

General Information

Mission Information

Project name	13876
Processing date	2022-06-24 19:48:47
Mission date	2022-04-17 14:17:20
Mission duration	04:59:57.000
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
20220417.001	POS Data
20220417.002	POS Data
20220417.003	POS Data
20220417.004	POS Data
20220417.005	POS Data
20220417.006	POS Data
20220417.007	POS Data
20220417.008	POS Data
20220417.009	POS Data
20220417.010	POS Data
20220417.011	POS Data
20220417.012	POS Data
20220417.013	POS Data
20220417.014	POS Data
20220417.015	POS Data
20220417.016	POS Data
20220417.017	POS Data
20220417.018	POS Data
20220417.019	POS Data
20220417.020	POS Data
20220417.021	POS Data
20220417.022	POS Data
20220417.023	POS Data
20220417.024	POS Data
20220417.025	POS Data
20220417.026	POS Data
20220417.027	POS Data
20220417.028	POS Data
20220417.029	POS Data
20220417.030	POS Data
20220417.031	POS Data
20220417.032	POS Data
20220417.033	POS Data
20220417.034	POS Data
20220417.035	POS Data
20220417.036	POS Data
20220417.037	POS Data
20220417.038	POS Data
20220417.039	POS Data
20220417.040	POS Data

Input Files

File Name	File Type
Ephm1070.22g	GLONASS Broadcast Ephemeris
Ephm1070.22n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_13876.out	SBET Trajectory File
eo_13876.txt	ZI Imaging POSEO Output
sbet_13876_NAD83(2011).out	Custom Smoothed BET Export Output

Rover Data Summary

First raw data file	20220417.001		
Last raw data file	20220417.040		
Start GPS week	2206		
Start time	51439.537 (04/17/2022 14:17:19)		
End time	69437.762 (04/17/2022 19:17:17)		
Start of fine alignment	51896.533 (04/17/2022 14:24:56)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Reference to IMU lever arm (m)	-0.230	-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

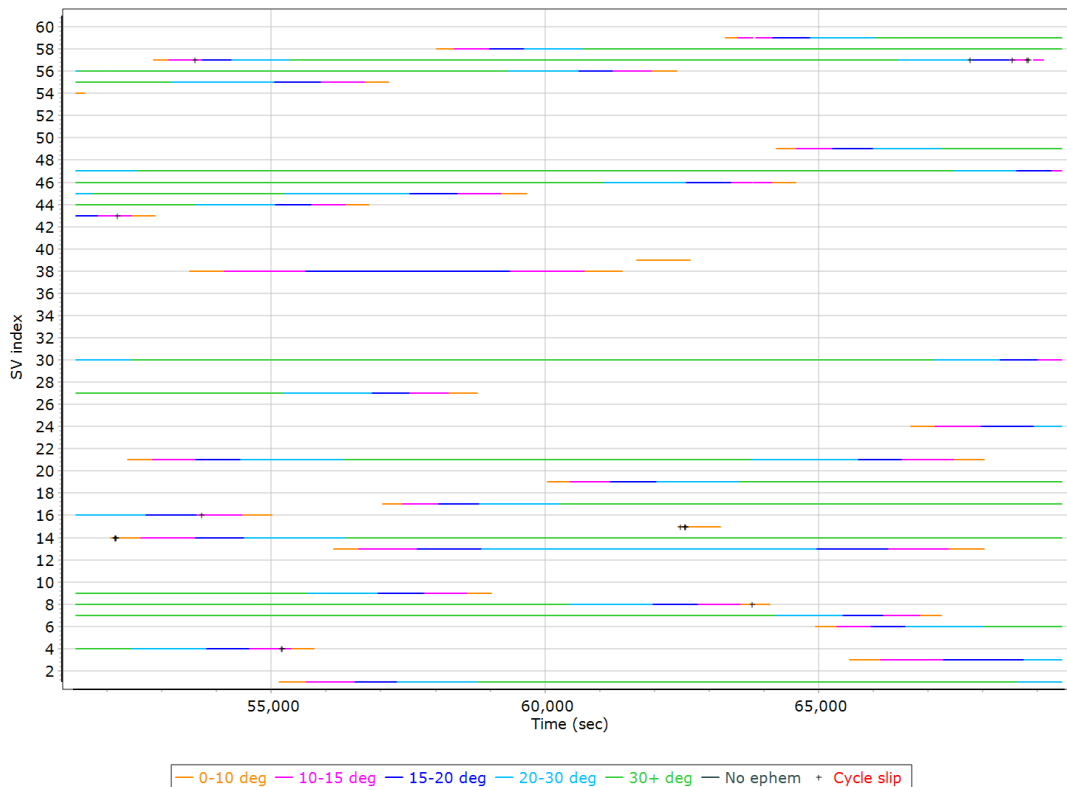
Rover Data QC

Raw IMU Import QC Summary

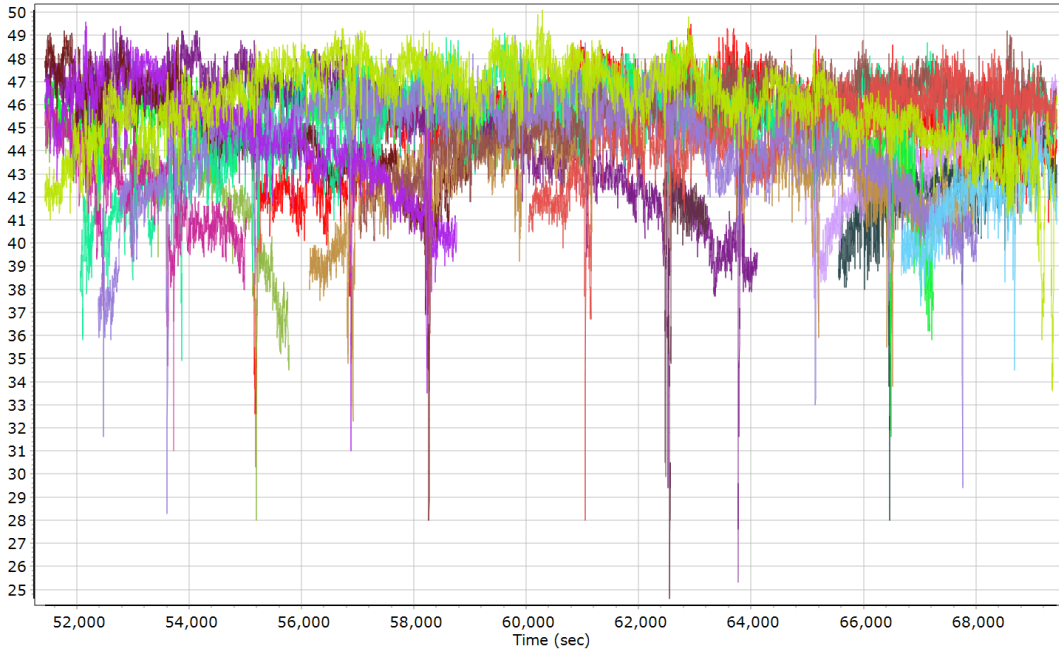
IMU data input file	imu_13876.dat
IMU data check log file	imudt_13876.log
IMU Records Processed	3598965
Termination Status	Normal
IMU Anomalies	0

Primary Observables & Satellite Data

GPS/GLONASS L1 Satellite Lock/Elevation

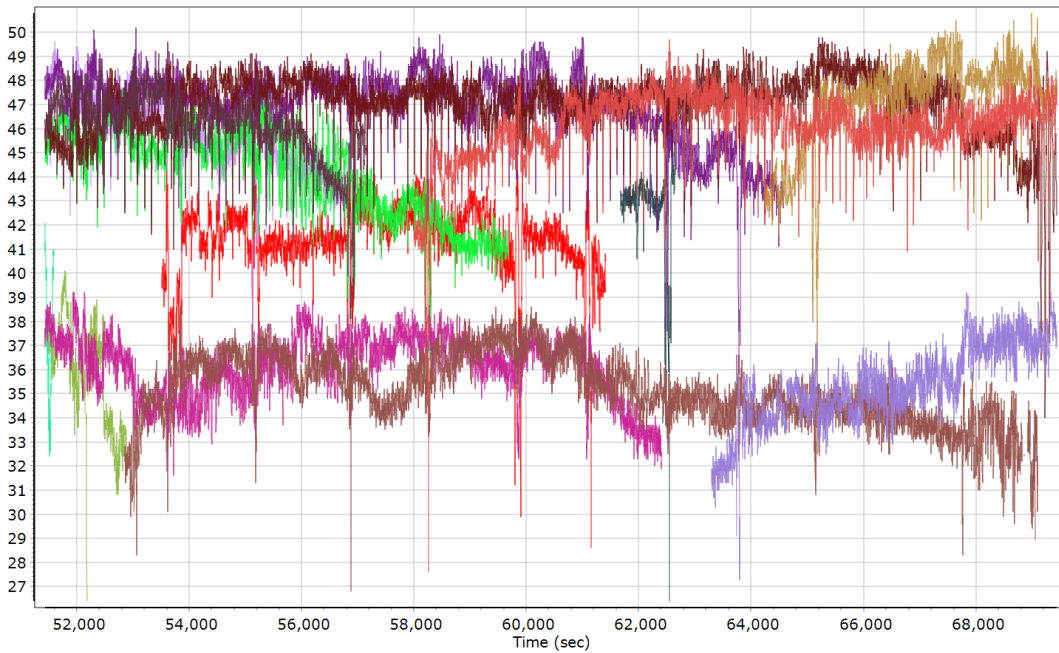


GPS L1 SNR



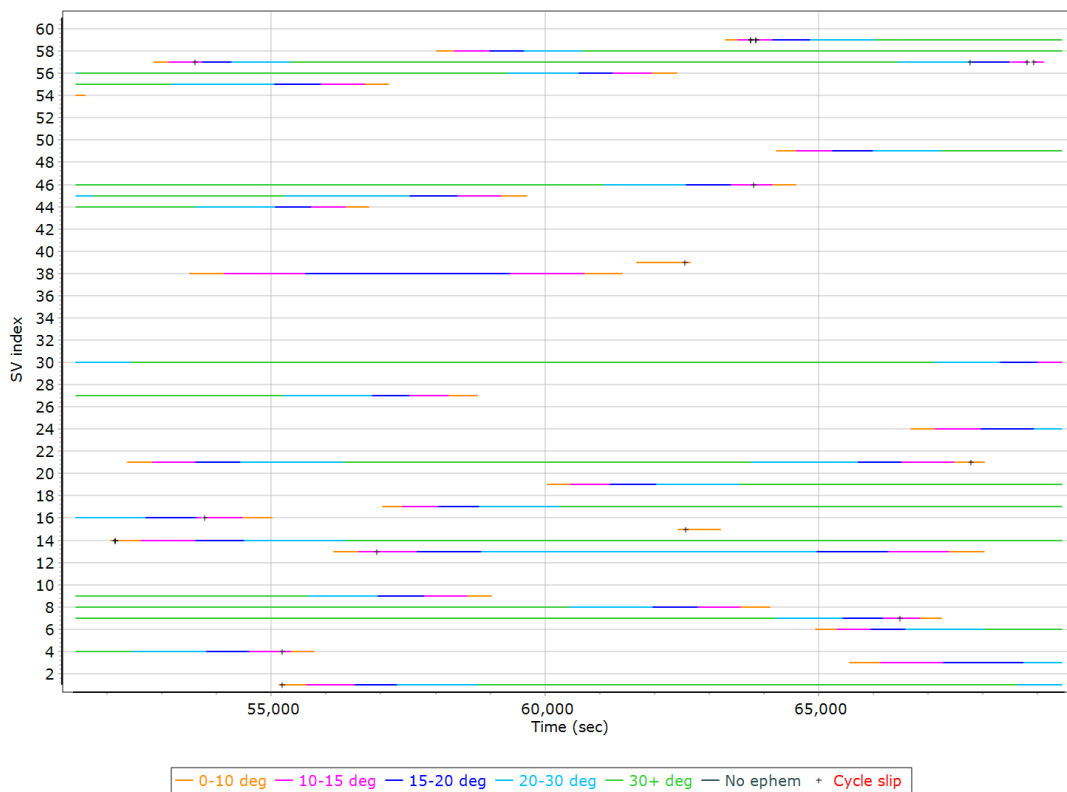
- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 01 L1 SNR (dB/Hz) | GPS PRN 03 L1 SNR (dB/Hz) | GPS PRN 04 L1 SNR (dB/Hz) | GPS PRN 06 L1 SNR (dB/Hz) |
| GPS PRN 07 L1 SNR (dB/Hz) | GPS PRN 08 L1 SNR (dB/Hz) | GPS PRN 09 L1 SNR (dB/Hz) | GPS PRN 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 19 L1 SNR (dB/Hz) | GPS PRN 21 L1 SNR (dB/Hz) | GPS PRN 24 L1 SNR (dB/Hz) | GPS PRN 27 L1 SNR (dB/Hz) |
| GPS PRN 30 L1 SNR (dB/Hz) | | | |

GLONASS L1 SNR

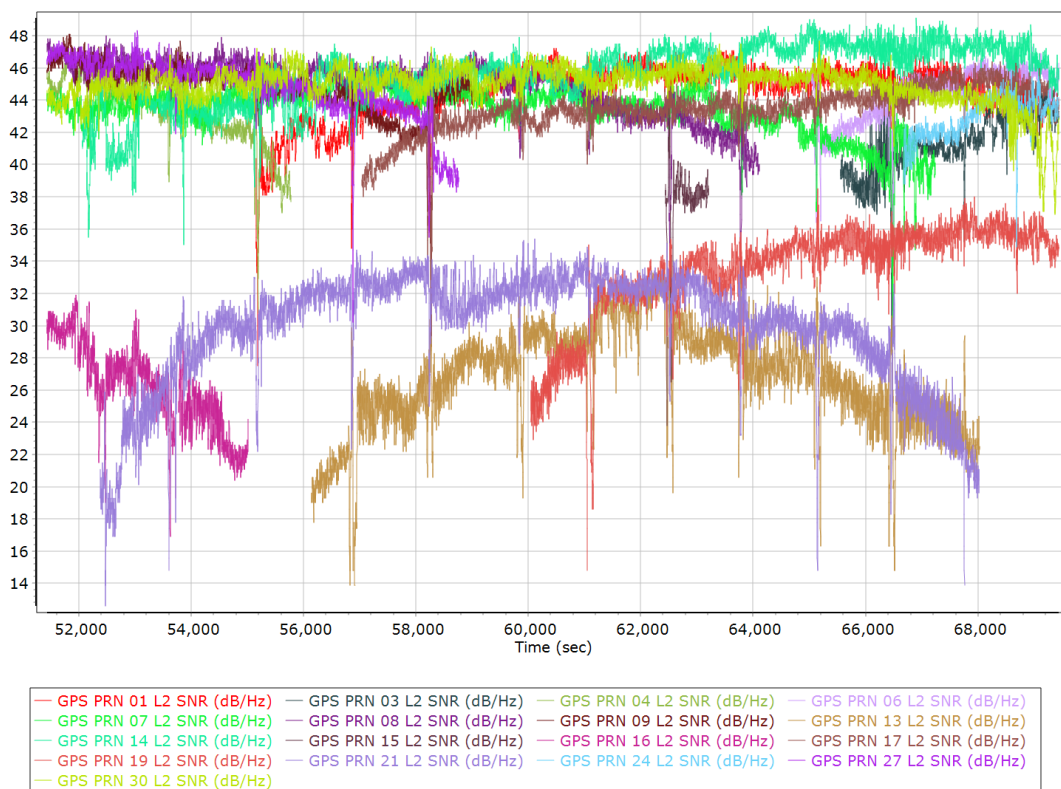


- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 01 L1 SNR (dB/Hz) | GLONASS 02 L1 SNR (dB/Hz) | GLONASS 06 L1 SNR (dB/Hz) |
| GLONASS 07 L1 SNR (dB/Hz) | GLONASS 08 L1 SNR (dB/Hz) | GLONASS 09 L1 SNR (dB/Hz) |
| GLONASS 10 L1 SNR (dB/Hz) | GLONASS 12 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) | |

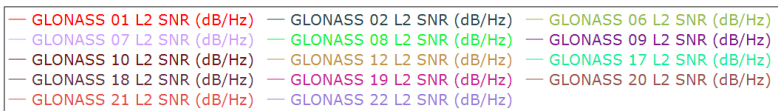
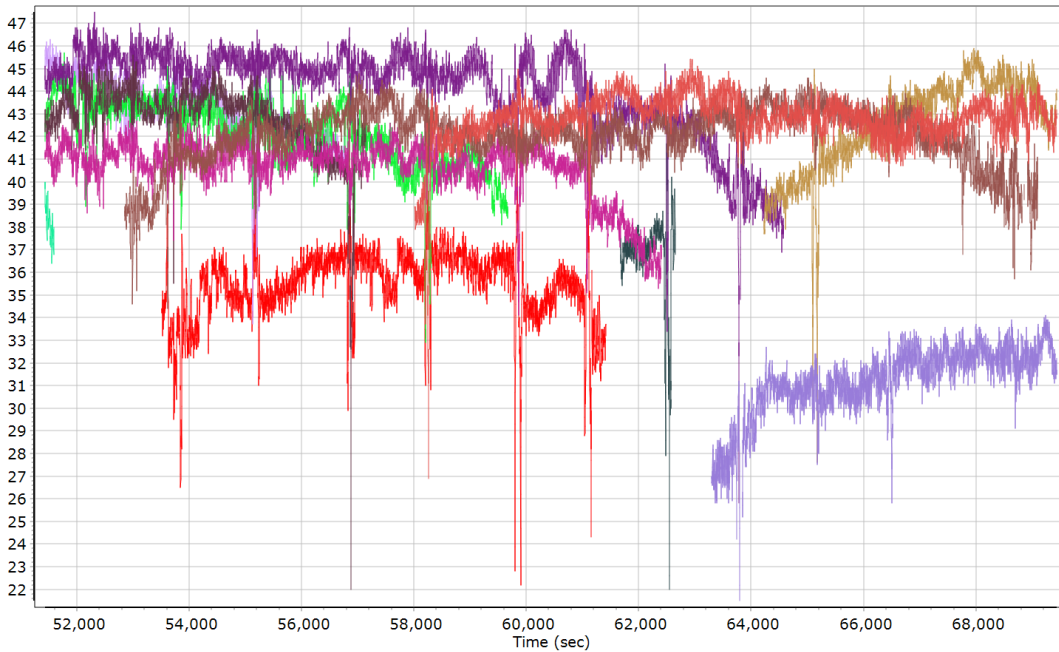
GPS/GLONASS L2 Satellite Lock/Elevation



