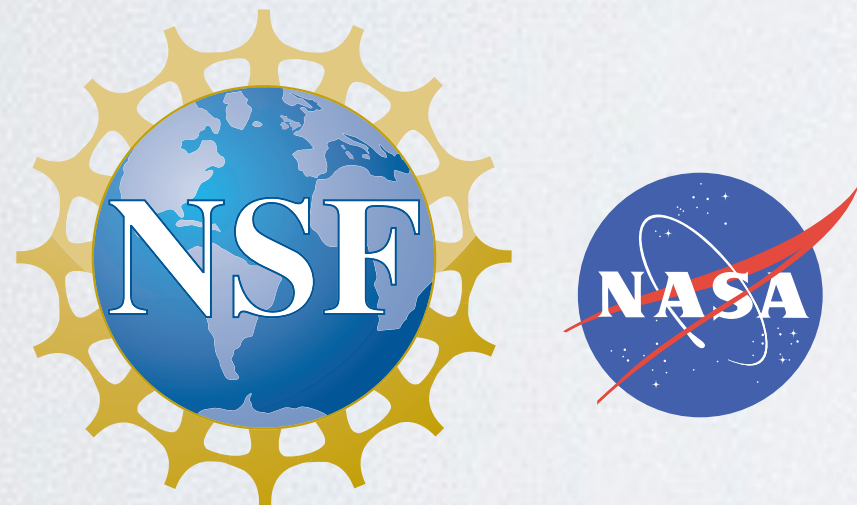


High rate, real-time GPS for studies of earthquakes, volcanic eruptions and other major events

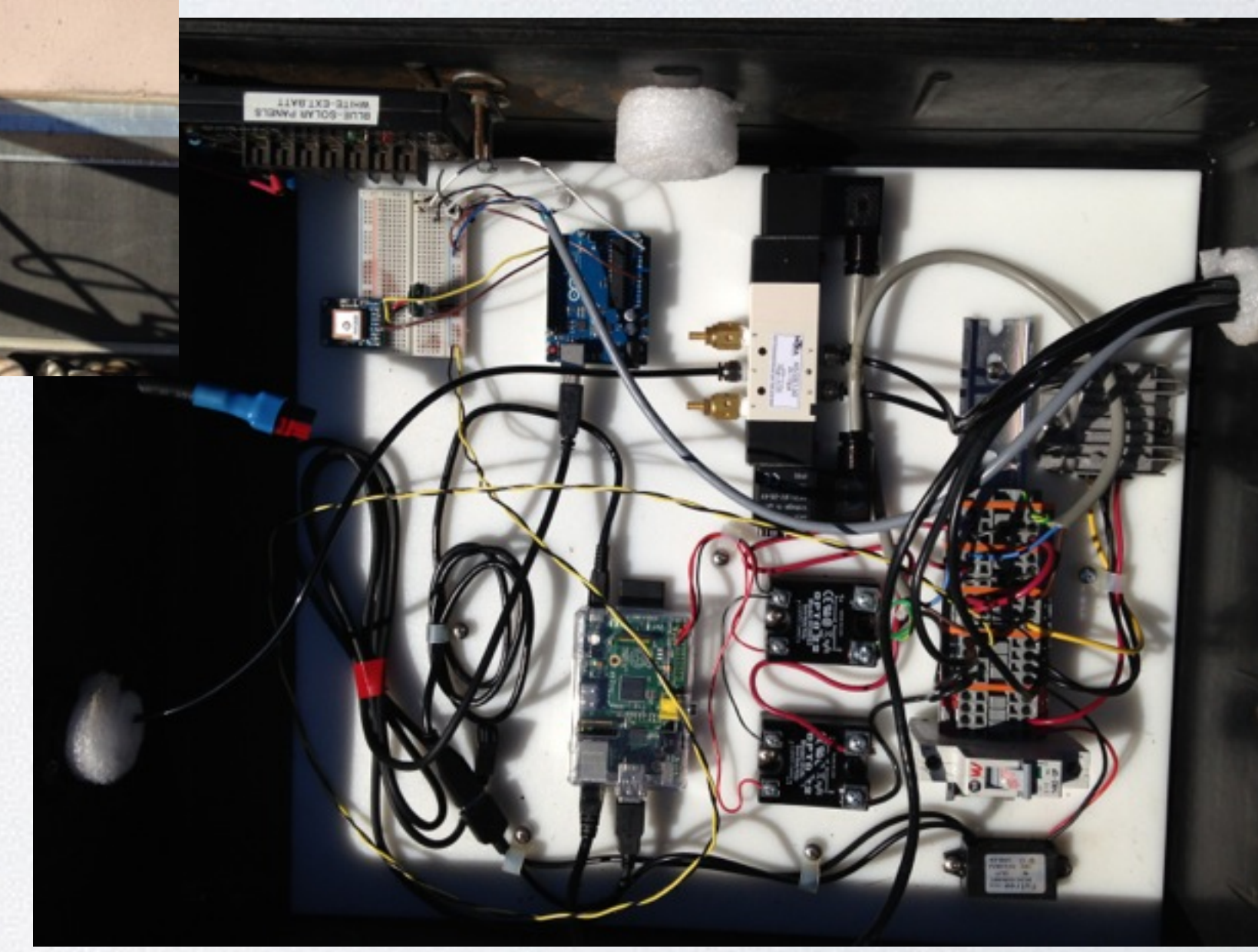
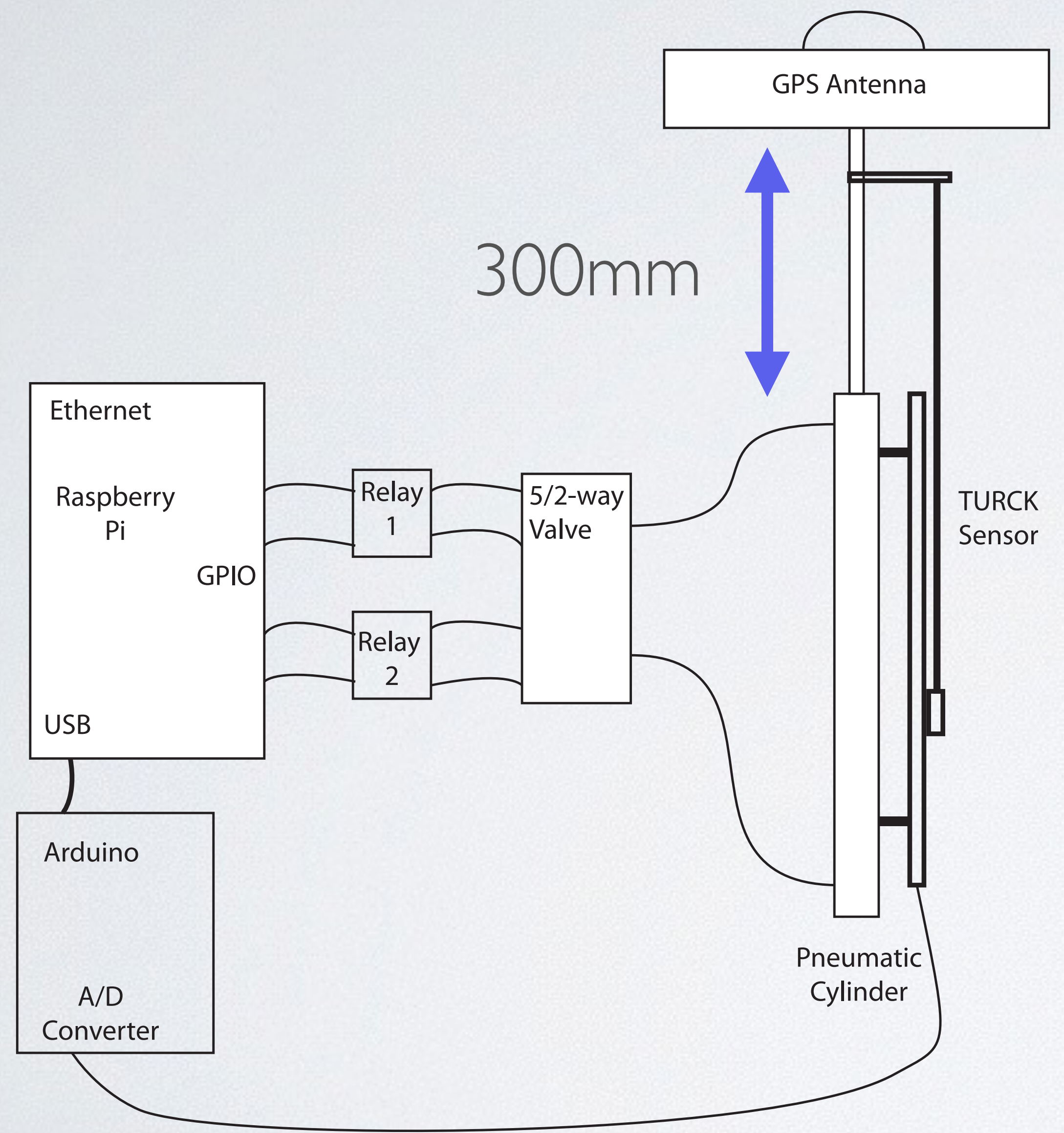
UNAVCO

