

General Information

Mission Information

Project name	12075
Processing date	2021-03-09 22:03:34
Mission date	2021-03-03 15:36:10
Mission duration	04:56:19.082
Processing mode	IN-Fusion PP-RTX

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N10633
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
20210303.025	POS Data
20210303.026	POS Data
20210303.027	POS Data
20210303.028	POS Data
20210303.029	POS Data
20210303.030	POS Data
20210303.031	POS Data
20210303.032	POS Data
20210303.033	POS Data
20210303.034	POS Data
20210303.035	POS Data
20210303.036	POS Data
20210303.037	POS Data
20210303.038	POS Data
20210303.039	POS Data
20210303.040	POS Data
20210303.041	POS Data
20210303.042	POS Data
20210303.043	POS Data
20210303.044	POS Data
20210303.045	POS Data
20210303.046	POS Data
20210303.047	POS Data
20210303.048	POS Data
20210303.049	POS Data
20210303.050	POS Data
20210303.051	POS Data
20210303.052	POS Data
20210303.053	POS Data
20210303.054	POS Data
20210303.055	POS Data
20210303.056	POS Data
20210303.057	POS Data
20210303.058	POS Data
20210303.059	POS Data
20210303.060	POS Data
20210303.061	POS Data
20210303.062	POS Data
20210303.063	POS Data

Input Files

File Name	File Type
Ephm0620.21g	GLONASS Broadcast Ephemeris
Ephm0620.21n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_12075.out	SBET Trajectory File
event1_eo_12075.txt	ZI Imaging POSEO Output
sbet_12075_NAD83(2011).out	Custom Smoothed BET Export Output
lever_arm_values.txt	ReferenceToPrimaryLeverArms Export Output

Rover Data Summary

First raw data file	20210303.025		
Last raw data file	20210303.063		
Start GPS week	2147		
Start time	315369.579 (03/03/2021 15:36:09)		
End time	333148.661 (03/03/2021 20:32:28)		
Start of fine alignment	315707.177 (03/03/2021 15:41:47)		
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)	0.000	0.000	0.000
Reference to IMU mounting angles (deg)	0.000	0.000	180.000
Reference to Primary GNSS lever arm (m)	-0.108	-0.248	-0.901
Reference to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

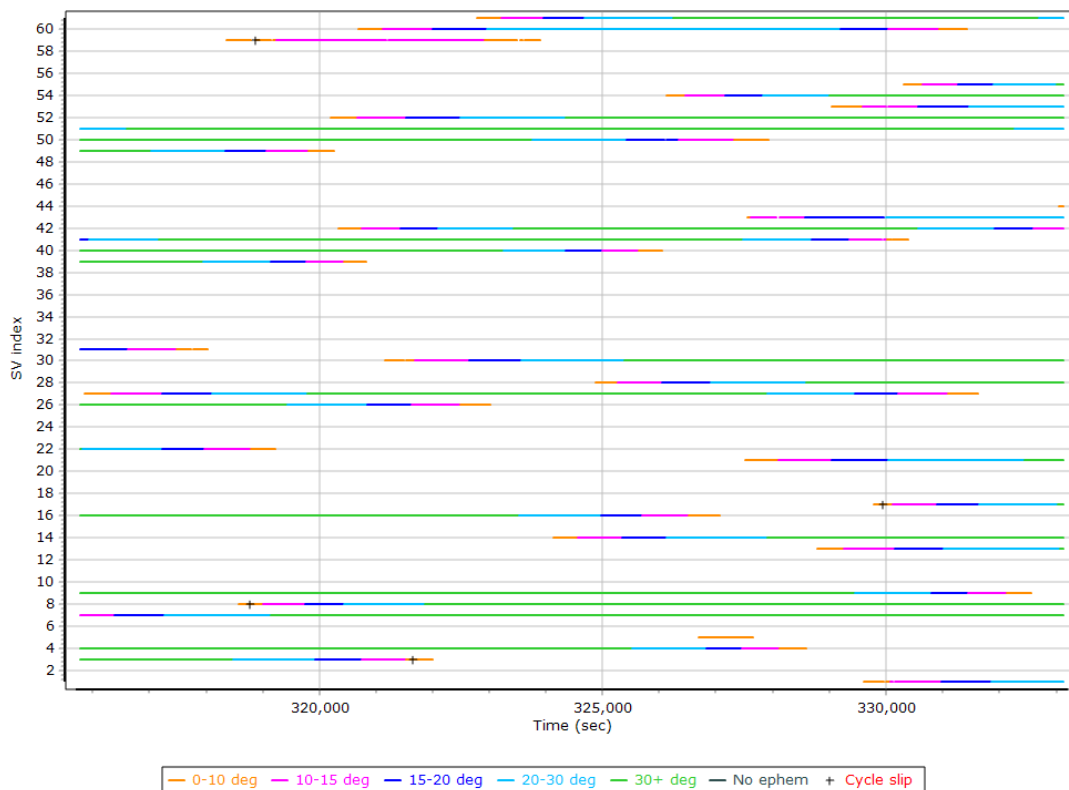
Rover Data QC

Raw IMU Import QC Summary

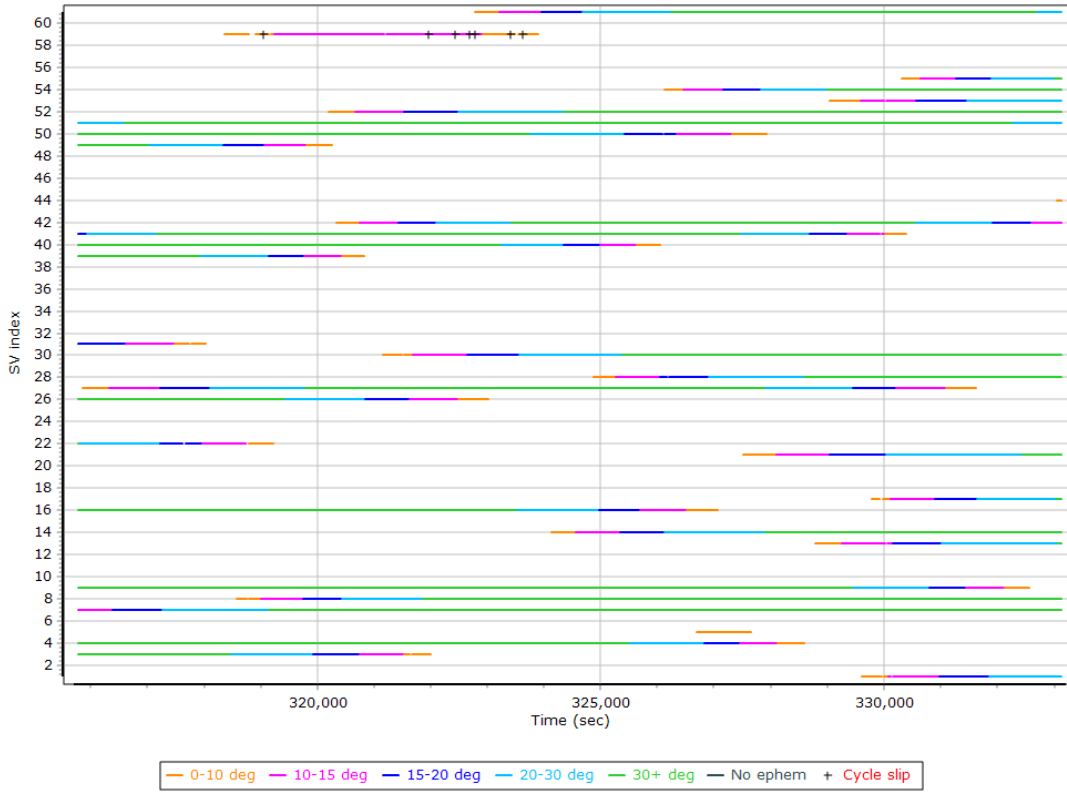
IMU data input file	imu_12075.dat
IMU data check log file	imudt_12075.log
IMU Records Processed	3555194
Termination Status	Normal
IMU Anomalies	0

Primary Observables & Satellite Data

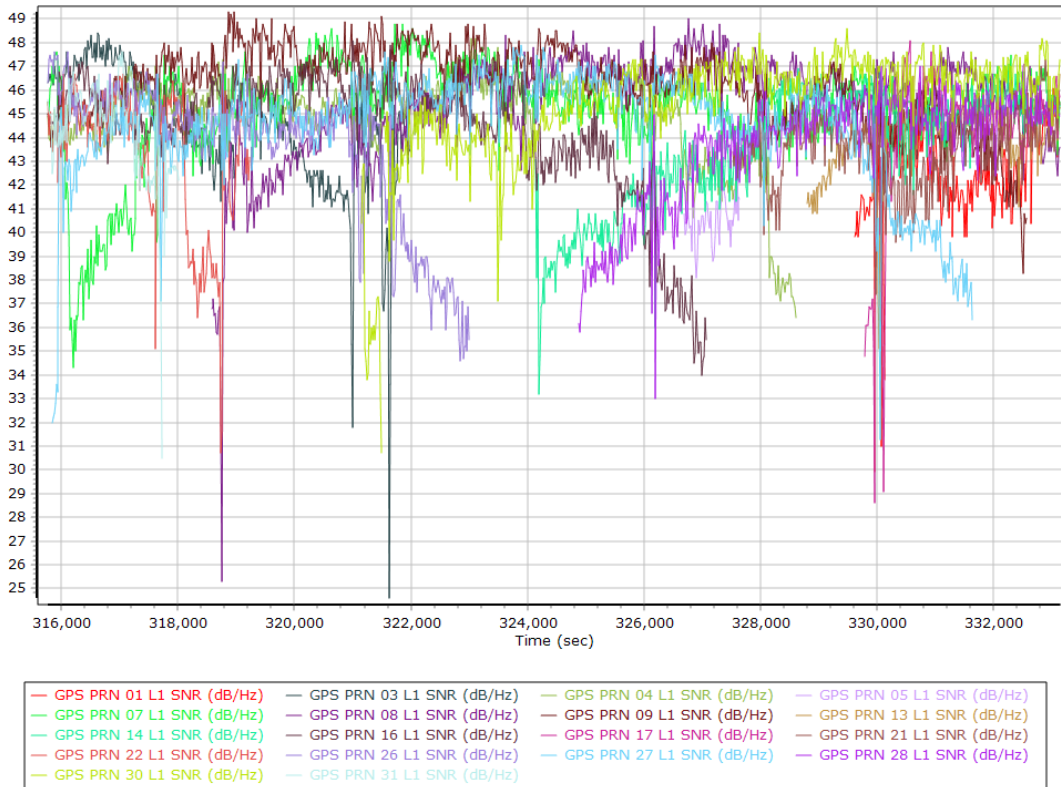
L1 Satellite Lock/Elevation



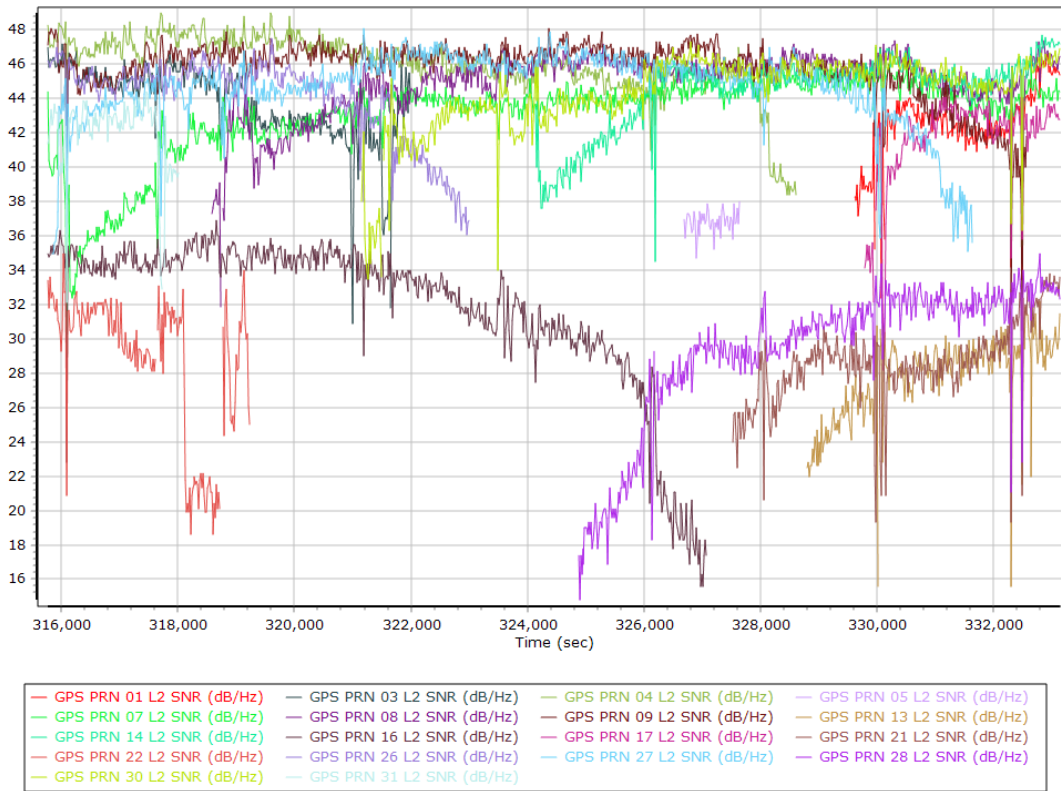
L2 Satellite Lock/Elevation



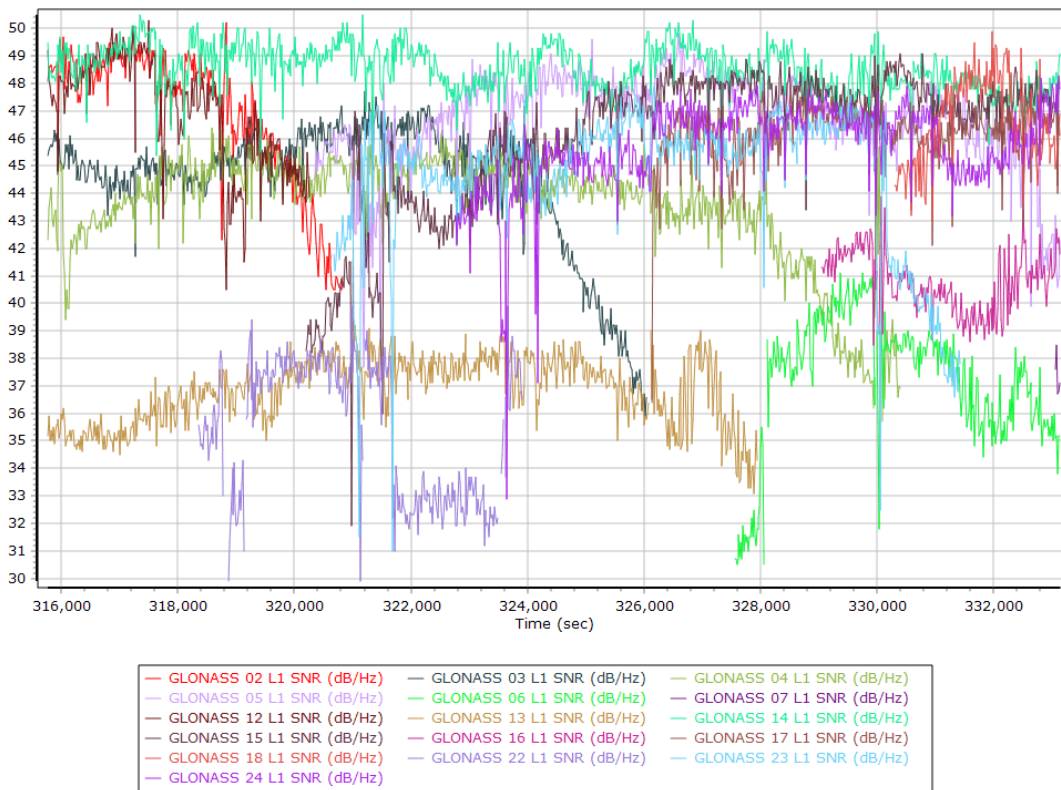
GPS L1 SNR



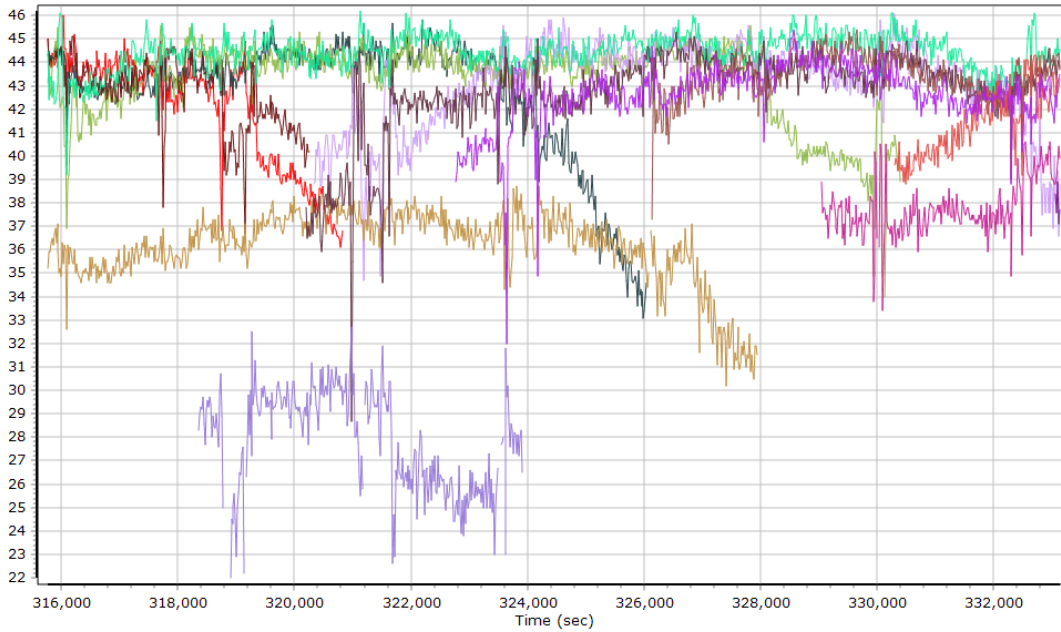
GPS L2 SNR



GLONASS L1 SNR

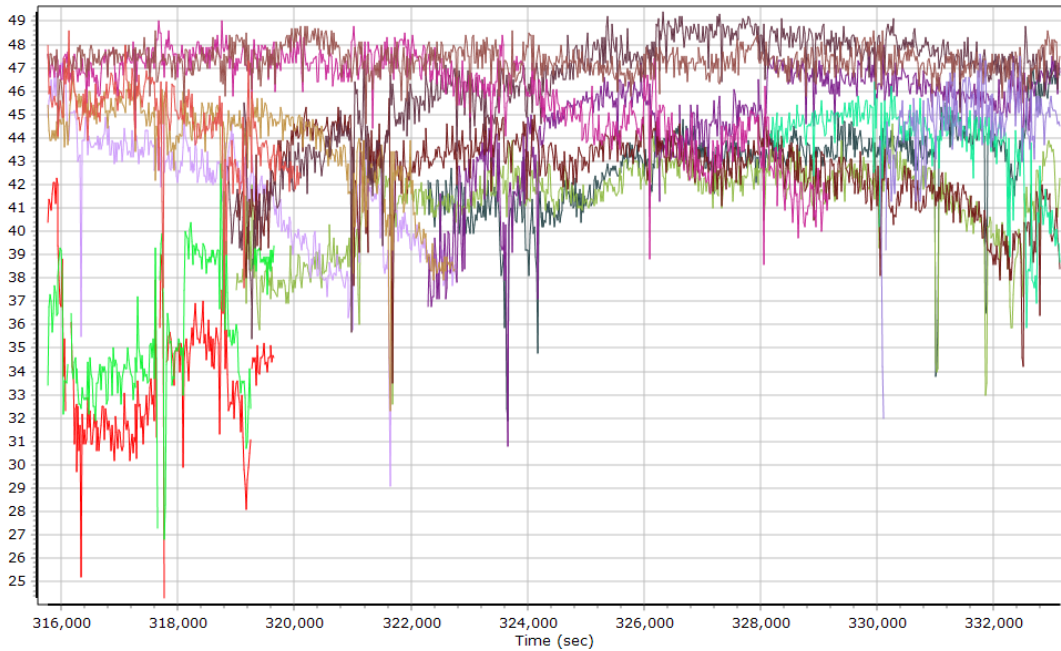


GLONASS L2 SNR



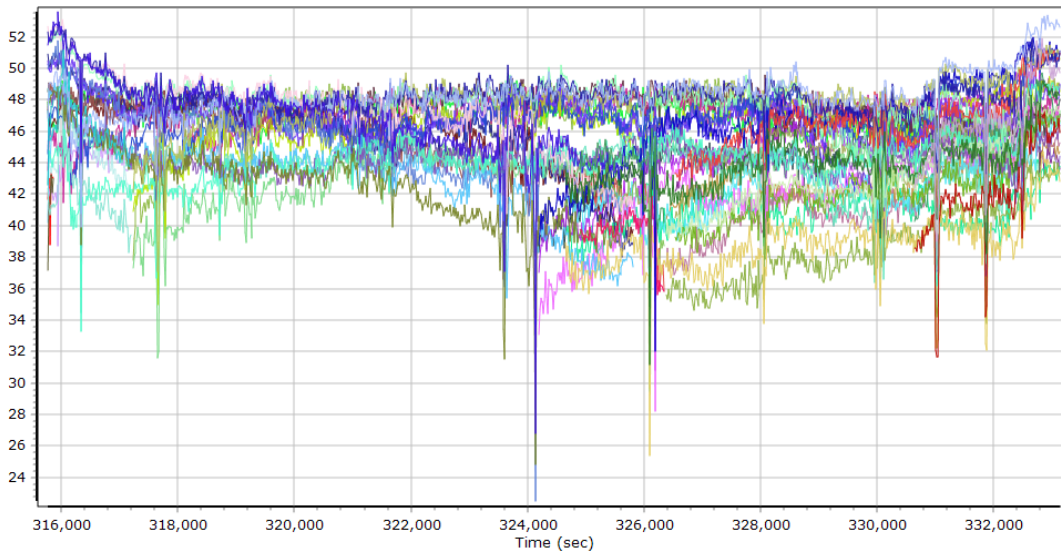
- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 02 L2 SNR (dB/Hz) | GLONASS 03 L2 SNR (dB/Hz) | GLONASS 04 L2 SNR (dB/Hz) |
| GLONASS 05 L2 SNR (dB/Hz) | GLONASS 06 L2 SNR (dB/Hz) | GLONASS 07 L2 SNR (dB/Hz) |
| GLONASS 12 L2 SNR (dB/Hz) | GLONASS 13 L2 SNR (dB/Hz) | GLONASS 14 L2 SNR (dB/Hz) |
| GLONASS 15 L2 SNR (dB/Hz) | GLONASS 16 L2 SNR (dB/Hz) | GLONASS 17 L2 SNR (dB/Hz) |
| GLONASS 18 L2 SNR (dB/Hz) | GLONASS 22 L2 SNR (dB/Hz) | GLONASS 23 L2 SNR (dB/Hz) |
| GLONASS 24 L2 SNR (dB/Hz) | | |

BEIDOU SNR



- | | | |
|------------------------------|------------------------------|------------------------------|
| BEIDOU 08 E5B B2 SNR (dB/Hz) | BEIDOU 11 E5B B2 SNR (dB/Hz) | BEIDOU 12 E5B B2 SNR (dB/Hz) |
| BEIDOU 14 E5B B2 SNR (dB/Hz) | BEIDOU 08 B1 B1 SNR (dB/Hz) | BEIDOU 11 B1 B1 SNR (dB/Hz) |
| BEIDOU 12 B1 B1 SNR (dB/Hz) | BEIDOU 14 B1 B1 SNR (dB/Hz) | BEIDOU 20 B1 B1 SNR (dB/Hz) |
| BEIDOU 23 B1 B1 SNR (dB/Hz) | BEIDOU 24 B1 B1 SNR (dB/Hz) | BEIDOU 25 B1 B1 SNR (dB/Hz) |
| BEIDOU 26 B1 B1 SNR (dB/Hz) | BEIDOU 28 B1 B1 SNR (dB/Hz) | |

