General Information

Mission Information

Project name	19-058_061020
Processing date	2020-07-20 19:30:19
Mission date	2020-06-10 14:30:23
Mission duration	06:52:45.000
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.535	POS Data
ALS.536	POS Data
ALS.537	POS Data
ALS.538	POS Data
ALS.539	POS Data
ALS.540	POS Data
ALS.541	POS Data
ALS.542	POS Data
ALS.543	POS Data
ALS.544	POS Data
ALS.545	POS Data
ALS.546	POS Data
ALS.547	POS Data
ALS.548	POS Data
ALS.549	POS Data
ALS.550	POS Data
ALS.551	POS Data
ALS.552	POS Data
ALS.553	POS Data
ALS.554	POS Data
ALS.555	POS Data
ALS.556	POS Data
ALS.557	POS Data
ALS.558	POS Data
ALS.559	POS Data
ALS.560	POS Data
ALS.561	POS Data
ALS.562	POS Data
ALS.563	POS Data
ALS.564	POS Data
ALS.565	POS Data
ALS.566	POS Data
ALS.567	POS Data
ALS.568	POS Data
ALS.569	POS Data
ALS.570	POS Data
ALS.571	POS Data
ALS.572	POS Data
ALS.573	POS Data
ALS.574	POS Data
ALS.575	POS Data
ALS.576	POS Data
ALS.577	POS Data
ALS.578	POS Data
ALS.579	POS Data
ALS.580	POS Data
ALS.581	POS Data
ALS.582	POS Data
ALS.583	POS Data
ALS.584	POS Data
ALS.585	POS Data
ALS.586	POS Data
ALS.587	POS Data
ALS.588	POS Data

Input Files

File Name	File Type
Ephm1620.20g	GLONASS Broadcast Ephemeris
Ephm1620.20n	GPS Broadcast Ephemeris

File Name	File Type
igl21092.sp3	GLONASS Precise Ephemeris
igl21093.sp3	GLONASS Precise Ephemeris
igl21094.sp3	GLONASS Precise Ephemeris
igs21092.sp3	GPS Precise Ephemeris
igs21093.sp3	GPS Precise Ephemeris
igs21094.sp3	GPS Precise Ephemeris

Output Files

Filename	File type
sbet_19-058_061020.out	SBET Trajectory File

Rover Data Summary

First raw data file	ALS.535		
Last raw data file	ALS.588		
Start GPS week	2109		
Start time	311434.960 (06/10/2020 14:30:16)		
End time	336180.884 (06/10/2020 21:22:42)		
Start of fine alignment	312030.899 (06/10/2020 14:40:12)		
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

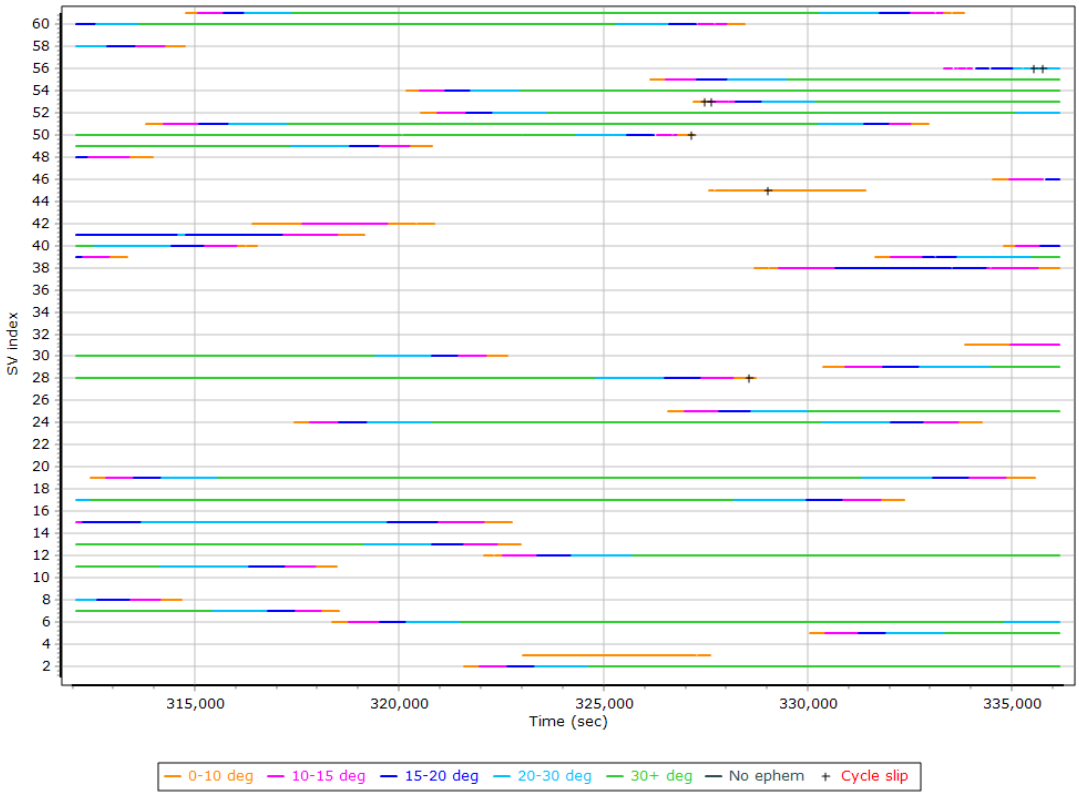
Rover Data QC

Raw IMU Import QC Summary

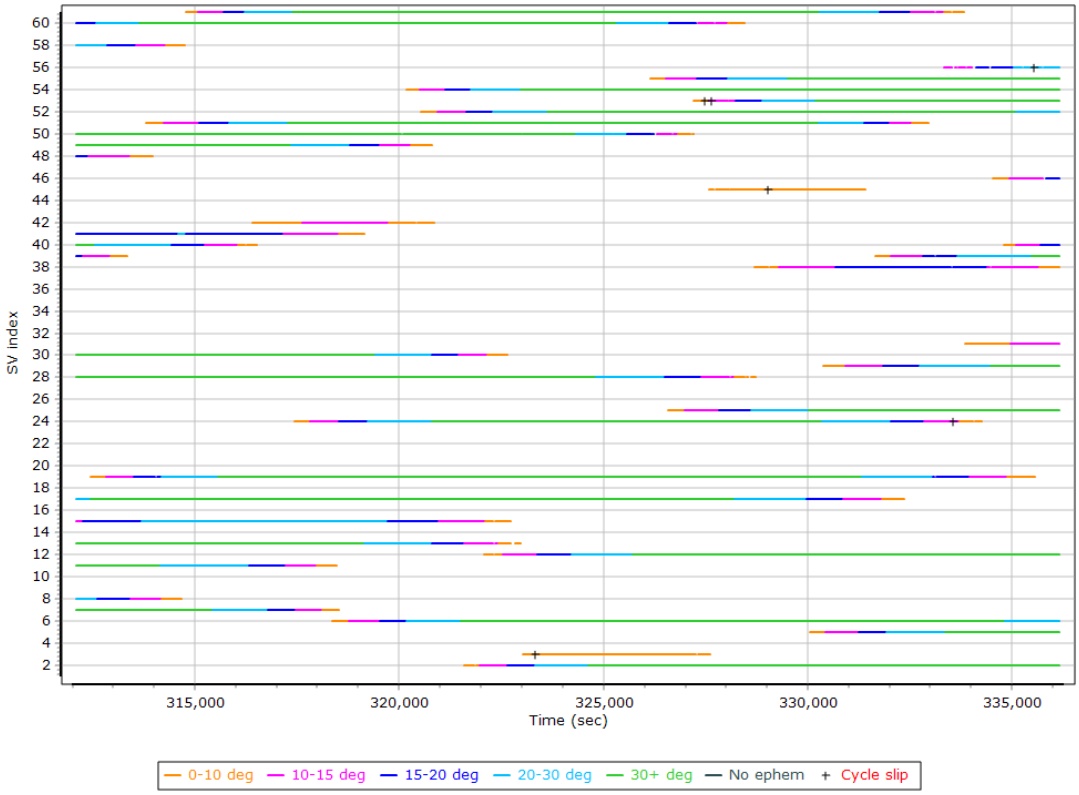
IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_19-058_061020.log
IMU Records Processed	4951959
Termination Status	Warnings
IMU Anomalies	1
IMU Failure Messages	
311434.725 : WARNING : Gap of 311422.7634 seconds in CHECKDT input data	