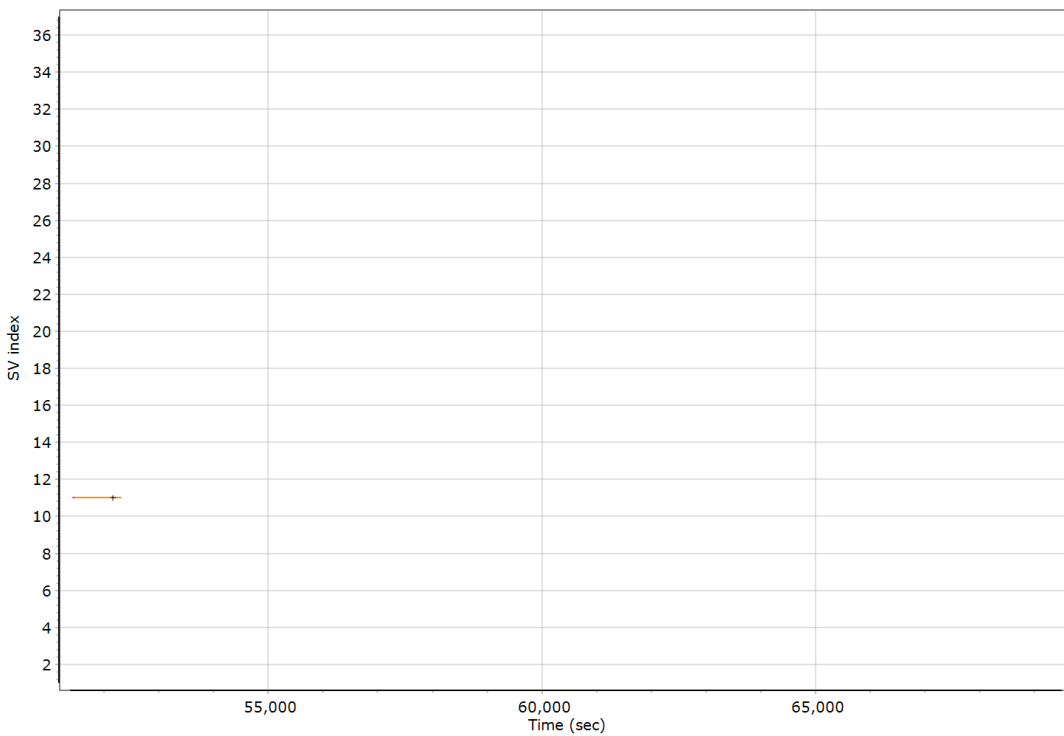
GPS L2 SNR



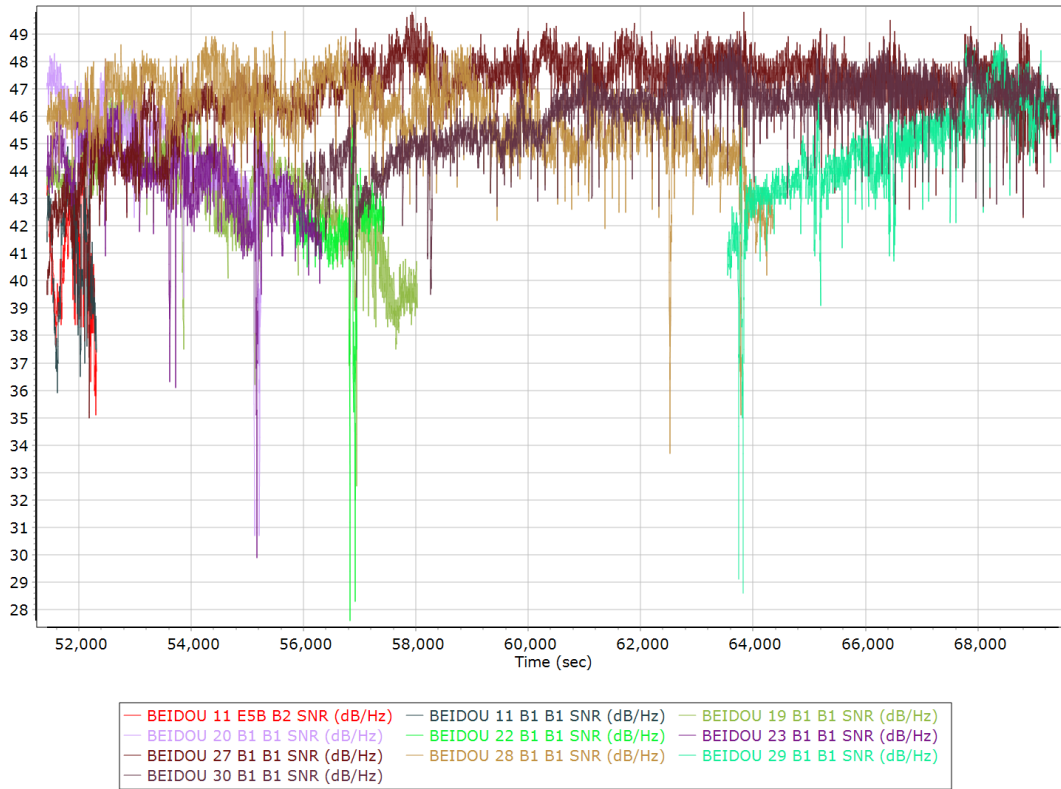
GLONASS L2 SNR



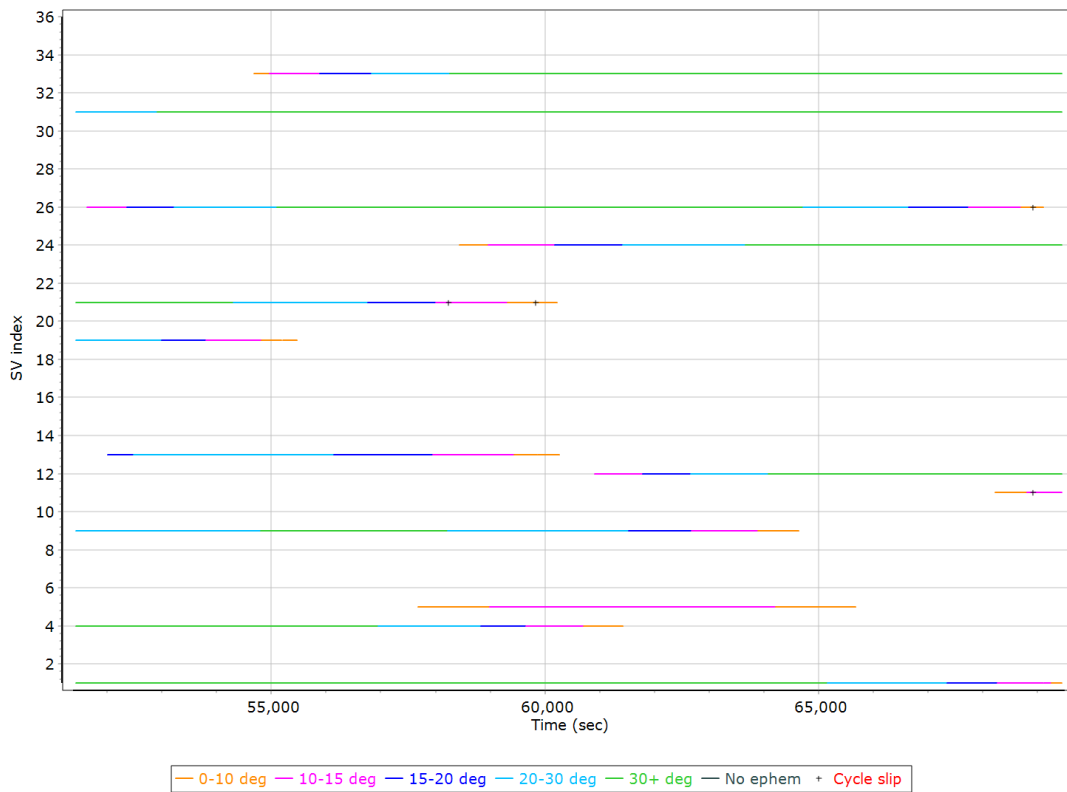
BEIDOU Satellite Lock/Elevation



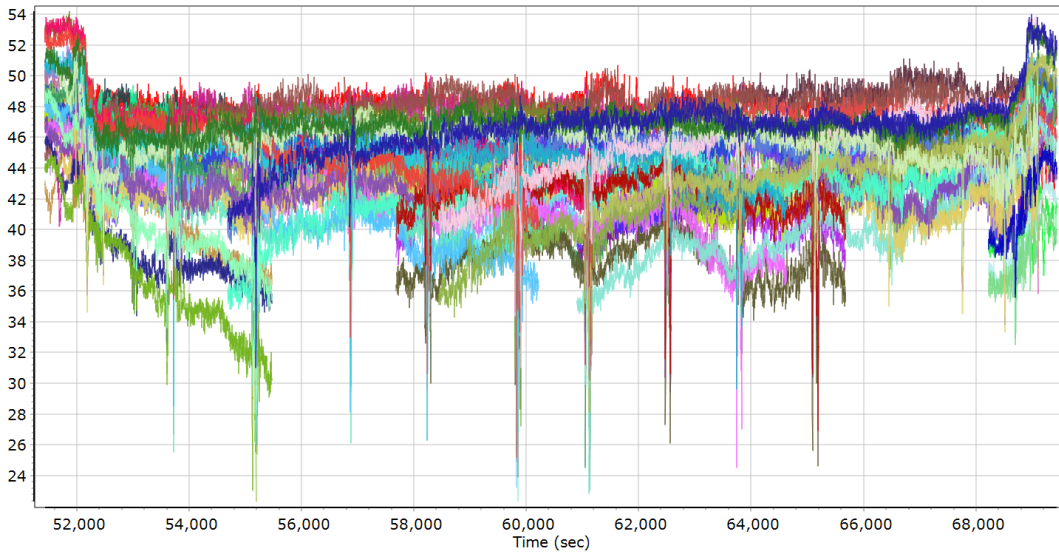
BEIDOU SNR



GALILEO Satellite Lock/Elevation



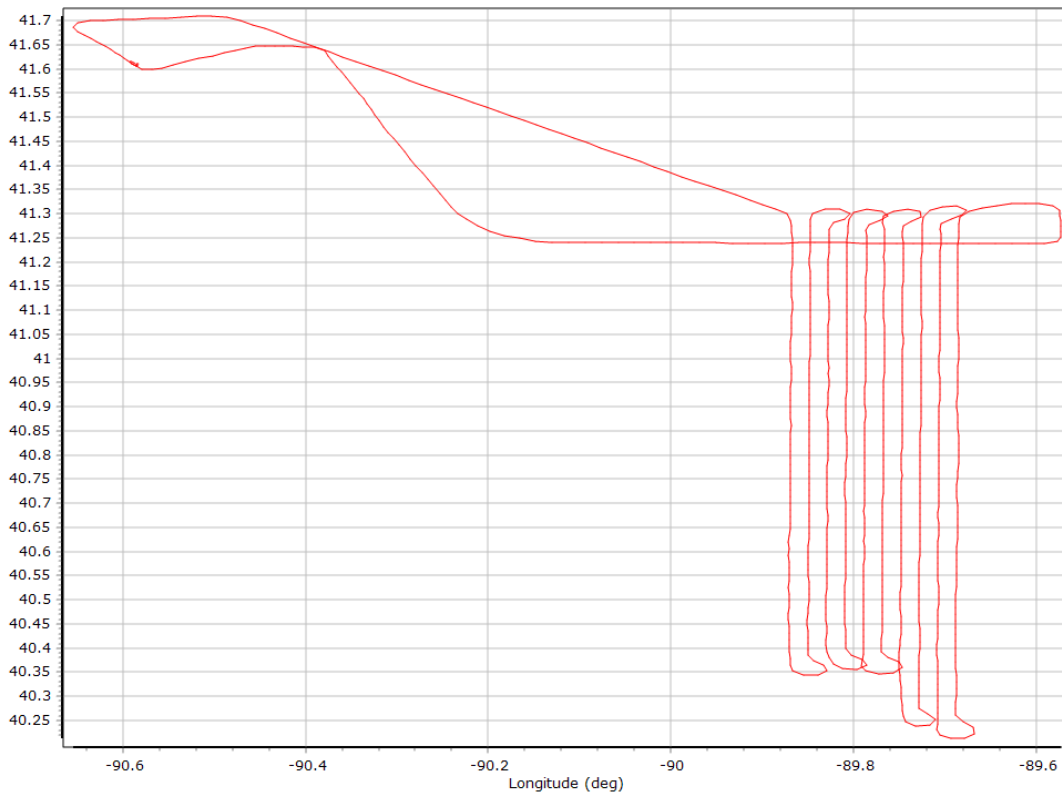
GALILEO SNR



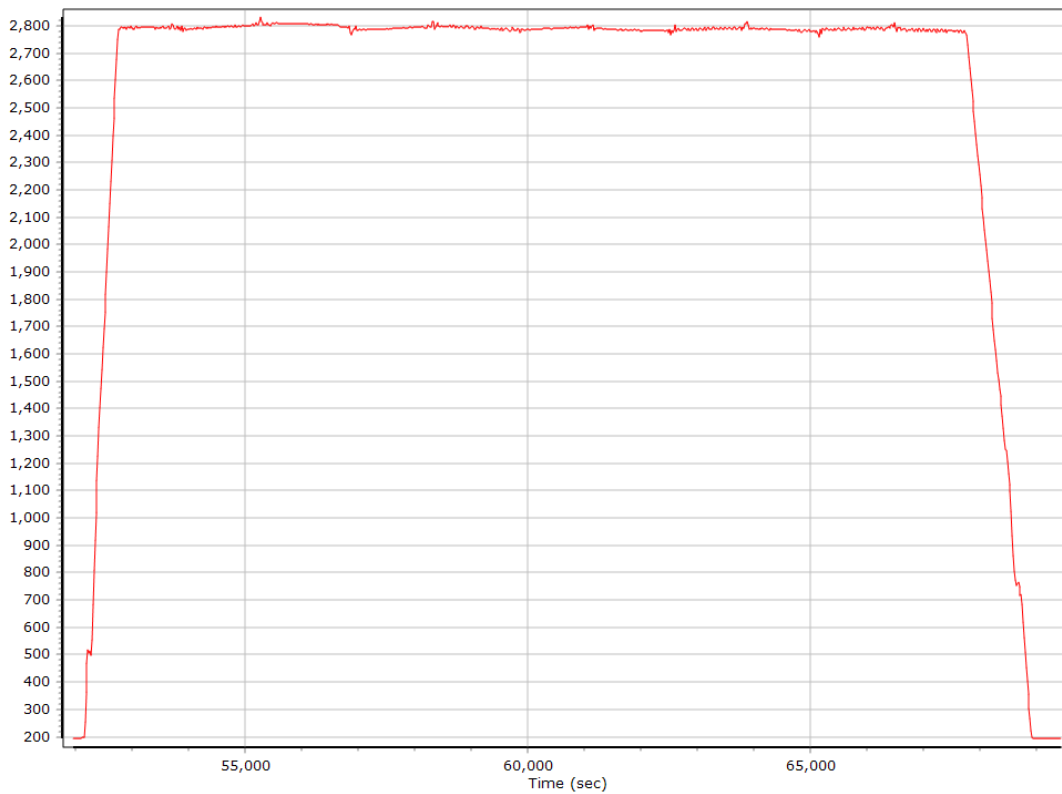
— GALILEO 01 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 04 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 05 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 09 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 11 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 12 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 13 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 19 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 21 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 24 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 26 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 01 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 12 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 13 L5E5A BPSK10_PD SNR (dB/Hz)