Trimble RTX - Preliminary Kinematic Testing



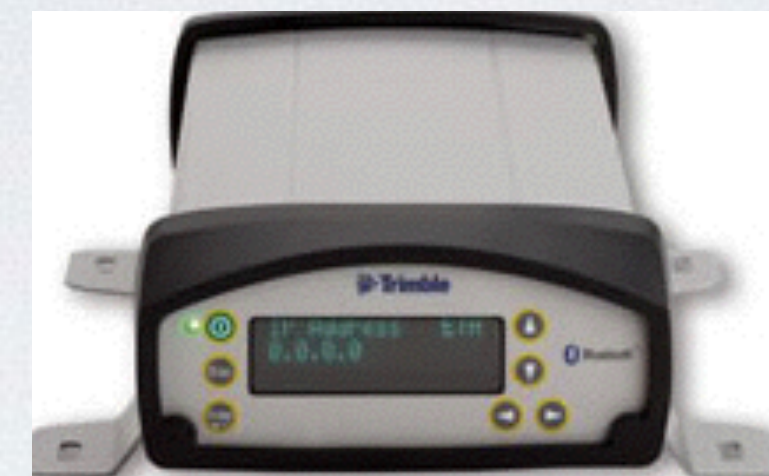
Frederick Blume, Henry Berglund,

LOW COST KINEMATIC TESTING

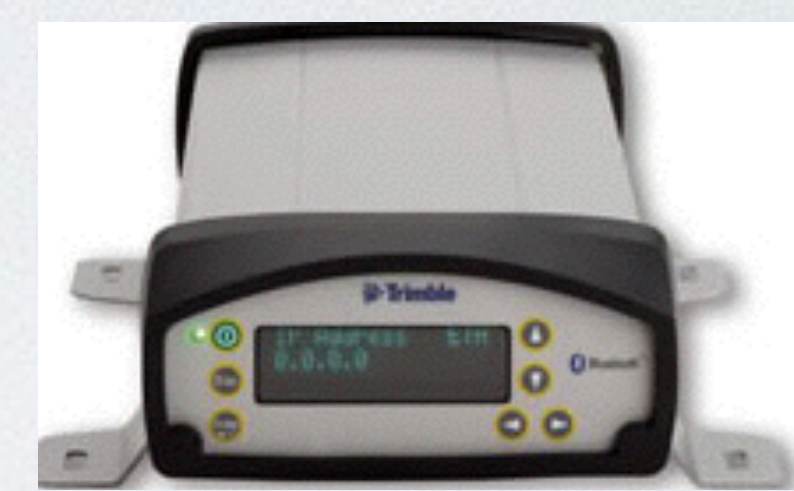


RTX - TYPES

https://www.trimble.com/positioning-services/pdf/WhitePaper_RTX.pdf



**Corrections
via IP or L-band
(CMRxe)**



**Position Estimates
(RT27, GSOF, NEMA)**

BINEX STREAMS

Currently GPS
or
GPS + GLONASS



**Position Estimates
(NEMA, Windows
database)**

**Corrections
via IP**

Server Based

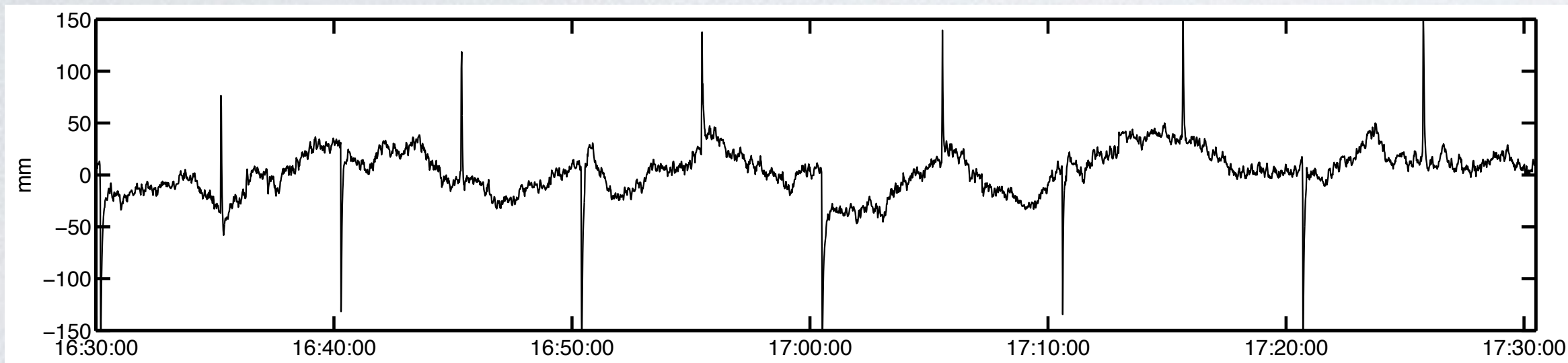
Receiver Based

TRACKRT VS. RTX

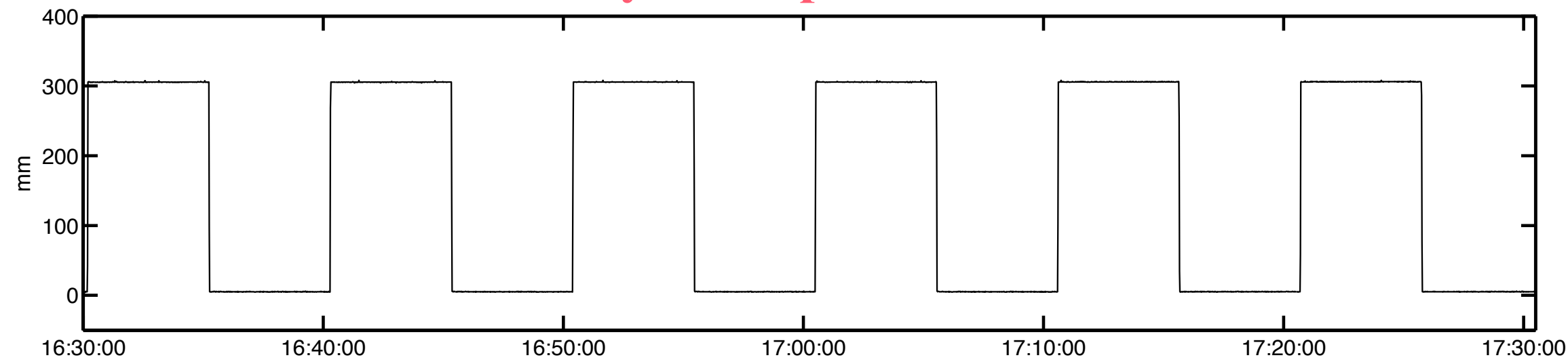
TrackRT (1Hz)

RTX (receiver)

