

General Information

Mission Information

Project name	sbet_211110_A_5060420_nad2011_FINAL
Processing date	2021-11-16 13:53:35
Mission date	2021-11-10 19:05:40
Mission duration	03:50:17.000
Processing mode	IN-Fusion PP-RTX

Rover Hardware Information

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

Project File List

Rover Data Files

File name	File type
survey1.pos	POS Data

Input Files

File Name	File Type
Ephm3140.21g	GLONASS Broadcast Ephemeris
Ephm3140.21n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_sbet_211110_A_5060420_nad2011_FINAL.o	SBET Trajectory File
export_Mission 1.shp	Shapefile Export Output

Rover Data Summary

First raw data file	survey1.pos		
Last raw data file	survey1.pos		
Start GPS week	2183		
Start time	327939.690 (11/10/2021 7:05:39 PM)		
End time	341757.066 (11/10/2021 10:55:57 PM)		
Start of fine alignment	328382.764 (11/10/2021 7:13:02 PM)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Reference to IMU lever arm (m)	0.000	0.000	0.000
Reference to IMU mounting angles (deg)	0.000	0.000	90.000
Reference to Primary GNSS lever arm (m)	-0.497	-0.045	-1.199
Reference to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

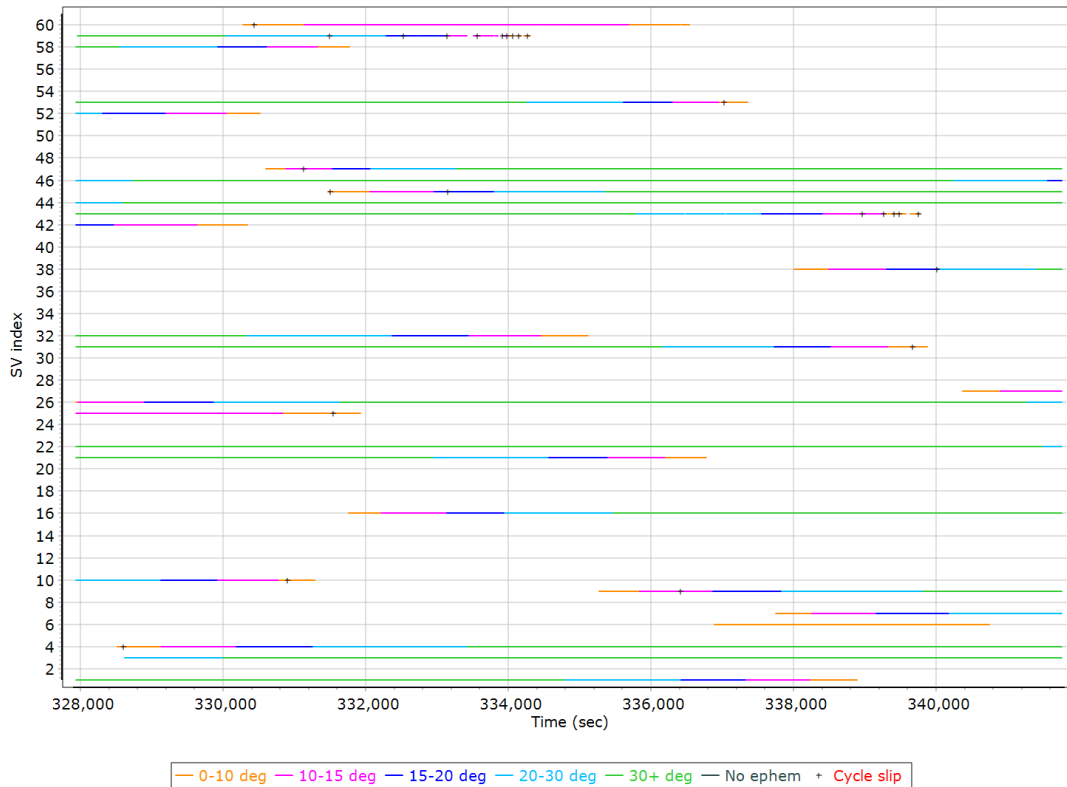
Rover Data QC

Raw IMU Import QC Summary

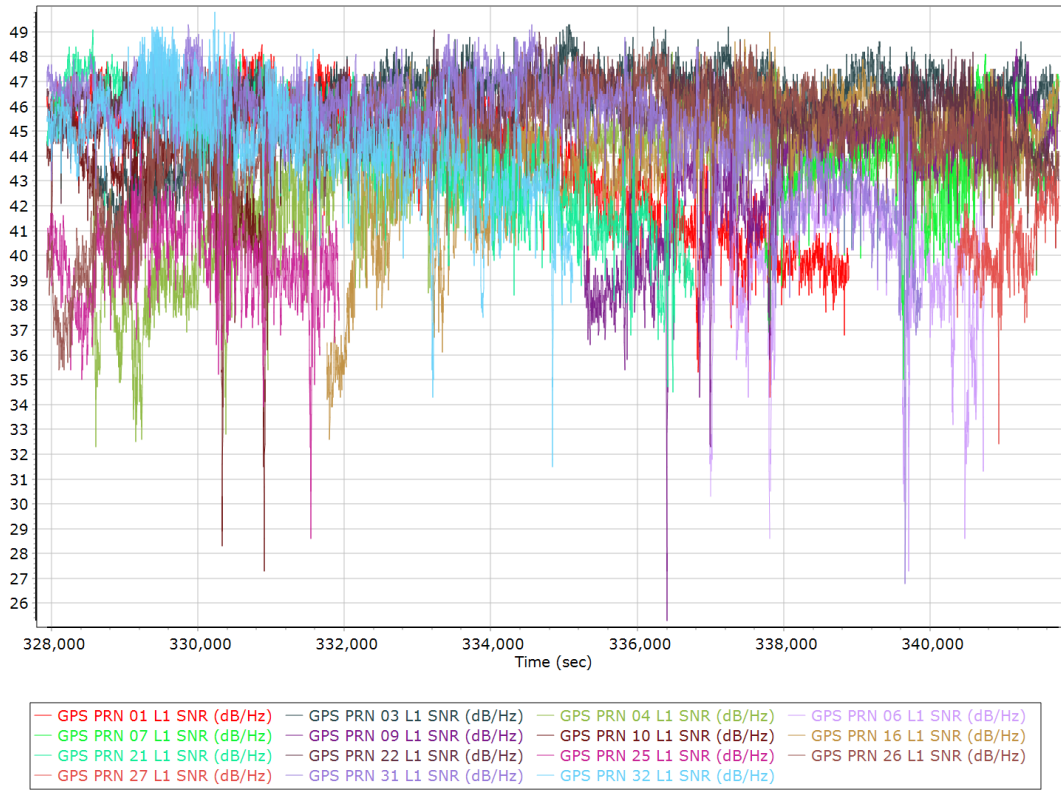
IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_sbet_211110_A_5060420_nad2011_FINAL.log
IMU Records Processed	2762898
Termination Status	Normal
IMU Anomalies	0

