

## General Information

### Mission Information

Project name	211011_B_5060428_nad2011_FINAL
Processing date	2021-10-15 15:01:34
Mission date	2021-10-11 20:22:02
Mission duration	02:39:40.000
Processing mode	IN-Fusion PP-RTX

### Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N10633
IMU type	57
Receiver type	BD982
Antenna type	AV39

## Project File List

### Rover Data Files

File name	File type
20211011.702	POS Data
20211011.703	POS Data
20211011.704	POS Data
20211011.705	POS Data
20211011.706	POS Data
20211011.707	POS Data
20211011.708	POS Data
20211011.709	POS Data
20211011.710	POS Data
20211011.711	POS Data
20211011.712	POS Data
20211011.713	POS Data
20211011.714	POS Data
20211011.715	POS Data
20211011.716	POS Data
20211011.717	POS Data
20211011.718	POS Data
20211011.719	POS Data
20211011.720	POS Data
20211011.721	POS Data
20211011.722	POS Data

### Input Files

File Name	File Type
Ephm2840.21g	GLONASS Broadcast Ephemeris
Ephm2840.21n	GPS Broadcast Ephemeris

### Output Files

Filename	File type
sbet_211011_B_5060428_nad2011_FINAL.out	SBET Trajectory File

## Rover Data Summary

First raw data file	20211011.702		
Last raw data file	20211011.722		
Start GPS week	2179		
Start time	159721.774 (10/11/2021 20:22:01)		
End time	169303.028 (10/11/2021 23:01:43)		
Start of fine alignment	160047.949 (10/11/2021 20:27:27)		
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	-90.000
Reference to Primary GNSS lever arm (m)	0.534	0.060	-1.199
Reference to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

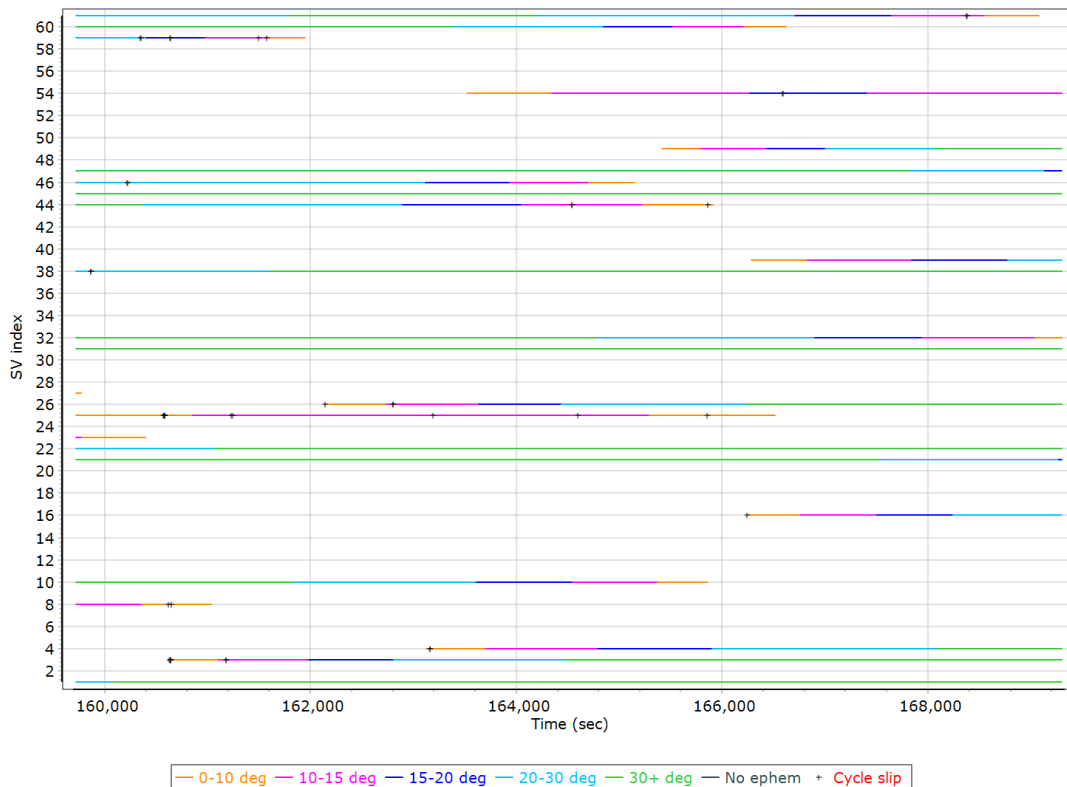
## Rover Data QC

### Raw IMU Import QC Summary

IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_211011_B_5060428_nad2011_FINAL.log
IMU Records Processed	1915839
Termination Status	Normal
IMU Anomalies	0

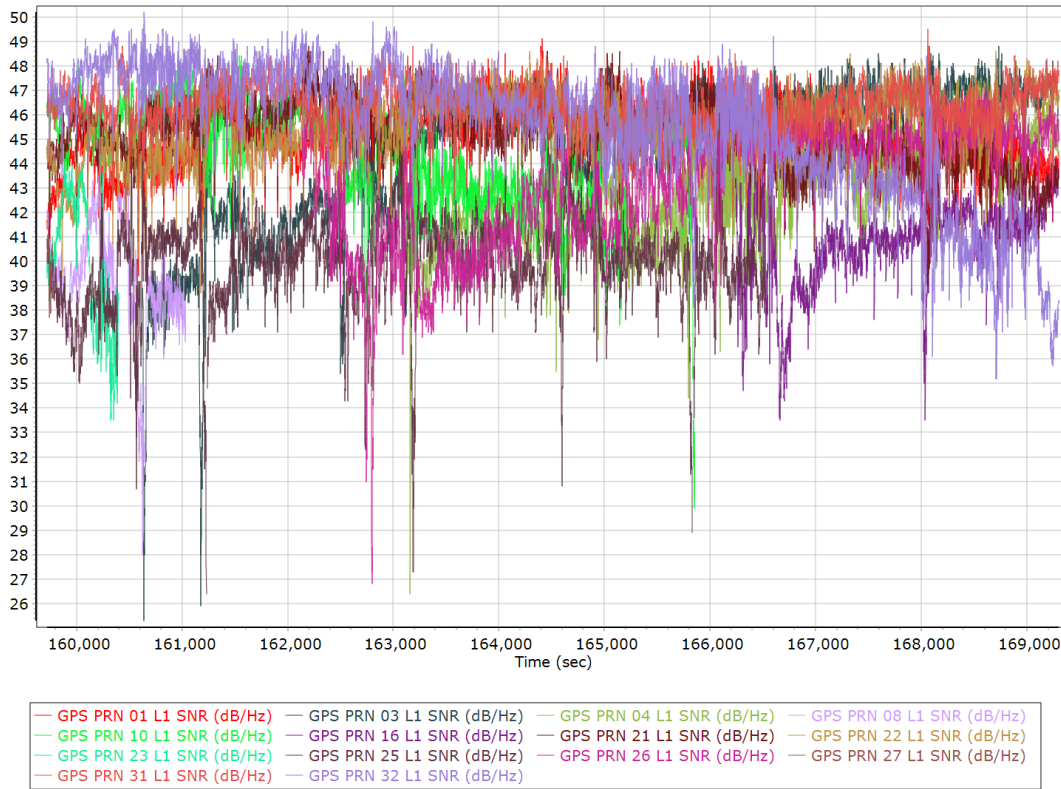
## Primary Observables & Satellite Data

### GPS/GLONASS L1 Satellite Lock/Elevation

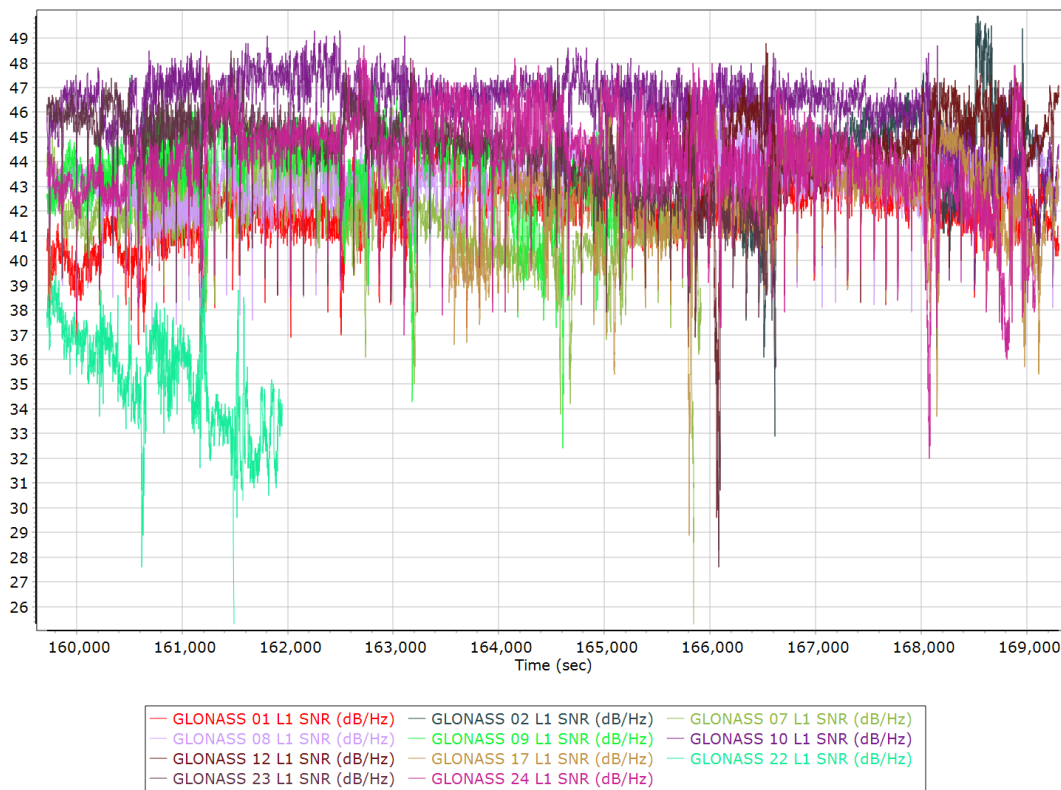




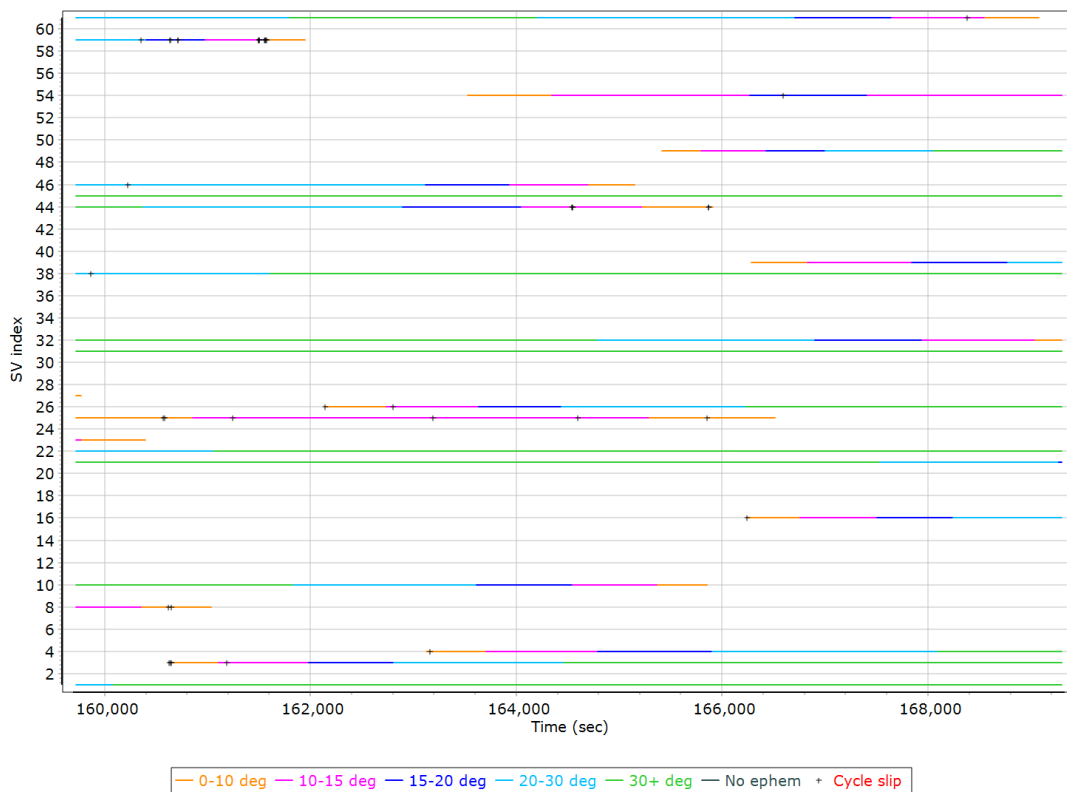
### GPS L1 SNR



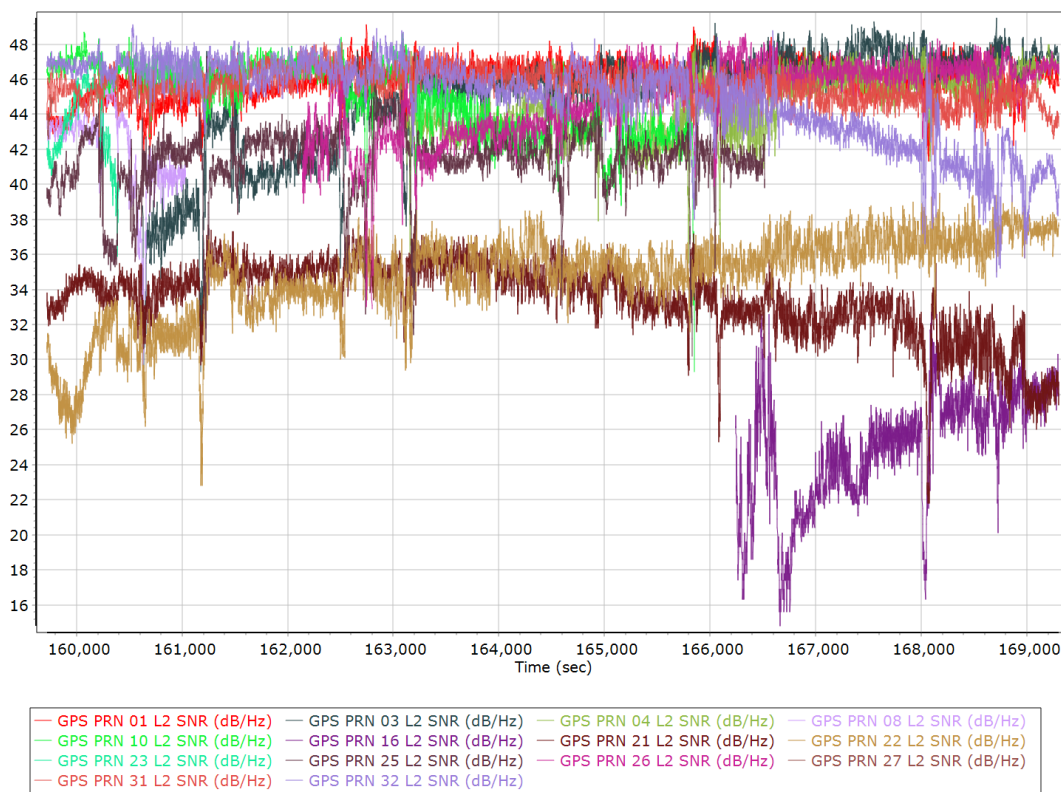
### GLONASS L1 SNR



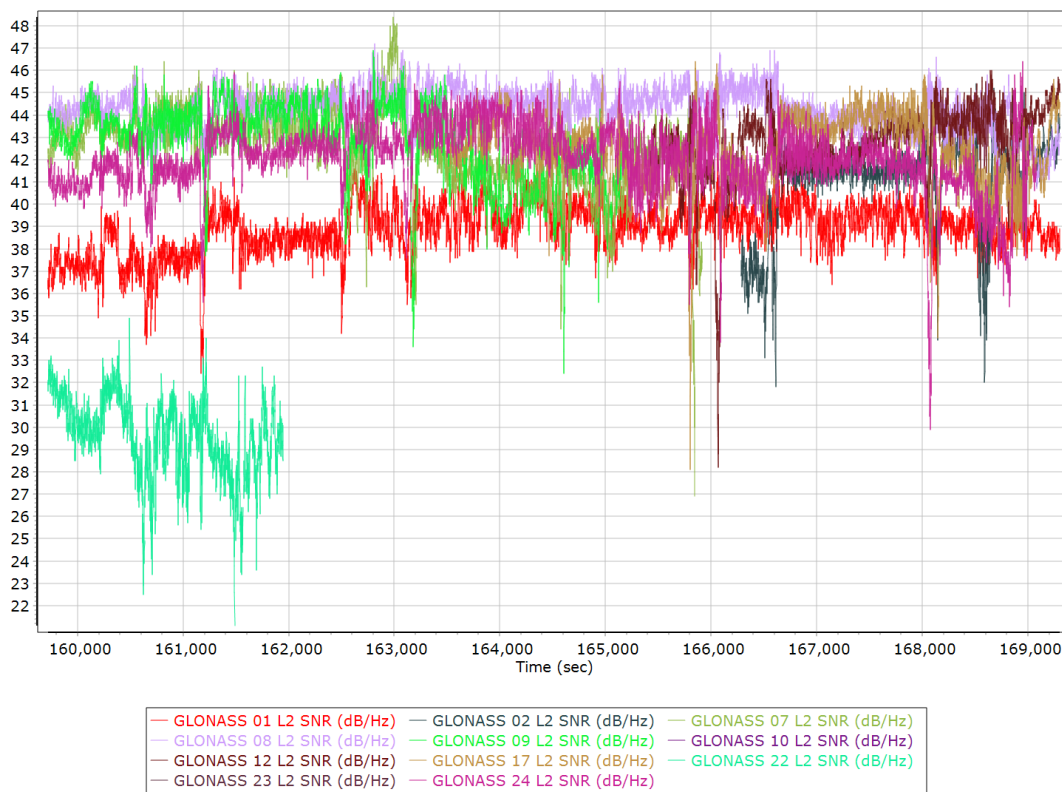
### GPS/GLONASS L2 Satellite Lock/Elevation



