

## General Information

### Mission Information

Project name	220512_A_5060495_nad2011_FINAL
Processing date	2022-05-20 23:41:31
Mission date	2022-05-12 13:24:40
Mission duration	02:14:36.000
Processing mode	IN-Fusion PP-RTX

### Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N13003
IMU type	57
Receiver type	BD982
Antenna type	AV39

## Project File List

### Rover Data Files

File name	File type
survey7.pos	POS Data

### Input Files

File Name	File Type
Ephm1320.22g	GLONASS Broadcast Ephemeris
Ephm1320.22n	GPS Broadcast Ephemeris

### Output Files

Filename	File type
sbet_220512_A_5060495_nad2011_FINAL.out	SBET Trajectory File

## Rover Data Summary

First raw data file	survey7.pos		
Last raw data file	survey7.pos		
Start GPS week	2209		
Start time	393879.460 (5/12/2022 1:24:39 PM)		
End time	401955.982 (5/12/2022 3:39:15 PM)		
Start of fine alignment	394289.470 (5/12/2022 1:31:29 PM)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	None		
Correction data	None		
<b>IMU Installation Lever Arms &amp; Mounting Angles</b>			
Reference to IMU lever arm (m)	0.000	0.000	0.000
Reference to IMU mounting angles (deg)	0.000	0.000	180.000
Reference to Primary GNSS lever arm (m)	-0.399	-0.382	-1.125
Reference to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

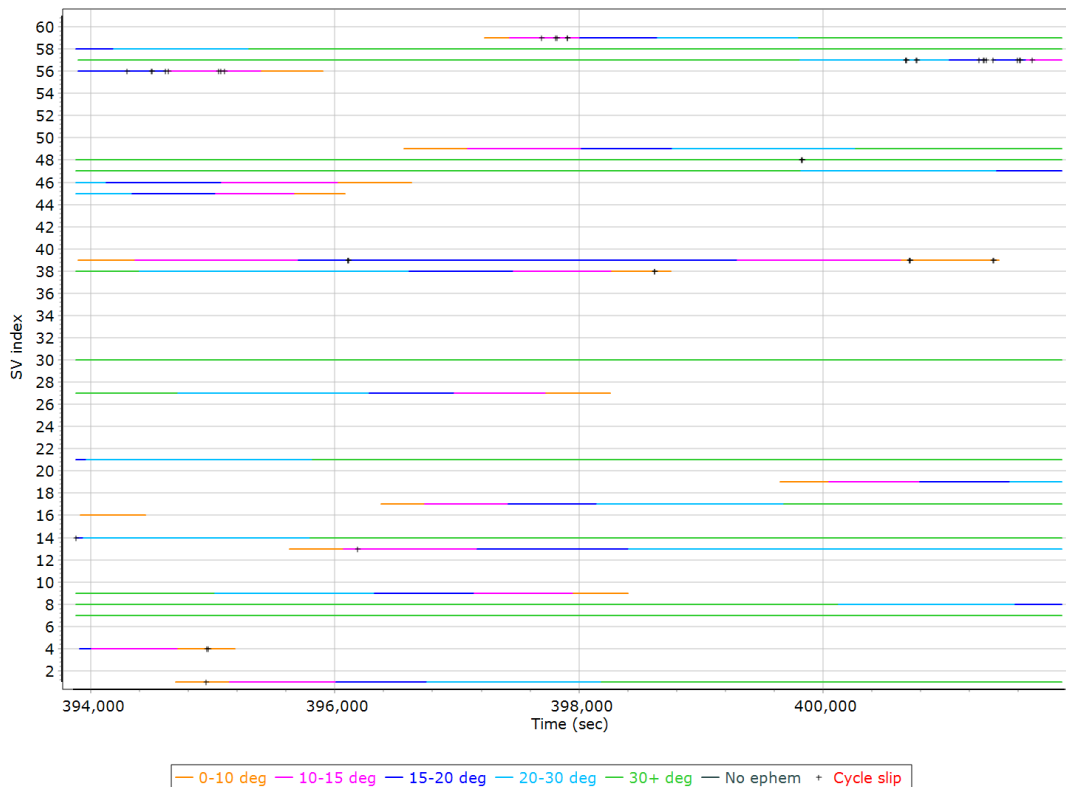
## Rover Data QC

### Raw IMU Import QC Summary

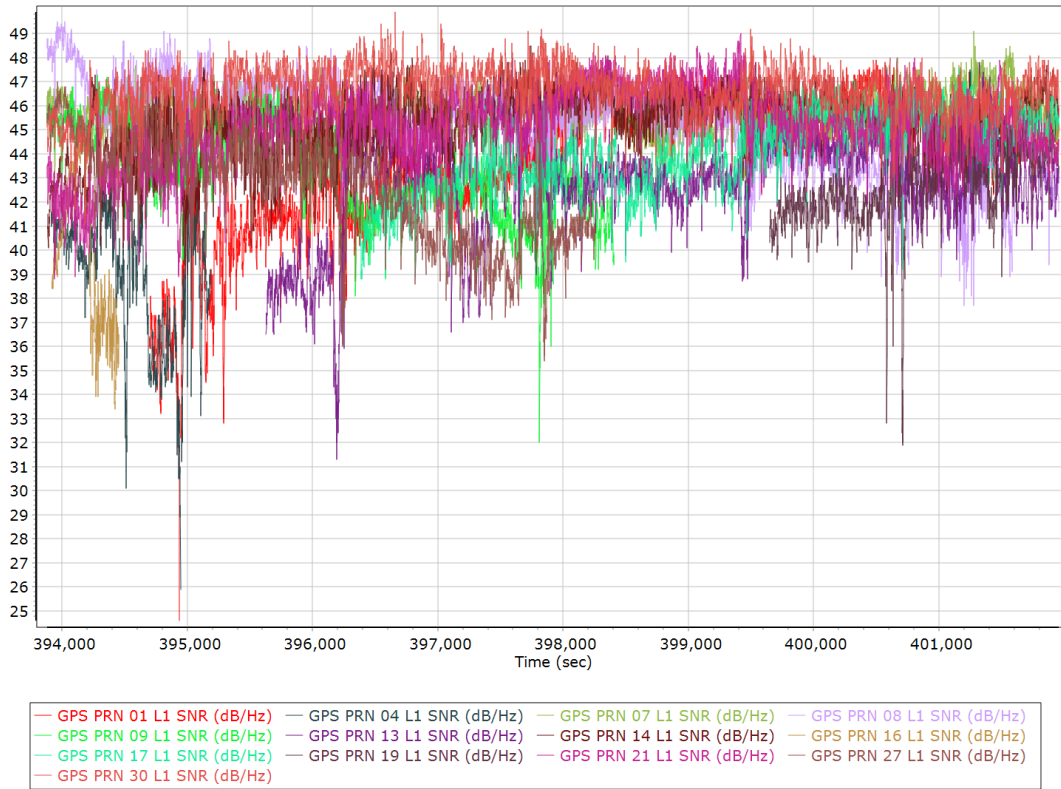
IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_220512_A_5060495_nad2011_FINAL.log
IMU Records Processed	1615057
Termination Status	Normal
IMU Anomalies	0

## Primary Observables & Satellite Data

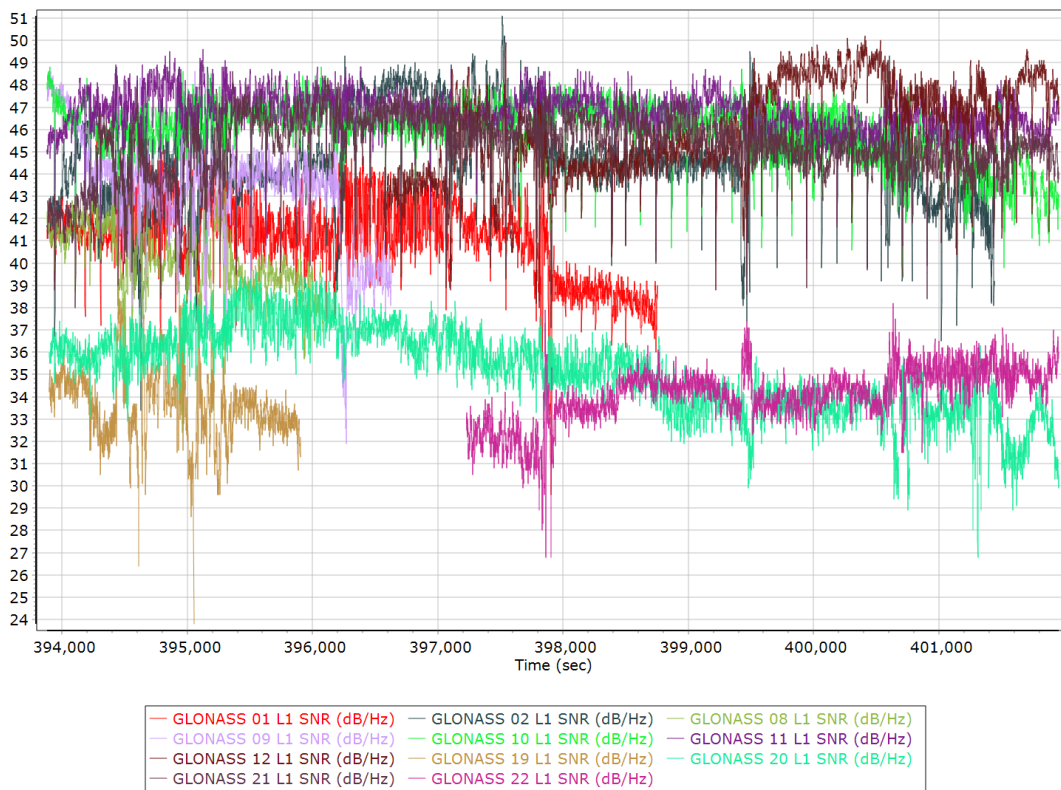
### GPS/GLONASS L1 Satellite Lock/Elevation



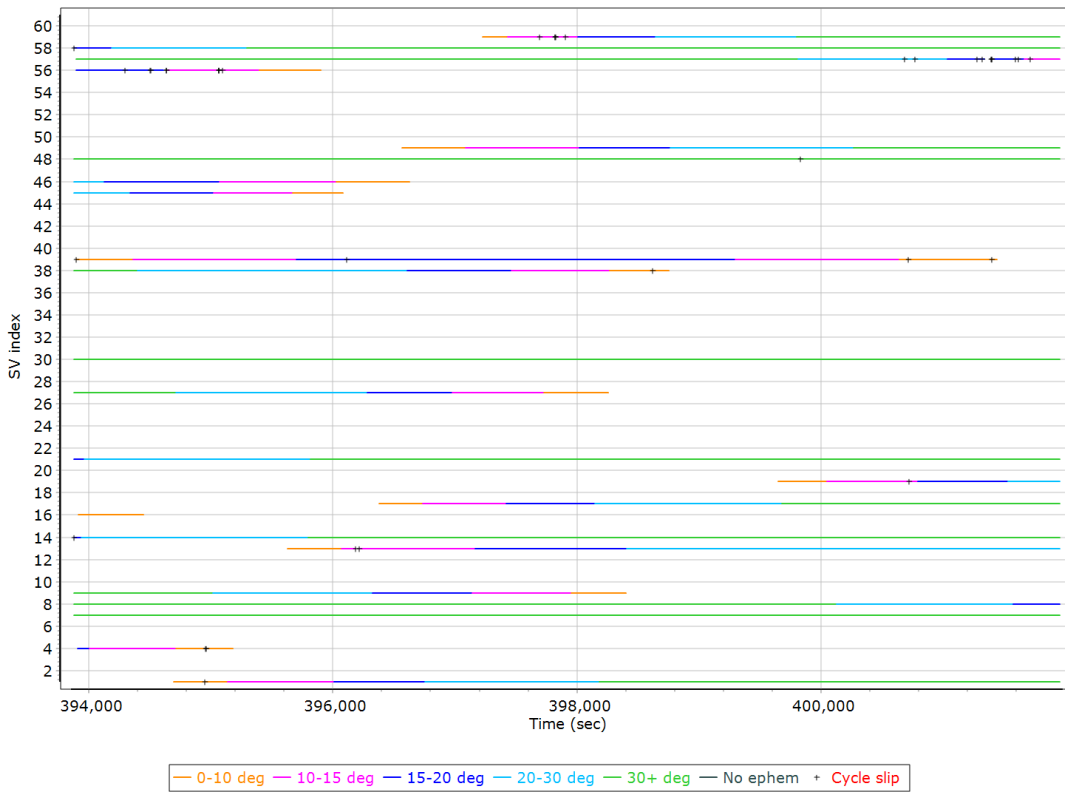
### GPS L1 SNR



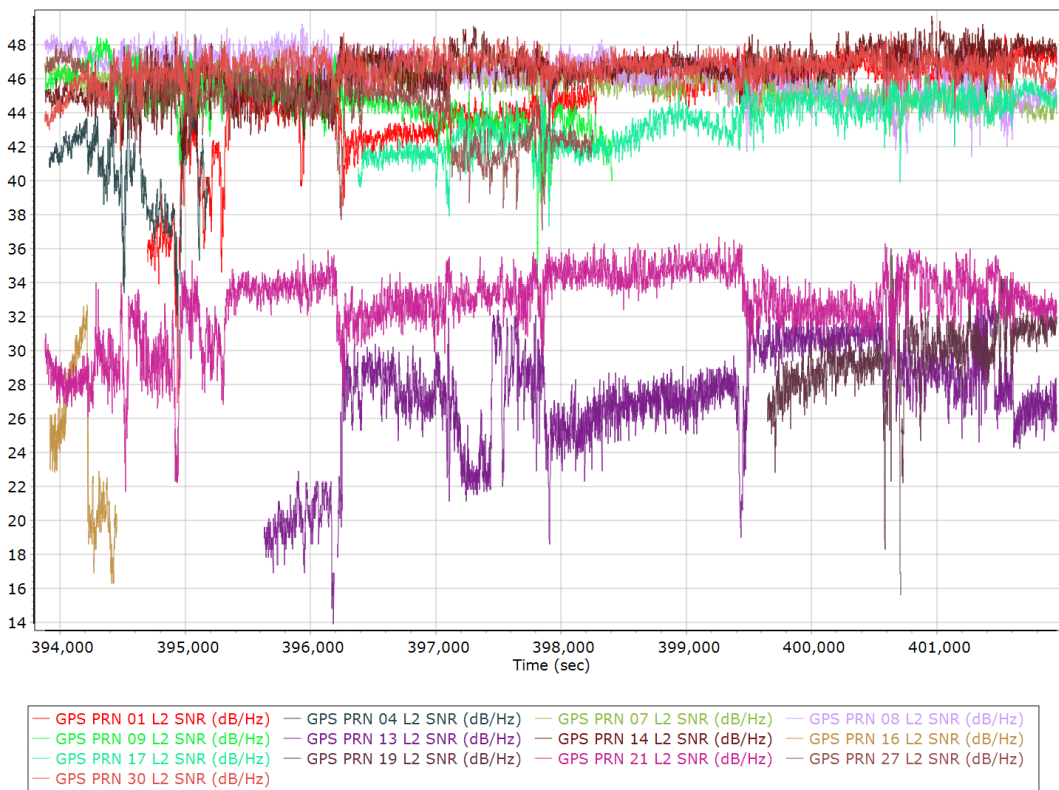
### GLONASS L1 SNR



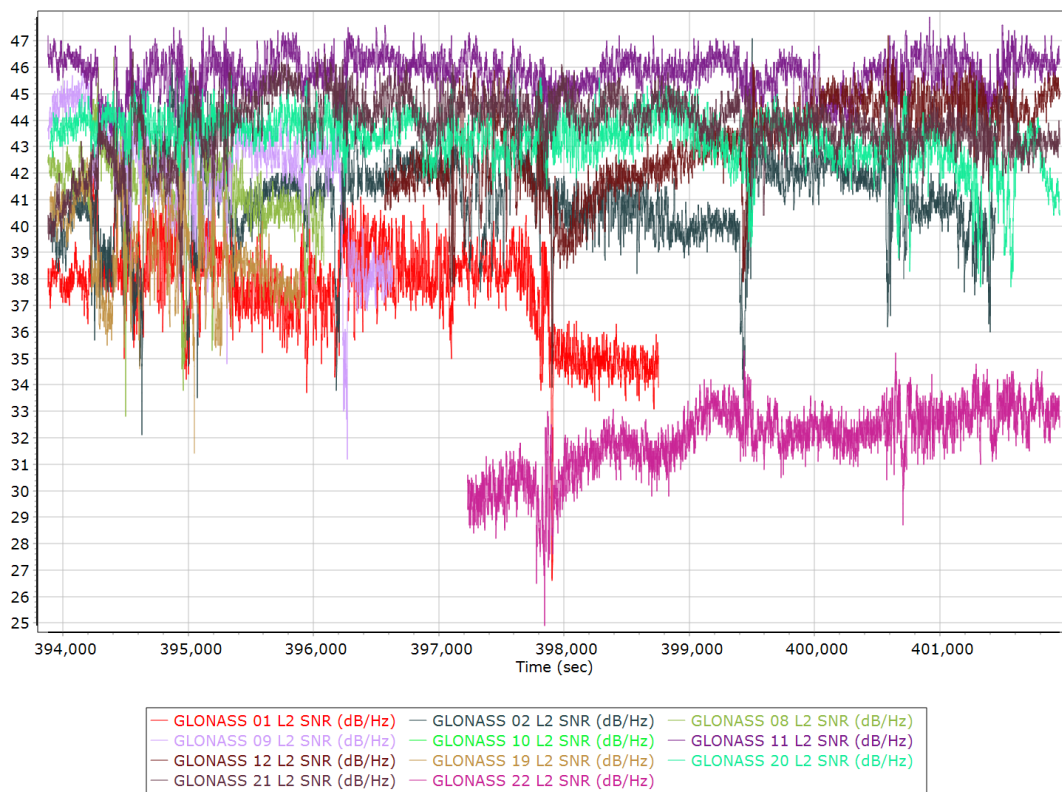
### GPS/GLONASS L2 Satellite Lock/Elevation



