General Information

Mission Information

Project name	19-058_061120
Processing date	2020-07-20 21:04:26
Mission date	2020-06-11 14:20:47
Mission duration	06:52:56.000
Processing mode	IN-Fusion Trimble RTX Nav

Rover Hardware Information

Product	POS AV 610 VER6 HW2.4-12
Serial number	S/N6310
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
ALS.590	POS Data
ALS.591	POS Data
ALS.592	POS Data
ALS.593	POS Data
ALS.594	POS Data
ALS.595	POS Data
ALS.596	POS Data
ALS.597	POS Data
ALS.598	POS Data
ALS.599	POS Data
ALS.600	POS Data
ALS.601	POS Data
ALS.602	POS Data
ALS.603	POS Data
ALS.604	POS Data
ALS.605	POS Data
ALS.606	POS Data
ALS.607	POS Data
ALS.608	POS Data
ALS.609	POS Data
ALS.610	POS Data
ALS.611	POS Data
ALS.612	POS Data
ALS.613	POS Data
ALS.614	POS Data
ALS.615	POS Data
ALS.616	POS Data
ALS.617	POS Data
ALS.618	POS Data
ALS.619	POS Data
ALS.620	POS Data
ALS.621	POS Data
ALS.622	POS Data
ALS.623	POS Data
ALS.624	POS Data
ALS.625	POS Data
ALS.626	POS Data
ALS.627	POS Data
ALS.628	POS Data
ALS.629	POS Data
ALS.630	POS Data
ALS.631	POS Data
ALS.632	POS Data
ALS.633	POS Data
ALS.634	POS Data
ALS.635	POS Data
ALS.636	POS Data
ALS.637	POS Data
ALS.638	POS Data
ALS.639	POS Data
ALS.640	POS Data
ALS.641	POS Data
ALS.642	POS Data
ALS.643	POS Data
ALS.644	POS Data

Input Files

File Name	File Type
Ephm1630.20g	GLONASS Broadcast Ephemeris

File Name	File Type
Ephm1630.20n	GPS Broadcast Ephemeris
igl21093.sp3	GLONASS Precise Ephemeris
igl21094.sp3	GLONASS Precise Ephemeris
igl21095.sp3	GLONASS Precise Ephemeris
igs21093.sp3	GPS Precise Ephemeris
igs21094.sp3	GPS Precise Ephemeris
igs21095.sp3	GPS Precise Ephemeris

Output Files

Filename	File type
sbet_19-058_061120.out	SBET Trajectory File

Rover Data Summary

First raw data file	ALS.590		
Last raw data file	ALS.644		
Start GPS week	2109		
Start time	13.202 (06/06/2020 23:59:55)		
End time	422023.030 (06/11/2020 21:13:25)		
Start of fine alignment	397968.244 (06/11/2020 14:32:30)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	Event 1 Input		
Correction data	Trimble RTX		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm (m)	0.000	0.000	0.000
Gimbal to IMU mounting angles (deg)	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm (m)	-0.011	0.039	-1.317
Gimbal to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

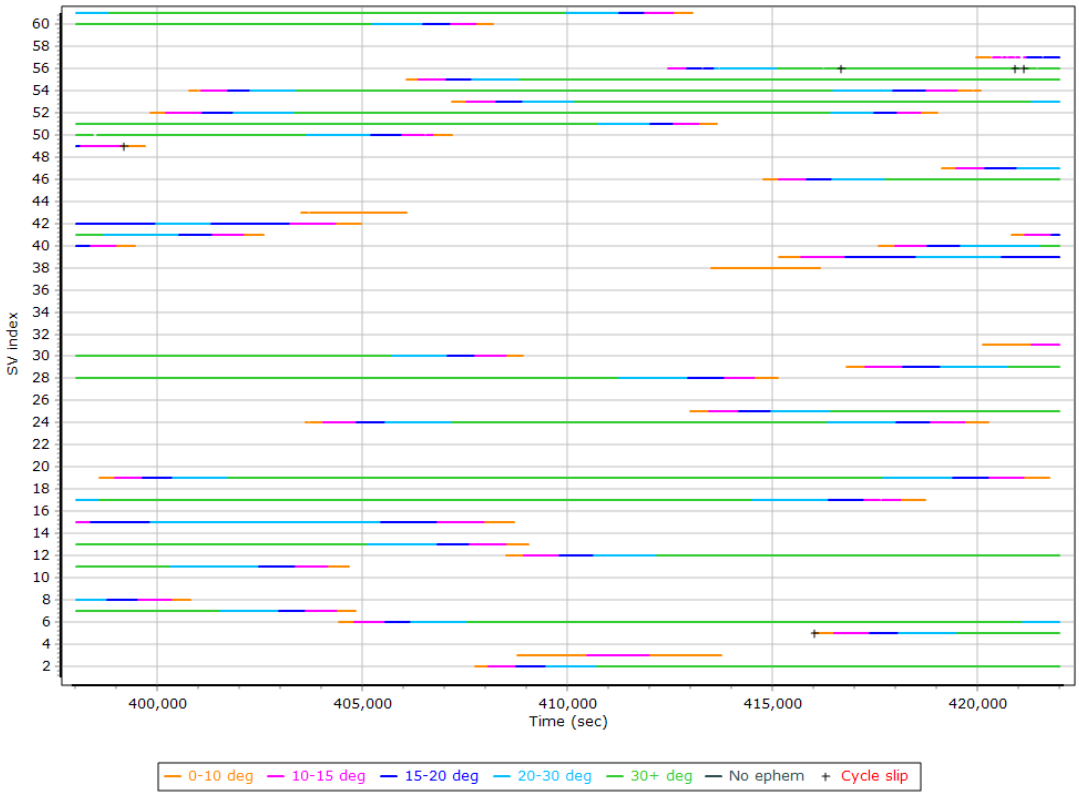
Rover Data QC

Raw IMU Import QC Summary

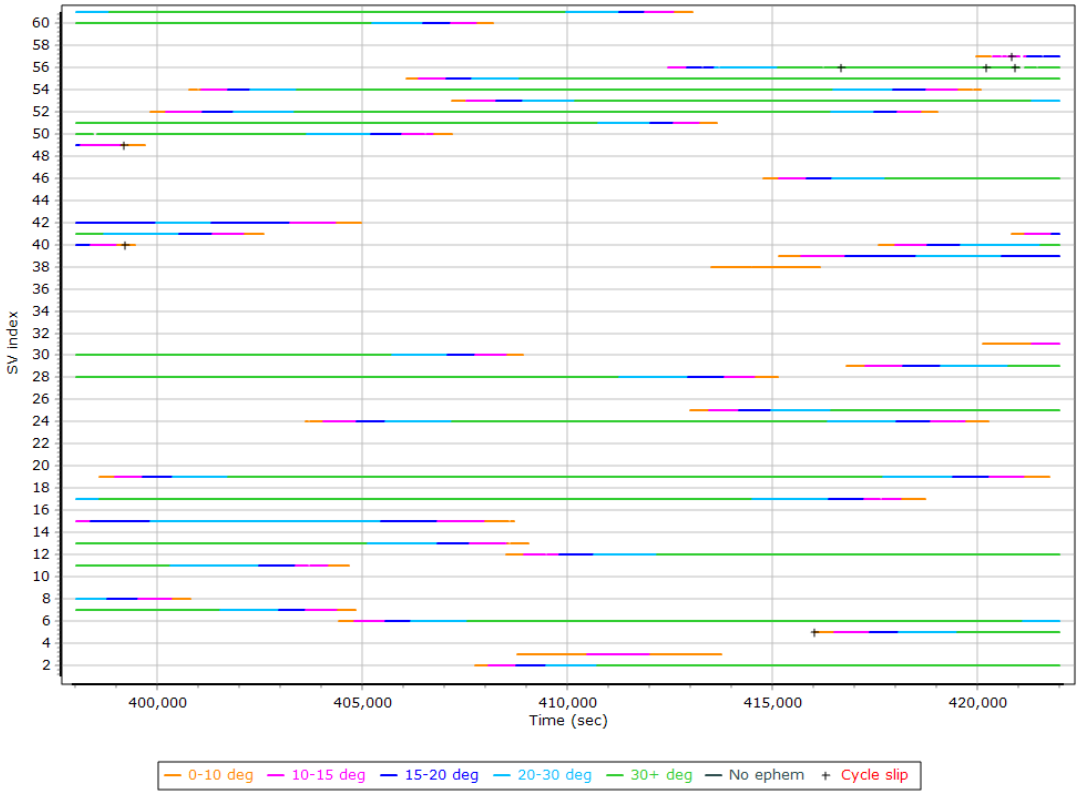
IMU data input file	imu_19-058_061120.dat
IMU data check log file	imudt_19-058_061120.log
IMU Records Processed	4954232
Termination Status	Warnings
IMU Anomalies	1
IMU Failure Messages	
397260.044 : WARNING : Gap of 397246.0819 seconds in CHECKDT input data	

