

General Information

Mission Information

| | |
|------------------|---------------------|
| Project name | 14624 |
| Processing date | 2022-07-13 09:08:32 |
| Mission date | 2022-07-12 12:26:30 |
| Mission duration | 05:18:53.625 |
| Processing mode | IN-Fusion PP-RTX |

Rover Hardware Information

| | |
|---------------|--------------------------|
| Product | POS AV 610 VER6 HW2.5-12 |
| Serial number | S/N13003 |
| IMU type | 57 |
| Receiver type | BD982 |
| Antenna type | AV39 |

Project File List

Rover Data Files

| File name | File type |
|--------------|-----------|
| 20220712.000 | POS Data |
| 20220712.001 | POS Data |
| 20220712.002 | POS Data |
| 20220712.003 | POS Data |
| 20220712.004 | POS Data |
| 20220712.005 | POS Data |
| 20220712.006 | POS Data |
| 20220712.007 | POS Data |
| 20220712.008 | POS Data |
| 20220712.009 | POS Data |
| 20220712.010 | POS Data |
| 20220712.011 | POS Data |
| 20220712.012 | POS Data |
| 20220712.013 | POS Data |
| 20220712.014 | POS Data |
| 20220712.015 | POS Data |
| 20220712.016 | POS Data |
| 20220712.017 | POS Data |
| 20220712.018 | POS Data |
| 20220712.019 | POS Data |
| 20220712.020 | POS Data |
| 20220712.021 | POS Data |
| 20220712.022 | POS Data |
| 20220712.023 | POS Data |
| 20220712.024 | POS Data |
| 20220712.025 | POS Data |
| 20220712.026 | POS Data |
| 20220712.027 | POS Data |
| 20220712.028 | POS Data |
| 20220712.029 | POS Data |
| 20220712.030 | POS Data |
| 20220712.031 | POS Data |
| 20220712.032 | POS Data |
| 20220712.033 | POS Data |
| 20220712.034 | POS Data |
| 20220712.035 | POS Data |
| 20220712.036 | POS Data |
| 20220712.037 | POS Data |
| 20220712.038 | POS Data |
| 20220712.039 | POS Data |
| 20220712.040 | POS Data |
| 20220712.041 | POS Data |
| 20220712.042 | POS Data |

Input Files

| File Name | File Type |
|--------------|-----------------------------|
| Ephm1930.22g | GLONASS Broadcast Ephemeris |
| Ephm1930.22n | GPS Broadcast Ephemeris |

Output Files

| Filename | File type |
|----------------------------|-----------------------------------|
| sbet_14624.out | SBET Trajectory File |
| eo_14624.txt | ZI Imaging POSEO Output |
| sbet_14624_NAD83(2011).out | Custom Smoothed BET Export Output |

Rover Data Summary

| | | | |
|--|----------------------------------|--------|---------|
| First raw data file | 20220712.000 | | |
| Last raw data file | 20220712.042 | | |
| Start GPS week | 2218 | | |
| Start time | 217589.320 (07/12/2022 12:26:29) | | |
| End time | 236722.945 (07/12/2022 17:45:22) | | |
| Start of fine alignment | 217944.945 (07/12/2022 12:32:24) | | |
| 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 | 180.000 |
| Reference to Primary GNSS lever arm (m) | -0.399 | -0.382 | -1.125 |
| Reference to Primary GNSS lever arm std dev (m) | -1.000 | | |
| Aircraft to Reference mounting angles (deg) | 0.000 | 0.000 | 0.000 |

