

## General Information

### Mission Information

Project name	13284-1808_20190104b
Processing date	2019-01-07 15:36:28
Mission date	2019-01-04 17:55:57
Mission duration	03:57:43.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

### Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9865
IMU type	57
Receiver type	BD982
Antenna type	AV37

## Project File List

### Rover Data Files

File name	File type
190104_175544_INS-GPS_1.raw	POS Data

### Input Files

File Name	File type
nybt004f00.19g	GLONASS Broadcast Ephemeris
nyws004f00.19g	GLONASS Broadcast Ephemeris
nysm004f00.19o	GNSS SingleBase
nysm004f00.19n	GPS Broadcast Ephemeris
nysm004f00.19g	GLONASS Broadcast Ephemeris
nypf004f00.19o	GNSS SingleBase
nypf004f00.19n	GPS Broadcast Ephemeris
nypf004f00.19g	GLONASS Broadcast Ephemeris
nylp004f00.19o	GNSS SingleBase
nylp004f00.19n	GPS Broadcast Ephemeris
nylp004f00.19g	GLONASS Broadcast Ephemeris
nyhb004f00.19o	GNSS SingleBase
nyws004f00.19n	GPS Broadcast Ephemeris
nyhb004f00.19n	GPS Broadcast Ephemeris
nyfs004f00.19o	GNSS SingleBase
nyfs004f00.19n	GPS Broadcast Ephemeris
nyfs004f00.19g	GLONASS Broadcast Ephemeris
nyfd004f00.19o	GNSS SingleBase
nyfd004f00.19n	GPS Broadcast Ephemeris
nyfd004f00.19g	GLONASS Broadcast Ephemeris
nydv004f00.19o	GNSS SingleBase
nydv004f00.19n	GPS Broadcast Ephemeris
nydv004f00.19g	GLONASS Broadcast Ephemeris
nybt004f00.19o	GNSS SingleBase
nybt004f00.19n	GPS Broadcast Ephemeris
nyhb004f00.19g	GLONASS Broadcast Ephemeris
nyws004f00.19o	GNSS SingleBase
cbrg0040.19o	GPS SingleBase
pwe10040.19o	GPS SingleBase
you60040.19o	GPS SingleBase
god20040.19o	GPS SingleBase
igr20344.sp3	GPS Precise Ephemeris
igr20345.sp3	GPS Precise Ephemeris
igr20346.sp3	GPS Precise Ephemeris
Ephm0040.19g	GLONASS Broadcast Ephemeris
Ephm0040.19n	GPS Broadcast Ephemeris

### Output Files

Filename	File type
sbet_Mission 1.out	SBET Trajectory File
export_Mission 1.txt	ASCII Export Output

## Rover Data Summary

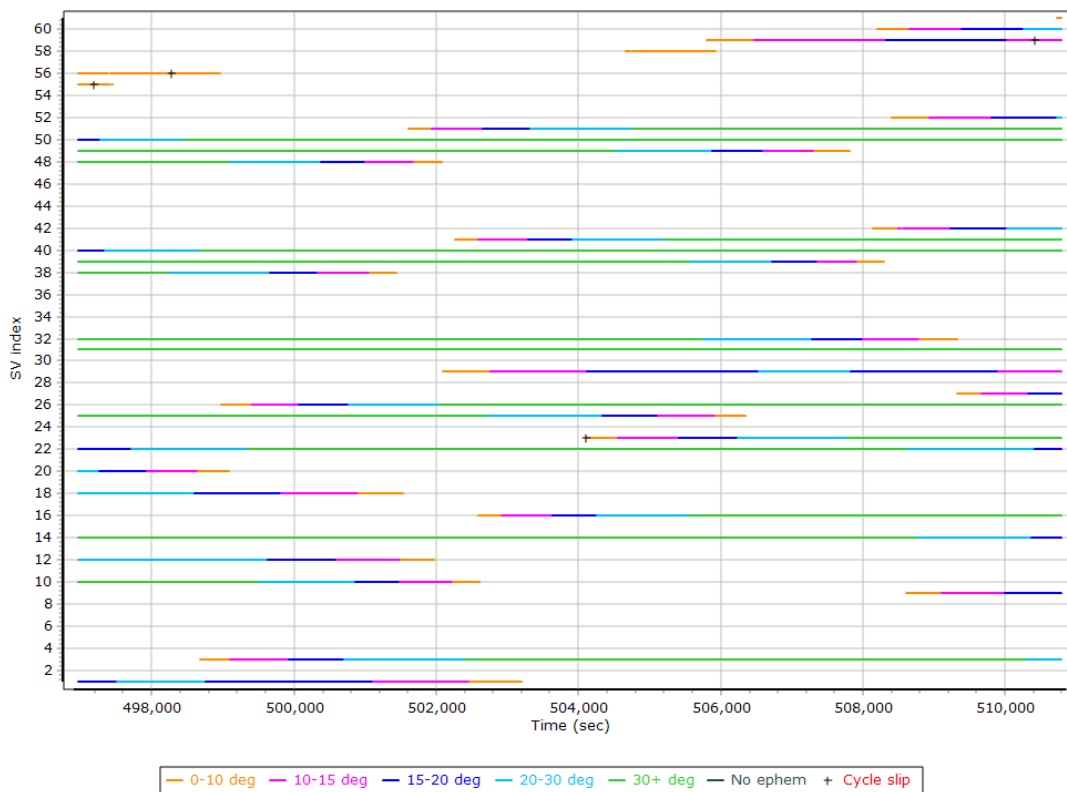
First raw data file	190104_175544_INS-GPS_1.raw		
Last raw data file	190104_175544_INS-GPS_1.raw		
Start GPS week	2034		
Start time	496538.140 (1/4/2019 5:55:38 PM)		
End time	510802.628 (1/4/2019 9:53:22 PM)		
Start of fine alignment	496902.338 (1/4/2019 6:01:42 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	Event 2 Input, Event 3 Input, Event 4 Input, Event 5 Input, Event 6 Input		
Correction data	None		
<b>IMU Installation Lever Arms &amp; Mounting Angles</b>			
Gimbal to IMU lever arm [m]	0.000	0.000	0.000
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

# Raw Data QC

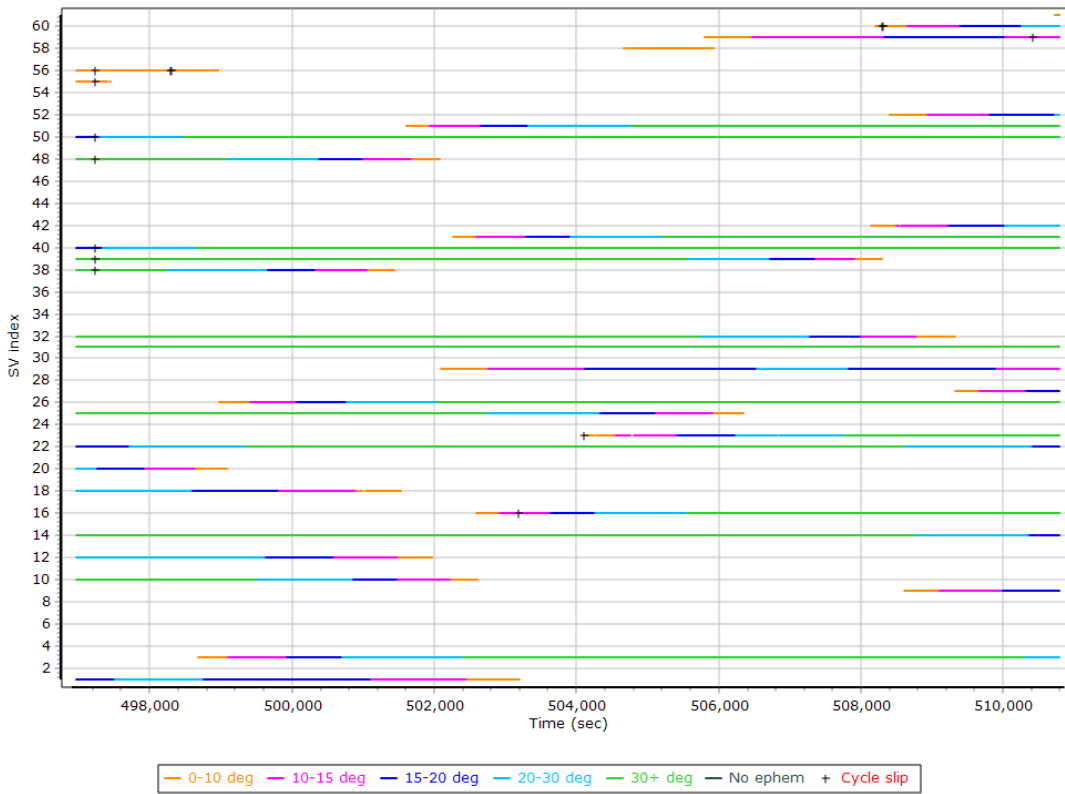
## Raw IMU Import QC Summary

IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_Mission 1.log
IMU Records Processed	2852299
Termination Status	Normal
IMU Anomalies	0

