

General Information

Mission Information

Project name	201110_B_5060420_nad2011_FINAL
Processing date	2020-11-17 13:25:42
Mission date	2020-11-10 23:25:55
Mission duration	04:37:18.000
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	AV39

Project File List

Rover Data Files

File name	File type
survey3.pos	POS Data

Input Files

File Name	File Type
Ephm3150.20g	GLONASS Broadcast Ephemeris
Ephm3150.20n	GPS Broadcast Ephemeris
Ephm3160.20g	GLONASS Broadcast Ephemeris
Ephm3160.20n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_201110_B_5060420_nad2011_FINAL.out	SBET Trajectory File

Rover Data Summary

First raw data file	survey3.pos		
Last raw data file	survey3.pos		
Start GPS week	2131		
Start time	257154.848 (11/10/2020 11:25:54 PM)		
End time	273792.816 (11/11/2020 4:03:12 AM)		
Start of fine alignment	257468.190 (11/10/2020 11:31:08 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)	0.527	0.205	-1.192
Reference to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

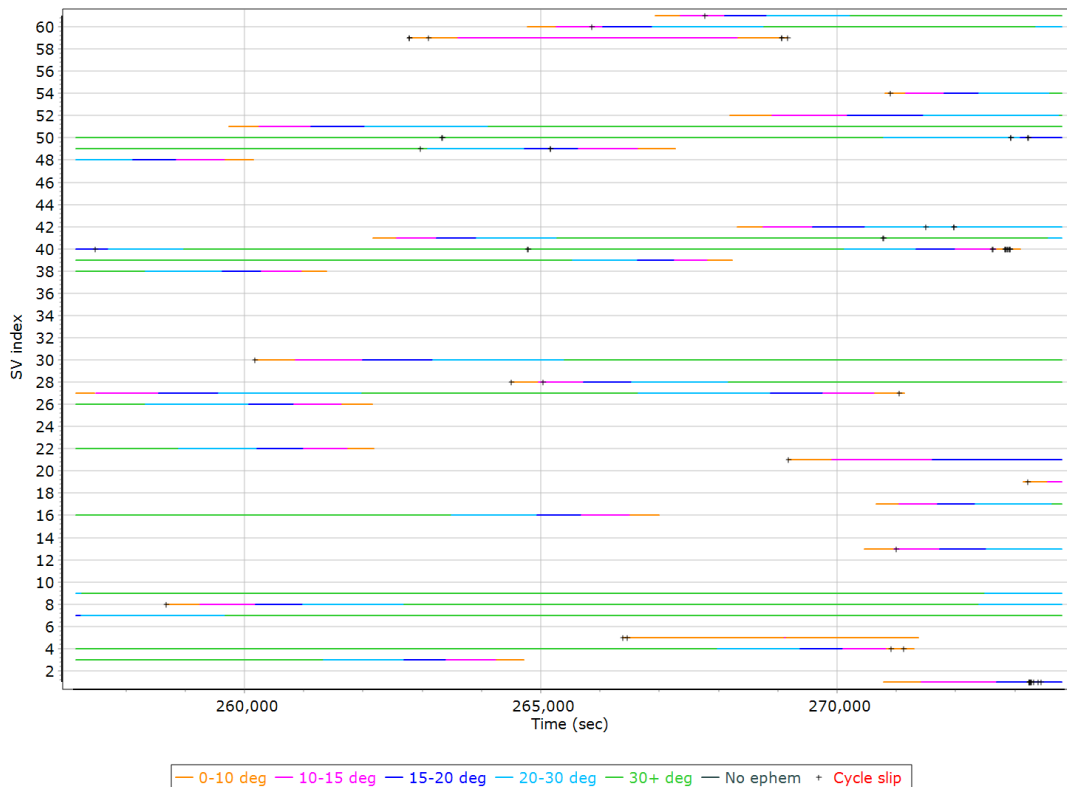
Rover Data QC

Raw IMU Import QC Summary

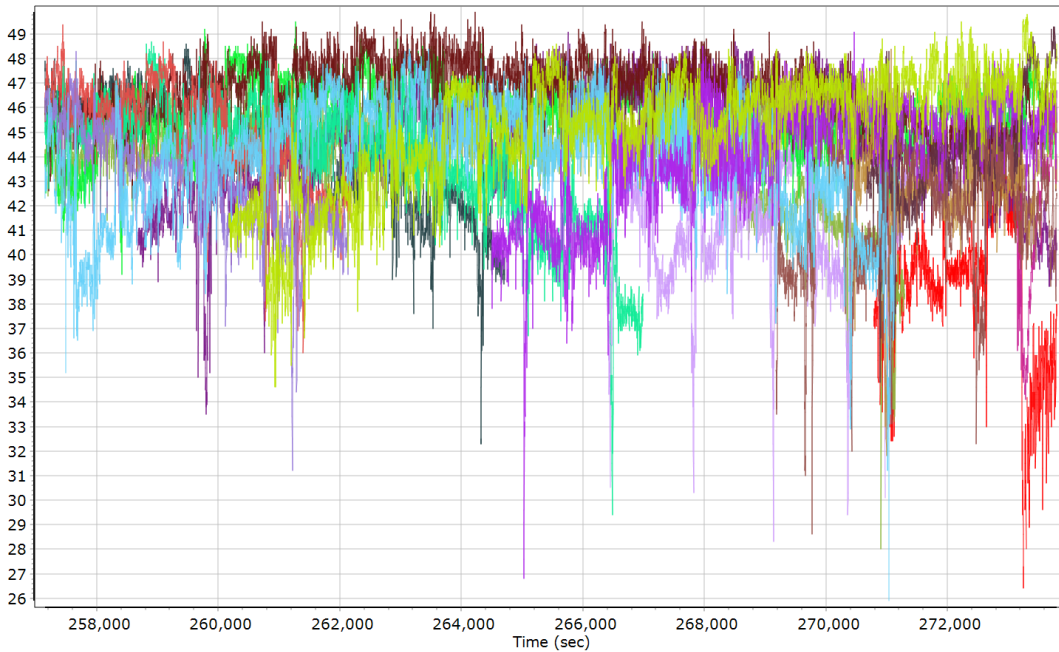
IMU data input file	imu_201110_B_5060420_nad2011_FINAL.dat
IMU data check log file	imudt_201110_B_5060420_nad2011_FINAL.log
IMU Records Processed	3326887
Termination Status	Normal
IMU Anomalies	0

Primary Observables & Satellite Data

GPS/GLONASS L1 Satellite Lock/Elevation

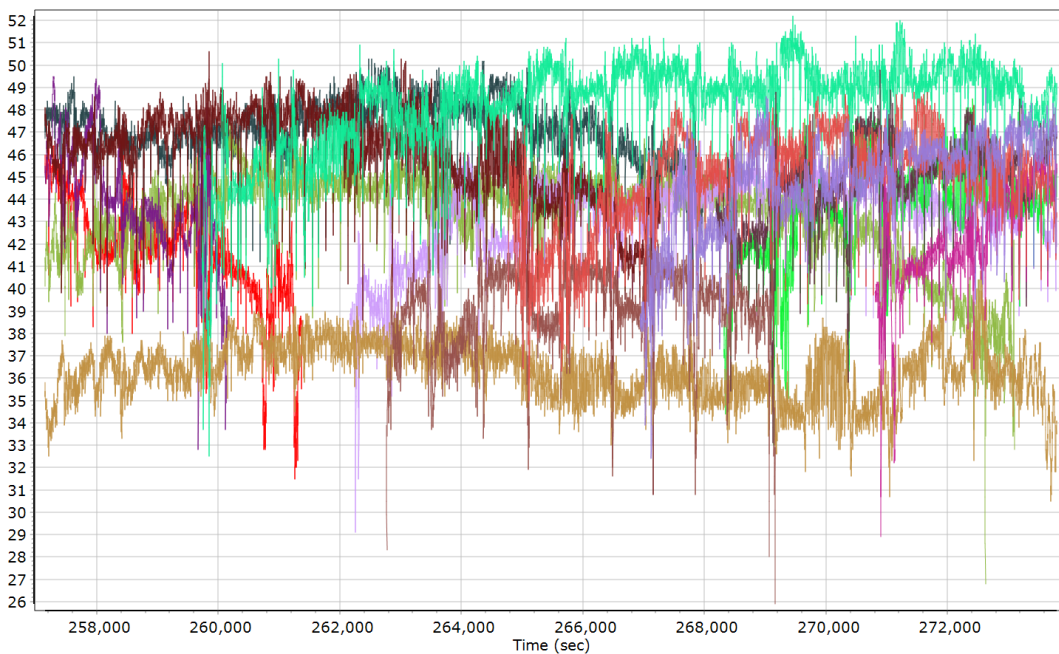


GPS L1 SNR



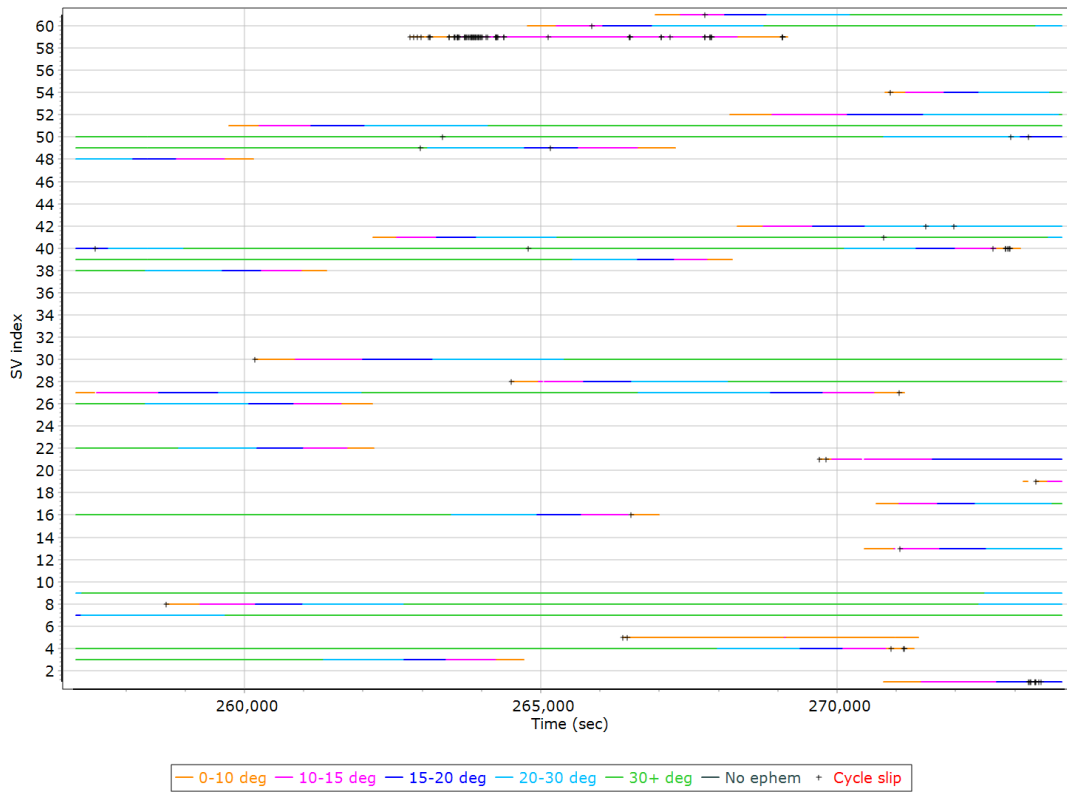
- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 01 L1 SNR (dB/Hz) | GPS PRN 03 L1 SNR (dB/Hz) | GPS PRN 04 L1 SNR (dB/Hz) | GPS PRN 05 L1 SNR (dB/Hz) |
| GPS PRN 07 L1 SNR (dB/Hz) | GPS PRN 08 L1 SNR (dB/Hz) | GPS PRN 09 L1 SNR (dB/Hz) | GPS PRN 13 L1 SNR (dB/Hz) |
| GPS PRN 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 22 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 30 L1 SNR (dB/Hz) | | | |

GLONASS L1 SNR

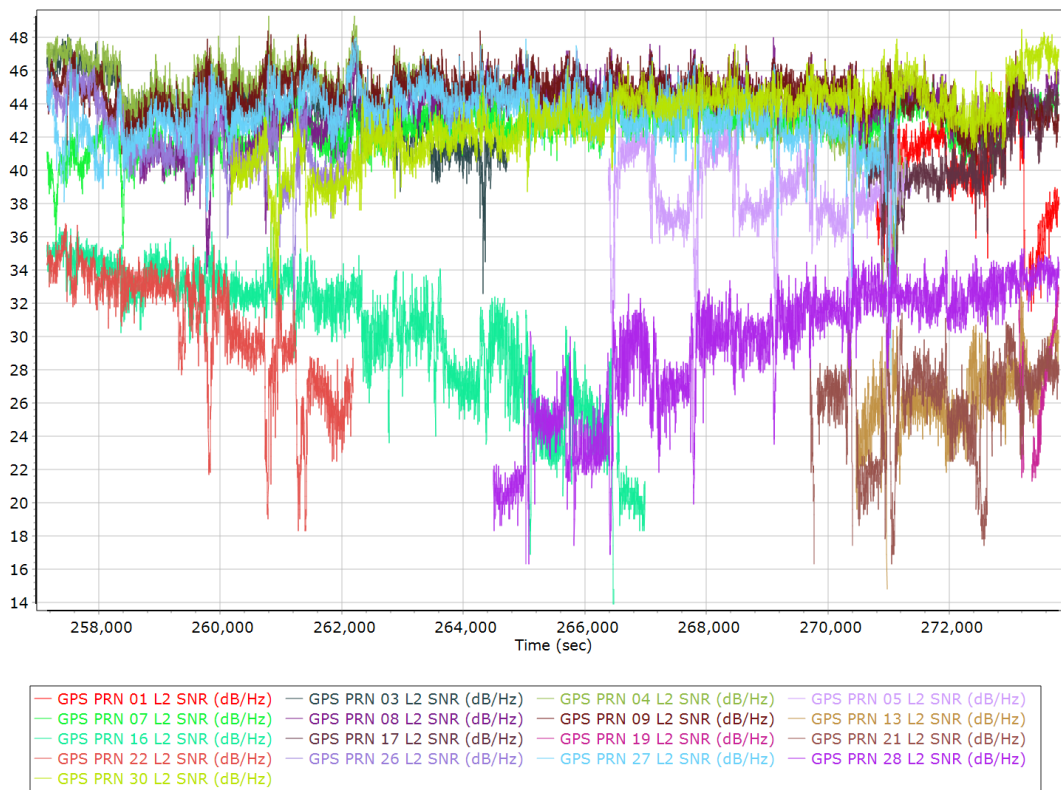


- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 01 L1 SNR (dB/Hz) | GLONASS 02 L1 SNR (dB/Hz) | GLONASS 03 L1 SNR (dB/Hz) |
| GLONASS 04 L1 SNR (dB/Hz) | GLONASS 05 L1 SNR (dB/Hz) | GLONASS 11 L1 SNR (dB/Hz) |
| GLONASS 12 L1 SNR (dB/Hz) | GLONASS 13 L1 SNR (dB/Hz) | GLONASS 14 L1 SNR (dB/Hz) |
| GLONASS 15 L1 SNR (dB/Hz) | GLONASS 17 L1 SNR (dB/Hz) | GLONASS 22 L1 SNR (dB/Hz) |
| GLONASS 23 L1 SNR (dB/Hz) | GLONASS 24 L1 SNR (dB/Hz) | |

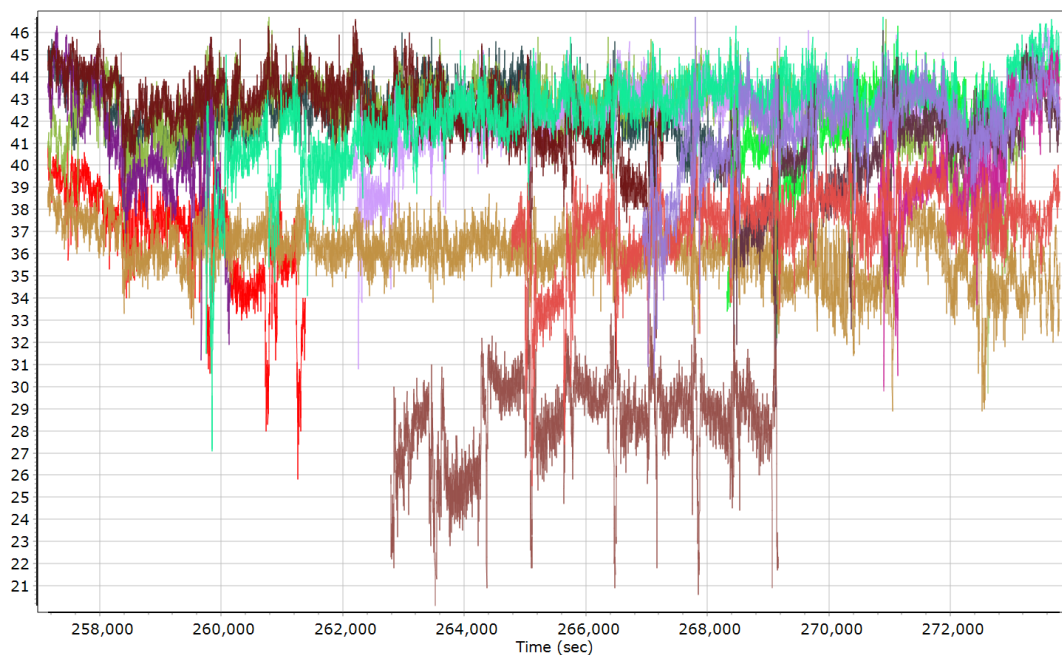
GPS/GLONASS L2 Satellite Lock/Elevation



GPS L2 SNR

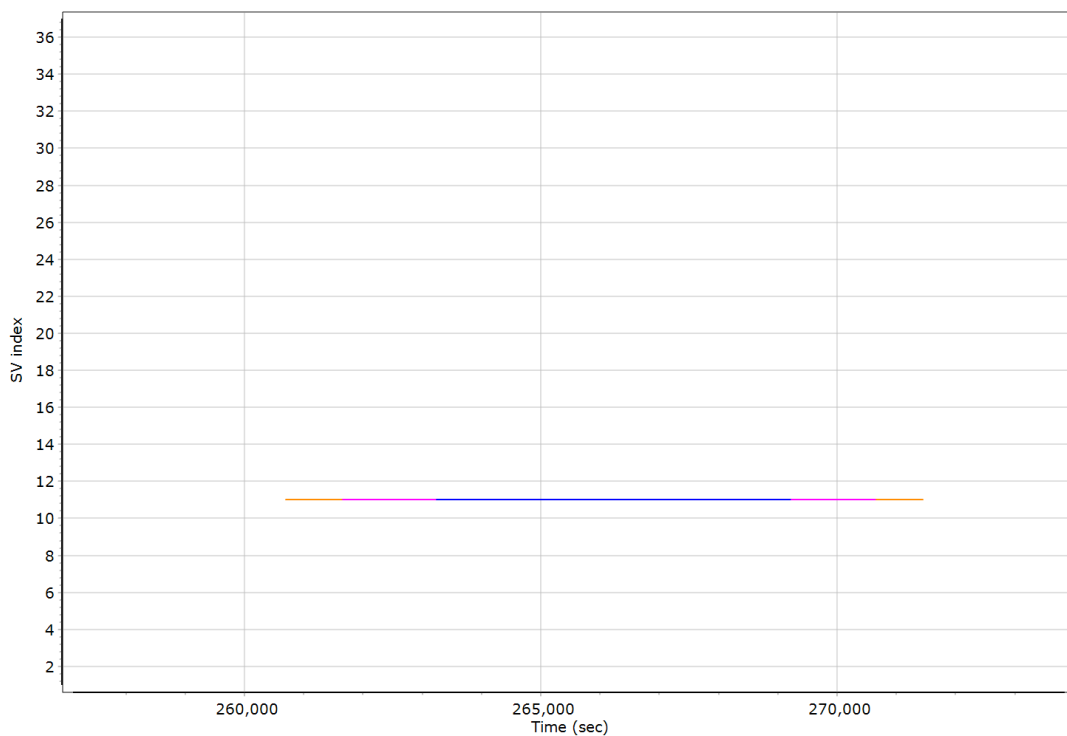


GLONASS L2 SNR



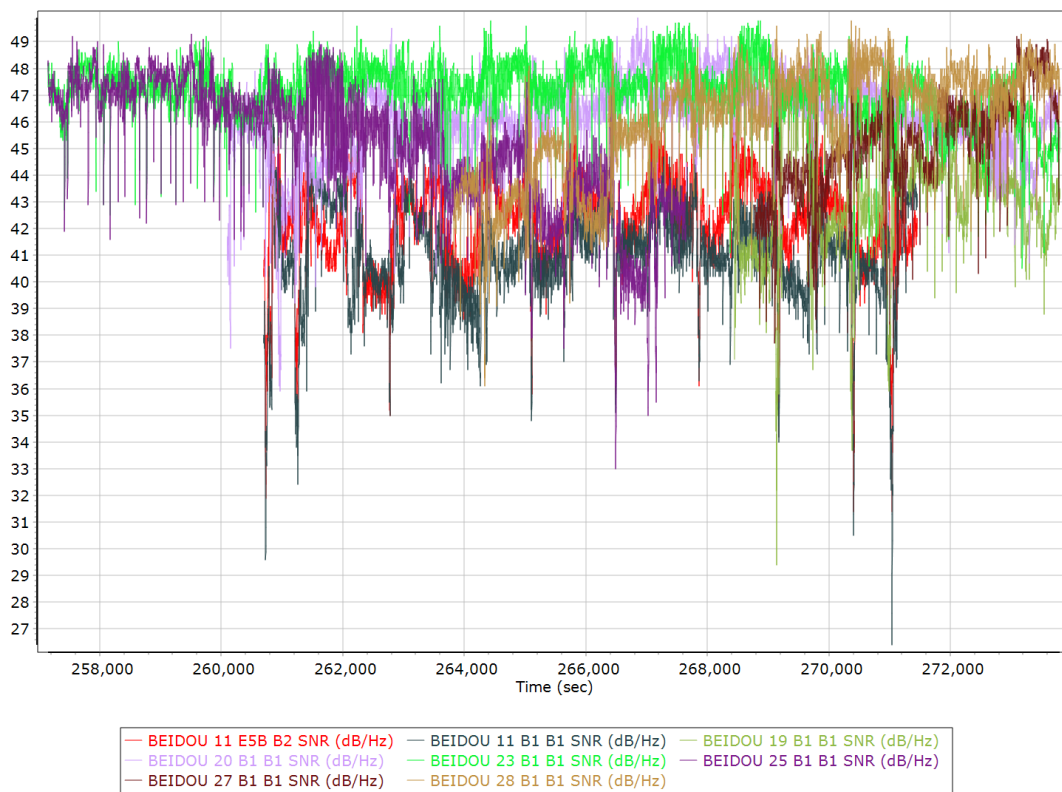
- GLONASS 01 L2 SNR (dB/Hz)
- GLONASS 02 L2 SNR (dB/Hz)
- GLONASS 03 L2 SNR (dB/Hz)
- GLONASS 04 L2 SNR (dB/Hz)
- GLONASS 05 L2 SNR (dB/Hz)
- GLONASS 11 L2 SNR (dB/Hz)
- GLONASS 12 L2 SNR (dB/Hz)
- GLONASS 13 L2 SNR (dB/Hz)
- GLONASS 14 L2 SNR (dB/Hz)
- GLONASS 15 L2 SNR (dB/Hz)
- GLONASS 17 L2 SNR (dB/Hz)
- GLONASS 22 L2 SNR (dB/Hz)
- GLONASS 23 L2 SNR (dB/Hz)
- GLONASS 24 L2 SNR (dB/Hz)

