

General Information

Mission Information

Project name	211007_A_5060420_nad2011_FINAL
Processing date	2021-10-08 22:40:26
Mission date	2021-10-07 14:43:13
Mission duration	04:29:03.000
Processing mode	IN-Fusion PP-RTX

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9825
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
20211007.202	POS Data
20211007.203	POS Data
20211007.204	POS Data
20211007.205	POS Data
20211007.206	POS Data
20211007.207	POS Data
20211007.208	POS Data
20211007.209	POS Data
20211007.210	POS Data
20211007.211	POS Data
20211007.212	POS Data
20211007.213	POS Data
20211007.214	POS Data
20211007.215	POS Data
20211007.216	POS Data
20211007.217	POS Data
20211007.218	POS Data
20211007.219	POS Data
20211007.220	POS Data
20211007.221	POS Data
20211007.222	POS Data
20211007.223	POS Data
20211007.224	POS Data
20211007.225	POS Data
20211007.226	POS Data
20211007.227	POS Data
20211007.228	POS Data
20211007.229	POS Data
20211007.230	POS Data
20211007.231	POS Data
20211007.232	POS Data
20211007.233	POS Data
20211007.234	POS Data
20211007.235	POS Data
20211007.236	POS Data
20211007.237	POS Data
20211007.238	POS Data
20211007.239	POS Data
20211007.240	POS Data
20211007.241	POS Data
20211007.242	POS Data
20211007.243	POS Data
20211007.244	POS Data
20211007.245	POS Data
20211007.246	POS Data
20211007.247	POS Data
20211007.248	POS Data
20211007.249	POS Data
20211007.250	POS Data
20211007.251	POS Data
20211007.252	POS Data
20211007.253	POS Data
20211007.254	POS Data
20211007.255	POS Data
20211007.256	POS Data
20211007.257	POS Data
20211007.258	POS Data
20211007.259	POS Data
20211007.260	POS Data

File name	File type
20211007.261	POS Data
20211007.262	POS Data
20211007.263	POS Data
20211007.264	POS Data
20211007.265	POS Data
20211007.266	POS Data
20211007.267	POS Data
20211007.268	POS Data
20211007.269	POS Data
20211007.270	POS Data
20211007.271	POS Data
20211007.272	POS Data
20211007.273	POS Data
20211007.274	POS Data
20211007.275	POS Data
20211007.276	POS Data
20211007.277	POS Data
20211007.278	POS Data
20211007.279	POS Data
20211007.280	POS Data
20211007.281	POS Data
20211007.282	POS Data
20211007.283	POS Data
20211007.284	POS Data
20211007.285	POS Data
20211007.286	POS Data
20211007.287	POS Data
20211007.288	POS Data
20211007.289	POS Data
20211007.290	POS Data
20211007.291	POS Data
20211007.292	POS Data
20211007.293	POS Data
20211007.294	POS Data
20211007.295	POS Data
20211007.296	POS Data
20211007.297	POS Data
20211007.298	POS Data
20211007.299	POS Data
20211007.300	POS Data

Input Files

File Name	File Type
Ephm2800.21g	GLONASS Broadcast Ephemeris
Ephm2800.21n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_211007_A_5060420_nad2011_FINAL.out	SBET Trajectory File
sbet_211007_A_5060420_nad2011_FINAL.shp	Shapefile Export Output

Rover Data Summary

First raw data file	20211007.202		
Last raw data file	20211007.300		
Start GPS week	2178		
Start time	398592.975 (10/07/2021 14:43:12)		
End time	414735.828 (10/07/2021 19:12:15)		
Start of fine alignment	398613.520 (10/07/2021 14:43:33)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
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)	-0.497	-0.045	-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

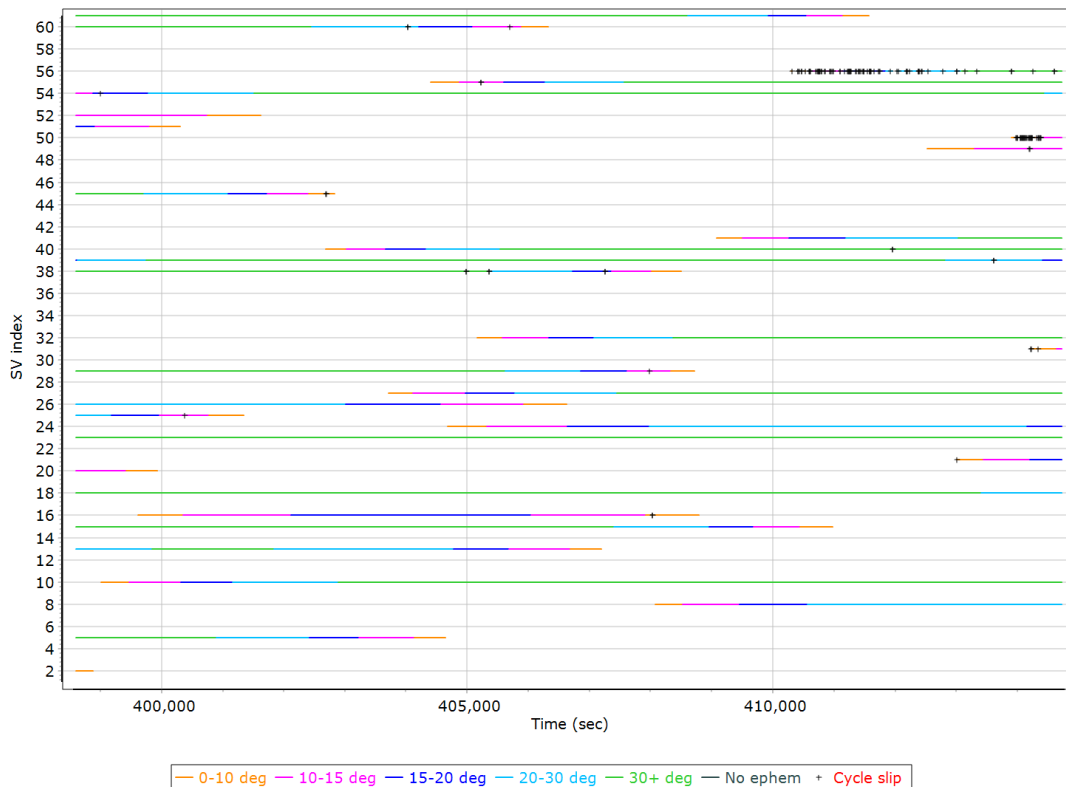
Rover Data QC

Raw IMU Import QC Summary

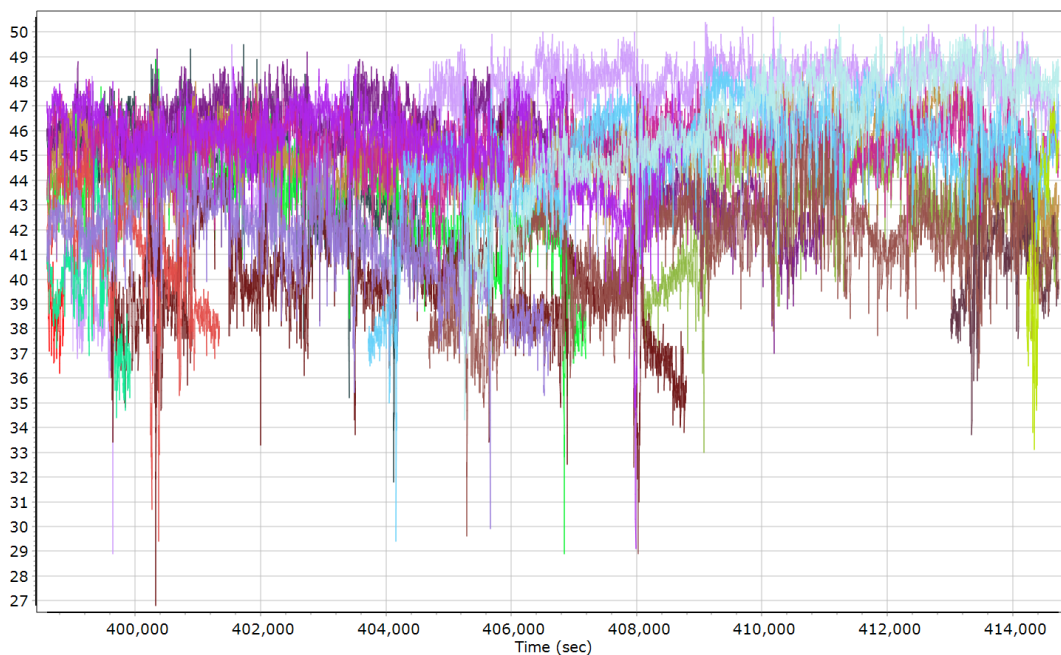
IMU data input file	imu_211007_A_5060420_nad2011_FINAL.dat
IMU data check log file	imudt_211007_A_5060420_nad2011_FINAL.log
IMU Records Processed	3227999
Termination Status	Normal
IMU Anomalies	0

Primary Observables & Satellite Data

GPS/GLONASS L1 Satellite Lock/Elevation

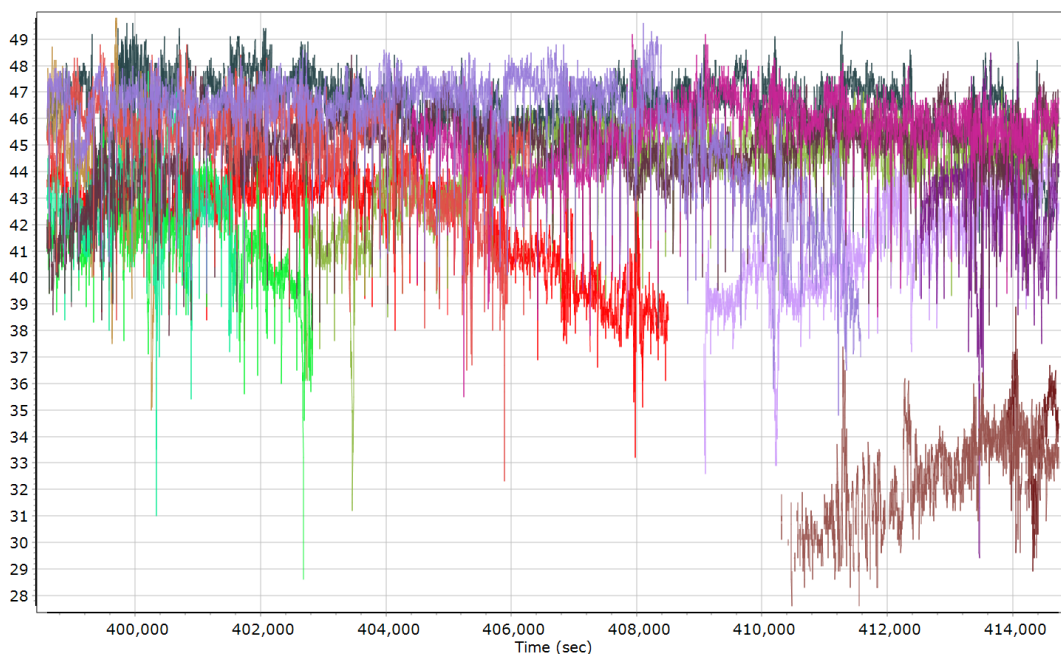


GPS L1 SNR



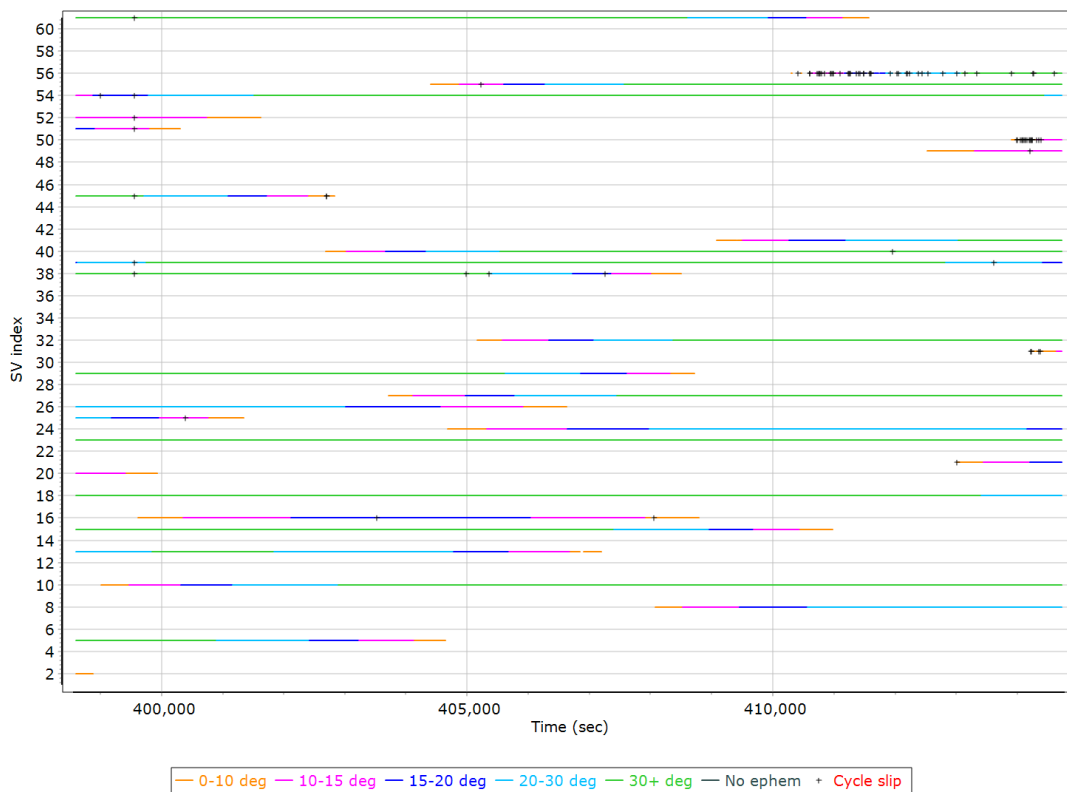
- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 02 L1 SNR (dB/Hz) | GPS PRN 05 L1 SNR (dB/Hz) | GPS PRN 08 L1 SNR (dB/Hz) | GPS PRN 10 L1 SNR (dB/Hz) |
| GPS PRN 13 L1 SNR (dB/Hz) | GPS PRN 15 L1 SNR (dB/Hz) | GPS PRN 16 L1 SNR (dB/Hz) | GPS PRN 18 L1 SNR (dB/Hz) |
| GPS PRN 20 L1 SNR (dB/Hz) | GPS PRN 21 L1 SNR (dB/Hz) | GPS PRN 23 L1 SNR (dB/Hz) | GPS PRN 24 L1 SNR (dB/Hz) |
| GPS PRN 25 L1 SNR (dB/Hz) | GPS PRN 26 L1 SNR (dB/Hz) | GPS PRN 27 L1 SNR (dB/Hz) | GPS PRN 29 L1 SNR (dB/Hz) |
| GPS PRN 31 L1 SNR (dB/Hz) | GPS PRN 32 L1 SNR (dB/Hz) | | |

GLONASS L1 SNR

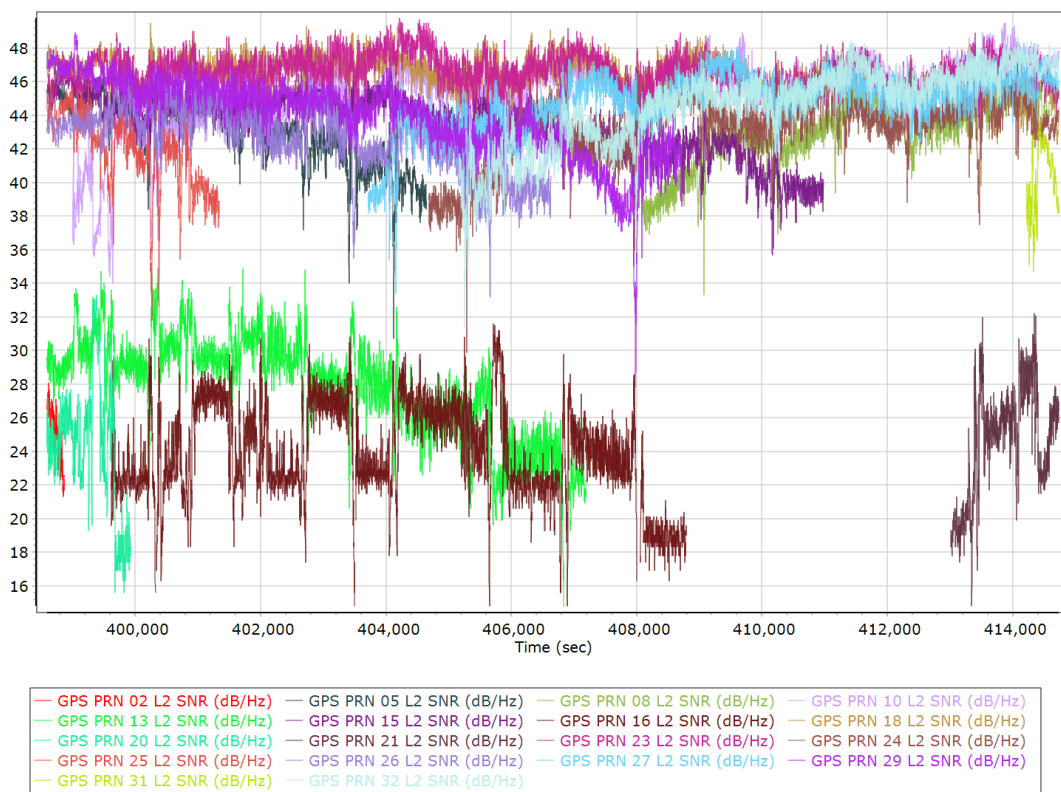


- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 01 L1 SNR (dB/Hz) | GLONASS 02 L1 SNR (dB/Hz) | GLONASS 03 L1 SNR (dB/Hz) |
| GLONASS 04 L1 SNR (dB/Hz) | GLONASS 08 L1 SNR (dB/Hz) | GLONASS 12 L1 SNR (dB/Hz) |
| GLONASS 13 L1 SNR (dB/Hz) | GLONASS 14 L1 SNR (dB/Hz) | GLONASS 15 L1 SNR (dB/Hz) |
| GLONASS 17 L1 SNR (dB/Hz) | GLONASS 18 L1 SNR (dB/Hz) | GLONASS 19 L1 SNR (dB/Hz) |
| GLONASS 23 L1 SNR (dB/Hz) | GLONASS 24 L1 SNR (dB/Hz) | |

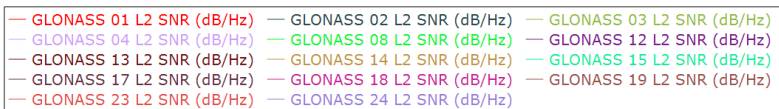
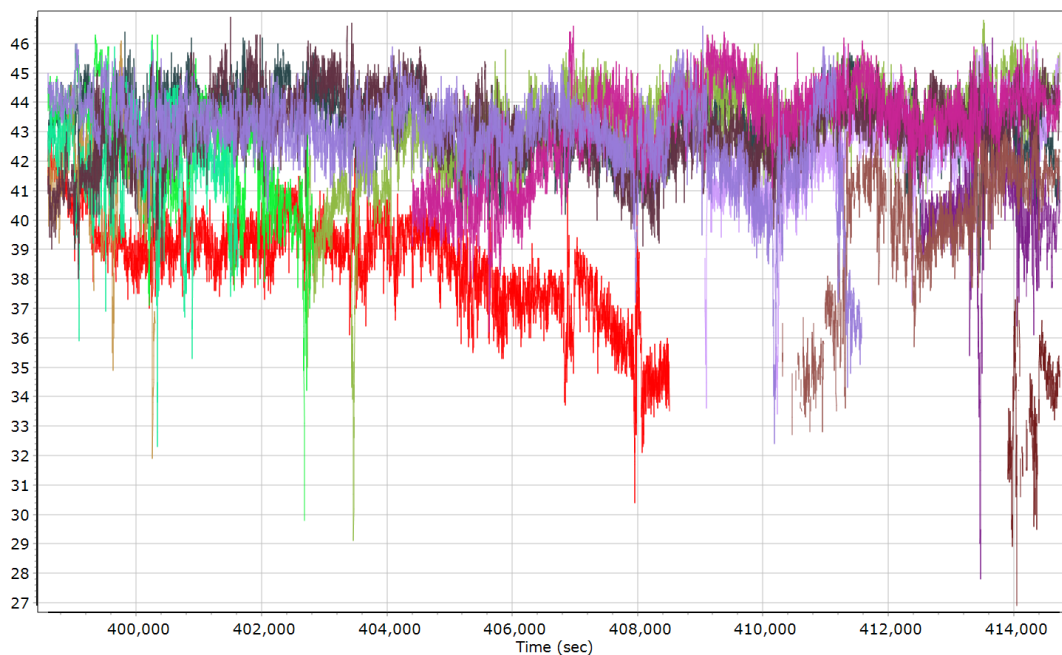
GPS/GLONASS L2 Satellite Lock/Elevation



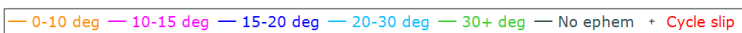
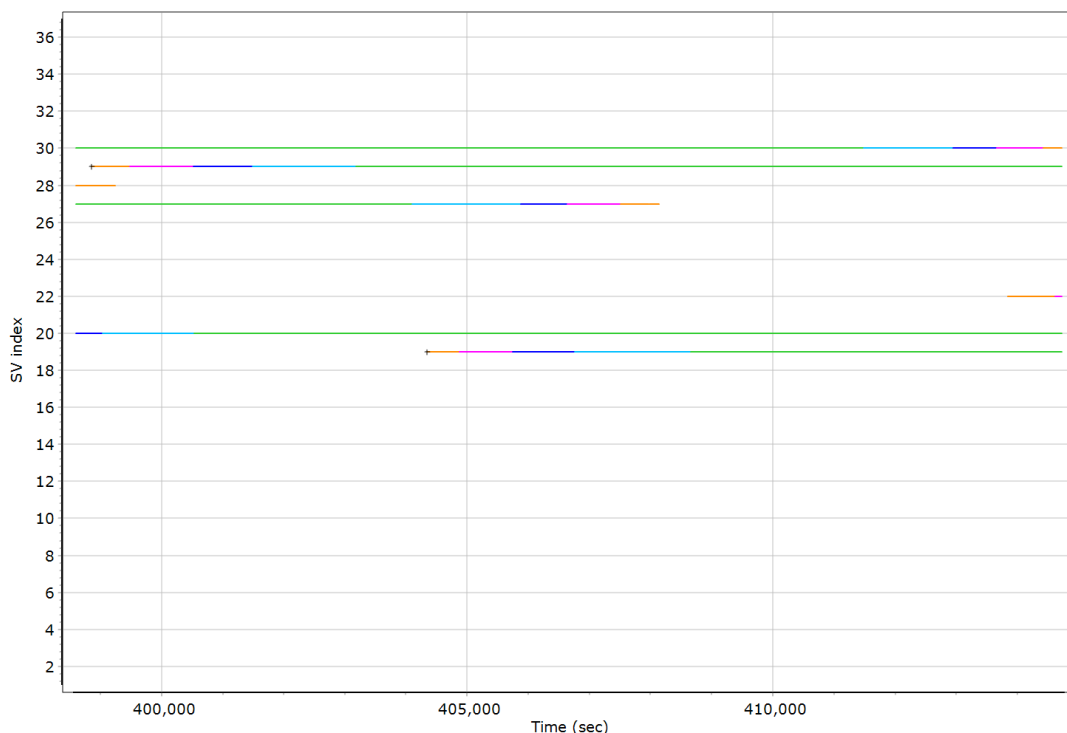
GPS L2 SNR