Primary Observables & Satellite Data

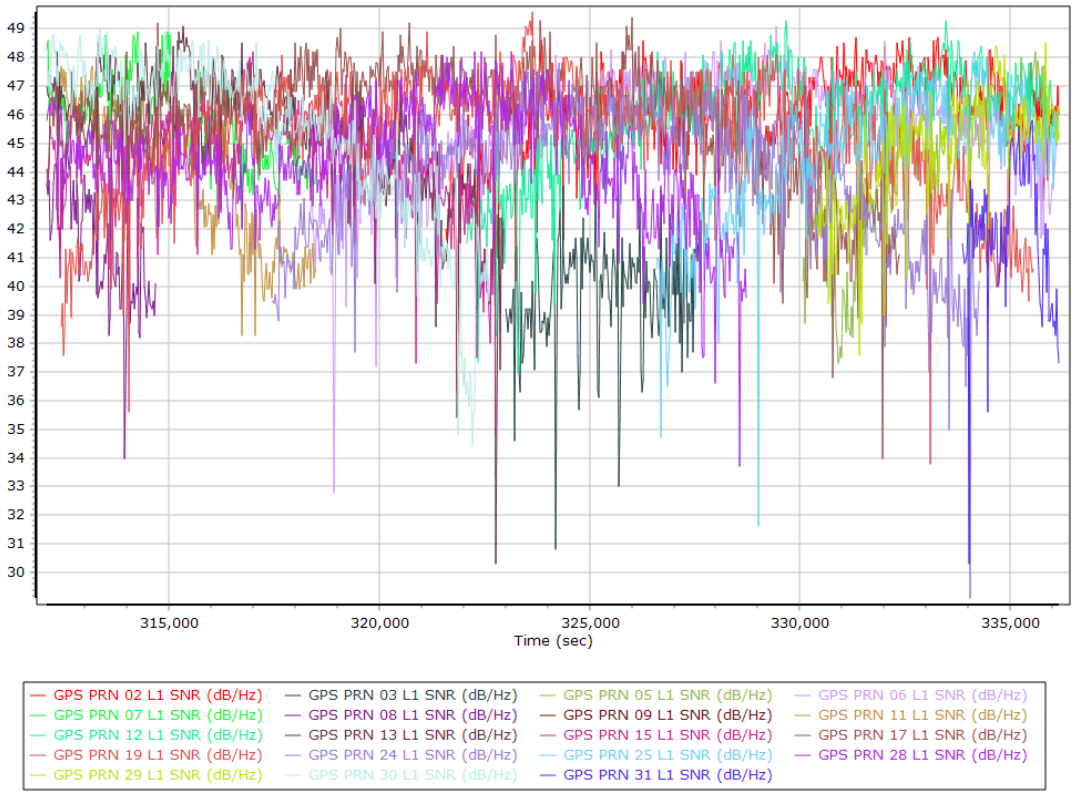
L1 Satellite Lock/Elevation



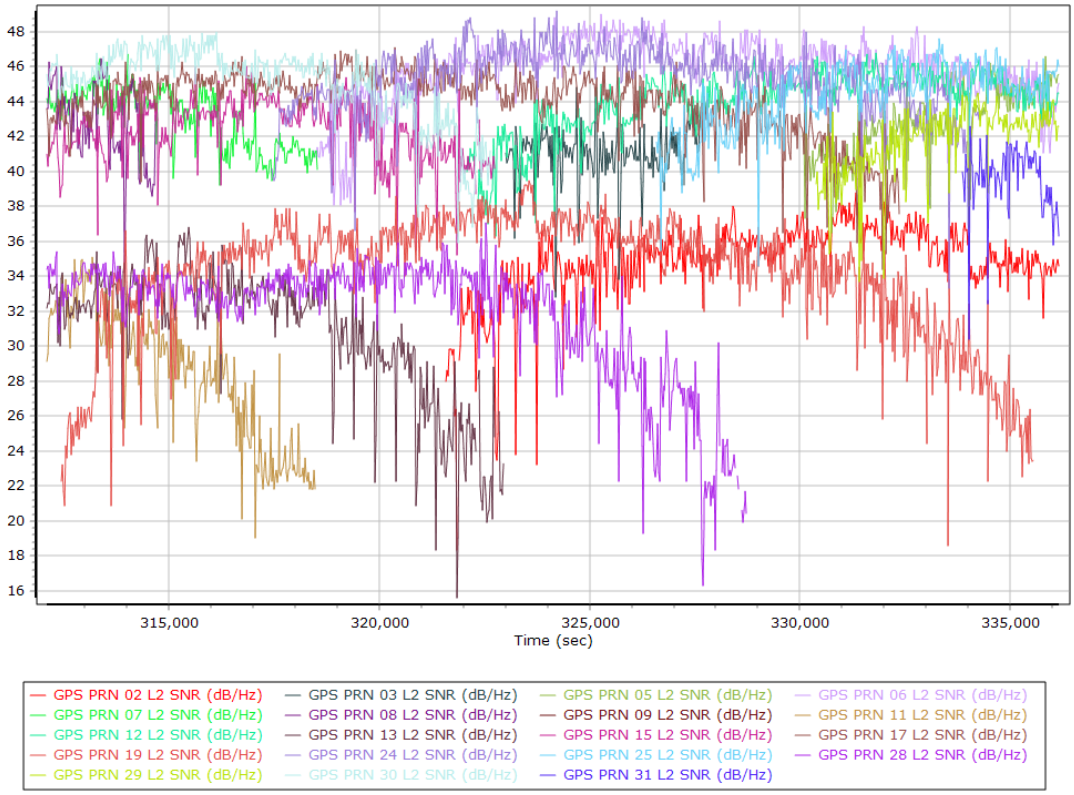
L2 Satellite Lock/Elevation



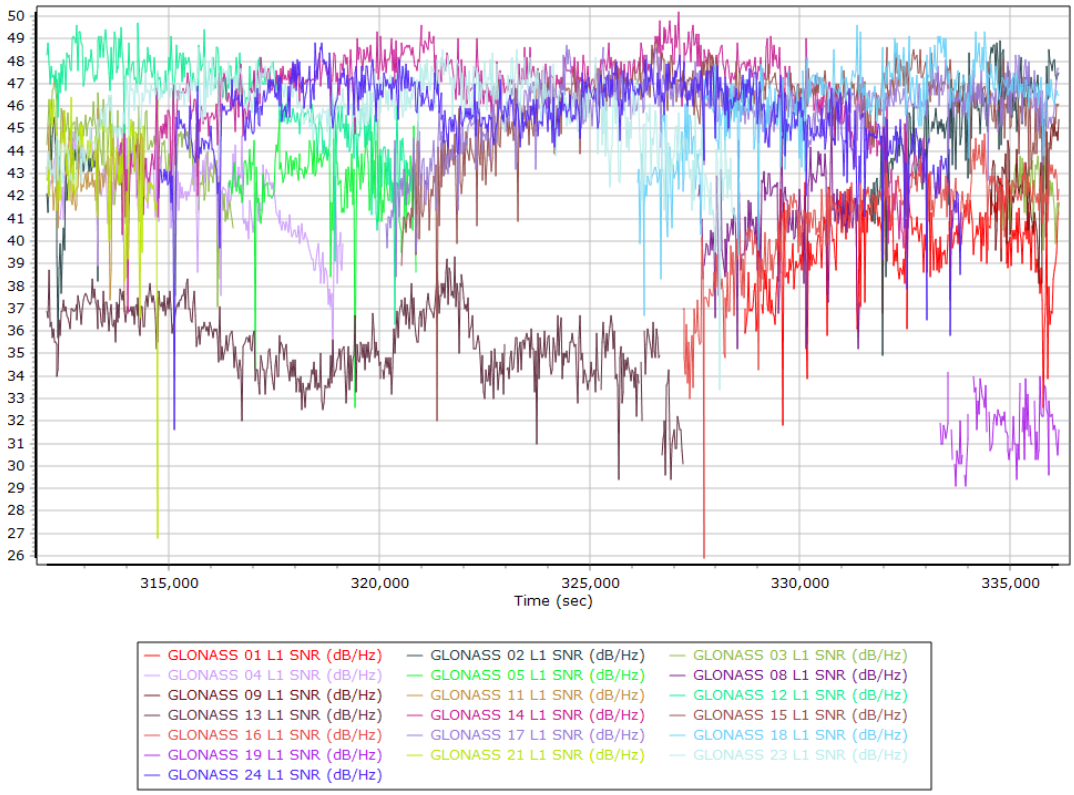
GPS L1 SNR



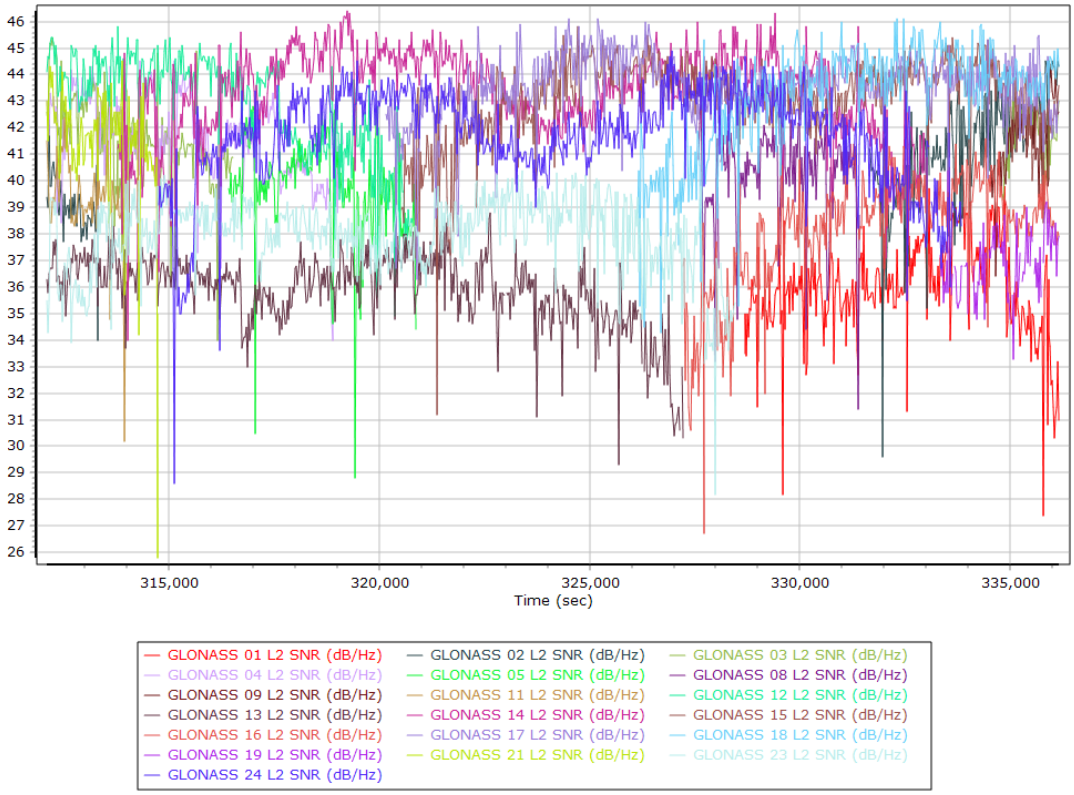
GPS L2 SNR



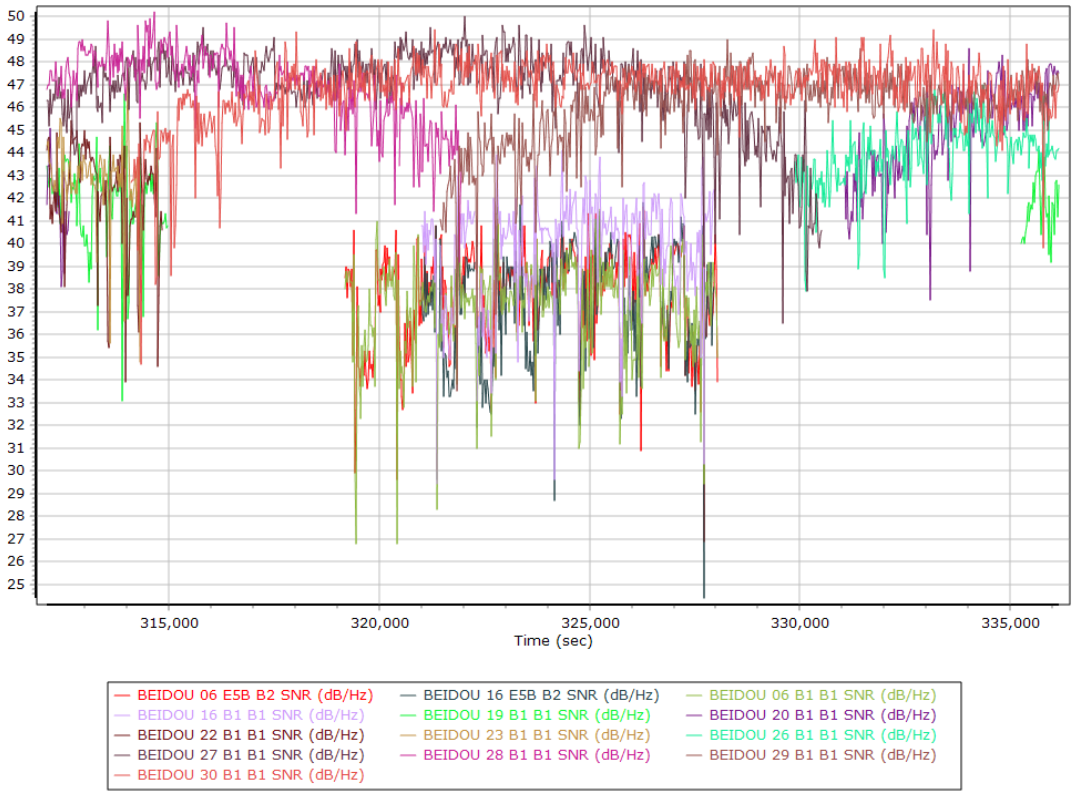
GLONASS L1 SNR



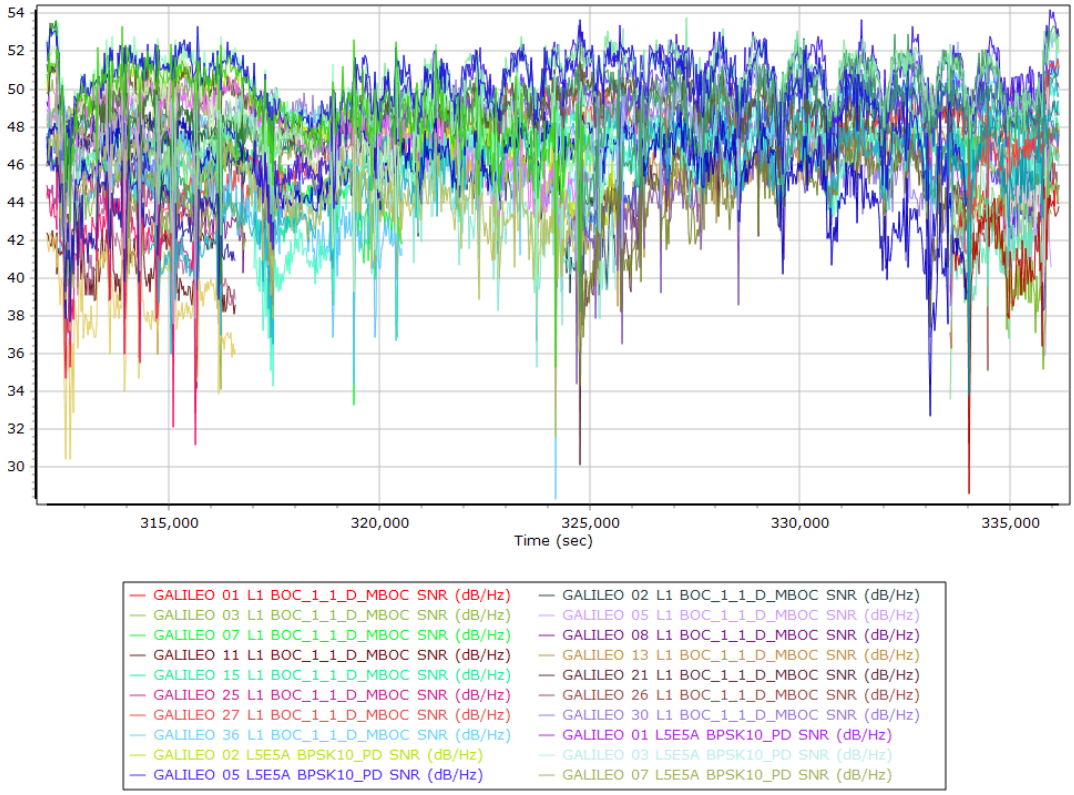
GLONASS L2 SNR



BEIDOU SNR

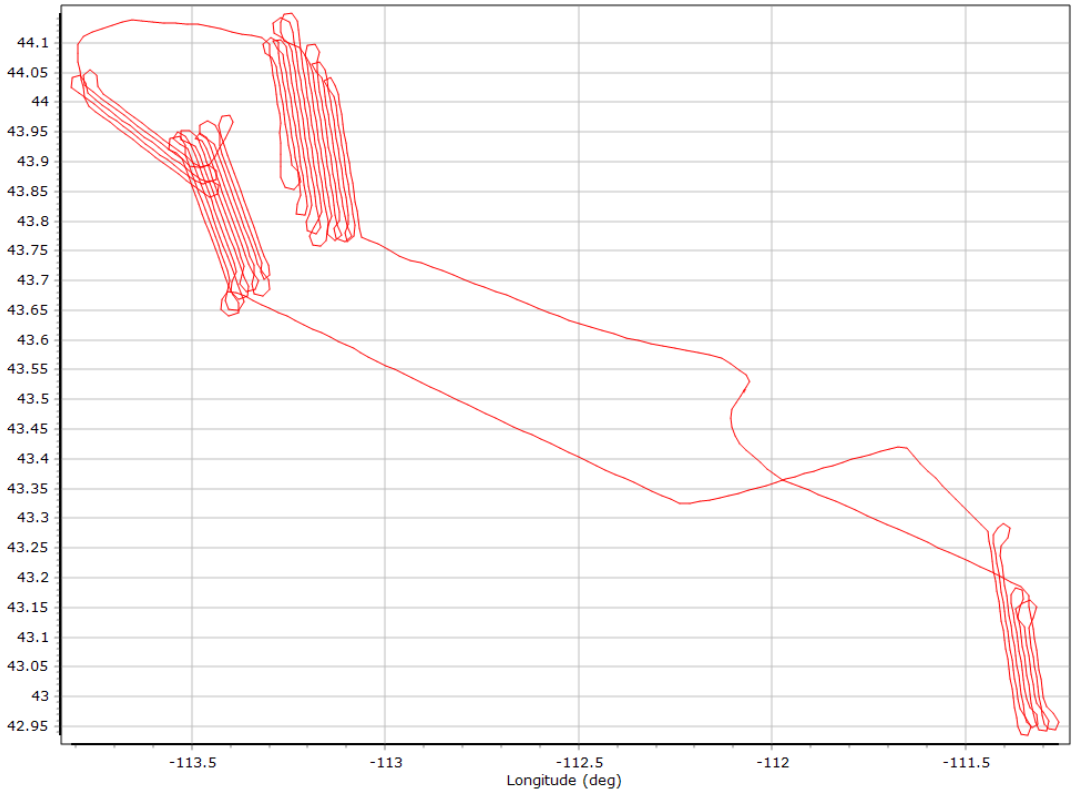


GALILEO SNR

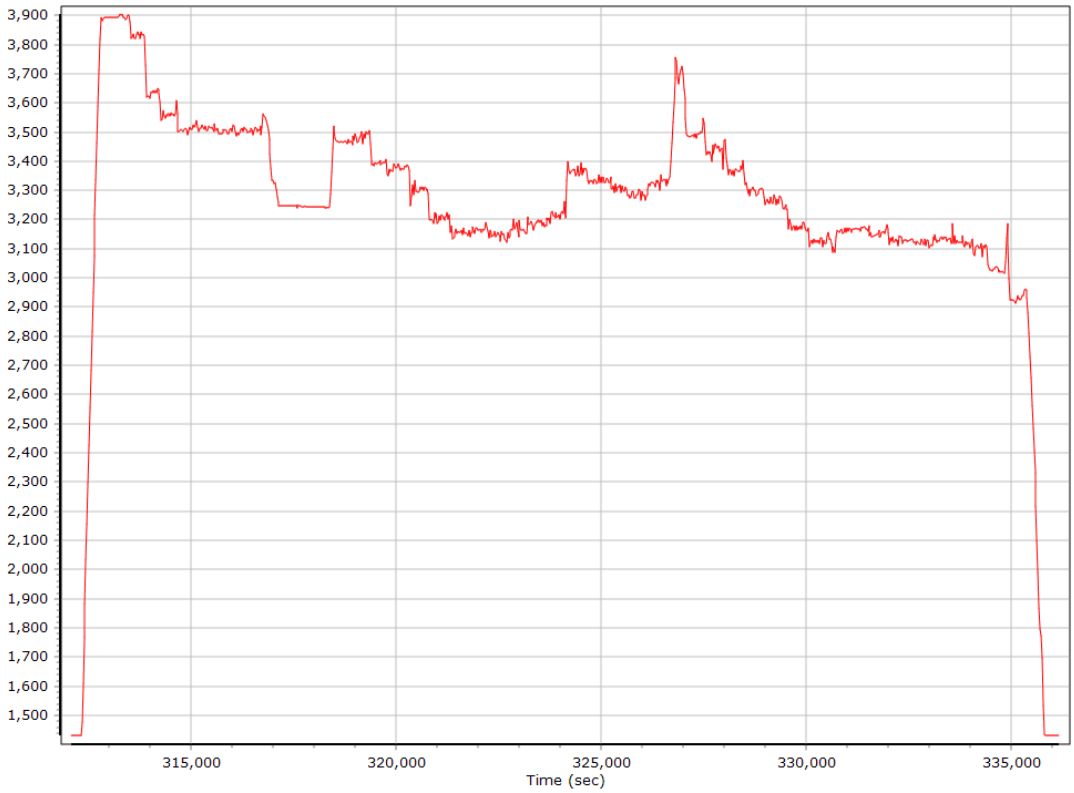

54
52
50
48
46
44
42
40
38
36
34
32
30
315,000
320,000
325,000
330,000
335,000
Time (sec)
GALILEO 01 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 02 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 03 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 05 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 07 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 08 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 11 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 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 25 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 03 L5E5A BPSK10_PD SNR (dB/Hz)
GALILEO 05 L5E5A BPSK10_PD SNR (dB/Hz)
GALILEO 07 L5E5A BPSK10_PD SNR (dB/Hz)

Smoothed Trajectory Information

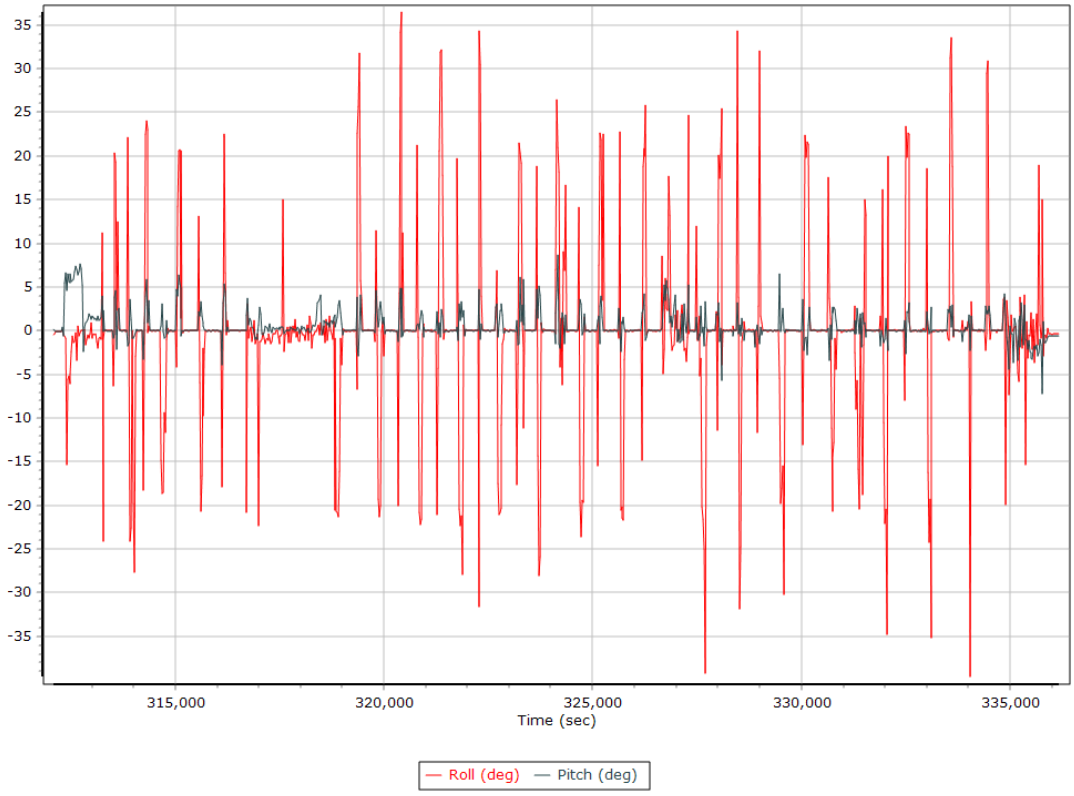
Top View



Altitude



Roll/Pitch



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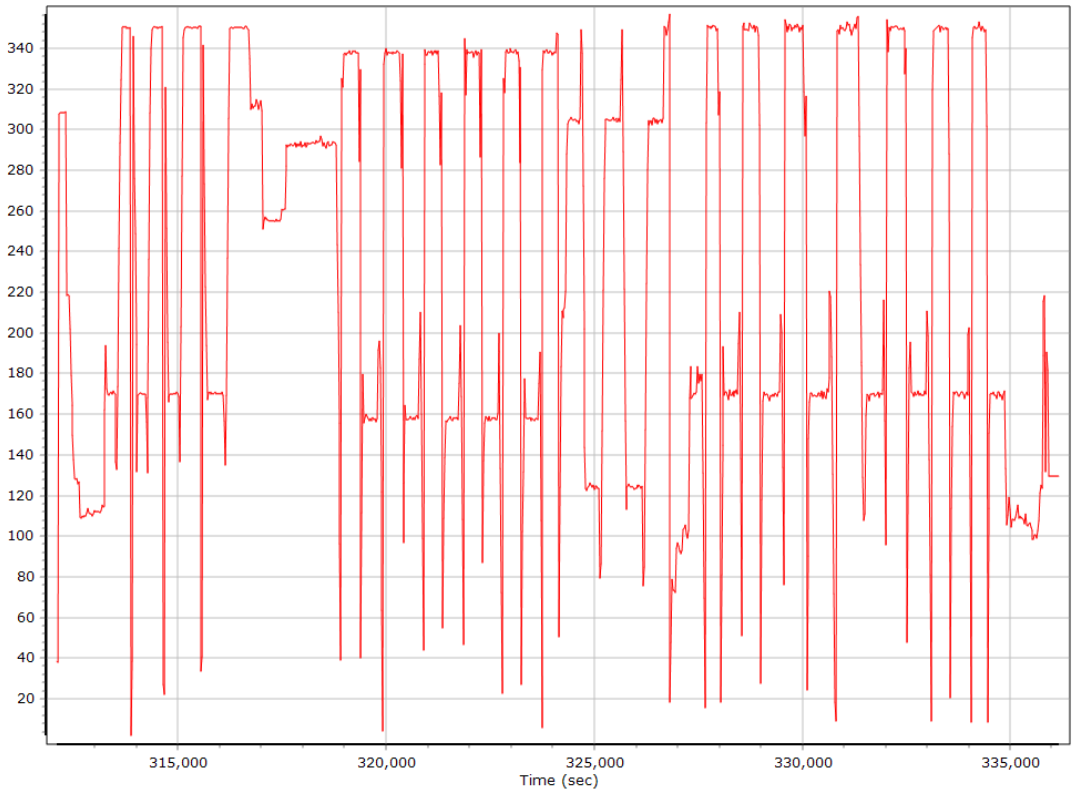
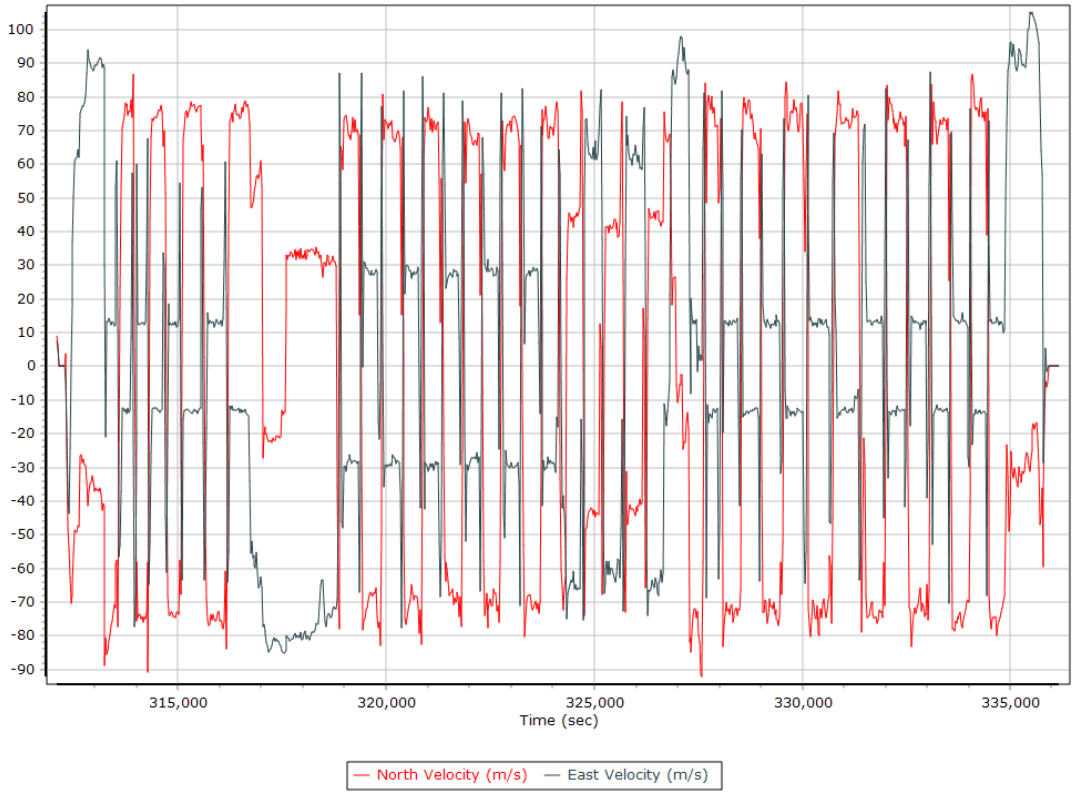
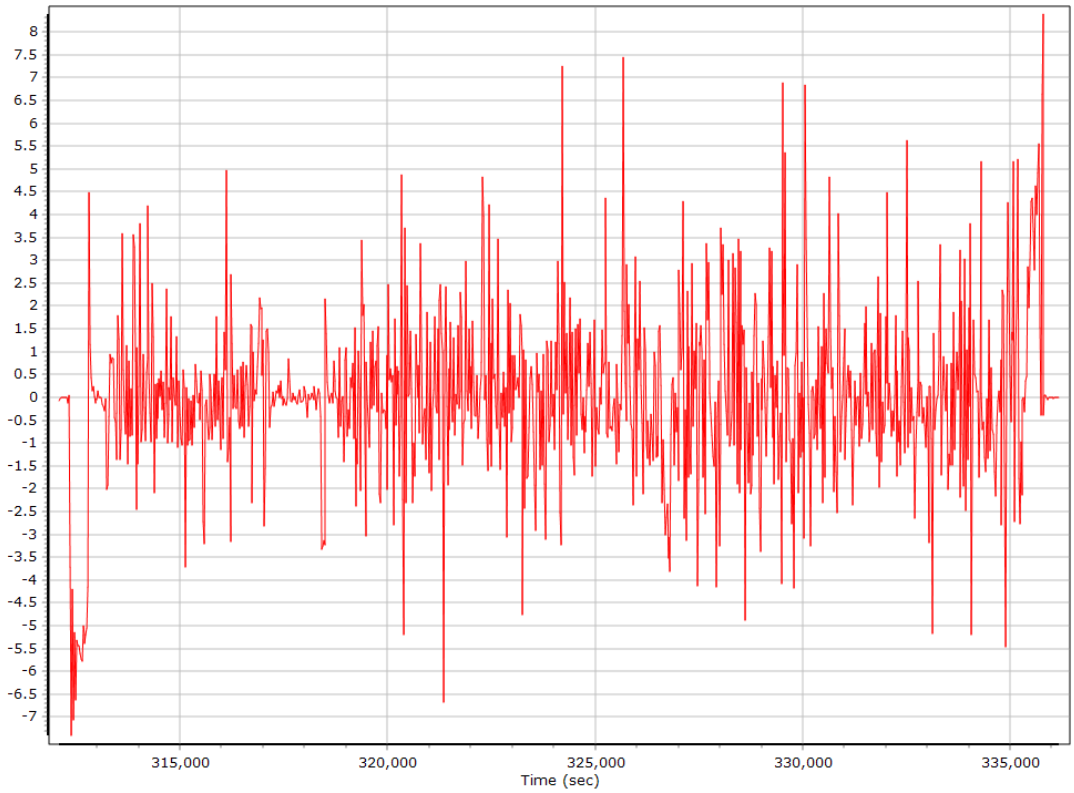