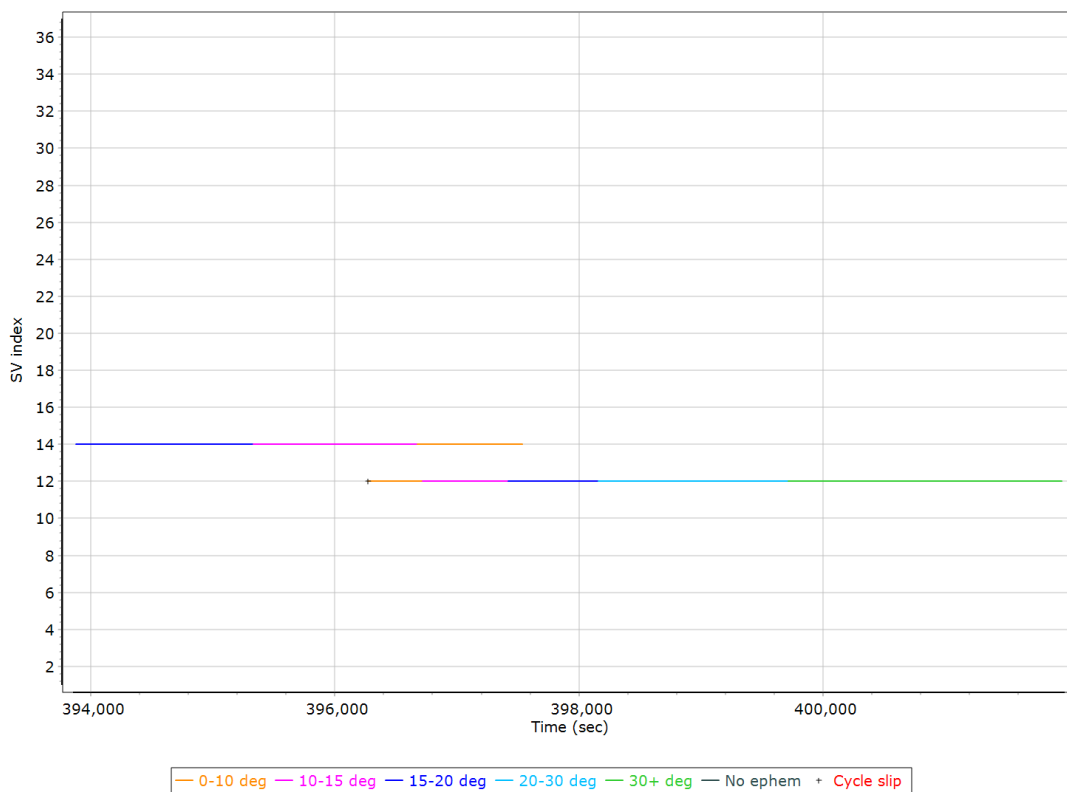
### GPS L2 SNR



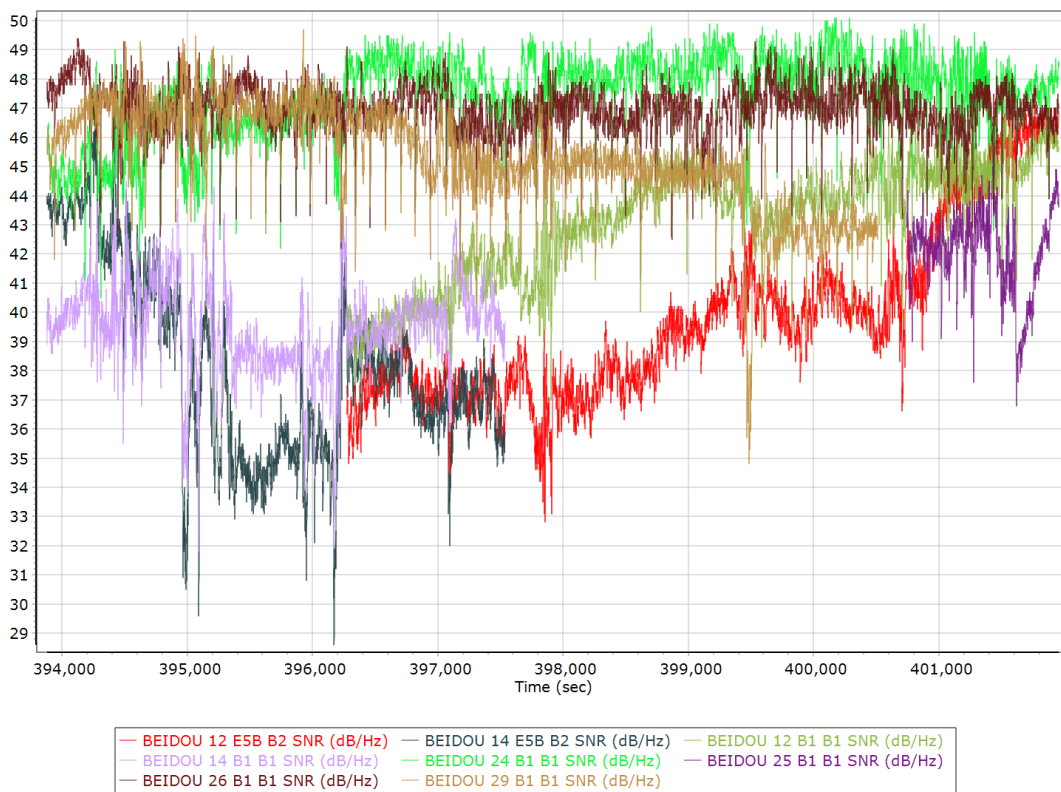
### GLONASS L2 SNR



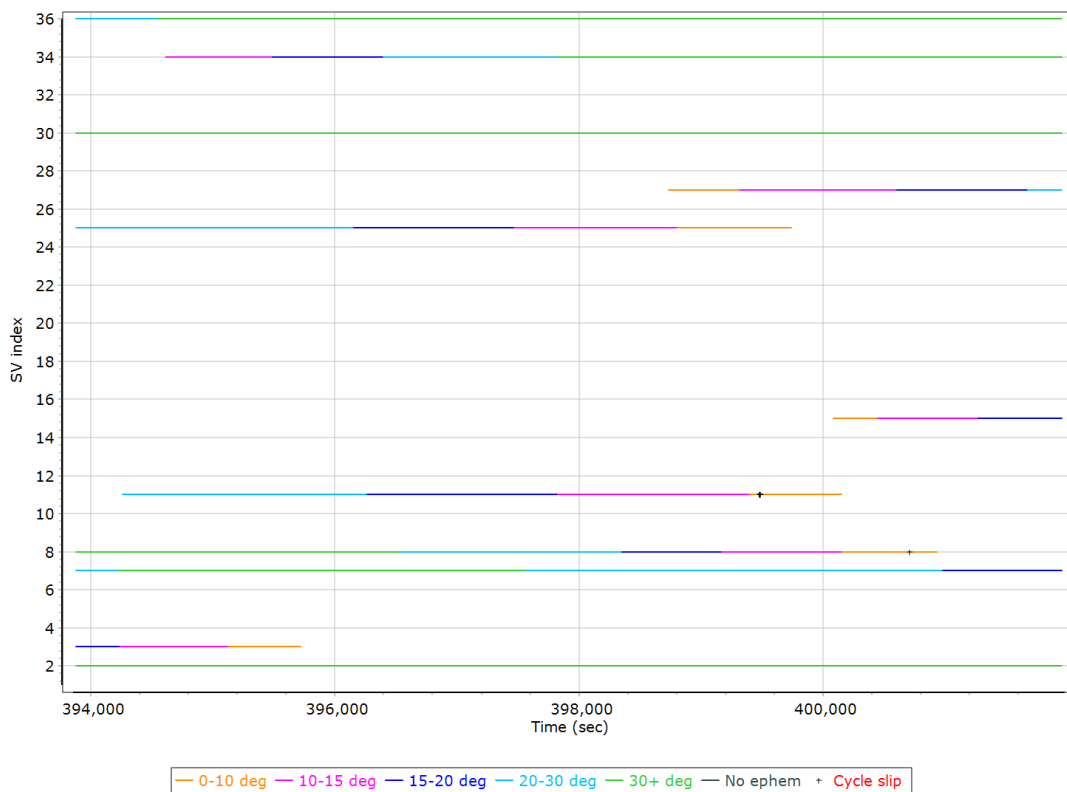
### BEIDOU Satellite Lock/Elevation



### BEIDOU SNR

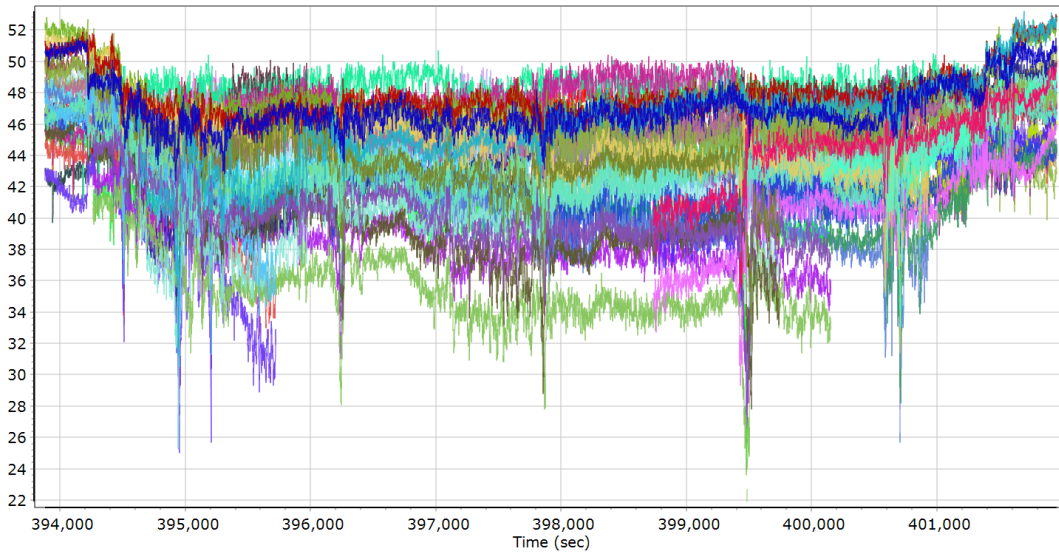


### GALILEO Satellite Lock/Elevation





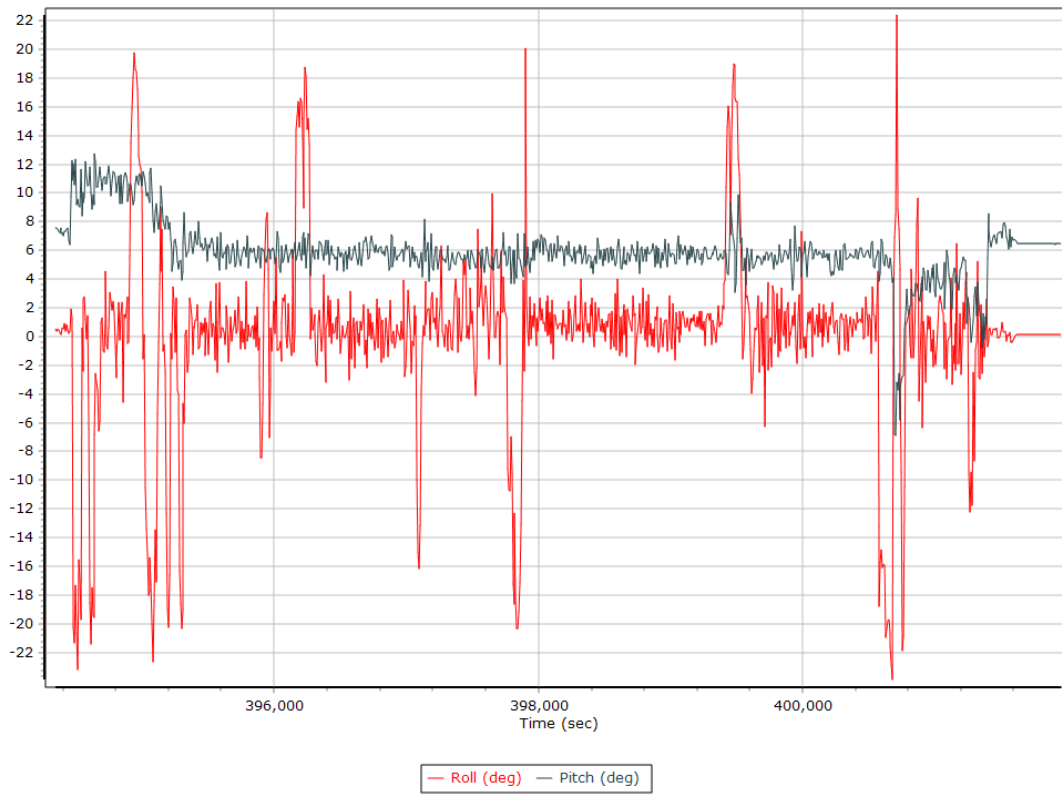
## GALILEO SNR



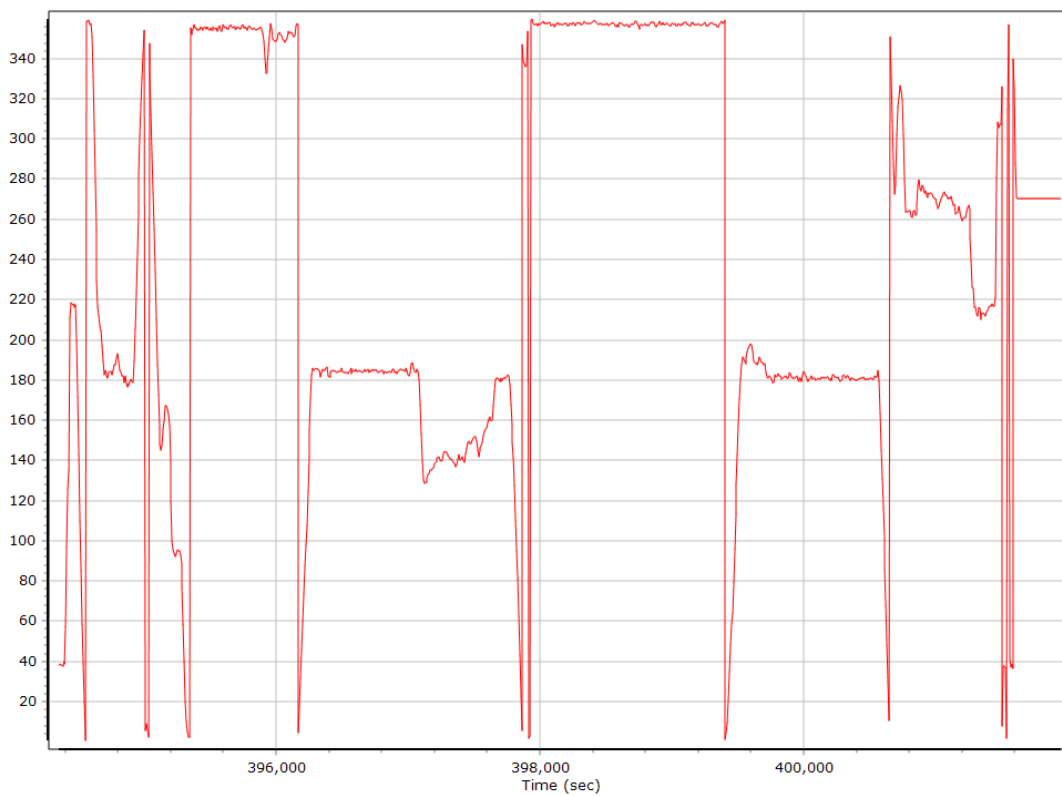
— GALILEO 02 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 03 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 07 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 08 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 11 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 15 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 25 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 27 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 30 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 34 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 36 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 02 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 03 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 07 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 08 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 11 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 15 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 25 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 27 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 30 L5E5A BPSK10_PD SNR (dB/Hz)



