

General Information

Mission Information

| | |
|------------------|----------------------|
| Project name | 13284-1806_20190331a |
| Processing date | 2019-04-11 00:01:20 |
| Mission date | 2019-03-31 11:58:52 |
| Mission duration | 01:56:39.596 |
| 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 |
|-----------------------------|-----------|
| 190331_115852_INS-GPS_1.raw | POS Data |

Input Files

| File Name | File type |
|-----------------------------|-----------------------------|
| Ephm0900.19g | GLONASS Broadcast Ephemeris |
| Ephm0900.19n | GPS Broadcast Ephemeris |
| igr20466.sp3 | GPS Precise Ephemeris |
| igr20470.sp3 | GPS Precise Ephemeris |
| igr20471.sp3 | GPS Precise Ephemeris |
| bkv1090100.19o.gps+glo.rnx2 | GNSS SingleBase |
| dunn090100.19o.gps+glo.rnx2 | GNSS SingleBase |
| flbr090100.19o.gps+glo.rnx2 | GNSS SingleBase |
| fld7090103.19o.gps+glo.rnx2 | GNSS SingleBase |
| fldc090100.19o.gps+glo.rnx2 | GNSS SingleBase |
| fleu090100.19o.gps+glo.rnx2 | GNSS SingleBase |
| flhs090103.19o.gps+glo.rnx2 | GNSS SingleBase |
| flwd090100.19o.gps+glo.rnx2 | GNSS SingleBase |
| gnv1090100.19o.gps+glo.rnx2 | GNSS SingleBase |
| ings090100.19o.gps+glo.rnx2 | GNSS SingleBase |
| ocla090100.19o.gps+glo.rnx2 | GNSS SingleBase |
| polk090100.19o.gps+glo.rnx2 | GNSS SingleBase |
| zefr090104.19o.gps+glo.rnx2 | GNSS SingleBase |

Output Files

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

Rover Data Summary

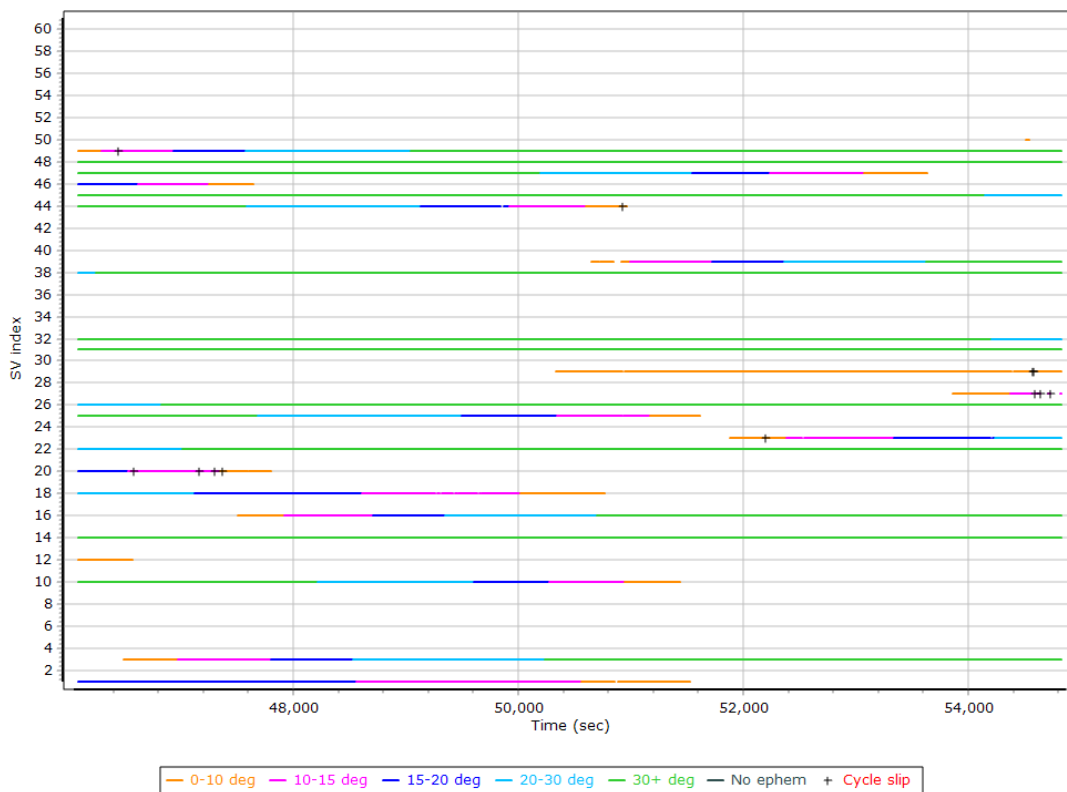
| | | | |
|--|-----------------------------------|--------|--------|
| First raw data file | 190331_115852_INS-GPS_1.raw | | |
| Last raw data file | 190331_115852_INS-GPS_1.raw | | |
| Start GPS week | 2047 | | |
| Start time | 43131.910 (3/31/2019 11:58:33 AM) | | |
| End time | 54835.569 (3/31/2019 3:13:37 PM) | | |
| Start of fine alignment | 46027.768 (3/31/2019 12:46:49 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

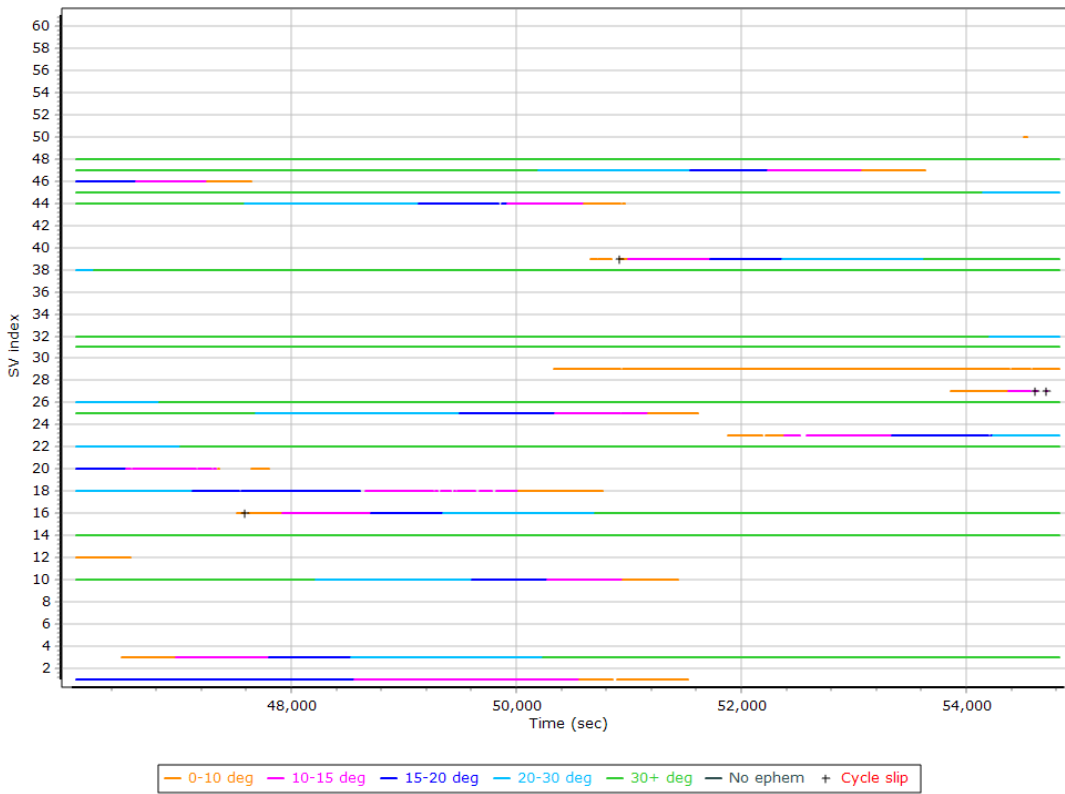
Raw IMU Import QC Summary

| | |
|-------------------------|---------------------|
| IMU data input file | imu_Mission 1.dat |
| IMU data check log file | imudt_Mission 1.log |
| IMU Records Processed | 2340348 |
| Termination Status | Normal |
| IMU Anomalies | 0 |