### GPS L2 SNR



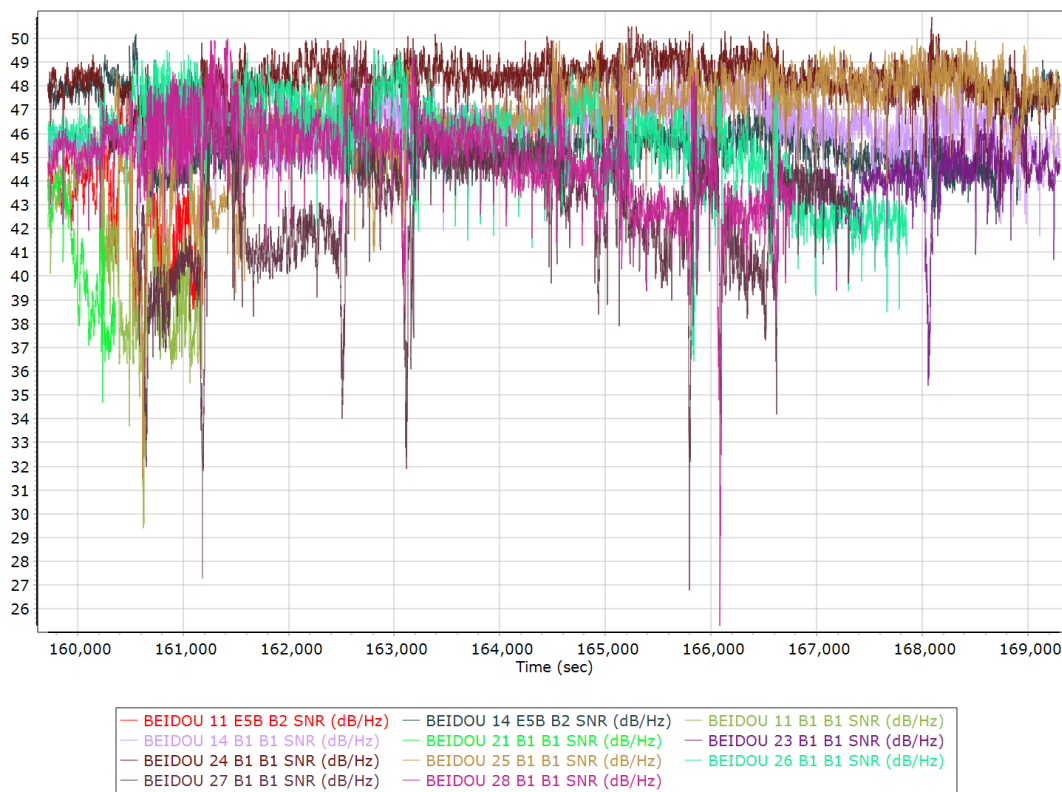
### GLONASS L2 SNR



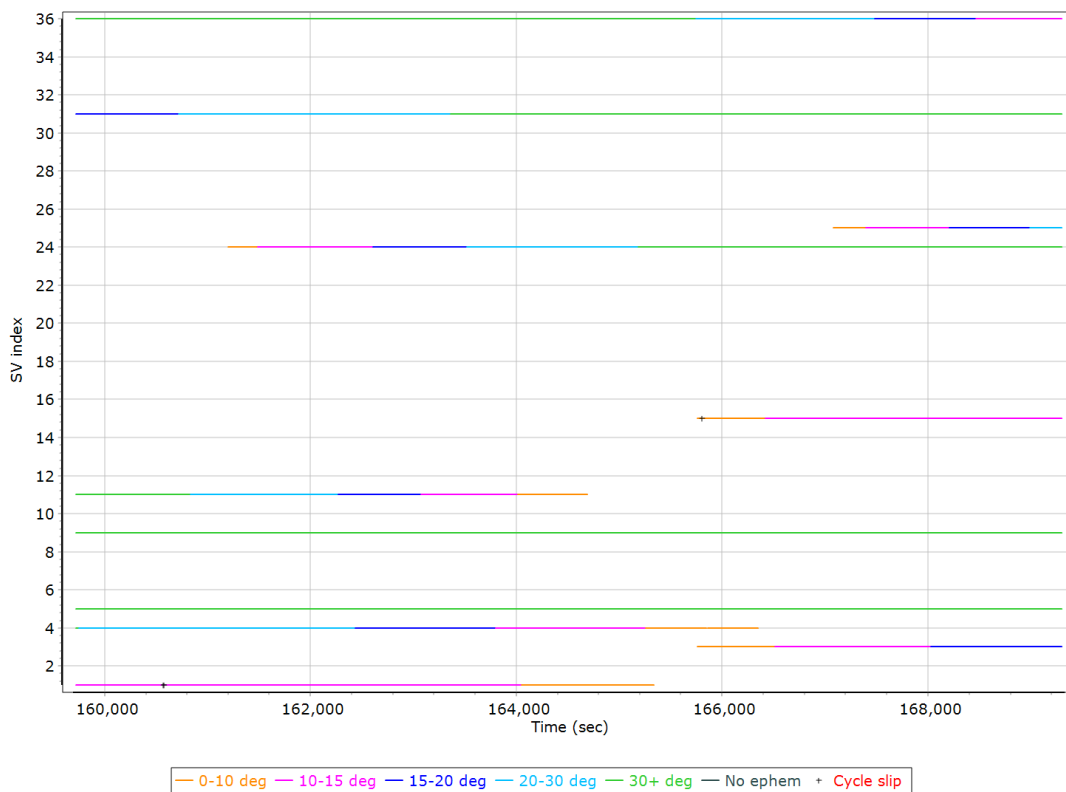
### BEIDOU Satellite Lock/Elevation



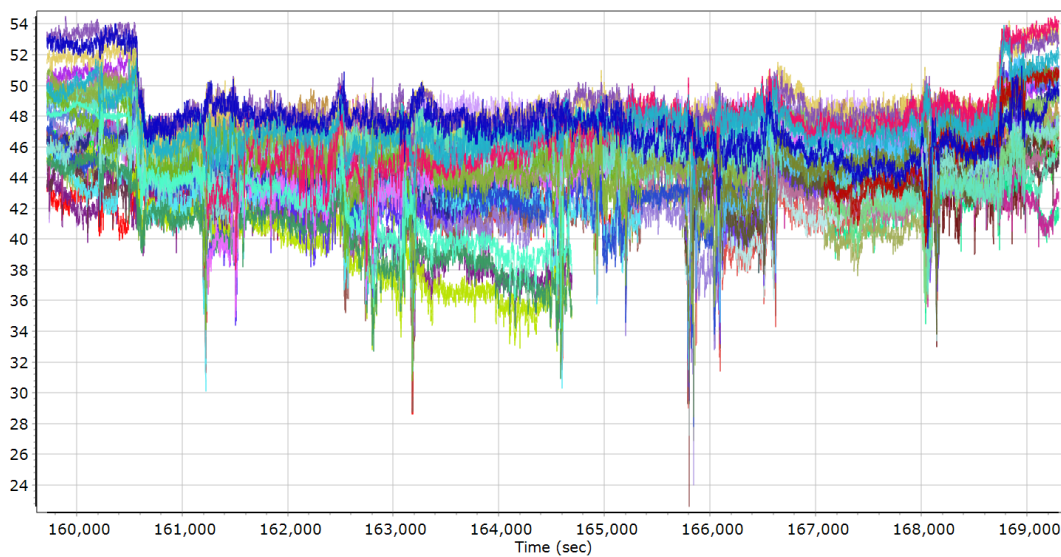
### BEIDOU SNR



### GALILEO Satellite Lock/Elevation



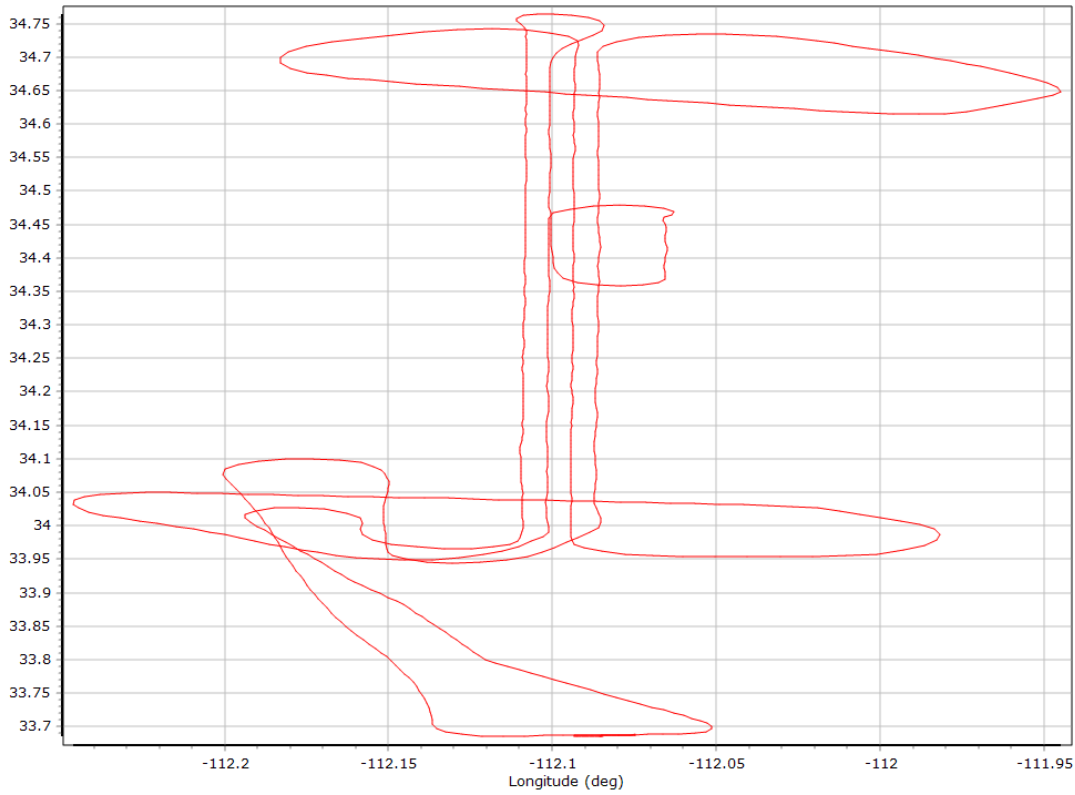
## GALILEO SNR



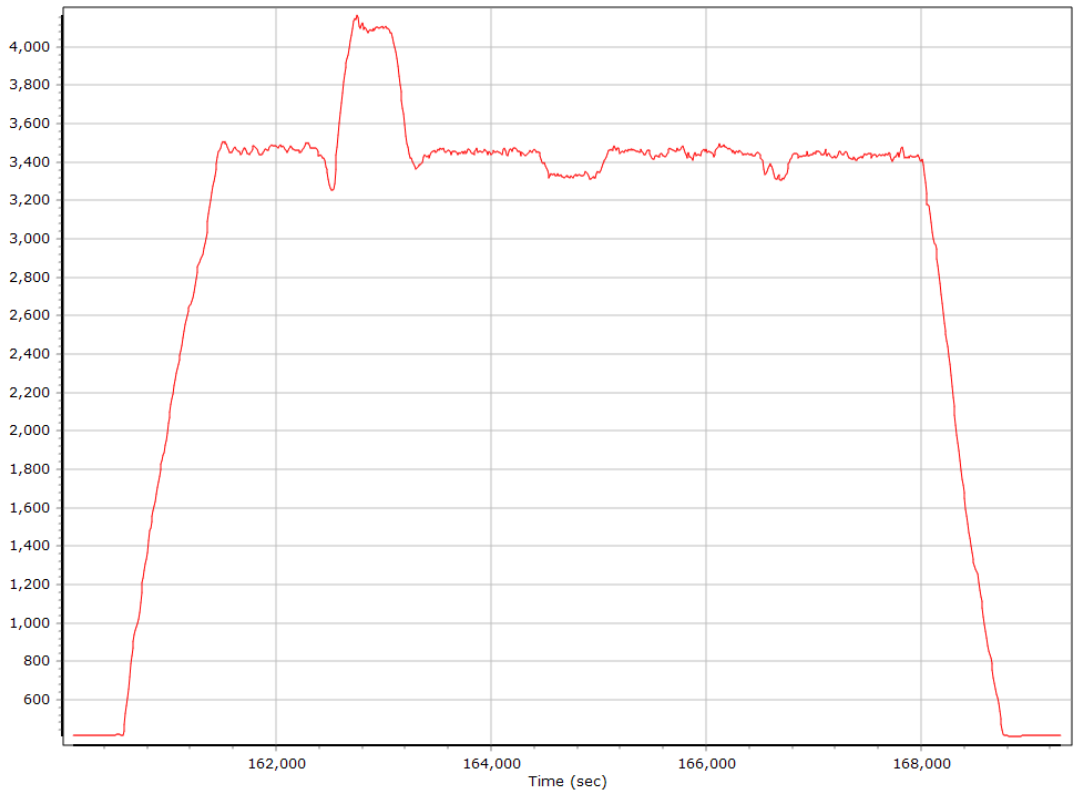
— GALILEO 01 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 03 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 04 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 05 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 09 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 11 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 15 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 24 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 25 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 31 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 36 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 01 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 03 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 04 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 05 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 09 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 11 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 15 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 24 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 25 L5E5A BPSK10_PD SNR (dB/Hz)