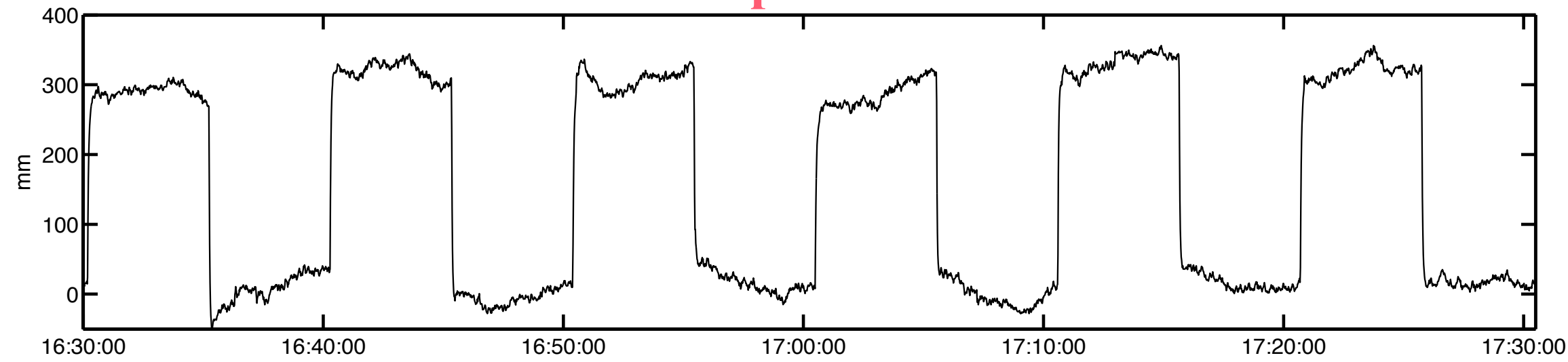
Difference GPS and cylinder position



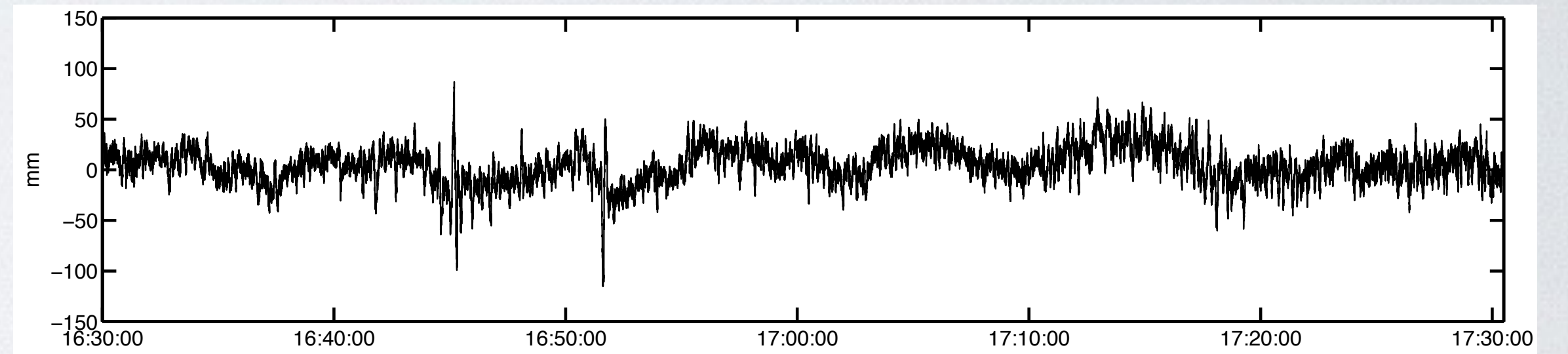
Cylinder position



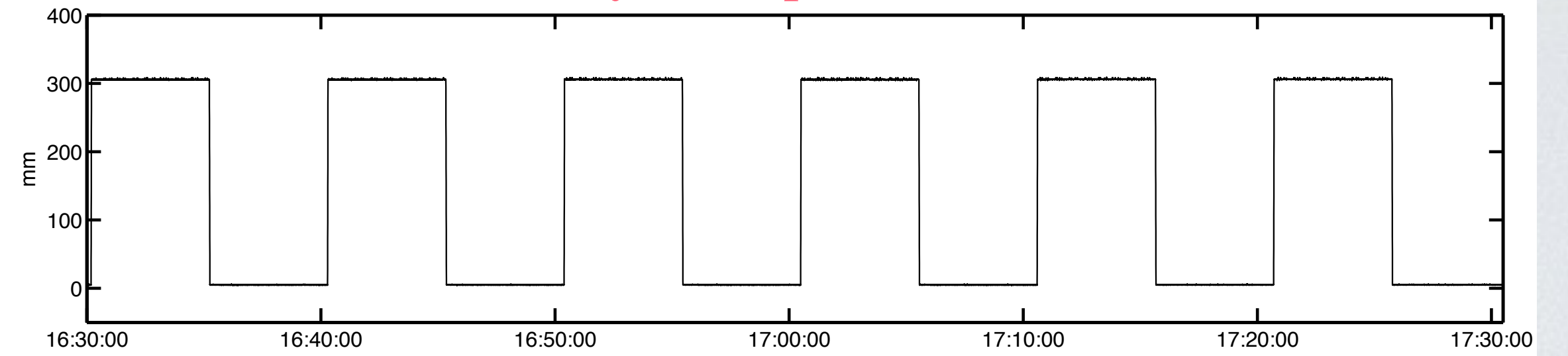
GPS position



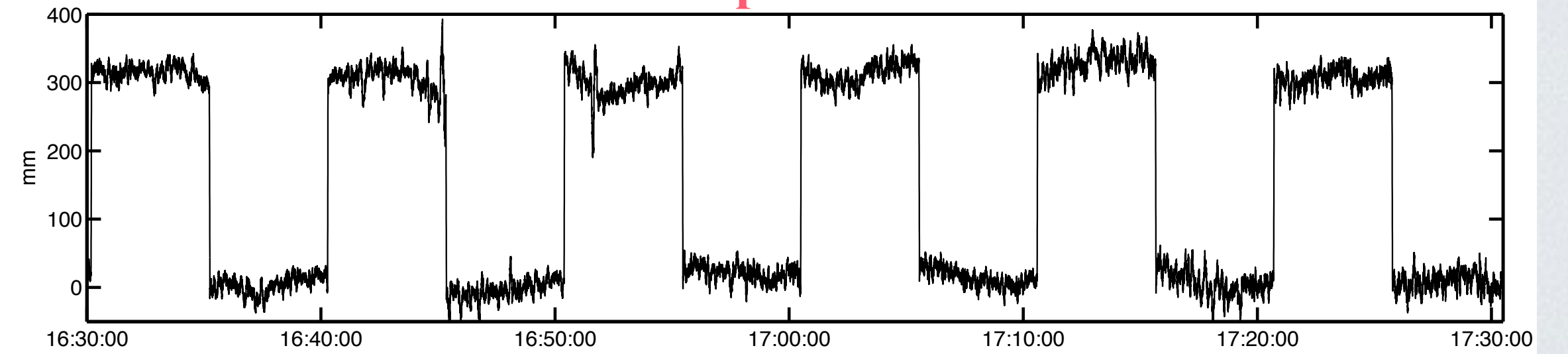
Difference GPS and cylinder position



