

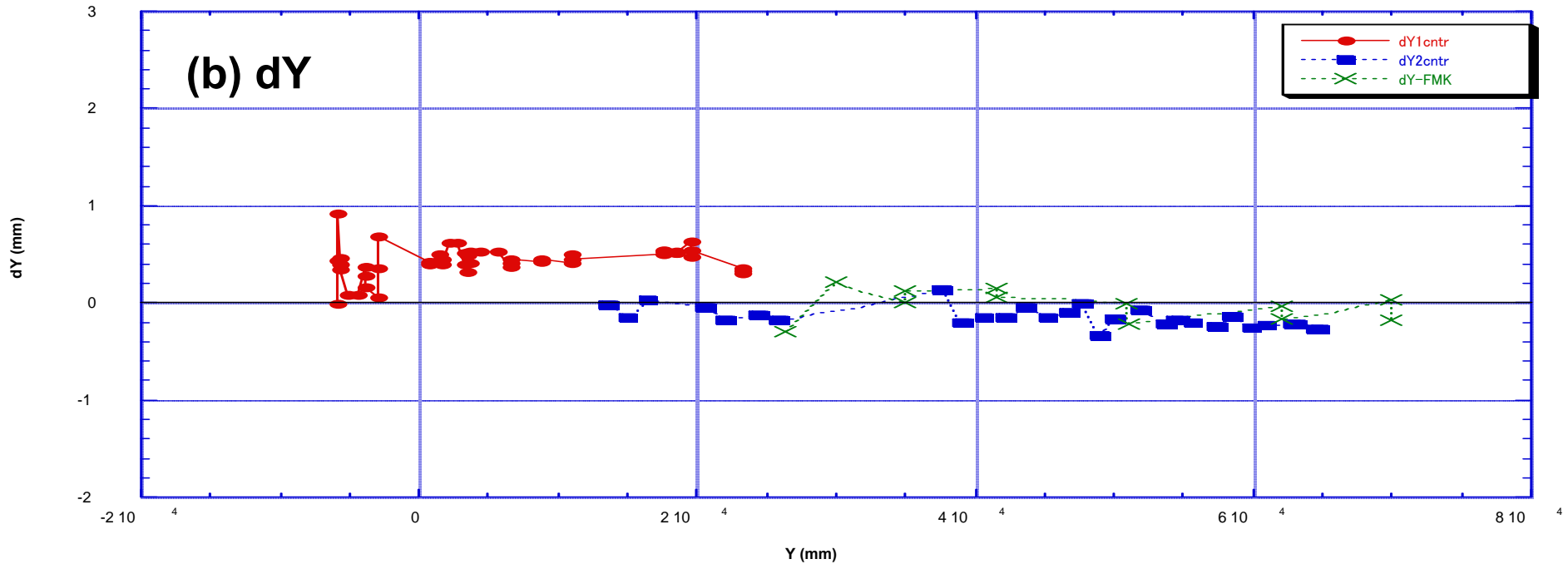
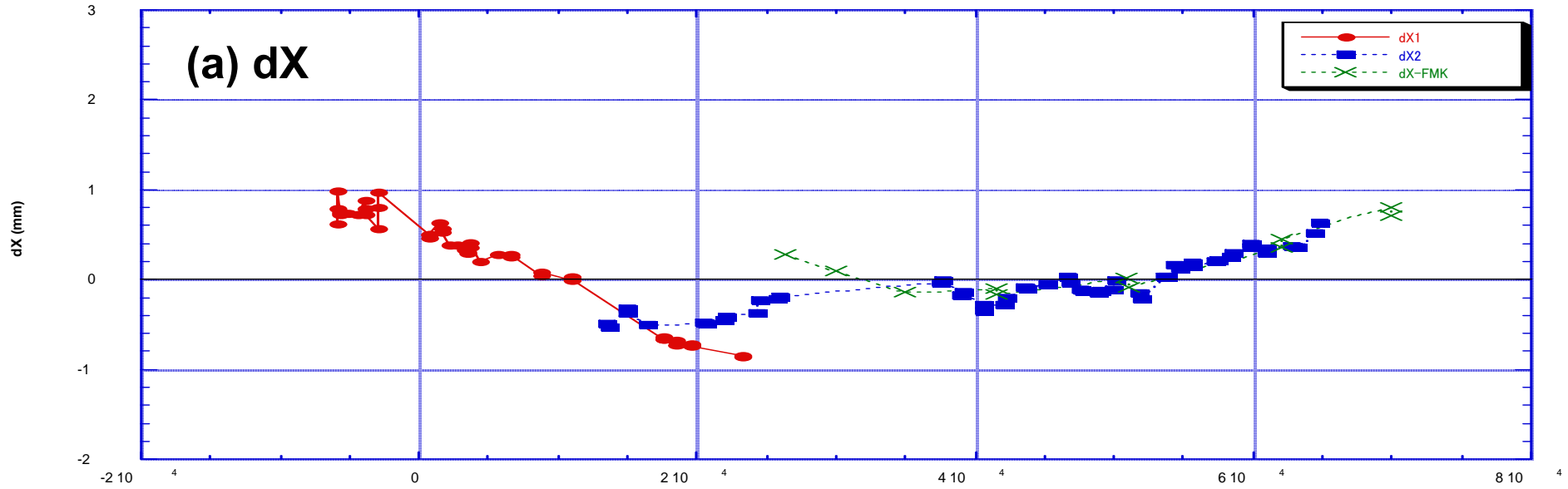
# **Results of Second Alignment and Longterm Variation of Tilt of Magnets**