## Smoothed Trajectory Information

### Top View



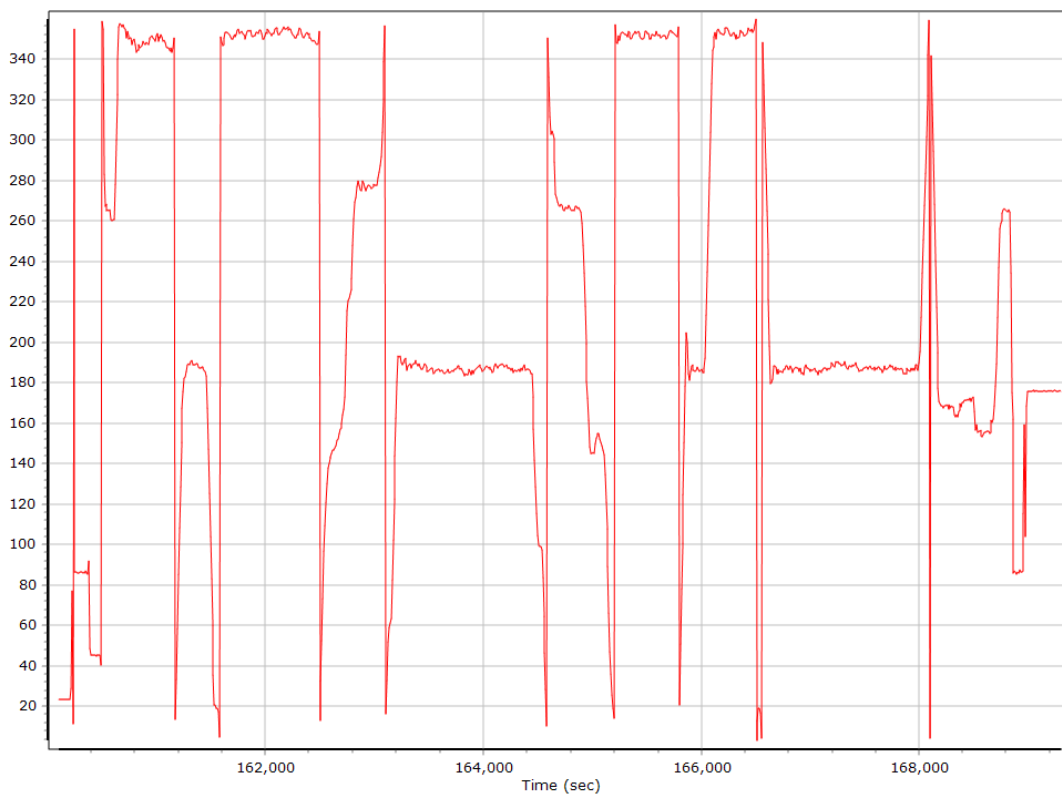
### Altitude



## Roll/Pitch

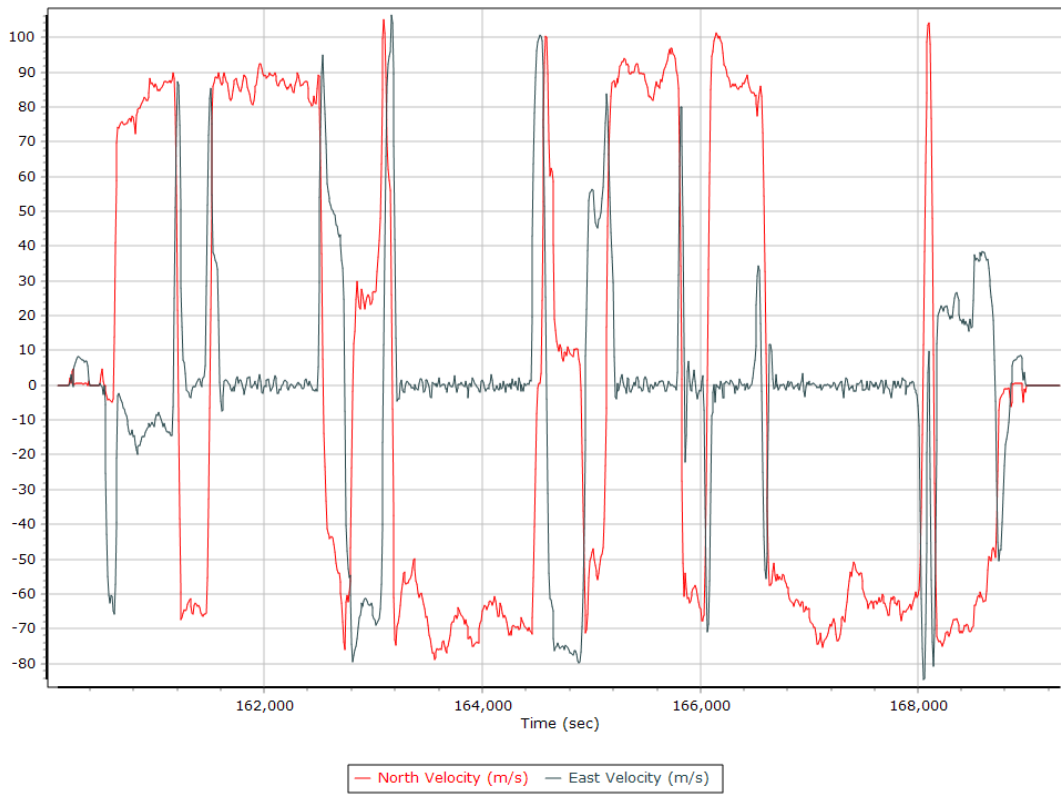


## Heading

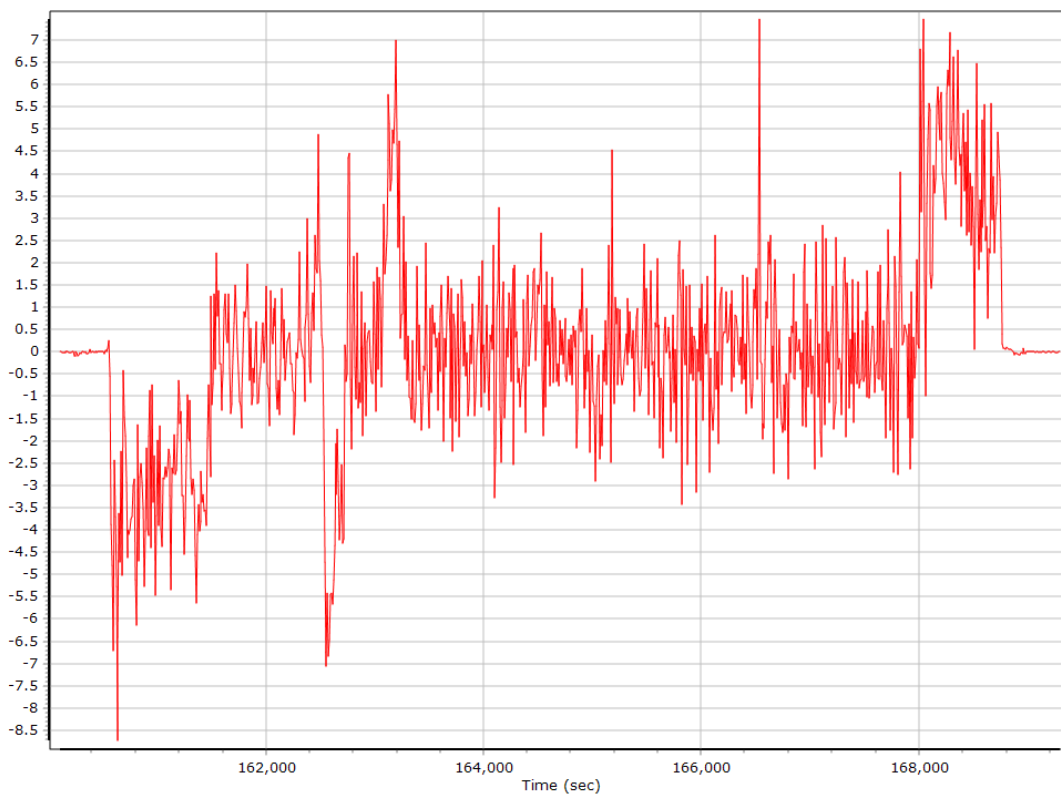




## North/East Velocity

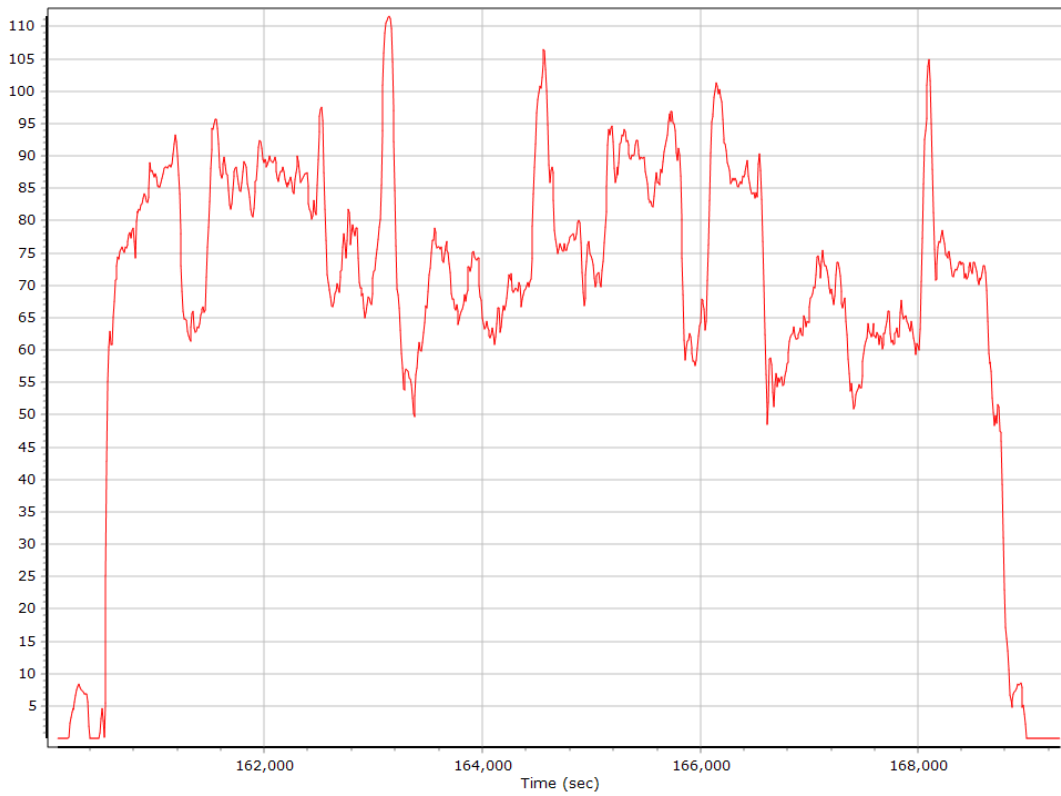


## Down Velocity

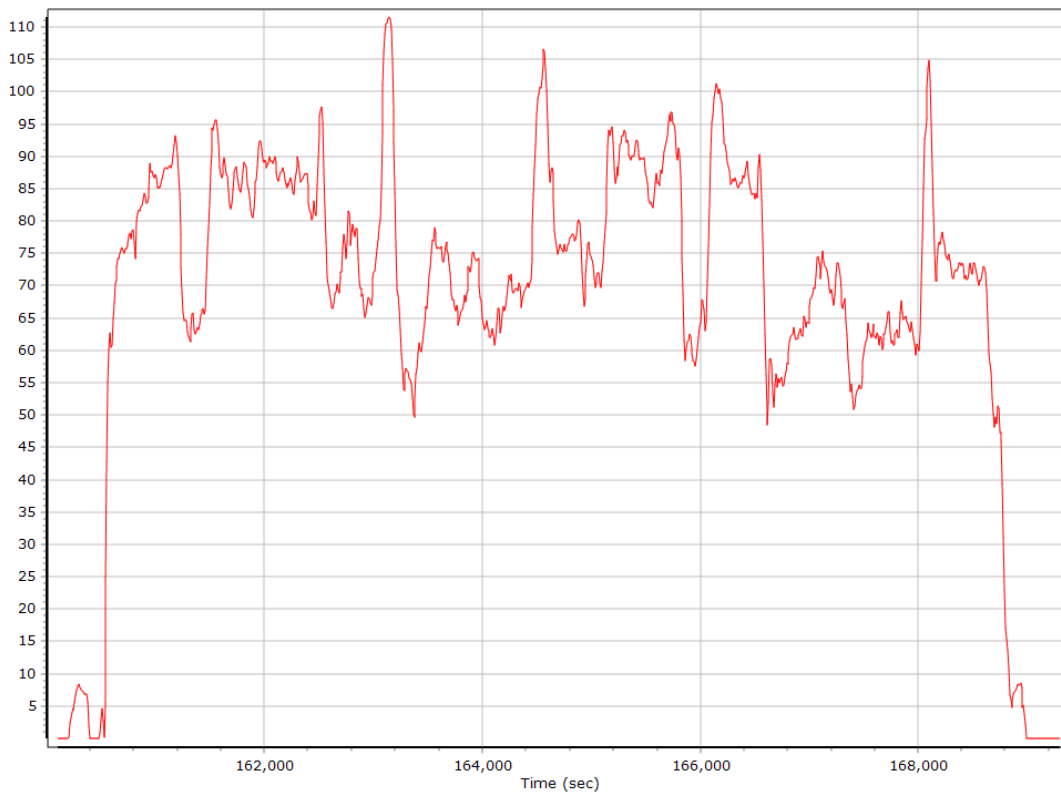




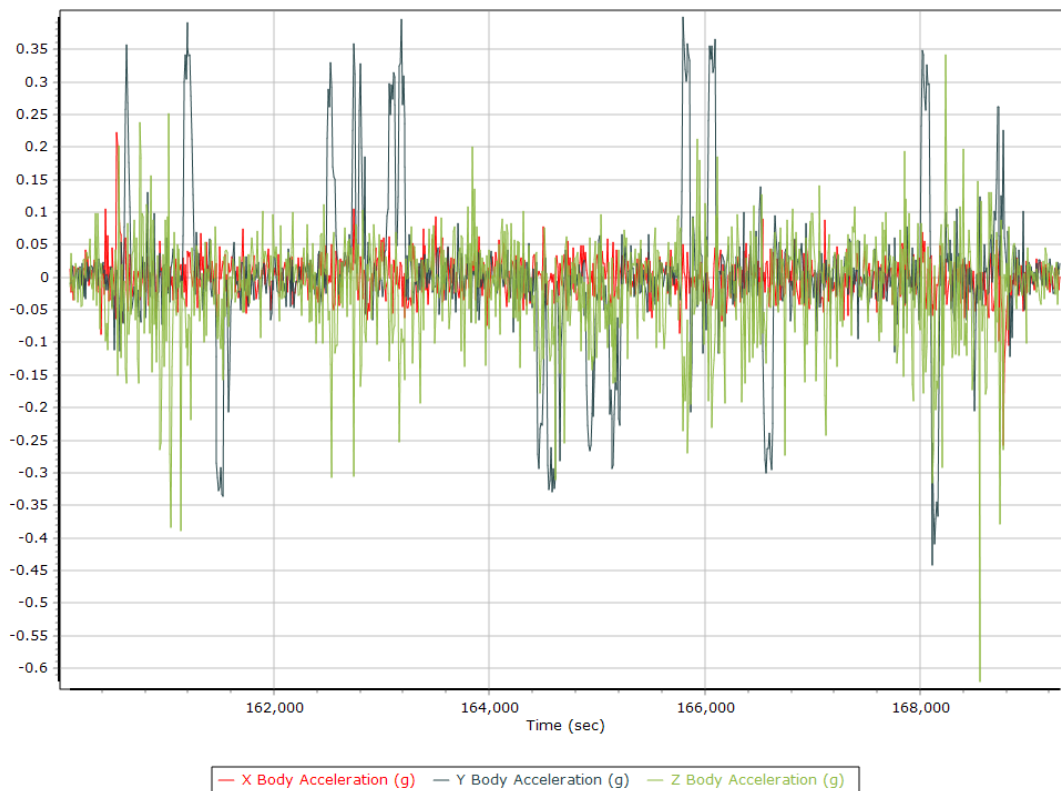
## Total Speed



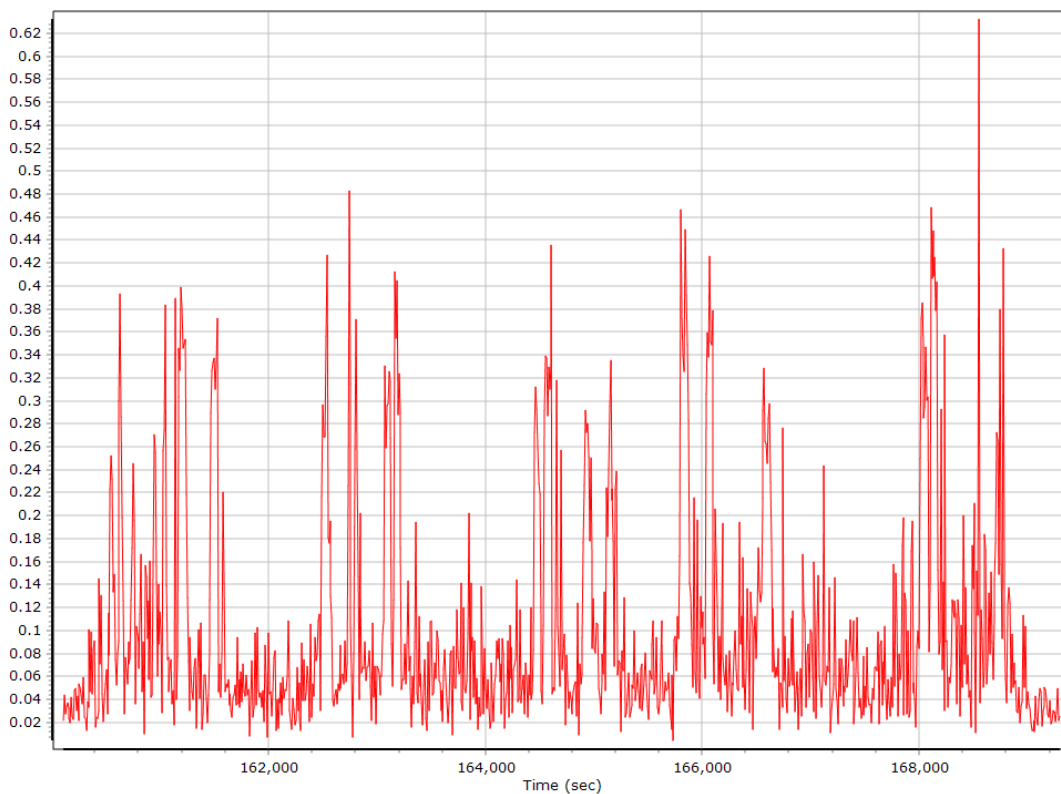
## Ground Speed



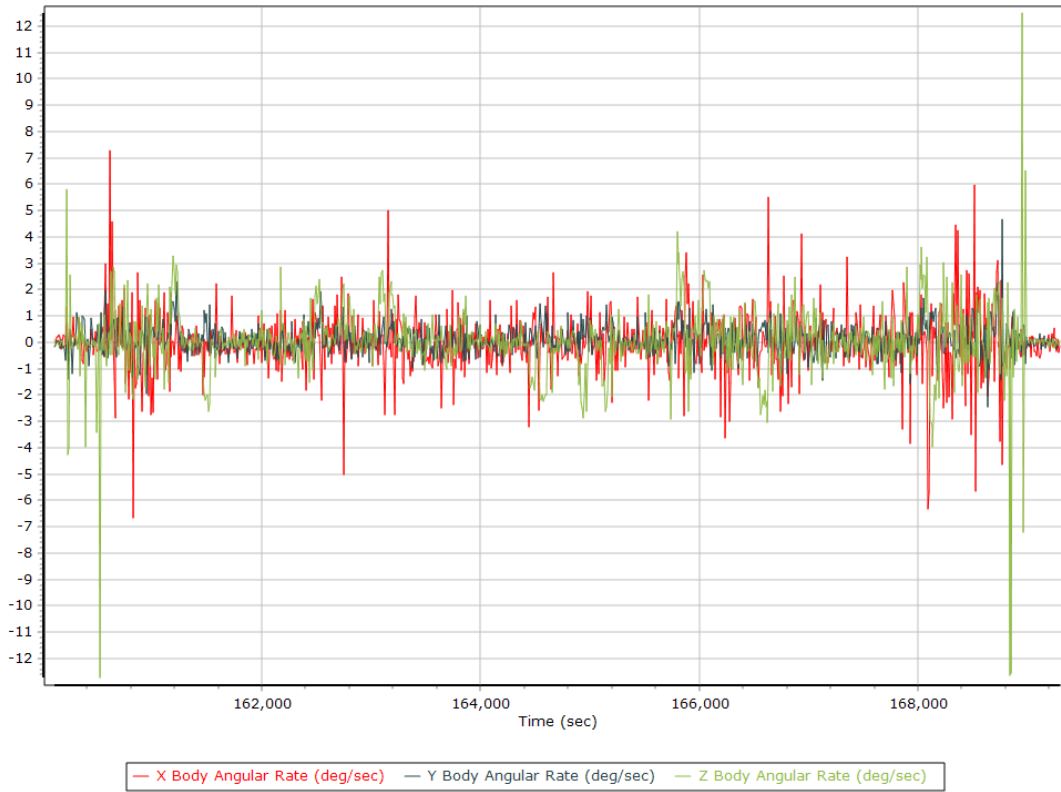
## Body Acceleration



## Total Body Acceleration

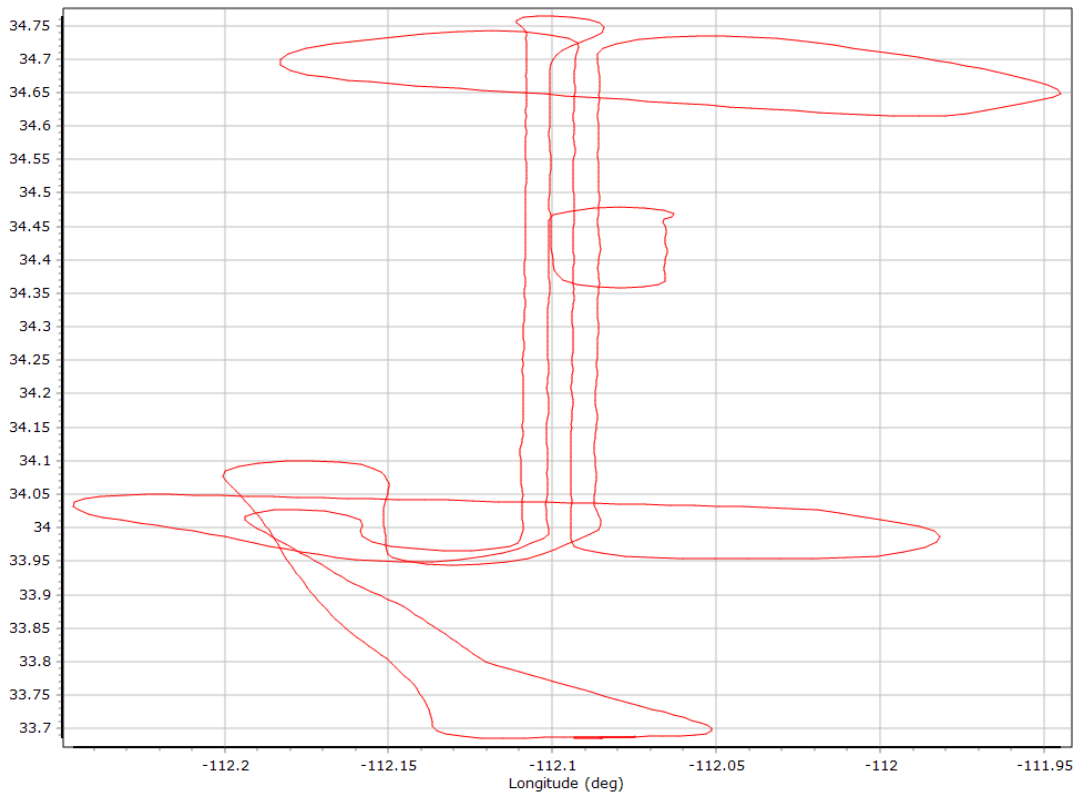


## Body Angular Rate

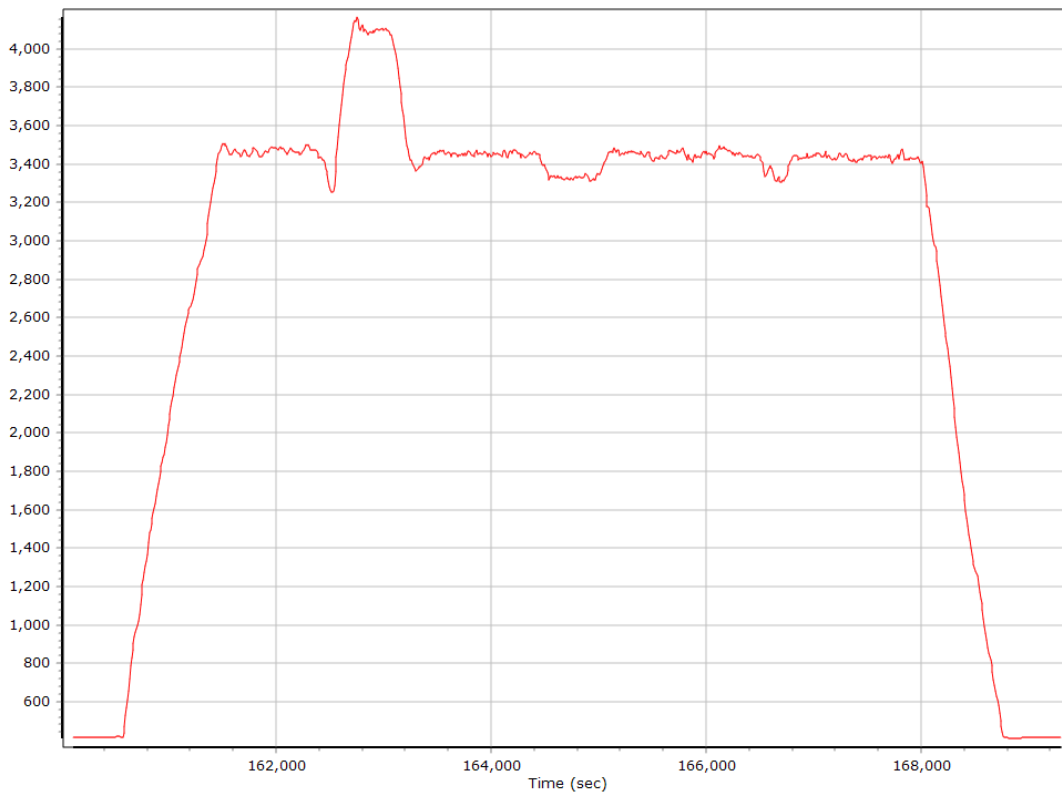


## Forward Processed Trajectory Information

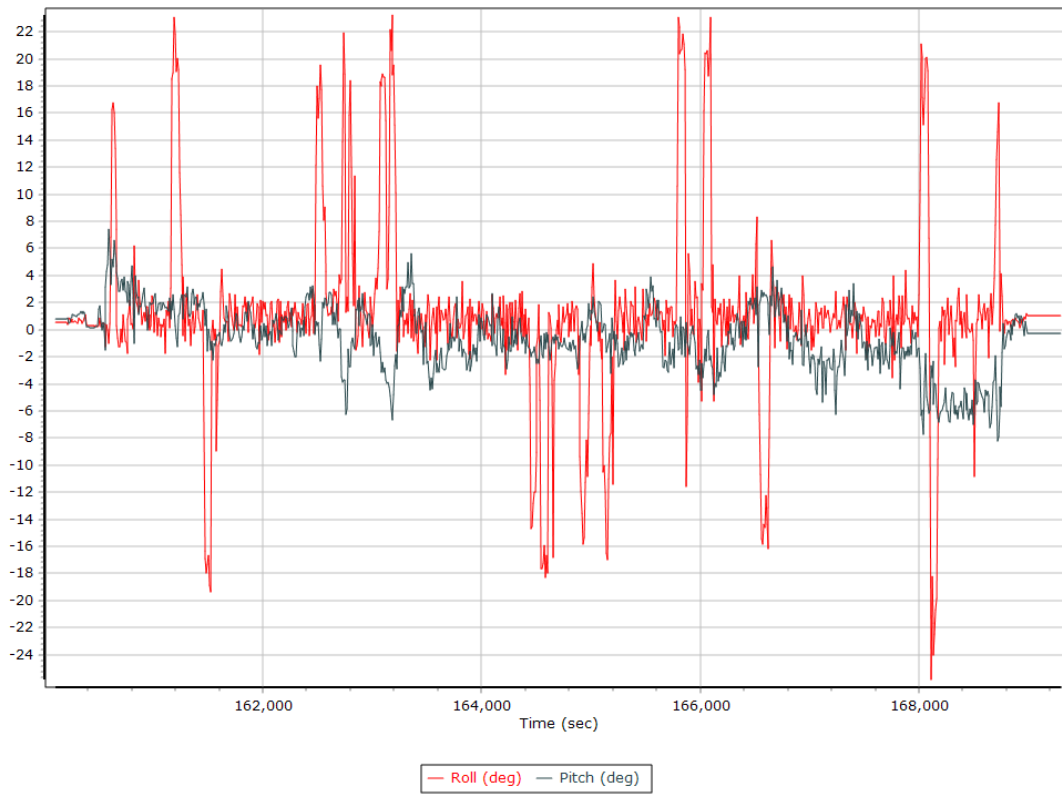
### Top View



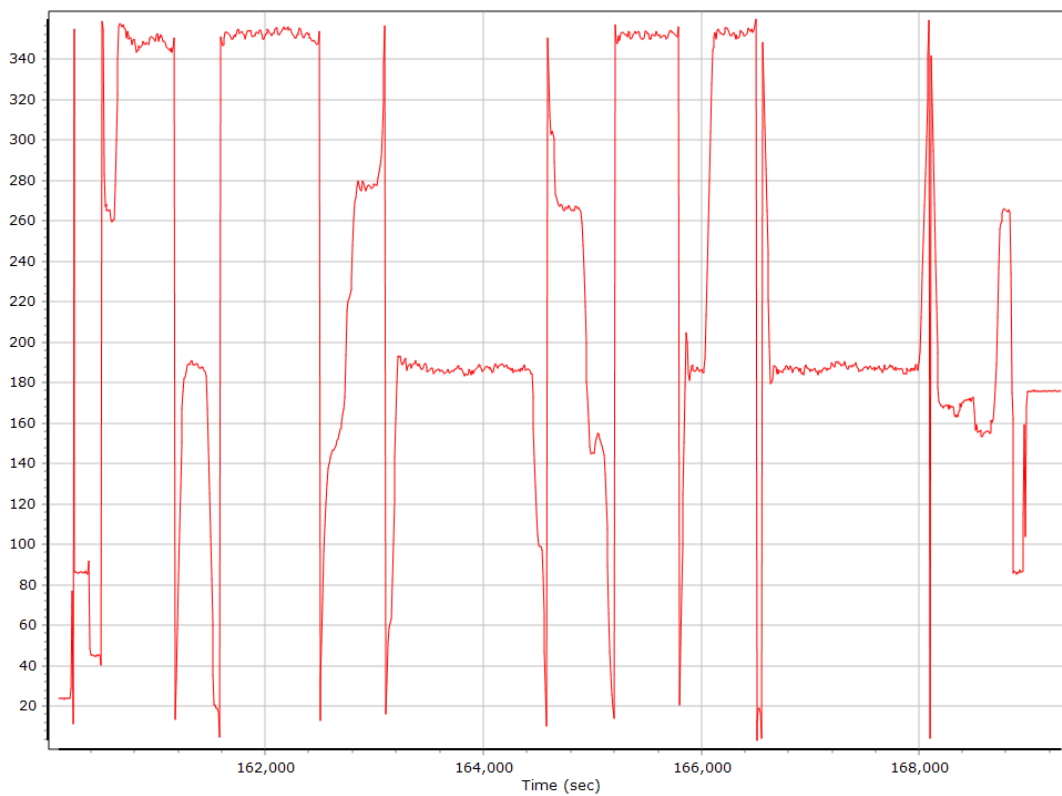