Cylinder position



GPS position

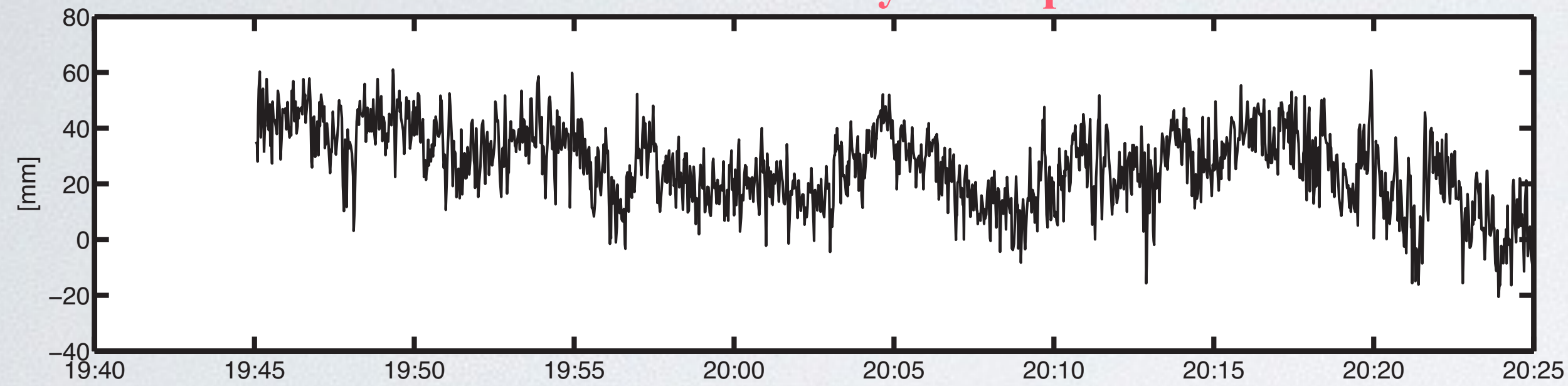




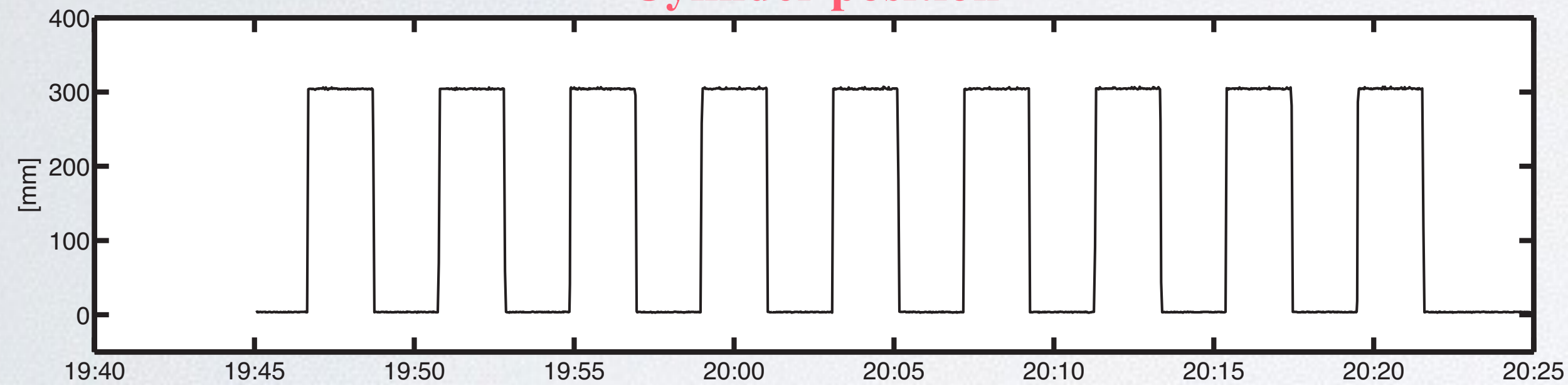
RTX - KINEMATIC TESTING

Receiver Based RTX

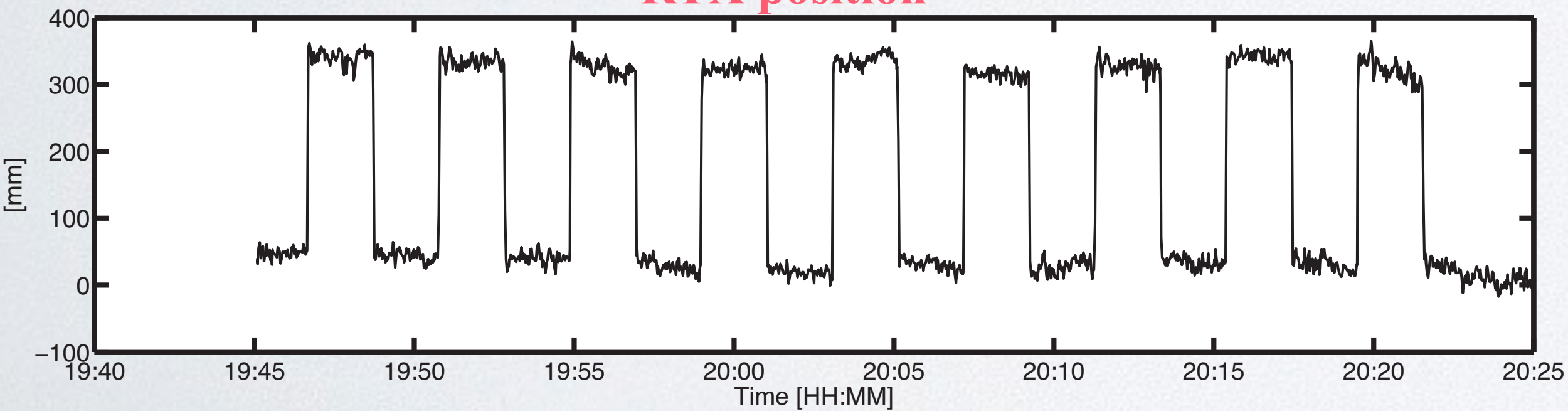
Difference GPS and cylinder position



Cylinder position

