

General Information

Mission Information

Project name	13937
Processing date	2022-06-24 20:23:44
Mission date	2022-05-08 15:22:15
Mission duration	05:34:28.000
Processing mode	IN-Fusion PP-RTX

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N7881
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
20220508.000	POS Data
20220508.001	POS Data
20220508.002	POS Data
20220508.003	POS Data
20220508.004	POS Data
20220508.005	POS Data
20220508.006	POS Data
20220508.007	POS Data
20220508.008	POS Data
20220508.009	POS Data
20220508.010	POS Data
20220508.011	POS Data
20220508.012	POS Data
20220508.013	POS Data
20220508.014	POS Data
20220508.015	POS Data
20220508.016	POS Data
20220508.017	POS Data
20220508.018	POS Data
20220508.019	POS Data
20220508.020	POS Data
20220508.021	POS Data
20220508.022	POS Data
20220508.023	POS Data
20220508.024	POS Data
20220508.025	POS Data
20220508.026	POS Data
20220508.027	POS Data
20220508.028	POS Data
20220508.029	POS Data
20220508.030	POS Data
20220508.031	POS Data
20220508.032	POS Data
20220508.033	POS Data
20220508.034	POS Data
20220508.035	POS Data
20220508.036	POS Data
20220508.037	POS Data
20220508.038	POS Data
20220508.039	POS Data
20220508.040	POS Data
20220508.041	POS Data
20220508.042	POS Data
20220508.043	POS Data

Input Files

File Name	File Type
Ephm1280.22g	GLONASS Broadcast Ephemeris
Ephm1280.22n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_13937.out	SBET Trajectory File
event1_eo_13937.txt	ZI Imaging POSEO Output
sbet_13937_NAD83(2011).out	Custom Smoothed BET Export Output

Rover Data Summary

First raw data file	20220508.000		
Last raw data file	20220508.043		
Start GPS week	2209		
Start time	55334.432 (05/08/2022 15:22:14)		
End time	75399.286 (05/08/2022 20:56:39)		
Start of fine alignment	55847.015 (05/08/2022 15:30:47)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	Event 1 Input		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Reference to IMU lever arm (m)	-0.230	-0.010	-0.133
Reference to IMU mounting angles (deg)	0.000	0.000	180.000
Reference to Primary GNSS lever arm (m)	0.126	-0.066	-1.071
Reference to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

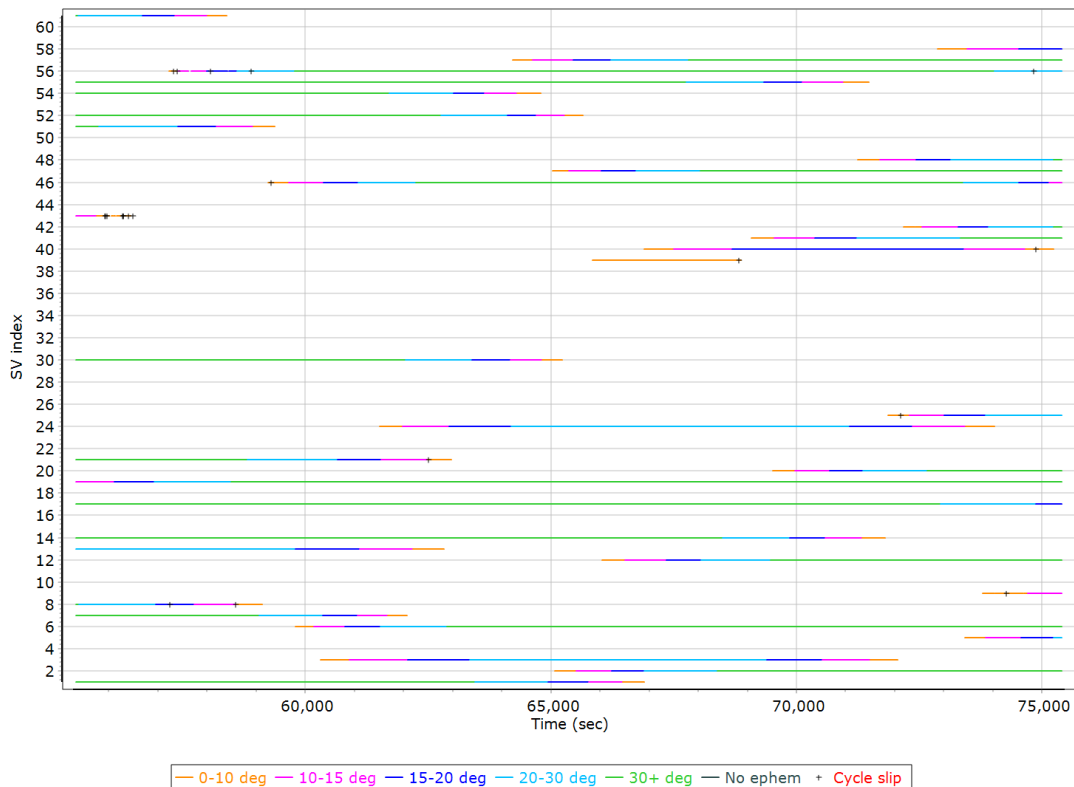
Rover Data QC

Raw IMU Import QC Summary

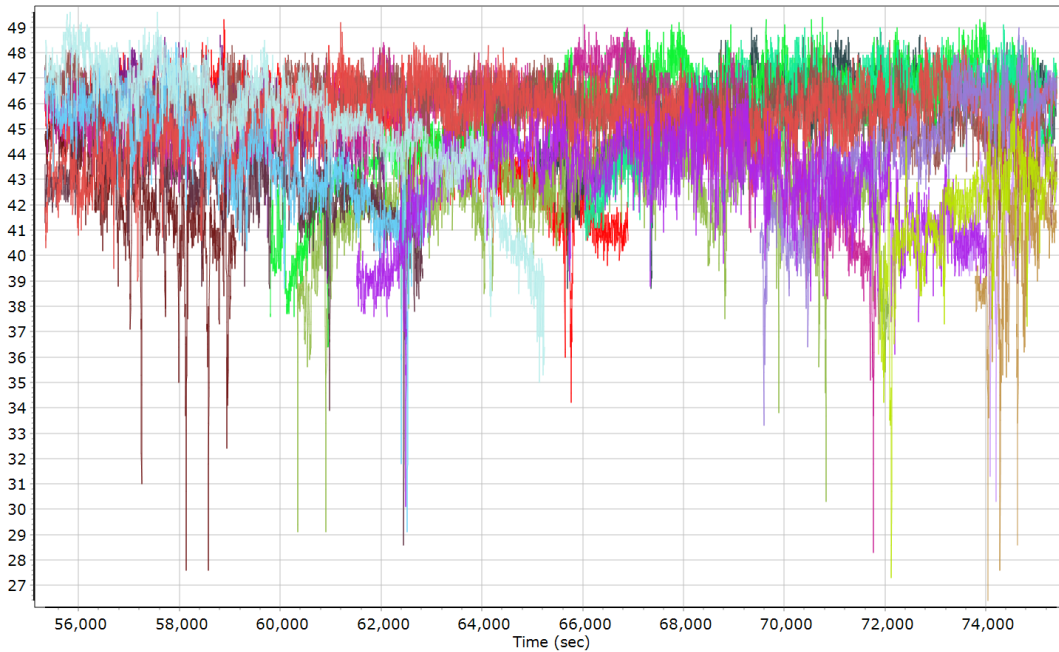
IMU data input file	imu_13937.dat
IMU data check log file	imudt_13937.log
IMU Records Processed	4012853
Termination Status	Normal
IMU Anomalies	0

Primary Observables & Satellite Data

GPS/GLONASS L1 Satellite Lock/Elevation

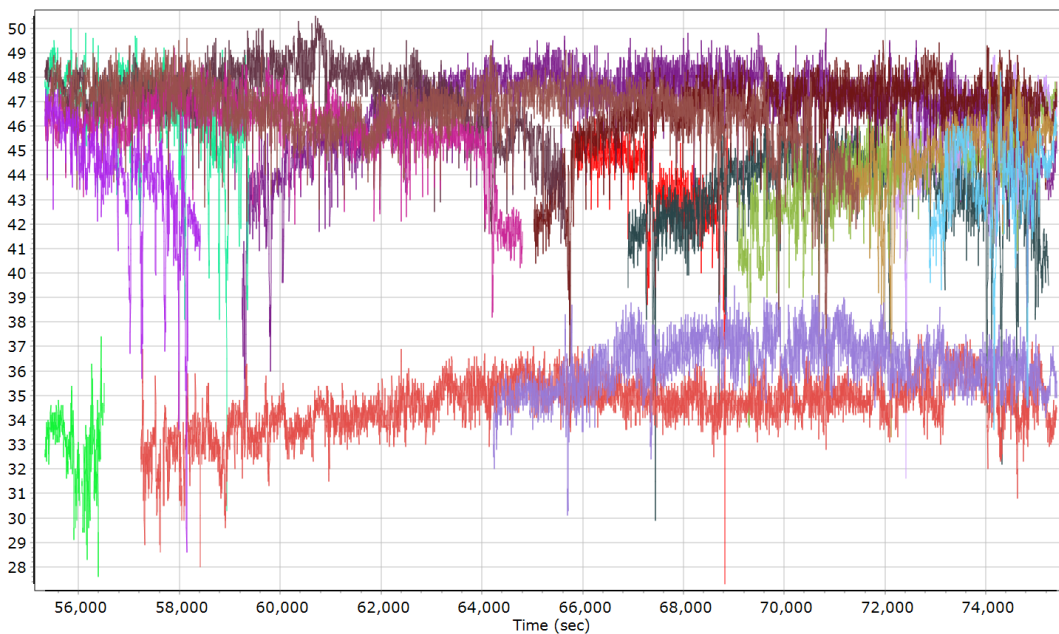


GPS L1 SNR



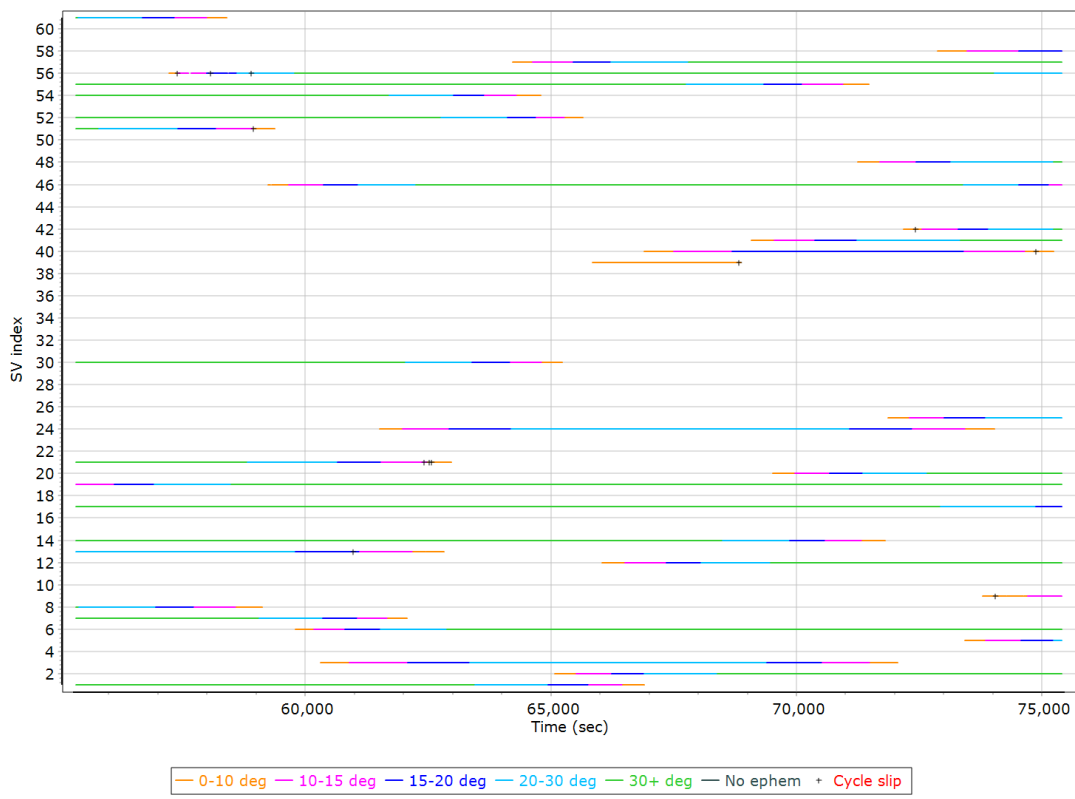
- GPS PRN 01 L1 SNR (dB/Hz)
- GPS PRN 02 L1 SNR (dB/Hz)
- GPS PRN 03 L1 SNR (dB/Hz)
- GPS PRN 04 L1 SNR (dB/Hz)
- GPS PRN 05 L1 SNR (dB/Hz)
- GPS PRN 06 L1 SNR (dB/Hz)
- GPS PRN 07 L1 SNR (dB/Hz)
- GPS PRN 08 L1 SNR (dB/Hz)
- GPS PRN 09 L1 SNR (dB/Hz)
- GPS PRN 10 L1 SNR (dB/Hz)
- GPS PRN 11 L1 SNR (dB/Hz)
- GPS PRN 12 L1 SNR (dB/Hz)
- GPS PRN 13 L1 SNR (dB/Hz)
- GPS PRN 14 L1 SNR (dB/Hz)
- GPS PRN 15 L1 SNR (dB/Hz)
- GPS PRN 16 L1 SNR (dB/Hz)
- GPS PRN 17 L1 SNR (dB/Hz)
- GPS PRN 18 L1 SNR (dB/Hz)
- GPS PRN 19 L1 SNR (dB/Hz)
- GPS PRN 20 L1 SNR (dB/Hz)
- GPS PRN 21 L1 SNR (dB/Hz)
- GPS PRN 22 L1 SNR (dB/Hz)
- GPS PRN 23 L1 SNR (dB/Hz)
- GPS PRN 24 L1 SNR (dB/Hz)
- GPS PRN 25 L1 SNR (dB/Hz)
- GPS PRN 26 L1 SNR (dB/Hz)
- GPS PRN 27 L1 SNR (dB/Hz)
- GPS PRN 28 L1 SNR (dB/Hz)
- GPS PRN 29 L1 SNR (dB/Hz)
- GPS PRN 30 L1 SNR (dB/Hz)

GLONASS L1 SNR

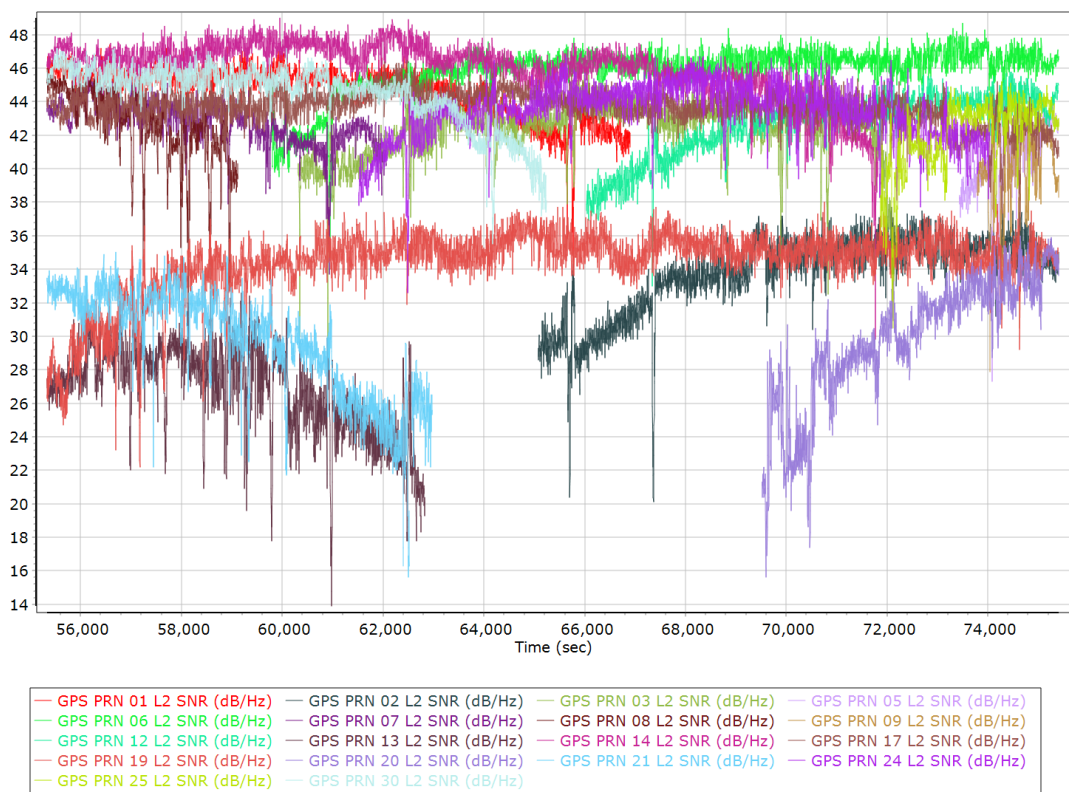


- GLONASS 02 L1 SNR (dB/Hz)
- GLONASS 03 L1 SNR (dB/Hz)
- GLONASS 04 L1 SNR (dB/Hz)
- GLONASS 05 L1 SNR (dB/Hz)
- GLONASS 06 L1 SNR (dB/Hz)
- GLONASS 07 L1 SNR (dB/Hz)
- GLONASS 08 L1 SNR (dB/Hz)
- GLONASS 09 L1 SNR (dB/Hz)
- GLONASS 10 L1 SNR (dB/Hz)
- GLONASS 11 L1 SNR (dB/Hz)
- GLONASS 12 L1 SNR (dB/Hz)
- GLONASS 13 L1 SNR (dB/Hz)
- GLONASS 14 L1 SNR (dB/Hz)
- GLONASS 15 L1 SNR (dB/Hz)
- GLONASS 16 L1 SNR (dB/Hz)
- GLONASS 17 L1 SNR (dB/Hz)
- GLONASS 18 L1 SNR (dB/Hz)
- GLONASS 19 L1 SNR (dB/Hz)
- GLONASS 20 L1 SNR (dB/Hz)
- GLONASS 21 L1 SNR (dB/Hz)
- GLONASS 22 L1 SNR (dB/Hz)
- GLONASS 23 L1 SNR (dB/Hz)
- GLONASS 24 L1 SNR (dB/Hz)

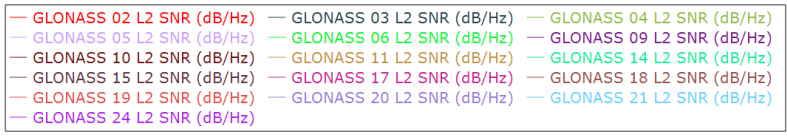
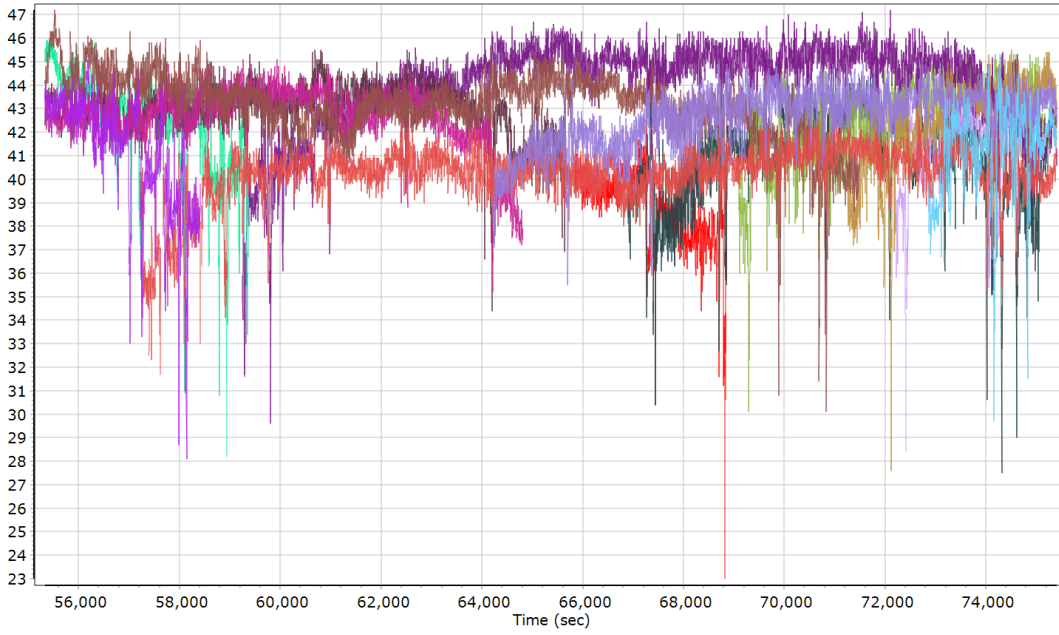
GPS/GLONASS L2 Satellite Lock/Elevation