Primary Observables & Satellite Data

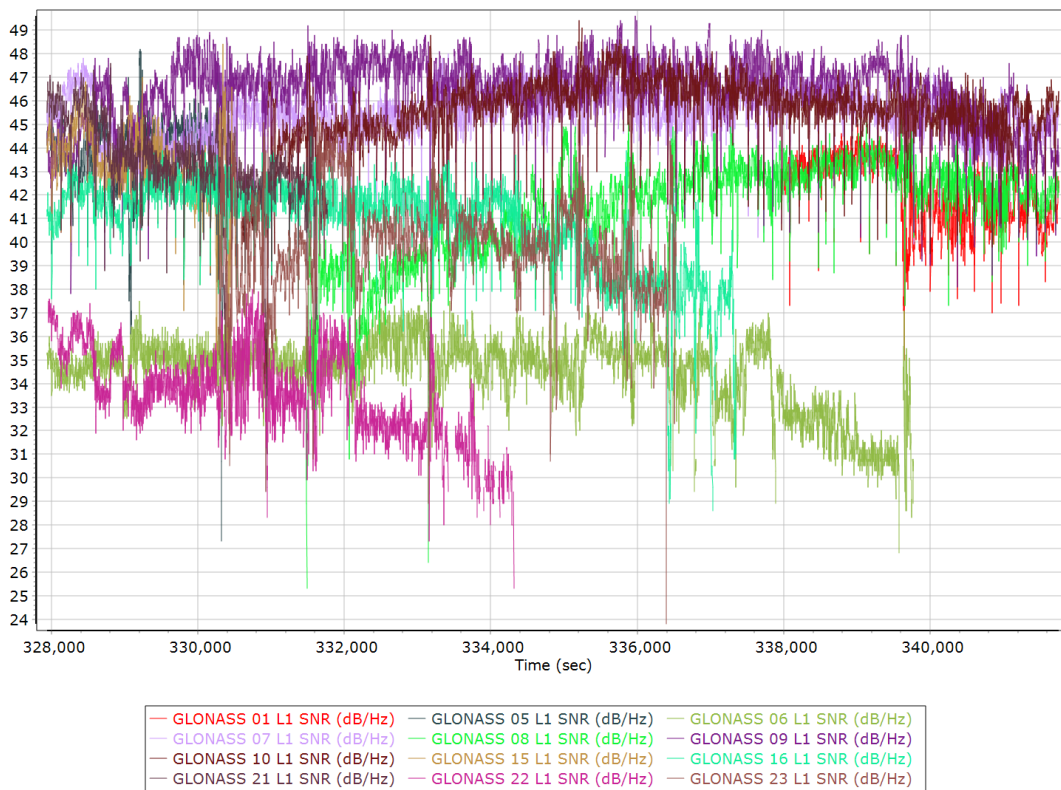
GPS/GLONASS L1 Satellite Lock/Elevation



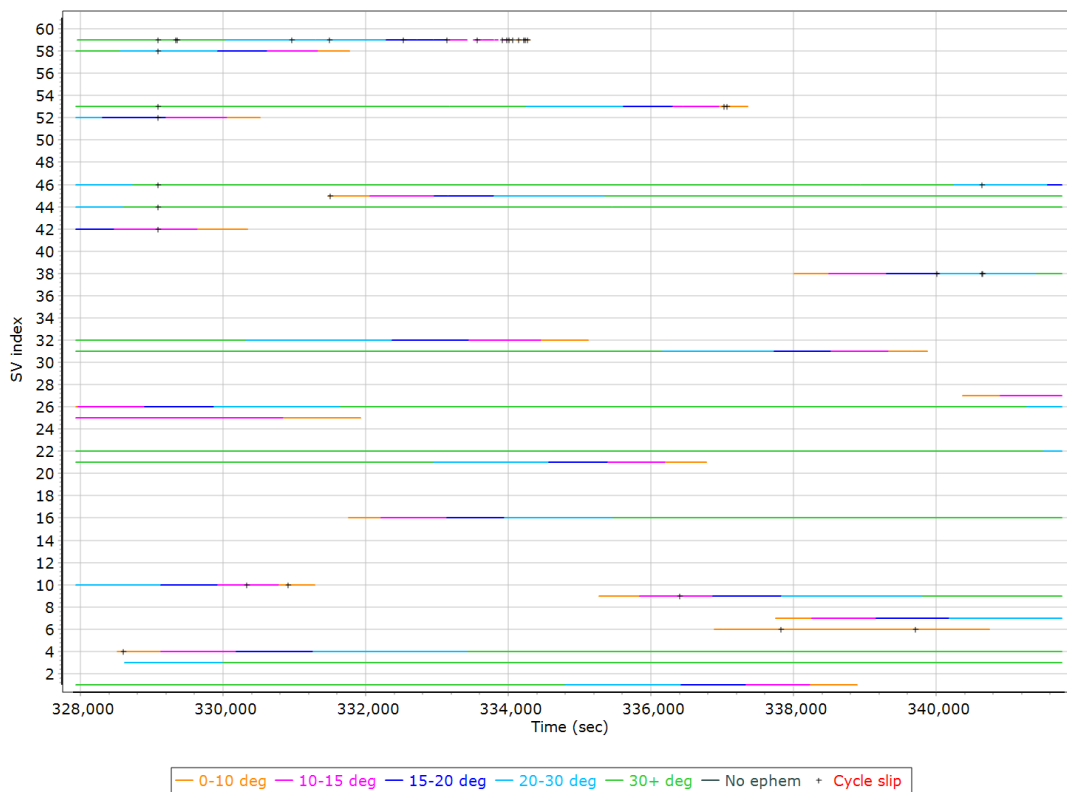
GPS L1 SNR



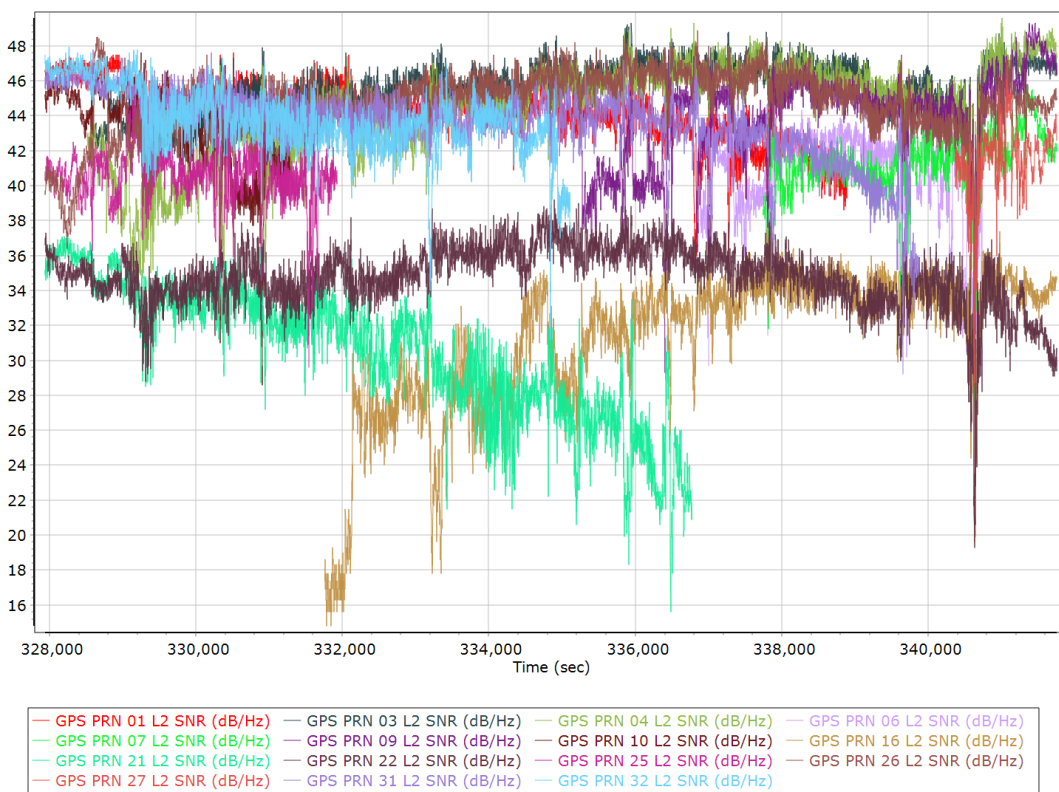
GLONASS L1 SNR



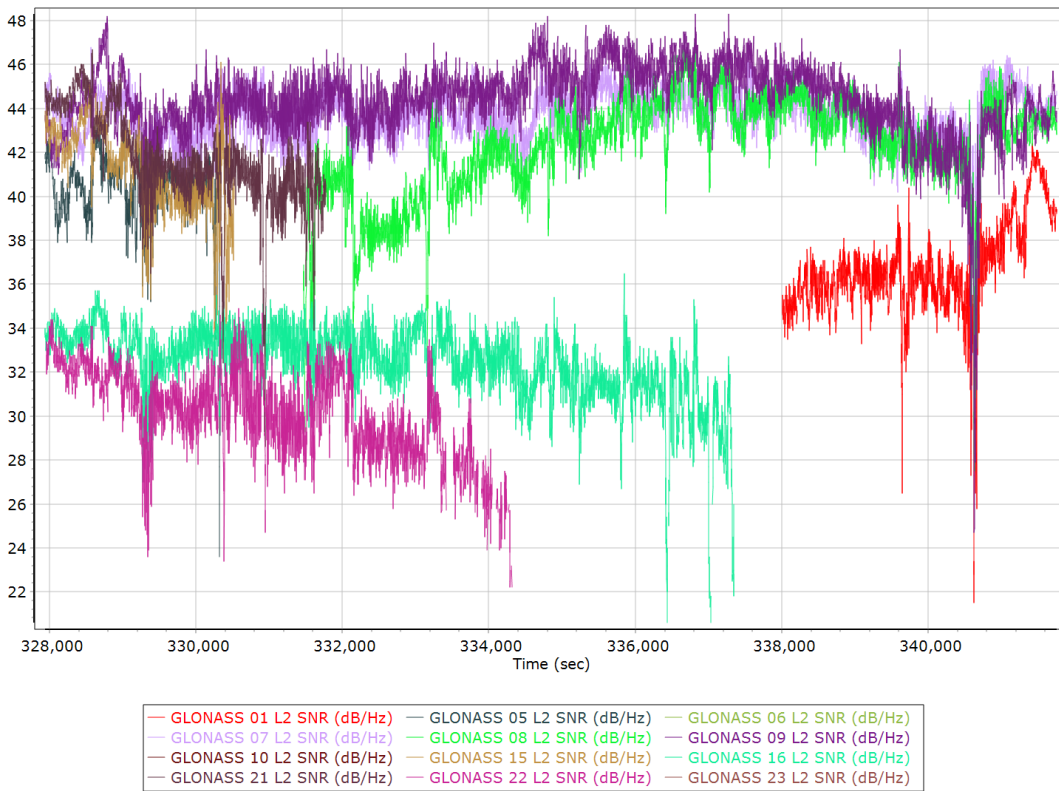
GPS/GLONASS L2 Satellite Lock/Elevation



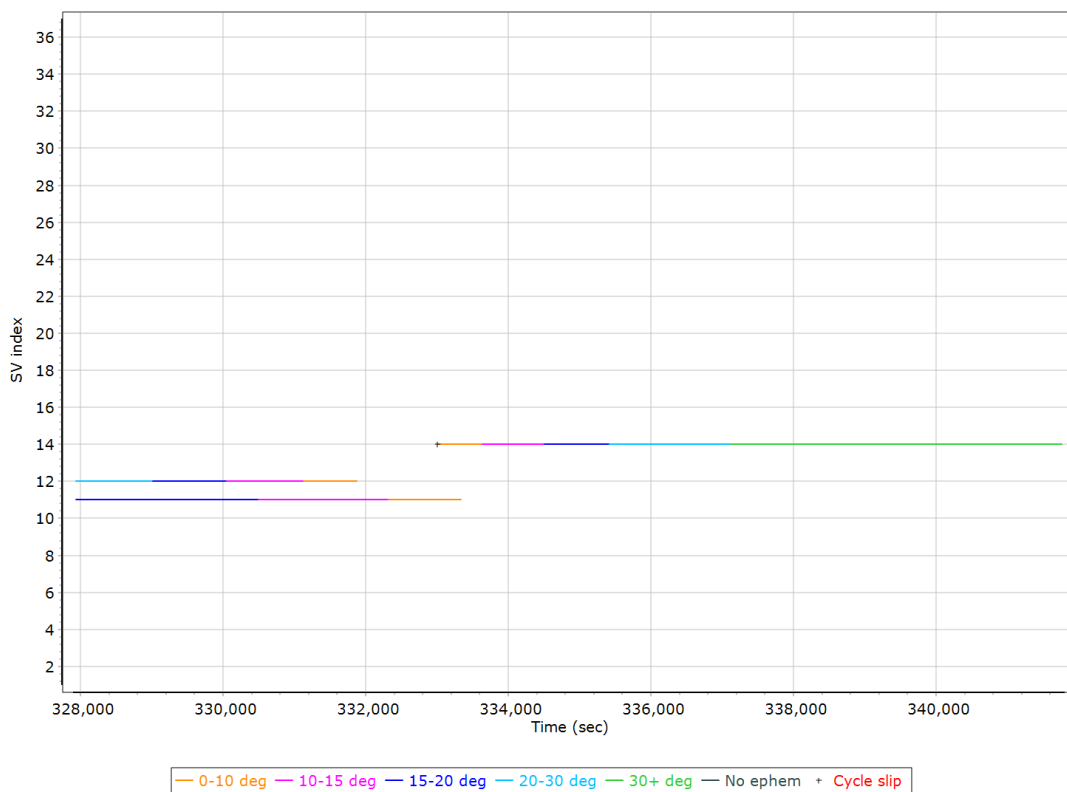
GPS L2 SNR



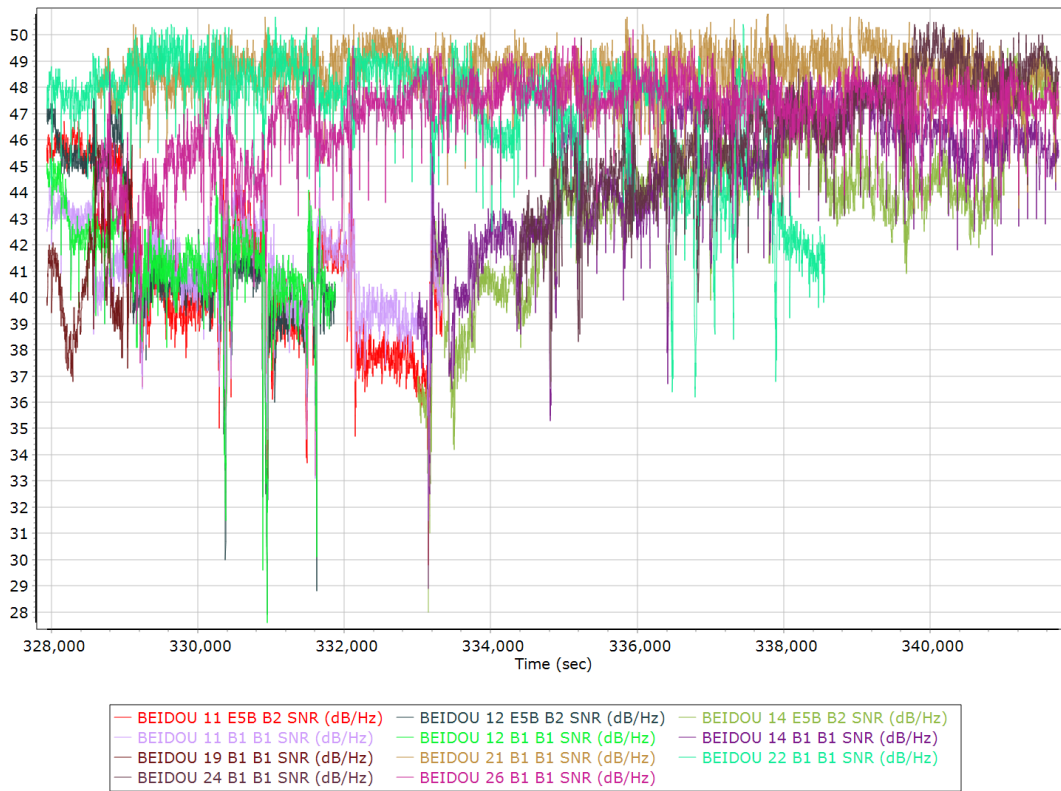
GLONASS L2 SNR



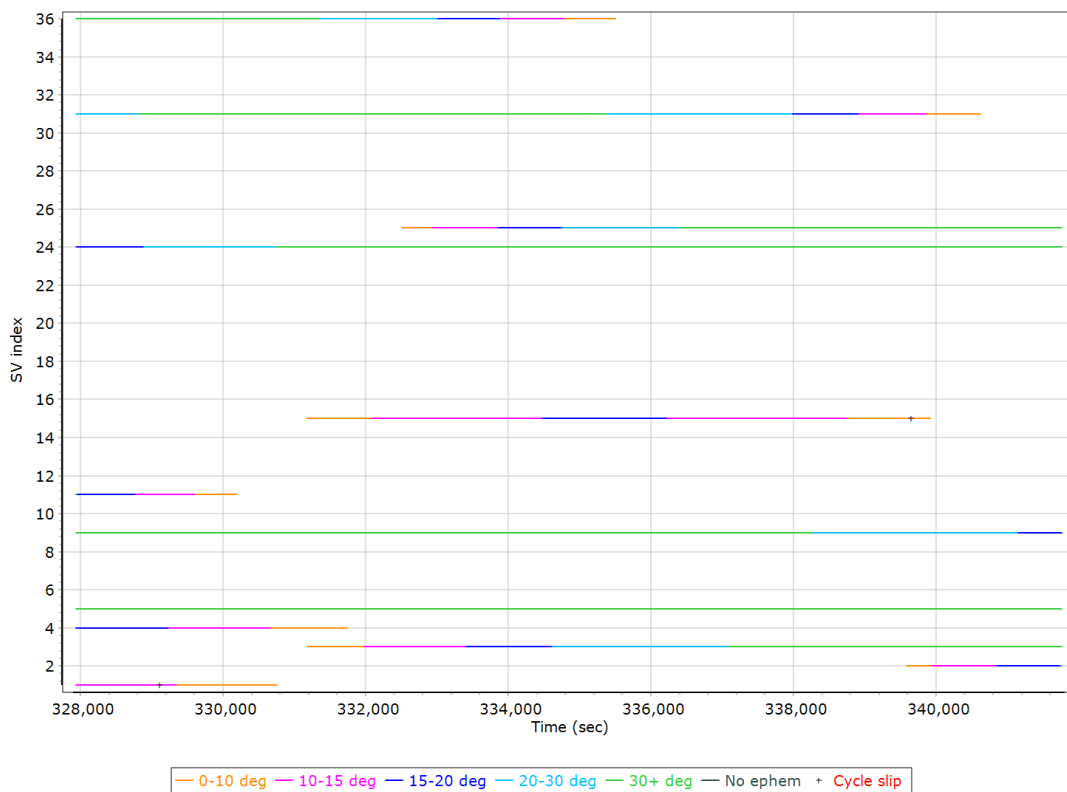
BEIDOU Satellite Lock/Elevation



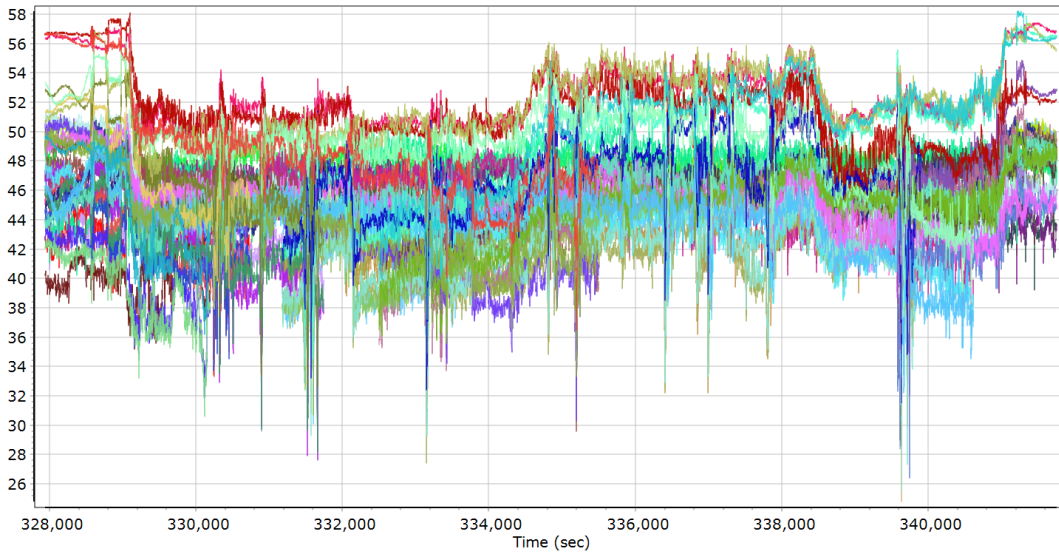
BEIDOU SNR



GALILEO Satellite Lock/Elevation



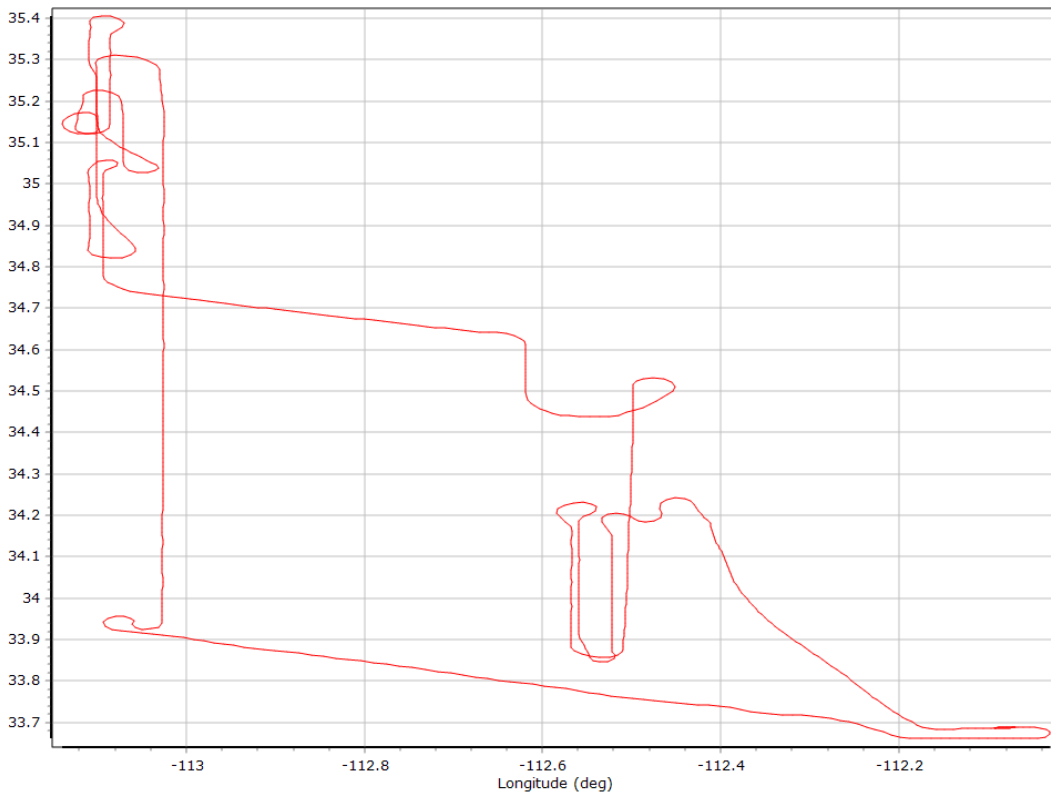
GALILEO SNR



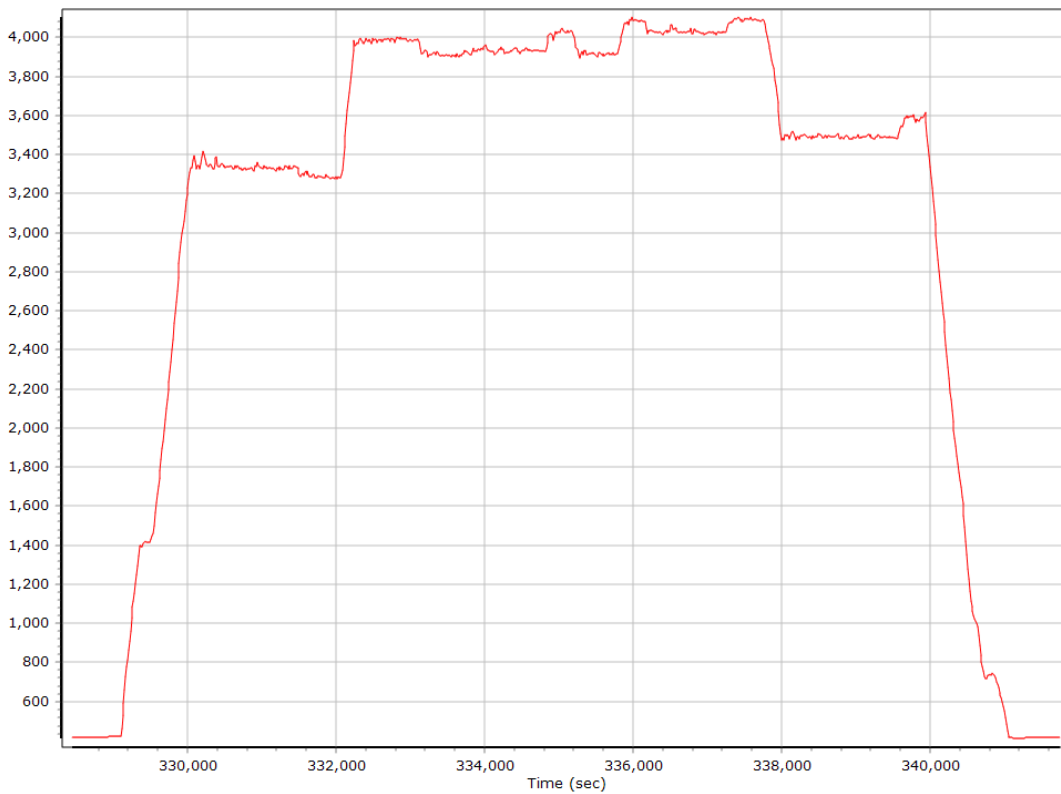
— GALILEO 01 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 02 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 03 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 04 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 05 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 09 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 11 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 15 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 24 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 25 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 31 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 36 L1 BOC_1_1_DP_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 04 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 05 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 09 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 11 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 15 L5E5A BPSK10_PD SNR (dB/Hz)

