

General Information

Mission Information

Project name	220713_A_5060492_nad2011_FINAL
Processing date	2022-07-14 15:59:11
Mission date	2022-07-13 13:13:40
Mission duration	03:52:13.000
Processing mode	IN-Fusion PP-RTX

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N12686
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
220713a.195	POS Data
220713a.196	POS Data
220713a.197	POS Data
220713a.198	POS Data
220713a.199	POS Data
220713a.200	POS Data
220713a.201	POS Data
220713a.202	POS Data
220713a.203	POS Data
220713a.204	POS Data
220713a.205	POS Data
220713a.206	POS Data
220713a.207	POS Data
220713a.208	POS Data
220713a.209	POS Data
220713a.210	POS Data
220713a.211	POS Data
220713a.212	POS Data
220713a.213	POS Data
220713a.214	POS Data
220713a.215	POS Data
220713a.216	POS Data
220713a.217	POS Data
220713a.218	POS Data
220713a.219	POS Data
220713a.220	POS Data
220713a.221	POS Data
220713a.222	POS Data
220713a.223	POS Data
220713a.224	POS Data
220713a.225	POS Data

Input Files

File Name	File Type
Ephm1940.22g	GLONASS Broadcast Ephemeris
Ephm1940.22n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_220713_A_5060492_nad2011_FINAL.out	SBET Trajectory File
sbet_220713_A_5060492_nad2011_FINAL.shp	Shapefile Export Output

Rover Data Summary

First raw data file	220713a.195		
Last raw data file	220713a.225		
Start GPS week	2218		
Start time	13.246 (07/10/2022 00:00:13)		
End time	320753.682 (07/13/2022 17:05:53)		
Start of fine alignment	307176.432 (07/13/2022 13:19:36)		
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	180.000
Reference to Primary GNSS lever arm (m)	0.361	-0.429	-0.945
Reference to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

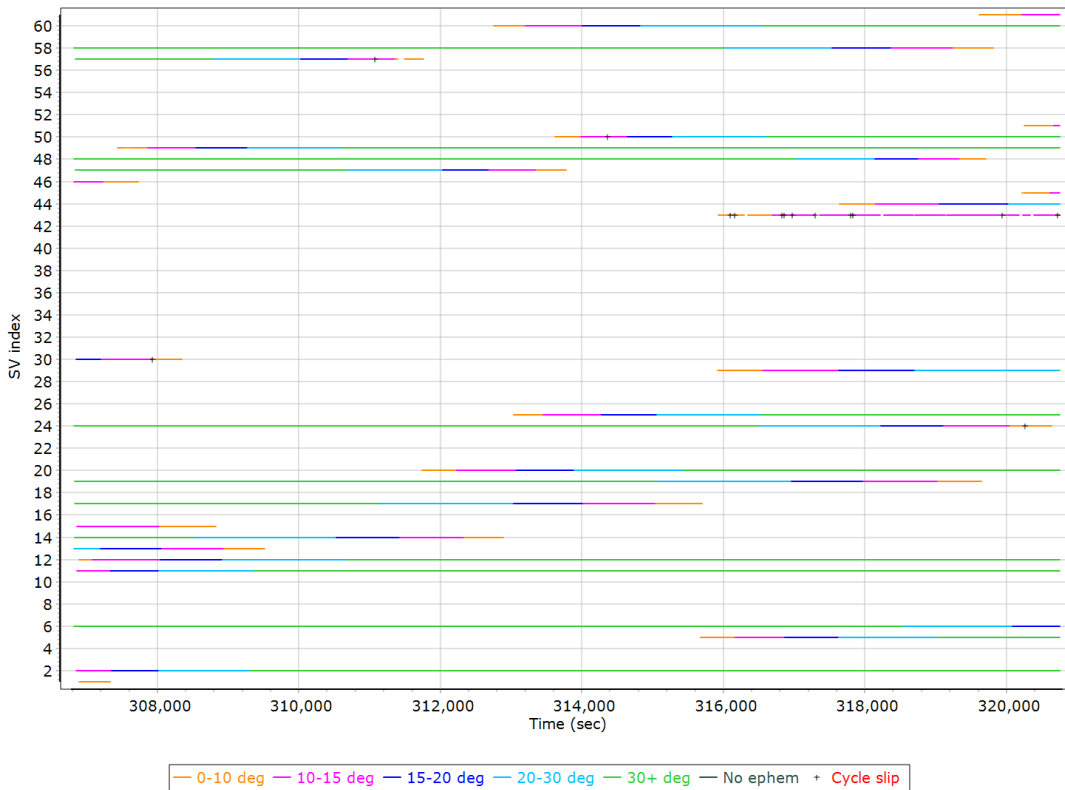
Rover Data QC

Raw IMU Import QC Summary

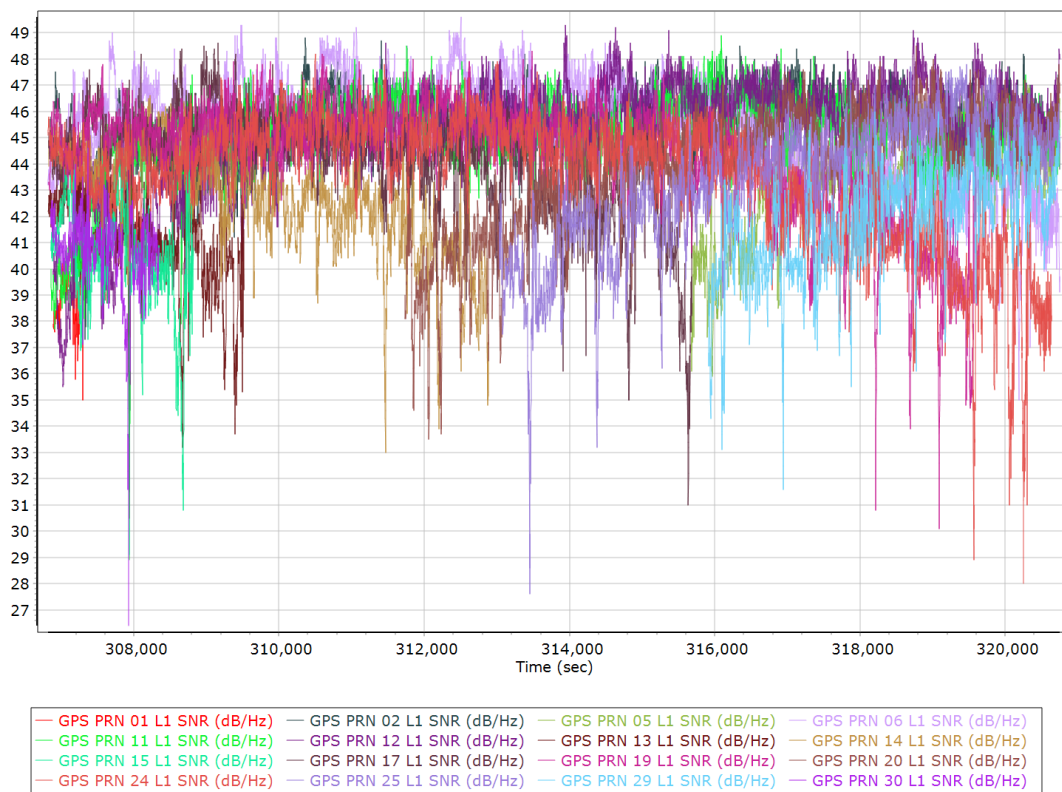
IMU data input file	imu_220713_A_5060492_nad2011_FINAL.dat
IMU data check log file	imudt_220713_A_5060492_nad2011_FINAL.log
IMU Records Processed	2786254
Termination Status	Warnings
IMU Anomalies	1
IMU Failure Messages	
306821.357 : WARNING : Gap of 306807.3652 seconds in CHECKDT input data	