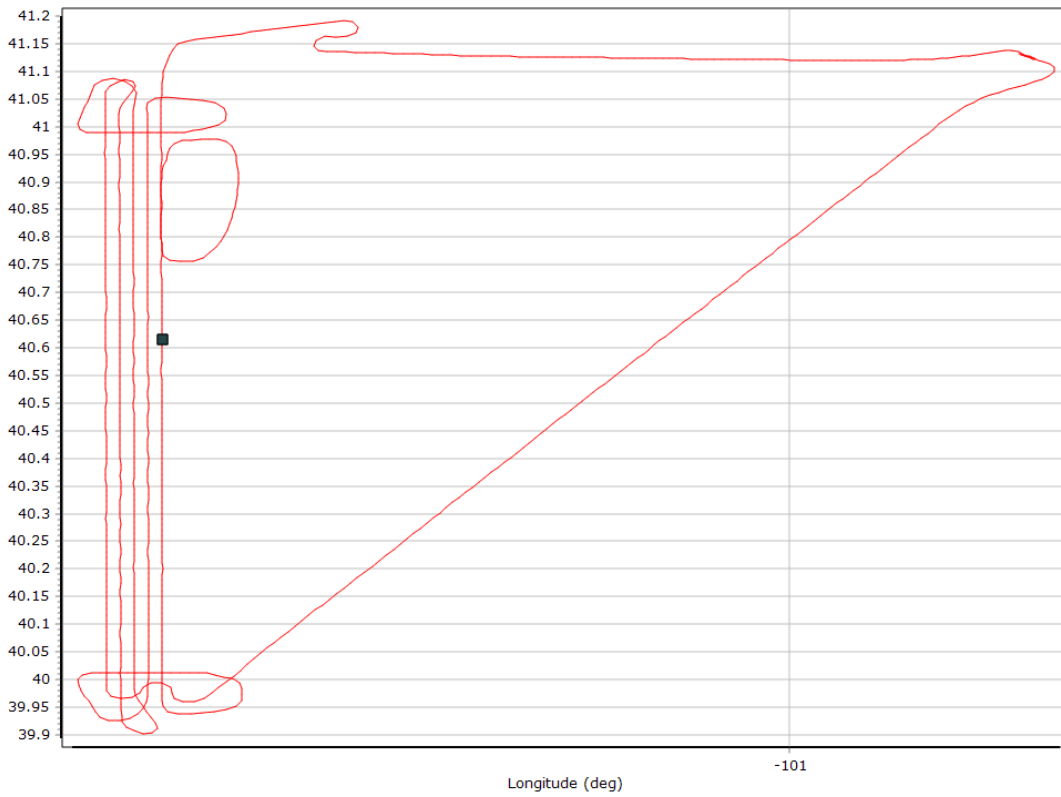
GALILEO SNR



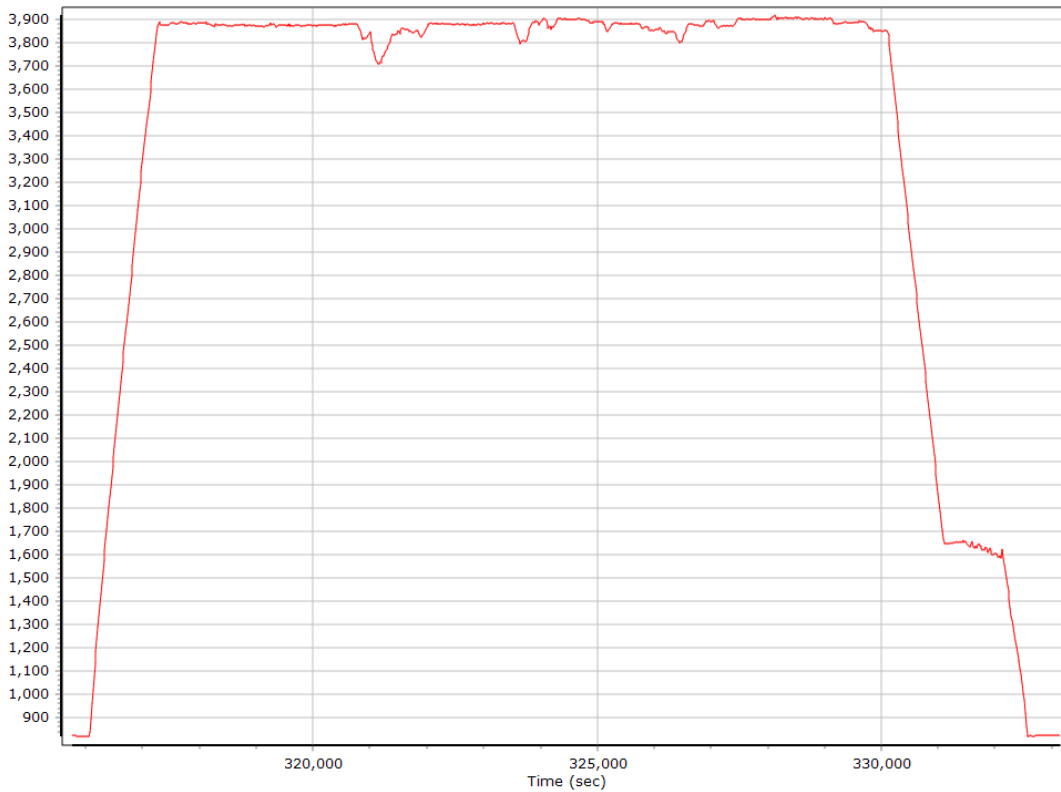
— GALILEO 01 L1 BOC_1_1_D_MBOC SNR (dB/Hz)	— GALILEO 02 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
— GALILEO 03 L1 BOC_1_1_D_MBOC SNR (dB/Hz)	— GALILEO 04 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
— GALILEO 05 L1 BOC_1_1_D_MBOC SNR (dB/Hz)	— GALILEO 08 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
— GALILEO 09 L1 BOC_1_1_D_MBOC SNR (dB/Hz)	— GALILEO 11 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
— GALILEO 12 L1 BOC_1_1_D_MBOC SNR (dB/Hz)	— GALILEO 24 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
— GALILEO 25 L1 BOC_1_1_D_MBOC SNR (dB/Hz)	— GALILEO 31 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
— GALILEO 33 L1 BOC_1_1_D_MBOC SNR (dB/Hz)	— GALILEO 36 L1 BOC_1_1_D_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 08 L5E5A BPSK10_PD SNR (dB/Hz)