BEIDOU Satellite Lock/Elevation

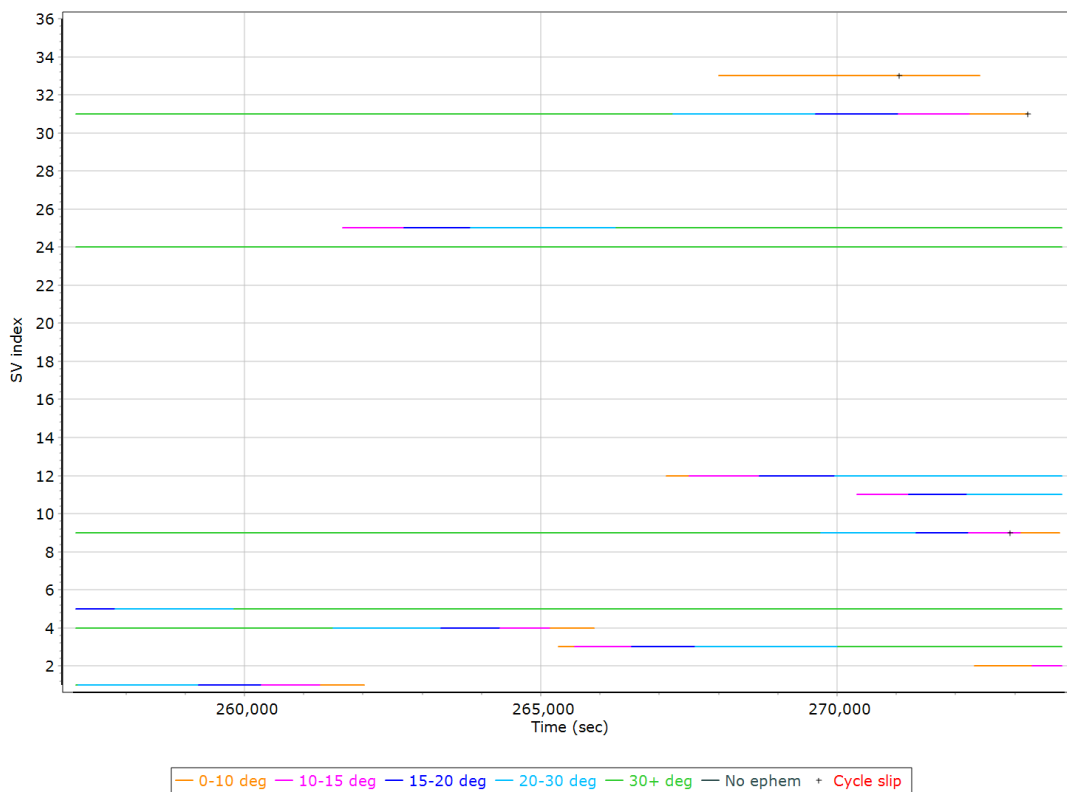


- 0-10 deg
- 10-15 deg
- 15-20 deg
- 20-30 deg
- 30+ deg
- No ephem
- + Cycle slip

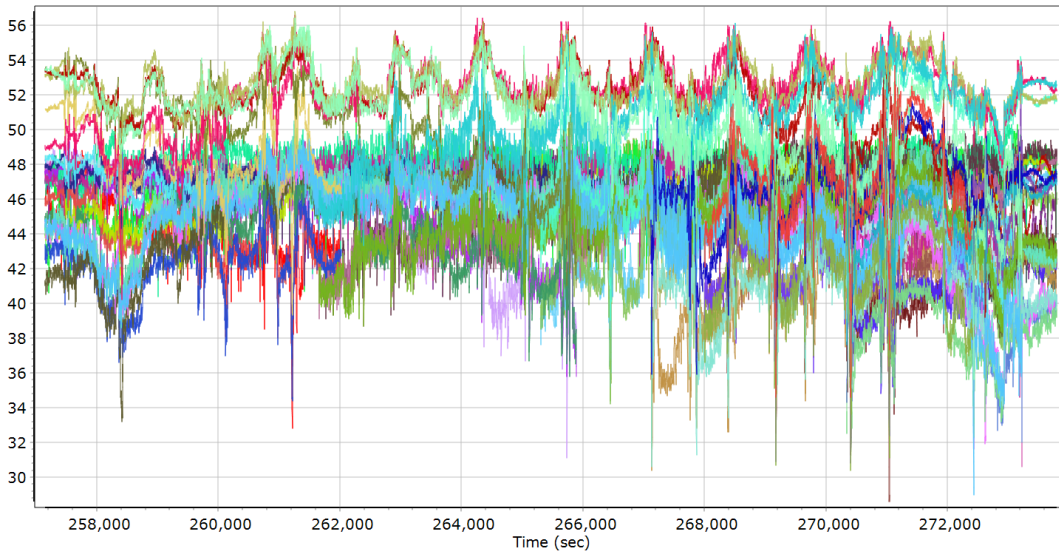
BEIDOU SNR



GALILEO Satellite Lock/Elevation



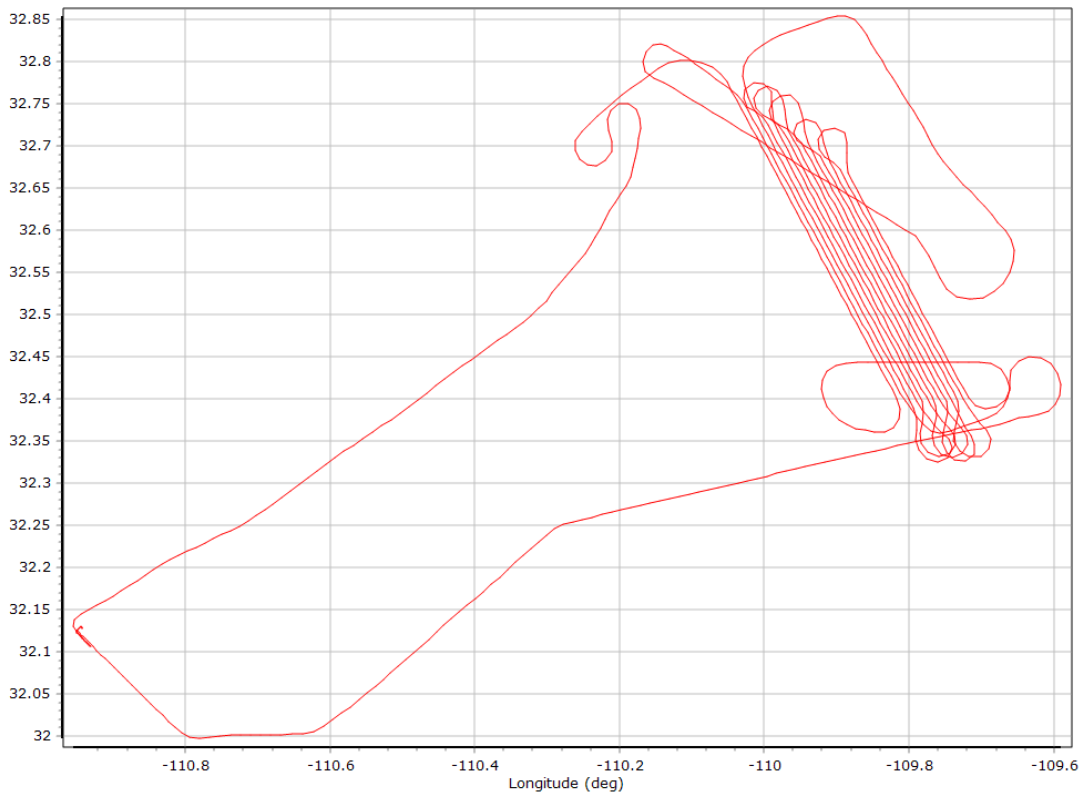
GALILEO SNR



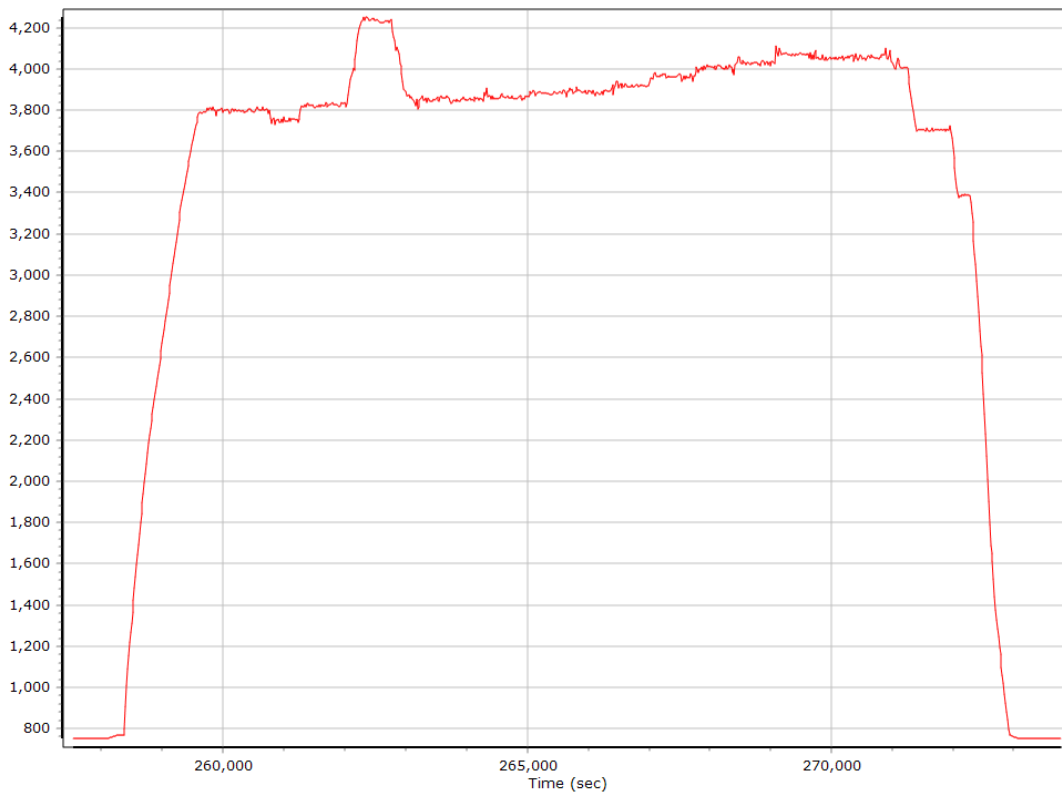
- | | |
|---|---|
| — GALILEO 01 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 02 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 03 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 04 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 05 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 09 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 11 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 12 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 33 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 12 L5E5A BPSK10_PD SNR (dB/Hz) |