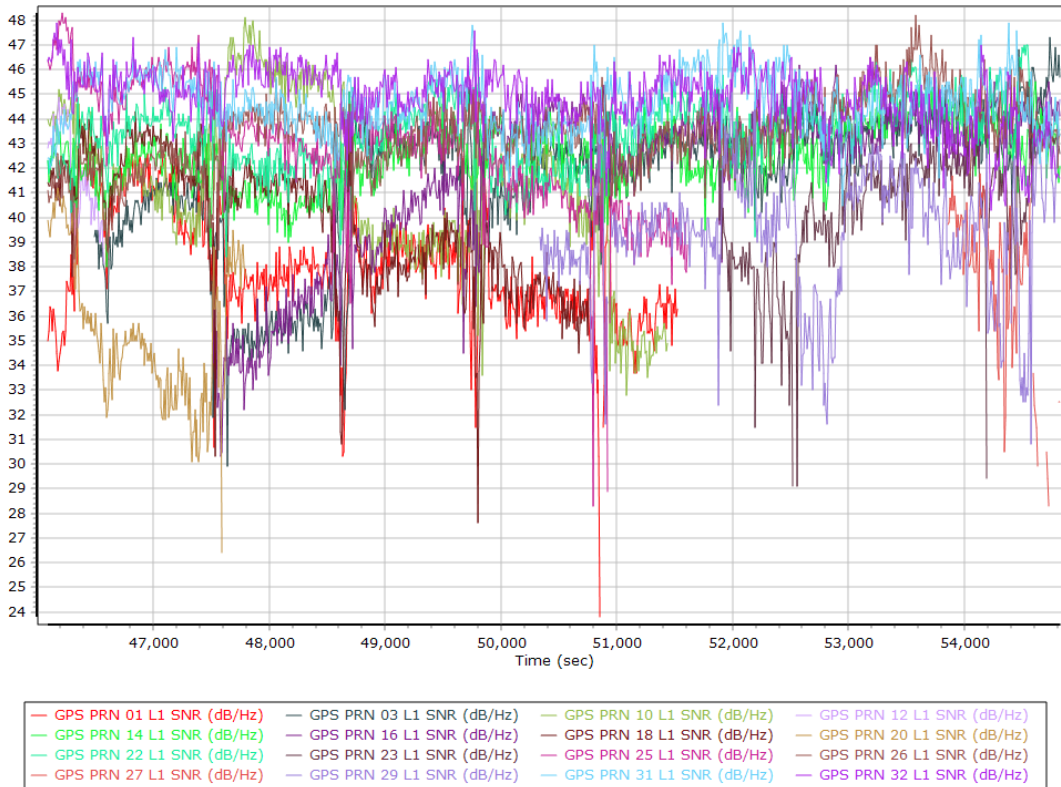
L1 Satellite Lock/Elevation



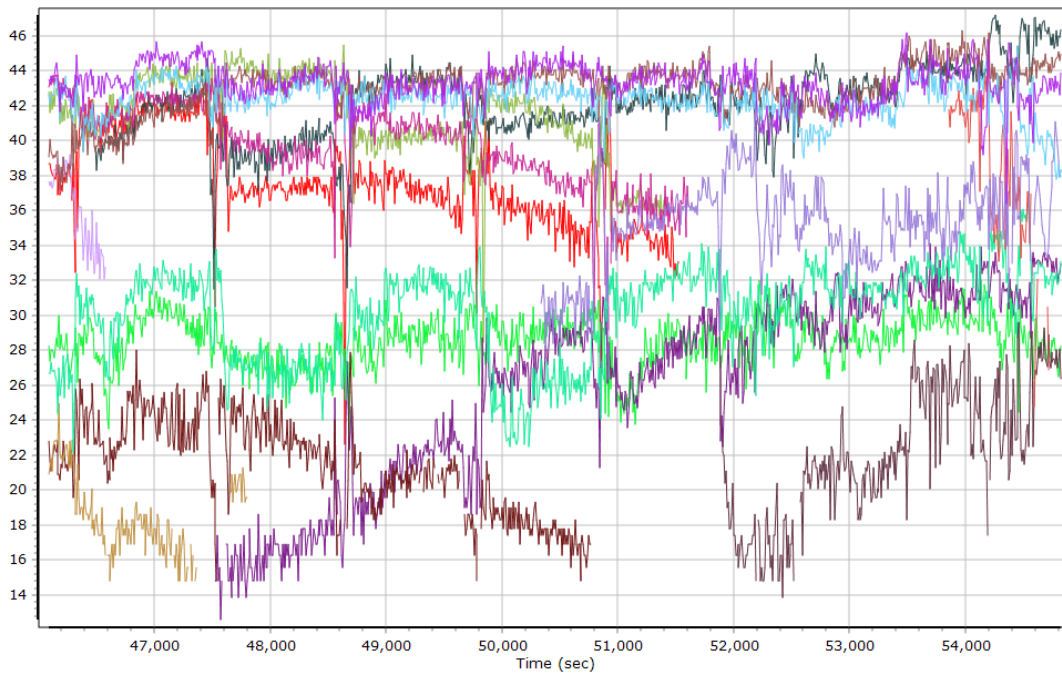
L2 Satellite Lock/Elevation



GPS L1 SNR

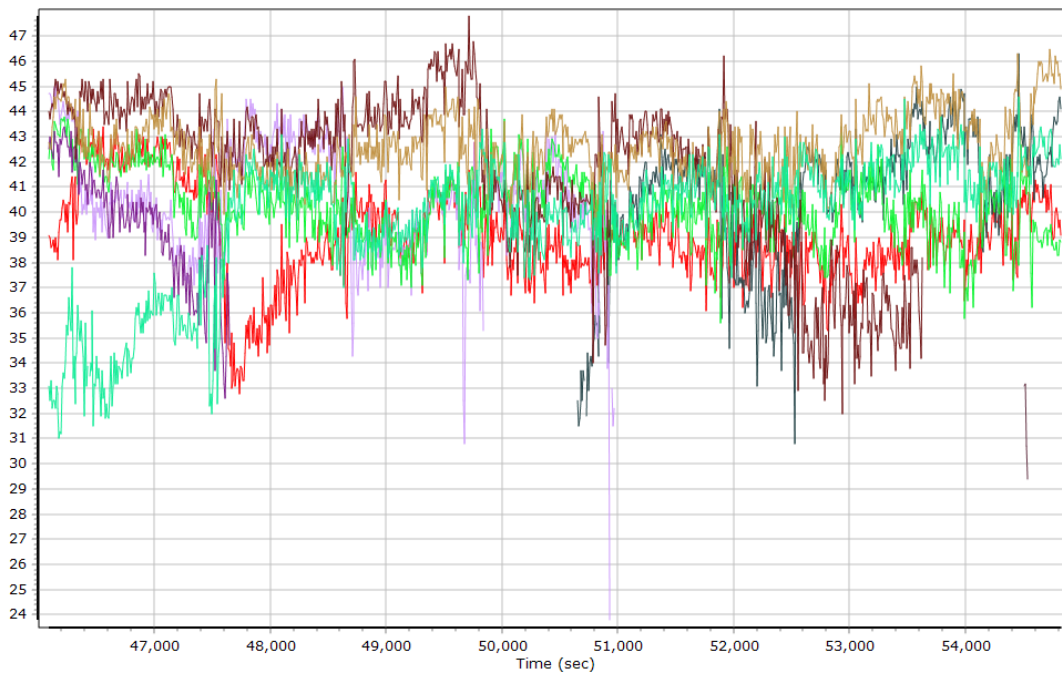


GPS L2 SNR



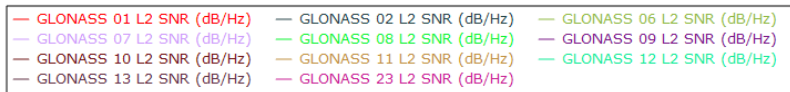
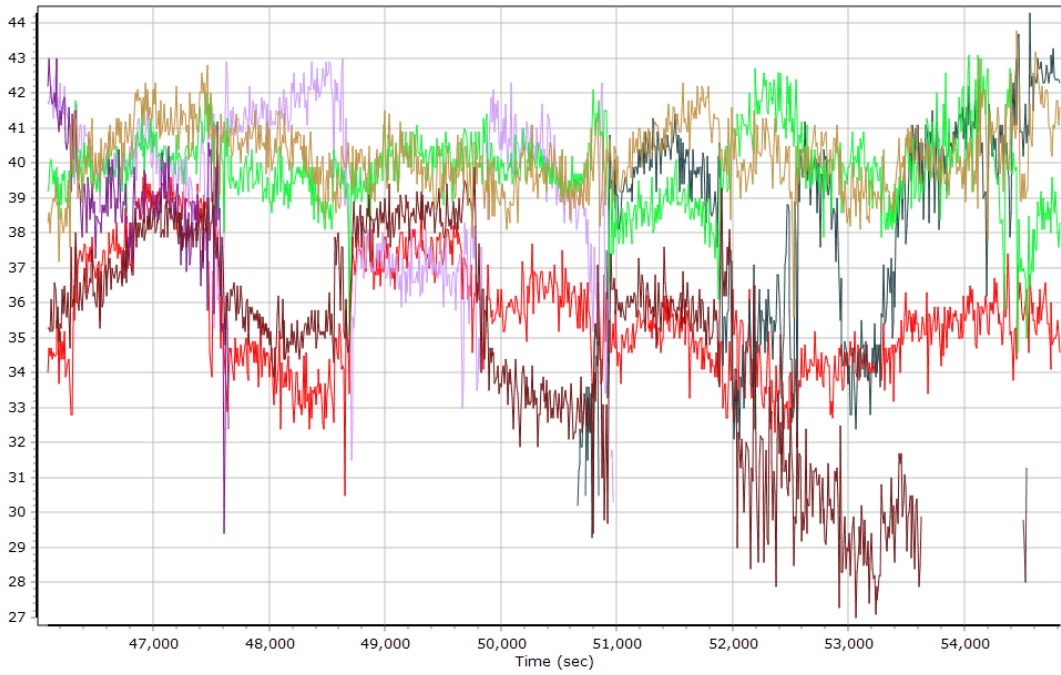
- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 01 L2 SNR (dB/Hz) | GPS PRN 03 L2 SNR (dB/Hz) | GPS PRN 10 L2 SNR (dB/Hz) | GPS PRN 12 L2 SNR (dB/Hz) |
| GPS PRN 14 L2 SNR (dB/Hz) | GPS PRN 16 L2 SNR (dB/Hz) | GPS 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



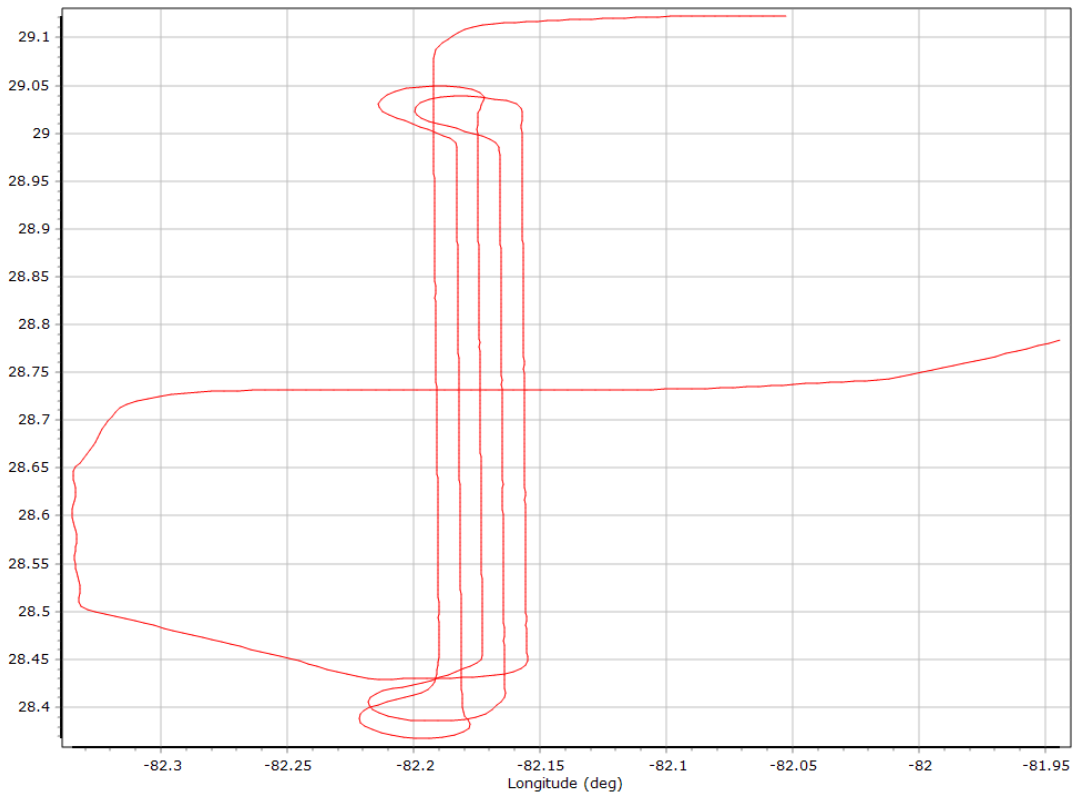
- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 01 L1 SNR (dB/Hz) | GLONASS 02 L1 SNR (dB/Hz) | GLONASS 06 L1 SNR (dB/Hz) |
| GLONASS 07 L1 SNR (dB/Hz) | GLONASS 08 L1 SNR (dB/Hz) | GLONASS 09 L1 SNR (dB/Hz) |
| GLONASS 10 L1 SNR (dB/Hz) | GLONASS 11 L1 SNR (dB/Hz) | GLONASS 12 L1 SNR (dB/Hz) |
| GLONASS 13 L1 SNR (dB/Hz) | GLONASS 23 L1 SNR (dB/Hz) | |