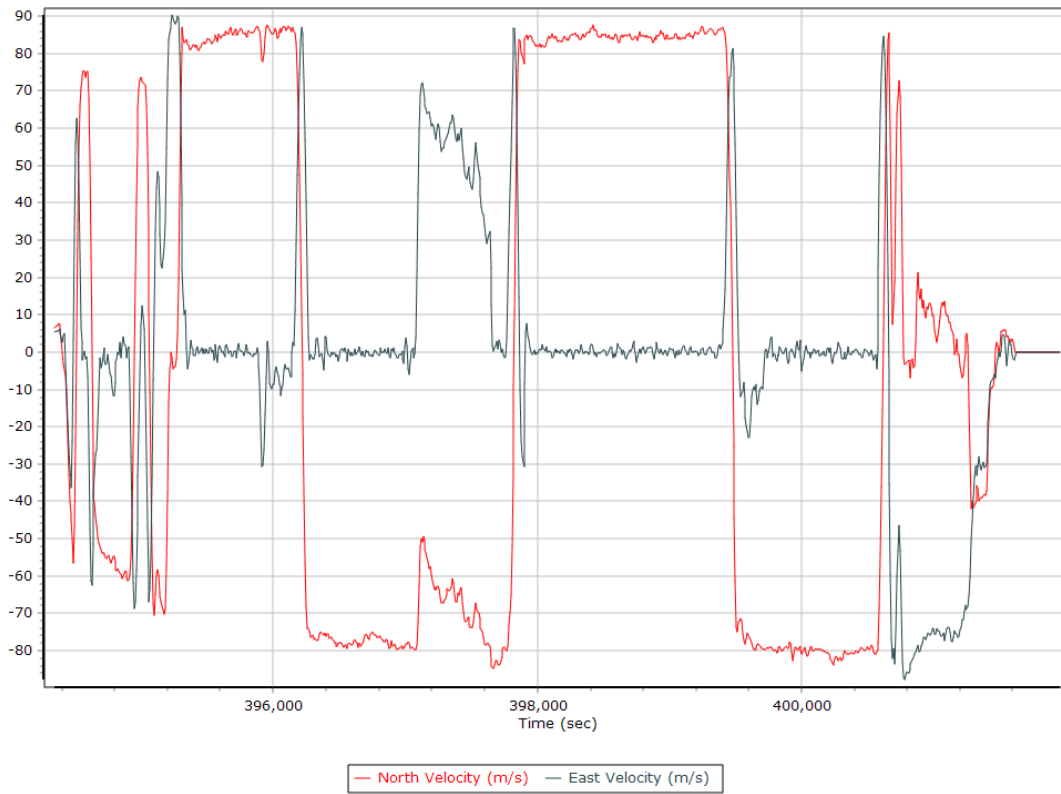
## Roll/Pitch



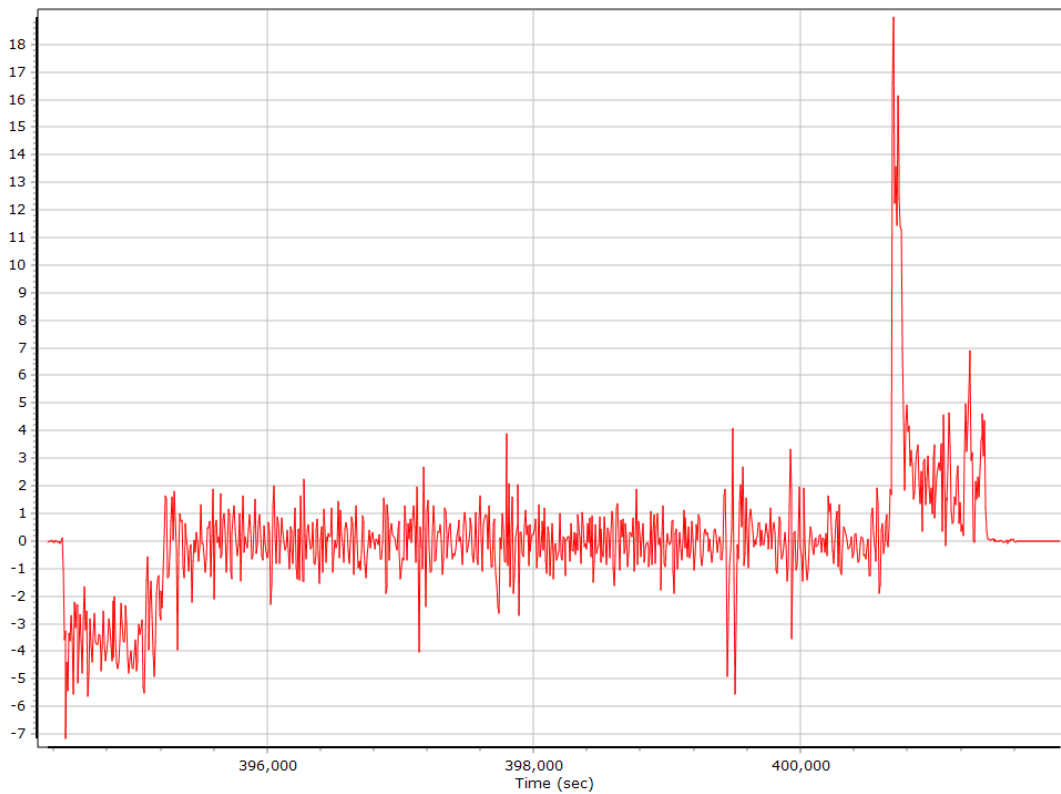
## Heading



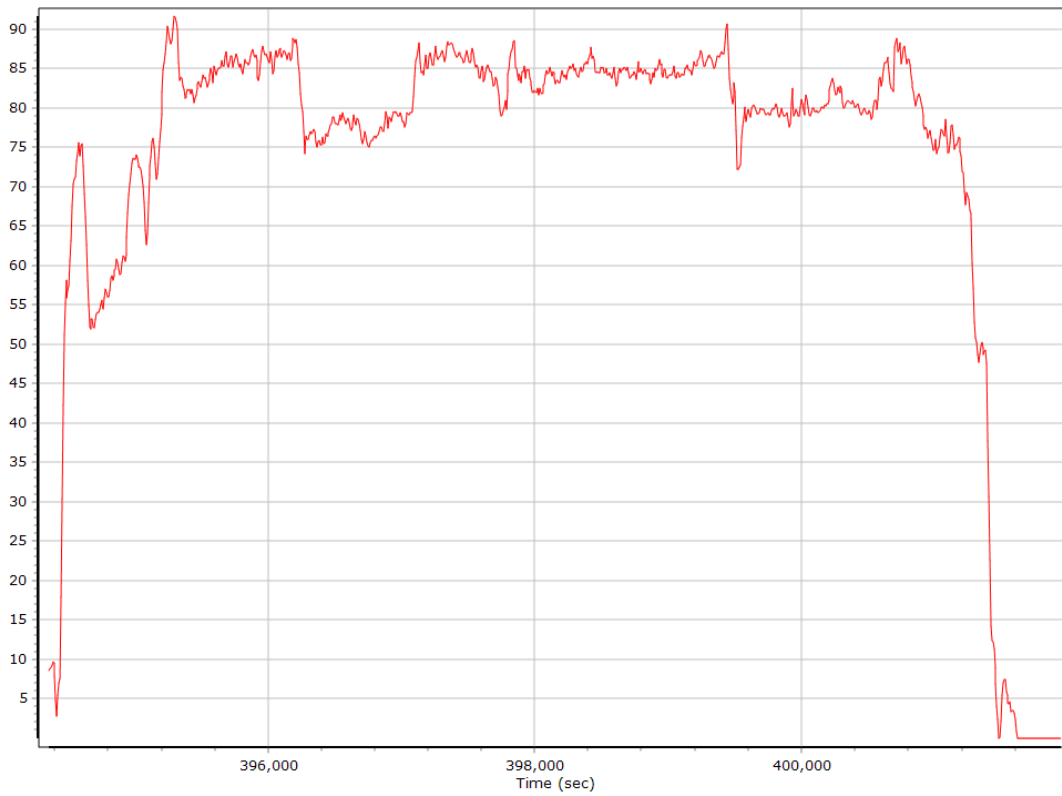
### North/East Velocity



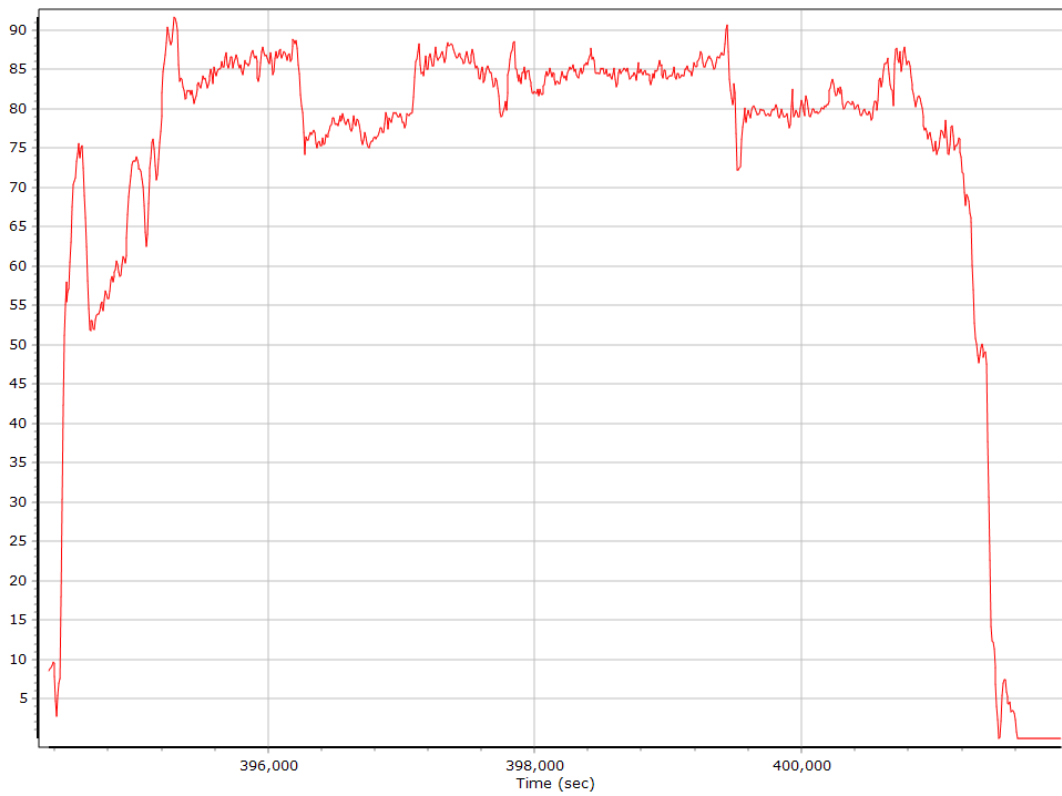
### Down Velocity



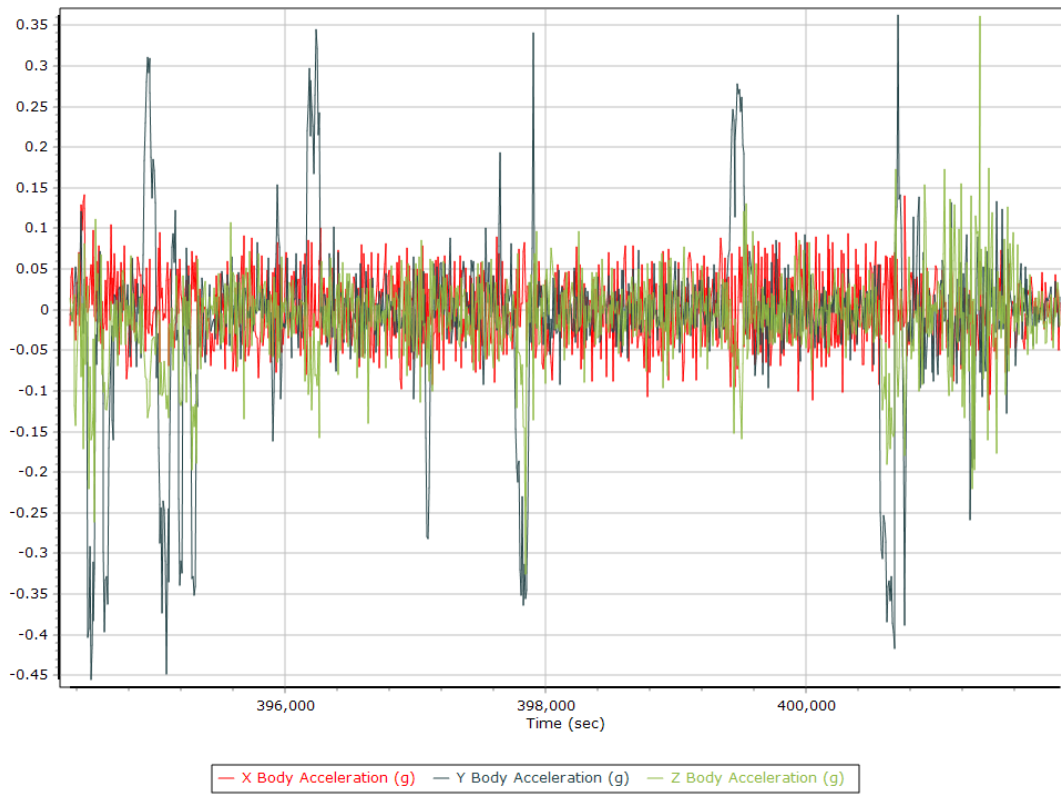
## Total Speed



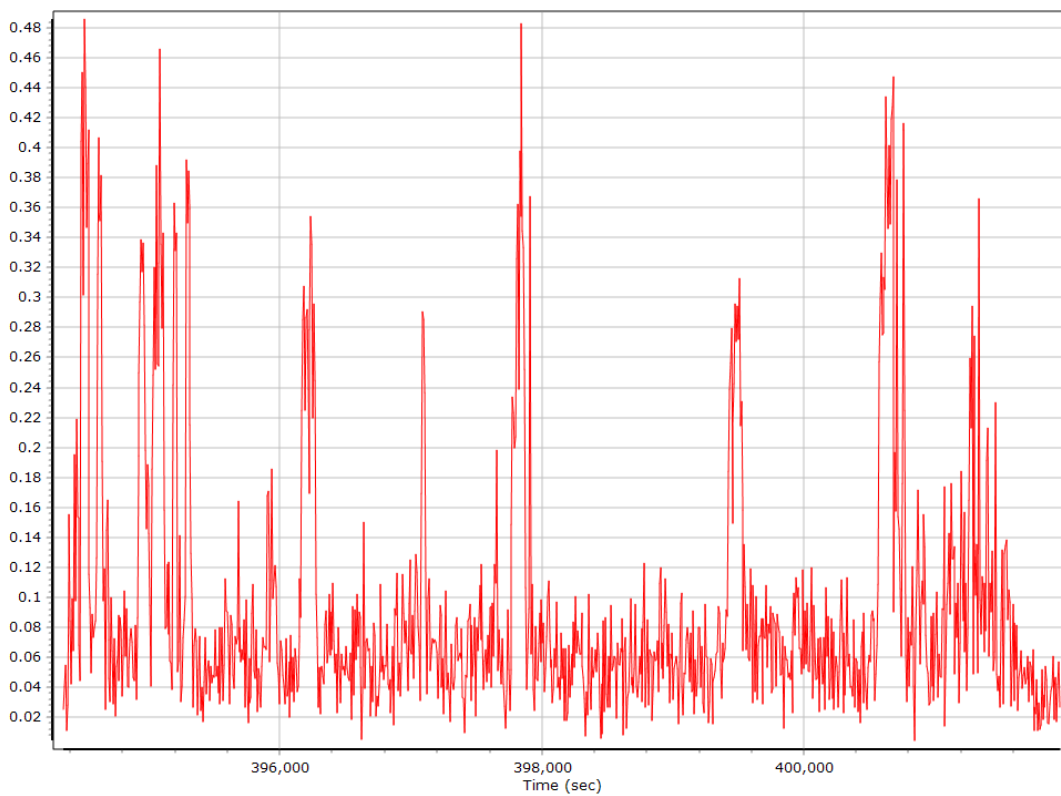
## Ground Speed



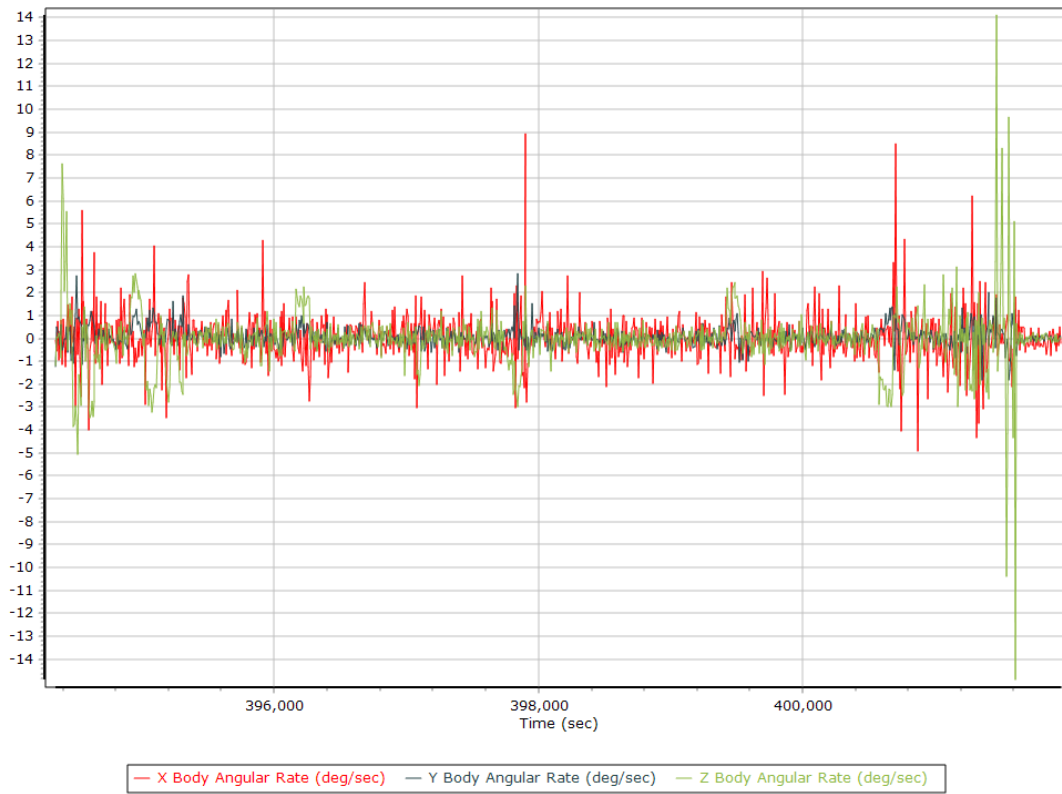
## Body Acceleration



## Total Body Acceleration



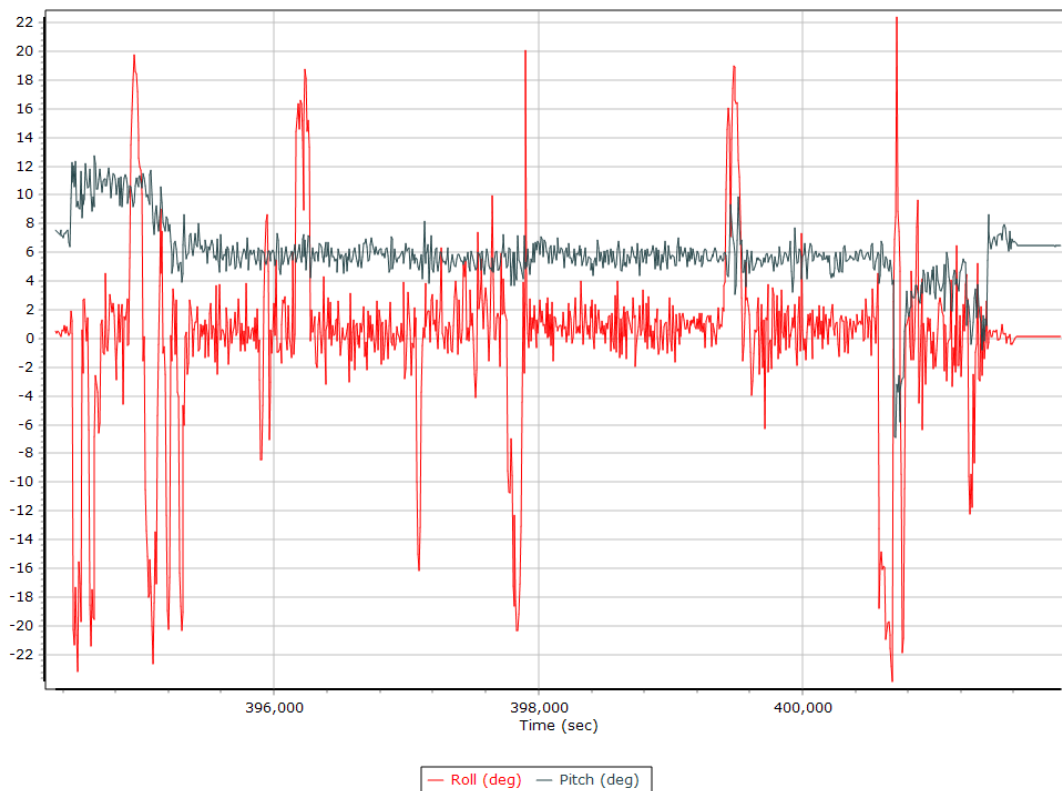
## Body Angular Rate



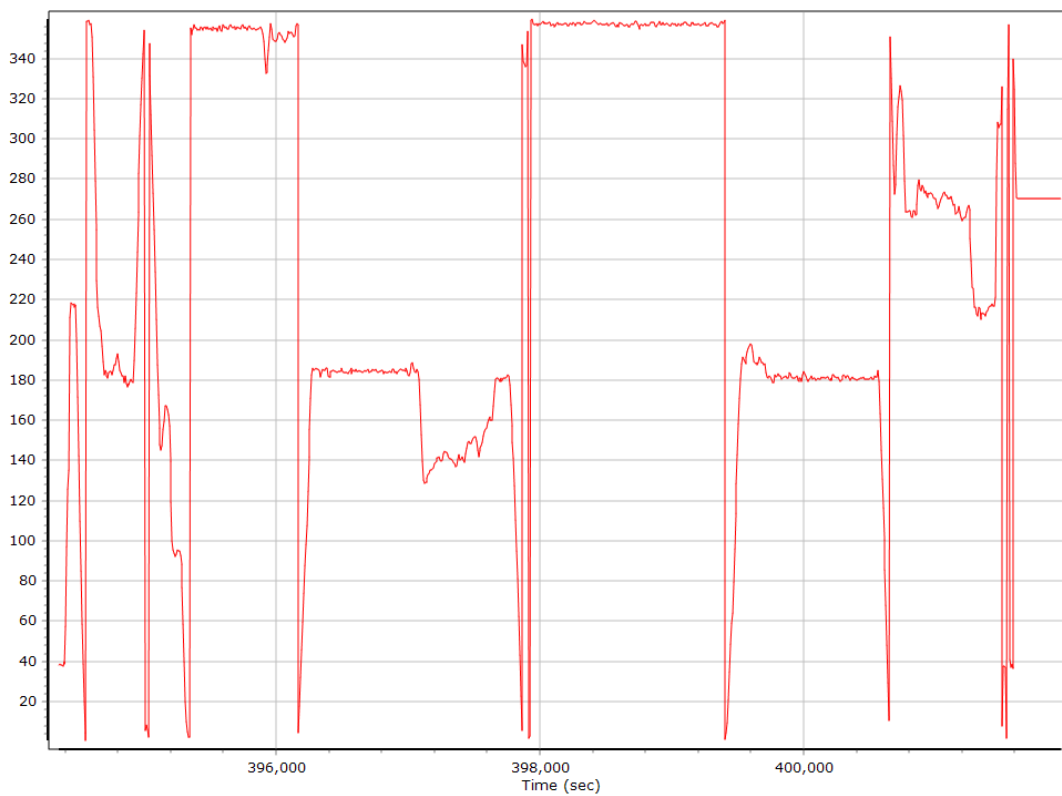




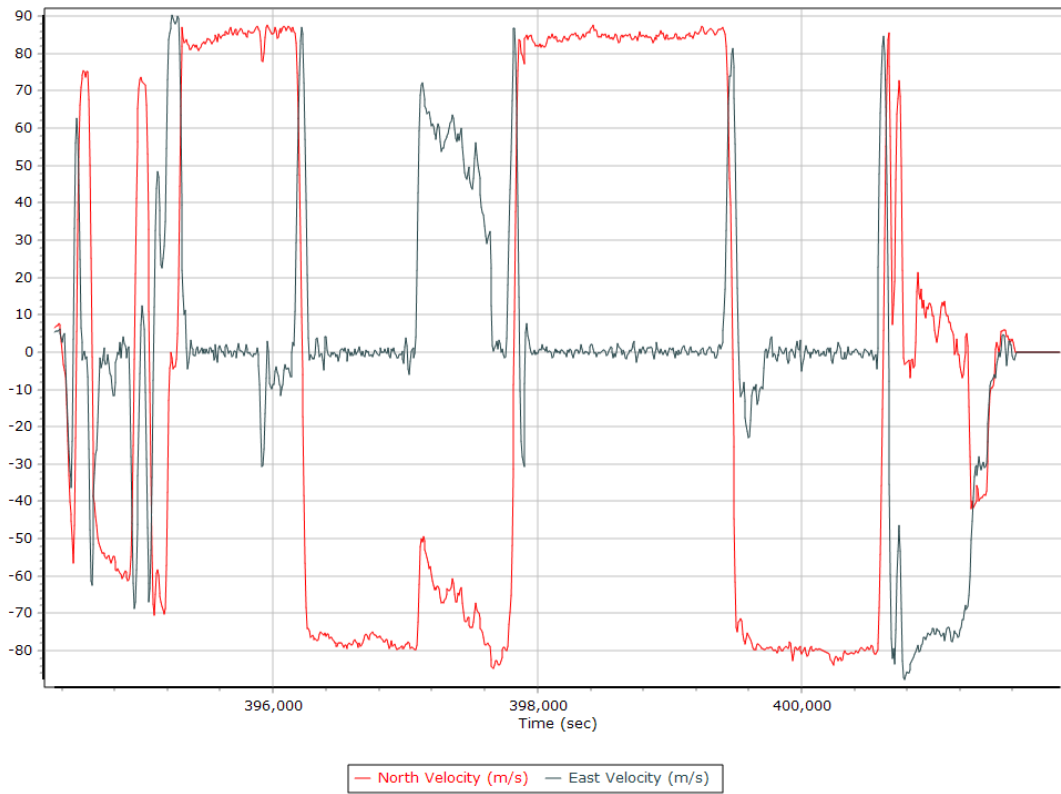
## Roll/Pitch



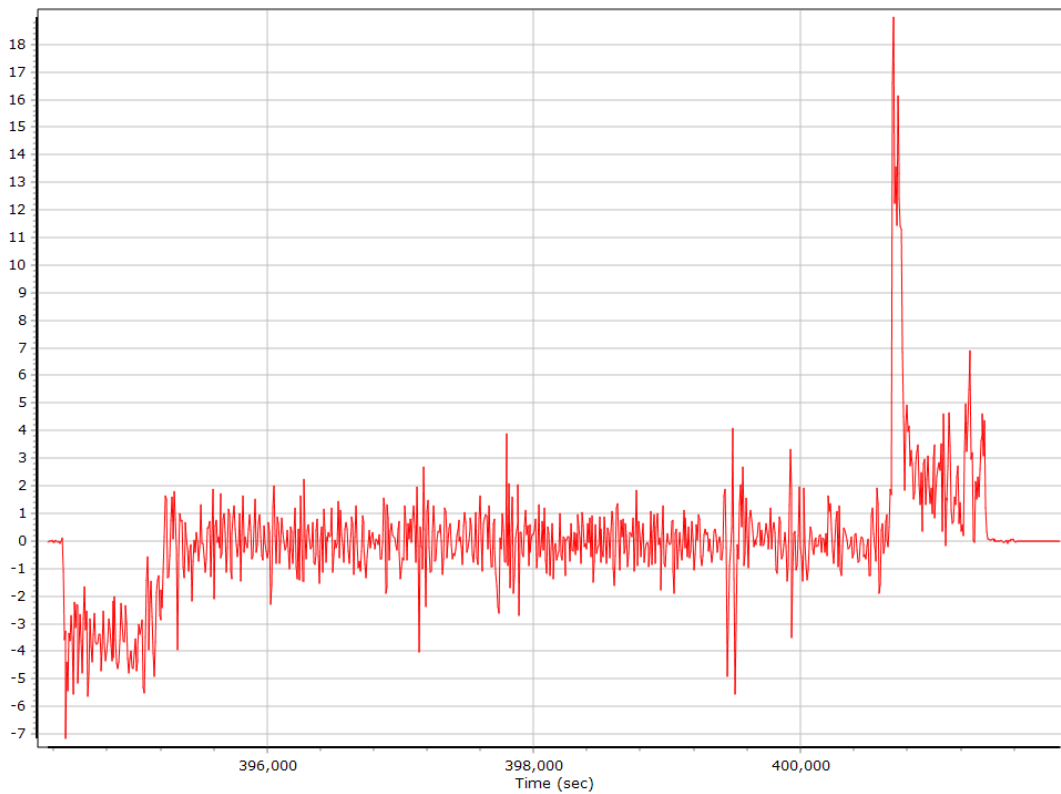
## Heading



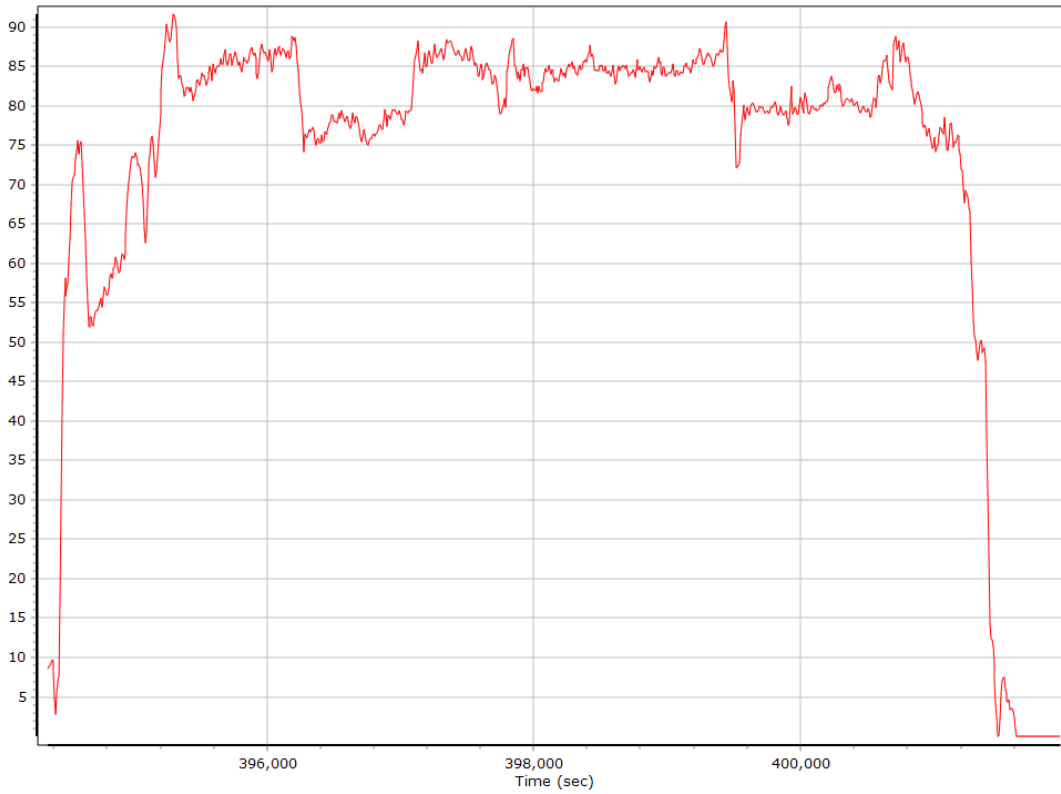
