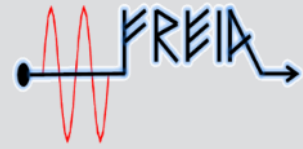
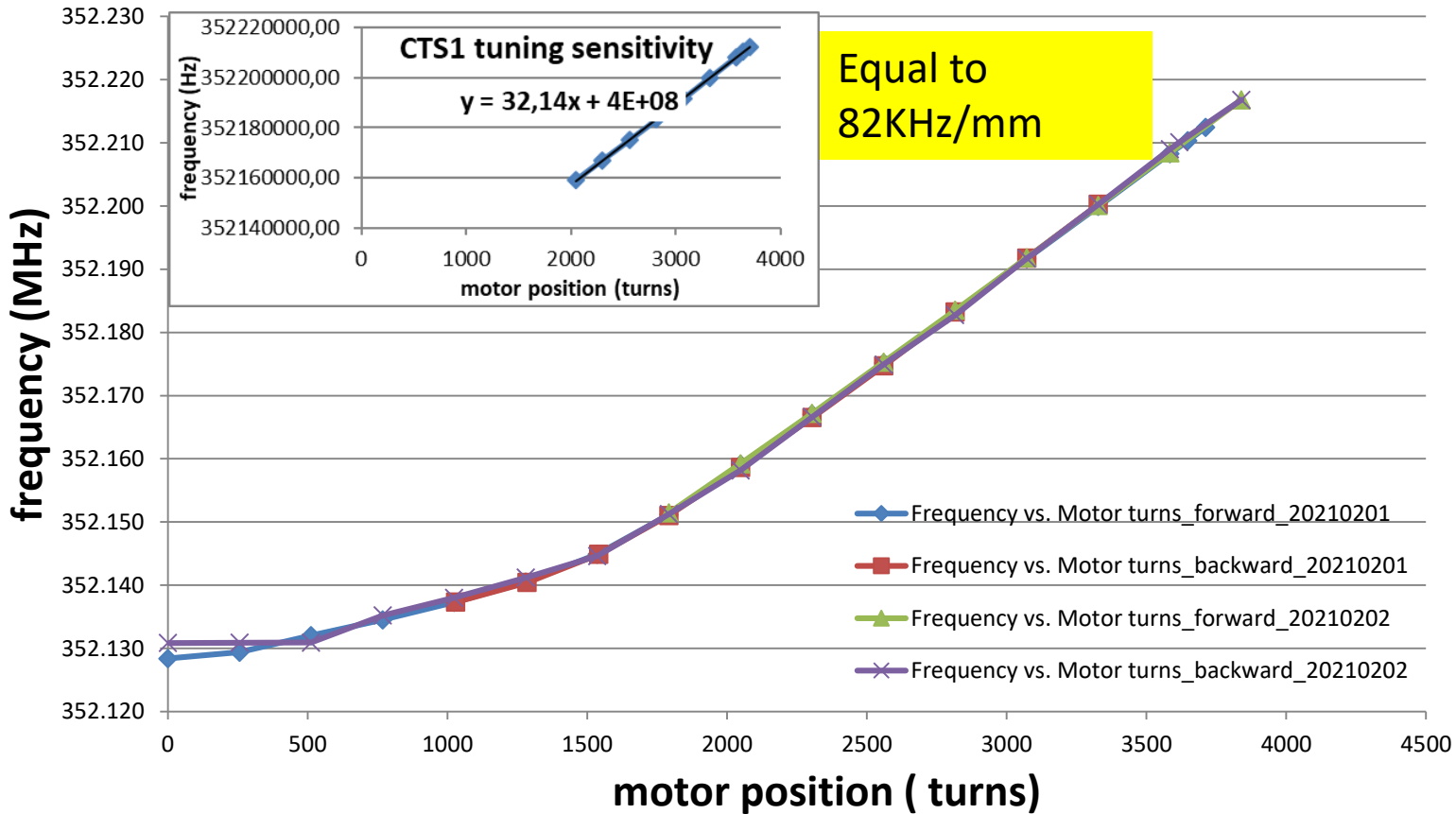