Smoothed Trajectory Information

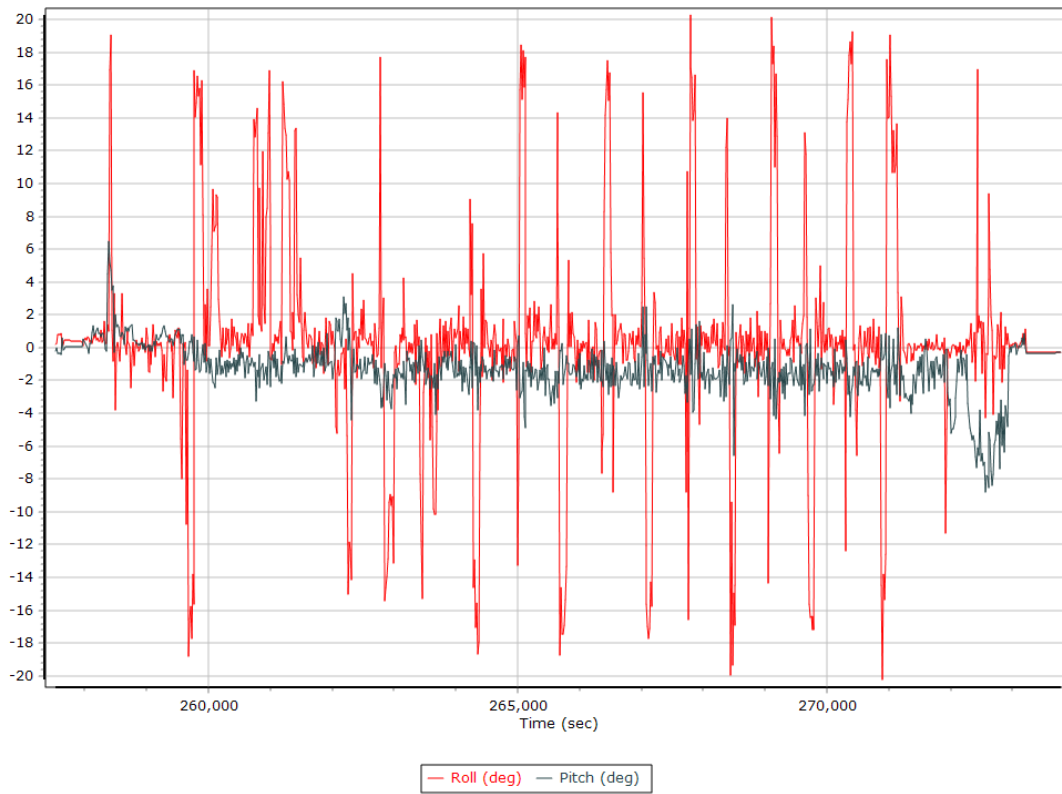
Top View



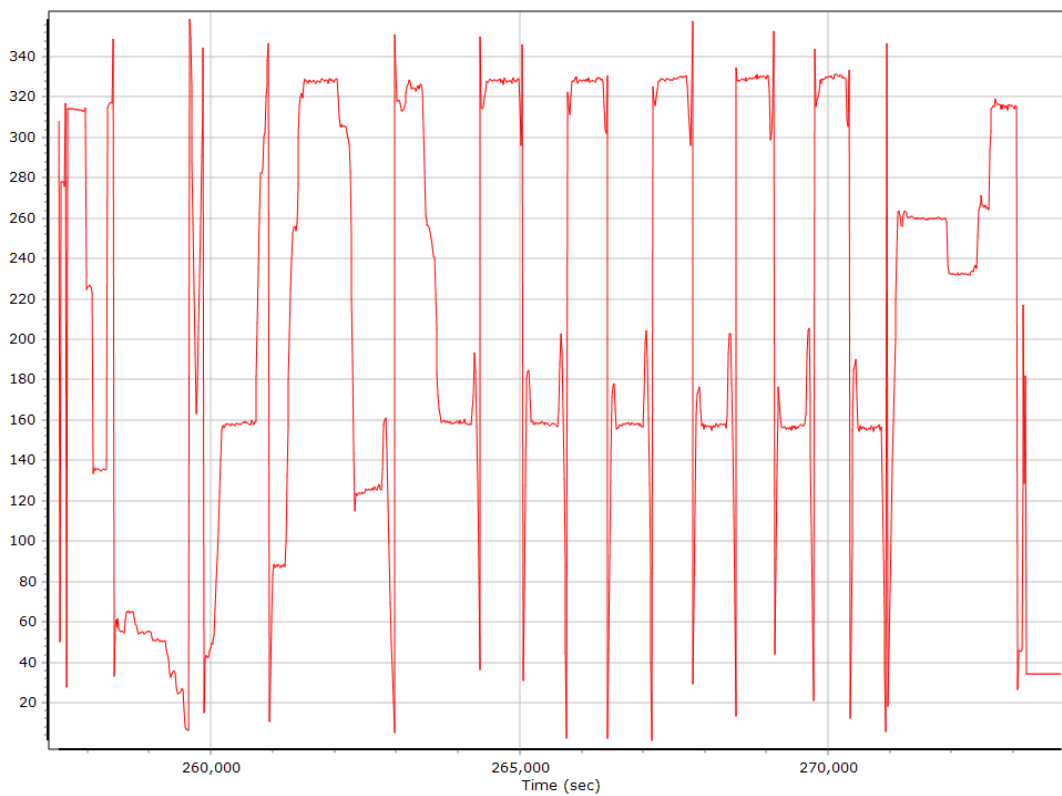
Altitude



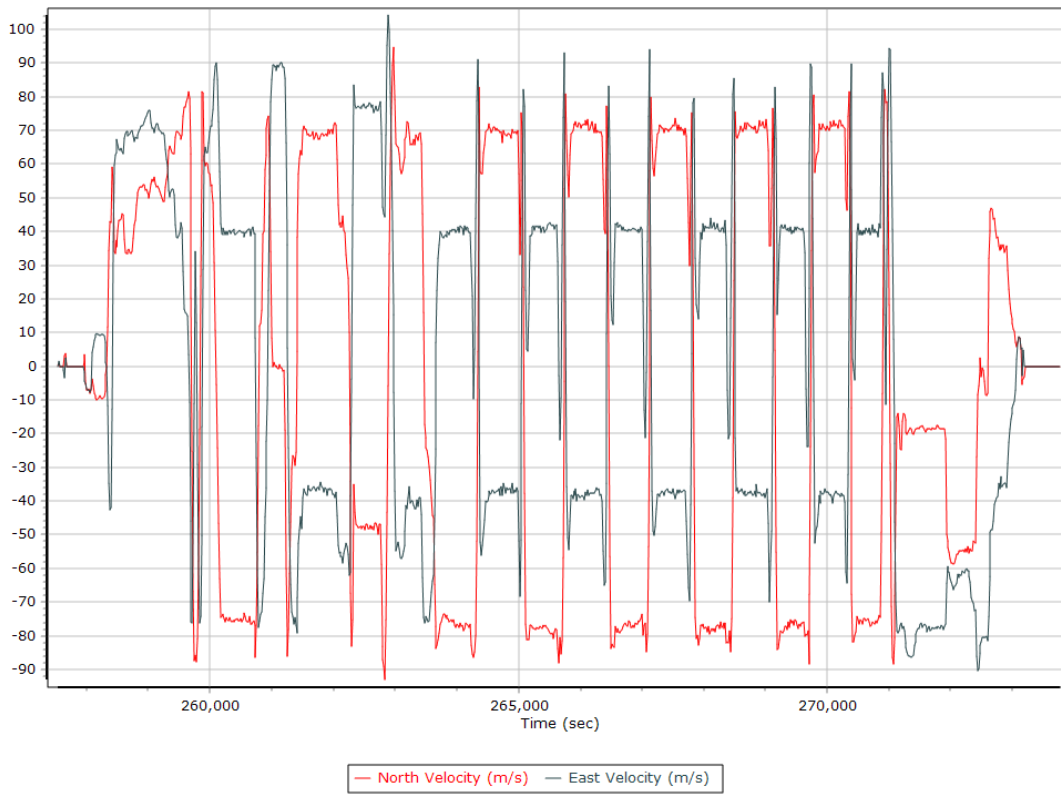
Roll/Pitch



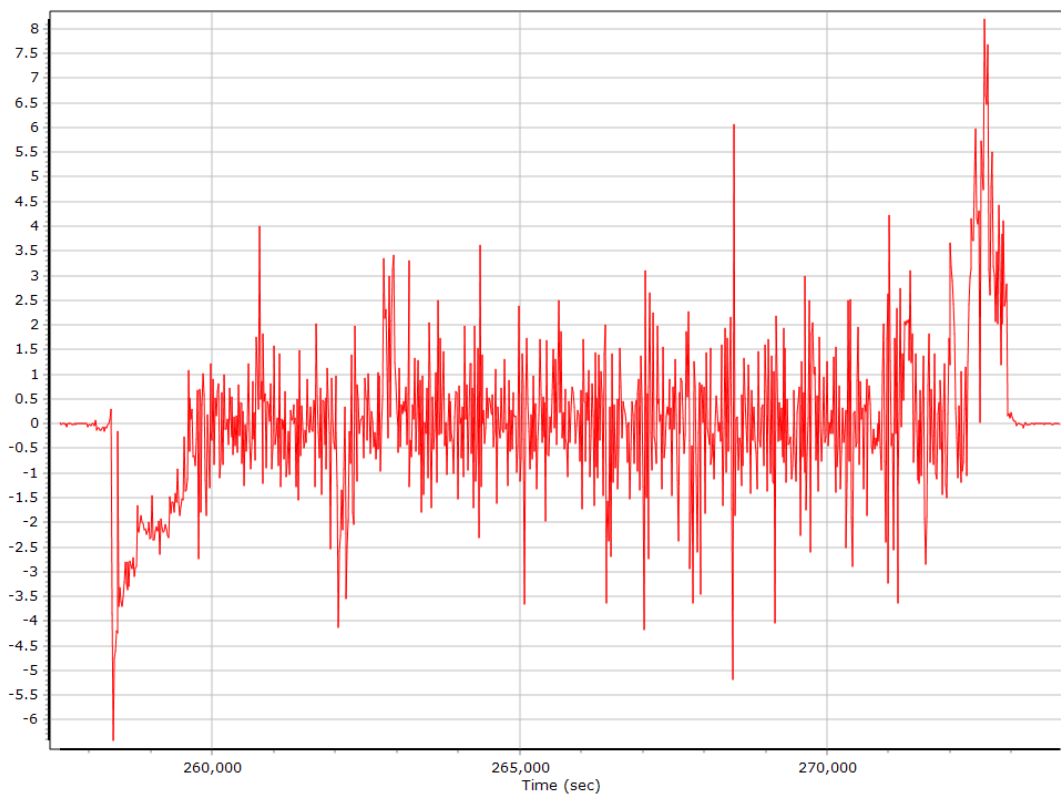
Heading



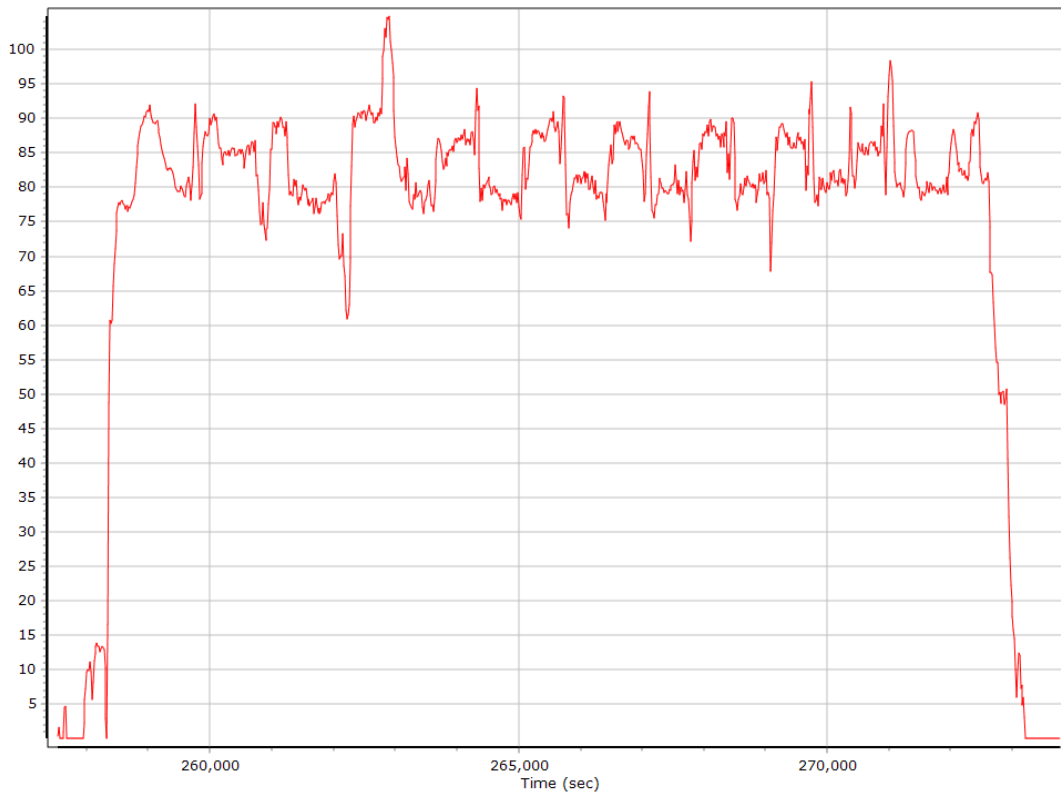
North/East Velocity



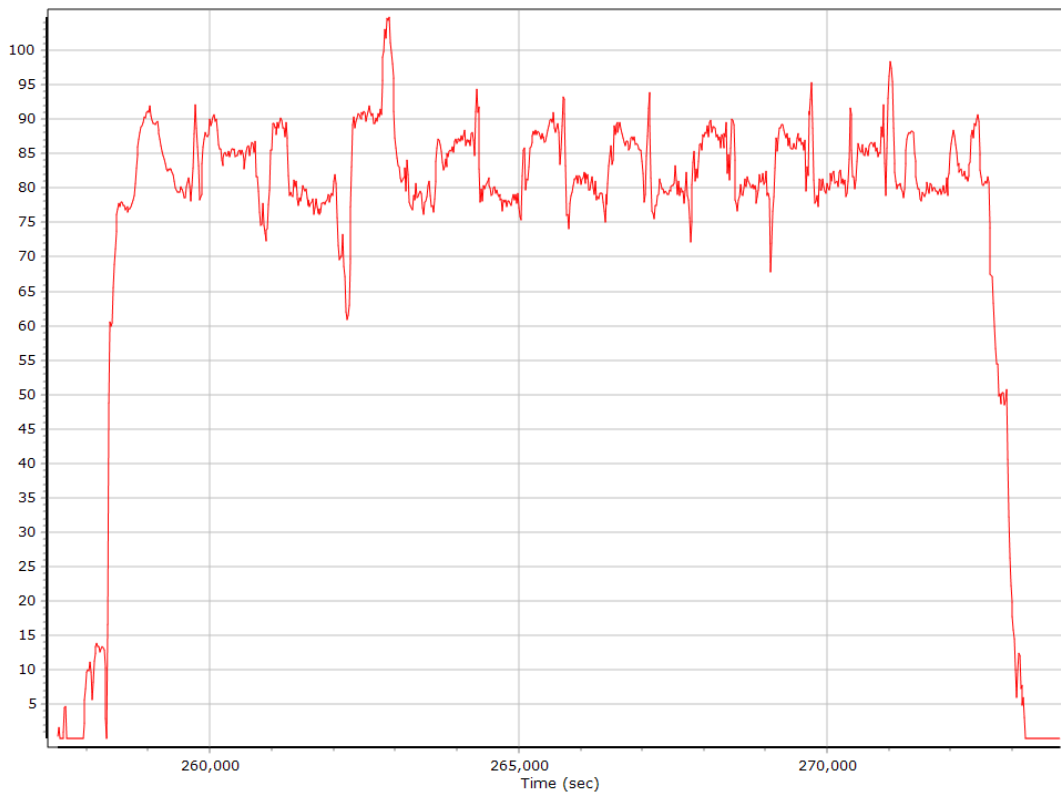
Down Velocity



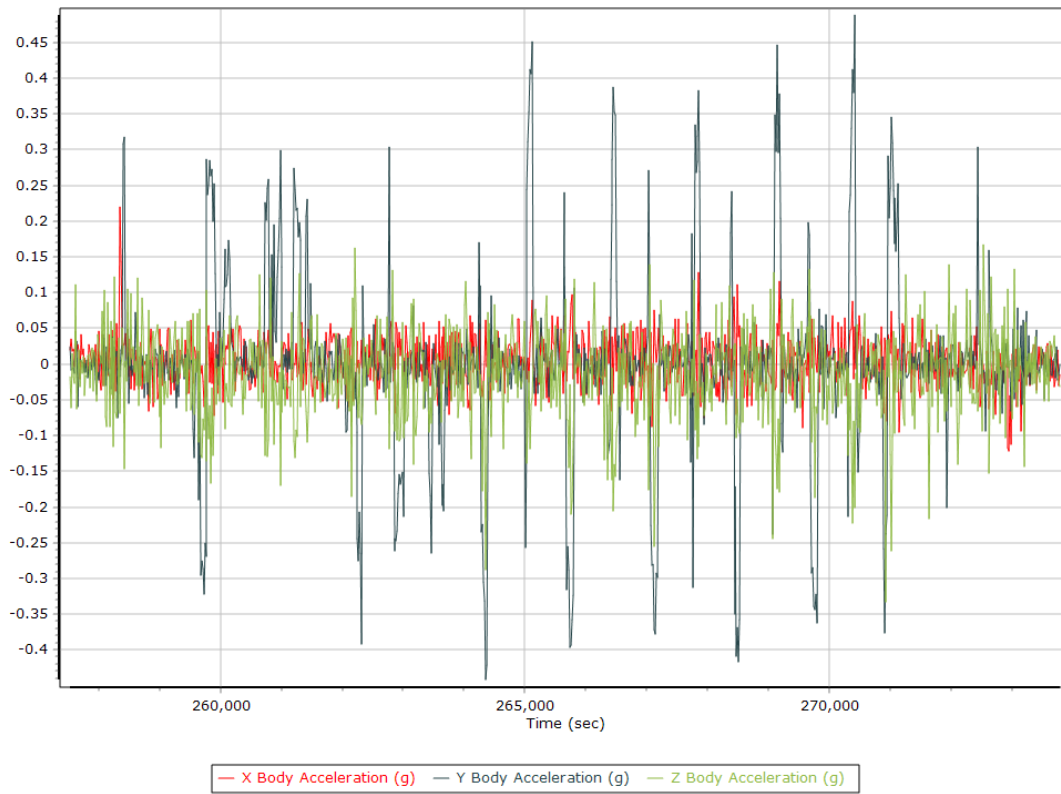
Total Speed



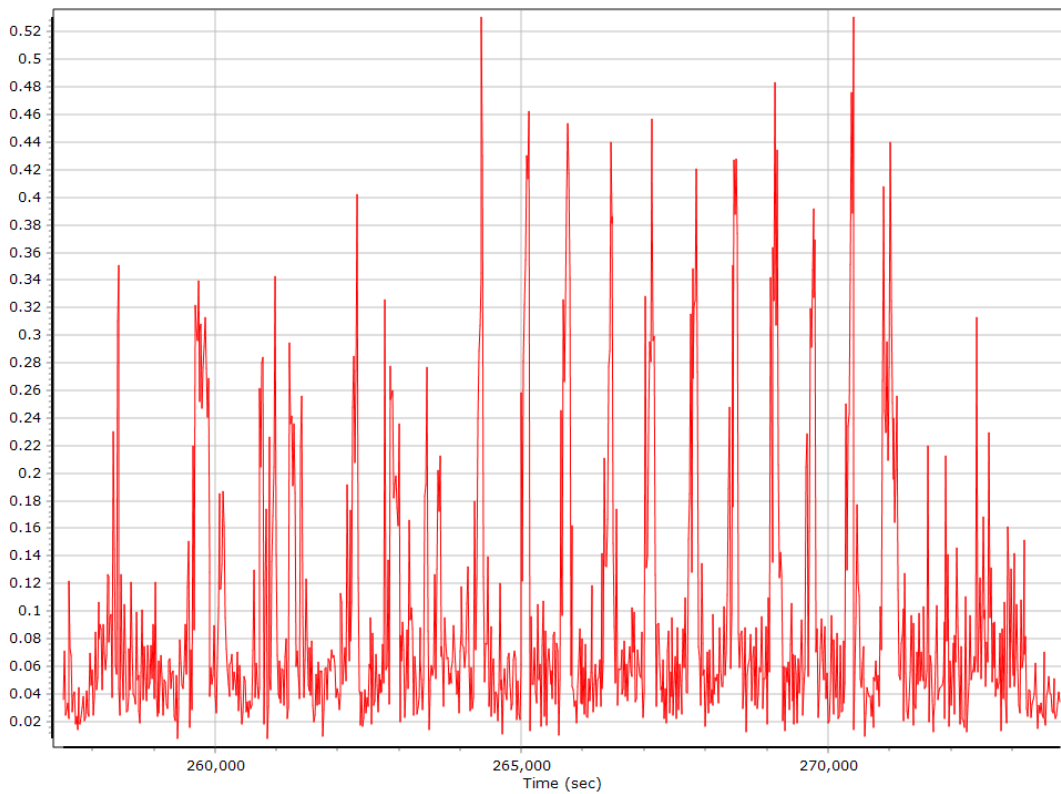
Ground Speed



Body Acceleration



Total Body Acceleration

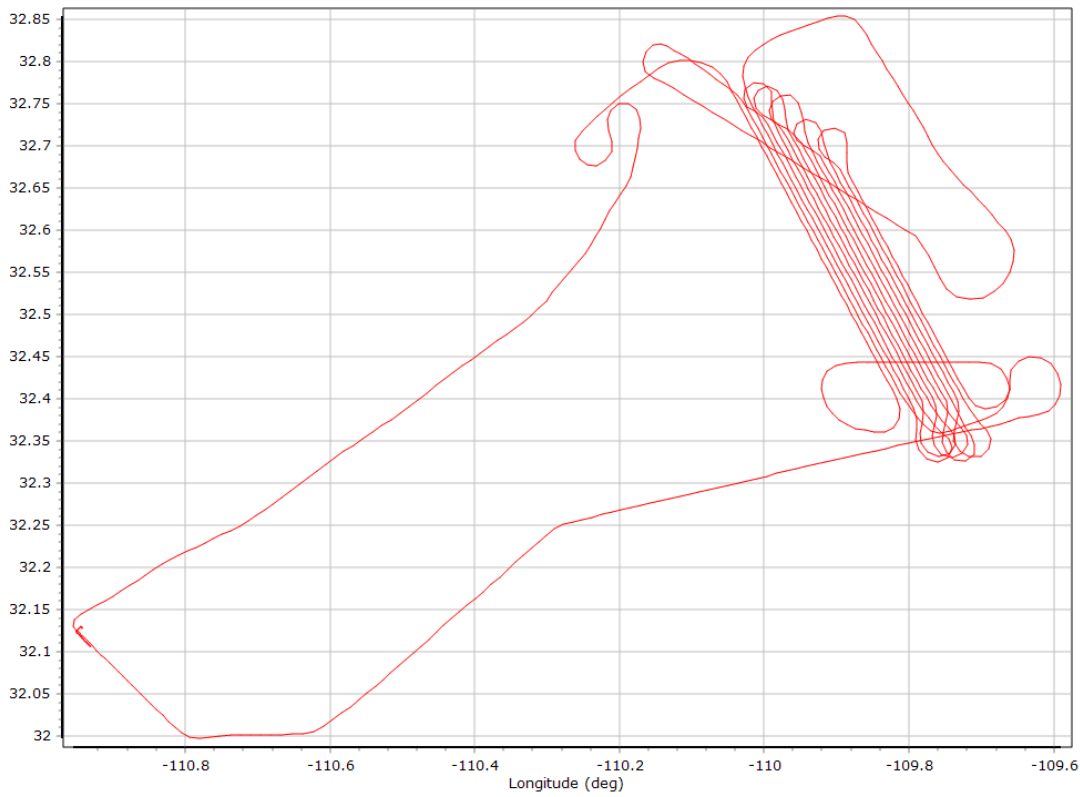


Body Angular Rate

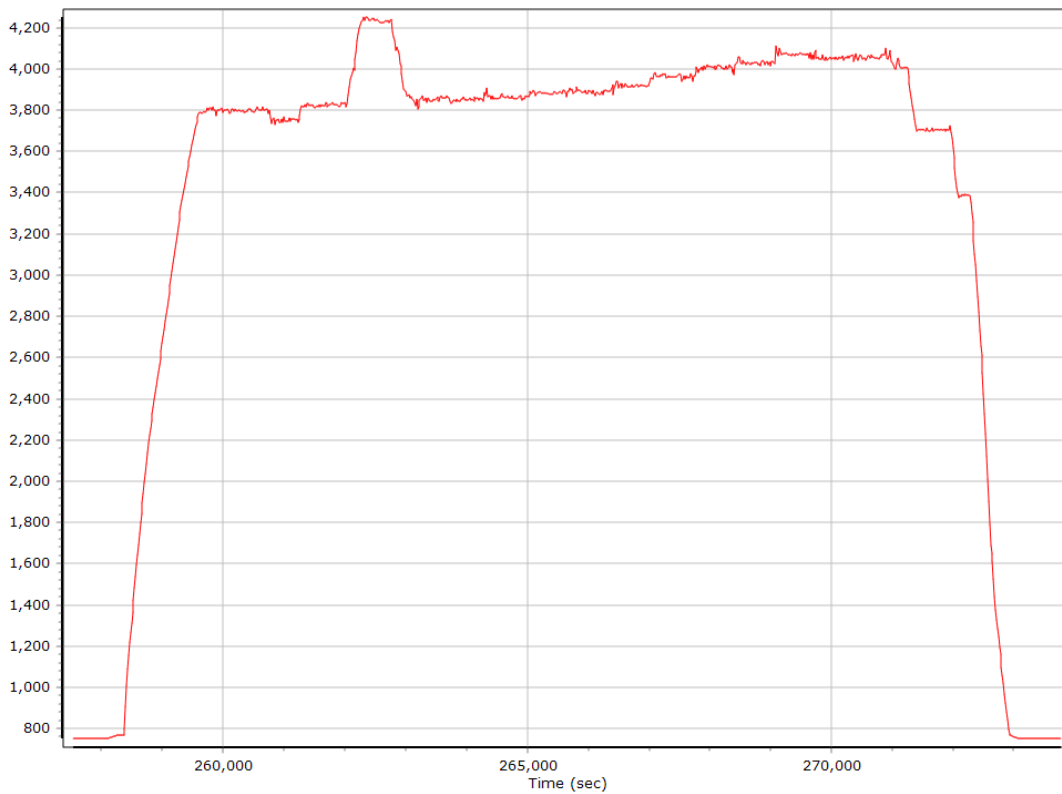


Forward Processed Trajectory Information

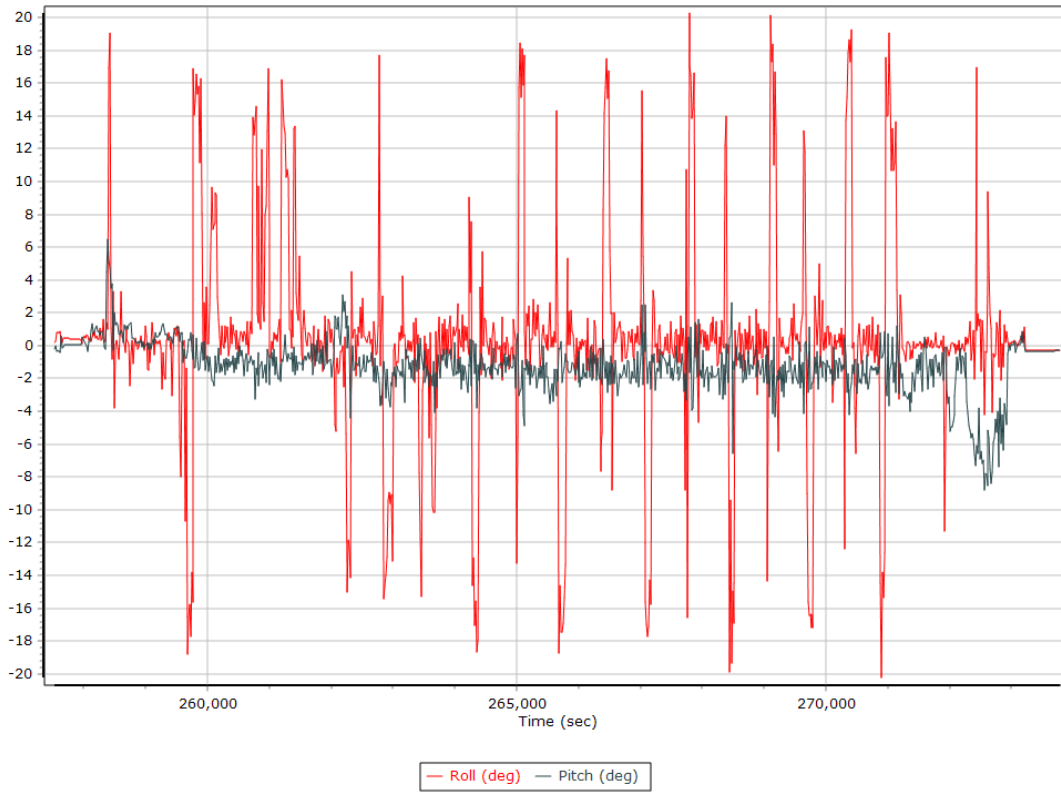
Top View



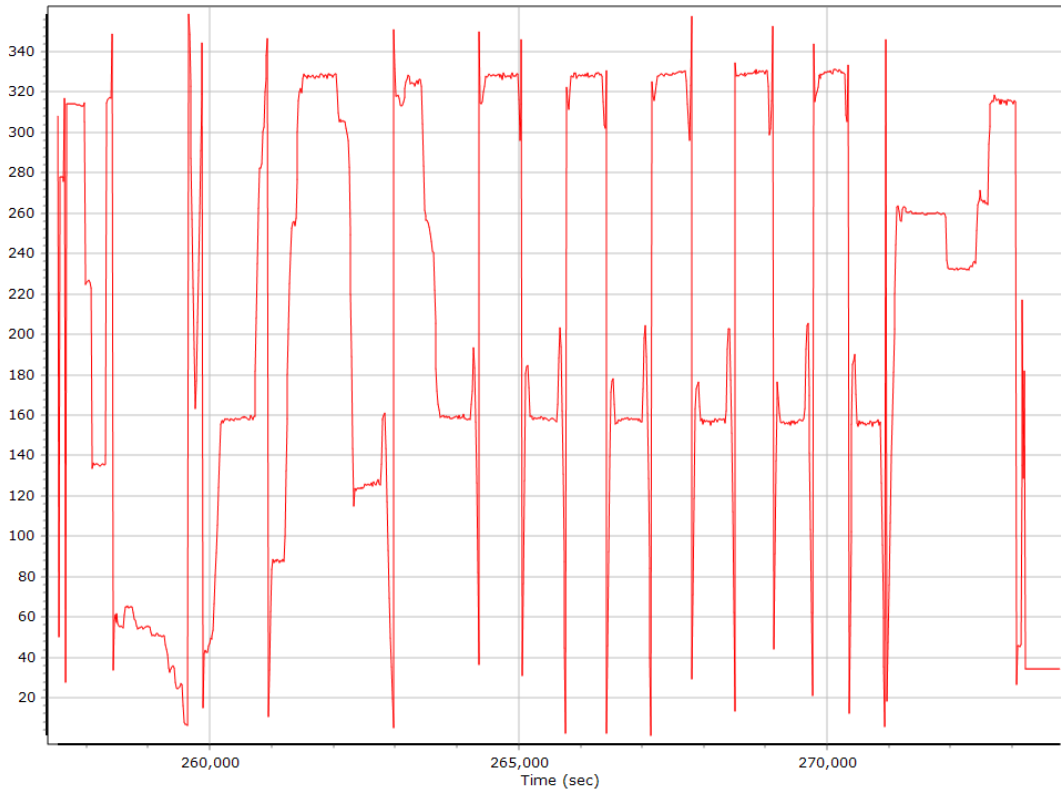
Altitude



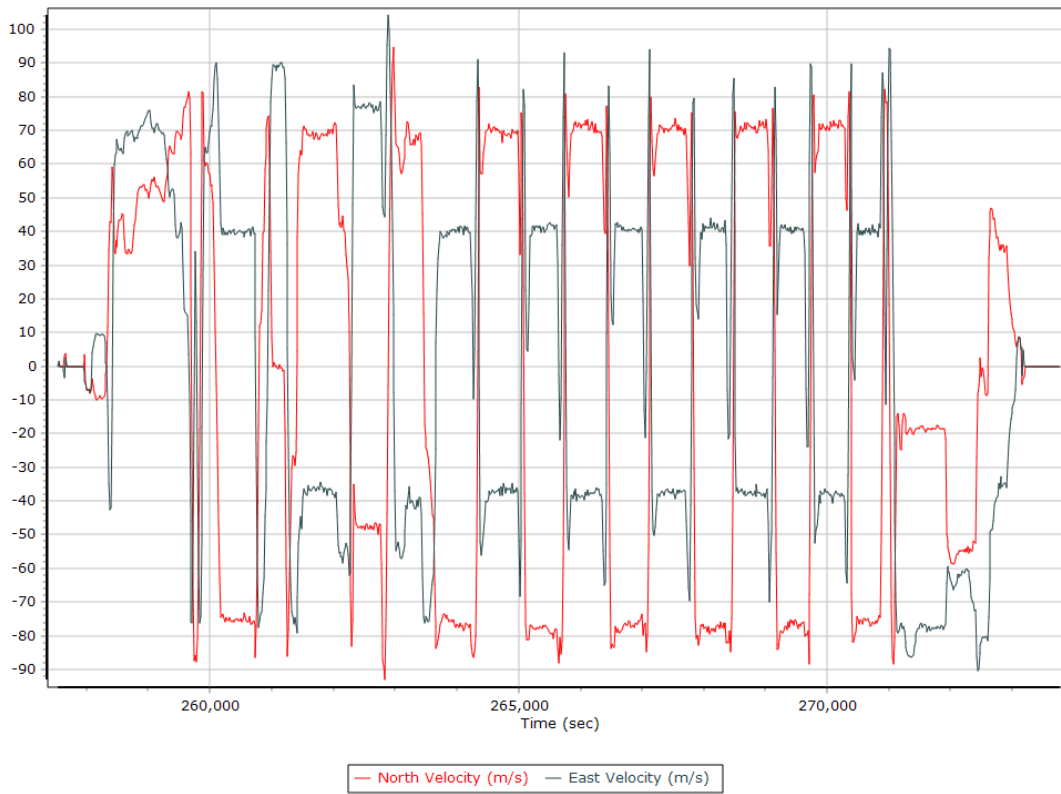
Roll/Pitch



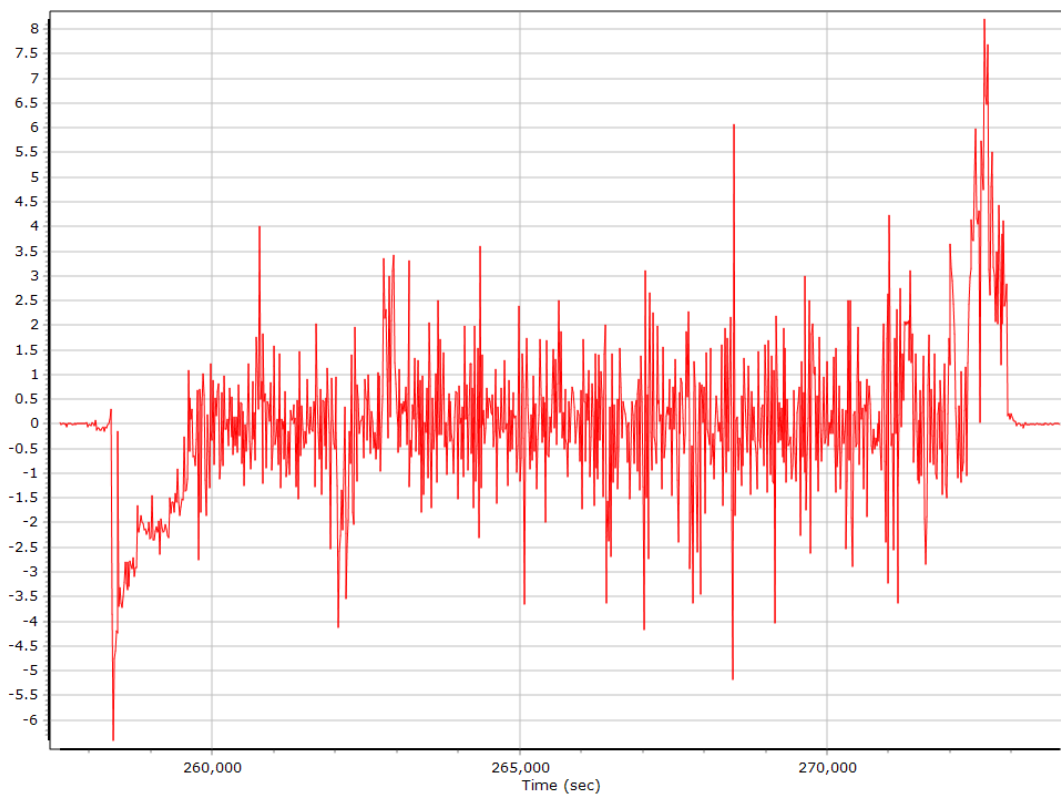
Heading



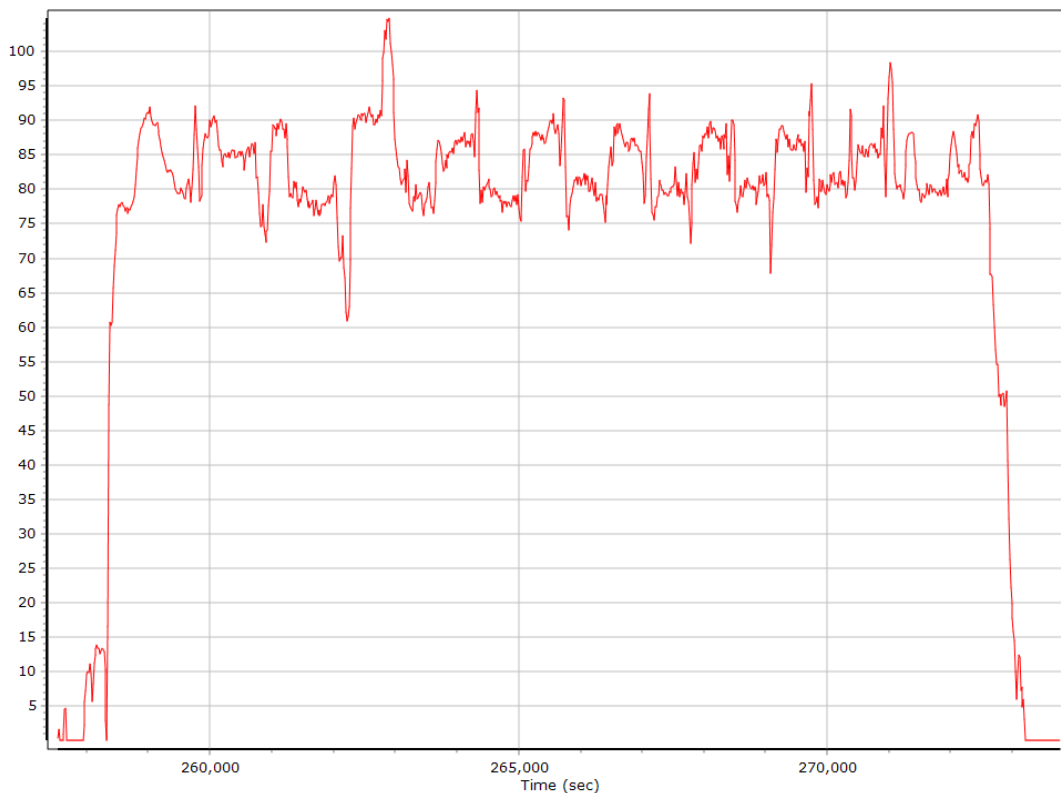
North/East Velocity



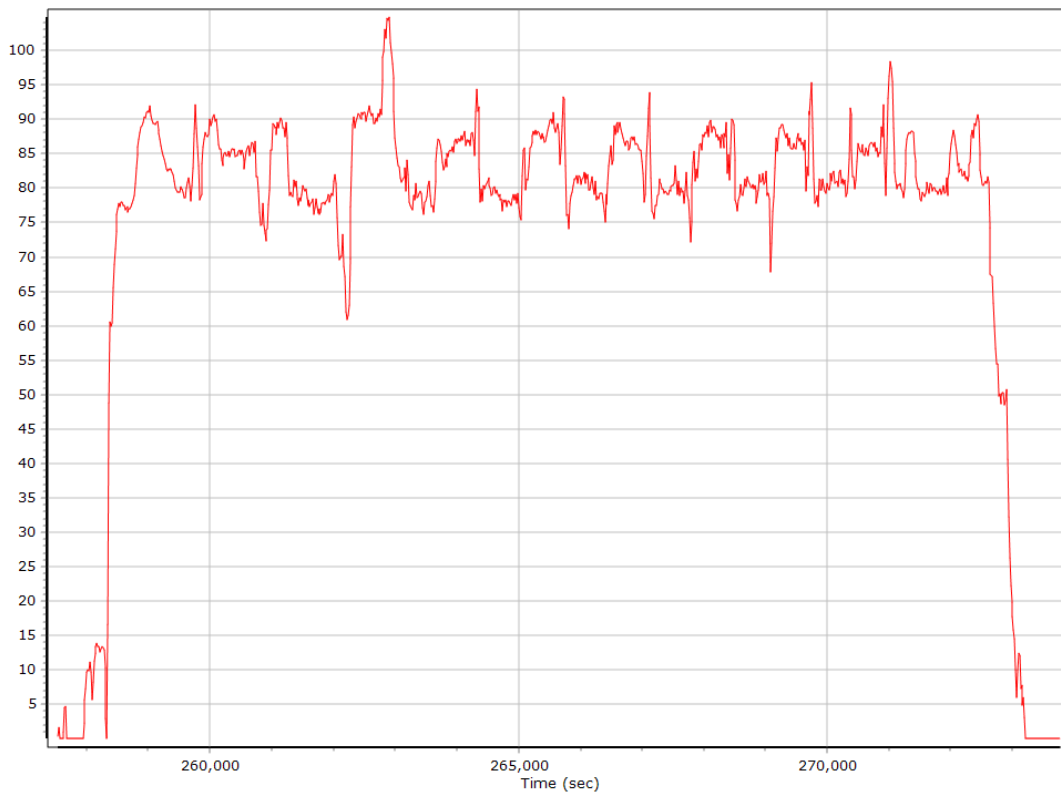
Down Velocity



Total Speed



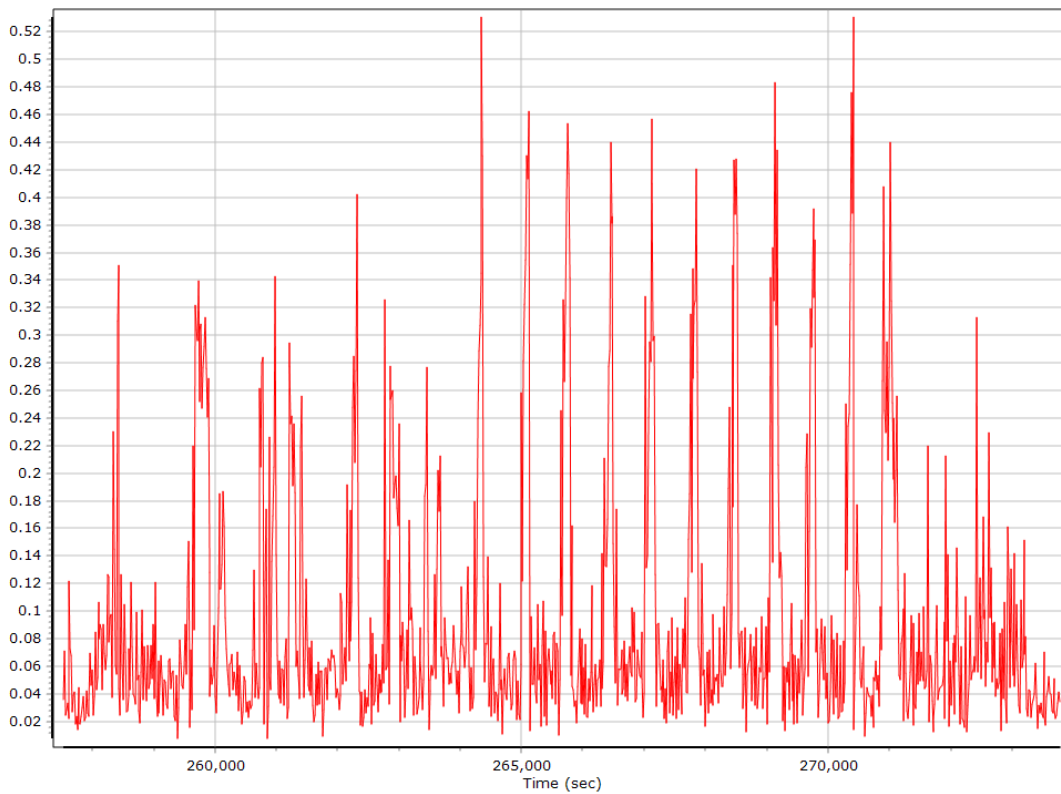
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate

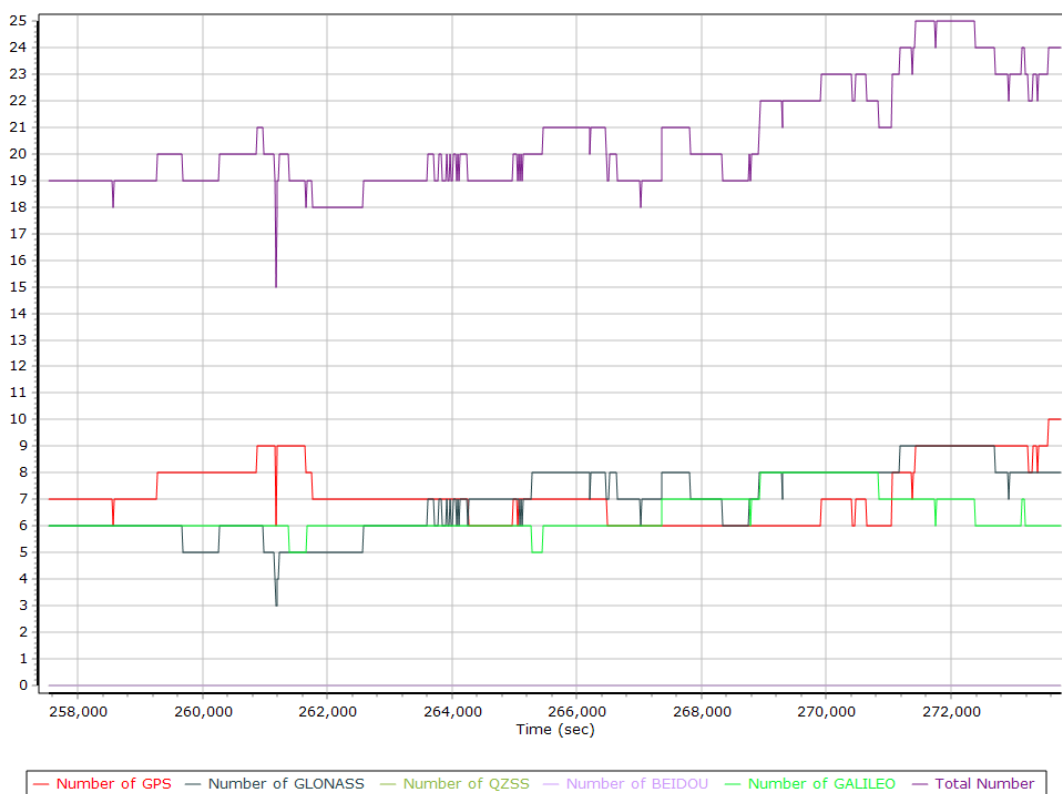


GNSS QC

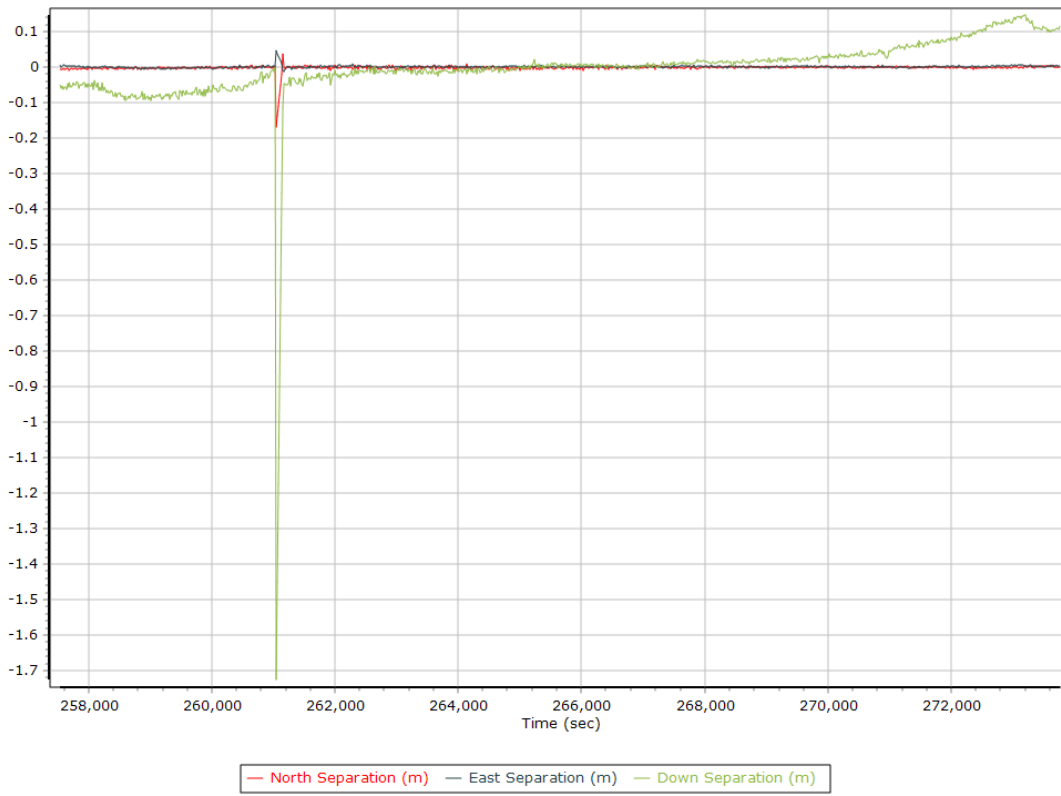
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	6	10	7
Number of GLONASS SV	0	9	7
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Number of GALILEO SV	5	8	6