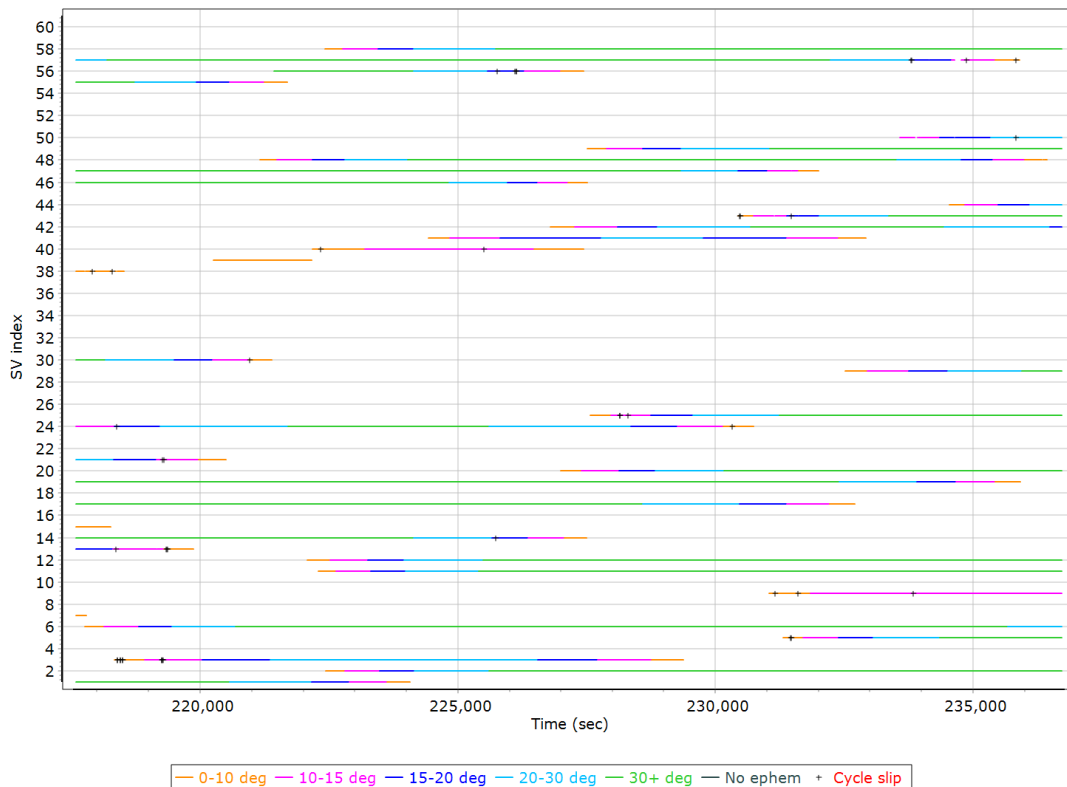
Rover Data QC

Raw IMU Import QC Summary

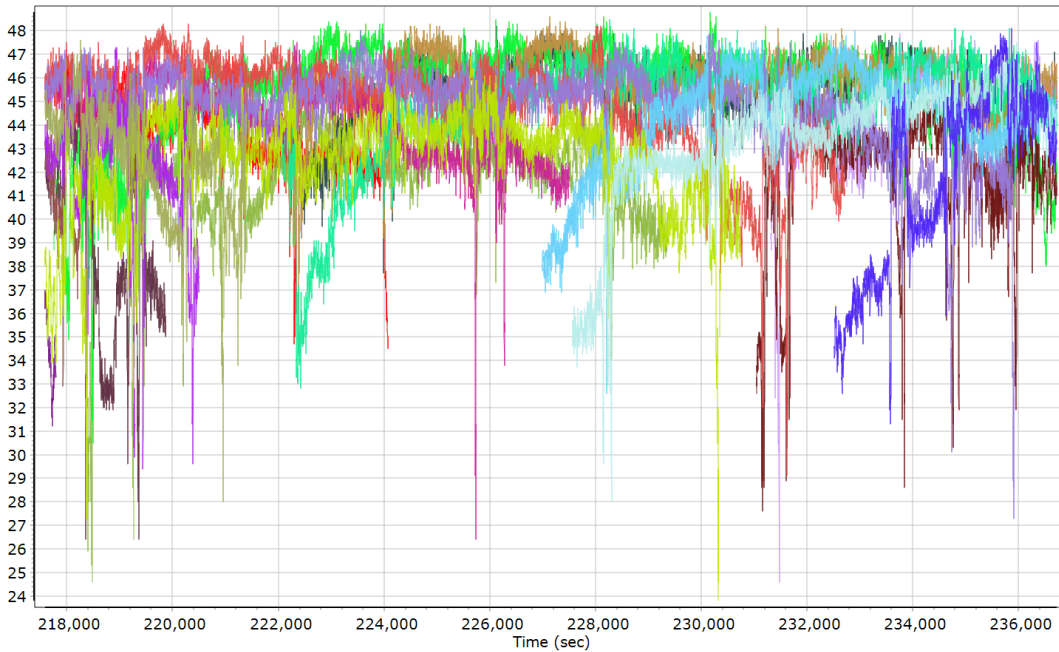
| | |
|-------------------------|-----------------|
| IMU data input file | imu_14624.dat |
| IMU data check log file | imudt_14624.log |
| IMU Records Processed | 3826614 |
| Termination Status | Normal |
| IMU Anomalies | 0 |