Smoothed Trajectory Information

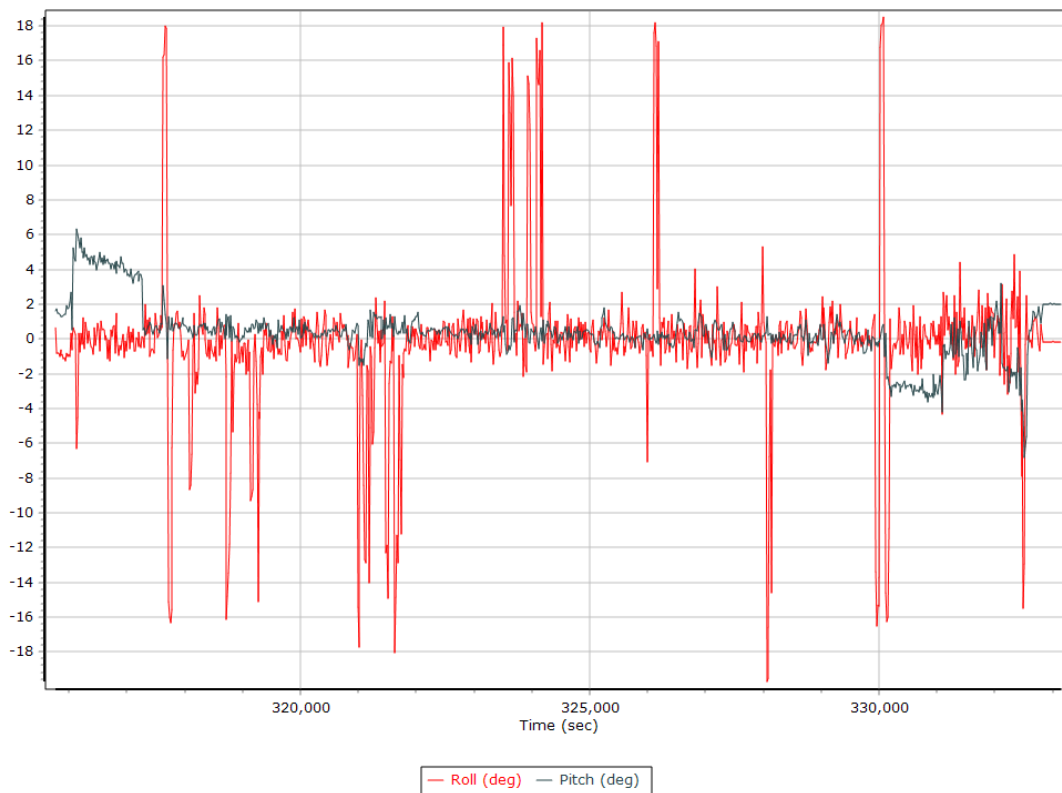
Top View



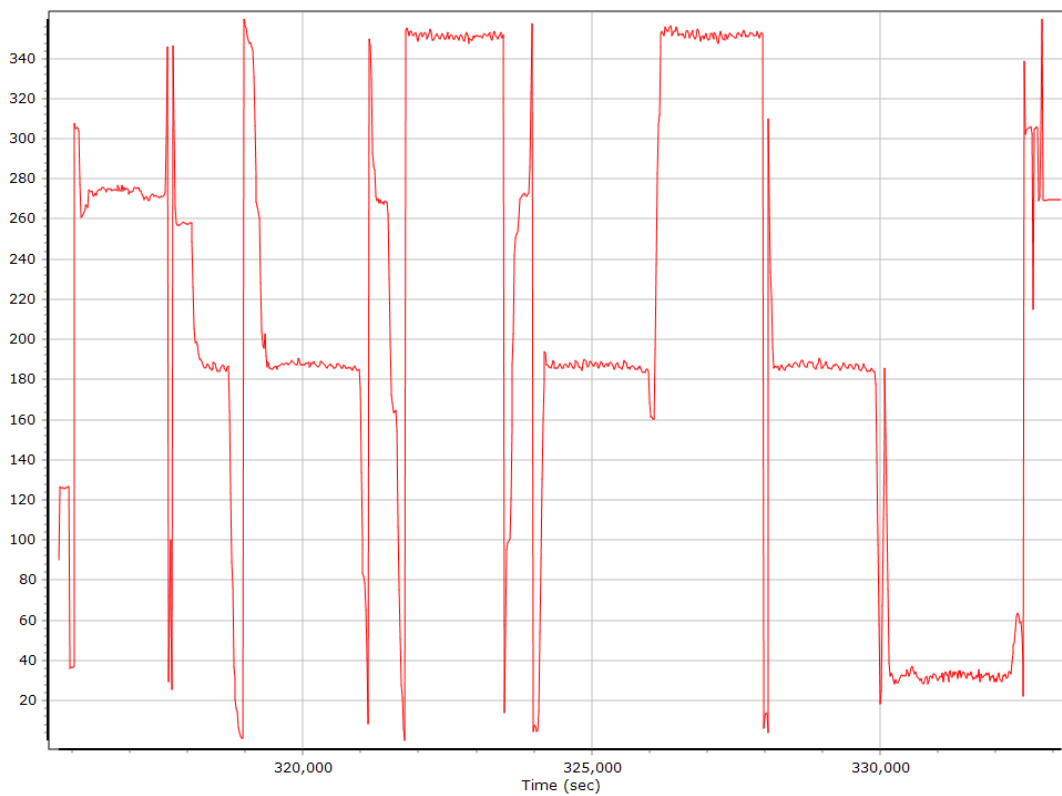
Altitude



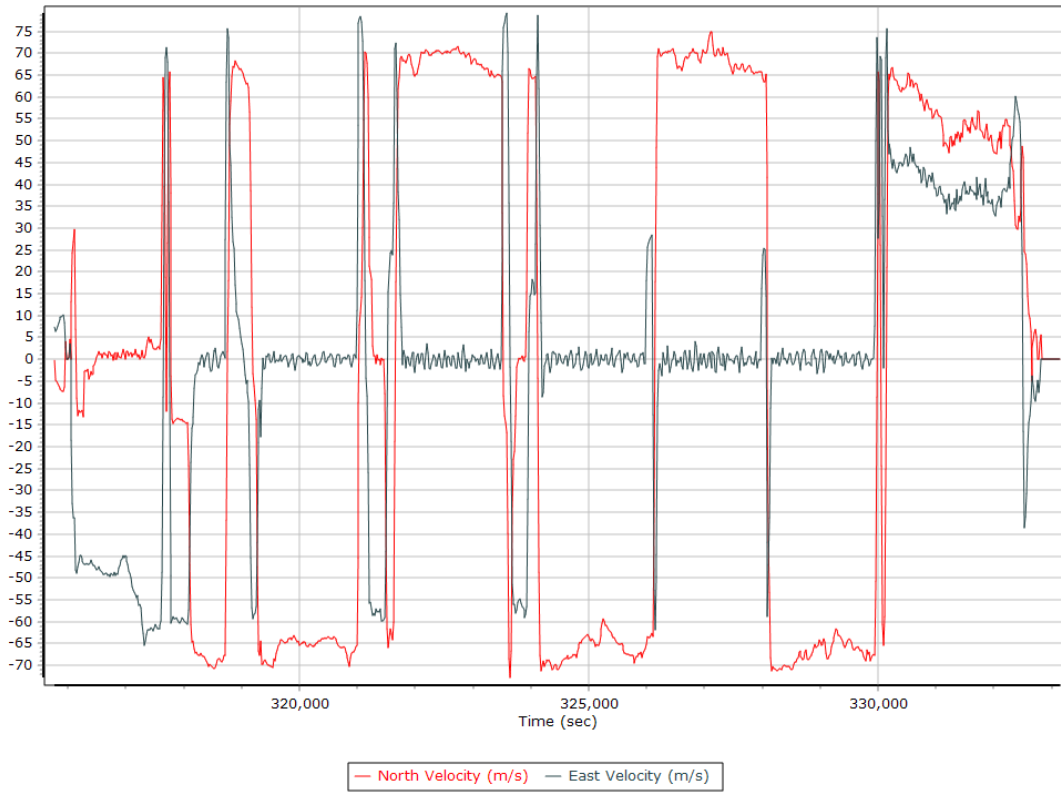
Roll/Pitch



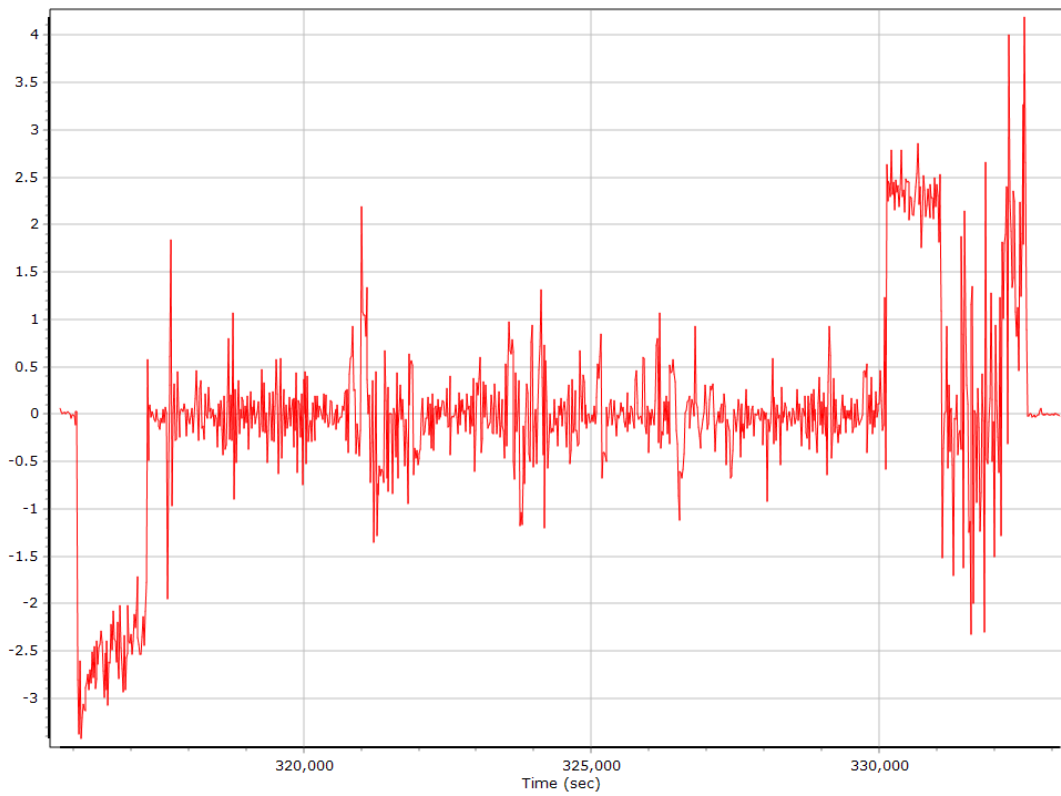
Heading



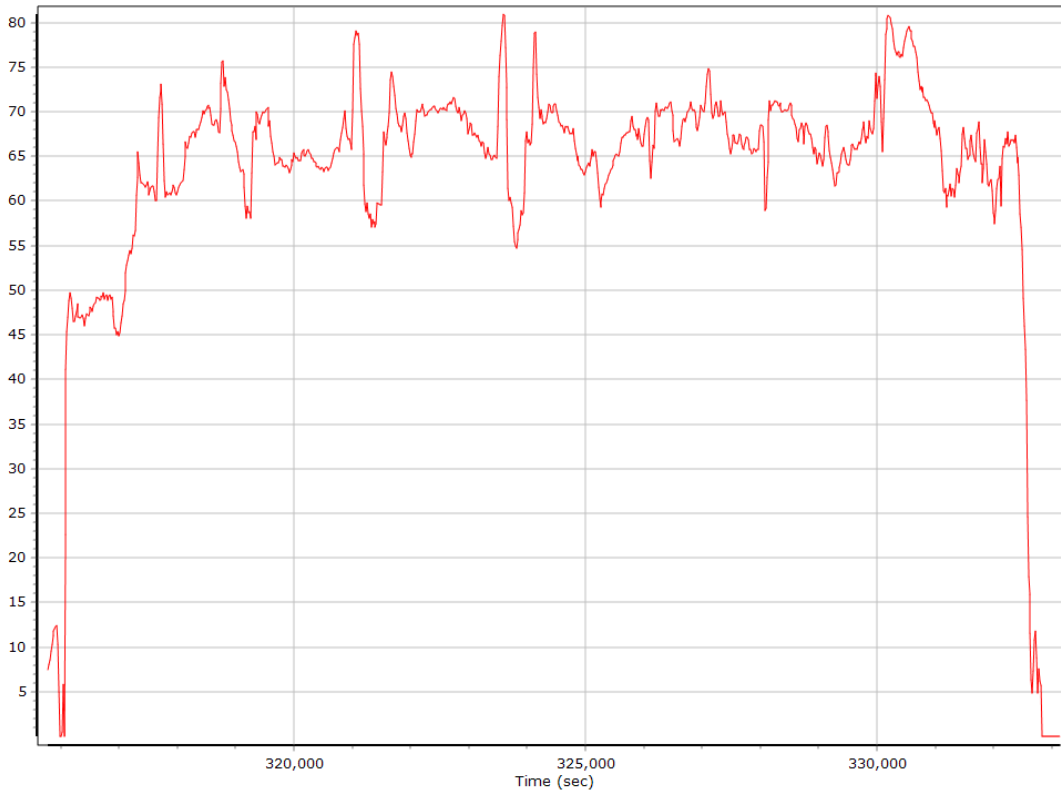
North/East Velocity



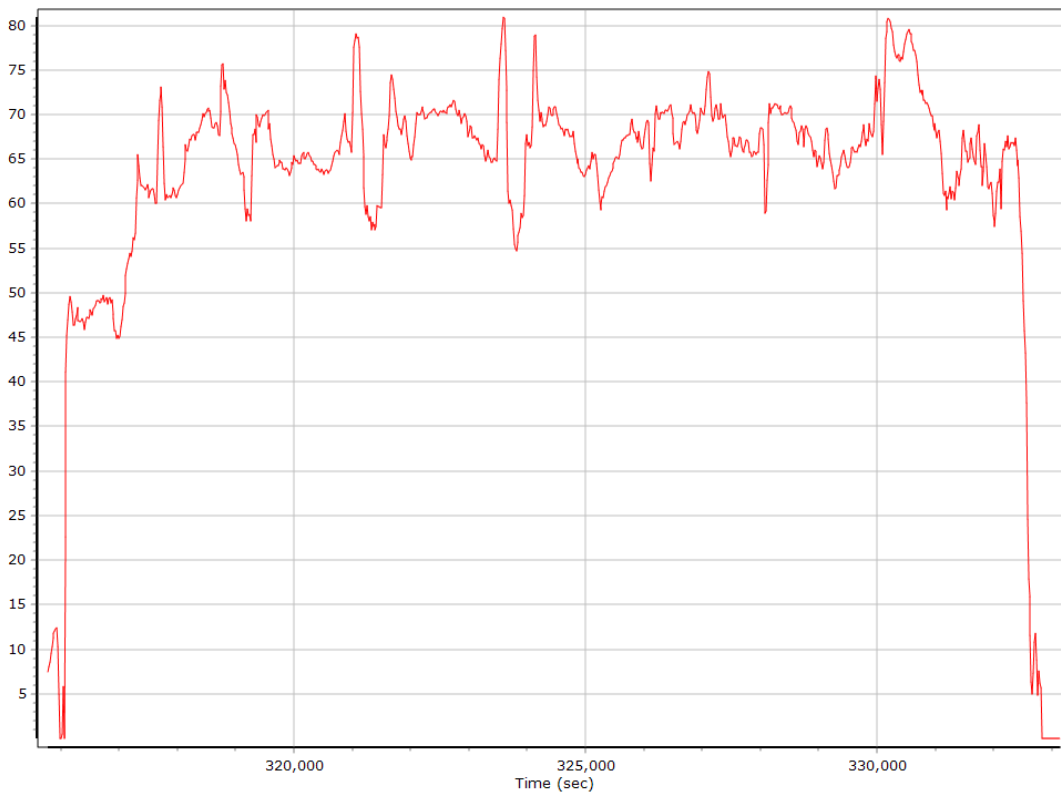
Down Velocity



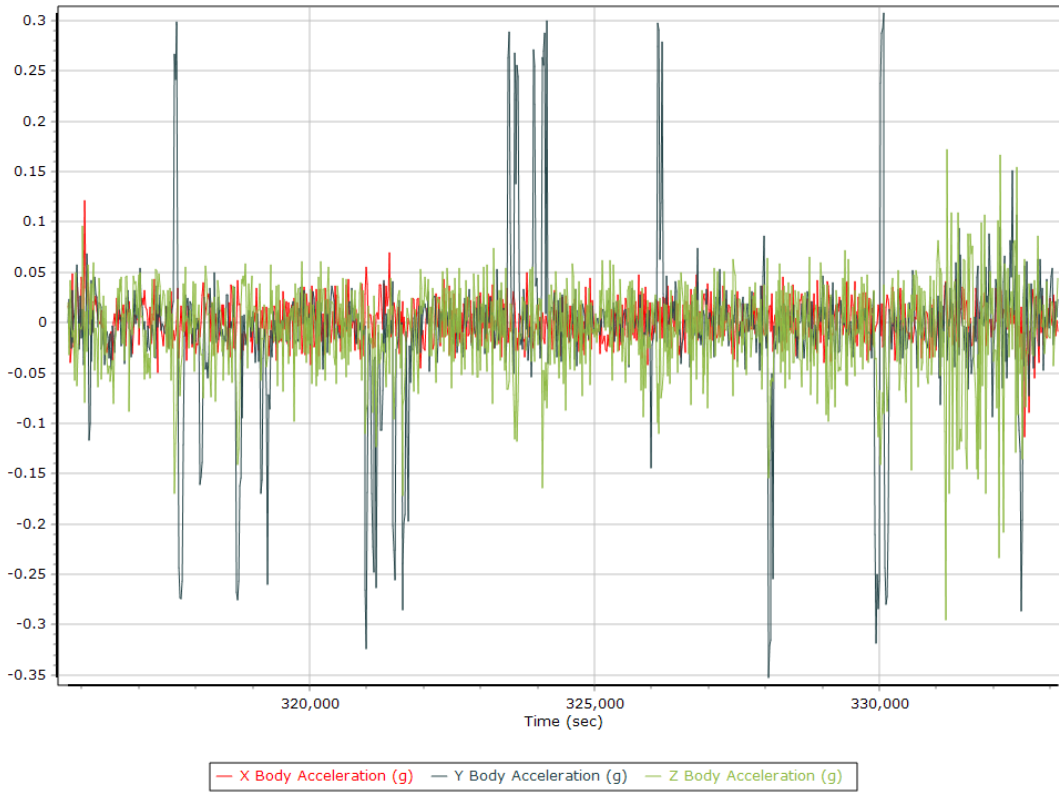
Total Speed



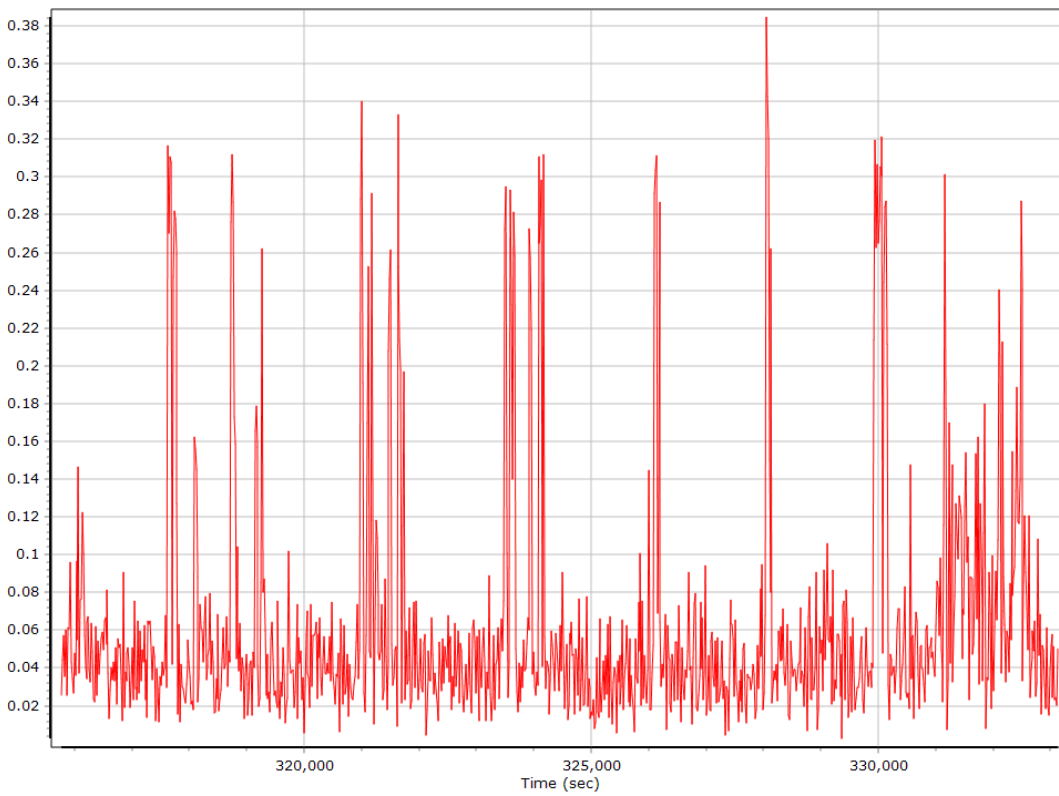
Ground Speed



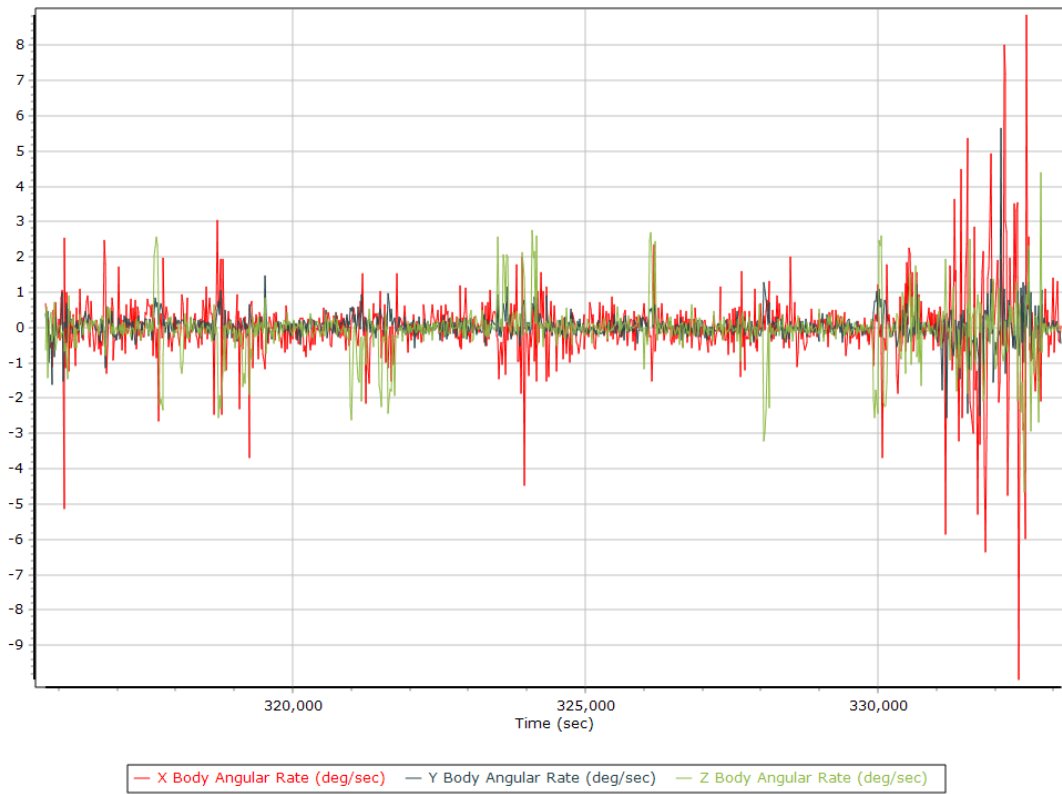
Body Acceleration



Total Body Acceleration

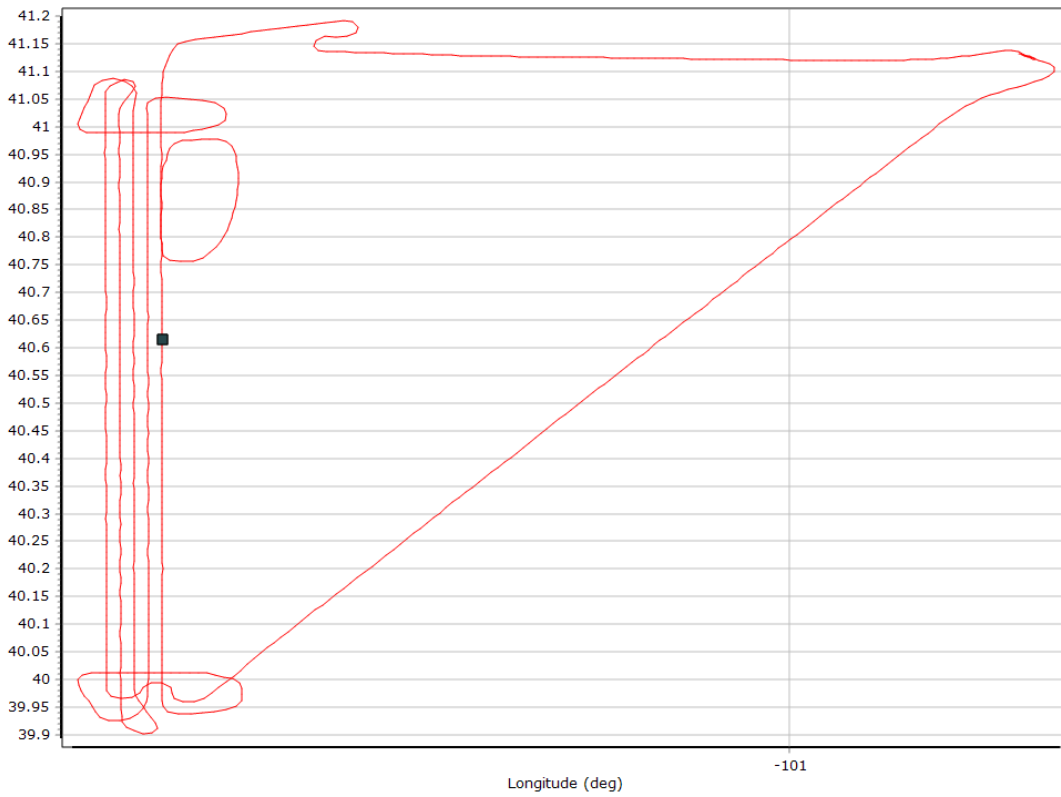


Body Angular Rate

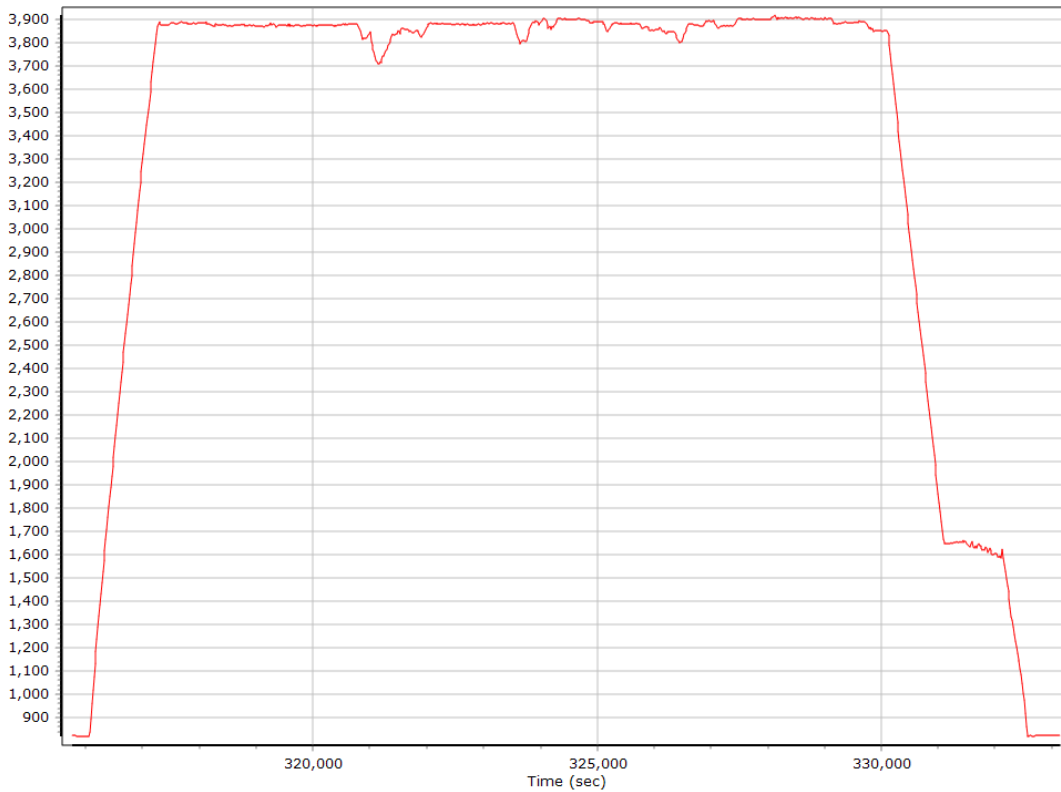


Forward Processed Trajectory Information

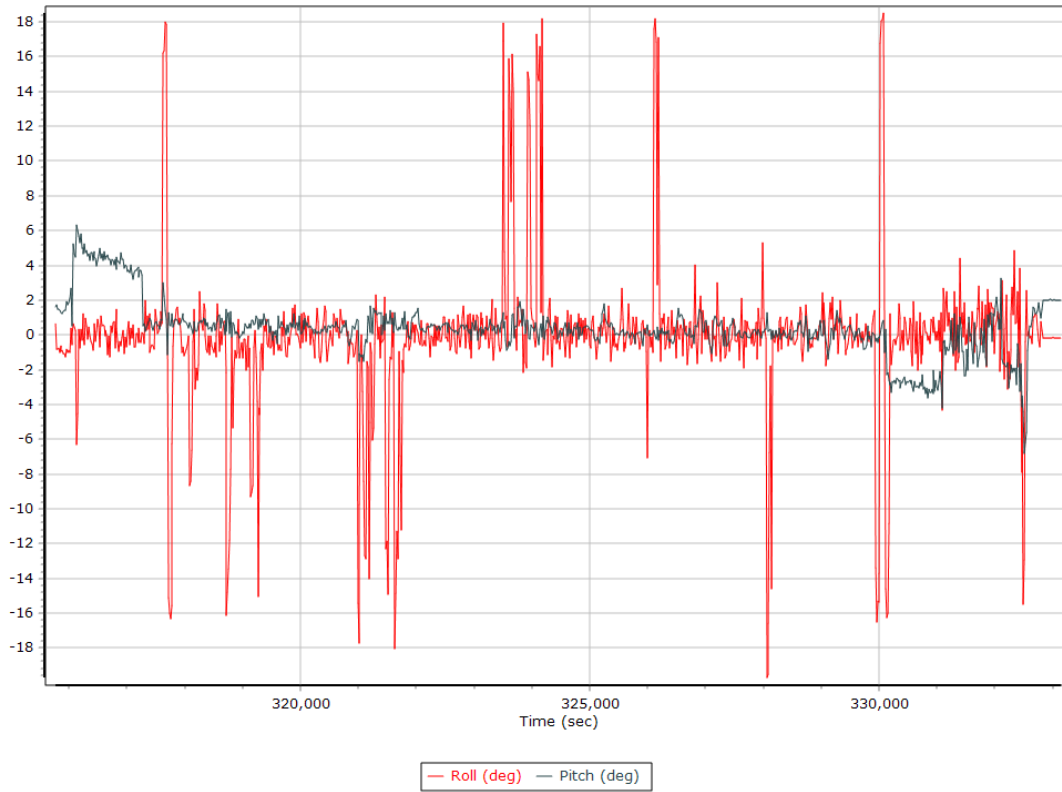
Top View



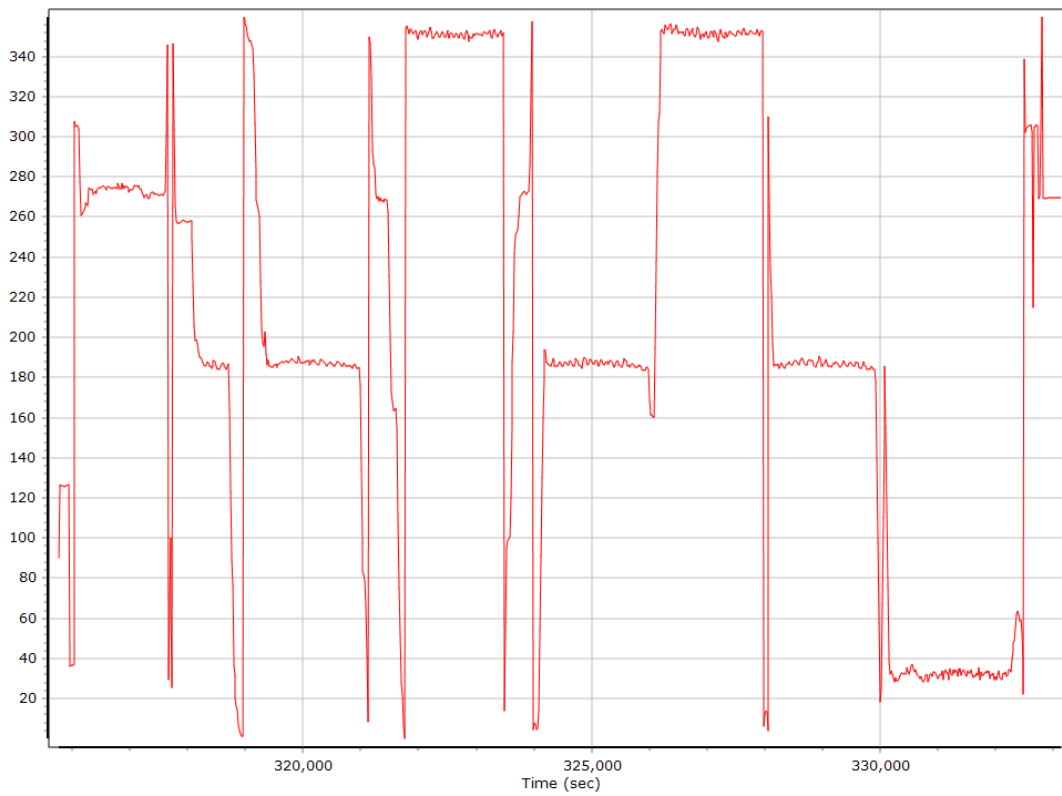
Altitude



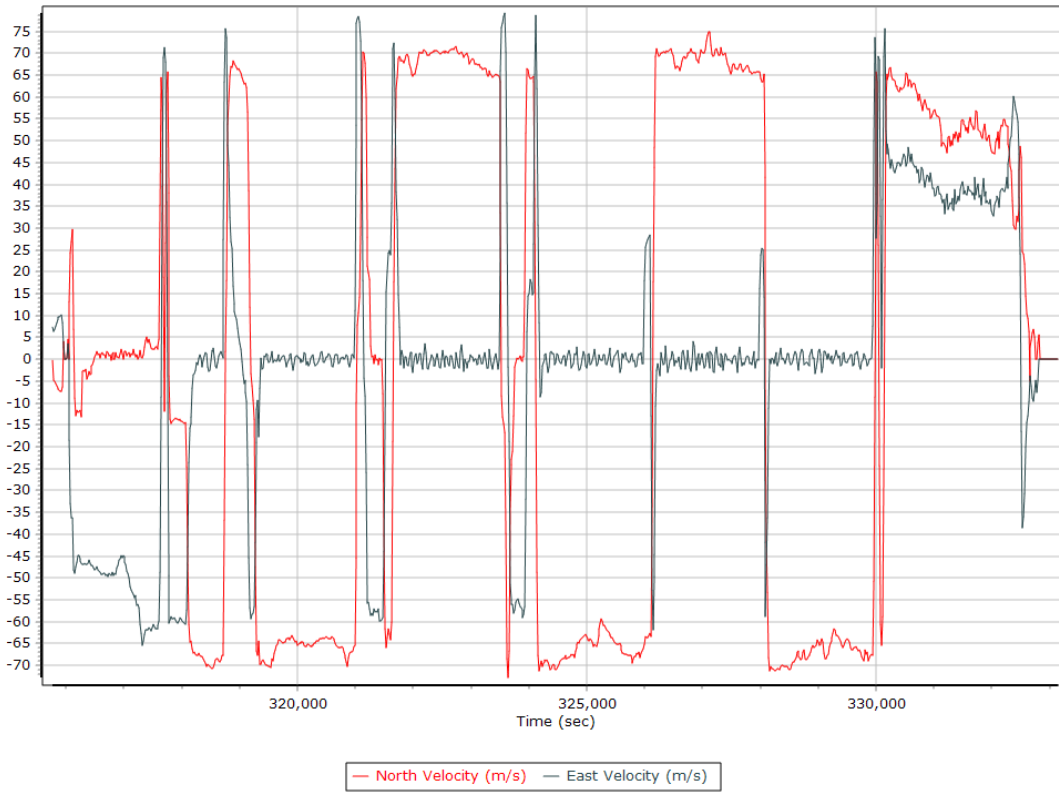
Roll/Pitch



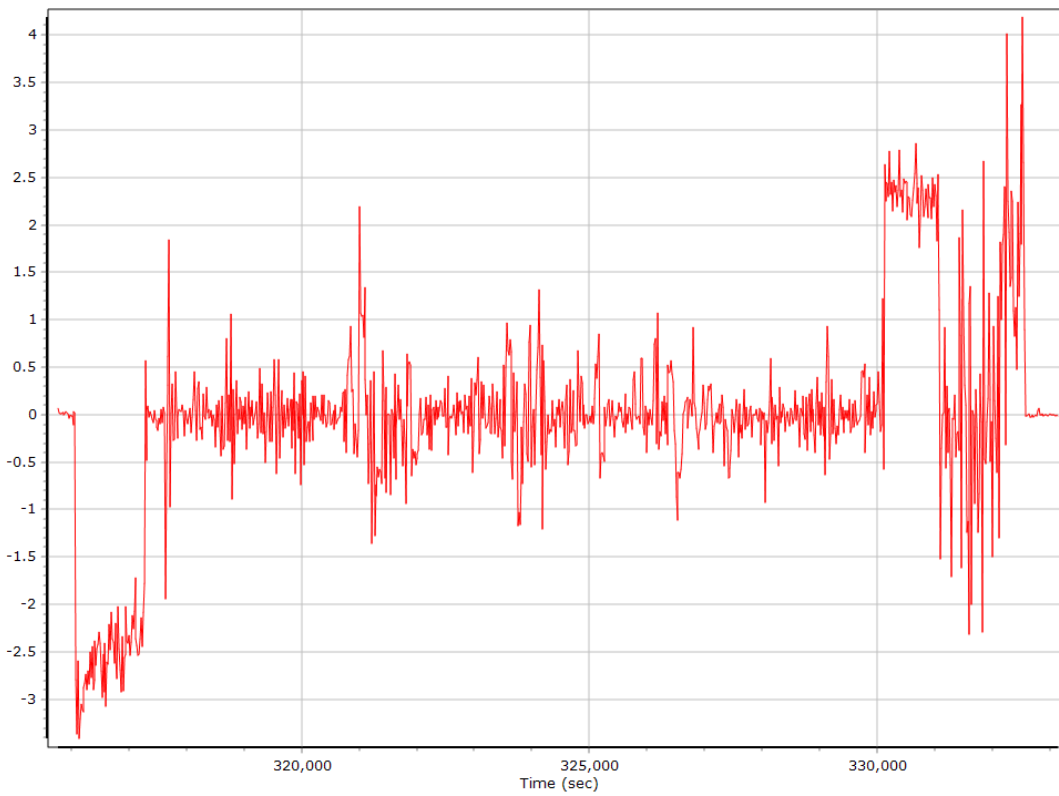
Heading



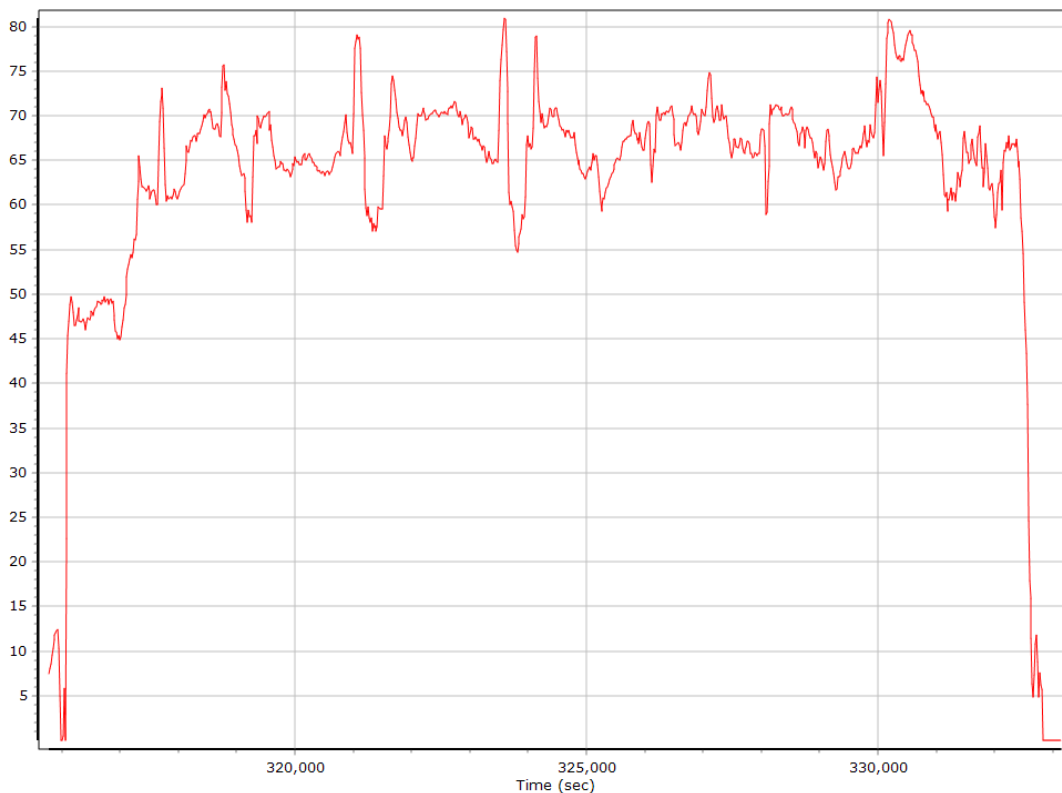
North/East Velocity



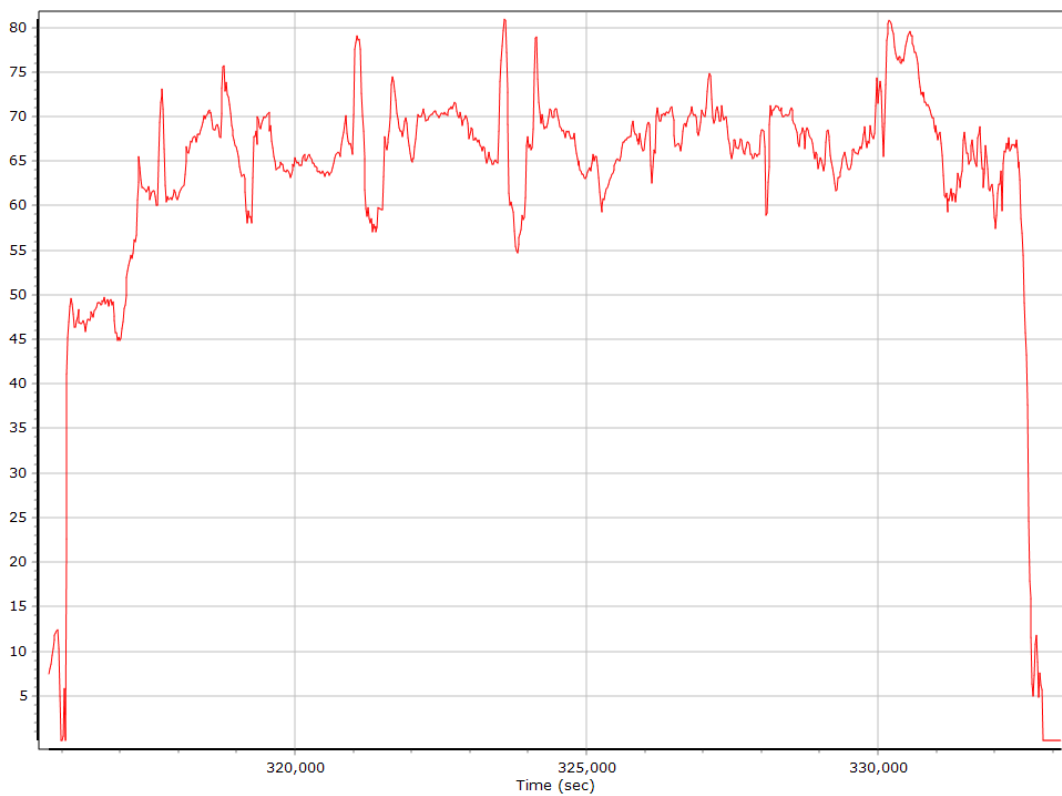
Down Velocity



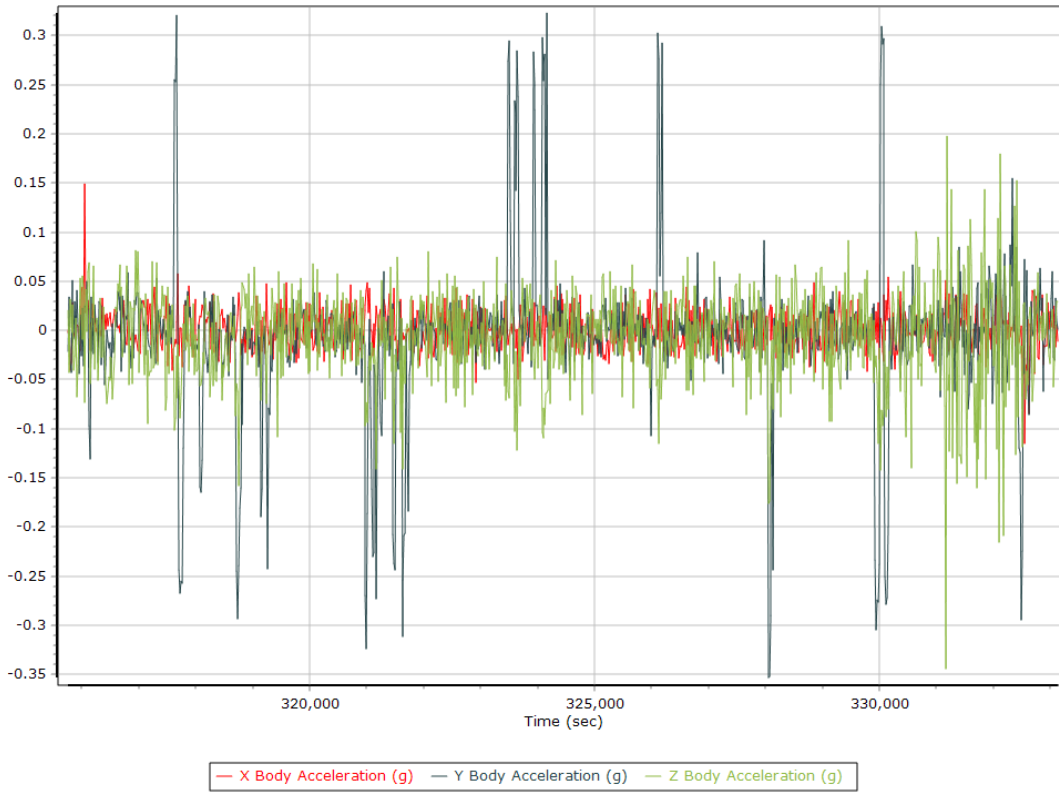
Total Speed



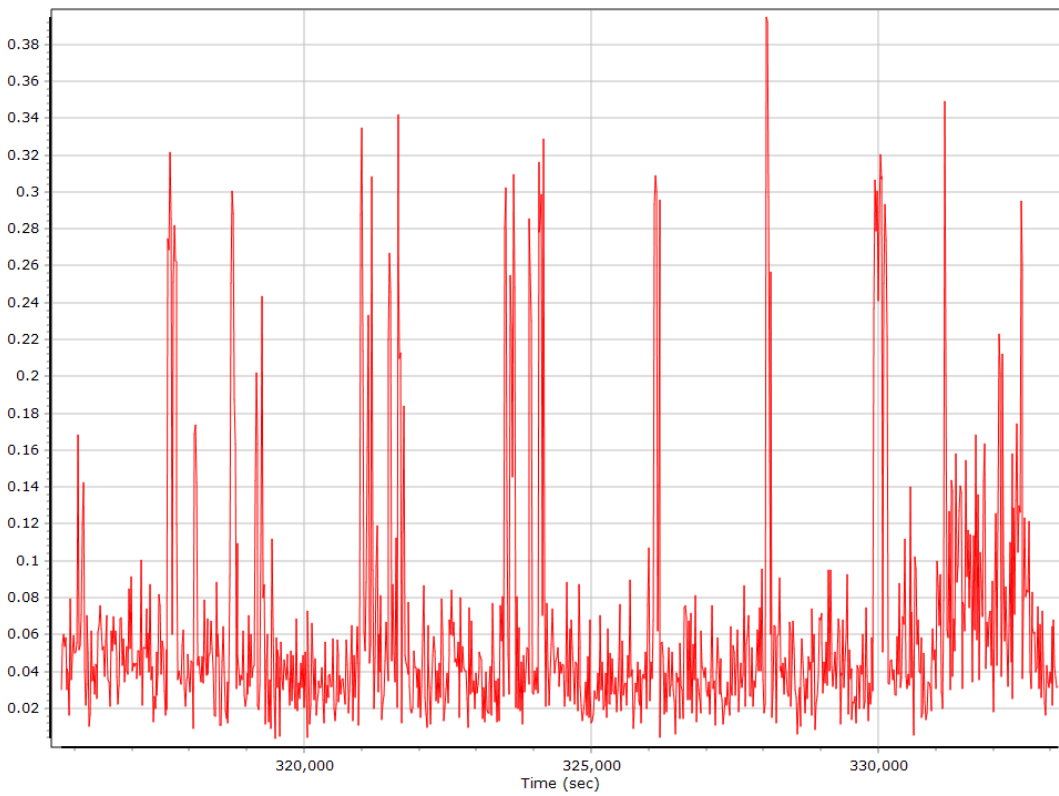
Ground Speed



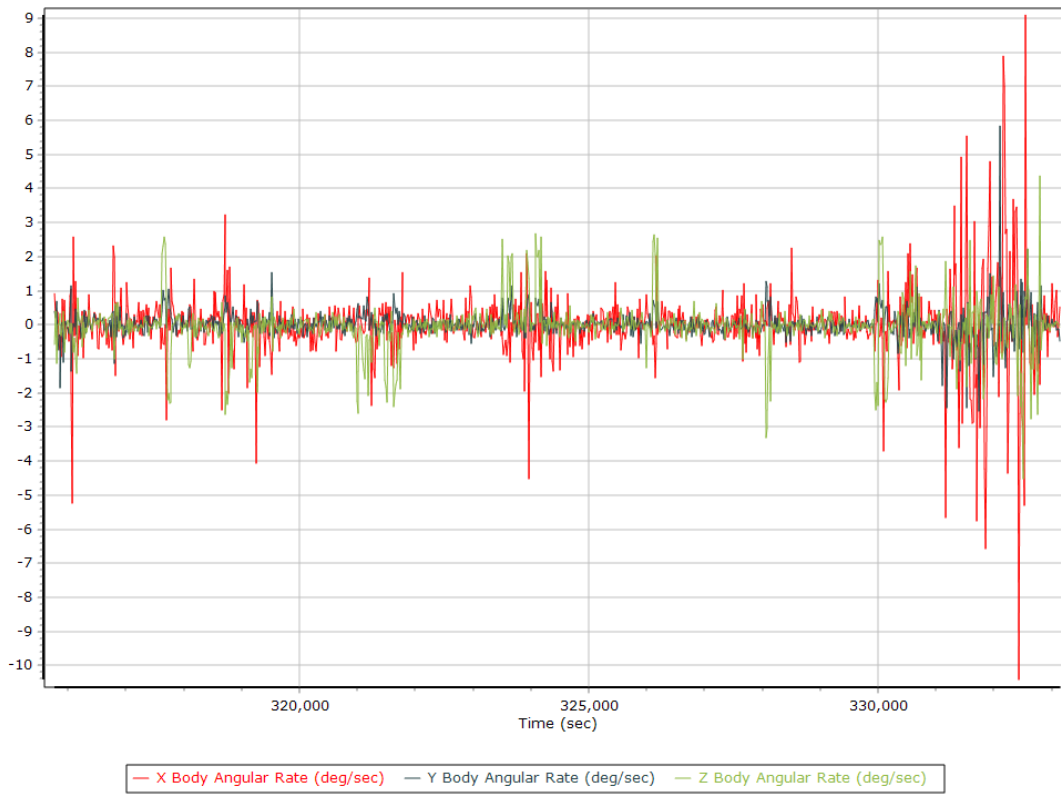
