General Information

Mission Information

Project name	19-058_061320
Processing date	2020-07-20 22:10:41
Mission date	2020-06-13 14:55:44
Mission duration	04:05:43.549
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.704	POS Data
ALS.705	POS Data
ALS.706	POS Data
ALS.707	POS Data
ALS.708	POS Data
ALS.709	POS Data
ALS.710	POS Data
ALS.711	POS Data
ALS.712	POS Data
ALS.713	POS Data
ALS.714	POS Data
ALS.715	POS Data
ALS.716	POS Data
ALS.717	POS Data
ALS.718	POS Data
ALS.719	POS Data
ALS.720	POS Data
ALS.721	POS Data
ALS.722	POS Data
ALS.723	POS Data
ALS.724	POS Data
ALS.725	POS Data
ALS.726	POS Data
ALS.727	POS Data
ALS.728	POS Data
ALS.729	POS Data
ALS.730	POS Data
ALS.731	POS Data
ALS.732	POS Data
ALS.733	POS Data
ALS.734	POS Data
ALS.735	POS Data
ALS.736	POS Data
ALS.737	POS Data
ALS.738	POS Data
ALS.739	POS Data
ALS.740	POS Data
ALS.741	POS Data

Input Files

File Name	File Type
Ephm1650.20g	GLONASS Broadcast Ephemeris
Ephm1650.20n	GPS Broadcast Ephemeris
igl21095.sp3	GLONASS Precise Ephemeris
igl21096.sp3	GLONASS Precise Ephemeris
igl21100.sp3	GLONASS Precise Ephemeris
igs21095.sp3	GPS Precise Ephemeris
igs21096.sp3	GPS Precise Ephemeris
igs21100.sp3	GPS Precise Ephemeris

Output Files

Filename	File type
sbet_Mission 1.out	SBET Trajectory File

Rover Data Summary

First raw data file	ALS.704		
Last raw data file	ALS.741		
Start GPS week	2109		
Start time	572155.368 (06/13/2020 14:55:37)		
End time	588827.971 (06/13/2020 19:33:29)		
Start of fine alignment	573743.550 (06/13/2020 15:22:05)		
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

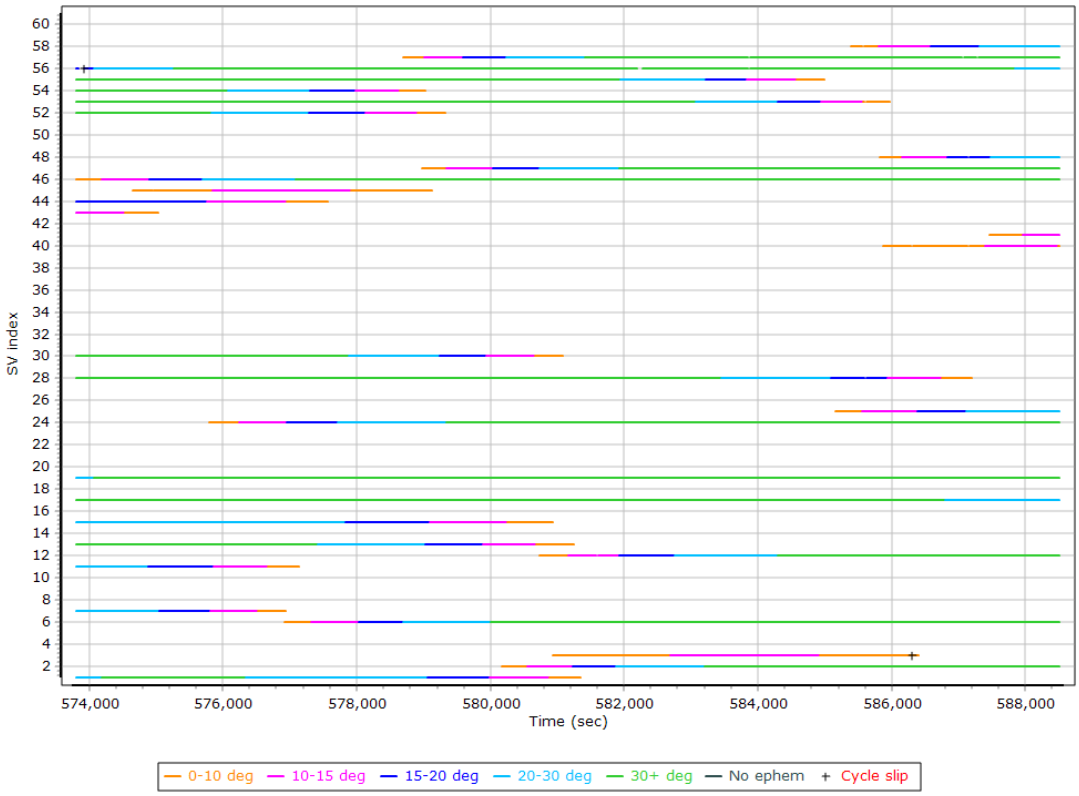
Rover Data QC

Raw IMU Import QC Summary

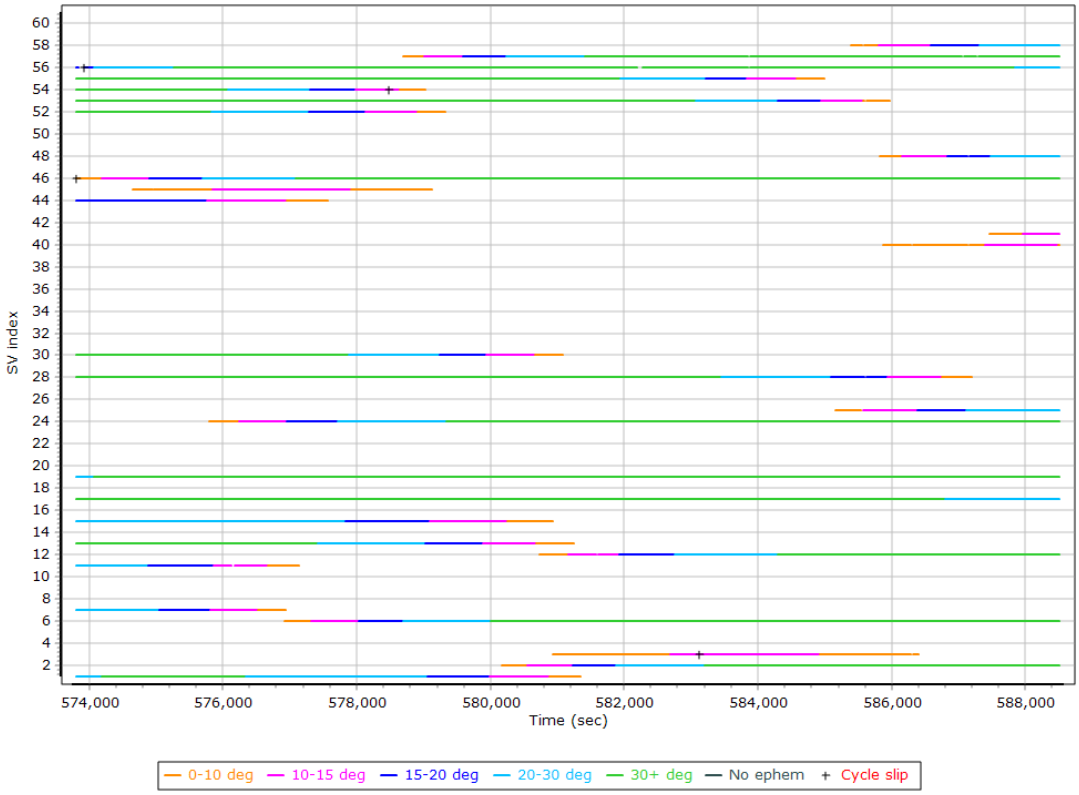
IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_Mission 1.log
IMU Records Processed	3260056
Termination Status	Warnings
IMU Anomalies	4
IMU Failure Messages	
588801.035 : WARNING : Gap of 306.2089 seconds in CHECKDT input data	
573470.880 : WARNING : Gap of 36.5486 seconds in CHECKDT input data	
572249.994 : WARNING : Gap of 37.9587 seconds in CHECKDT input data	
572155.132 : WARNING : Gap of 572143.1759 seconds in CHECKDT input data	

