

## General Information

### Mission Information

Project name	211103_A_5060420_nad2011_FINAL
Processing date	2021-11-08 15:54:34
Mission date	2021-11-03 15:31:29
Mission duration	04:49:28.000
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	Unknown External

## Project File List

### Rover Data Files

File name	File type
survey7.pos	POS Data

### Input Files

File Name	File Type
Ephm3070.21g	GLONASS Broadcast Ephemeris
Ephm3070.21n	GPS Broadcast Ephemeris

### Output Files

Filename	File type
sbt_211103_A_5060420_nad2011_FINAL.out	SBET Trajectory File
sbt_211103_A_5060420_nad2011_FINAL.shp	Shapefile Export Output

## Rover Data Summary

First raw data file	survey7.pos		
Last raw data file	survey7.pos		
Start GPS week	2182		
Start time	315088.630 (11/03/2021 15:31:28)		
End time	332457.802 (11/03/2021 20:20:57)		
Start of fine alignment	315508.858 (11/03/2021 15:38:28)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	None		
Correction data	None		
<b>IMU Installation Lever Arms &amp; Mounting Angles</b>			
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)	-0.497	-0.045	-1.199
Reference to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

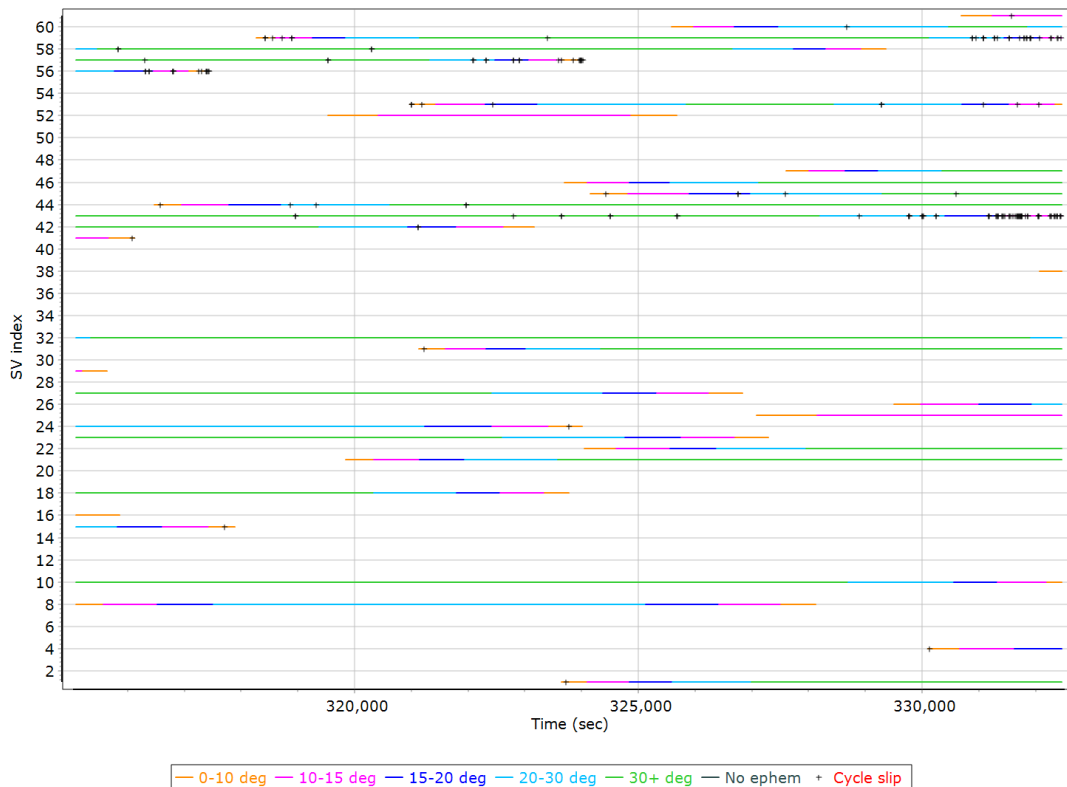
## Rover Data QC

### Raw IMU Import QC Summary

IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_211103_A_5060420_nad2011_FINAL.log
IMU Records Processed	3473005
Termination Status	Normal
IMU Anomalies	0

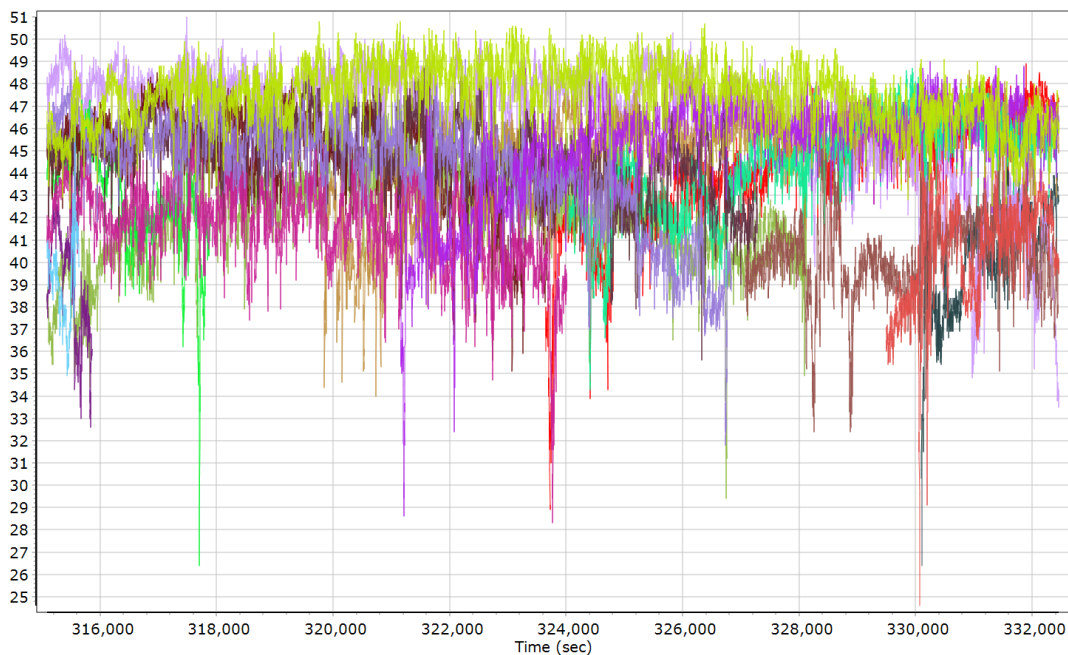
## Primary Observables & Satellite Data

### GPS/GLONASS L1 Satellite Lock/Elevation



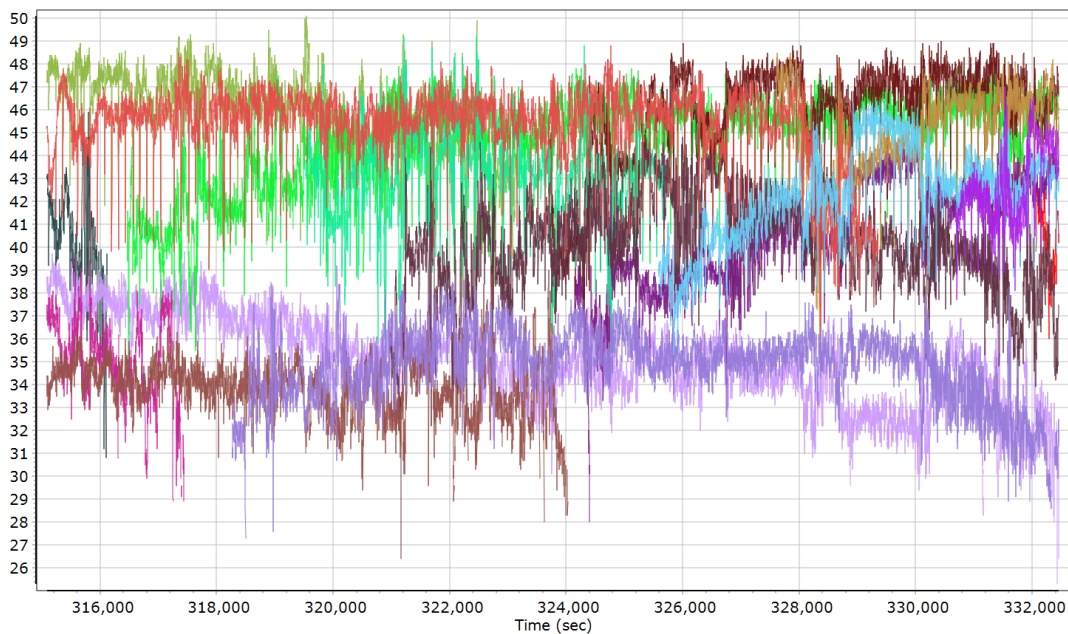


### GPS L1 SNR



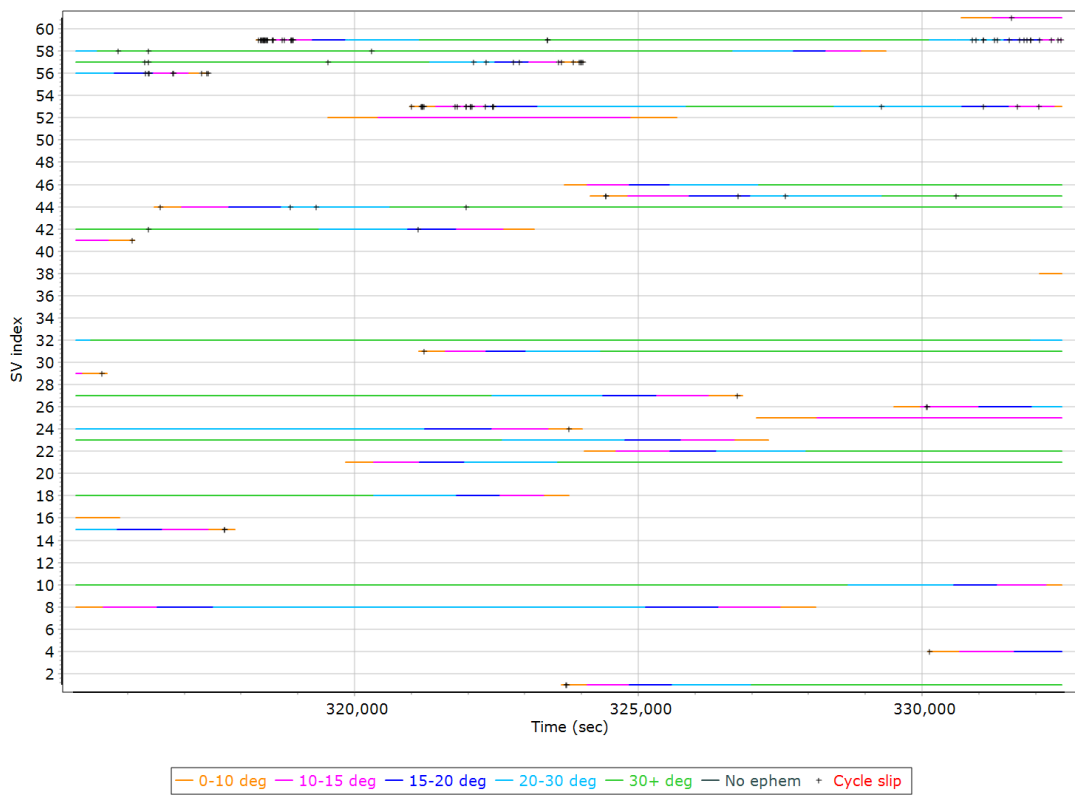
- |                           |                           |                           |                           |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 01 L1 SNR (dB/Hz) | GPS PRN 04 L1 SNR (dB/Hz) | GPS PRN 08 L1 SNR (dB/Hz) | GPS PRN 10 L1 SNR (dB/Hz) |
| GPS PRN 15 L1 SNR (dB/Hz) | GPS PRN 16 L1 SNR (dB/Hz) | GPS PRN 18 L1 SNR (dB/Hz) | GPS PRN 21 L1 SNR (dB/Hz) |
| GPS PRN 22 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 27 L1 SNR (dB/Hz) | GPS PRN 29 L1 SNR (dB/Hz) | GPS PRN 31 L1 SNR (dB/Hz) |
| GPS PRN 32 L1 SNR (dB/Hz) |                           |                           |                           |

### GLONASS L1 SNR

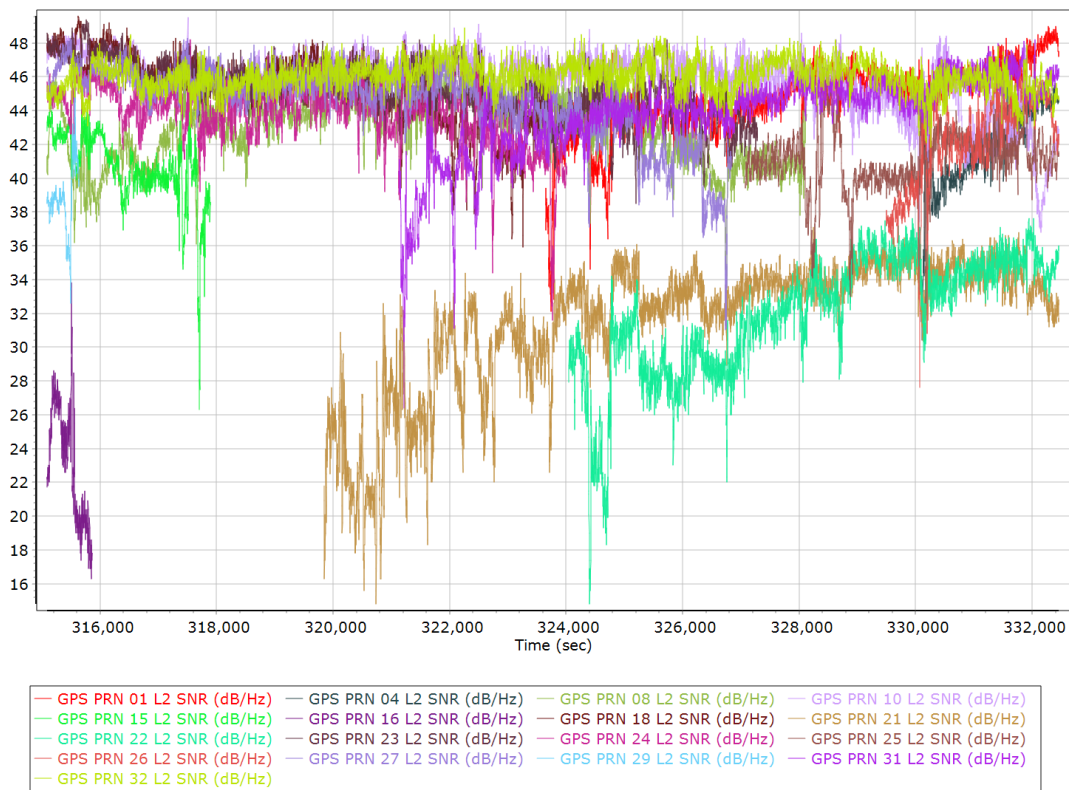


- |                           |                           |                           |
|---------------------------|---------------------------|---------------------------|
| GLONASS 01 L1 SNR (dB/Hz) | GLONASS 04 L1 SNR (dB/Hz) | GLONASS 05 L1 SNR (dB/Hz) |
| GLONASS 06 L1 SNR (dB/Hz) | GLONASS 07 L1 SNR (dB/Hz) | GLONASS 08 L1 SNR (dB/Hz) |
| GLONASS 09 L1 SNR (dB/Hz) | GLONASS 10 L1 SNR (dB/Hz) | GLONASS 15 L1 SNR (dB/Hz) |
| GLONASS 16 L1 SNR (dB/Hz) | GLONASS 19 L1 SNR (dB/Hz) | GLONASS 20 L1 SNR (dB/Hz) |
| GLONASS 21 L1 SNR (dB/Hz) | GLONASS 22 L1 SNR (dB/Hz) | GLONASS 23 L1 SNR (dB/Hz) |
| GLONASS 24 L1 SNR (dB/Hz) |                           |                           |

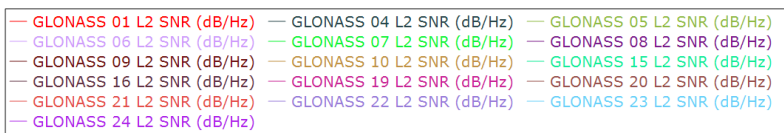
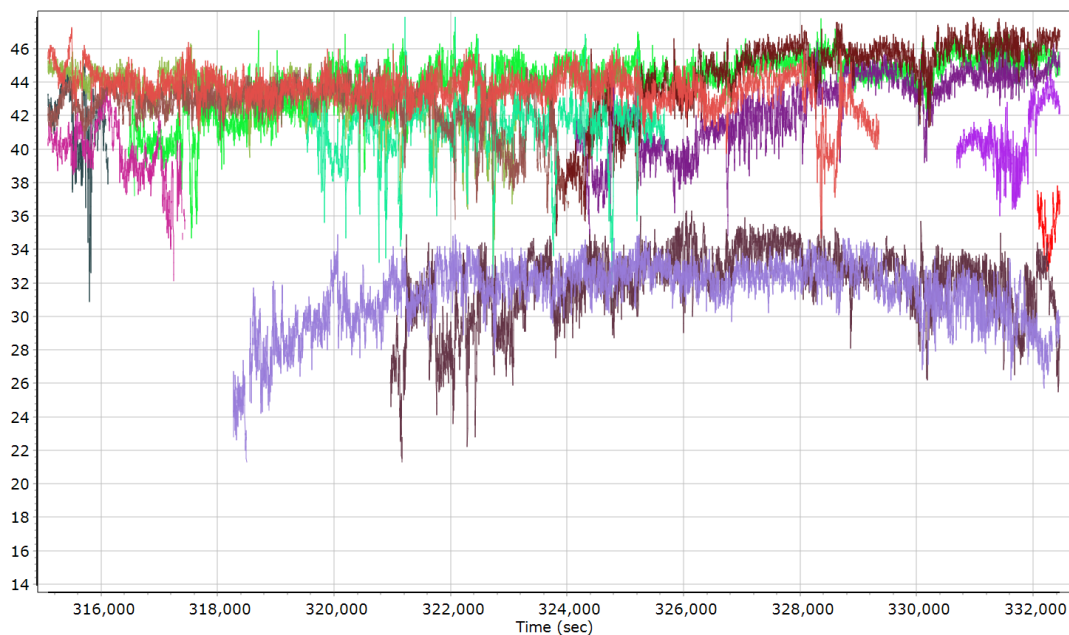
### GPS/GLONASS L2 Satellite Lock/Elevation