Primary Observables & Satellite Data

GPS/GLONASS L1 Satellite Lock/Elevation

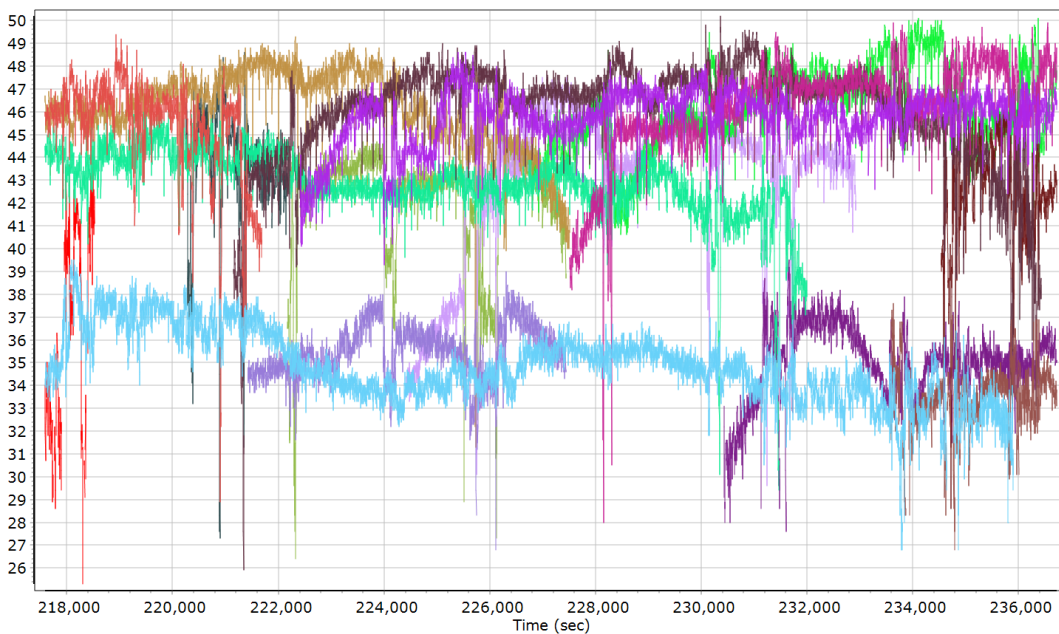


GPS L1 SNR



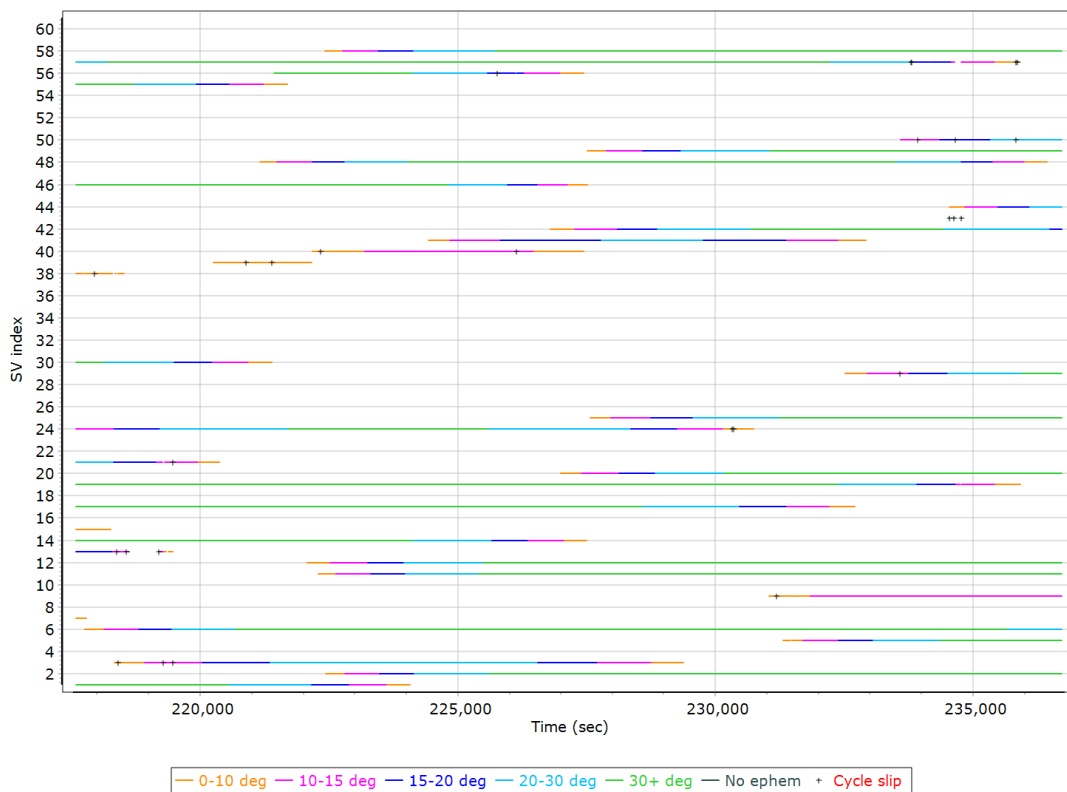
- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 01 L1 SNR (dB/Hz) | GPS PRN 02 L1 SNR (dB/Hz) | GPS PRN 03 L1 SNR (dB/Hz) | GPS PRN 05 L1 SNR (dB/Hz) |
| GPS PRN 06 L1 SNR (dB/Hz) | GPS PRN 07 L1 SNR (dB/Hz) | GPS PRN 09 L1 SNR (dB/Hz) | GPS PRN 11 L1 SNR (dB/Hz) |
| GPS PRN 12 L1 SNR (dB/Hz) | GPS PRN 13 L1 SNR (dB/Hz) | GPS PRN 14 L1 SNR (dB/Hz) | GPS PRN 15 L1 SNR (dB/Hz) |
| GPS PRN 17 L1 SNR (dB/Hz) | GPS PRN 19 L1 SNR (dB/Hz) | GPS PRN 20 L1 SNR (dB/Hz) | GPS PRN 21 L1 SNR (dB/Hz) |
| GPS PRN 24 L1 SNR (dB/Hz) | GPS PRN 25 L1 SNR (dB/Hz) | GPS PRN 29 L1 SNR (dB/Hz) | GPS PRN 30 L1 SNR (dB/Hz) |

GLONASS L1 SNR

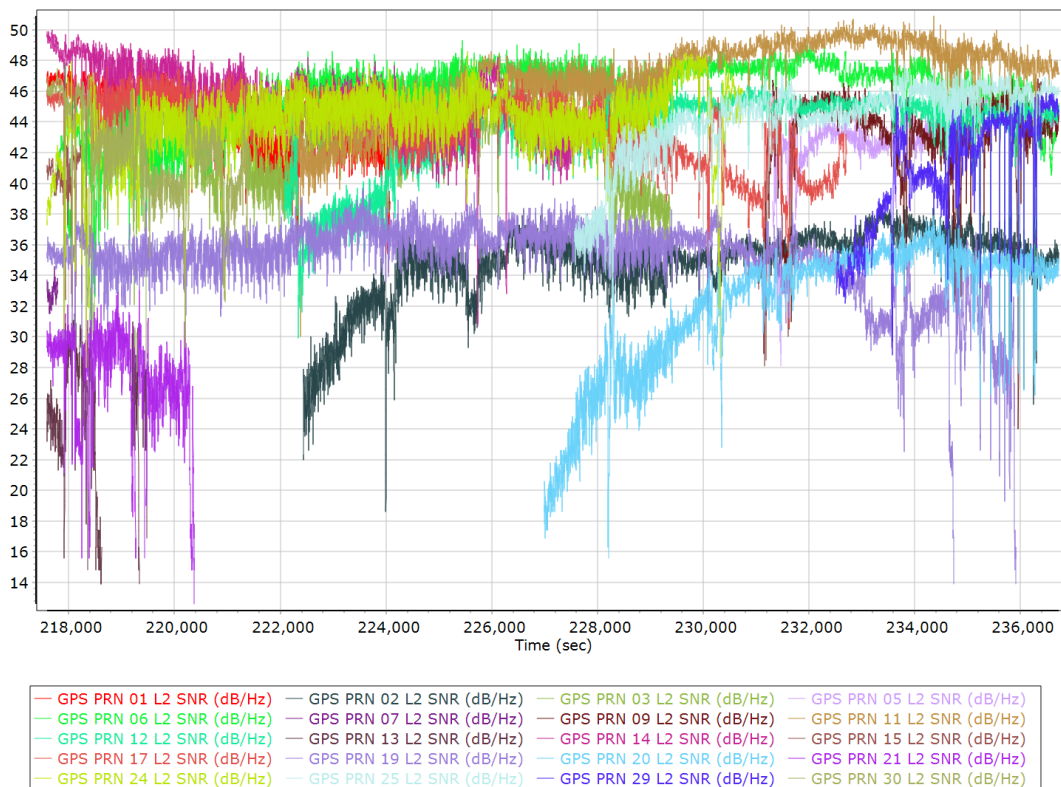


- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 01 L1 SNR (dB/Hz) | GLONASS 02 L1 SNR (dB/Hz) | GLONASS 03 L1 SNR (dB/Hz) |
| GLONASS 04 L1 SNR (dB/Hz) | GLONASS 05 L1 SNR (dB/Hz) | GLONASS 06 L1 SNR (dB/Hz) |
| GLONASS 07 L1 SNR (dB/Hz) | GLONASS 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 18 L1 SNR (dB/Hz) | GLONASS 19 L1 SNR (dB/Hz) | GLONASS 20 L1 SNR (dB/Hz) |
| GLONASS 21 L1 SNR (dB/Hz) | | |

