

General Information

Mission Information

| | |
|------------------|---------------------|
| Project name | 13284-1806_20190329 |
| Processing date | 2019-04-10 22:45:47 |
| Mission date | 2019-03-29 16:32:50 |
| Mission duration | 04:14:33.500 |
| Processing mode | IN-Fusion SmartBase |
| GPS Station | ASB |

Rover Hardware Information

| | |
|---------------|--------------------------|
| Product | POS AV 610 VER6 HW2.5-12 |
| Serial number | S/N8223 |
| IMU type | 57 |
| Receiver type | BD982 |
| Antenna type | AV37 |

Project File List

Rover Data Files

| File name | File type |
|-----------------------------|-----------|
| 190329_163249_INS-GPS_1.raw | POS Data |

Input Files

| File Name | File type |
|-----------------------------|-----------------------------|
| Ephm0880.19g | GLONASS Broadcast Ephemeris |
| Ephm0880.19n | GPS Broadcast Ephemeris |
| avon088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| bkv1088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| brtw088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| dlnd088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| dunn088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| flcc088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| fld7088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| fldc088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| fleu088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| flgr088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| flks088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| flwd088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| gnv1088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| ocla088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| orl1088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| pltk088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| polk088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| snfd088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| wach088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| zefr088p00.19o.gps+glo.rnx2 | GNSS SingleBase |
| igr20464.sp3 | GPS Precise Ephemeris |
| igr20465.sp3 | GPS Precise Ephemeris |
| igr20466.sp3 | GPS Precise Ephemeris |

Output Files

| Filename | File type |
|--------------------|----------------------|
| sbet_Mission 1.out | SBET Trajectory File |

Rover Data Summary

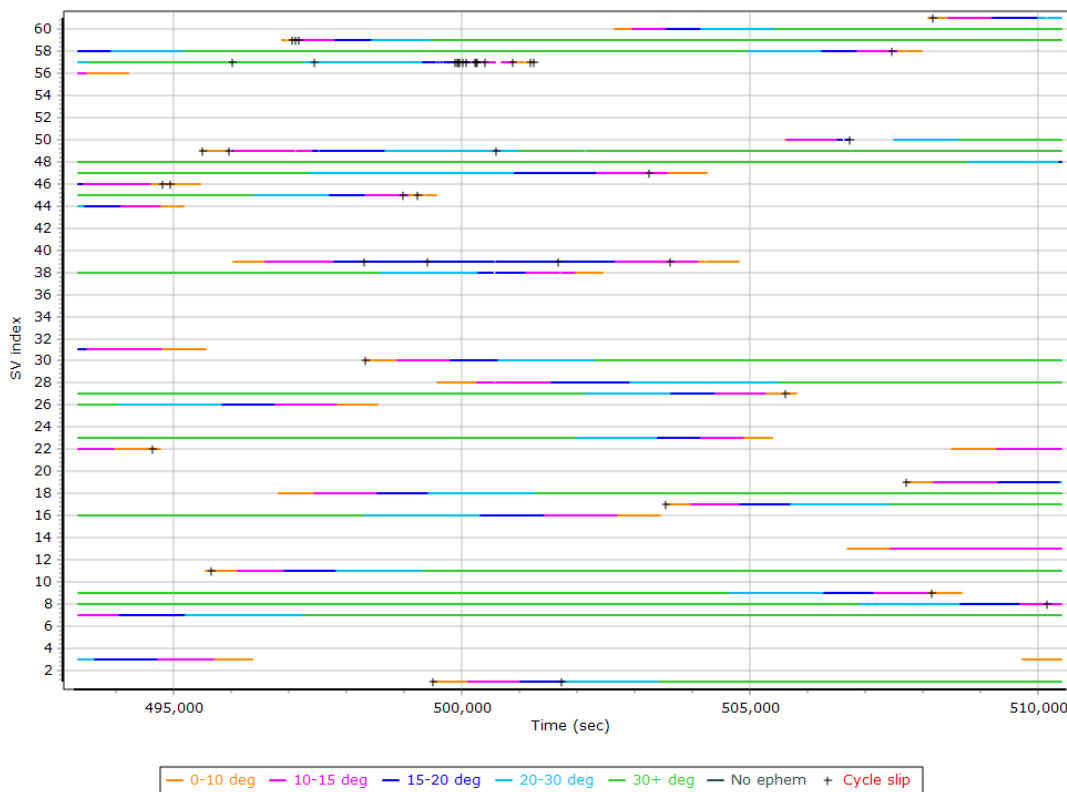
| | | | |
|--|-----------------------------------|--------|--------|
| First raw data file | 190329_163249_INS-GPS_1.raw | | |
| Last raw data file | 190329_163249_INS-GPS_1.raw | | |
| Start GPS week | 2046 | | |
| Start time | 491569.465 (3/29/2019 4:32:31 PM) | | |
| End time | 510413.775 (3/29/2019 9:46:35 PM) | | |
| Start of fine alignment | 493290.060 (3/29/2019 5:01:12 PM) | | |
| 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 | 0.000 |
| Reference to Primary GNSS lever arm [m] | 0.080 | -0.198 | -0.950 |
| Reference 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

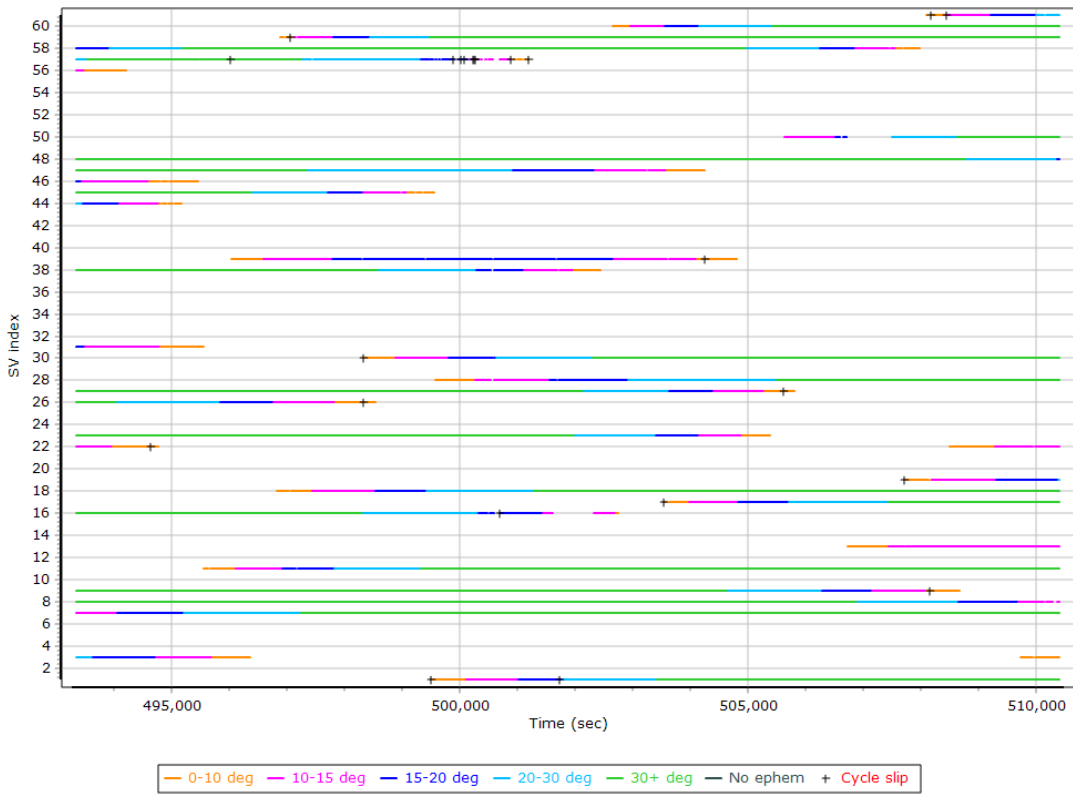
Raw IMU Import QC Summary

| | |
|-------------------------|---------------------|
| IMU data input file | imu_Mission 1.dat |
| IMU data check log file | imudt_Mission 1.log |
| IMU Records Processed | 3769110 |
| Termination Status | Normal |
| IMU Anomalies | 0 |