### Altitude



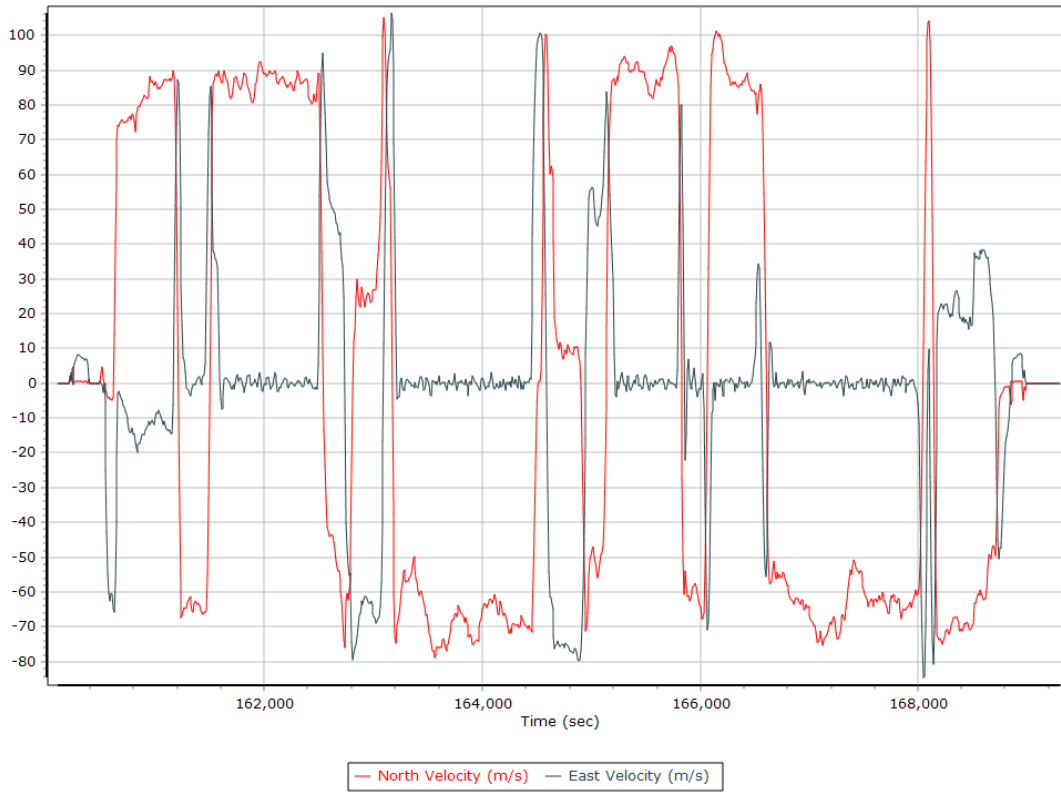
## Roll/Pitch



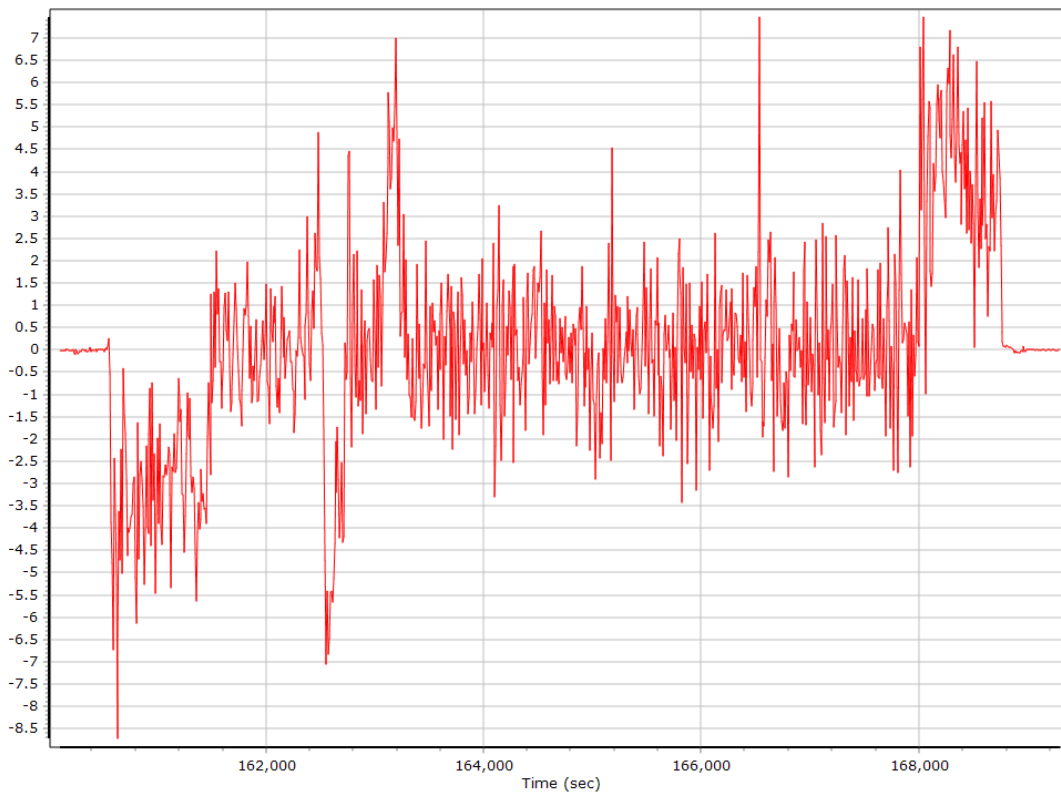
## Heading



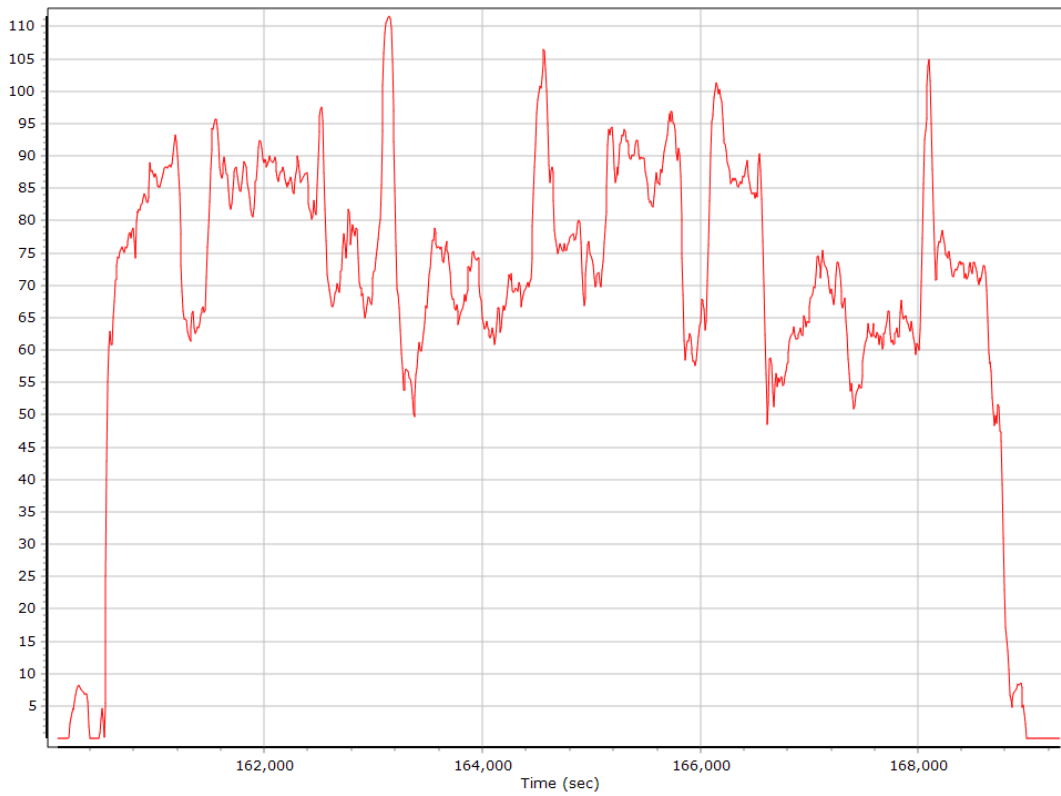
## North/East Velocity



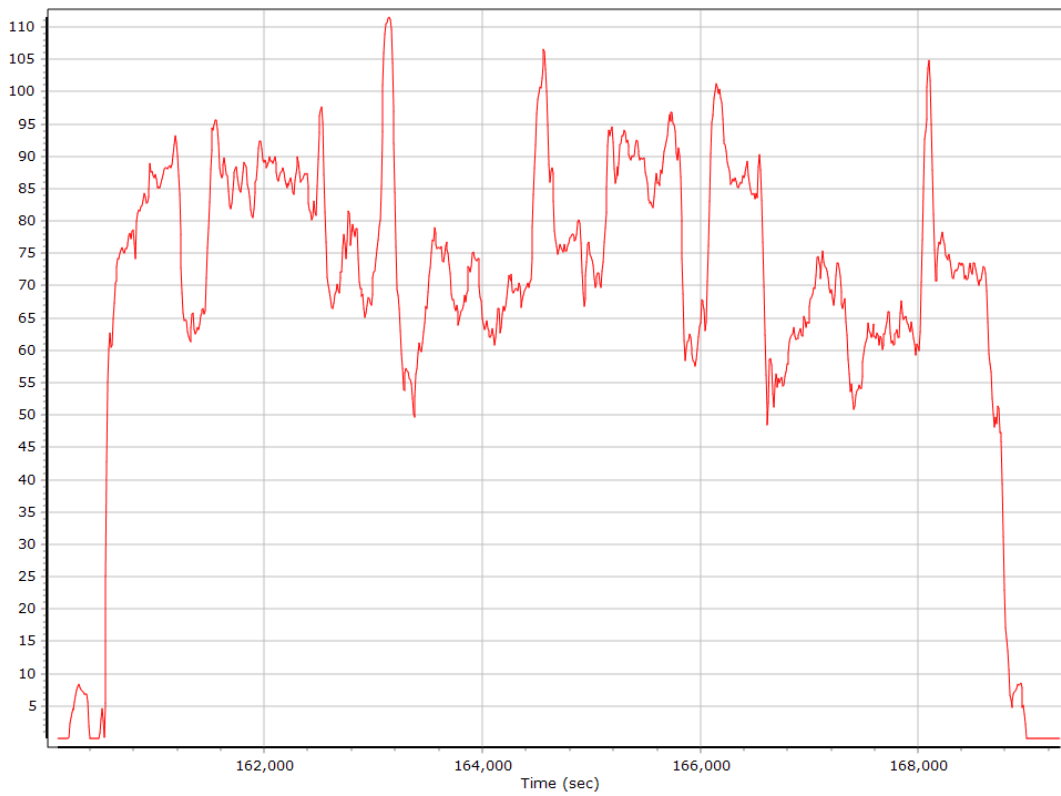
## Down Velocity



## Total Speed



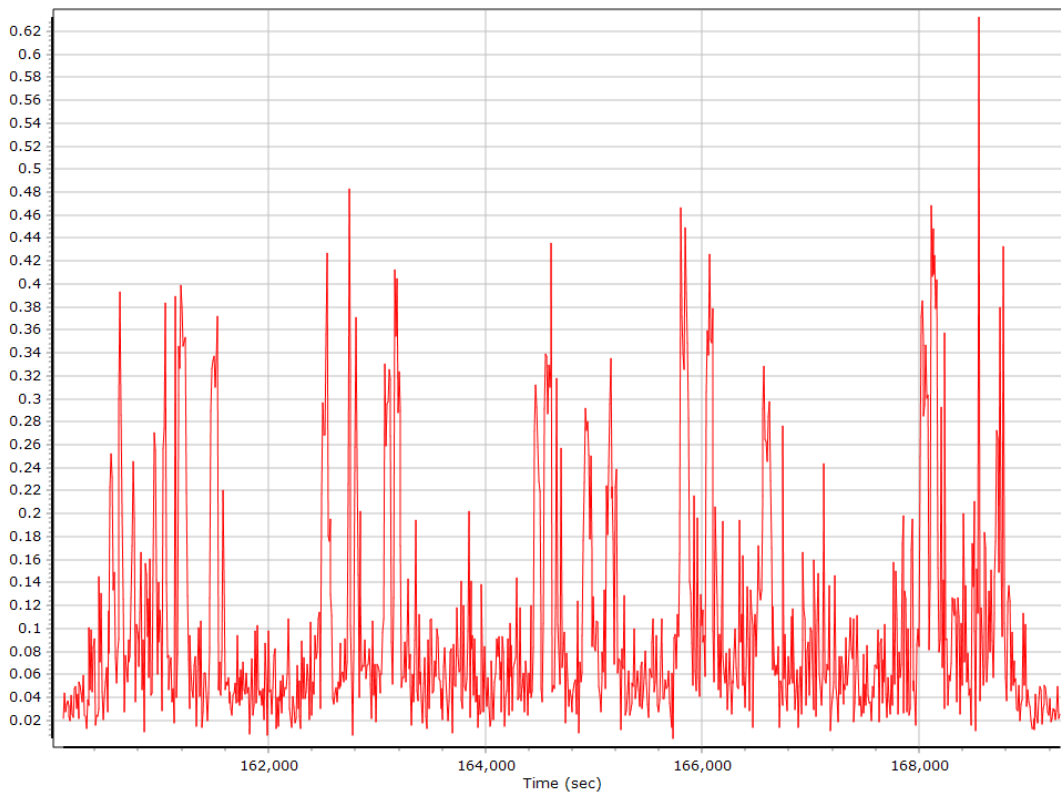
## Ground Speed



## Body Acceleration



## Total Body Acceleration





## Body Angular Rate

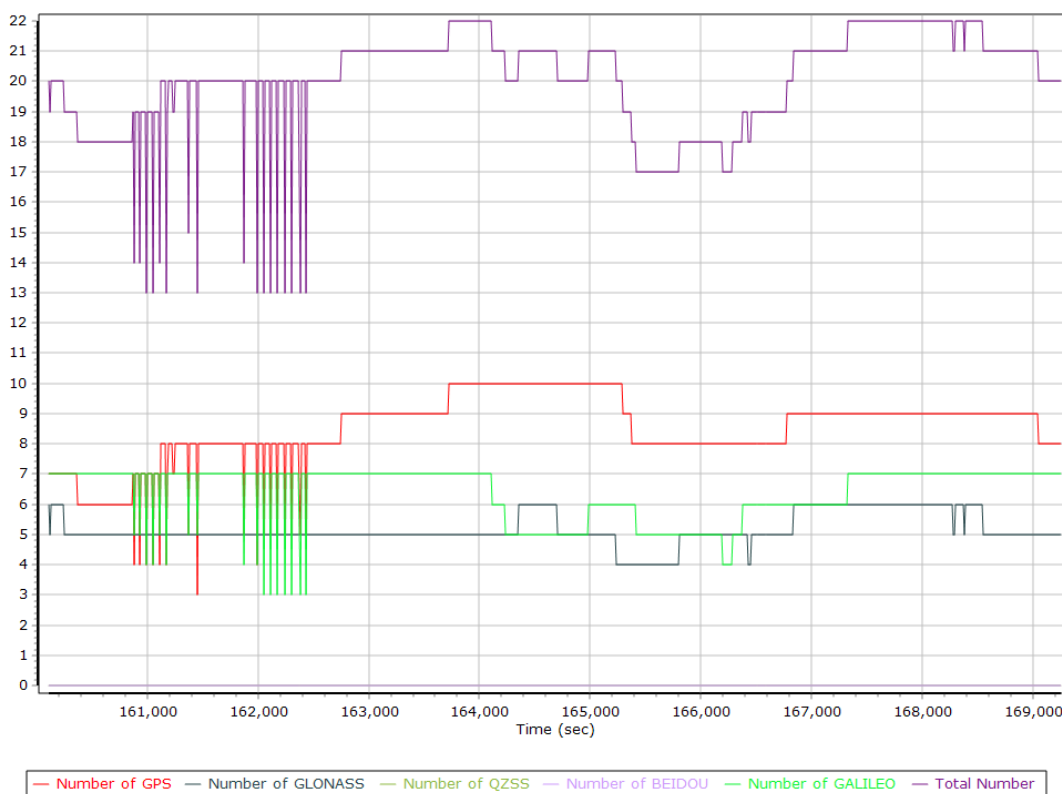


## GNSS QC

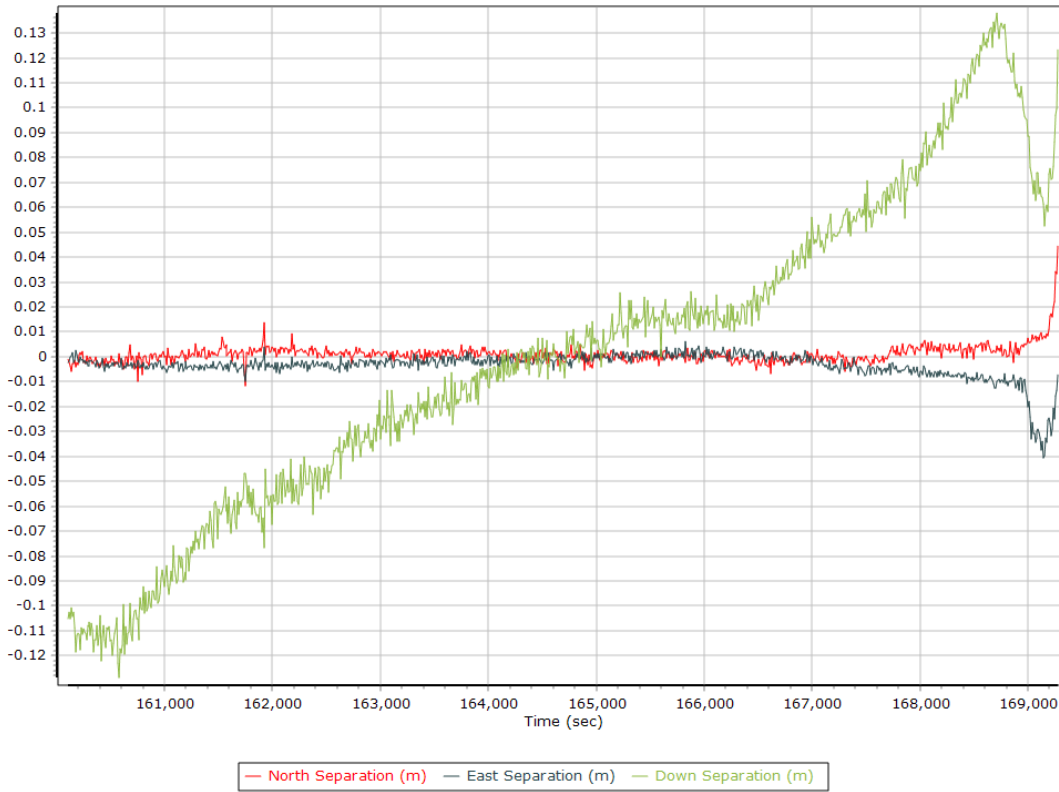
### GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	2	10	8
Number of GLONASS SV	4	6	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Number of GALILEO SV	3	7	6
Total number of SV	11	22	20
PDOP	1.13	3.33	1.32
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	9495.00	0.00	37.00
Percentage	99.61	0.00	0.39