ESS spoke CM04
weekly meeting
20210205
Han Li



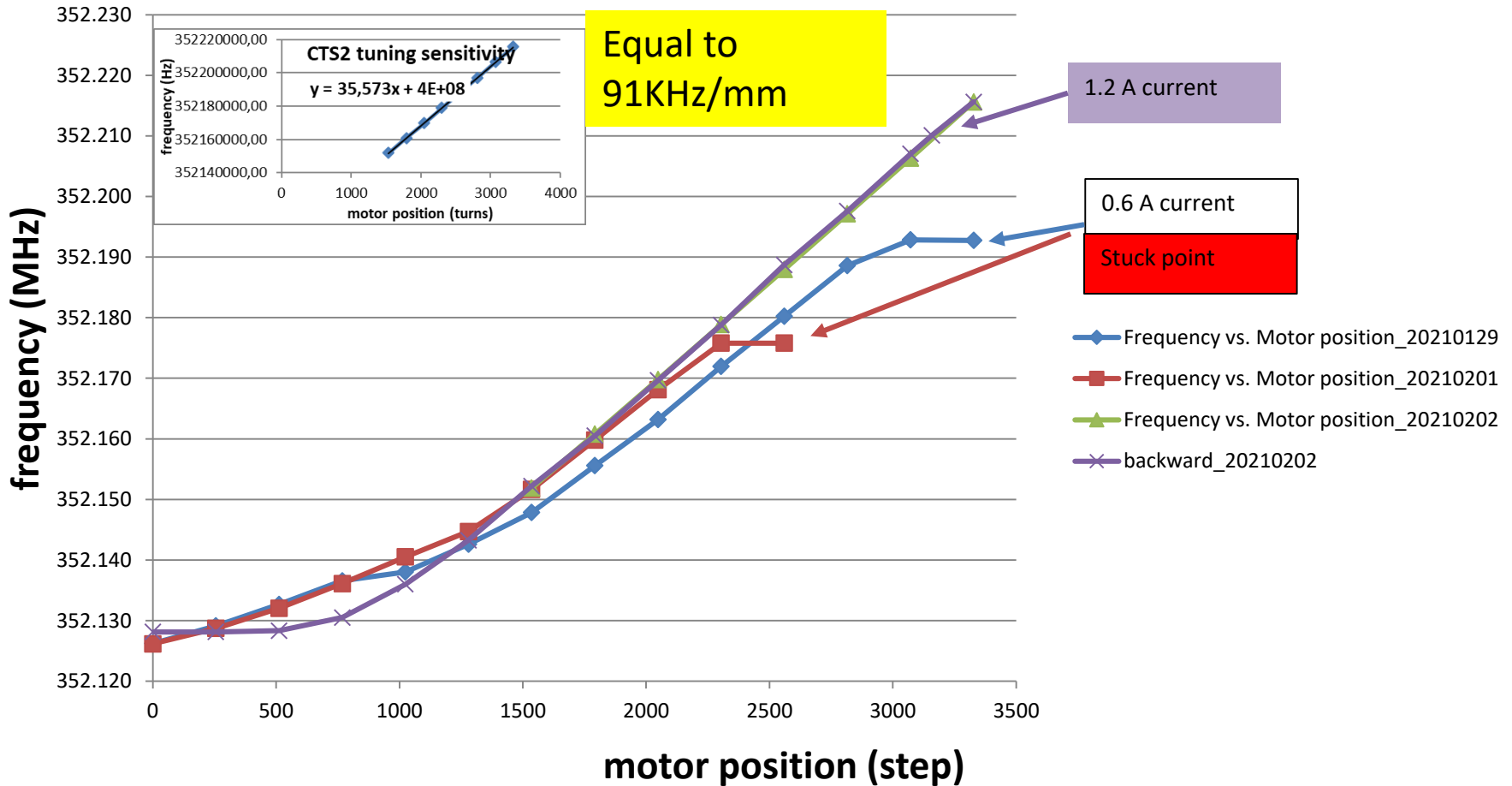
- CTS test
- CM conditioning
- Test plan