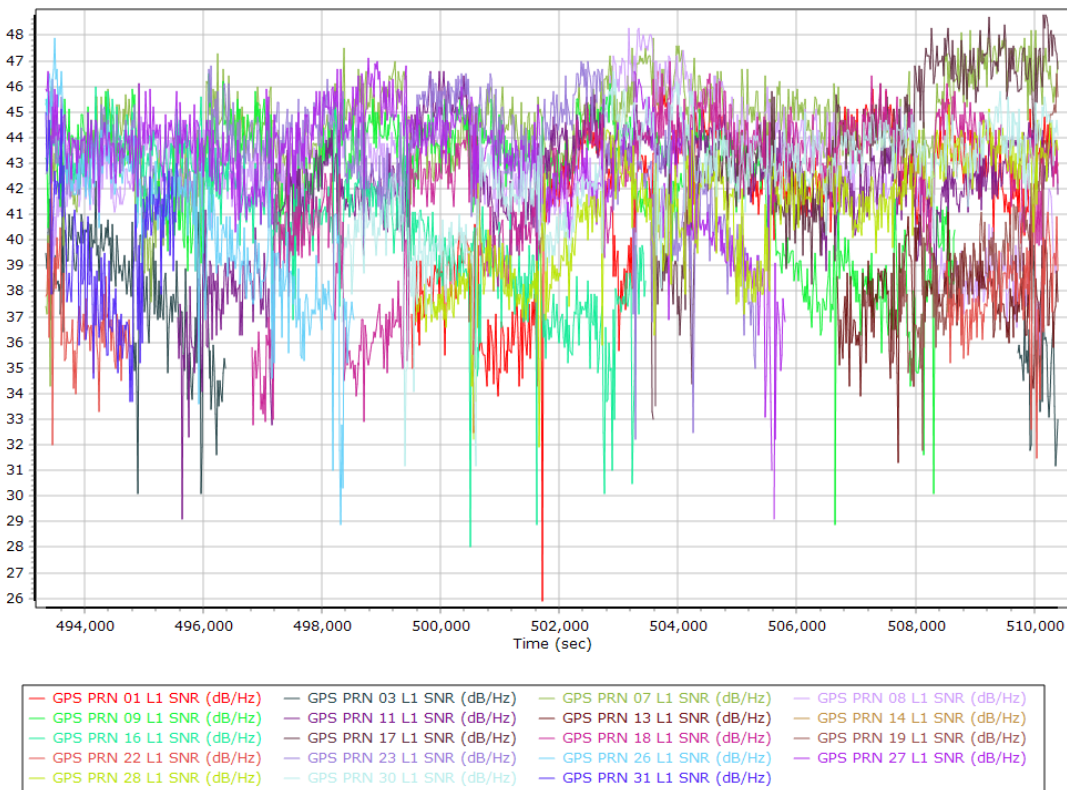
L1 Satellite Lock/Elevation



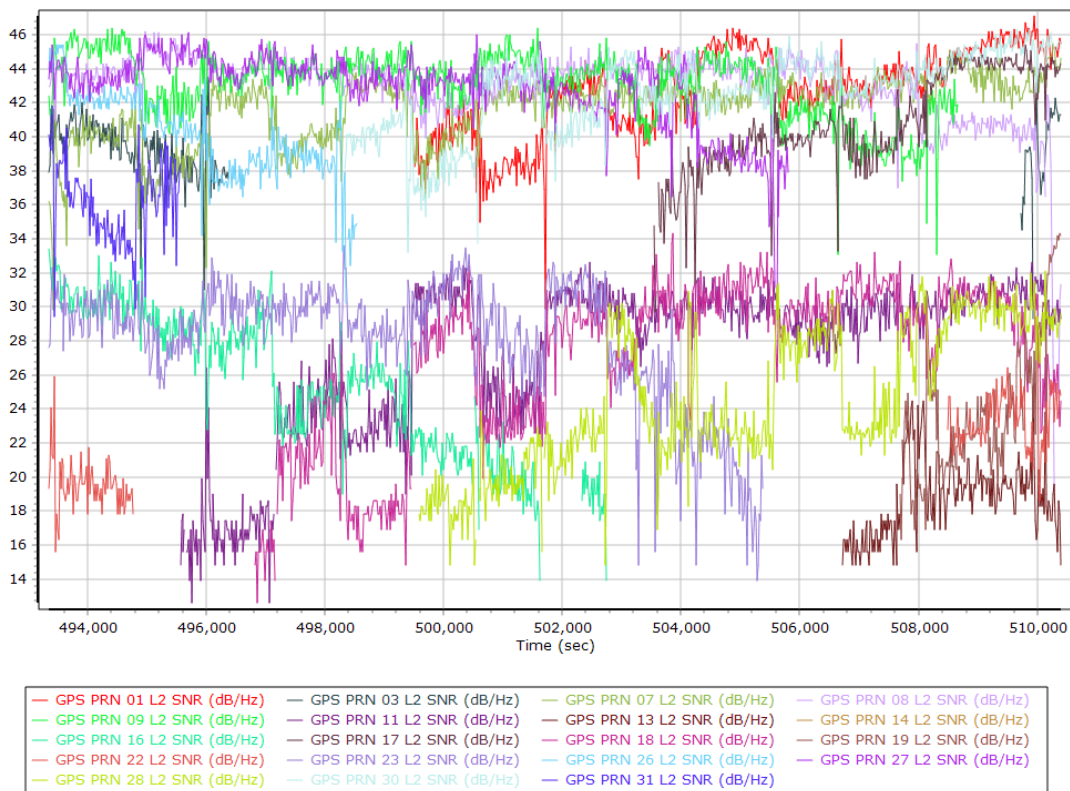
L2 Satellite Lock/Elevation



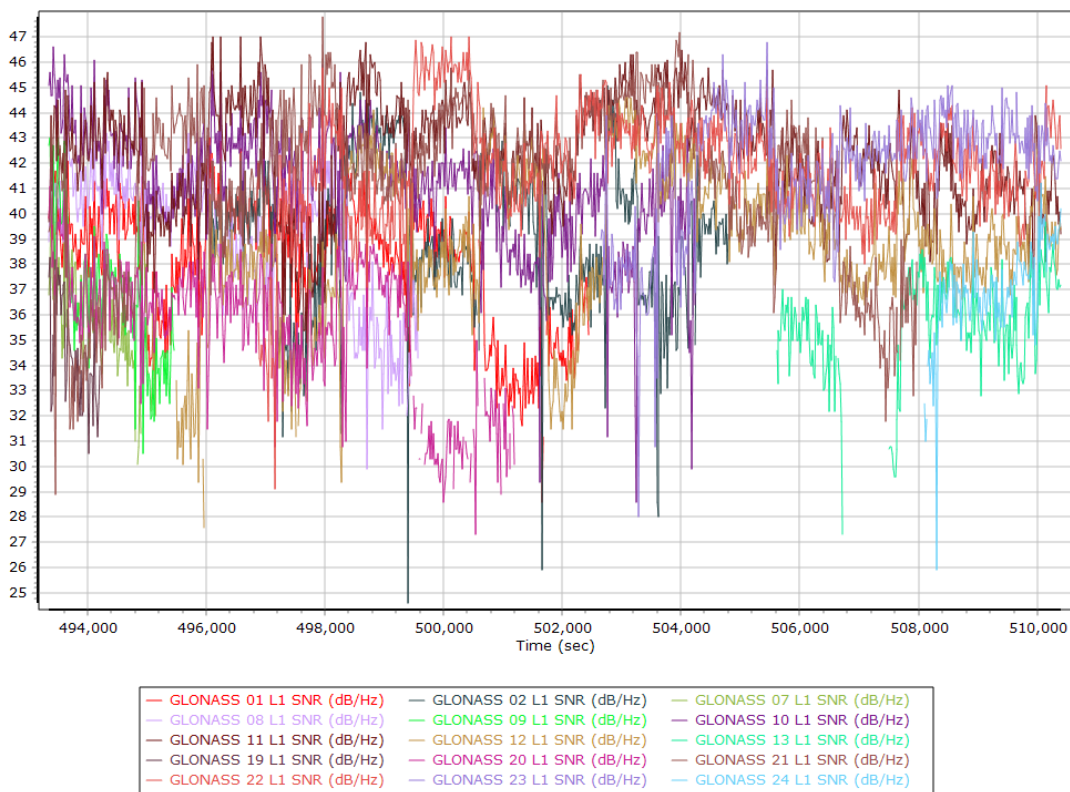
GPS L1 SNR



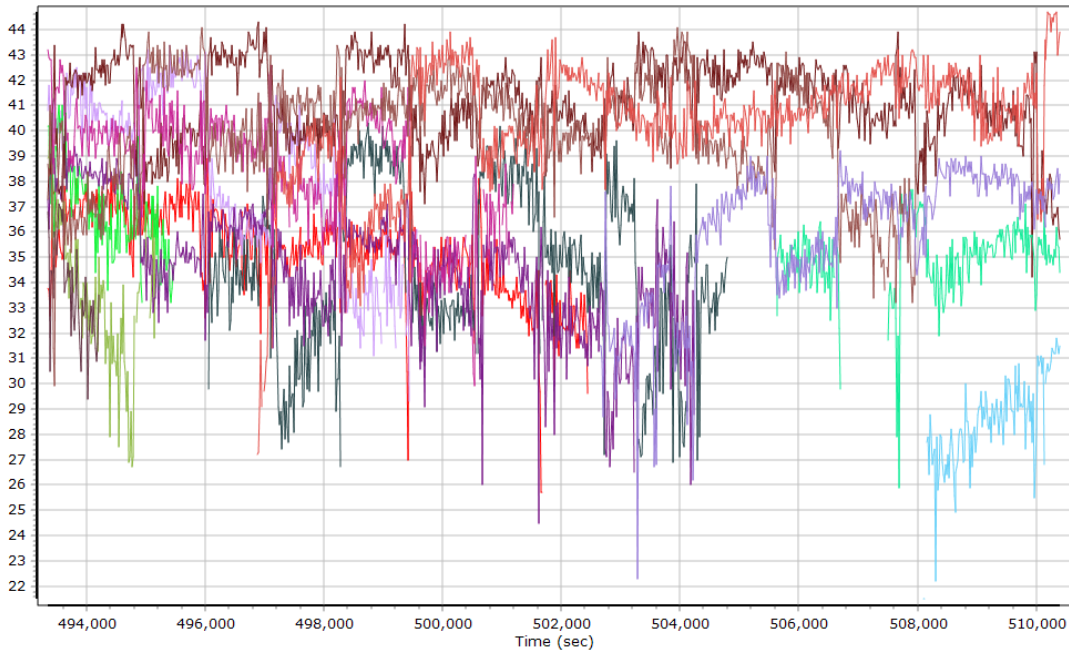
GPS L2 SNR



GLONASS L1 SNR

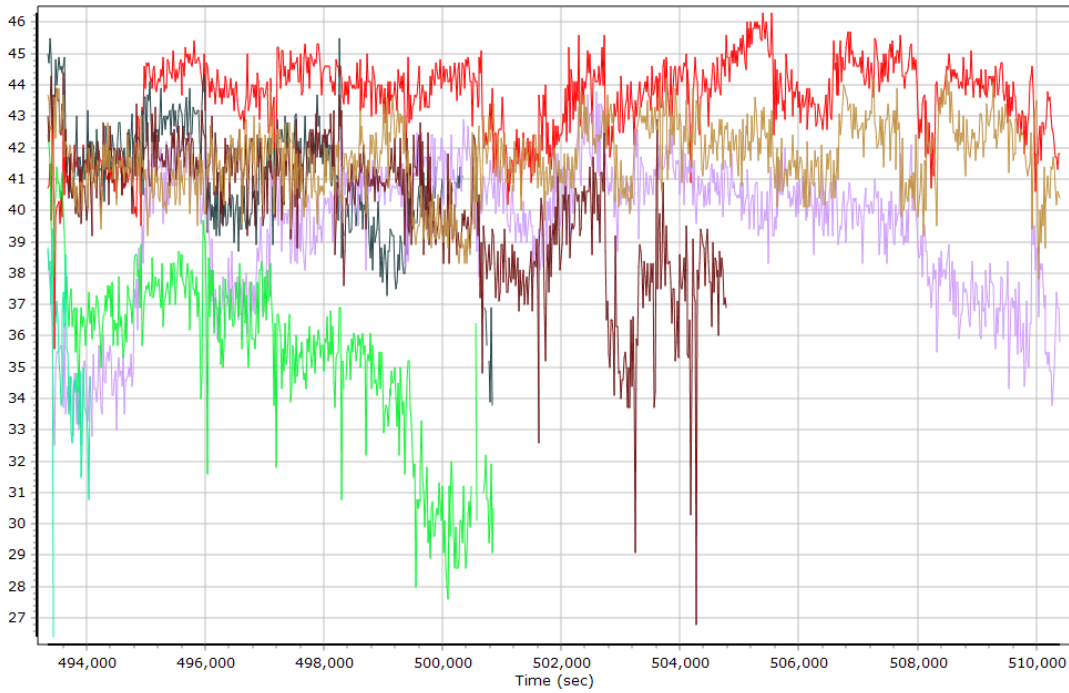


GLONASS L2 SNR



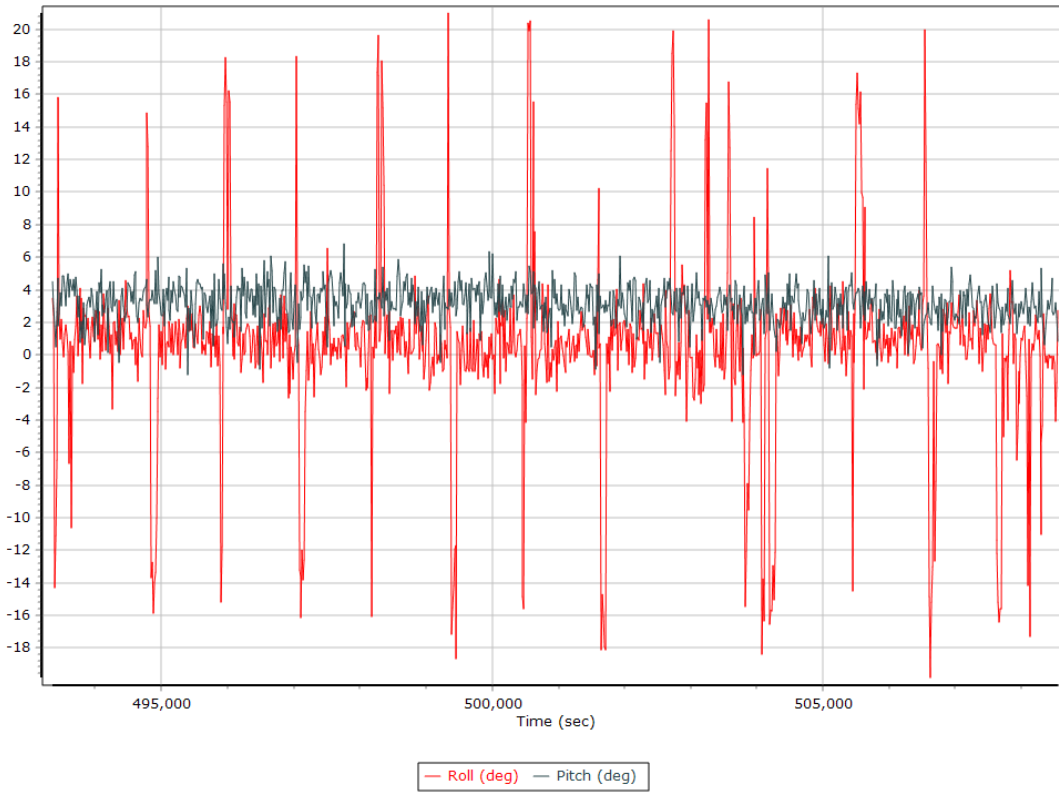
- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 01 L2 SNR (dB/Hz) | GLONASS 02 L2 SNR (dB/Hz) | GLONASS 07 L2 SNR (dB/Hz) |
| GLONASS 08 L2 SNR (dB/Hz) | GLONASS 09 L2 SNR (dB/Hz) | GLONASS 10 L2 SNR (dB/Hz) |
| GLONASS 11 L2 SNR (dB/Hz) | GLONASS 12 L2 SNR (dB/Hz) | GLONASS 13 L2 SNR (dB/Hz) |
| GLONASS 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) | GLONASS 24 L2 SNR (dB/Hz) |

BEIDOU SNR

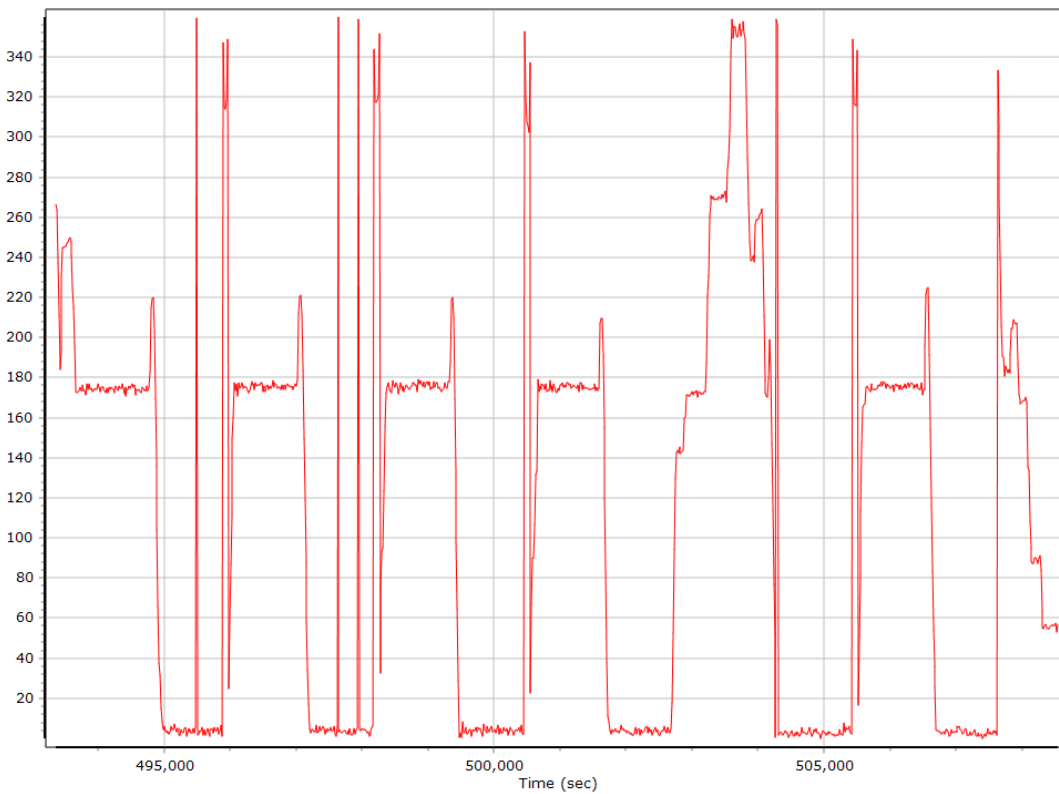


- | | | |
|------------------------------|------------------------------|------------------------------|
| BEIDOU 11 E5B B2 SNR (dB/Hz) | BEIDOU 12 E5B B2 SNR (dB/Hz) | BEIDOU 14 E5B B2 SNR (dB/Hz) |
| BEIDOU 11 B1 B1 SNR (dB/Hz) | BEIDOU 12 B1 B1 SNR (dB/Hz) | BEIDOU 14 B1 B1 SNR (dB/Hz) |
| BEIDOU 24 B1 B1 SNR (dB/Hz) | BEIDOU 25 B1 B1 SNR (dB/Hz) | BEIDOU 26 B1 B1 SNR (dB/Hz) |