Smoothed Trajectory Information

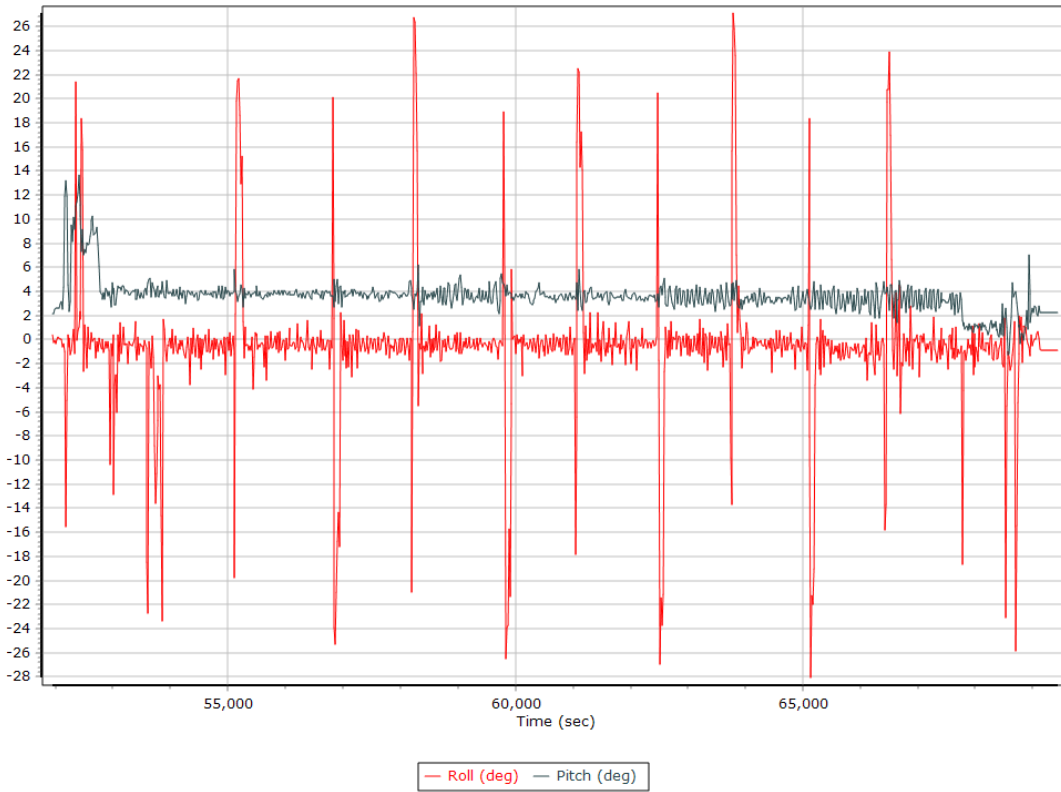
Top View



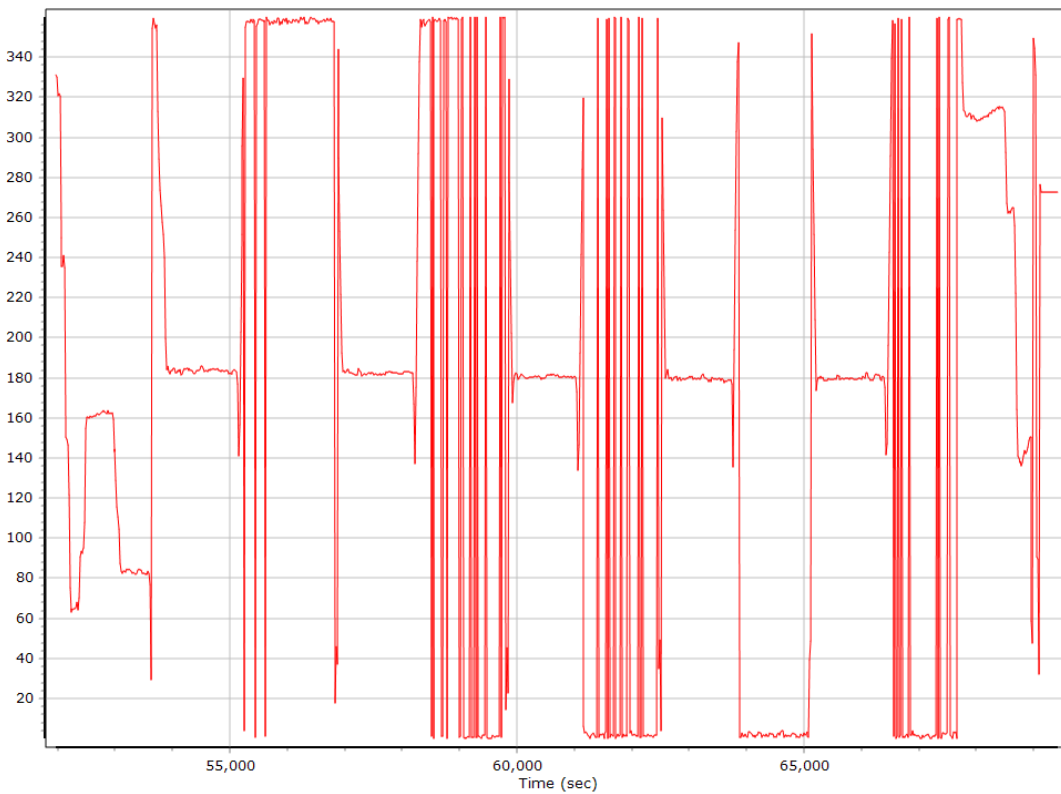
Altitude



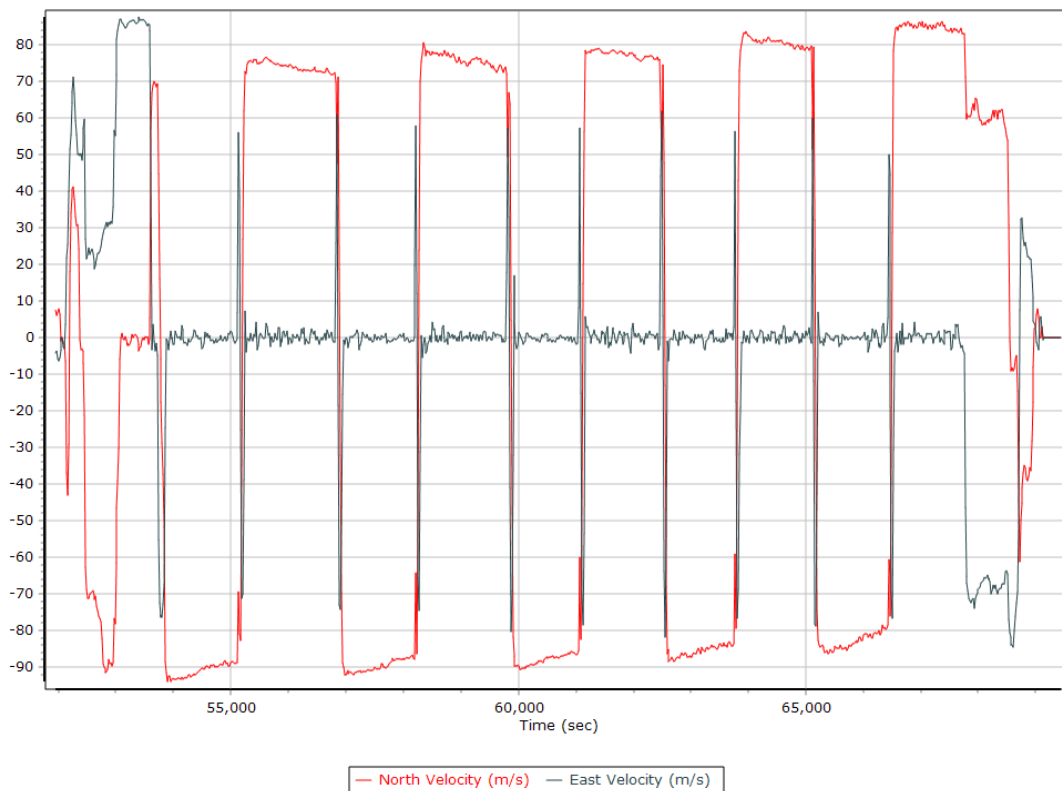
Roll/Pitch



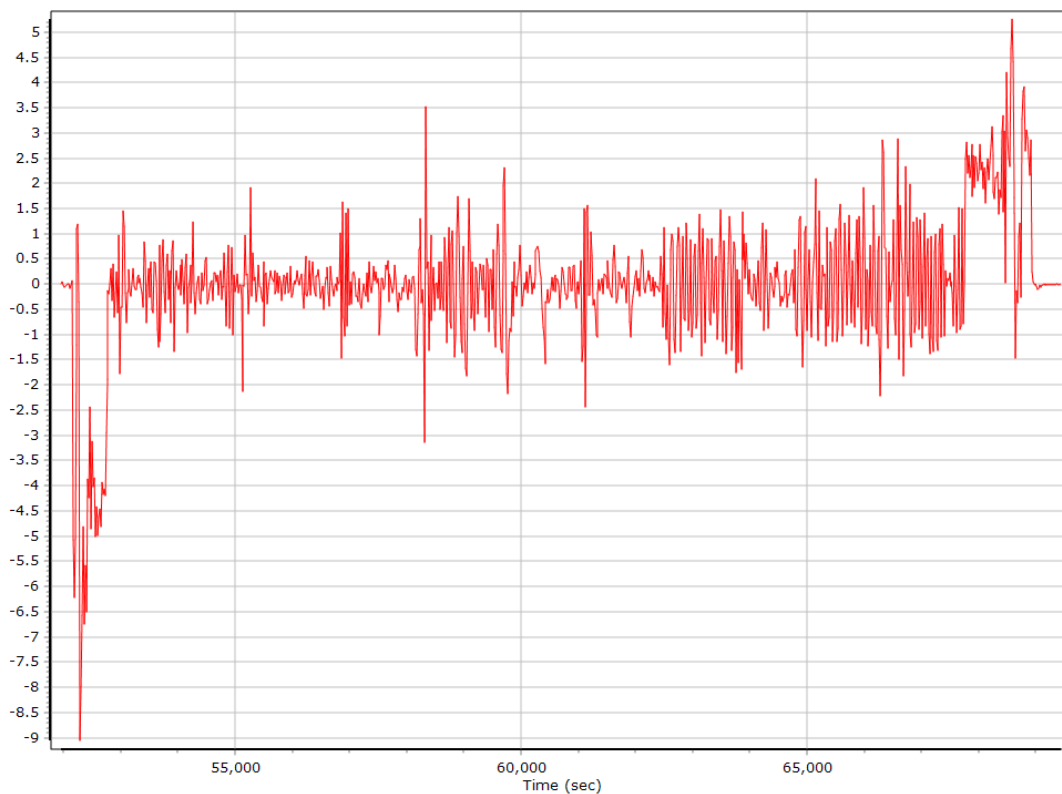
Heading



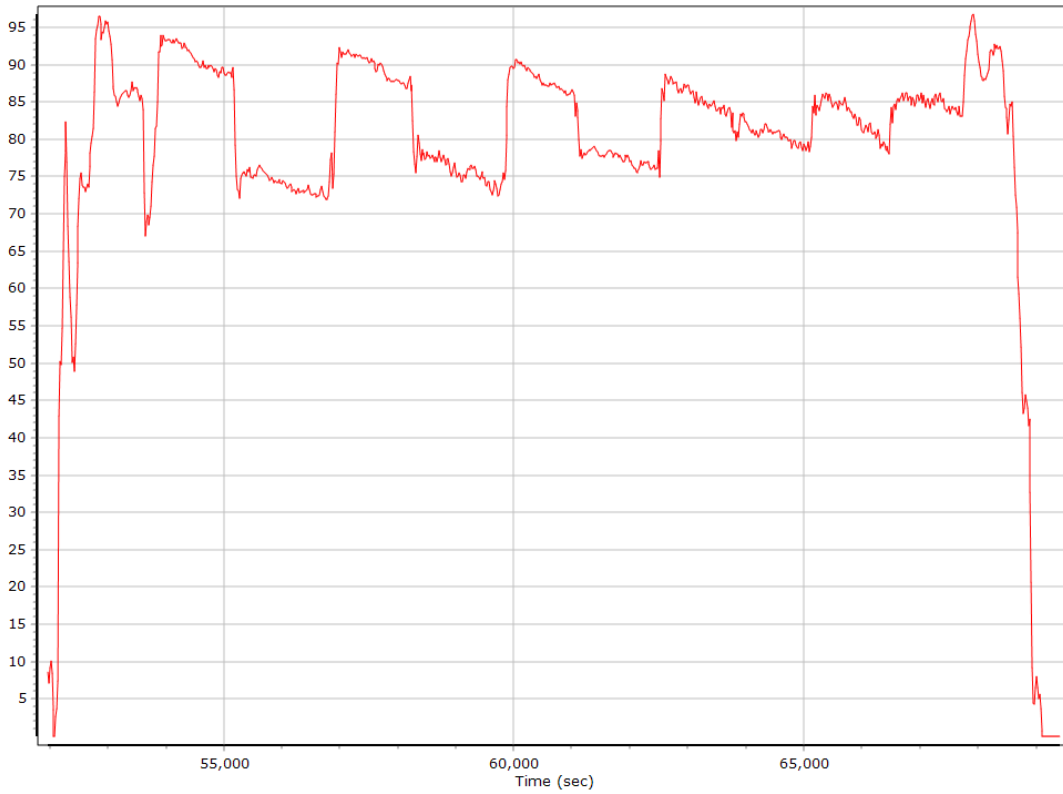
North/East Velocity



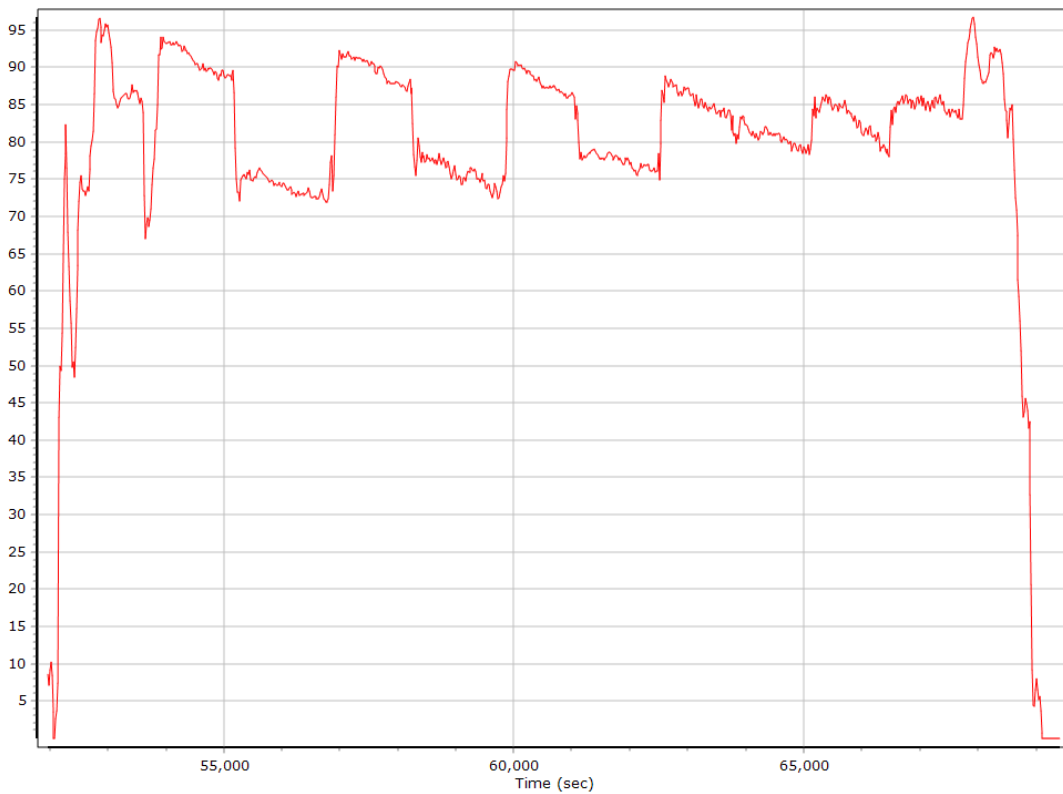
Down Velocity



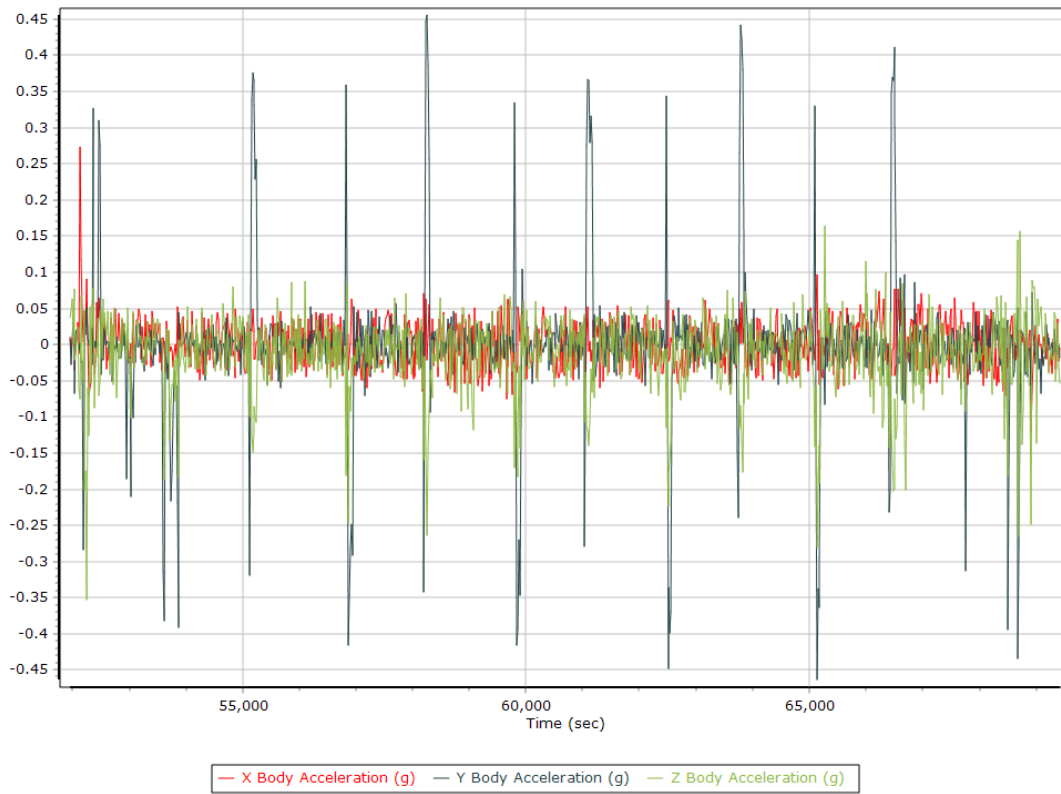
Total Speed



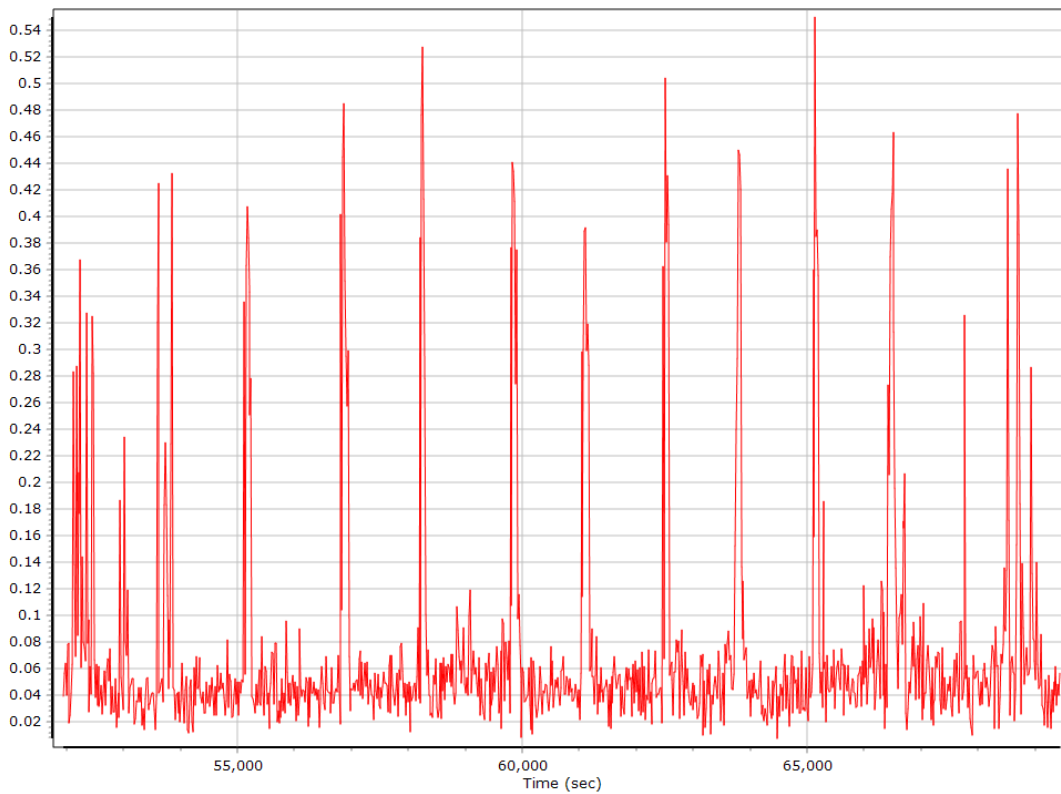
Ground Speed



Body Acceleration



Total Body Acceleration

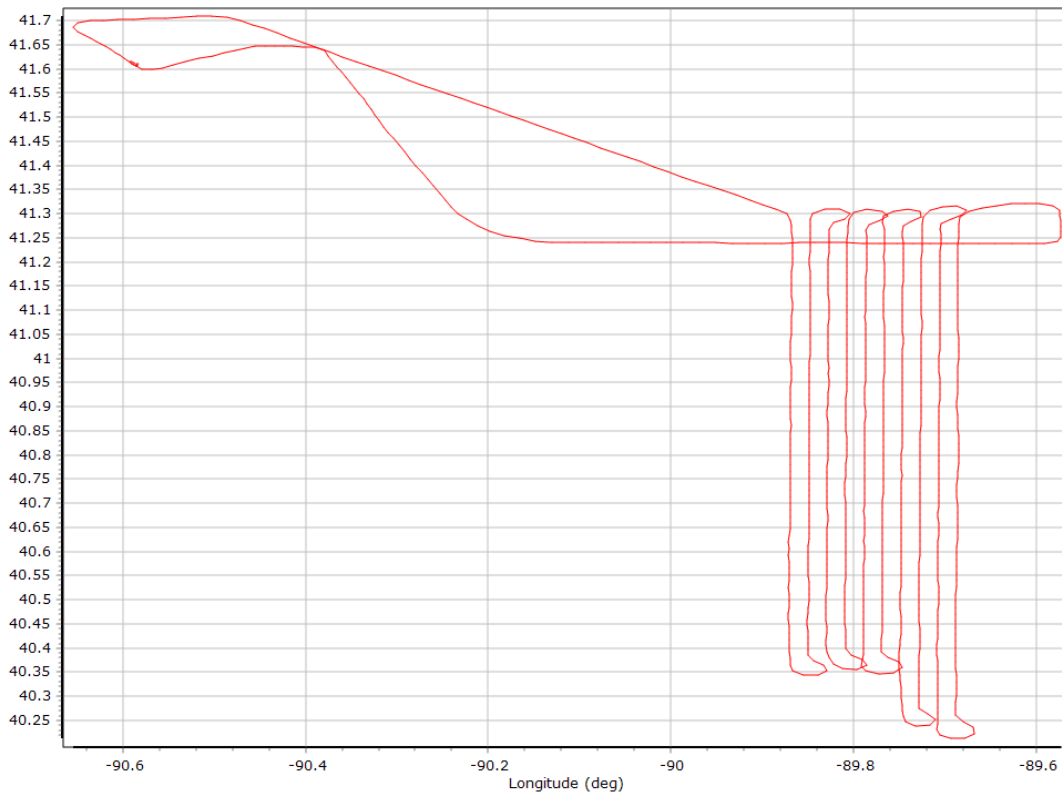


Body Angular Rate

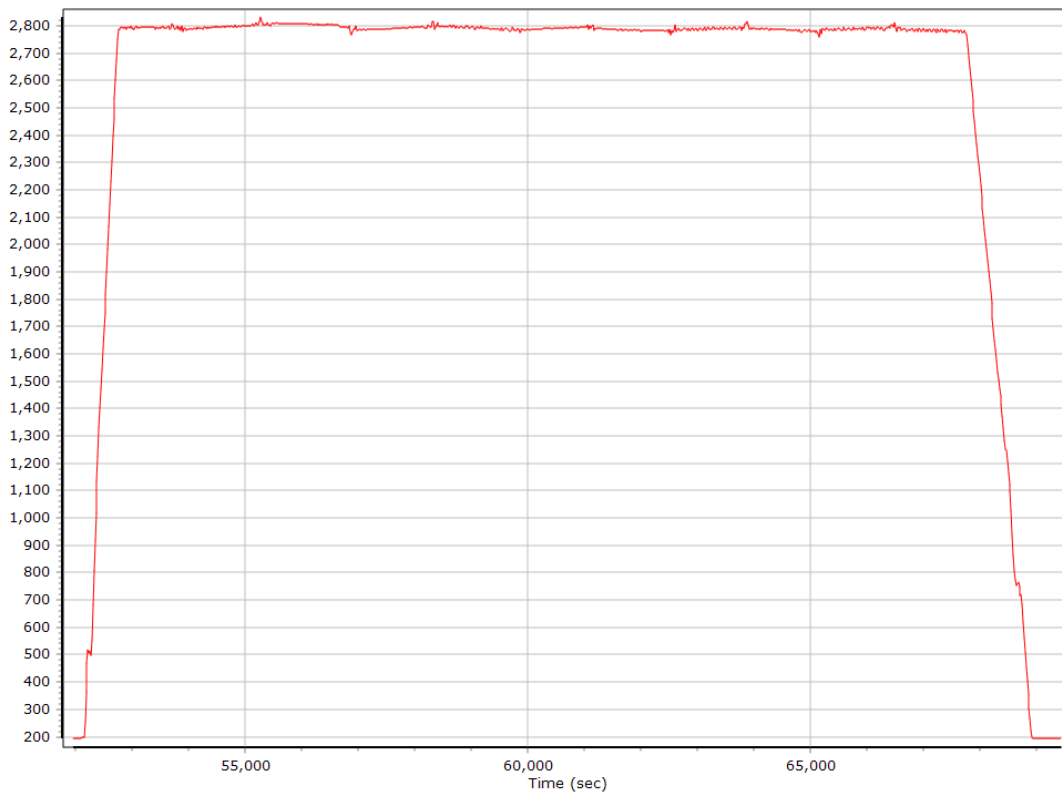


Forward Processed Trajectory Information

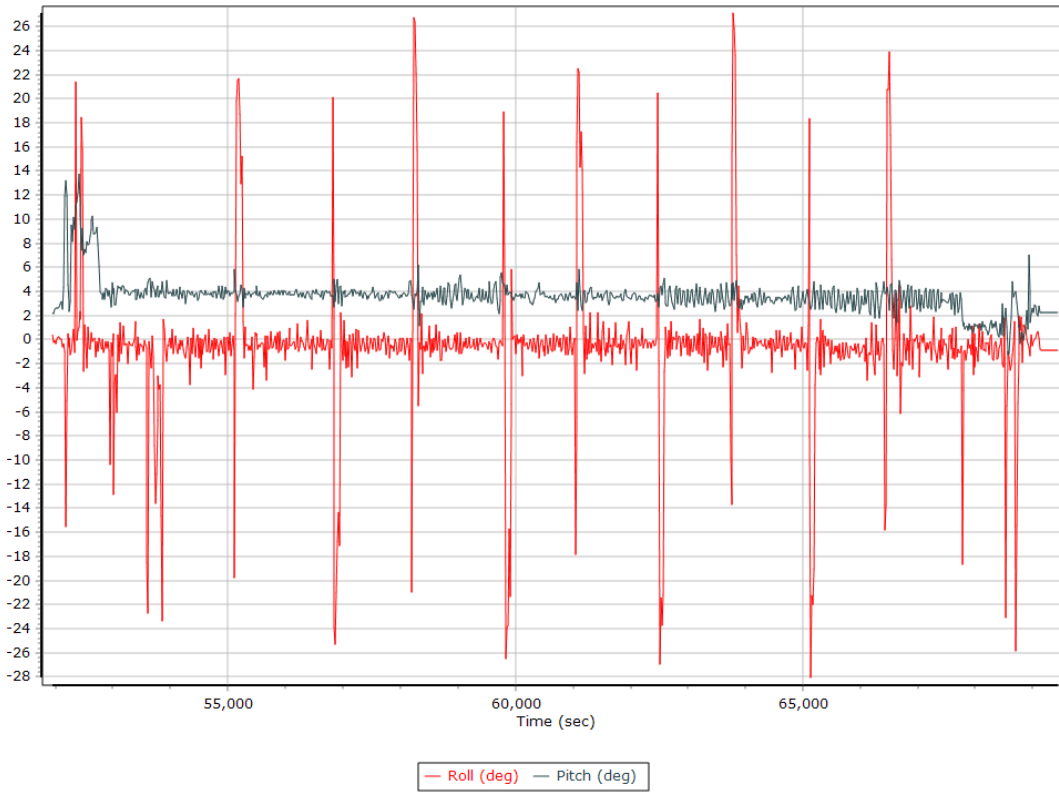
Top View



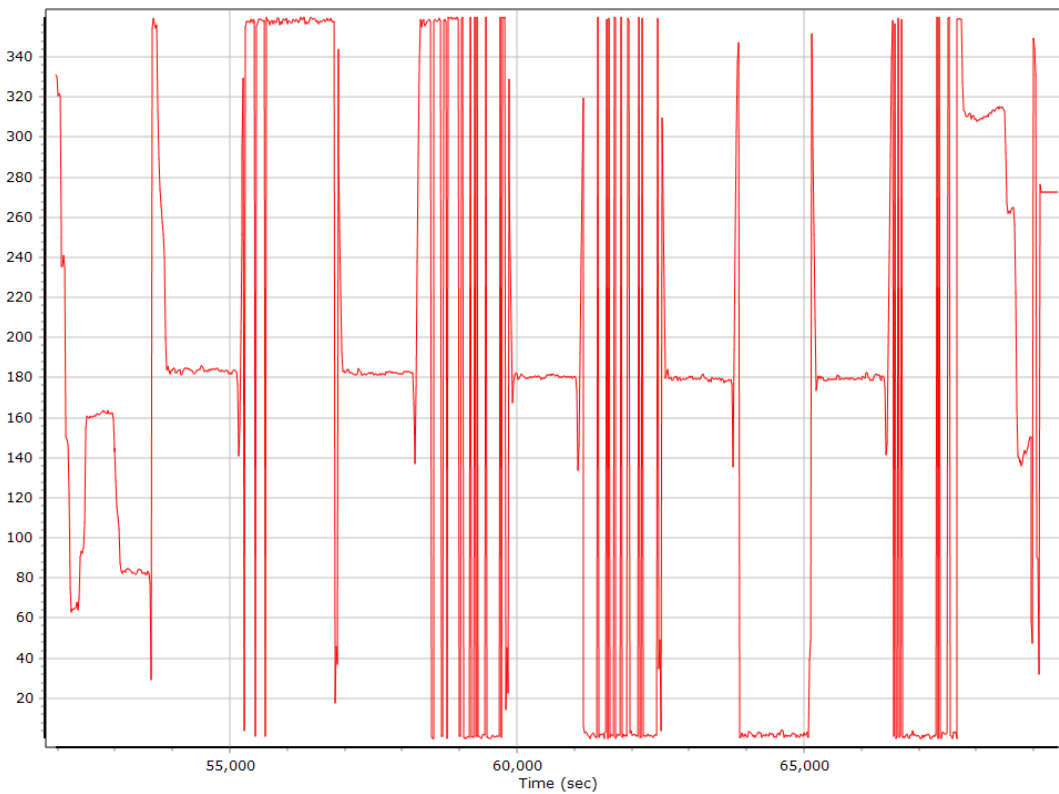
Altitude