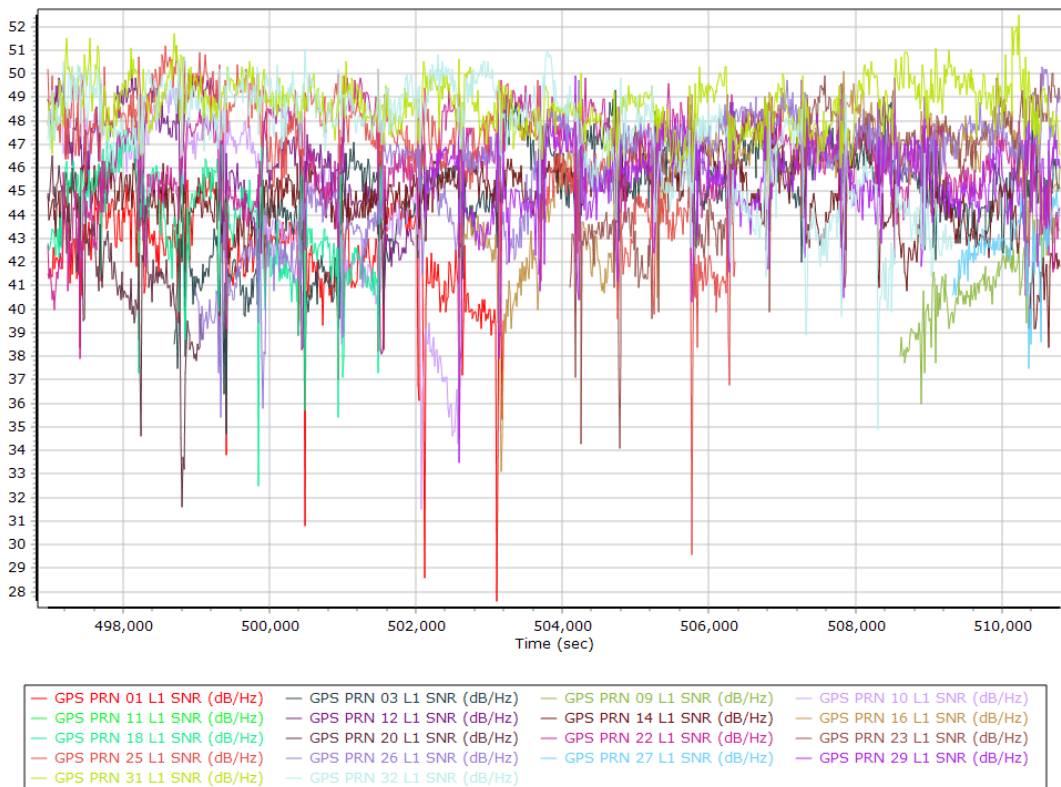
### L1 Satellite Lock/Elevation



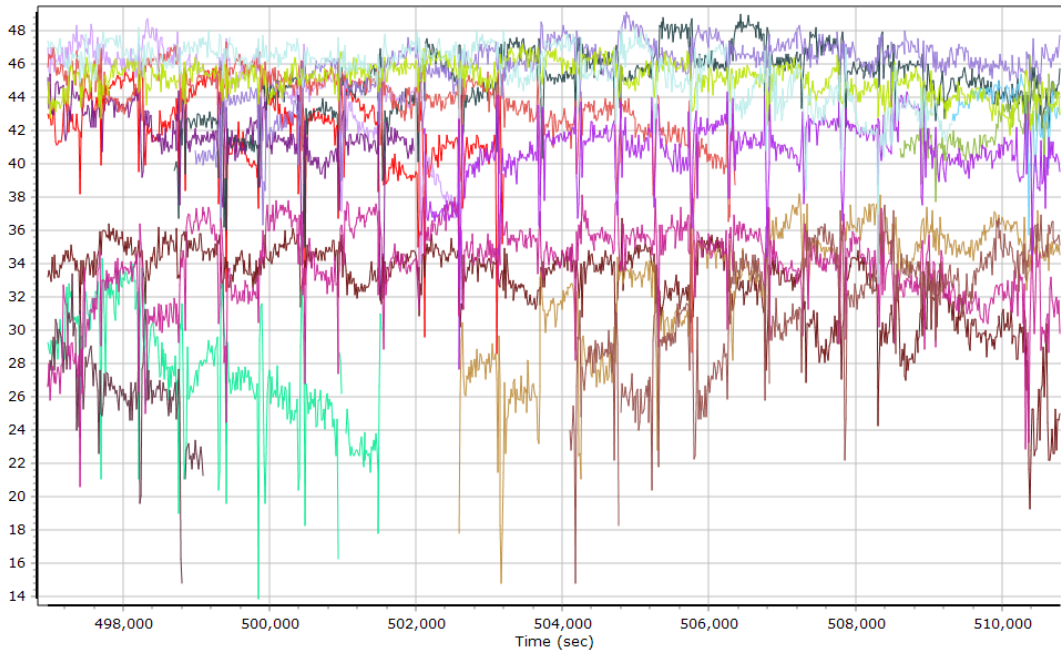
## L2 Satellite Lock/Elevation



## GPS L1 SNR

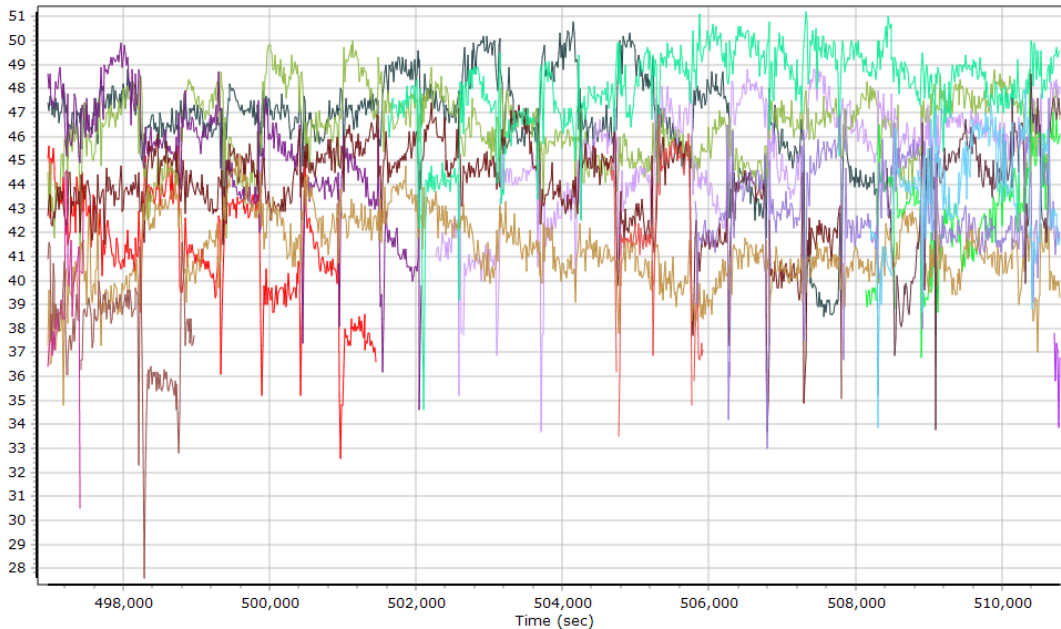


## GPS L2 SNR



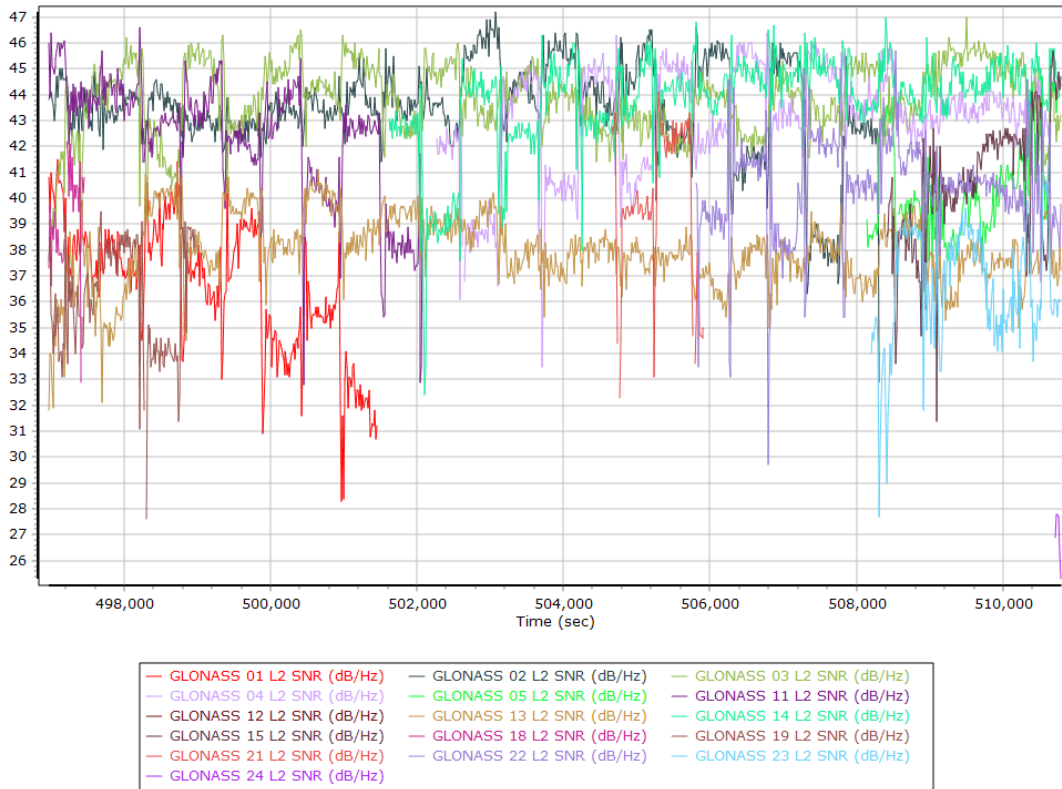
- |                           |                           |                           |                           |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 01 L2 SNR (dB/Hz) | GPS PRN 03 L2 SNR (dB/Hz) | GPS PRN 09 L2 SNR (dB/Hz) | GPS PRN 10 L2 SNR (dB/Hz) |
| GPS PRN 11 L2 SNR (dB/Hz) | GPS PRN 12 L2 SNR (dB/Hz) | GPS PRN 14 L2 SNR (dB/Hz) | GPS PRN 16 L2 SNR (dB/Hz) |
| GPS PRN 18 L2 SNR (dB/Hz) | GPS PRN 20 L2 SNR (dB/Hz) | GPS PRN 22 L2 SNR (dB/Hz) | GPS PRN 23 L2 SNR (dB/Hz) |
| GPS PRN 25 L2 SNR (dB/Hz) | GPS PRN 26 L2 SNR (dB/Hz) | GPS PRN 27 L2 SNR (dB/Hz) | GPS PRN 29 L2 SNR (dB/Hz) |
| GPS PRN 31 L2 SNR (dB/Hz) | GPS PRN 32 L2 SNR (dB/Hz) |                           |                           |

## GLONASS L1 SNR

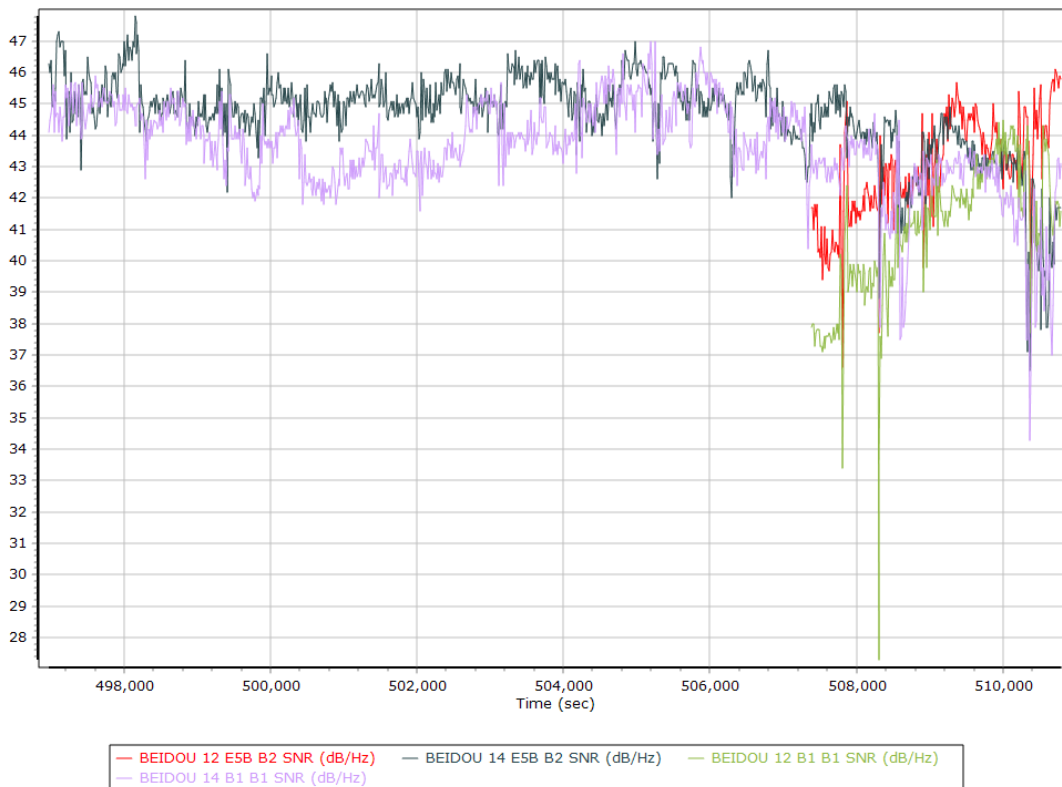


- |                           |                           |                           |
|---------------------------|---------------------------|---------------------------|
| GLONASS 01 L1 SNR (dB/Hz) | GLONASS 02 L1 SNR (dB/Hz) | GLONASS 03 L1 SNR (dB/Hz) |
| GLONASS 04 L1 SNR (dB/Hz) | GLONASS 05 L1 SNR (dB/Hz) | GLONASS 11 L1 SNR (dB/Hz) |
| GLONASS 12 L1 SNR (dB/Hz) | GLONASS 13 L1 SNR (dB/Hz) | GLONASS 14 L1 SNR (dB/Hz) |
| GLONASS 15 L1 SNR (dB/Hz) | GLONASS 18 L1 SNR (dB/Hz) | GLONASS 19 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) |                           |                           |