**R. Sugahara**

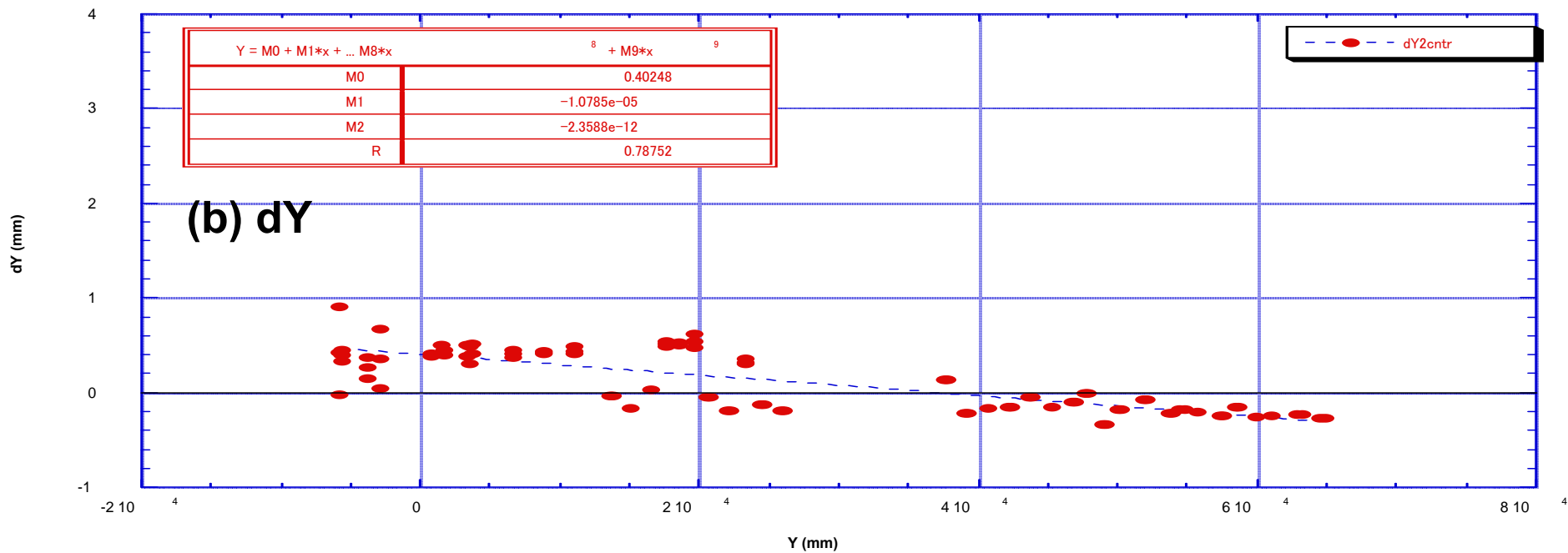
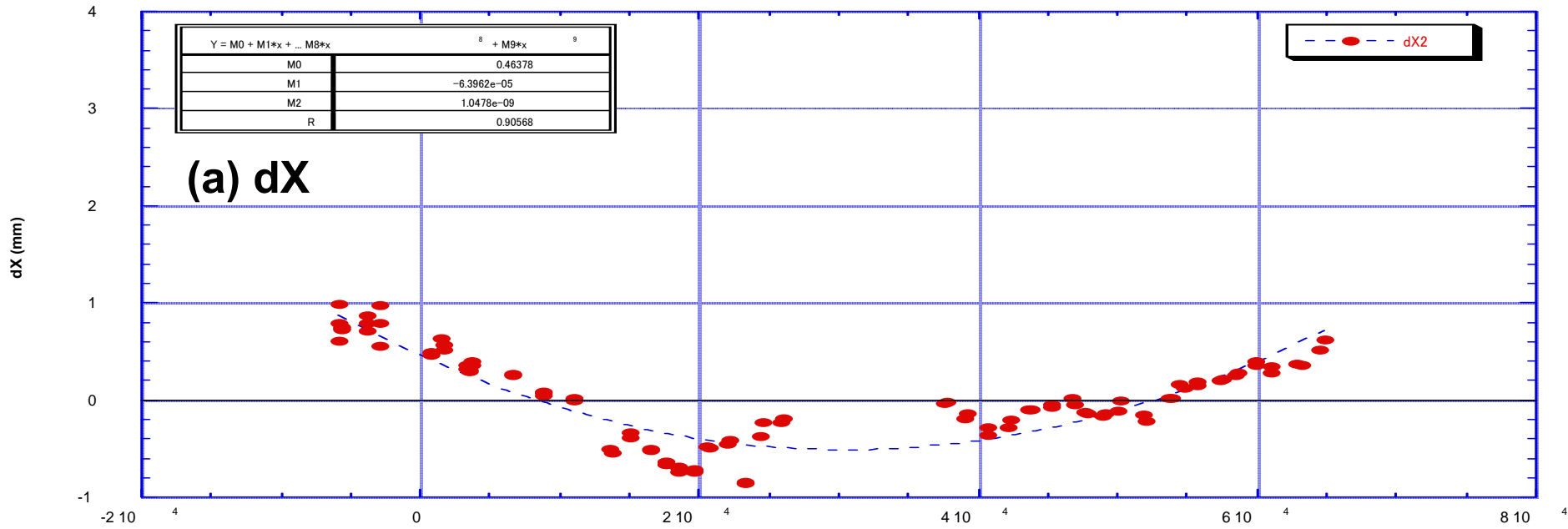
**KEK**

