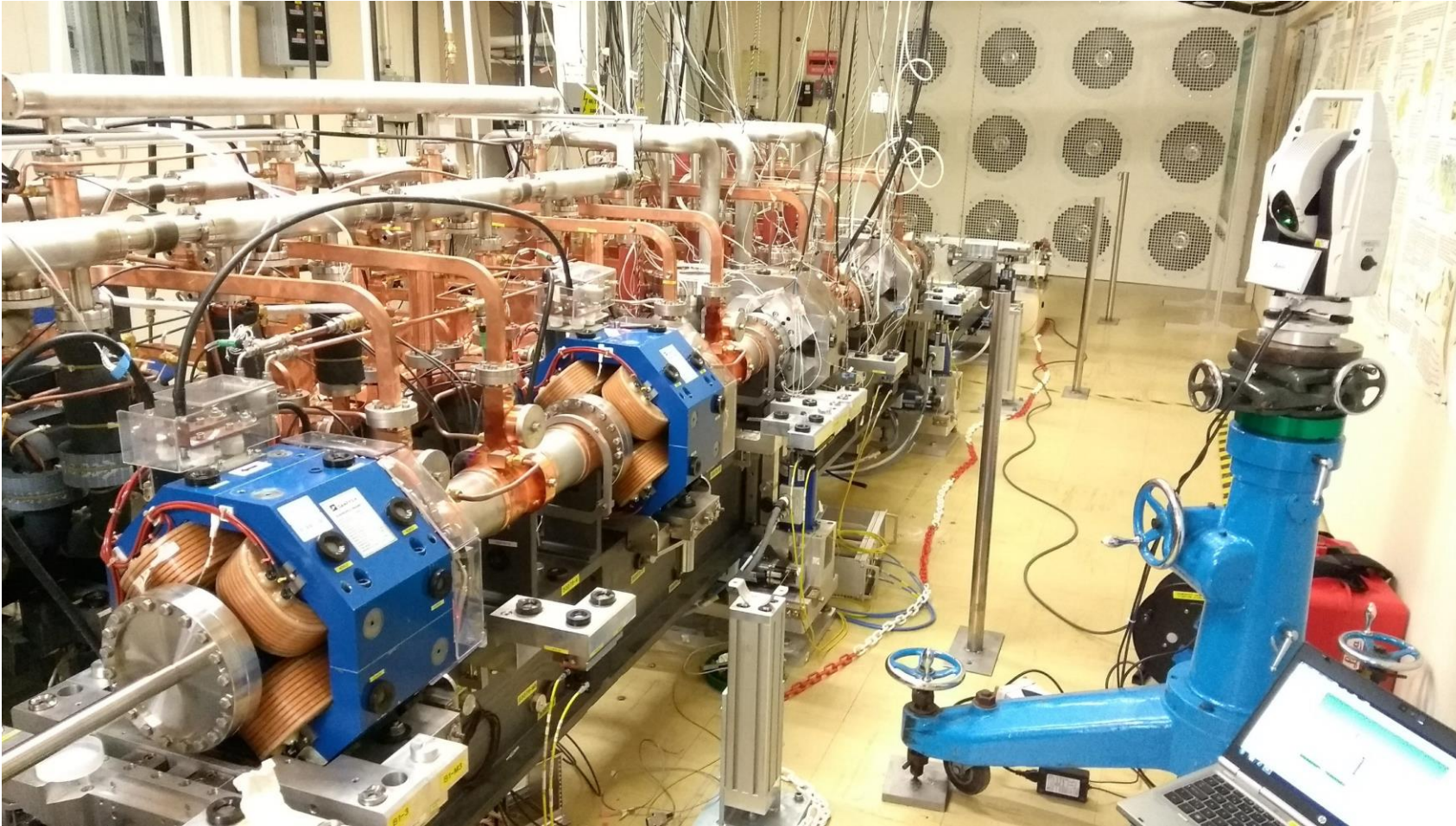


## DBQ test



# Details of measurements:

Date: 15/08/2018 and 16/08/2018

Number of stations: 3

Measurements conditions: ambient temperature  $\sim 20.0^{\circ}\text{C}$  (recorded by AT401)