## GLONASS L2 SNR

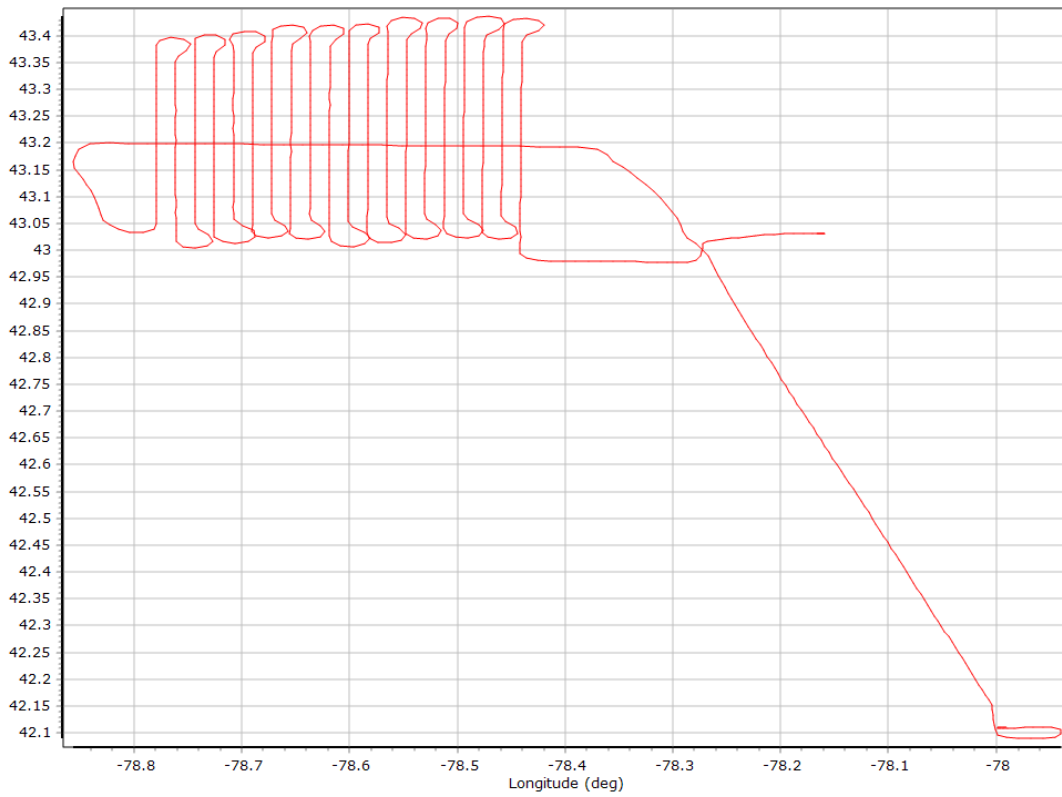


## BEIDOU SNR

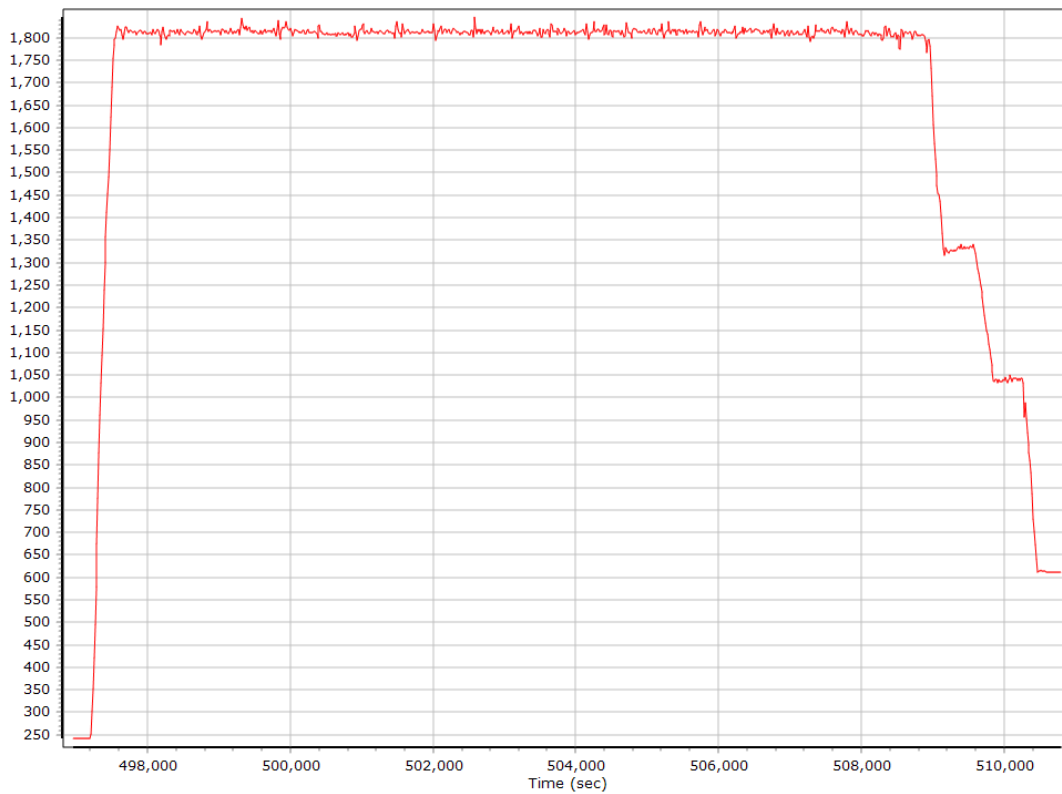


## Trajectory Information

### Top View

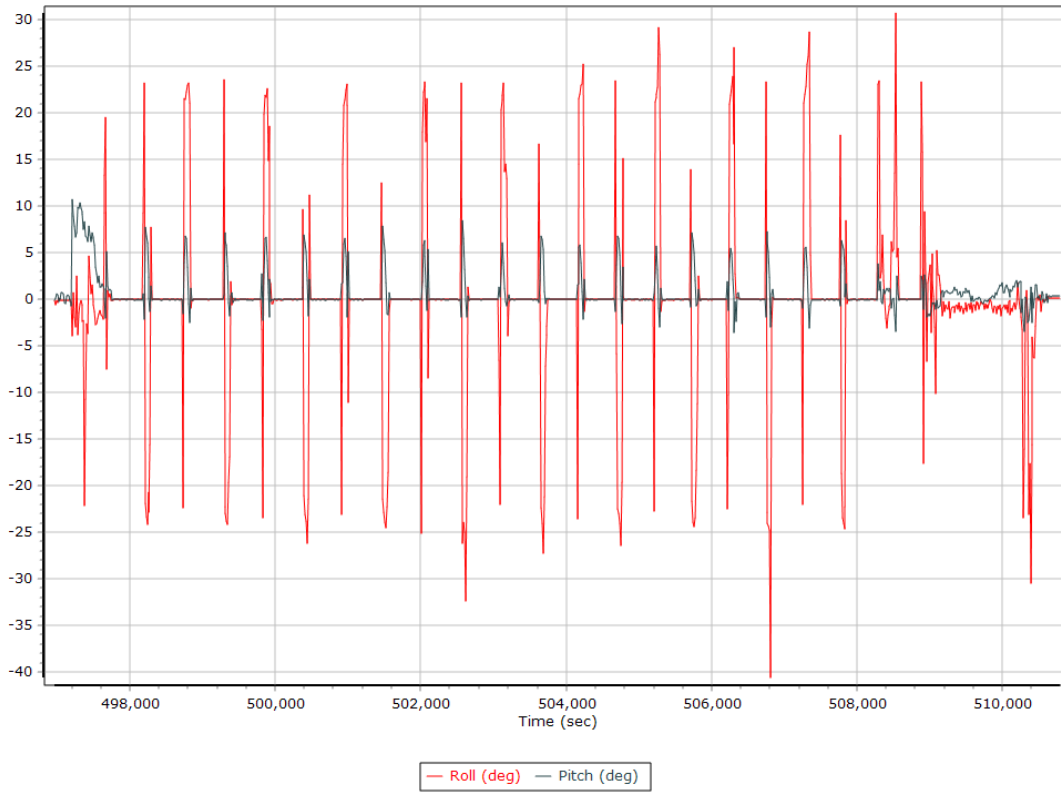


### Altitude

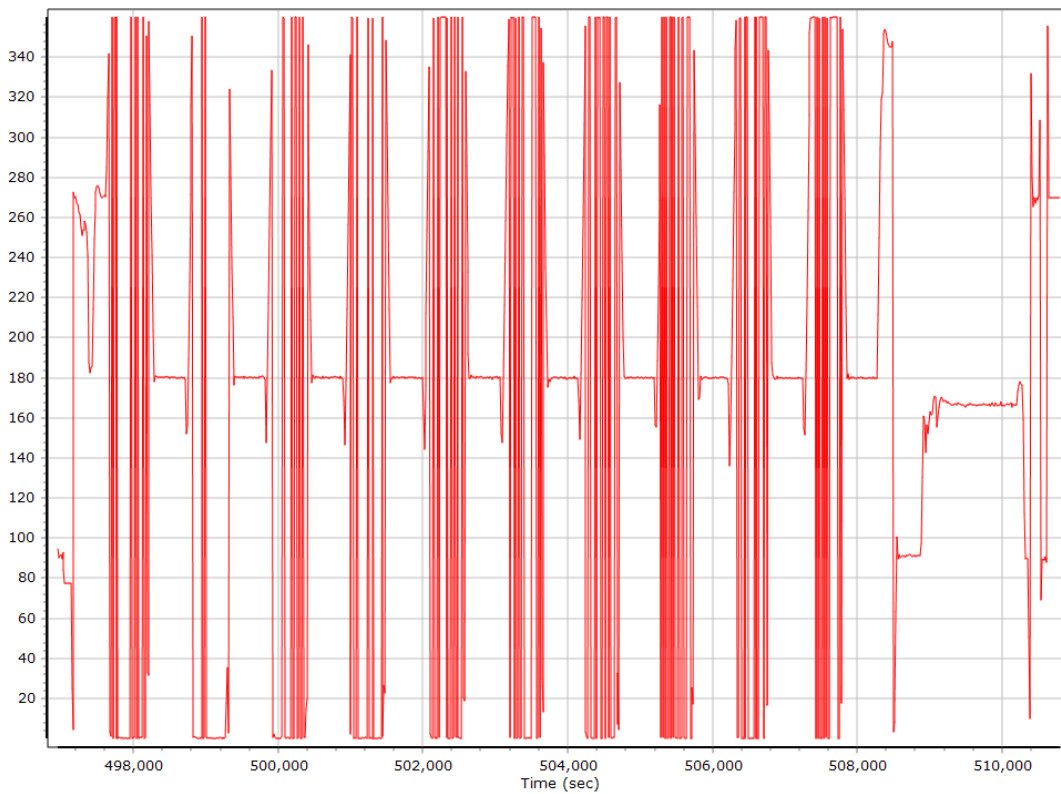




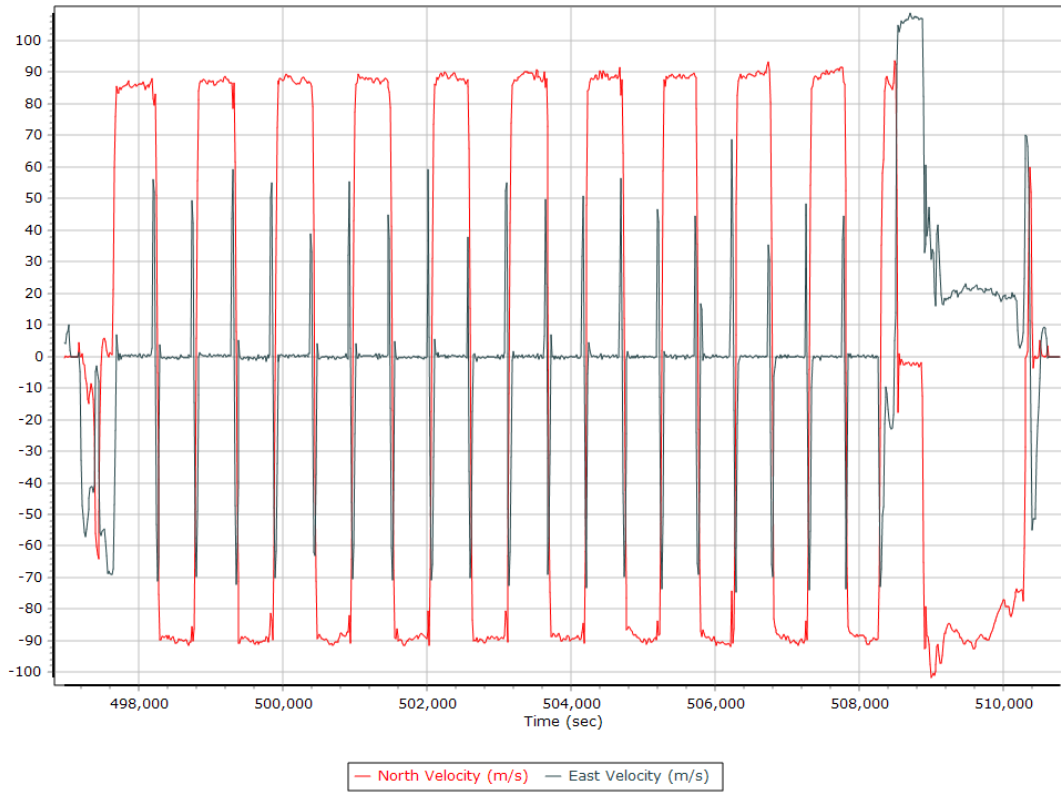
## Roll/Pitch



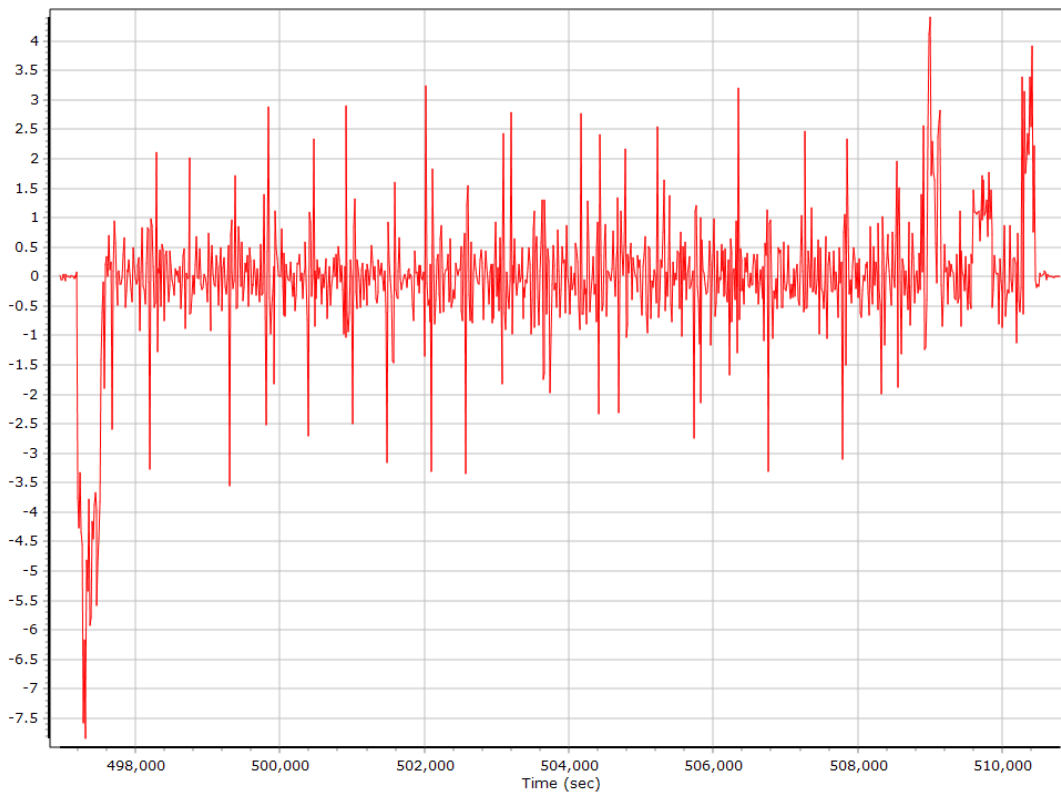
## Heading



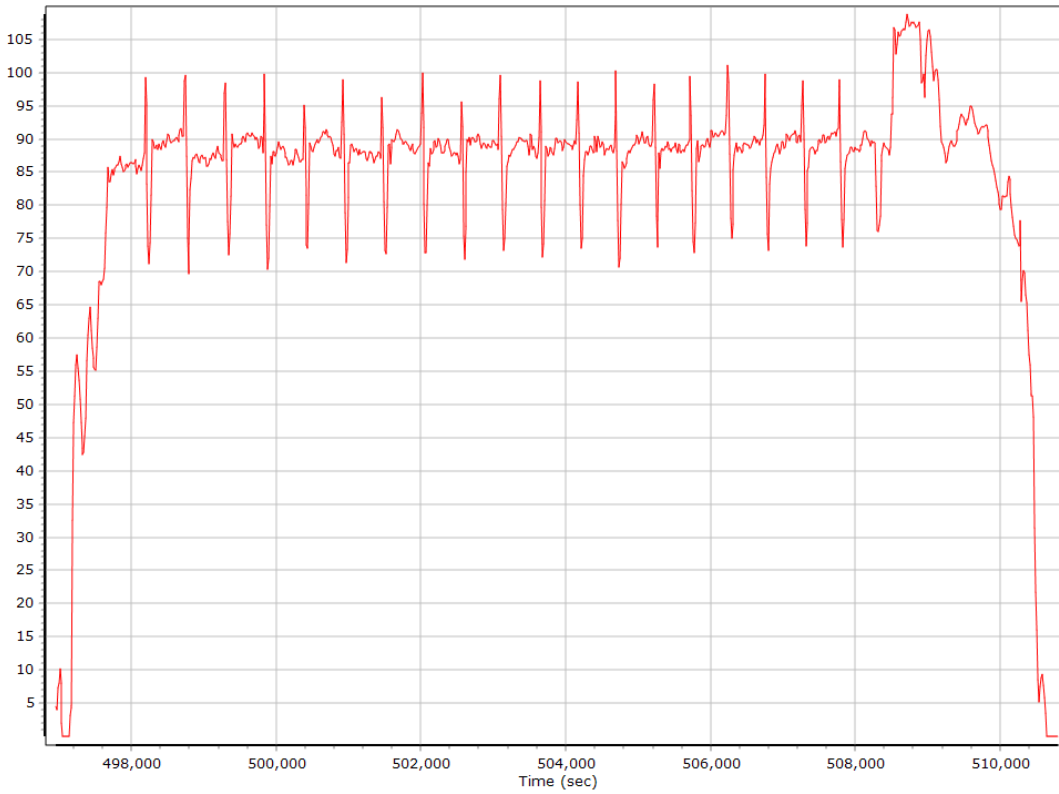
## North/East Velocity



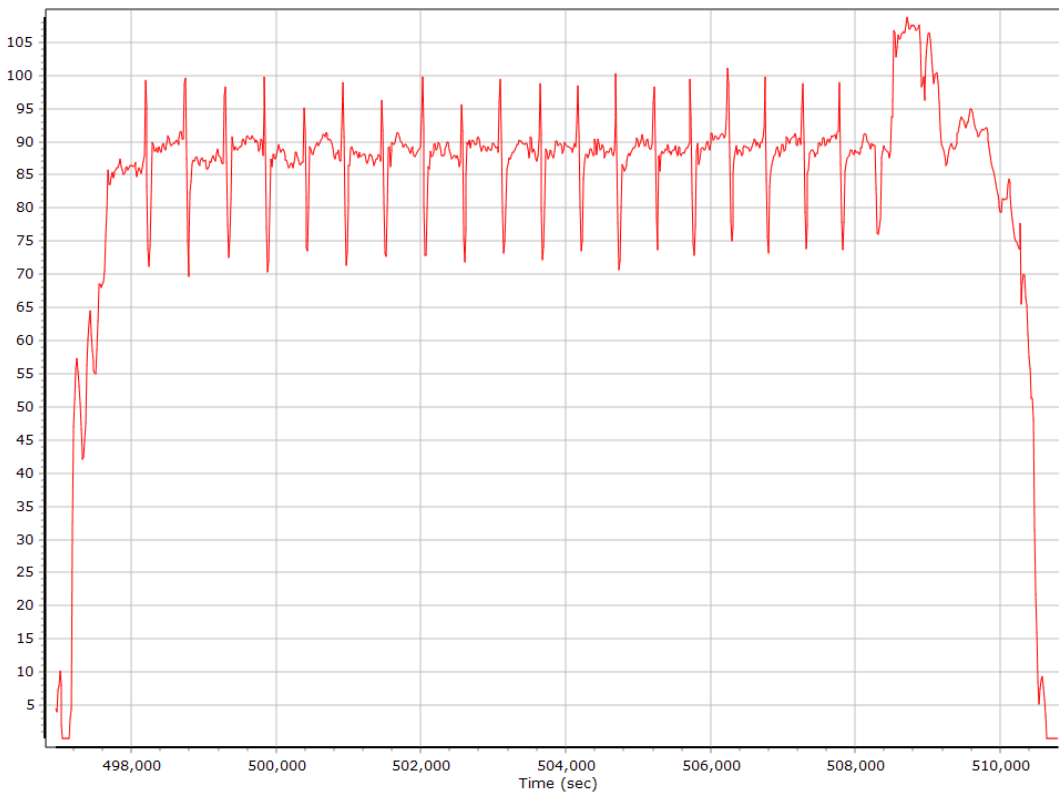
## Down Velocity



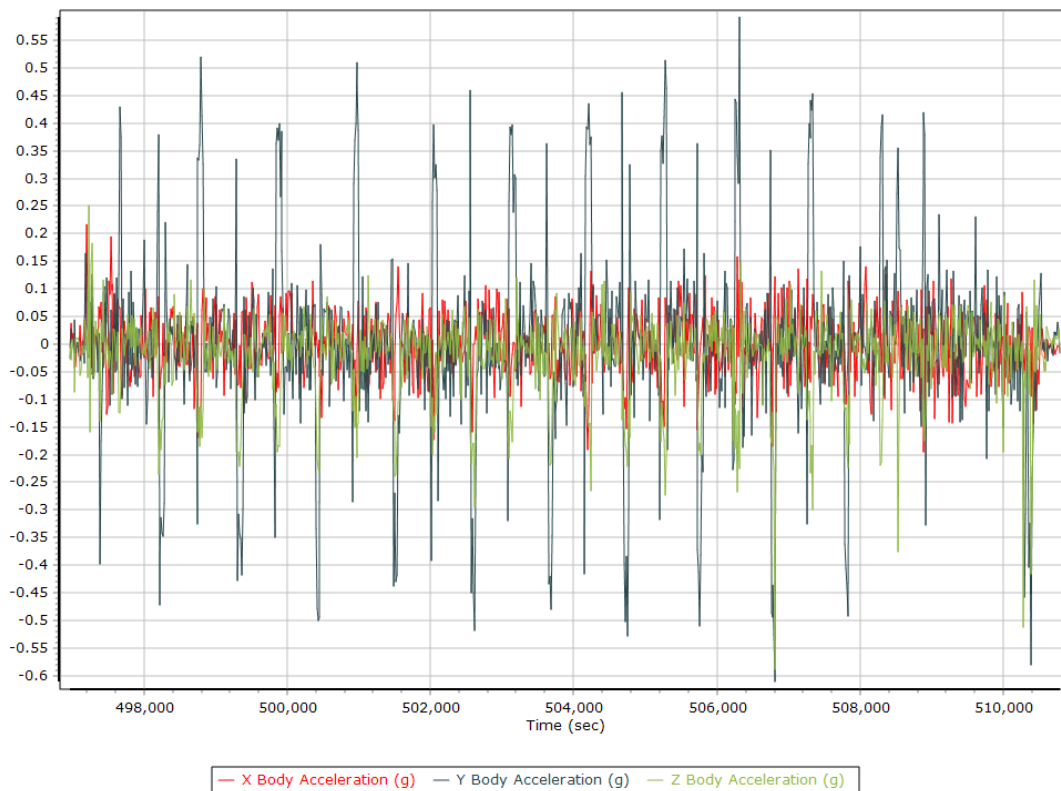
## Total Speed



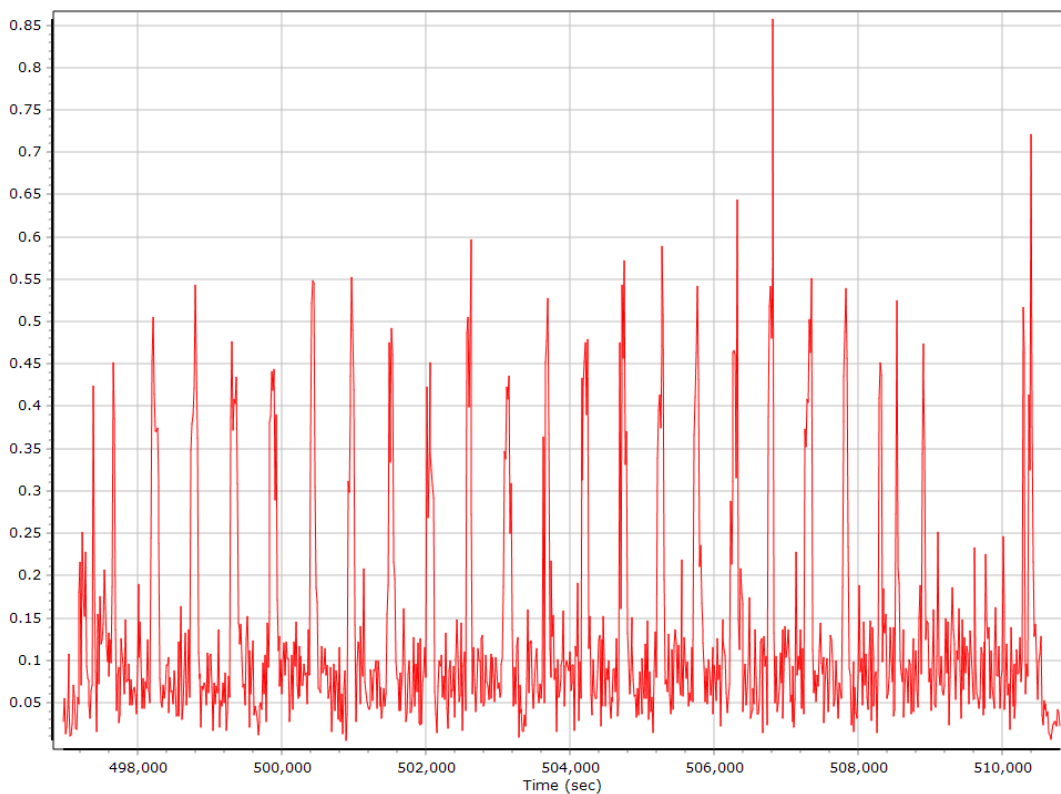
## Ground Speed



### Body Acceleration



### Total Body Acceleration



## Body Angular Rate



## SmartBase Processing Summary

### Smart Select Options

Archive enabled	False
User database enabled	False
Include high-rate data sites	False
Target GNSS Selection	GNSS