Total number of SV	13	25	21
PDOP	1.05	1.53	1.22
QC Solution Gaps	1.00	5.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	16601.00	0.00	7.00
Percentage	99.96	0.00	0.04

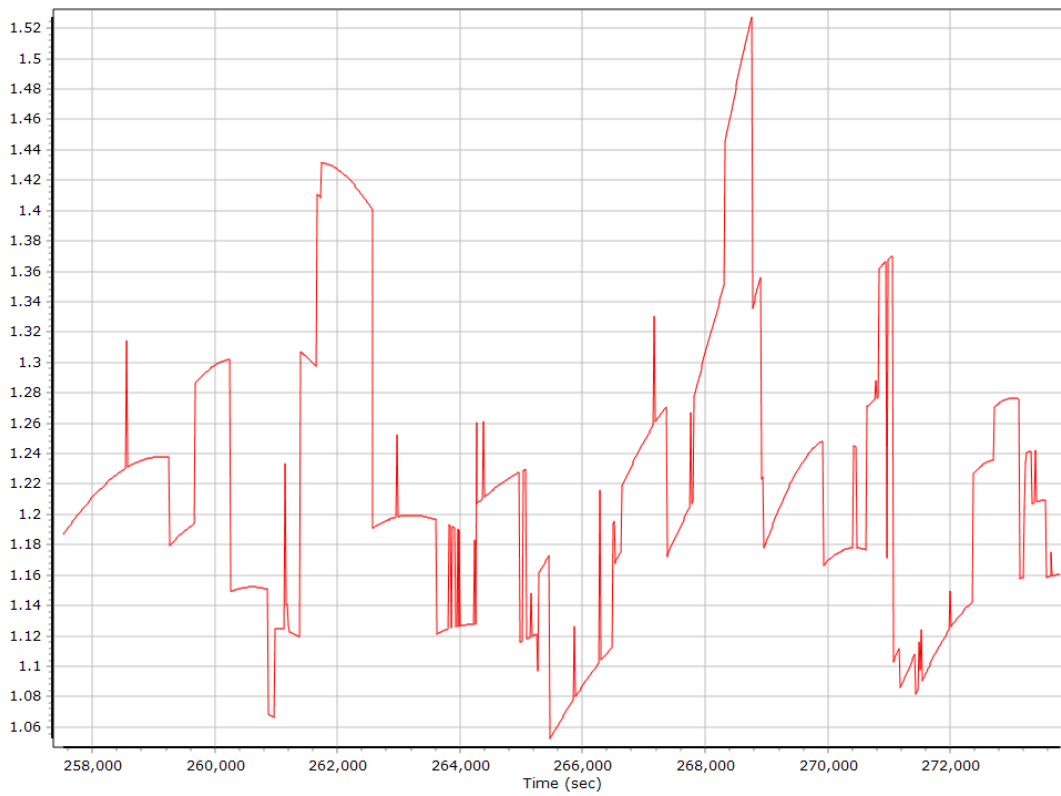
Num SVs in solution



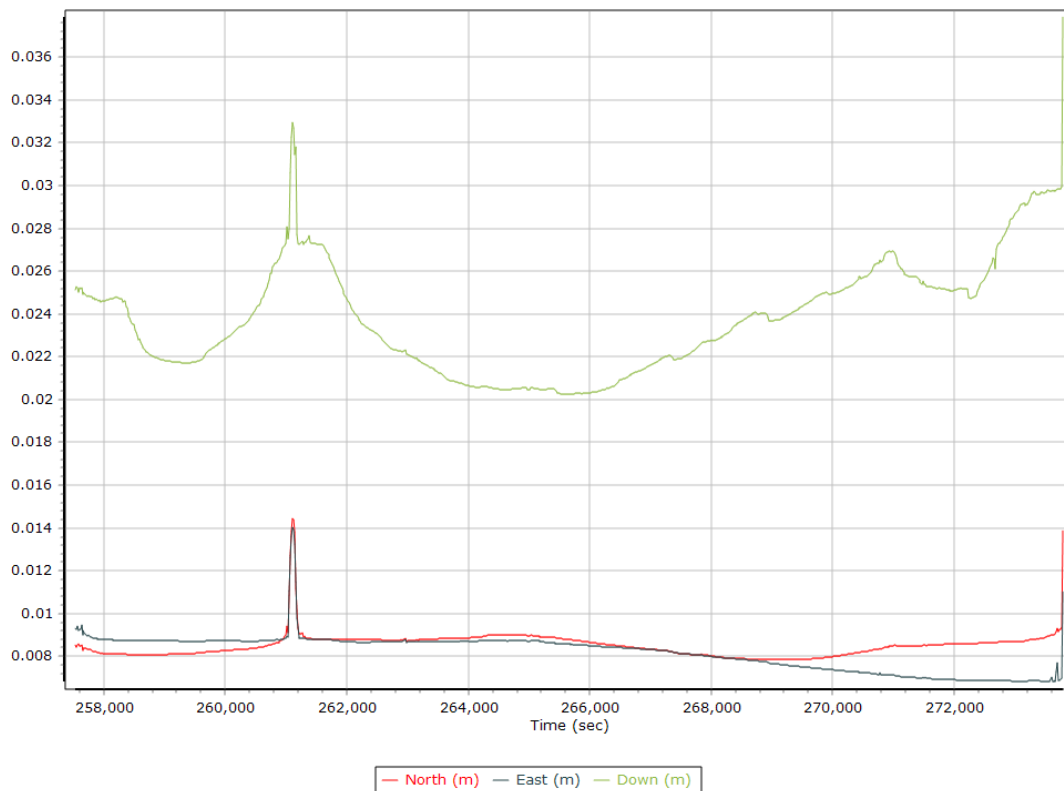
Forward/Reverse Separation



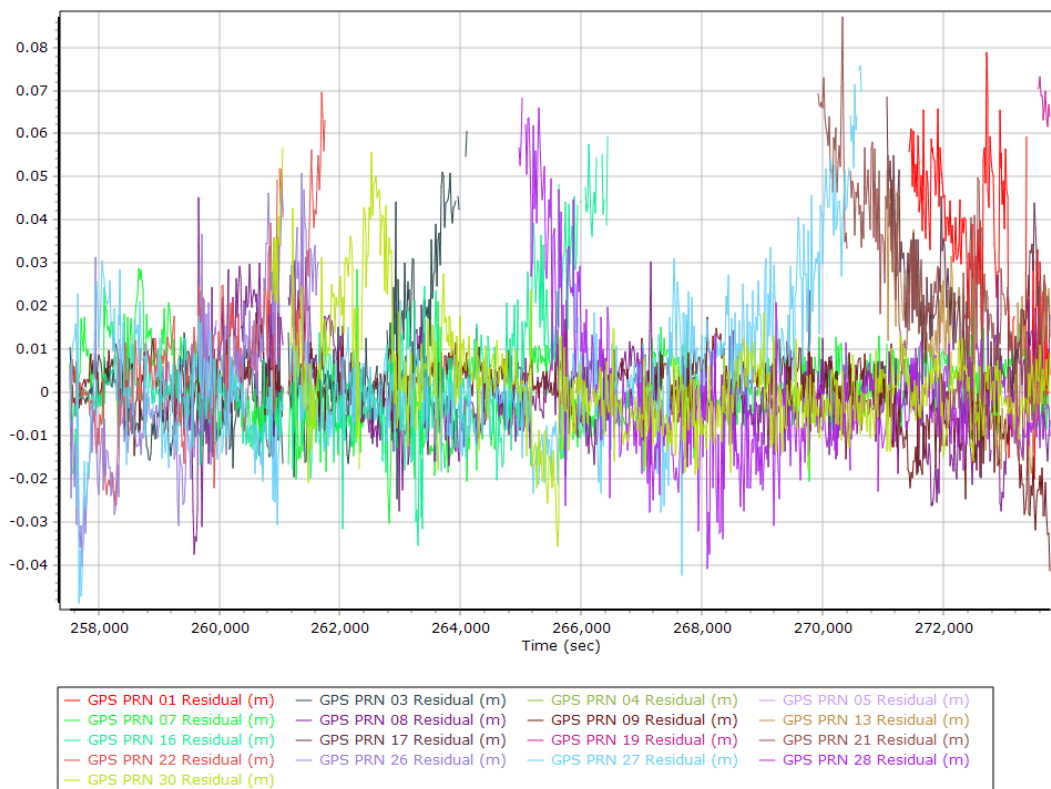
PDOP



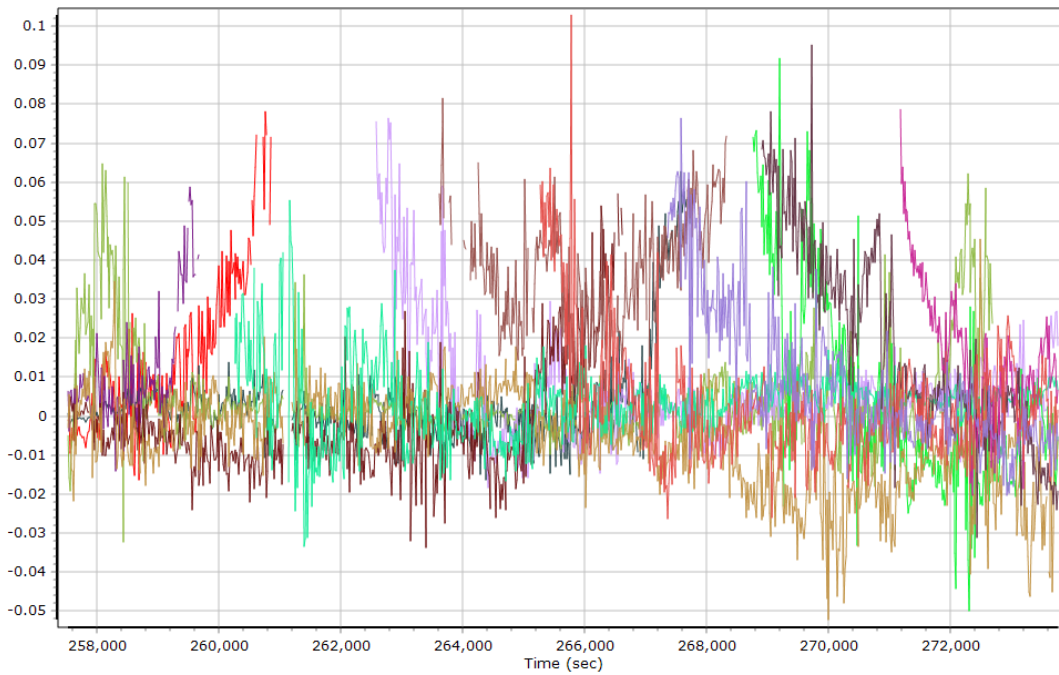
Estimated Position Accuracy



GPS Residuals

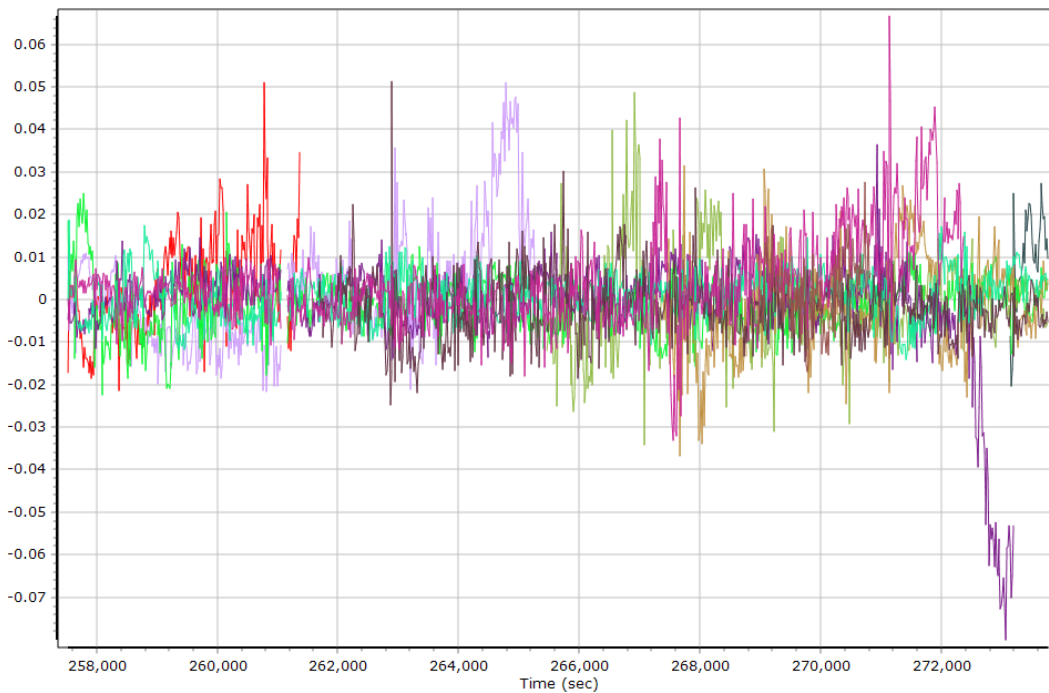


GLONASS Residuals



- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GLONASS 01 Residual (m) | GLONASS 02 Residual (m) | GLONASS 03 Residual (m) | GLONASS 04 Residual (m) |
| GLONASS 05 Residual (m) | GLONASS 11 Residual (m) | GLONASS 12 Residual (m) | GLONASS 13 Residual (m) |
| GLONASS 14 Residual (m) | GLONASS 15 Residual (m) | GLONASS 17 Residual (m) | GLONASS 22 Residual (m) |
| GLONASS 23 Residual (m) | GLONASS 24 Residual (m) | | |

GALILEO Residuals



- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GALILEO 01 Residual (m) | GALILEO 02 Residual (m) | GALILEO 03 Residual (m) | GALILEO 04 Residual (m) |
| GALILEO 05 Residual (m) | GALILEO 09 Residual (m) | GALILEO 11 Residual (m) | GALILEO 12 Residual (m) |
| GALILEO 24 Residual (m) | GALILEO 25 Residual (m) | GALILEO 31 Residual (m) | GALILEO 33 Residual (m) |