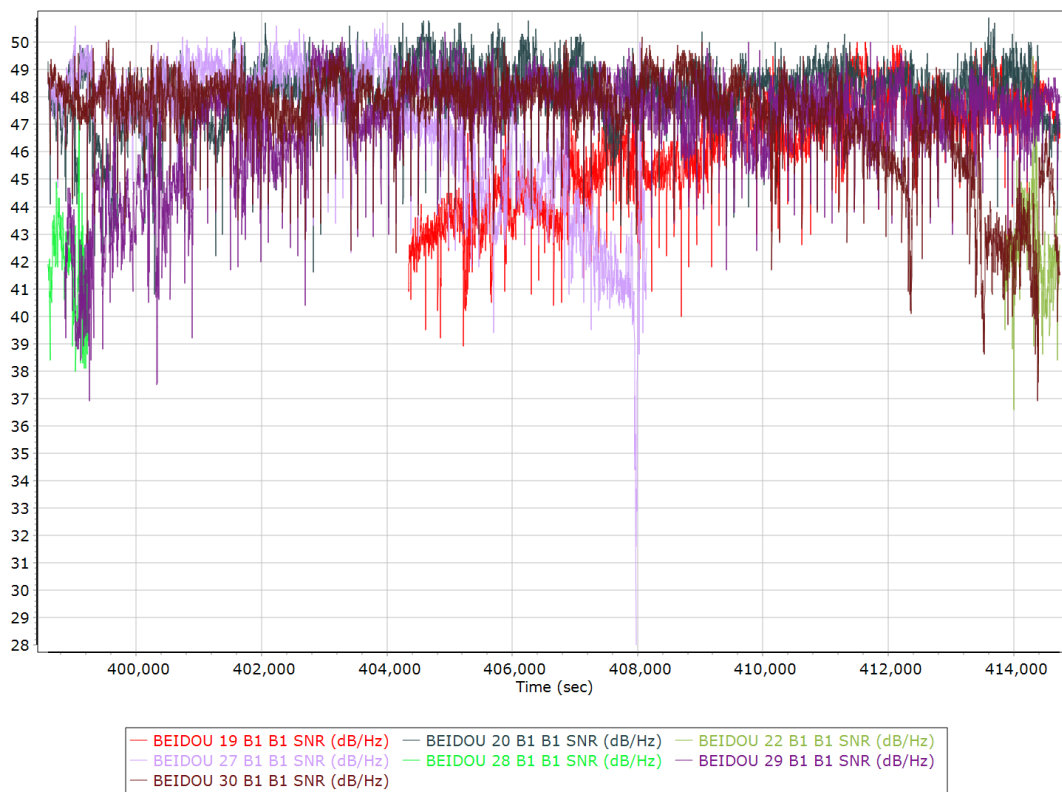
GLONASS L2 SNR



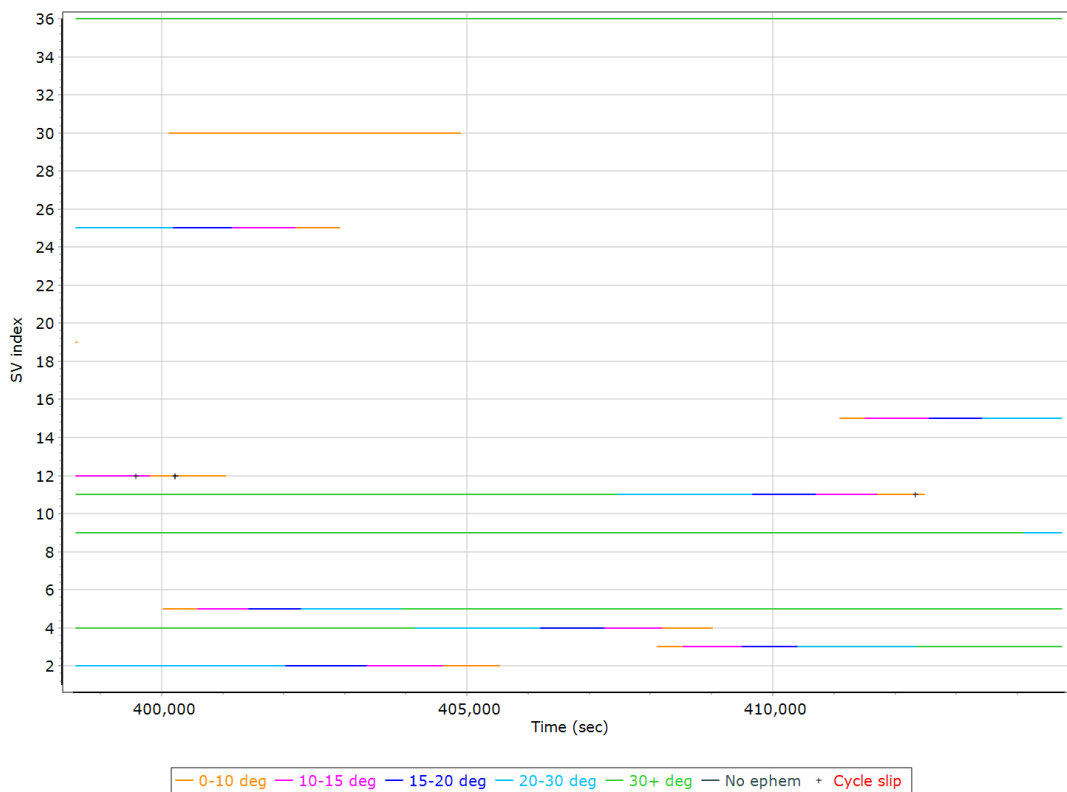
BEIDOU Satellite Lock/Elevation



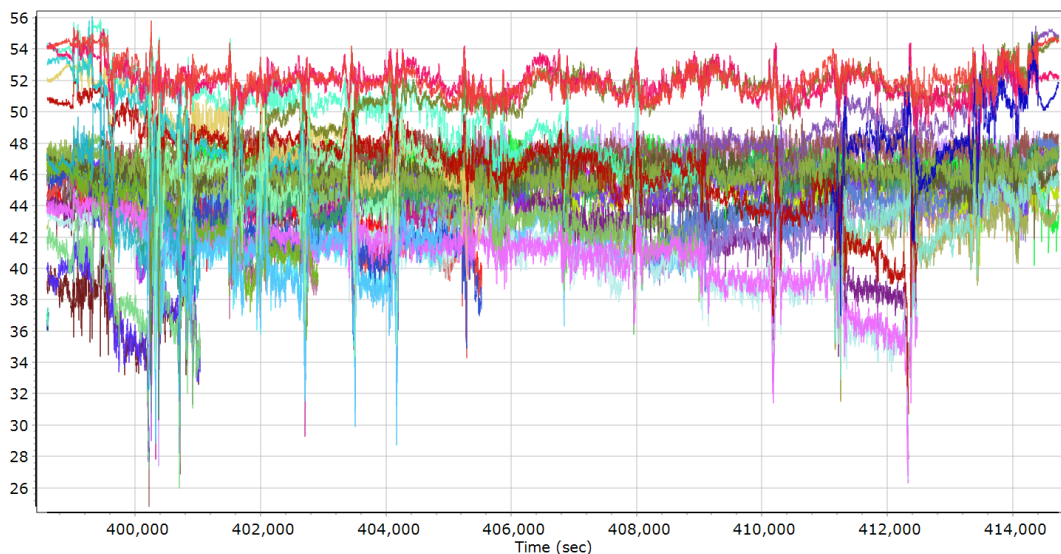
BEIDOU SNR



GALILEO Satellite Lock/Elevation



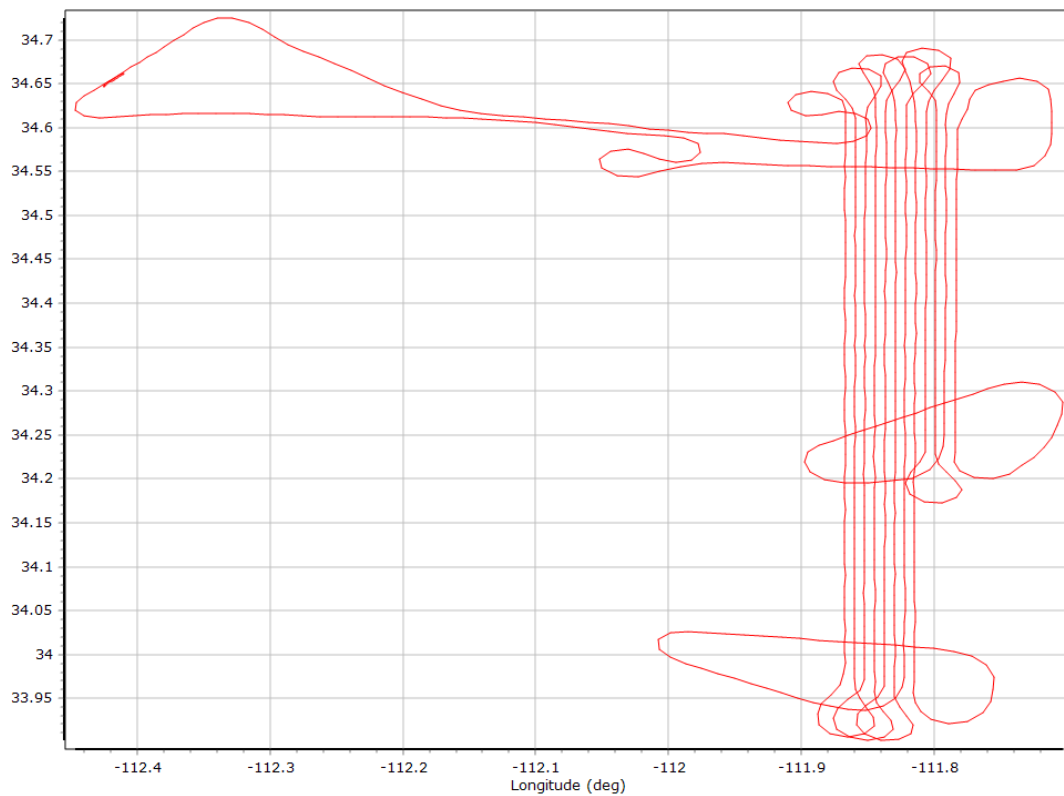
GALILEO SNR



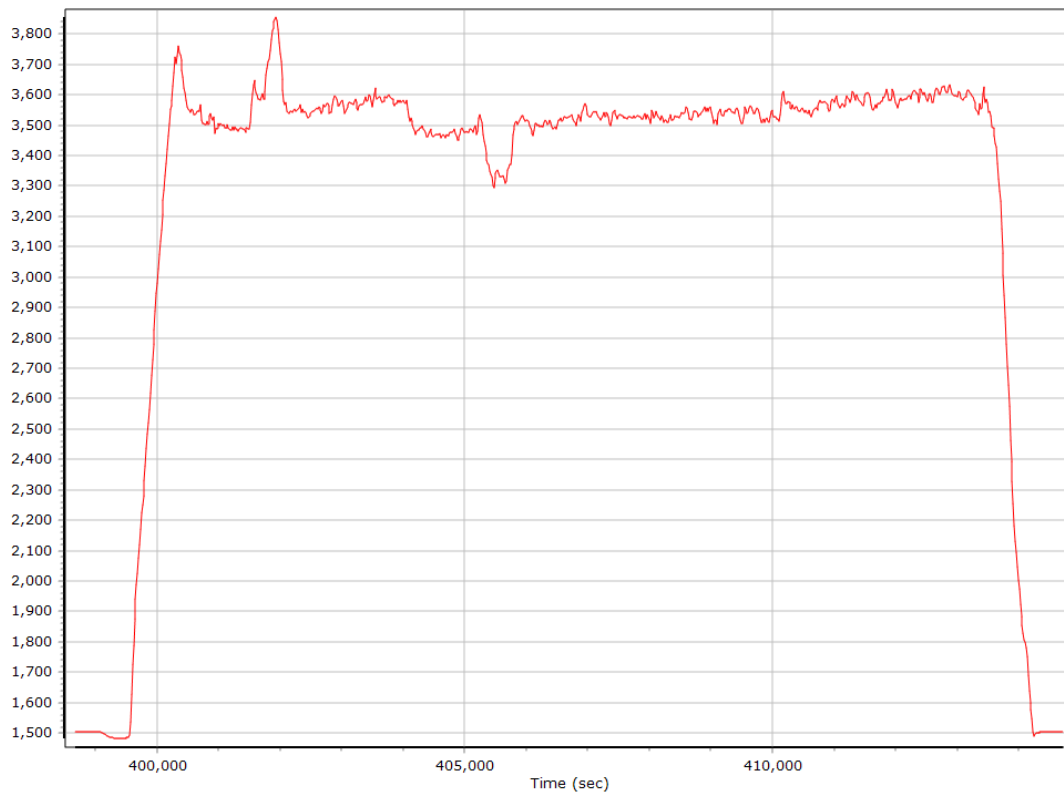
— GALILEO 02 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 03 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 04 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 05 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 09 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 11 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 12 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 15 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 19 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 25 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 30 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 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 12 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 15 L5E5A BPSK10_PD SNR (dB/Hz)