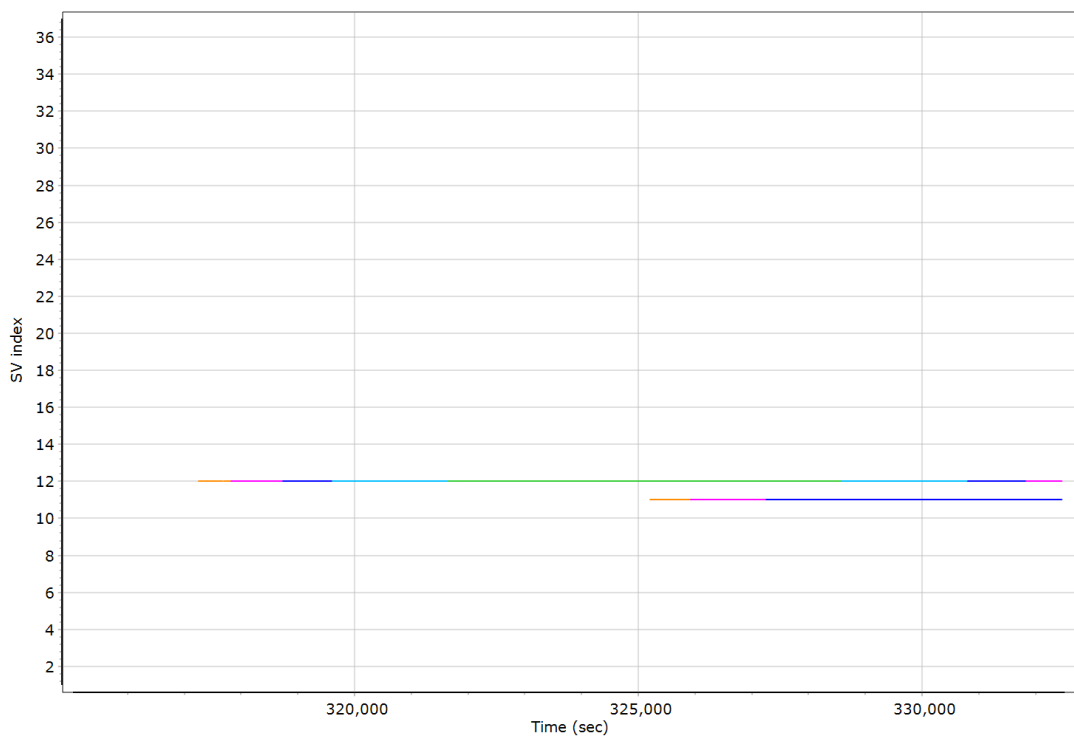
### GPS L2 SNR



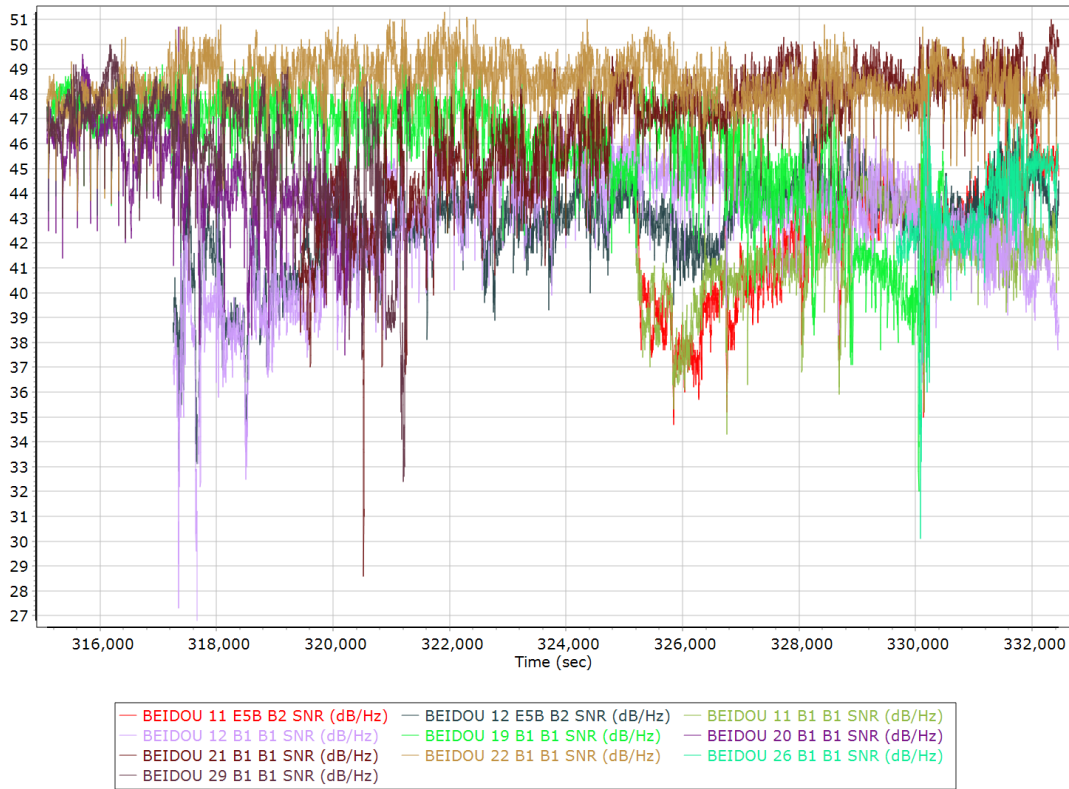
### GLONASS L2 SNR



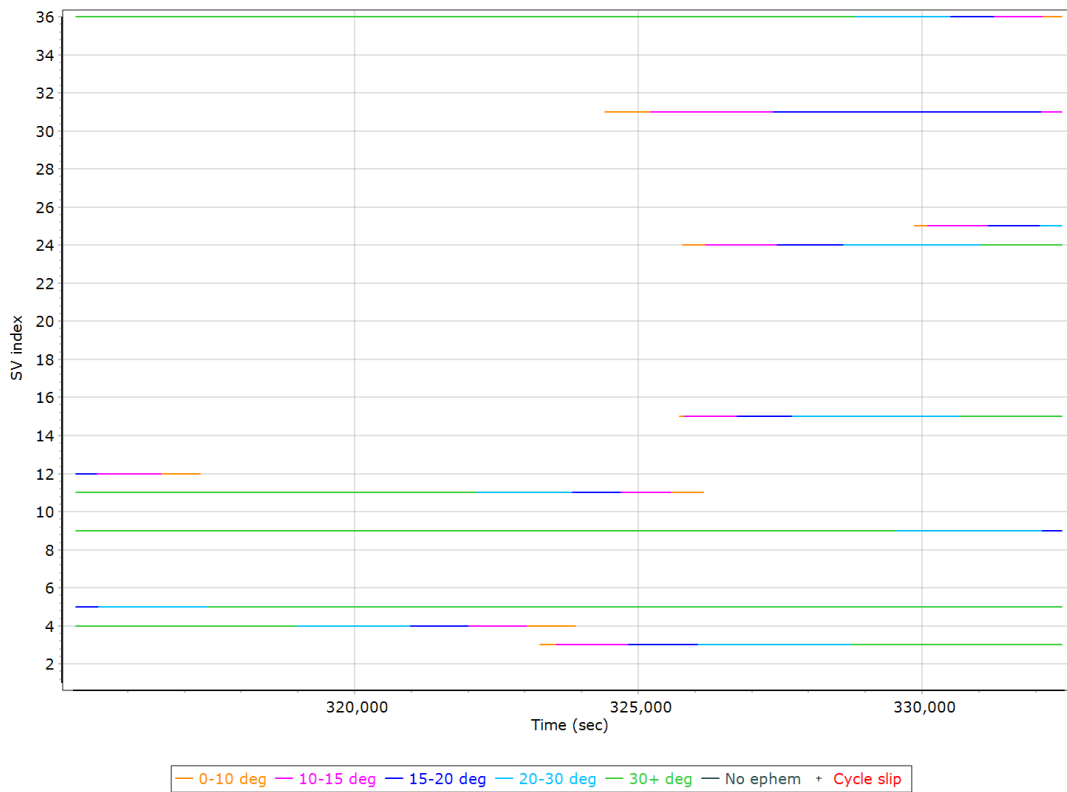
### BEIDOU Satellite Lock/Elevation



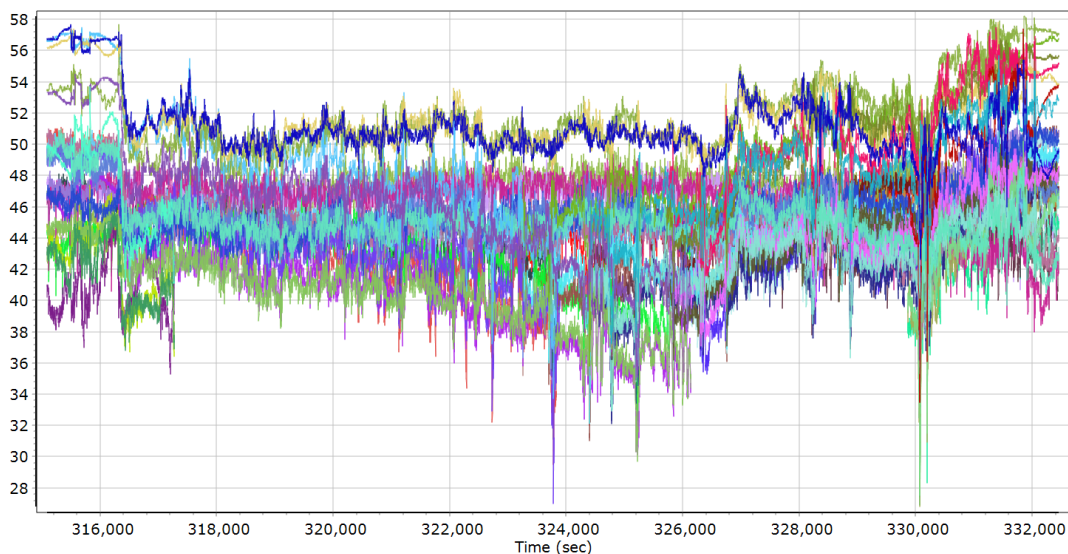
### BEIDOU SNR



### GALILEO Satellite Lock/Elevation



## GALILEO SNR



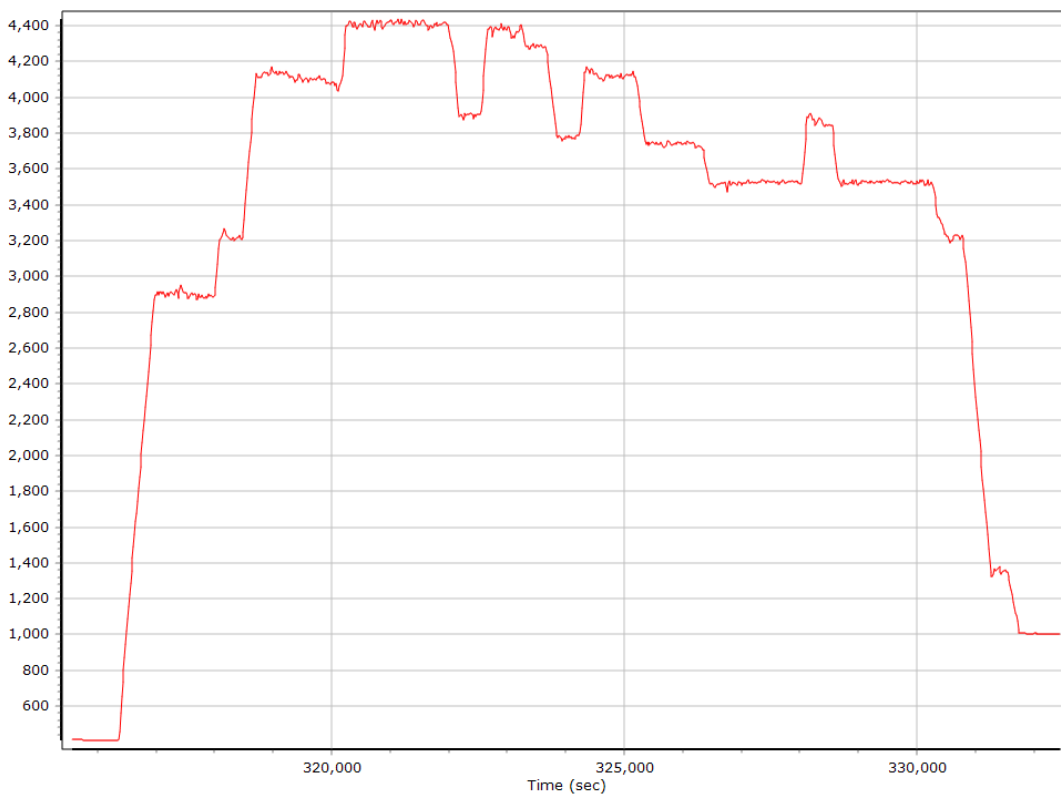
— GALILEO 03 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 04 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 05 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 09 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 11 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 12 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 15 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— 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 36 L1 BOC_1_1_DP_MBOC 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)	— GALILEO 15 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 24 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 25 L5E5A BPSK10_PD SNR (dB/Hz)

