

General Information

Mission Information

Project name	13284-1805_20181208_reprocessed
Processing date	2019-01-08 13:17:35
Mission date	2018-12-08 18:35:58
Mission duration	03:58:09.501
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
181208_183539_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3420.18g	GLONASS Broadcast Ephemeris
Ephm3420.18n	GPS Broadcast Ephemeris
igr20305.sp3	GPS Precise Ephemeris
igr20306.sp3	GPS Precise Ephemeris
igr20310.sp3	GPS Precise Ephemeris
GALP342A.18g	GLONASS Broadcast Ephemeris
WVHA342A.18o	GNSS SingleBase
WVHU342A.18g	GLONASS Broadcast Ephemeris
WVHU342A.18n	GPS Broadcast Ephemeris
WVHU342A.18o	GNSS SingleBase
WVMZ342A.18g	GLONASS Broadcast Ephemeris
WVHA342A.18n	GPS Broadcast Ephemeris
WVMZ342A.18n	GPS Broadcast Ephemeris
WVRH342A.18g	GLONASS Broadcast Ephemeris
WVRH342A.18n	GPS Broadcast Ephemeris
WVMZ342A.18o	GNSS SingleBase
WVHA342A.18g	GLONASS Broadcast Ephemeris
WVFL342A.18o	GNSS SingleBase
GALP342A.18n	GPS Broadcast Ephemeris
GALP342A.18o	GNSS SingleBase
MCON342A.18g	GLONASS Broadcast Ephemeris
MCON342A.18n	GPS Broadcast Ephemeris
MCON342A.18o	GNSS SingleBase
WVCH342A.18g	GLONASS Broadcast Ephemeris
WVCH342A.18n	GPS Broadcast Ephemeris
WVCH342A.18o	GNSS SingleBase
WVCL342A.18g	GLONASS Broadcast Ephemeris
WVCL342A.18n	GPS Broadcast Ephemeris
WVCL342A.18o	GNSS SingleBase
WVFL342A.18g	GLONASS Broadcast Ephemeris
WVFL342A.18n	GPS Broadcast Ephemeris
WVRH342A.18o	GNSS SingleBase
WVRA342A.18g	GLONASS Broadcast Ephemeris
WVRA342A.18n	GPS Broadcast Ephemeris
WVRA342A.18o	GNSS SingleBase

Output Files

Filename	File type
sbet_Mission 1.out	SBET Trajectory File

Rover Data Summary

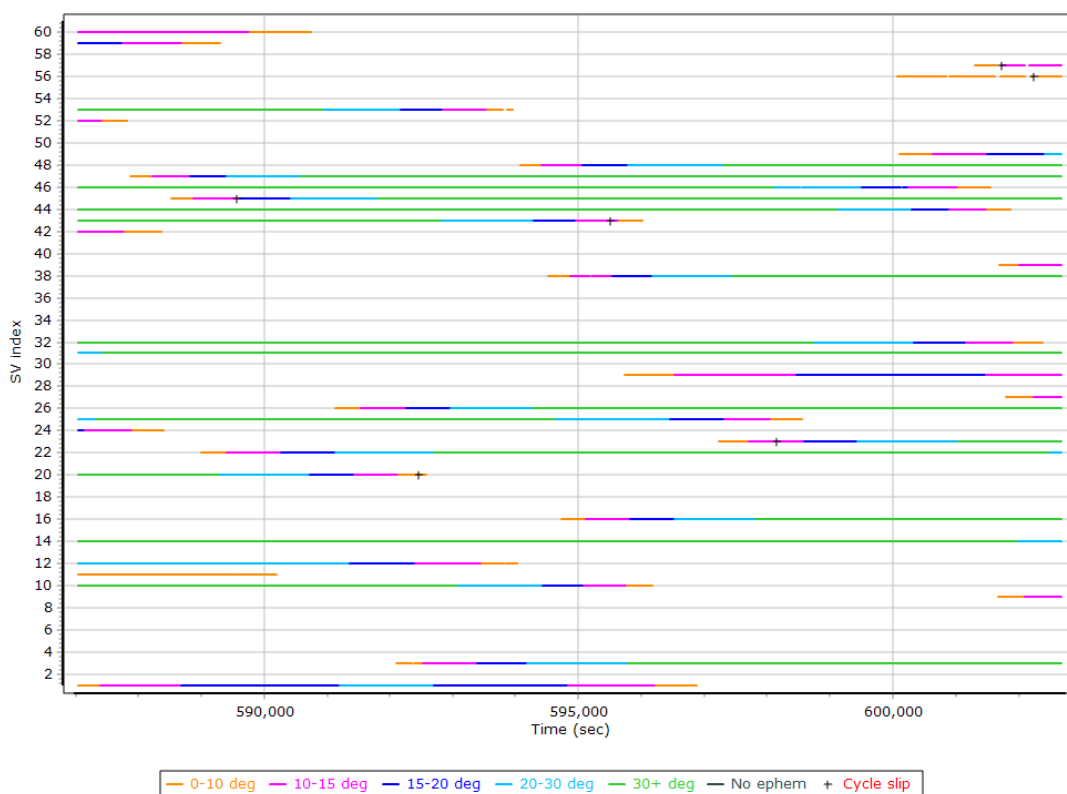
First raw data file	181208_183539_INS-GPS_1.raw		
Last raw data file	181208_183539_INS-GPS_1.raw		
Start GPS week	2030		
Start time	585339.510 (12/8/2018 6:35:39 PM)		
End time	602689.751 (12/8/2018 11:24:49 PM)		
Start of fine alignment	586986.108 (12/8/2018 7:03:06 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	Event 1 Input, Event 2 Input, Event 3 Input, Event 4 Input, Event 5 Input, Event 6 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

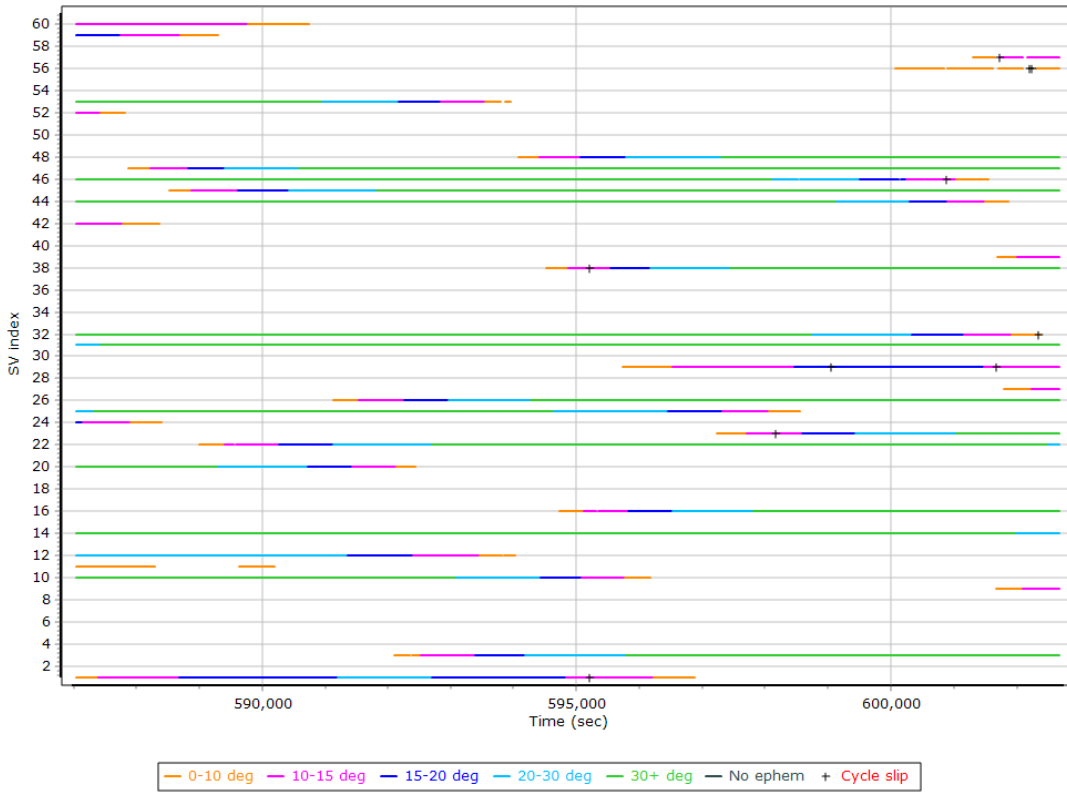
Raw IMU Import QC Summary

IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_Mission 1.log
IMU Records Processed	3466594
Termination Status	Warnings
IMU Anomalies	1
IMU Failure Messages	
601954.968 : WARNING : Gap of 14.0085 seconds in CHECKDT input data	