Smoothed Trajectory Information

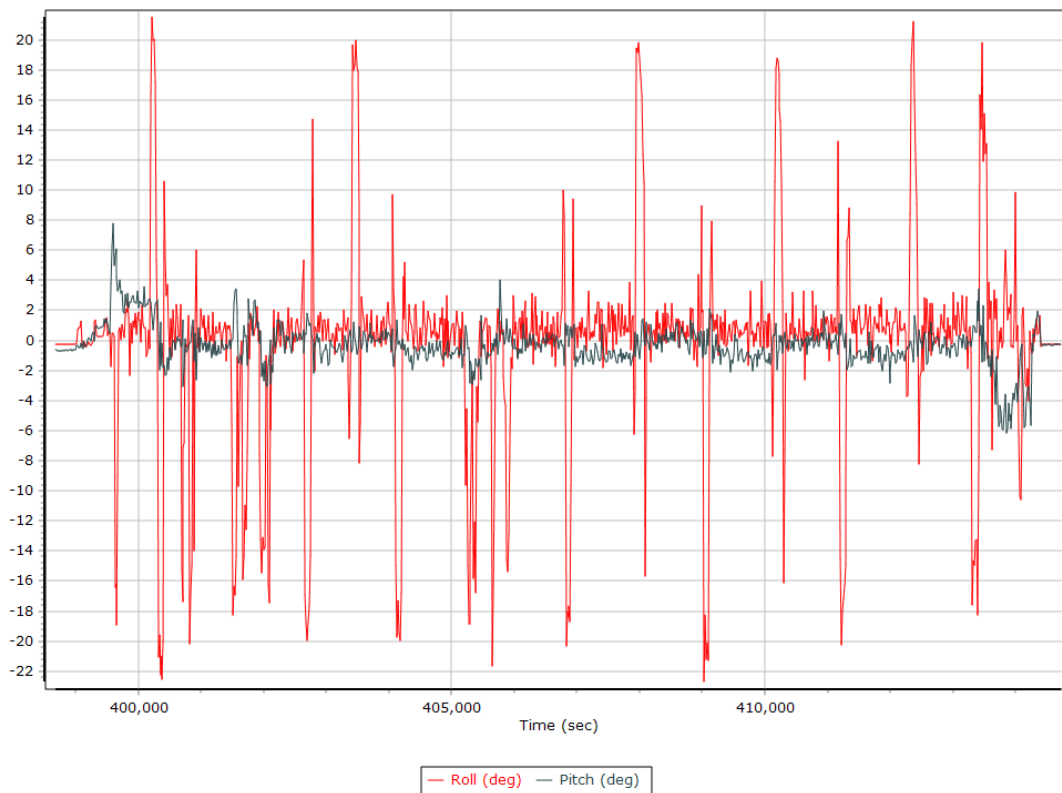
Top View



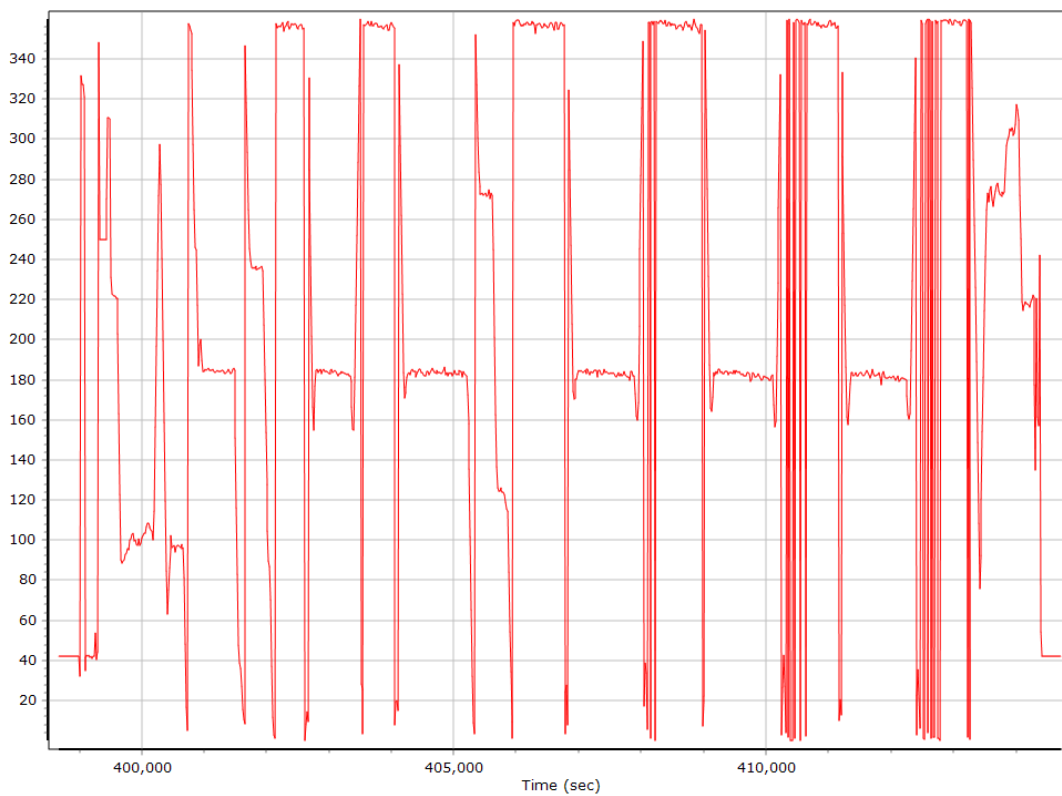
Altitude



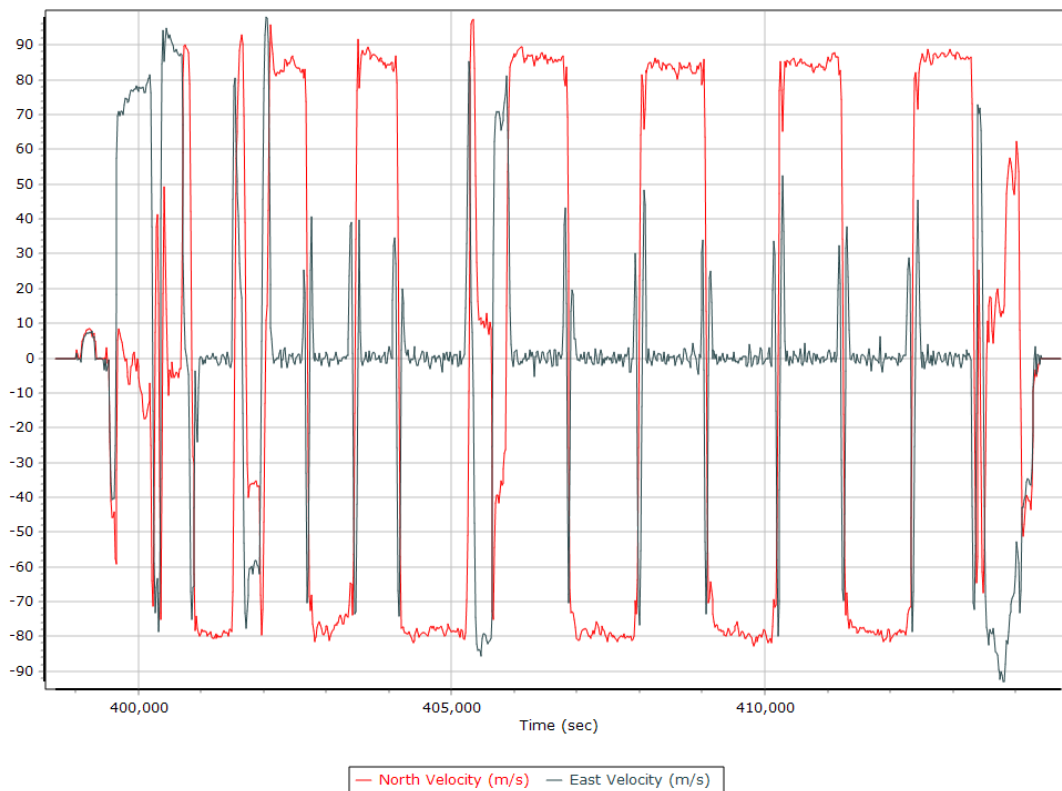
Roll/Pitch



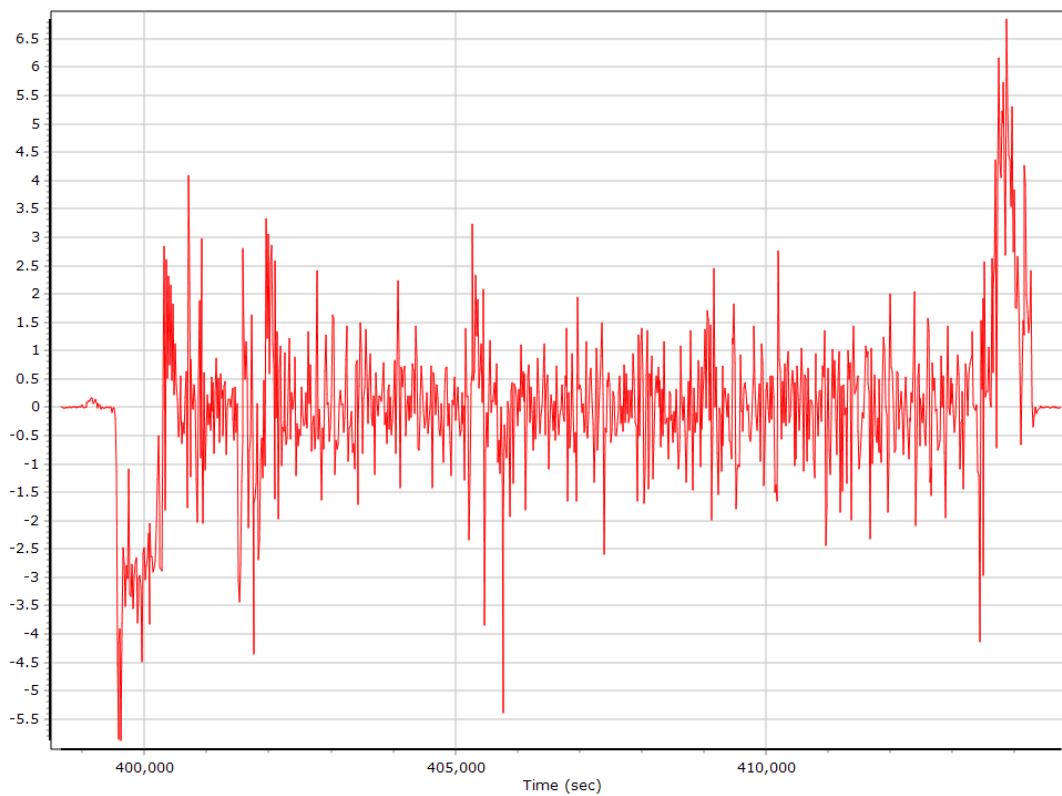
Heading



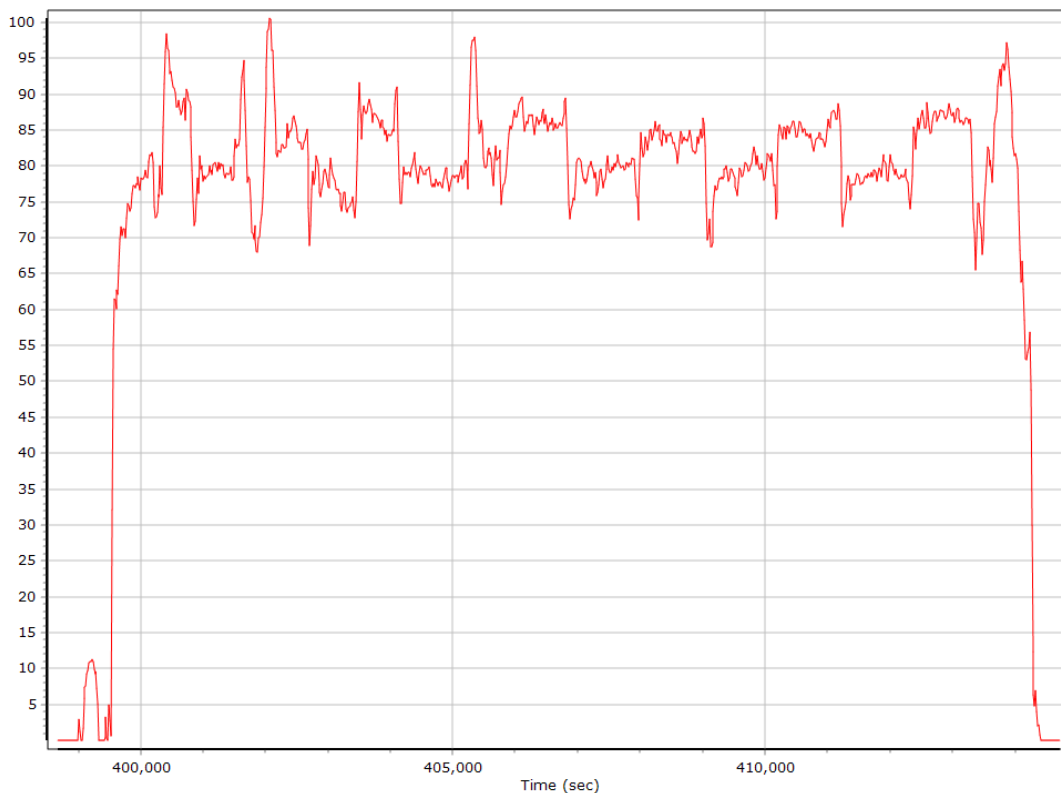
North/East Velocity



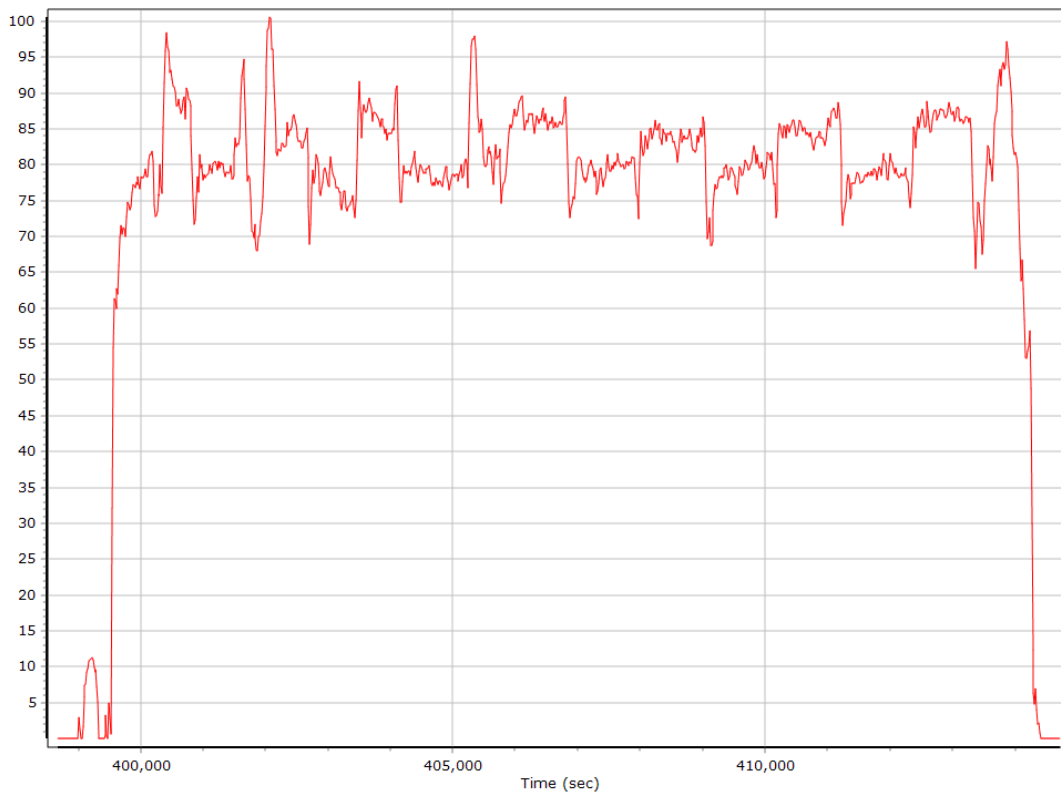
Down Velocity



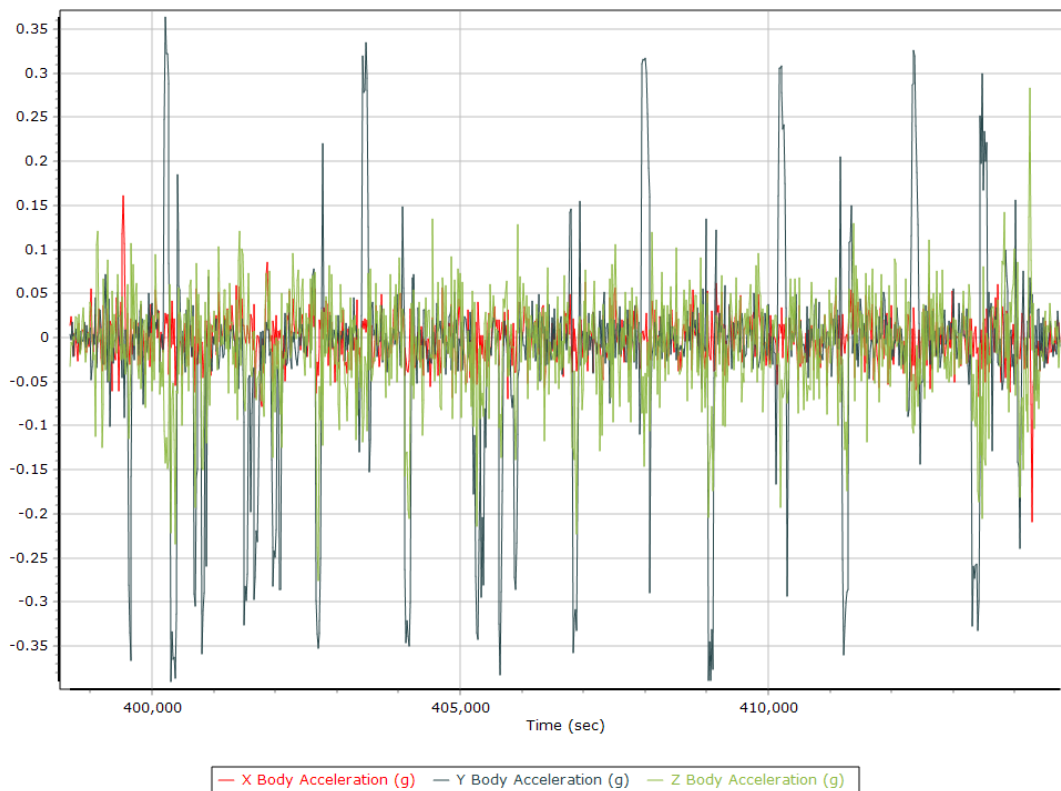
Total Speed



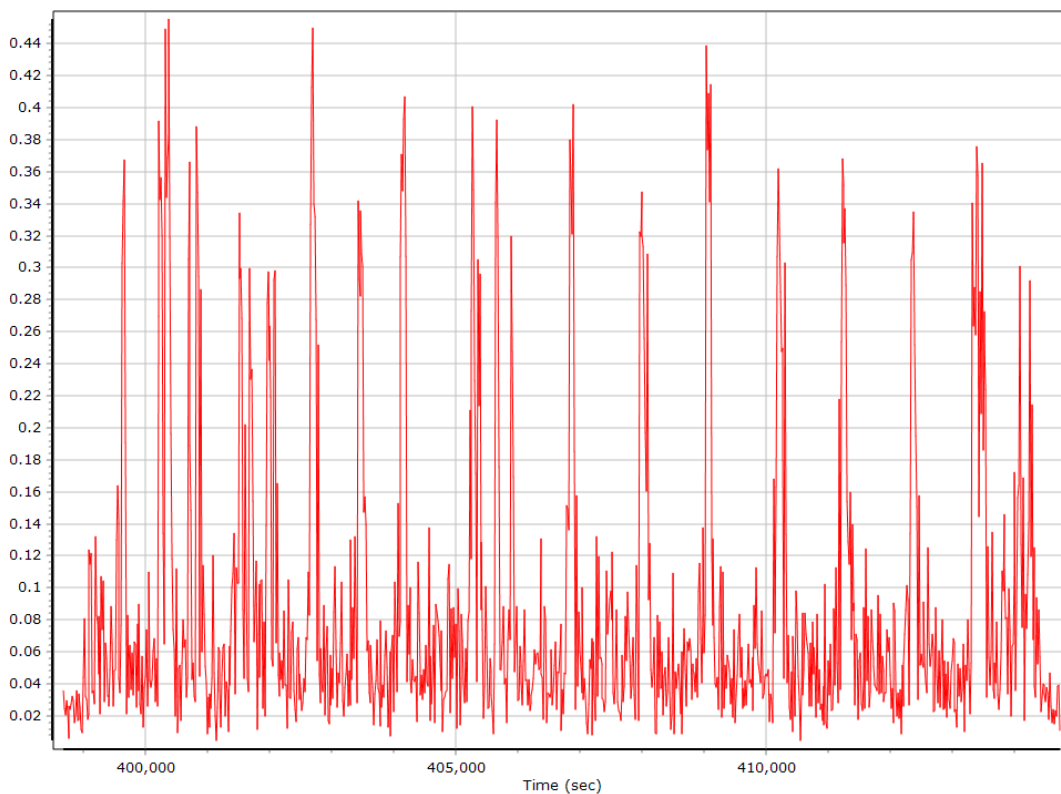
Ground Speed



Body Acceleration



Total Body Acceleration

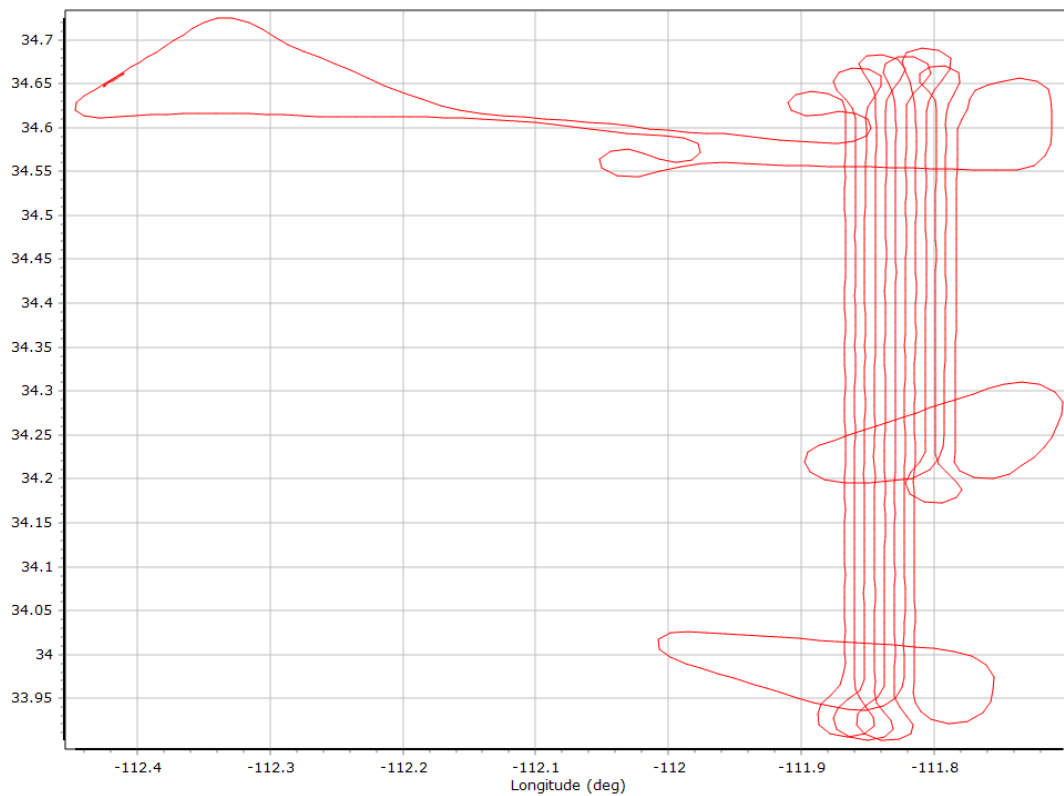


Body Angular Rate

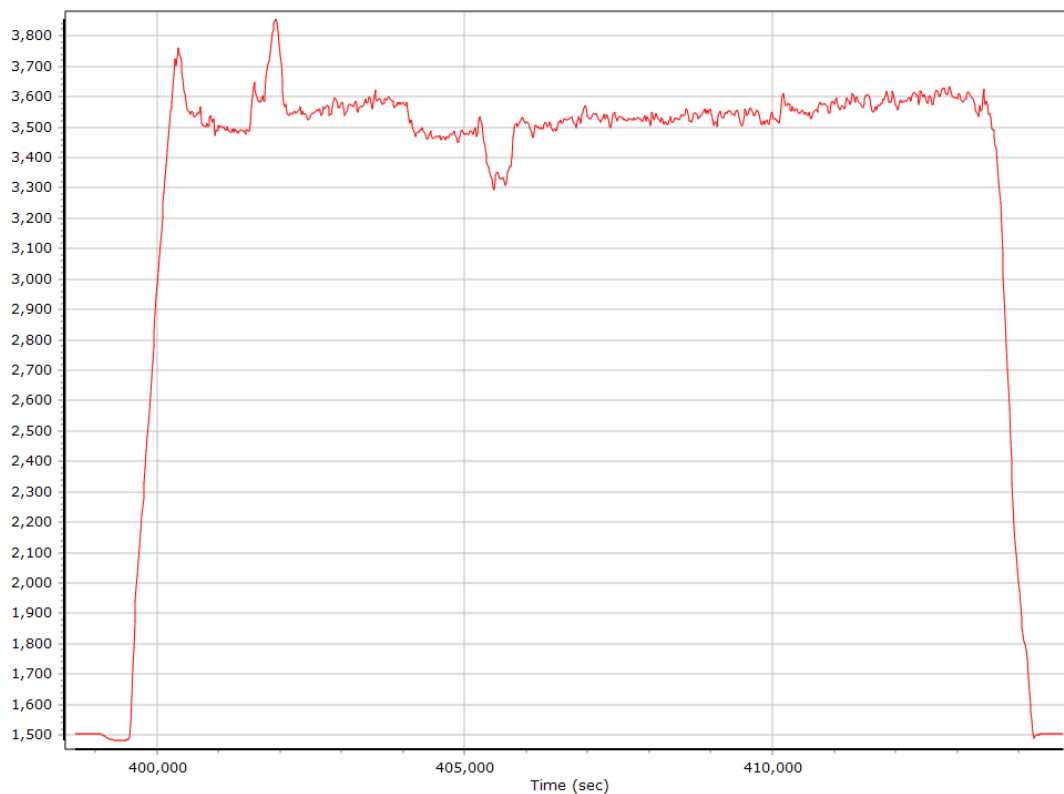


Forward Processed Trajectory Information

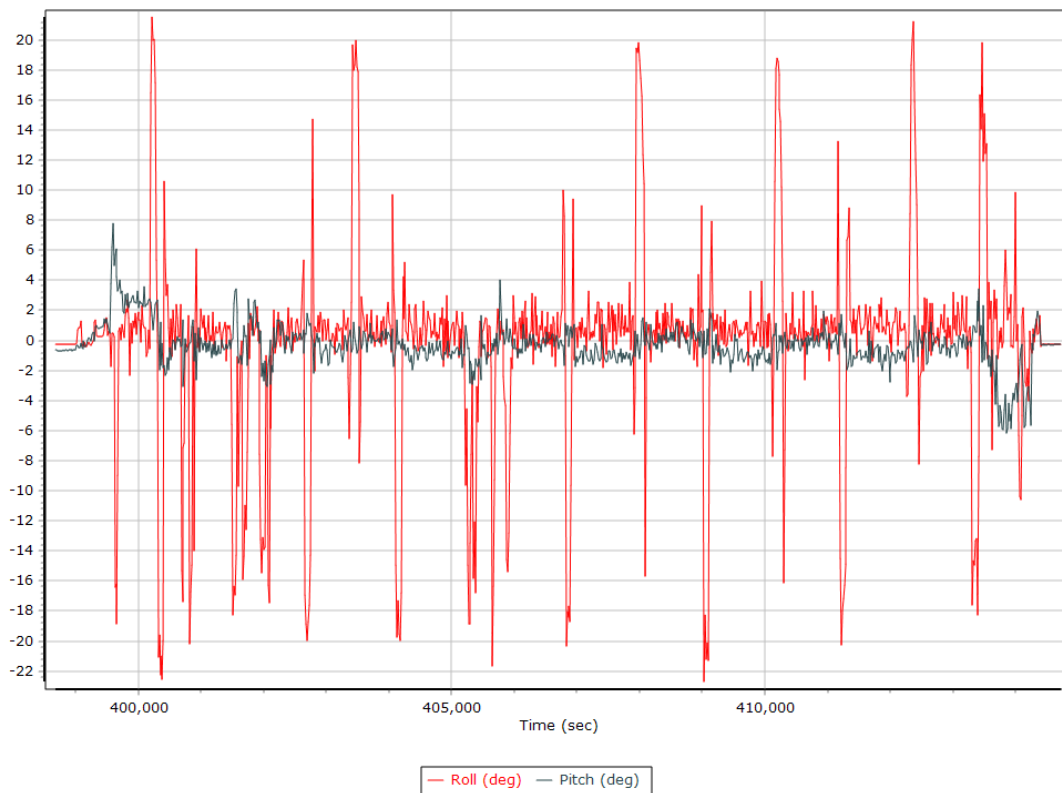
Top View



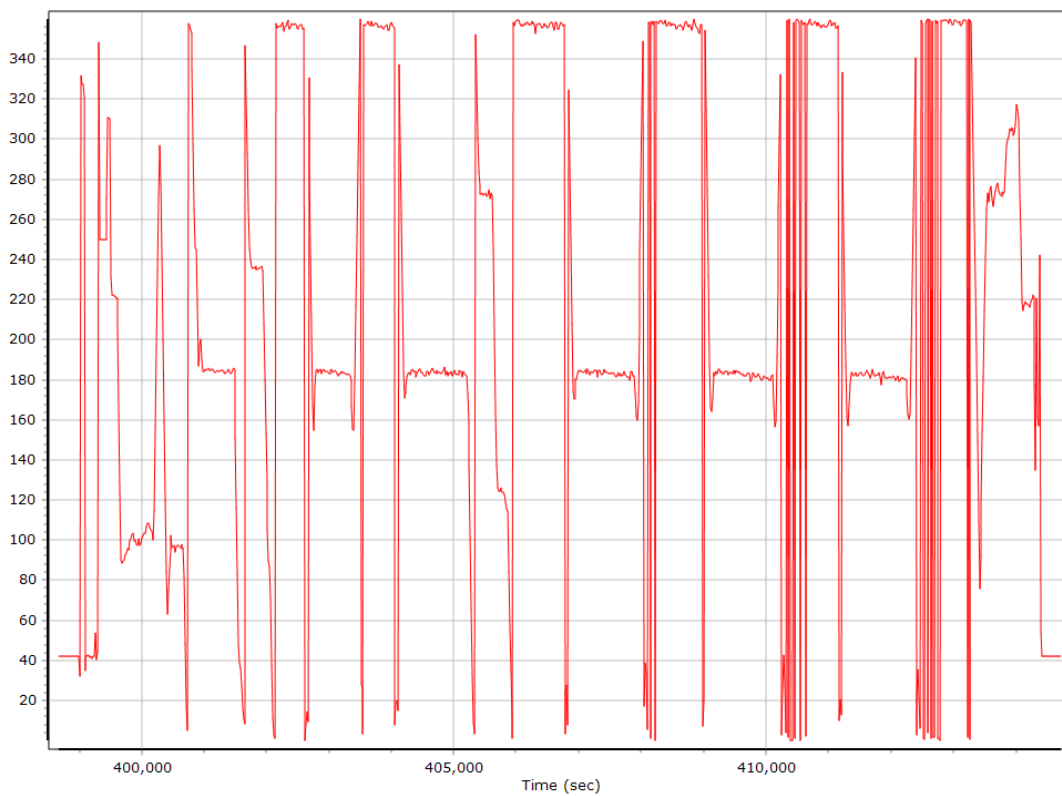
Altitude