Primary Observables & Satellite Data

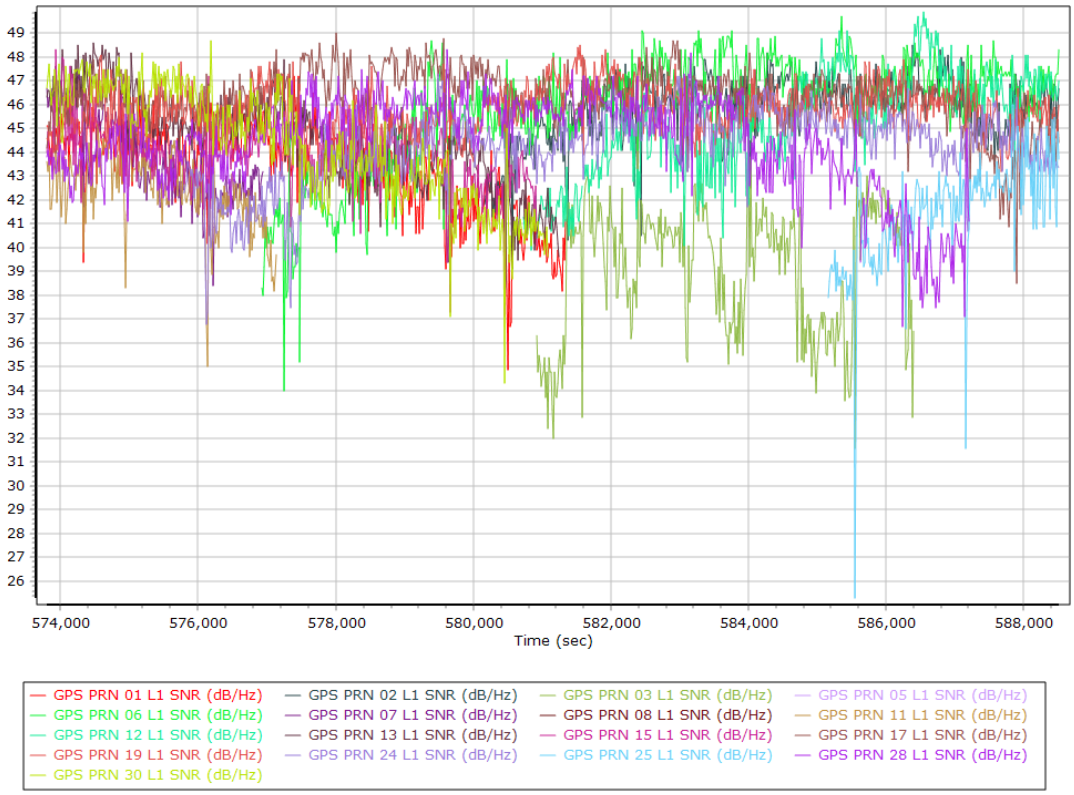
L1 Satellite Lock/Elevation



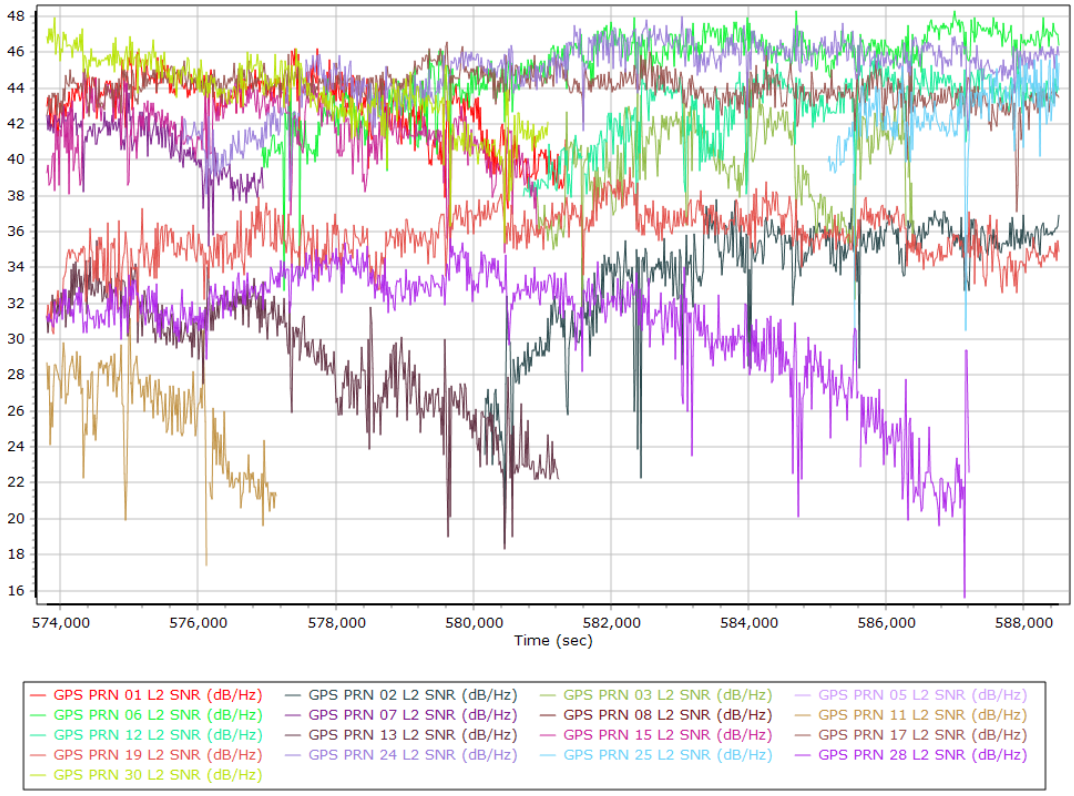
L2 Satellite Lock/Elevation



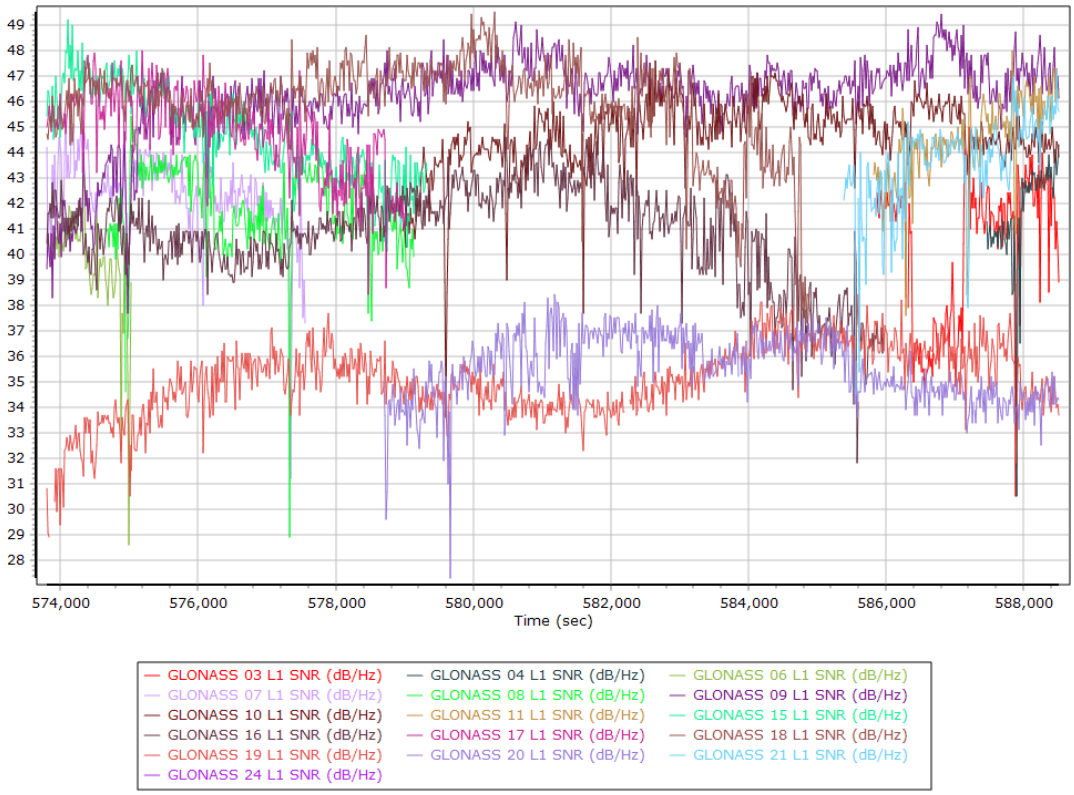
GPS L1 SNR



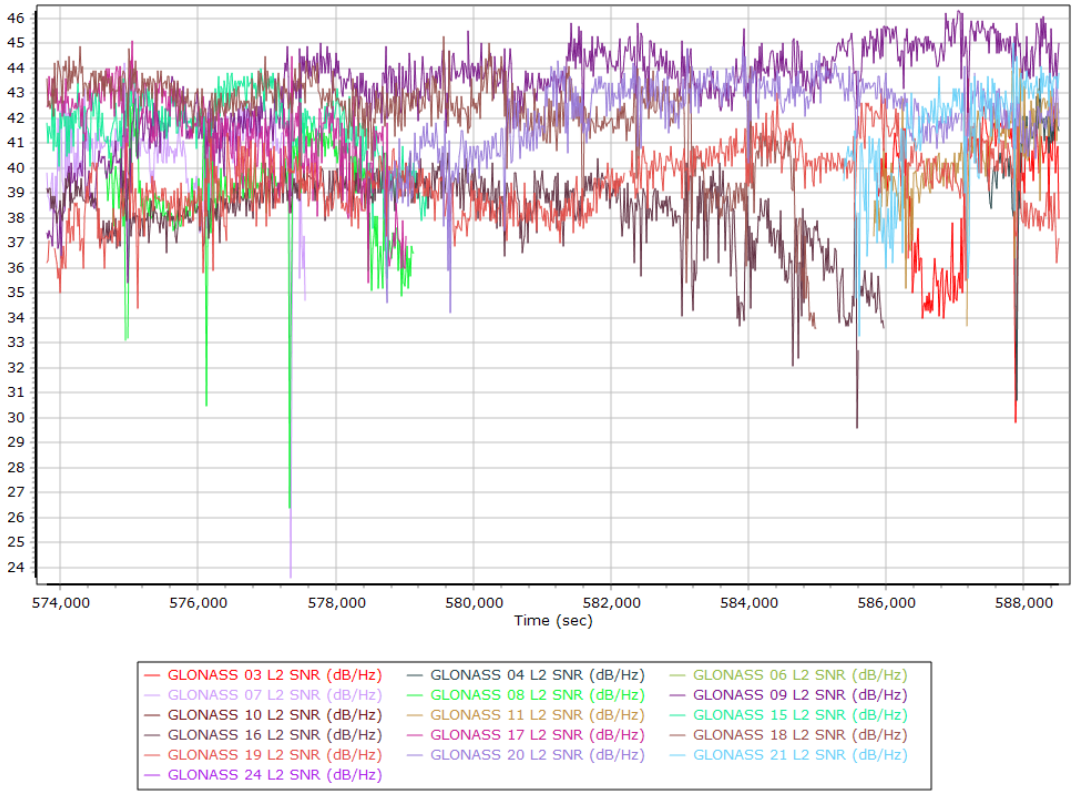
GPS L2 SNR



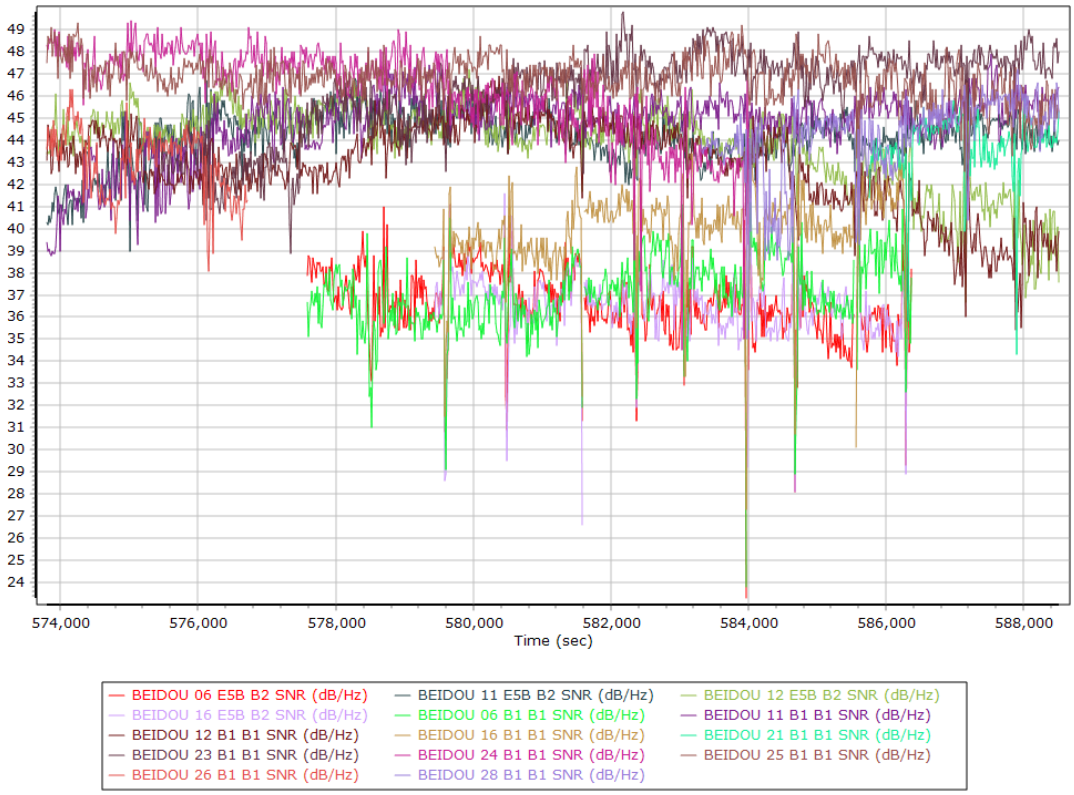
GLONASS L1 SNR



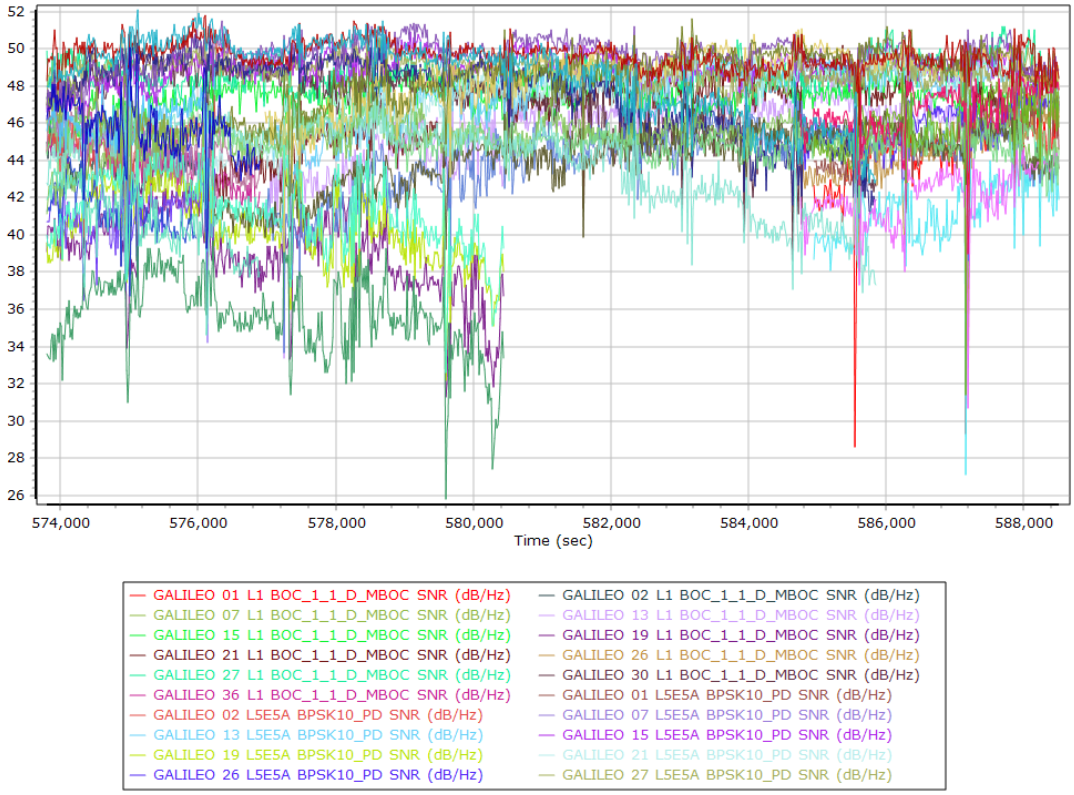
GLONASS L2 SNR



BEIDOU SNR

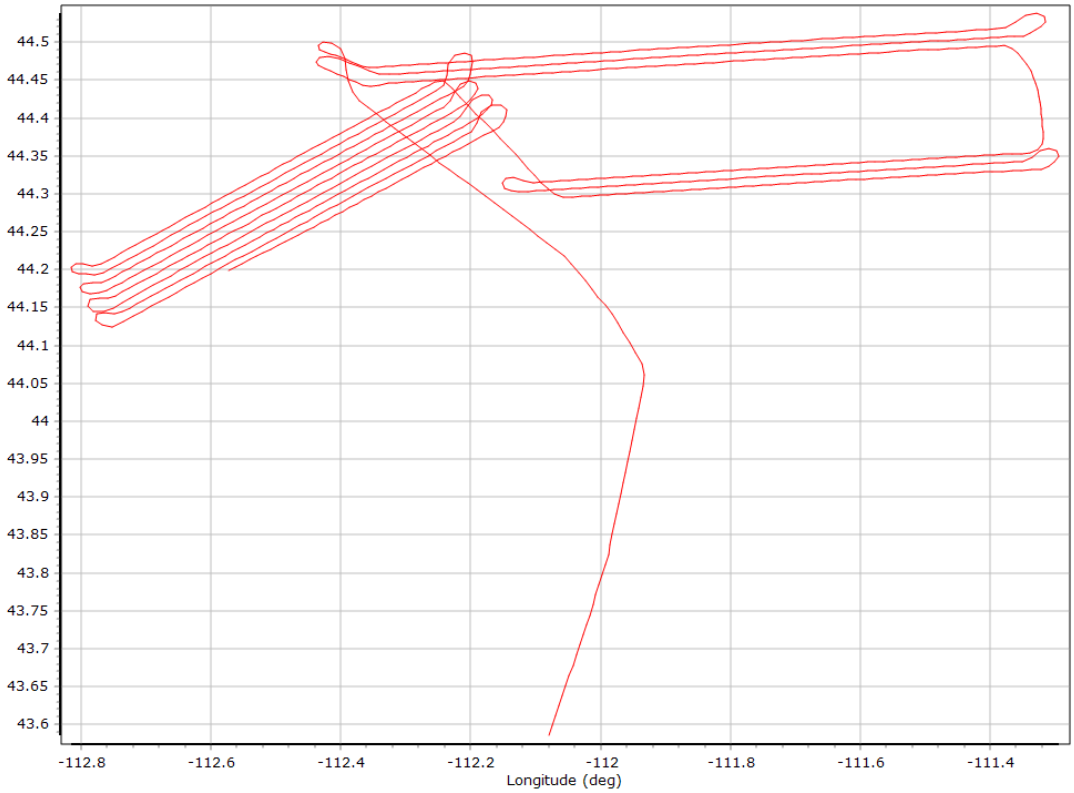


GALILEO SNR

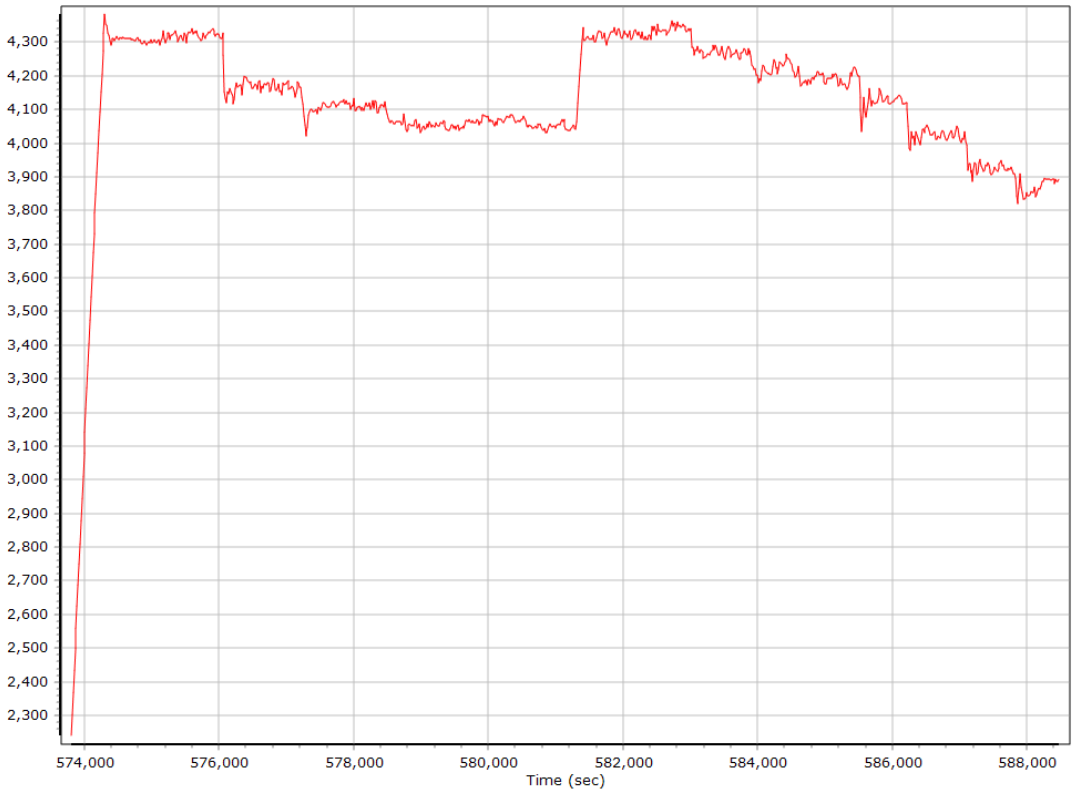

52
50
48
46
44
42
40
38
36
34
32
30
28
26
574,000
576,000
578,000
580,000
582,000
584,000
586,000
588,000
Time (sec)
GALILEO 01 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 02 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 07 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 13 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 15 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 19 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 21 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 26 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 01 L5E5A BPSK10_PD SNR (dB/Hz)
GALILEO 02 L5E5A BPSK10_PD SNR (dB/Hz)
GALILEO 07 L5E5A BPSK10_PD SNR (dB/Hz)
GALILEO 13 L5E5A BPSK10_PD SNR (dB/Hz)
GALILEO 15 L5E5A BPSK10_PD SNR (dB/Hz)
GALILEO 19 L5E5A BPSK10_PD SNR (dB/Hz)
GALILEO 21 L5E5A BPSK10_PD SNR (dB/Hz)
GALILEO 26 L5E5A BPSK10_PD SNR (dB/Hz)
GALILEO 27 L5E5A BPSK10_PD SNR (dB/Hz)

Smoothed Trajectory Information

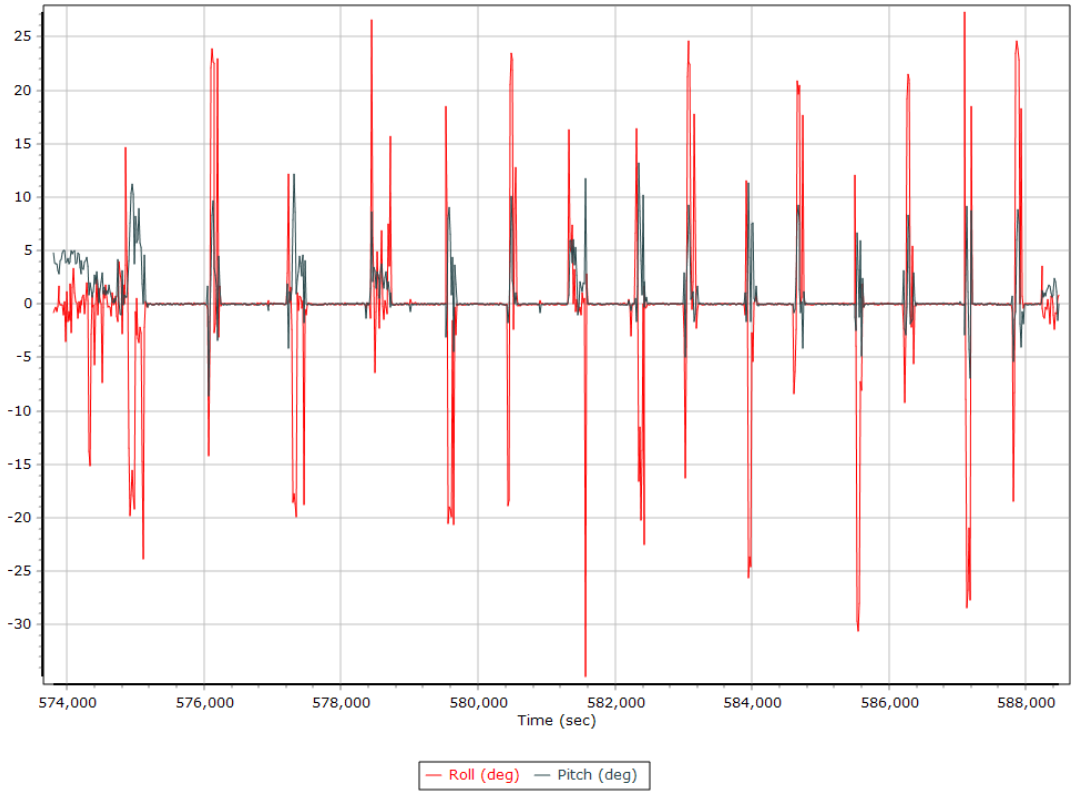
Top View



Altitude



Roll/Pitch



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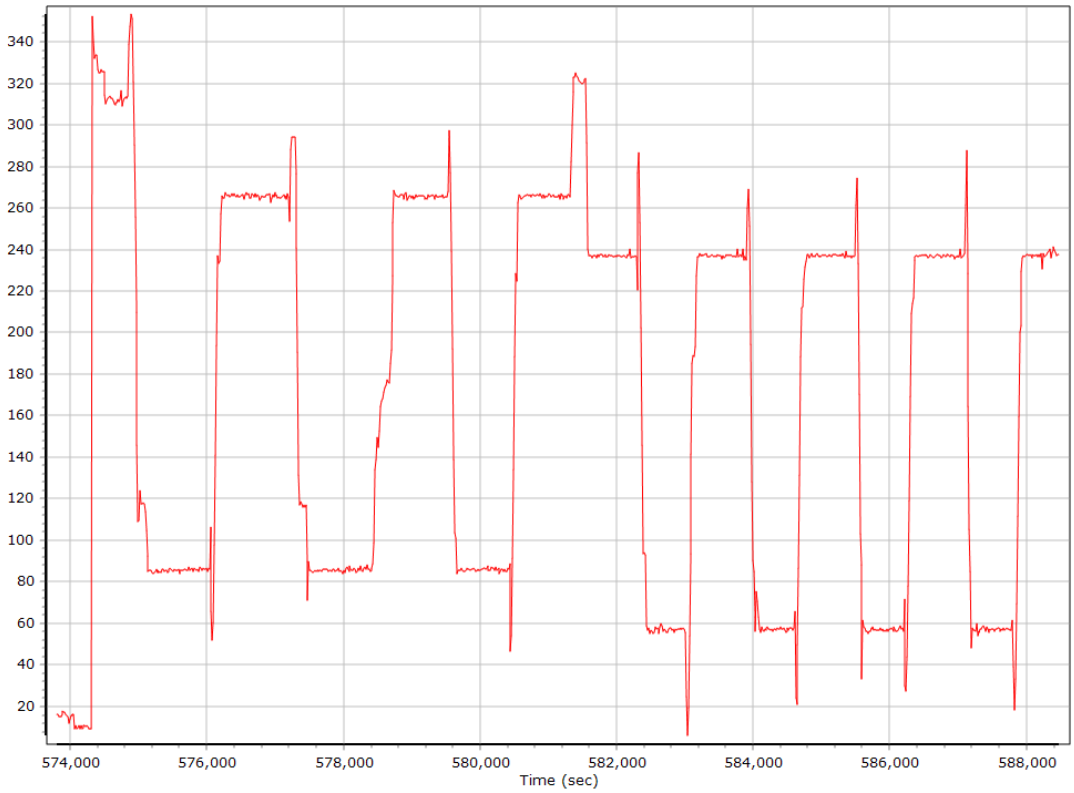
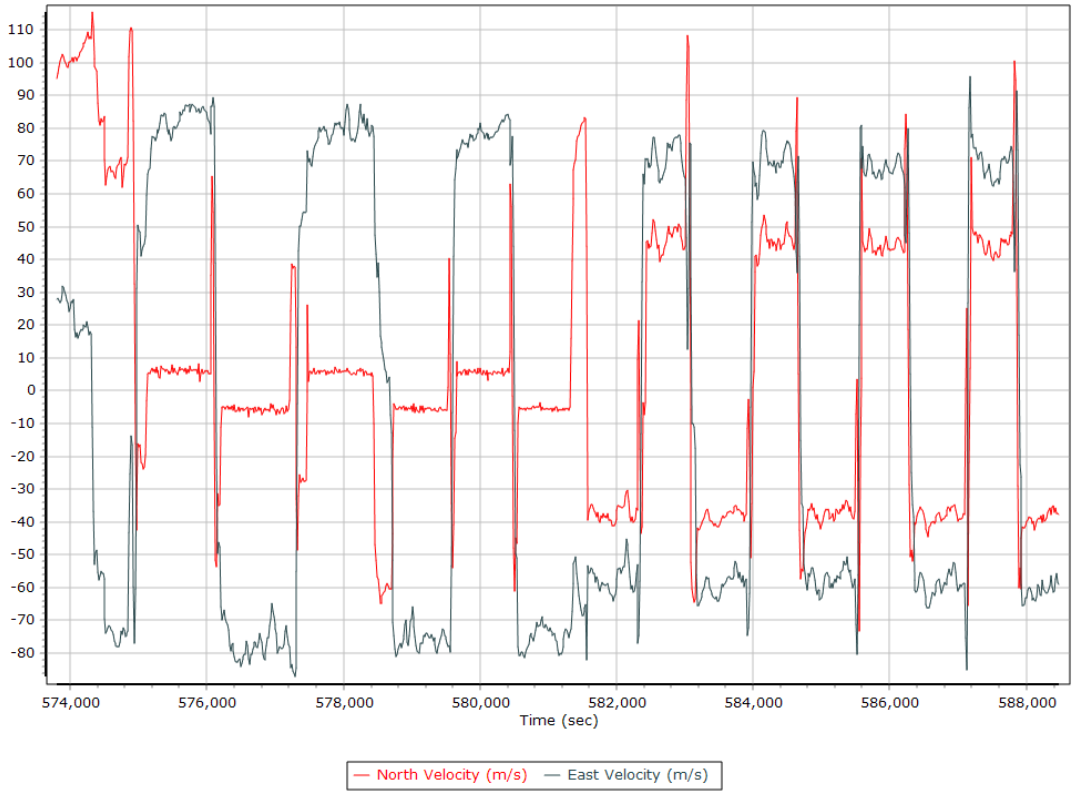
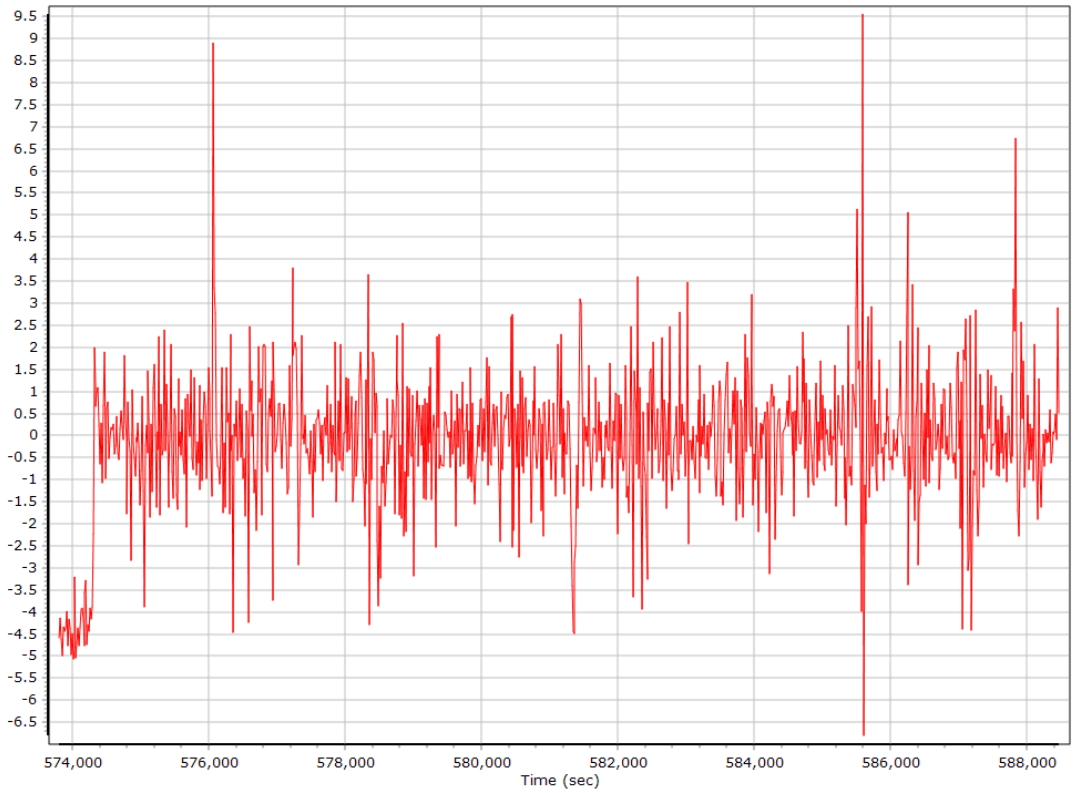