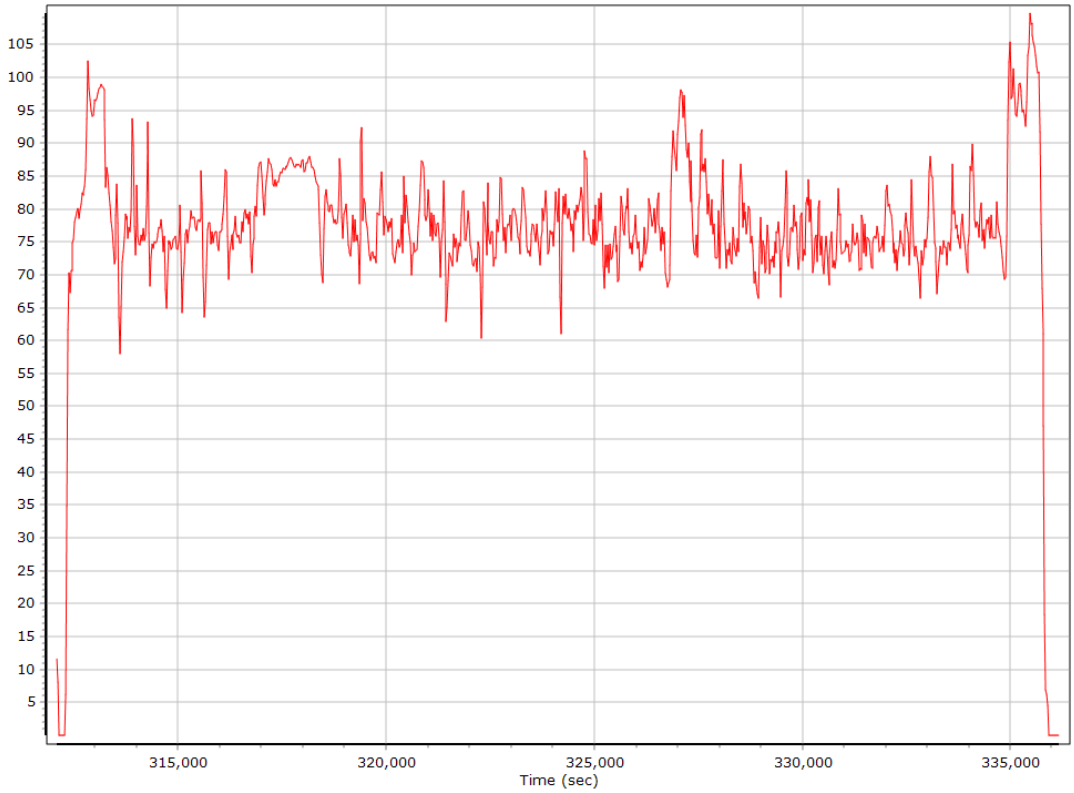
North/East Velocity



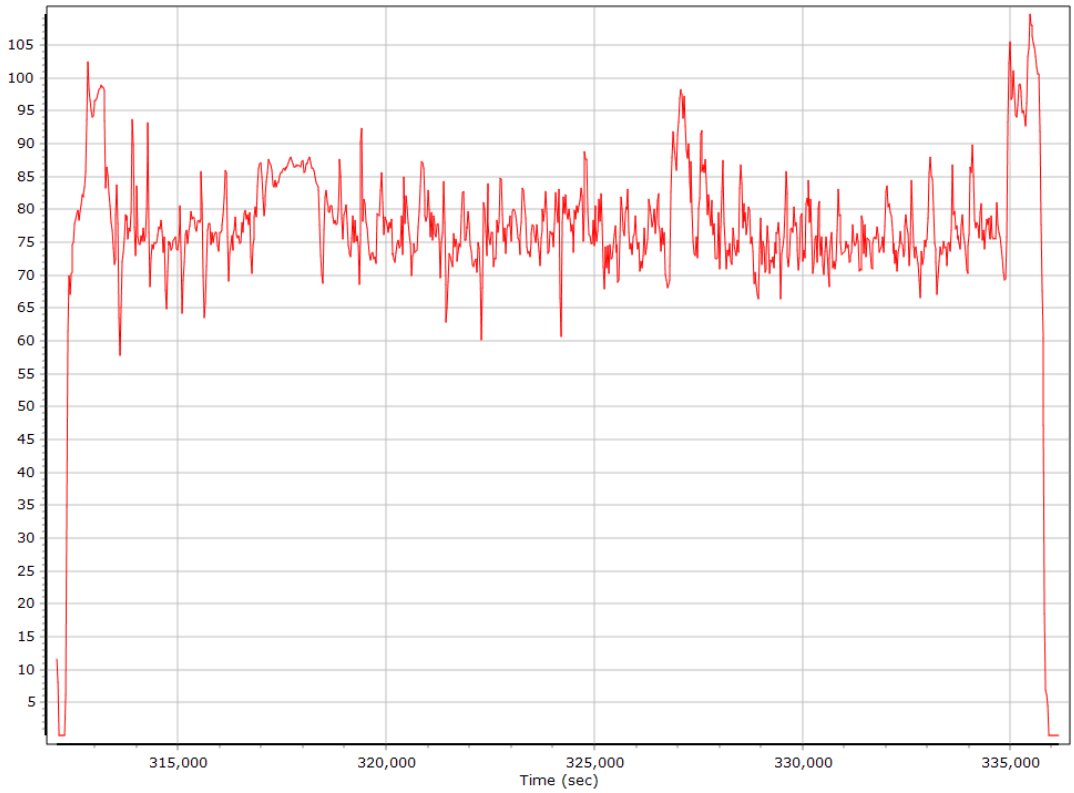
Down Velocity



Total Speed

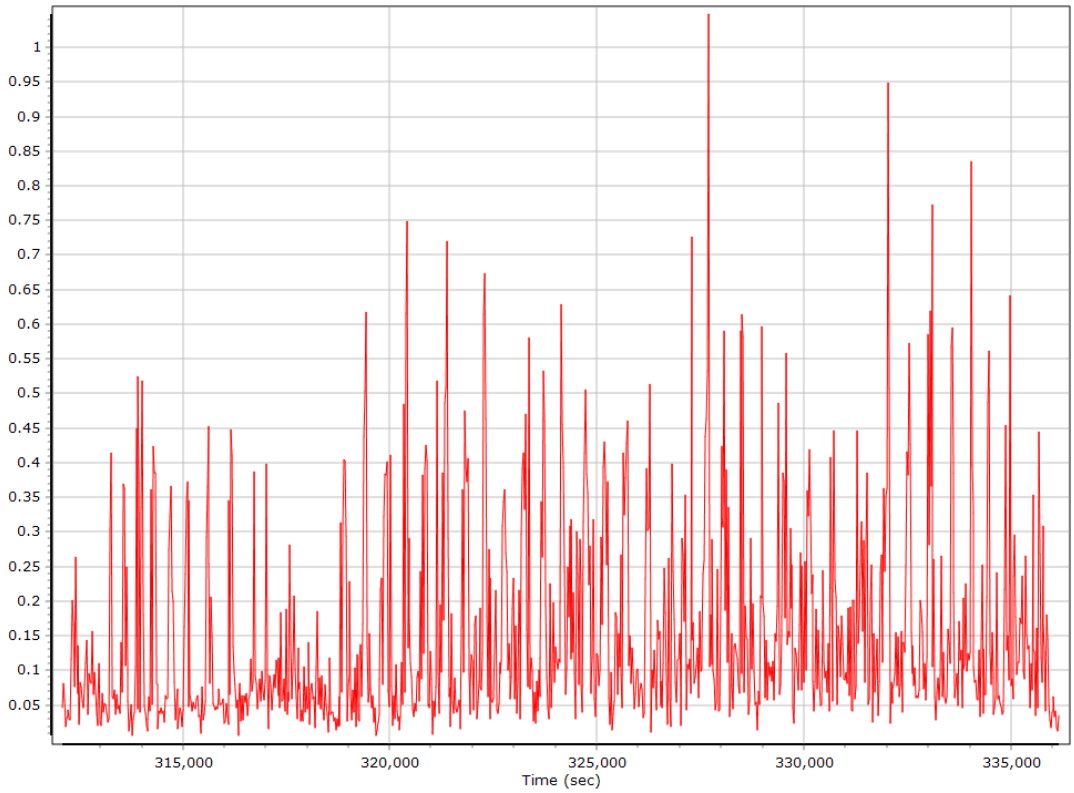


Ground Speed



Body Acceleration

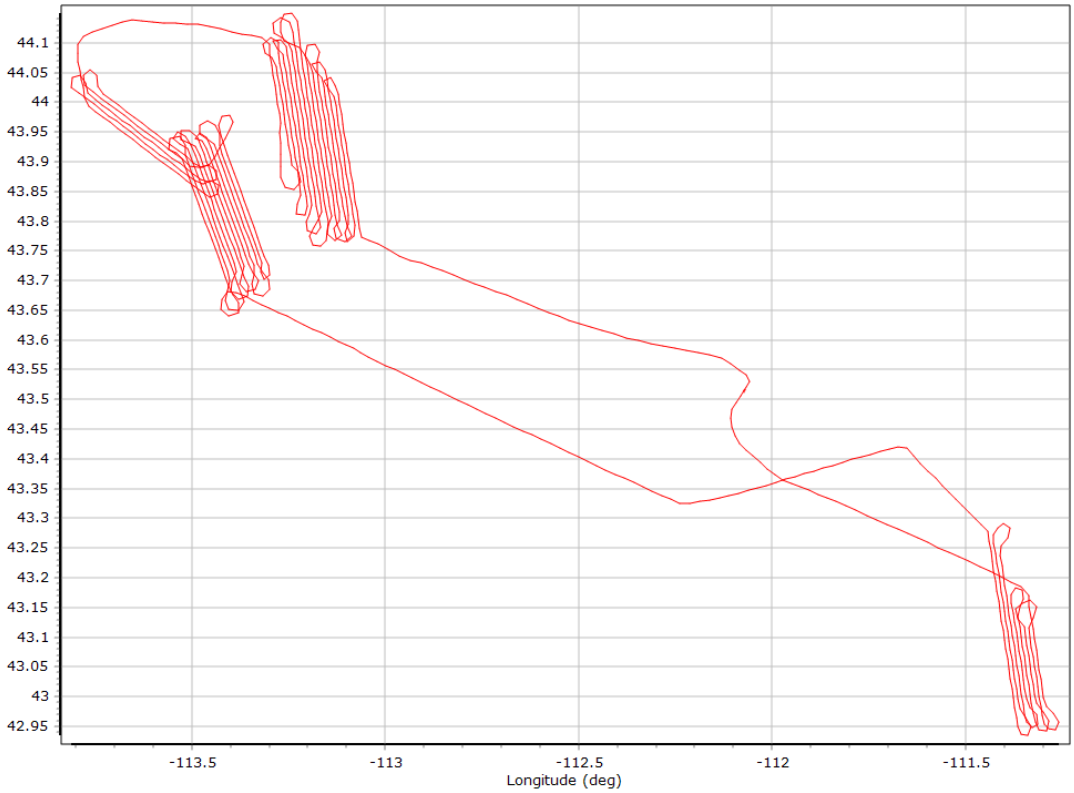
Total Body Acceleration



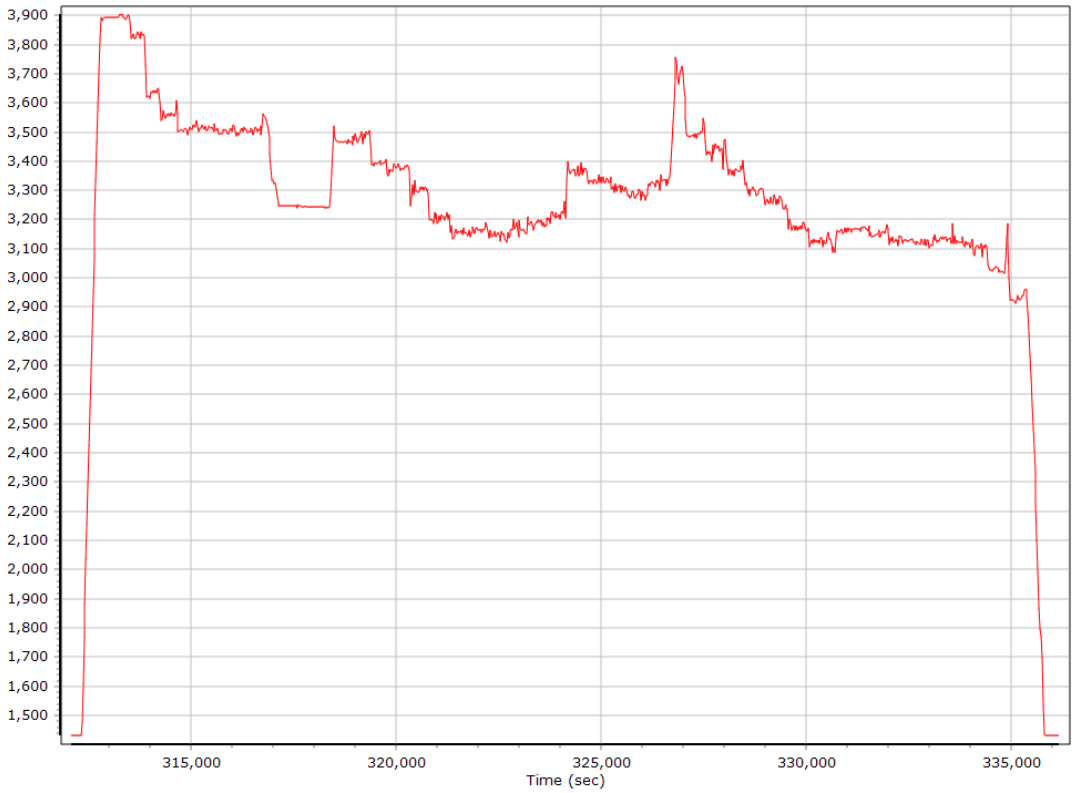
Body Angular Rate

Forward Processed Trajectory Information

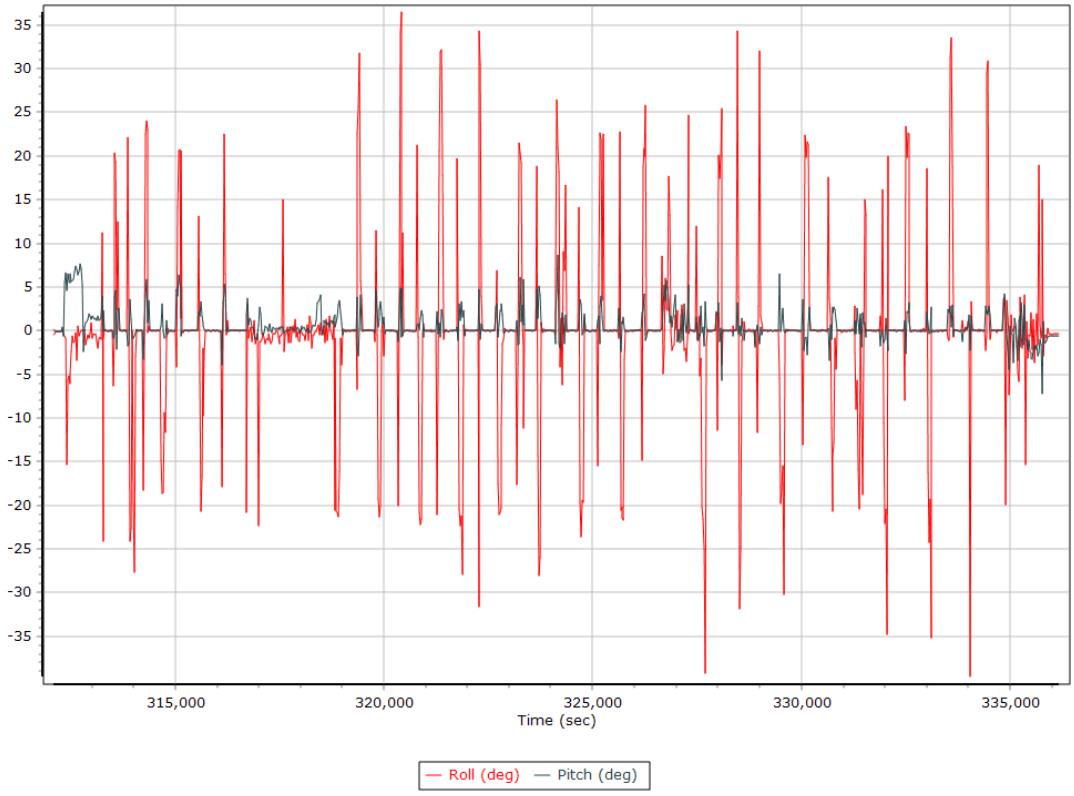
Top View



Altitude



Roll/Pitch



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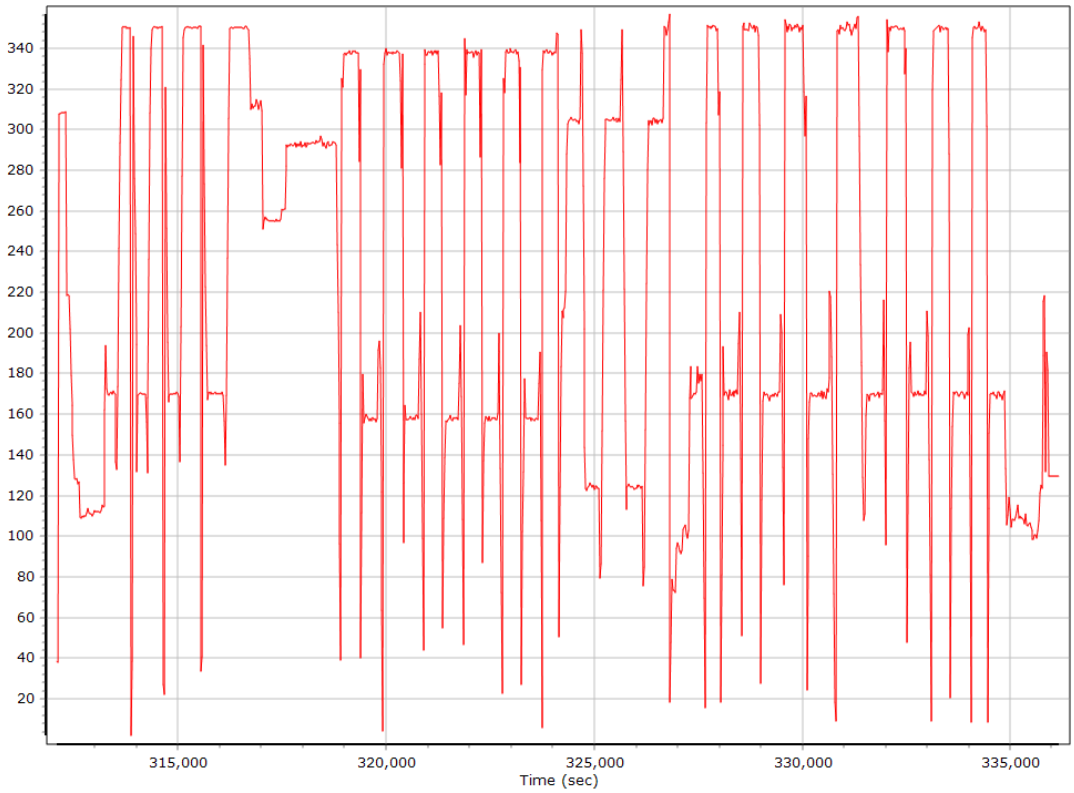
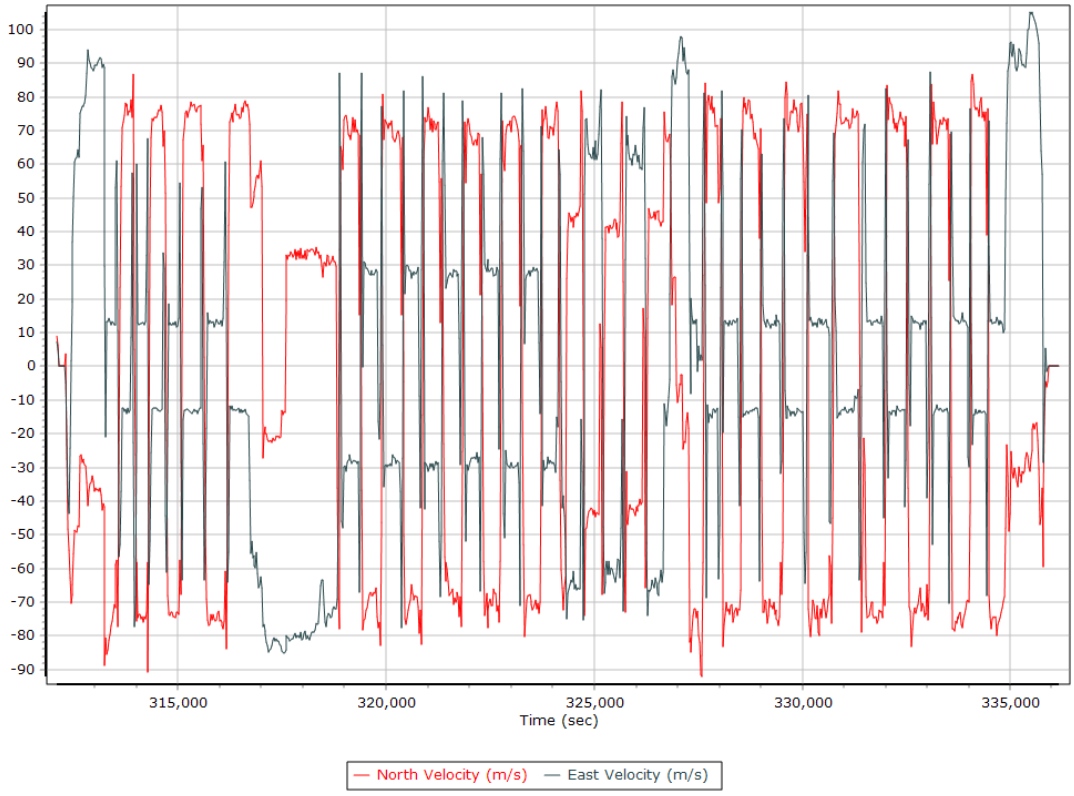
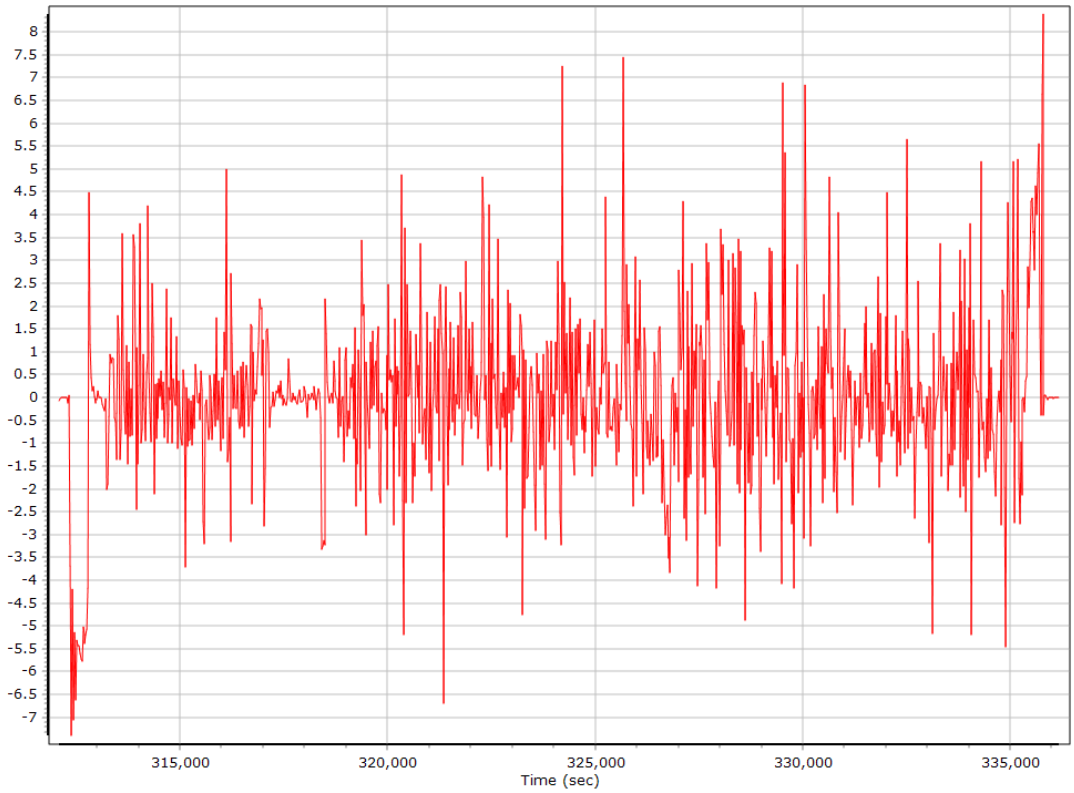