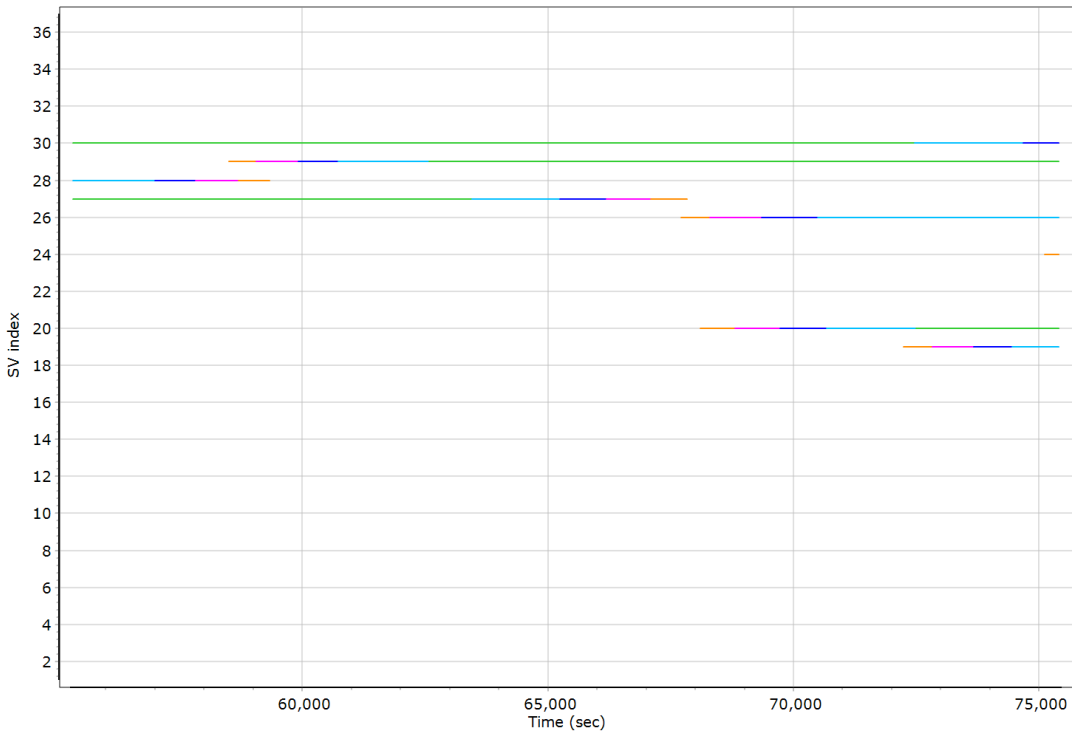
GPS L2 SNR



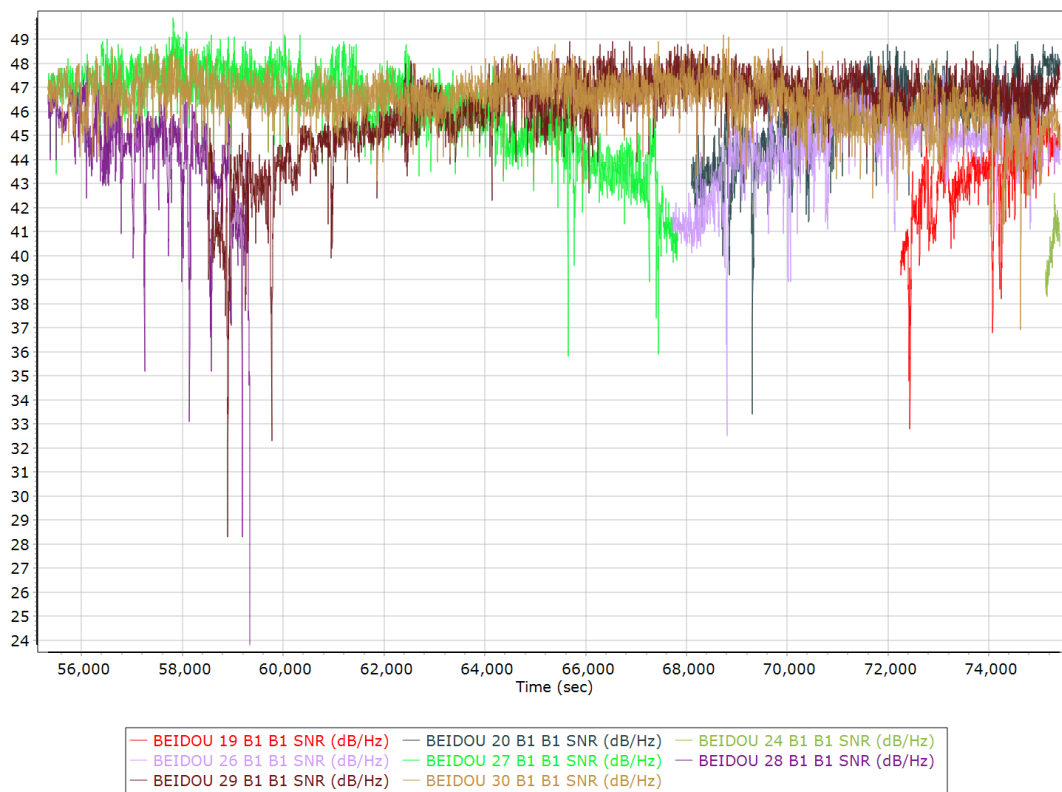
GLONASS L2 SNR



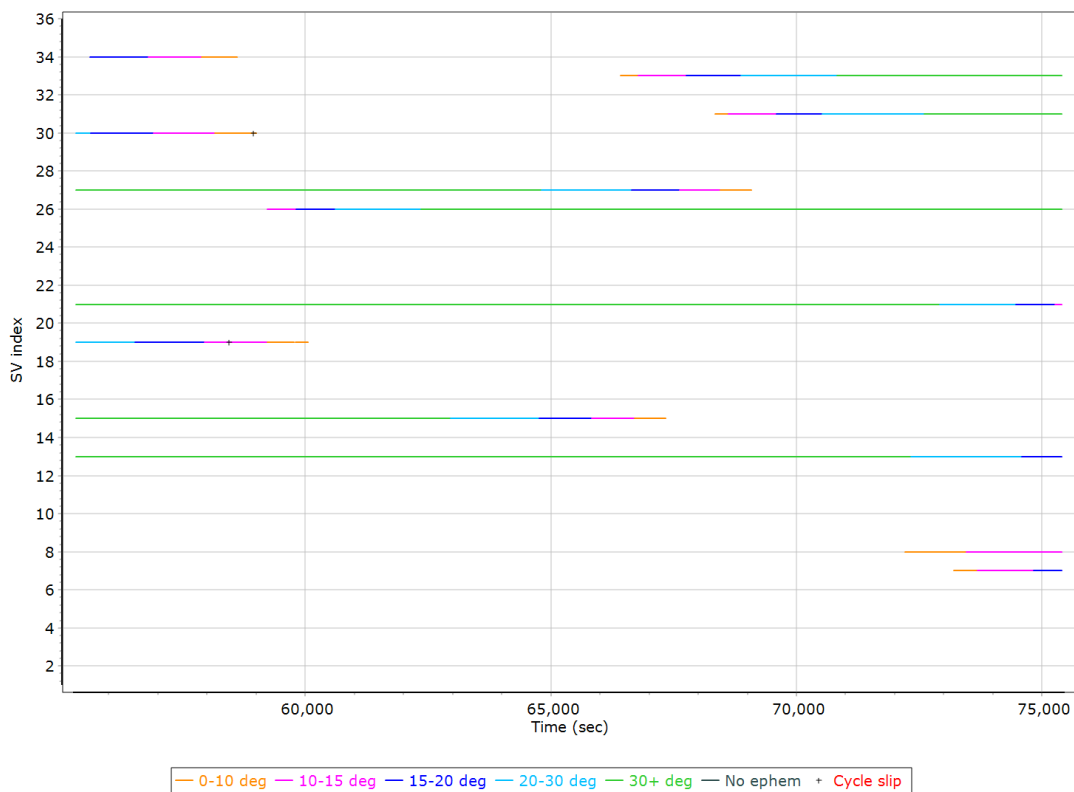
BEIDOU Satellite Lock/Elevation



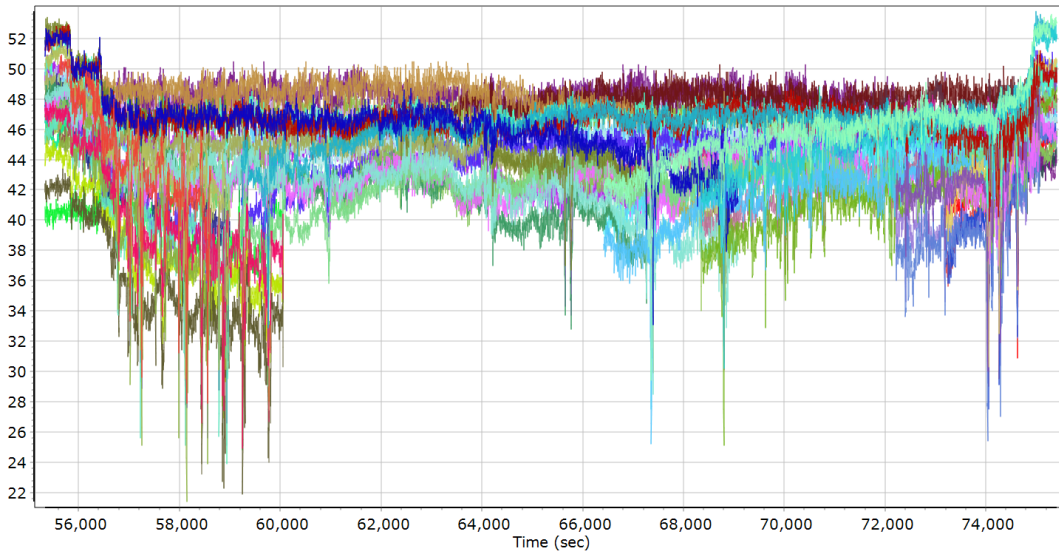
BEIDOU SNR



GALILEO Satellite Lock/Elevation



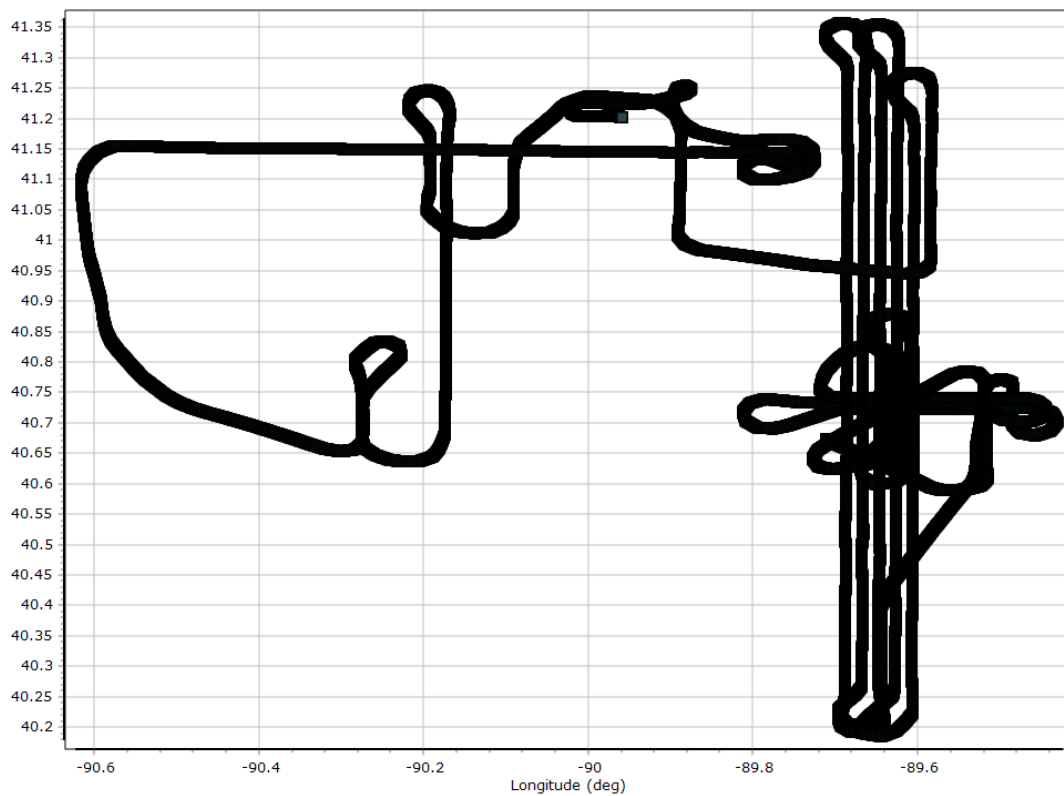
GALILEO SNR



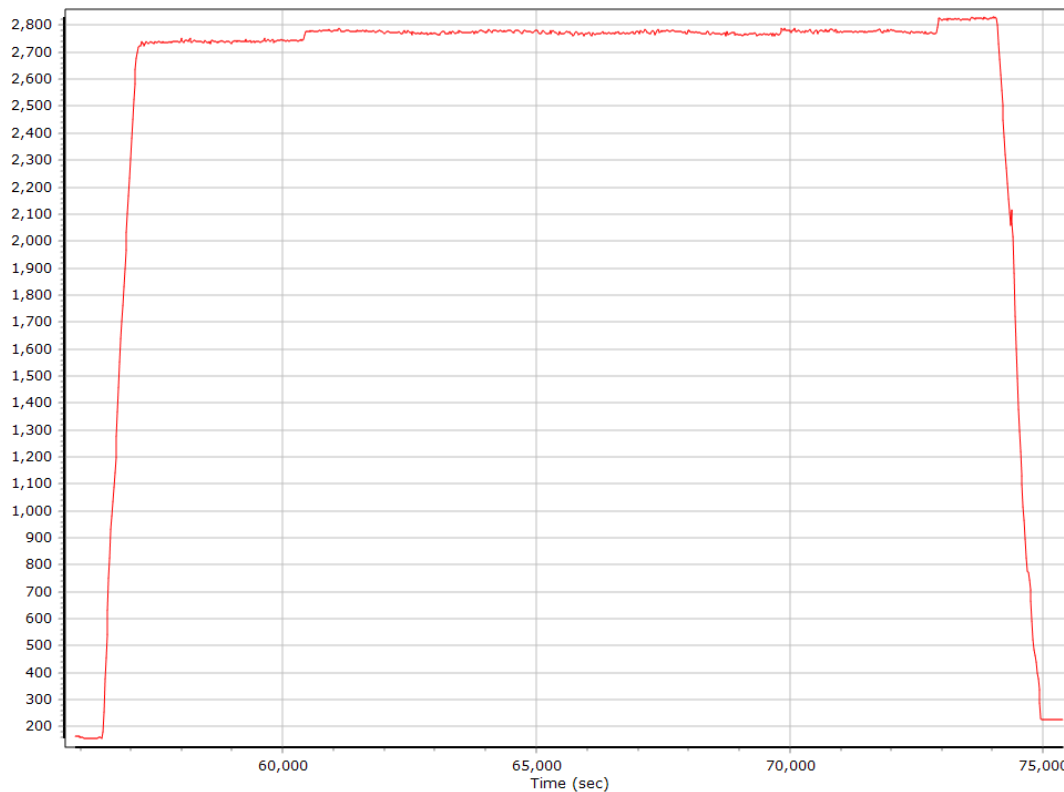
— GALILEO 07 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 08 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 13 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 15 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 19 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 21 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 26 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 27 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 30 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 31 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 33 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 34 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 07 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 08 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