CTS1 performance



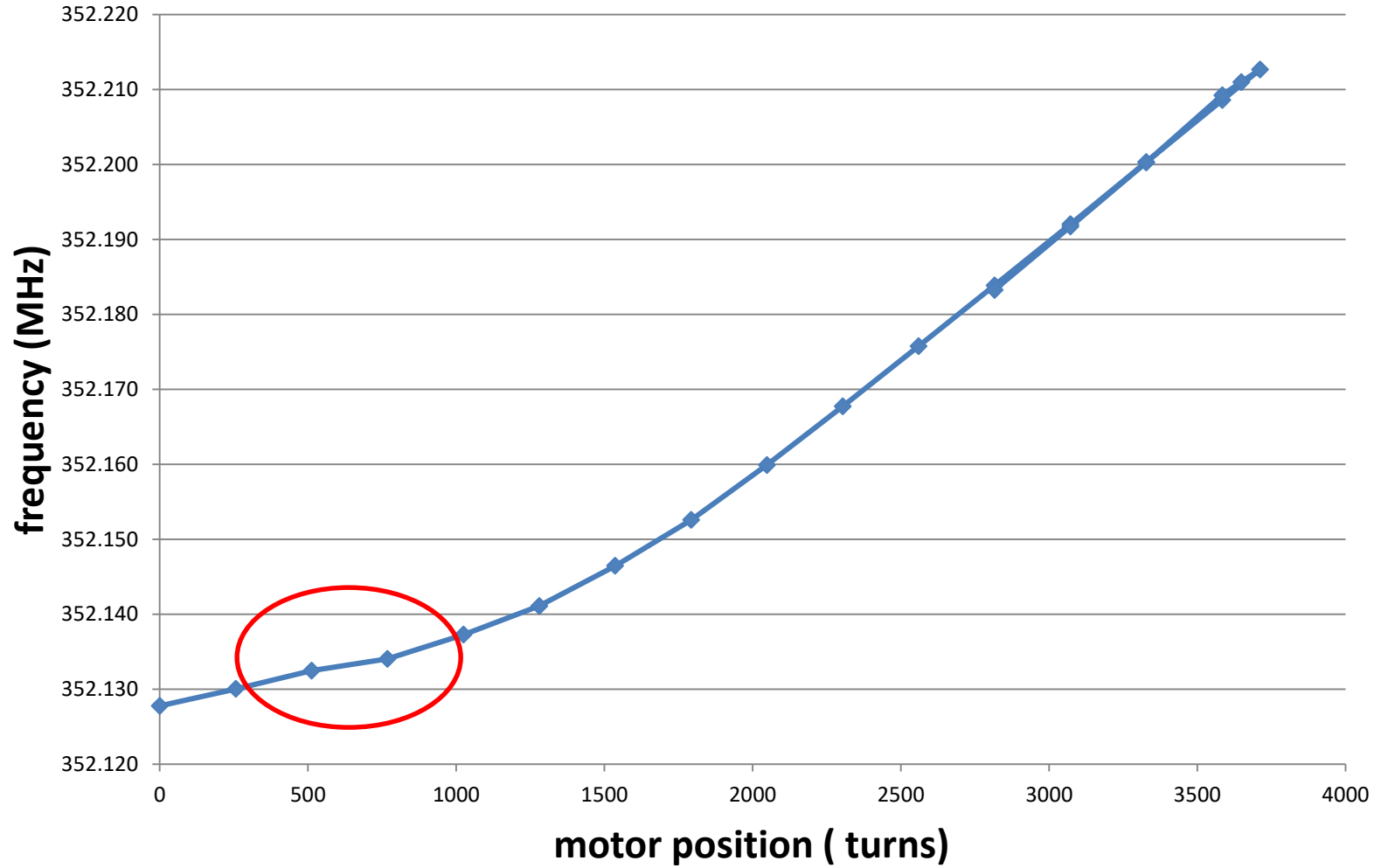
- To target frequency: **1.42 mm** motor position and **3617** shaft turns
- Higher frequency after CTS disconnect with cavity

