

General Information

Mission Information

Project name	13867
Processing date	2022-06-24 19:38:39
Mission date	2022-04-16 20:57:02
Mission duration	04:54:58.000
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
202204162.048	POS Data
202204162.049	POS Data
202204162.050	POS Data
202204162.051	POS Data
202204162.052	POS Data
202204162.053	POS Data
202204162.054	POS Data
202204162.055	POS Data
202204162.056	POS Data
202204162.057	POS Data
202204162.058	POS Data
202204162.059	POS Data
202204162.060	POS Data
202204162.061	POS Data
202204162.062	POS Data
202204162.063	POS Data
202204162.064	POS Data
202204162.065	POS Data
202204162.066	POS Data
202204162.067	POS Data
202204162.068	POS Data
202204162.069	POS Data
202204162.070	POS Data
202204162.071	POS Data
202204162.072	POS Data
202204162.073	POS Data
202204162.074	POS Data
202204162.075	POS Data
202204162.076	POS Data
202204162.077	POS Data
202204162.078	POS Data
202204162.079	POS Data
202204162.080	POS Data
202204162.081	POS Data
202204162.082	POS Data
202204162.083	POS Data
202204162.084	POS Data
202204162.085	POS Data
202204162.086	POS Data
202204162.087	POS Data

Input Files

File Name	File Type
Ephm1060.22g	GLONASS Broadcast Ephemeris
Ephm1060.22n	GPS Broadcast Ephemeris
Ephm1070.22g	GLONASS Broadcast Ephemeris
Ephm1070.22n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_13867.out	SBET Trajectory File
eo_13867.txt	ZI Imaging POSEO Output
sbet_13867_NAD83(2011).out	Custom Smoothed BET Export Output

Rover Data Summary

First raw data file	202204162.048		
Last raw data file	202204162.087		
Start GPS week	2205		
Start time	593821.356 (04/16/2022 20:57:01)		
End time	6719.462 (04/17/2022 01:51:59)		
Start of fine alignment	594203.393 (04/16/2022 21:03:23)		
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

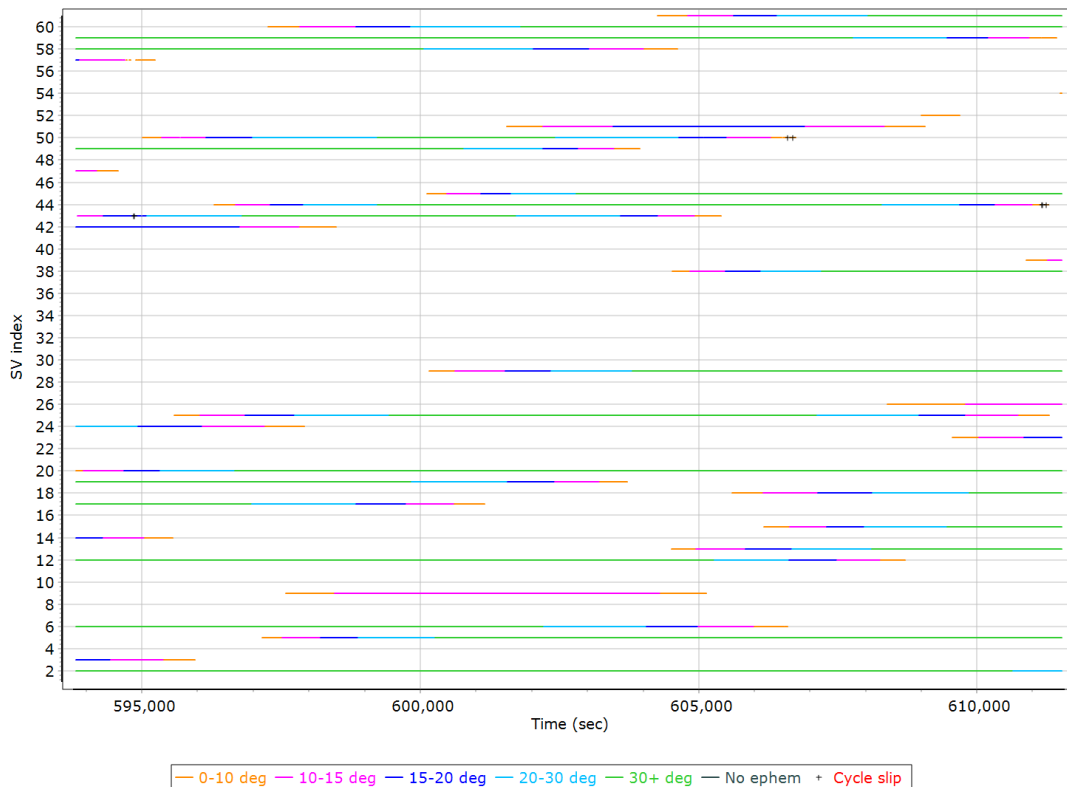
Rover Data QC

Raw IMU Import QC Summary

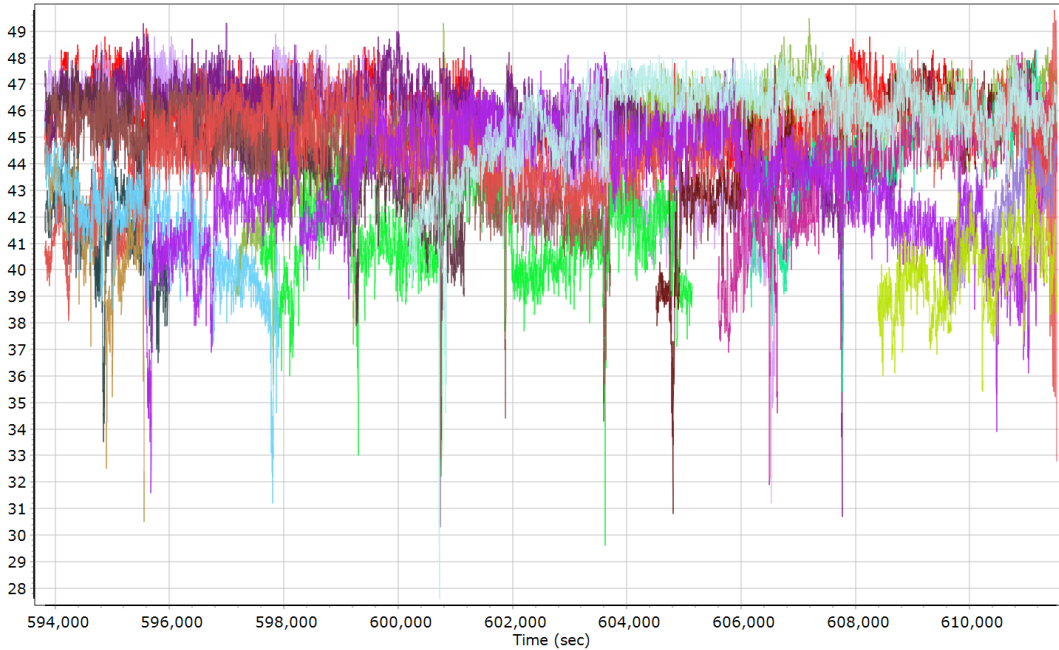
IMU data input file	imu_13867.dat
IMU data check log file	imudt_13867.log
IMU Records Processed	3538998
Termination Status	Normal
IMU Anomalies	0

Primary Observables & Satellite Data

GPS/GLONASS L1 Satellite Lock/Elevation

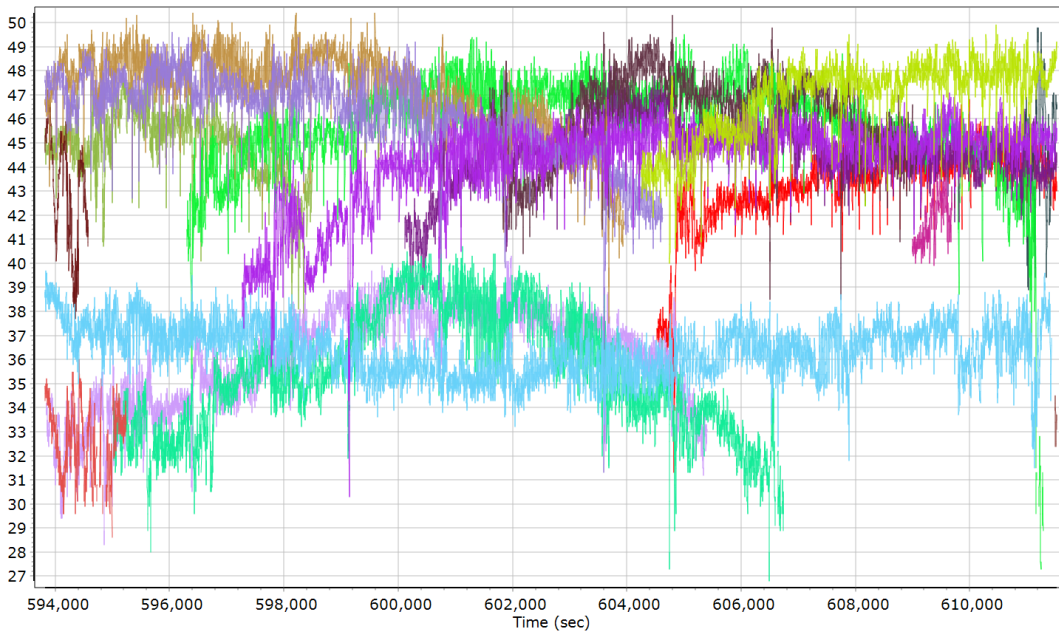


GPS L1 SNR



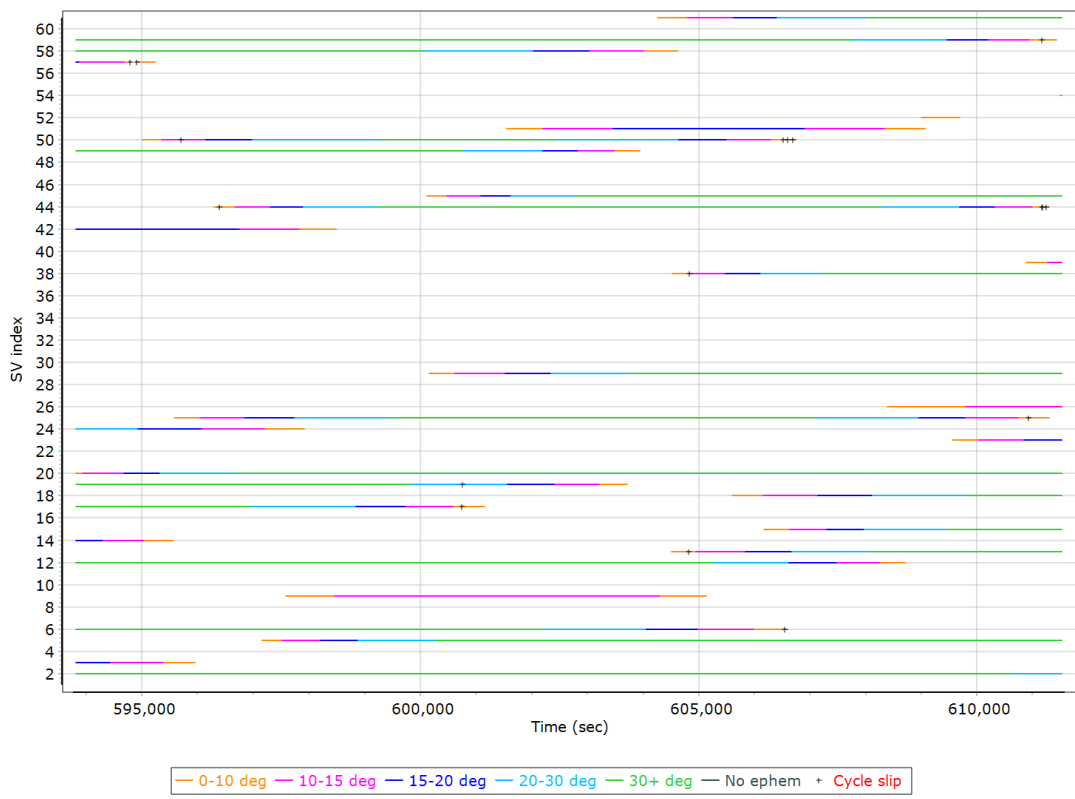
- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 02 L1 SNR (dB/Hz) | GPS PRN 03 L1 SNR (dB/Hz) | GPS PRN 05 L1 SNR (dB/Hz) | GPS PRN 06 L1 SNR (dB/Hz) |
| GPS PRN 09 L1 SNR (dB/Hz) | GPS PRN 12 L1 SNR (dB/Hz) | GPS PRN 13 L1 SNR (dB/Hz) | GPS PRN 14 L1 SNR (dB/Hz) |
| GPS PRN 15 L1 SNR (dB/Hz) | GPS PRN 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 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 29 L1 SNR (dB/Hz) | | |

GLONASS L1 SNR

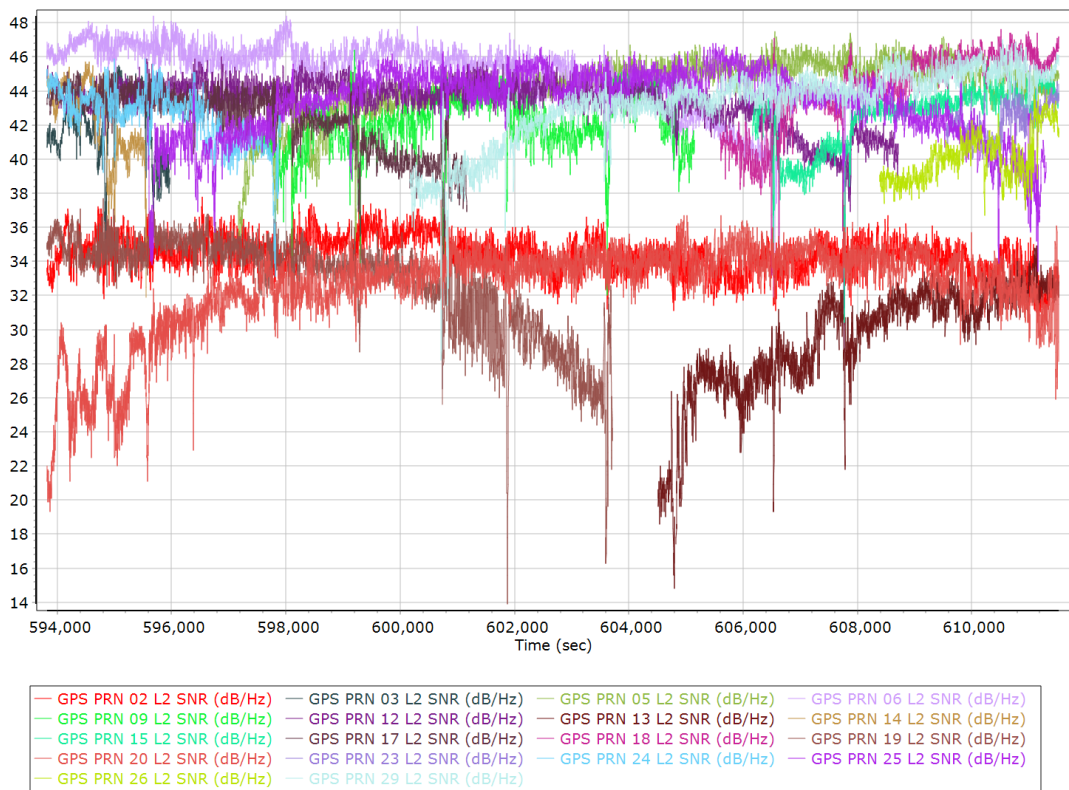


- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 01 L1 SNR (dB/Hz) | GLONASS 02 L1 SNR (dB/Hz) | GLONASS 05 L1 SNR (dB/Hz) |
| GLONASS 06 L1 SNR (dB/Hz) | GLONASS 07 L1 SNR (dB/Hz) | GLONASS 08 L1 SNR (dB/Hz) |
| GLONASS 10 L1 SNR (dB/Hz) | GLONASS 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 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) | |

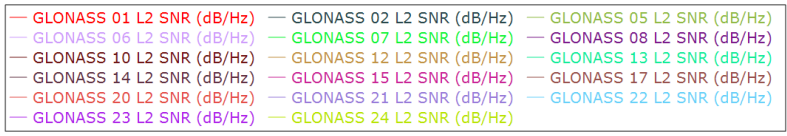
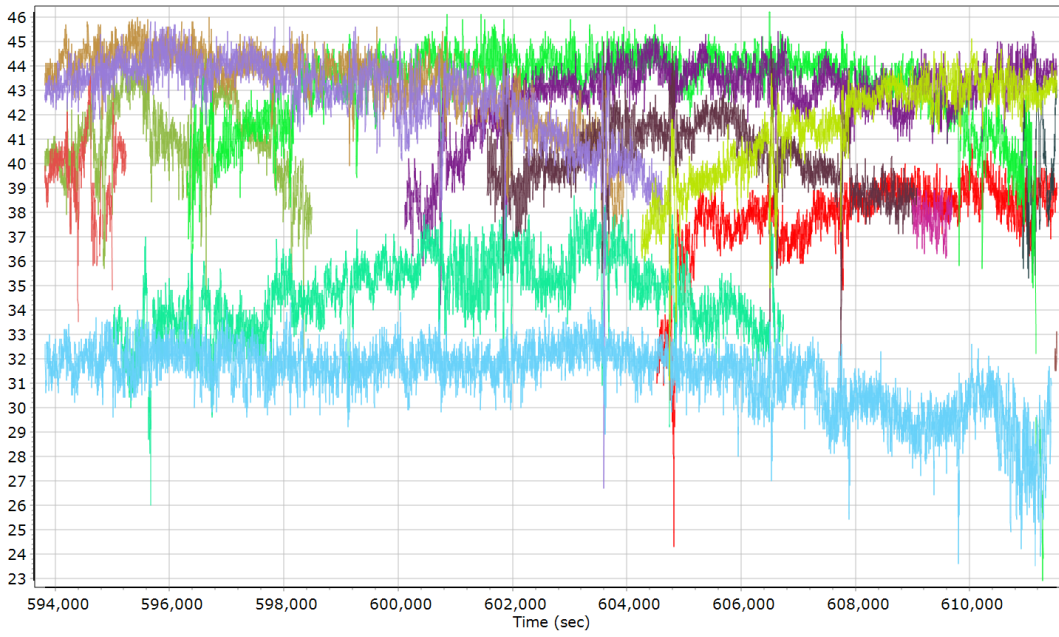
GPS/GLONASS L2 Satellite Lock/Elevation



