General Information

Mission Information

Project name	19-058_052820
Processing date	2020-07-02 18:17:00
Mission date	2020-05-28 14:33:19
Mission duration	08:27:43.000
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.257	POS Data
ALS.258	POS Data
ALS.259	POS Data
ALS.260	POS Data
ALS.261	POS Data
ALS.262	POS Data
ALS.263	POS Data
ALS.264	POS Data
ALS.265	POS Data
ALS.266	POS Data
ALS.267	POS Data
ALS.268	POS Data
ALS.269	POS Data
ALS.270	POS Data
ALS.271	POS Data
ALS.272	POS Data
ALS.273	POS Data
ALS.274	POS Data
ALS.275	POS Data
ALS.276	POS Data
ALS.277	POS Data
ALS.278	POS Data
ALS.279	POS Data
ALS.280	POS Data
ALS.281	POS Data
ALS.282	POS Data
ALS.283	POS Data
ALS.284	POS Data
ALS.285	POS Data
ALS.286	POS Data
ALS.287	POS Data
ALS.288	POS Data
ALS.289	POS Data
ALS.290	POS Data
ALS.291	POS Data
ALS.292	POS Data
ALS.293	POS Data
ALS.294	POS Data
ALS.295	POS Data
ALS.296	POS Data
ALS.297	POS Data
ALS.298	POS Data
ALS.299	POS Data
ALS.300	POS Data
ALS.301	POS Data
ALS.302	POS Data
ALS.303	POS Data
ALS.304	POS Data
ALS.305	POS Data
ALS.306	POS Data
ALS.307	POS Data
ALS.308	POS Data
ALS.309	POS Data
ALS.310	POS Data
ALS.311	POS Data
ALS.312	POS Data
ALS.313	POS Data
ALS.314	POS Data
ALS.315	POS Data

File name	File type
ALS.316	POS Data
ALS.317	POS Data
ALS.318	POS Data
ALS.319	POS Data
ALS.320	POS Data
ALS.321	POS Data
ALS.322	POS Data
ALS.323	POS Data
ALS.324	POS Data

Input Files

File Name	File Type
Ephm1490.20g	GLONASS Broadcast Ephemeris
Ephm1490.20n	GPS Broadcast Ephemeris
igl21073.sp3	GLONASS Precise Ephemeris
igl21074.sp3	GLONASS Precise Ephemeris
igl21075.sp3	GLONASS Precise Ephemeris
igs21073.sp3	GPS Precise Ephemeris
igs21074.sp3	GPS Precise Ephemeris
igs21075.sp3	GPS Precise Ephemeris

Output Files

Filename	File type
sbet_19-058_052820.out	SBET Trajectory File
export_19-058_052820.out	Custom Smoothed BET Export Output

Rover Data Summary

First raw data file	ALS.257		
Last raw data file	ALS.324		
Start GPS week	2107		
Start time	398010.520 (05/28/2020 14:33:12)		
End time	428458.045 (05/28/2020 23:00:40)		
Start of fine alignment	399856.754 (05/28/2020 15:03:58)		
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

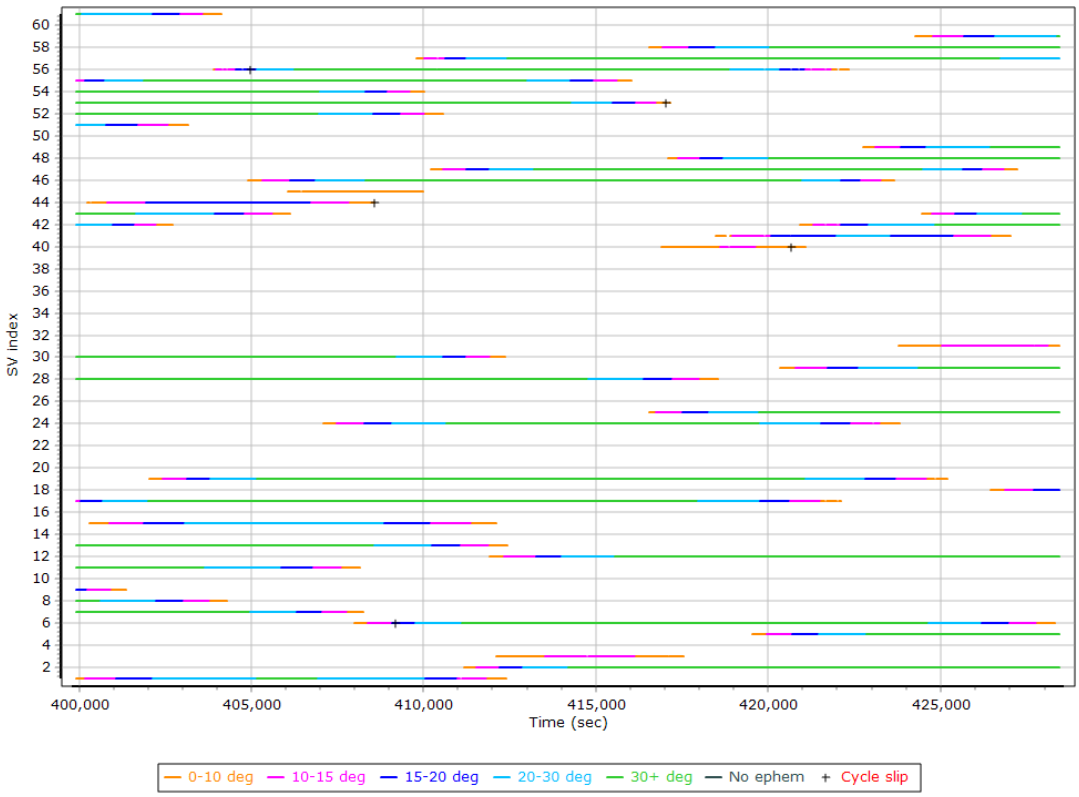
Rover Data QC

Raw IMU Import QC Summary

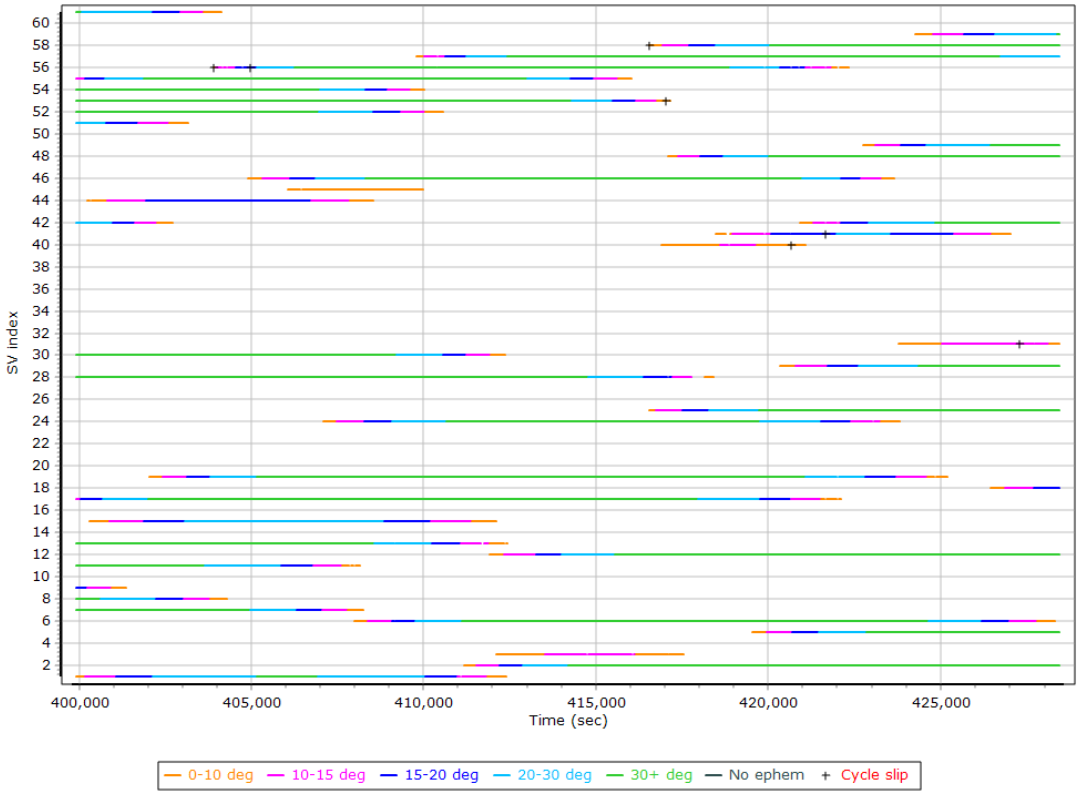
IMU data input file	imu_19-058_052820.dat
IMU data check log file	imudt_19-058_052820.log
IMU Records Processed	6091388
Termination Status	Warnings
IMU Anomalies	2
IMU Failure Messages	
398893.146 : WARNING : Gap of 0.1250 seconds in CHECKDT input data	
398010.285 : WARNING : Gap of 397998.3282 seconds in CHECKDT input data	

