

General Information

Mission Information

Project name	
Processing date	2019-04-15 00:56:25
Mission date	2019-04-11 13:51:21
Mission duration	03:23:47.977
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
190411_135120_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm1010.19g	GLONASS Broadcast Ephemeris
Ephm1010.19n	GPS Broadcast Ephemeris
vawy101i.19o	GNSS SingleBase
wvbf101i.19o	GNSS SingleBase
wvbf101j.19o	GNSS SingleBase
wvbf101k.19o	GNSS SingleBase
wvbf101m.19o	GNSS SingleBase
wvbf101t.19o	GNSS SingleBase
wvbf101s.19o	GNSS SingleBase
wvbf101r.19o	GNSS SingleBase
wvbf101q.19o	GNSS SingleBase
wvbf101p.19o	GNSS SingleBase
wvbf101o.19o	GNSS SingleBase
wvbf101n.19o	GNSS SingleBase
wvbf101l.19o	GNSS SingleBase
vawy101t.19o	GNSS SingleBase
vawy101s.19o	GNSS SingleBase
vawy101r.19o	GNSS SingleBase
vawy101q.19o	GNSS SingleBase
vawy101p.19o	GNSS SingleBase
vawy101o.19o	GNSS SingleBase
vawy101n.19o	GNSS SingleBase
vawy101l.19o	GNSS SingleBase
vawy101k.19o	GNSS SingleBase
vawy101j.19o	GNSS SingleBase
loyu101t.19o	GNSS SingleBase
loyu101s.19o	GNSS SingleBase
loyu101r.19o	GNSS SingleBase
loyu101q.19o	GNSS SingleBase
loyu101p.19o	GNSS SingleBase
loyu101n.19o	GNSS SingleBase
loyu101m.19o	GNSS SingleBase
loyu101l.19o	GNSS SingleBase
loyu101k.19o	GNSS SingleBase
loyu101j.19o	GNSS SingleBase
loyu101i.19o	GNSS SingleBase
loyu101o.19o	GNSS SingleBase
WVSA101A.19o	GNSS SingleBase
WVOH101A.19o	GNSS SingleBase
WVLA101A.19o	GNSS SingleBase
WVAT101A.19o	GNSS SingleBase
KYTL101A.19o	GNSS SingleBase
WVSW101A.19o	GNSS SingleBase
KYPA101A.19o	GNSS SingleBase
WVCH101A.19o	GNSS SingleBase
vawy101i.19o	GNSS SingleBase
vaab101l.19o	GNSS SingleBase
vaab101k.19o	GNSS SingleBase
vaab101j.19o	GNSS SingleBase
vaab101i.19o	GNSS SingleBase
vaab101m.19o	GNSS SingleBase
vaab101n.19o	GNSS SingleBase
vaab101p.19o	GNSS SingleBase
var1101r.19o	GNSS SingleBase
var1101q.19o	GNSS SingleBase

File Name	File type
var1101p.19o	GNSS SingleBase
var1101o.19o	GNSS SingleBase
var1101n.19o	GNSS SingleBase
var1101m.19o	GNSS SingleBase
vaab101o.19o	GNSS SingleBase
var1101l.19o	GNSS SingleBase
var1101j.19o	GNSS SingleBase
var1101i.19o	GNSS SingleBase
vaab101t.19o	GNSS SingleBase
vaab101s.19o	GNSS SingleBase
vaab101r.19o	GNSS SingleBase
vaab101q.19o	GNSS SingleBase
var1101k.19o	GNSS SingleBase
vawe101t.19o	GNSS SingleBase
vawe101s.19o	GNSS SingleBase
loyu101k.19o	GNSS SingleBase
loyu101j.19o	GNSS SingleBase
loyu101i.19o	GNSS SingleBase
vawy101t.19o	GNSS SingleBase
vawy101s.19o	GNSS SingleBase
vawy101r.19o	GNSS SingleBase
loyu101l.19o	GNSS SingleBase
vawy101q.19o	GNSS SingleBase
vawy101o.19o	GNSS SingleBase
vawy101n.19o	GNSS SingleBase
vawy101m.19o	GNSS SingleBase
vawy101l.19o	GNSS SingleBase
vawy101k.19o	GNSS SingleBase
vawy101j.19o	GNSS SingleBase
vawy101p.19o	GNSS SingleBase
loyu101m.19o	GNSS SingleBase
loyu101n.19o	GNSS SingleBase
loyu101o.19o	GNSS SingleBase
vawe101r.19o	GNSS SingleBase
vawe101q.19o	GNSS SingleBase
vawe101p.19o	GNSS SingleBase
vawe101o.19o	GNSS SingleBase
vawe101n.19o	GNSS SingleBase
vawe101m.19o	GNSS SingleBase
vawe101l.19o	GNSS SingleBase
vawe101k.19o	GNSS SingleBase
vawe101j.19o	GNSS SingleBase
vawe101i.19o	GNSS SingleBase
loyu101t.19o	GNSS SingleBase
loyu101s.19o	GNSS SingleBase
loyu101r.19o	GNSS SingleBase
loyu101q.19o	GNSS SingleBase
loyu101p.19o	GNSS SingleBase
var1101s.19o	GNSS SingleBase
var1101t.19o	GNSS SingleBase
igr20484.sp3	GPS Precise Ephemeris
igr20485.sp3	GPS Precise Ephemeris
igr20483.sp3	GPS Precise Ephemeris

Output Files

Filename	File type
sbt_Mission 1.out	SBET Trajectory File

Rover Data Summary

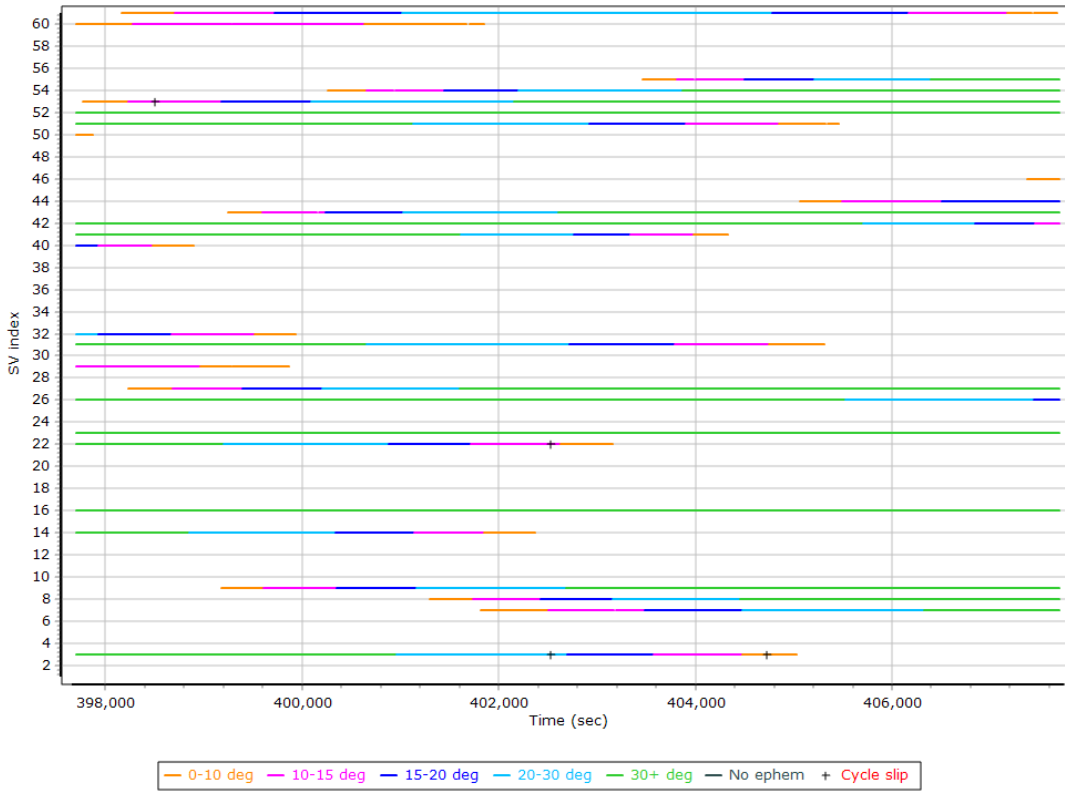
First raw data file	190411_135120_INS-GPS_1.raw		
Last raw data file	190411_135120_INS-GPS_1.raw		
Start GPS week	2048		
Start time	395480.289 (4/11/2019 1:51:02 PM)		
End time	407708.266 (4/11/2019 5:14:50 PM)		
Start of fine alignment	397643.219 (4/11/2019 2:27:05 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	Event 1 Input		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
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

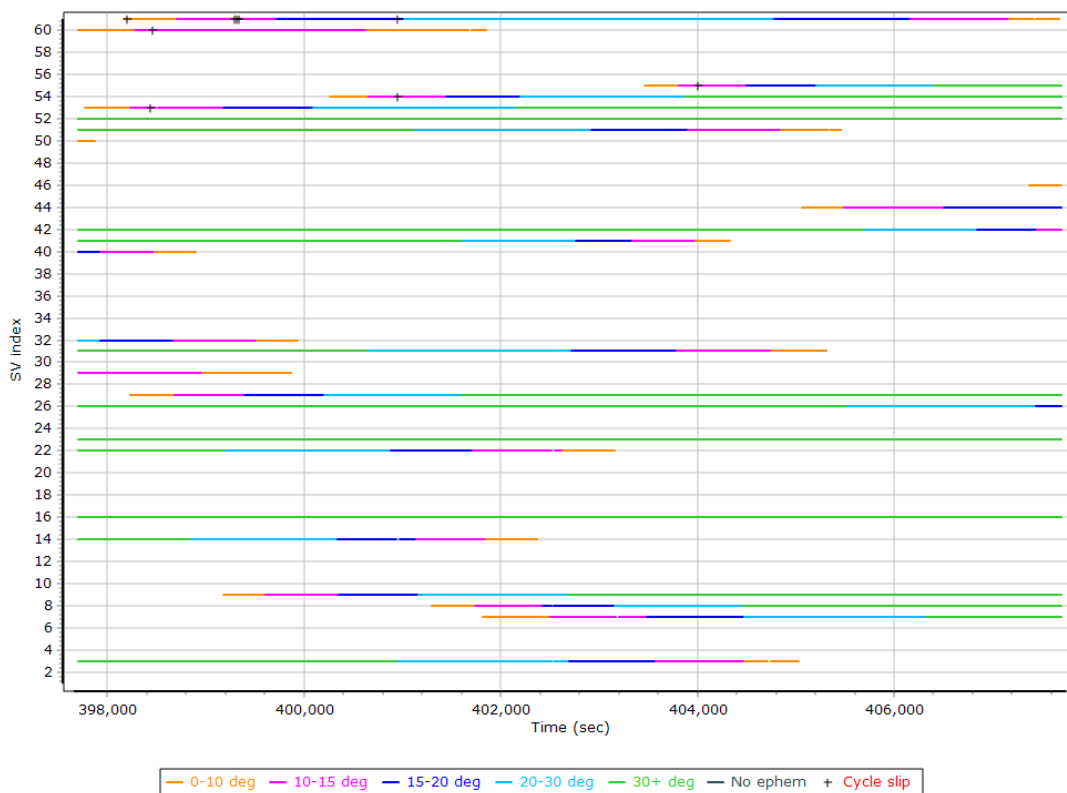
Raw IMU Import QC Summary

IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_Mission 1.log
IMU Records Processed	2445044
Termination Status	Normal
IMU Anomalies	0