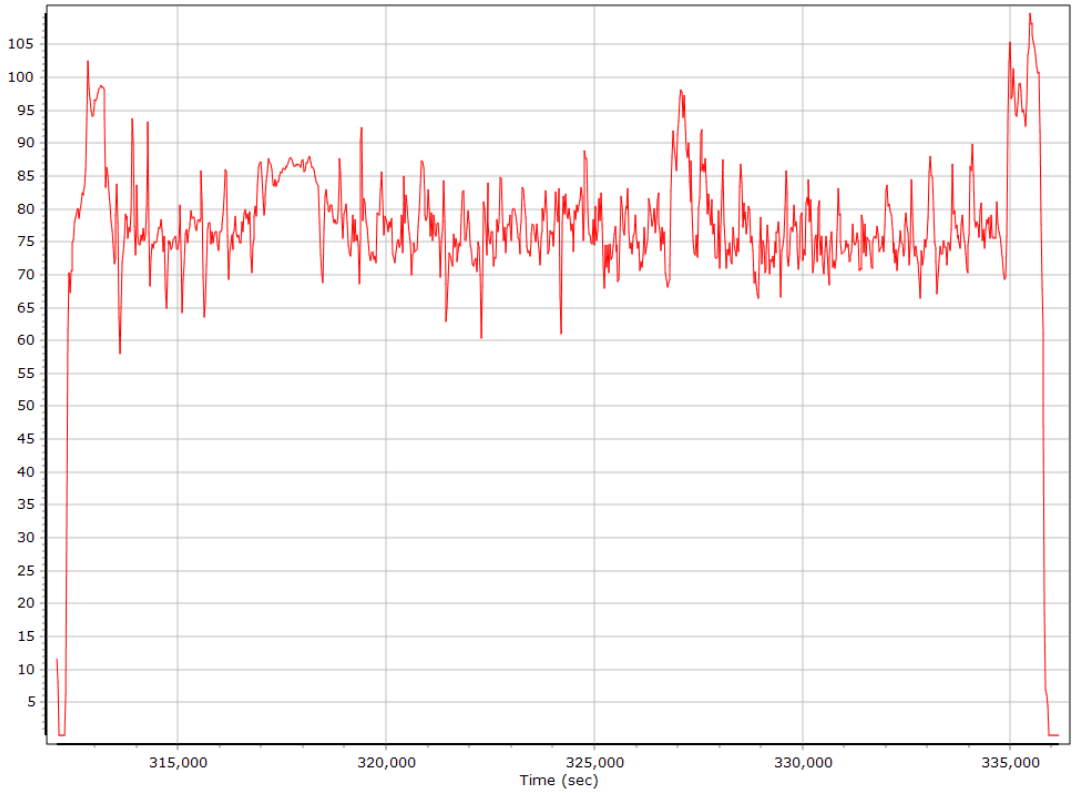
North/East Velocity



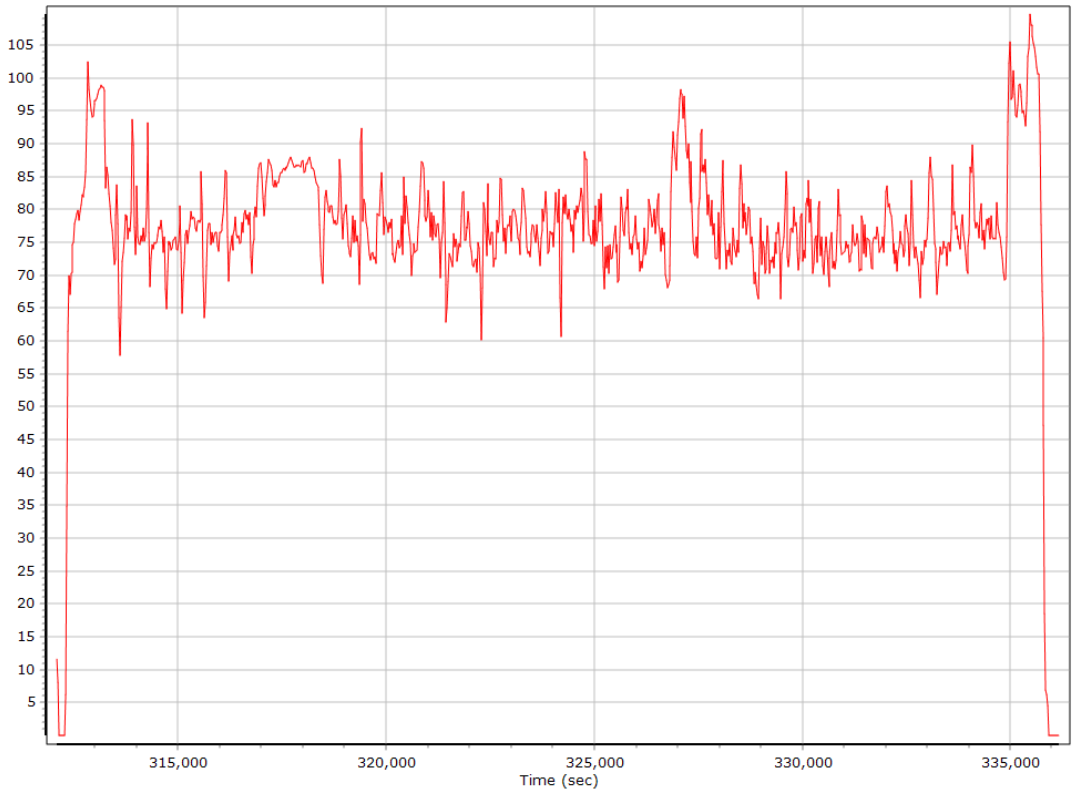
Down Velocity



Total Speed

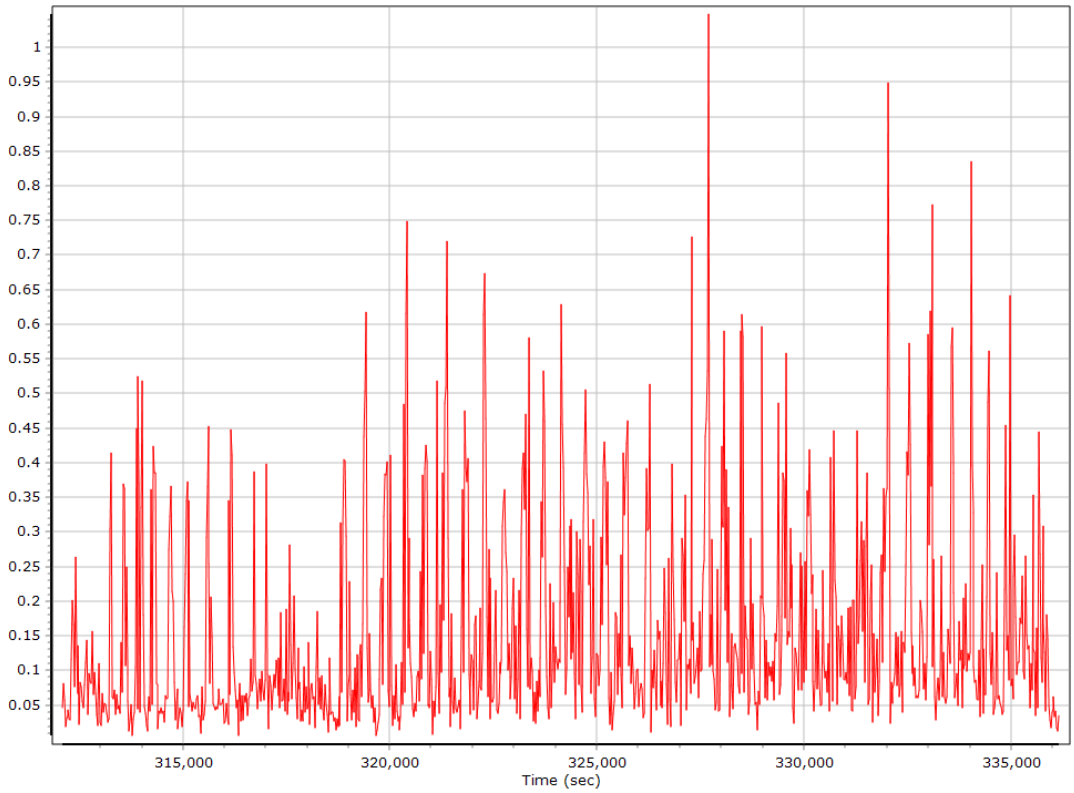


Ground Speed



Body Acceleration

Total Body Acceleration



Body Angular Rate

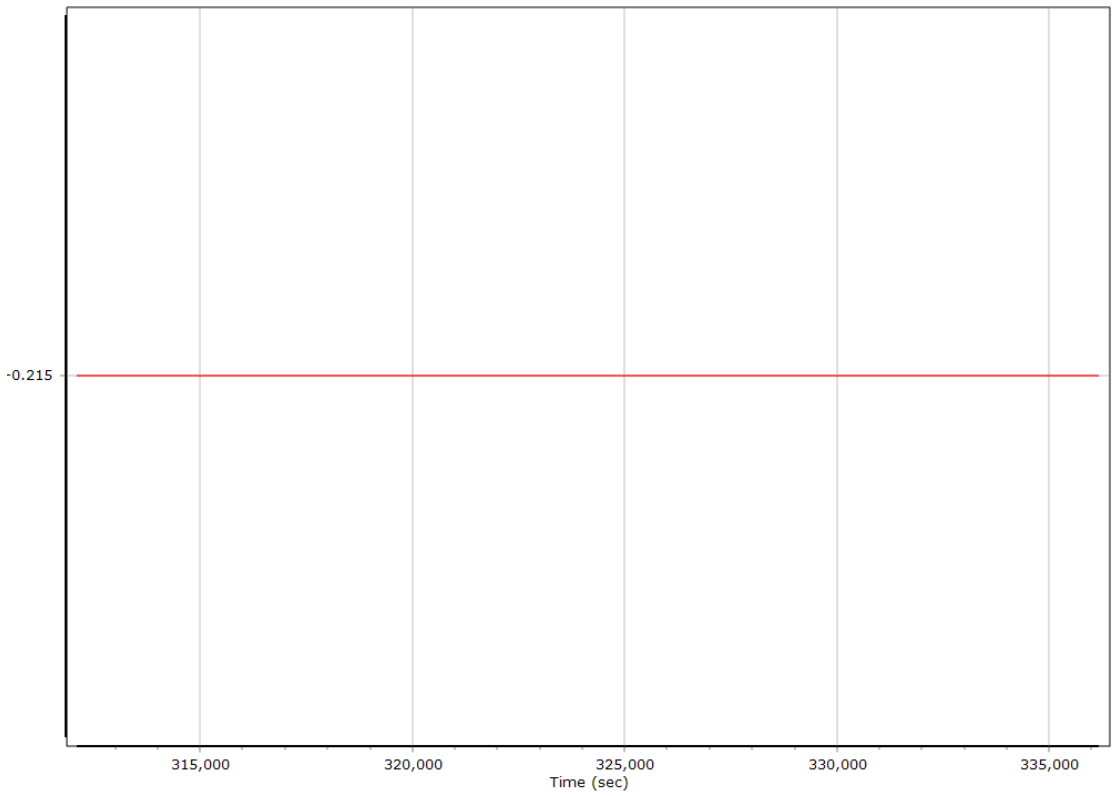
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion Trimble RTX Nav		
Stabilized mount	True		
Processing start time	311423.000 (06/10/2020 14:30:05)		
Processing end time	336188.000 (06/10/2020 21:22:50)		
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

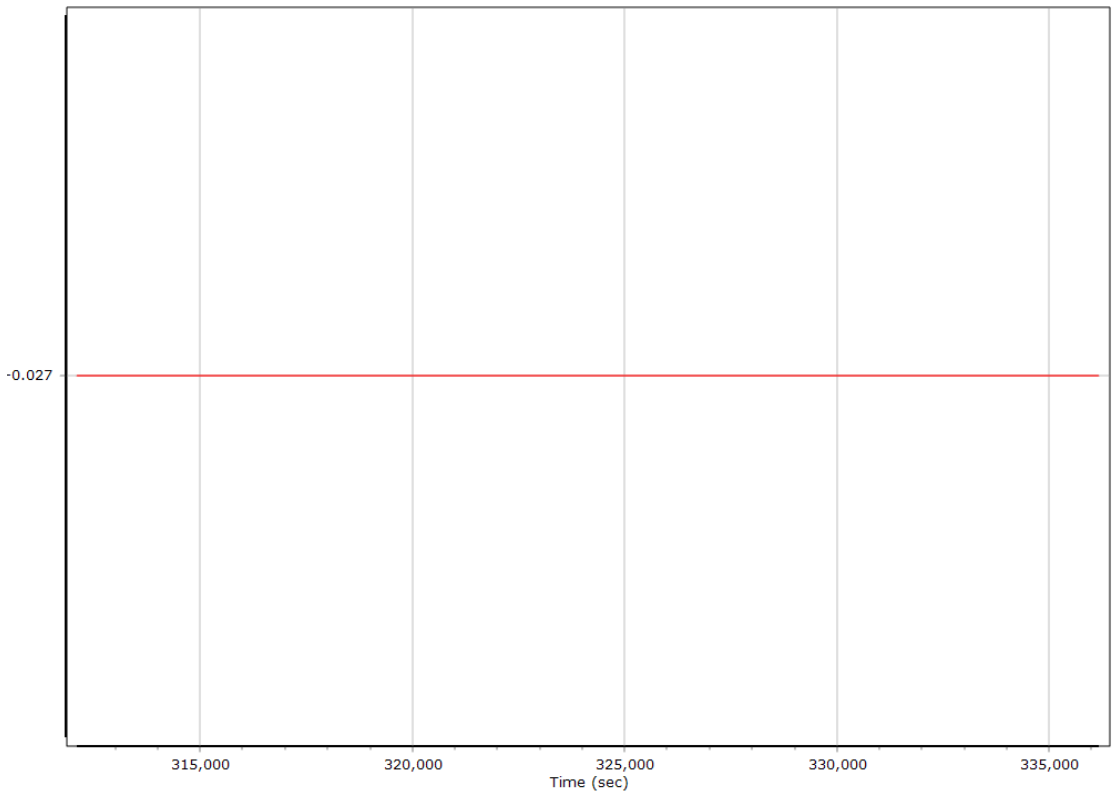
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

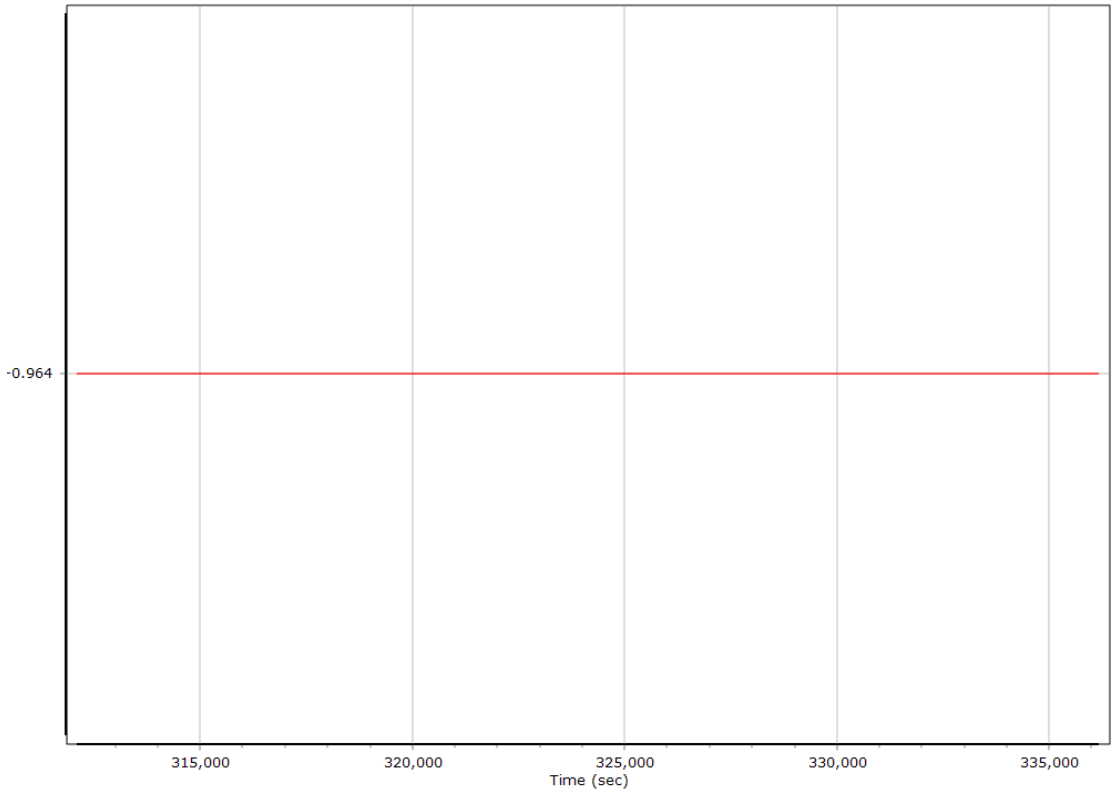
X Reference-Primary GNSS Lever Arm (m)



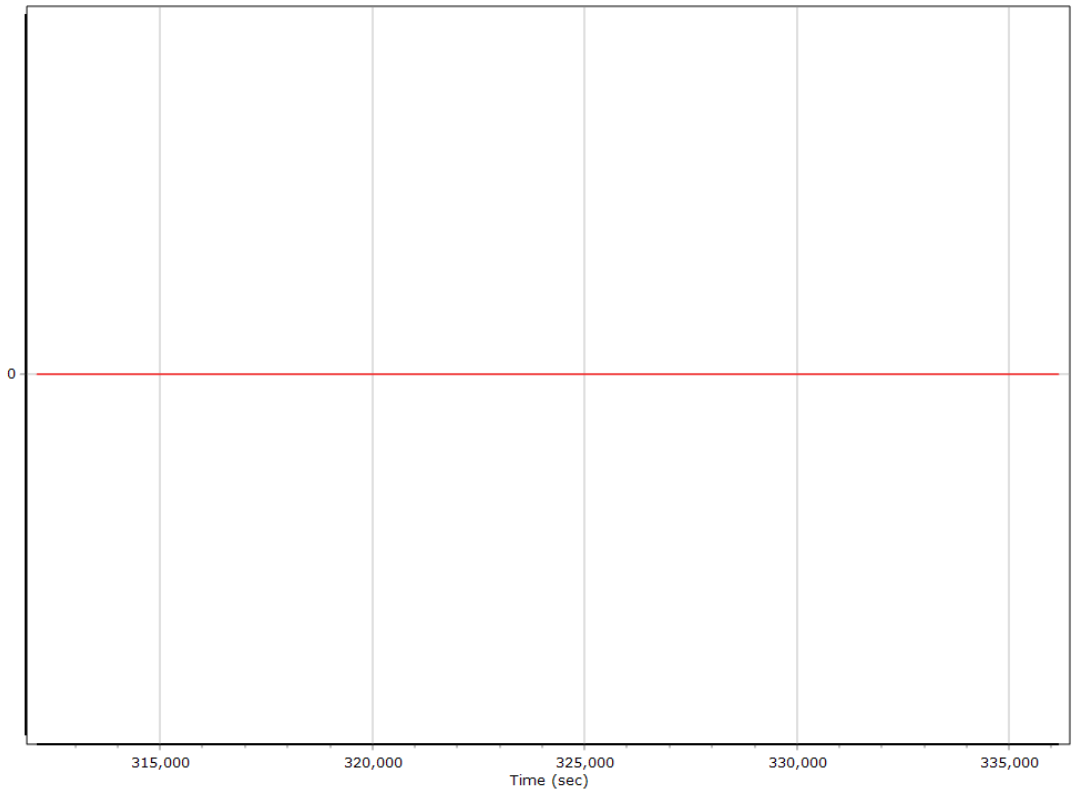
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



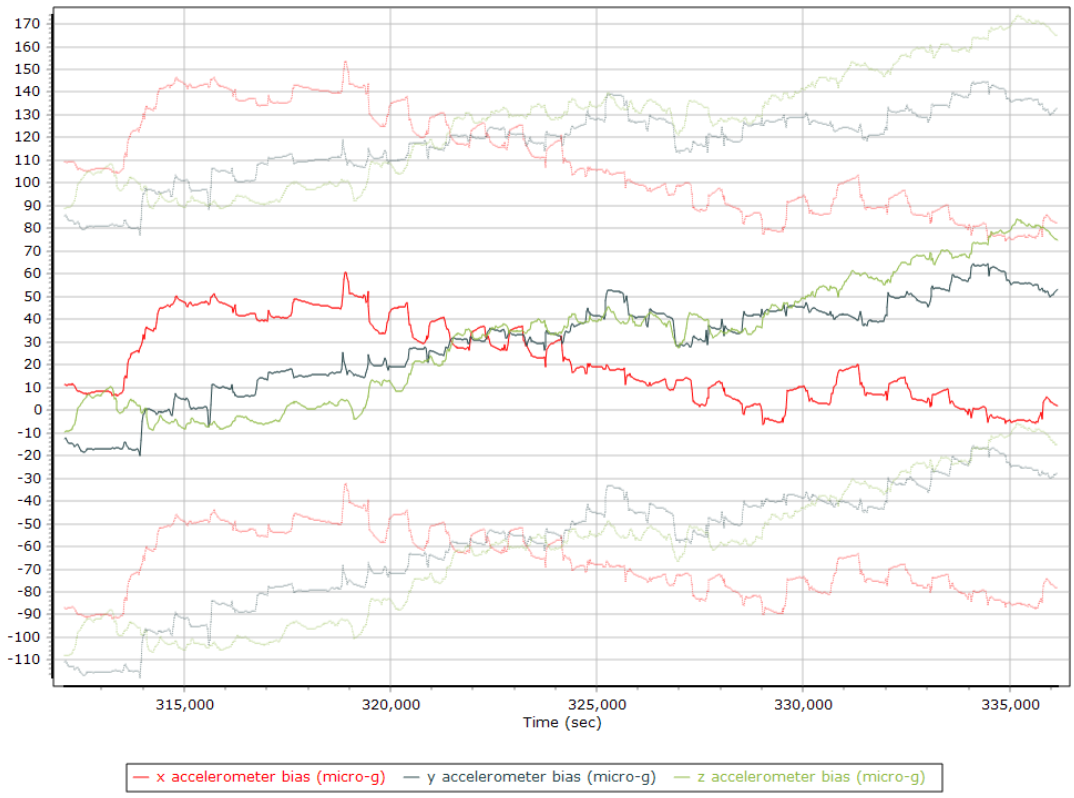
Reference-Primary GNSS Lever Arm Figure of Merit