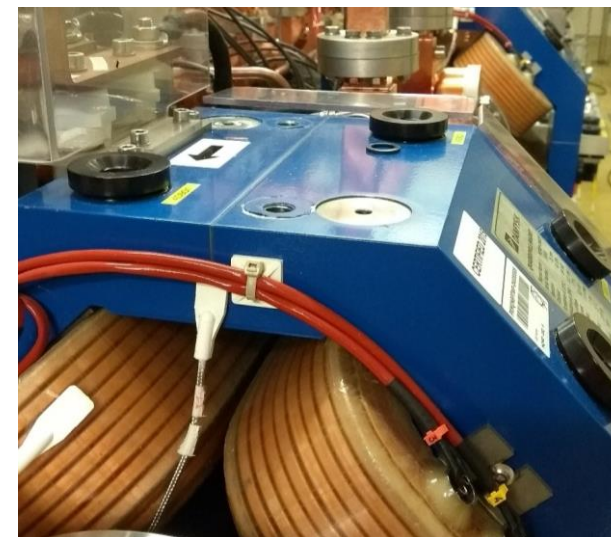
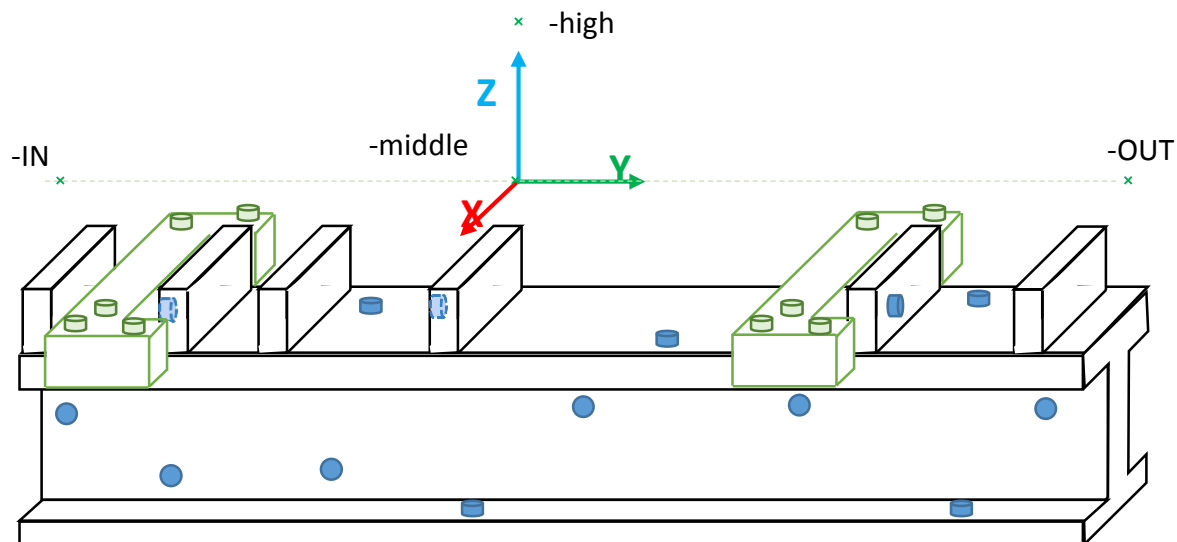
station 1 – temperature of DBQ  $20.7^{\circ}\text{C}$  (temperature not registered!)

station 2 – temperature of 3DBQ  $26.9^{\circ}\text{C}$ , 4DBQ  $29.9^{\circ}\text{C}$

station 3 – temperature of DBQ  $20.7^{\circ}\text{C}$

Precise mode of measurements (2 circles, 5 sec each)

## Girder coordinate system



	Max [ $\mu\text{m}$ ]	RMS [ $\mu\text{m}$ ]	No points	Excluded
	girder DBT0#2			
station 1	17	10	14	0
station 2	15	10	14	0
station 3	14	10	14	0



# Displacement of the quads:



ST2 vs ST1						
3DBQ				4DBQ		
Tx	0.003	mm		Tx	-0.002	mm
Ty	-0.002	mm		Ty	0.008	mm
Tz	-0.003	mm		Tz	0.006	mm
Rx	0.000016	rad		Rx	-0.000026	rad
Ry	0.000026	rad		Ry	0.000015	rad
Rz	0.000001	rad		Rz	0.000003	rad
F	1.000024			F	1.000052	

Temperature during station 1??