### Basestation Selection

Date	ID	Dist	Data Type	Rate	Service	Database	Status
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### SmartBase Results

SmartBase status	
Primary station Id	
Primary station data rate [sec]	0.0
VRS/ASB generation rate [sec]	0.0
VRS/ASB timespan	
Number of reference stations	0
Primary station GPS measurement usage [%]	0.0
Average number of satellites per epoch	0.0
Max number of GPS stations used	0
Min number of GPS stations used	0
Total full data gap [sec]	0
Total individual satellite data gap [sec]	0
GPS precise vs. broadcast ephemeris used	0.0 % / 0.0 %
Termination Status	

## **SmartBase Quality Check**

## GNSS QC

### GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	0.19	121.66	
Number of GPS SV	7	11	9
Number of GLONASS SV	0	8	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	10	18	15
PDOP	1.08	1.80	1.34
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	14220.00	0.00	1.00
Percentage	99.99	0.00	0.01



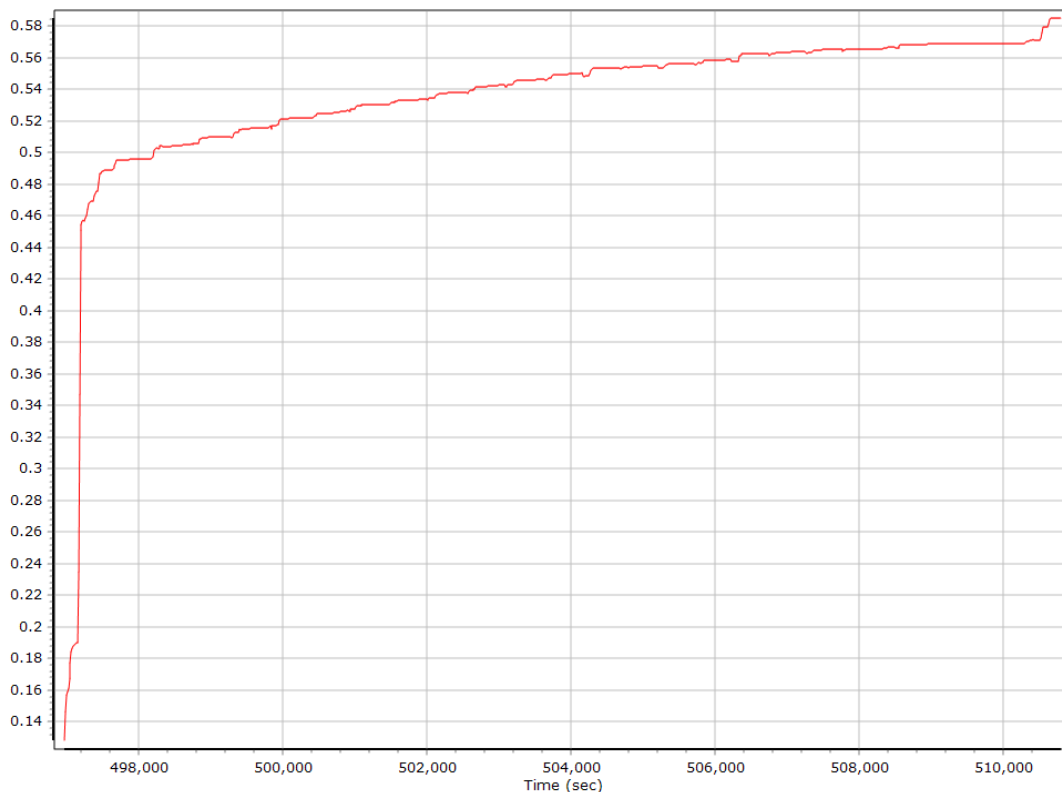
## GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	496539.000 (1/4/2019 5:55:39 PM)		
Processing end time	510802.000 (1/4/2019 9:53:22 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	0.000	0.000	0.000
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm std dev [m]	0.100	0.100	0.100
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

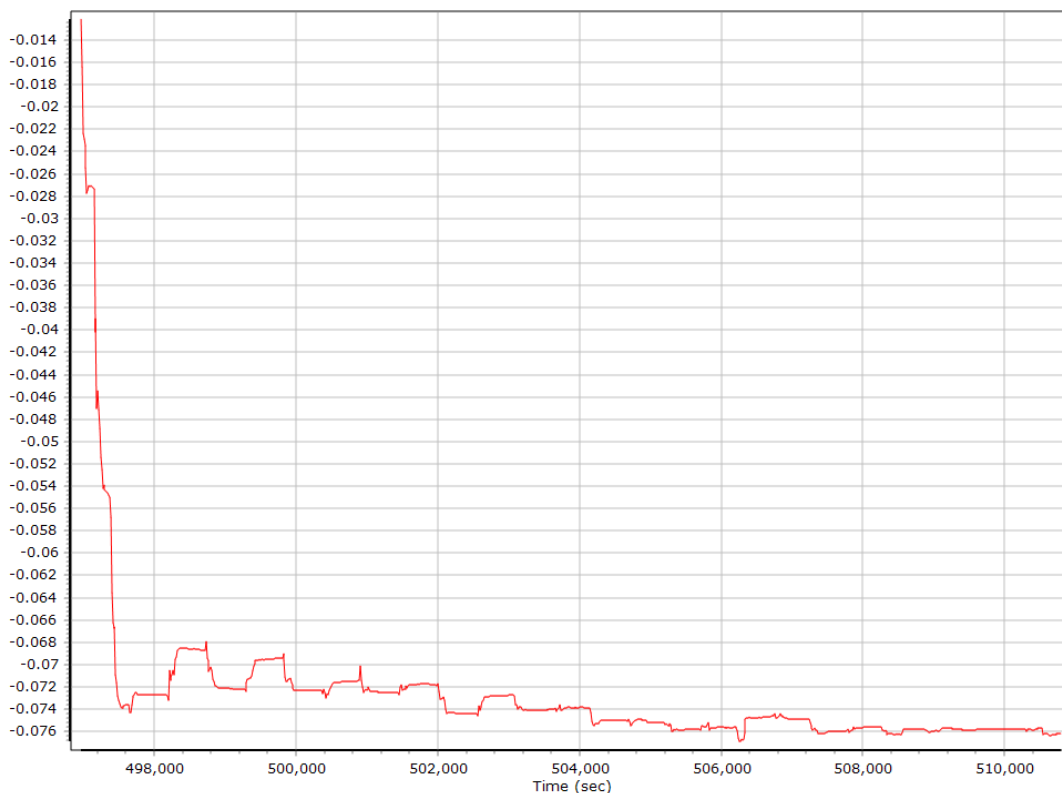
## Calibrated Installation Parameters

### Reference-Primary GNSS Lever Arm

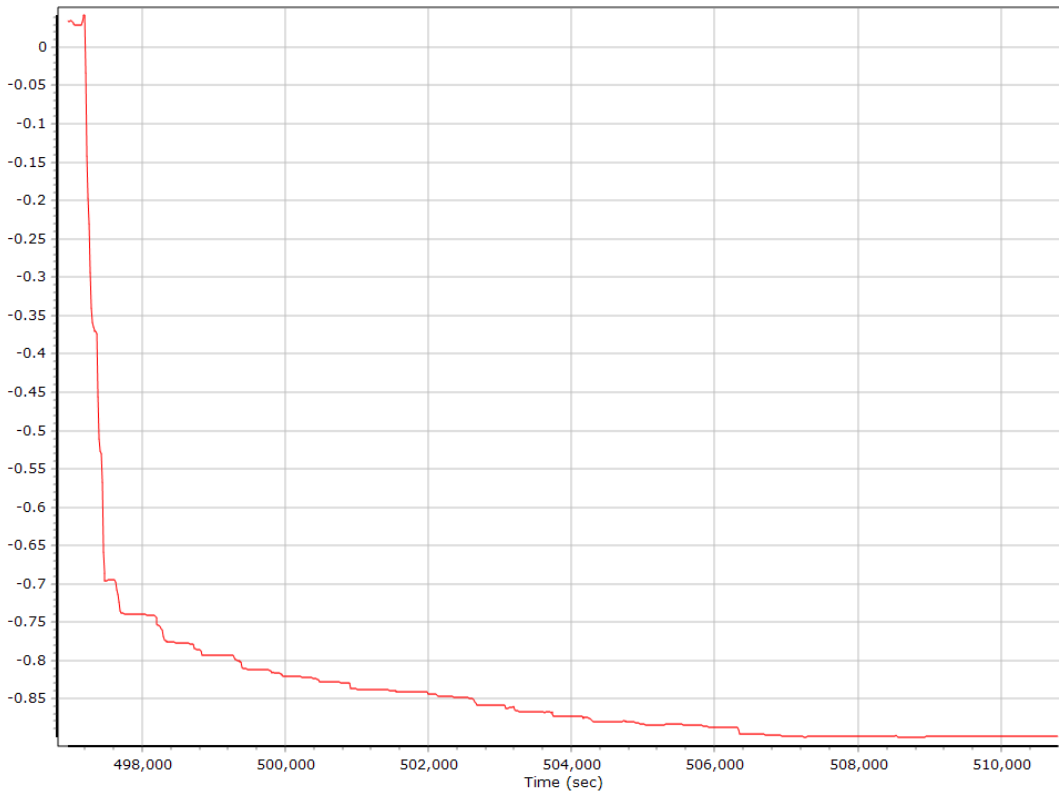
#### X Reference-Primary GNSS Lever Arm (m)



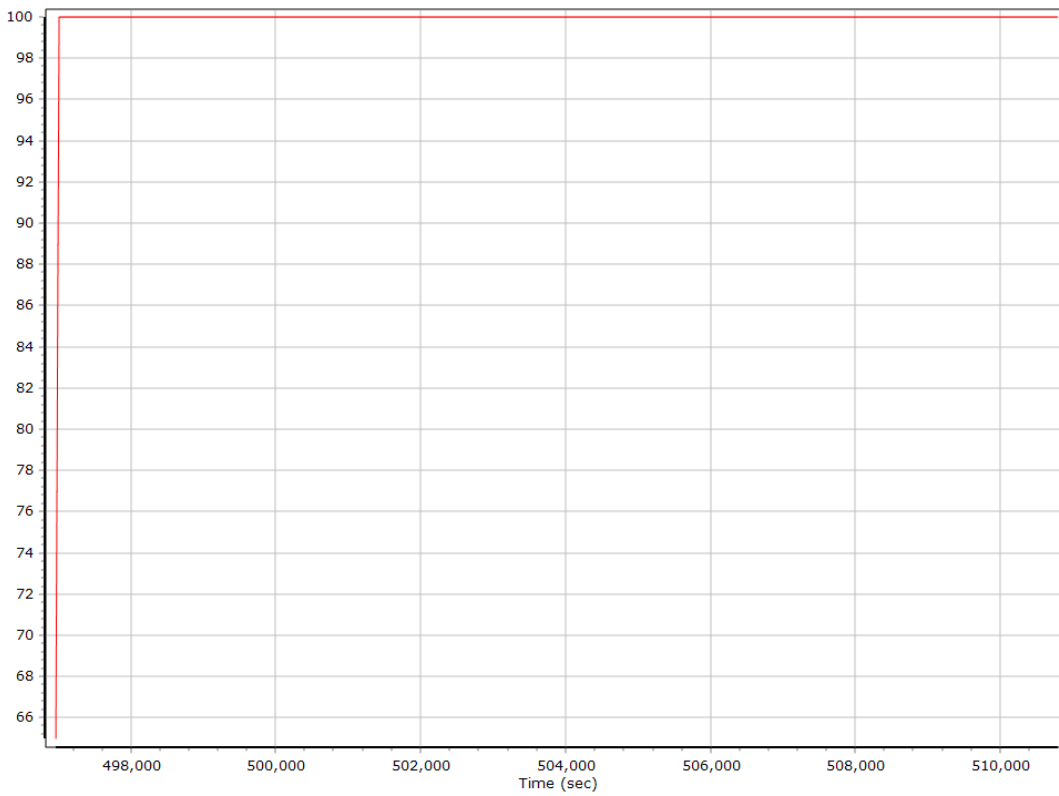
#### Y Reference-Primary GNSS Lever Arm (m)



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



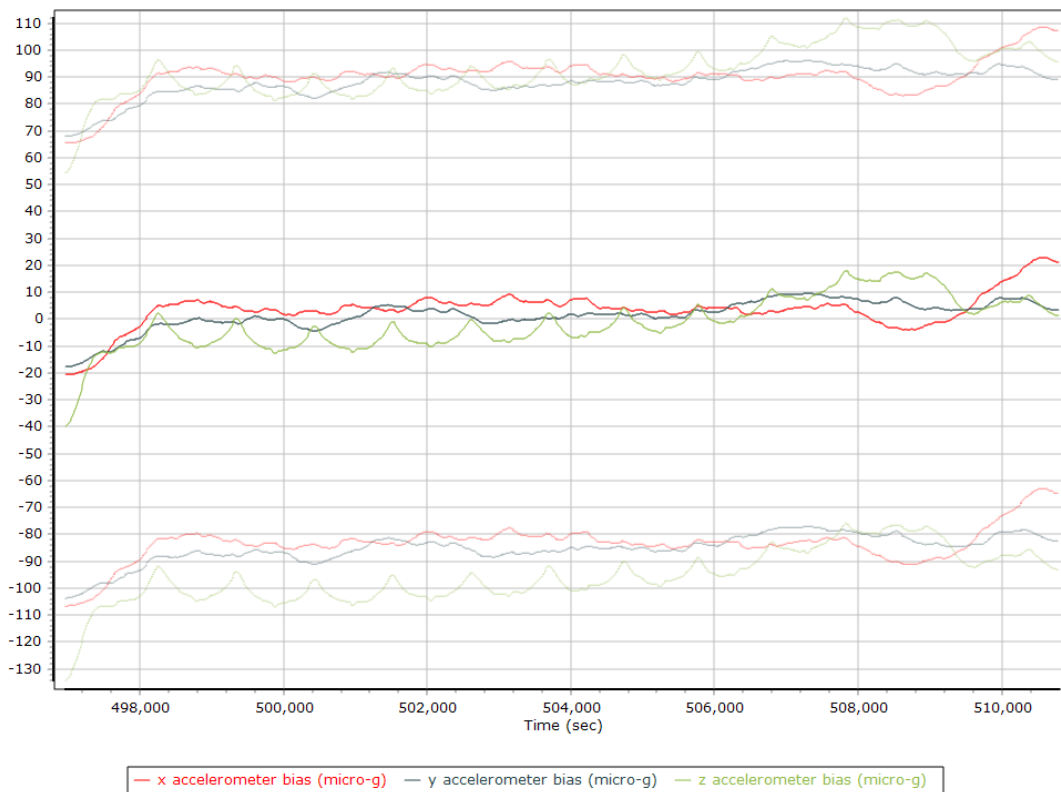
### Reference-Primary GNSS Lever Arm Figure of Merit