Primary Observables & Satellite Data

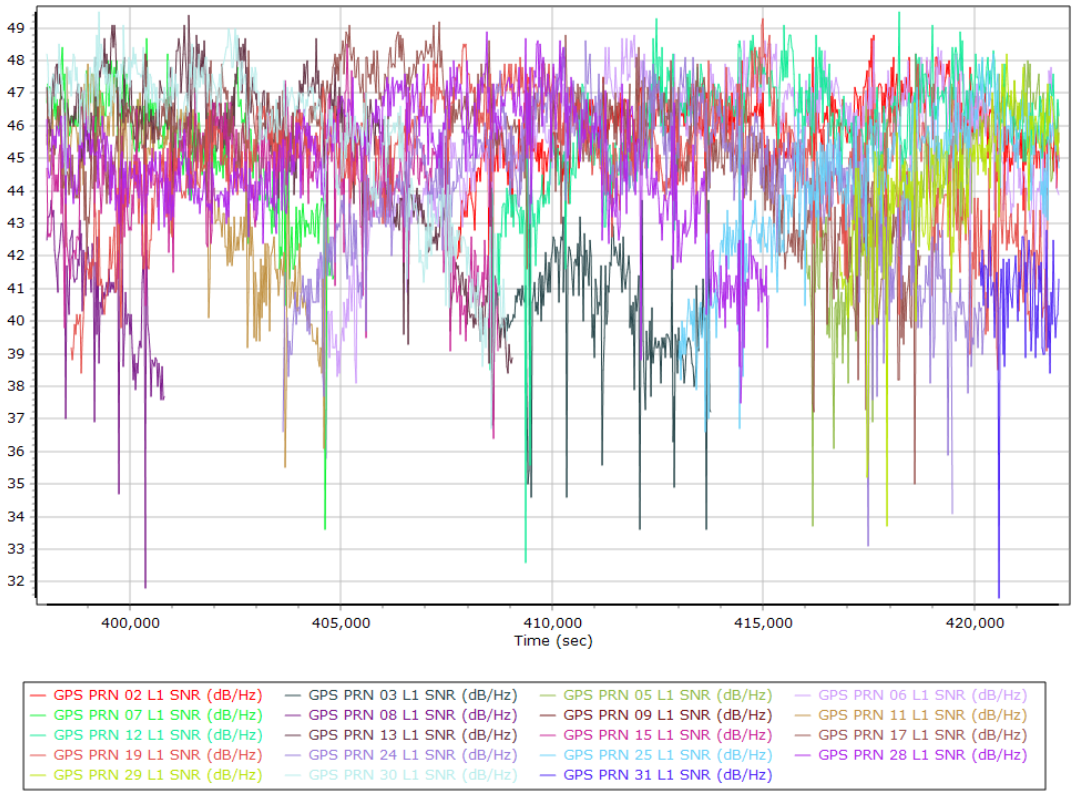
L1 Satellite Lock/Elevation



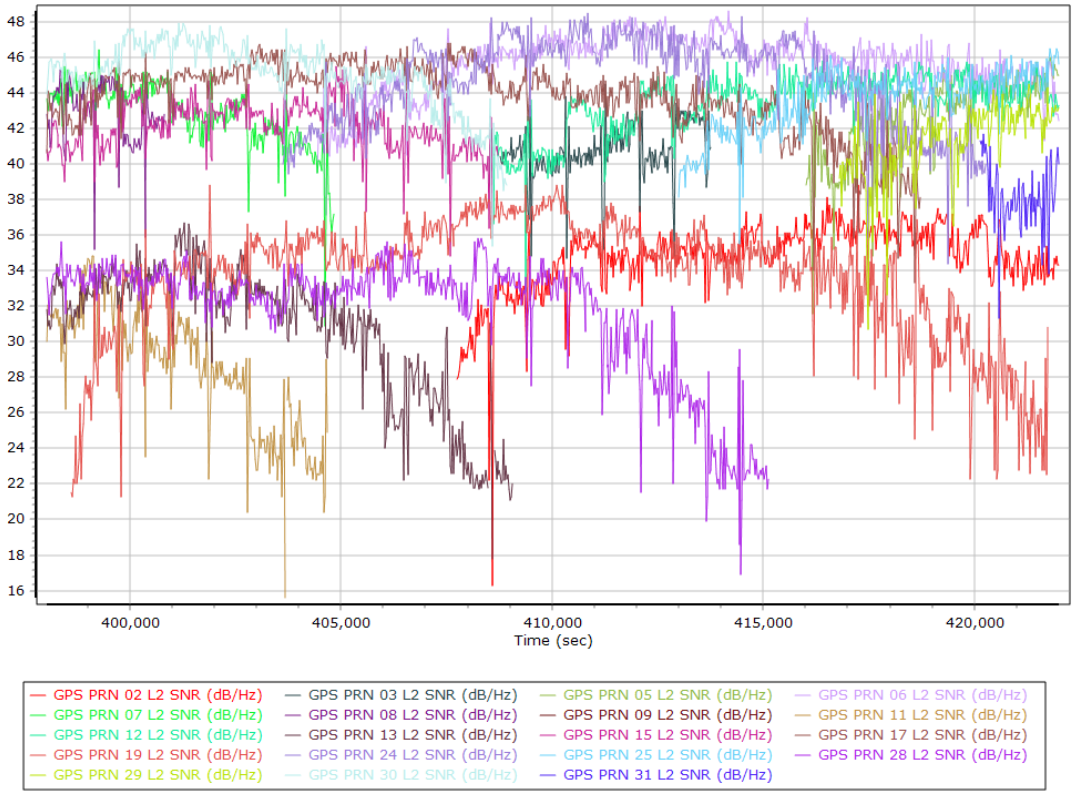
L2 Satellite Lock/Elevation



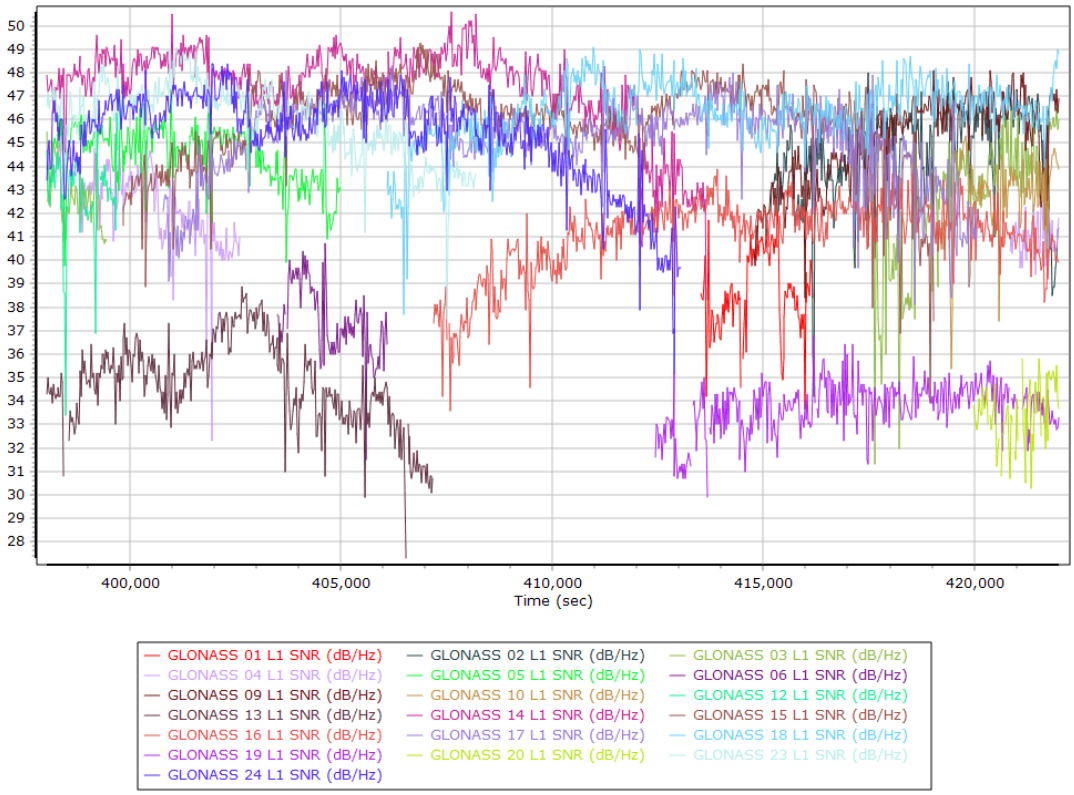
GPS L1 SNR



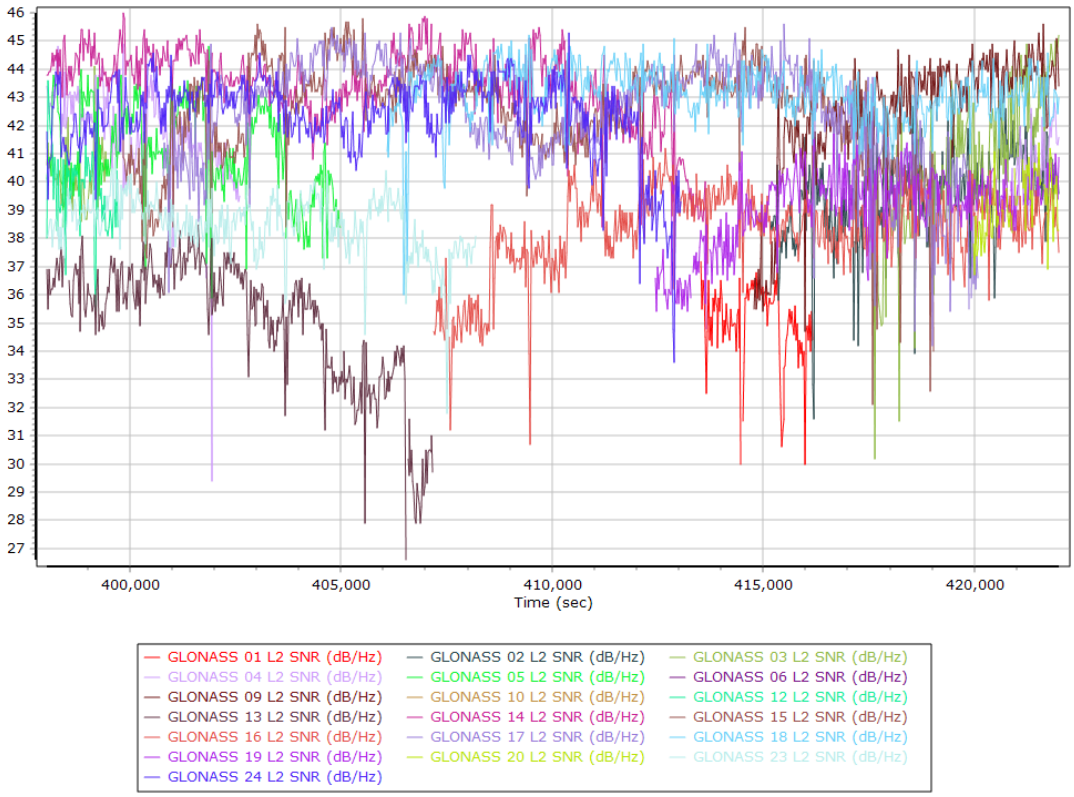
GPS L2 SNR



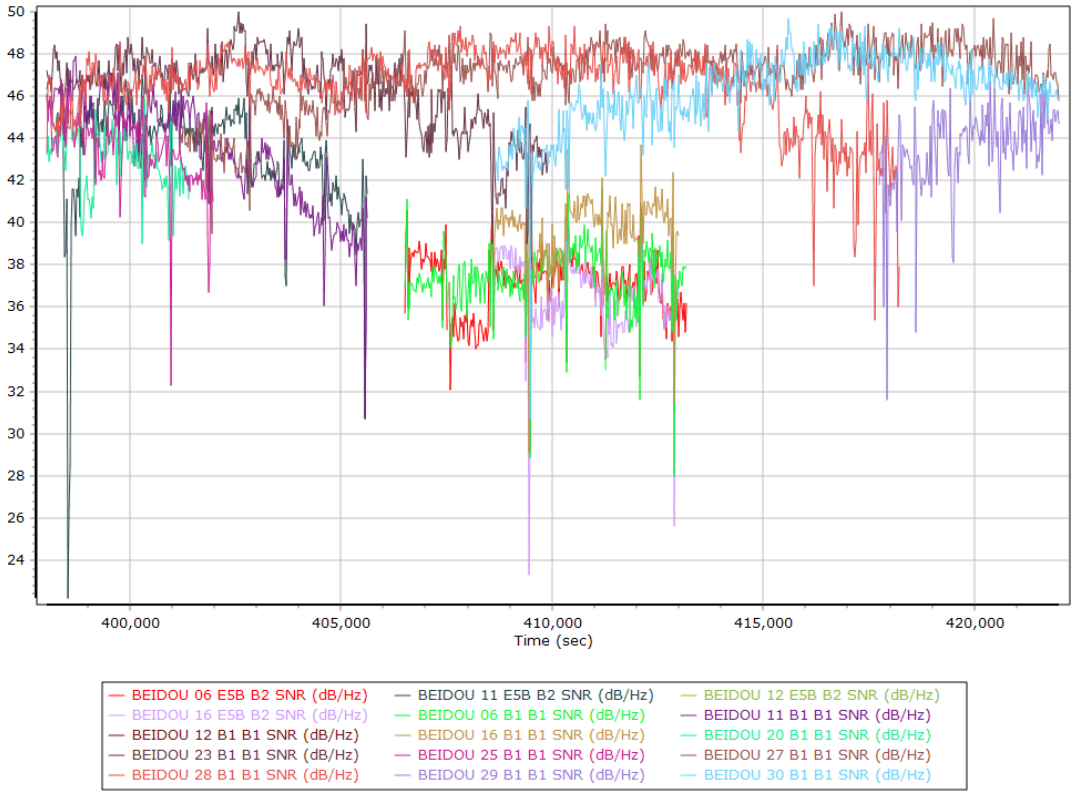
GLONASS L1 SNR



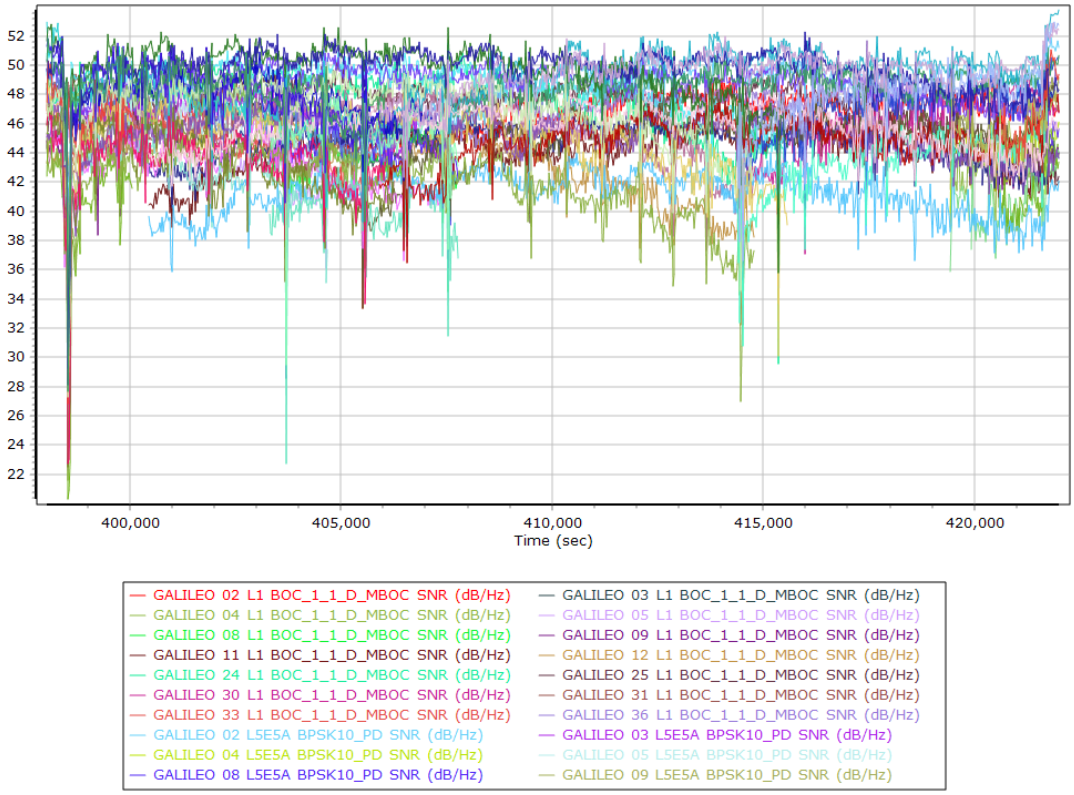
GLONASS L2 SNR



BEIDOU SNR

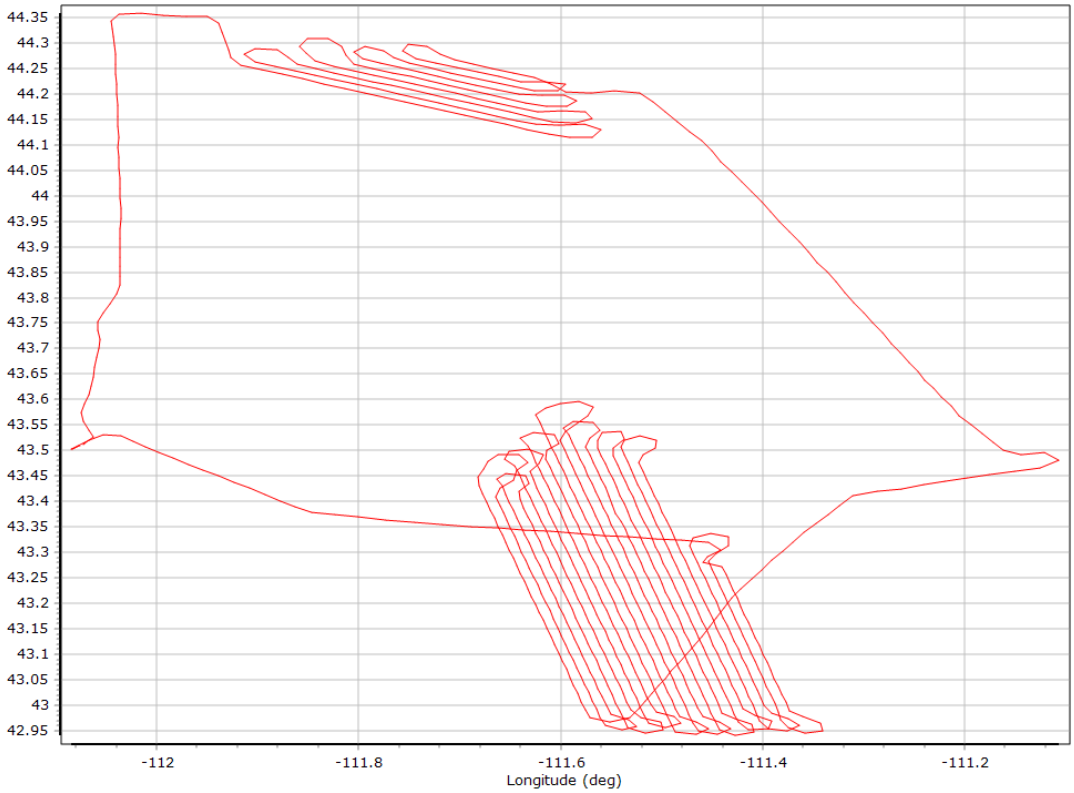


GALILEO SNR

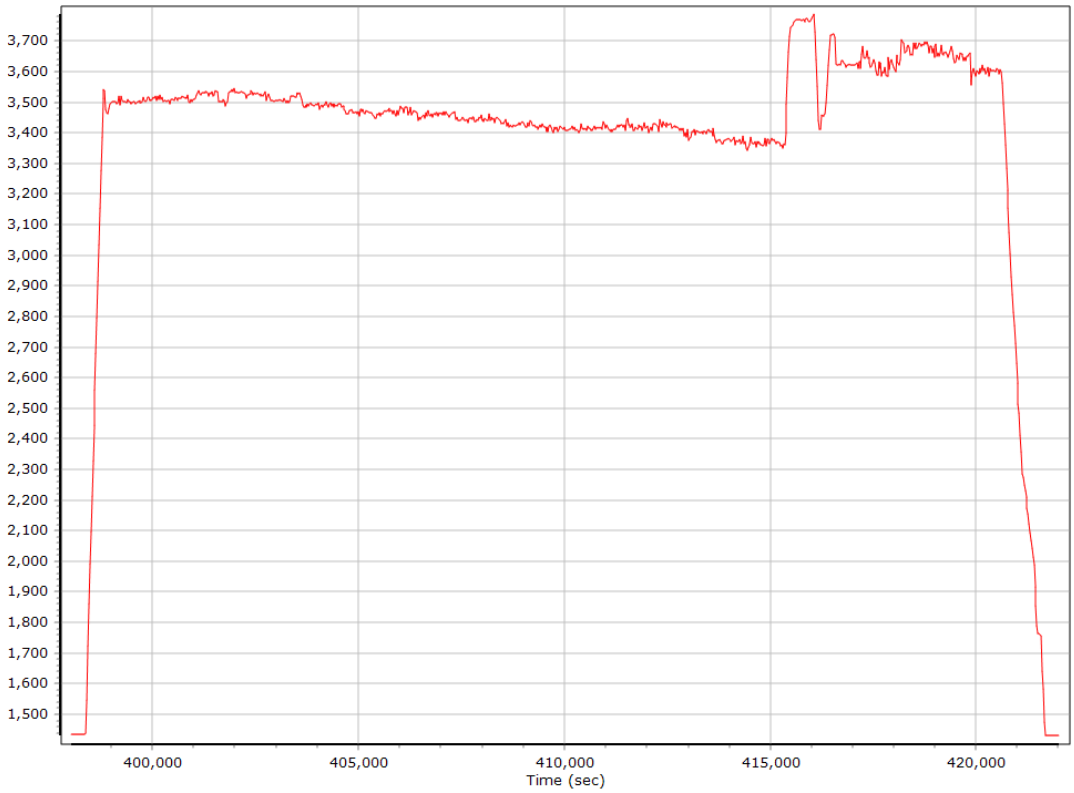

52
50
48
46
44
42
40
38
36
34
32
30
28
26
24
22
400,000
405,000
410,000
415,000
420,000
Time (sec)
GALILEO 02 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 03 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 04 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 05 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 08 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 09 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 11 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 12 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 24 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 25 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 30 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 31 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 33 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 36 L1 BOC_1_1_D_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 08 L5E5A BPSK10_PD SNR (dB/Hz)
GALILEO 09 L5E5A BPSK10_PD SNR (dB/Hz)

Smoothed Trajectory Information

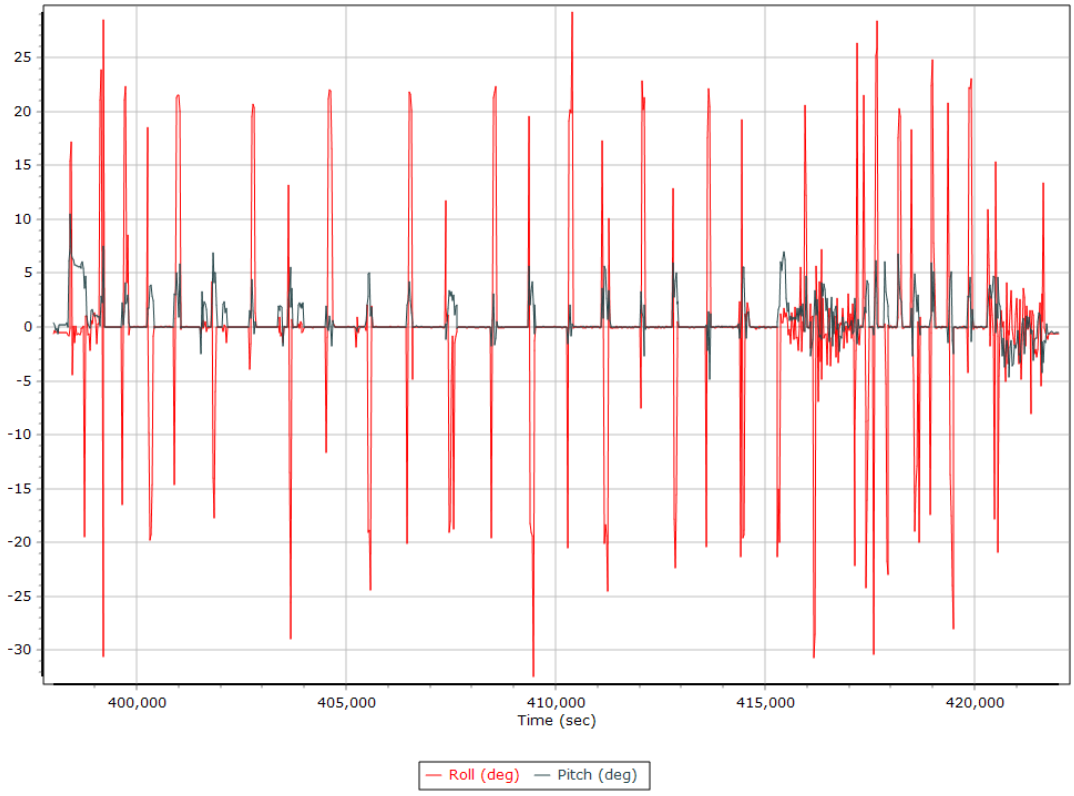
Top View



Altitude



Roll/Pitch



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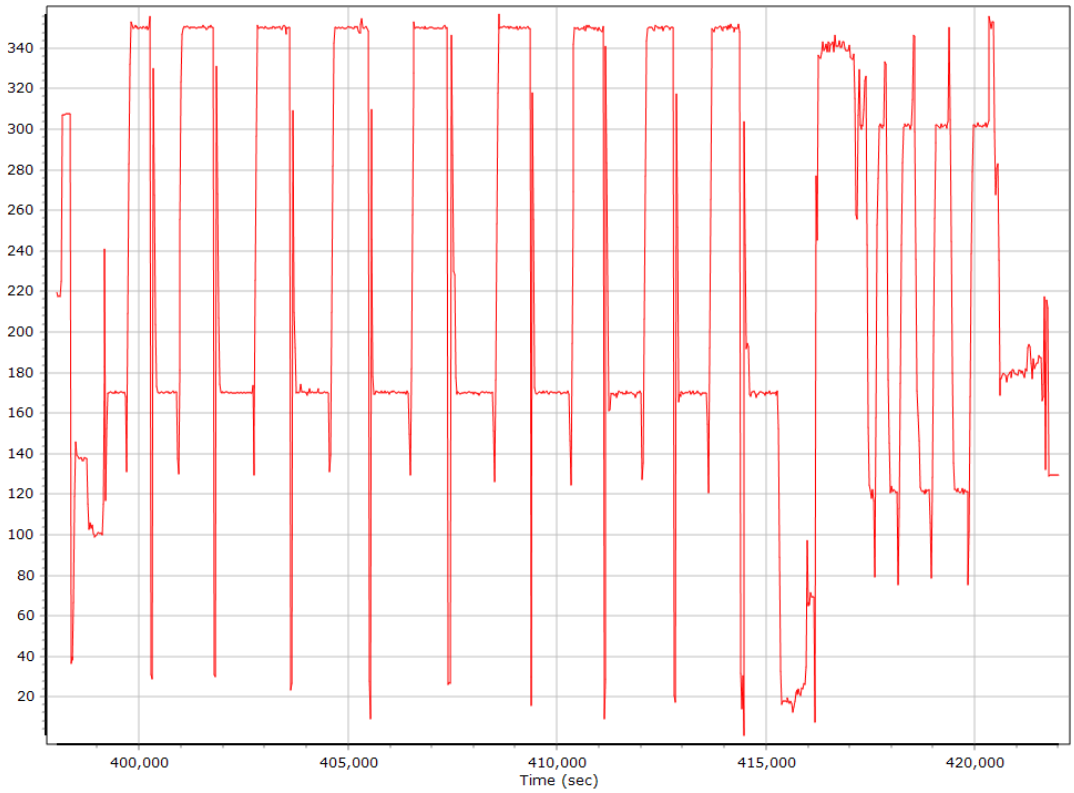
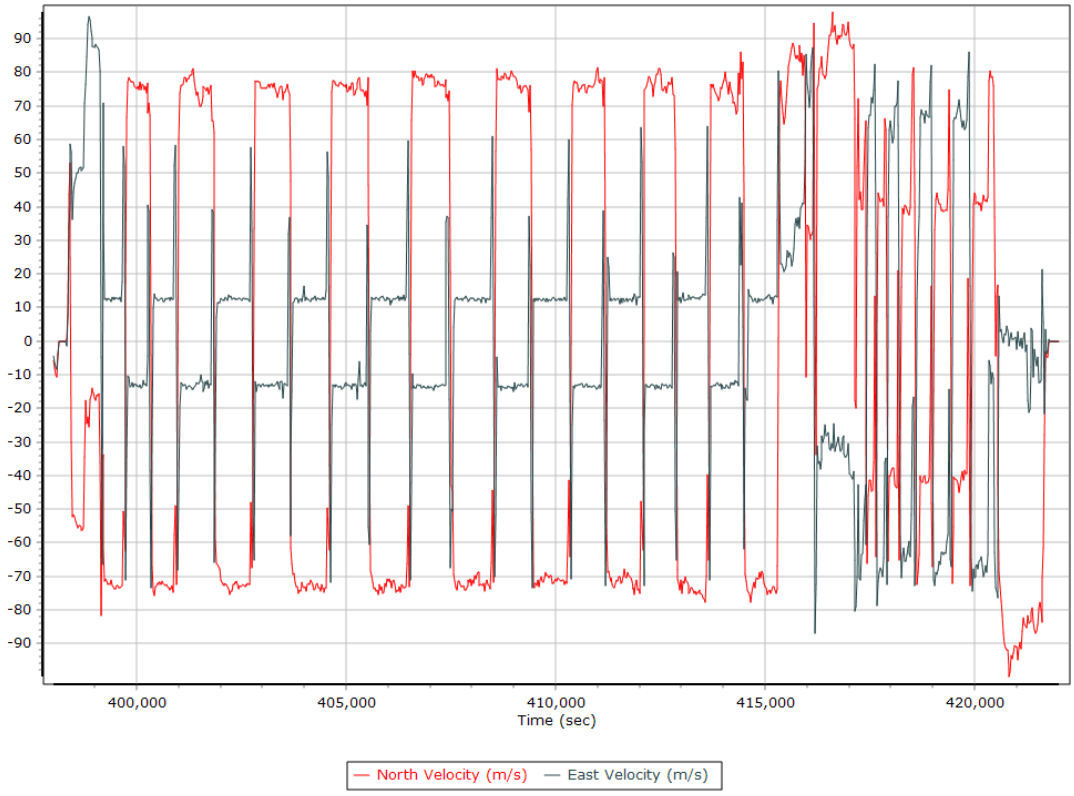
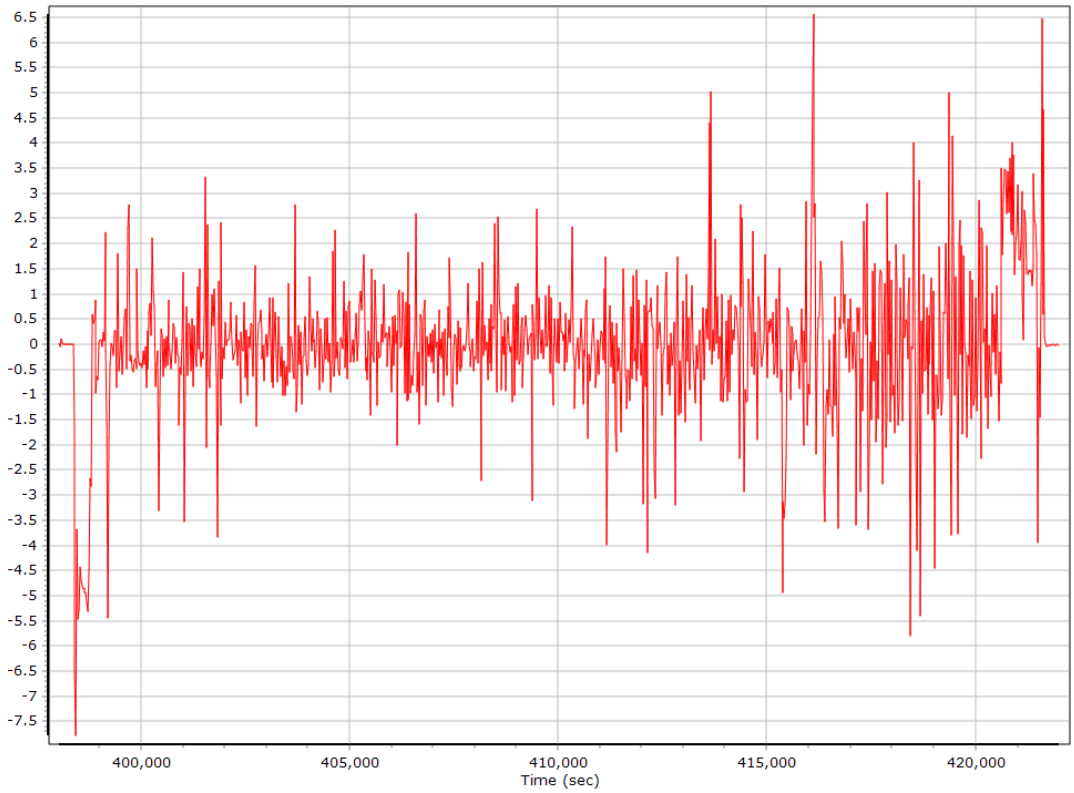