## Smoothed Trajectory Information

### Top View



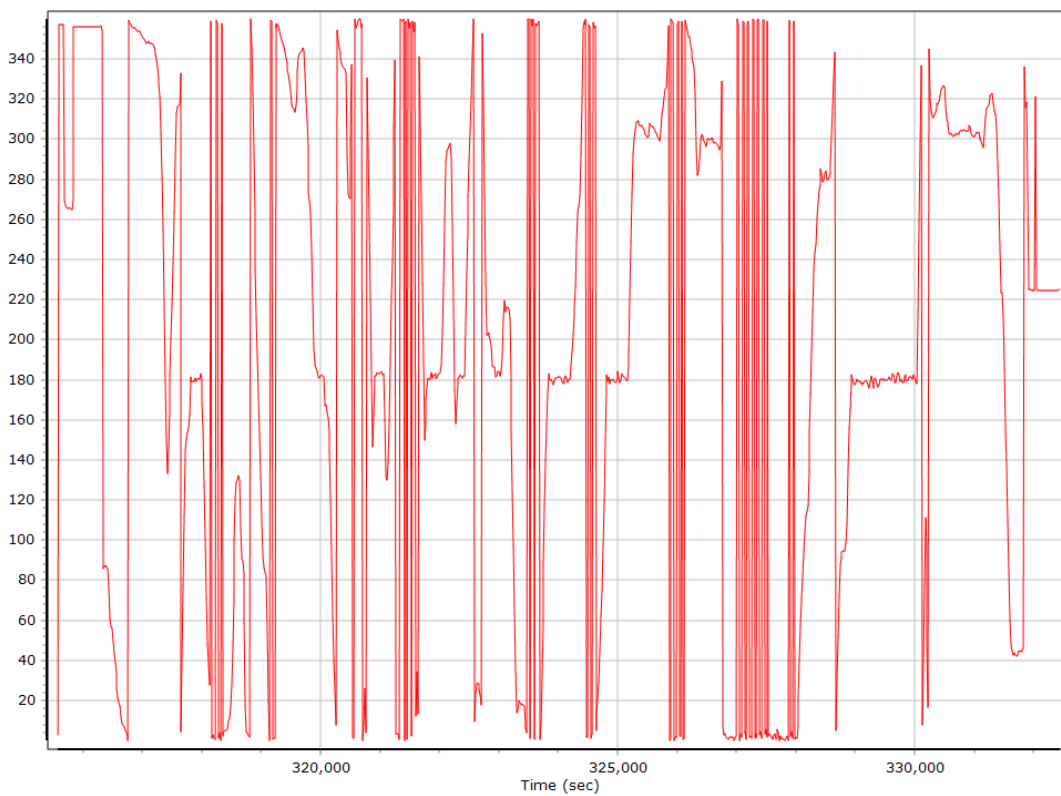
### Altitude



## Roll/Pitch

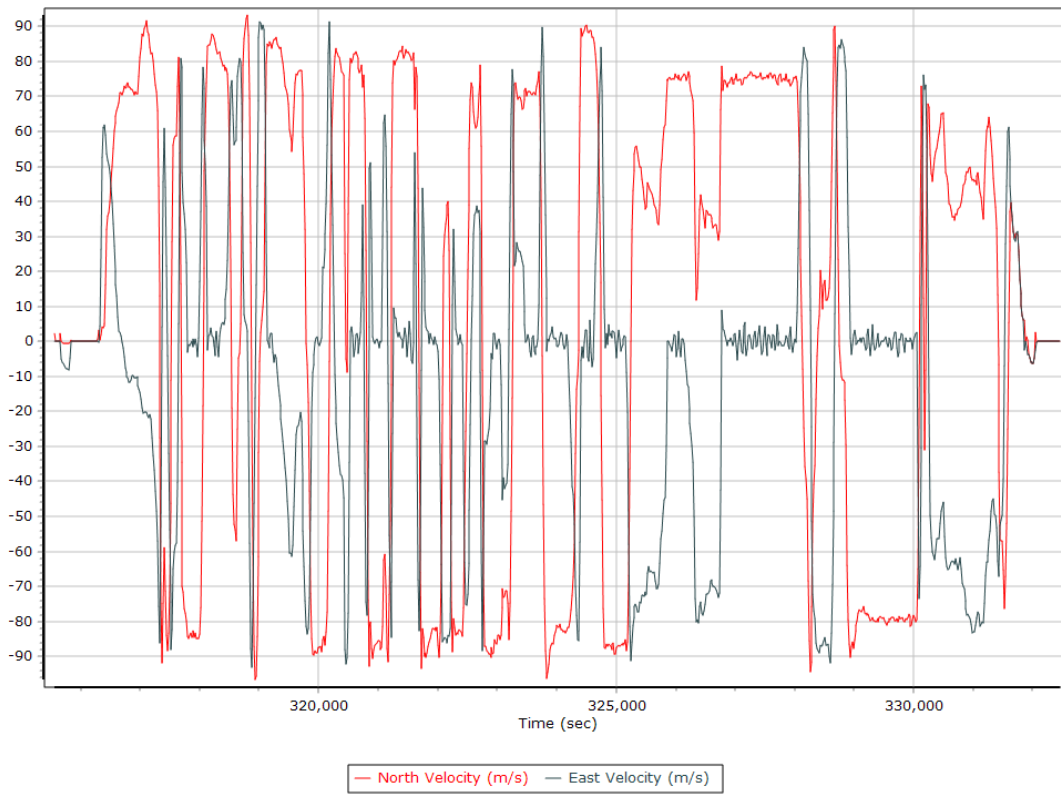


## Heading

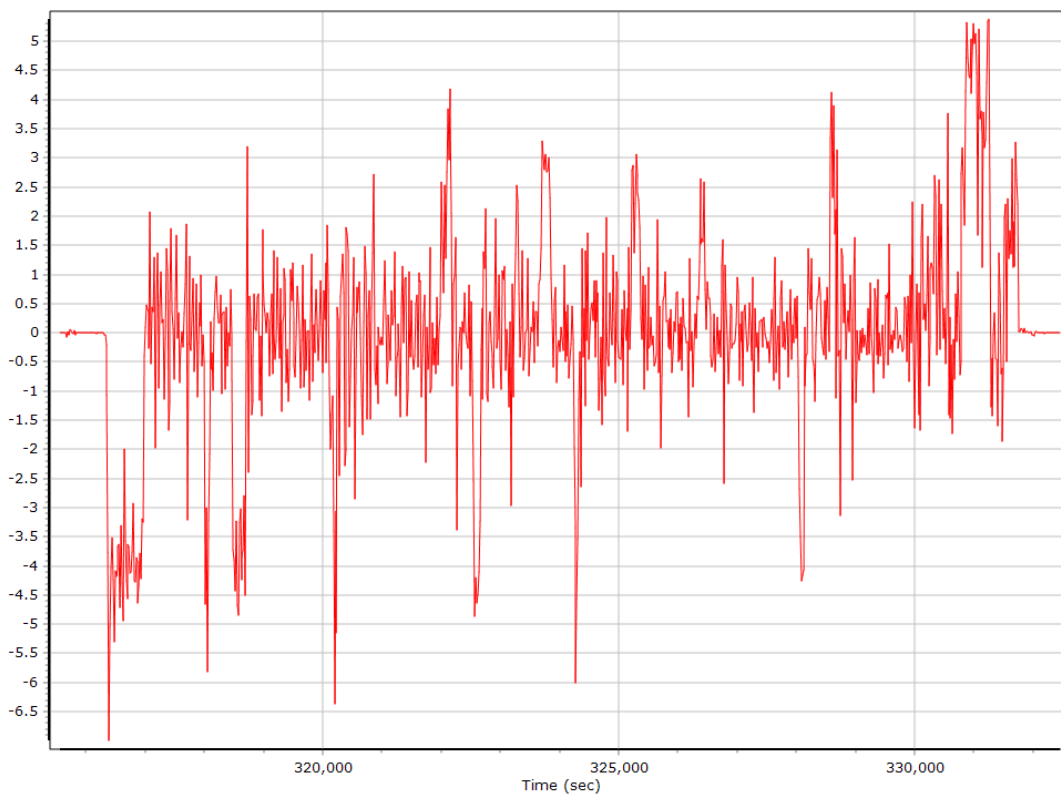




## North/East Velocity

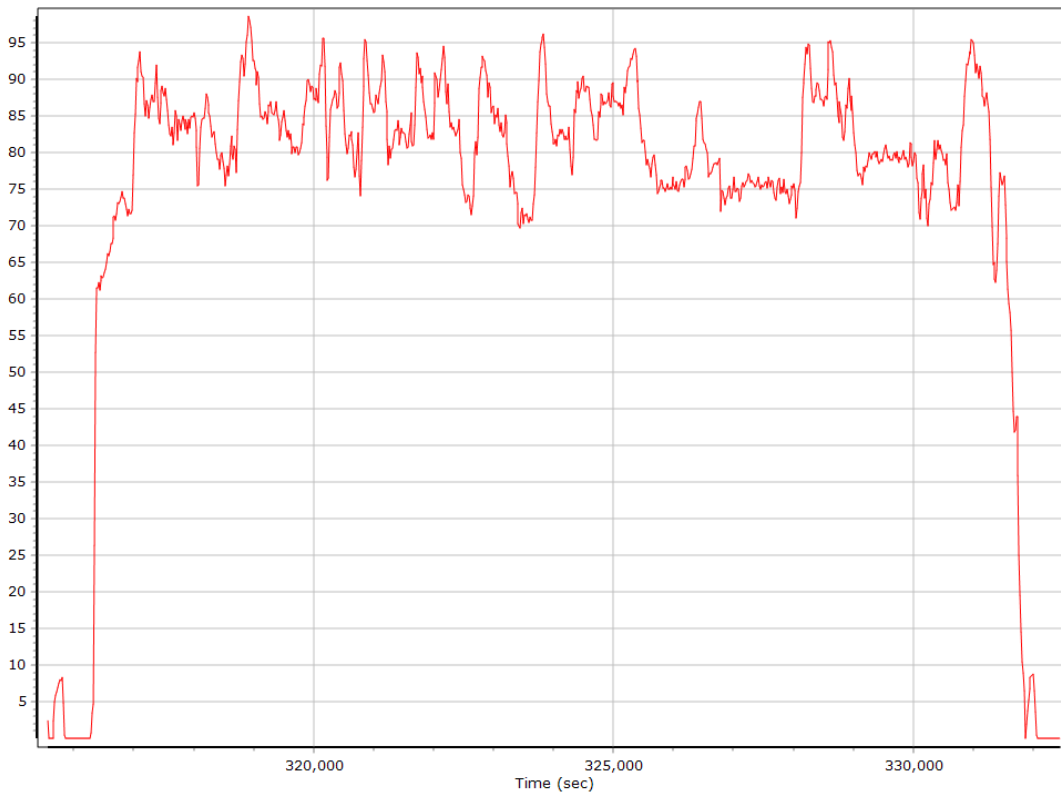


## Down Velocity

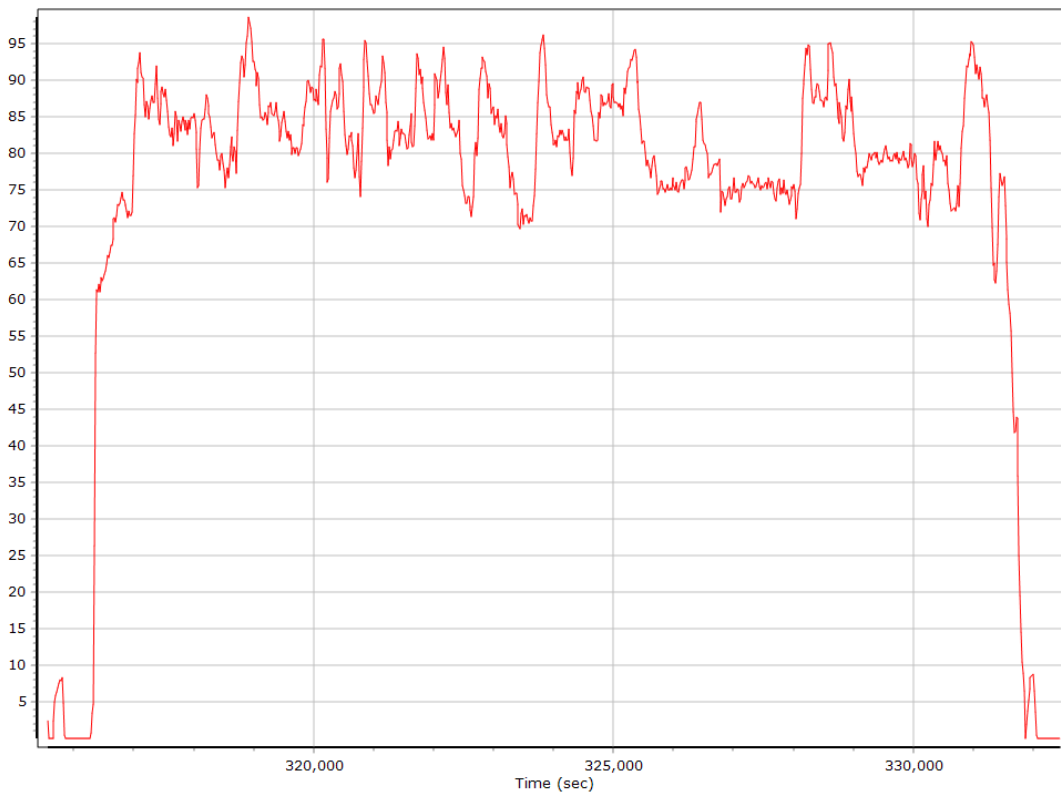




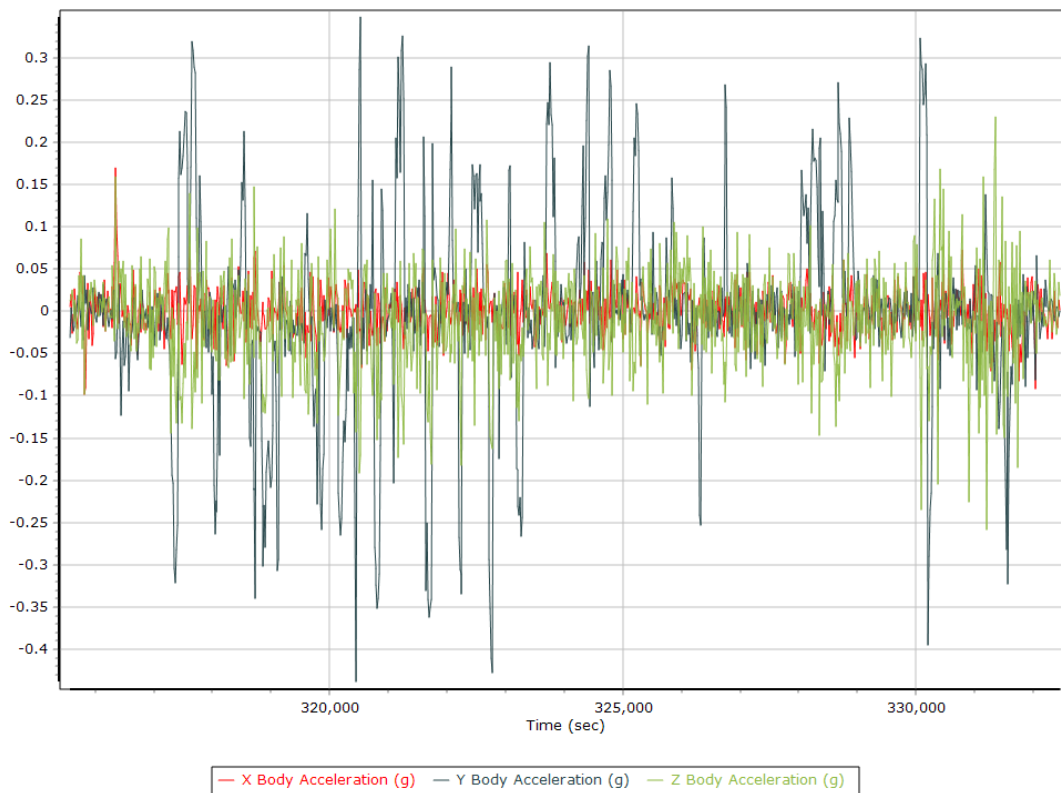
## Total Speed



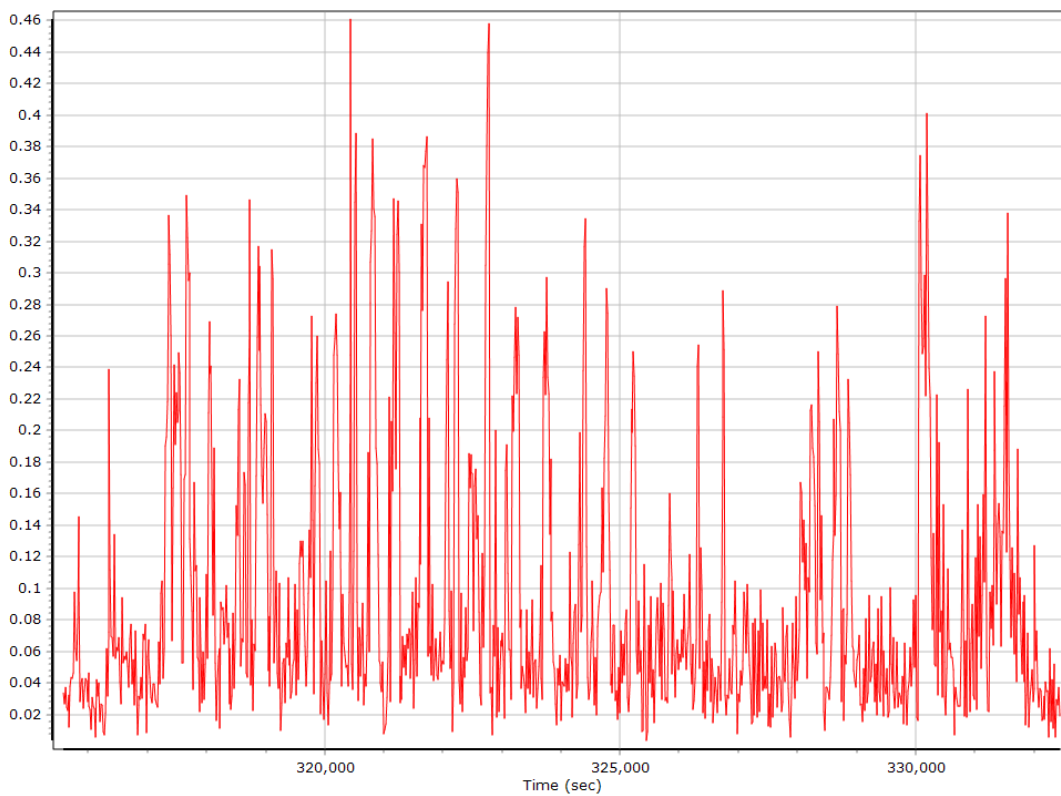
## Ground Speed



## Body Acceleration



## Total Body Acceleration



## Body Angular Rate

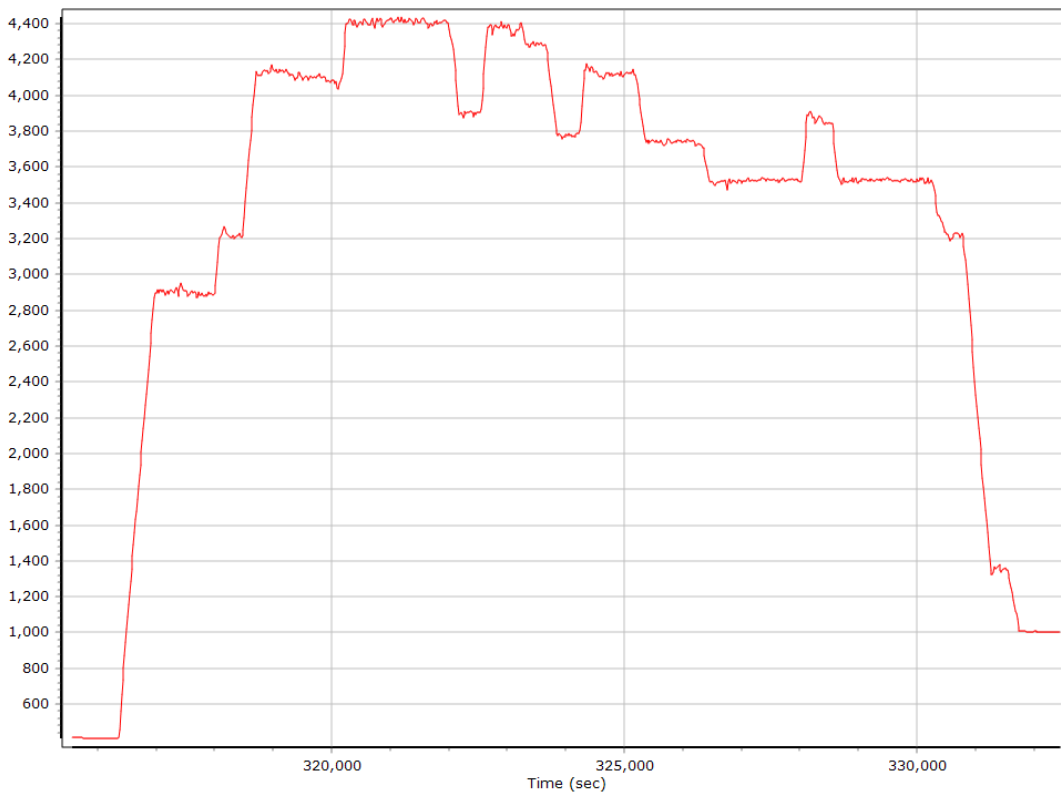


## Forward Processed Trajectory Information

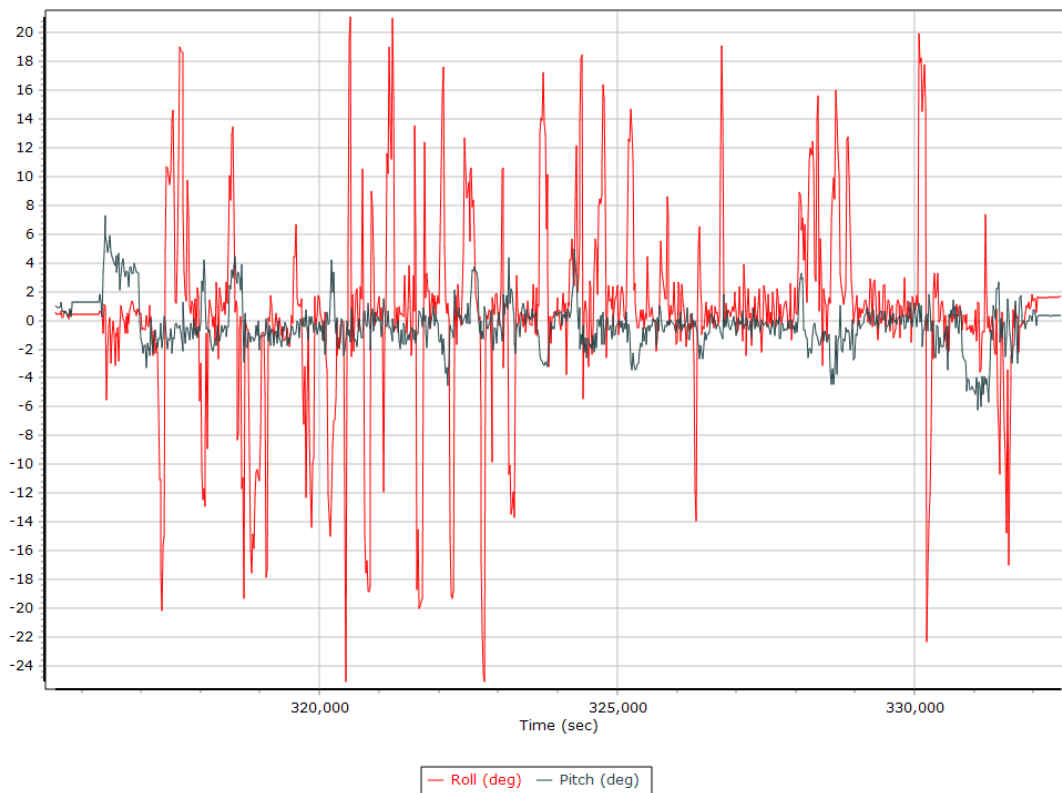
### Top View



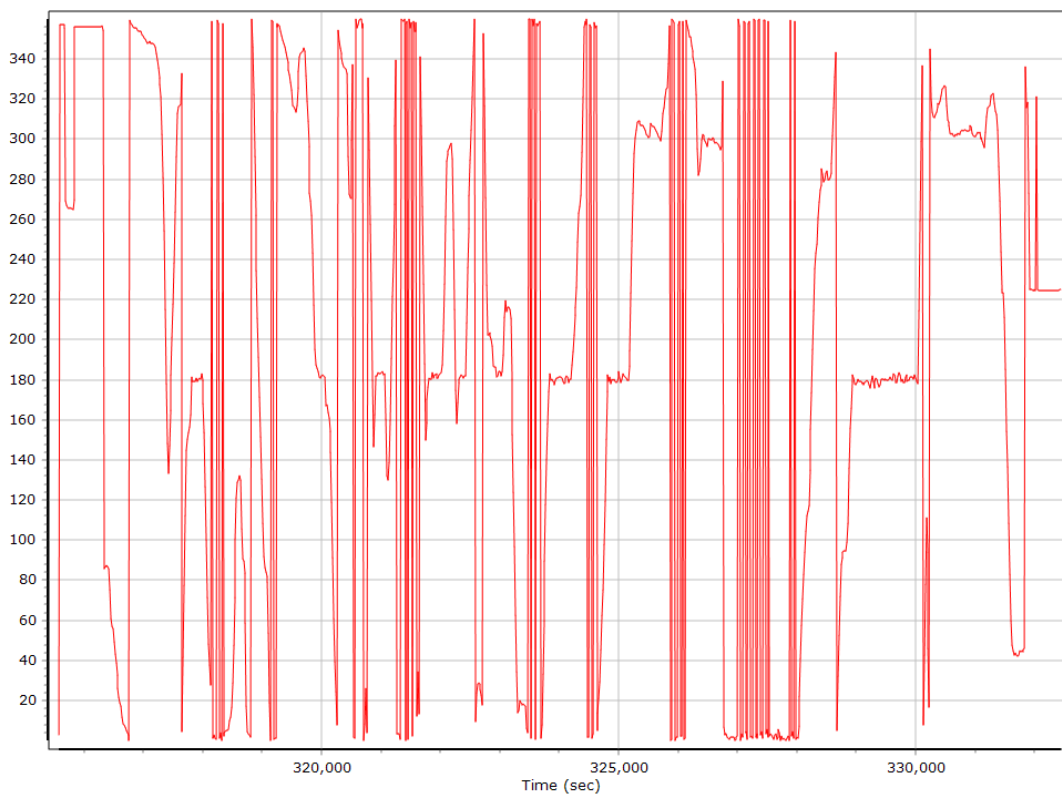
### Altitude



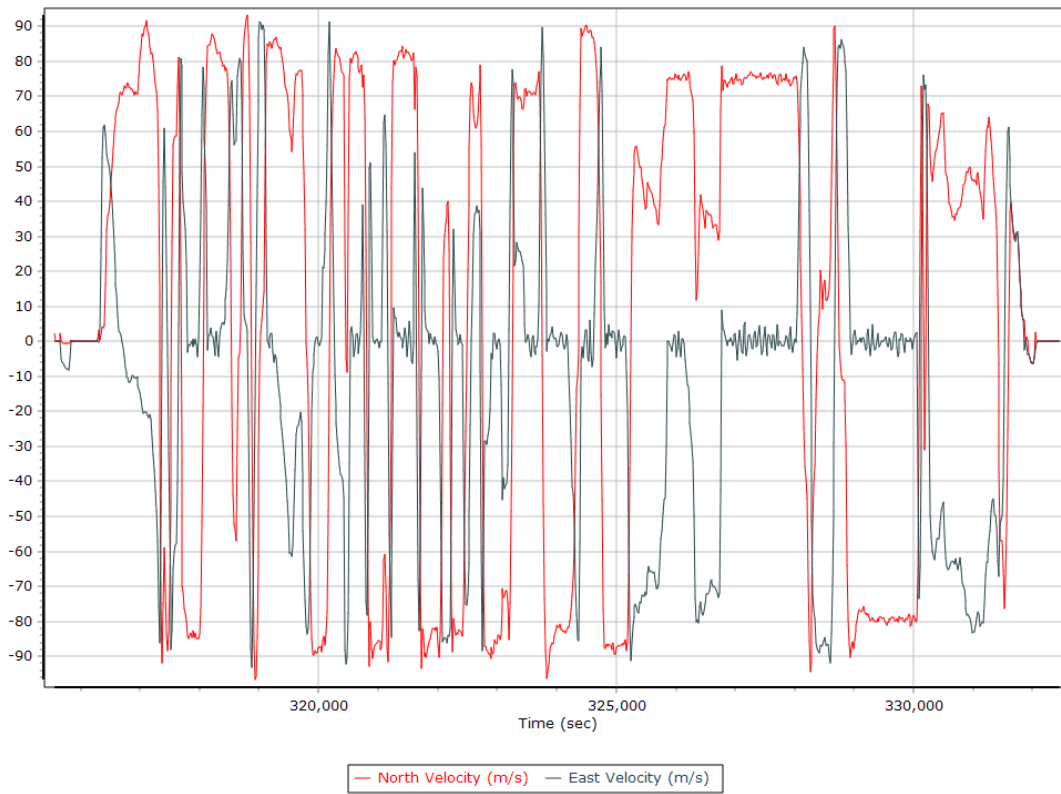