ST3 vs ST1						
3DBQ				4DBQ		
Tx	0.000	mm		Tx	0.000	mm
Ty	-0.004	mm		Ty	0.008	mm
Tz	0.008	mm		Tz	0.012	mm
Rx	0.000026	rad		Rx	-0.000017	rad
Ry	-0.000010	rad		Ry	-0.000003	rad
Rz	-0.000005	rad		Rz	0.000018	rad
F	1.000037			F	1.000031	

	3DBQ	4DBQ	$\Delta$ temp	$\Delta$ temp
Station 1	20.8	20.7		
Station 2	26.9	29.9	6.1	9.2
Station 3	20.8	20.7	-6.1	-9.2

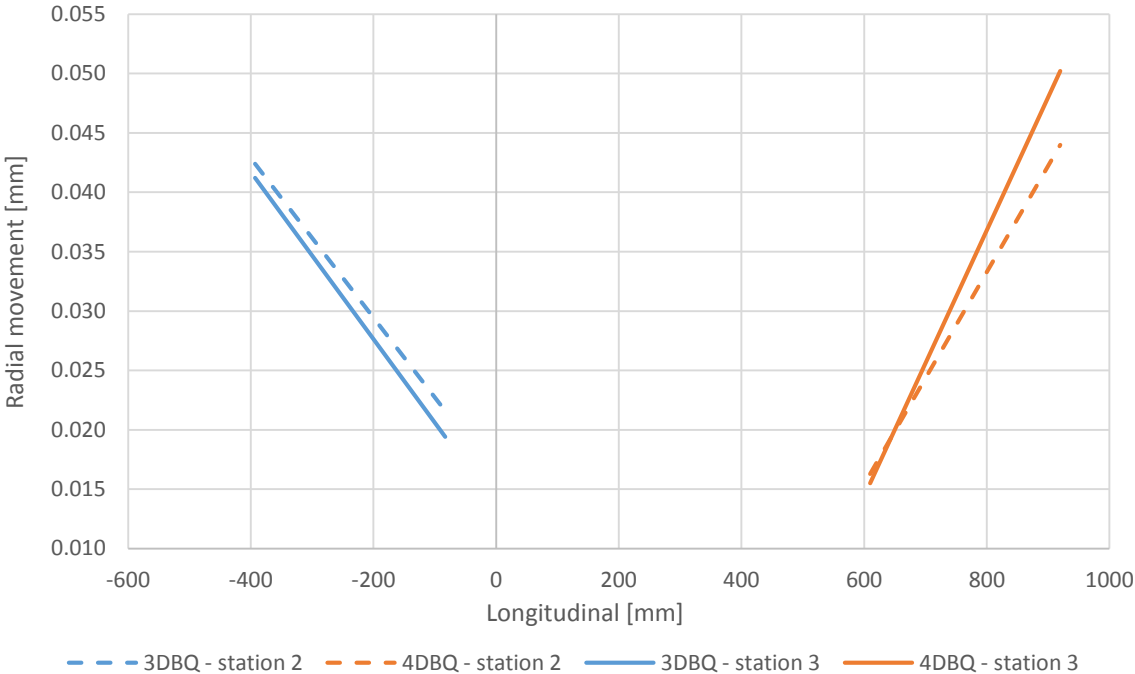
ST2 vs ST3						
3DBQ				4DBQ		
Tx	0.003	mm		Tx	-0.002	mm
Ty	-0.005	mm		Ty	0.016	mm
Tz	0.005	mm		Tz	0.018	mm
Rx	0.000042	rad		Rx	-0.000042	rad
Ry	0.000016	rad		Ry	0.000012	rad
Rz	-0.000003	rad		Rz	0.000020	rad
F	1.000062			F	1.000083	



# Position of the quads (in girder coordinate frame):



Radial position of the DBQ



	X [mm]	Y [mm]	Z [mm]
Station 2			
3DBQ-in	0.042	-392.910	0.042
3DBQ-out	0.022	-82.894	-0.037
4DBQ-in	0.016	609.836	-0.046
4DBQ-out	0.044	919.860	0.085
Station 3			
3DBQ-in	0.041	-392.896	0.043
3DBQ-out	0.019	-82.896	-0.049
4DBQ-in	0.016	609.832	-0.070
4DBQ-out	0.050	919.832	0.073

Vertical position of the DBQ