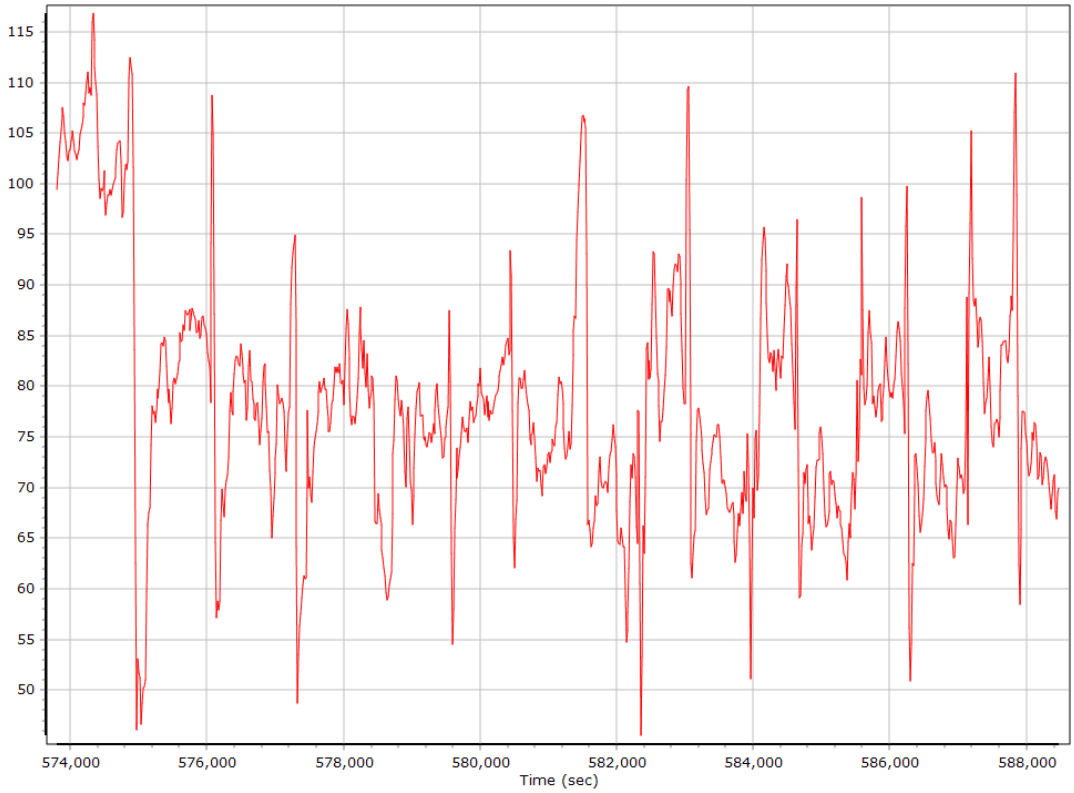
North/East Velocity



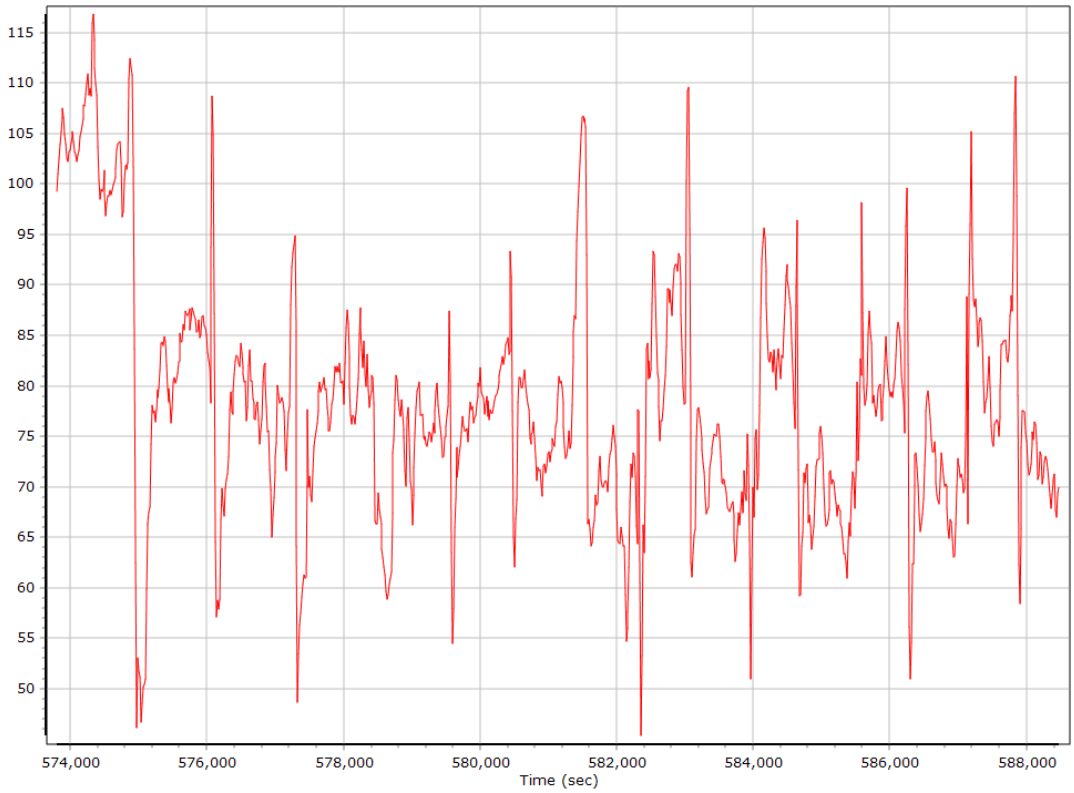
Down Velocity



Total Speed

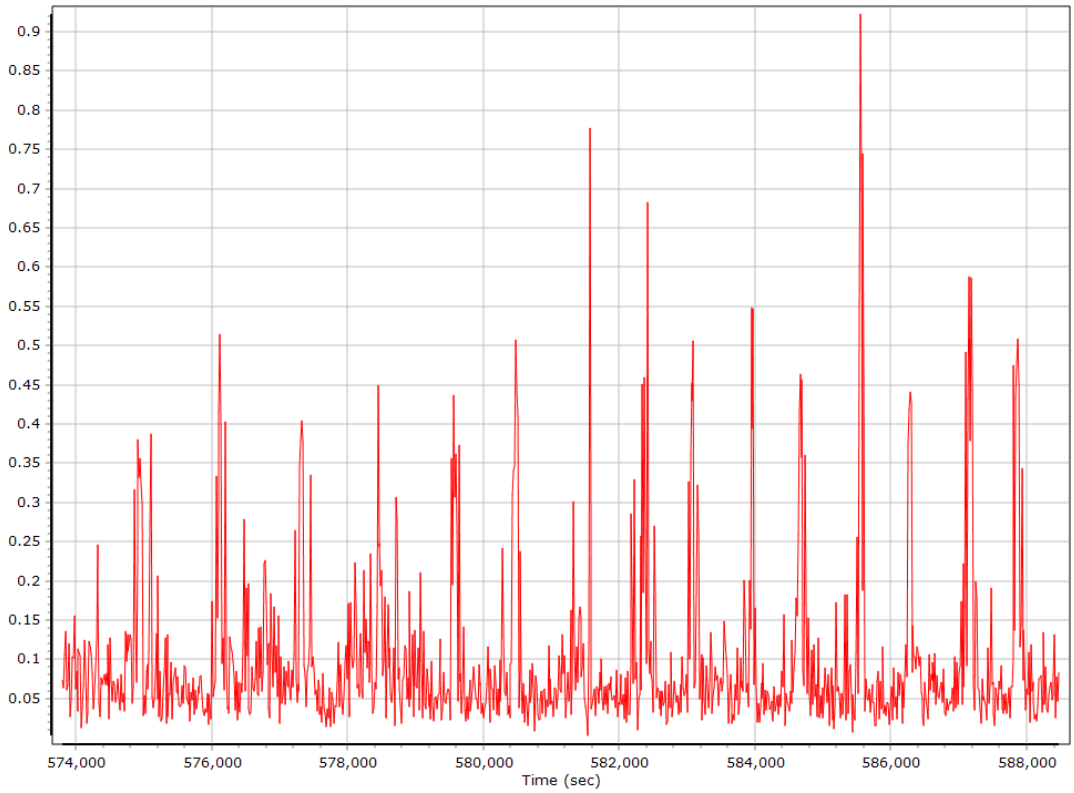


Ground Speed

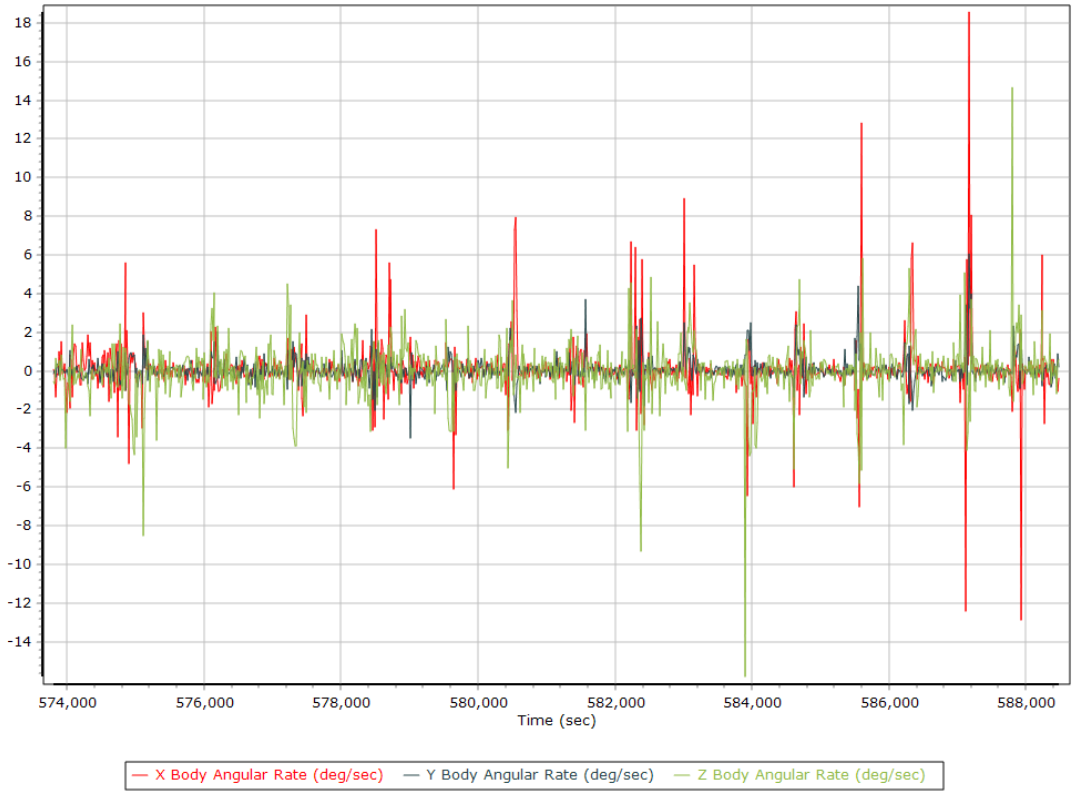


Body Acceleration

Total Body Acceleration

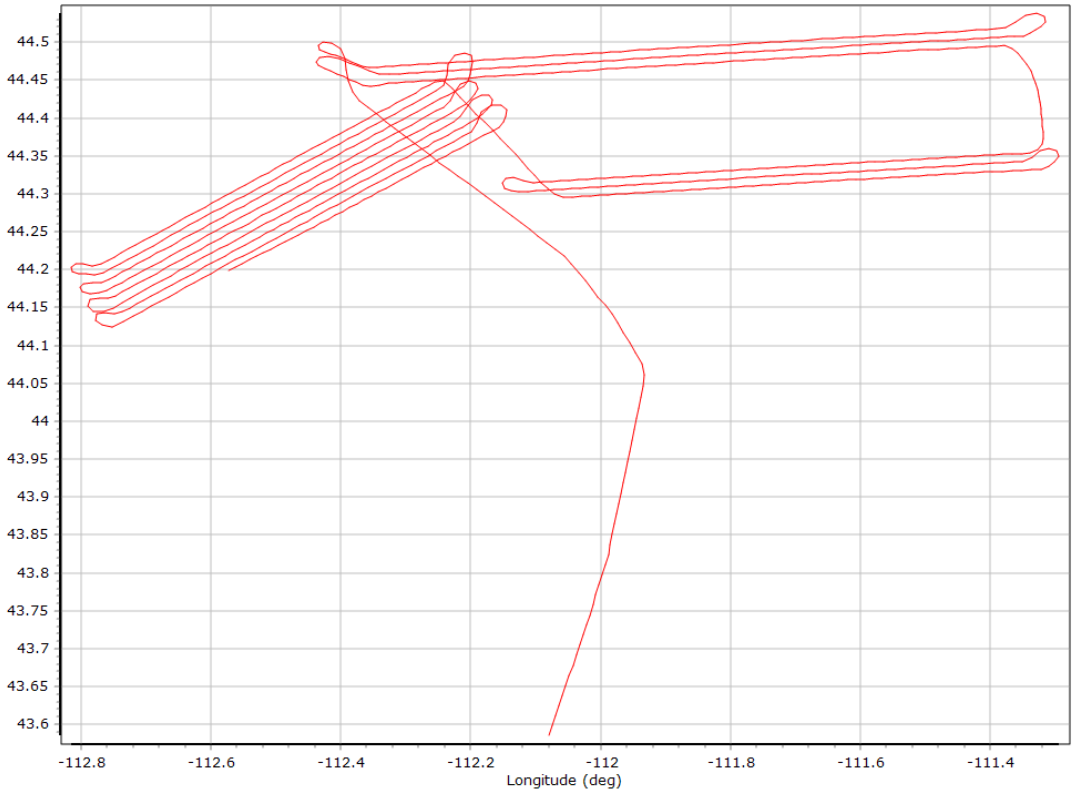


Body Angular Rate

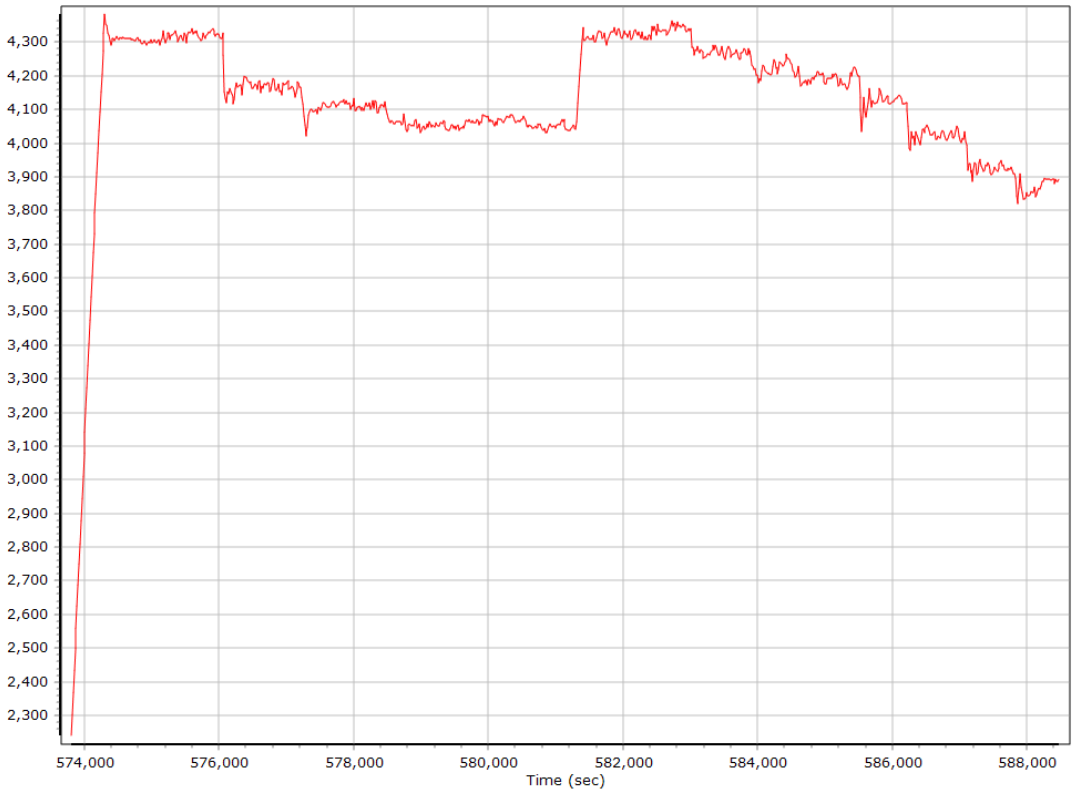


Forward Processed Trajectory Information

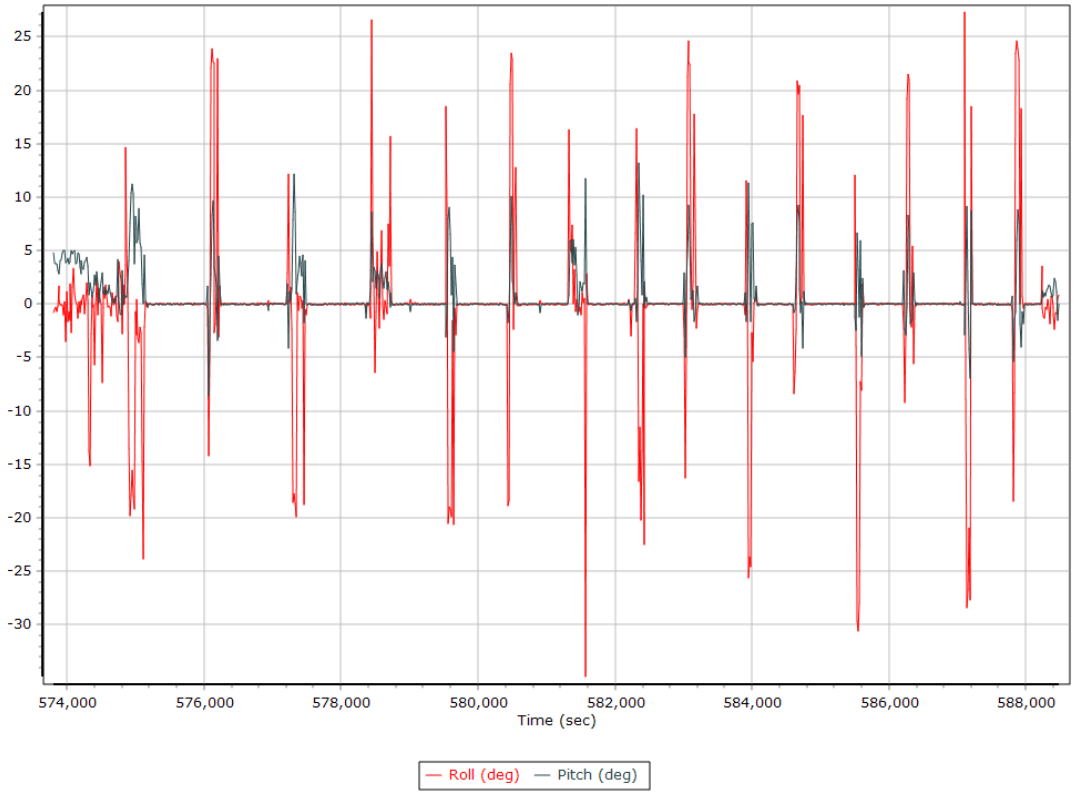
Top View



Altitude



Roll/Pitch



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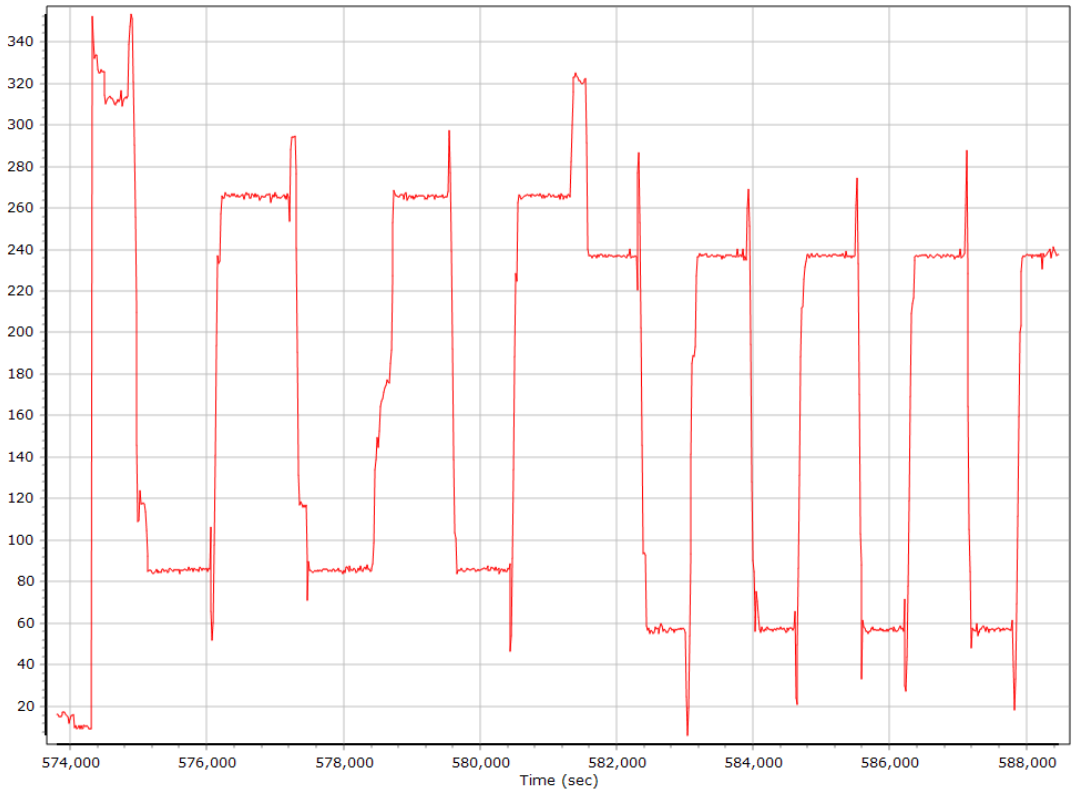
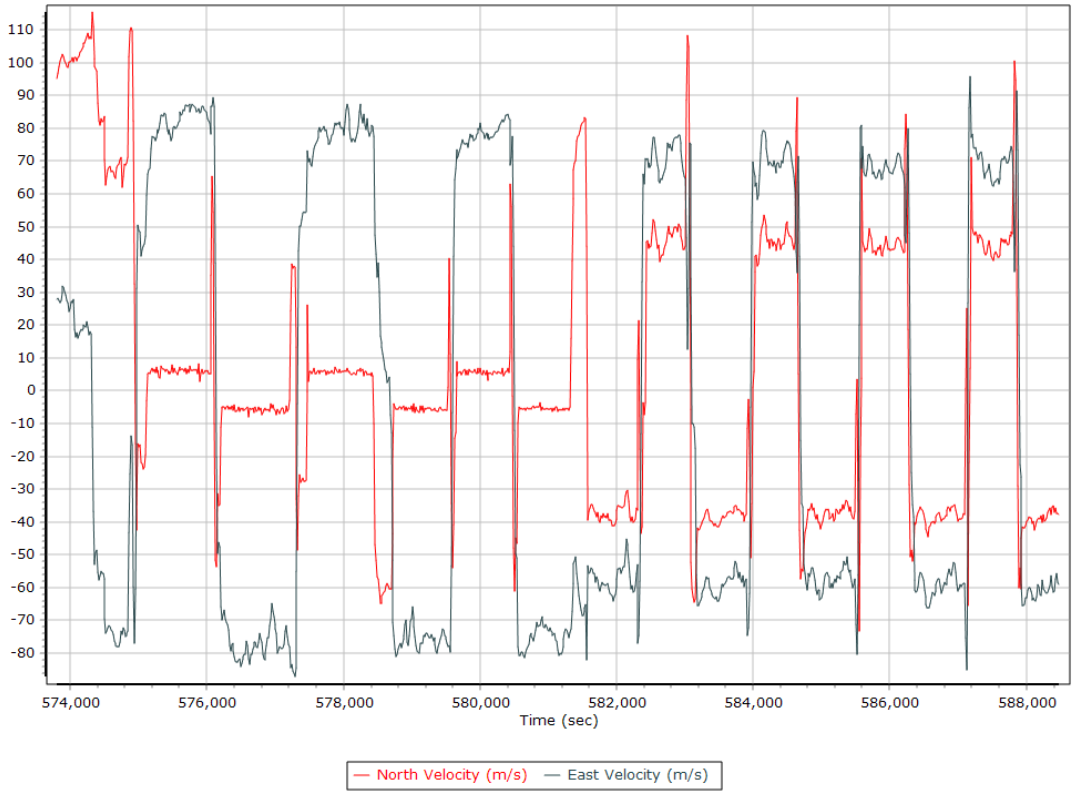
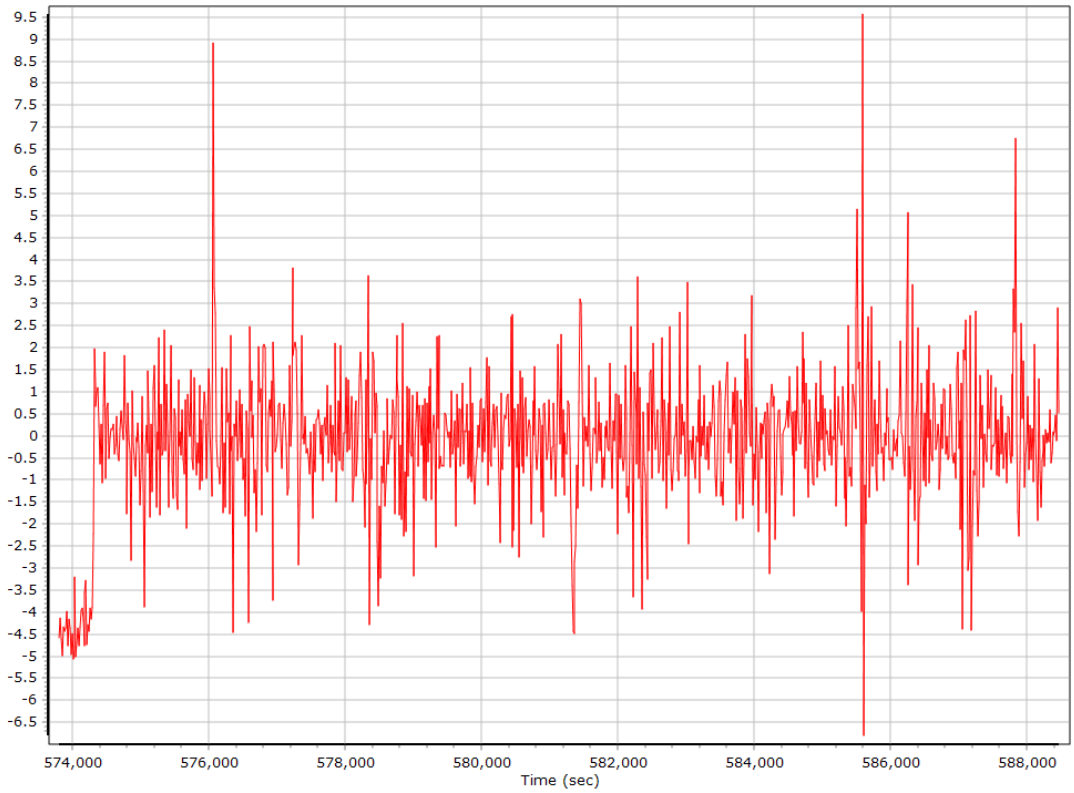