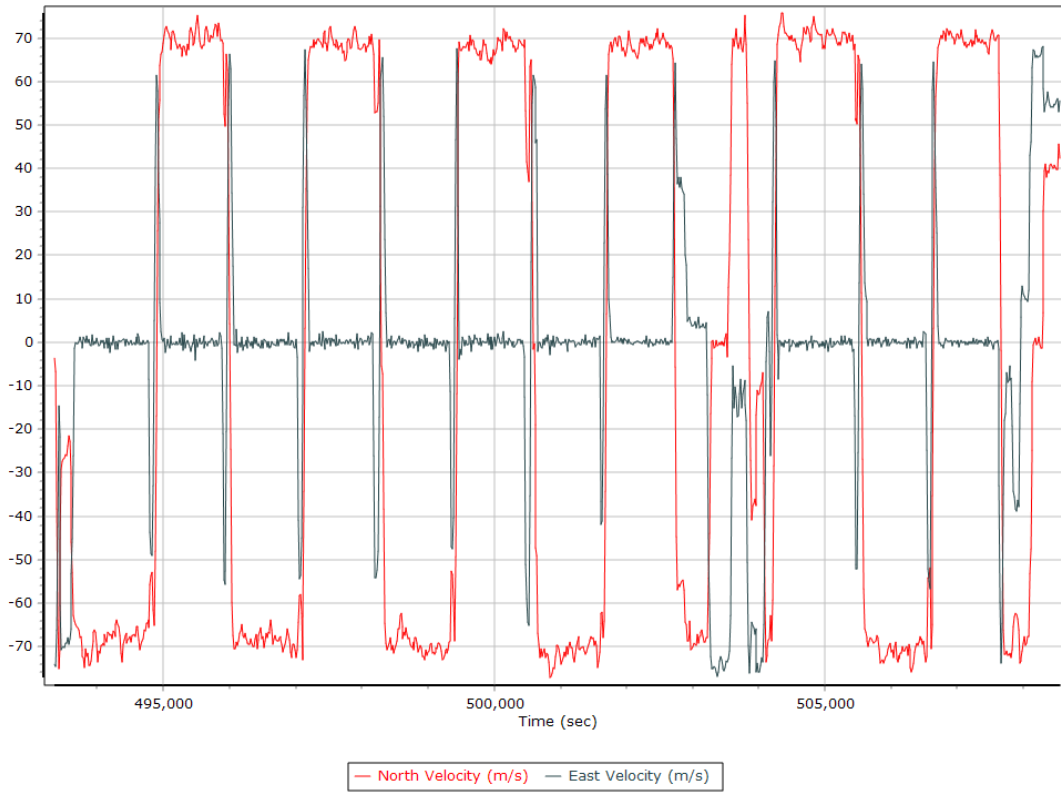
Roll/Pitch



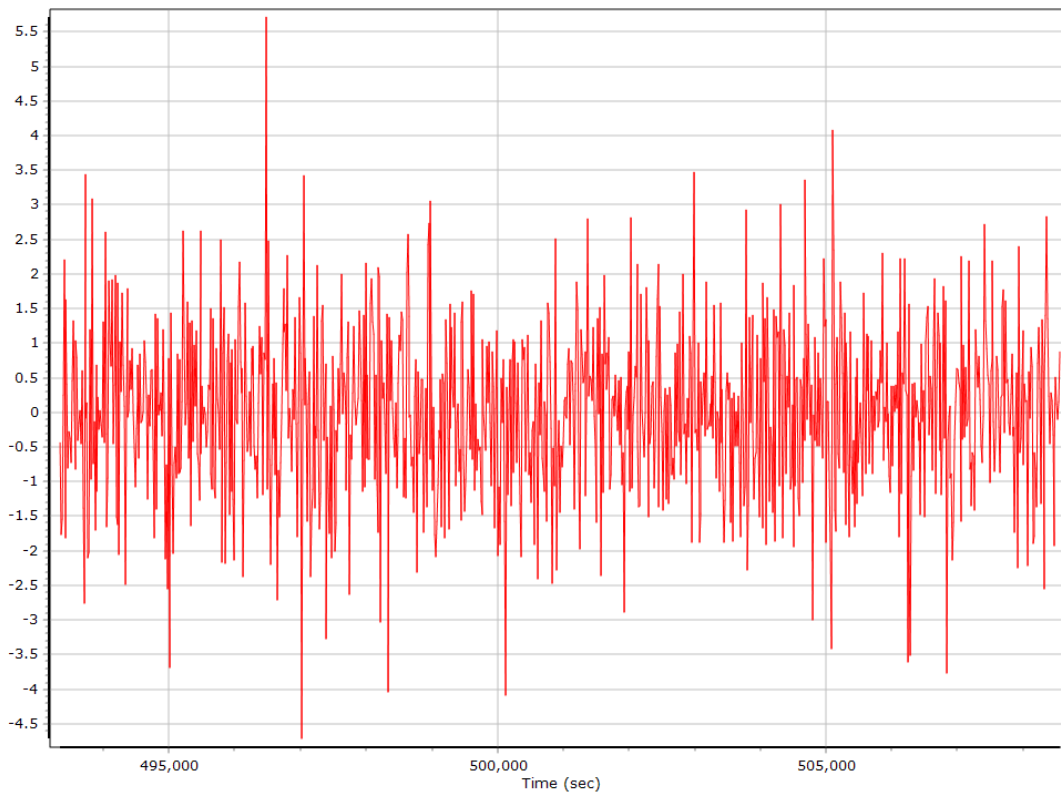
Heading



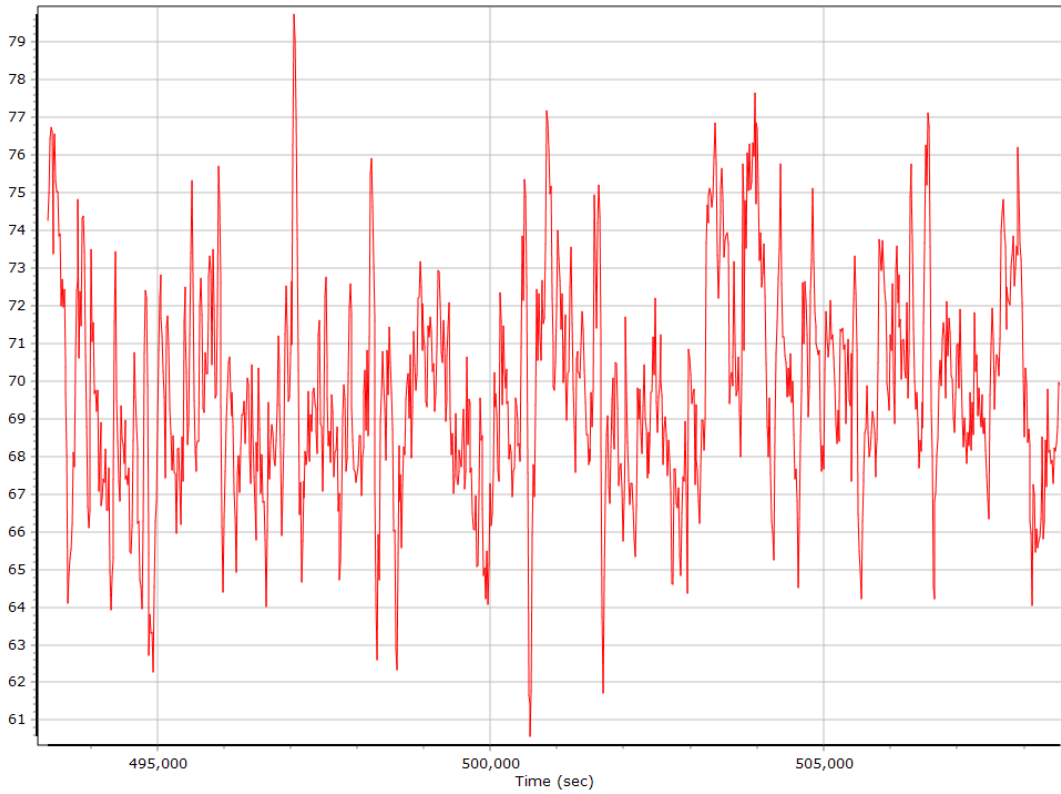
North/East Velocity



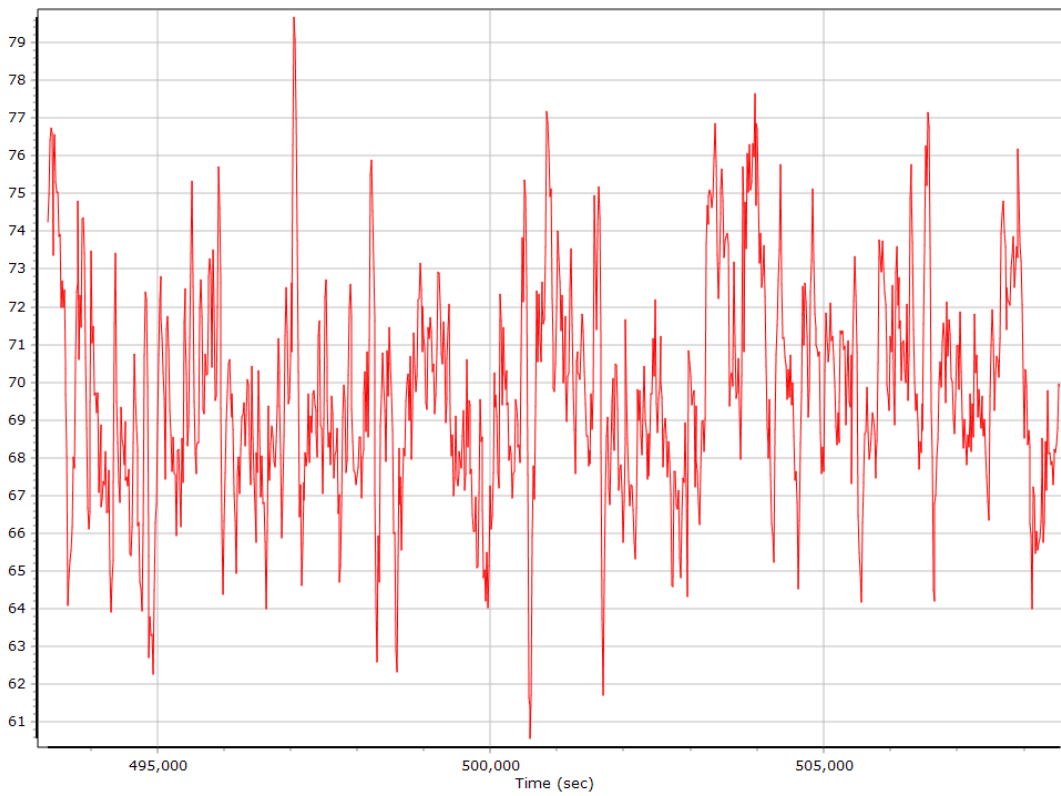
Down Velocity



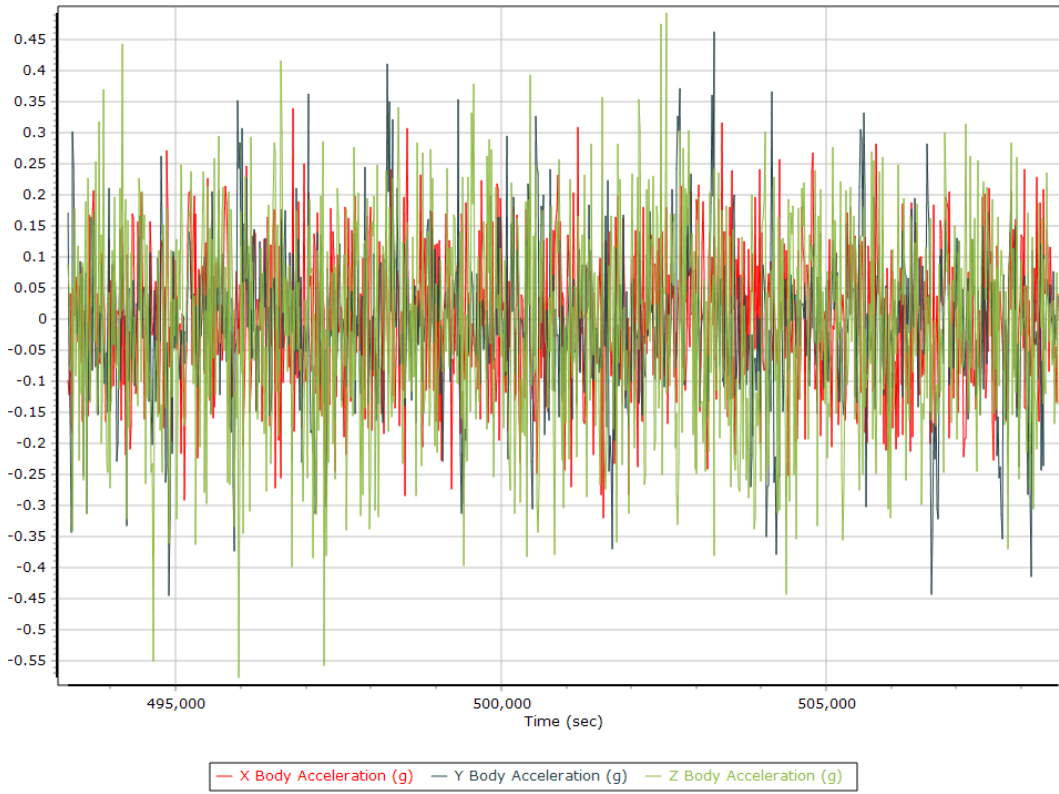
Total Speed



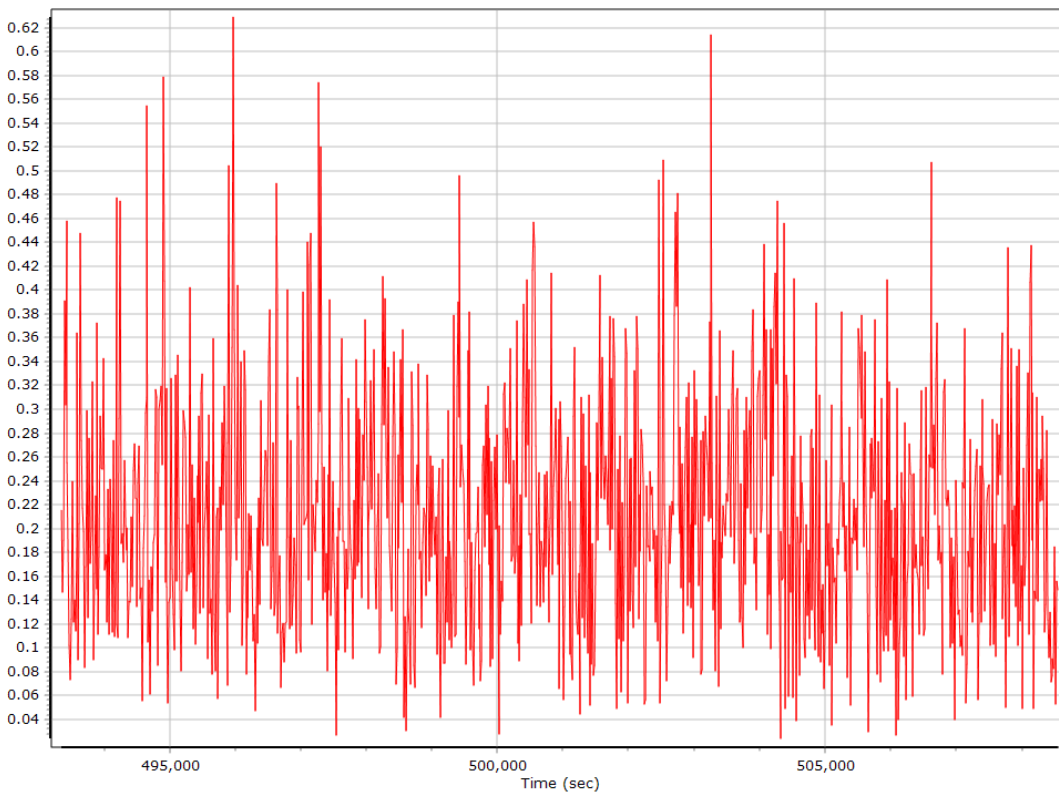
Ground Speed



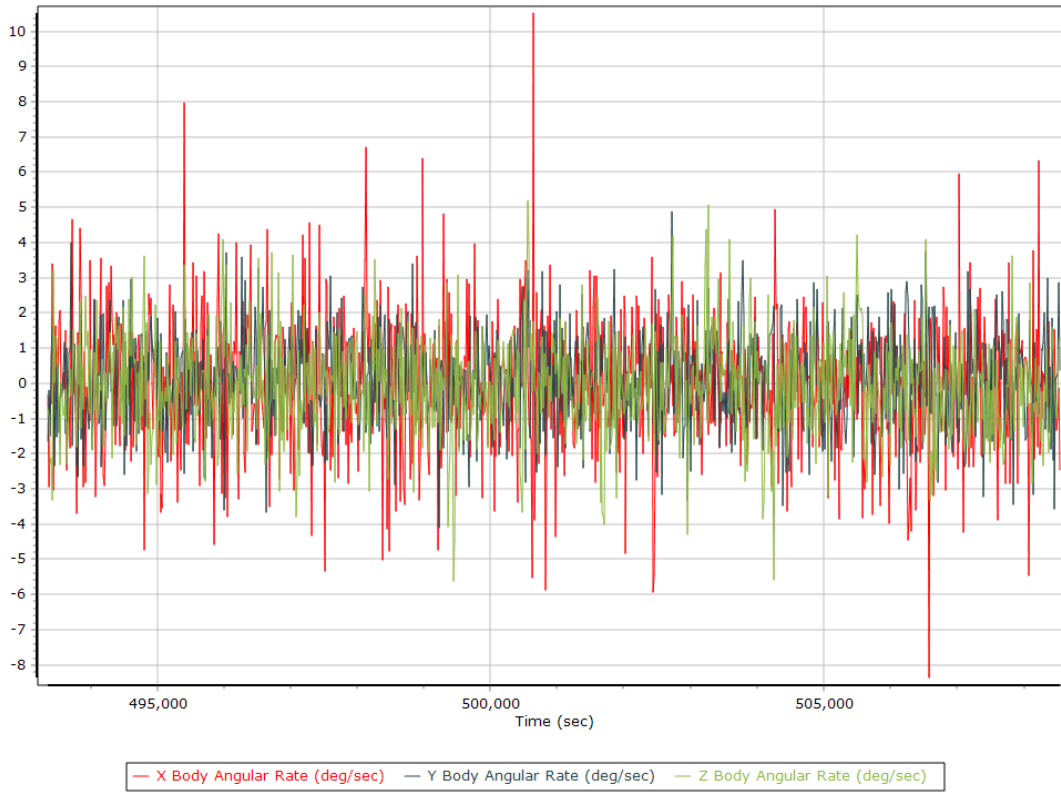
Body Acceleration



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 |
|------|----|------|-----------|------|---------|----------|--------|
|------|----|------|-----------|------|---------|----------|--------|