Primary Observables & Satellite Data

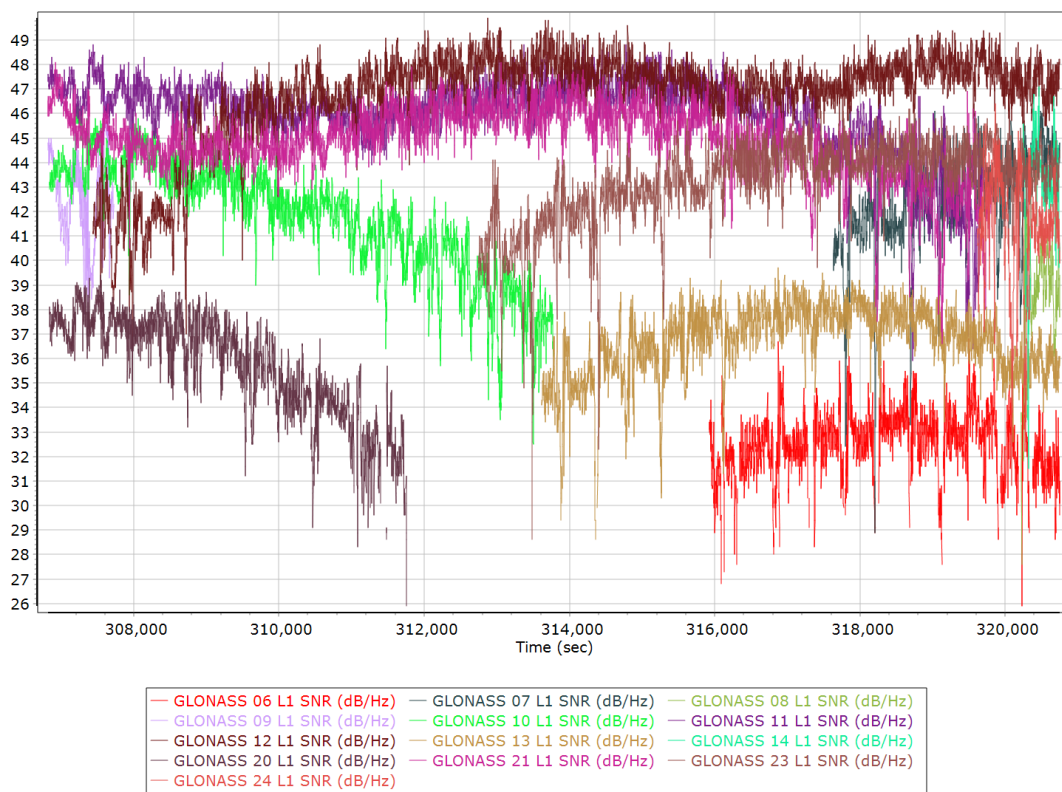
GPS/GLONASS L1 Satellite Lock/Elevation



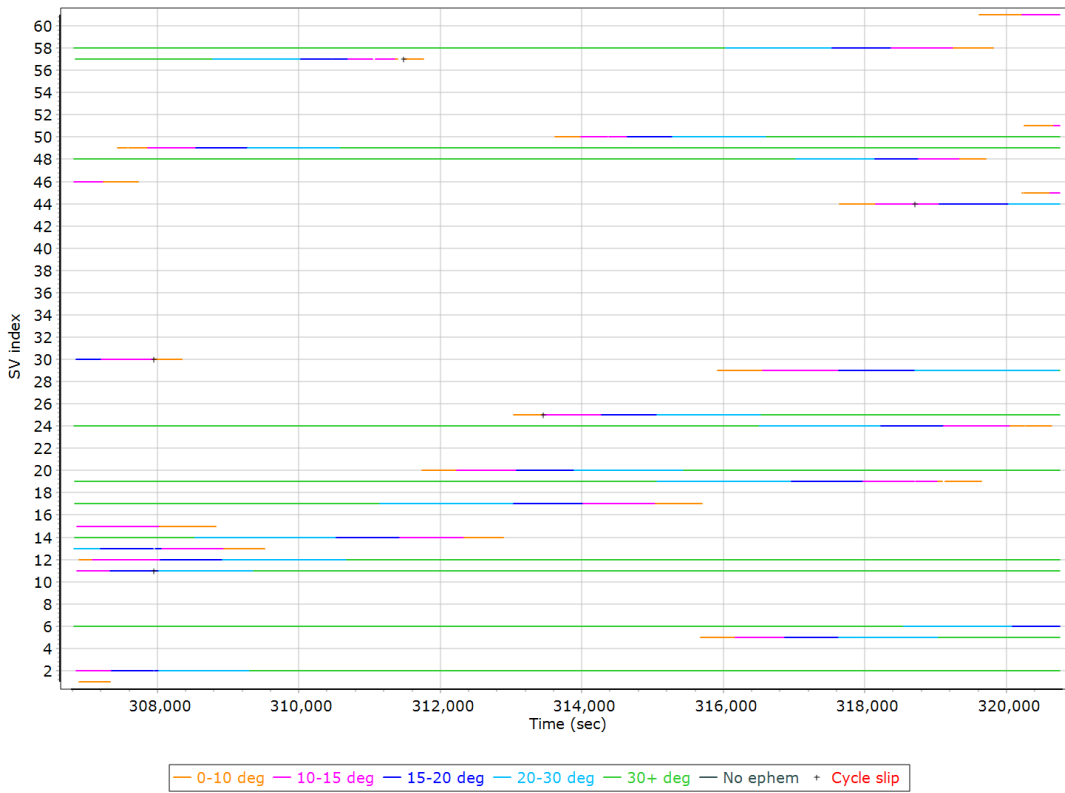
GPS L1 SNR



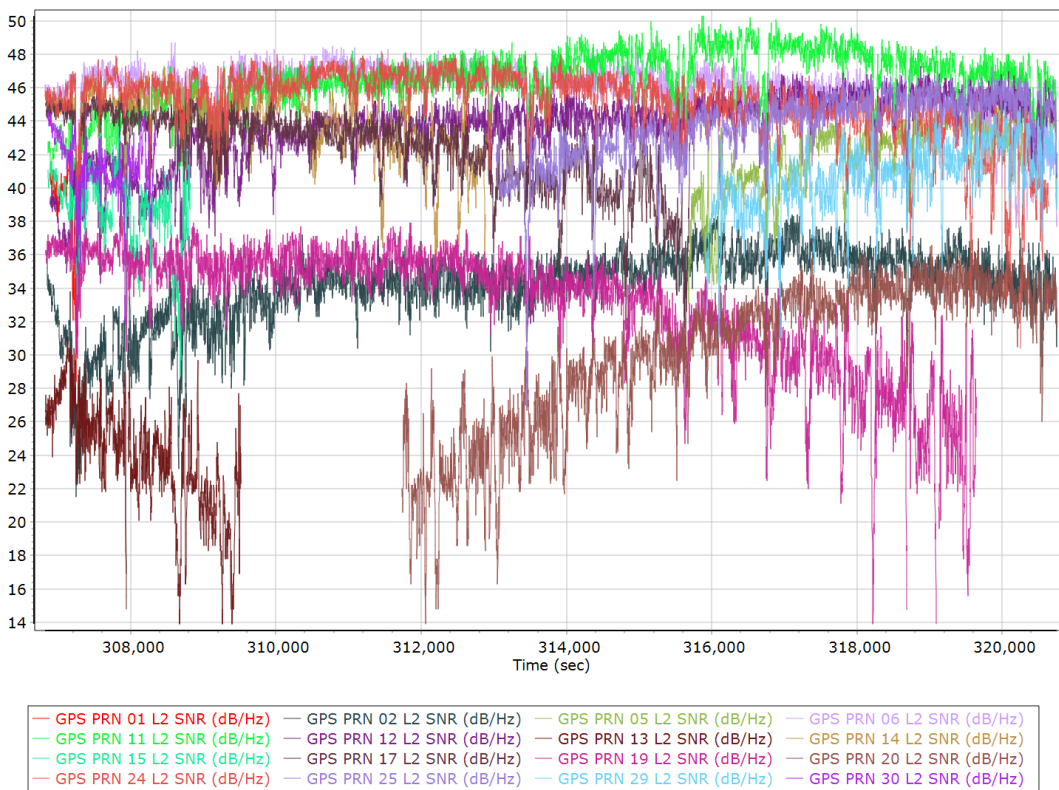
GLONASS L1 SNR



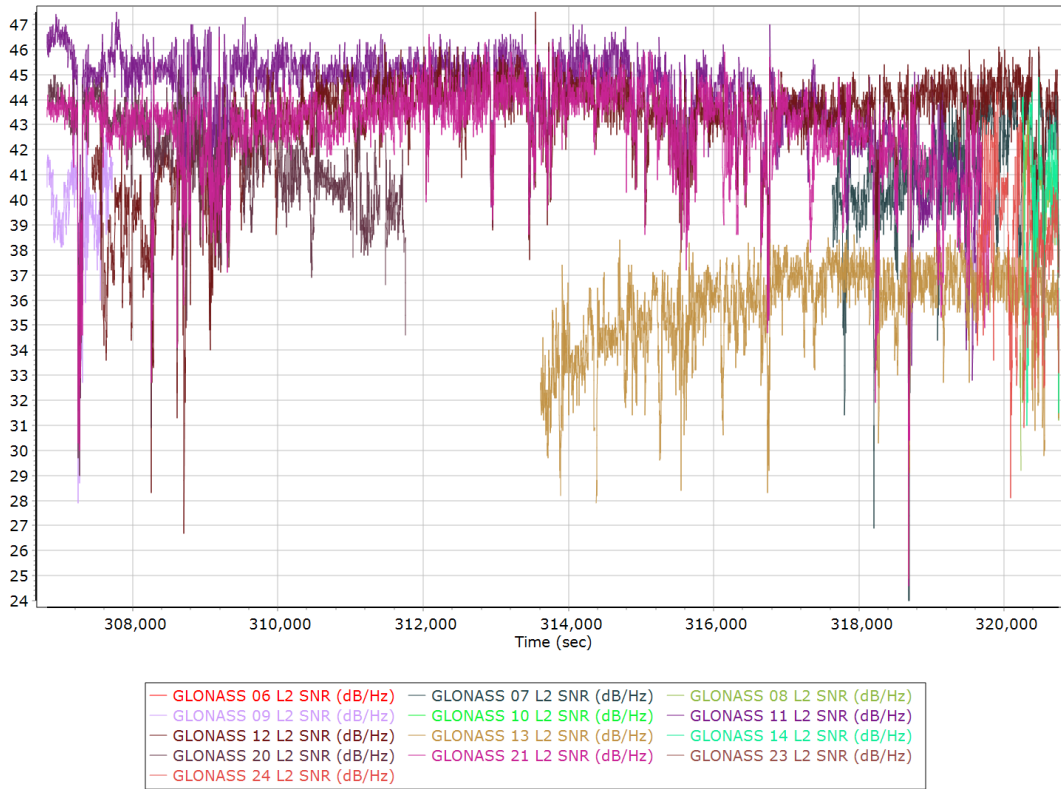
GPS/GLONASS L2 Satellite Lock/Elevation



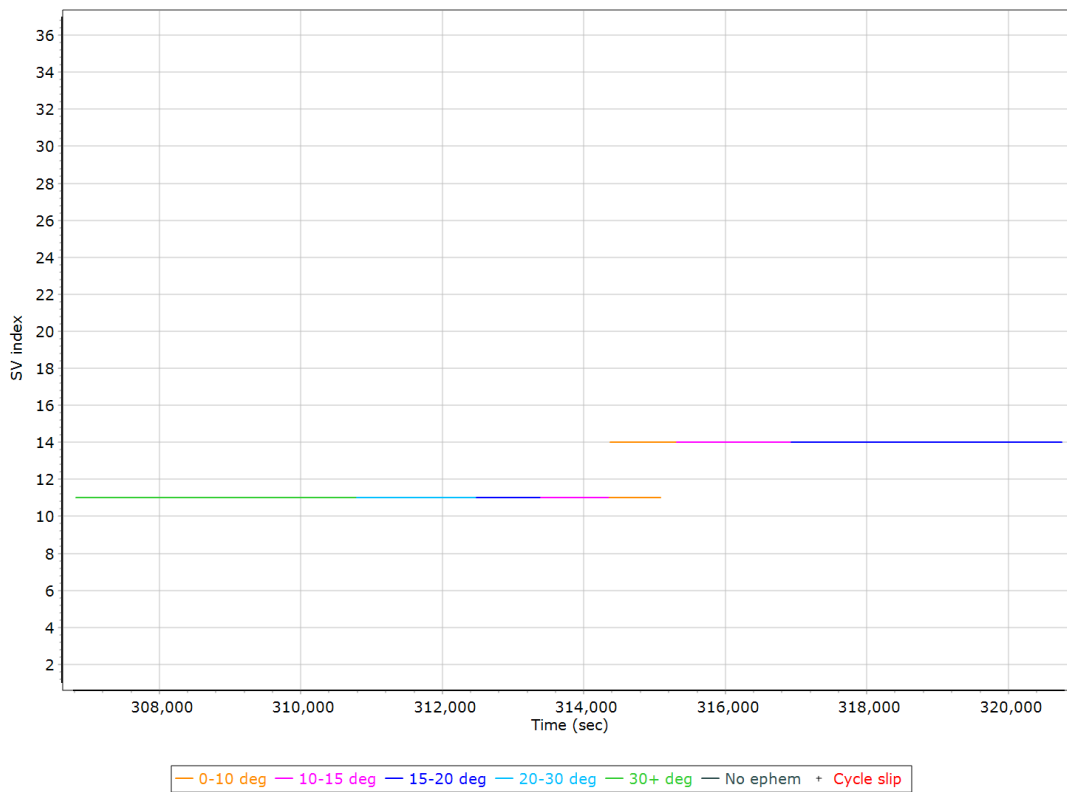
GPS L2 SNR



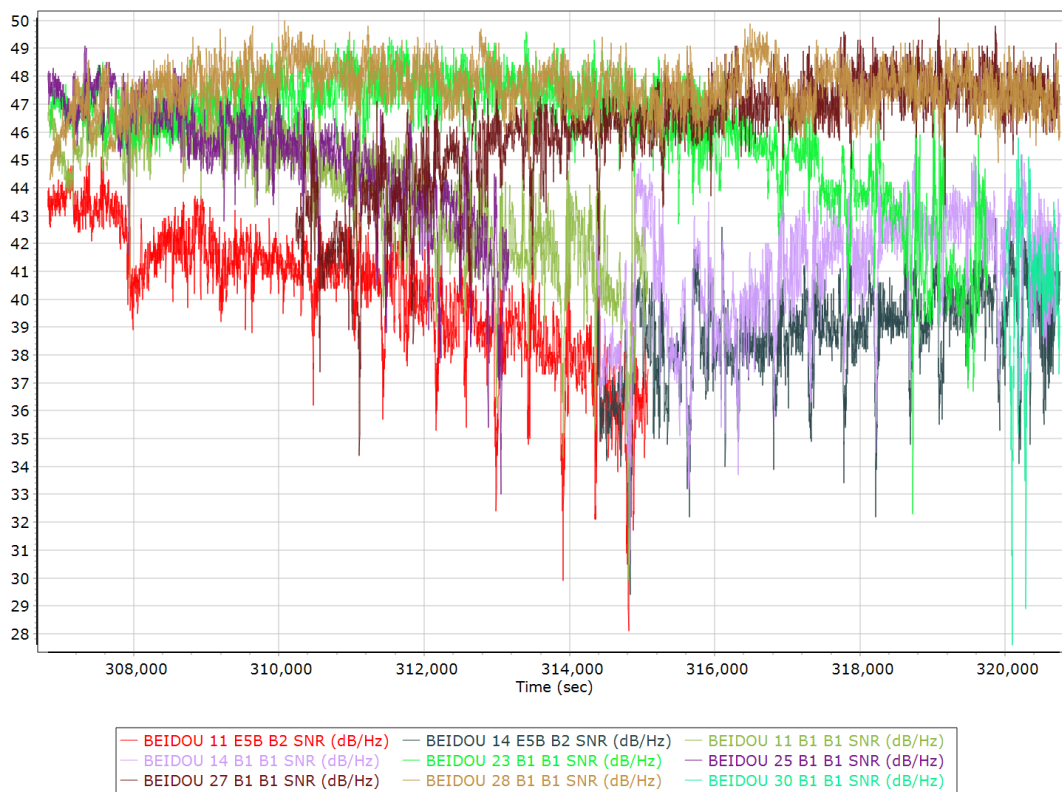
GLONASS L2 SNR



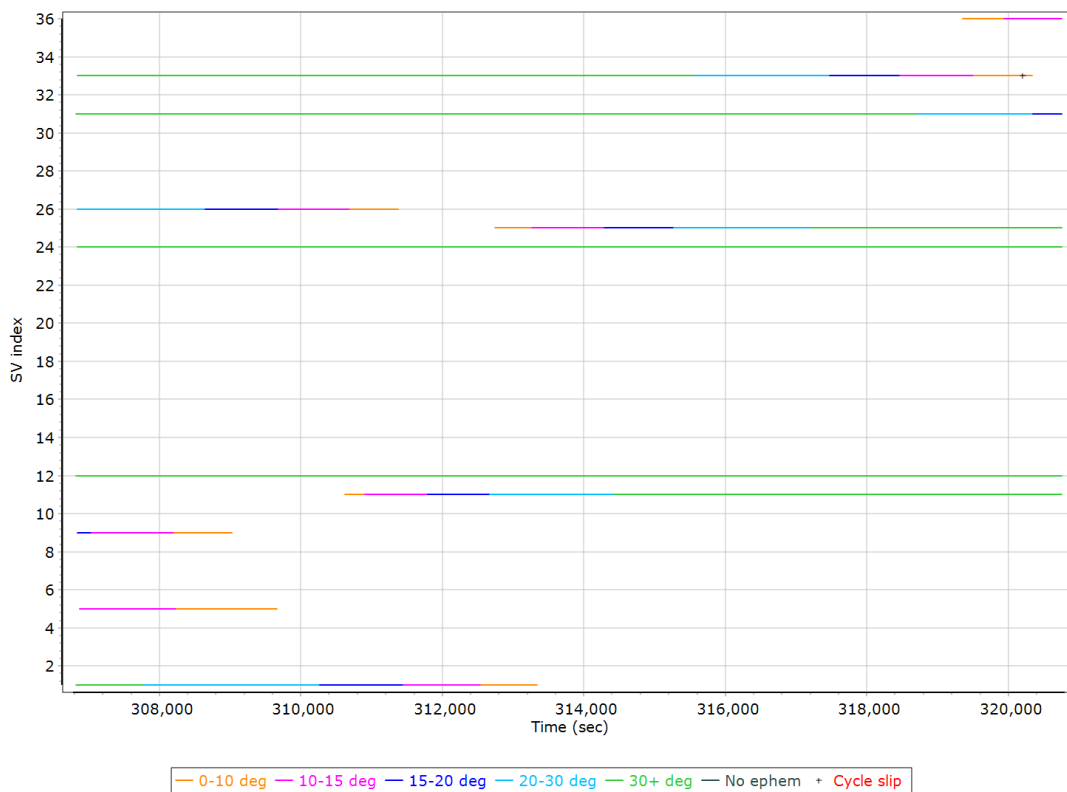
BEIDOU Satellite Lock/Elevation



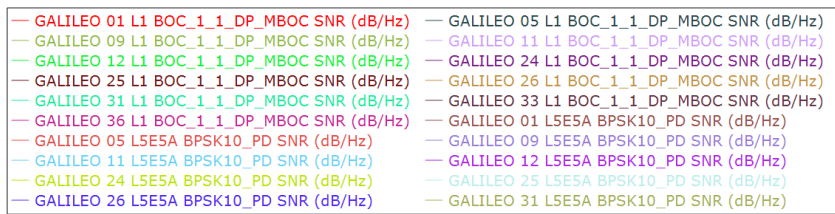
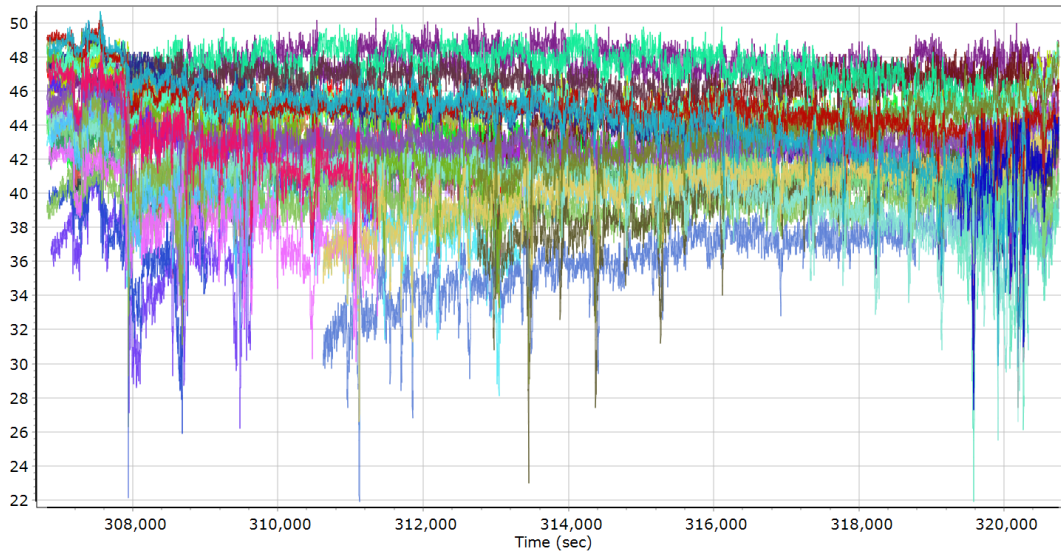
BEIDOU SNR