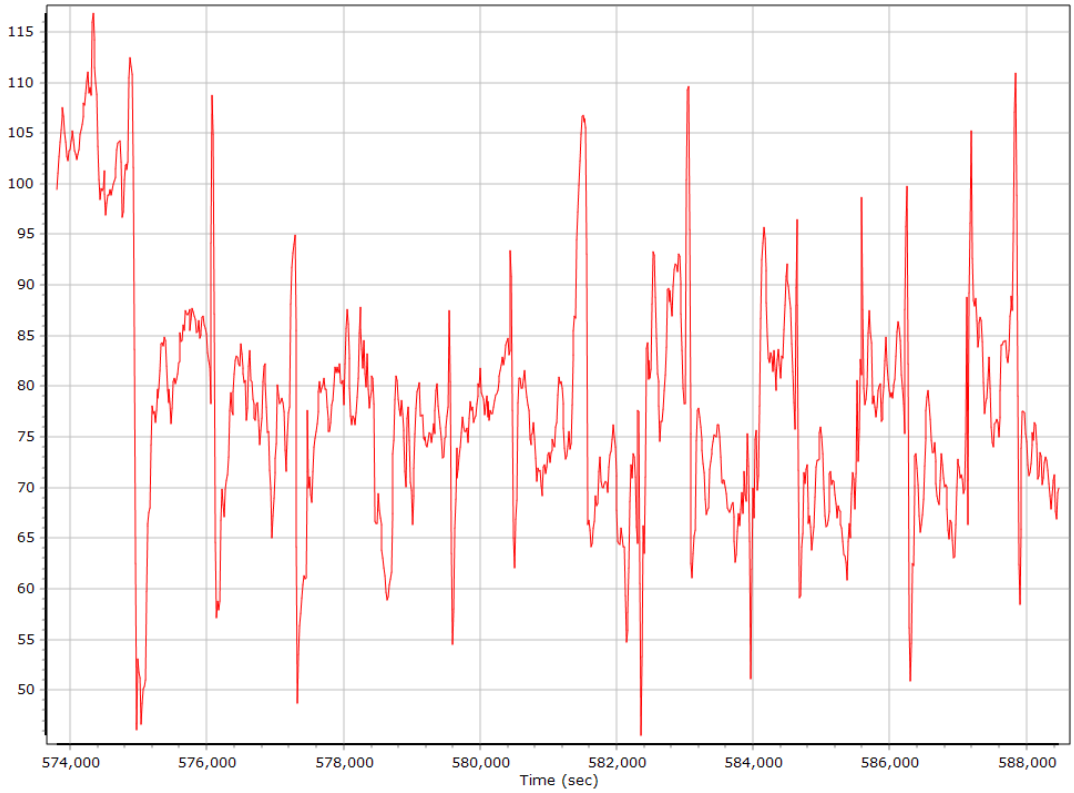
North/East Velocity



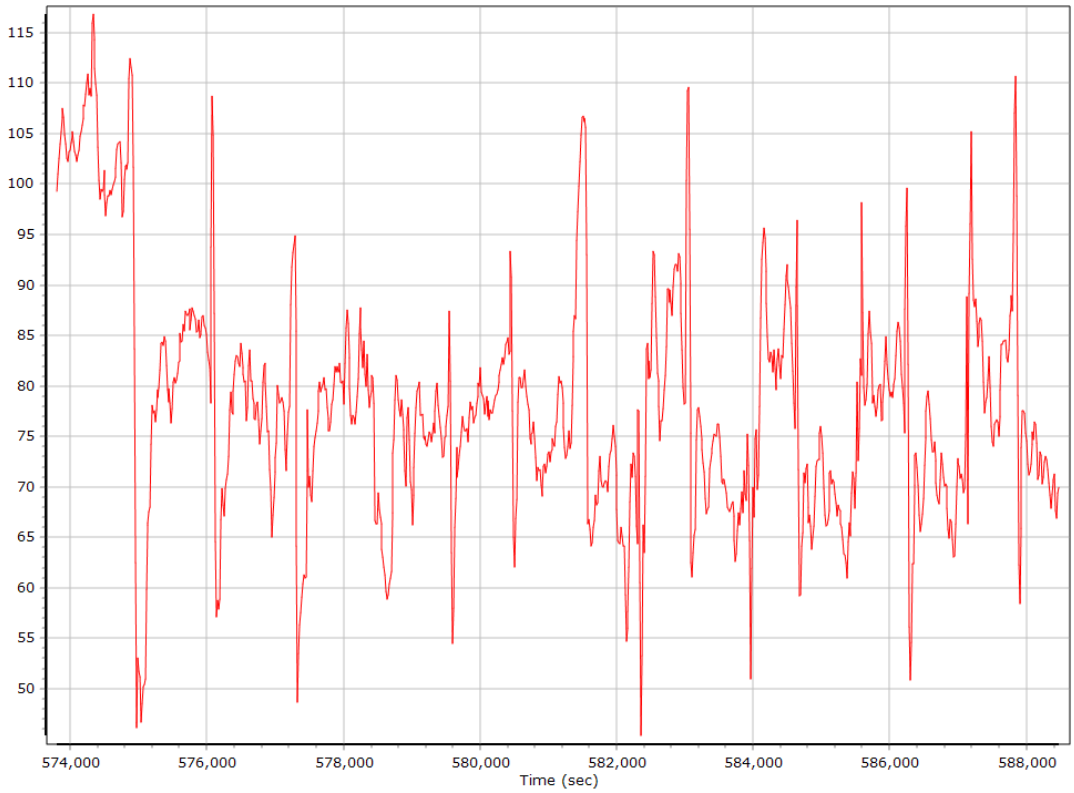
Down Velocity



Total Speed

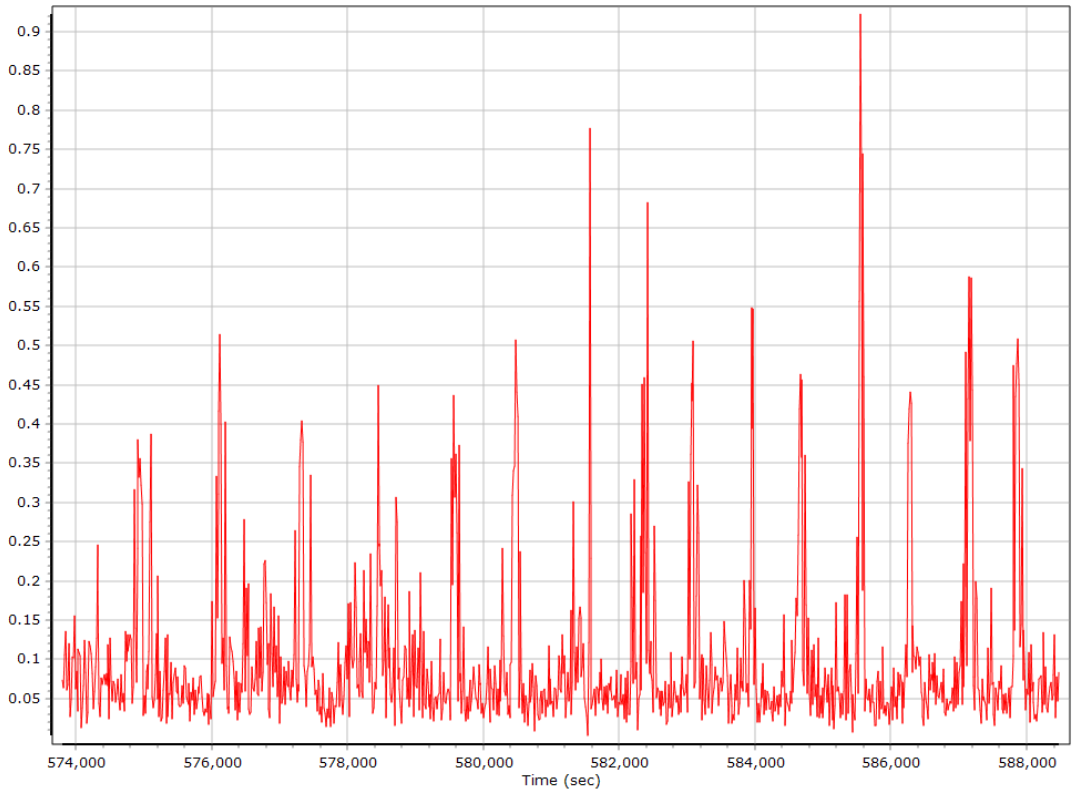


Ground Speed

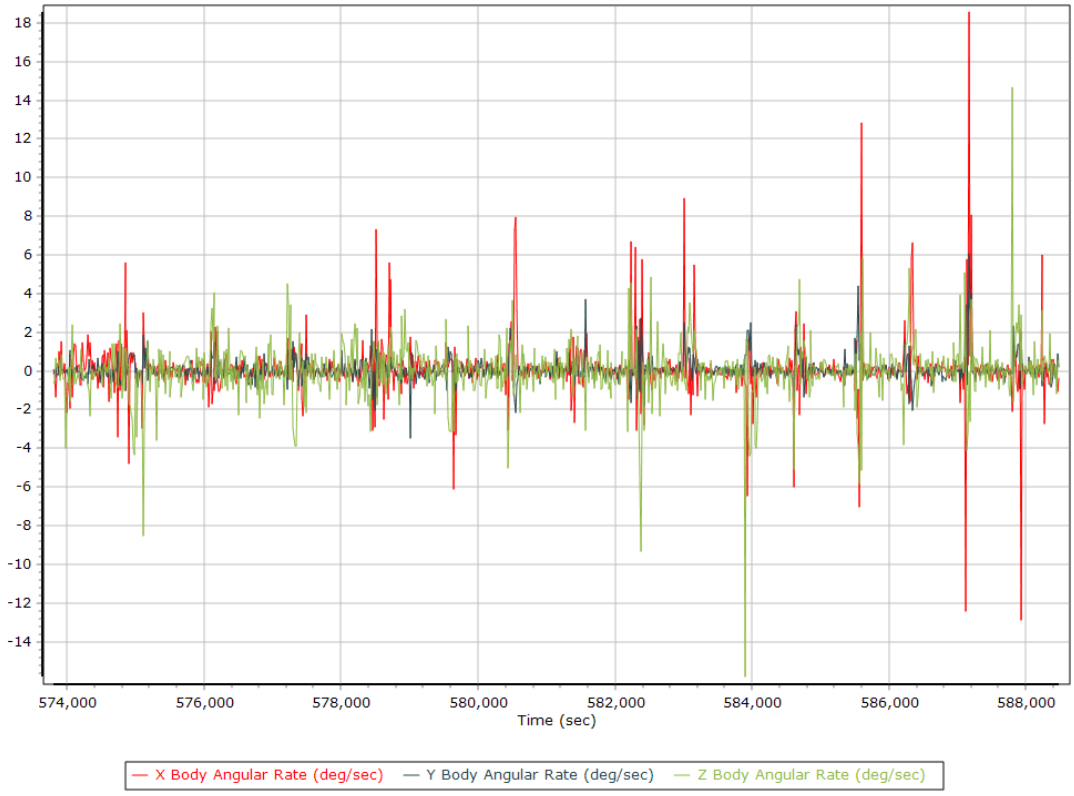


Body Acceleration

Total Body Acceleration



Body Angular Rate



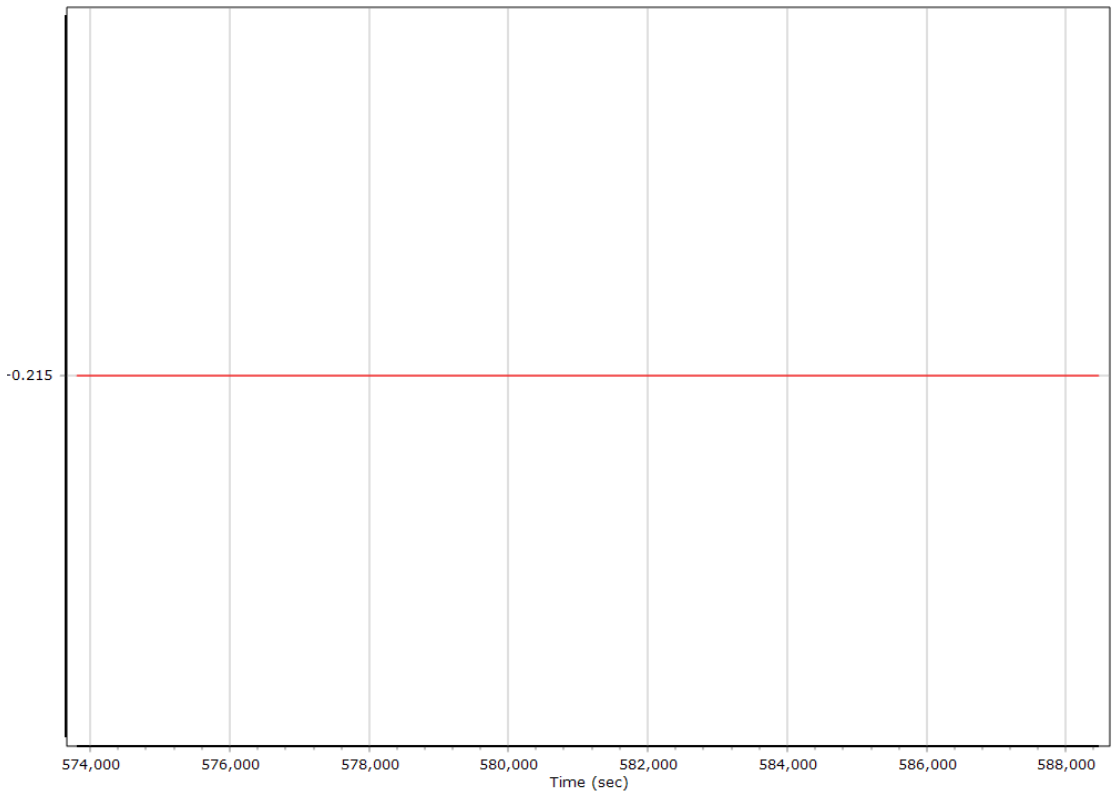
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion Trimble RTX Nav		
Stabilized mount	True		
Processing start time	573743.240 (06/13/2020 15:22:05)		
Processing end time	588486.789 (06/13/2020 19:27:48)		
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

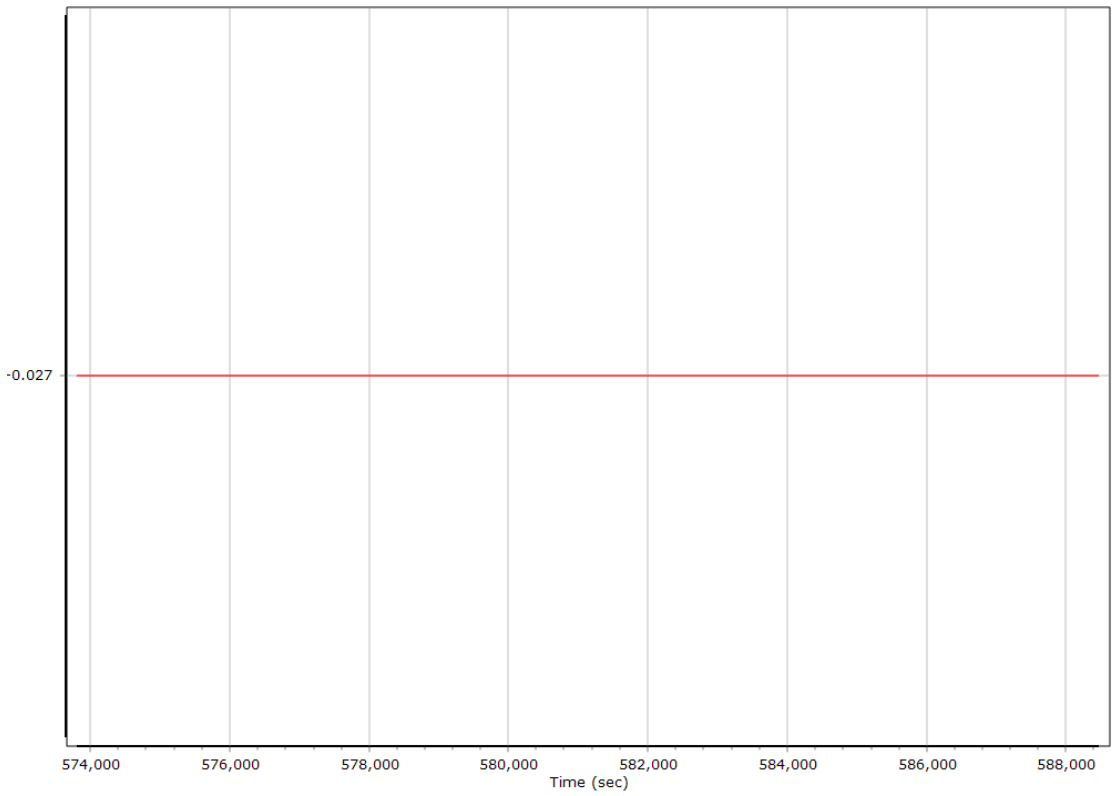
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

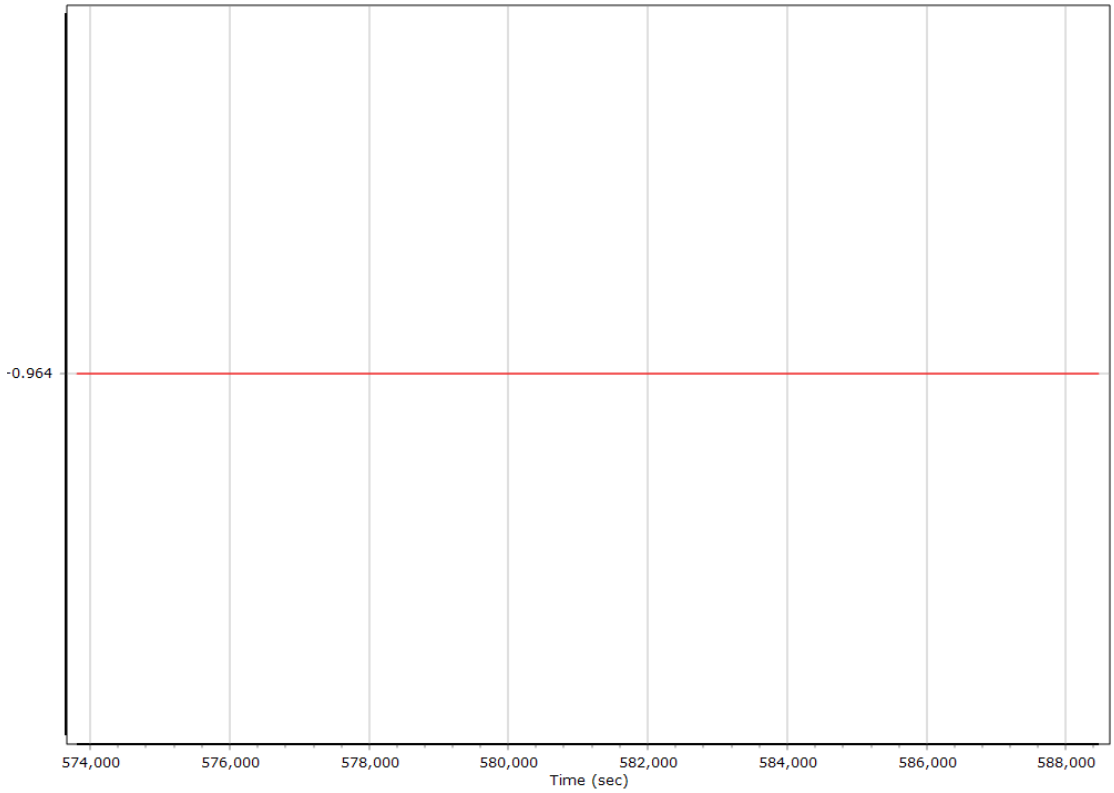
X Reference-Primary GNSS Lever Arm (m)



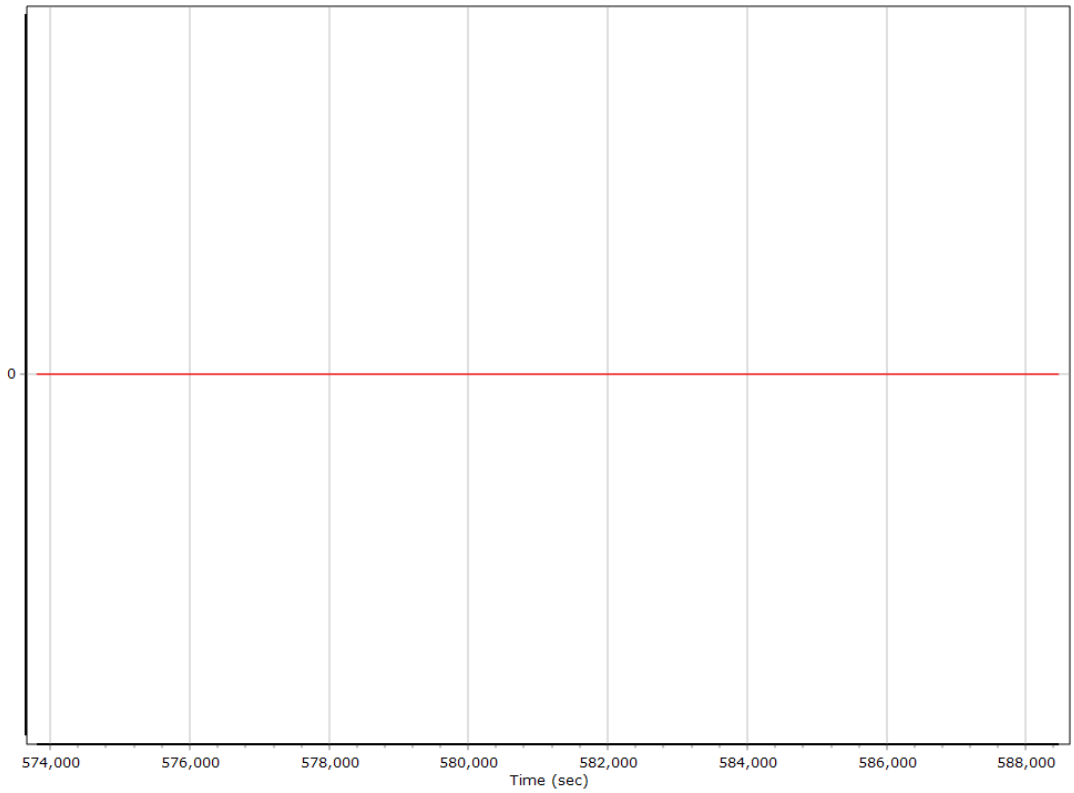
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