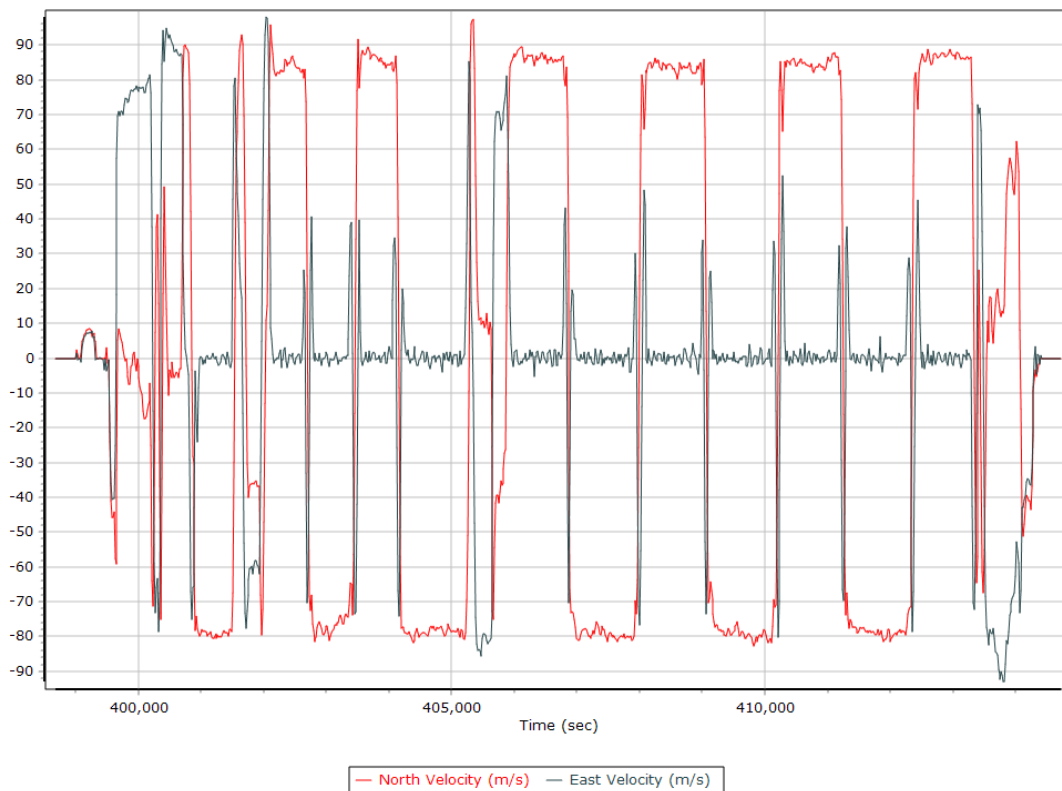
Roll/Pitch



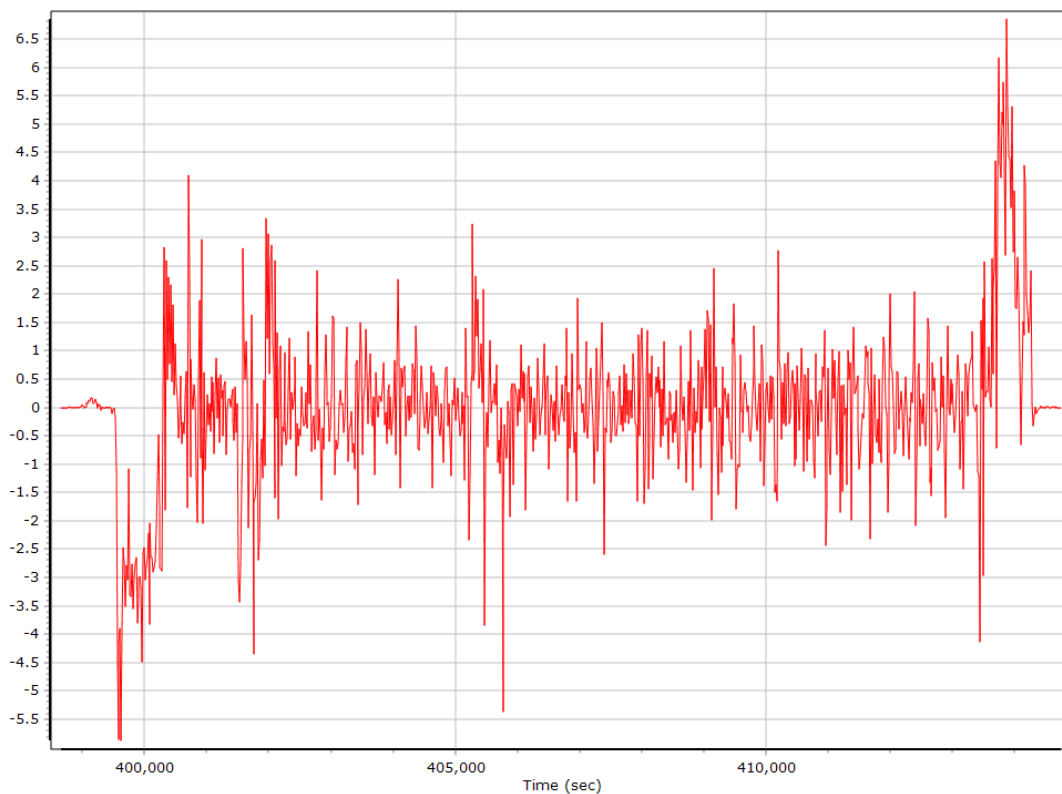
Heading



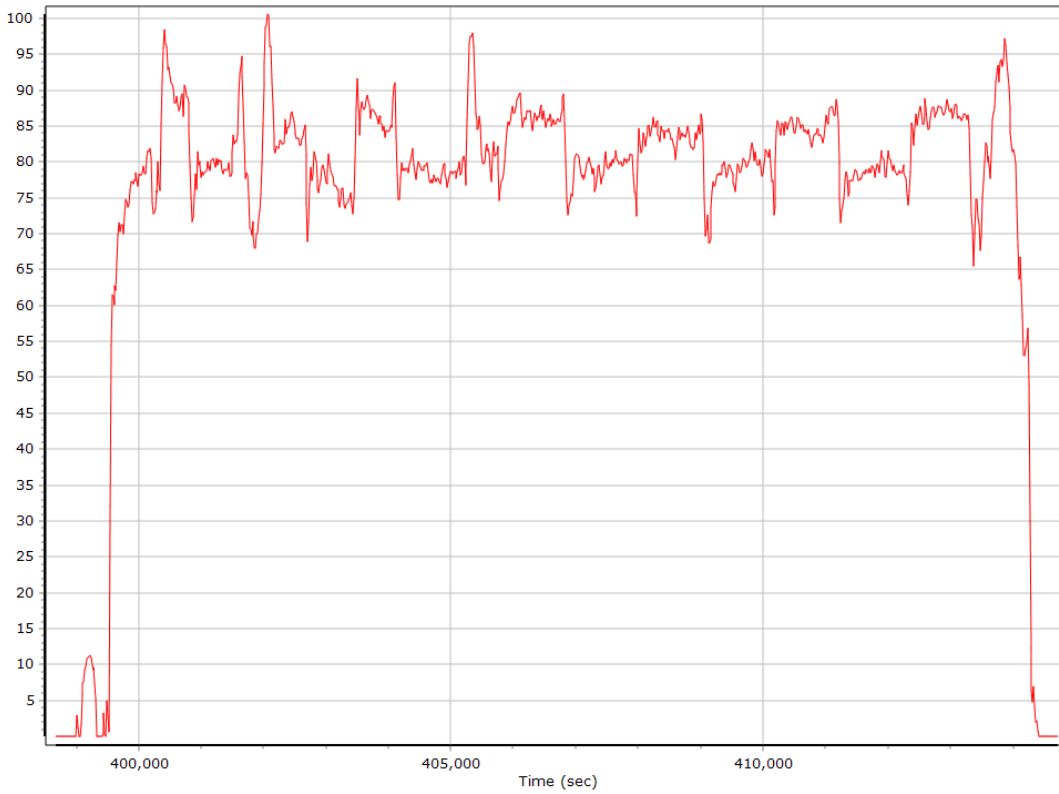
North/East Velocity



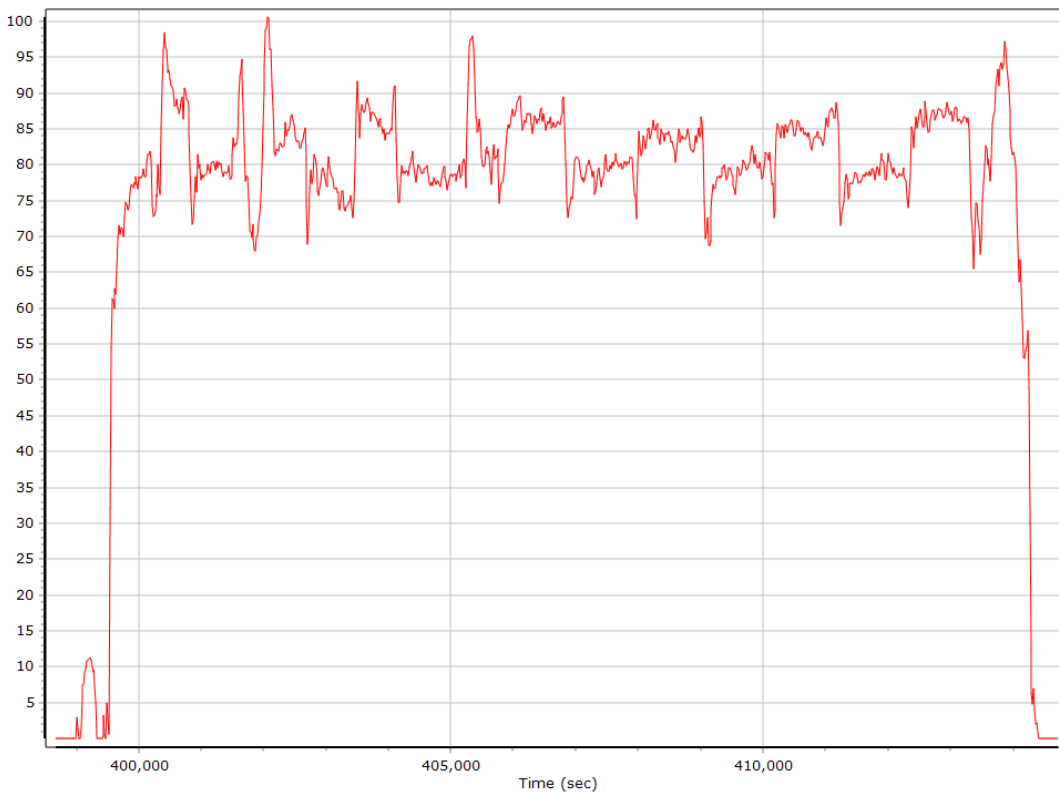
Down Velocity



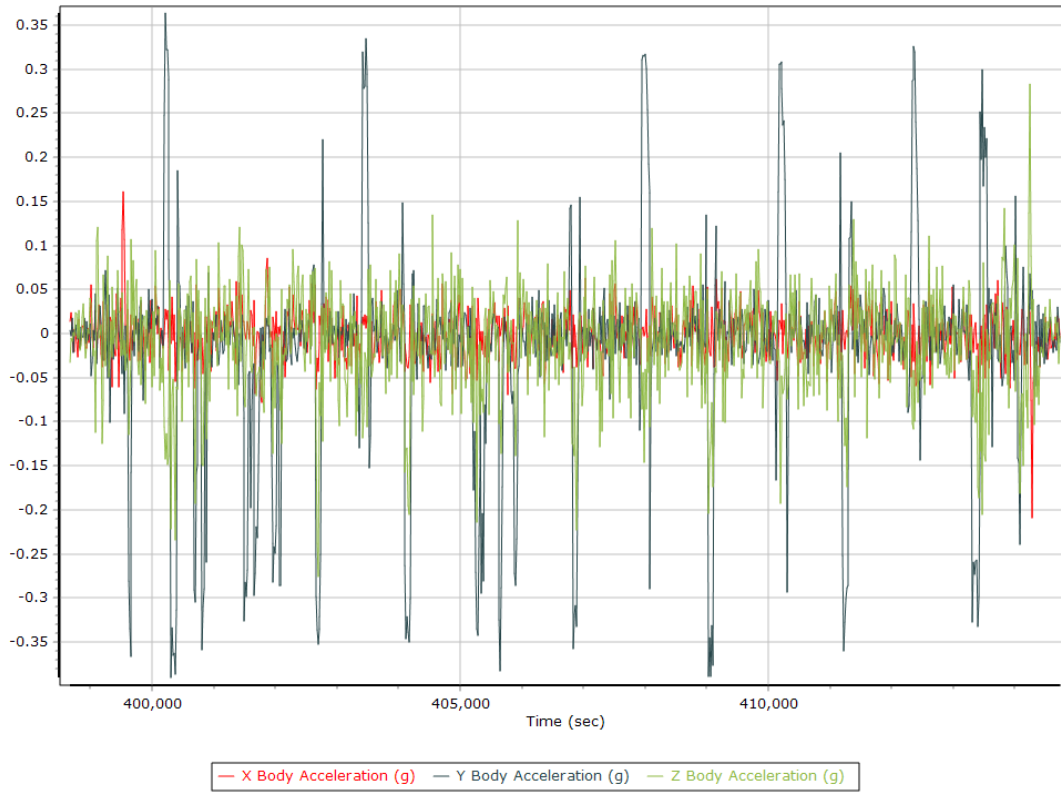
Total Speed



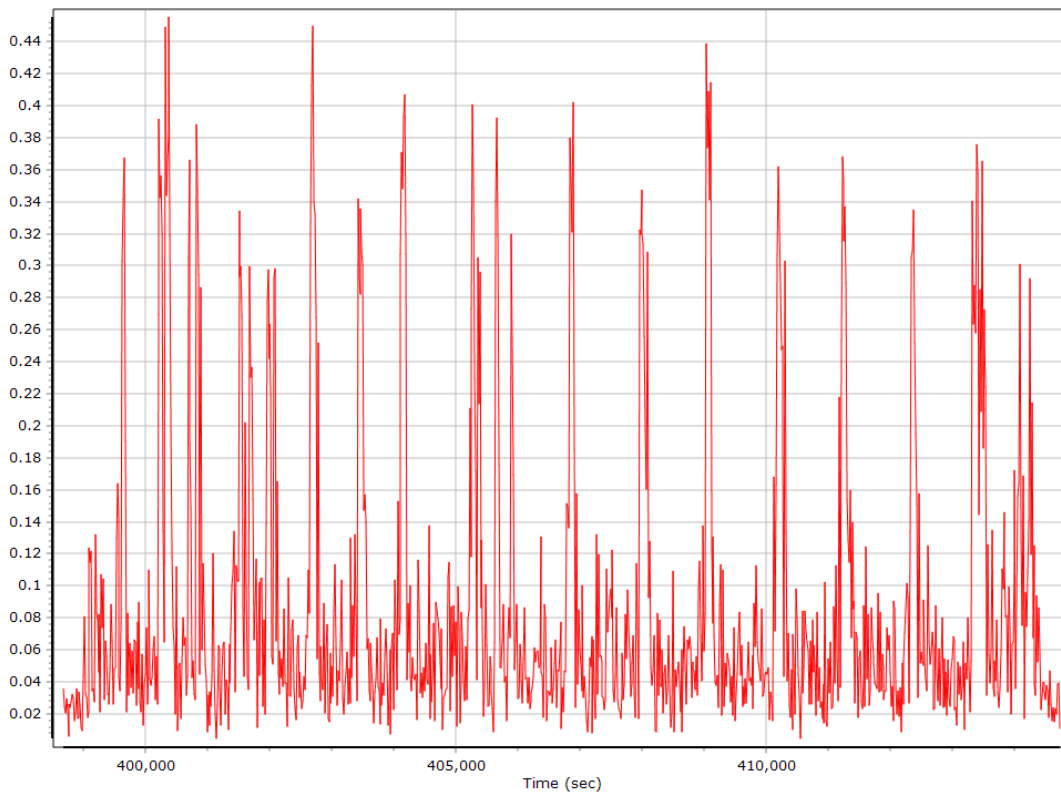
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate

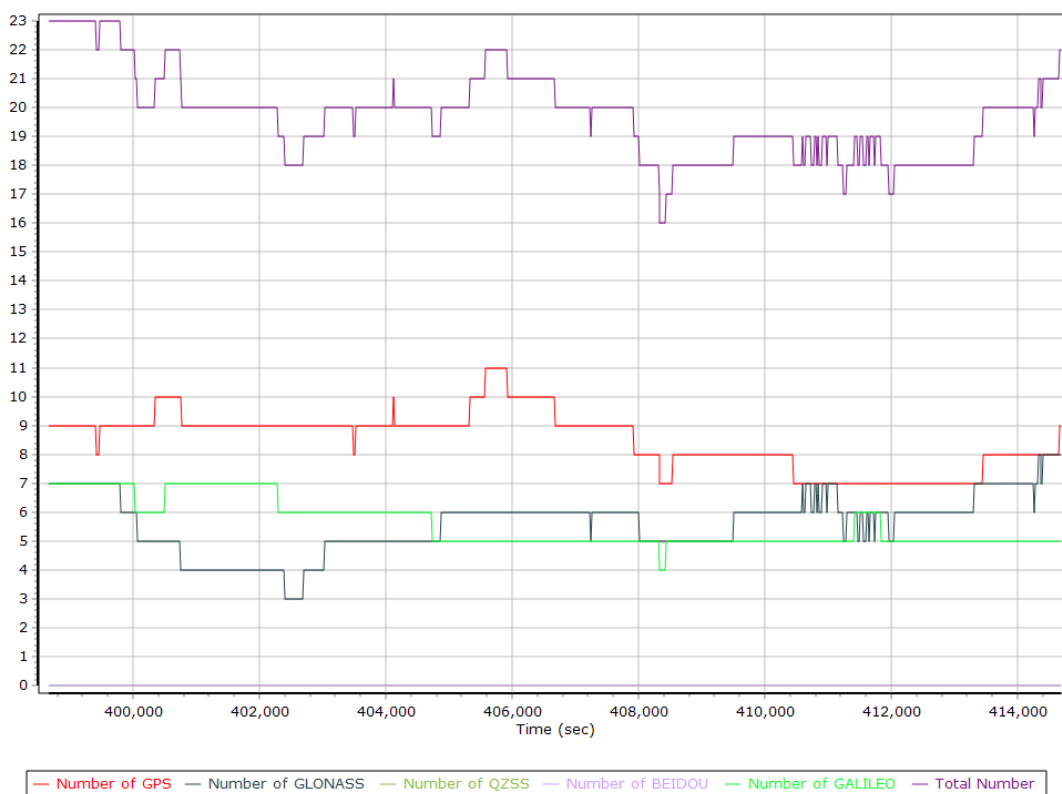


GNSS QC

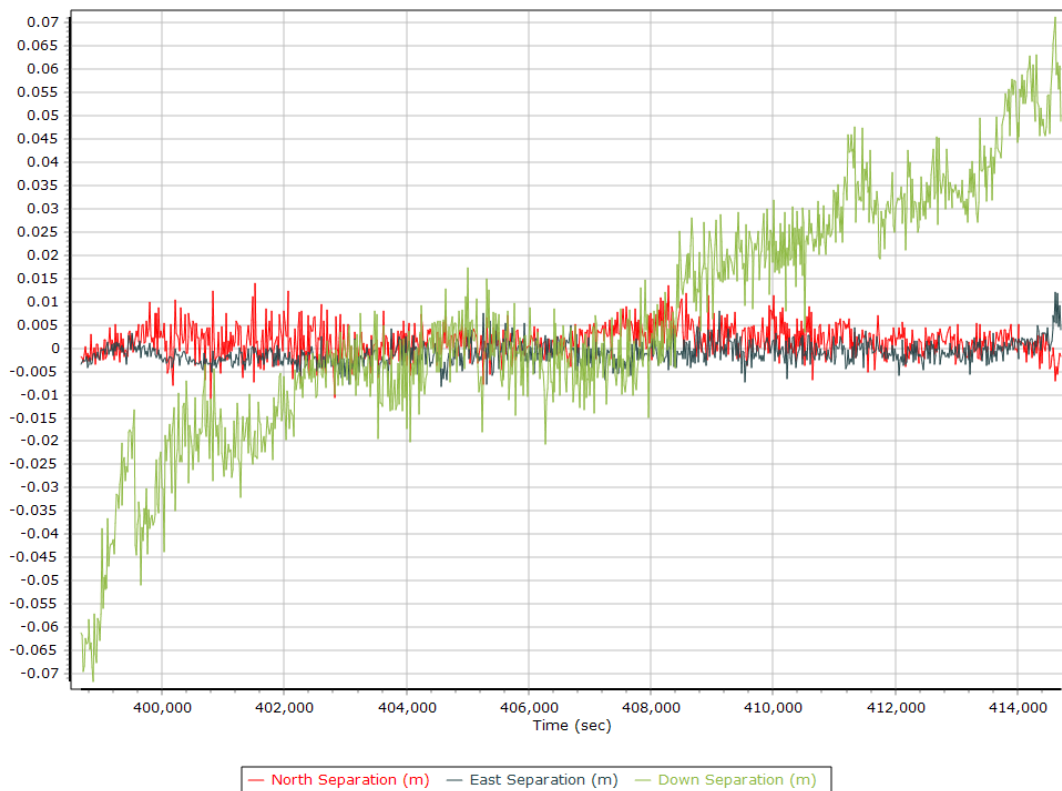
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	7	11	9
Number of GLONASS SV	0	8	6
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Number of GALILEO SV	4	7	6
Total number of SV	16	23	20
PDOP	1.01	1.63	1.21
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	16094.00	0.00	2.00
Percentage	99.99	0.00	0.01