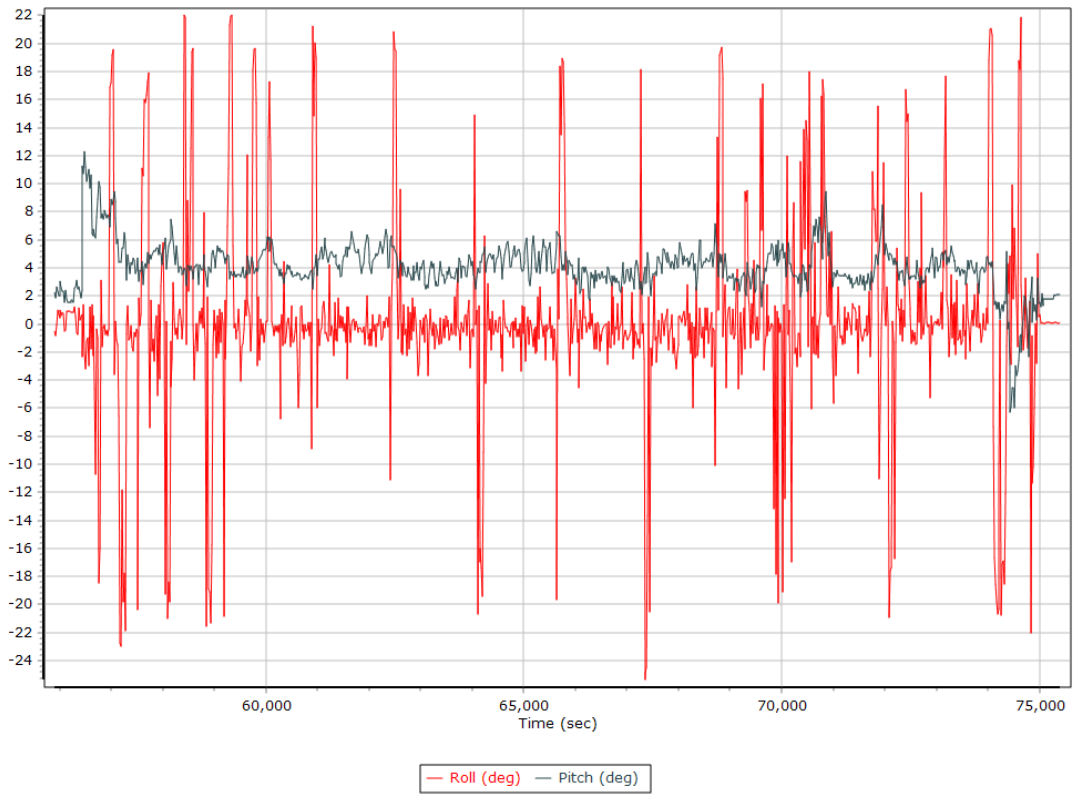
Top View



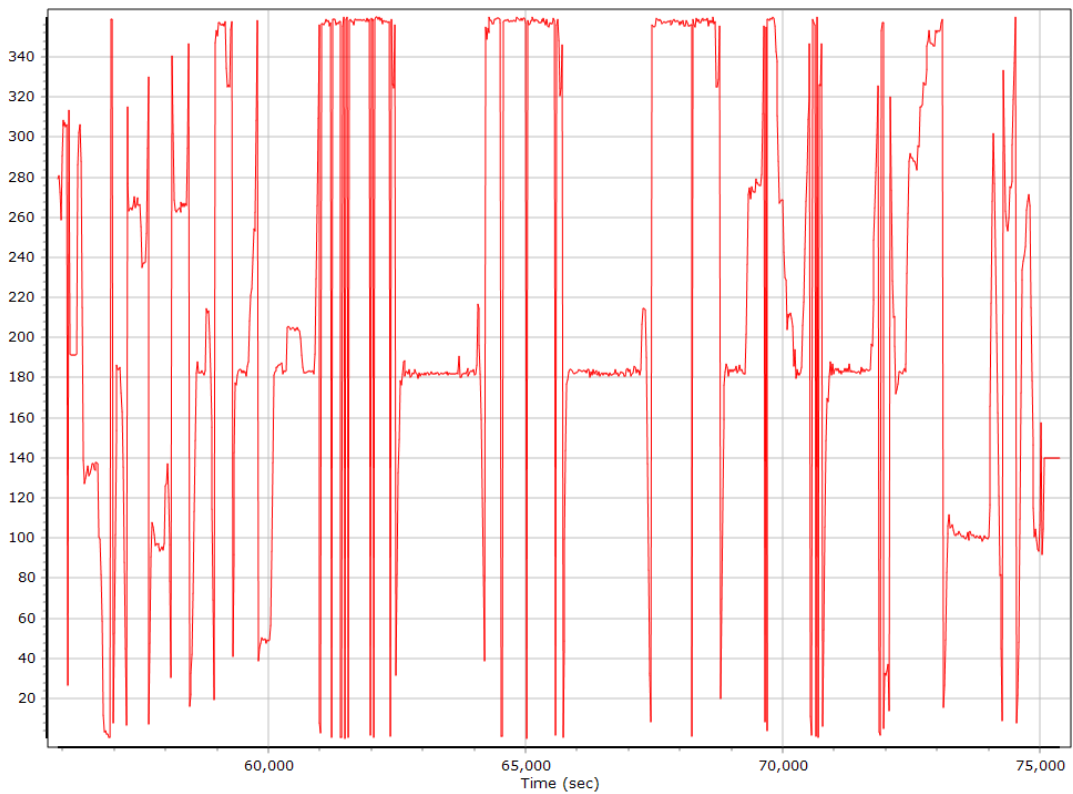
Altitude



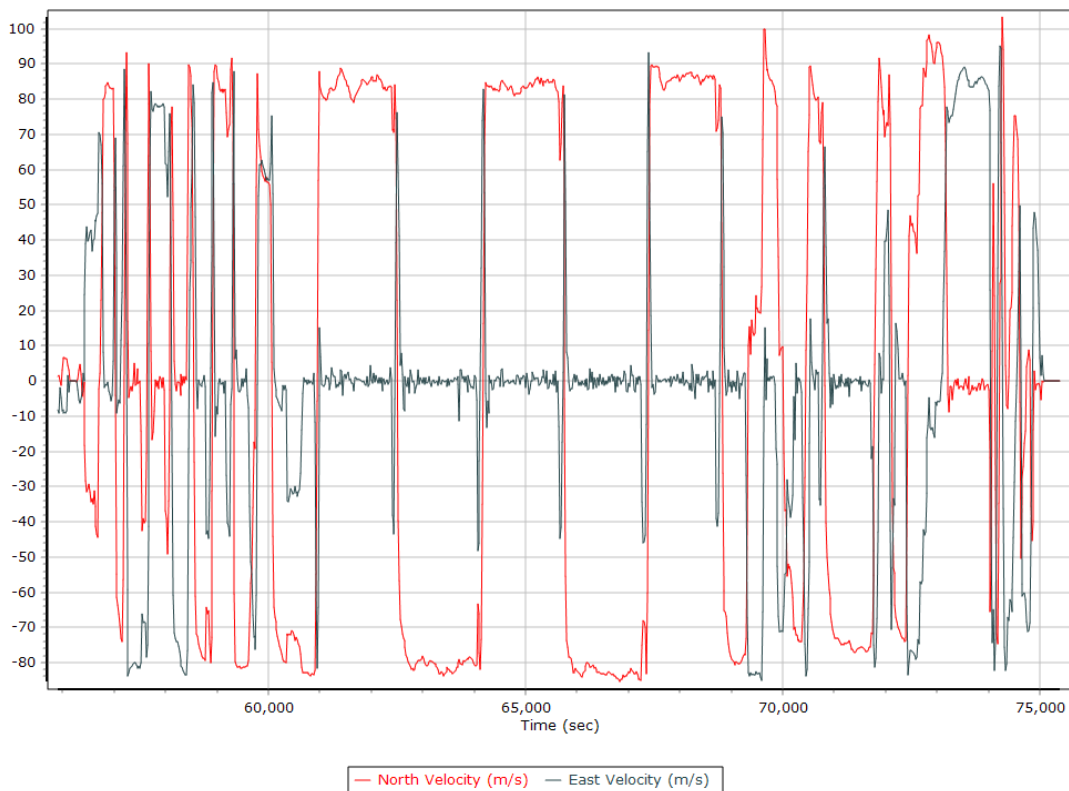
Roll/Pitch



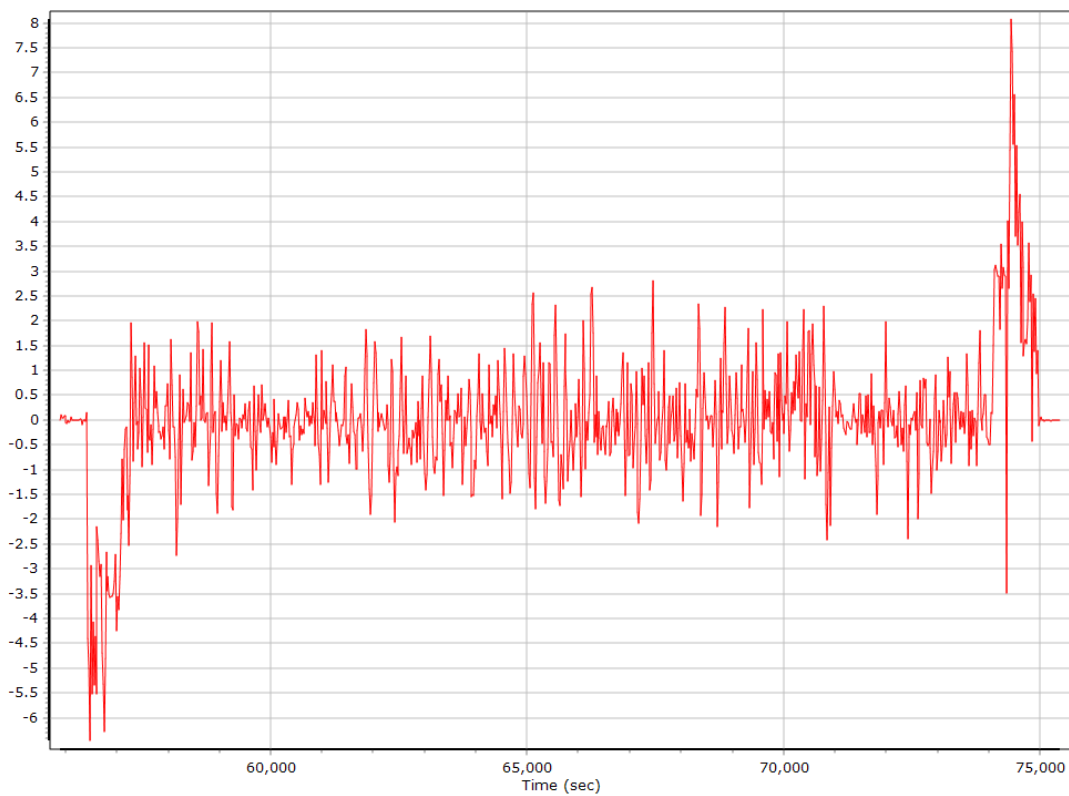
Heading



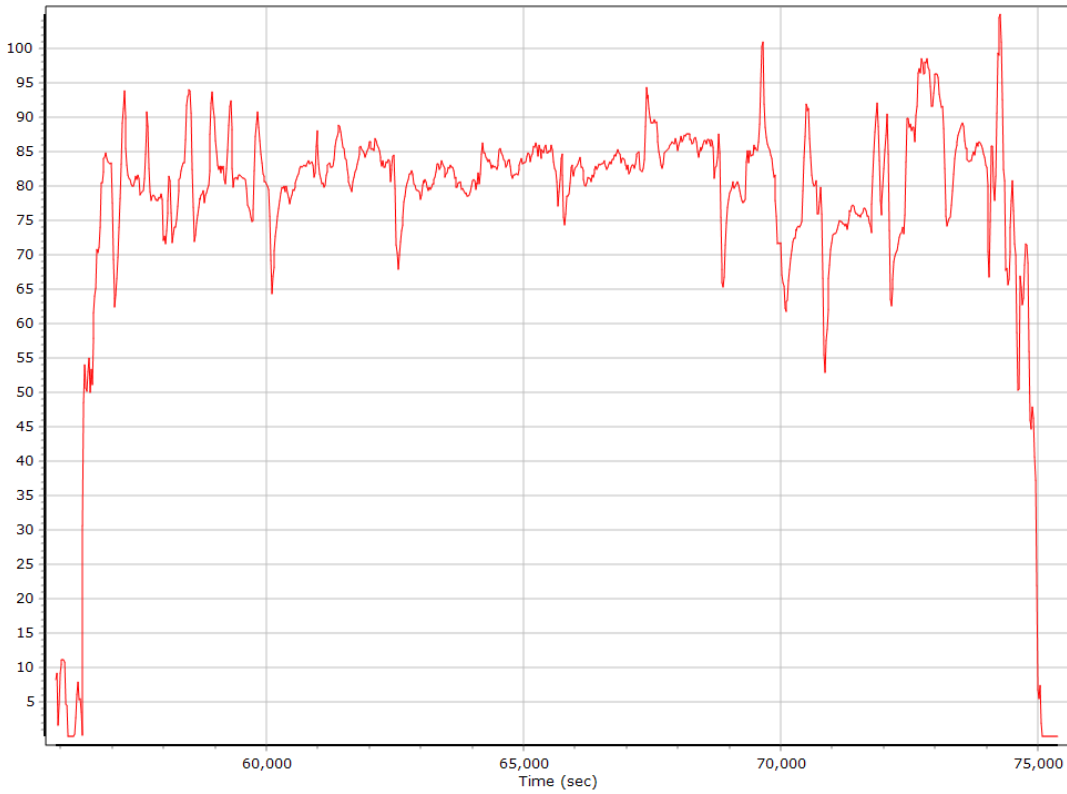
North/East Velocity



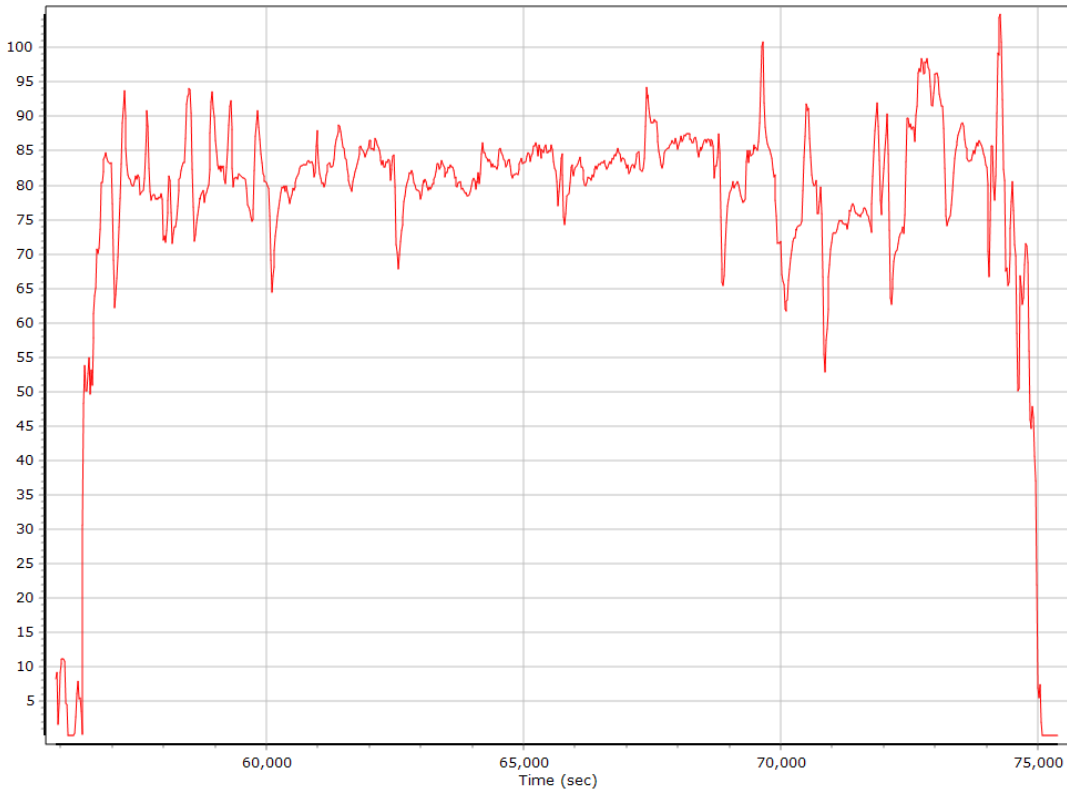
Down Velocity



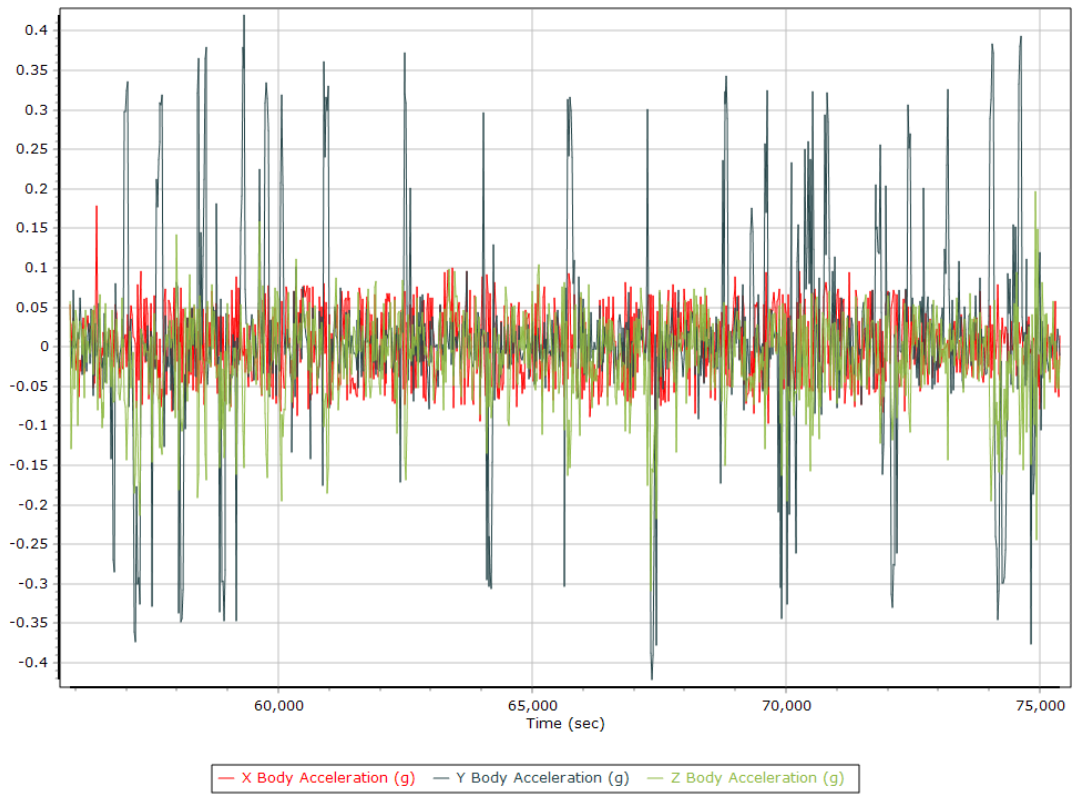
Total Speed



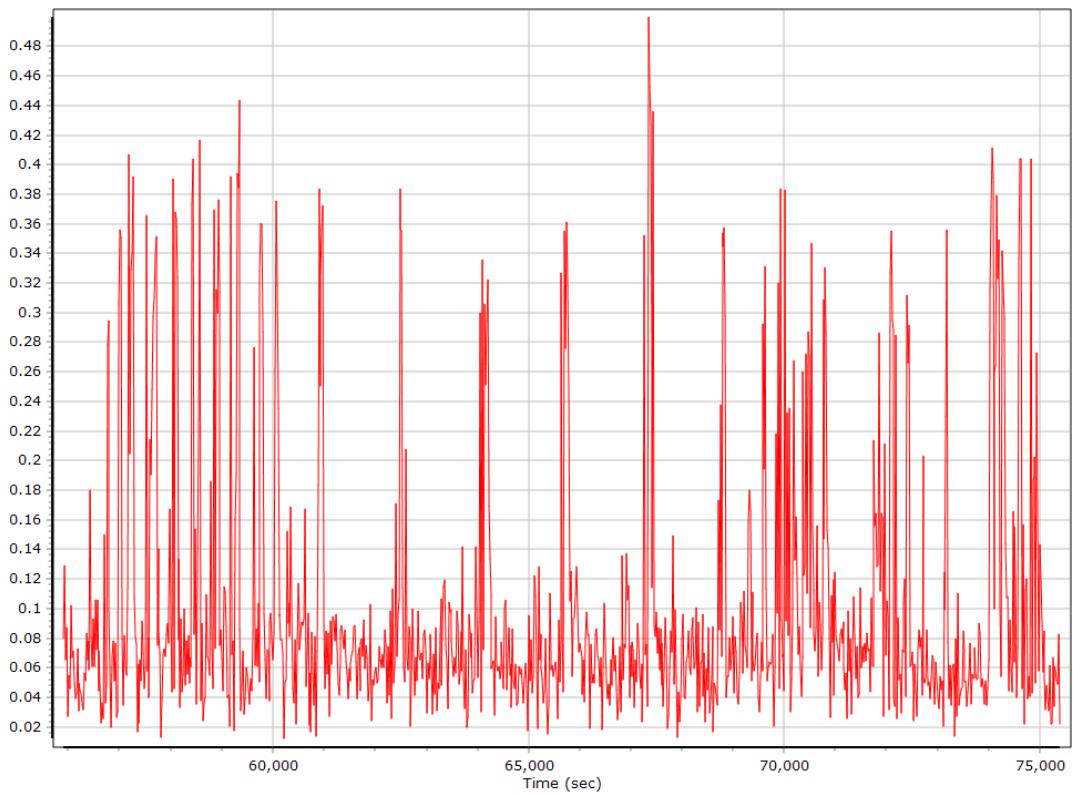
Ground Speed



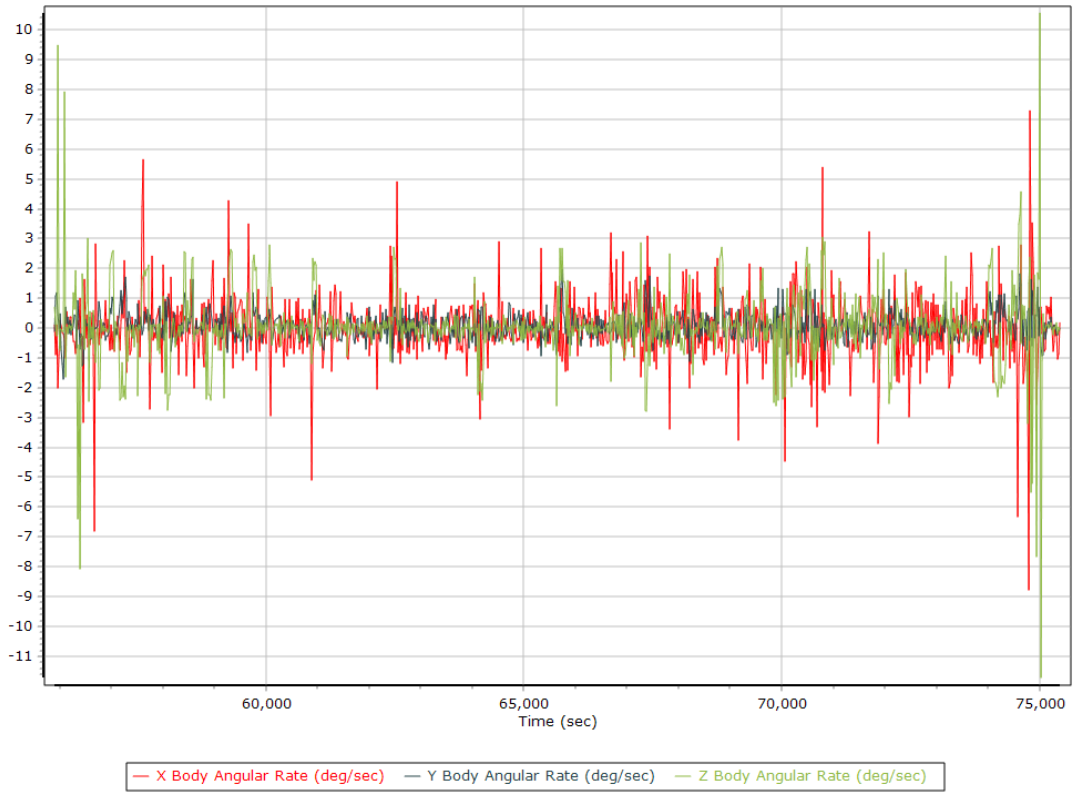
Body Acceleration



Total Body Acceleration

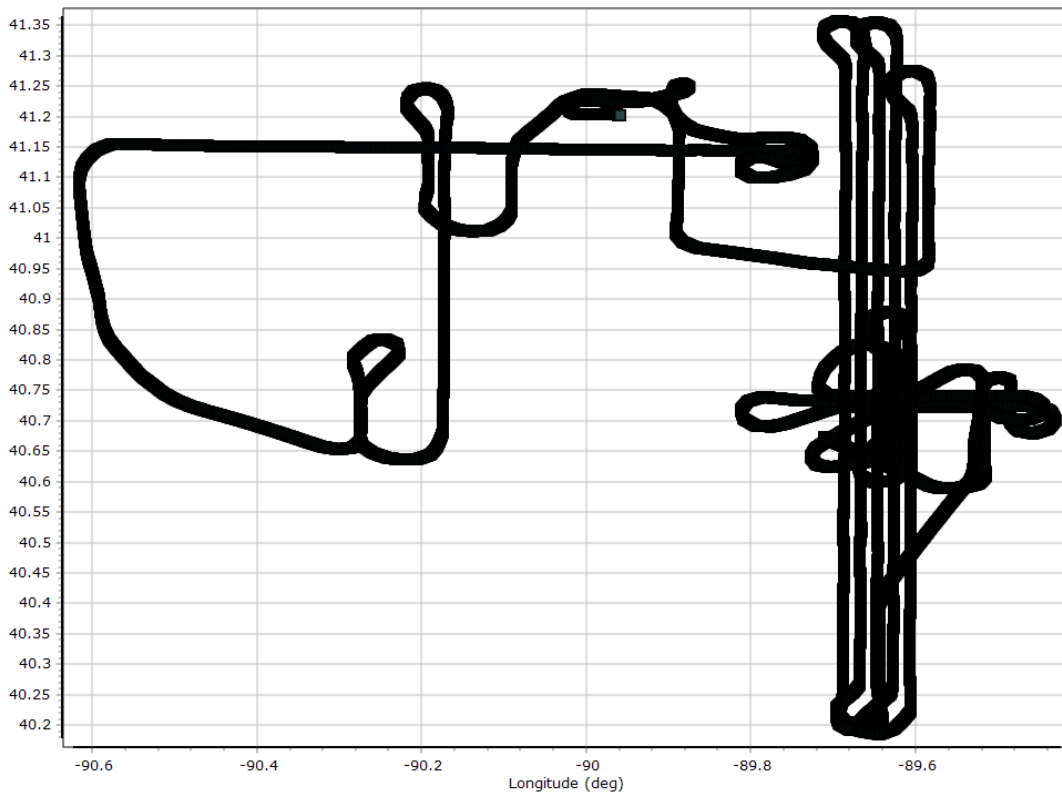


Body Angular Rate

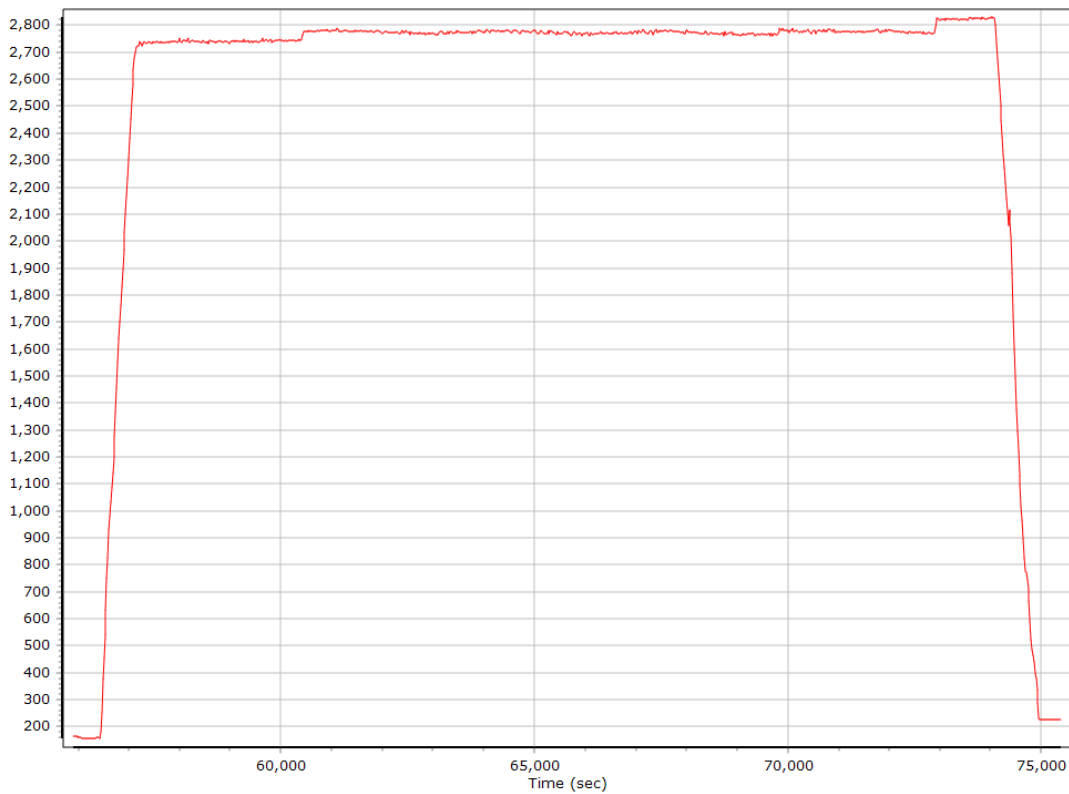


Forward Processed Trajectory Information

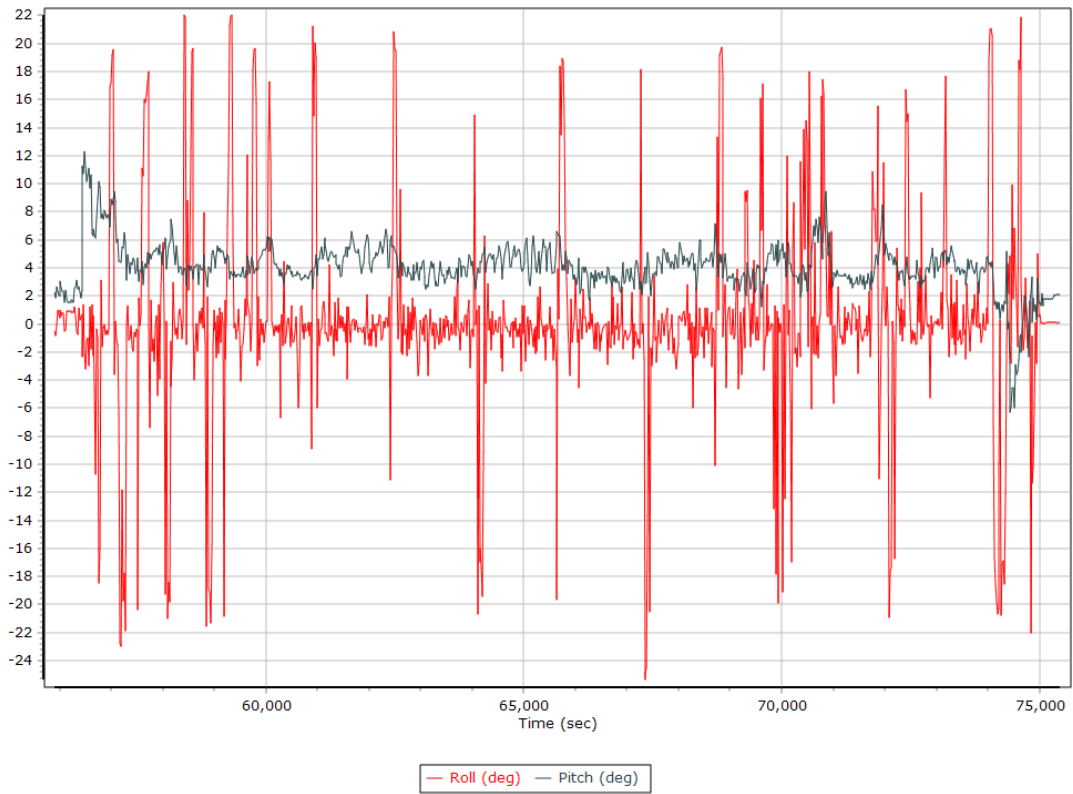
Top View



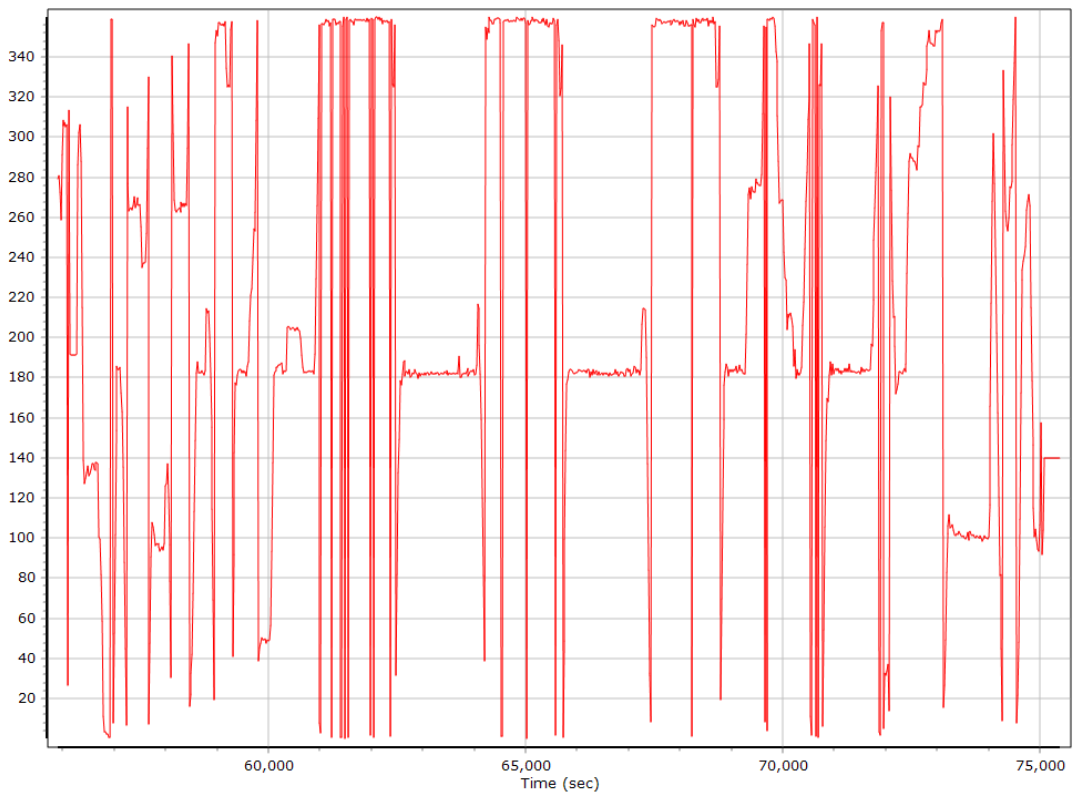
Altitude



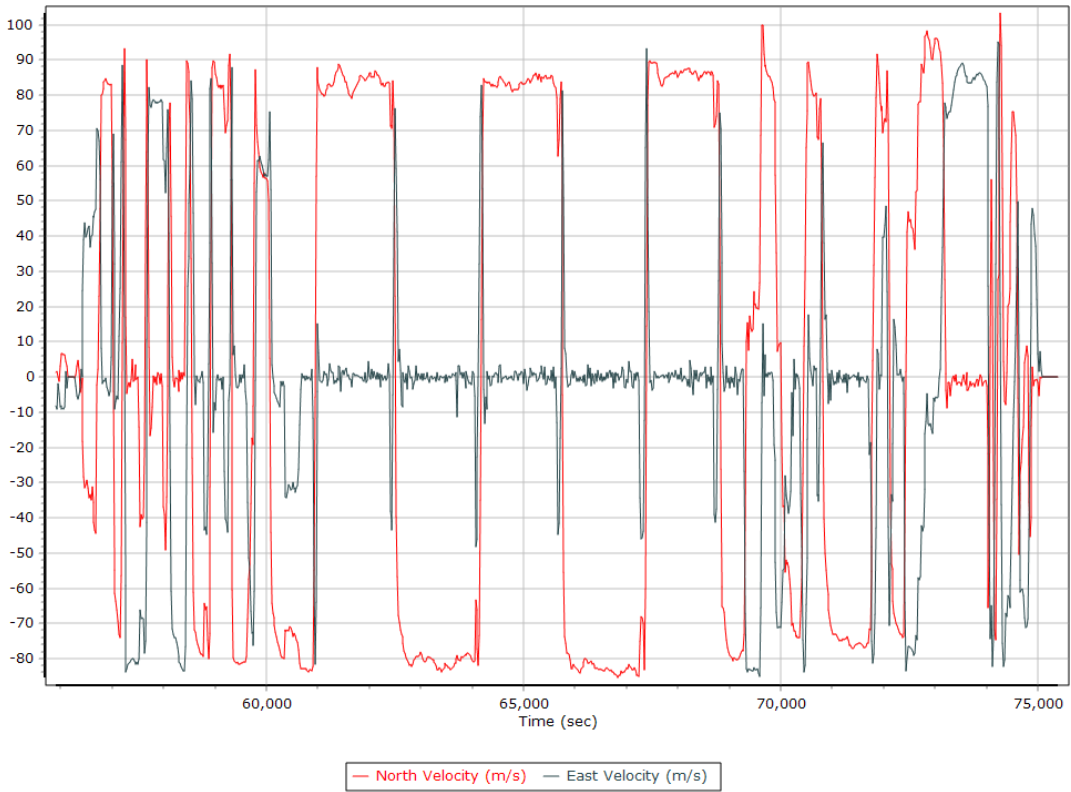