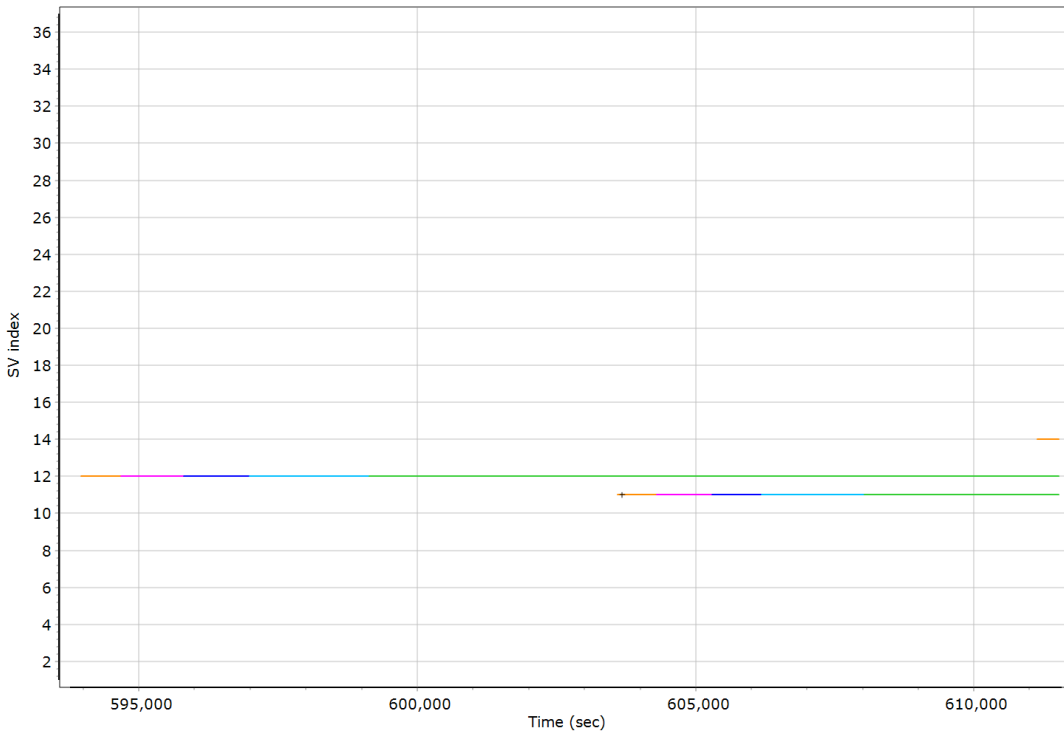
GPS L2 SNR



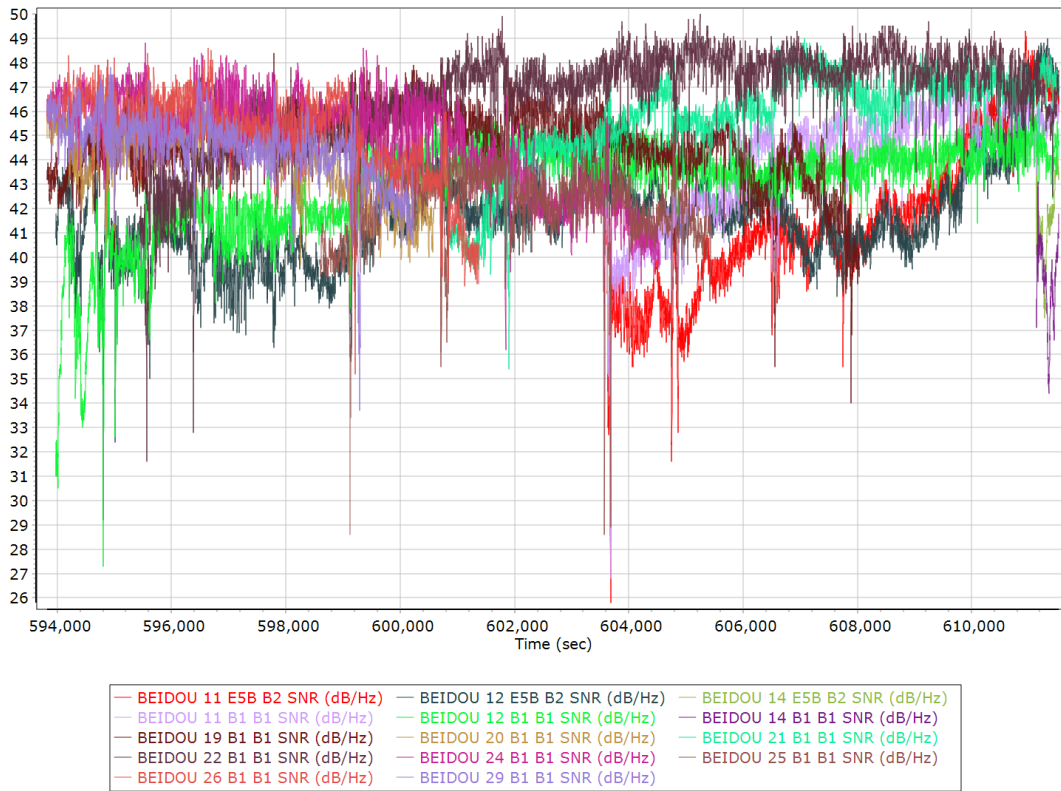
GLONASS L2 SNR



BEIDOU Satellite Lock/Elevation



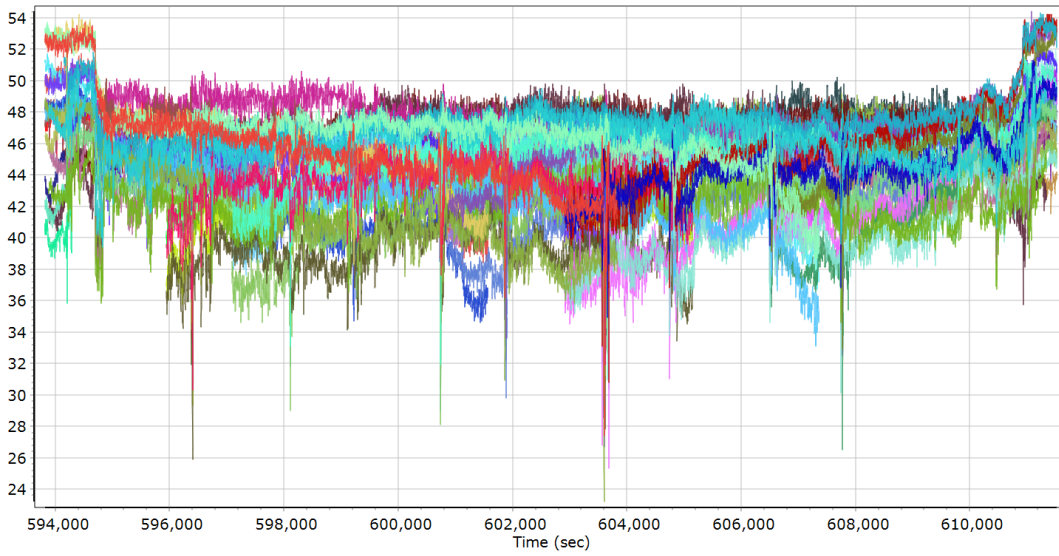
BEIDOU SNR



GALILEO Satellite Lock/Elevation



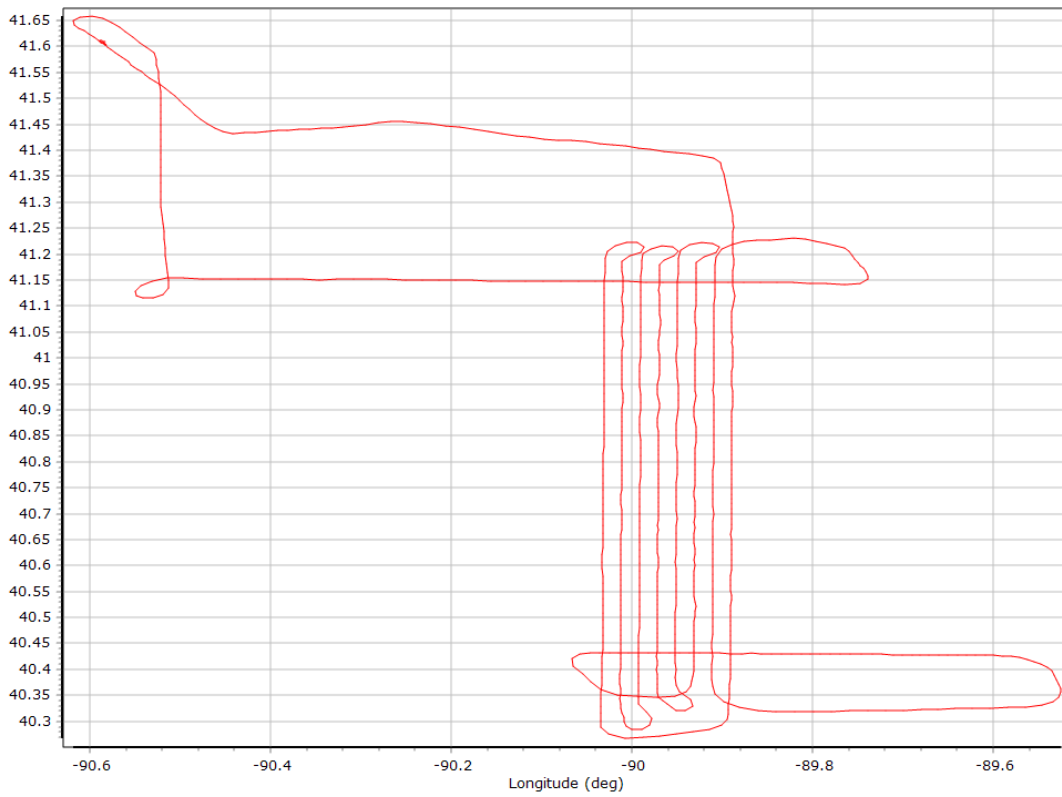
GALILEO SNR



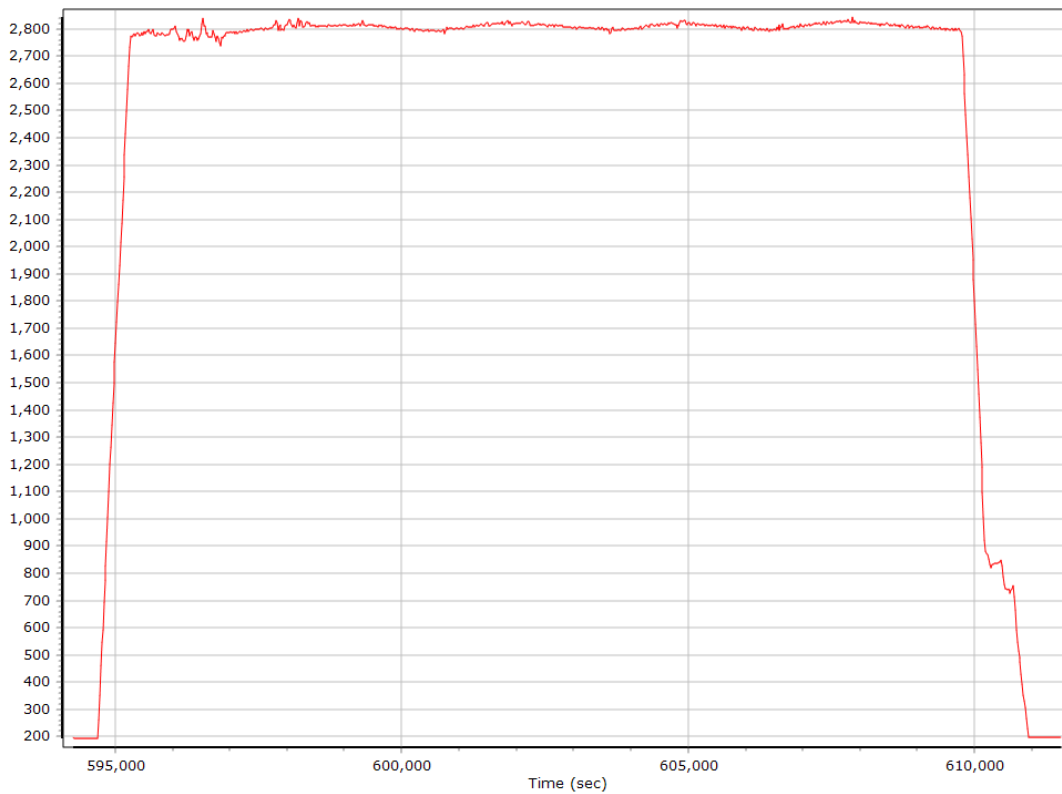
— GALILEO 02 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 03 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 05 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 08 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 09 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 13 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 15 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 21 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 25 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 36 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 02 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 03 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 05 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 08 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 09 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 13 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 15 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 21 L5E5A BPSK10_PD SNR (dB/Hz)