Smoothed Trajectory Information

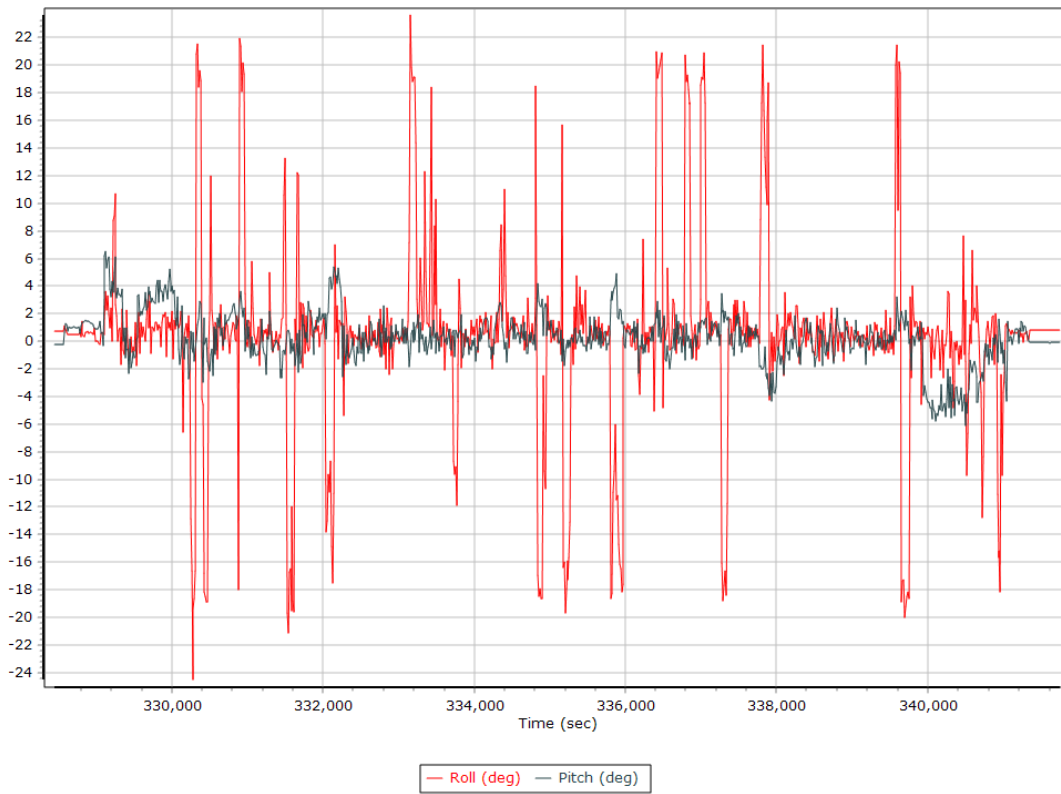
Top View



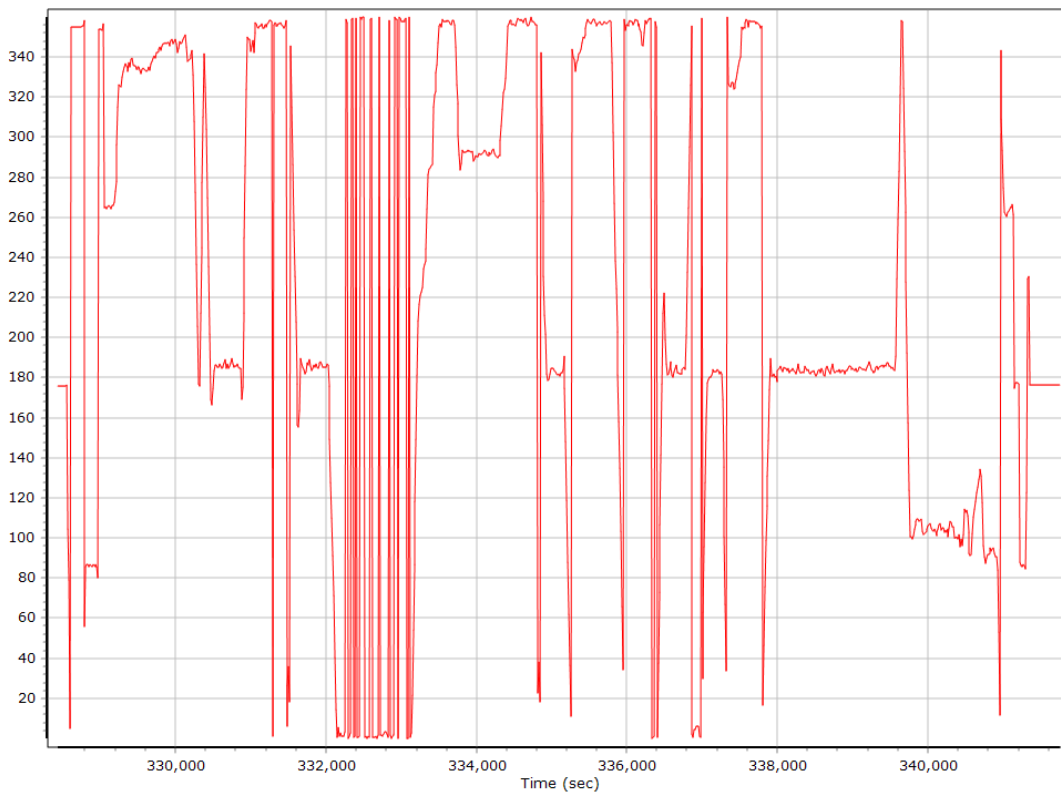
Altitude



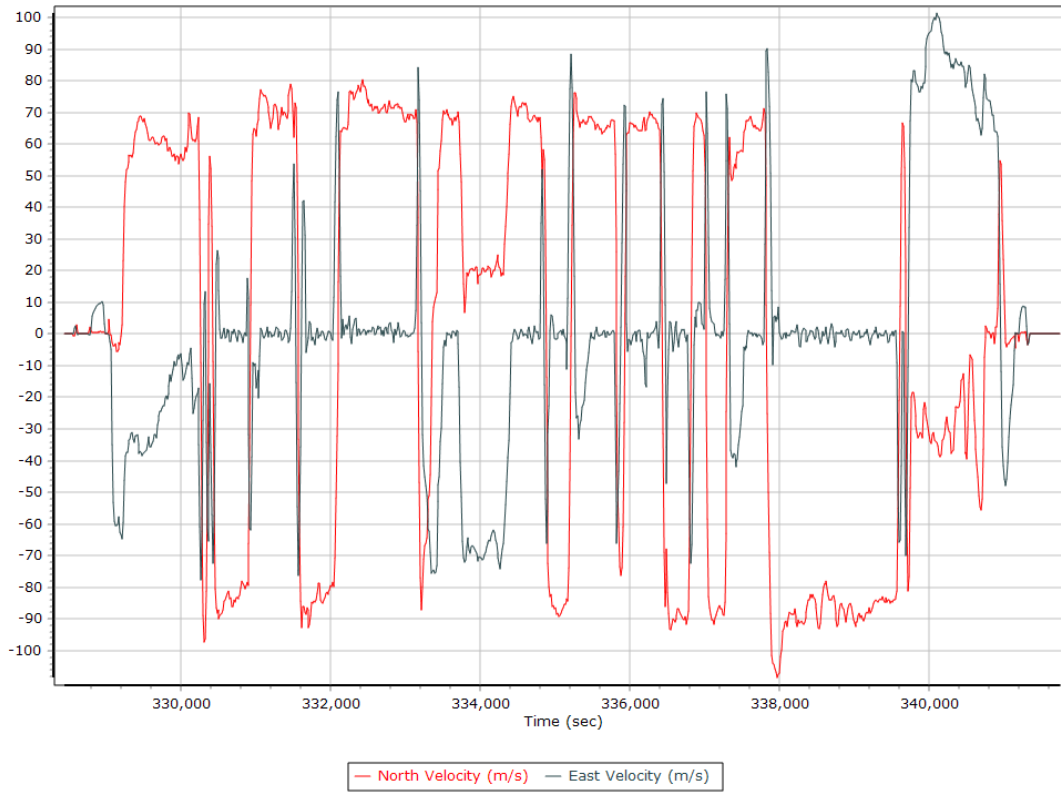
Roll/Pitch



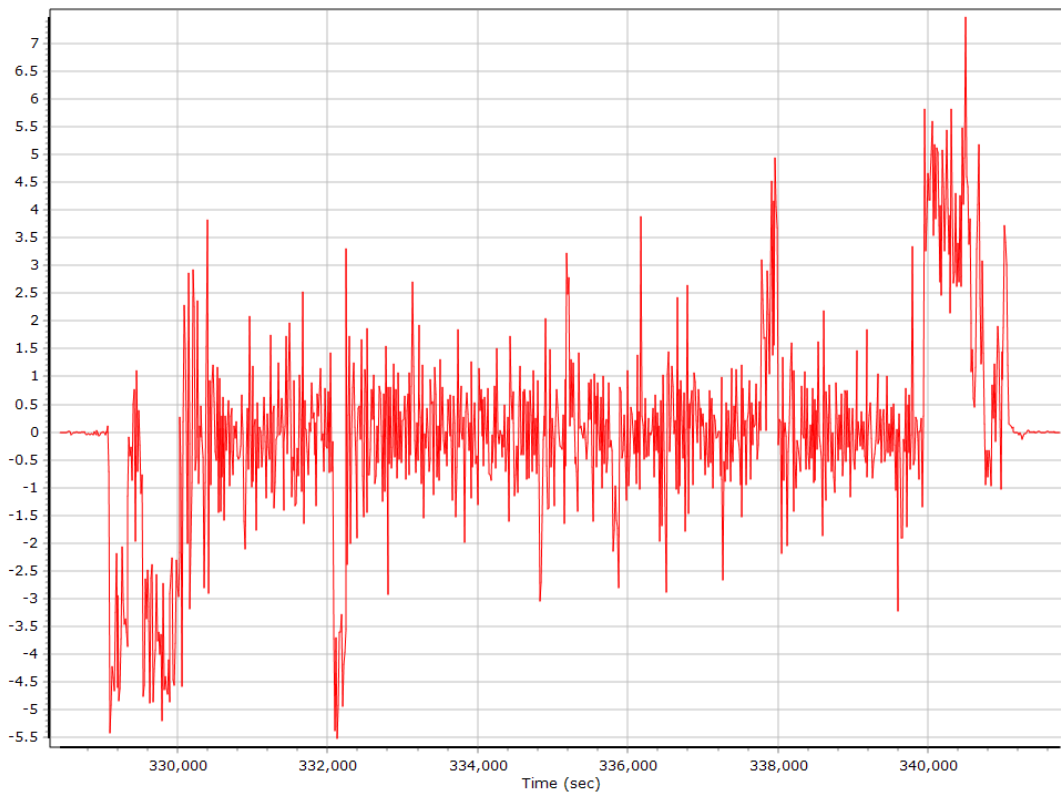
Heading



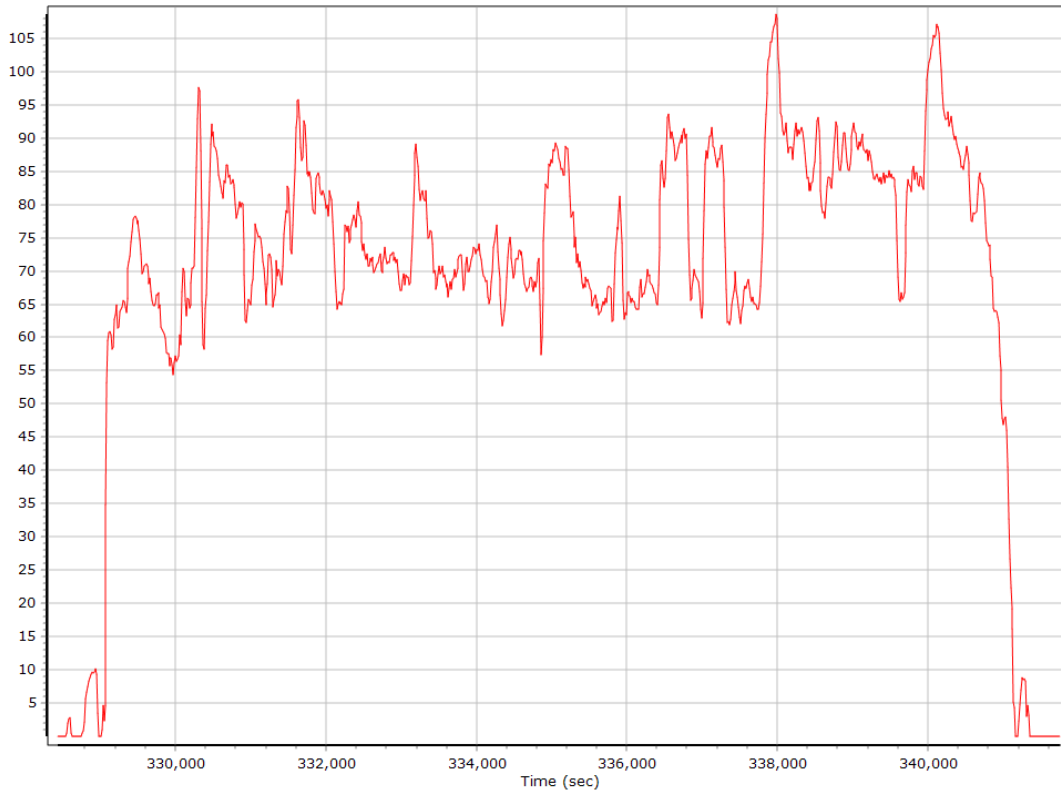
North/East Velocity



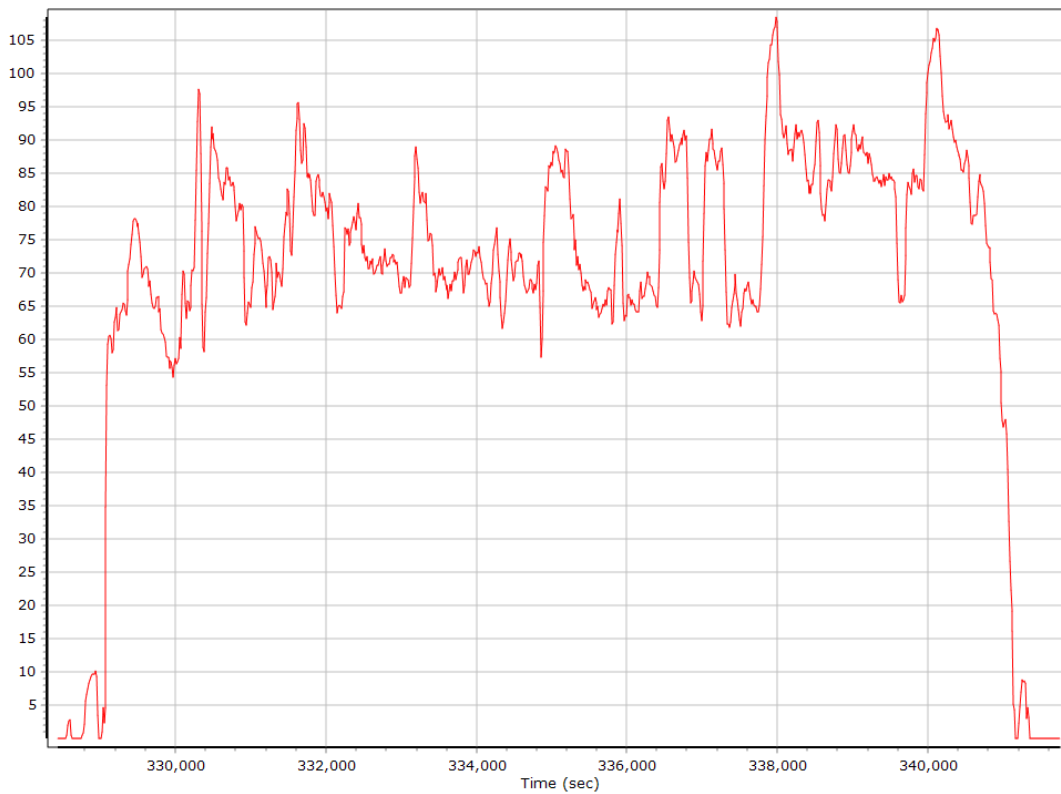
Down Velocity



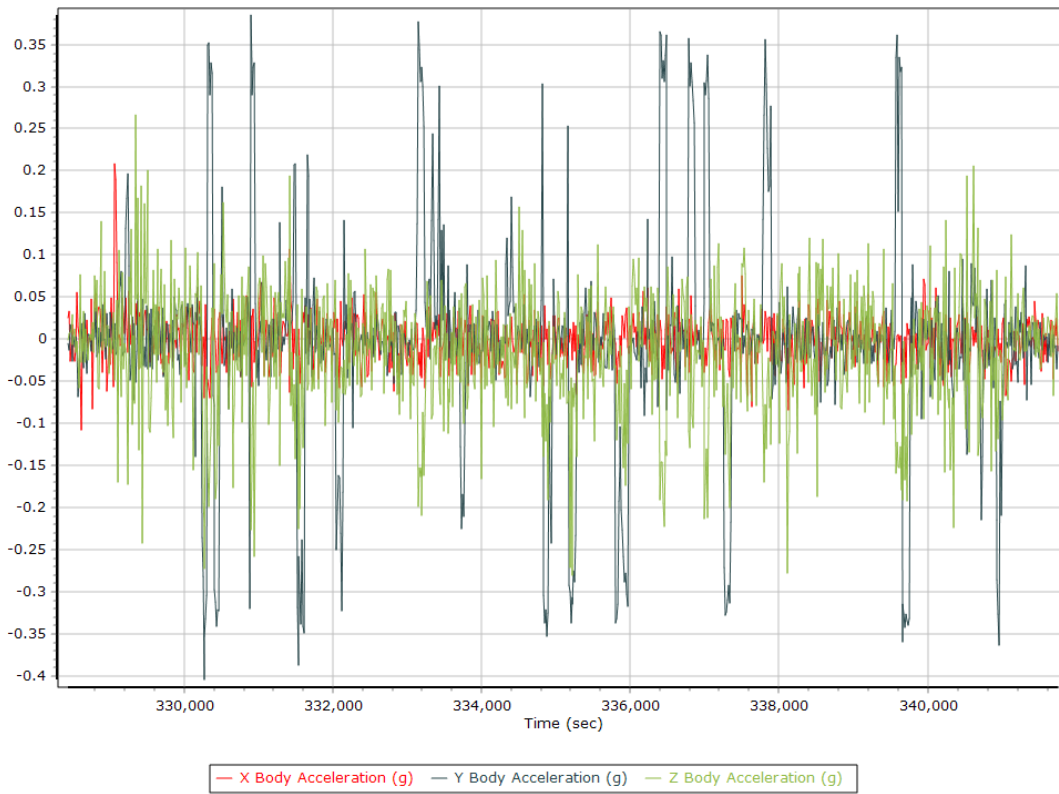
Total Speed



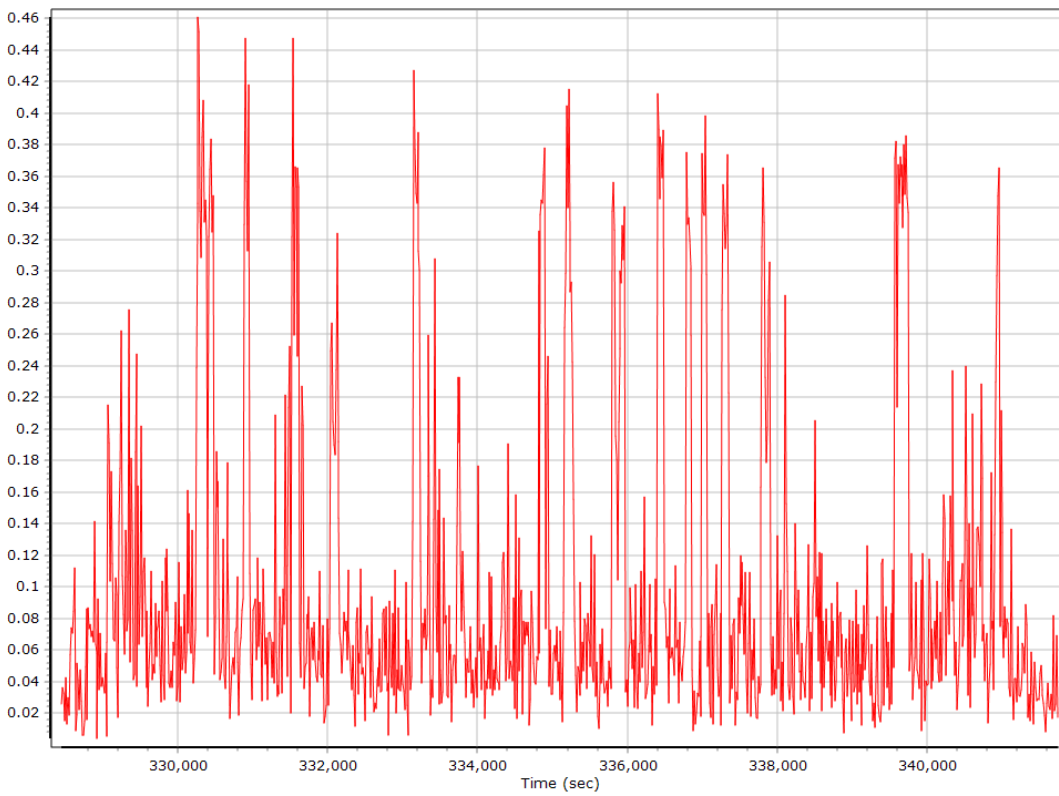
Ground Speed



Body Acceleration



Total Body Acceleration

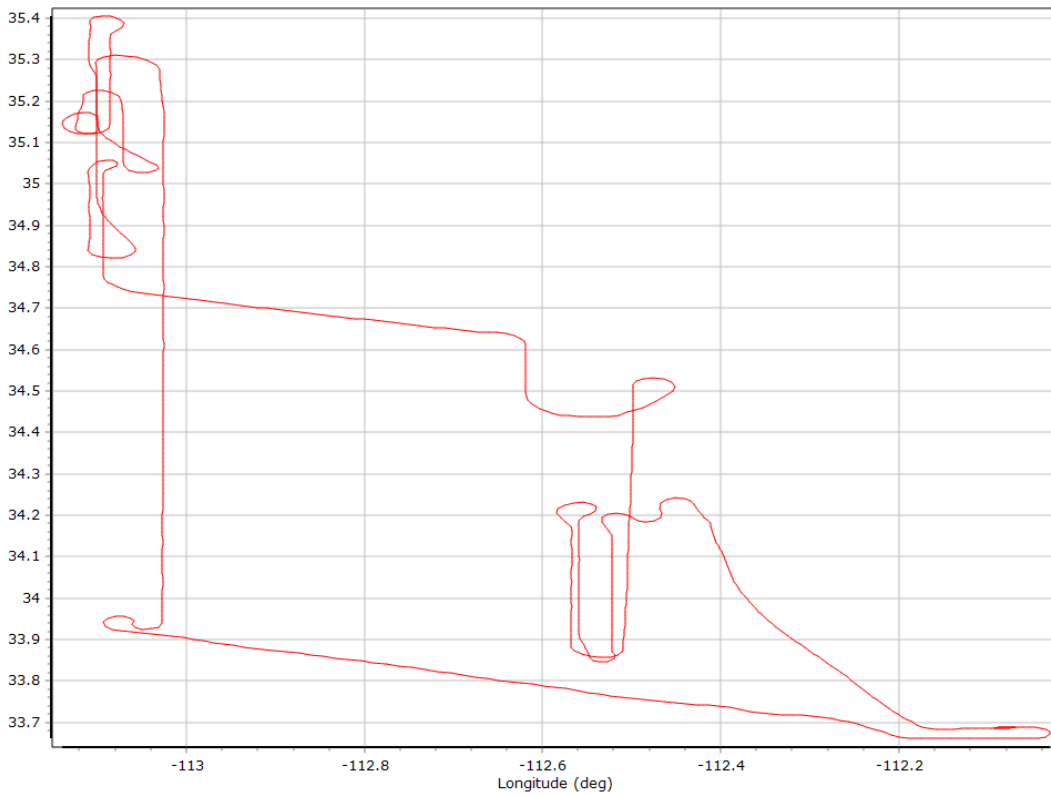


Body Angular Rate

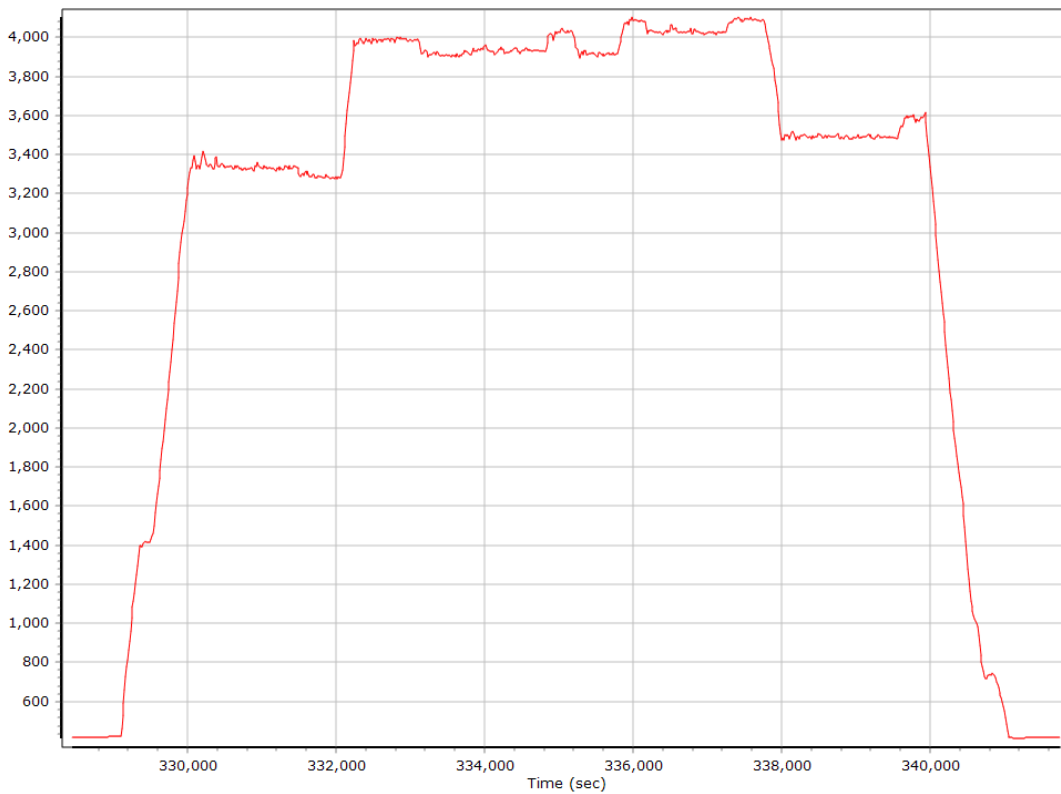


Forward Processed Trajectory Information

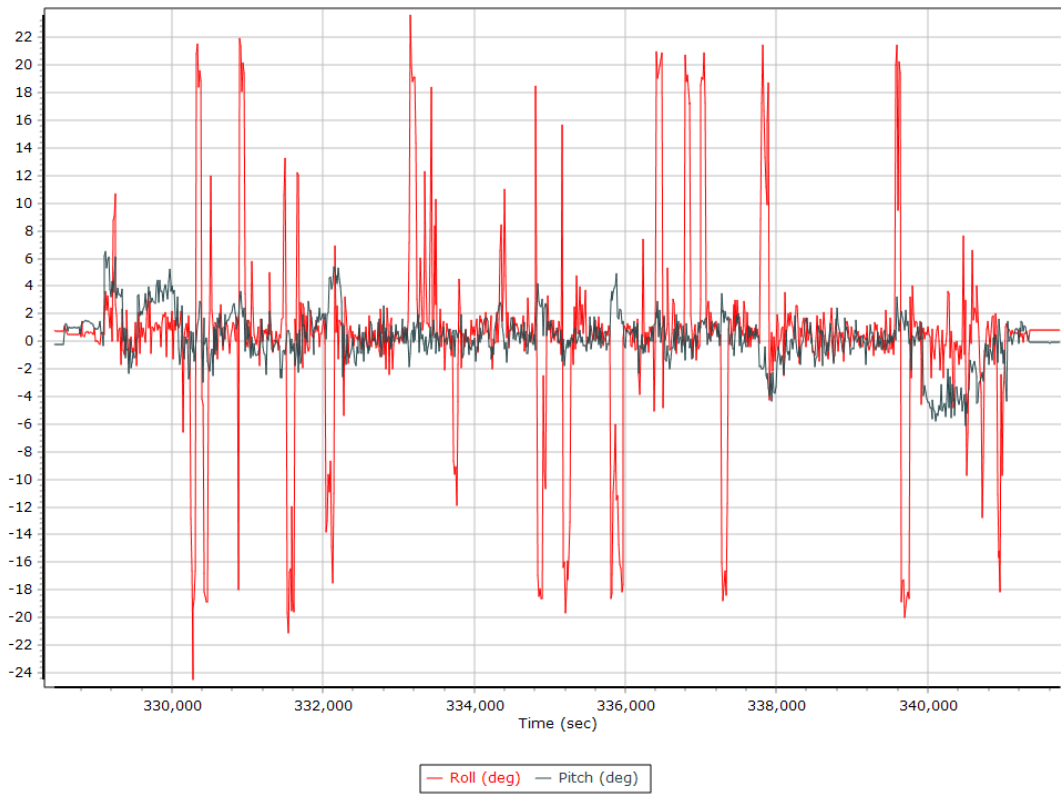
Top View



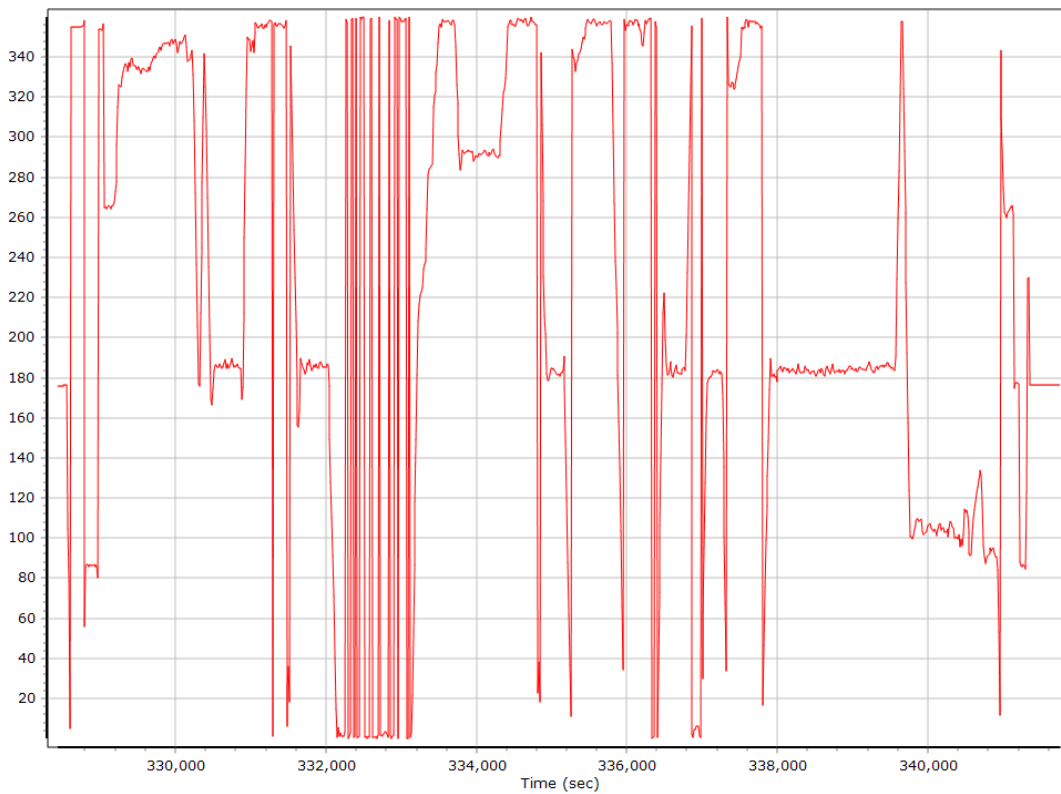
Altitude