**October 22, 2008**

# Results of First Alignment

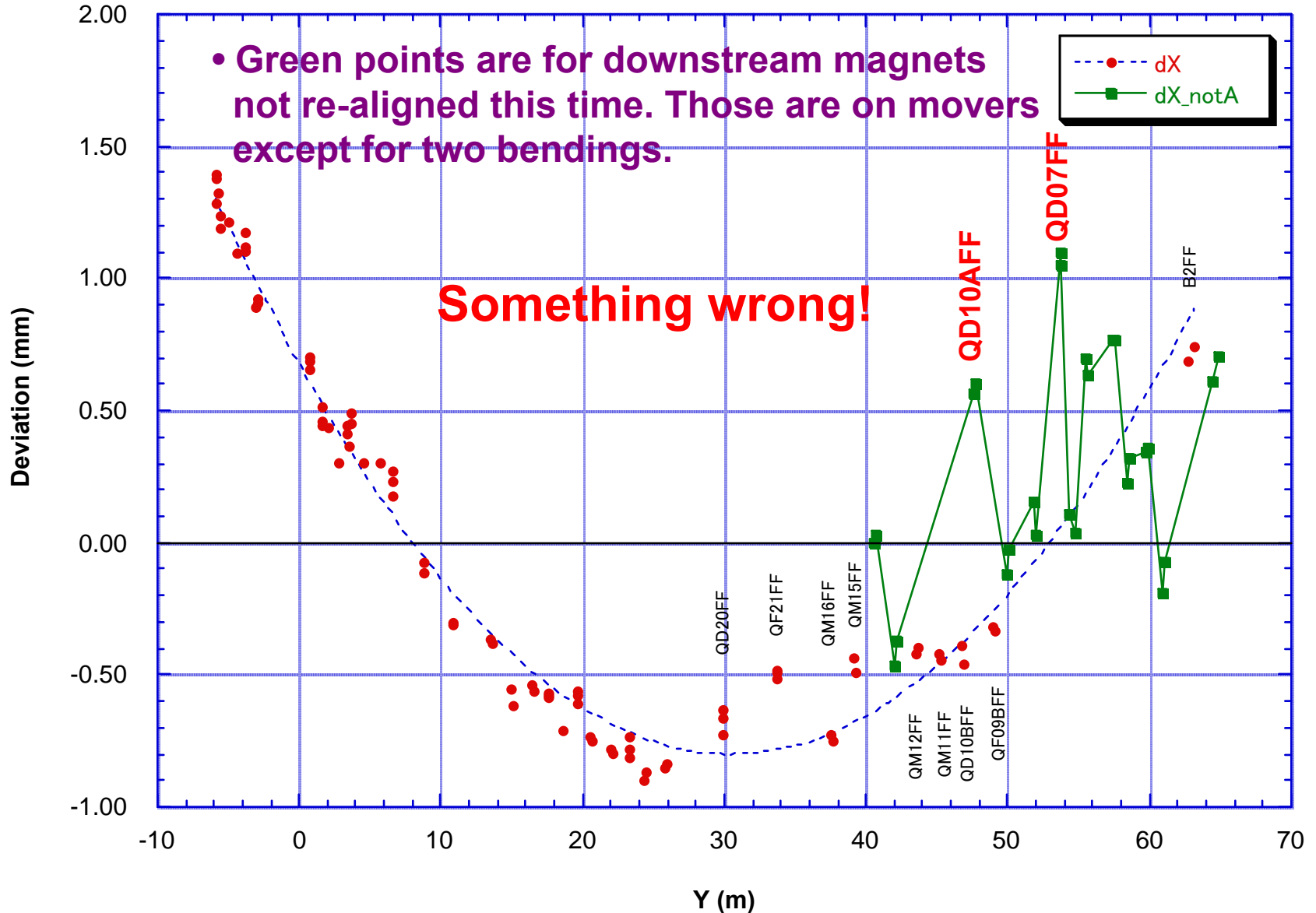


# Deviation from Smoothing Curves

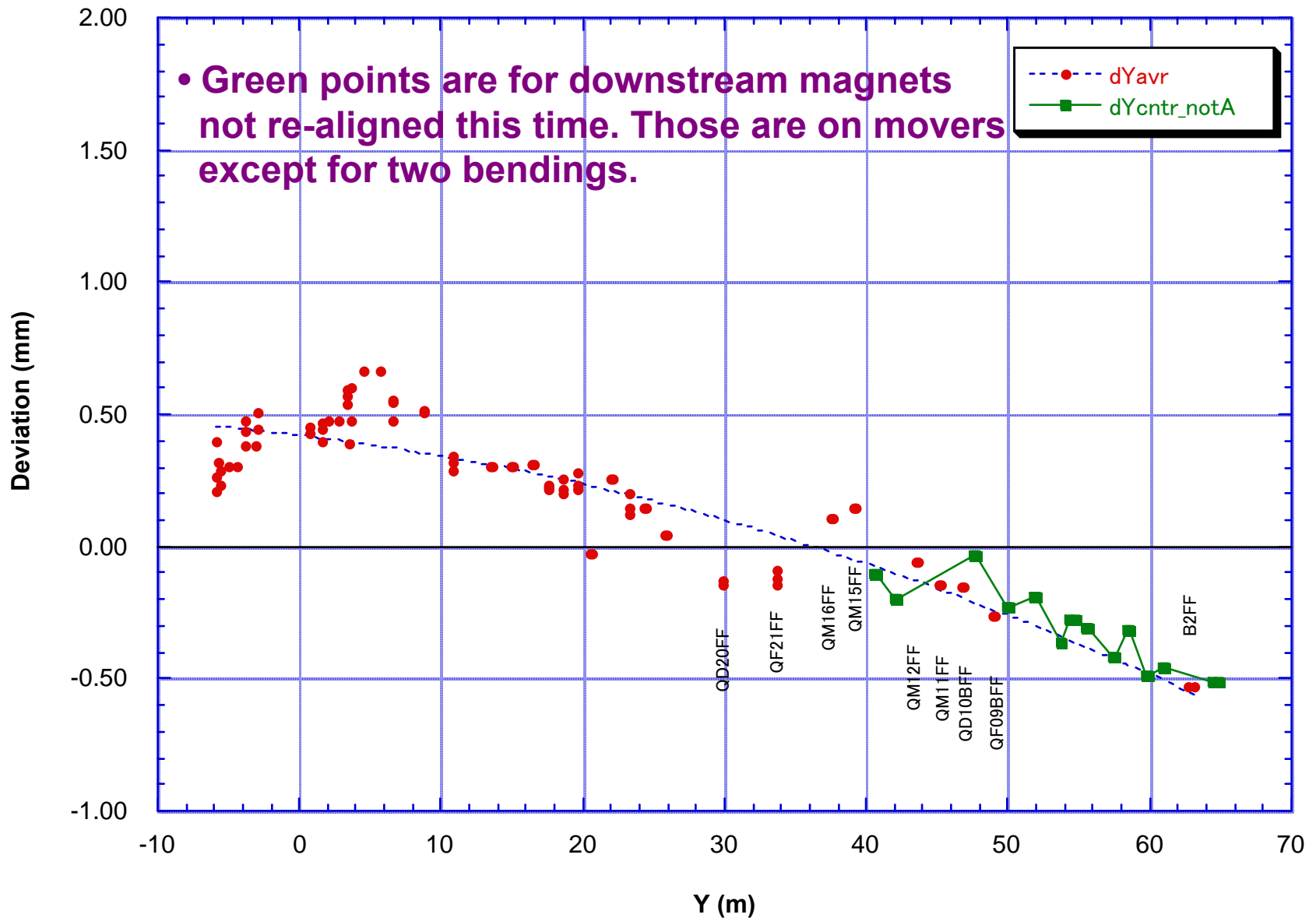


# Results of Second Alignment

## dX



# Results of Second Alignment dY



- It is obvious that some movers have moved after 1st alignment, because abnormal deviations are observed only in X direction

--> Movers' voltage and levels were checked for those which have abnormal X deviation

<u>Mag-ID</u>	<u>V1</u> / <u>V2</u> / <u>V3</u>	<u>ΔRoll</u>
QD10A	-5.035/-5.040/-5.344	0.990
QF07	-5.046/-5.039/-5.441	1.203