Primary Observables & Satellite Data

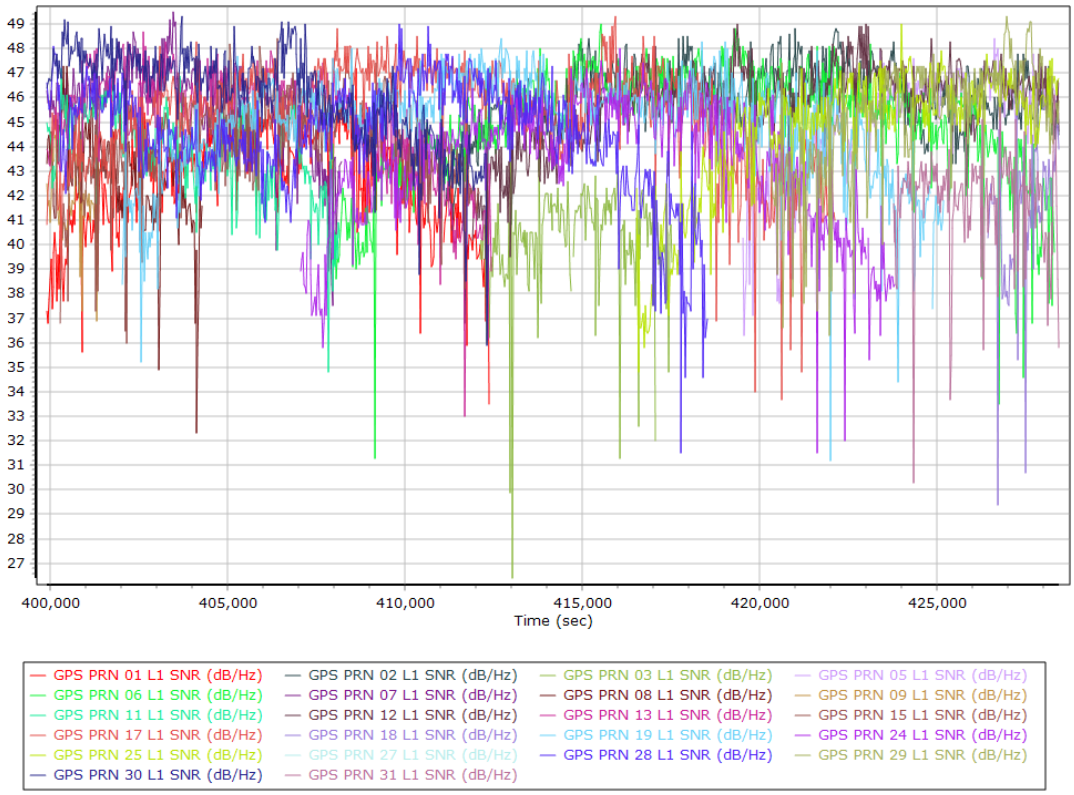
L1 Satellite Lock/Elevation



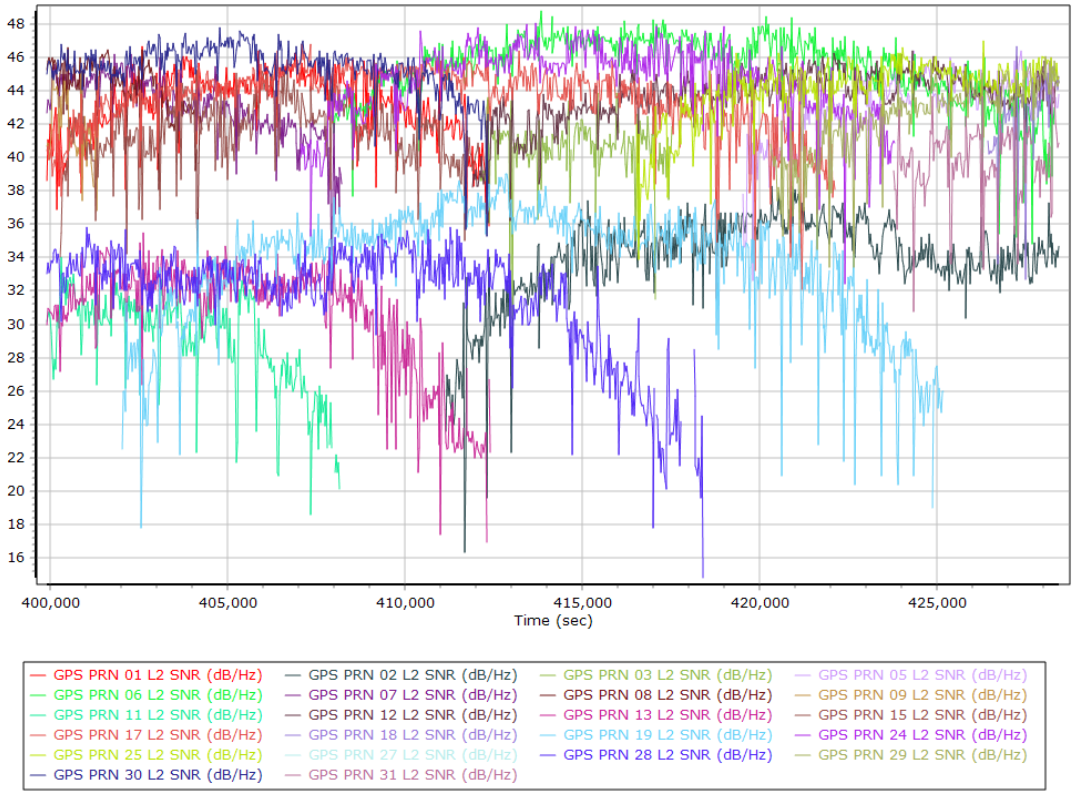
L2 Satellite Lock/Elevation



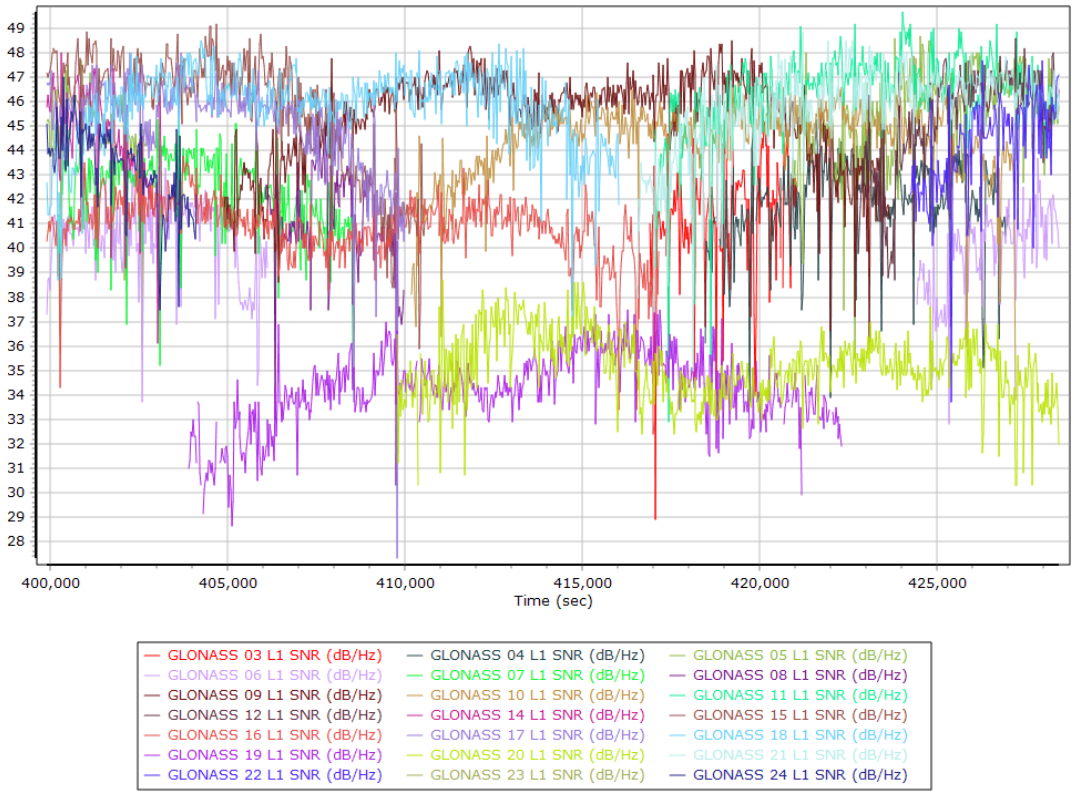
GPS L1 SNR



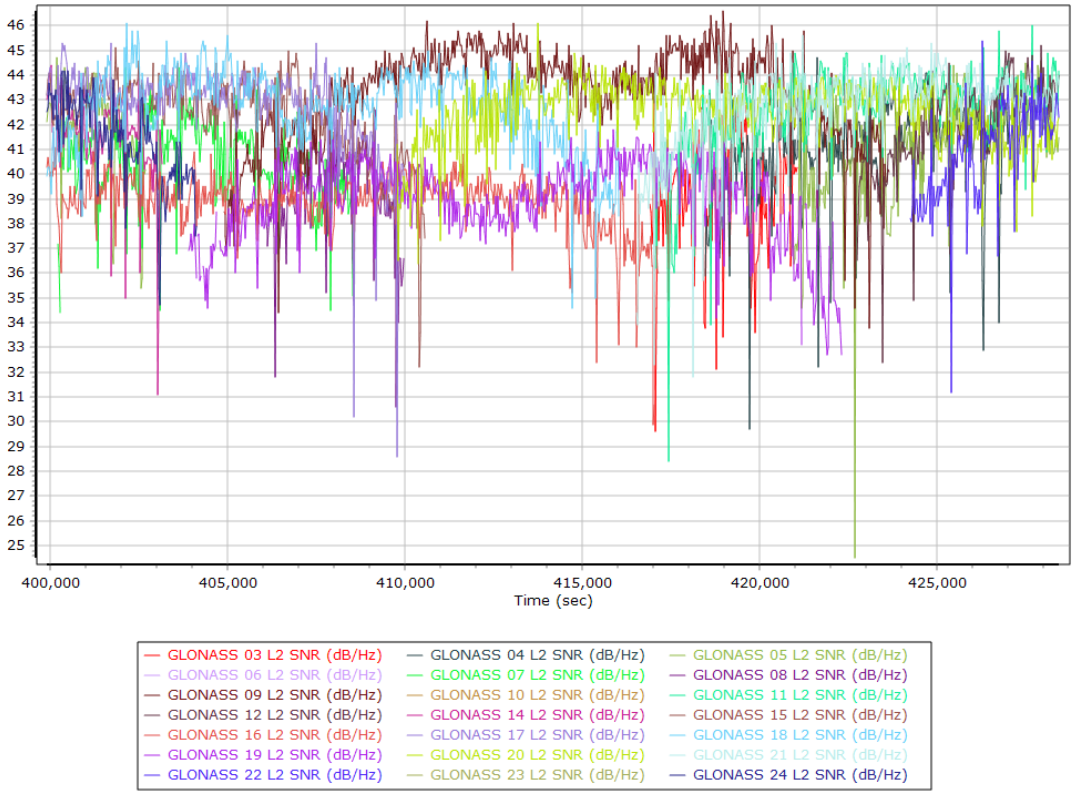
GPS L2 SNR



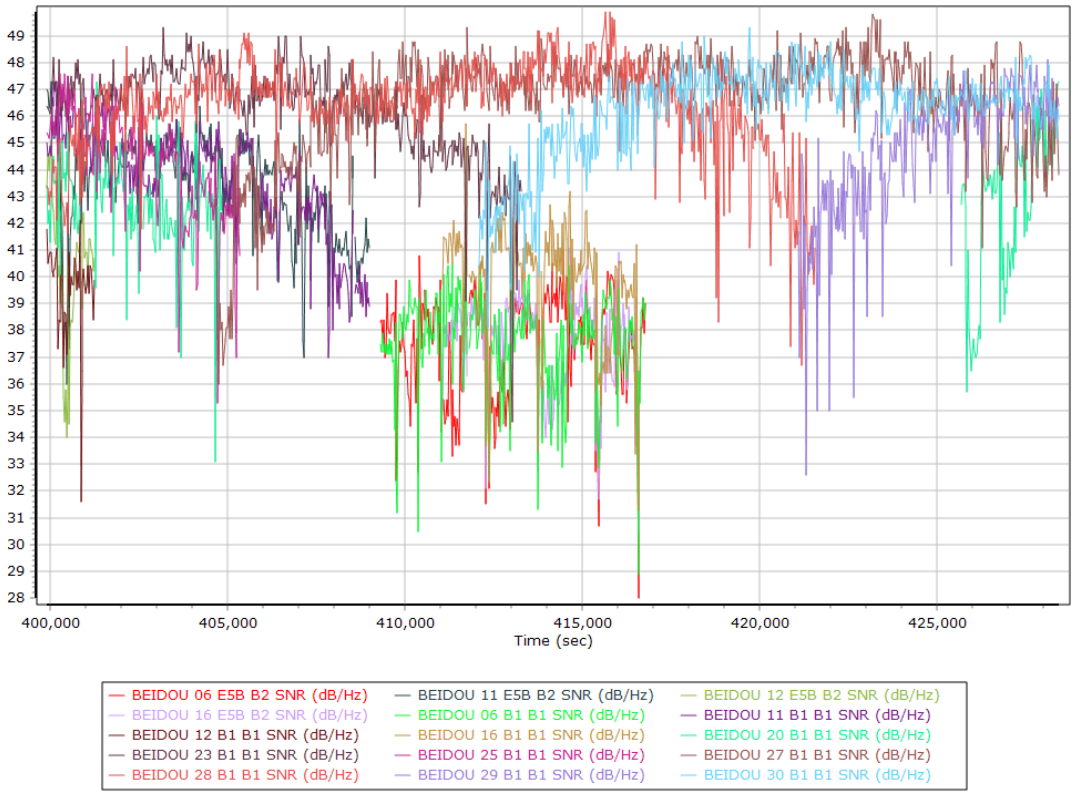
GLONASS L1 SNR



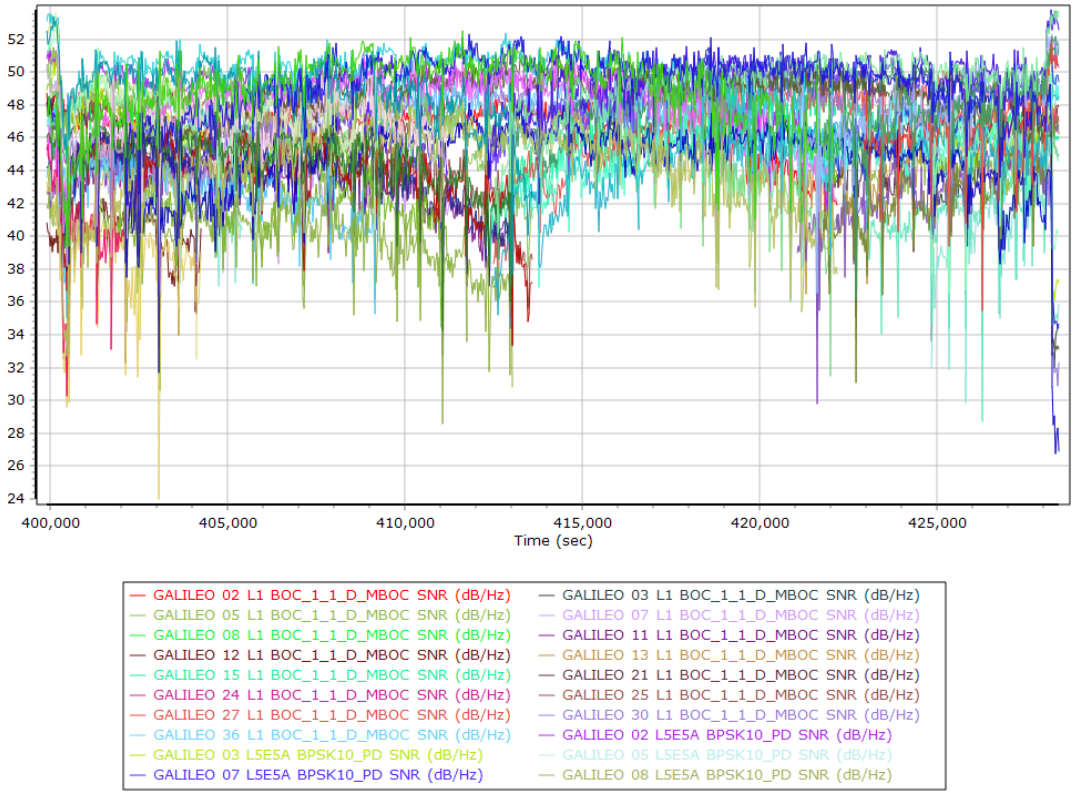
GLONASS L2 SNR



BEIDOU SNR

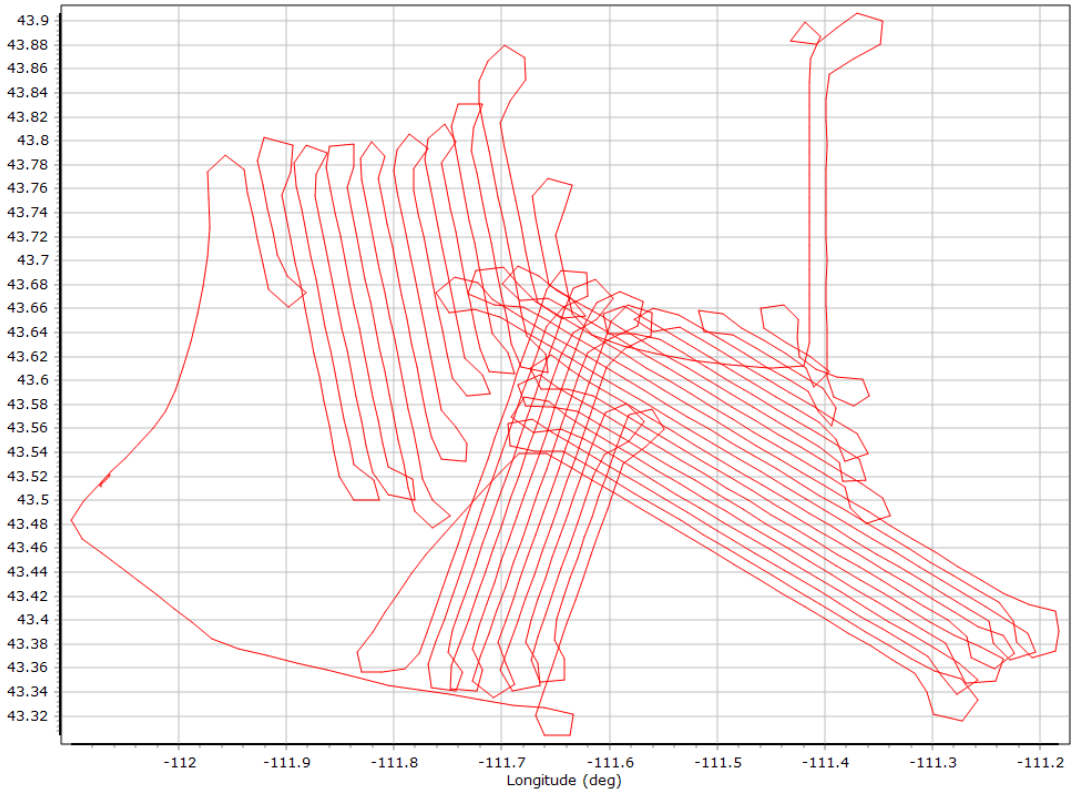


GALILEO SNR

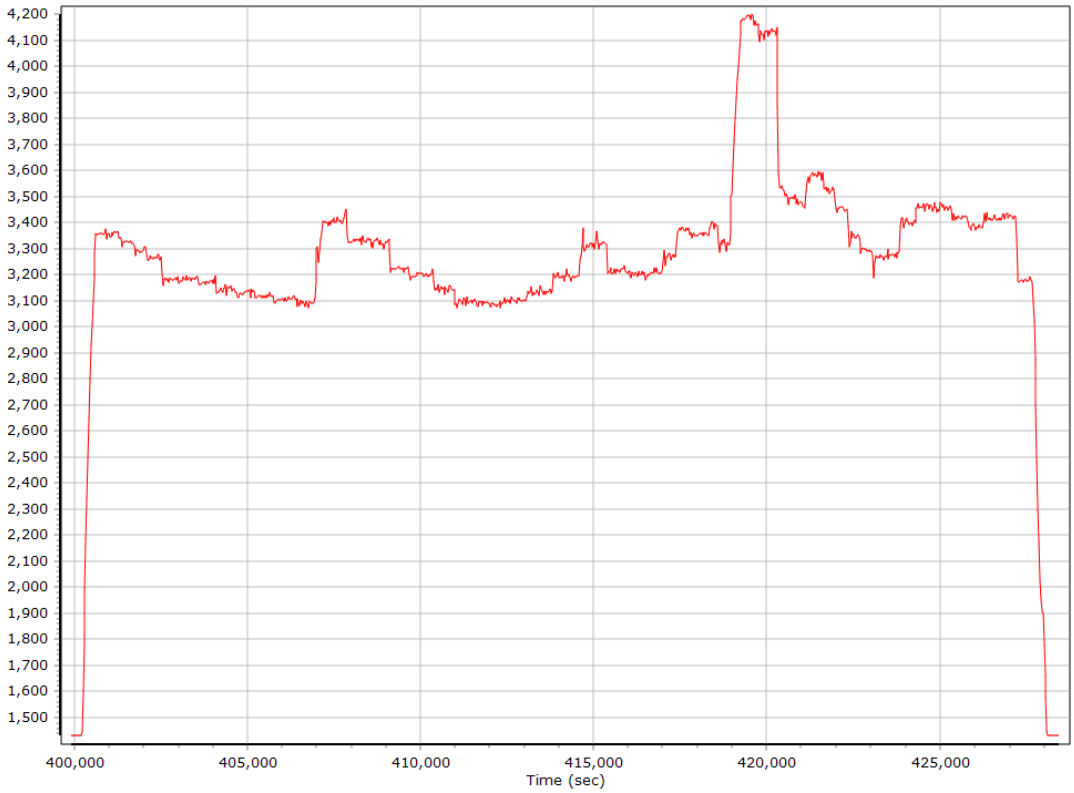

52
50
48
46
44
42
40
38
36
34
32
30
28
26
24
400,000
405,000
410,000
415,000
420,000
425,000
Time (sec)
GALILEO 02 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 03 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 05 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 07 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 08 L1 BOC_1_1_D_MBOC SNR (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 13 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 15 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 21 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 27 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 30 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 05 L5E5A BPSK10_PD SNR (dB/Hz)
GALILEO 07 L5E5A BPSK10_PD SNR (dB/Hz)
GALILEO 08 L5E5A BPSK10_PD SNR (dB/Hz)