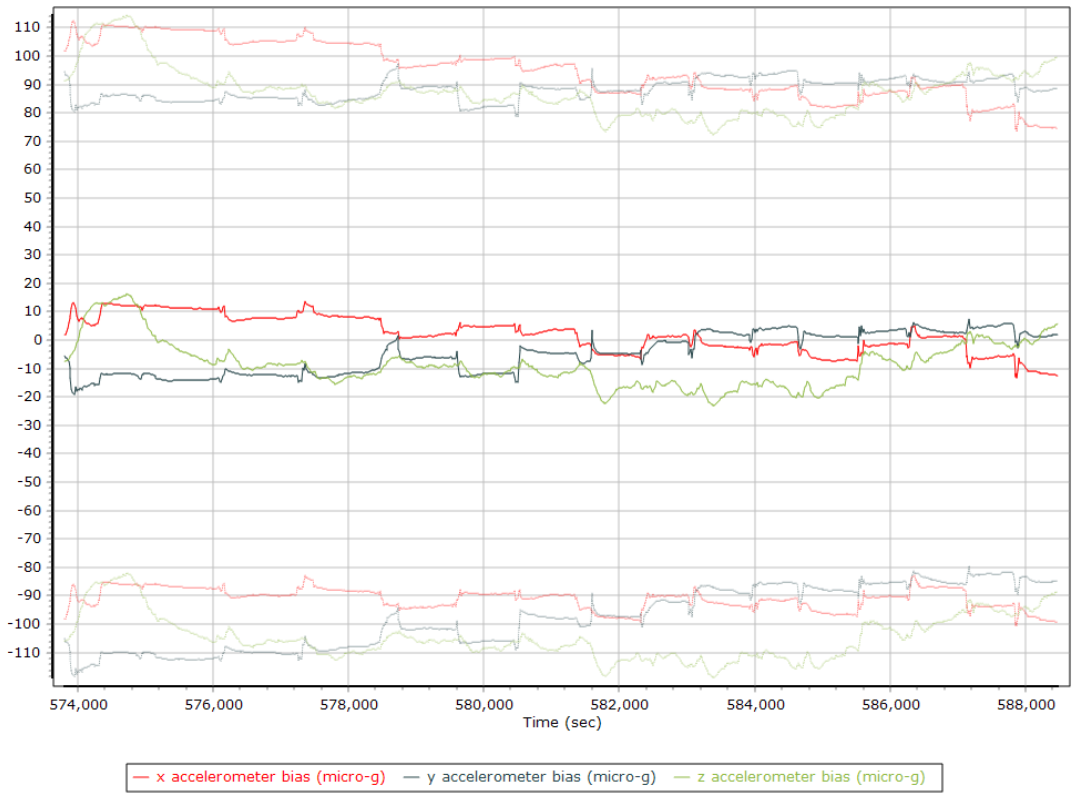
Reference-Primary GNSS Lever Arm Figure of Merit



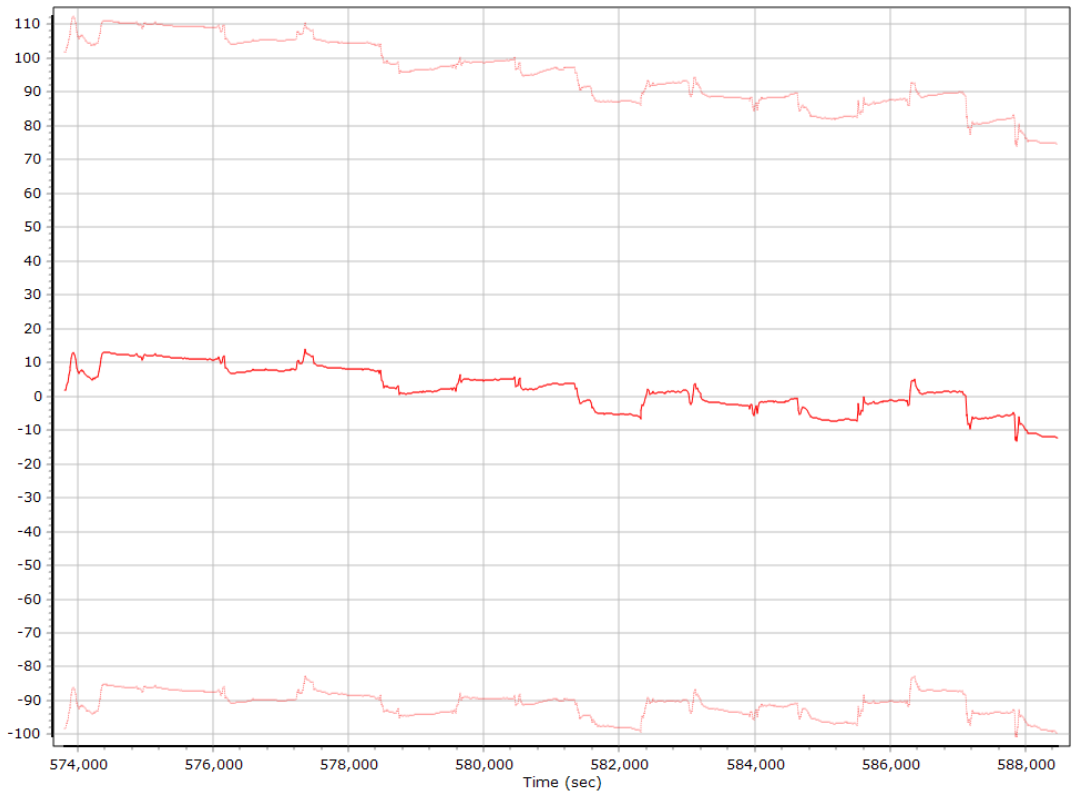
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

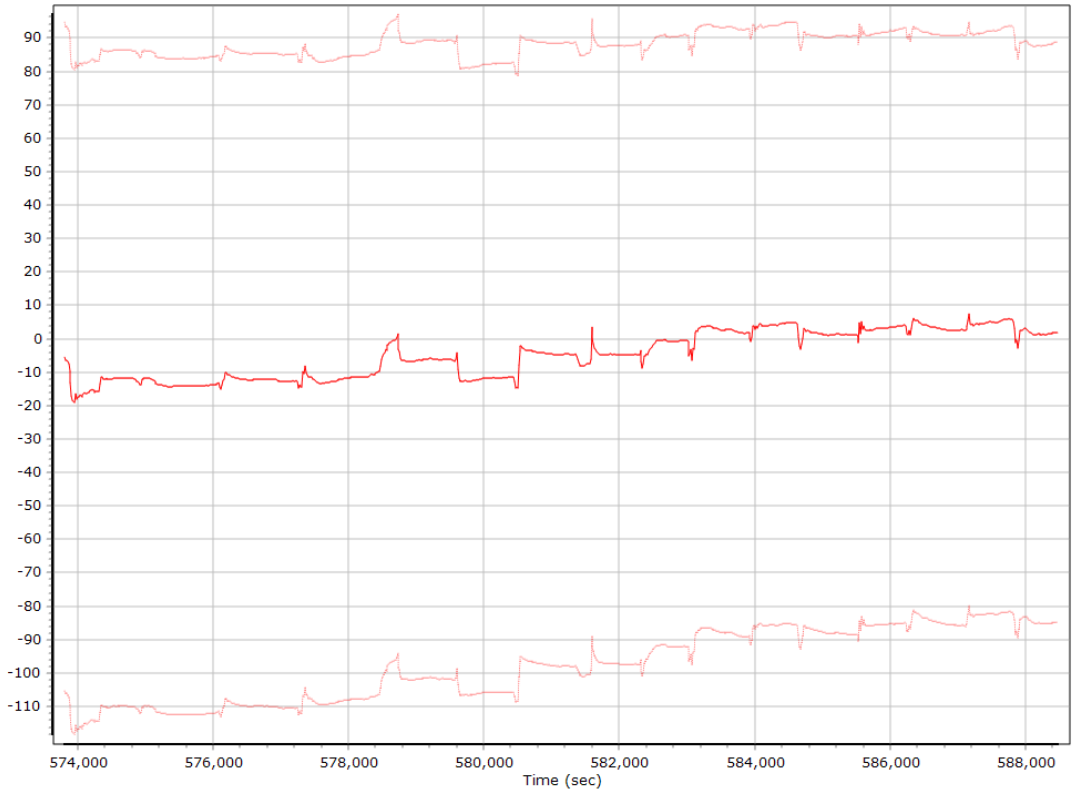
Accelerometer Bias (micro-g)



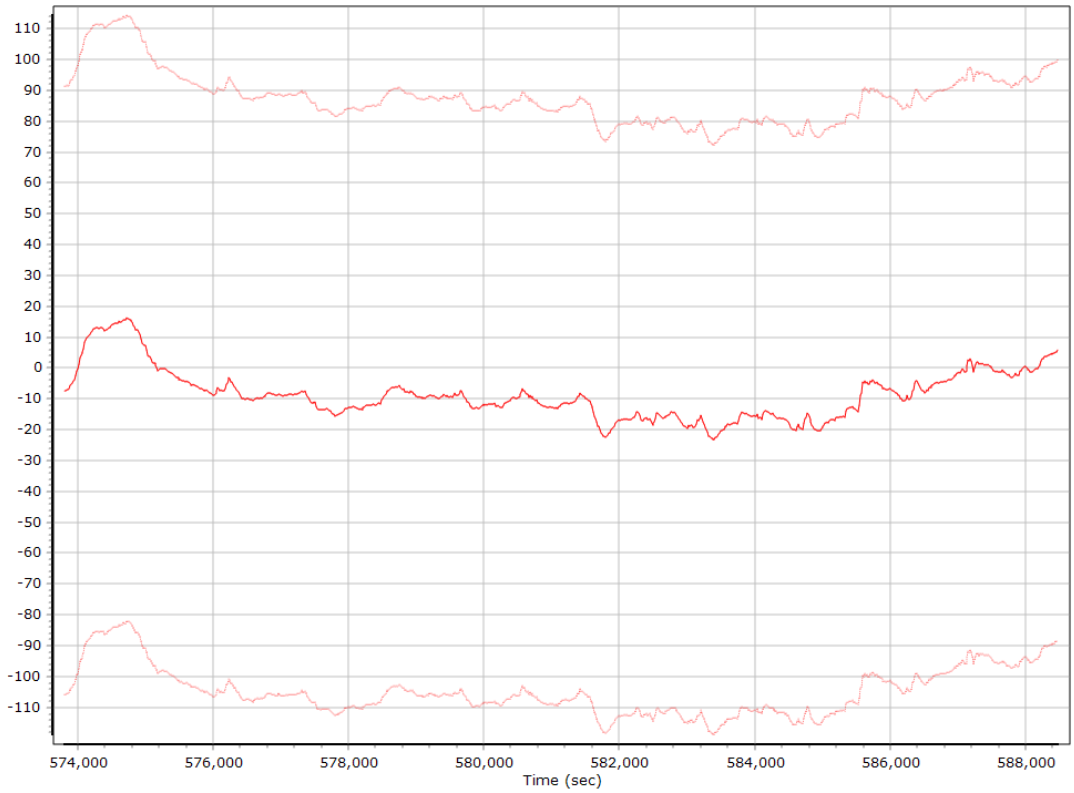
X Accelerometer Bias (micro-g)



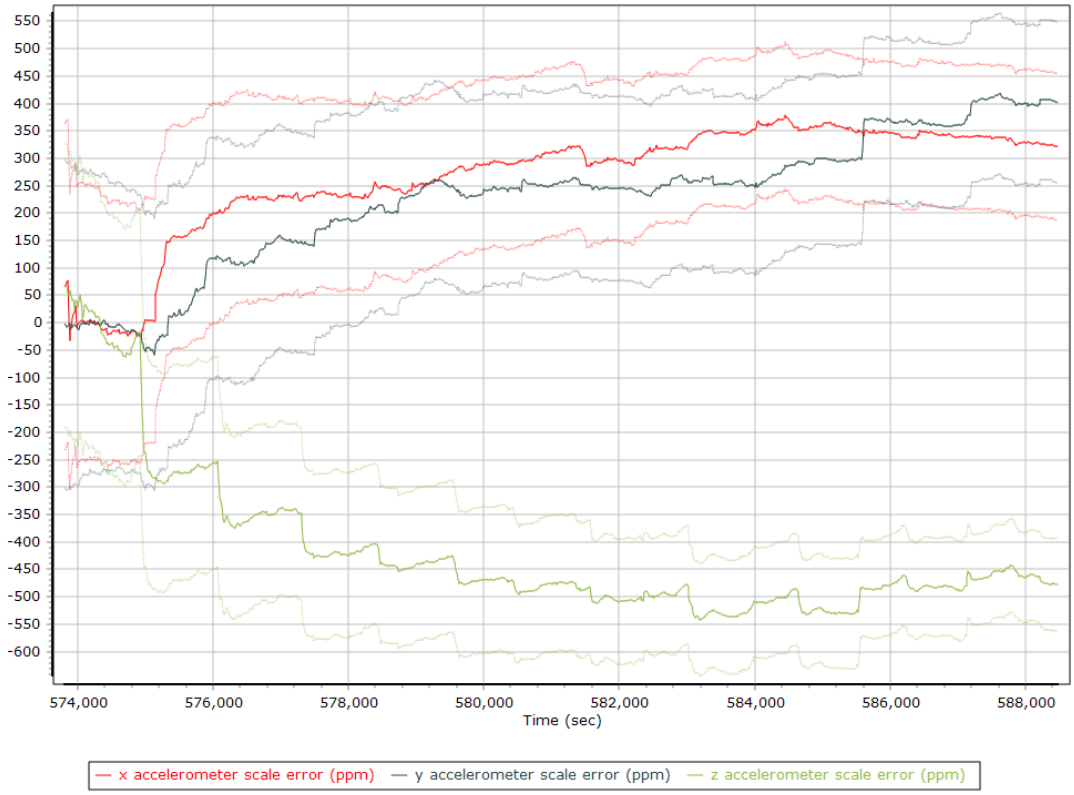
Y Accelerometer Bias (micro-g)



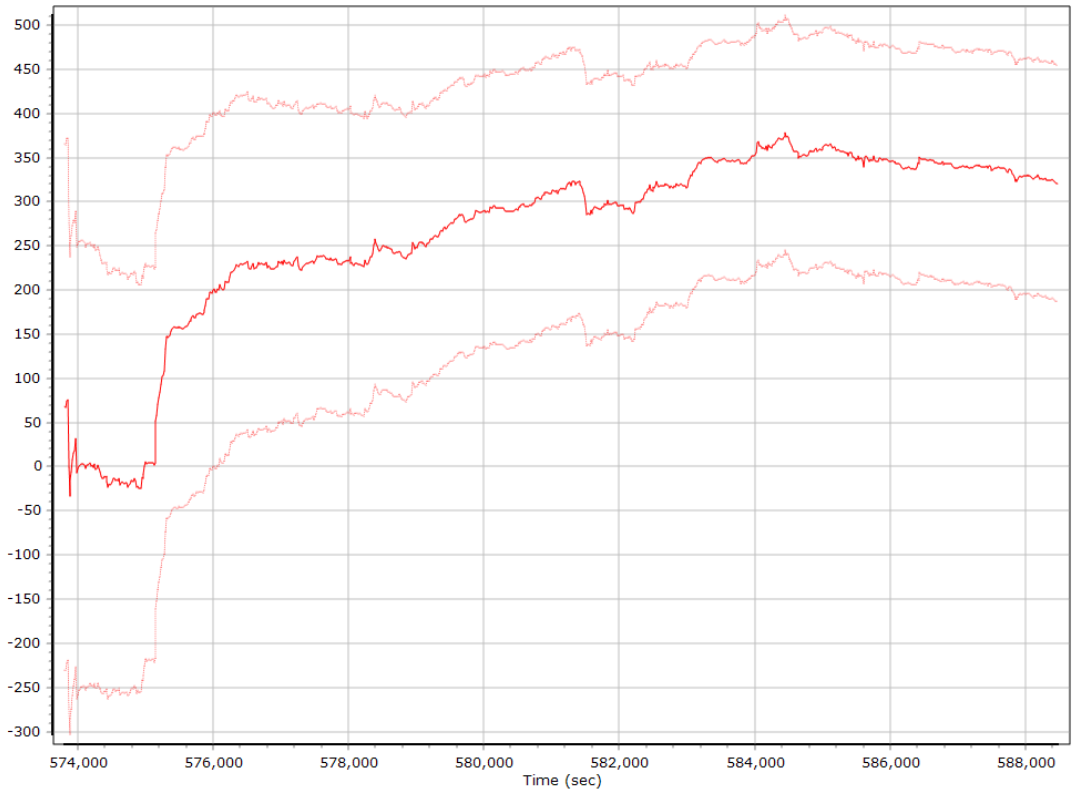
Z Accelerometer Bias (micro-g)



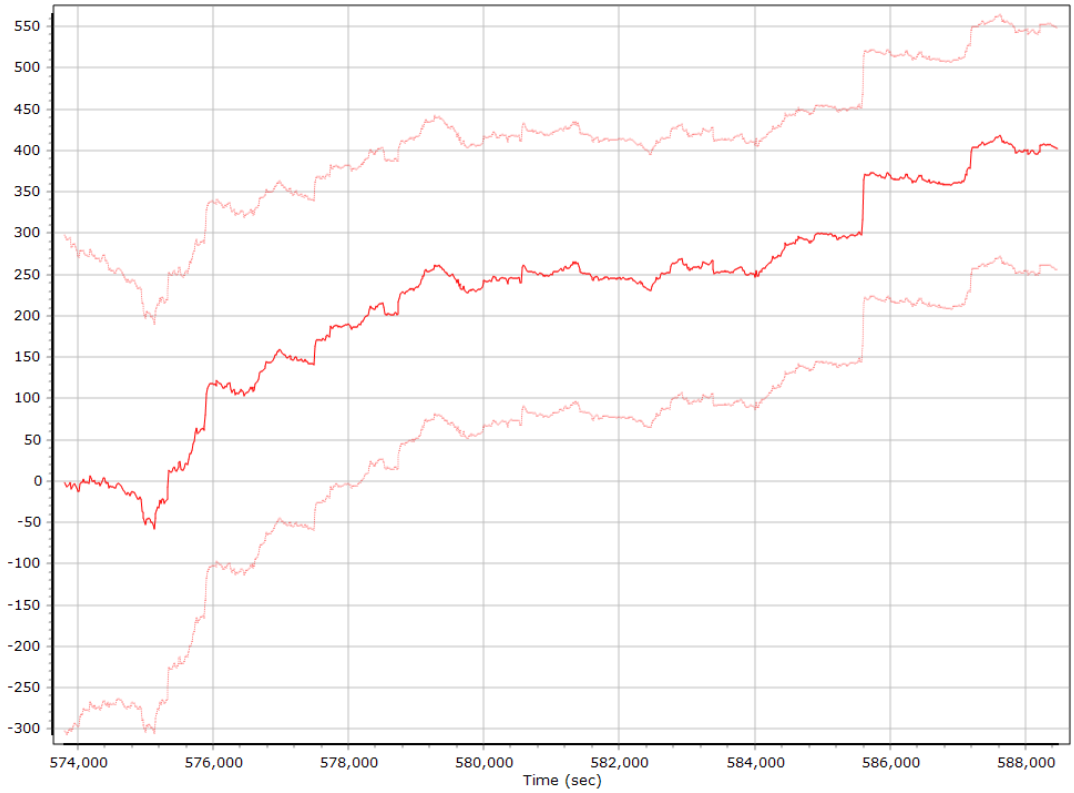
Accelerometer Scale Error (ppm)



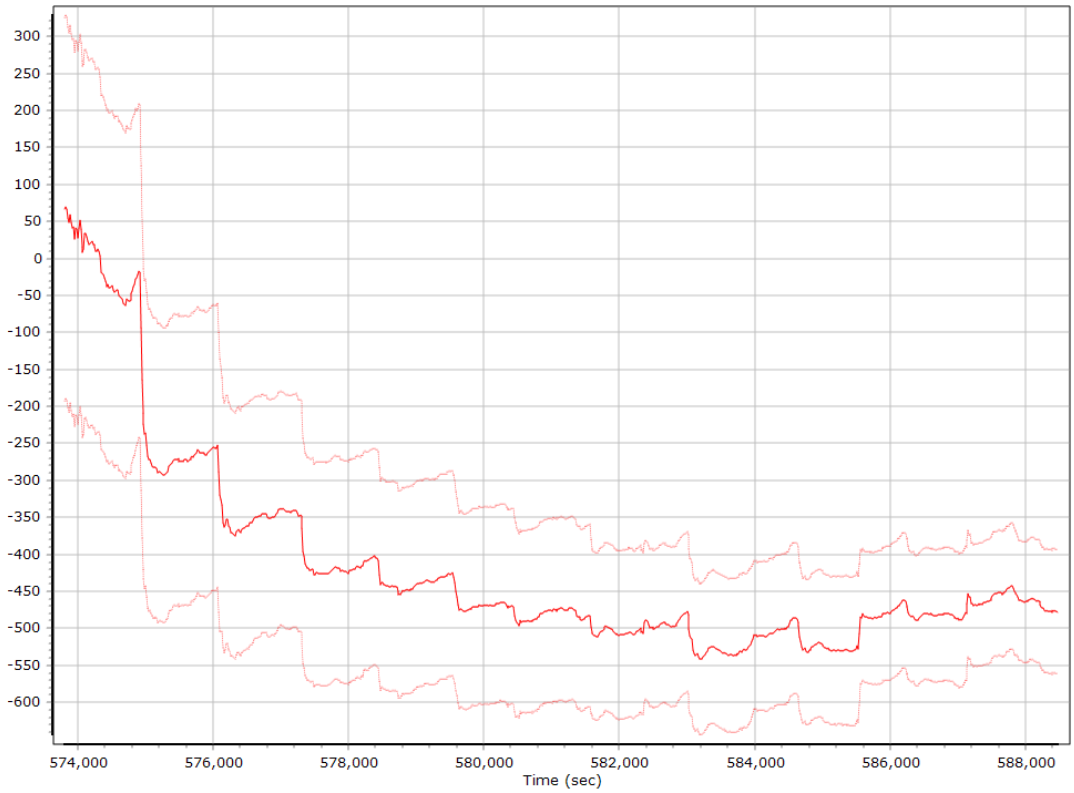
X Accelerometer Scale Error (ppm)



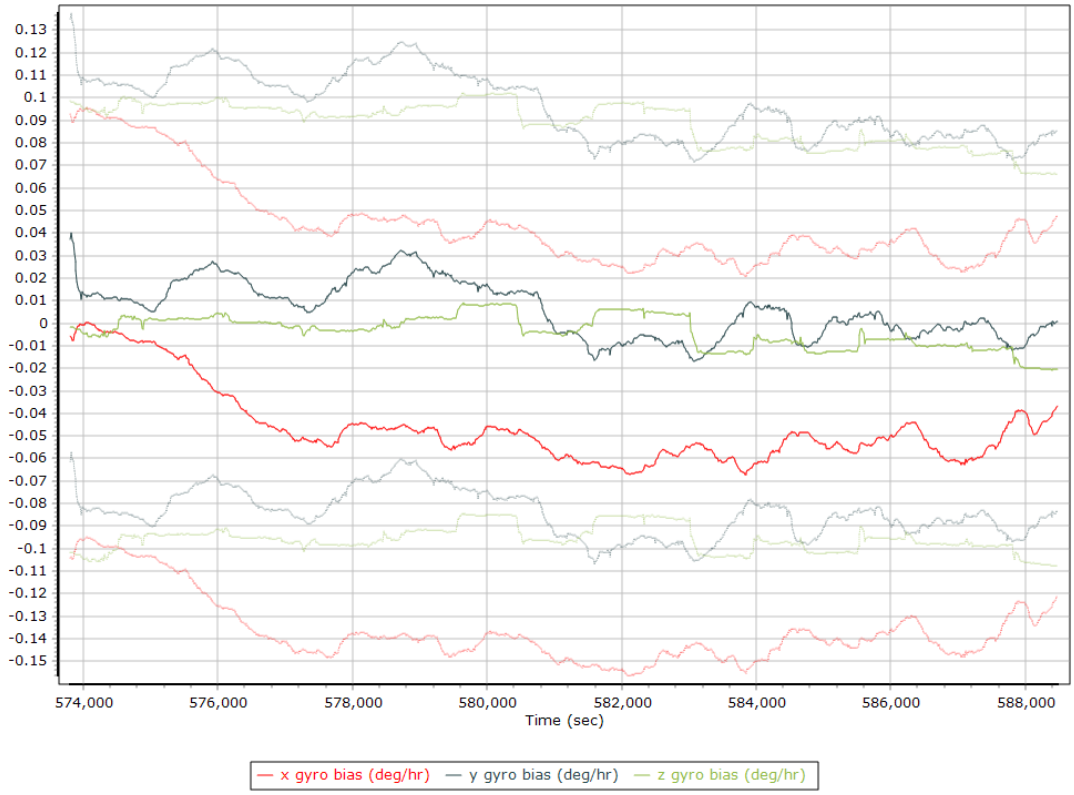
Y Accelerometer Scale Error (ppm)