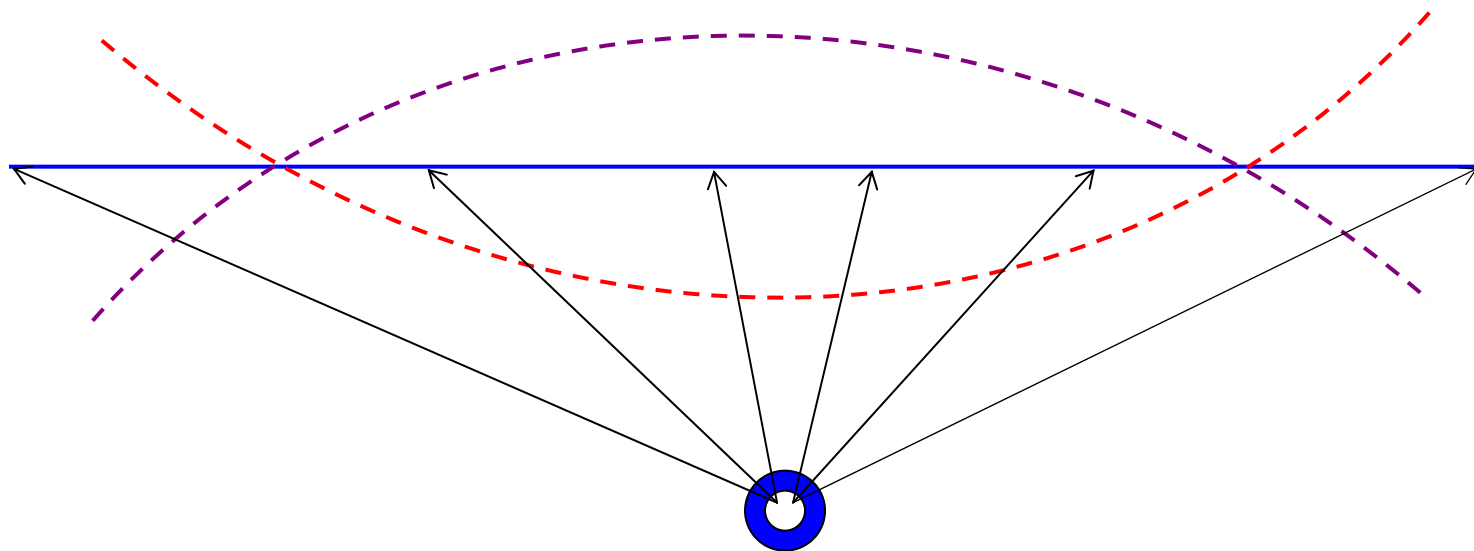
\* Here, V1, V2 and V3 are voltages at the potentiometers for twin cam shaft (V1 and V2) and single one (V3), and ΔRoll stands for the (roll measured - expected value)

**All the movers' voltages will be checked and corrected if necessary, then X and Y positions will be surveyed again.**

Fortunately, movers' voltage for magnets re-aligned this time looks normal.

About the variation of the smoothing curve, I am suspicious of the tracker's systematic error in angle measurement, because the tracker is not good in straight line measurement.