Smoothed Trajectory Information

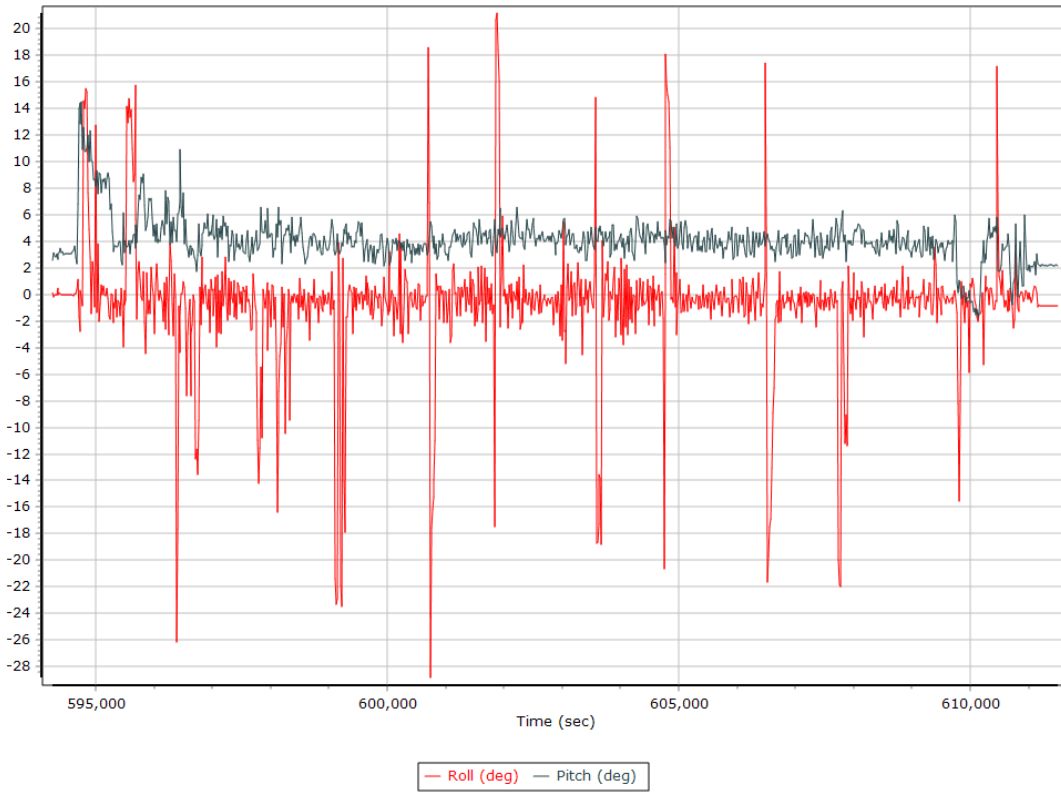
Top View



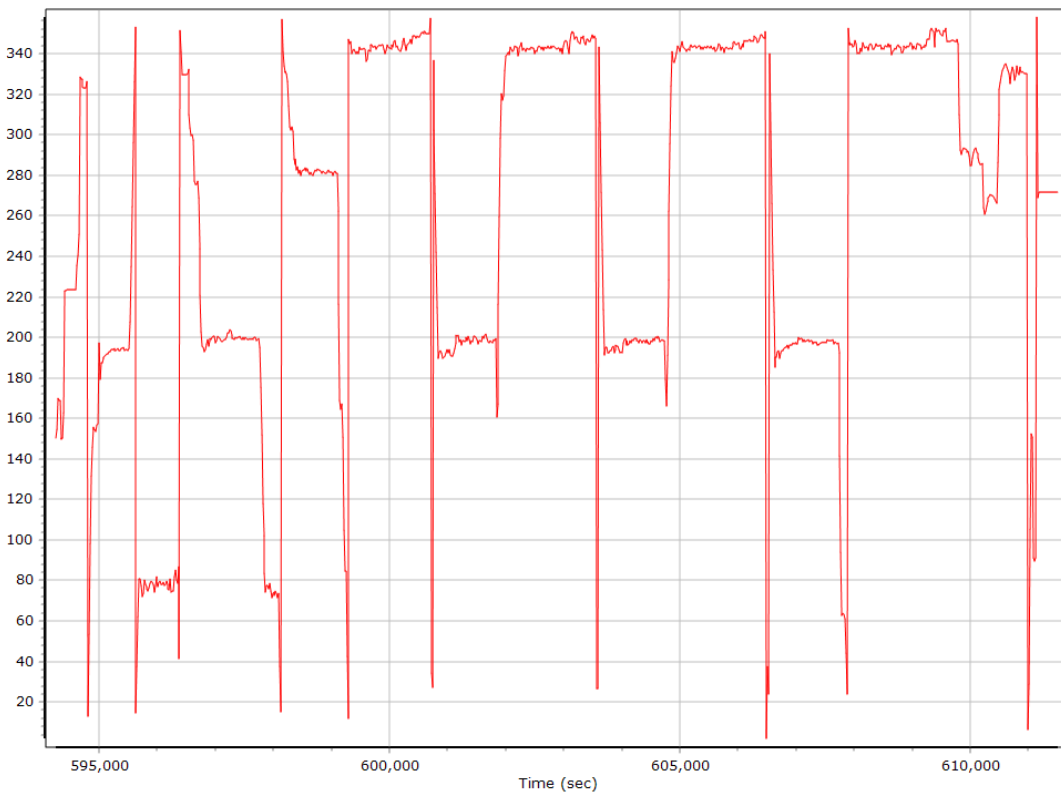
Altitude



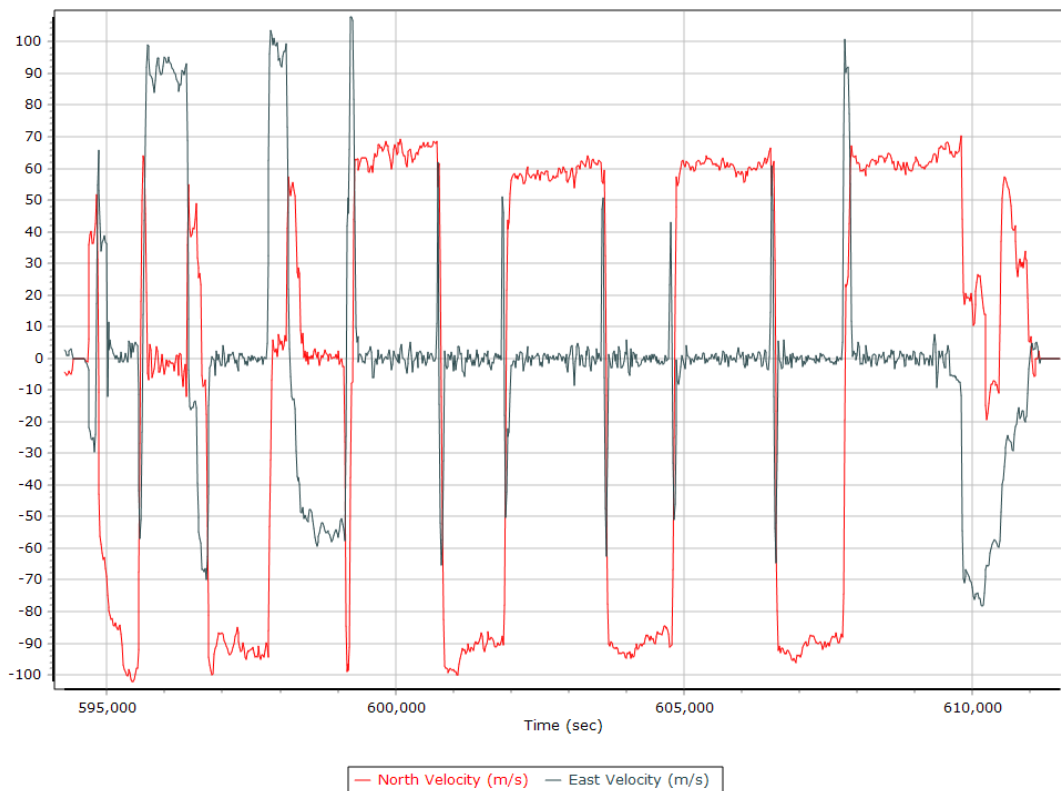
Roll/Pitch



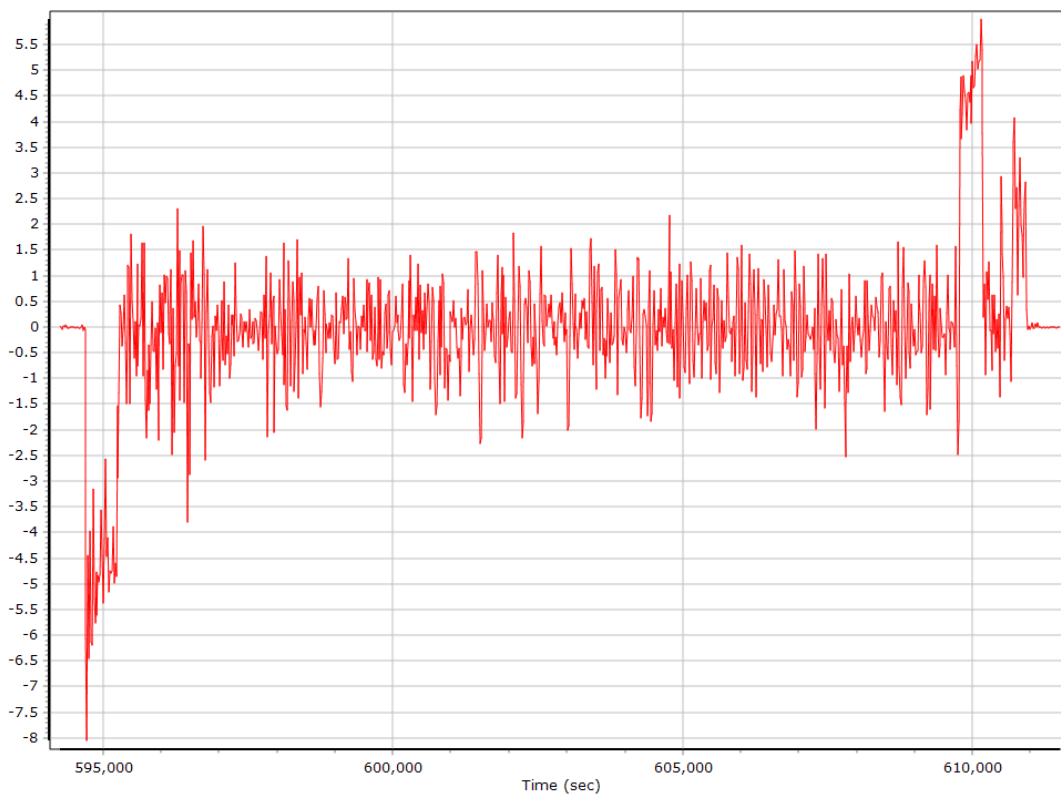
Heading



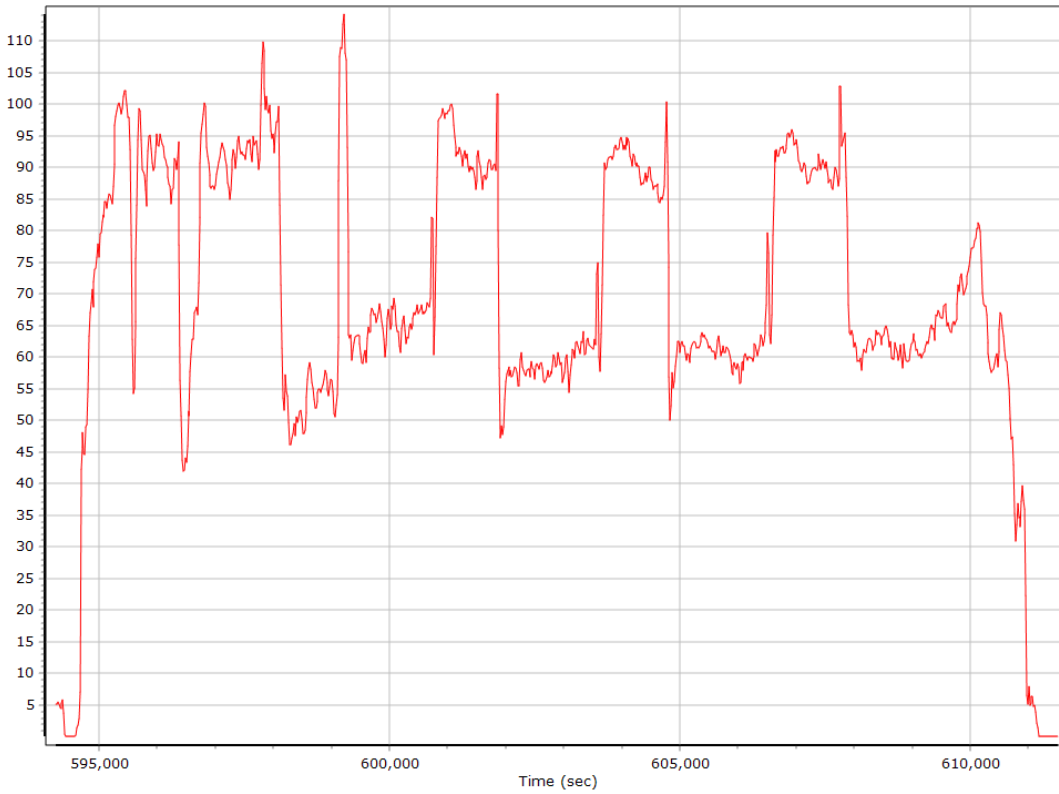
North/East Velocity



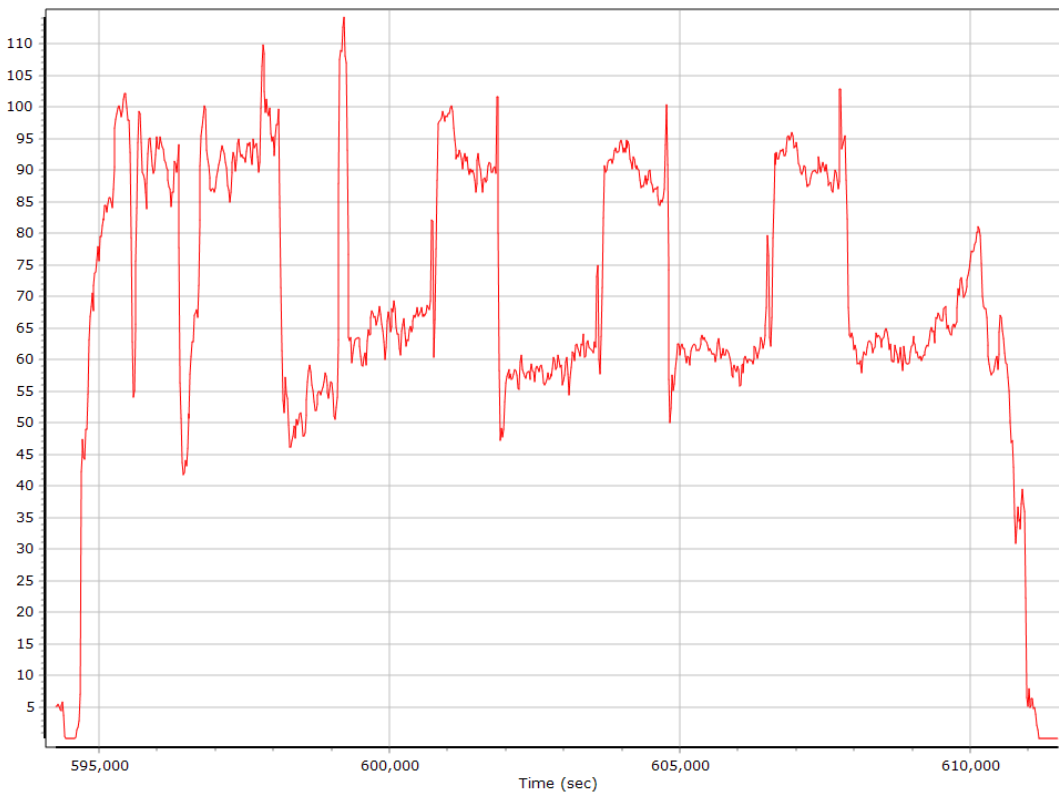
Down Velocity



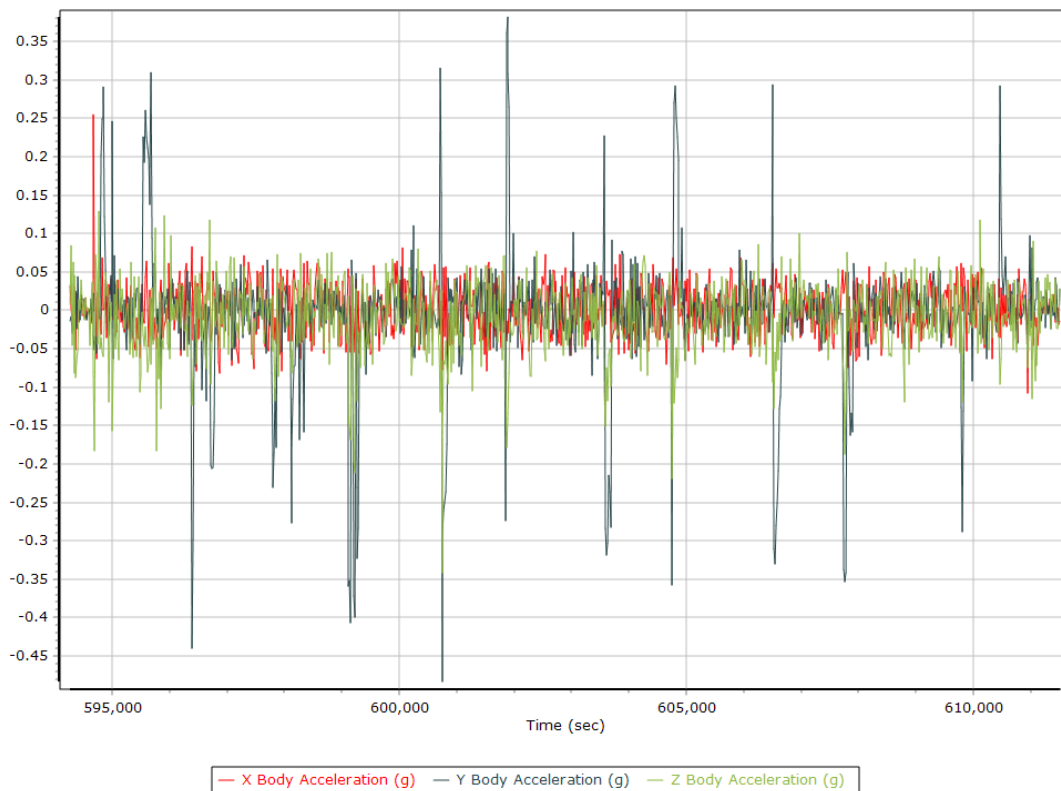
Total Speed



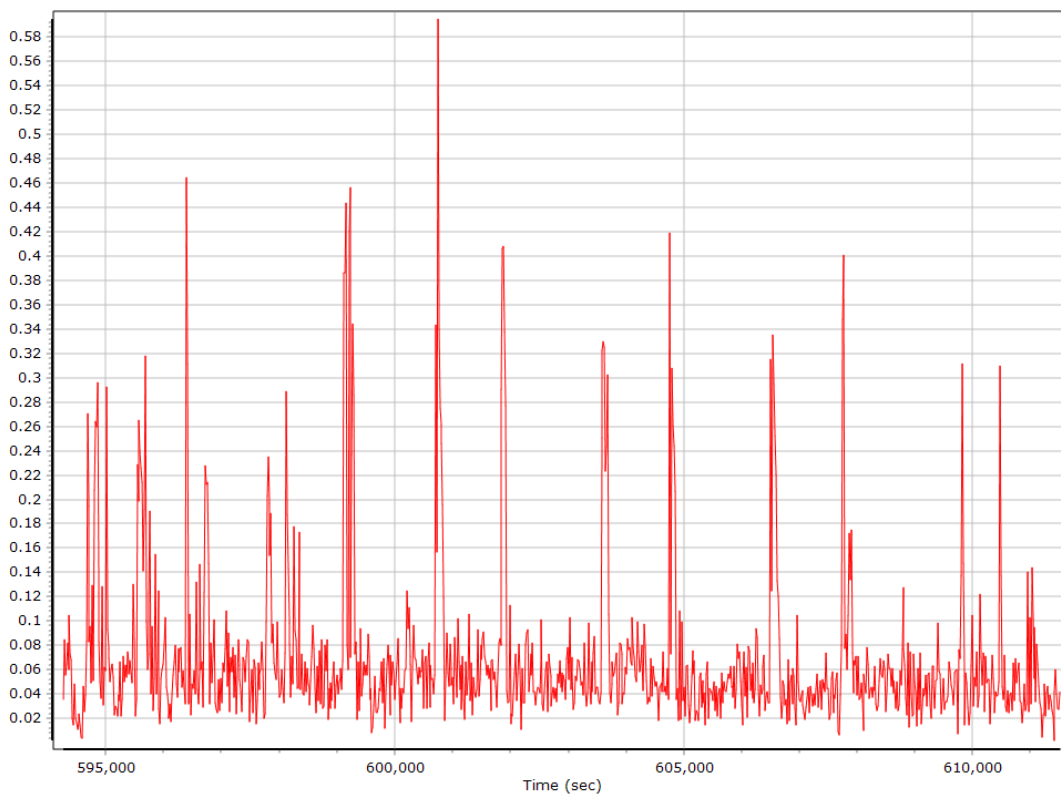
Ground Speed



Body Acceleration



Total Body Acceleration

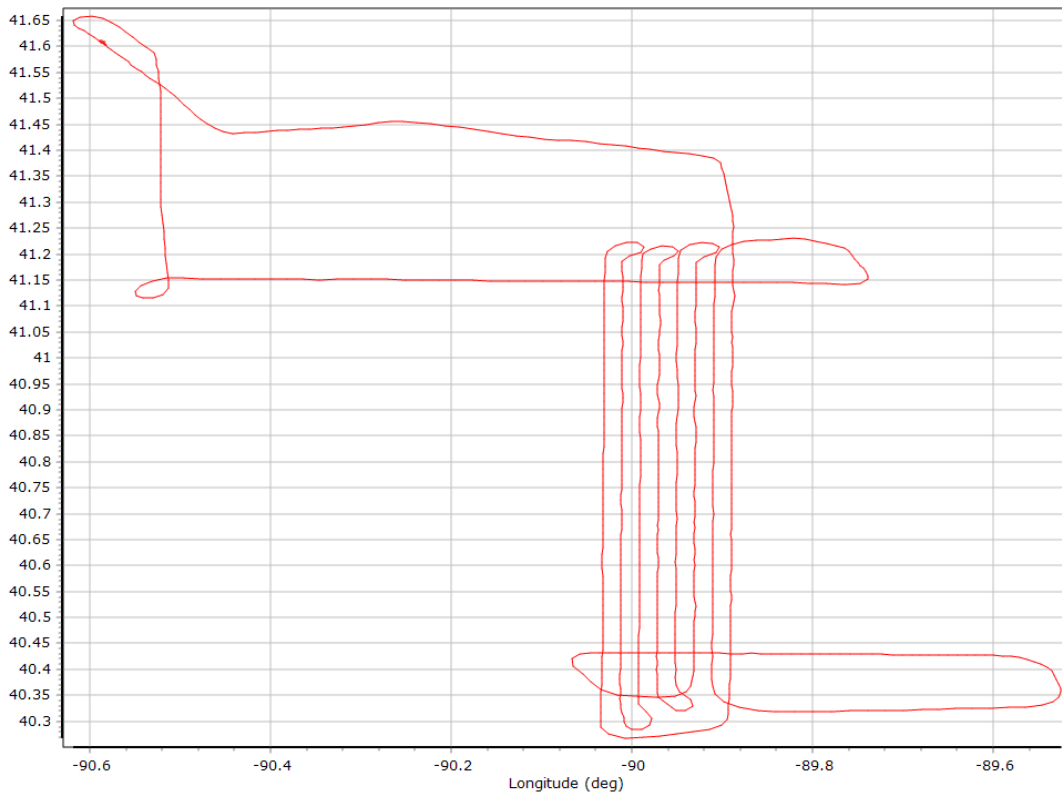


Body Angular Rate

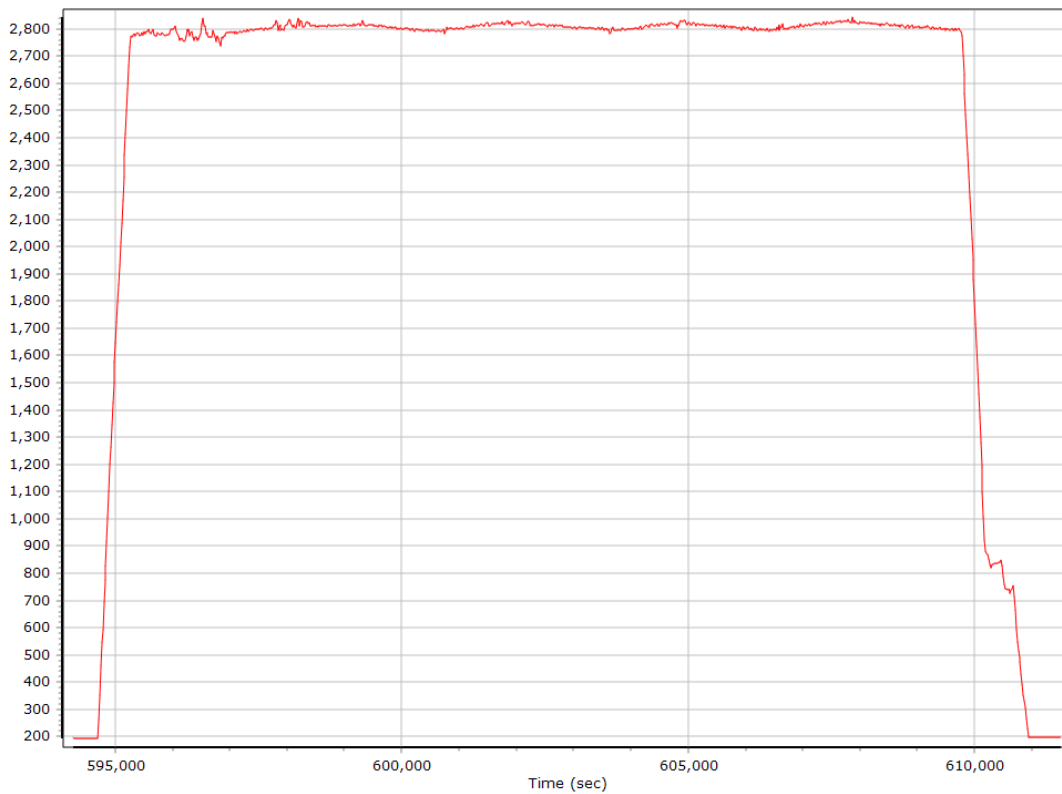


Forward Processed Trajectory Information

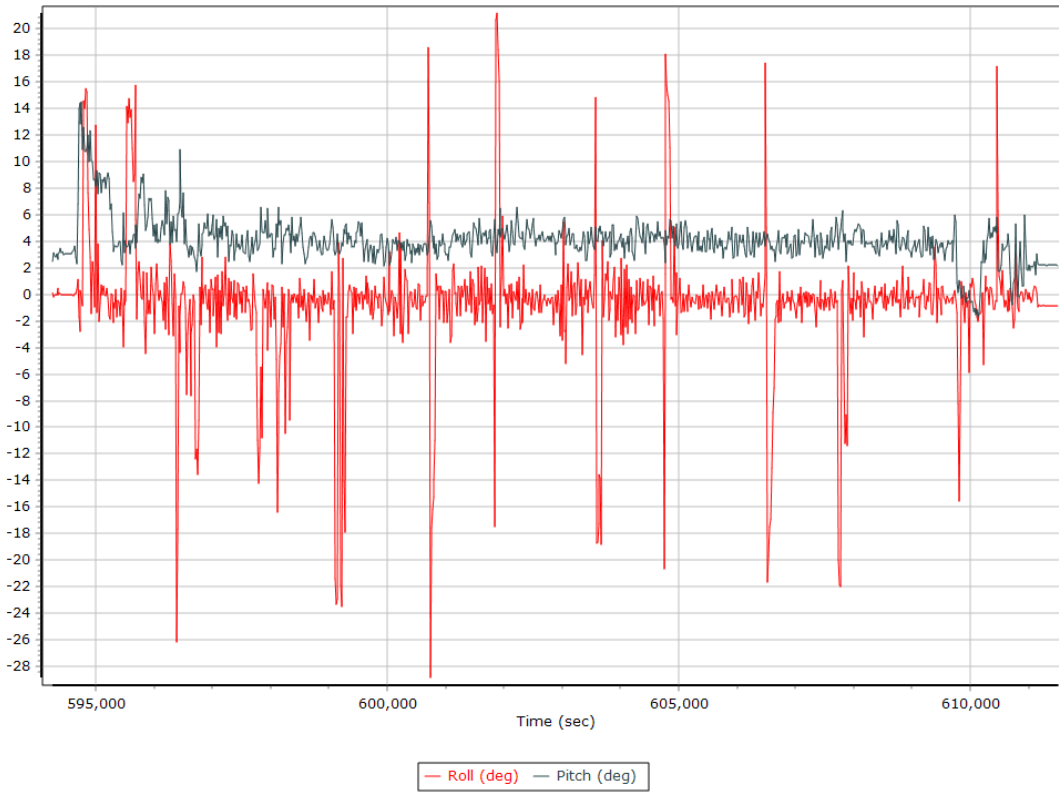
Top View



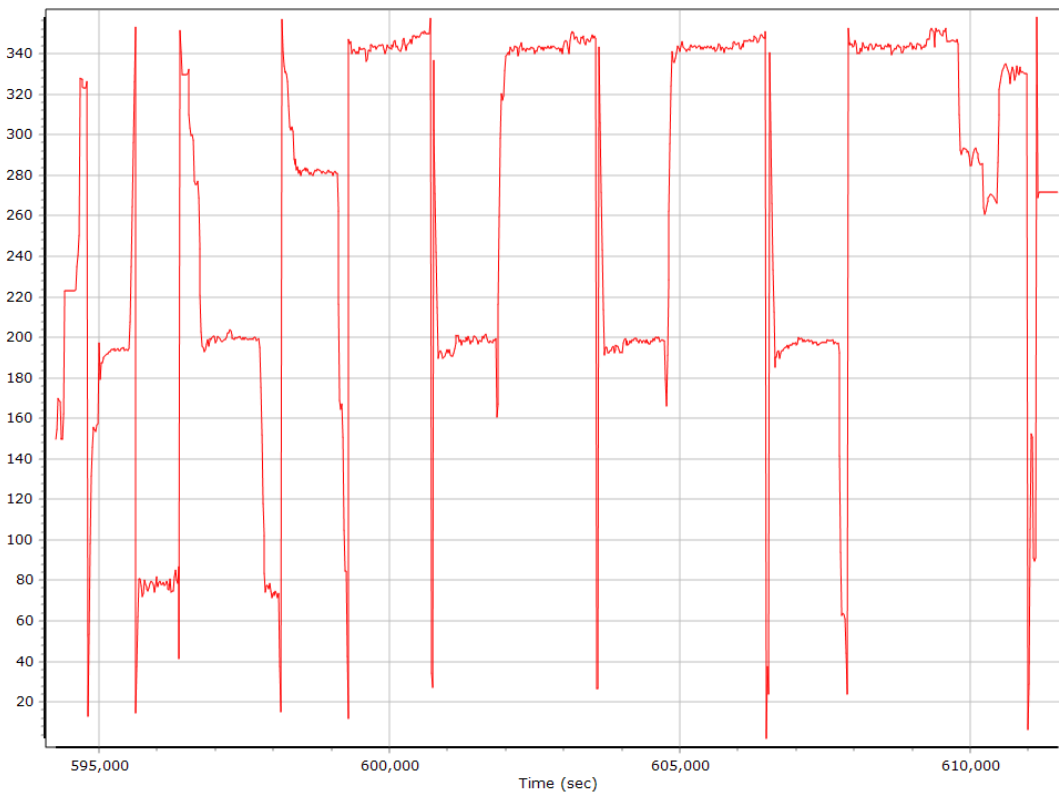
Altitude



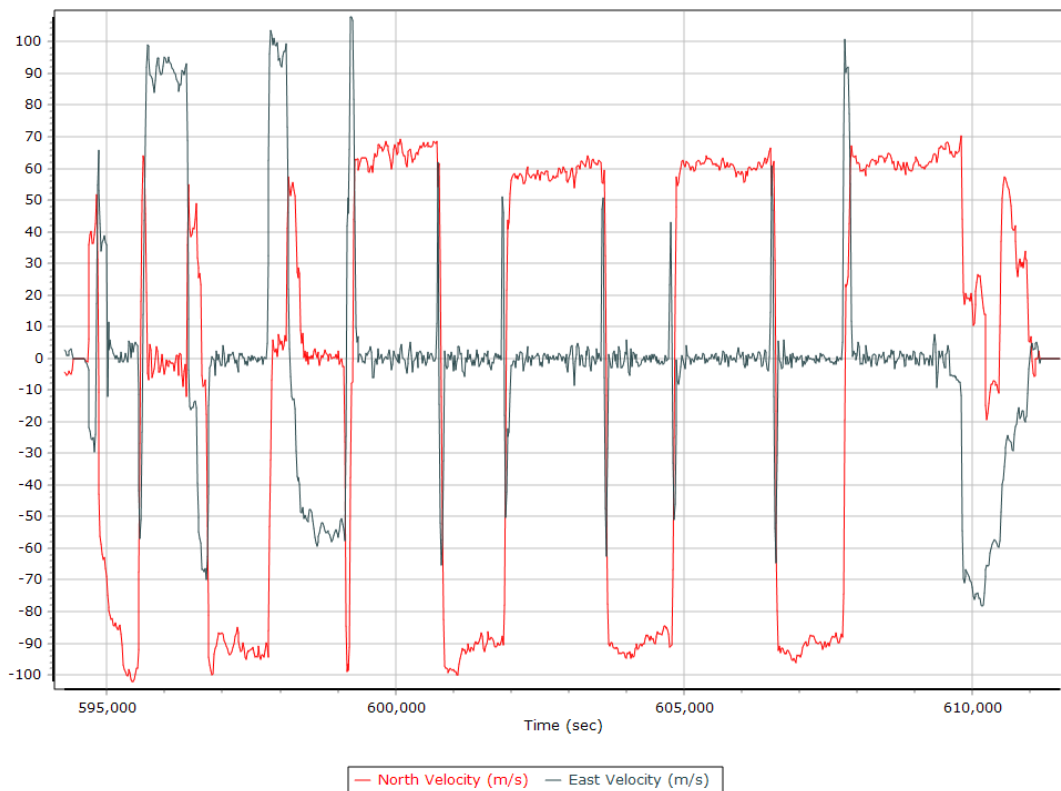