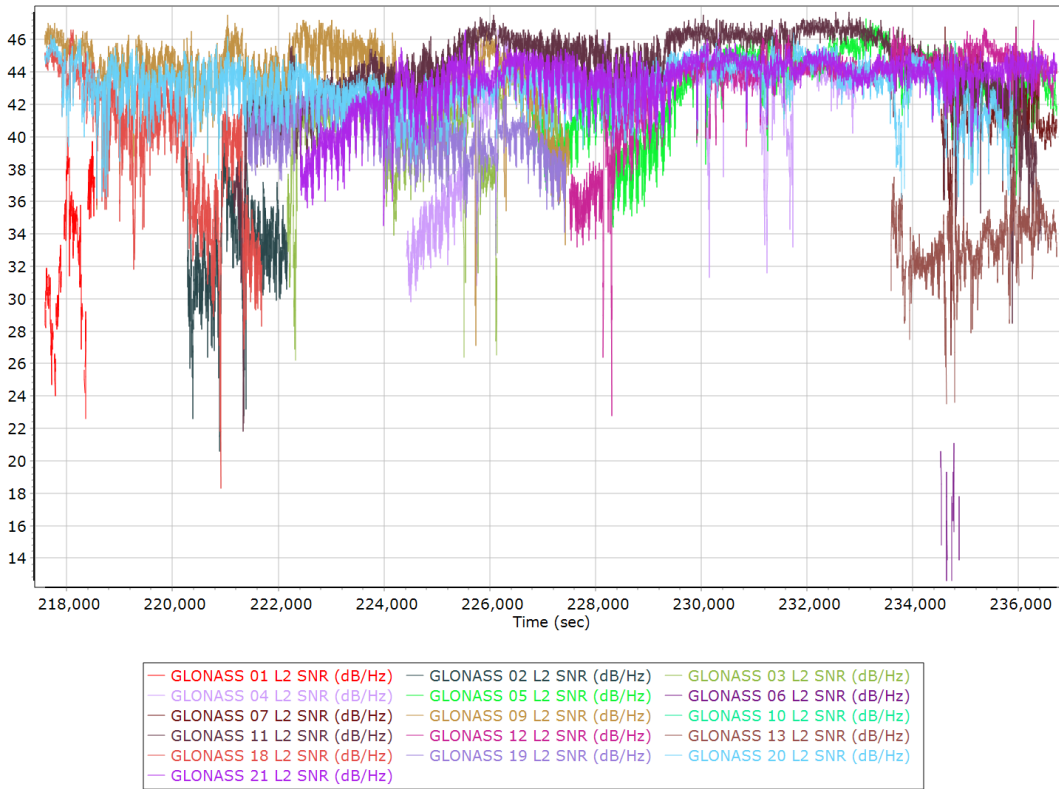
GPS/GLONASS L2 Satellite Lock/Elevation



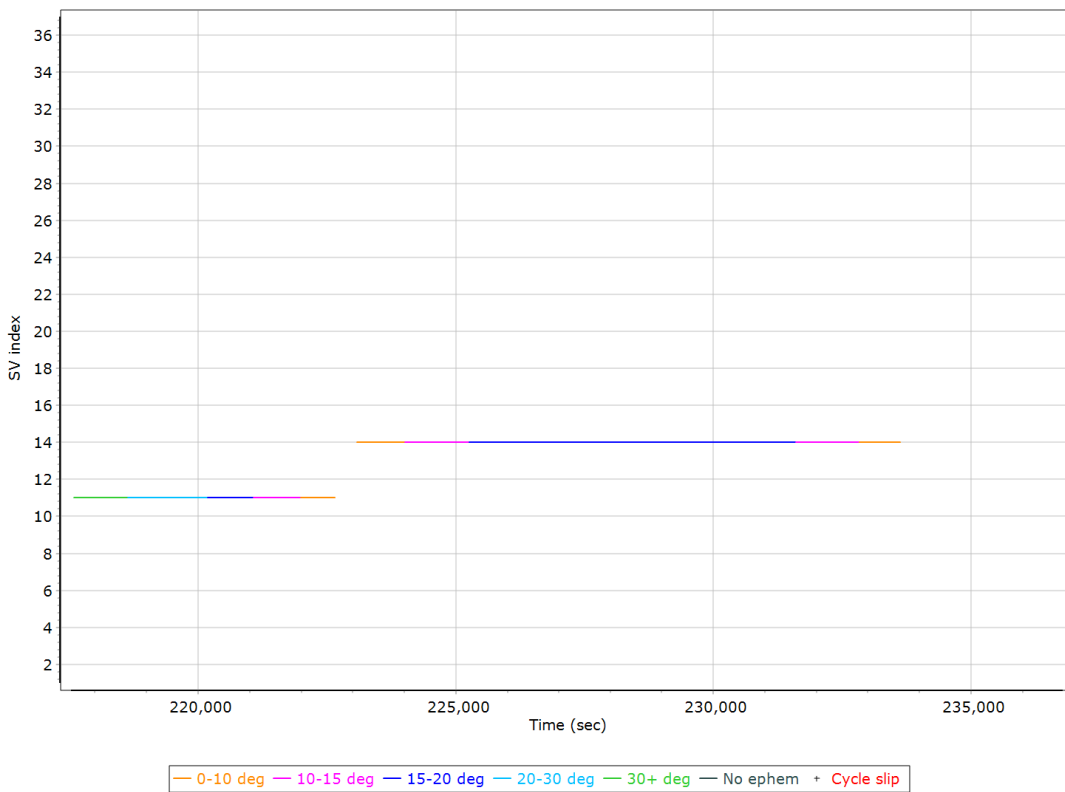
GPS L2 SNR



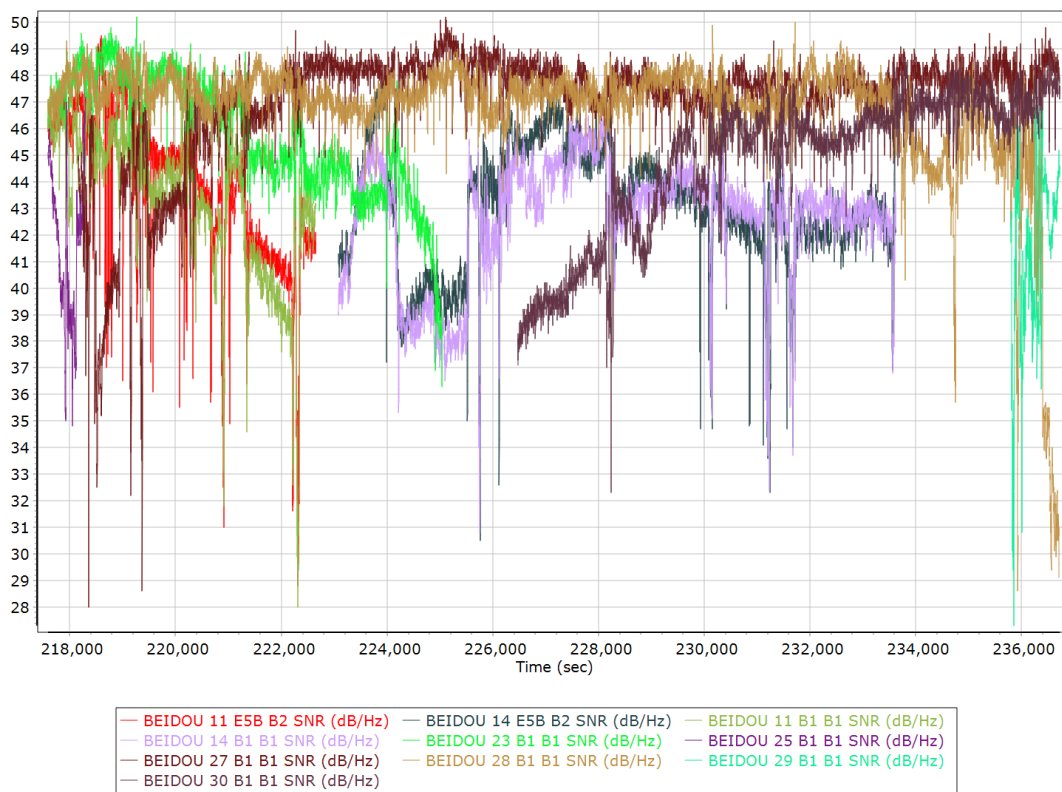