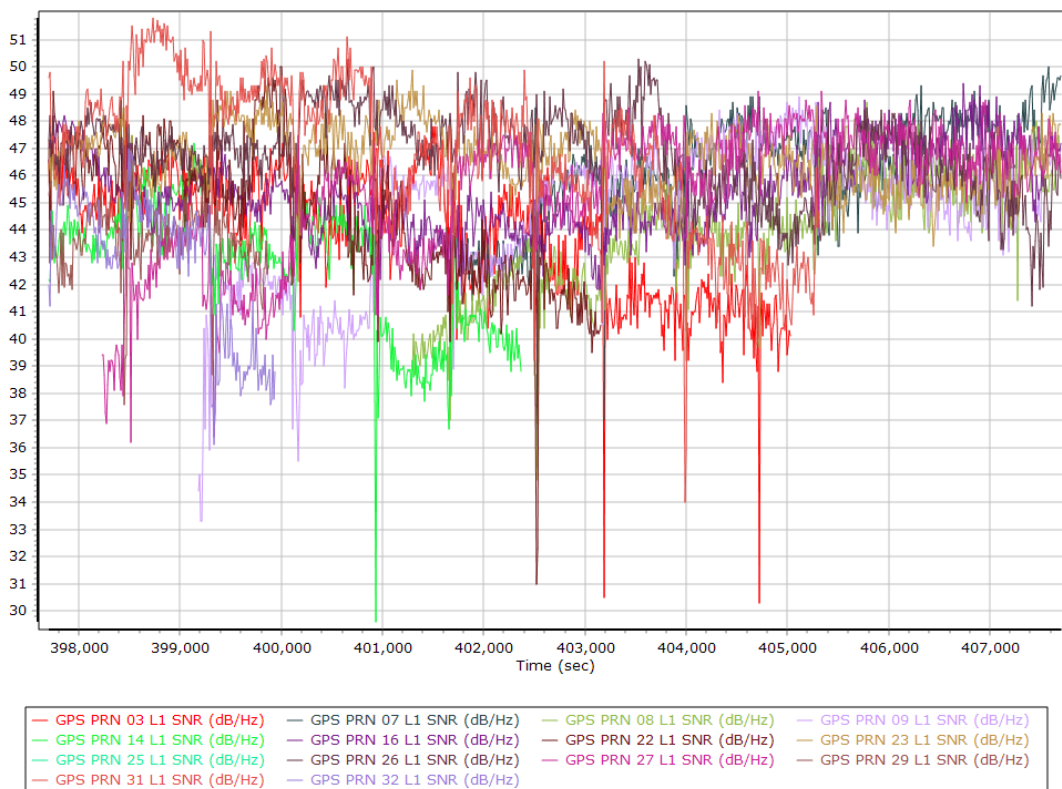
L1 Satellite Lock/Elevation



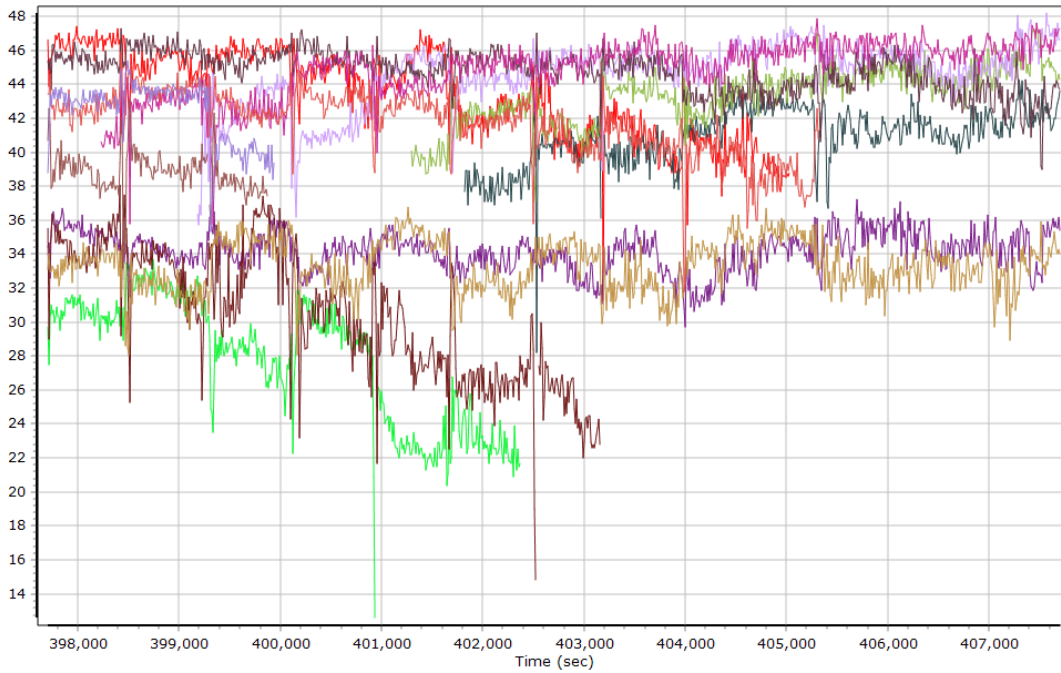
L2 Satellite Lock/Elevation



GPS L1 SNR

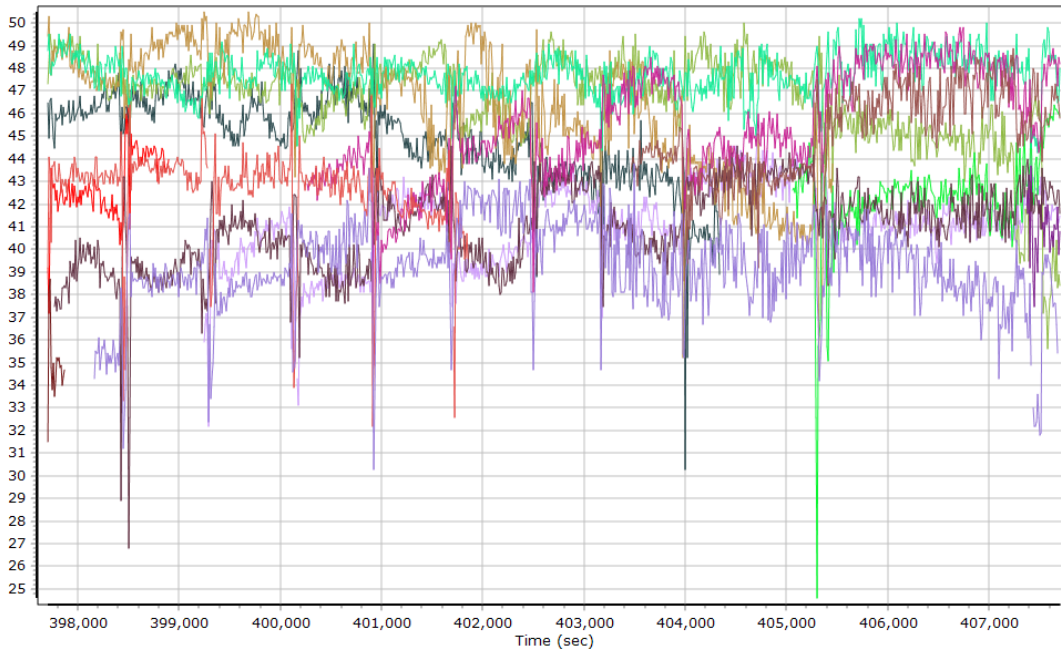


GPS L2 SNR



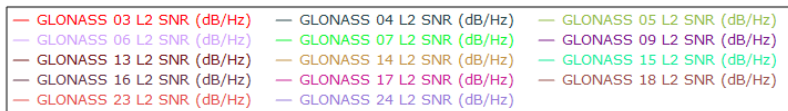
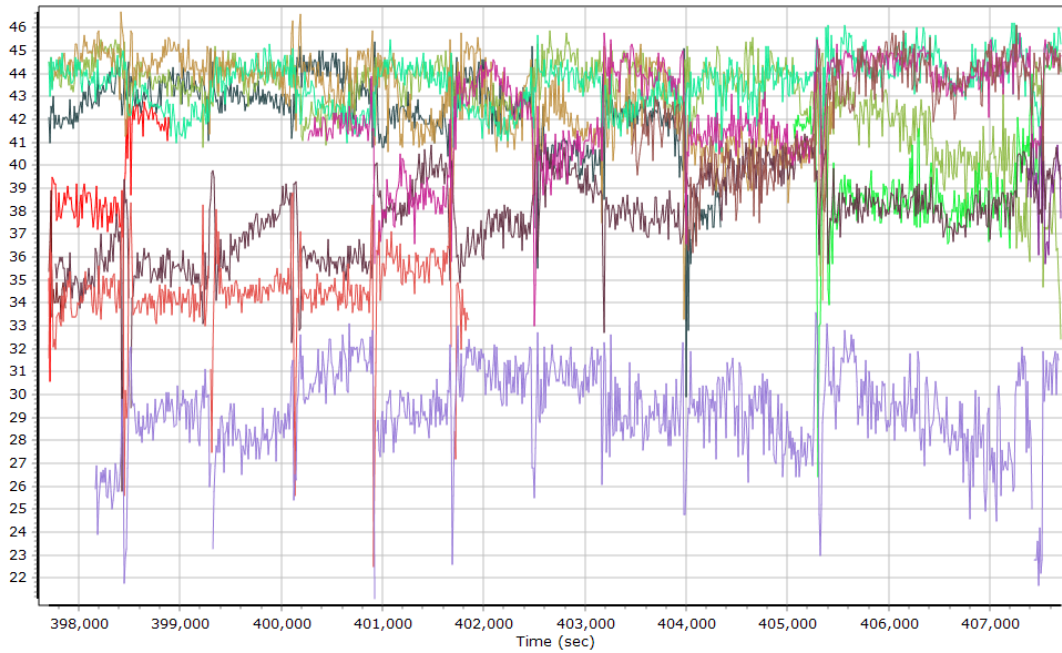
- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 03 L2 SNR (dB/Hz) | GPS PRN 07 L2 SNR (dB/Hz) | GPS PRN 08 L2 SNR (dB/Hz) | GPS PRN 09 L2 SNR (dB/Hz) |
| GPS PRN 14 L2 SNR (dB/Hz) | GPS PRN 16 L2 SNR (dB/Hz) | GPS 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

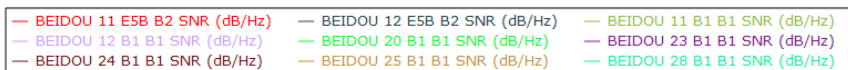
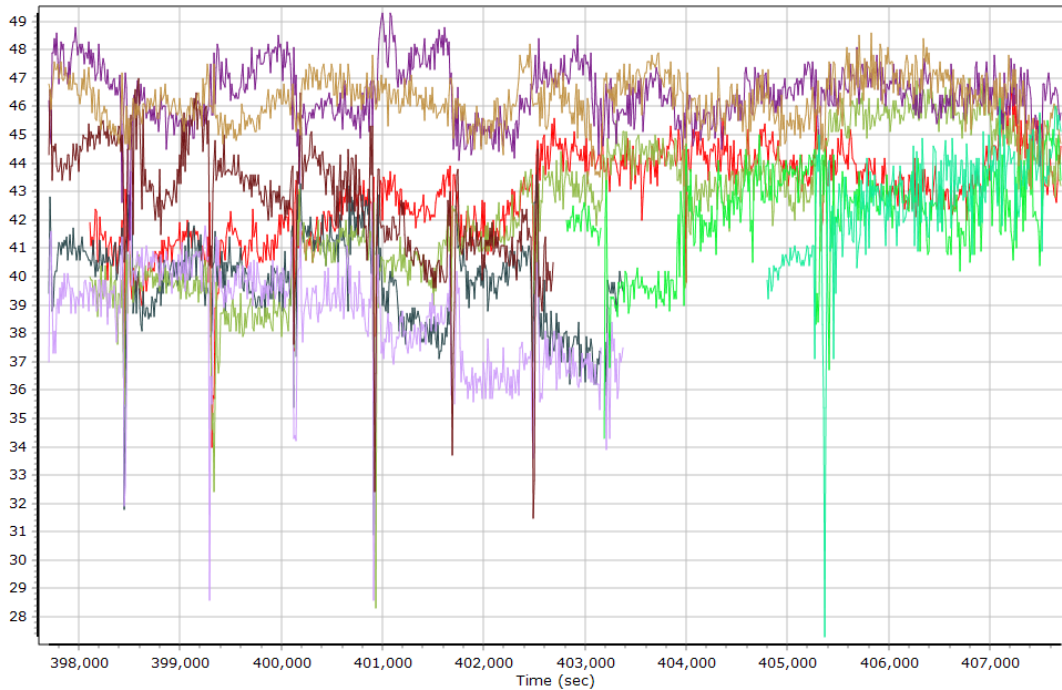


- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 03 L1 SNR (dB/Hz) | GLONASS 04 L1 SNR (dB/Hz) | GLONASS 05 L1 SNR (dB/Hz) |
| GLONASS 06 L1 SNR (dB/Hz) | GLONASS 07 L1 SNR (dB/Hz) | GLONASS 09 L1 SNR (dB/Hz) |
| GLONASS 13 L1 SNR (dB/Hz) | GLONASS 14 L1 SNR (dB/Hz) | GLONASS 15 L1 SNR (dB/Hz) |
| GLONASS 16 L1 SNR (dB/Hz) | GLONASS 17 L1 SNR (dB/Hz) | GLONASS 18 L1 SNR (dB/Hz) |
| GLONASS 23 L1 SNR (dB/Hz) | GLONASS 24 L1 SNR (dB/Hz) | |