Smoothed Trajectory Information

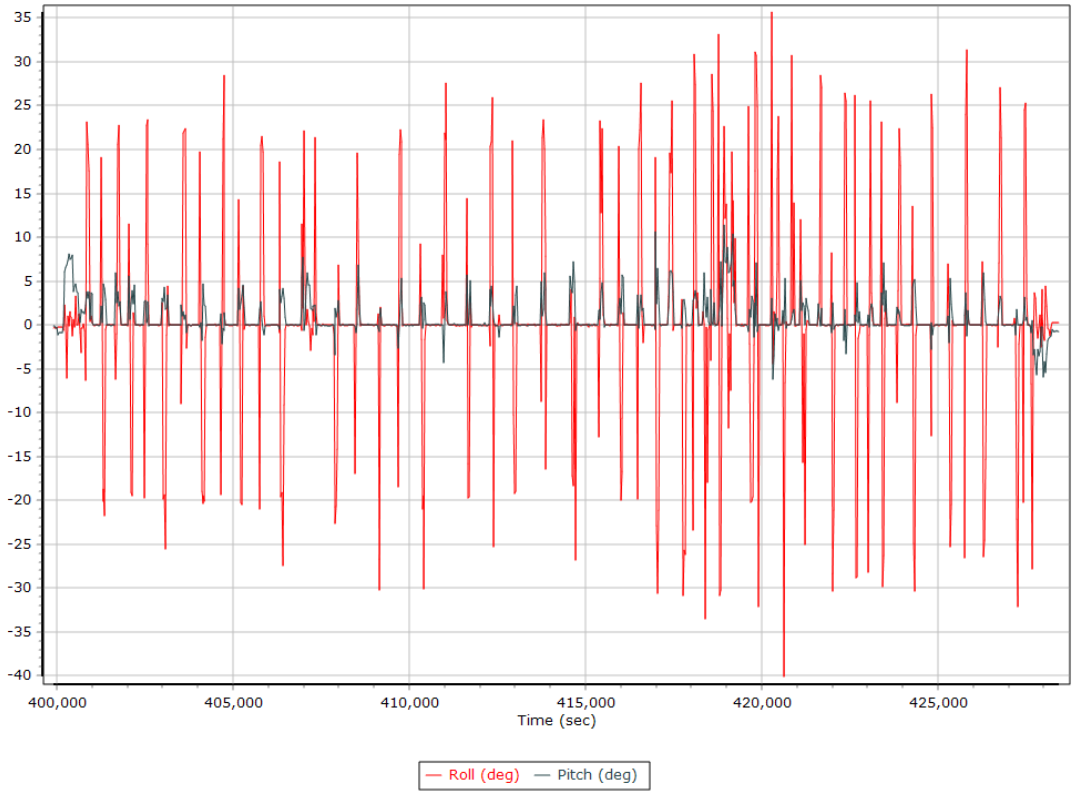
Top View



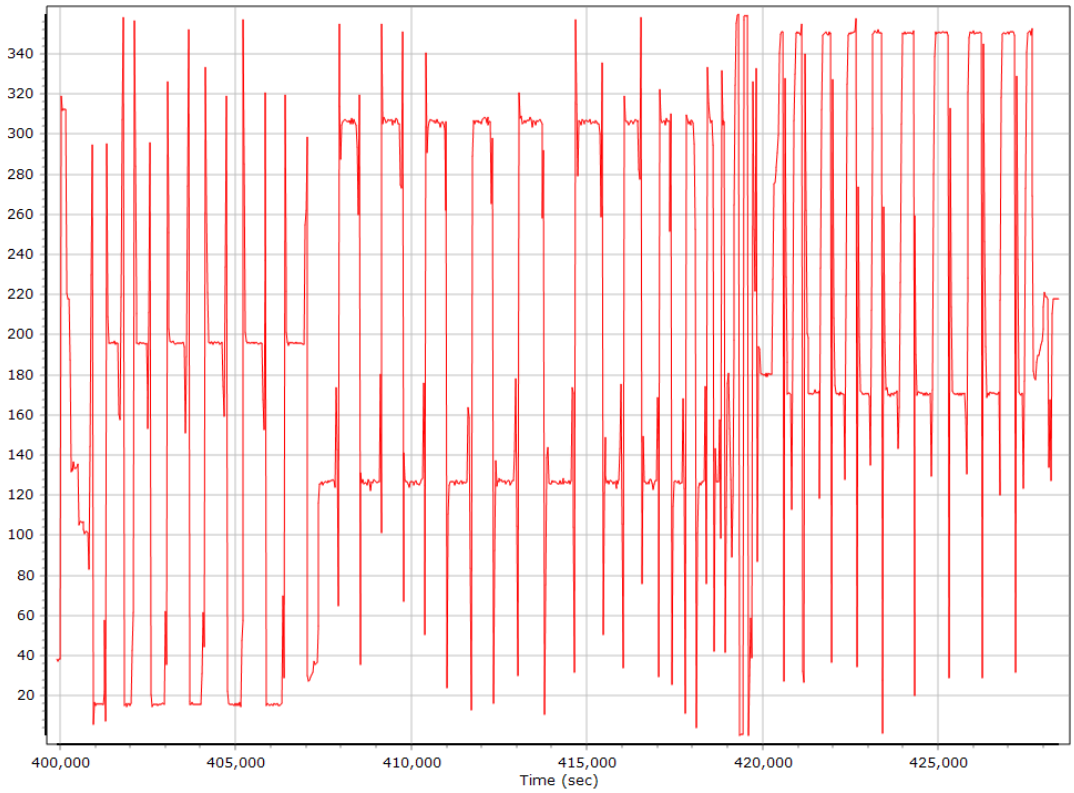
Altitude



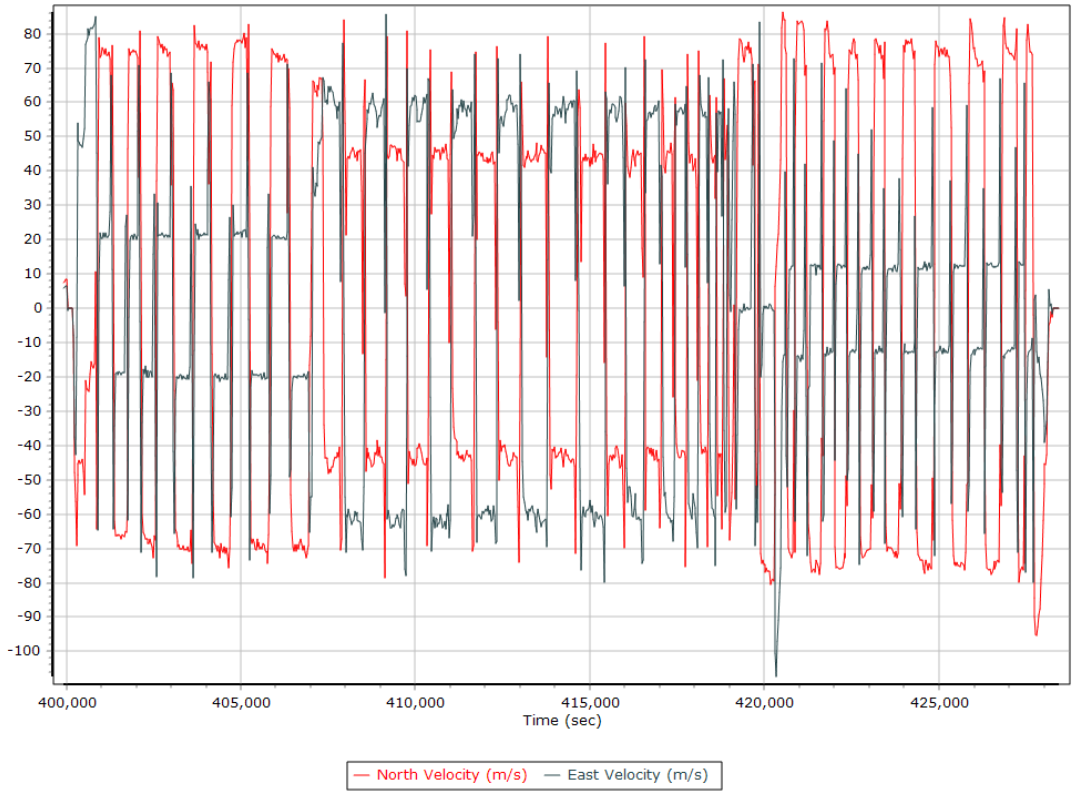
Roll/Pitch



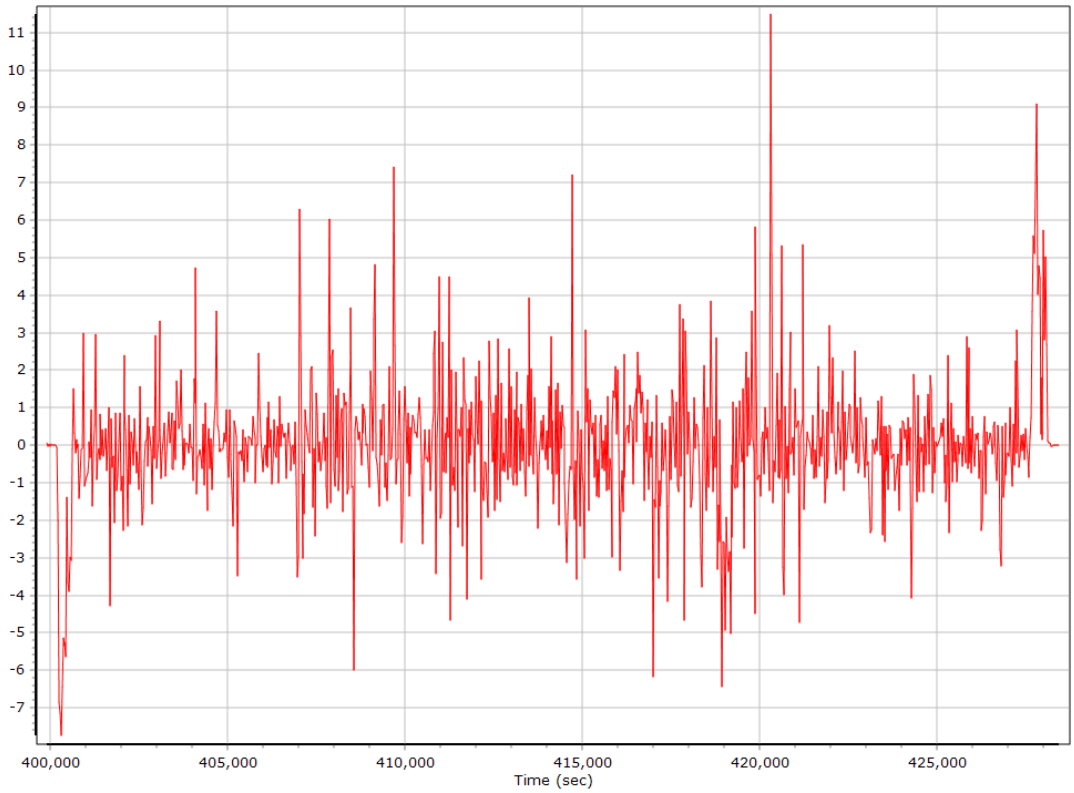
Heading



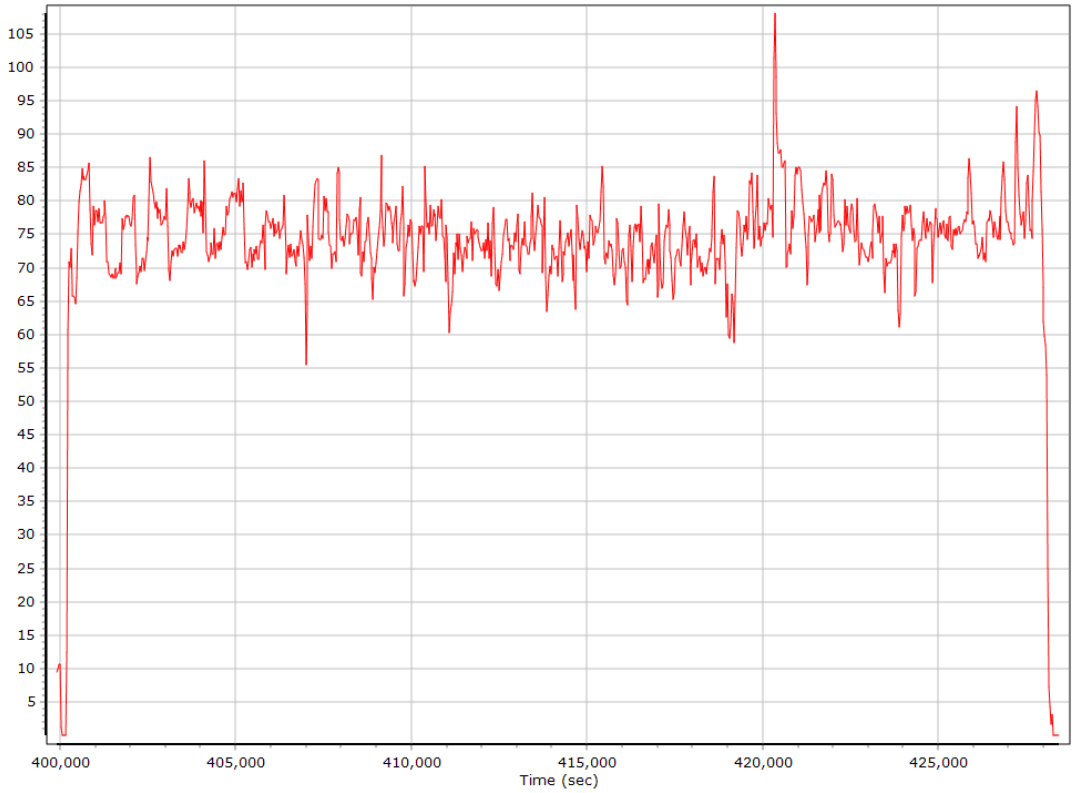
North/East Velocity



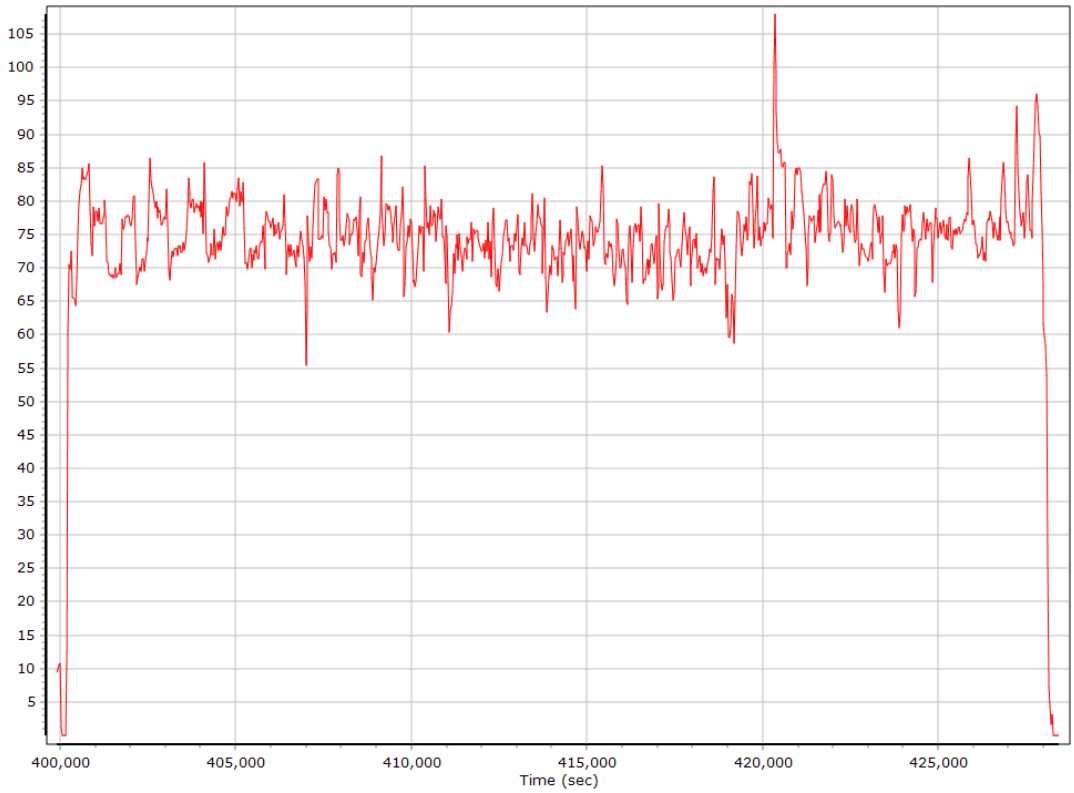
Down Velocity



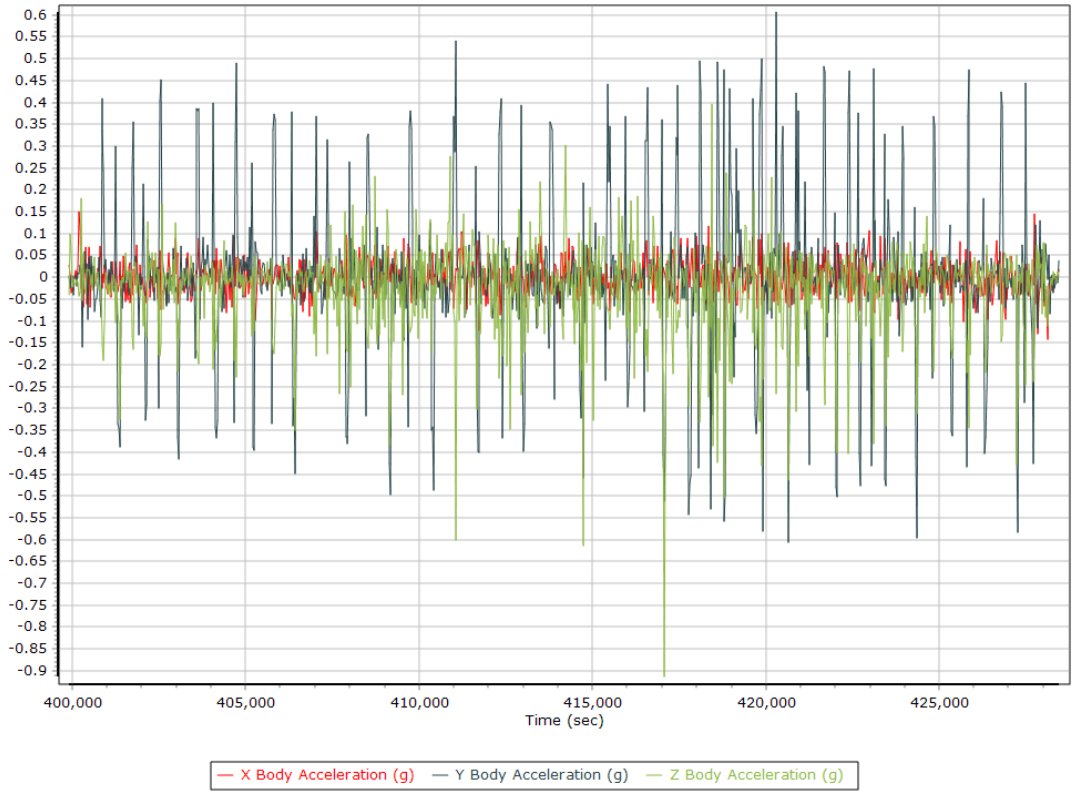
Total Speed



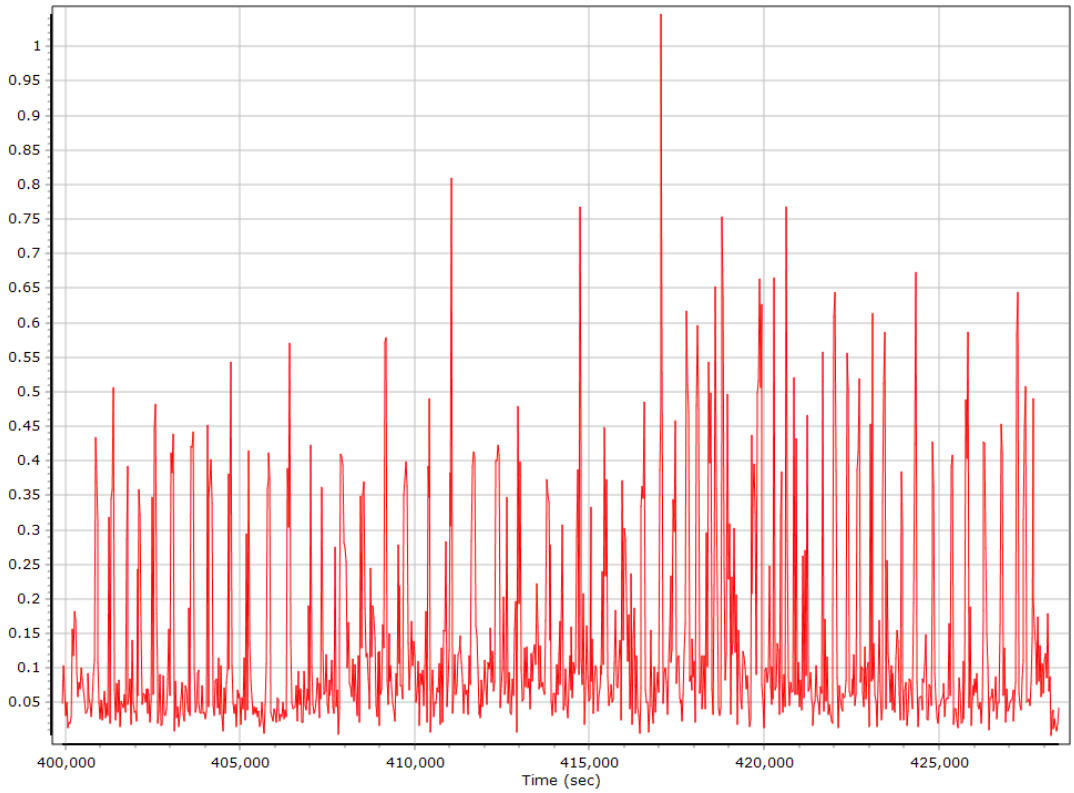
Ground Speed



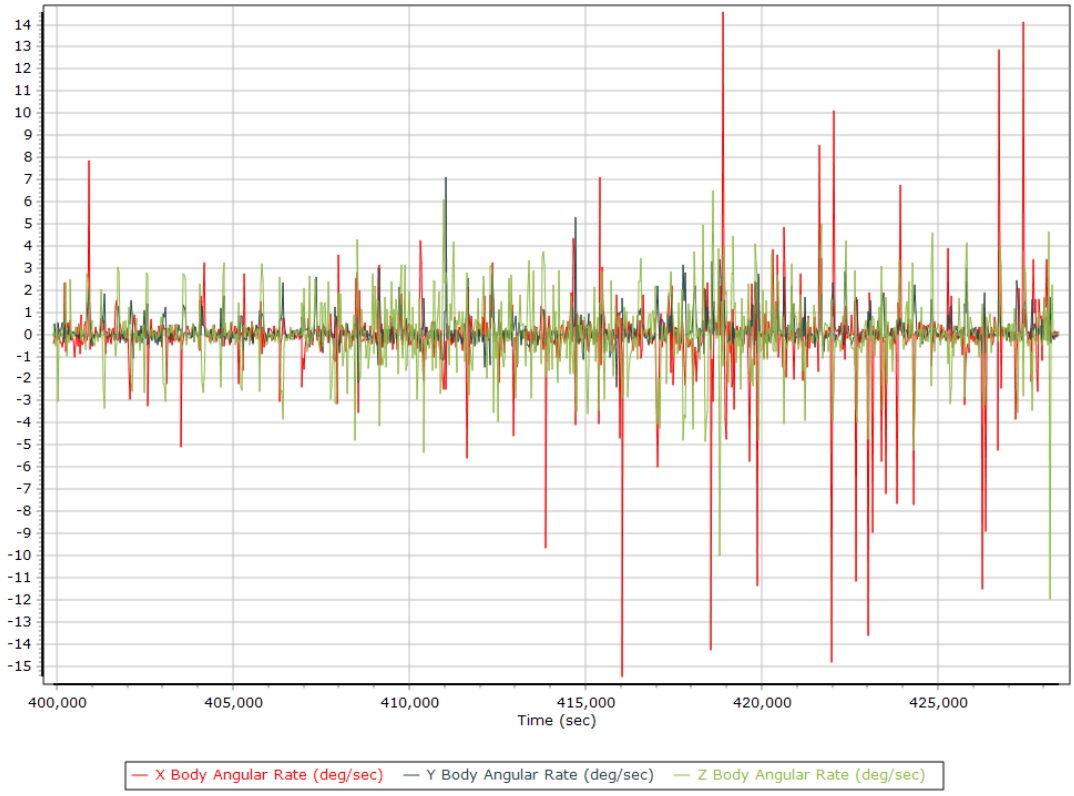
Body Acceleration



Total Body Acceleration

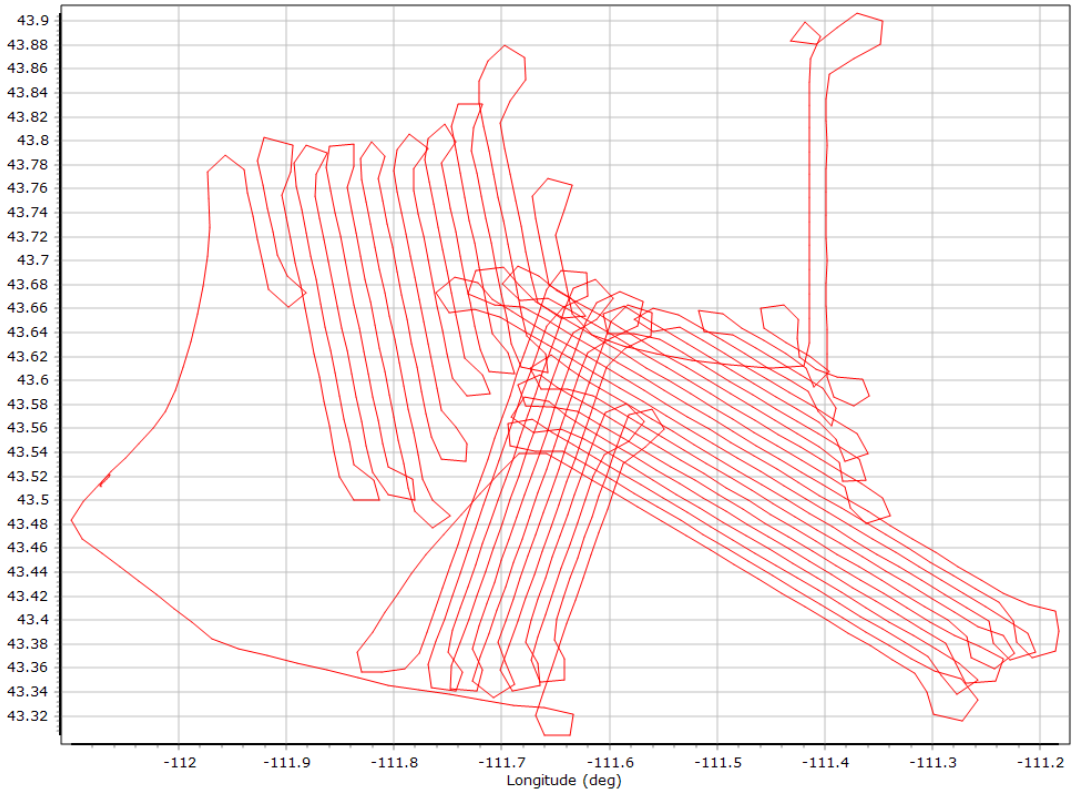


Body Angular Rate

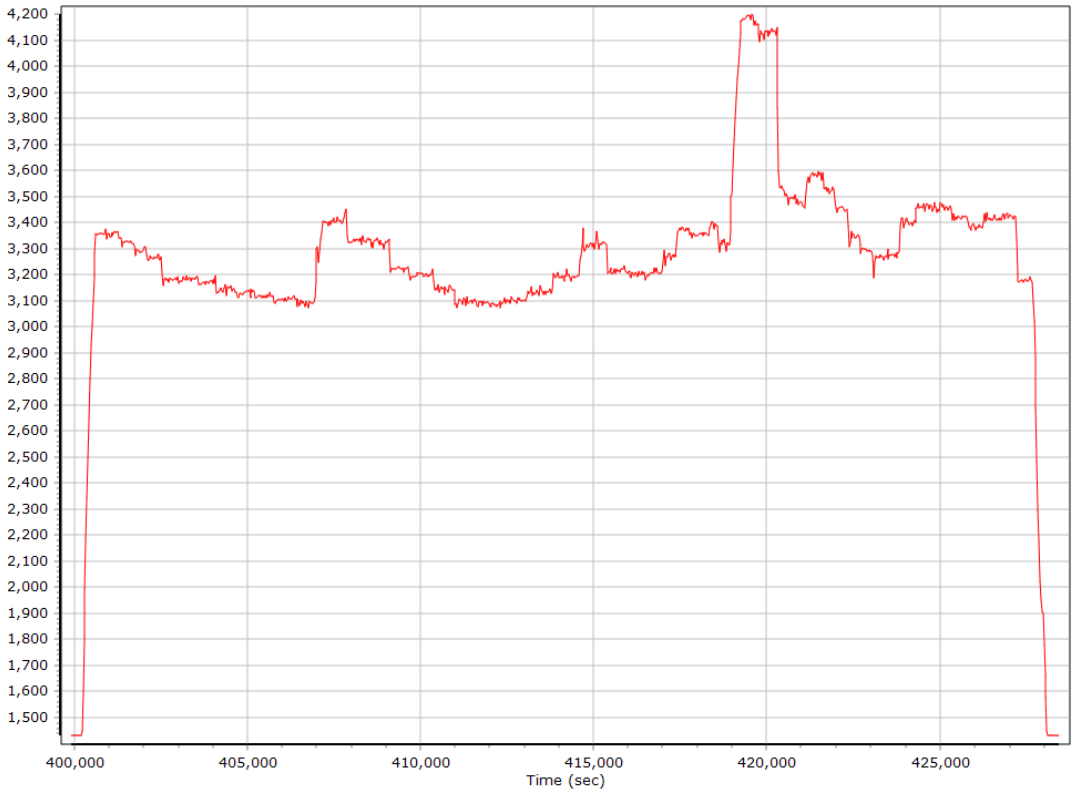


Forward Processed Trajectory Information

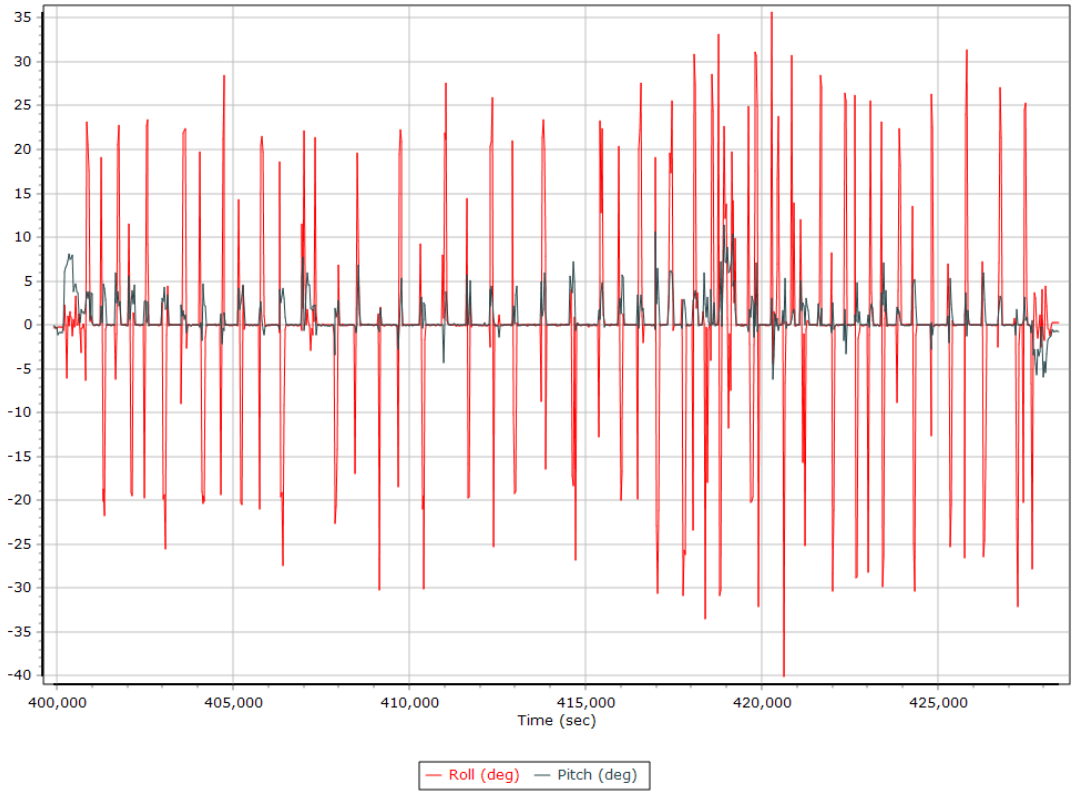
Top View



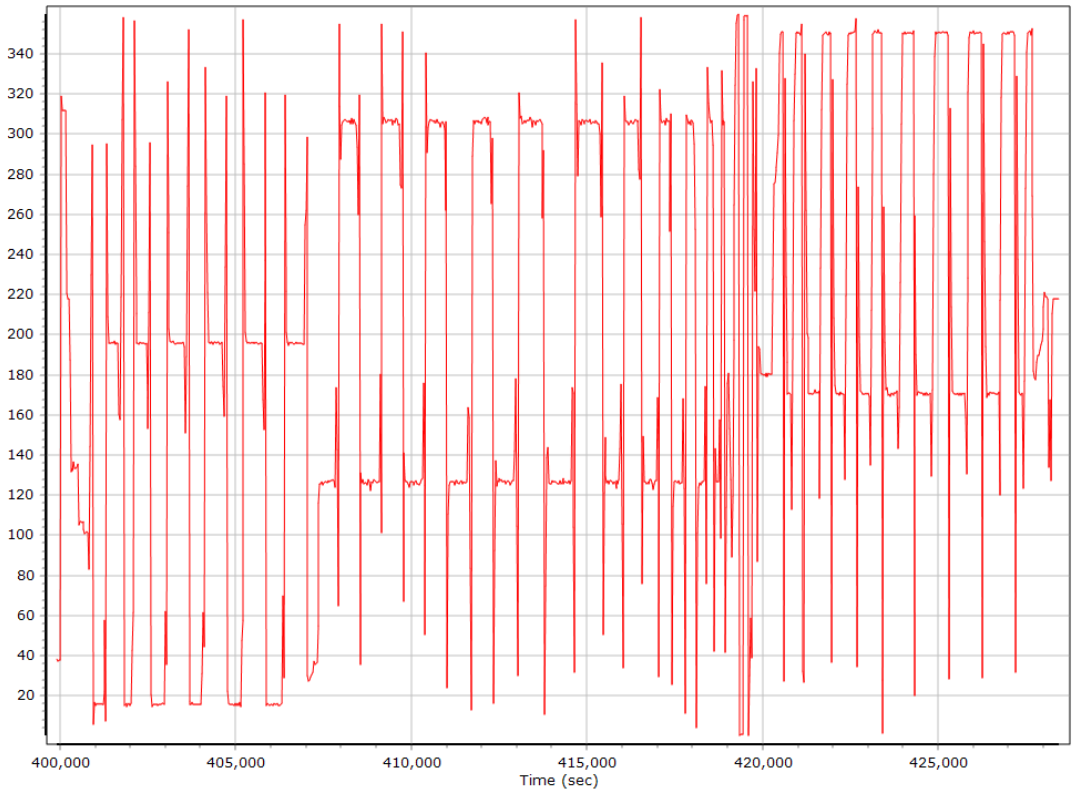
Altitude



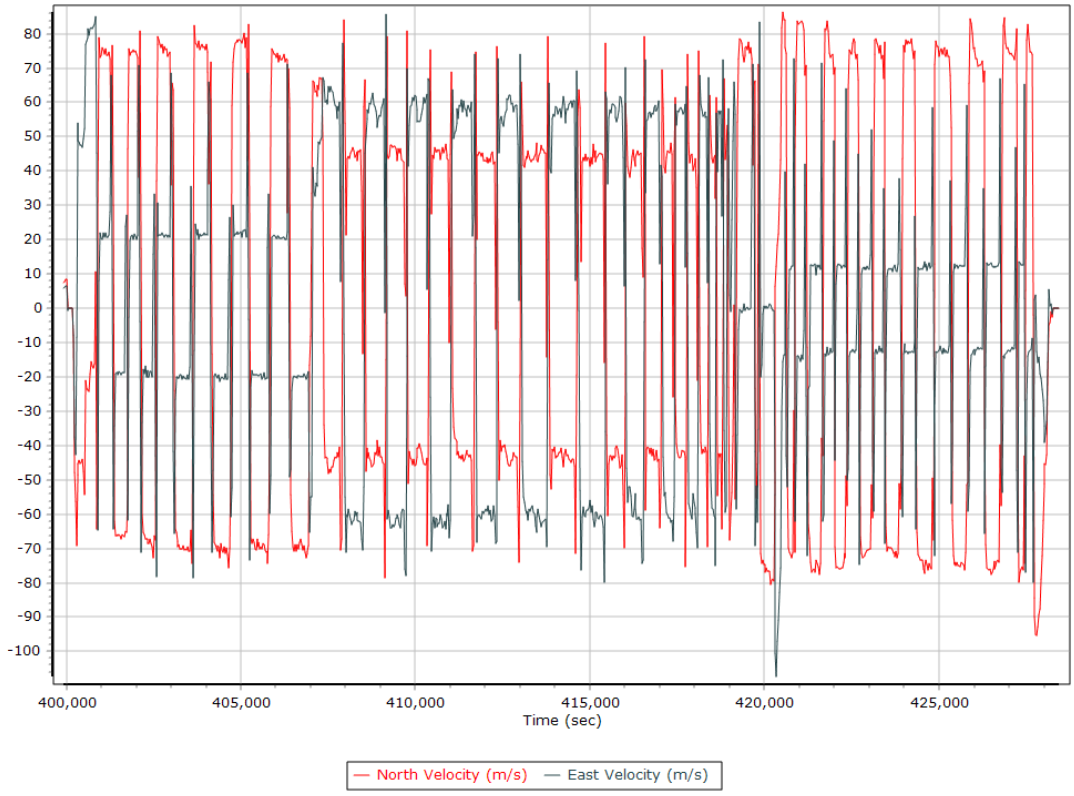
Roll/Pitch



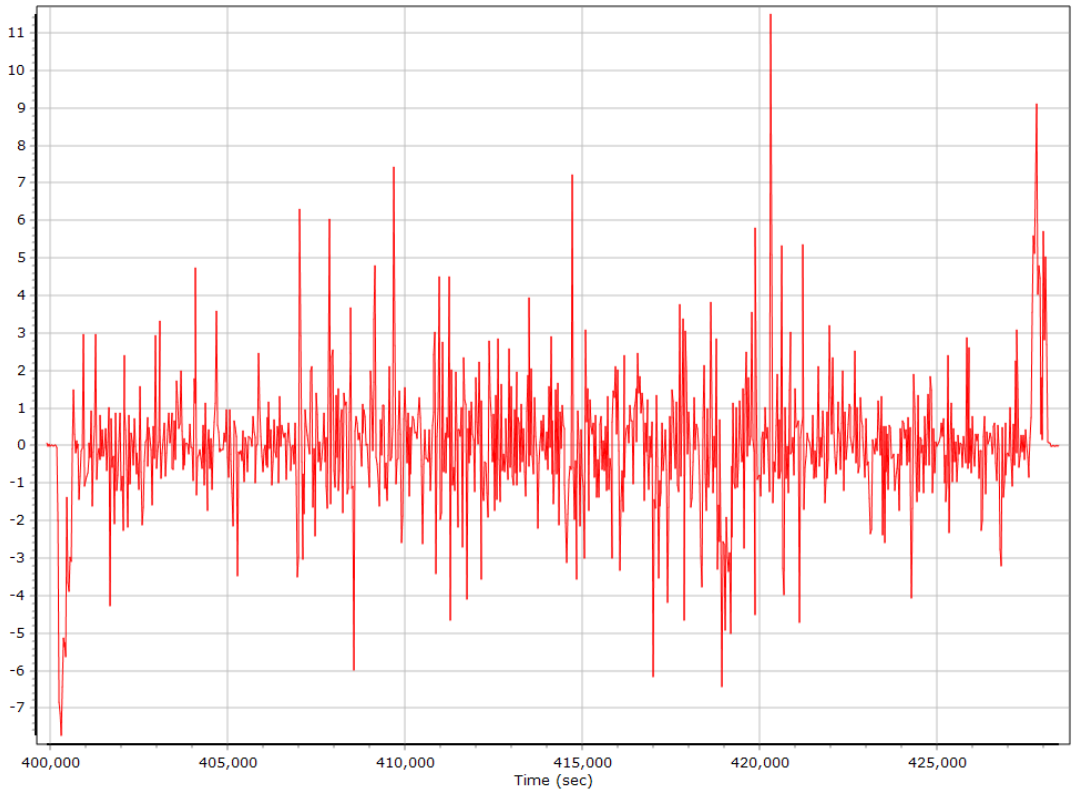