## North/East Velocity



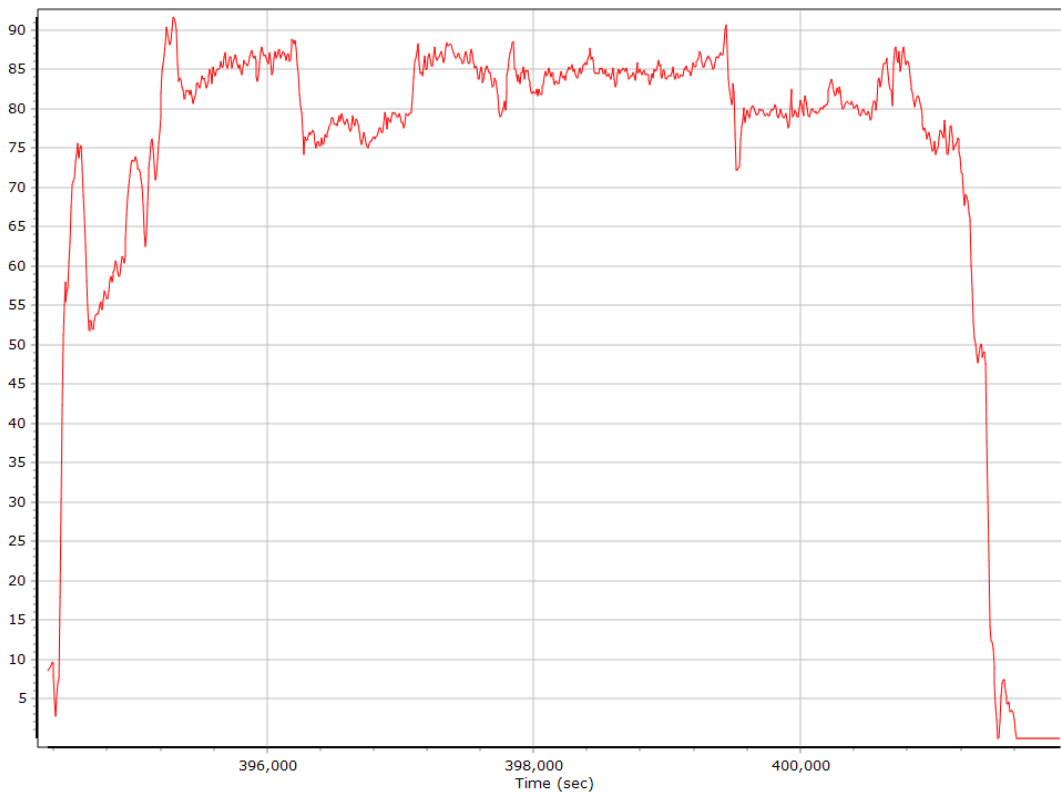
## Down Velocity



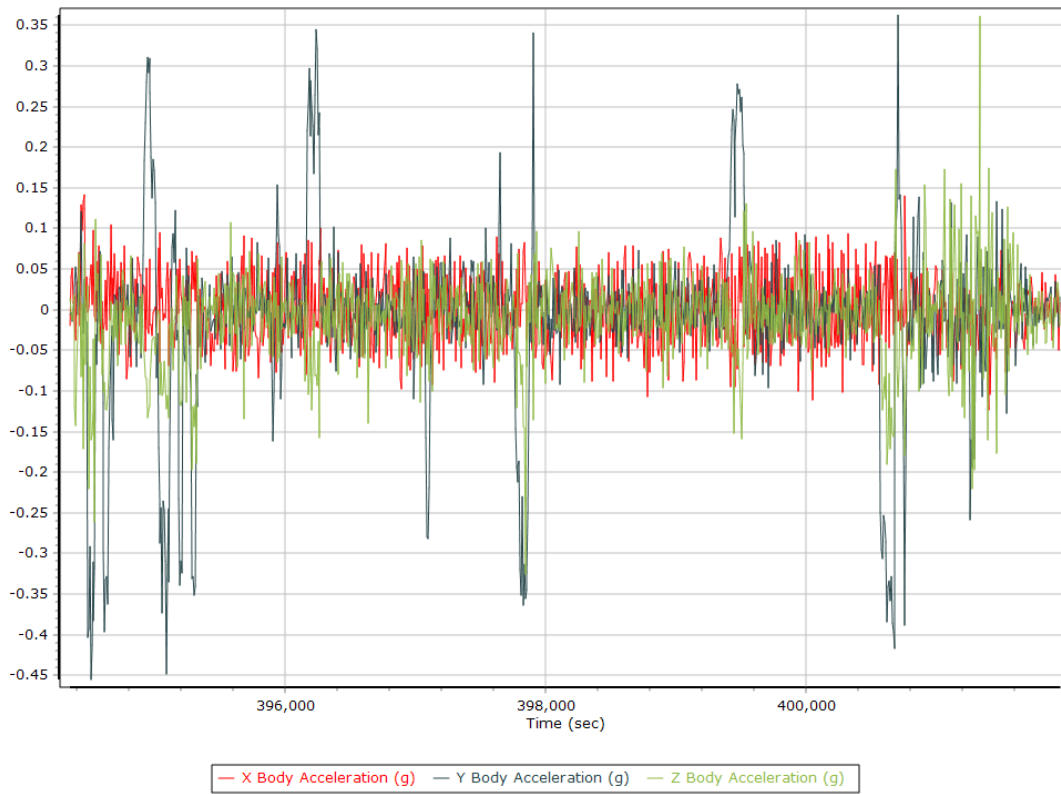
## Total Speed



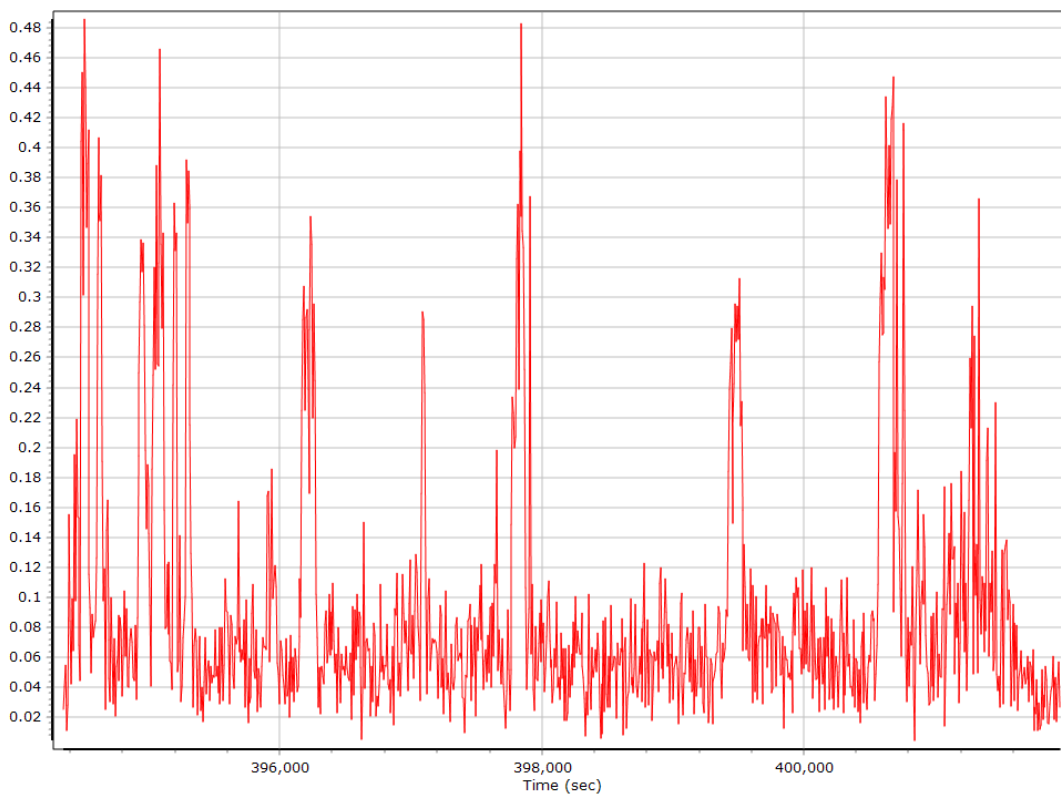
## Ground Speed



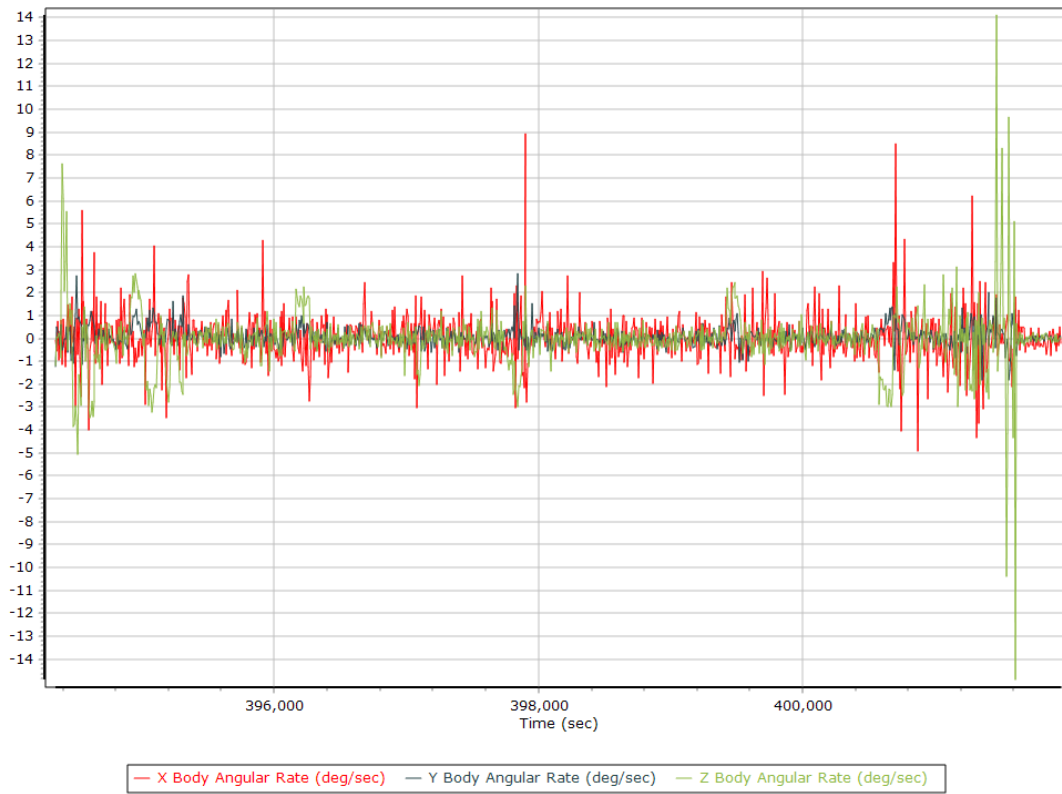
## Body Acceleration



## Total Body Acceleration



## Body Angular Rate

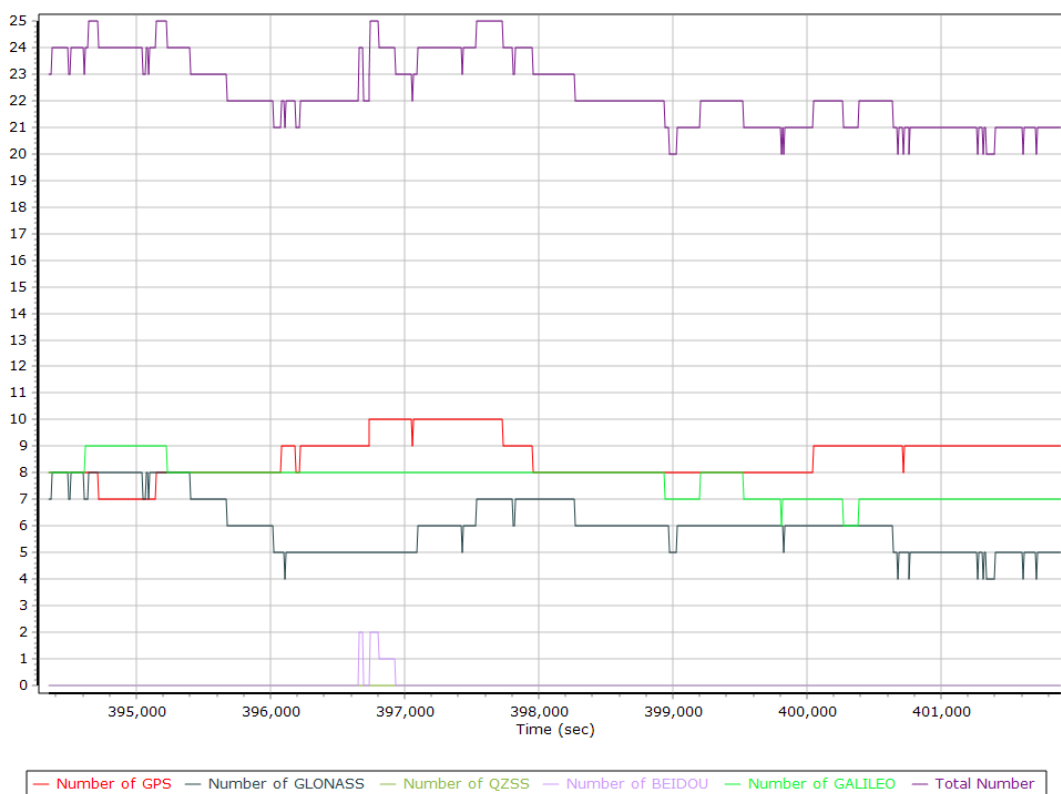


## GNSS QC

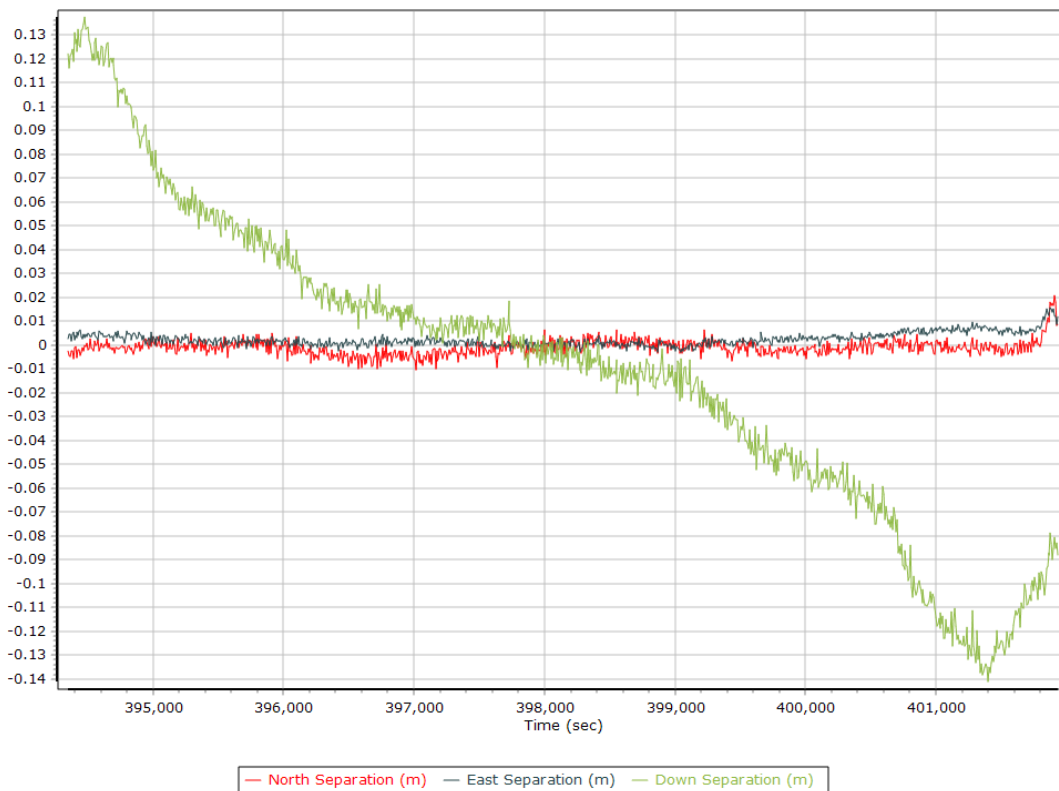
### GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	6	10	9
Number of GLONASS SV	4	8	6
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	2	0
Number of GALILEO SV	6	9	8
Total number of SV	18	25	22
PDOP	0.94	1.75	1.14
QC Solution Gaps	0.00	0.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	8016.00	0.00	0.00
Percentage	100.00	0.00	0.00