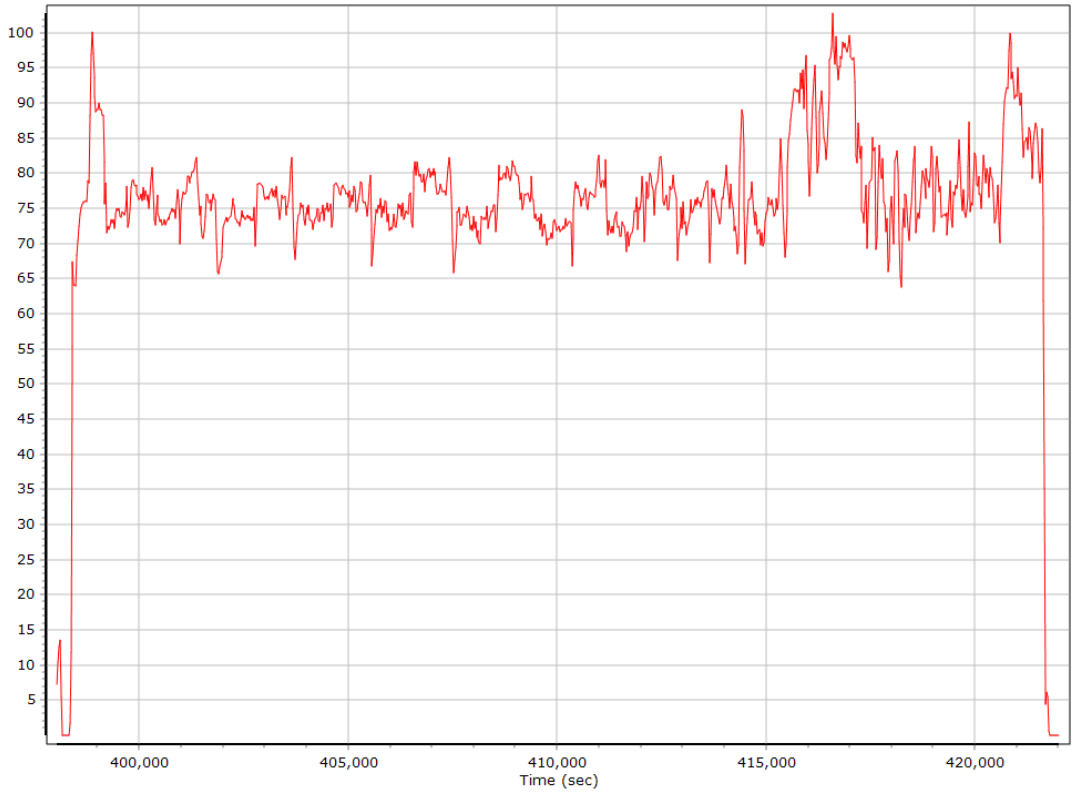
North/East Velocity



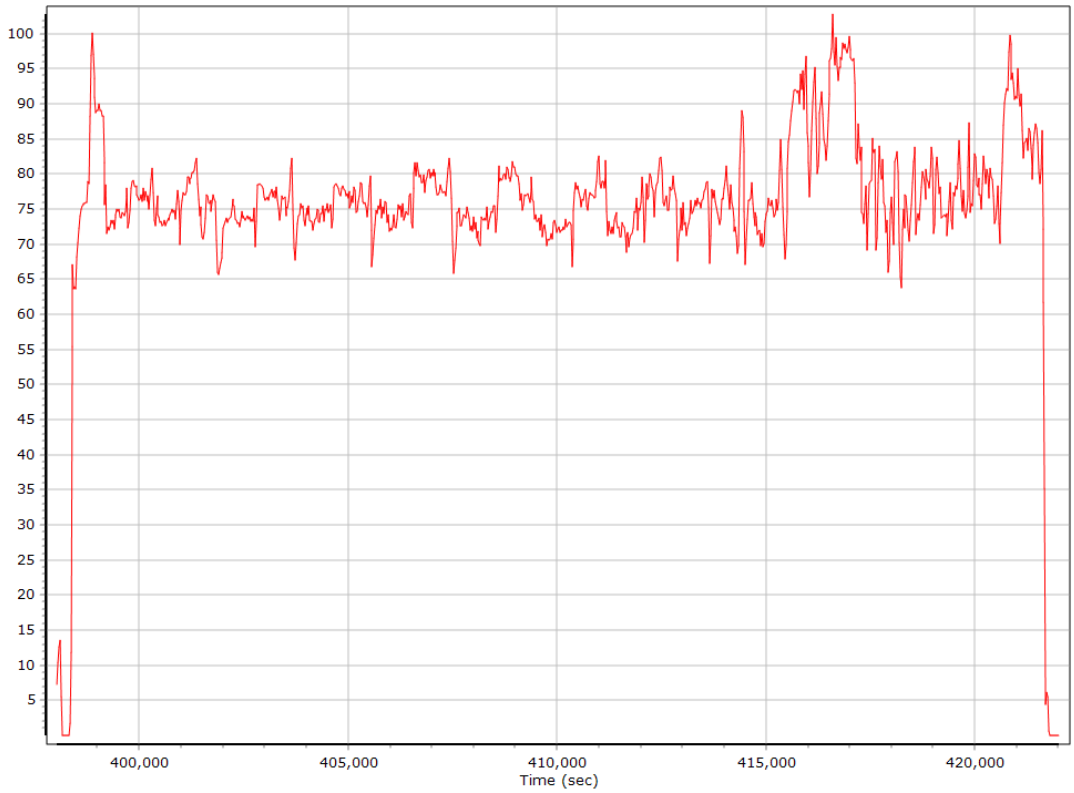
Down Velocity



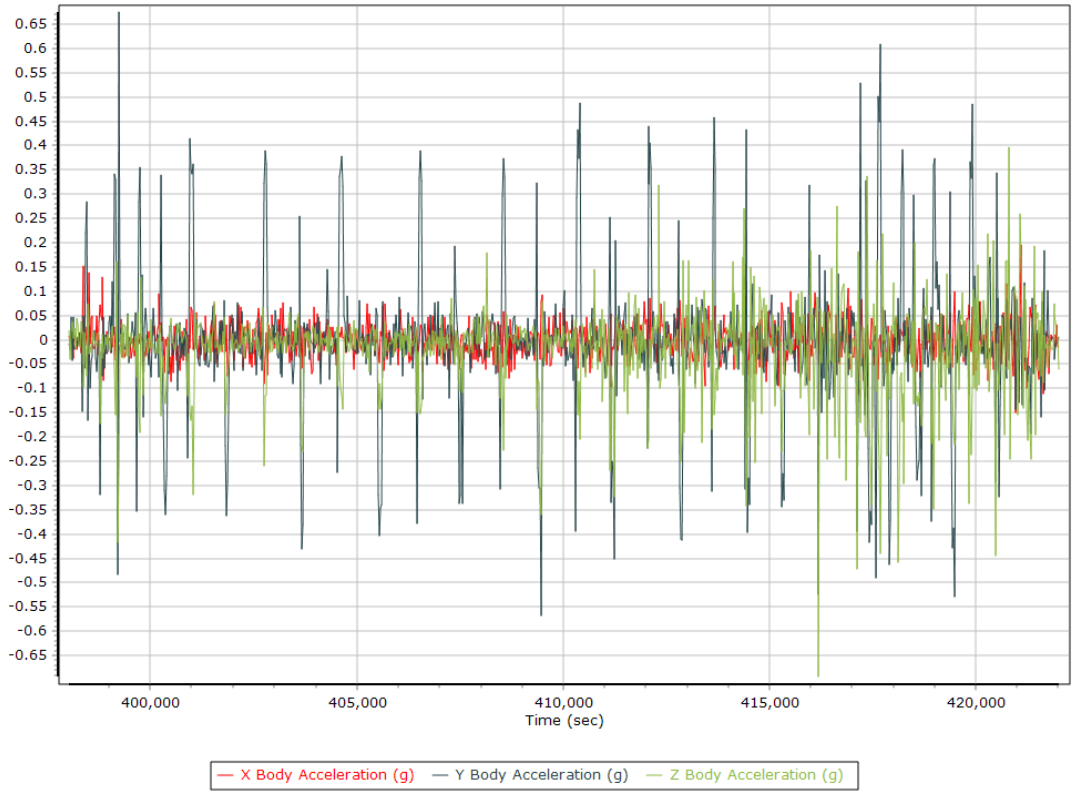
Total Speed



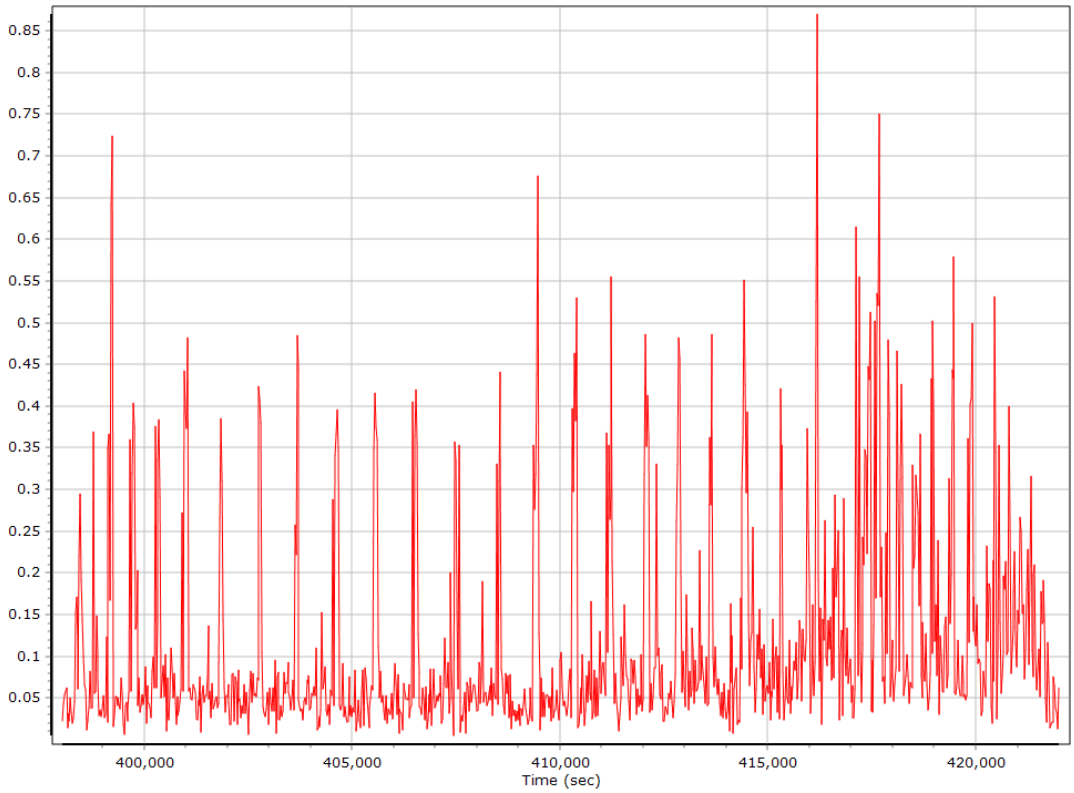
Ground Speed



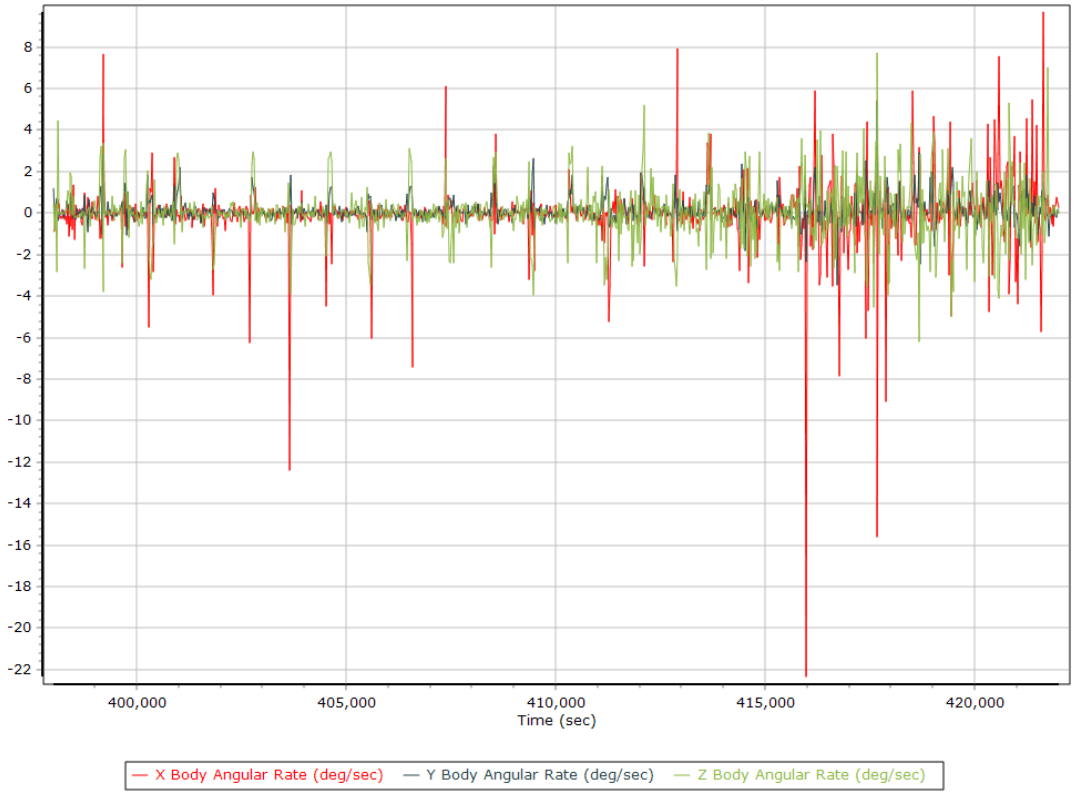
Body Acceleration



Total Body Acceleration

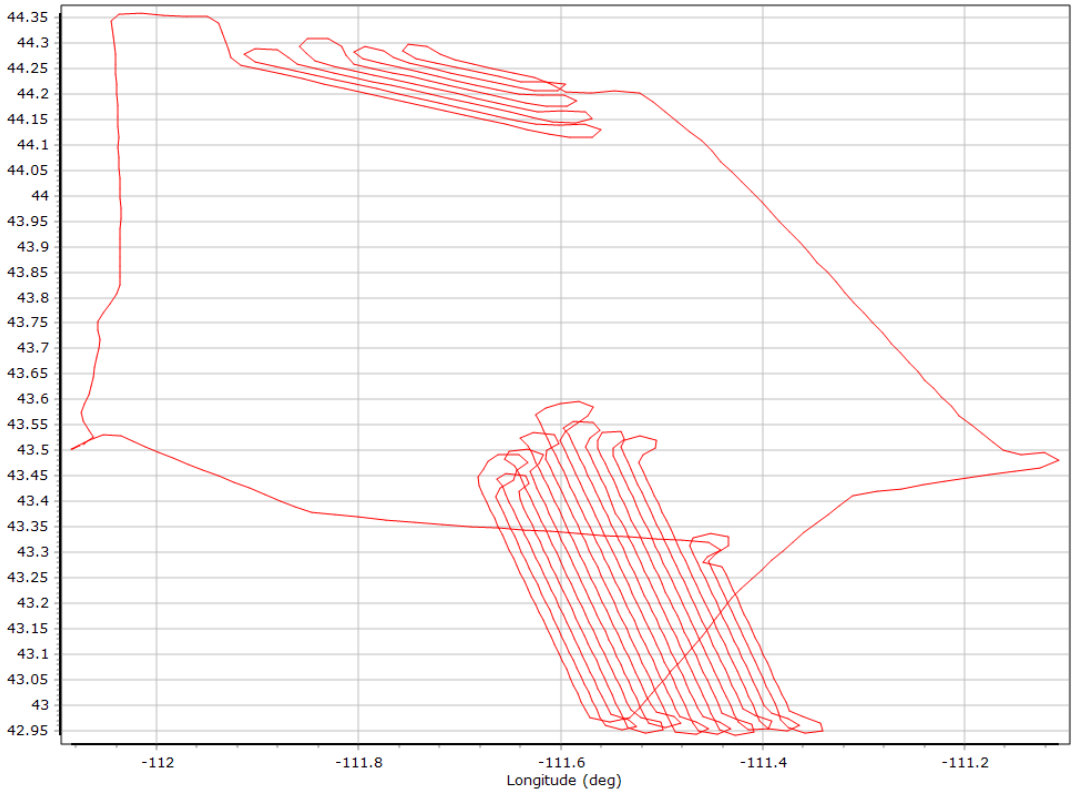


Body Angular Rate

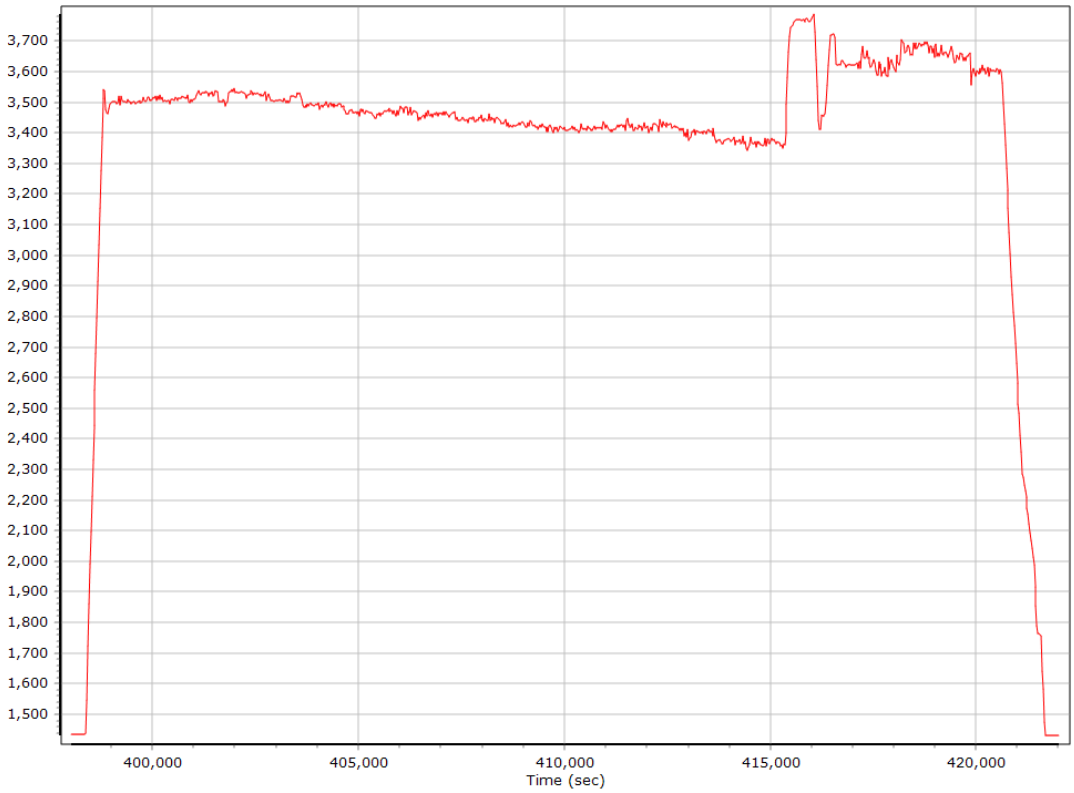


Forward Processed Trajectory Information

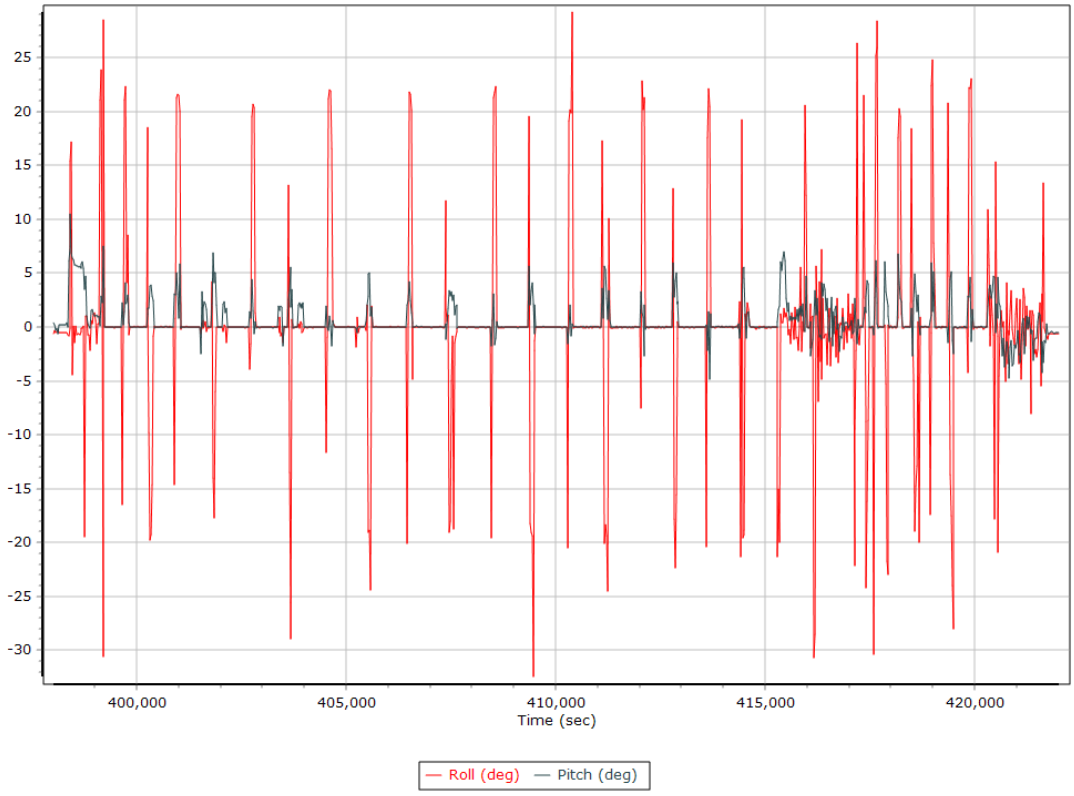
Top View



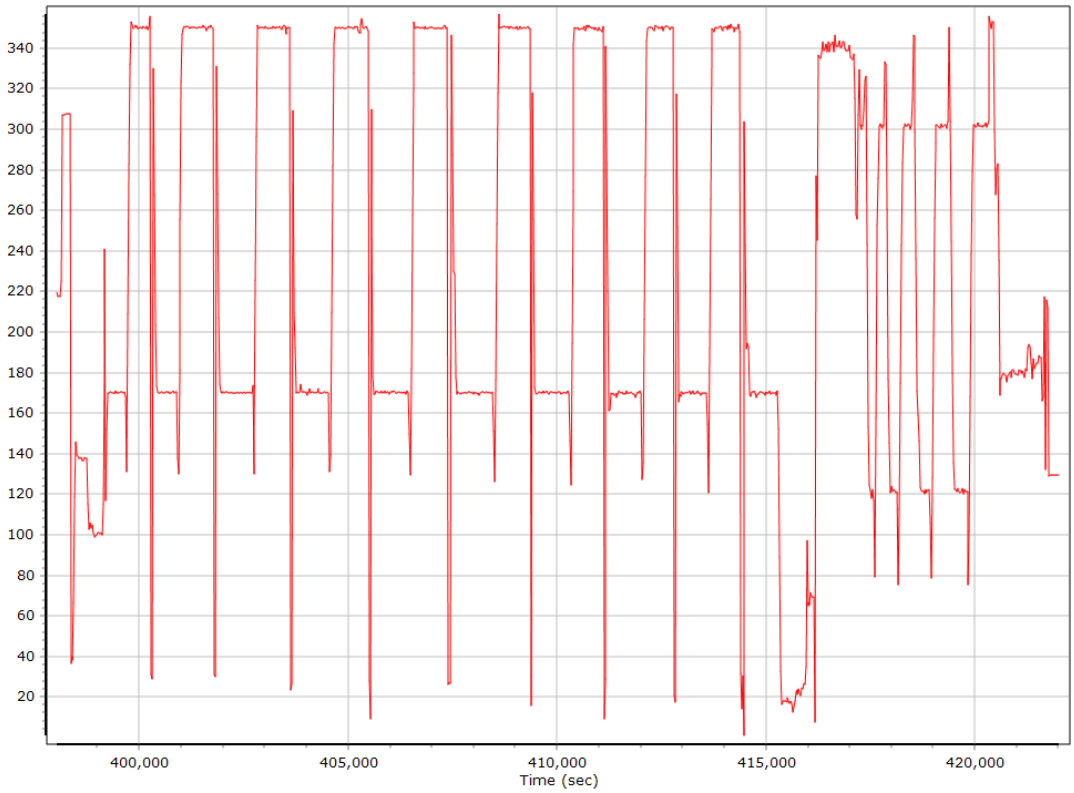
Altitude



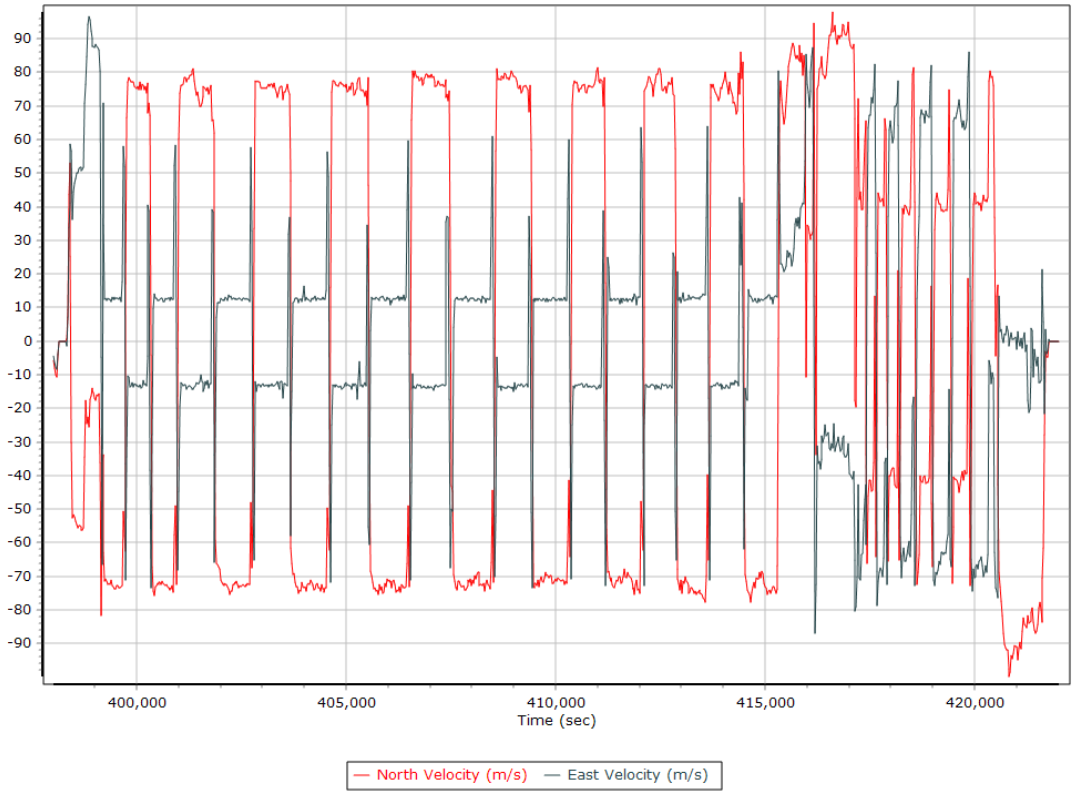
Roll/Pitch



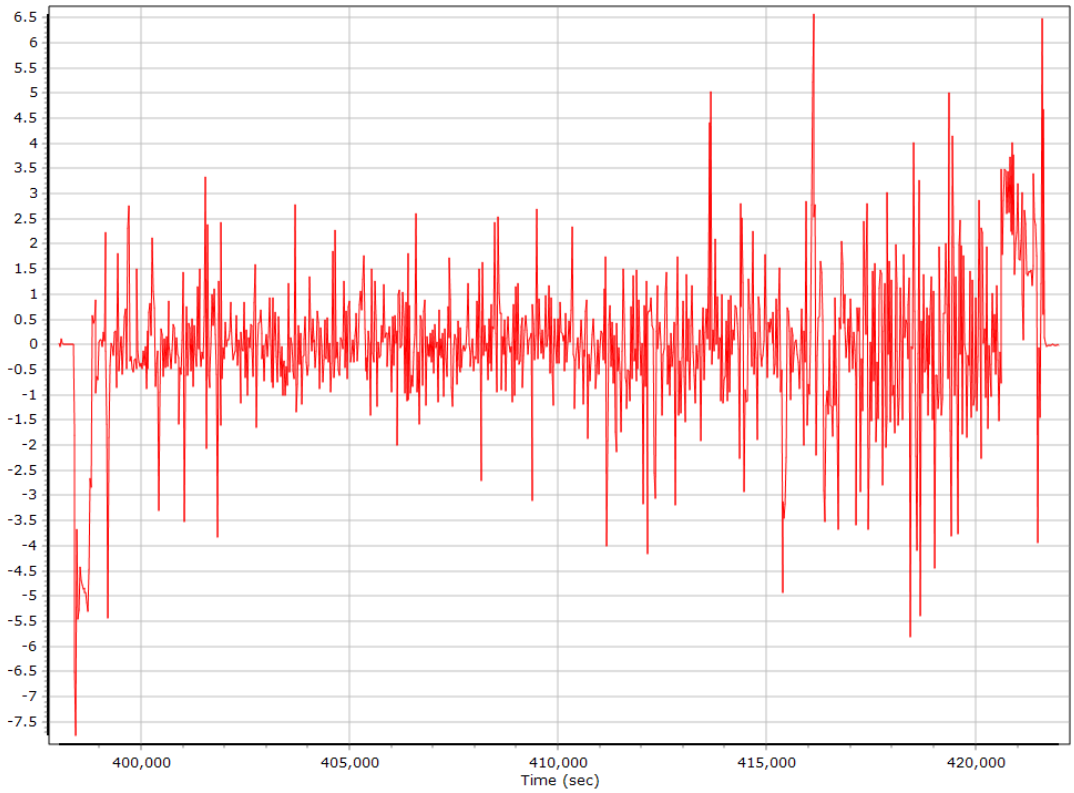
Heading



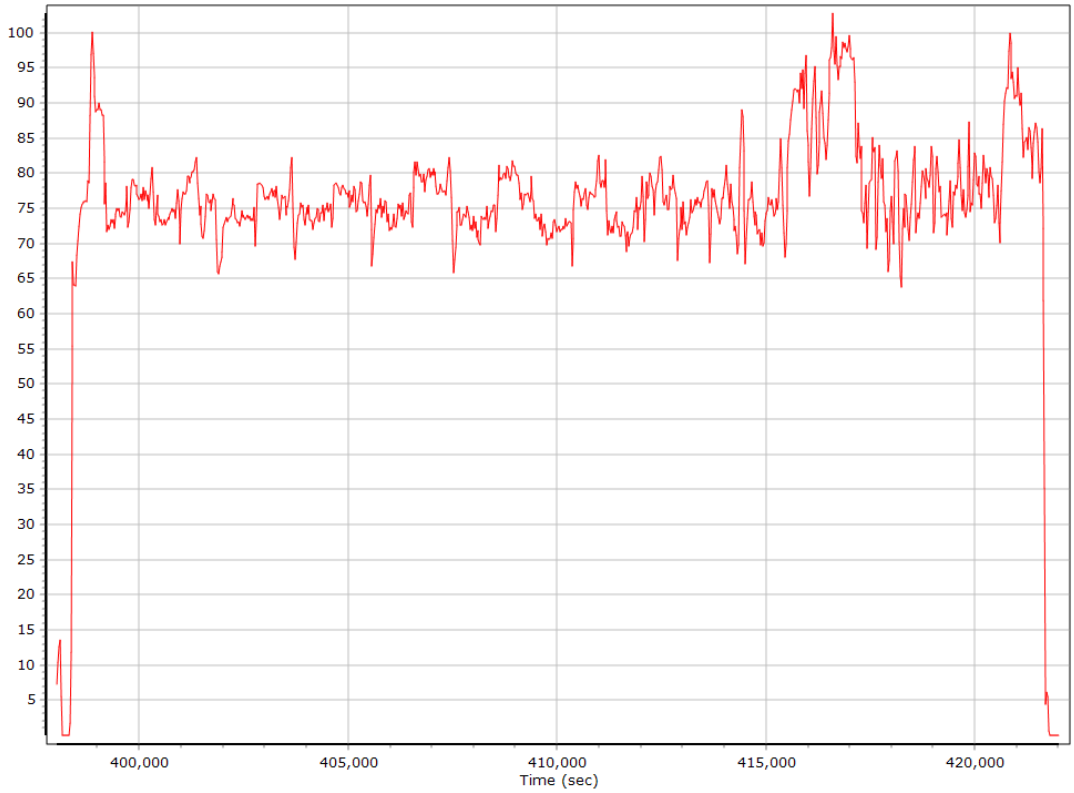
North/East Velocity



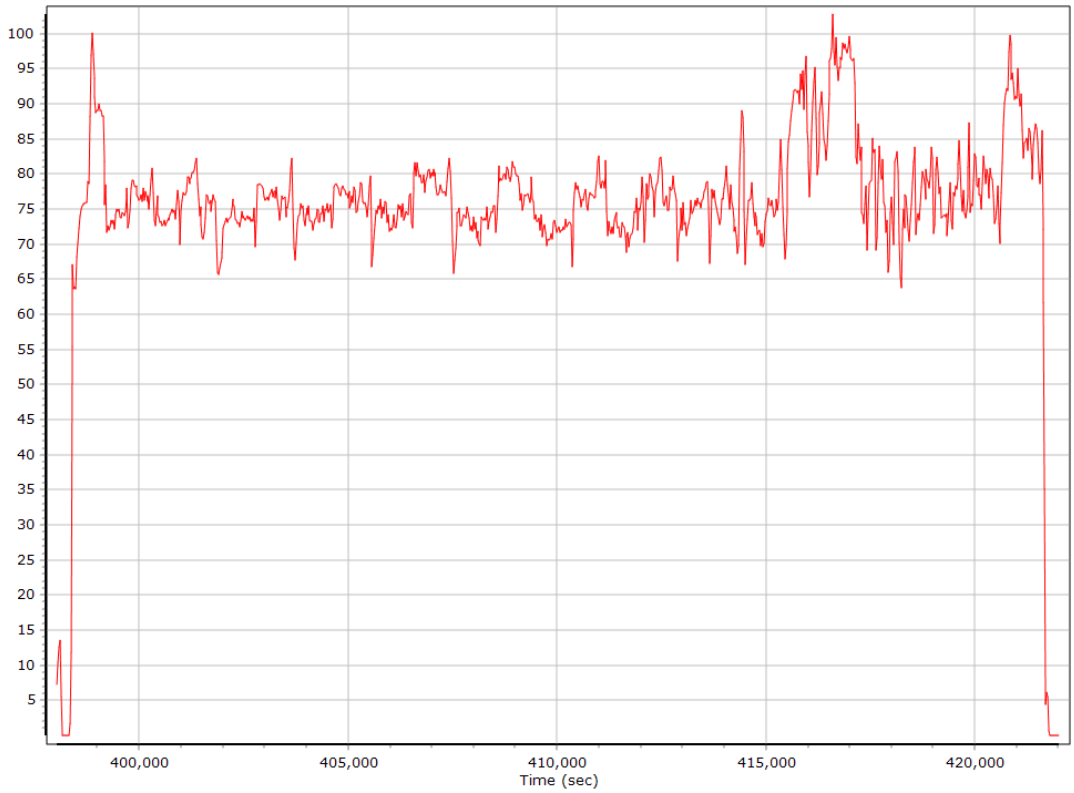
Down Velocity



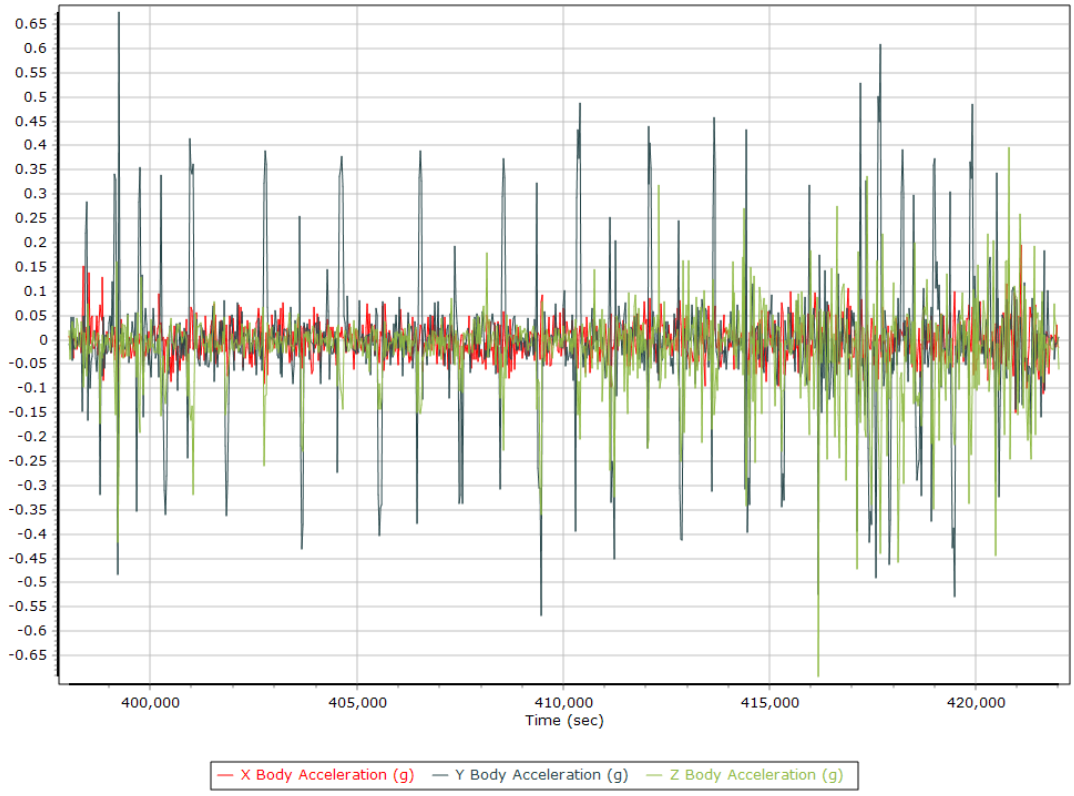
Total Speed



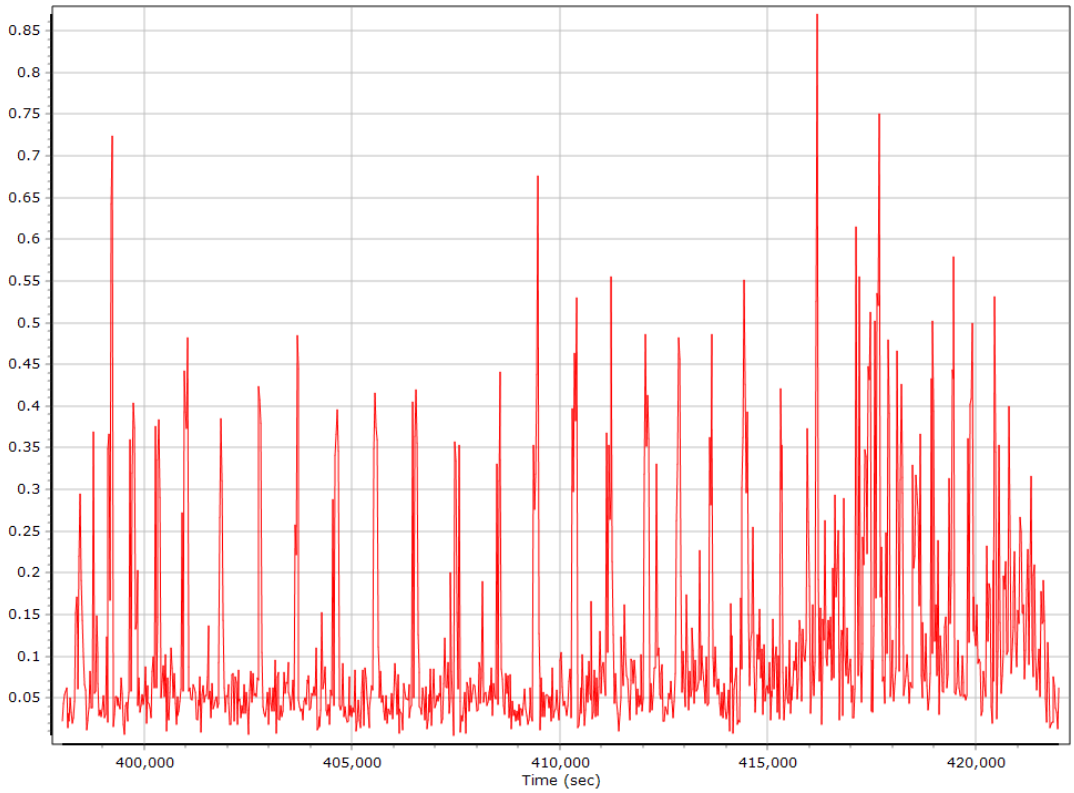