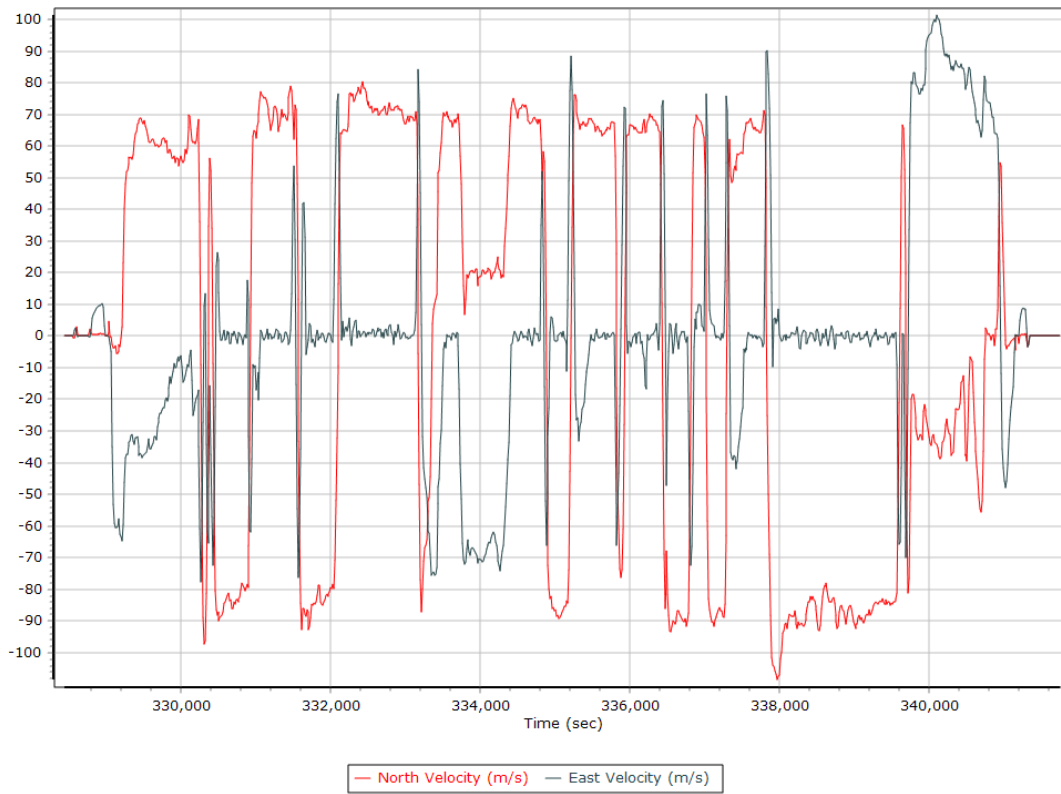
Roll/Pitch



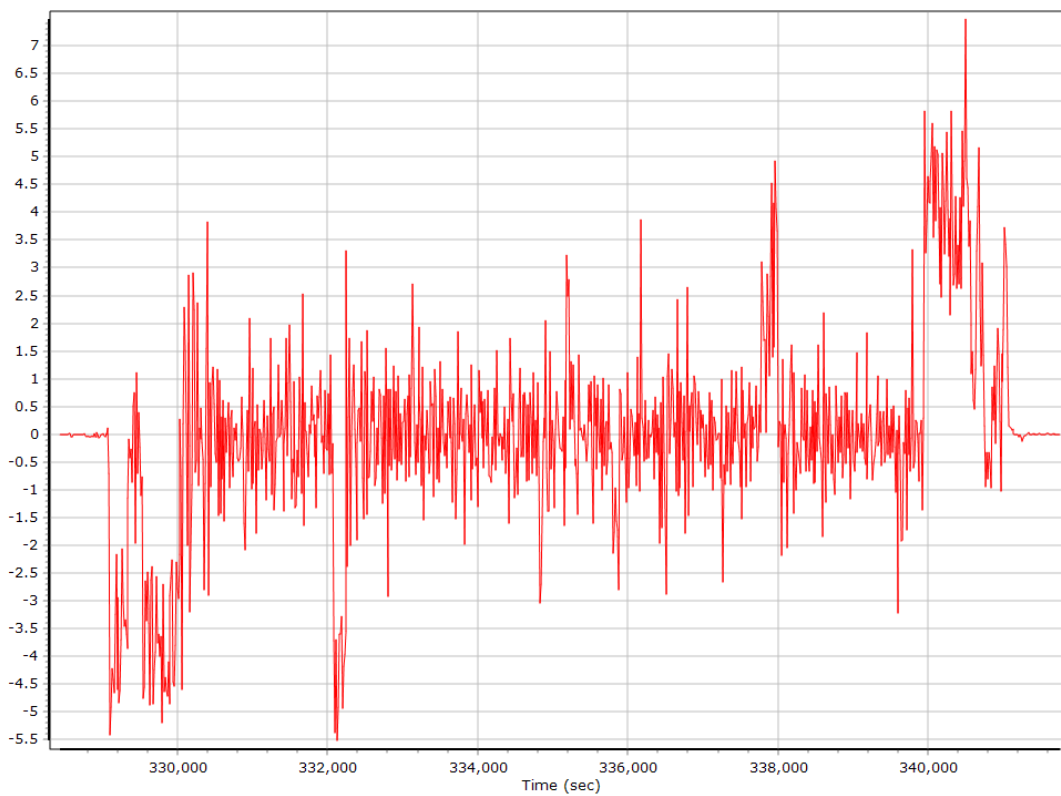
Heading



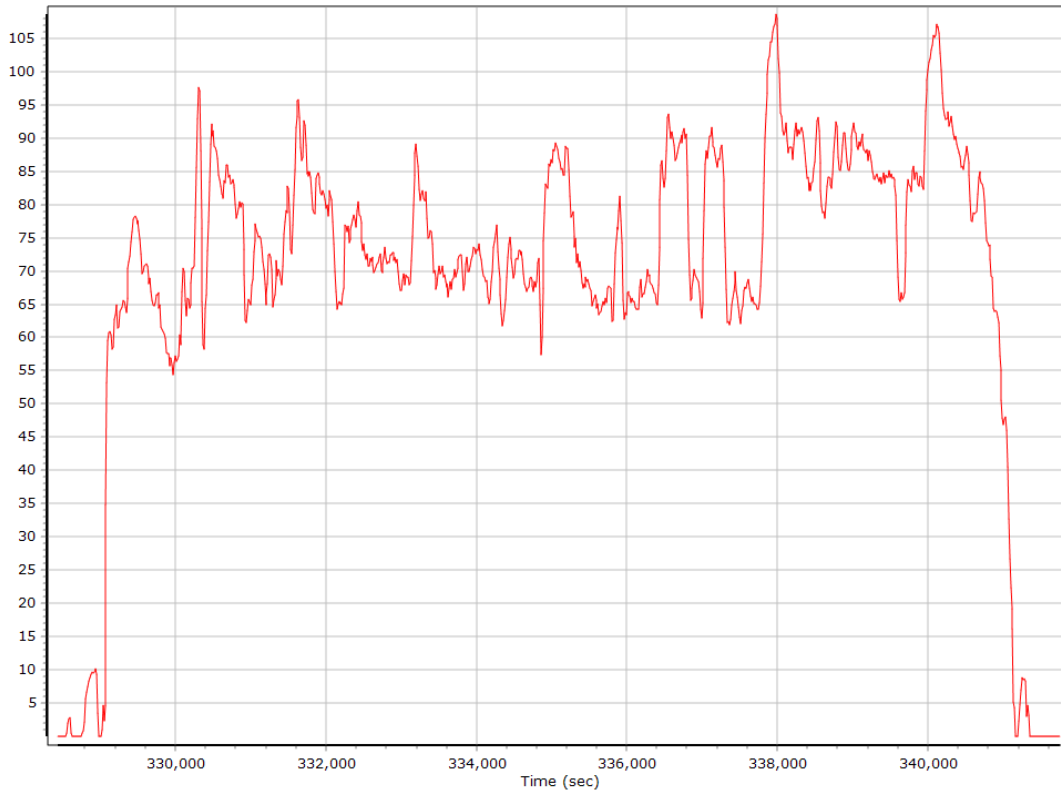
North/East Velocity



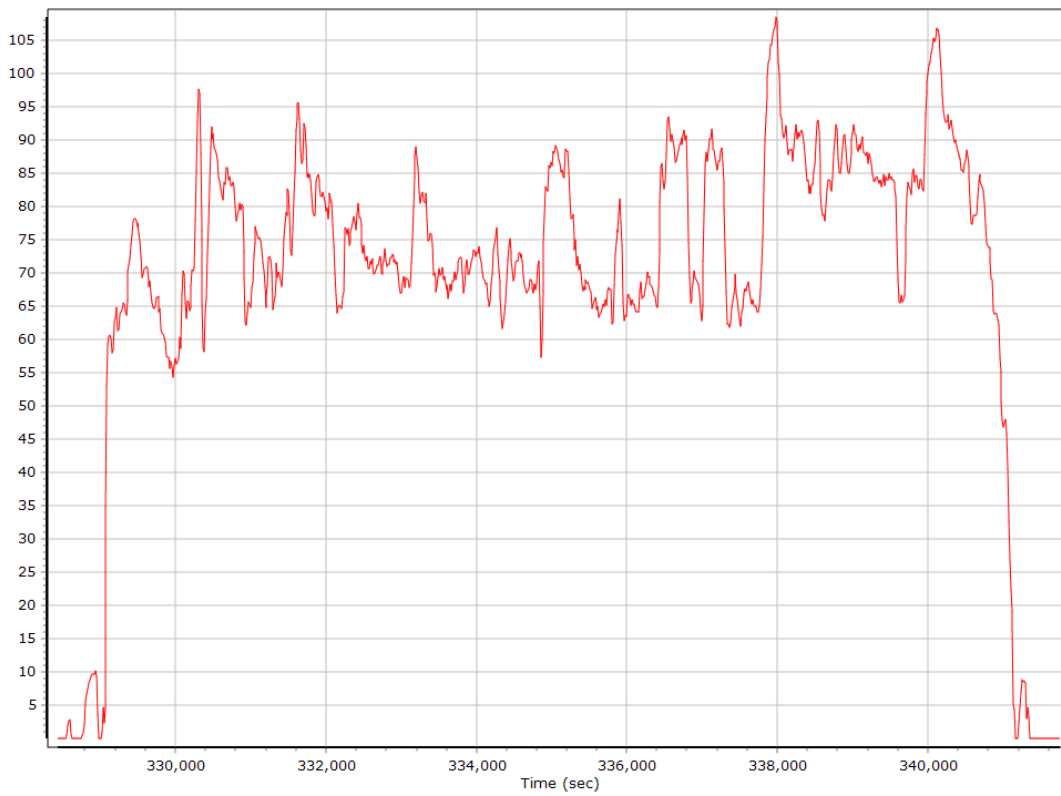
Down Velocity



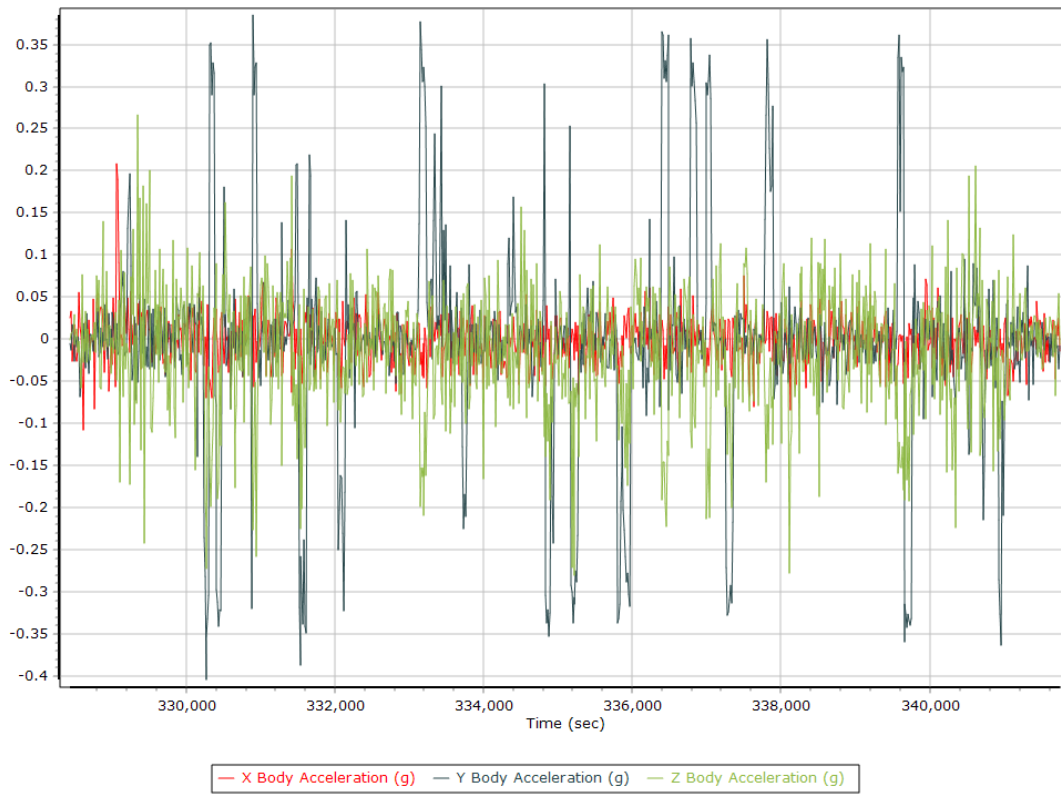
Total Speed



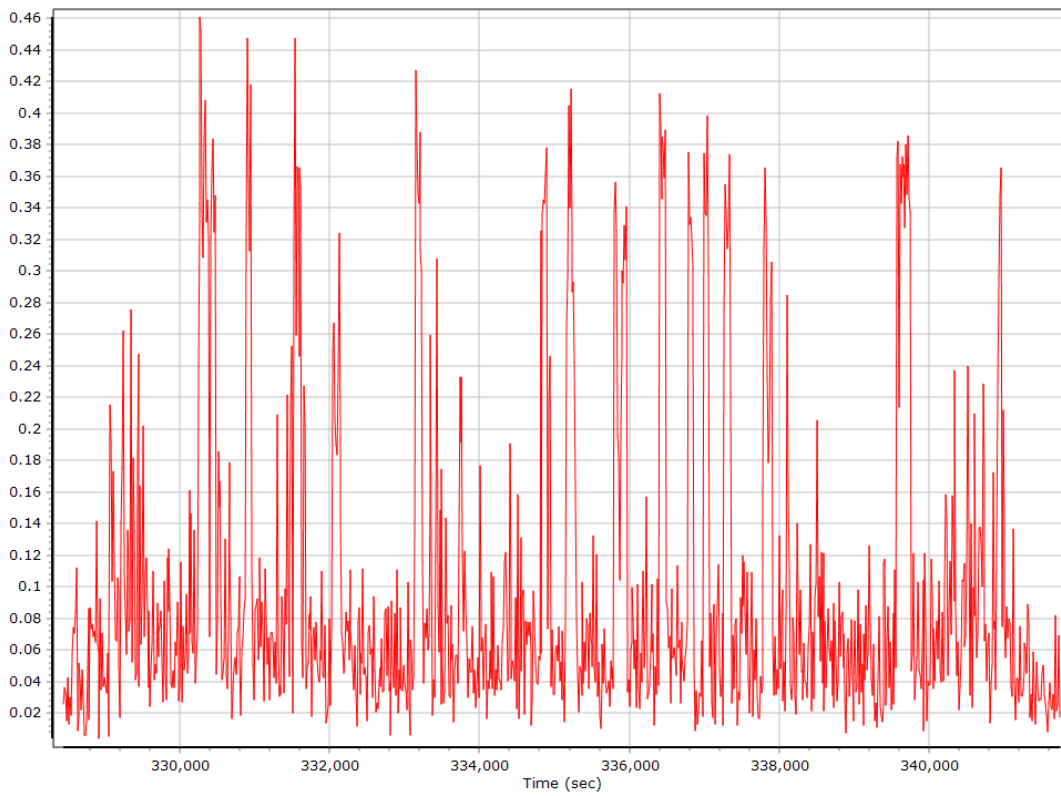
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate

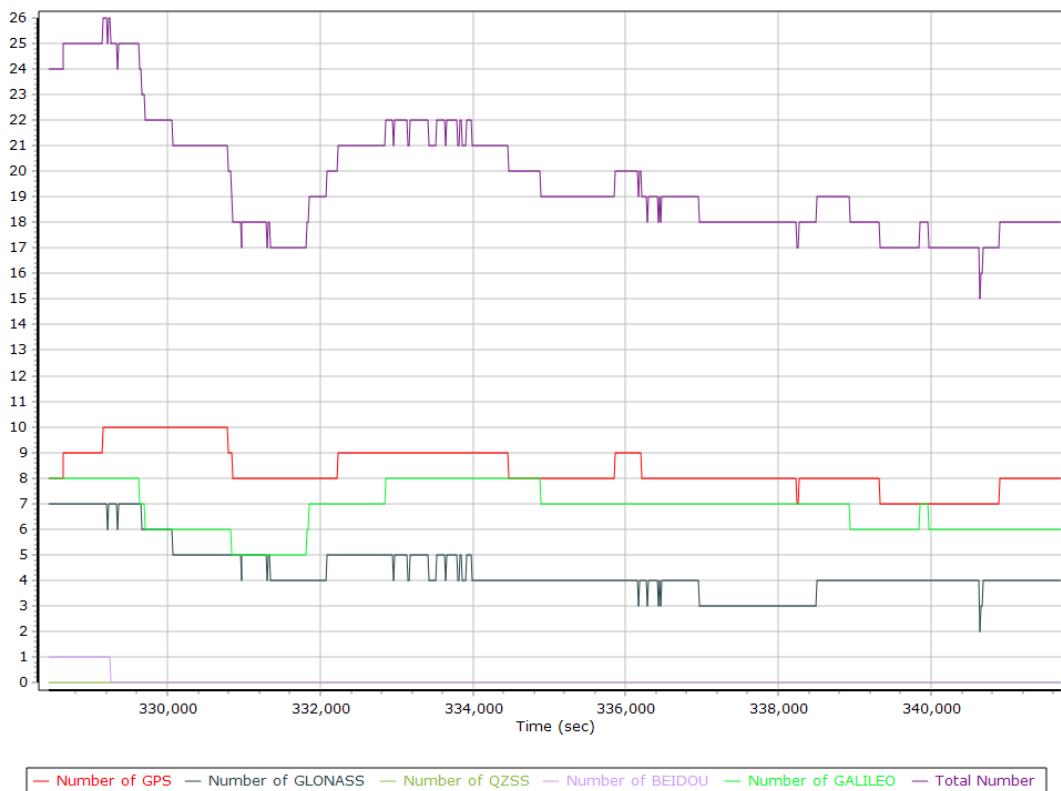


GNSS QC

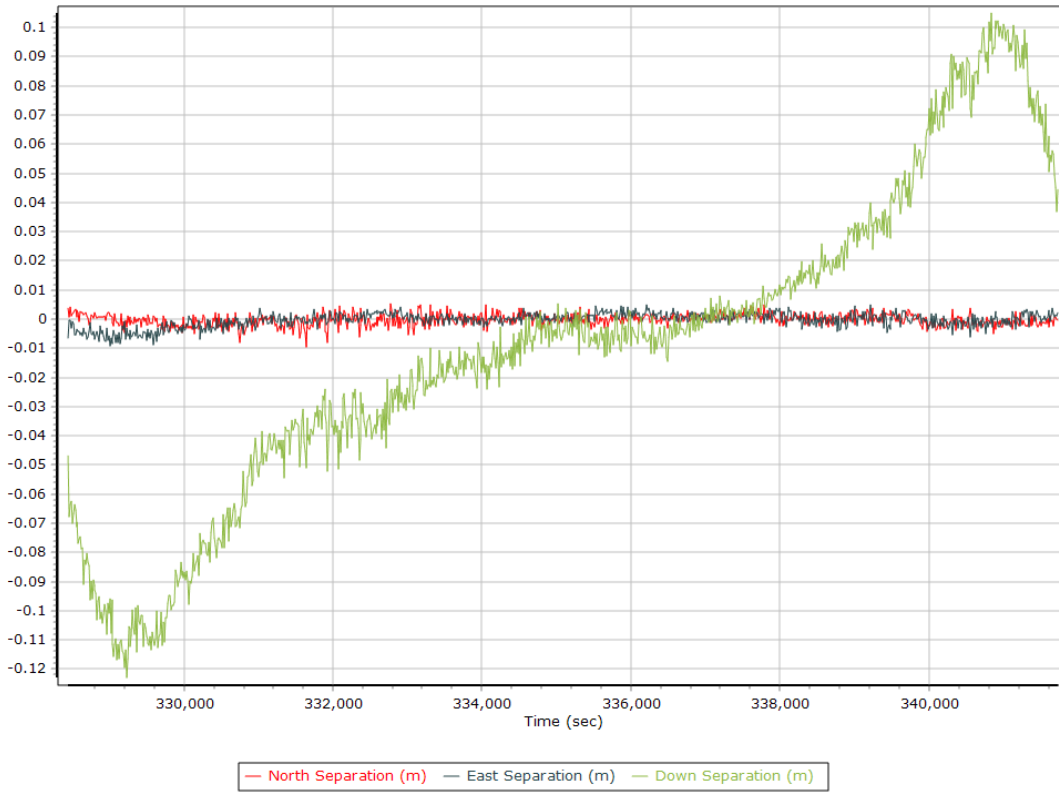
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	7	10	8
Number of GLONASS SV	0	7	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	2	0
Number of GALILEO SV	2	8	7
Total number of SV	15	26	20
PDOP	1.03	1.87	1.27
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	13762.00	0.00	2.00
Percentage	99.99	0.00	0.01