Body Acceleration



Total Body Acceleration



Body Angular Rate

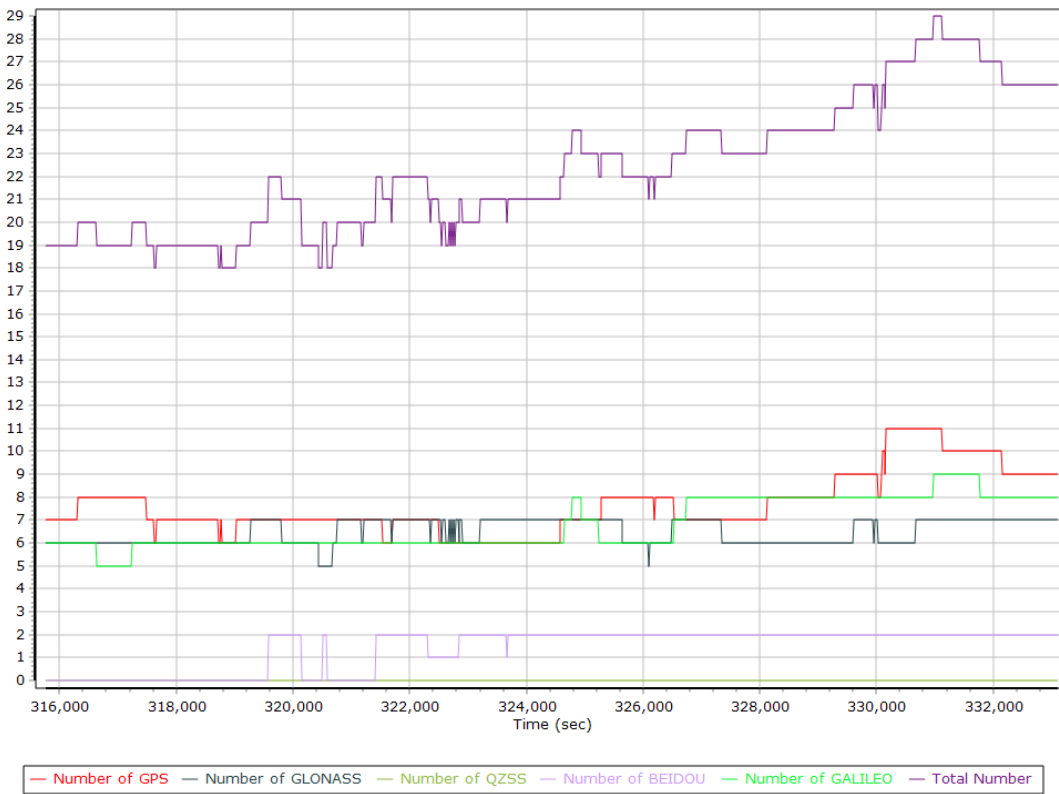


GNSS QC

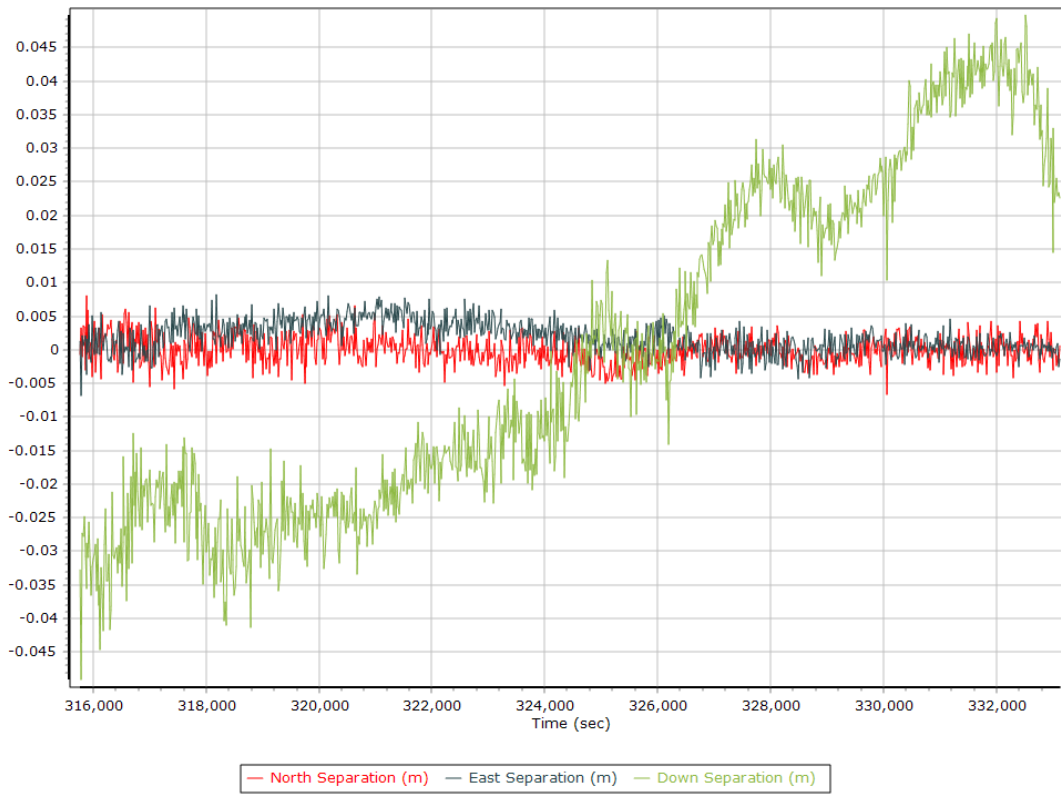
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	6	11	8
Number of GLONASS SV	5	7	6
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	2	1
Number of GALILEO SV	5	9	7
Total number of SV	17	29	22
PDOP	0.97	1.35	1.16
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	17744.00	0.00	3.00
Percentage	99.98	0.00	0.02

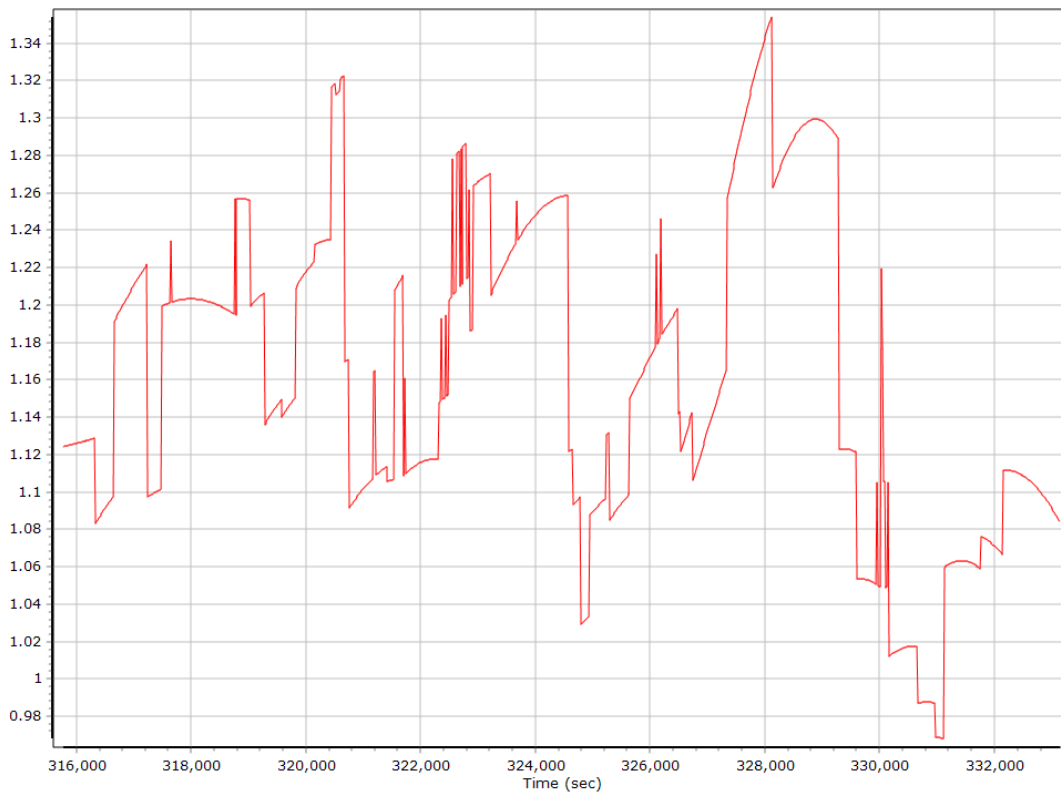
Num SVs in solution



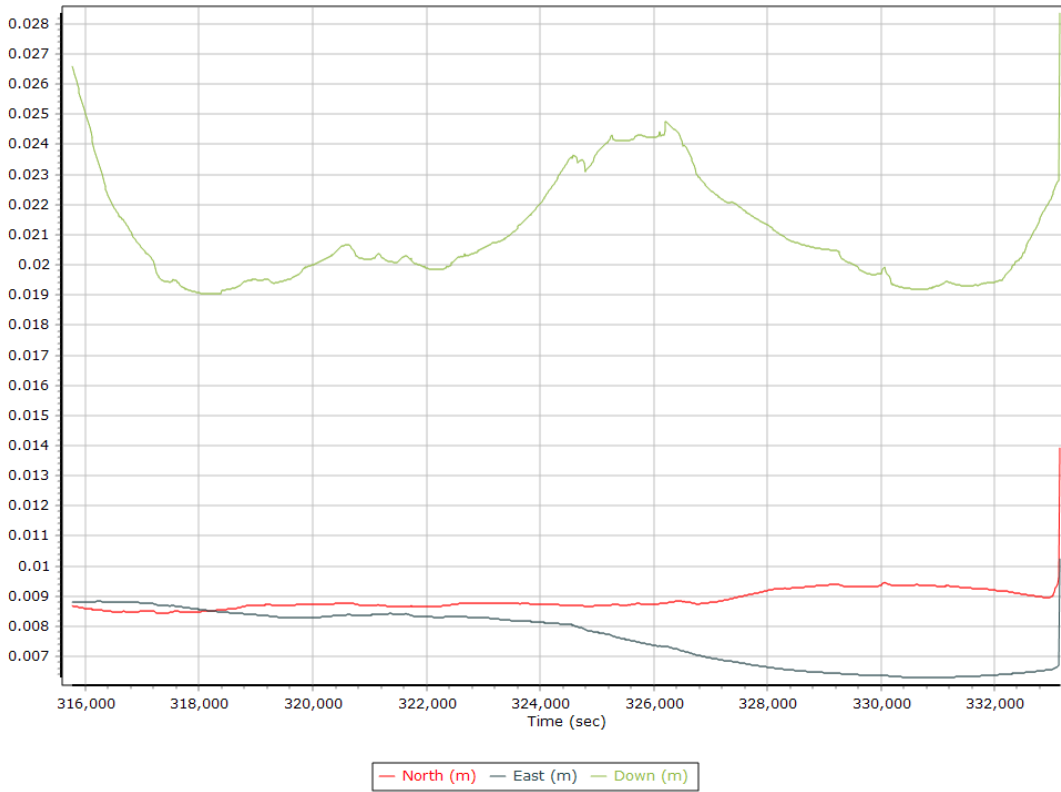
Forward/Reverse Separation



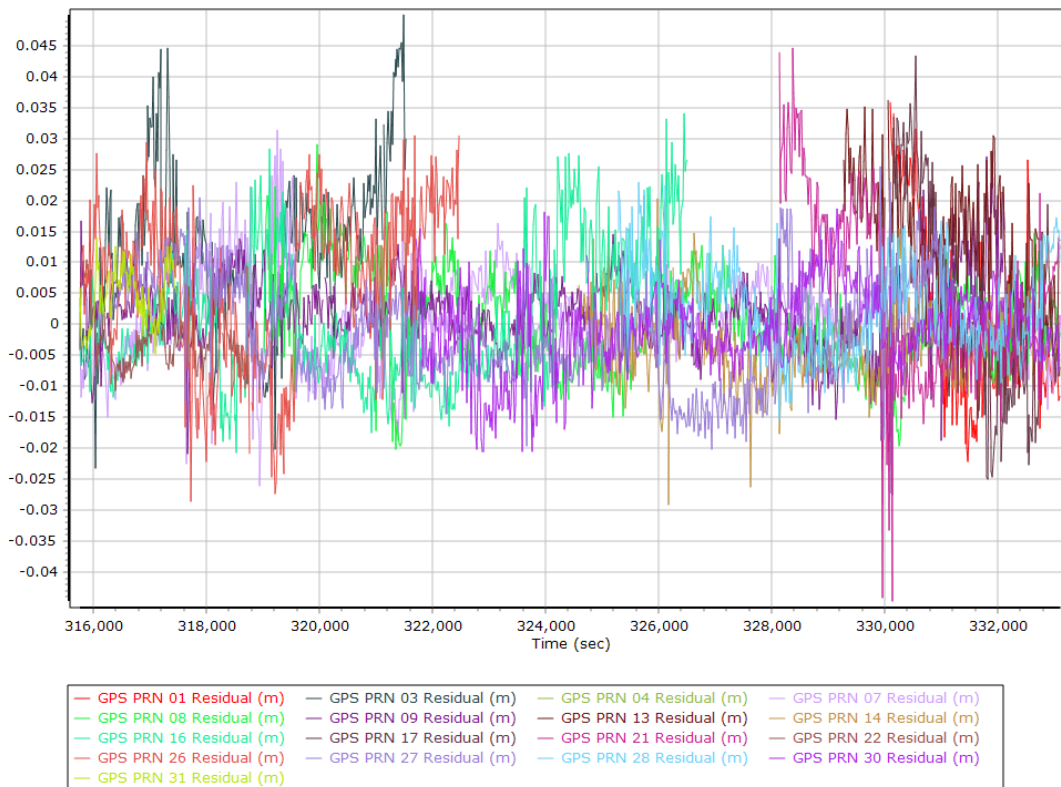
PDOP



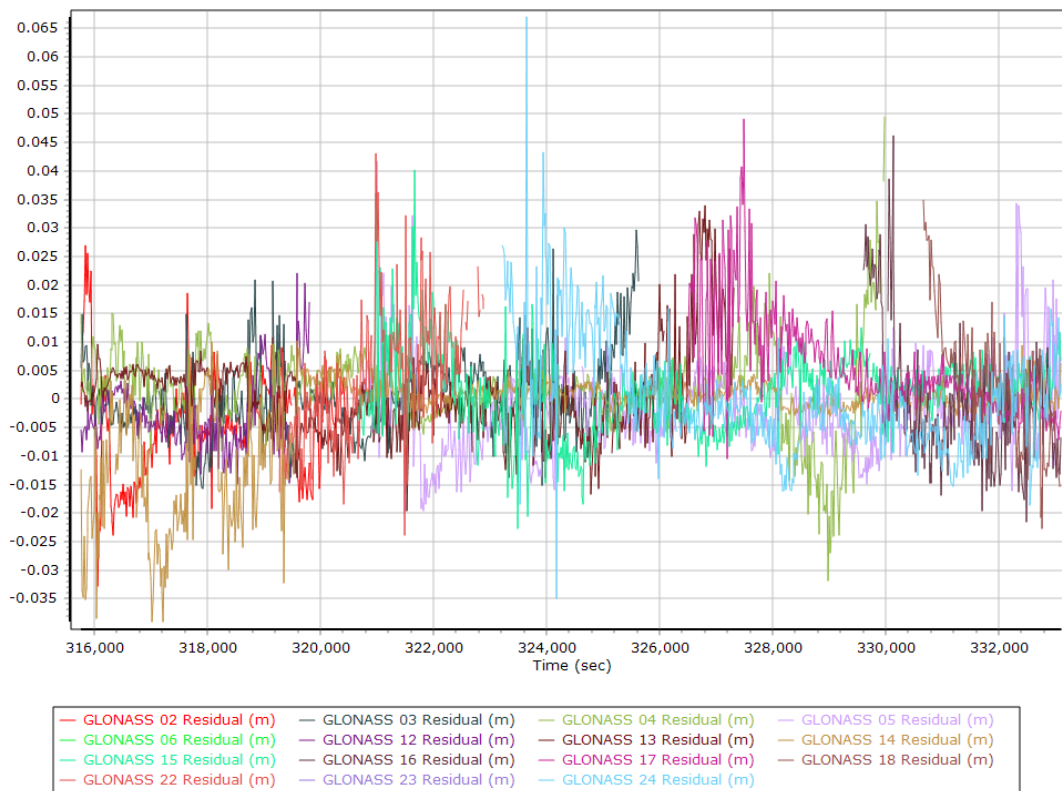
Estimated Position Accuracy



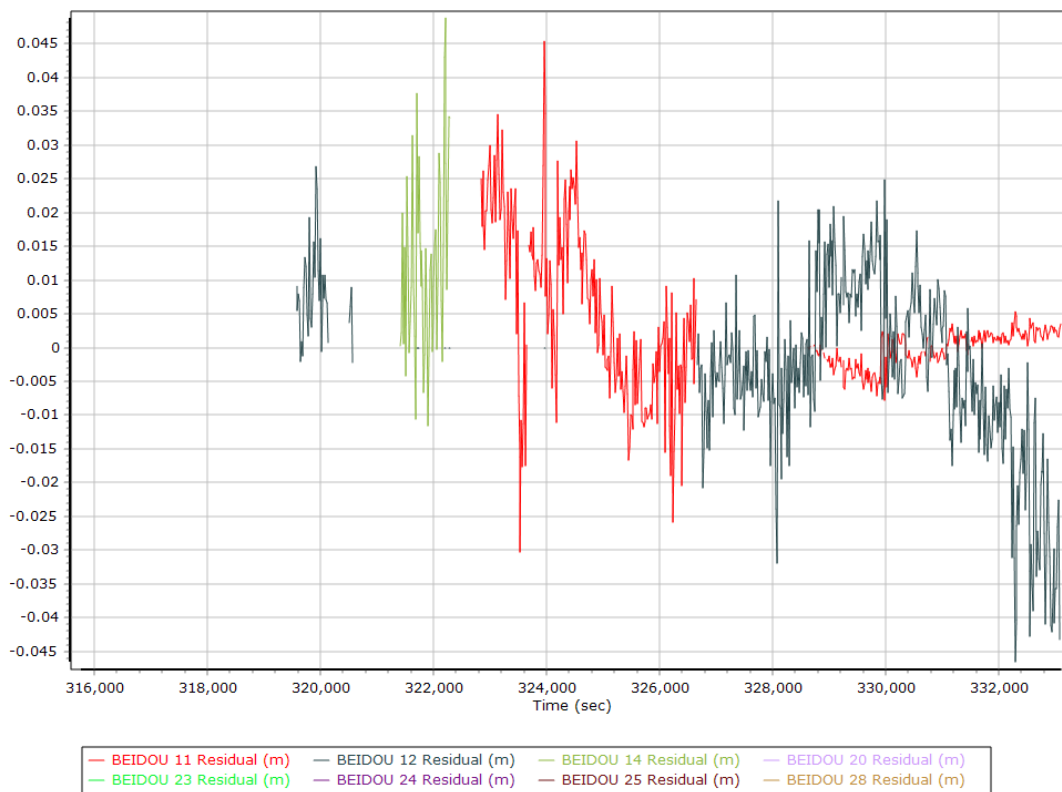
GPS Residuals



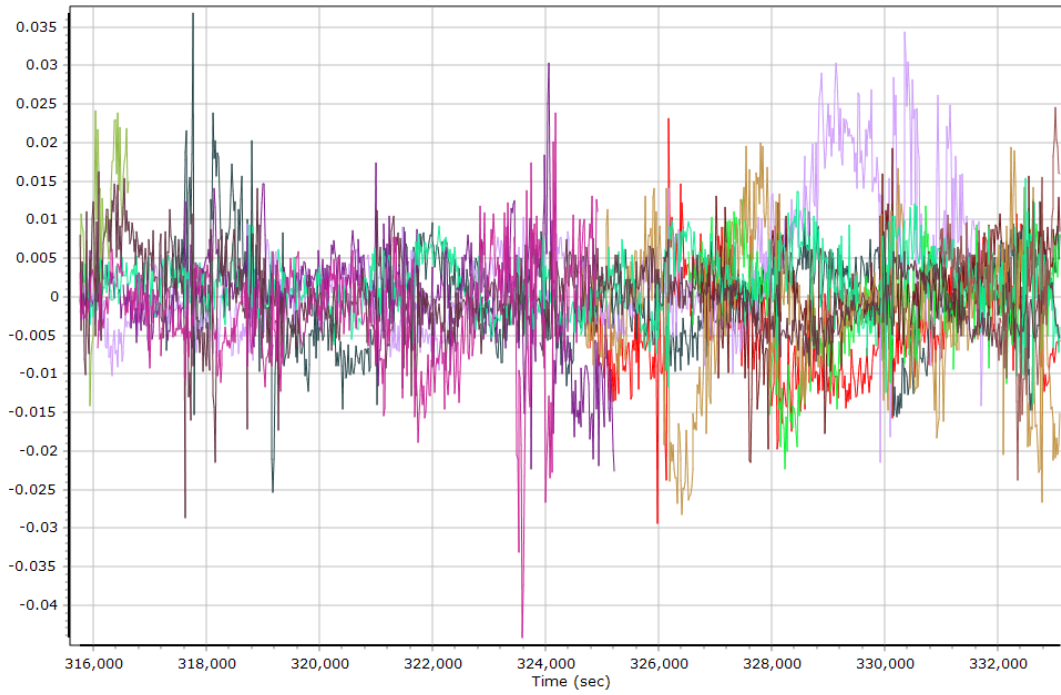
GLONASS Residuals



BEIDOU Residuals



GALILEO Residuals



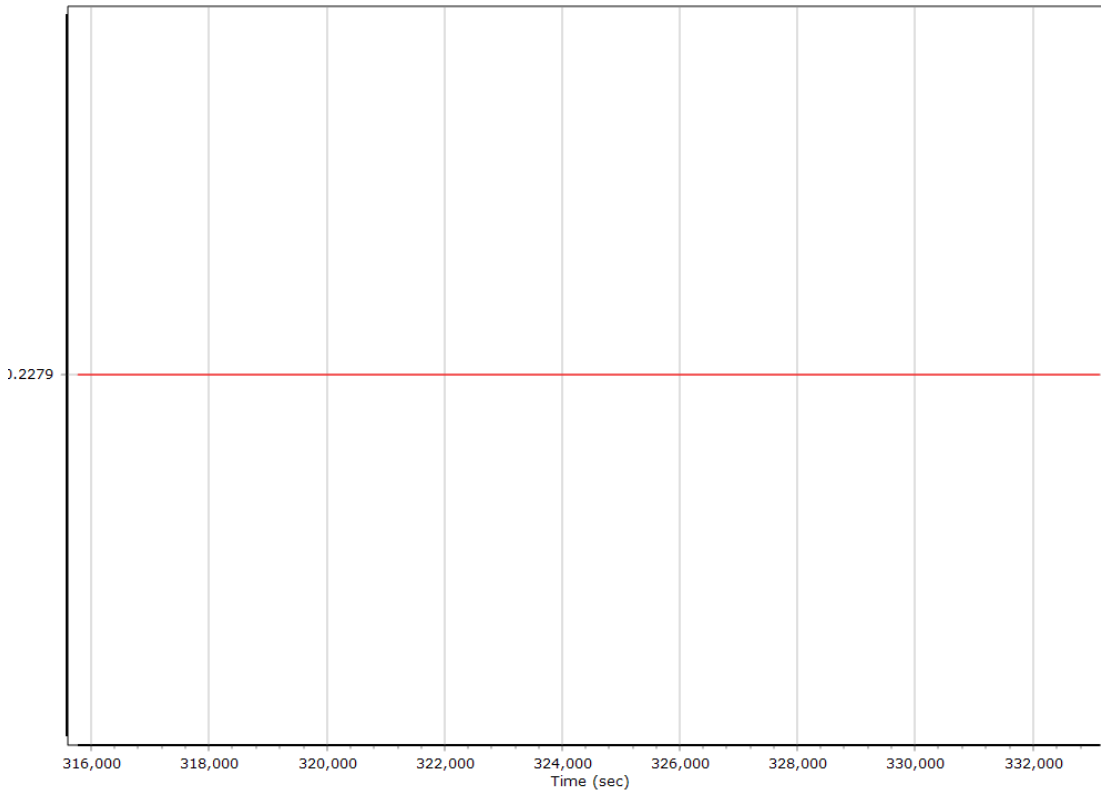
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	315370.000 (03/03/2021 15:36:10)		
Processing end time	333149.000 (03/03/2021 20:32:29)		
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)	0.228	-0.286	-0.967
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