Ground Speed



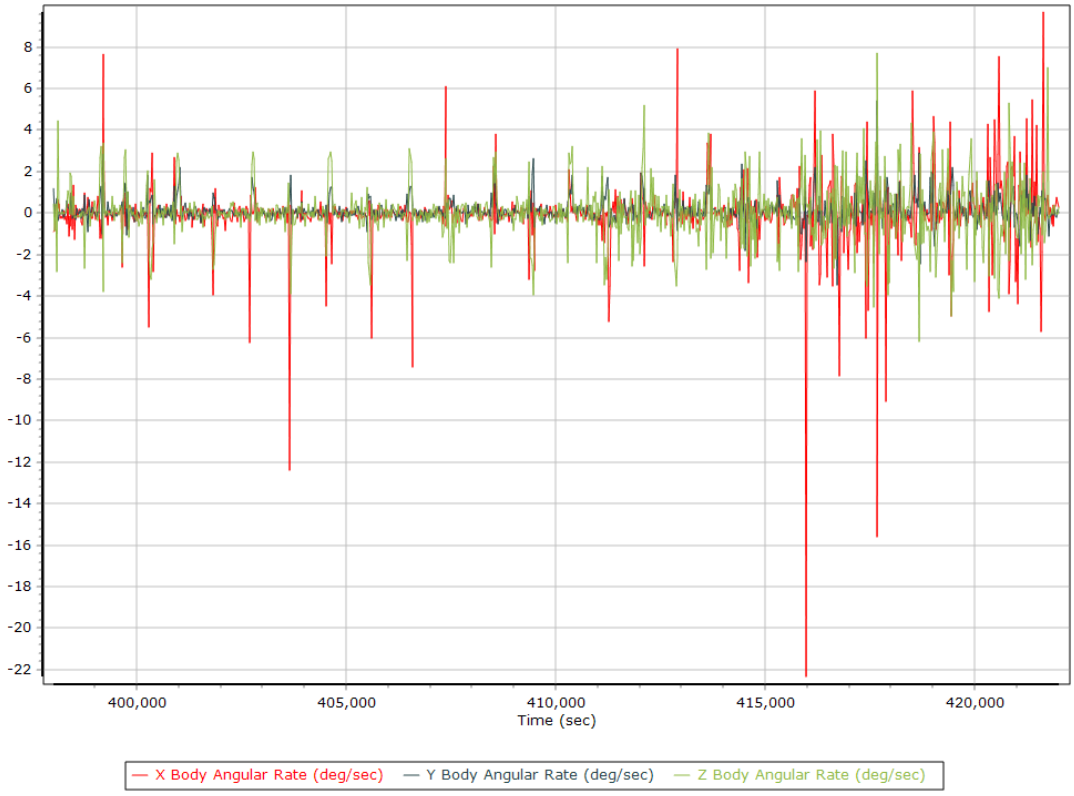
Body Acceleration



Total Body Acceleration



Body Angular Rate



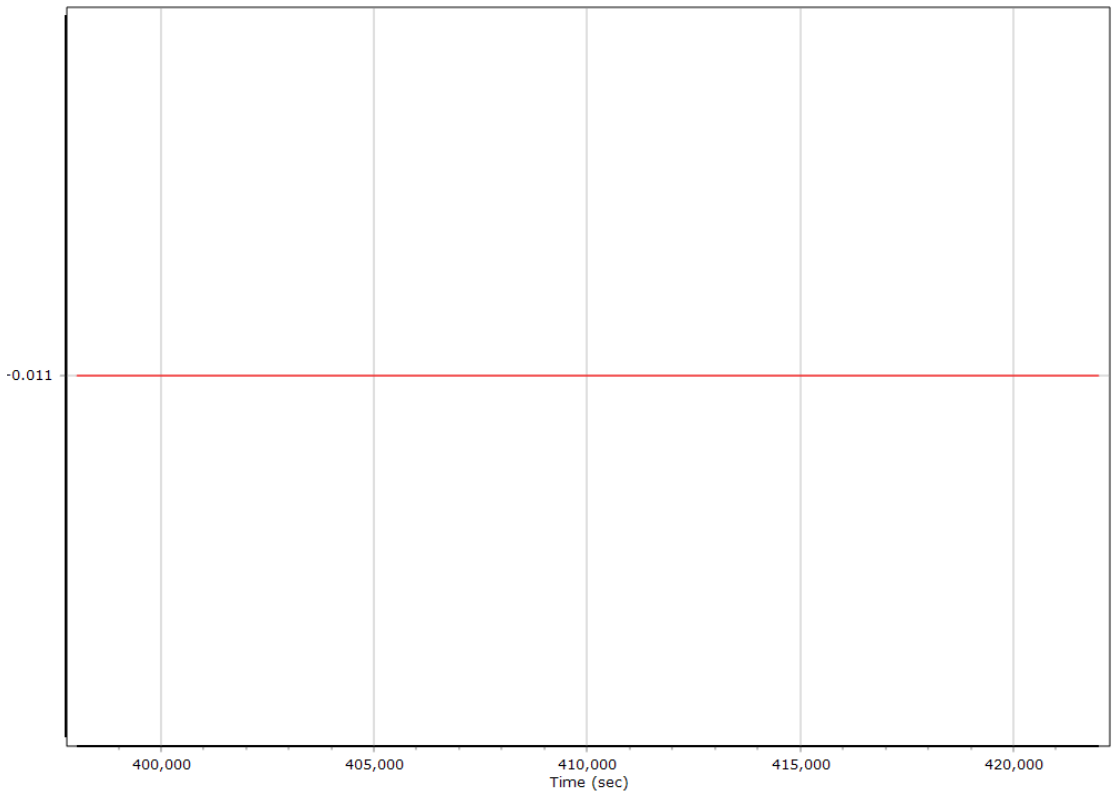
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion Trimble RTX Nav		
Stabilized mount	True		
Processing start time	397247.000 (06/11/2020 14:20:29)		
Processing end time	422023.000 (06/11/2020 21:13:25)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm (m)	0.000	0.000	0.000
Gimbal to IMU mounting angles (deg)	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm (m)	-0.011	0.039	-1.317
Gimbal 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

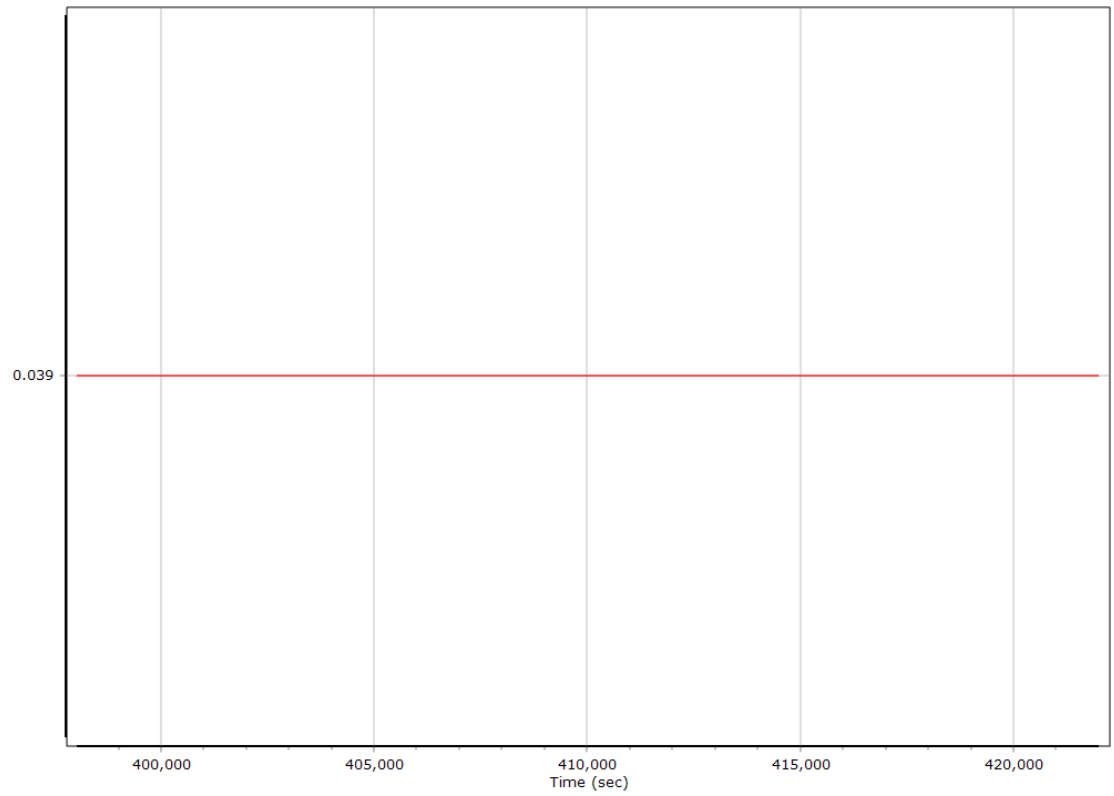
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

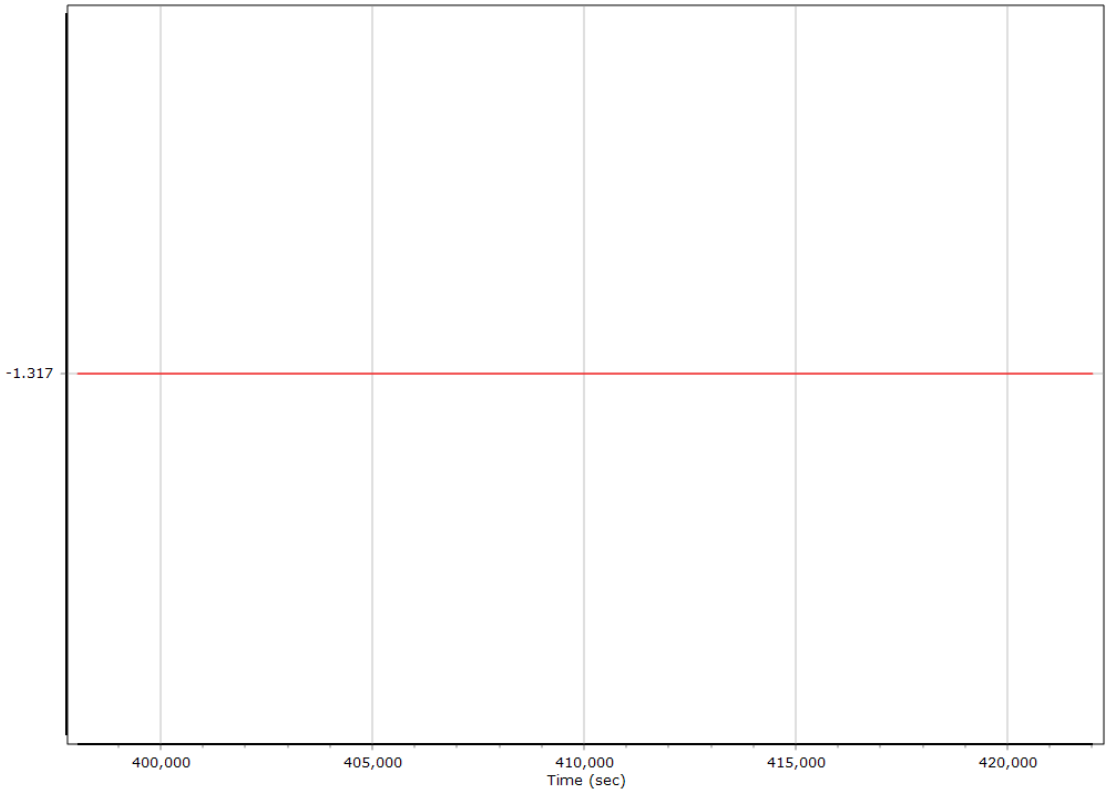
X Reference-Primary GNSS Lever Arm (m)



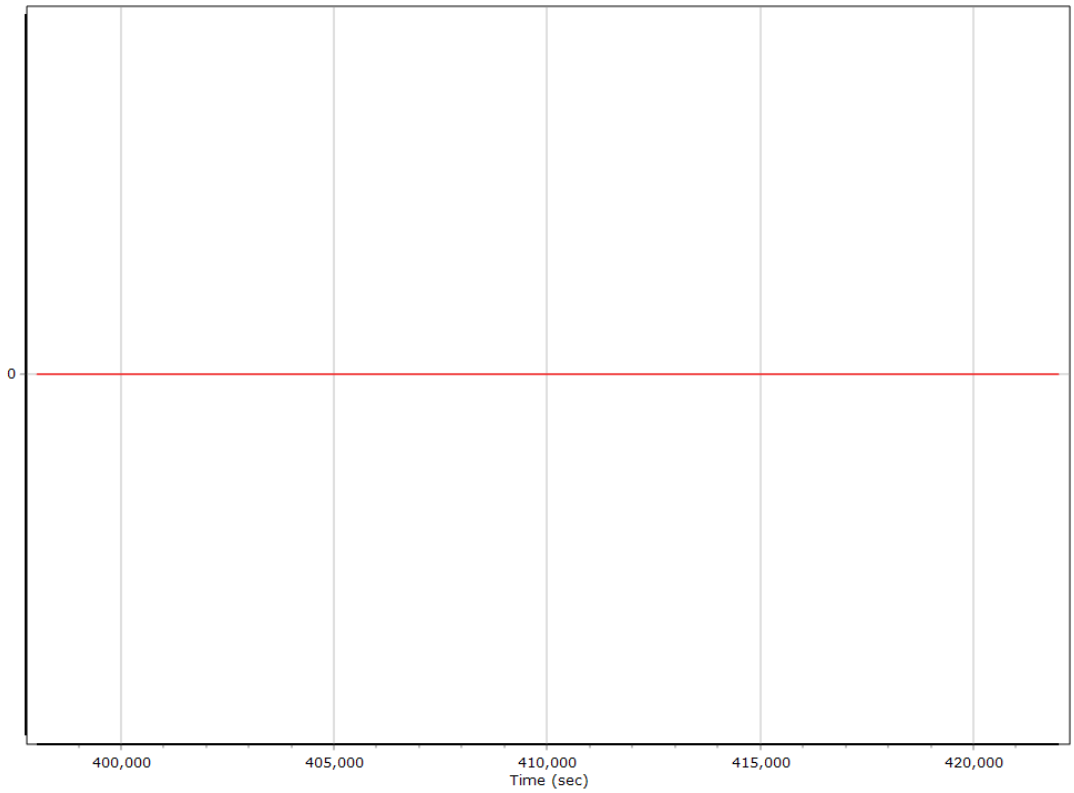
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