GLONASS L2 SNR

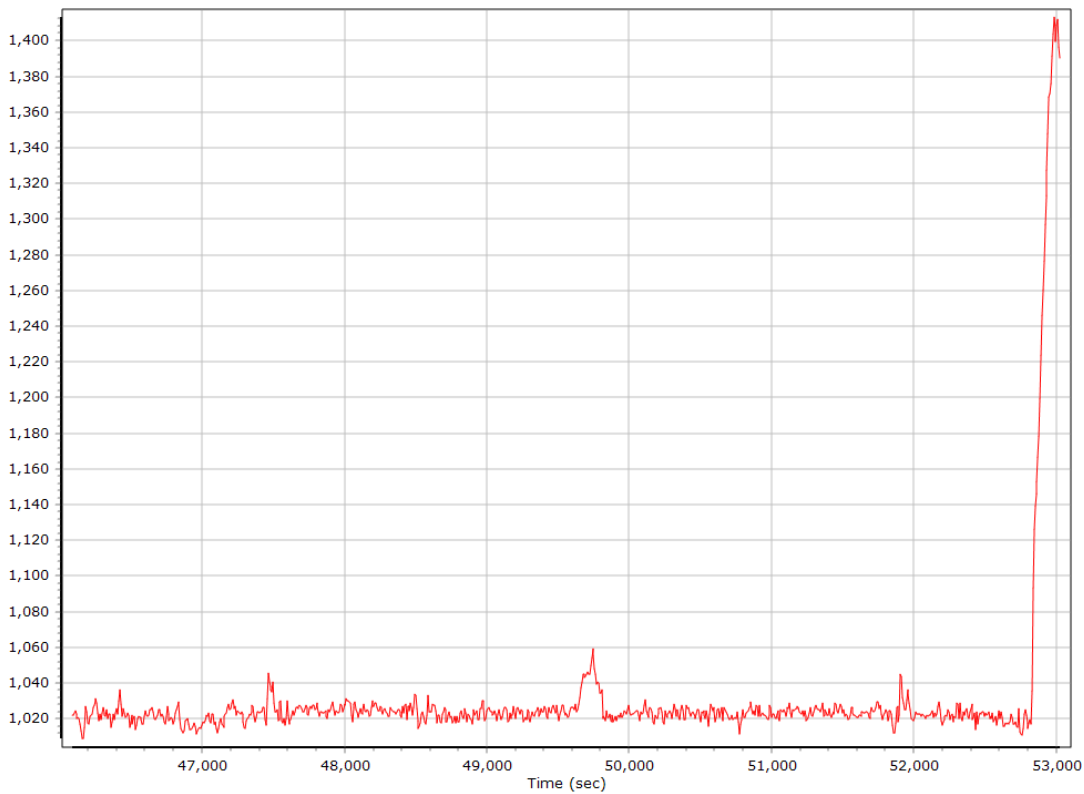


Trajectory Information

Top View



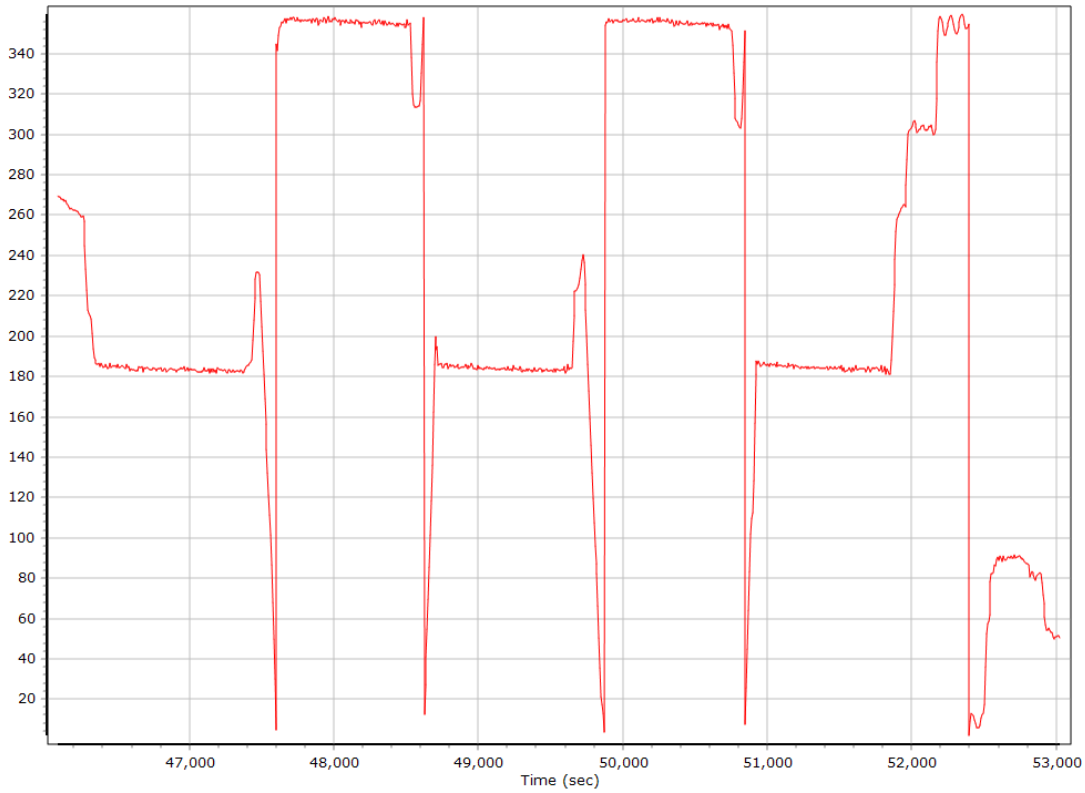
Altitude



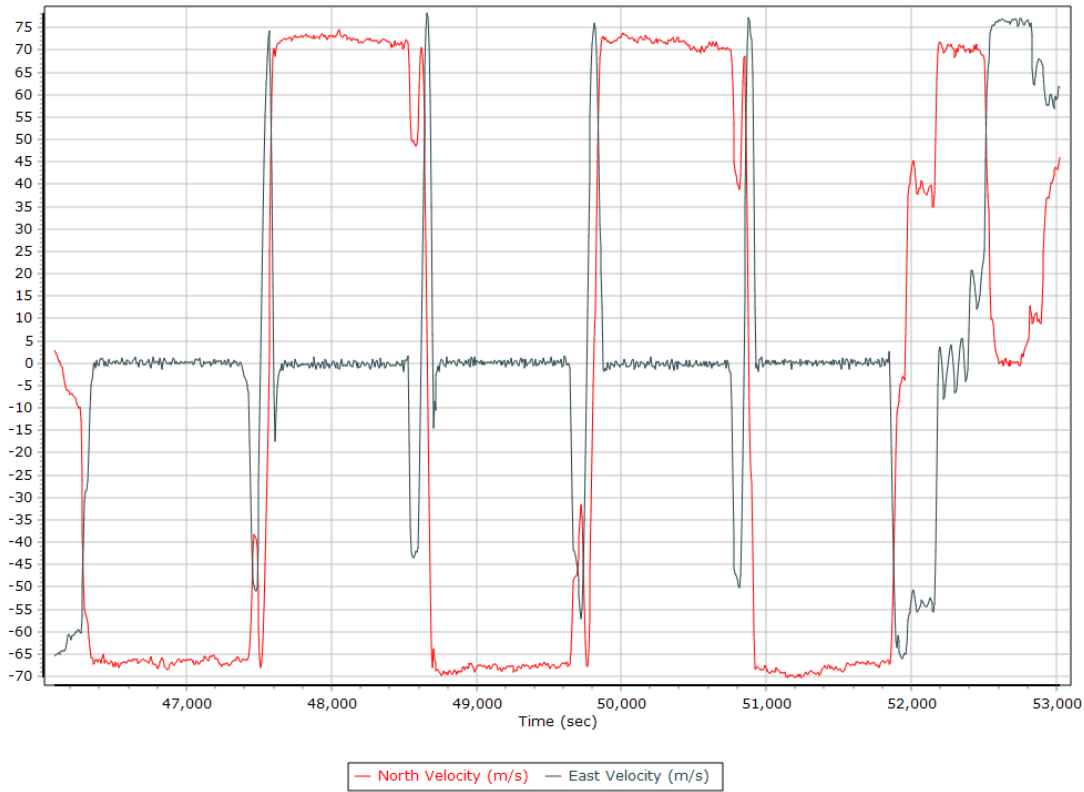
Roll/Pitch



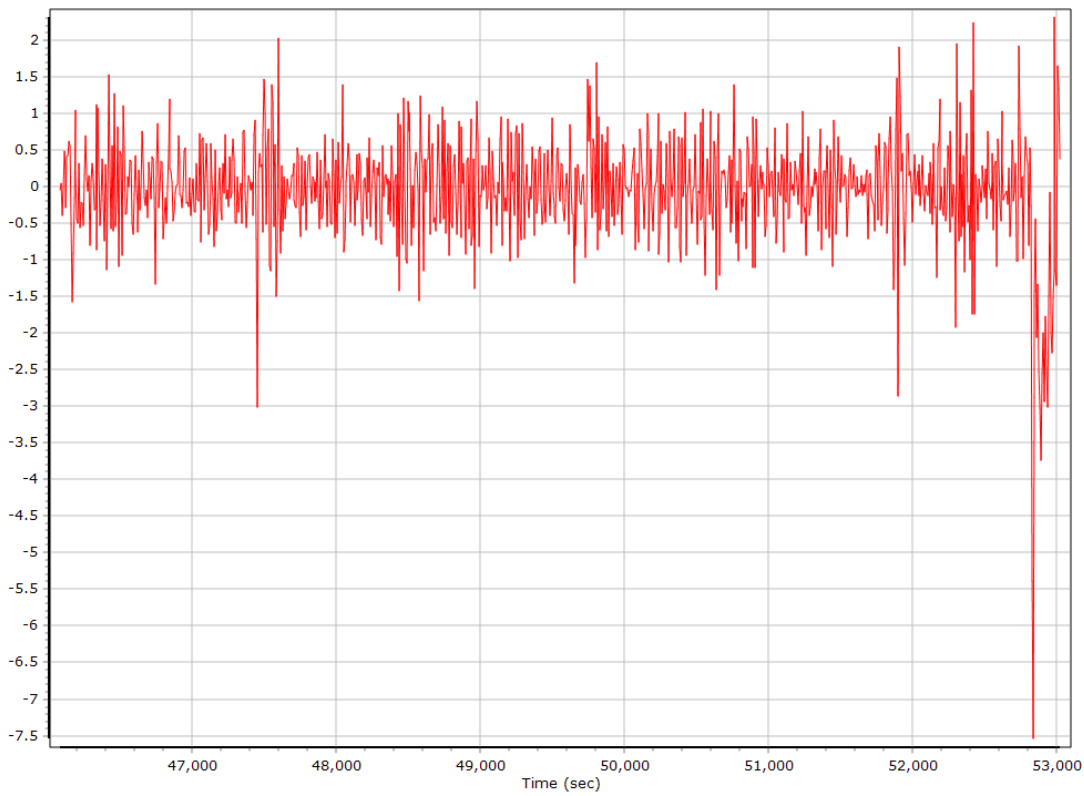
Heading



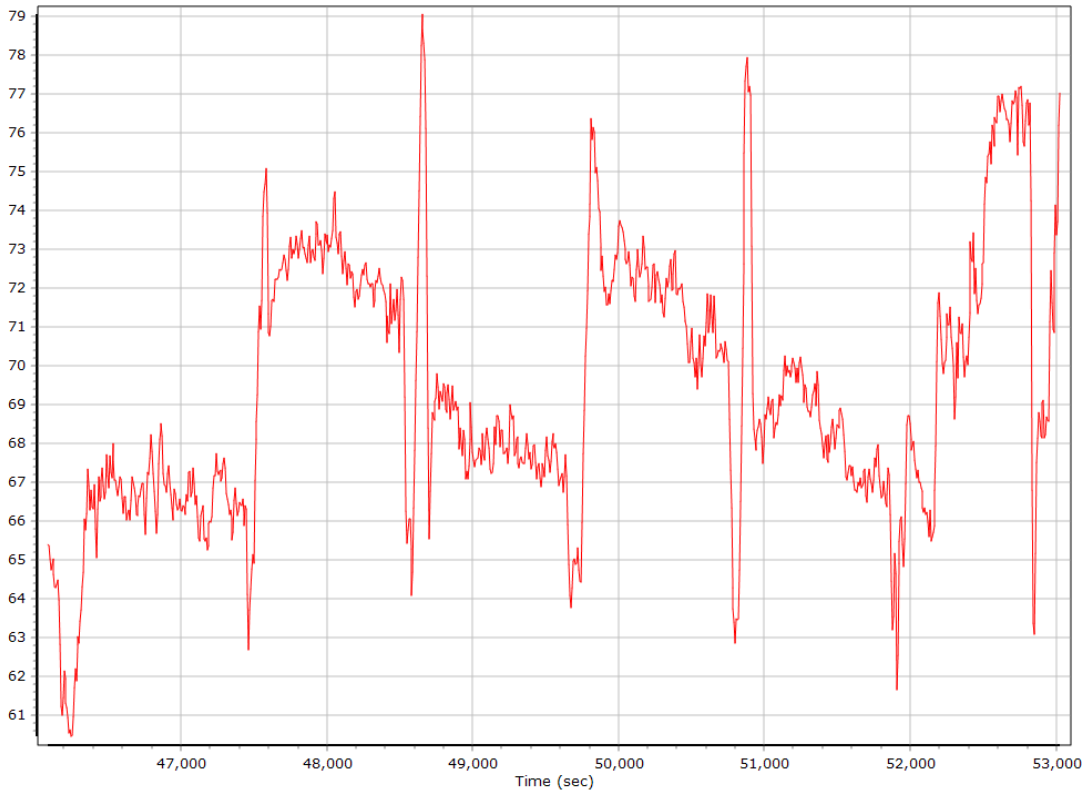
North/East Velocity



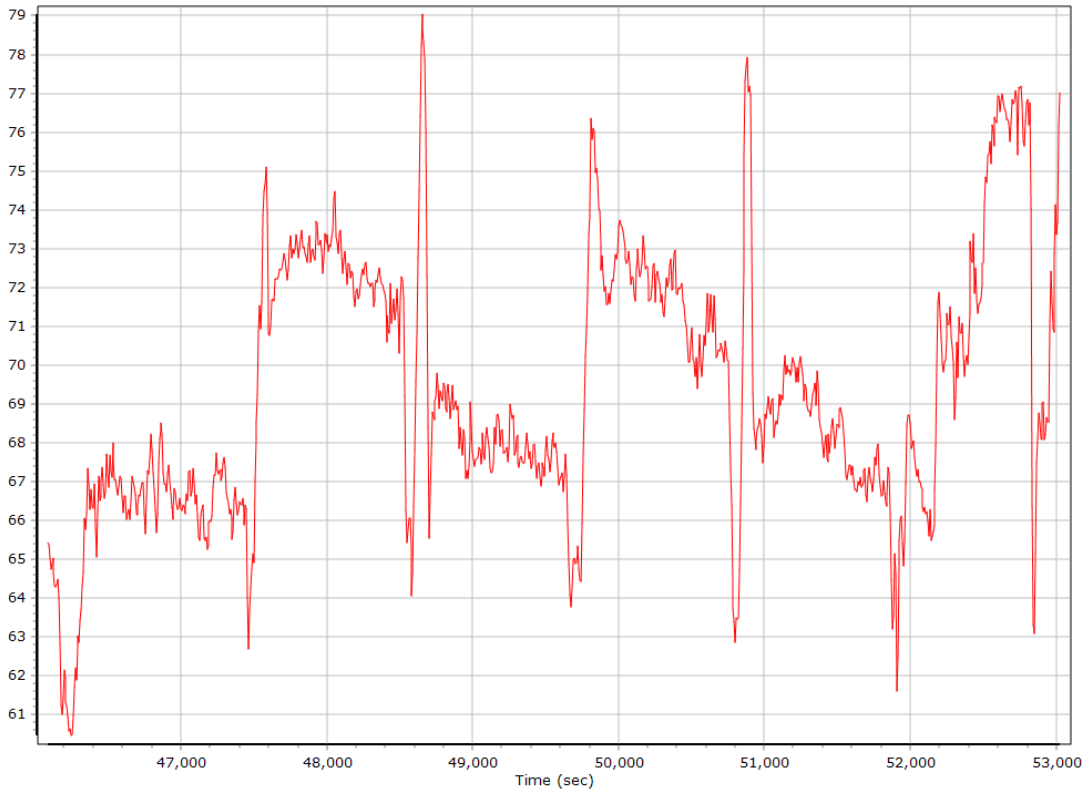
Down Velocity



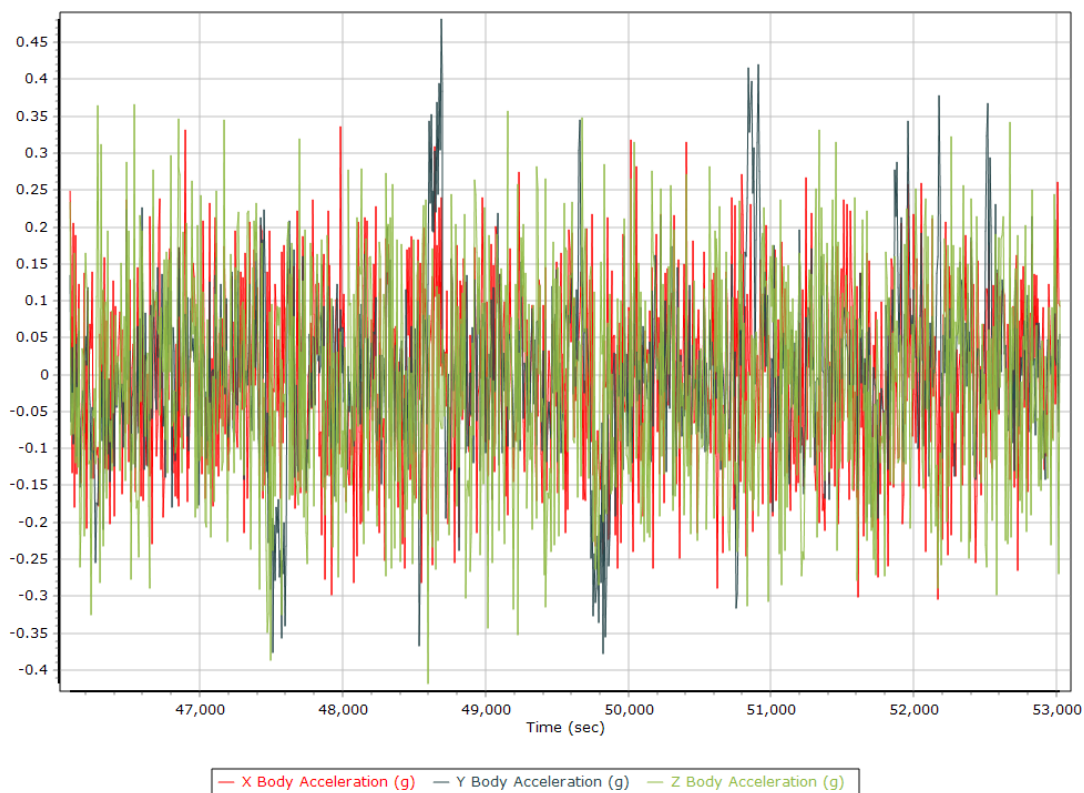
Total Speed



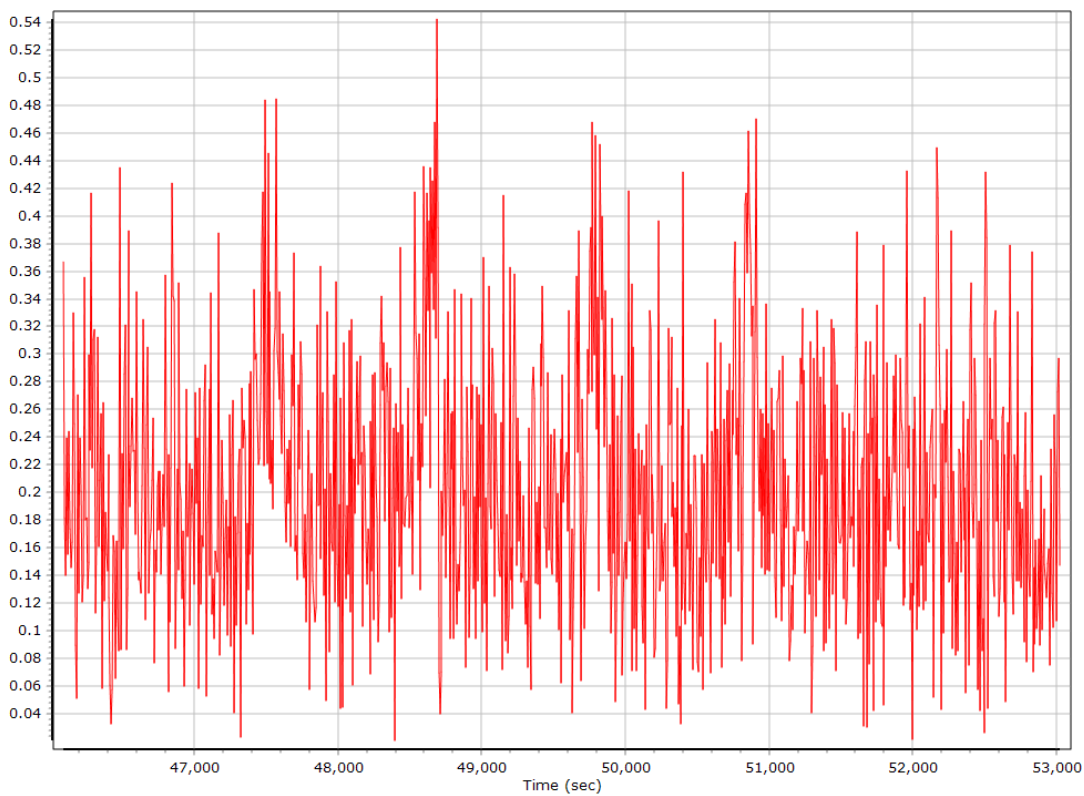
Ground Speed



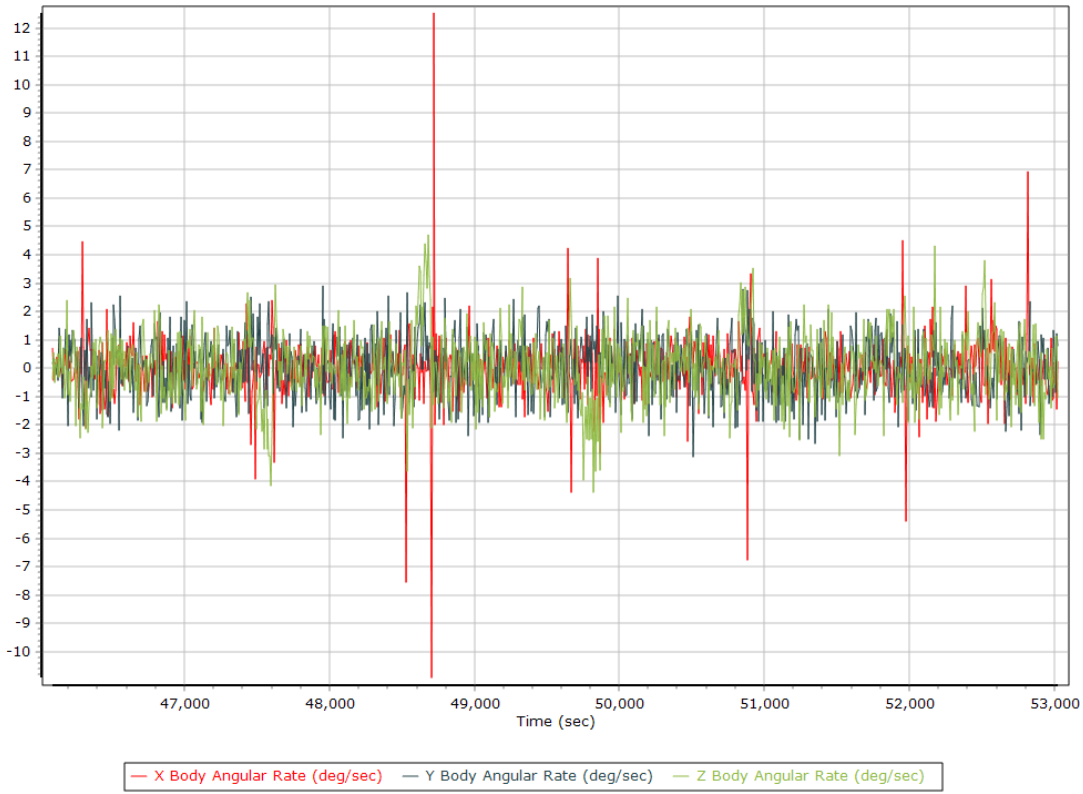
Body Acceleration



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

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] | 0.17 | 123.75 | |
| Number of GPS SV | 7 | 11 | 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 | 9 | 17 | 14 |
| PDOP | 1.19 | 2.17 | 1.52 |
| QC Solution Gaps | 1.00 | 1.00 | |
| Solution Type | Fixed | Float | No solution |
| Epoch (s) | 11660.00 | 0.00 | 1.00 |
| Percentage | 99.99 | 0.00 | 0.01 |