## Roll/Pitch



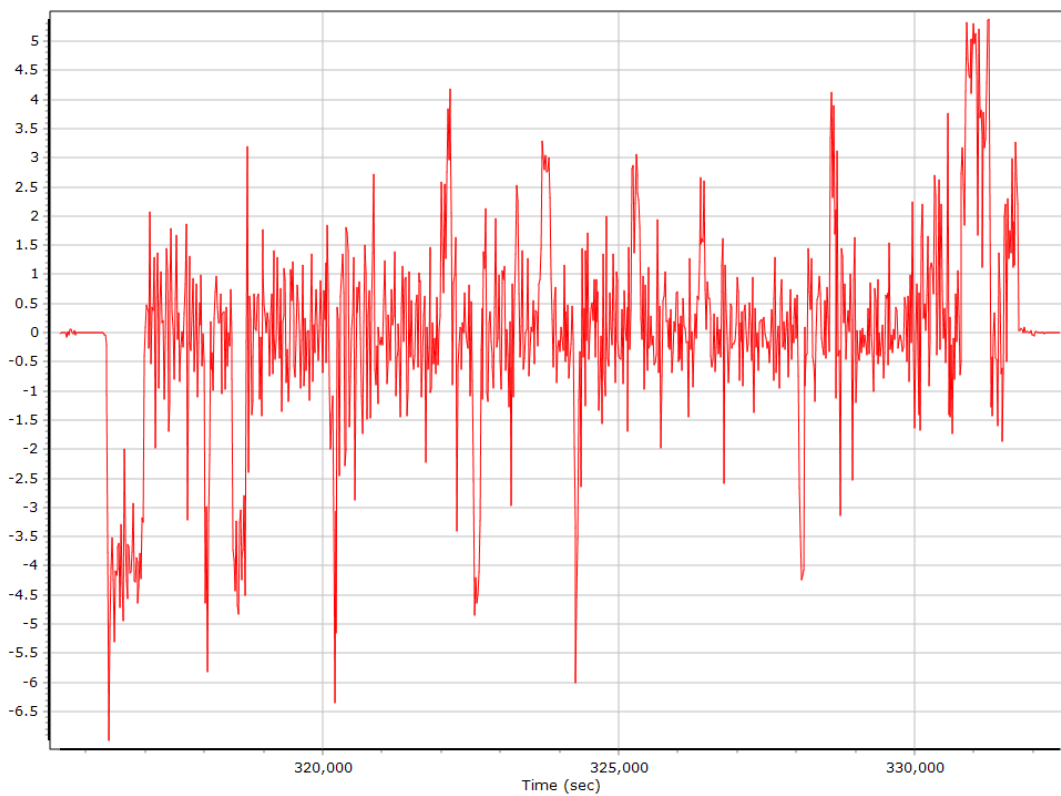
## Heading



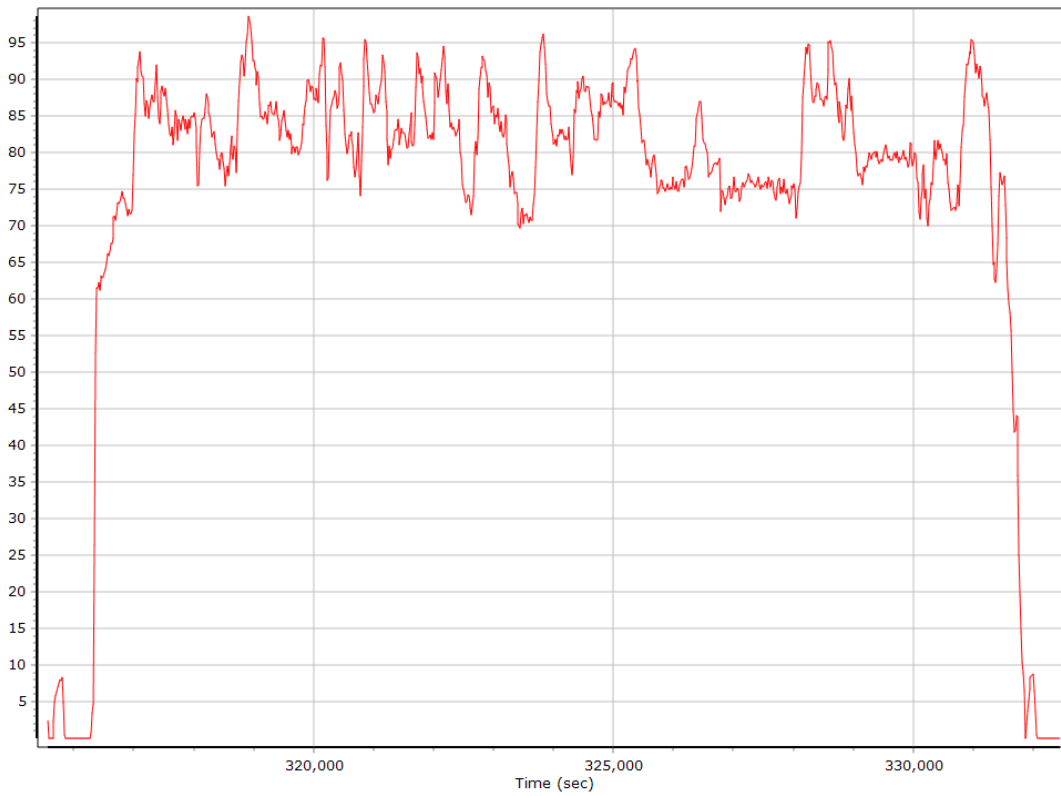
## North/East Velocity



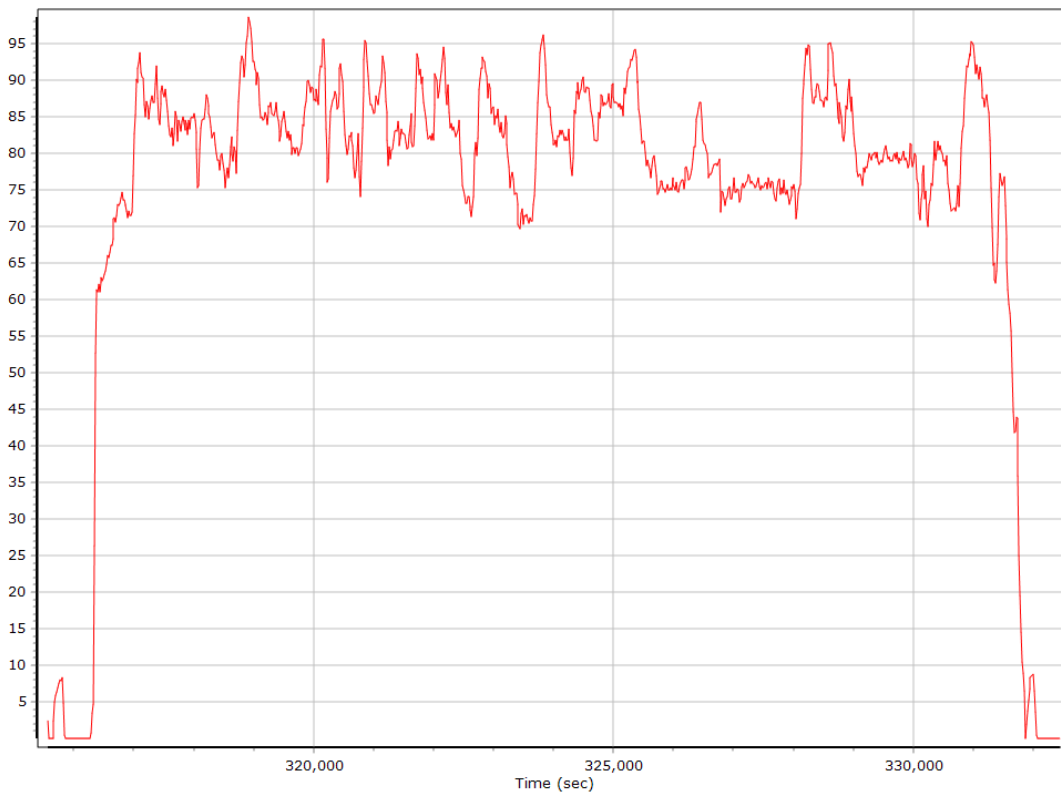
## Down Velocity



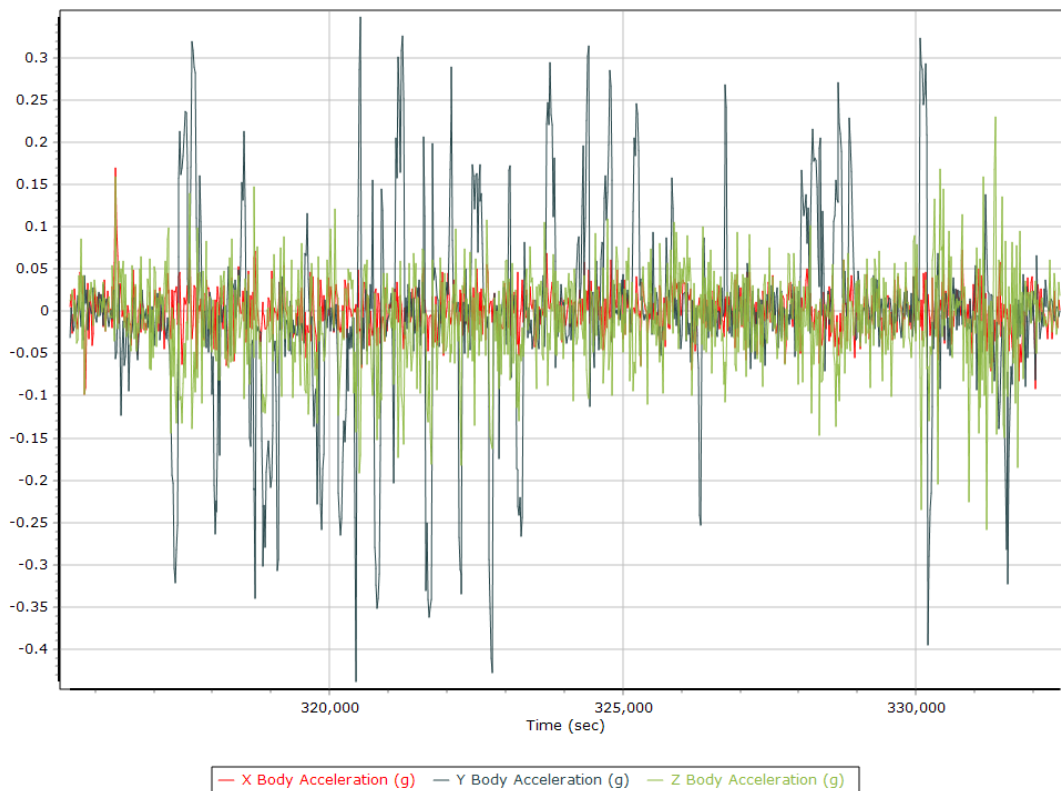
## Total Speed



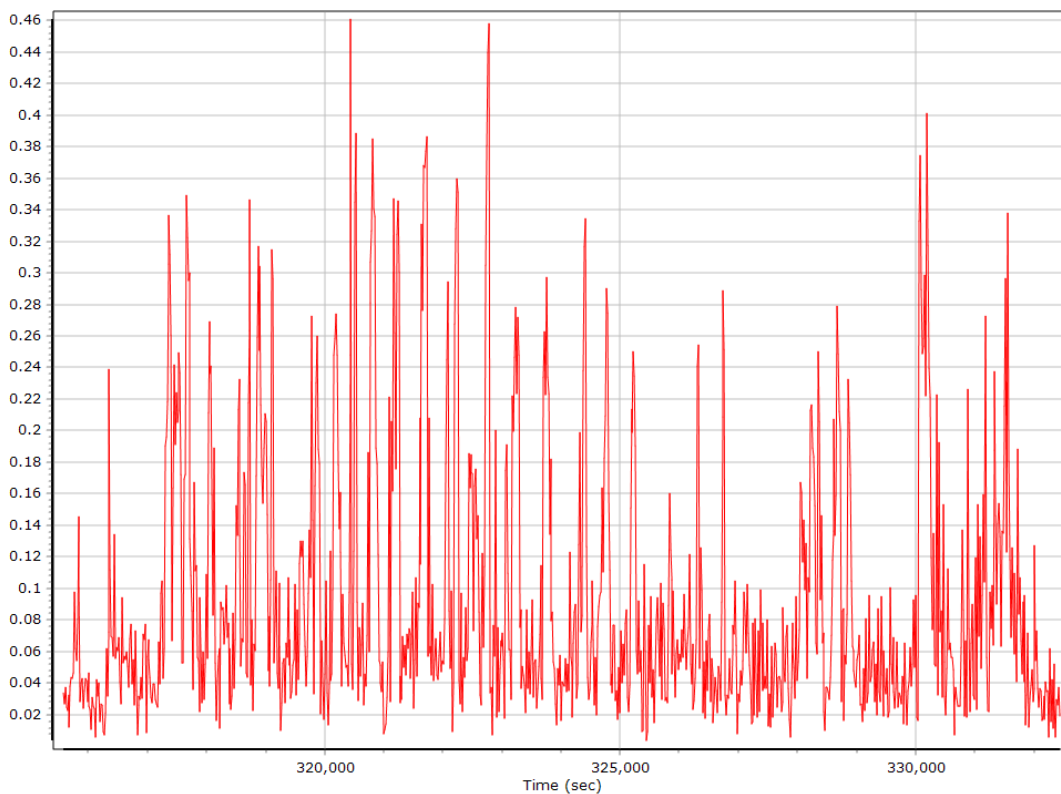
## Ground Speed



## Body Acceleration



## Total Body Acceleration





## Body Angular Rate

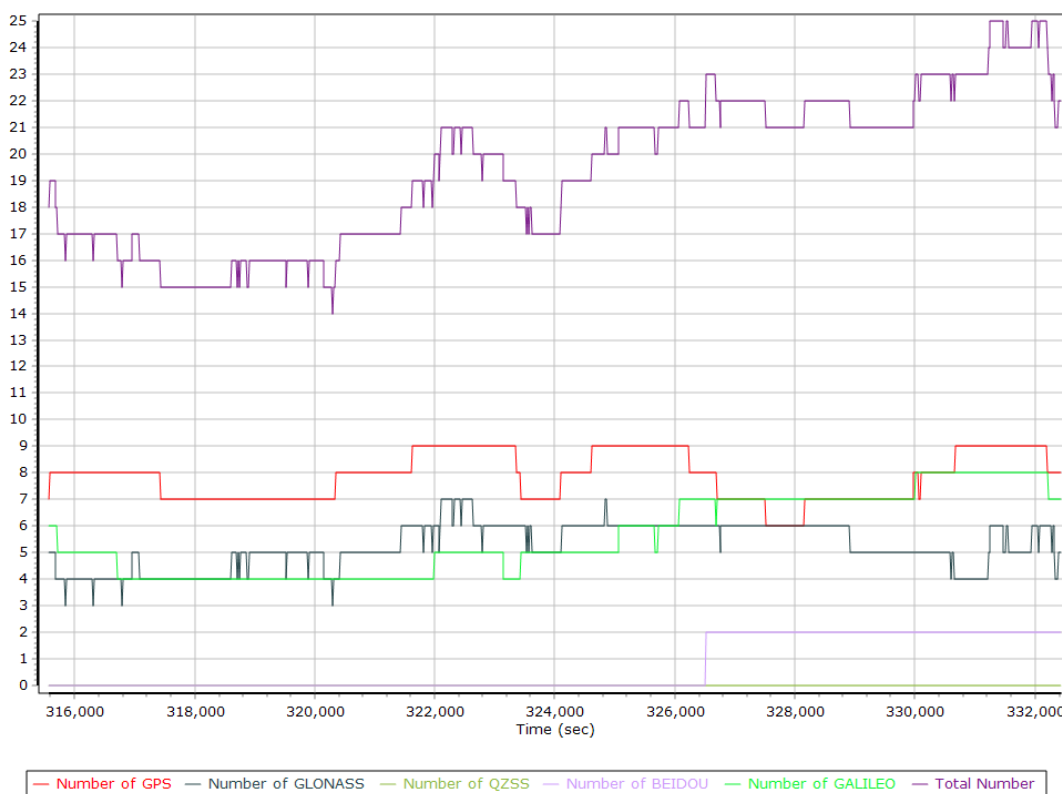


## GNSS QC

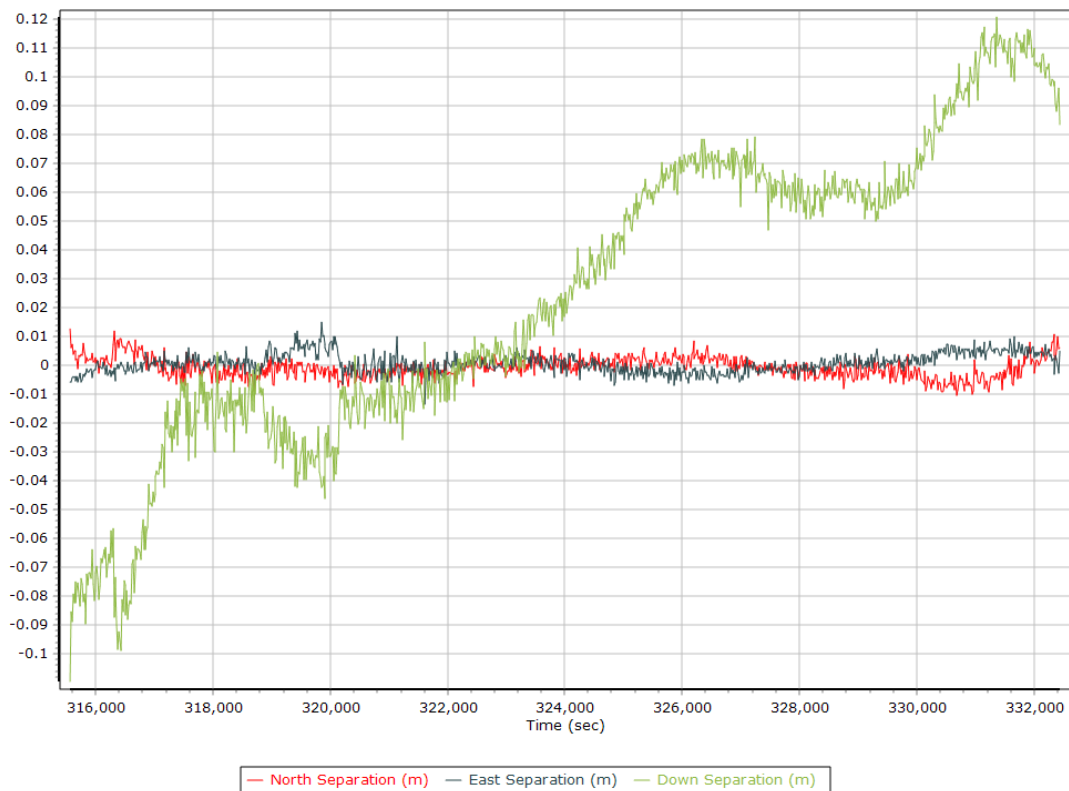
### GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	6	9	8
Number of GLONASS SV	0	7	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	2	1
Number of GALILEO SV	4	8	6
Total number of SV	13	25	19
PDOP	1.03	2.06	1.28
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	17346.00	0.00	1.00
Percentage	99.99	0.00	0.01