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] | 6.77 | 126.51 | |
| Number of GPS SV | 6 | 11 | 9 |
| Number of GLONASS SV | 0 | 9 | 6 |
| Number of QZSS SV | 0 | 0 | 0 |
| Number of BEIDOU SV | 0 | 0 | 0 |
| Total number of SV | 10 | 19 | 15 |
| PDOP | 1.17 | 2.68 | 1.45 |
| QC Solution Gaps | 1.00 | 1.00 | |
| Solution Type | Fixed | Float | No solution |
| Epoch (s) | 18828.00 | 0.00 | 1.00 |
| Percentage | 99.99 | 0.00 | 0.01 |

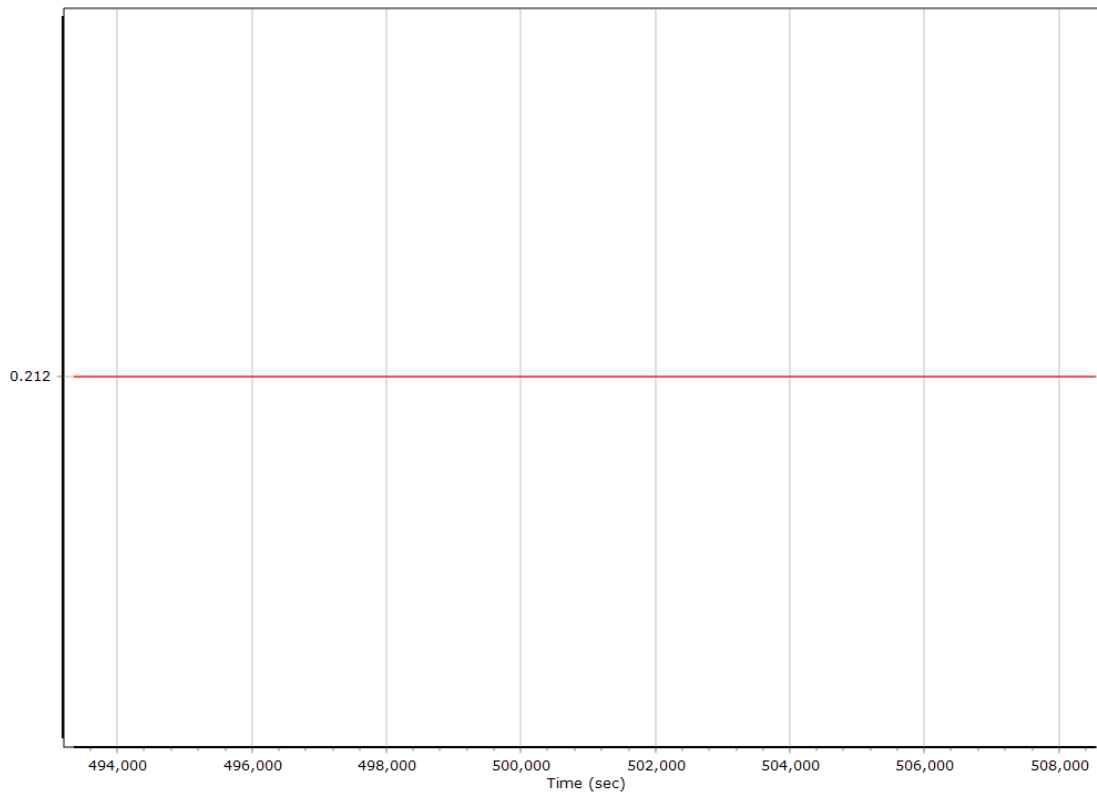
GNSS-Inertial Processor Configuration

| | | | |
|---|-----------------------------------|-------|--------|
| Processing mode | IN-Fusion SmartBase | | |
| Stabilized mount | False | | |
| Base station | ASB | | |
| Processing start time | 493289.850 (3/29/2019 5:01:11 PM) | | |
| Processing end time | 508563.350 (3/29/2019 9:15:45 PM) | | |
| 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 | 0.000 |
| Reference to Primary GNSS lever arm [m] | 0.212 | 0.092 | -0.769 |
| 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 |

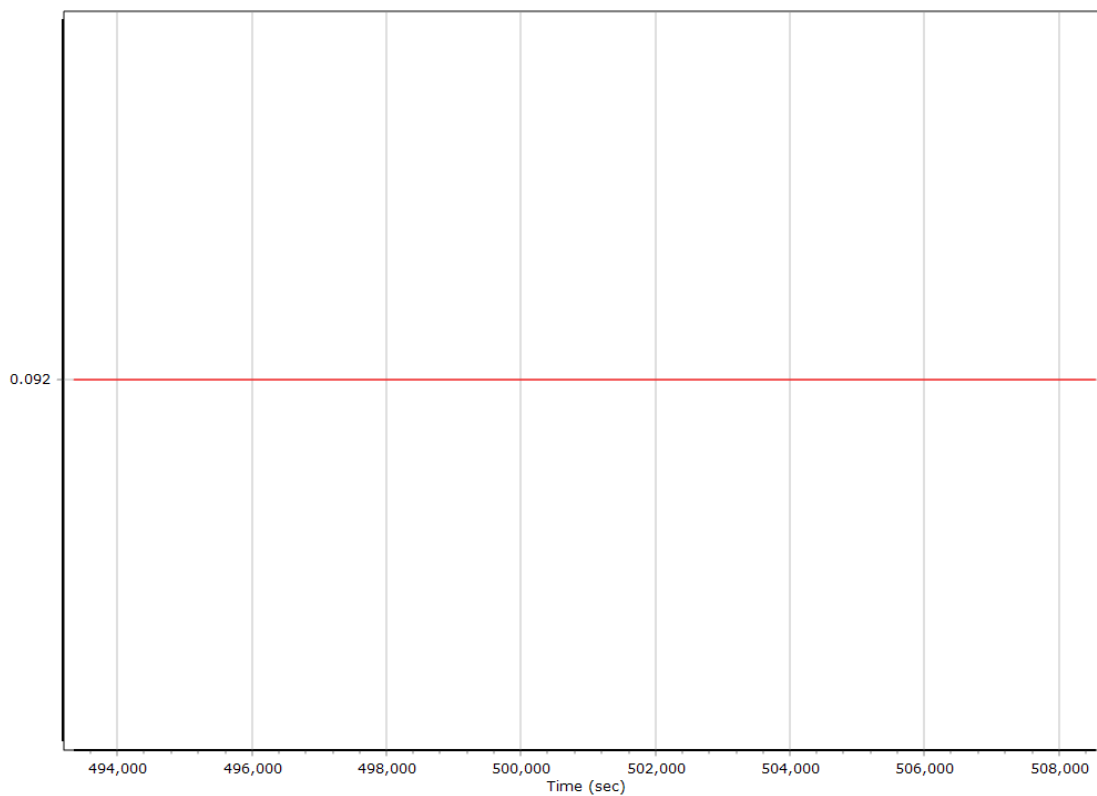
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

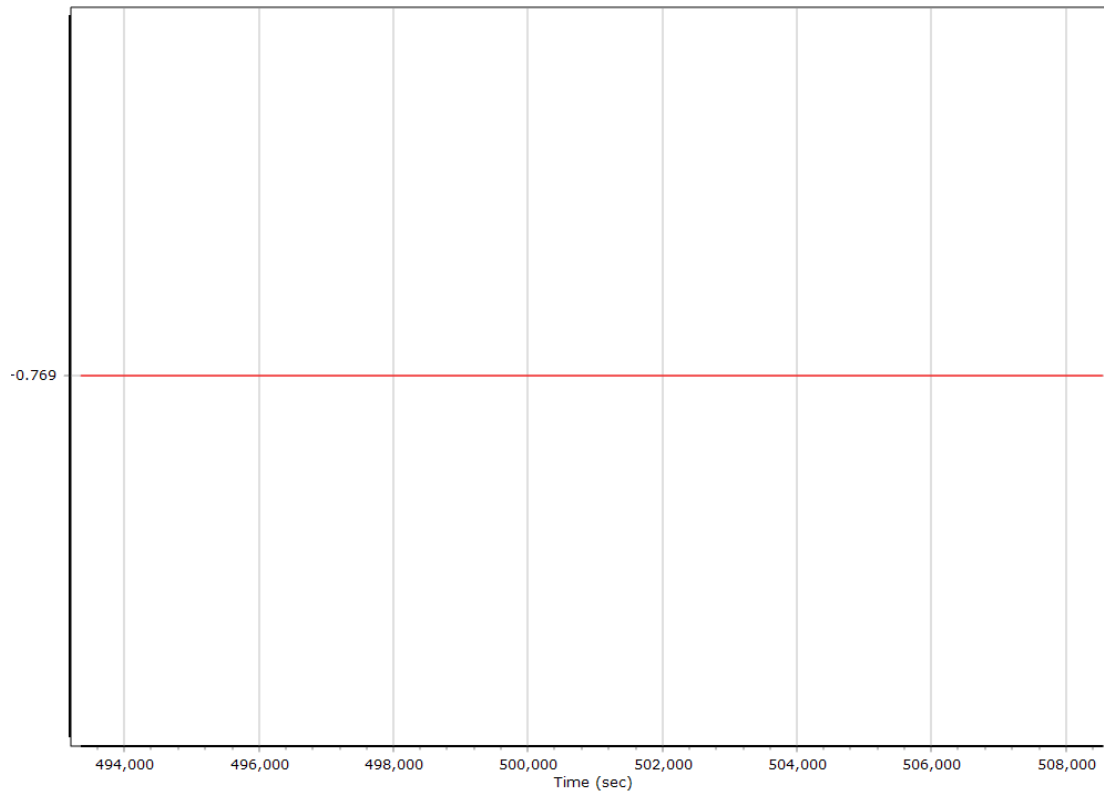
X Reference-Primary GNSS Lever Arm (m)



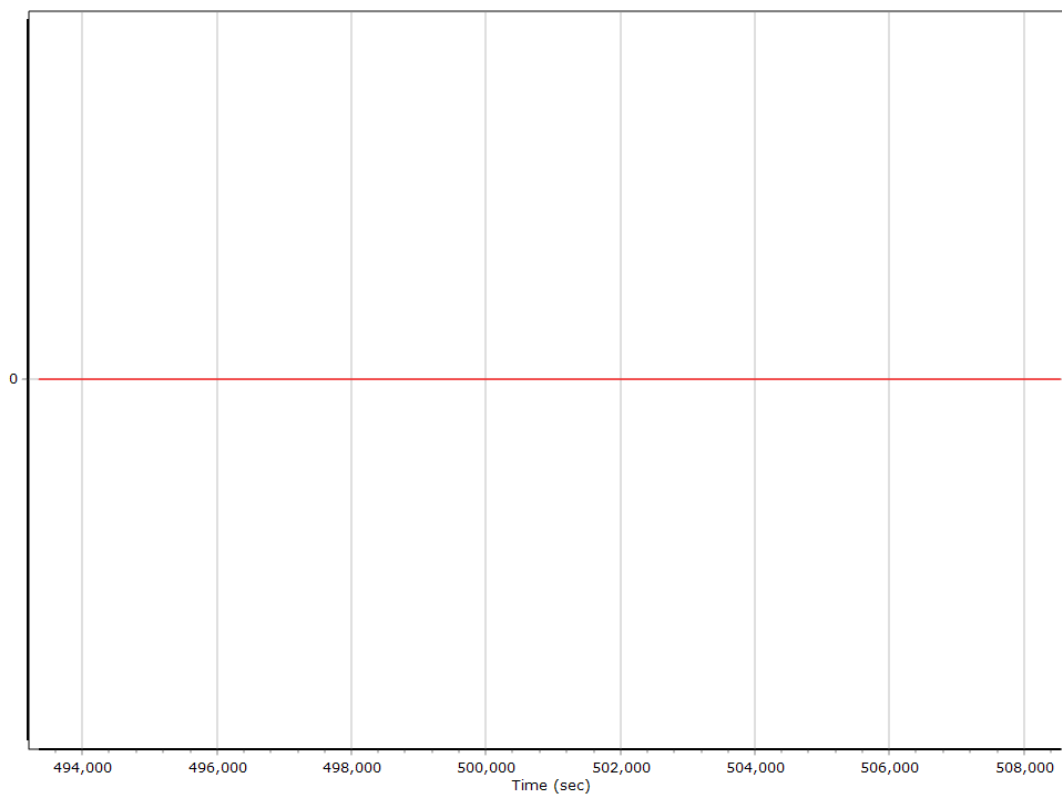
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



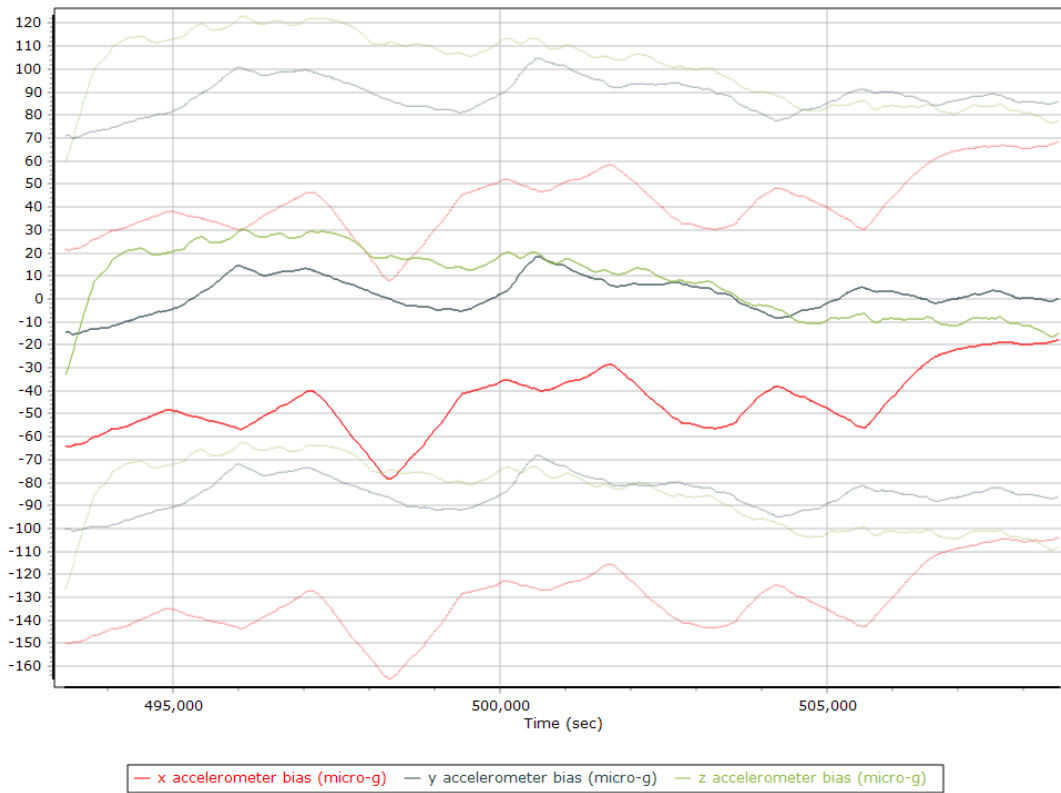
Reference-Primary GNSS Lever Arm Figure of Merit