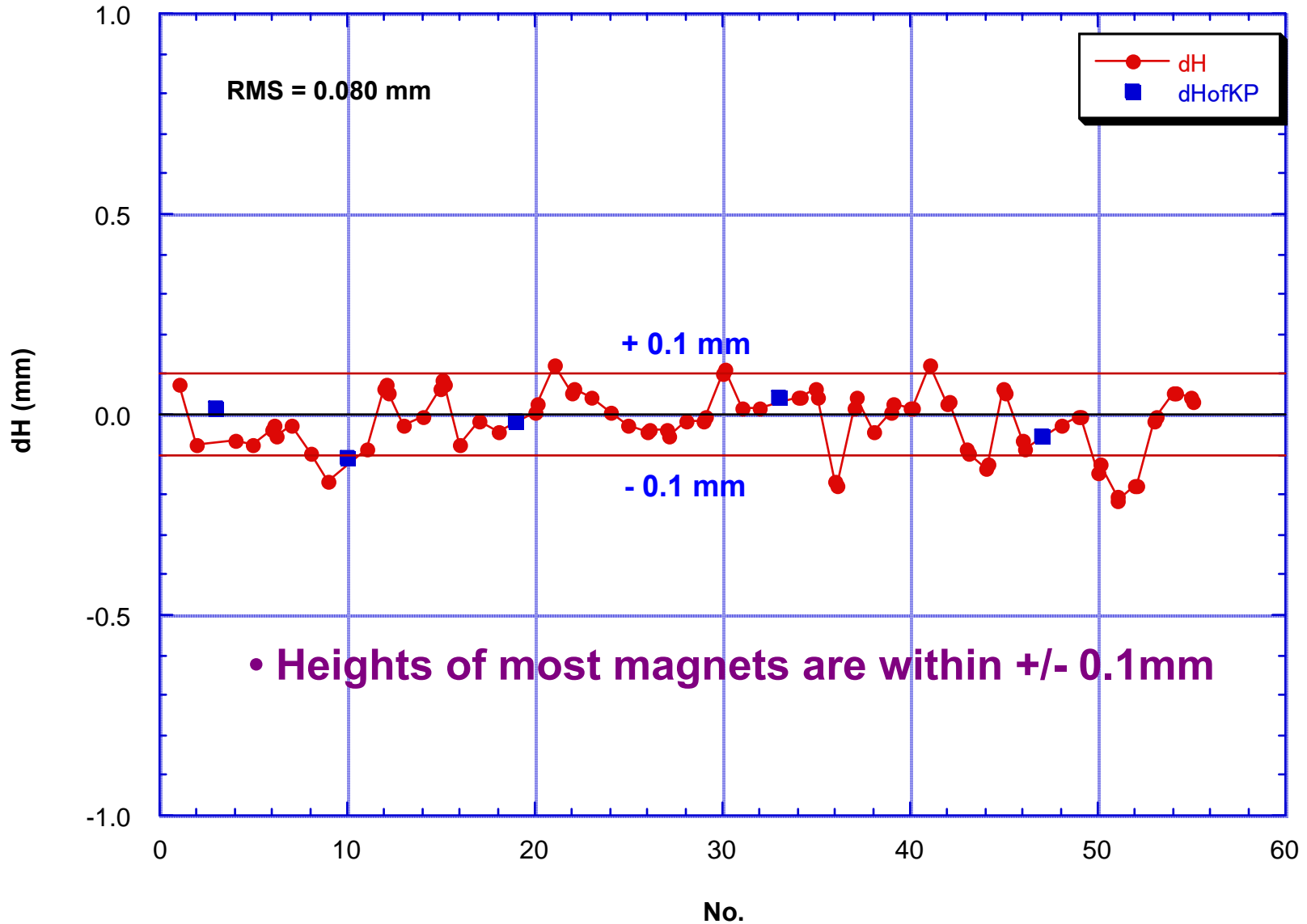
--> We will do the tracker calibration before the next ATF2 beamline survey, and let's see .....



Laser tracker

# Height Survey after the Second Alignment

aftrAlign\_level





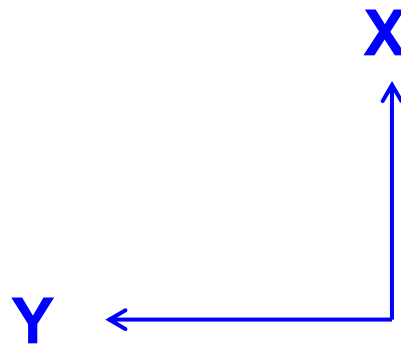
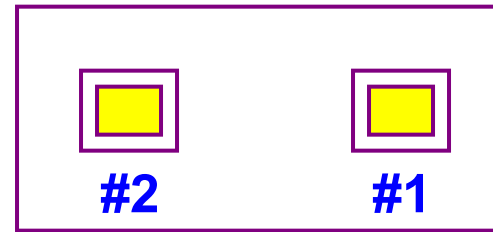
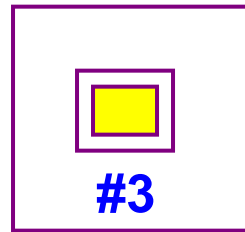
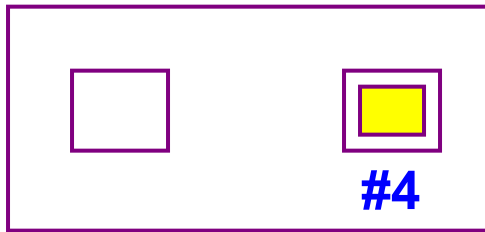
# Longterm Variation of Tilt of Magnets