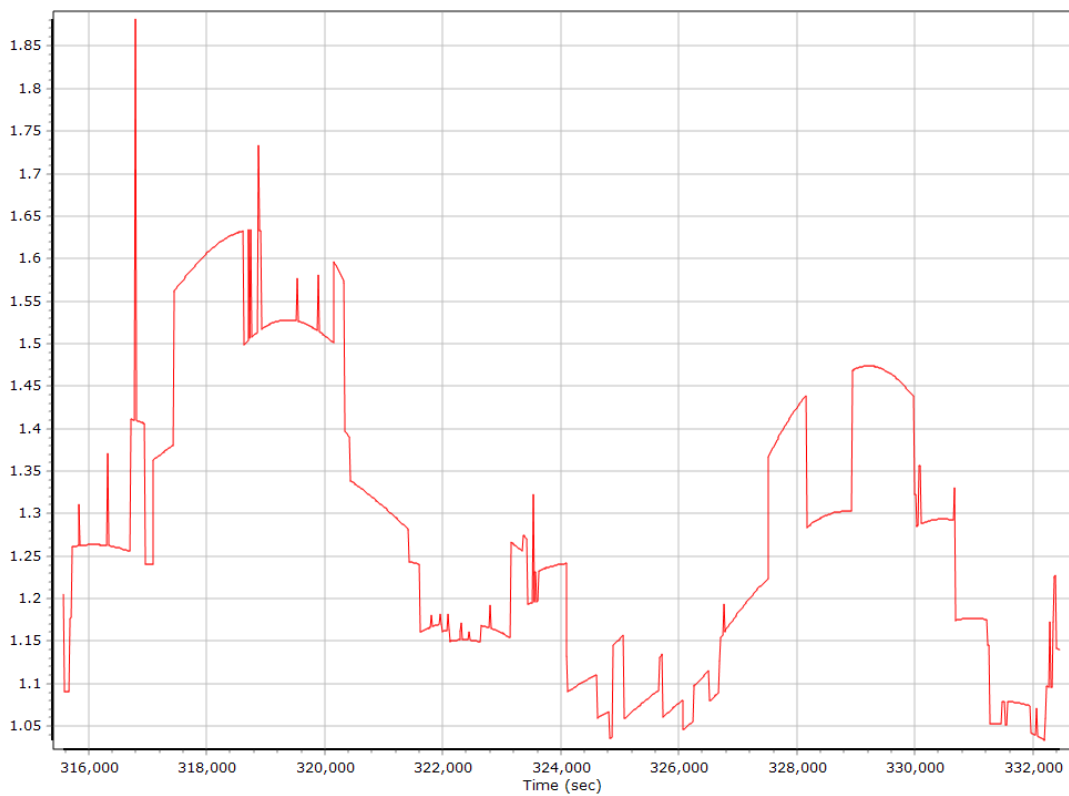
### Num SVs in solution



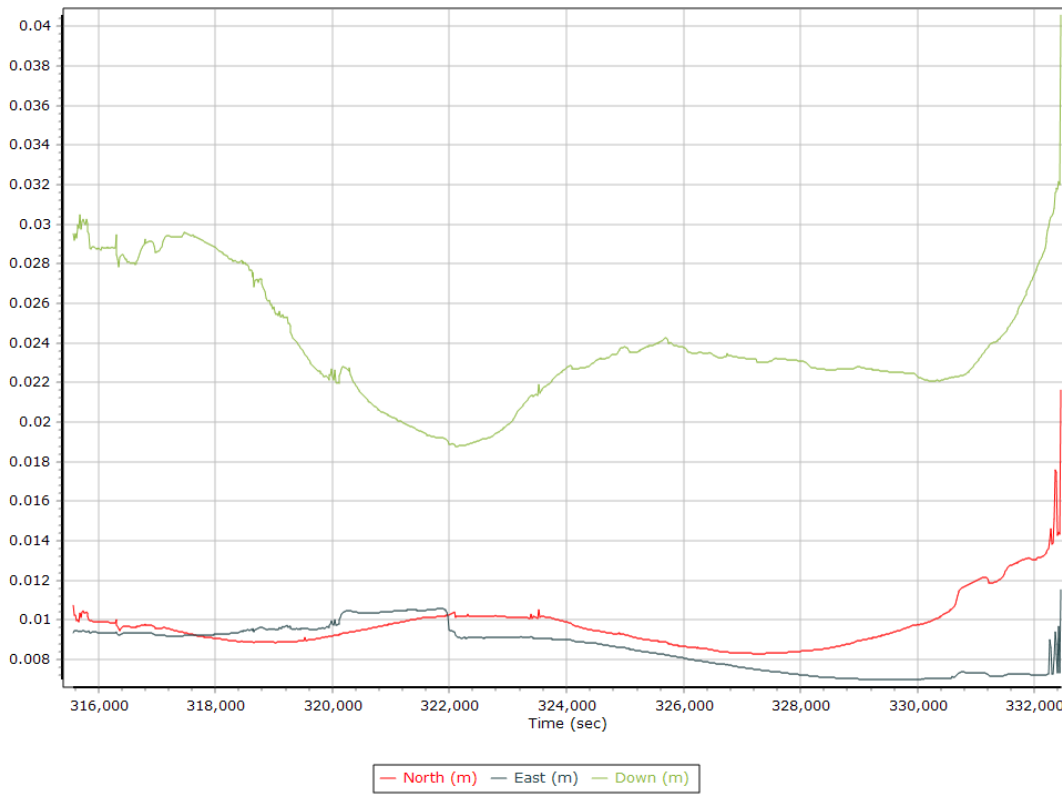
### Forward/Reverse Separation



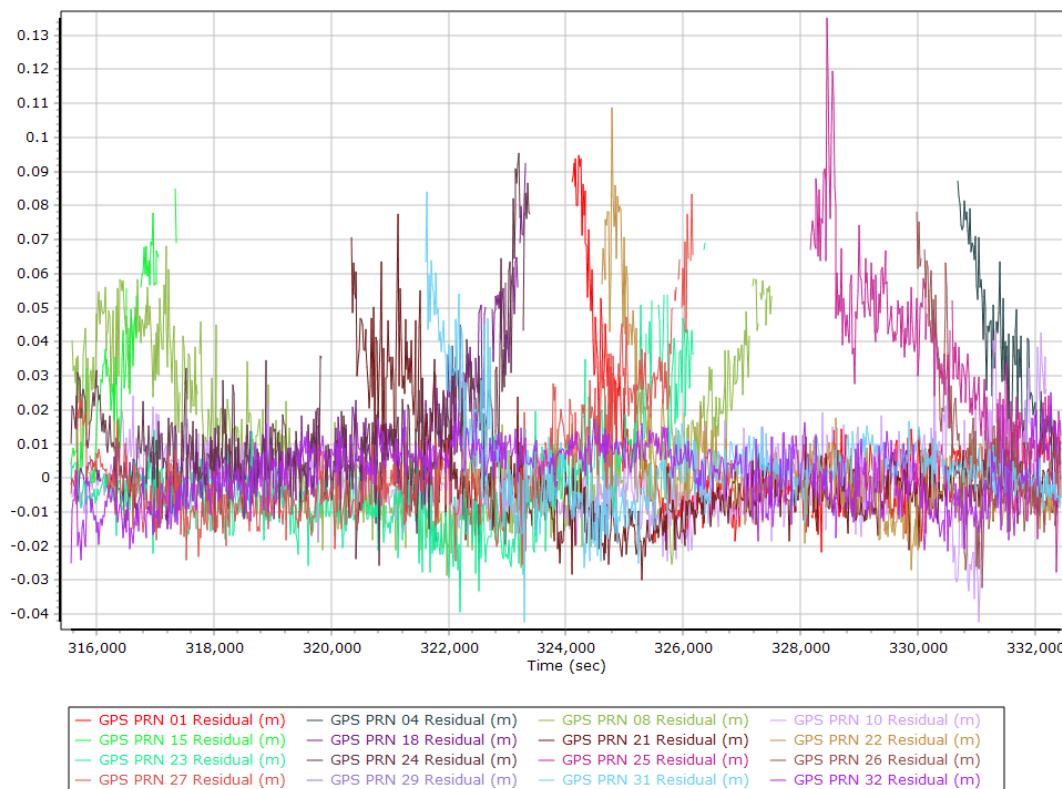
### PDOP



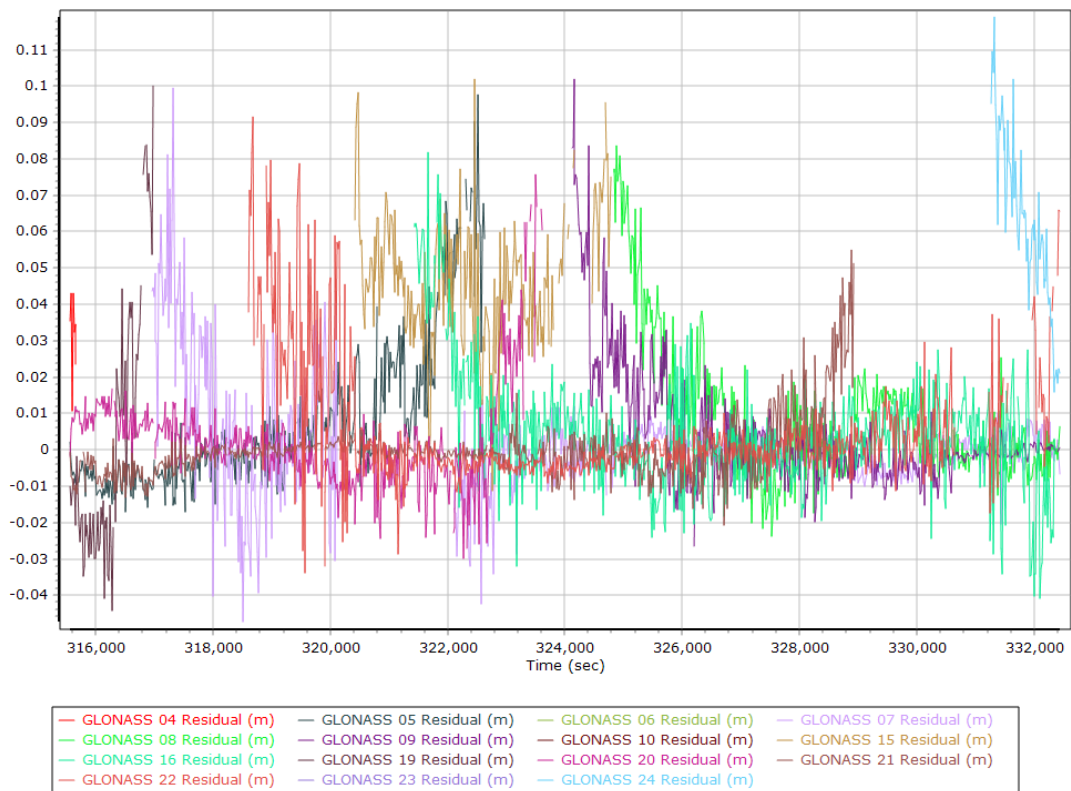
## Estimated Position Accuracy



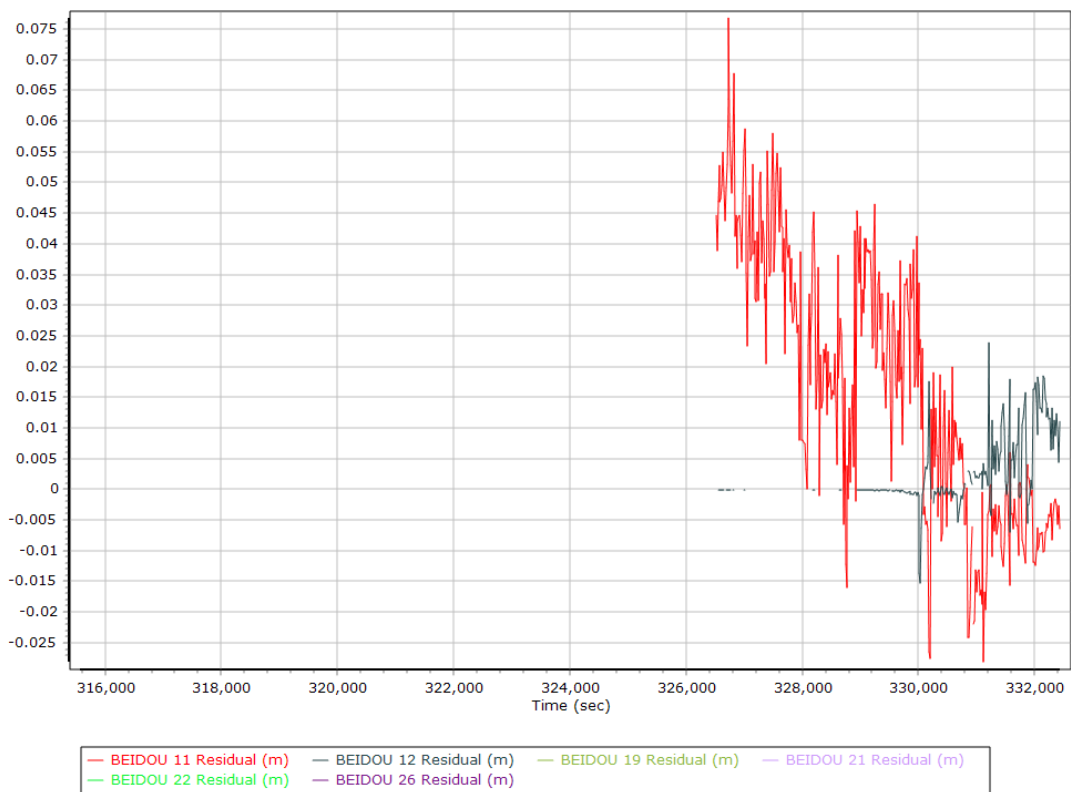
## GPS Residuals



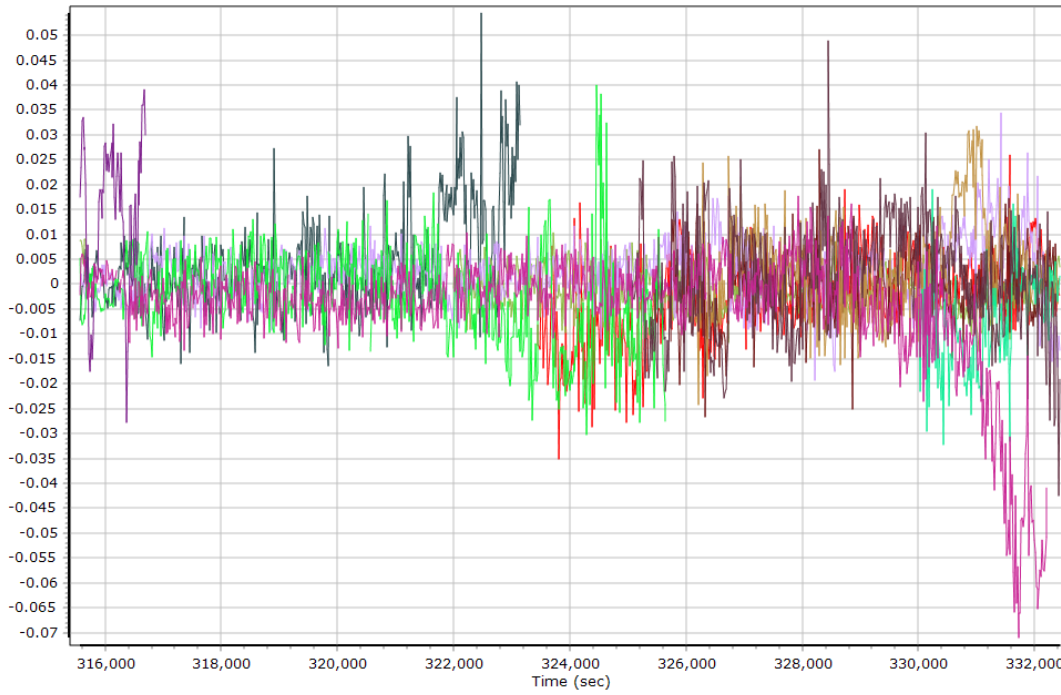
## GLONASS Residuals



## BEIDOU Residuals



## GALILEO Residuals



- |                         |                         |                         |                         |
|-------------------------|-------------------------|-------------------------|-------------------------|
| 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 15 Residual (m) | GALILEO 24 Residual (m) |
| GALILEO 25 Residual (m) | GALILEO 31 Residual (m) | GALILEO 36 Residual (m) |                         |

## GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	315089.000 (11/03/2021 15:31:29)		
Processing end time	332457.000 (11/03/2021 20:20:57)		
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)	-0.542	-0.067	-1.196
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

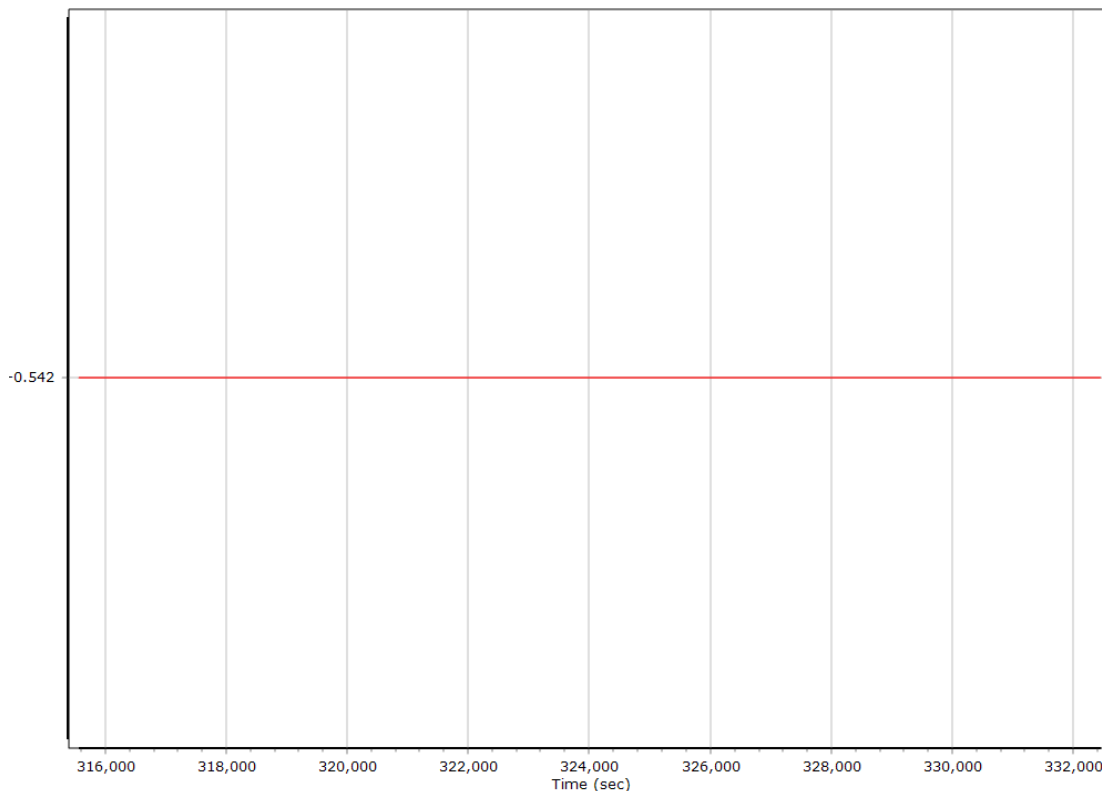
## Calibrated Installation Parameters

### Reference-Primary GNSS Lever Arm (m)

#### Reference-Primary GNSS Lever Arm Automatic Calibration Results

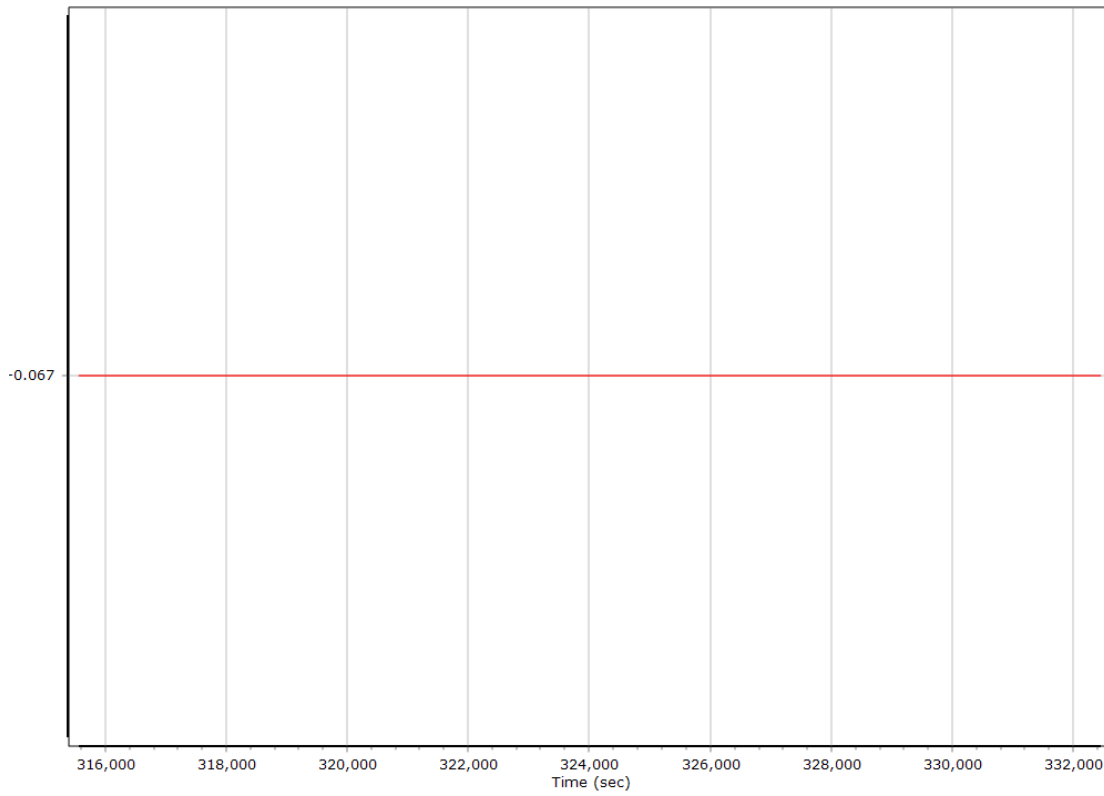
Original Reference to Primary GNSS lever arm (m)	-0.497	-0.045	-1.199
Iteration 1 Reference to Primary GNSS lever arm (m)	-0.541	-0.066	-1.196
Iteration 2 Reference to Primary GNSS lever arm (m)	-0.542	-0.067	-1.196
Primary GNSS Lever Arm In use	Iteration 2		

### X Reference-Primary GNSS Lever Arm (m)

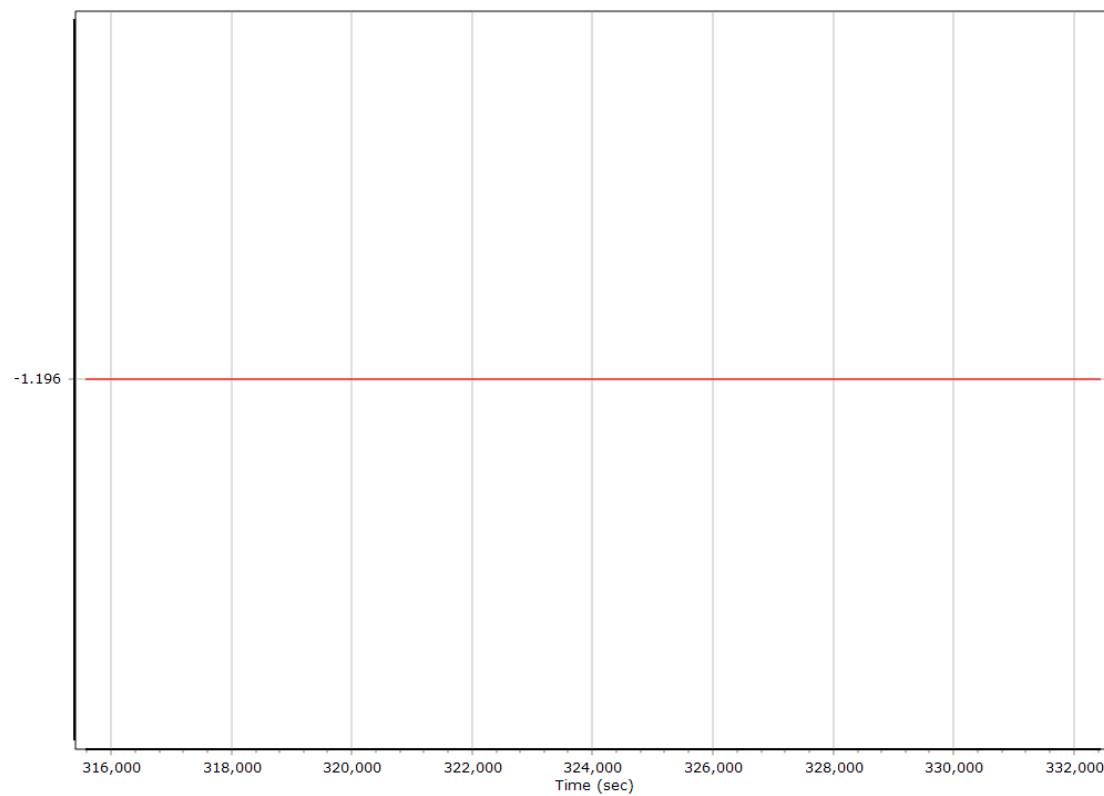




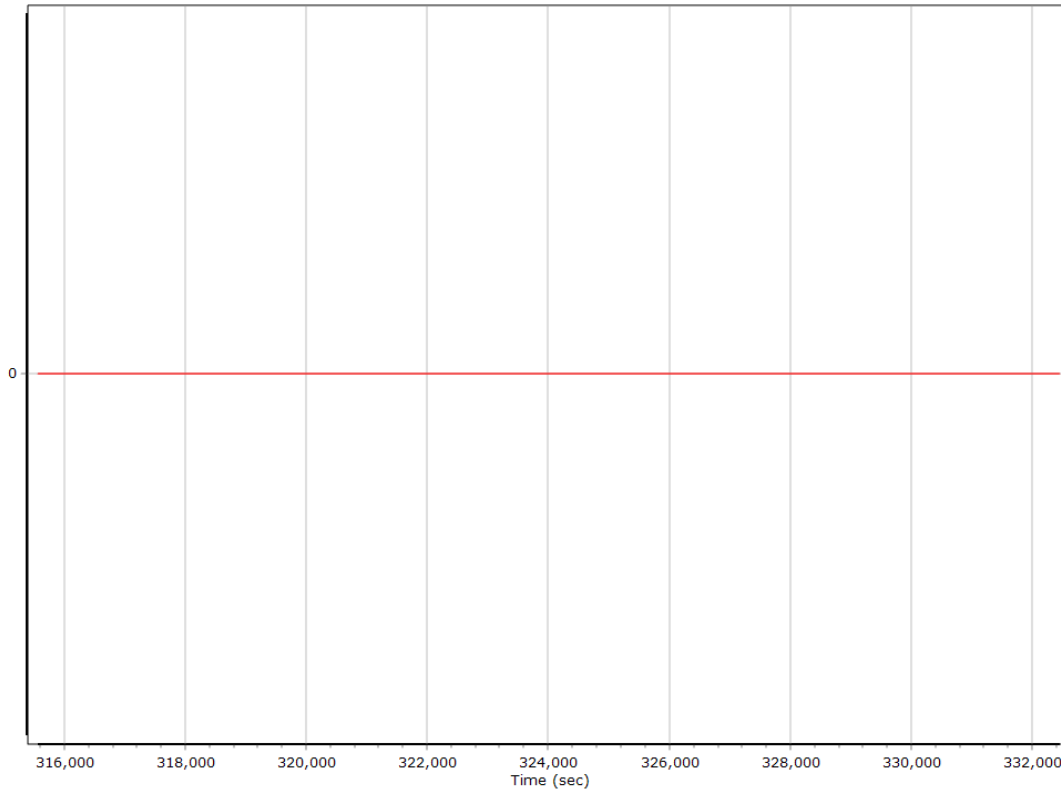
**Y Reference-Primary GNSS Lever Arm (m)**



