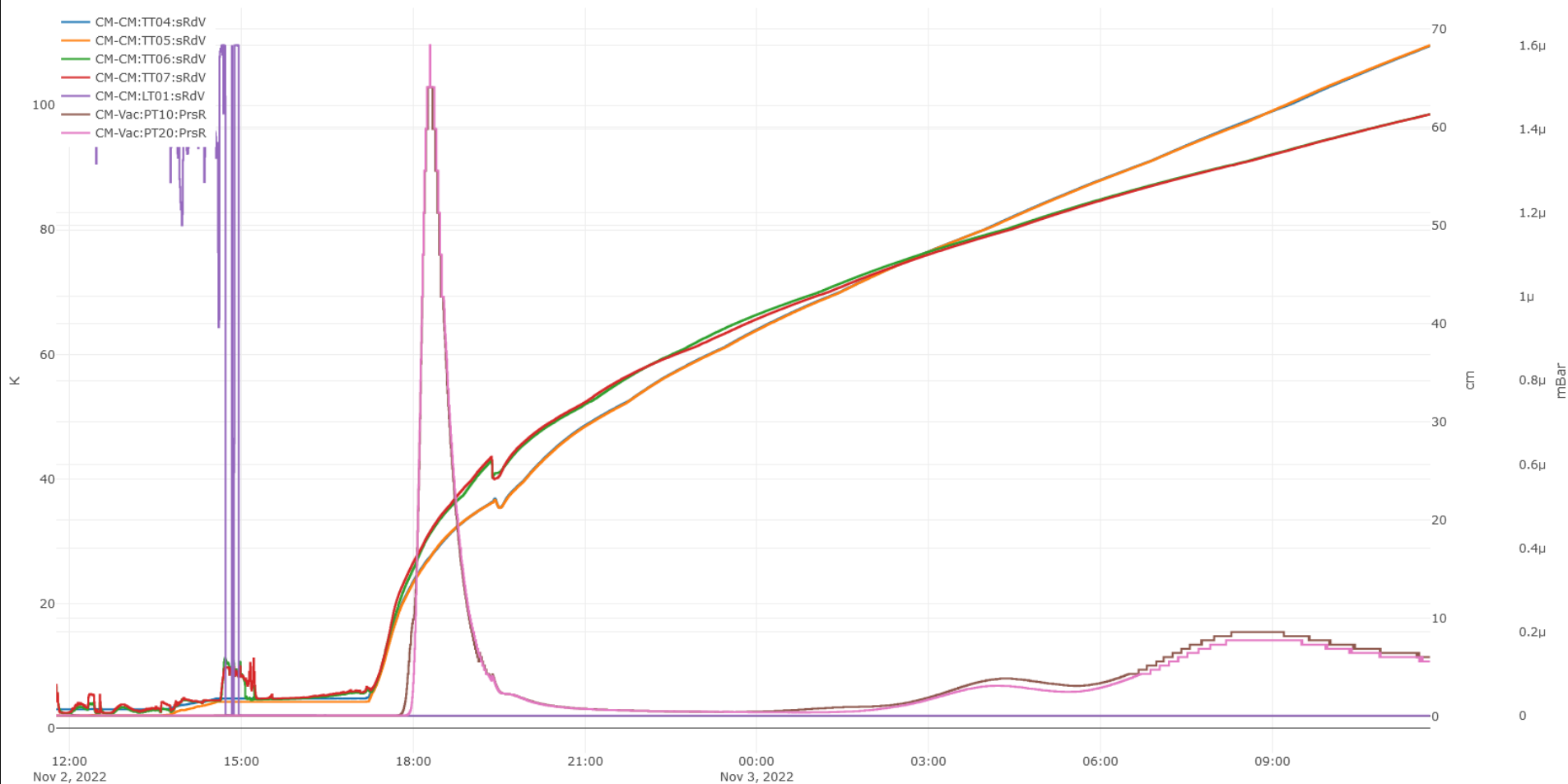


- When we start warm-up LT01 start bouncing 0 and max level value.
- Controller switched to **Burnout Protect** mode.
- Electrical continuity will be check after warm-up