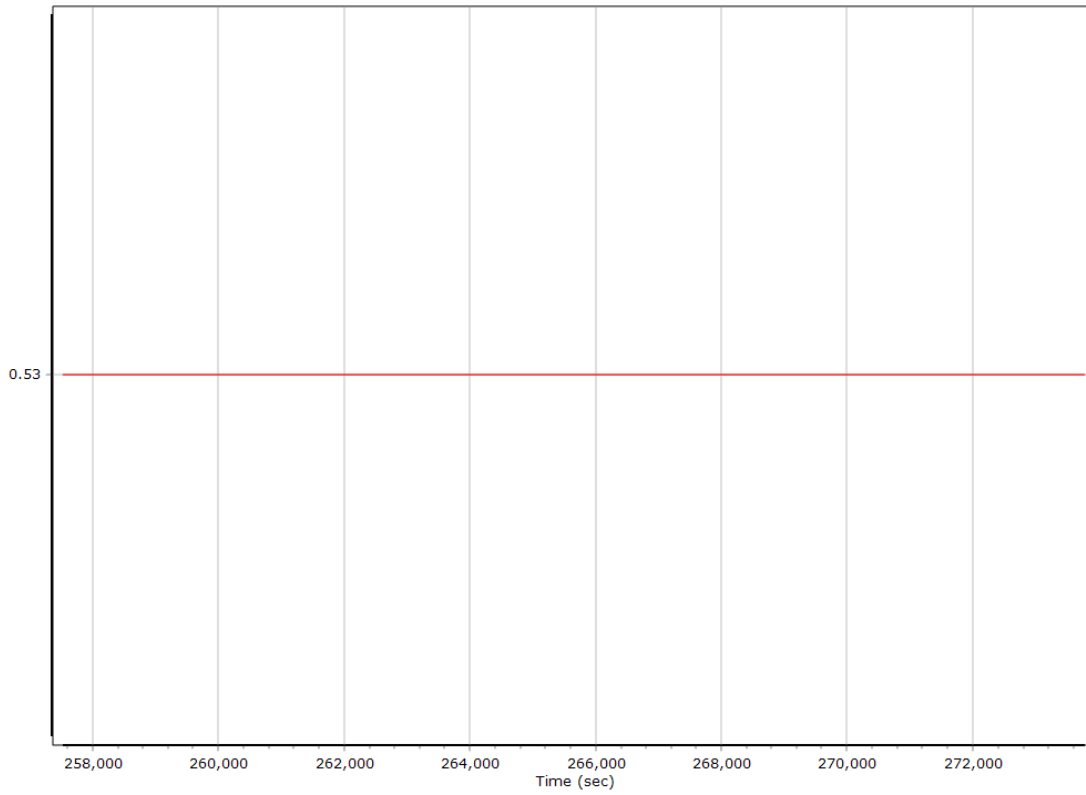
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	257155.000 (11/10/2020 11:25:55 PM)		
Processing end time	273793.000 (11/11/2020 4:03:13 AM)		
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)	0.530	0.200	-1.189
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

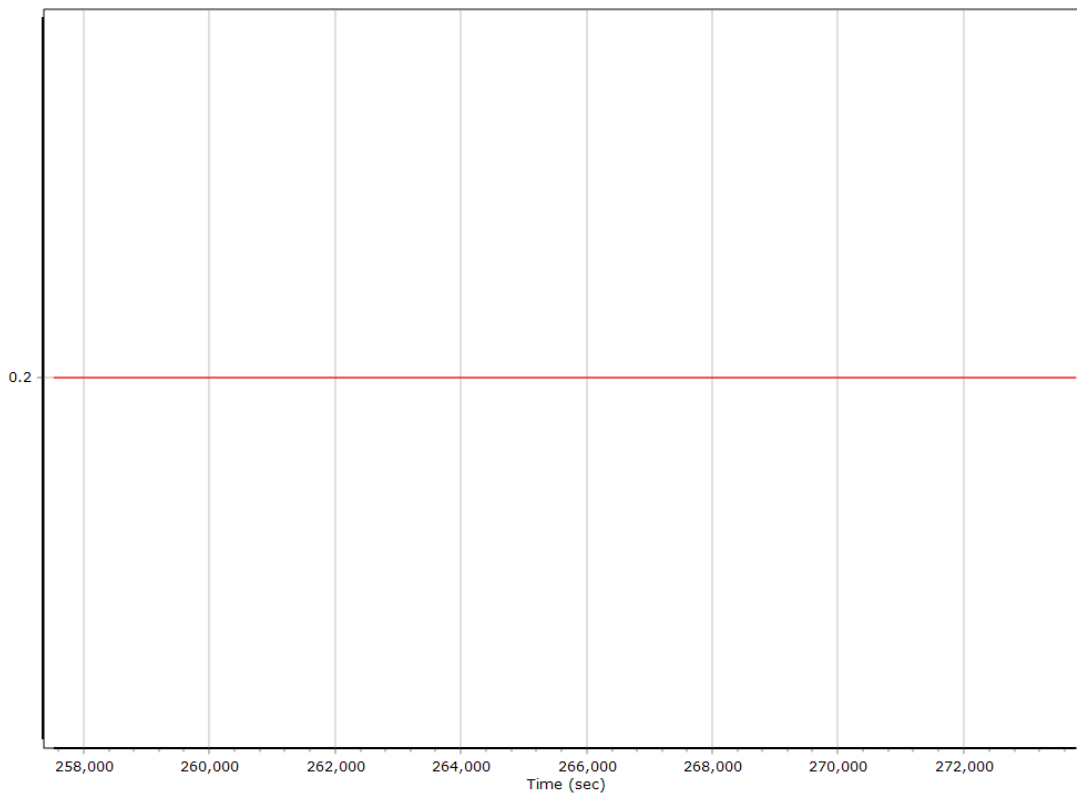
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

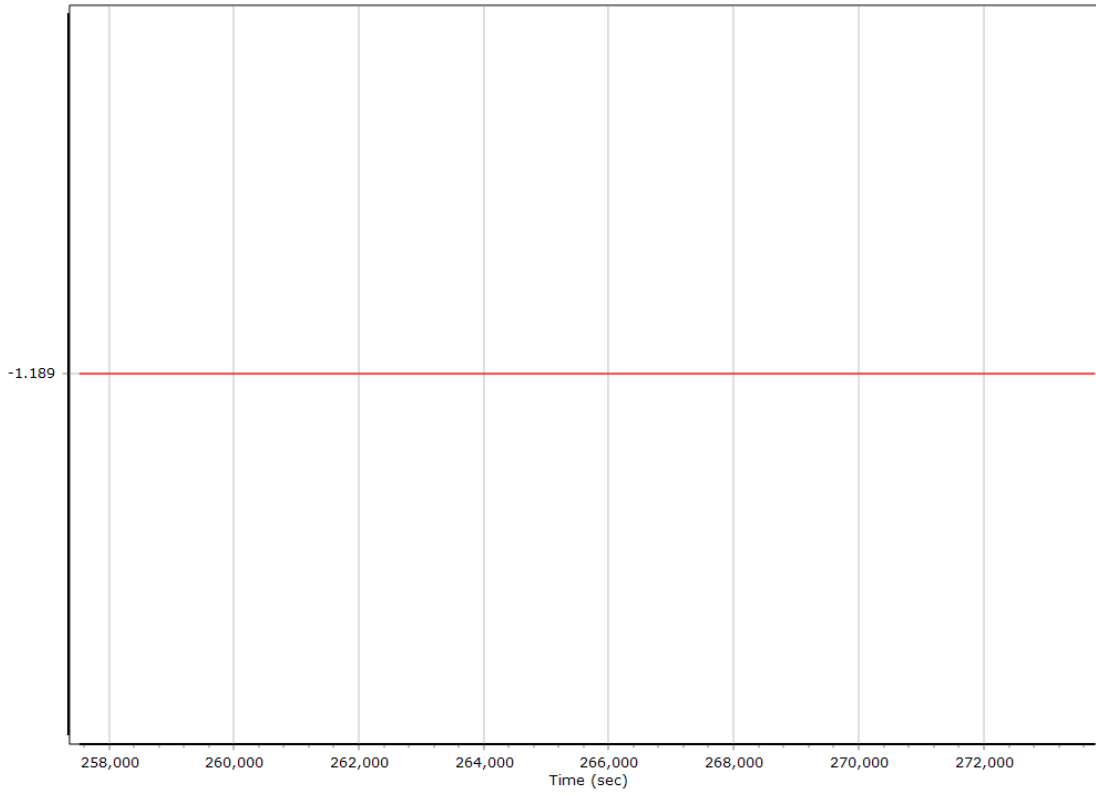
X Reference-Primary GNSS Lever Arm (m)



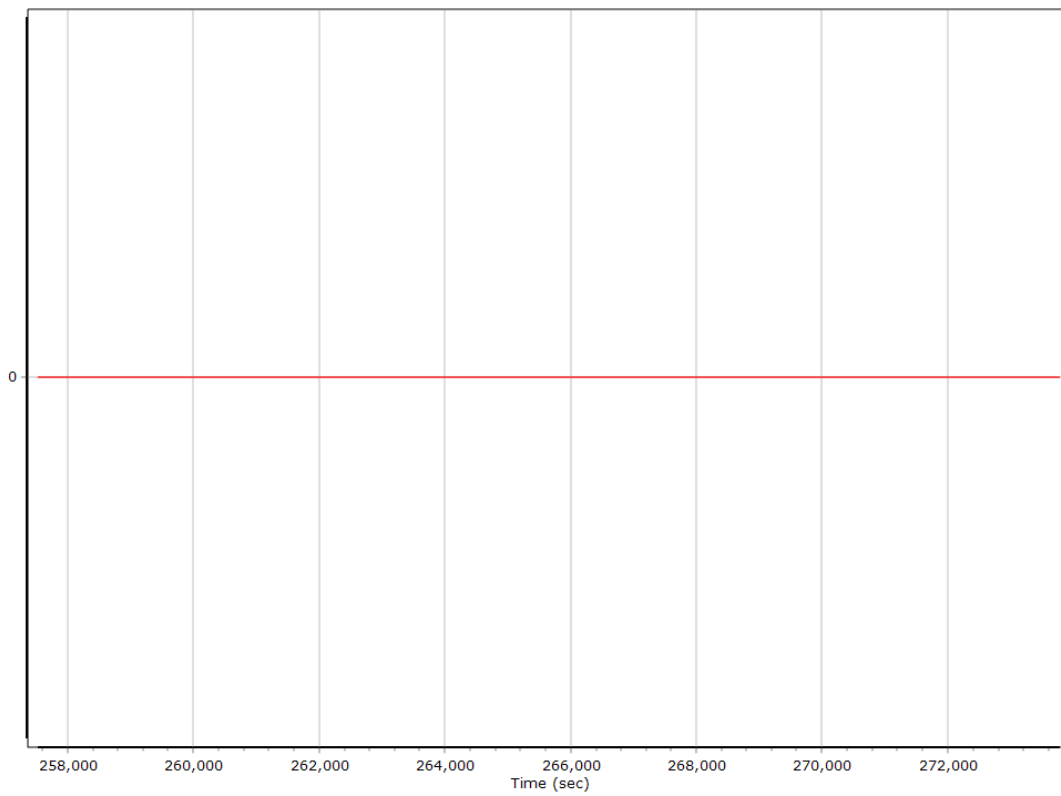
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



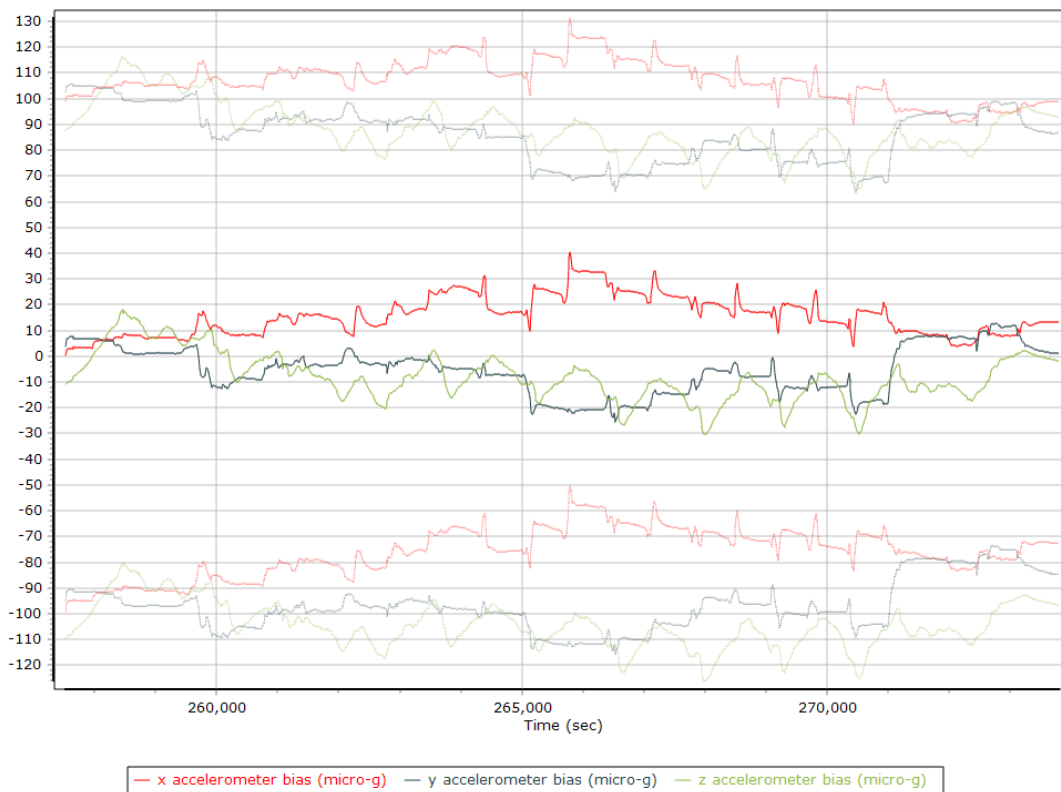
Reference-Primary GNSS Lever Arm Figure of Merit



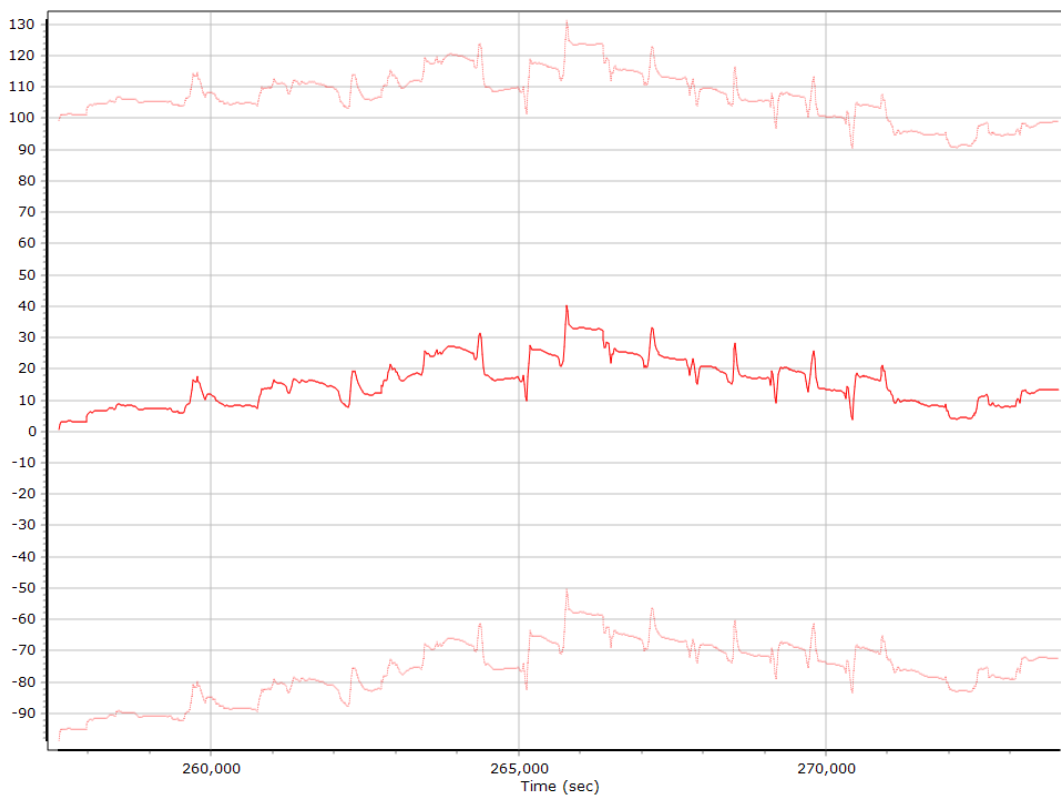
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

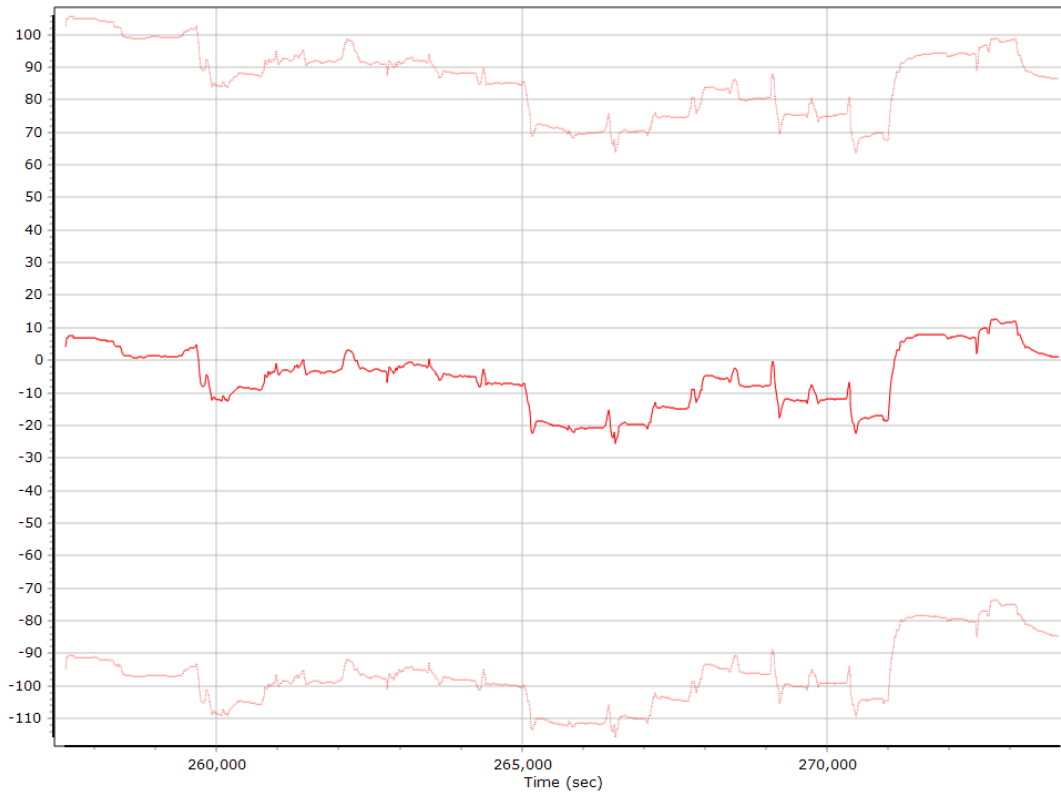
Accelerometer Bias (micro-g)



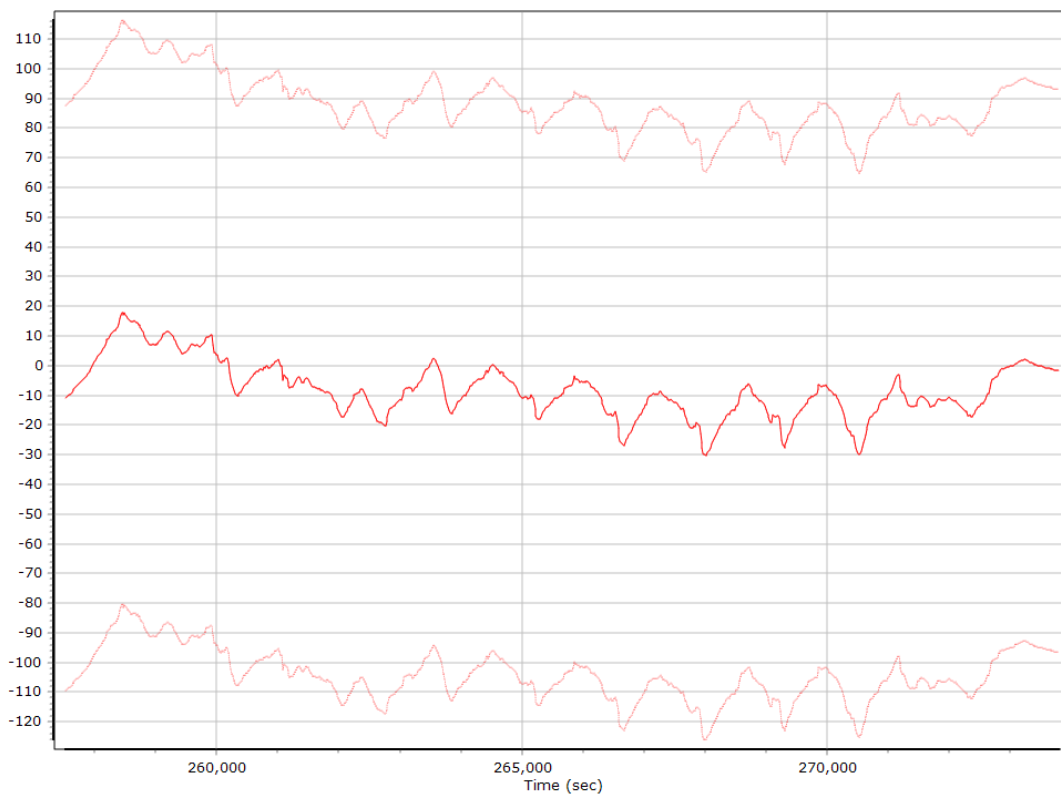
X Accelerometer Bias (micro-g)



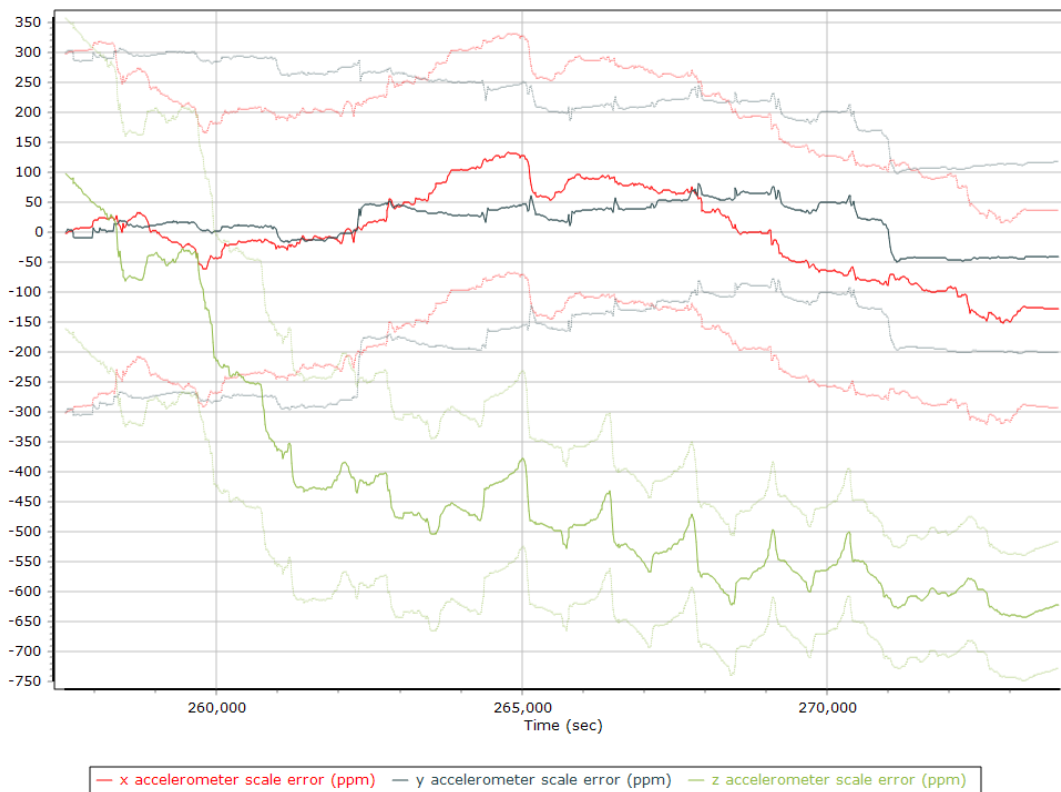
Y Accelerometer Bias (micro-g)