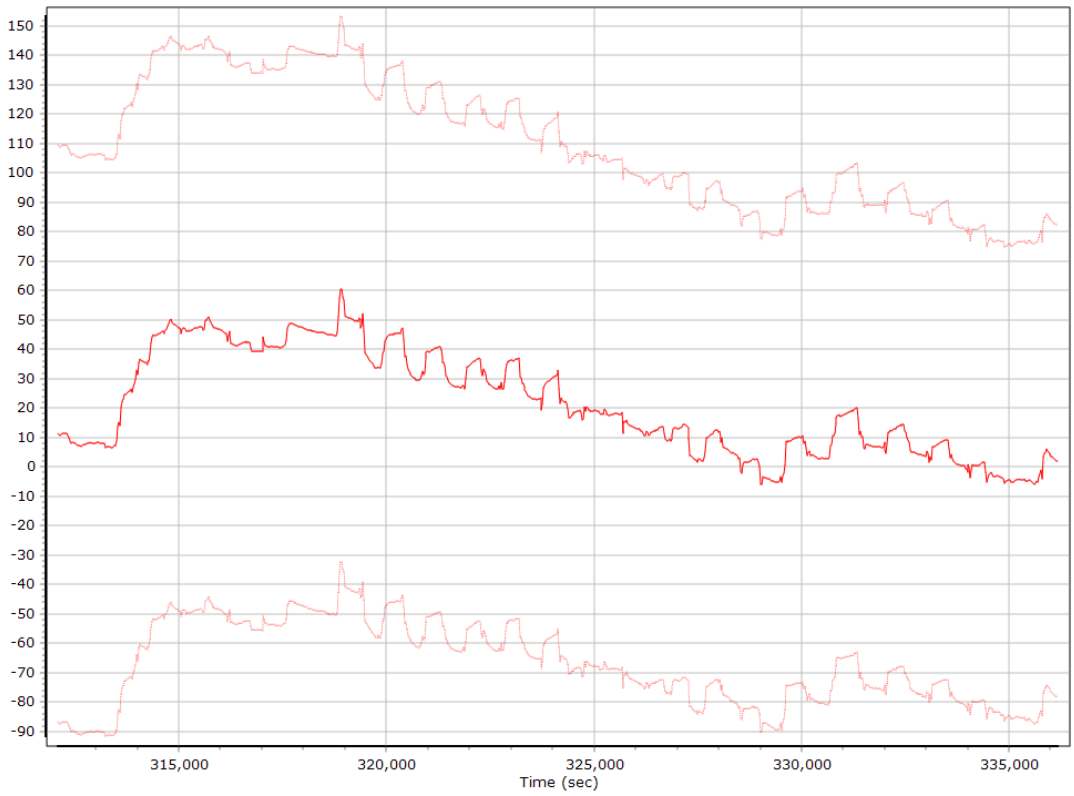
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

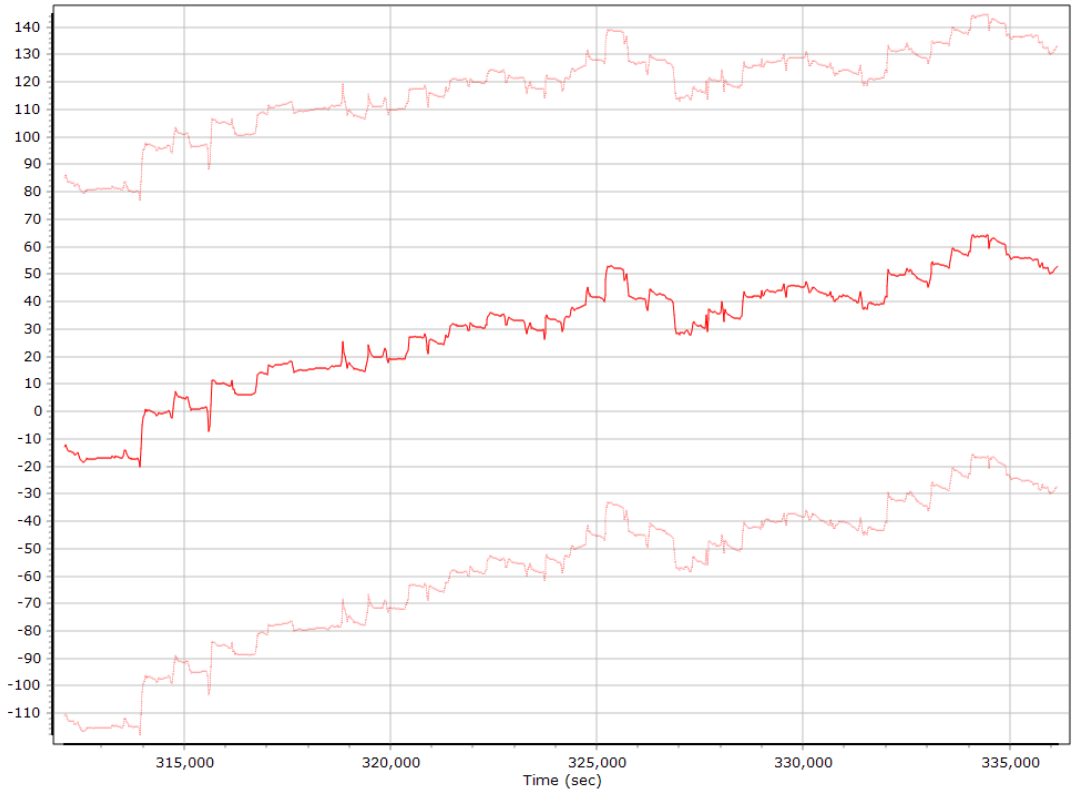
Accelerometer Bias (micro-g)



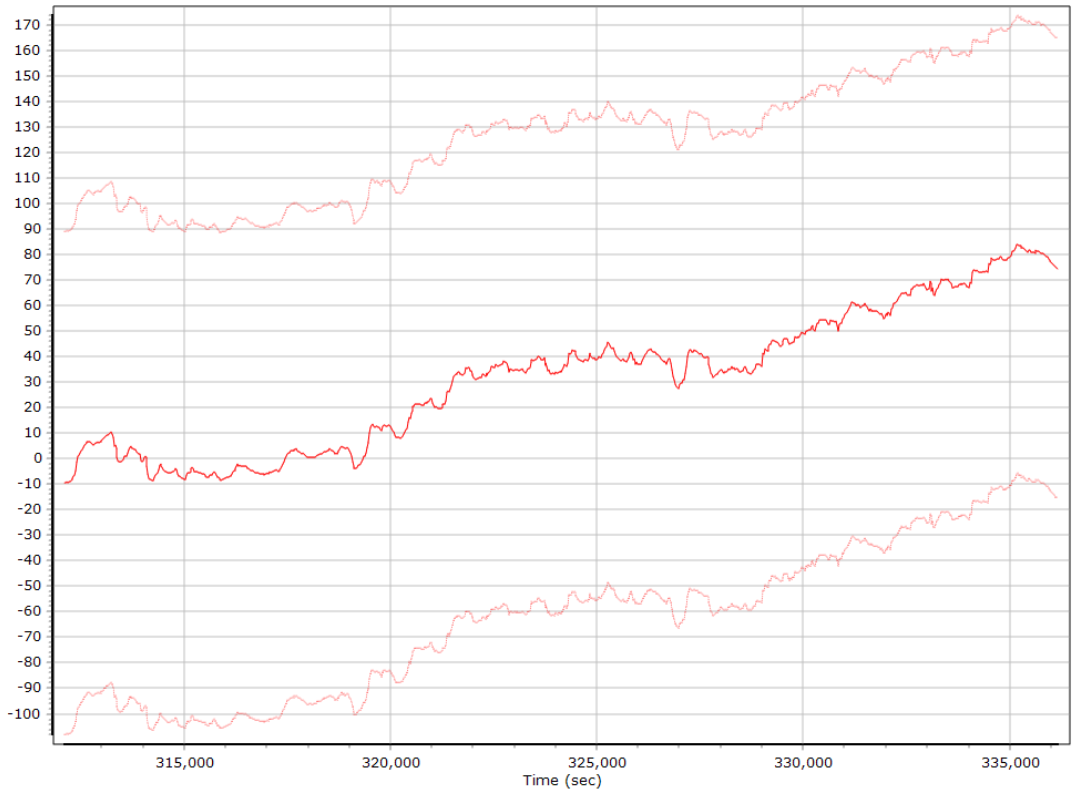
X Accelerometer Bias (micro-g)



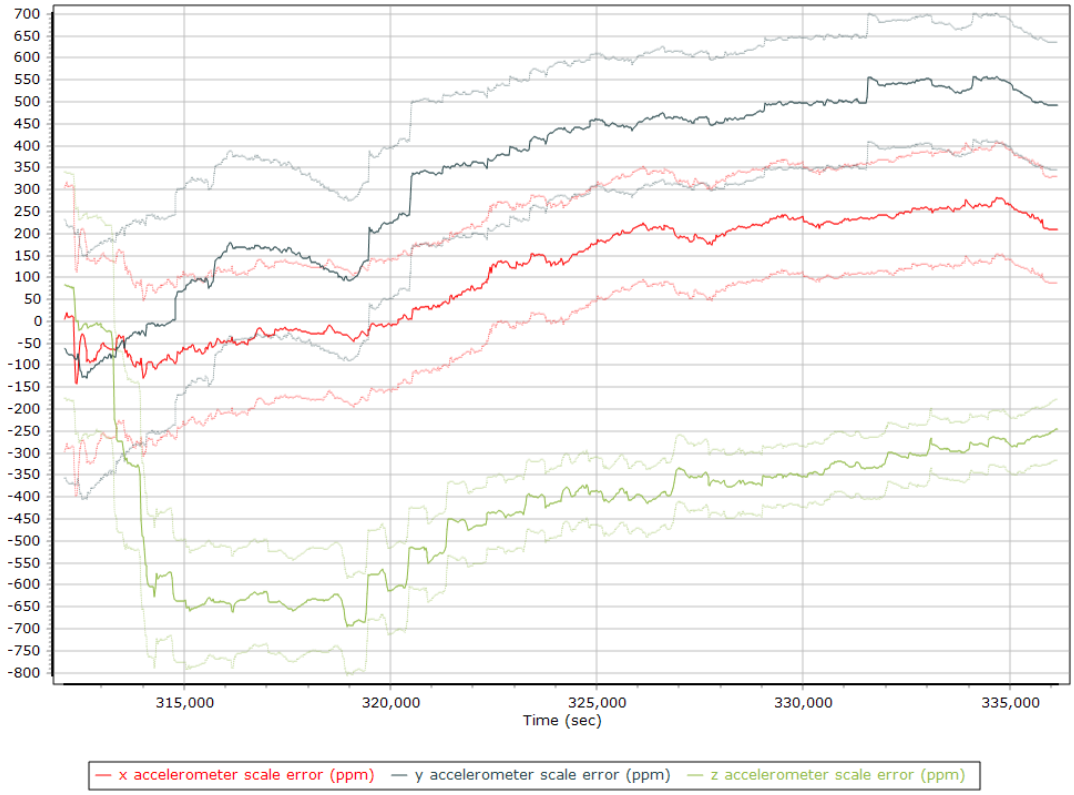
Y Accelerometer Bias (micro-g)



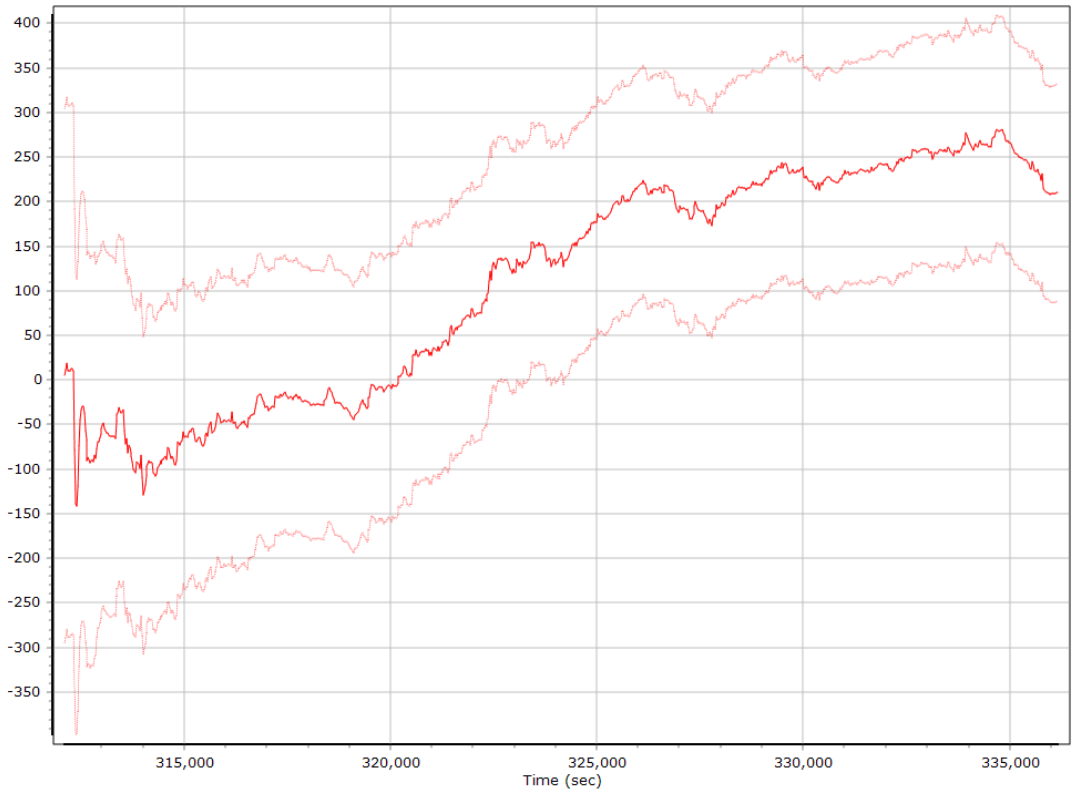
Z Accelerometer Bias (micro-g)



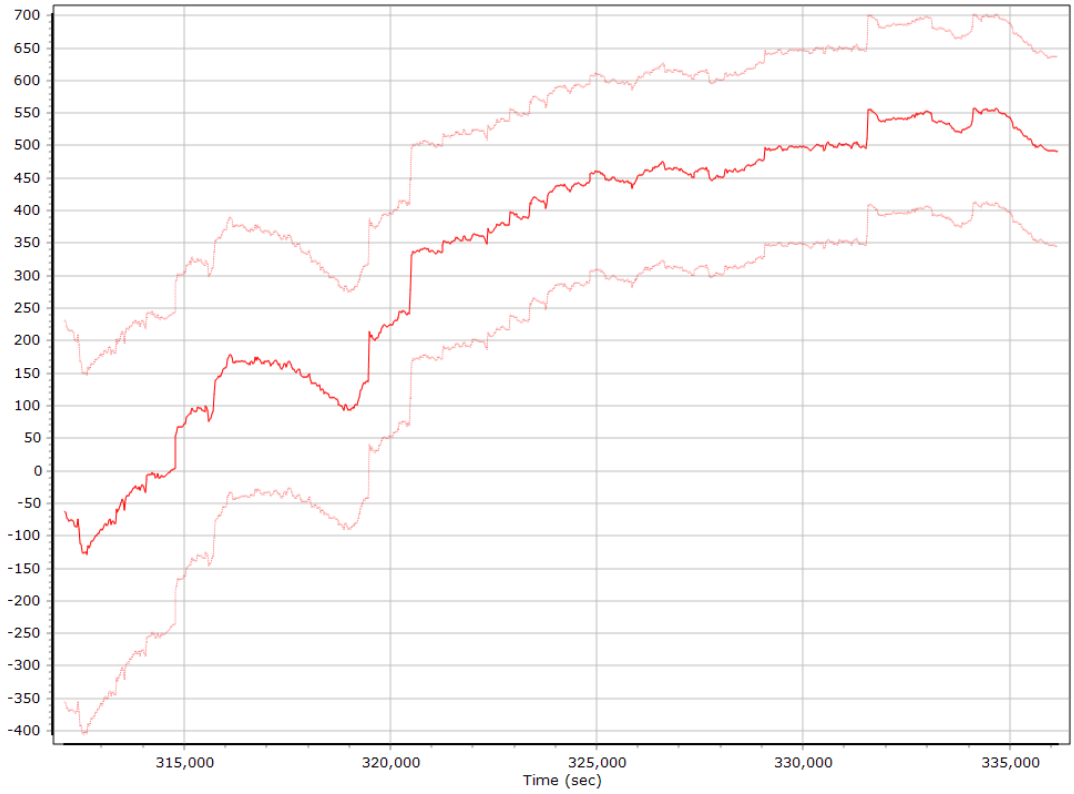
Accelerometer Scale Error (ppm)



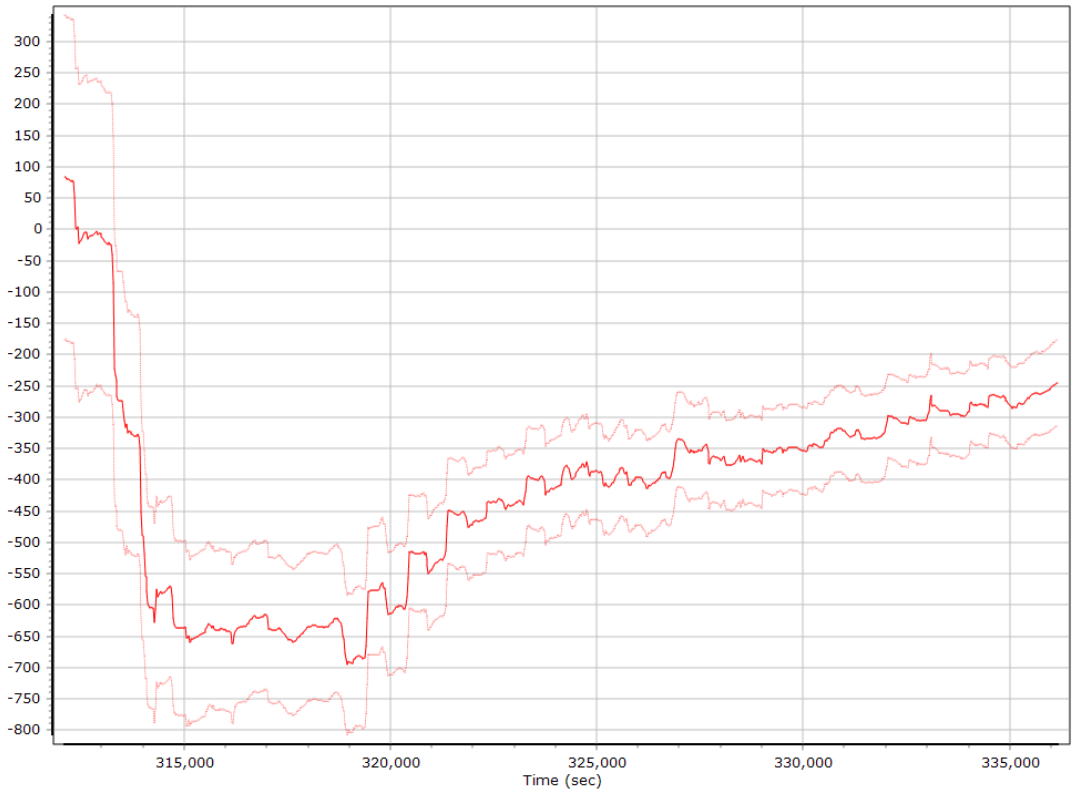
X Accelerometer Scale Error (ppm)



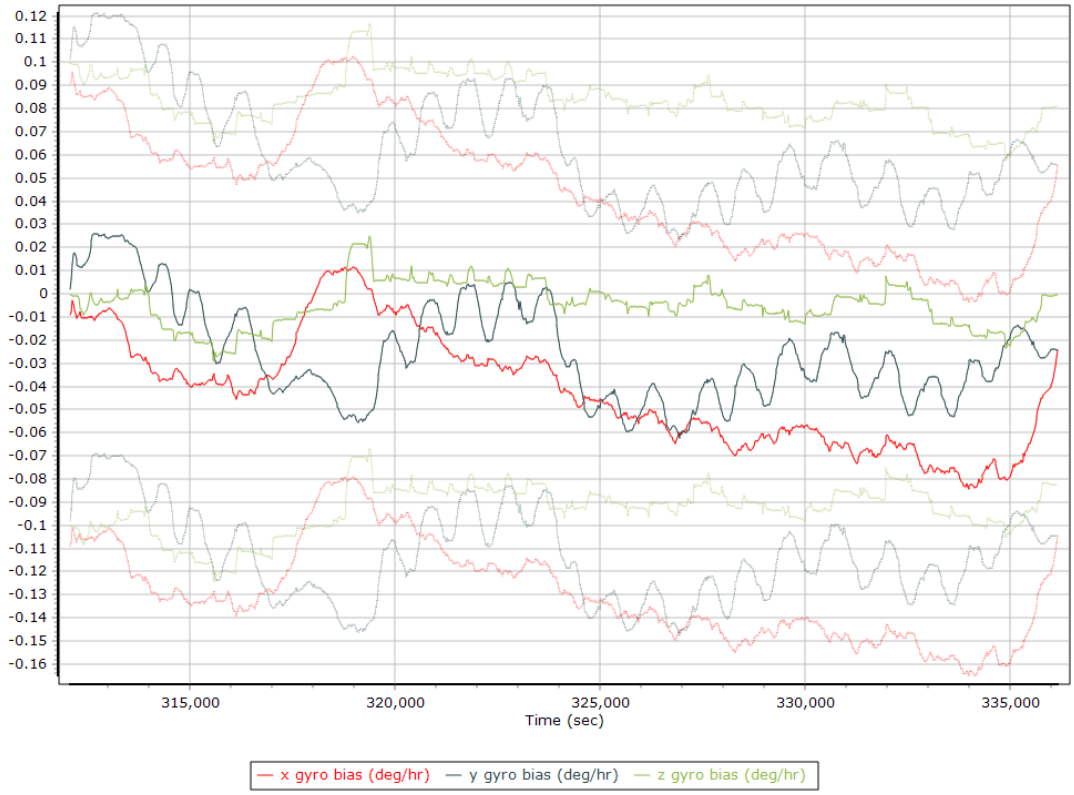
Y Accelerometer Scale Error (ppm)



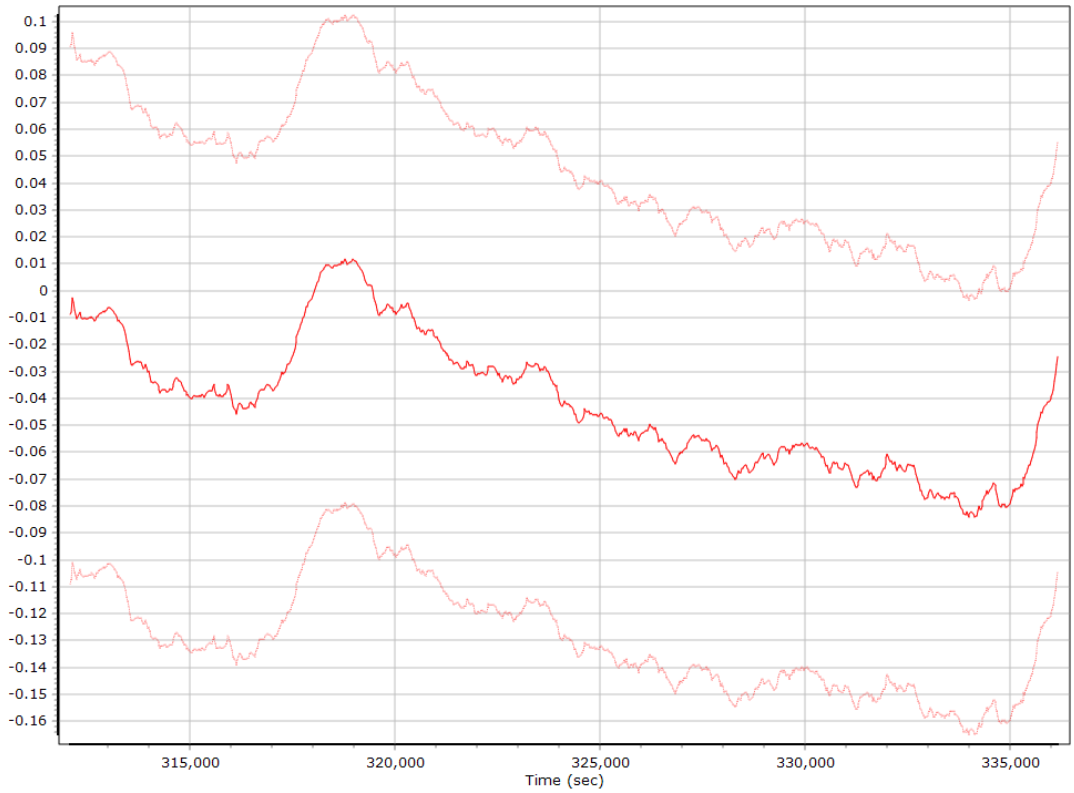
Z Accelerometer Scale Error (ppm)