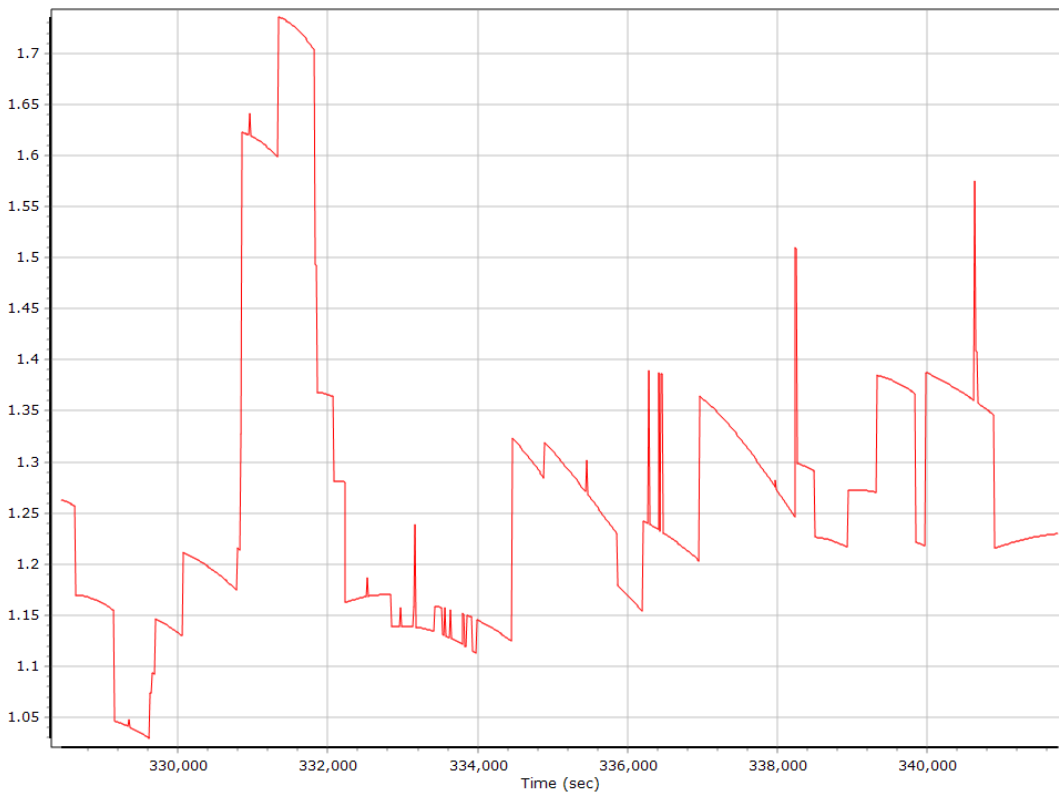
Num SVs in solution



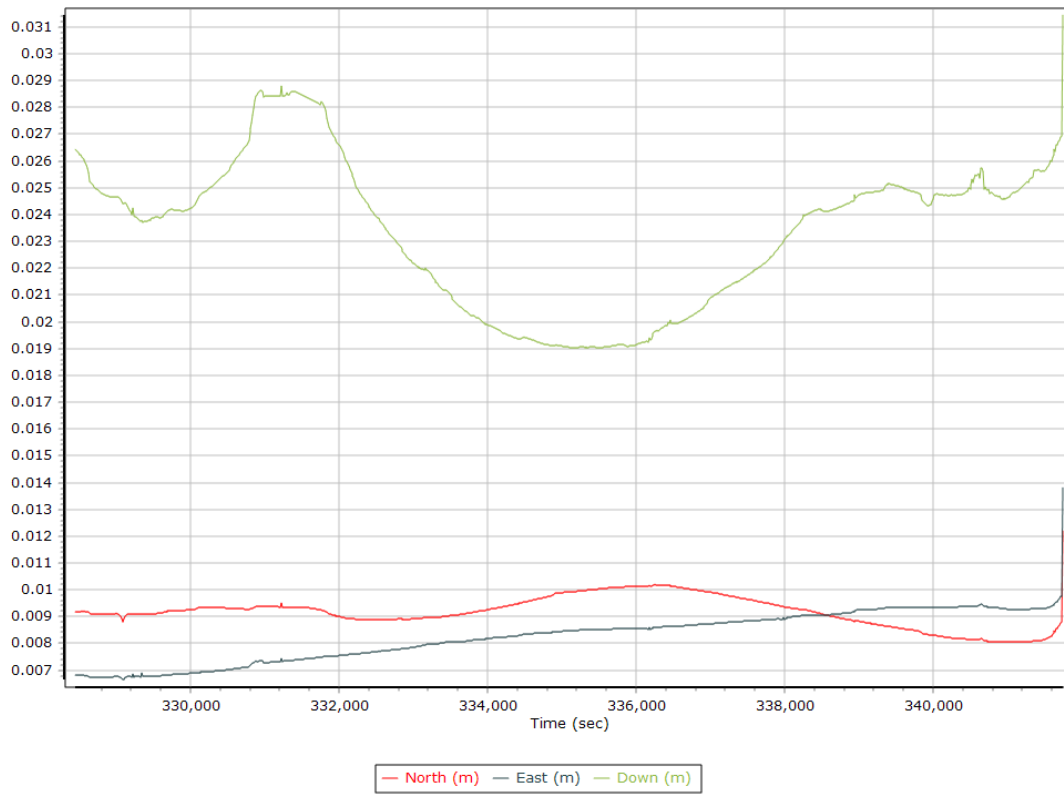
Forward/Reverse Separation



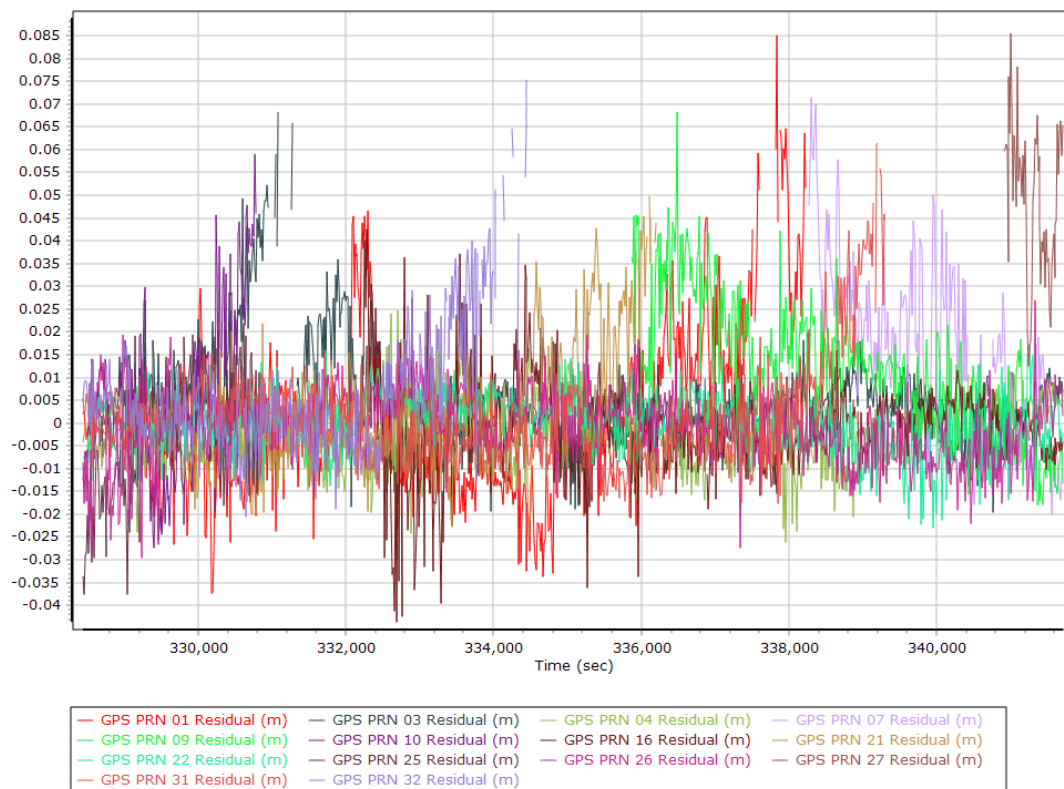
PDOP



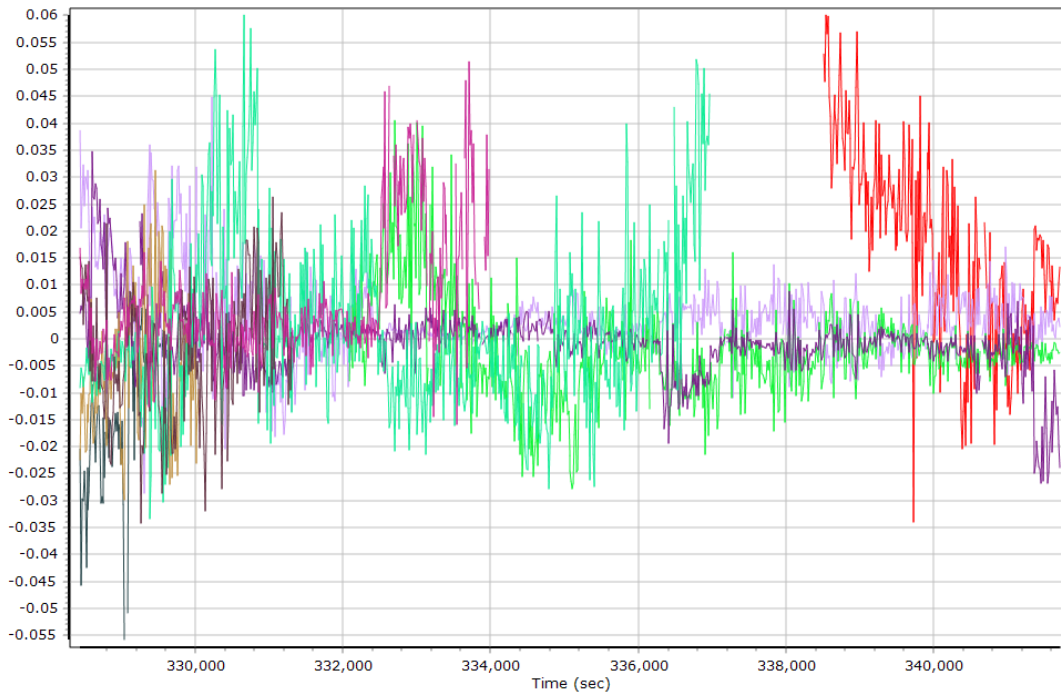
Estimated Position Accuracy



GPS Residuals

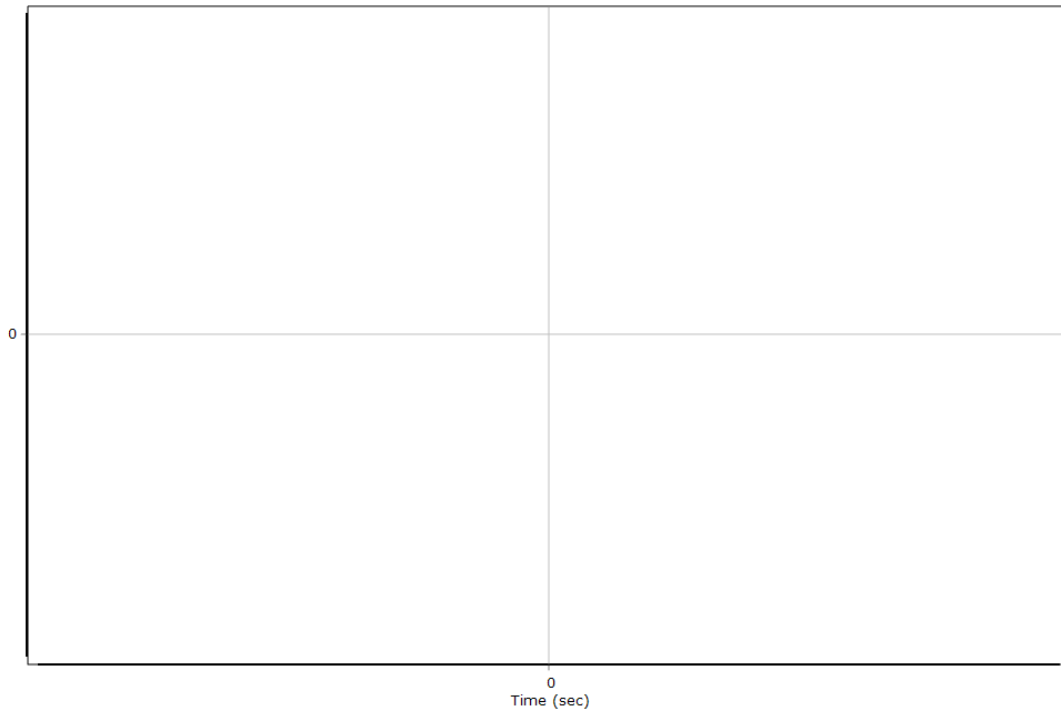


GLONASS Residuals



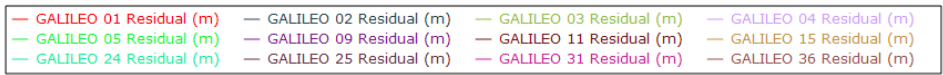
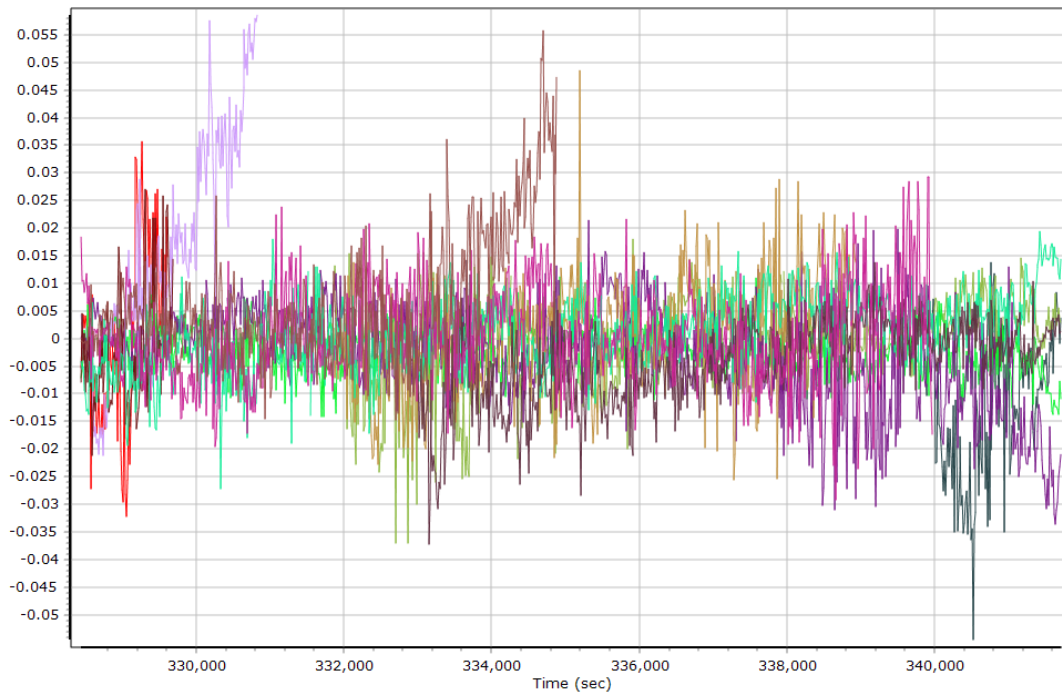
- GLONASS 01 Residual (m)
- GLONASS 05 Residual (m)
- GLONASS 06 Residual (m)
- GLONASS 07 Residual (m)
- GLONASS 08 Residual (m)
- GLONASS 09 Residual (m)
- GLONASS 10 Residual (m)
- GLONASS 15 Residual (m)
- GLONASS 16 Residual (m)
- GLONASS 21 Residual (m)
- GLONASS 22 Residual (m)
- GLONASS 23 Residual (m)

BEIDOU Residuals



- BEIDOU 11 Residual (m)
- BEIDOU 12 Residual (m)
- BEIDOU 19 Residual (m)
- BEIDOU 21 Residual (m)
- BEIDOU 22 Residual (m)
- BEIDOU 26 Residual (m)

GALILEO Residuals



GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	327940.000 (11/10/2021 7:05:40 PM)		
Processing end time	341757.000 (11/10/2021 10:55:57 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Reference to IMU lever arm (m)	0.000	0.000	0.000
Reference to IMU mounting angles (deg)	0.000	0.000	90.000
Reference to Primary GNSS lever arm (m)	-0.528	-0.052	-1.200
Reference to Primary GNSS lever arm std dev (m)	0.030	0.030	0.030
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

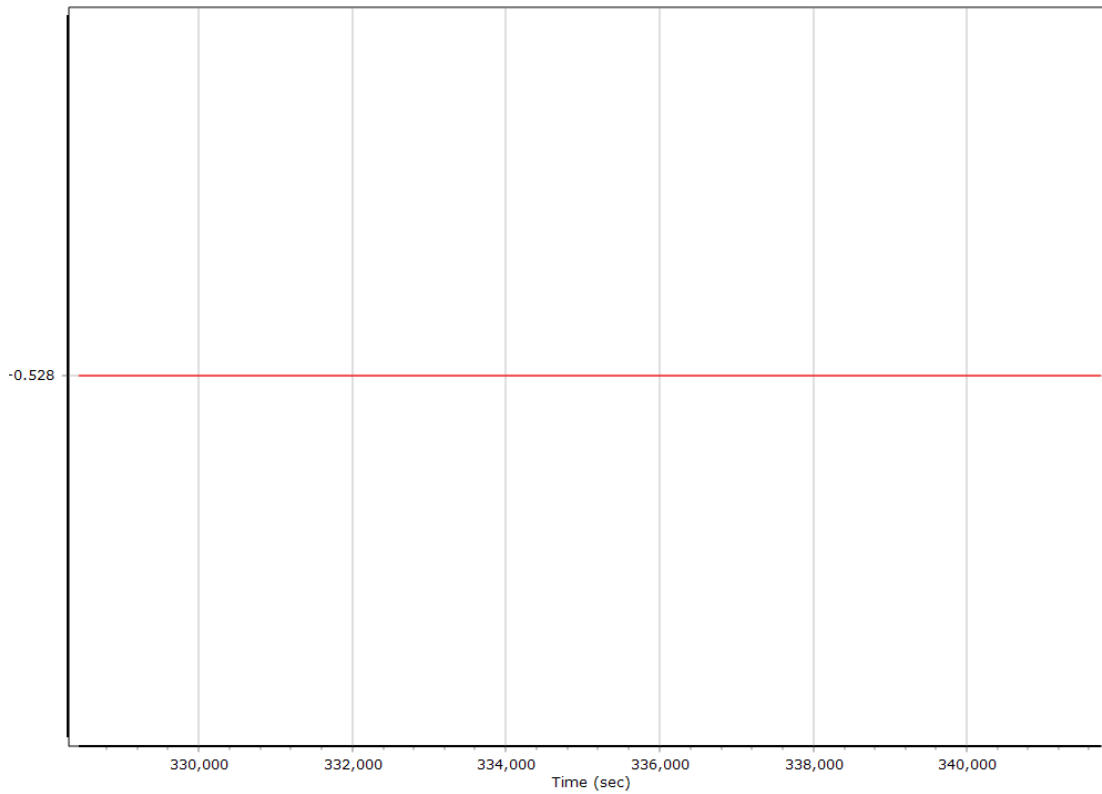
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

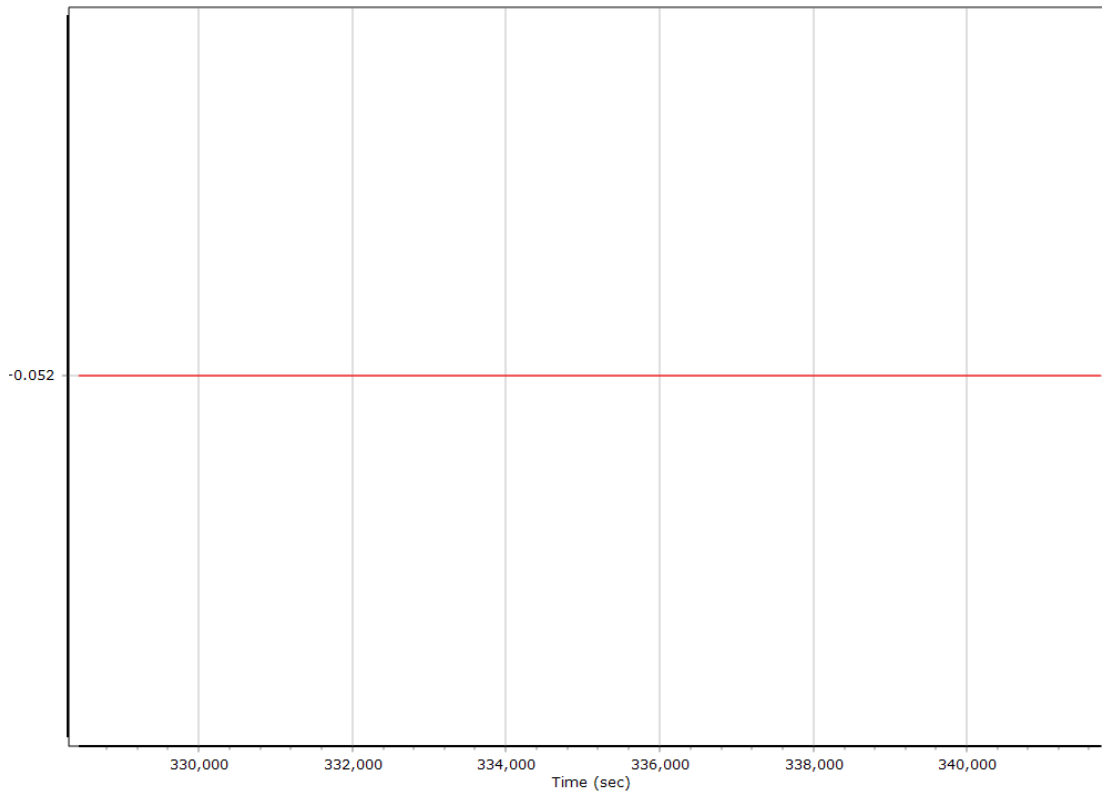
Reference-Primary GNSS Lever Arm Automatic Calibration Results

Original Reference to Primary GNSS lever arm (m)	-0.497	-0.045	-1.199
Iteration 1 Reference to Primary GNSS lever arm (m)	-0.527	-0.052	-1.200
Iteration 2 Reference to Primary GNSS lever arm (m)	-0.528	-0.052	-1.200
Primary GNSS Lever Arm In use	Iteration 2		

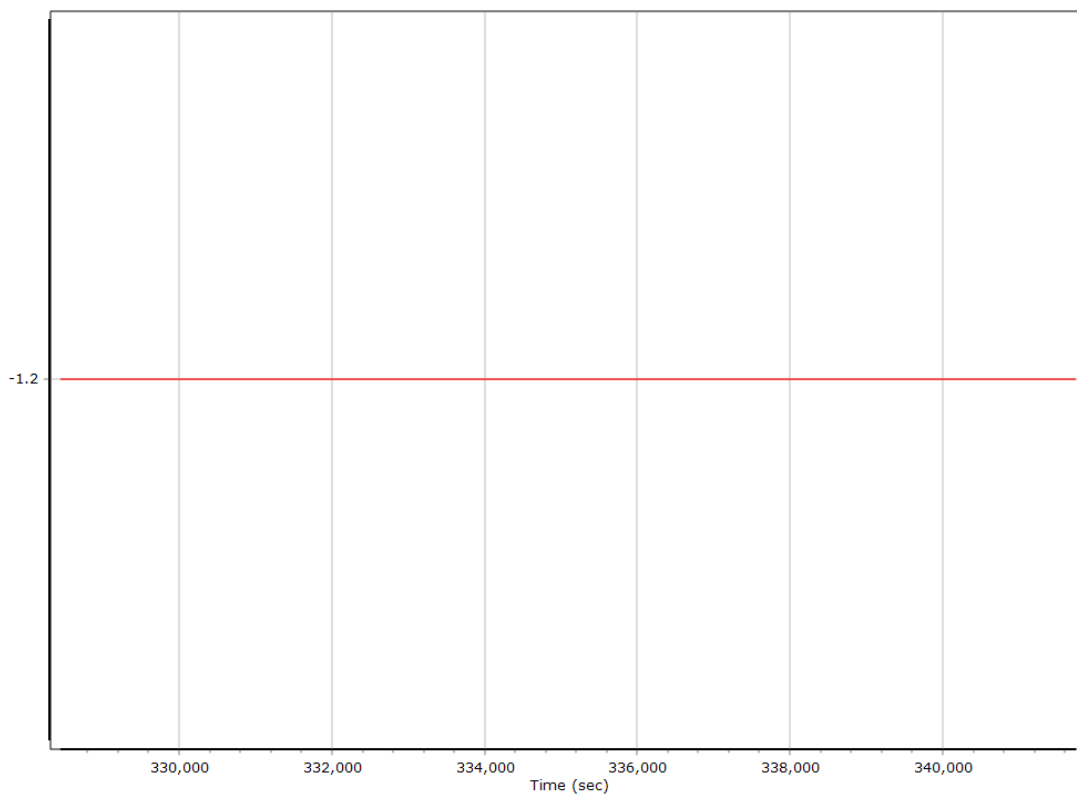
X Reference-Primary GNSS Lever Arm (m)