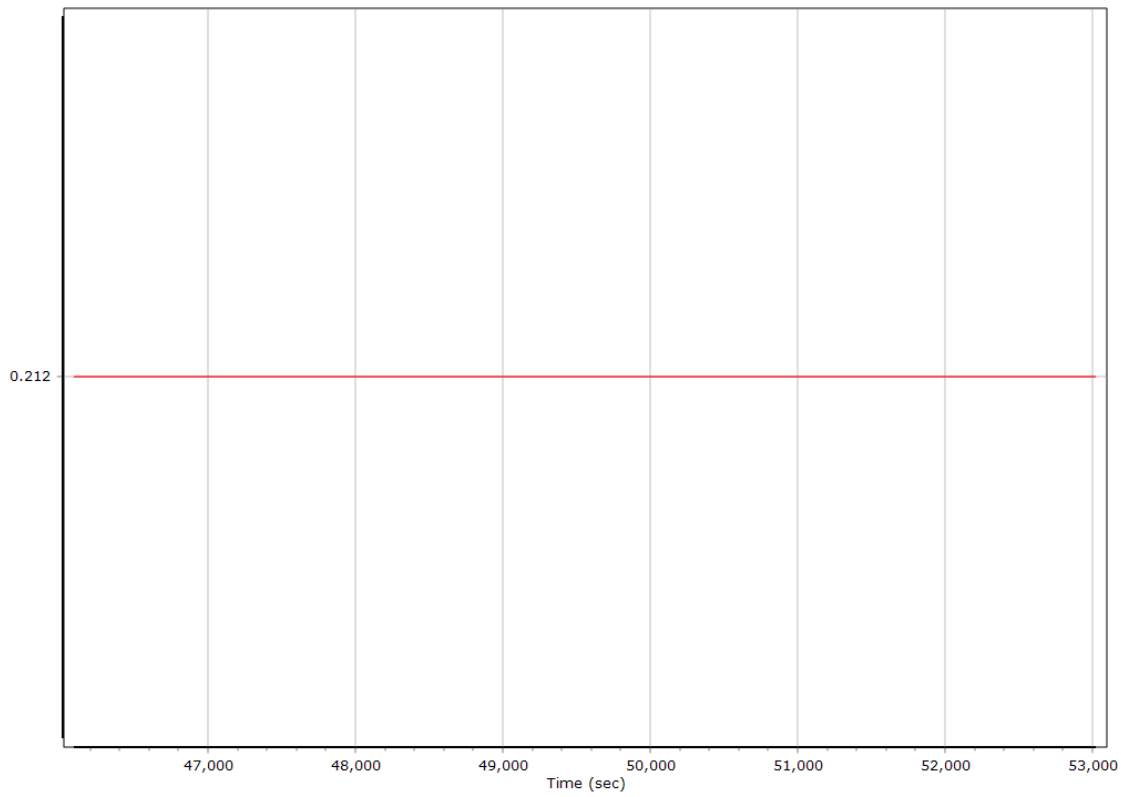
GNSS-Inertial Processor Configuration

| | | | |
|---|-----------------------------------|-------|--------|
| Processing mode | IN-Fusion SmartBase | | |
| Stabilized mount | False | | |
| Base station | ASB | | |
| Processing start time | 46027.558 (3/31/2019 12:46:49 PM) | | |
| Processing end time | 53027.154 (3/31/2019 2:43:29 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 |

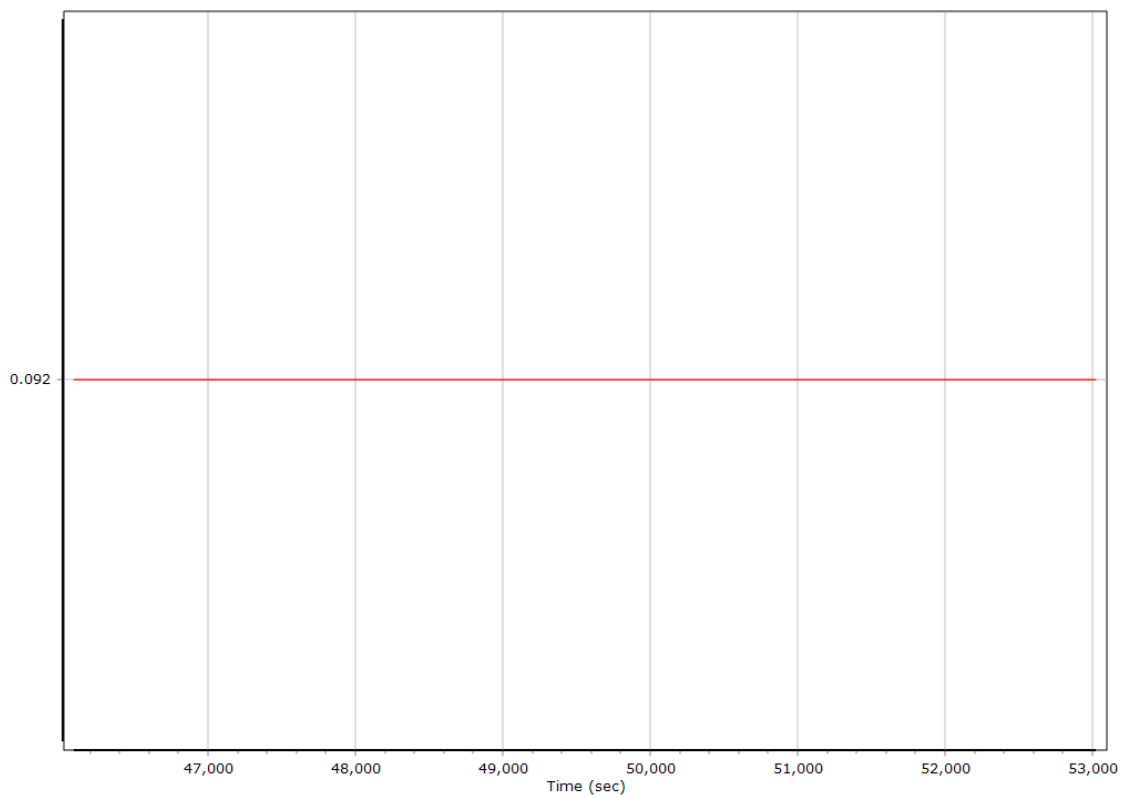
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

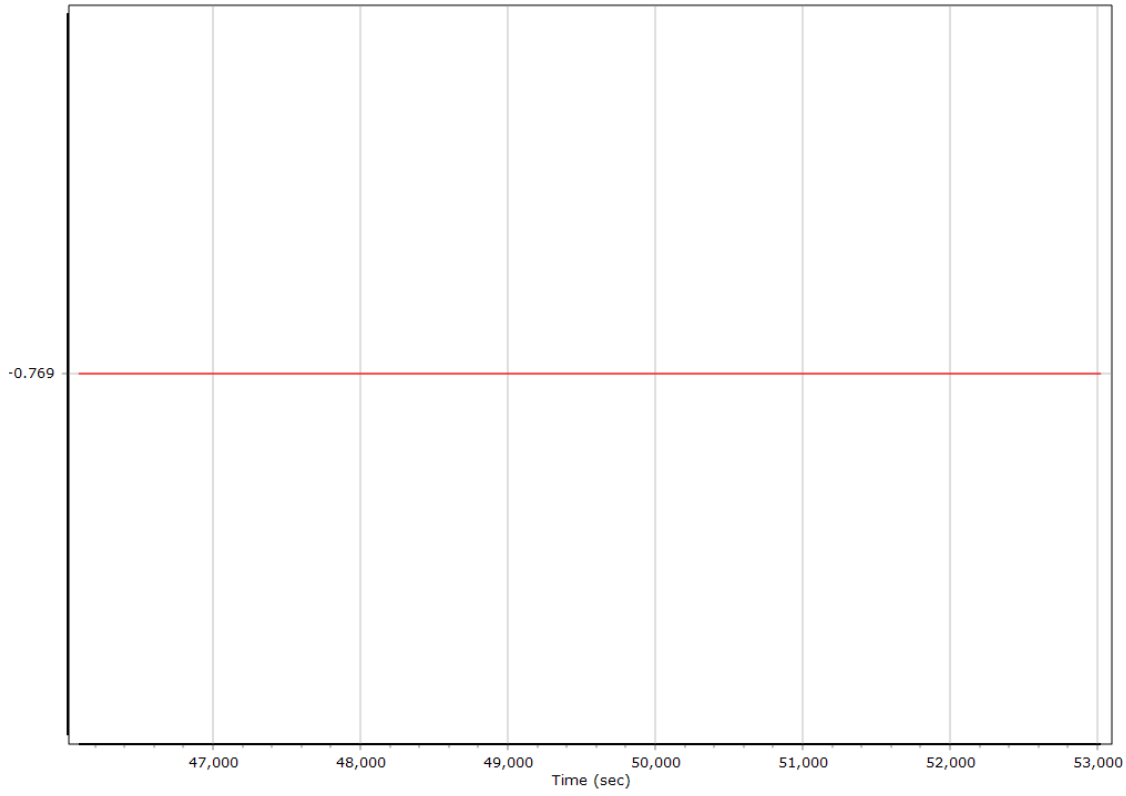
X Reference-Primary GNSS Lever Arm (m)



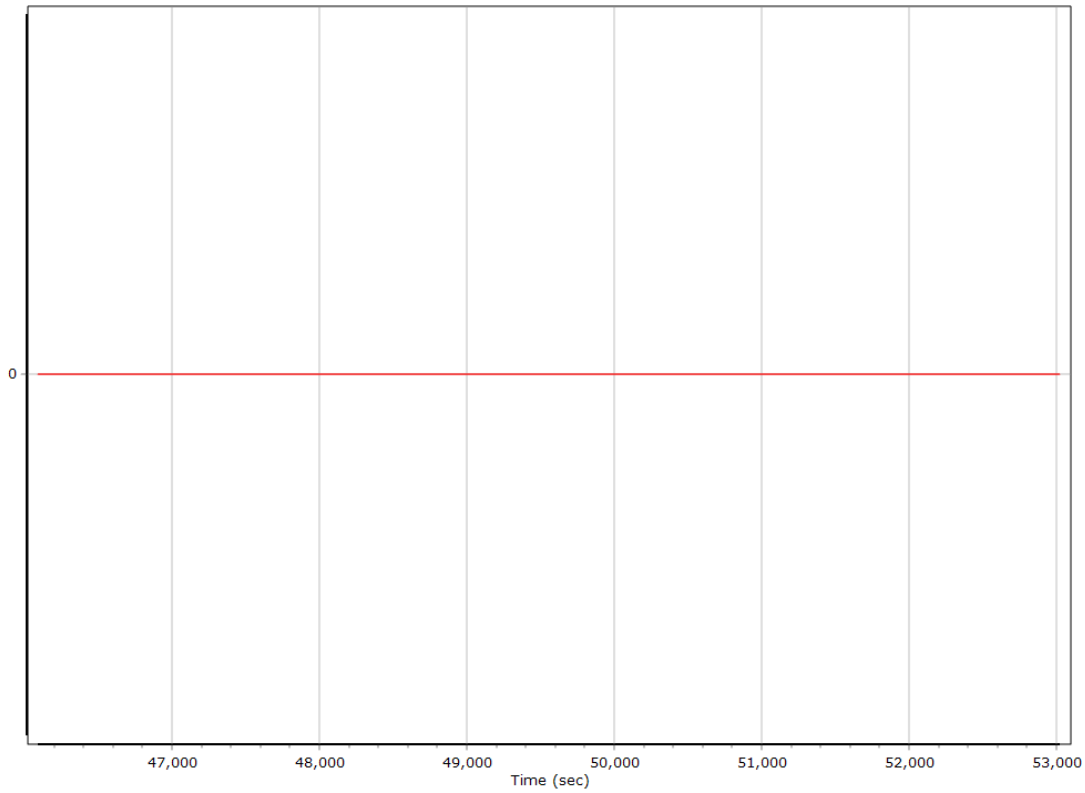
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



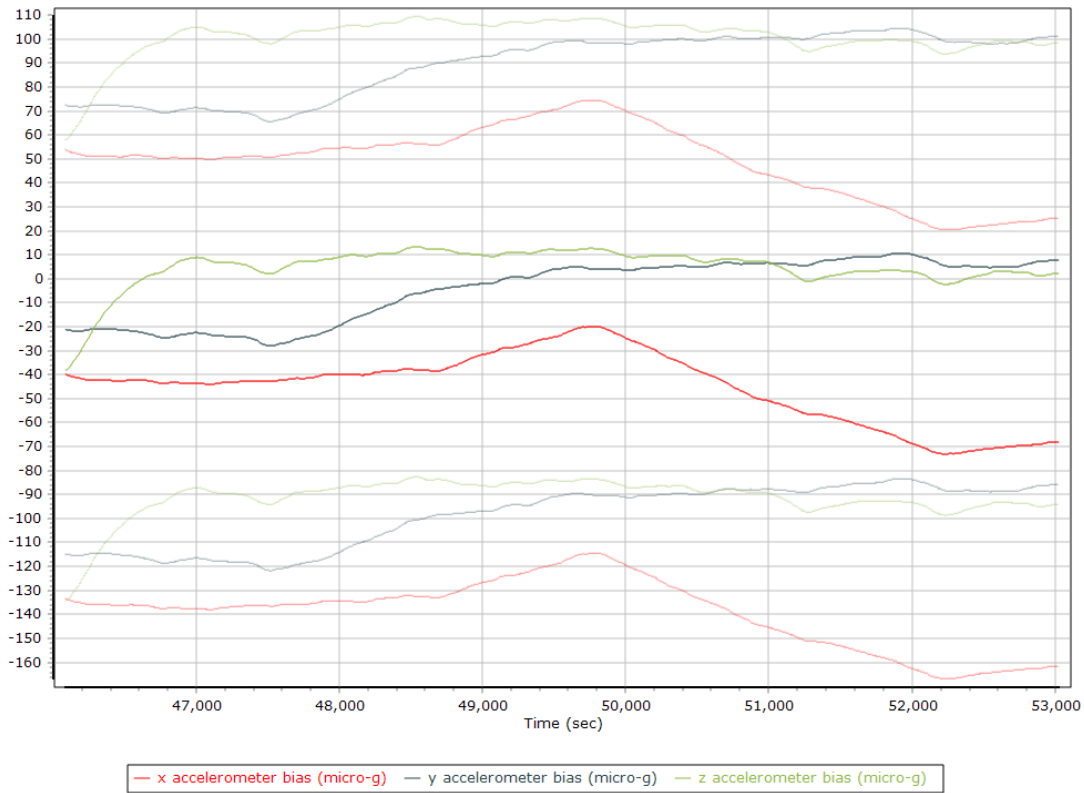
Reference-Primary GNSS Lever Arm Figure of Merit