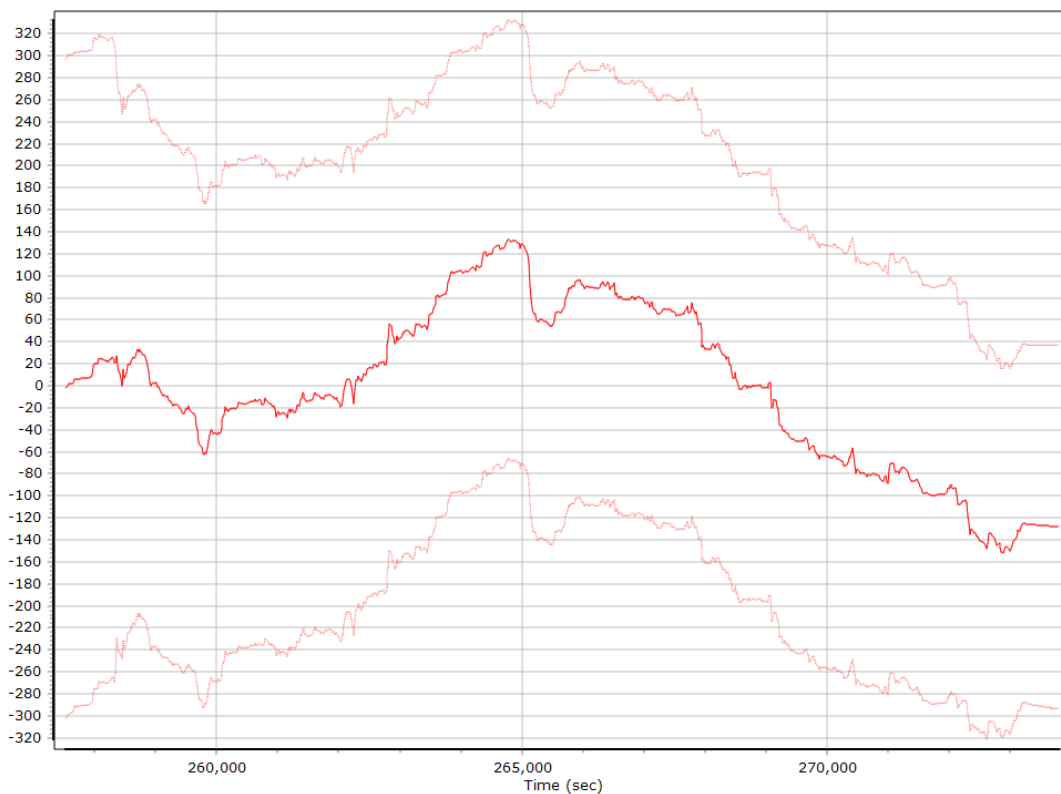
Z Accelerometer Bias (micro-g)



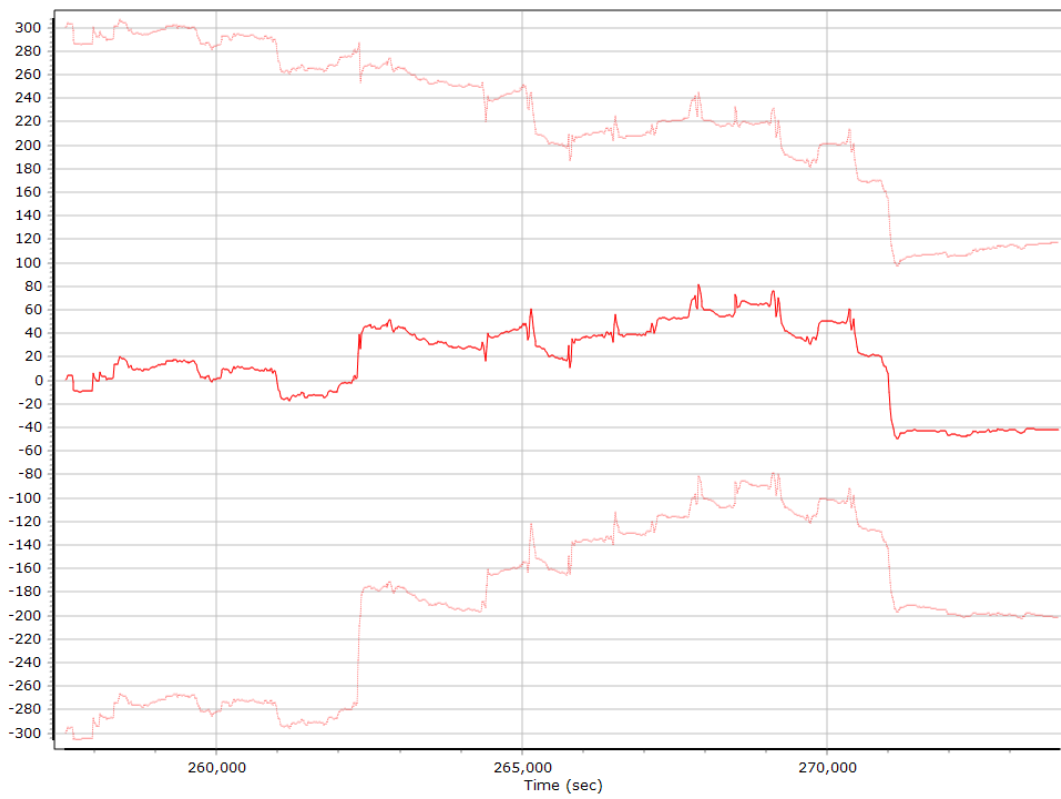
Accelerometer Scale Error (ppm)



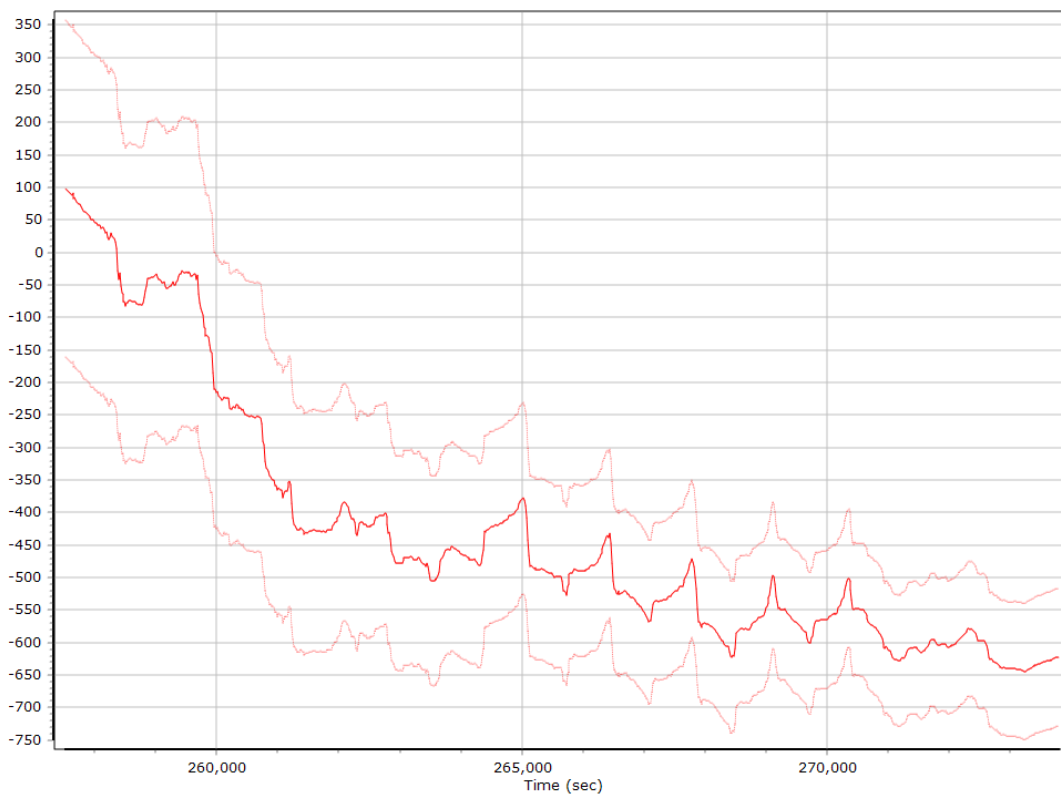
X Accelerometer Scale Error (ppm)



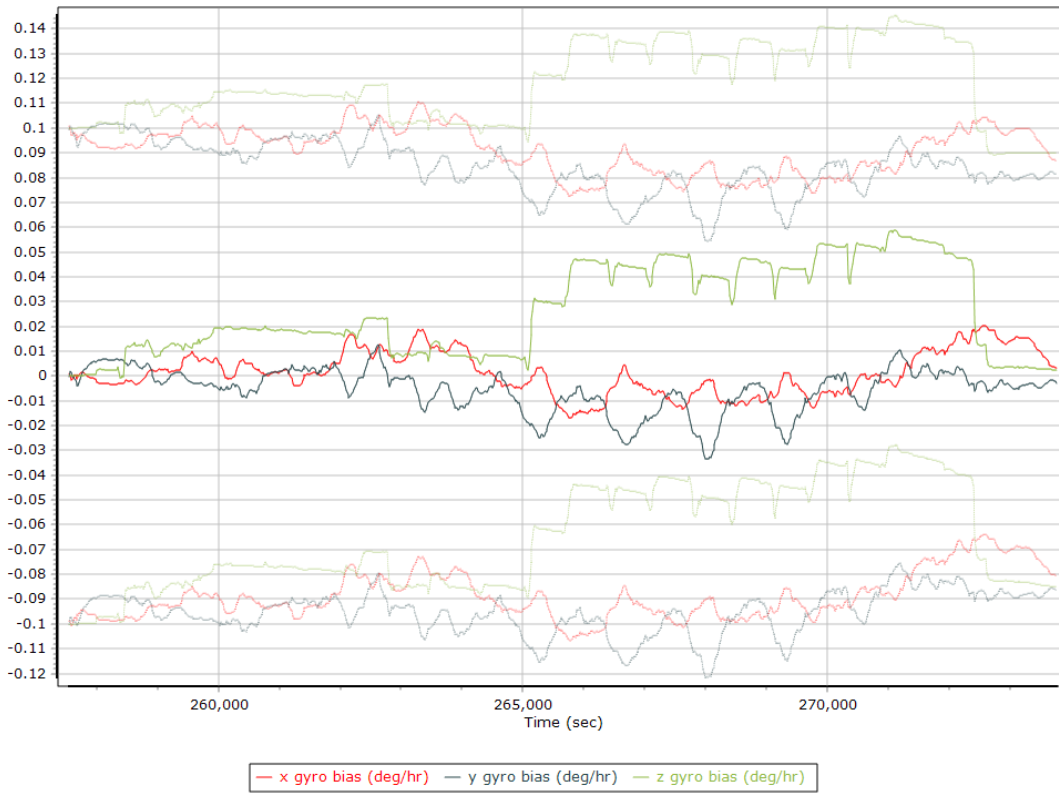
Y Accelerometer Scale Error (ppm)



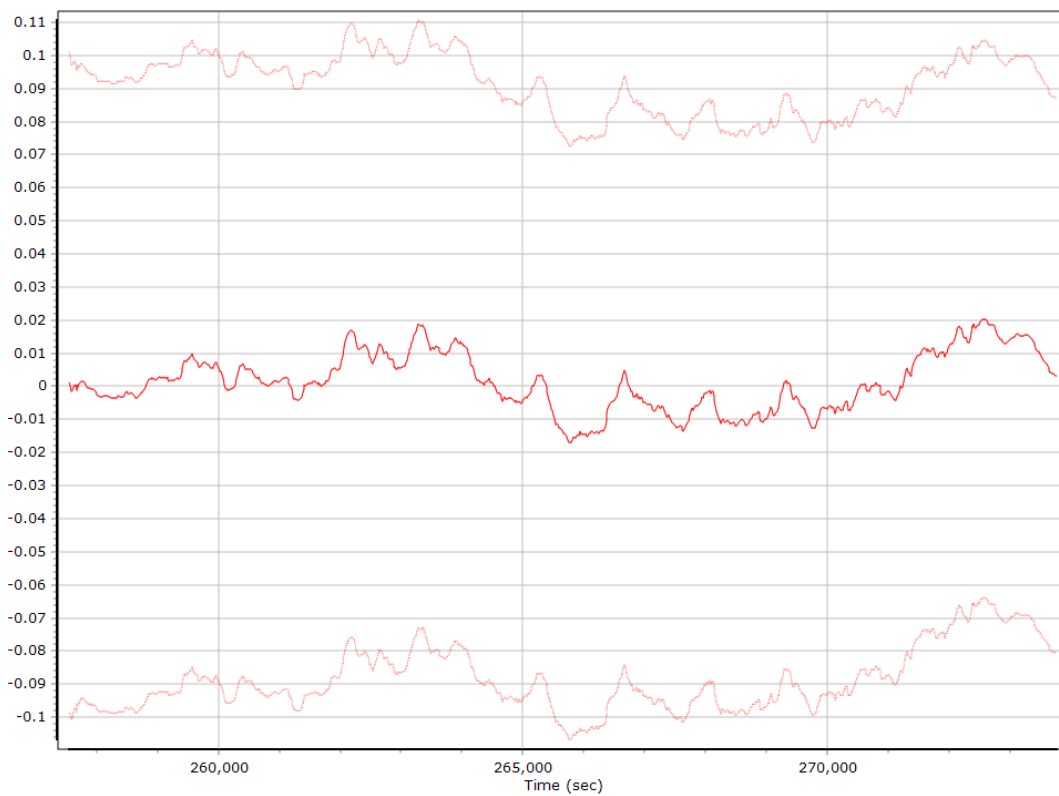
Z Accelerometer Scale Error (ppm)



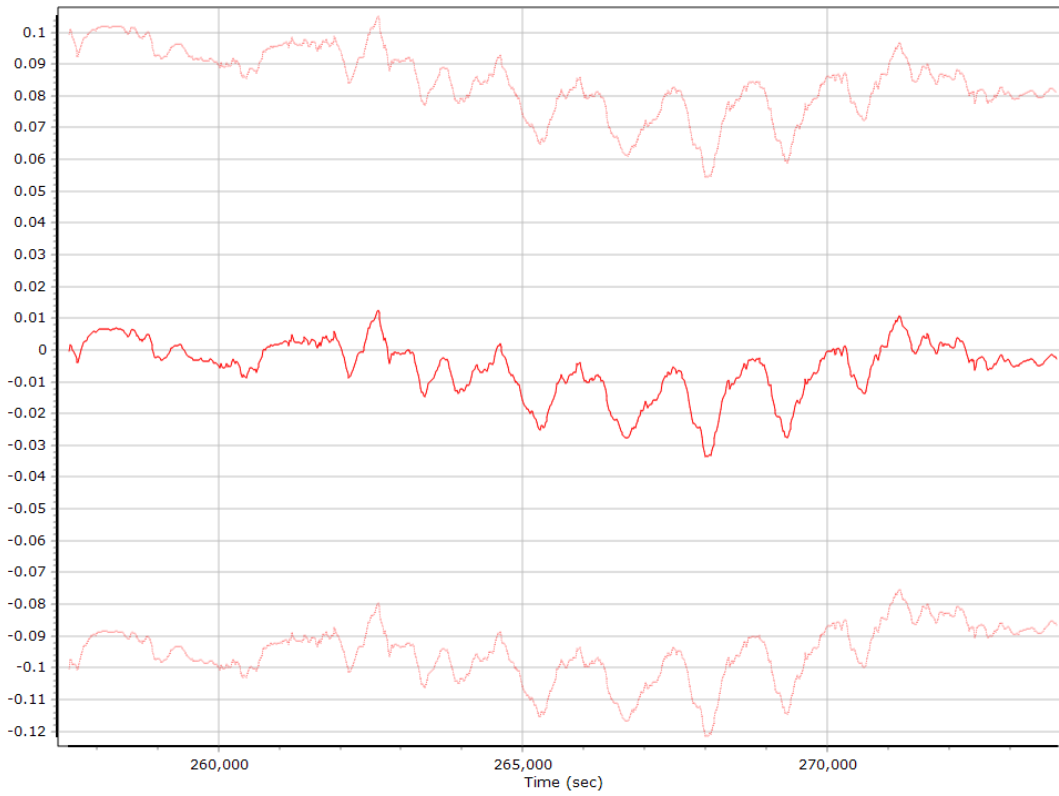
Gyro Bias (deg/h)



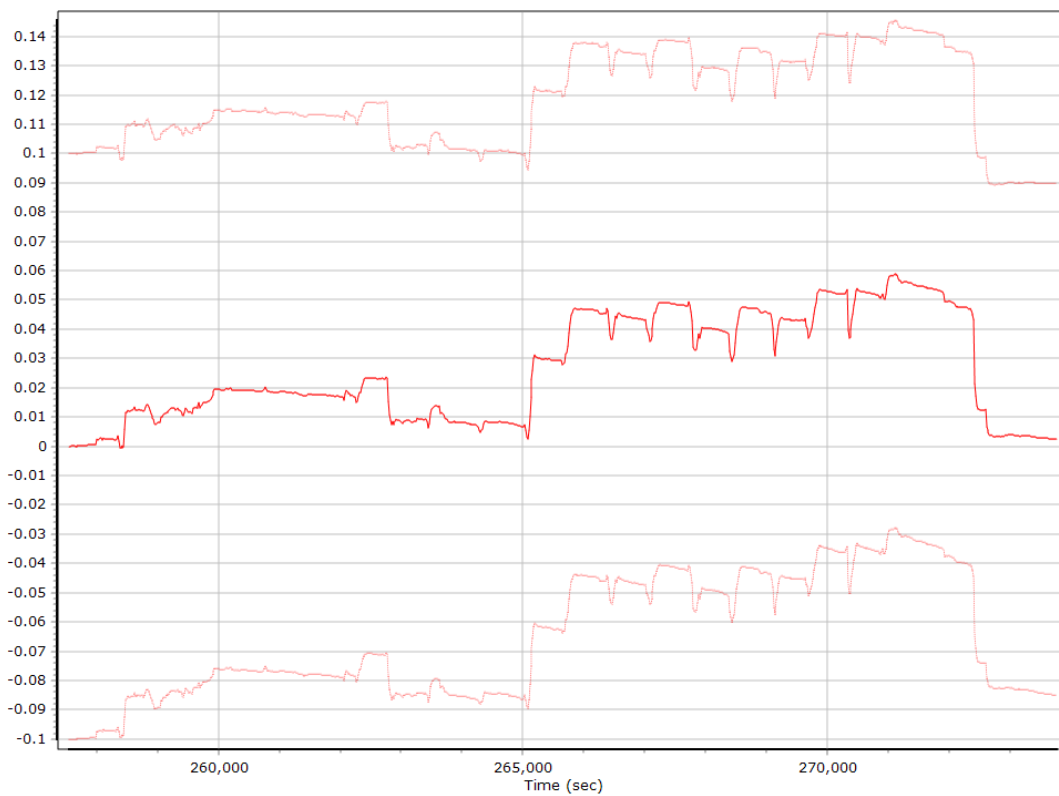
X Gyro Bias (deg/h)



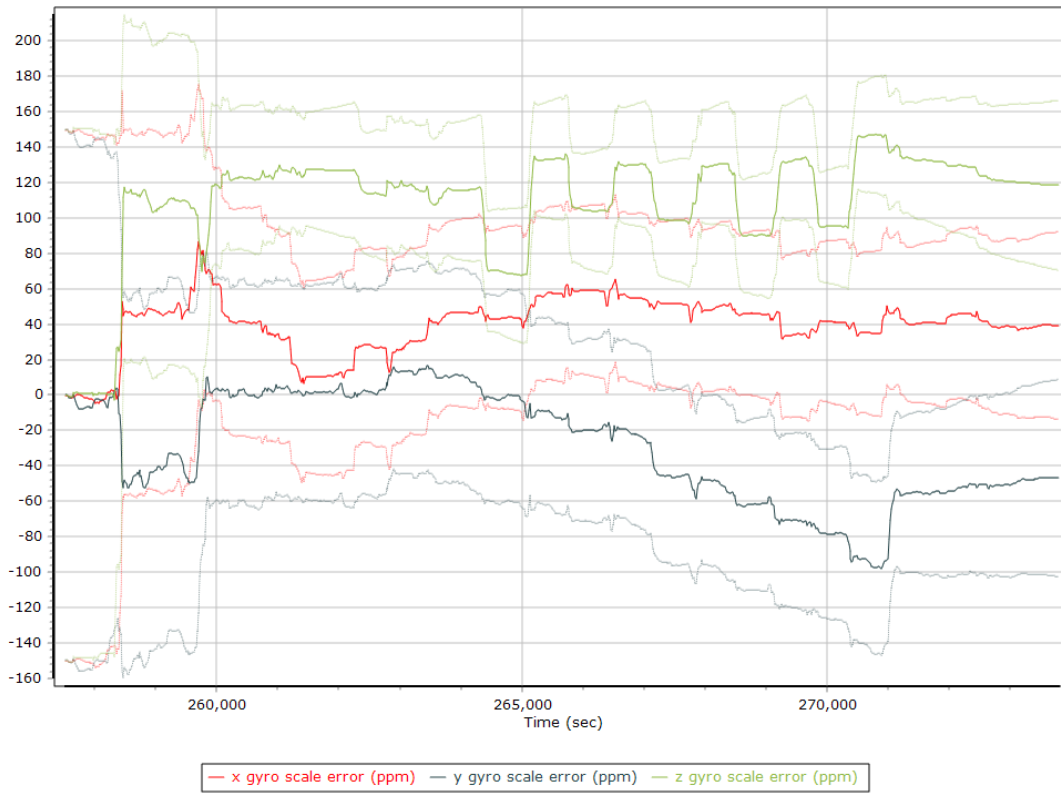
Y Gyro Bias (deg/h)



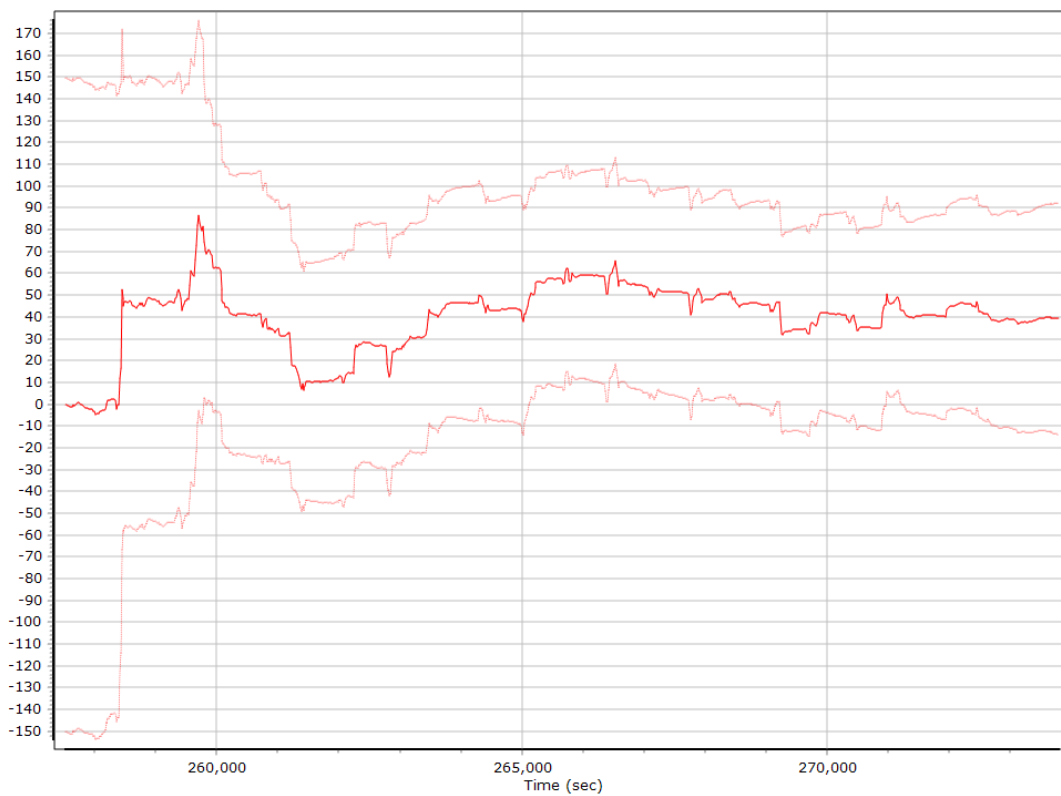
Z Gyro Bias (deg/h)