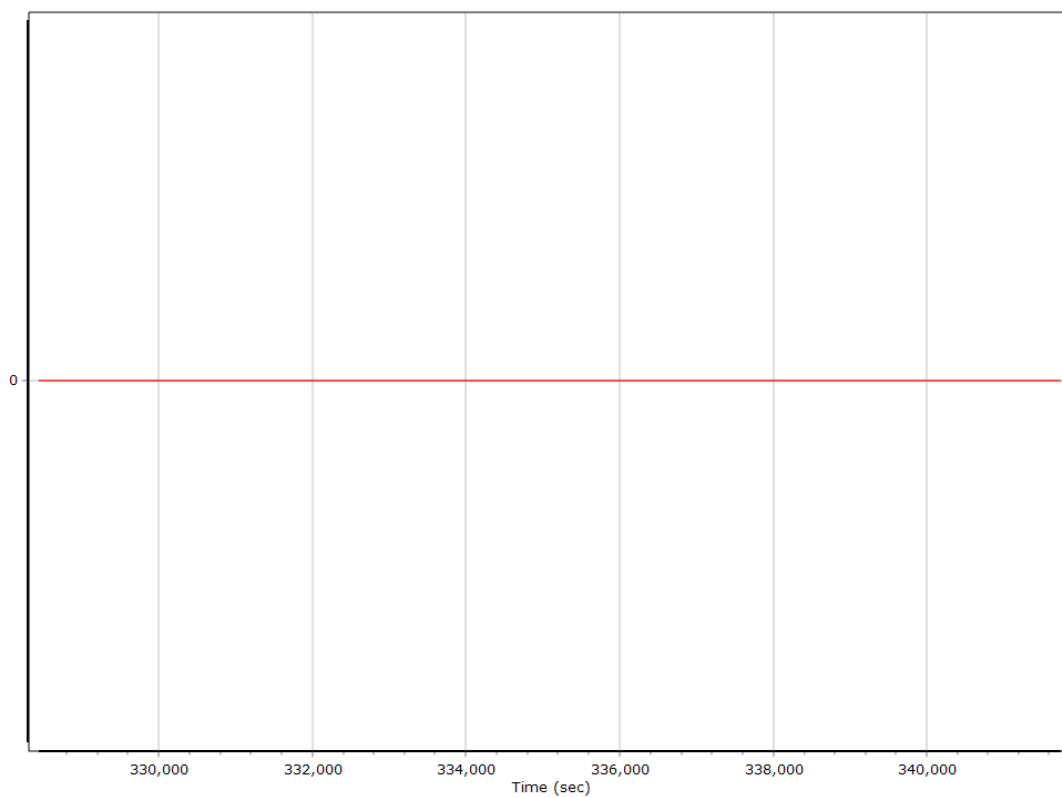
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



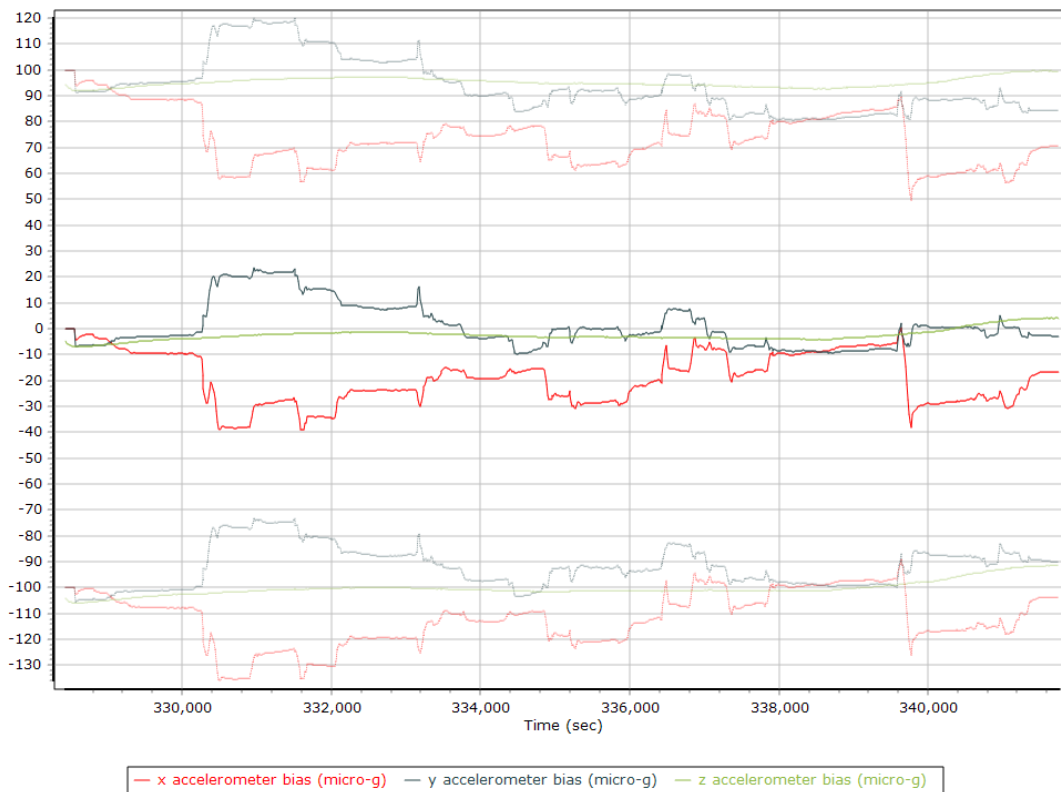
Reference-Primary GNSS Lever Arm Figure of Merit



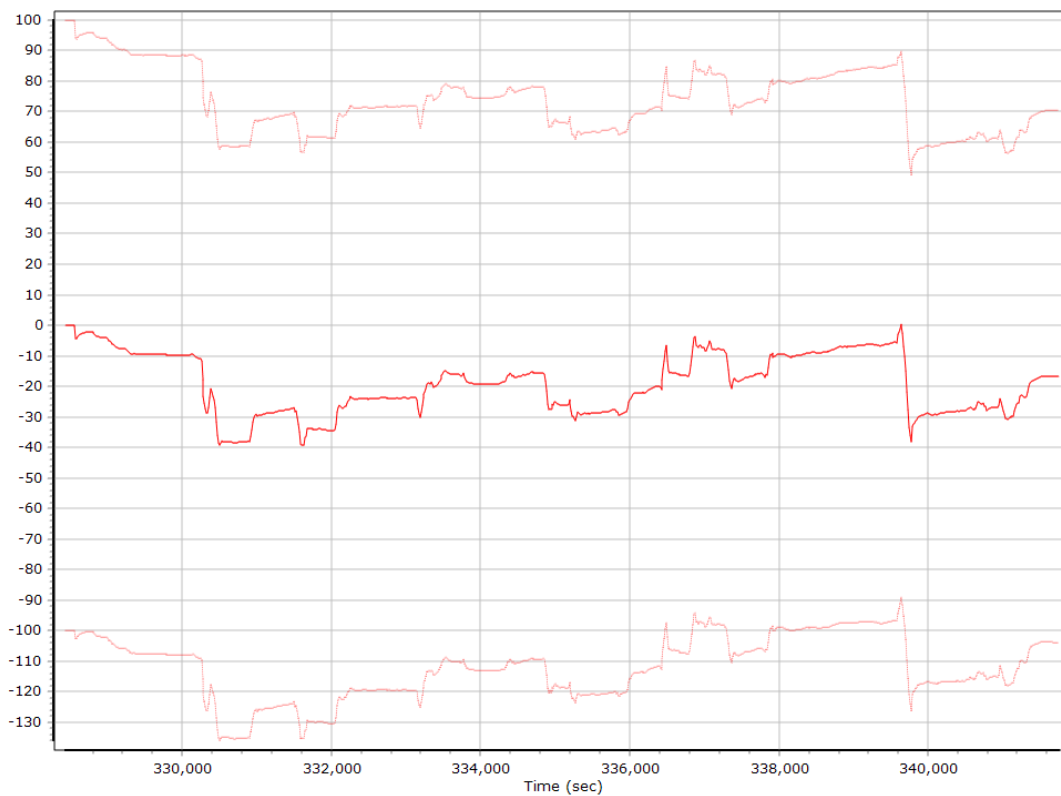
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

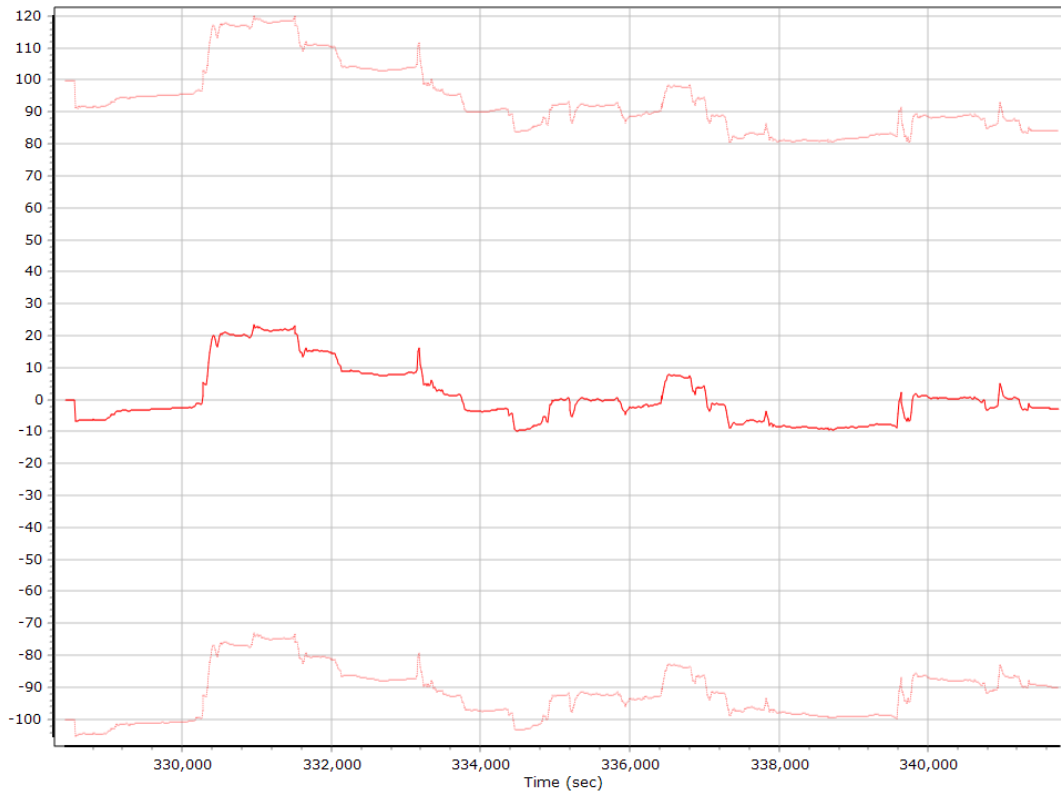
Accelerometer Bias (micro-g)



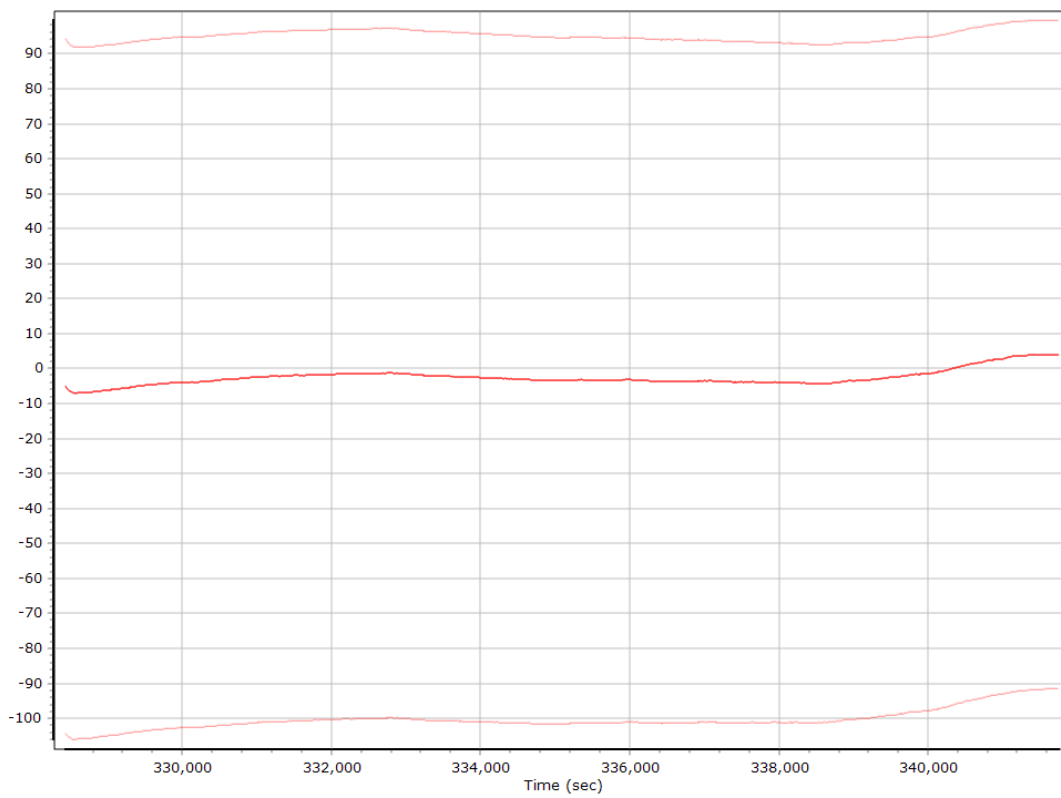
X Accelerometer Bias (micro-g)



Y Accelerometer Bias (micro-g)



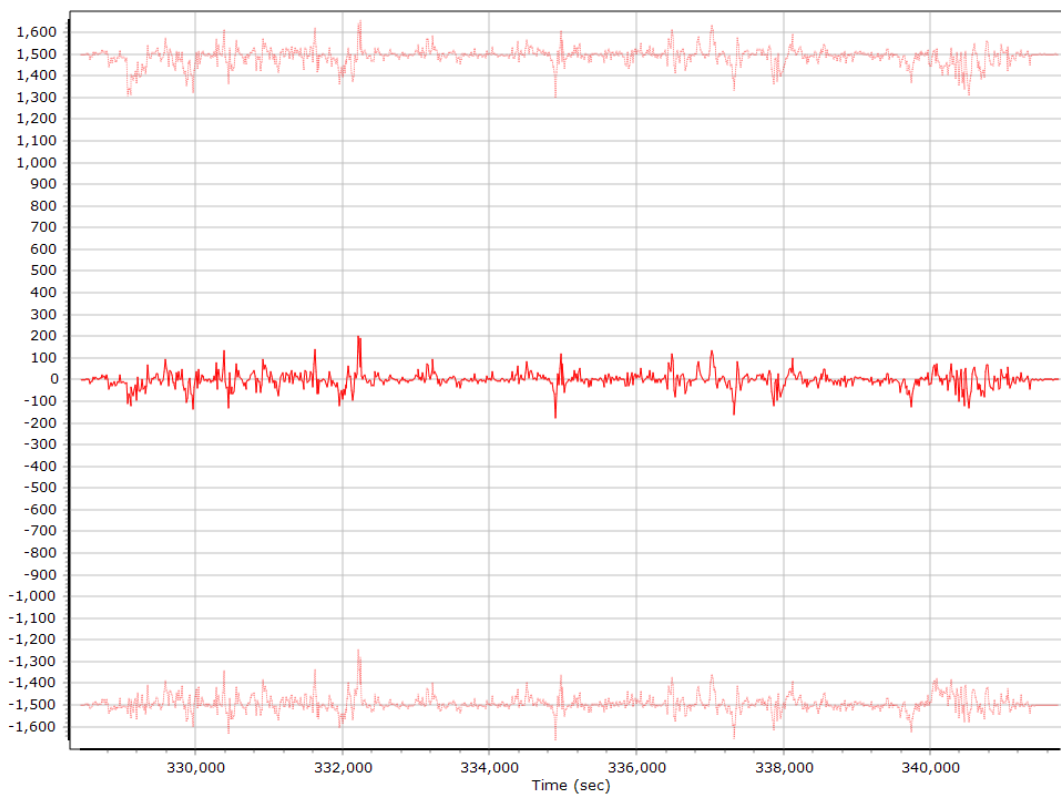
Z Accelerometer Bias (micro-g)



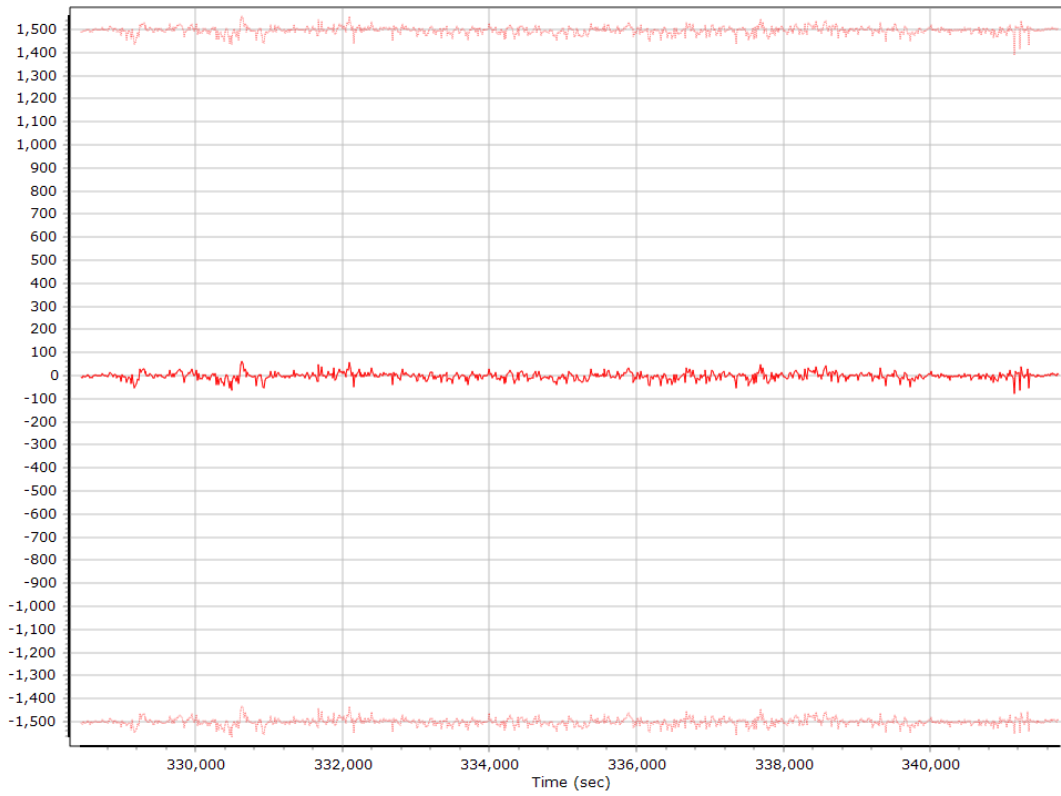
Accelerometer Scale Error (ppm)



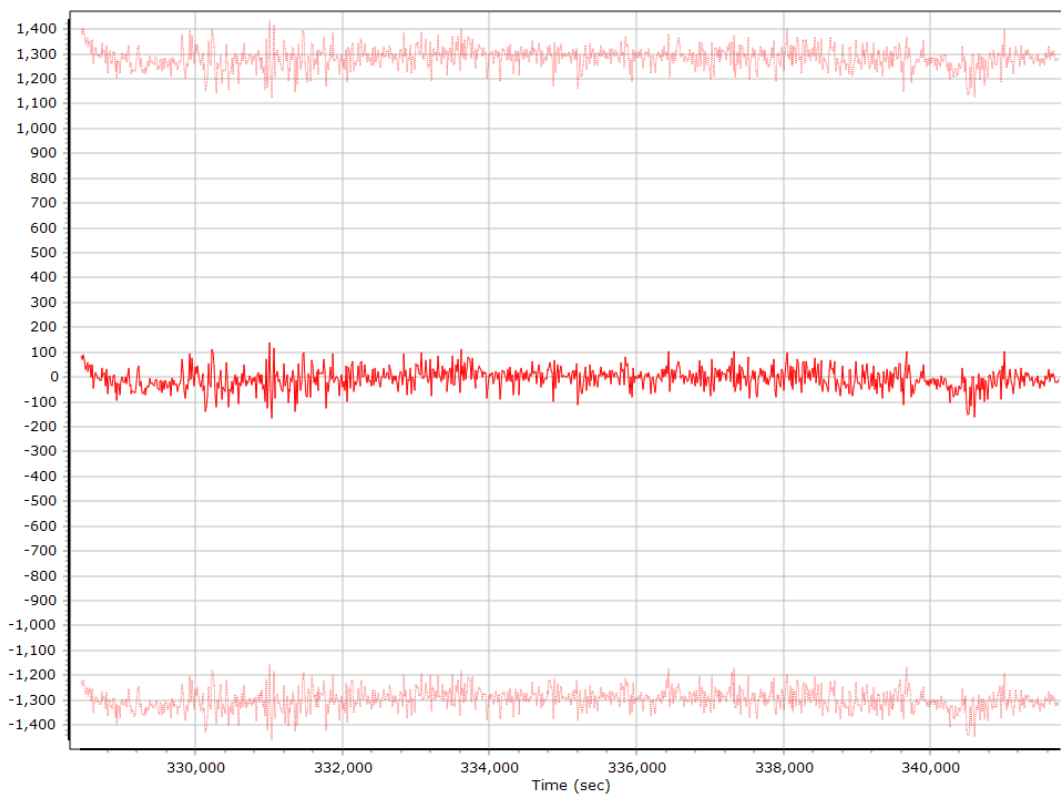
X Accelerometer Scale Error (ppm)