Heading



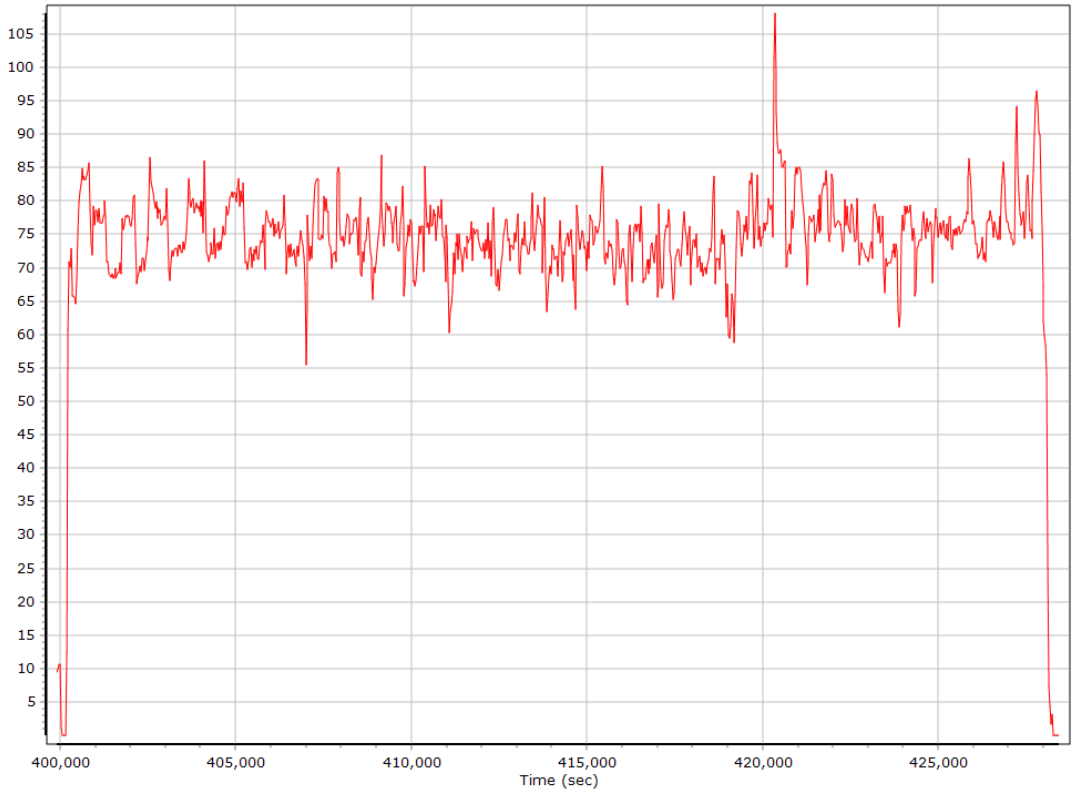
North/East Velocity



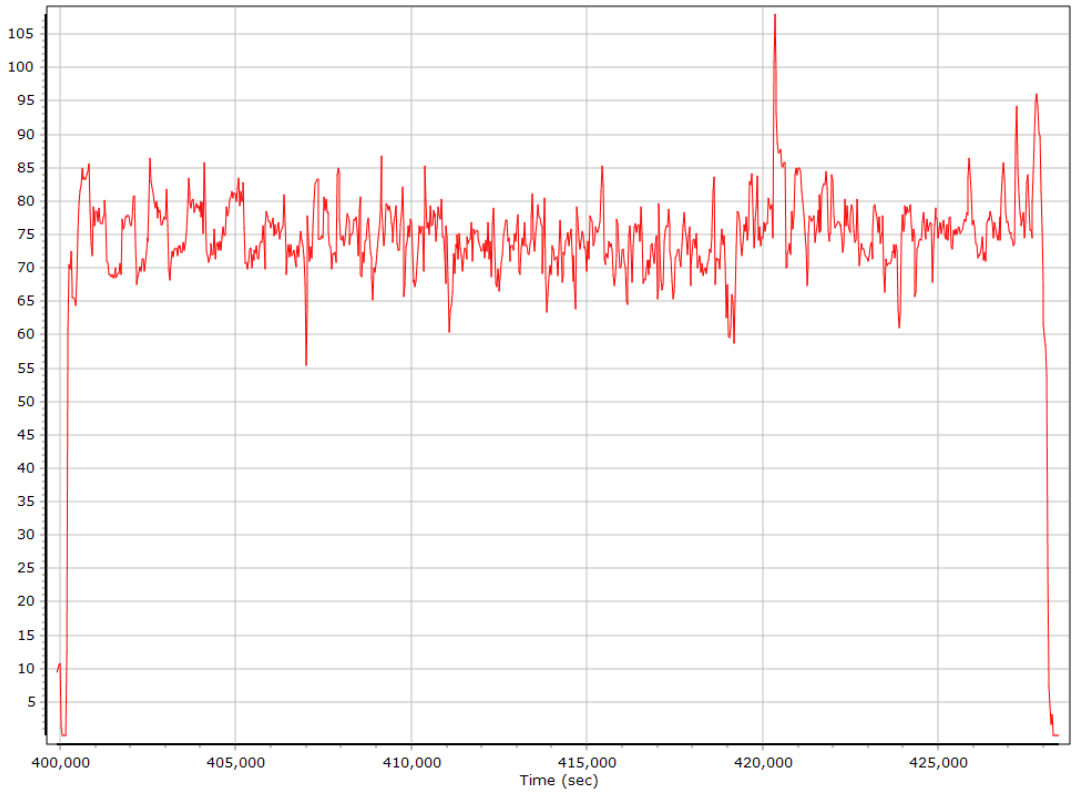
Down Velocity



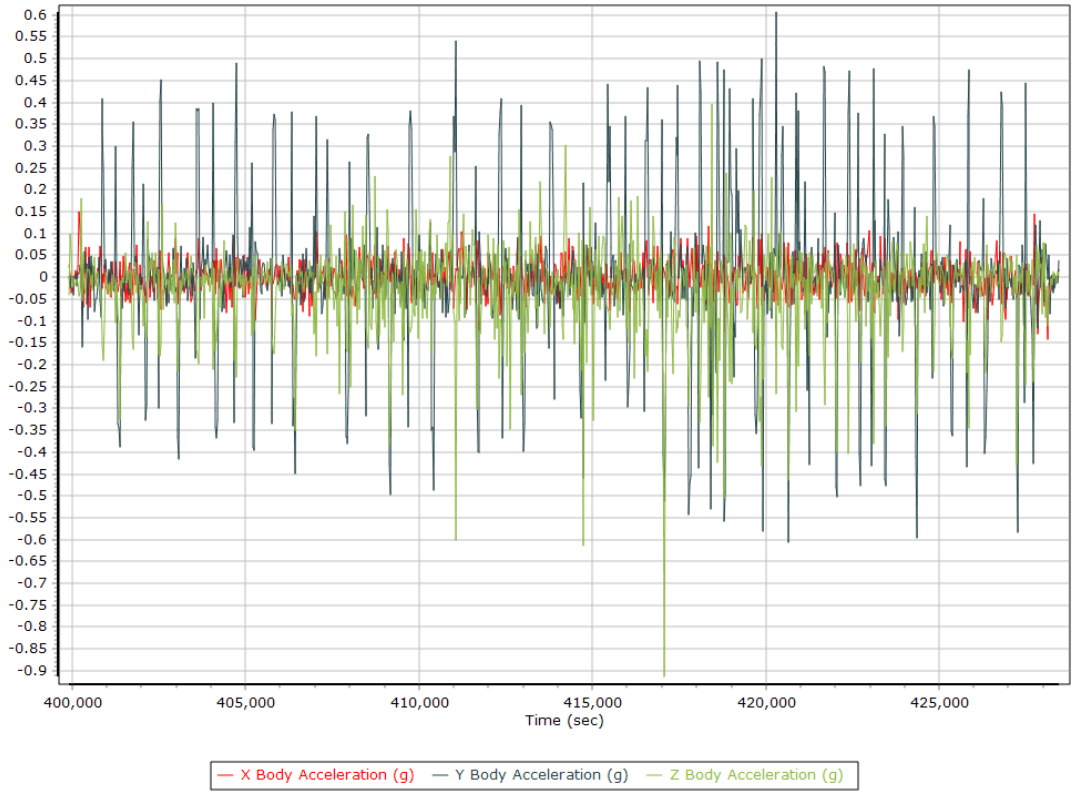
Total Speed



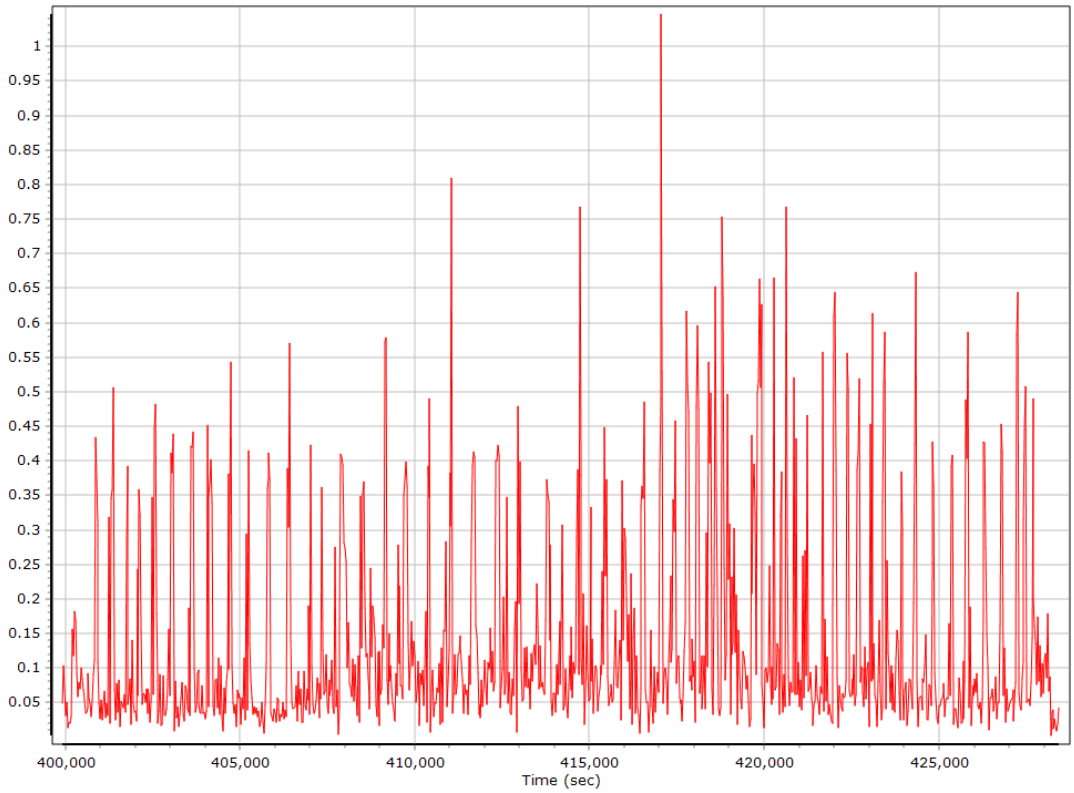
Ground Speed



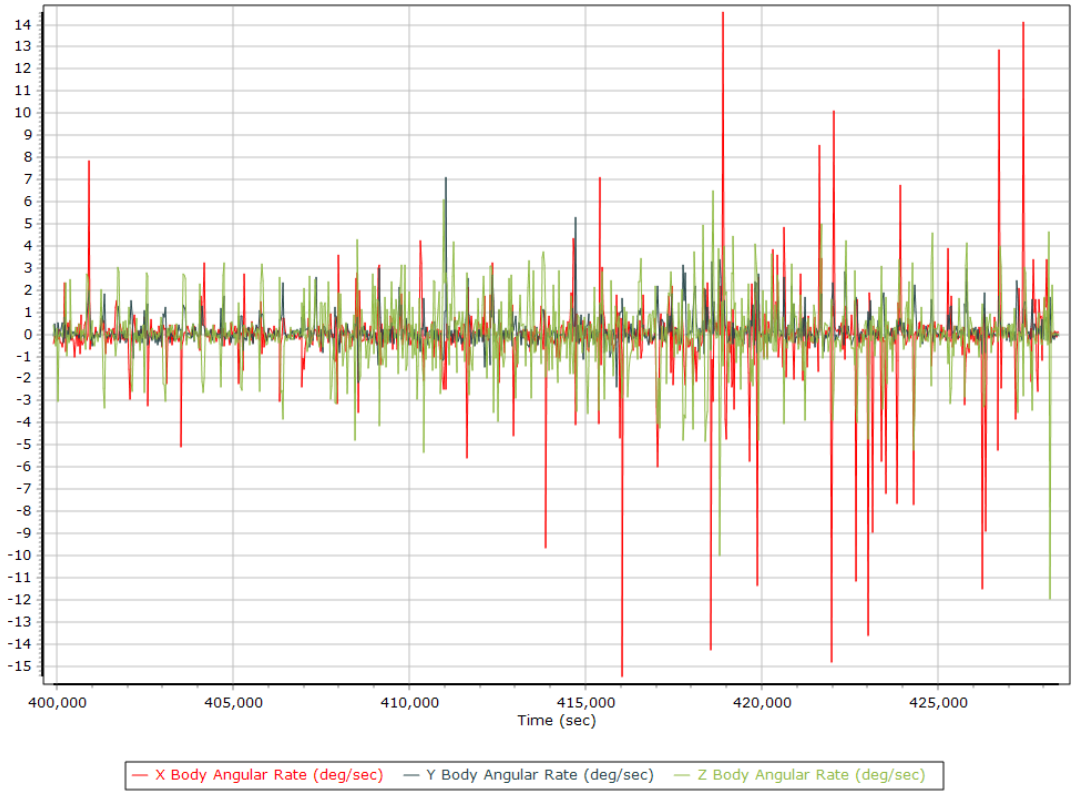
Body Acceleration



Total Body Acceleration



Body Angular Rate



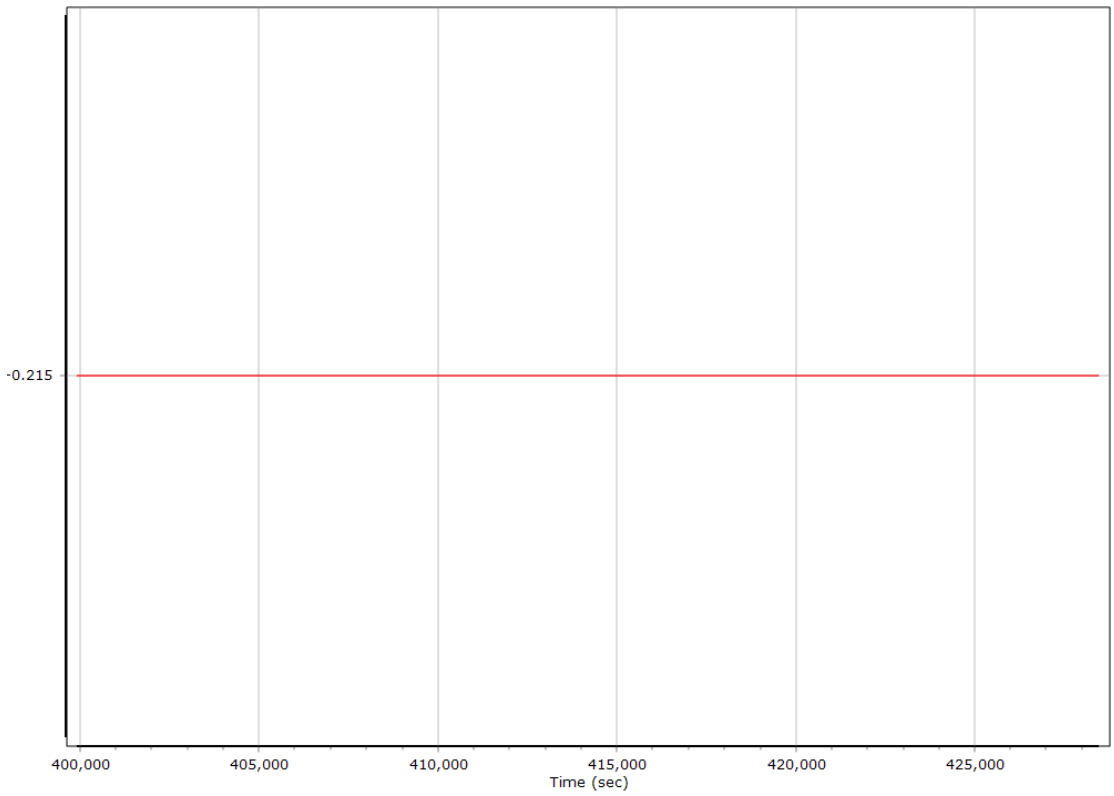
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion Trimble RTX Nav		
Stabilized mount	True		
Processing start time	397999.000 (05/28/2020 14:33:01)		
Processing end time	428462.000 (05/28/2020 23:00:44)		
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)	-0.215	-0.027	-0.964
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

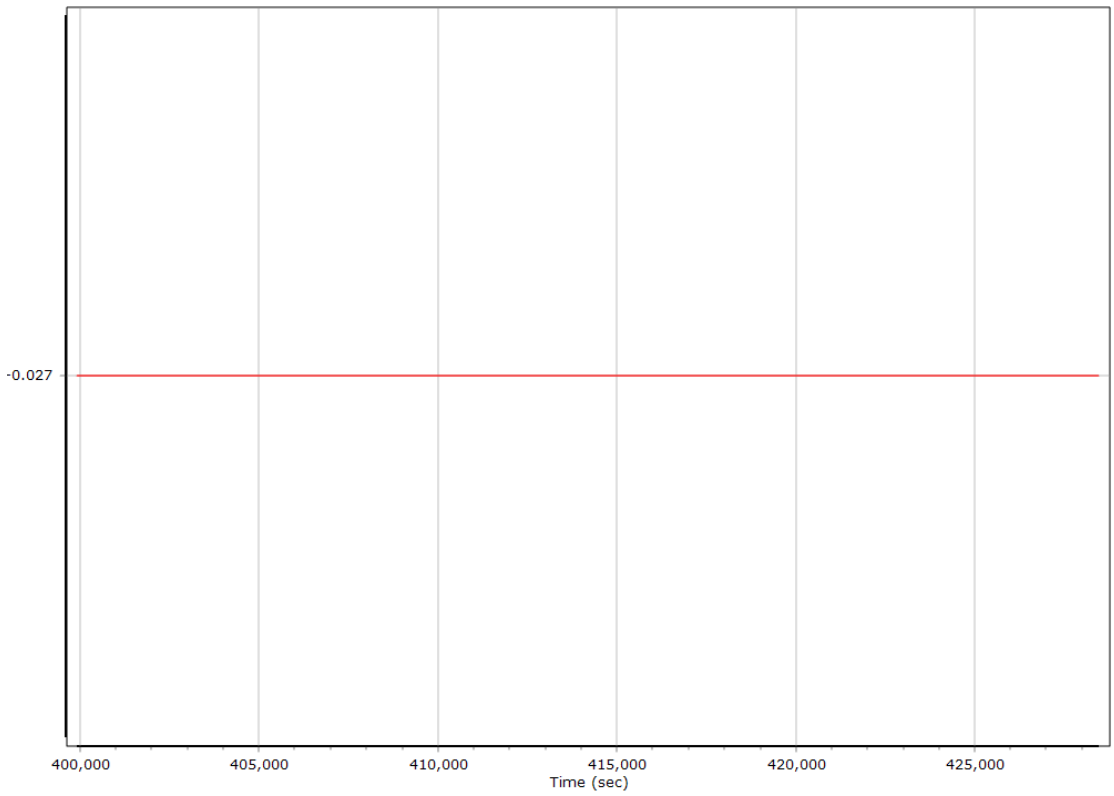
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

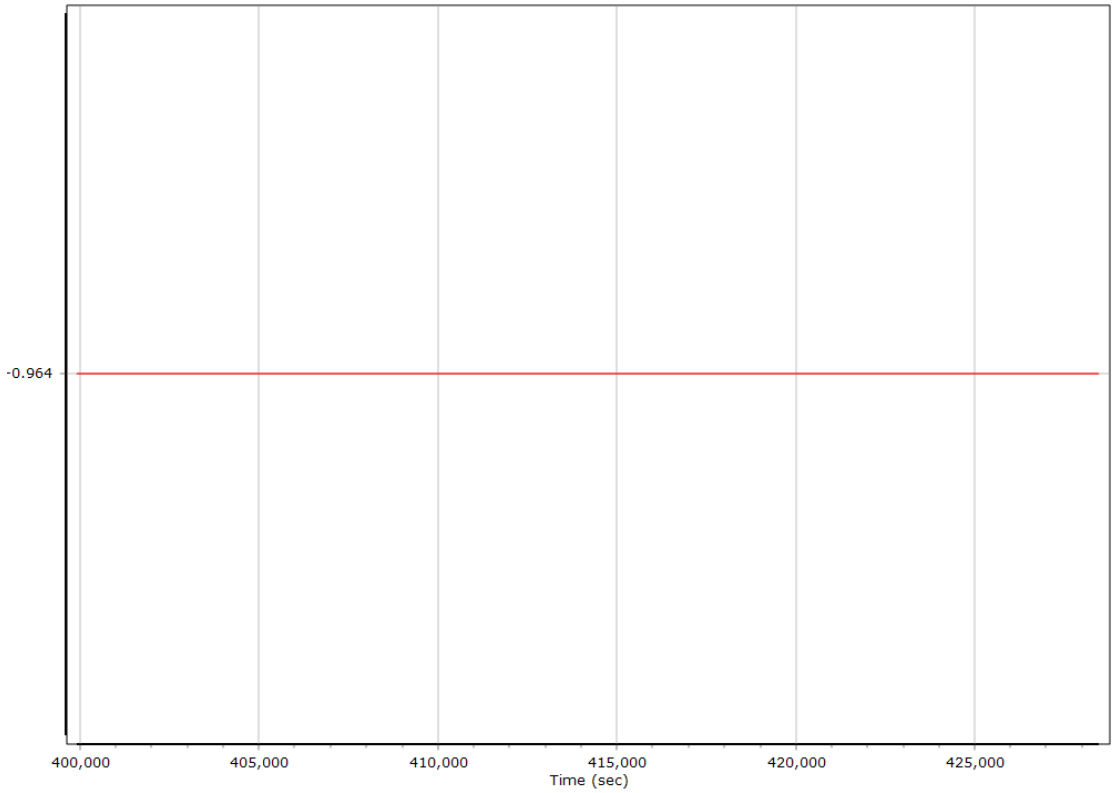
X Reference-Primary GNSS Lever Arm (m)