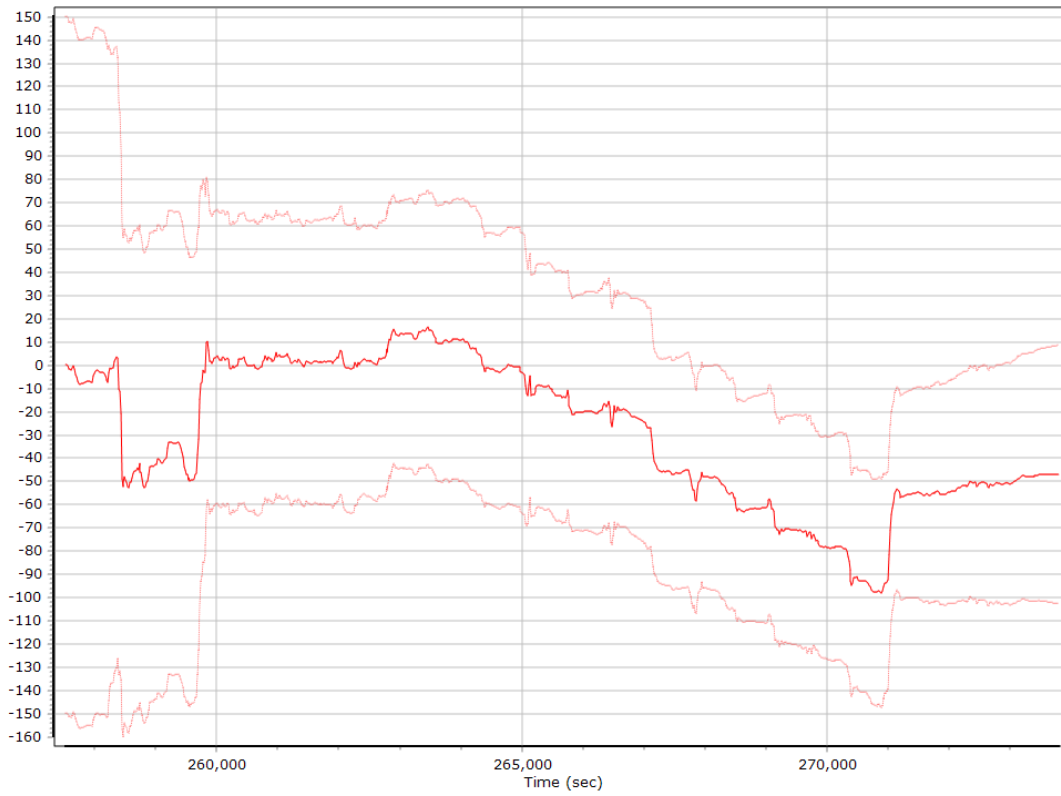
Gyro Scale Error (ppm)



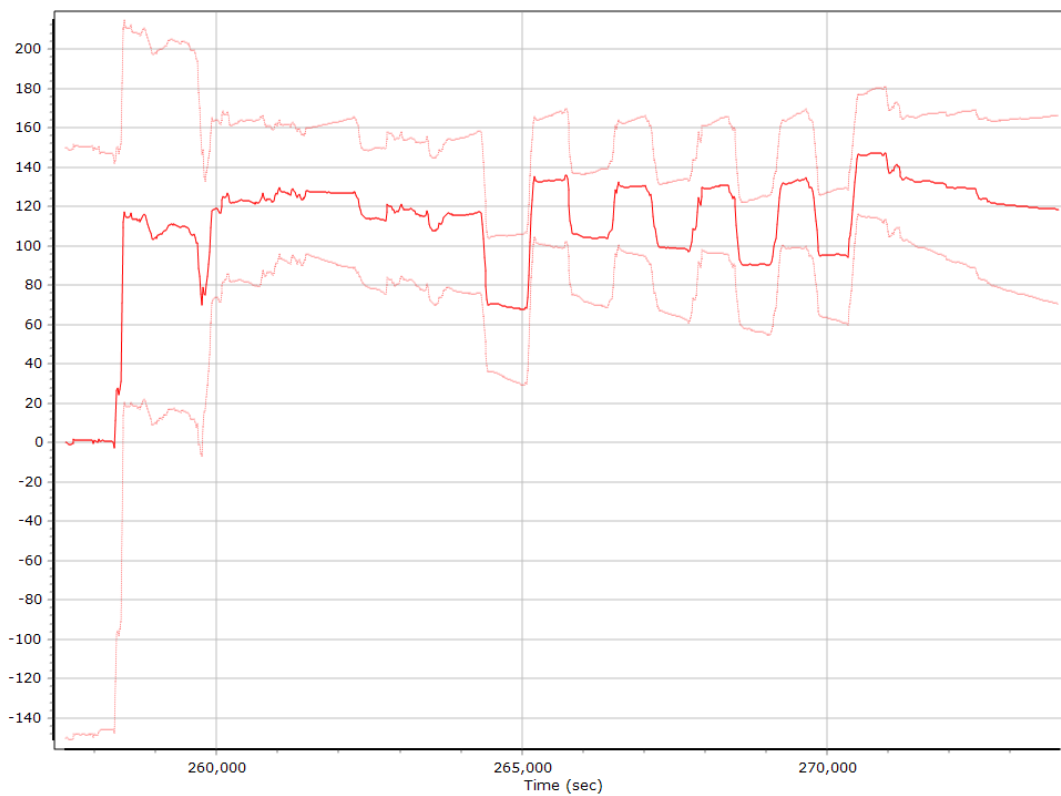
X Gyro Scale Error (ppm)



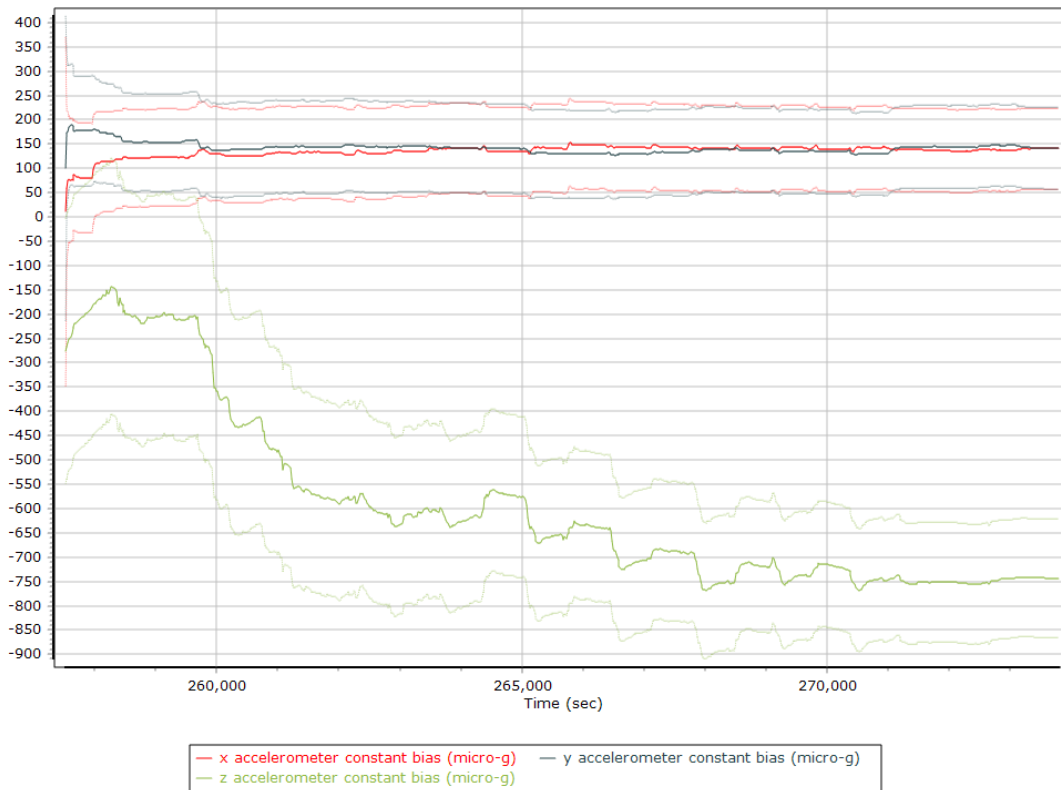
Y Gyro Scale Error (ppm)



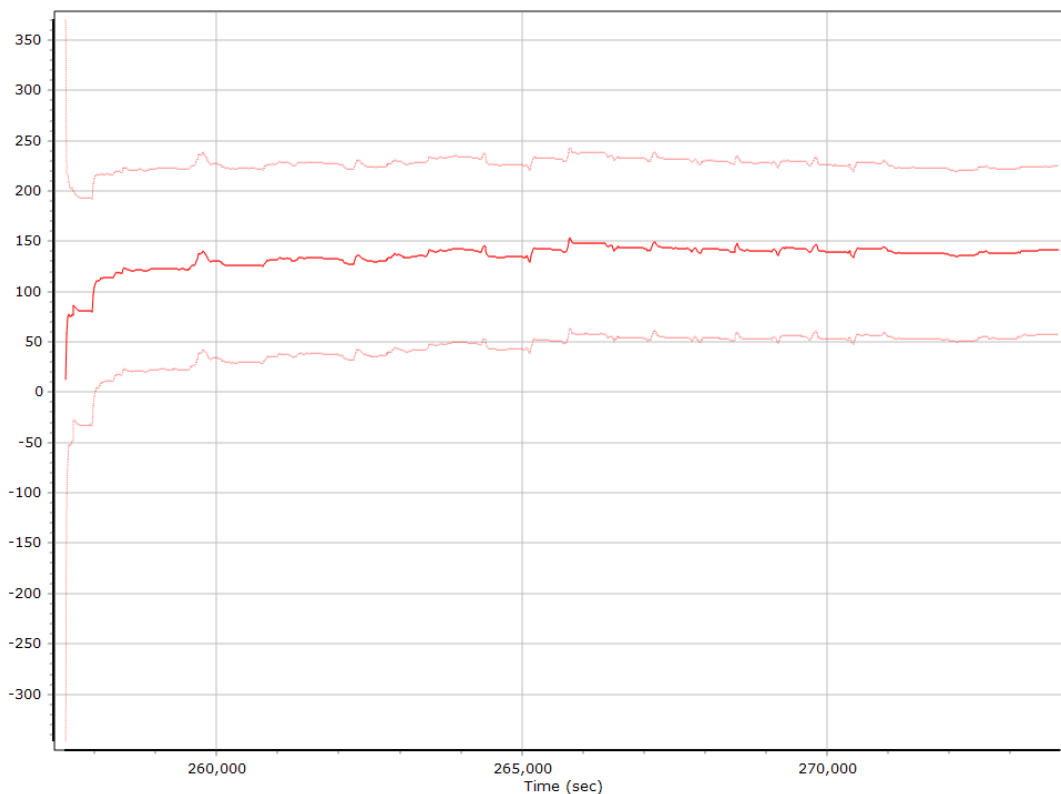
Z Gyro Scale Error (ppm)



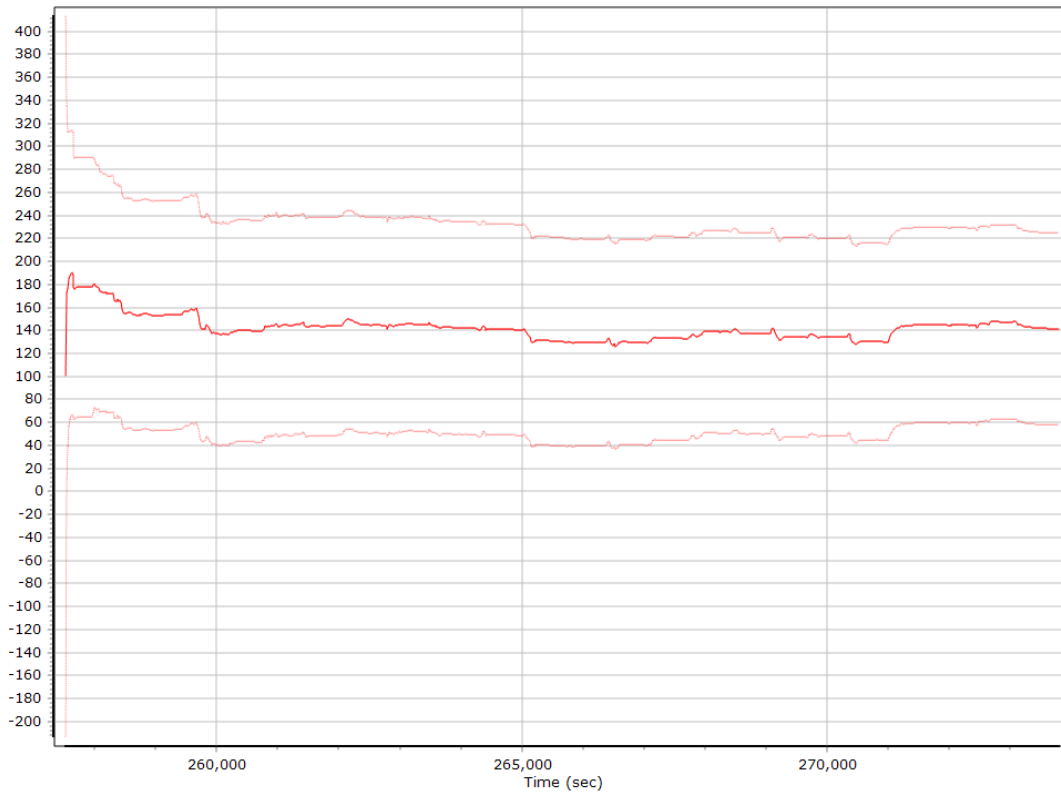
Forward Processed Estimated Constant Errors, Reference Frame Accelerometer Bias (micro-g)



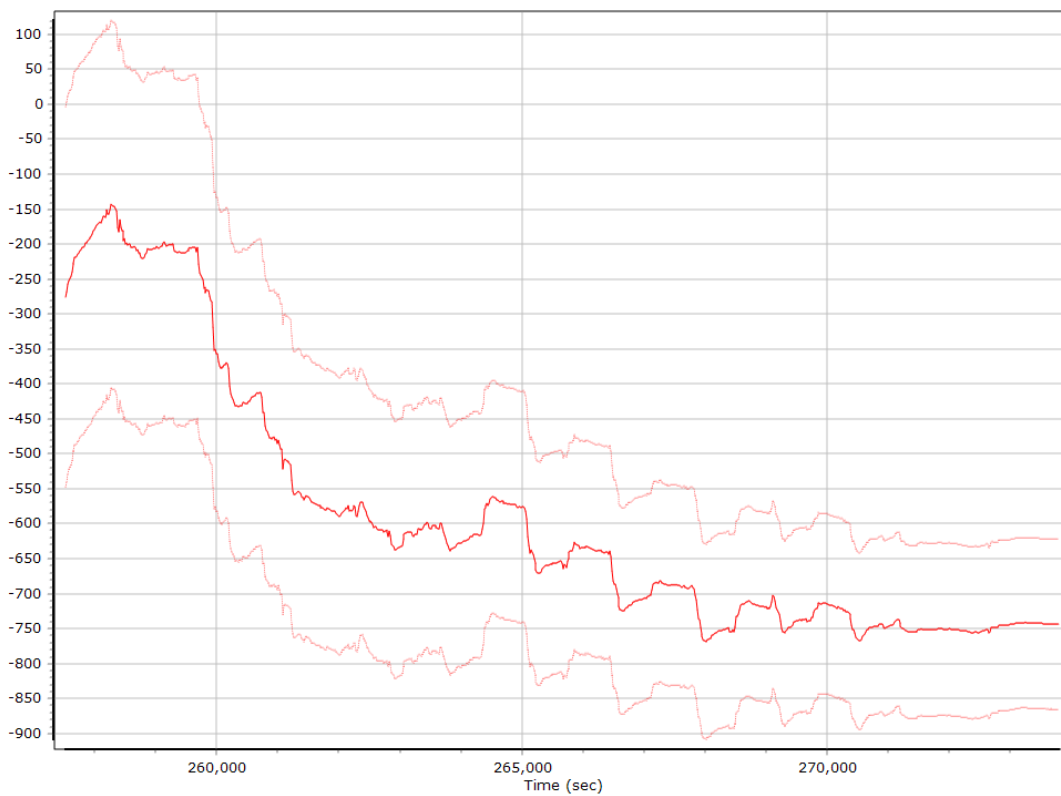
X Accelerometer Bias (micro-g)



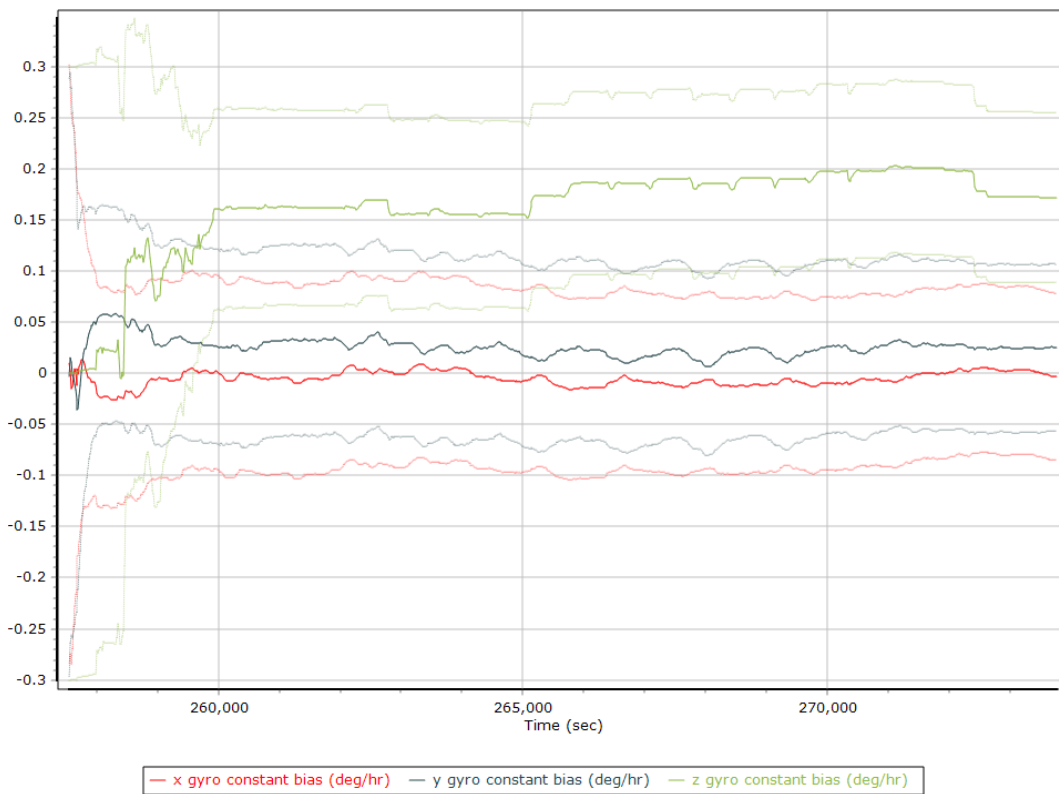
Y Accelerometer Bias (micro-g)



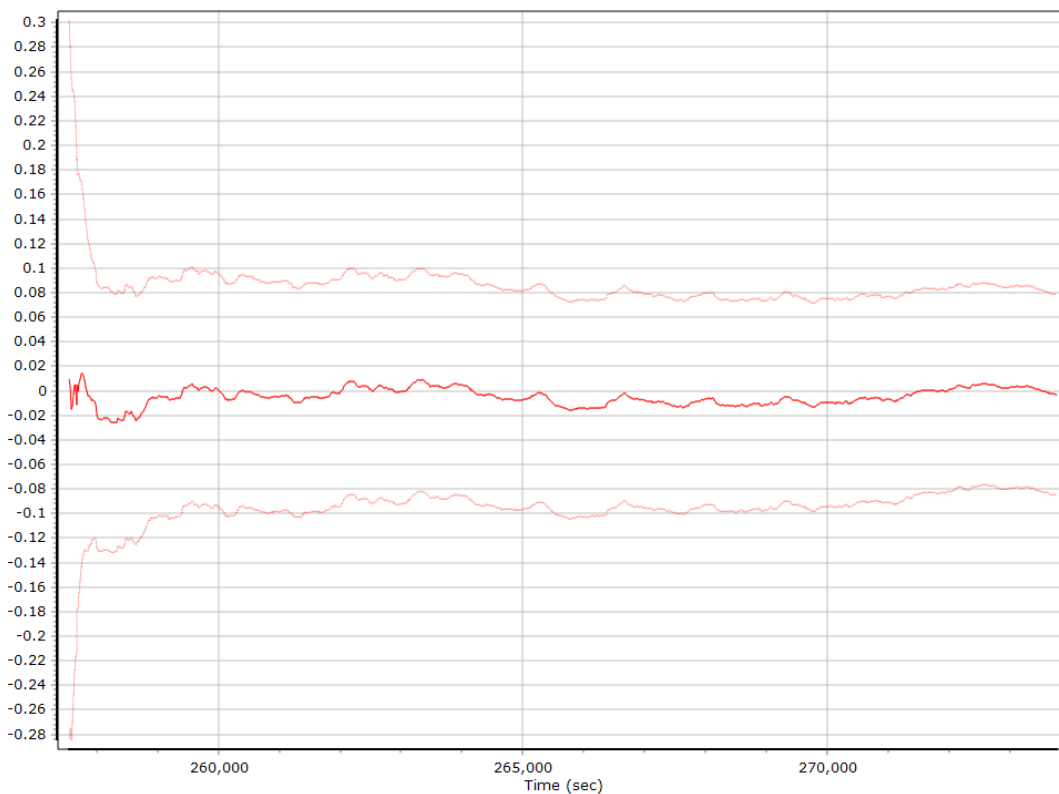
Z Accelerometer Bias (micro-g)



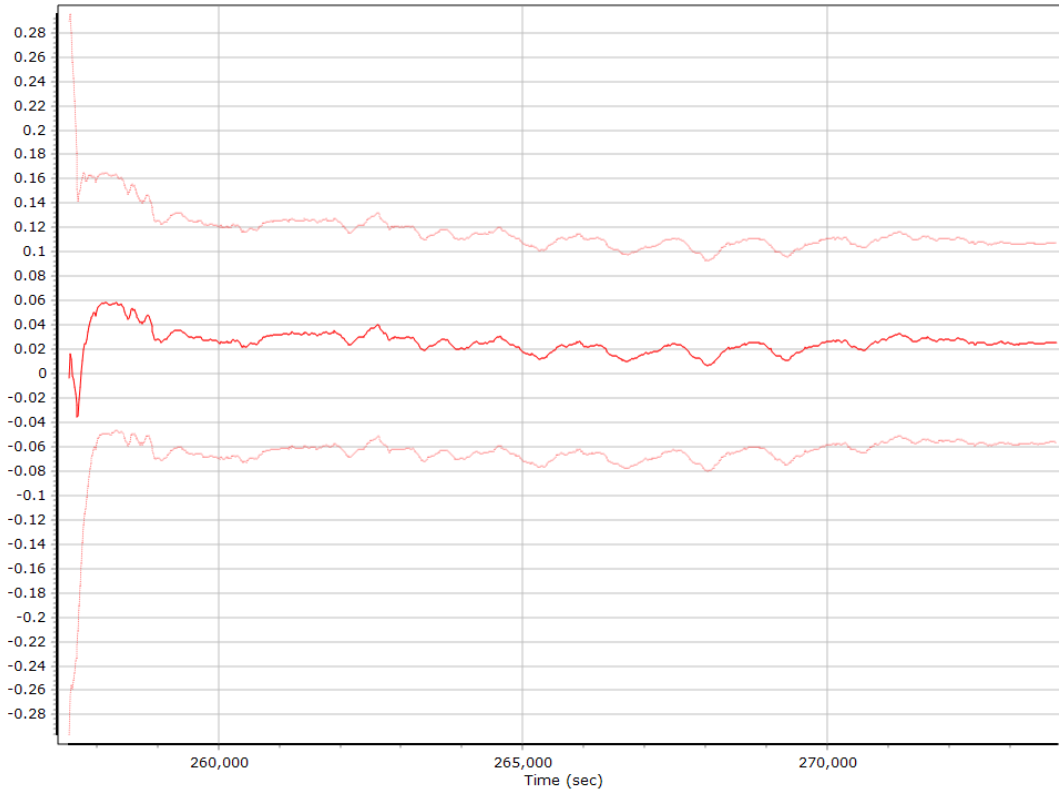
Gyro Bias (deg/h)



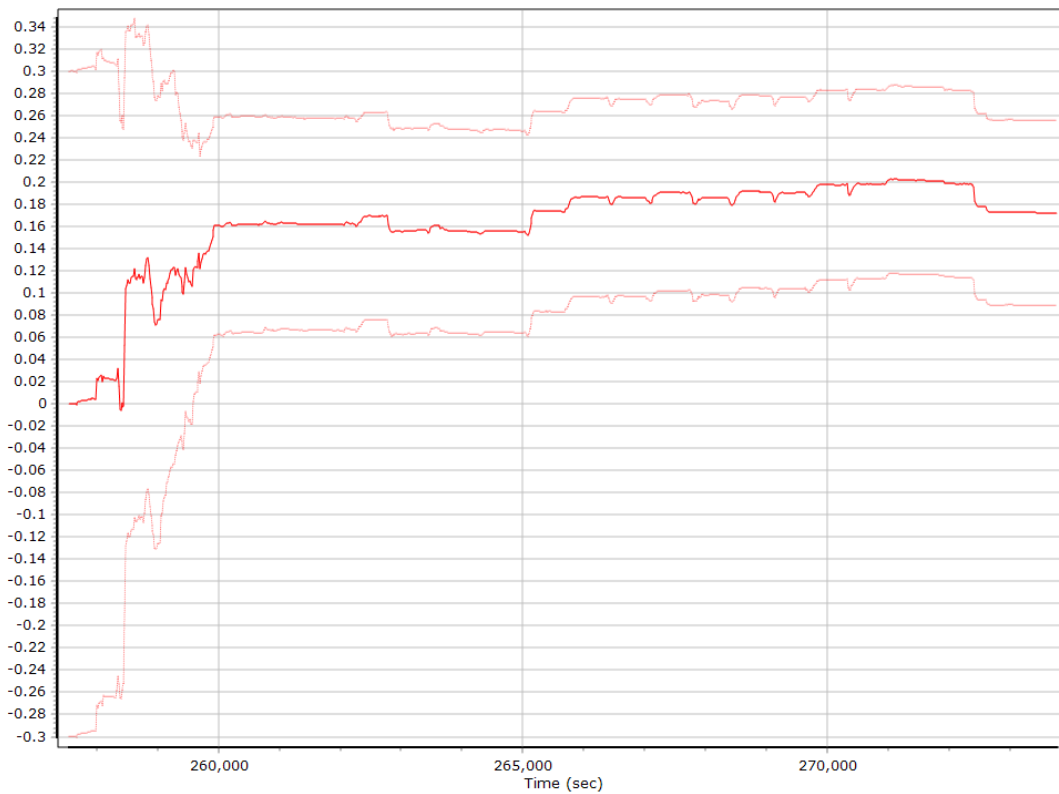
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)