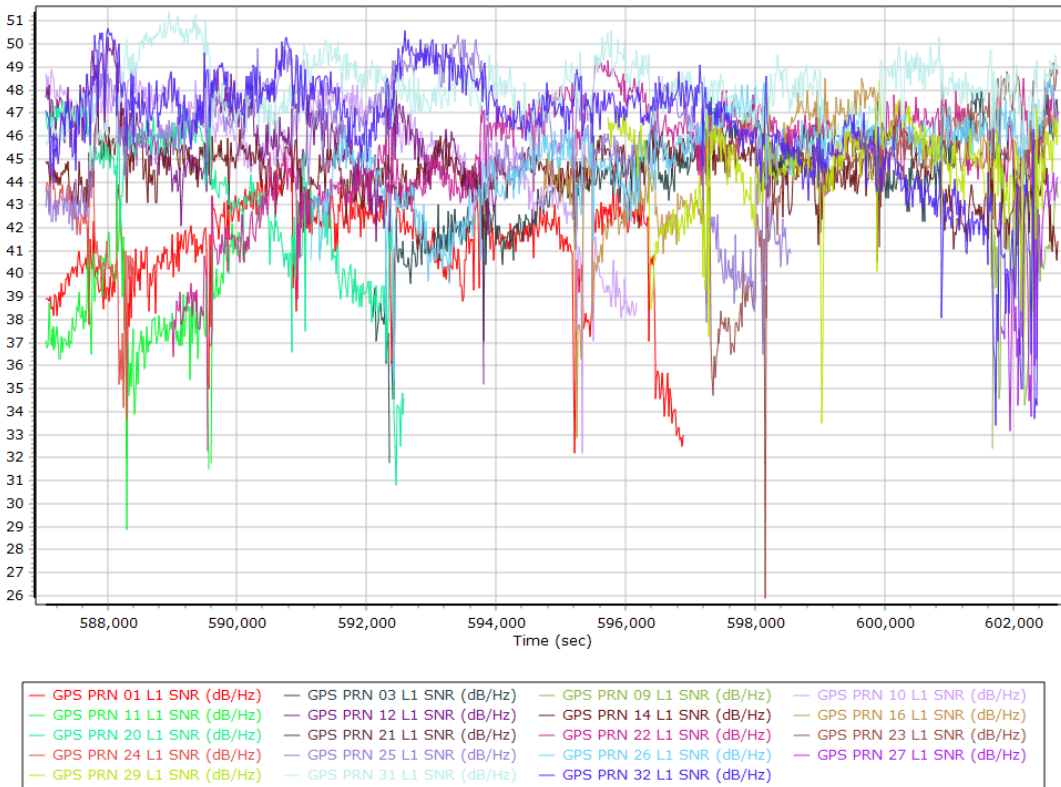
L1 Satellite Lock/Elevation



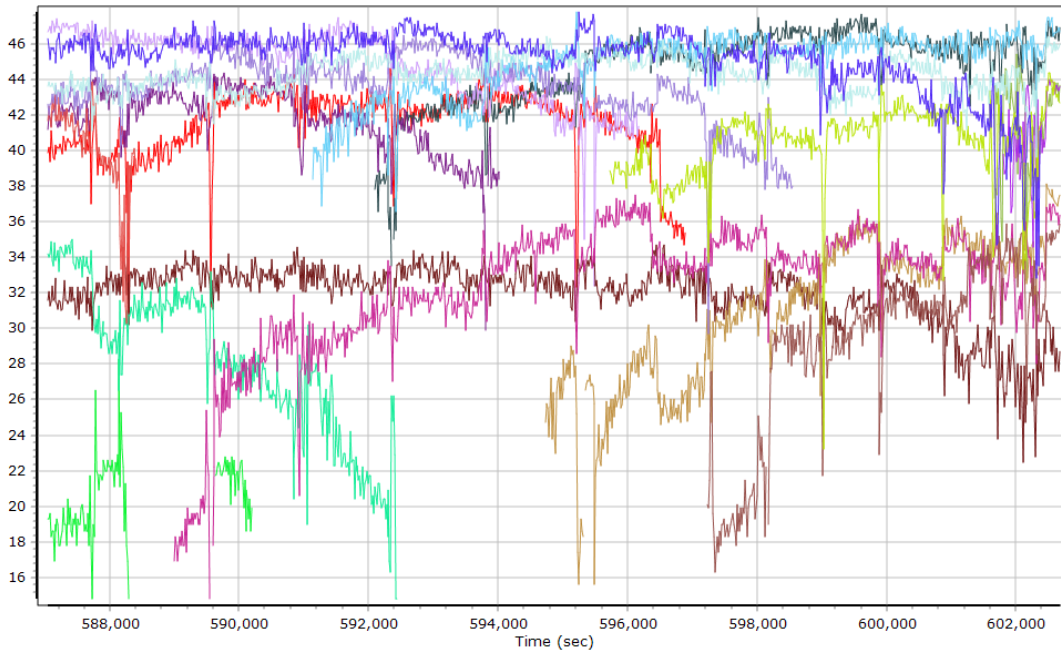
L2 Satellite Lock/Elevation



GPS L1 SNR

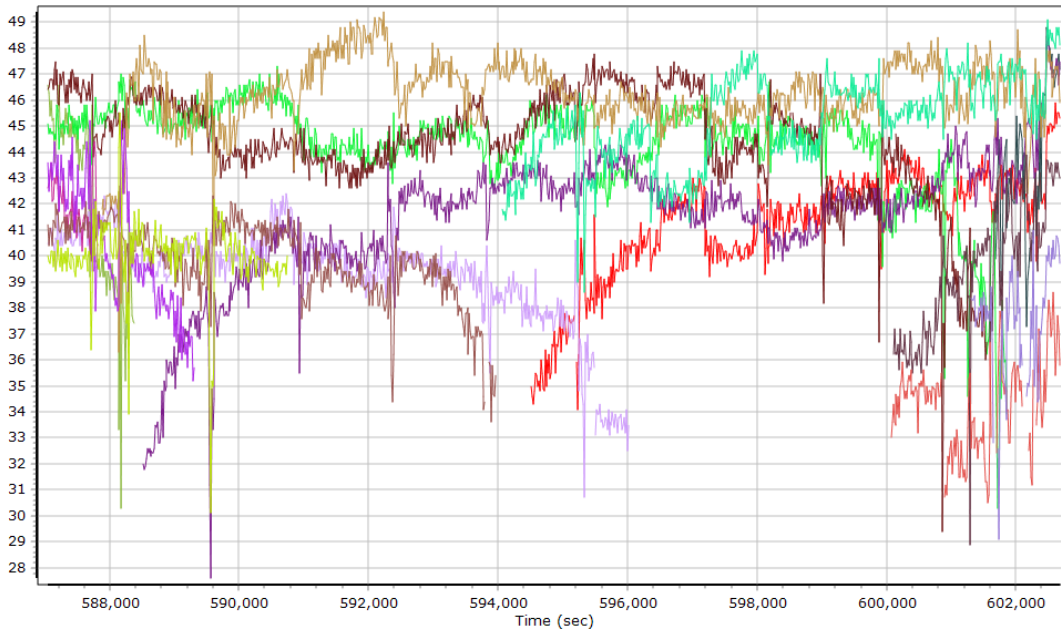


GPS L2 SNR



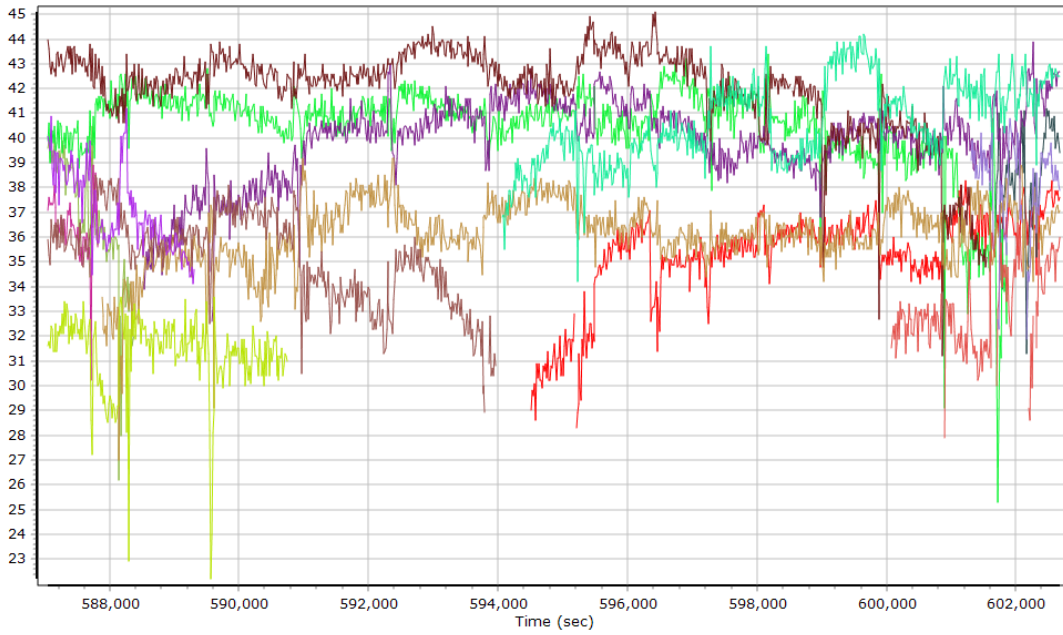
- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 01 L2 SNR (dB/Hz) | GPS PRN 03 L2 SNR (dB/Hz) | GPS PRN 09 L2 SNR (dB/Hz) | GPS PRN 10 L2 SNR (dB/Hz) |
| GPS PRN 11 L2 SNR (dB/Hz) | GPS PRN 12 L2 SNR (dB/Hz) | GPS PRN 14 L2 SNR (dB/Hz) | GPS PRN 16 L2 SNR (dB/Hz) |
| GPS PRN 20 L2 SNR (dB/Hz) | GPS PRN 21 L2 SNR (dB/Hz) | GPS PRN 22 L2 SNR (dB/Hz) | GPS PRN 23 L2 SNR (dB/Hz) |
| GPS PRN 24 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



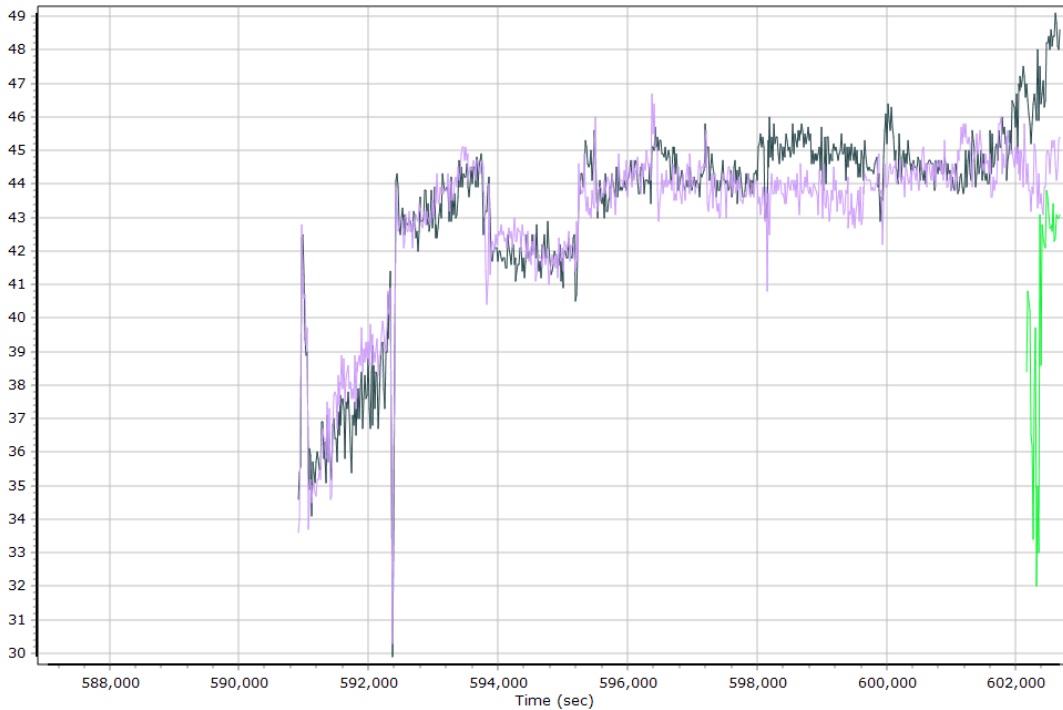
- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 01 L1 SNR (dB/Hz) | GLONASS 02 L1 SNR (dB/Hz) | GLONASS 05 L1 SNR (dB/Hz) |
| GLONASS 06 L1 SNR (dB/Hz) | GLONASS 07 L1 SNR (dB/Hz) | GLONASS 08 L1 SNR (dB/Hz) |
| GLONASS 09 L1 SNR (dB/Hz) | GLONASS 10 L1 SNR (dB/Hz) | GLONASS 11 L1 SNR (dB/Hz) |
| GLONASS 12 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 L2 SNR



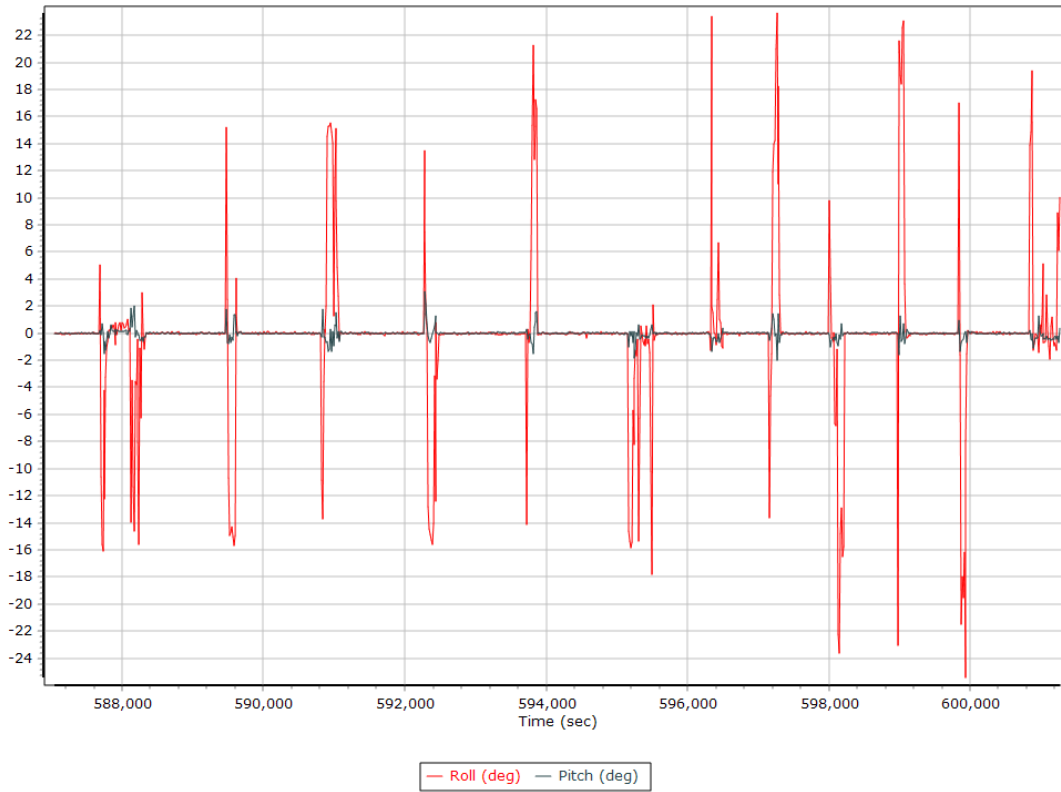
- GLONASS 01 L2 SNR (dB/Hz)
- GLONASS 02 L2 SNR (dB/Hz)
- GLONASS 03 L2 SNR (dB/Hz)
- GLONASS 04 L2 SNR (dB/Hz)
- GLONASS 05 L2 SNR (dB/Hz)
- GLONASS 06 L2 SNR (dB/Hz)
- GLONASS 07 L2 SNR (dB/Hz)
- GLONASS 08 L2 SNR (dB/Hz)
- GLONASS 09 L2 SNR (dB/Hz)
- GLONASS 10 L2 SNR (dB/Hz)
- GLONASS 11 L2 SNR (dB/Hz)
- 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 19 L2 SNR (dB/Hz)
- GLONASS 20 L2 SNR (dB/Hz)
- GLONASS 21 L2 SNR (dB/Hz)
- GLONASS 22 L2 SNR (dB/Hz)
- GLONASS 23 L2 SNR (dB/Hz)

BEIDOU SNR

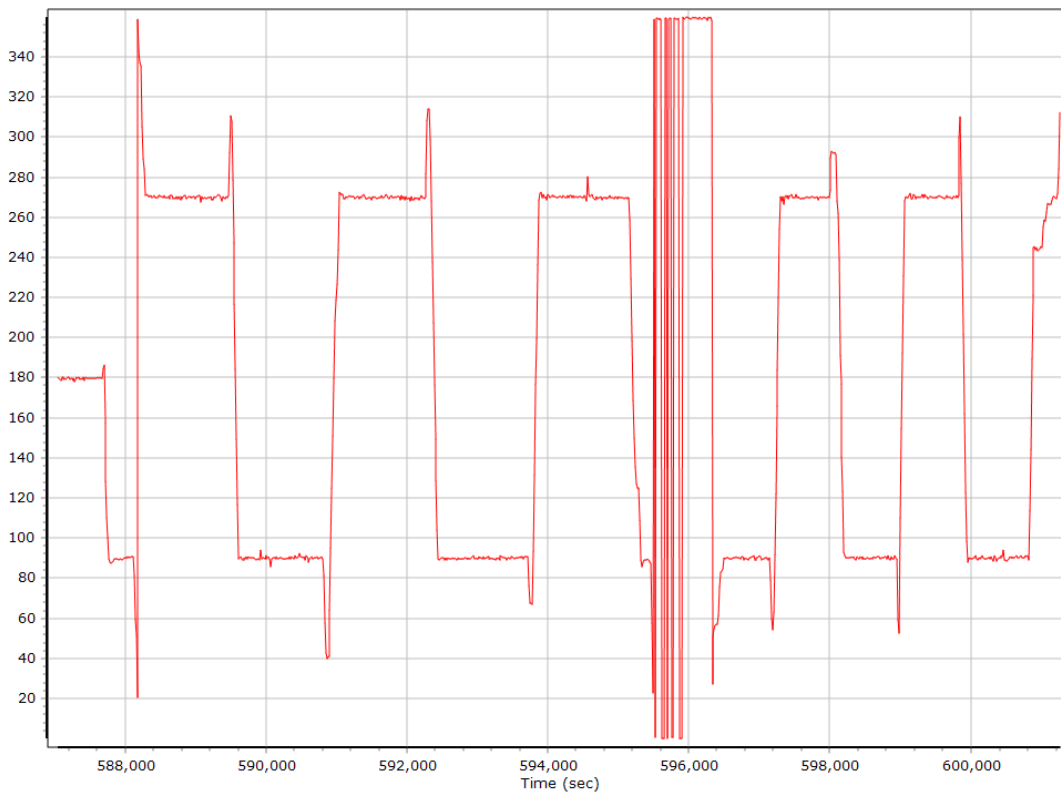


- BEIDOU 12 E5B B2 SNR (dB/Hz)
- BEIDOU 14 E5B B2 SNR (dB/Hz)
- BEIDOU 12 B1 B1 SNR (dB/Hz)
- BEIDOU 14 B1 B1 SNR (dB/Hz)
- BEIDOU 19 B1 B1 SNR (dB/Hz)