CTS2 performance

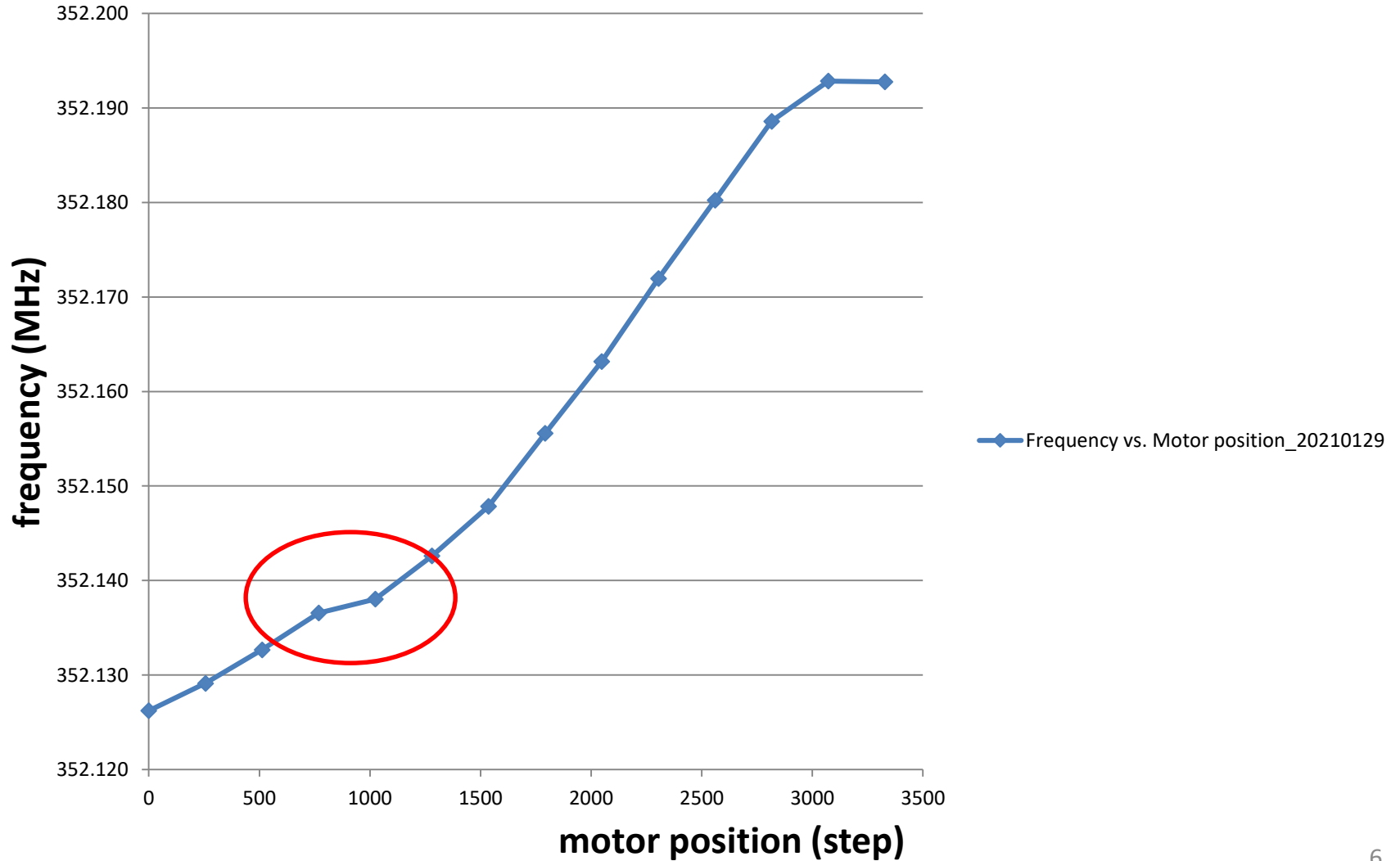


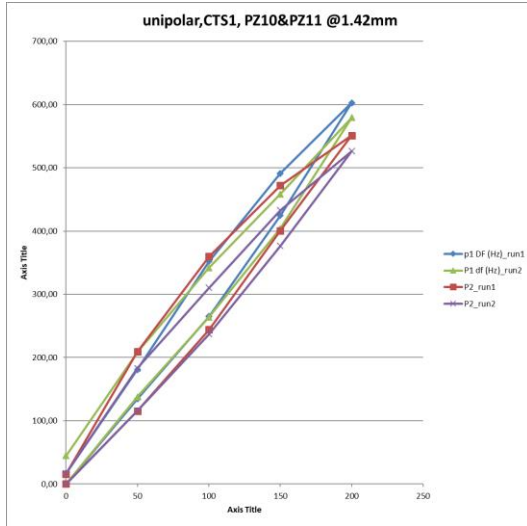
- To target frequency: **1.23 mm** motor position and **3617** shaft turns
- Higher frequency after CTS disconnect with cavity