GLONASS L2 SNR

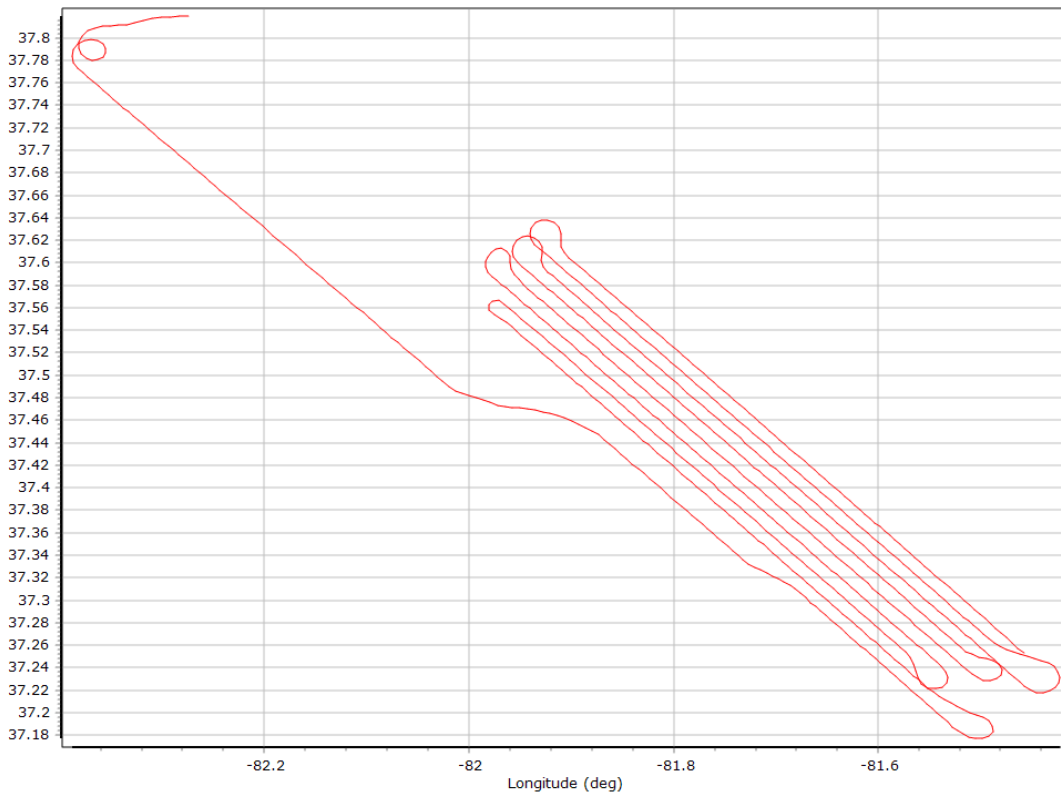


BEIDOU SNR

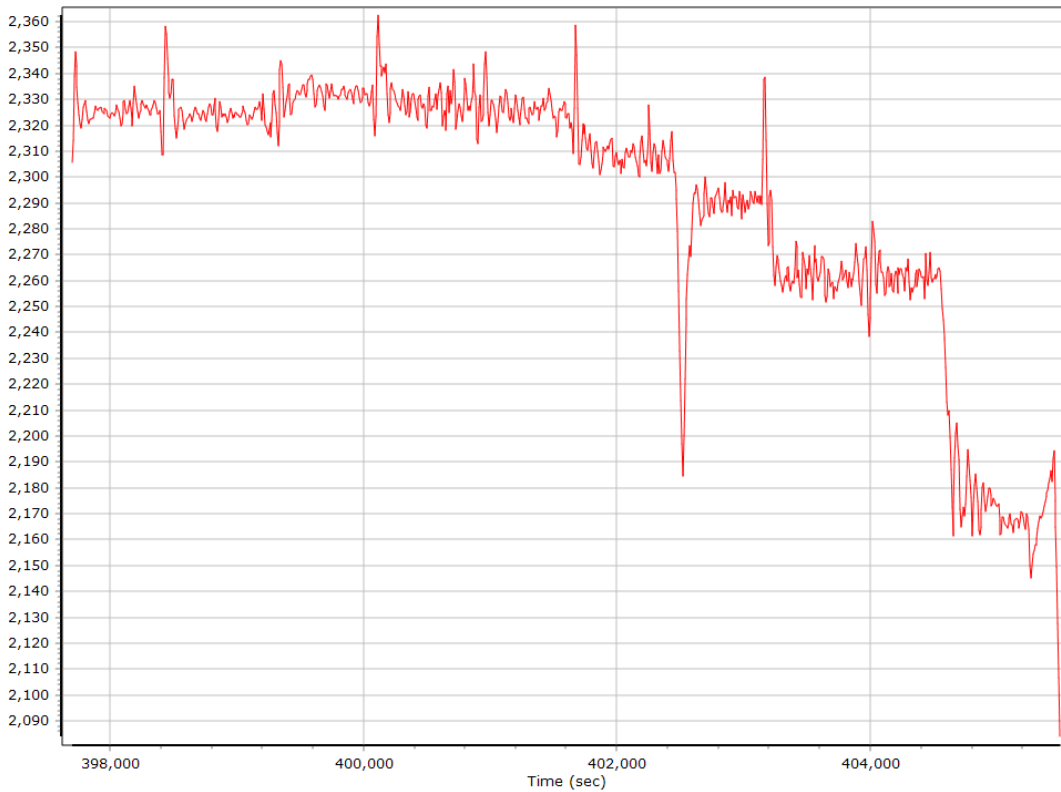


Trajectory Information

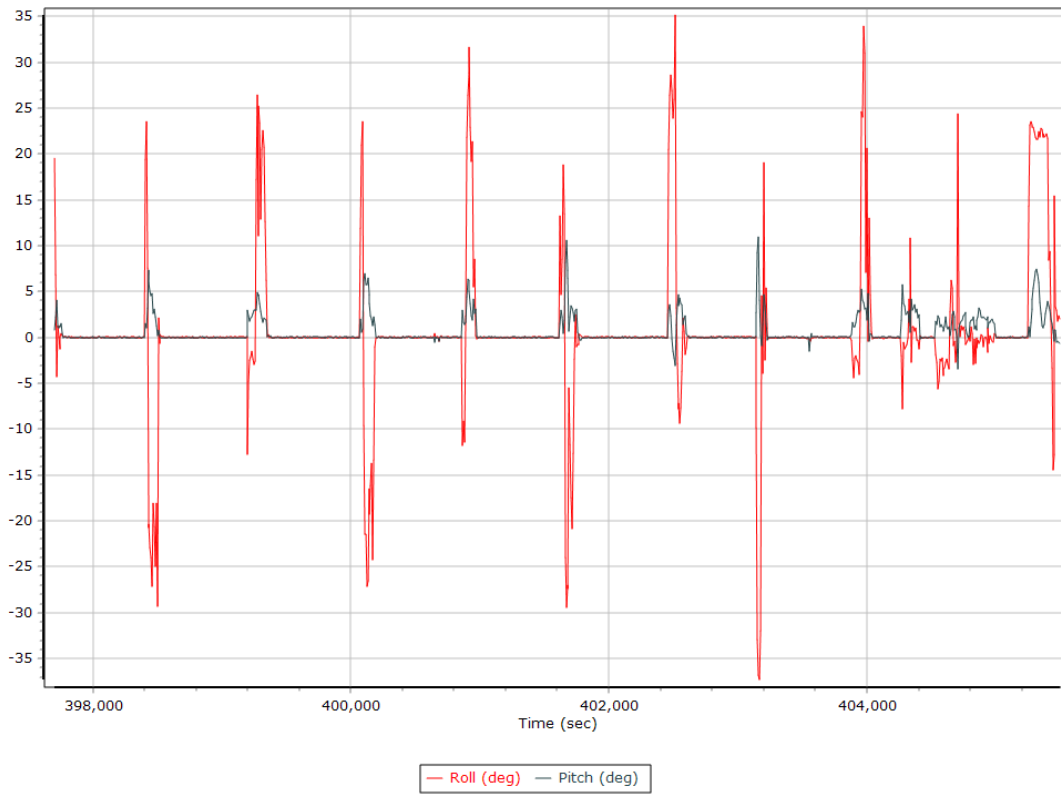
Top View



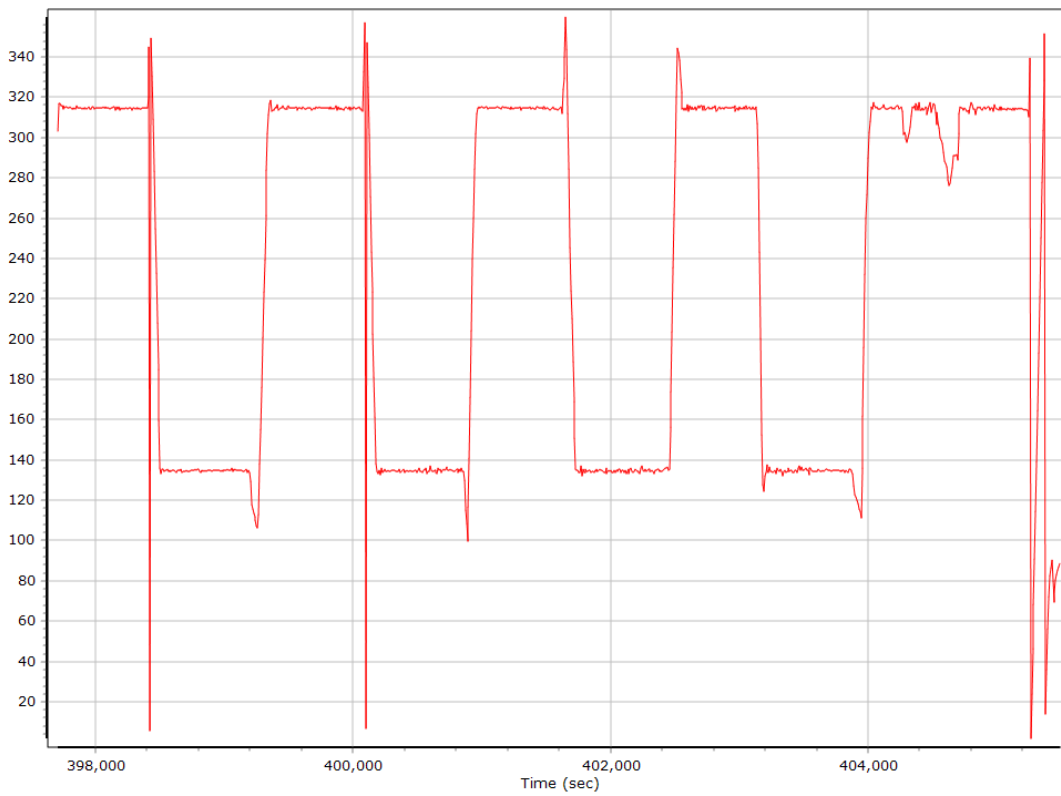
Altitude



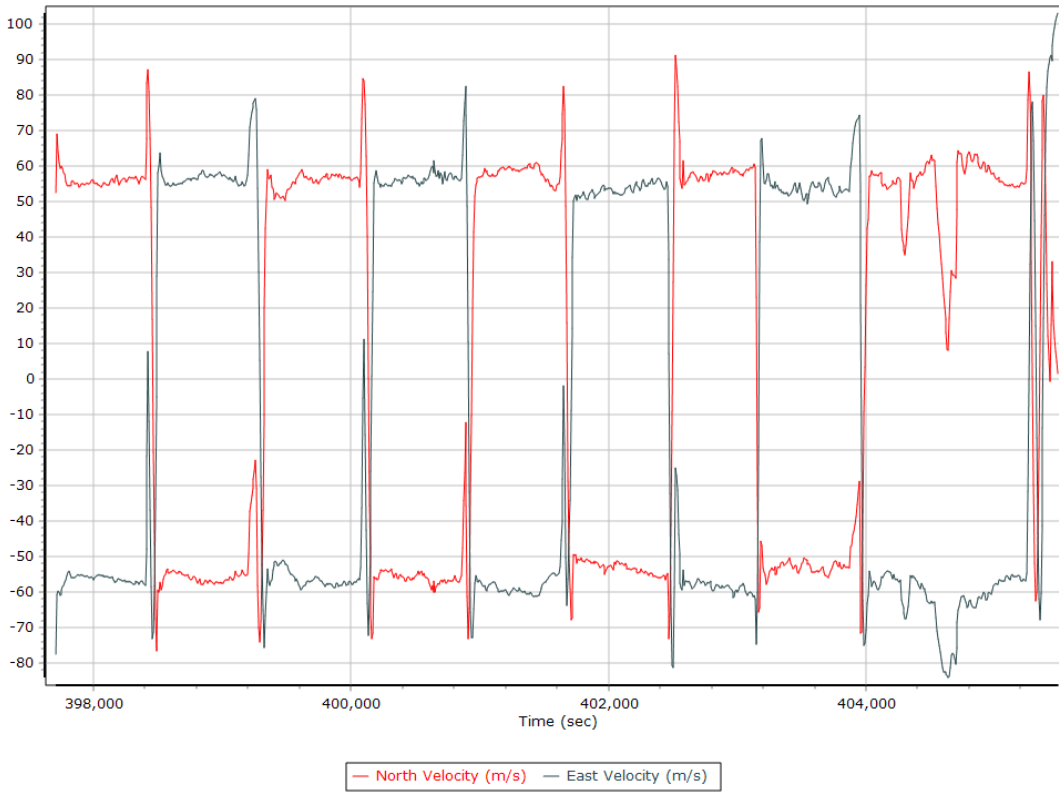
Roll/Pitch



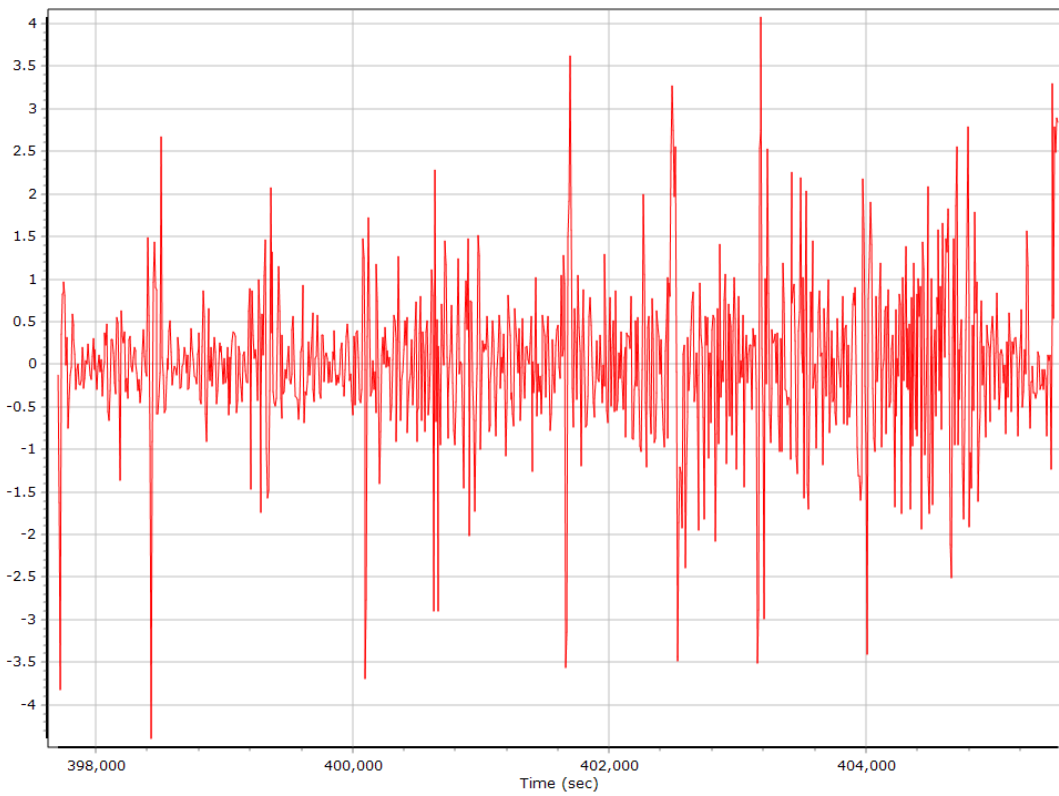
Heading



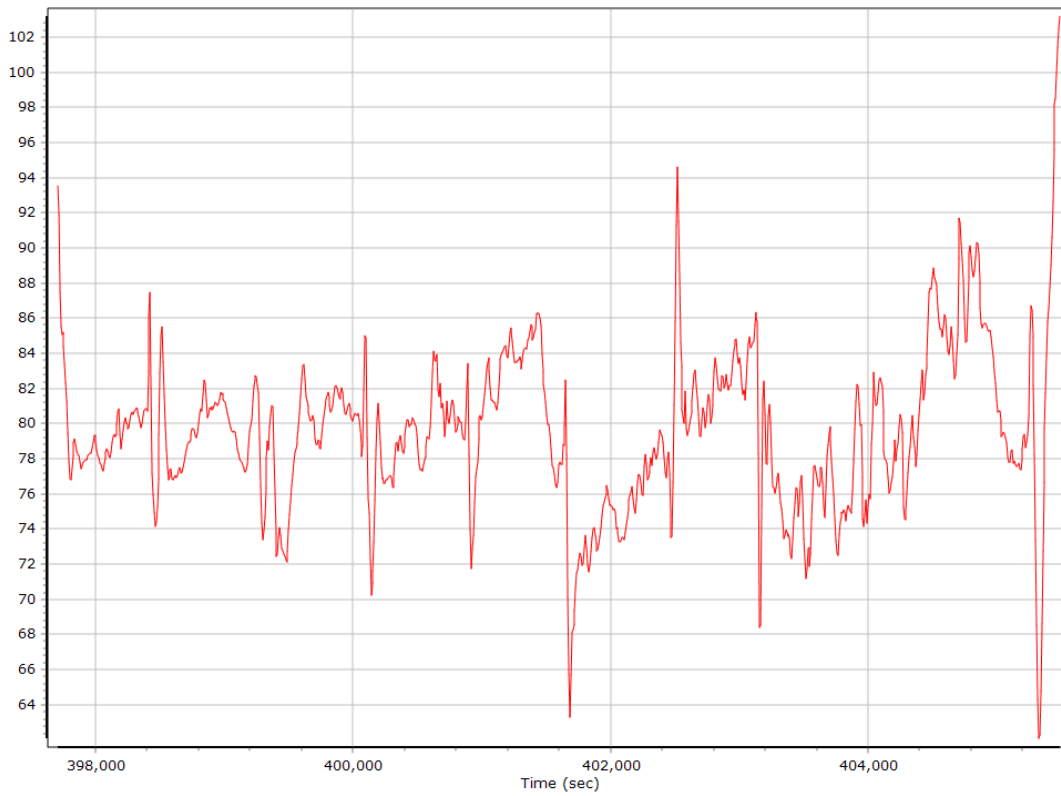
North/East Velocity



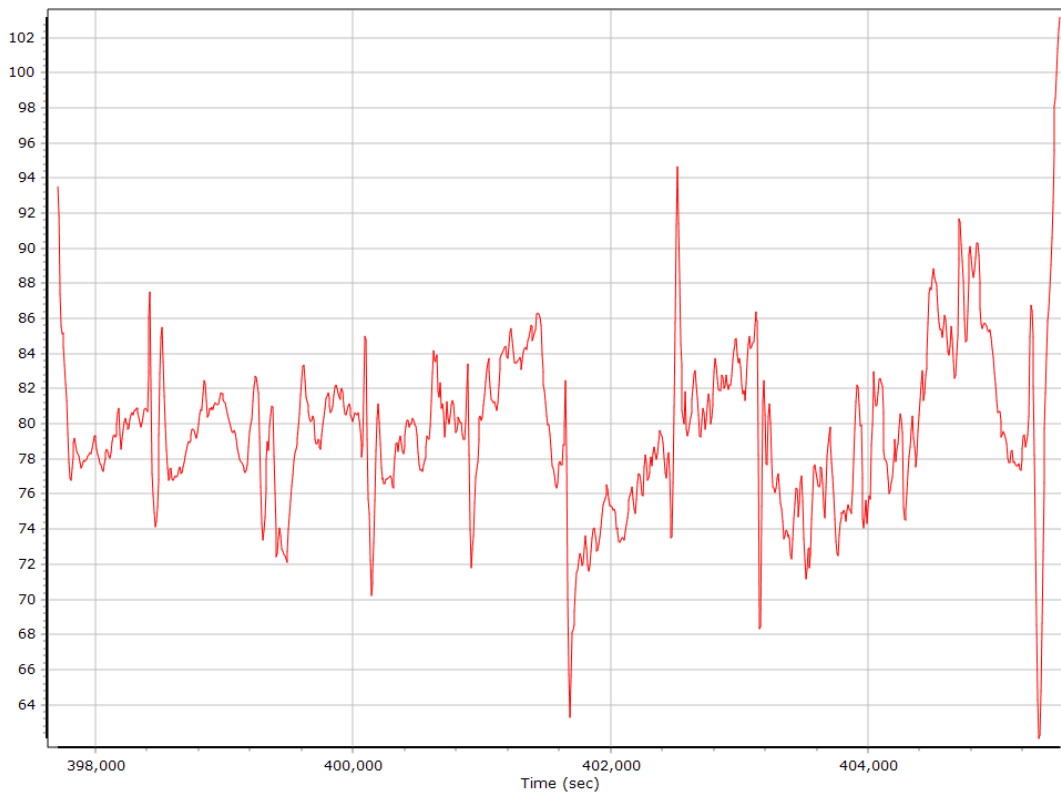
Down Velocity



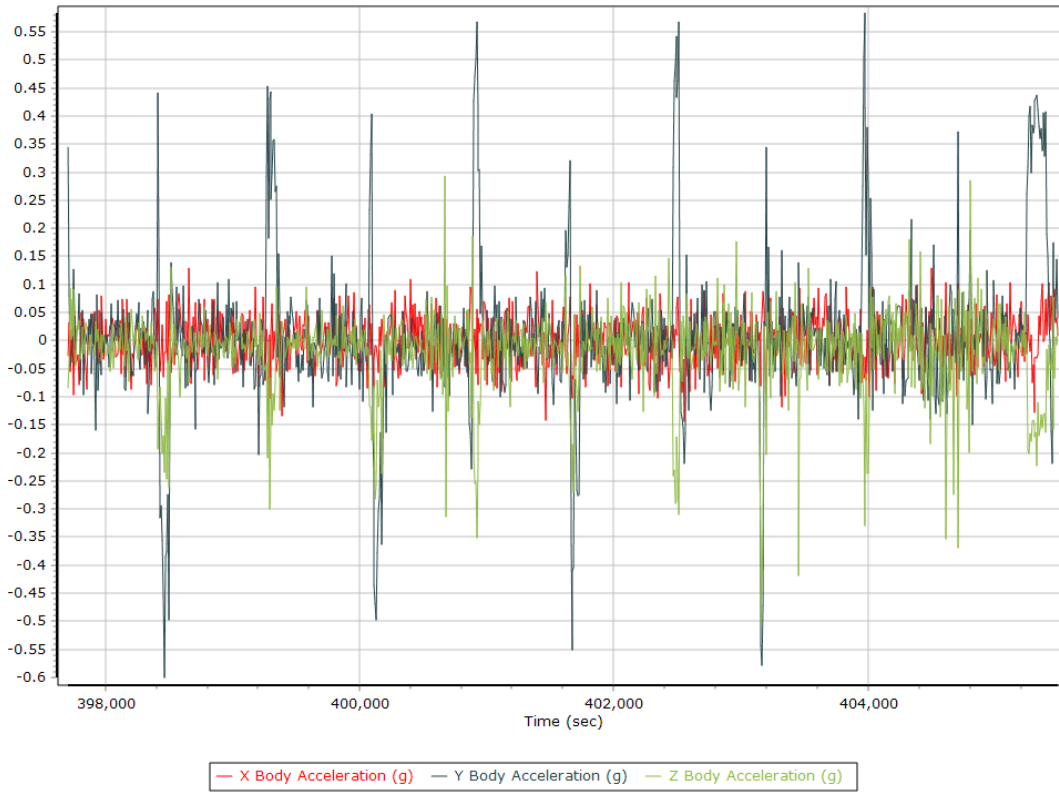
Total Speed



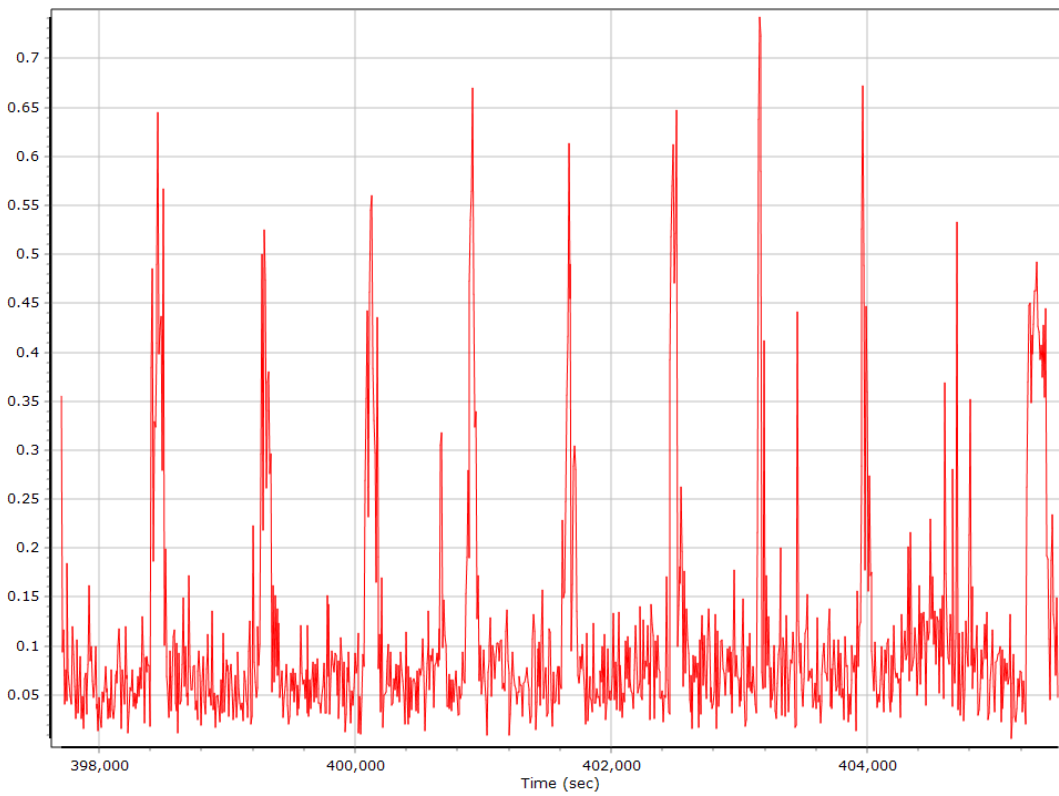
Ground Speed



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	True
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]	0.25	132.94	
Number of GPS SV	4	10	8