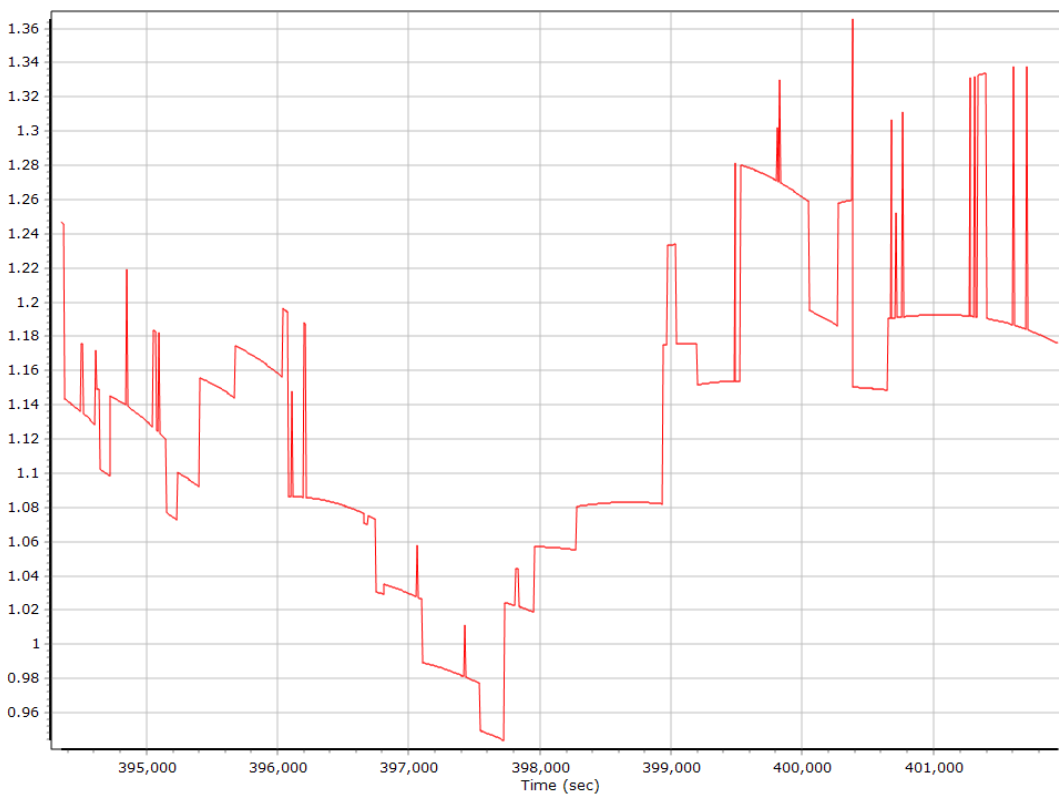
### Num SVs in solution



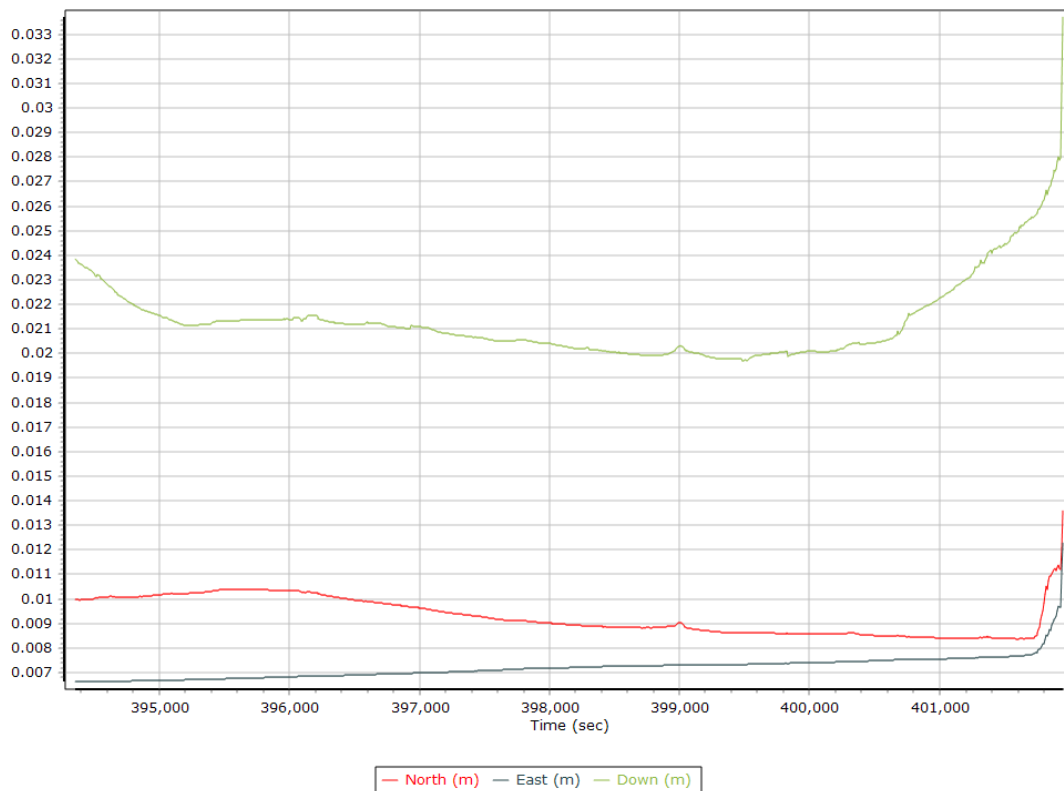
### Forward/Reverse Separation



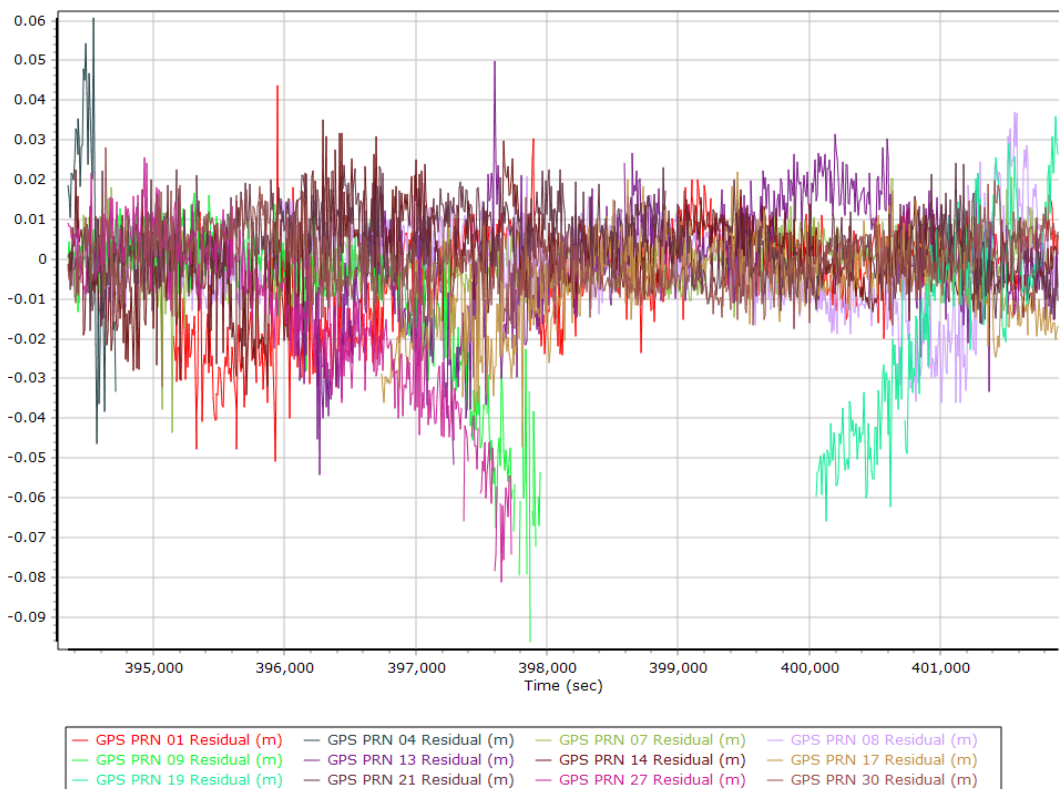
### PDOP



## Estimated Position Accuracy

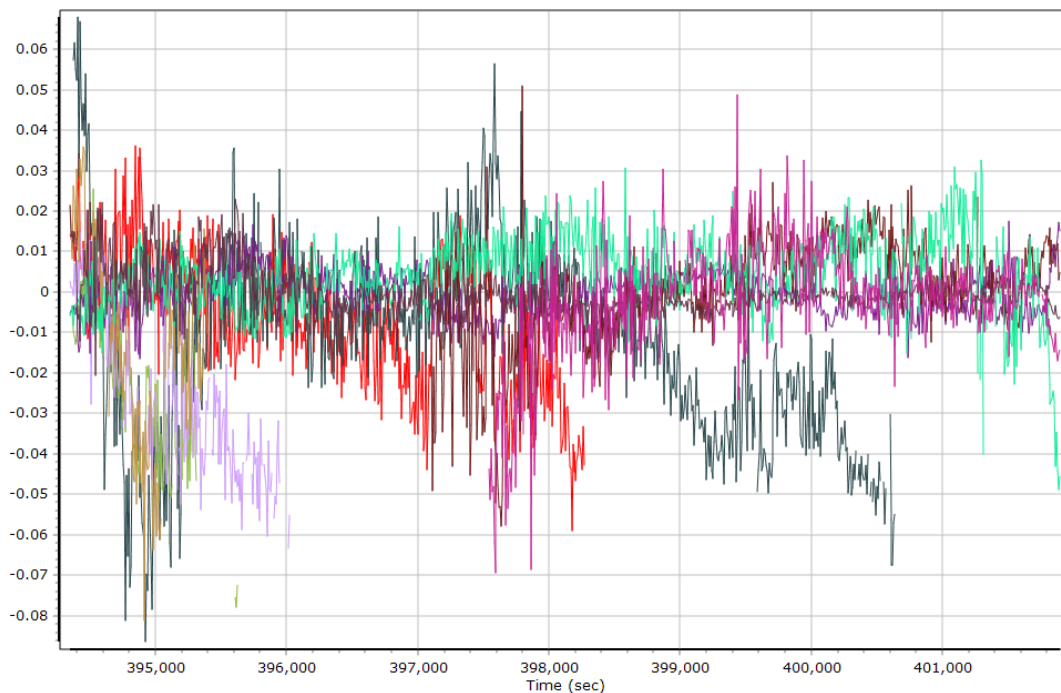


## GPS Residuals



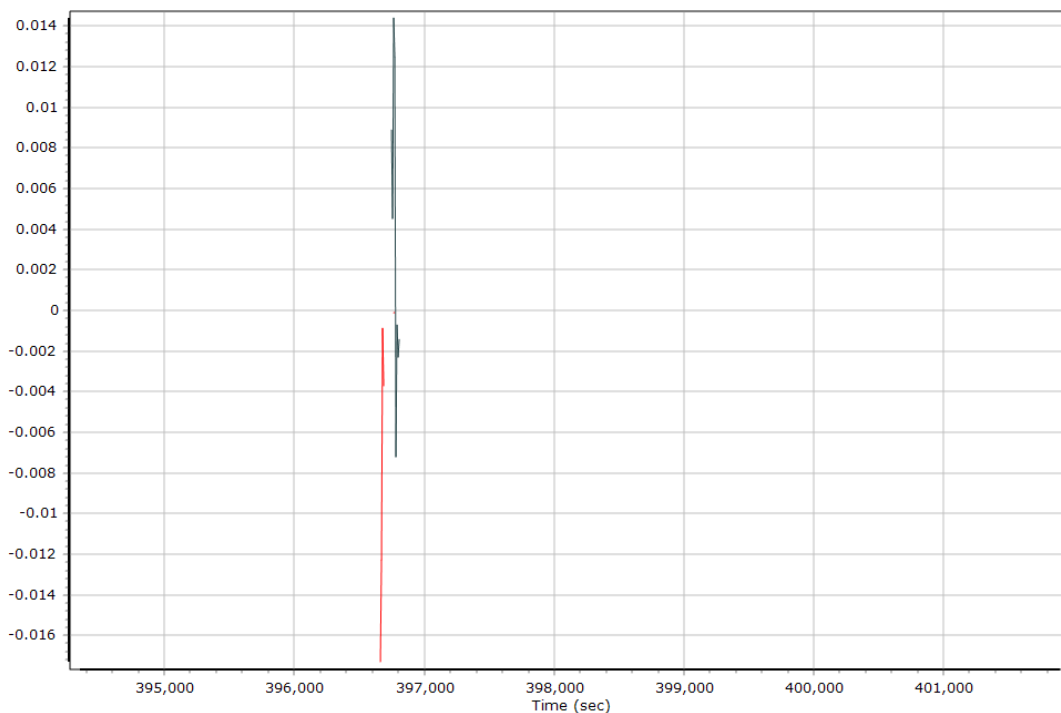


## GLONASS Residuals



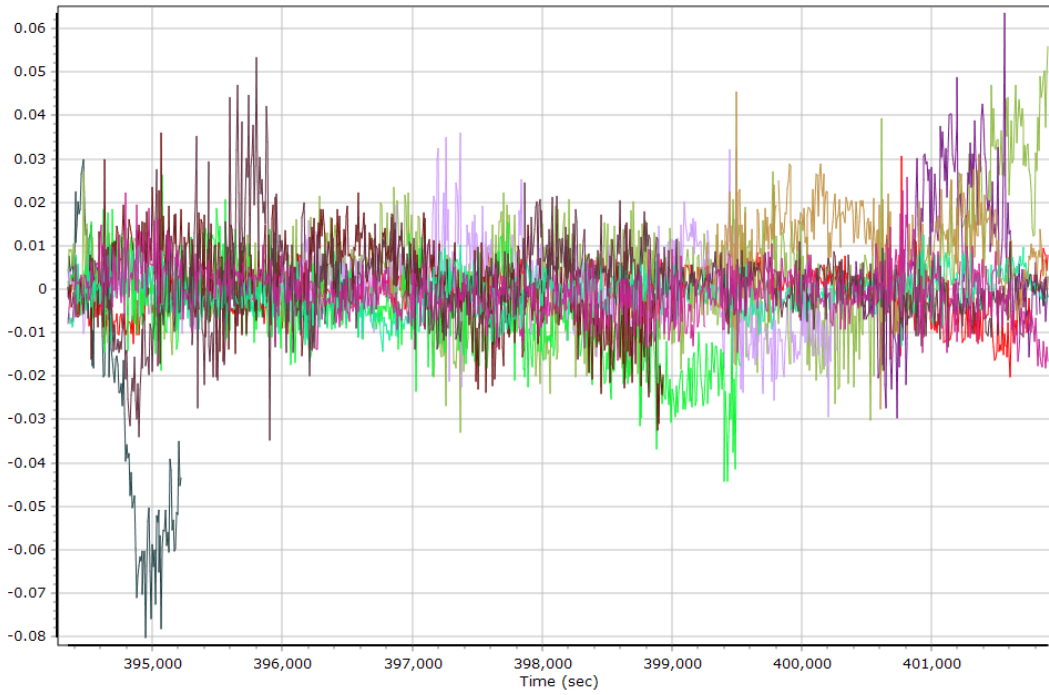
- GLONASS 01 Residual (m)
- GLONASS 02 Residual (m)
- GLONASS 08 Residual (m)
- GLONASS 09 Residual (m)
- GLONASS 10 Residual (m)
- GLONASS 11 Residual (m)
- GLONASS 12 Residual (m)
- GLONASS 19 Residual (m)
- GLONASS 20 Residual (m)
- GLONASS 21 Residual (m)
- GLONASS 22 Residual (m)

## BEIDOU Residuals



- BEIDOU 12 Residual (m)
- BEIDOU 14 Residual (m)
- BEIDOU 24 Residual (m)
- BEIDOU 26 Residual (m)
- BEIDOU 29 Residual (m)

## GALILEO Residuals



- |                         |                         |                         |                         |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GALILEO 02 Residual (m) | GALILEO 03 Residual (m) | GALILEO 07 Residual (m) | GALILEO 08 Residual (m) |
| GALILEO 11 Residual (m) | GALILEO 15 Residual (m) | GALILEO 25 Residual (m) | GALILEO 27 Residual (m) |
| GALILEO 30 Residual (m) | GALILEO 34 Residual (m) | GALILEO 36 Residual (m) |                         |

## GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	393880.000 (5/12/2022 1:24:40 PM)		
Processing end time	401956.000 (5/12/2022 3:39:16 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Reference to IMU lever arm (m)	0.000	0.000	0.000
Reference to IMU mounting angles (deg)	0.000	0.000	180.000
Reference to Primary GNSS lever arm (m)	0.384	-0.078	-1.063
Reference to Primary GNSS lever arm std dev (m)	0.030	0.030	0.030
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

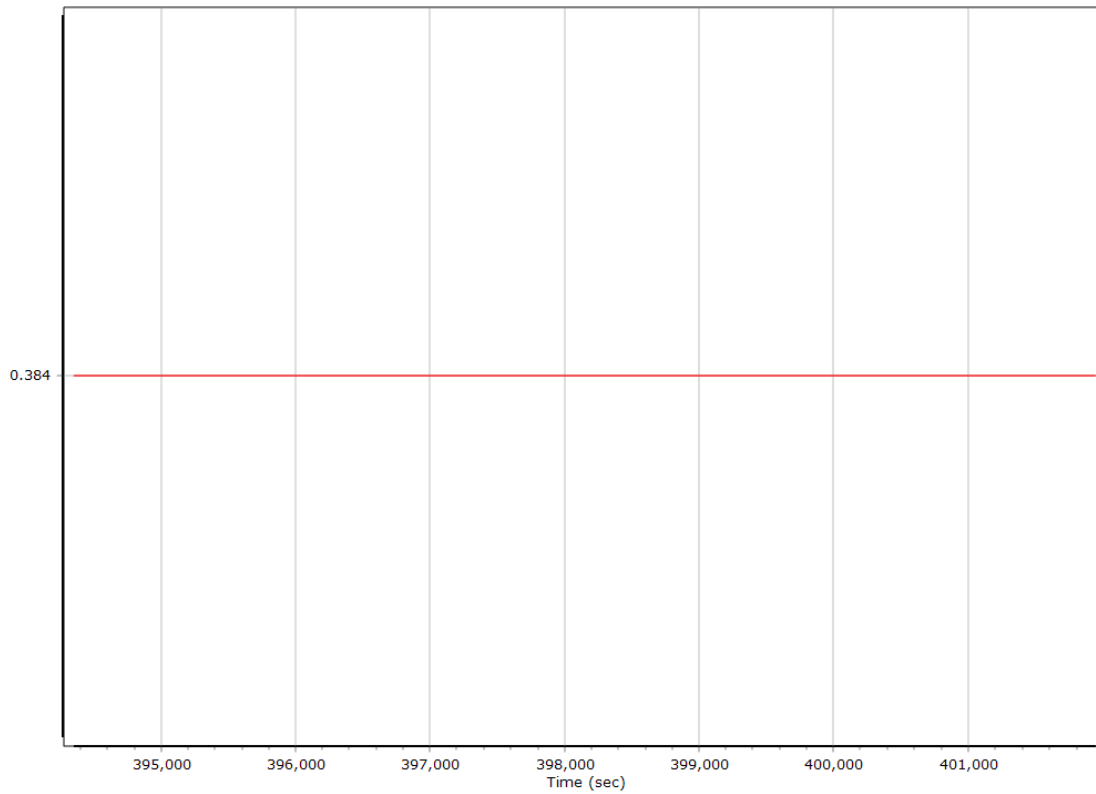
## Calibrated Installation Parameters

### Reference-Primary GNSS Lever Arm (m)

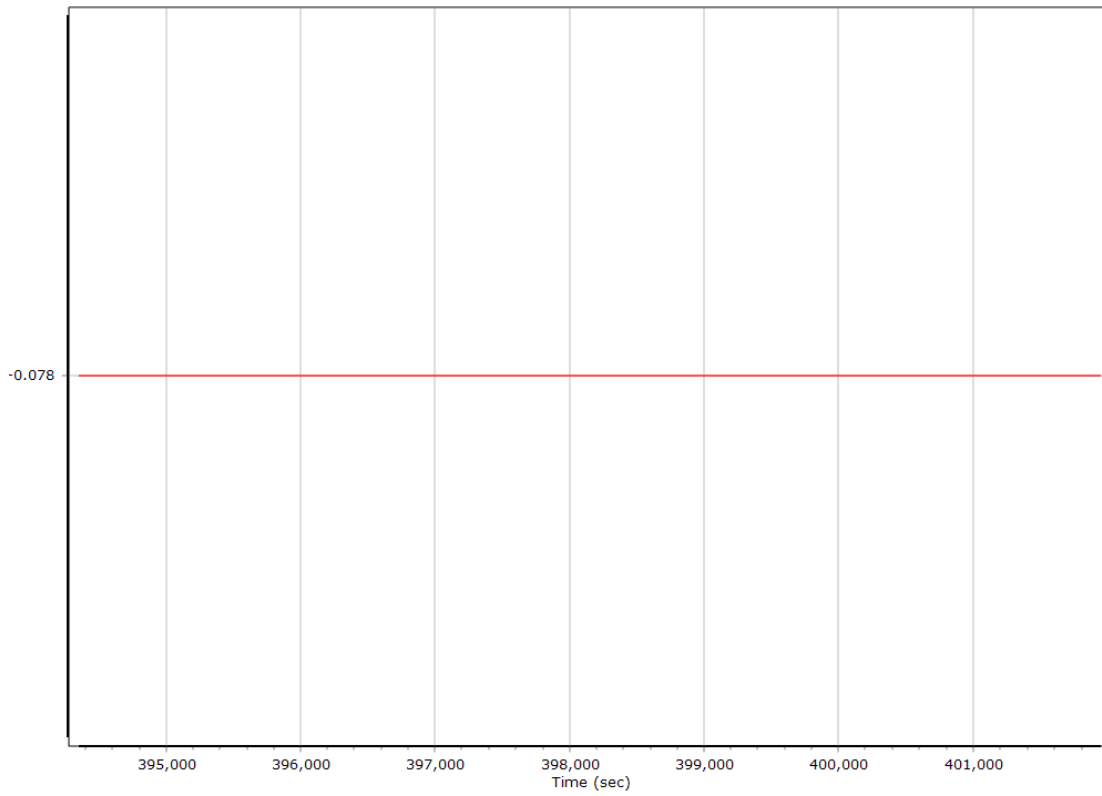
#### Reference-Primary GNSS Lever Arm Automatic Calibration Results

Original Reference to Primary GNSS lever arm (m)	-0.399	-0.382	-1.125
Iteration 1 Reference to Primary GNSS lever arm (m)	0.347	-0.095	-1.066
Iteration 2 Reference to Primary GNSS lever arm (m)	0.384	-0.078	-1.063
Primary GNSS Lever Arm In use	Iteration 2		

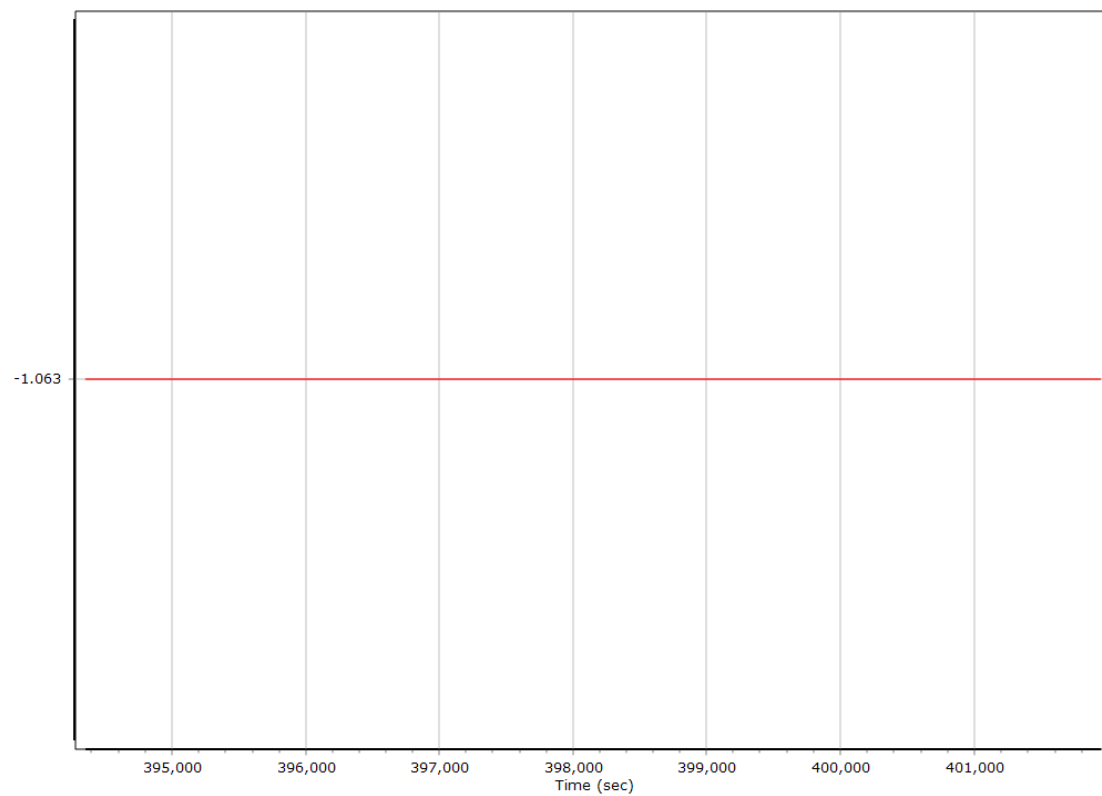
### X Reference-Primary GNSS Lever Arm (m)