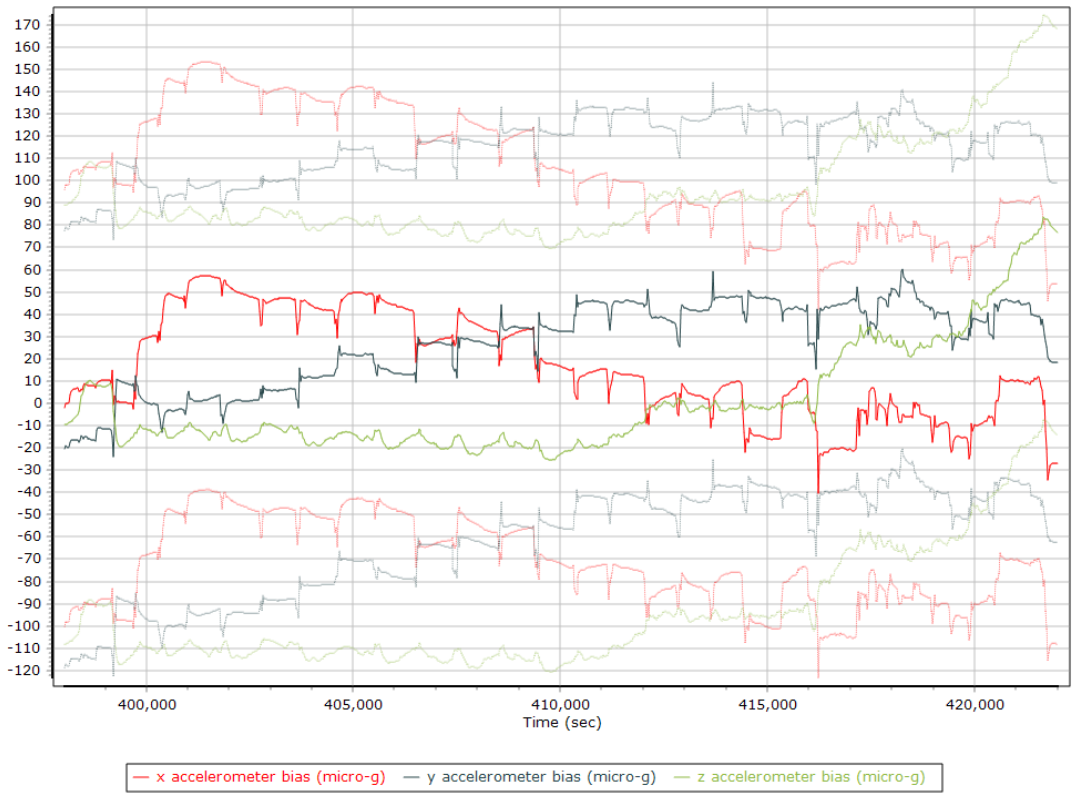
Reference-Primary GNSS Lever Arm Figure of Merit



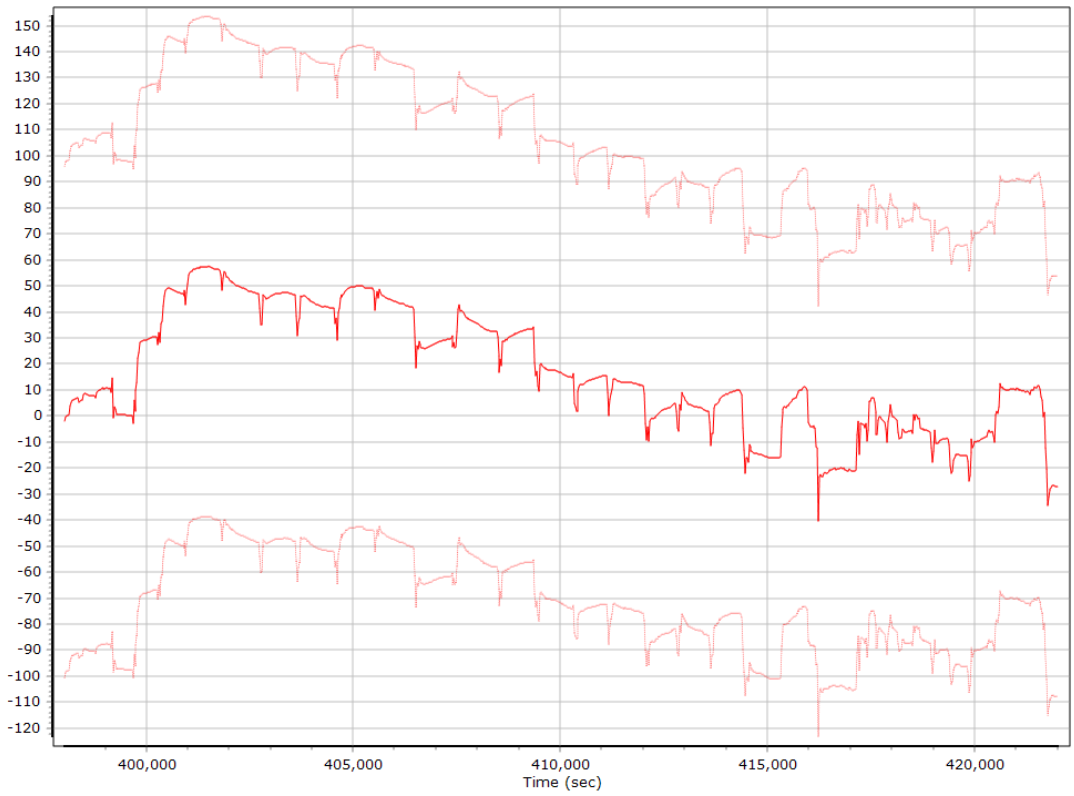
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

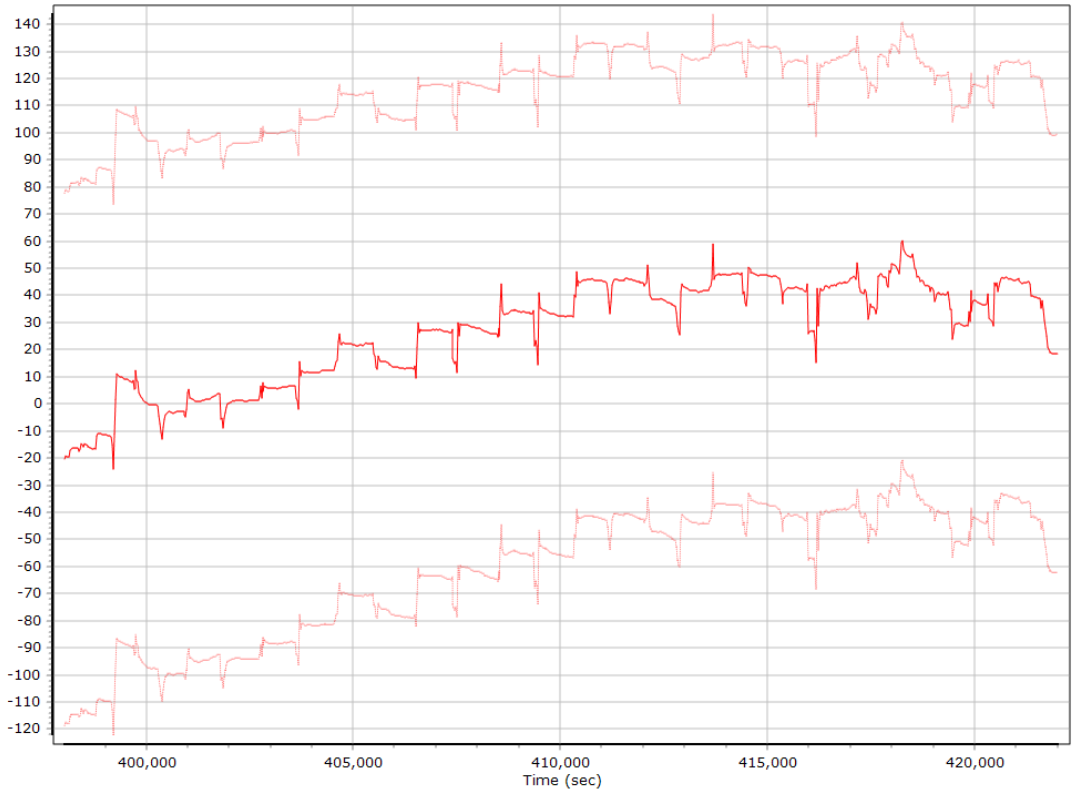
Accelerometer Bias (micro-g)



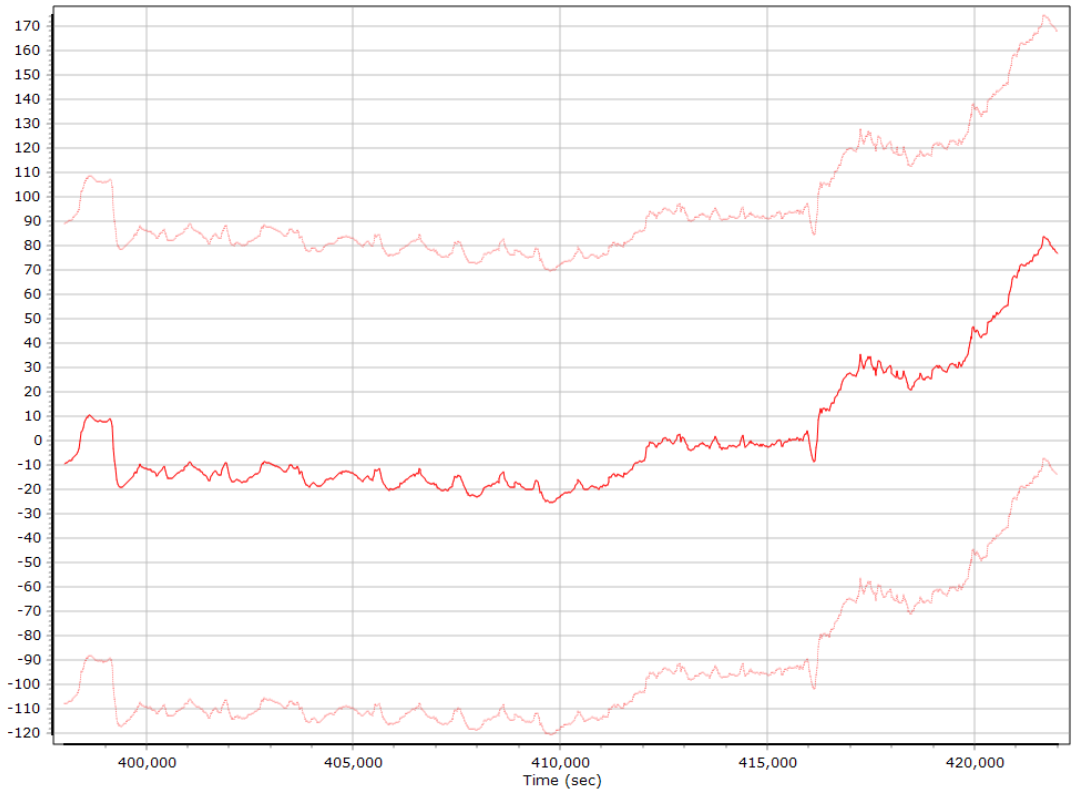
X Accelerometer Bias (micro-g)



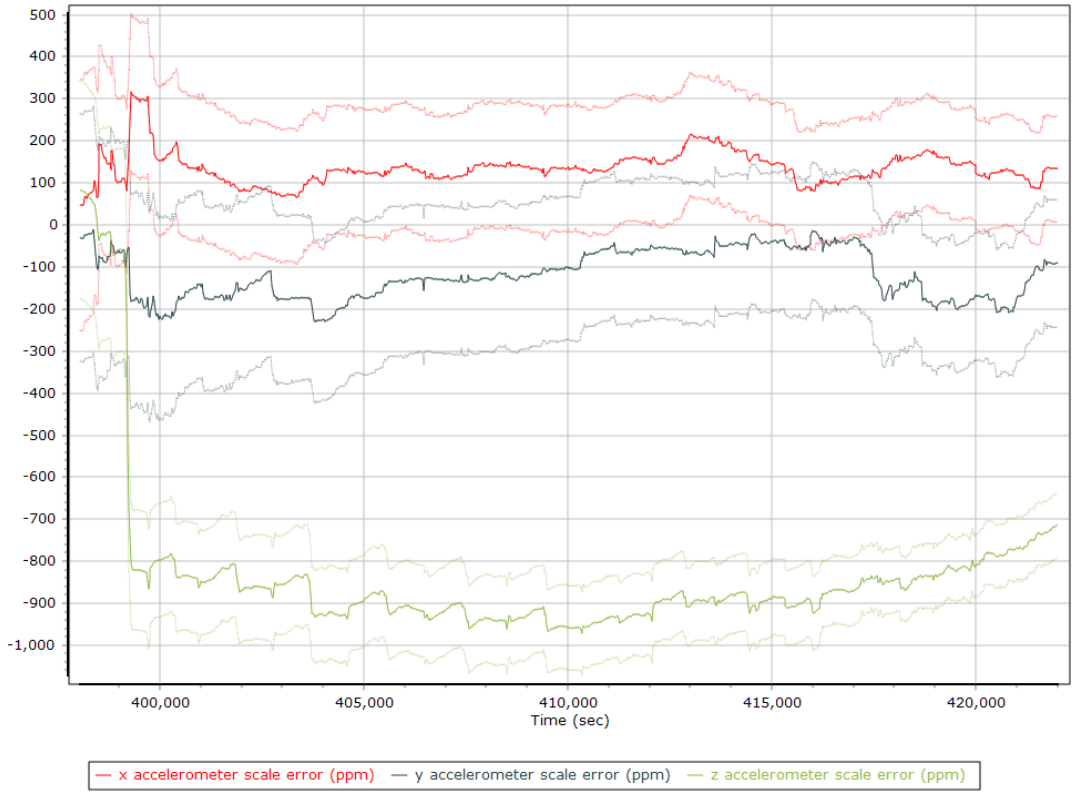
Y Accelerometer Bias (micro-g)



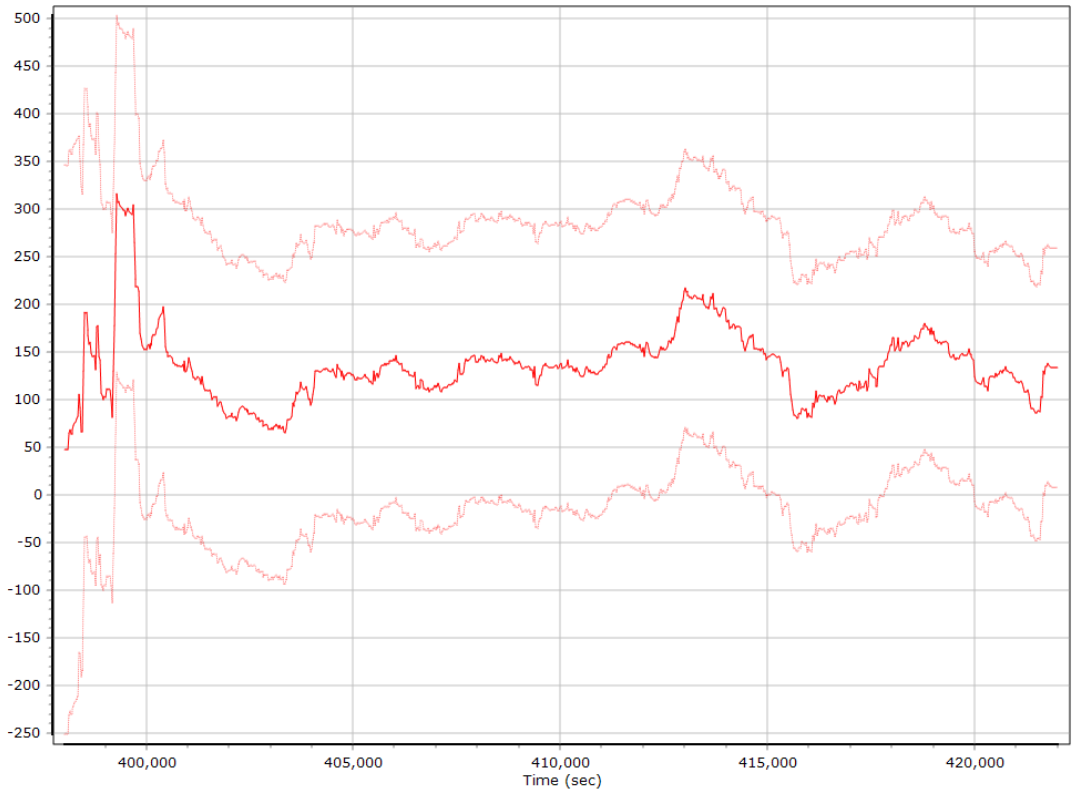
Z Accelerometer Bias (micro-g)



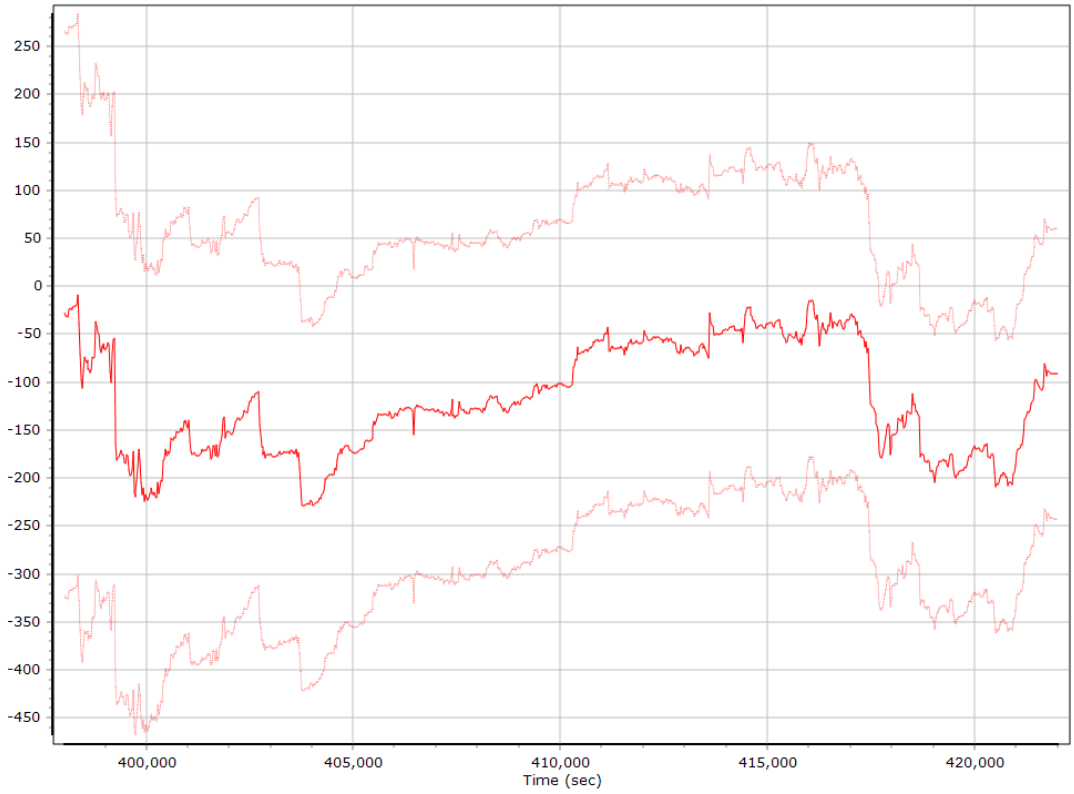
Accelerometer Scale Error (ppm)



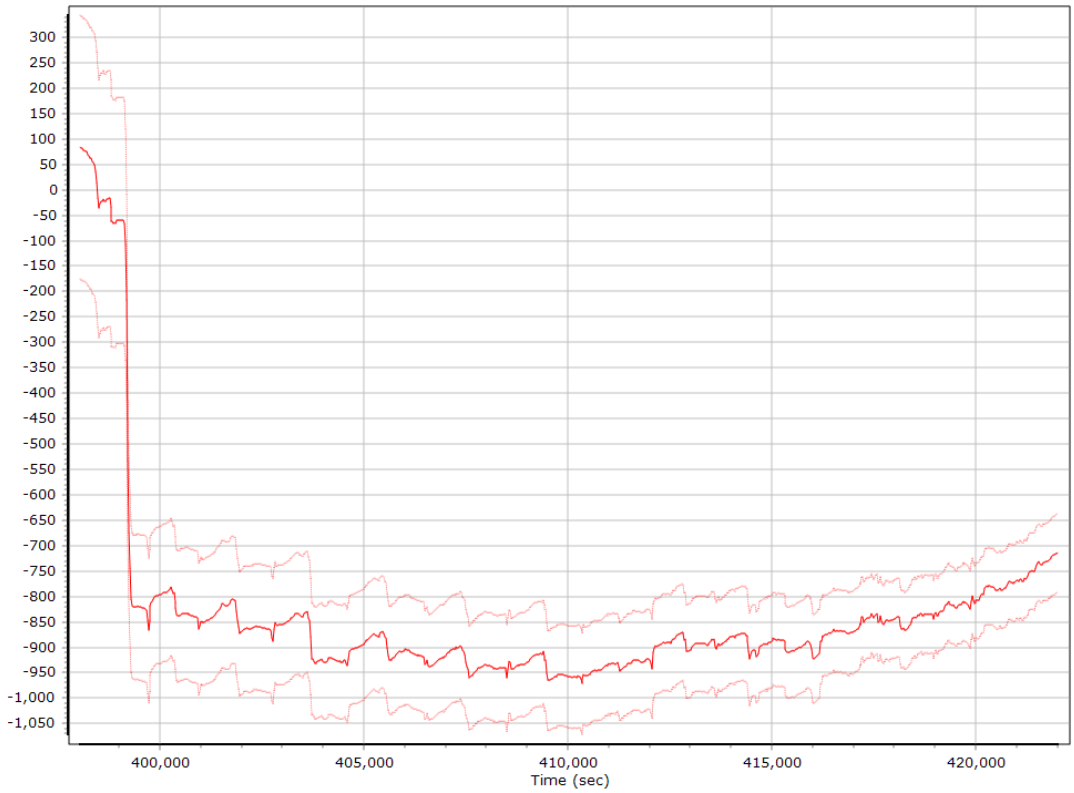
X Accelerometer Scale Error (ppm)



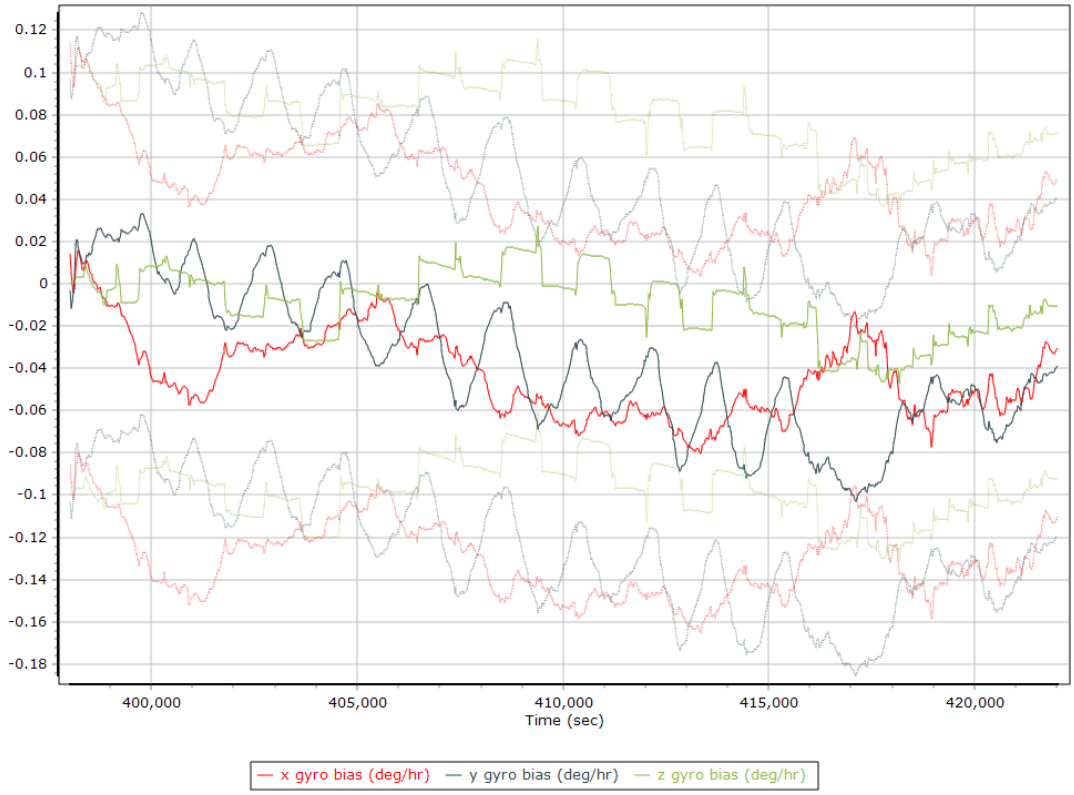
Y Accelerometer Scale Error (ppm)