Roll/Pitch



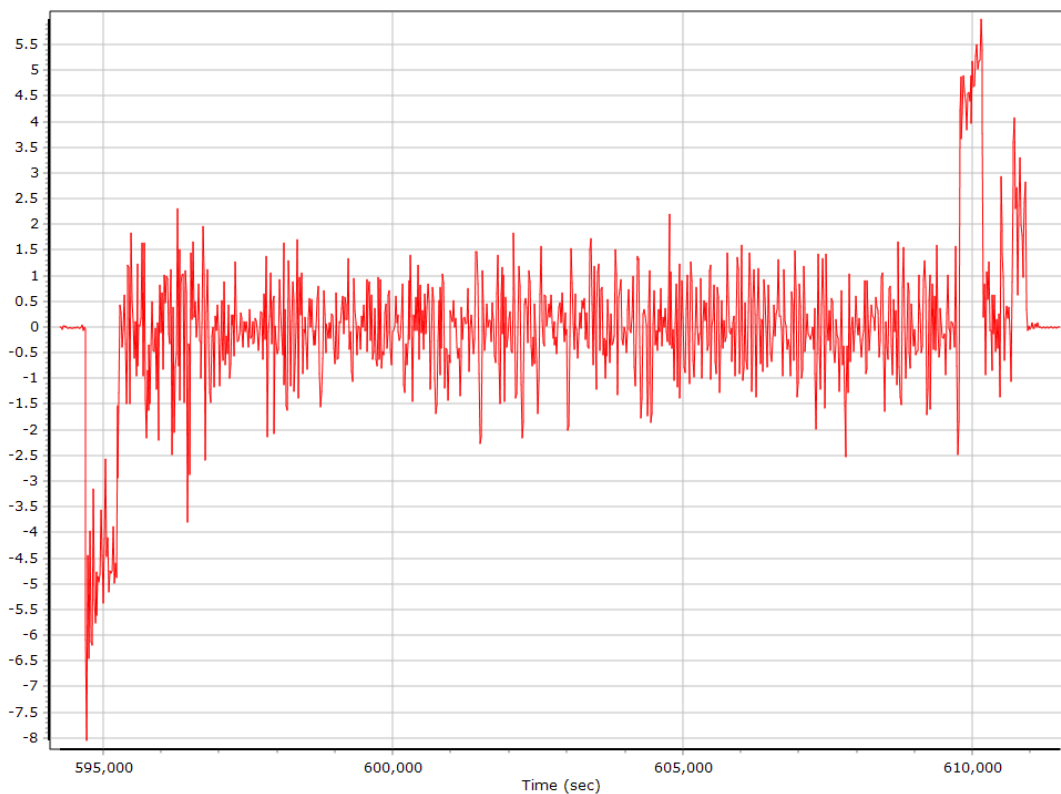
Heading



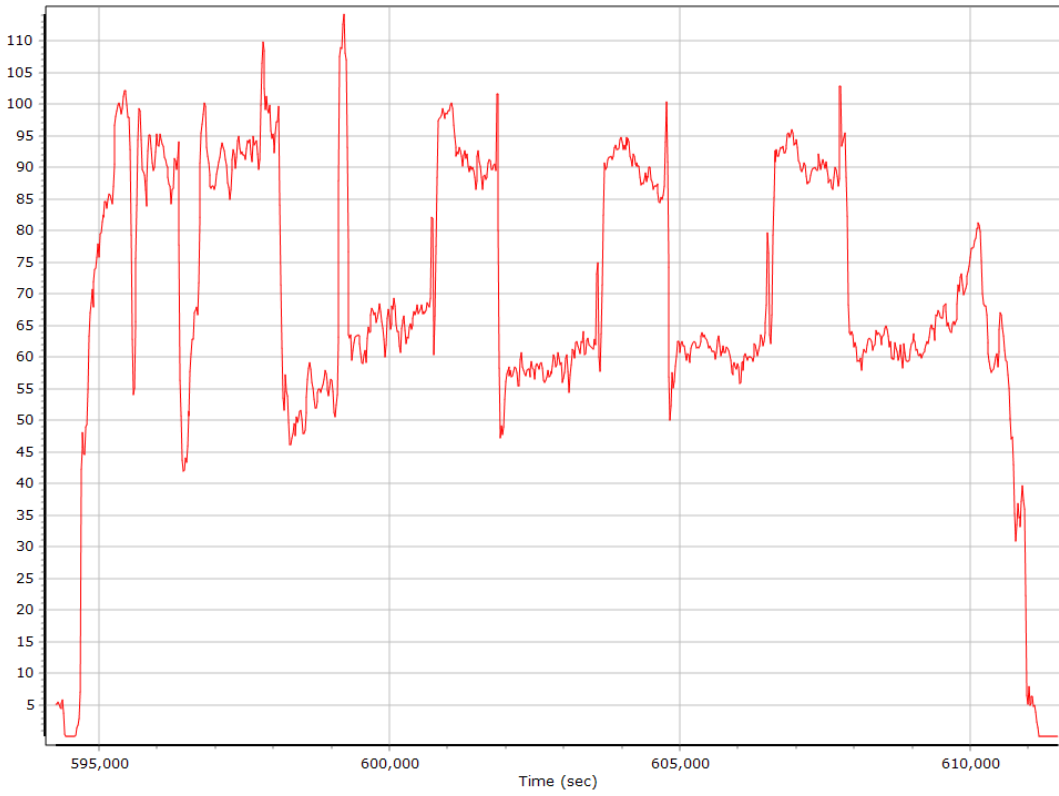
North/East Velocity



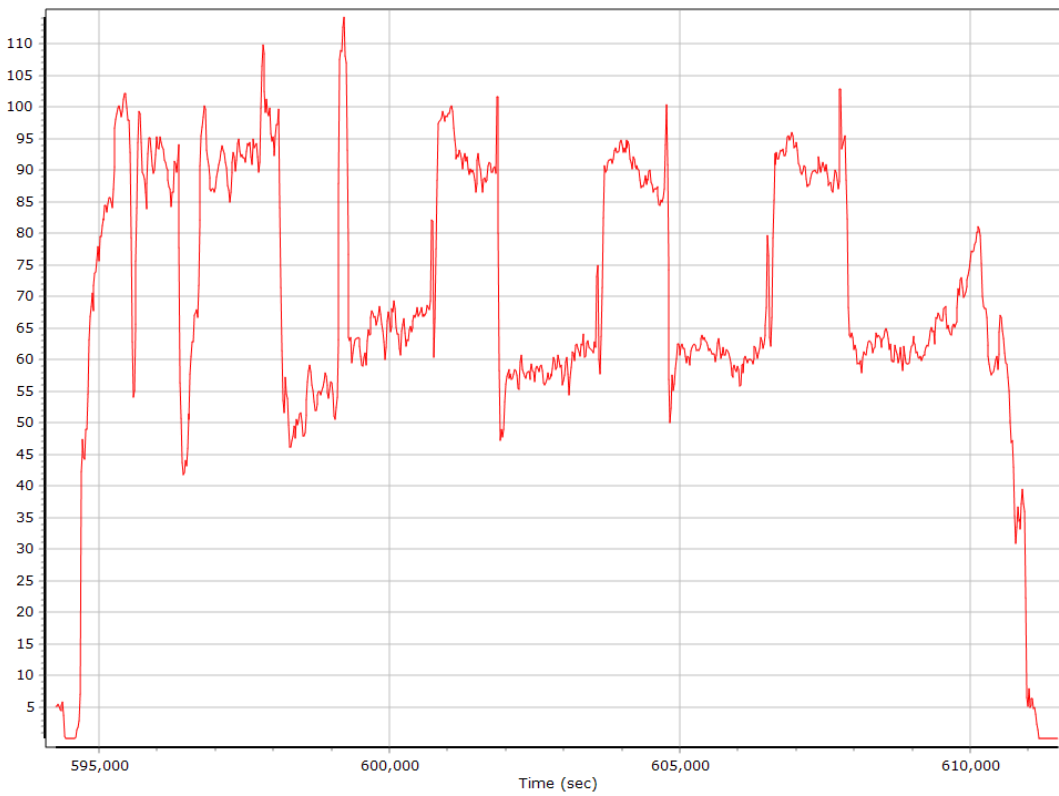
Down Velocity



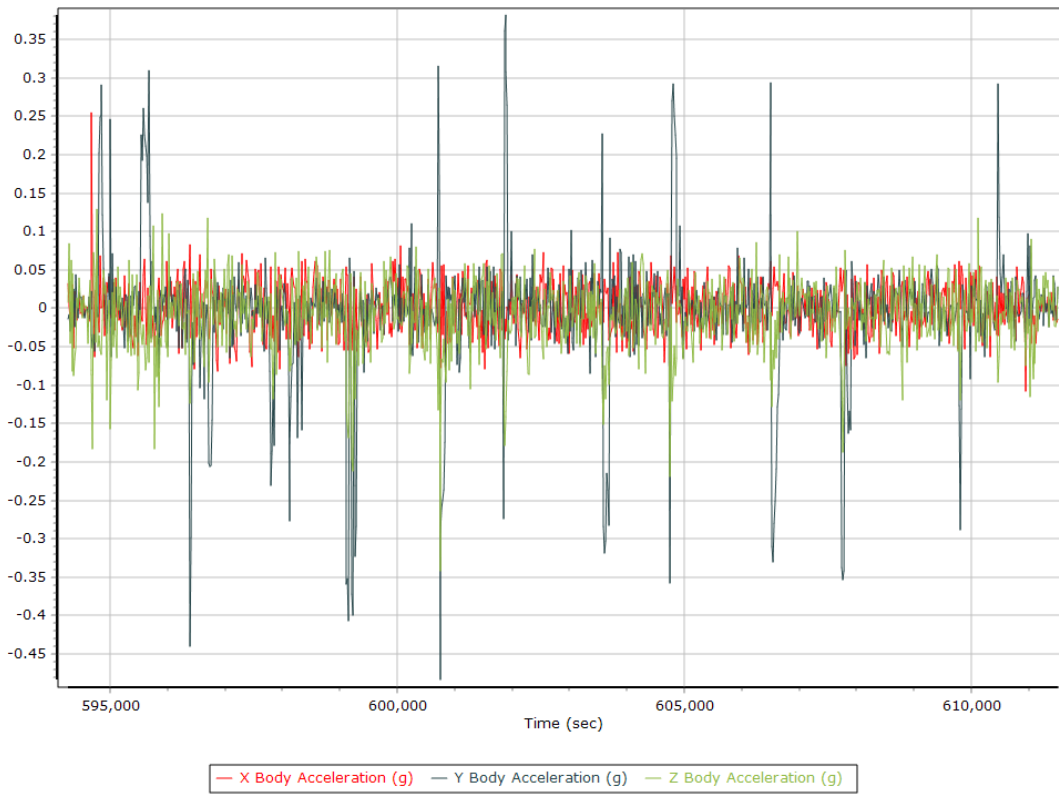
Total Speed



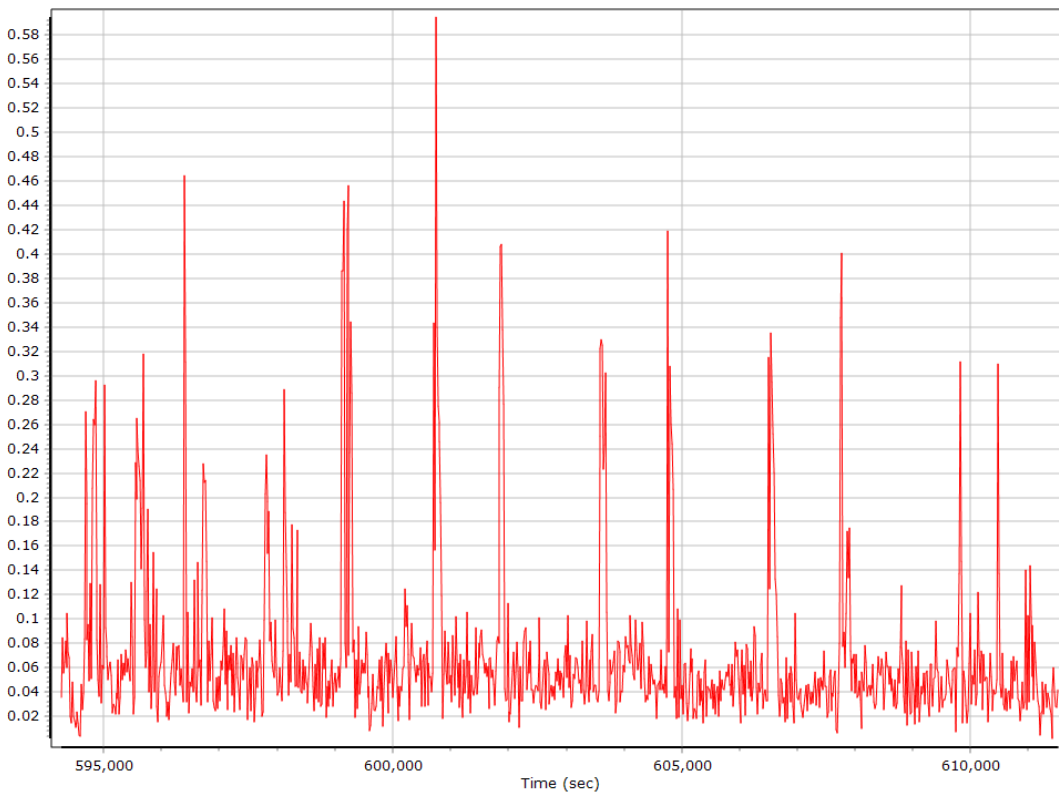
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate

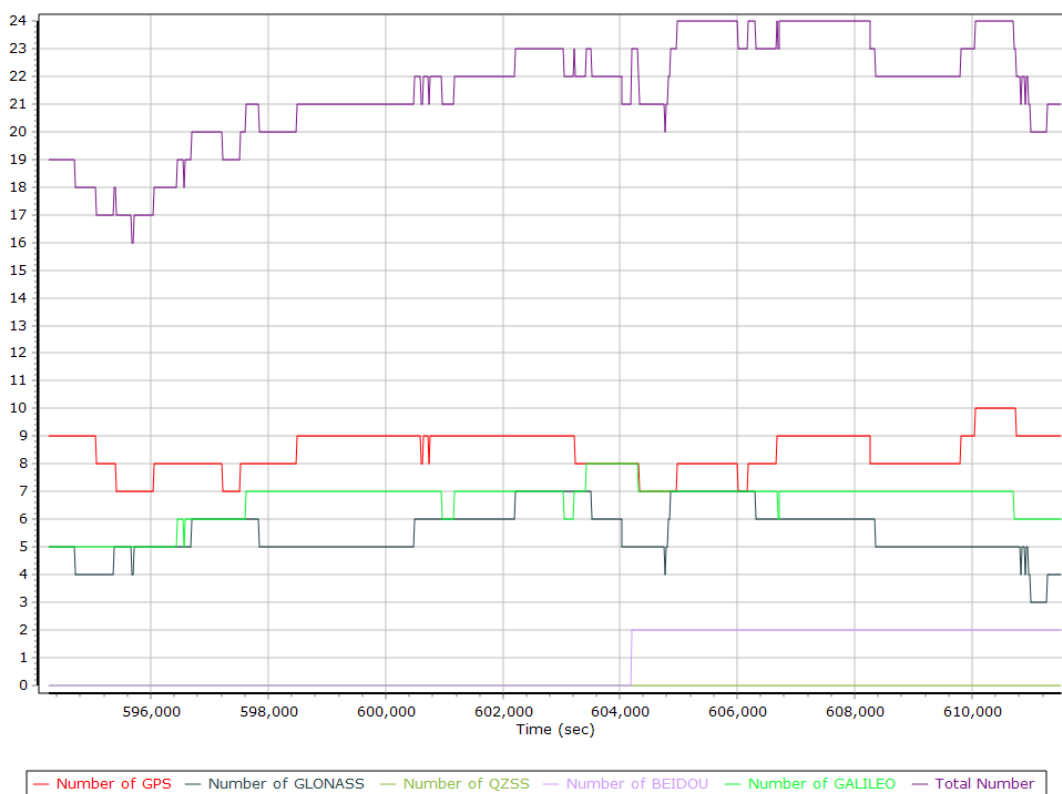


GNSS QC

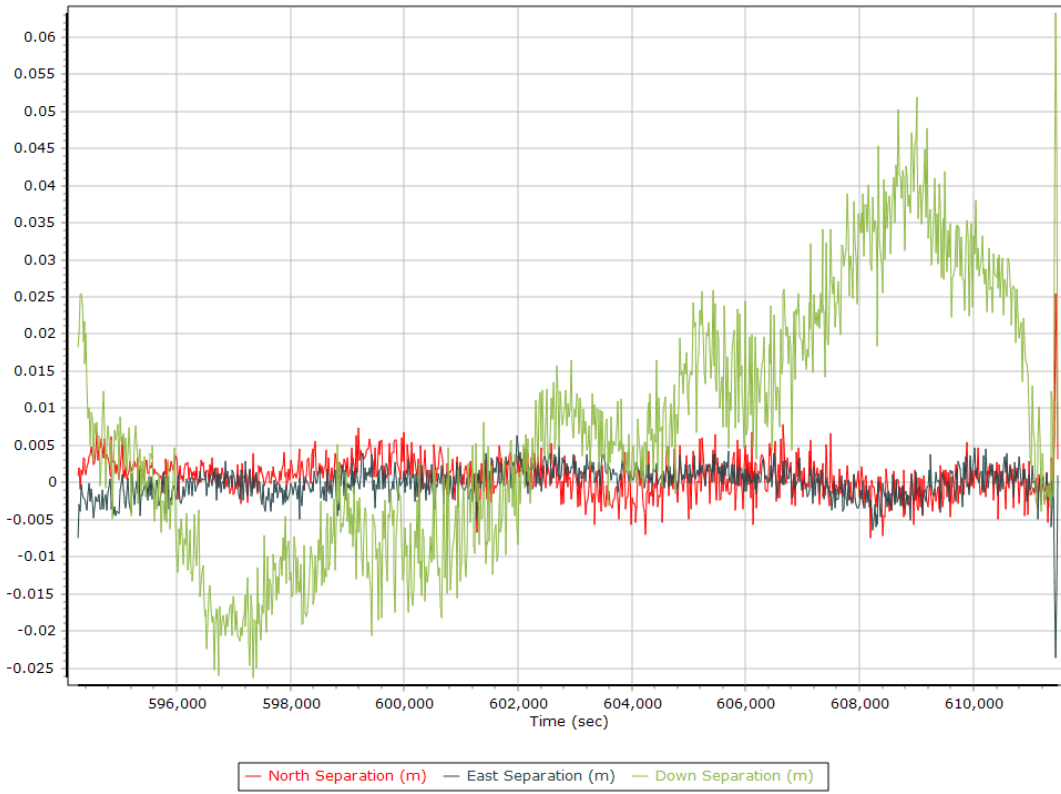
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	6	10	8
Number of GLONASS SV	3	7	6
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	2	1
Number of GALILEO SV	3	8	7
Total number of SV	13	24	21
PDOP	0.98	2.11	1.21
QC Solution Gaps	0.00	0.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	17687.00	0.00	0.00
Percentage	100.00	0.00	0.00