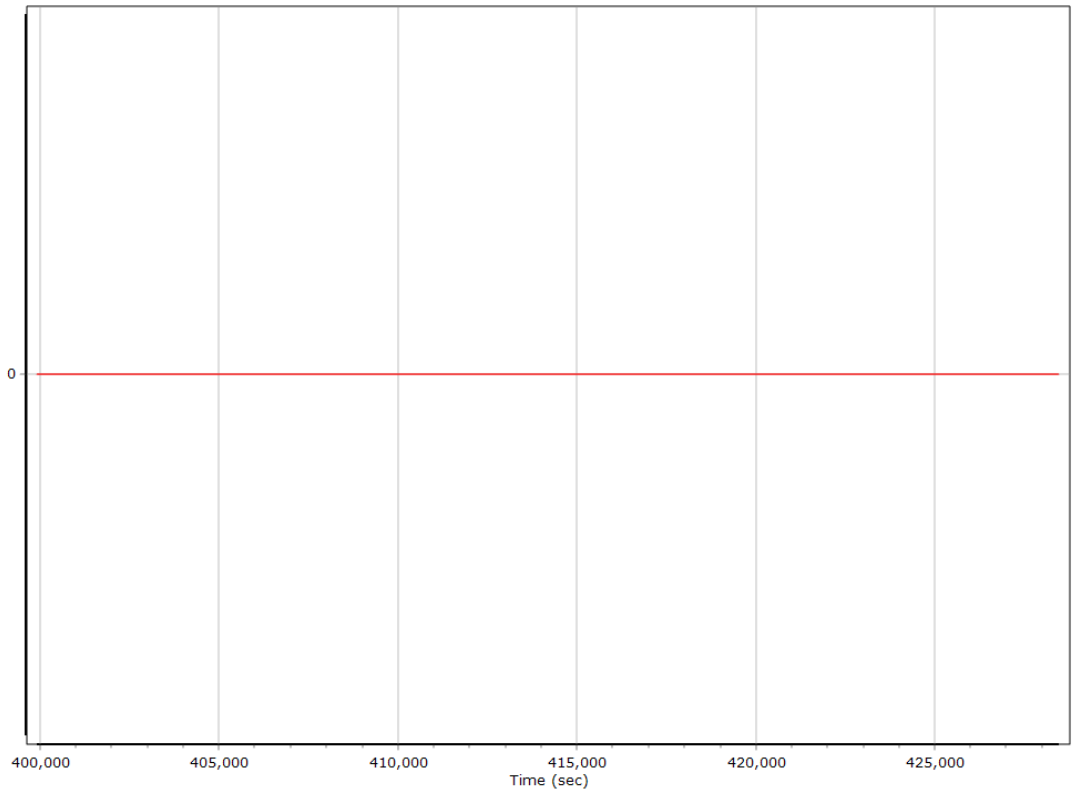
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



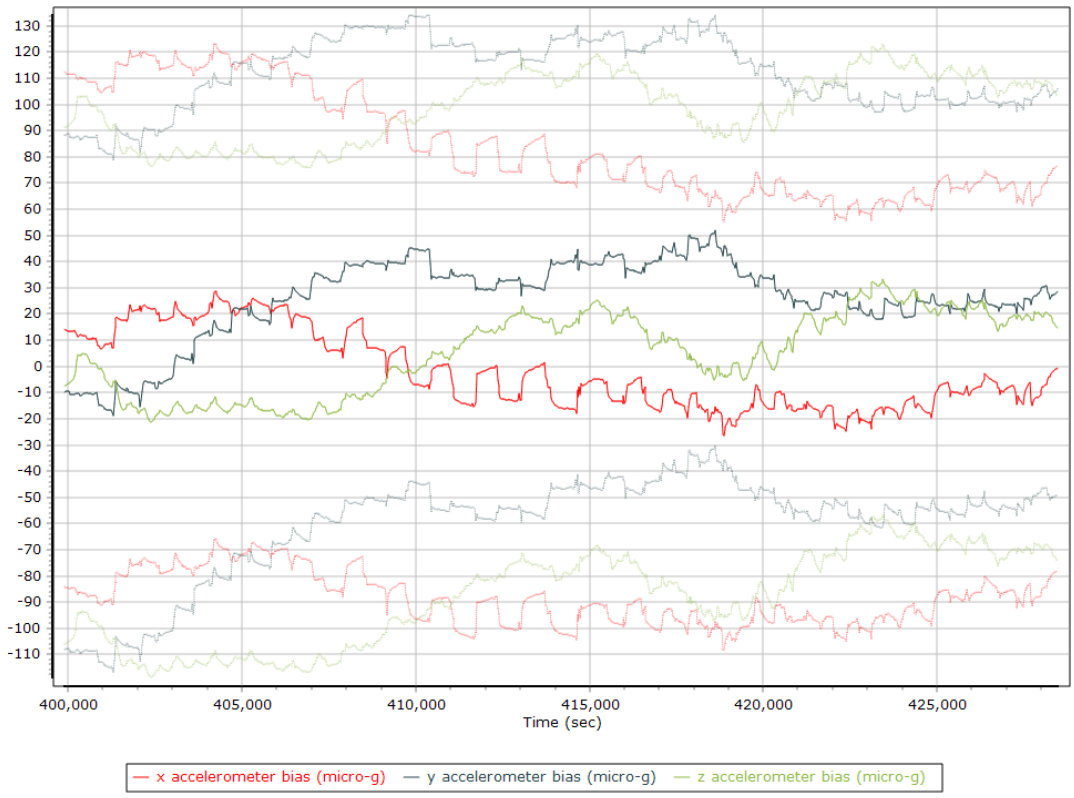
Reference-Primary GNSS Lever Arm Figure of Merit



IN-Fusion QC

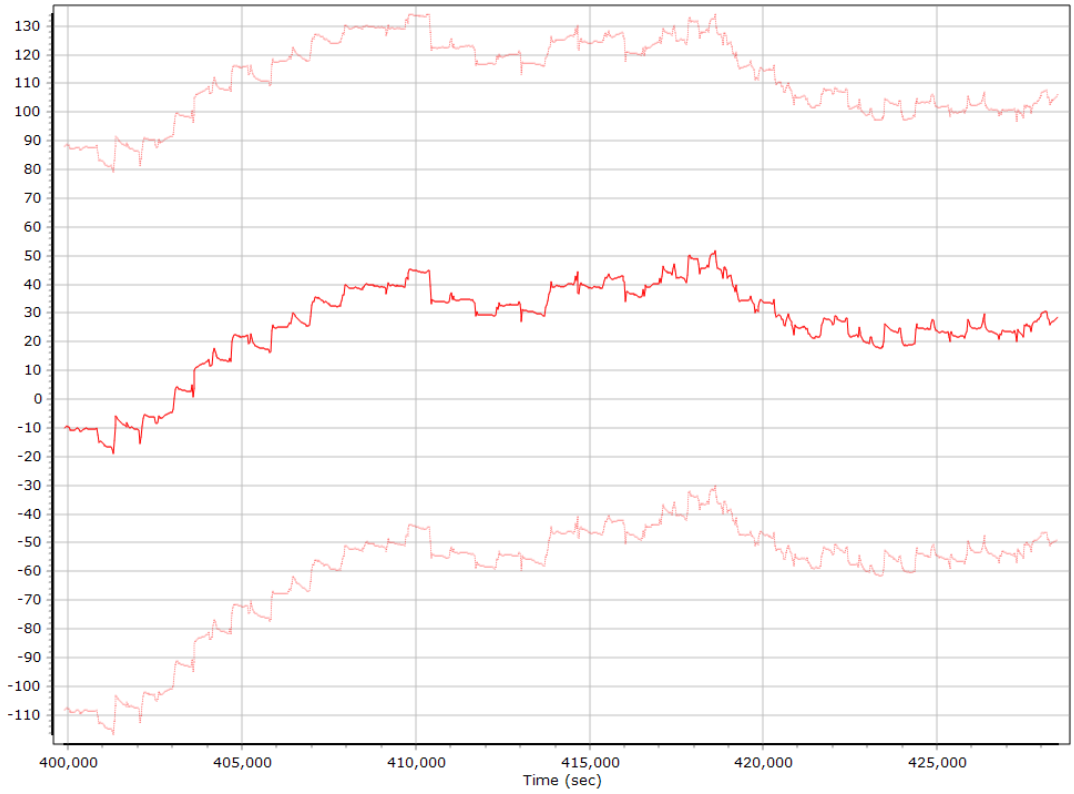
Forward Processed Estimated Errors, Reference Frame

Accelerometer Bias (micro-g)

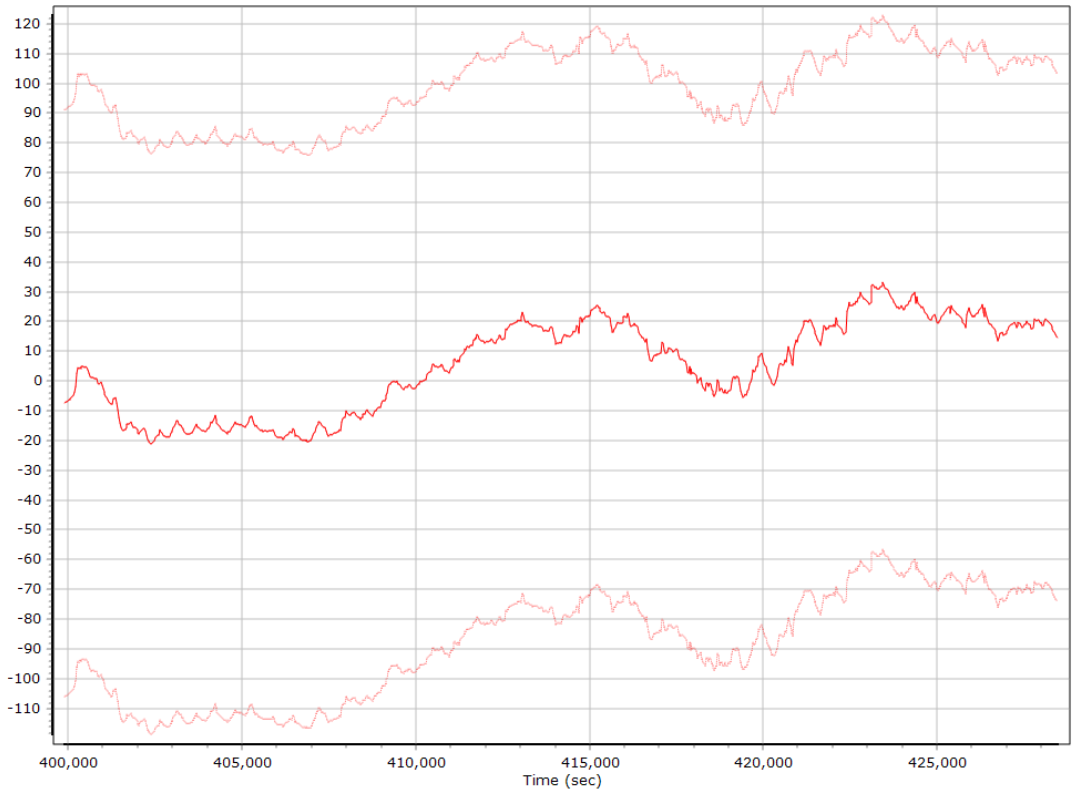


X Accelerometer Bias (micro-g)

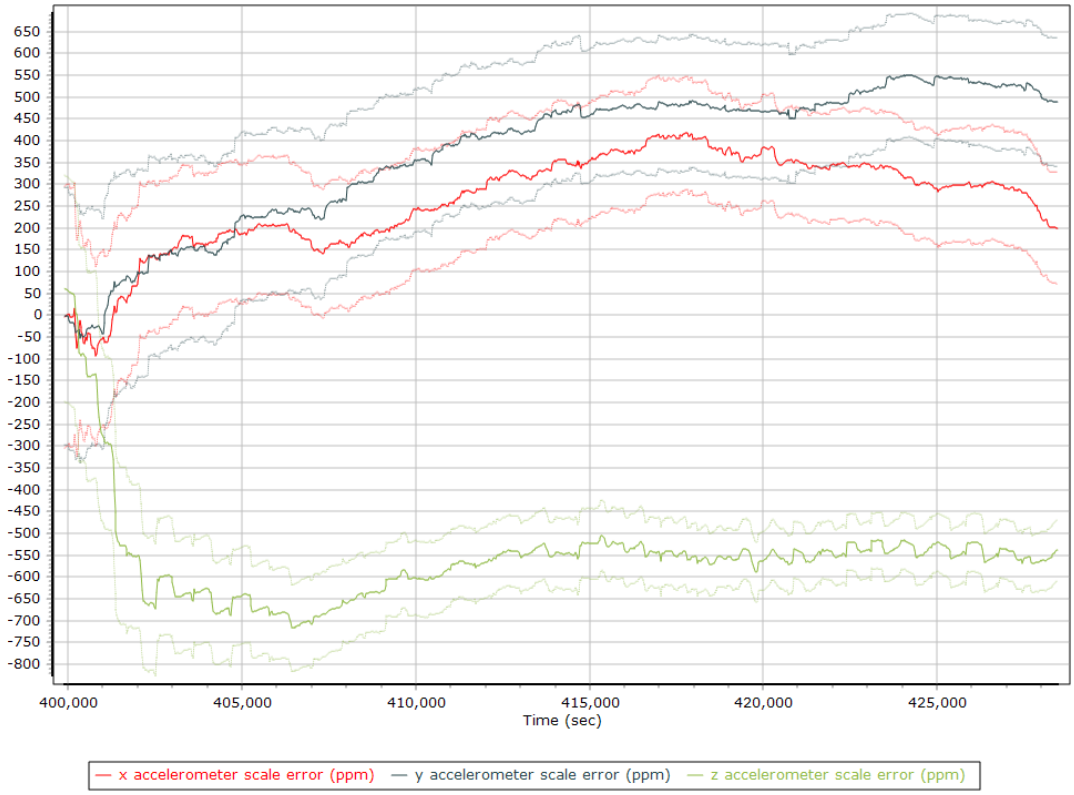
Y Accelerometer Bias (micro-g)



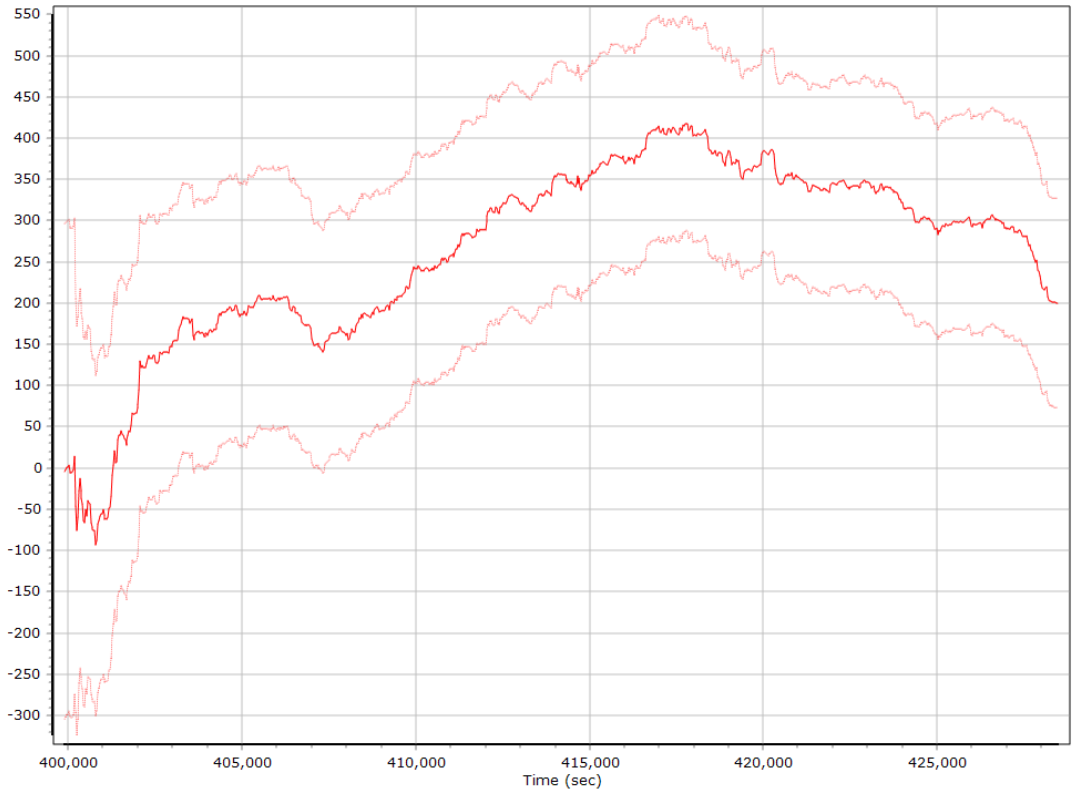
Z Accelerometer Bias (micro-g)



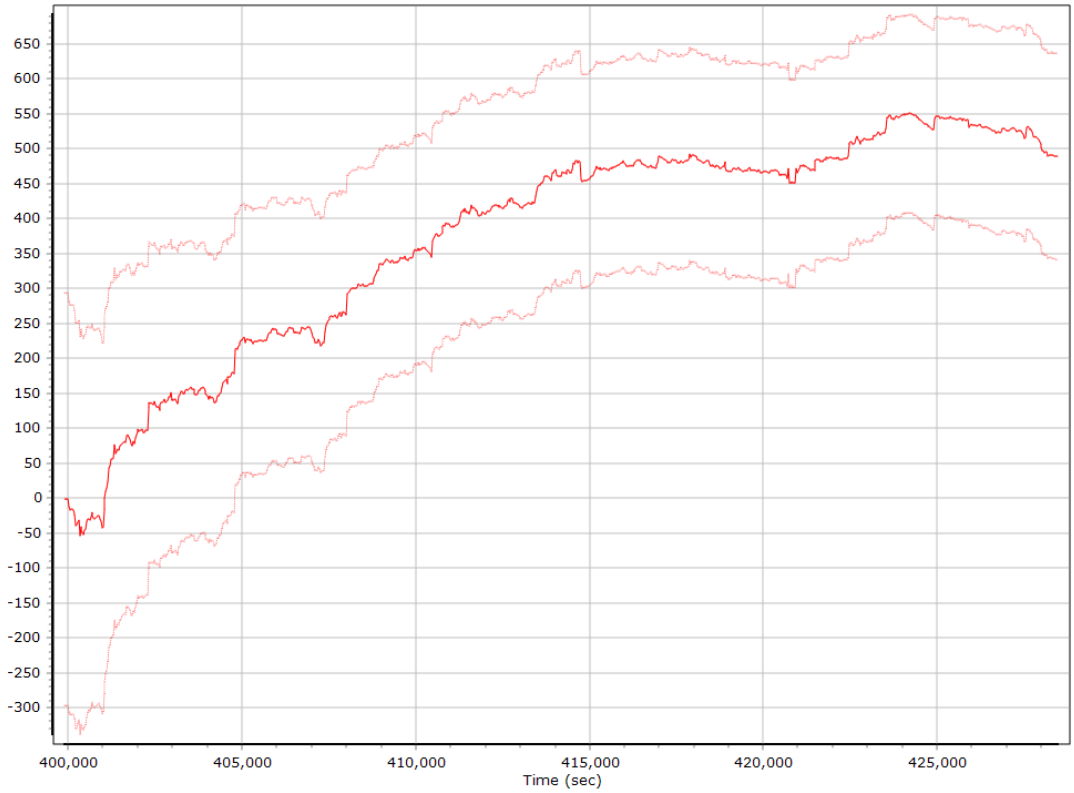
Accelerometer Scale Error (ppm)



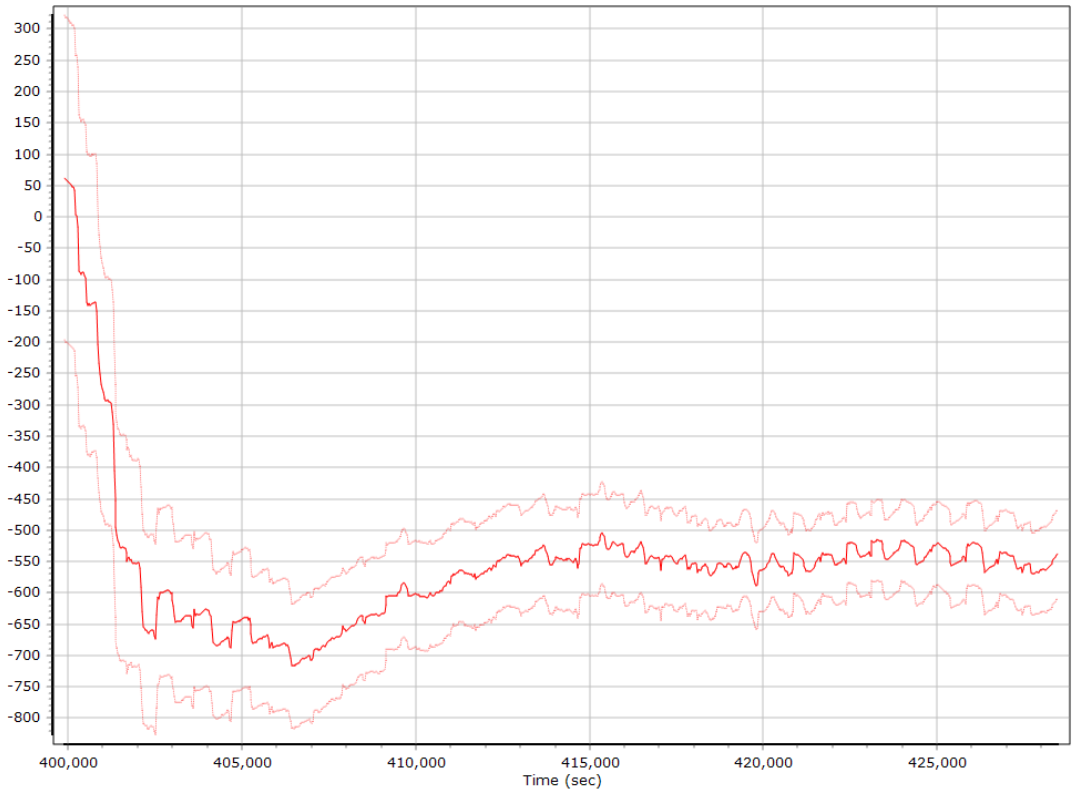
X Accelerometer Scale Error (ppm)



Y Accelerometer Scale Error (ppm)