GLONASS L2 SNR



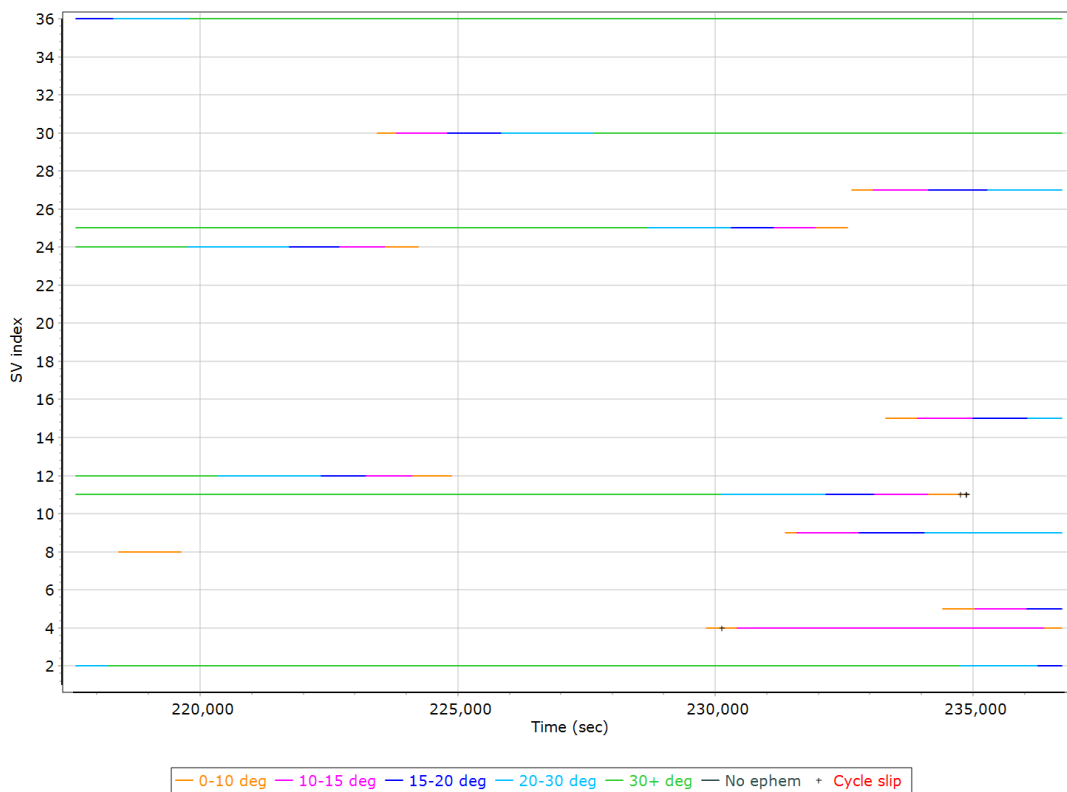
BEIDOU Satellite Lock/Elevation



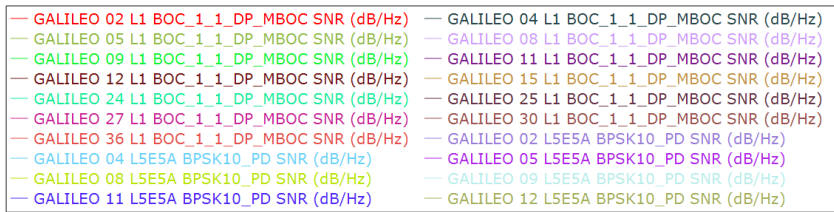
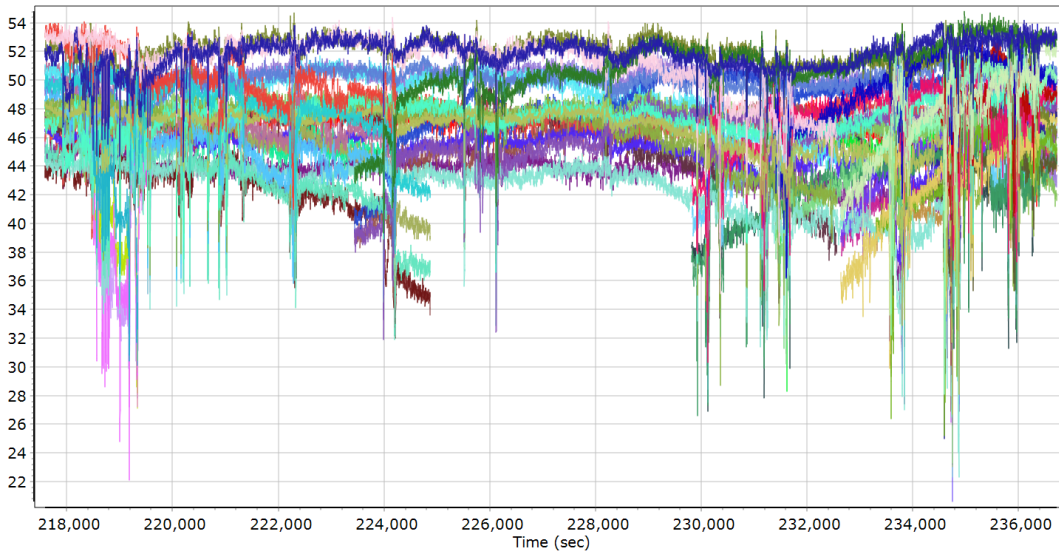
BEIDOU SNR