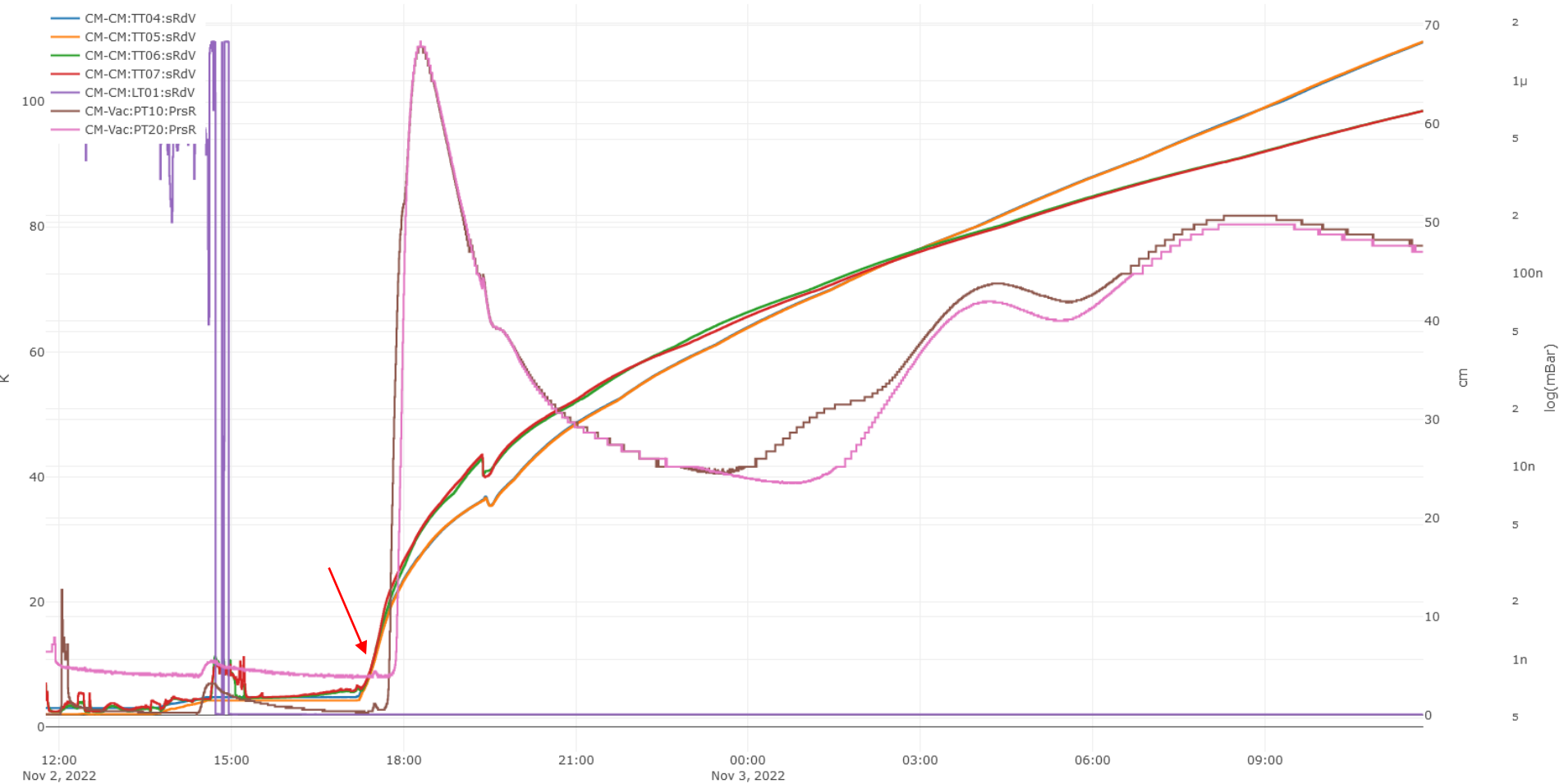


CM10_2: Warm-up