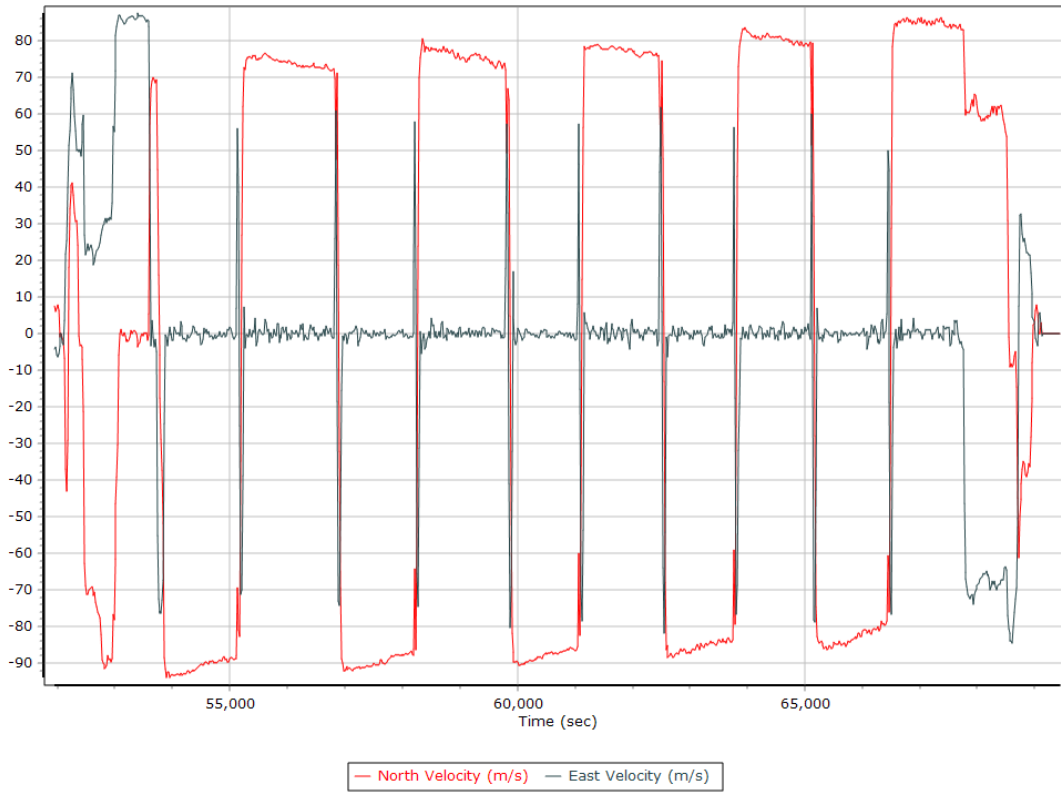
Roll/Pitch



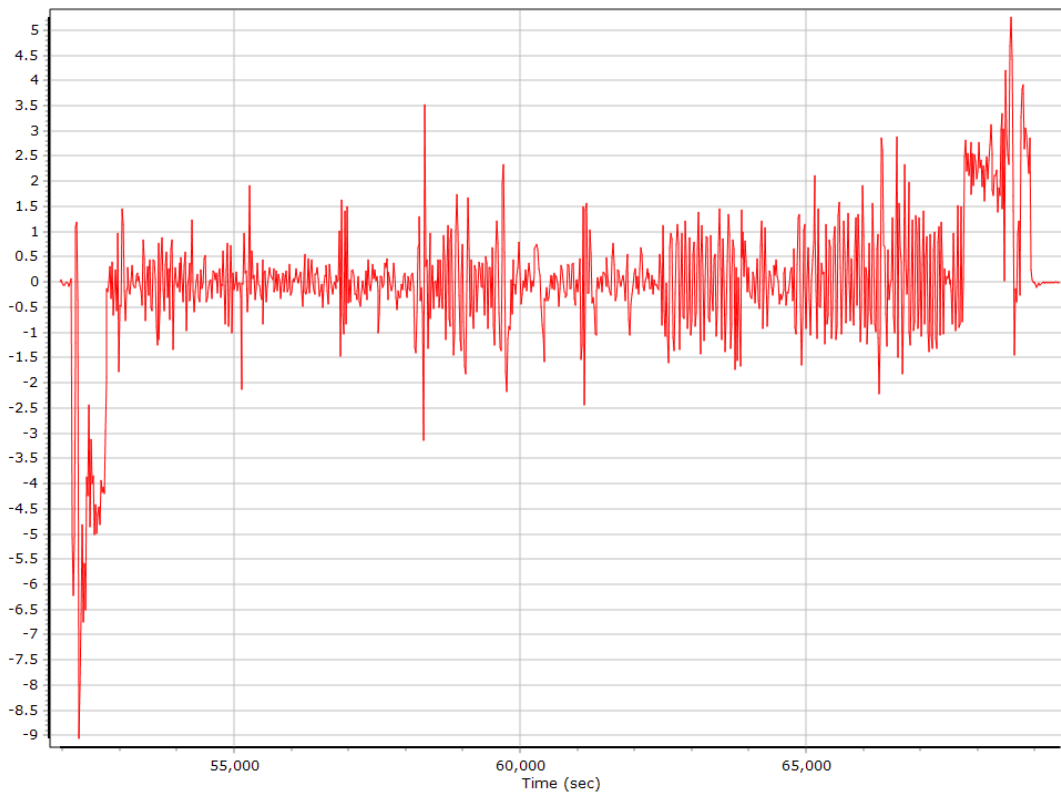
Heading



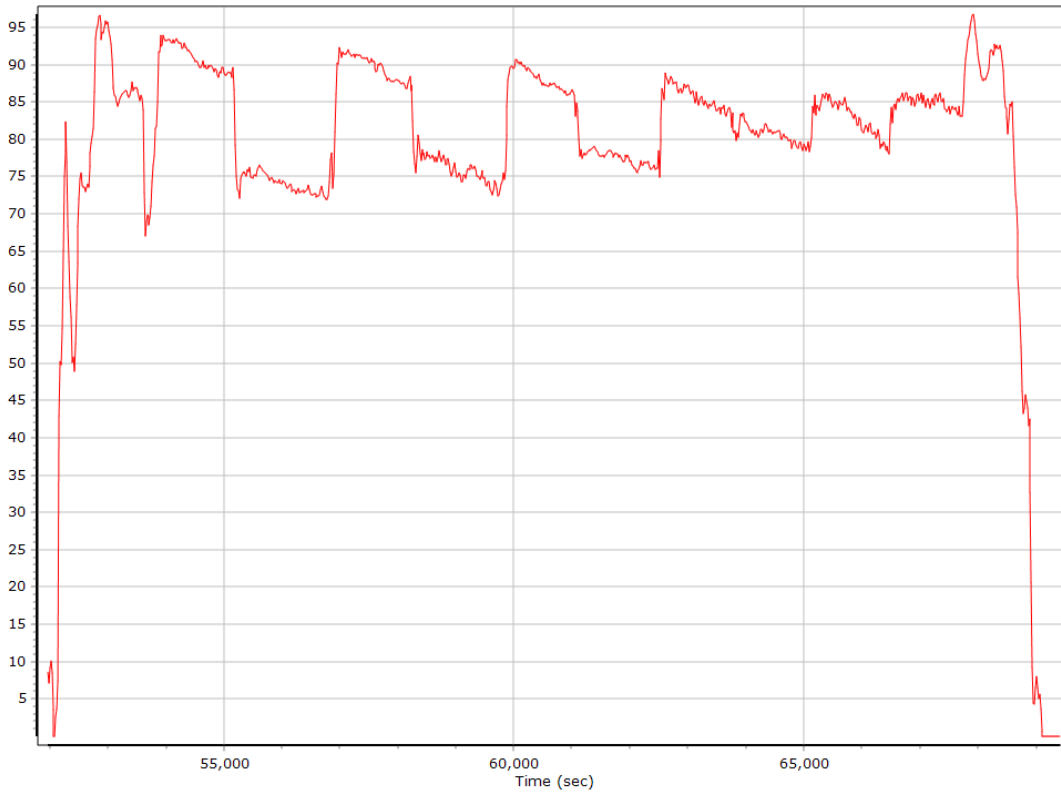
North/East Velocity



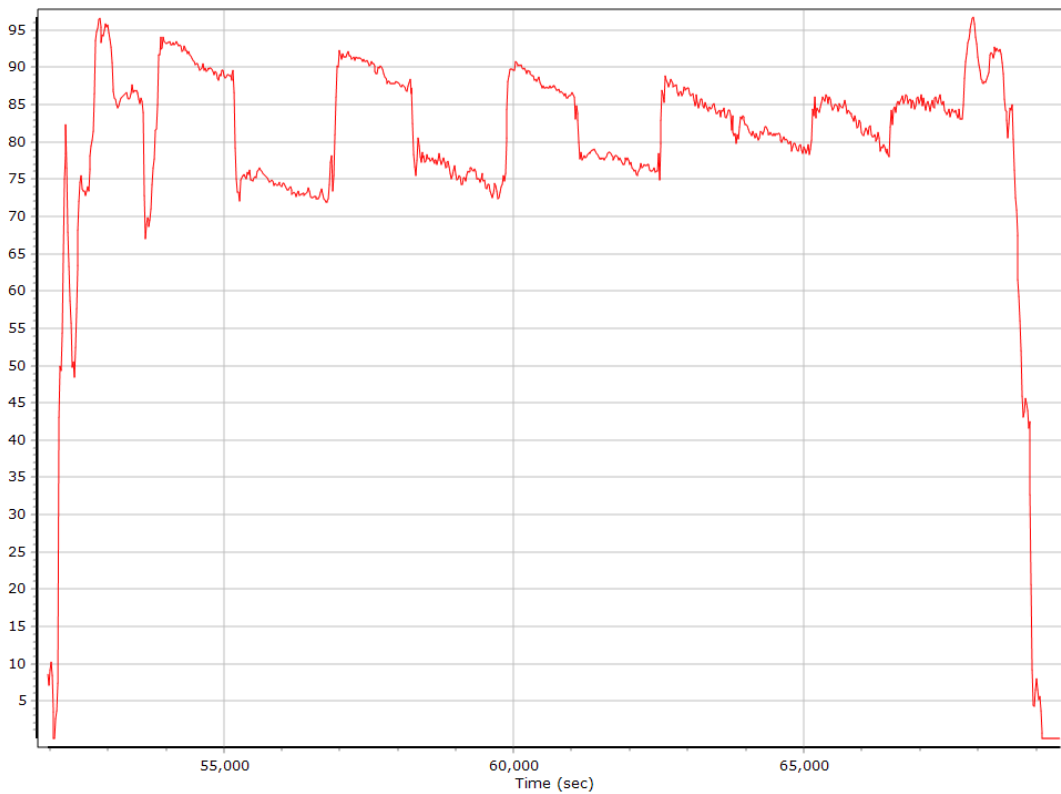
Down Velocity



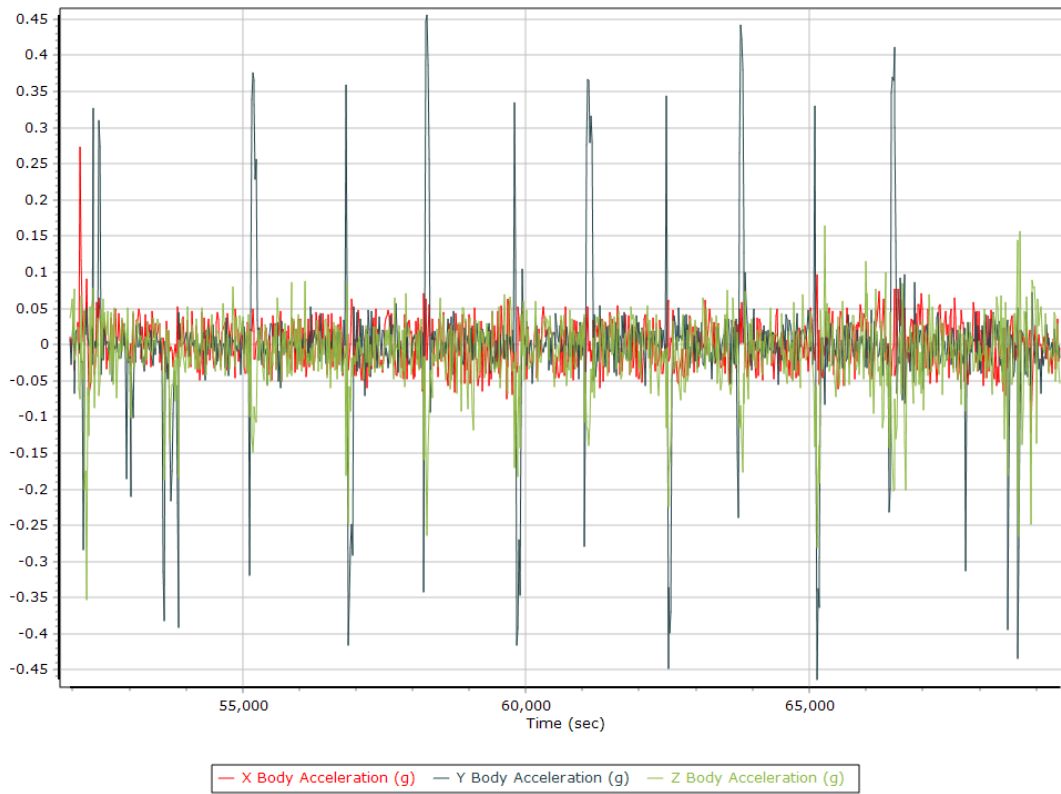
Total Speed



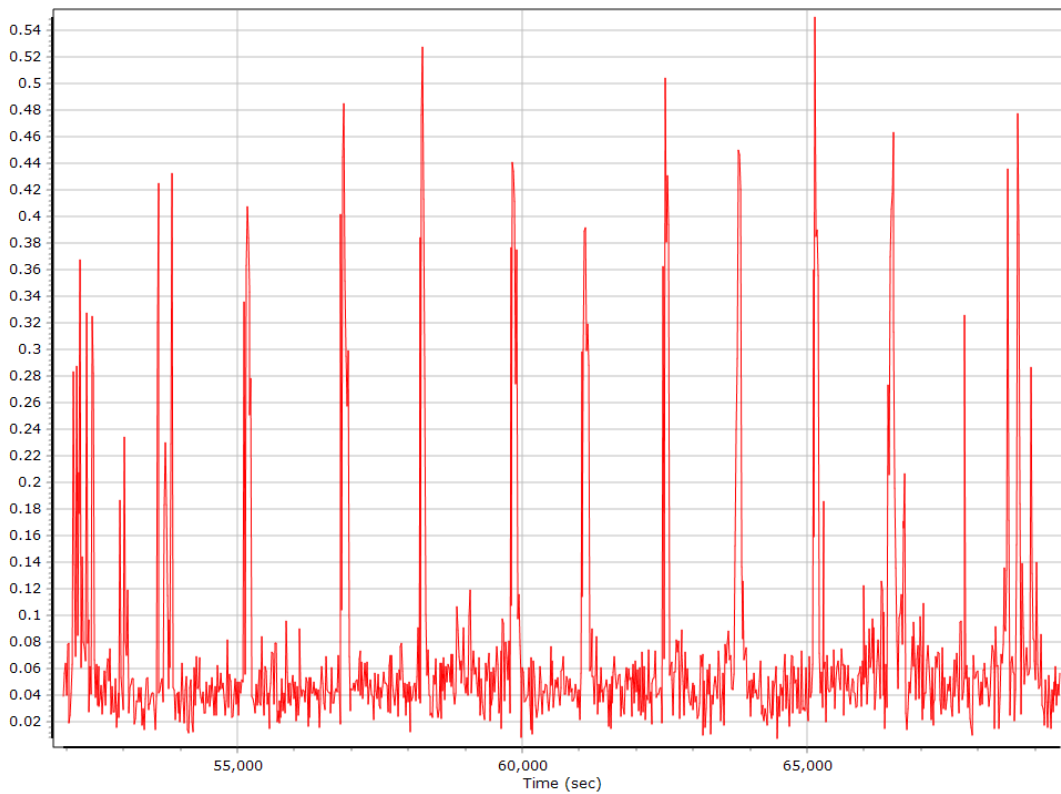
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate

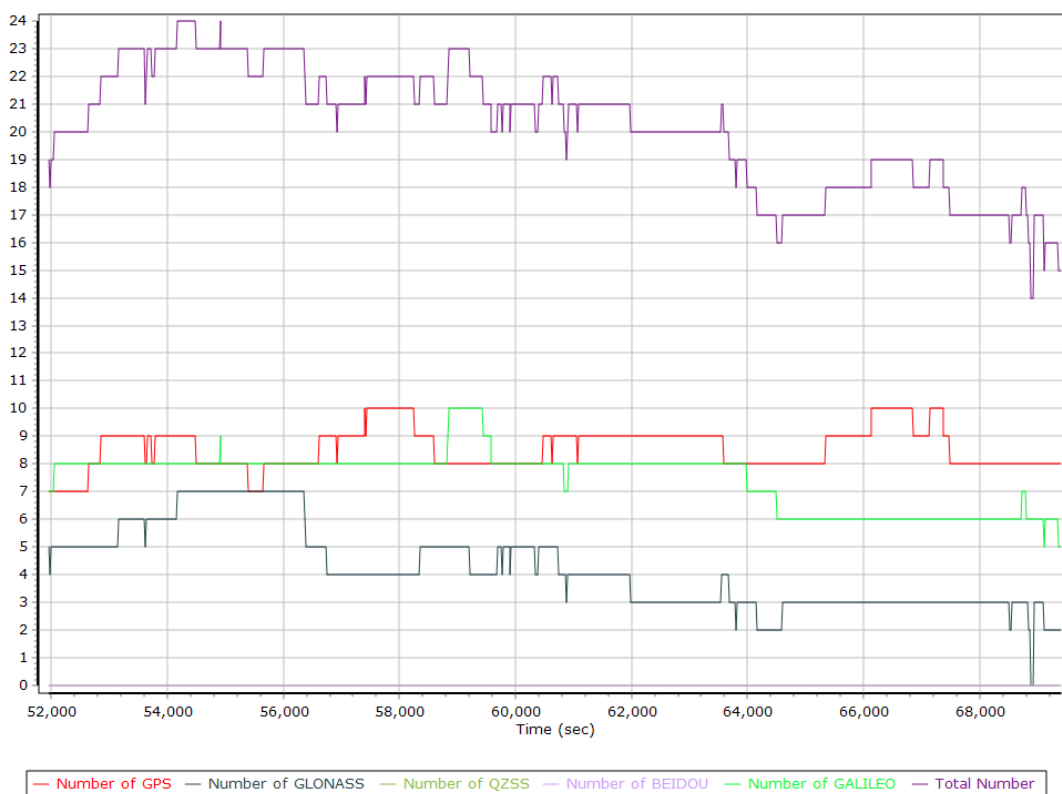


GNSS QC

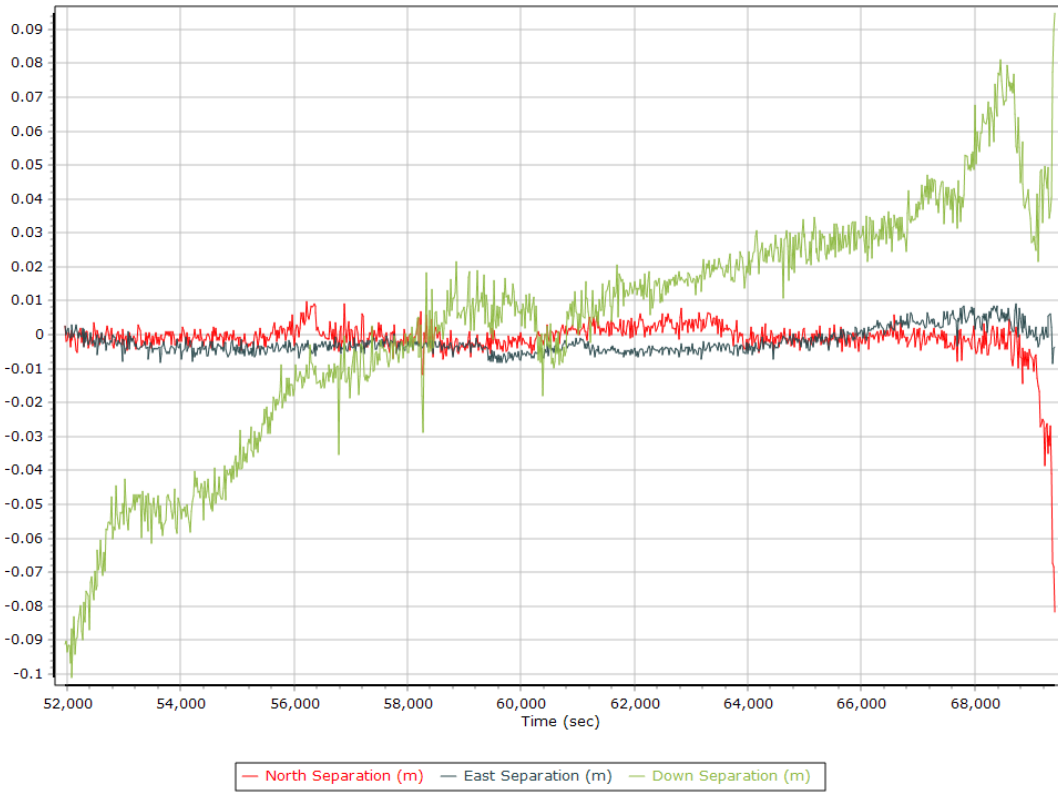
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	7	10	9
Number of GLONASS SV	0	7	4
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Number of GALILEO SV	5	10	7
Total number of SV	13	24	20
PDOP	1.05	1.54	1.19
QC Solution Gaps	0.00	0.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	17971.00	0.00	0.00
Percentage	100.00	0.00	0.00