CTS1 performance

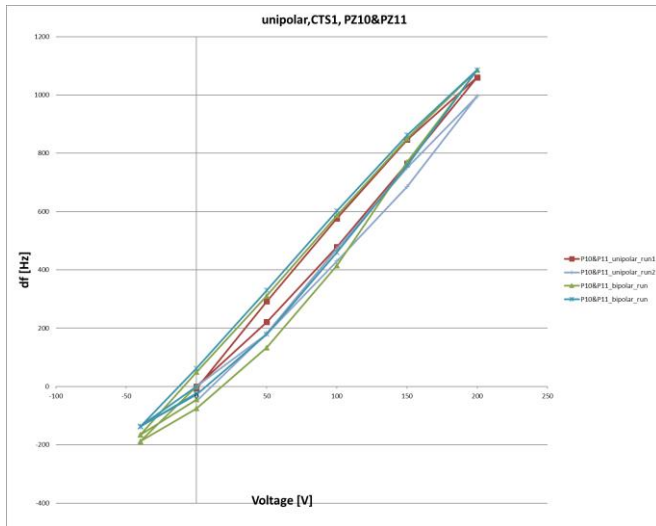


CTS2 performance



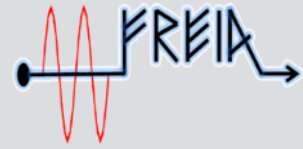


Tuning range	PZ10	PZ11	PZ10 &PZ11
unipolar	603 Hz	526 Hz	1060 Hz
bipolar	758 Hz	620 Hz	1273 Hz