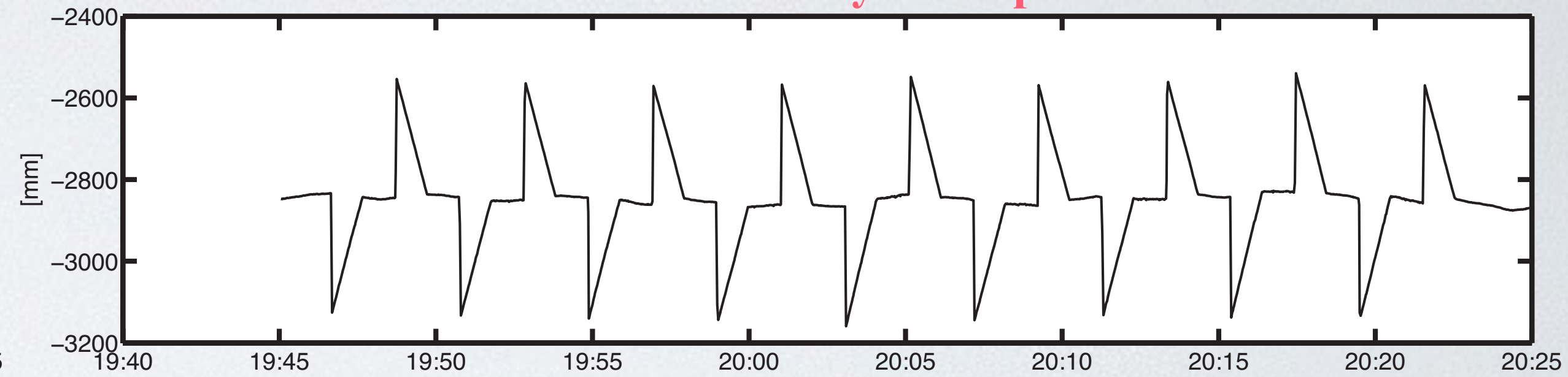


RTX position

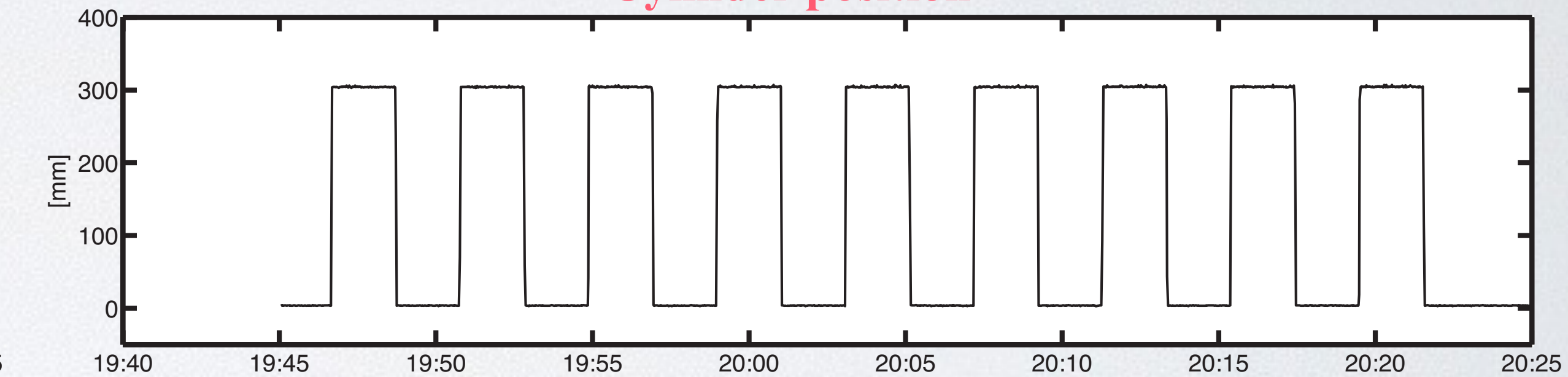


Server Based RTX

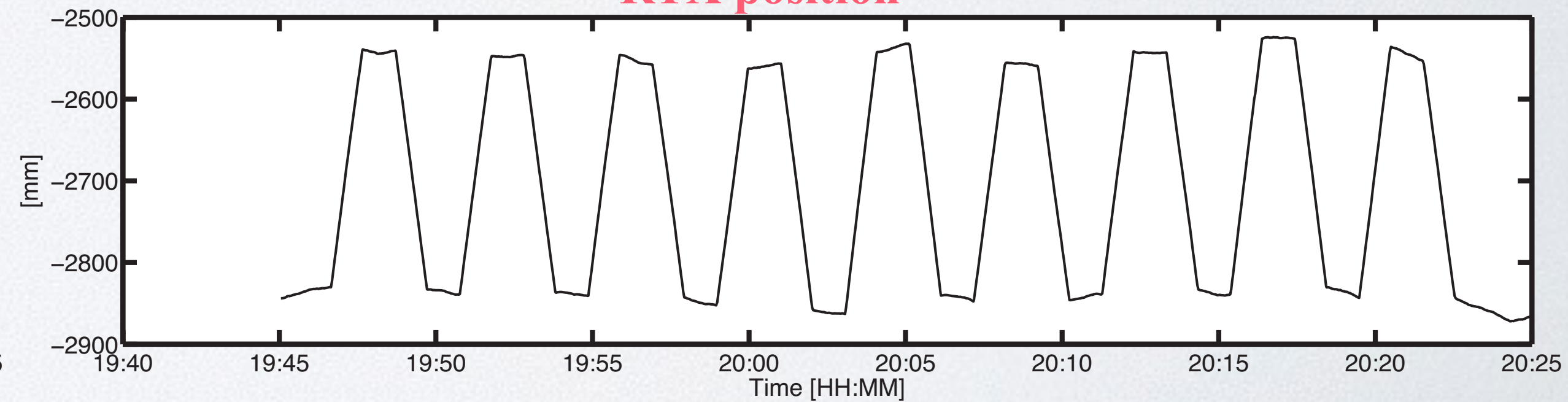
Difference GPS and cylinder position



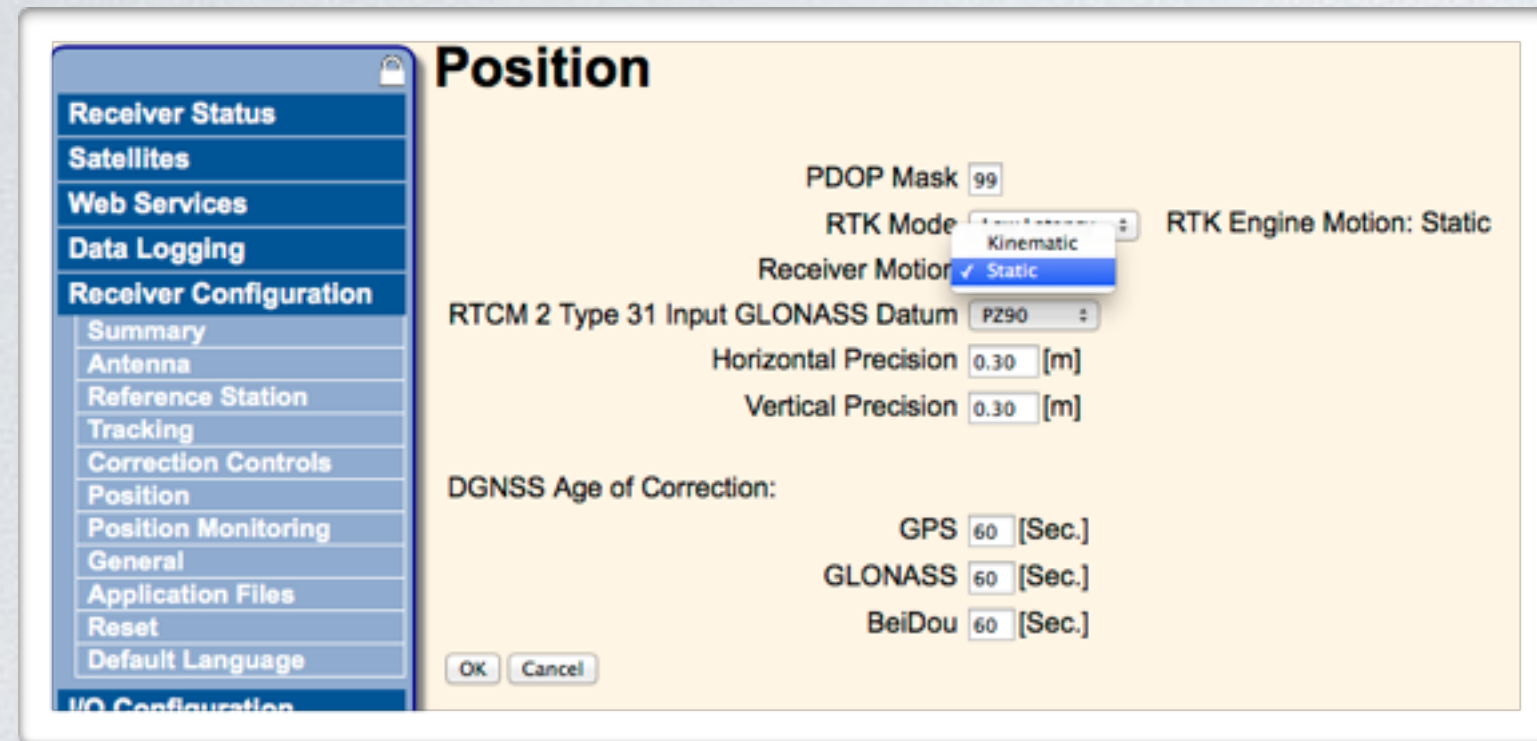
Cylinder position



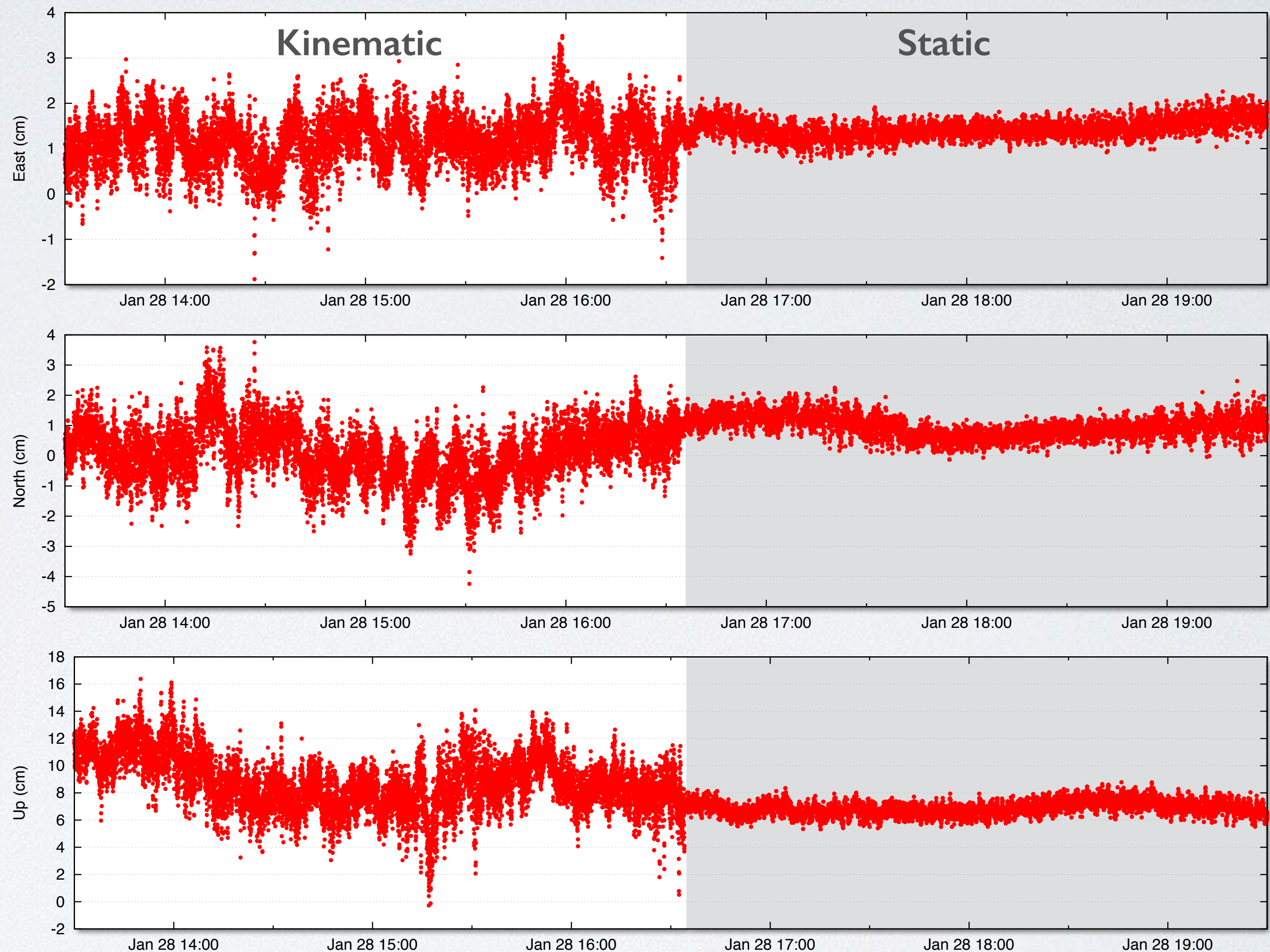