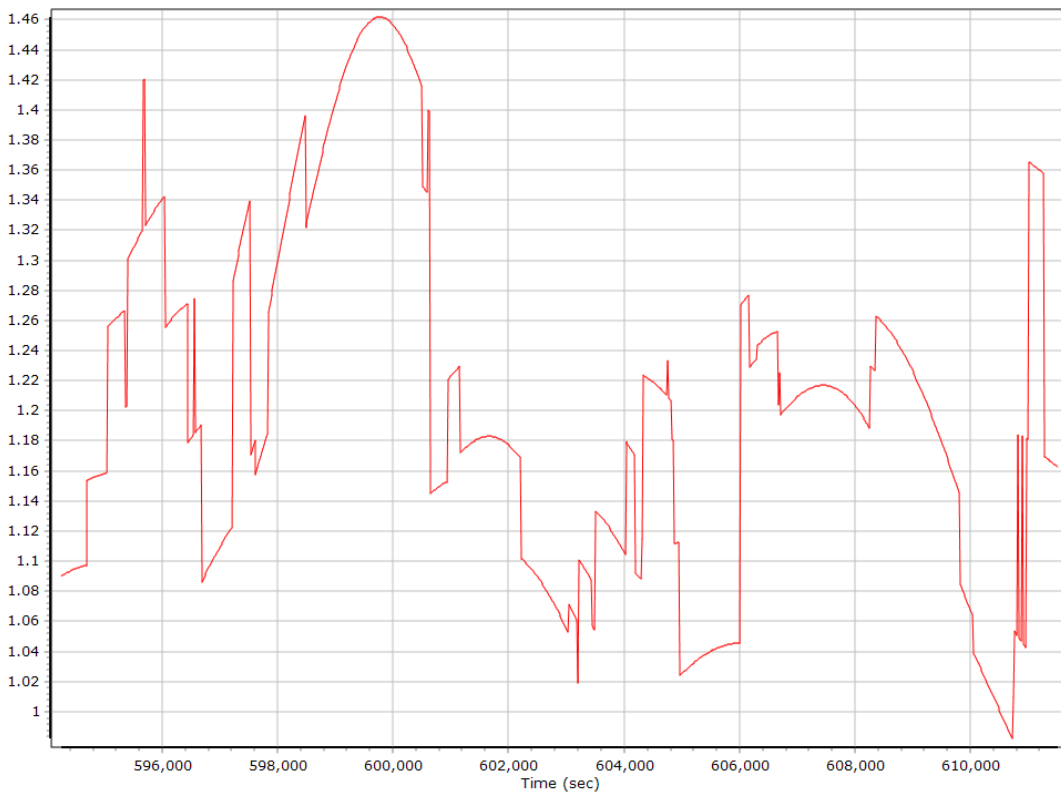
Num SVs in solution



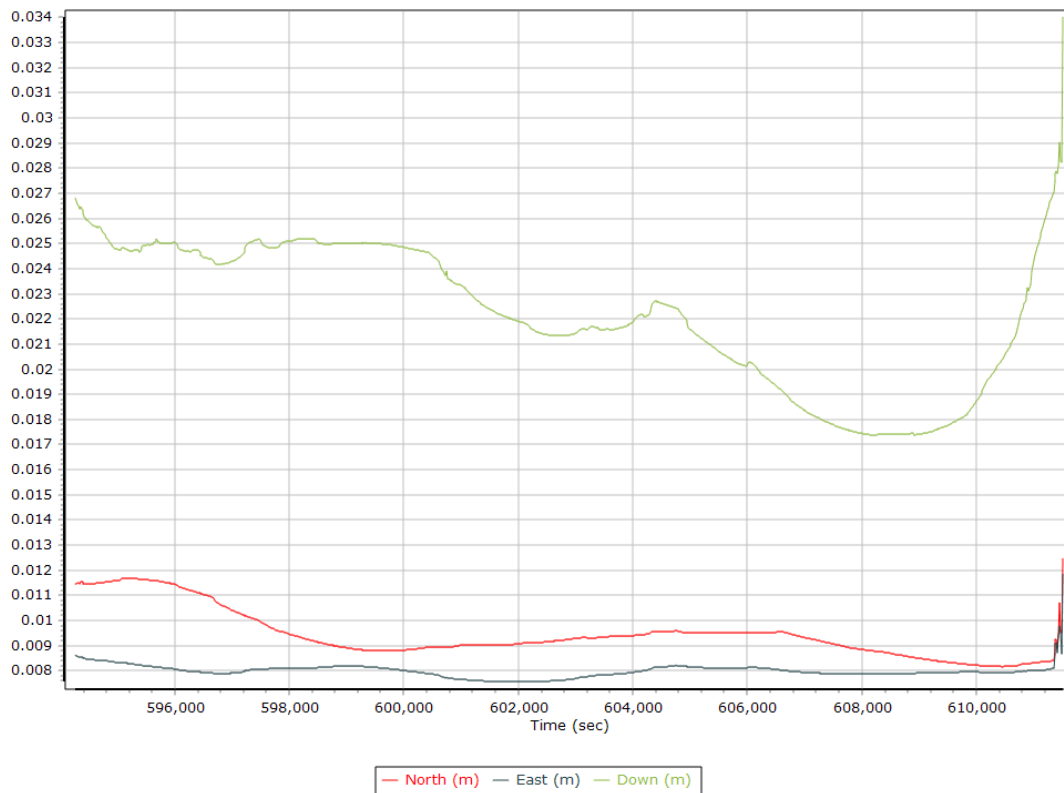
Forward/Reverse Separation



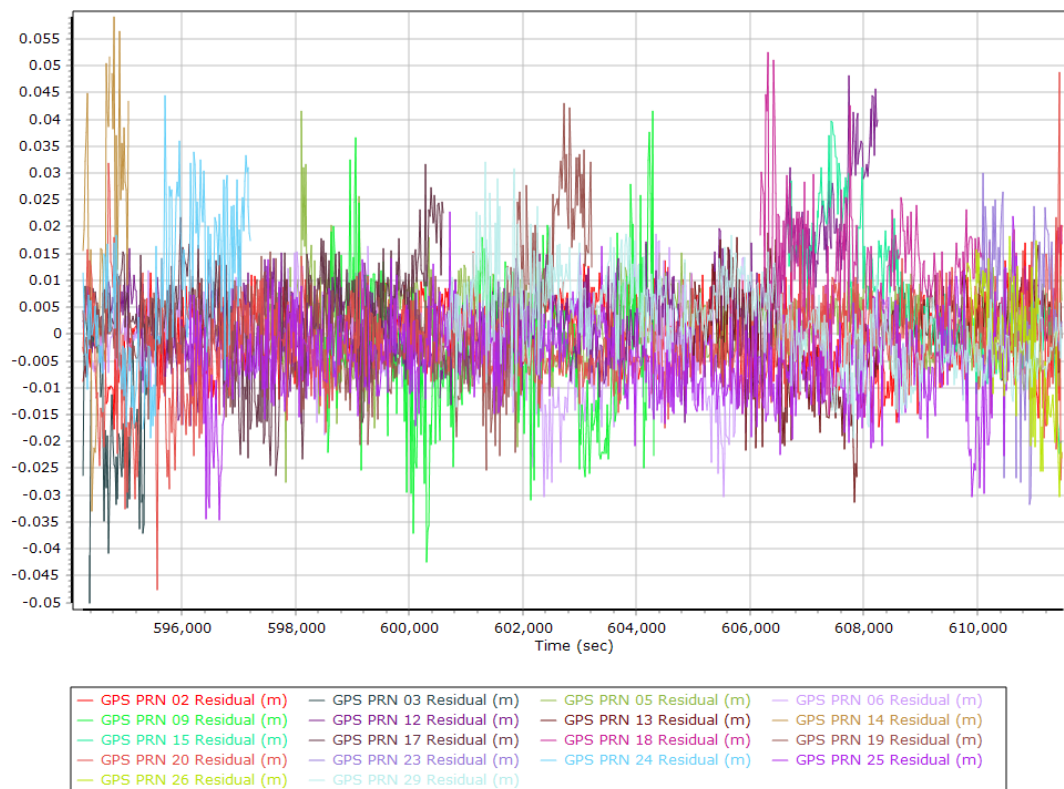
PDOP



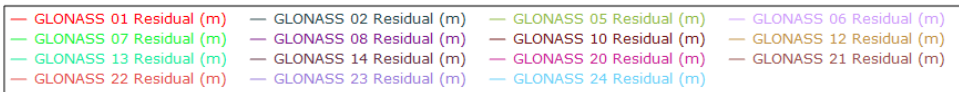
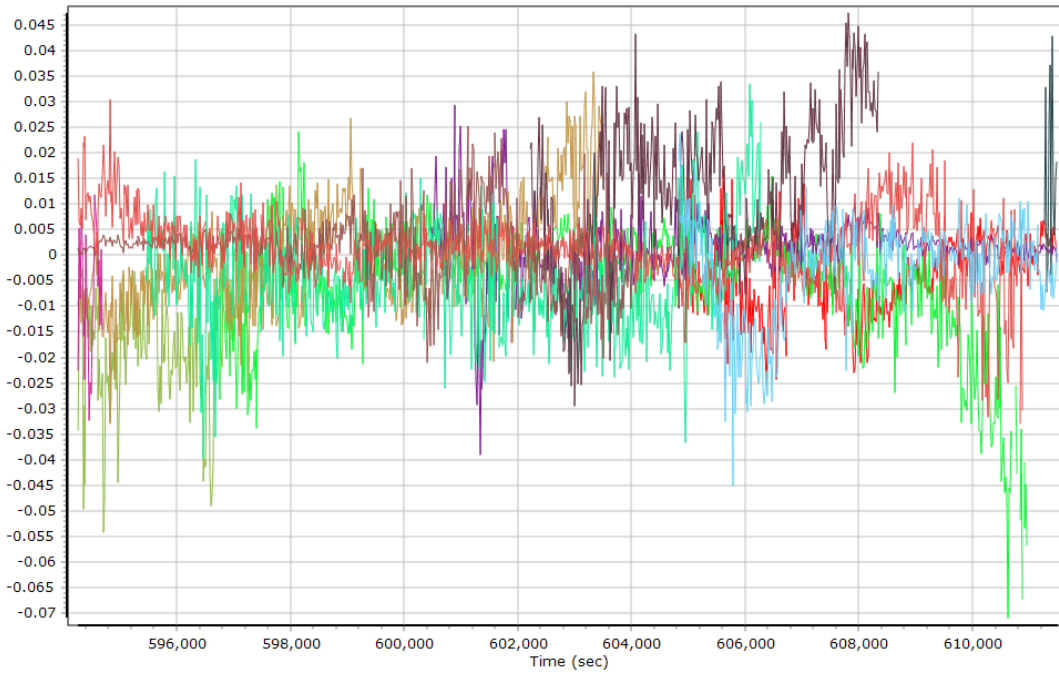
Estimated Position Accuracy



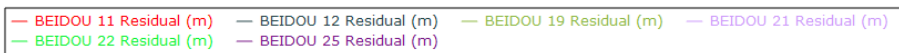
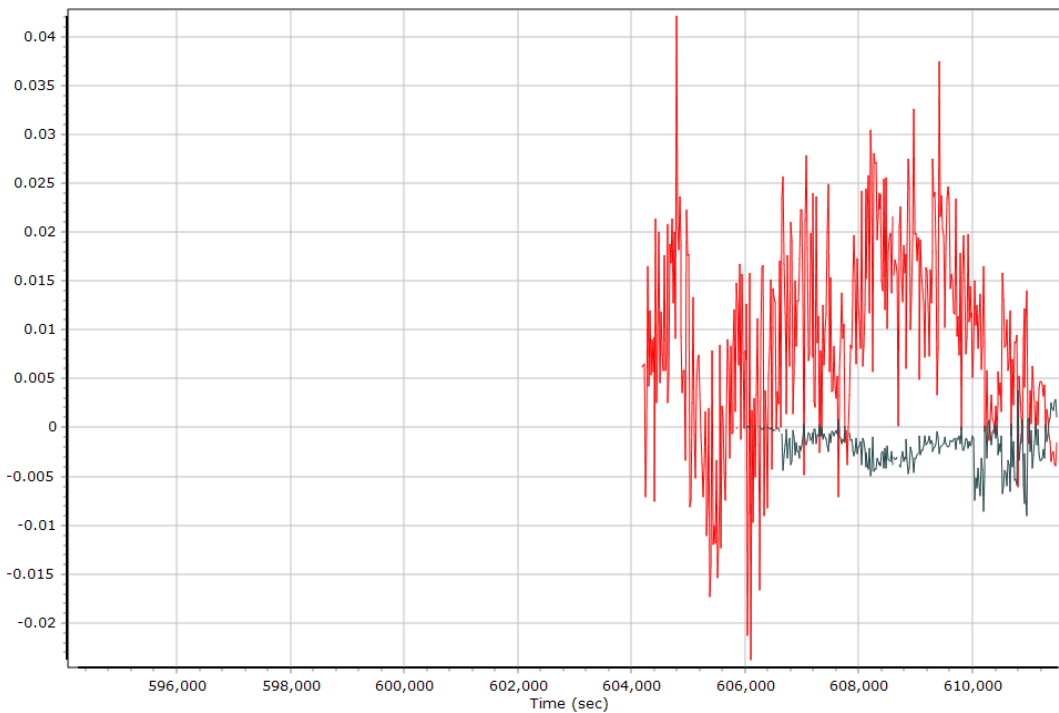
GPS Residuals



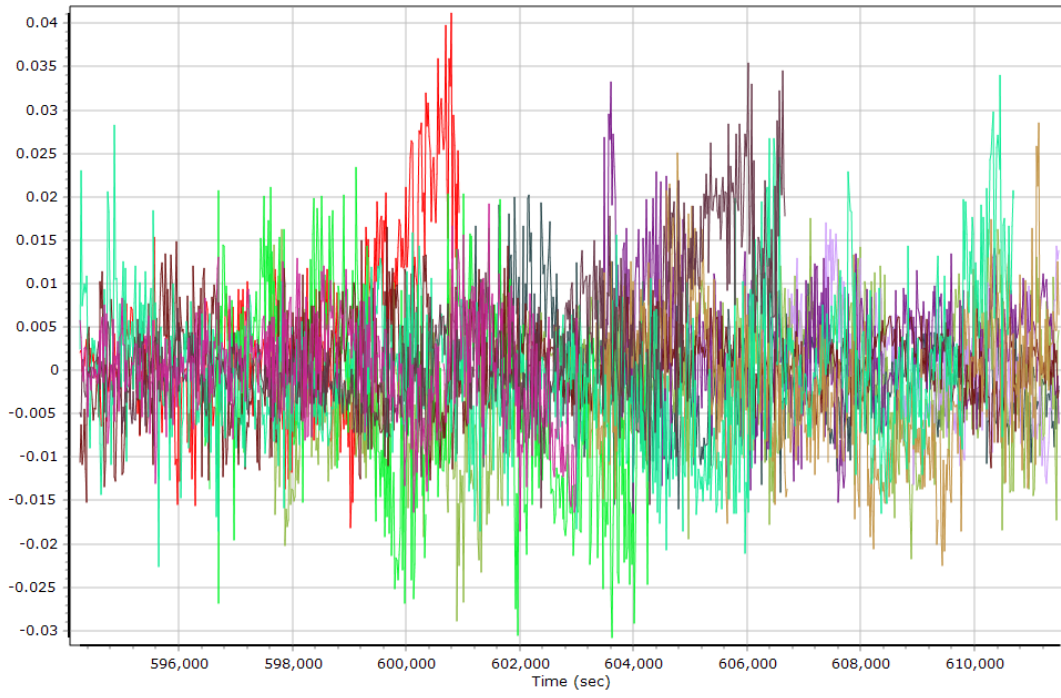
GLONASS Residuals



BEIDOU Residuals



GALILEO Residuals



- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GALILEO 02 Residual (m) | GALILEO 03 Residual (m) | GALILEO 05 Residual (m) | GALILEO 08 Residual (m) |
| GALILEO 09 Residual (m) | GALILEO 13 Residual (m) | GALILEO 15 Residual (m) | GALILEO 21 Residual (m) |
| GALILEO 27 Residual (m) | GALILEO 30 Residual (m) | GALILEO 36 Residual (m) | |

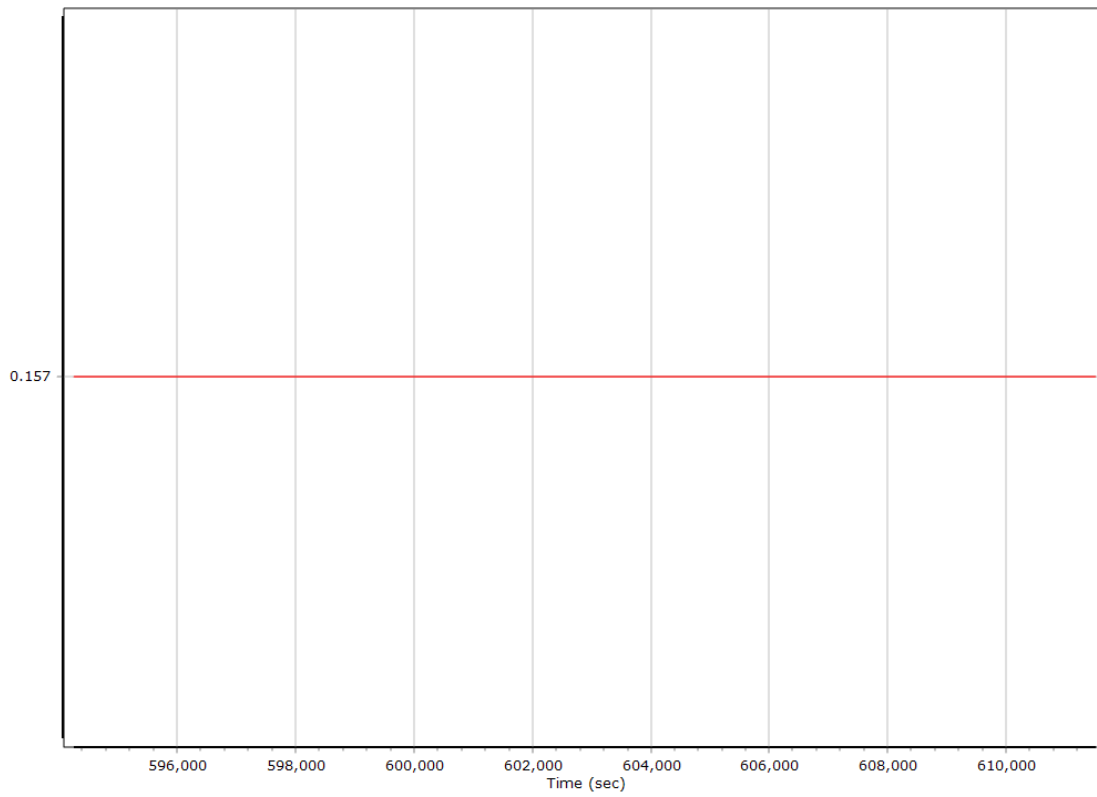
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	593822.000 (04/16/2022 20:57:02)		
Processing end time	6720.000 (04/17/2022 01:52:00)		
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

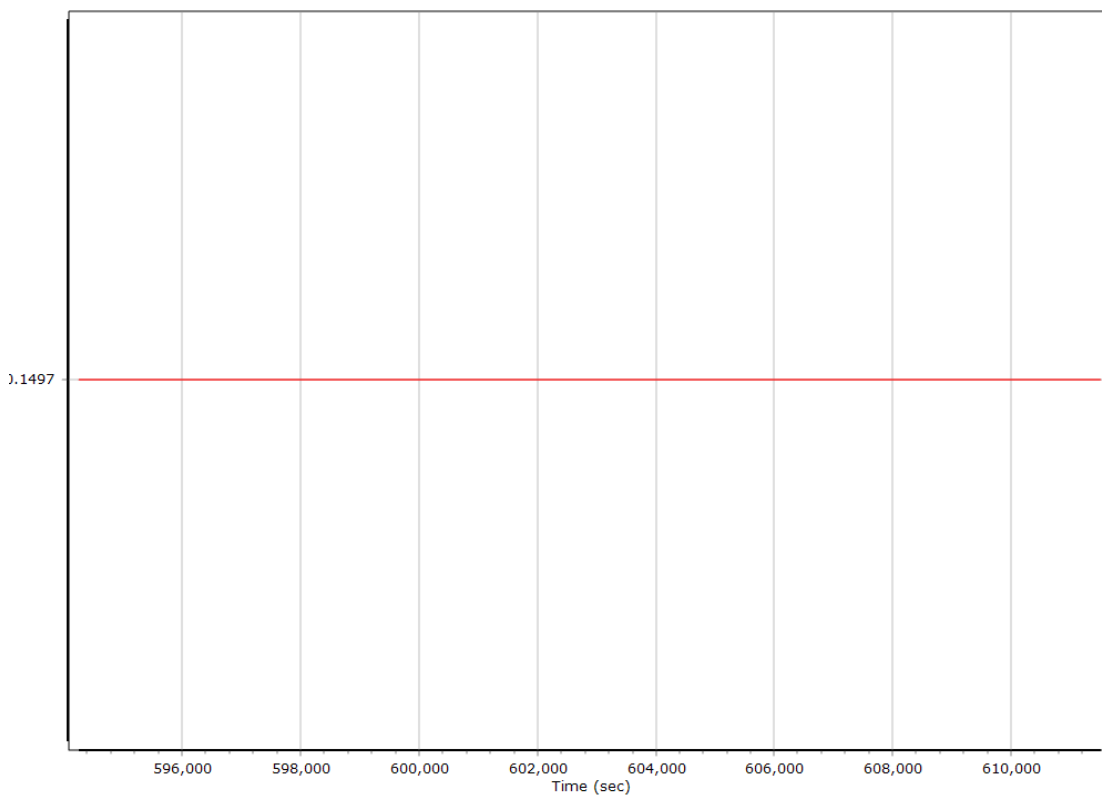
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

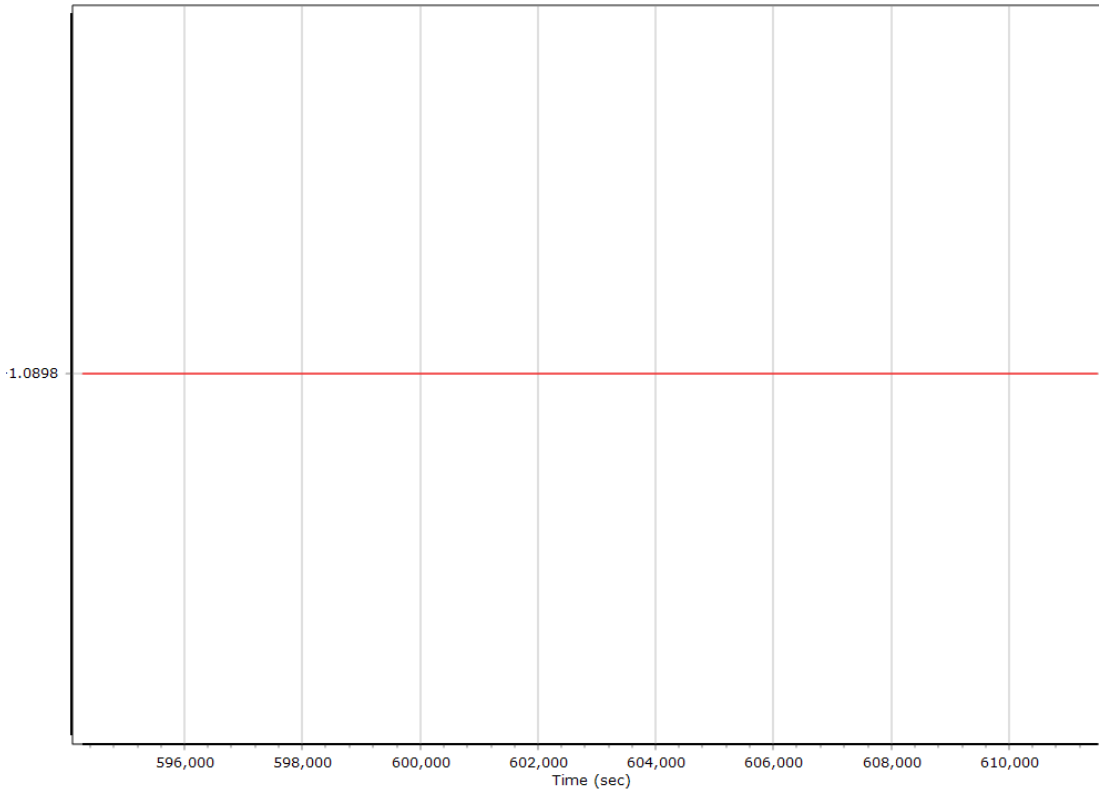
X Reference-Primary GNSS Lever Arm (m)



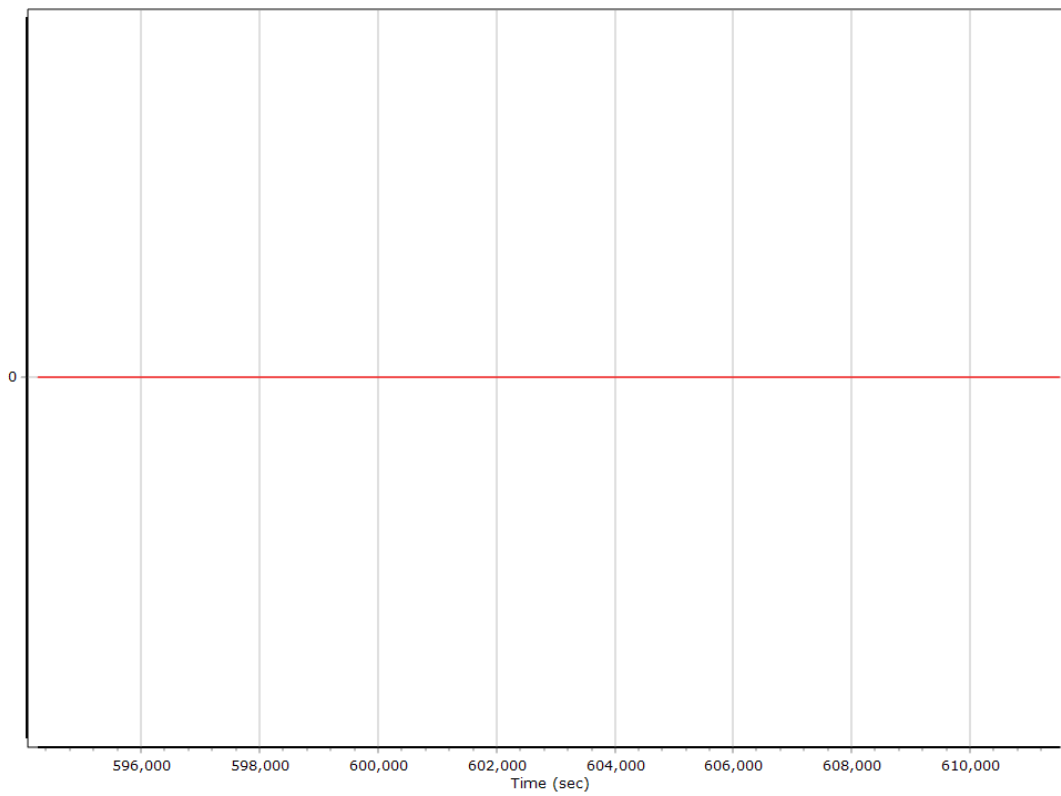
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