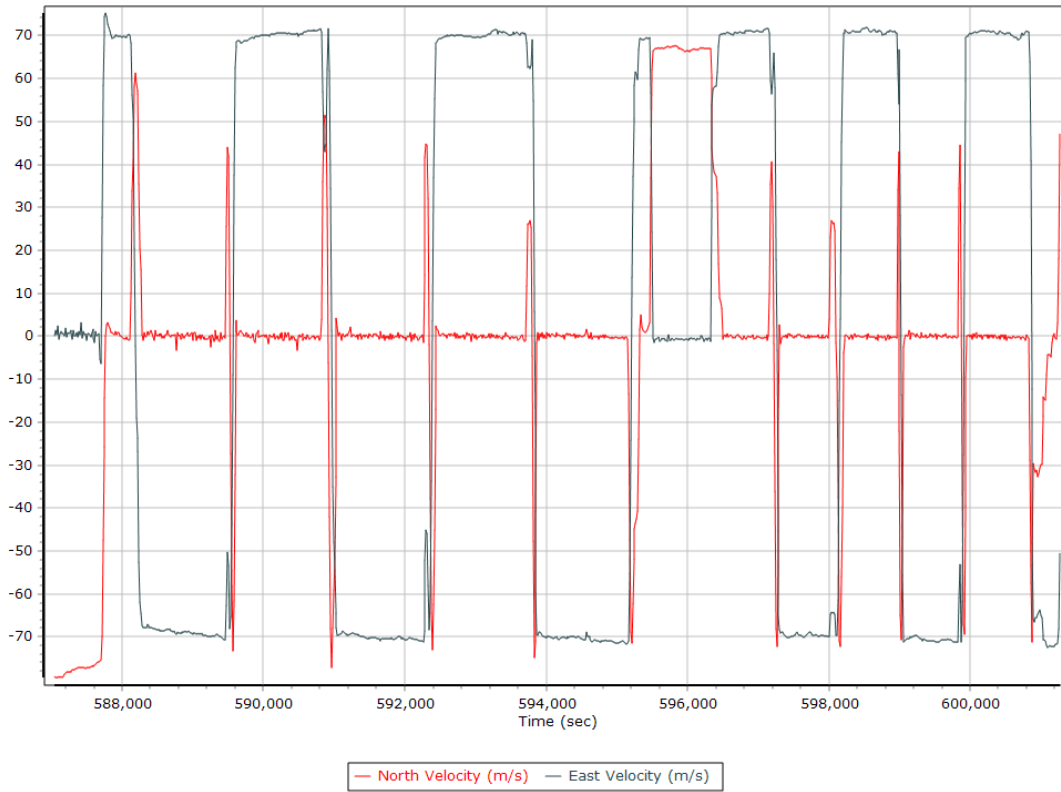
Roll/Pitch



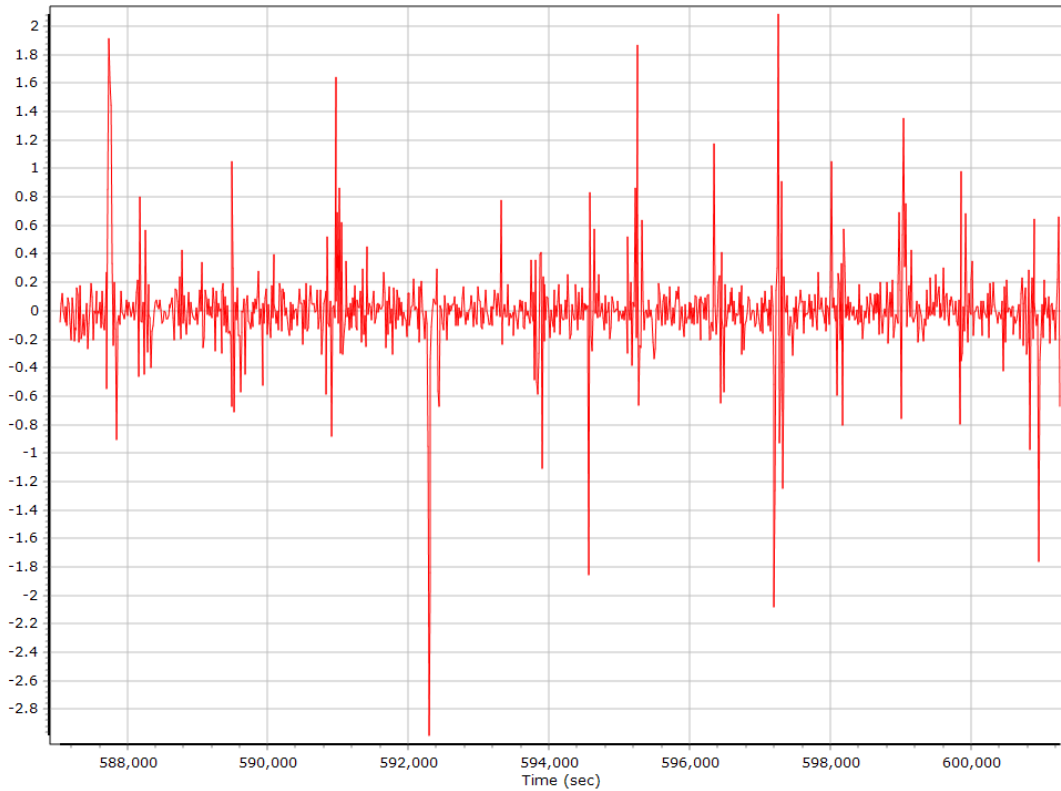
Heading



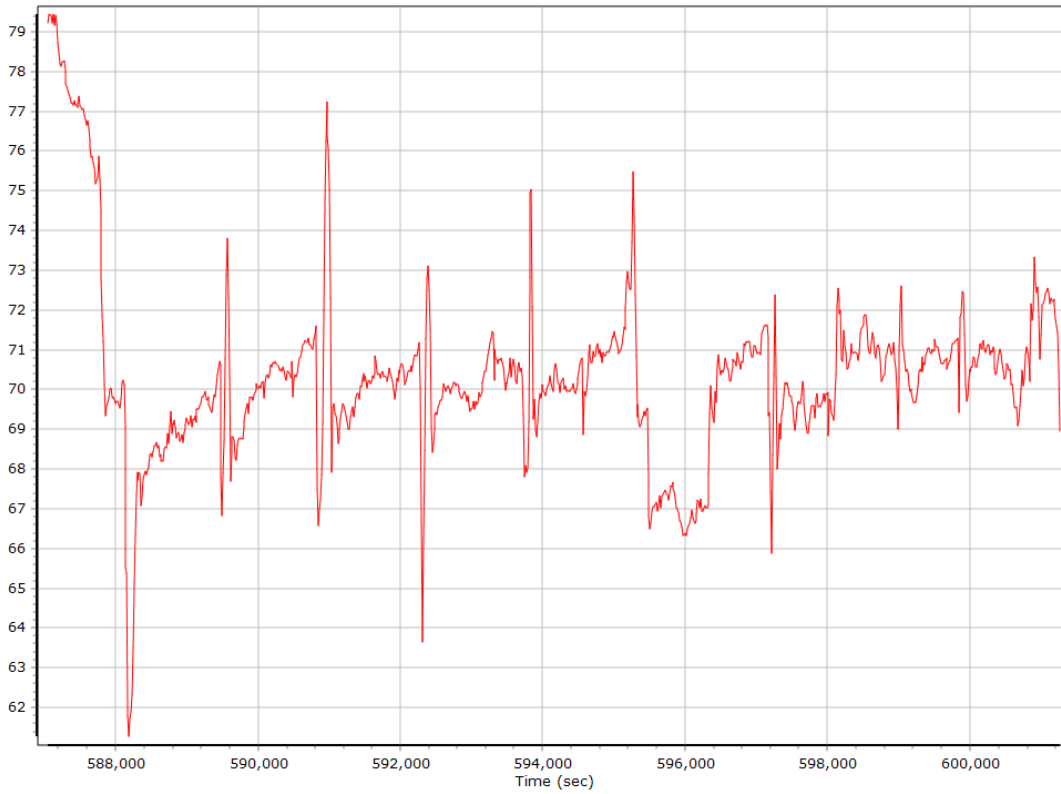
North/East Velocity



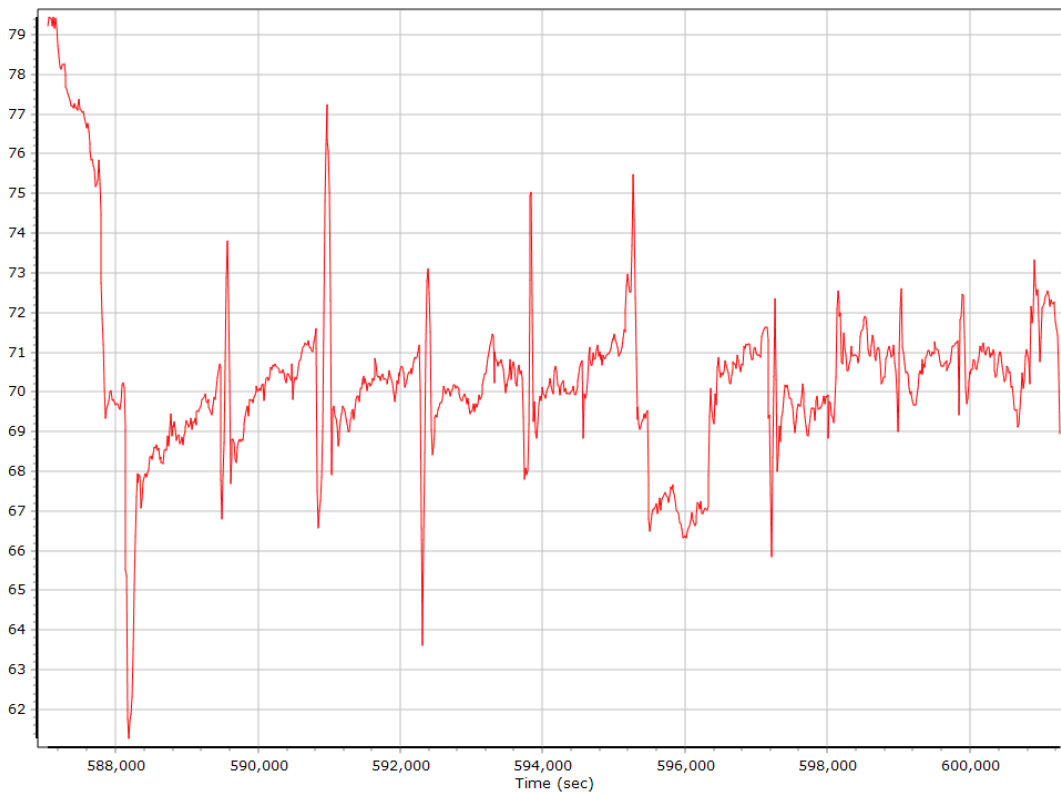
Down Velocity



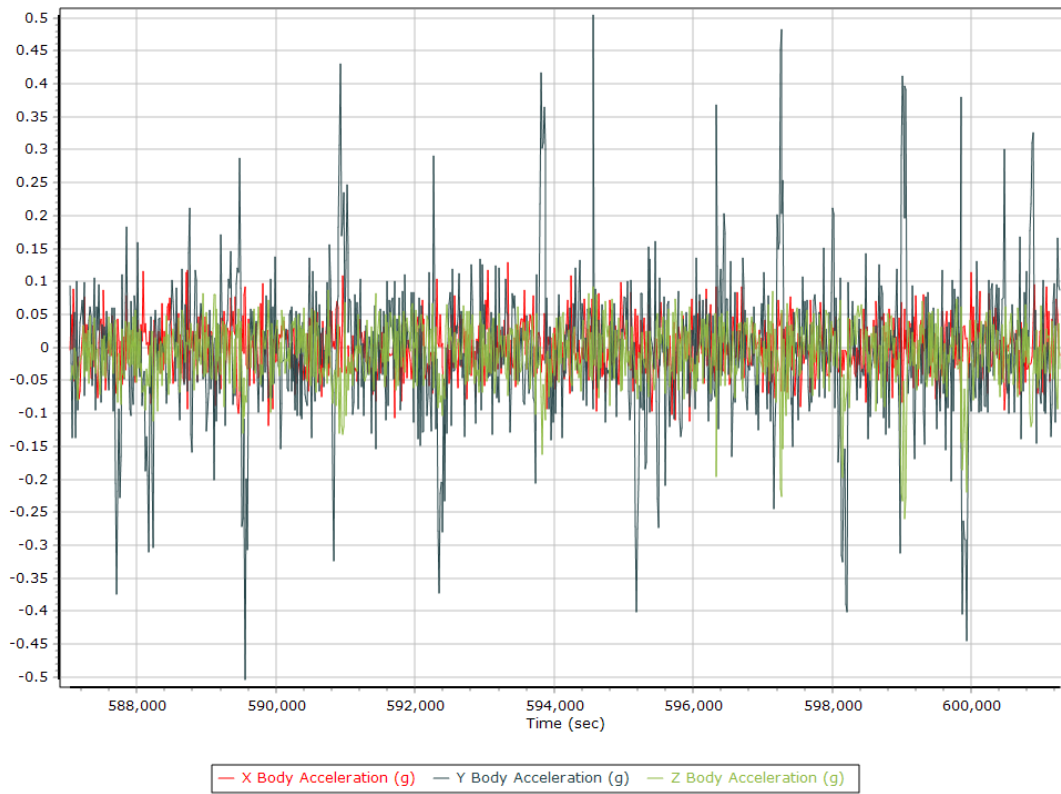
Total Speed



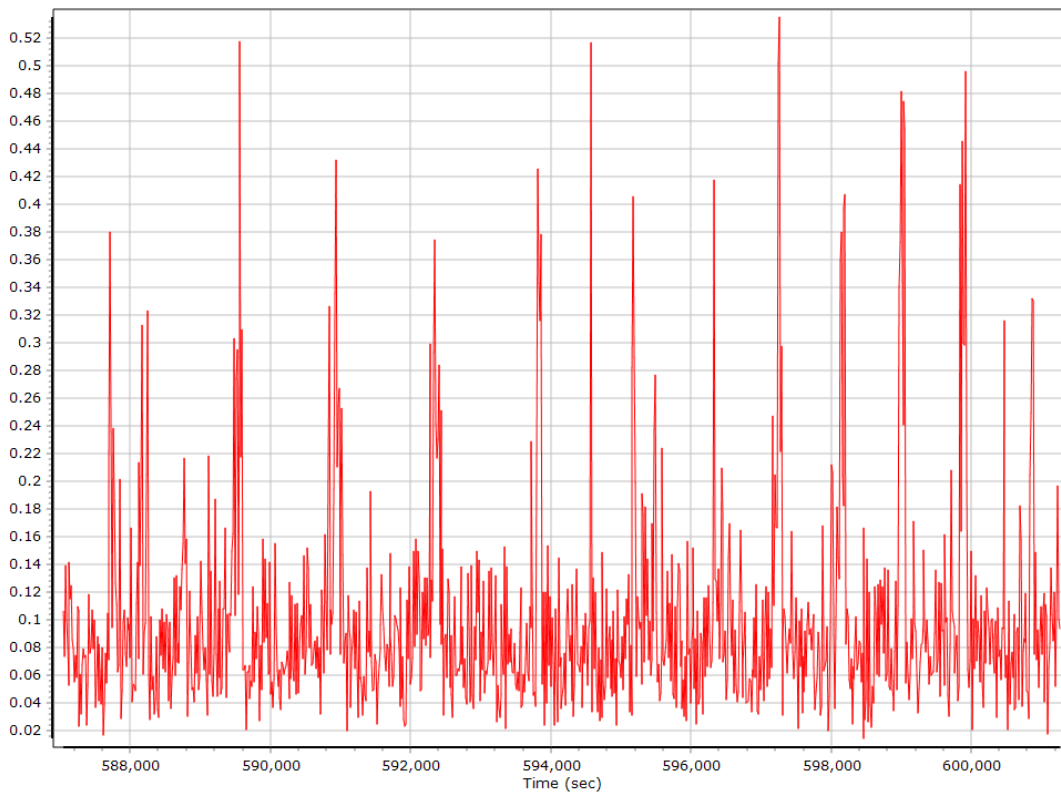
Ground Speed



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]	11.09	61.30	
Number of GPS SV	7	10	9
Number of GLONASS SV	0	6	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	8	16	14
PDOP	1.16	2.01	1.45
QC Solution Gaps	1.00	14.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	17292.00	0.00	15.00
Percentage	99.91	0.00	0.09