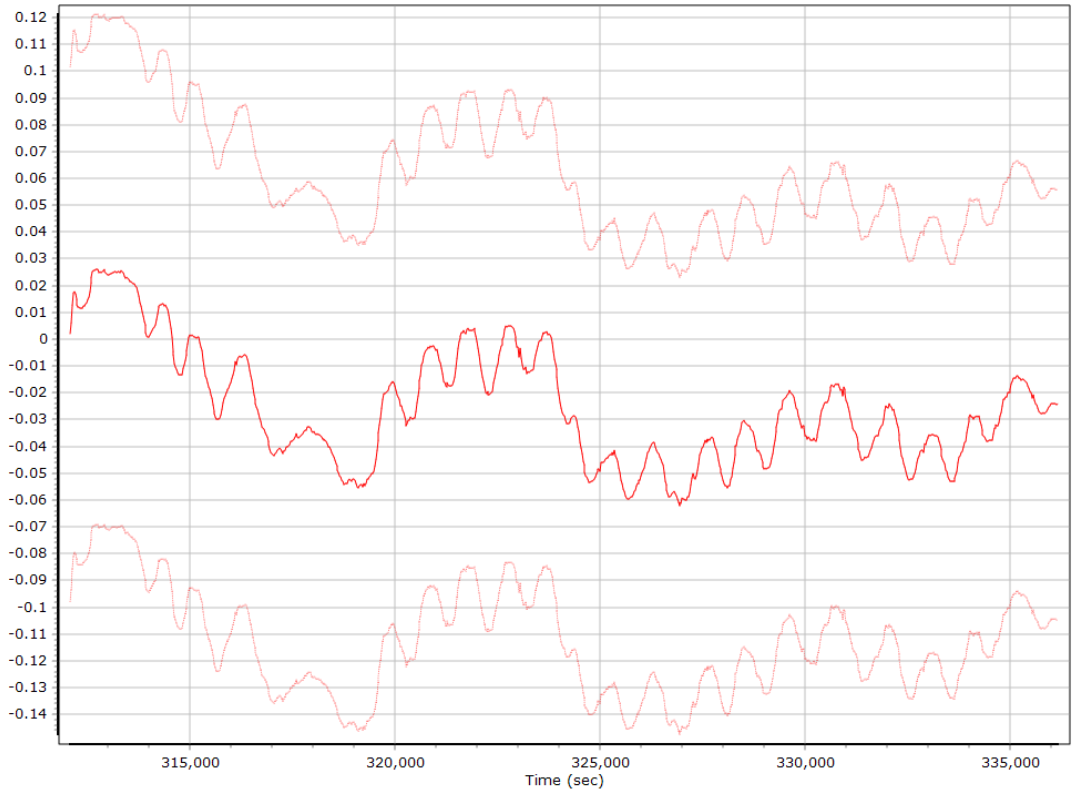
Gyro Bias (deg/h)



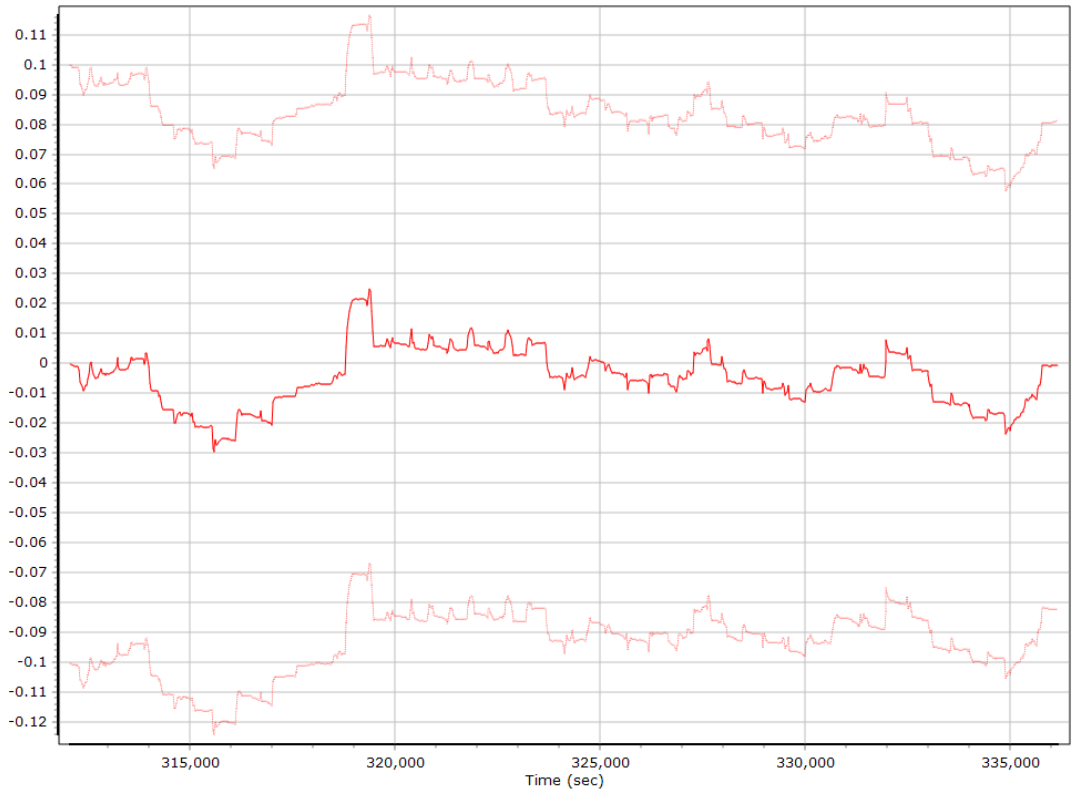
X Gyro Bias (deg/h)



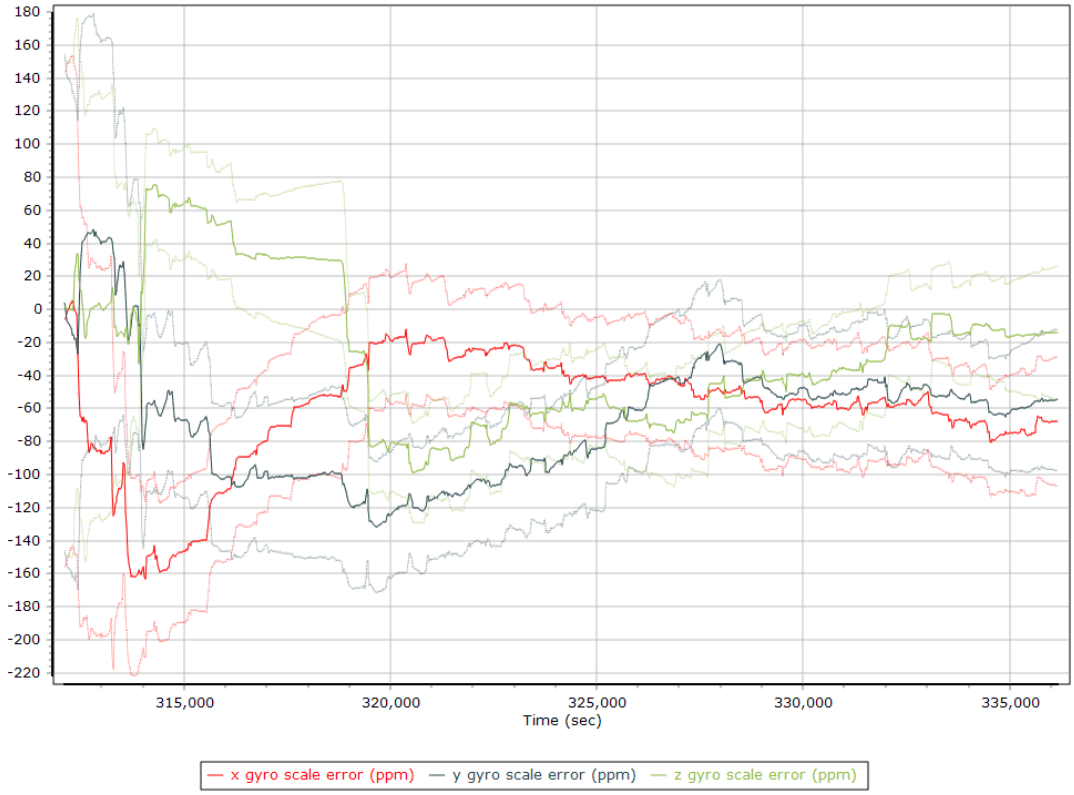
Y Gyro Bias (deg/h)



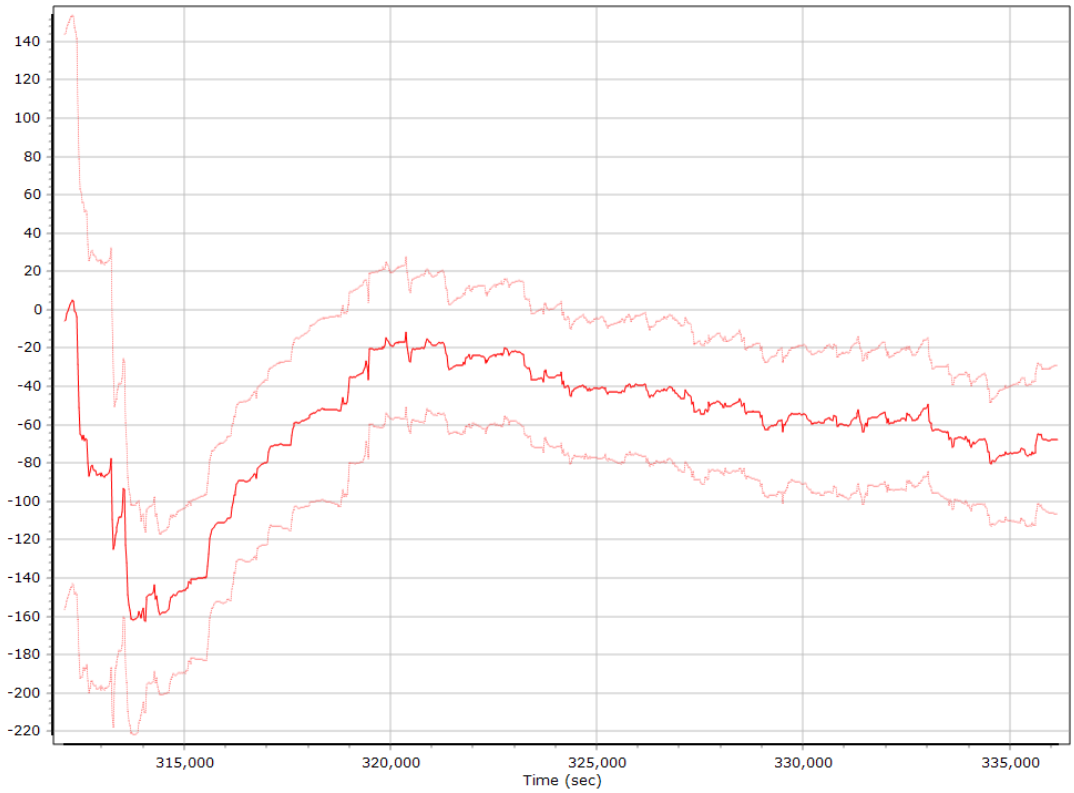
Z Gyro Bias (deg/h)



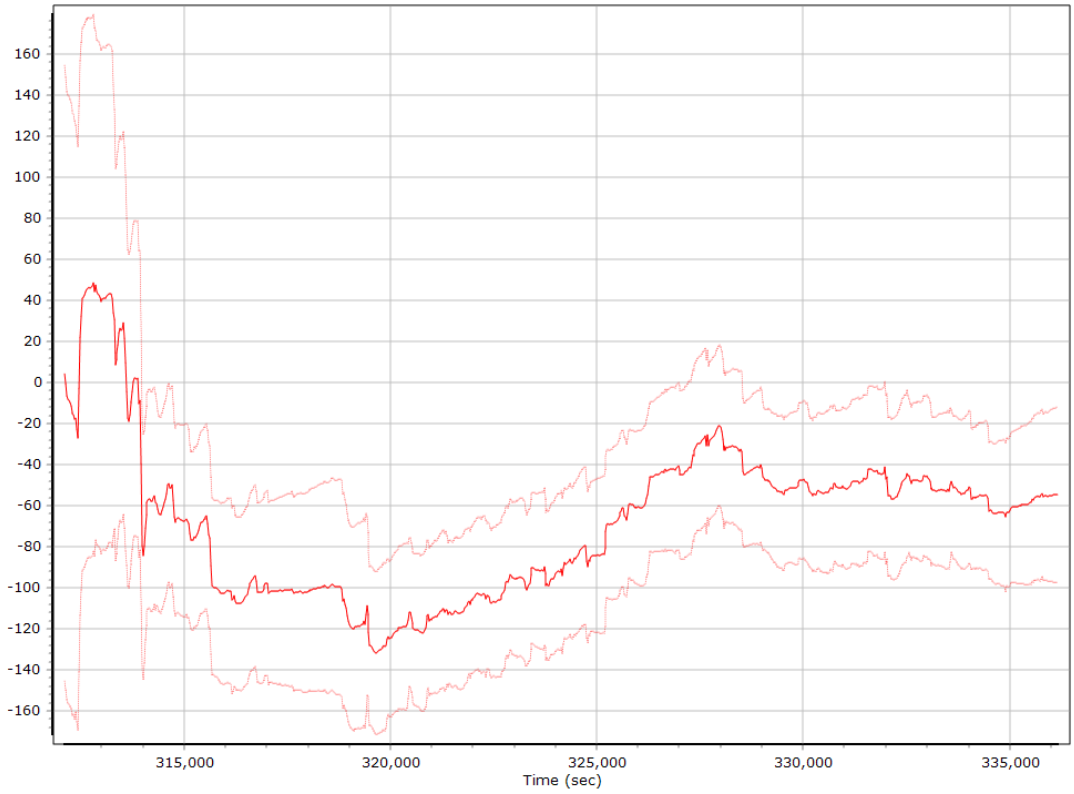
Gyro Scale Error (ppm)



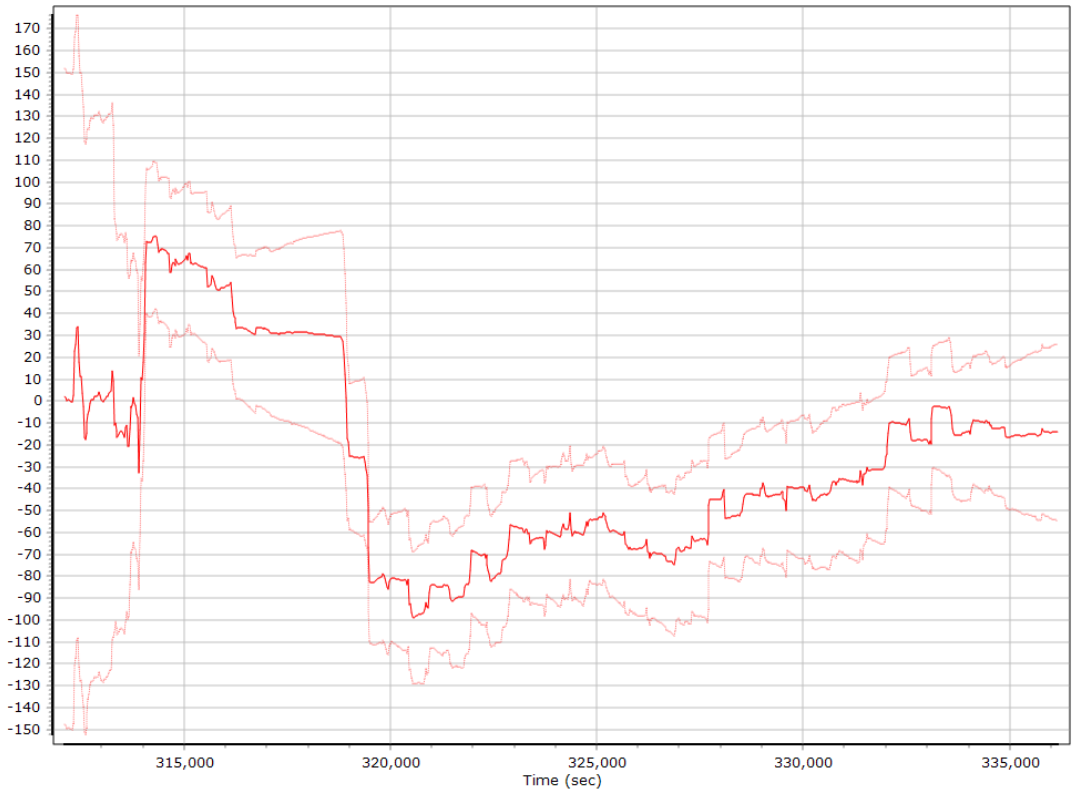
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

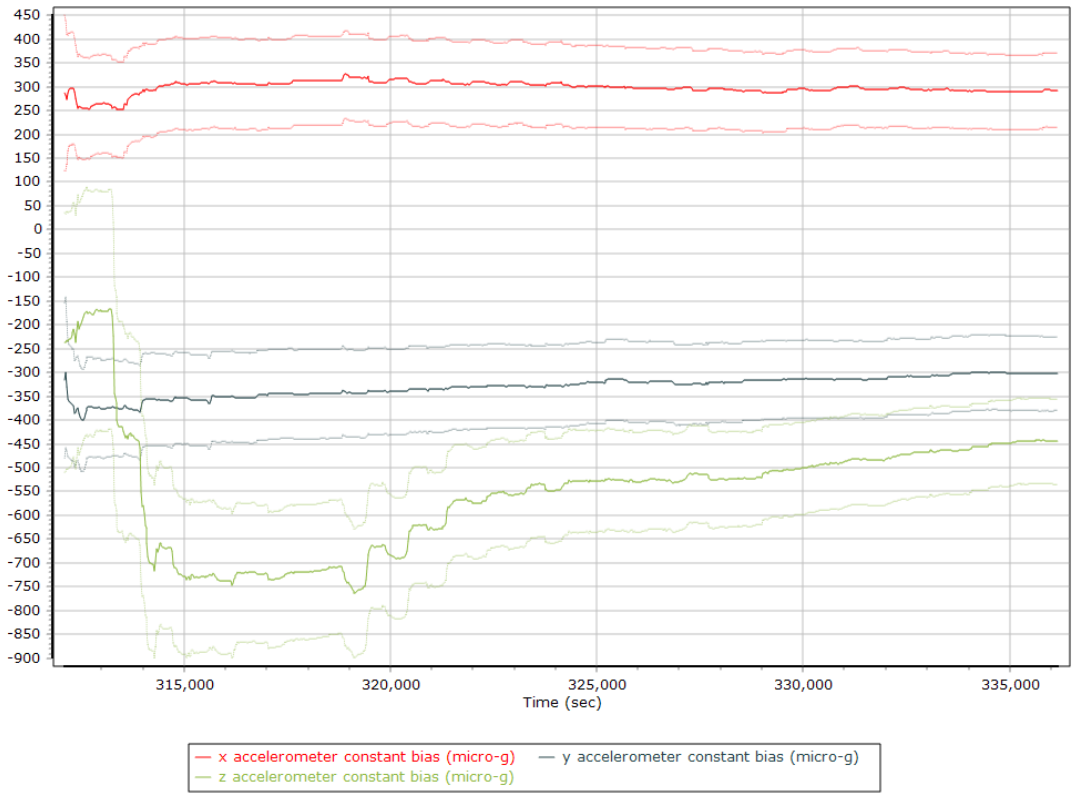


Z Gyro Scale Error (ppm)