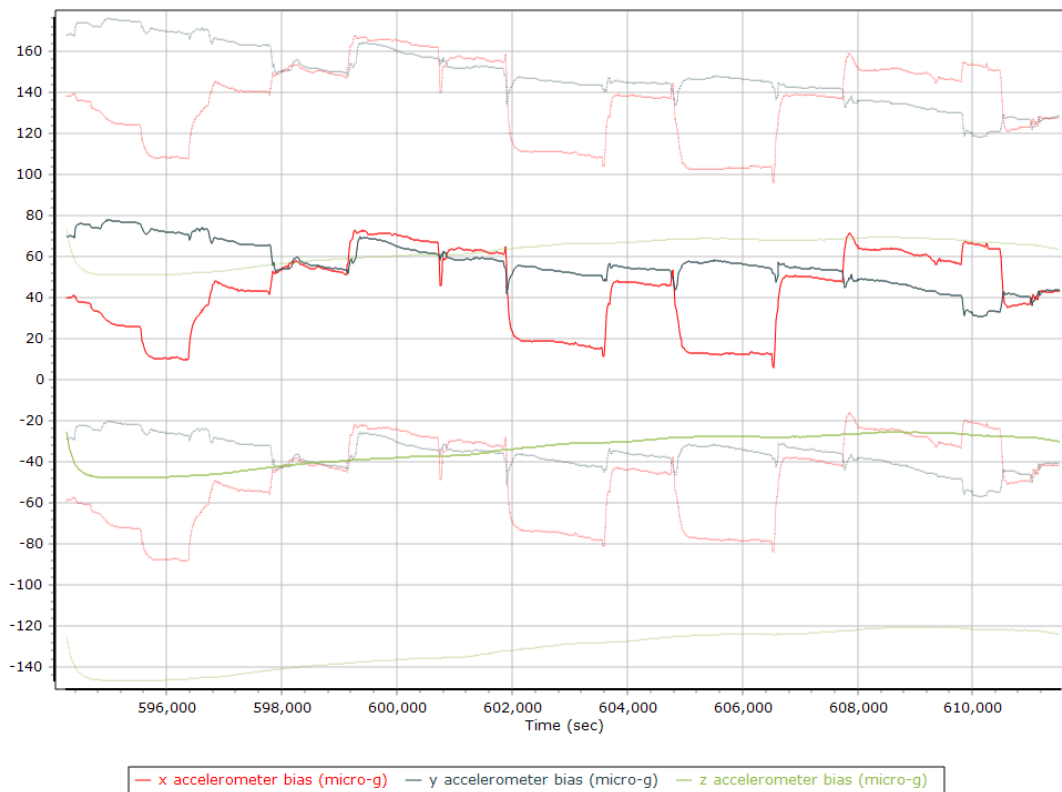
Reference-Primary GNSS Lever Arm Figure of Merit



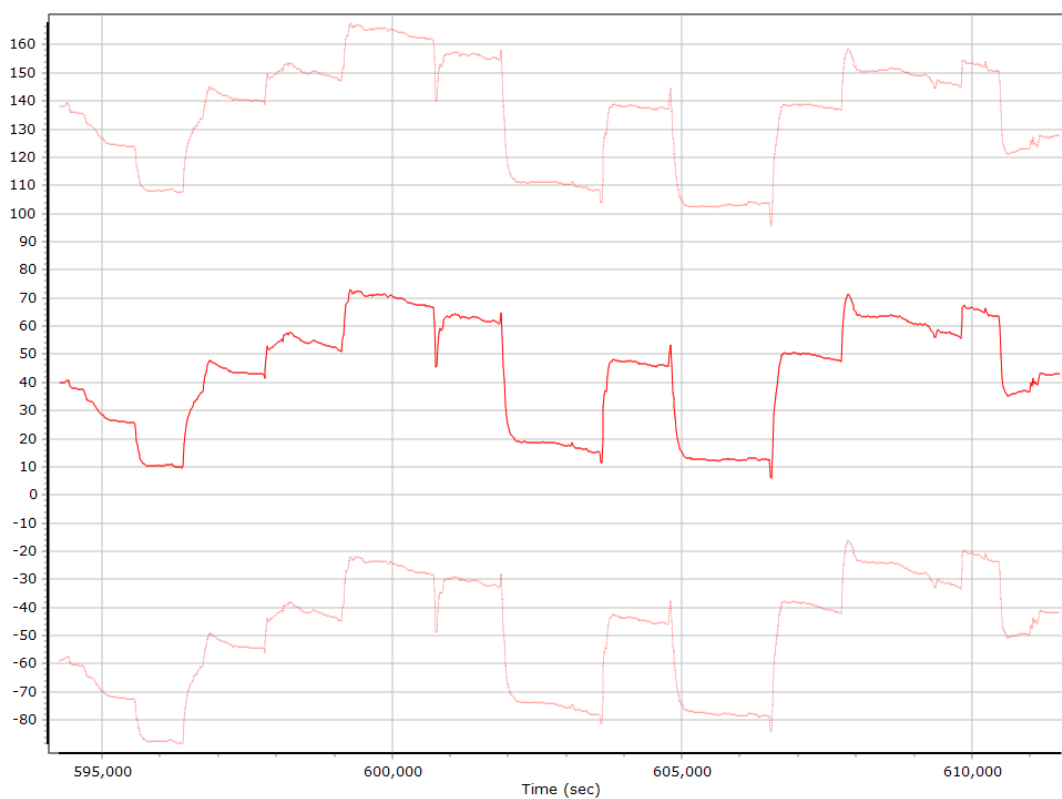
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

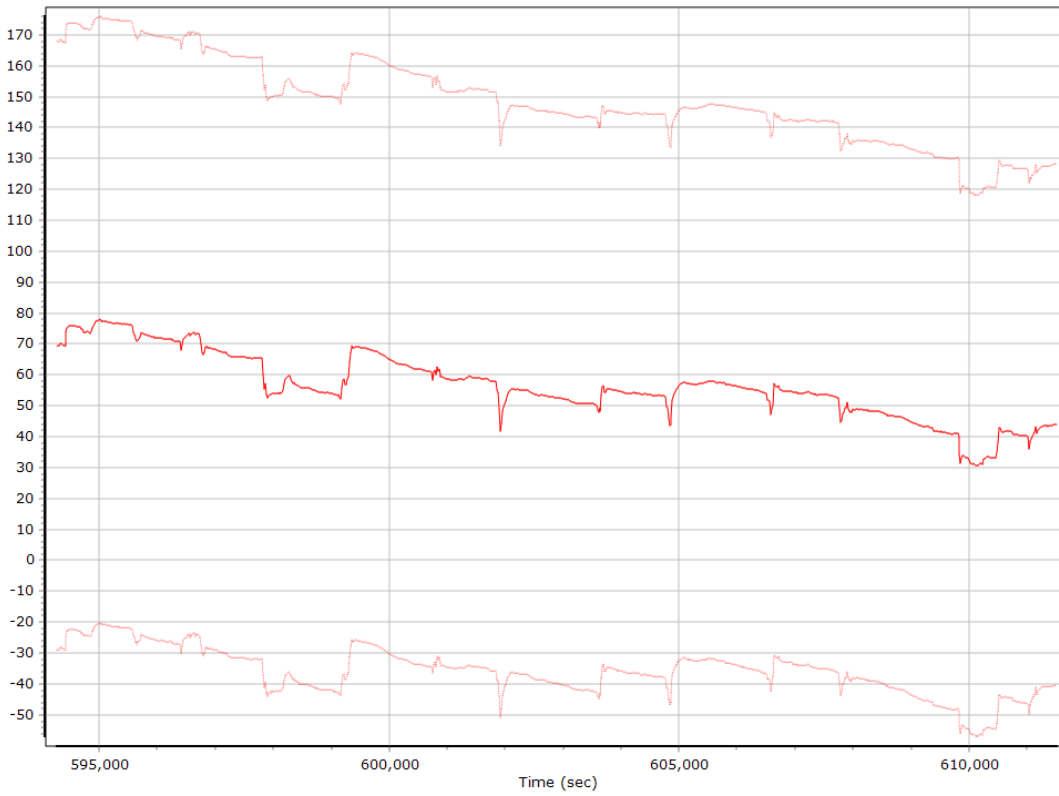
Accelerometer Bias (micro-g)



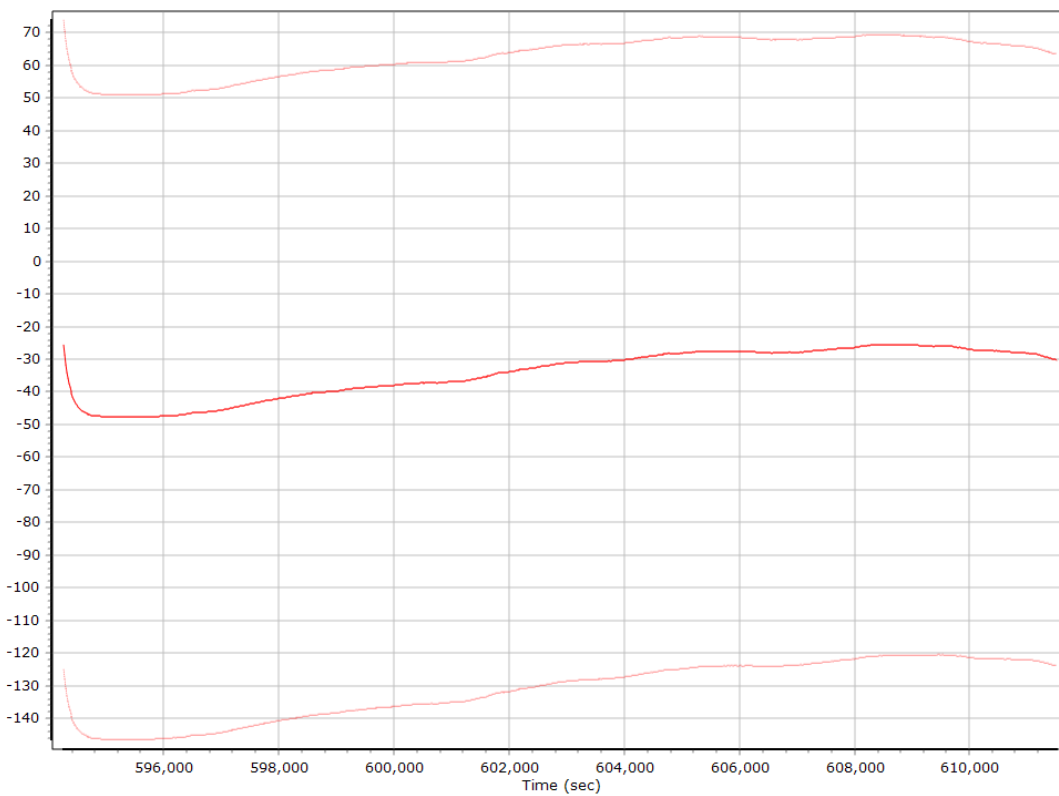
X Accelerometer Bias (micro-g)



Y Accelerometer Bias (micro-g)



Z Accelerometer Bias (micro-g)



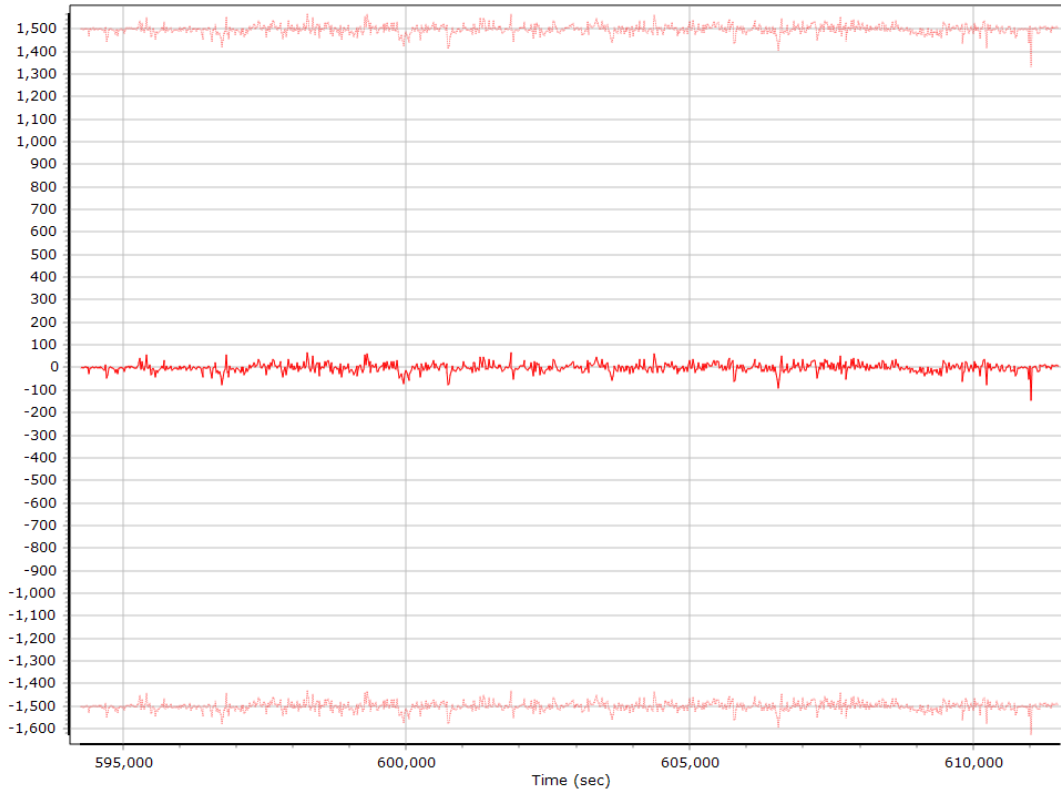
Accelerometer Scale Error (ppm)



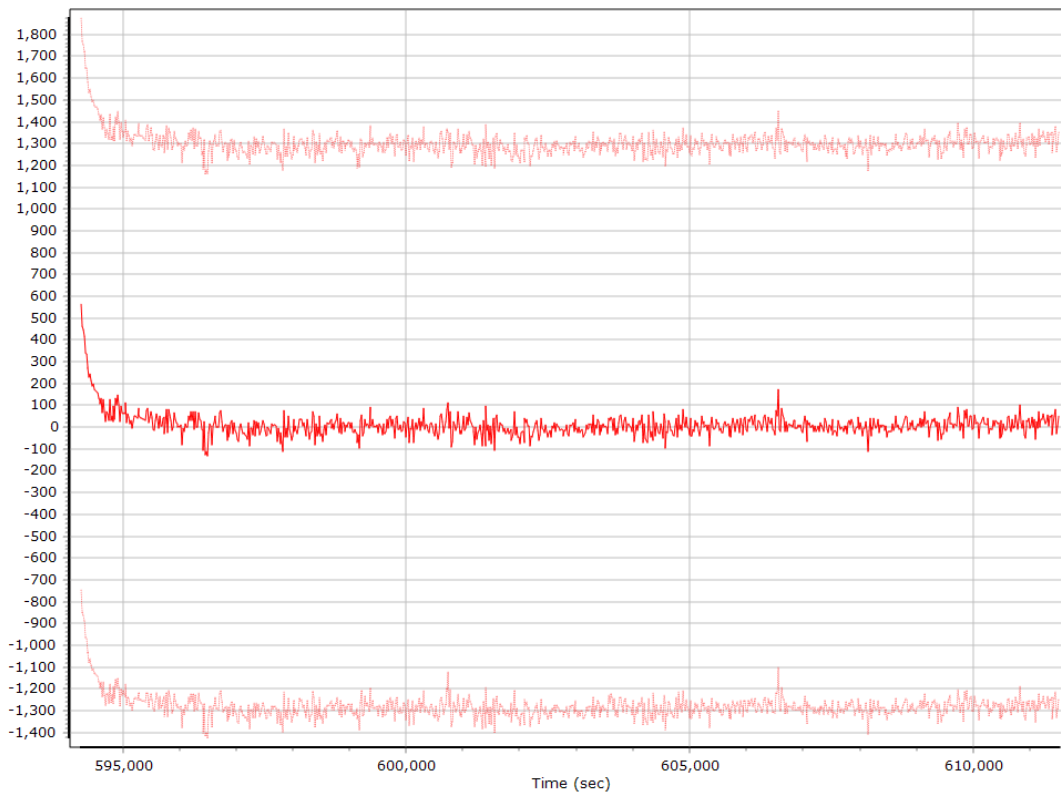
X Accelerometer Scale Error (ppm)



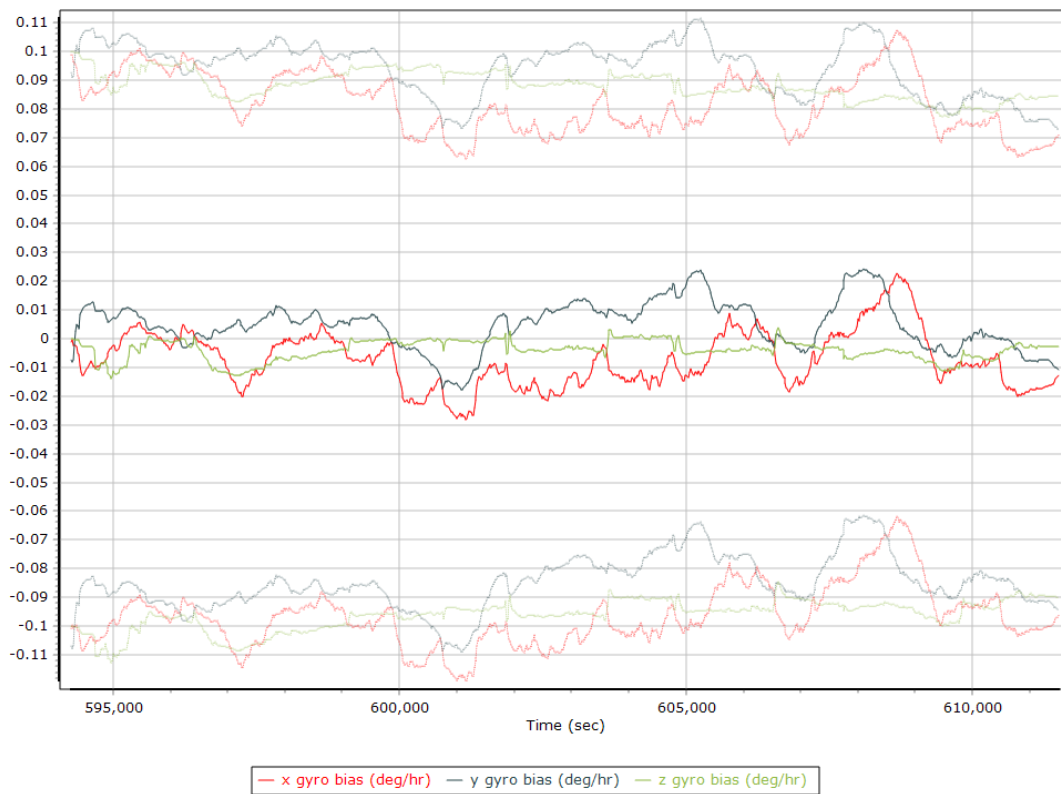
Y Accelerometer Scale Error (ppm)



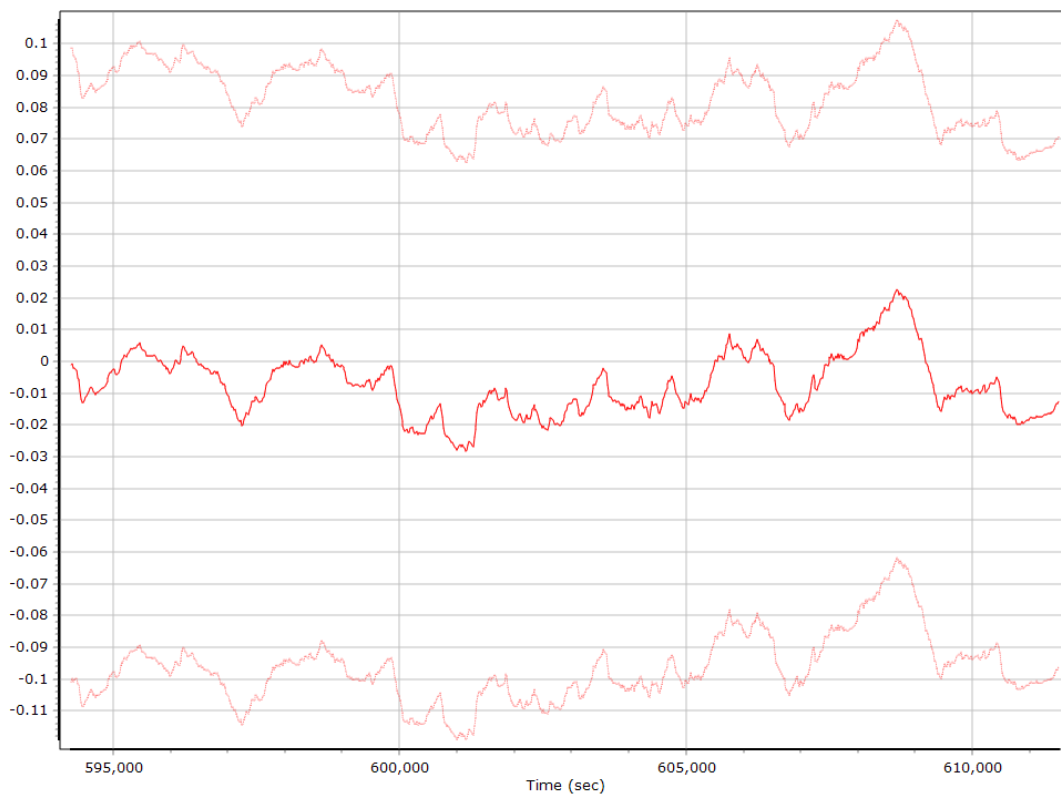
Z Accelerometer Scale Error (ppm)