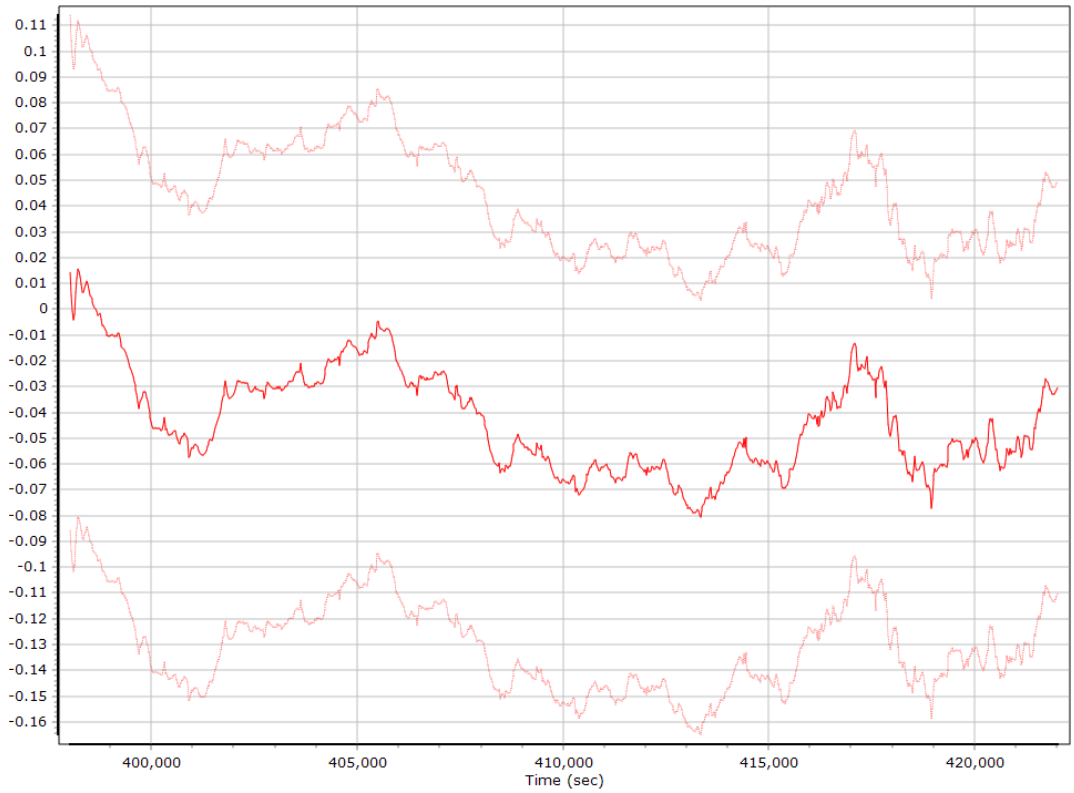
Z Accelerometer Scale Error (ppm)



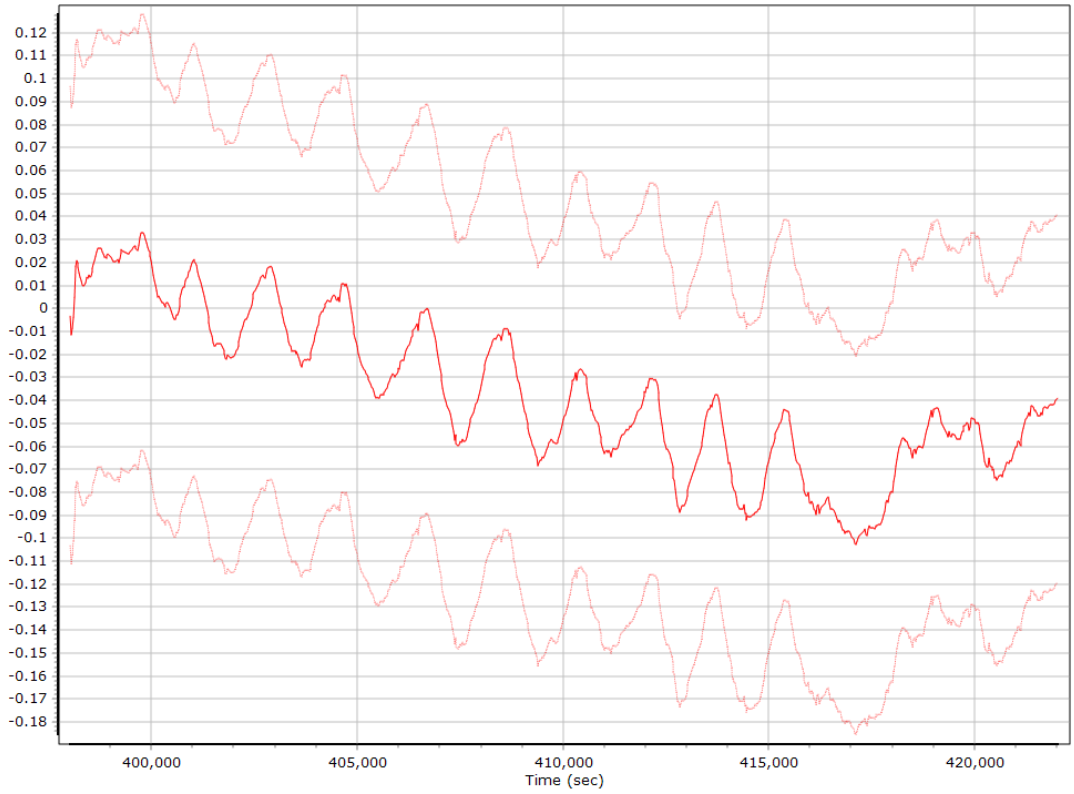
Gyro Bias (deg/h)



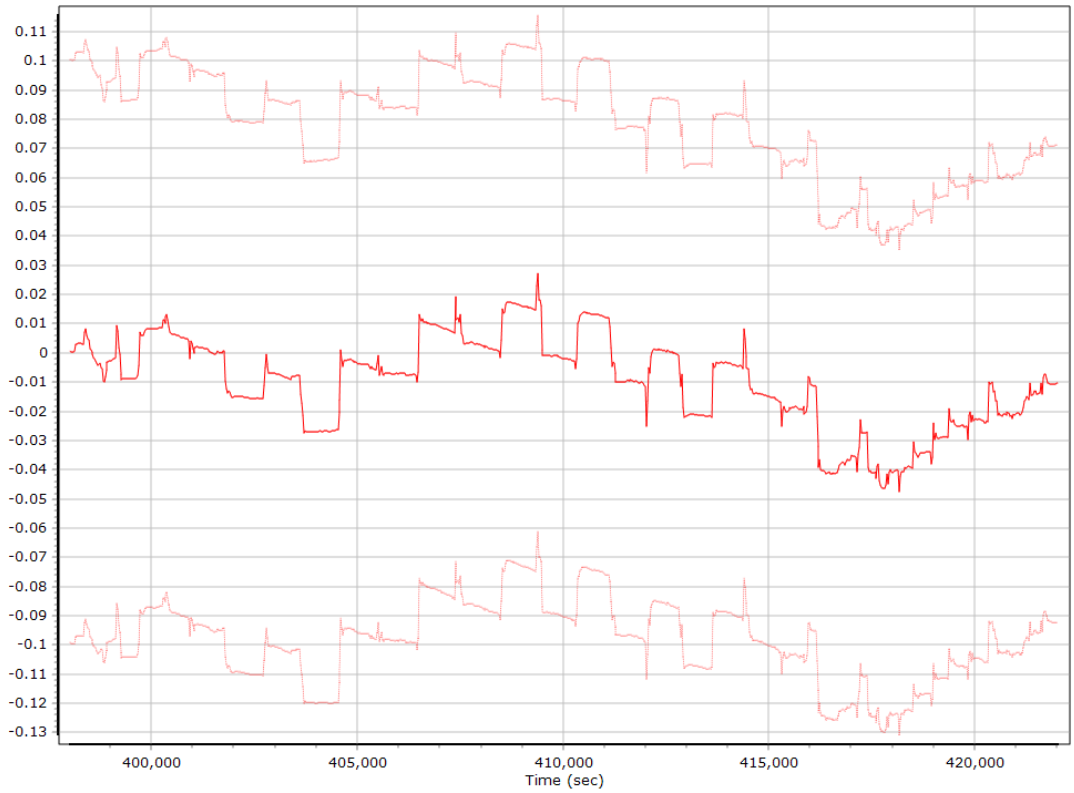
X Gyro Bias (deg/h)



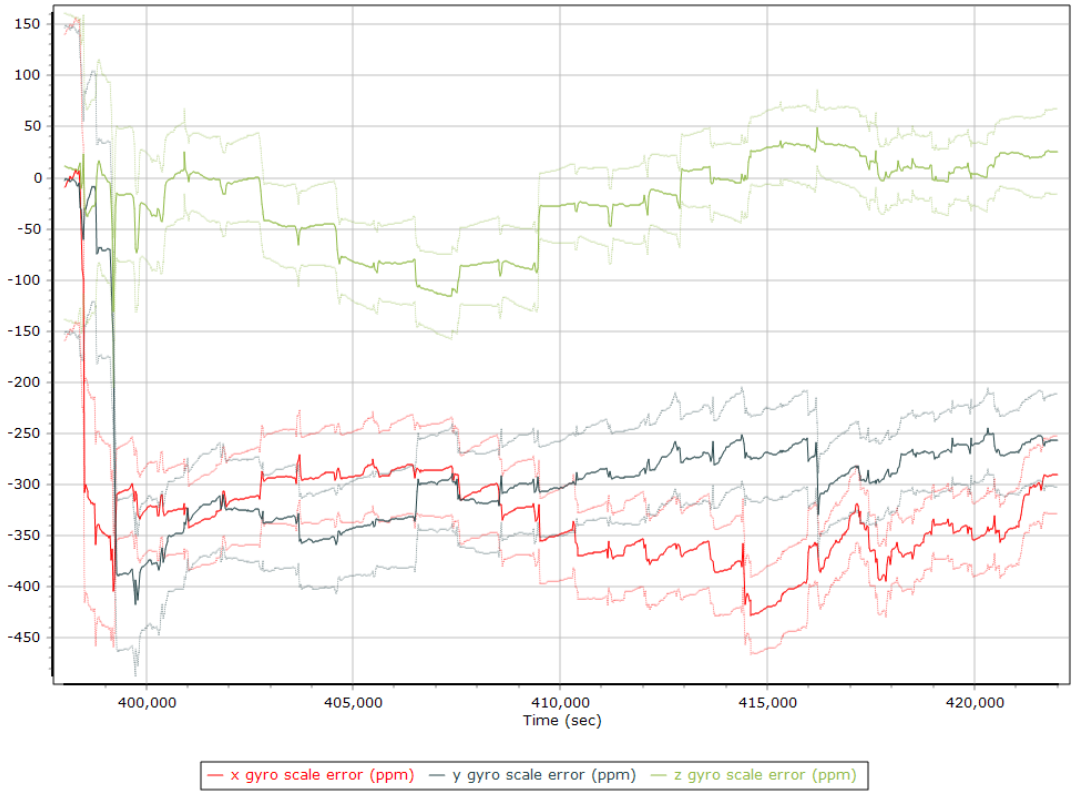
Y Gyro Bias (deg/h)



Z Gyro Bias (deg/h)



Gyro Scale Error (ppm)



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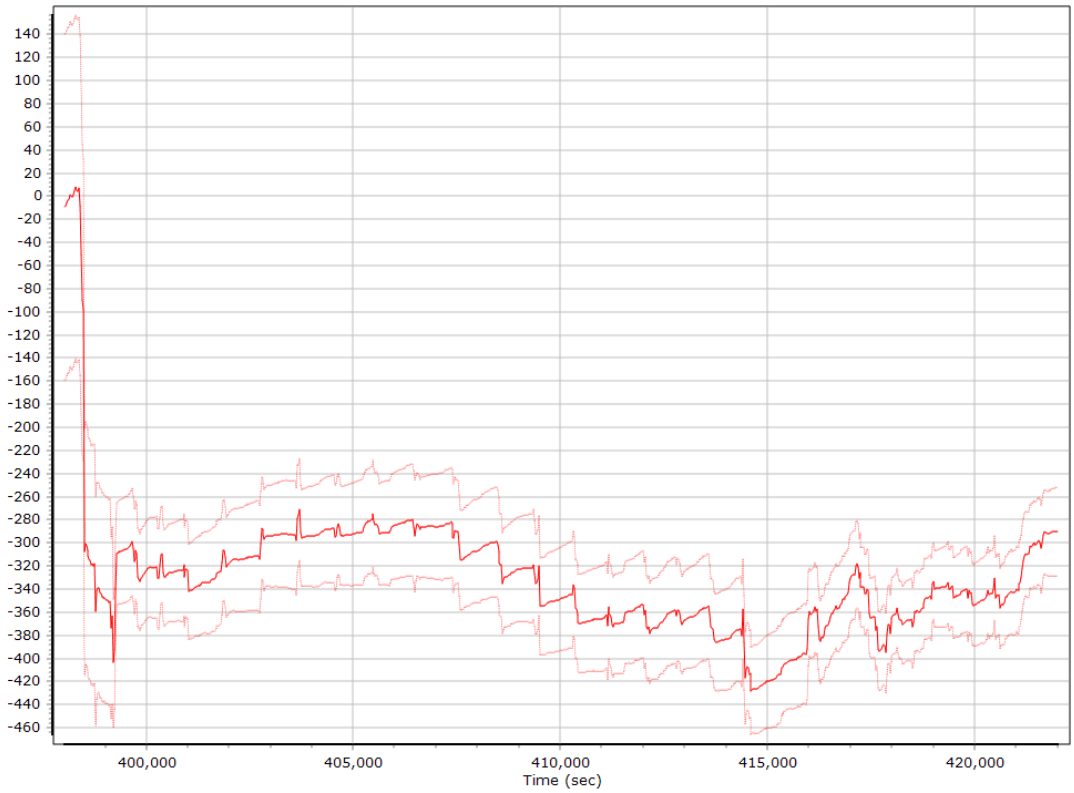
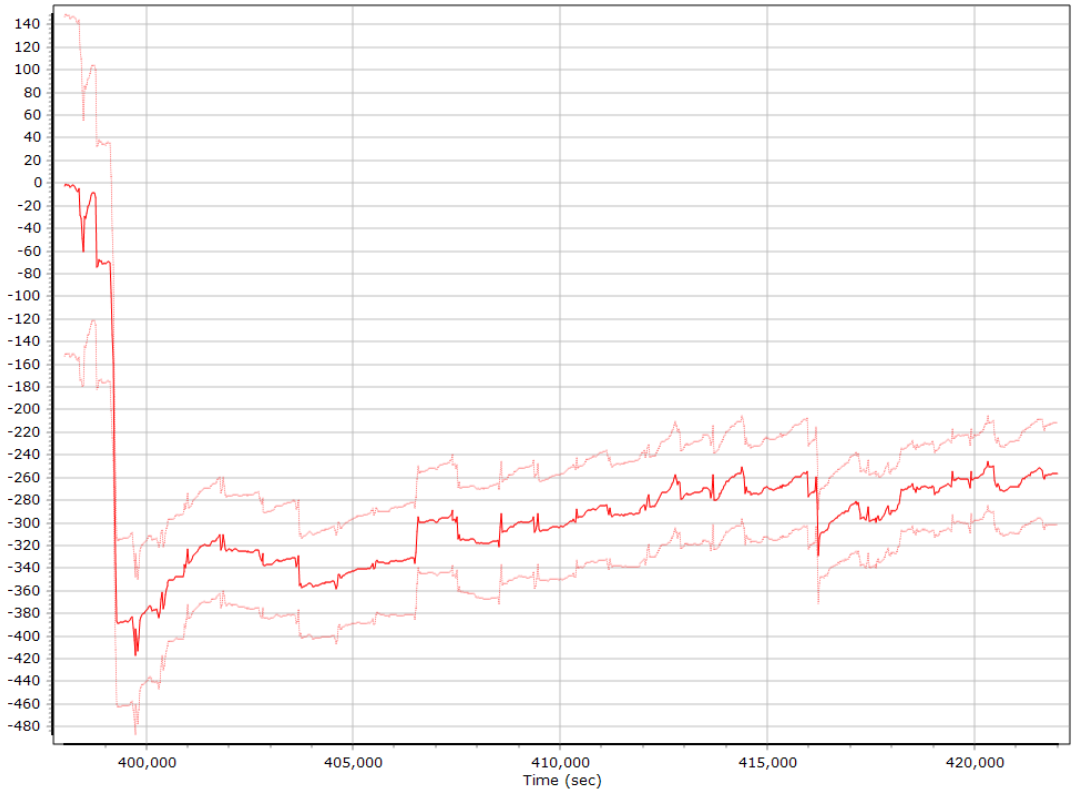
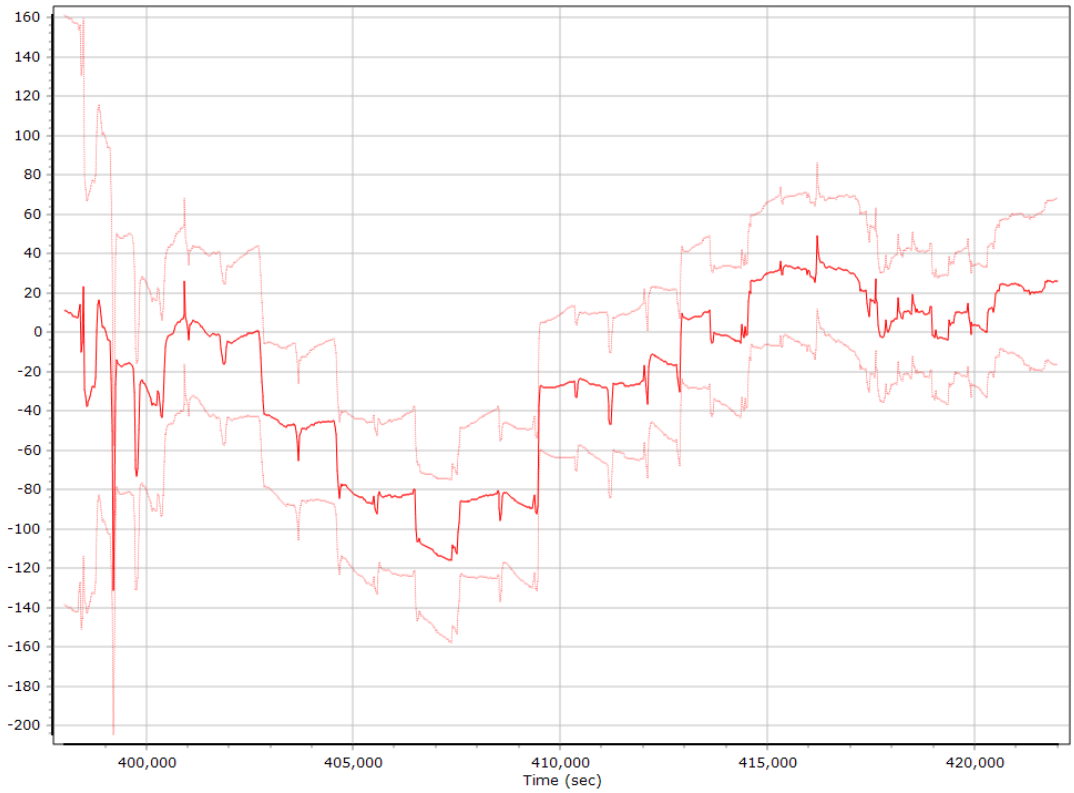


Y Gyro Scale Error (ppm)

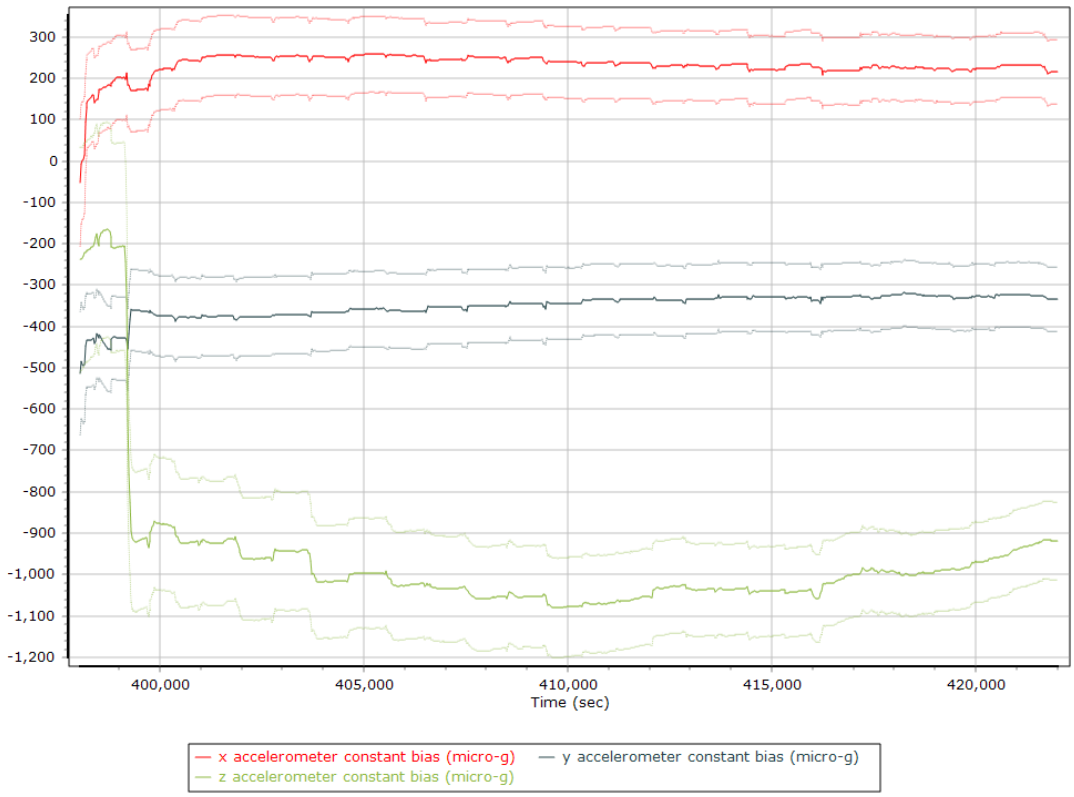


Z Gyro Scale Error (ppm)