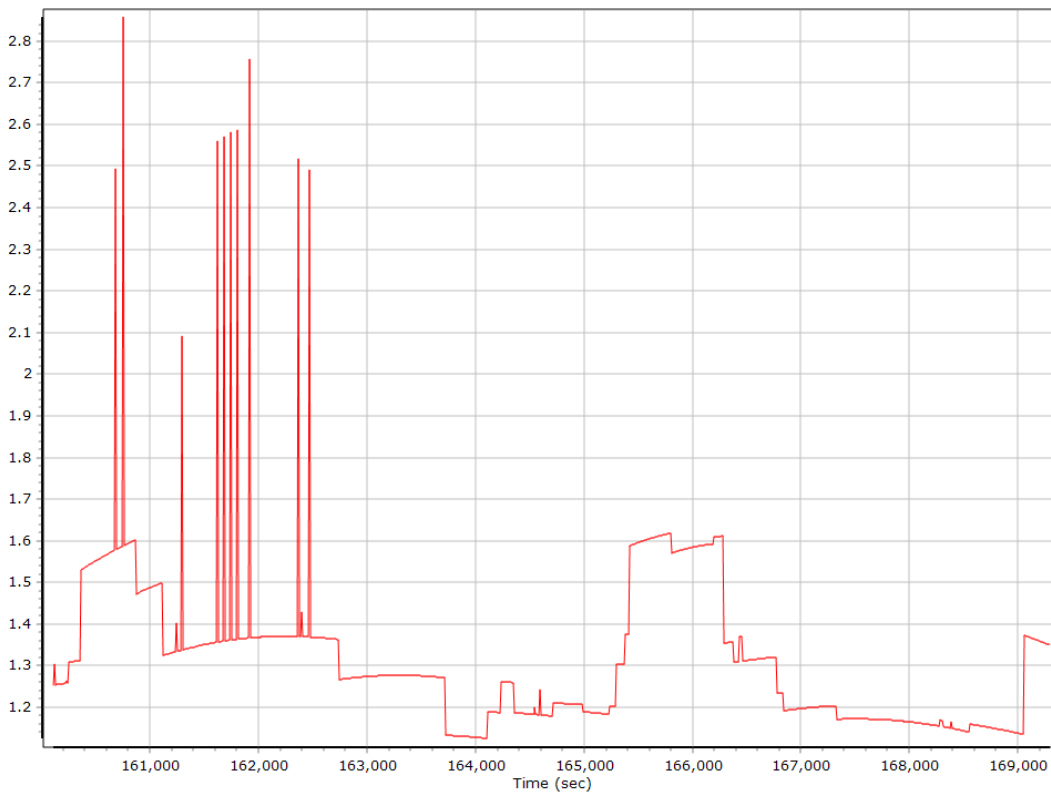
### Num SVs in solution



## Forward/Reverse Separation



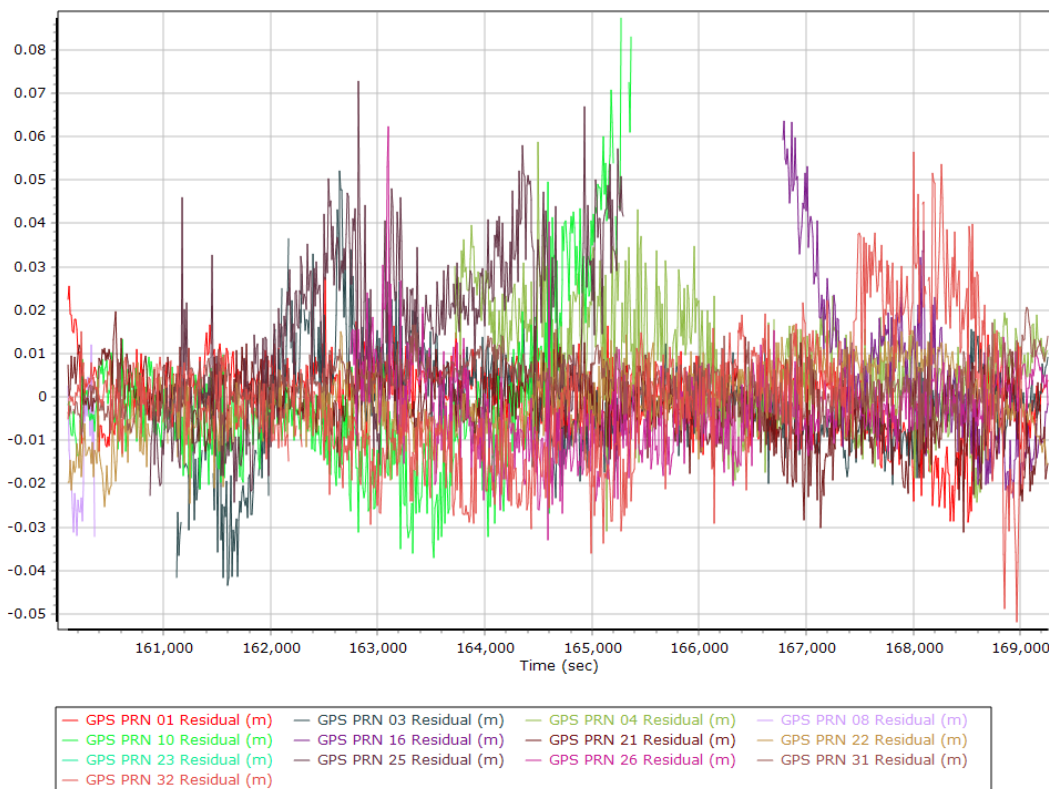
## PDOP



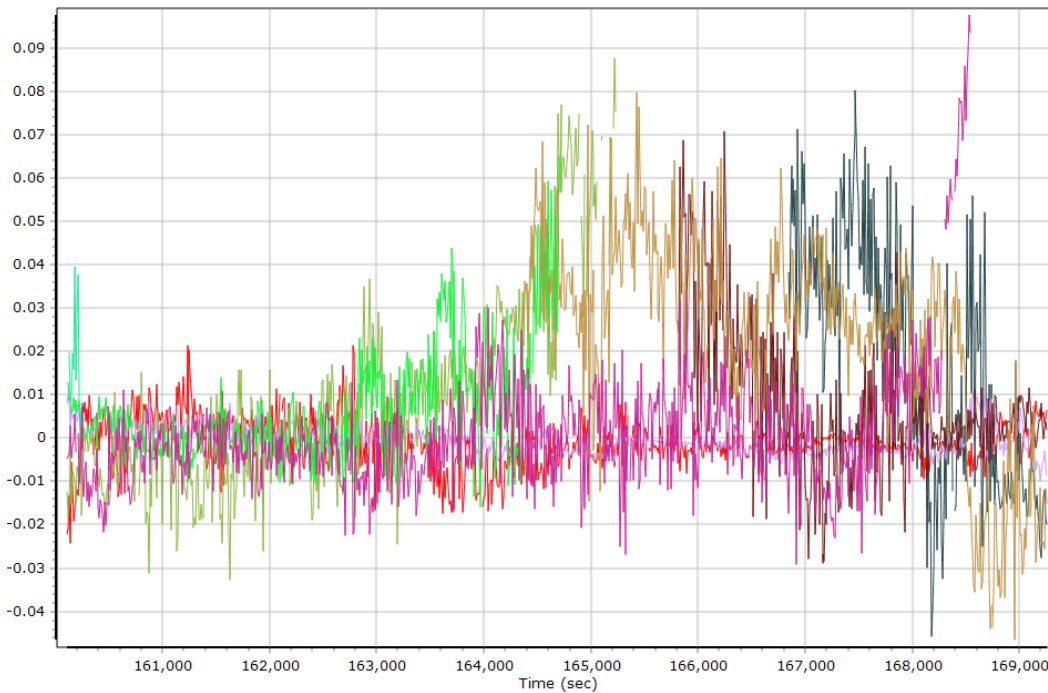
### Estimated Position Accuracy



### GPS Residuals

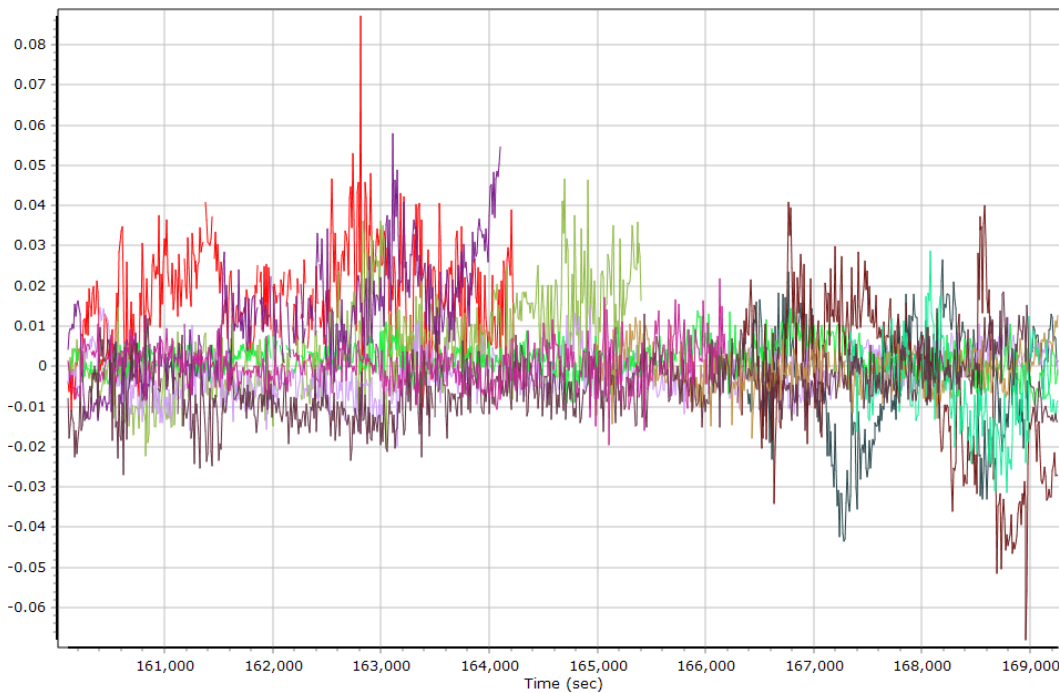


## GLONASS Residuals



- |                         |                         |                         |                         |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GLONASS 01 Residual (m) | GLONASS 02 Residual (m) | GLONASS 07 Residual (m) | GLONASS 08 Residual (m) |
| GLONASS 09 Residual (m) | GLONASS 10 Residual (m) | GLONASS 12 Residual (m) | GLONASS 17 Residual (m) |
| GLONASS 22 Residual (m) | GLONASS 23 Residual (m) | GLONASS 24 Residual (m) |                         |

## GALILEO Residuals



- |                         |                         |                         |                         |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GALILEO 01 Residual (m) | GALILEO 03 Residual (m) | GALILEO 04 Residual (m) | GALILEO 05 Residual (m) |
| GALILEO 09 Residual (m) | GALILEO 11 Residual (m) | GALILEO 15 Residual (m) | GALILEO 24 Residual (m) |
| GALILEO 25 Residual (m) | GALILEO 31 Residual (m) | GALILEO 36 Residual (m) |                         |

## GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	159722.000 (10/11/2021 20:22:02)		
Processing end time	169302.000 (10/11/2021 23:01:42)		
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	-90.000
Reference to Primary GNSS lever arm (m)	0.529	0.048	-1.195
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

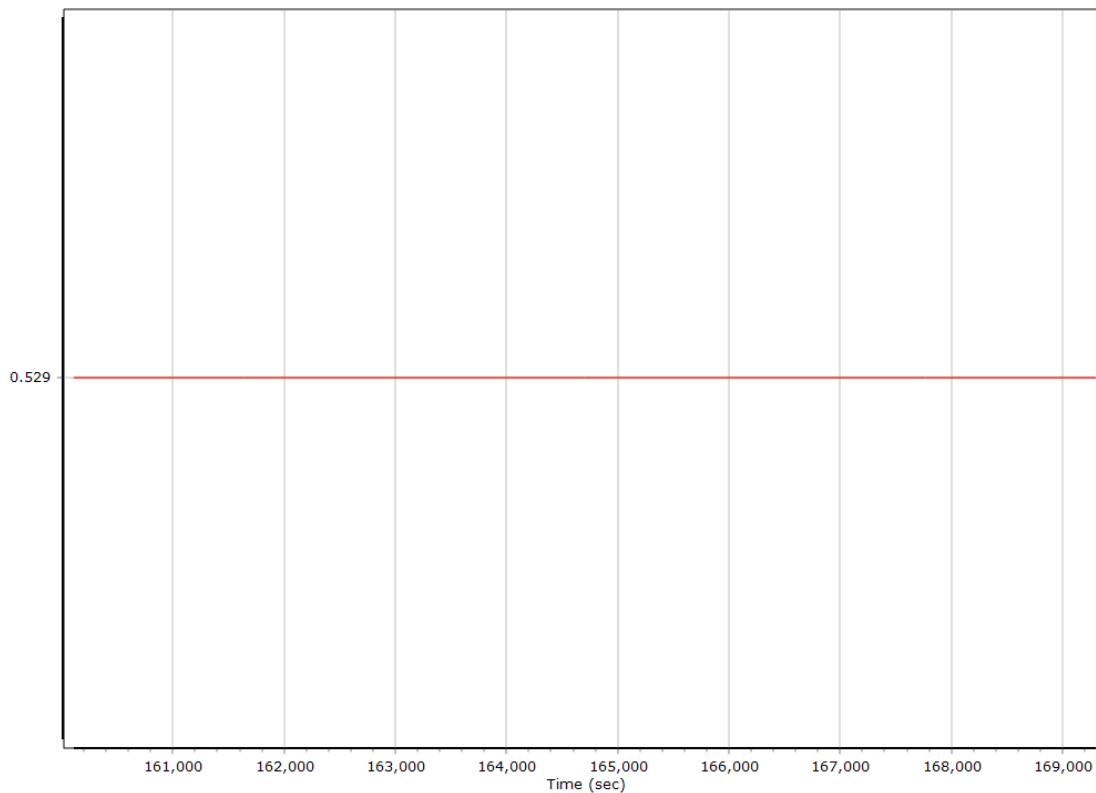
## Calibrated Installation Parameters

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

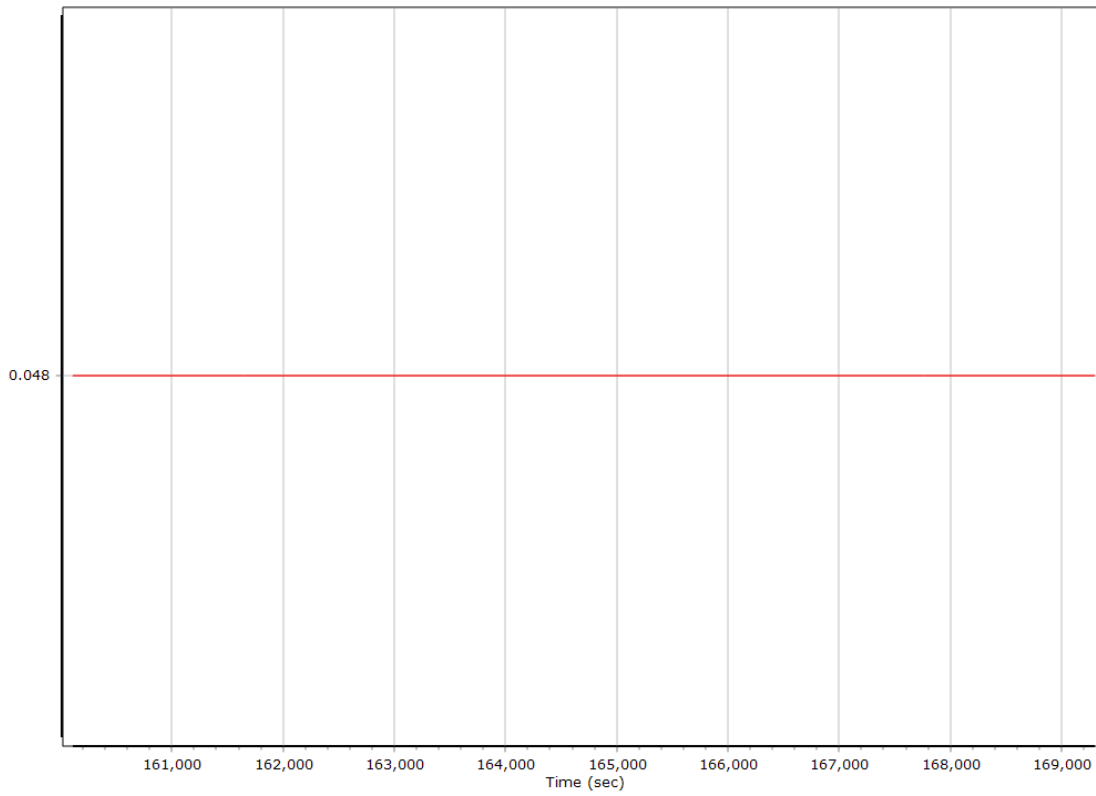
#### Reference-Primary GNSS Lever Arm Automatic Calibration Results

Original Reference to Primary GNSS lever arm (m)	0.534	0.060	-1.199
Iteration 1 Reference to Primary GNSS lever arm (m)	0.529	0.048	-1.195
Iteration 2 Reference to Primary GNSS lever arm (m)	0.529	0.048	-1.195
Primary GNSS Lever Arm In use	Iteration 2		

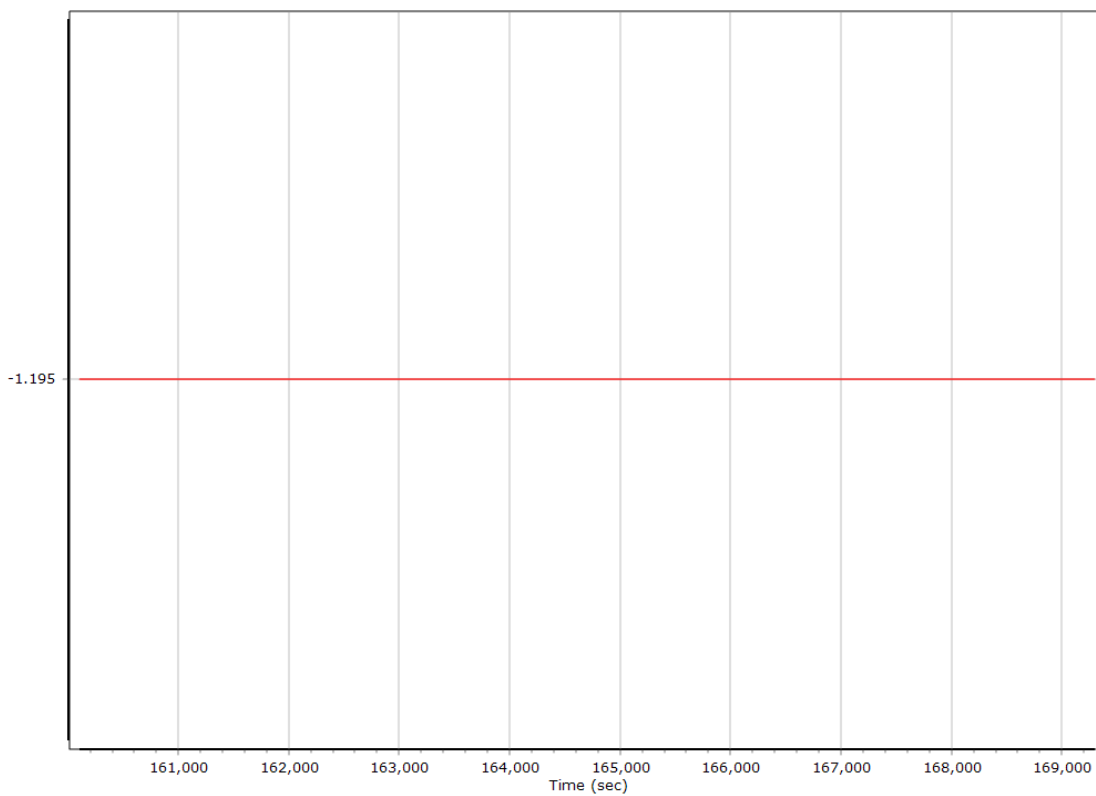
### X Reference-Primary GNSS Lever Arm (m)