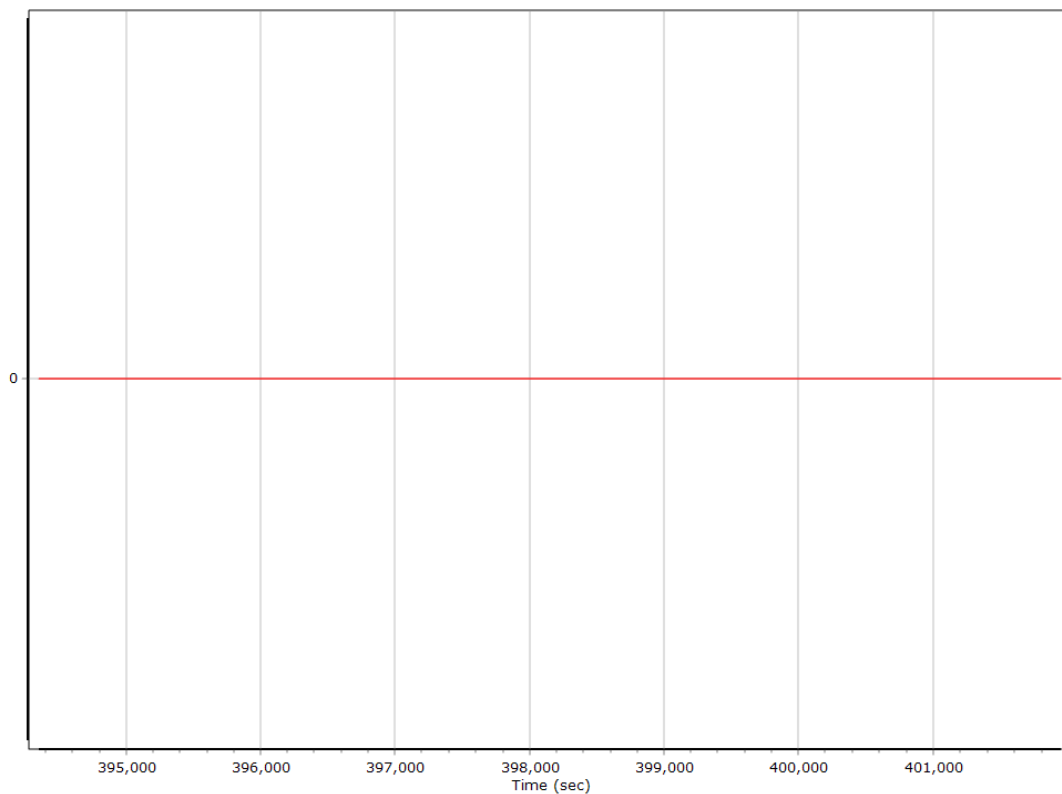
### Y Reference-Primary GNSS Lever Arm (m)



### Z Reference-Primary GNSS Lever Arm (m)



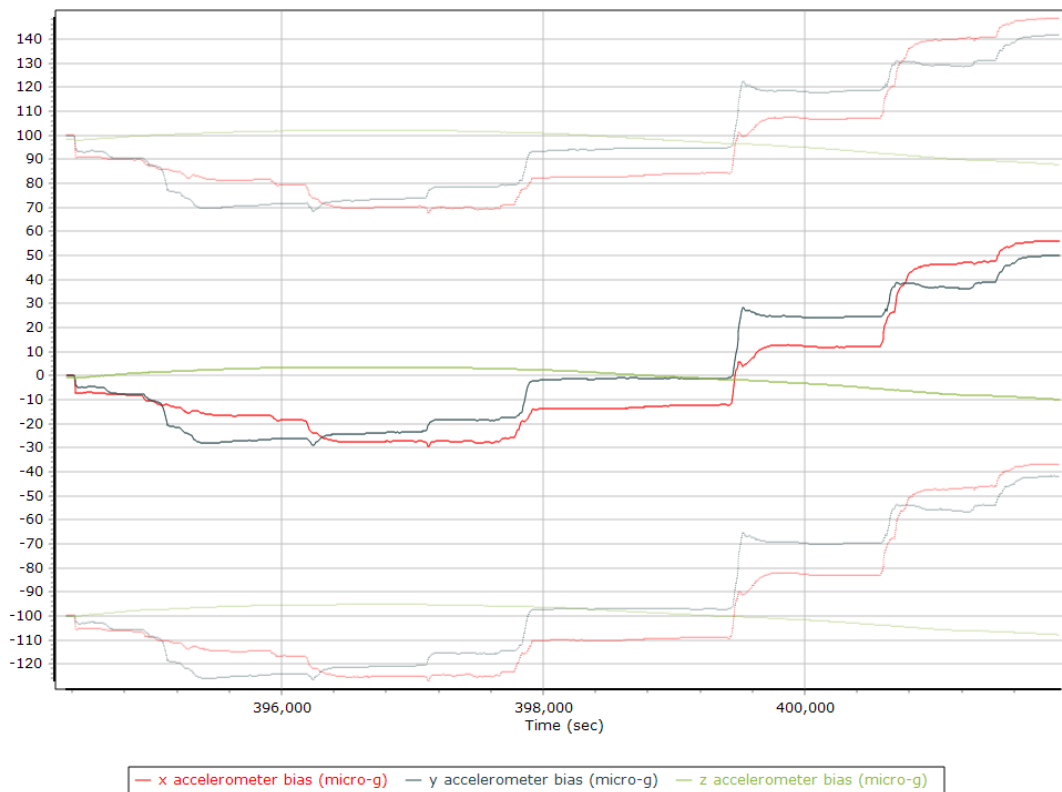
### Reference-Primary GNSS Lever Arm Figure of Merit



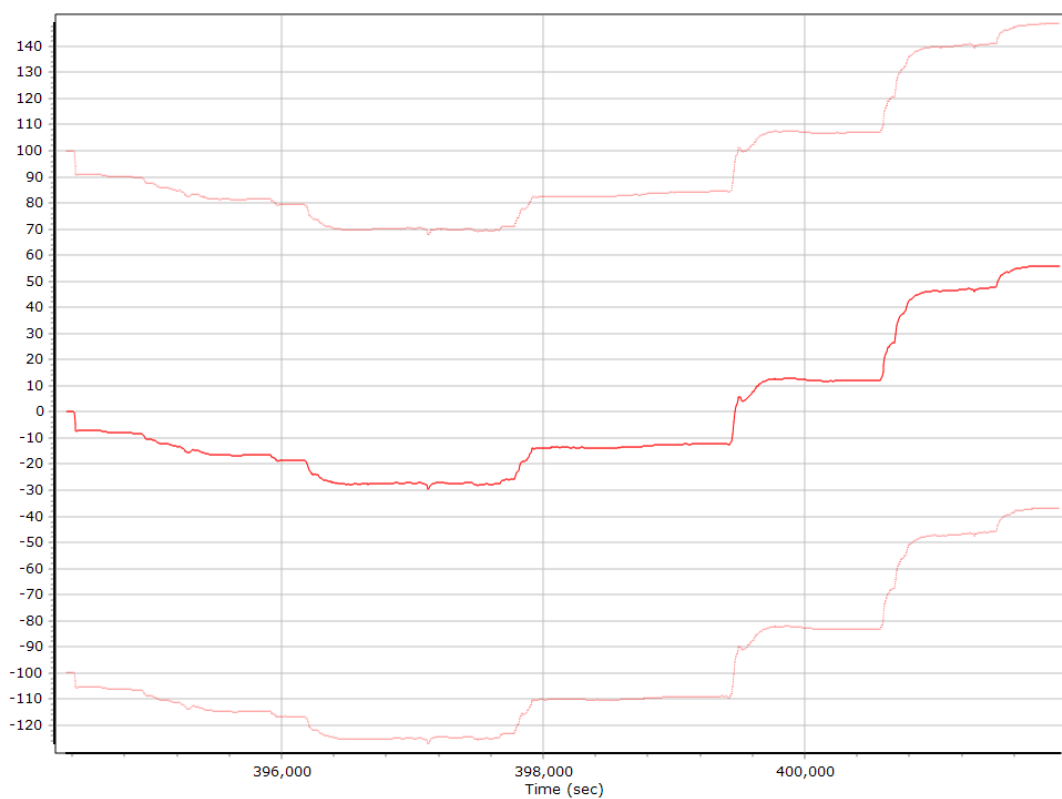
## IN-Fusion QC

### Forward Processed Estimated Errors, Reference Frame

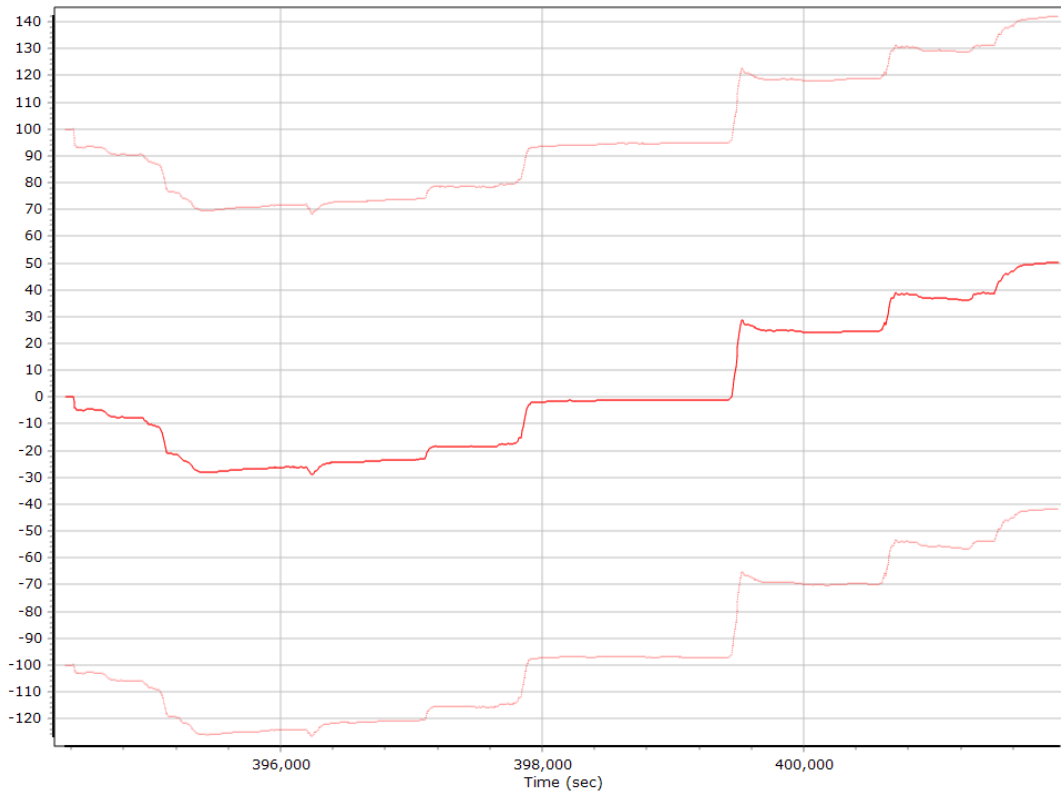
#### Accelerometer Bias (micro-g)



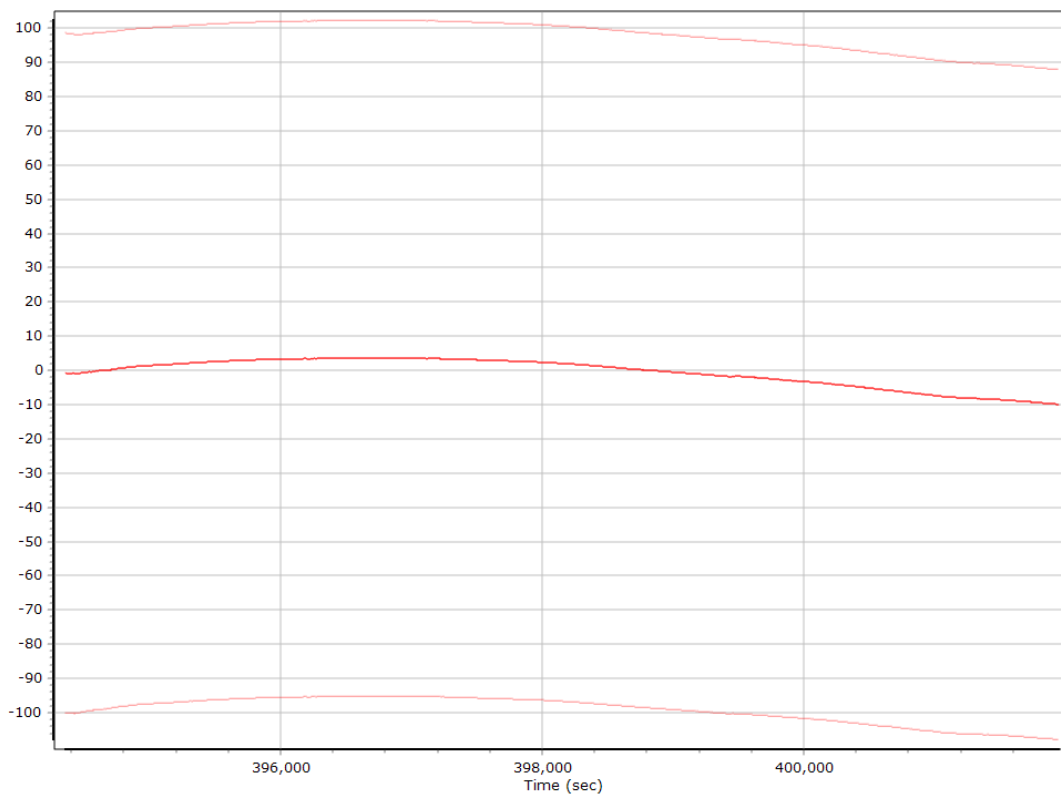
#### X Accelerometer Bias (micro-g)



### Y Accelerometer Bias (micro-g)



### Z Accelerometer Bias (micro-g)





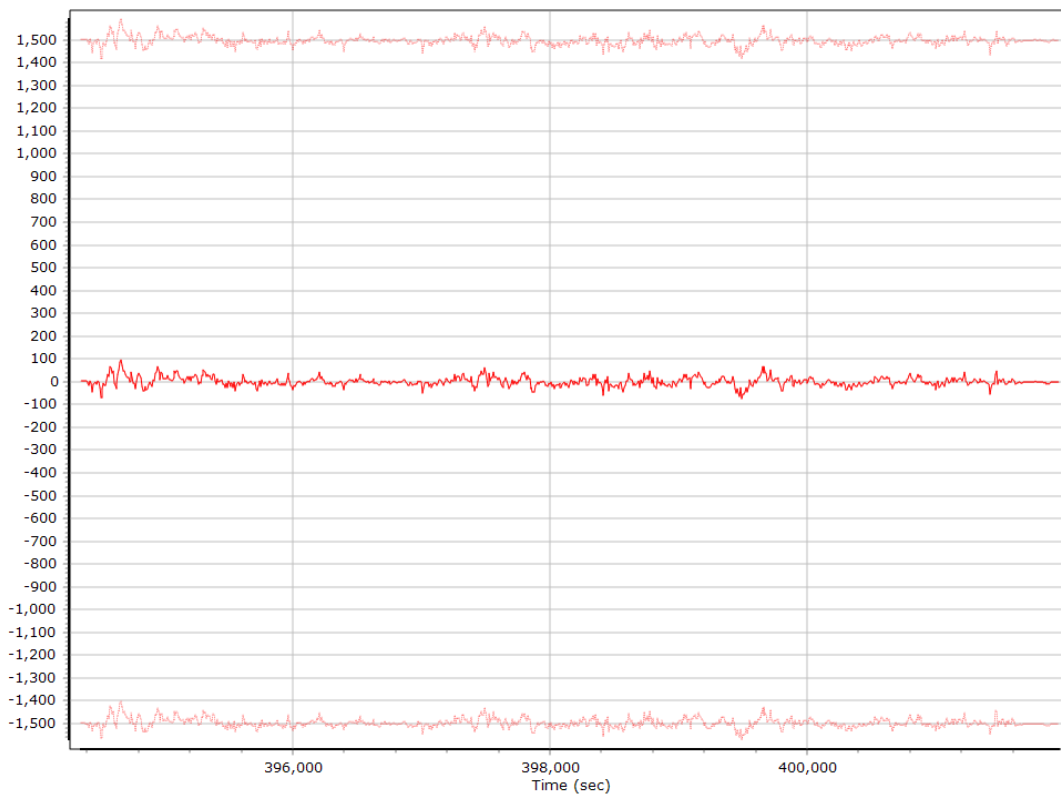
### Accelerometer Scale Error (ppm)



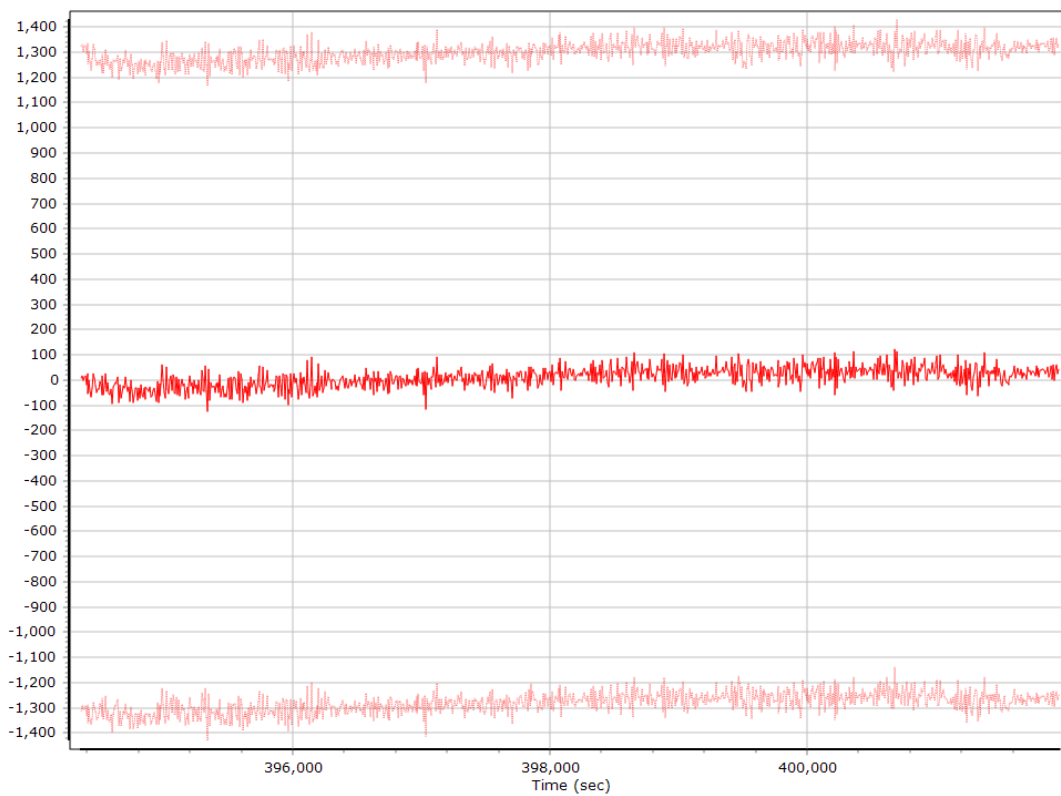
### X Accelerometer Scale Error (ppm)



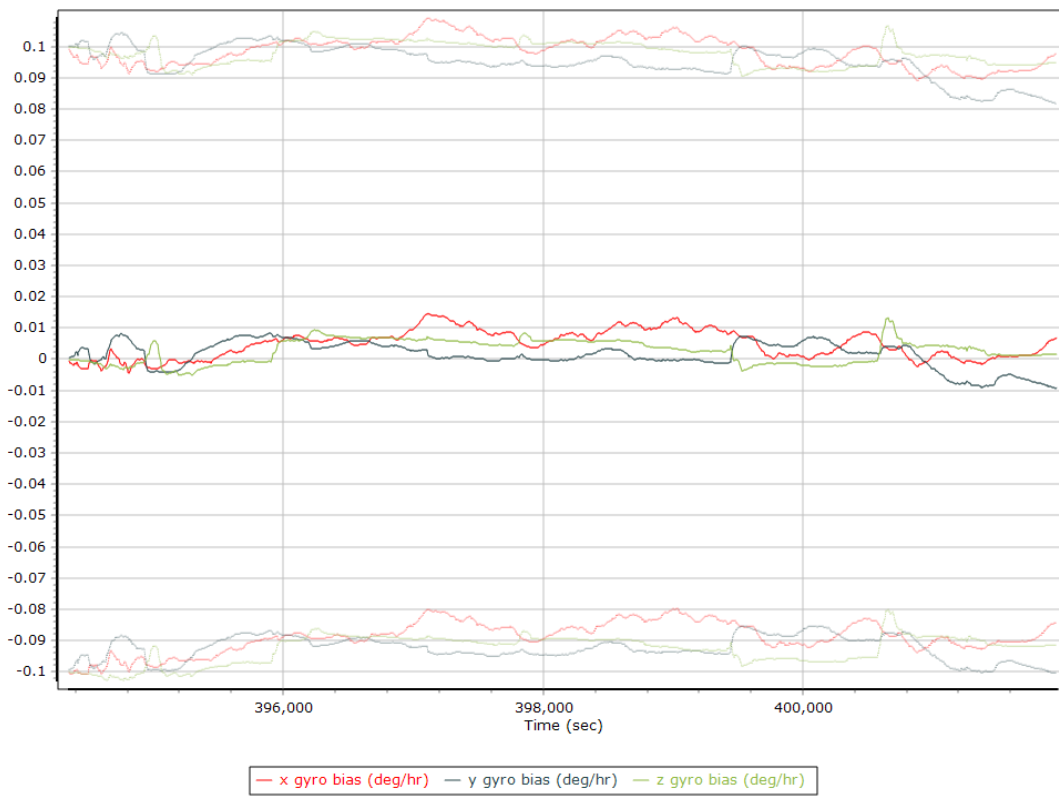
### Y Accelerometer Scale Error (ppm)