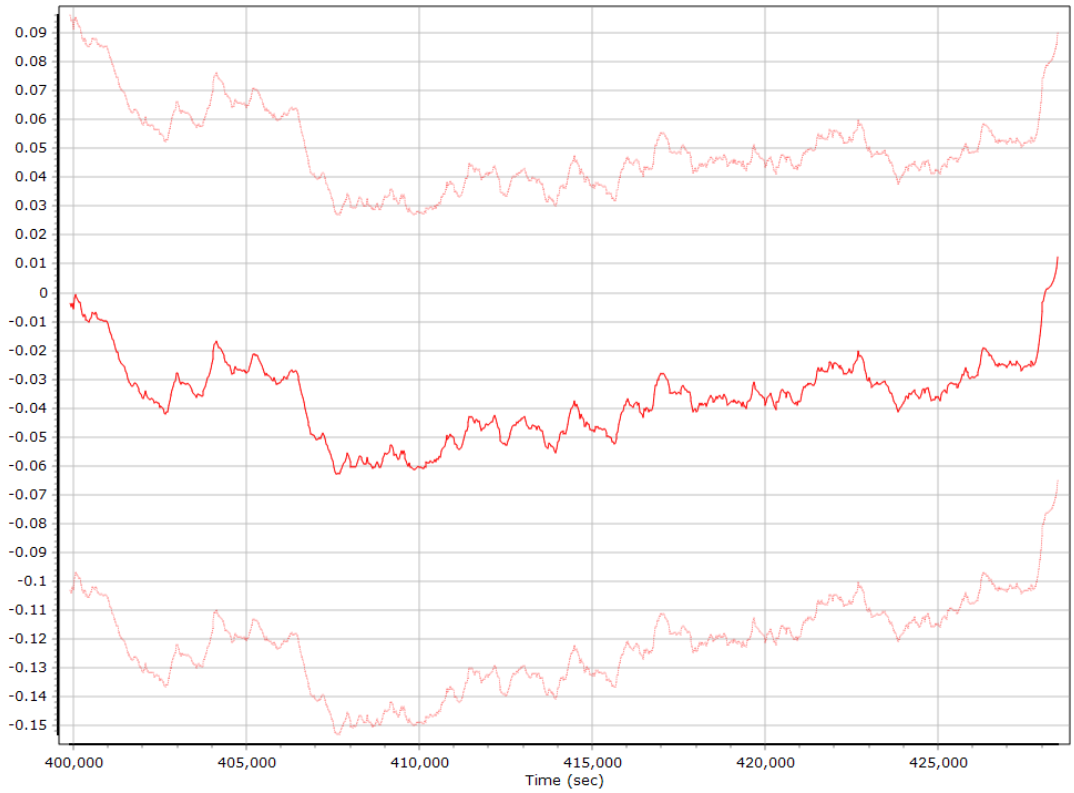


Z Accelerometer Scale Error (ppm)

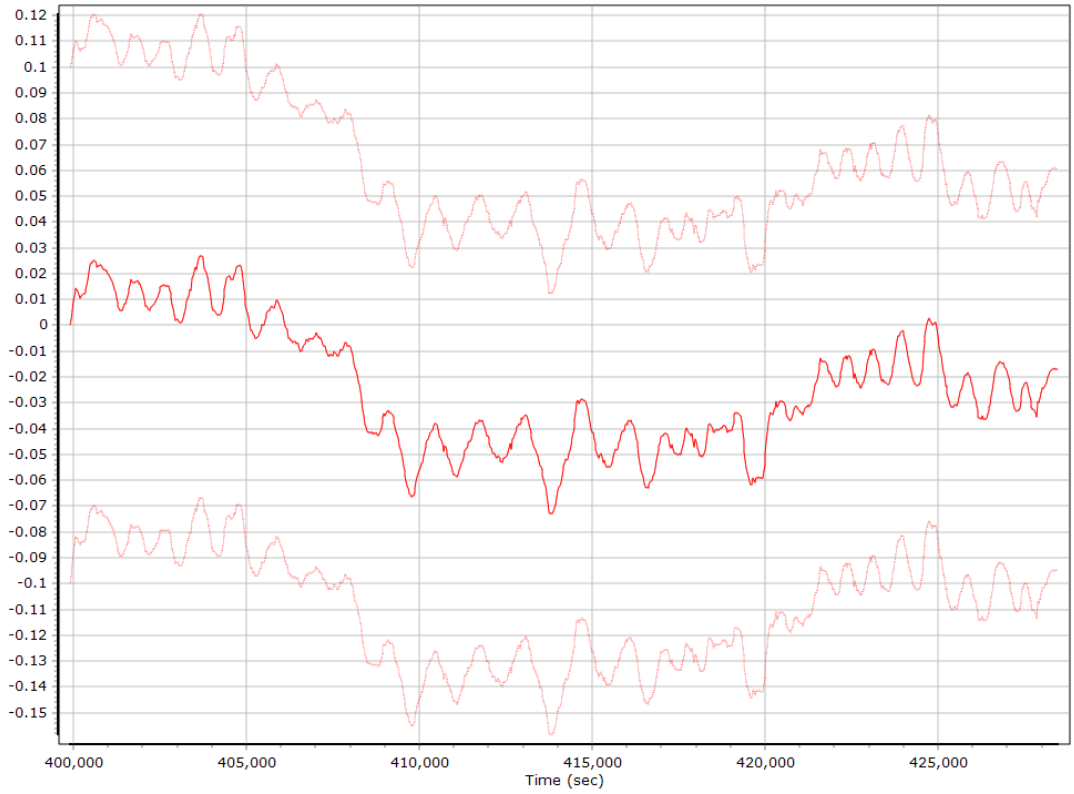


Gyro Bias (deg/h)

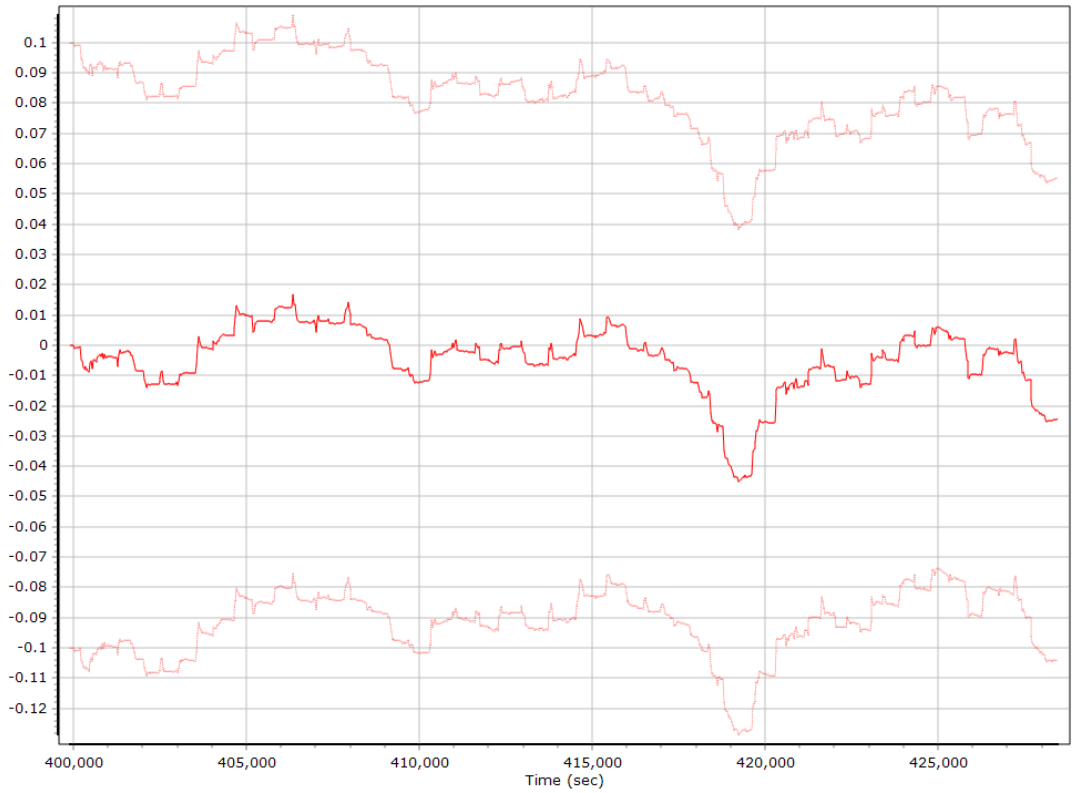
X Gyro Bias (deg/h)



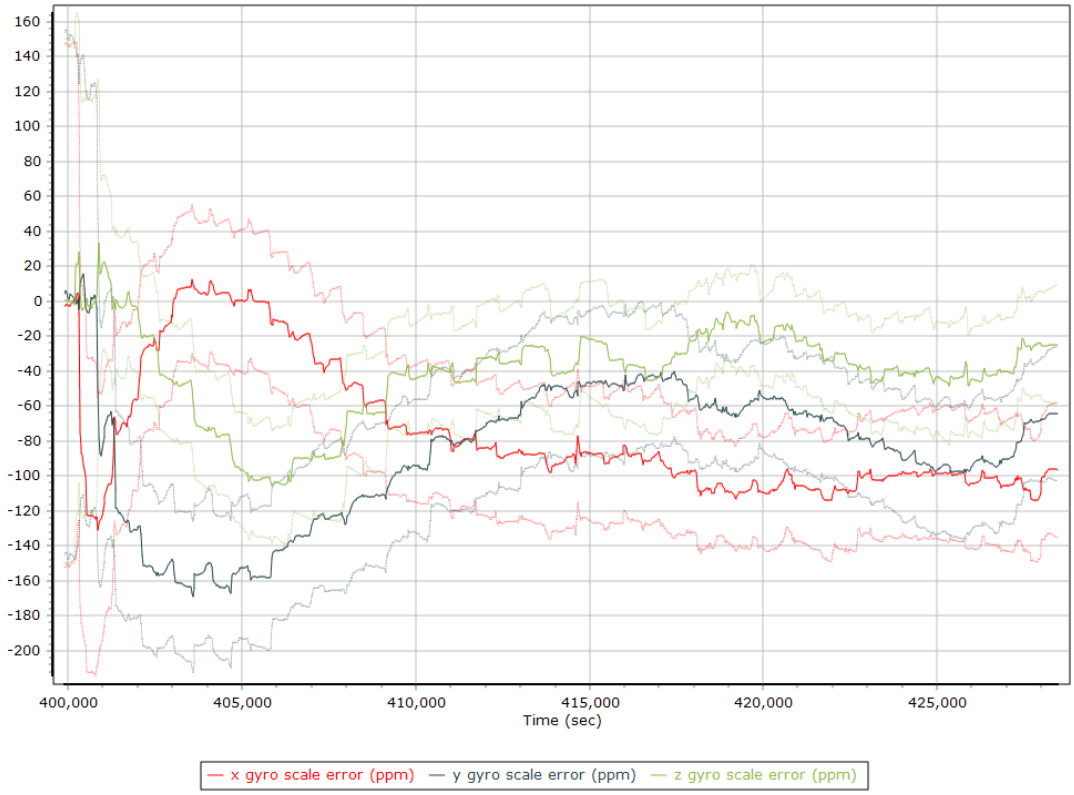
Y Gyro Bias (deg/h)



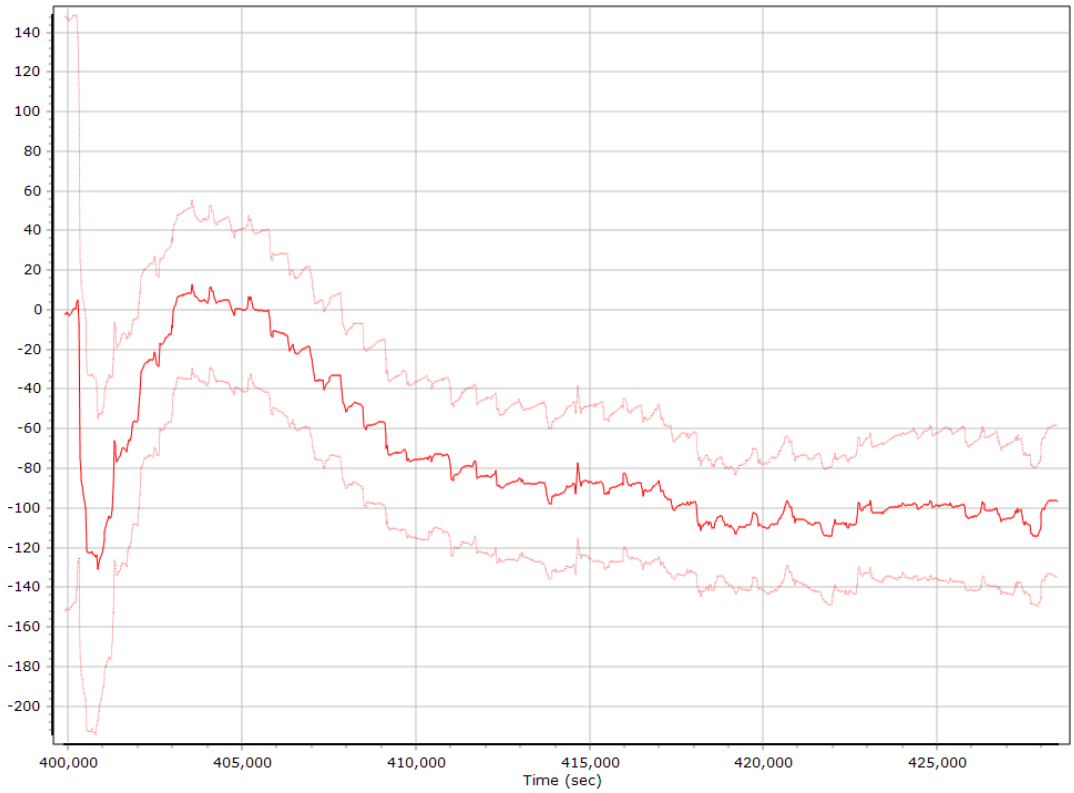
Z Gyro Bias (deg/h)



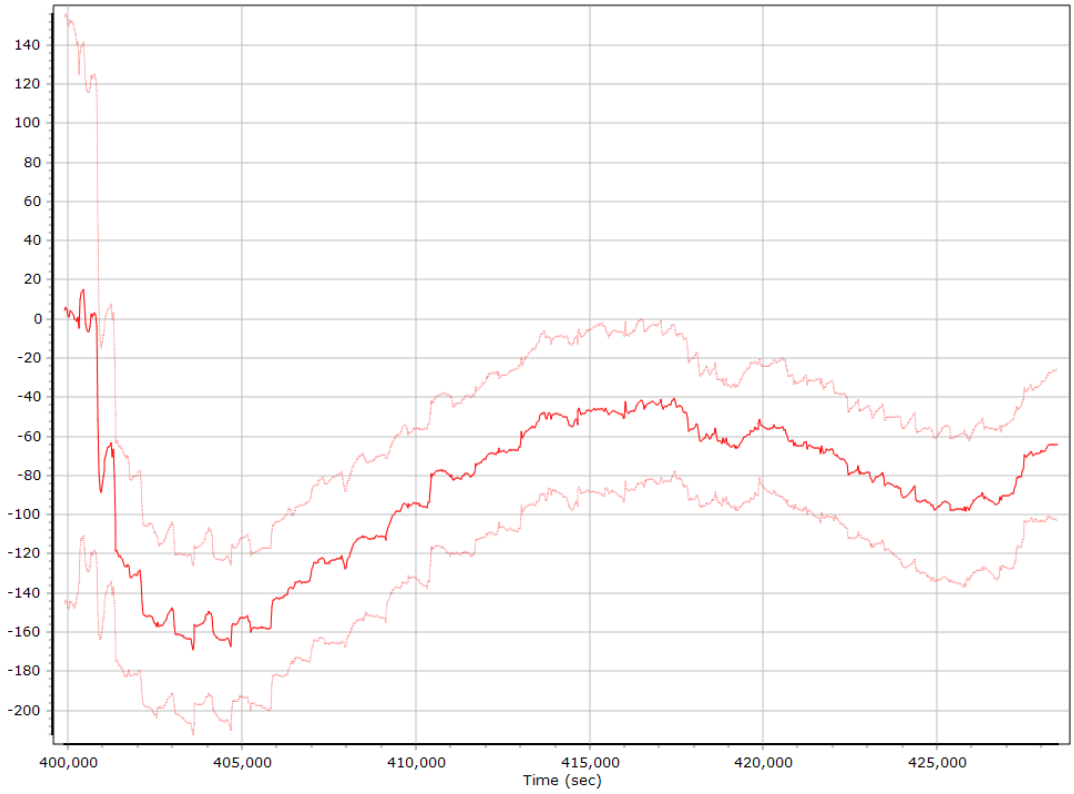
Gyro Scale Error (ppm)



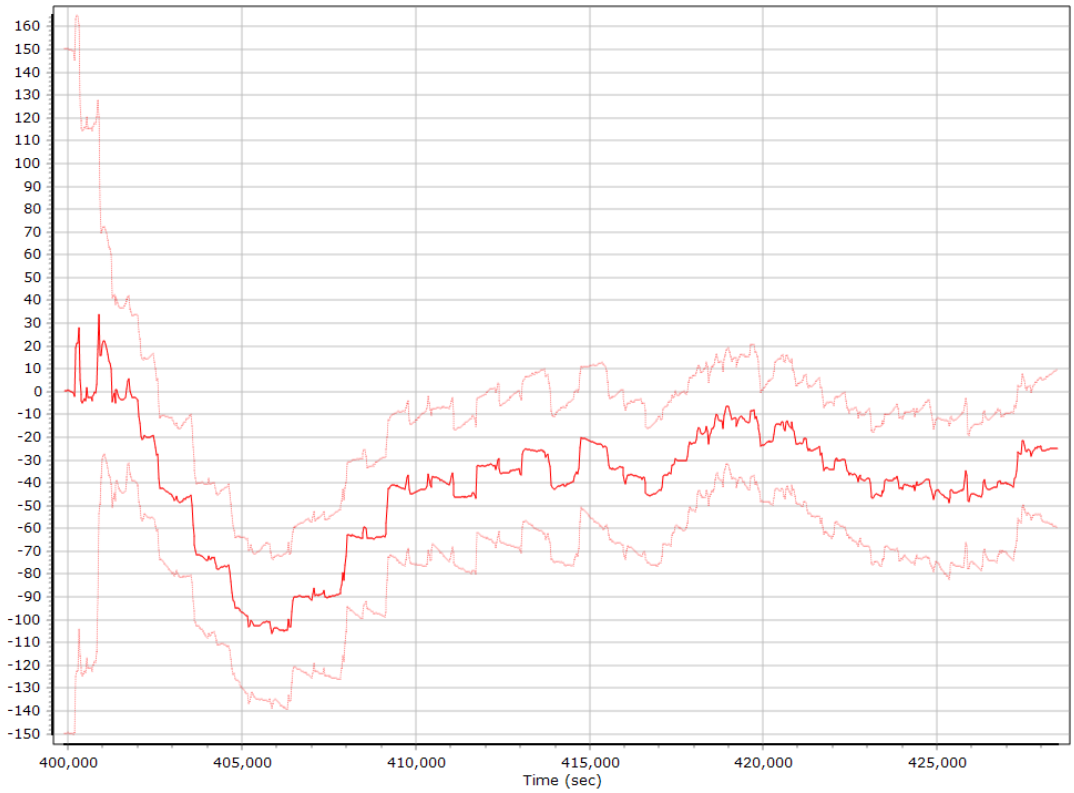
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

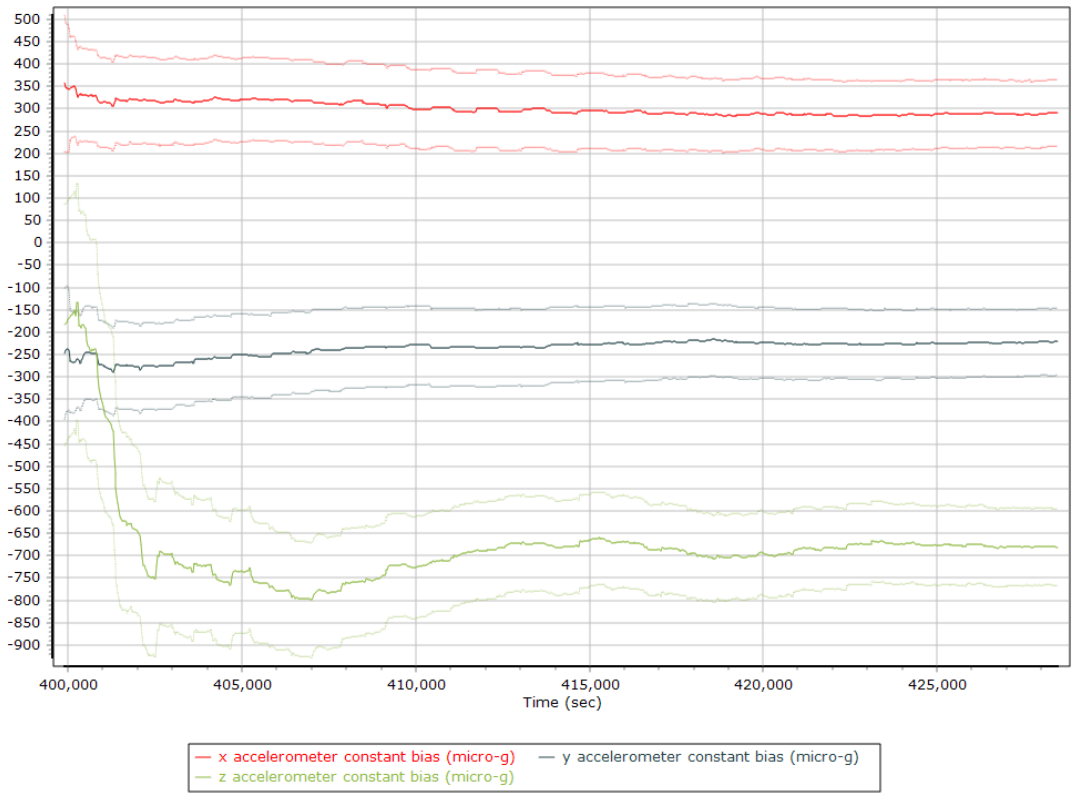


Z Gyro Scale Error (ppm)