Roll/Pitch



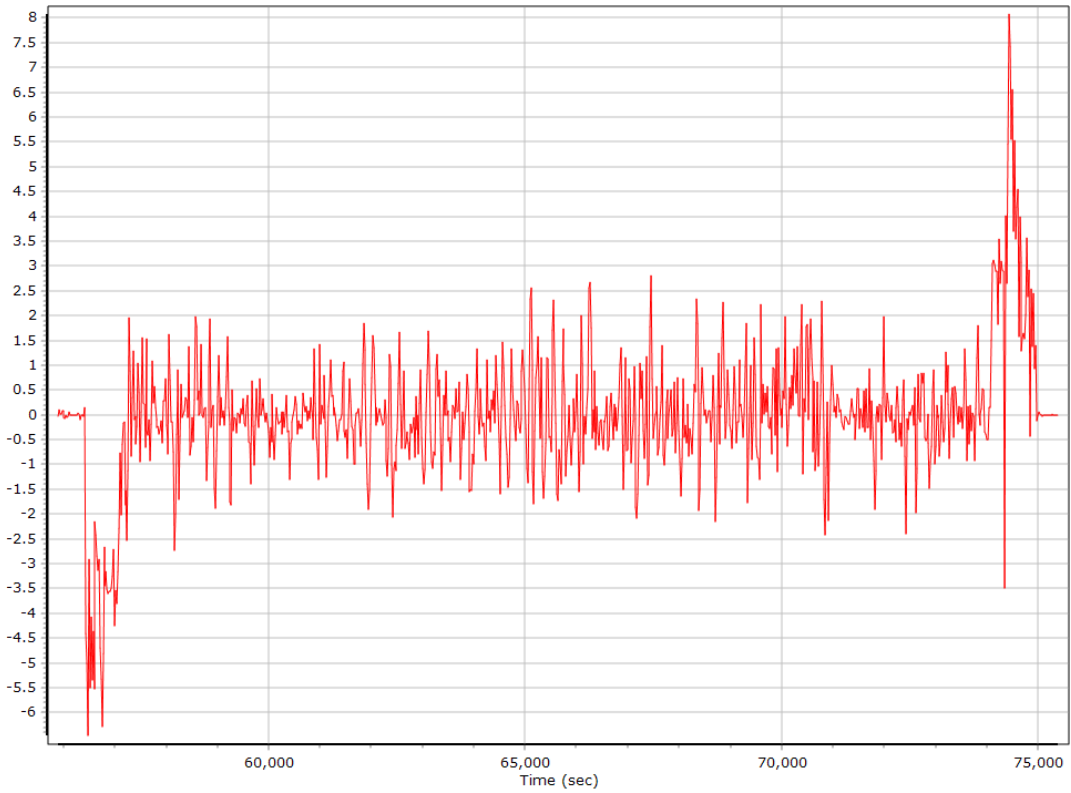
Heading



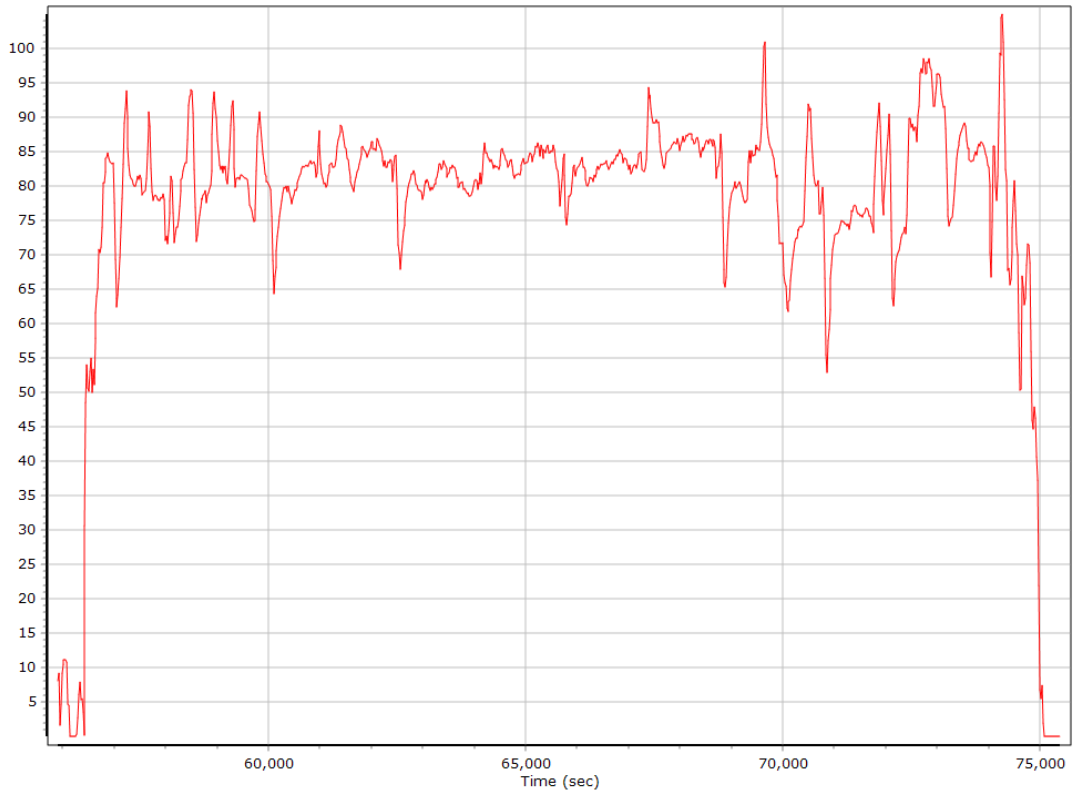
North/East Velocity



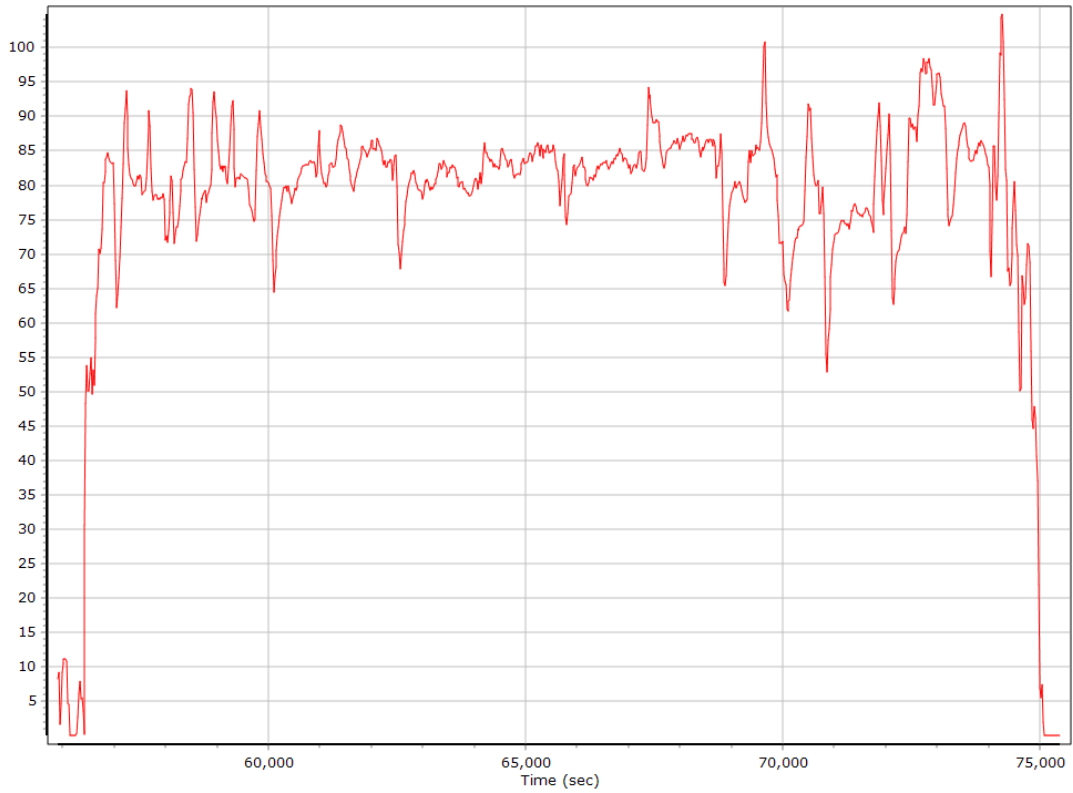
Down Velocity



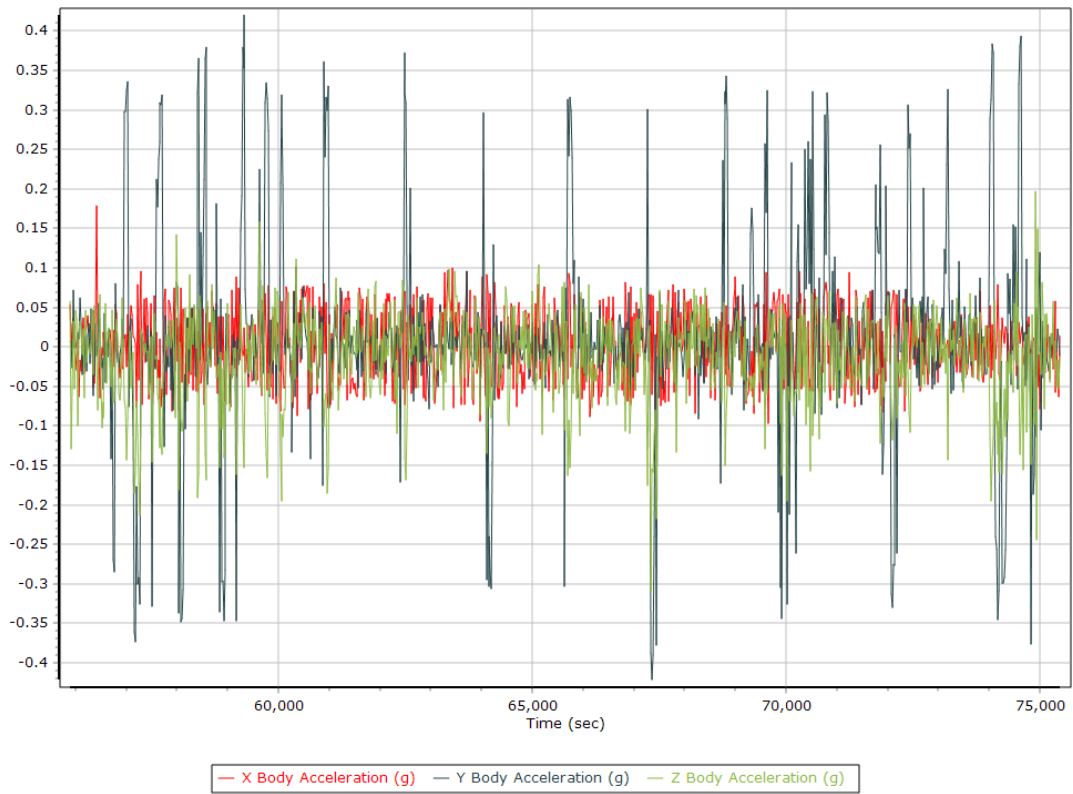
Total Speed



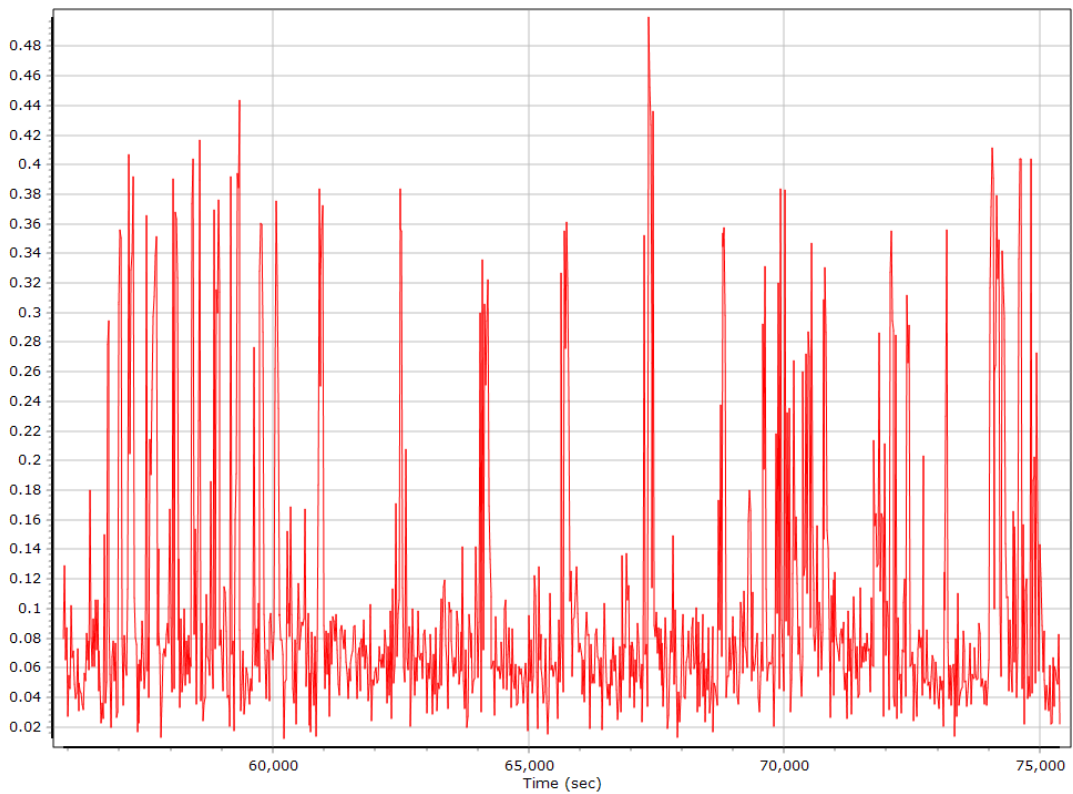
Ground Speed



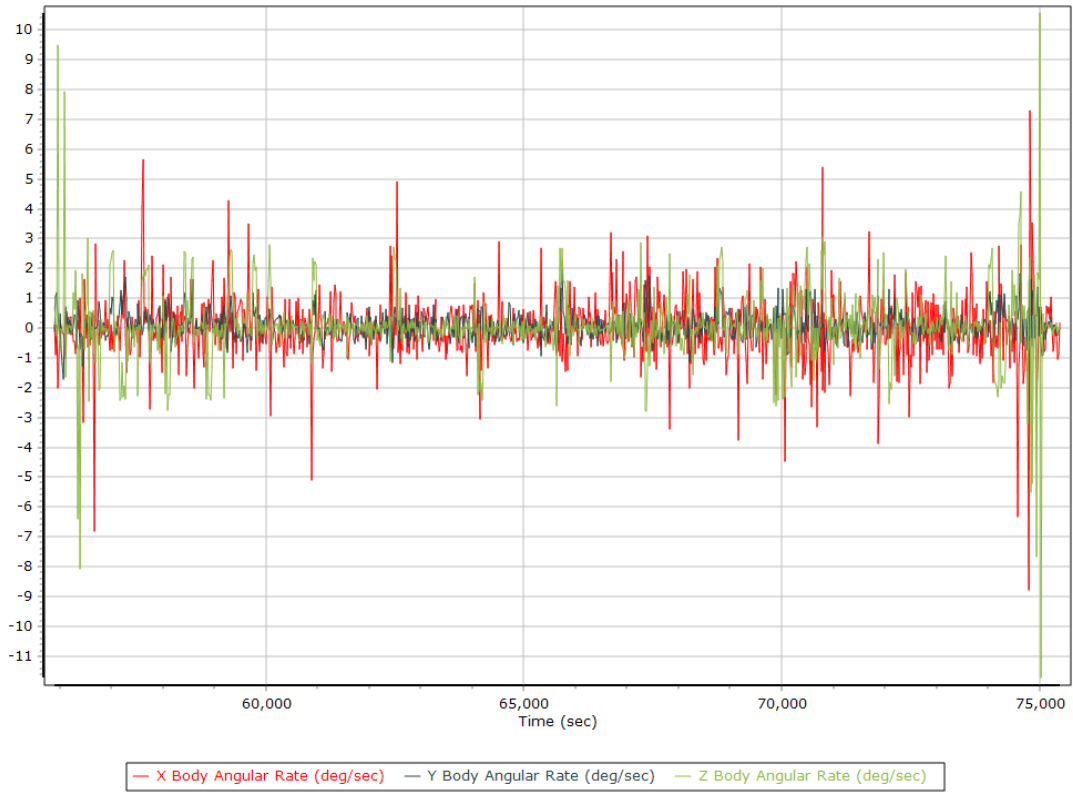
Body Acceleration



Total Body Acceleration



Body Angular Rate

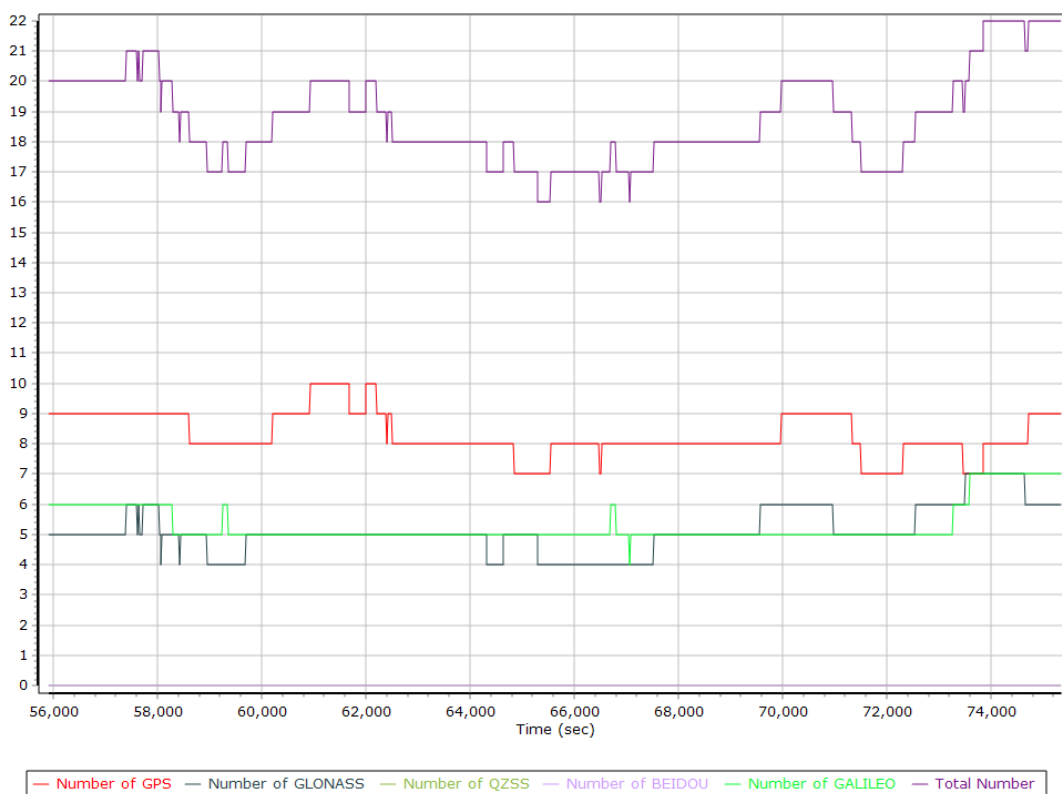


GNSS QC

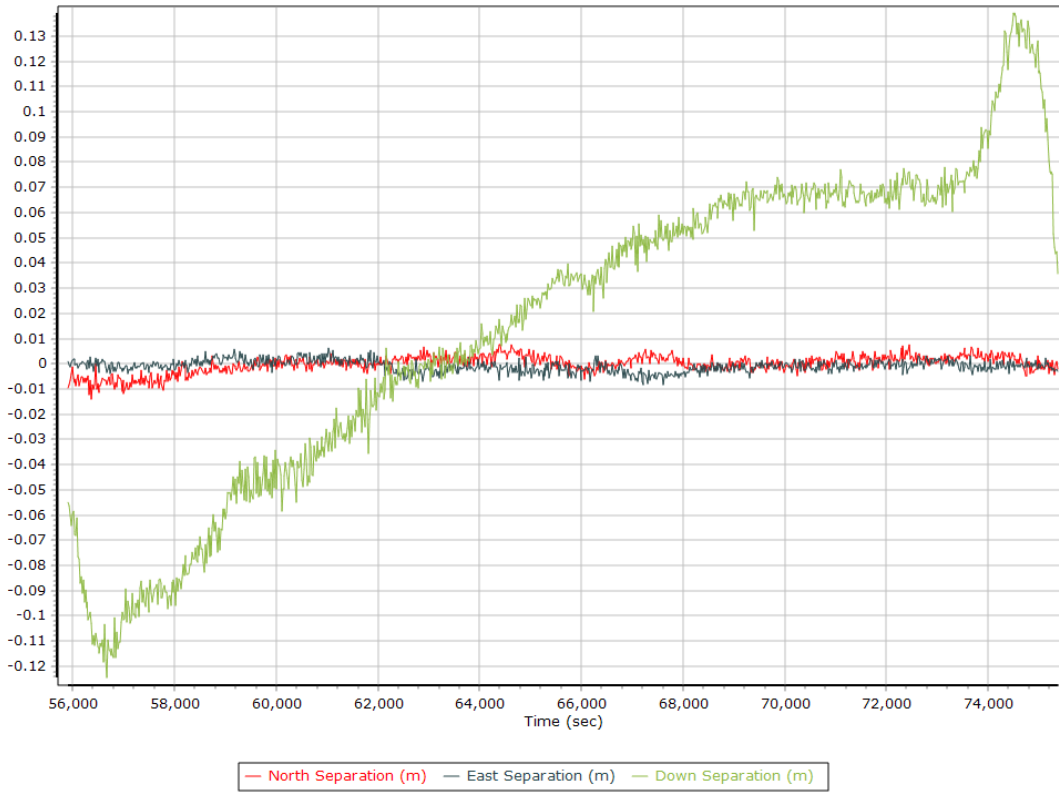
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	5	10	8
Number of GLONASS SV	4	7	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Number of GALILEO SV	4	7	5
Total number of SV	13	22	19
PDOP	1.02	2.50	1.20
QC Solution Gaps	0.00	0.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	20019.00	0.00	0.00
Percentage	100.00	0.00	0.00