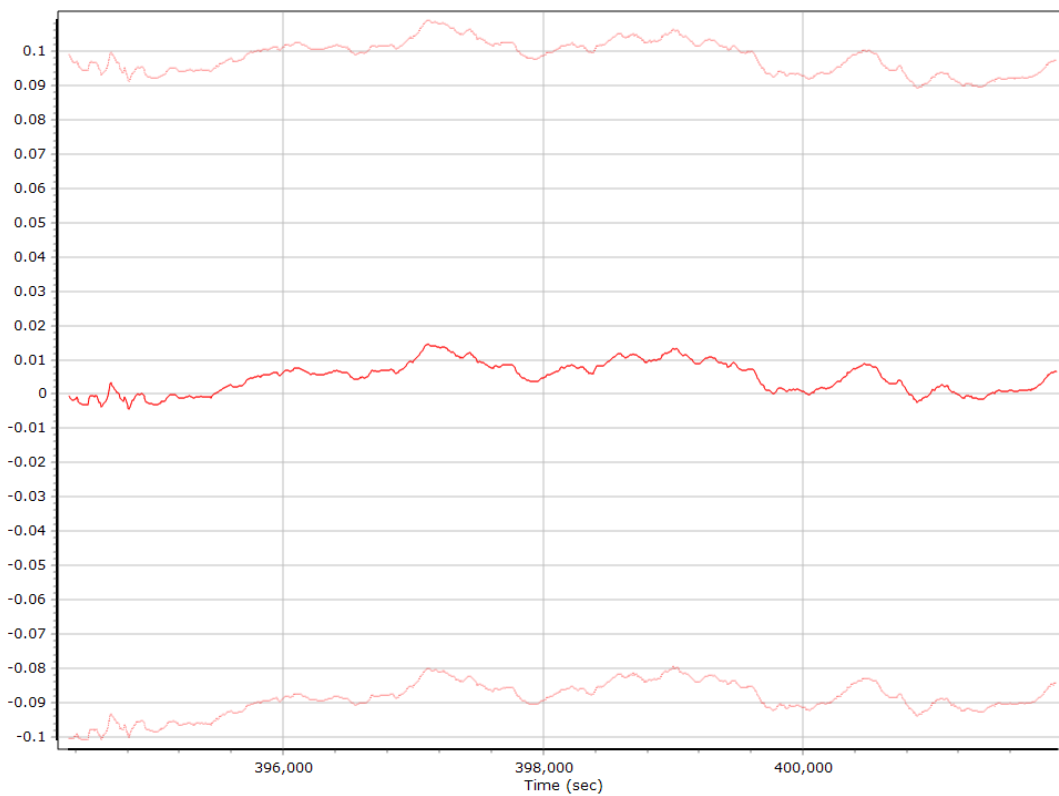
### Z Accelerometer Scale Error (ppm)



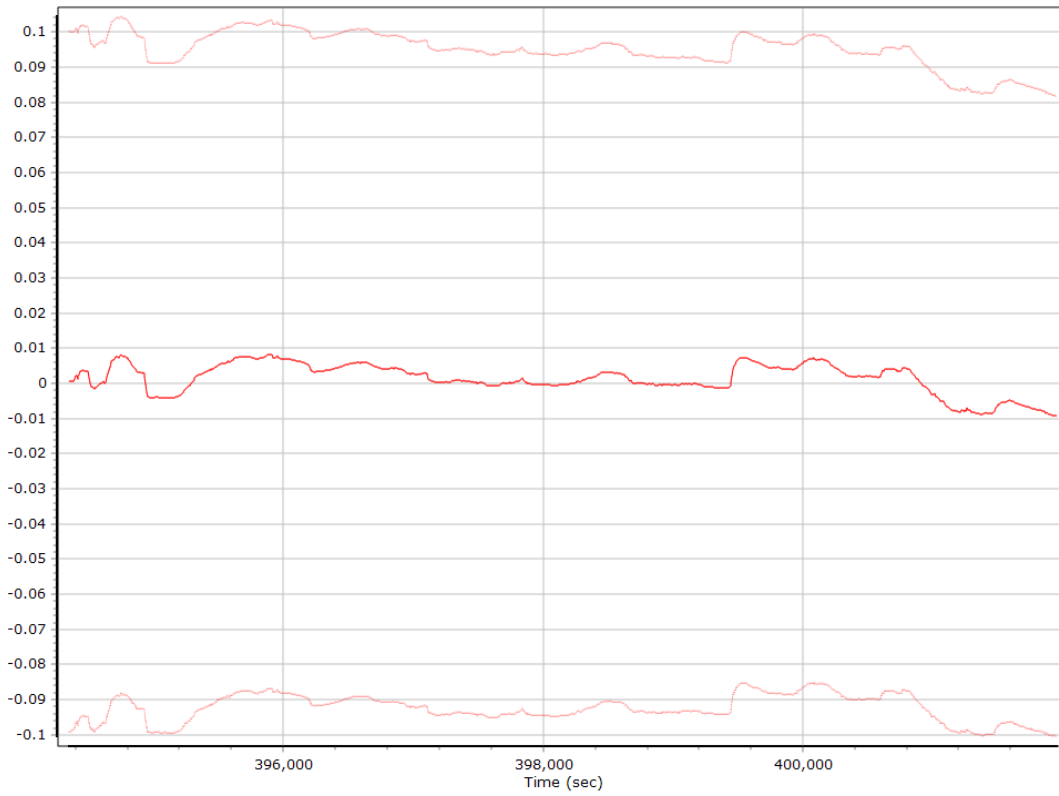
### Gyro Bias (deg/h)



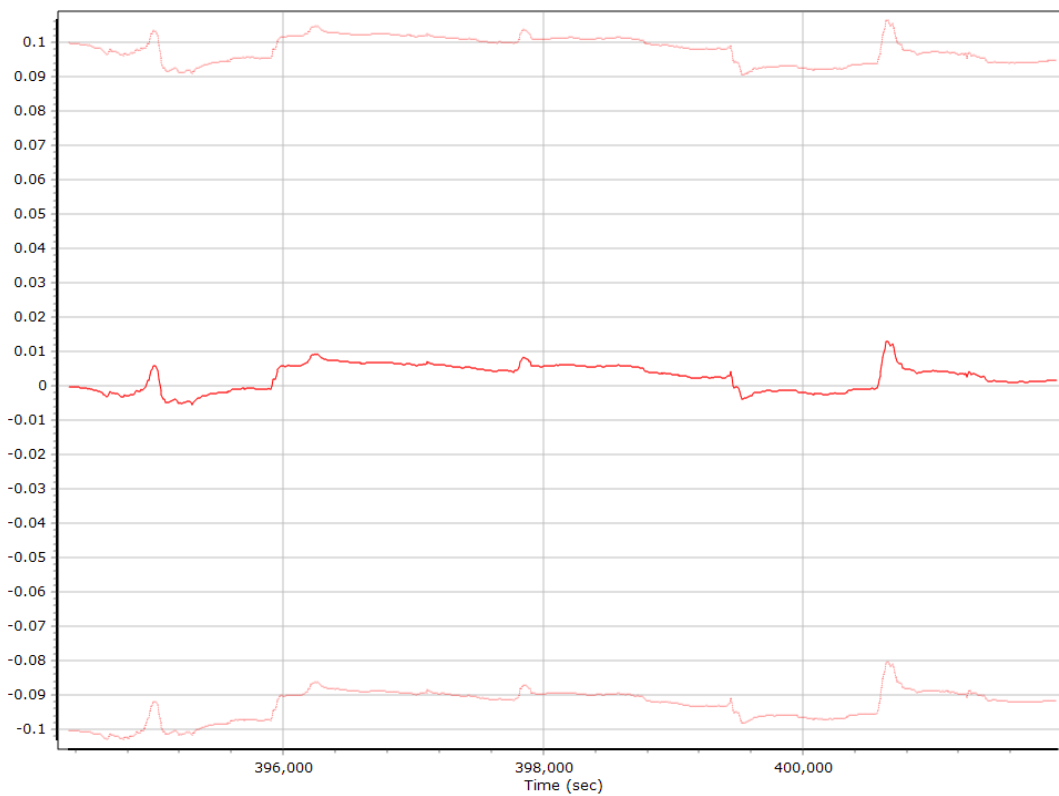
### X Gyro Bias (deg/h)



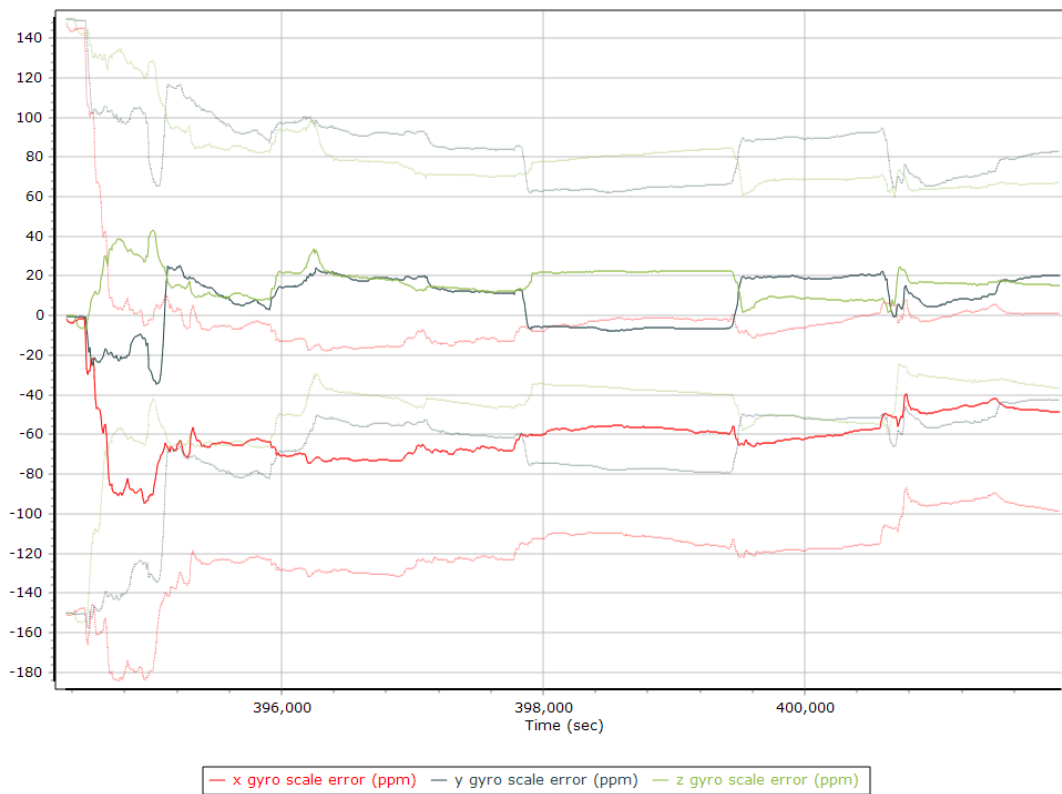
### Y Gyro Bias (deg/h)



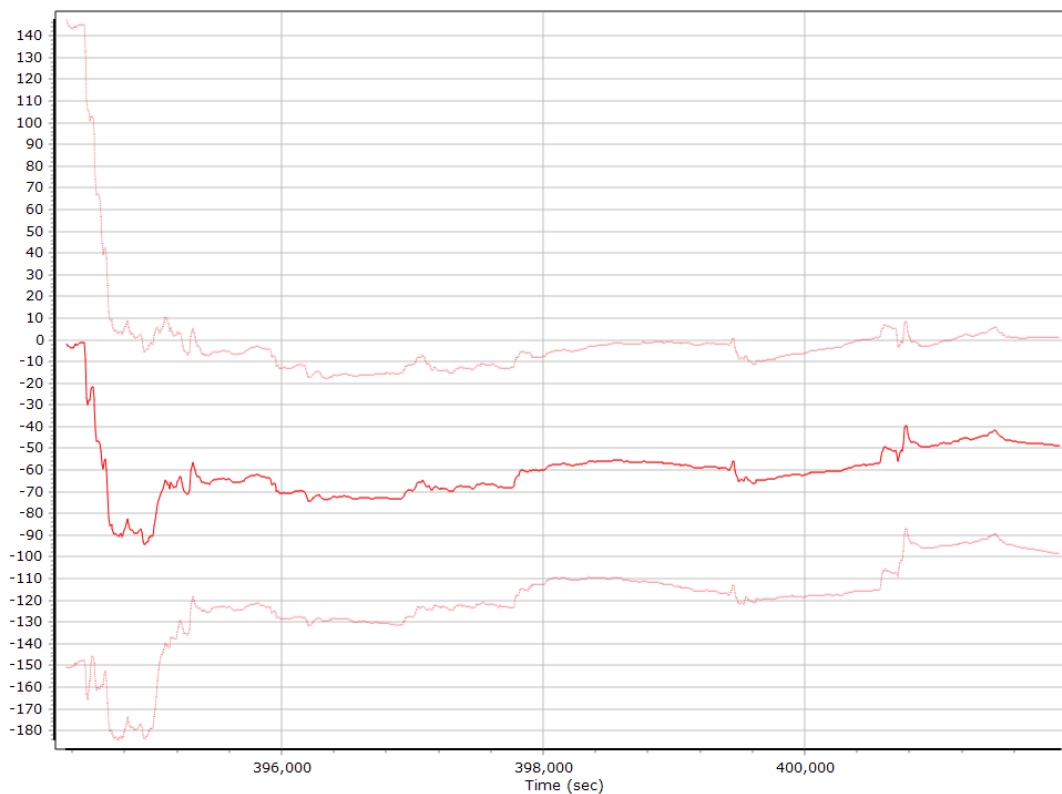
### Z Gyro Bias (deg/h)



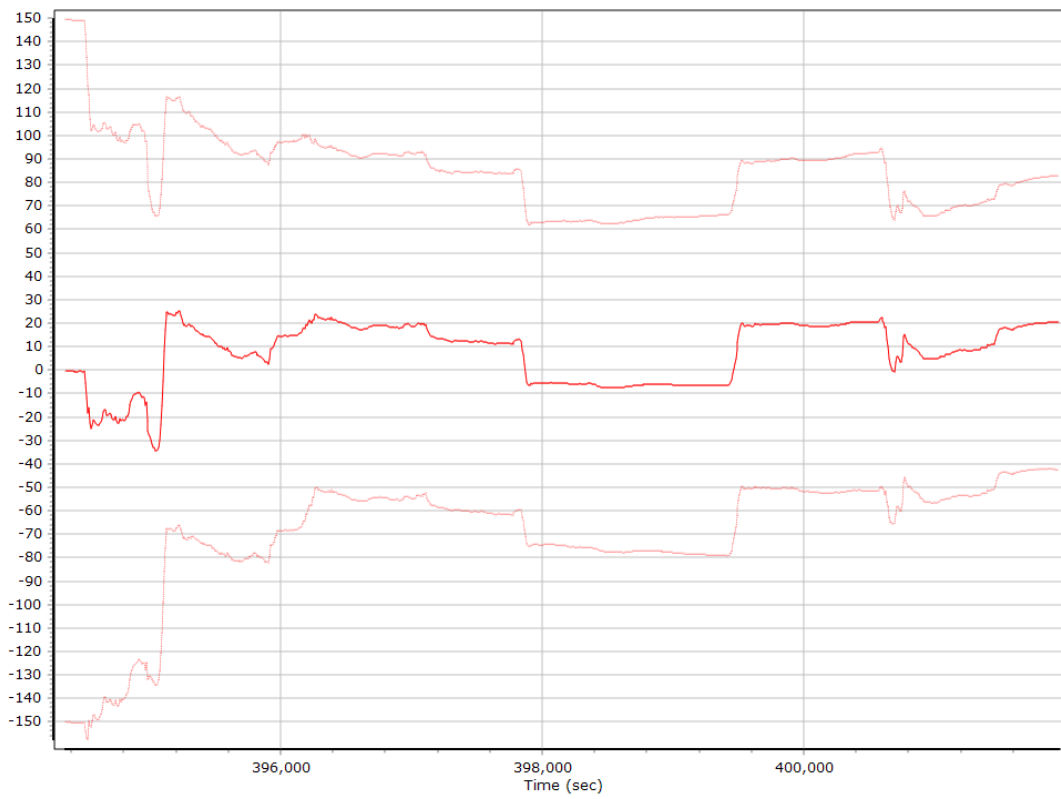
### Gyro Scale Error (ppm)



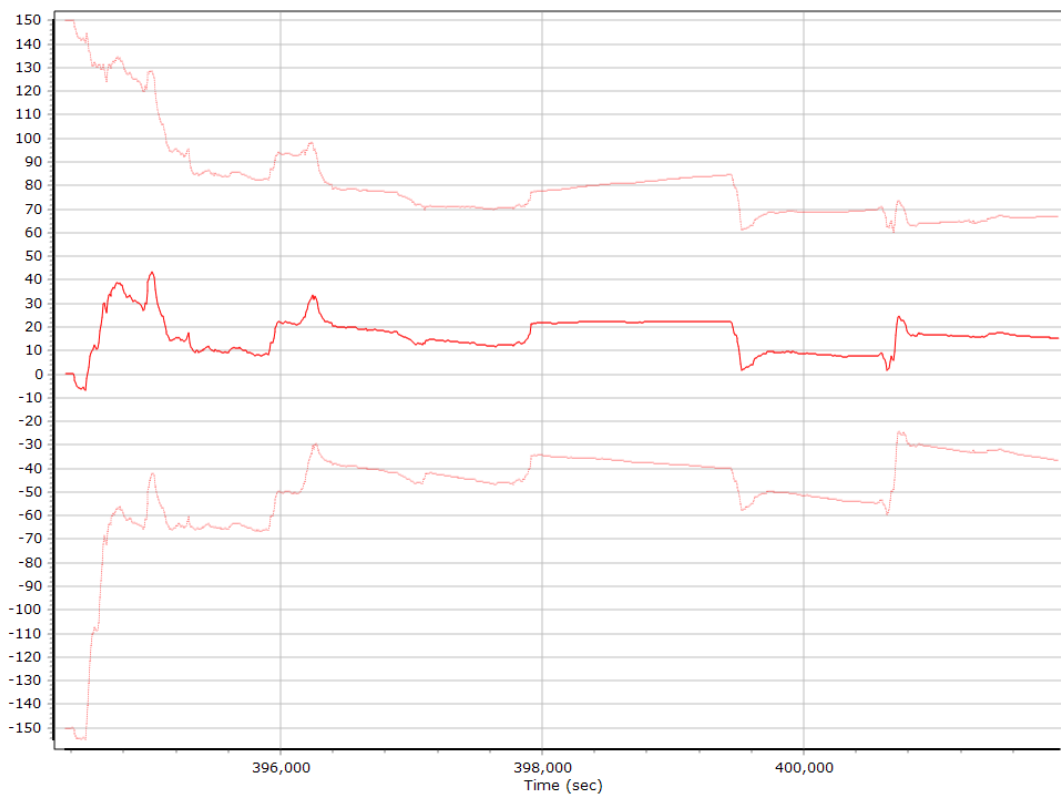
### X Gyro Scale Error (ppm)