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

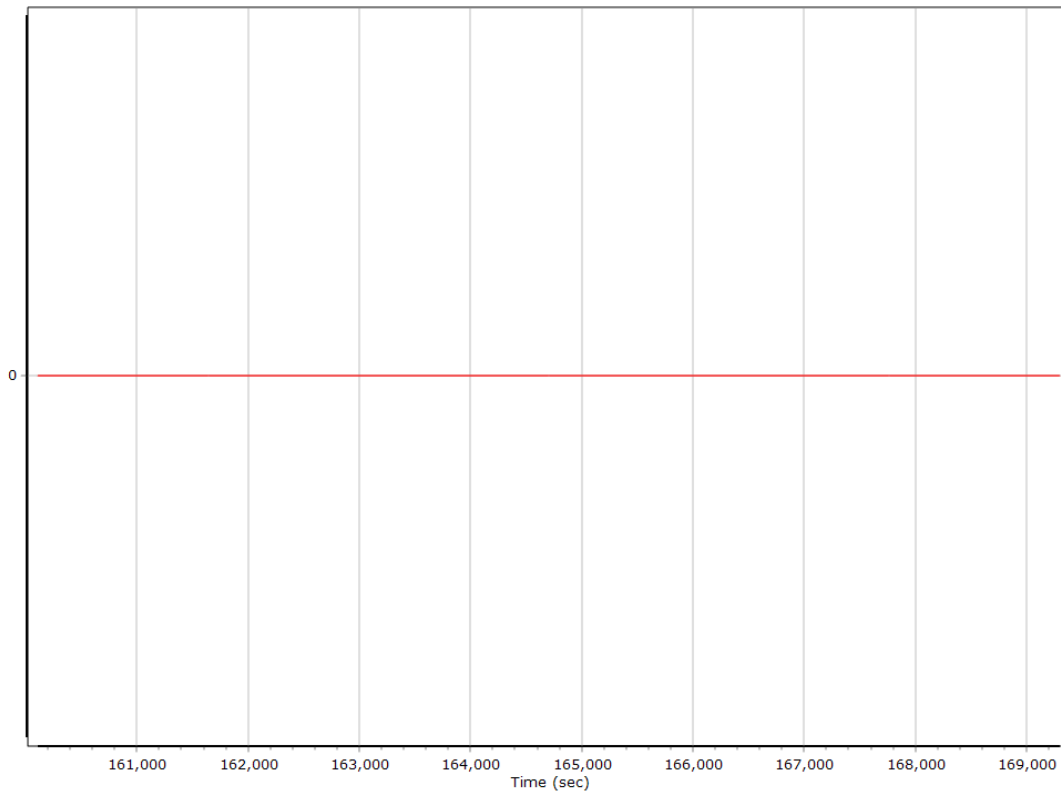


### Z Reference-Primary GNSS Lever Arm (m)





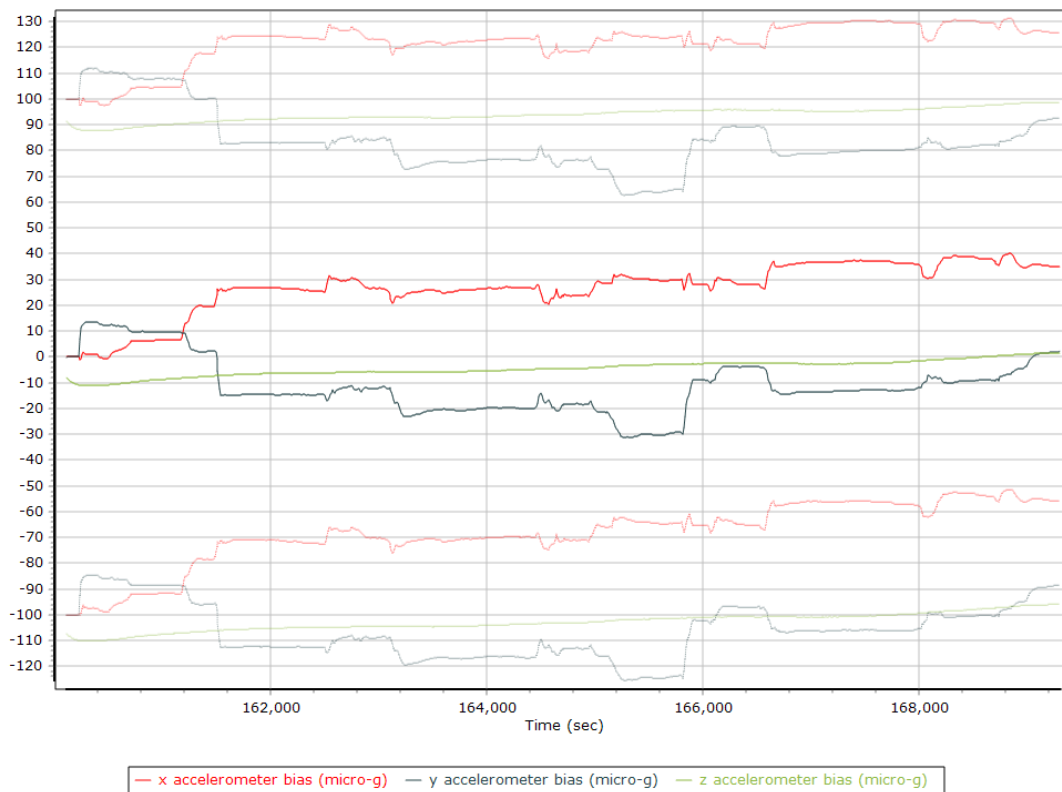
### Reference-Primary GNSS Lever Arm Figure of Merit



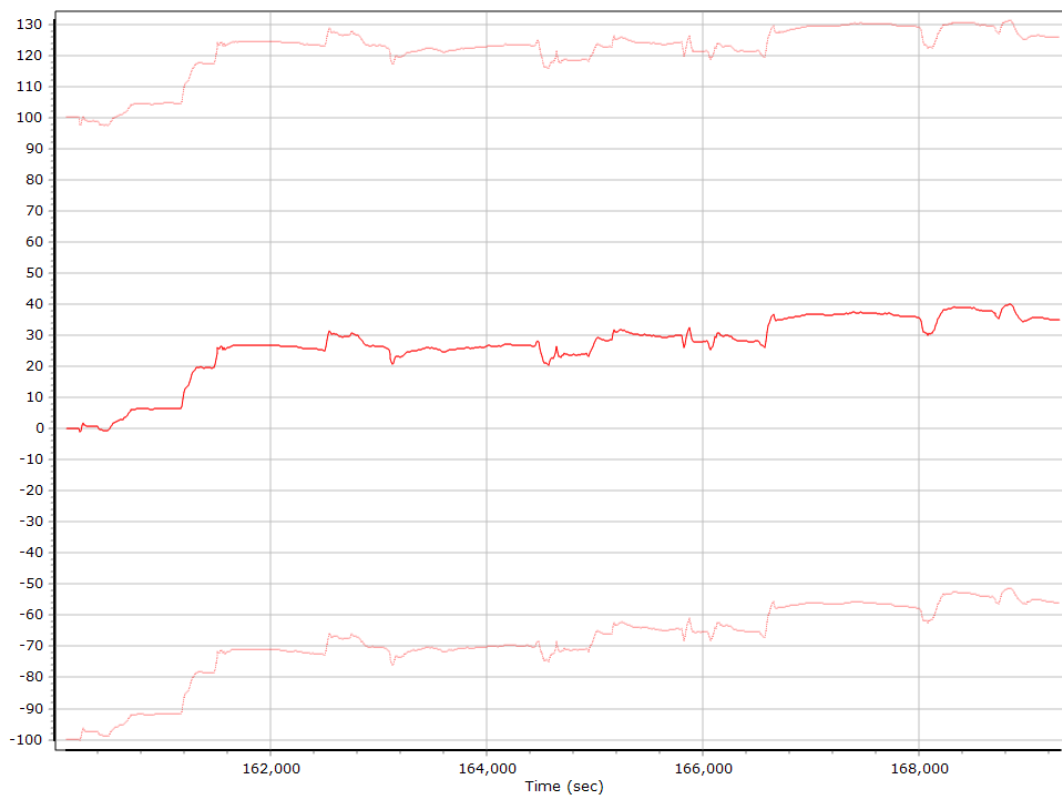
## IN-Fusion QC

### Forward Processed Estimated Errors, Reference Frame

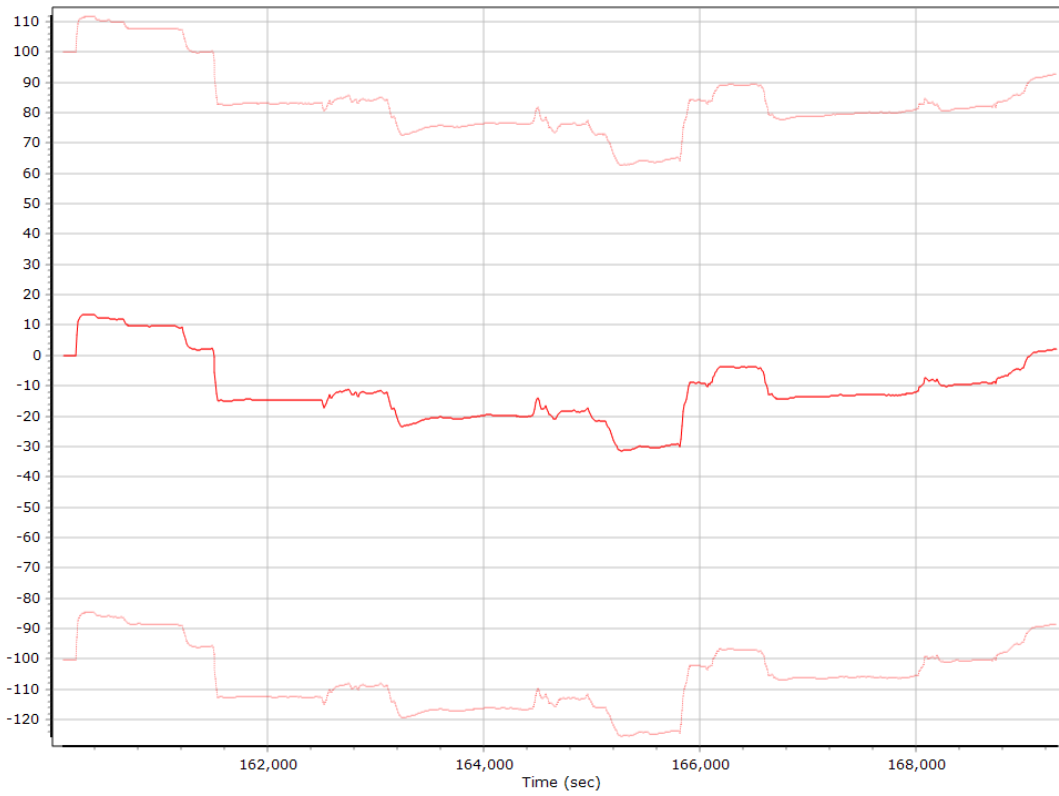
#### Accelerometer Bias (micro-g)



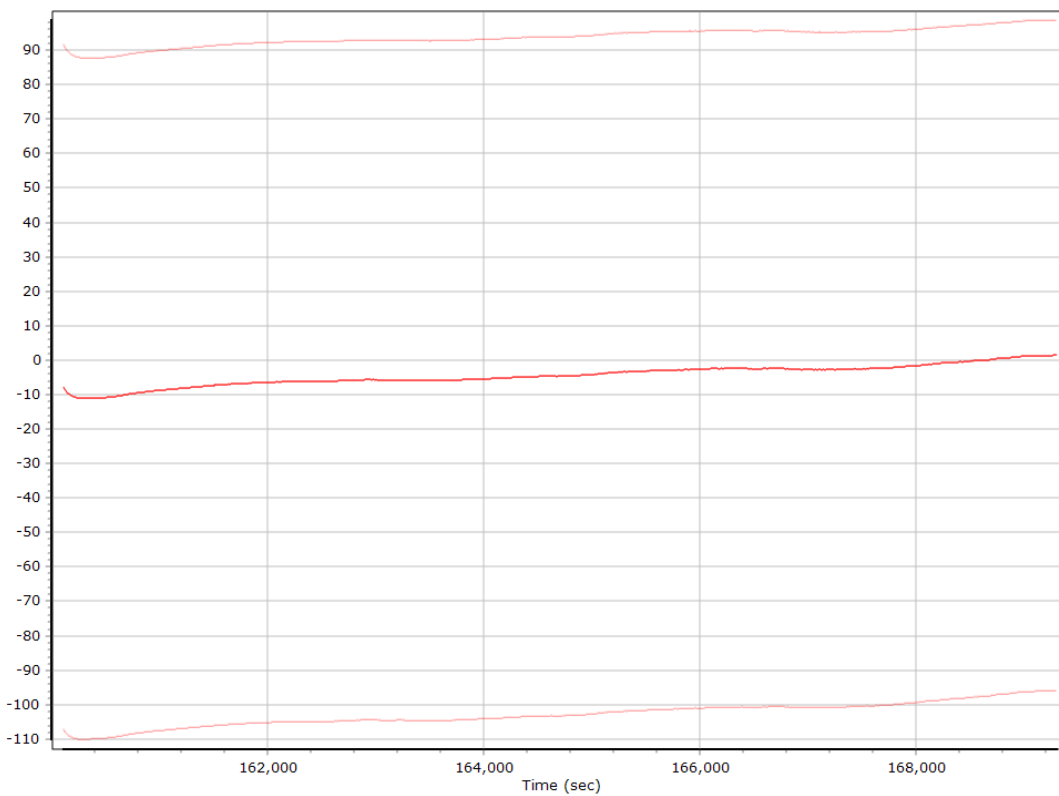
#### X Accelerometer Bias (micro-g)



### Y Accelerometer Bias (micro-g)



### Z Accelerometer Bias (micro-g)



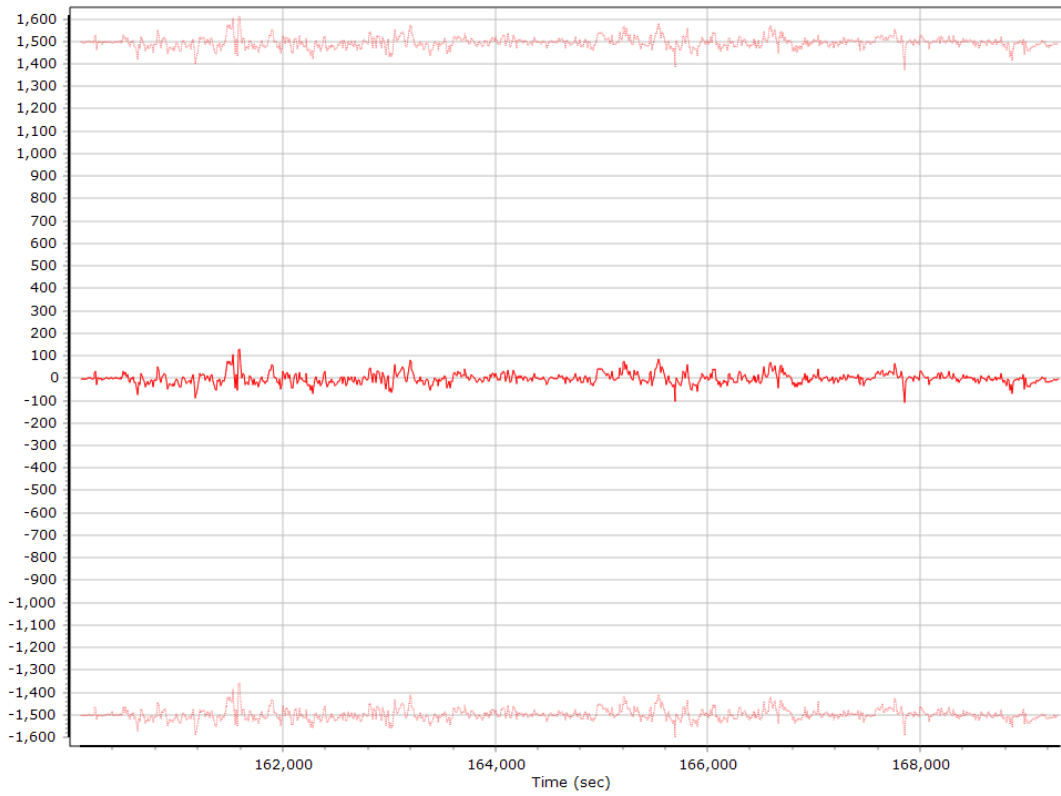
### Accelerometer Scale Error (ppm)



### X Accelerometer Scale Error (ppm)



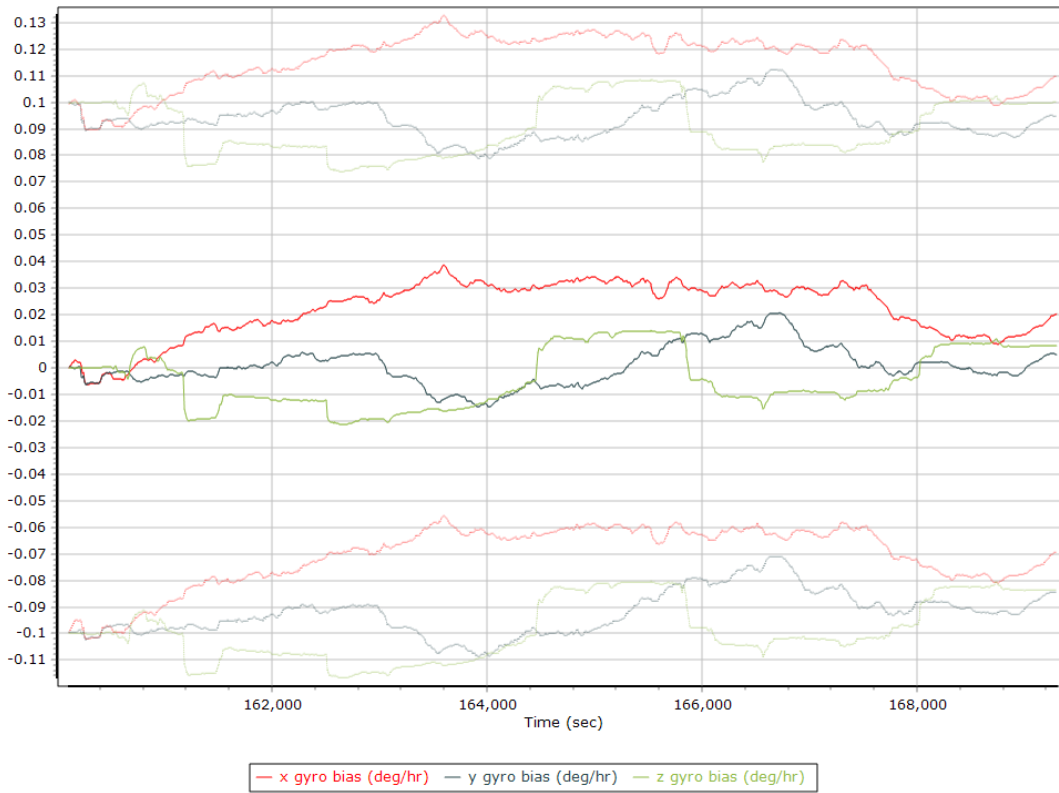
### Y Accelerometer Scale Error (ppm)



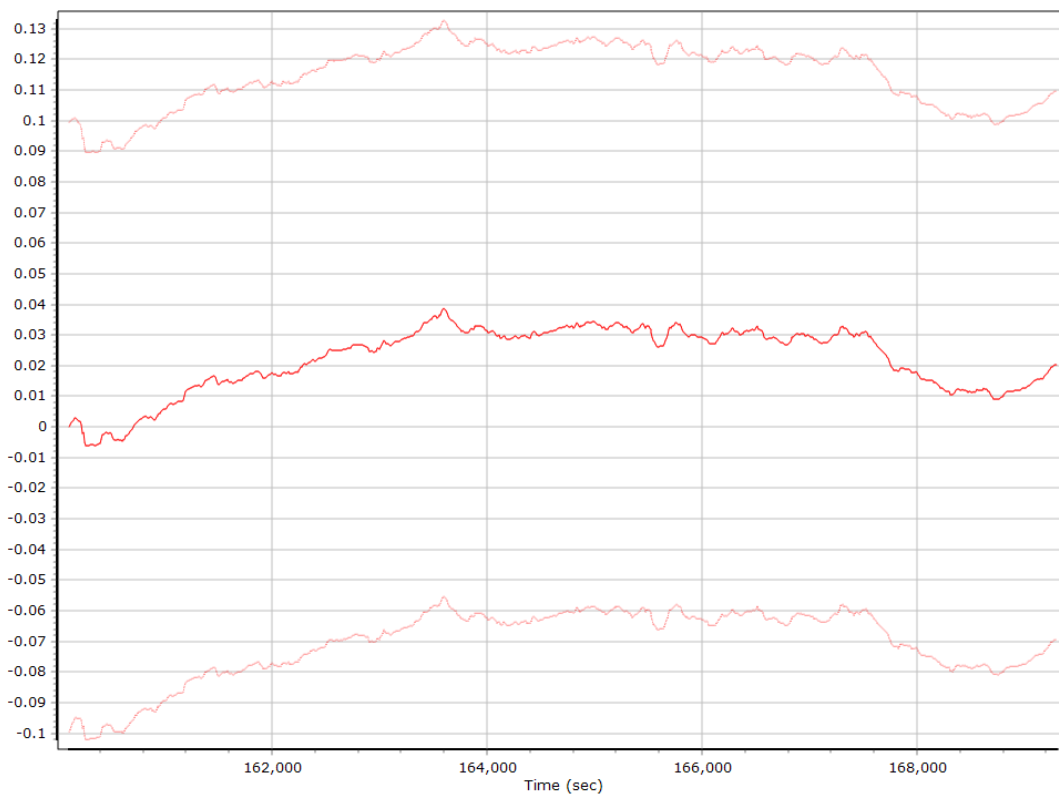
### Z Accelerometer Scale Error (ppm)