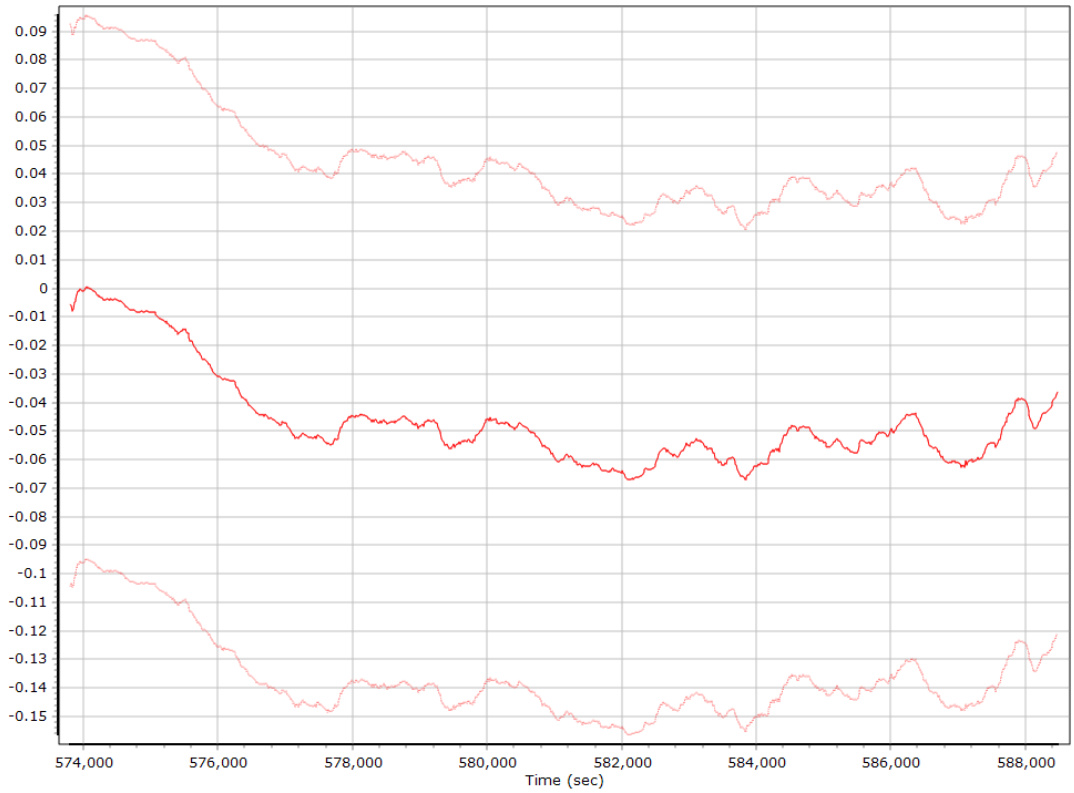
Z Accelerometer Scale Error (ppm)



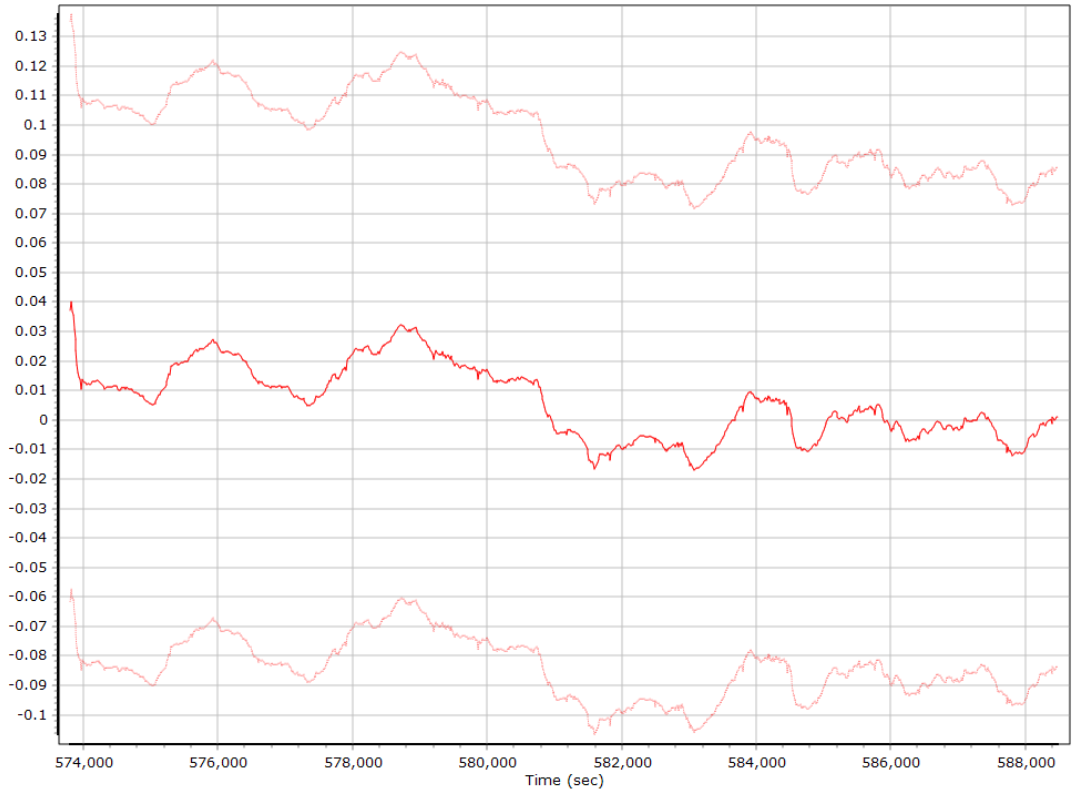
Gyro Bias (deg/h)



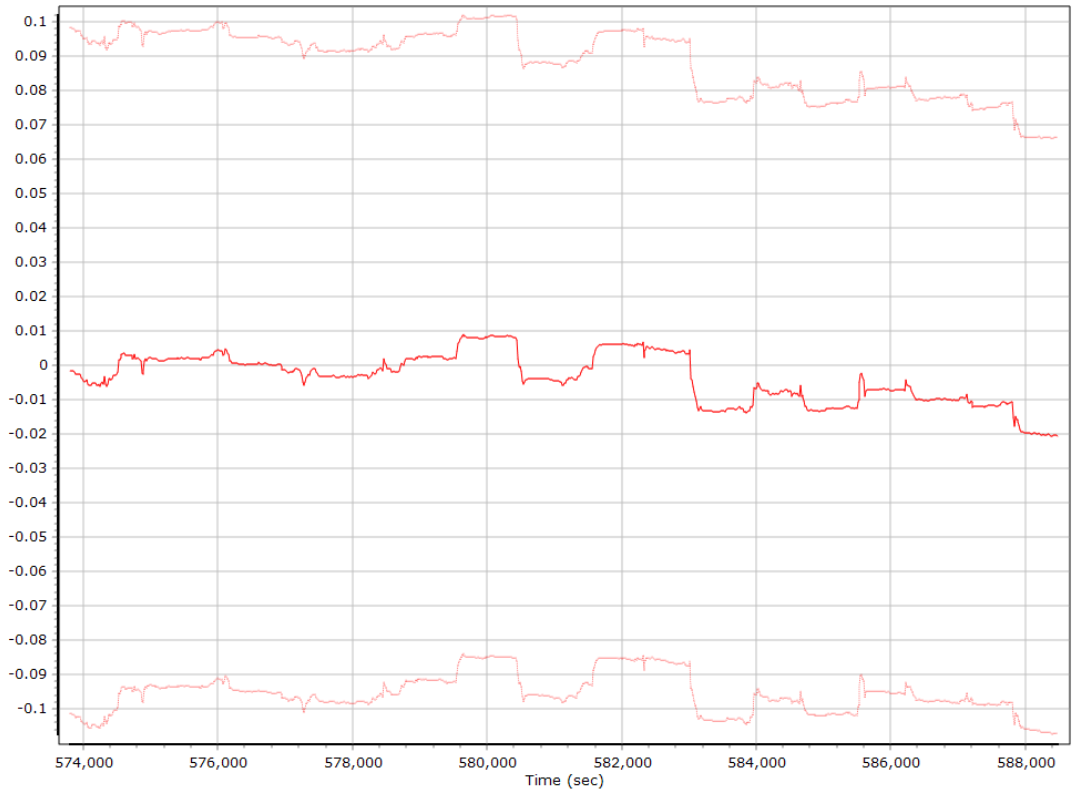
X Gyro Bias (deg/h)



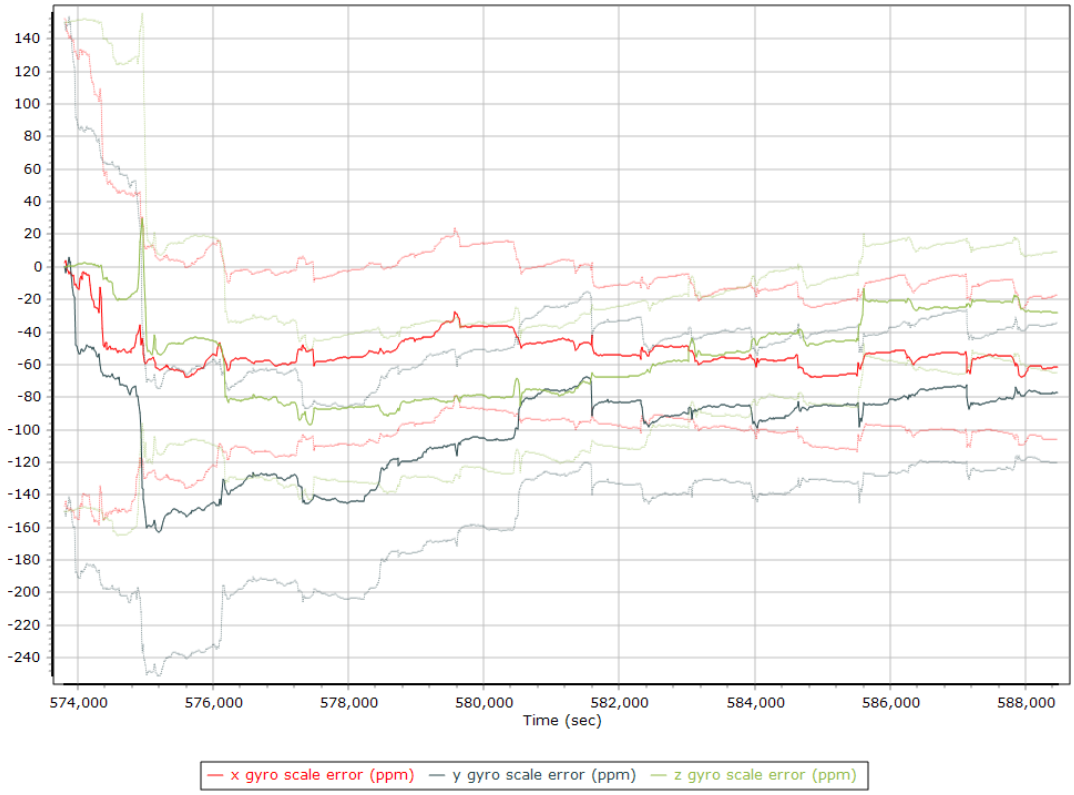
Y Gyro Bias (deg/h)



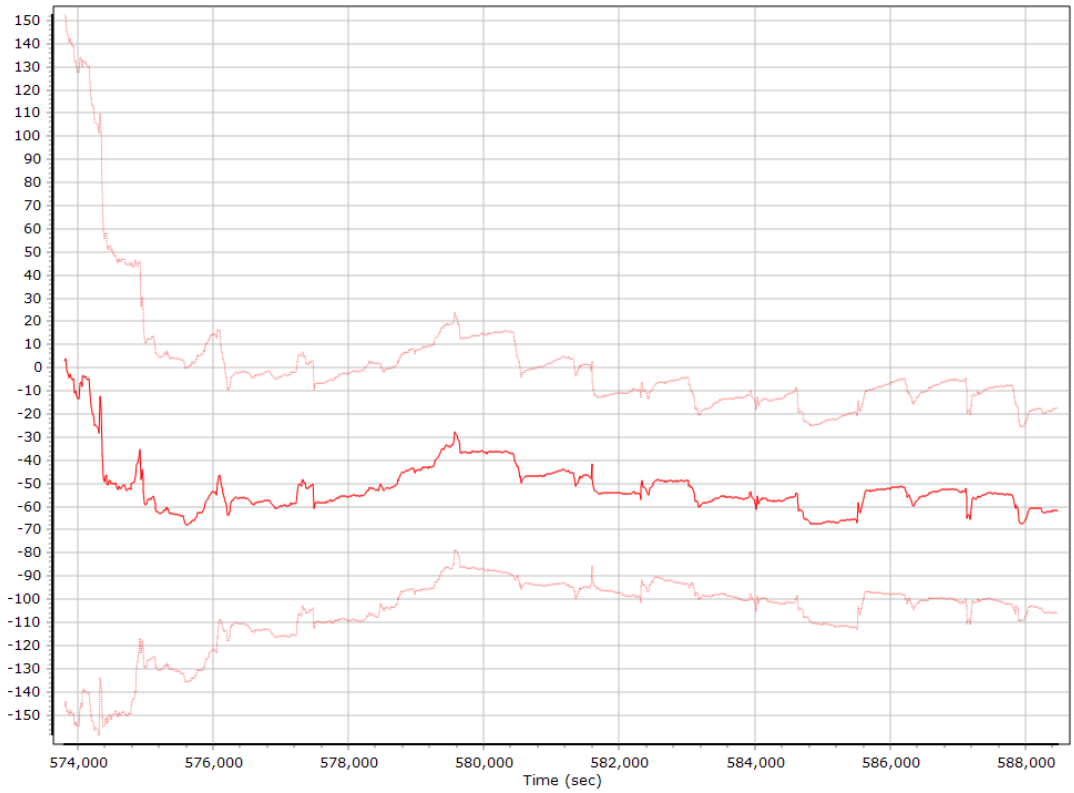
Z Gyro Bias (deg/h)



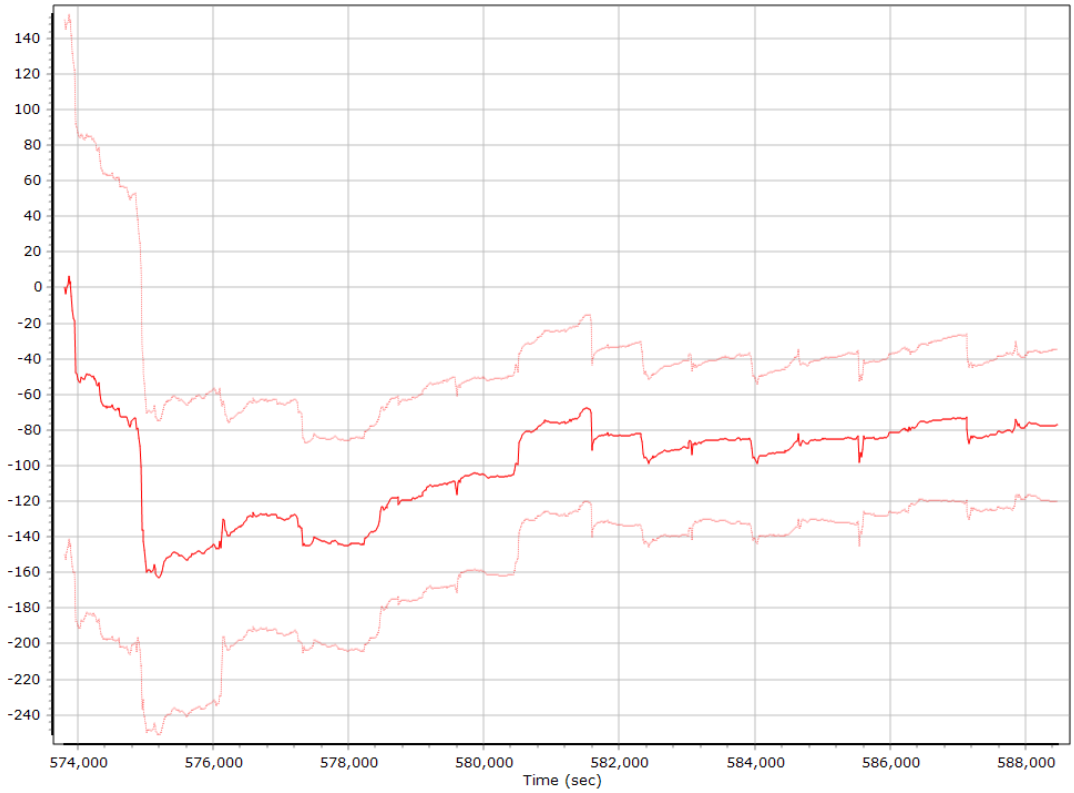
Gyro Scale Error (ppm)



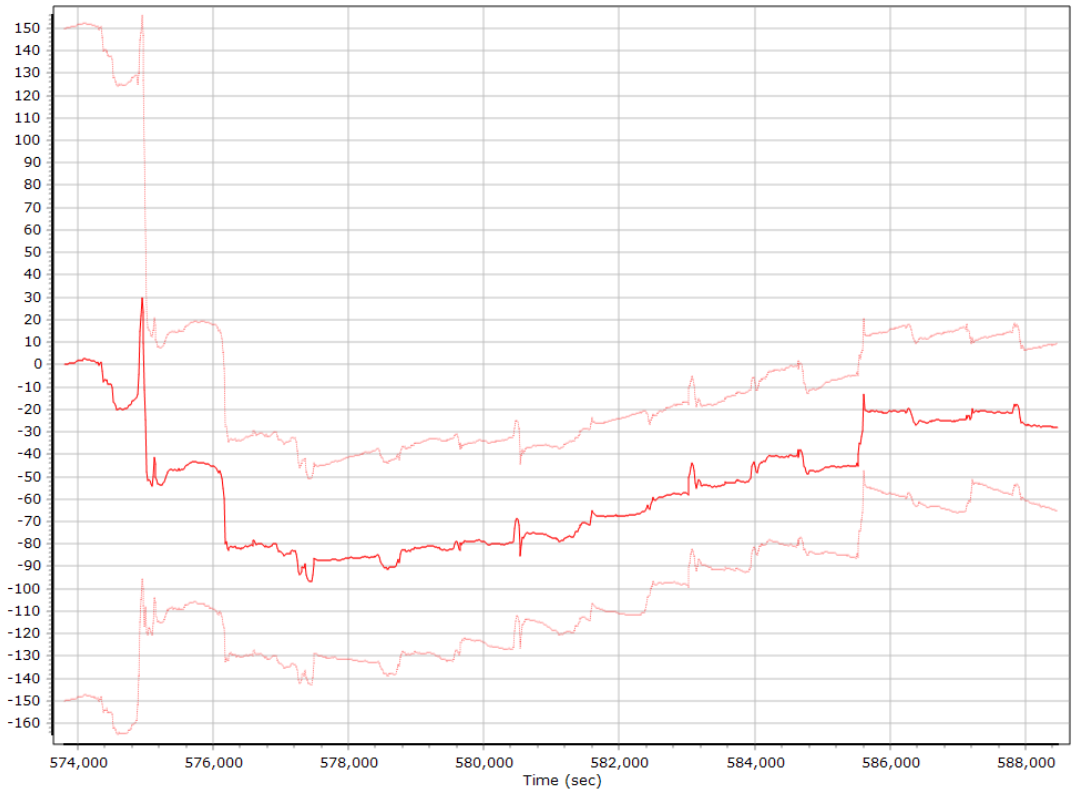
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

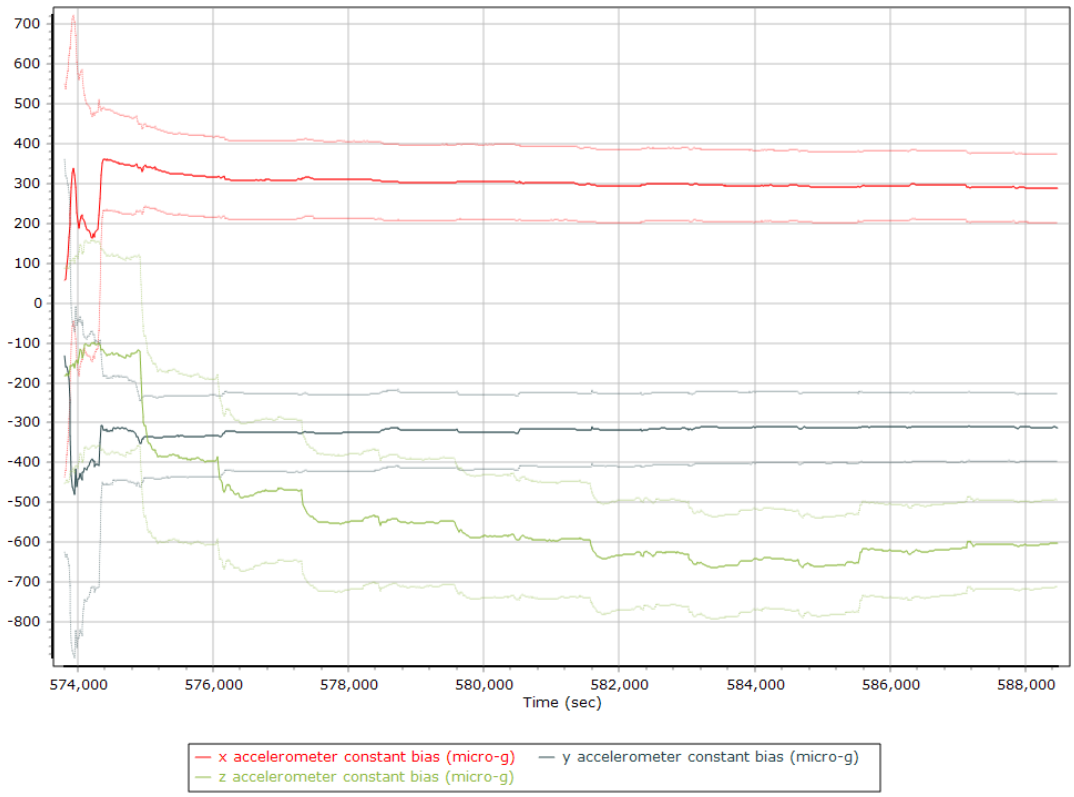


Z Gyro Scale Error (ppm)