GALILEO Satellite Lock/Elevation

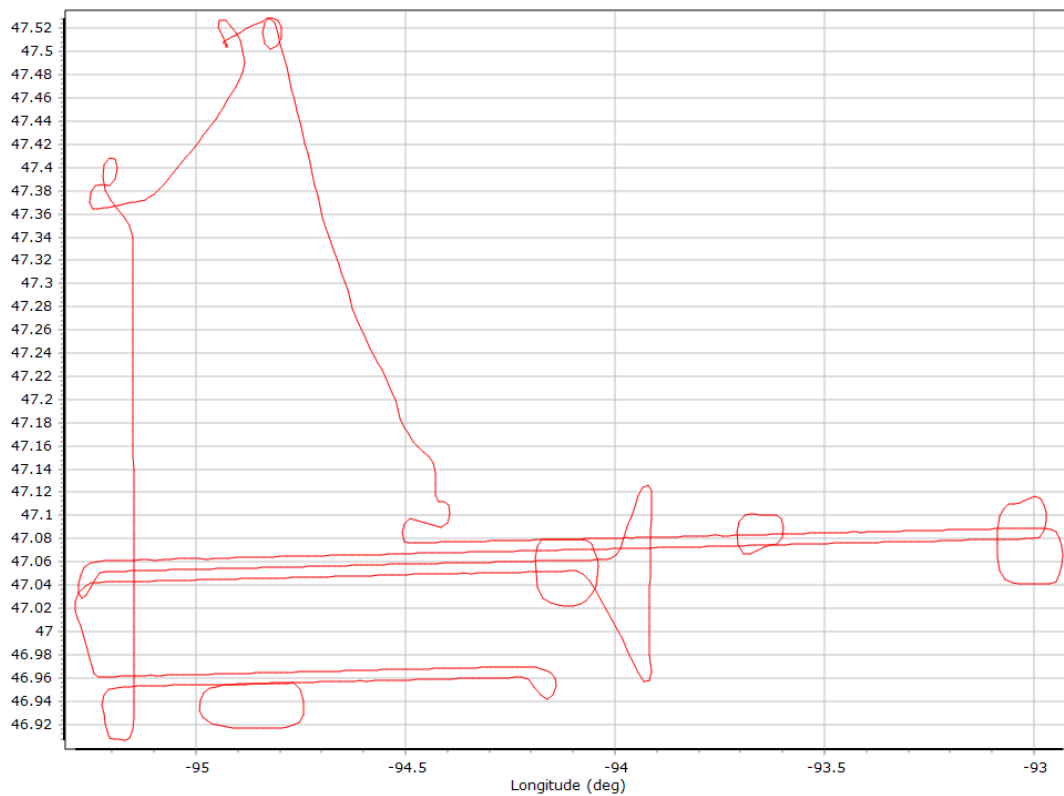


GALILEO SNR

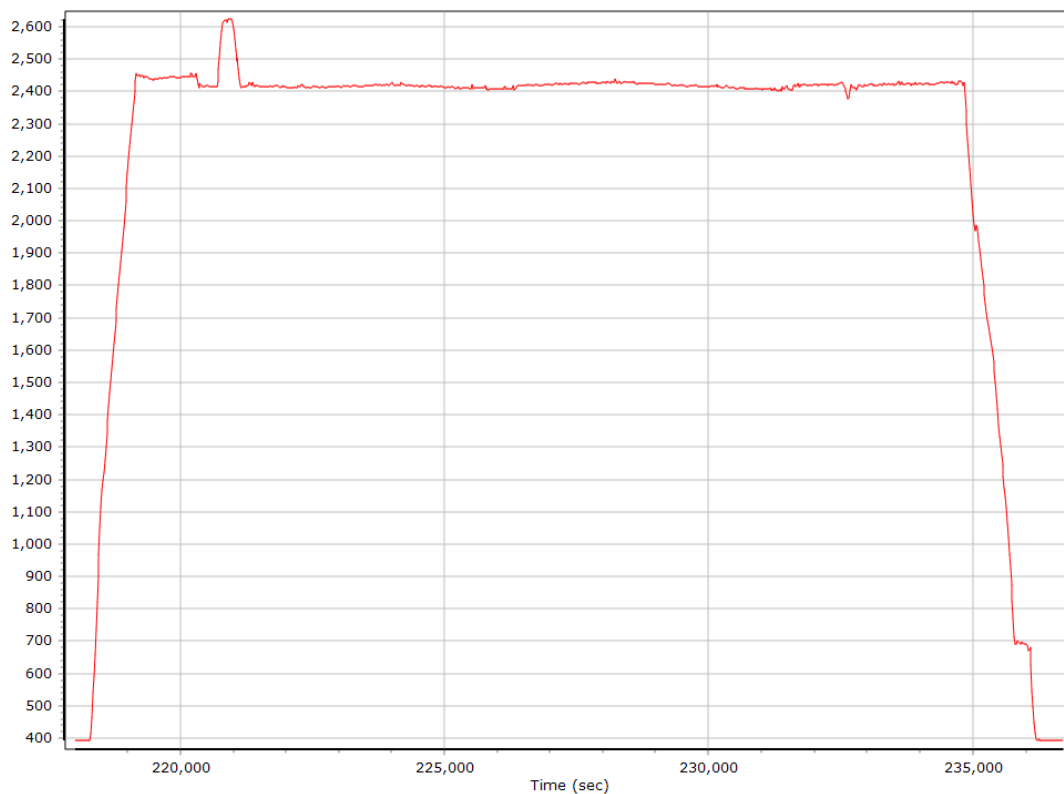