GALILEO Satellite Lock/Elevation

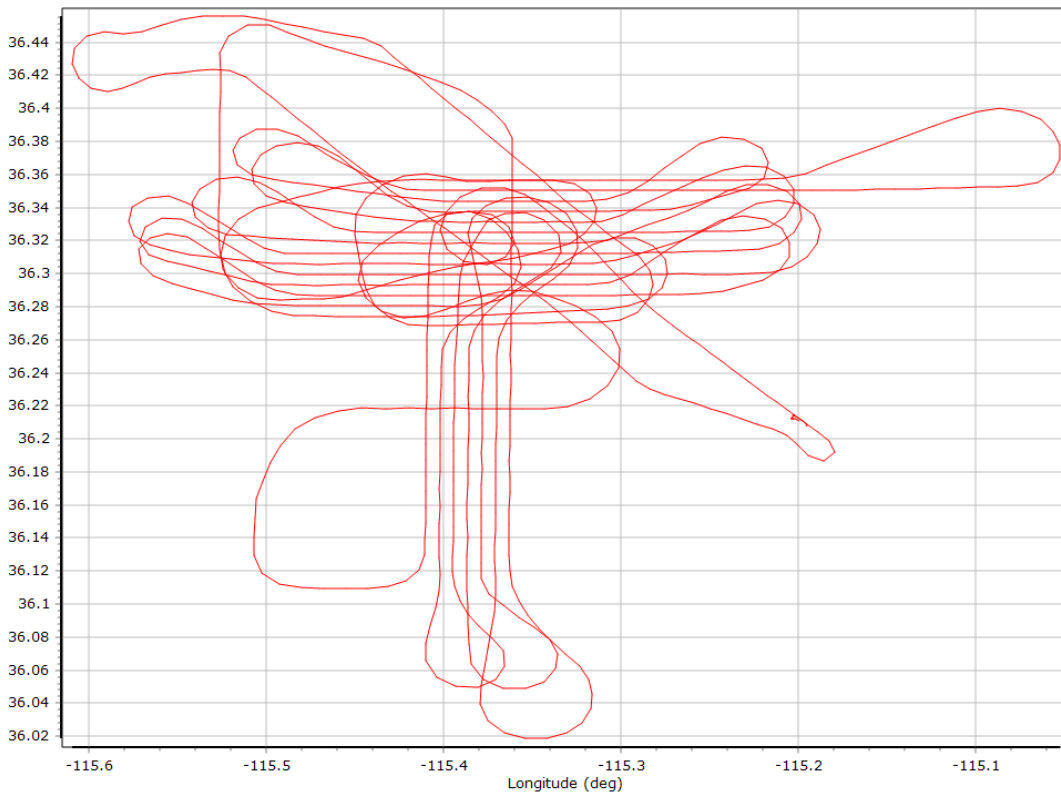


GALILEO SNR

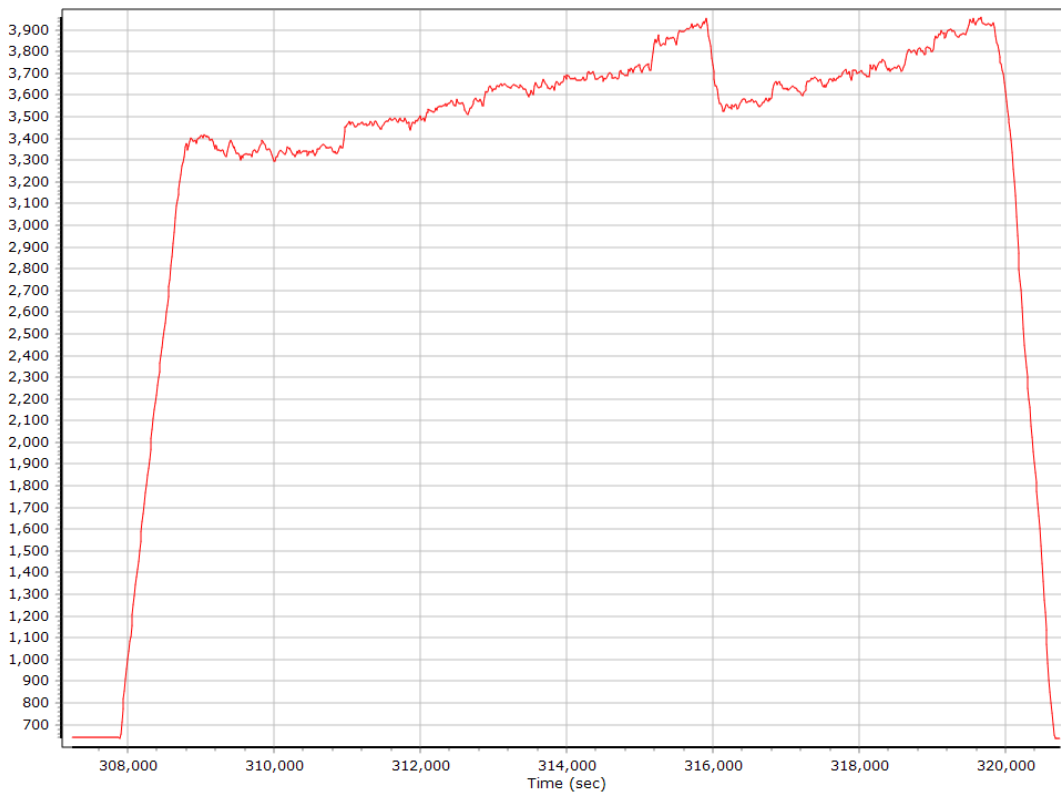


Smoothed Trajectory Information

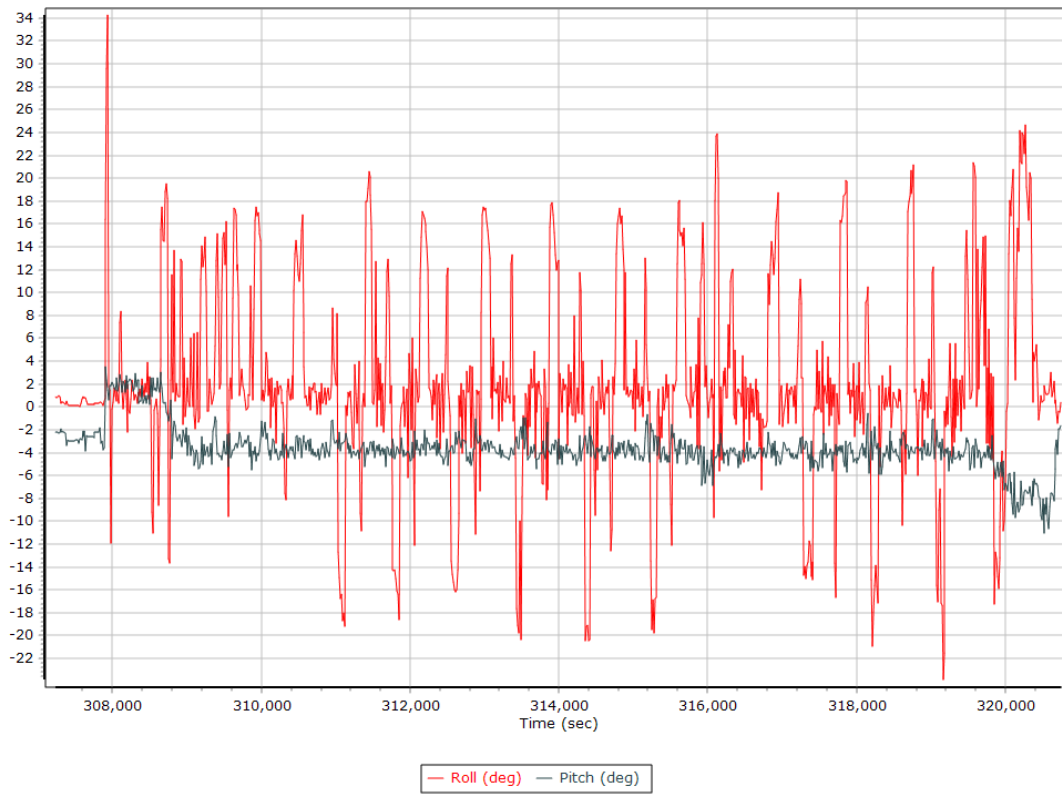
Top View



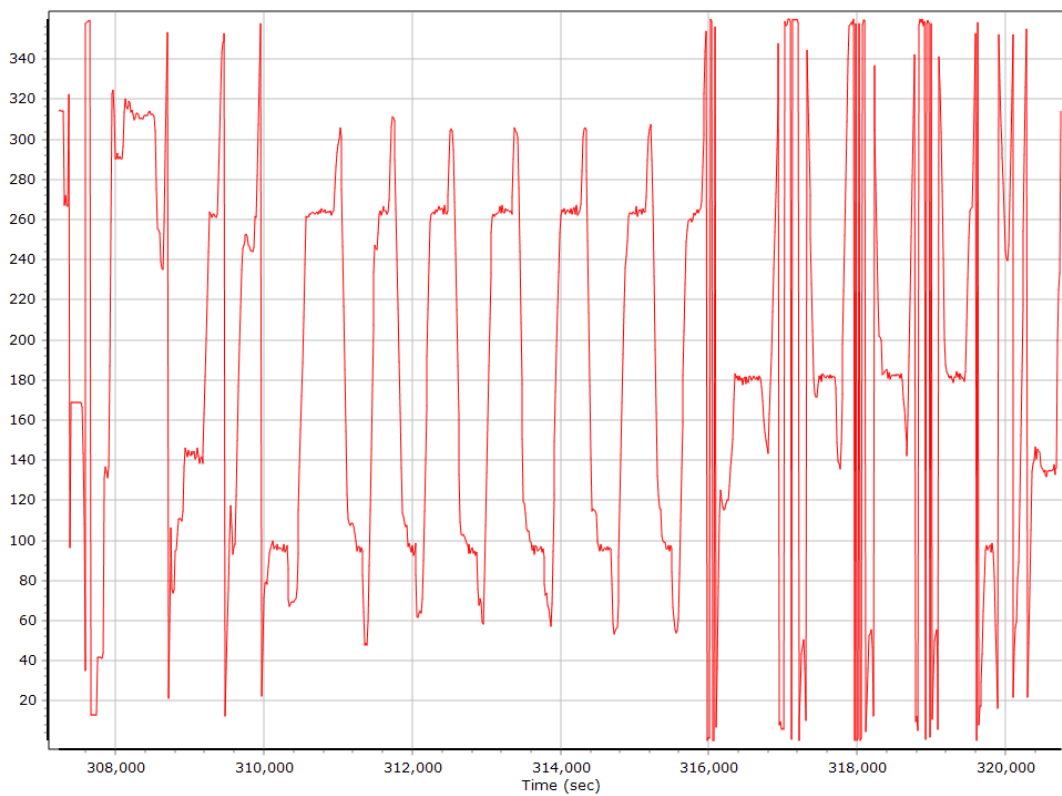
Altitude



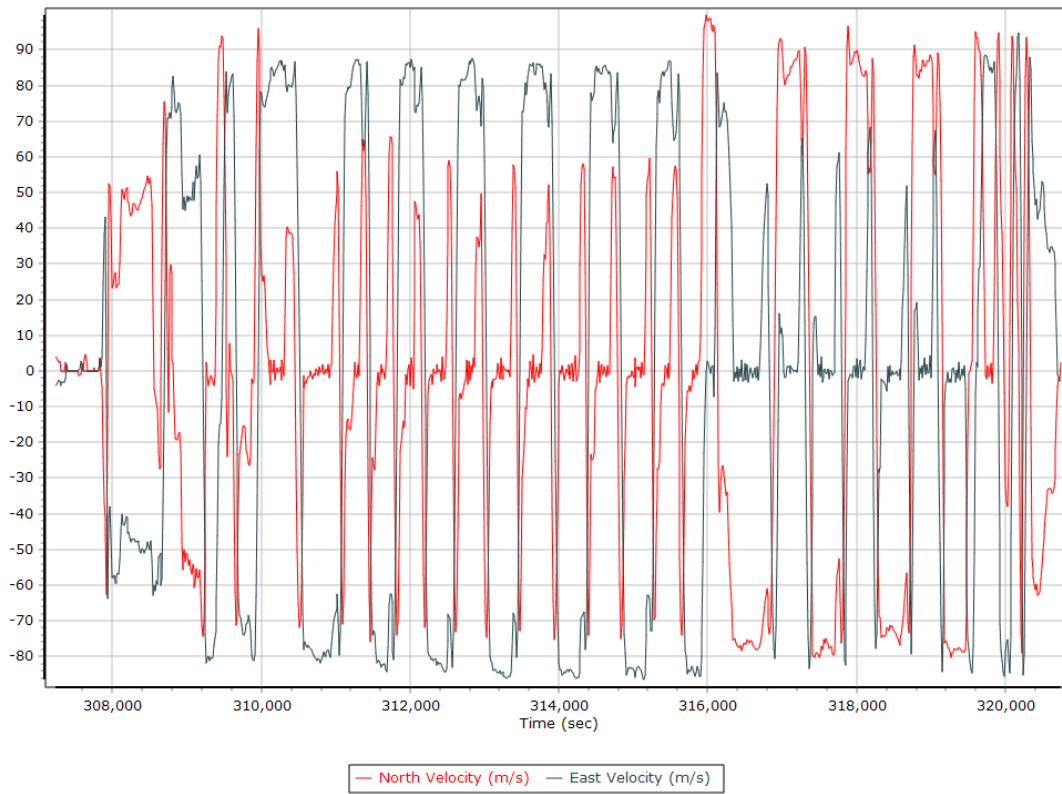
Roll/Pitch



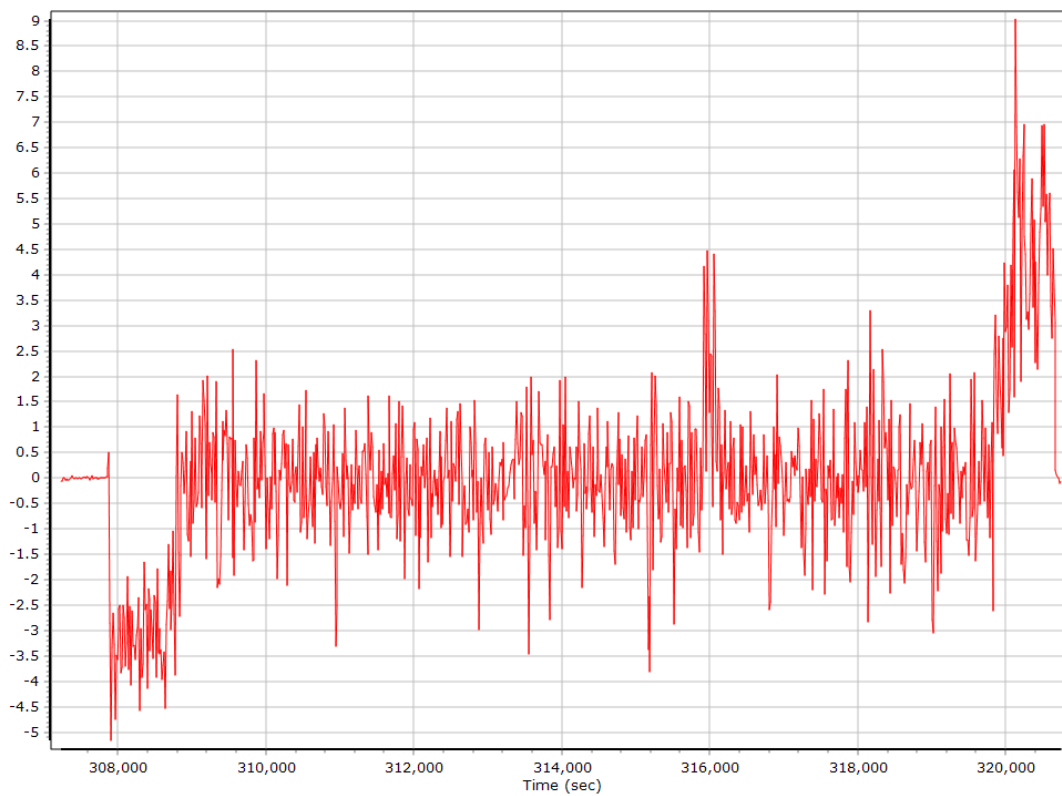
Heading



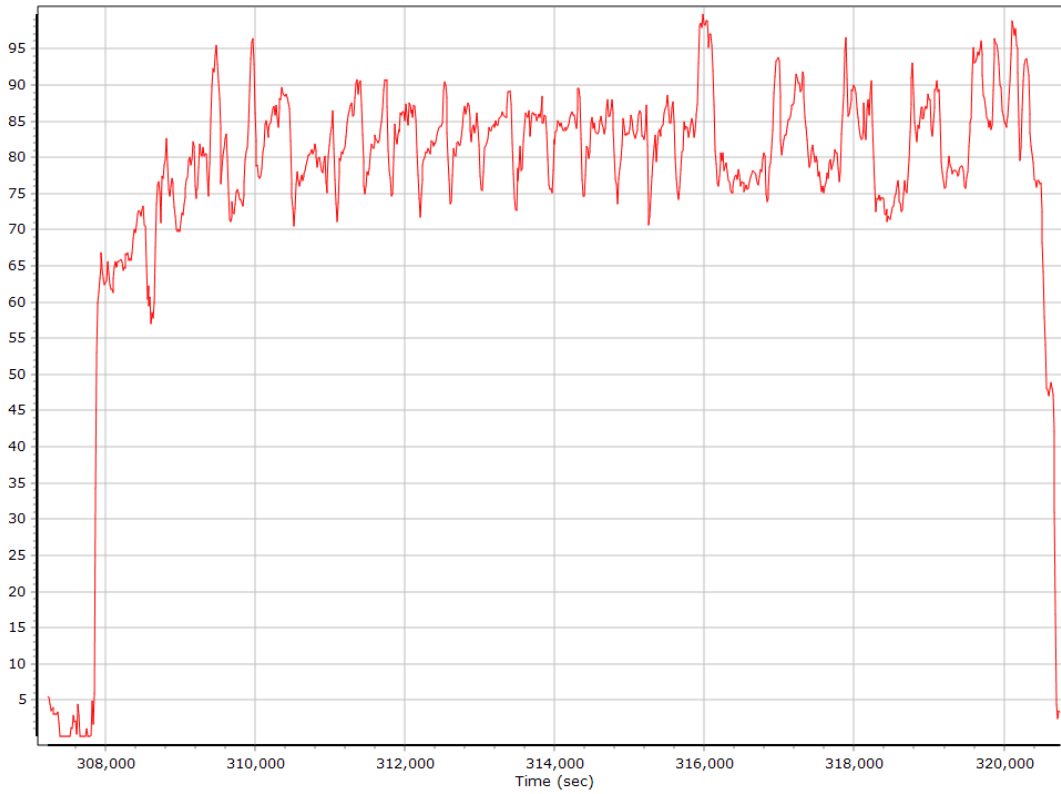
North/East Velocity



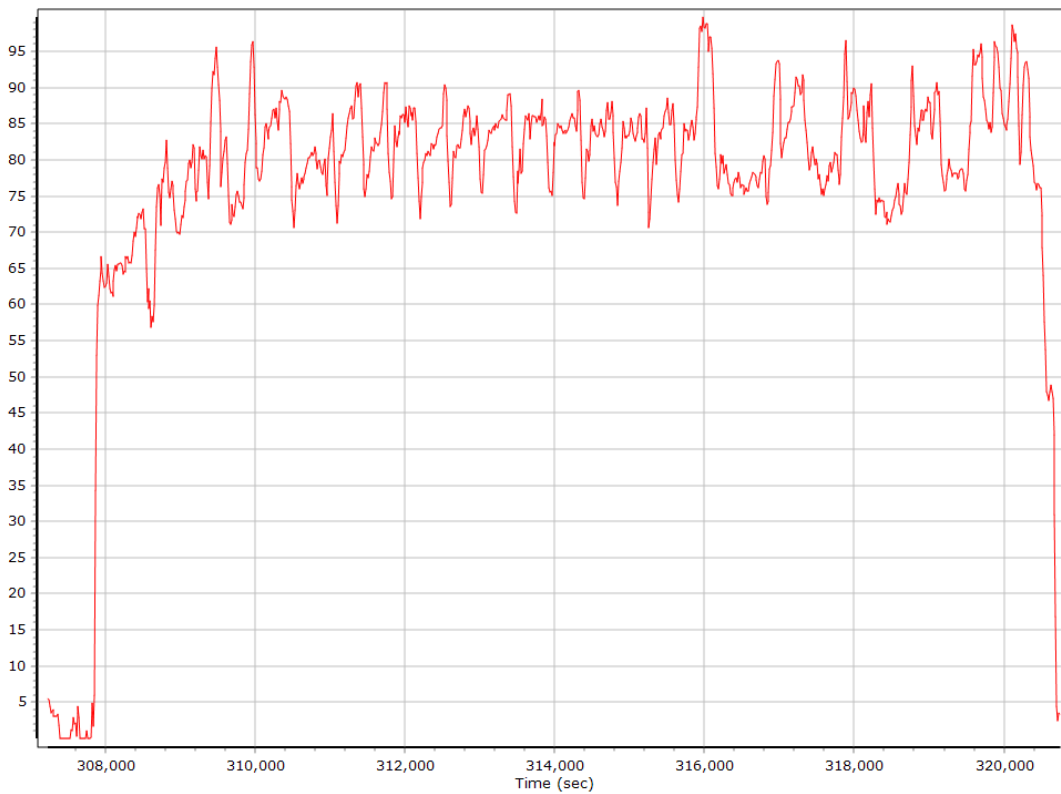
Down Velocity



Total Speed



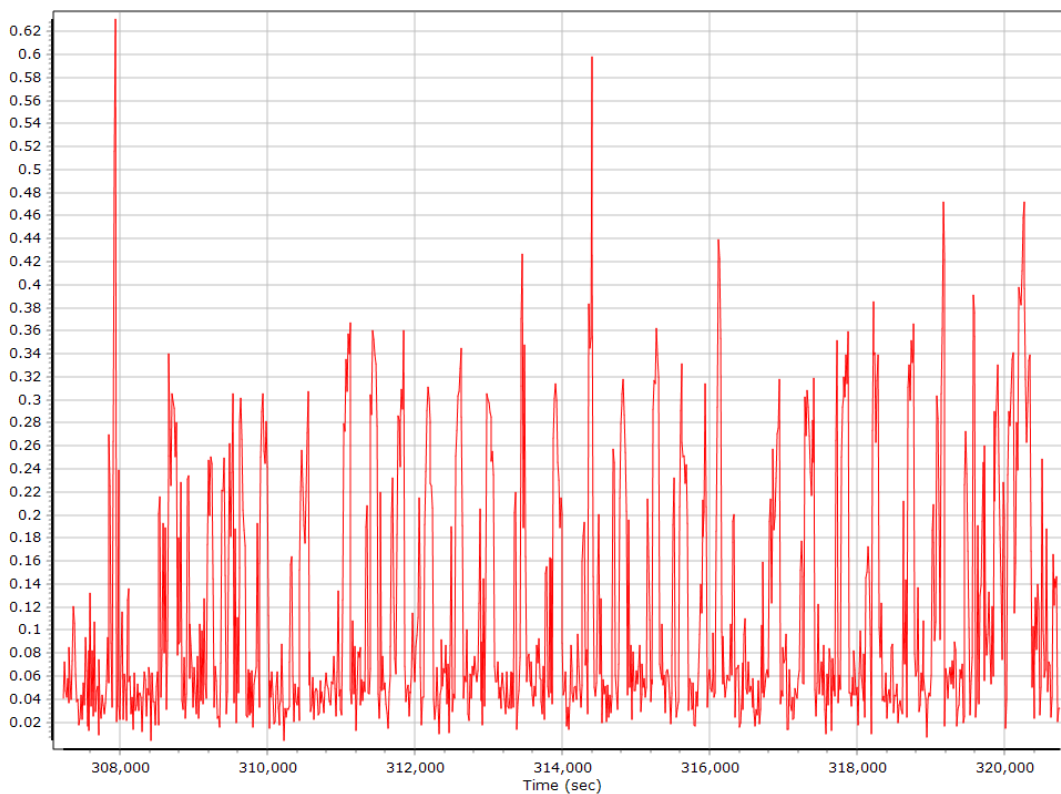
Ground Speed



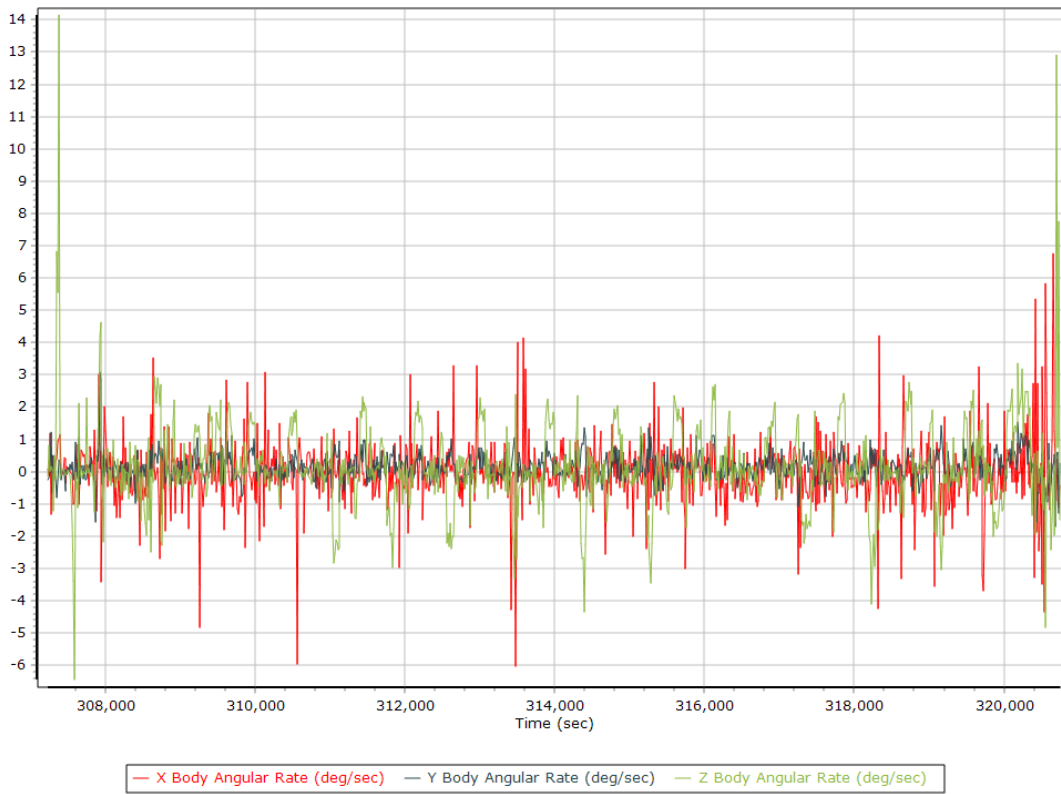
Body Acceleration



Total Body Acceleration

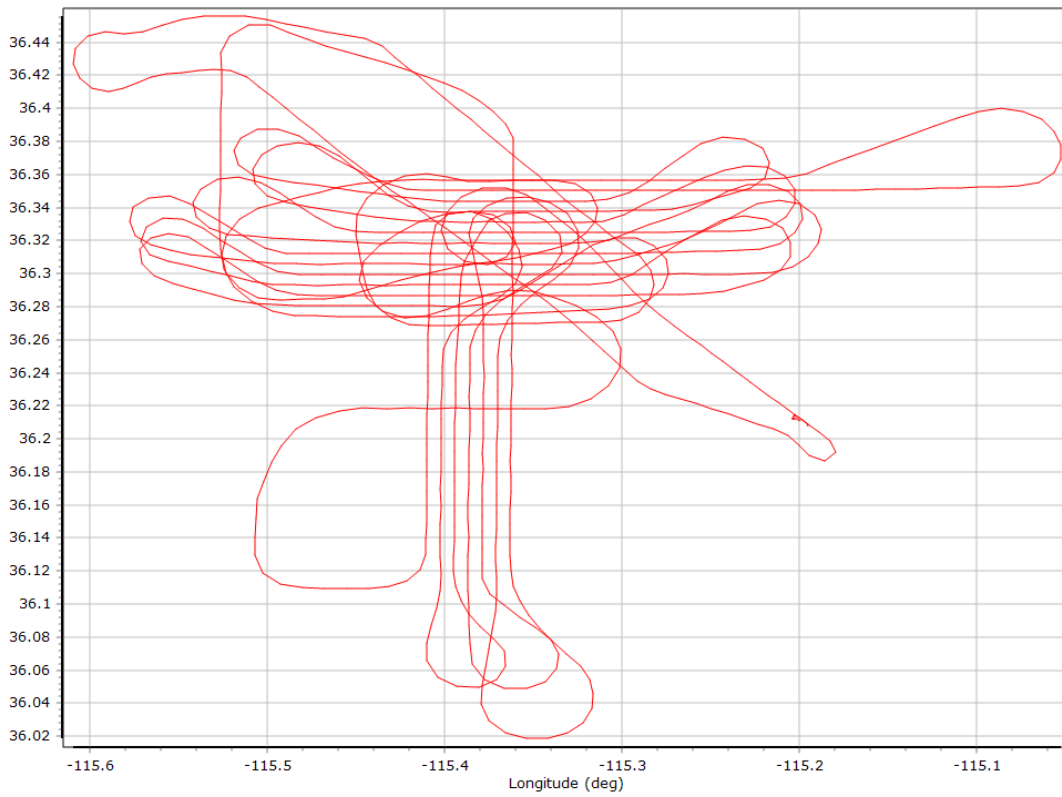


Body Angular Rate

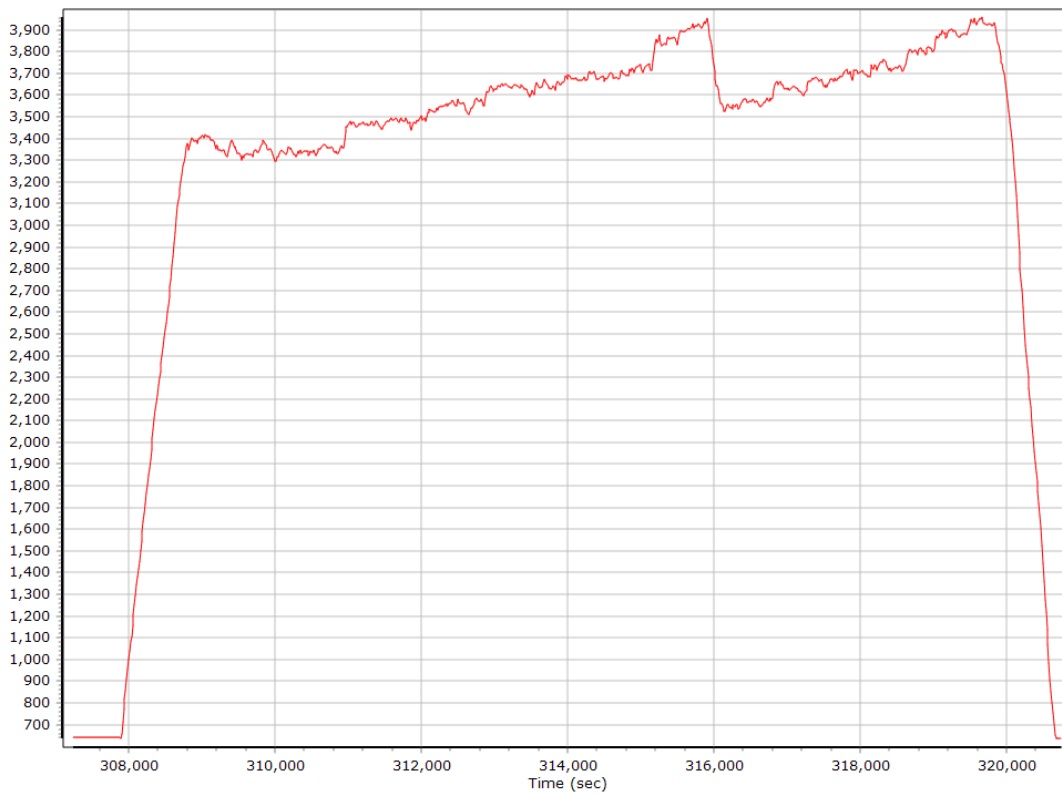


Forward Processed Trajectory Information

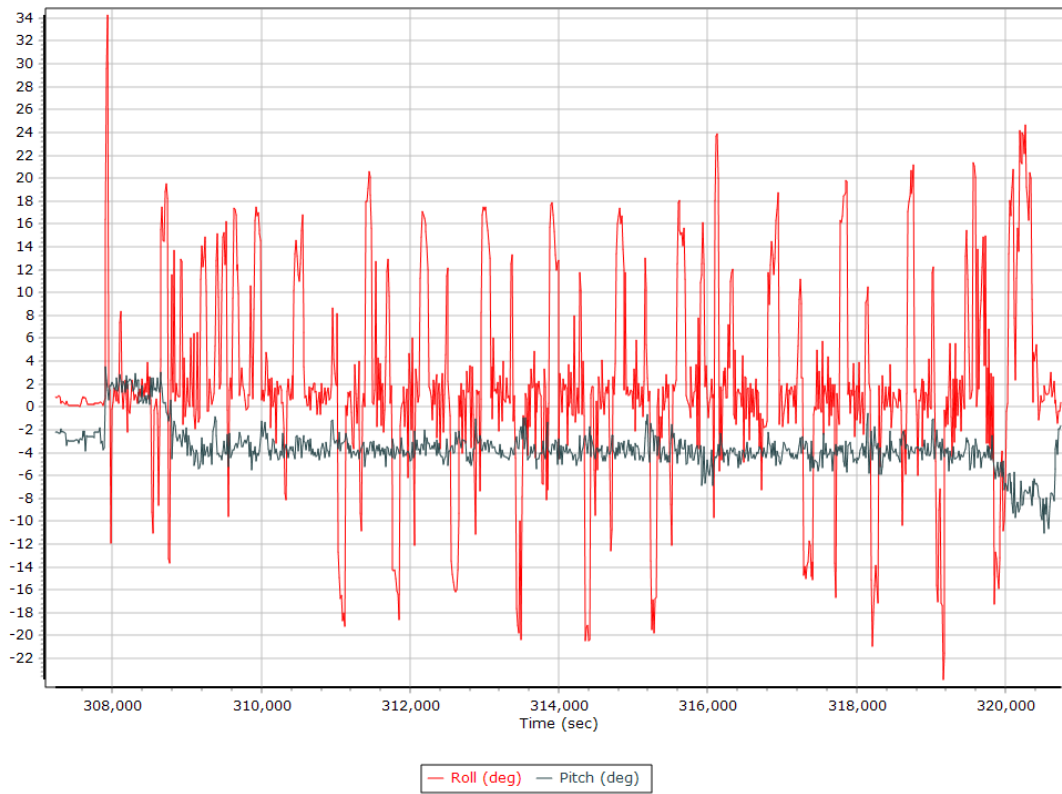