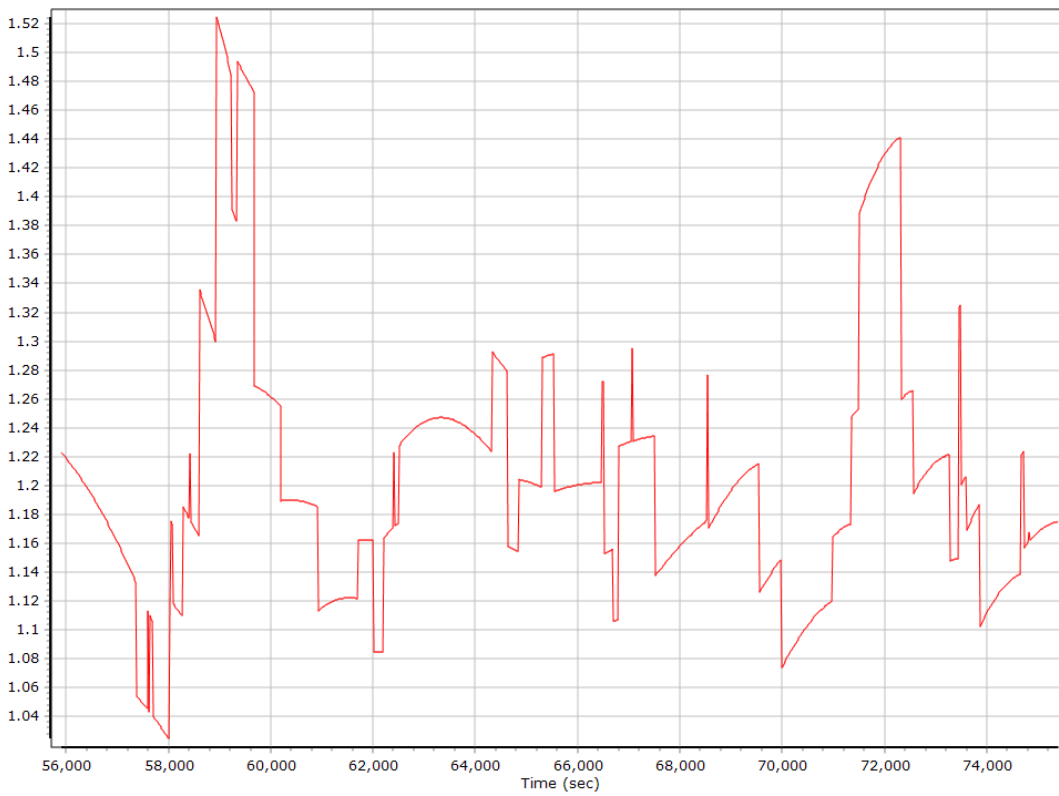
Num SVs in solution



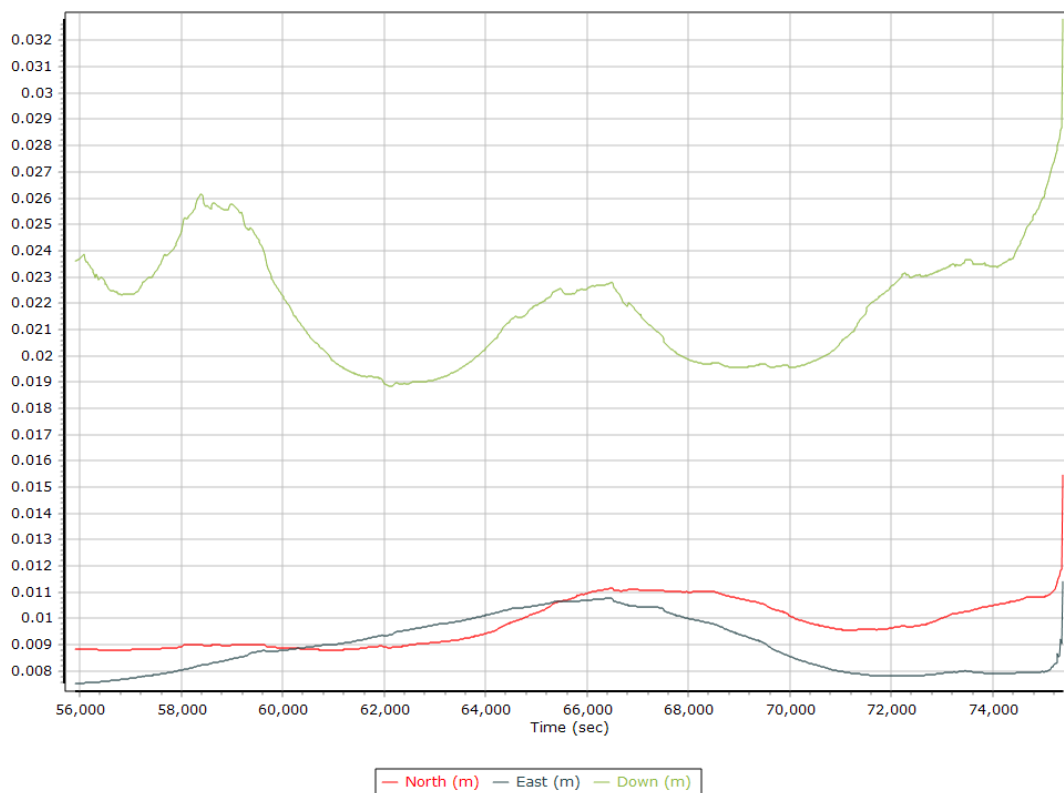
Forward/Reverse Separation



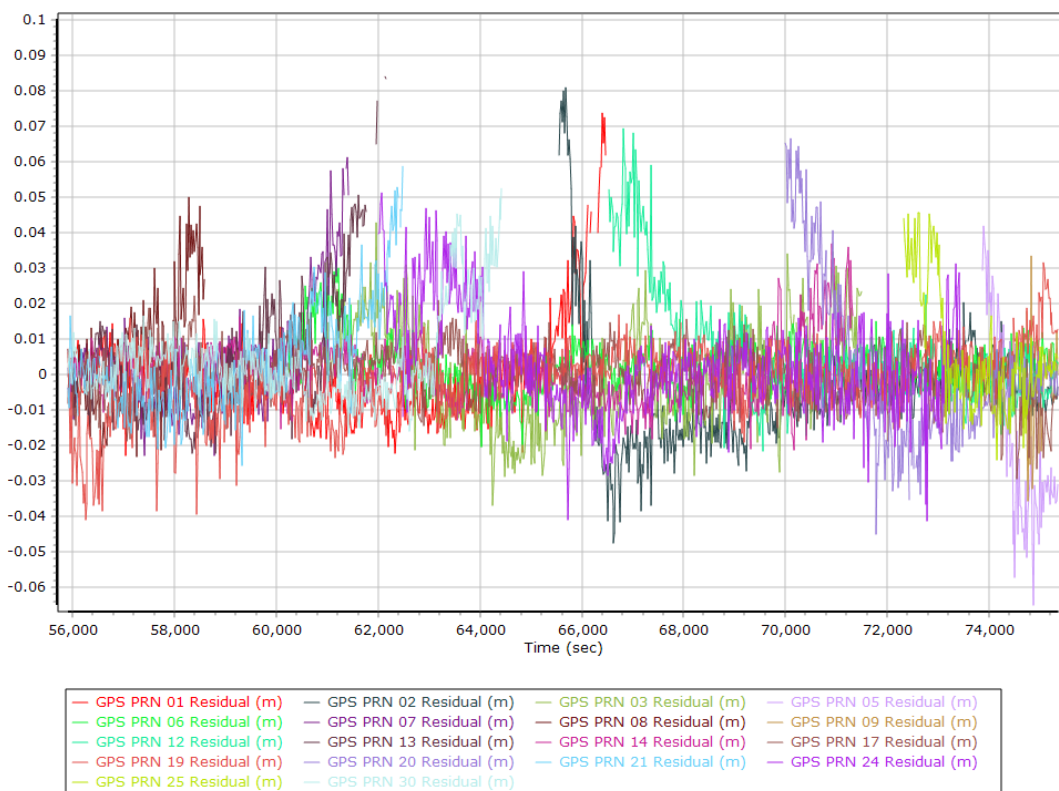
PDOP



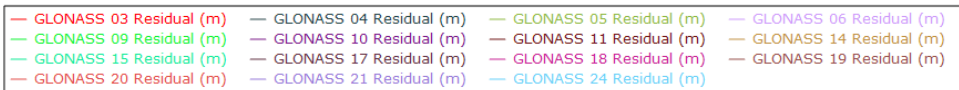
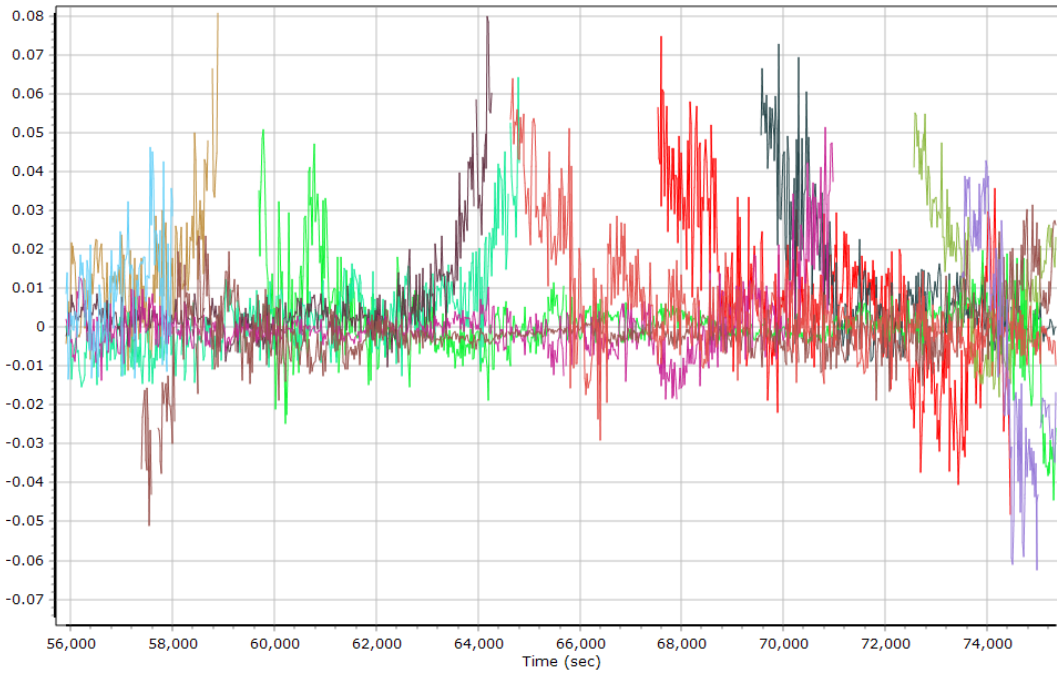
Estimated Position Accuracy



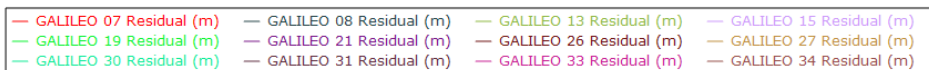
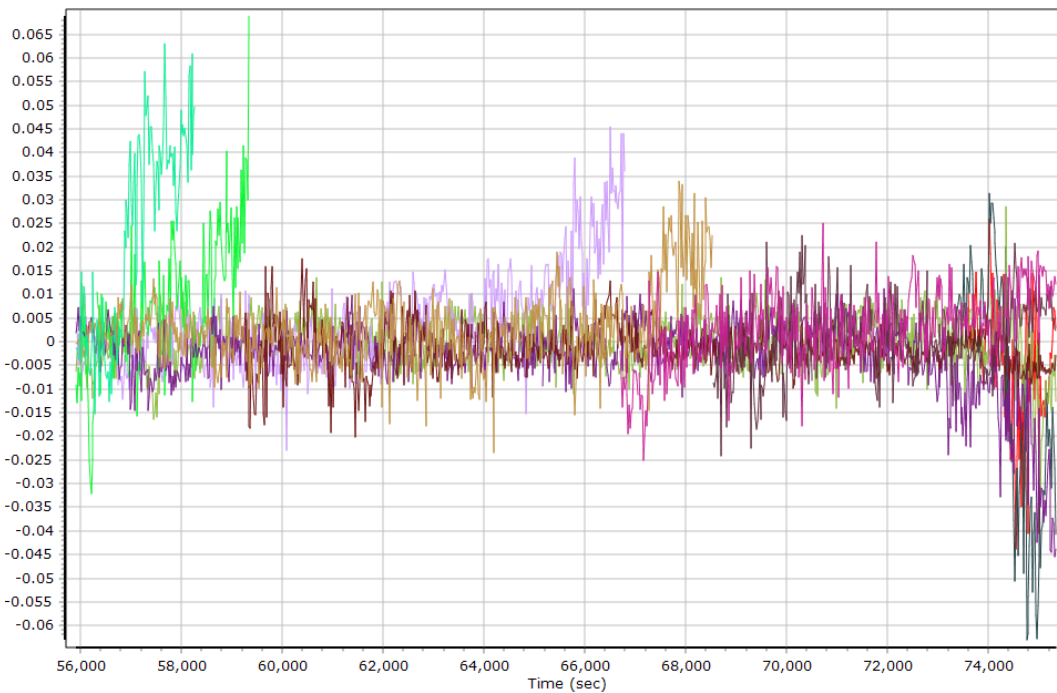
GPS Residuals



GLONASS Residuals



GALILEO Residuals



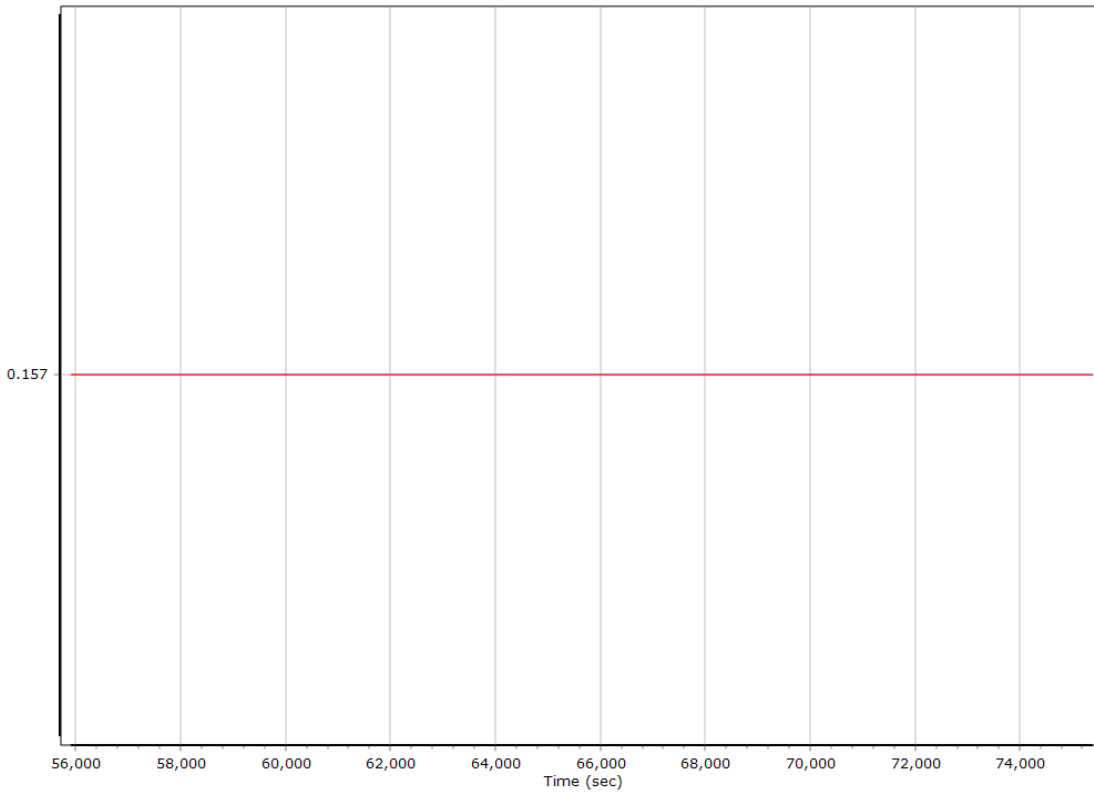
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	55335.000 (05/08/2022 15:22:15)		
Processing end time	75403.000 (05/08/2022 20:56:43)		
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	180.000
Reference to Primary GNSS lever arm (m)	0.157	-0.150	-1.090
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

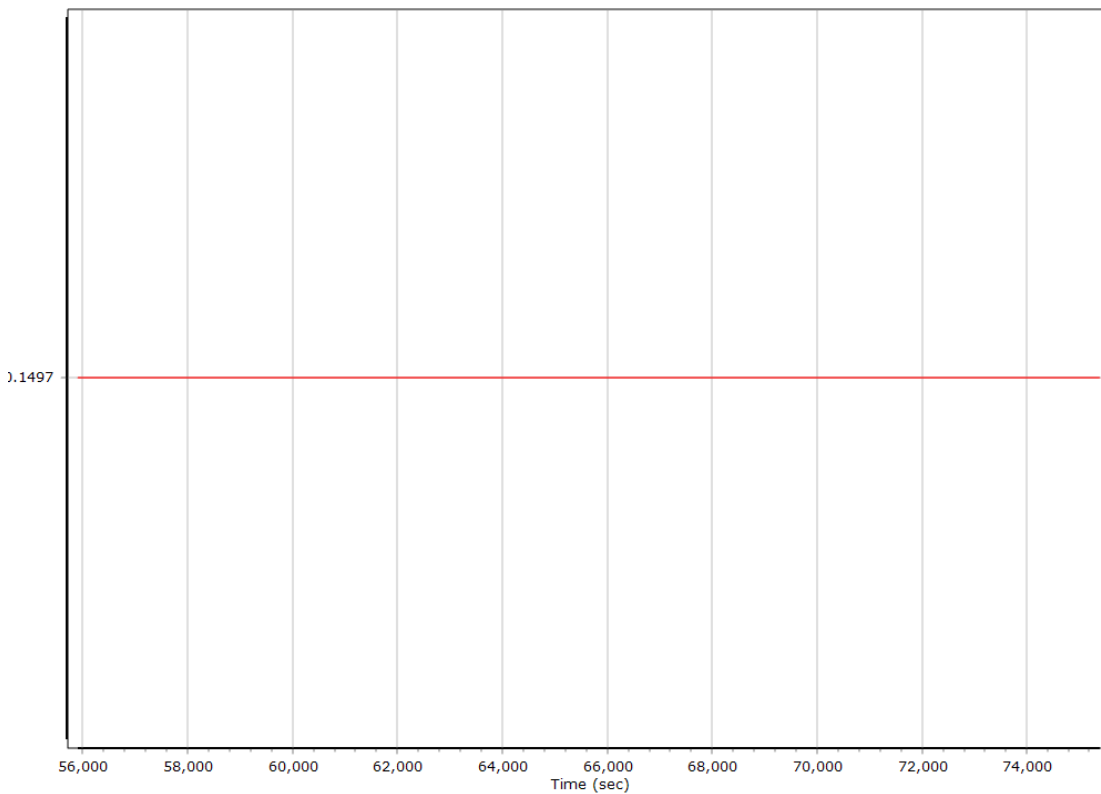
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

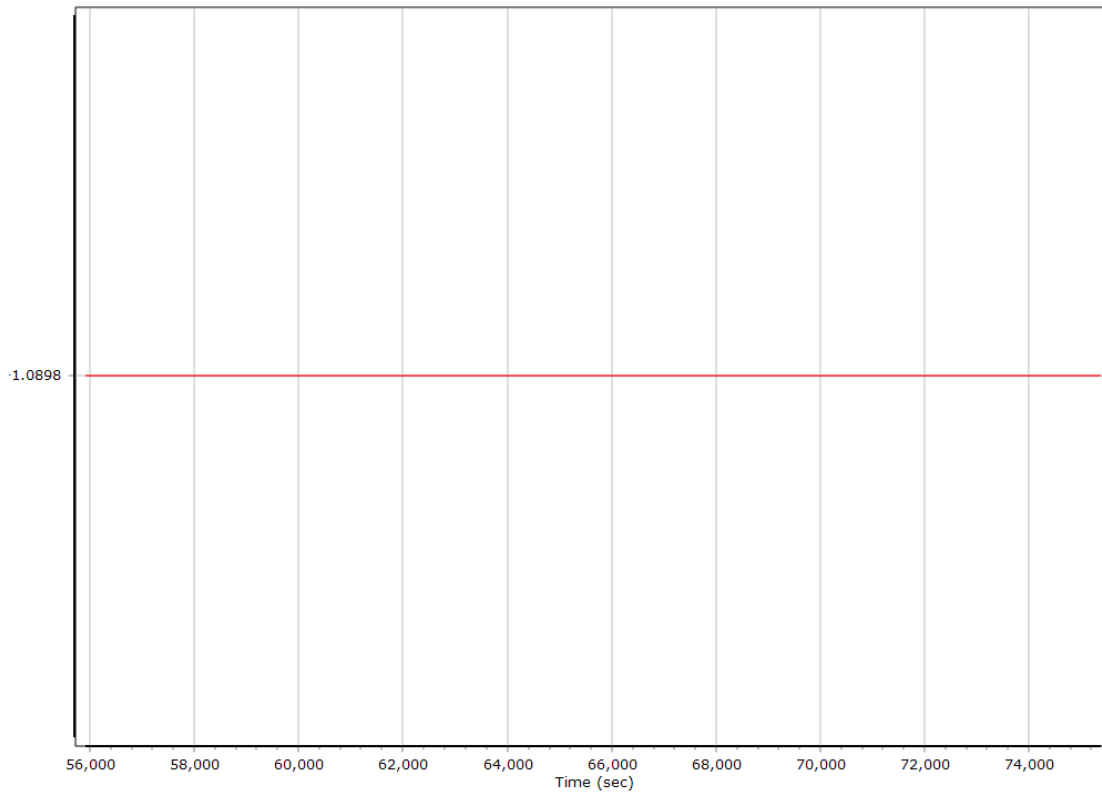
X Reference-Primary GNSS Lever Arm (m)