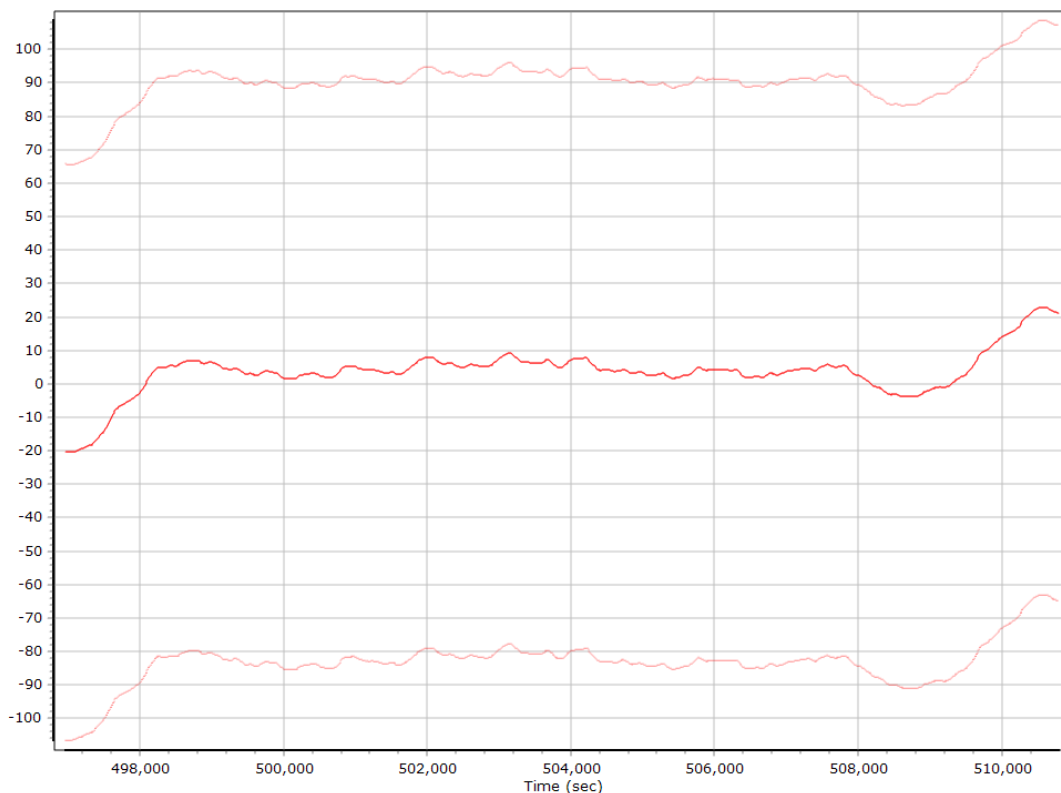
## Smoothed IN-Fusion QC

### Smoothed Estimated Errors, Reference Frame

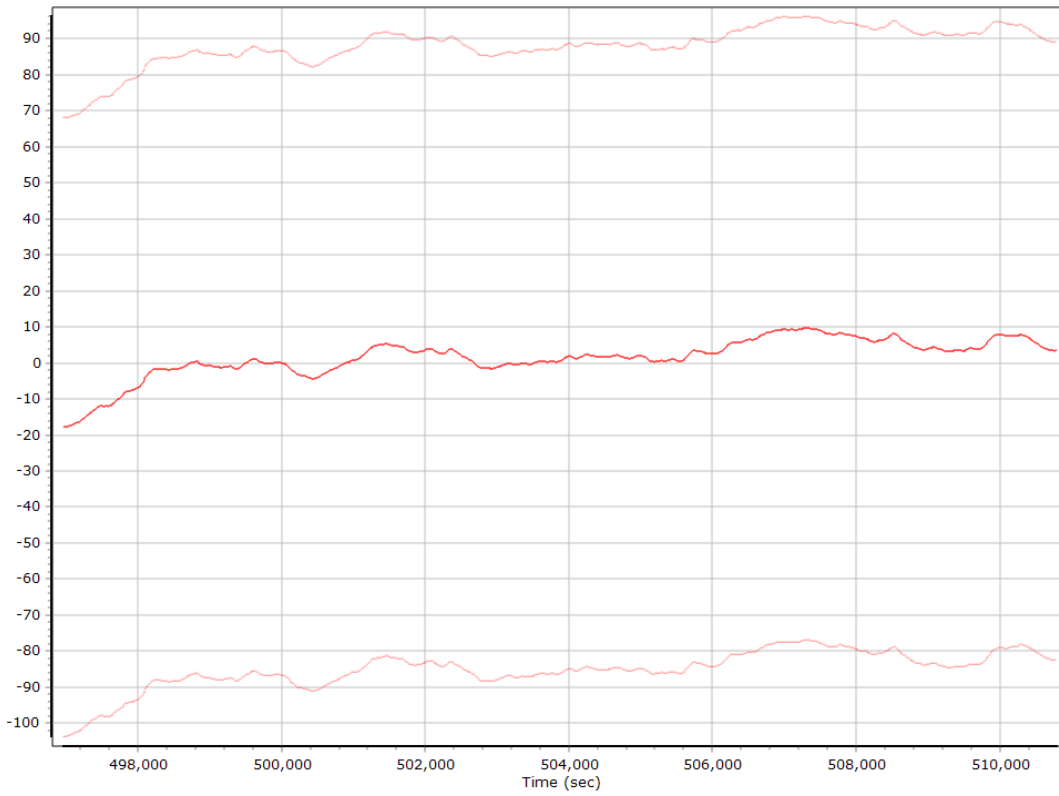
#### Accelerometer Bias (micro-g)



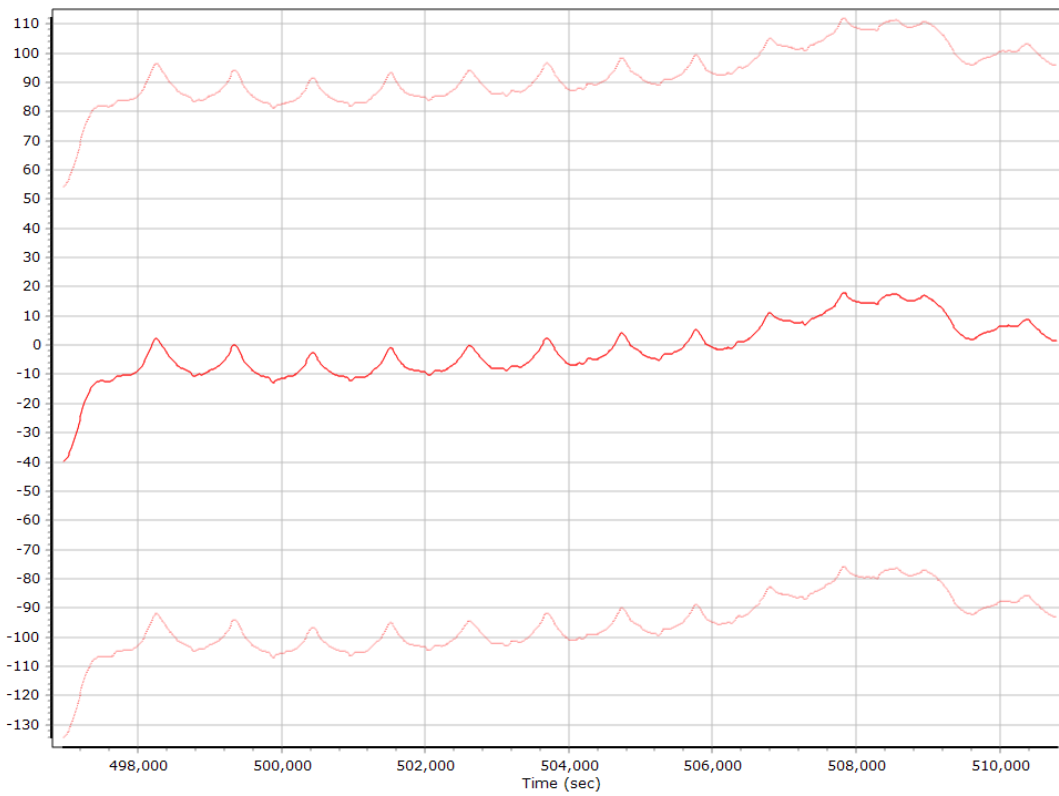
#### X Accelerometer Bias (micro-g)



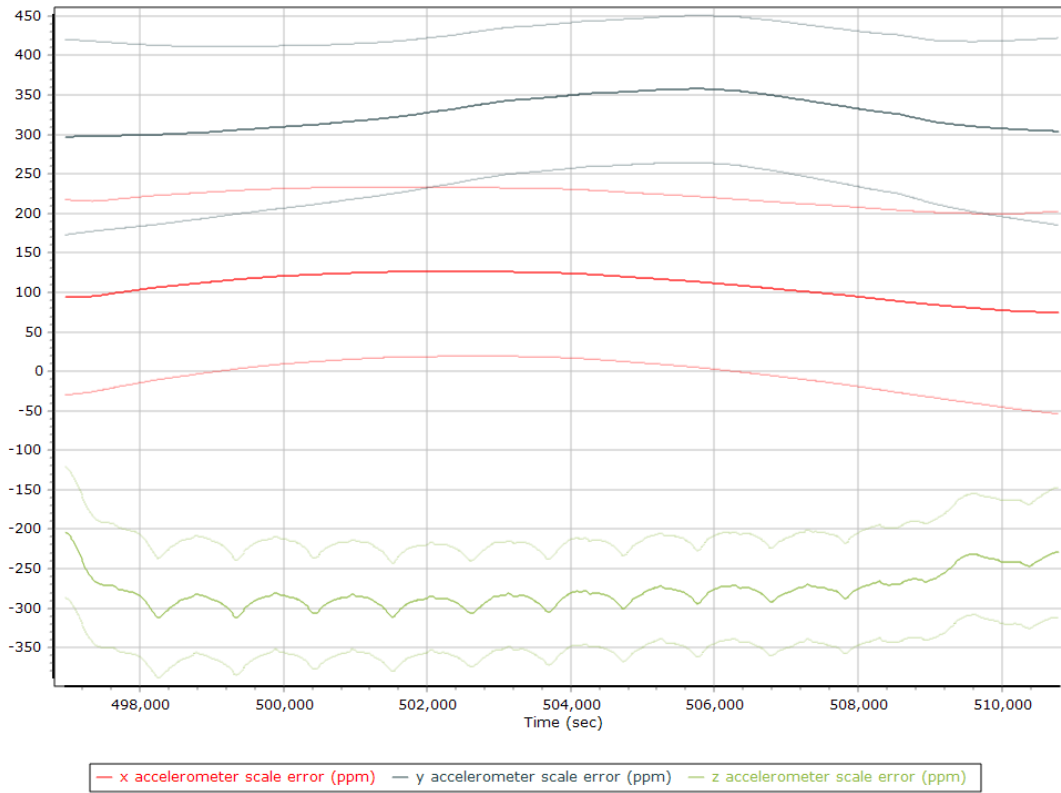
### Y Accelerometer Bias (micro-g)



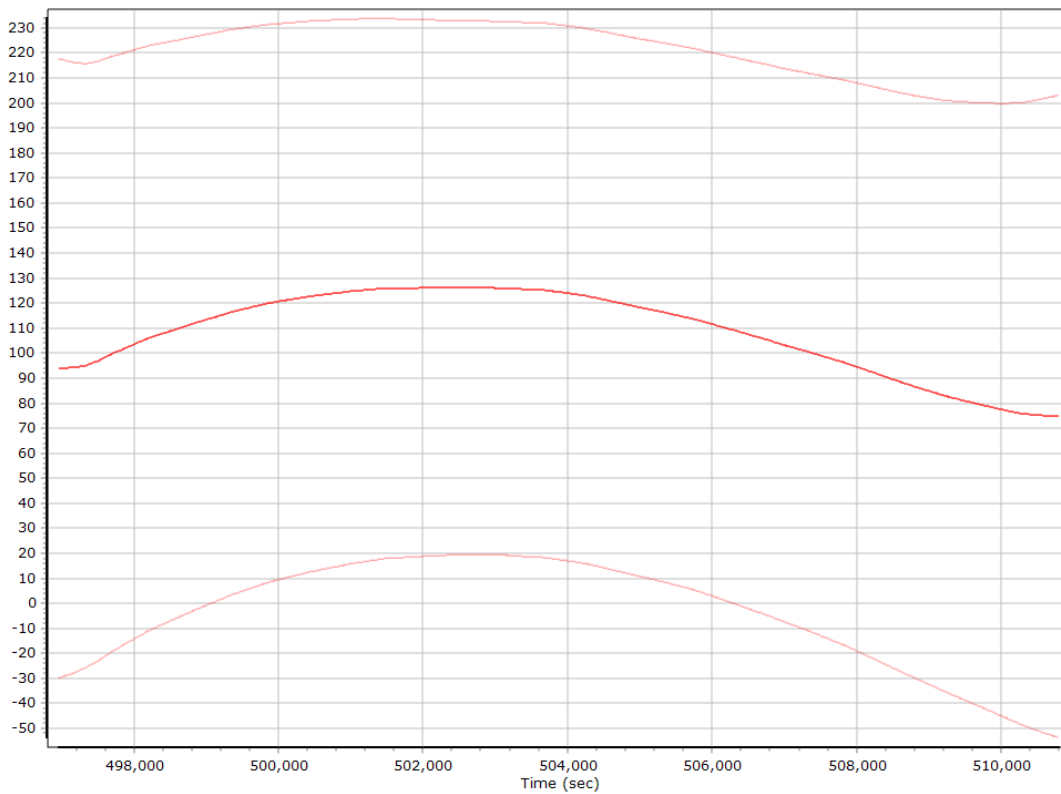
### Z Accelerometer Bias (micro-g)



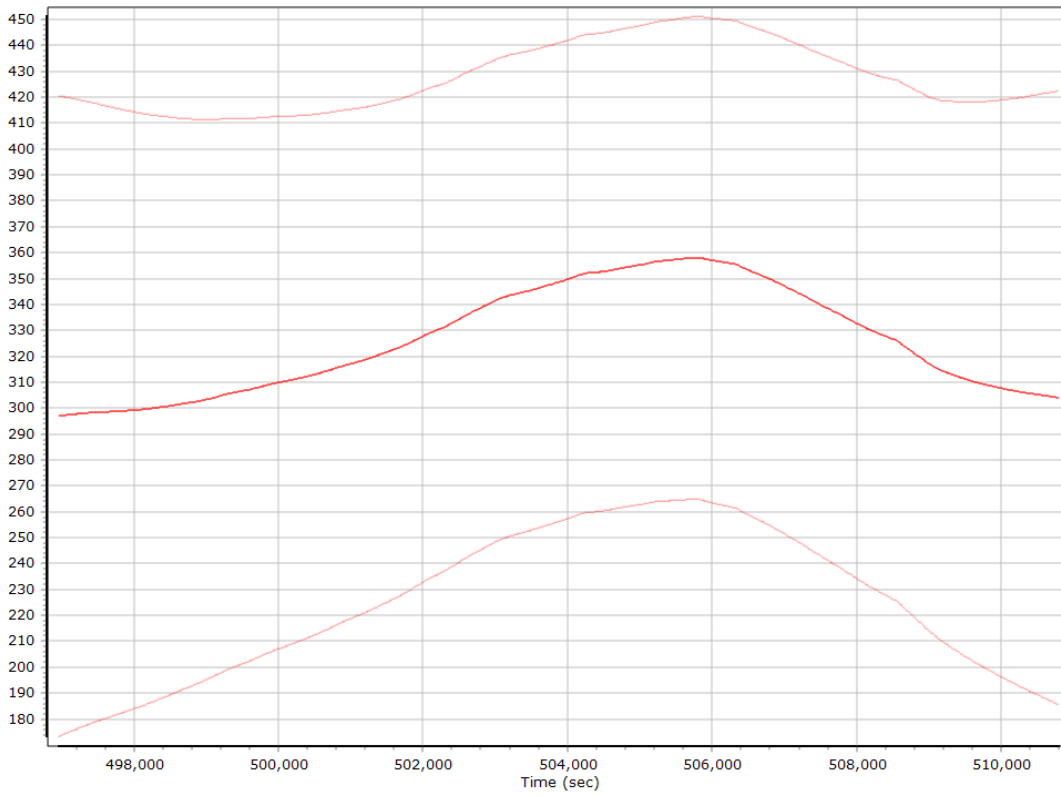
### Accelerometer Scale Error (ppm)