RTX position



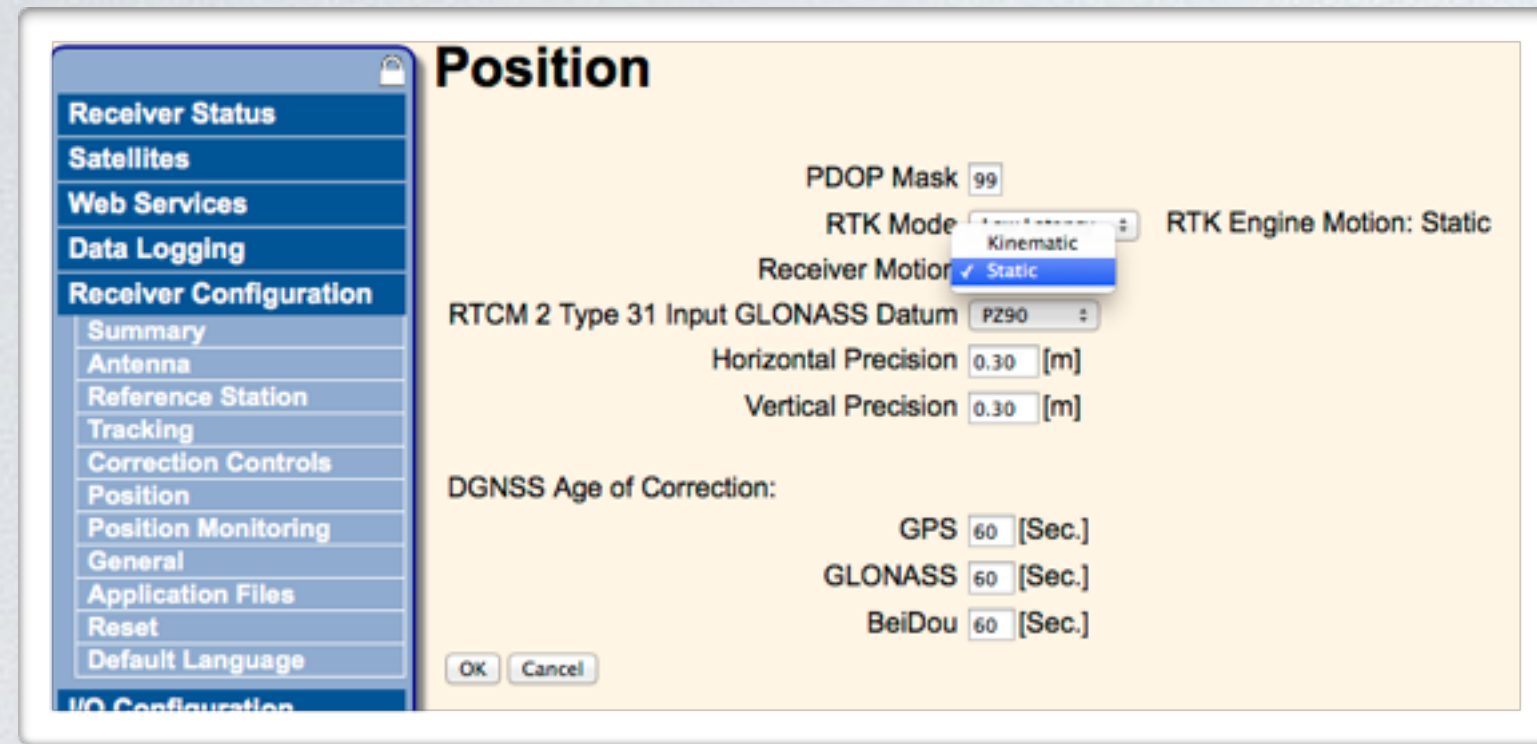
RTX KINEMATIC VS. STATIC



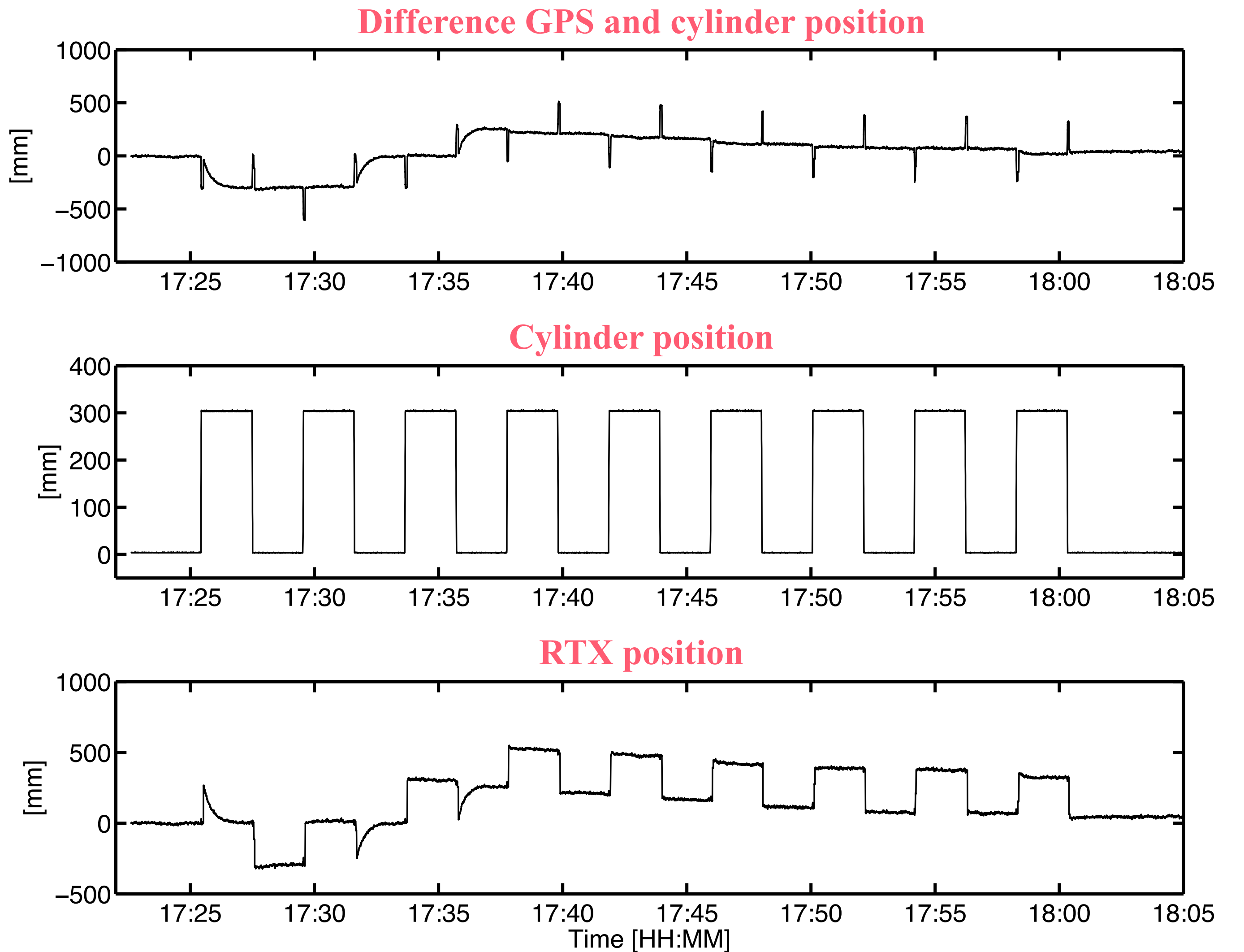
- Selecting kinematic mode disables RTCM streams
- Enabling an RTCM stream disables kinematic mode
- This can be overridden by enabling Position Monitoring