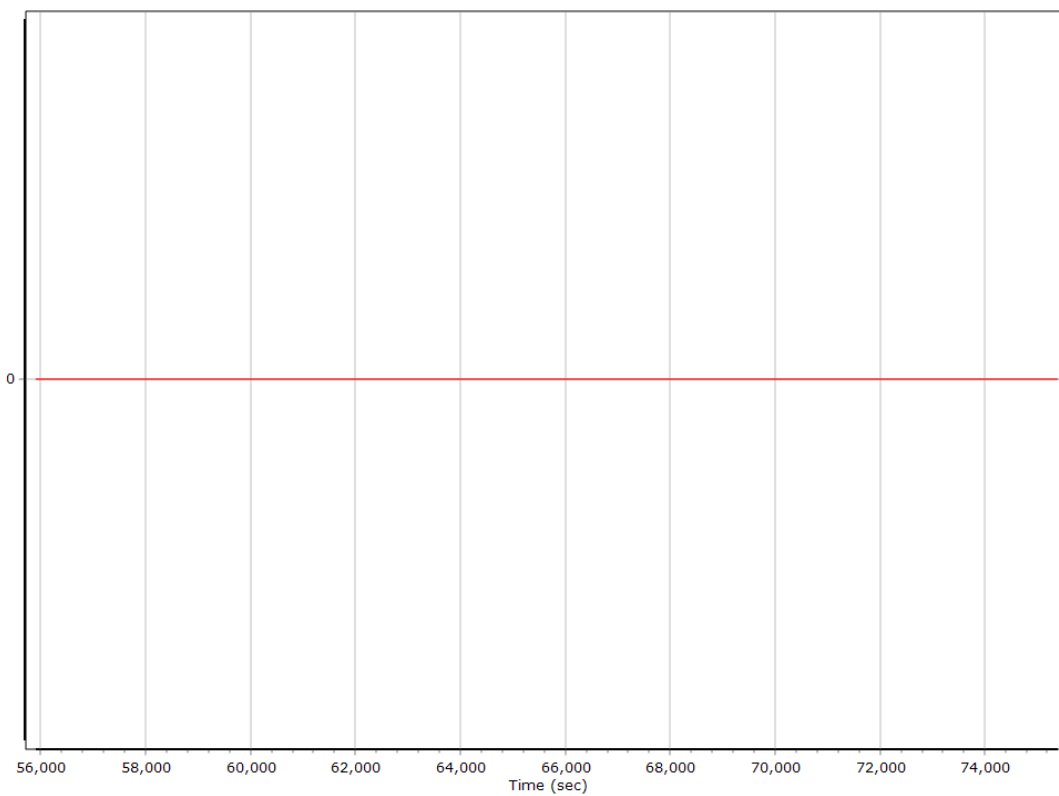
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



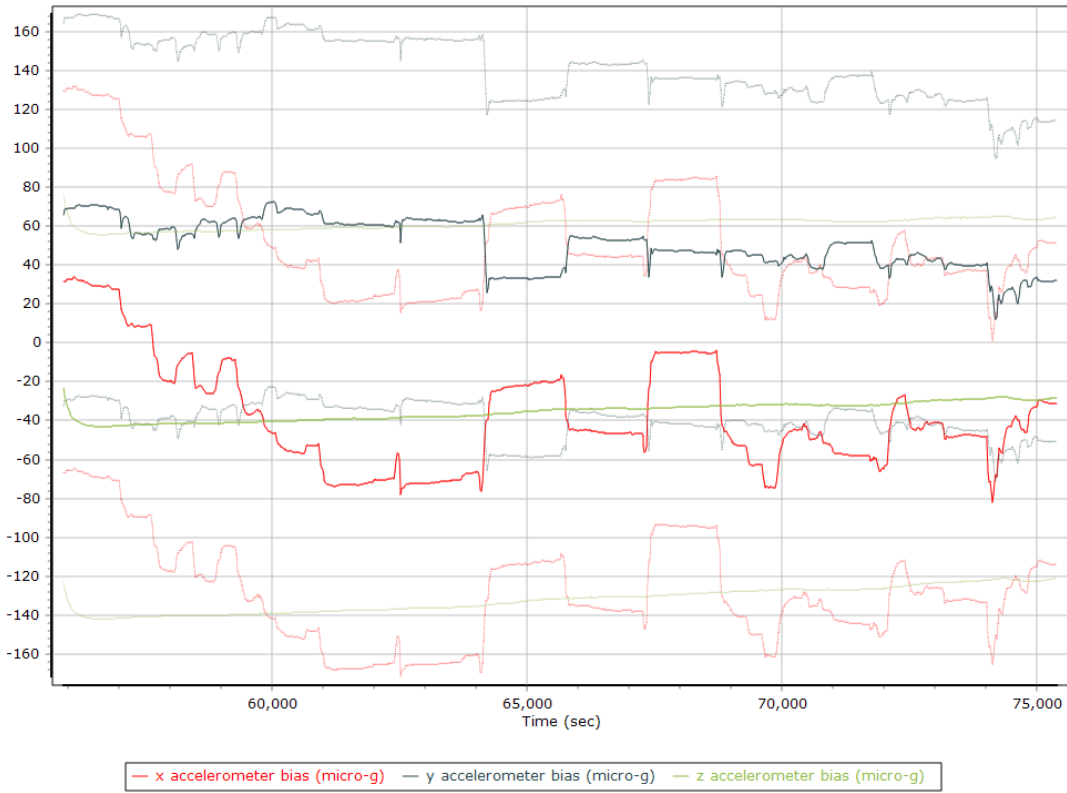
Reference-Primary GNSS Lever Arm Figure of Merit



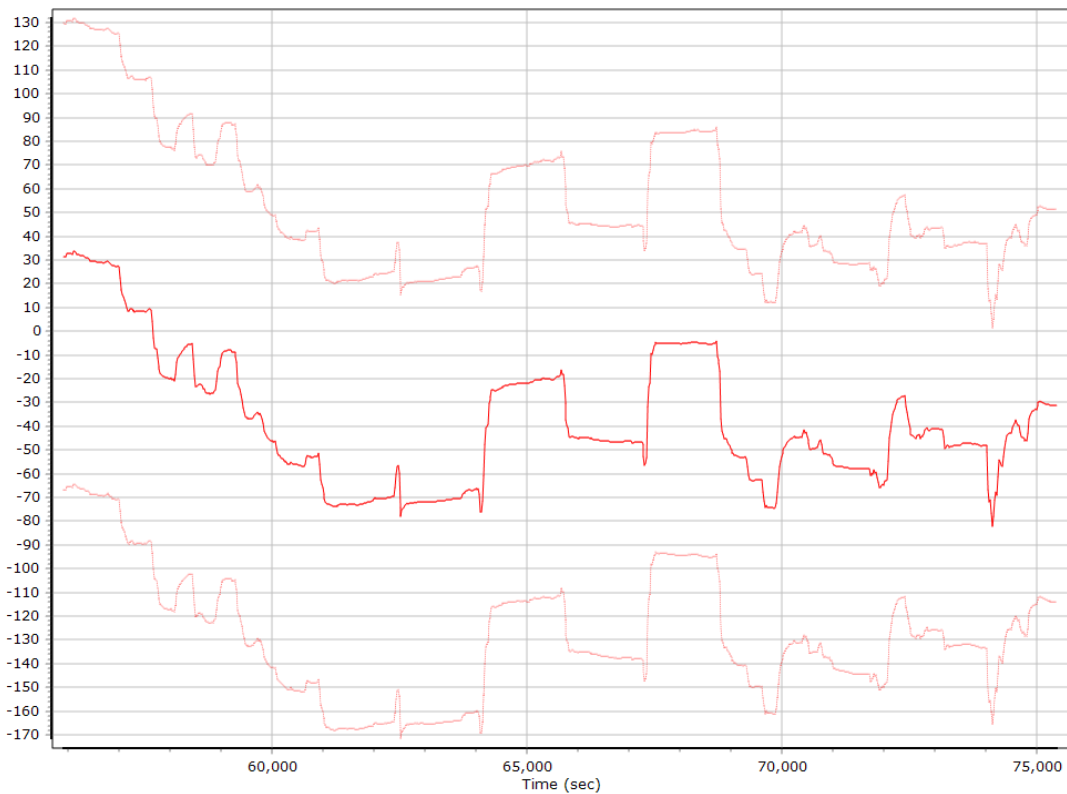
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

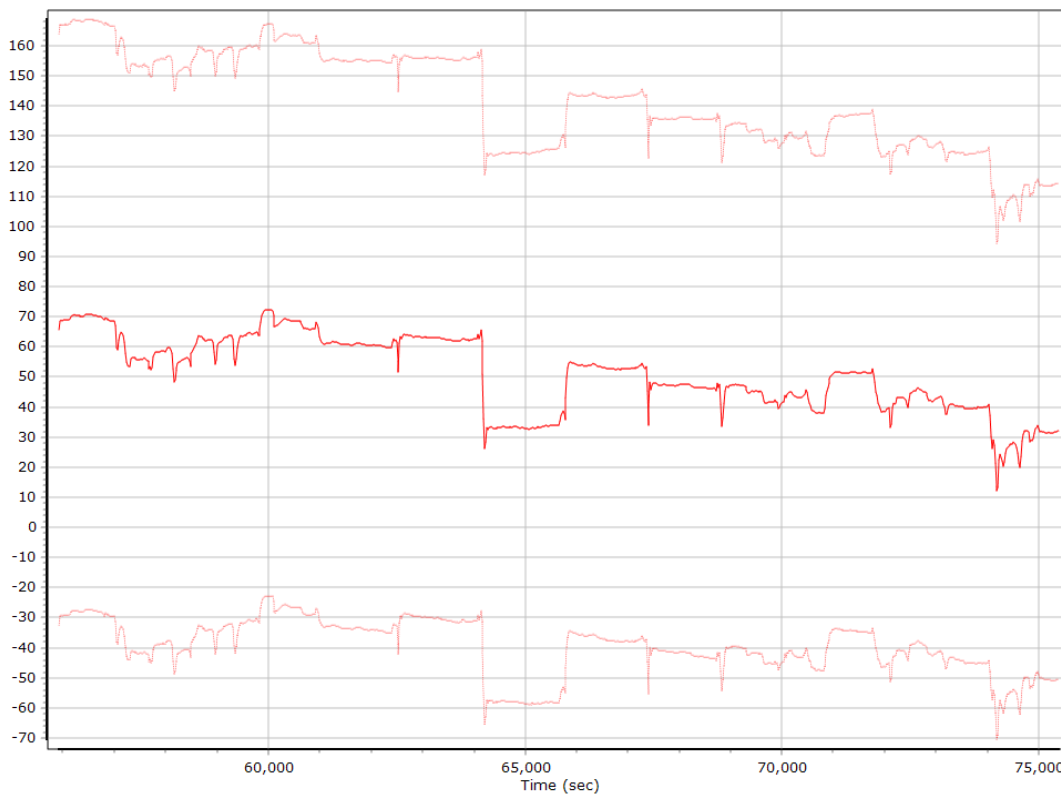
Accelerometer Bias (micro-g)



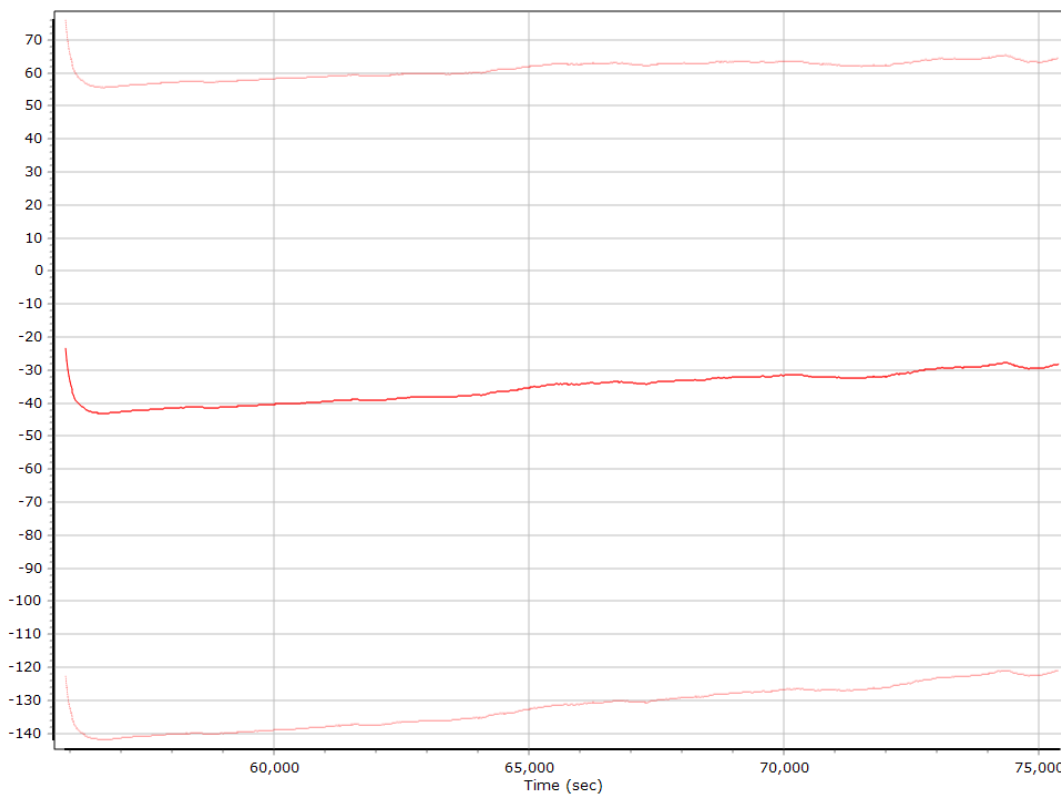
X Accelerometer Bias (micro-g)



Y Accelerometer Bias (micro-g)



Z Accelerometer Bias (micro-g)



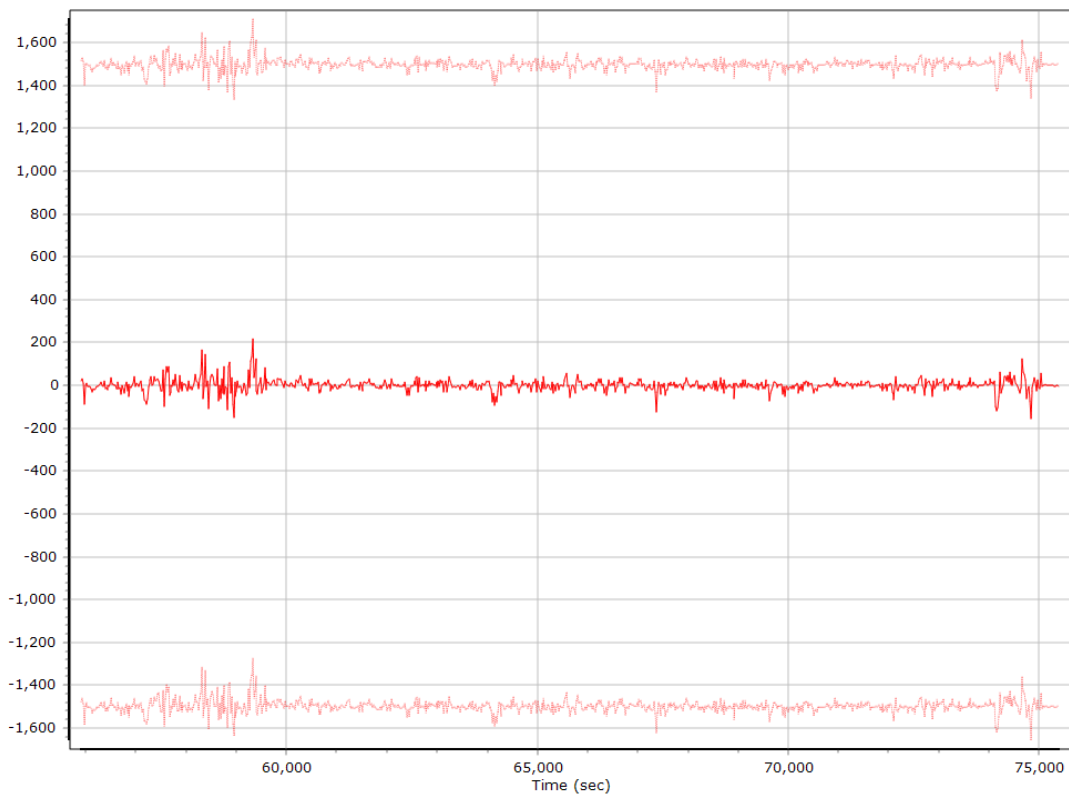
Accelerometer Scale Error (ppm)



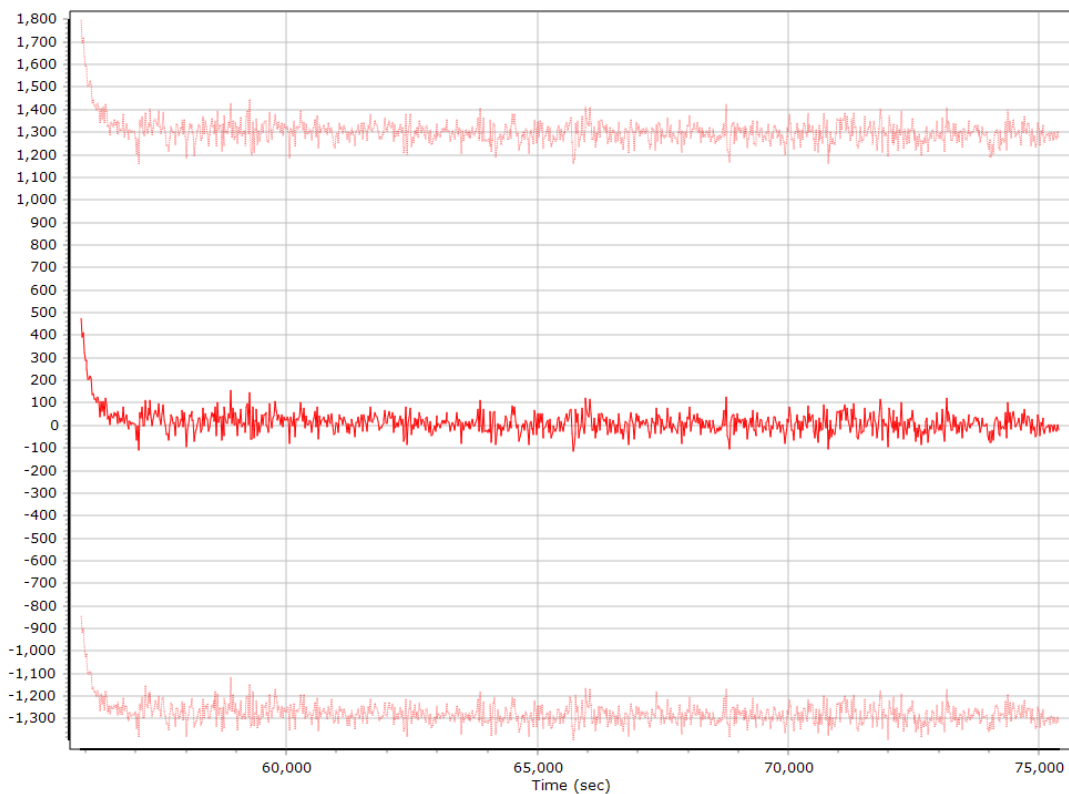
X Accelerometer Scale Error (ppm)



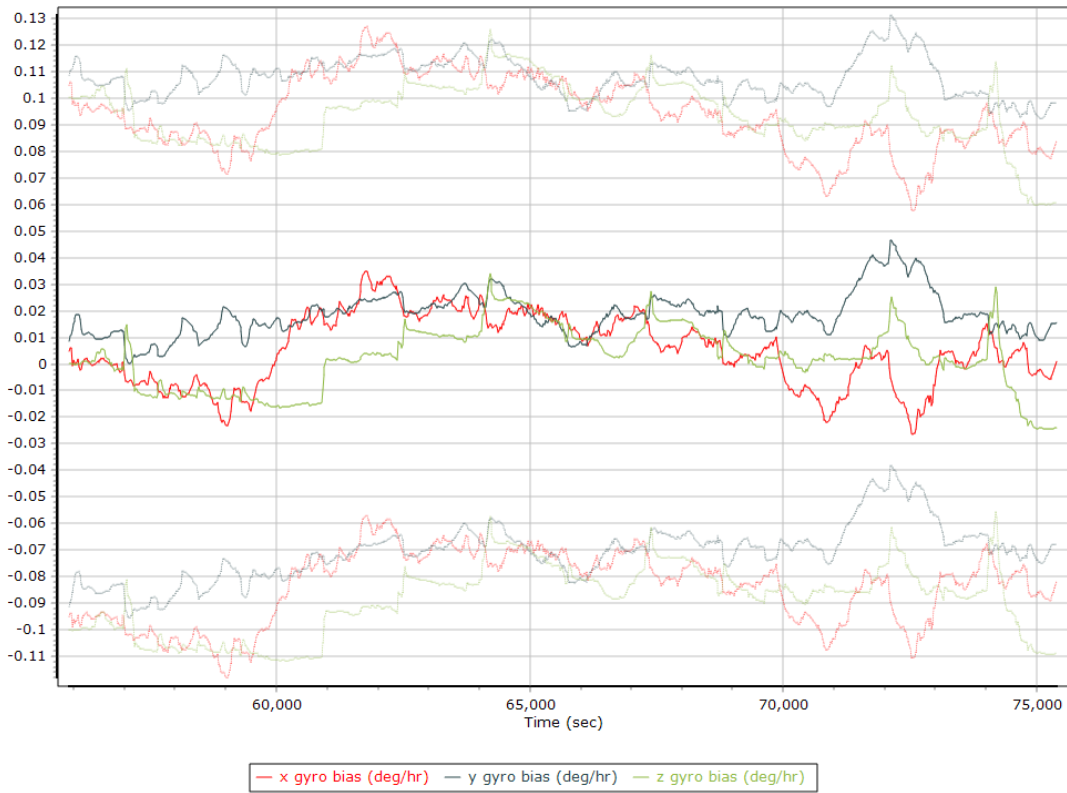
Y Accelerometer Scale Error (ppm)



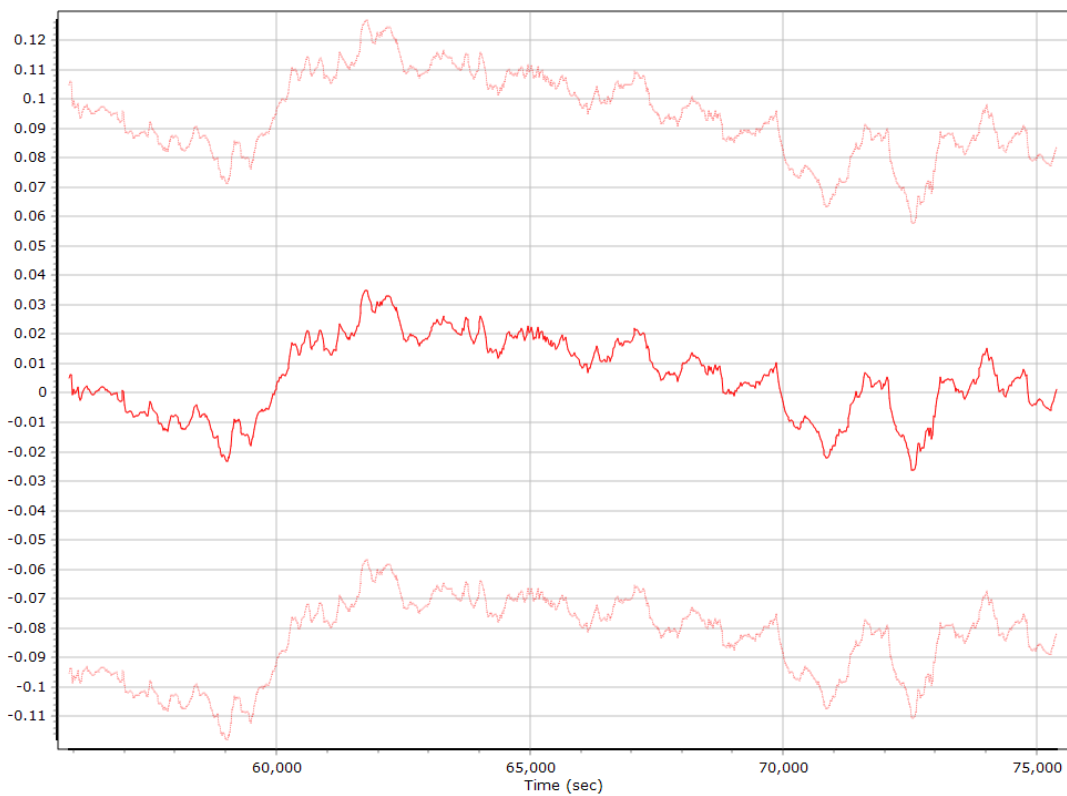
Z Accelerometer Scale Error (ppm)