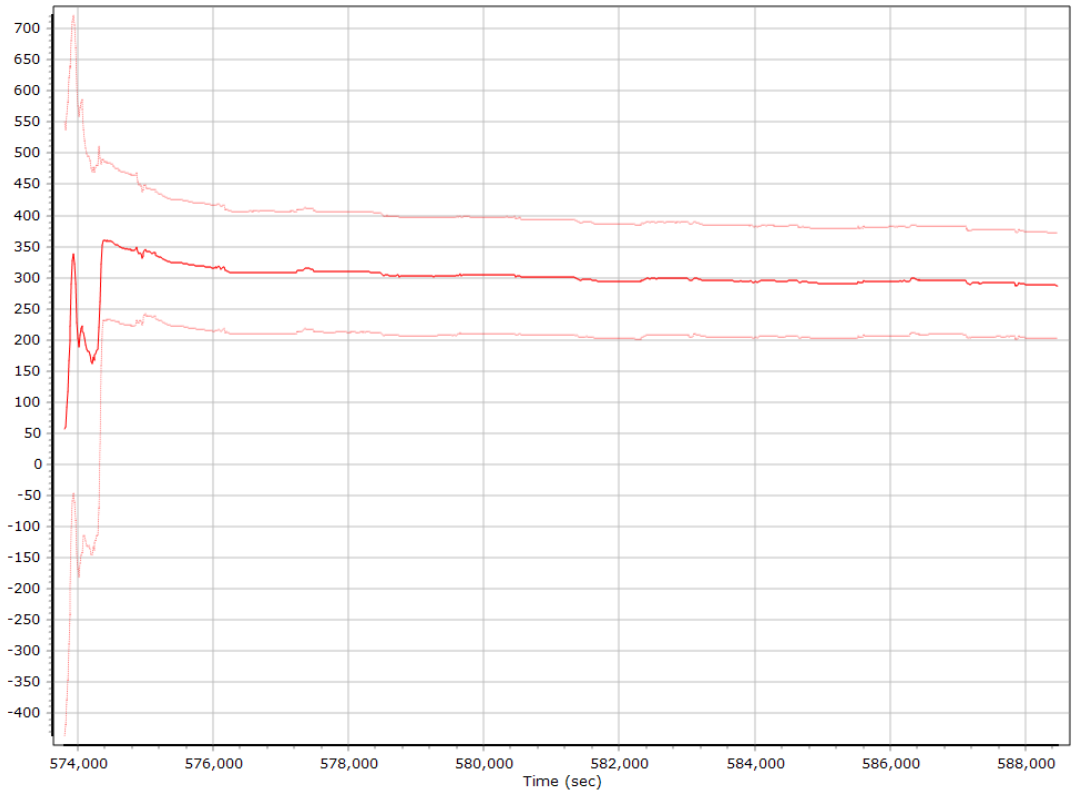


Forward Processed Estimated Constant Errors, Reference Frame

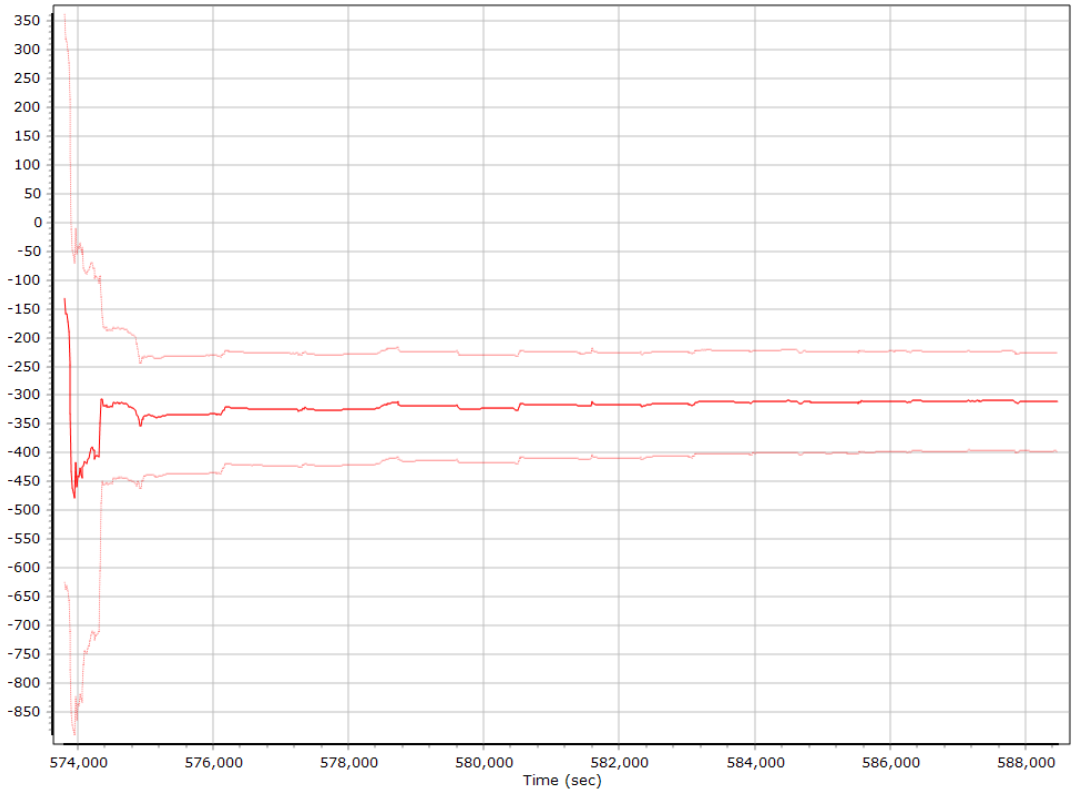
Accelerometer Bias (micro-g)



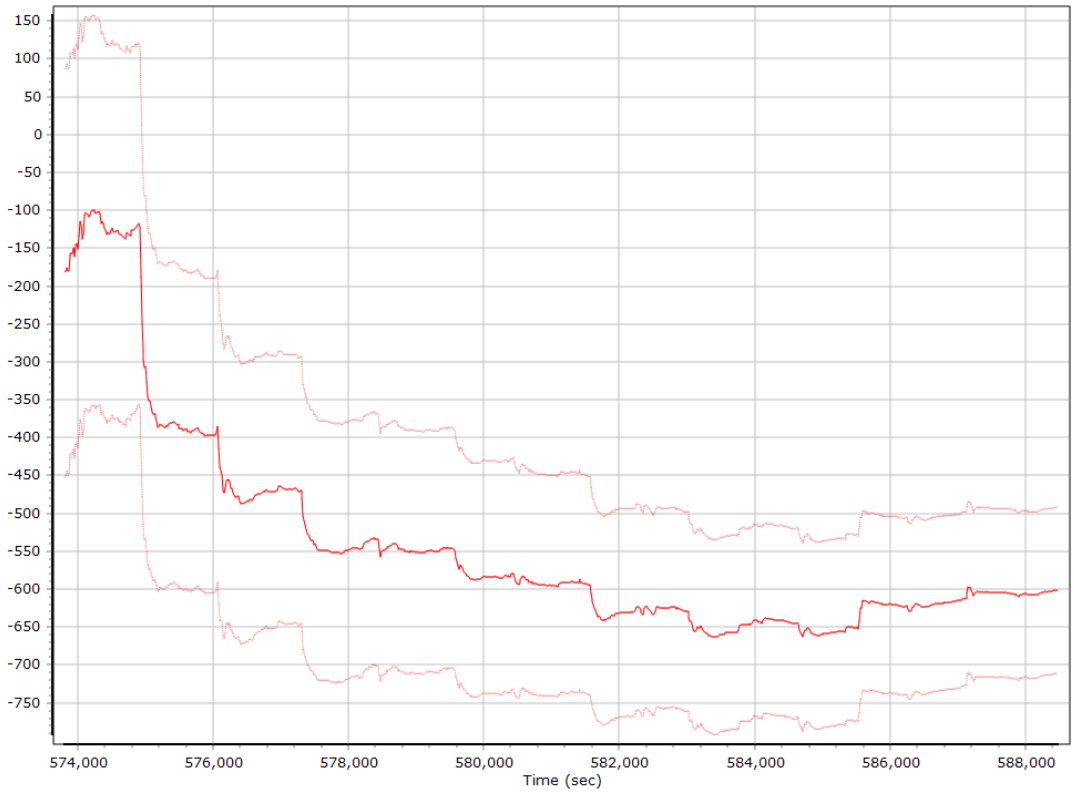
X Accelerometer Bias (micro-g)



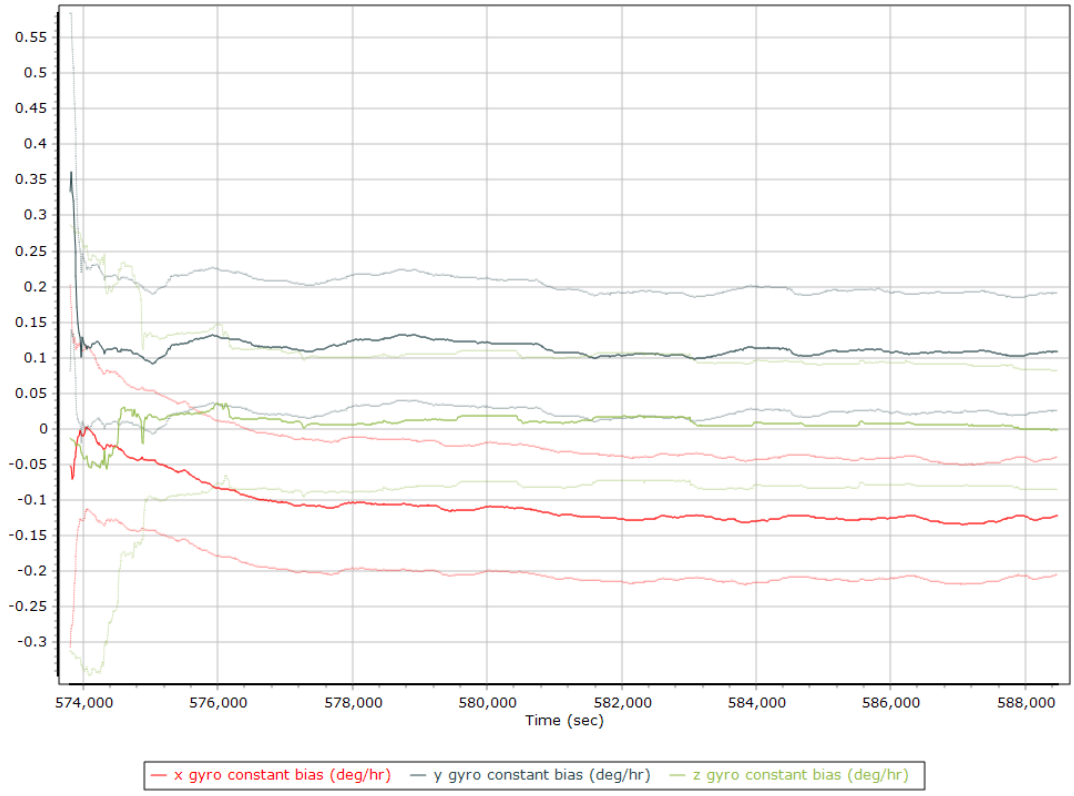
Y Accelerometer Bias (micro-g)



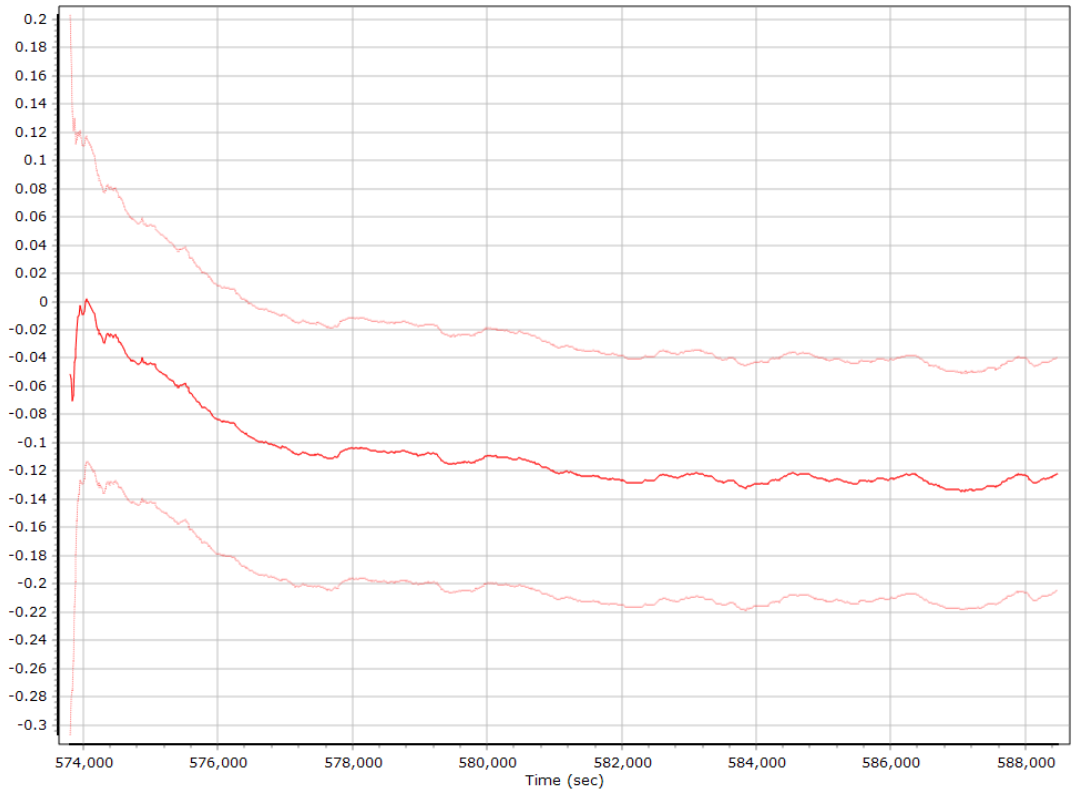
Z Accelerometer Bias (micro-g)



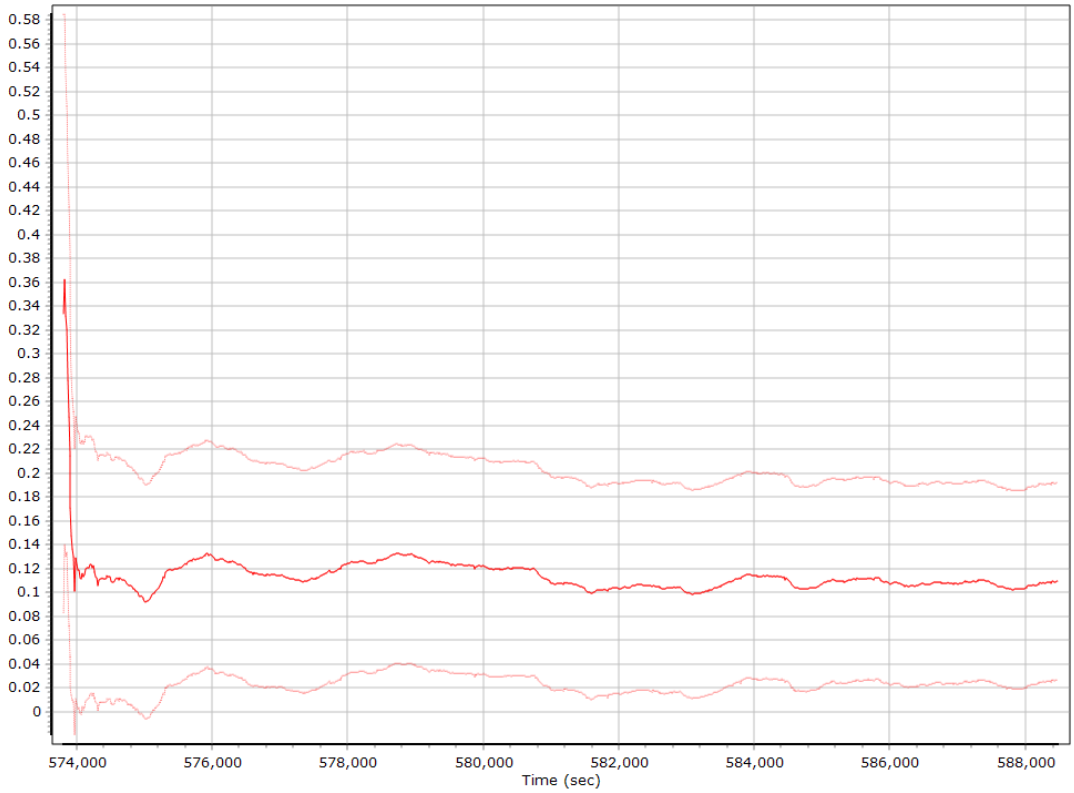
Gyro Bias (deg/h)



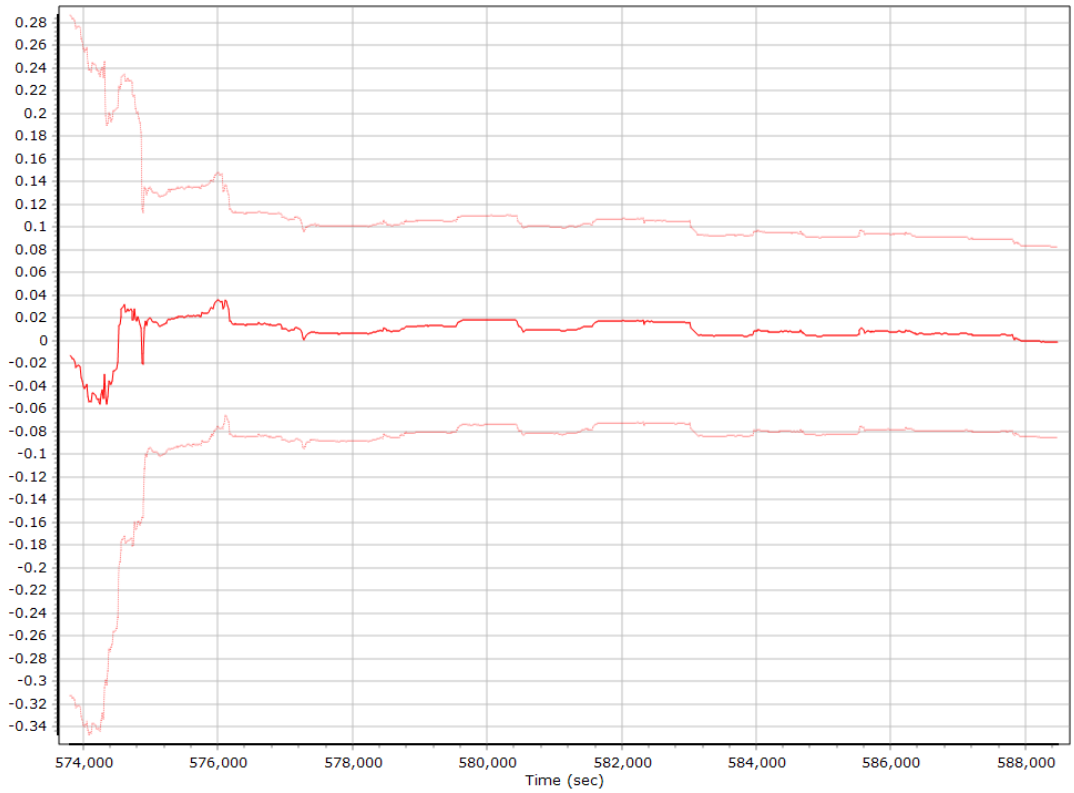
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)

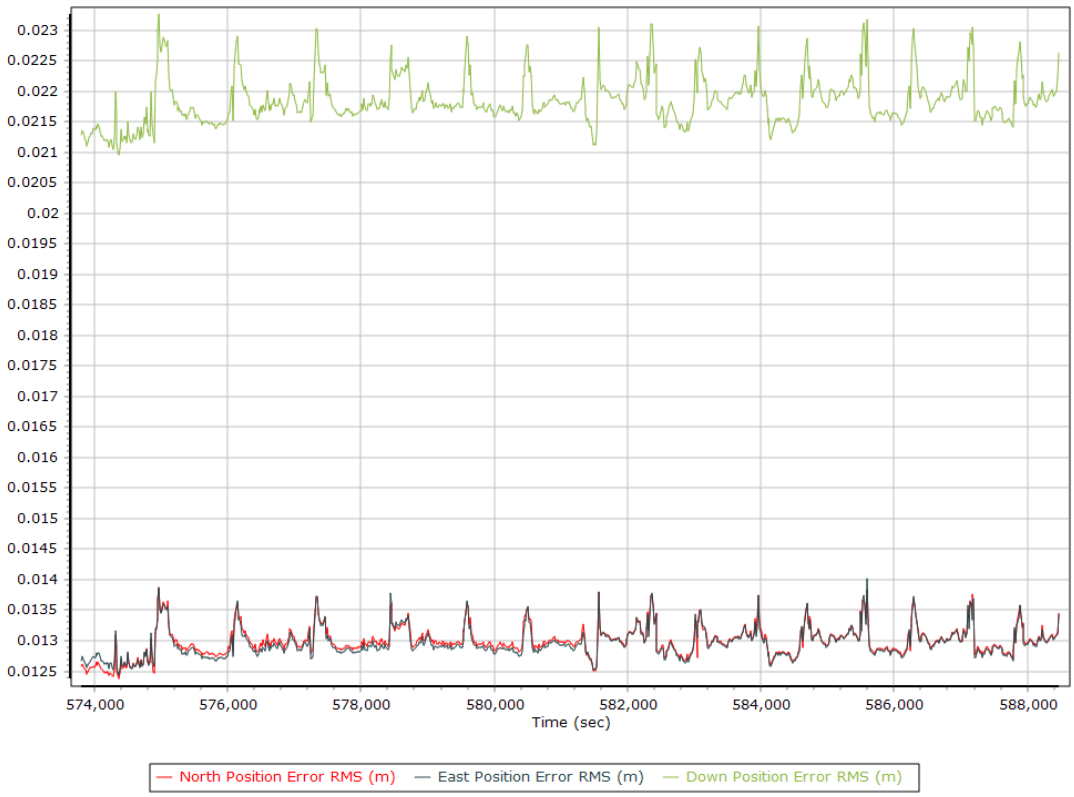


Z Gyro Bias (deg/h)