Top View



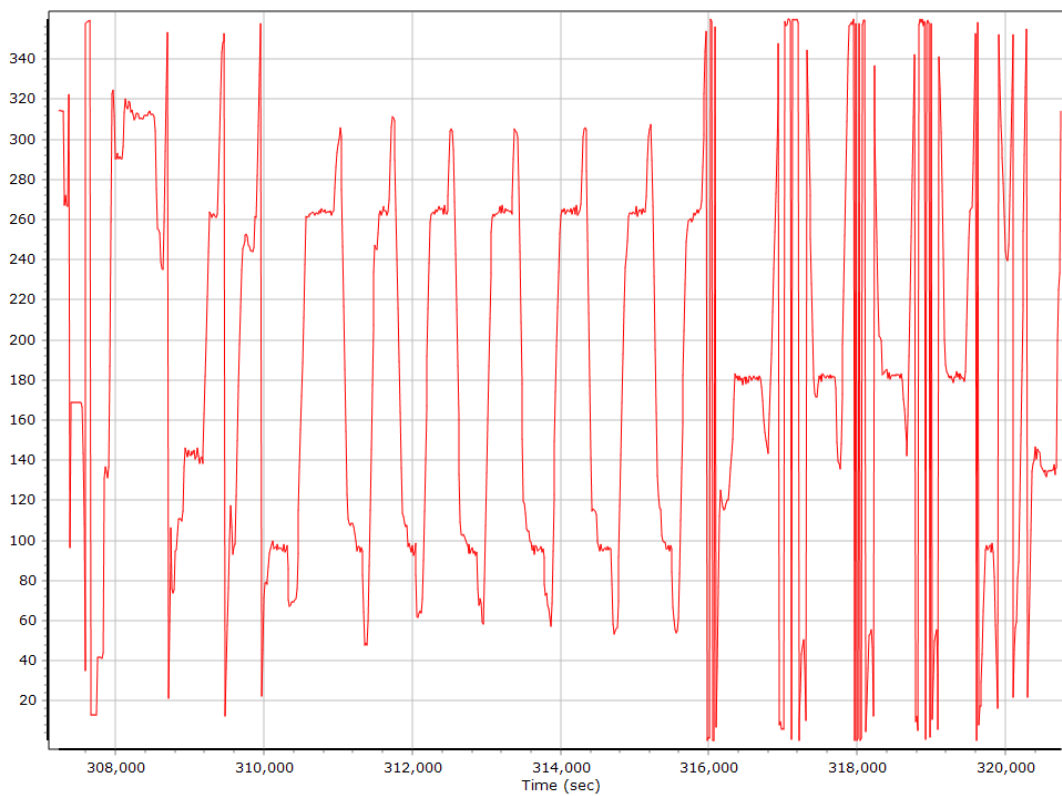
Altitude



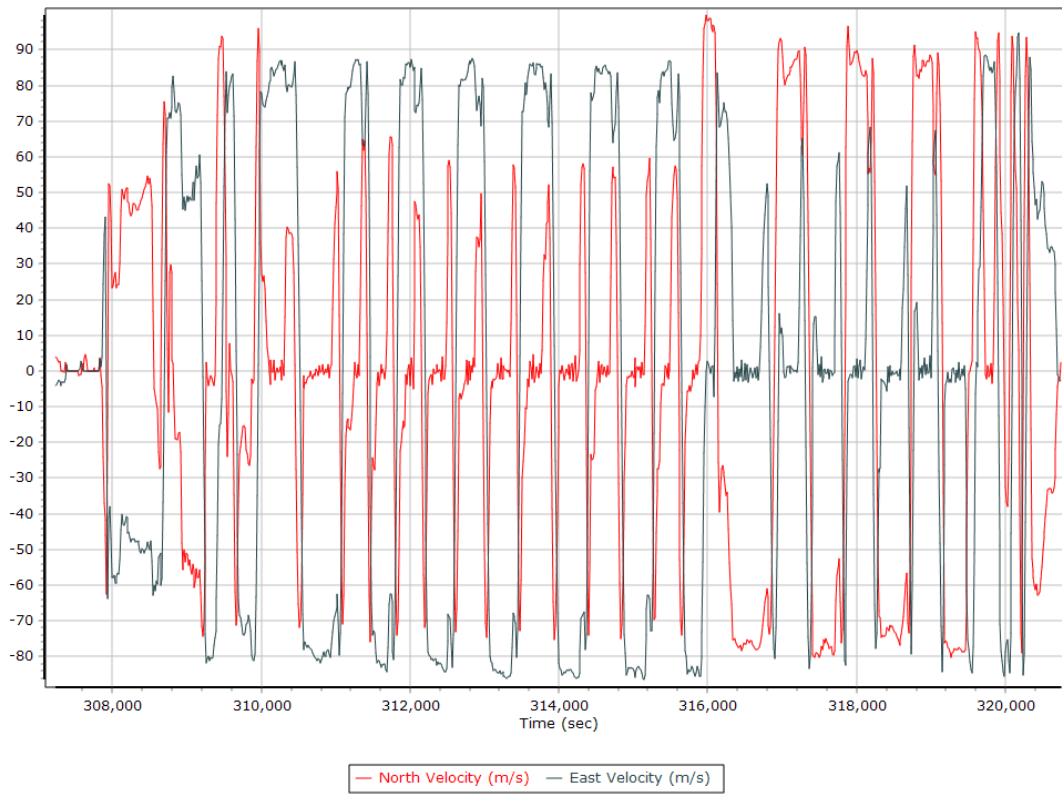
Roll/Pitch



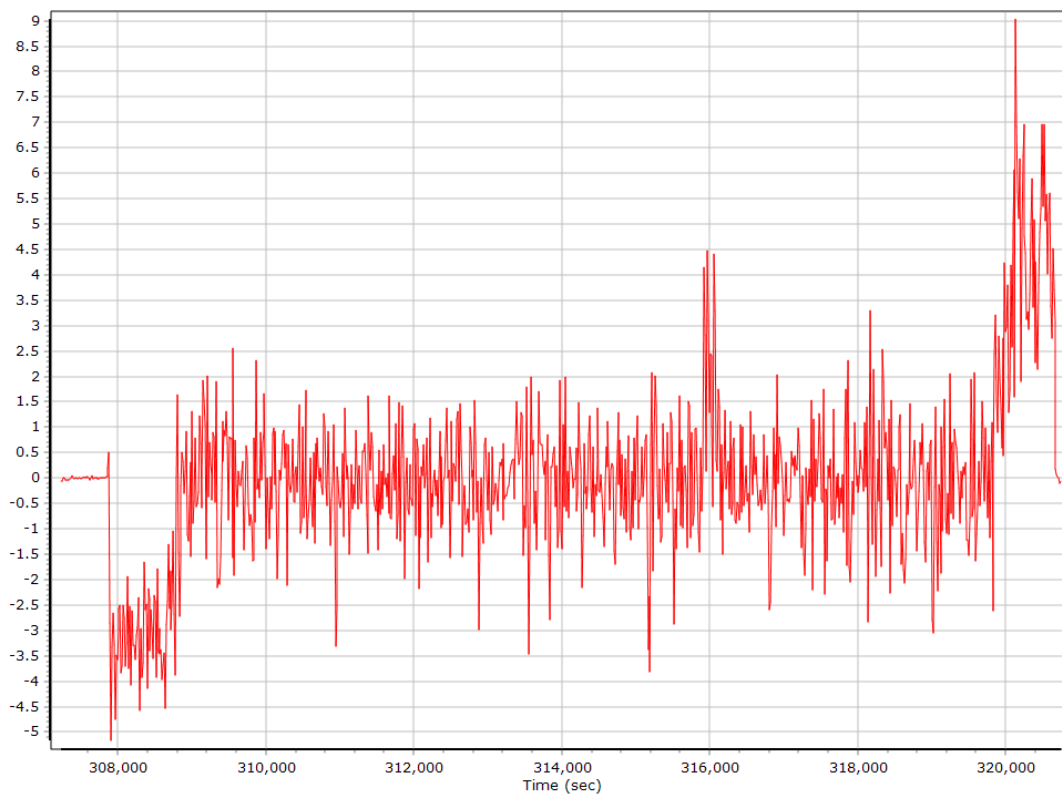
Heading



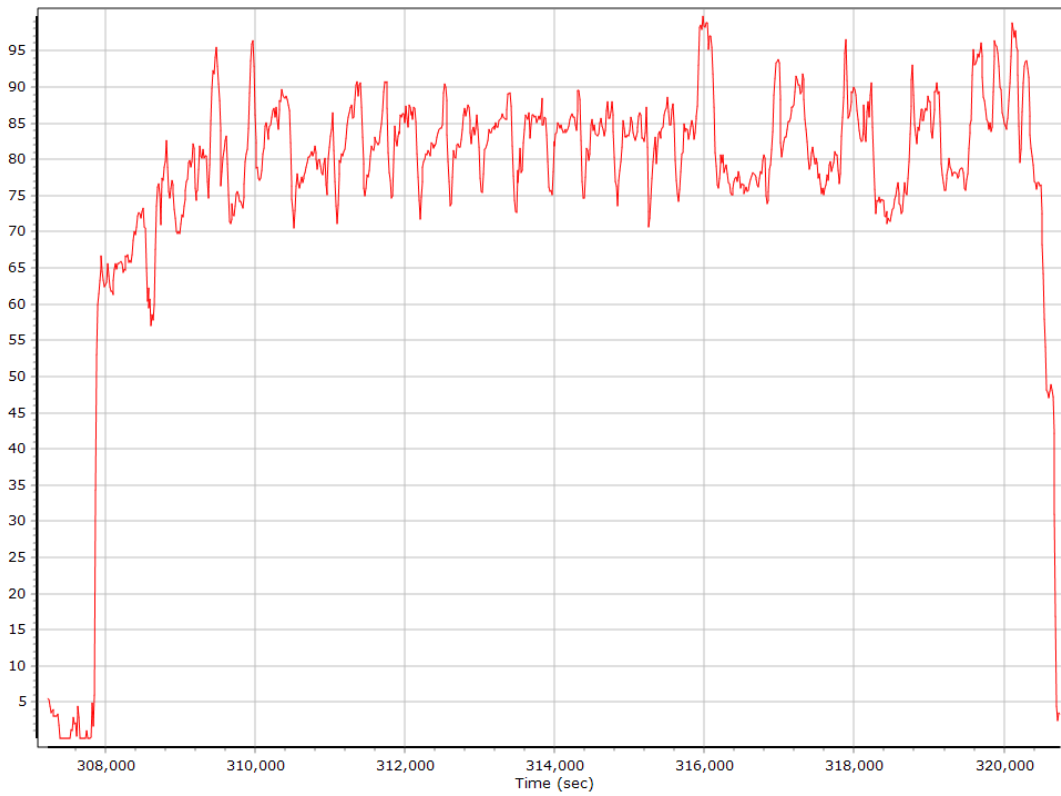
North/East Velocity



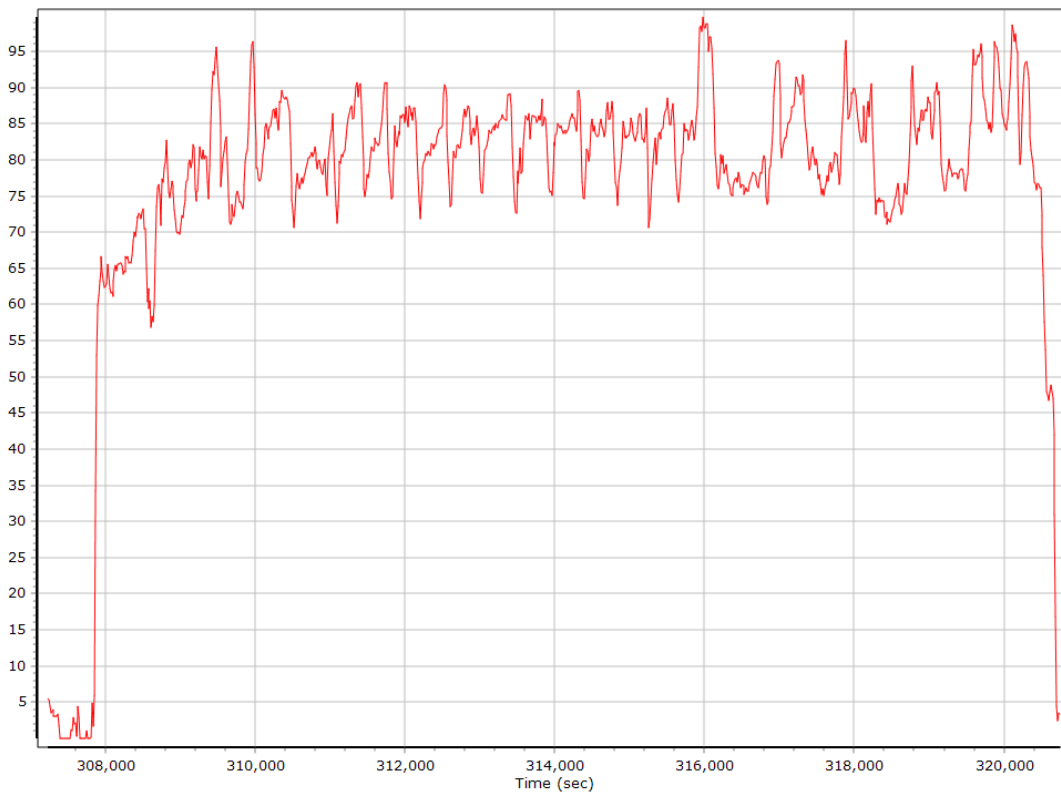
Down Velocity



Total Speed



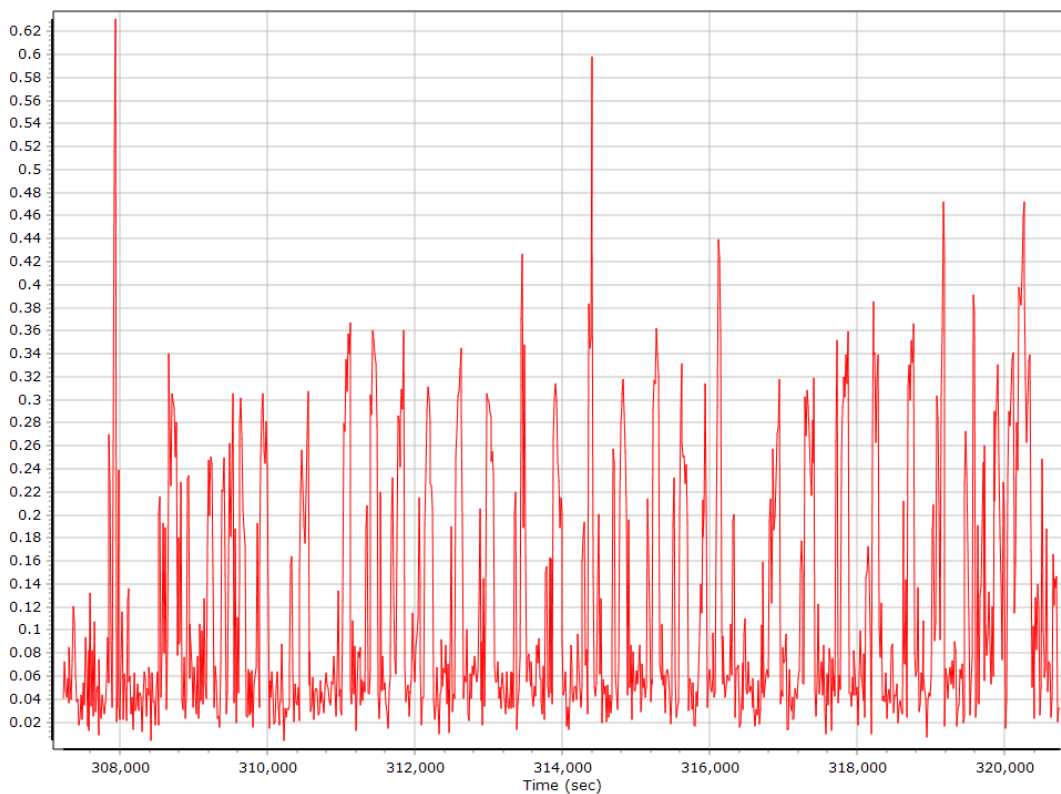
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate

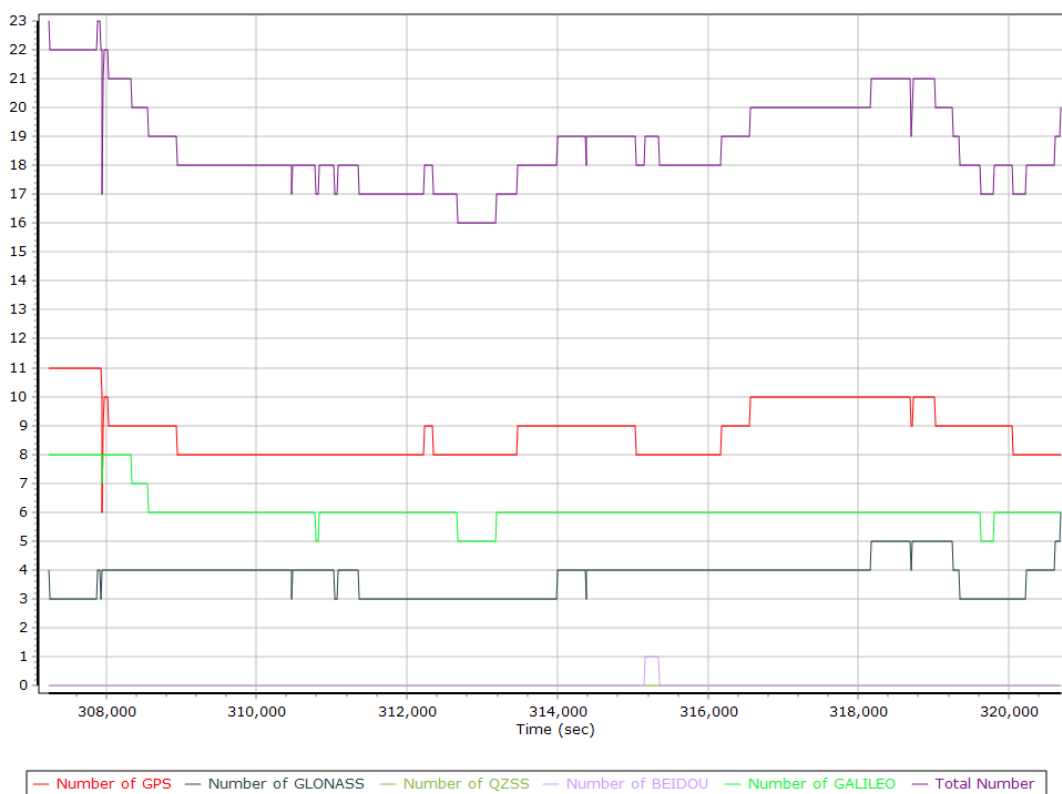


GNSS QC

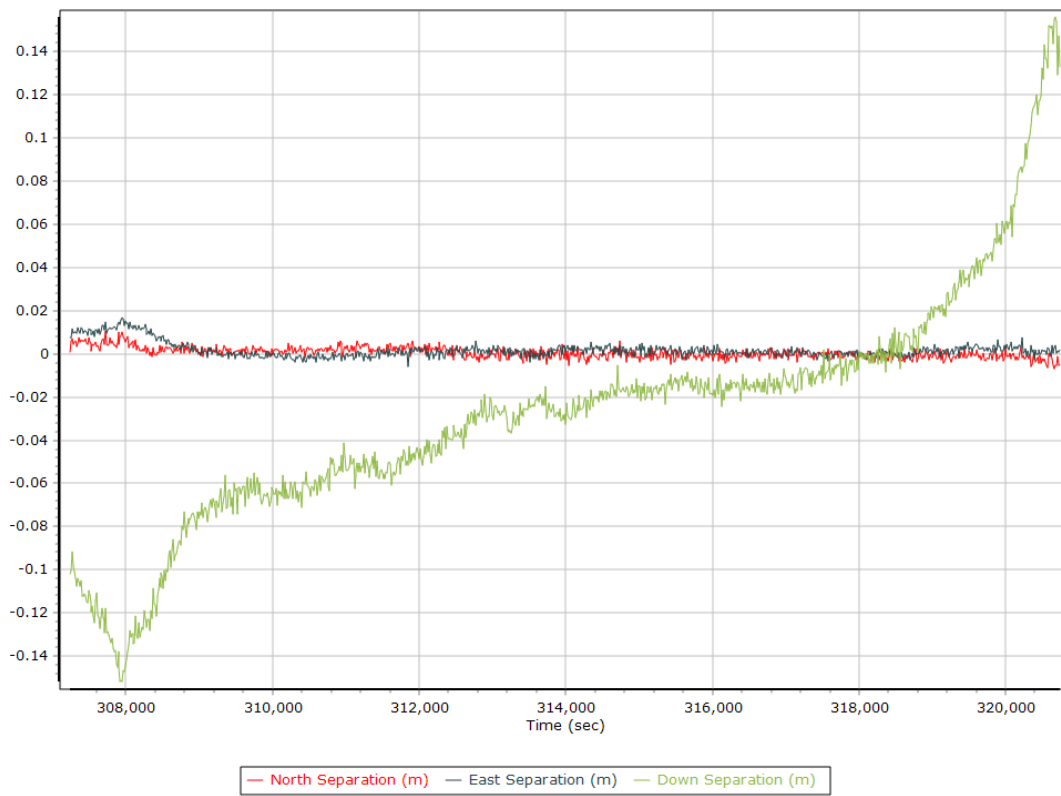
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	2	11	9
Number of GLONASS SV	3	6	4
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	1	0
Number of GALILEO SV	3	8	6
Total number of SV	8	23	19
PDOP	1.05	2.39	1.21
QC Solution Gaps	0.00	0.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	13875.00	0.00	0.00
Percentage	100.00	0.00	0.00