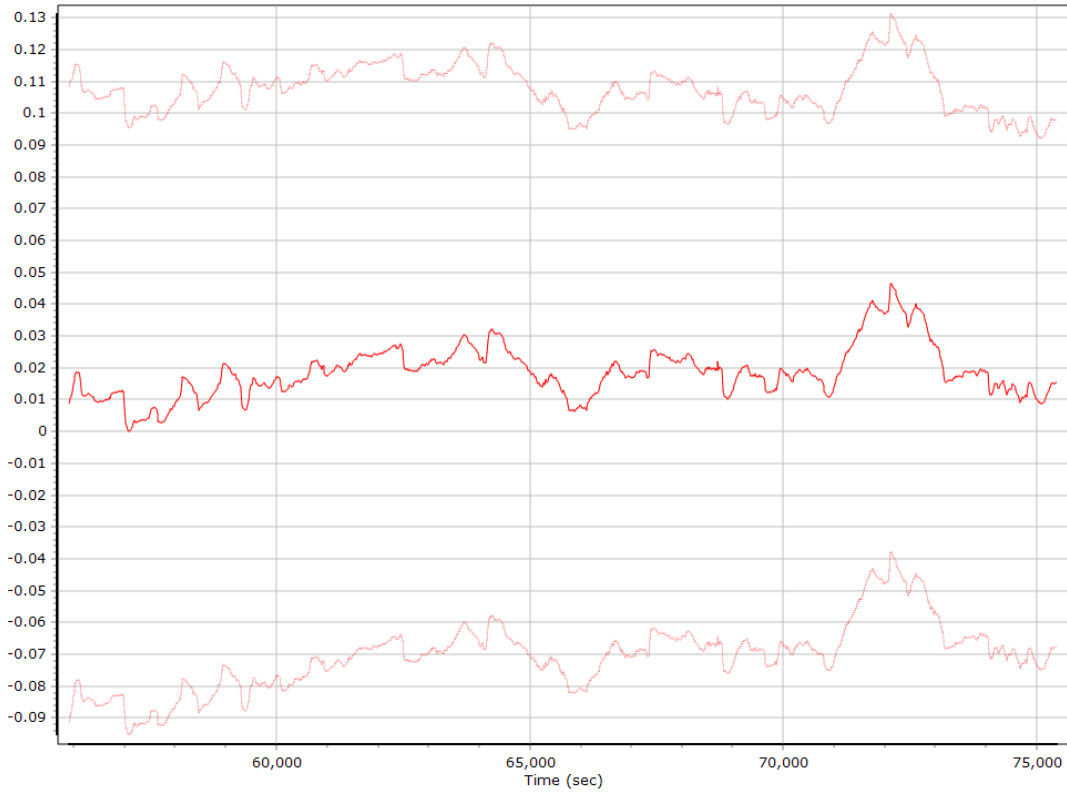
Gyro Bias (deg/h)



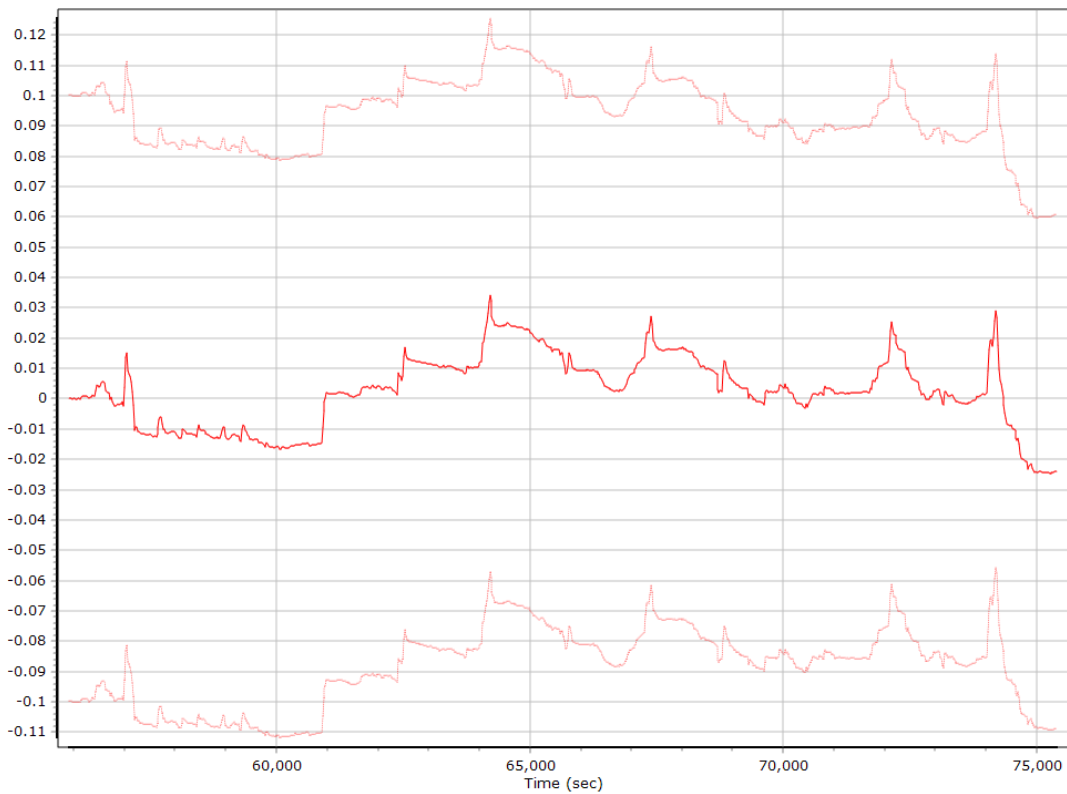
X Gyro Bias (deg/h)



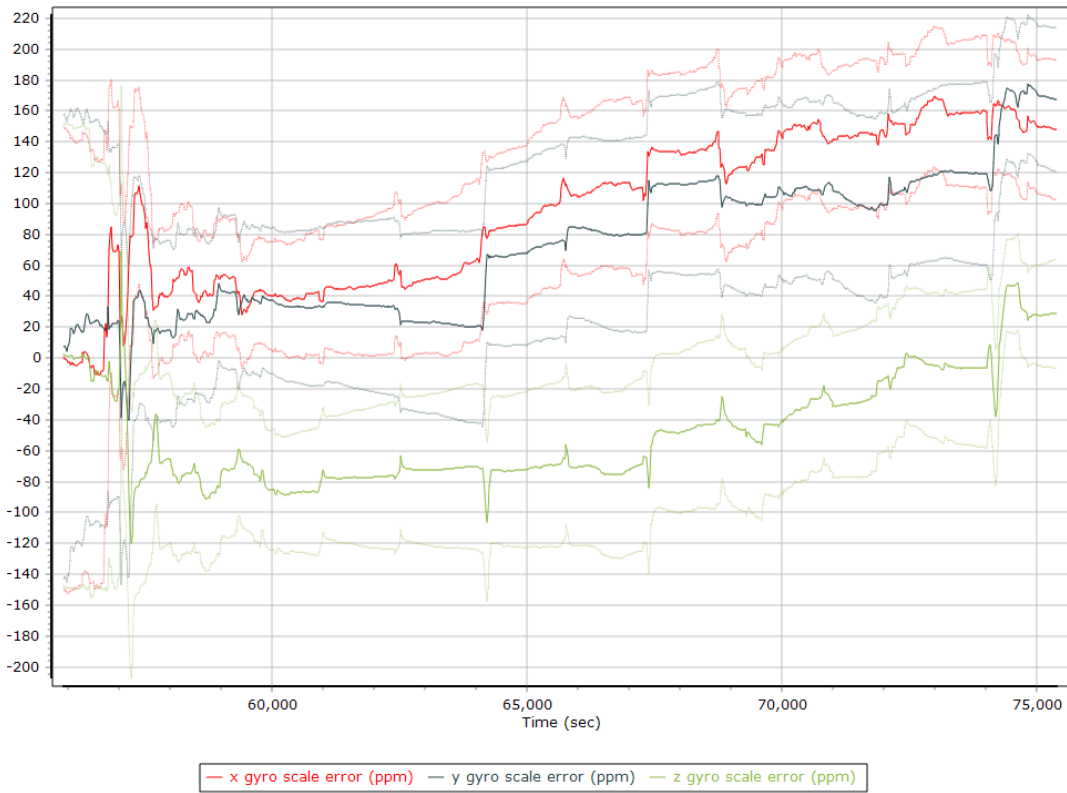
Y Gyro Bias (deg/h)



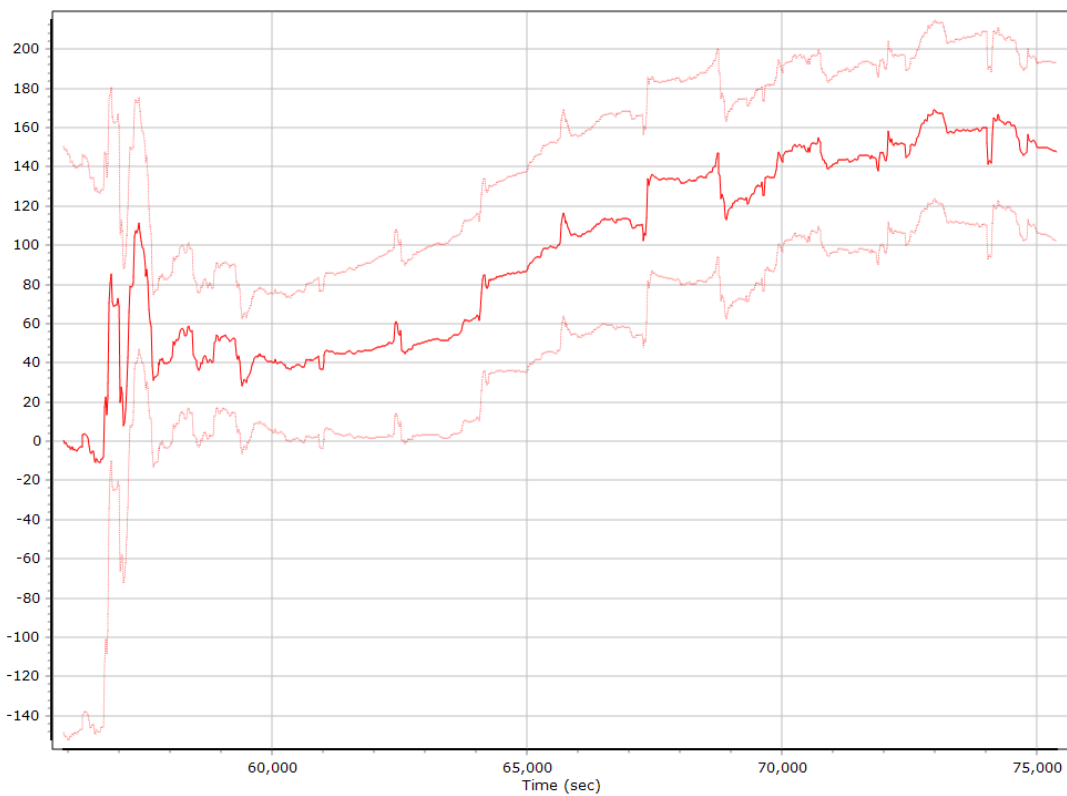
Z Gyro Bias (deg/h)



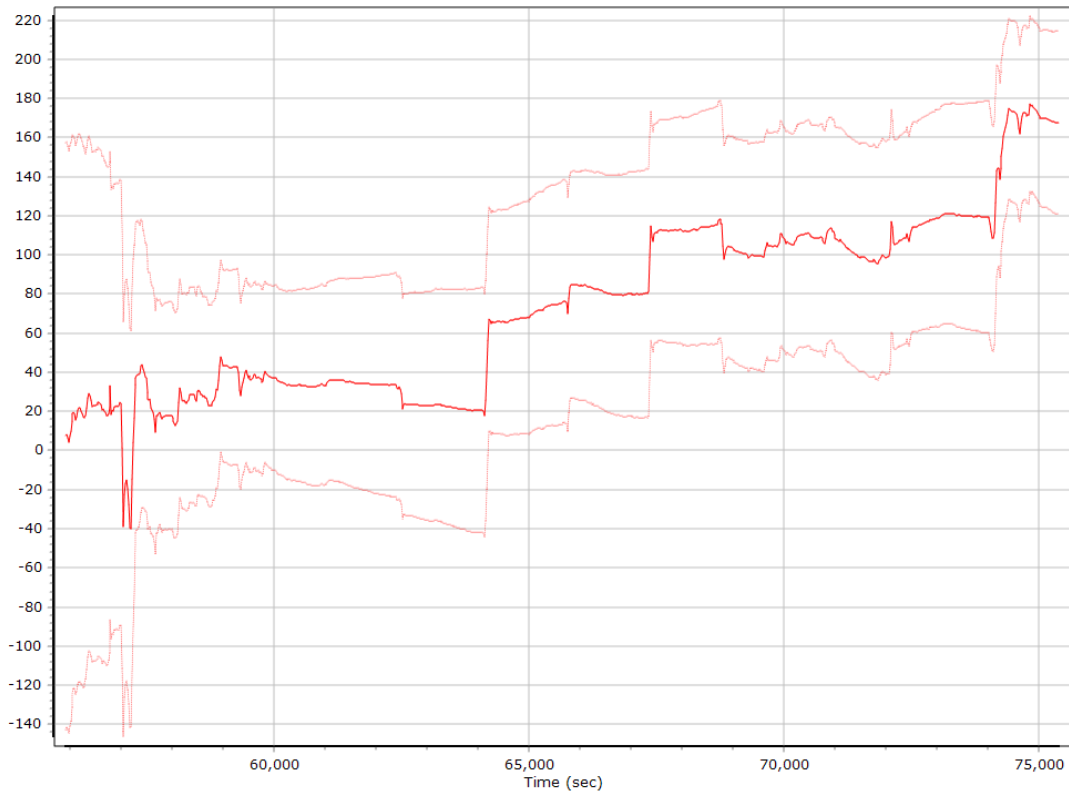
Gyro Scale Error (ppm)



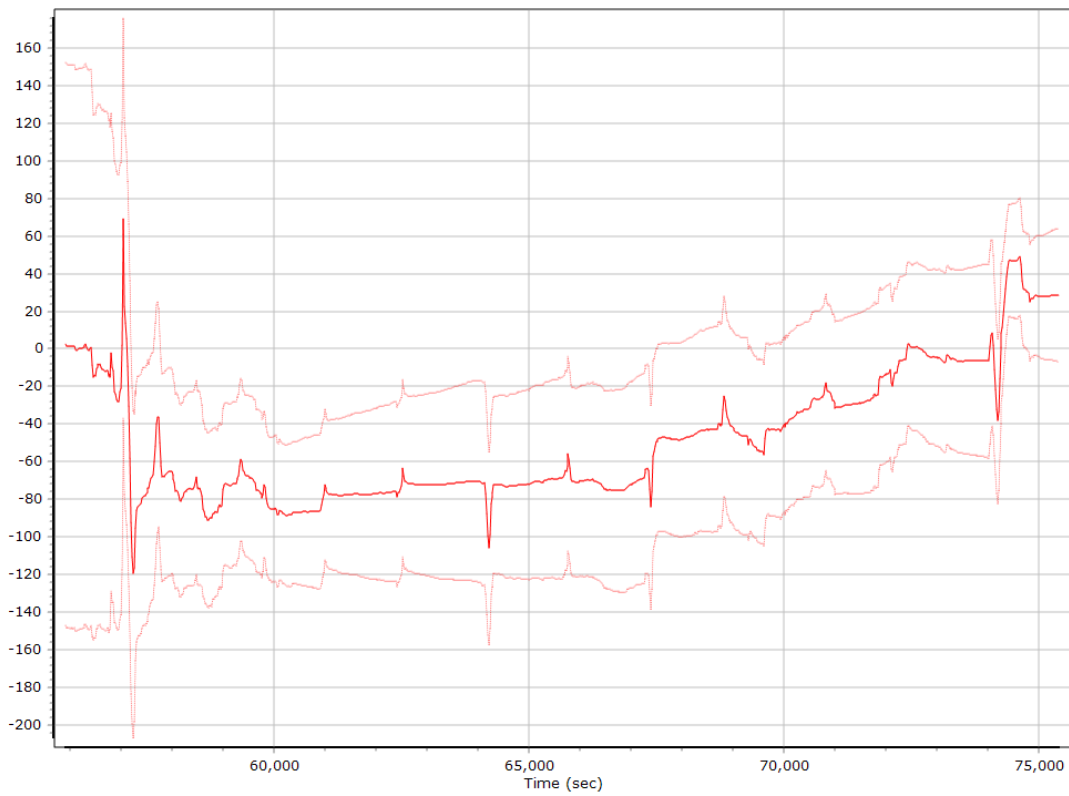
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

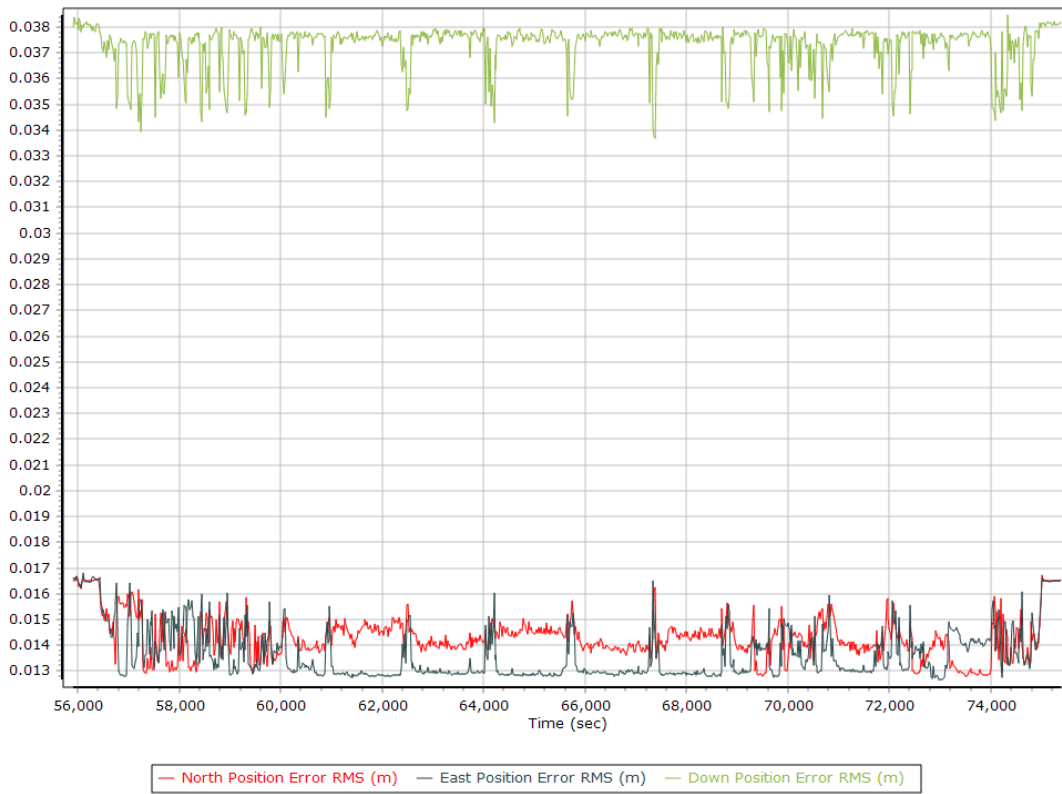


Z Gyro Scale Error (ppm)

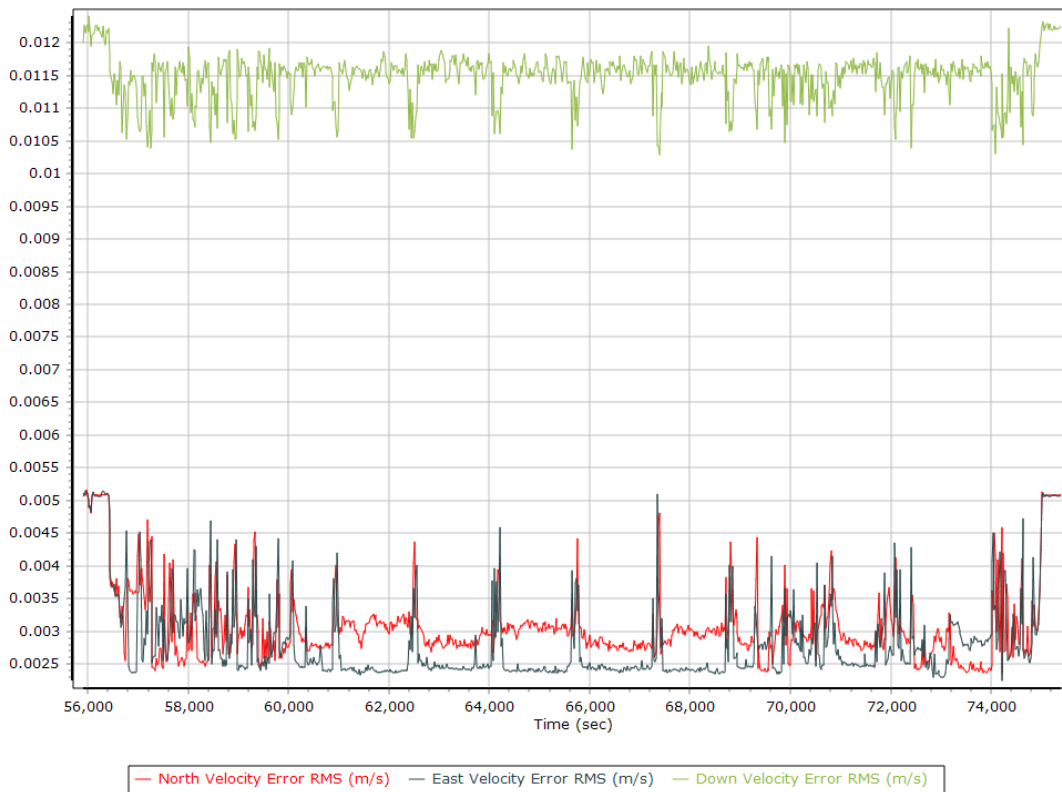


Smoothed Performance Metrics

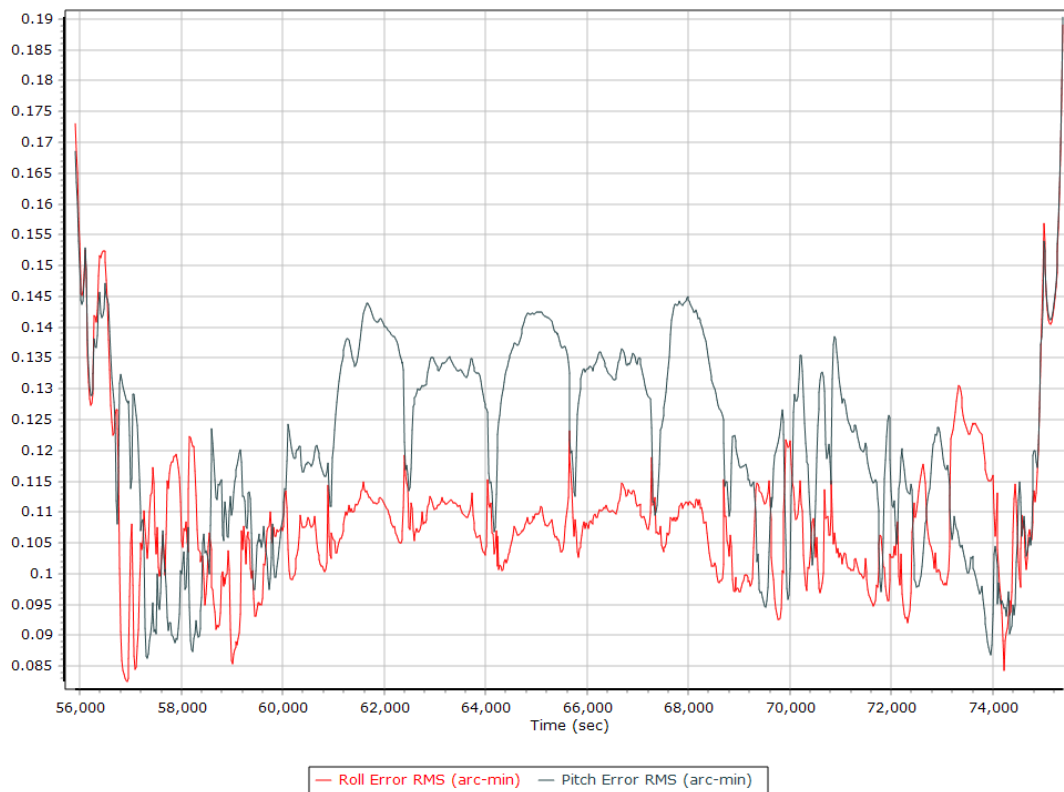
Position Error RMS (m)