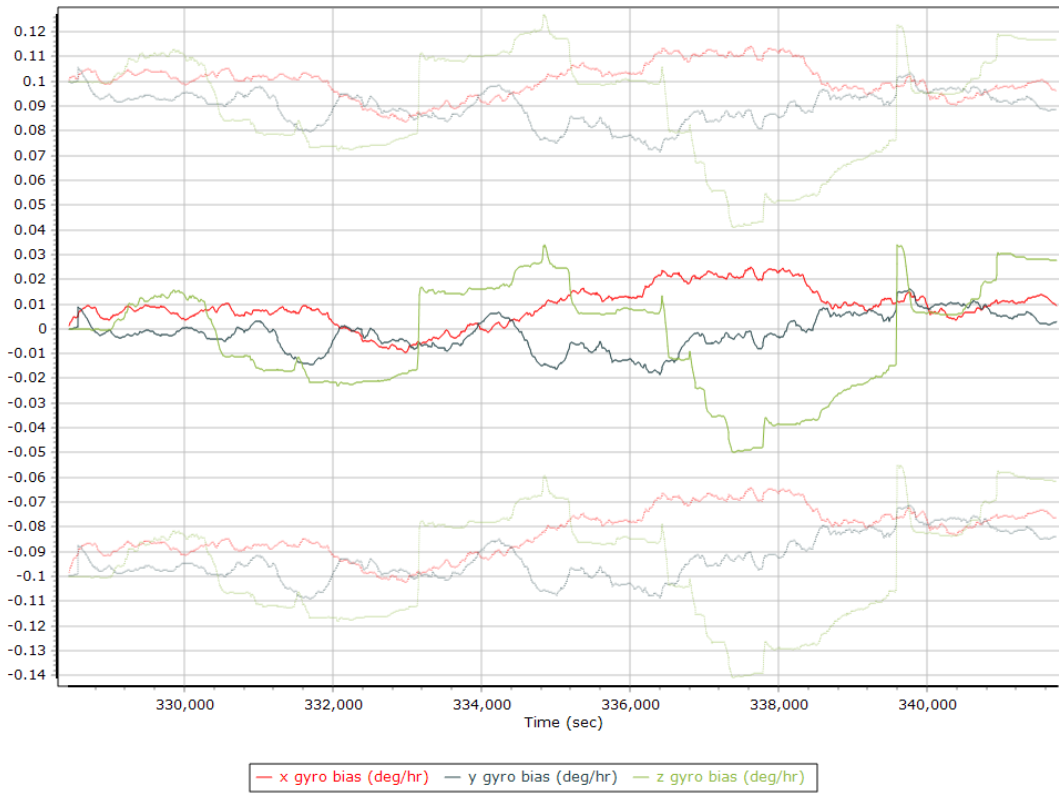
Y Accelerometer Scale Error (ppm)



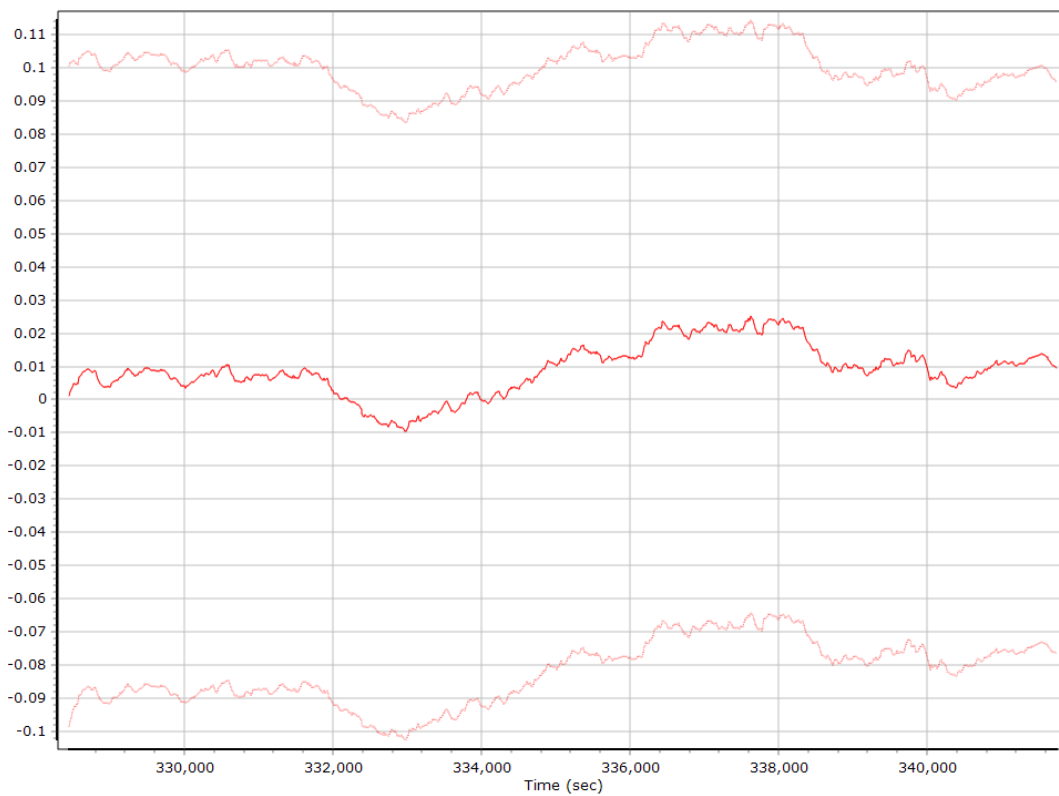
Z Accelerometer Scale Error (ppm)



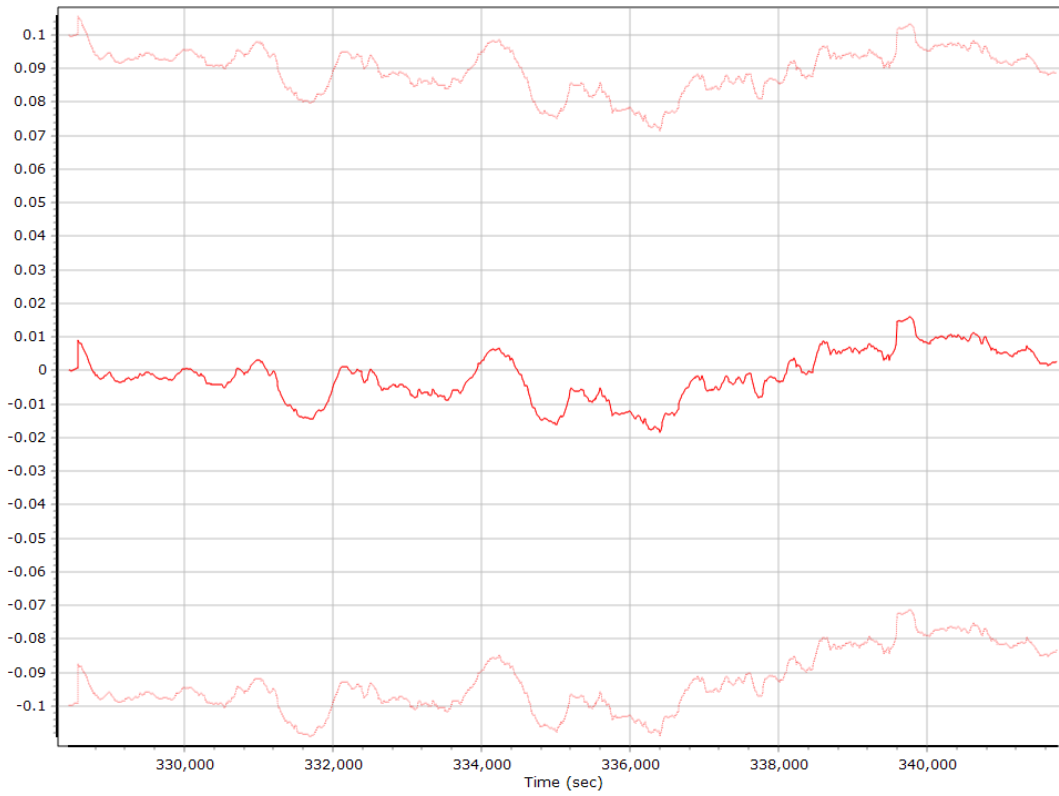
Gyro Bias (deg/h)



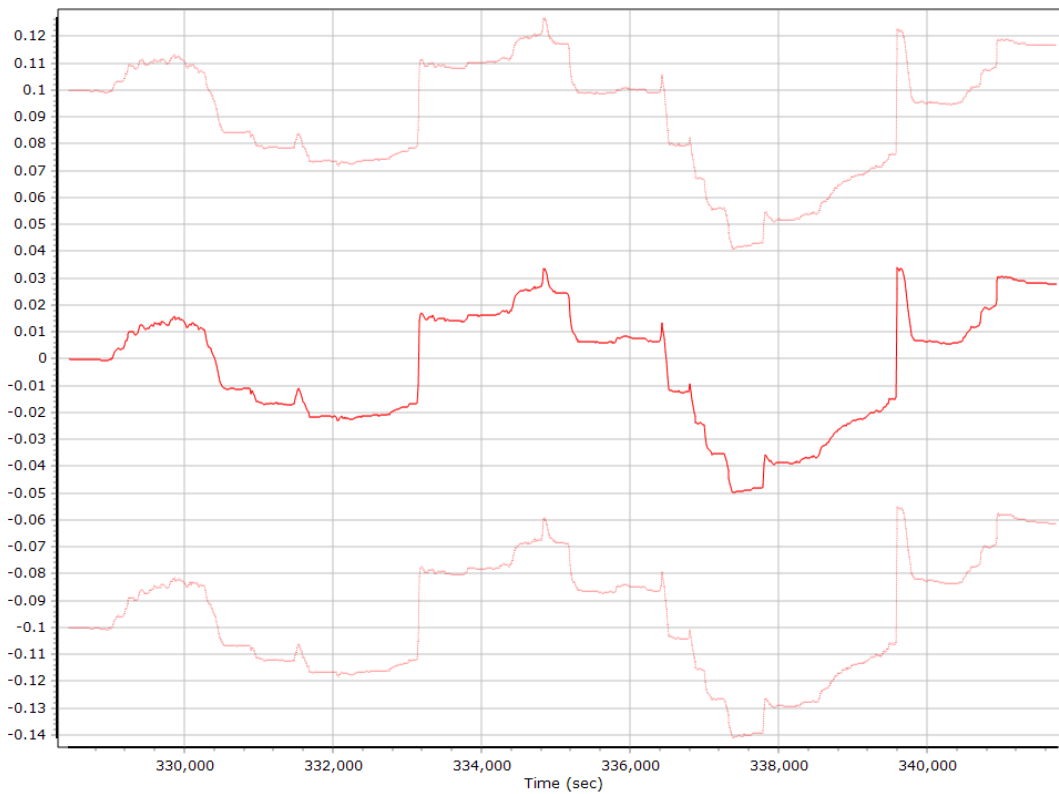
X Gyro Bias (deg/h)



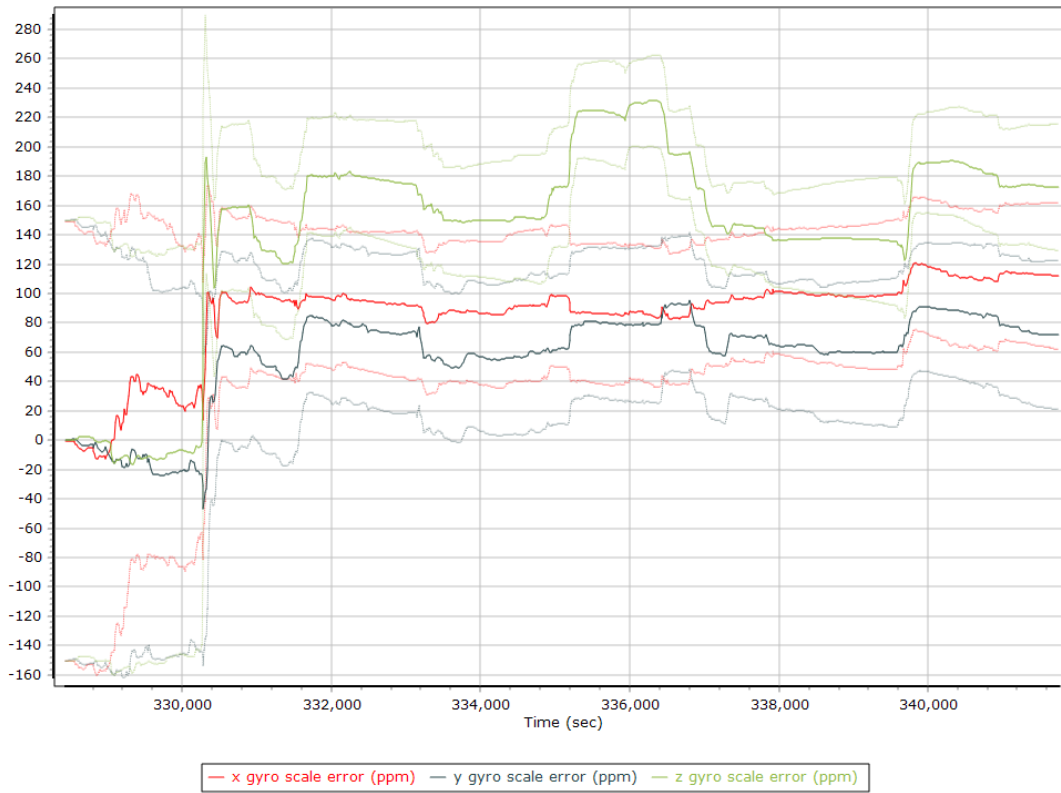
Y Gyro Bias (deg/h)



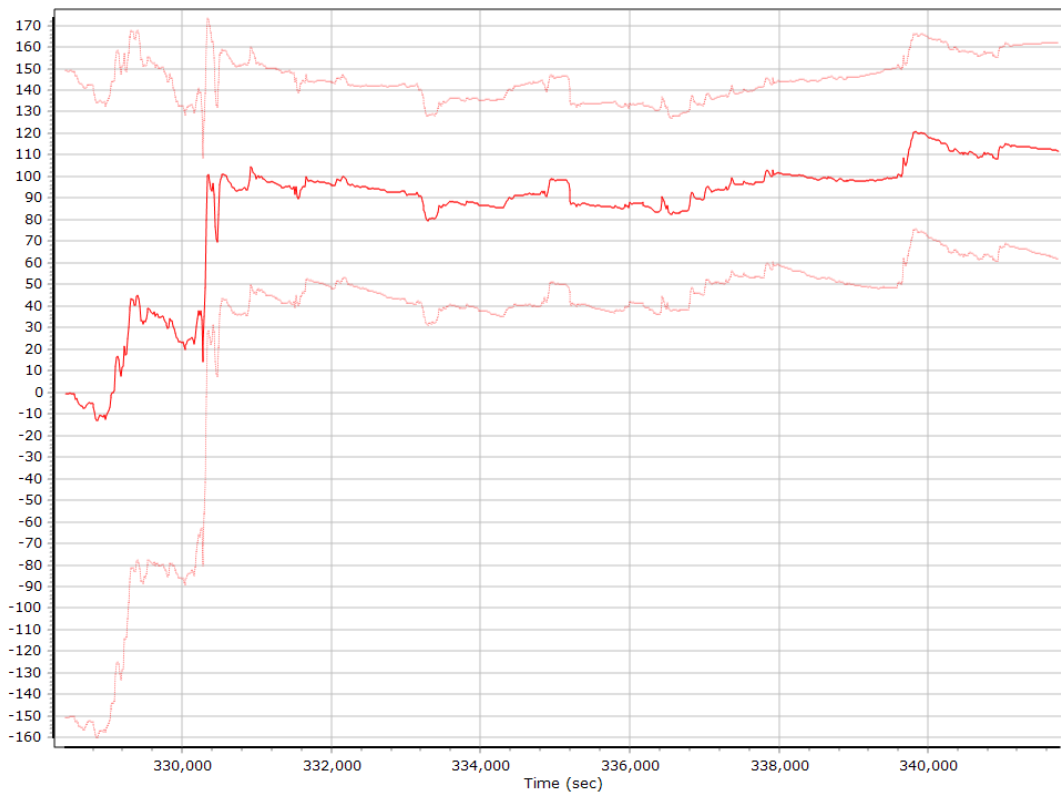
Z Gyro Bias (deg/h)



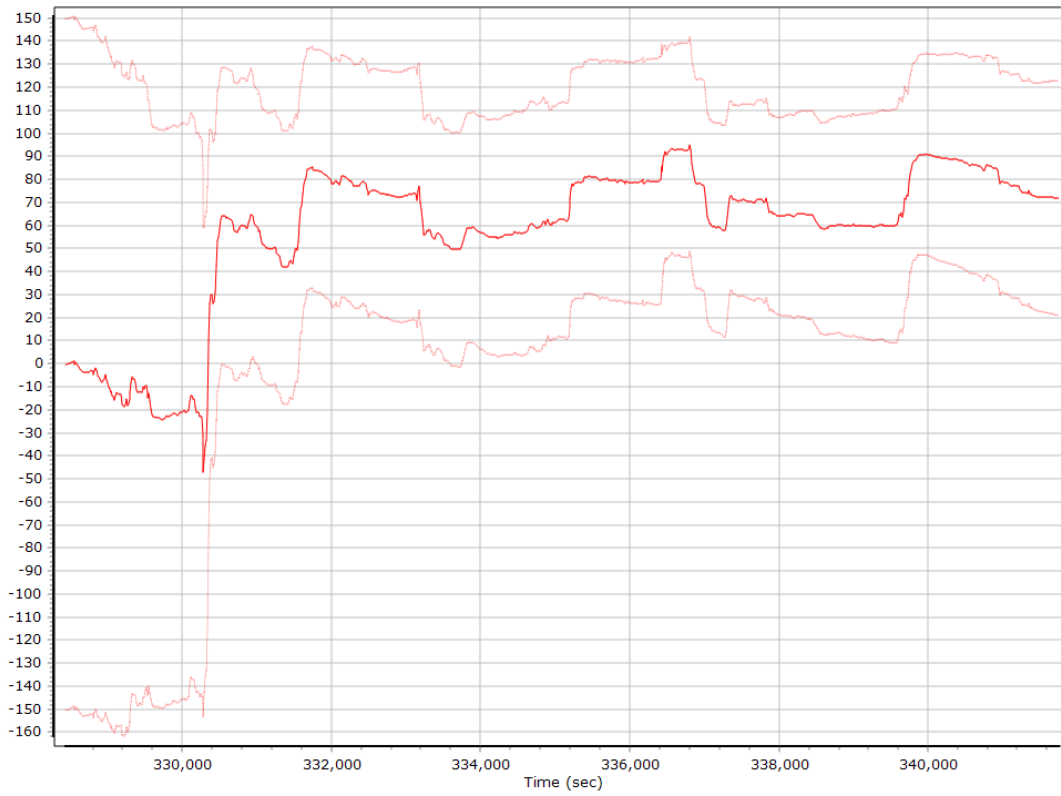
Gyro Scale Error (ppm)



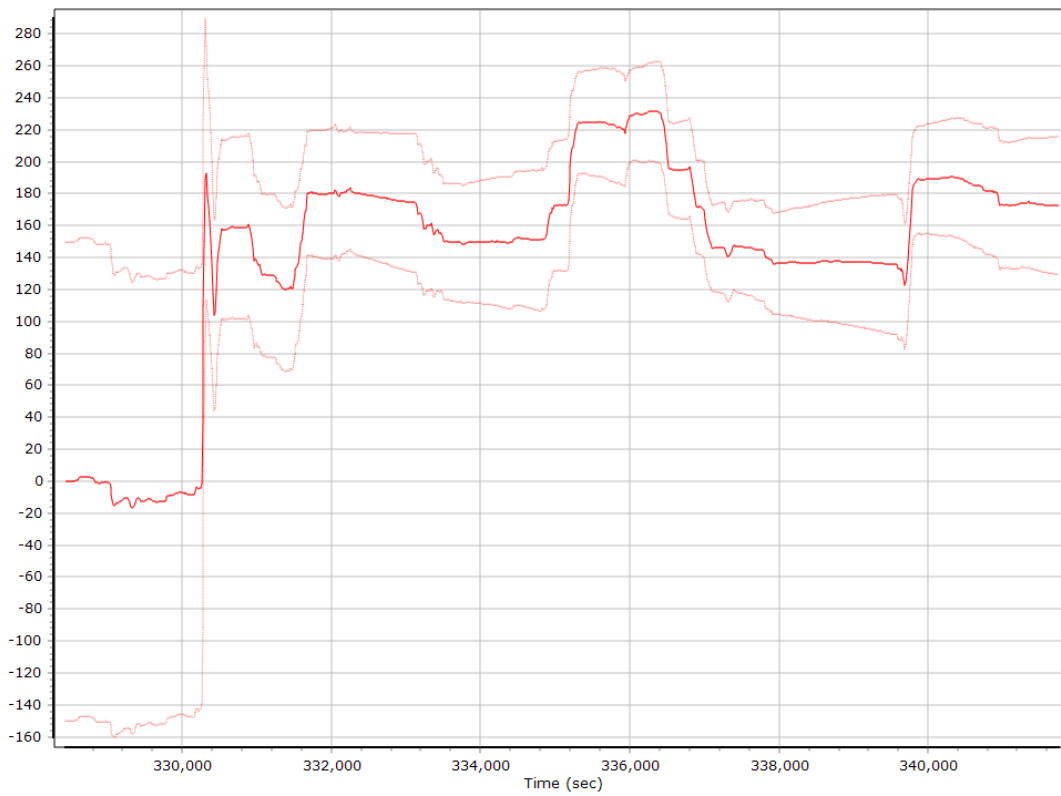
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

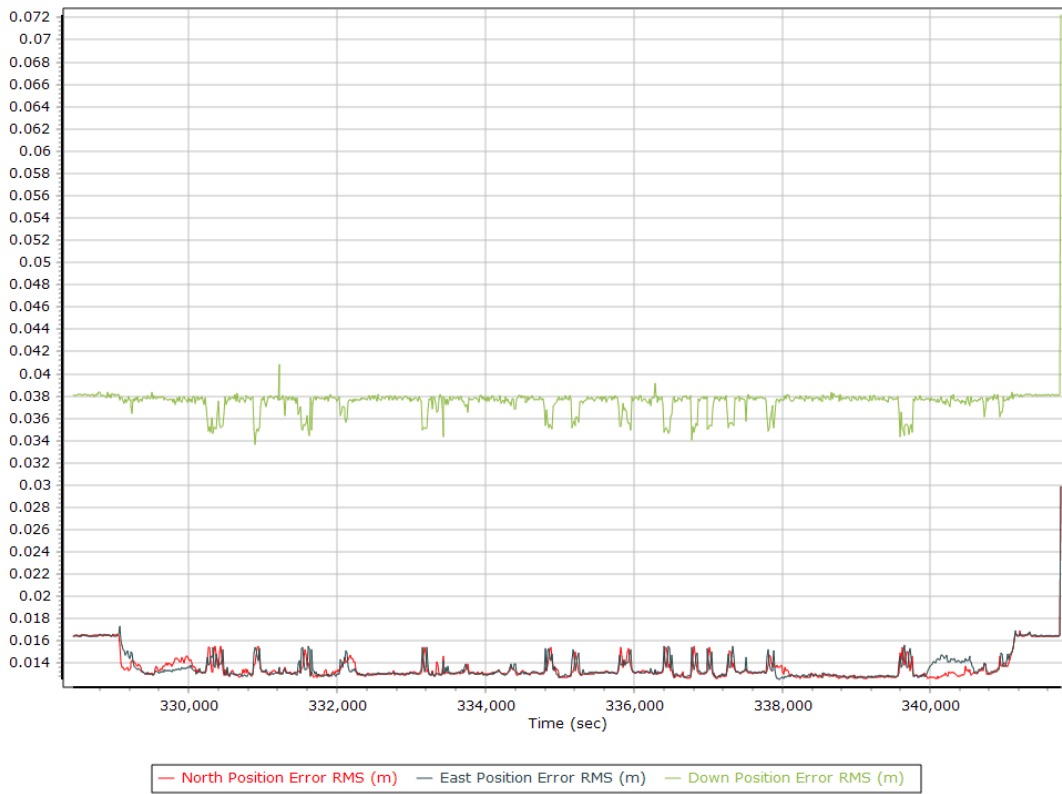


Z Gyro Scale Error (ppm)