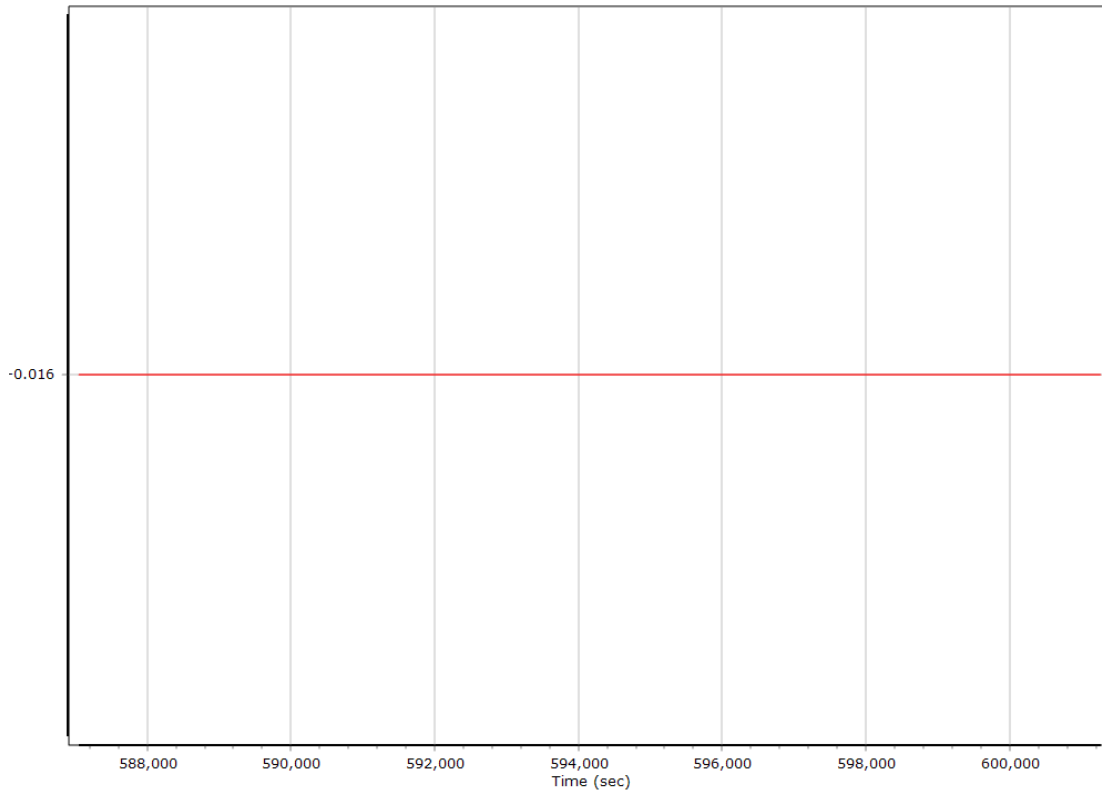
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	586985.898 (12/8/2018 7:03:05 PM)		
Processing end time	601275.399 (12/8/2018 11:01:15 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]	-0.016	0.008	-0.680
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

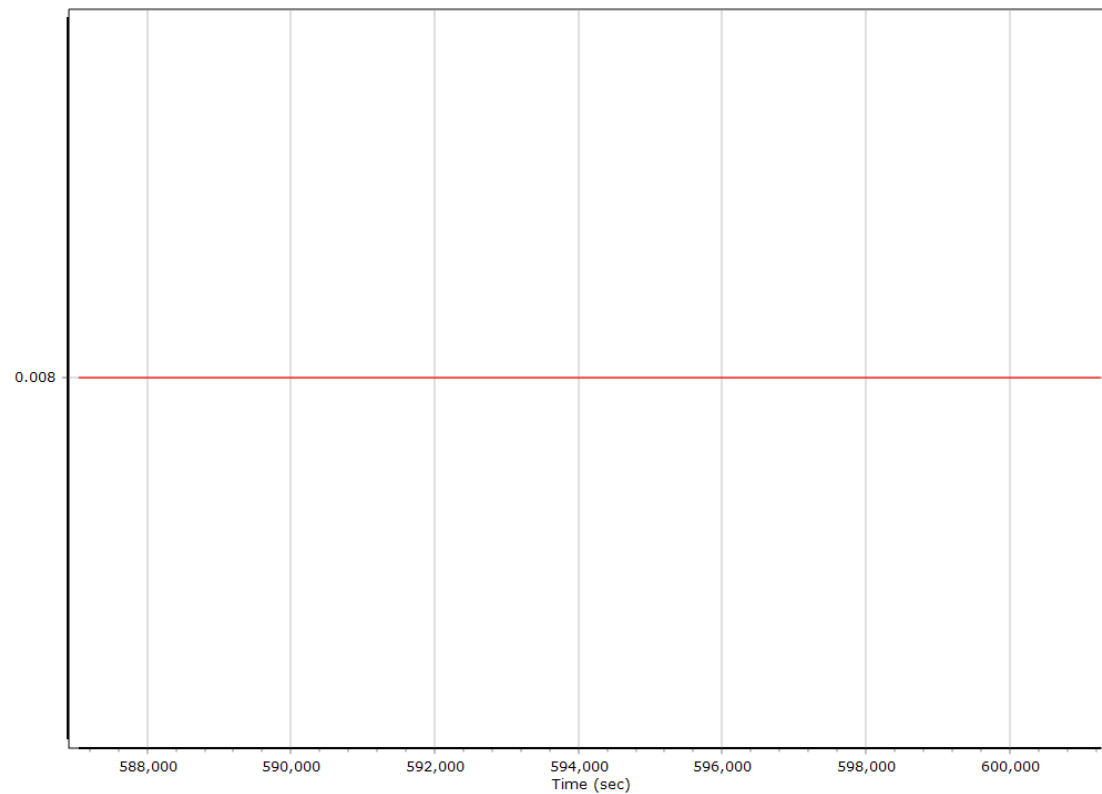
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

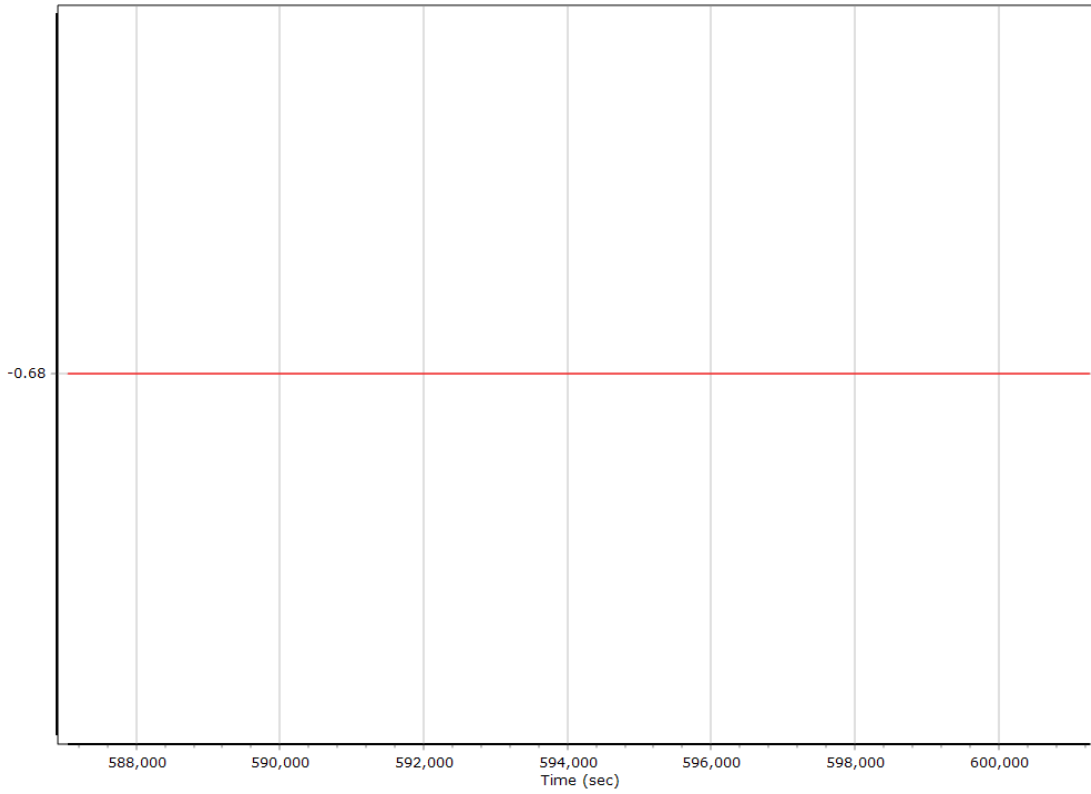
X Reference-Primary GNSS Lever Arm (m)



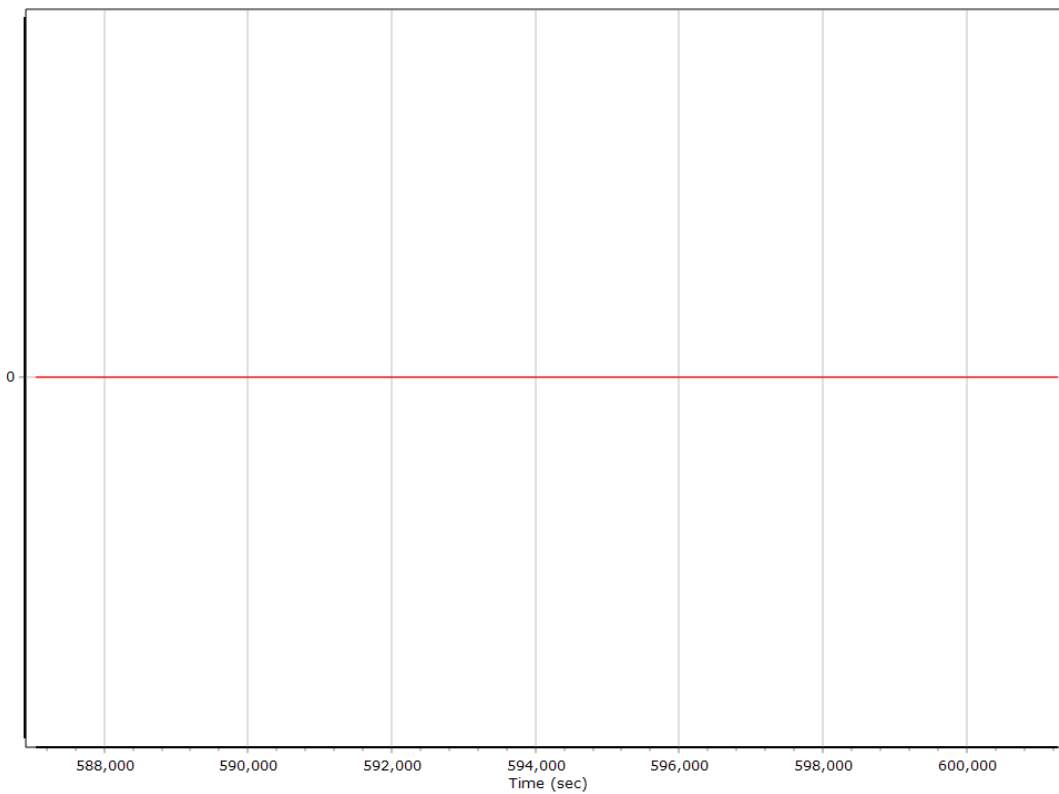
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



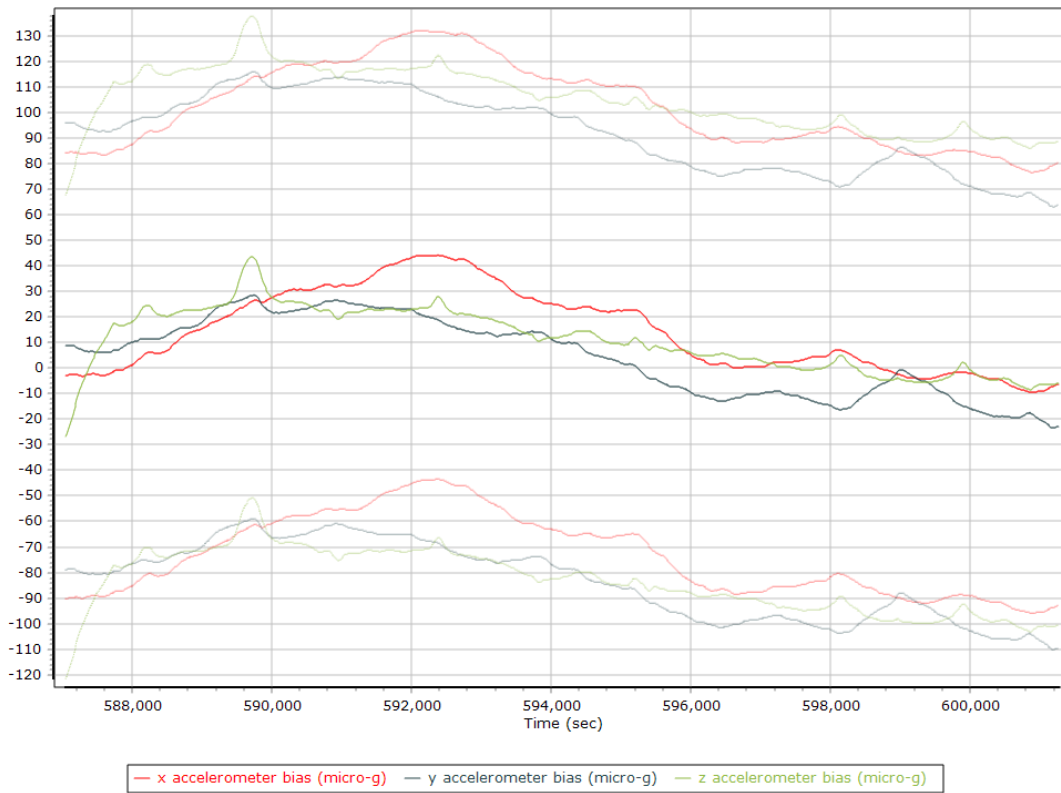
Reference-Primary GNSS Lever Arm Figure of Merit