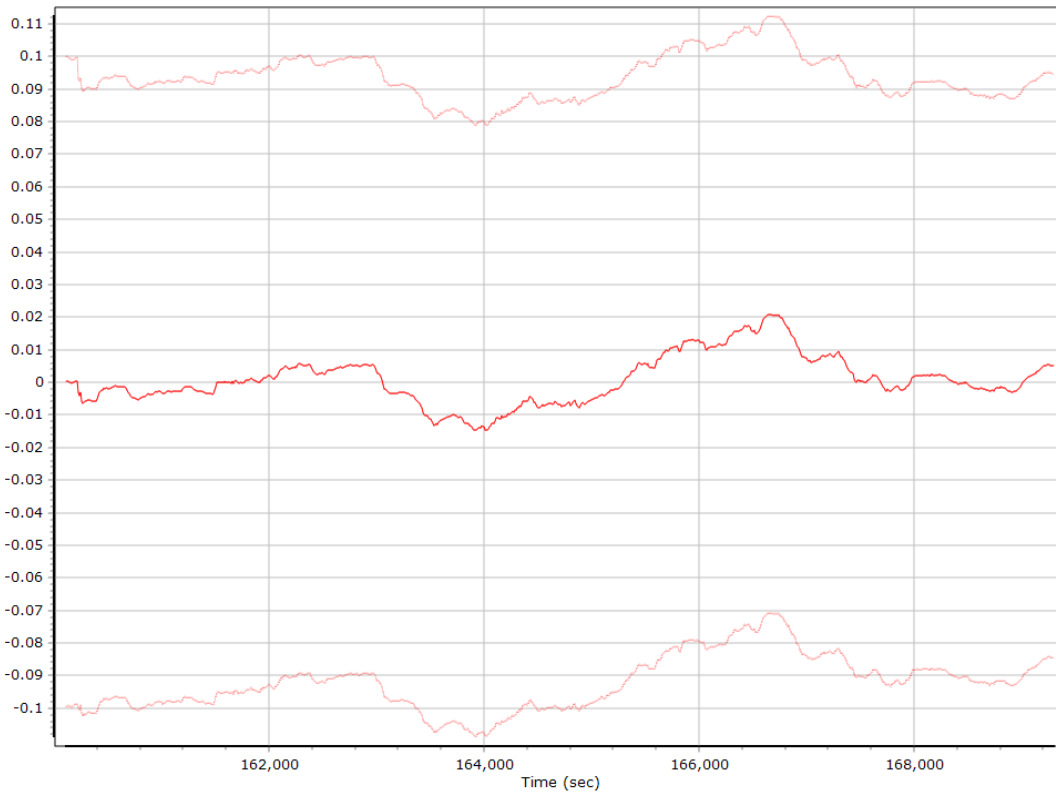
### Gyro Bias (deg/h)



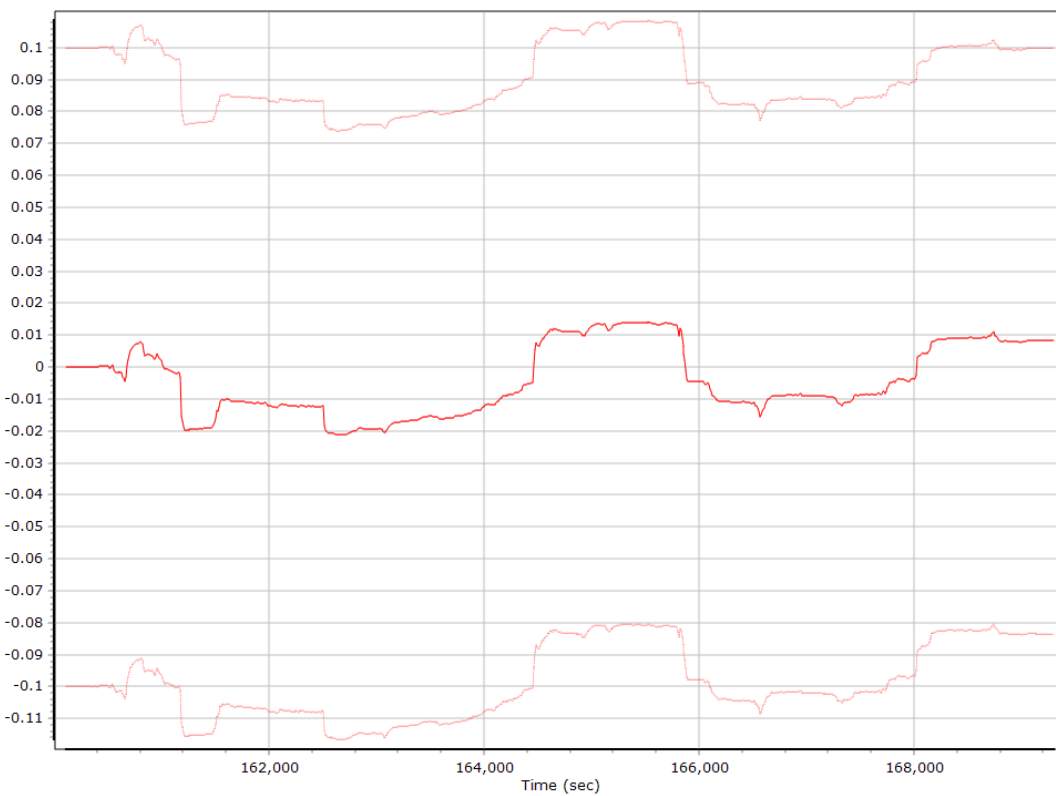
### X Gyro Bias (deg/h)



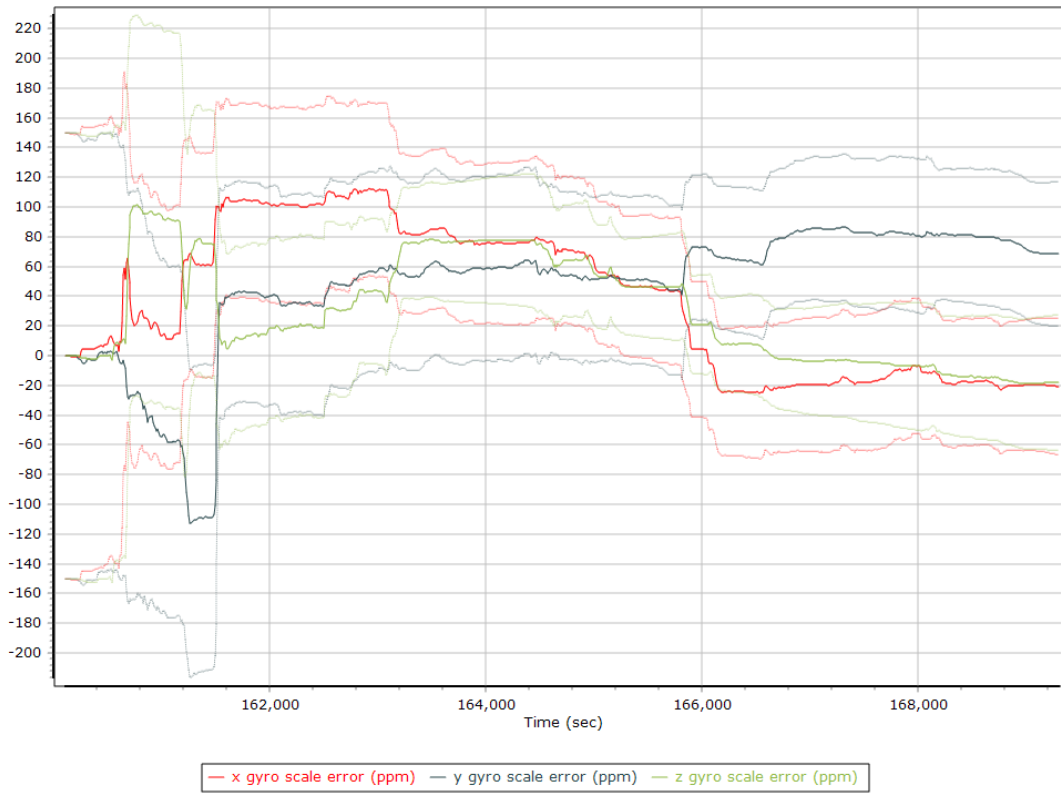
### Y Gyro Bias (deg/h)



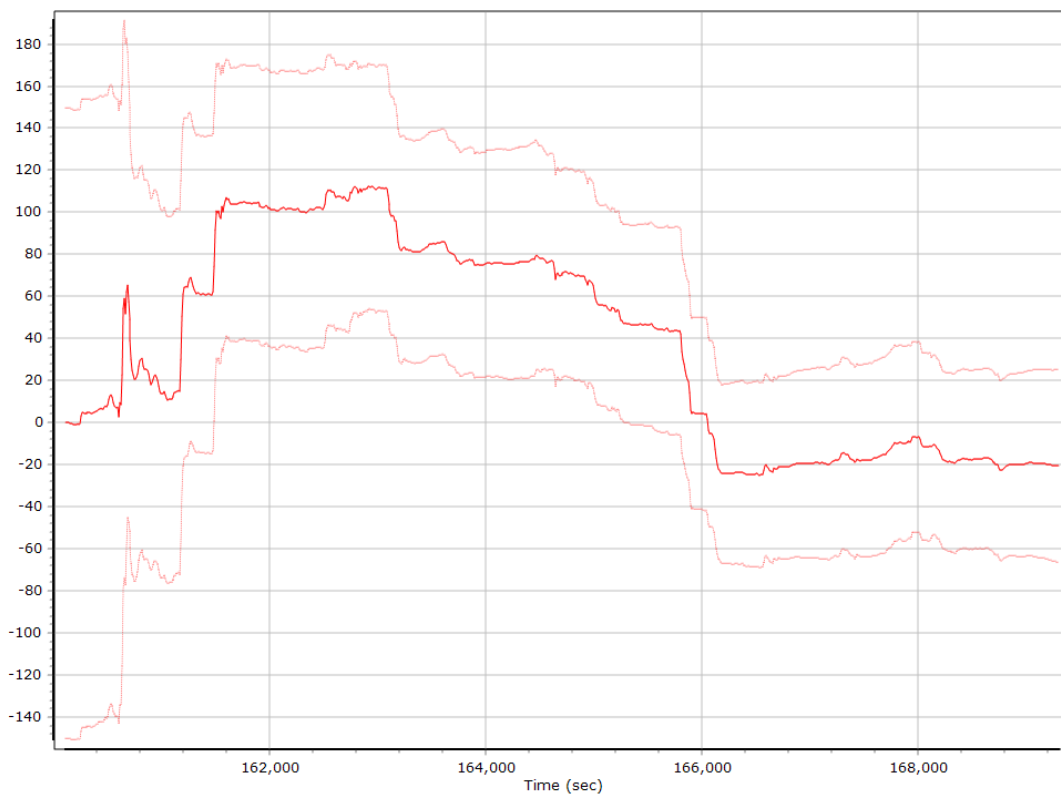
### Z Gyro Bias (deg/h)



### Gyro Scale Error (ppm)

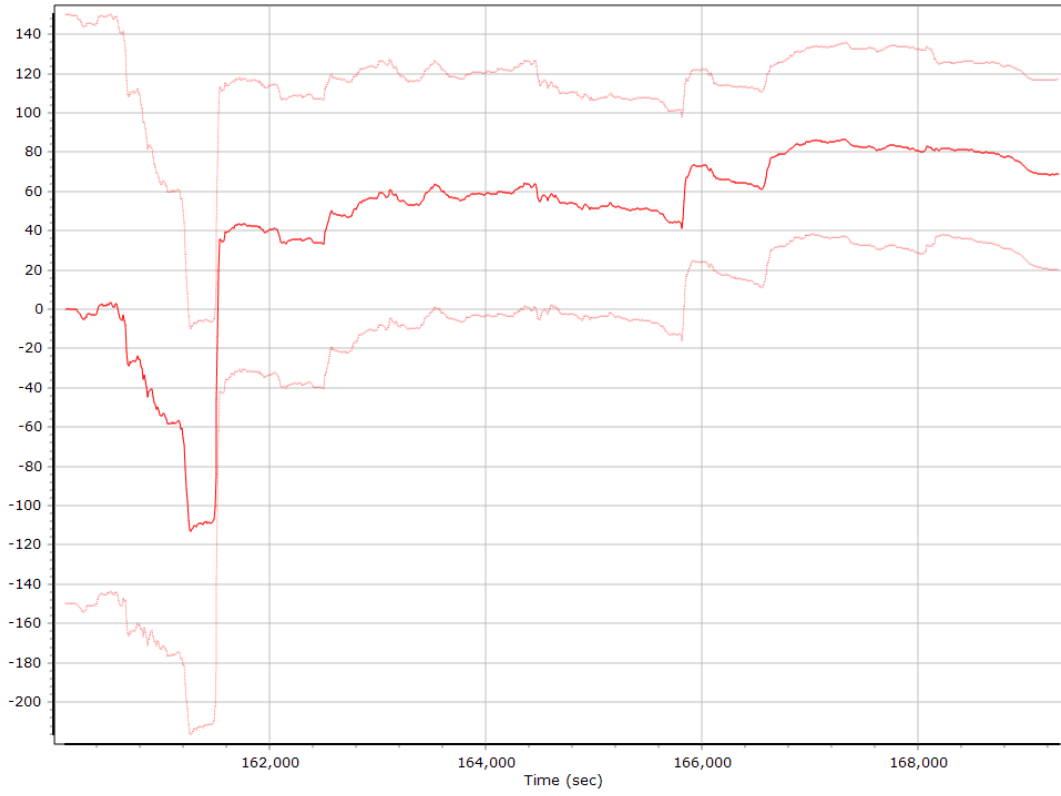


### X Gyro Scale Error (ppm)

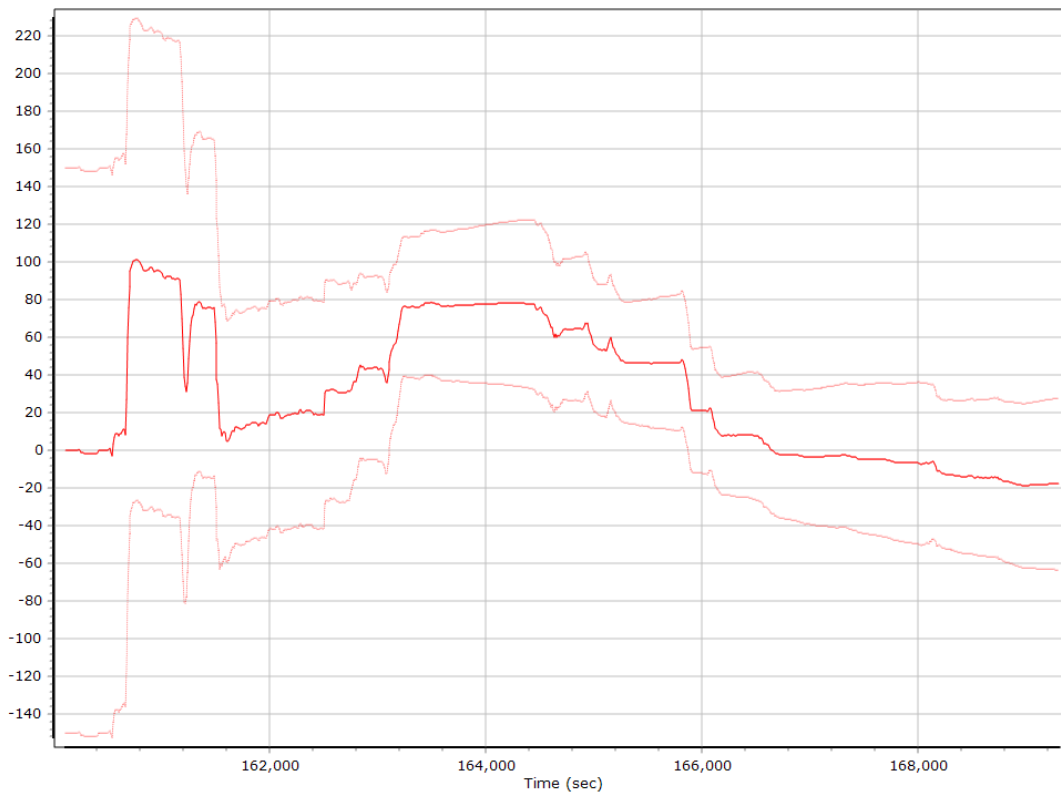




### Y Gyro Scale Error (ppm)

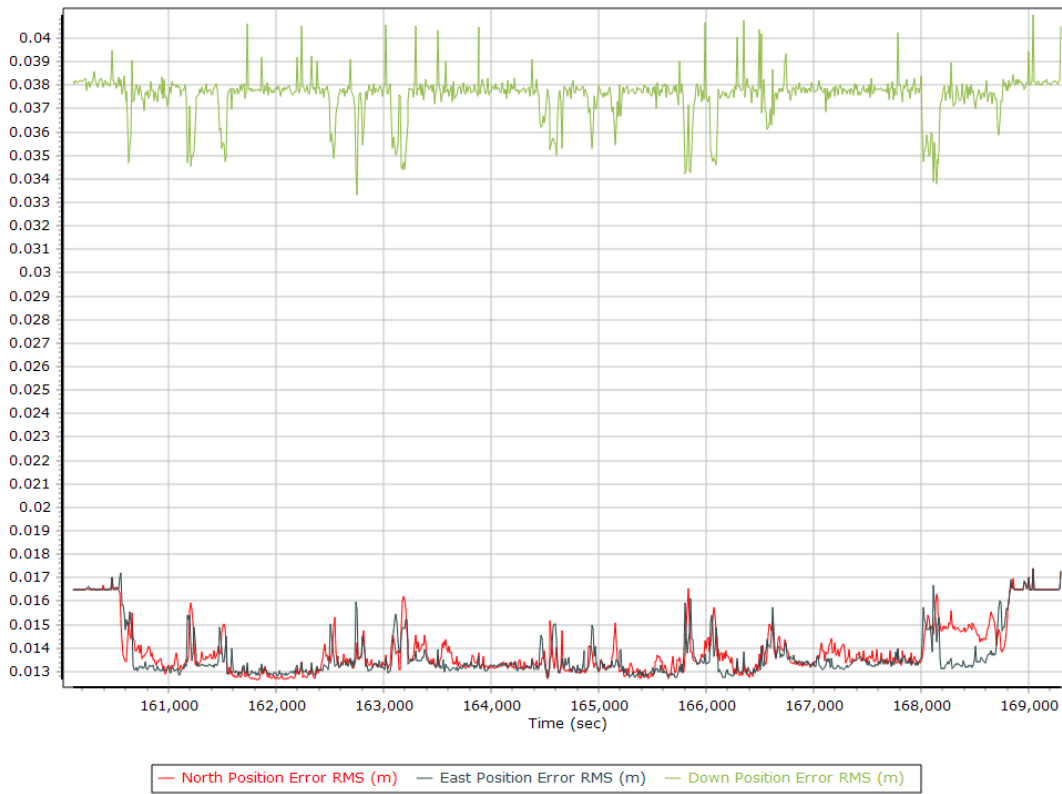


### Z Gyro Scale Error (ppm)

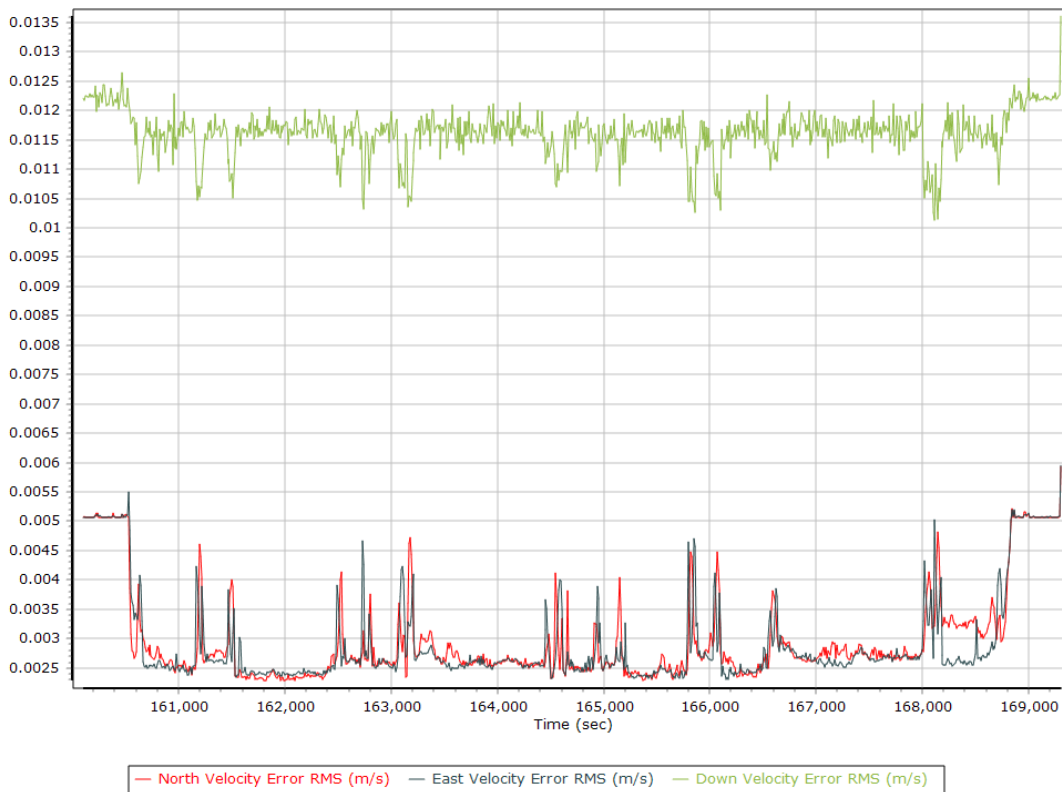


## Smoothed Performance Metrics

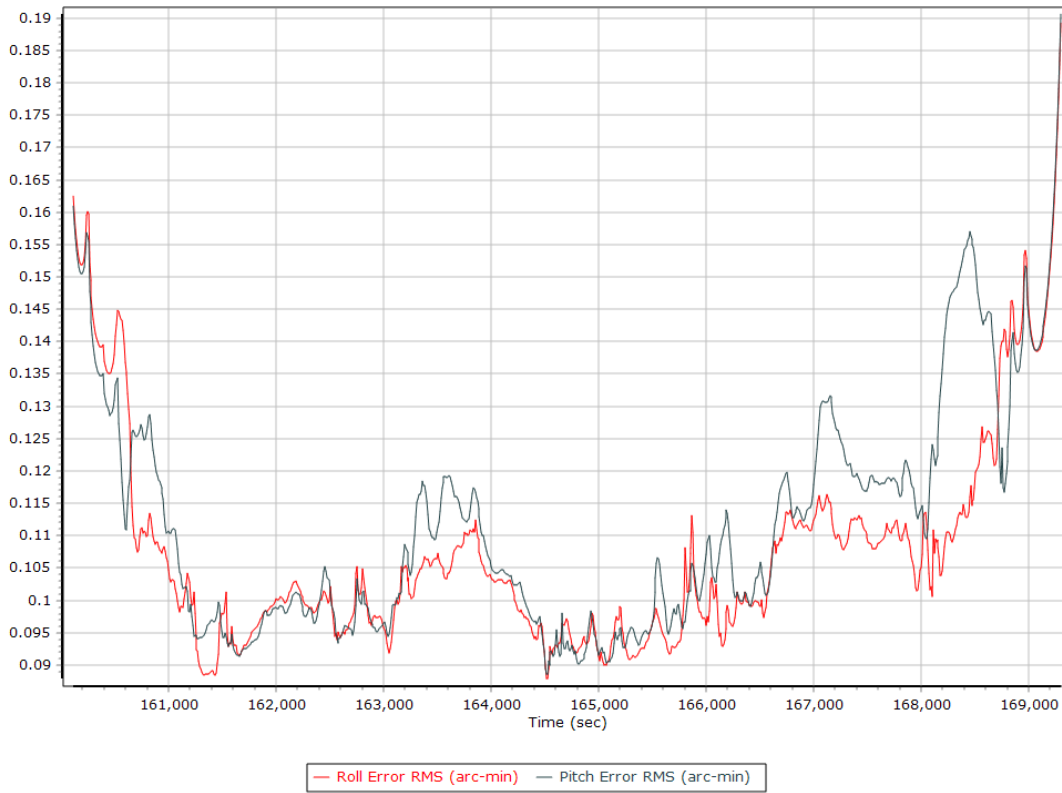
### Position Error RMS (m)