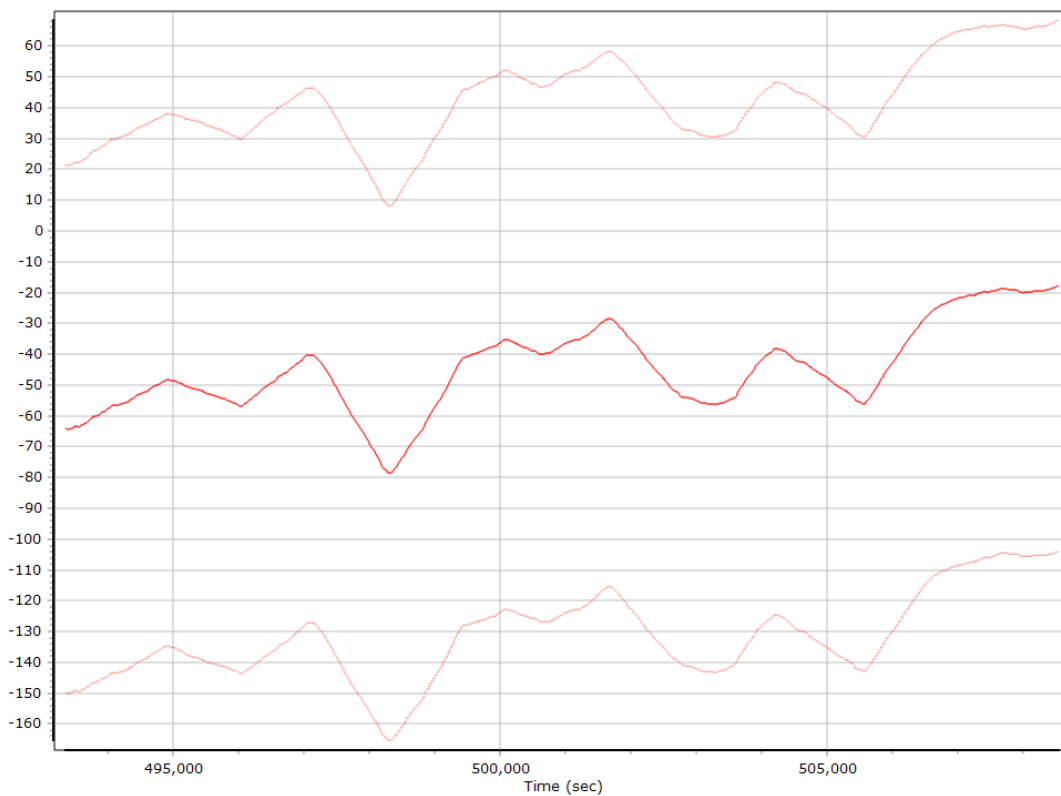
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

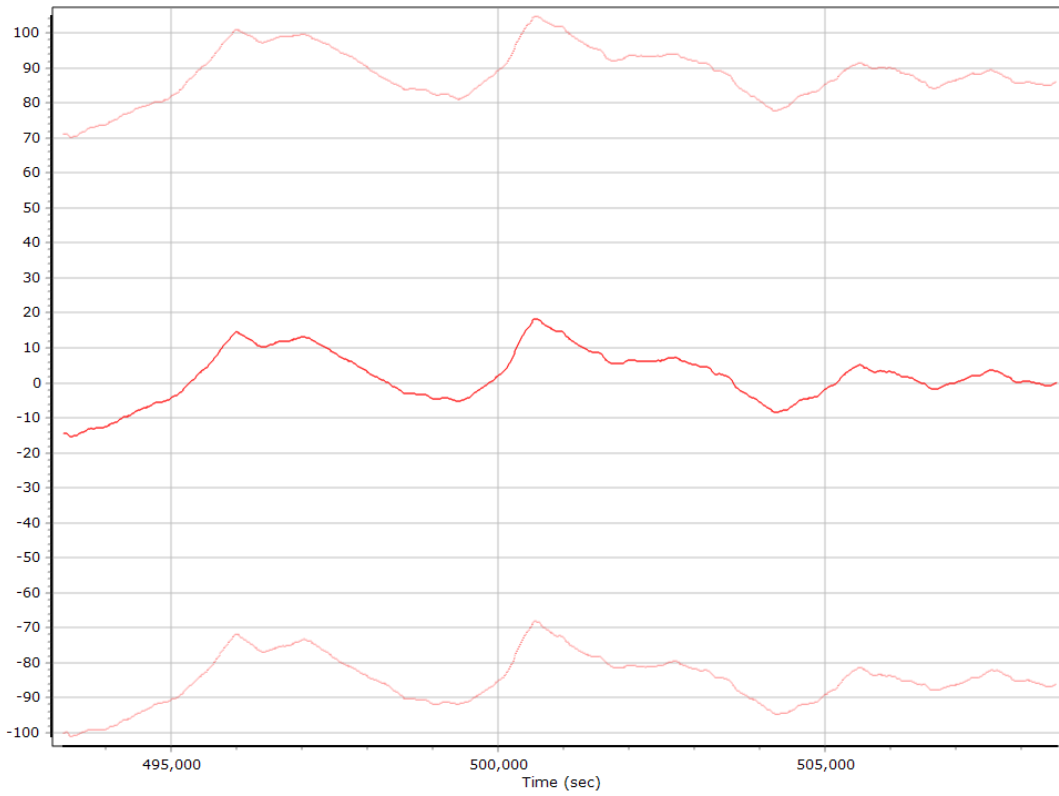
Accelerometer Bias (micro-g)



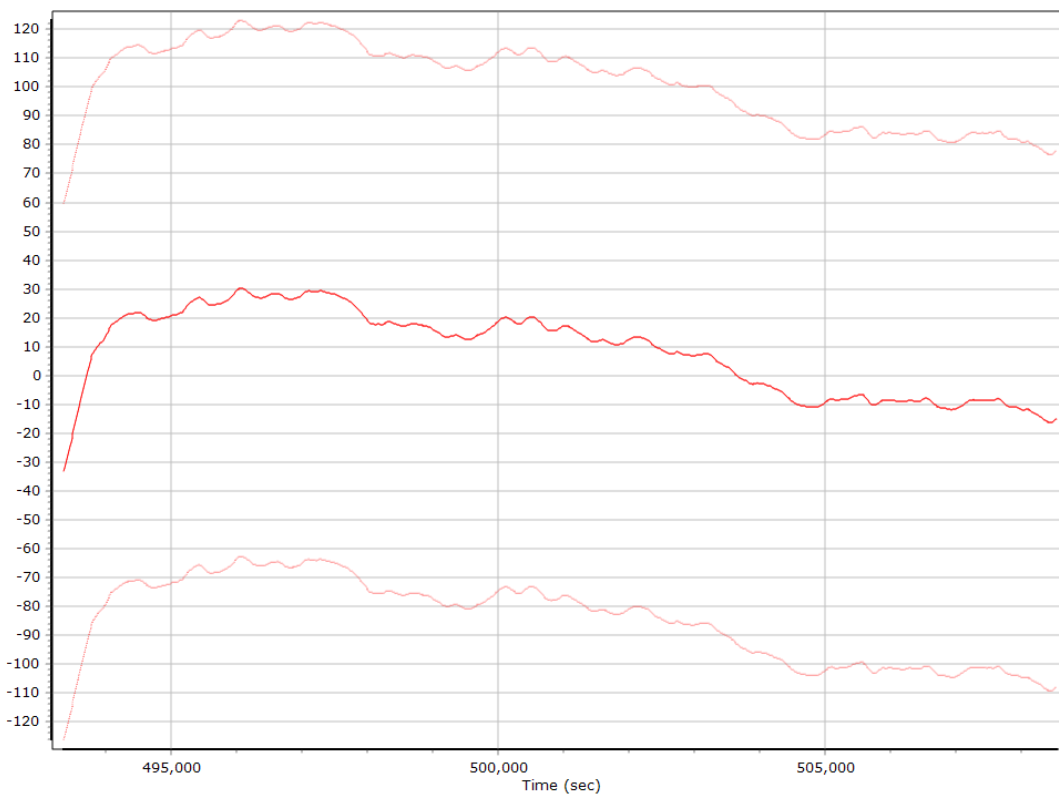
X Accelerometer Bias (micro-g)



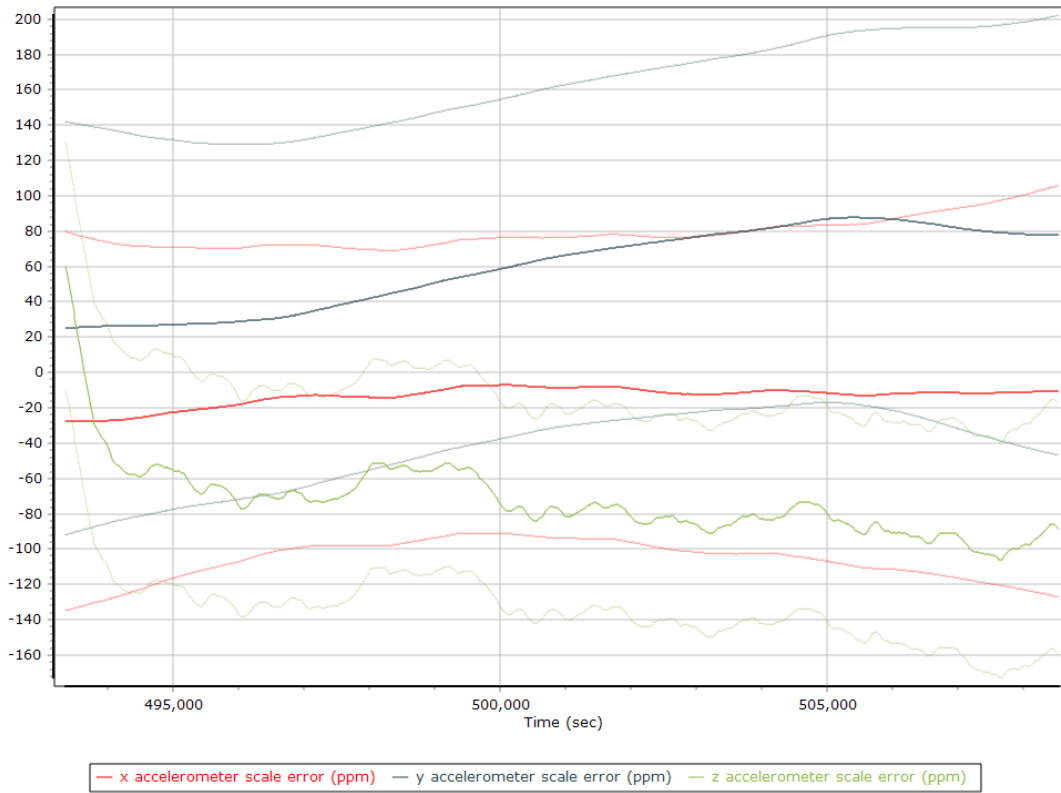
Y Accelerometer Bias (micro-g)



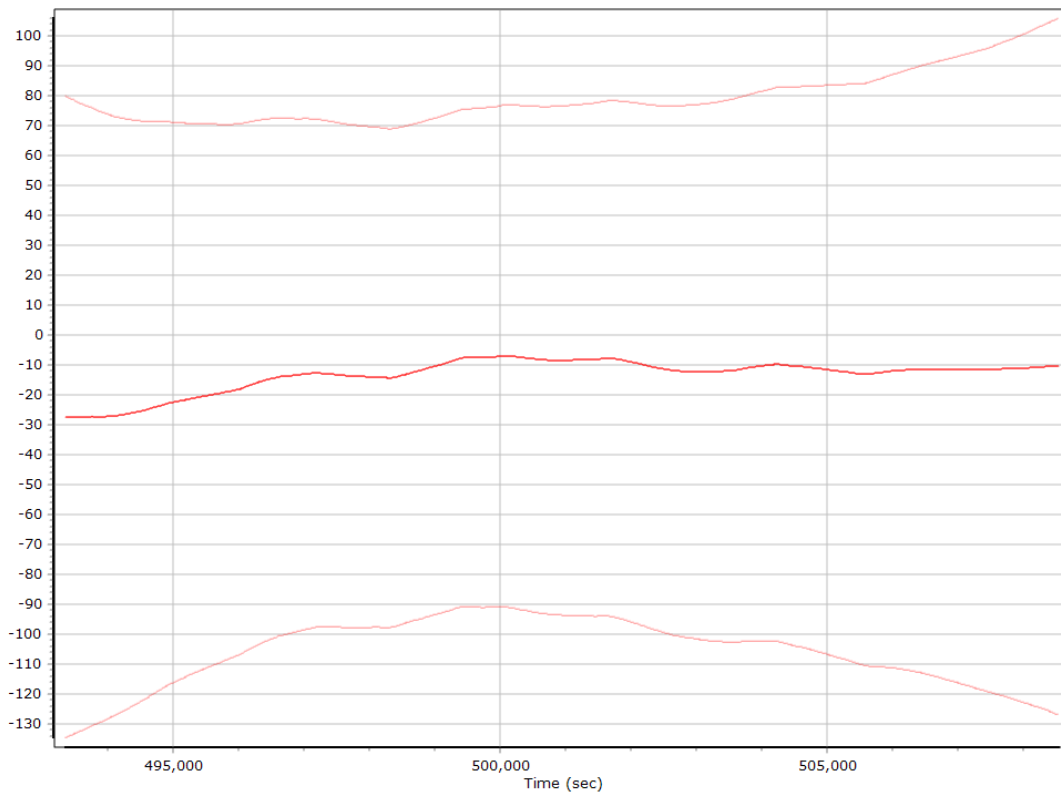
Z Accelerometer Bias (micro-g)