Number of GLONASS SV	0	7	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	7	16	14
PDOP	1.25	5.42	1.65
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	11657.00	515.00	1.00
Percentage	95.76	4.23	0.01

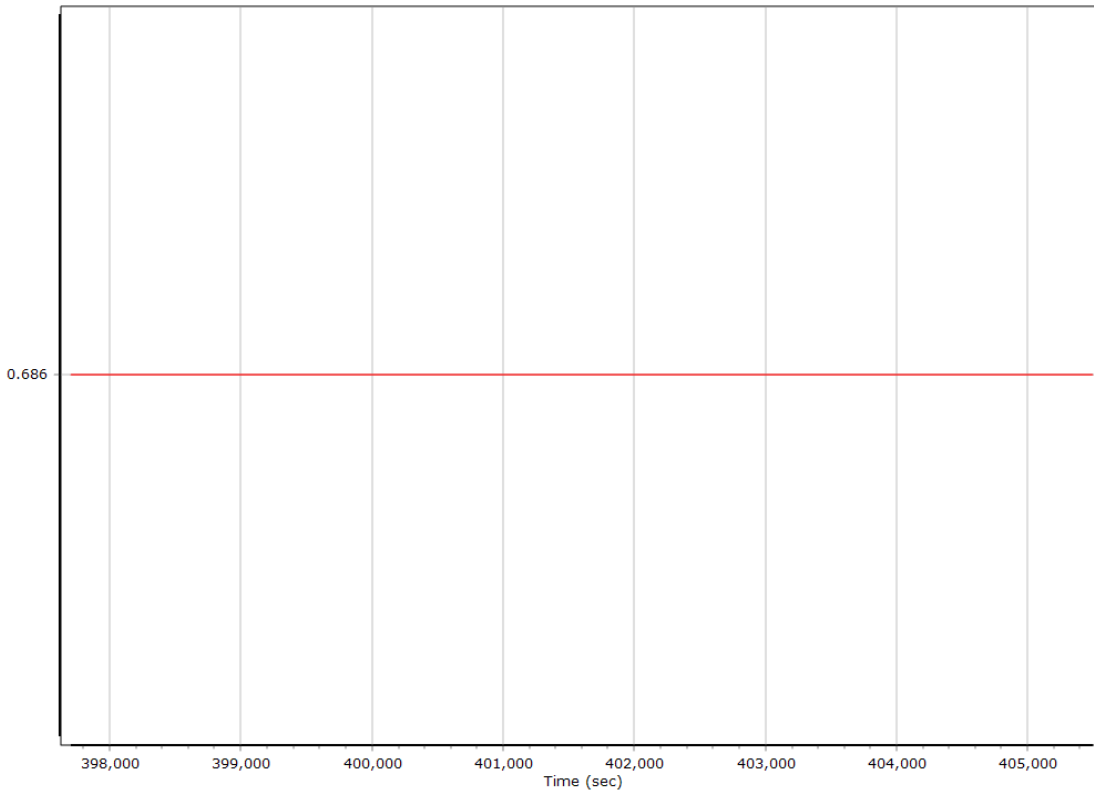
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	397642.809 (4/11/2019 2:27:04 PM)		
Processing end time	405499.726 (4/11/2019 4:38:01 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]	0.686	-0.089	-0.956
Gimbal 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

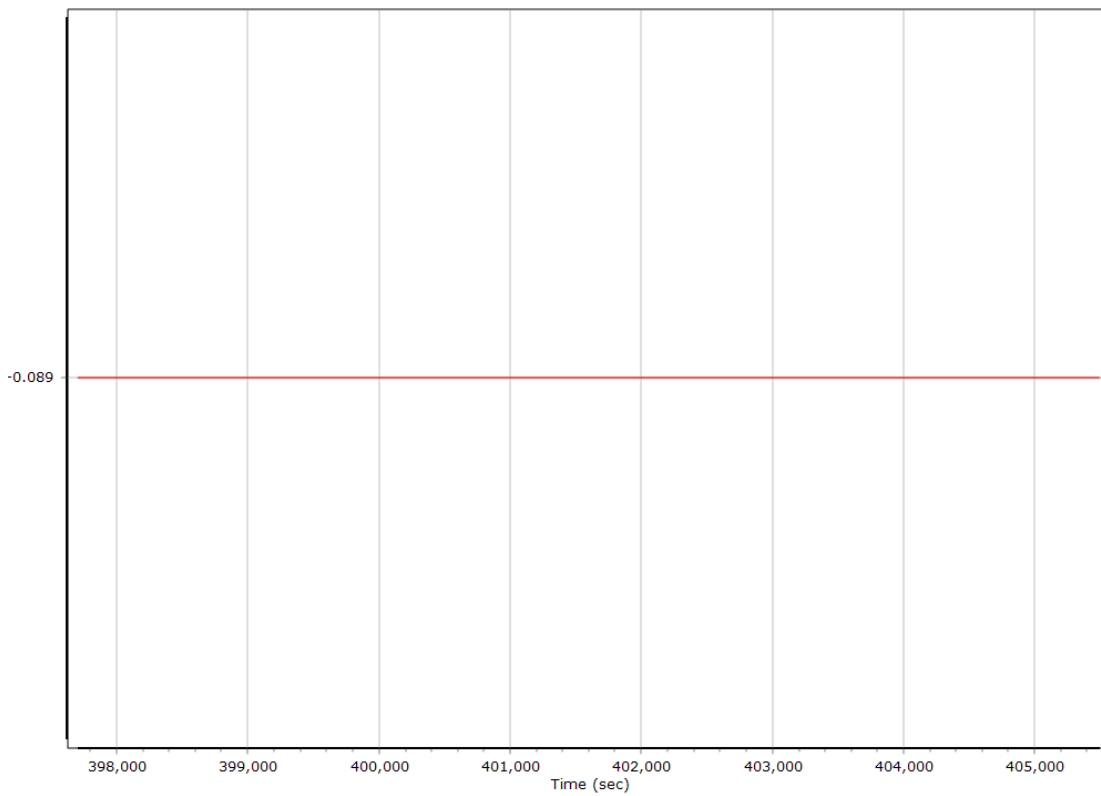
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

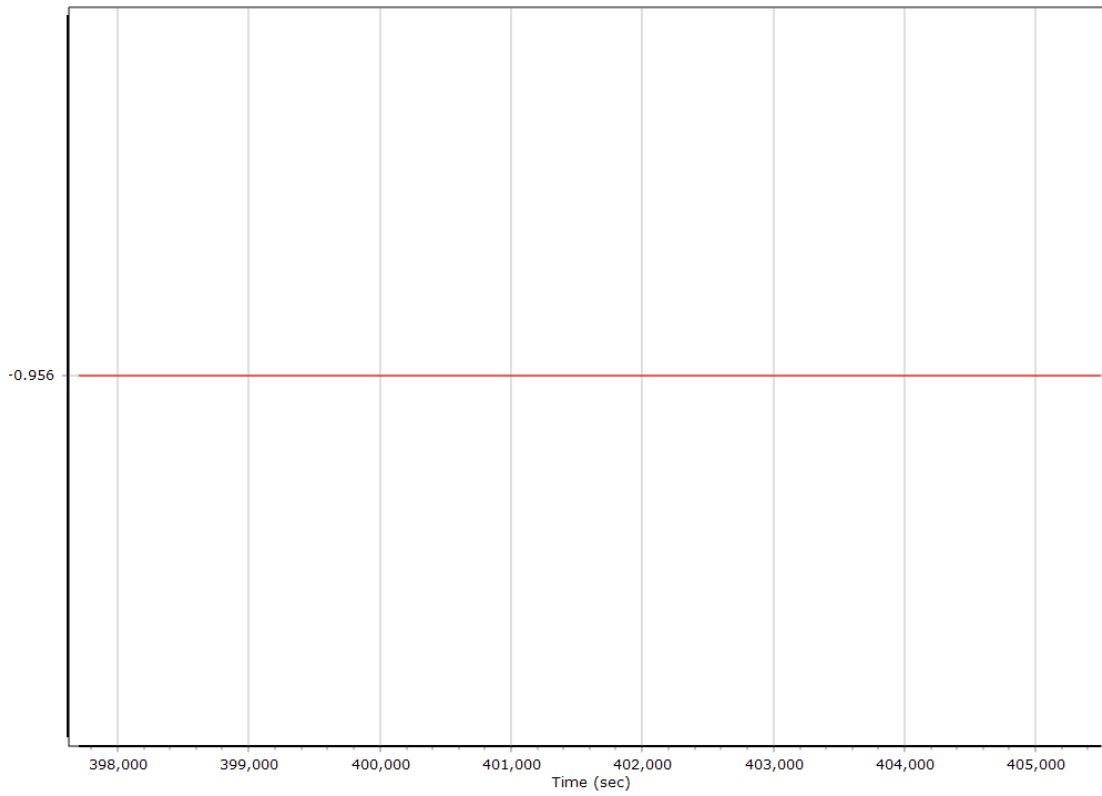
X Reference-Primary GNSS Lever Arm (m)



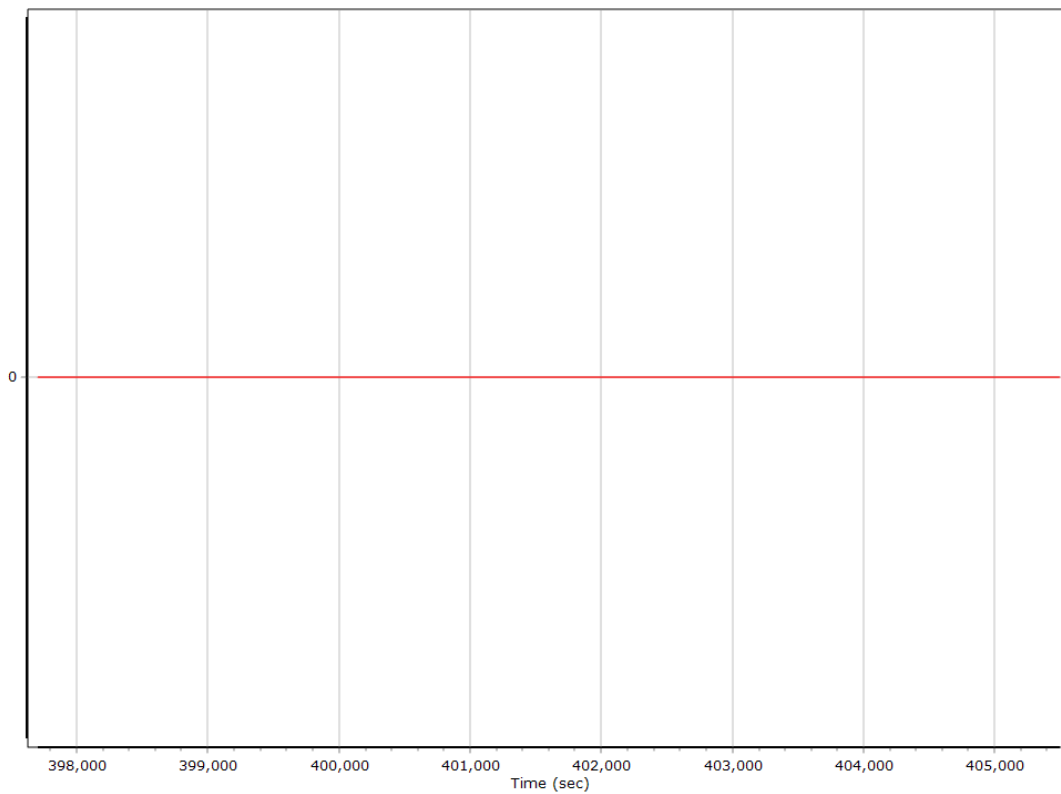
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