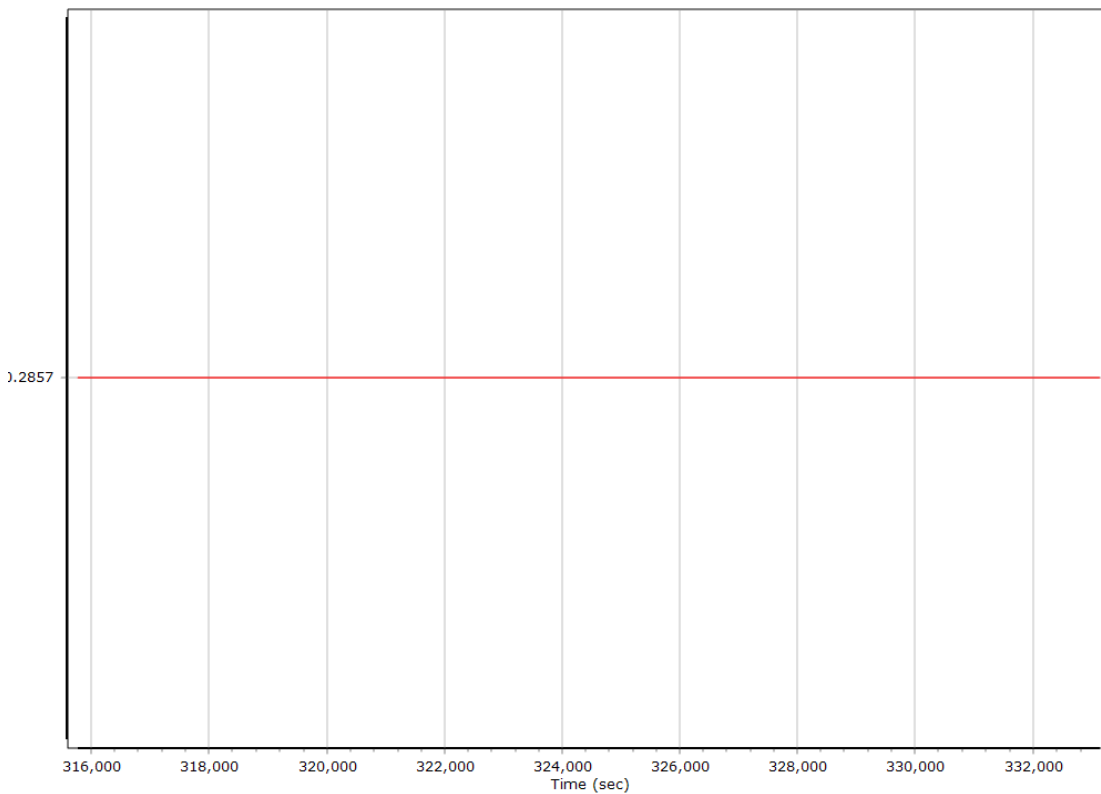
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

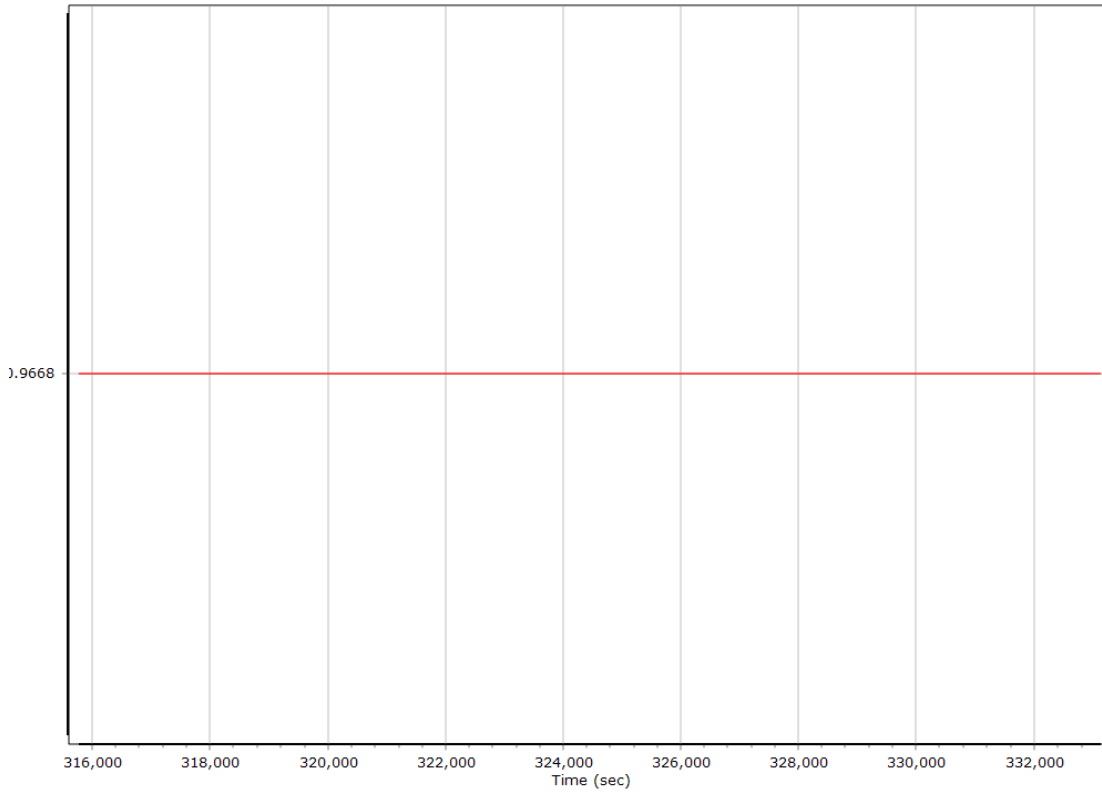
X Reference-Primary GNSS Lever Arm (m)



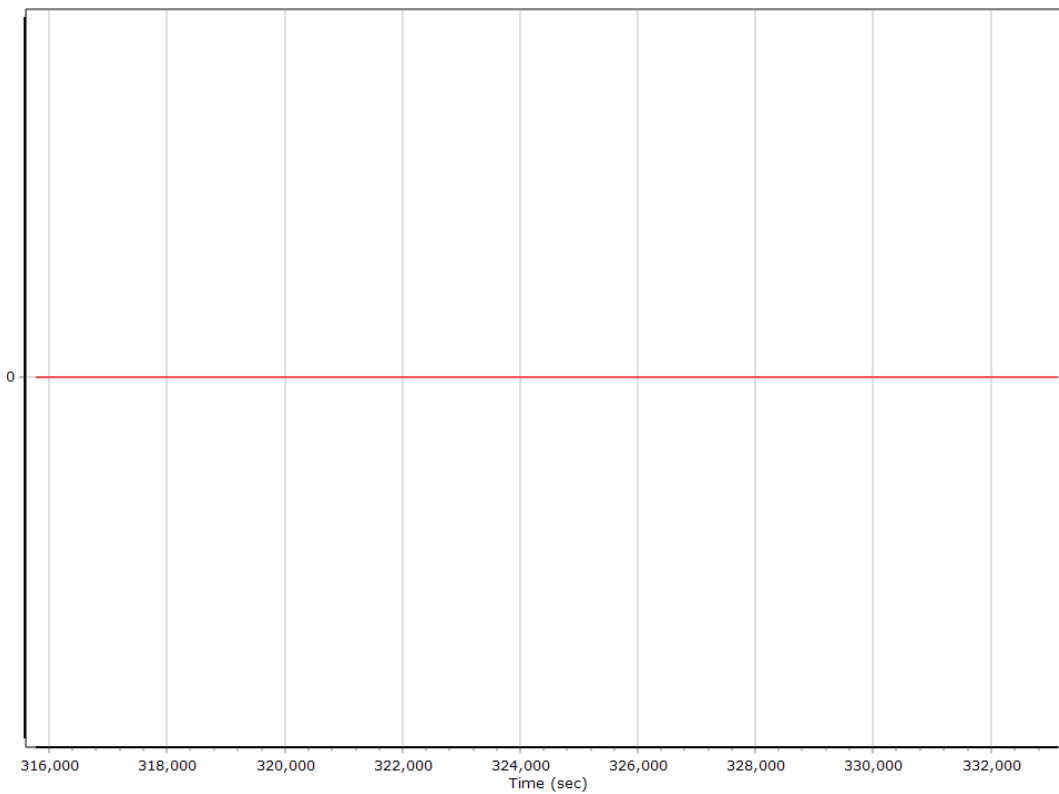
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



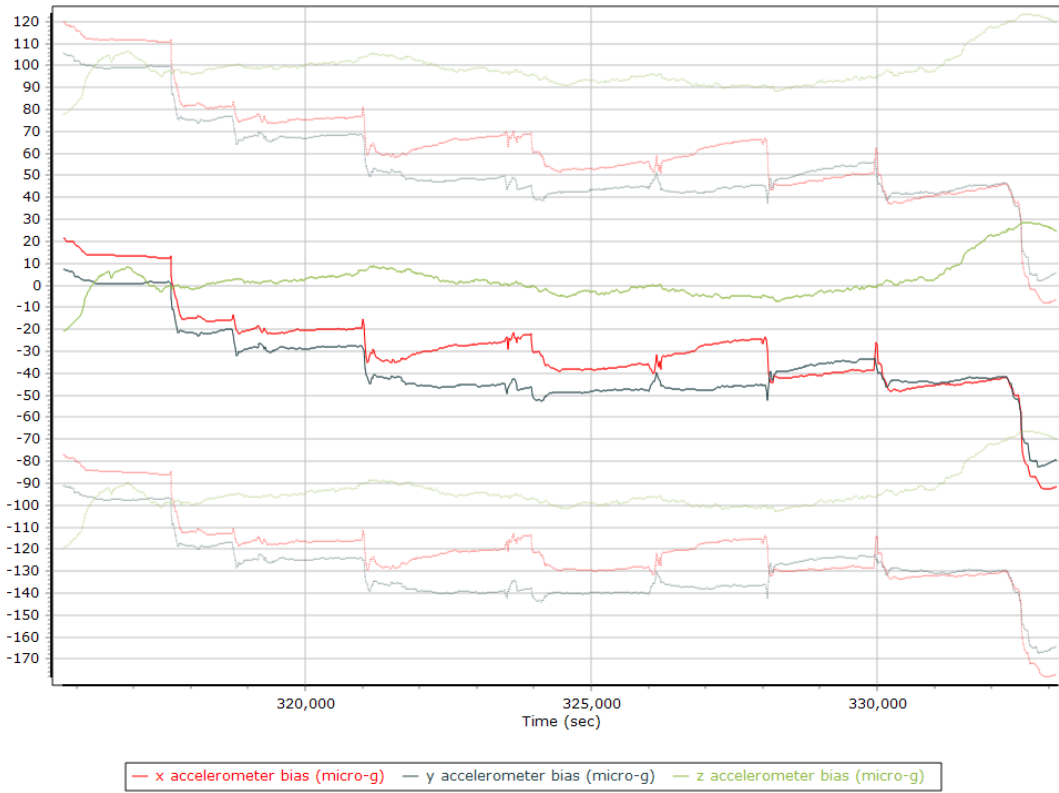
Reference-Primary GNSS Lever Arm Figure of Merit



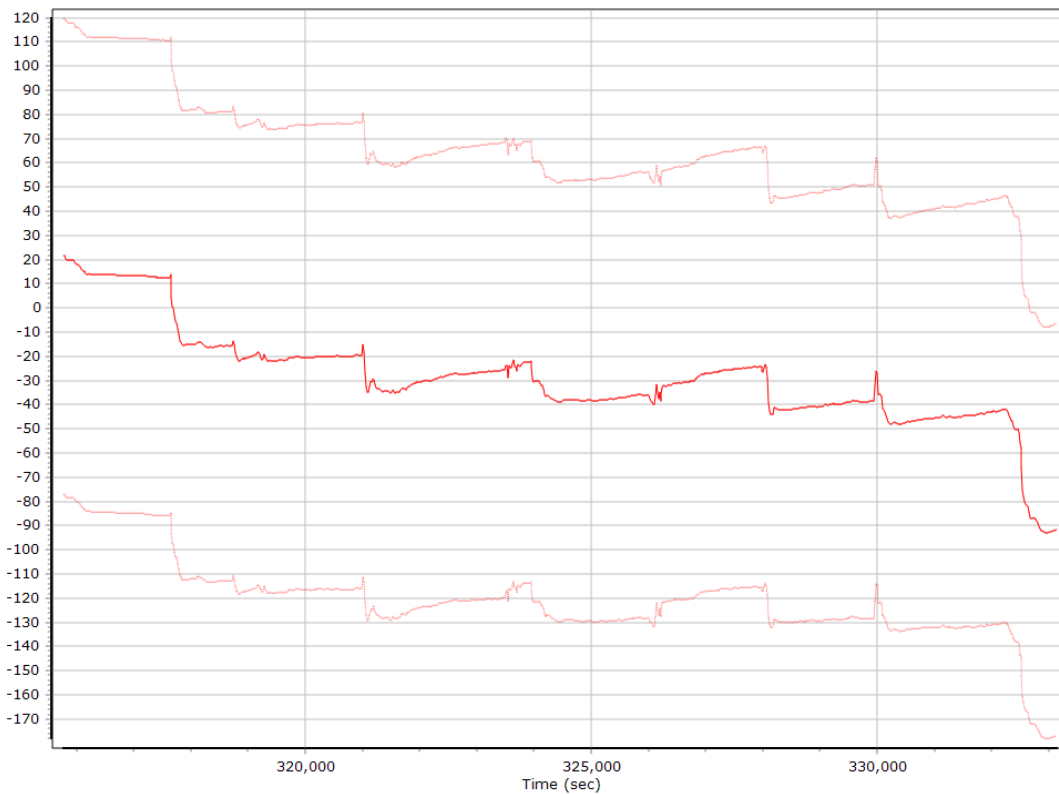
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

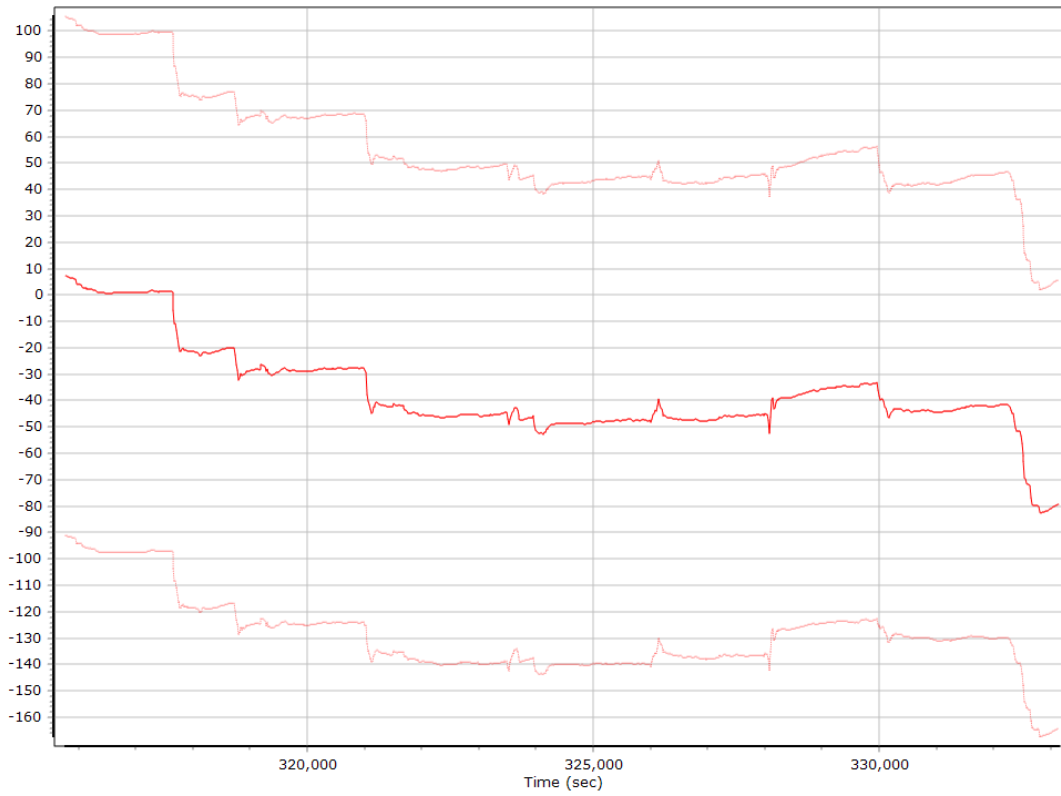
Accelerometer Bias (micro-g)



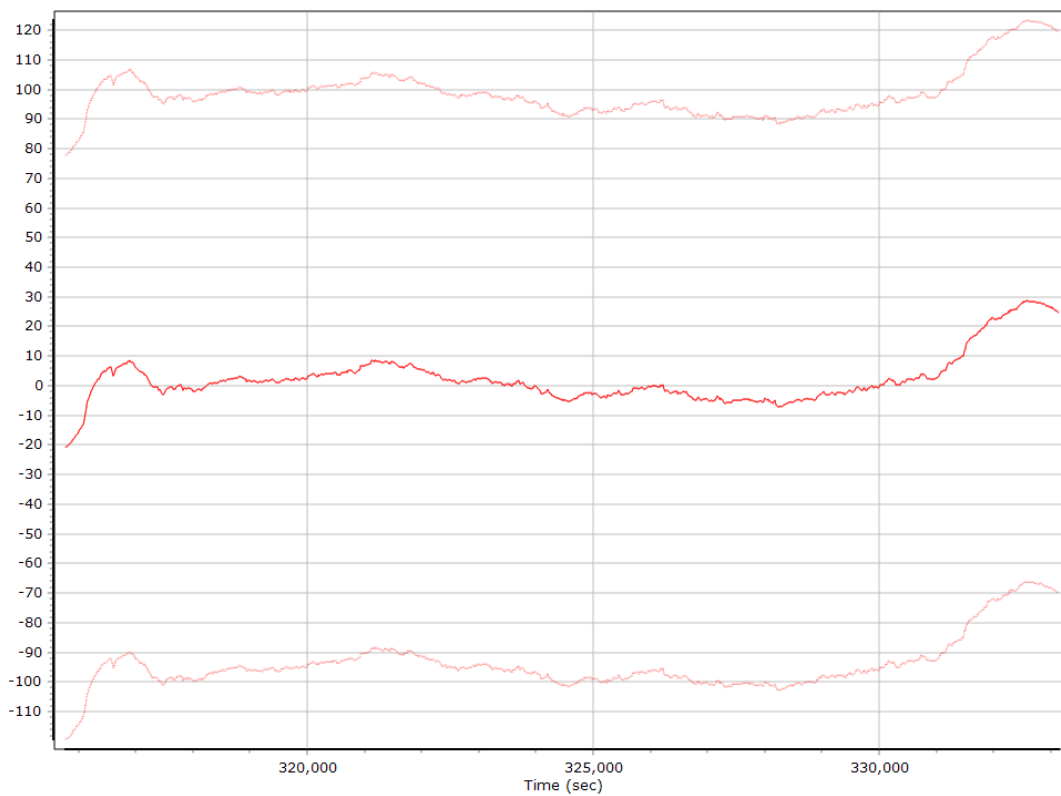
X Accelerometer Bias (micro-g)



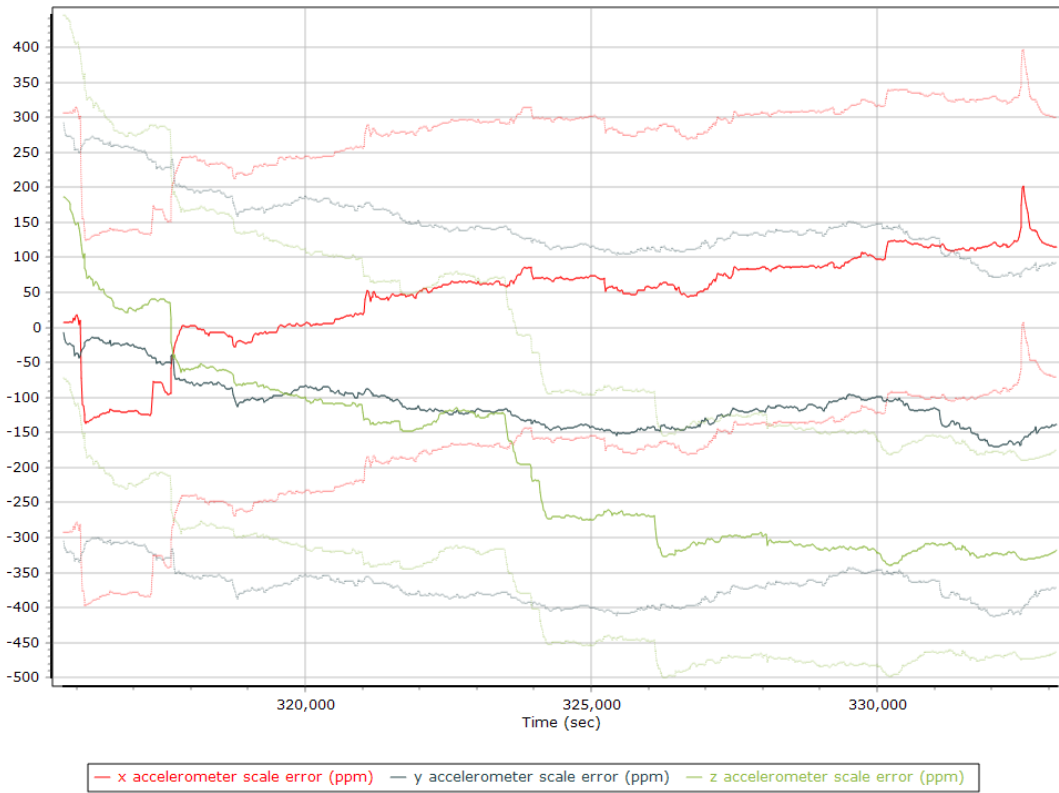
Y Accelerometer Bias (micro-g)



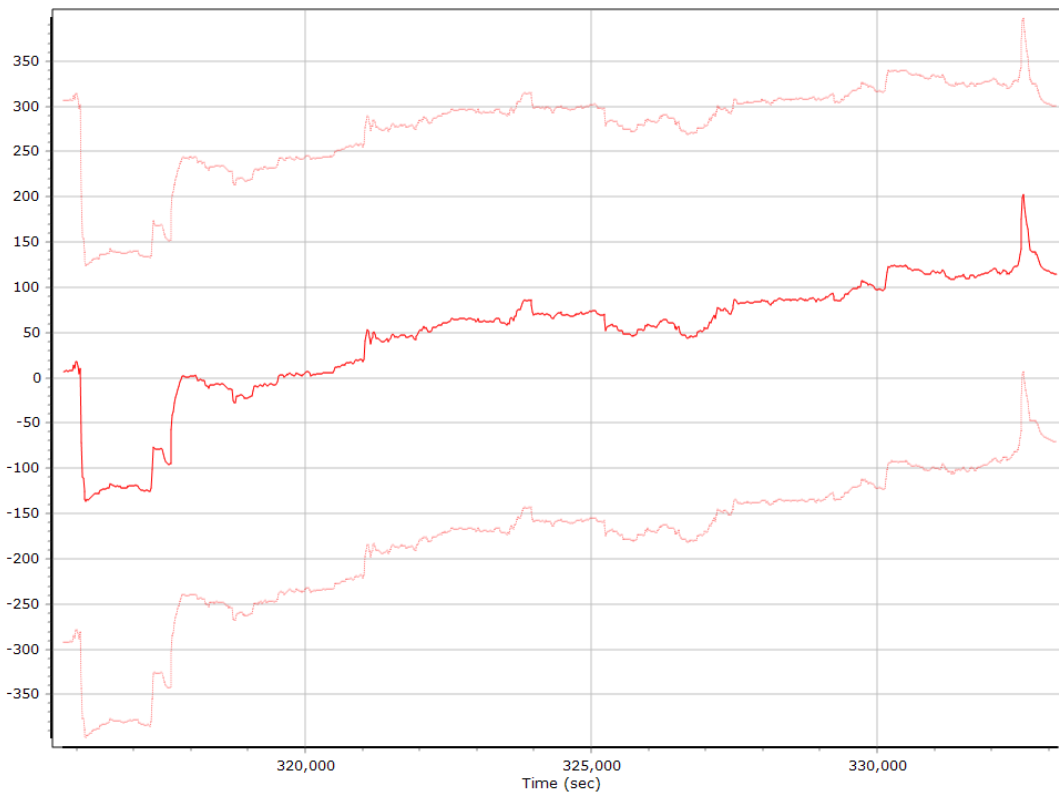
Z Accelerometer Bias (micro-g)