Smoothed Trajectory Information

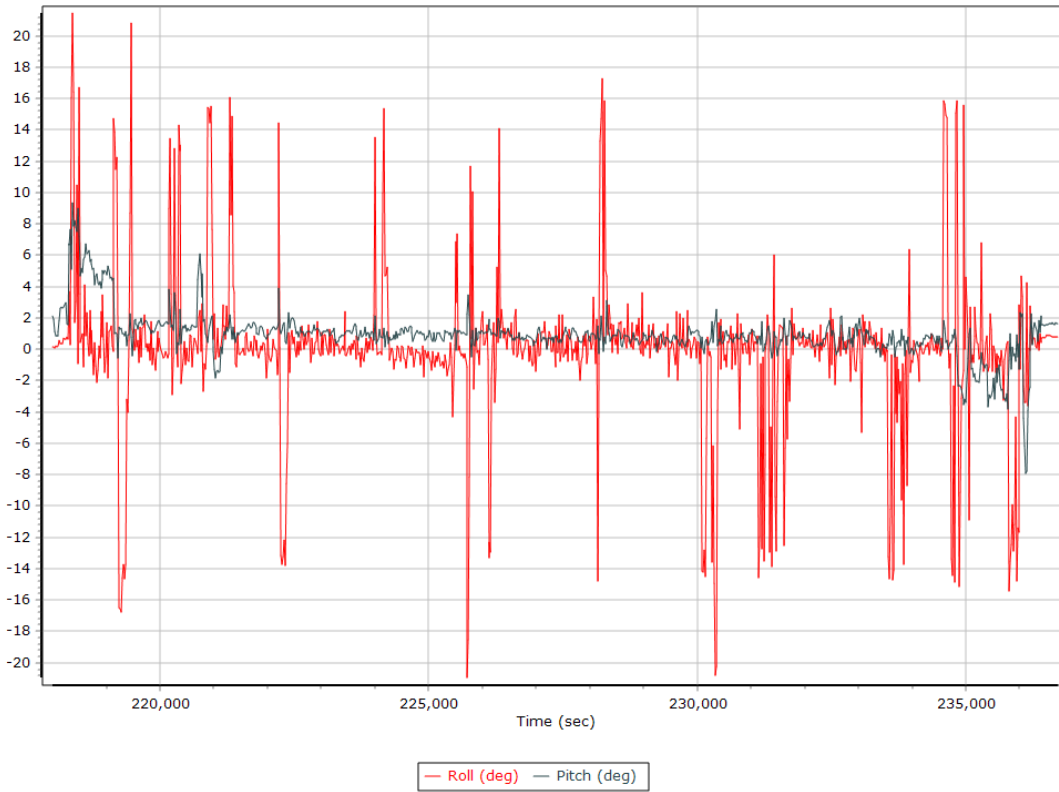
Top View



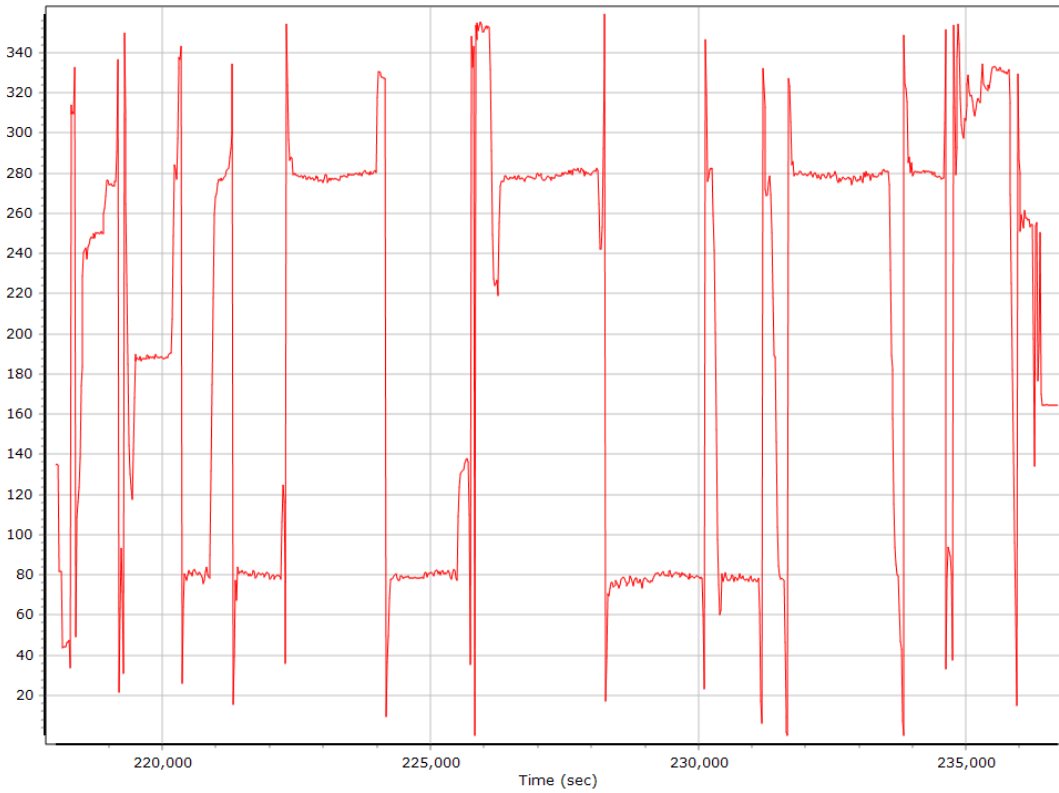
Altitude



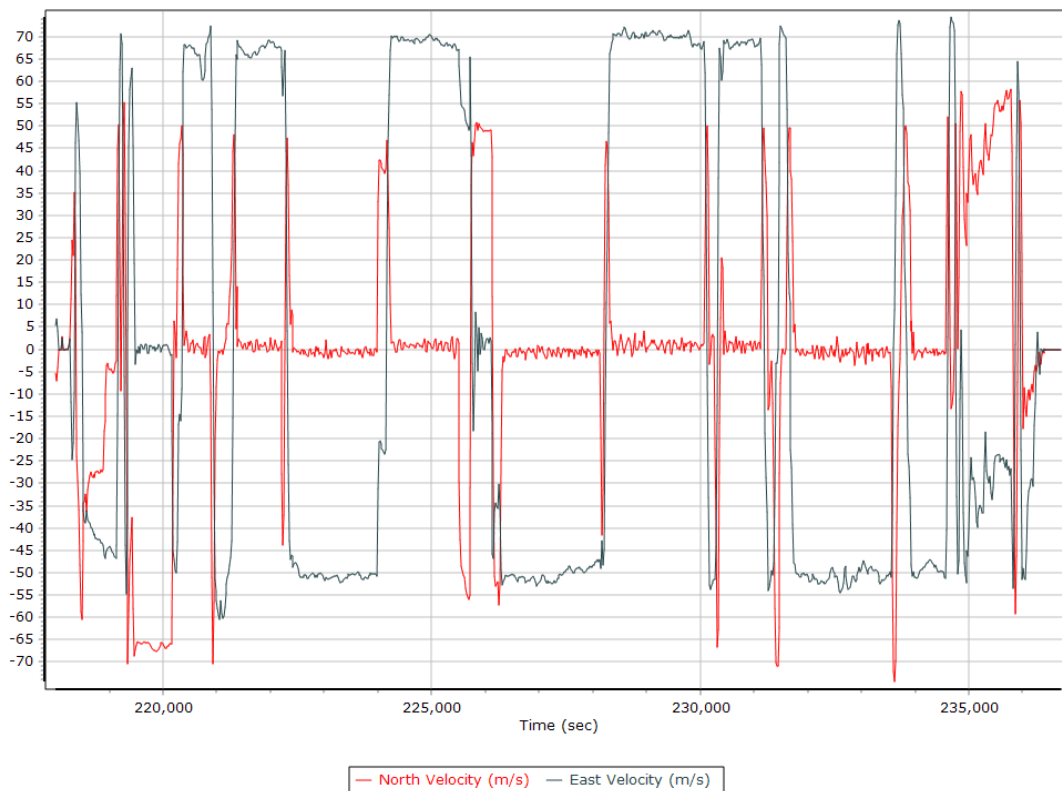