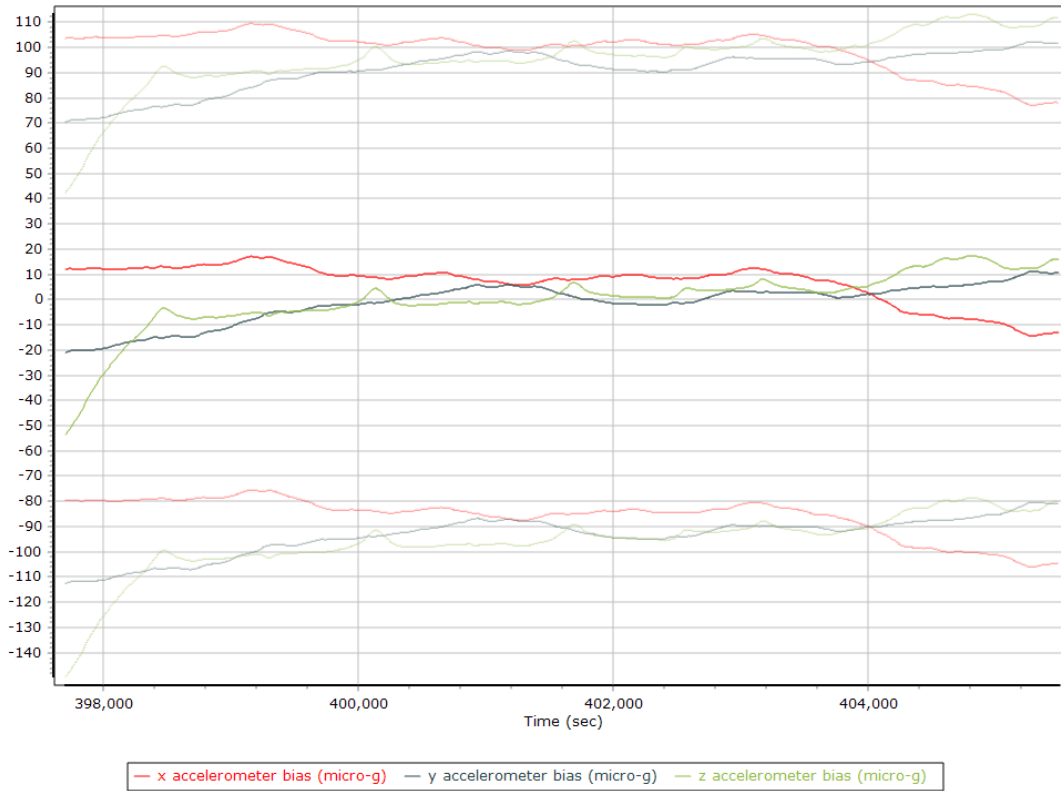
Reference-Primary GNSS Lever Arm Figure of Merit



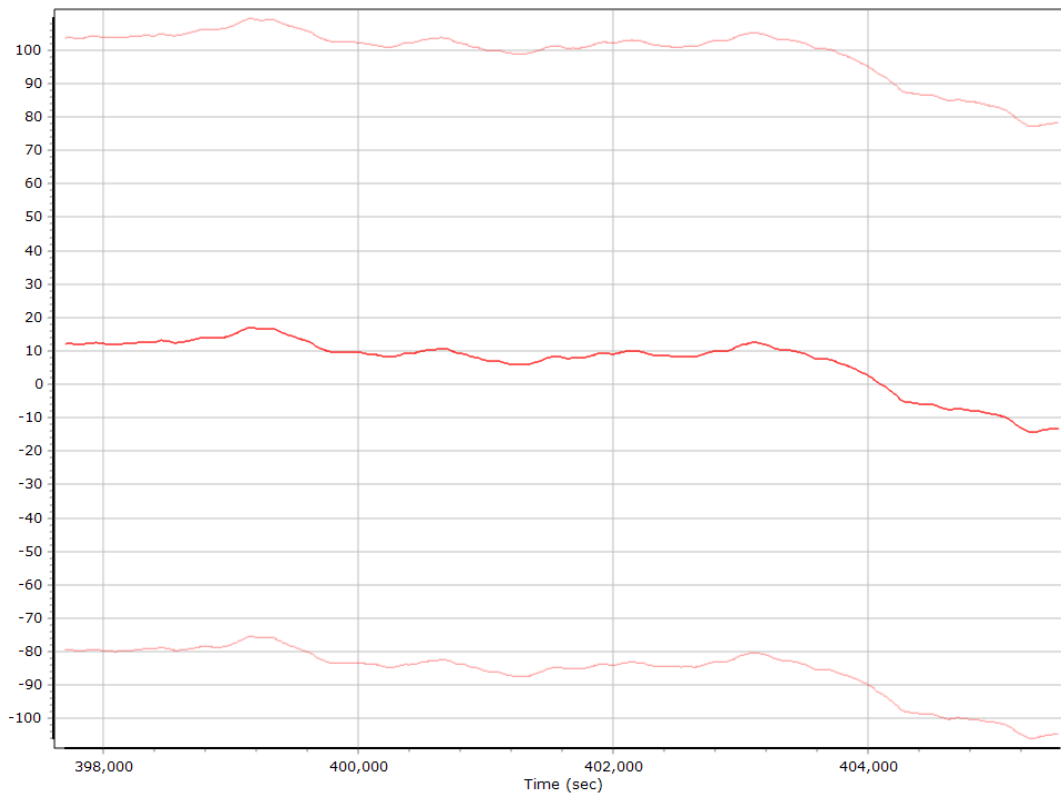
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

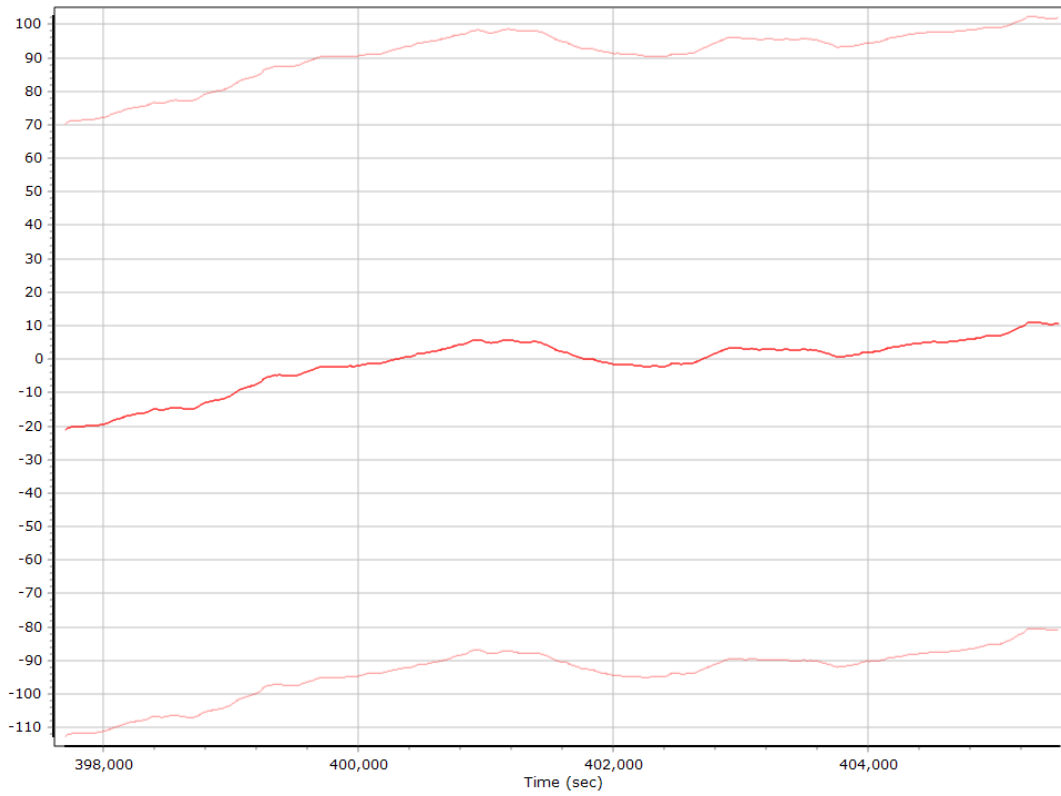
Accelerometer Bias (micro-g)



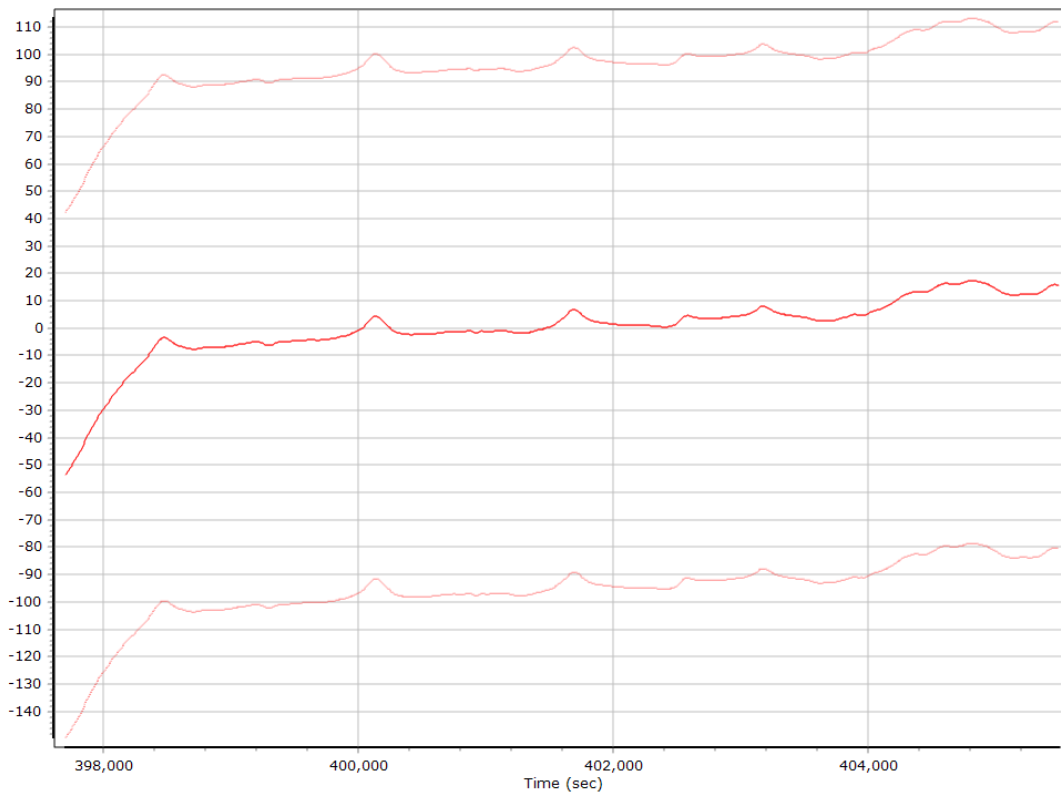
X Accelerometer Bias (micro-g)



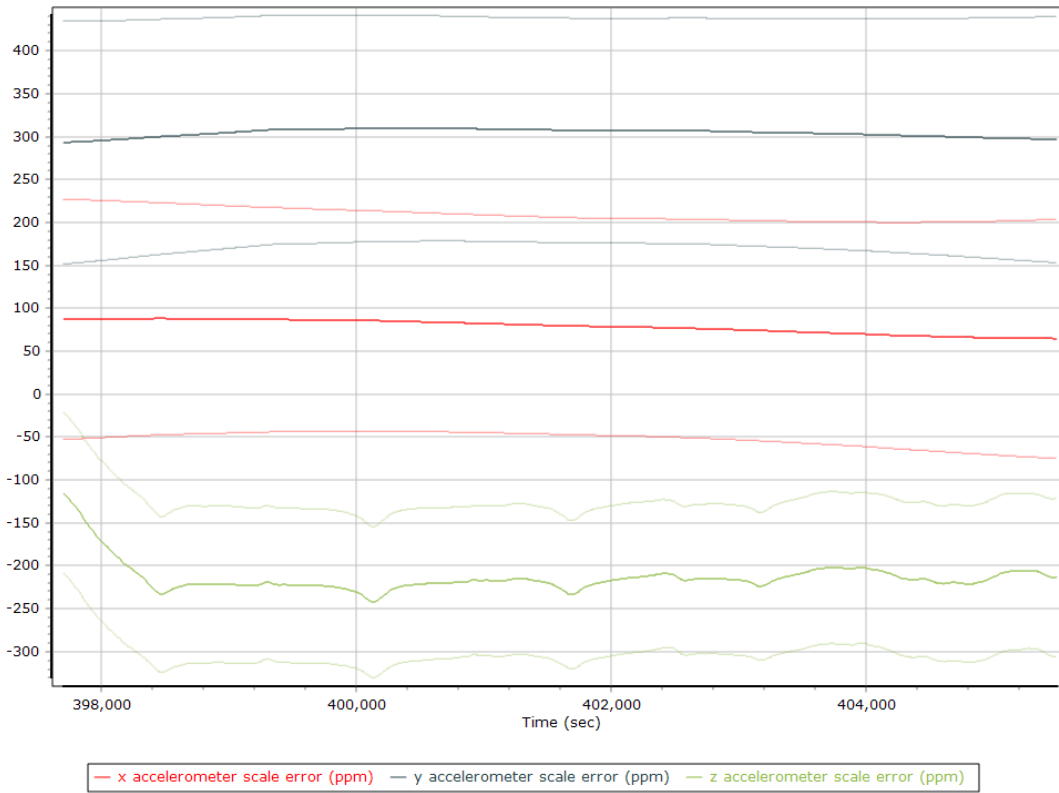
Y Accelerometer Bias (micro-g)



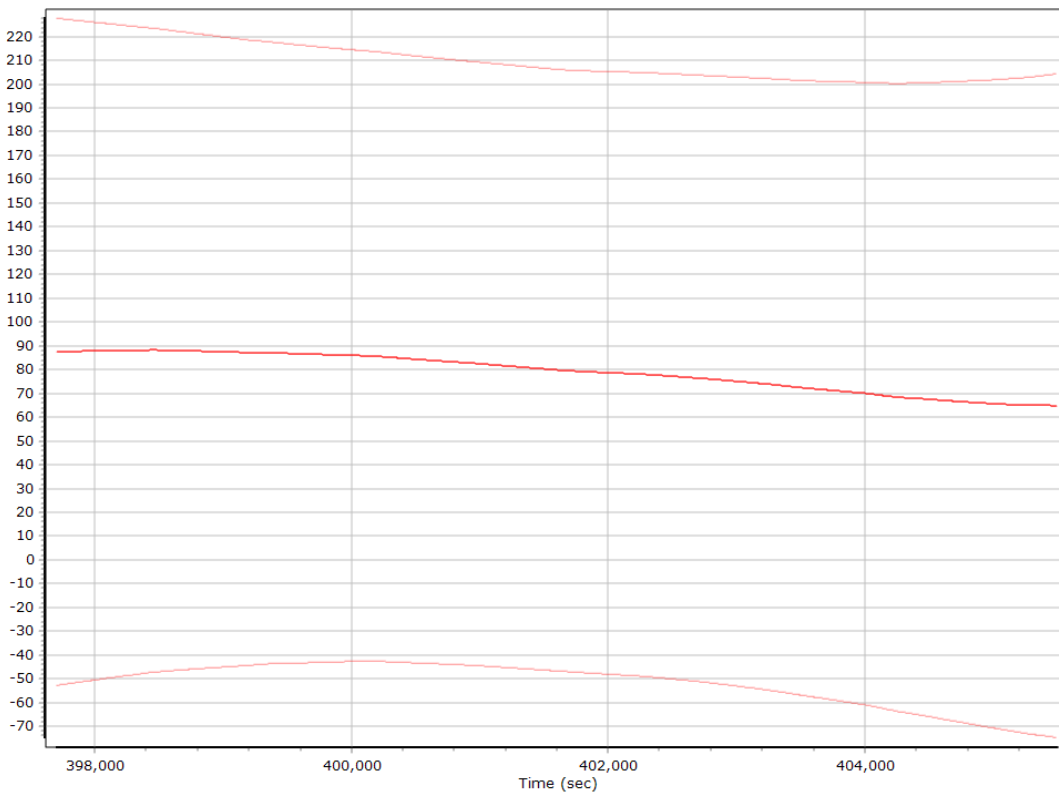
Z Accelerometer Bias (micro-g)