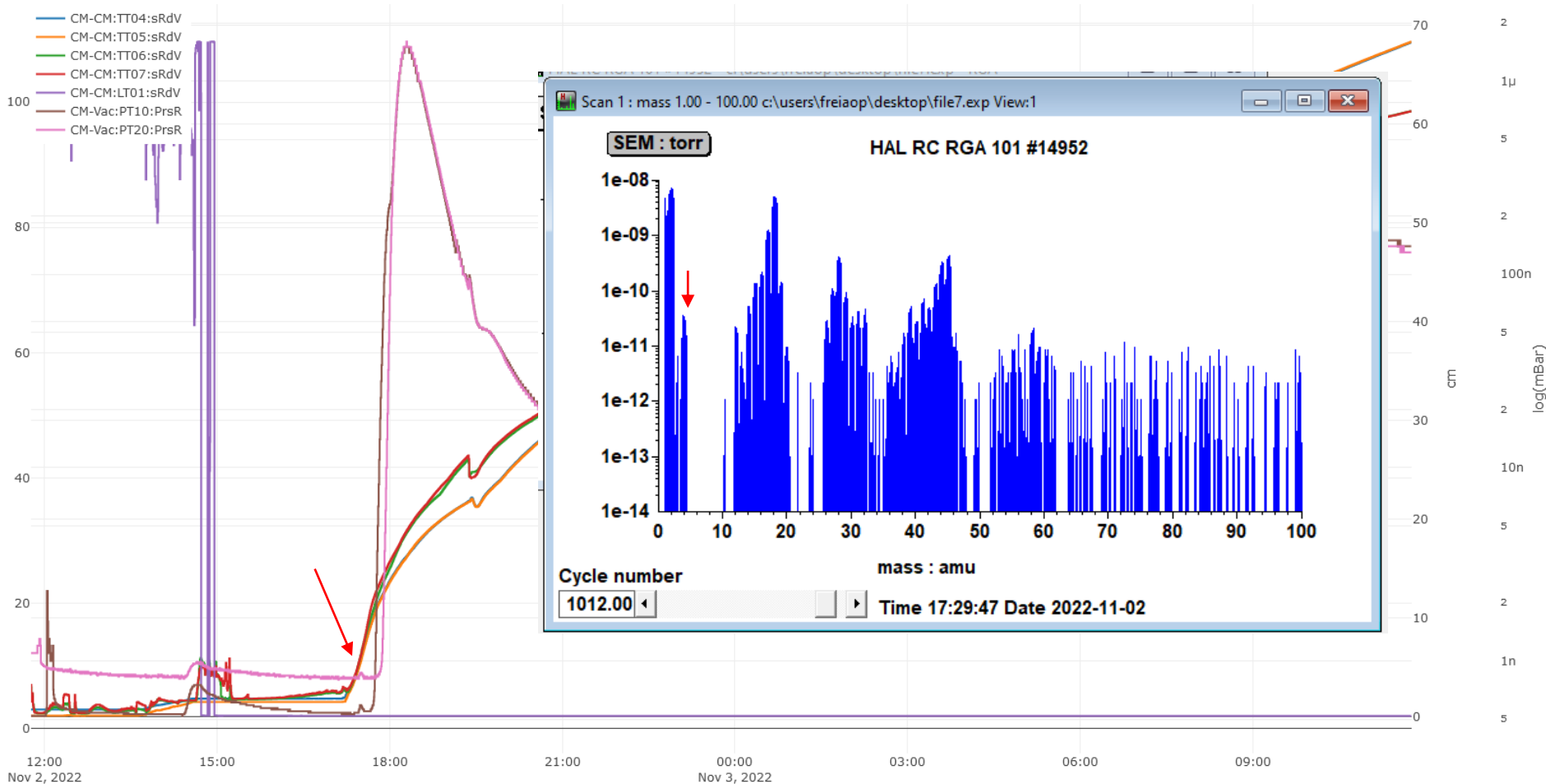
- For fist look nothing strange.