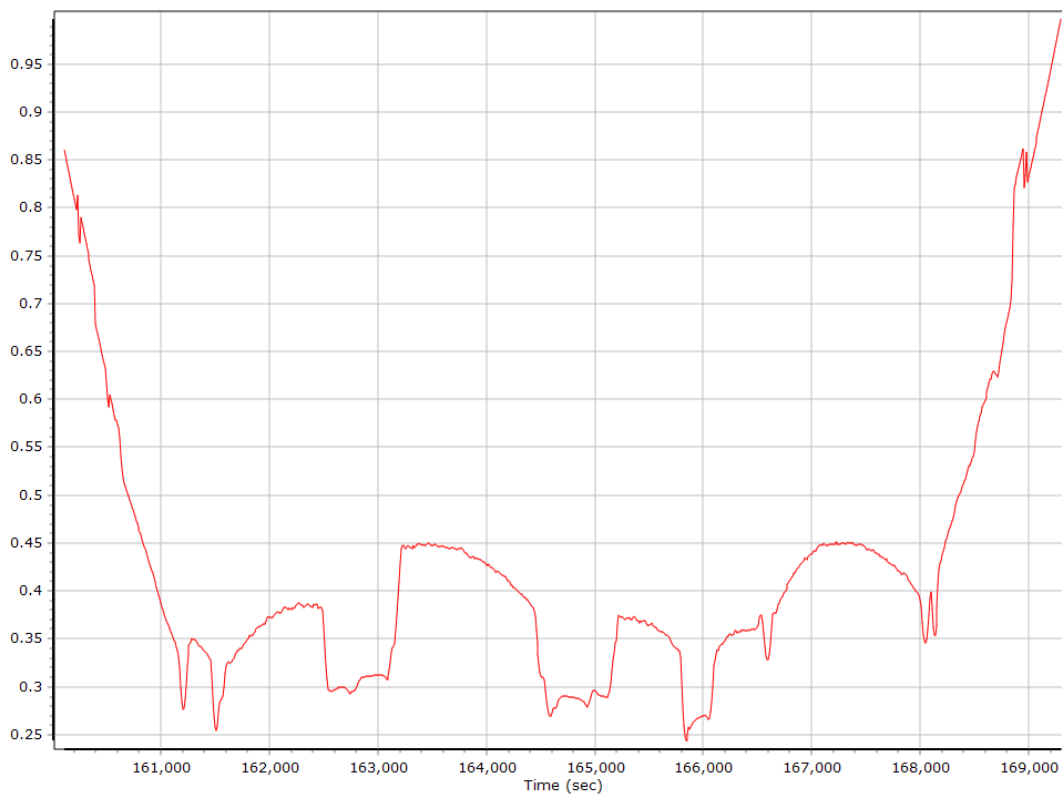
### Velocity Error RMS (m/s)



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

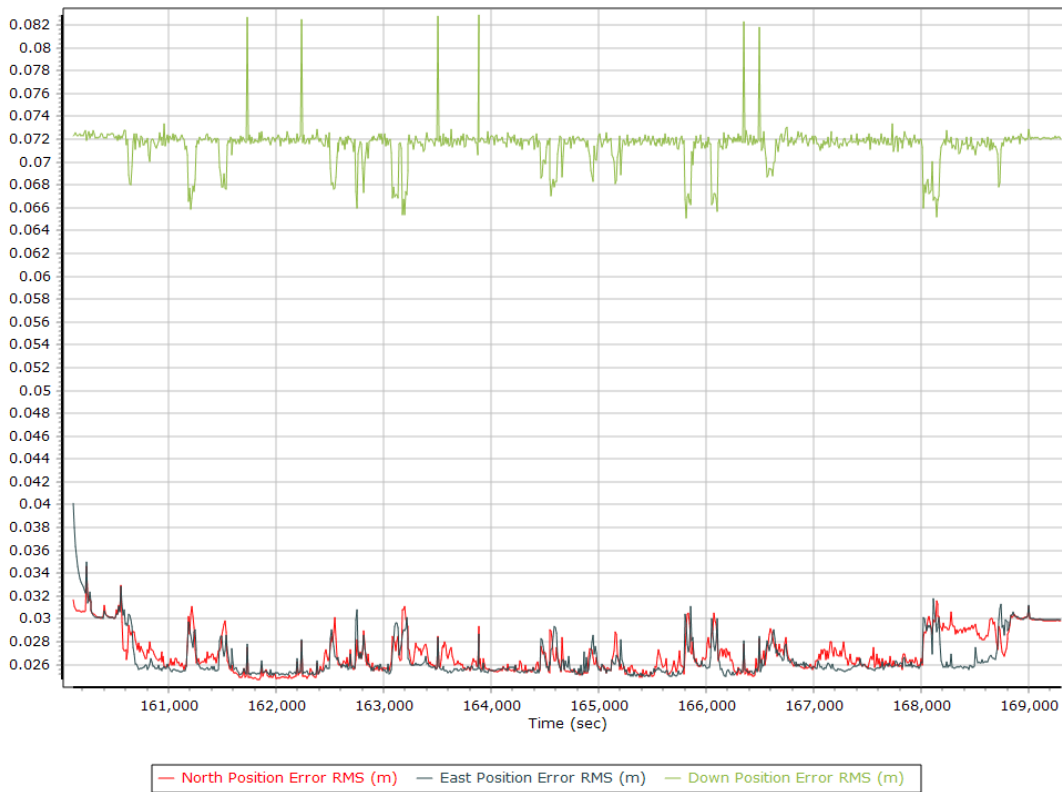


### Heading Error RMS (arc-min)

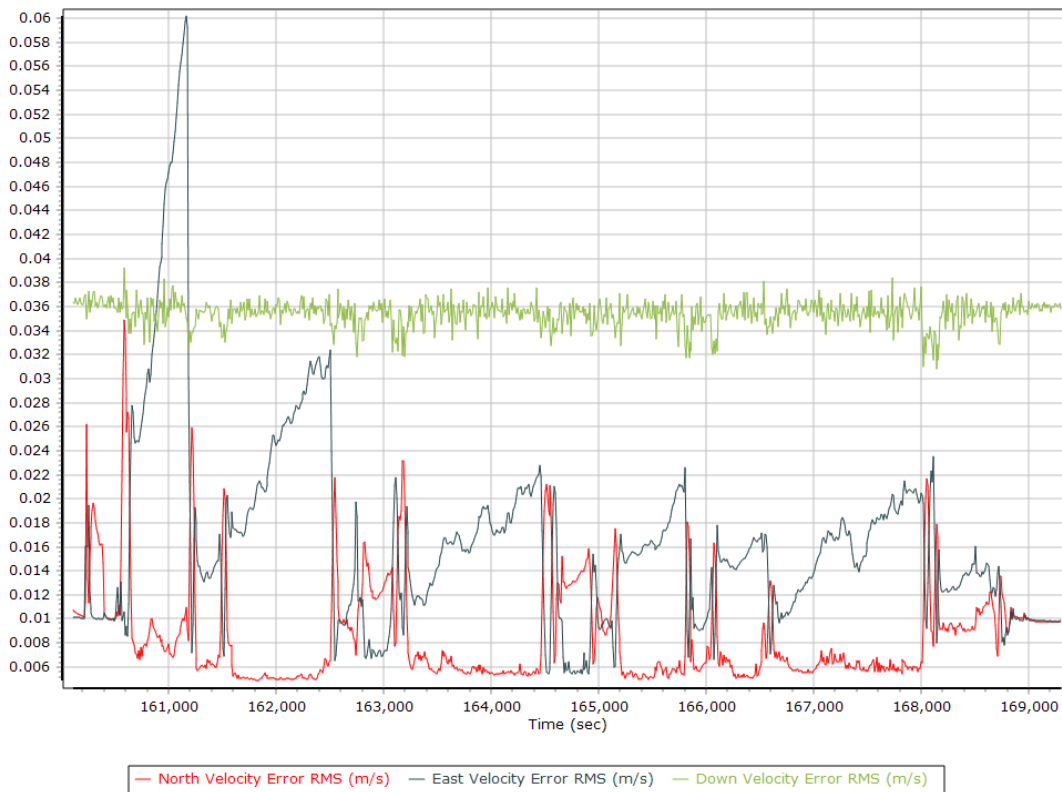


## Forward Processed Performance Metrics

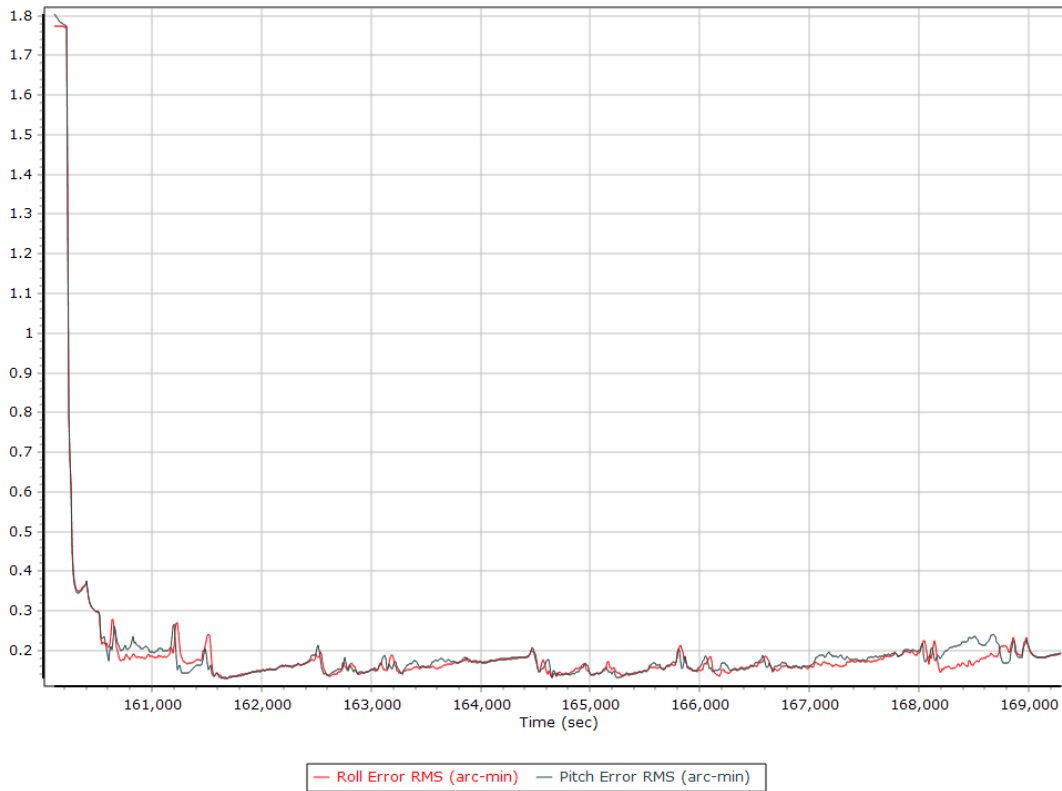
### Position Error RMS (m)



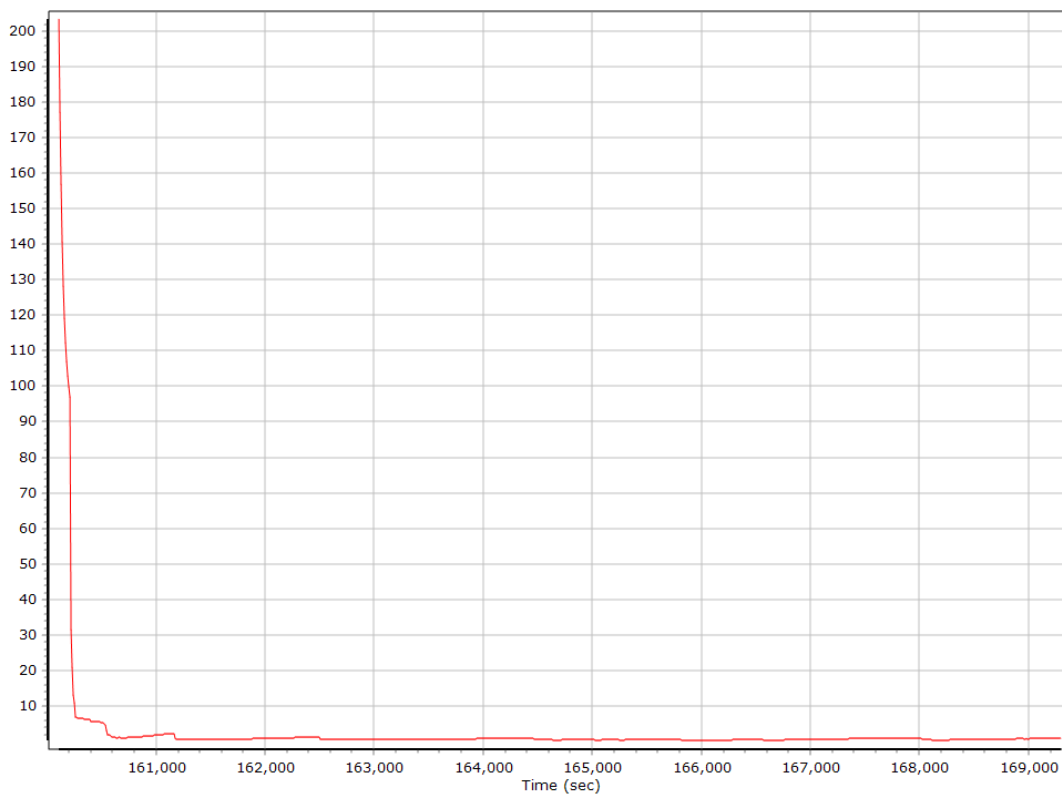
### Velocity Error RMS (m/s)



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

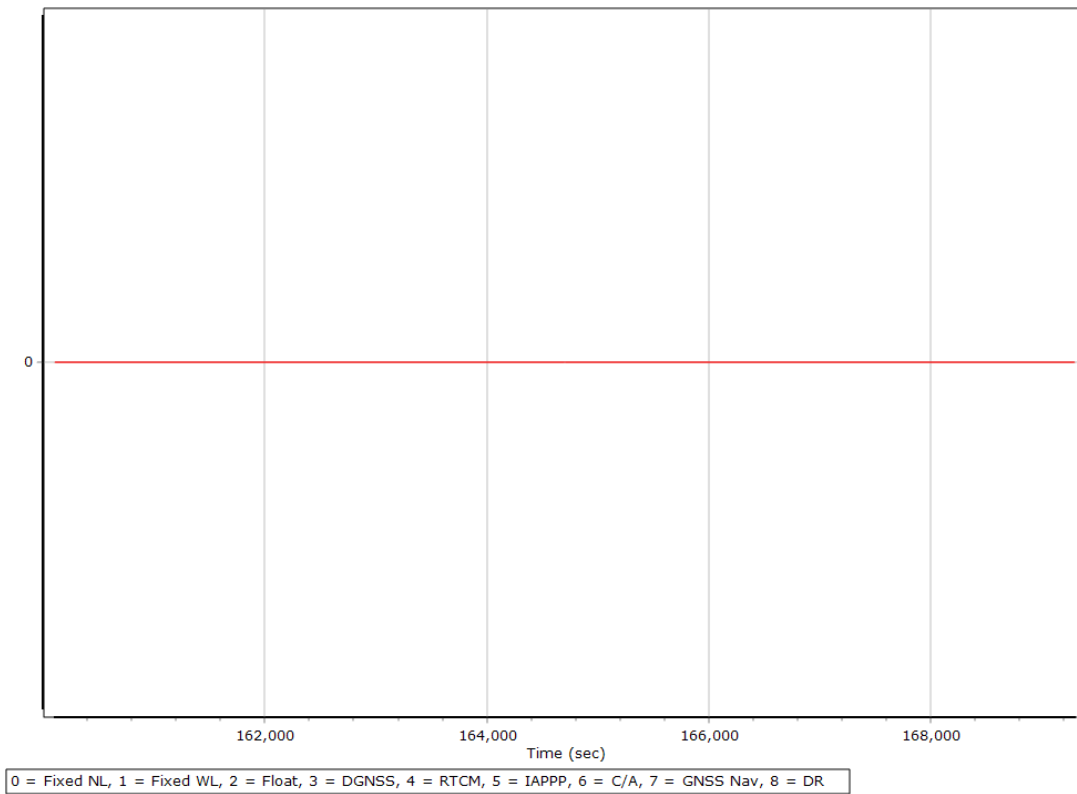


### Heading Error RMS (arc-min)

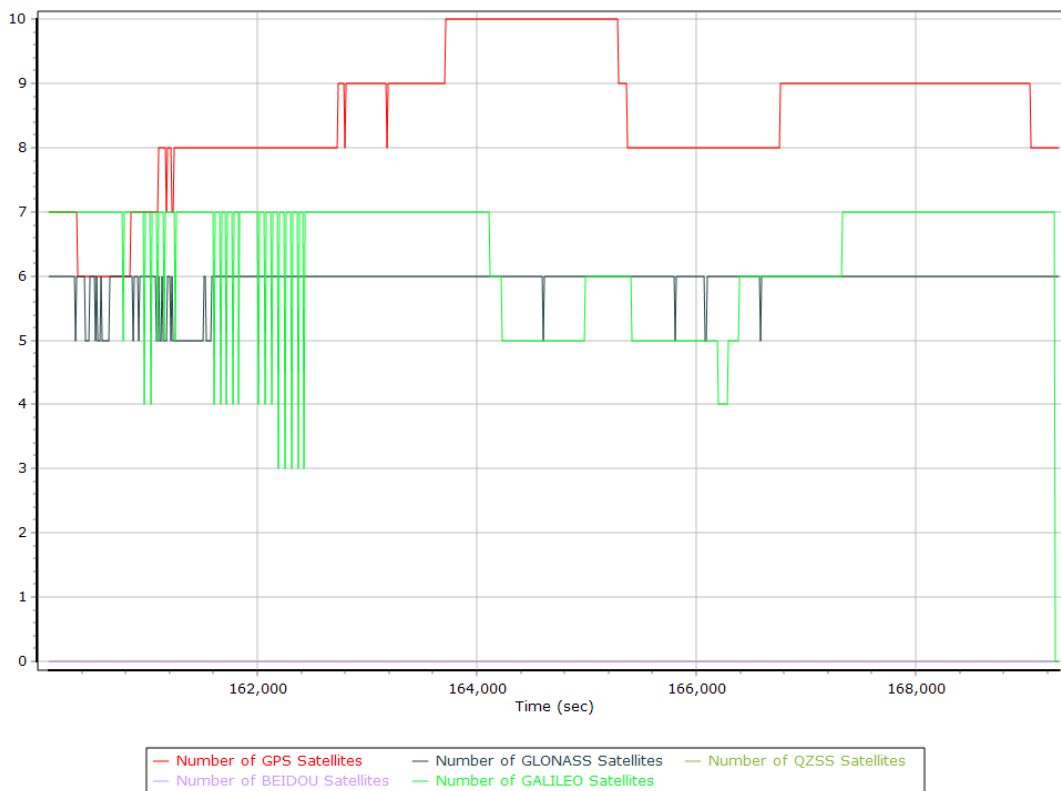


## Forward Processed Solution Status

### Processing Mode



### Number of Satellites



## Baseline Length