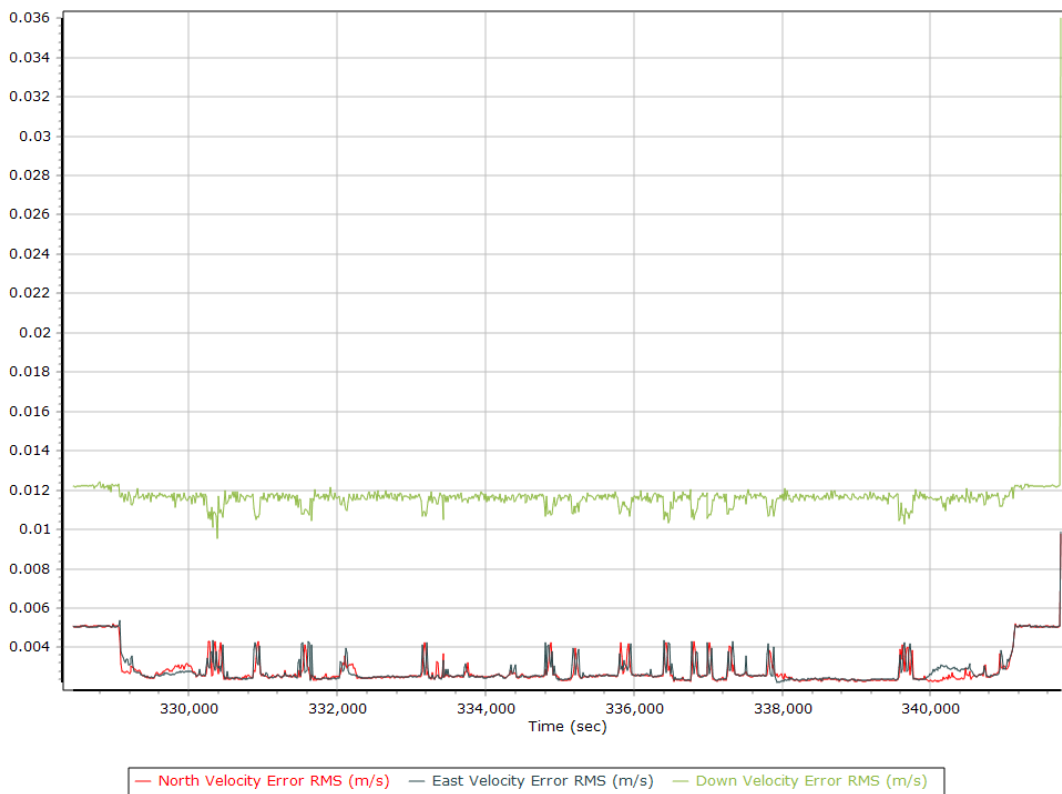


Smoothed Performance Metrics

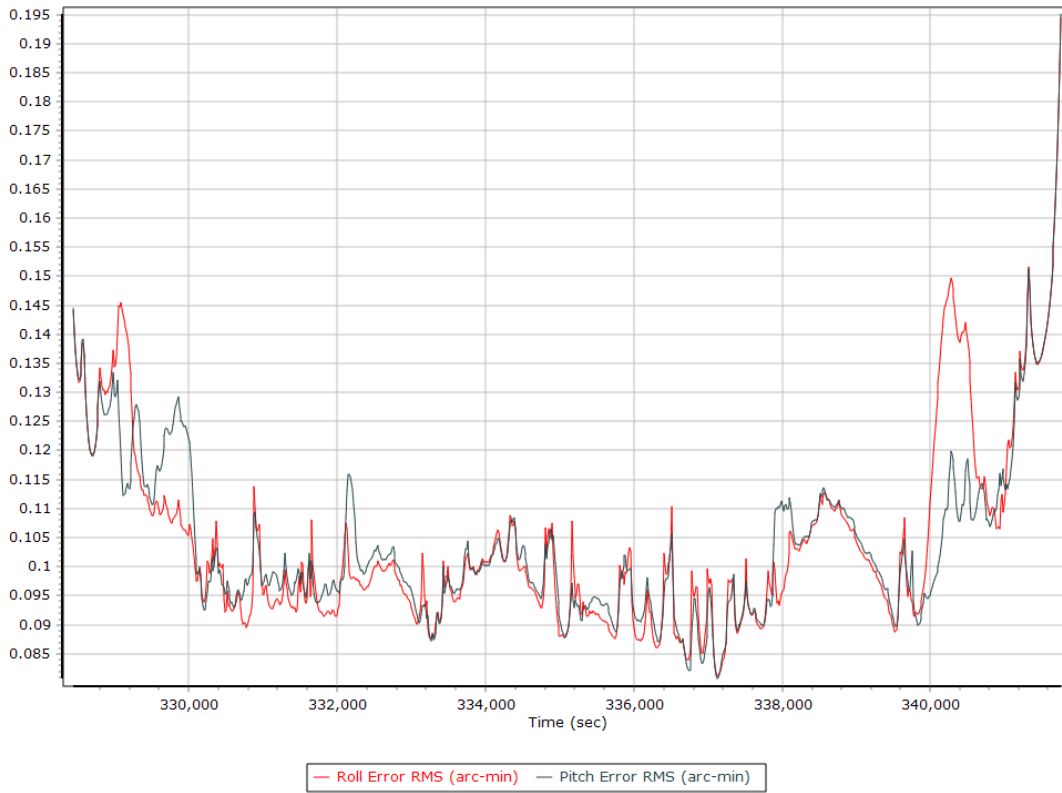
Position Error RMS (m)



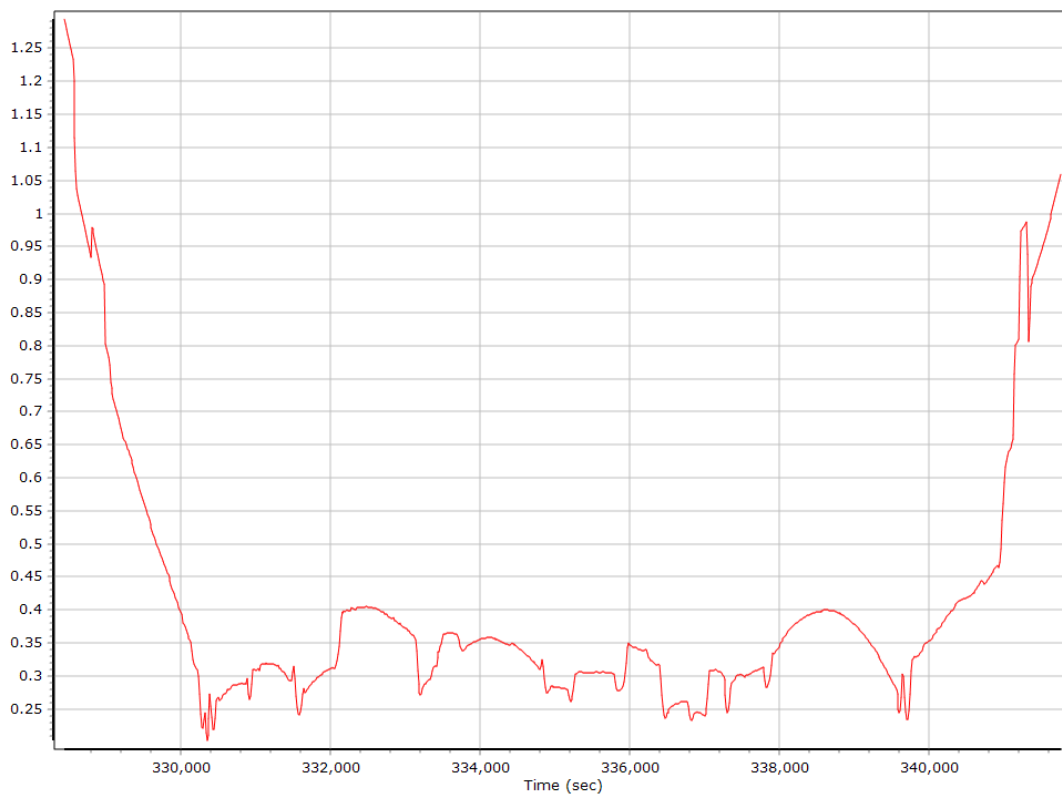
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)



Heading Error RMS (arc-min)



Forward Processed Performance Metrics

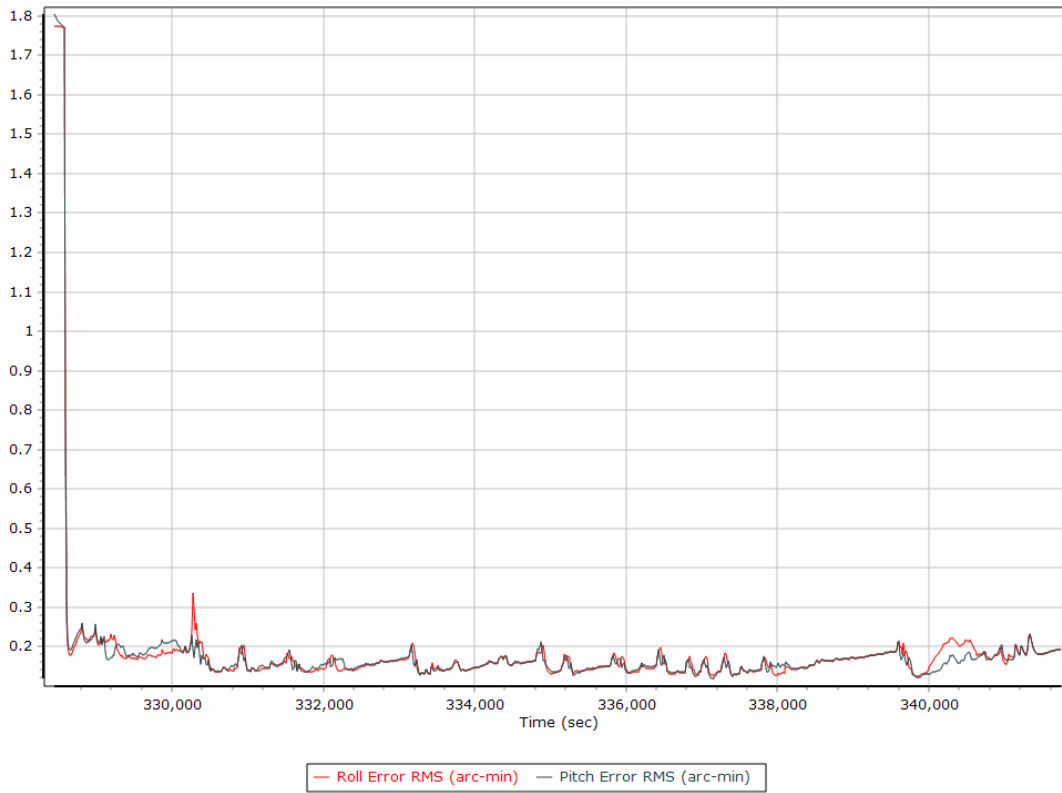
Position Error RMS (m)



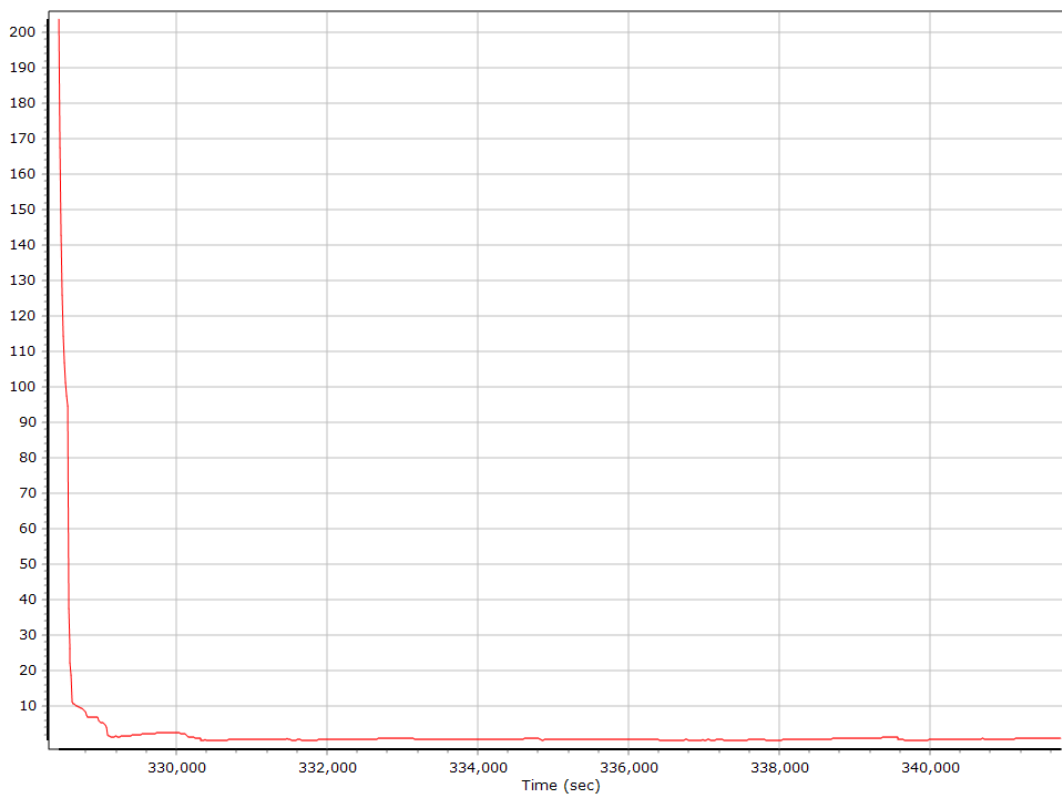
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

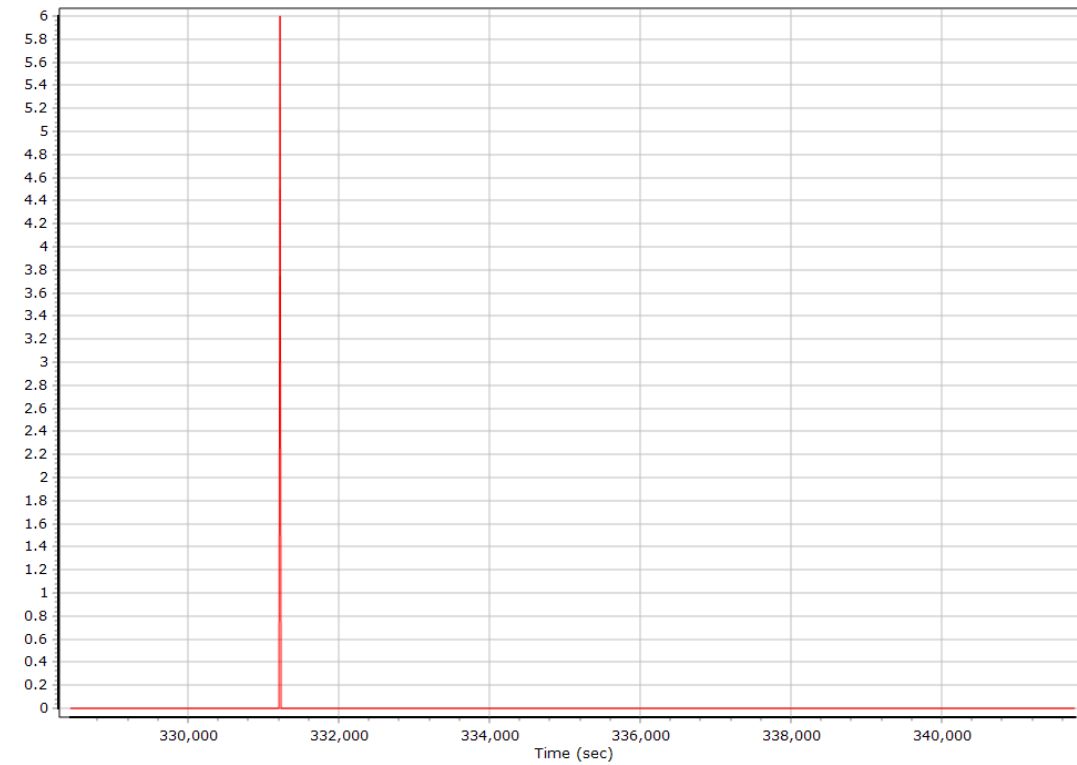


Heading Error RMS (arc-min)



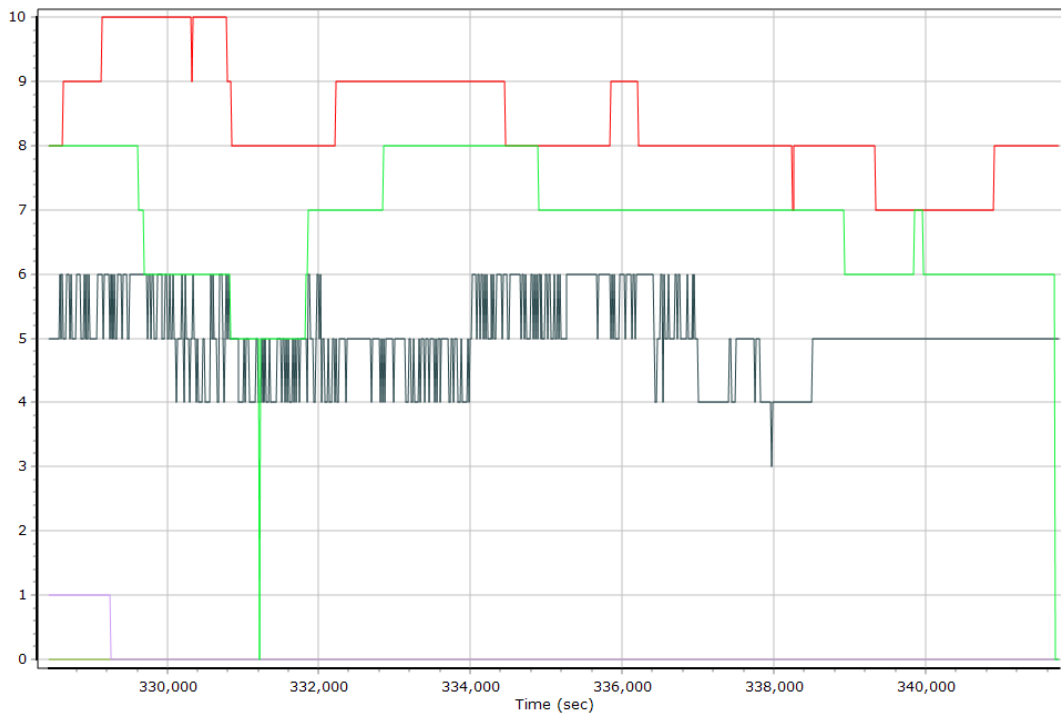
Forward Processed Solution Status

Processing Mode



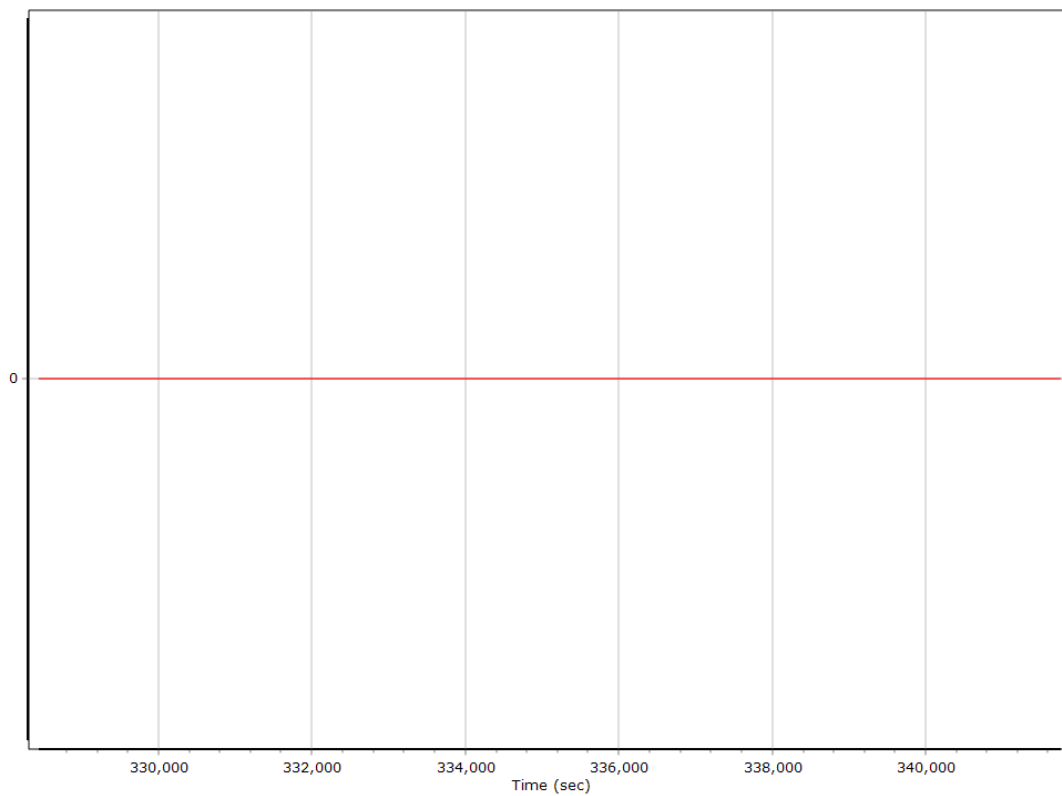
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR

Number of Satellites



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

Baseline Length



Export Summary

Export file	export_Mission 1.shp		
Export format	Shapefile		
Solution in use	Post-processed		
Output rate	Specified Distance Interval		
Distance Interval (m)	10.000		
Reference to Output lever arm (m)	0.000	0.000	0.000
Reference mounting angles (deg)	0.000	0.000	0.000
Output units (Coordinate / Lat & Lon)	Meter	Deg Decimal	
Export start time	328384.005 (11/10/2021 7:13:04 PM)		
Export end time	341757.001 (11/10/2021 10:55:57 PM)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 12 (114W to 108W)		
Datum	WGS84		
Ellipsoid	WGS84		
Local Transformation	NONE		
Target Epoch	2021.857534		