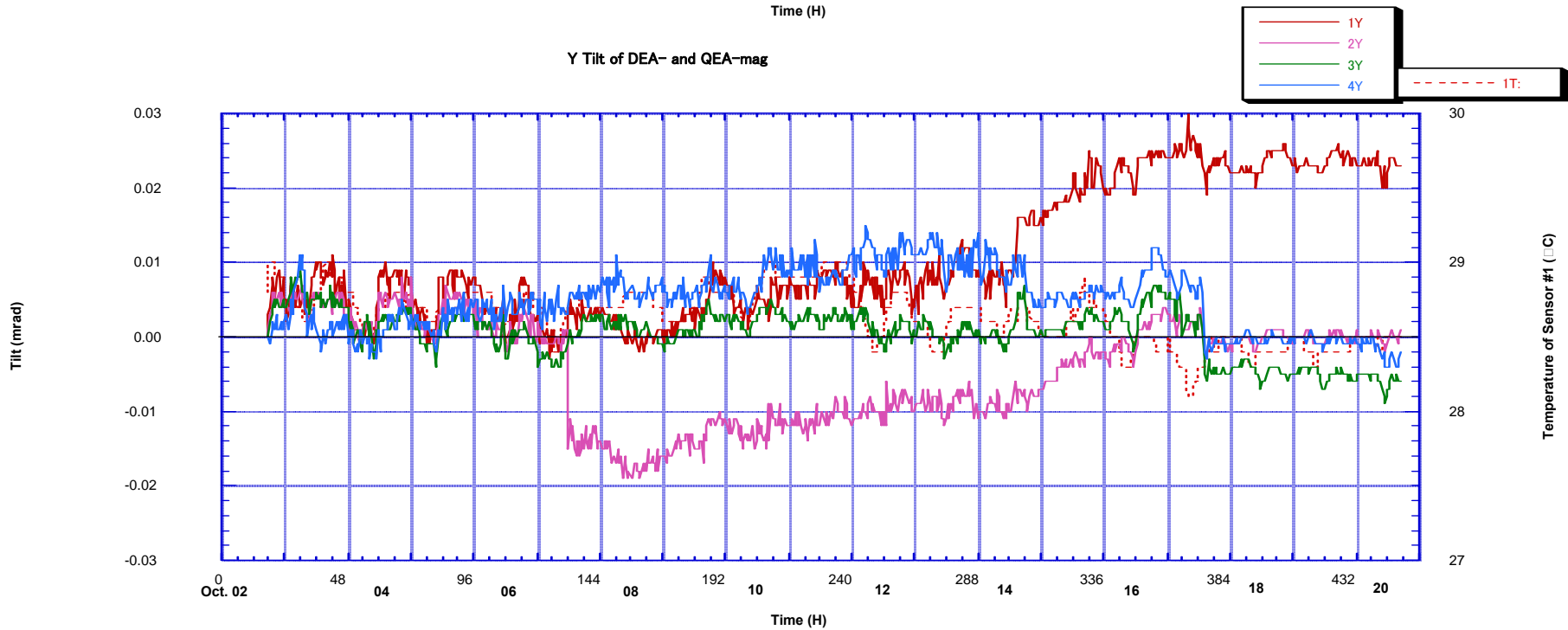
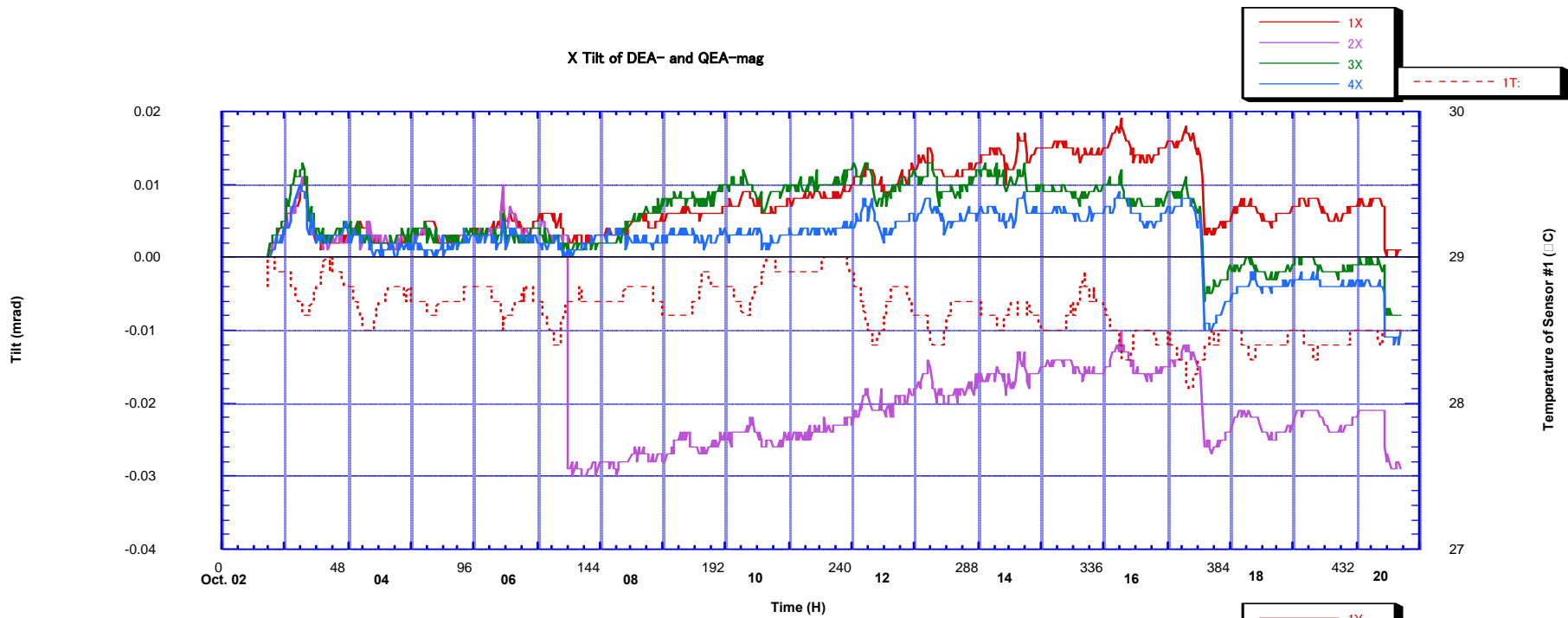
downstream ← → upstream