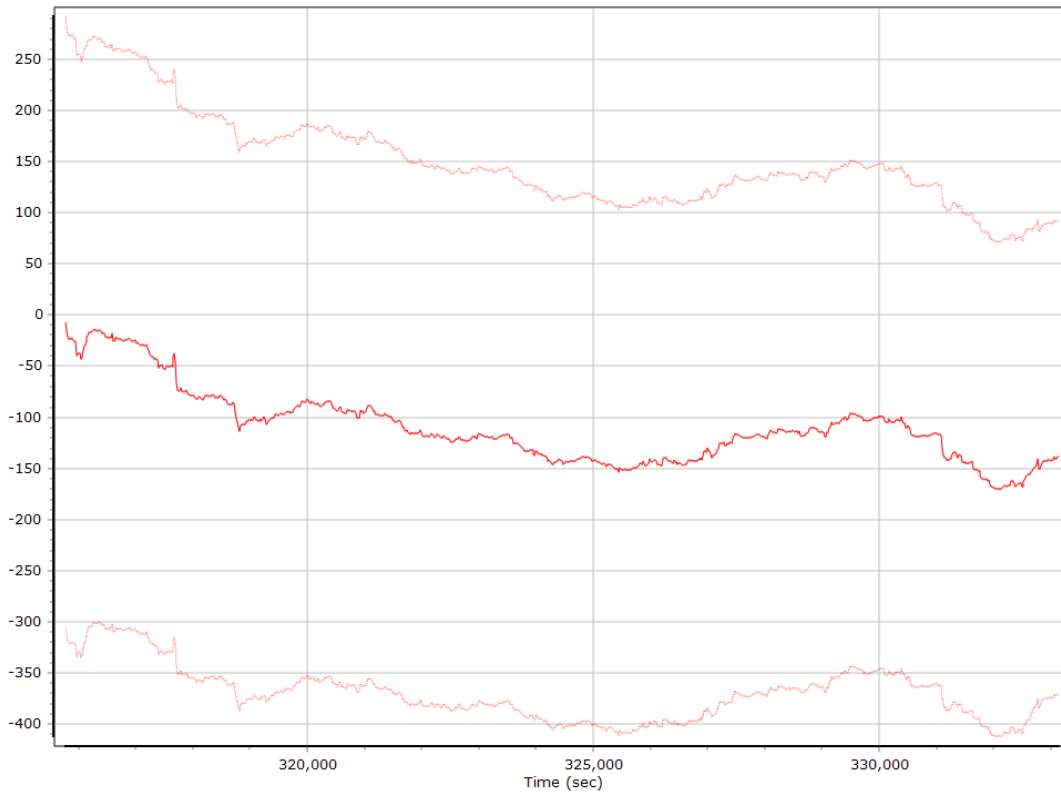
Accelerometer Scale Error (ppm)



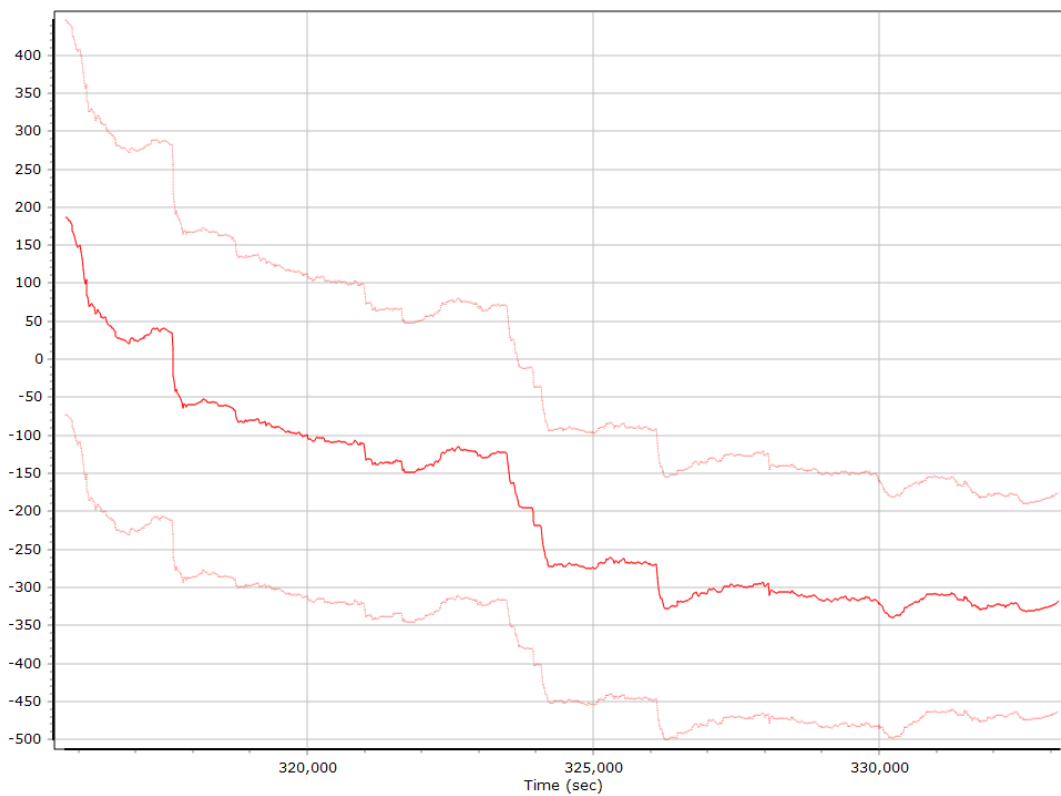
X Accelerometer Scale Error (ppm)



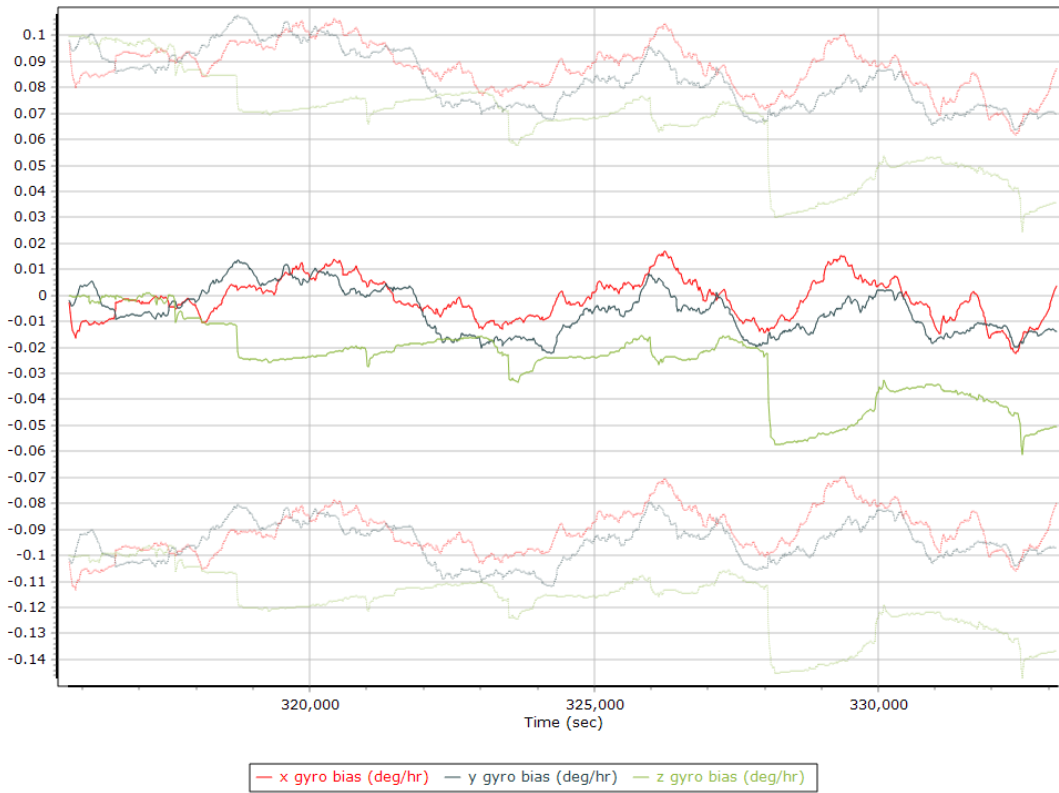
Y Accelerometer Scale Error (ppm)



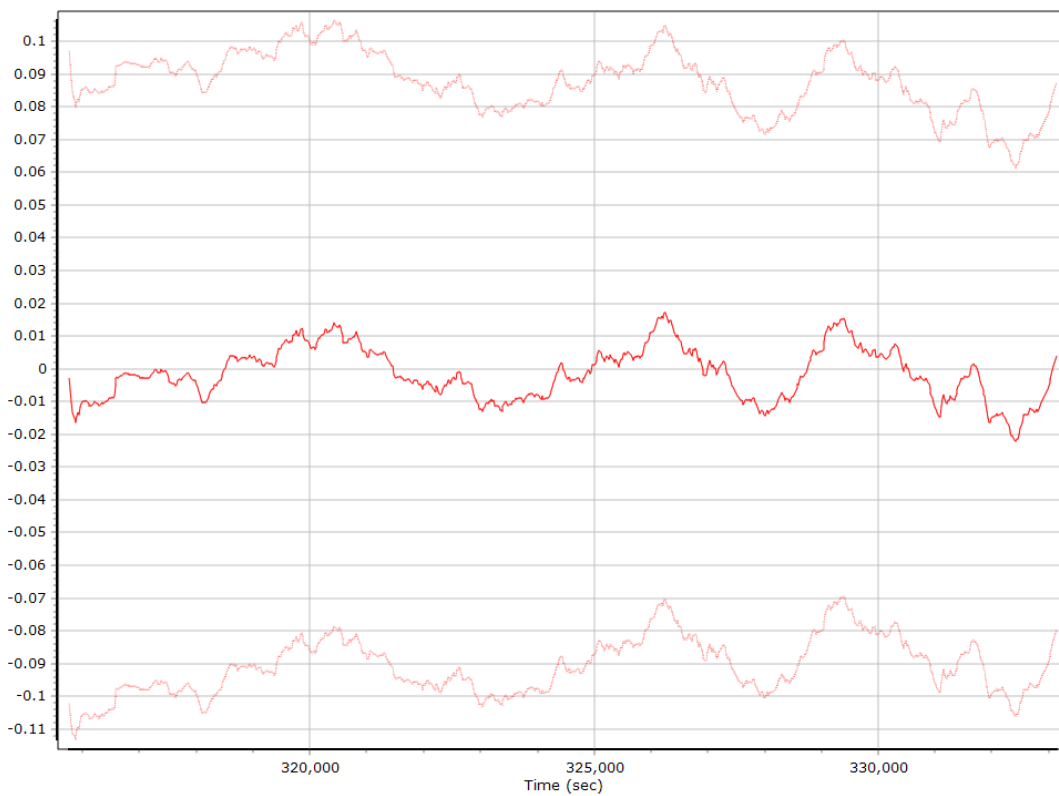
Z Accelerometer Scale Error (ppm)



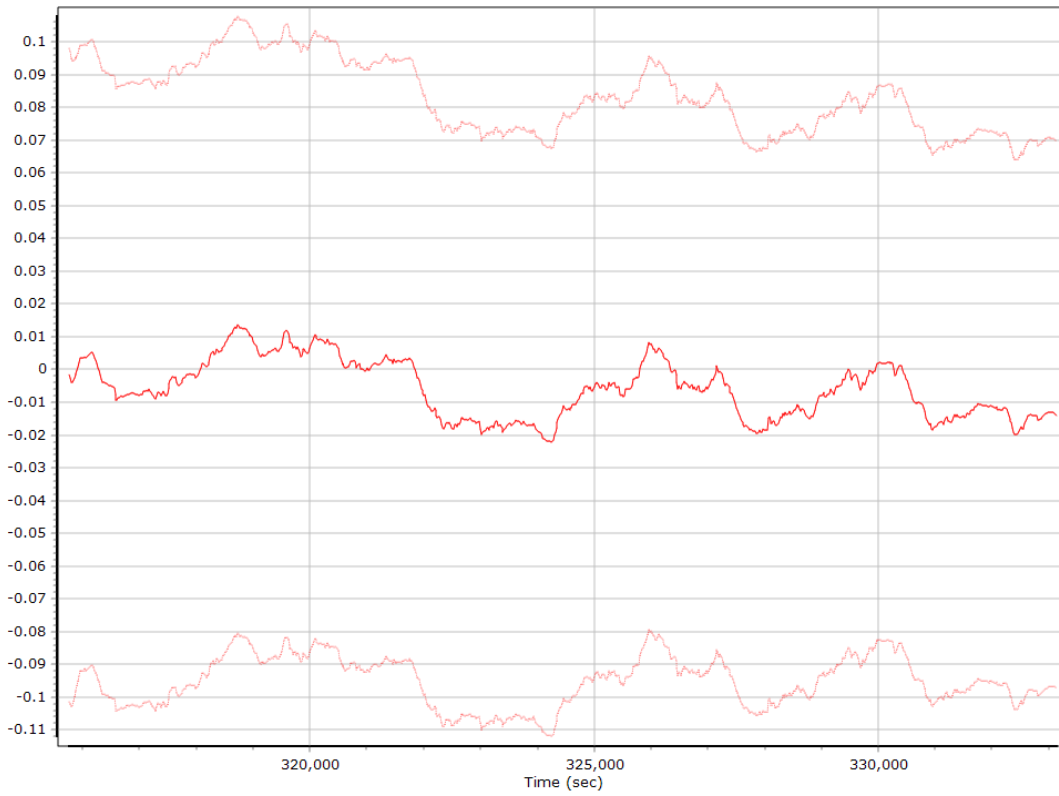
Gyro Bias (deg/h)



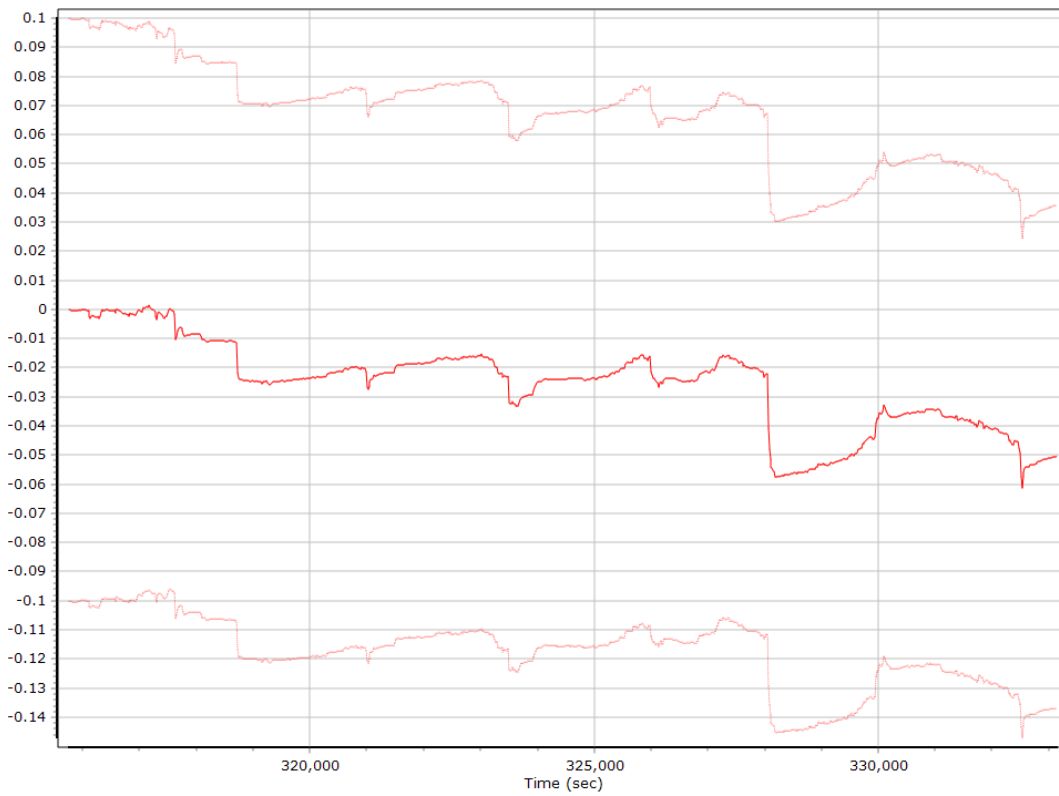
X Gyro Bias (deg/h)



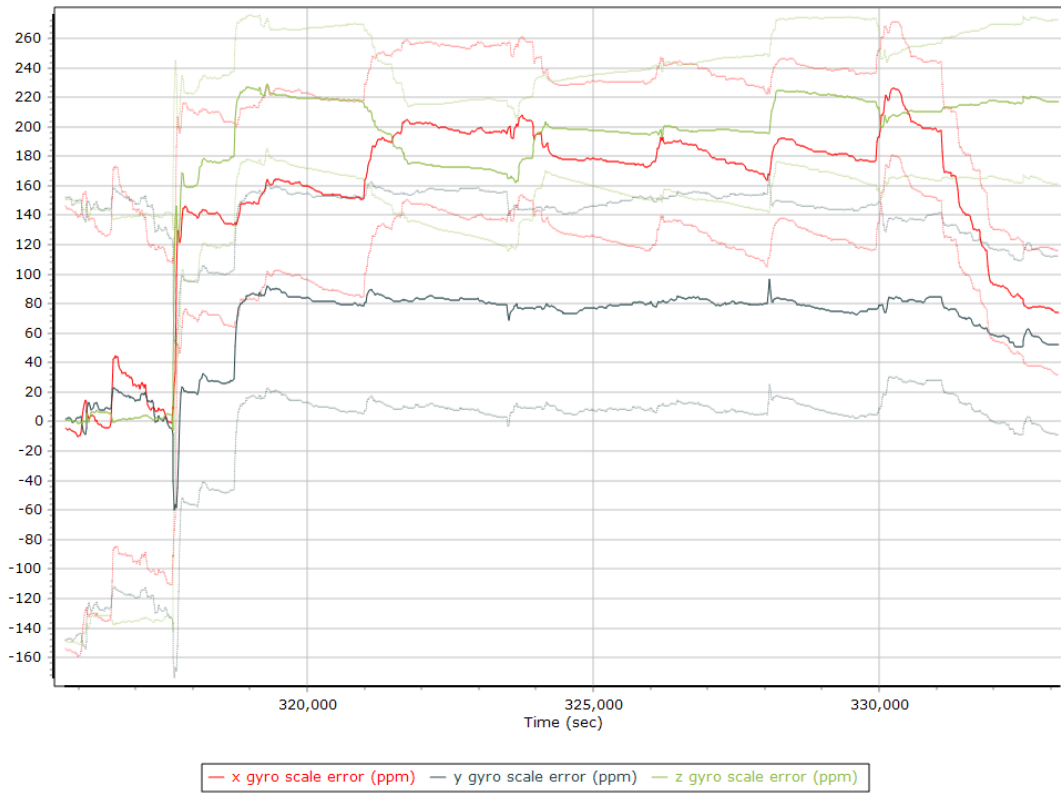
Y Gyro Bias (deg/h)



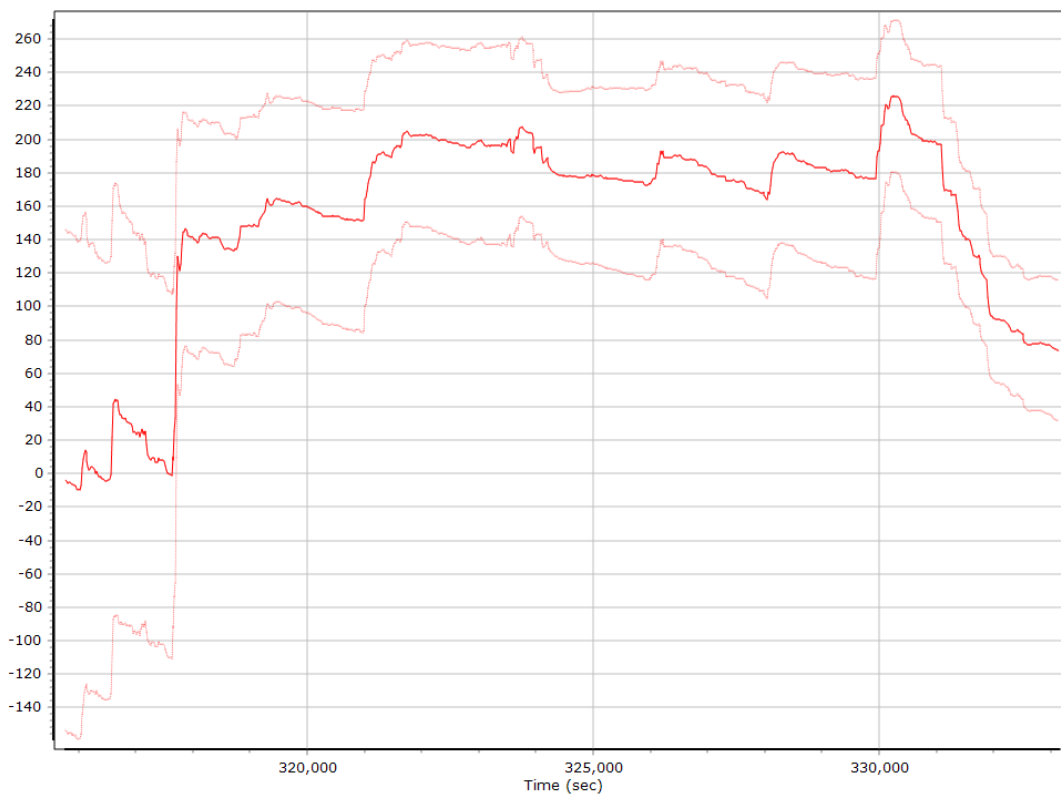
Z Gyro Bias (deg/h)



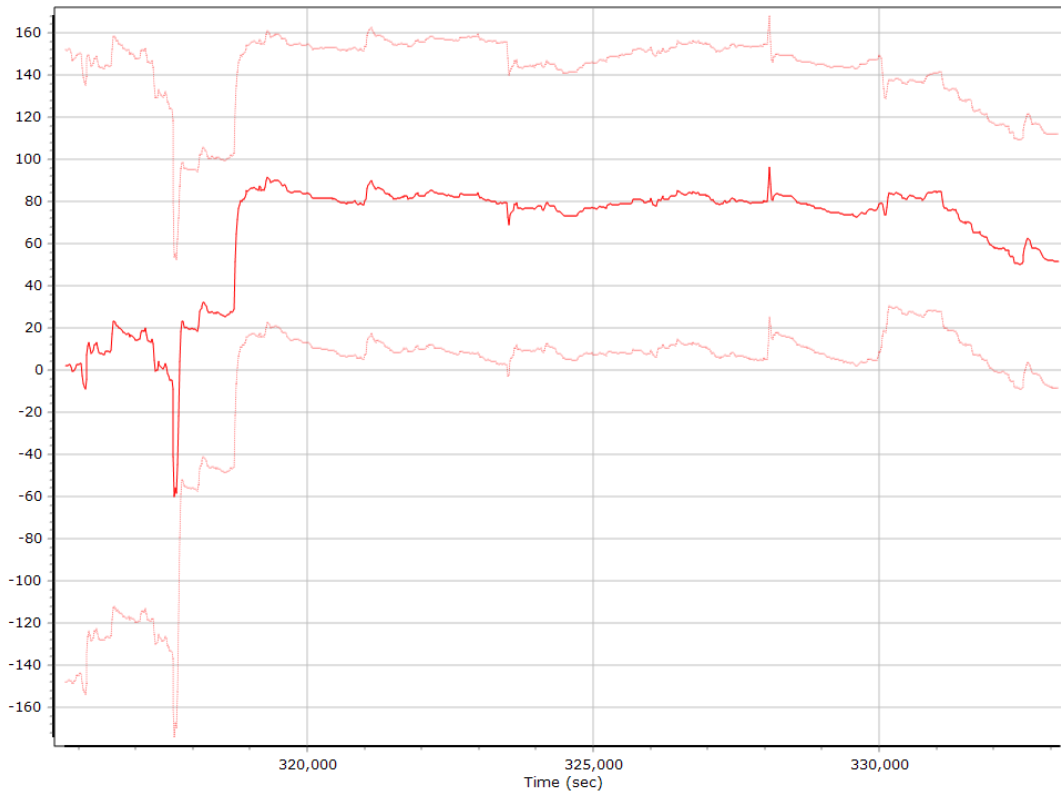
Gyro Scale Error (ppm)



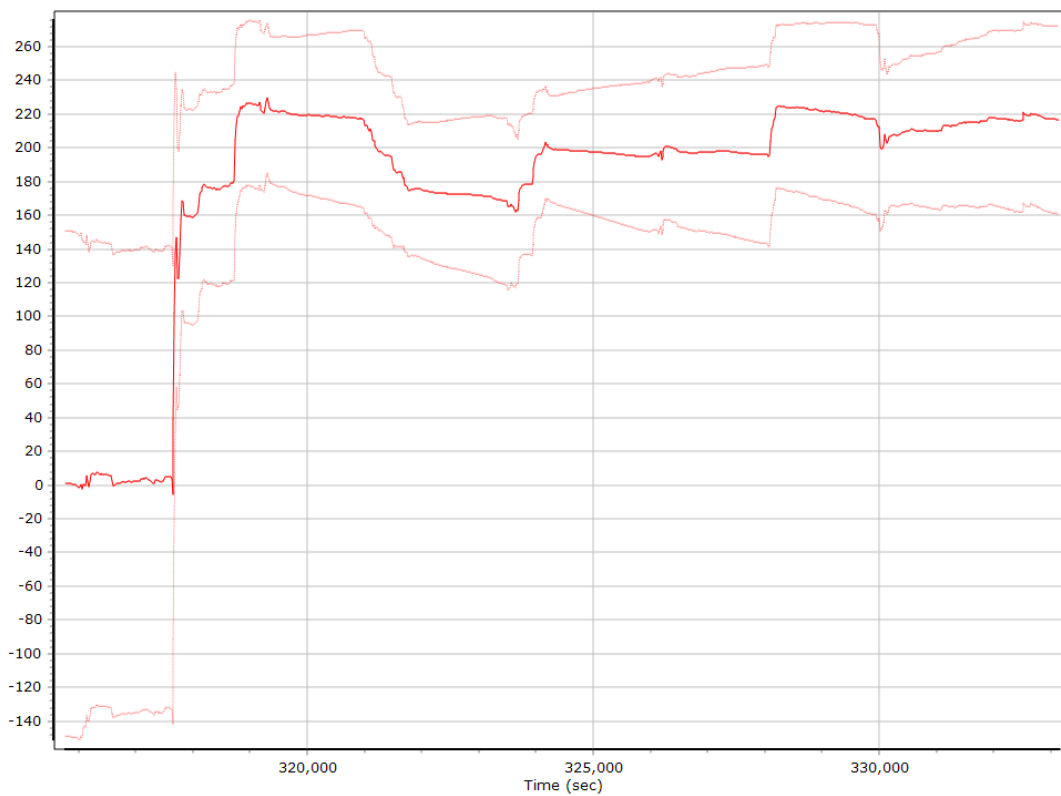
X Gyro Scale Error (ppm)