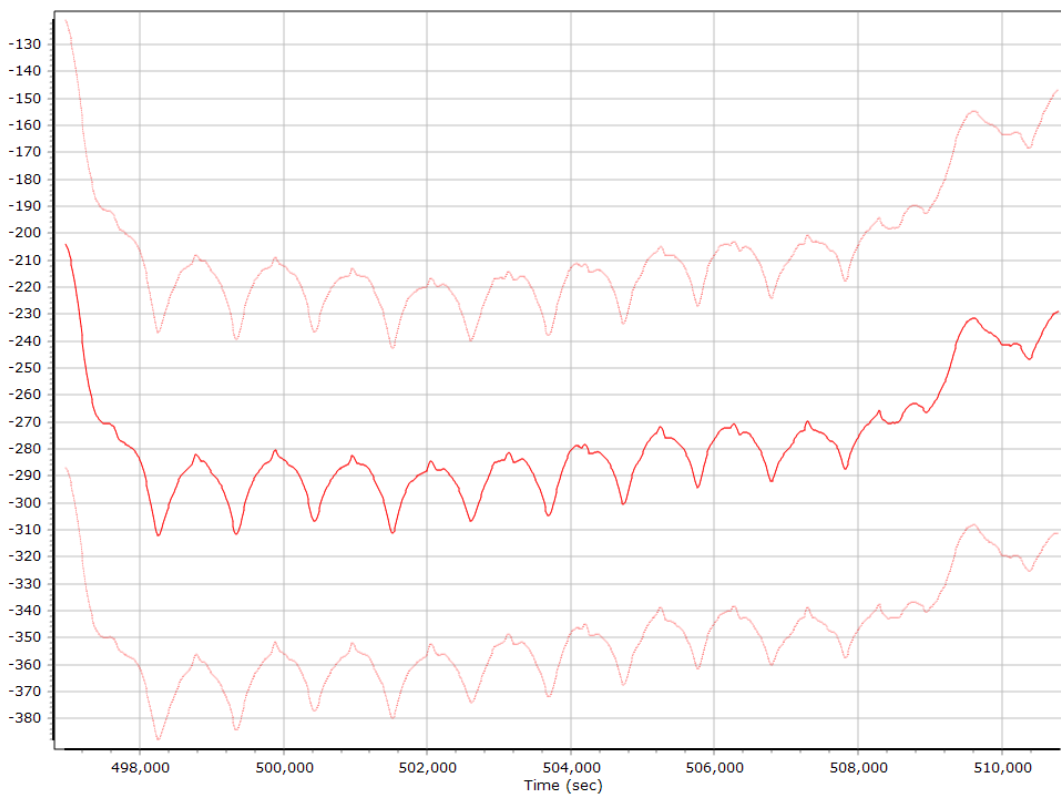
### X Accelerometer Scale Error (ppm)



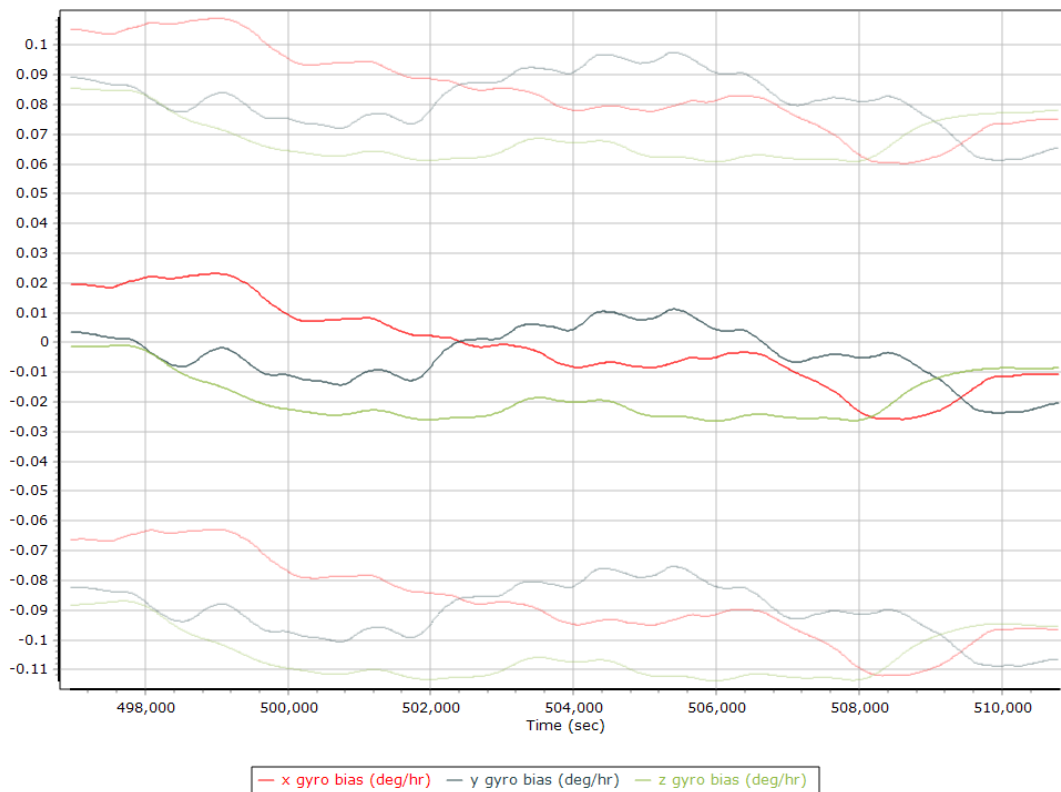
### Y Accelerometer Scale Error (ppm)



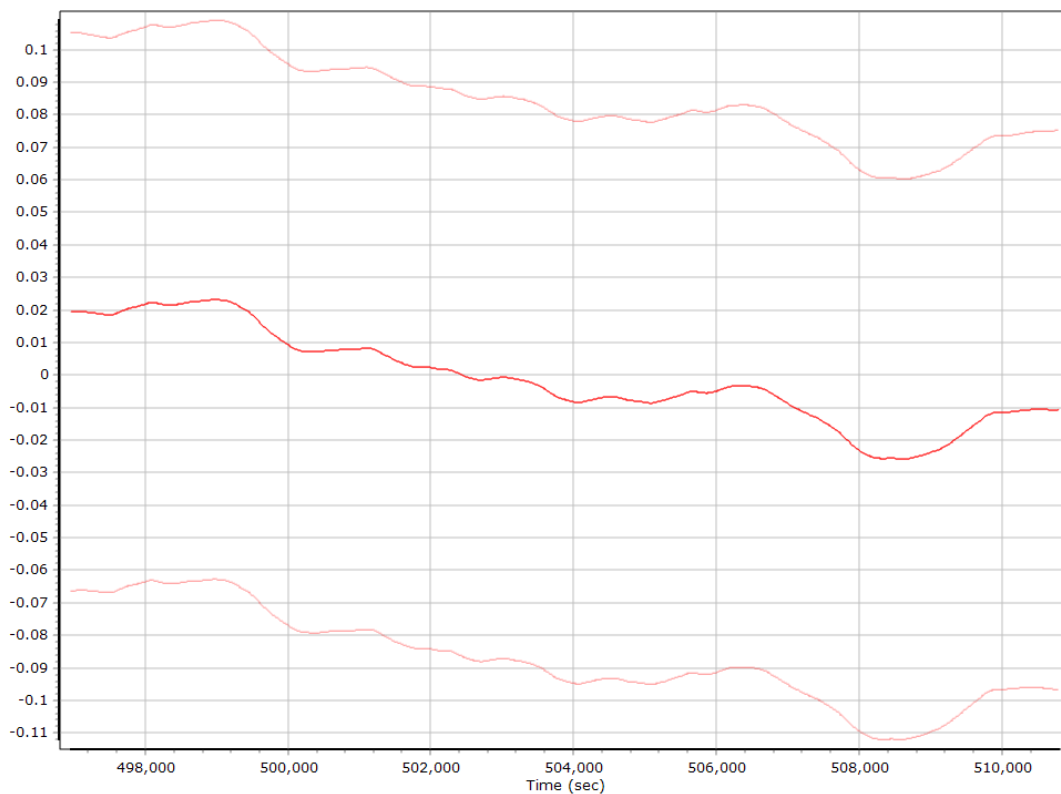
### Z Accelerometer Scale Error (ppm)



### Gyro Bias (deg/h)

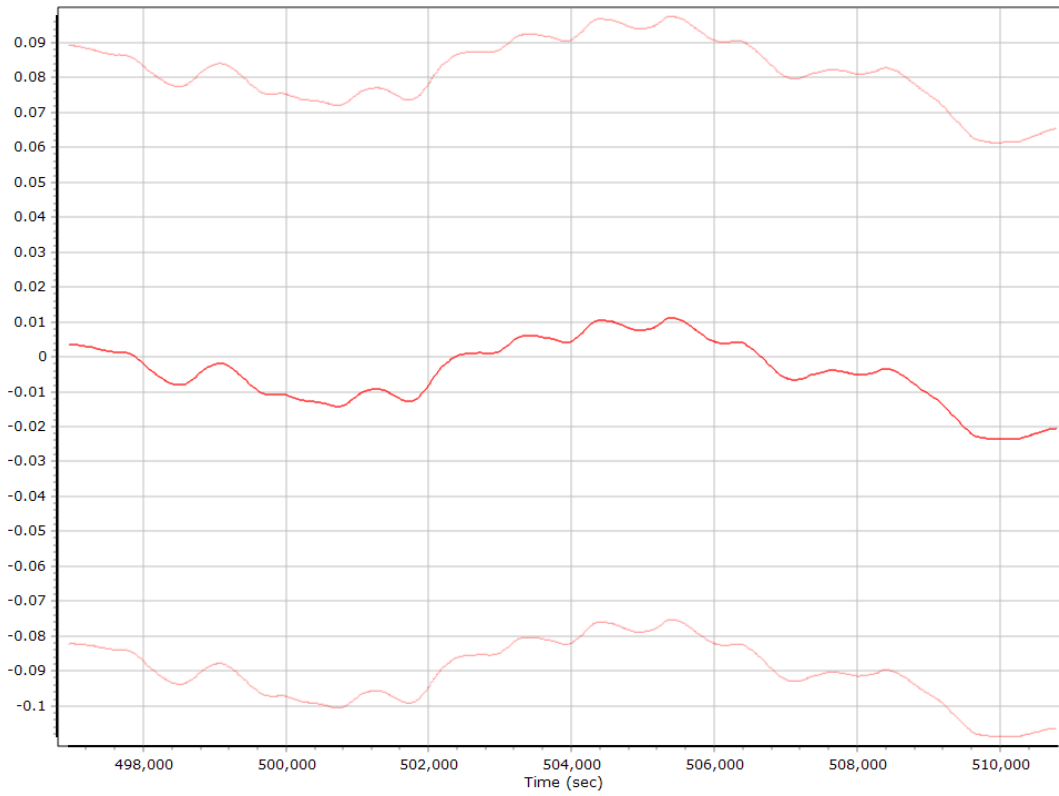


### X Gyro Bias (deg/h)

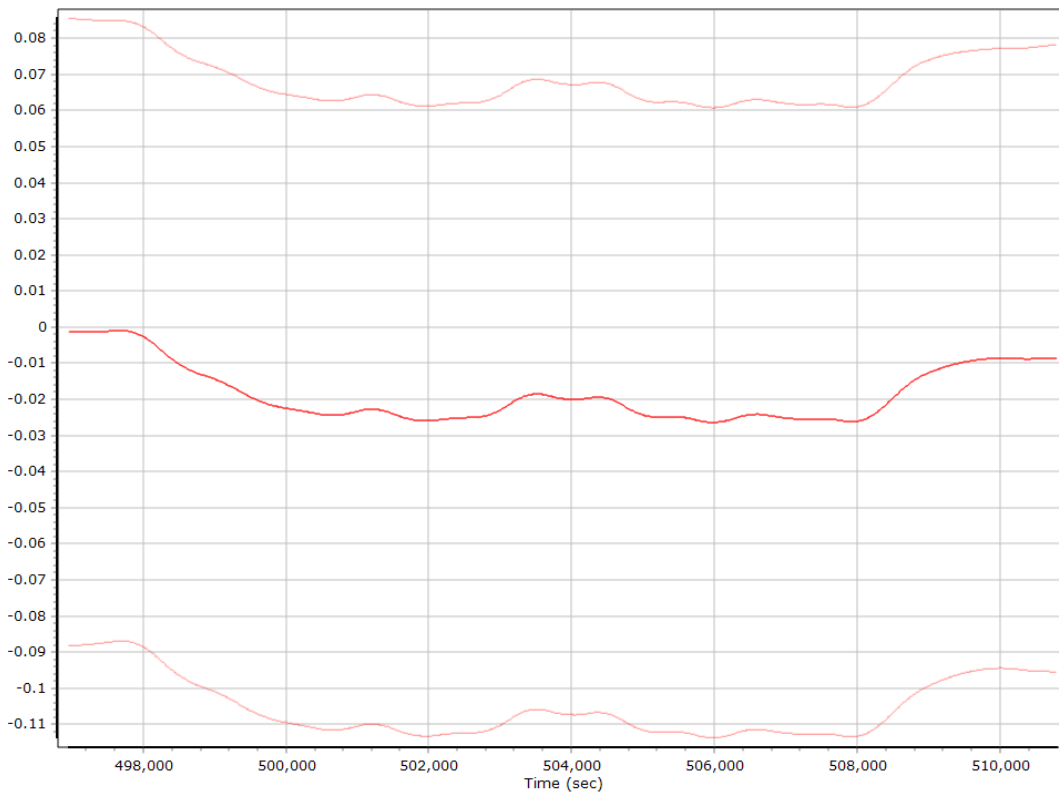




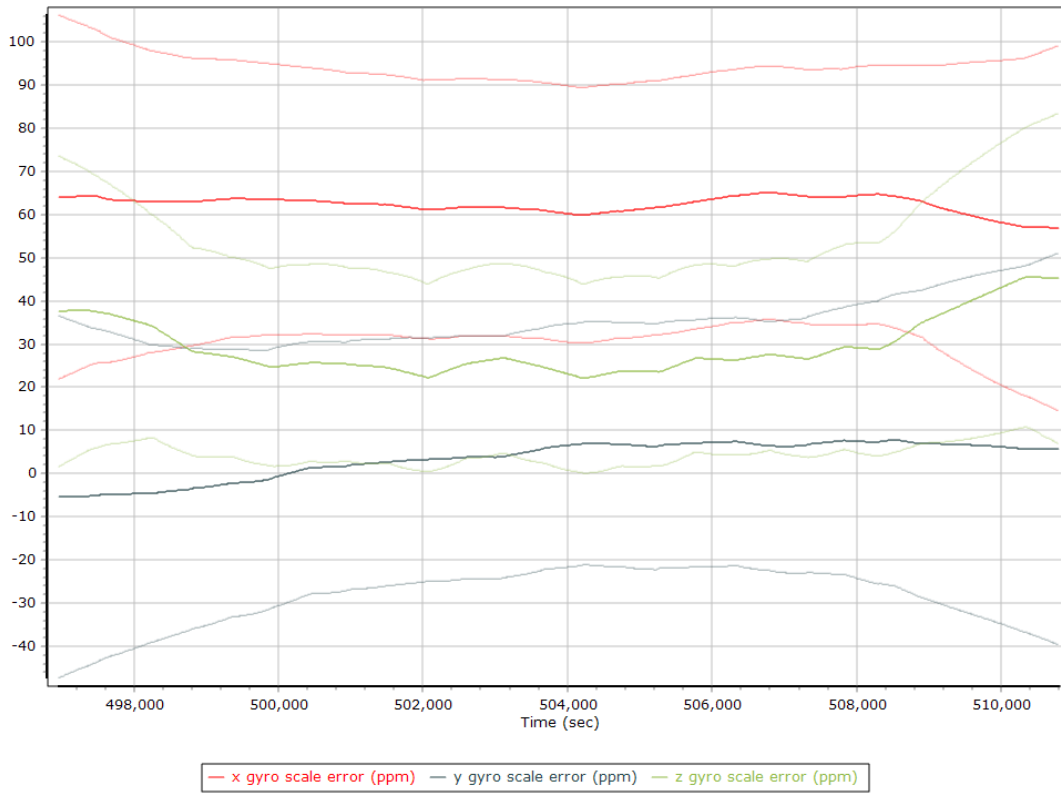
### Y Gyro Bias (deg/h)