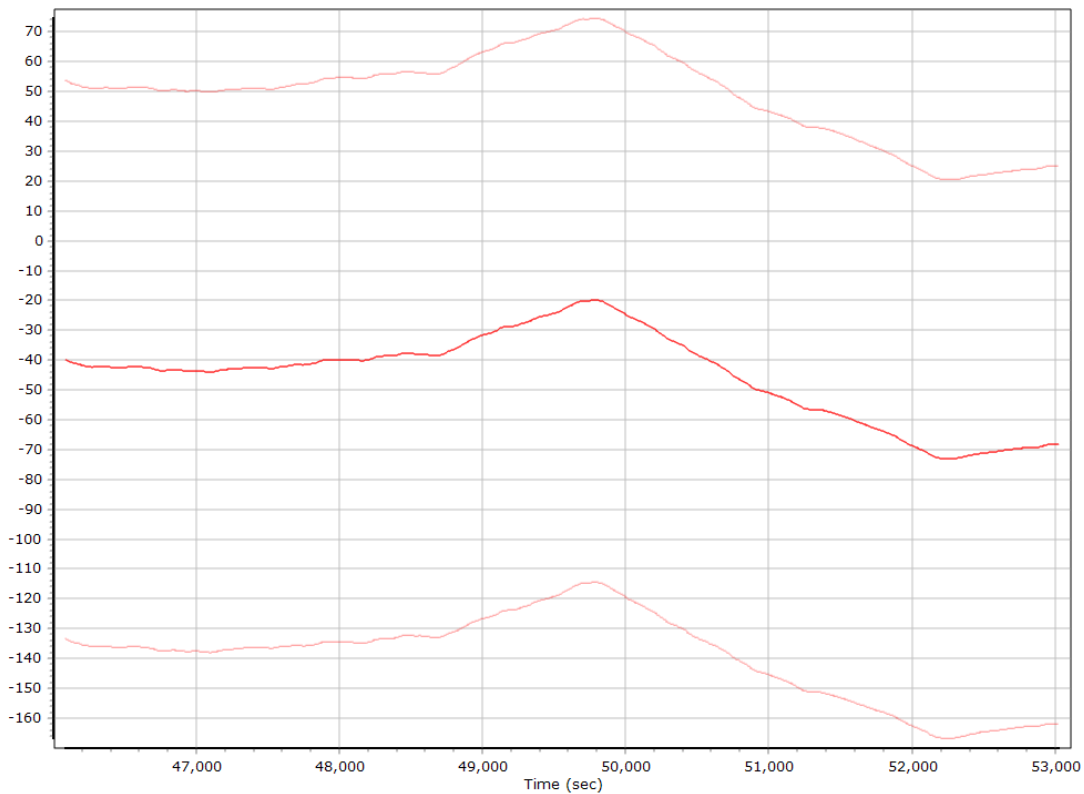
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

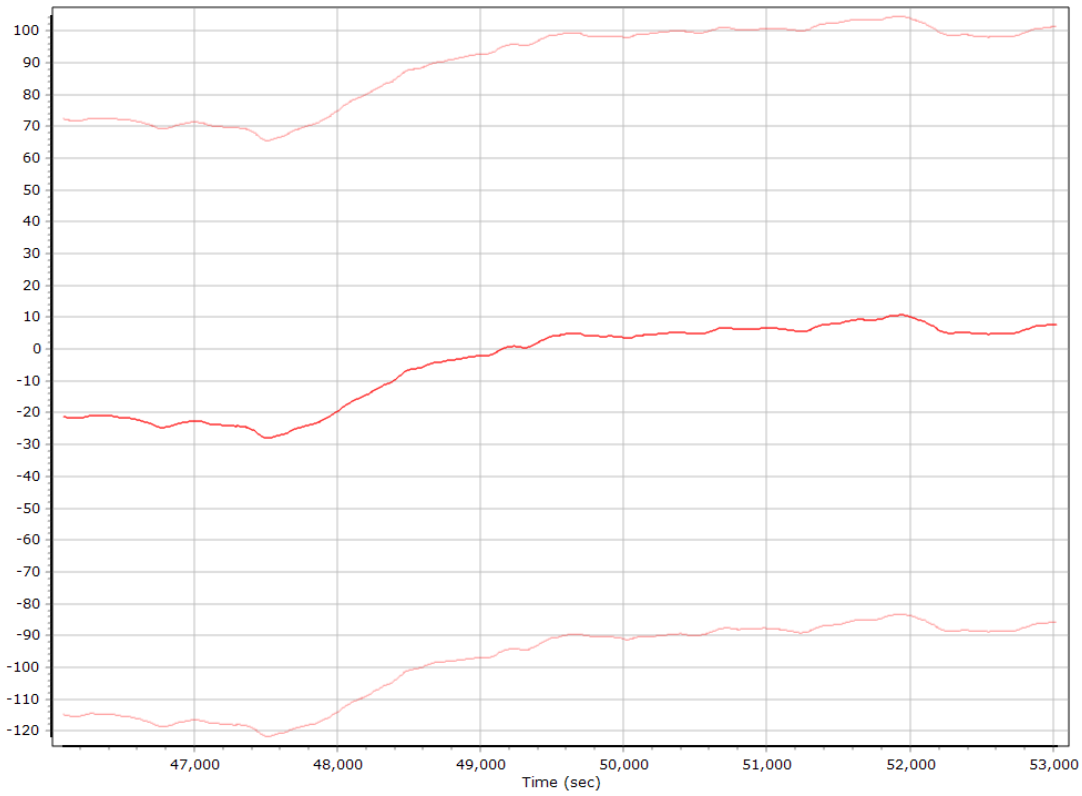
Accelerometer Bias (micro-g)



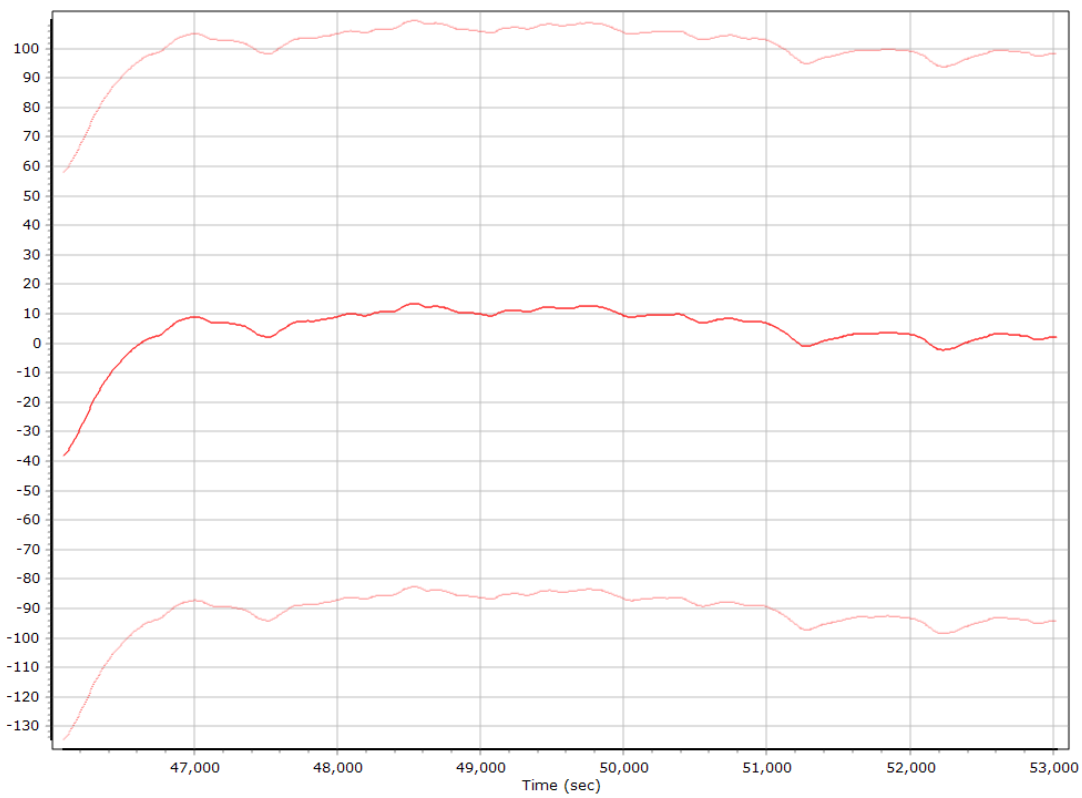
X Accelerometer Bias (micro-g)



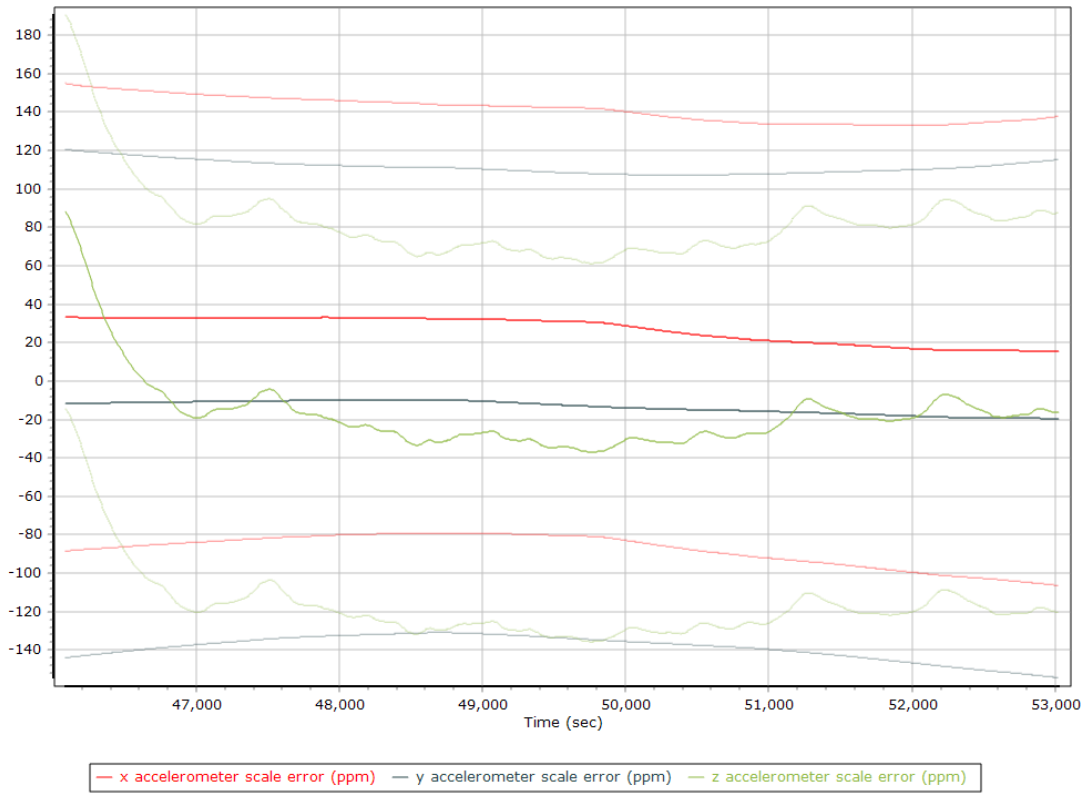
Y Accelerometer Bias (micro-g)



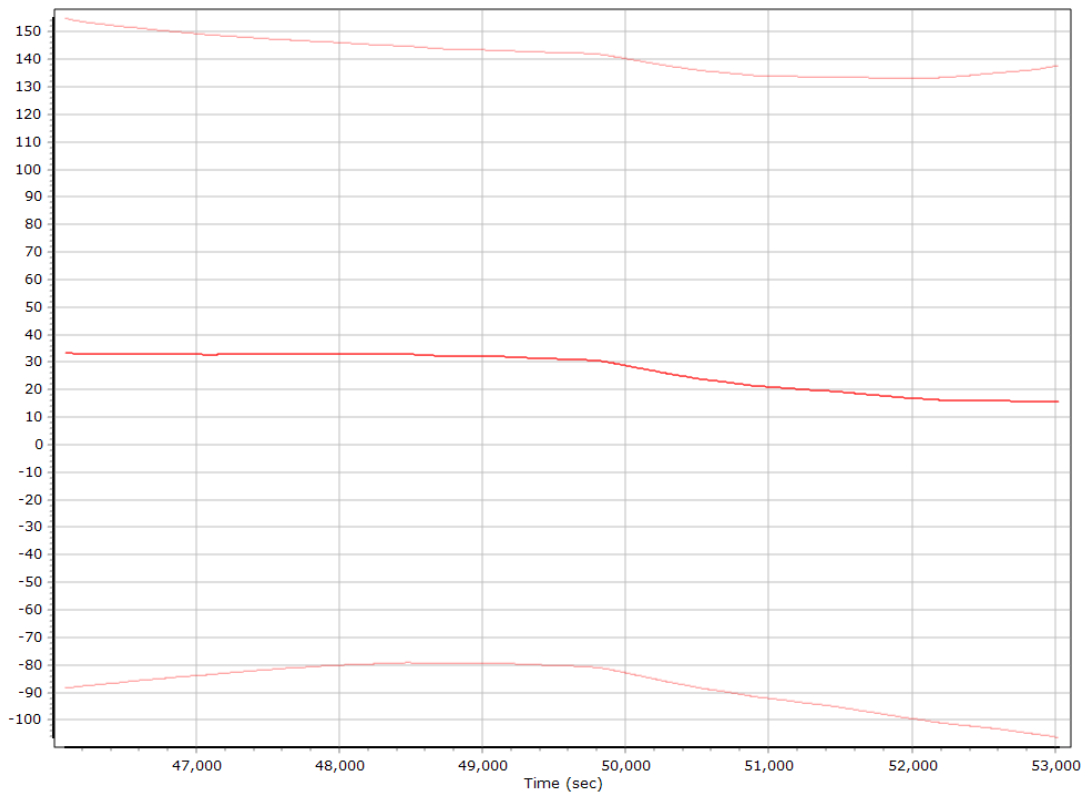
Z Accelerometer Bias (micro-g)