**B1FF**

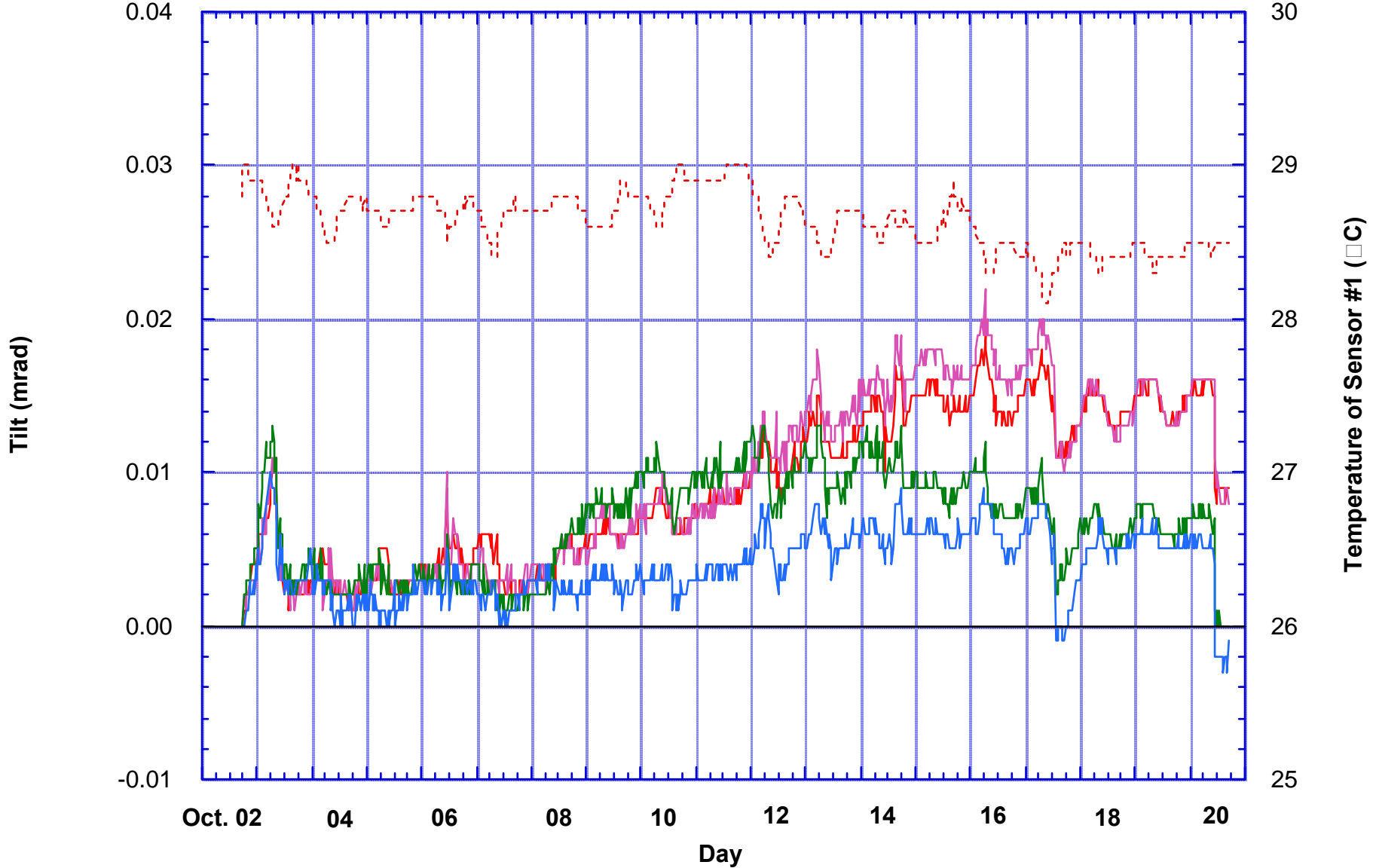
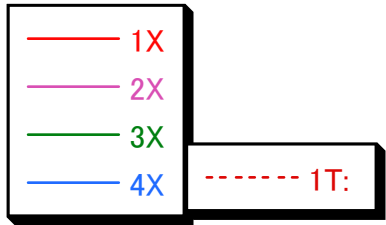
**QF3FF**

**B2FF**





### X Tilt of DEA- and QEA-mag



### Y Tilt of DEA- and QEA-mag