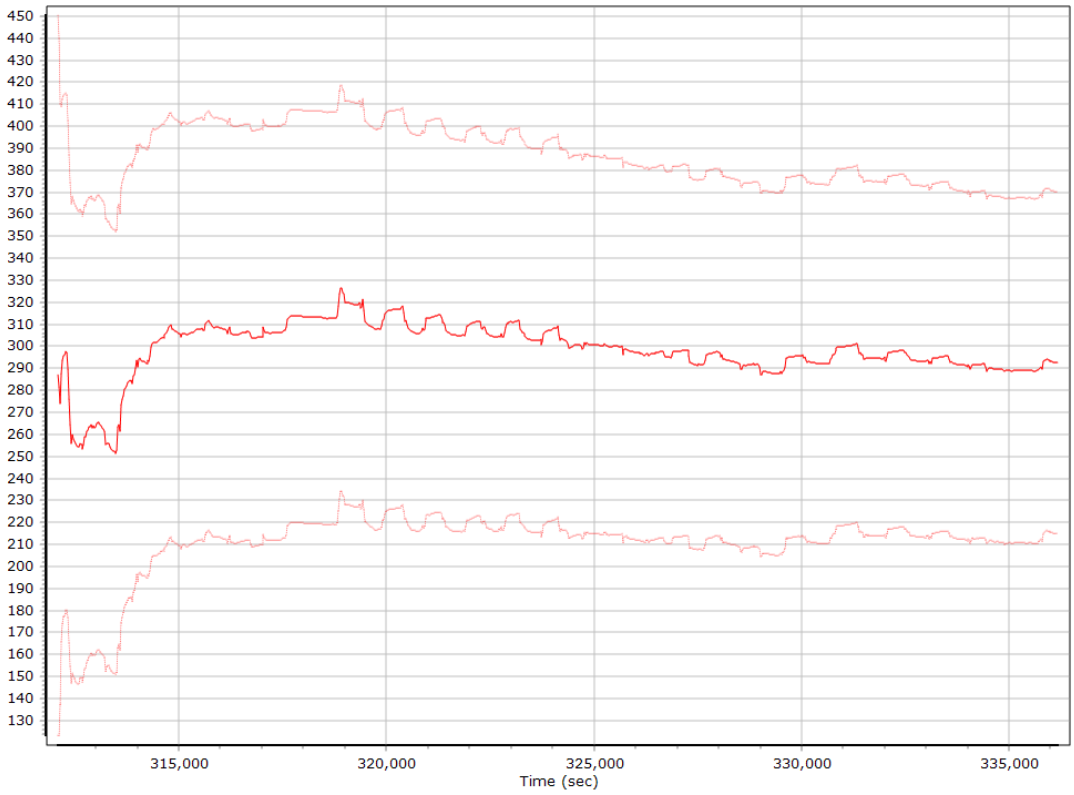


Forward Processed Estimated Constant Errors, Reference Frame

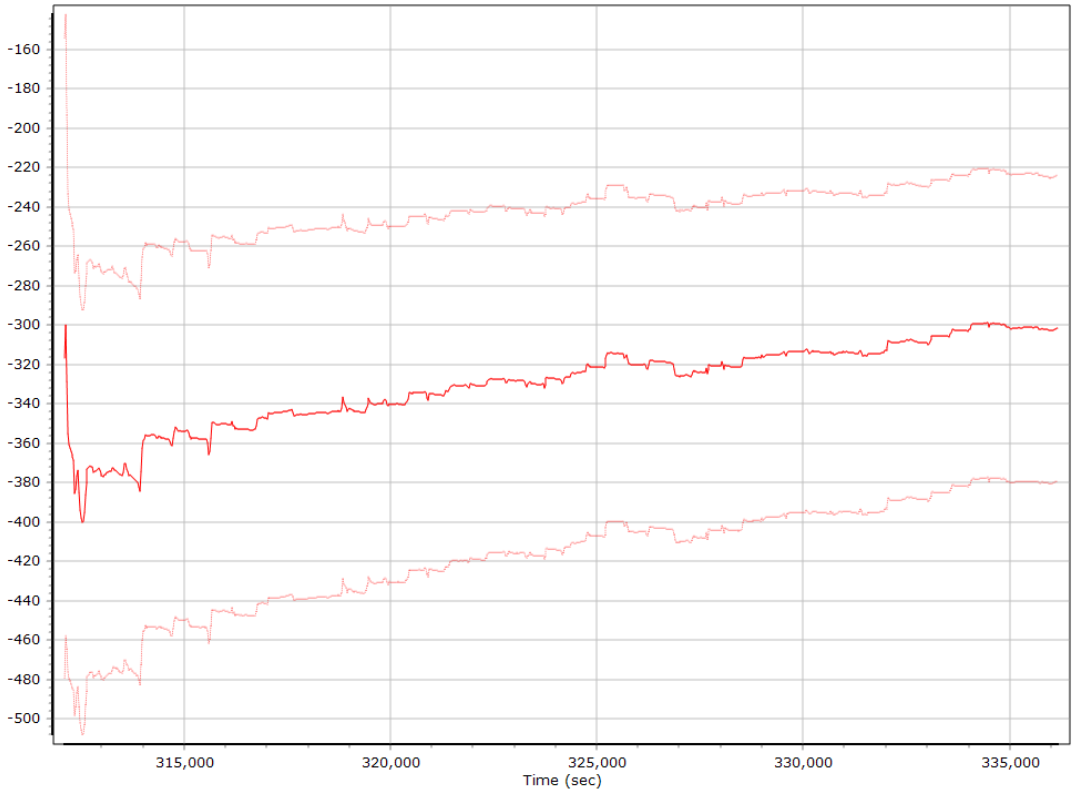
Accelerometer Bias (micro-g)



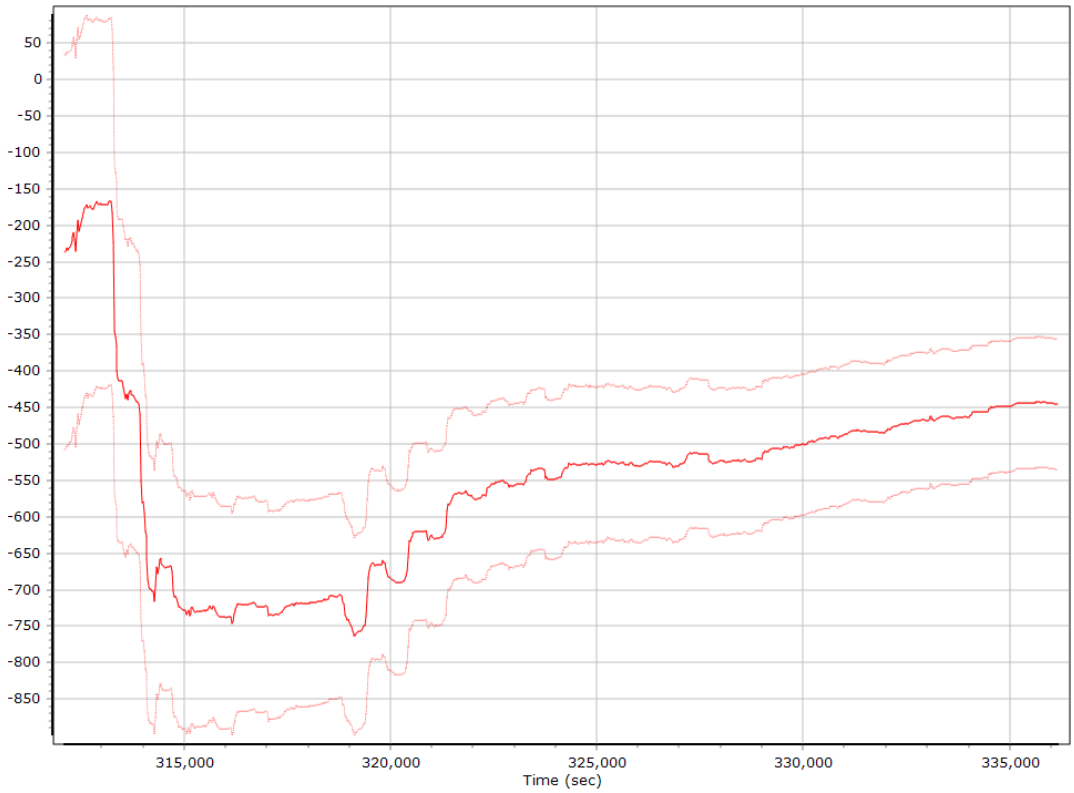
X Accelerometer Bias (micro-g)



Y Accelerometer Bias (micro-g)

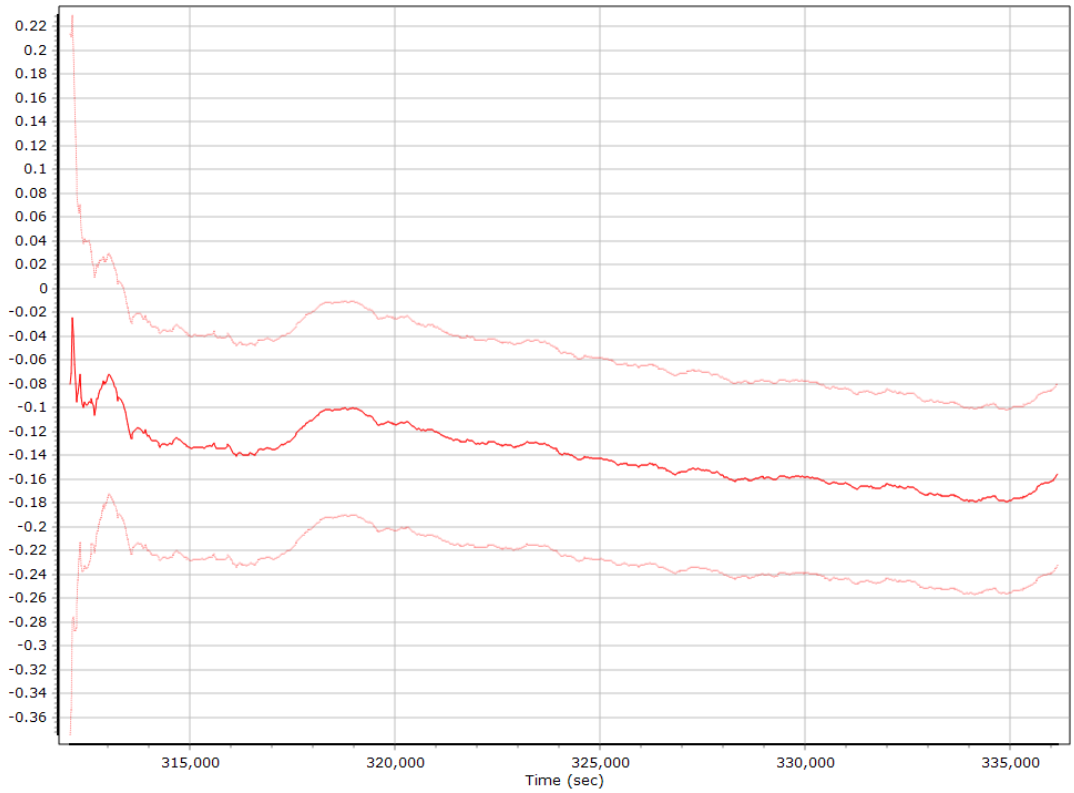


Z Accelerometer Bias (micro-g)

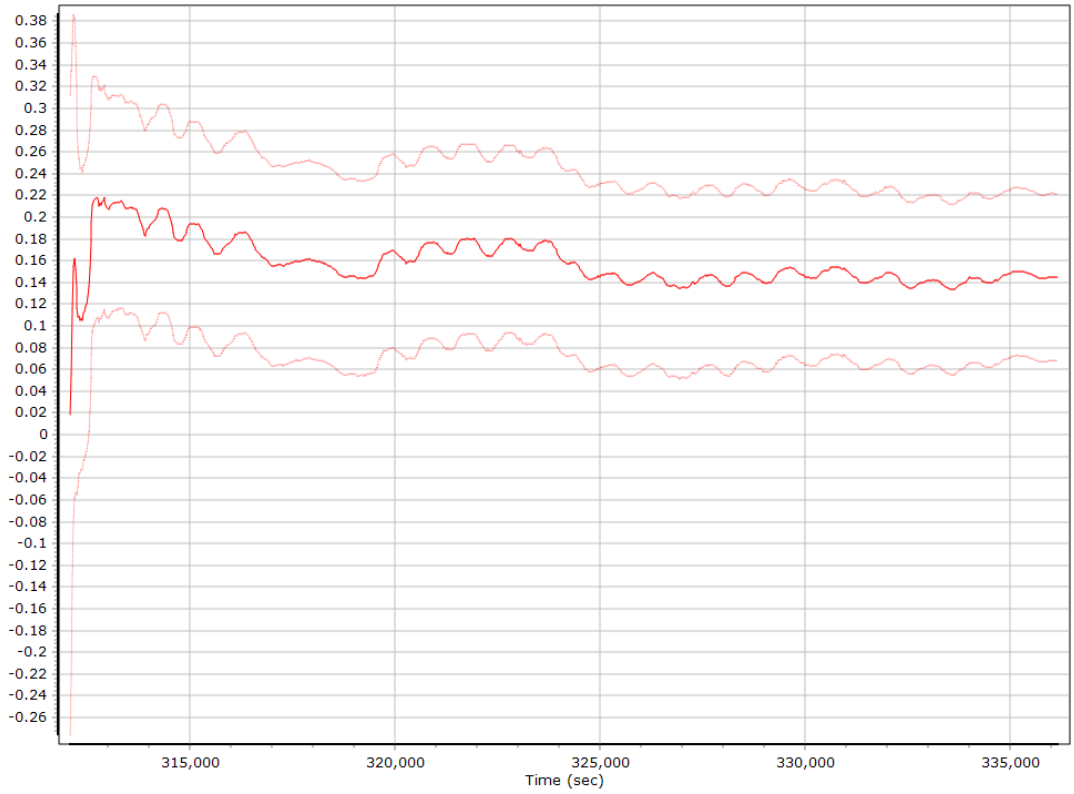


Gyro Bias (deg/h)

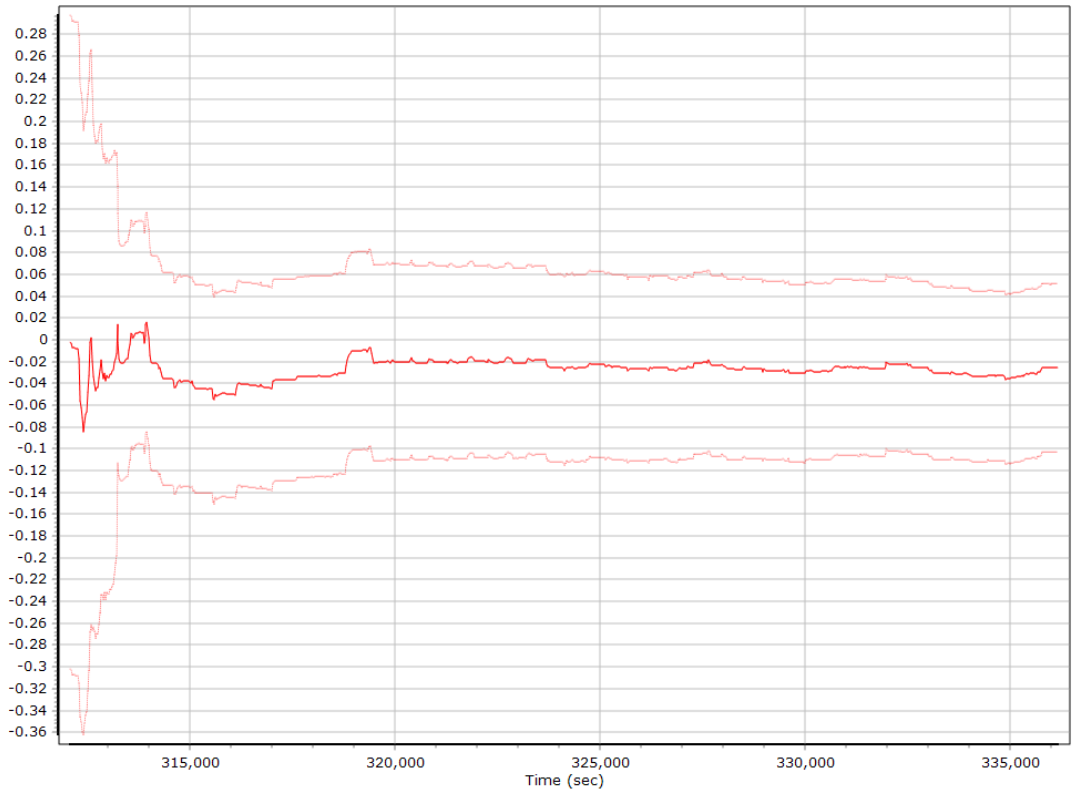
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)

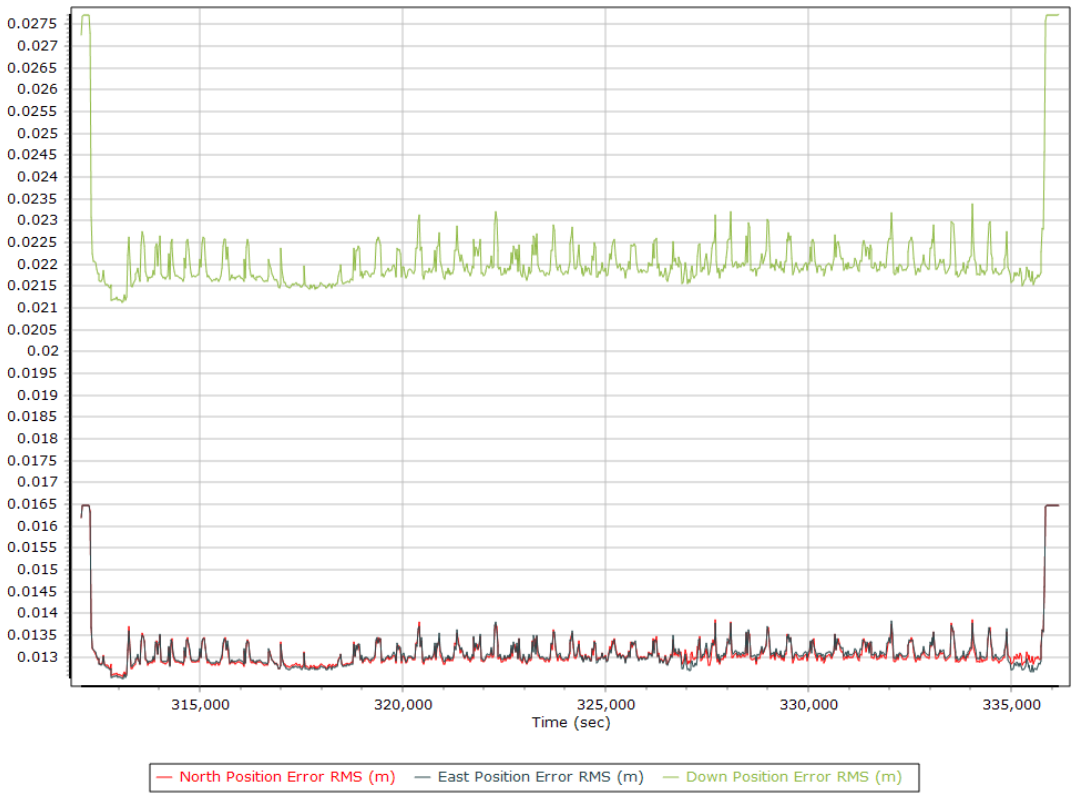


Z Gyro Bias (deg/h)

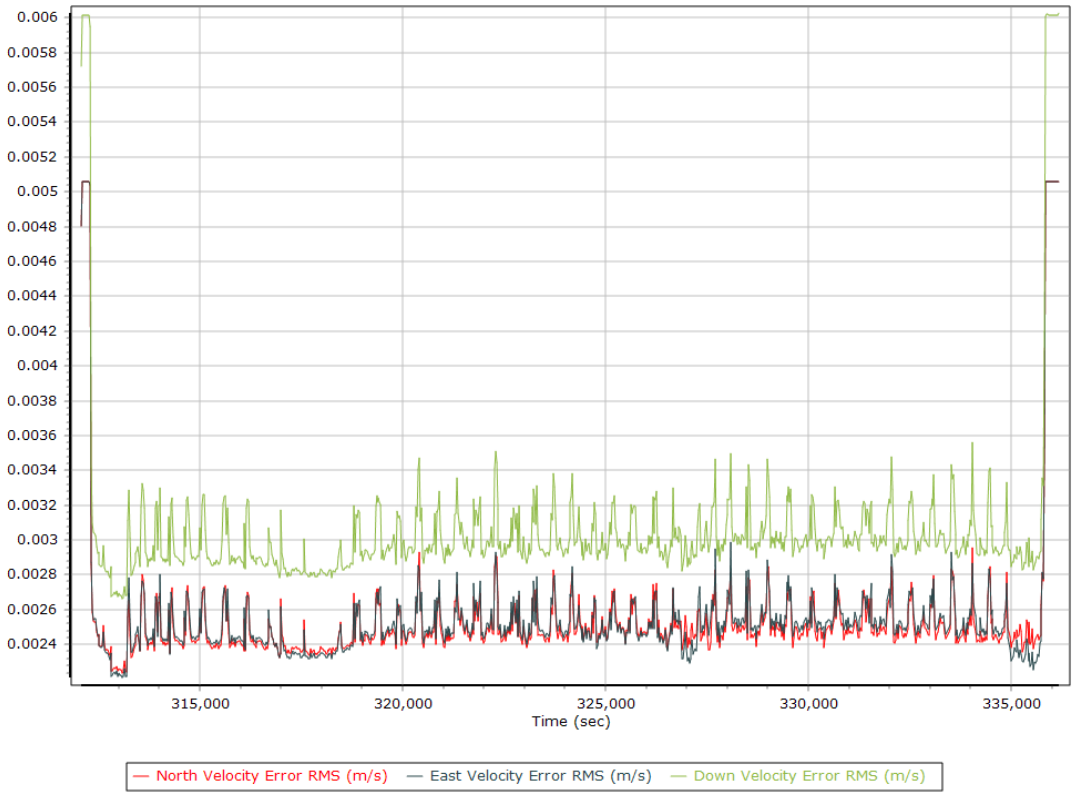


Smoothed Performance Metrics

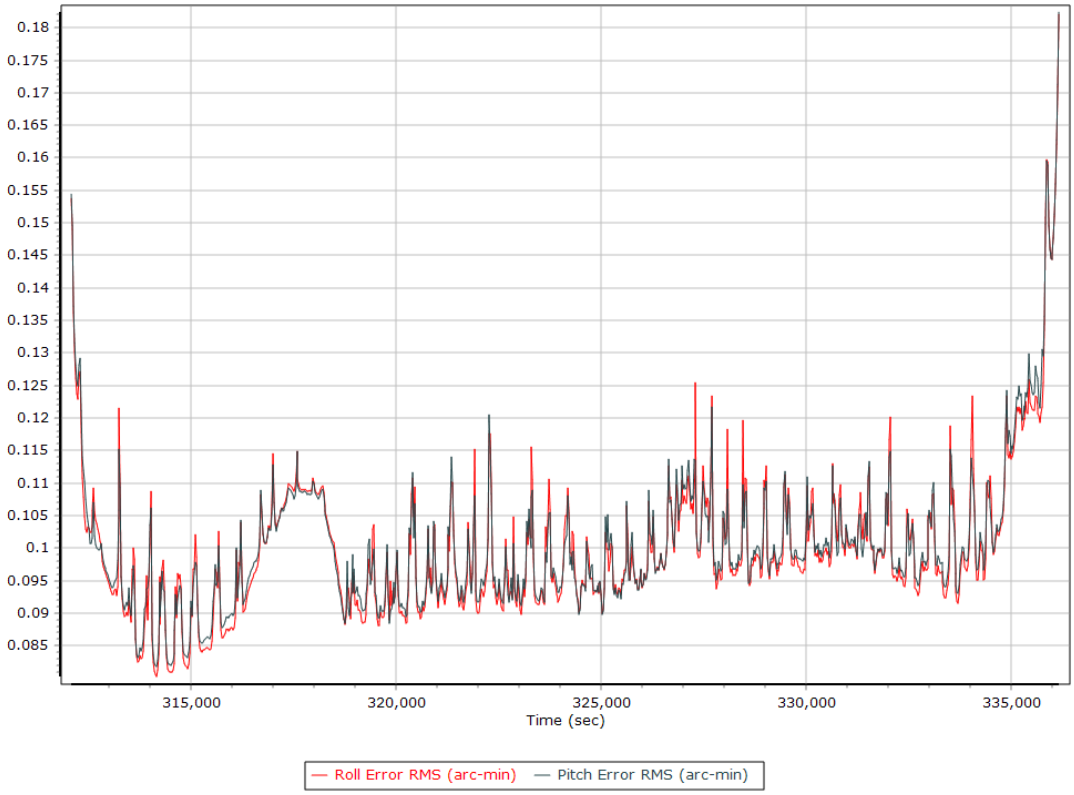
Position Error RMS (m)