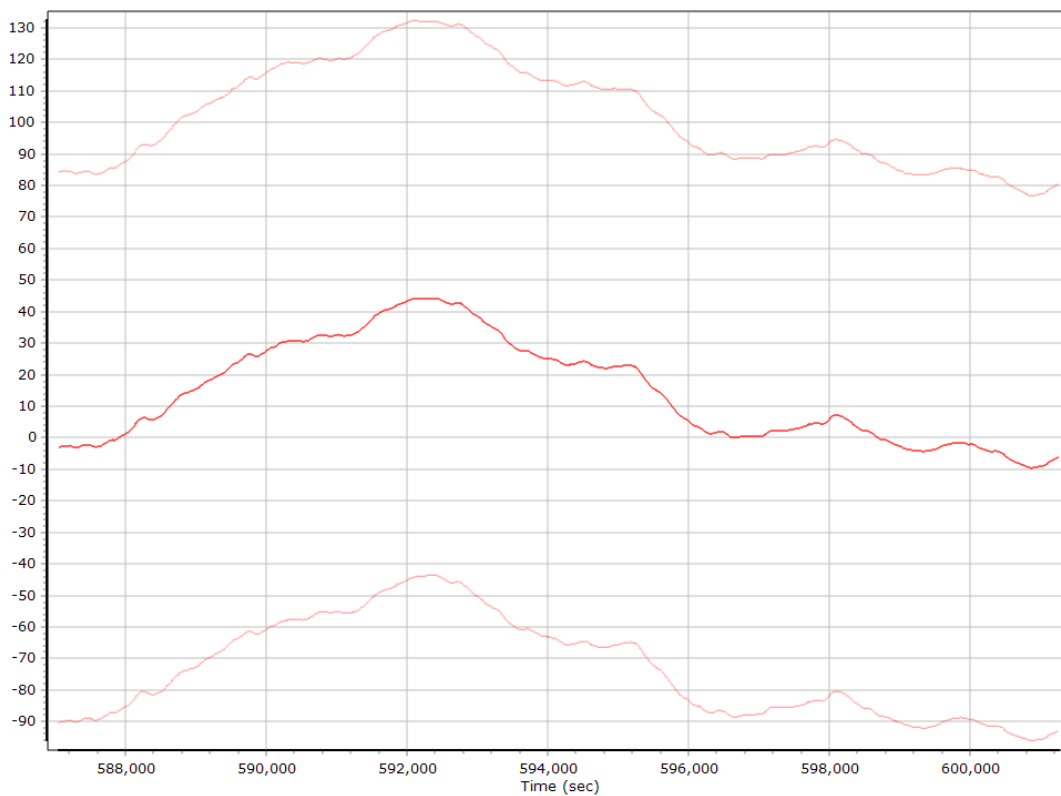
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

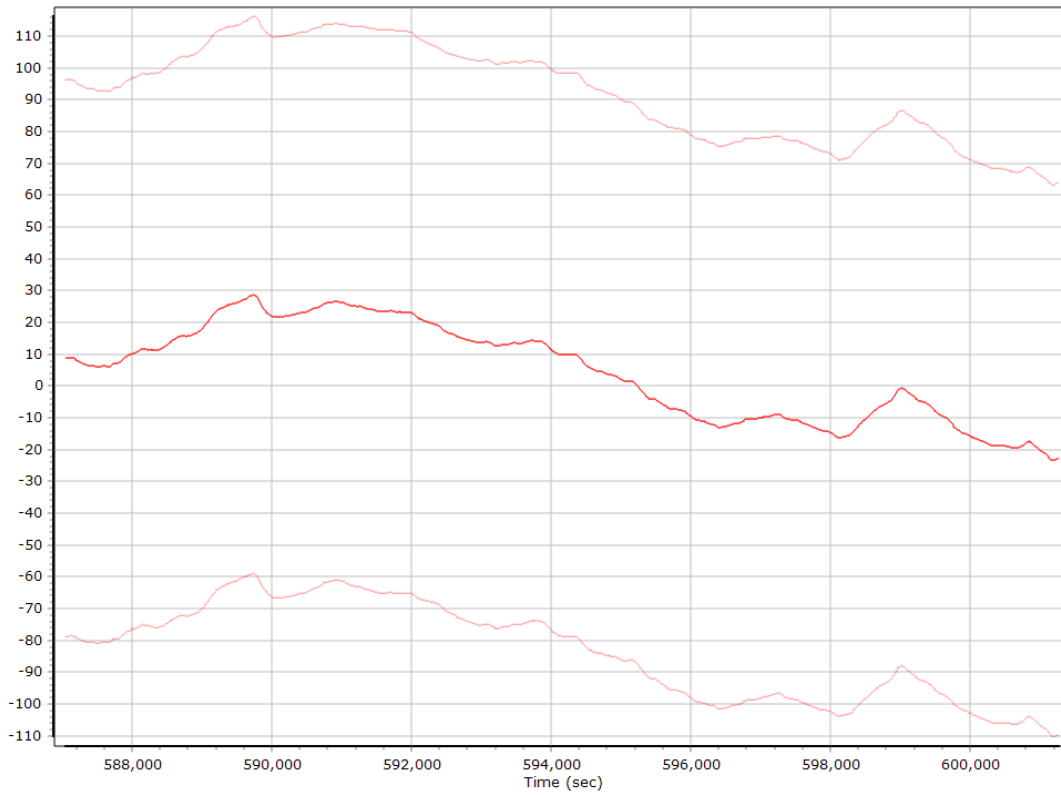
Accelerometer Bias (micro-g)



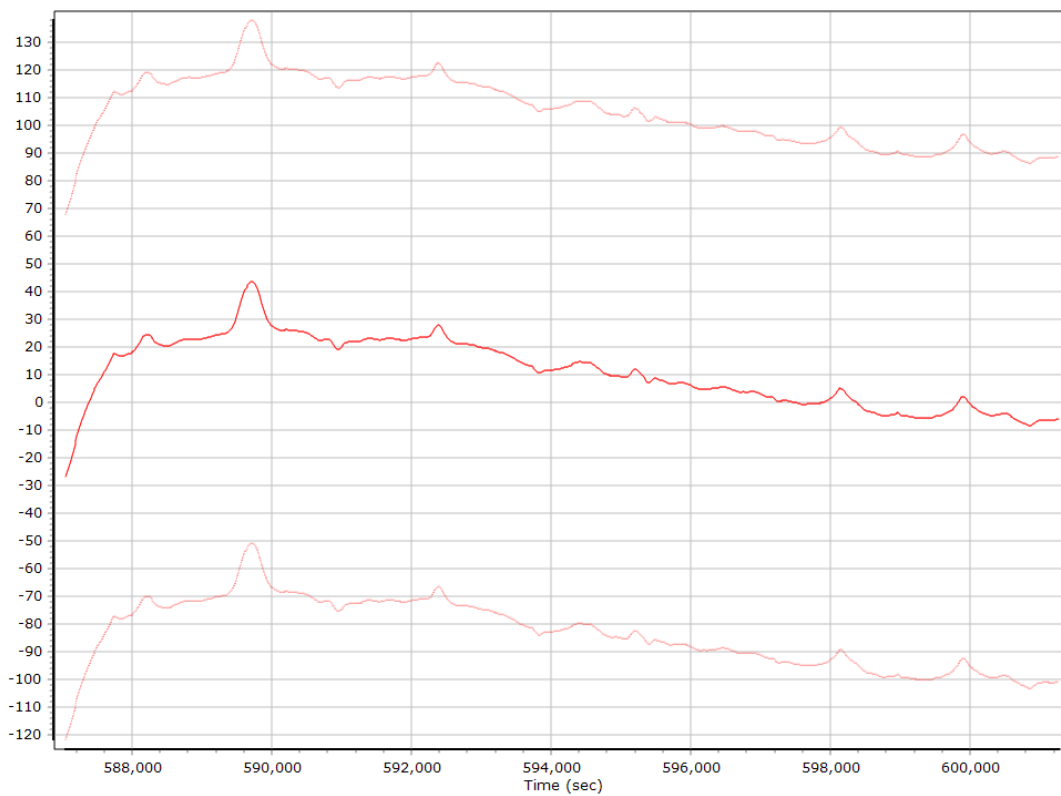
X Accelerometer Bias (micro-g)



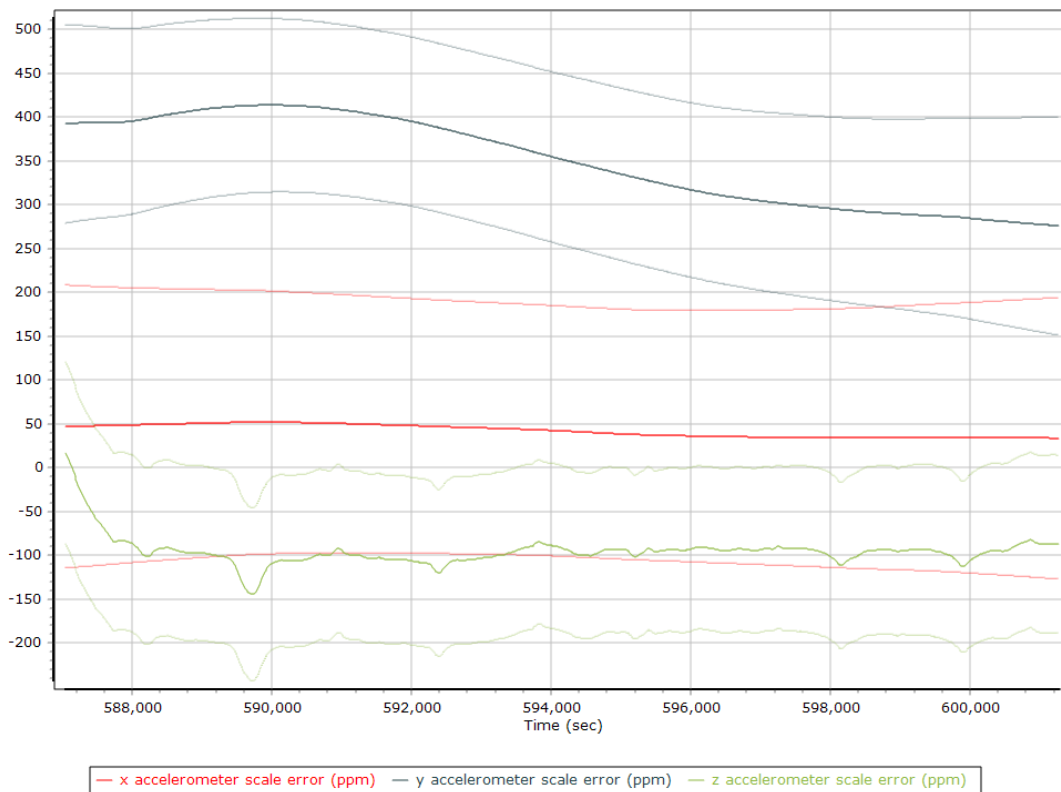
Y Accelerometer Bias (micro-g)



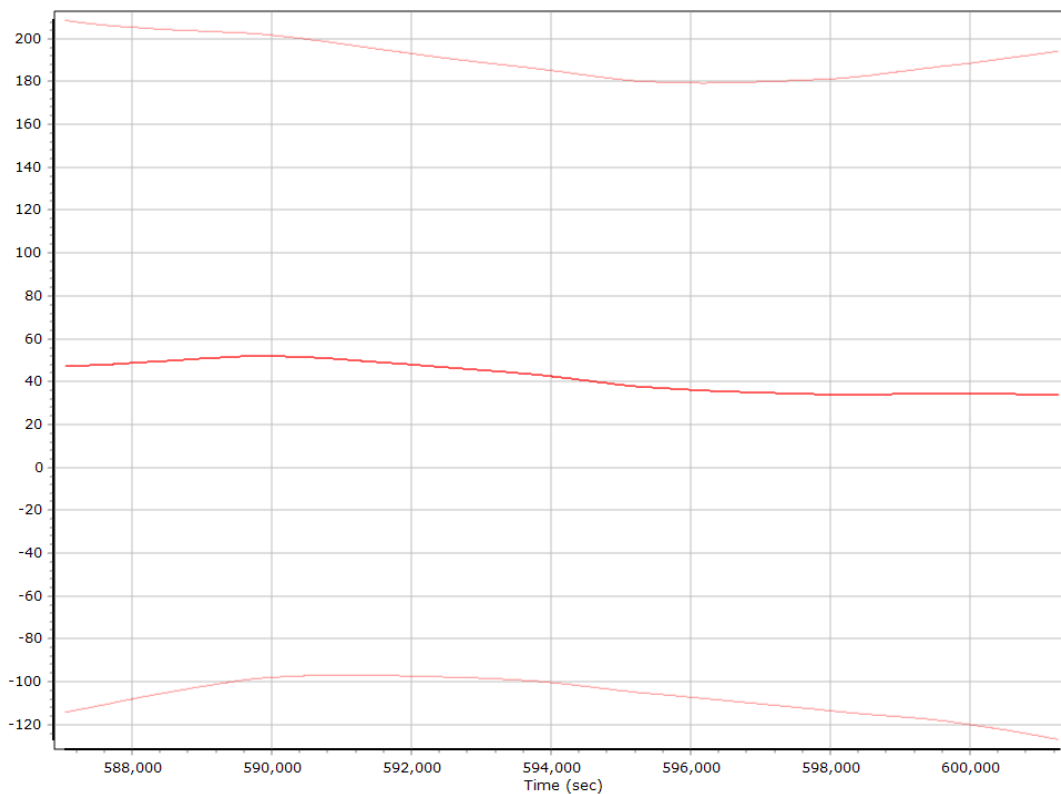
Z Accelerometer Bias (micro-g)



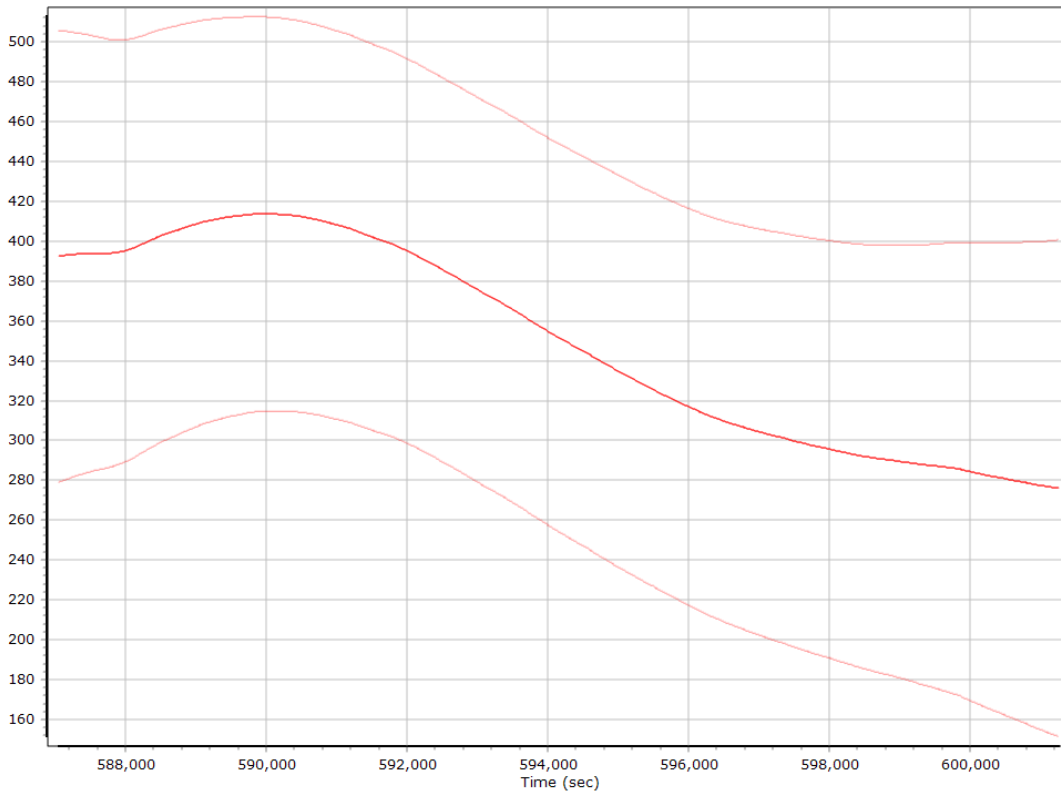
Accelerometer Scale Error (ppm)