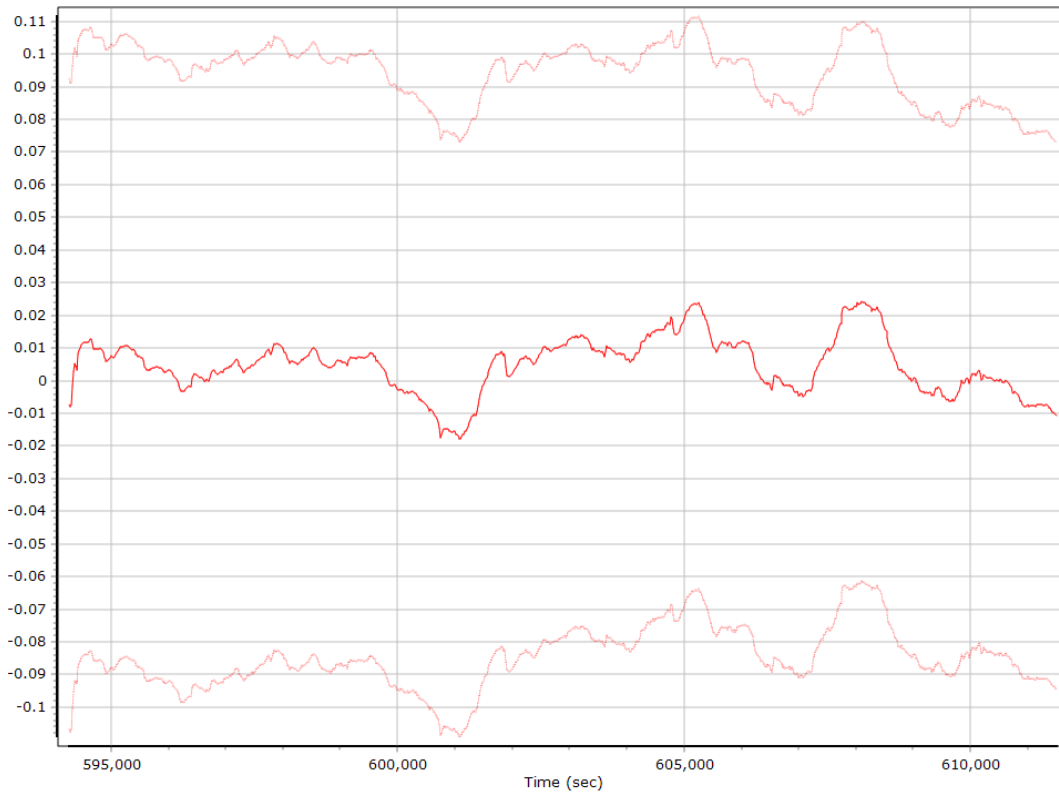
Gyro Bias (deg/h)



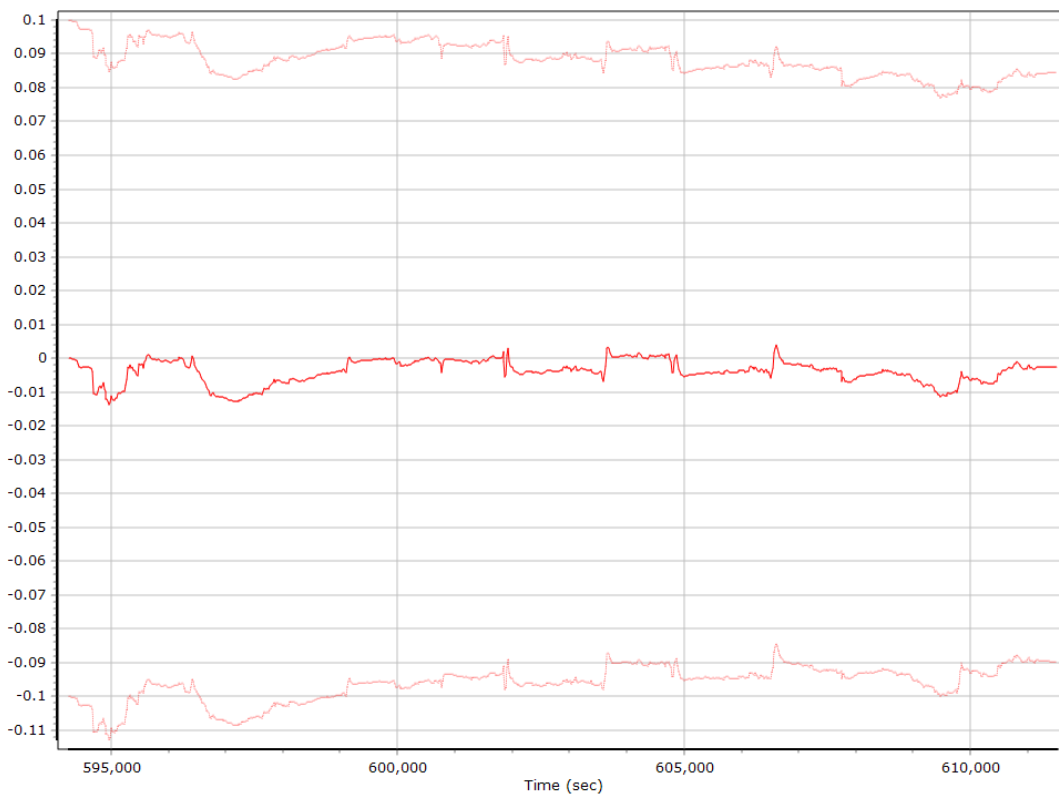
X Gyro Bias (deg/h)



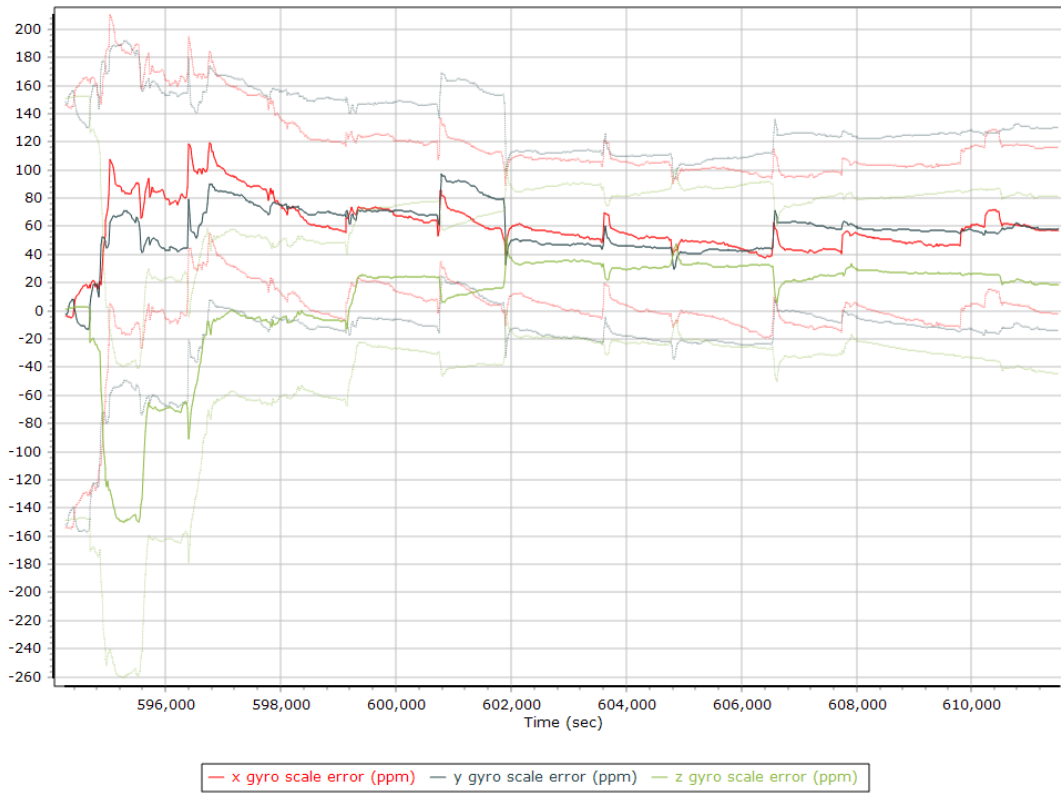
Y Gyro Bias (deg/h)



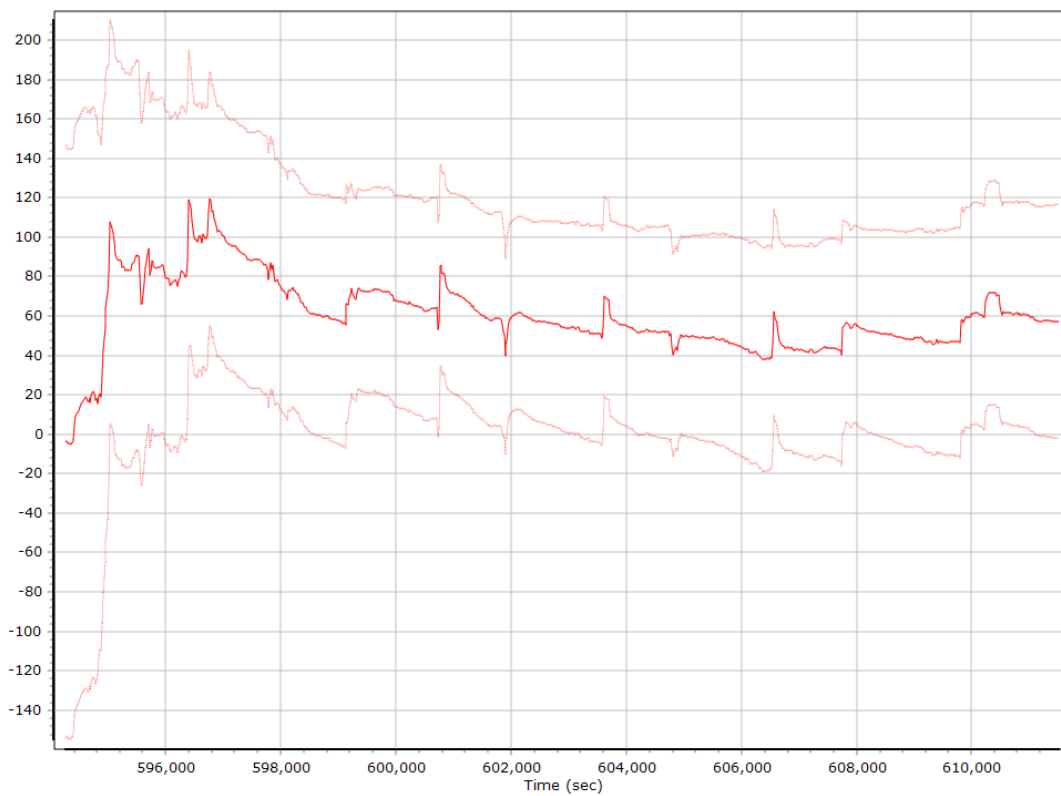
Z Gyro Bias (deg/h)



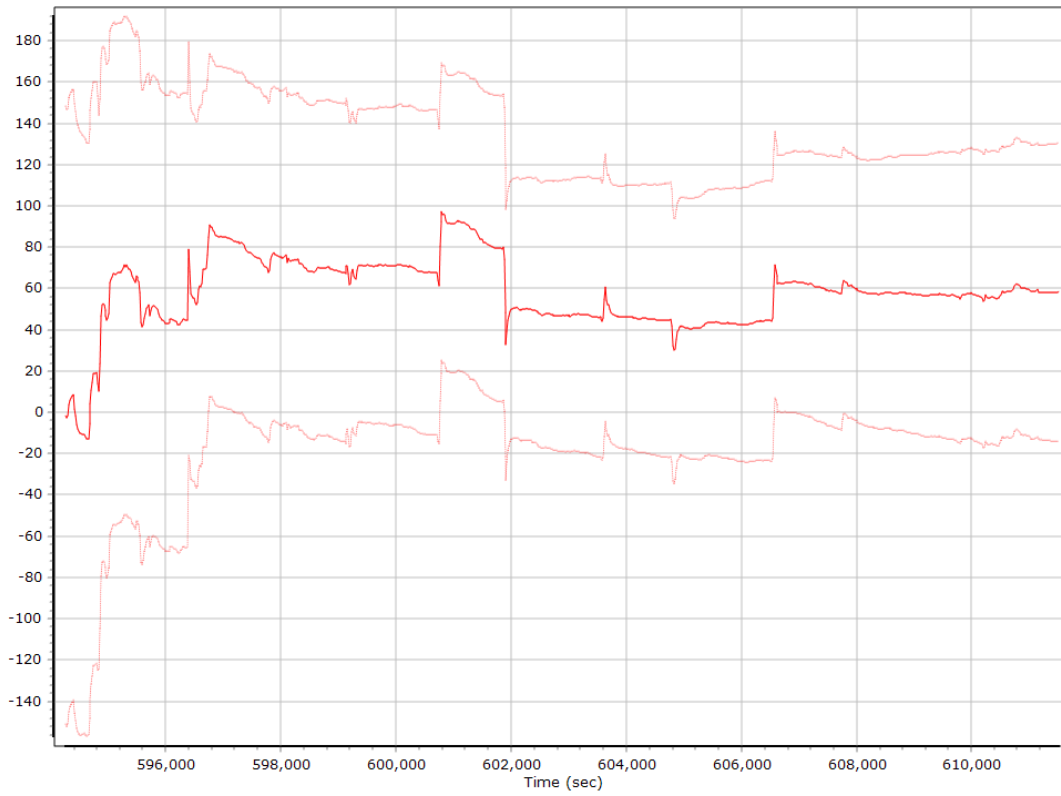
Gyro Scale Error (ppm)



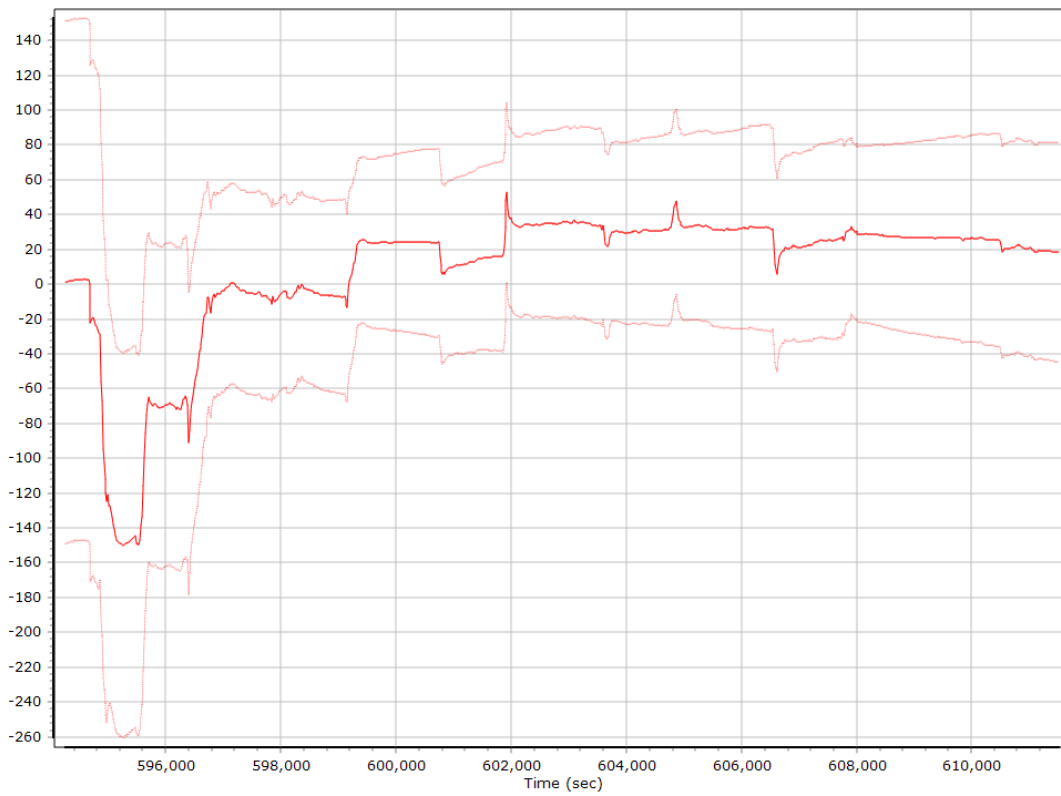
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

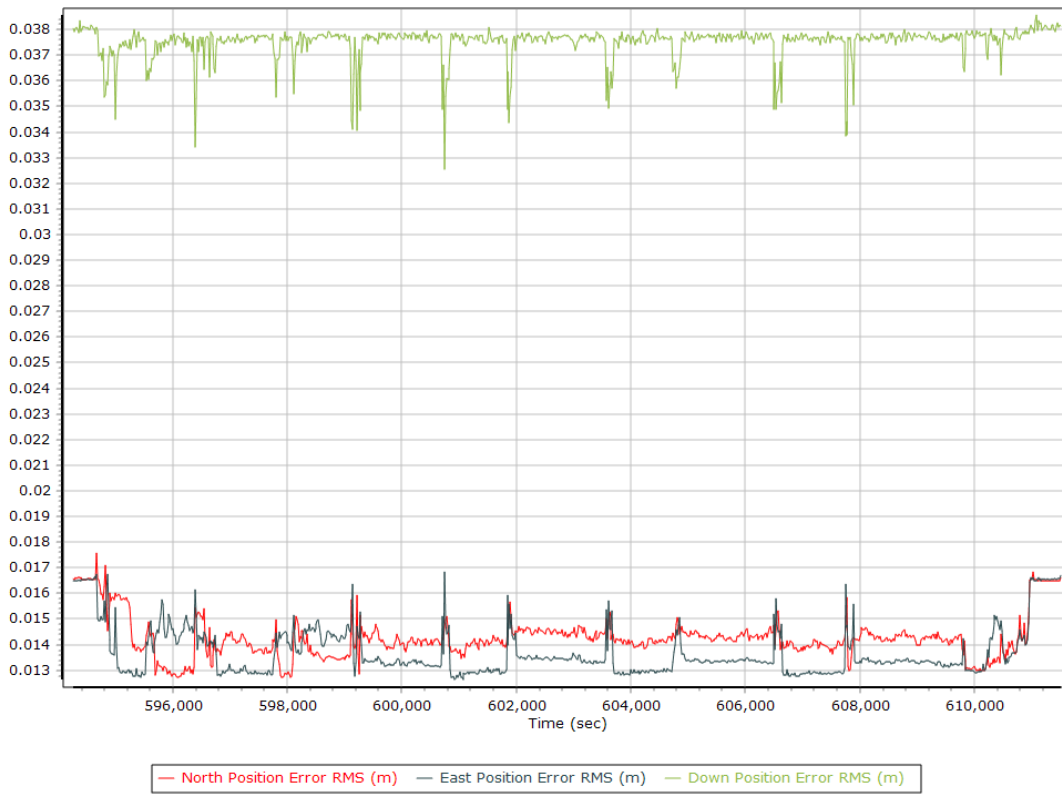


Z Gyro Scale Error (ppm)

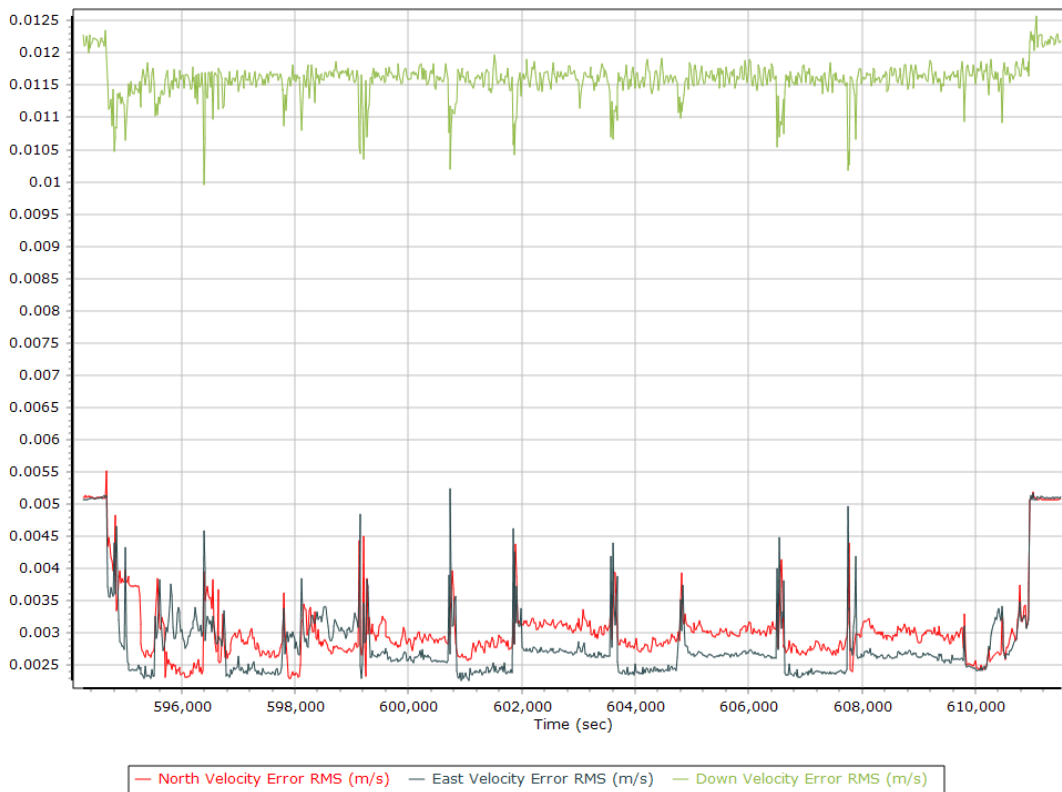


Smoothed Performance Metrics

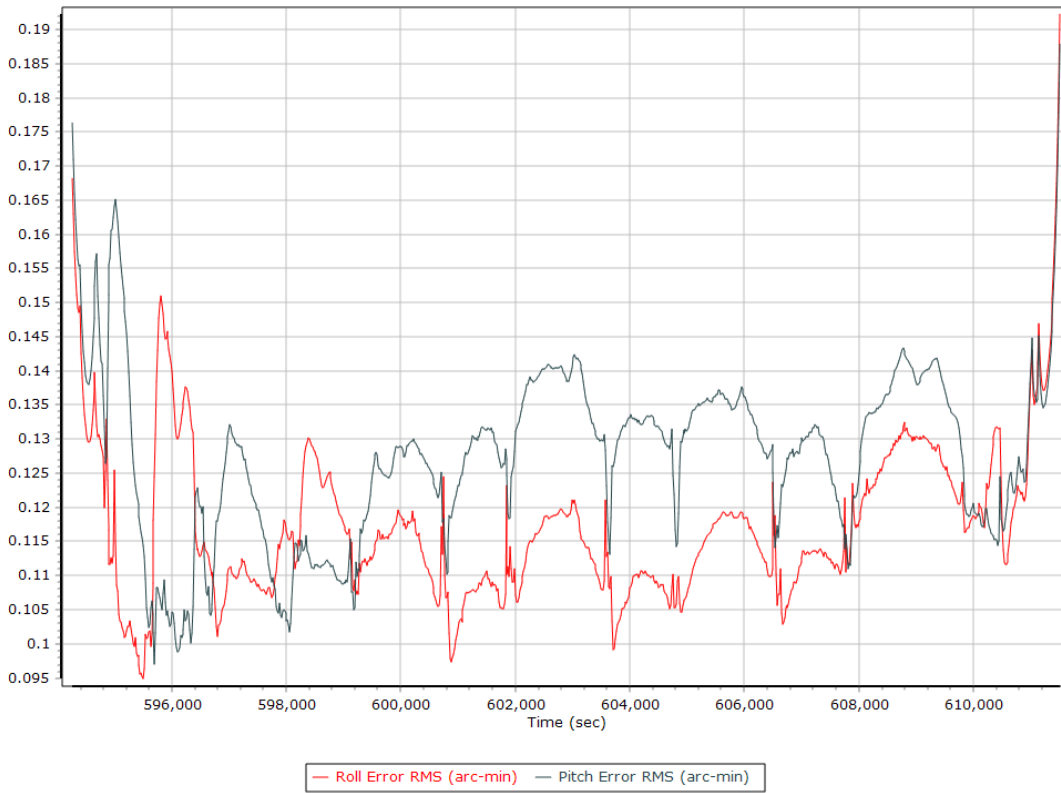
Position Error RMS (m)