Z Gyro Bias (deg/h)

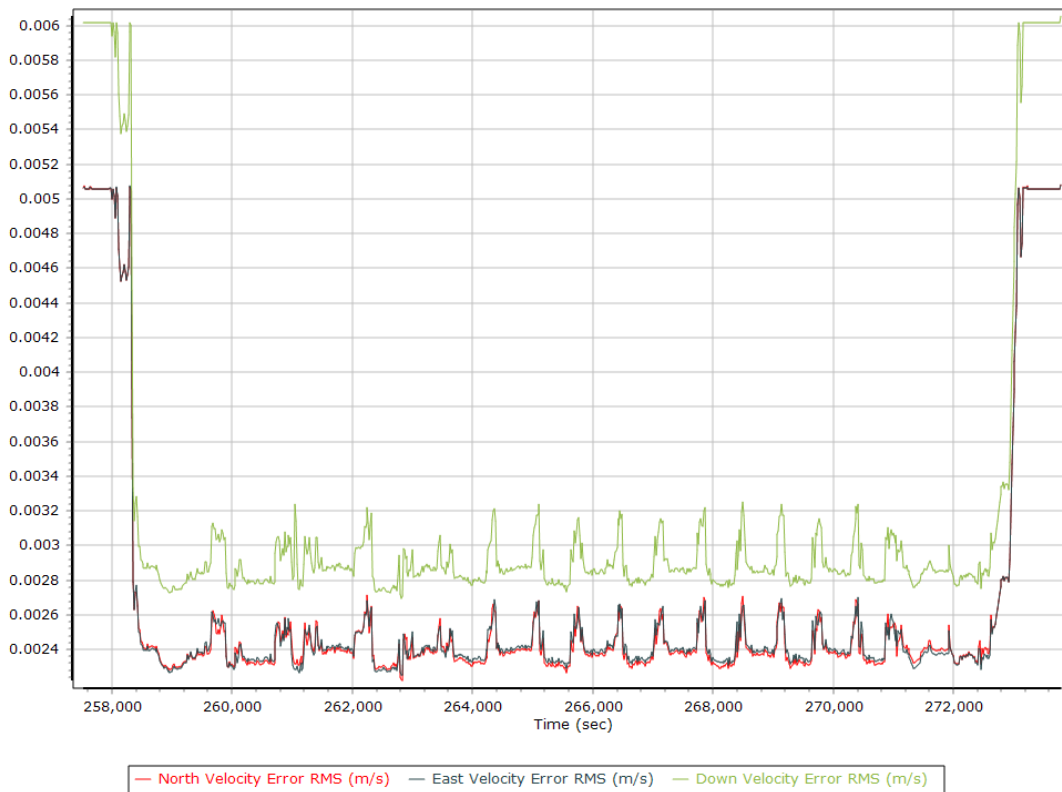


Smoothed Performance Metrics

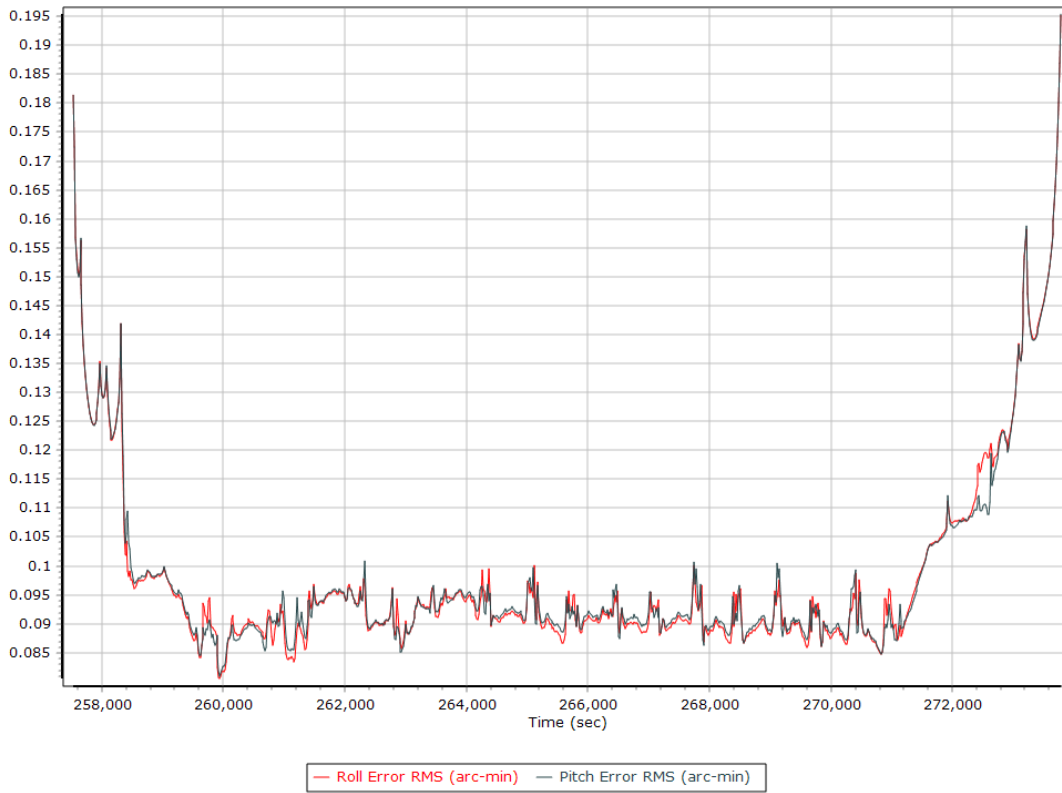
Position Error RMS (m)



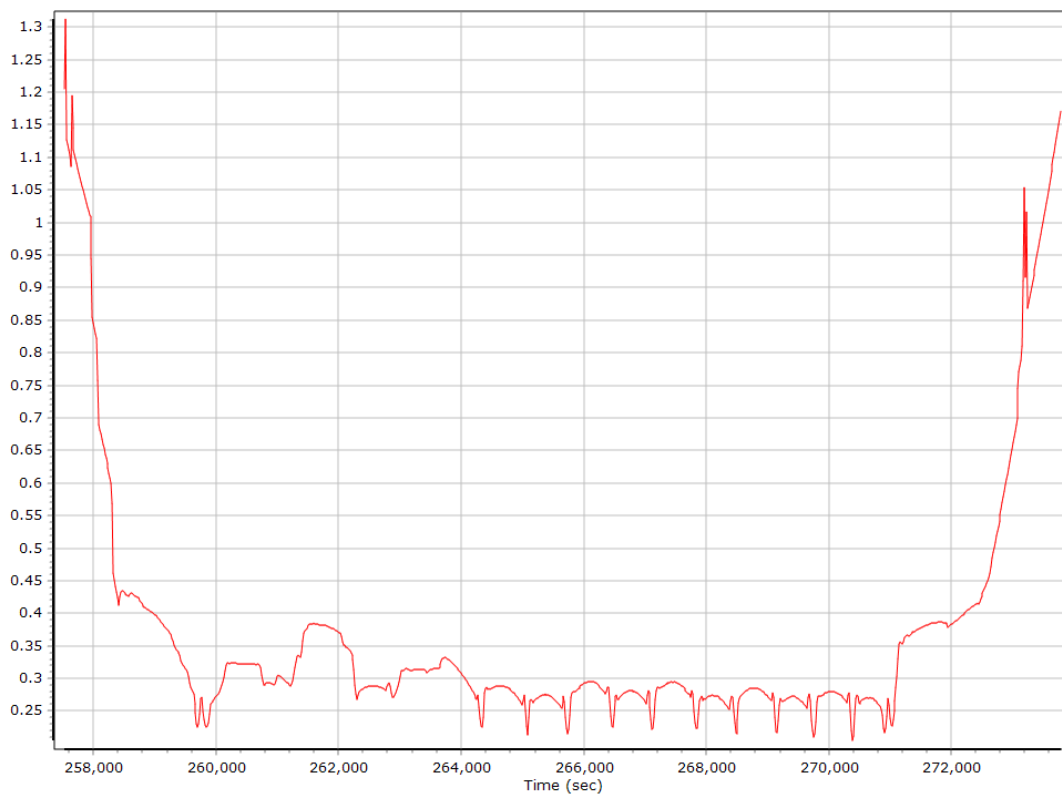
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

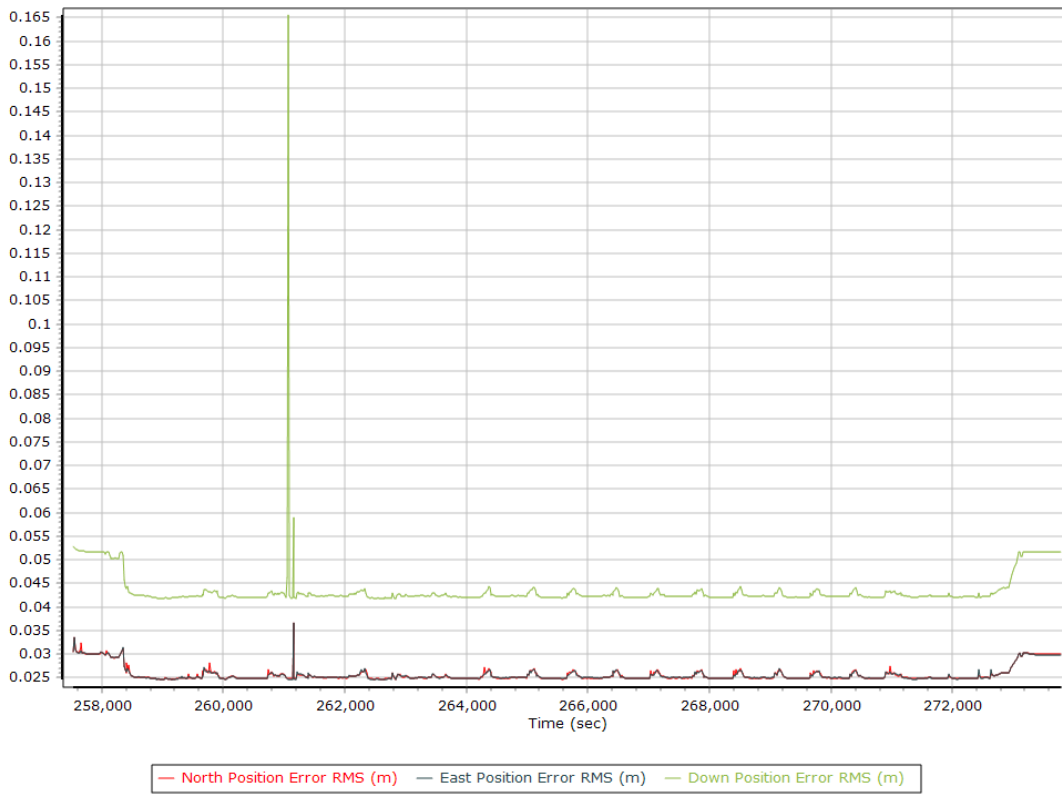


Heading Error RMS (arc-min)

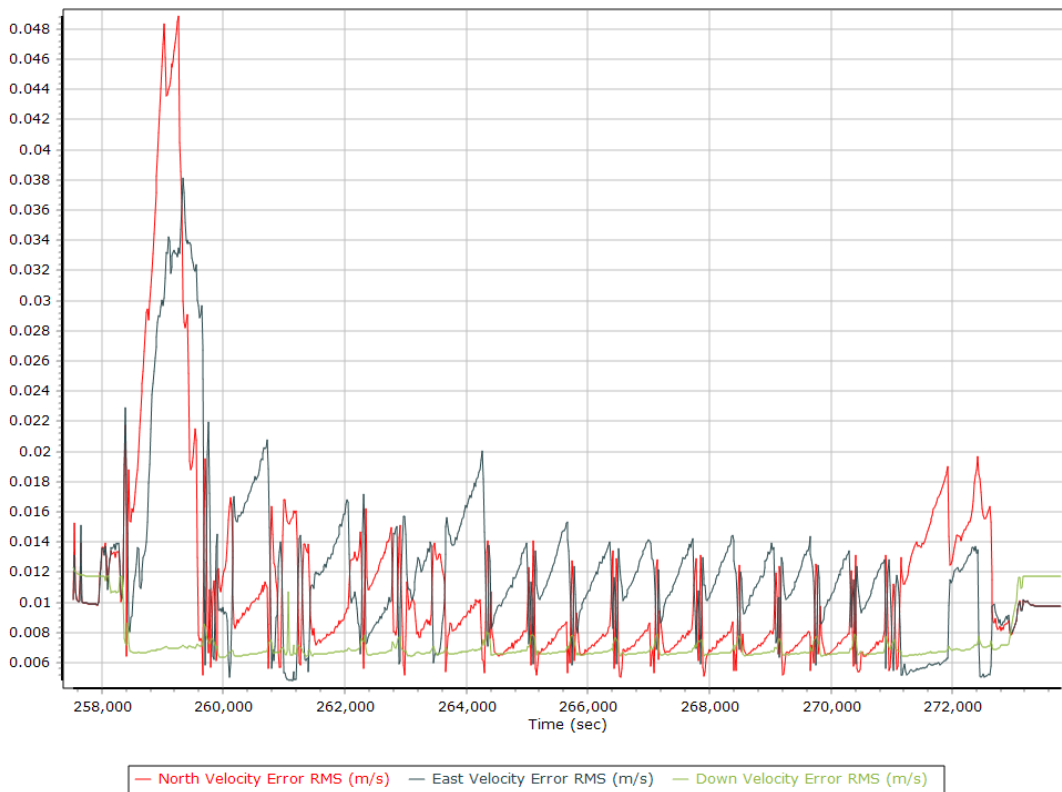


Forward Processed Performance Metrics

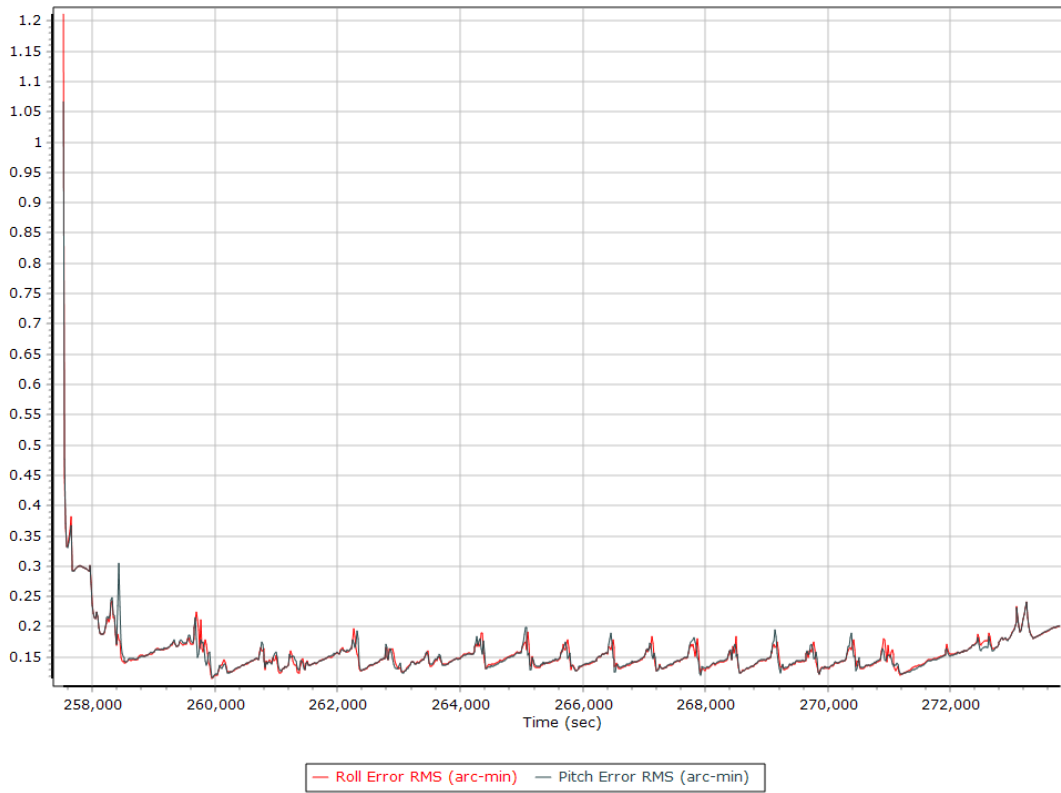
Position Error RMS (m)



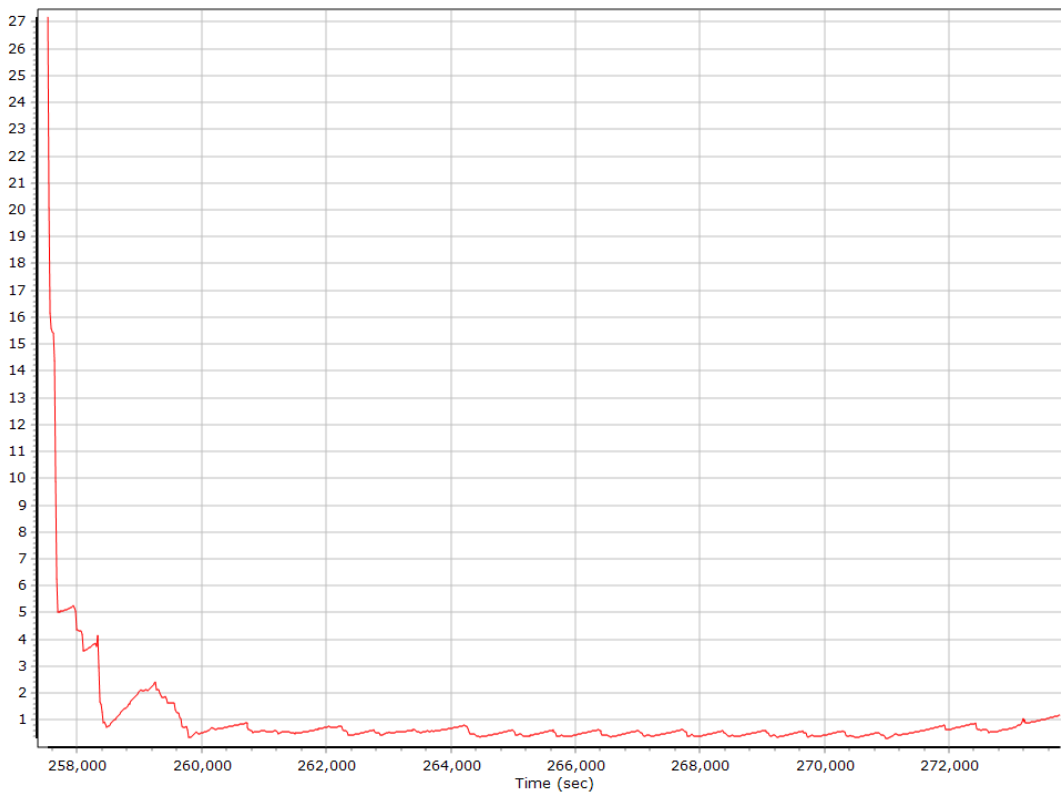
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

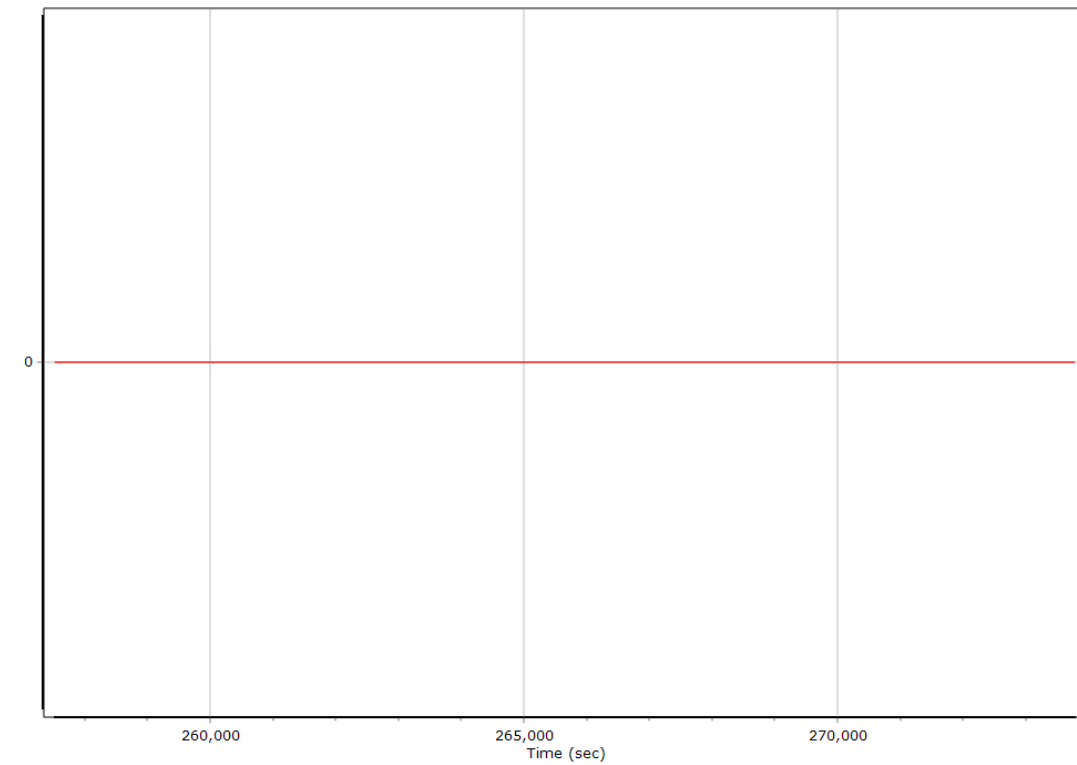


Heading Error RMS (arc-min)



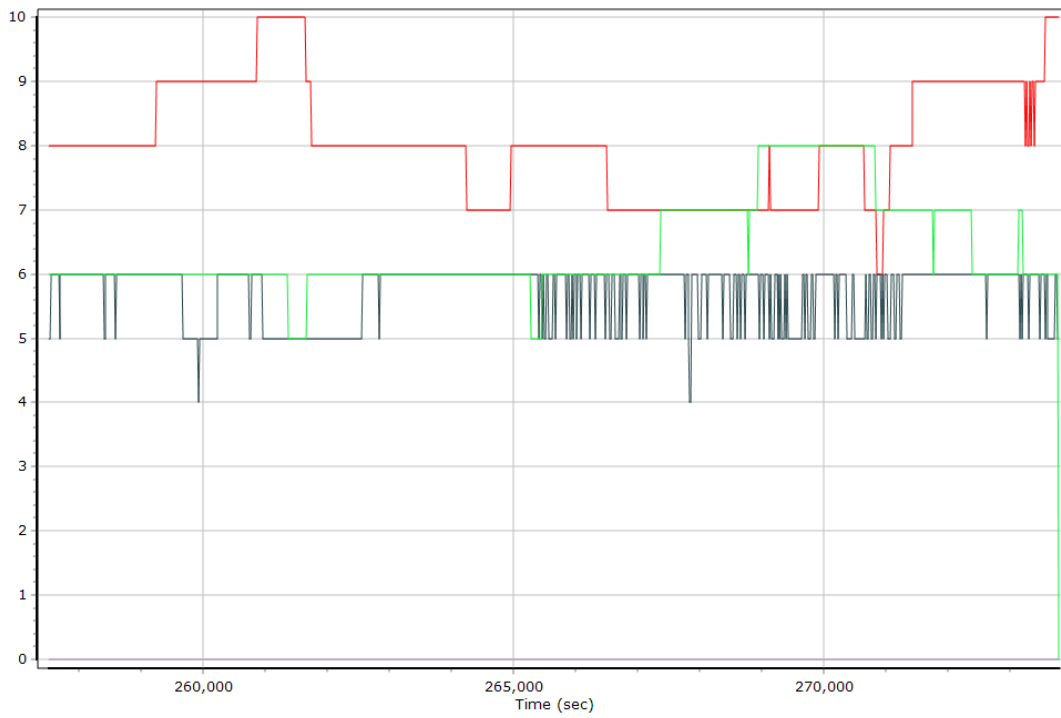
Forward Processed Solution Status

Processing Mode



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