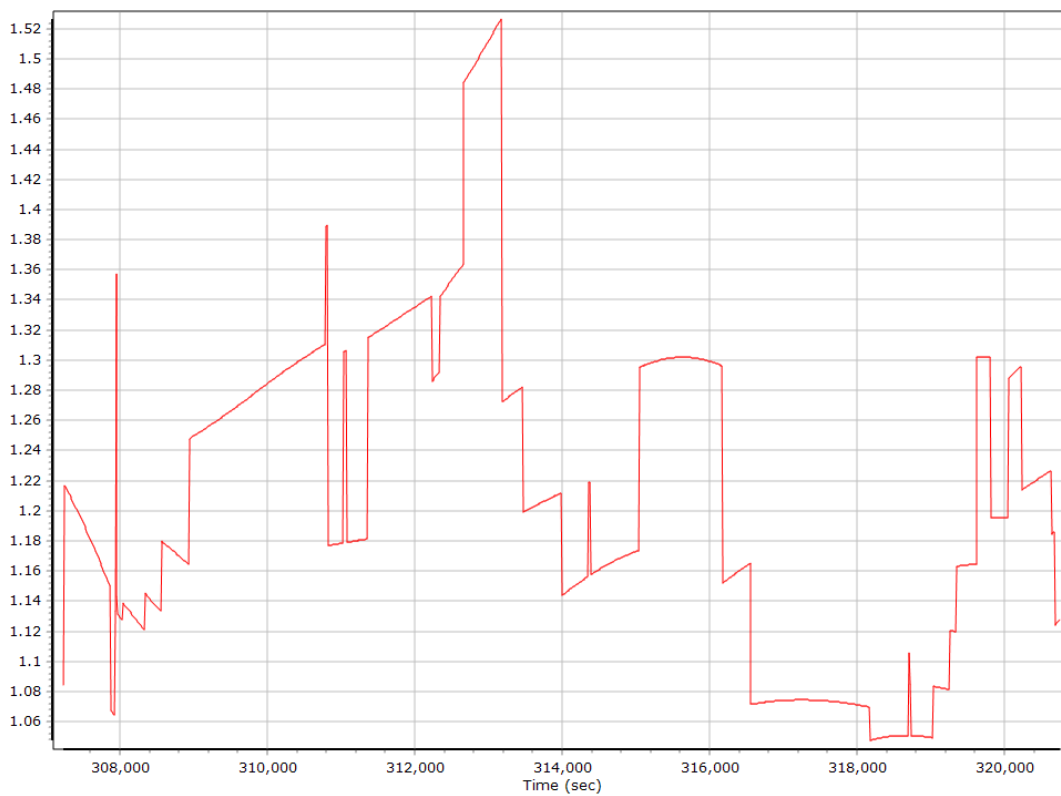
Num SVs in solution



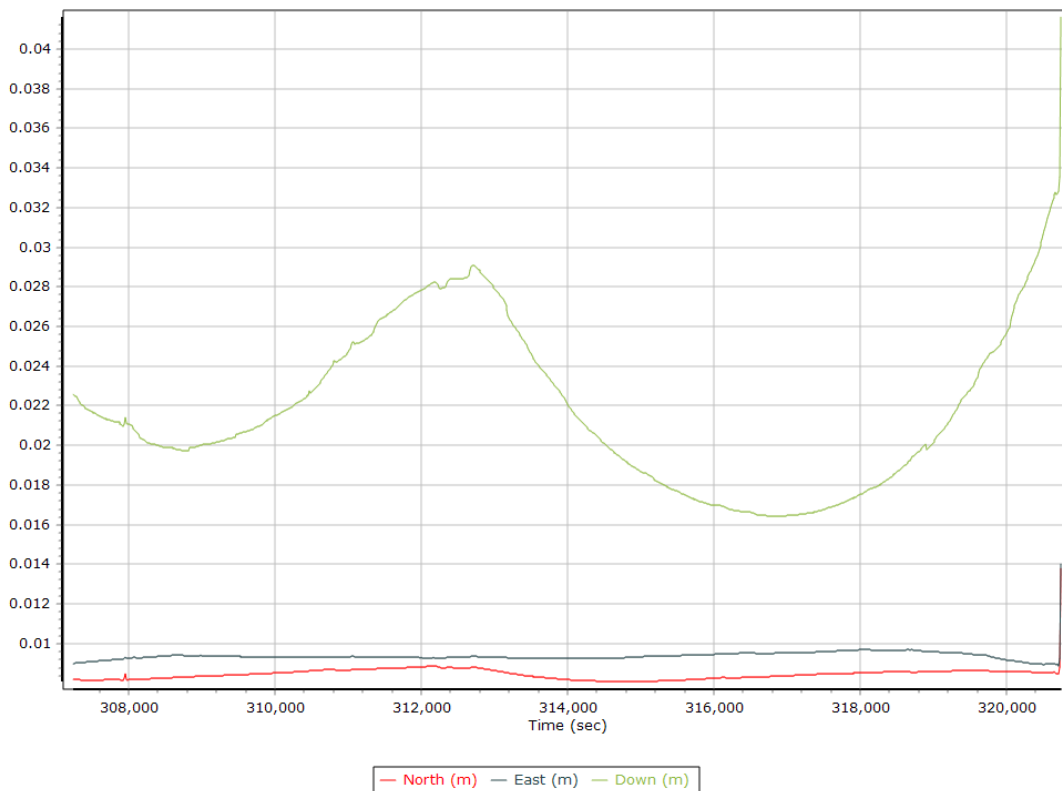
Forward/Reverse Separation



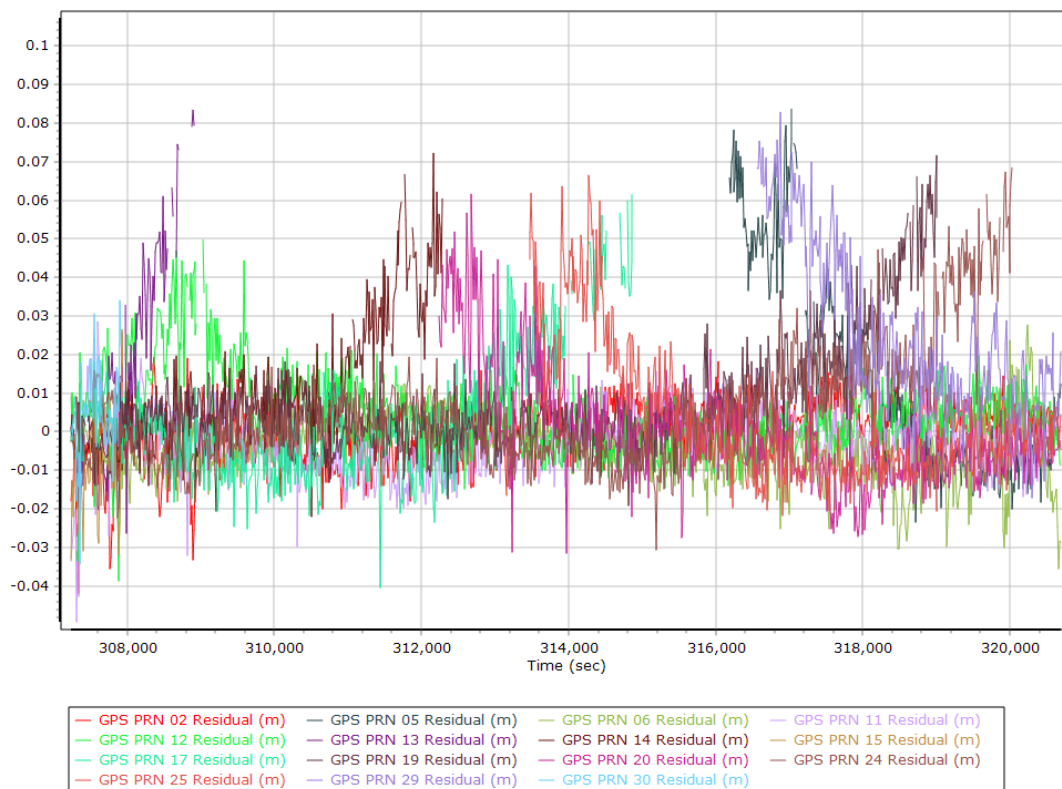
PDOP



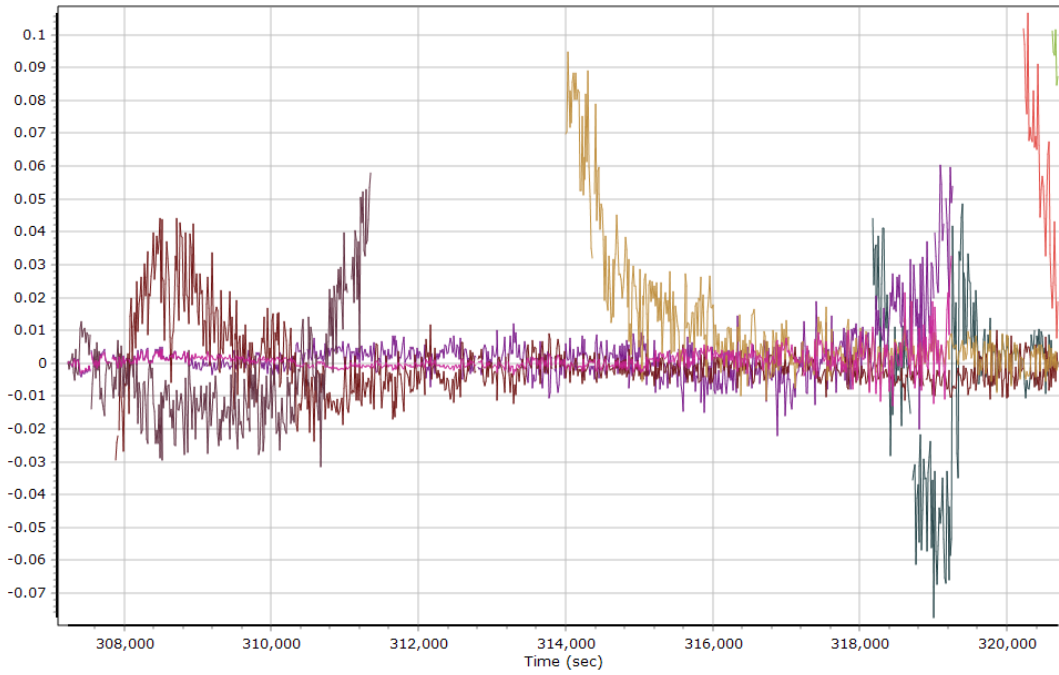
Estimated Position Accuracy



GPS Residuals

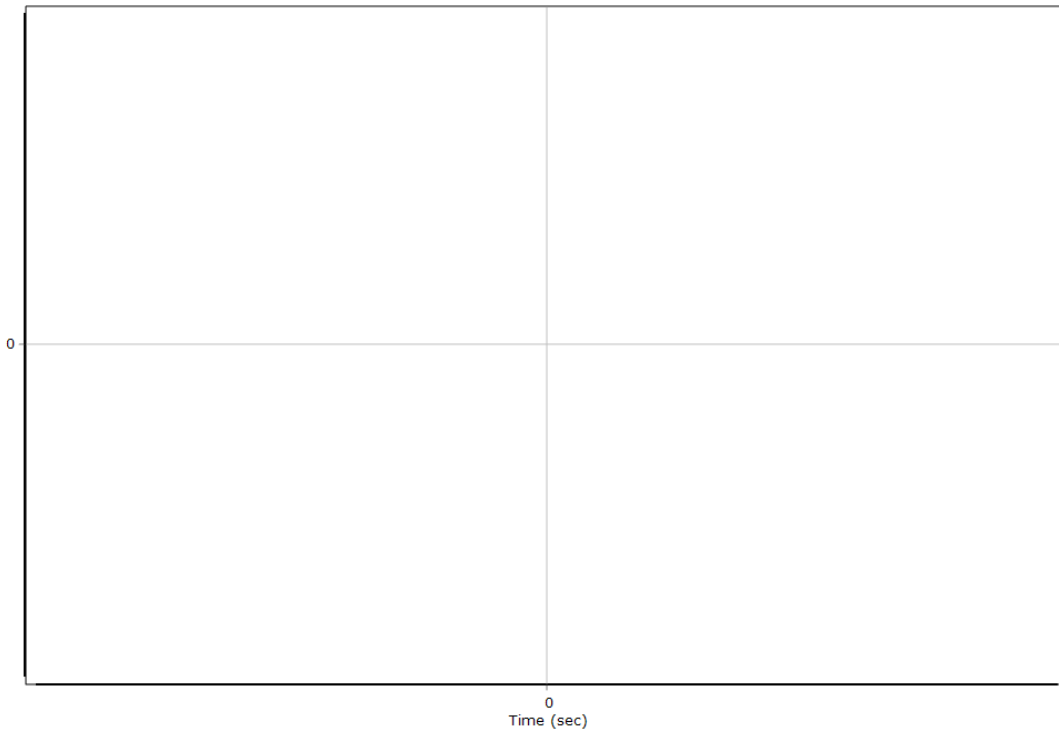


GLONASS Residuals



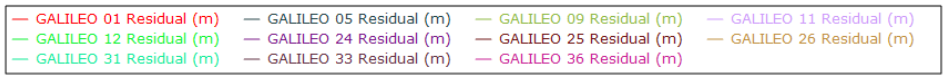
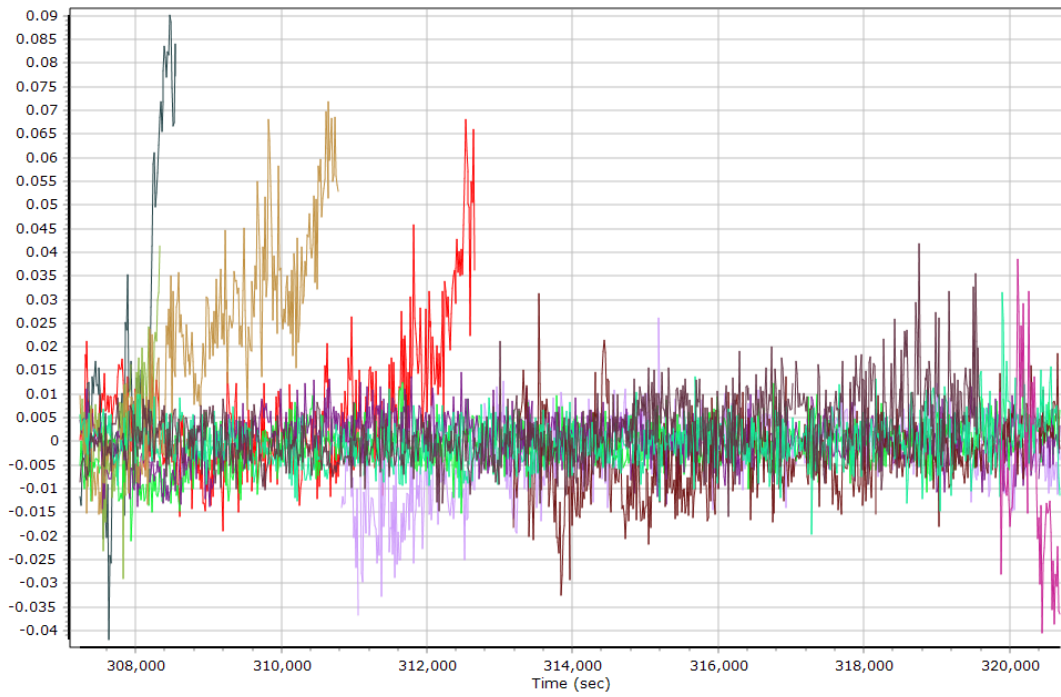
- GLONASS 06 Residual (m)
- GLONASS 07 Residual (m)
- GLONASS 08 Residual (m)
- GLONASS 09 Residual (m)
- GLONASS 10 Residual (m)
- GLONASS 11 Residual (m)
- GLONASS 12 Residual (m)
- GLONASS 13 Residual (m)
- GLONASS 14 Residual (m)
- GLONASS 20 Residual (m)
- GLONASS 21 Residual (m)
- GLONASS 23 Residual (m)
- GLONASS 24 Residual (m)

BEIDOU Residuals



- BEIDOU 14 Residual (m)
- BEIDOU 23 Residual (m)
- BEIDOU 27 Residual (m)
- BEIDOU 28 Residual (m)

GALILEO Residuals



GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	306820.000 (07/13/2022 13:13:40)		
Processing end time	320753.000 (07/13/2022 17:05:53)		
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)	0.381	-0.429	-1.086
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

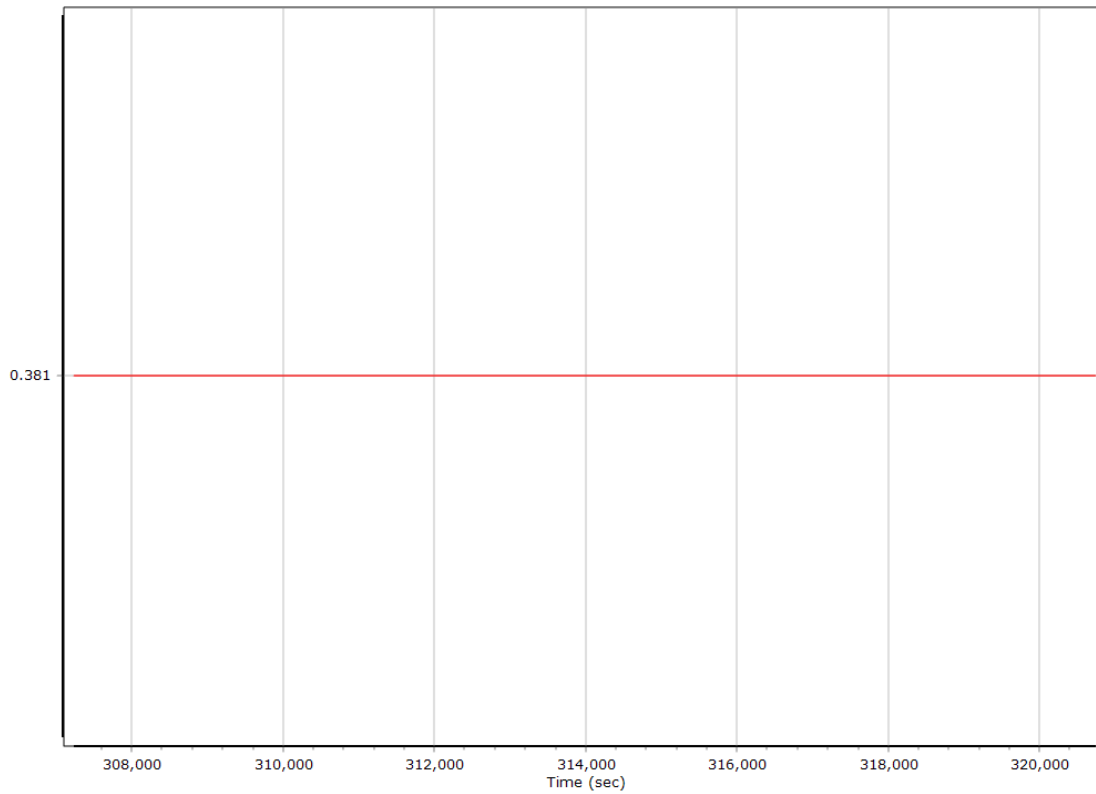
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

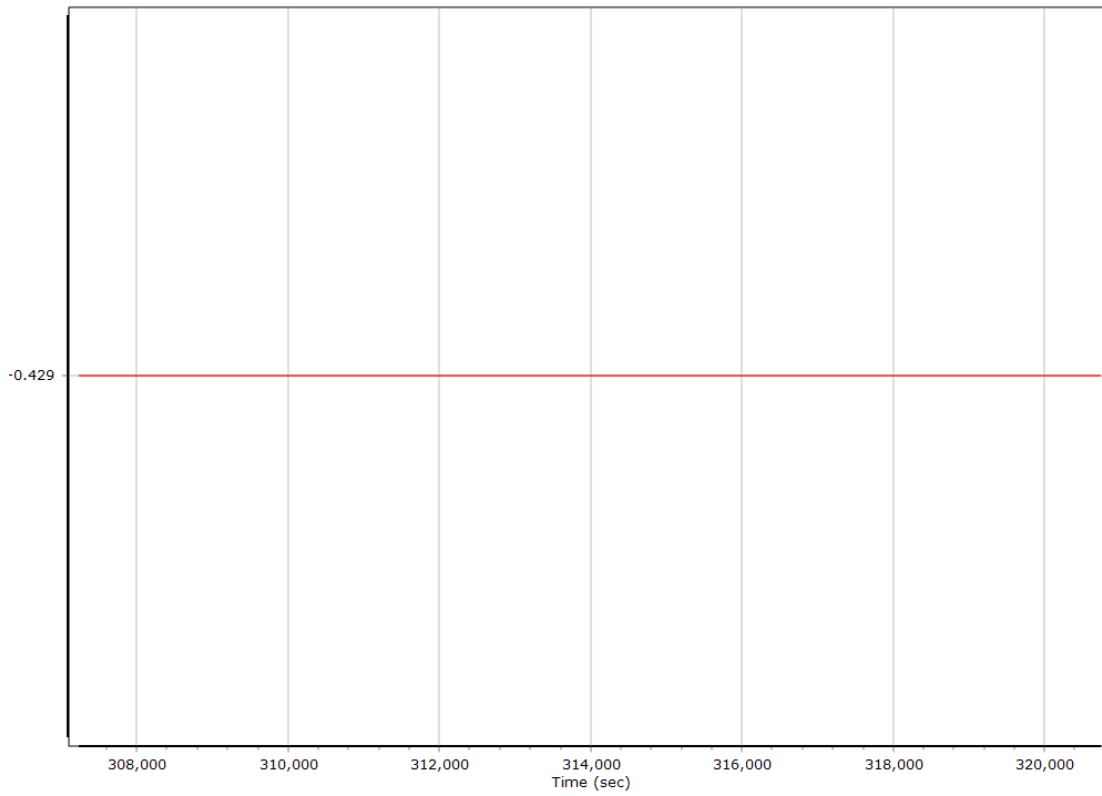
Reference-Primary GNSS Lever Arm Automatic Calibration Results

Original Reference to Primary GNSS lever arm (m)	0.361	-0.429	-0.945
Iteration 1 Reference to Primary GNSS lever arm (m)	0.382	-0.429	-1.085
Iteration 2 Reference to Primary GNSS lever arm (m)	0.381	-0.429	-1.086
Primary GNSS Lever Arm In use	Iteration 2		

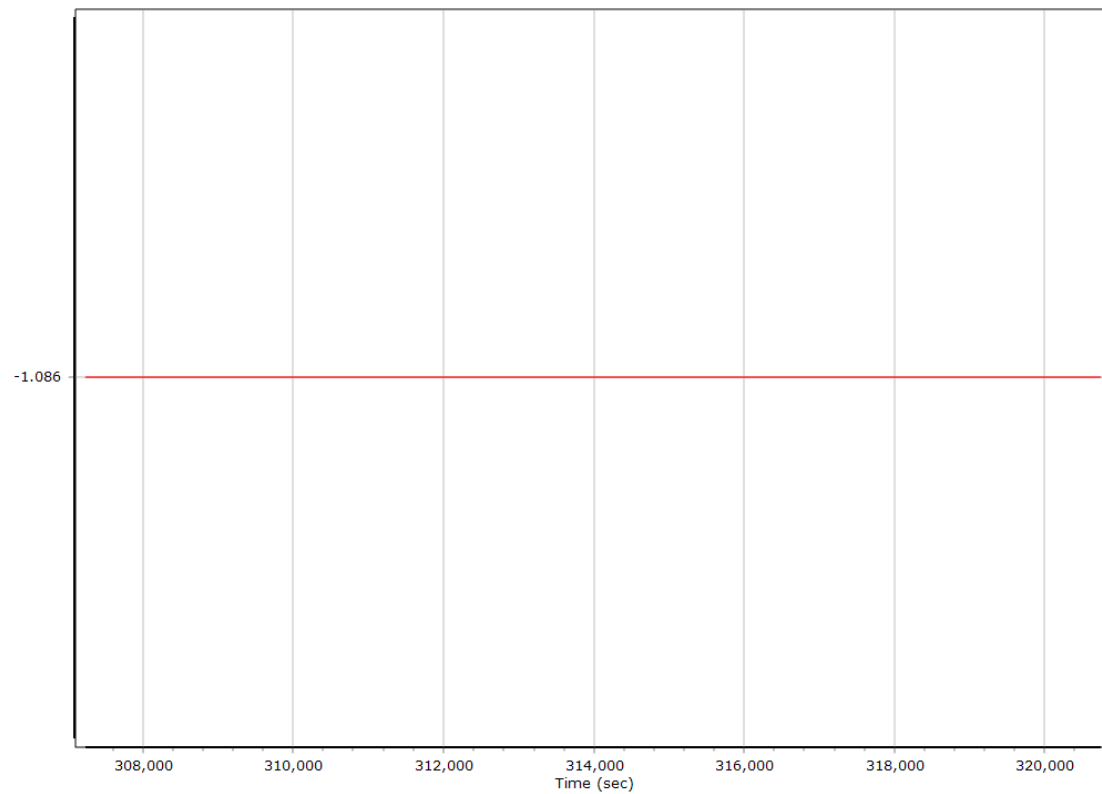
X Reference-Primary GNSS Lever Arm (m)



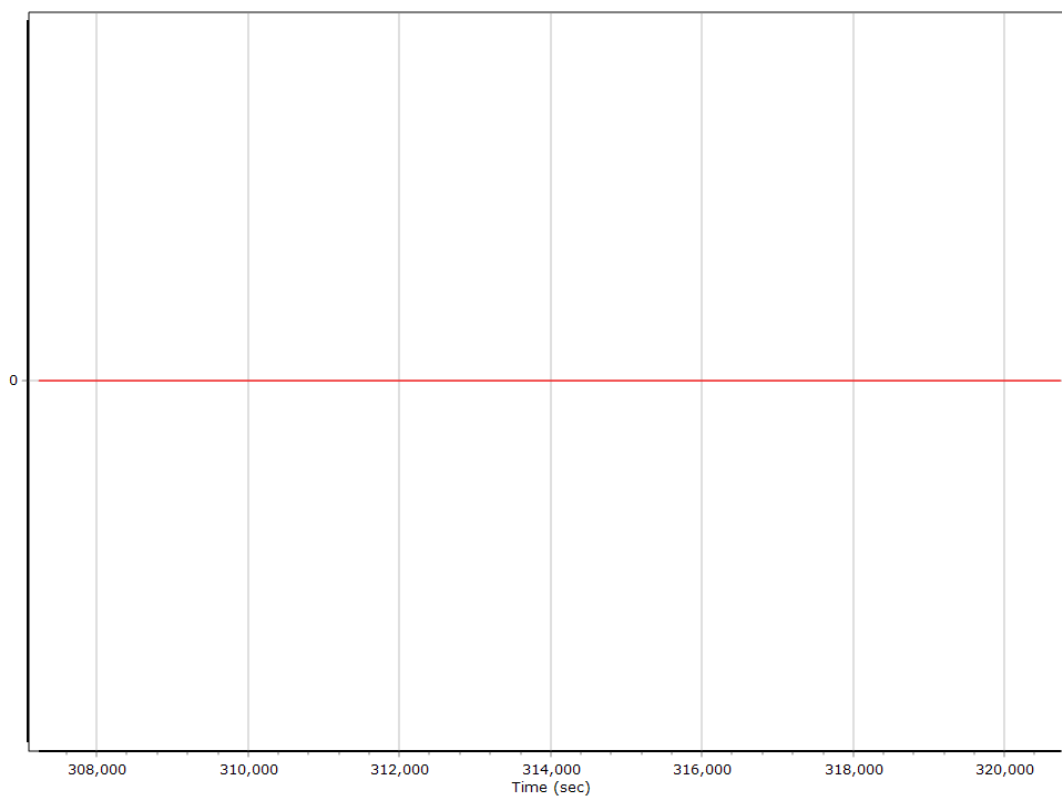
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



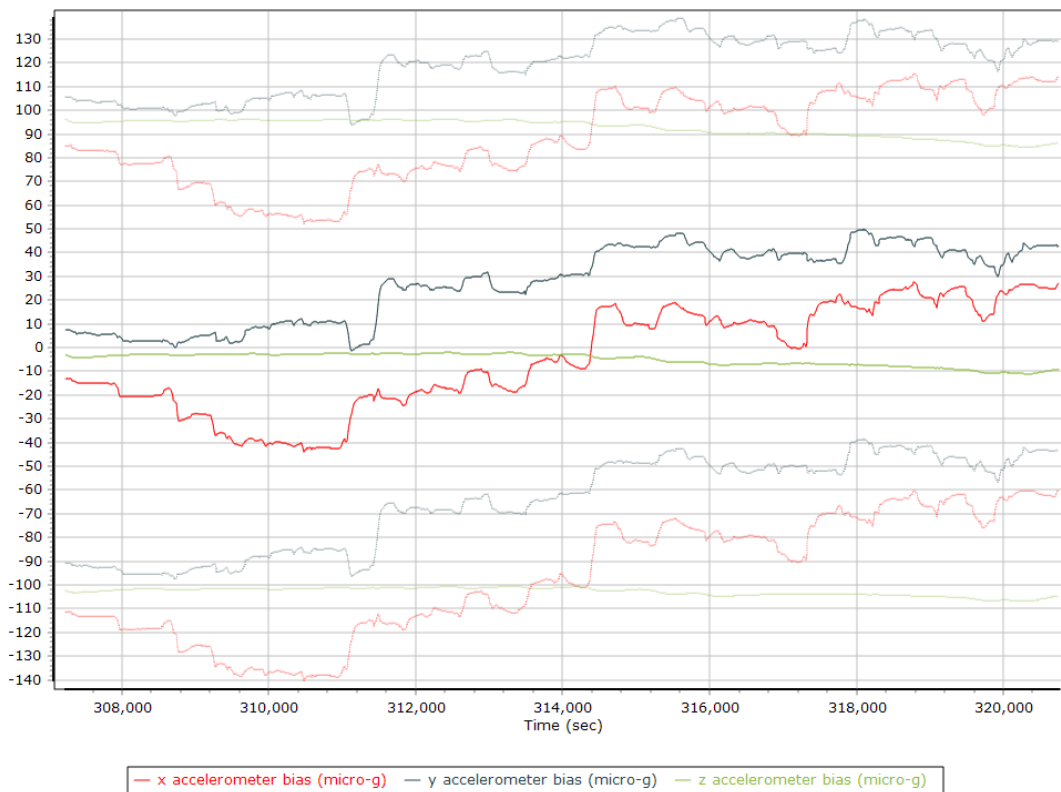
Reference-Primary GNSS Lever Arm Figure of Merit