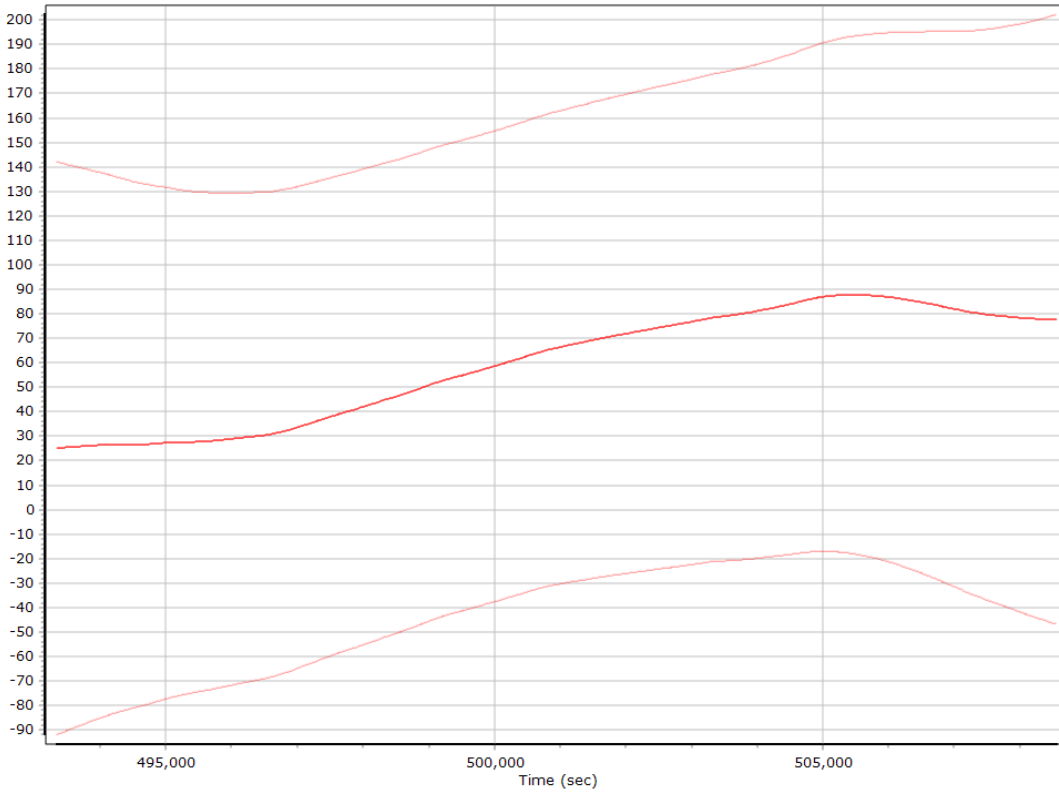
Accelerometer Scale Error (ppm)



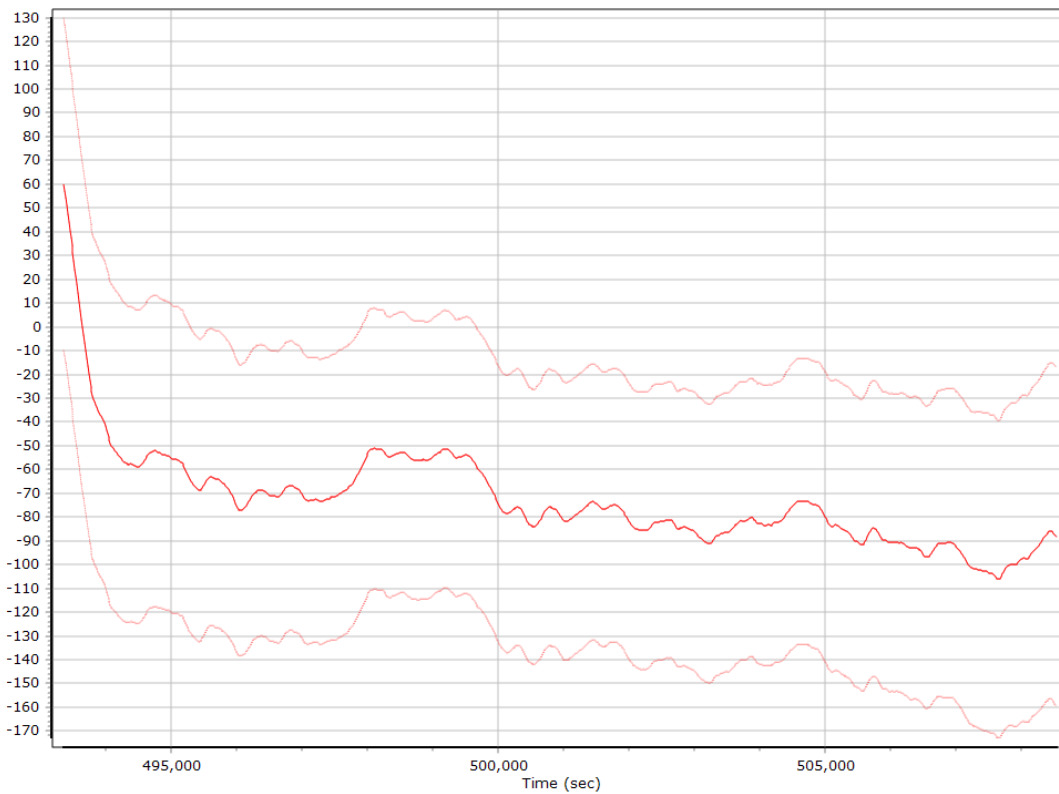
X Accelerometer Scale Error (ppm)



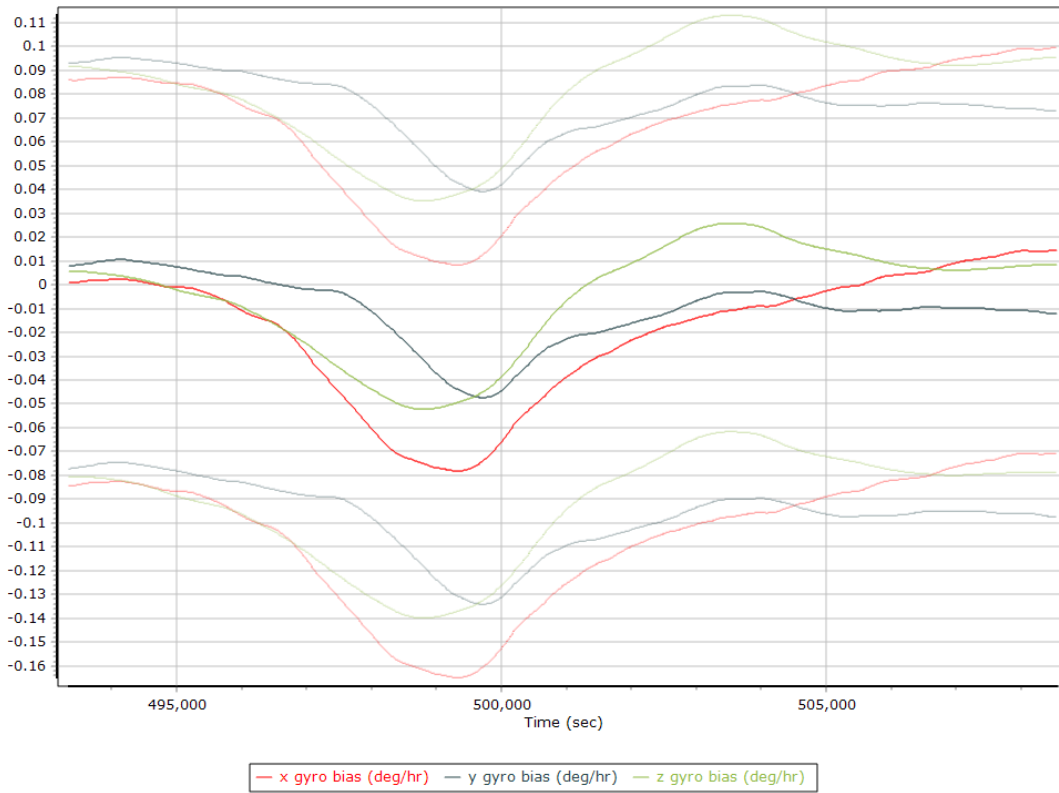
Y Accelerometer Scale Error (ppm)



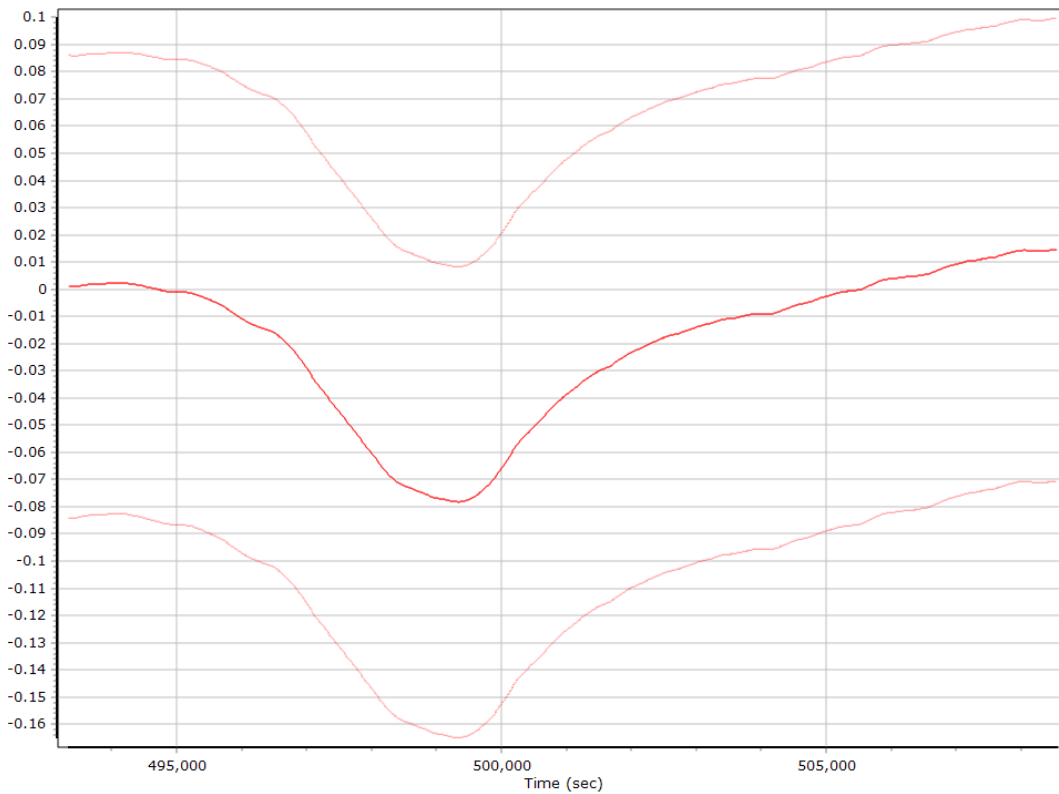
Z Accelerometer Scale Error (ppm)



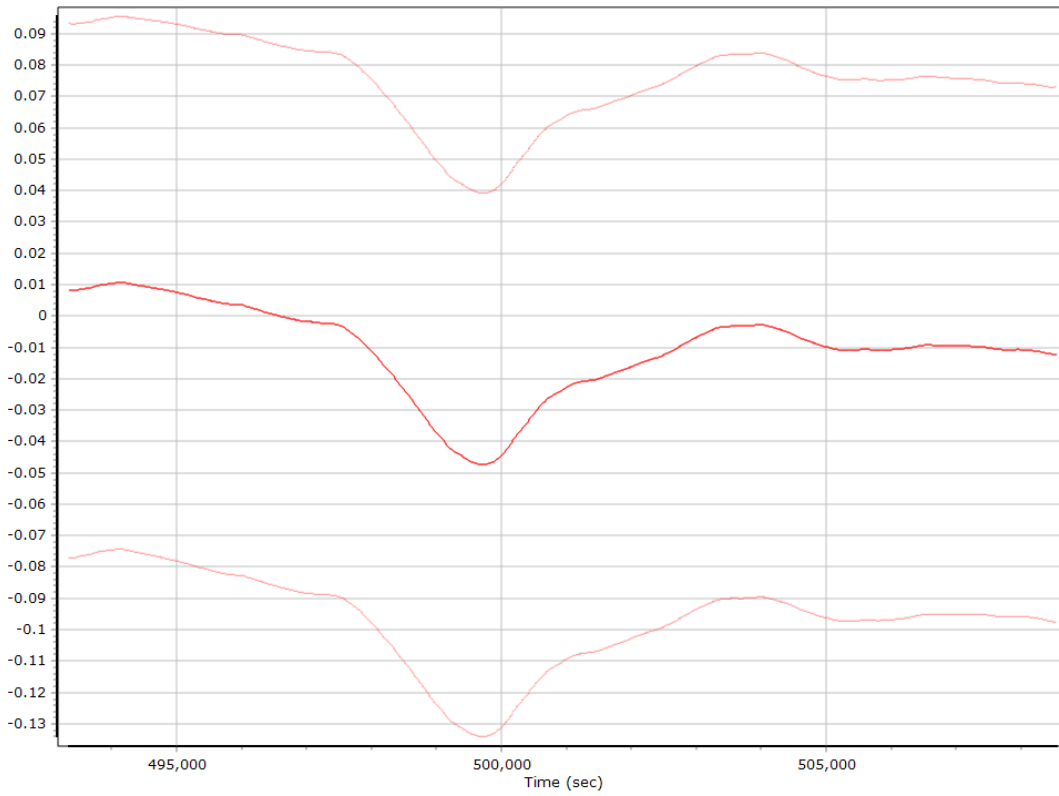
Gyro Bias (deg/h)



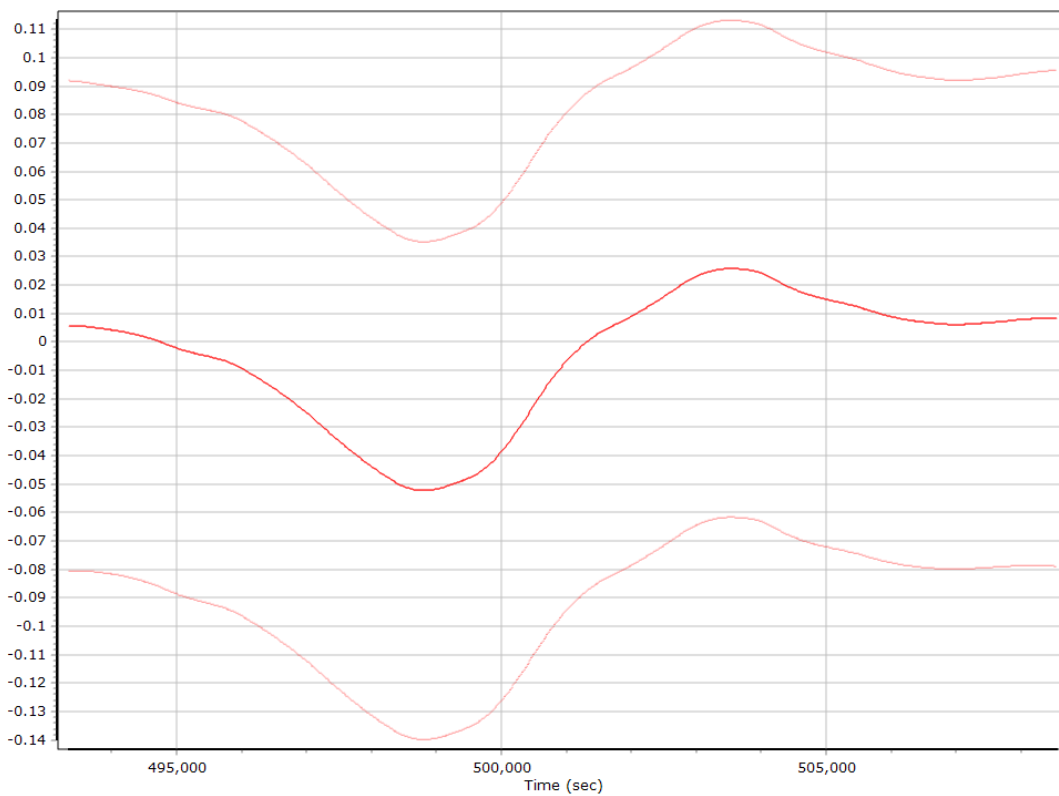
X Gyro Bias (deg/h)