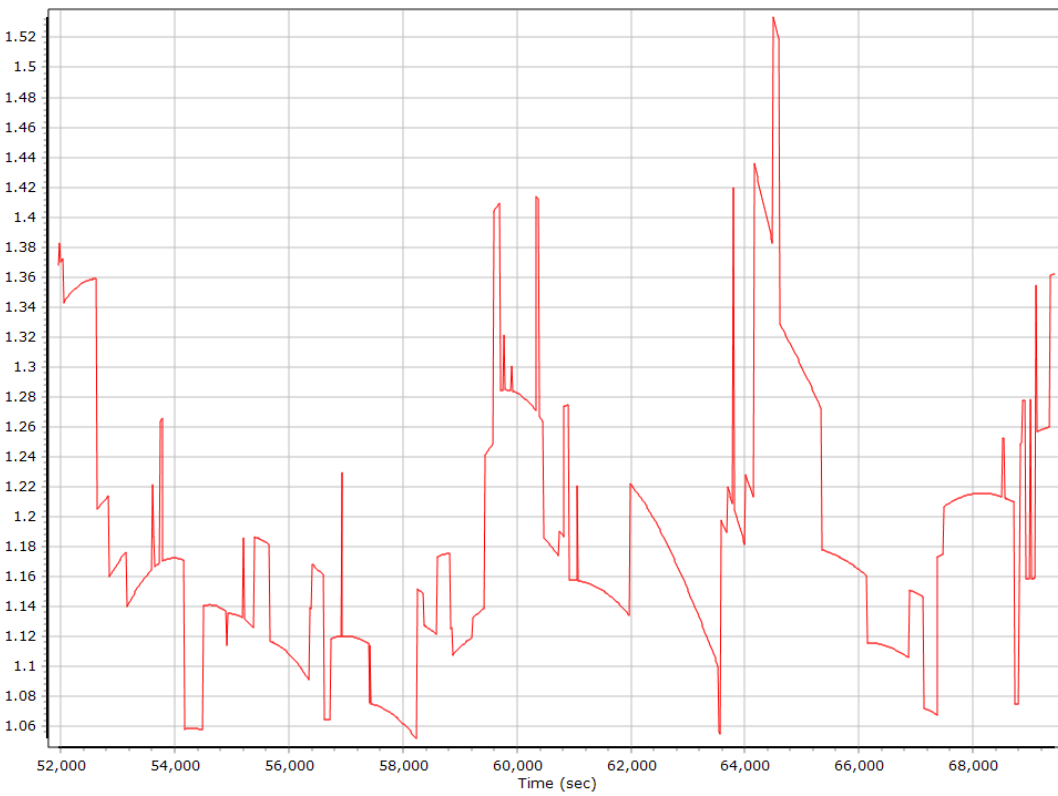
Num SVs in solution



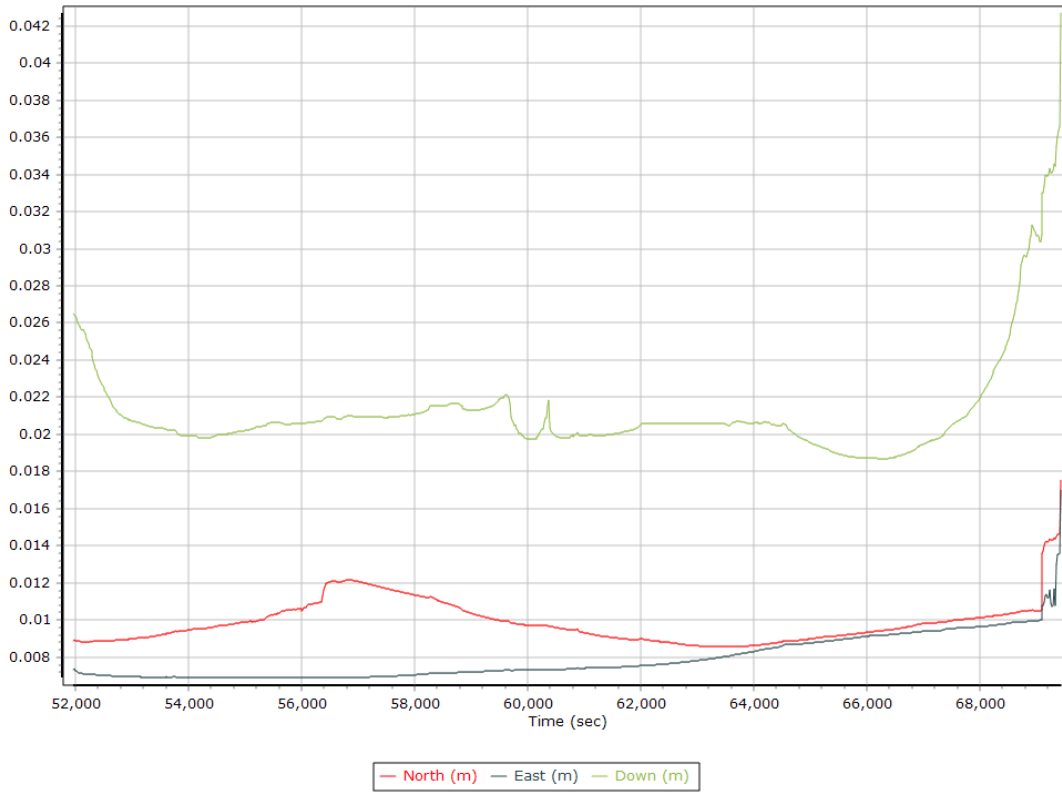
Forward/Reverse Separation



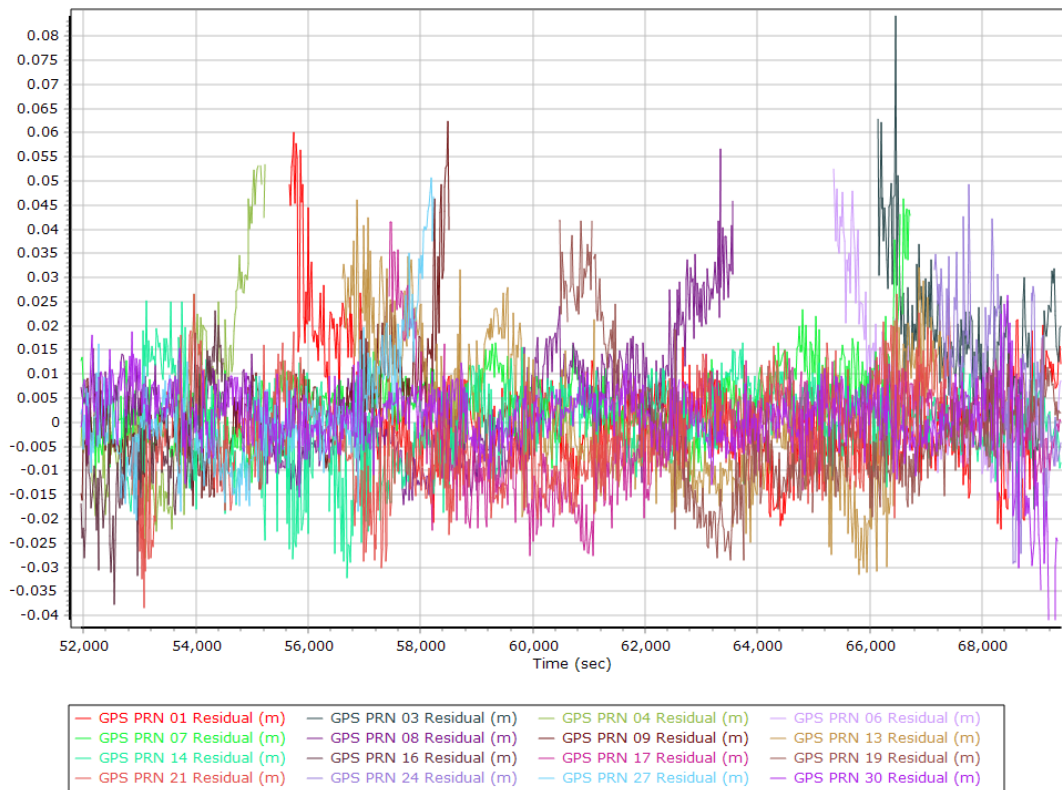
PDOP



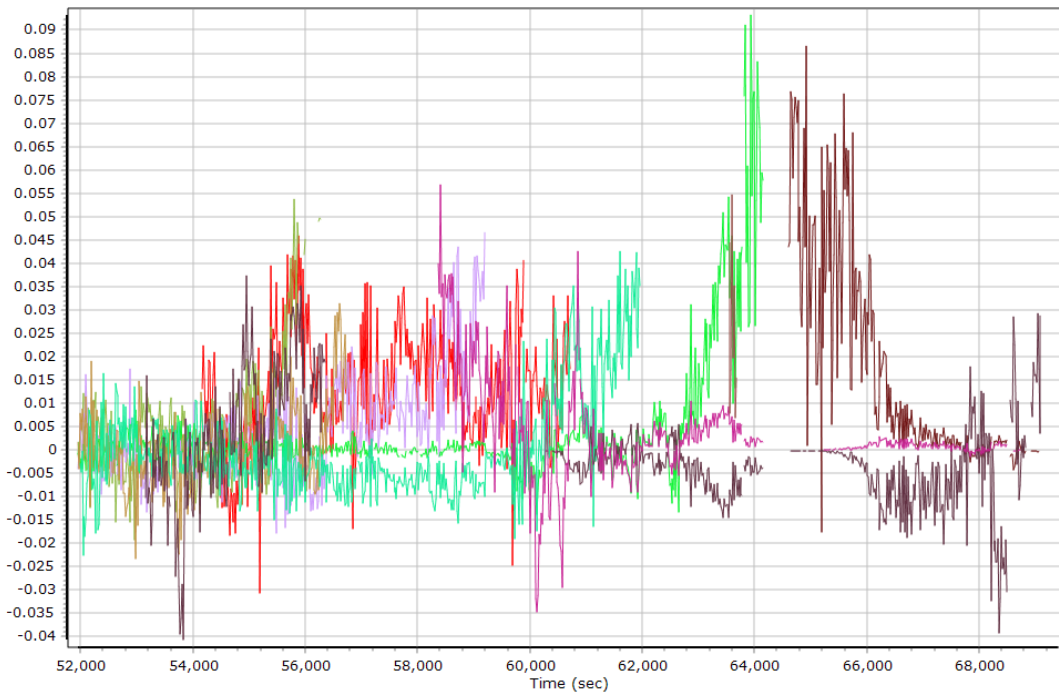
Estimated Position Accuracy



GPS Residuals

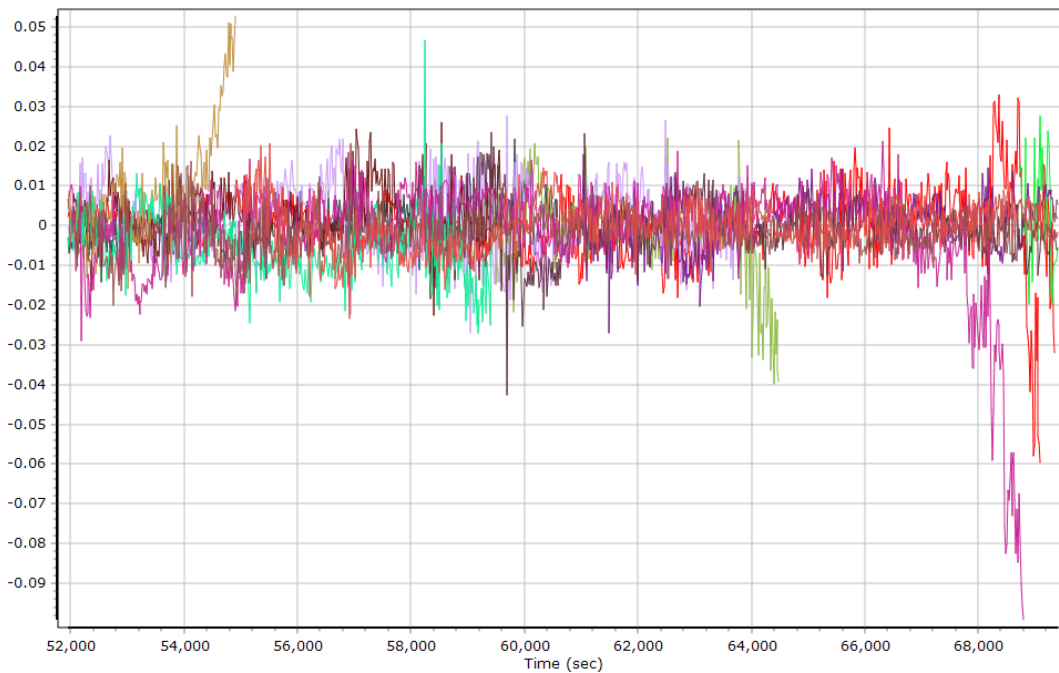


GLONASS Residuals



- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GLONASS 01 Residual (m) | GLONASS 06 Residual (m) | GLONASS 07 Residual (m) | GLONASS 08 Residual (m) |
| GLONASS 09 Residual (m) | GLONASS 10 Residual (m) | GLONASS 12 Residual (m) | GLONASS 18 Residual (m) |
| GLONASS 19 Residual (m) | GLONASS 20 Residual (m) | GLONASS 21 Residual (m) | GLONASS 22 Residual (m) |

GALILEO Residuals



- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GALILEO 01 Residual (m) | GALILEO 04 Residual (m) | GALILEO 05 Residual (m) | GALILEO 09 Residual (m) |
| GALILEO 11 Residual (m) | GALILEO 12 Residual (m) | GALILEO 13 Residual (m) | GALILEO 19 Residual (m) |
| GALILEO 21 Residual (m) | GALILEO 24 Residual (m) | GALILEO 26 Residual (m) | GALILEO 31 Residual (m) |
| GALILEO 33 Residual (m) | | | |

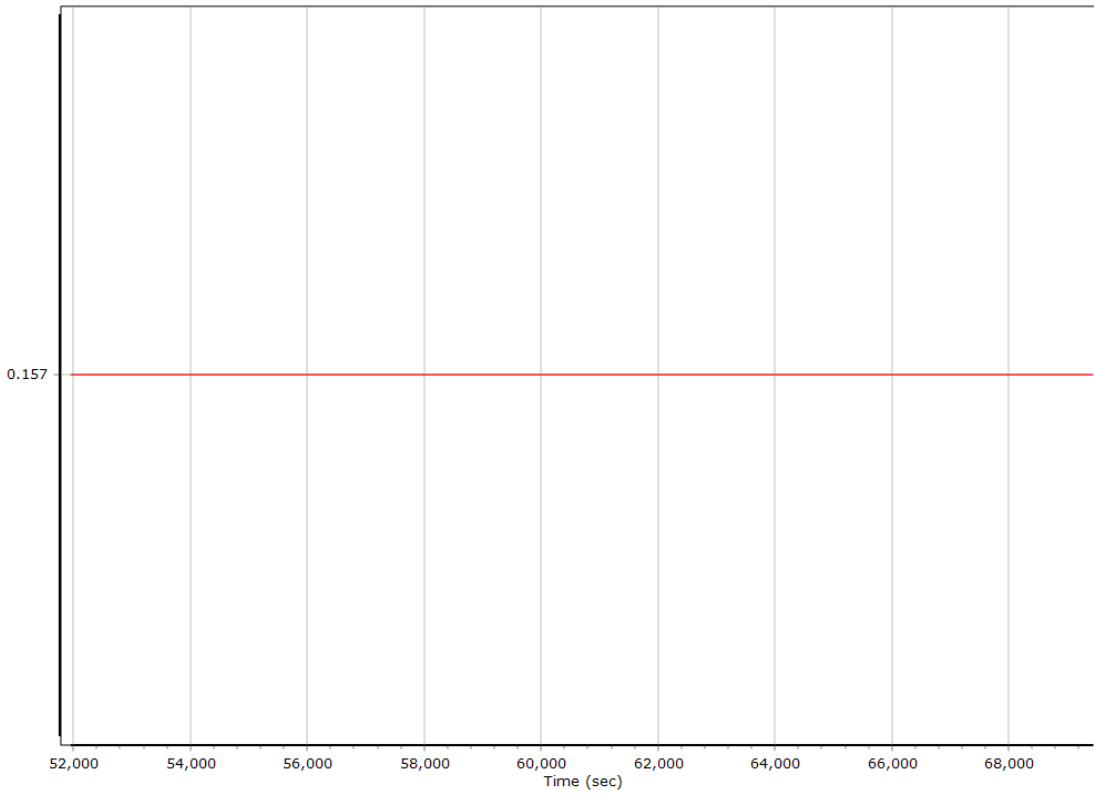
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	51440.000 (04/17/2022 14:17:20)		
Processing end time	69437.000 (04/17/2022 19:17:17)		
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

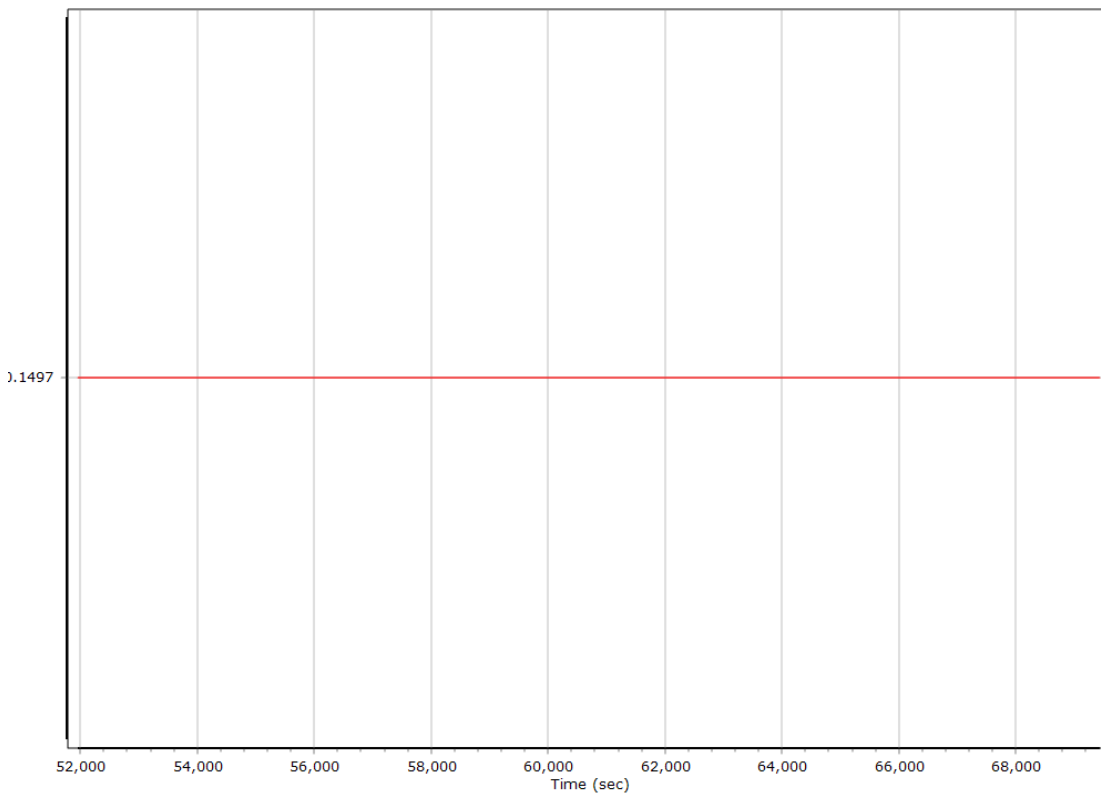
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

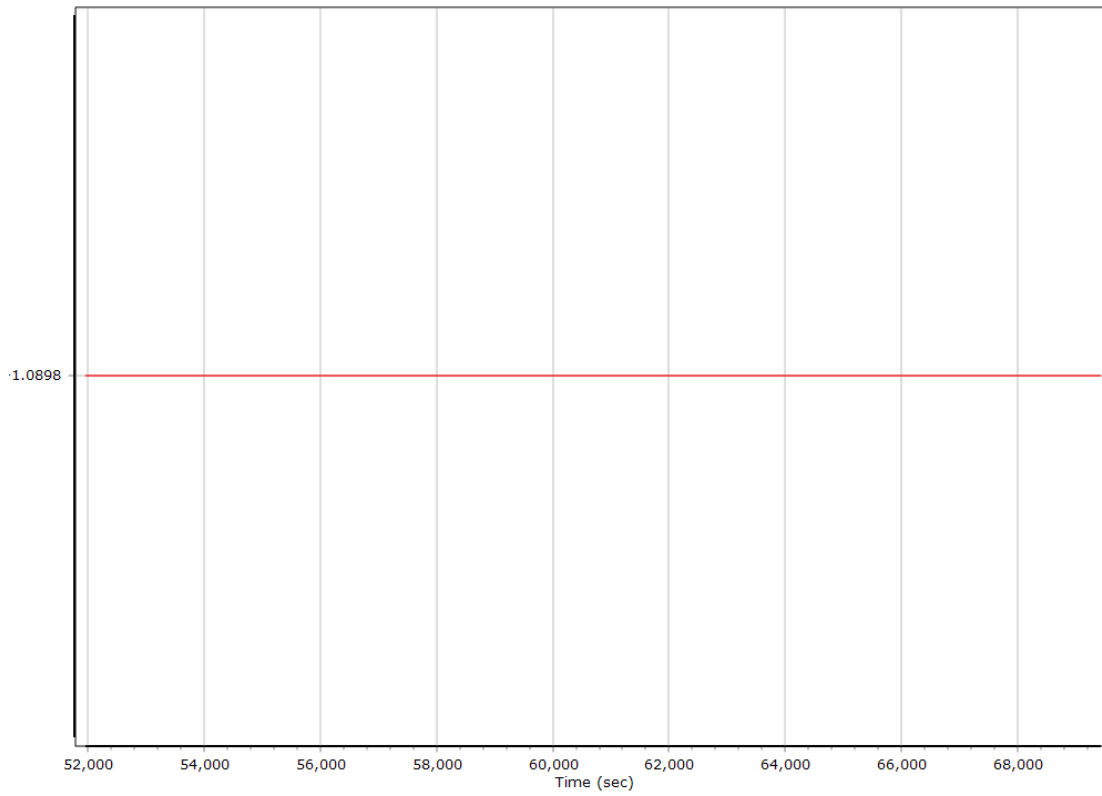
X Reference-Primary GNSS Lever Arm (m)