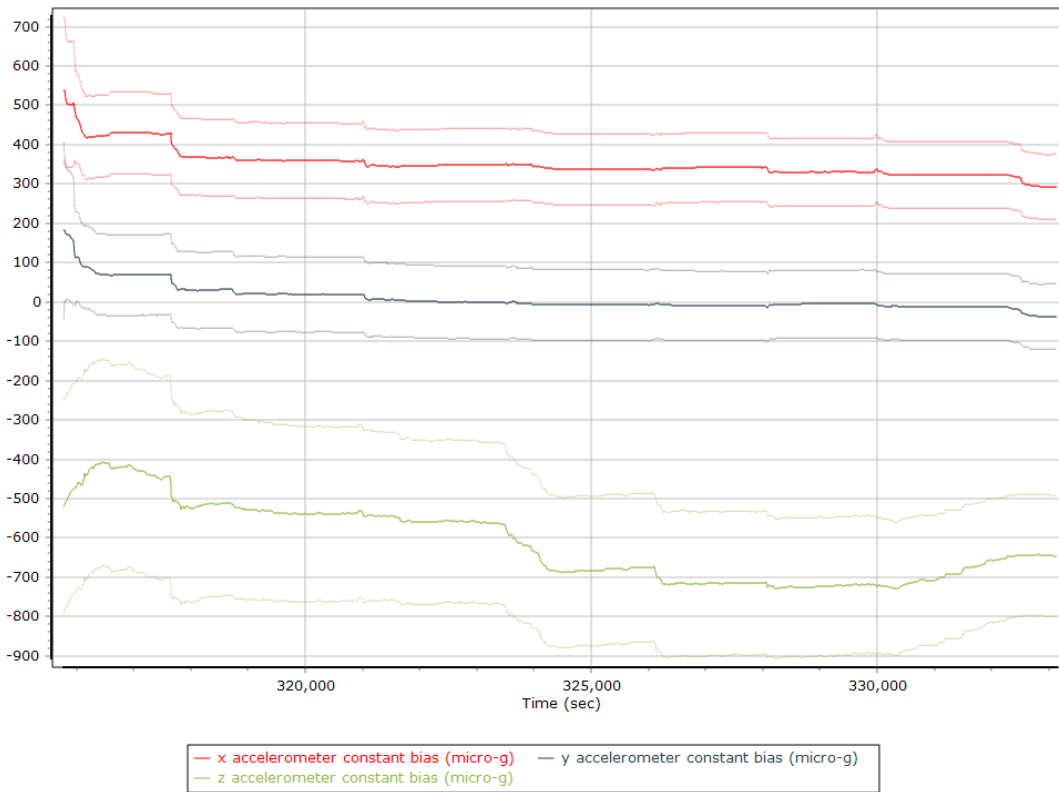
Y Gyro Scale Error (ppm)



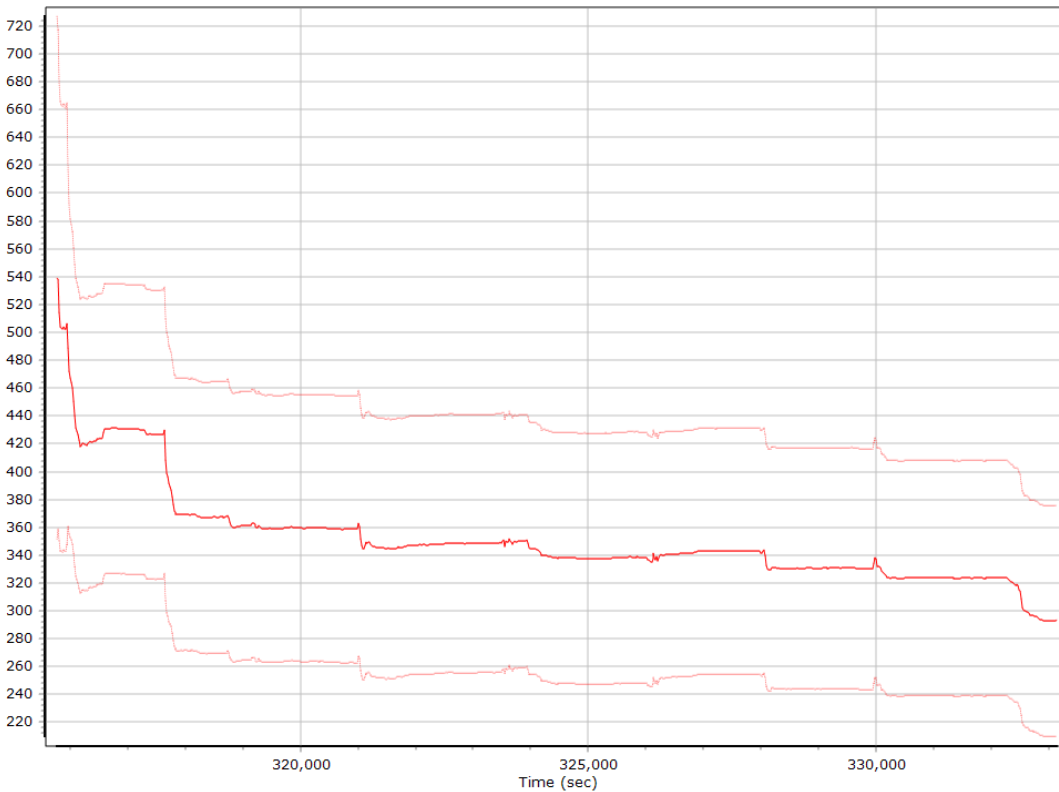
Z Gyro Scale Error (ppm)



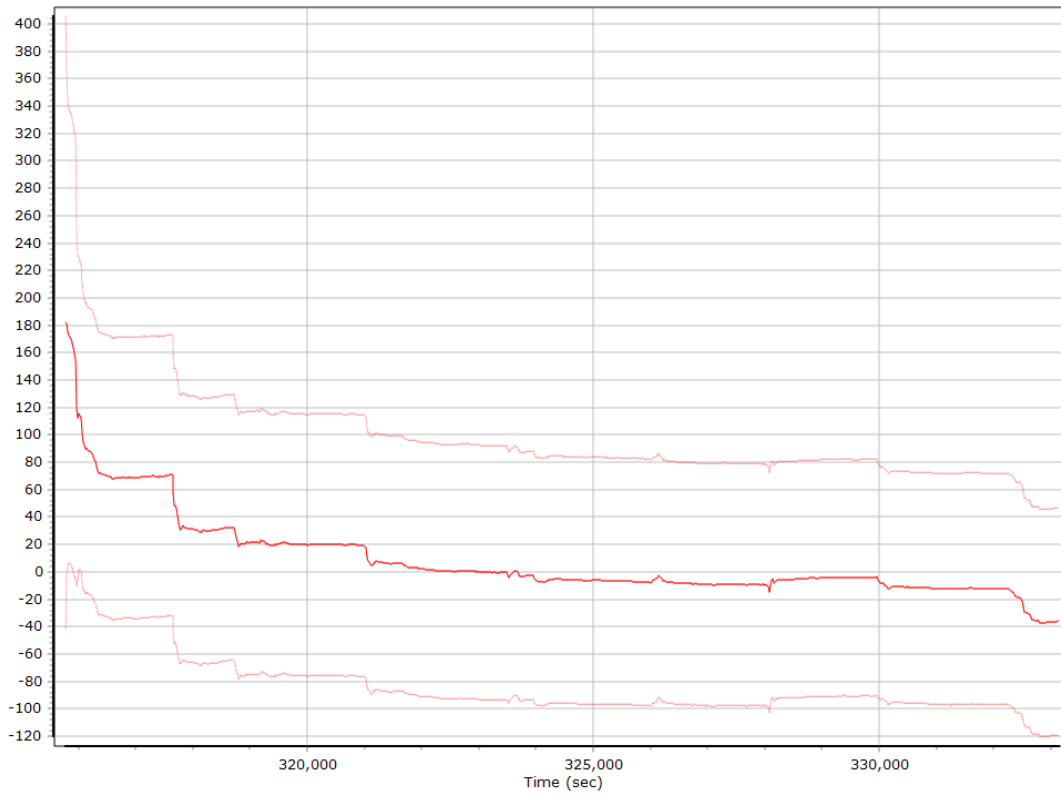
Forward Processed Estimated Constant Errors, Reference Frame Accelerometer Bias (micro-g)



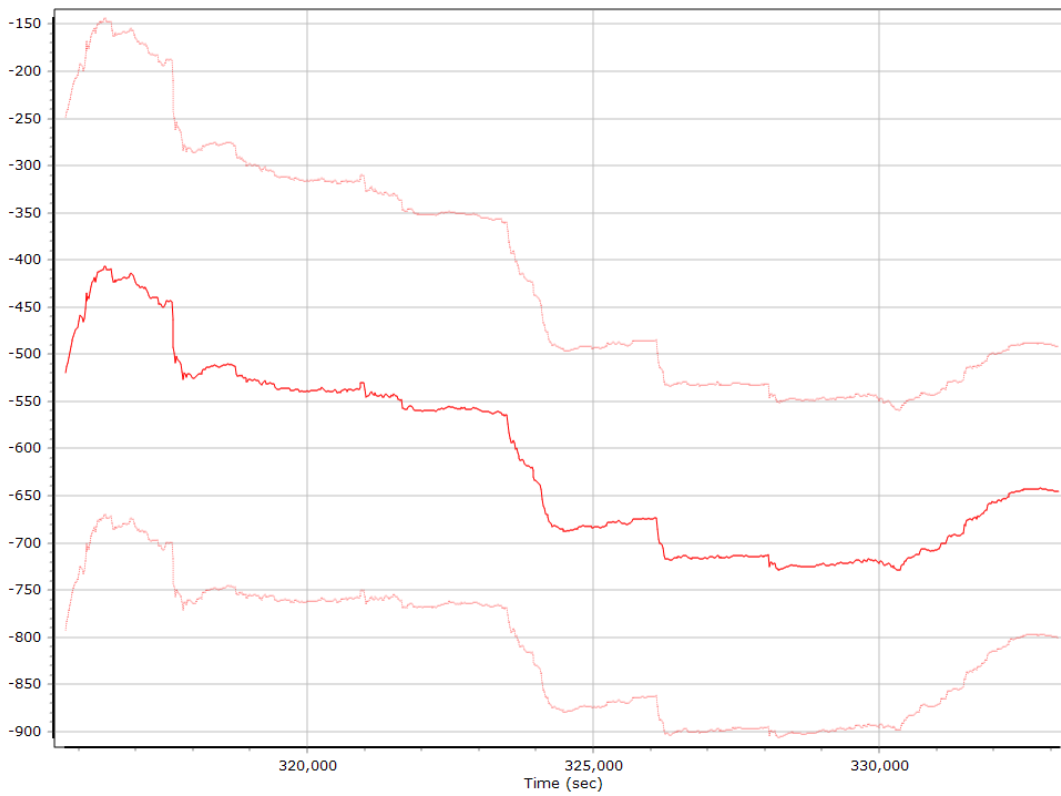
X Accelerometer Bias (micro-g)



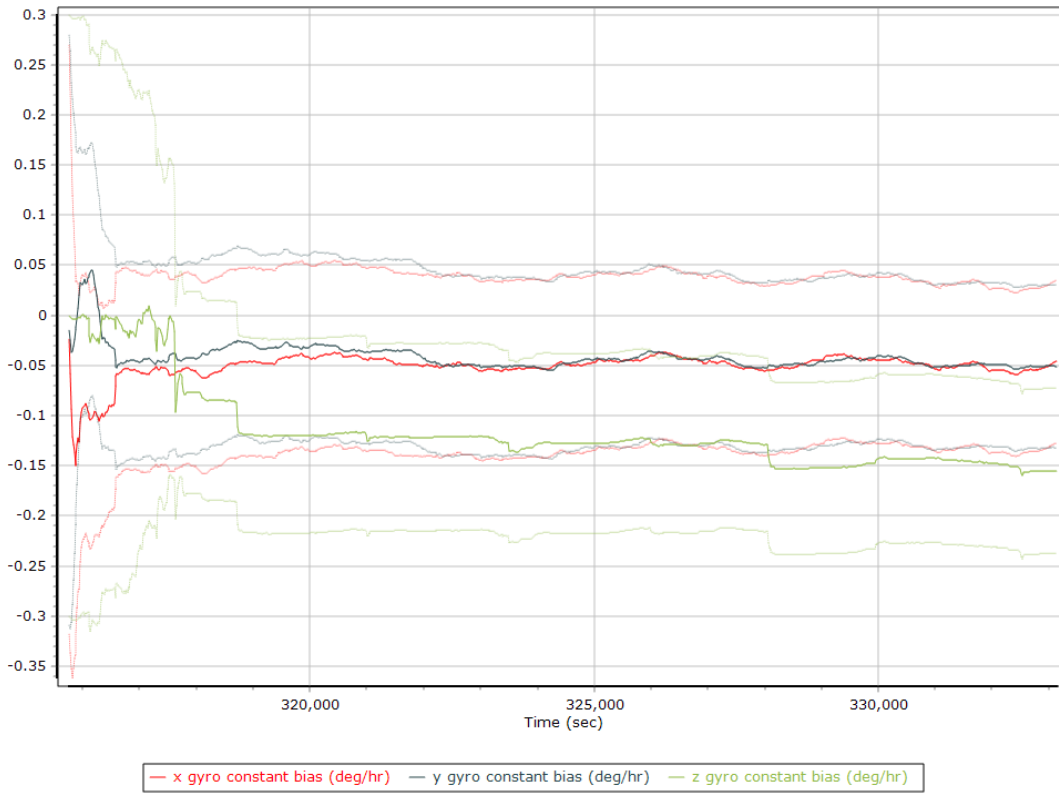
Y Accelerometer Bias (micro-g)



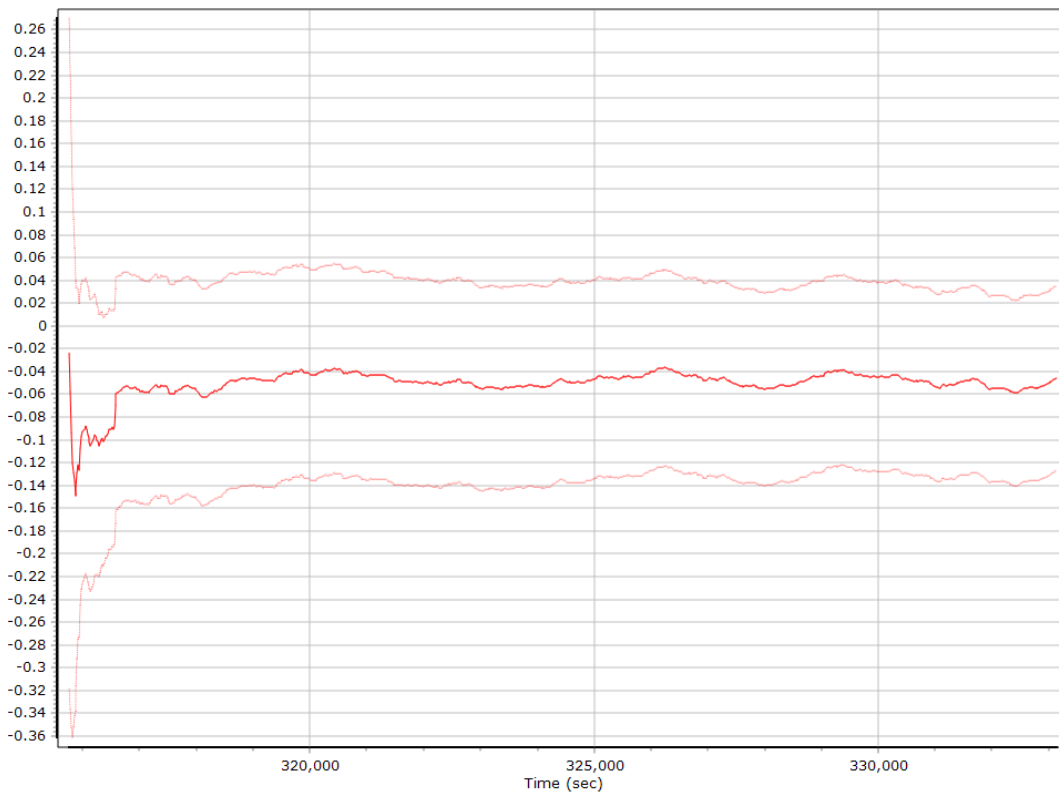
Z Accelerometer Bias (micro-g)



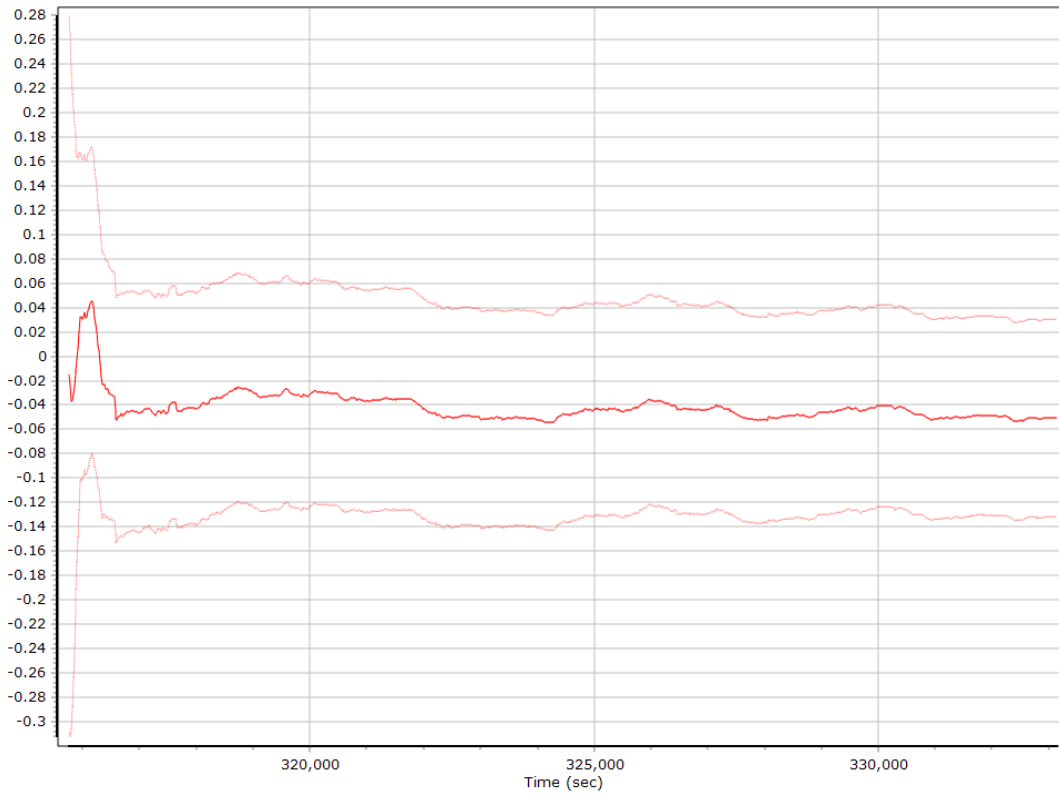
Gyro Bias (deg/h)



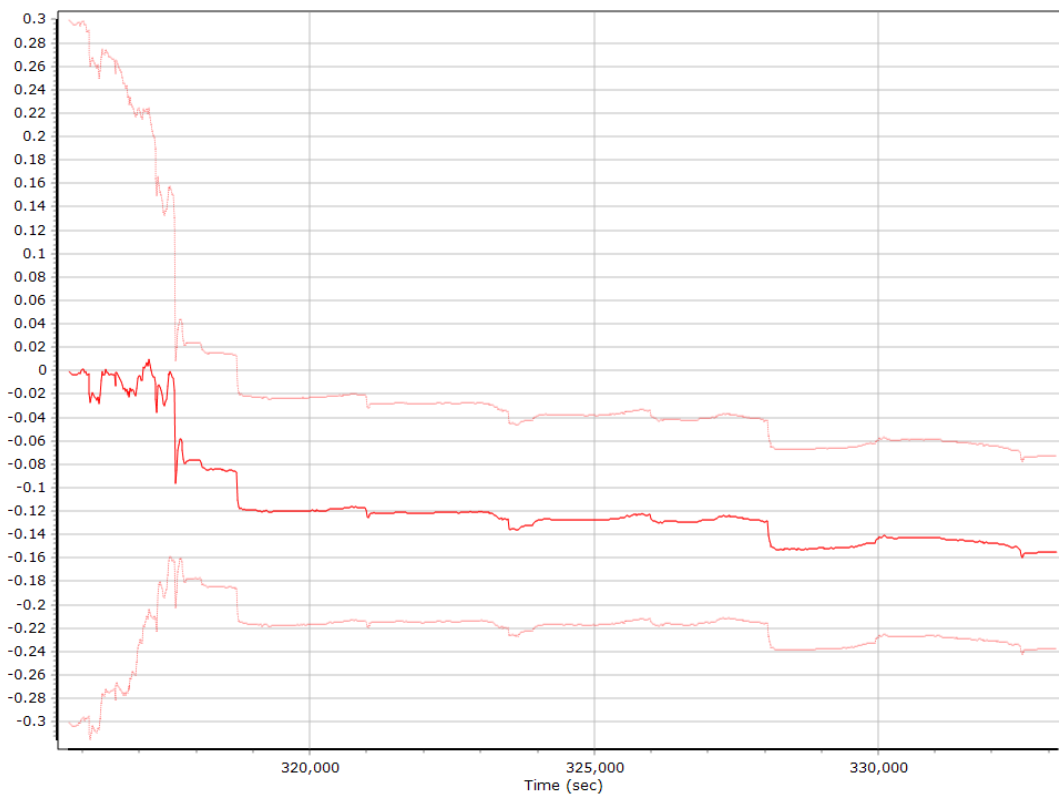
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)

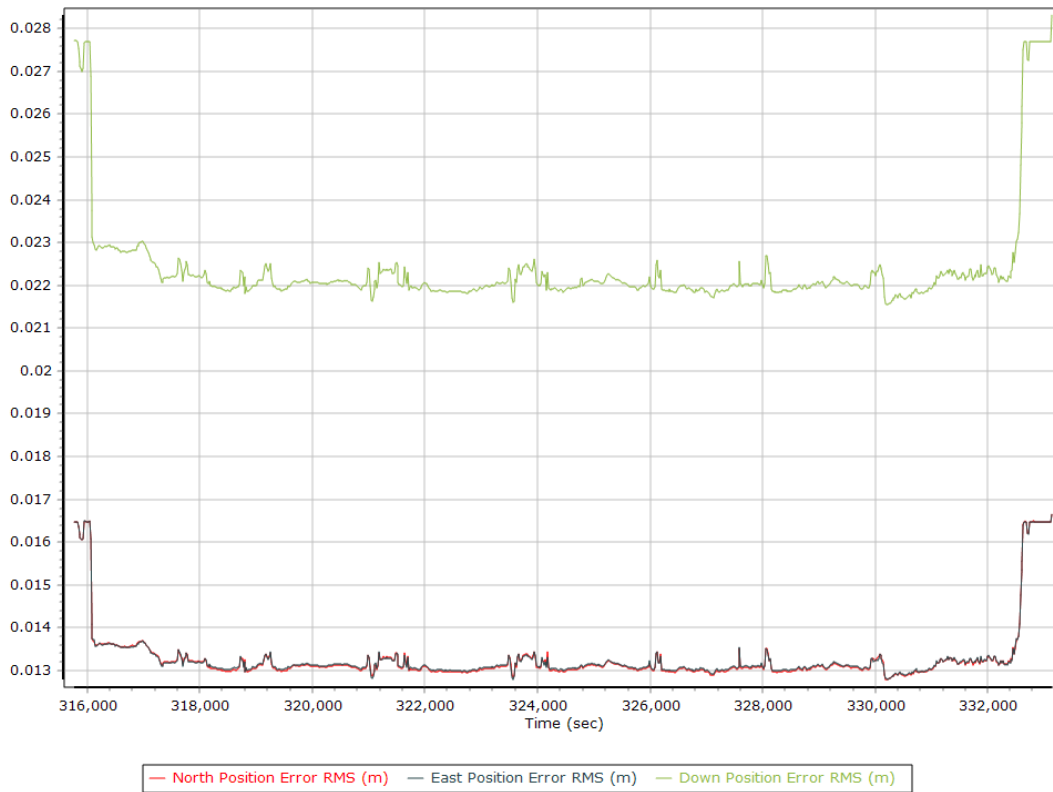


Z Gyro Bias (deg/h)