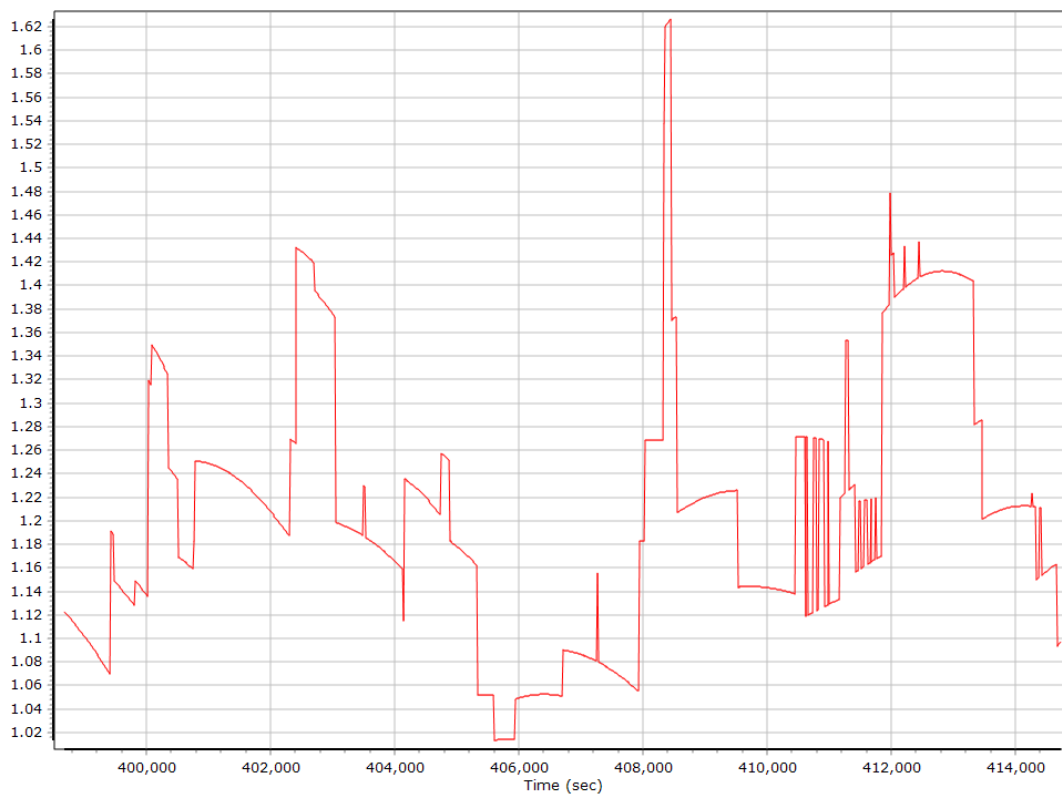
Num SVs in solution



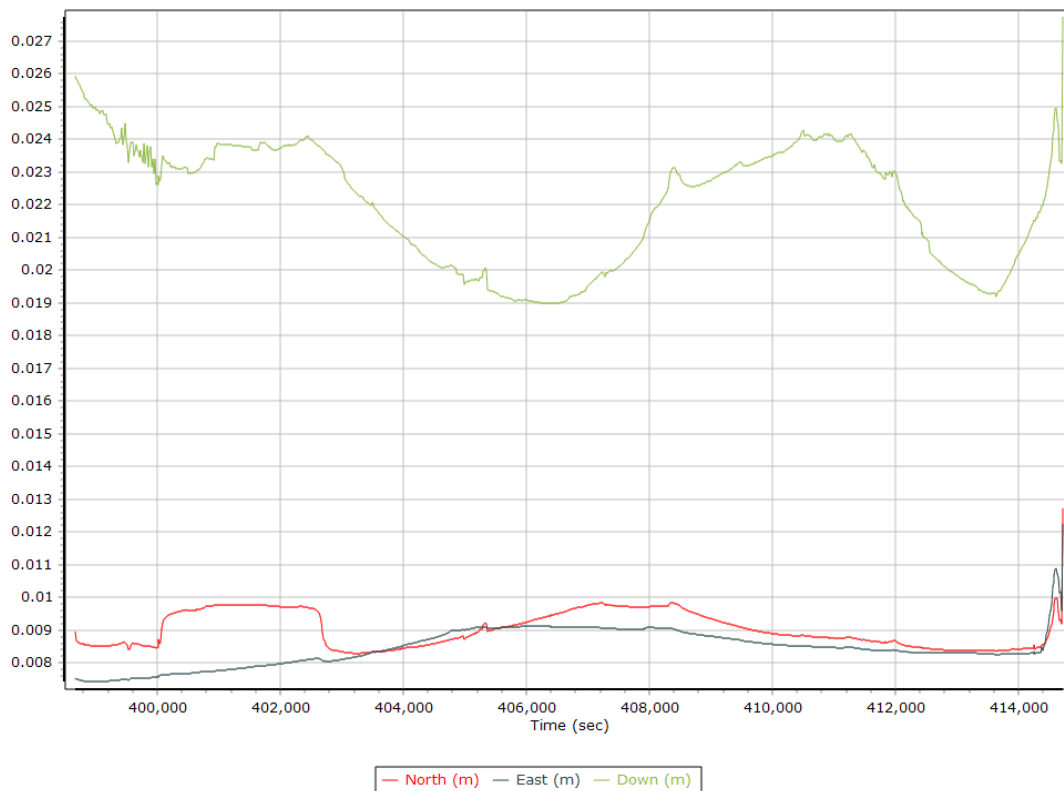
Forward/Reverse Separation



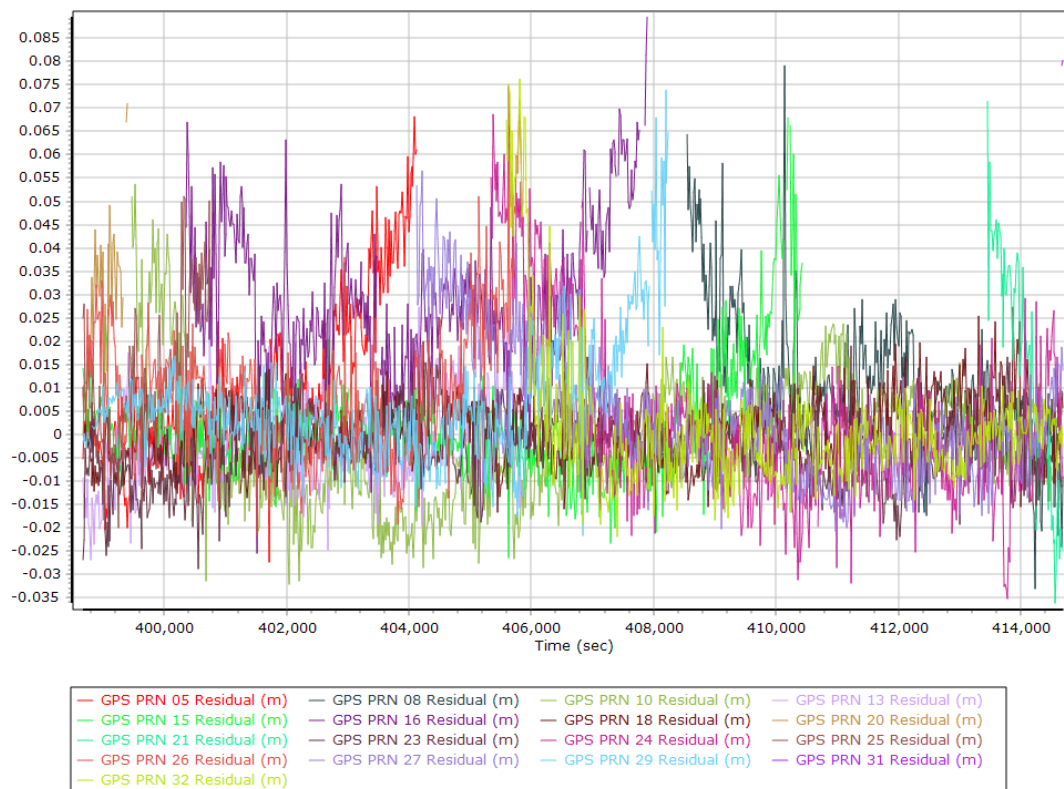
PDOP



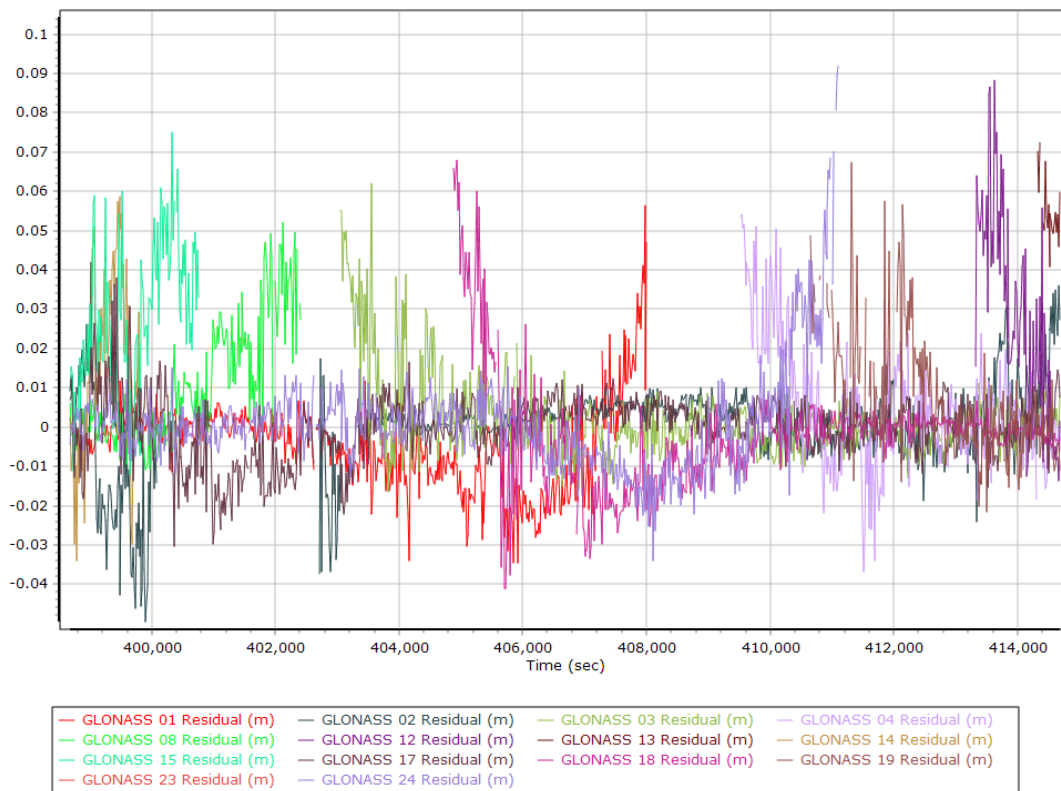
Estimated Position Accuracy



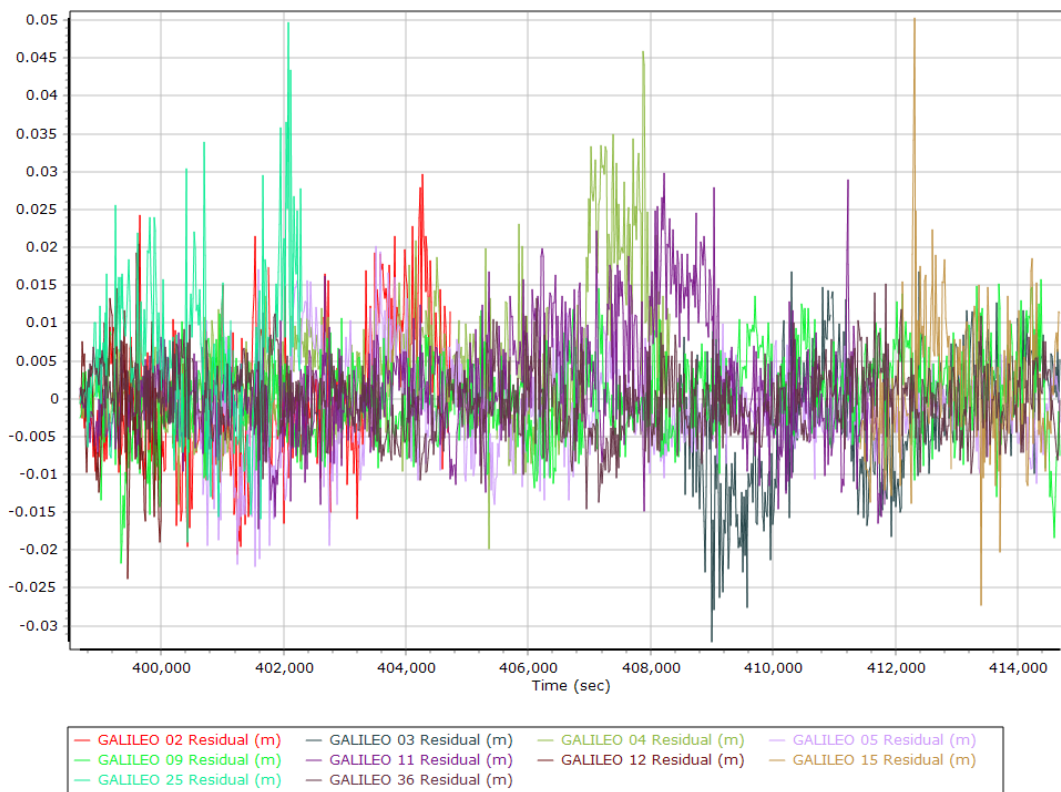
GPS Residuals



GLONASS Residuals



GALILEO Residuals



GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	398593.000 (10/07/2021 14:43:13)		
Processing end time	414736.000 (10/07/2021 19:12:16)		
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)	-0.515	-0.060	-1.223
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

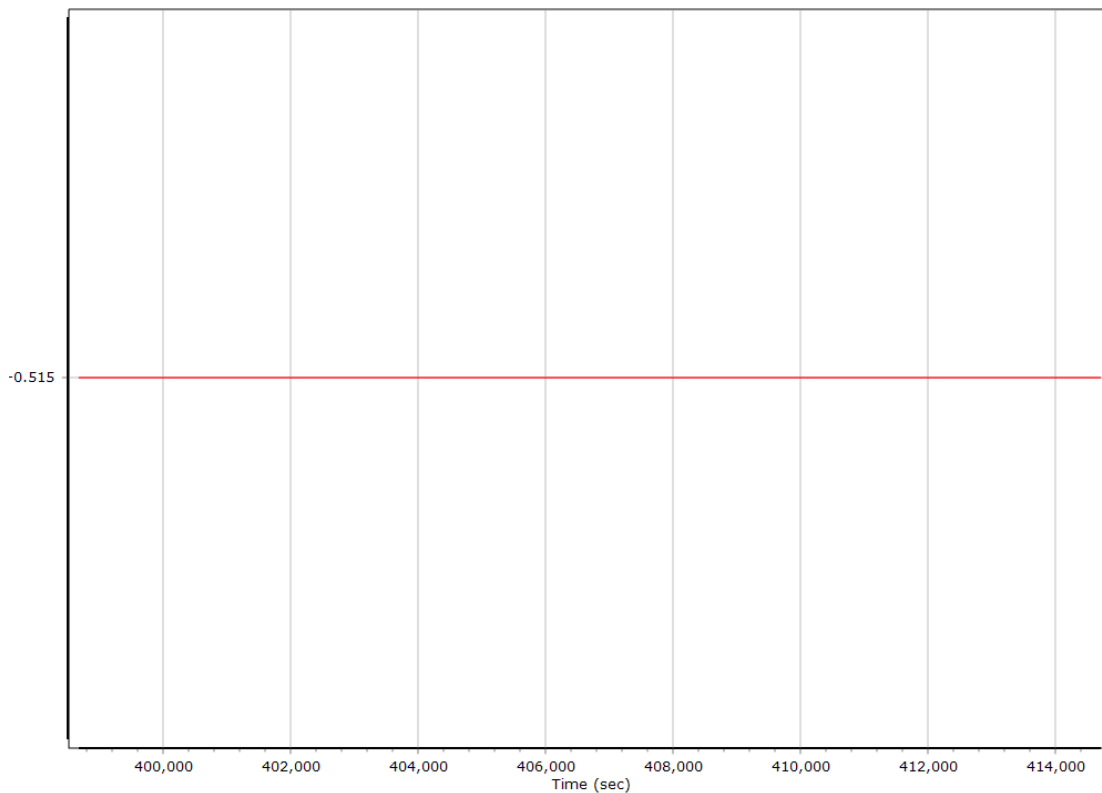
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

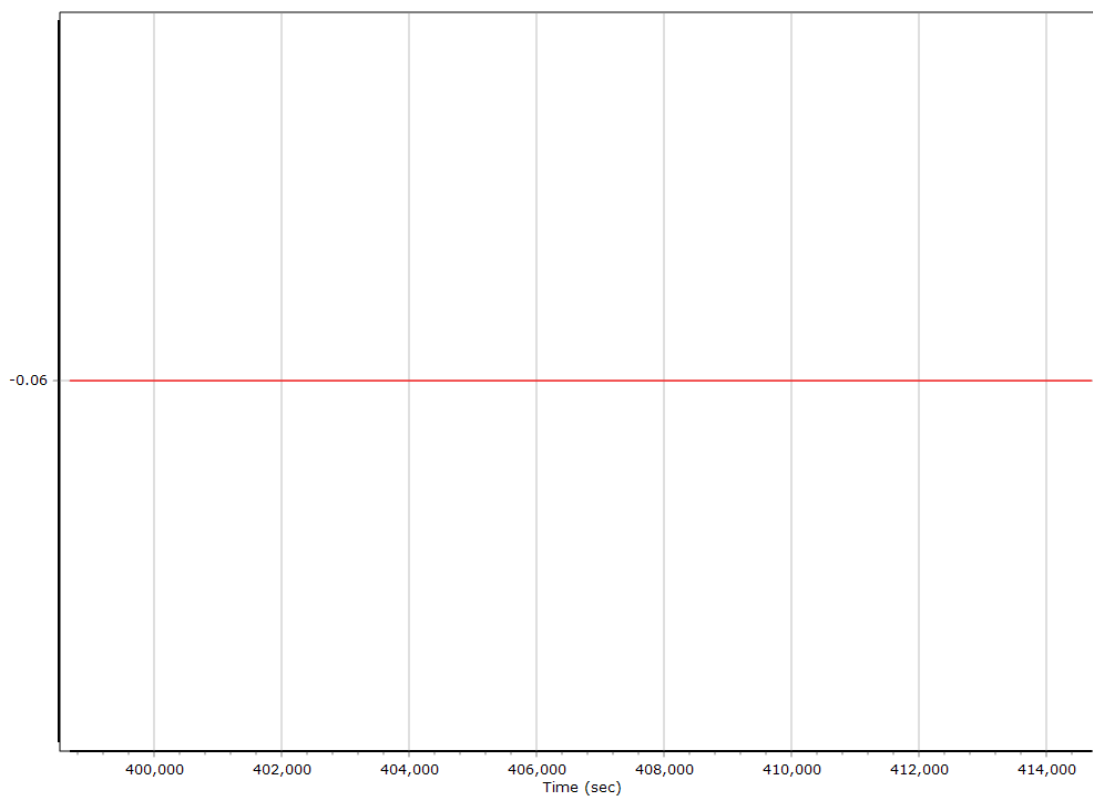
Reference-Primary GNSS Lever Arm Automatic Calibration Results

Original Reference to Primary GNSS lever arm (m)	-0.509	-0.046	-1.196
Iteration 1 Reference to Primary GNSS lever arm (m)	-0.515	-0.060	-1.222
Iteration 2 Reference to Primary GNSS lever arm (m)	-0.515	-0.060	-1.223
Primary GNSS Lever Arm In use	Iteration 2		

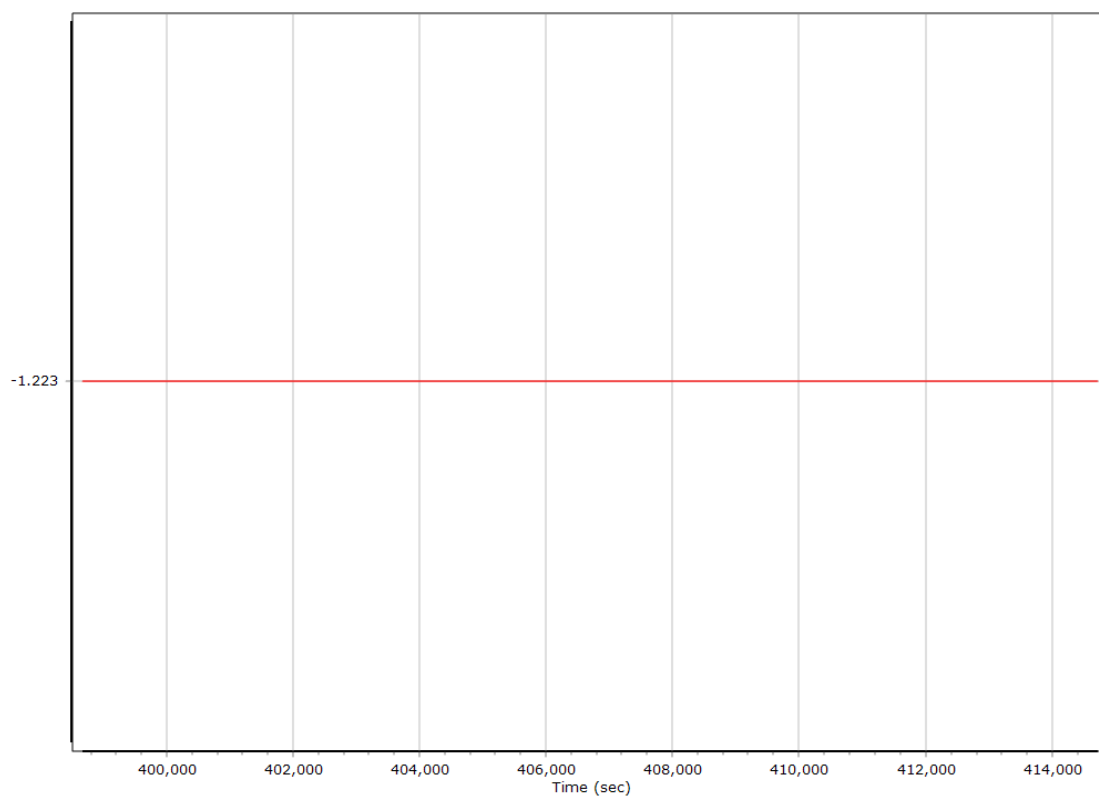
X Reference-Primary GNSS Lever Arm (m)



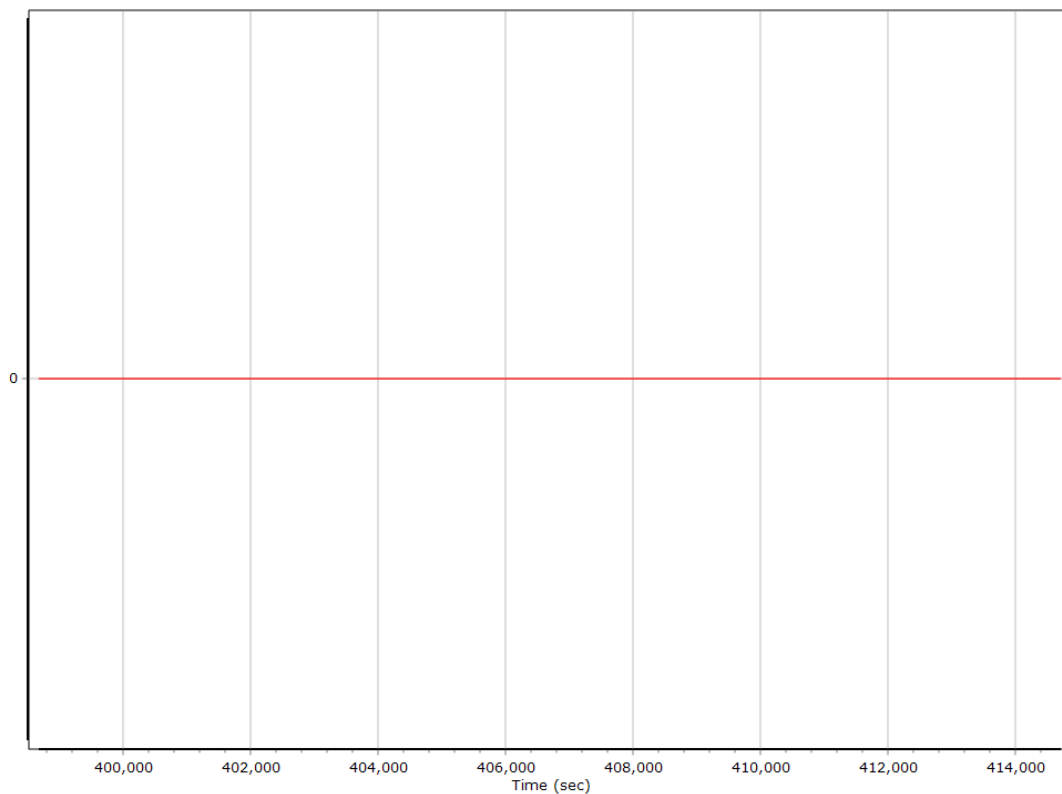
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