**Z Reference-Primary GNSS Lever Arm (m)**



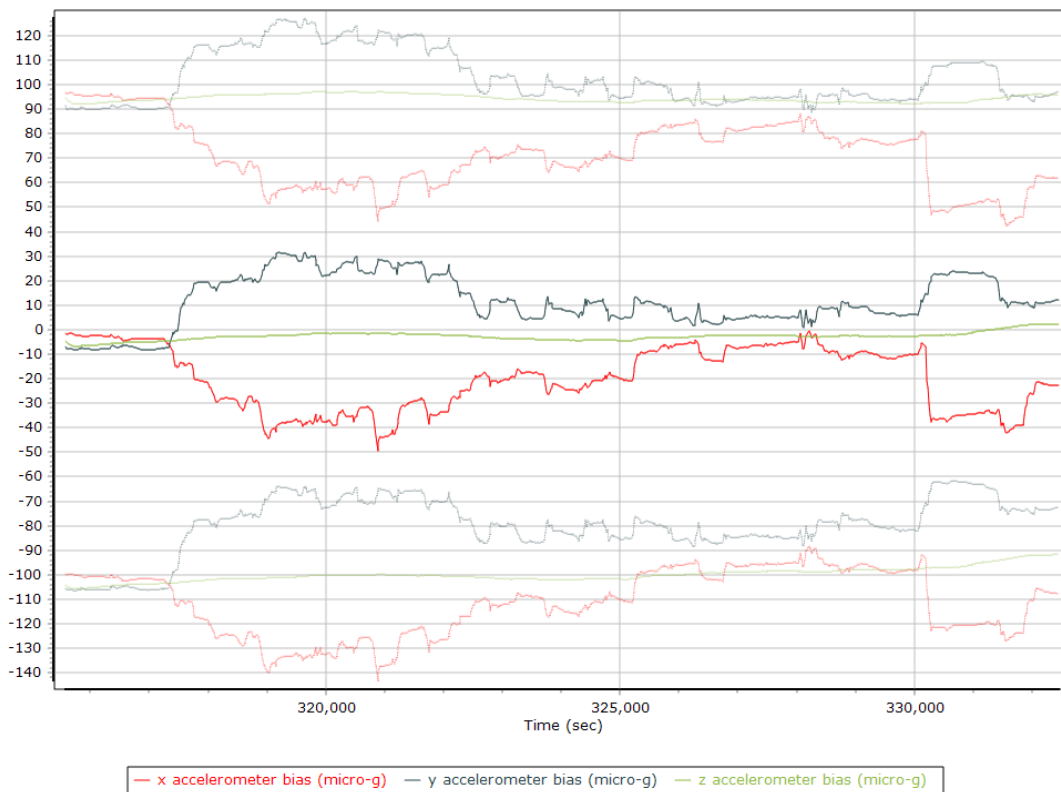
### Reference-Primary GNSS Lever Arm Figure of Merit



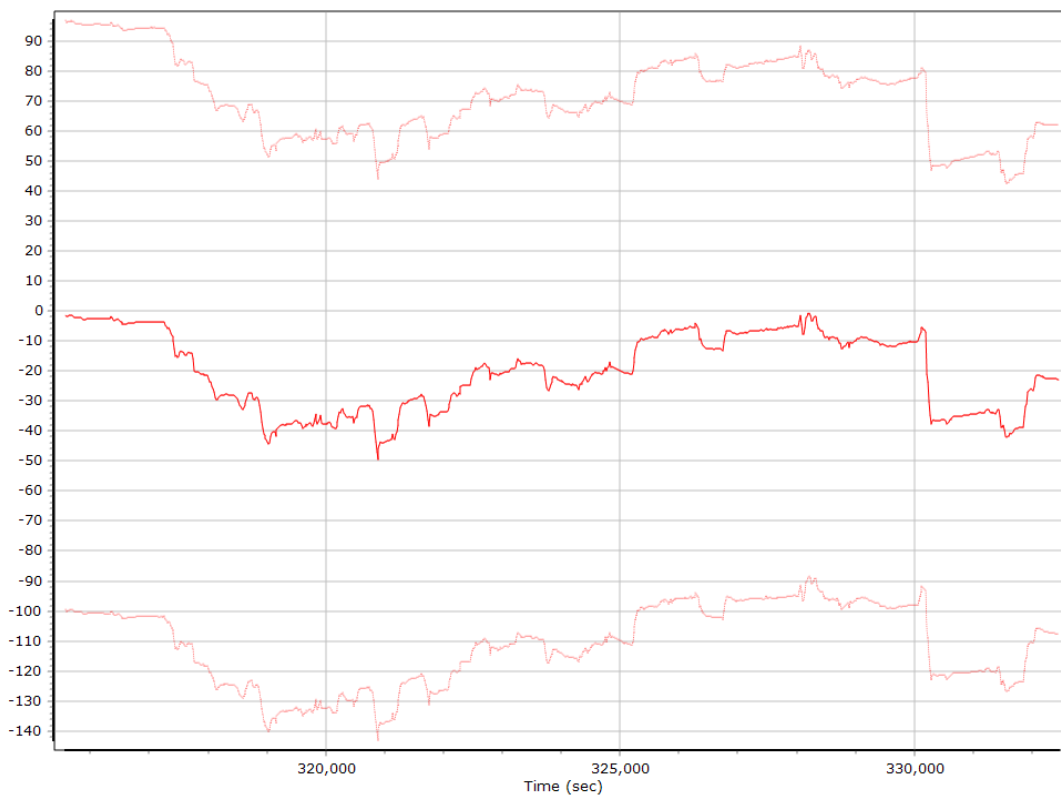
## IN-Fusion QC

### Forward Processed Estimated Errors, Reference Frame

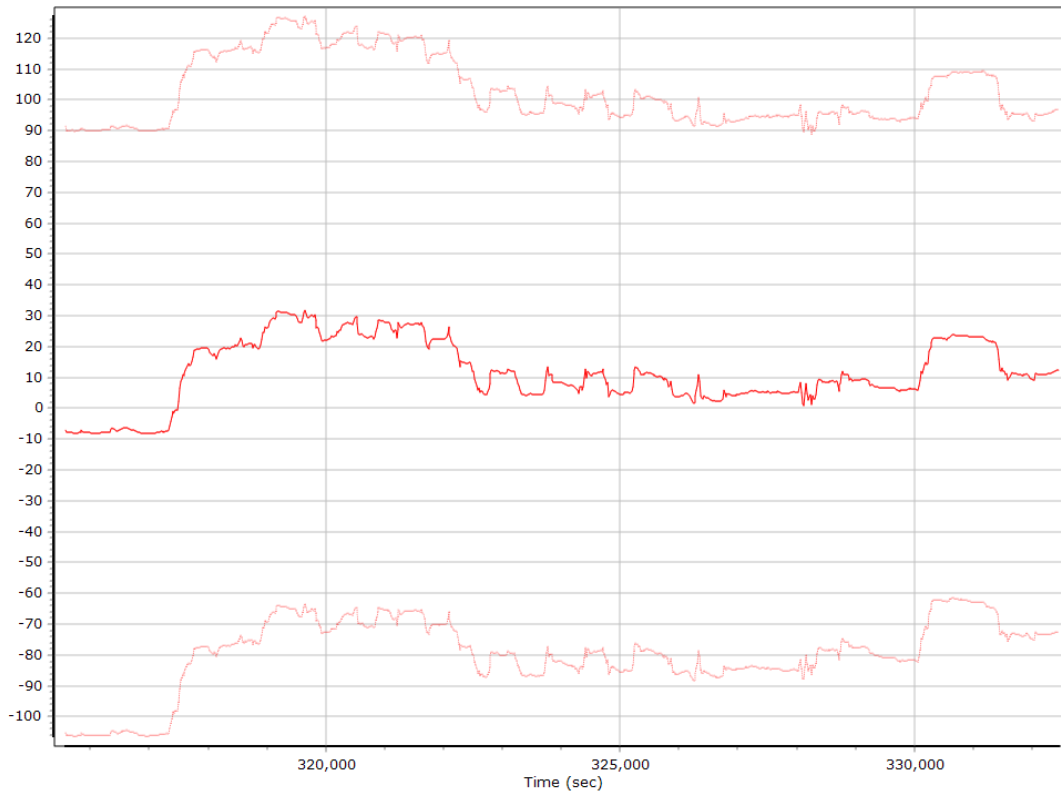
#### Accelerometer Bias (micro-g)



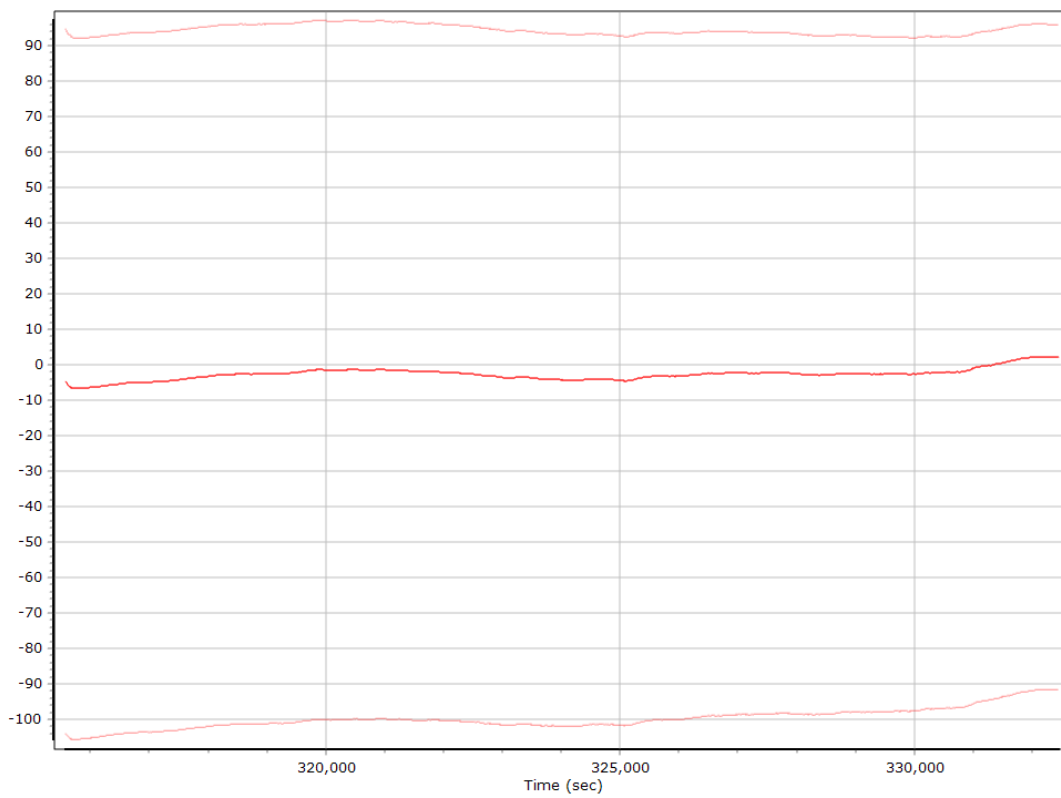
#### X Accelerometer Bias (micro-g)



### Y Accelerometer Bias (micro-g)



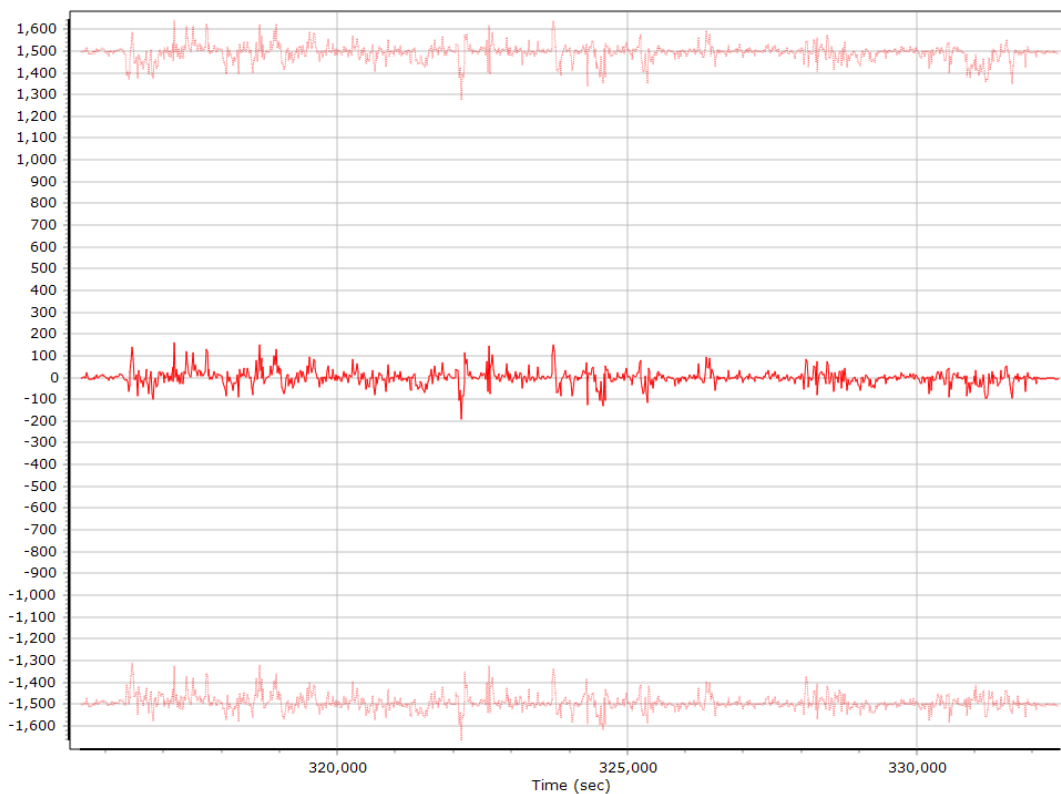
### Z Accelerometer Bias (micro-g)



### Accelerometer Scale Error (ppm)



### X Accelerometer Scale Error (ppm)



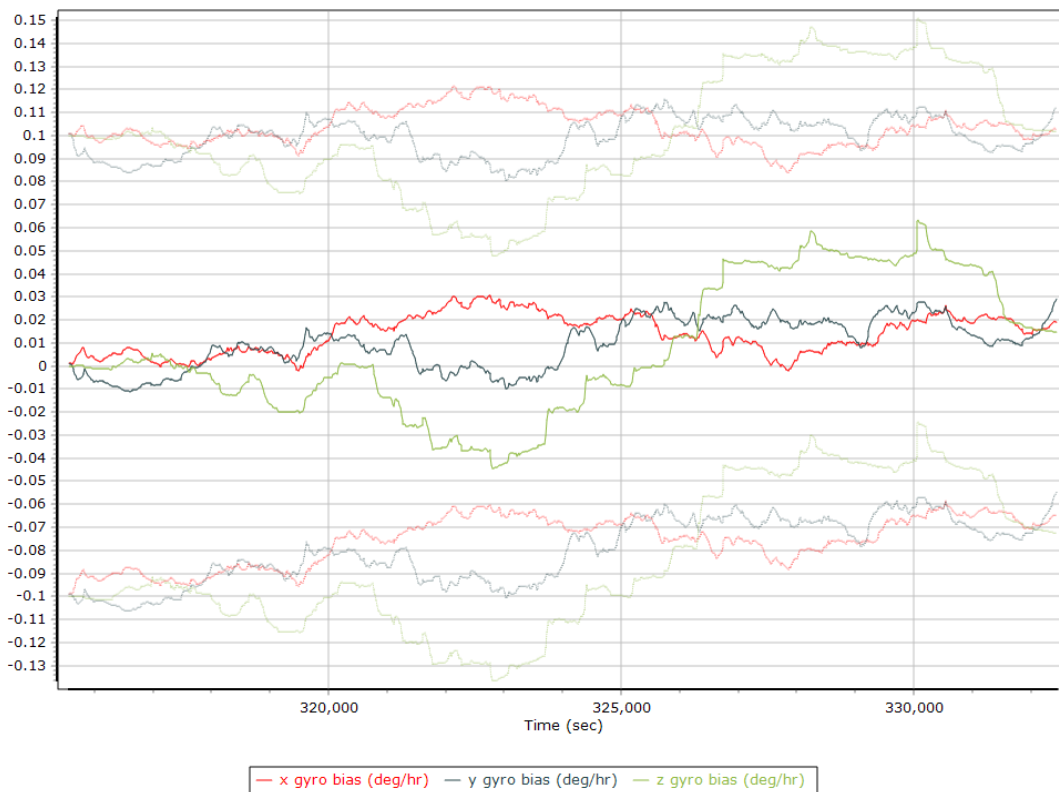
### Y Accelerometer Scale Error (ppm)



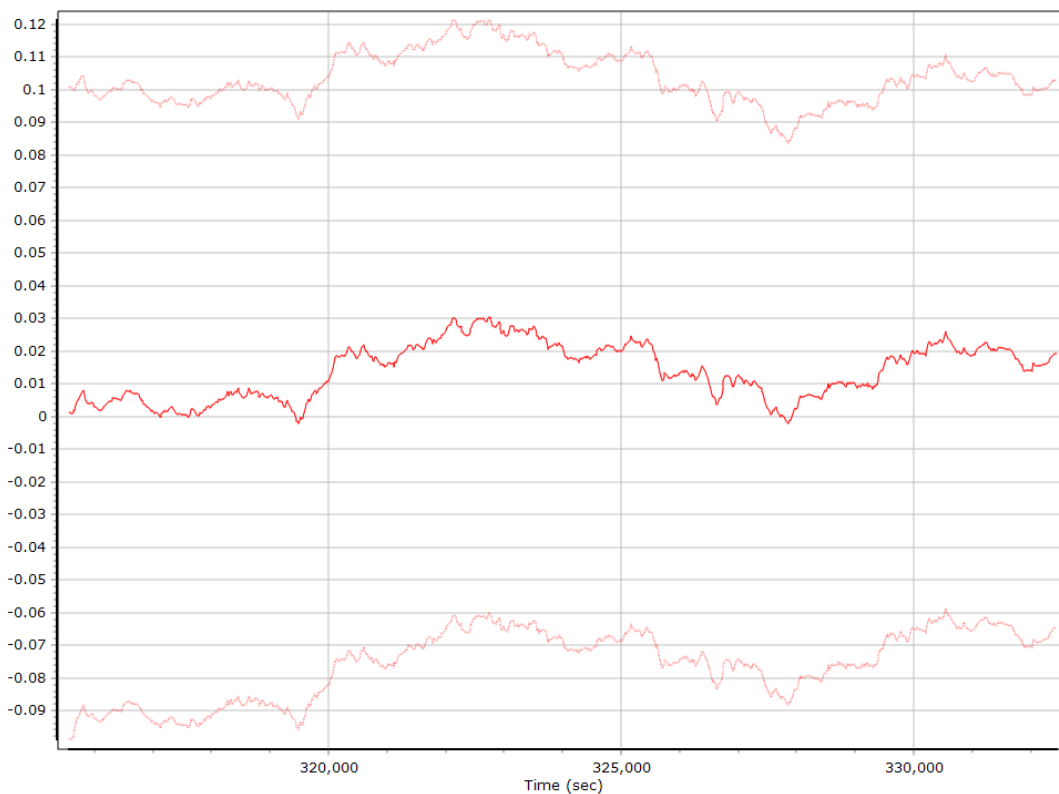
### Z Accelerometer Scale Error (ppm)



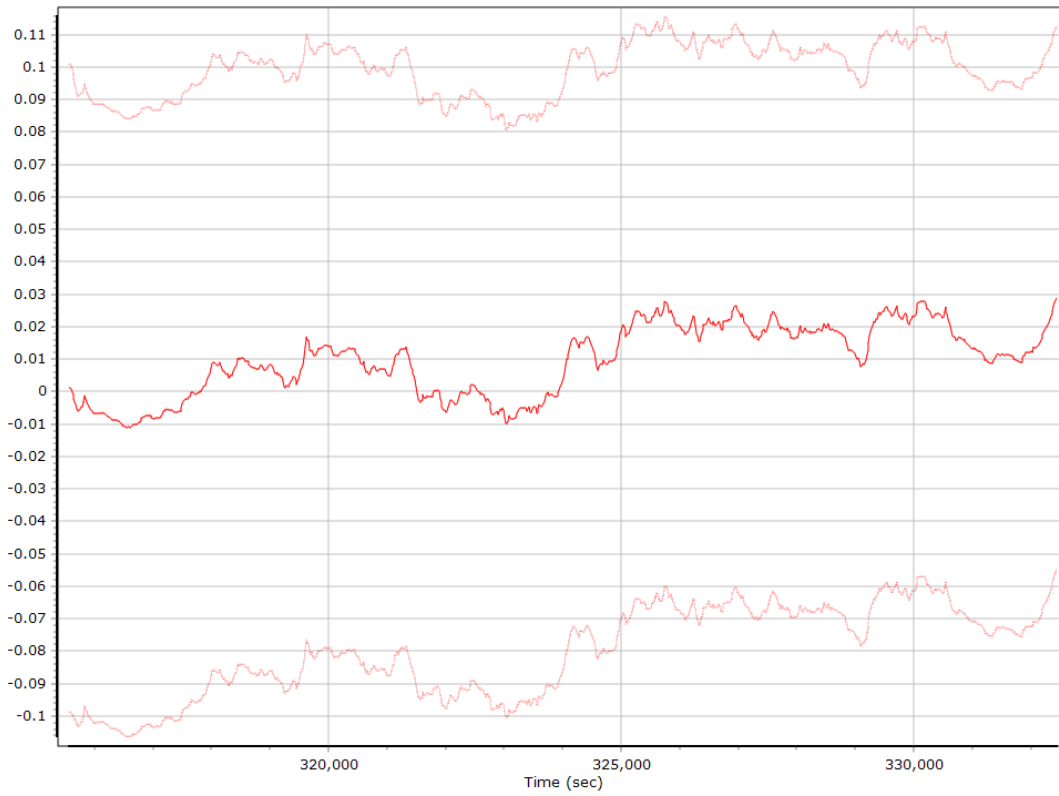
### Gyro Bias (deg/h)