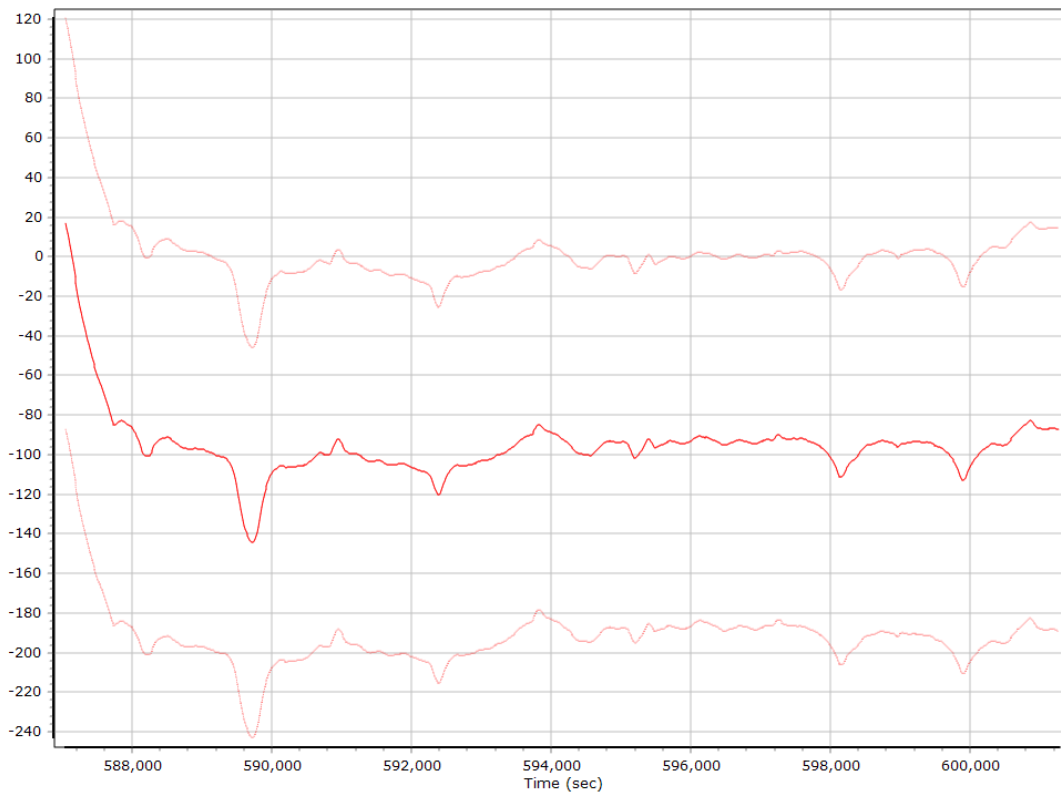
X Accelerometer Scale Error (ppm)



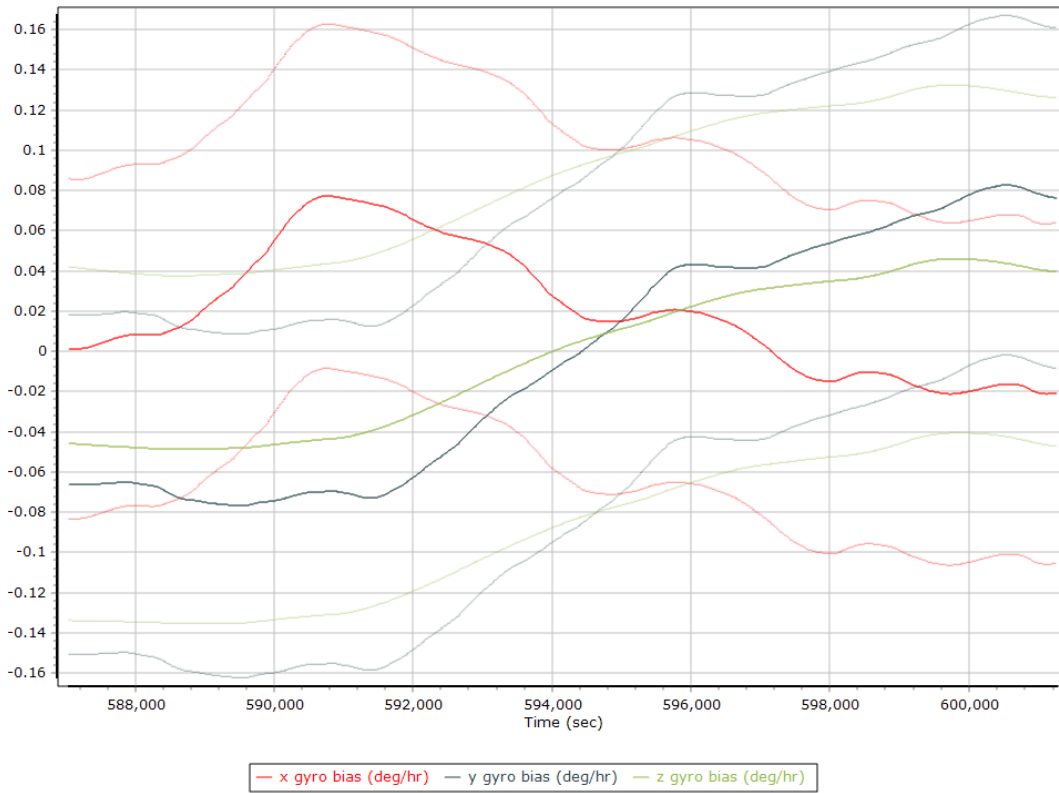
Y Accelerometer Scale Error (ppm)



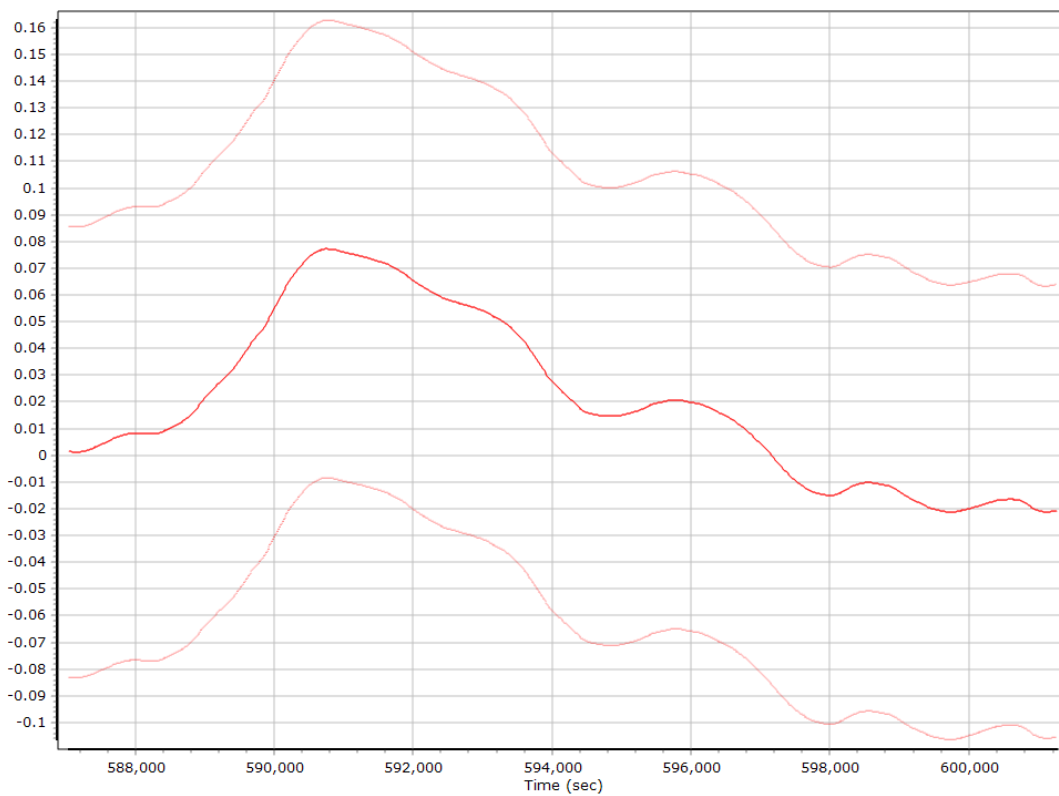
Z Accelerometer Scale Error (ppm)



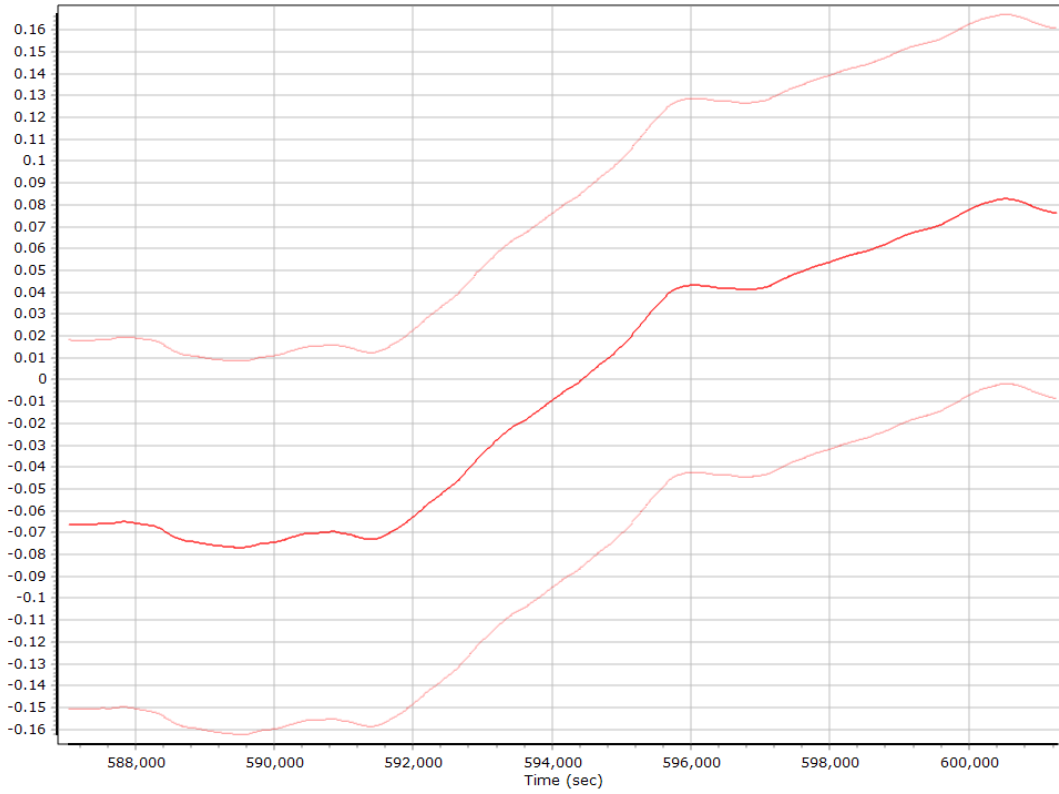
Gyro Bias (deg/h)



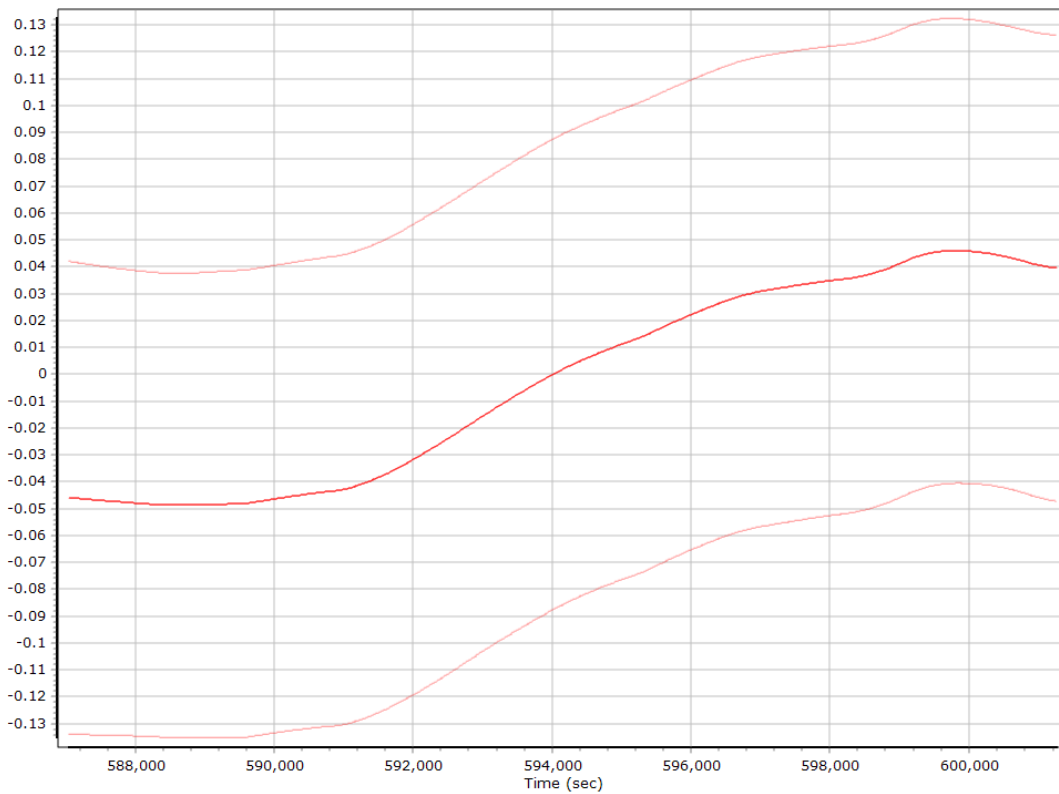
X Gyro Bias (deg/h)