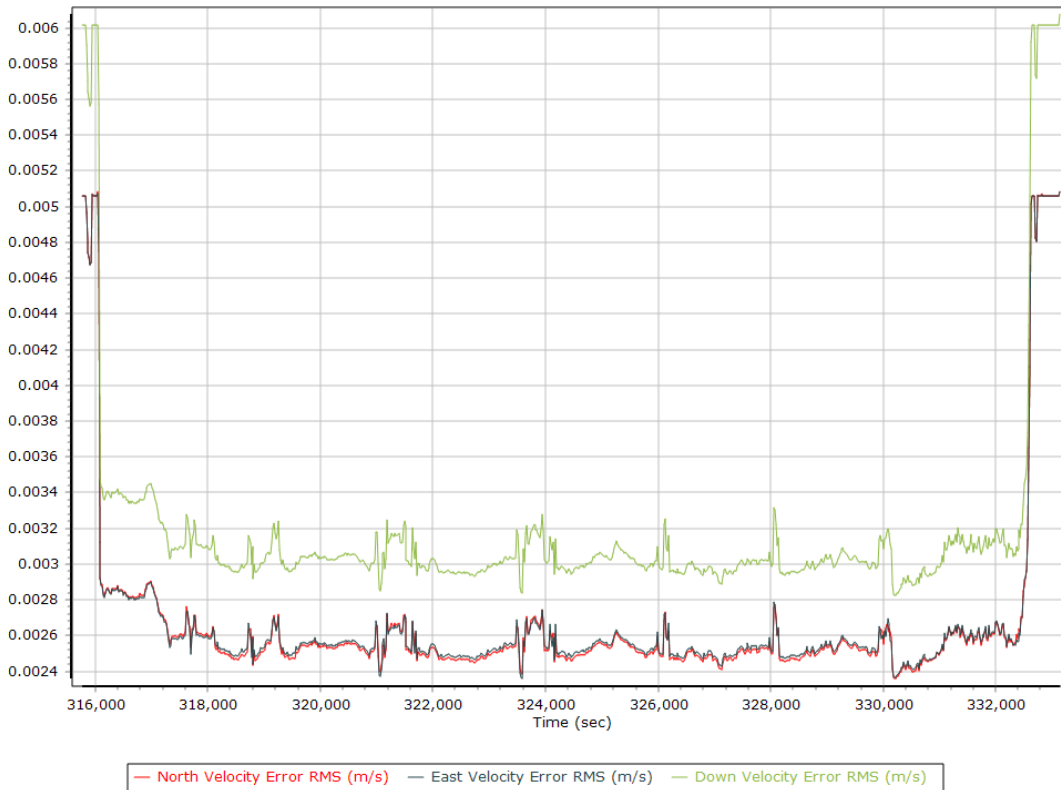


Smoothed Performance Metrics

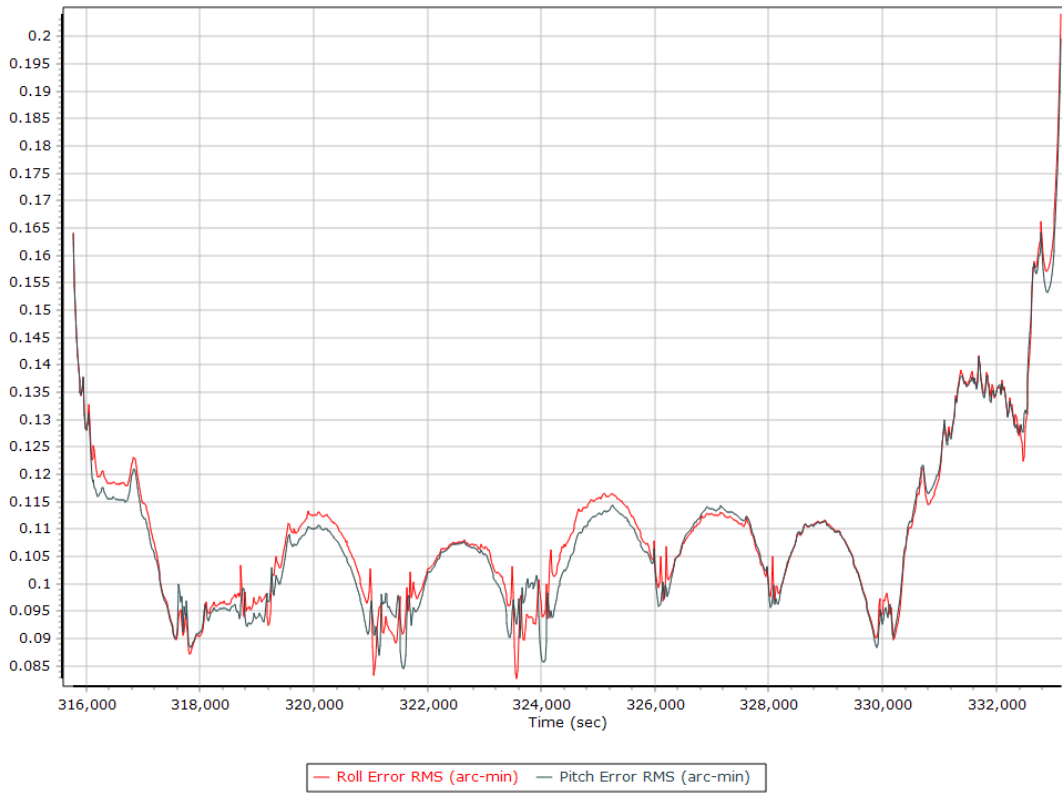
Position Error RMS (m)



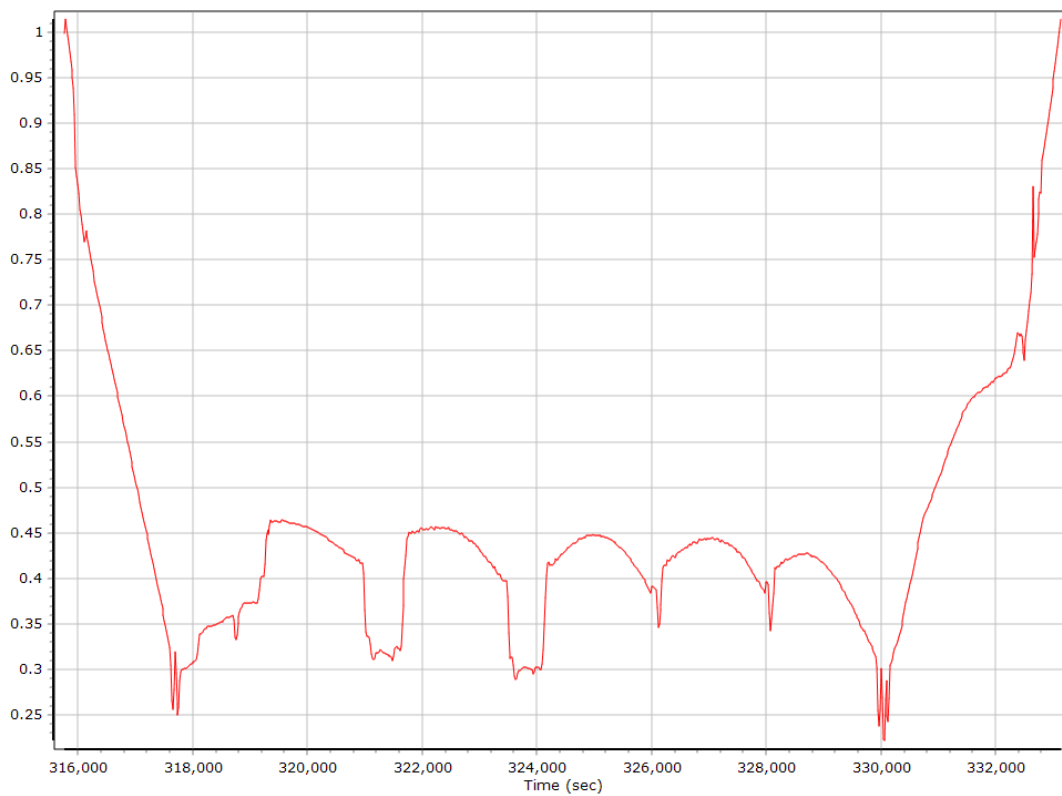
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

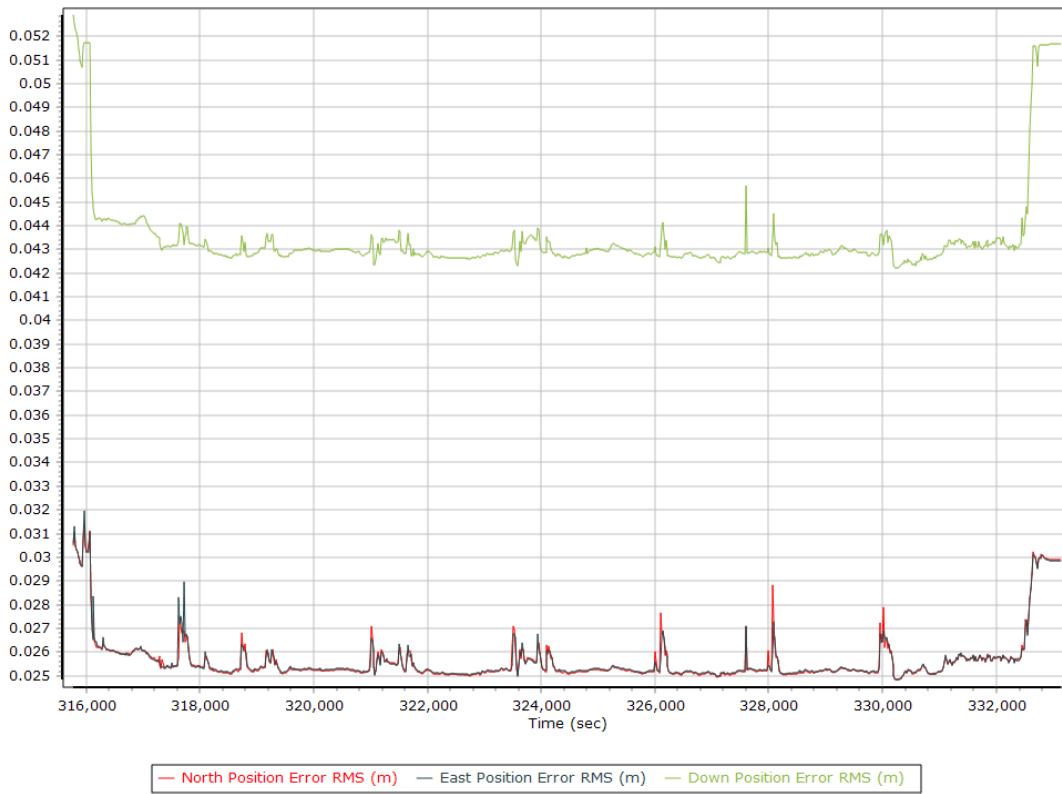


Heading Error RMS (arc-min)

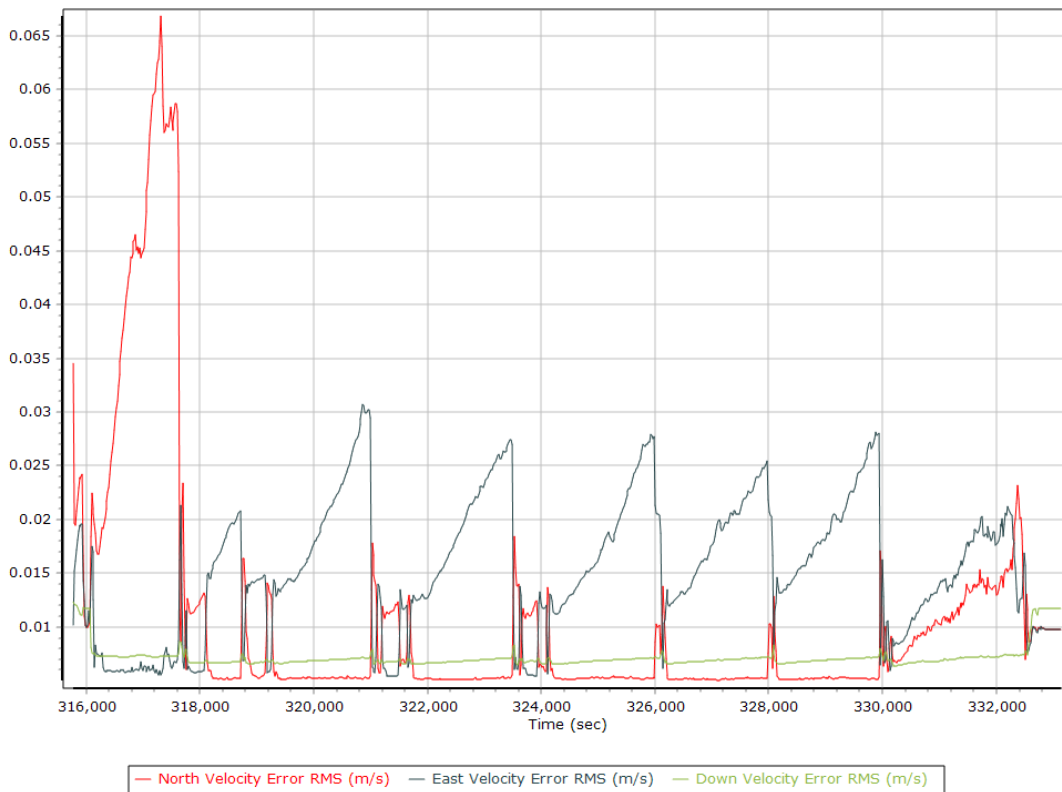


Forward Processed Performance Metrics

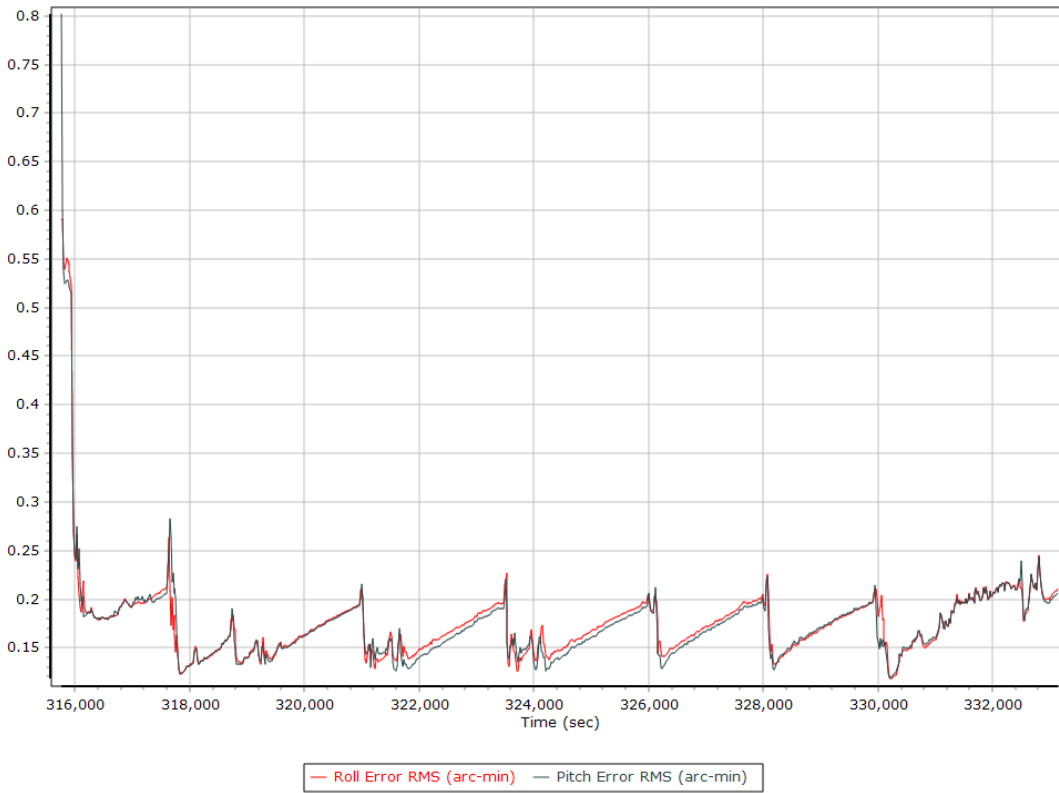
Position Error RMS (m)



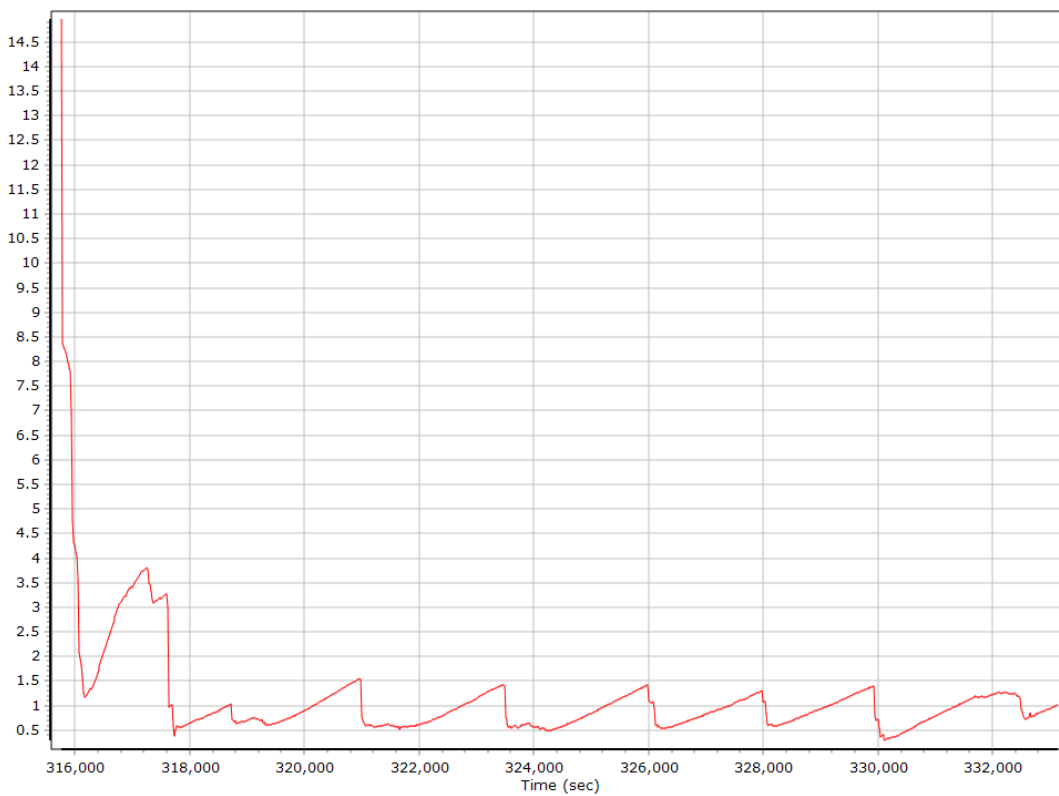
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

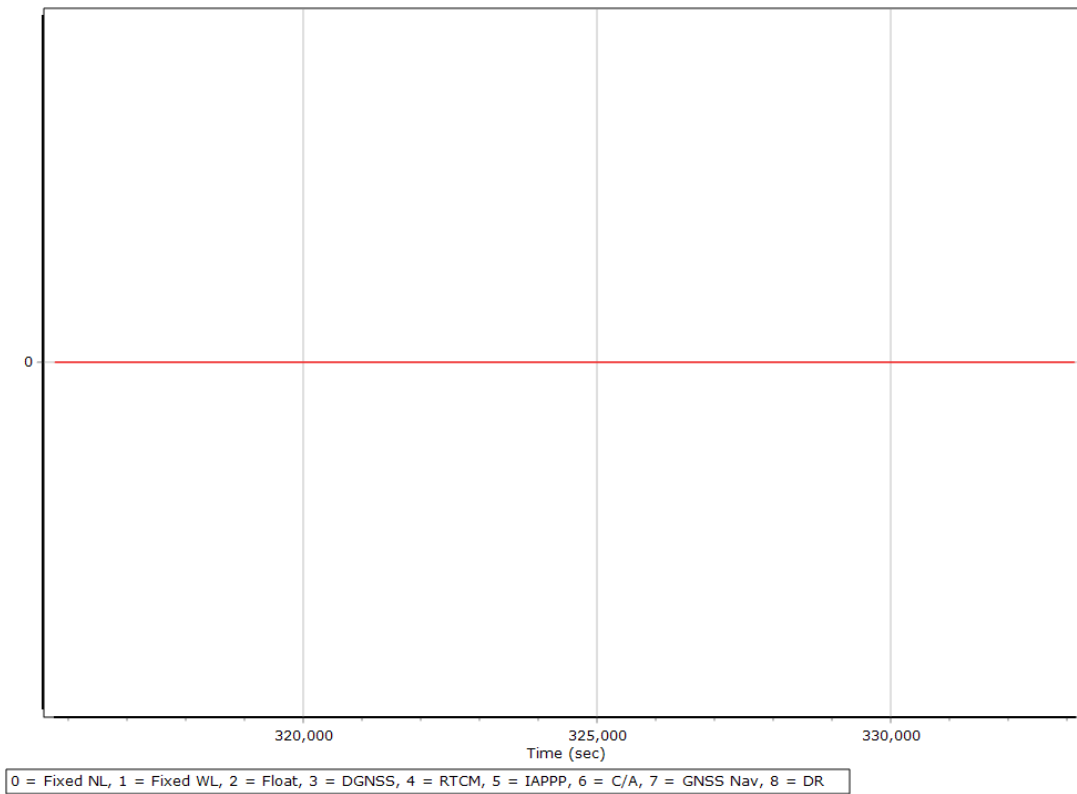


Heading Error RMS (arc-min)

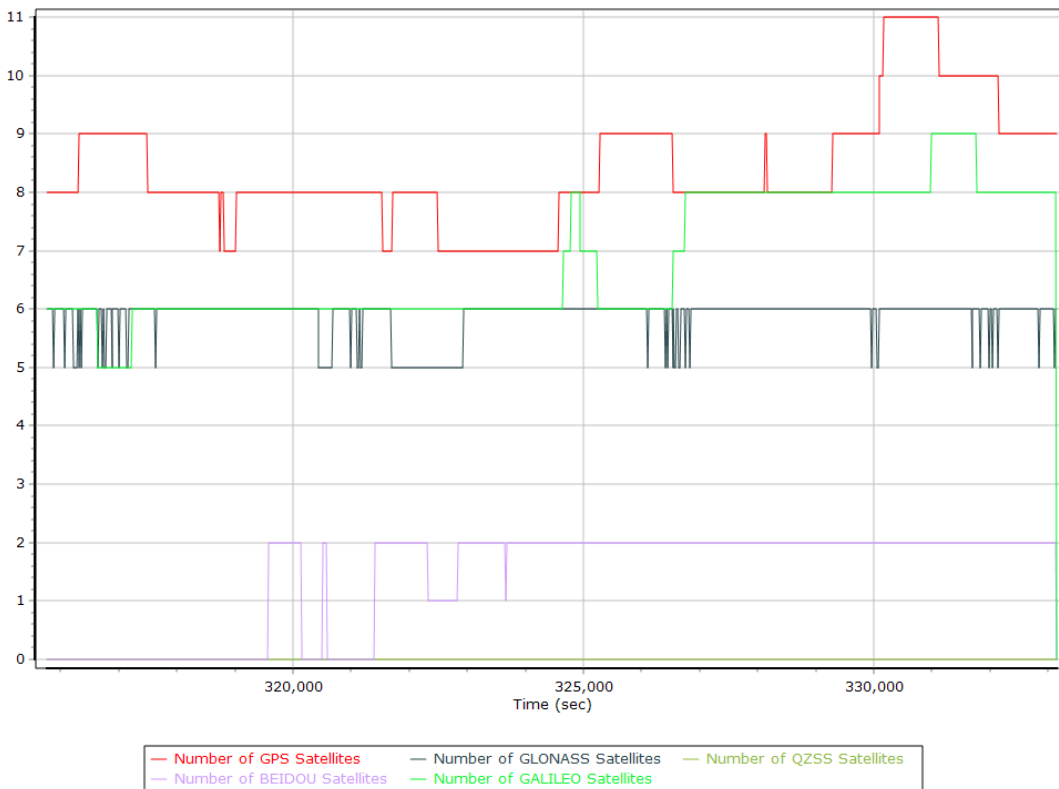


Forward Processed Solution Status

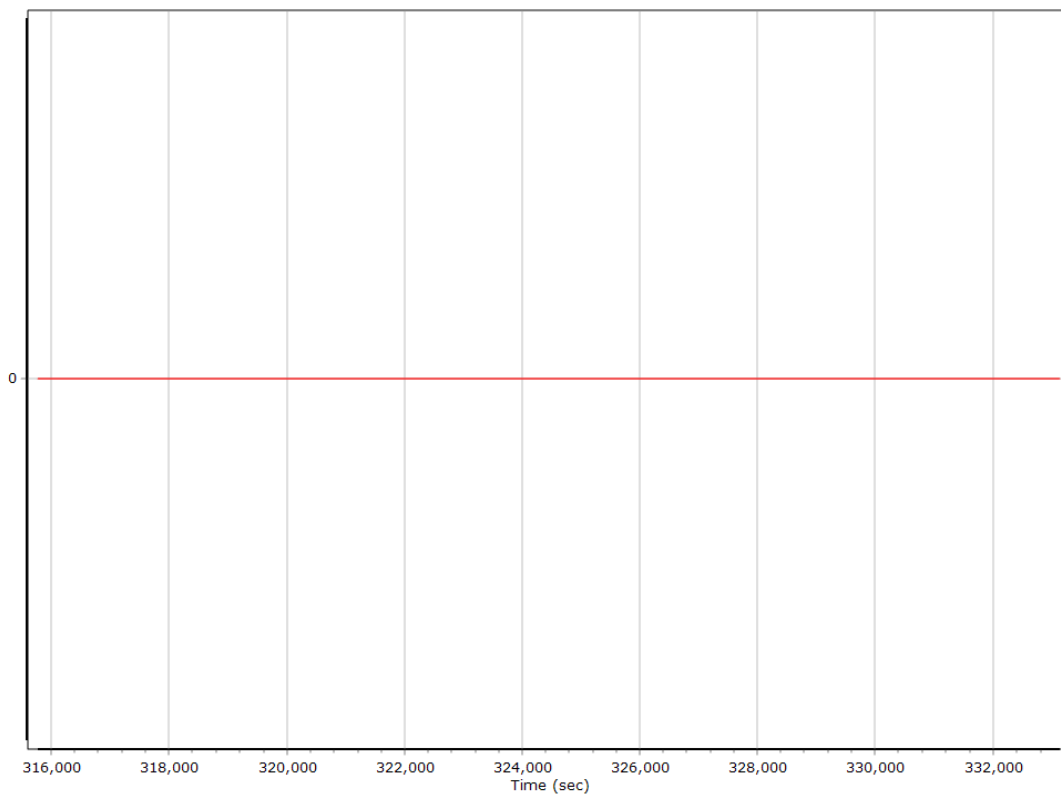
Processing Mode



Number of Satellites



Baseline Length



Export Summary Section 1

Export file	sbet_12075_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	Meter	
Export start time	315709.003 (03/03/2021 15:41:49)		
Export end time	333149.001 (03/03/2021 20:32:29)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid			
Zone			
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation			
Target Epoch	2010		

Export Summary Section 2

Export file	lever_arm_values.txt		
Export format	ReferenceToPrimaryLeverArms		
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	Meter	
Export start time	315709.003 (03/03/2021 15:41:49)		
Export end time	333149.001 (03/03/2021 20:32:29)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 14 (102W to 96W)		
Datum	WGS84		
Ellipsoid	WGS84		
Local Transformation	NONE		
Target Epoch	2010		

EO Summary Section 1

EO file			
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	315709.003 (03/03/2021 15:41:49)		
EO end time	333149.001 (03/03/2021 20:32:29)		
Grid	Universal Transverse Mercator		
Zone	UTM North 14 (102W to 96W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2010		