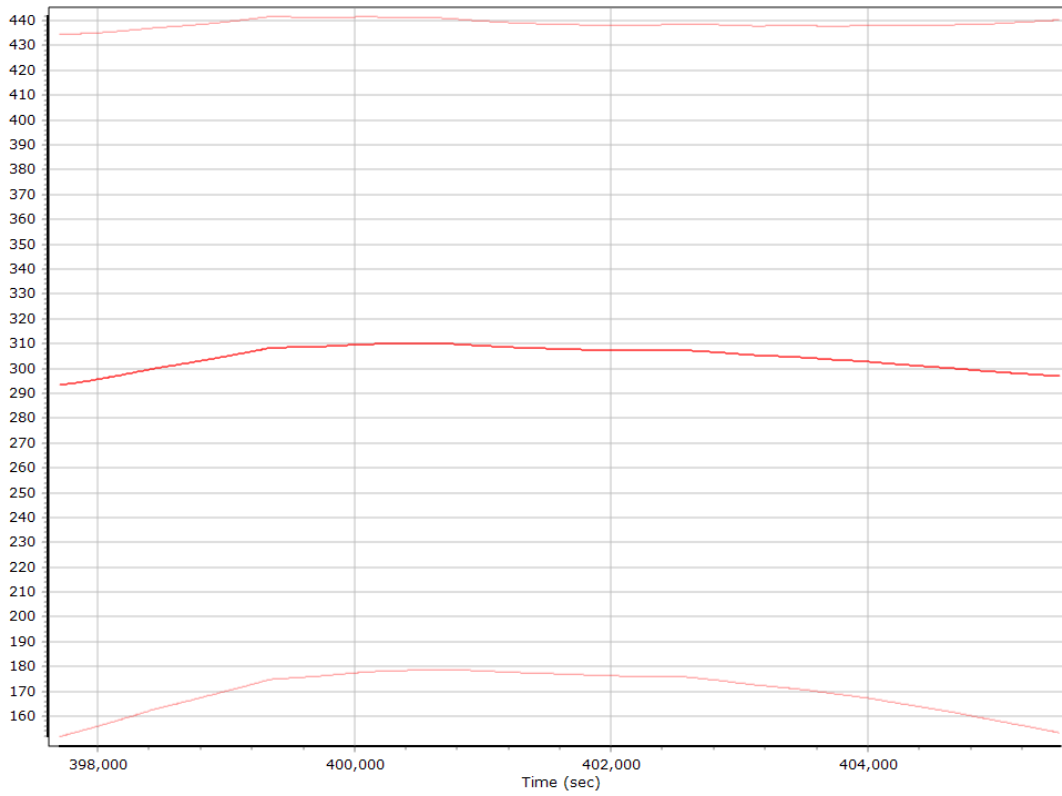
Accelerometer Scale Error (ppm)



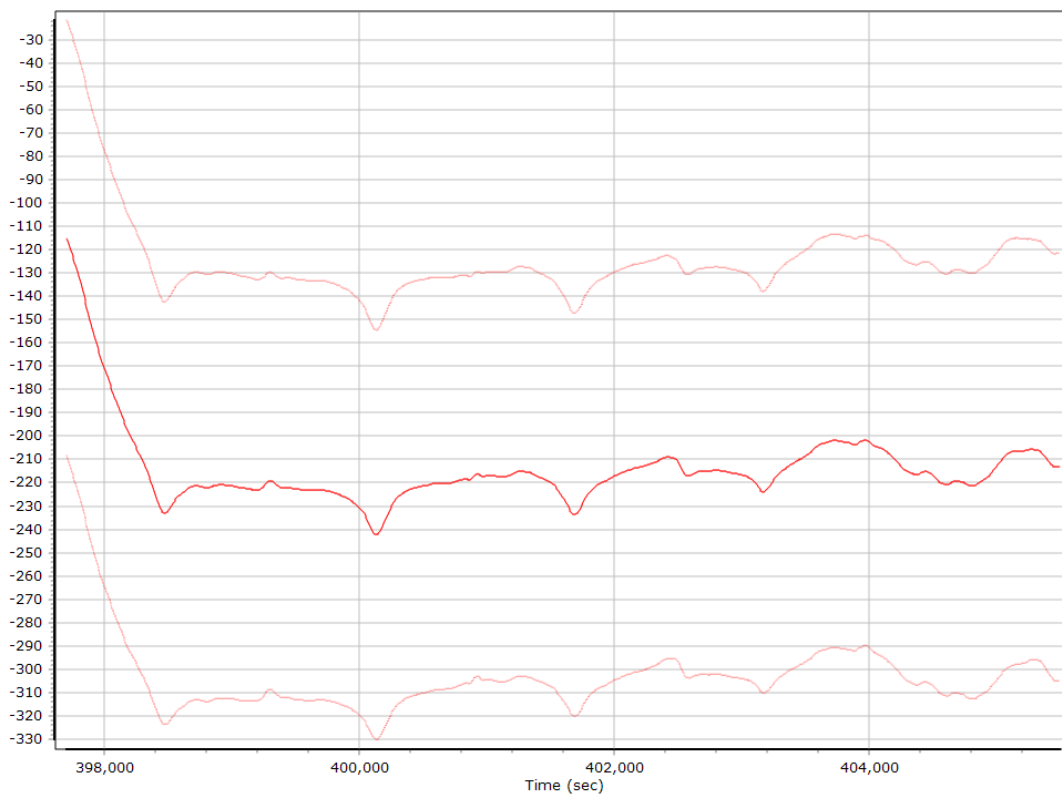
X Accelerometer Scale Error (ppm)



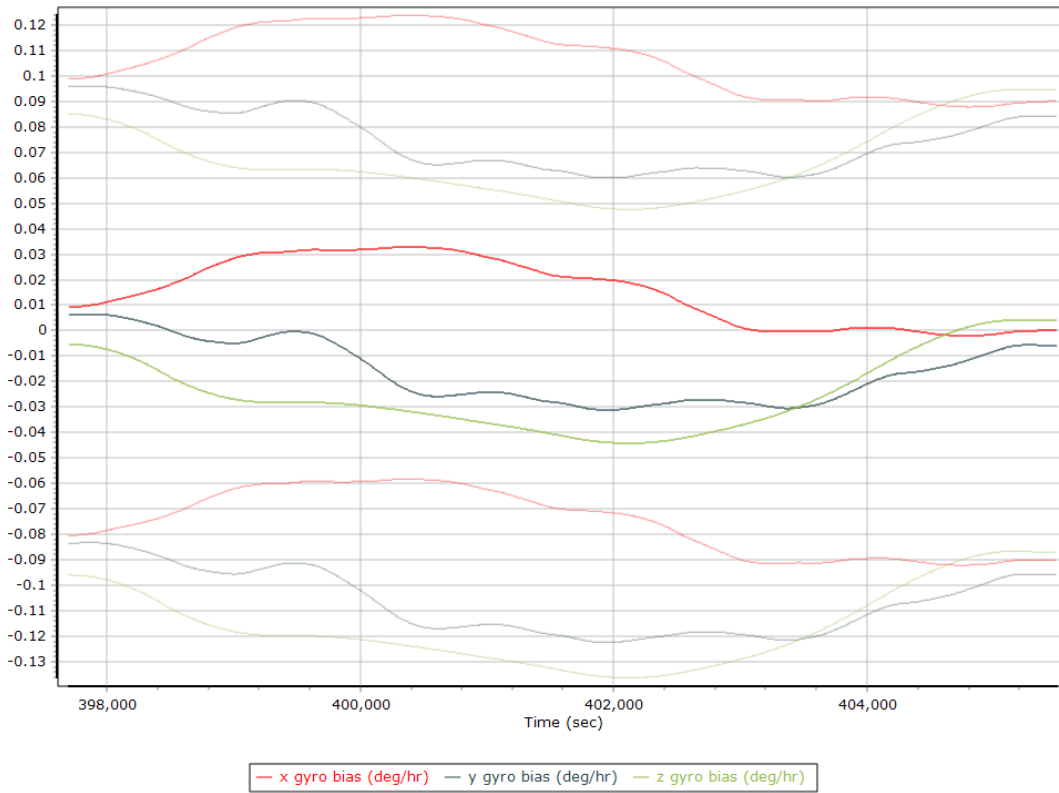
Y Accelerometer Scale Error (ppm)



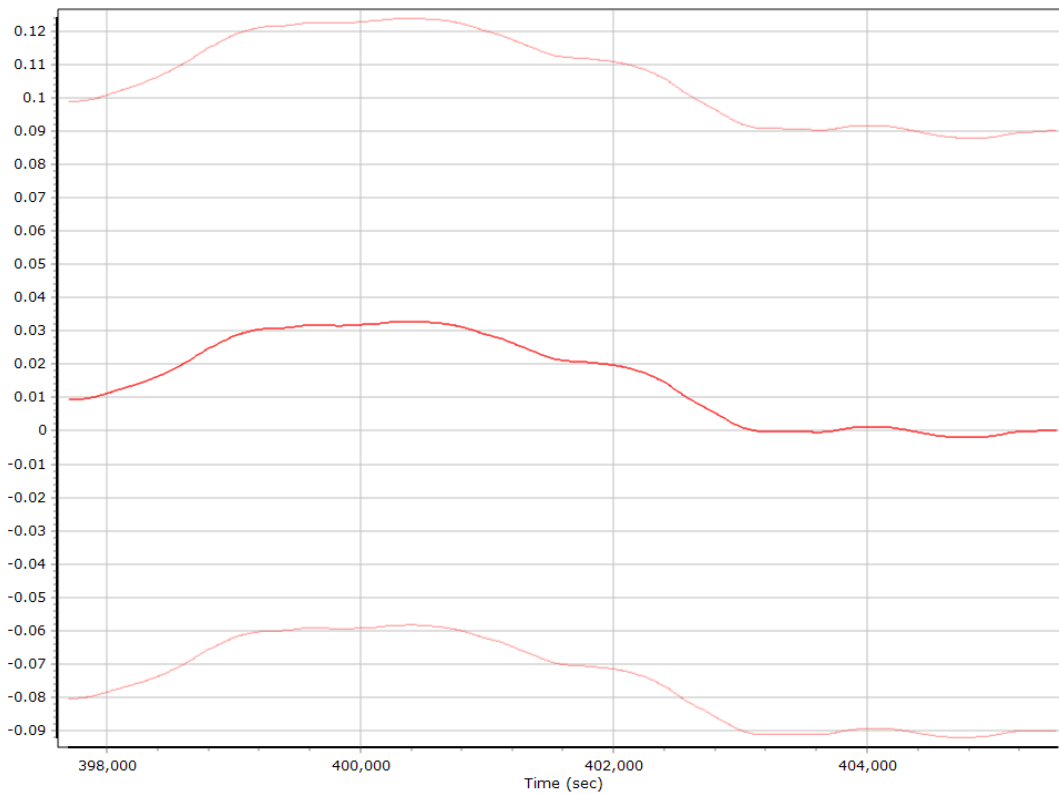
Z Accelerometer Scale Error (ppm)



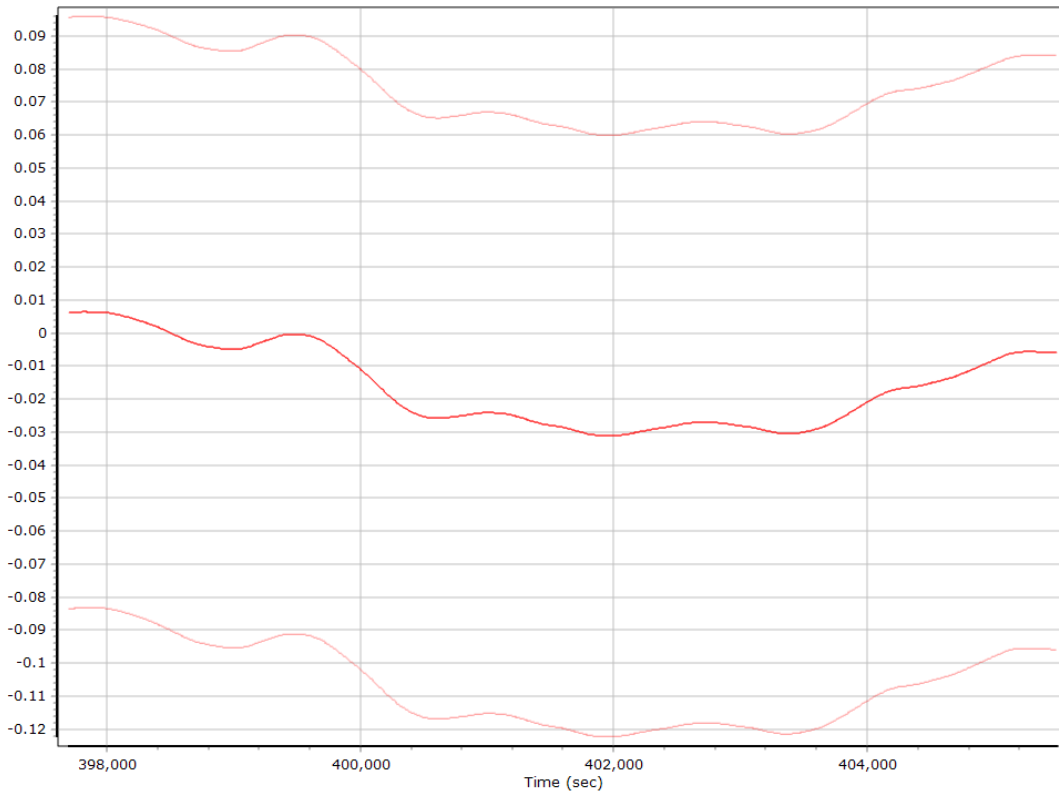
Gyro Bias (deg/h)