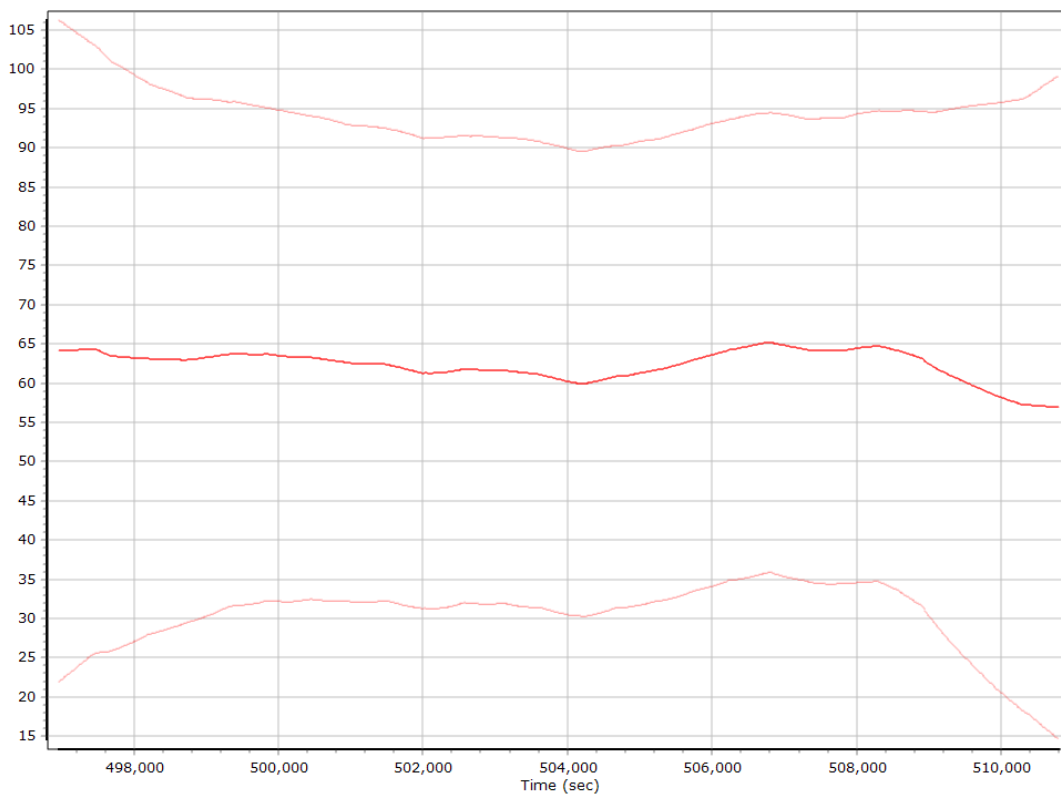
### Z Gyro Bias (deg/h)



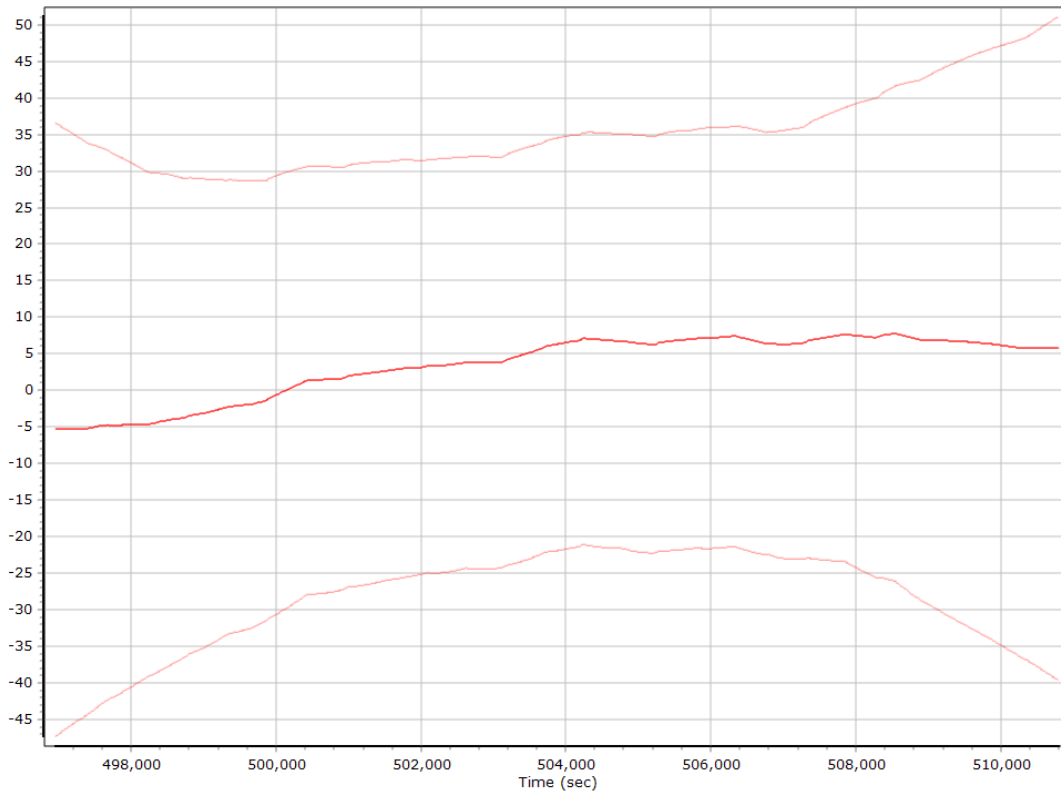
### Gyro Scale Error (ppm)



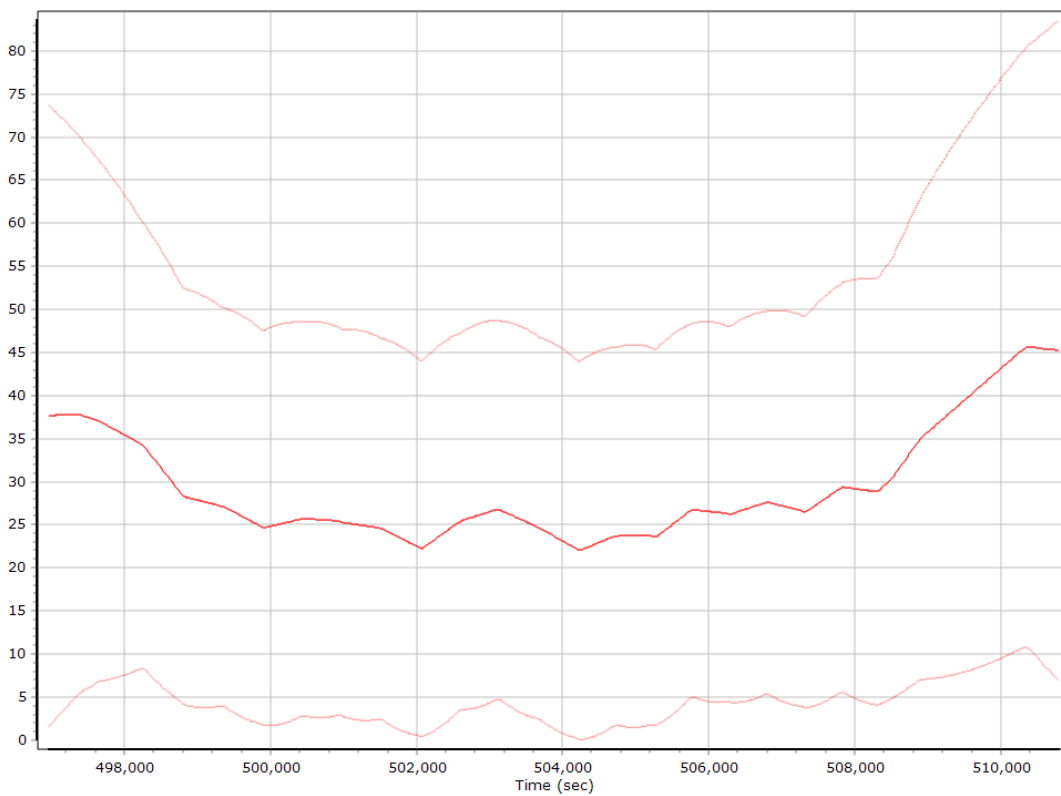
### X Gyro Scale Error (ppm)



### Y Gyro Scale Error (ppm)

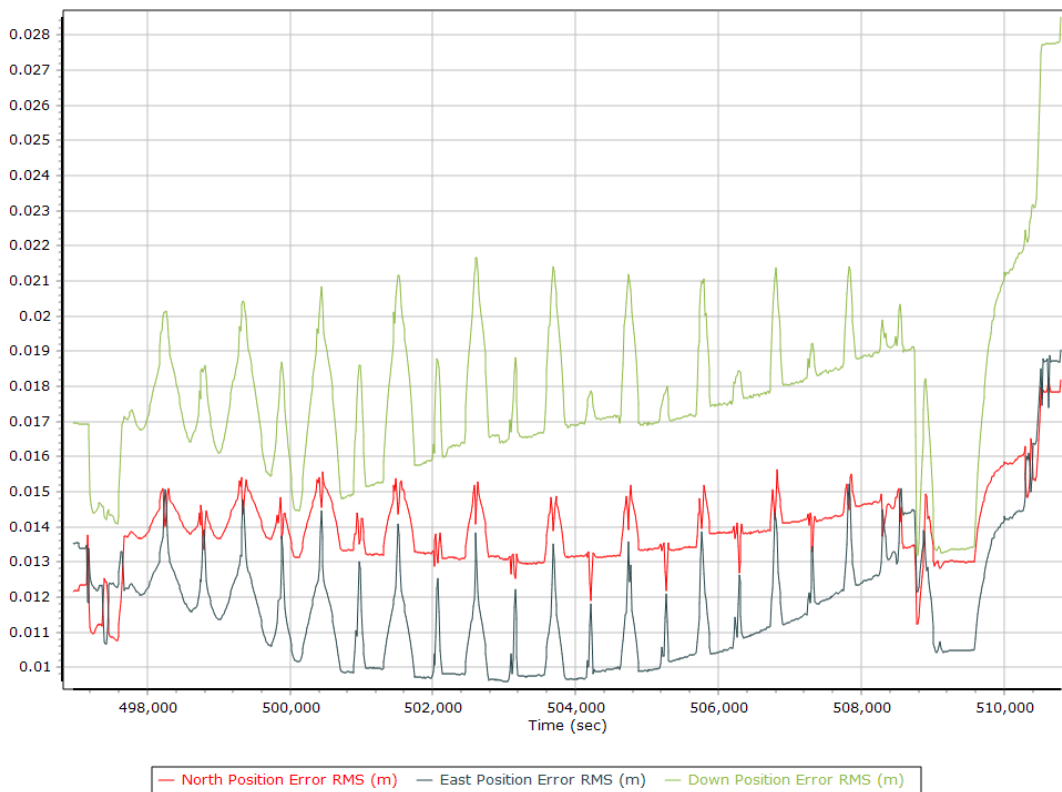


### Z Gyro Scale Error (ppm)

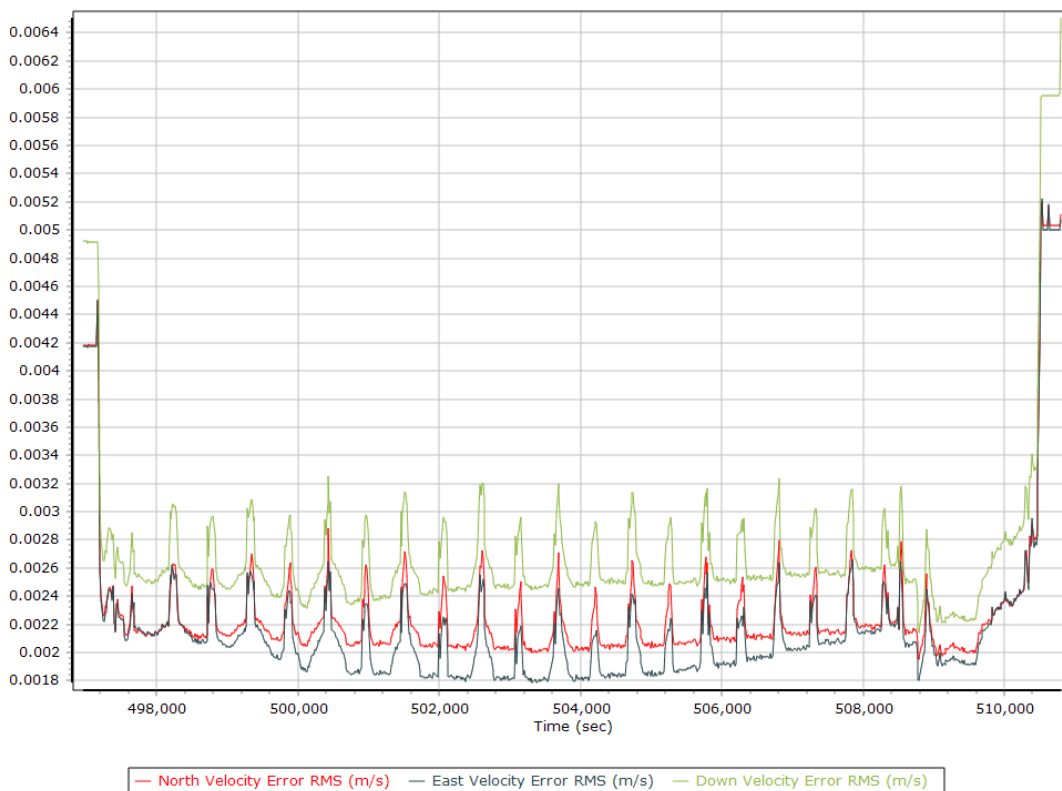


## Smoothed Performance Metrics

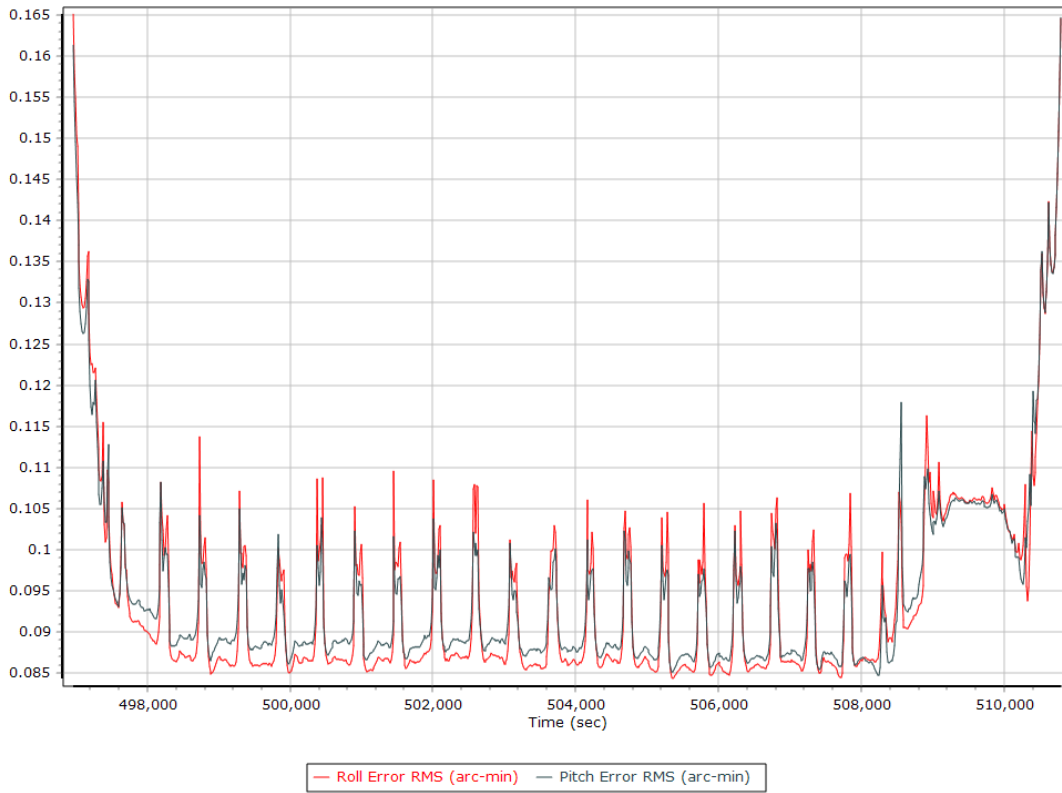
### Position Error RMS (m)