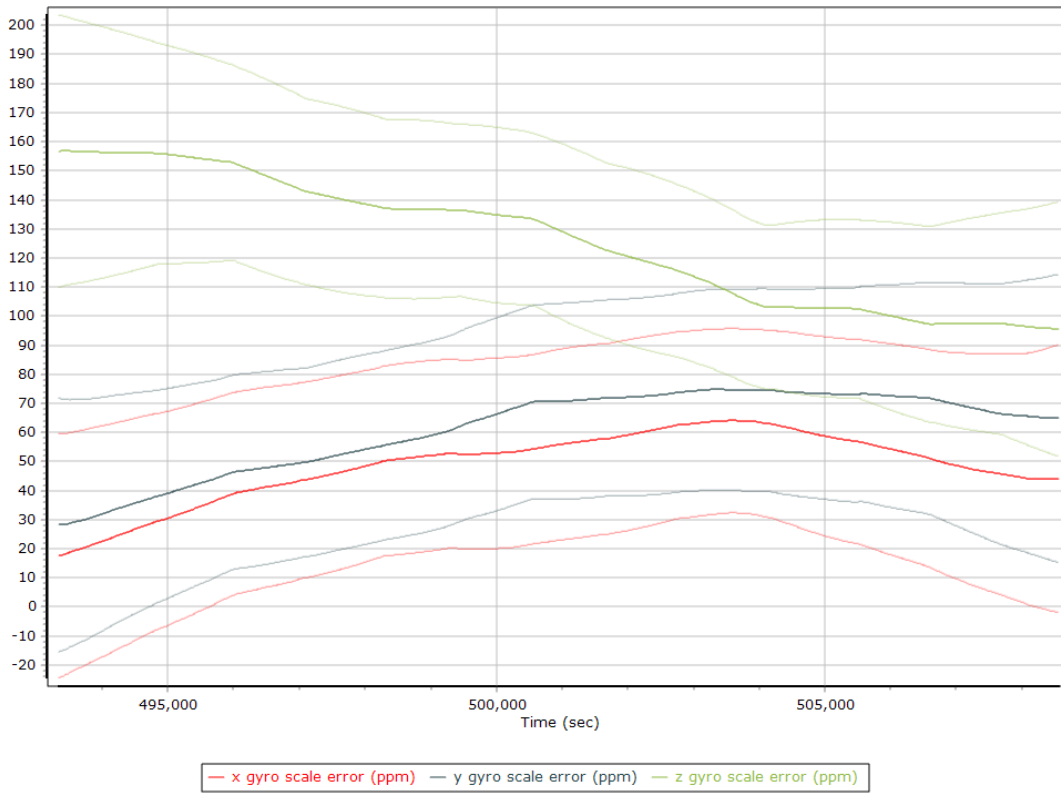
Y Gyro Bias (deg/h)



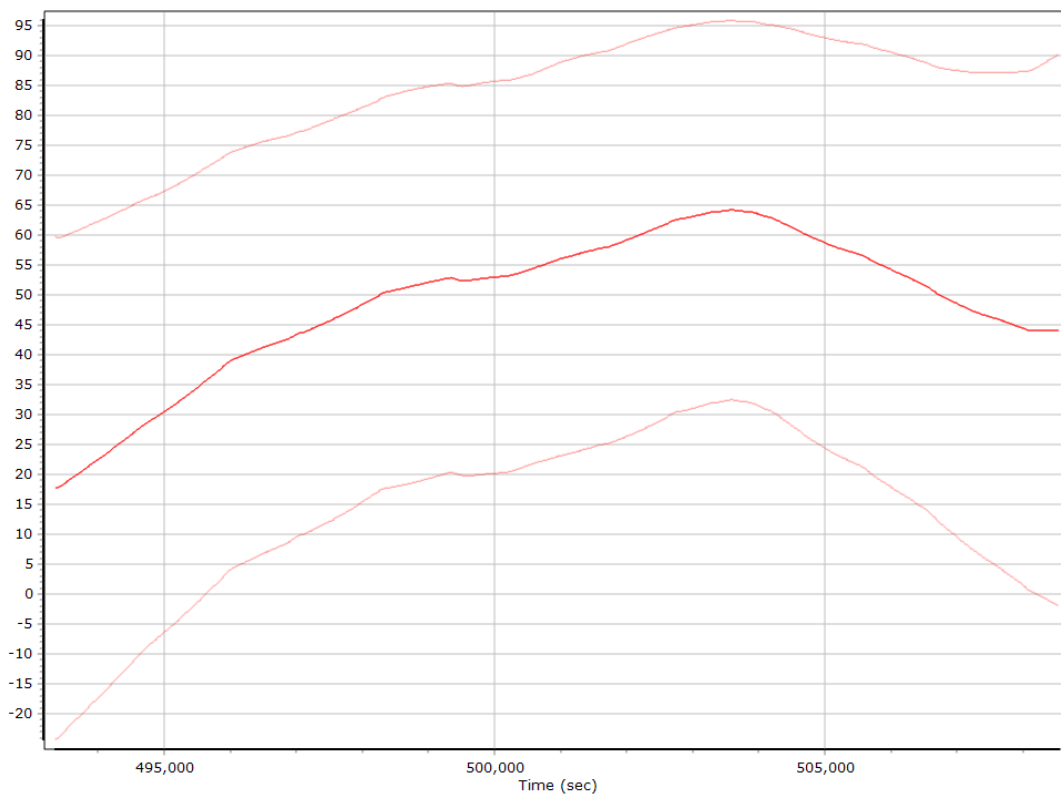
Z Gyro Bias (deg/h)



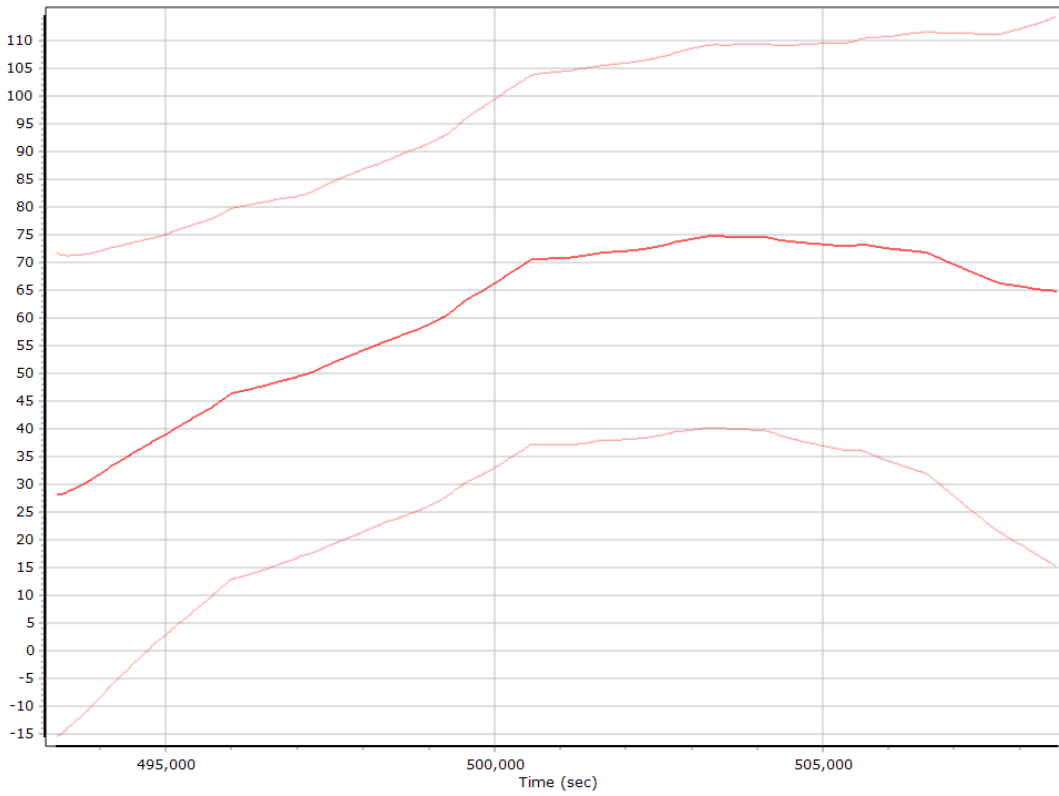
Gyro Scale Error (ppm)



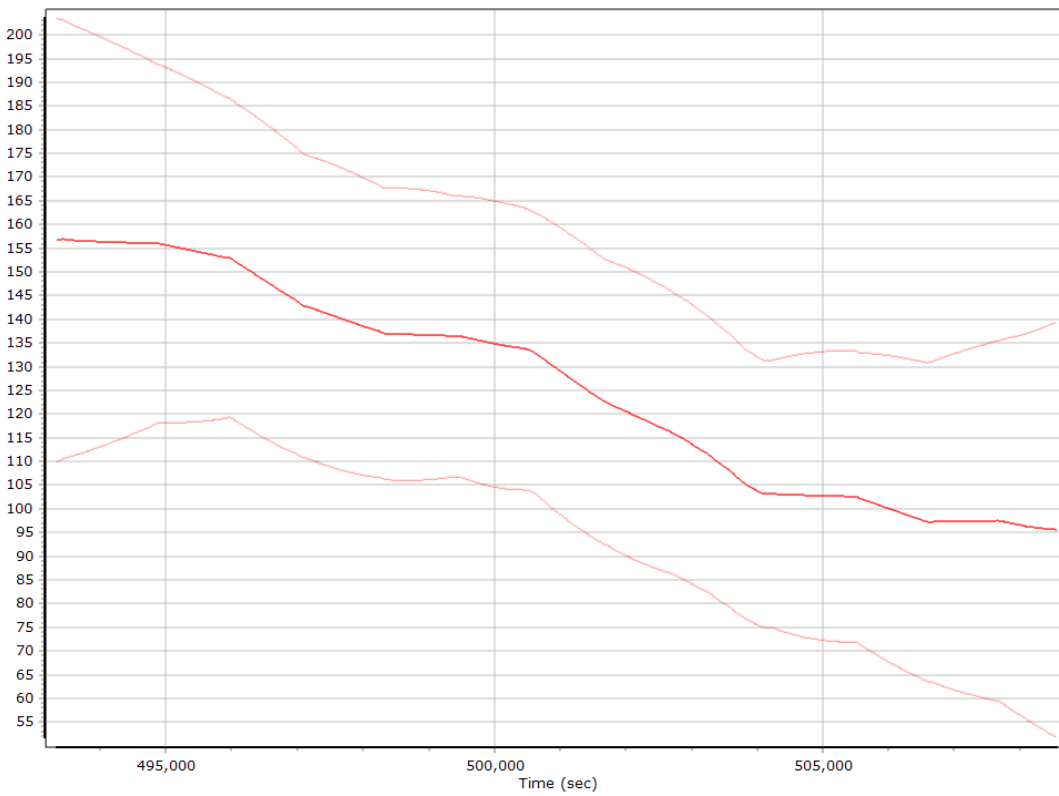
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

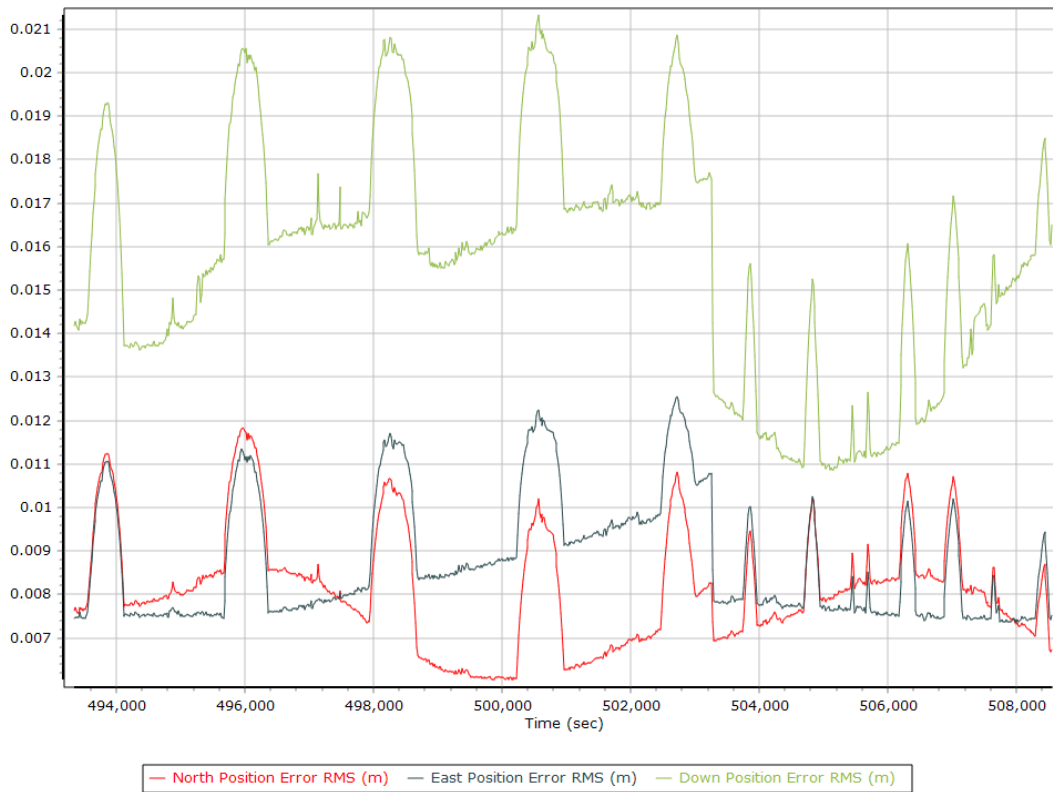


Z Gyro Scale Error (ppm)