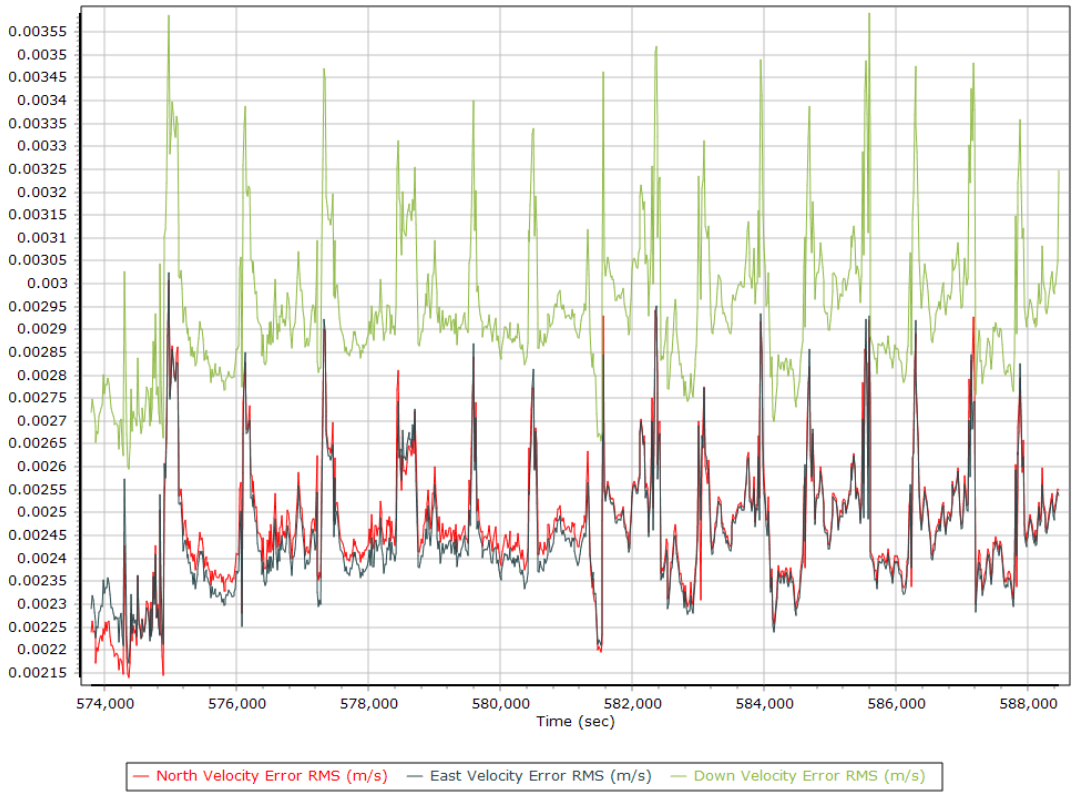


Smoothed Performance Metrics

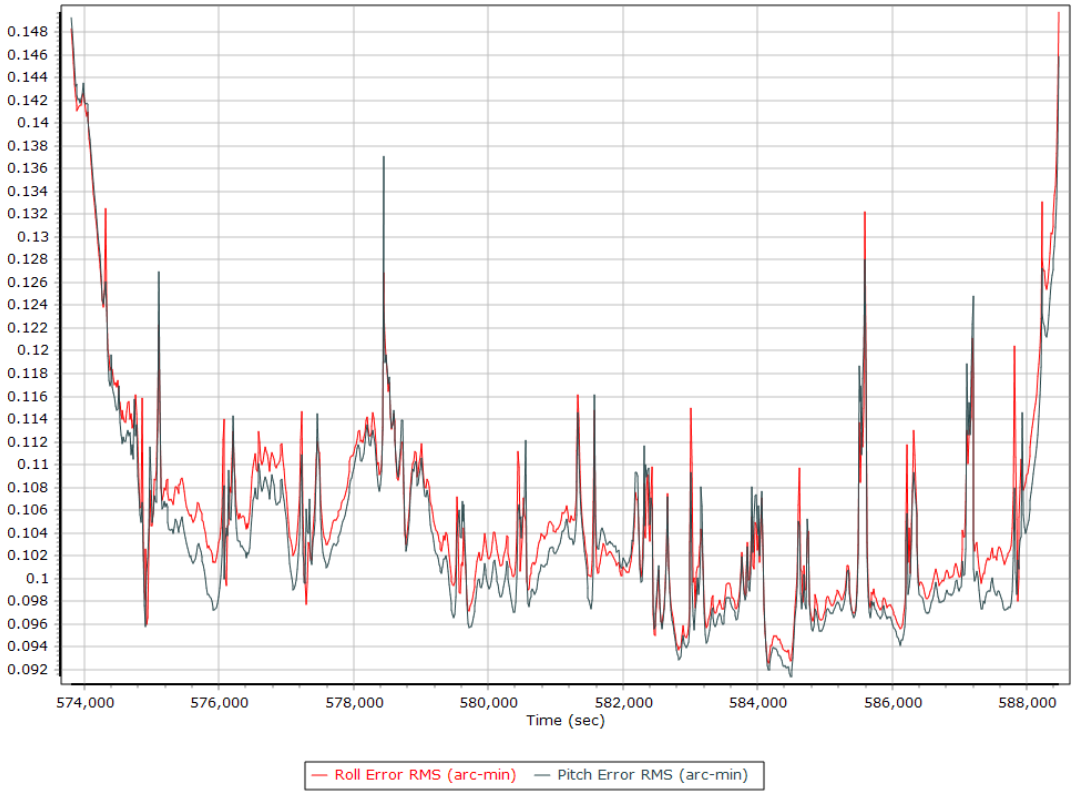
Position Error RMS (m)



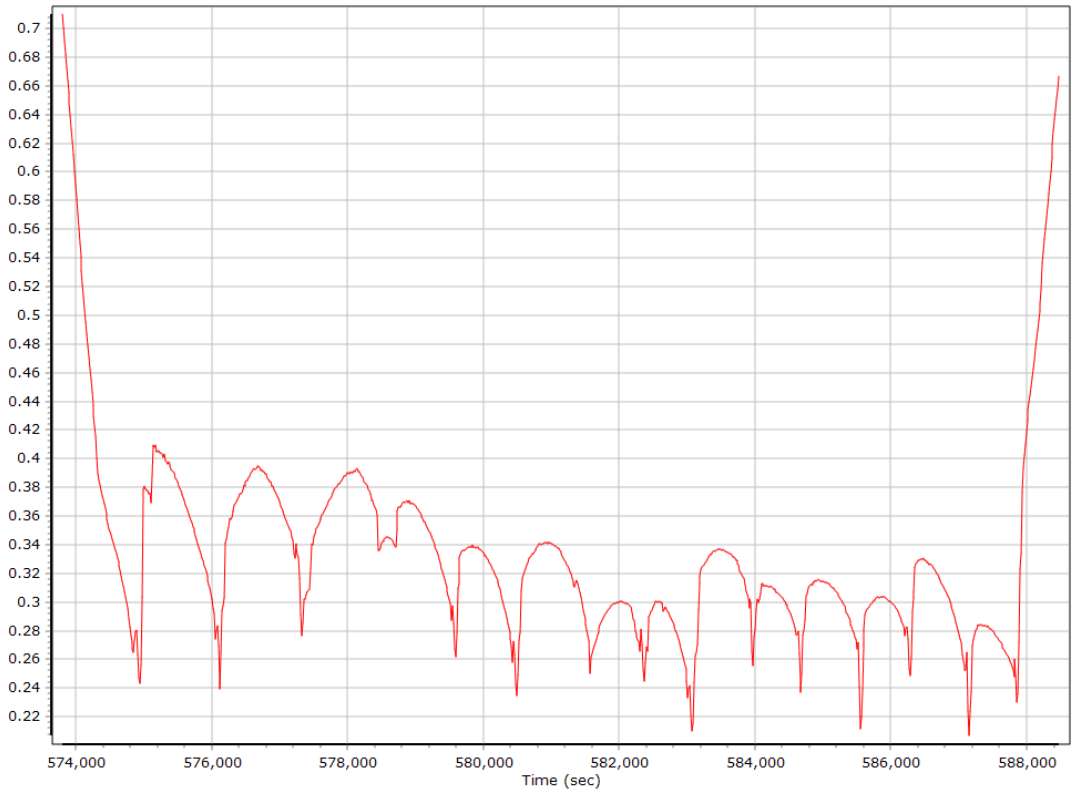
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)



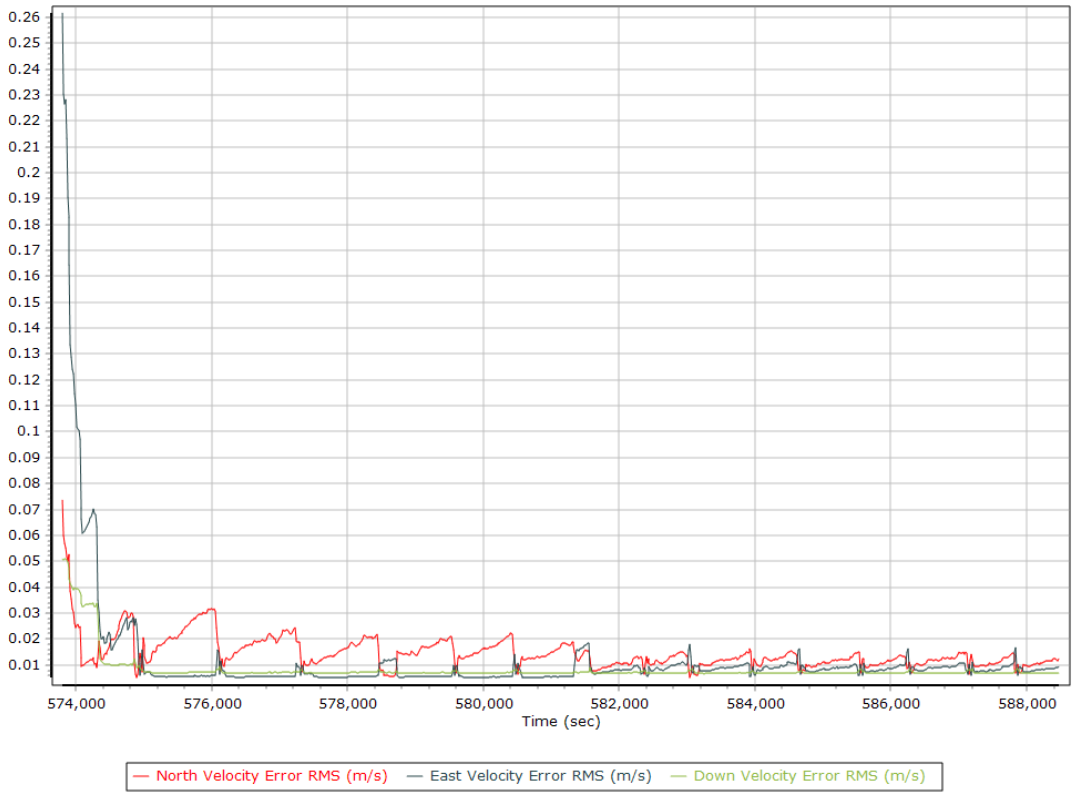
Heading Error RMS (arc-min)



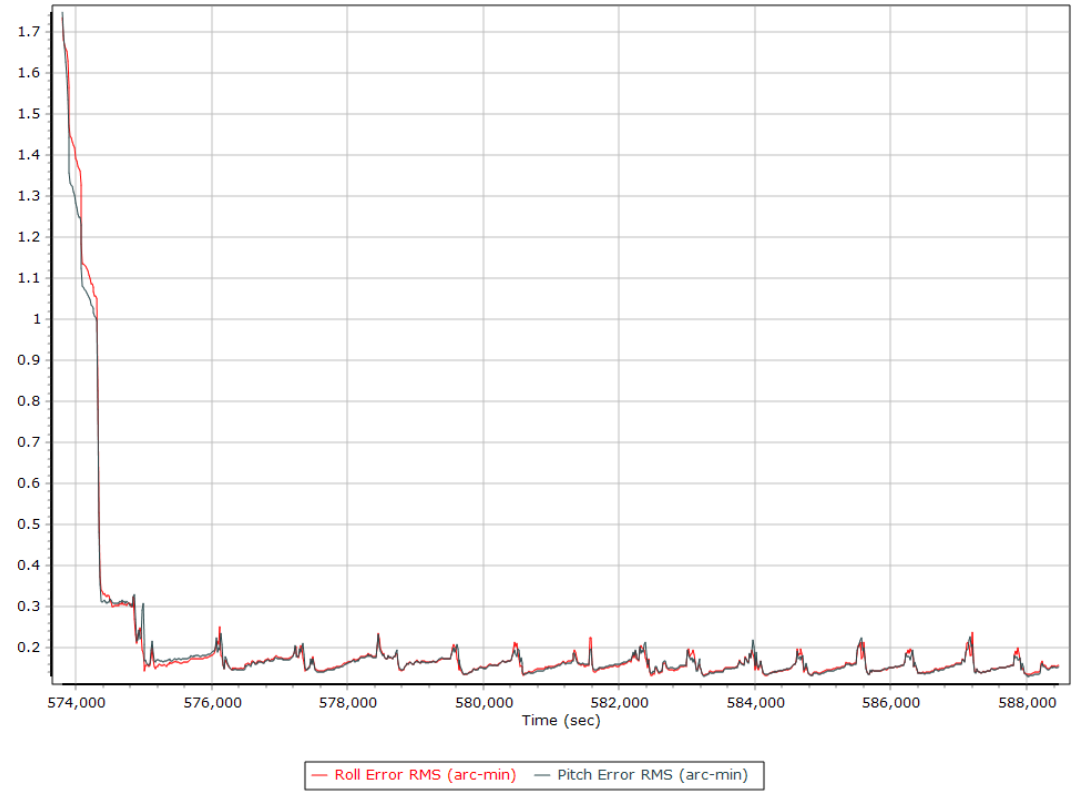
Forward Processed Performance Metrics

Position Error RMS (m)

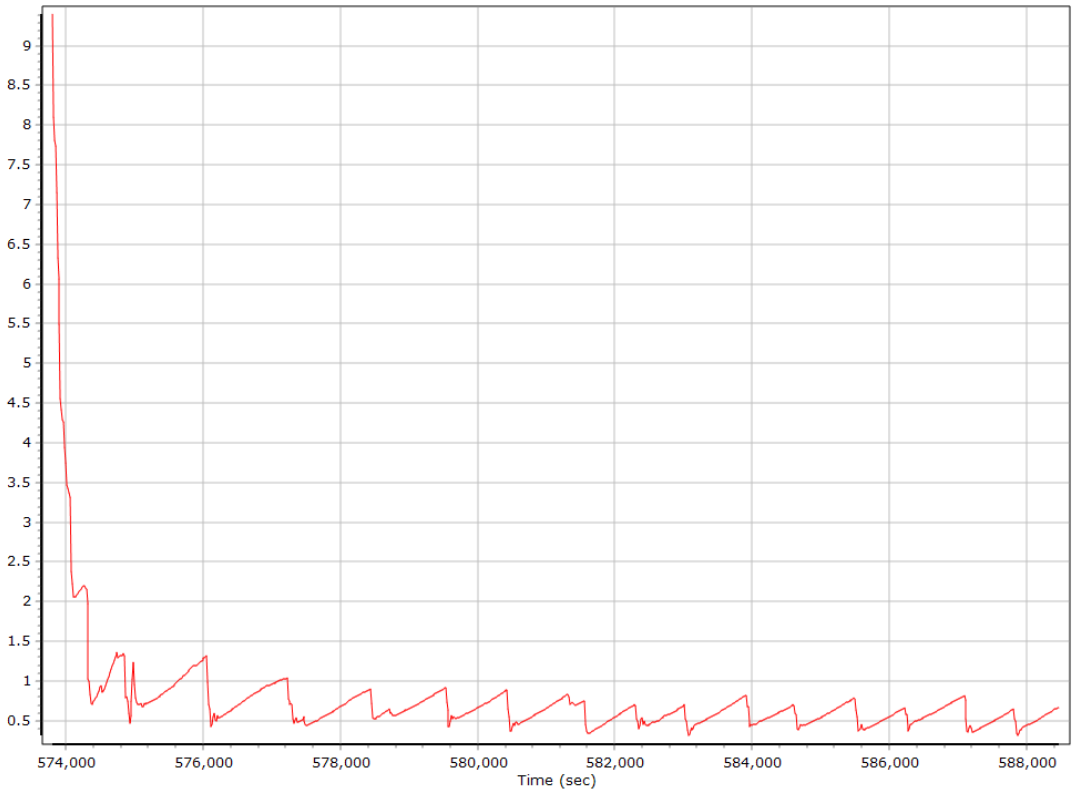
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

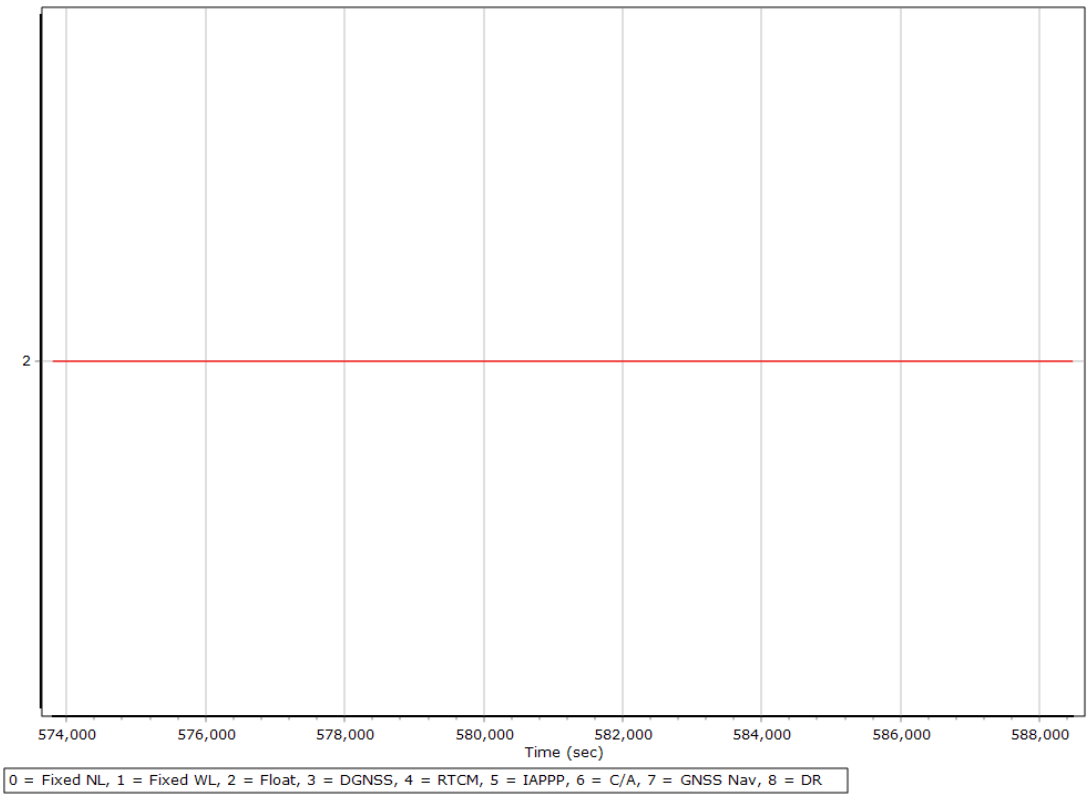


Heading Error RMS (arc-min)

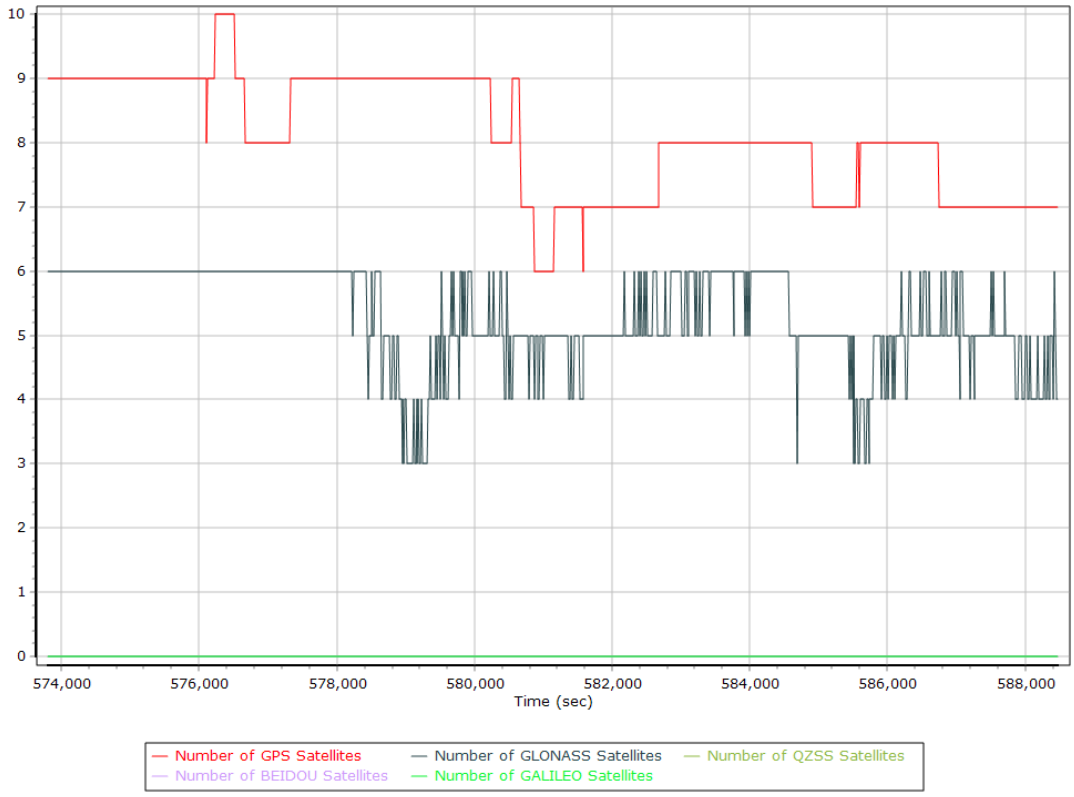
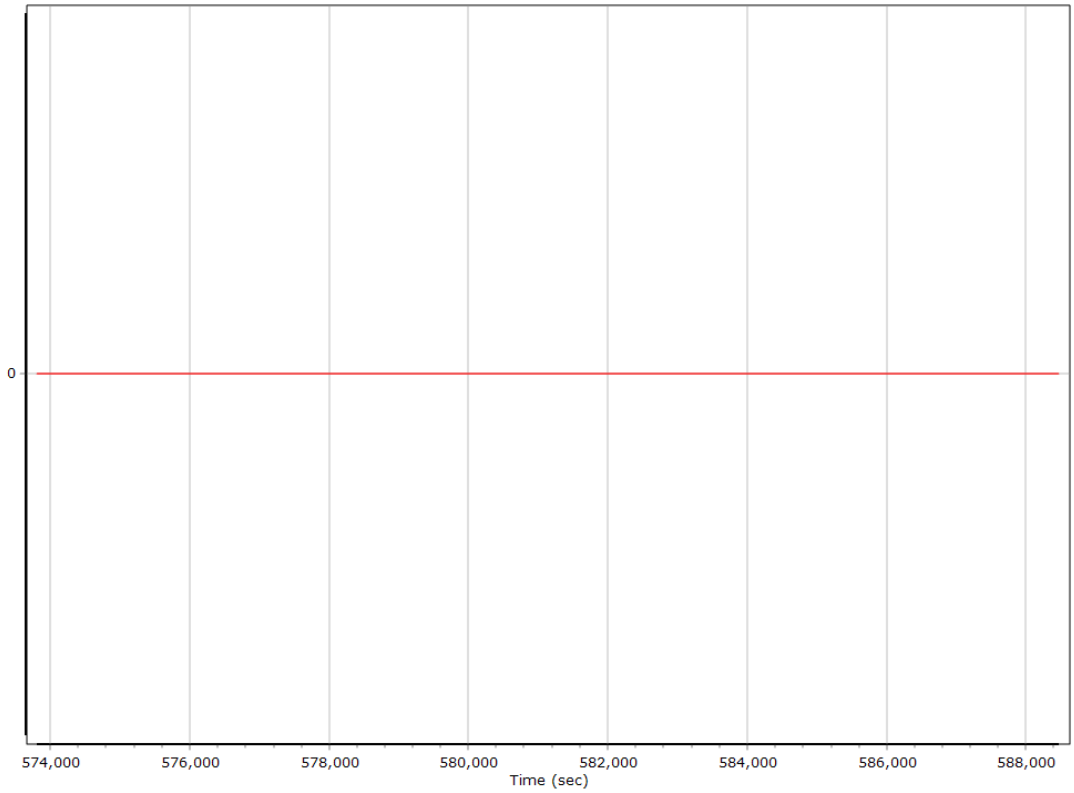


Forward Processed Solution Status

Processing Mode



Number of Satellites



Baseline Length