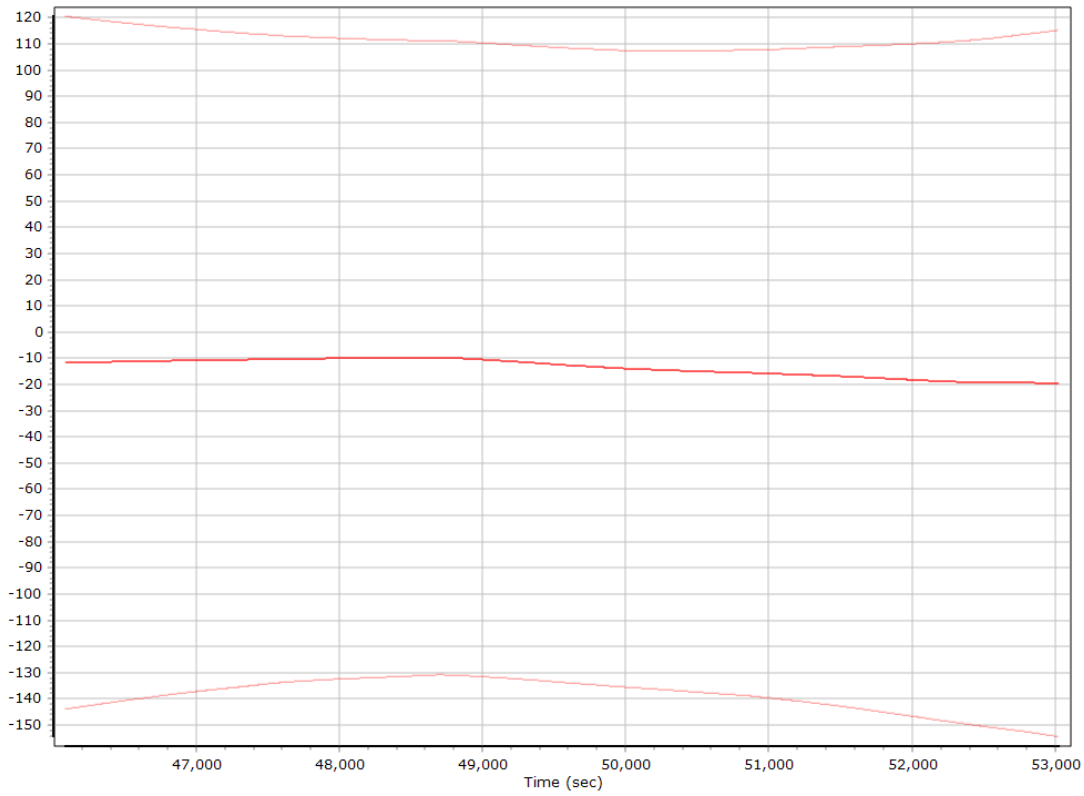
Accelerometer Scale Error (ppm)



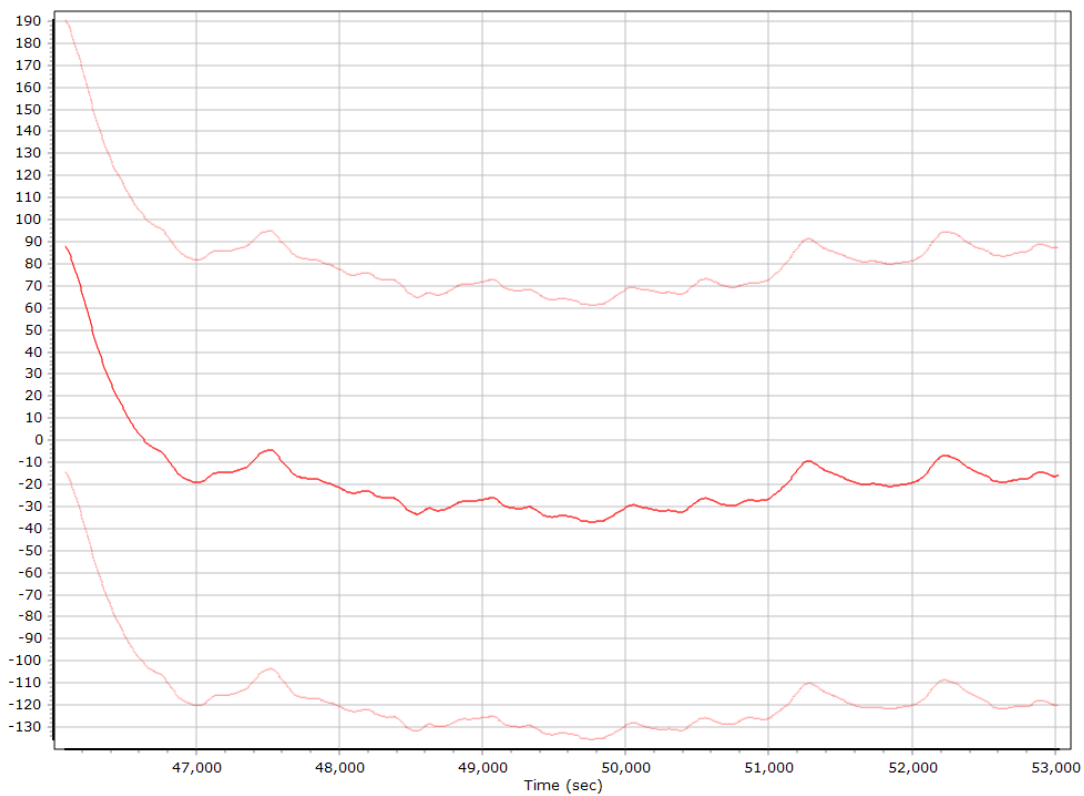
X Accelerometer Scale Error (ppm)



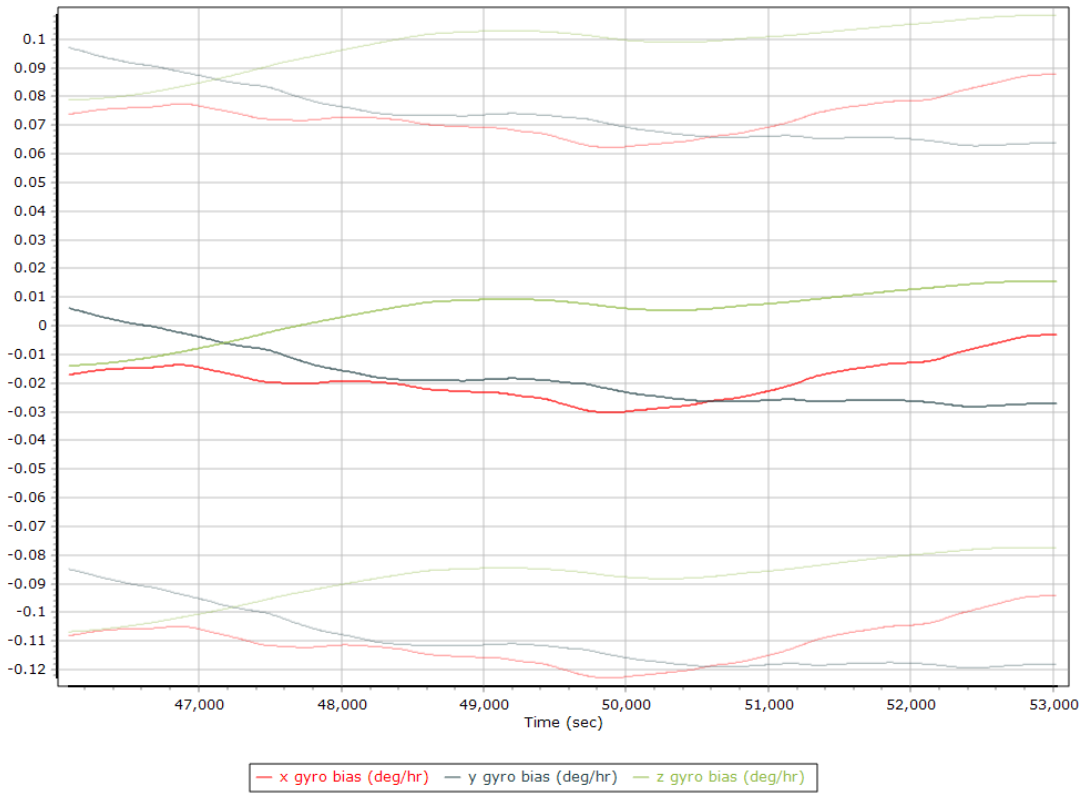
Y Accelerometer Scale Error (ppm)



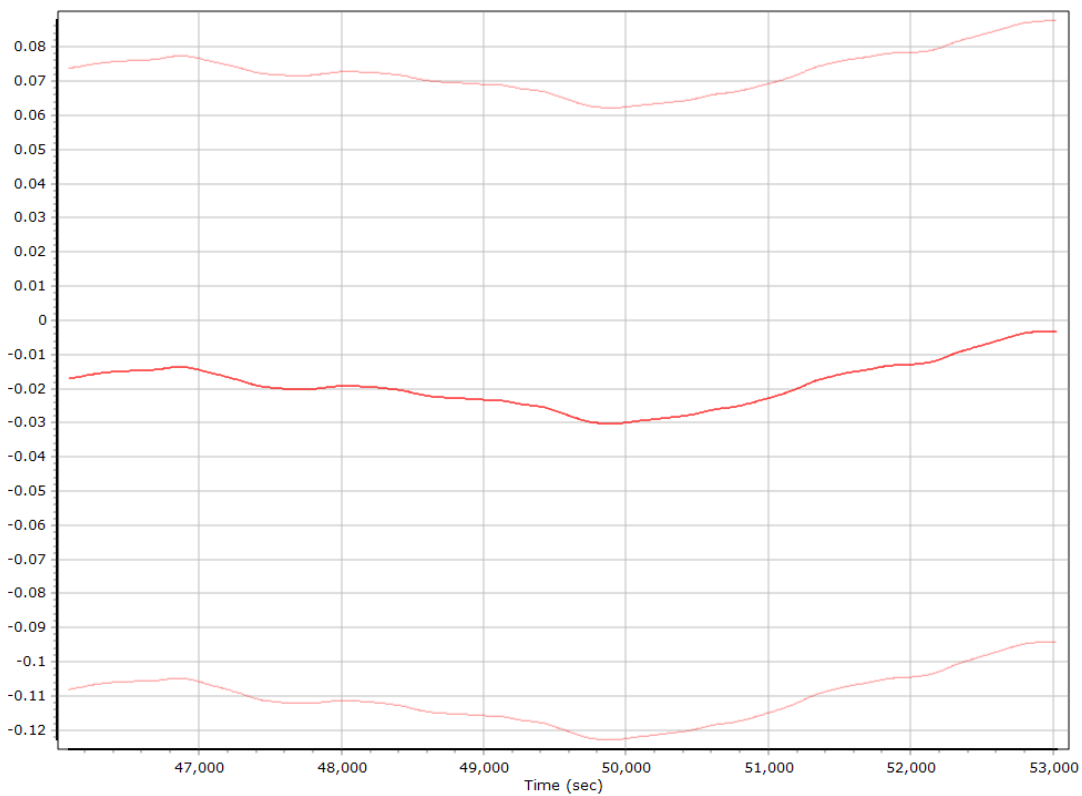
Z Accelerometer Scale Error (ppm)



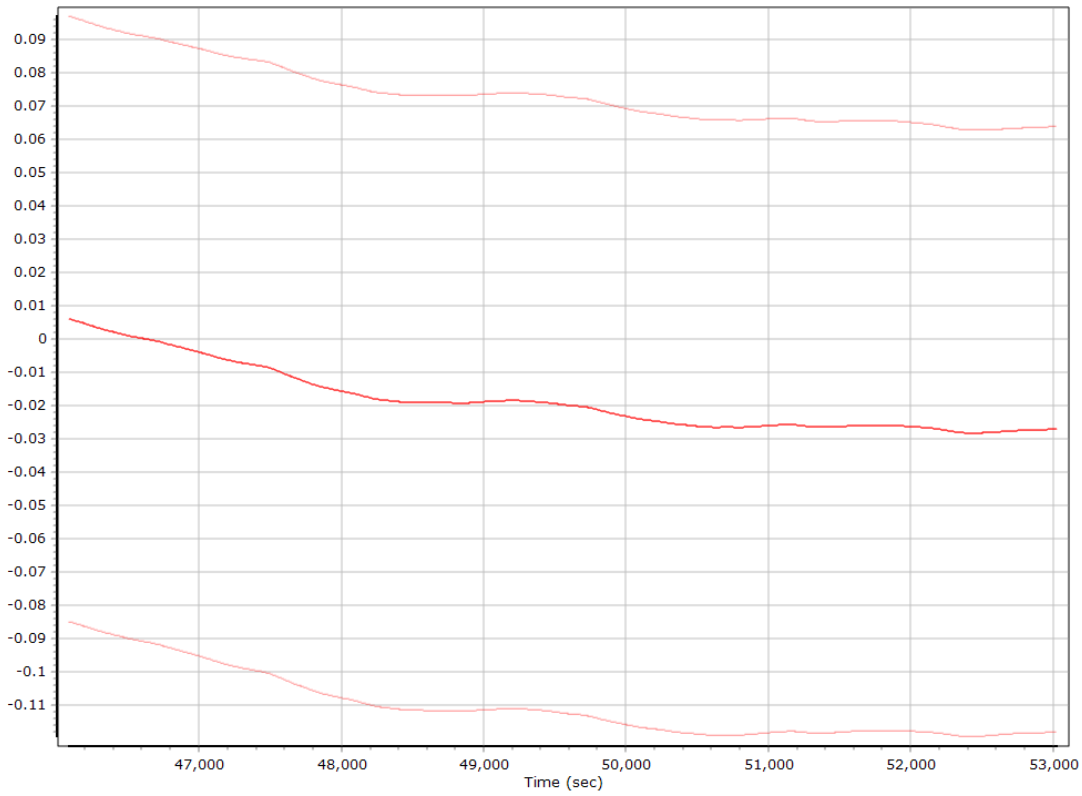
Gyro Bias (deg/h)



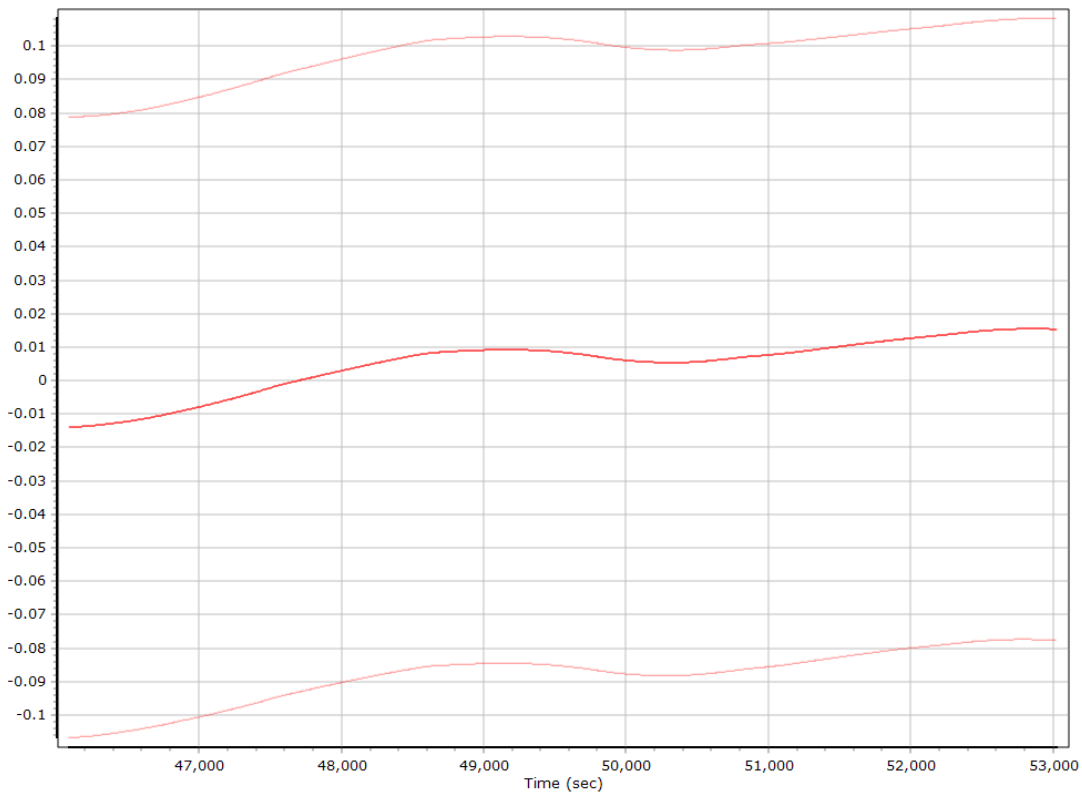
X Gyro Bias (deg/h)