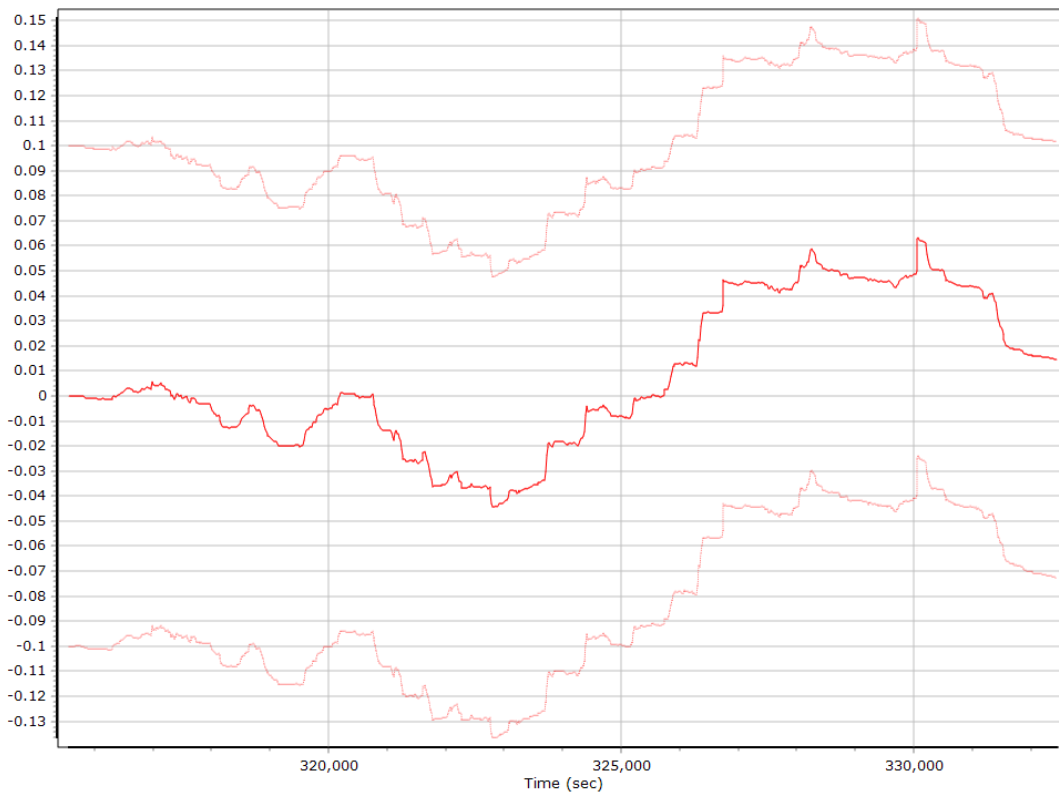
### X Gyro Bias (deg/h)



### Y Gyro Bias (deg/h)

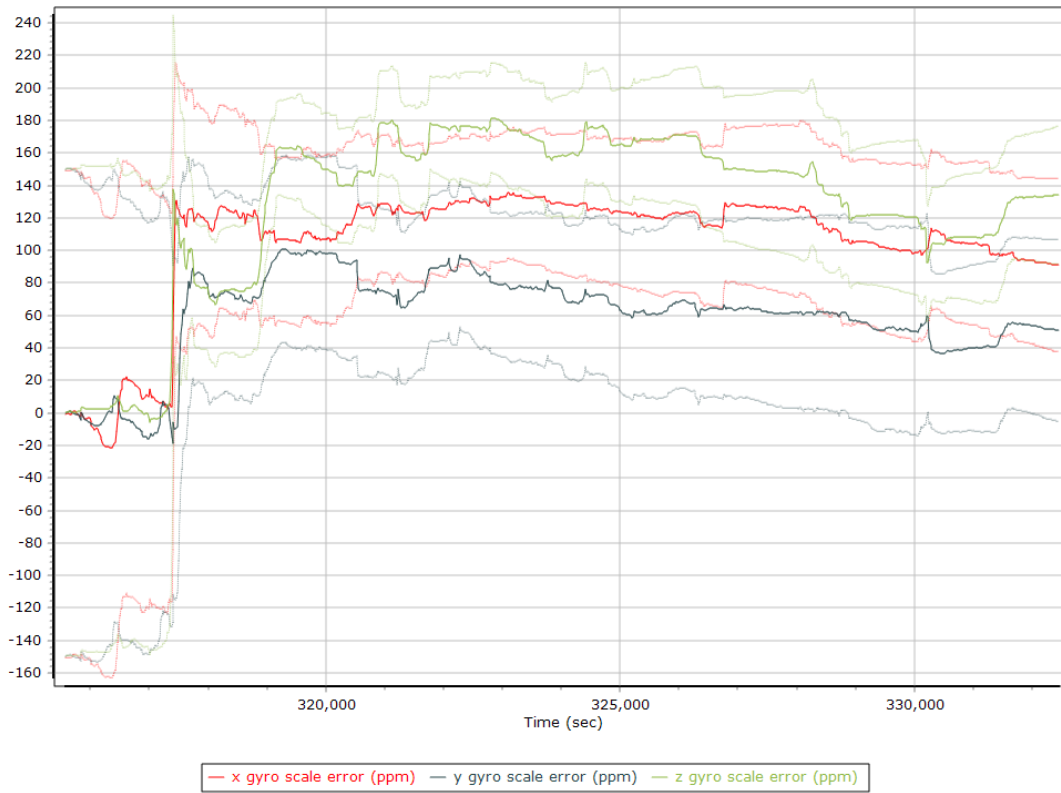


### Z Gyro Bias (deg/h)

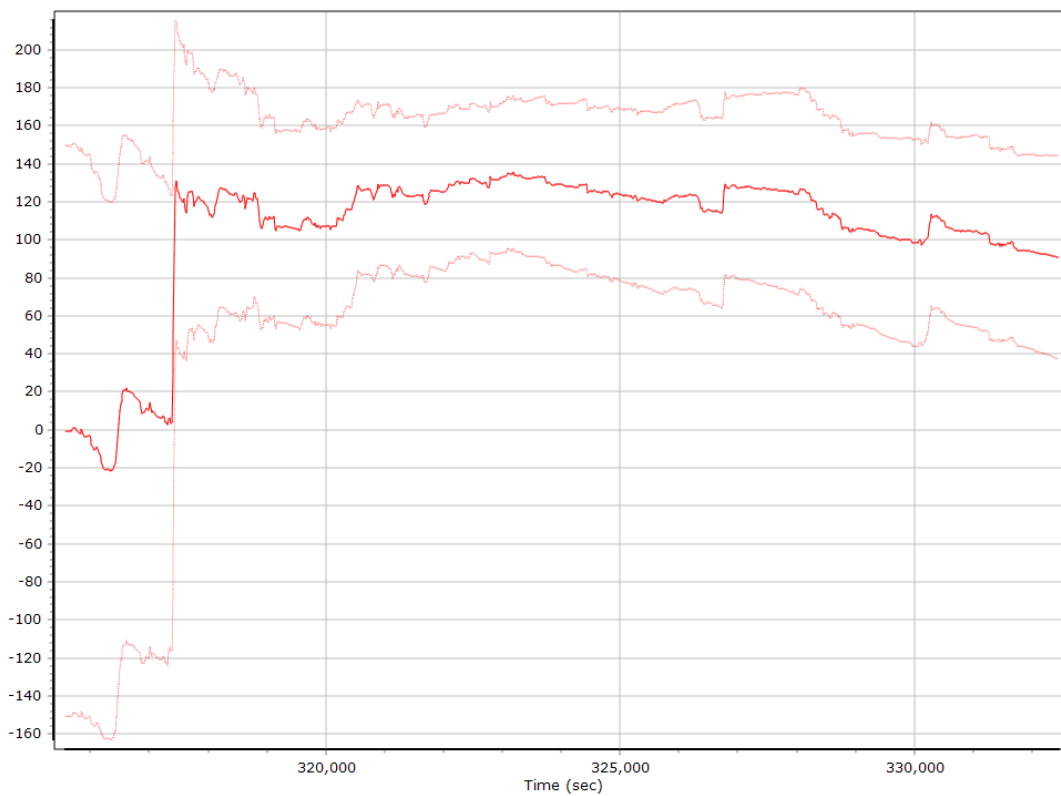




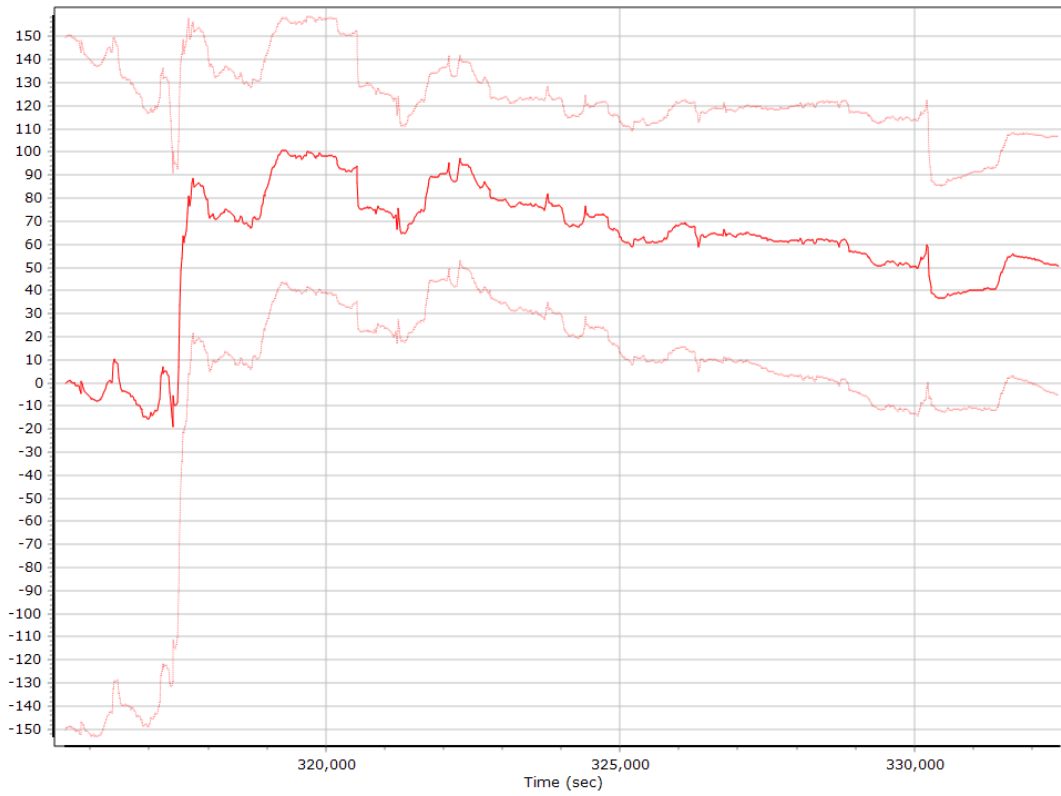
### Gyro Scale Error (ppm)



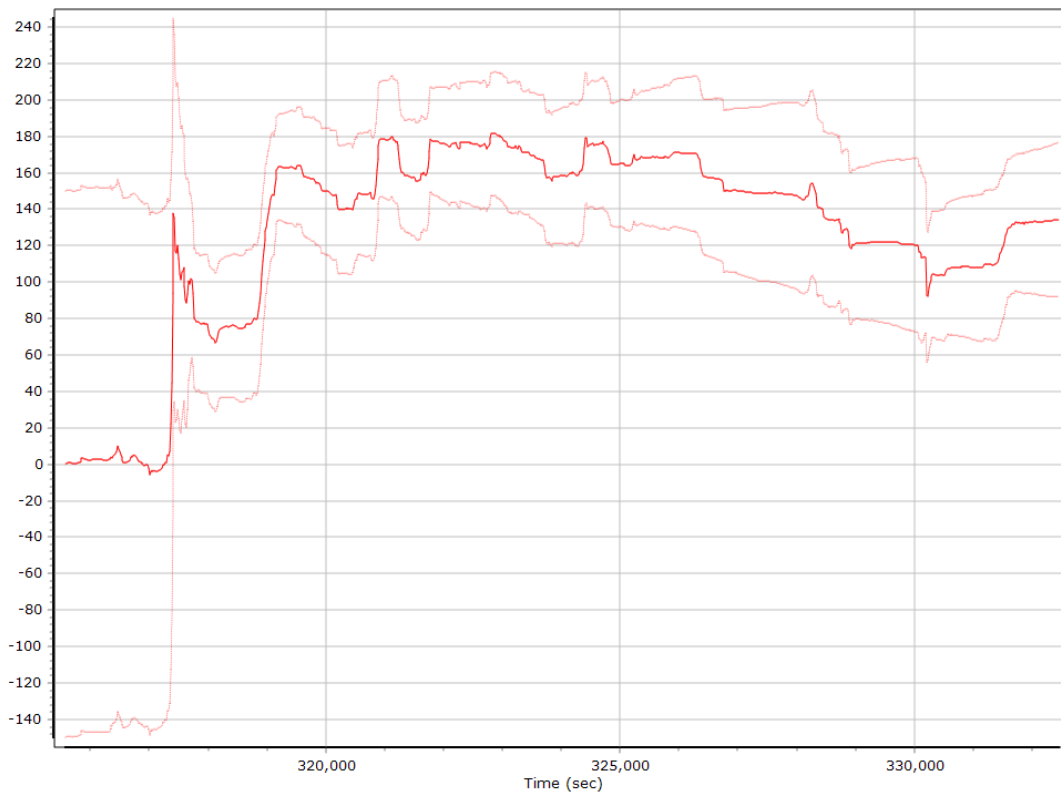
### X Gyro Scale Error (ppm)



### Y Gyro Scale Error (ppm)

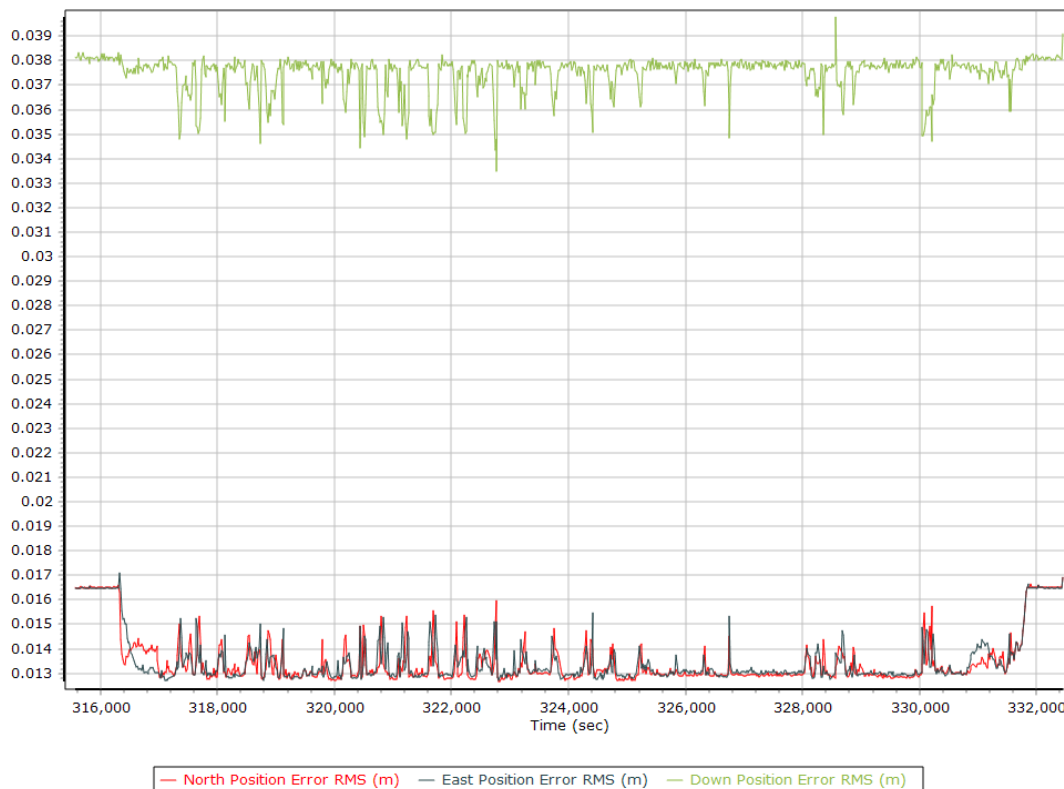


### Z Gyro Scale Error (ppm)

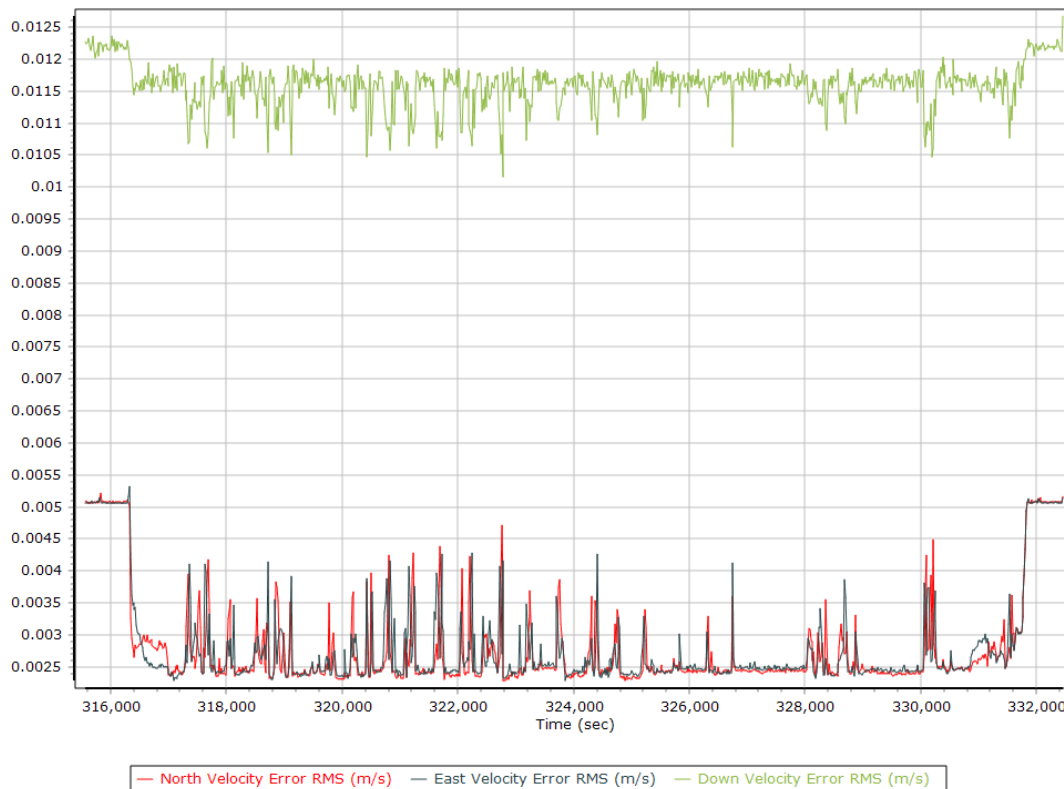


## Smoothed Performance Metrics

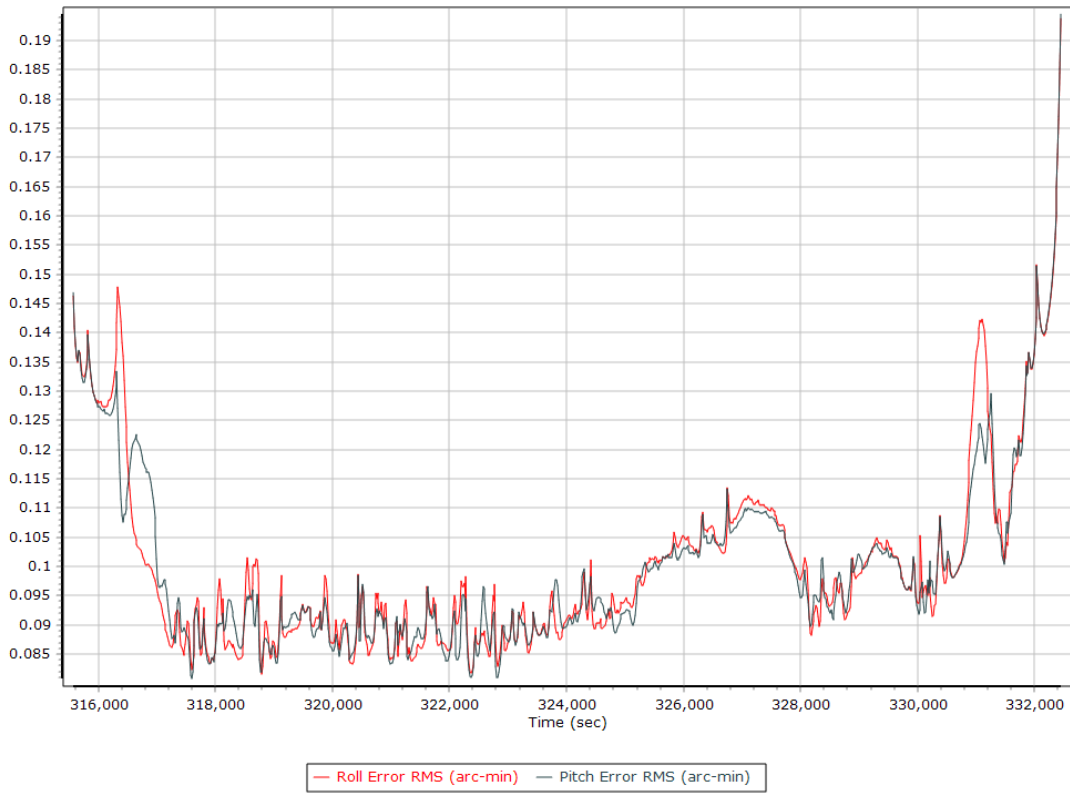
### Position Error RMS (m)