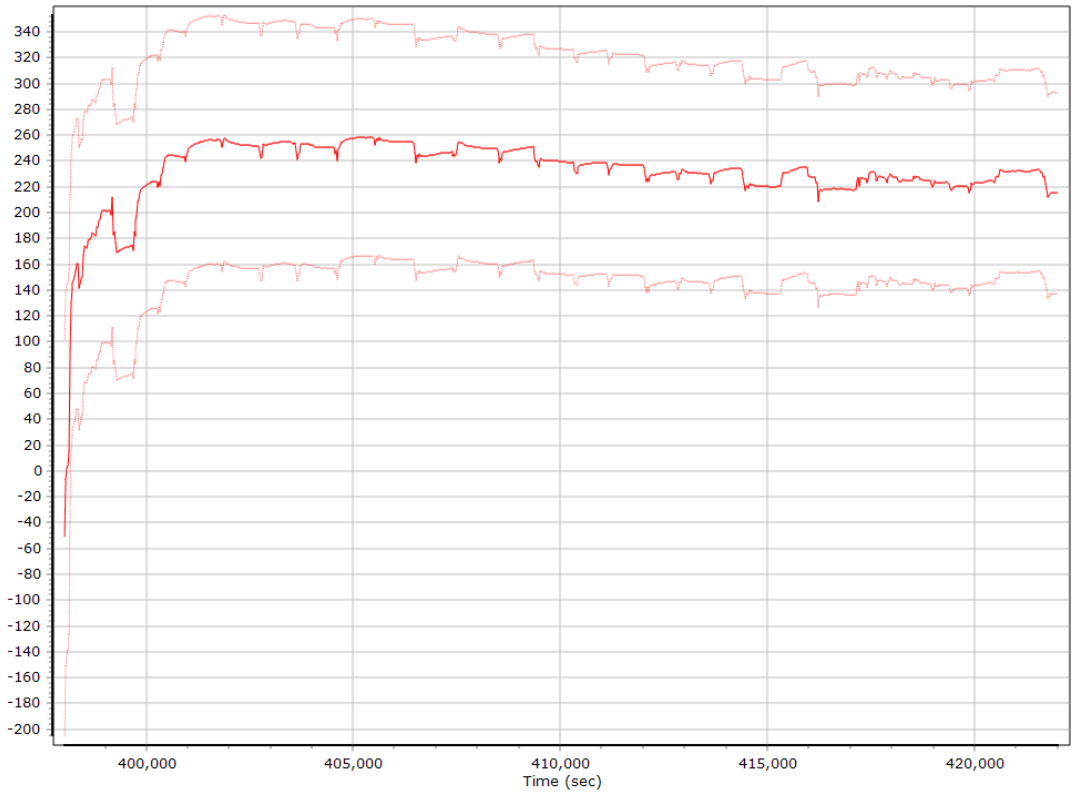


Forward Processed Estimated Constant Errors, Reference Frame

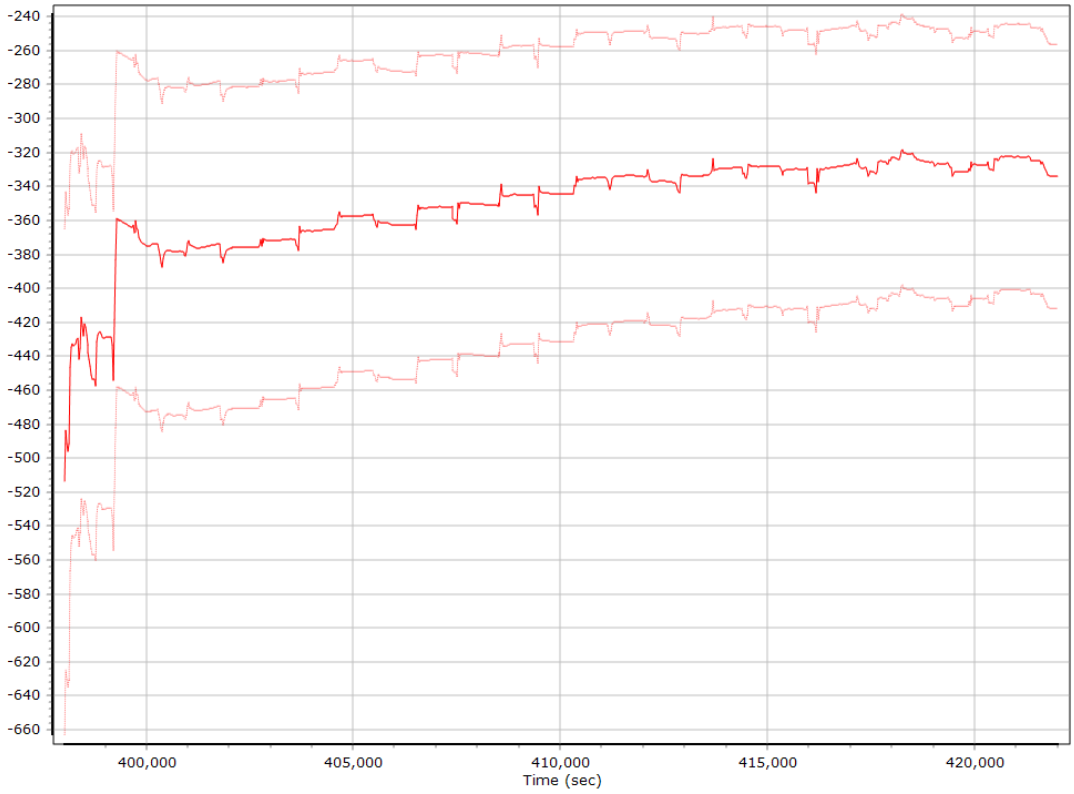
Accelerometer Bias (micro-g)



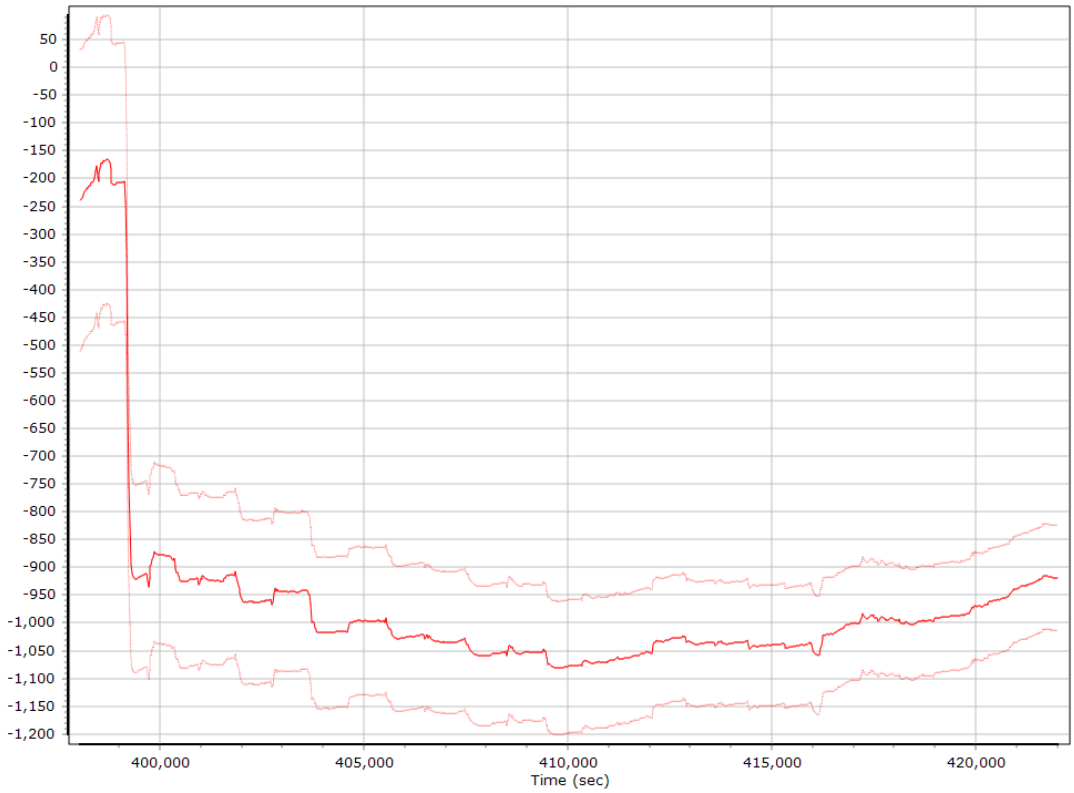
X Accelerometer Bias (micro-g)



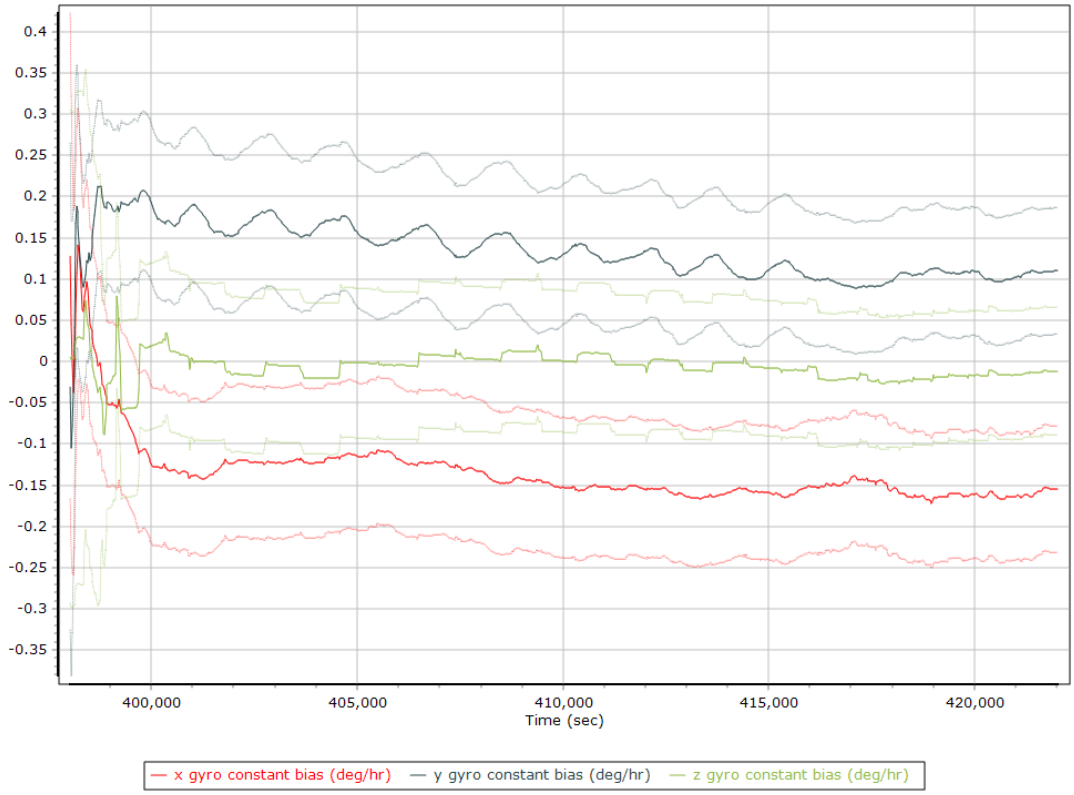
Y Accelerometer Bias (micro-g)



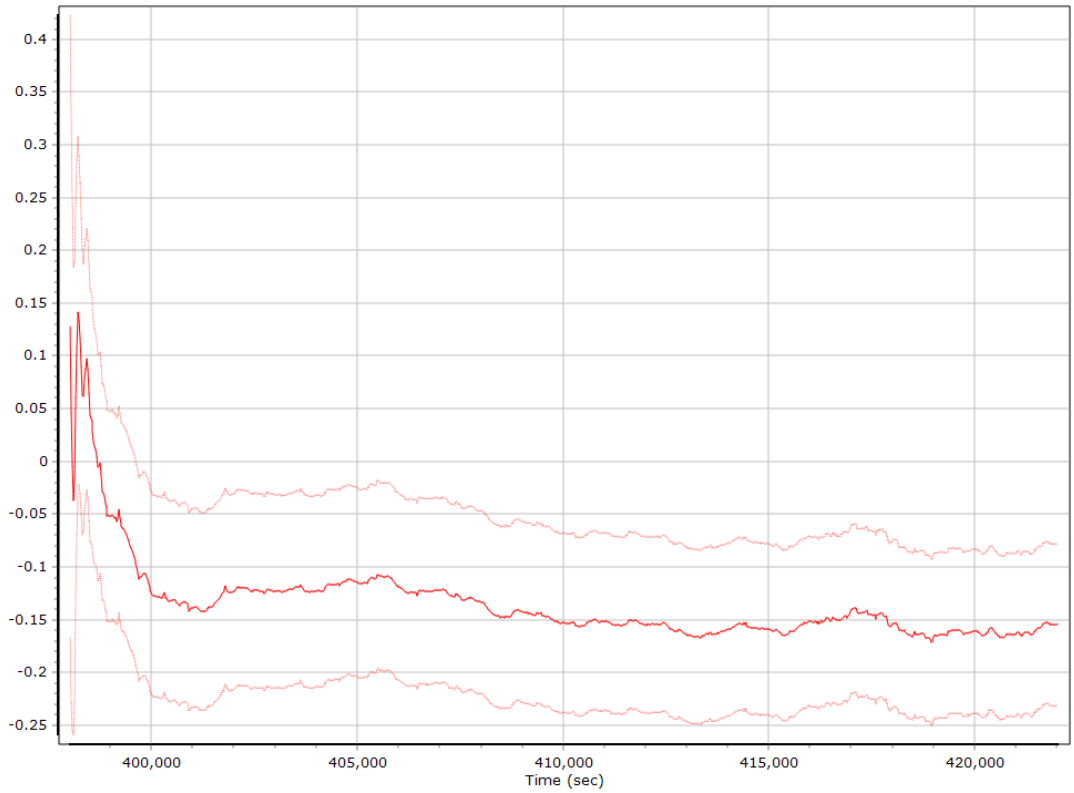
Z Accelerometer Bias (micro-g)



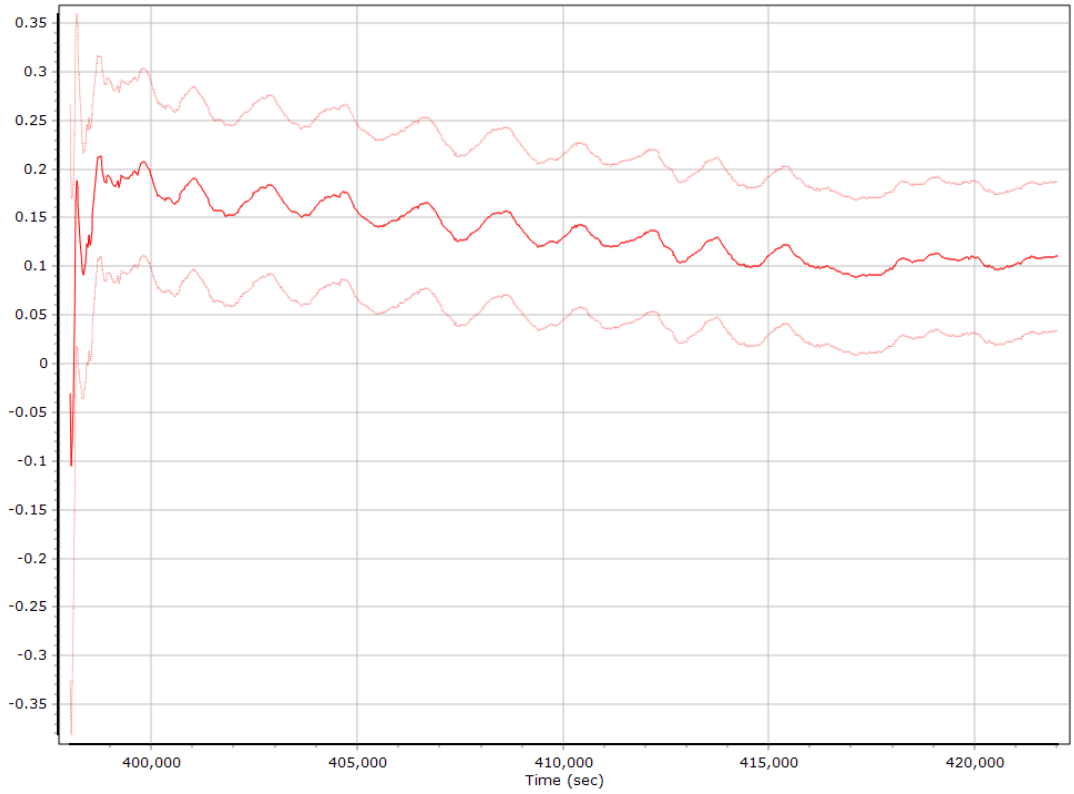
Gyro Bias (deg/h)



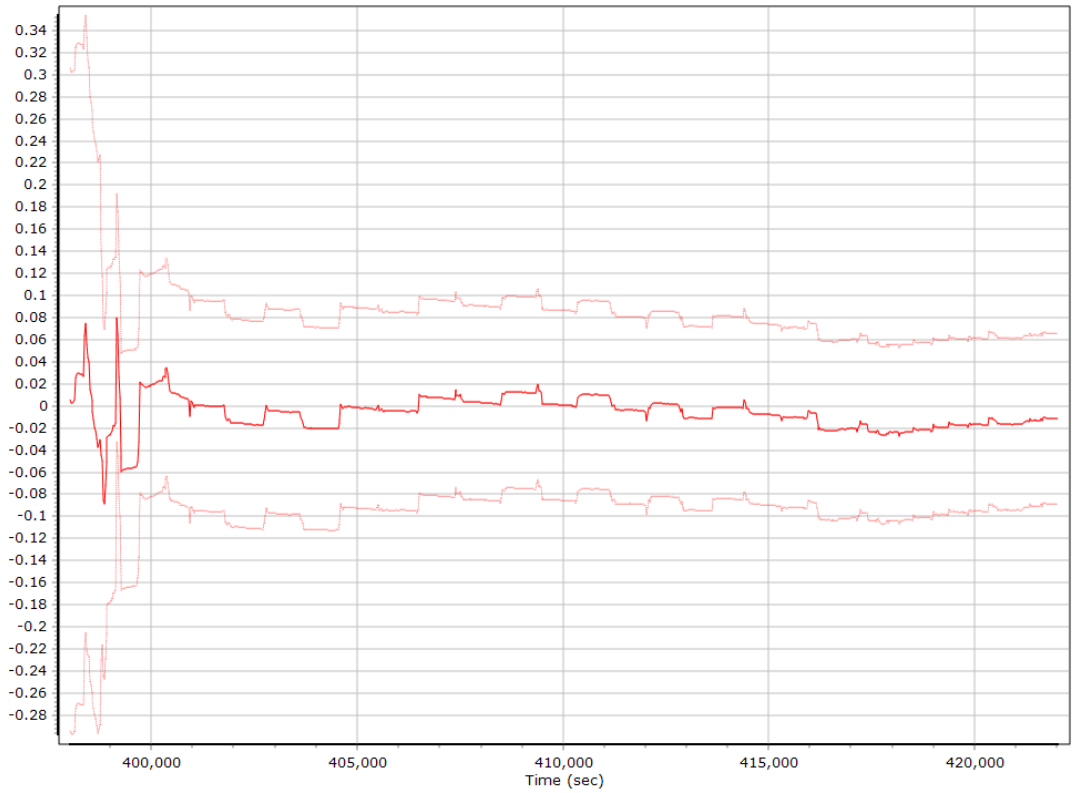
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)

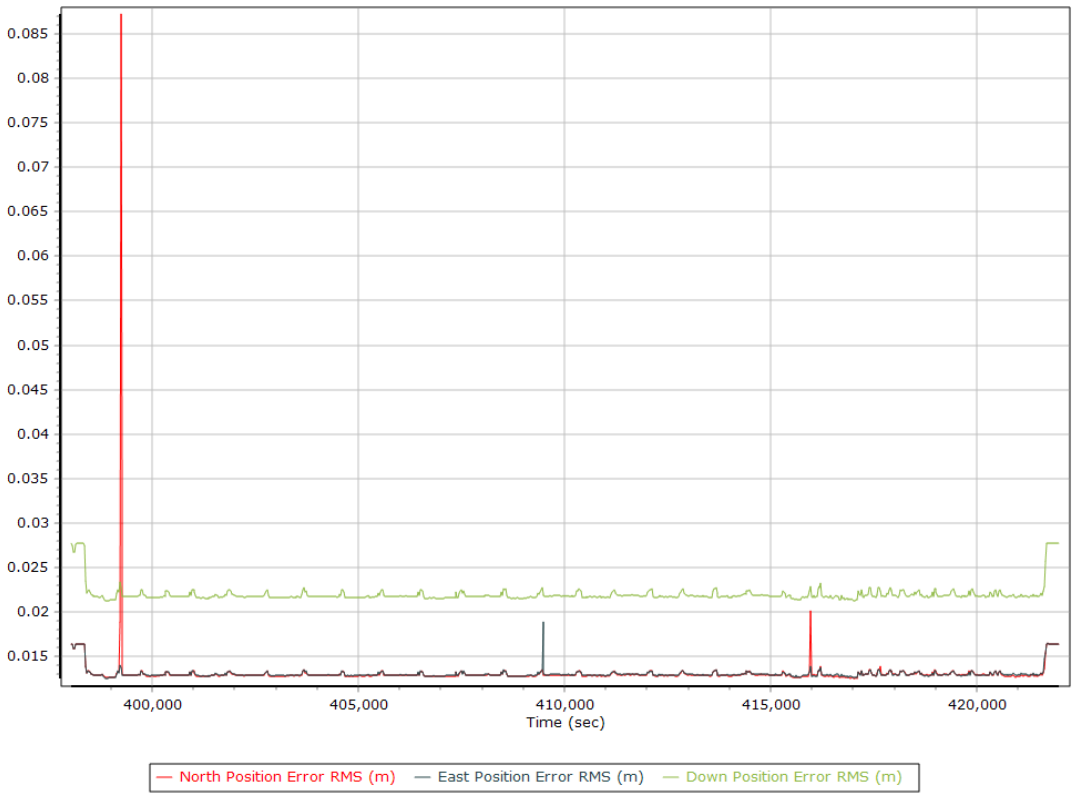


Z Gyro Bias (deg/h)

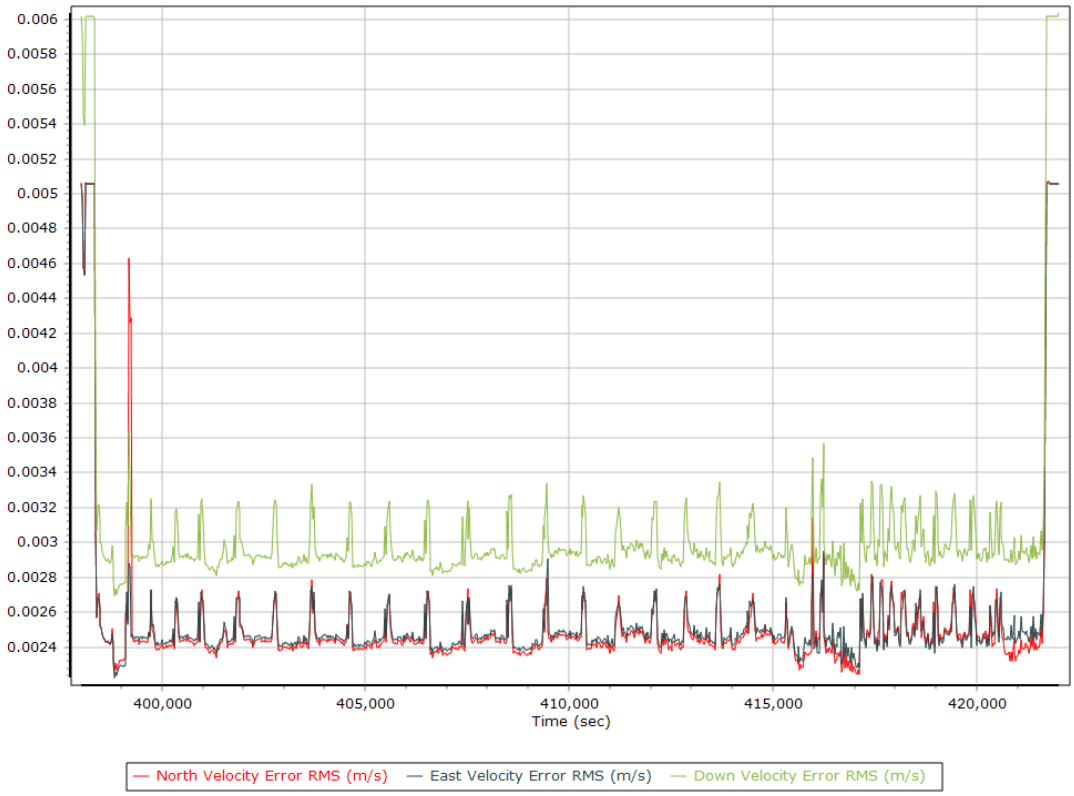


Smoothed Performance Metrics

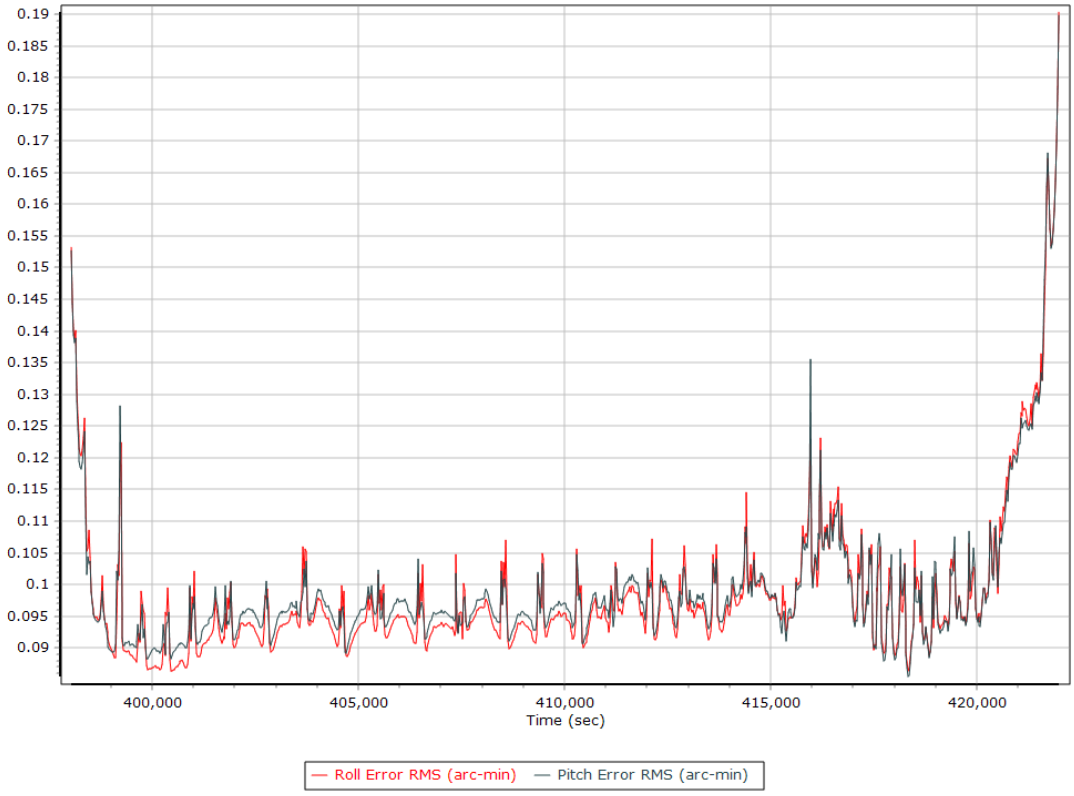
Position Error RMS (m)