RTX KINEMATIC VS. STATIC

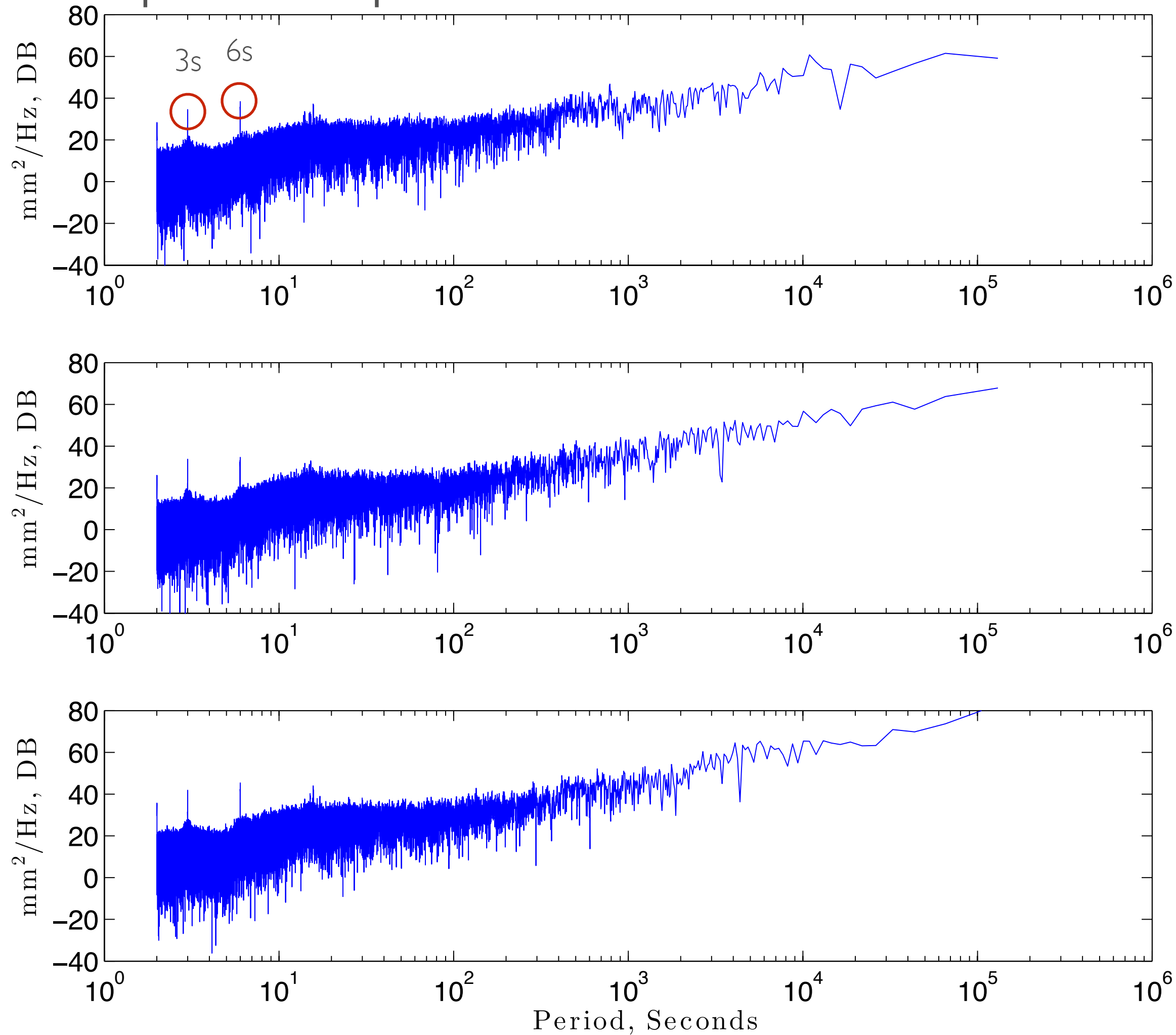


- Selecting kinematic mode disables RTCM streams
- Enabling an RTCM stream disables kinematic mode
- This can be overridden by enabling Position Monitoring