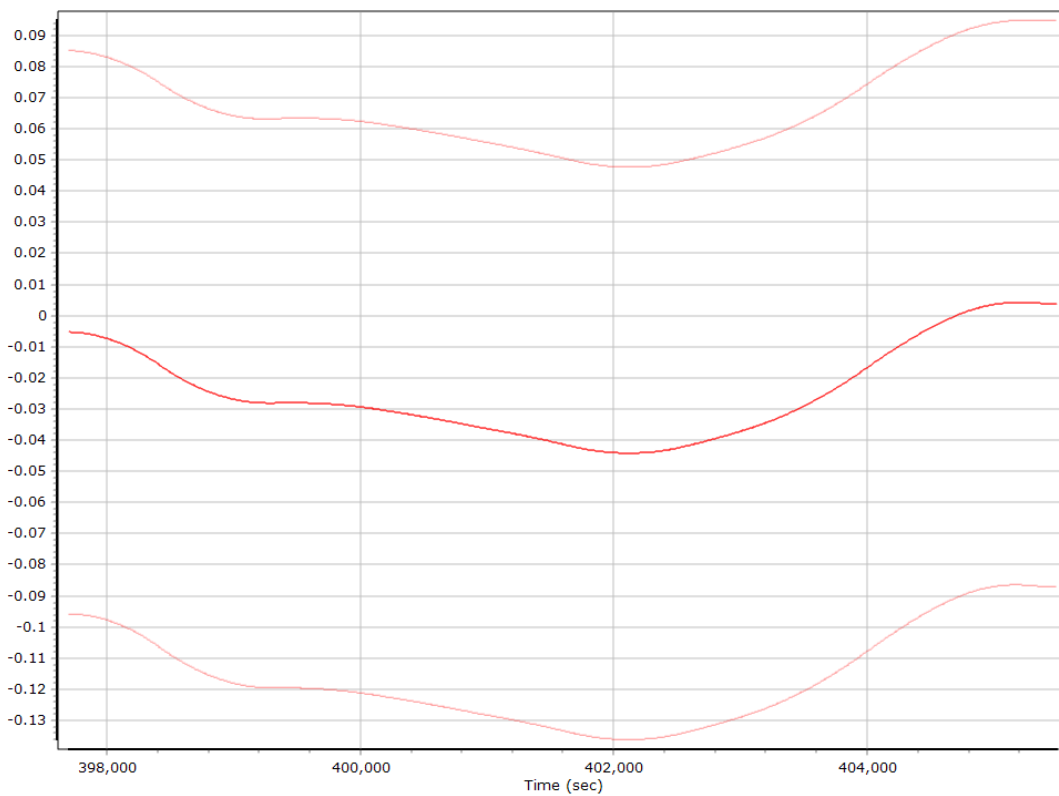
X Gyro Bias (deg/h)



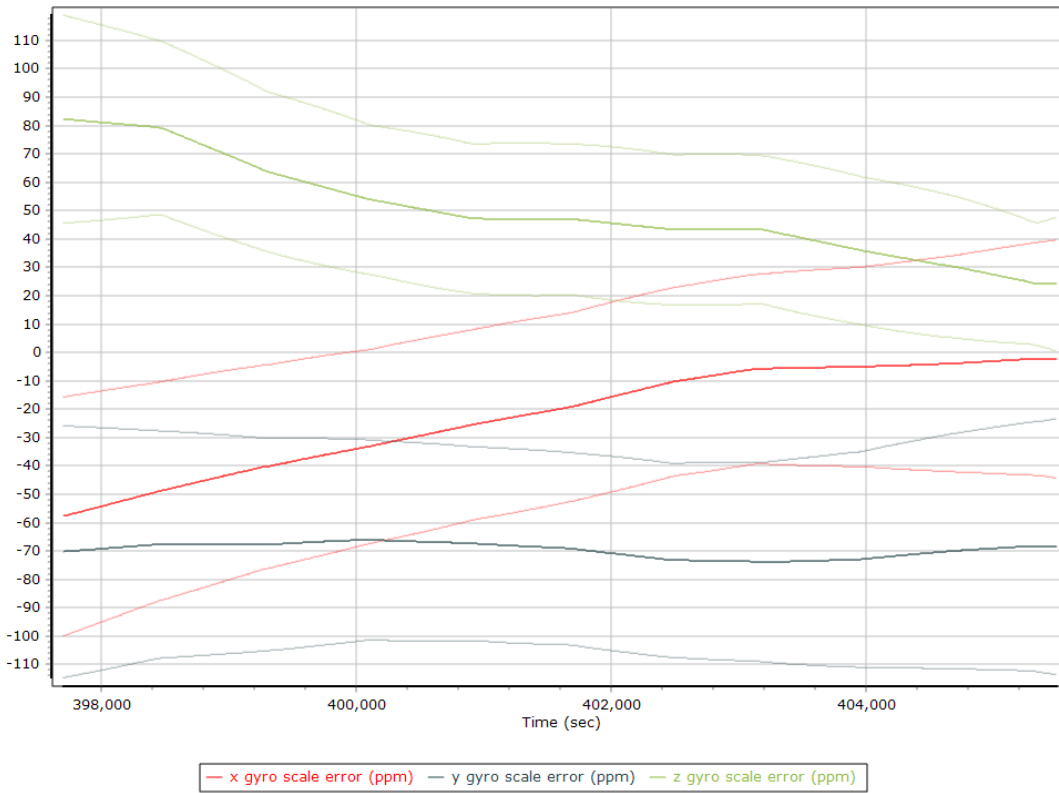
Y Gyro Bias (deg/h)



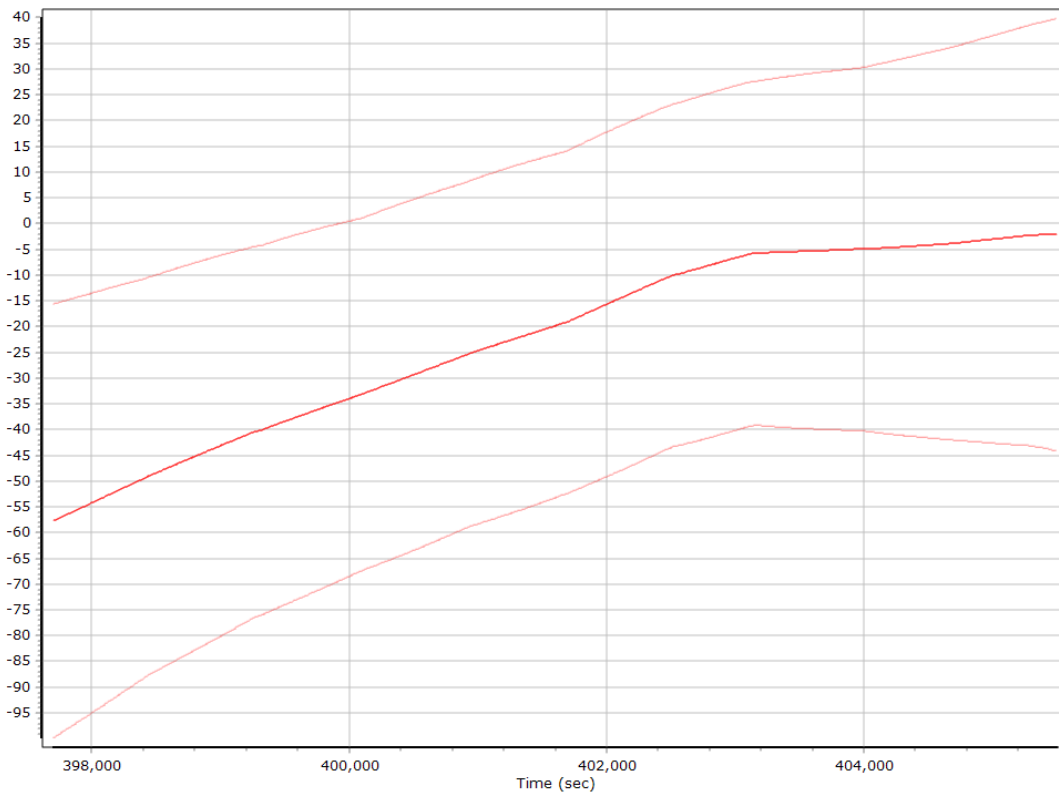
Z Gyro Bias (deg/h)



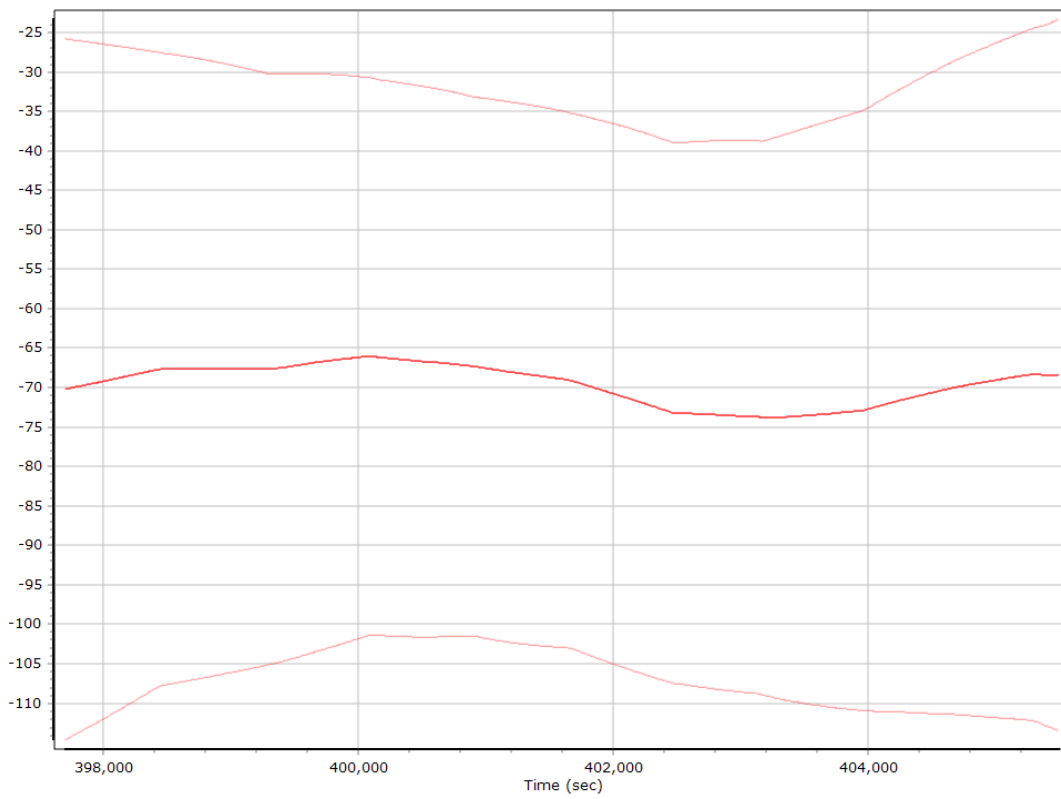
Gyro Scale Error (ppm)



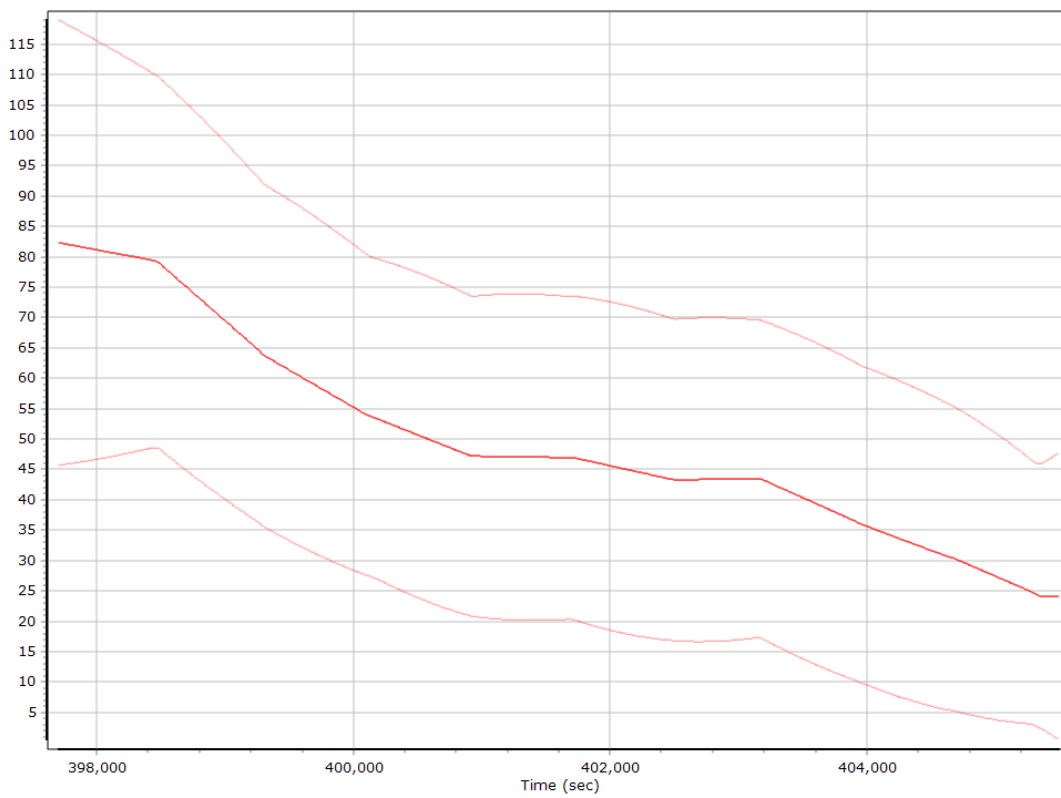
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

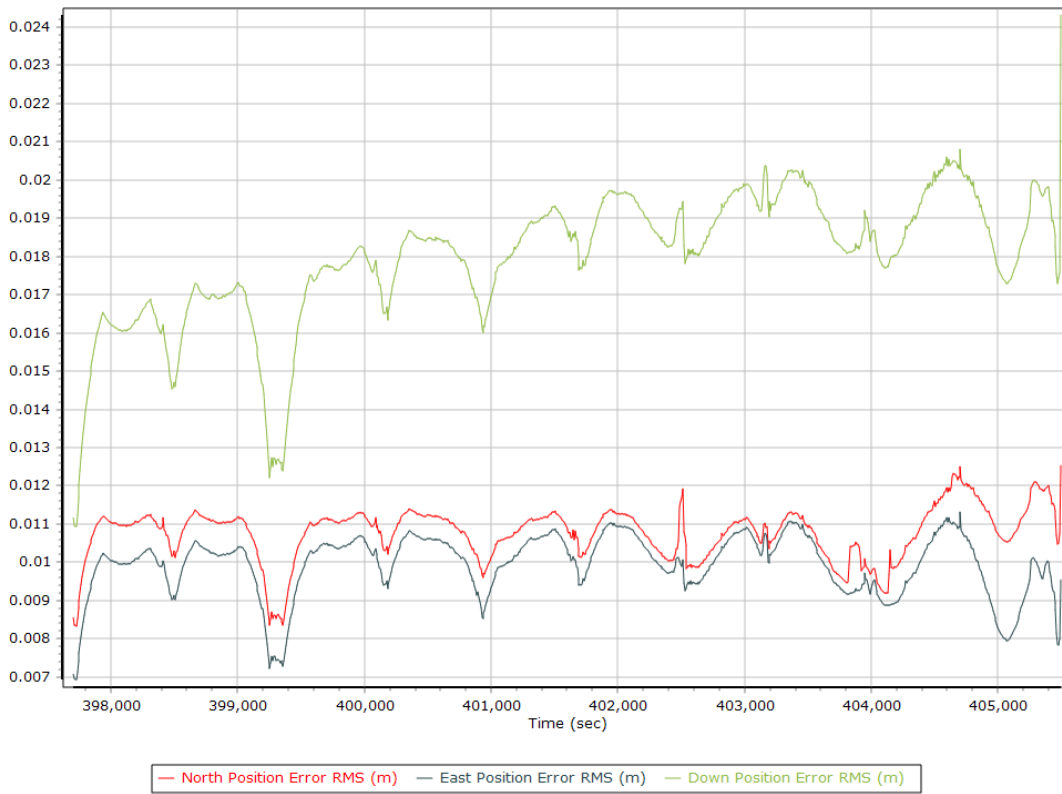


Z Gyro Scale Error (ppm)