### Y Gyro Scale Error (ppm)

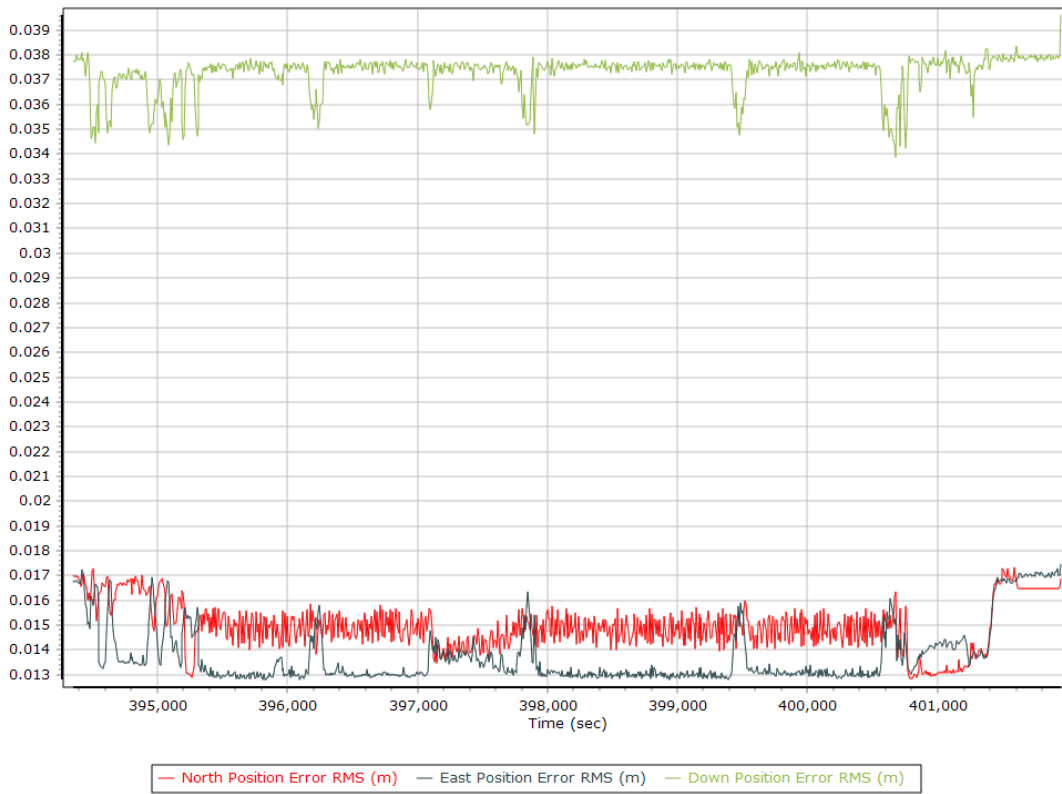


### Z Gyro Scale Error (ppm)

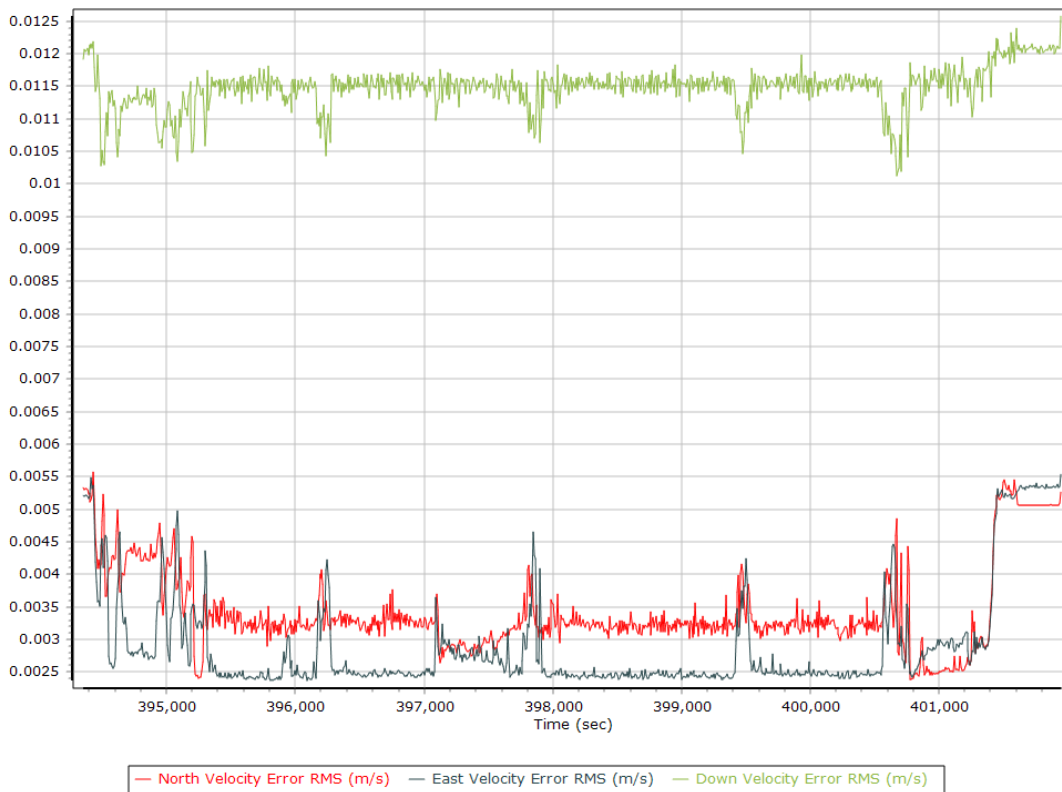


## Smoothed Performance Metrics

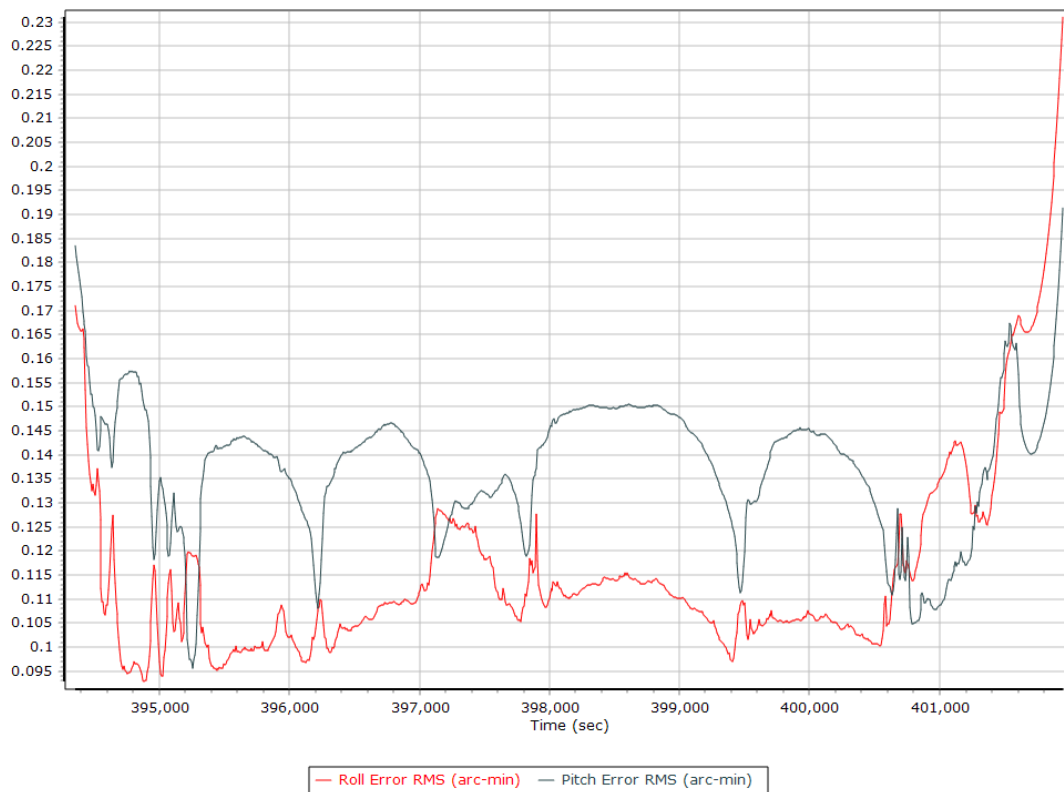
### Position Error RMS (m)



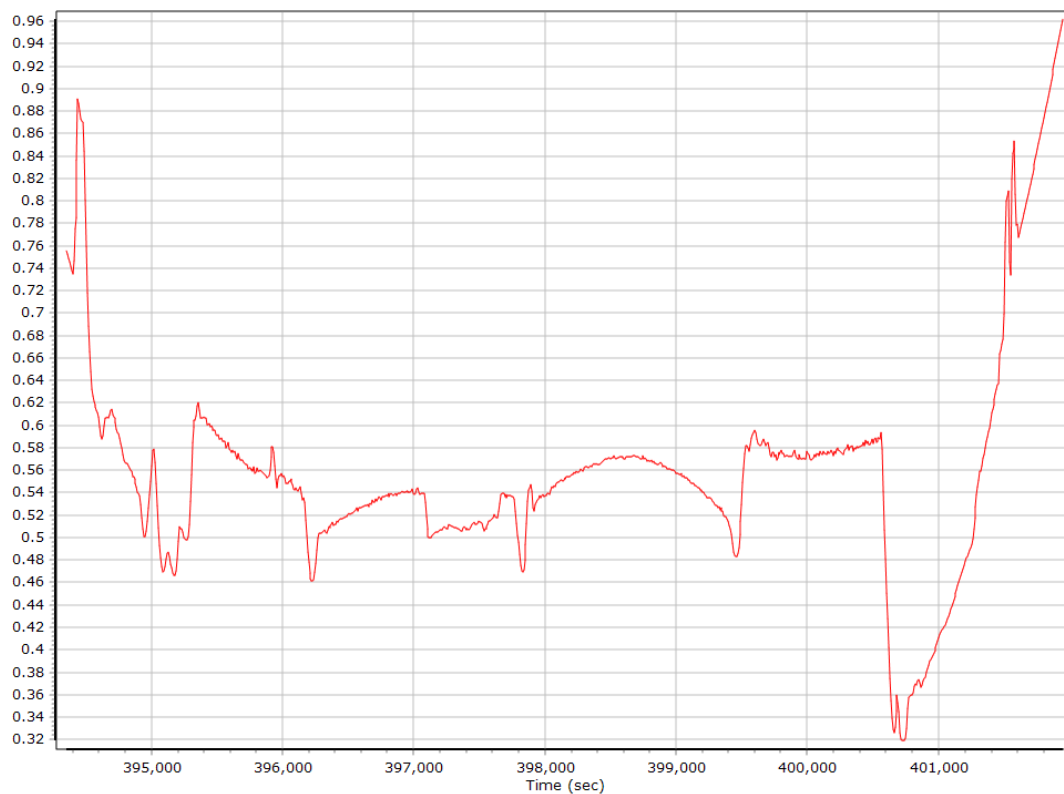
### Velocity Error RMS (m/s)



### Roll/Pitch Error RMS (arc-min)



### Heading Error RMS (arc-min)



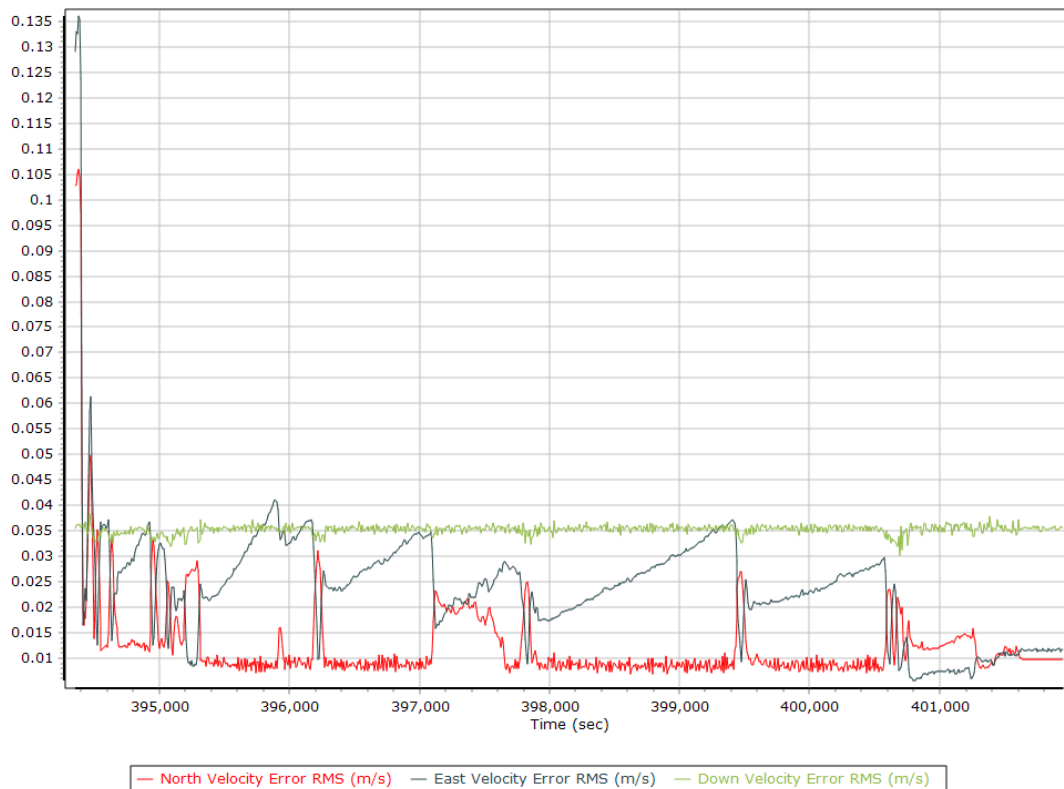


## Forward Processed Performance Metrics

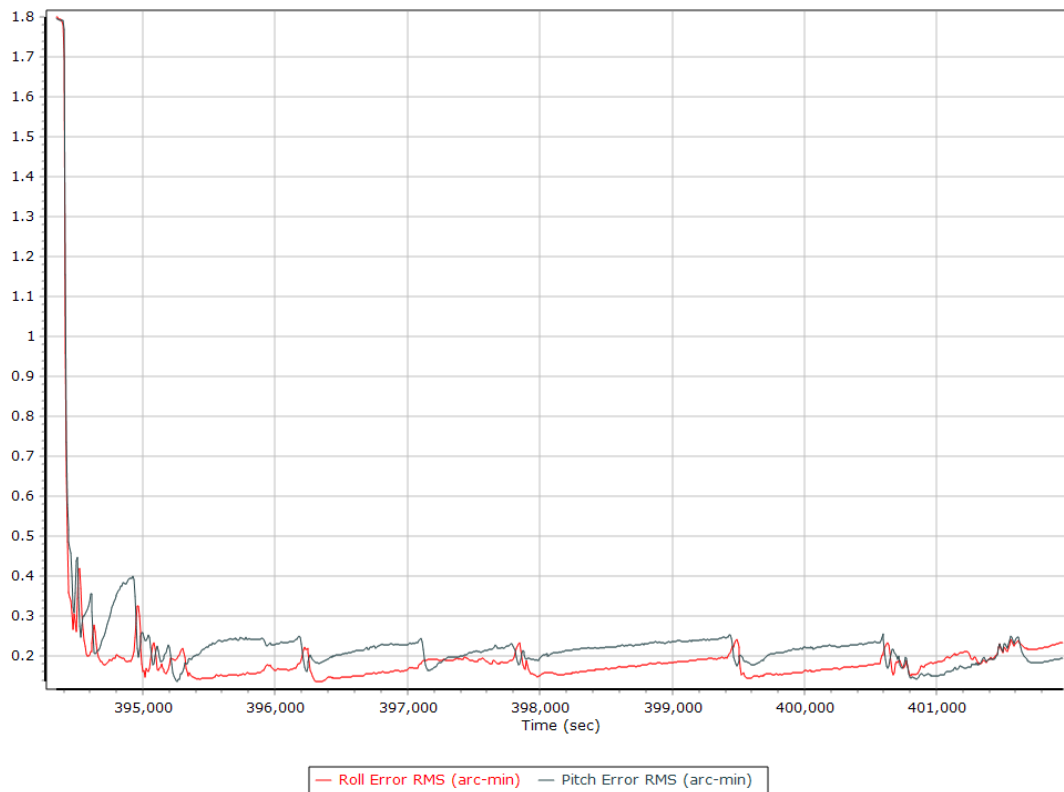
### Position Error RMS (m)



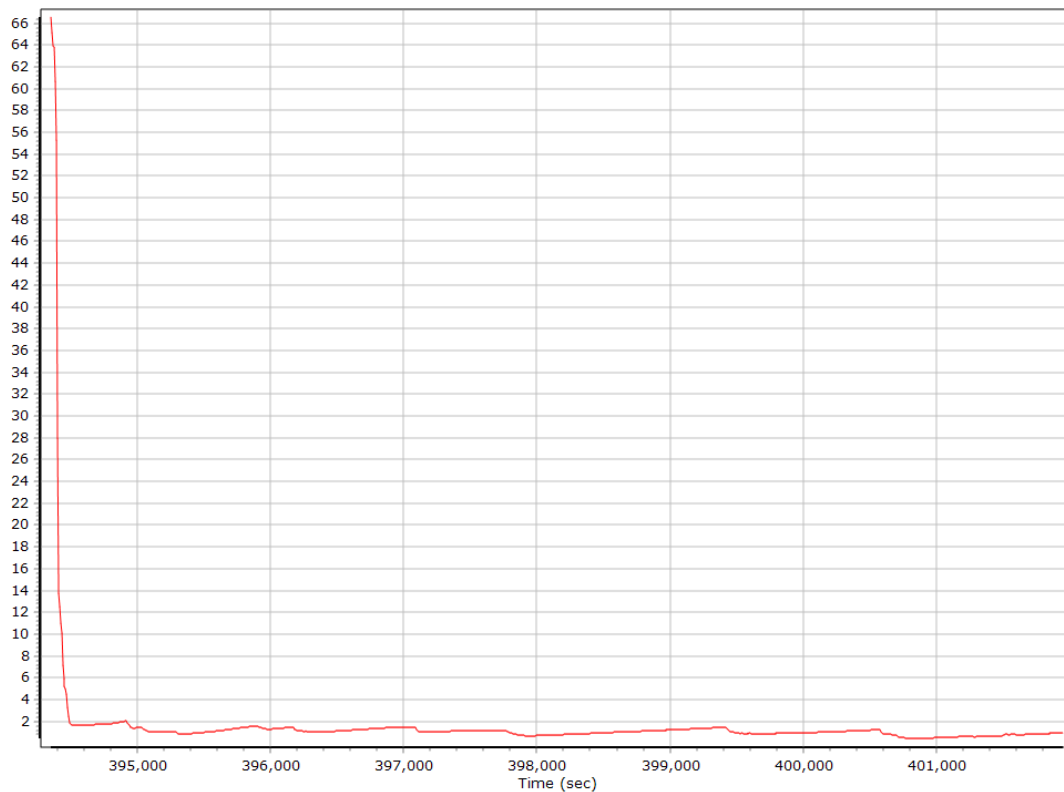
### Velocity Error RMS (m/s)



### Roll/Pitch Error RMS (arc-min)

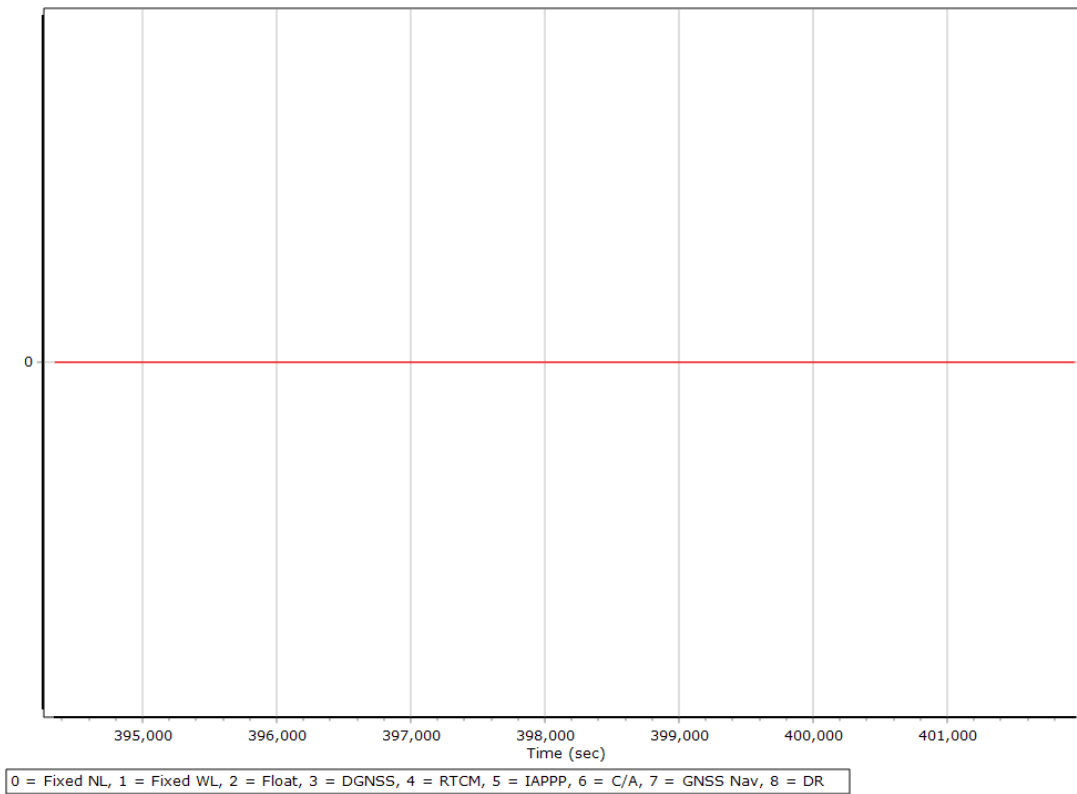


### Heading Error RMS (arc-min)

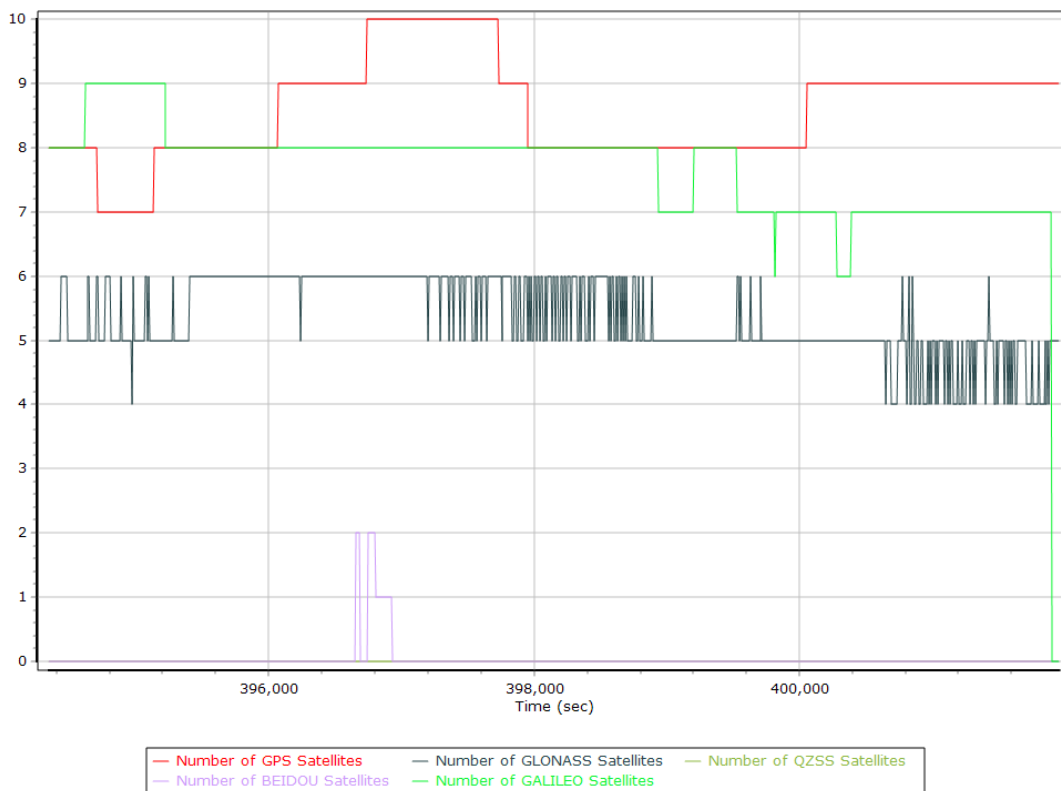


## Forward Processed Solution Status

### Processing Mode



### Number of Satellites



## Baseline Length