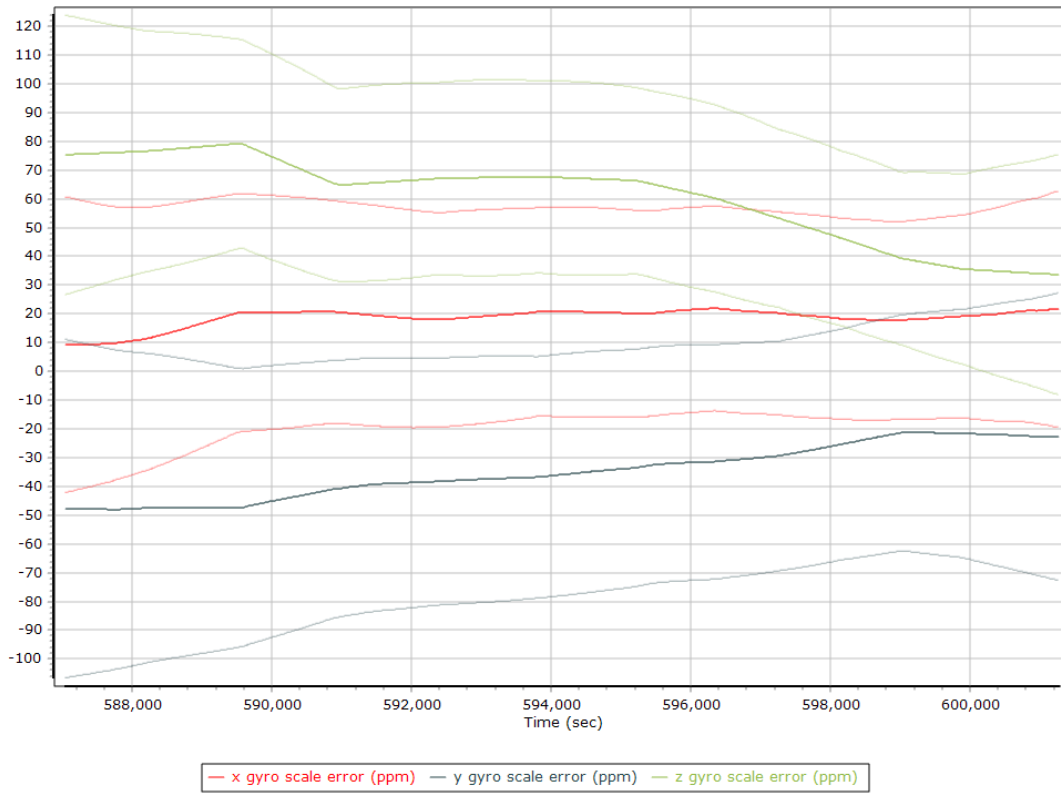
Y Gyro Bias (deg/h)



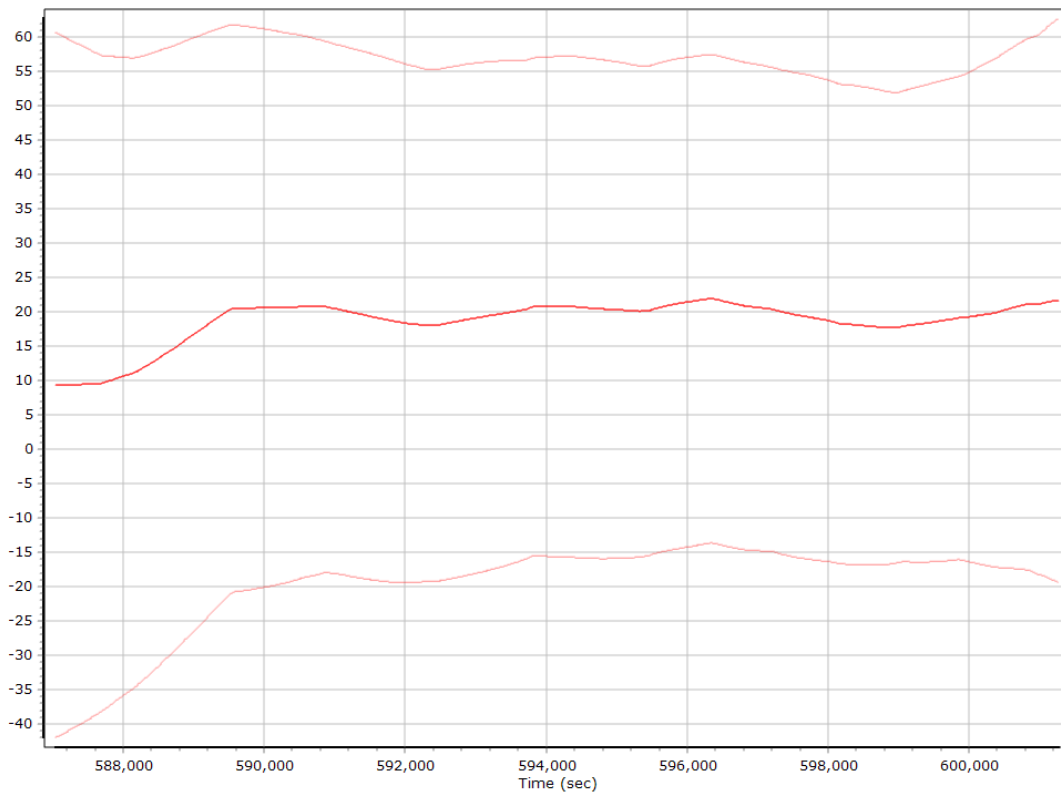
Z Gyro Bias (deg/h)



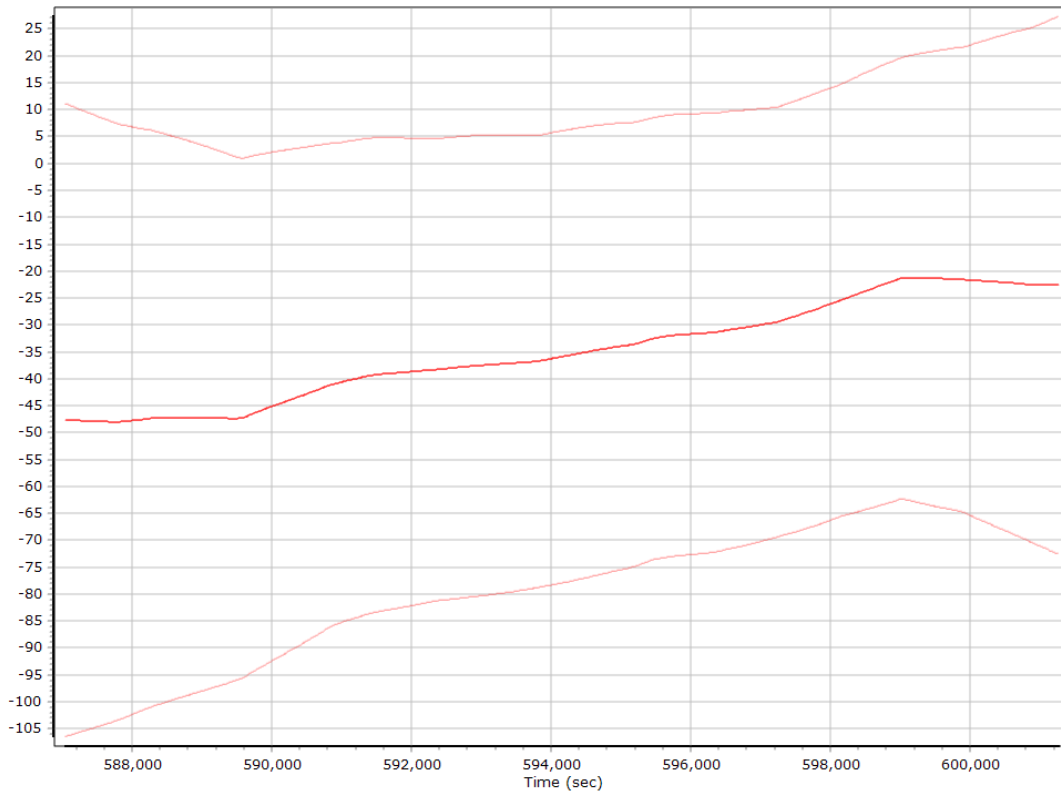
Gyro Scale Error (ppm)



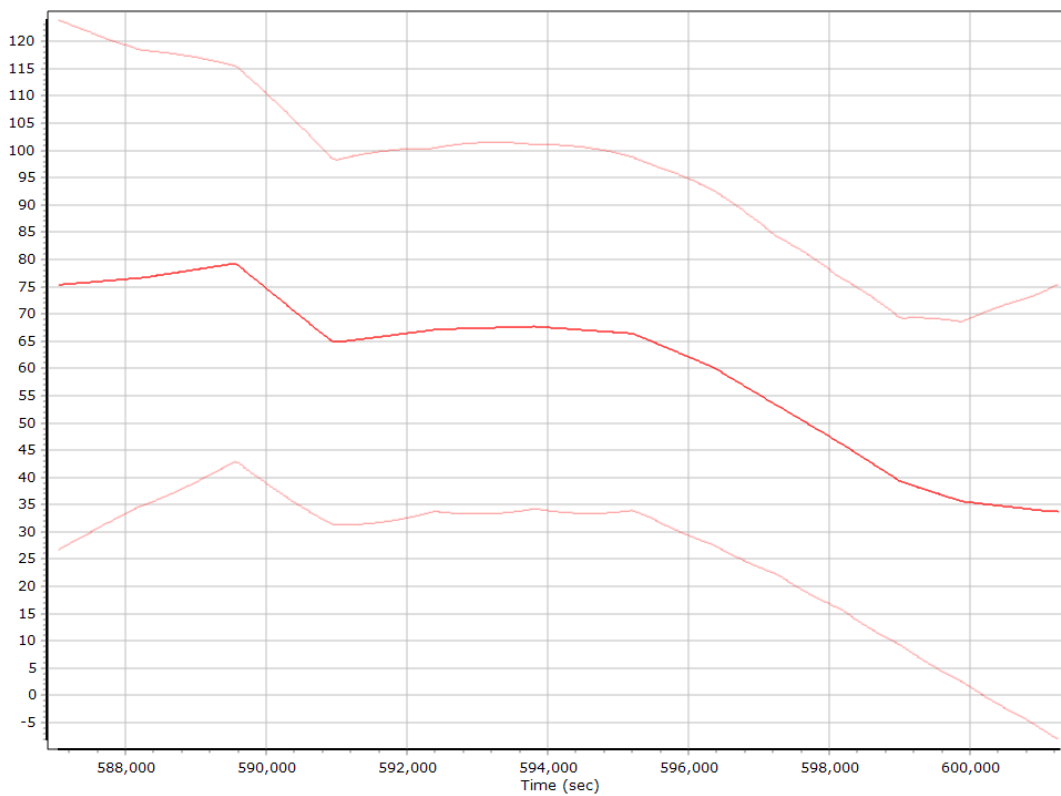
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

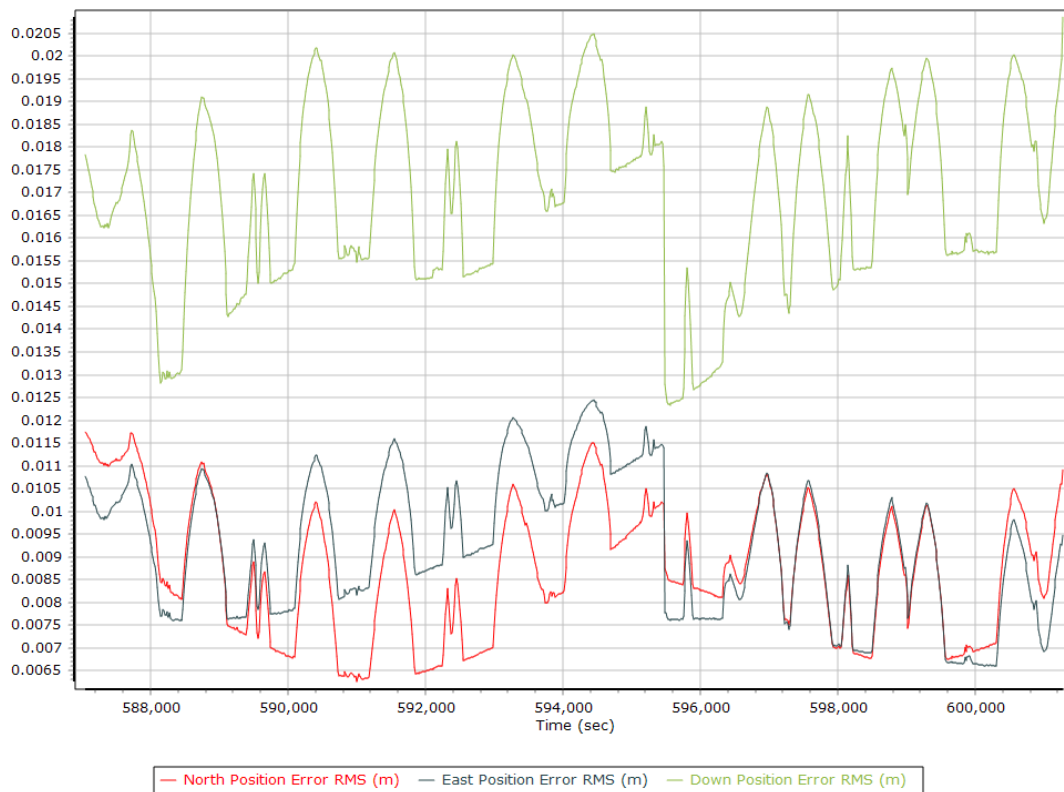


Z Gyro Scale Error (ppm)