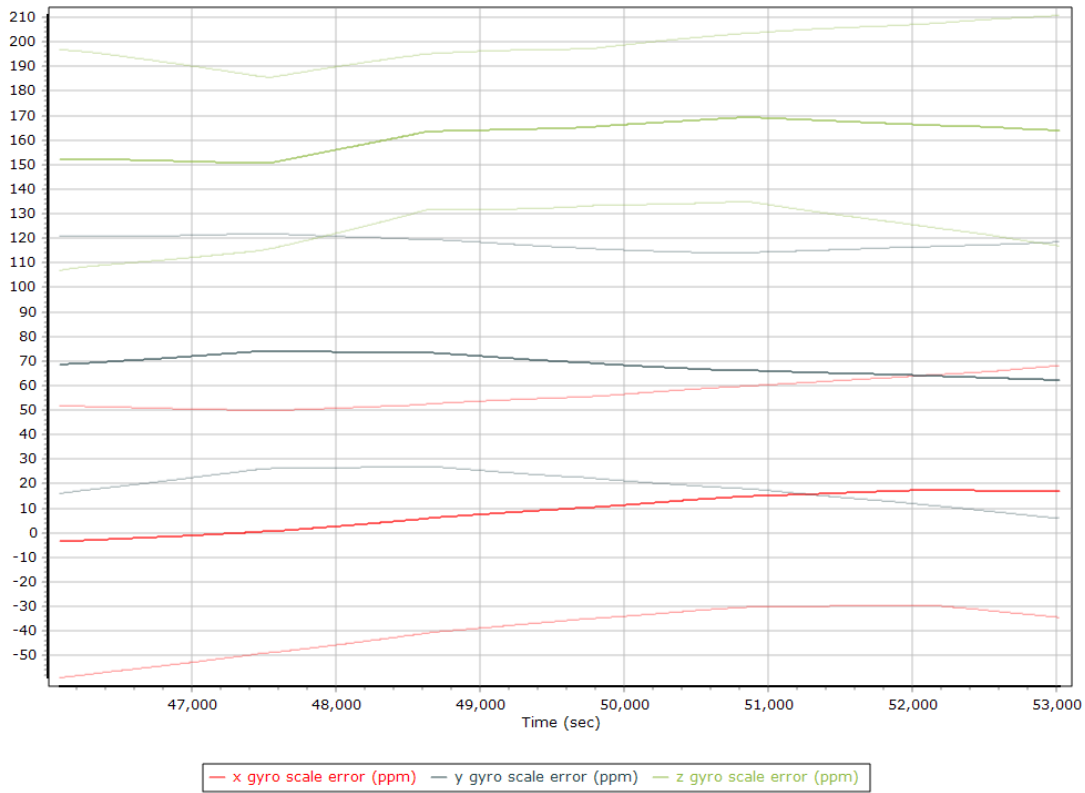
Y Gyro Bias (deg/h)



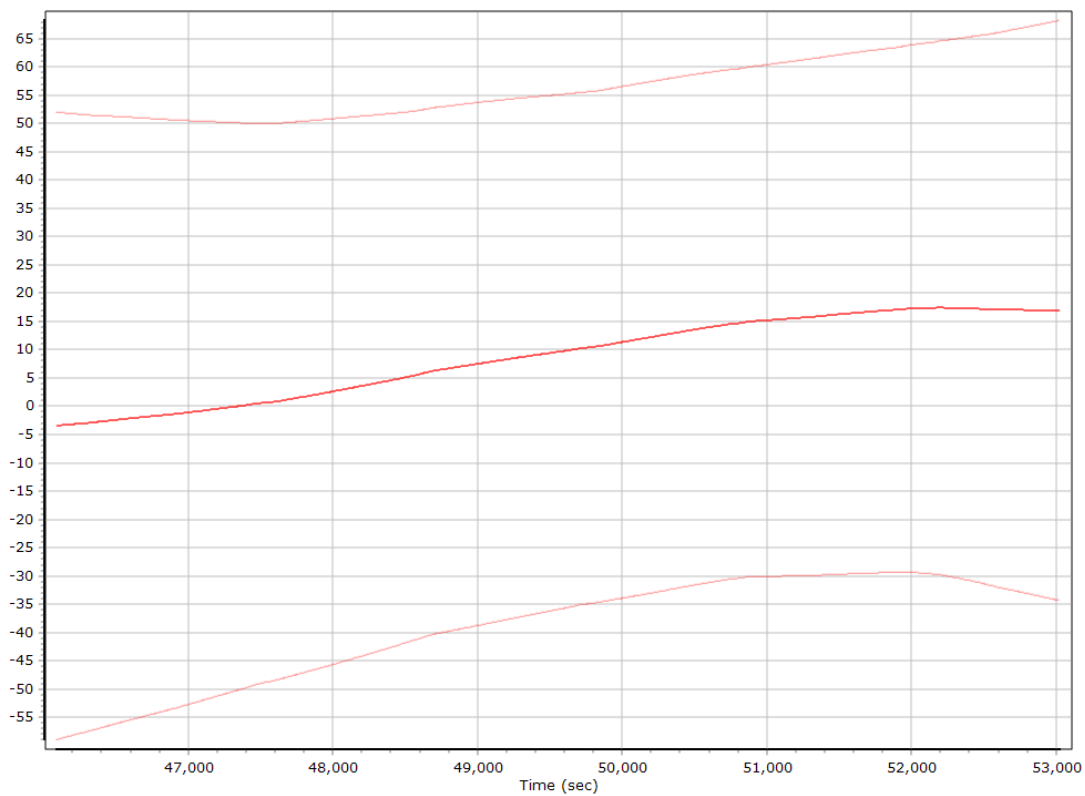
Z Gyro Bias (deg/h)



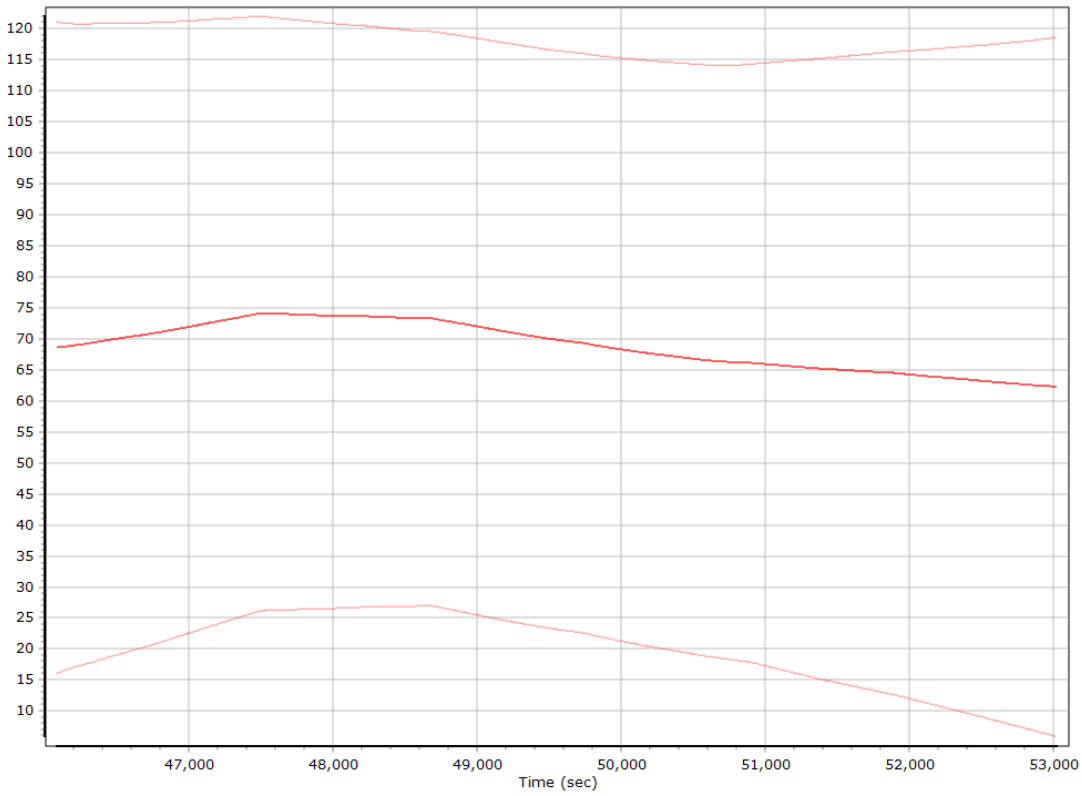
Gyro Scale Error (ppm)



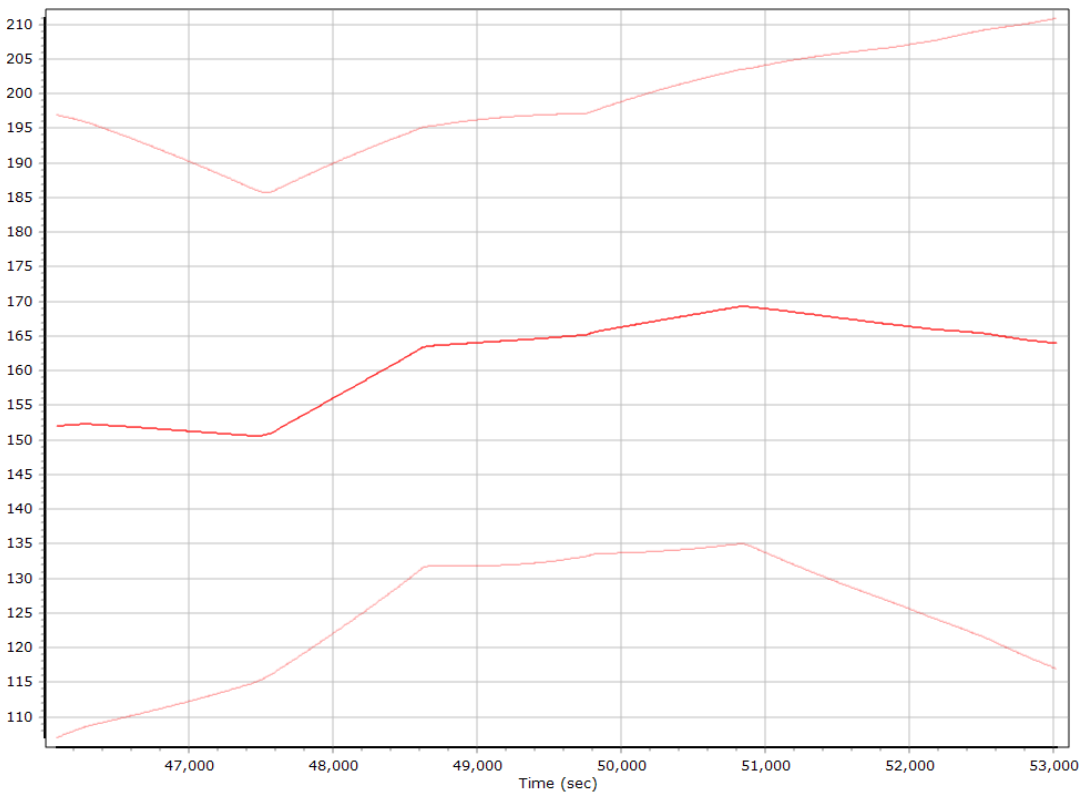
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

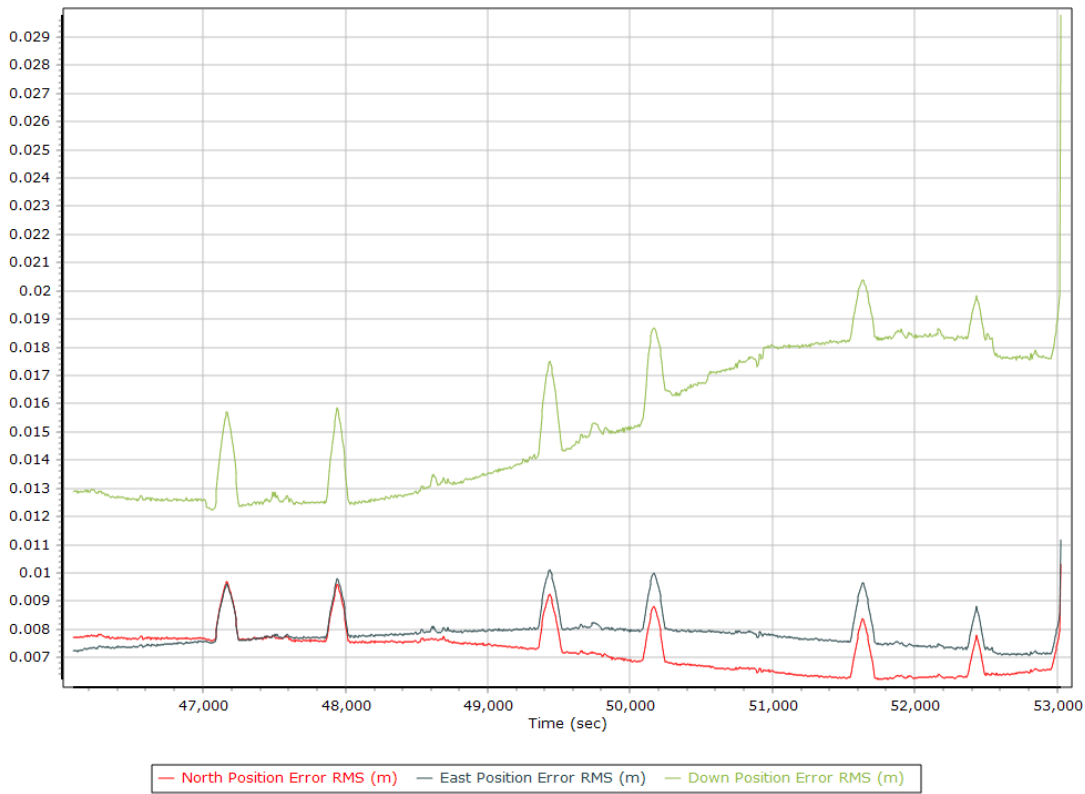


Z Gyro Scale Error (ppm)