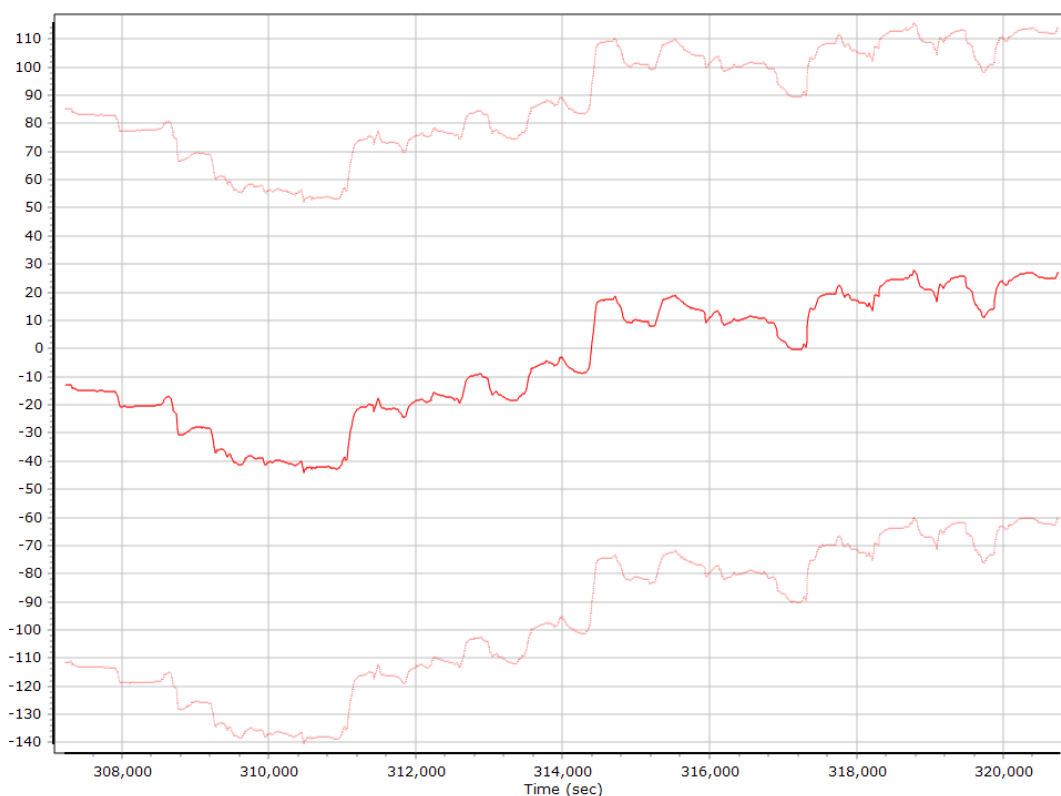
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

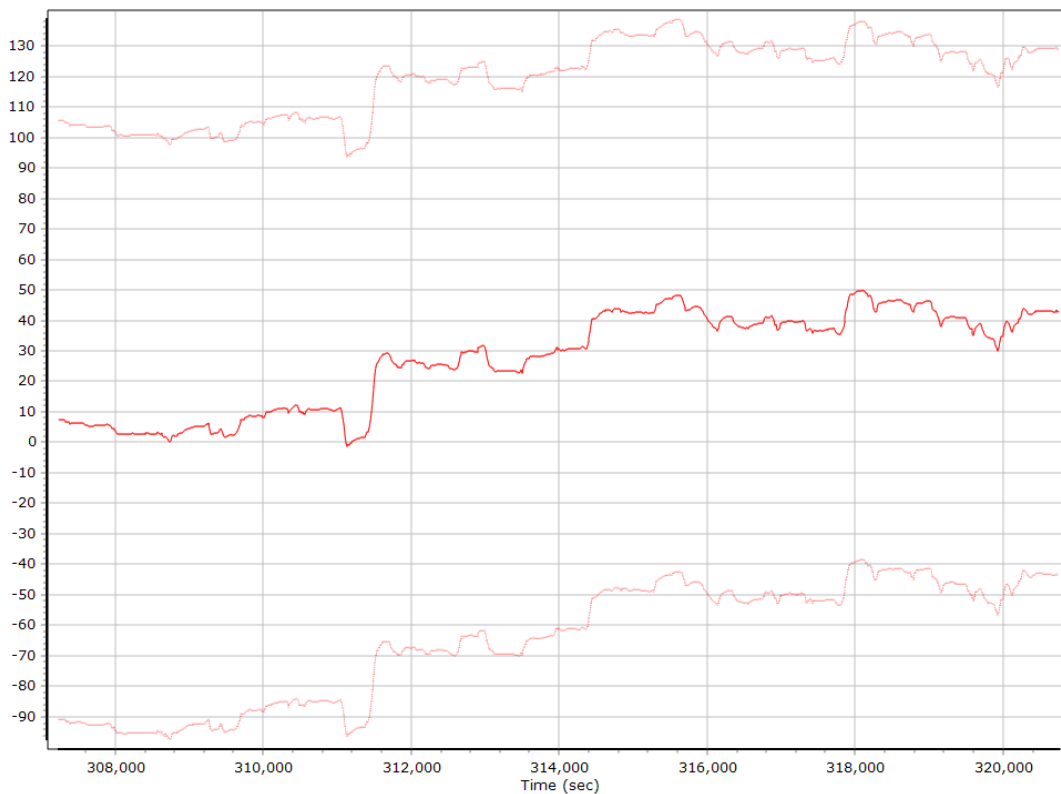
Accelerometer Bias (micro-g)



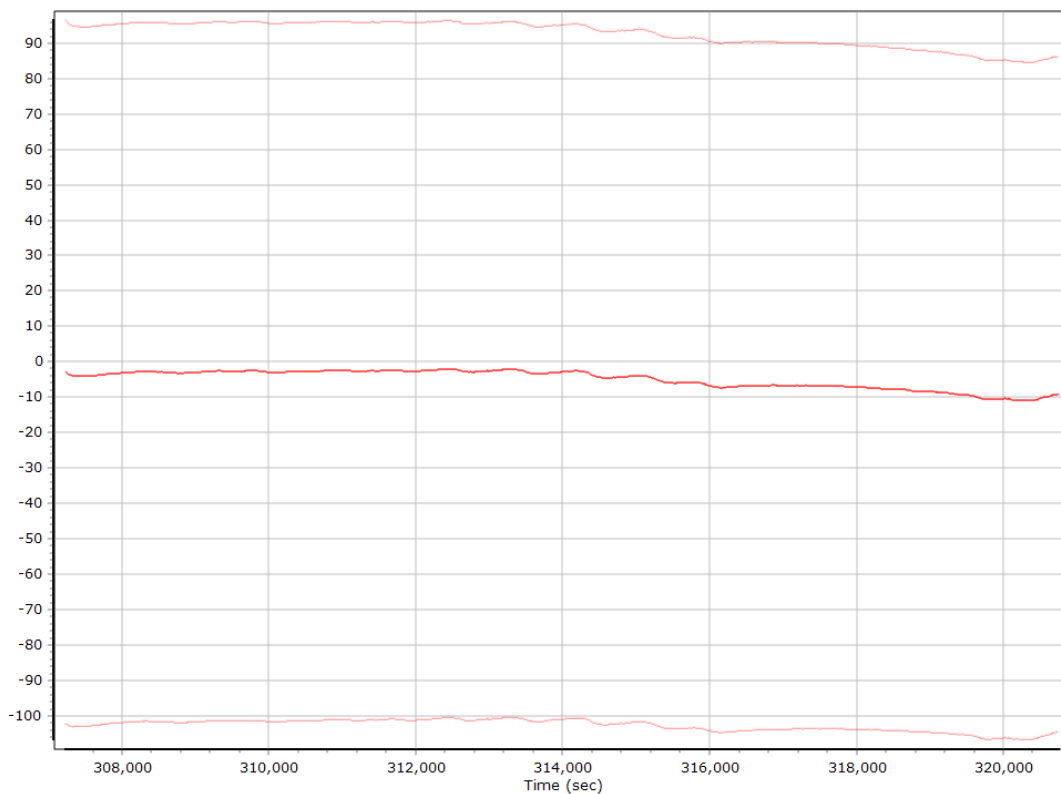
X Accelerometer Bias (micro-g)



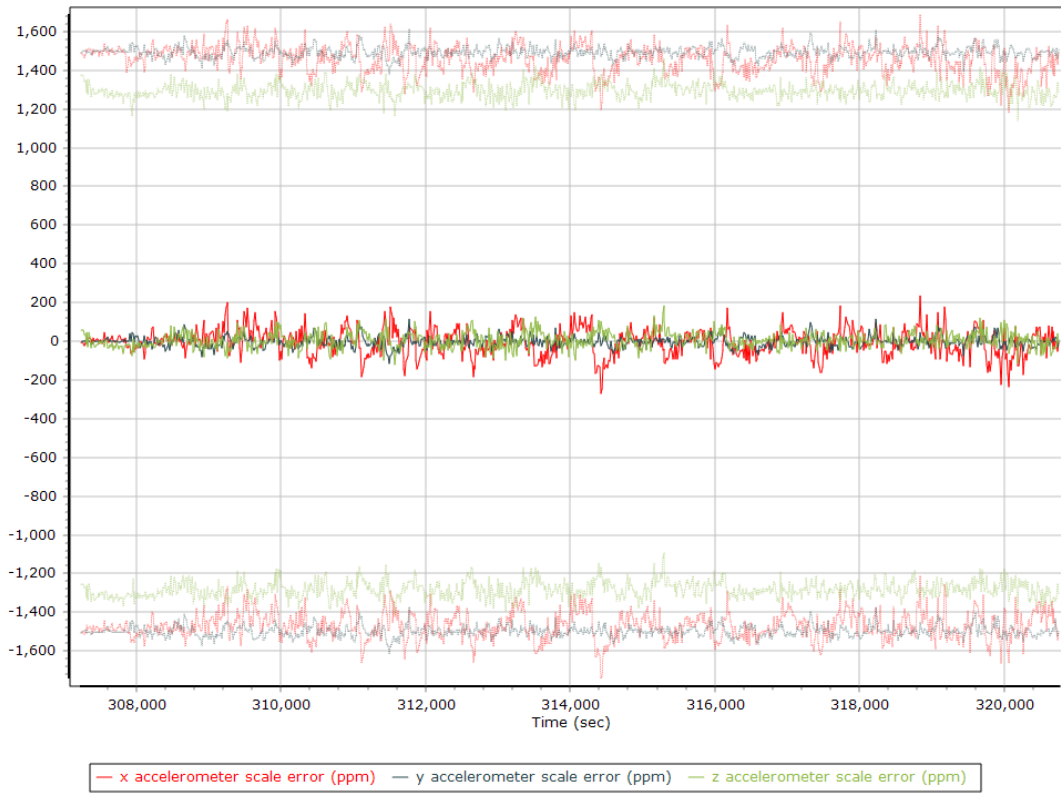
Y Accelerometer Bias (micro-g)



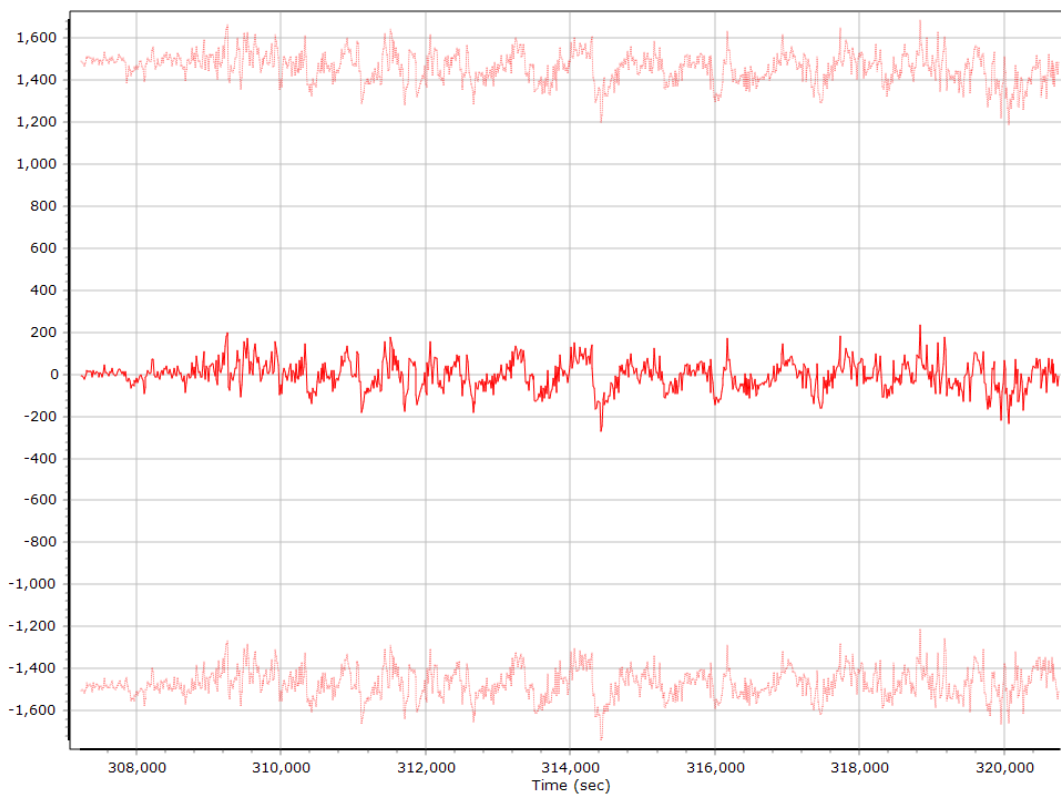
Z Accelerometer Bias (micro-g)



Accelerometer Scale Error (ppm)



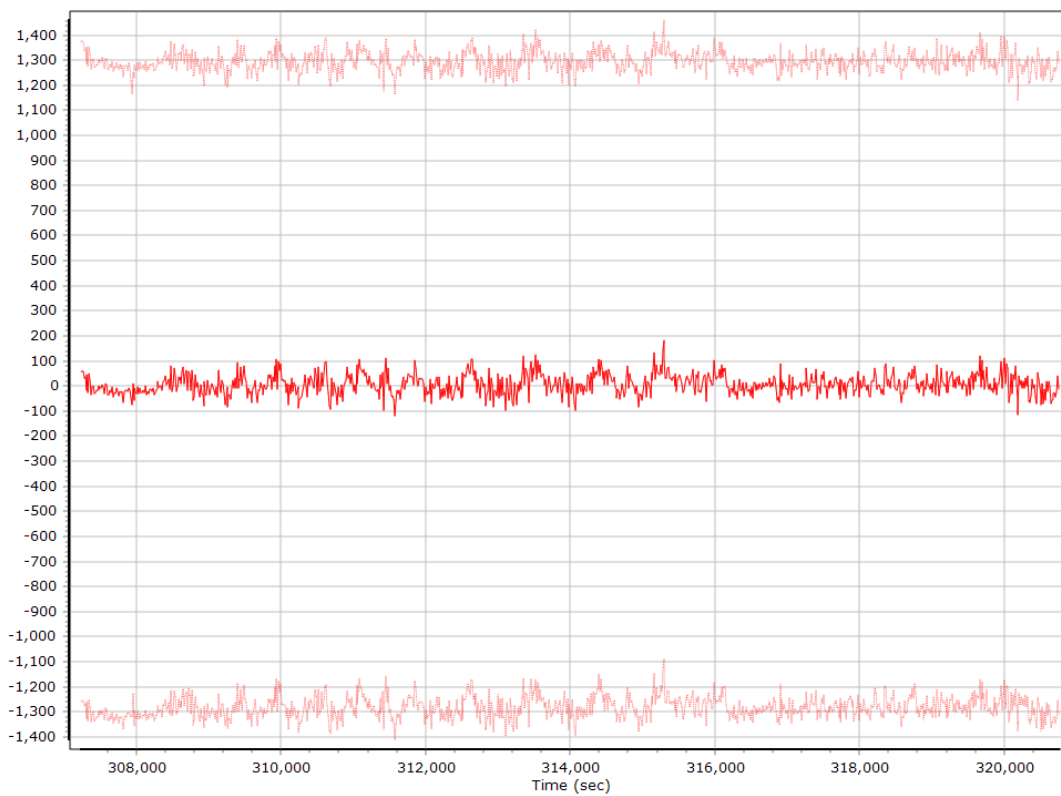
X Accelerometer Scale Error (ppm)



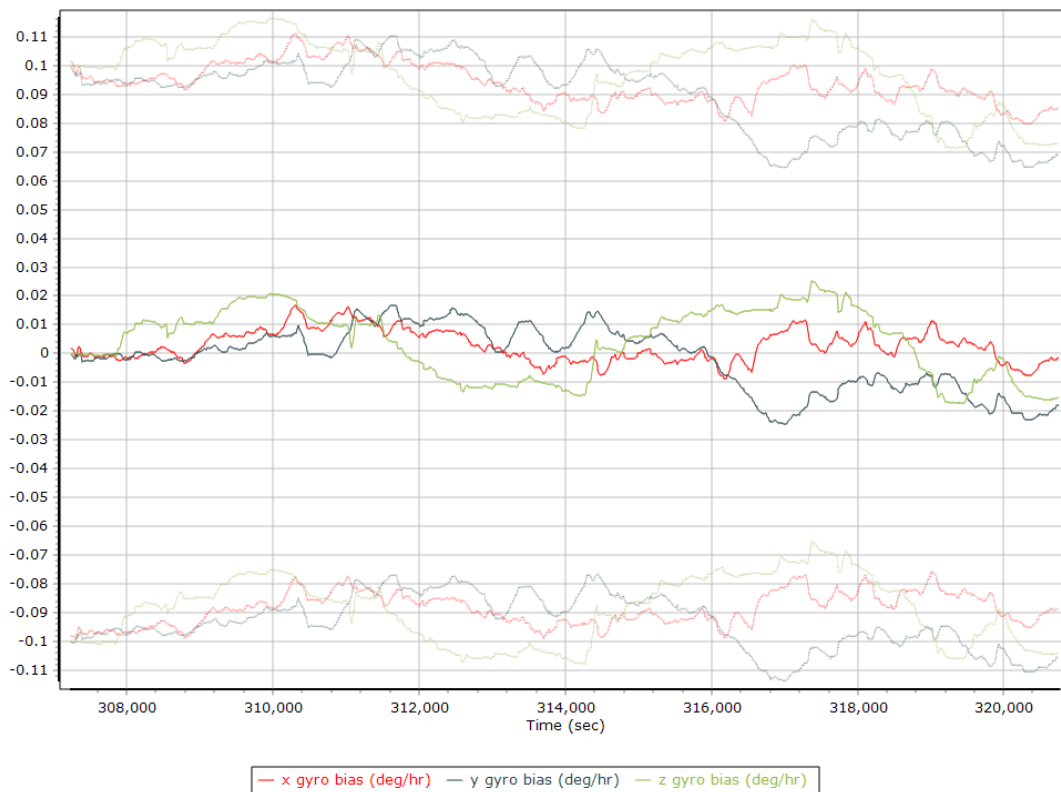
Y Accelerometer Scale Error (ppm)



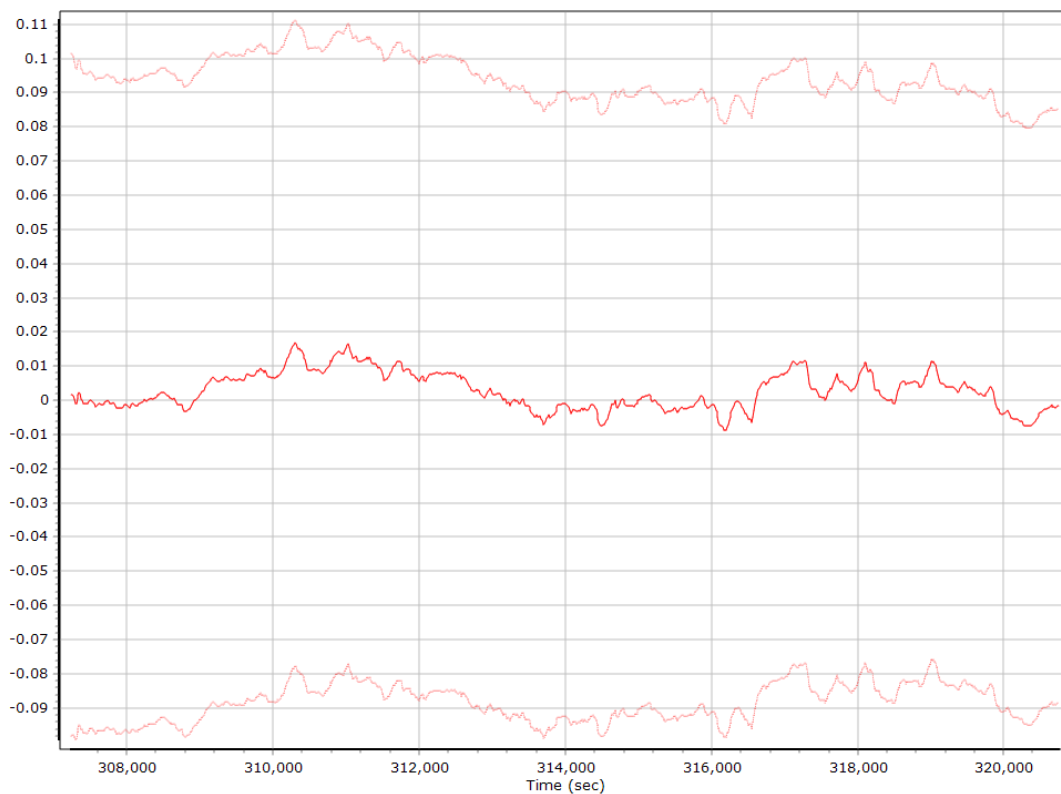
Z Accelerometer Scale Error (ppm)