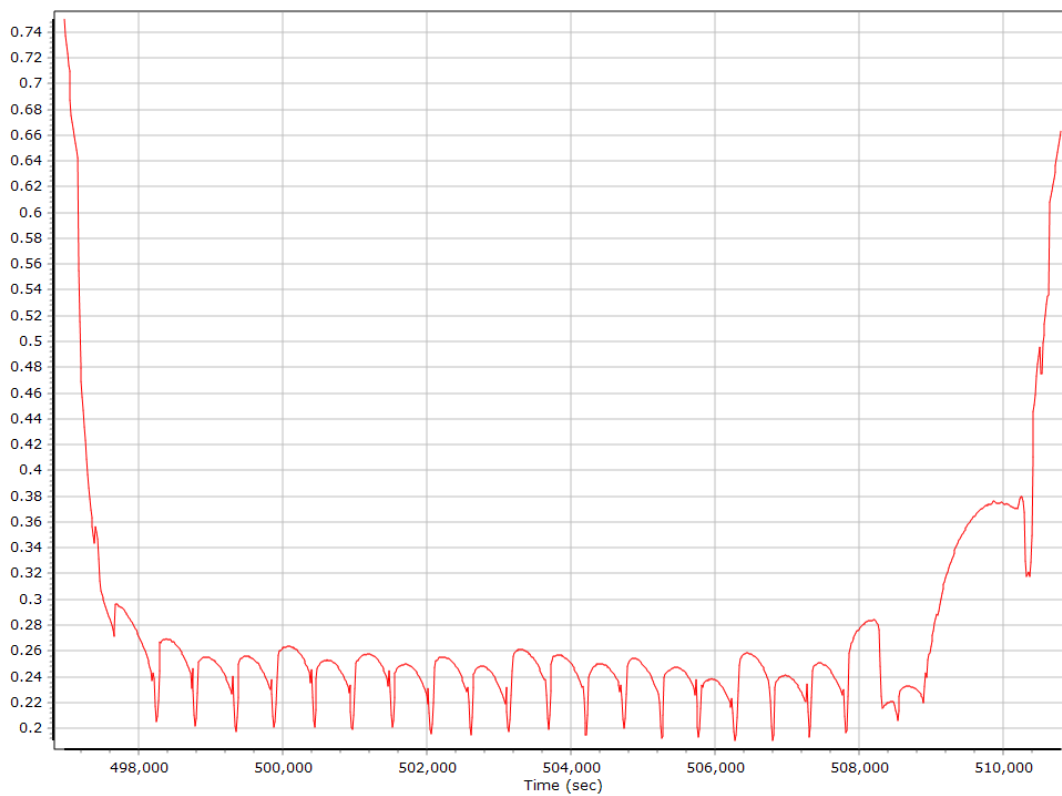
### Velocity Error RMS (m/s)



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

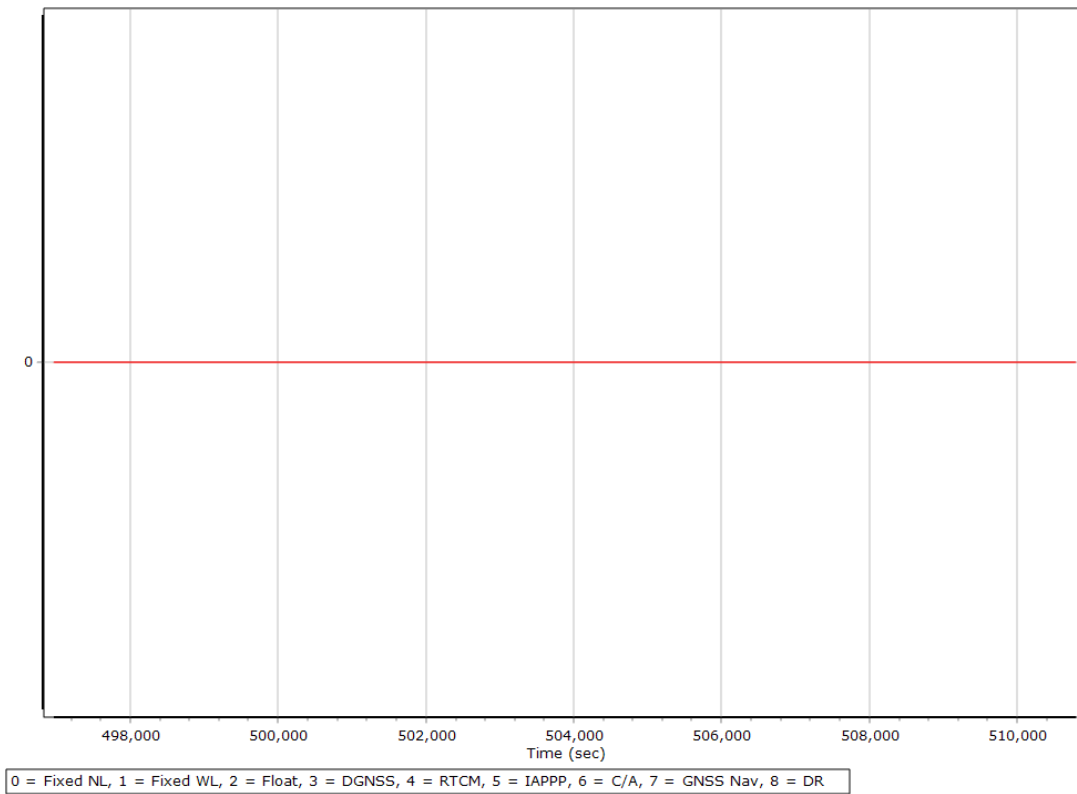


### Heading Error RMS (arc-min)

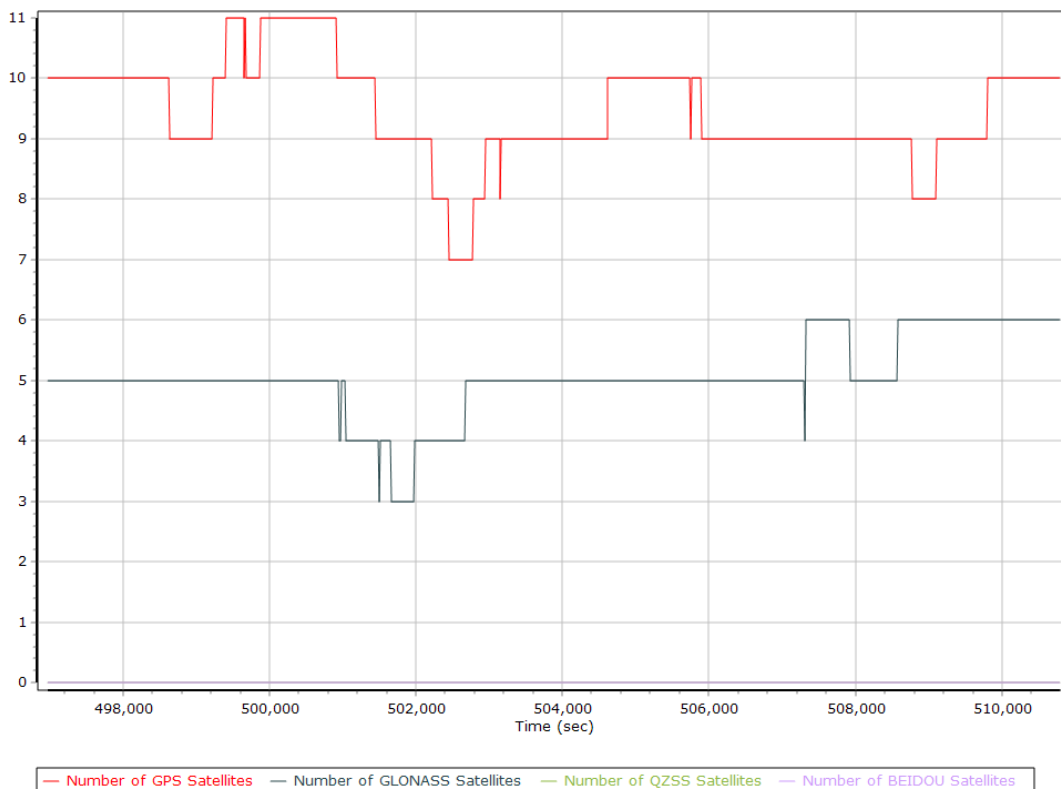


## Smoothed Solution Status

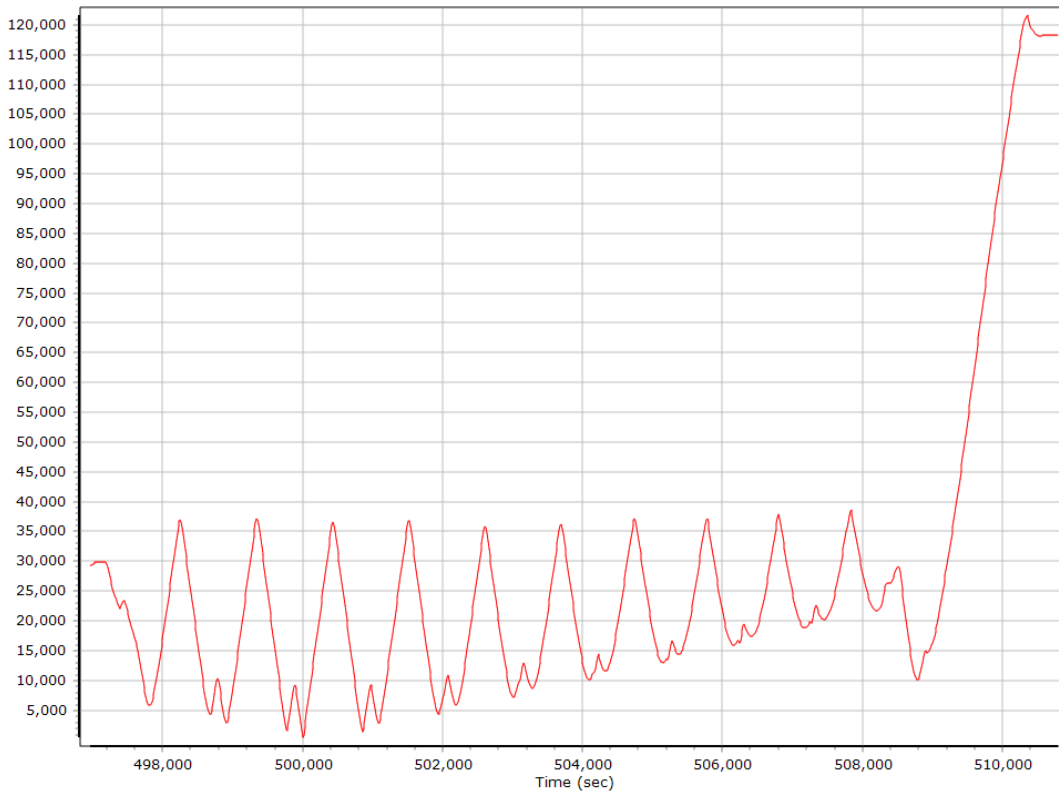
### Processing Mode



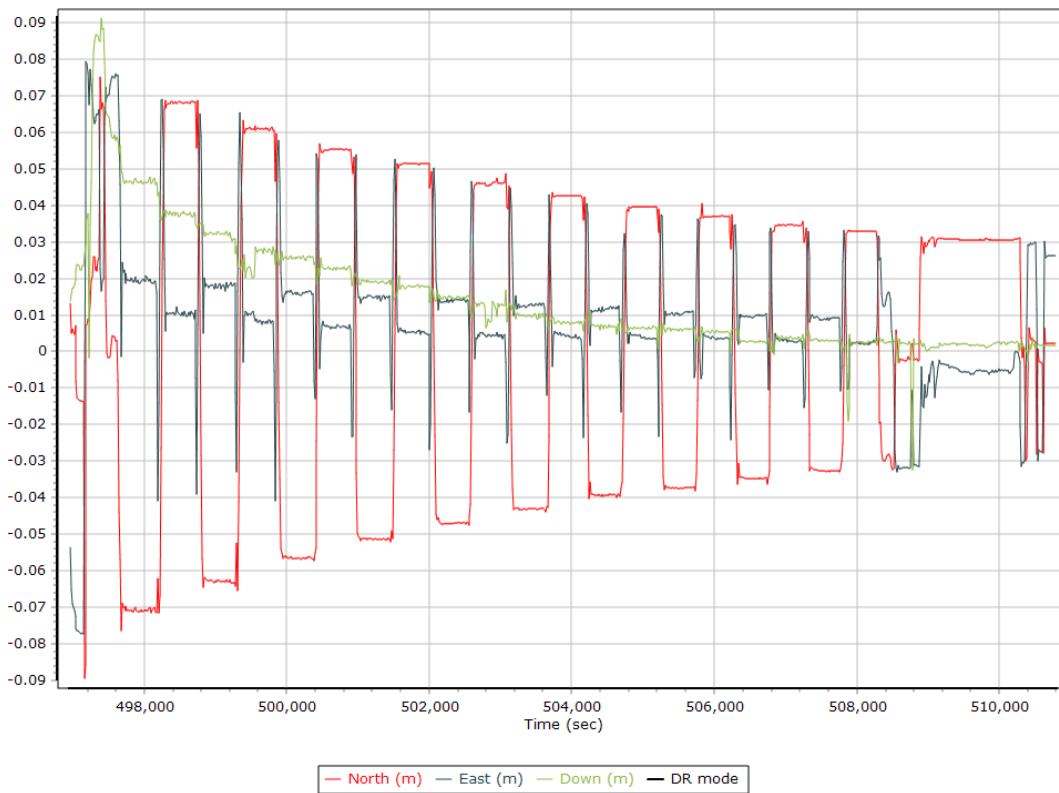
### Number of Satellites



### Baseline Length



### SBET IAKAR Separation



## Export Summary

Export file	export_Mission 1.txt		
Export format	ASCII		
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	496904.004 (1/4/2019 6:01:44 PM)		
Export end time	510802.003 (1/4/2019 9:53:22 PM)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 17 (84W to 78W)		
Datum	WGS84		
Ellipsoid	WGS84		
Local Transformation	NONE		
Target Epoch	2019.008219		



## EO Summary

EO file			
EO format			
Lever arm [m]	0.000	0.000	0.000
Boresight angles [arcmin]	0.000	0.000	0.000
Output rate	Event 2 Time		
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	496904.004 (1/4/2019 6:01:44 PM)		
EO end time	510802.003 (1/4/2019 9:53:22 PM)		
Grid	Universal Transverse Mercator		
Zone	UTM North 17 (84W to 78W)		
Datum	WGS84		
Ellipsoid	WGS84		
Local Transformation	NONE		
Target Epoch	2019.008219		