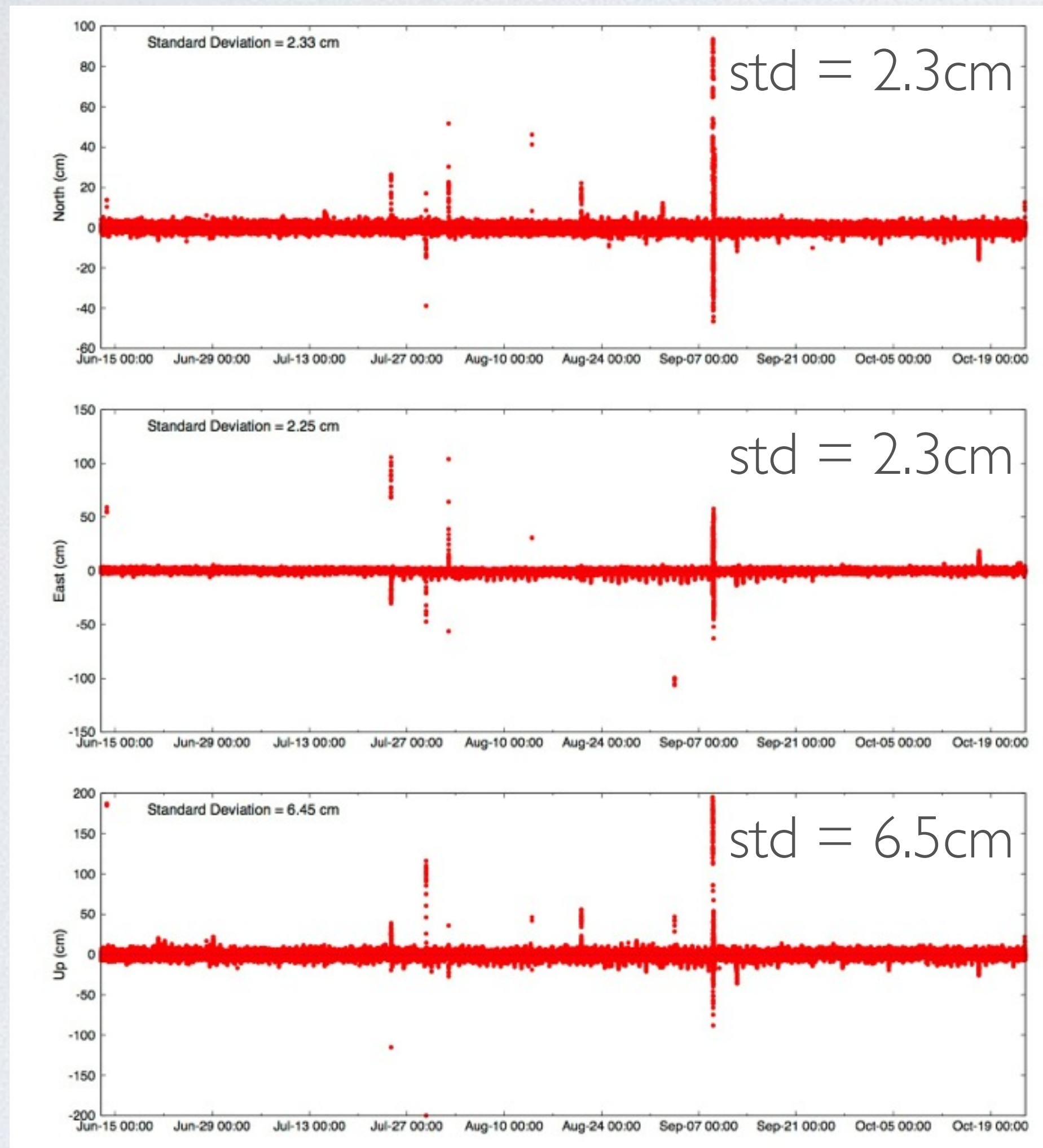
RTX HIGH-RATE PERIODOGRAM

Spectral peaks at 6 and 3 seconds



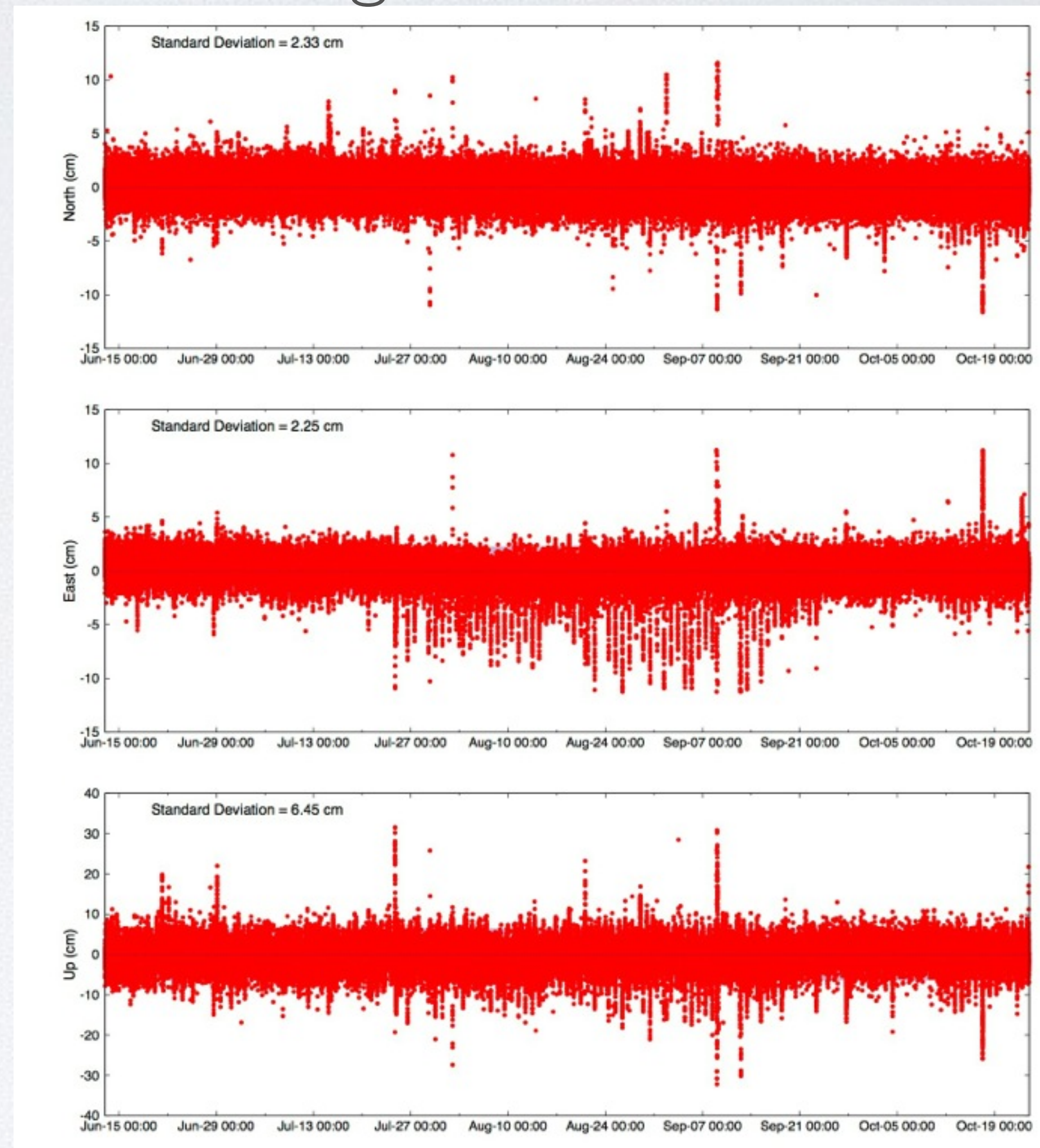
P04 | RTX TIME SERIES (RECEIVER)

All Points



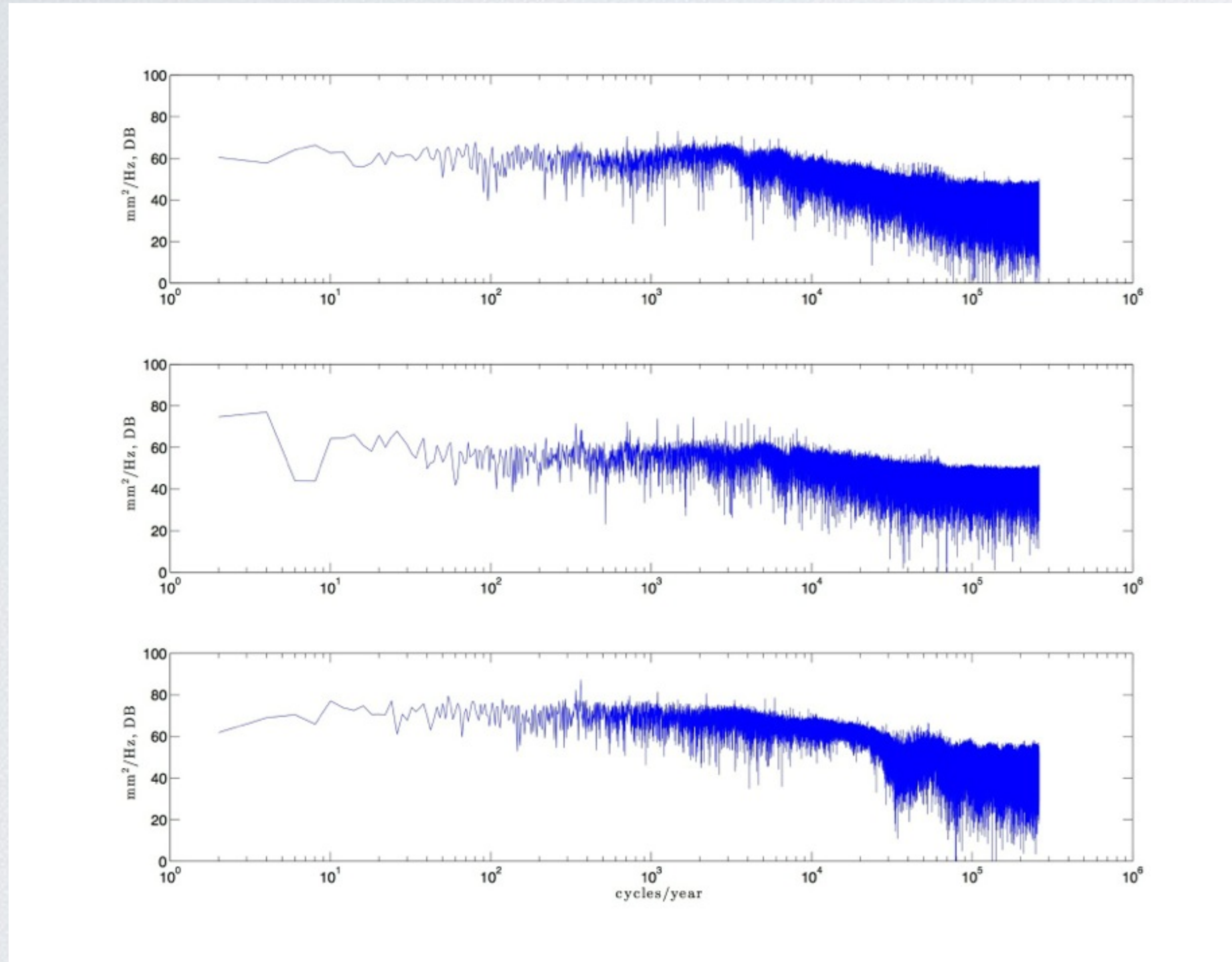
← ~4 months →

5-sigma Removed



← ~4 months →

Periodogram



Histogram (5-sigma Removed)