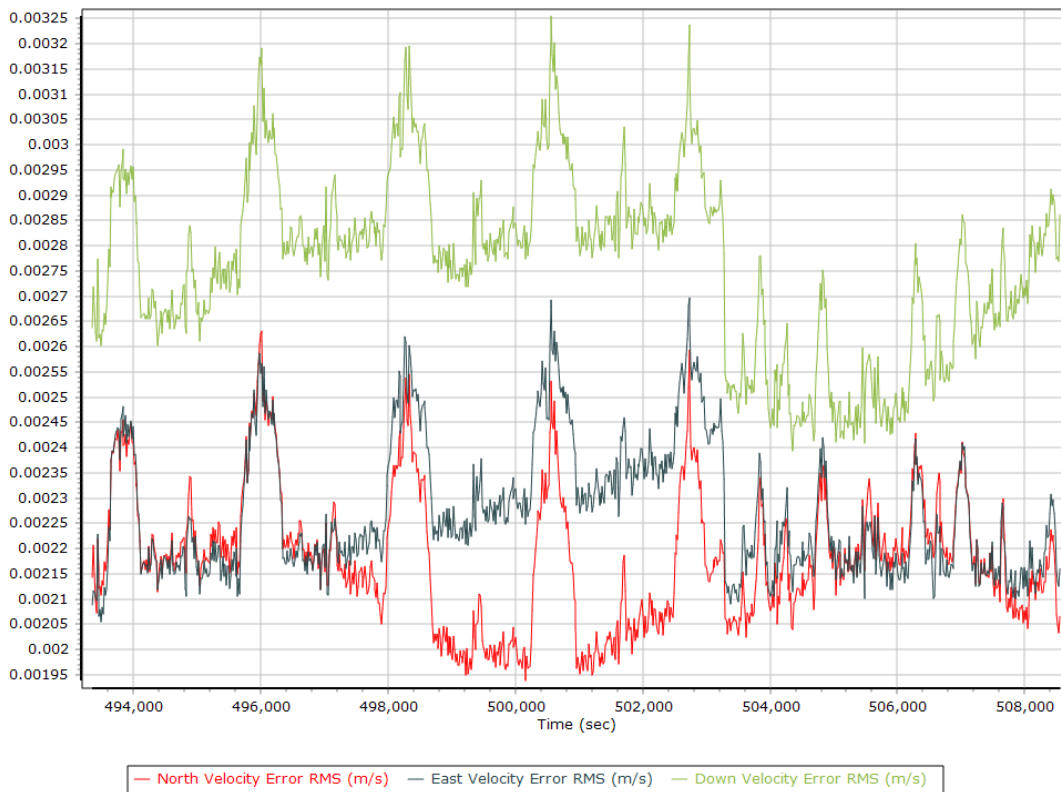


Smoothed Performance Metrics

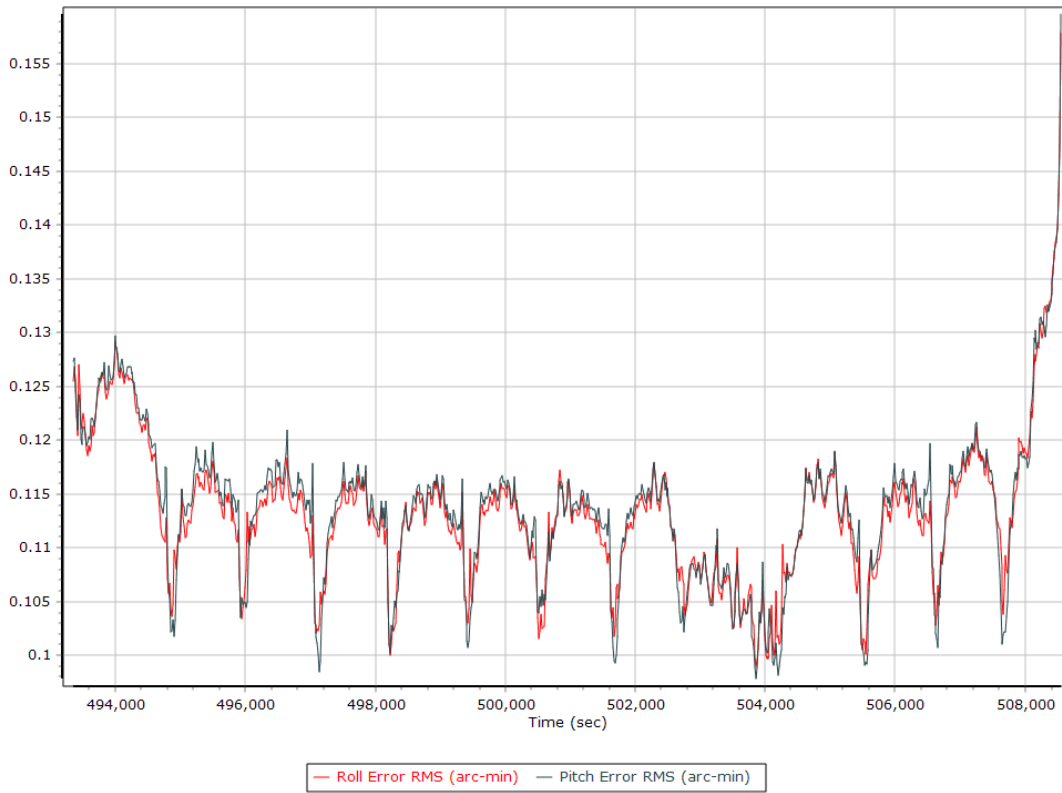
Position Error RMS (m)



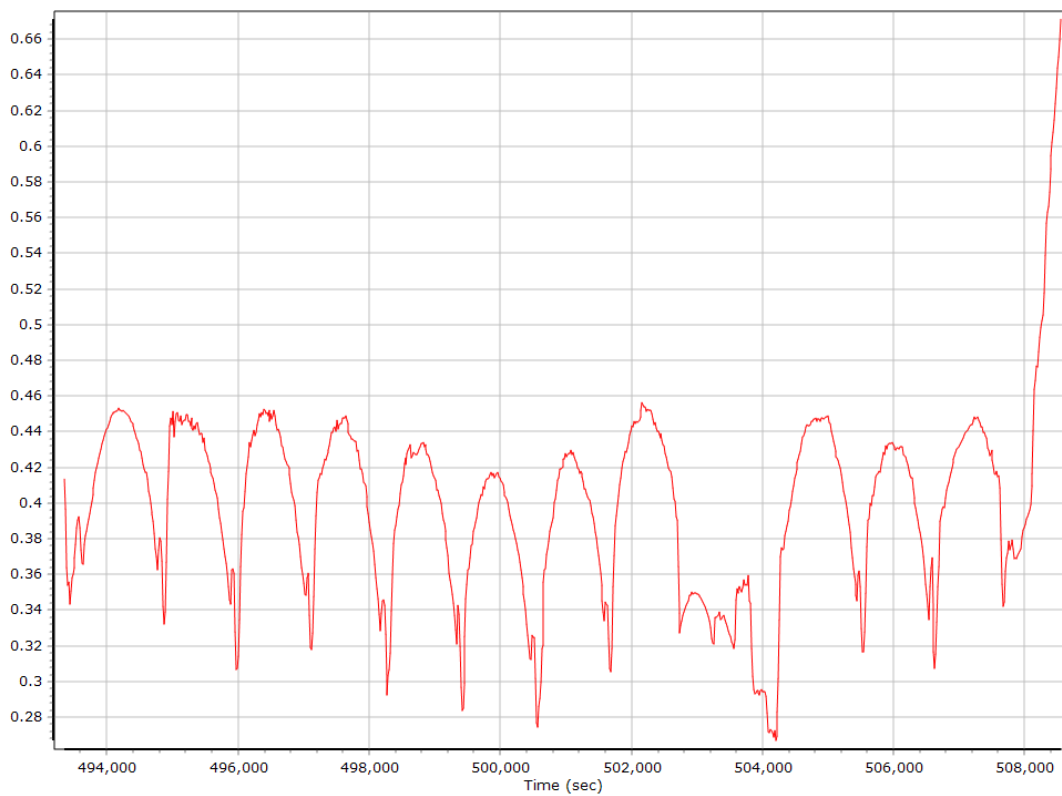
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

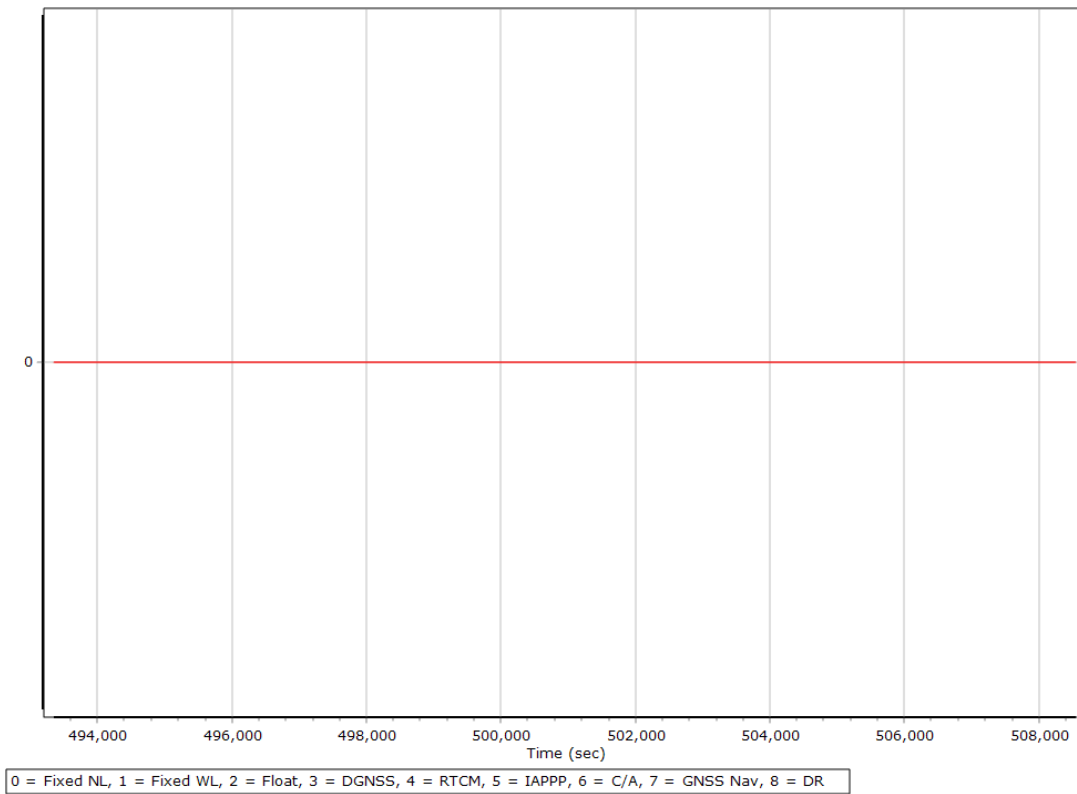


Heading Error RMS (arc-min)

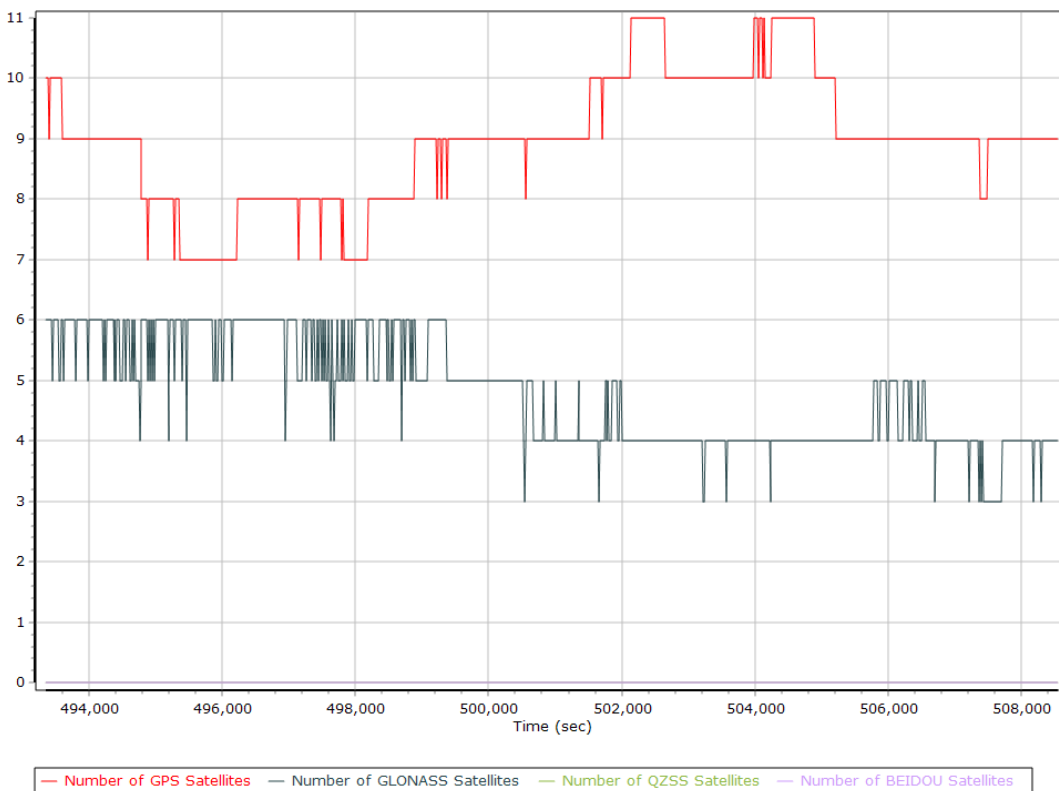


Smoothed Solution Status

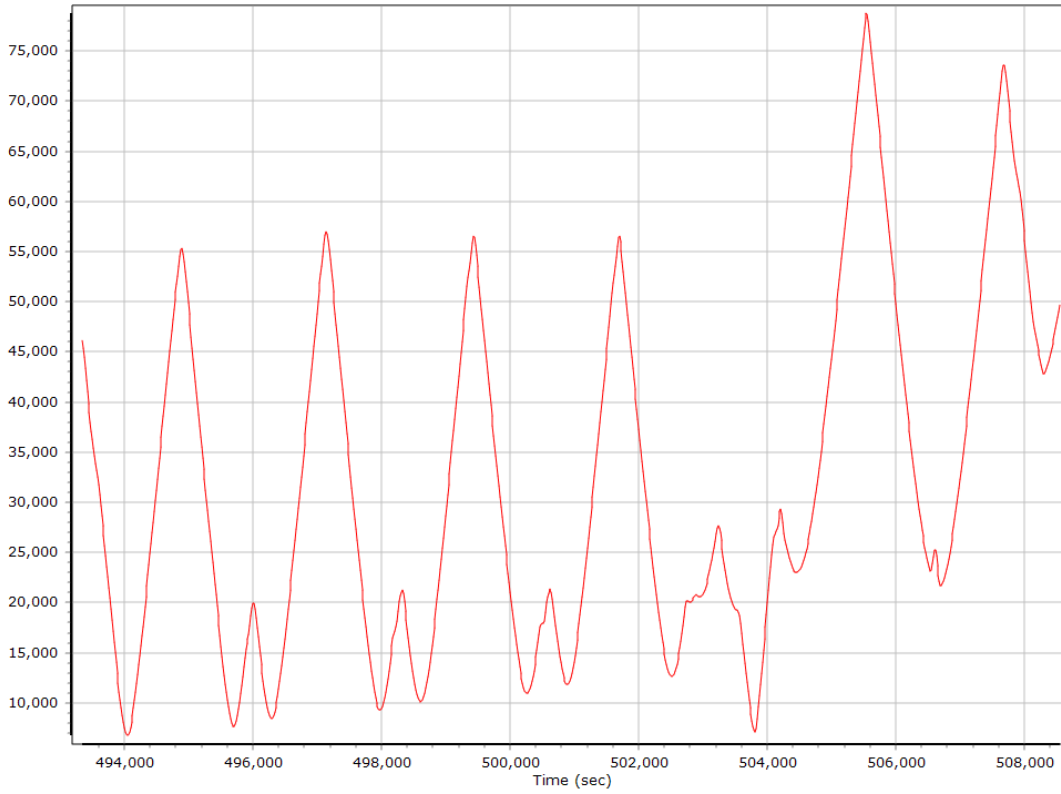
Processing Mode



Number of Satellites



Baseline Length



SBET IAKAR Separation