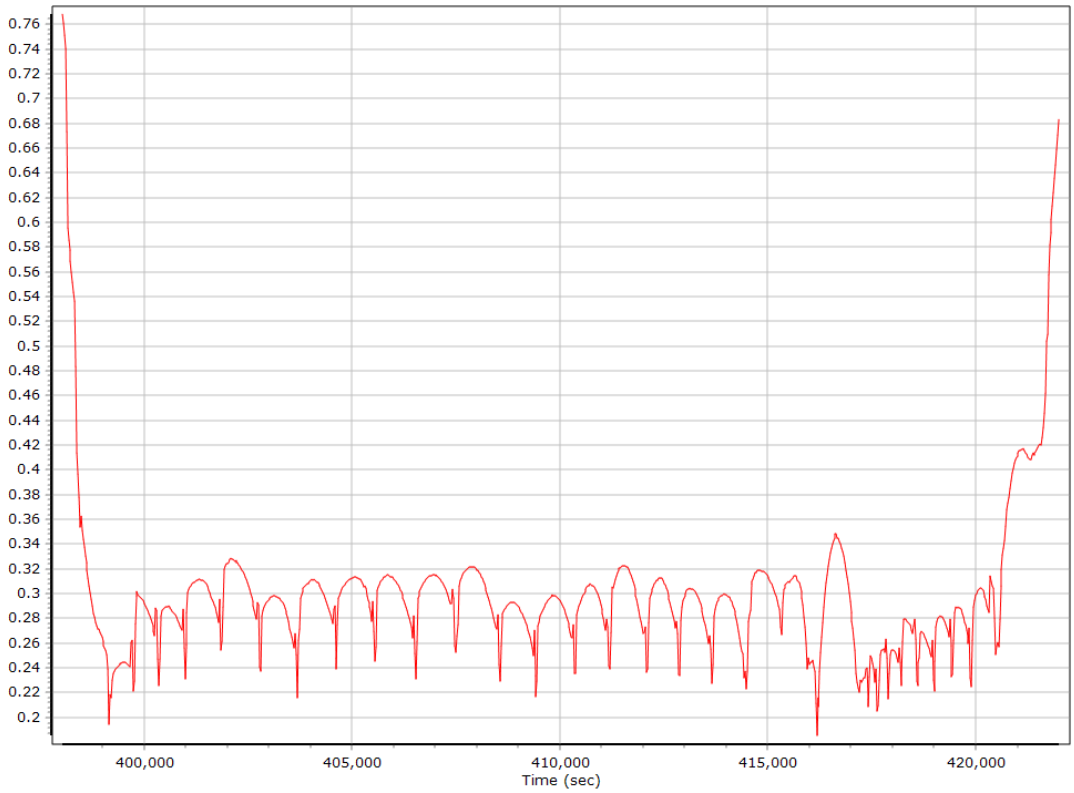
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

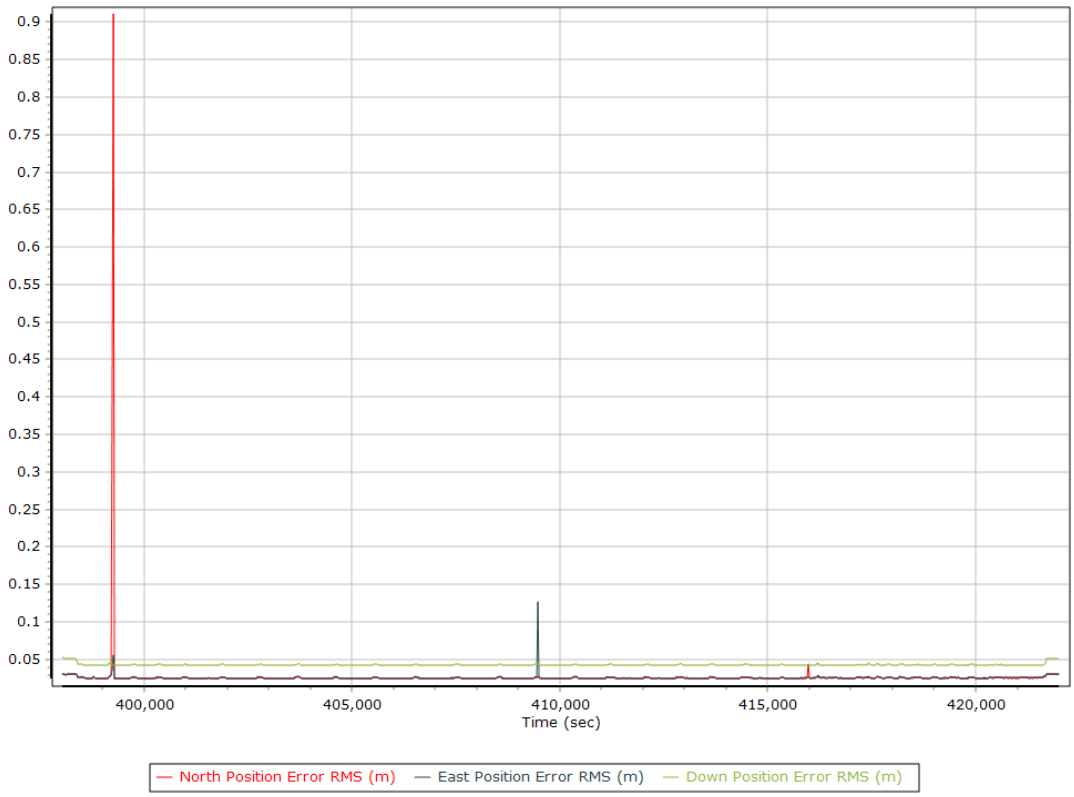


Heading Error RMS (arc-min)

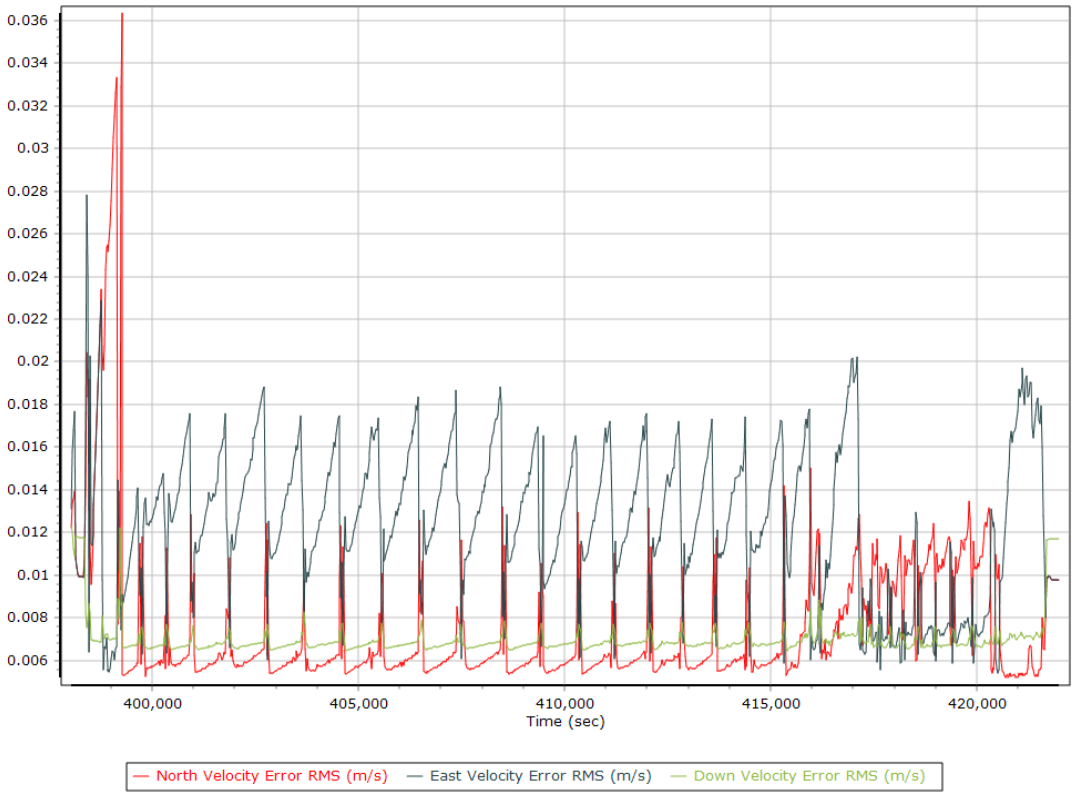


Forward Processed Performance Metrics

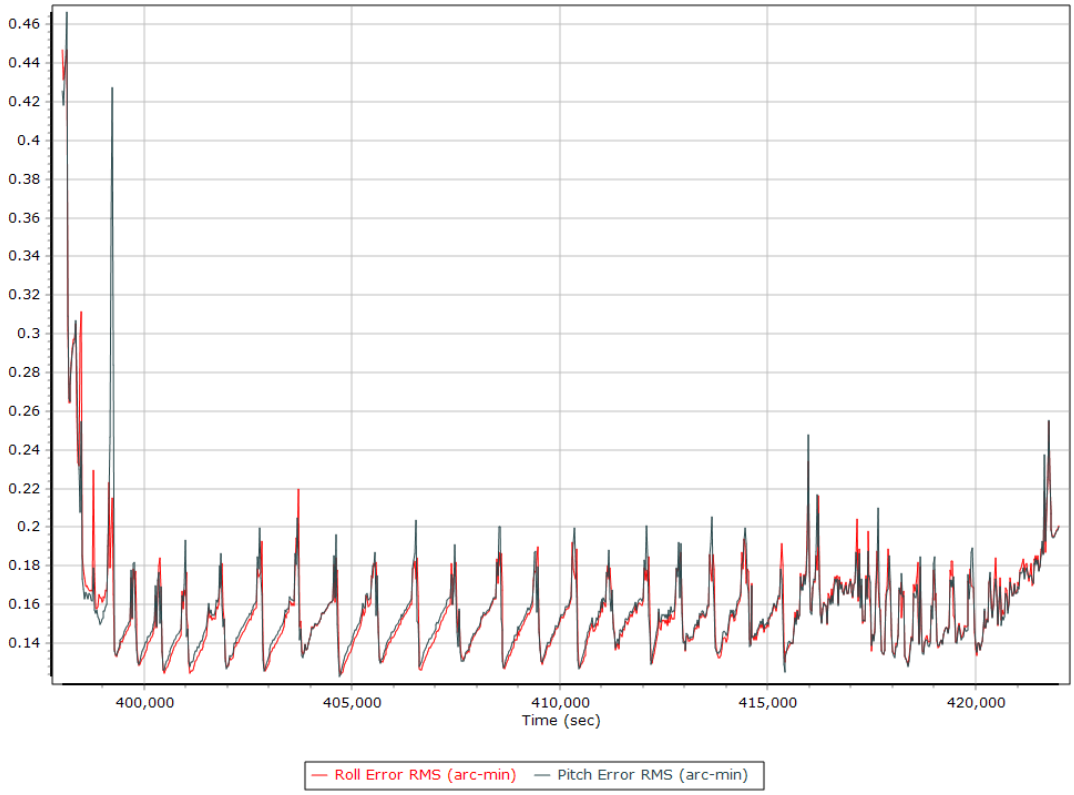
Position Error RMS (m)



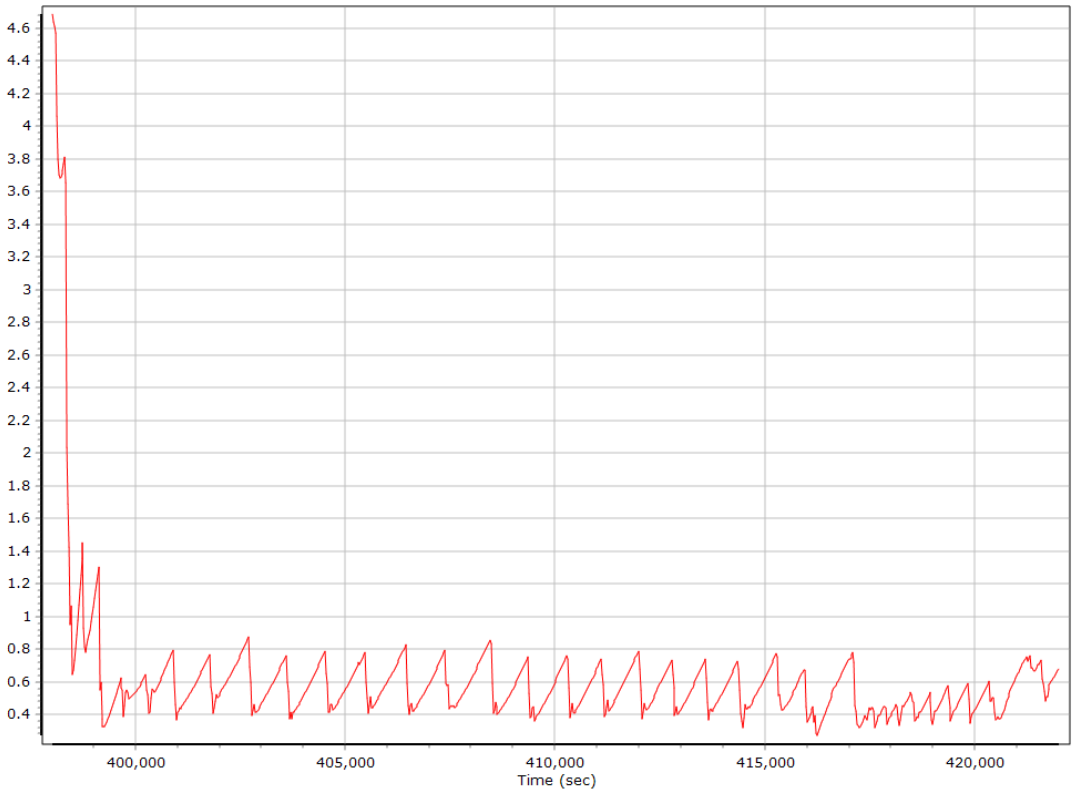
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

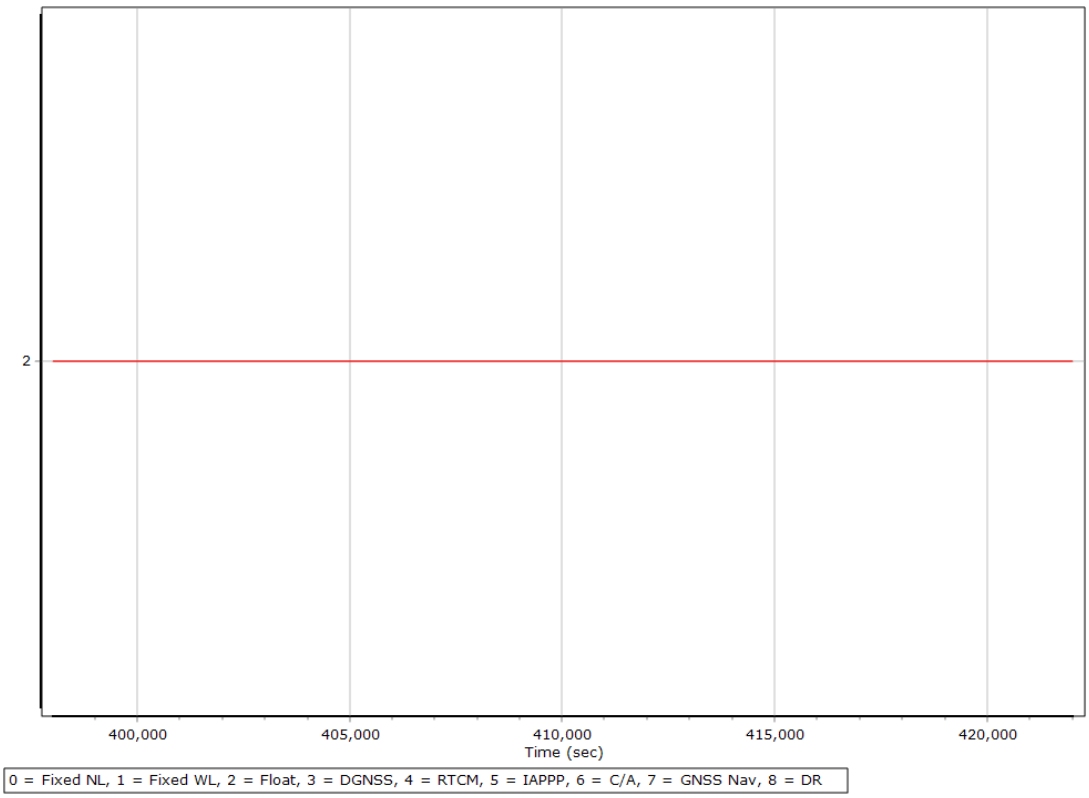


Heading Error RMS (arc-min)

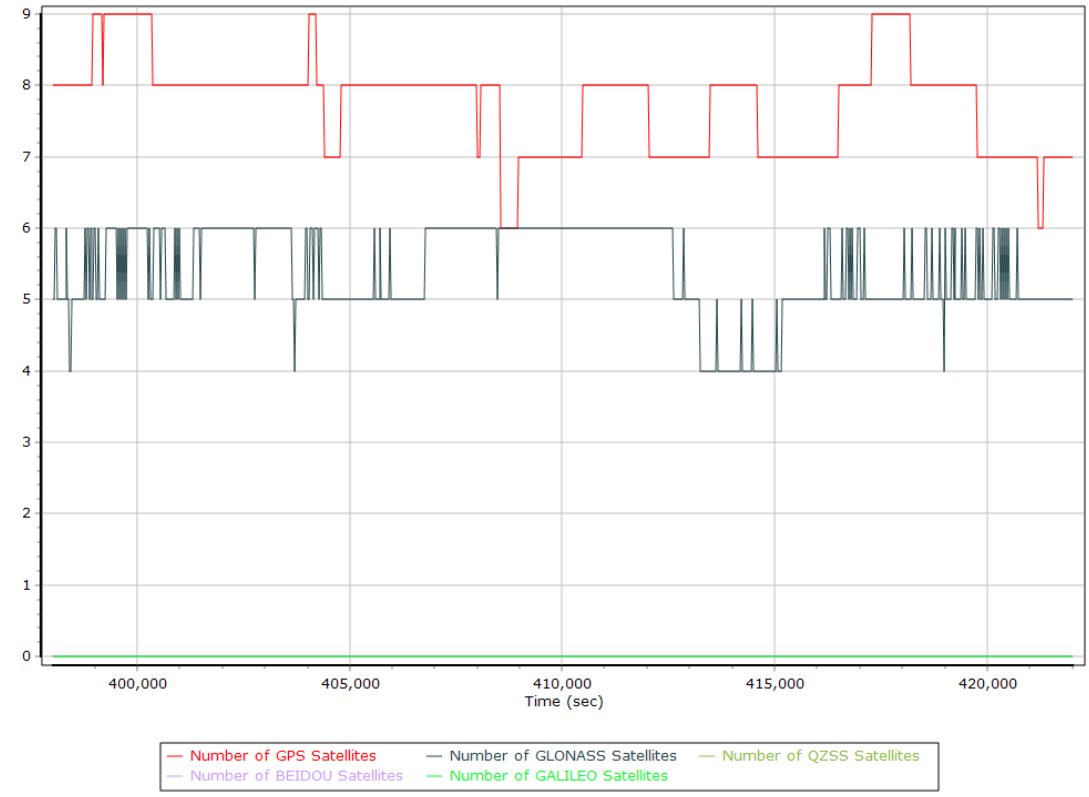
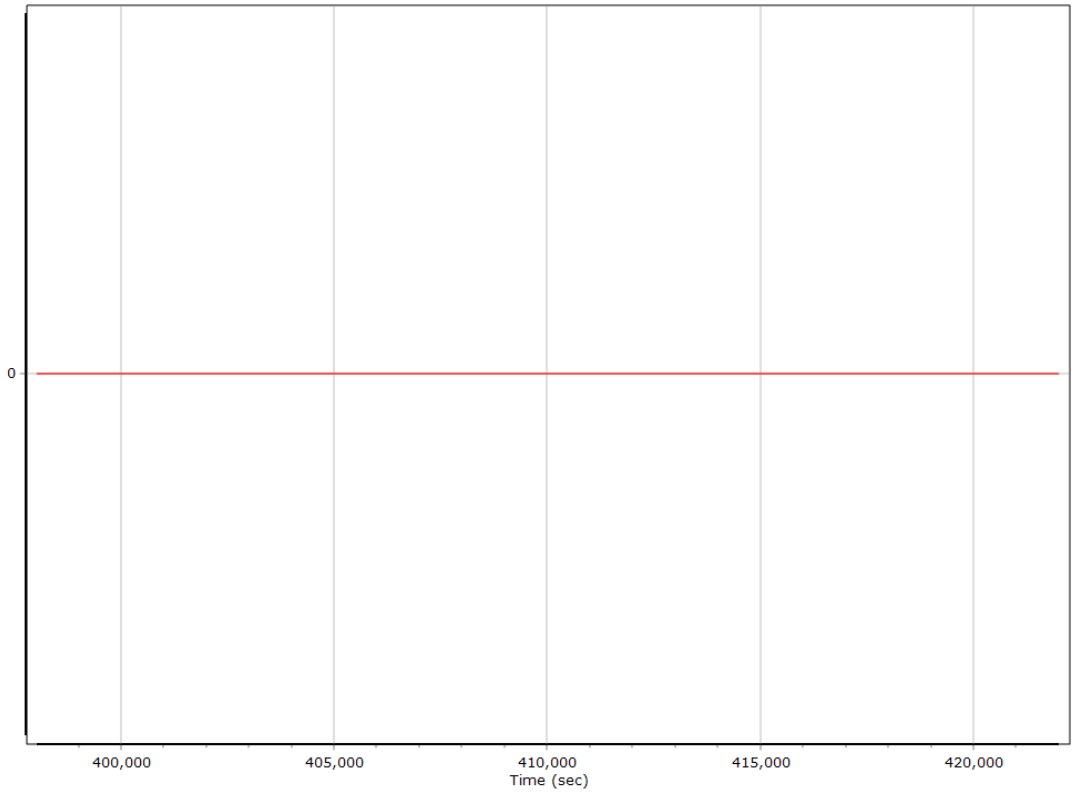


Forward Processed Solution Status

Processing Mode



Number of Satellites



Baseline Length