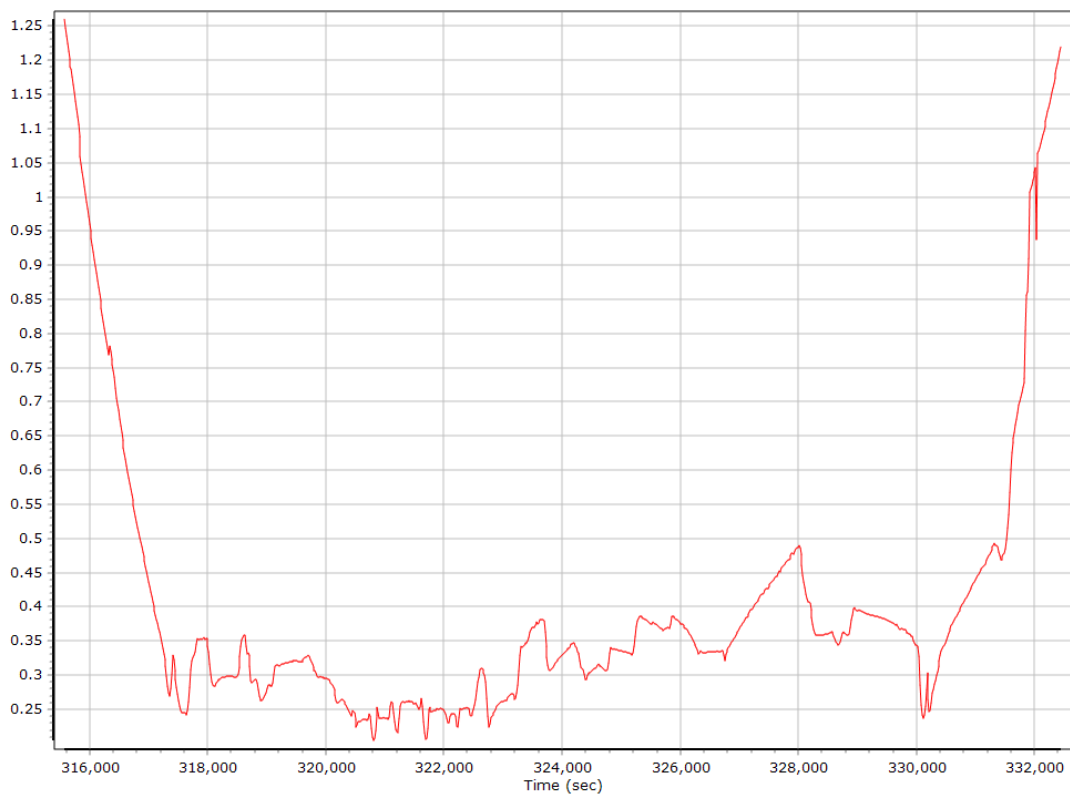
### Velocity Error RMS (m/s)



### Roll/Pitch Error RMS (arc-min)

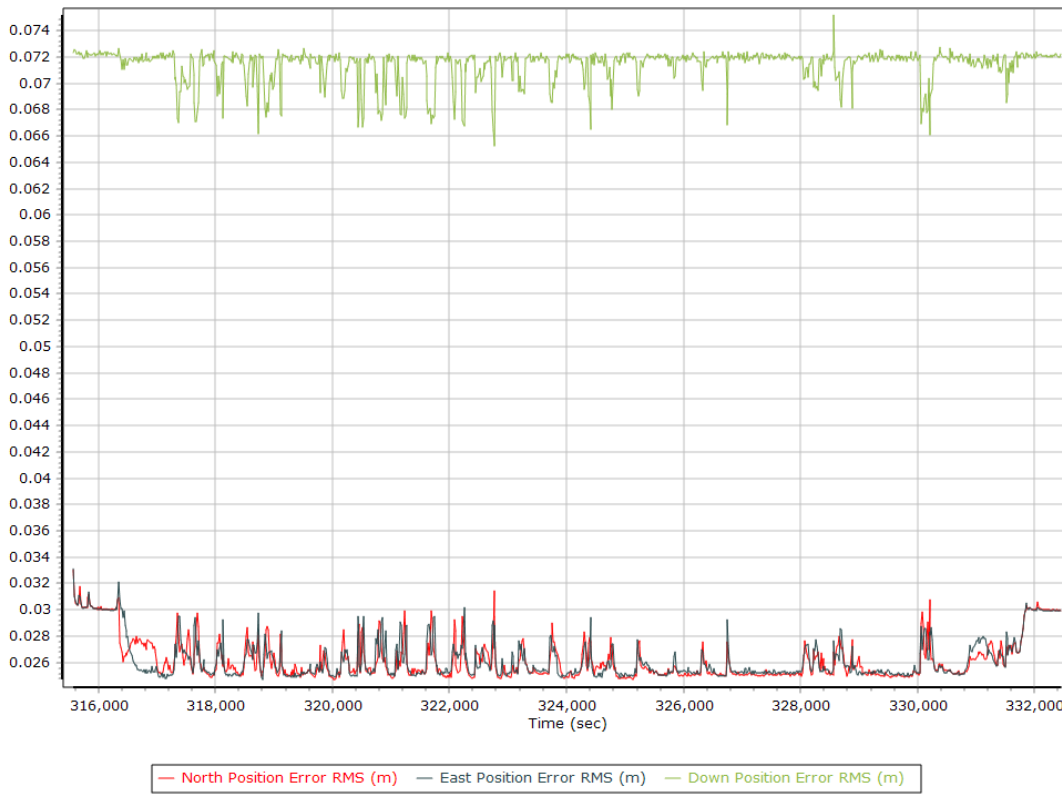


### Heading Error RMS (arc-min)



## Forward Processed Performance Metrics

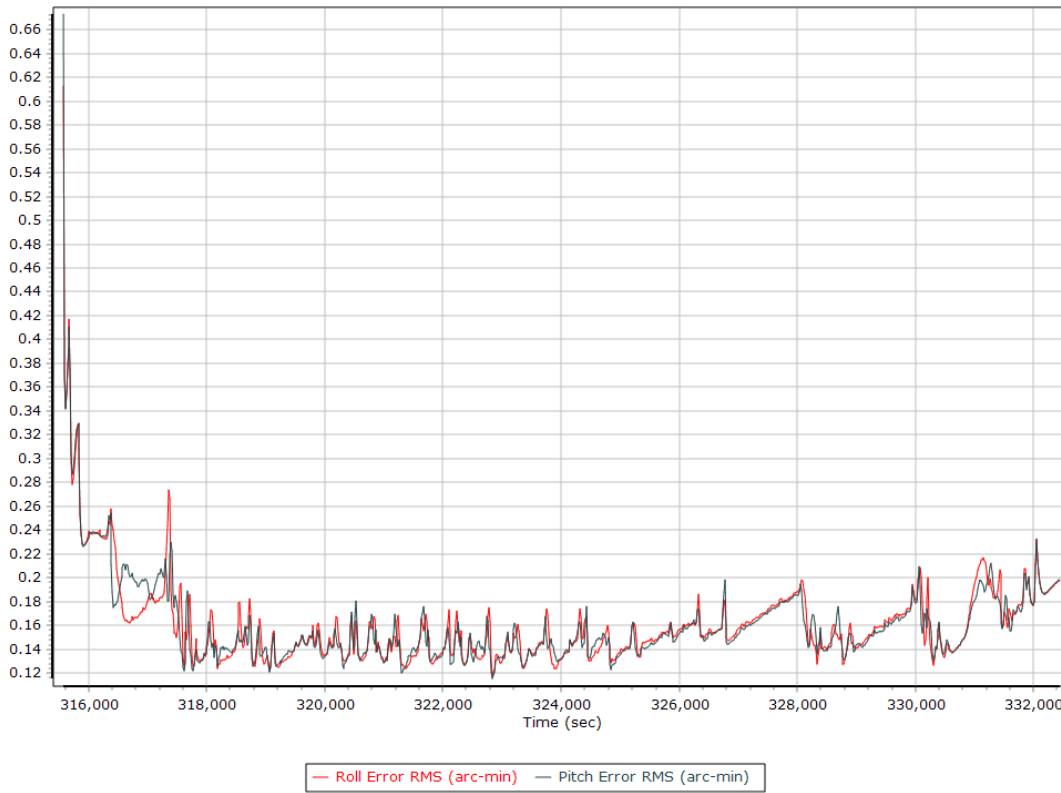
### Position Error RMS (m)



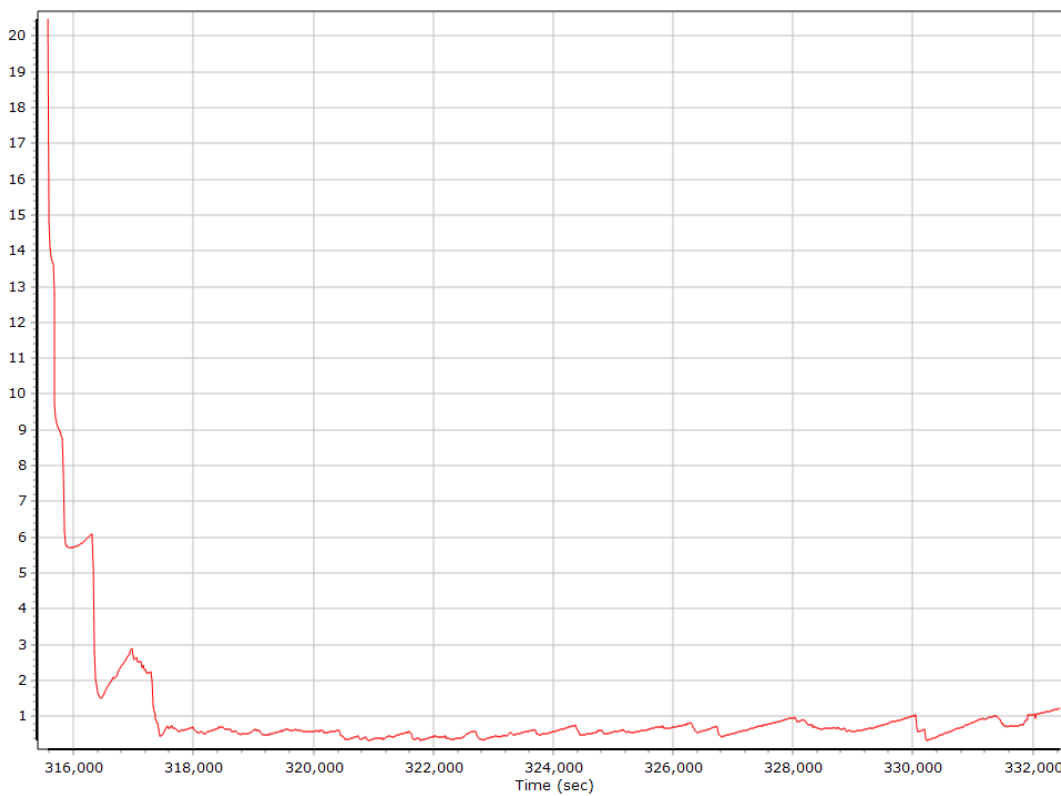
### Velocity Error RMS (m/s)



### Roll/Pitch Error RMS (arc-min)

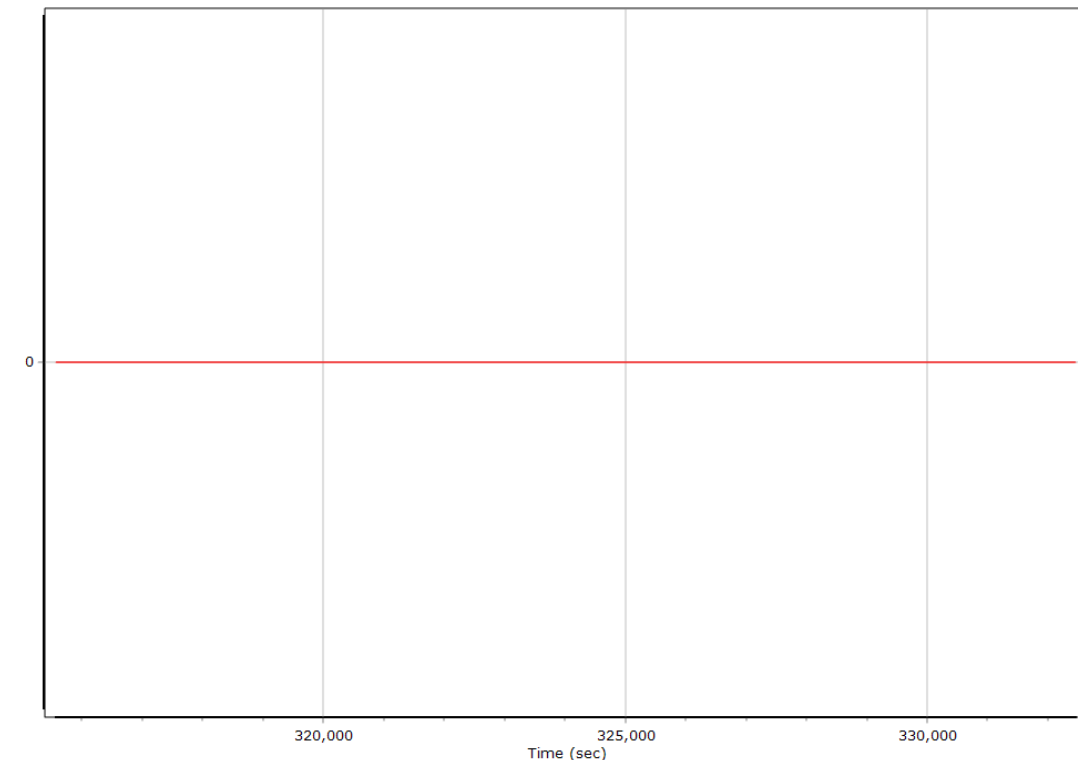


### Heading Error RMS (arc-min)



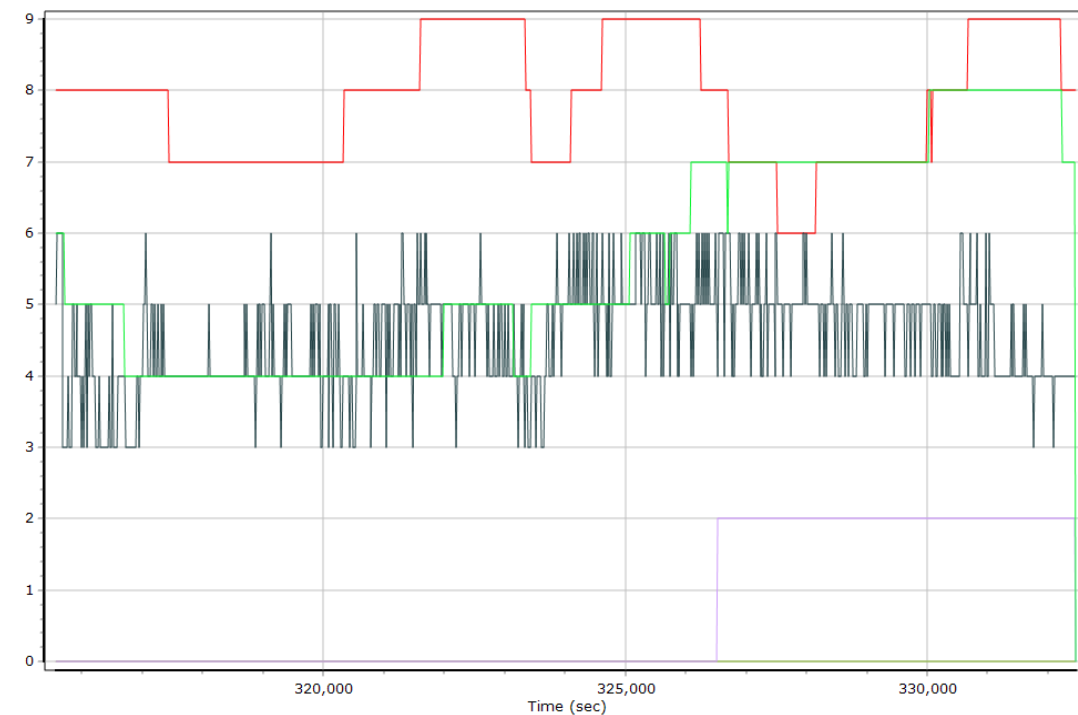
## Forward Processed Solution Status

### Processing Mode



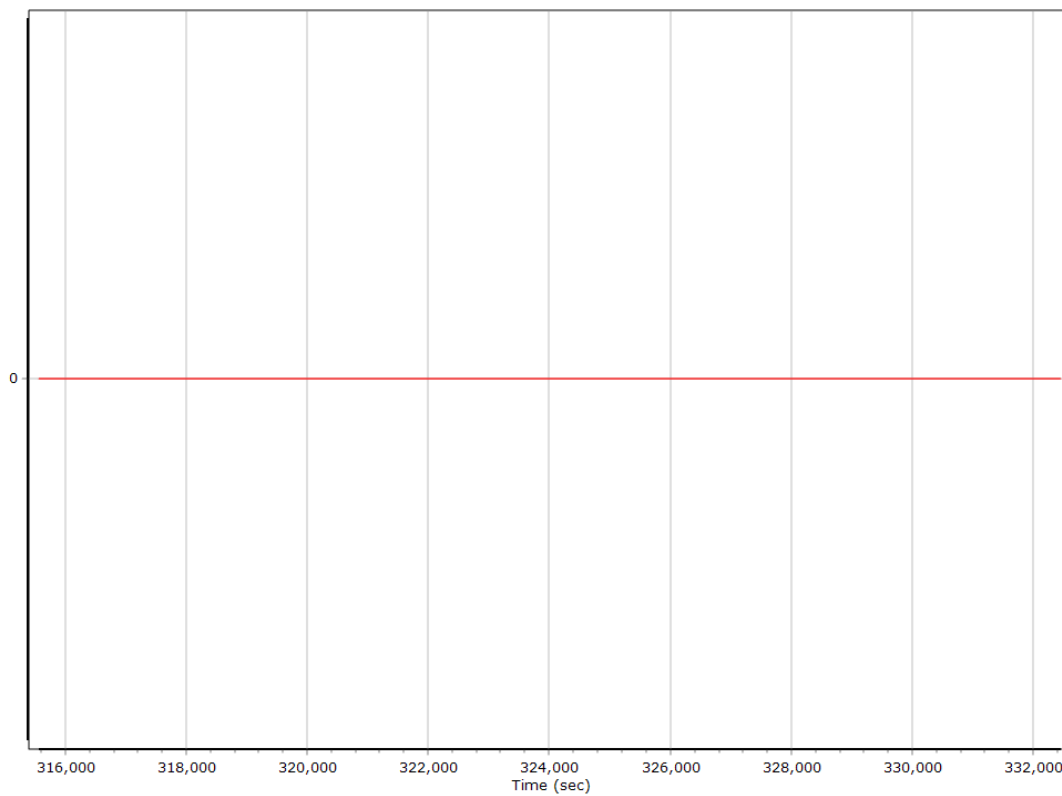
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR

### Number of Satellites



— Number of GPS Satellites   
 — Number of GLONASS Satellites   
 — Number of QZSS Satellites  
— Number of BEIDOU Satellites   
 — Number of GALILEO Satellites

## Baseline Length





## Export Summary

<b>Export file</b>	sbet_211103_A_5060420_nad2011_FINAL.shp		
<b>Export format</b>	Shapefile		
<b>Solution in use</b>	Post-processed		
<b>Output rate</b>	Specified Distance Interval		
<b>Distance Interval (m)</b>	10.000		
<b>Reference to Output lever arm (m)</b>	0.000	0.000	0.000
<b>Reference mounting angles (deg)</b>	0.000	0.000	0.000
<b>Output units (Coordinate / Lat &amp; Lon)</b>	Meter	Deg Decimal	
<b>Export start time</b>	315510.004 (11/03/2021 15:38:30)		
<b>Export end time</b>	332457.002 (11/03/2021 20:20:57)		
<b>Height option</b>	Ellipsoid Height		
<b>WGS84 height flag</b>	False		
<b>Grid</b>	Universal Transverse Mercator		
<b>Zone</b>	UTM North 12 (114W to 108W)		
<b>Datum</b>	NAD83 (2011)		
<b>Ellipsoid</b>	GRS 1980		
<b>Local Transformation</b>	NONE		
<b>Target Epoch</b>	2010		