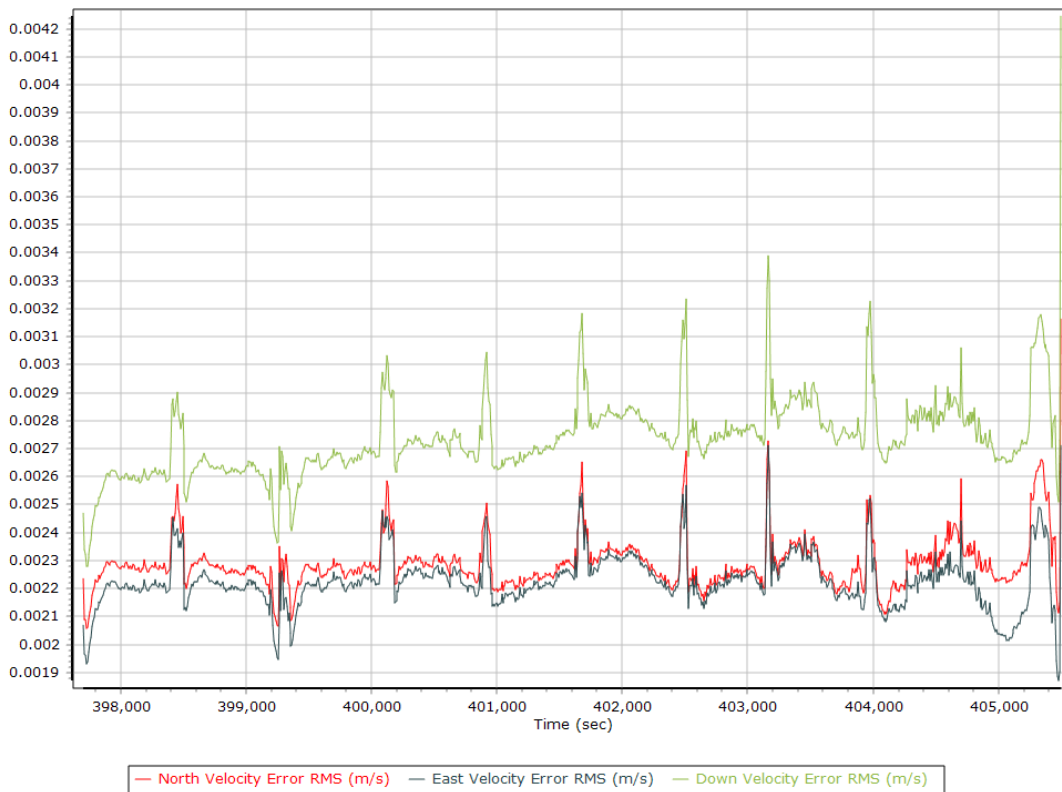


Smoothed Performance Metrics

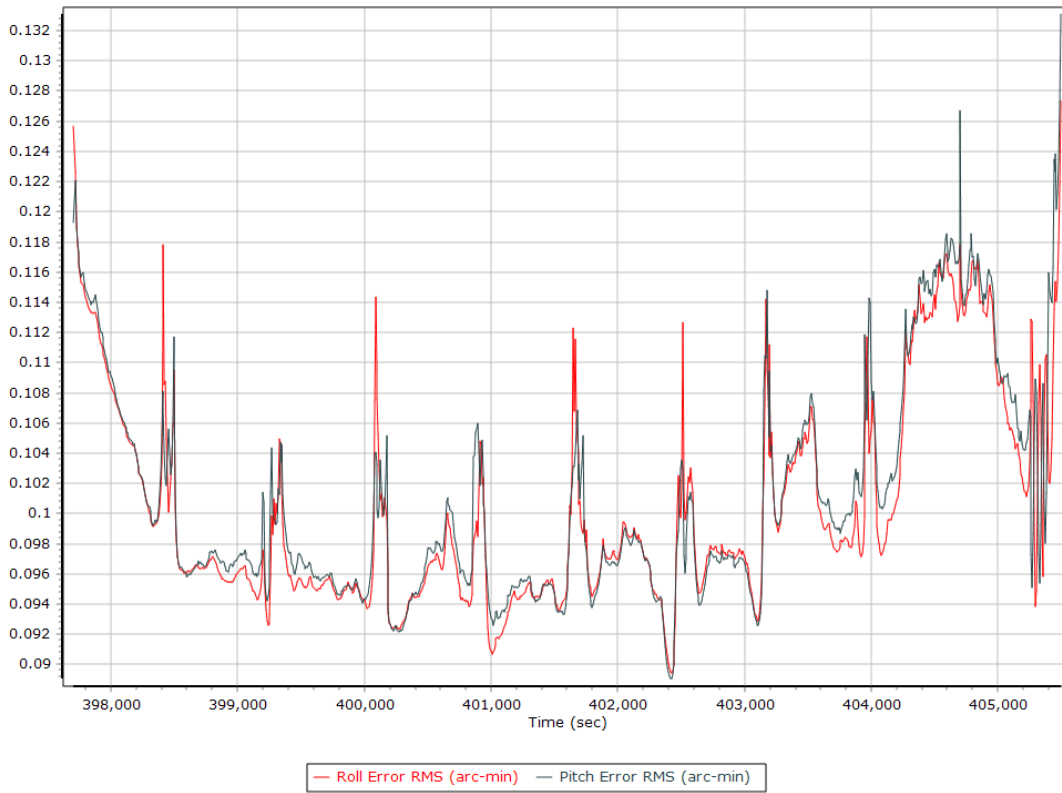
Position Error RMS (m)



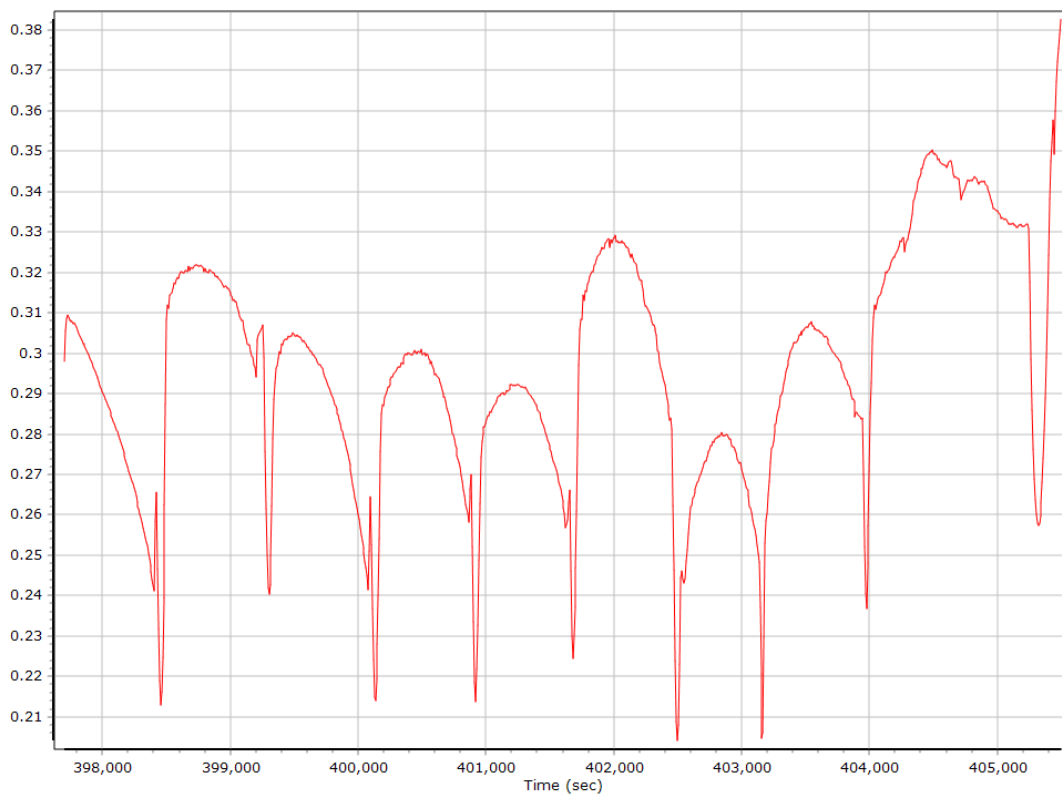
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

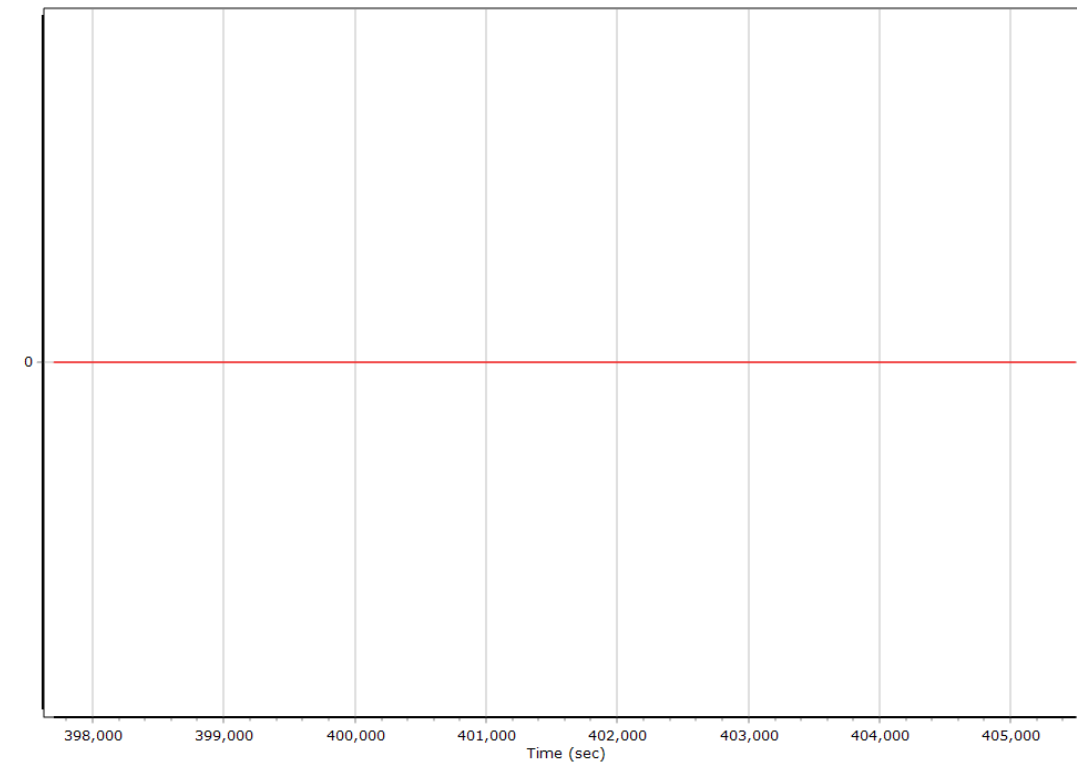


Heading Error RMS (arc-min)



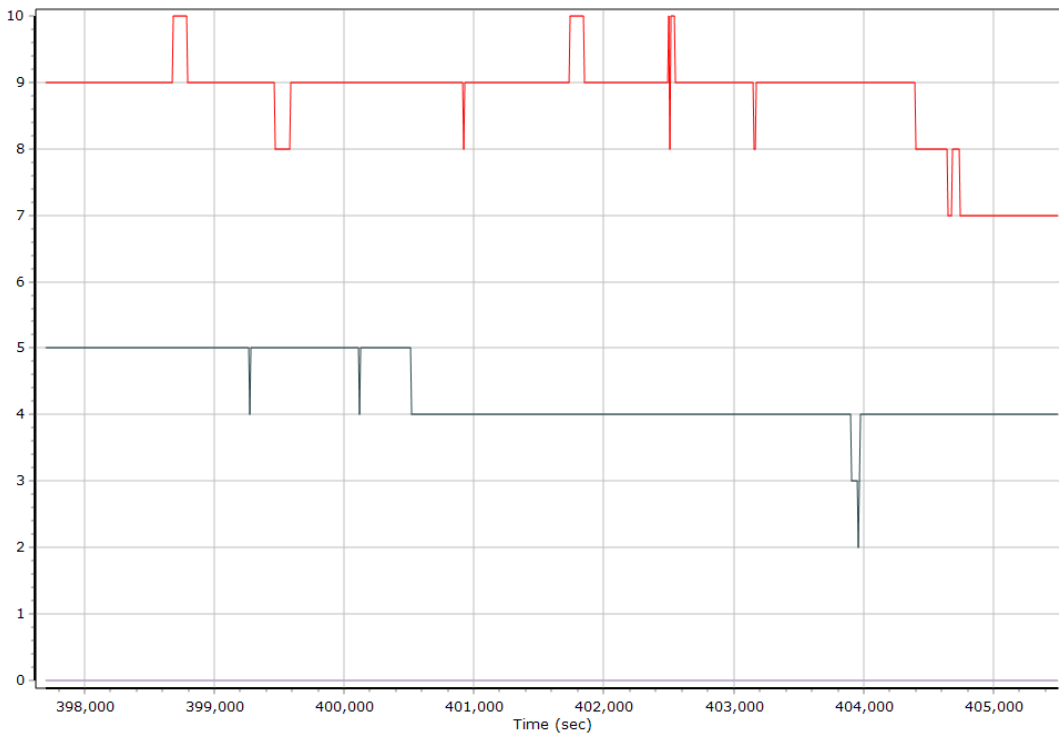
Smoothed Solution Status

Processing Mode



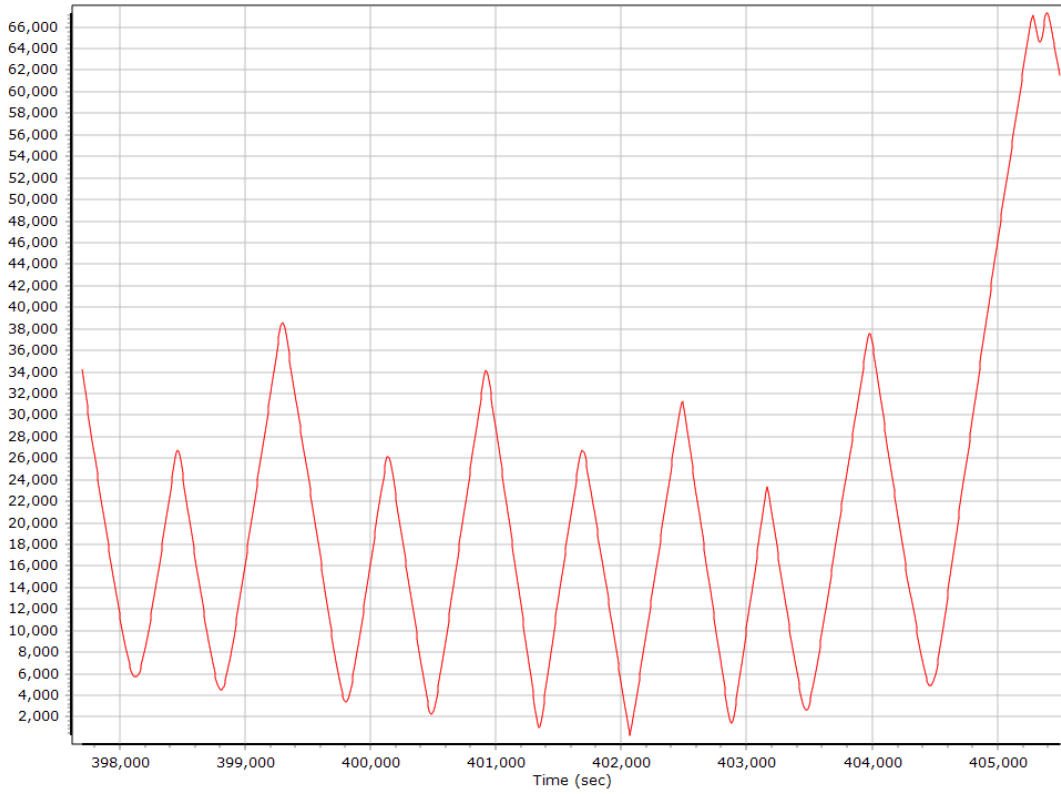
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR

Number of Satellites



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

Baseline Length



SBET IAKAR Separation