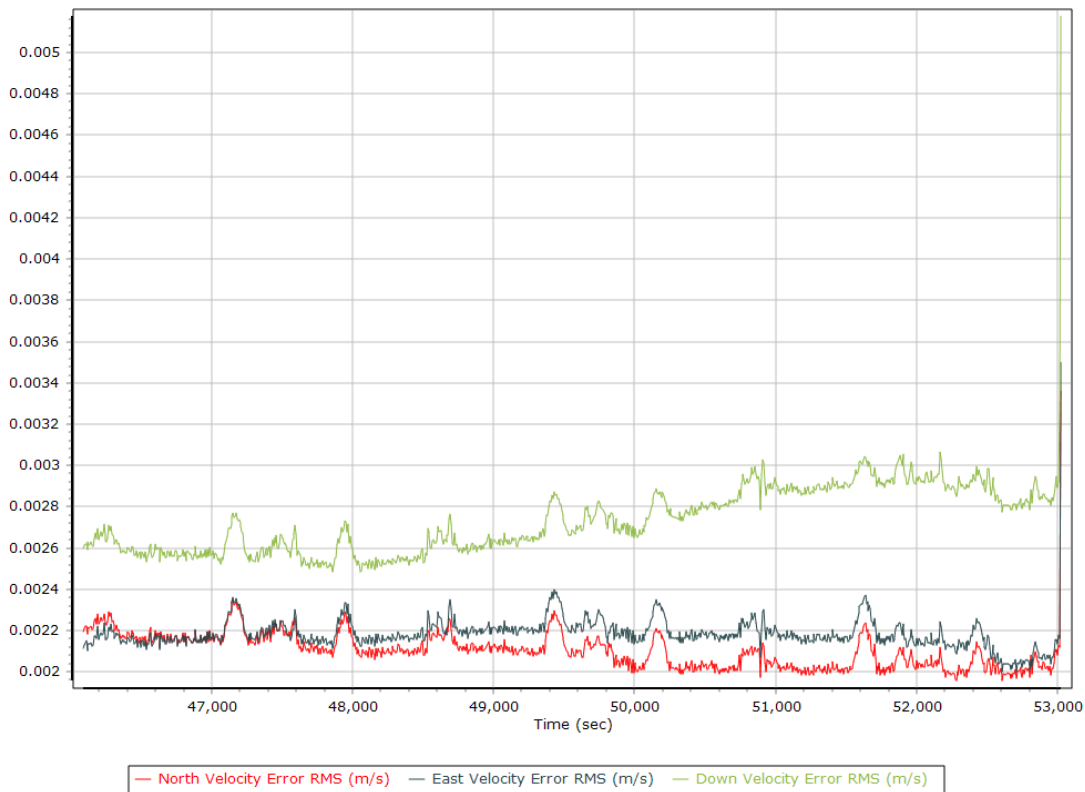


Smoothed Performance Metrics

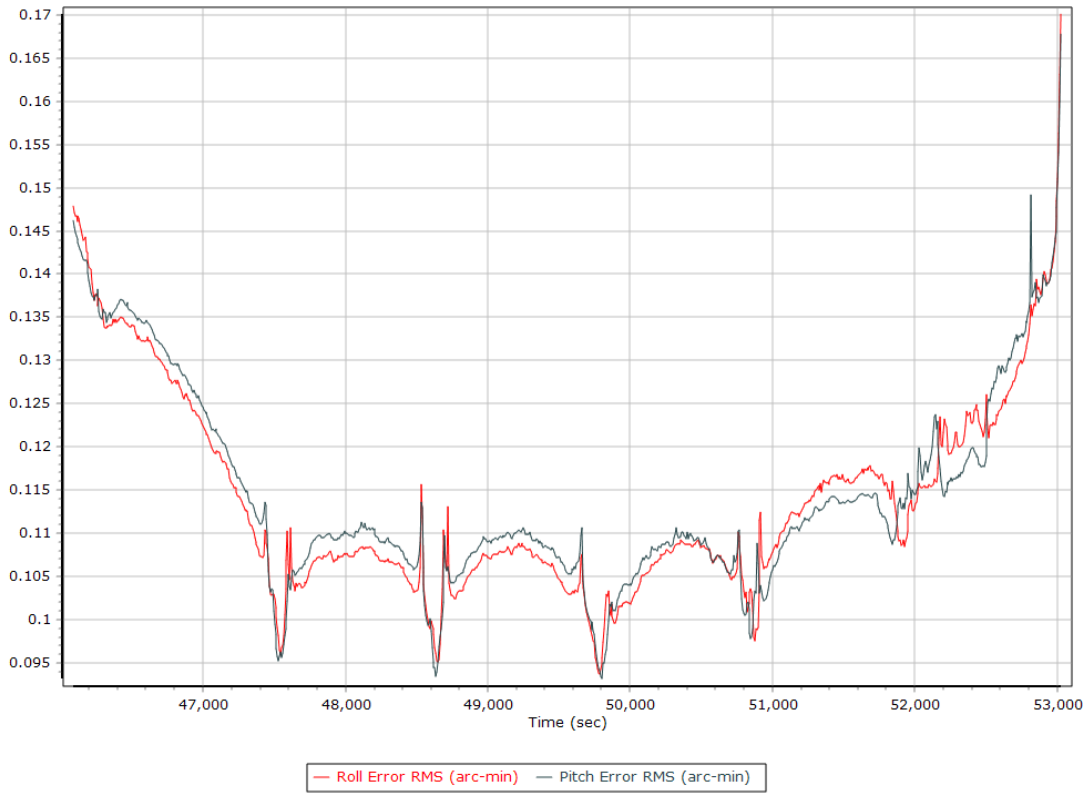
Position Error RMS (m)



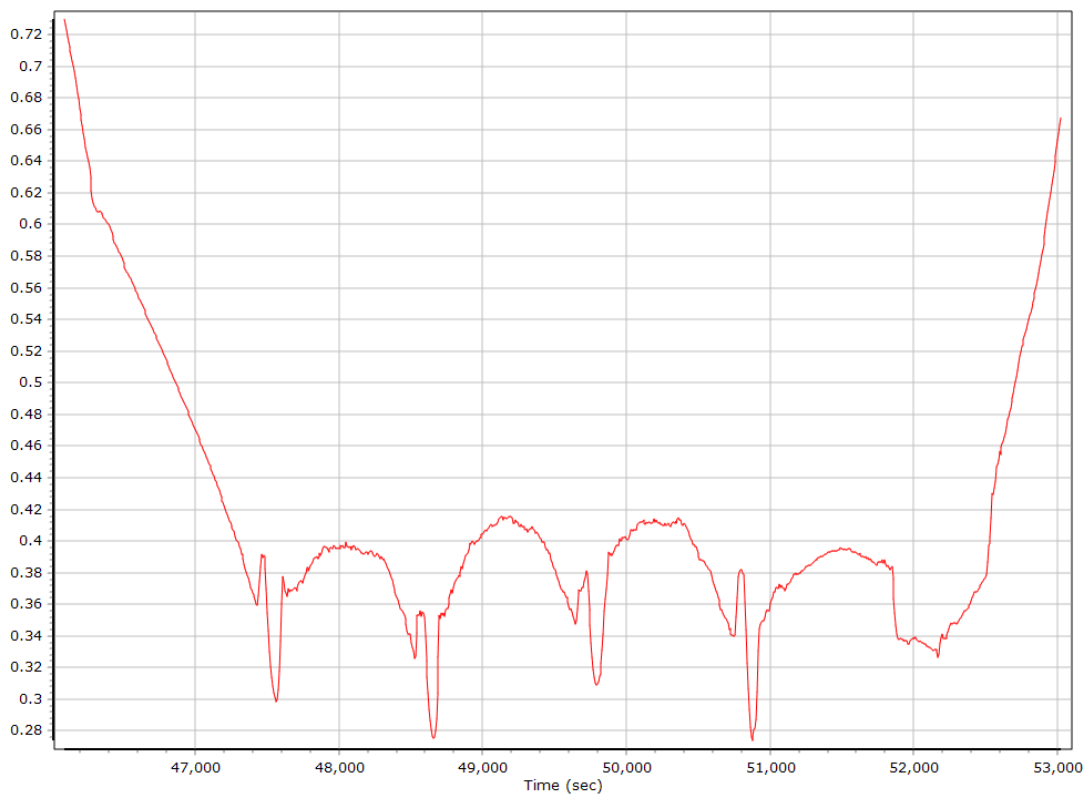
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

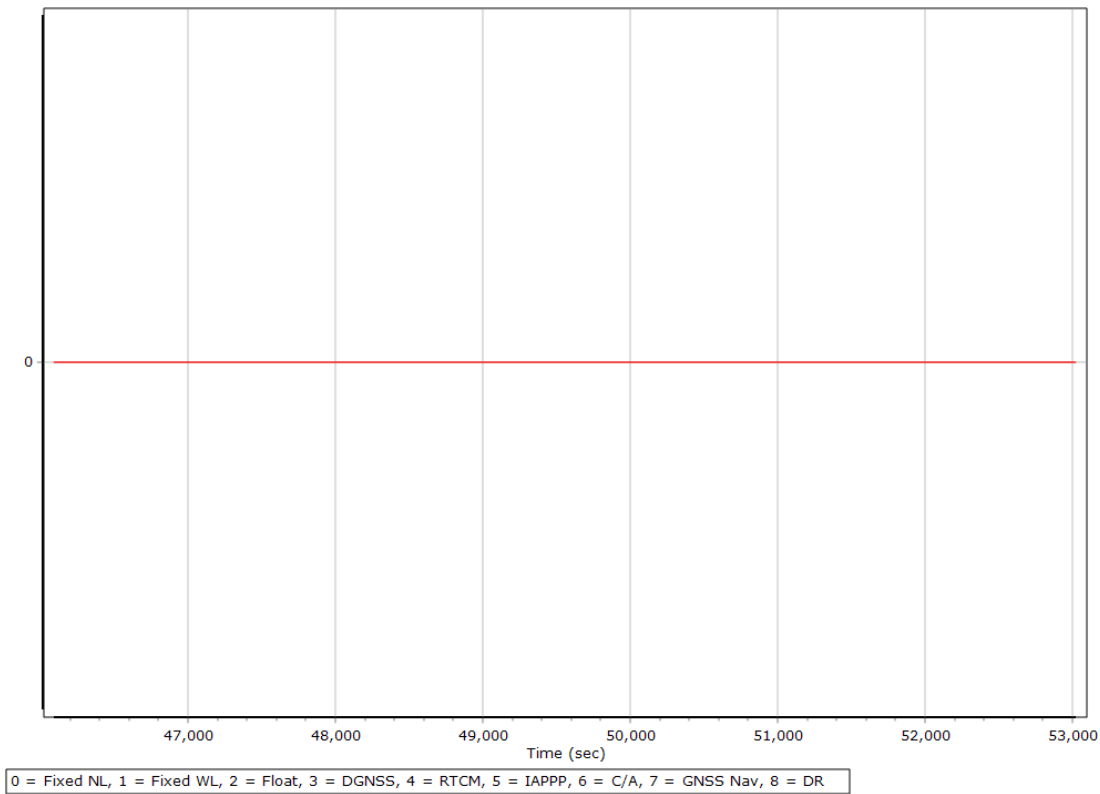


Heading Error RMS (arc-min)

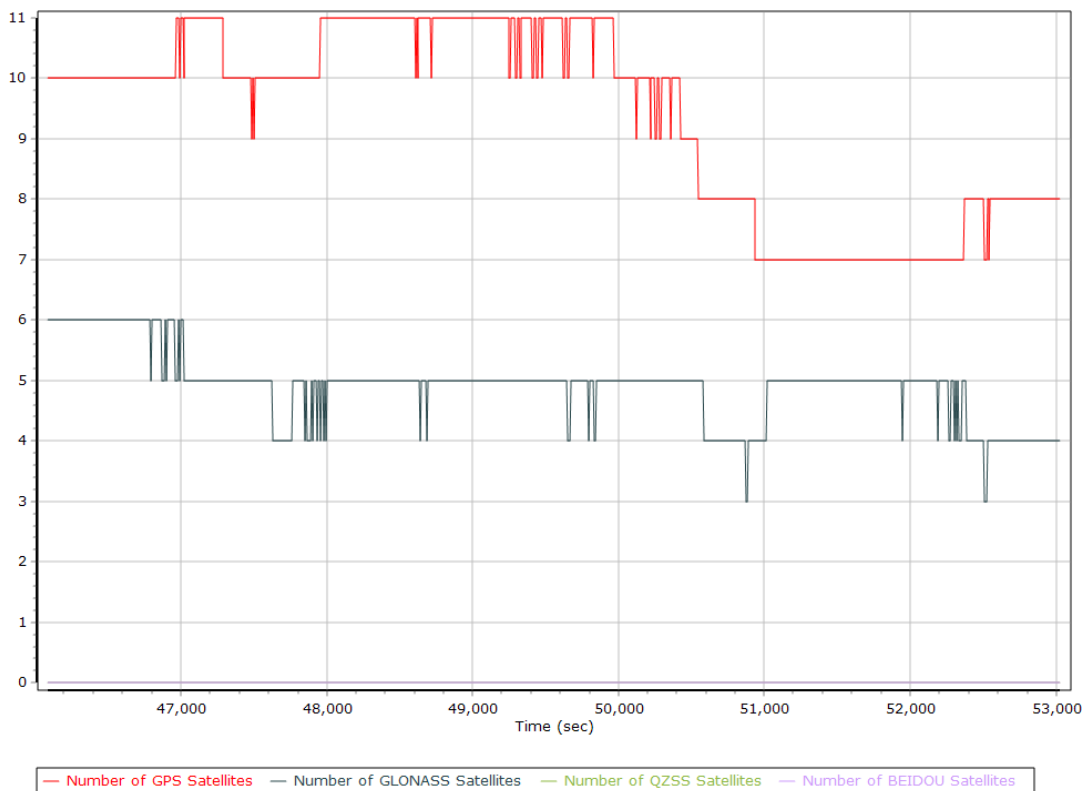


Smoothed Solution Status

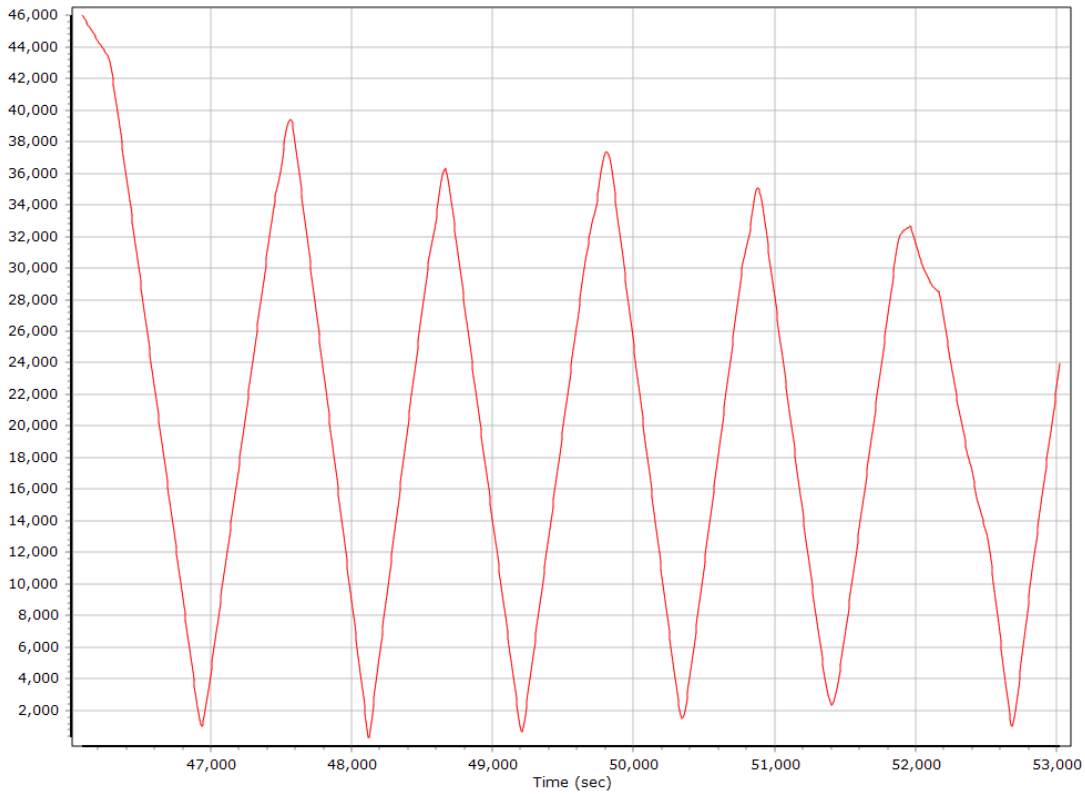
Processing Mode



Number of Satellites



Baseline Length



SBET IAKAR Separation