	PZ20	PZ21	PZ20 &PZ21
unipolar	620 Hz	481 Hz	941 Hz
bipolar	762 Hz	595 Hz	1168 Hz

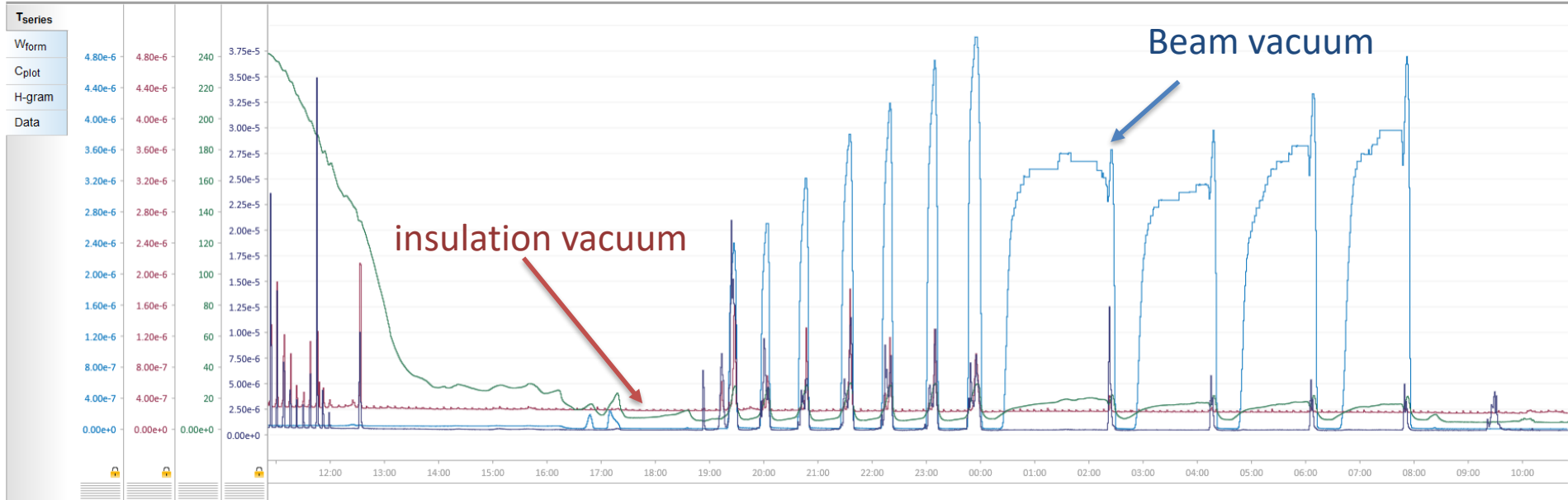
Vacuum during 4K cooldown

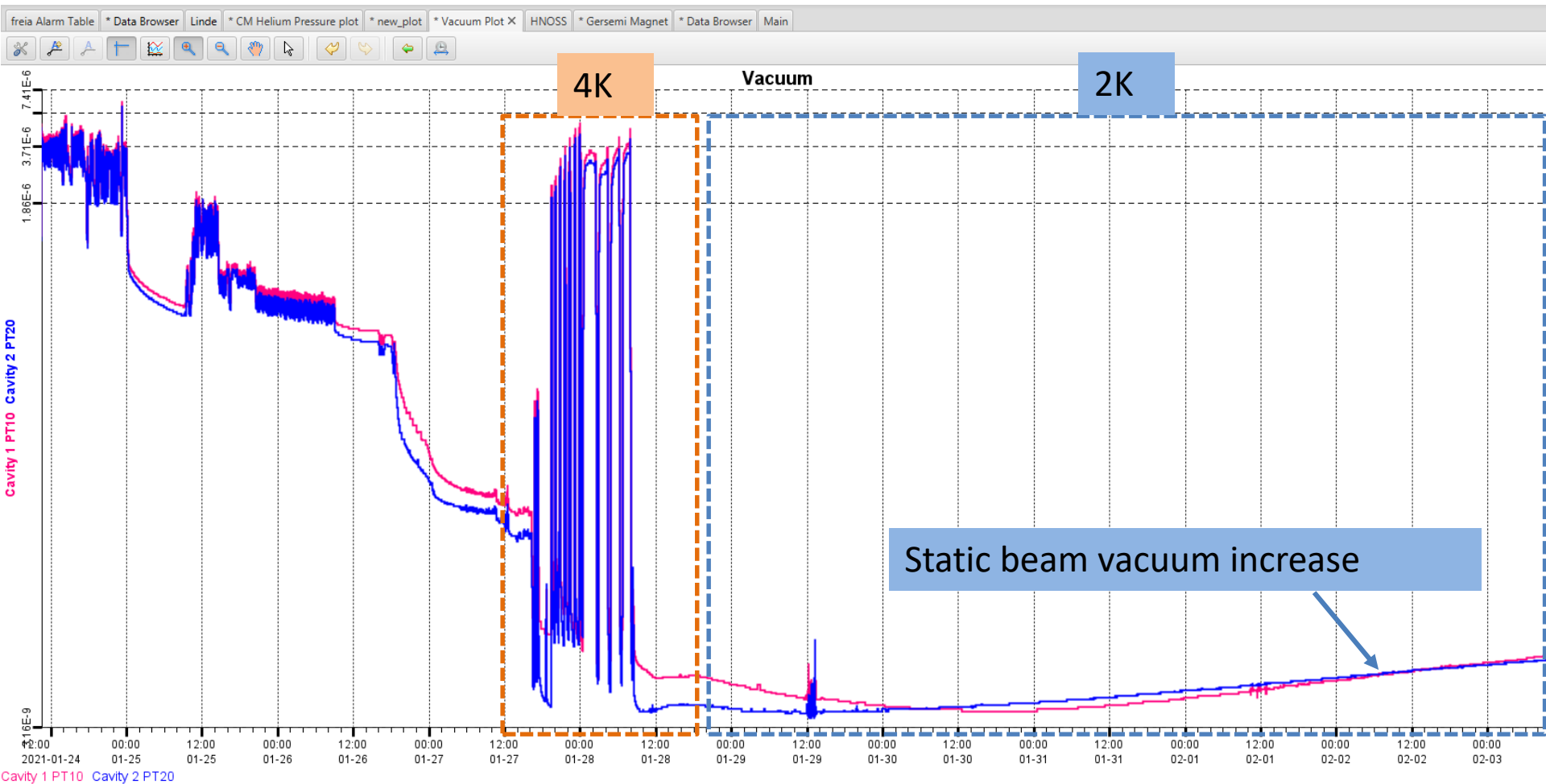


- Beam vacuum spike during 4K up to $5E-6$ mbar
- Higher than insulation vacuum

Del	Plot	Name	DBRType	Units	Processing	Scale	Time (local)	Value	Notes
<input type="checkbox"/>	<input checked="" type="checkbox"/>	CM-Vac:PT10:sRdV	DBR_SCALAR_DOUBLE			linear	2021-01-28 02:52:57	3.3499999999999997e-7	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	CM-Vac:PT73:sRdV	DBR_SCALAR_DOUBLE	mbar		linear	2021-01-28 02:52:57	2.2700363189187556e-7	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	CM-CM:TT07:sRdV	DBR_SCALAR_DOUBLE	K		linear	2021-01-28 02:52:57	10.766831134438744	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	CM-Vac:PT77:sRdV	DBR_SCALAR_DOUBLE	mbar		linear	2021-01-28 02:52:57	4.67261031644739e-7	