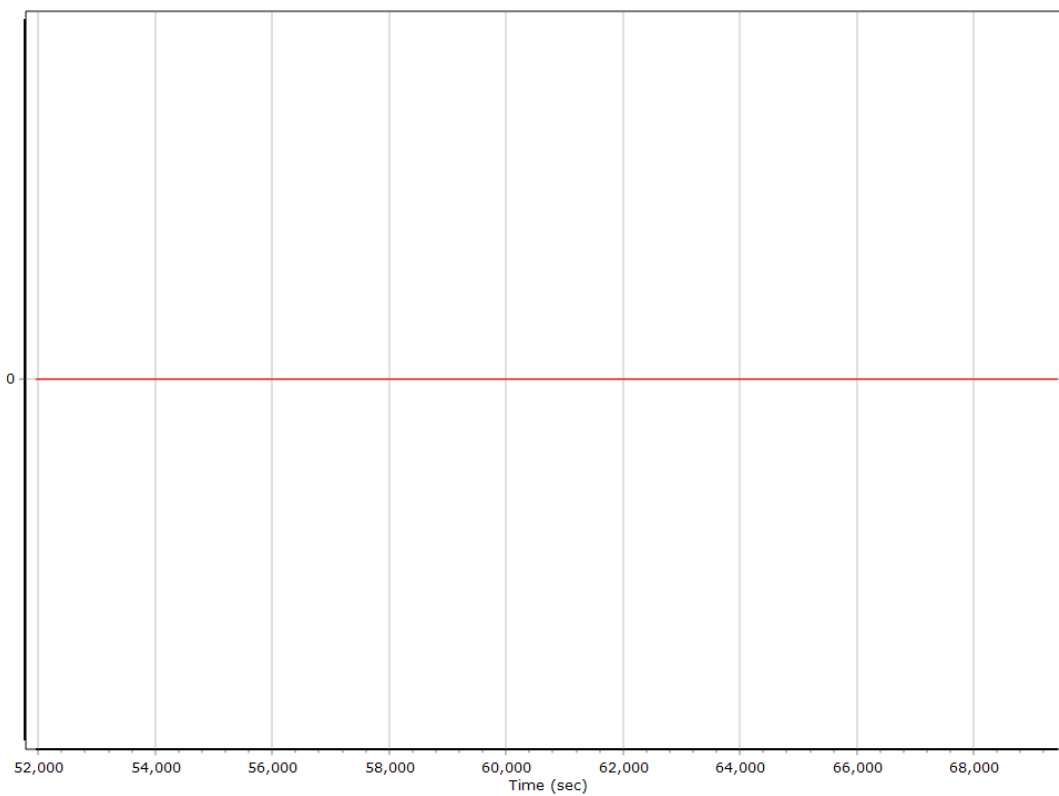
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



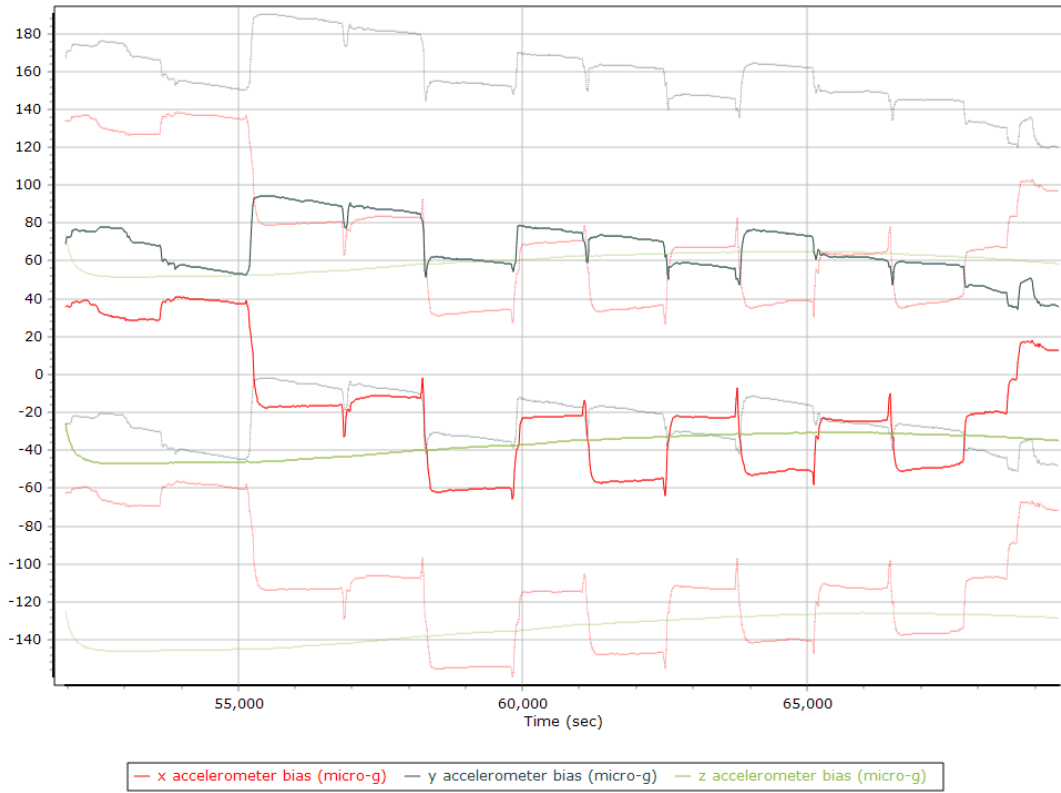
Reference-Primary GNSS Lever Arm Figure of Merit



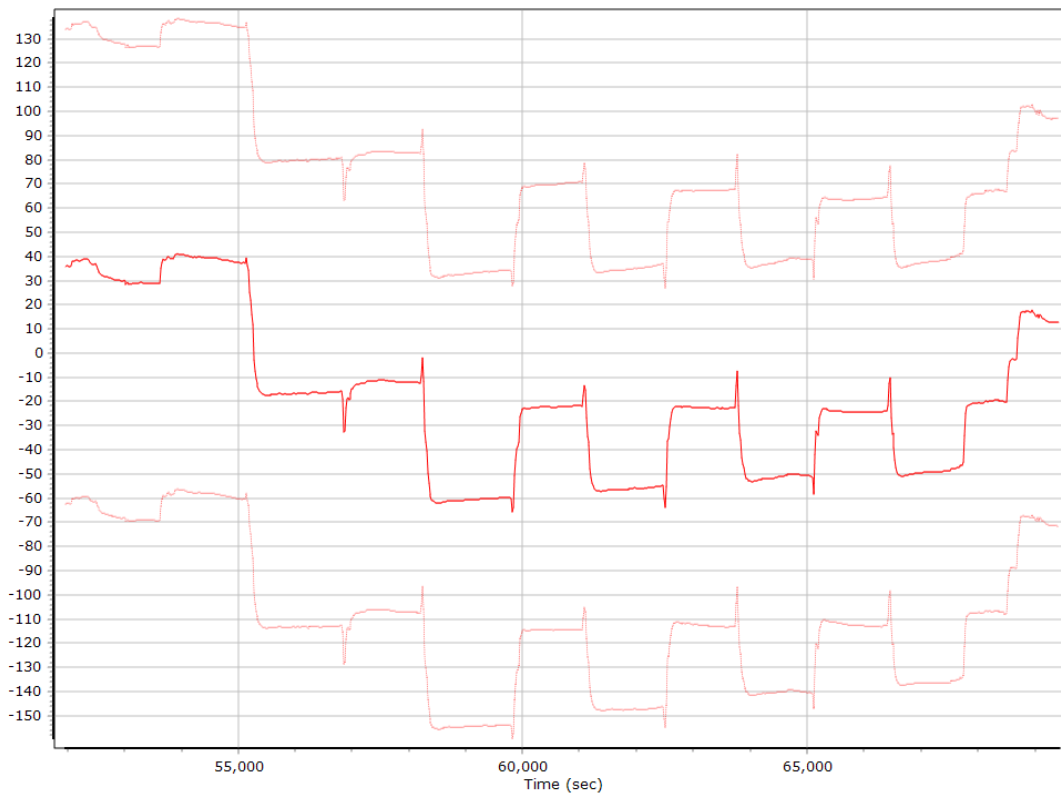
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

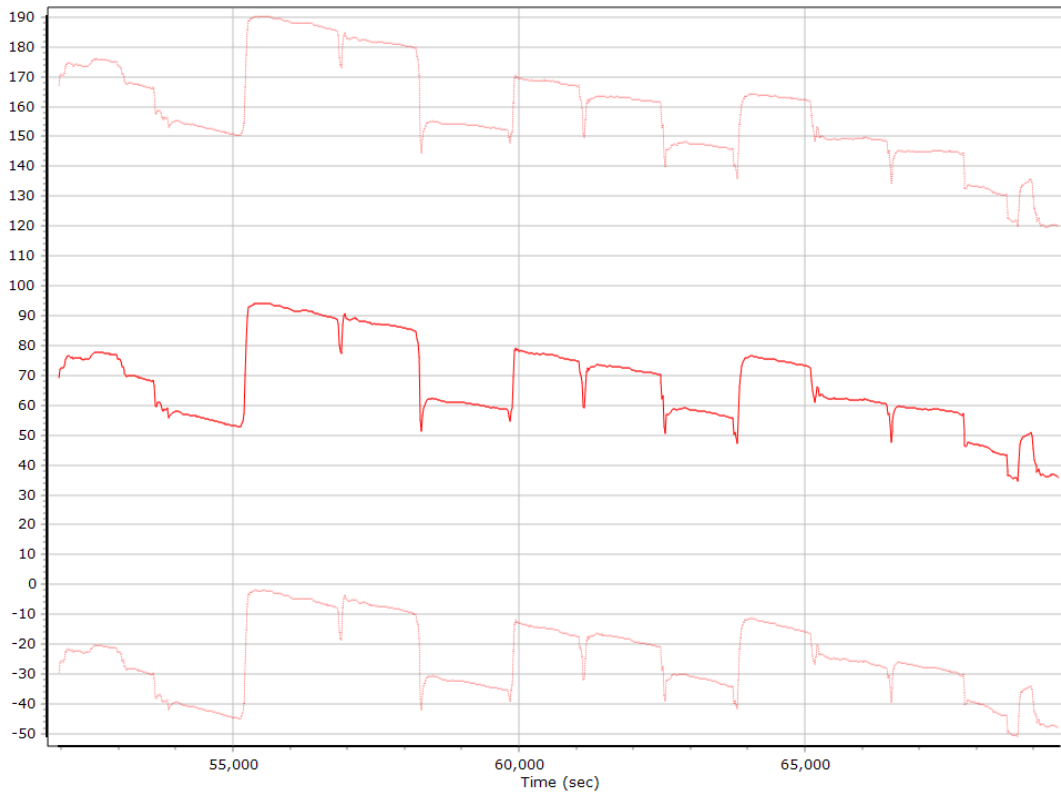
Accelerometer Bias (micro-g)



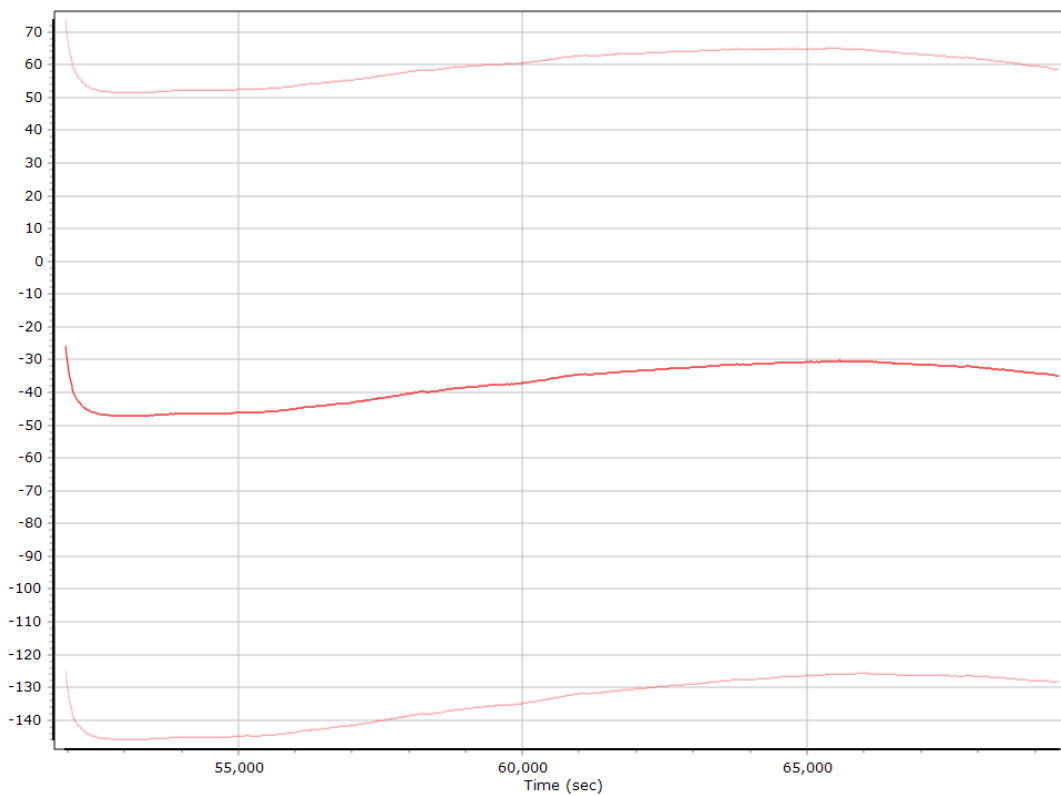
X Accelerometer Bias (micro-g)



Y Accelerometer Bias (micro-g)



Z Accelerometer Bias (micro-g)



Accelerometer Scale Error (ppm)



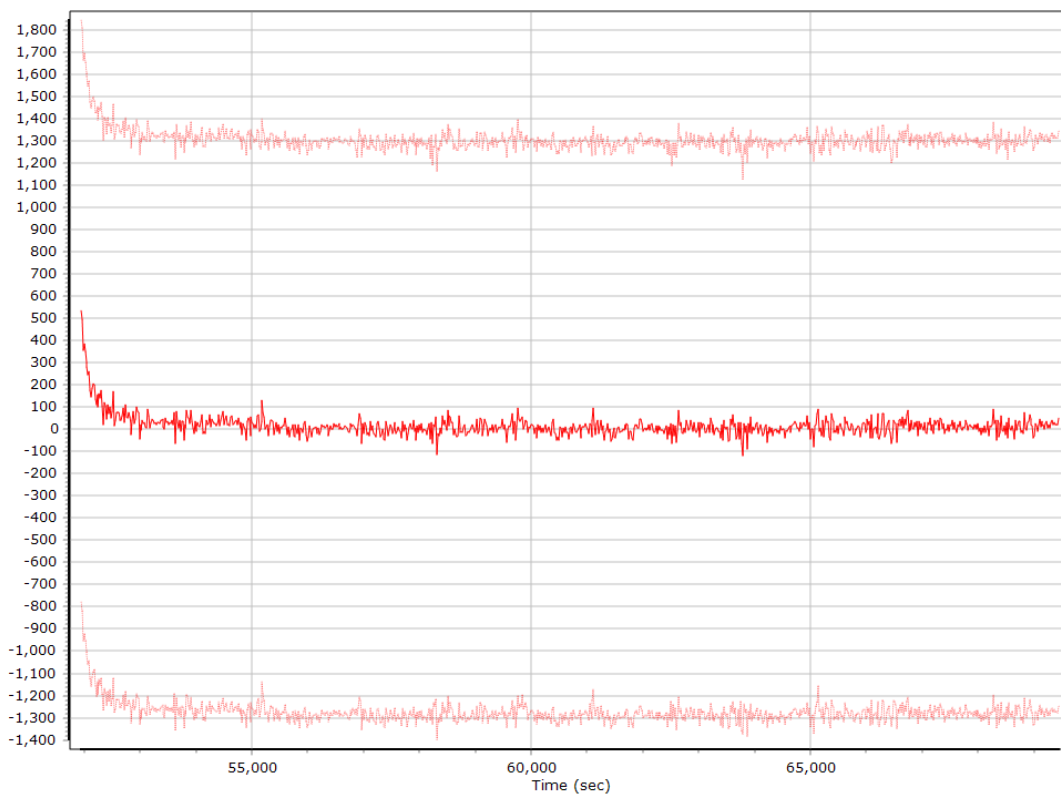
X Accelerometer Scale Error (ppm)



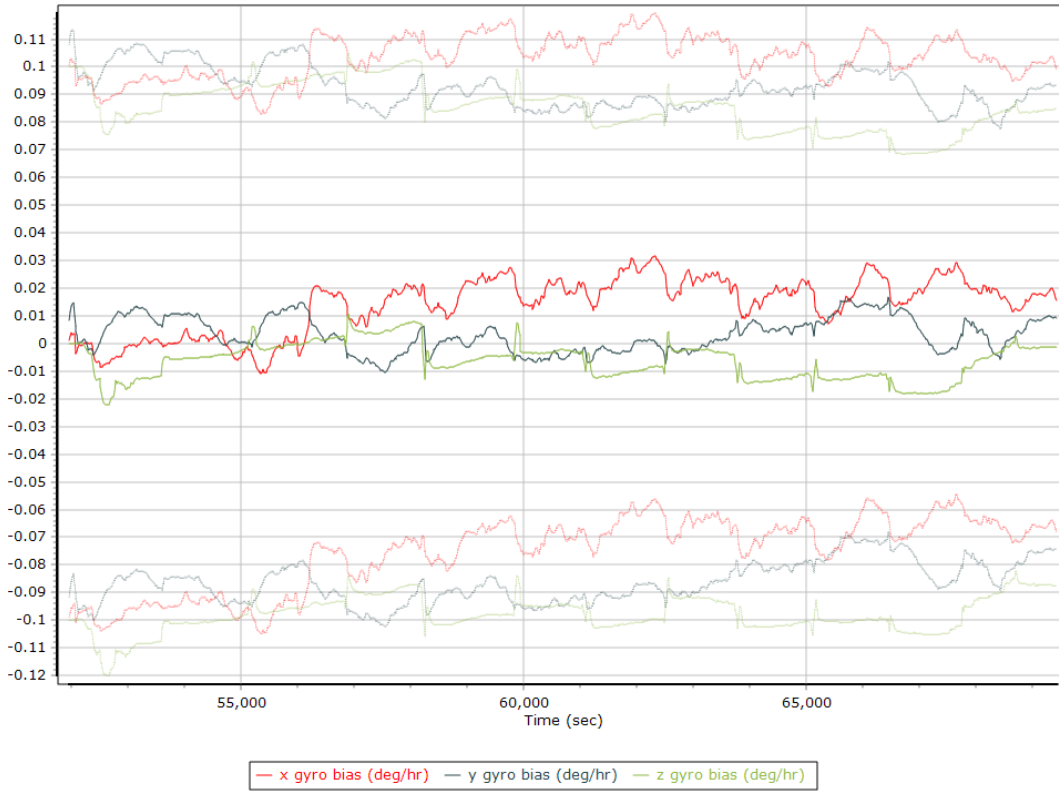
Y Accelerometer Scale Error (ppm)



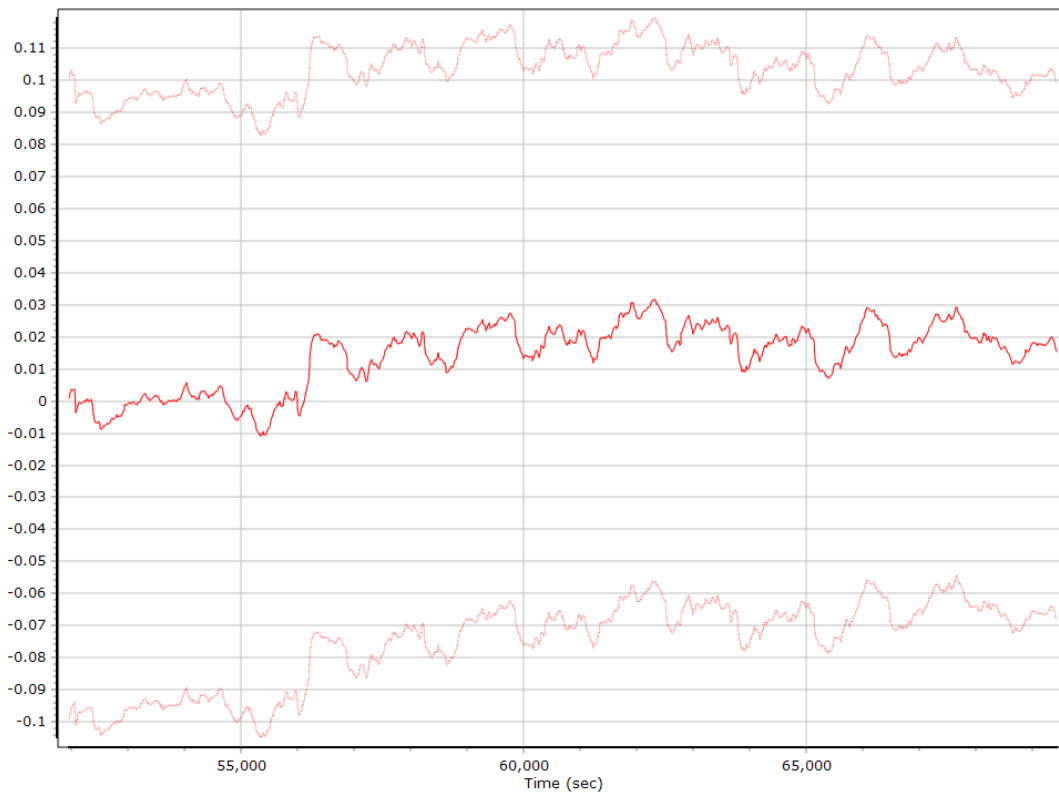
Z Accelerometer Scale Error (ppm)



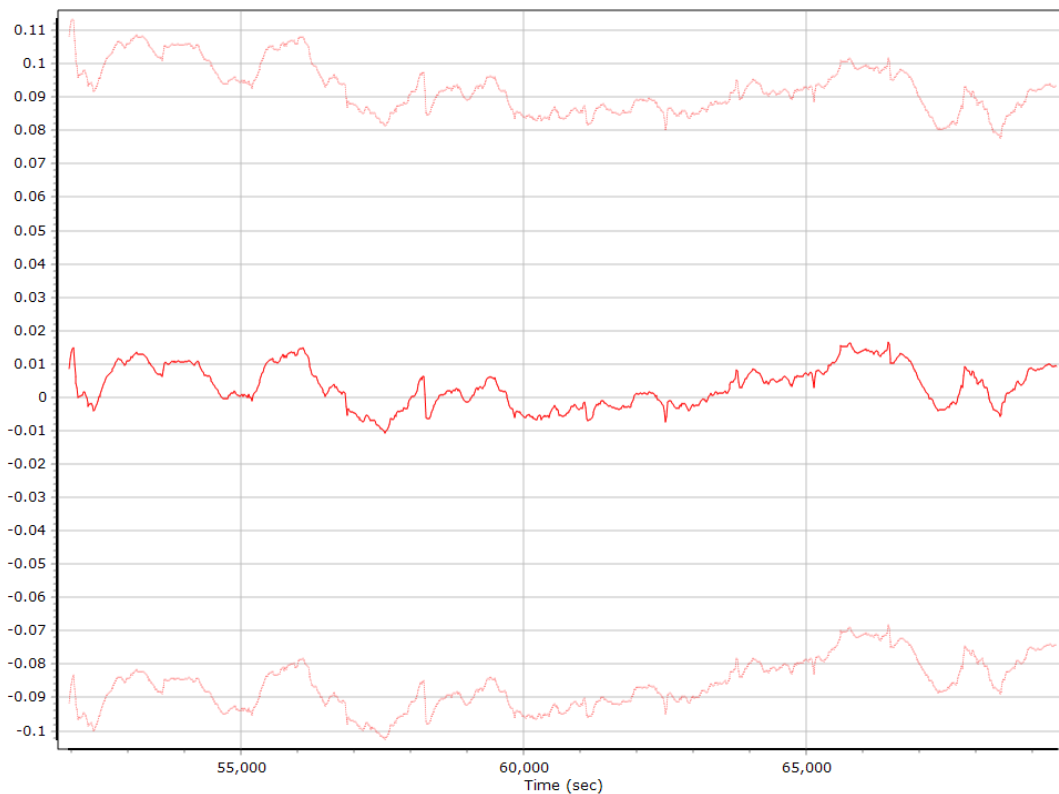
Gyro Bias (deg/h)