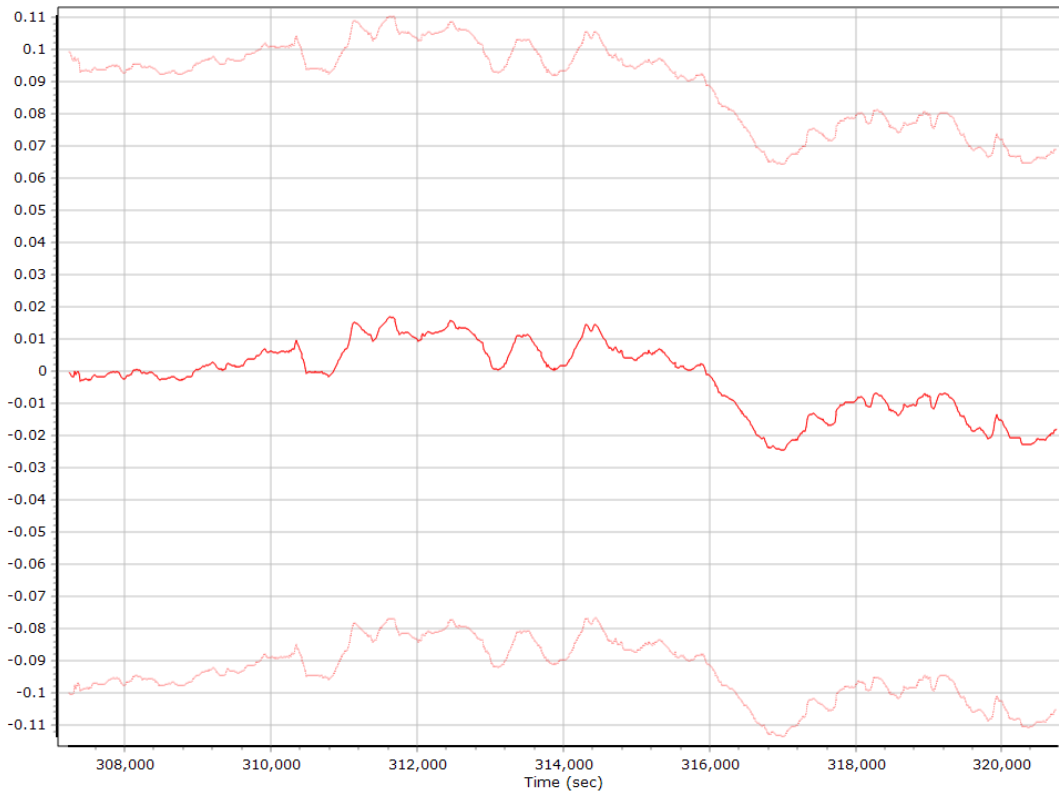
Gyro Bias (deg/h)



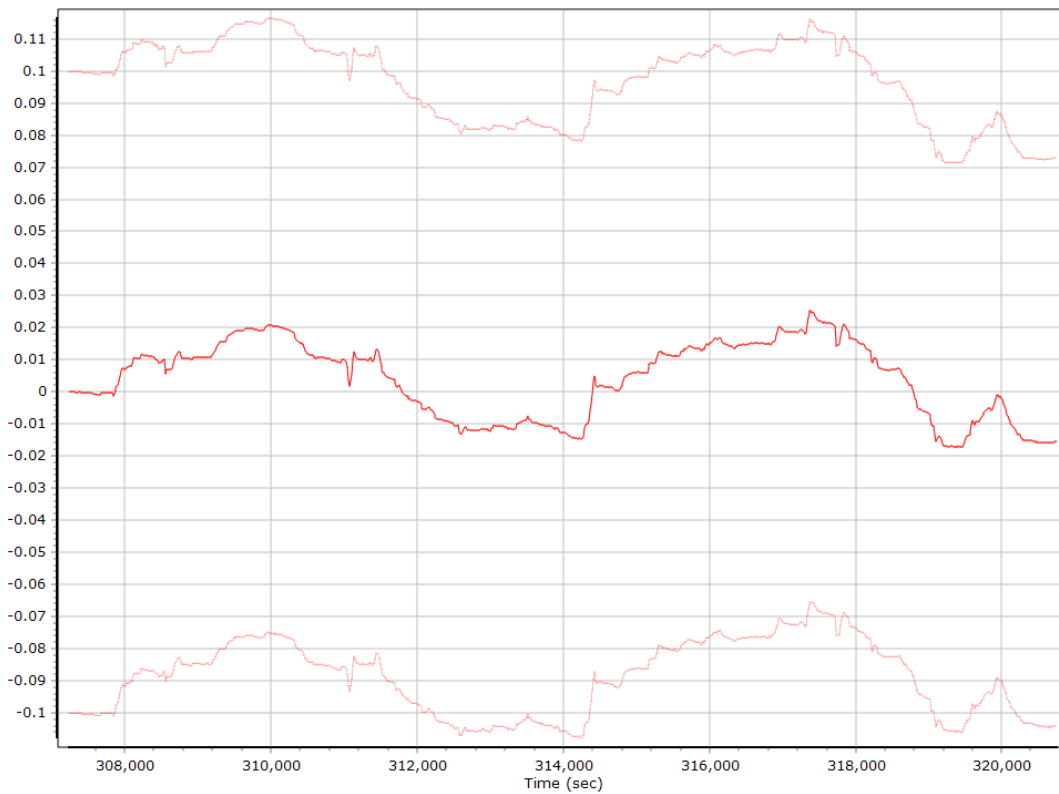
X Gyro Bias (deg/h)



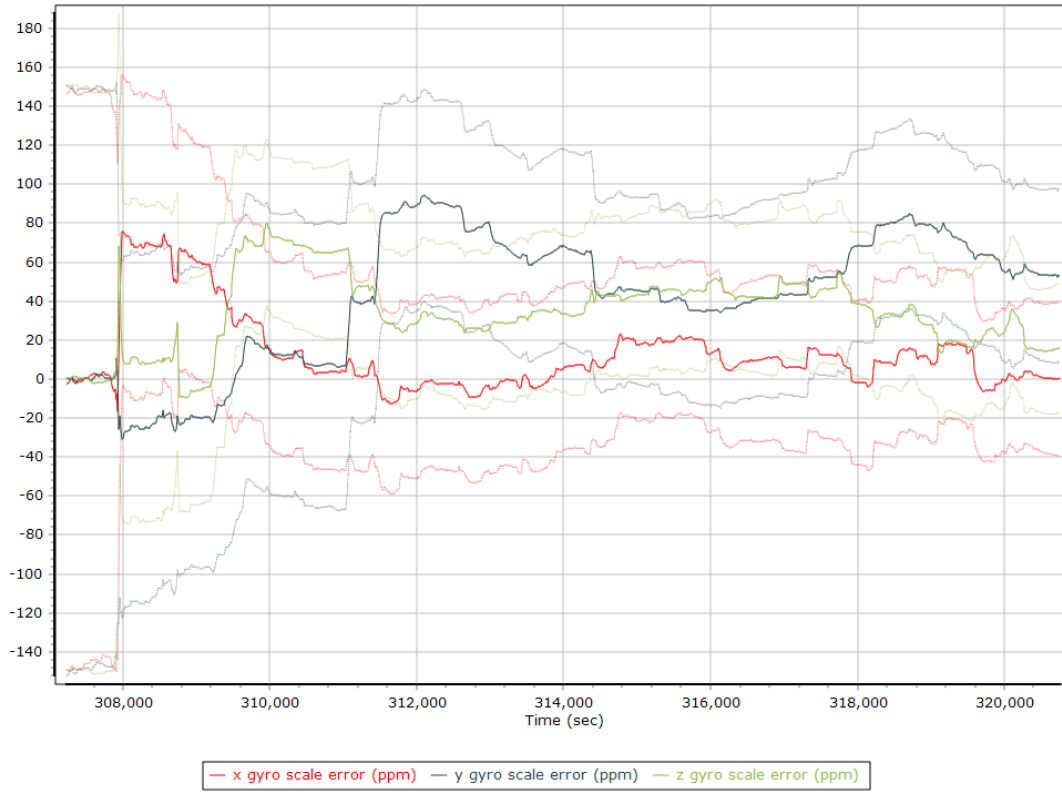
Y Gyro Bias (deg/h)



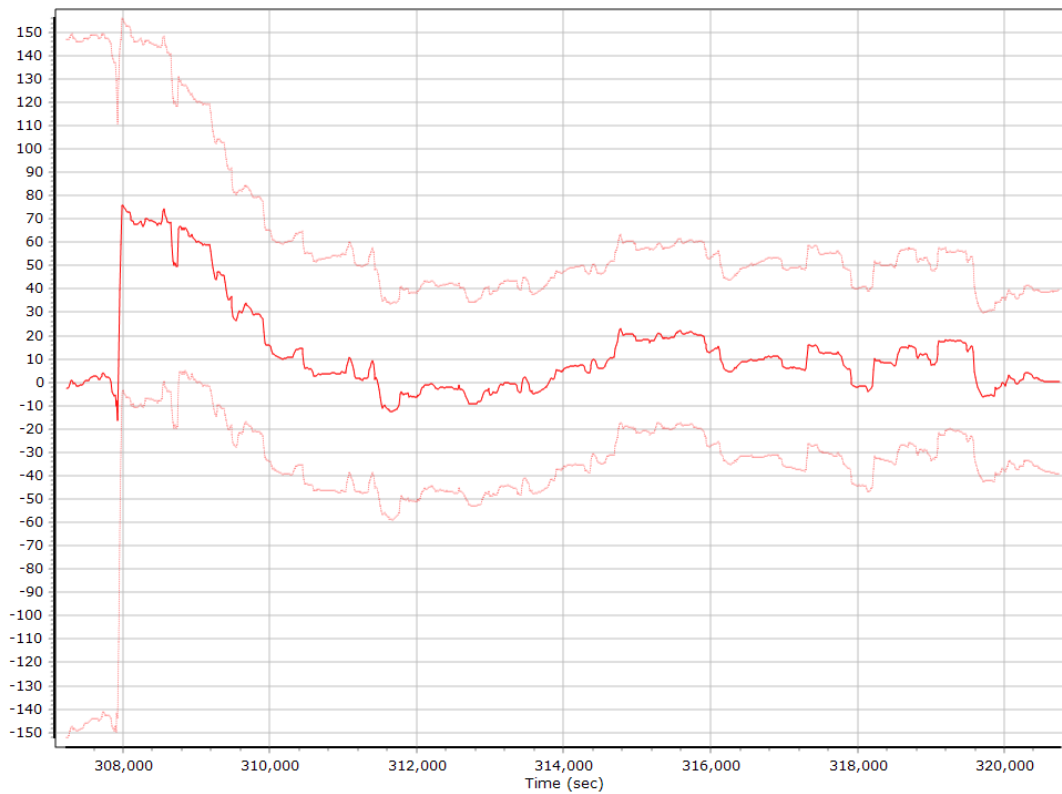
Z Gyro Bias (deg/h)



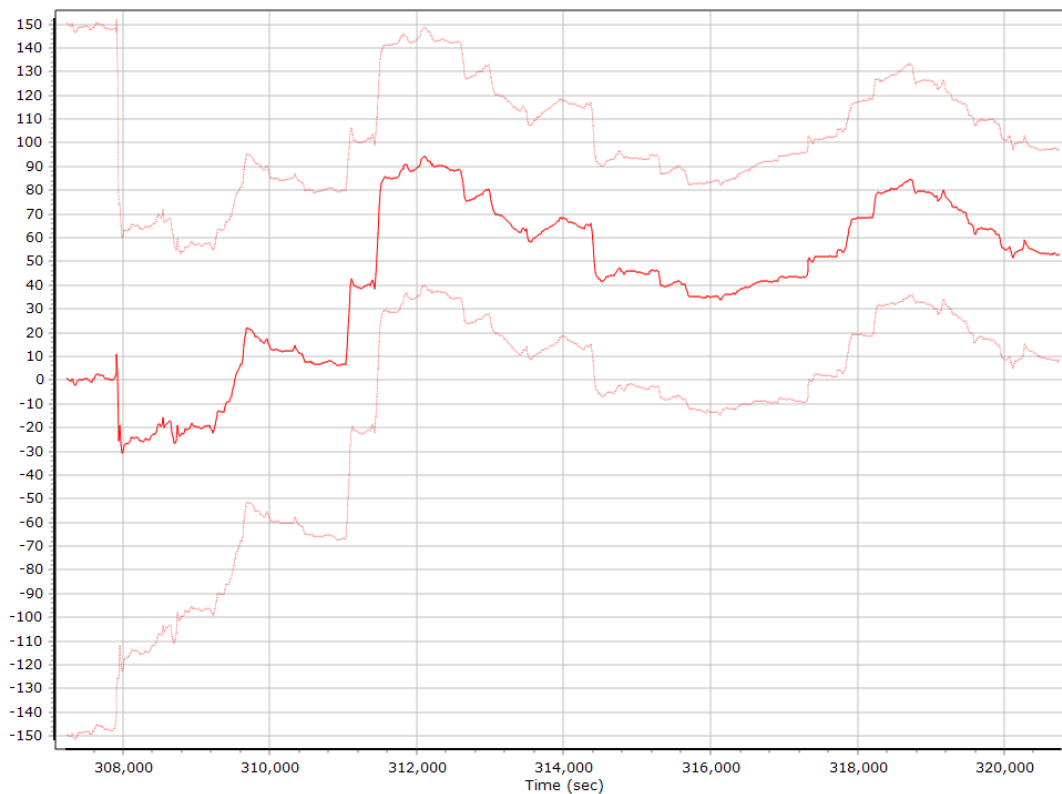
Gyro Scale Error (ppm)



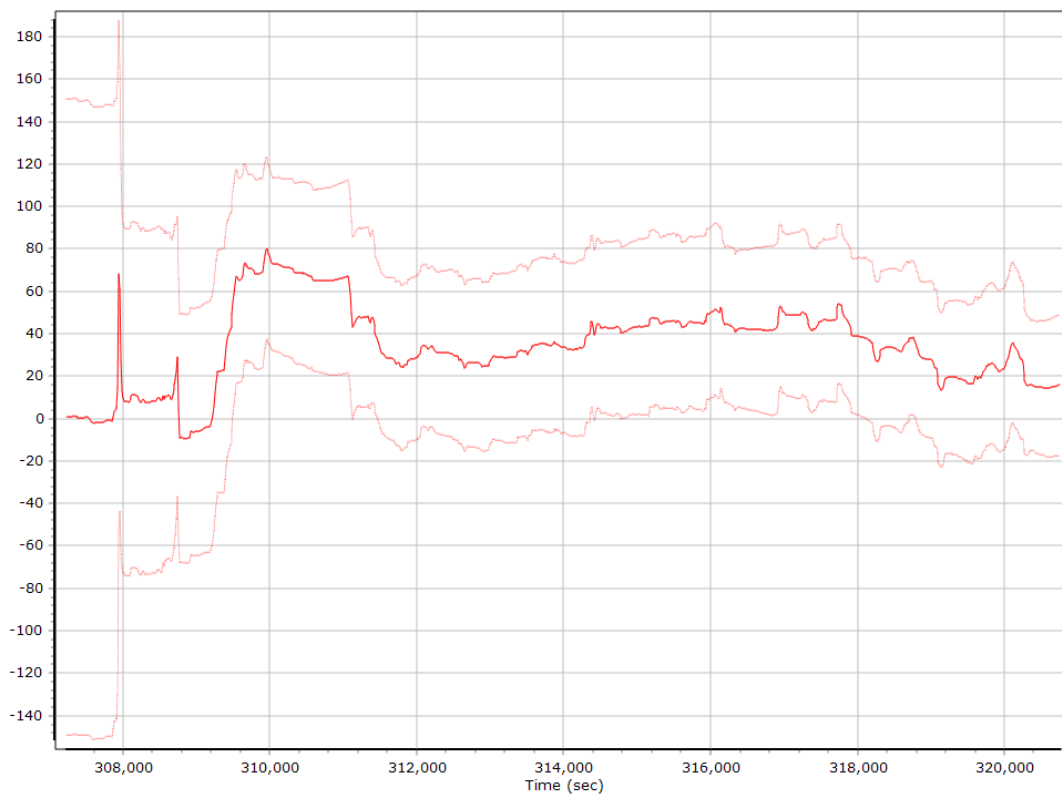
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

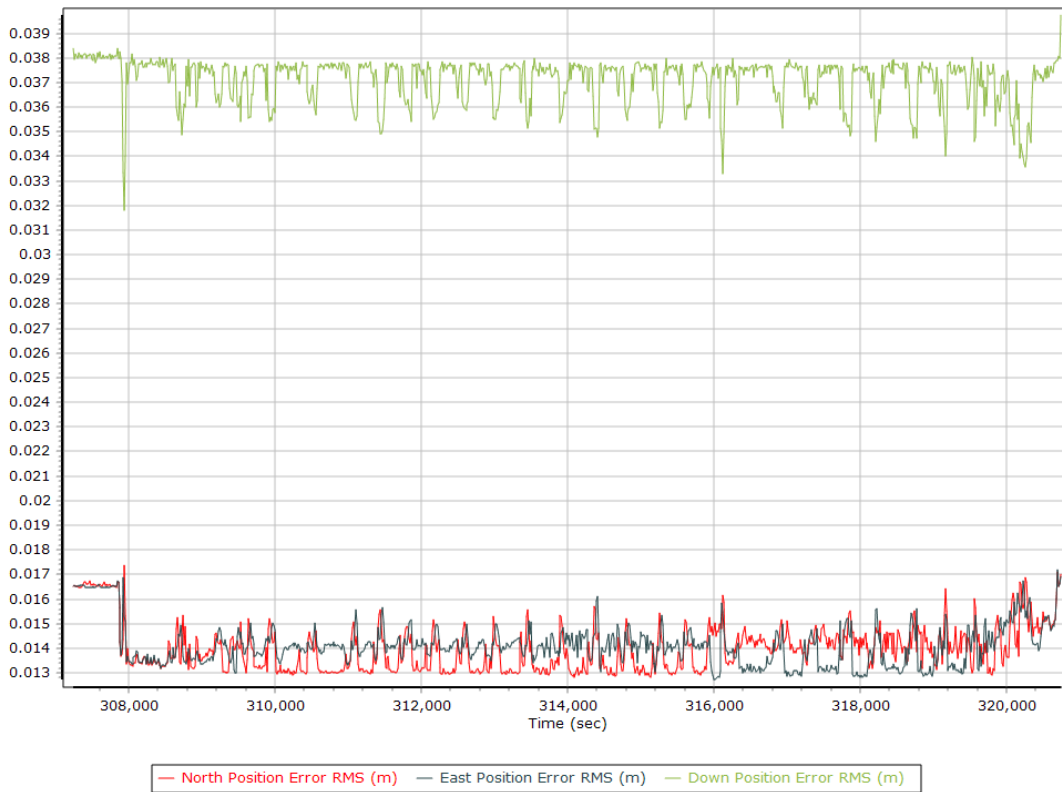


Z Gyro Scale Error (ppm)

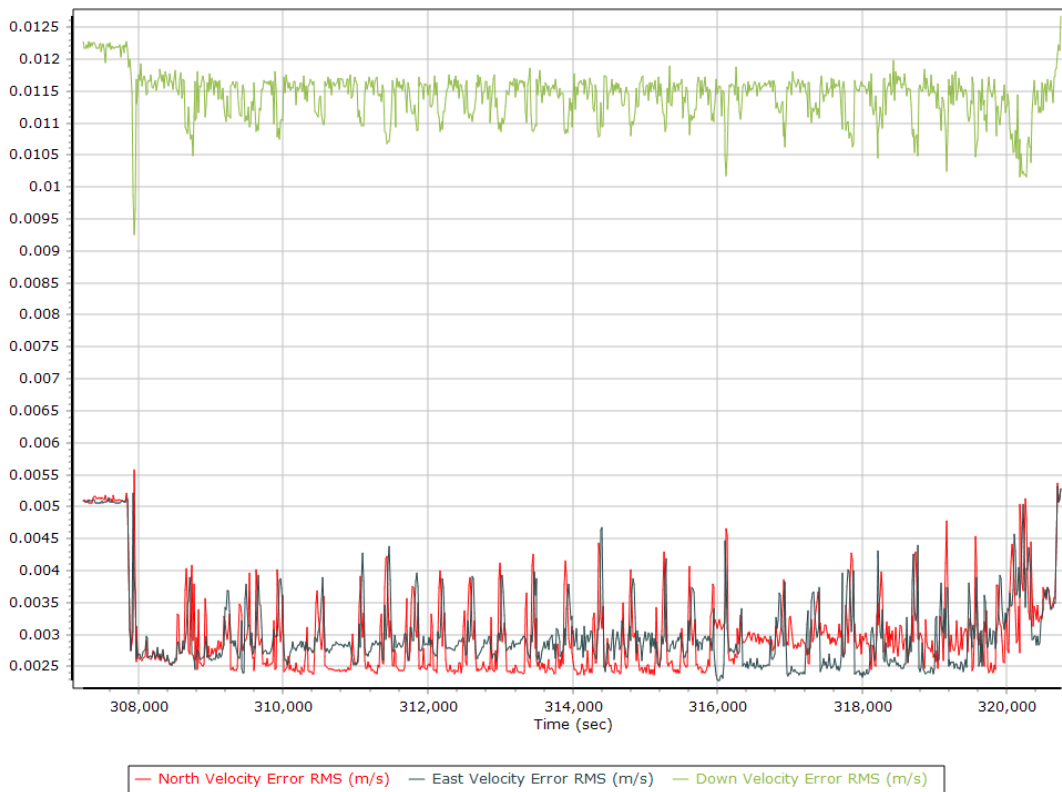


Smoothed Performance Metrics

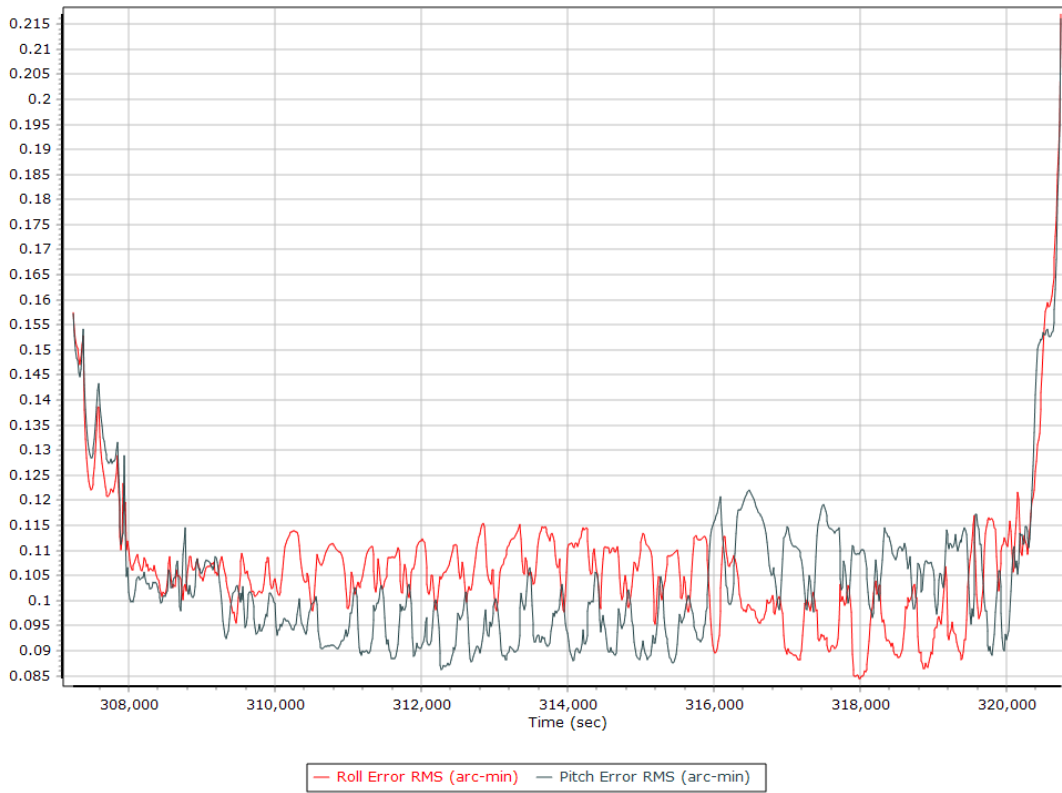
Position Error RMS (m)