WINDOW SIZE: END: 2021-01-28 10 :50 :40



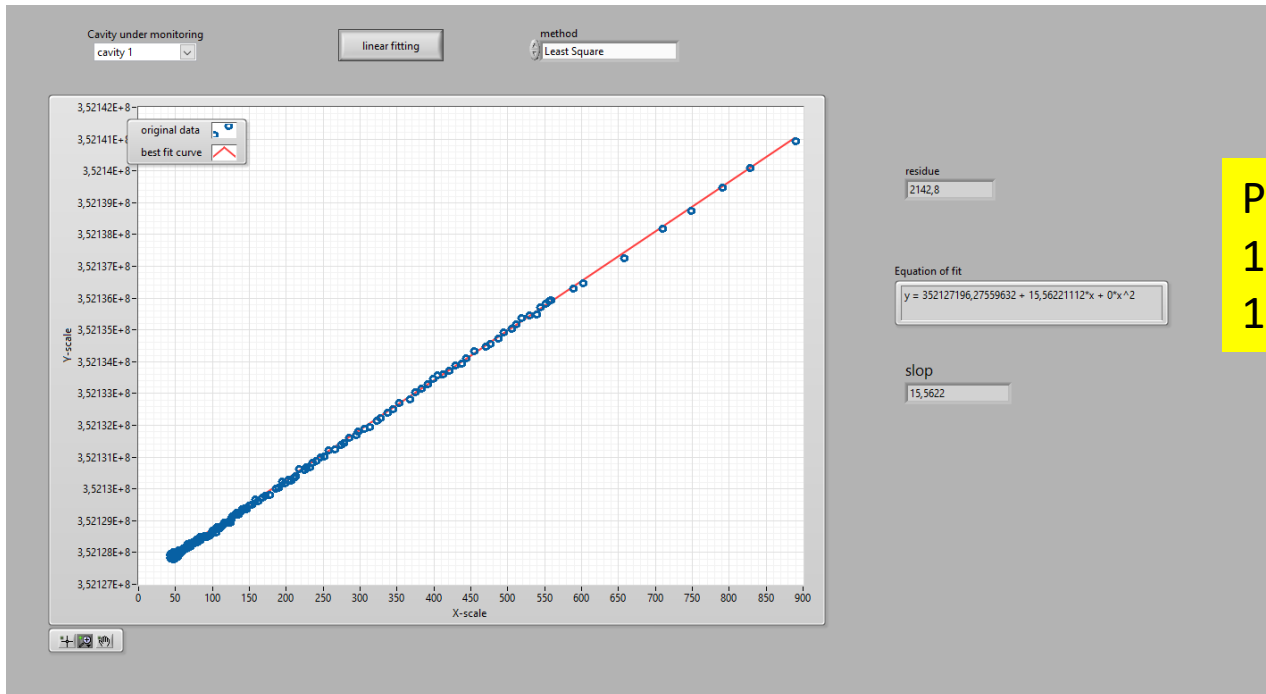


Properties X

Traces Time Axis Value Axes Misc. Statistics

Show	Item (PV, Formula)	Display Name	Color	Cursor Value	Scan Period	Buffer Size	Axis	Trace Type	Width	Style	Point	Size	Request	Index
<input type="checkbox"/>	CM-VacPT71:sRdV	CM PT71	■	-	0.0	5000	mbar	Single	2	Solid	None	2	<input checked="" type="checkbox"/> Optimiz...	0
<input type="checkbox"/>	CM-VacPT73:sRdV	CM PT73	■	-	0.0	5000	mbar	Single	2	Solid	None	2	<input checked="" type="checkbox"/> Optimiz...	0
<input type="checkbox"/>	CM-VacPT77:sRdV	CM PT77	■	-	0.0	5000	mbar	Single	2	Solid	None	2	<input checked="" type="checkbox"/> Optimiz...	0