CM10_2: Warm-up



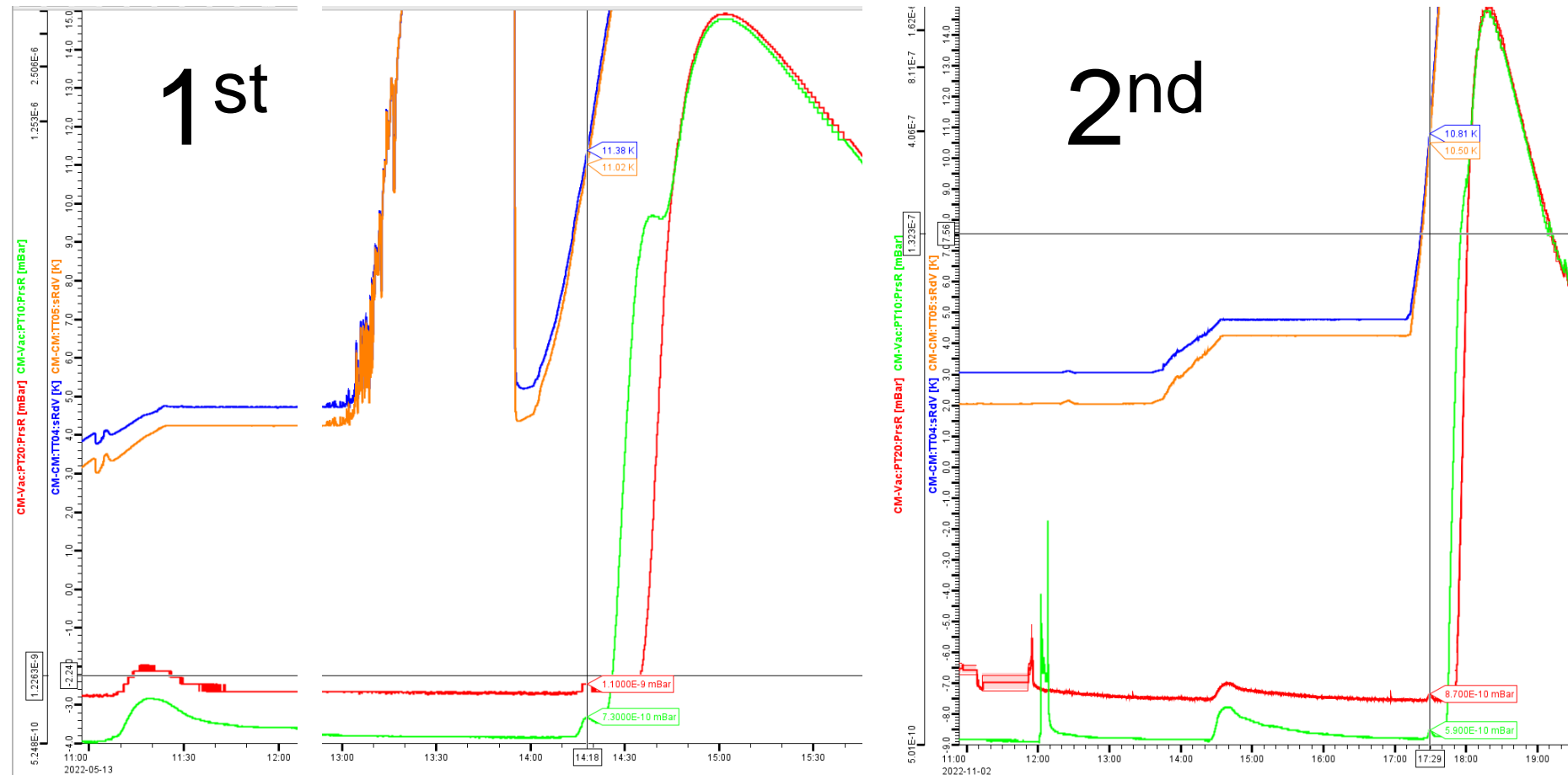
- Small bump in beam vacuum detected around 11K at 17:30.

CM10_2: Warm-up



- Small bump in beam vacuum detected around 11K at 17:30.
- He signal (2E-11 torr) observed in same time by RGA

CM10_2: 1st run vs 2nd run Warm-ups



- Same behavior observed also during 1st run of CM10.
- We cant exclude (for now) that: This can be common behavior for all CMs.



CM10, CM09, CM13 Planning