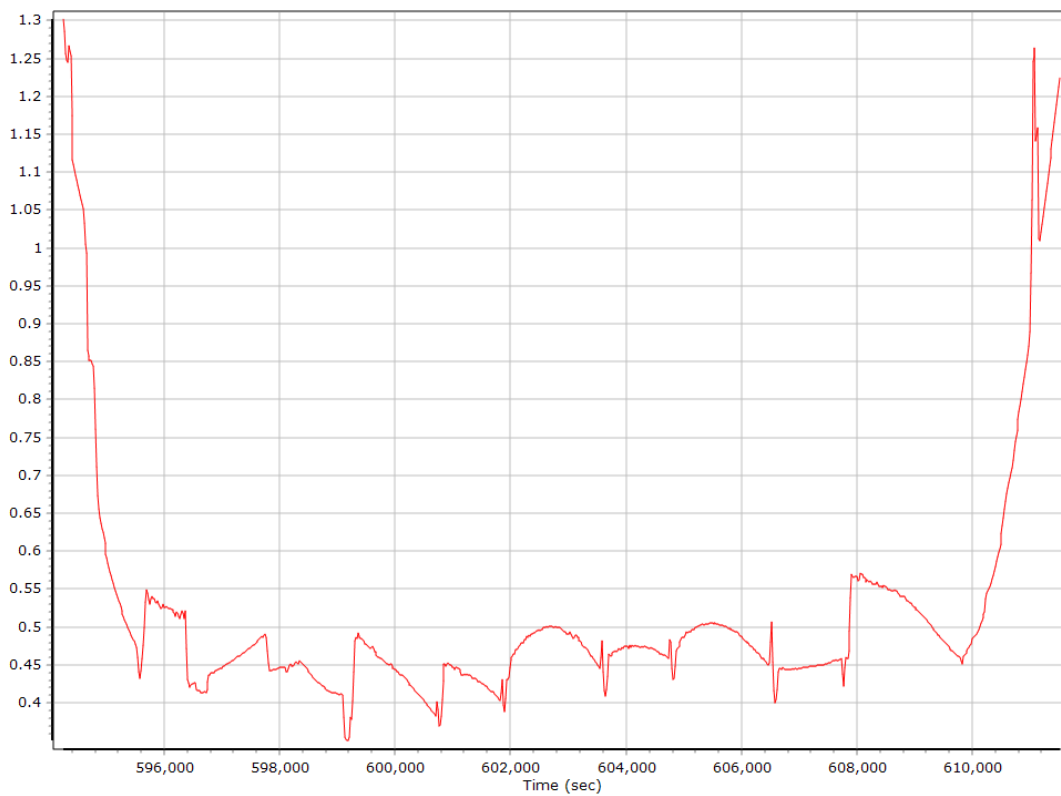
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

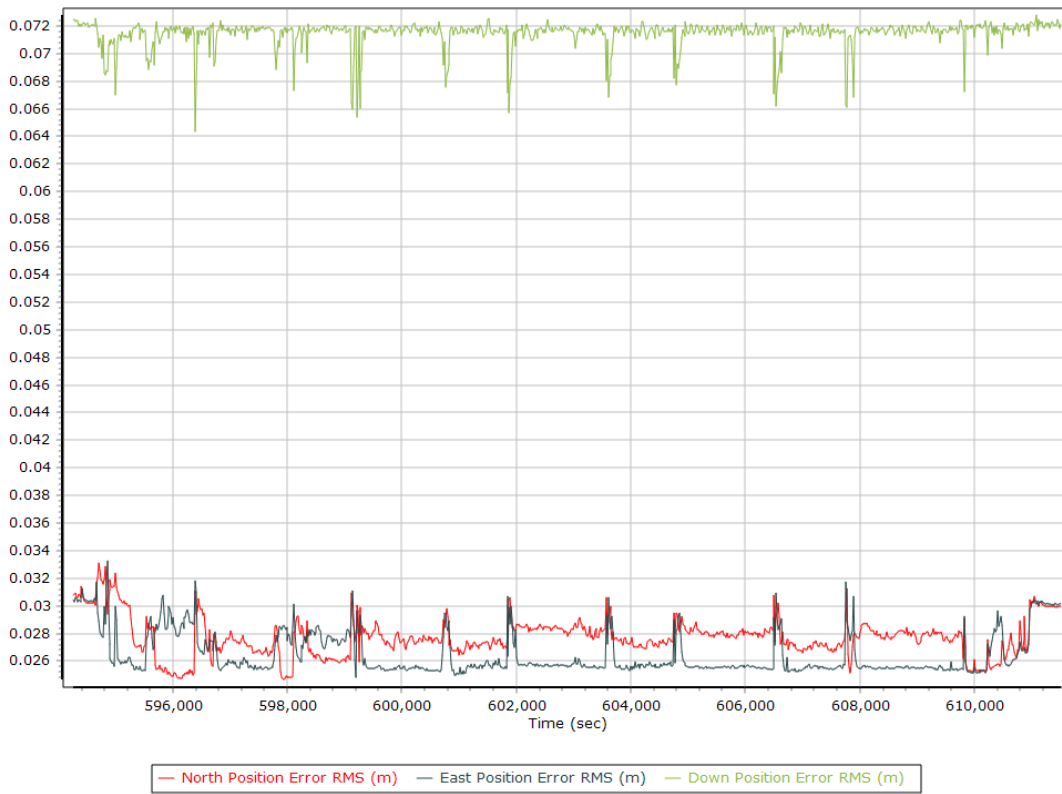


Heading Error RMS (arc-min)

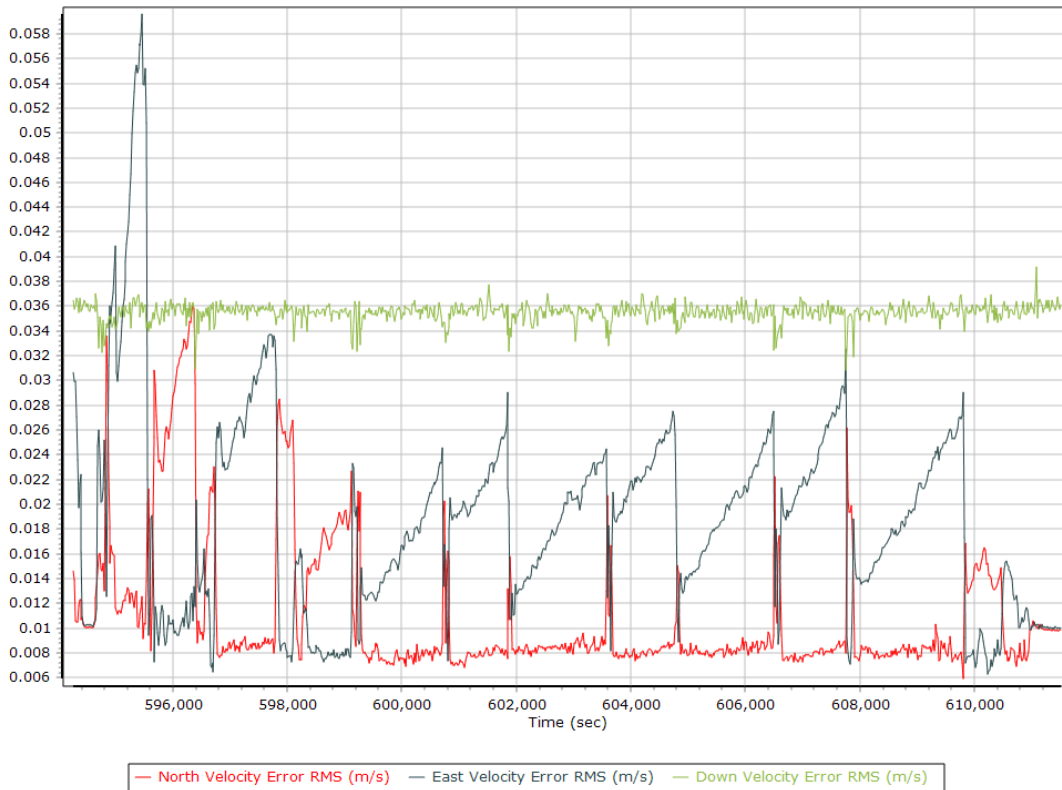


Forward Processed Performance Metrics

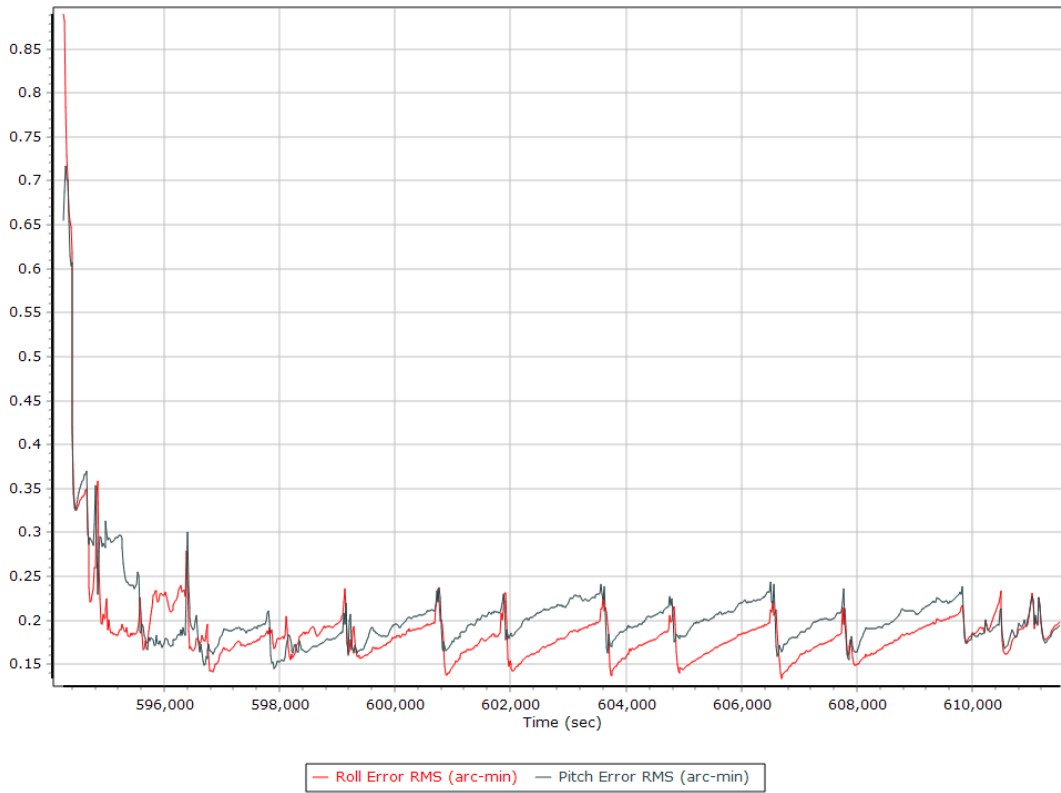
Position Error RMS (m)



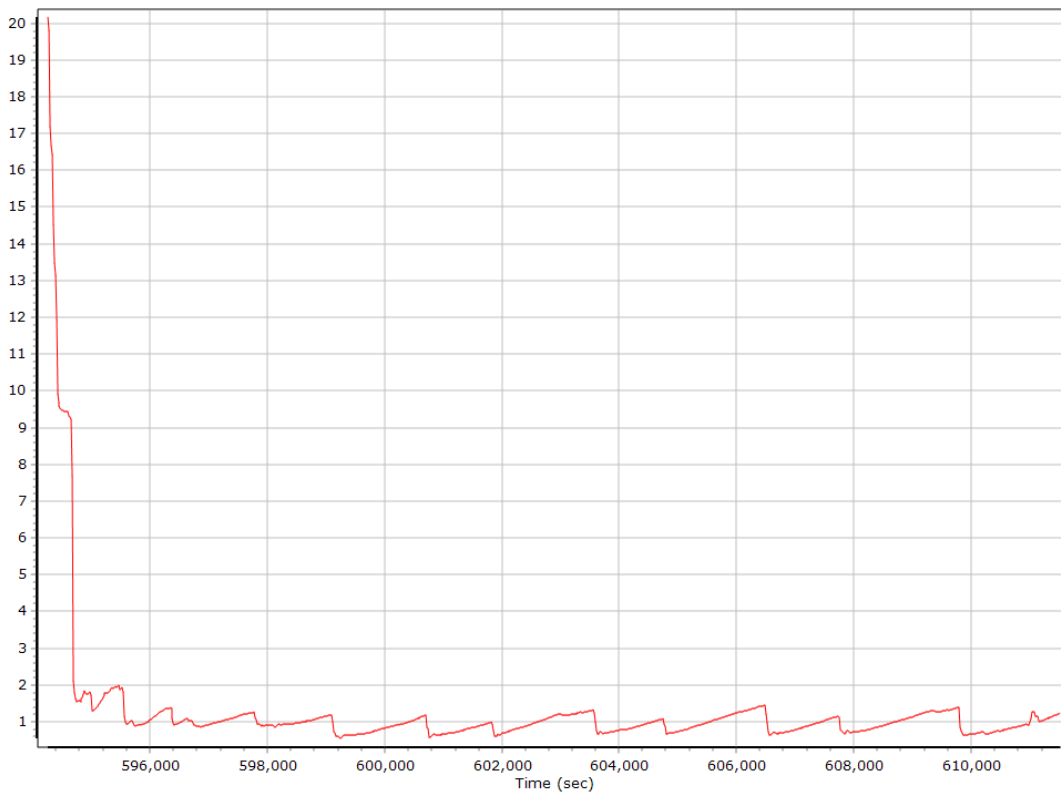
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

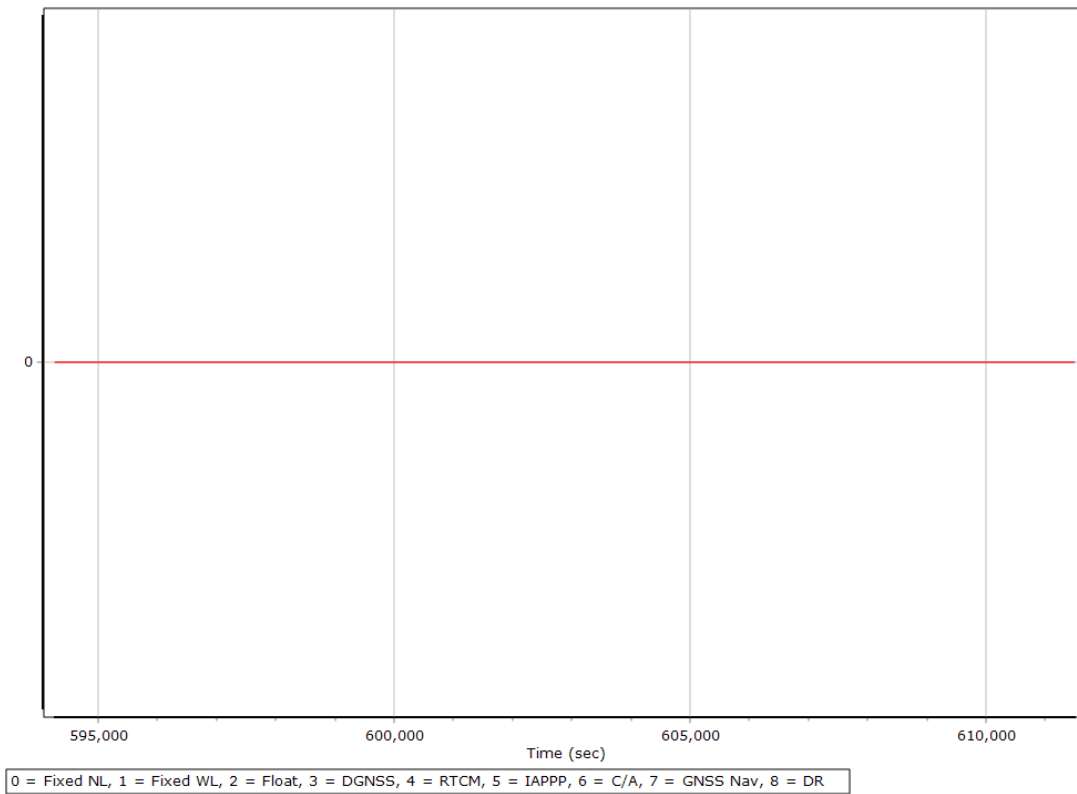


Heading Error RMS (arc-min)

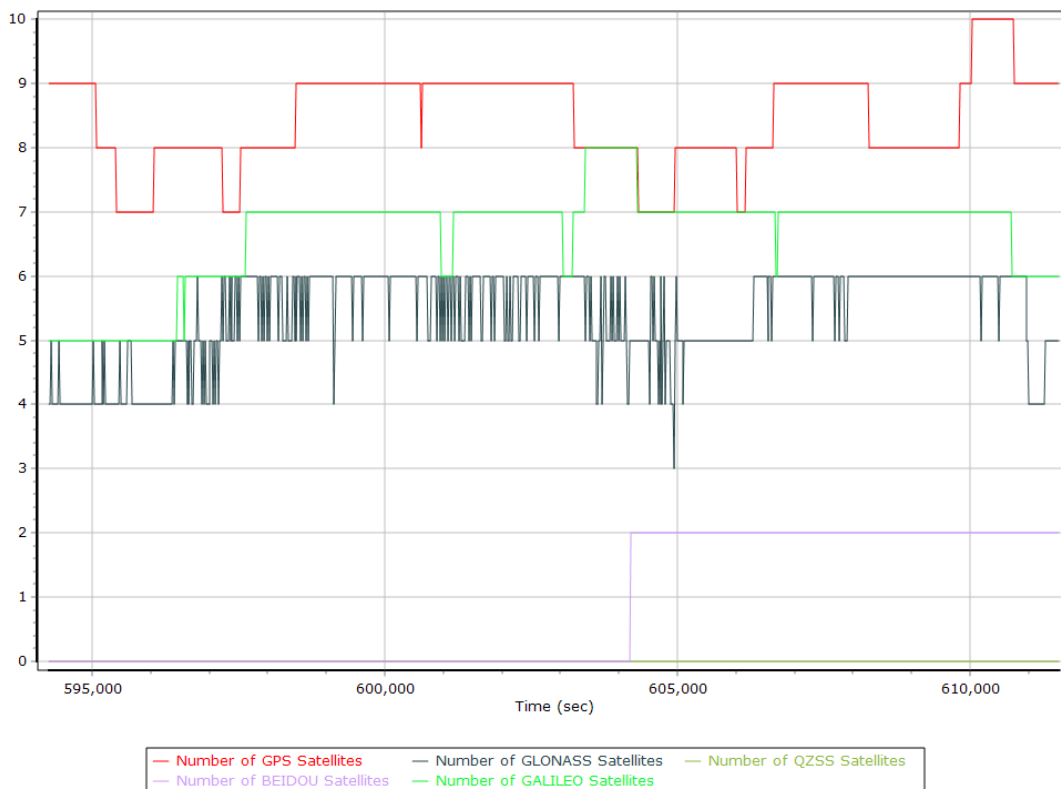


Forward Processed Solution Status

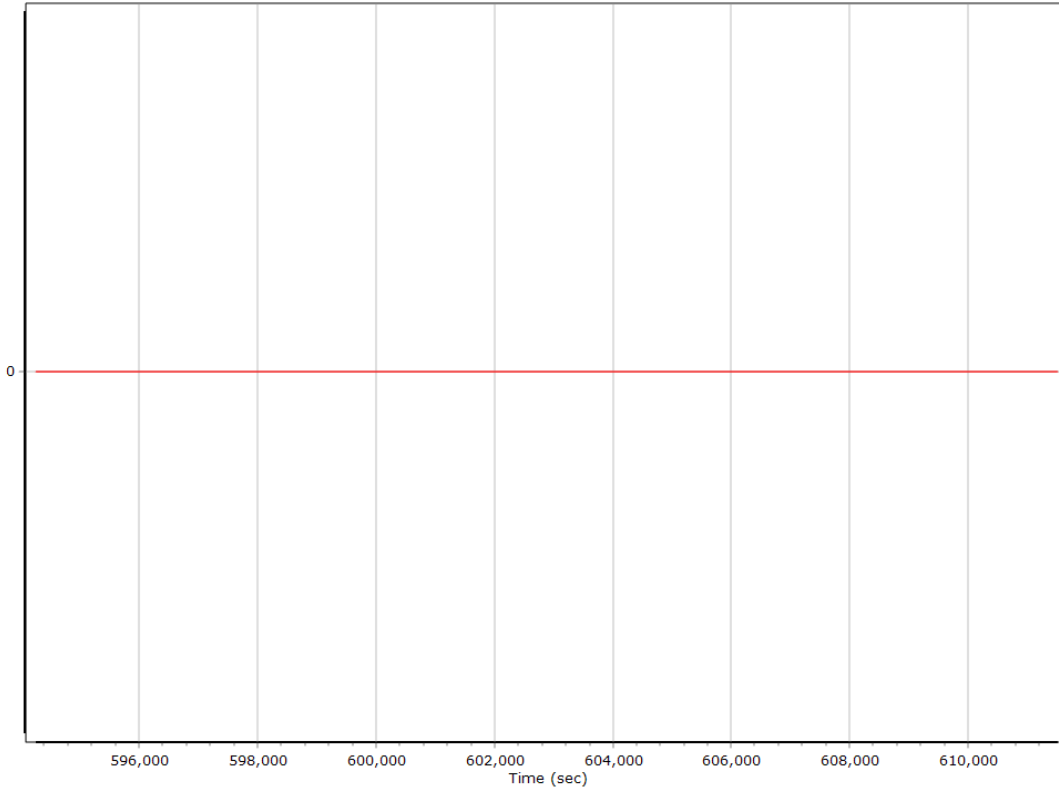
Processing Mode



Number of Satellites



Baseline Length



Export Summary

Export file	sbet_13867_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	594205.003 (04/16/2022 21:03:25)		
Export end time	6720.003 (04/17/2022 01:52:00)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 15 (96W to 90W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2010		

EO Summary

EO file	eo_13867.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	594205.003 (04/16/2022 21:03:25)		
EO end time	6720.003 (04/17/2022 01:52:00)		
Grid	Universal Transverse Mercator		
Zone	UTM North 15 (96W to 90W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2010		