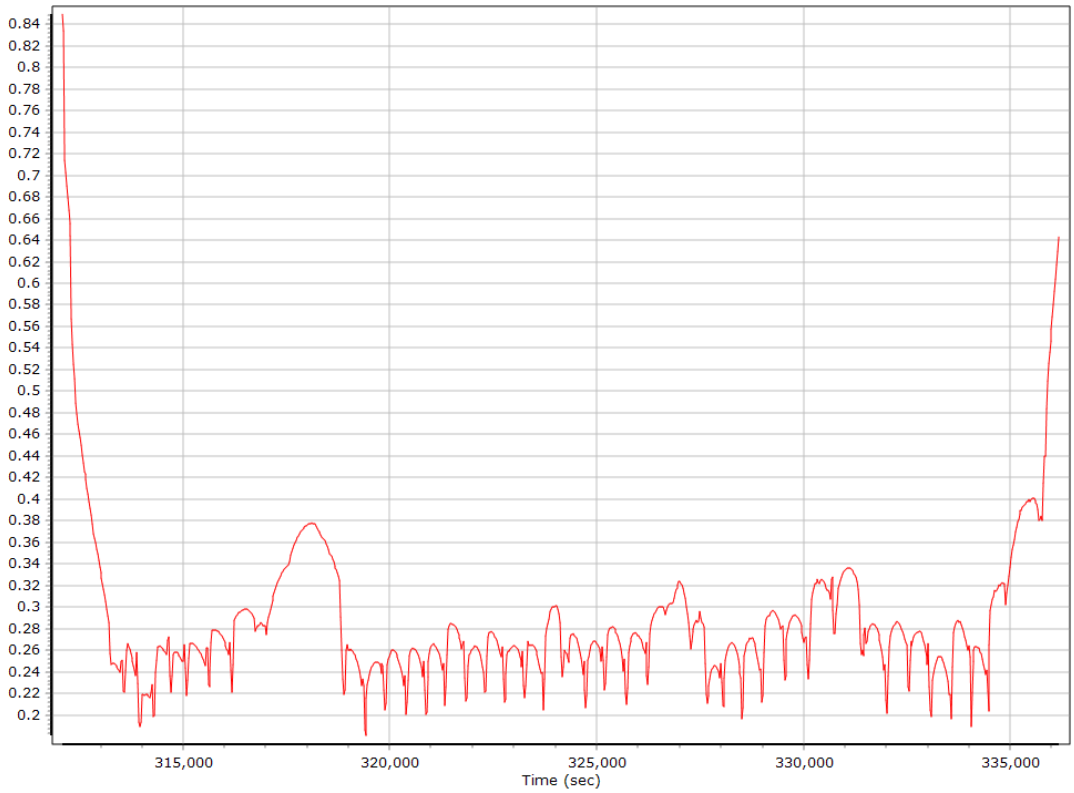
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

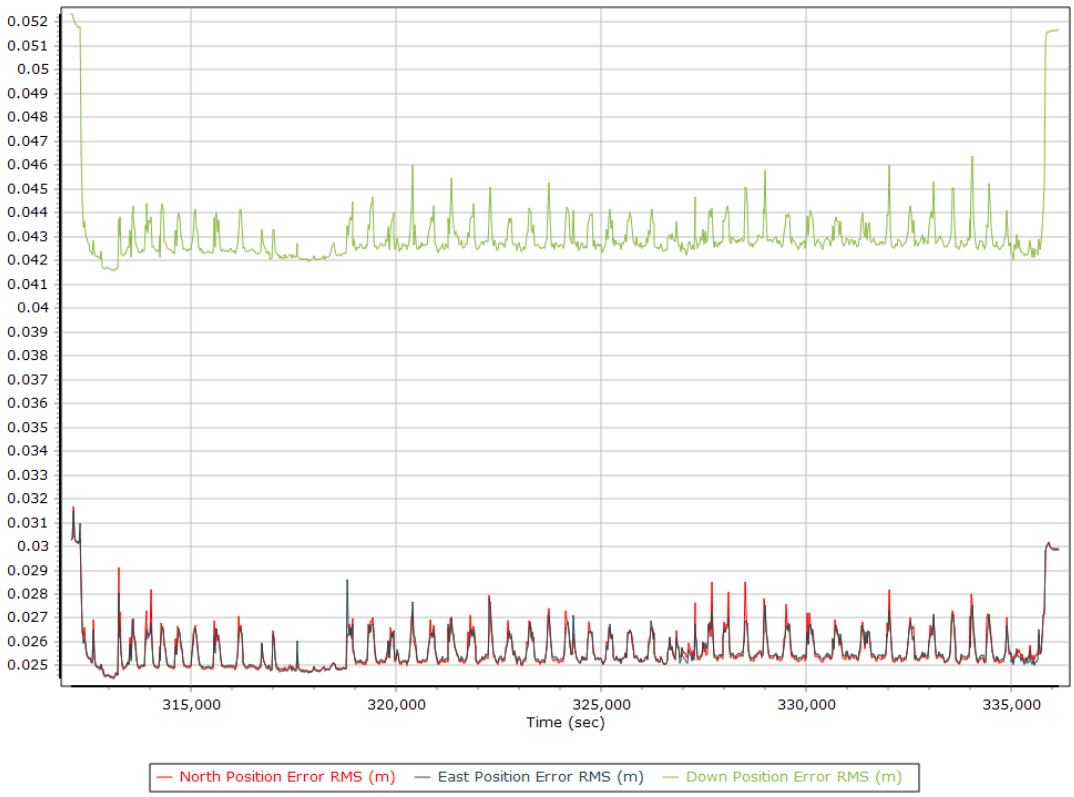


Heading Error RMS (arc-min)

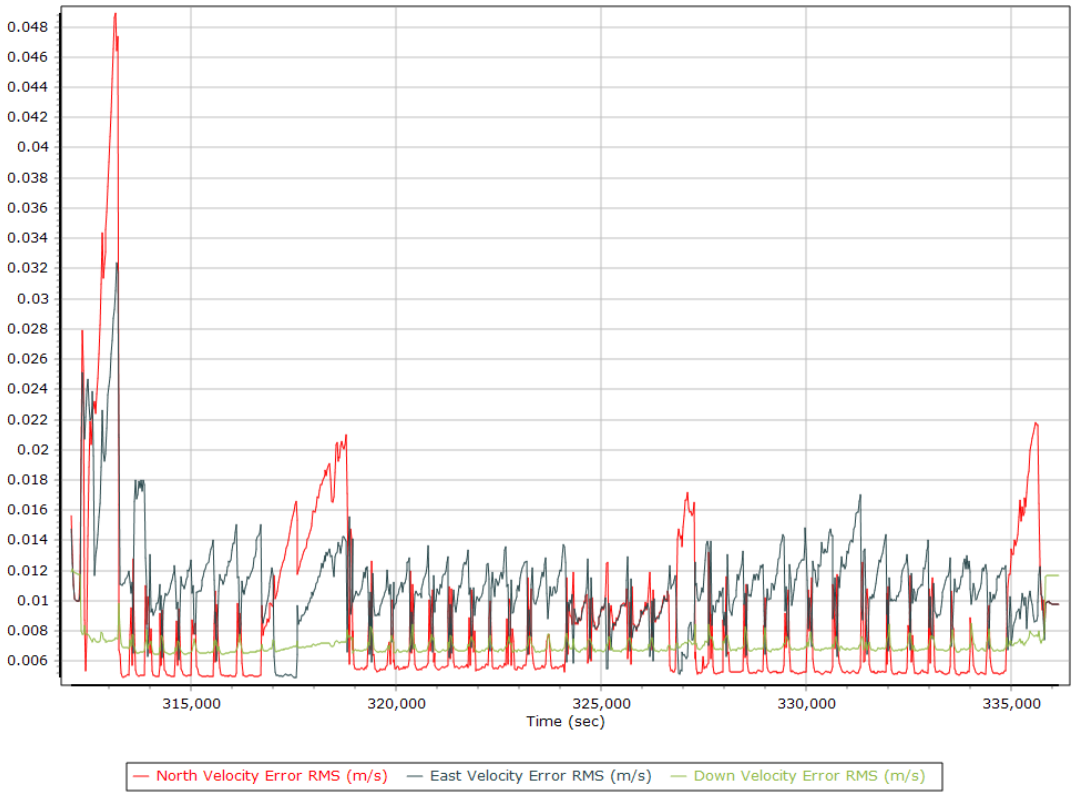


Forward Processed Performance Metrics

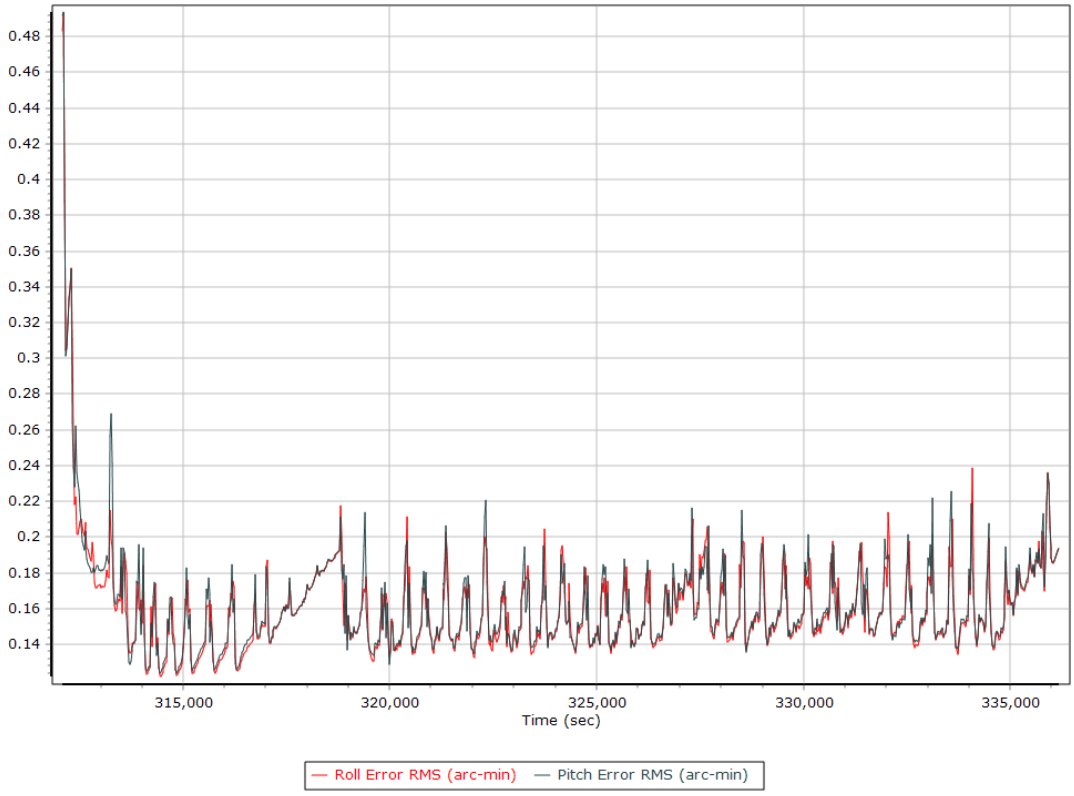
Position Error RMS (m)



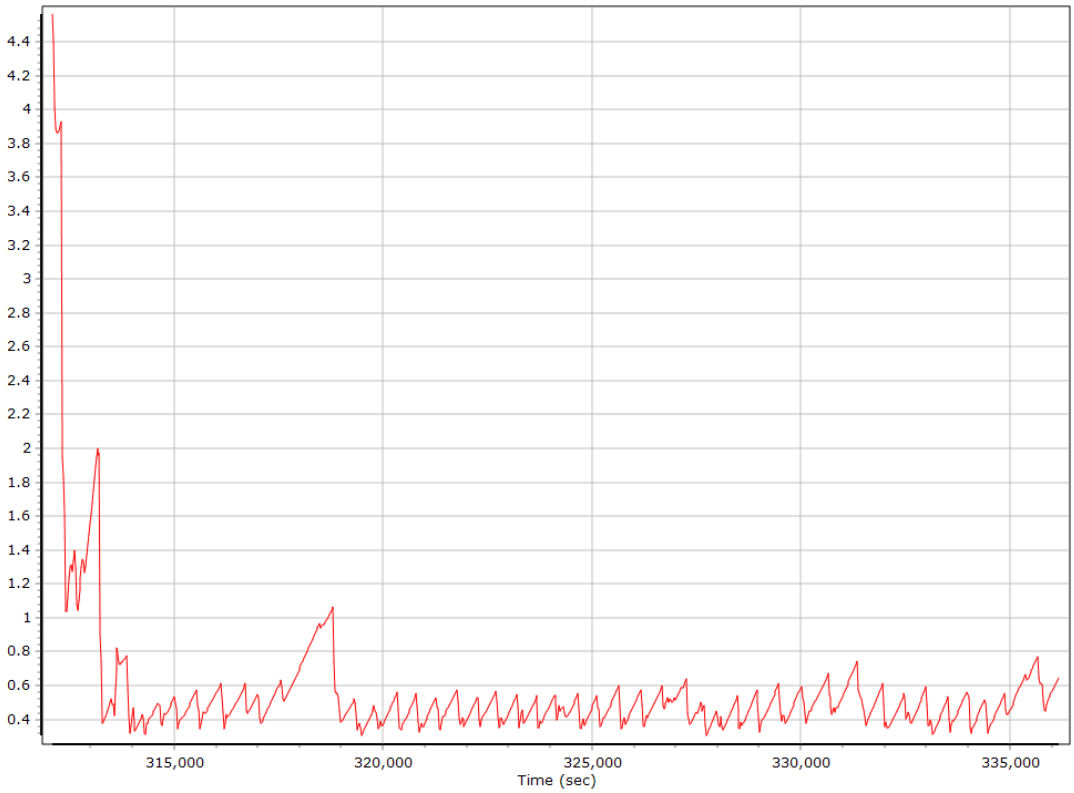
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

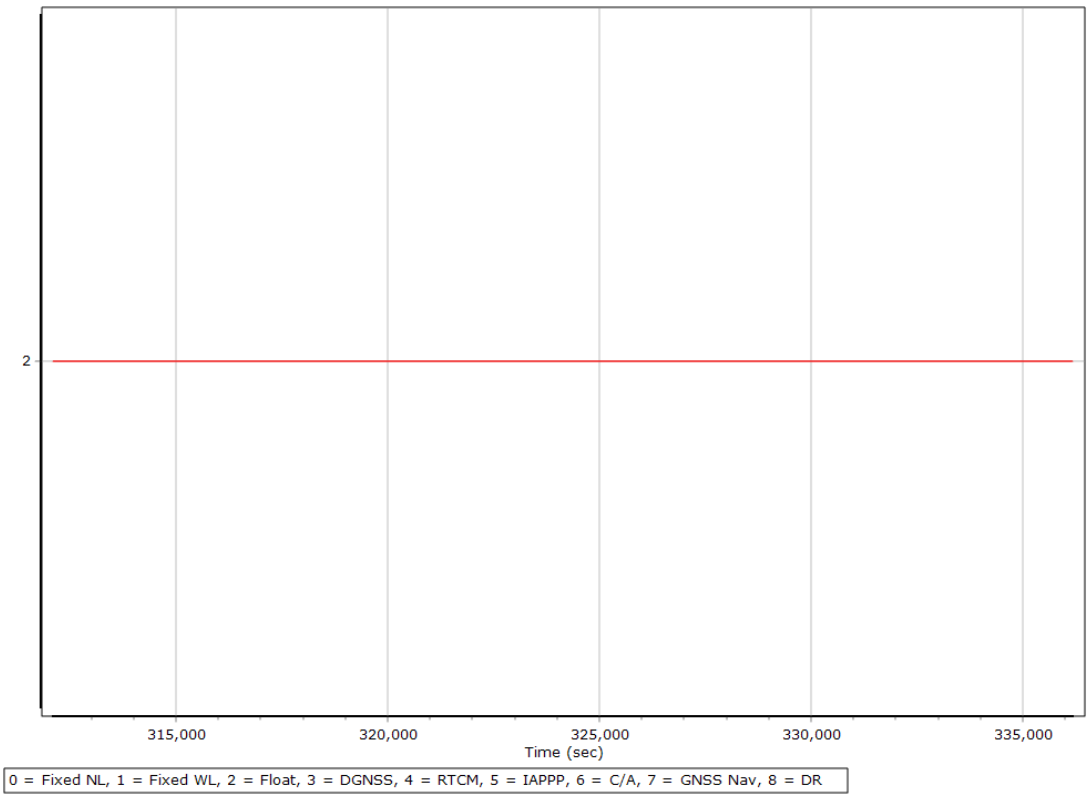


Heading Error RMS (arc-min)

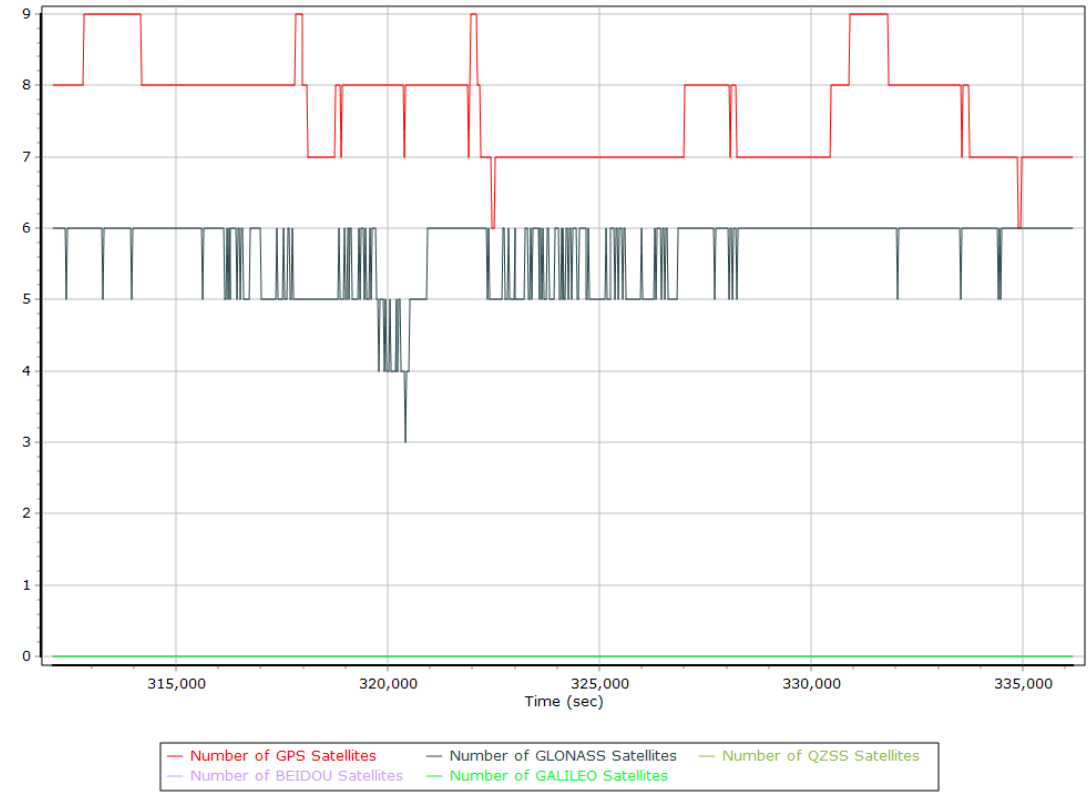
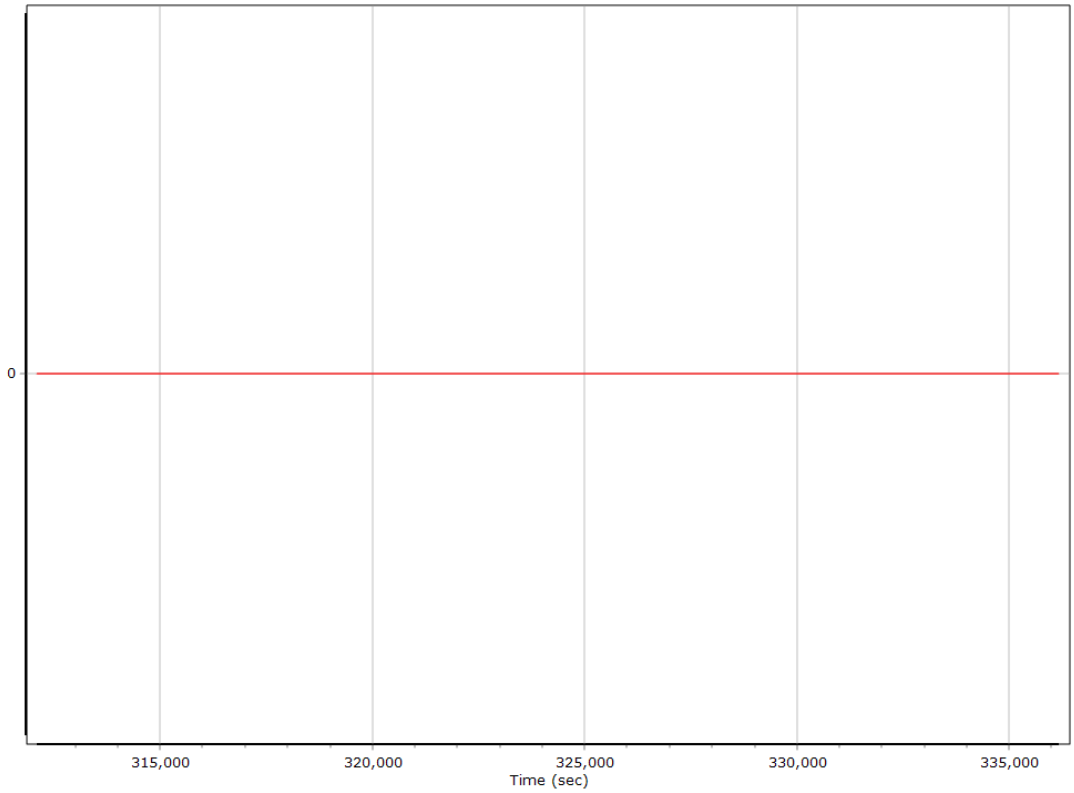


Forward Processed Solution Status

Processing Mode



Number of Satellites



Baseline Length