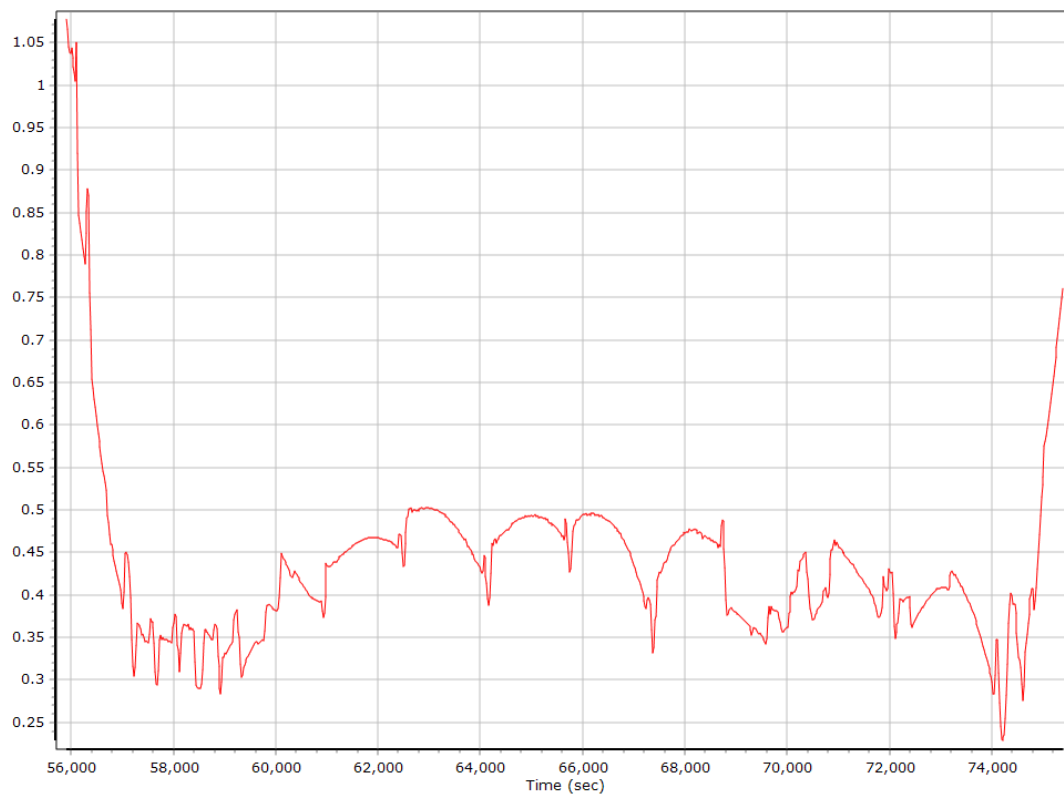
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

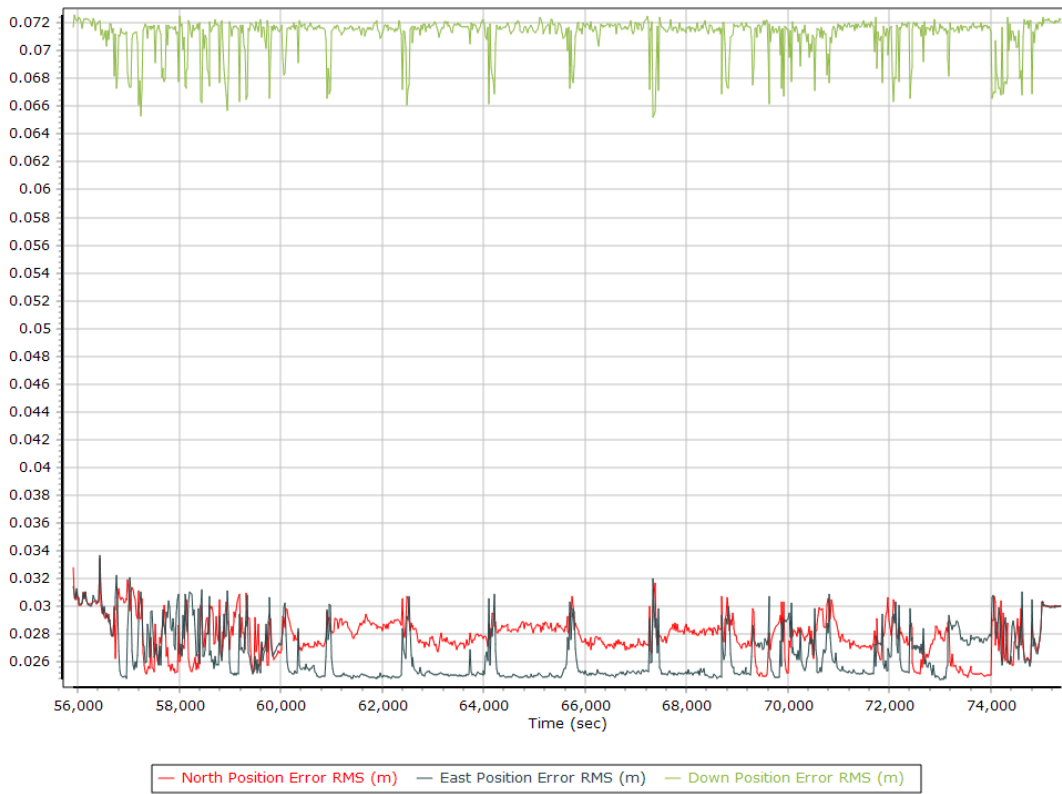


Heading Error RMS (arc-min)

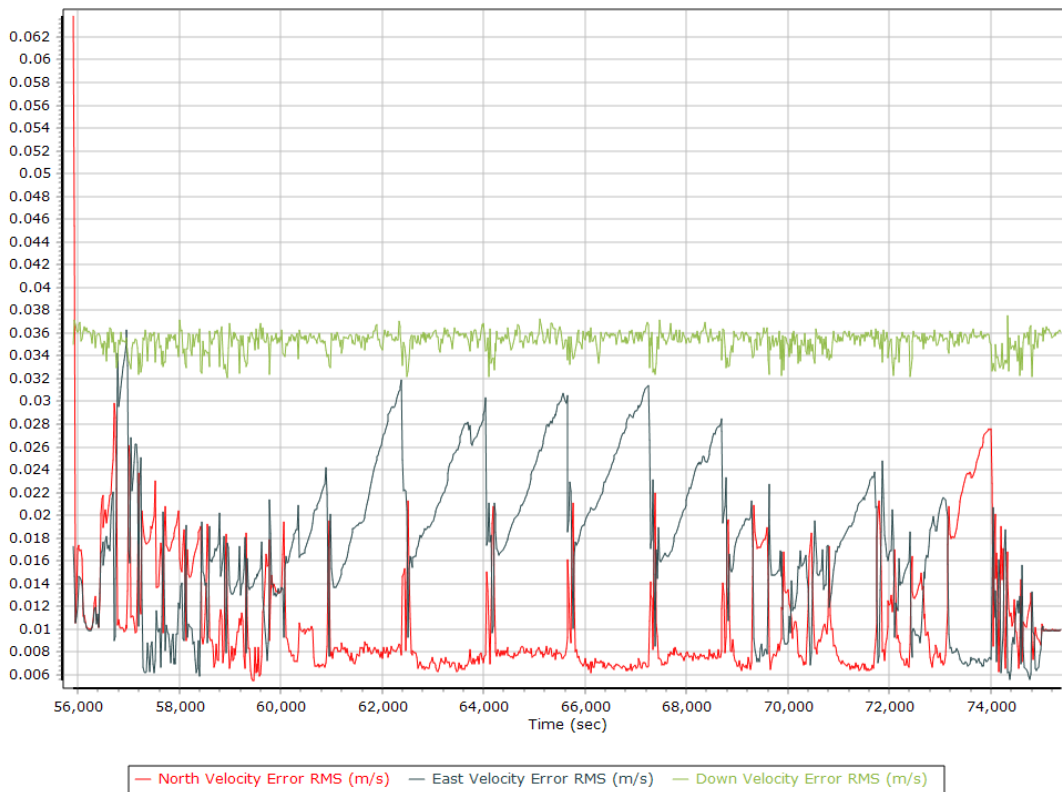


Forward Processed Performance Metrics

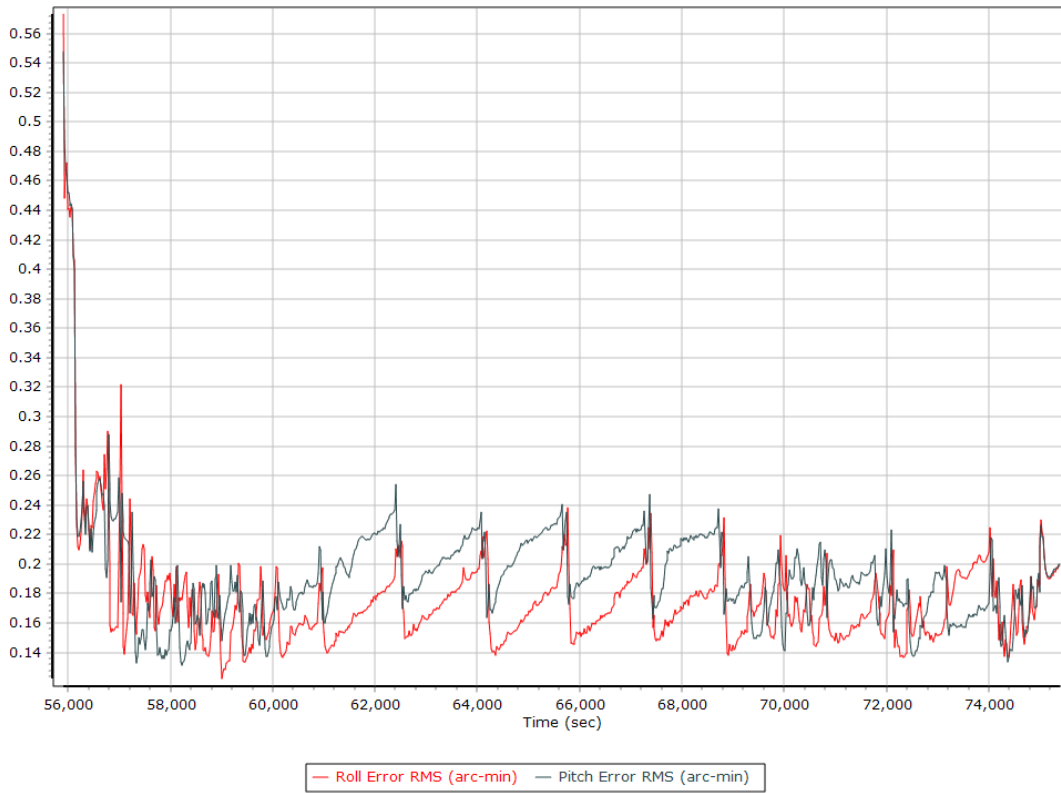
Position Error RMS (m)



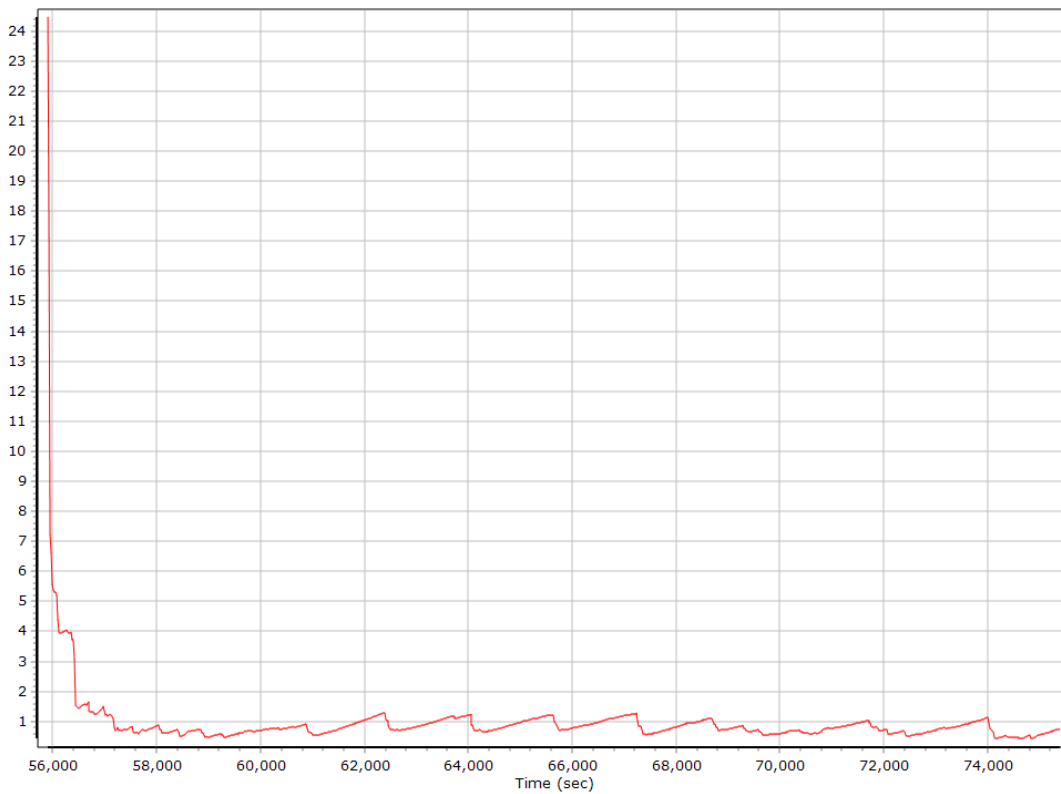
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

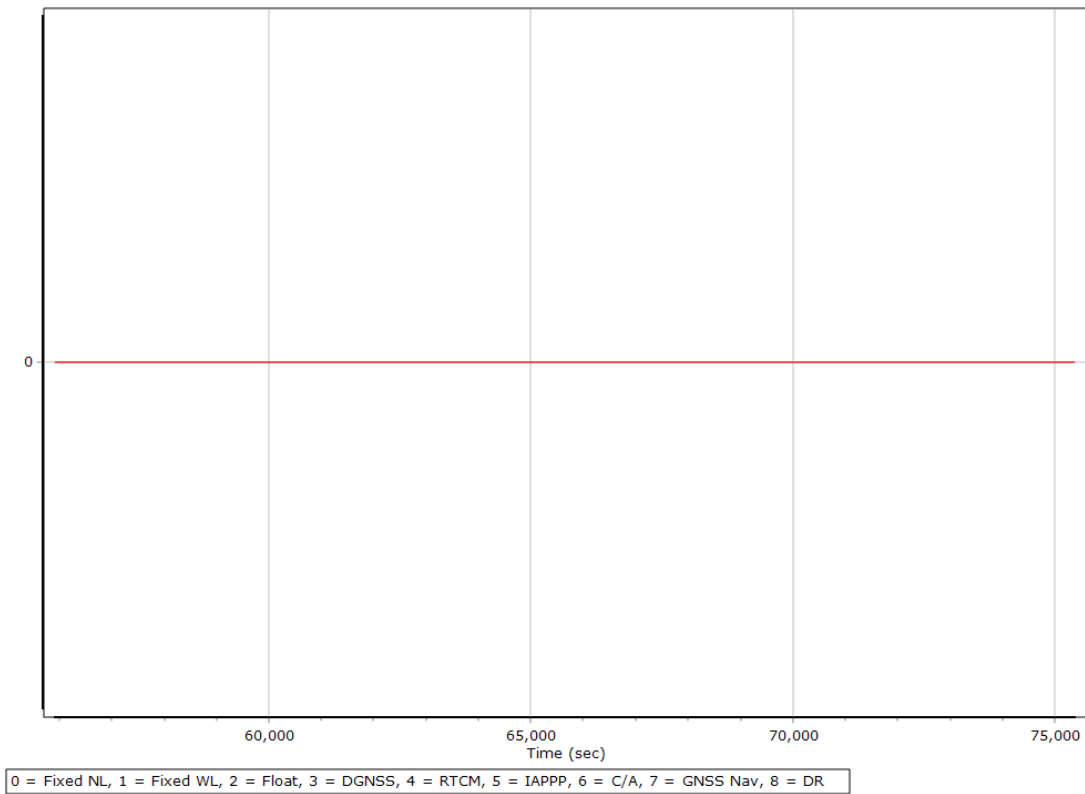


Heading Error RMS (arc-min)

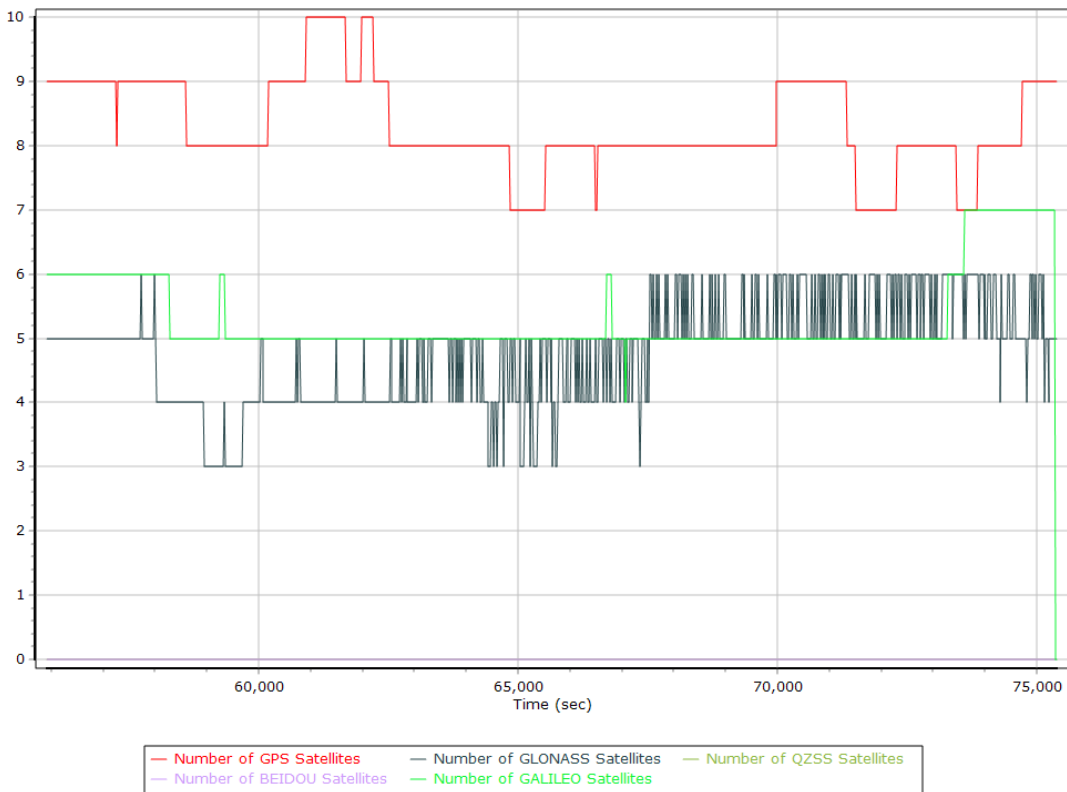


Forward Processed Solution Status

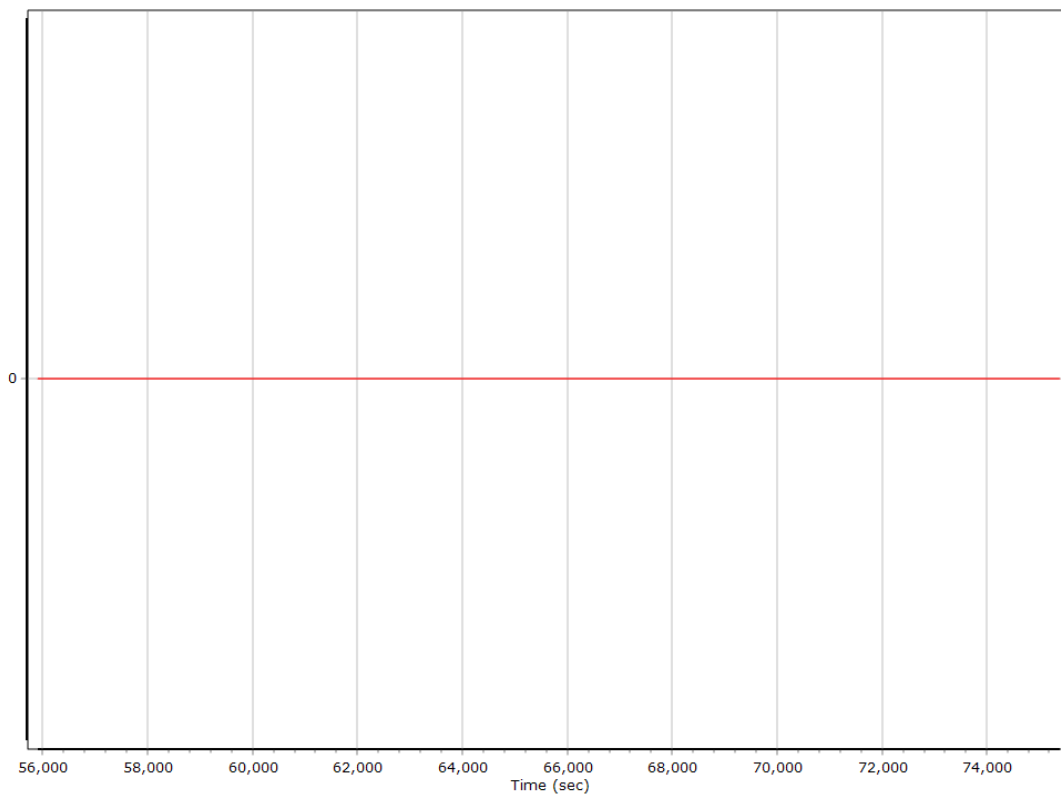
Processing Mode



Number of Satellites



Baseline Length



Export Summary

Export file	sbet_13937_NAD83(2011).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	55848.005 (05/08/2022 15:30:48)		
Export end time	75403.002 (05/08/2022 20:56:43)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 16 (90W to 84W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2010		

EO Summary

EO file	event1_eo_13937.txt		
EO format	ZI Imaging		
Lever arm (m)	0.000	0.000	0.000
Boresight angles (arcmin)	0.0000	0.0000	0.0000
Output rate	Event 1 Time		
Rotation sequence	x omega	y phi	z kappa
Local shift (m)	0.000	0.000	0.000
Output units (coordinate / angle / lat & lon)	Meter	Degree	Deg Decimal
Height option	Ellipsoid Height		
WGS84 height flag	False		
Scale height option	False		
Kappa cardinal rotation (deg)	0		
Solution in use	Post-processed		
EO start time	55848.005 (05/08/2022 15:30:48)		
EO end time	75403.002 (05/08/2022 20:56:43)		
Grid	Universal Transverse Mercator		
Zone	UTM North 15 (96W to 90W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2010		