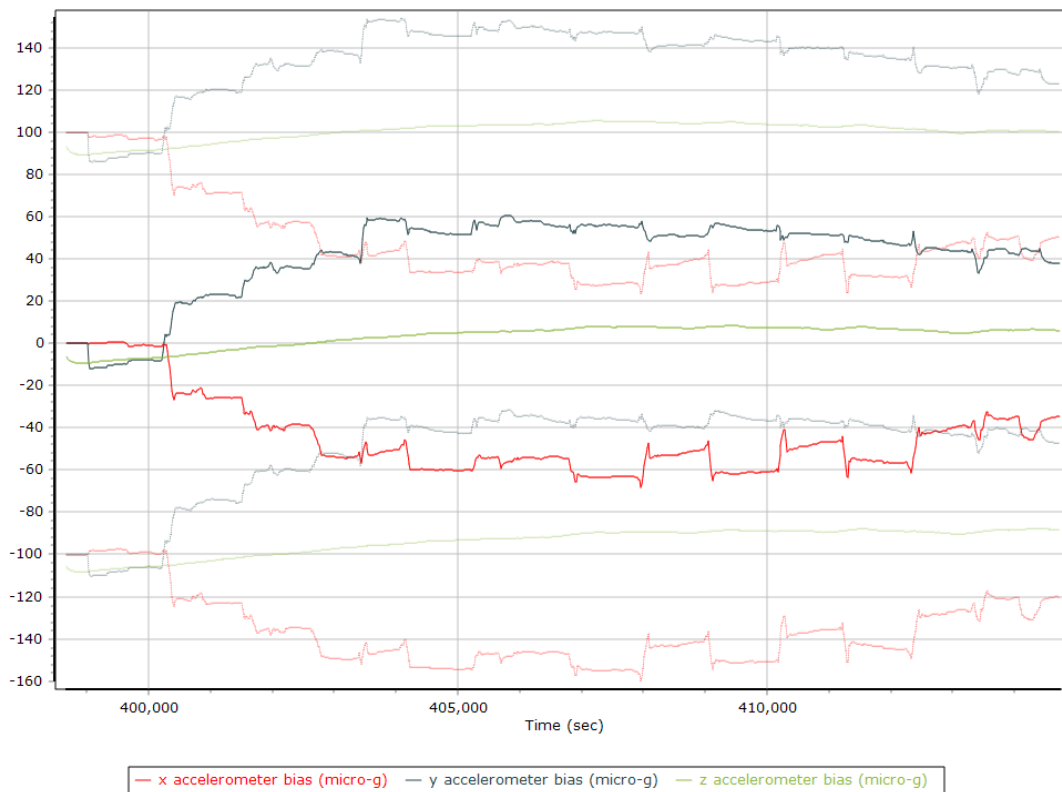
Reference-Primary GNSS Lever Arm Figure of Merit



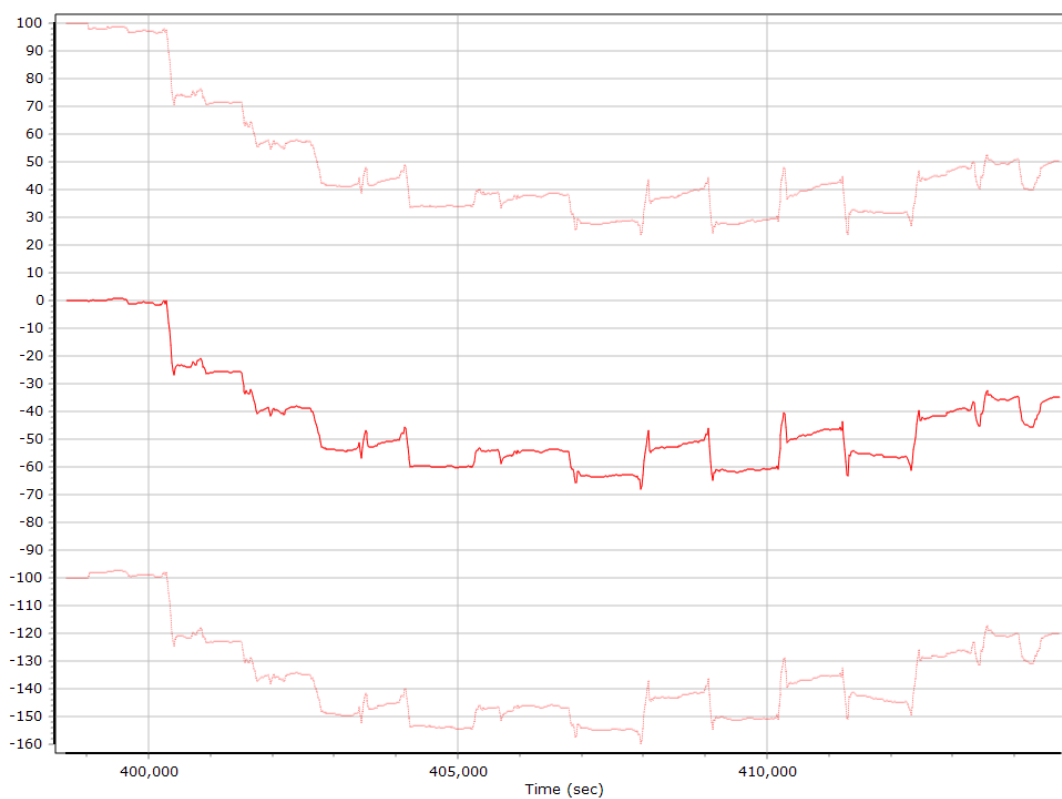
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

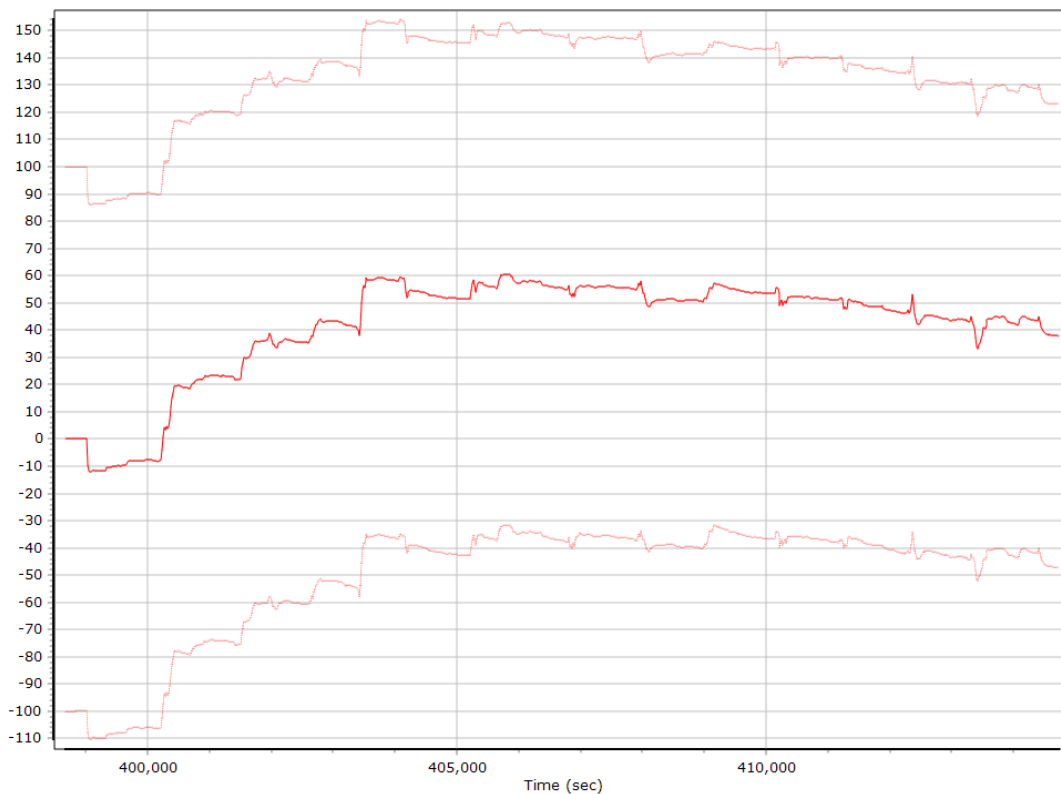
Accelerometer Bias (micro-g)



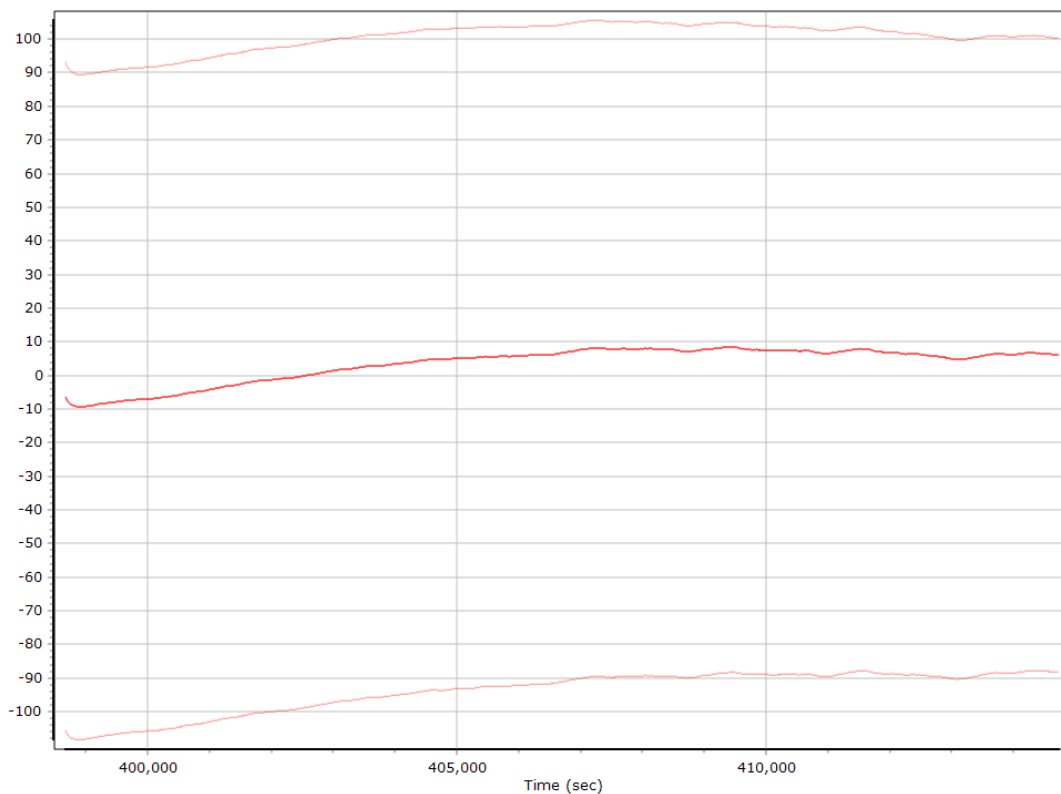
X Accelerometer Bias (micro-g)



Y Accelerometer Bias (micro-g)



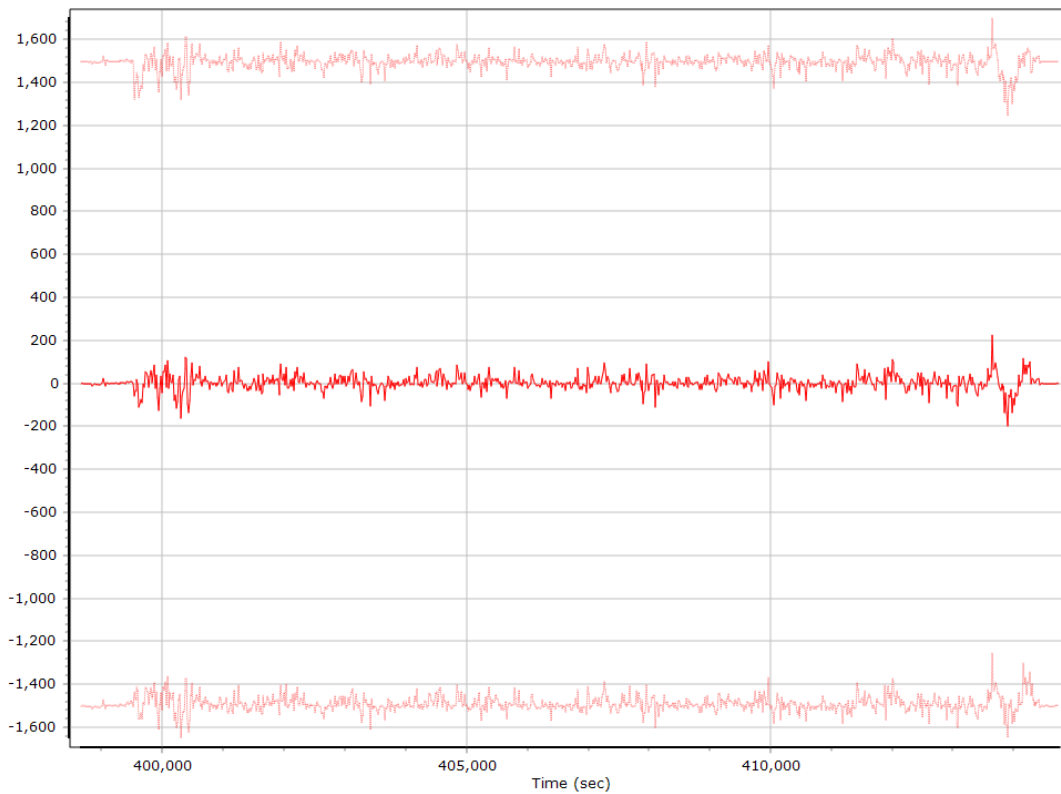
Z Accelerometer Bias (micro-g)



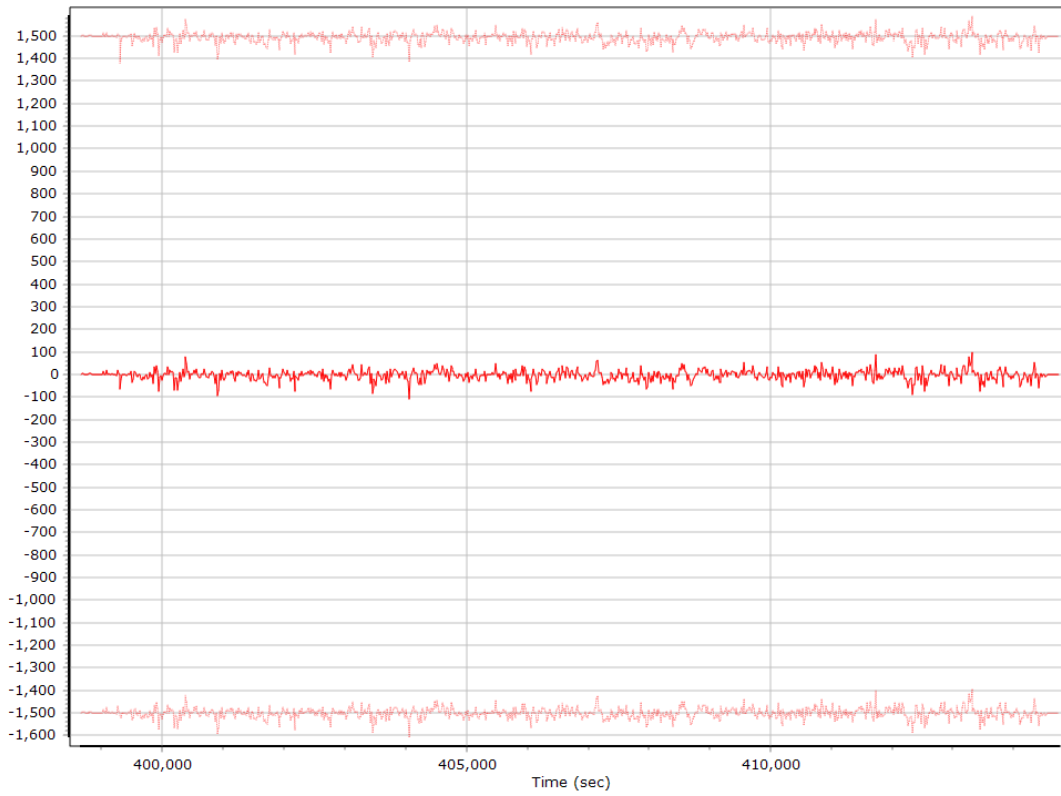
Accelerometer Scale Error (ppm)



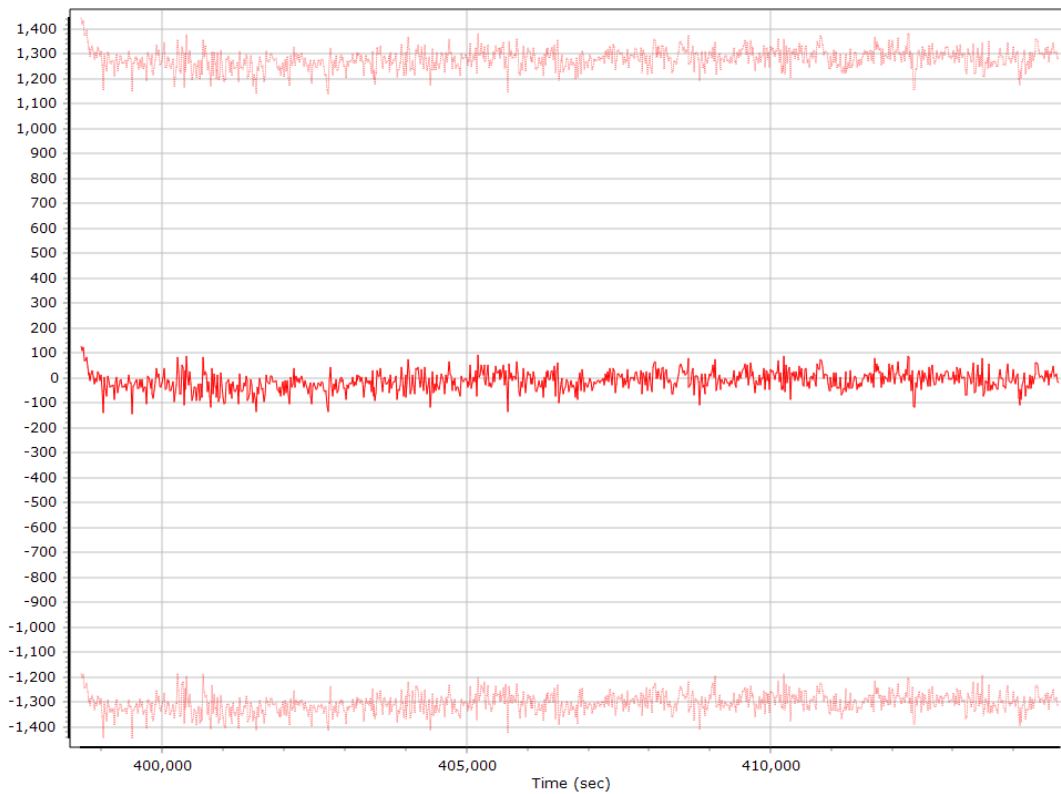
X Accelerometer Scale Error (ppm)



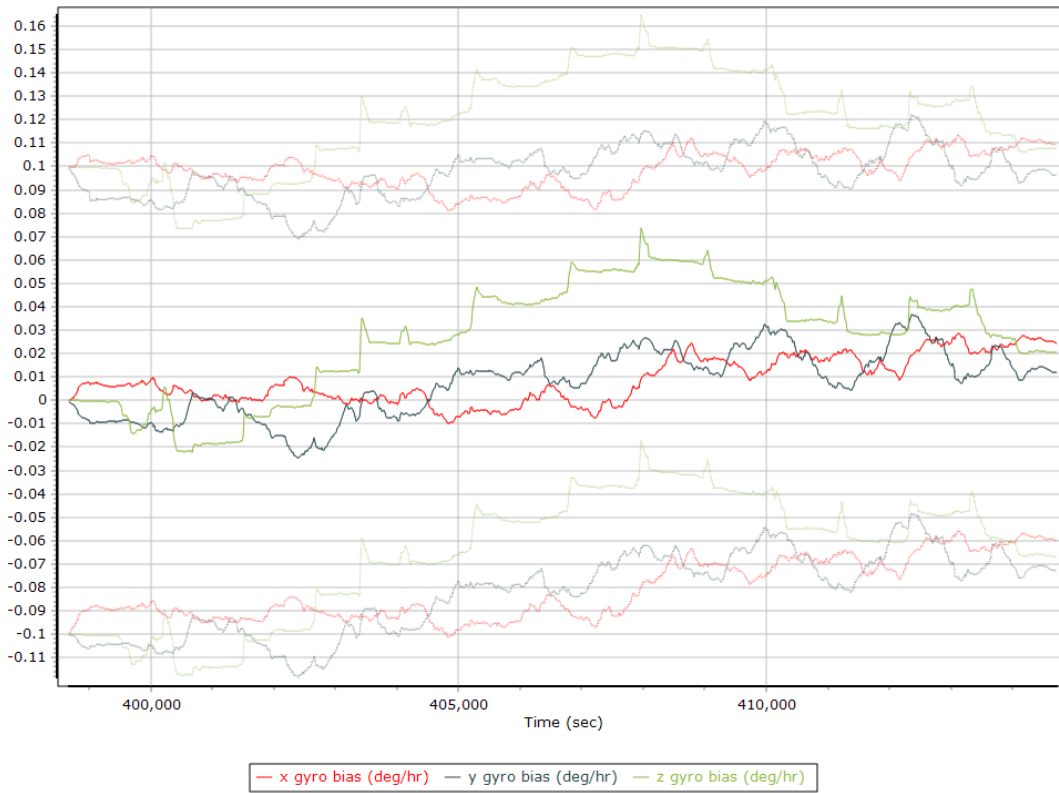
Y Accelerometer Scale Error (ppm)