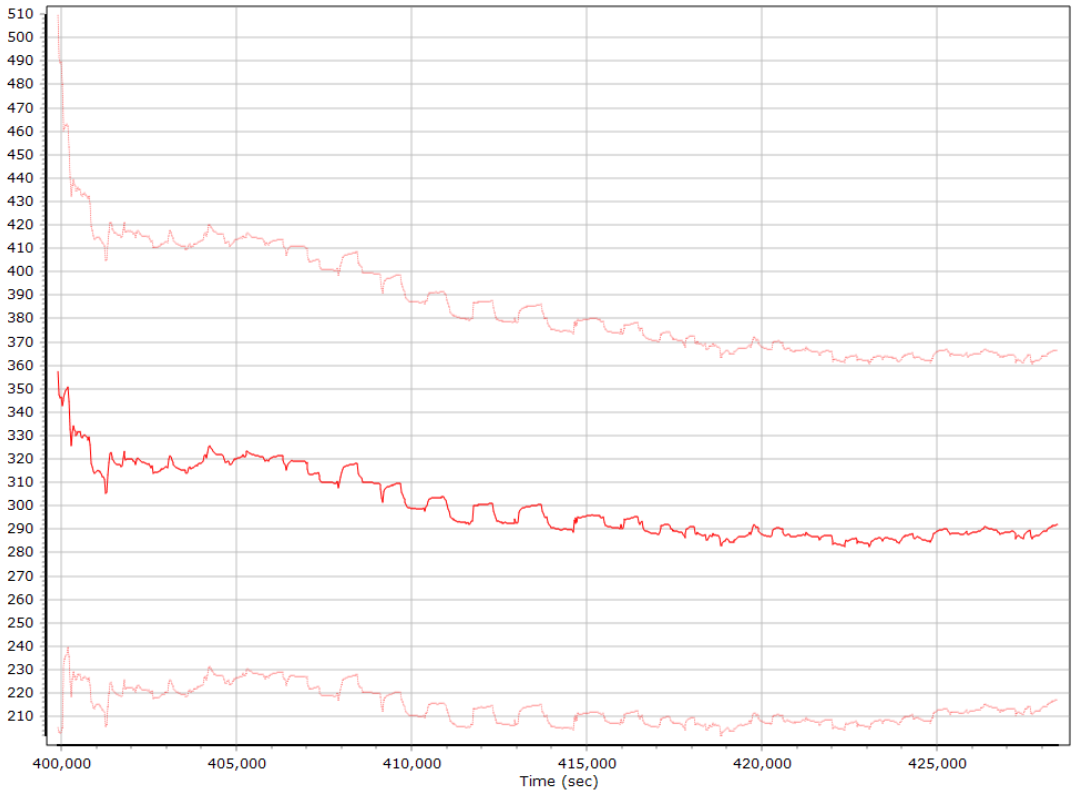


Forward Processed Estimated Constant Errors, Reference Frame

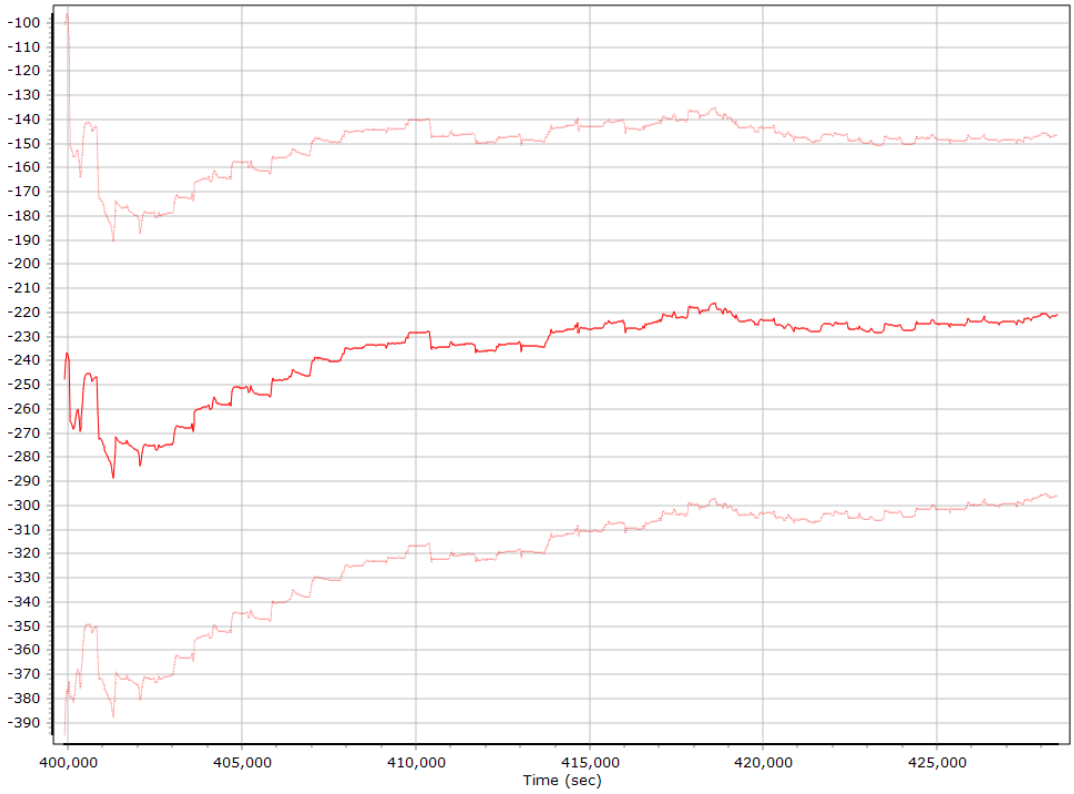
Accelerometer Bias (micro-g)



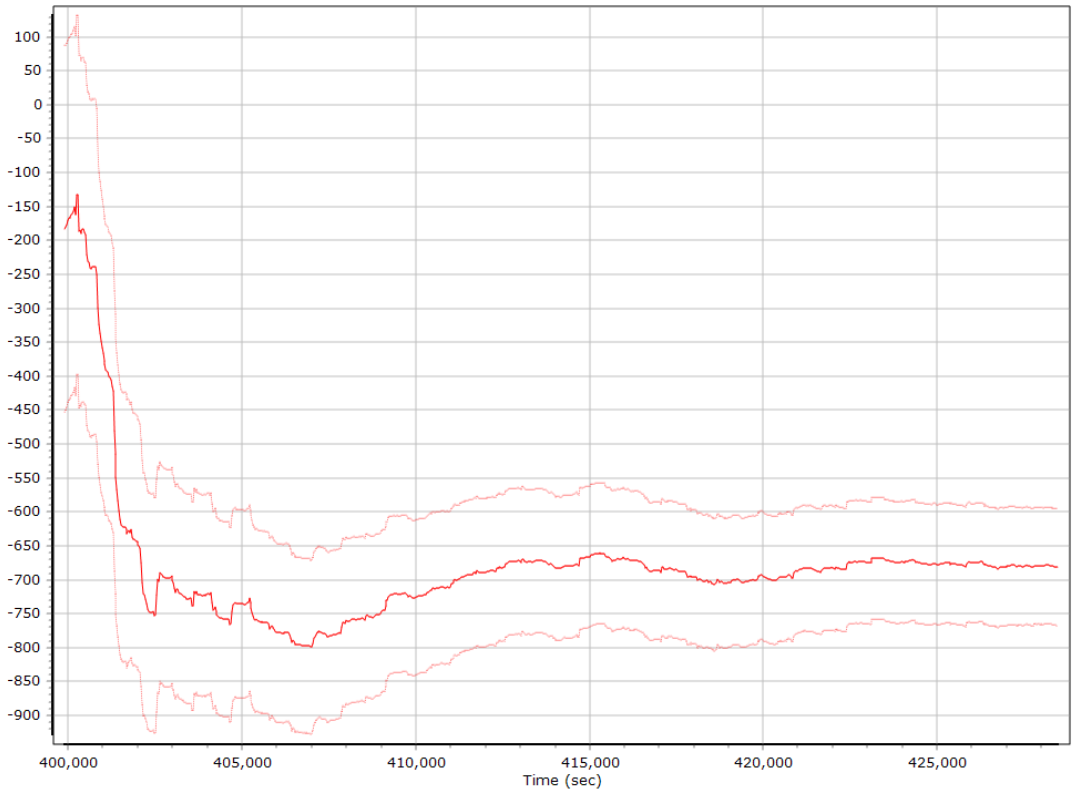
X Accelerometer Bias (micro-g)



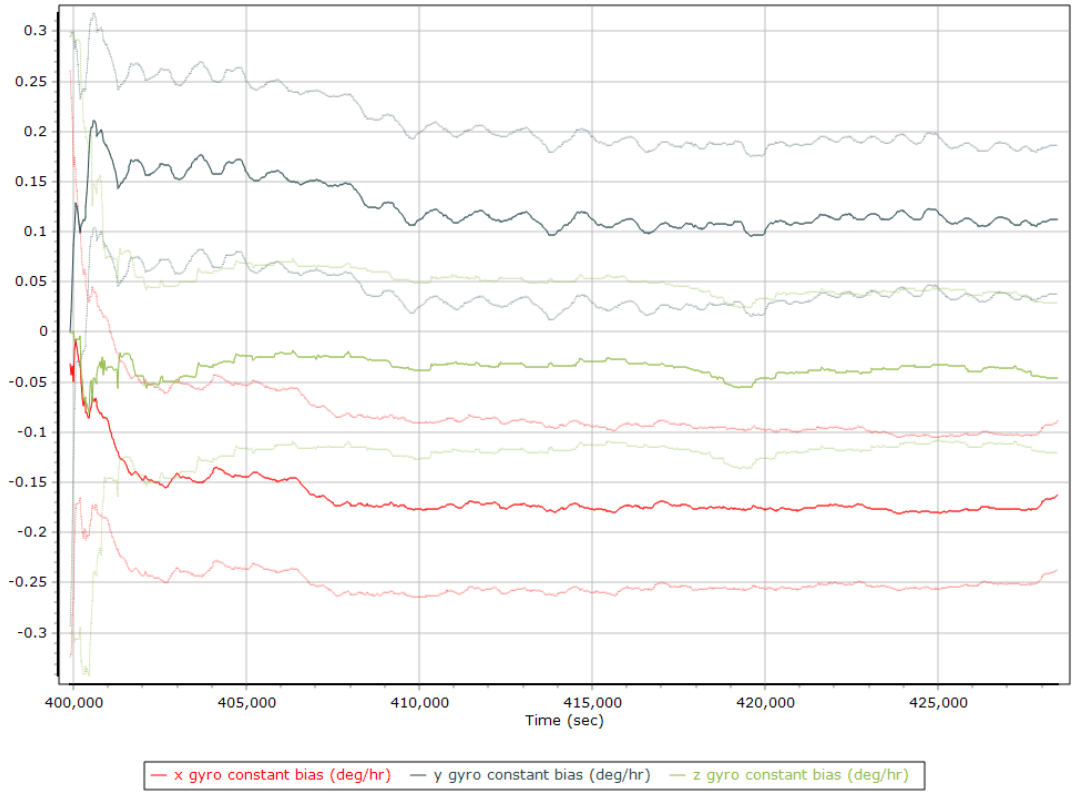
Y Accelerometer Bias (micro-g)



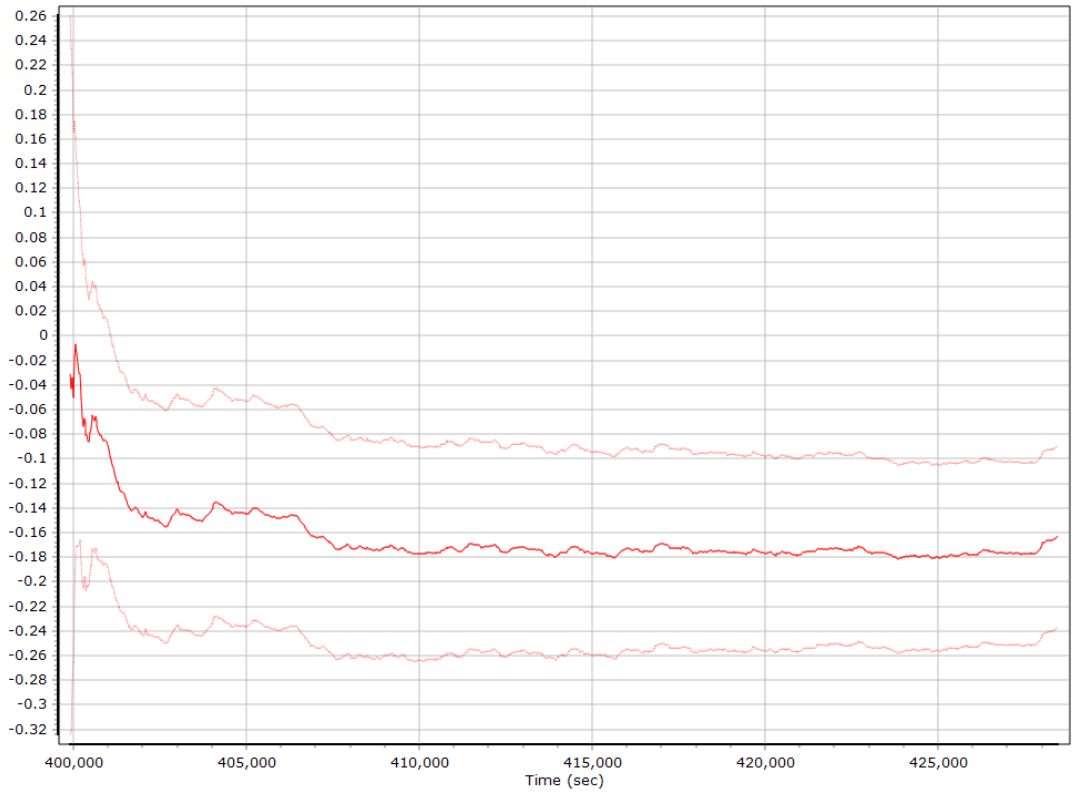
Z Accelerometer Bias (micro-g)



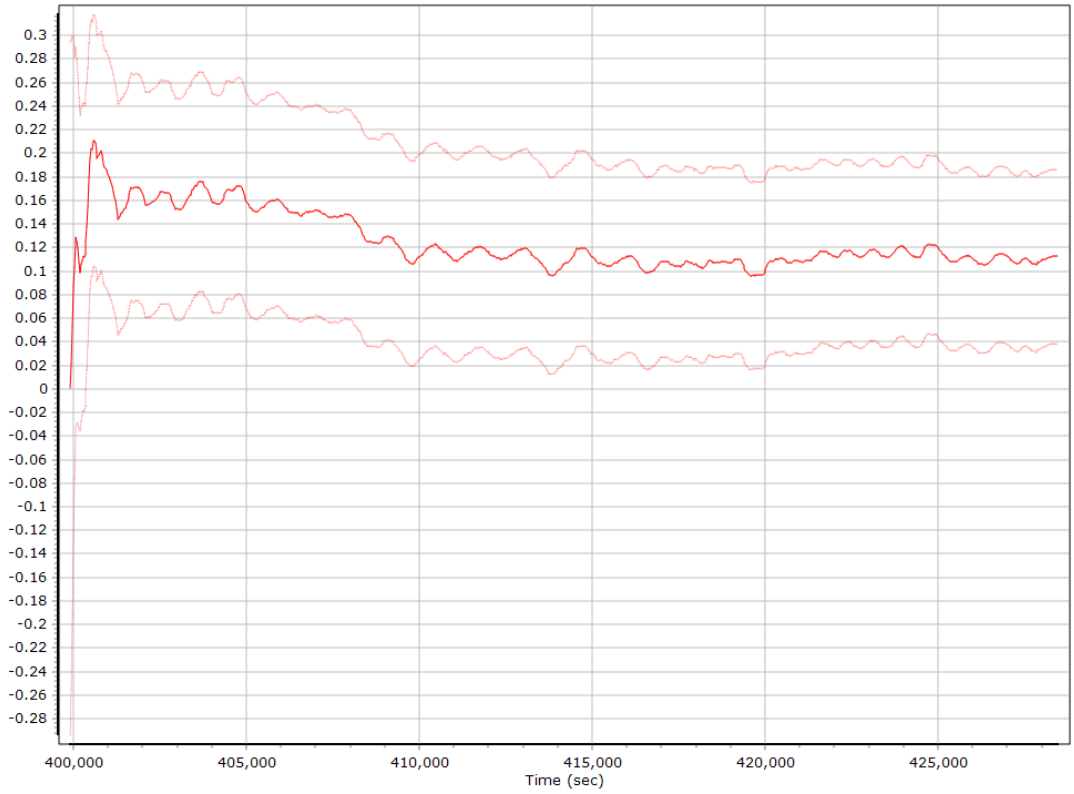
Gyro Bias (deg/h)



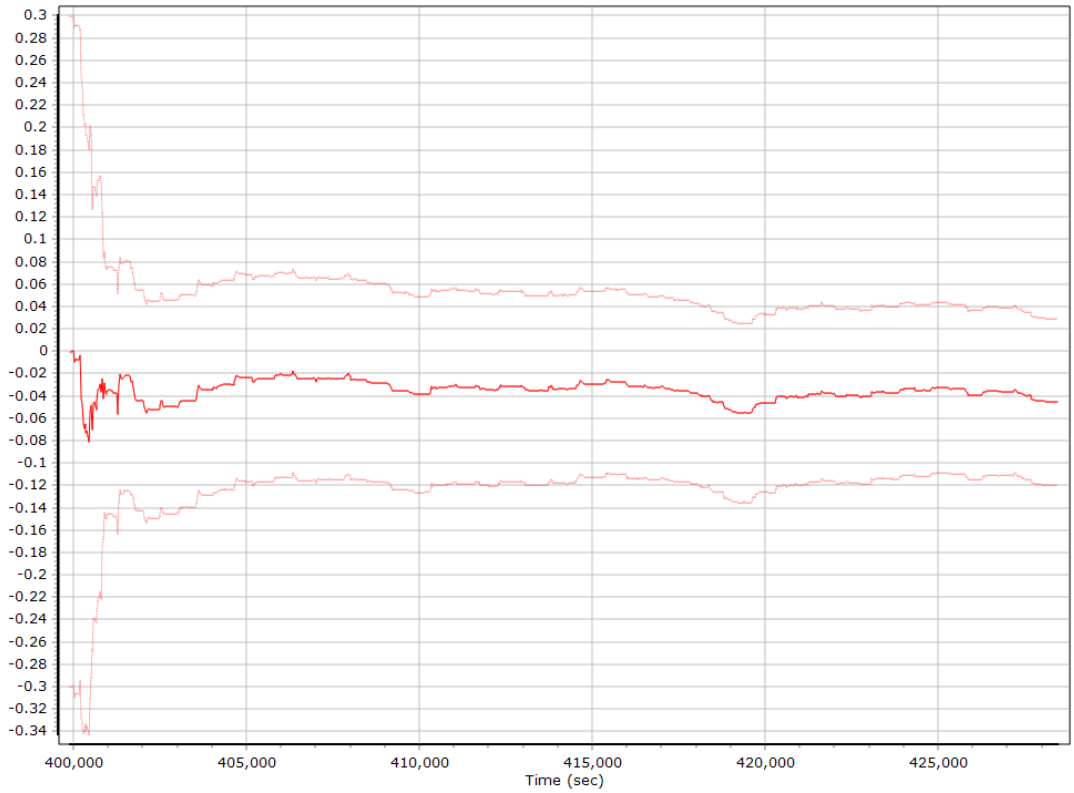
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)

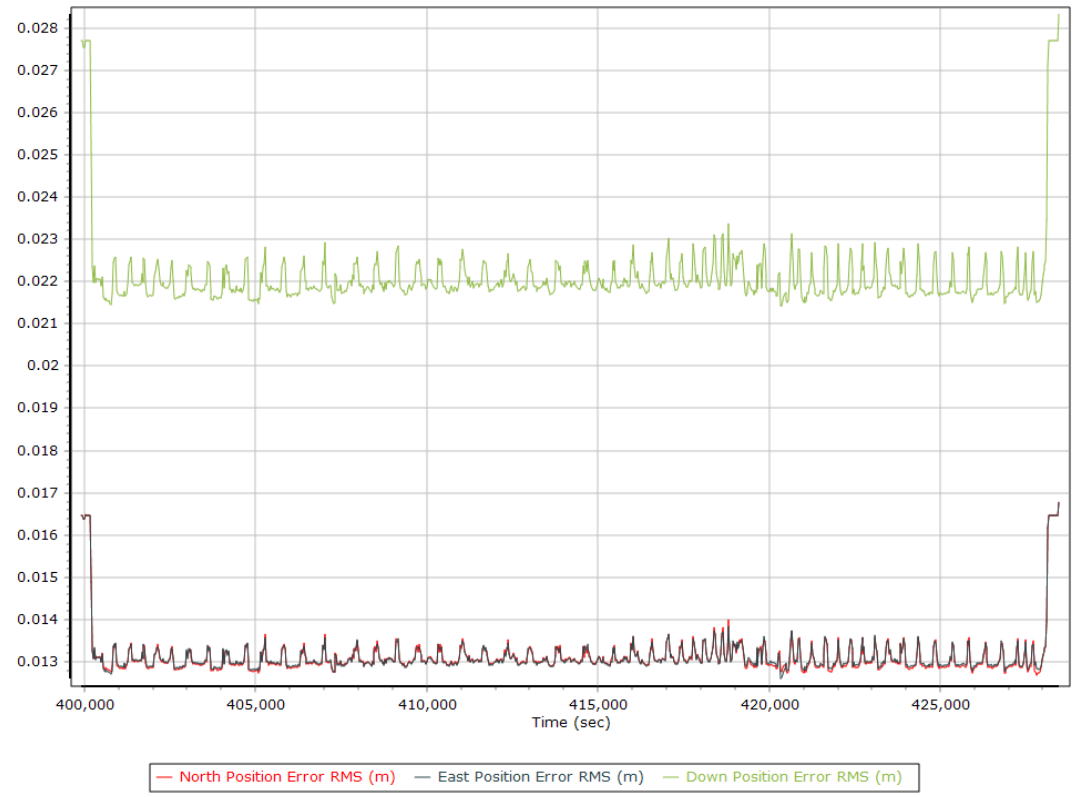


Z Gyro Bias (deg/h)

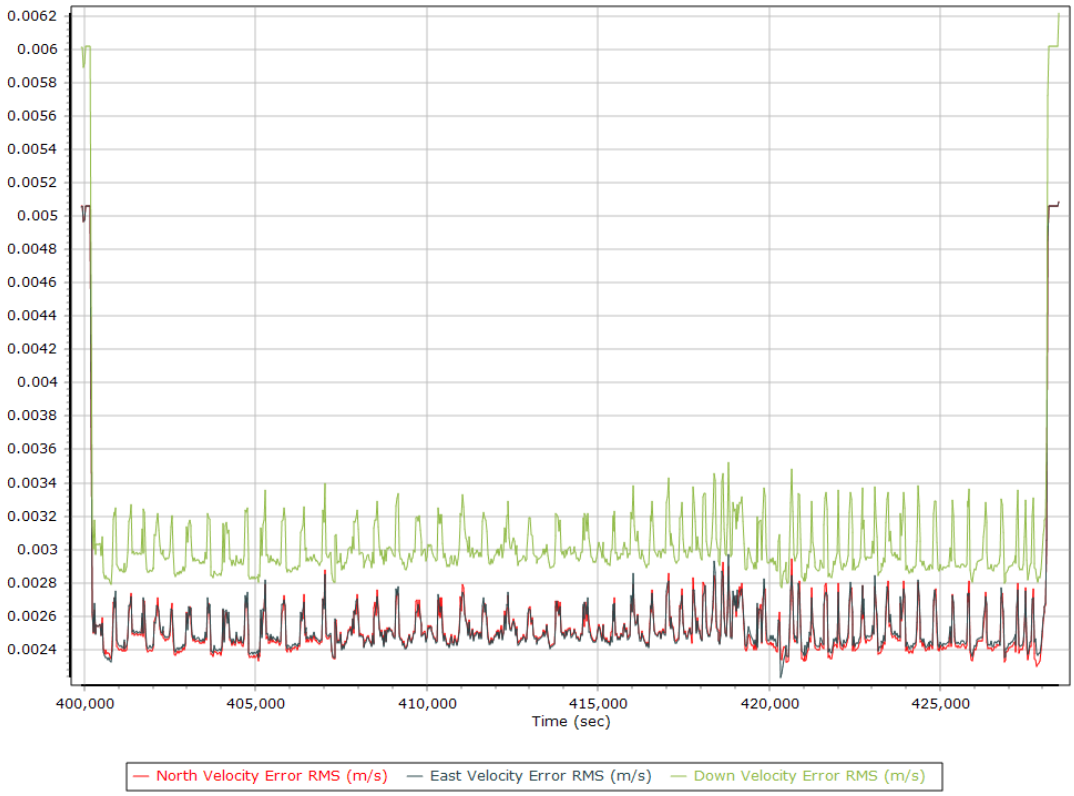


Smoothed Performance Metrics

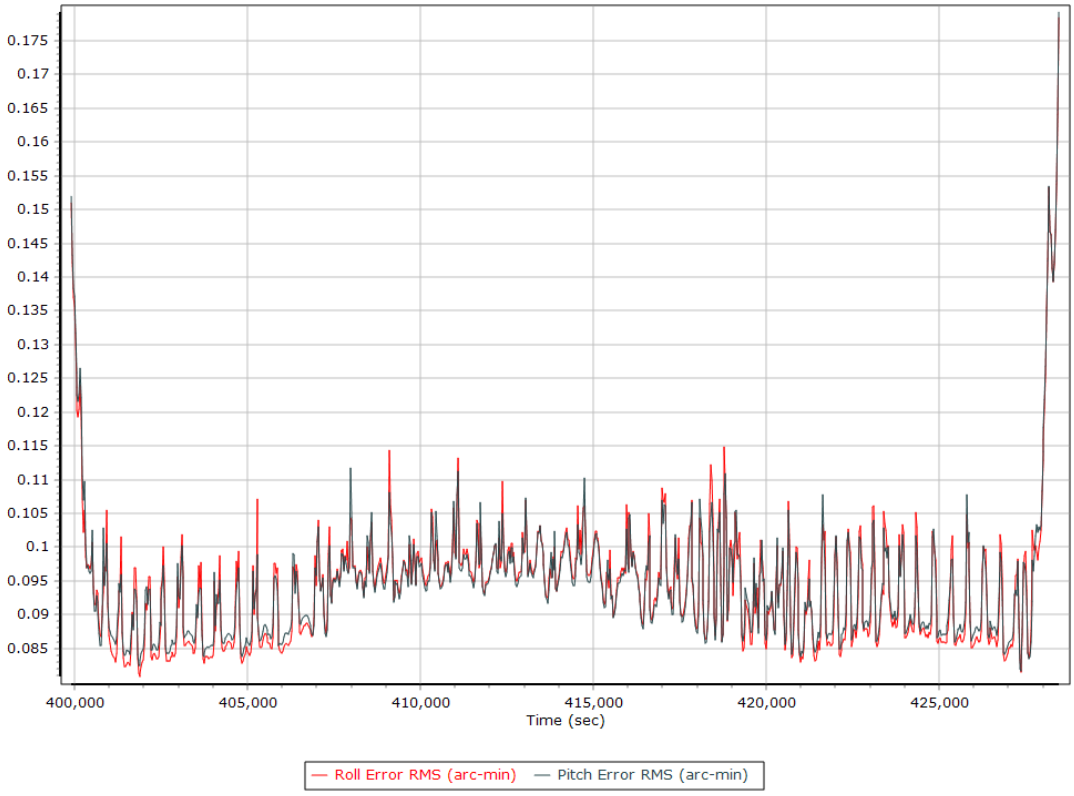
Position Error RMS (m)