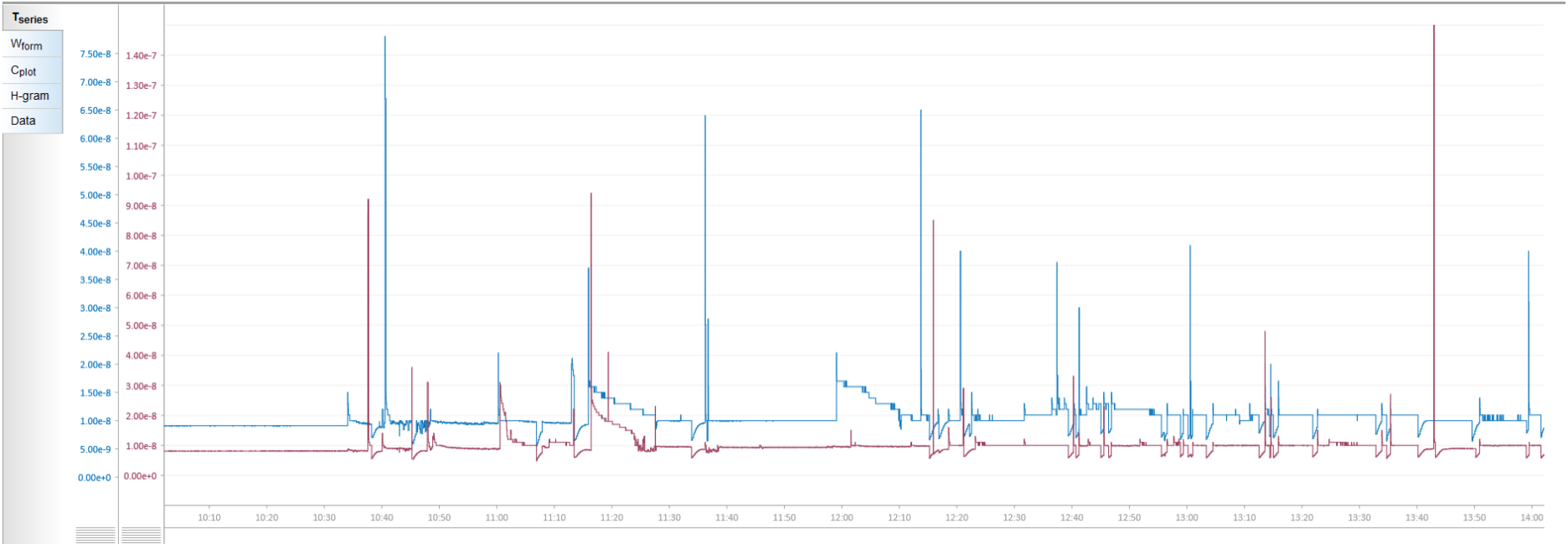
	UU test	
Cavity location	Cavity IN	Cavity OUT
Cavity	DSPK10	DSPK17
Frequency (MHz) @RT	351.580	352.580
Frequency (MHz)@4K	351.143	352.138
Frequency (MHz)@2K	351.128	352.125



Pressure sensitivity:
 15.6Hz/mbar (Cav1, CTS off)
 13.1Hz/mbar (Cav2, CTS off)

Del	Plot	Name	DBRType	Units	Processing	Scale	Time (local)	Value	Notes
<input type="checkbox"/>	<input checked="" type="checkbox"/>	CM-Vac:PT10:sRdV	DBR_SCALAR_DOUBLE			linear	2021-02-04 10:38:52	8.2e-9	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	CM-Vac:PT20:sRdV	DBR_SCALAR_DOUBLE			linear	2021-02-04 10:38:50	7.3e-9	

WINDOW SIZE: END: 2021-02-04 14 :02 :09





Preliminary time plan



Test item	time	comment
Arrival, unpacking, initial inspection	11 th -12 th Jan.	
CM installation	13 th -15 th Jan.	
CM alignment measurement	18 th -21 th Jan.	
FPC warm conditioning	22 th -25 th Jan.	1) Simultaneously 2) Could be prolonged depended on the progressing
Insulation vacuum		CM alignment measurement
CM cooldown to 4 K	27 th Jan.	
CM cooldown to 2 K	28 th Jan.	
FPC cold conditioning	29 th Jan.	Simultaneously
CTS test	1 st -2 nd Feb.	CTS measurement
Cavity conditioning (on resonance)	3 rd Feb.	Open loop
Heat load/Q measurement	4 th Feb.	1)Each cavity 2) PID
CM alignment measurement	5 th Feb..	
Warm up	6 th -9 th Feb.	
Disconnect, packing, shipment	10 th -15 th Feb.	