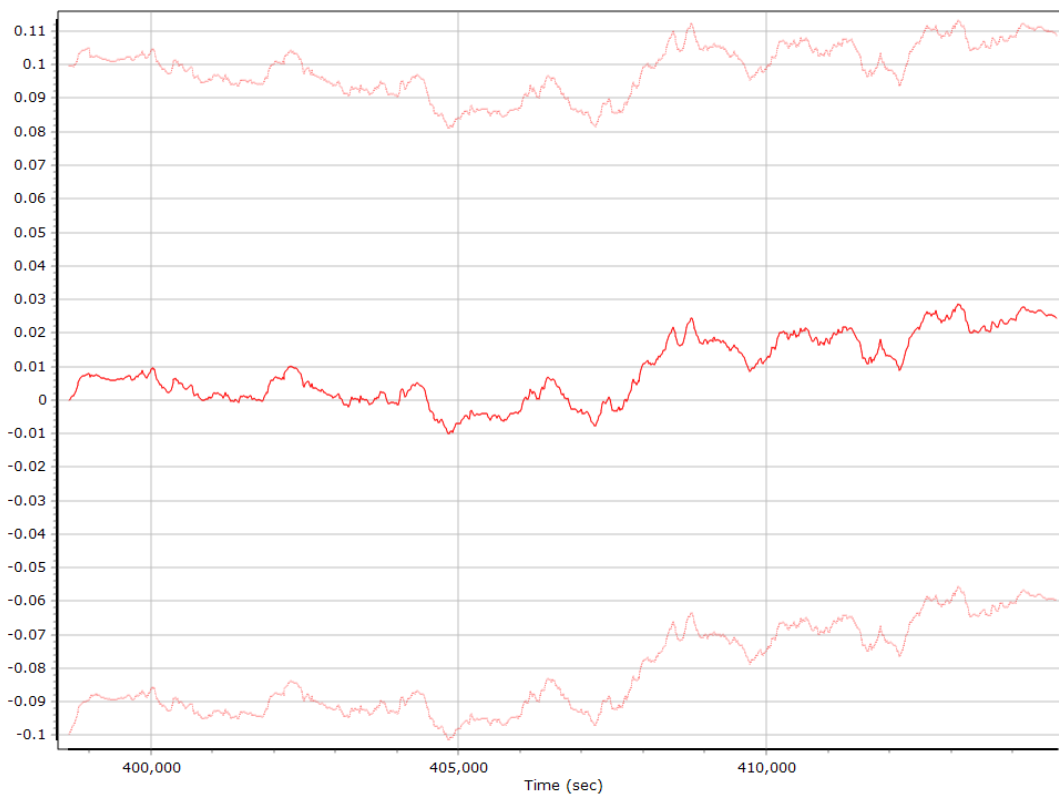
Z Accelerometer Scale Error (ppm)



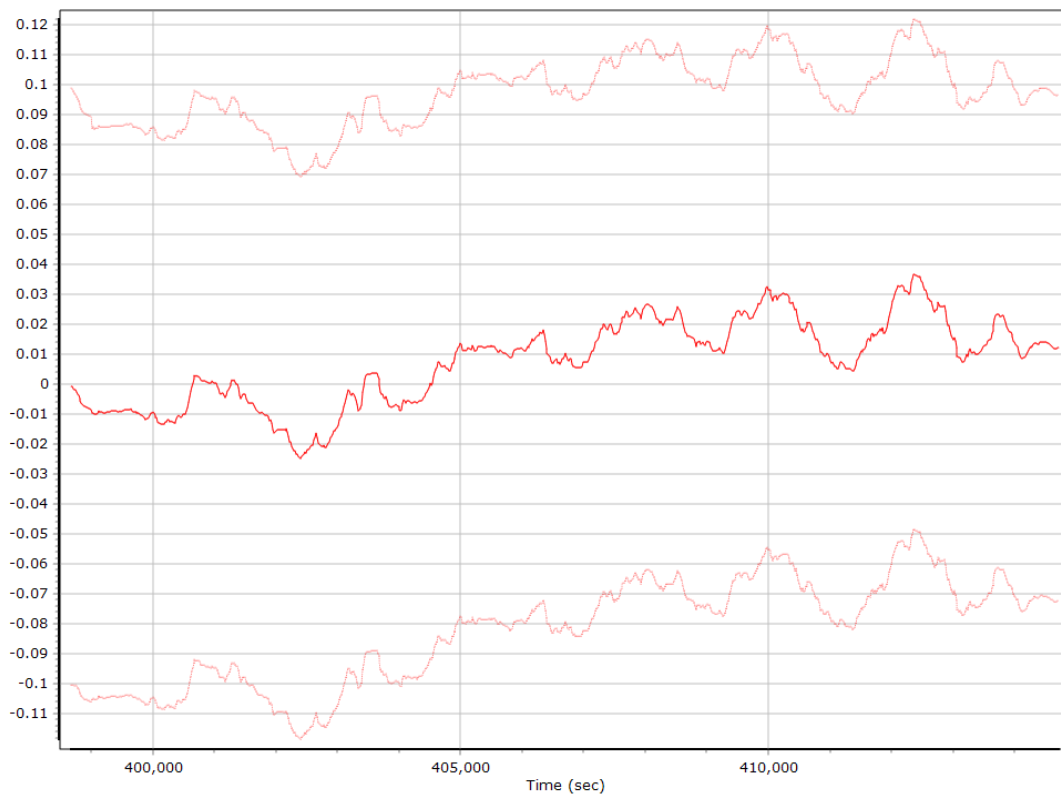
Gyro Bias (deg/h)



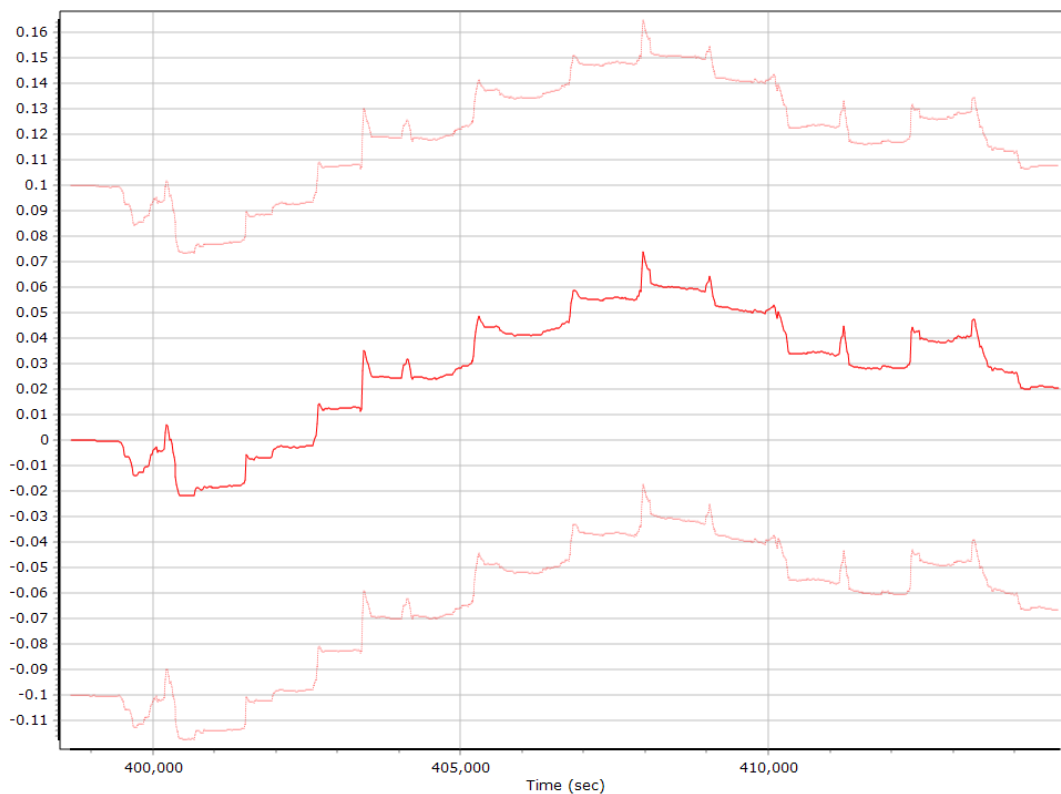
X Gyro Bias (deg/h)



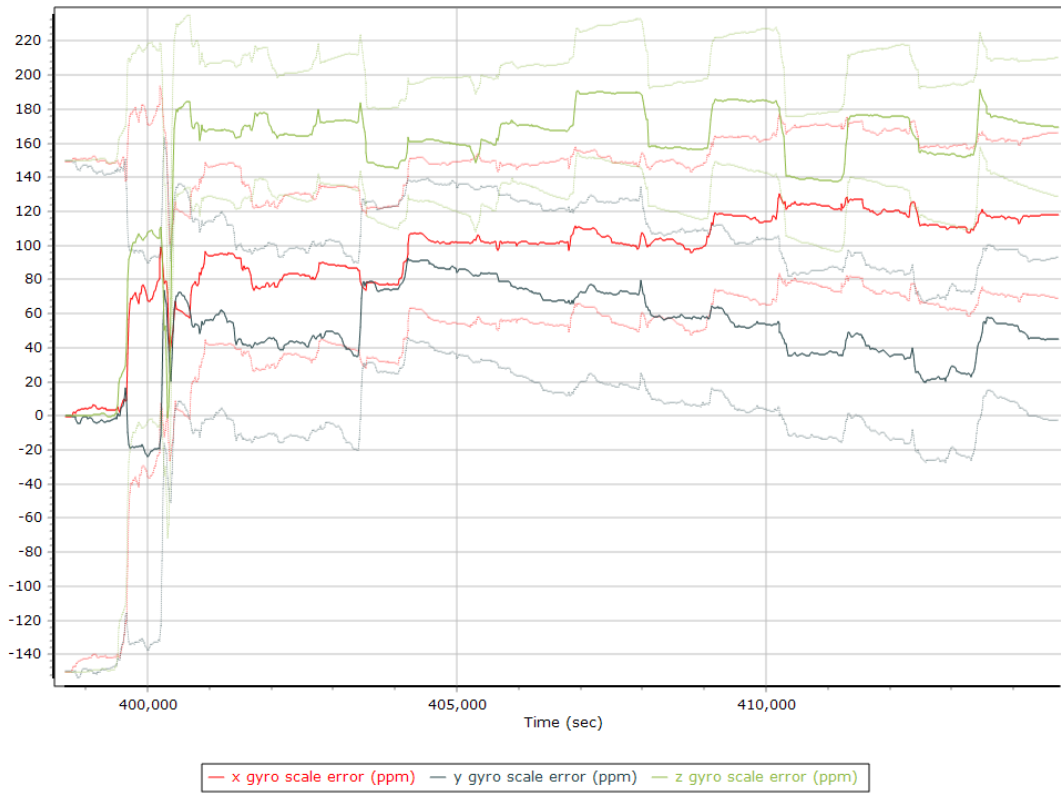
Y Gyro Bias (deg/h)



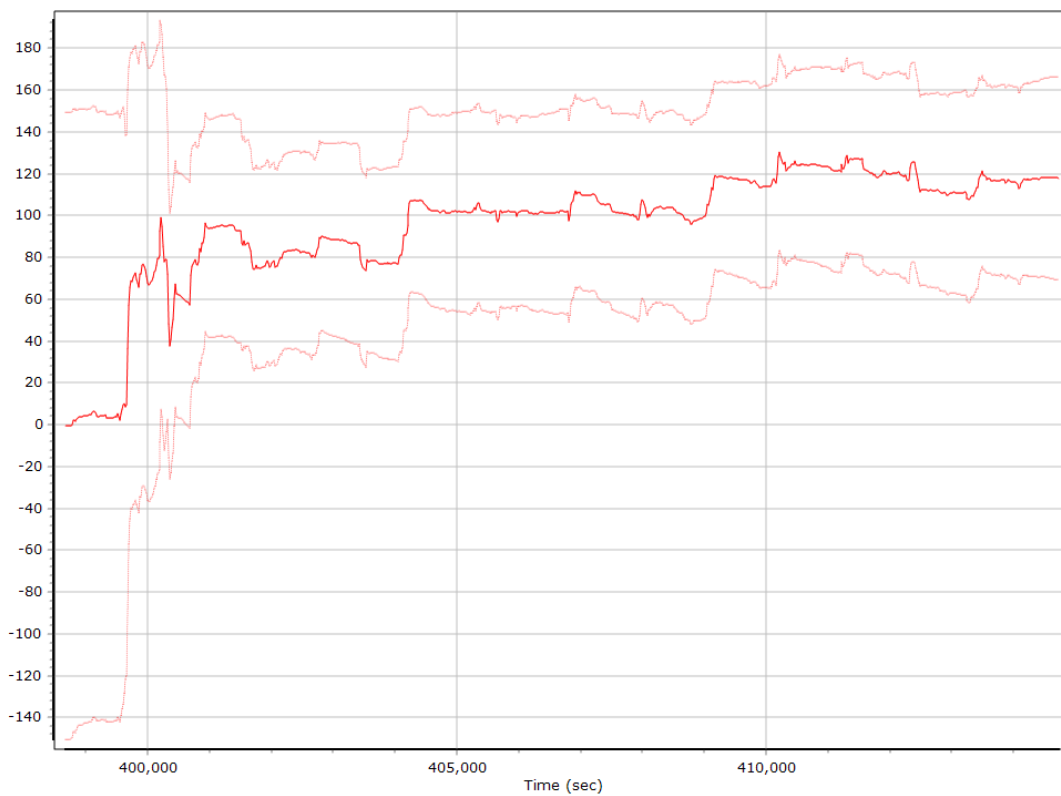
Z Gyro Bias (deg/h)



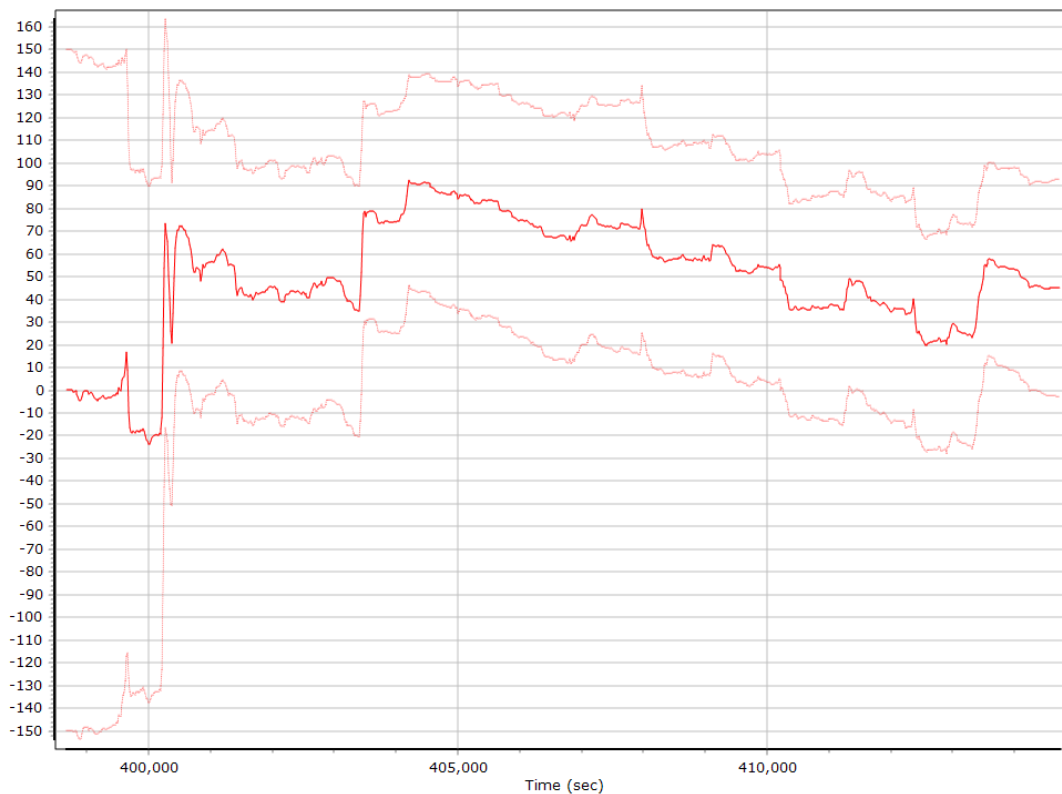
Gyro Scale Error (ppm)



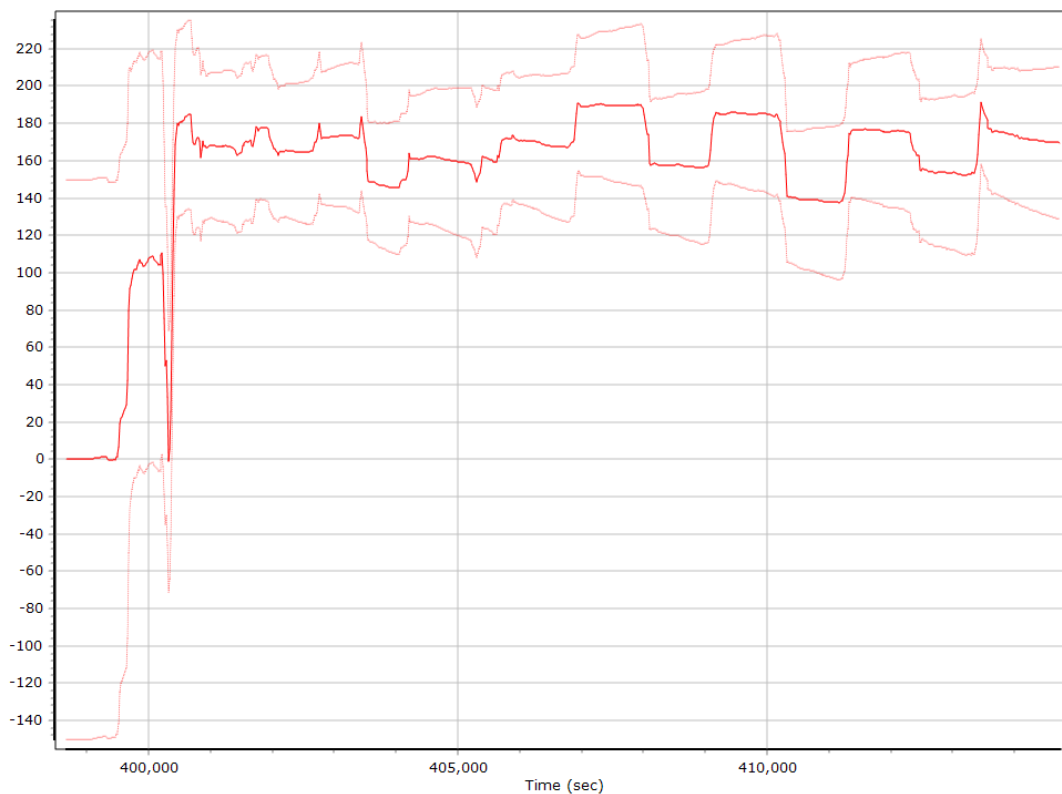
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

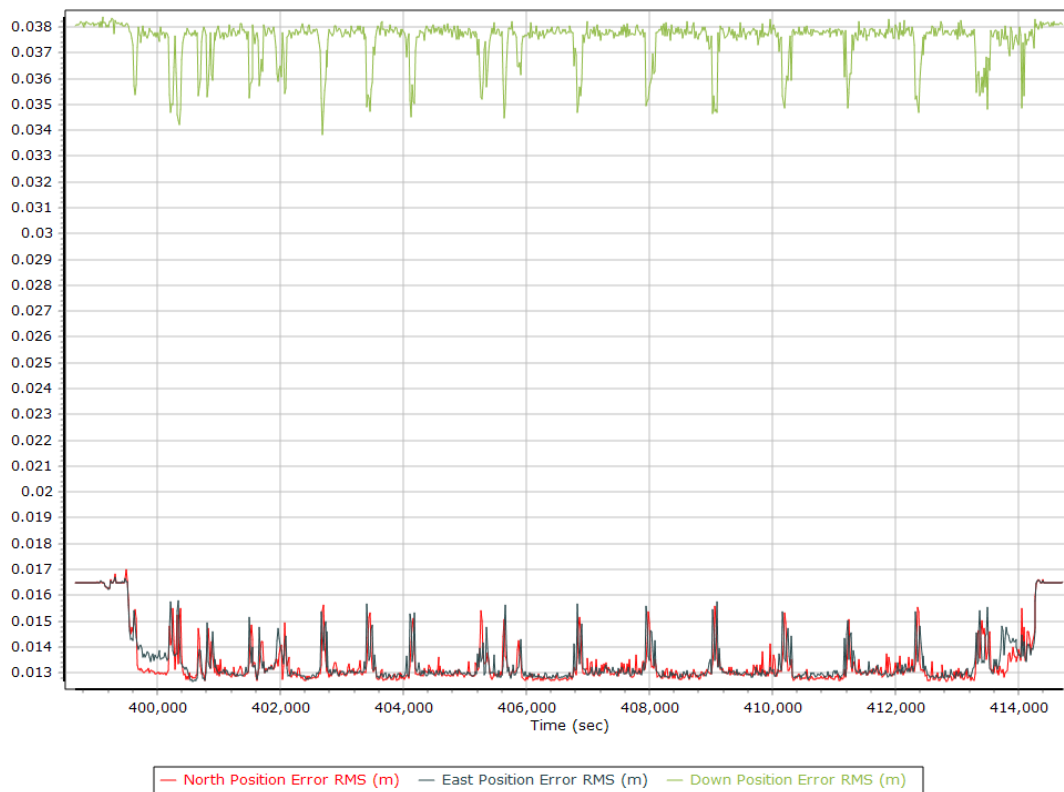


Z Gyro Scale Error (ppm)