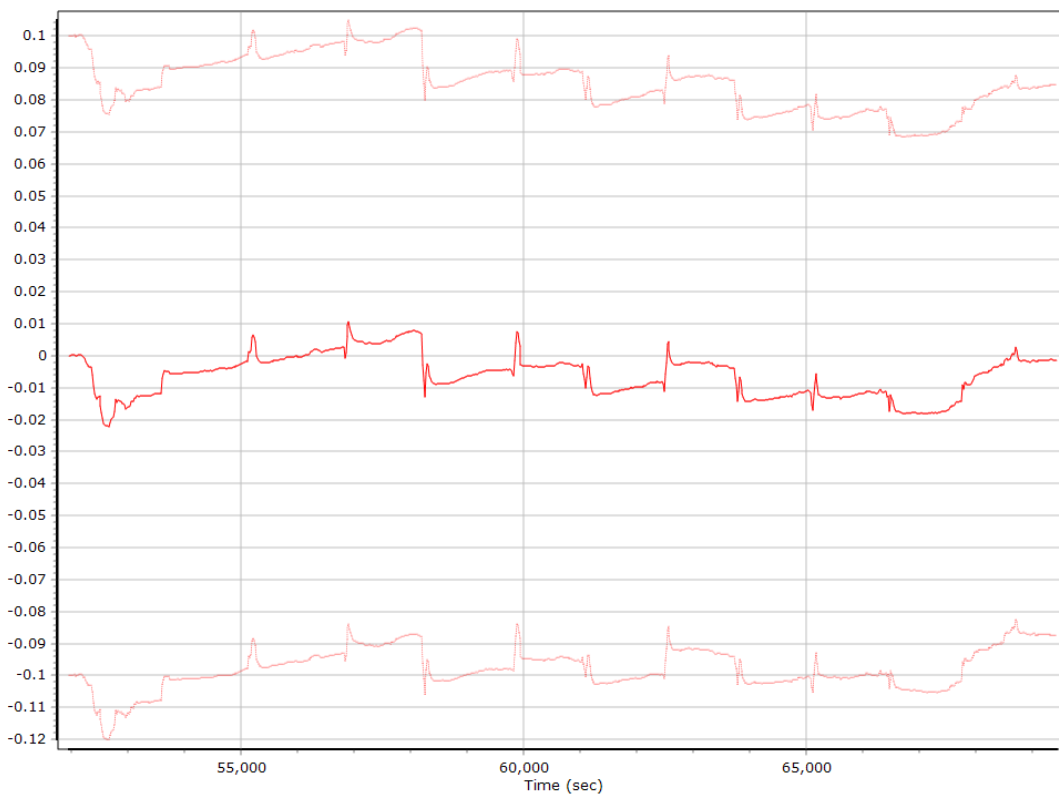
X Gyro Bias (deg/h)



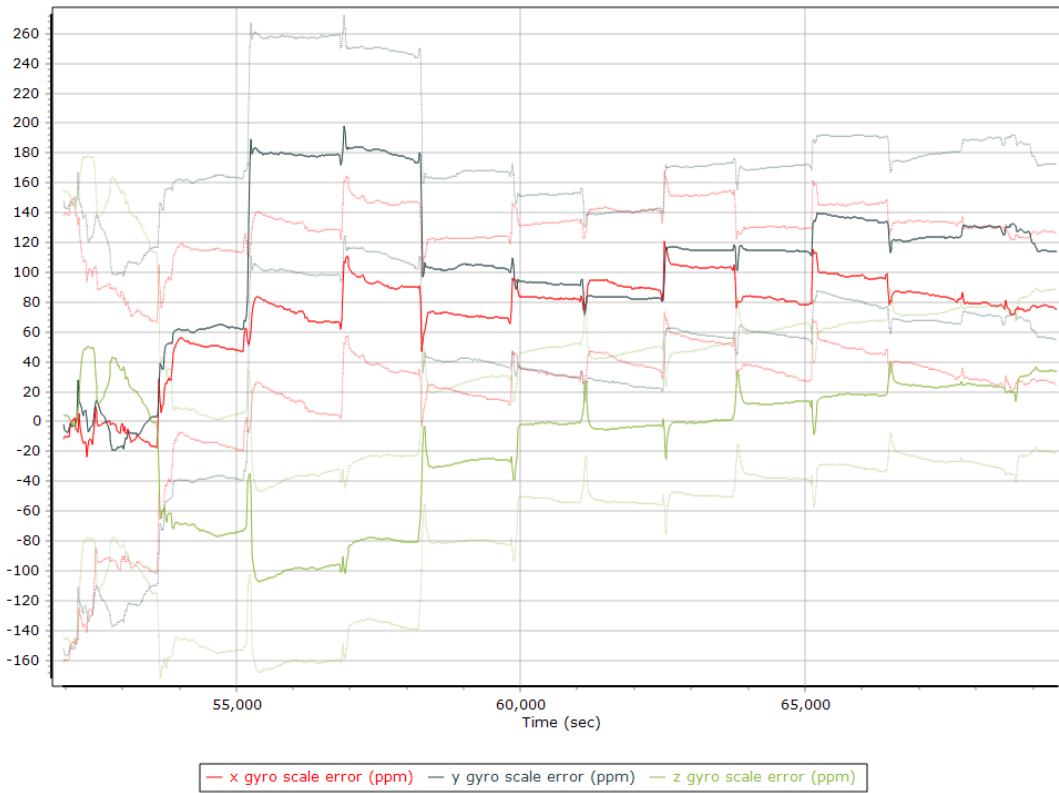
Y Gyro Bias (deg/h)



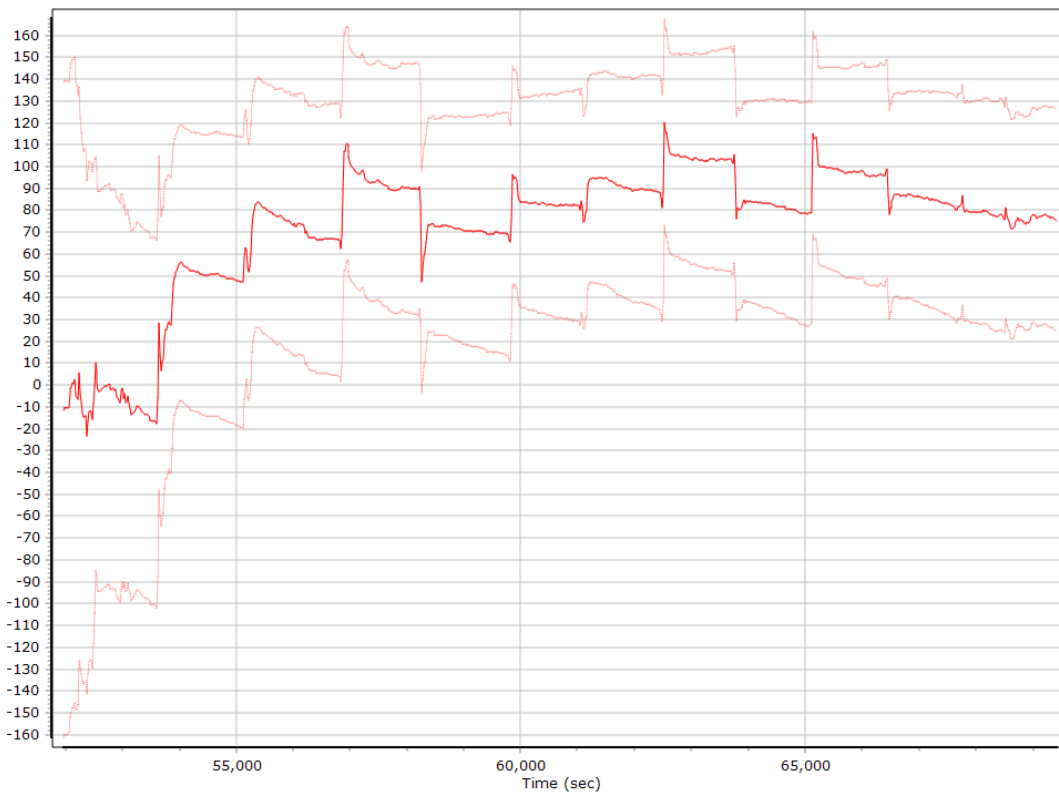
Z Gyro Bias (deg/h)



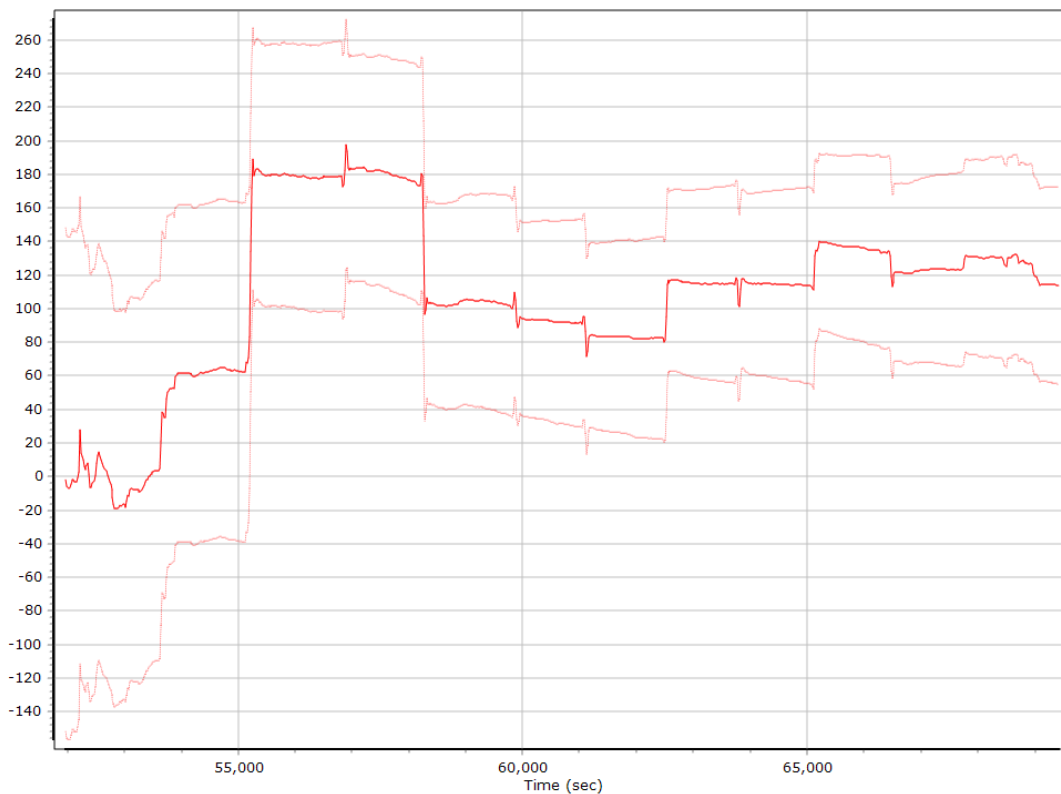
Gyro Scale Error (ppm)



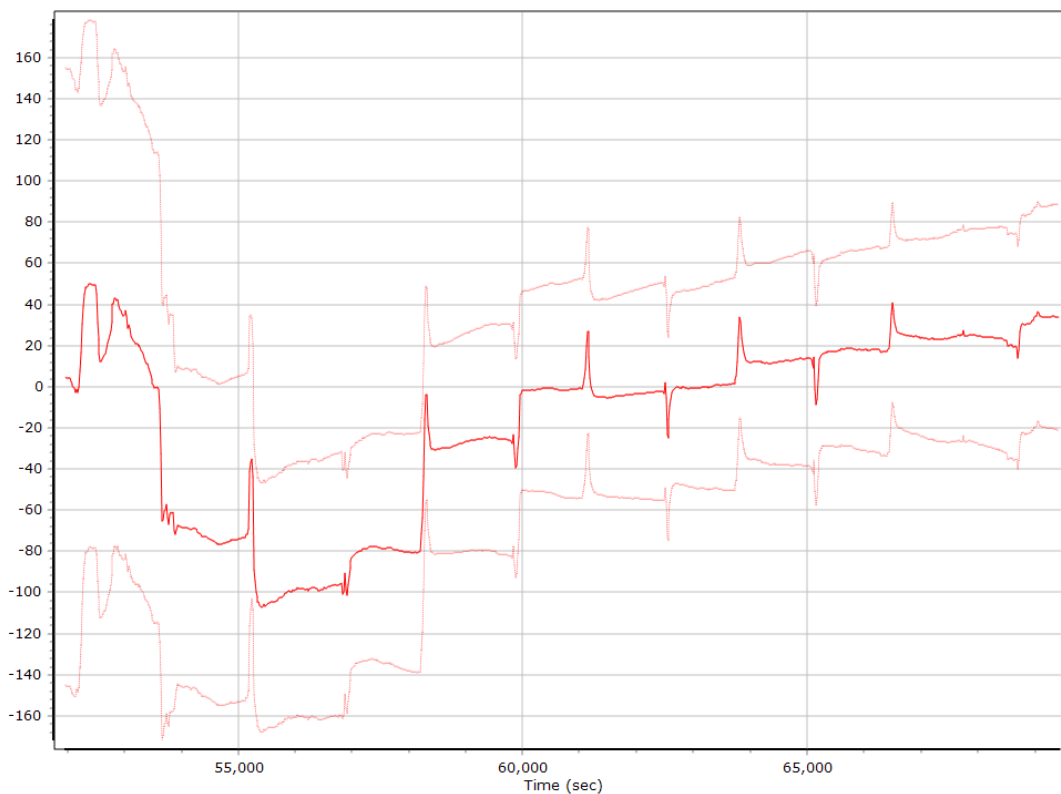
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

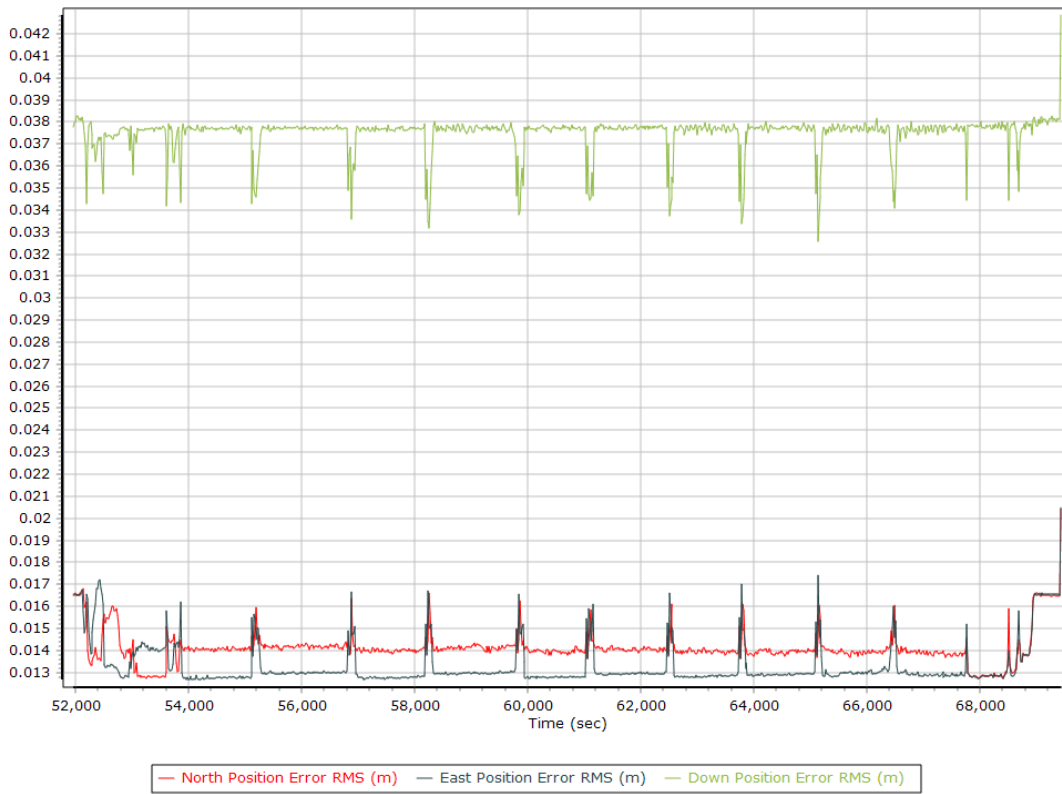


Z Gyro Scale Error (ppm)

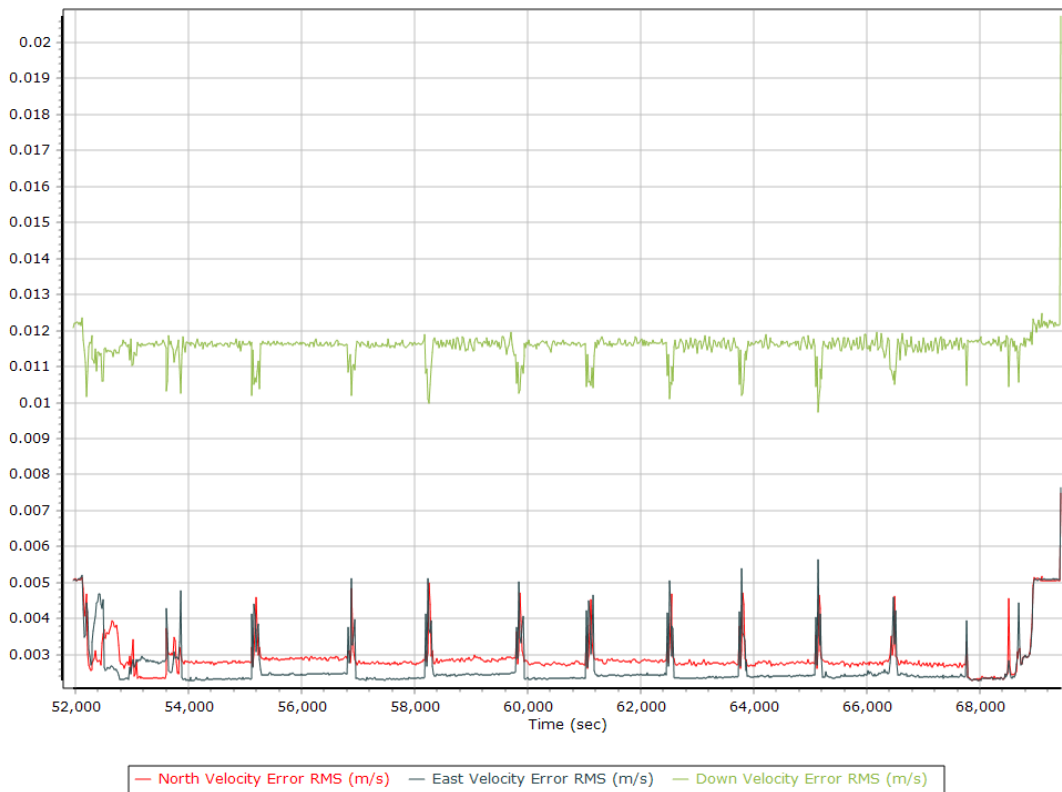


Smoothed Performance Metrics

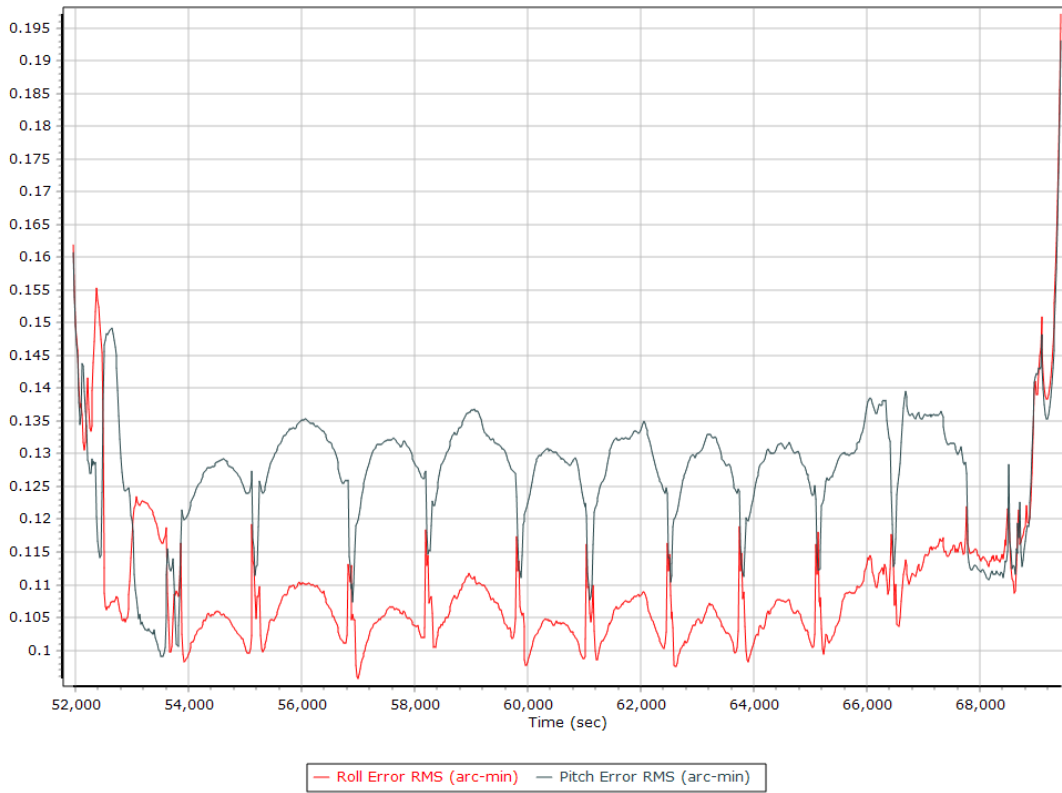
Position Error RMS (m)