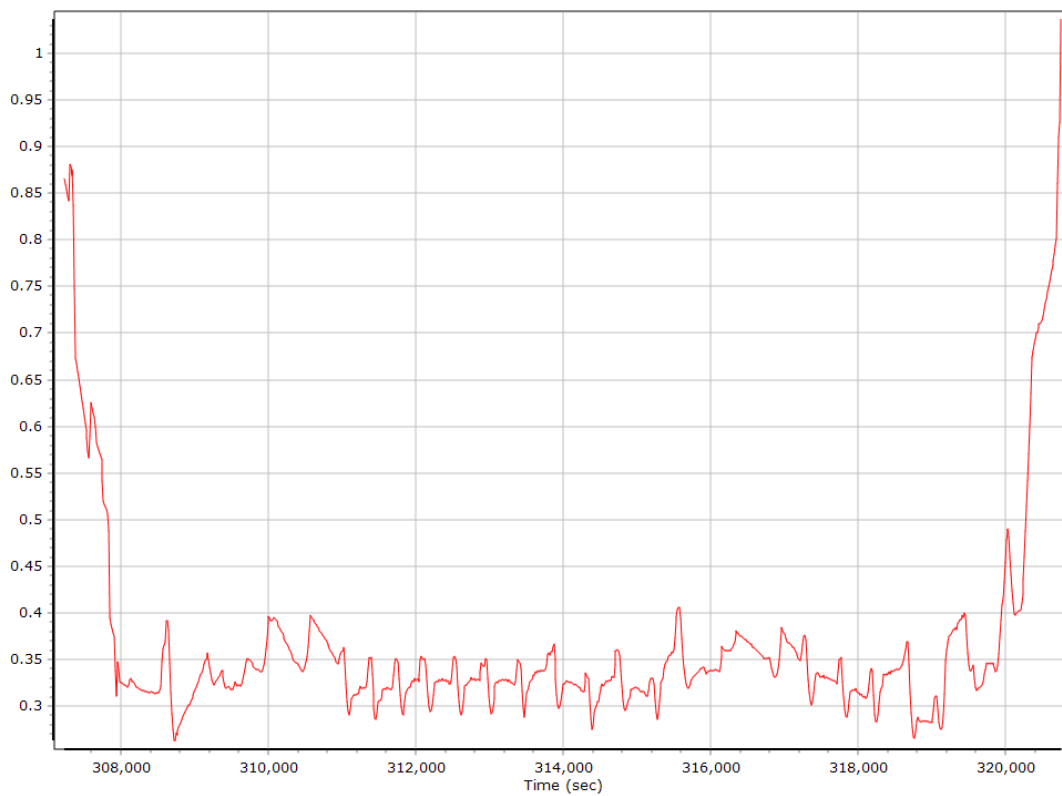
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

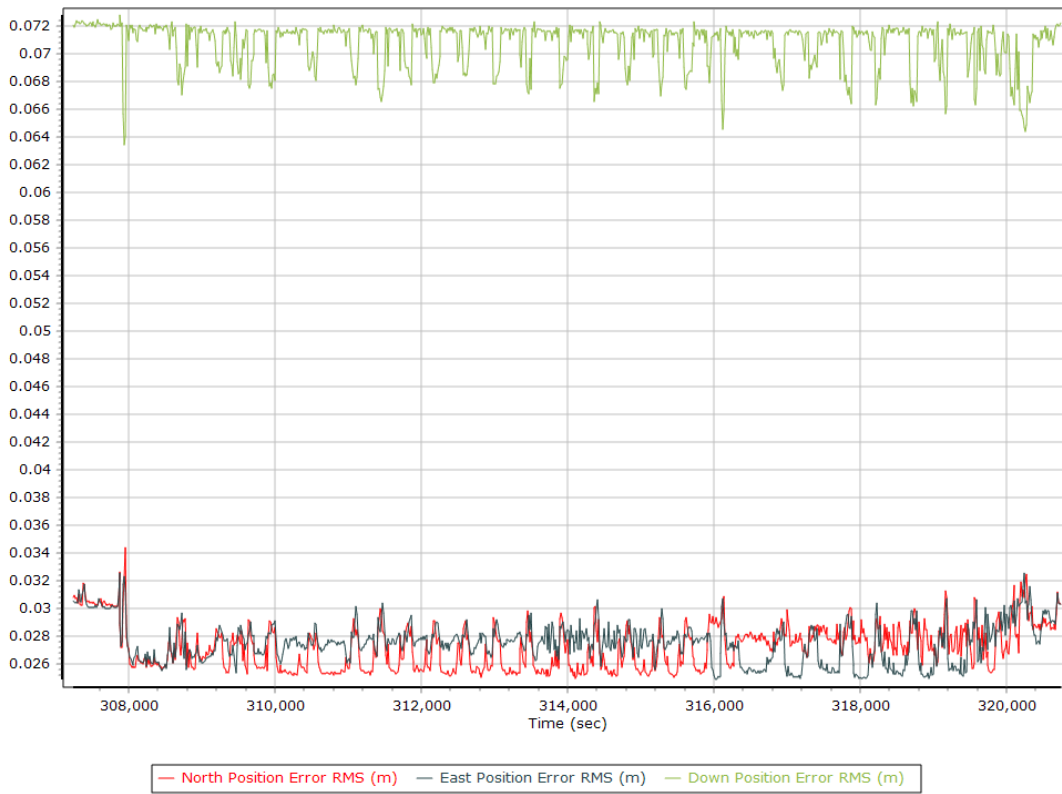


Heading Error RMS (arc-min)

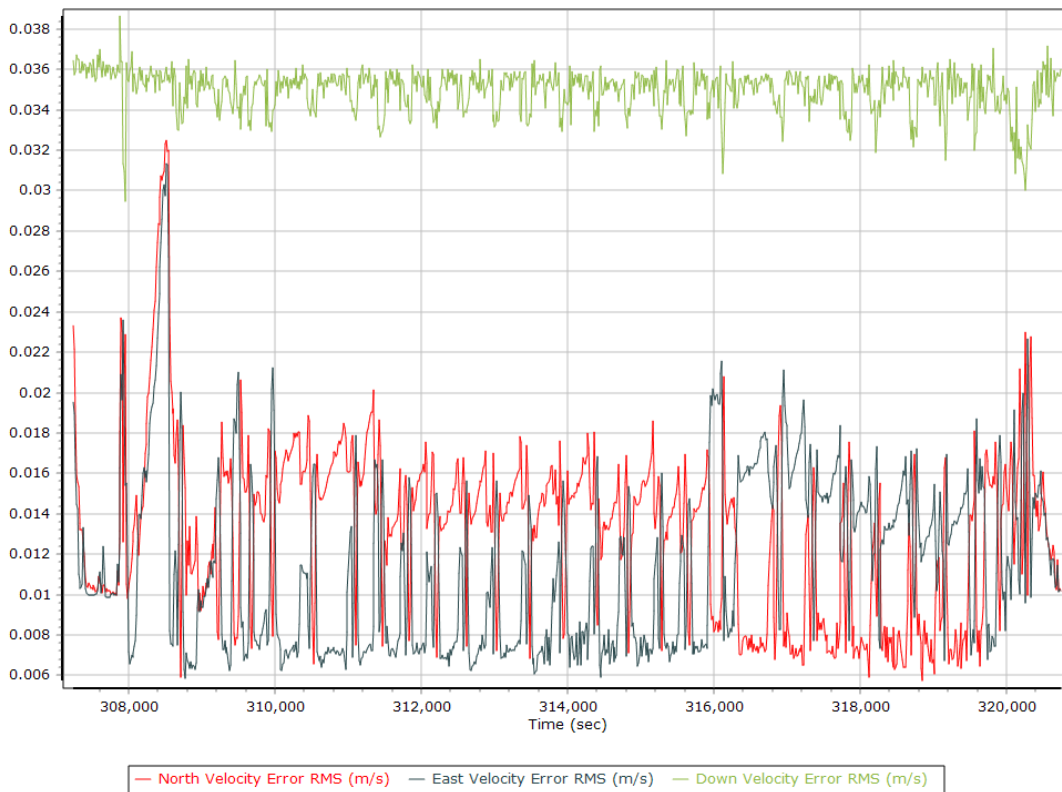


Forward Processed Performance Metrics

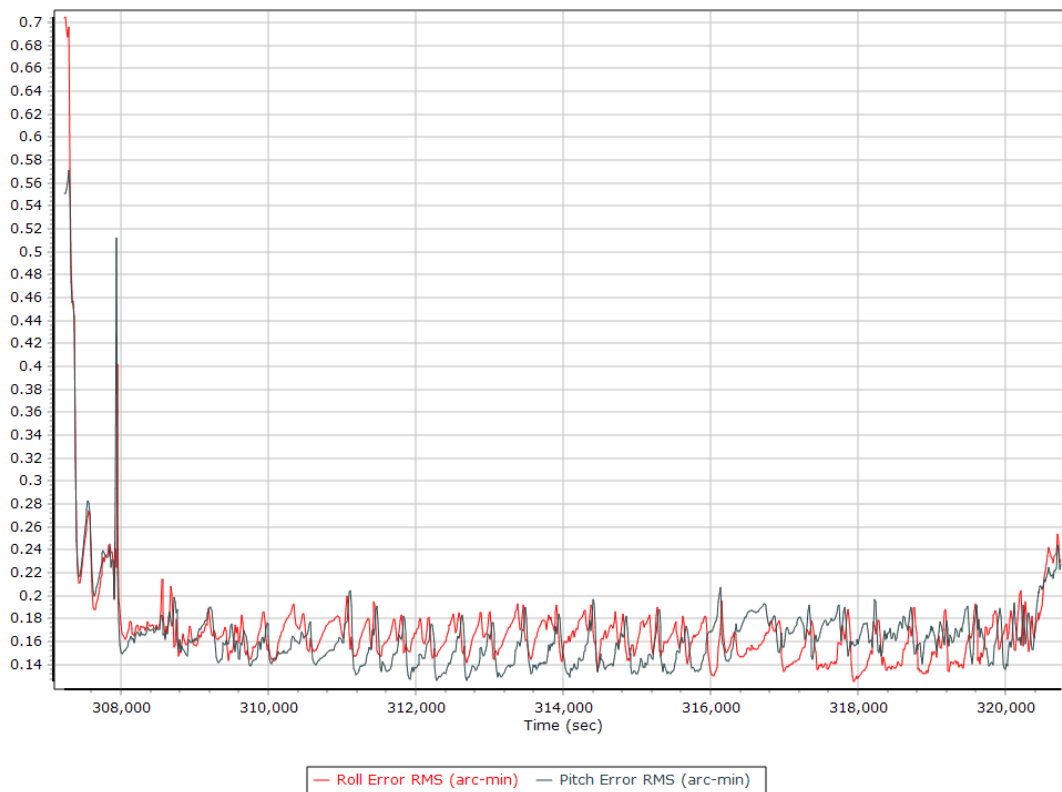
Position Error RMS (m)



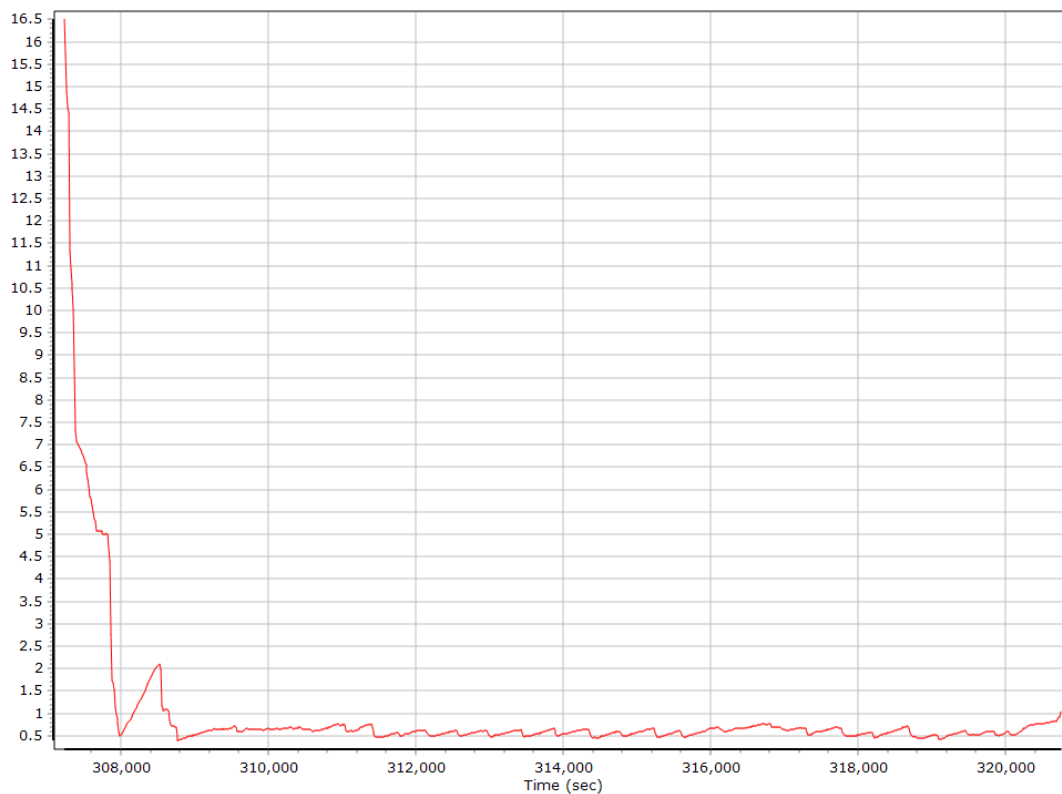
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

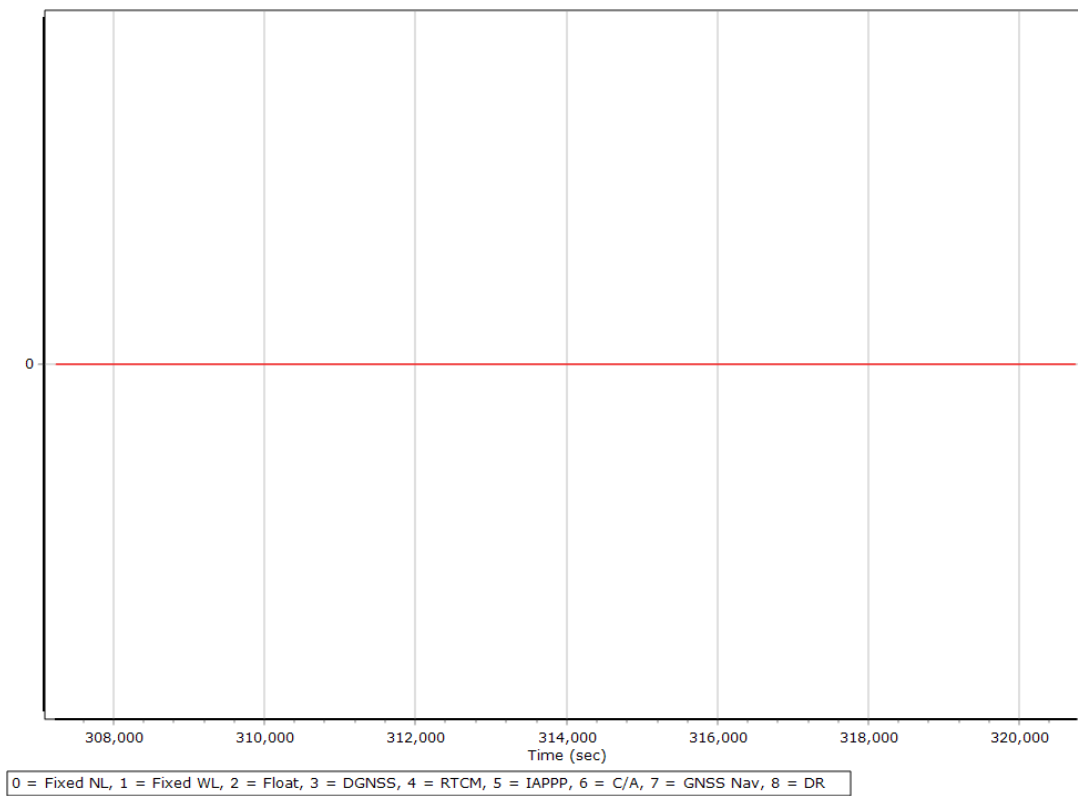


Heading Error RMS (arc-min)

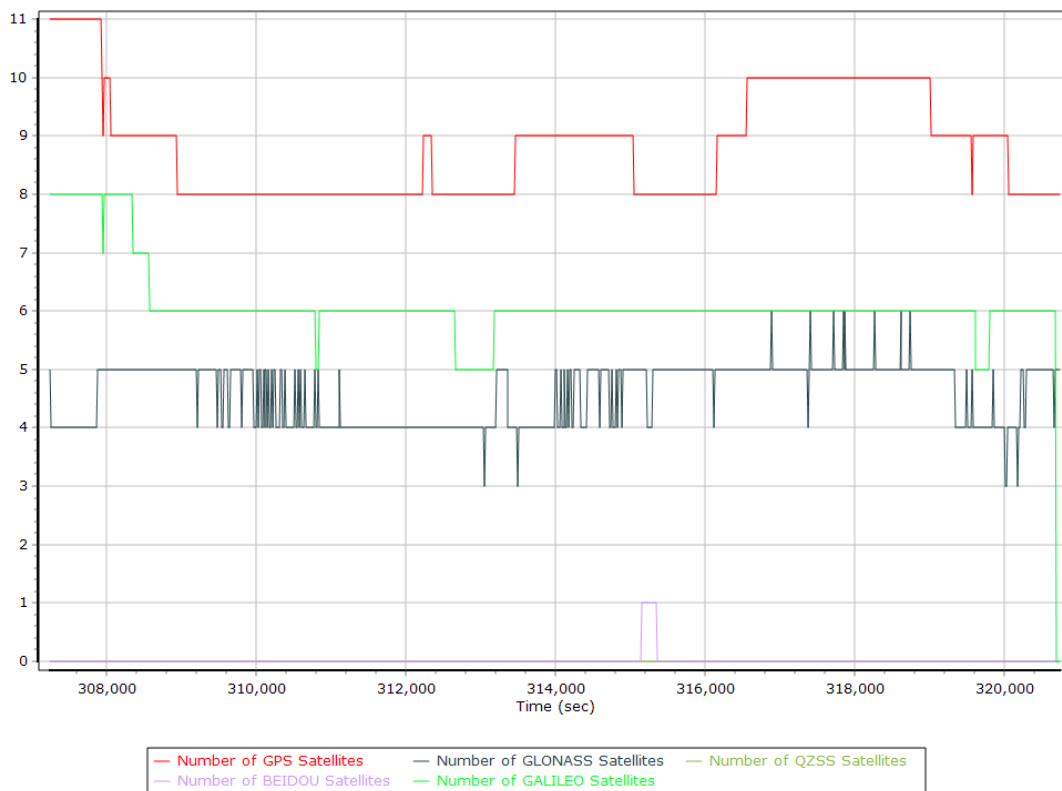


Forward Processed Solution Status

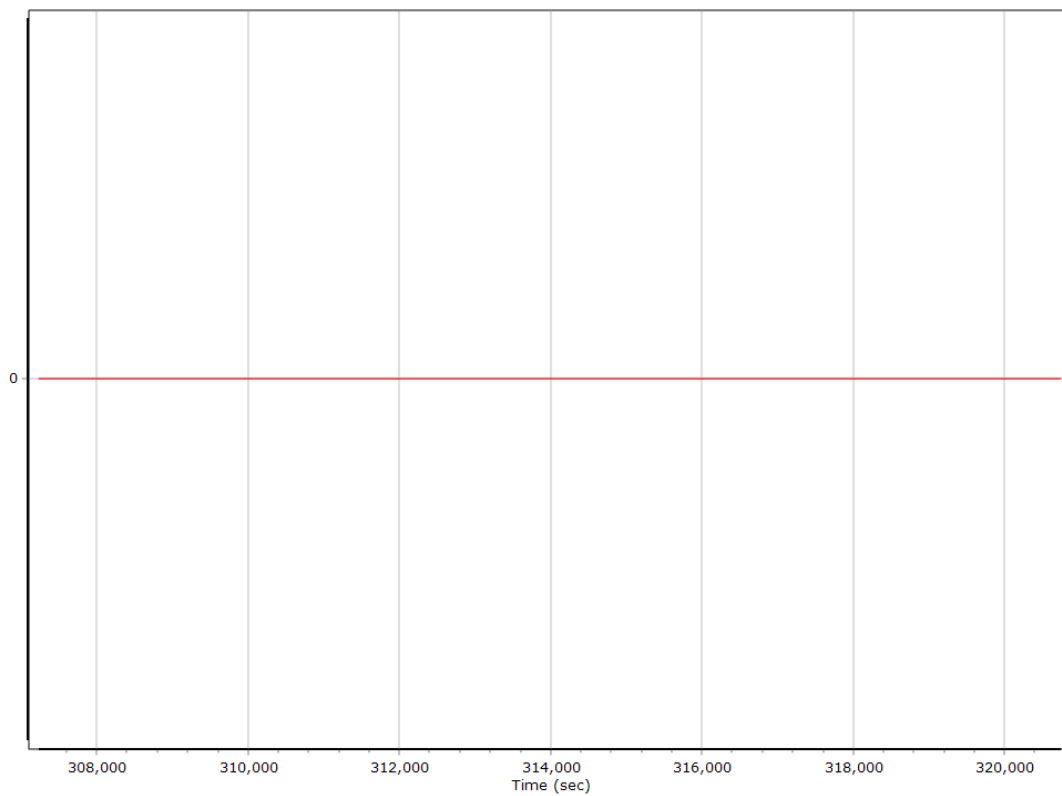
Processing Mode



Number of Satellites



Baseline Length



Export Summary

Export file	sbet_220713_A_5060492_nad2011_FINAL.shp		
Export format	Shapefile		
Solution in use	Post-processed		
Output rate	Specified Distance Interval		
Distance Interval (m)	10.000		
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	307178.002 (07/13/2022 13:19:38)		
Export end time	320753.002 (07/13/2022 17:05:53)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 11 (120W to 114W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2022.528767		