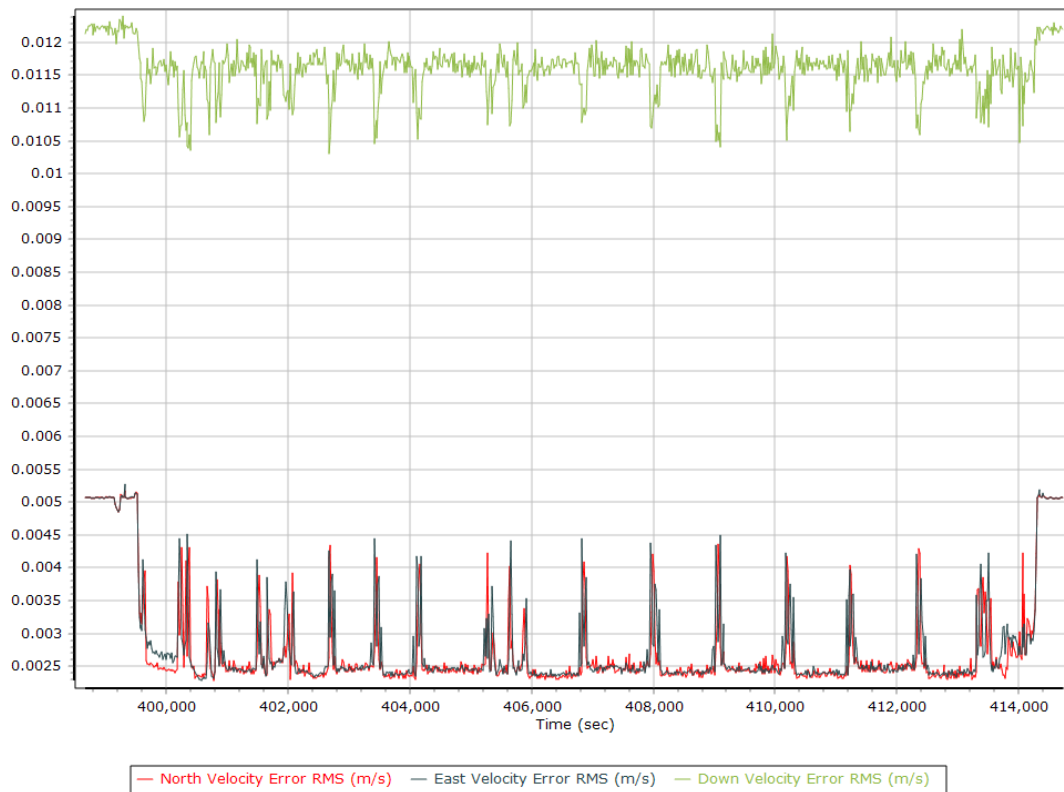


Smoothed Performance Metrics

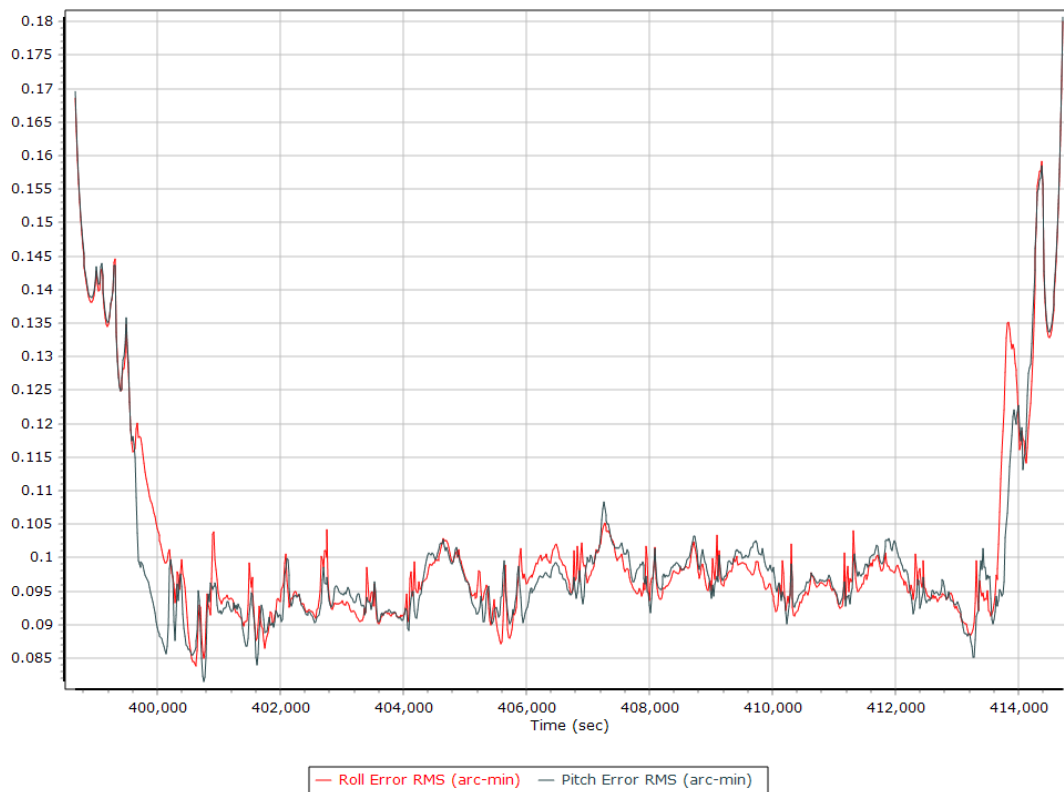
Position Error RMS (m)



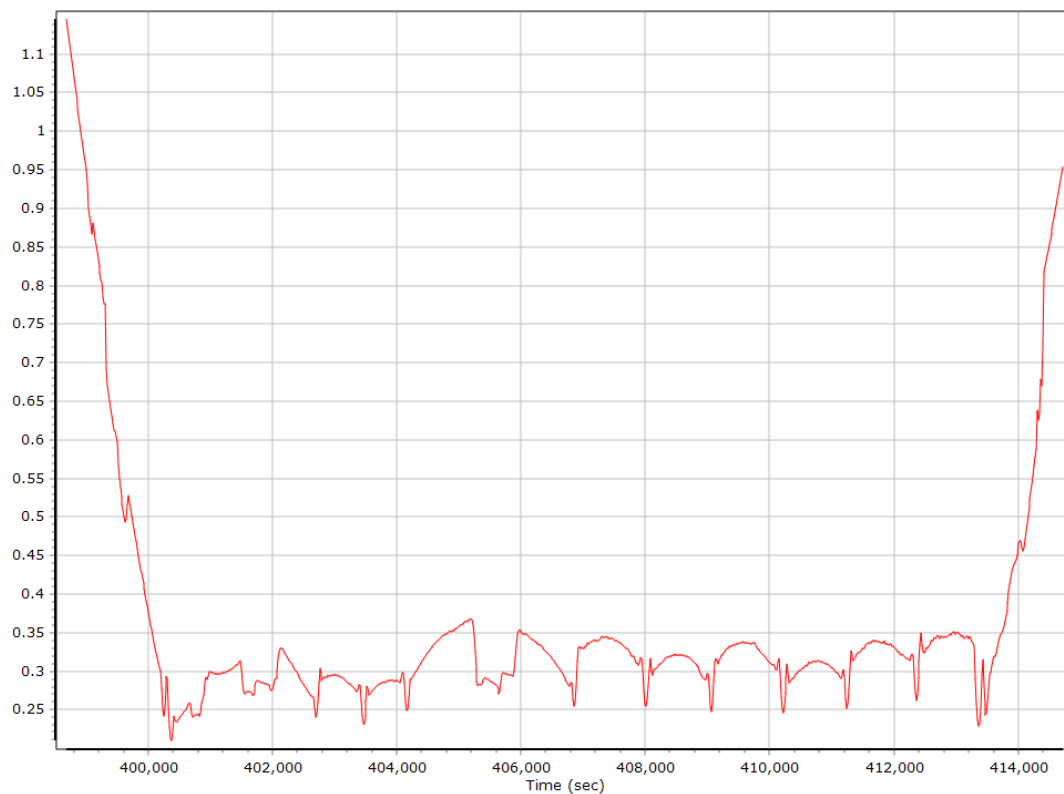
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

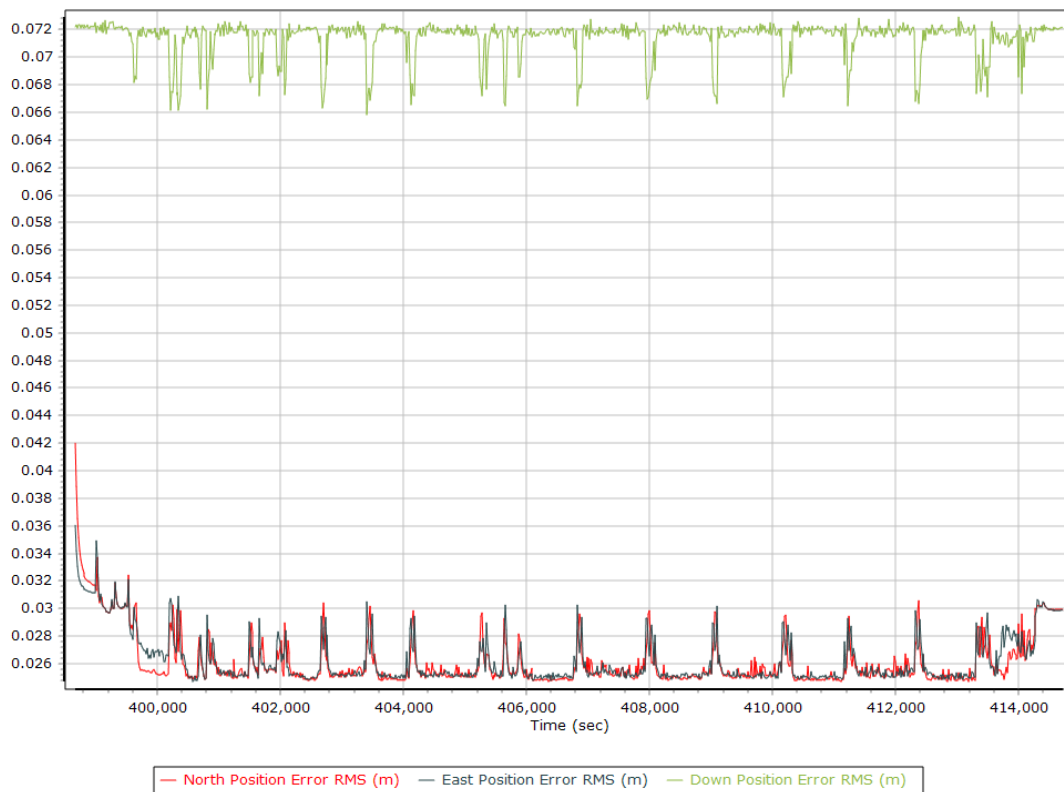


Heading Error RMS (arc-min)



Forward Processed Performance Metrics

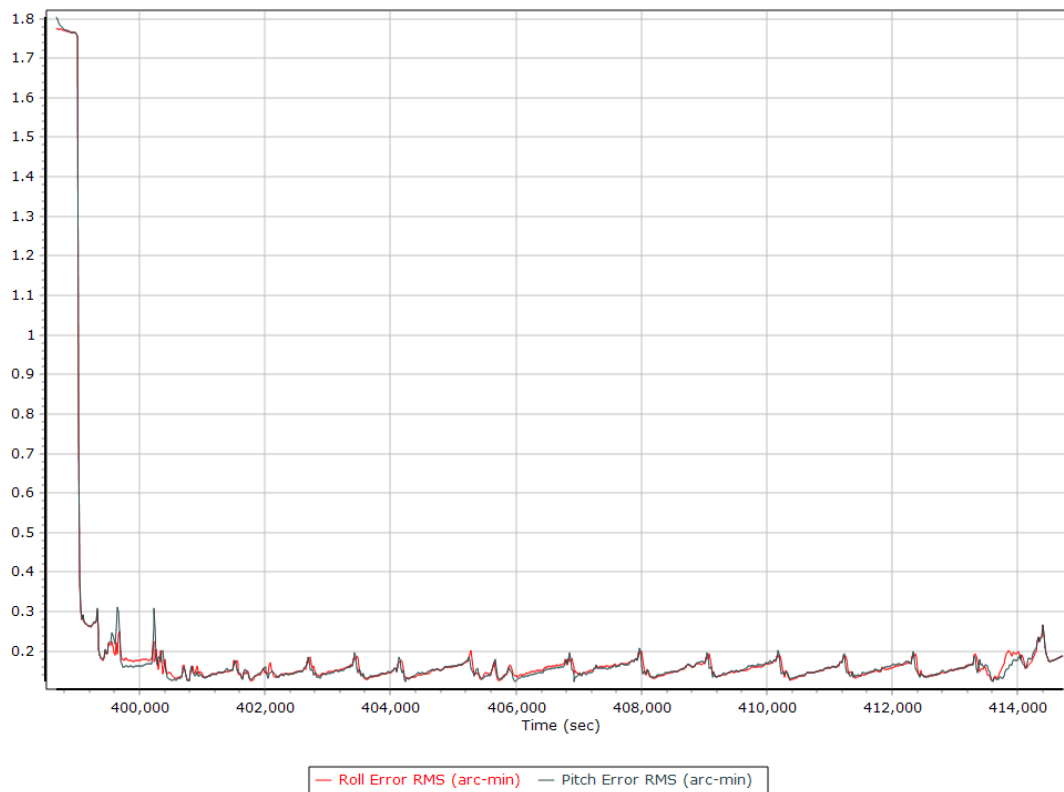
Position Error RMS (m)



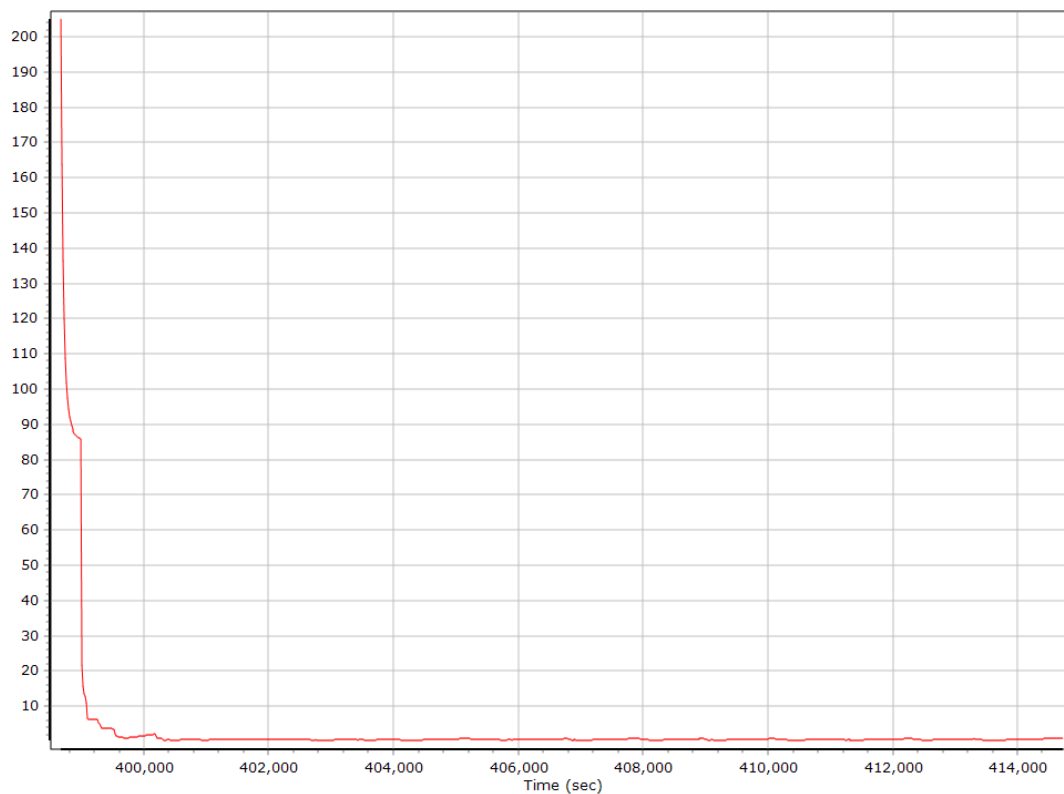
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

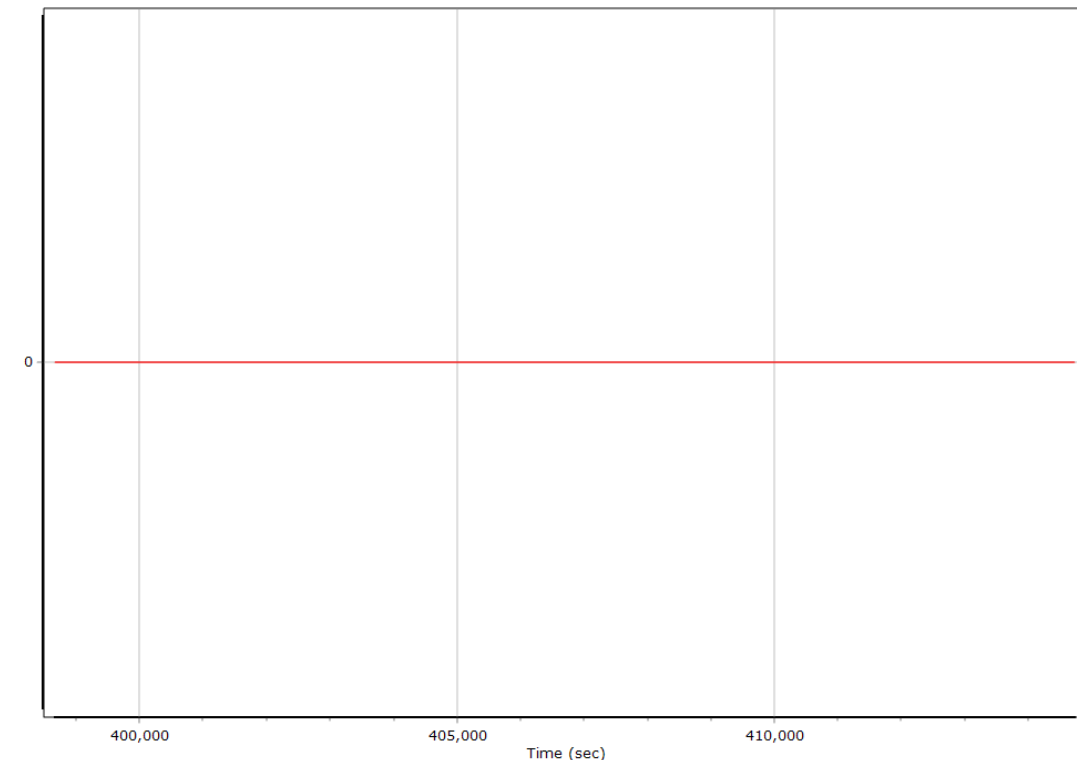


Heading Error RMS (arc-min)



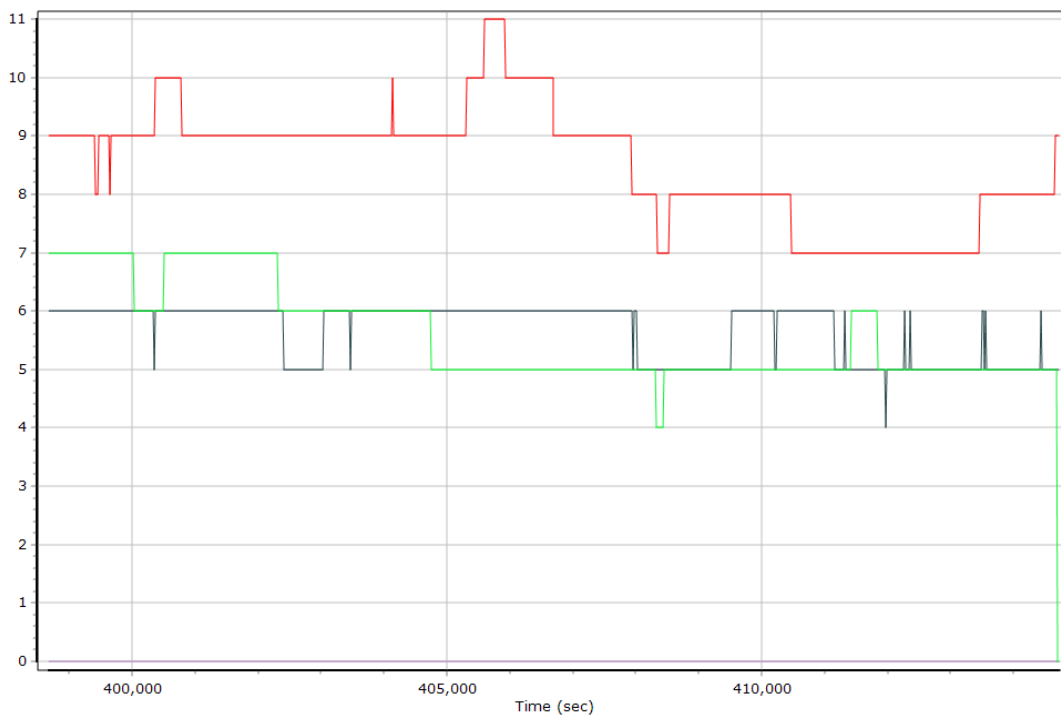
Forward Processed Solution Status

Processing Mode



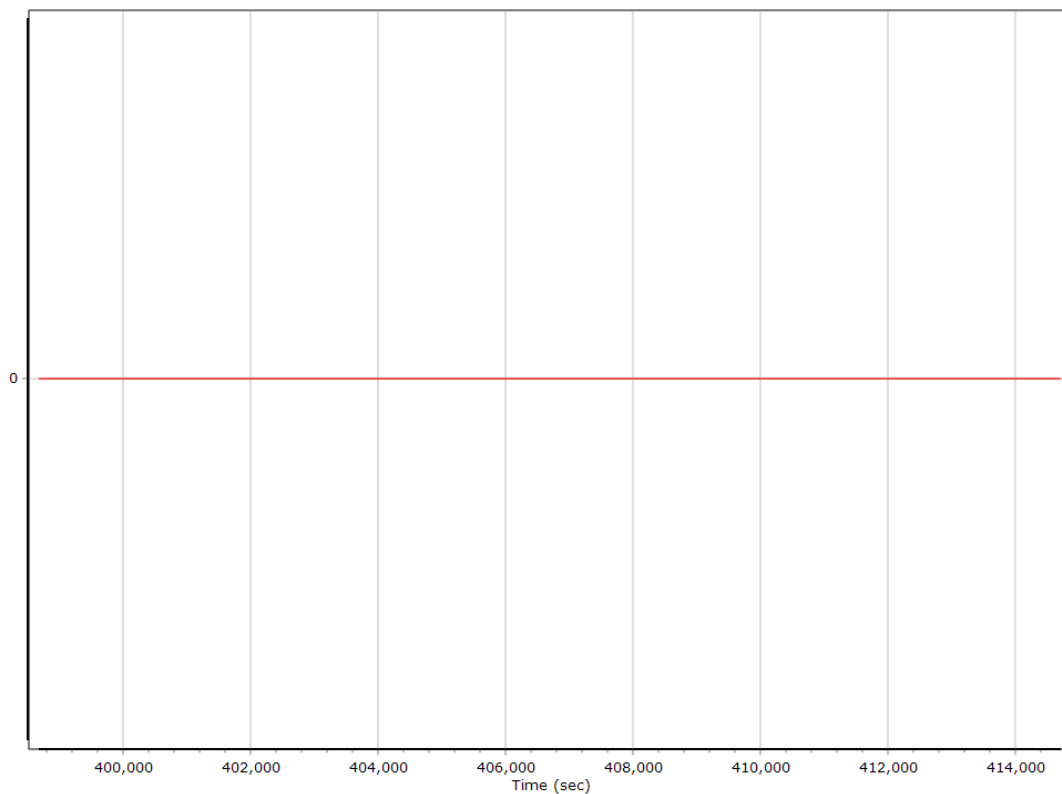
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR

Number of Satellites



— Number of GPS Satellites
 — Number of GLONASS Satellites
 — Number of QZSS Satellites
— Number of BEIDOU Satellites
 — Number of GALILEO Satellites

Baseline Length



Export Summary

Export file	sbet_211007_A_5060420_nad2011_FINAL.shp		
Export format	Shapefile		
Solution in use	Post-processed		
Output rate	Specified Distance Interval		
Distance Interval (m)	10.000		
Reference to Output lever arm (m)	0.000	0.000	0.000
Reference mounting angles (deg)	0.000	0.000	0.000
Output units (Coordinate / Lat & Lon)	Meter	Deg Decimal	
Export start time	398615.001 (10/07/2021 14:43:35)		
Export end time	414736.003 (10/07/2021 19:12:16)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 12 (114W to 108W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2021.764384		