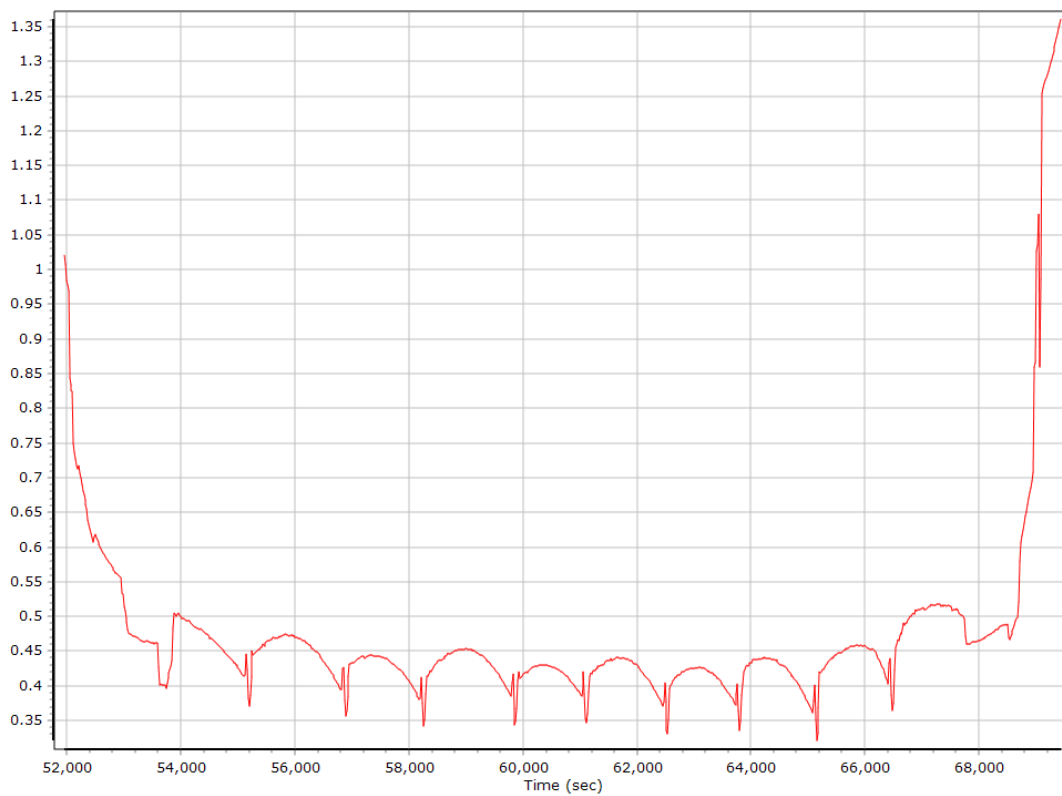
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

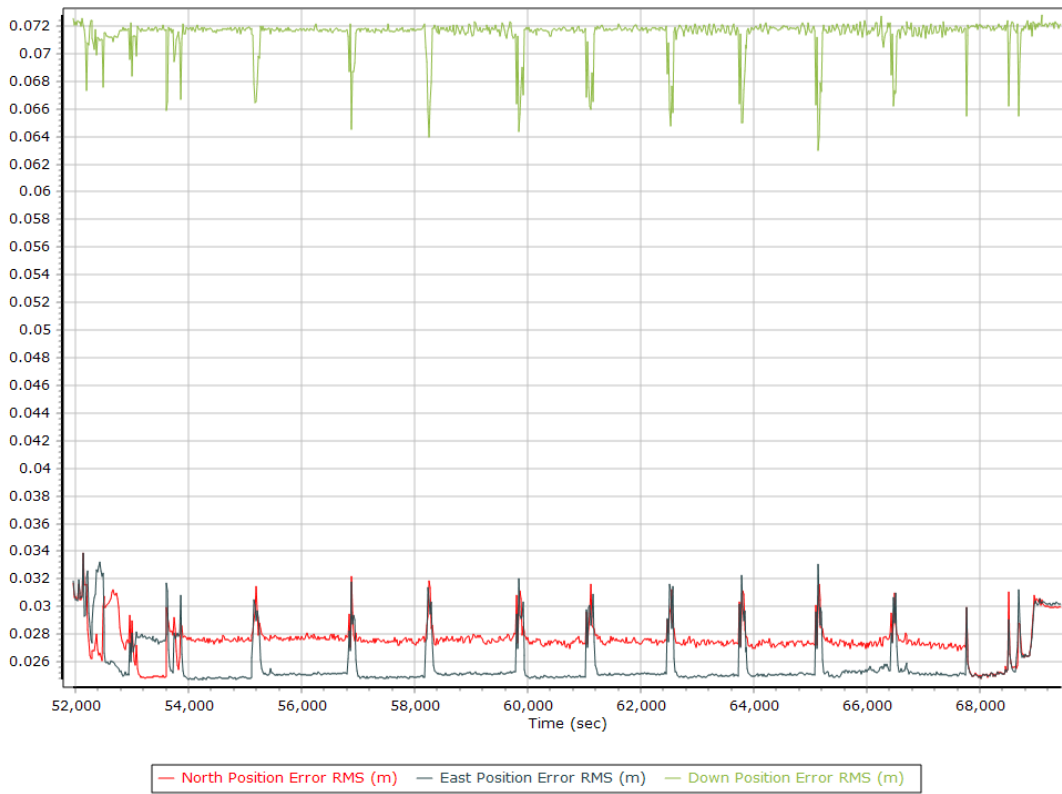


Heading Error RMS (arc-min)

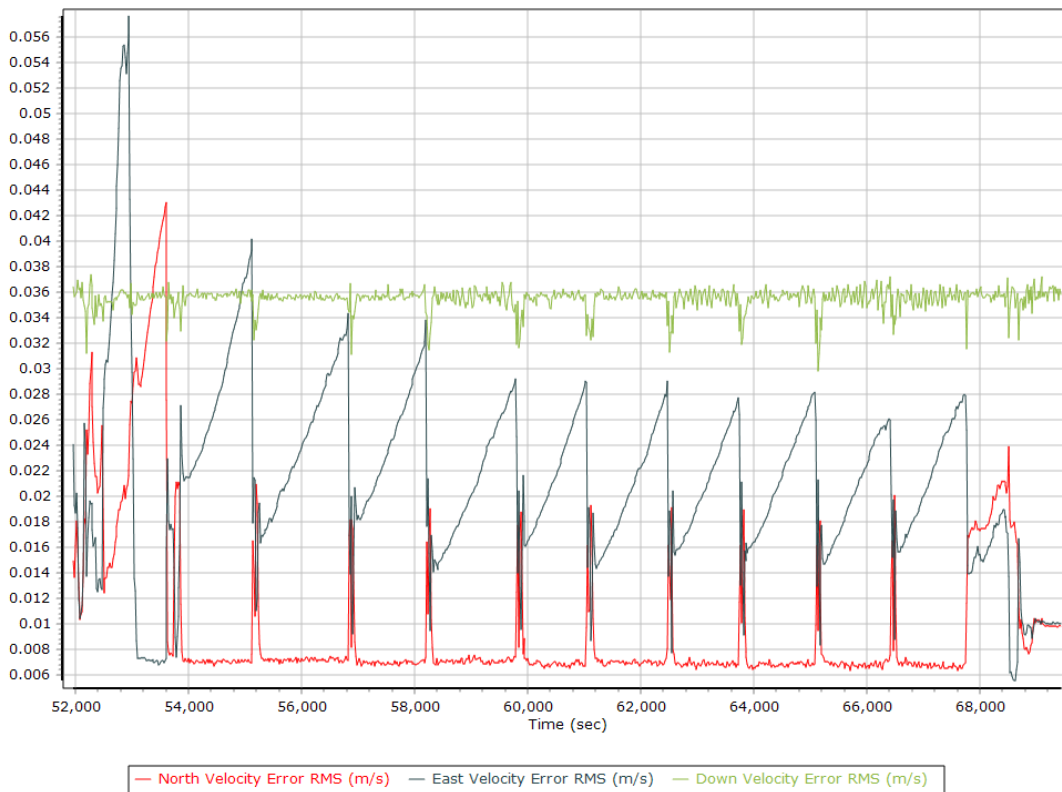


Forward Processed Performance Metrics

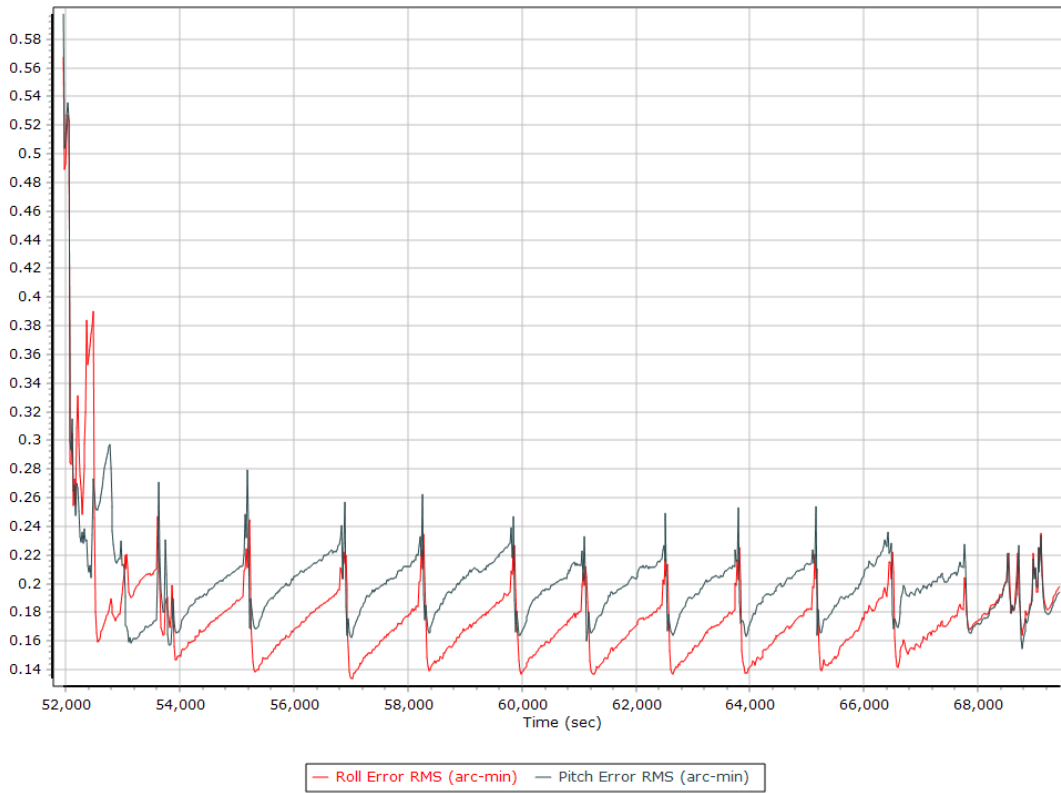
Position Error RMS (m)



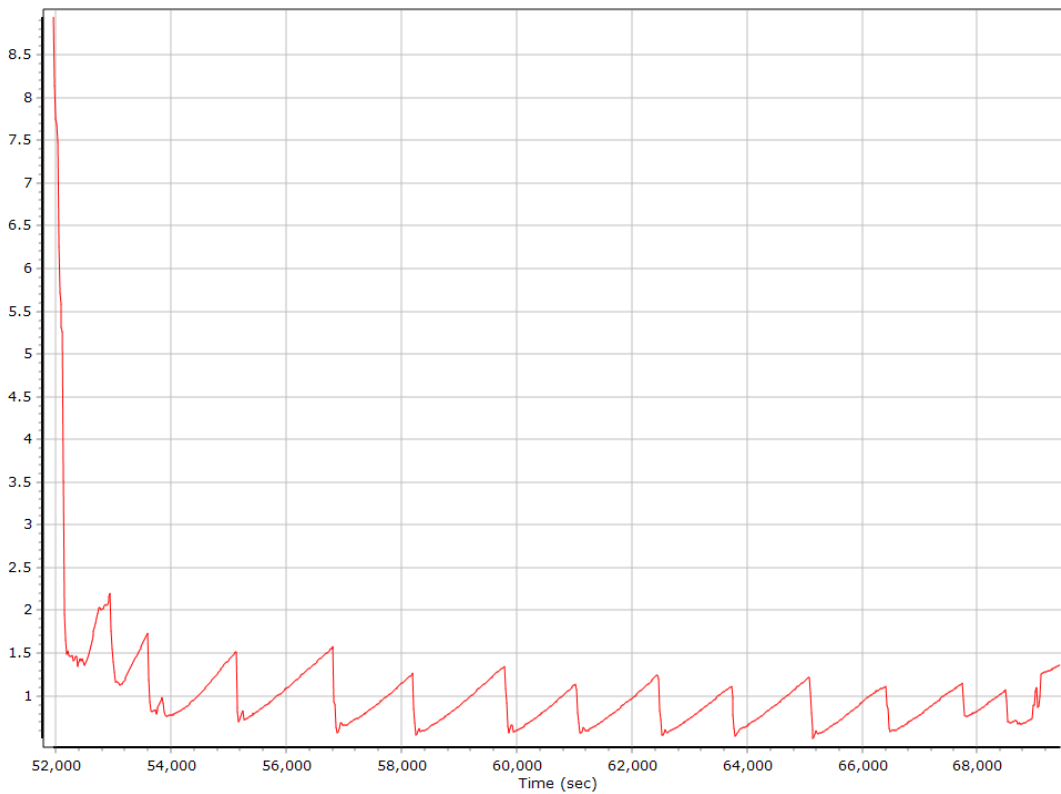
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

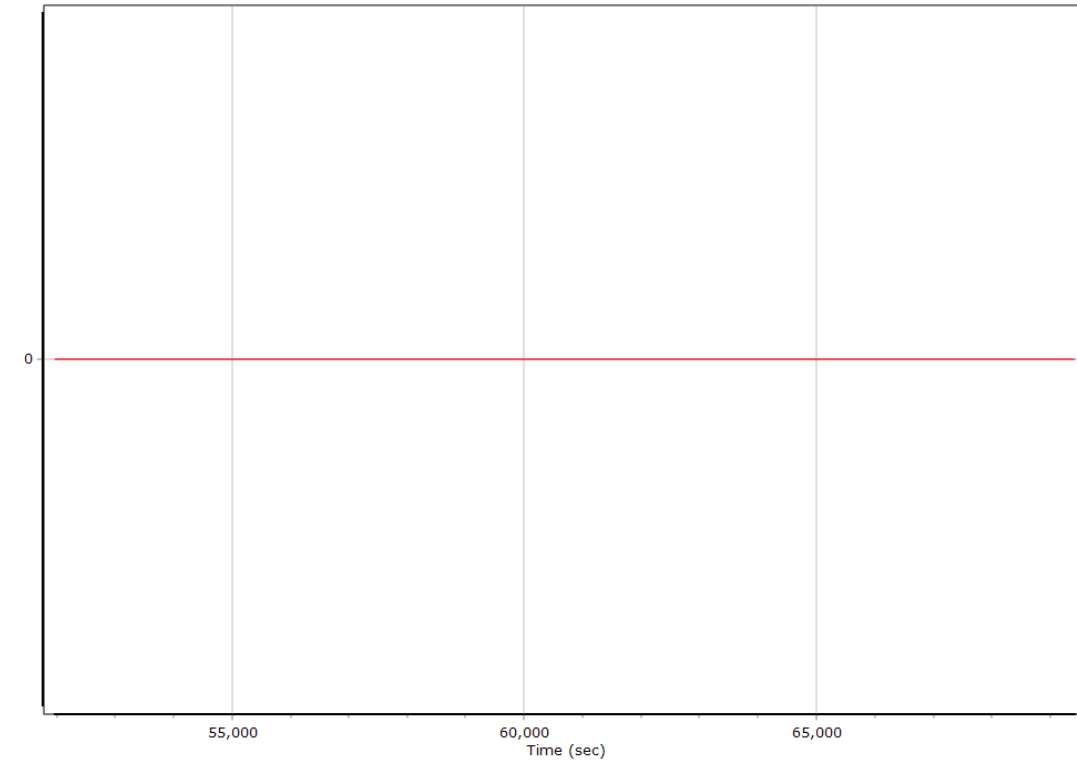


Heading Error RMS (arc-min)



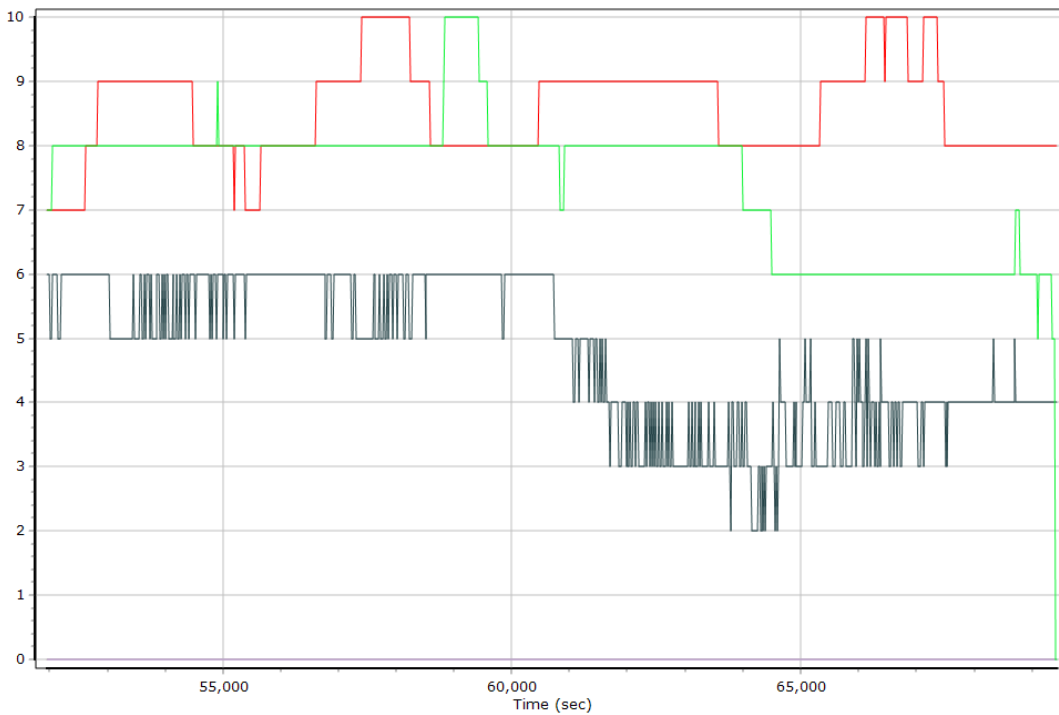
Forward Processed Solution Status

Processing Mode



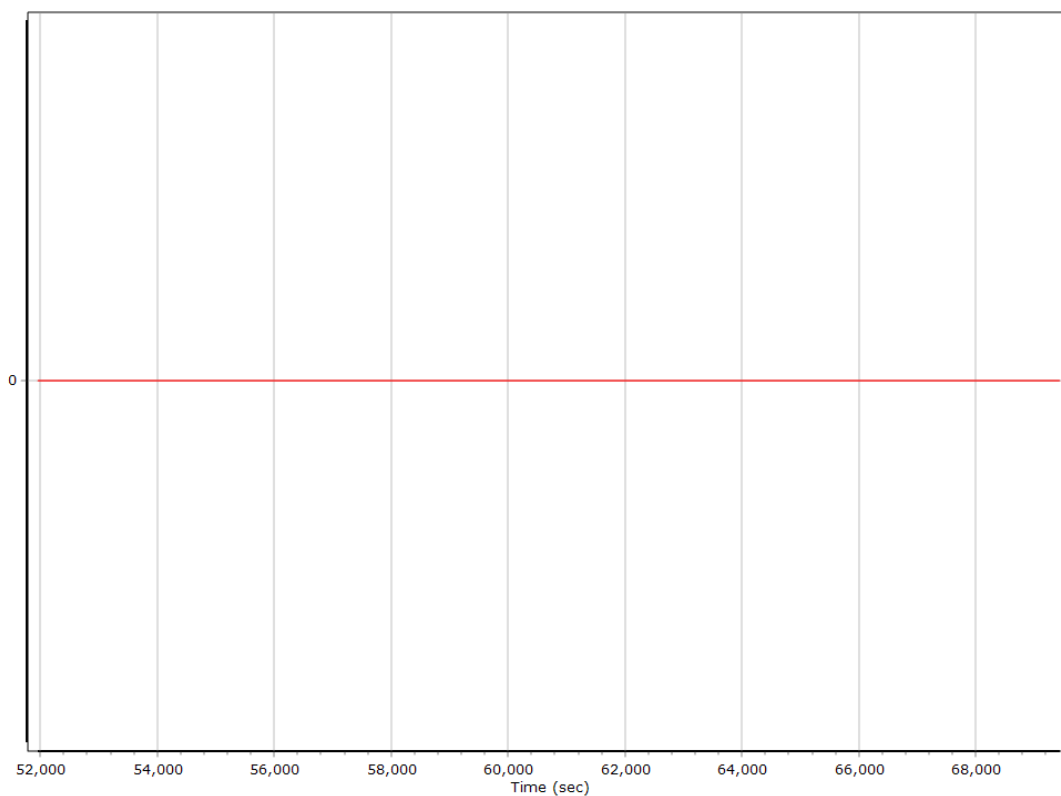
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR

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	sbet_13876_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	51898.004 (04/17/2022 14:24:58)		
Export end time	69437.002 (04/17/2022 19:17:17)		
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	eo_13876.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	All Records		
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	51898.004 (04/17/2022 14:24:58)		
EO end time	69437.002 (04/17/2022 19:17:17)		
Grid	Universal Transverse Mercator		
Zone	UTM North 16 (90W to 84W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2010		