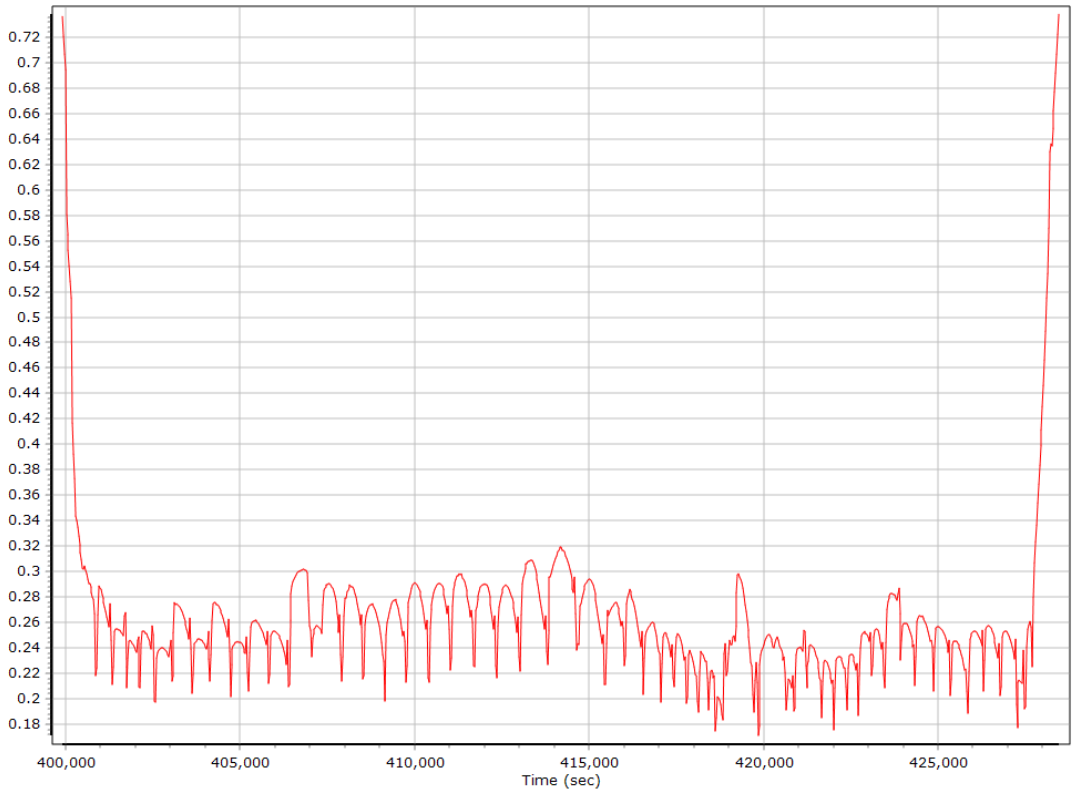
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

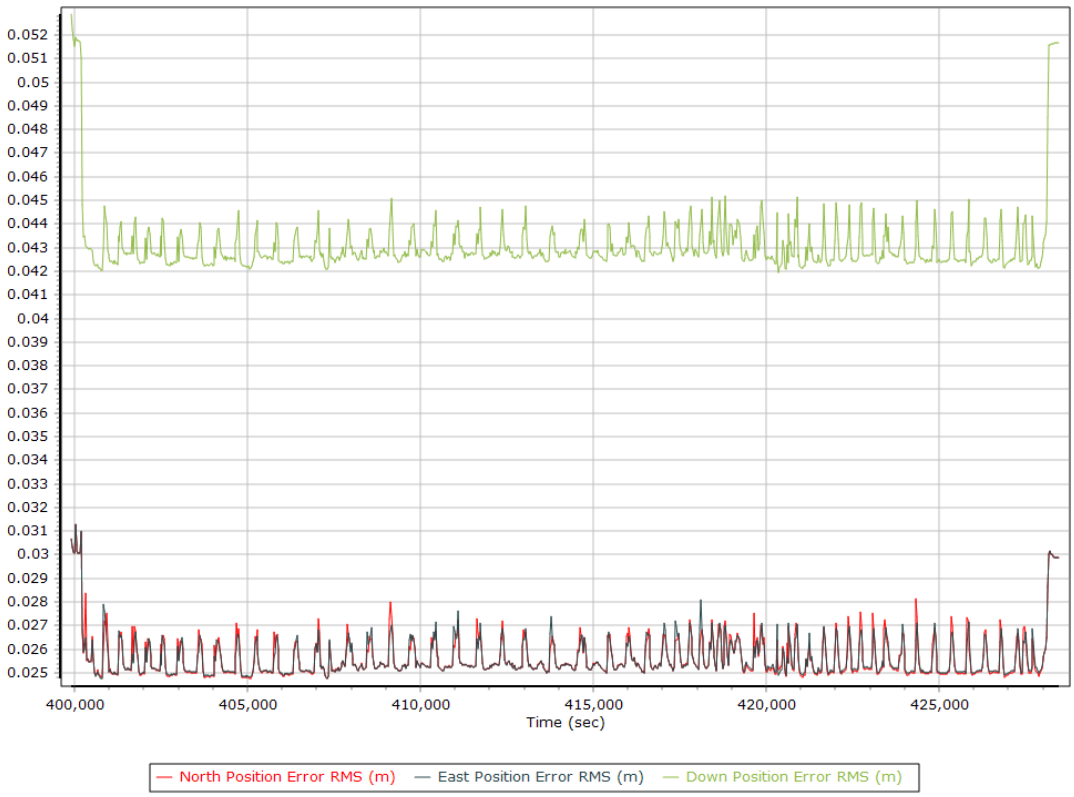


Heading Error RMS (arc-min)

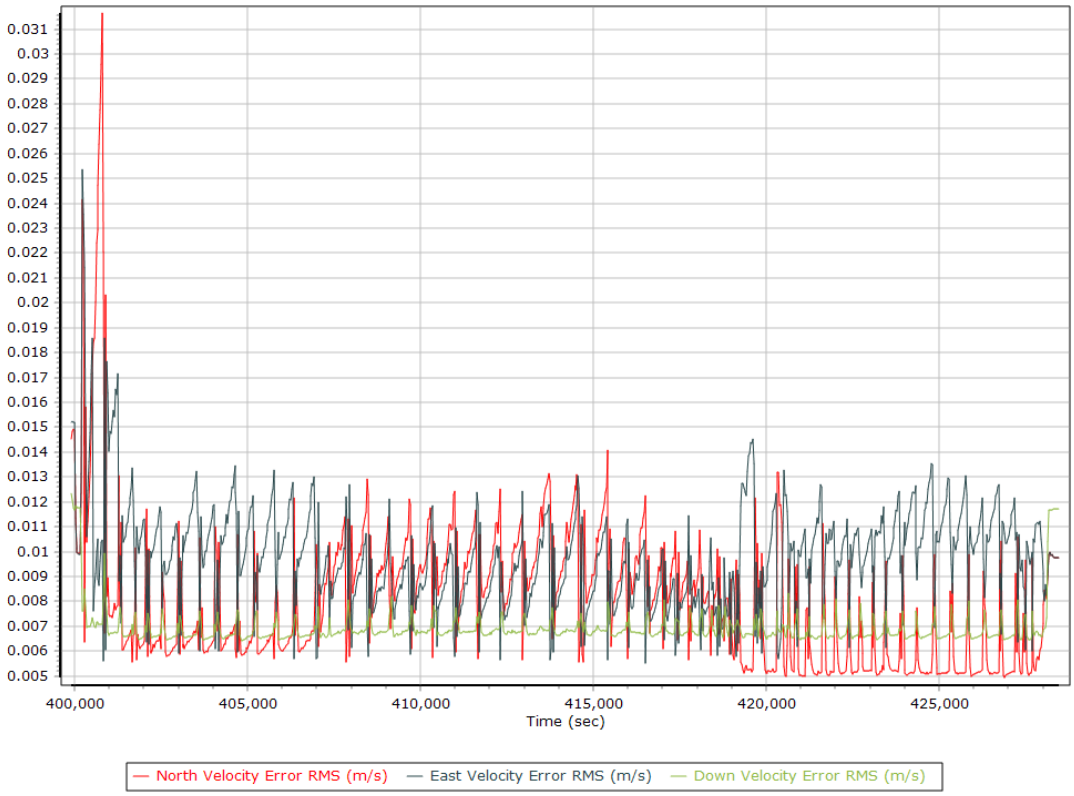


Forward Processed Performance Metrics

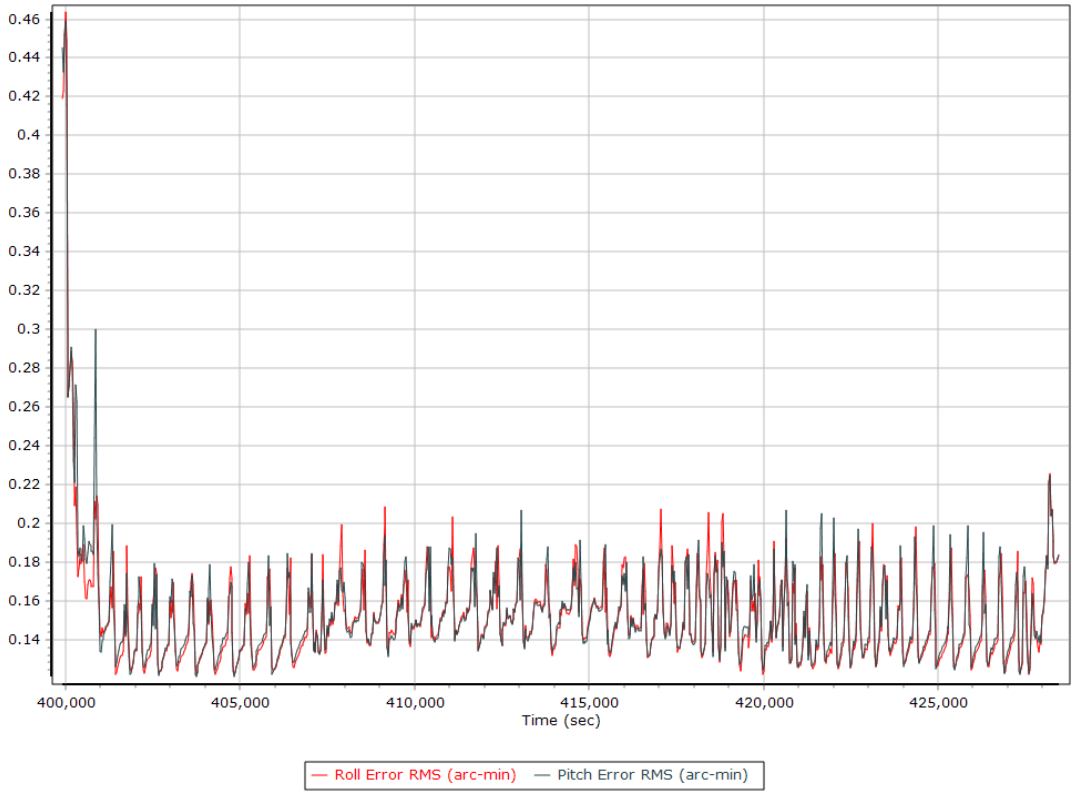
Position Error RMS (m)



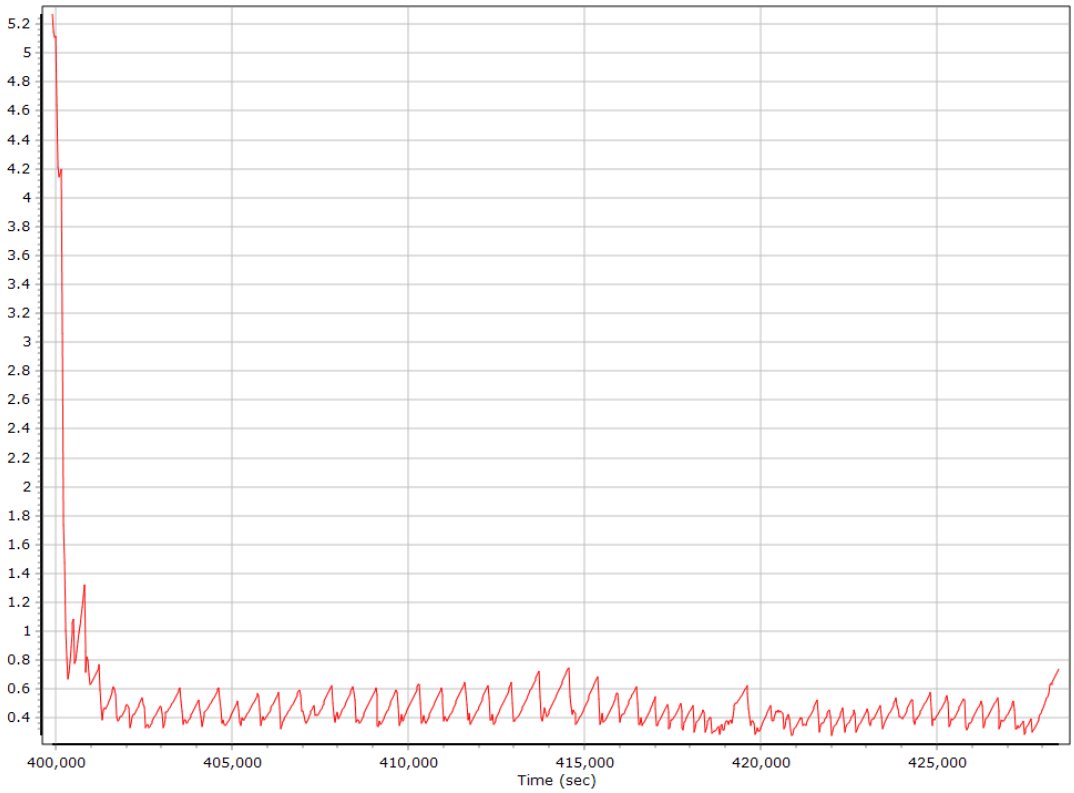
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

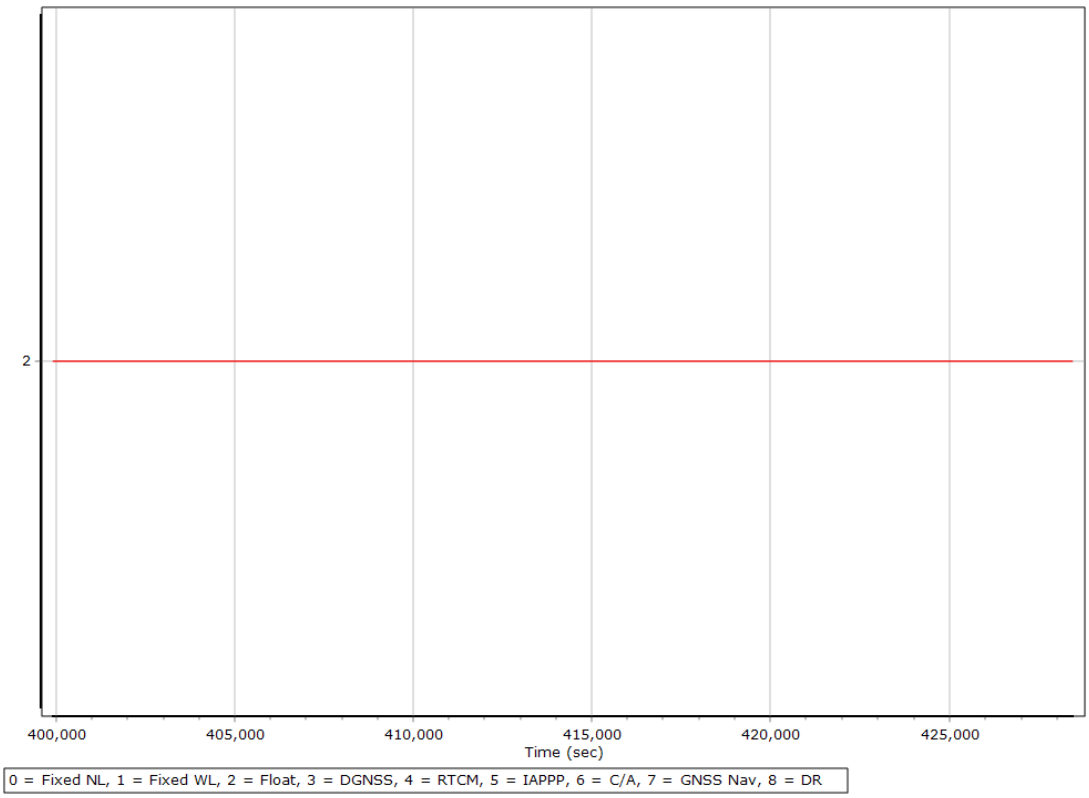


Heading Error RMS (arc-min)

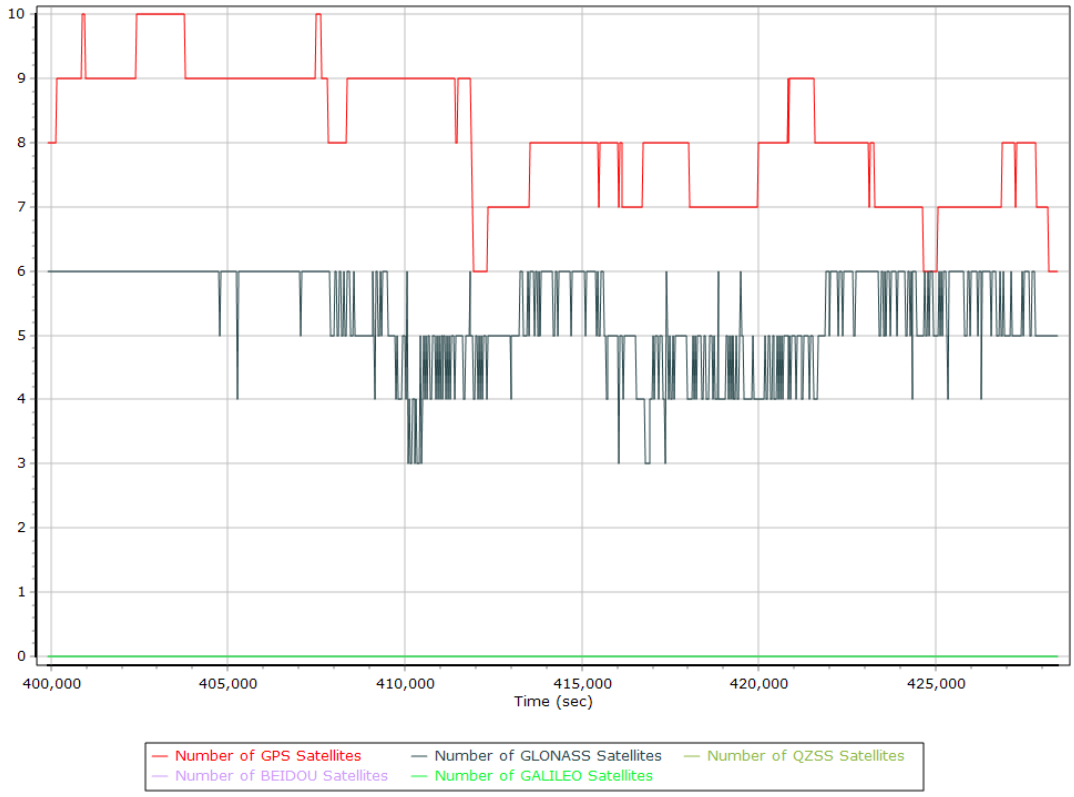


Forward Processed Solution Status

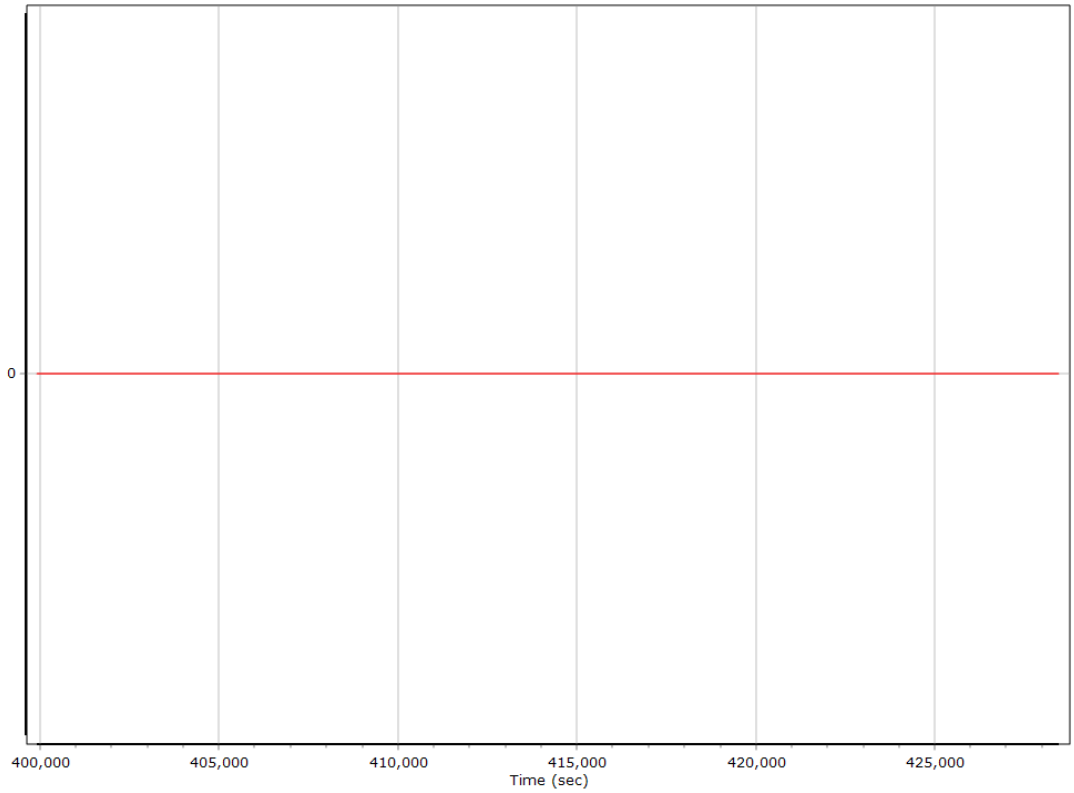
Processing Mode



Number of Satellites



Baseline Length



Export Summary

Export file	export_19-058_052820.out		
Export format	Custom Smoothed BET		
Solution in use	Post-processed		
Output rate	All Records		
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	399858.004 (05/28/2020 15:04:00)		
Export end time	428458.045 (05/28/2020 23:00:40)		
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	2010		