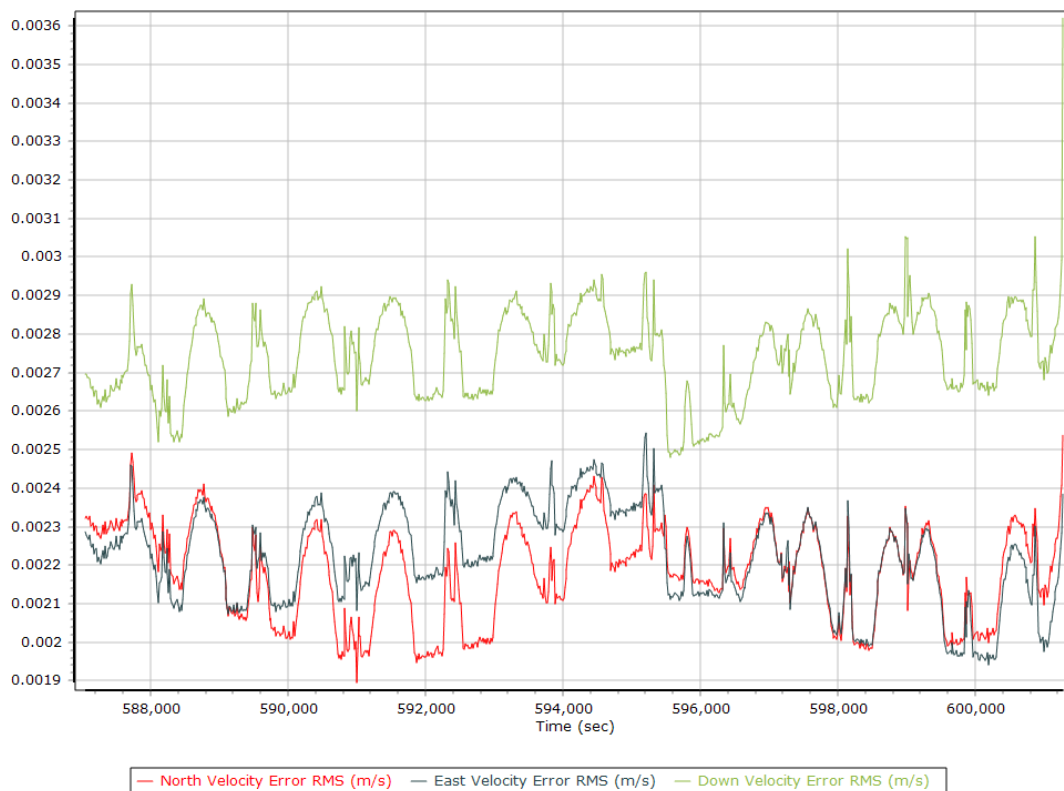


Smoothed Performance Metrics

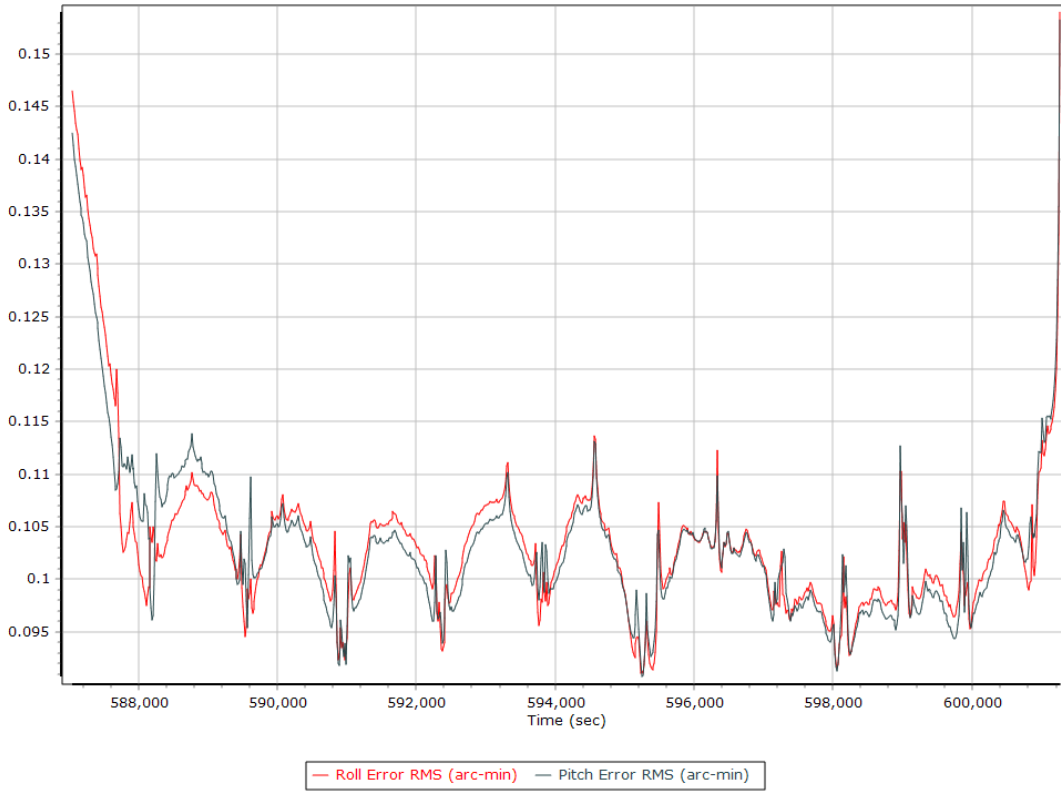
Position Error RMS (m)



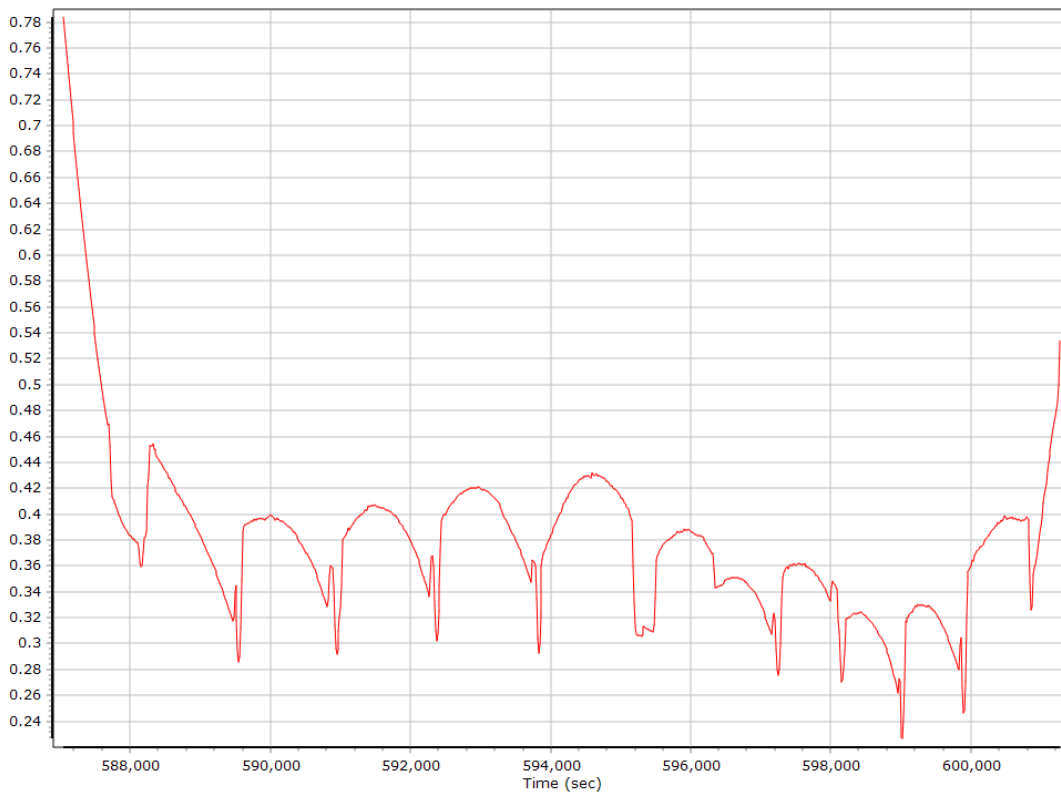
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

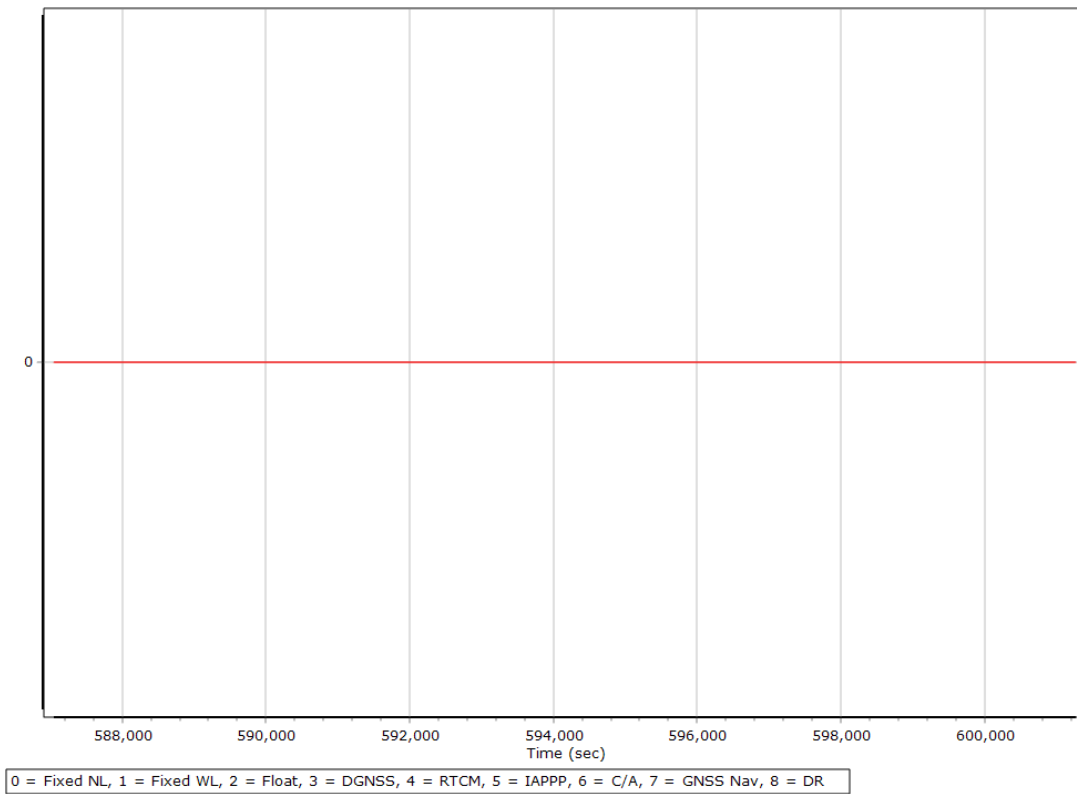


Heading Error RMS (arc-min)

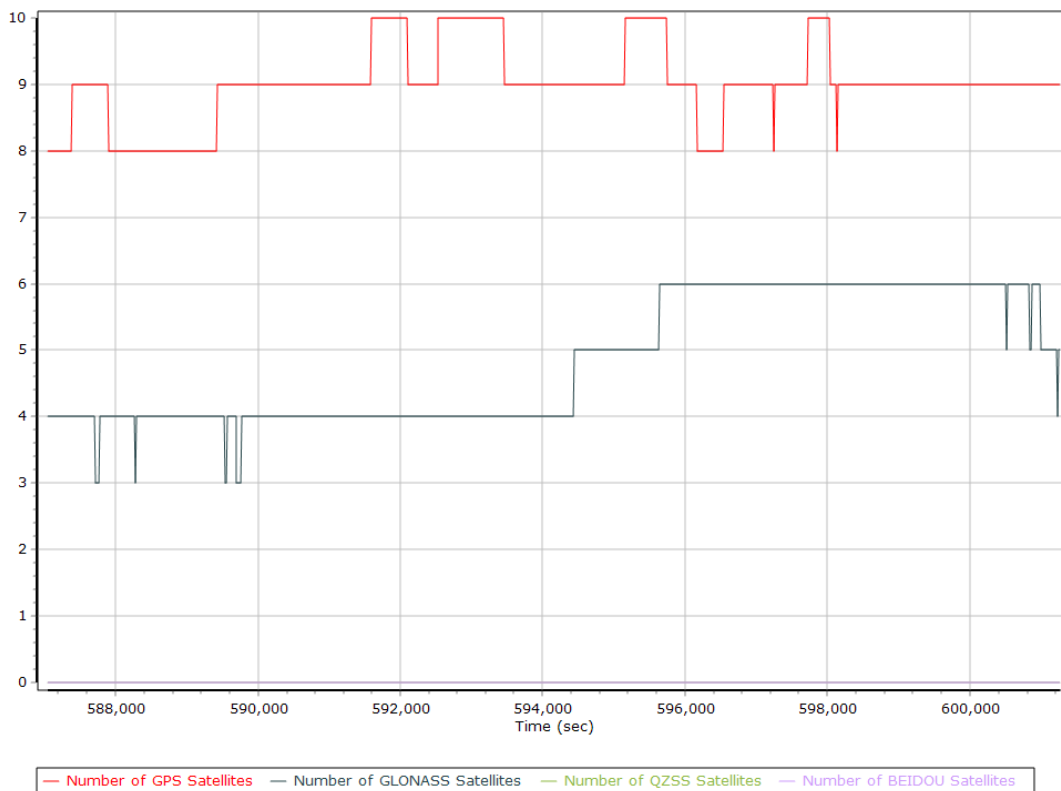


Smoothed Solution Status

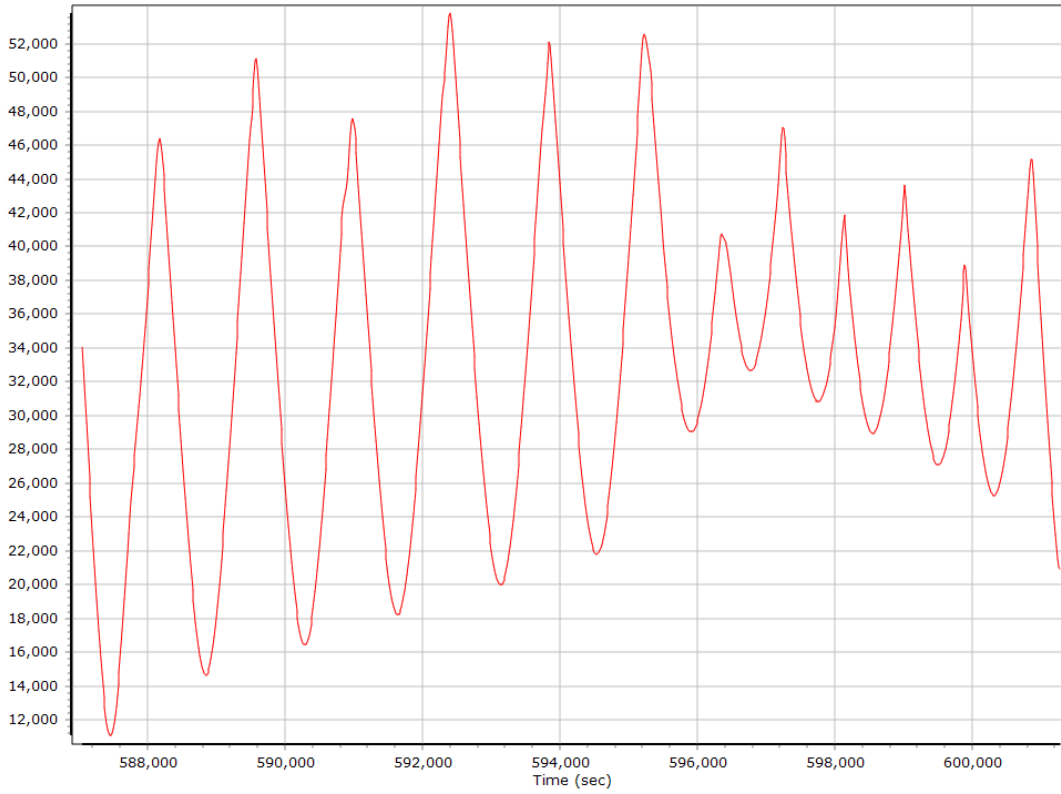
Processing Mode



Number of Satellites



Baseline Length



SBET IAkar Separation