Roll/Pitch



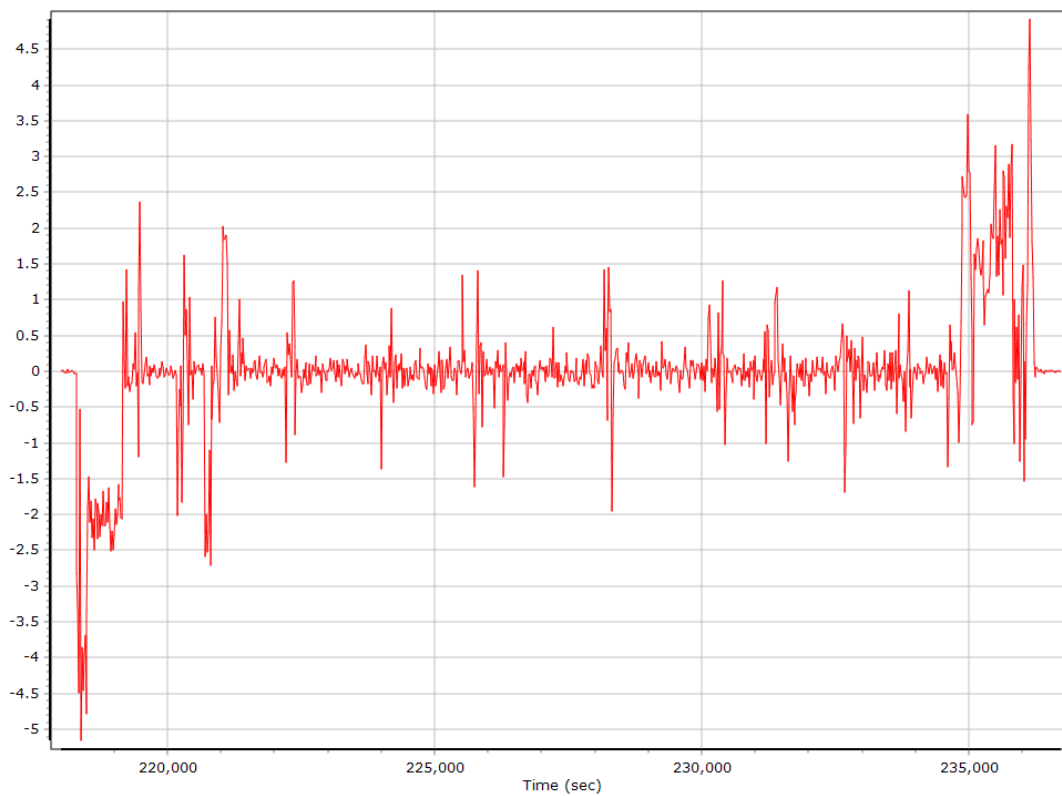
Heading



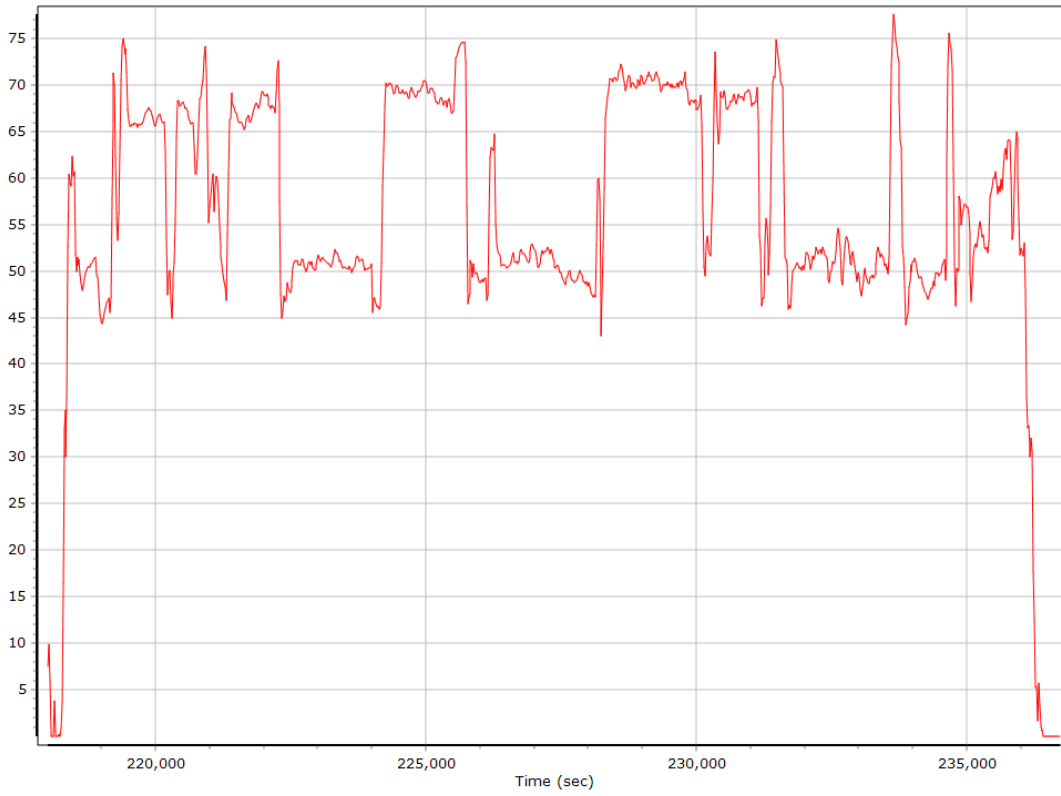
North/East Velocity



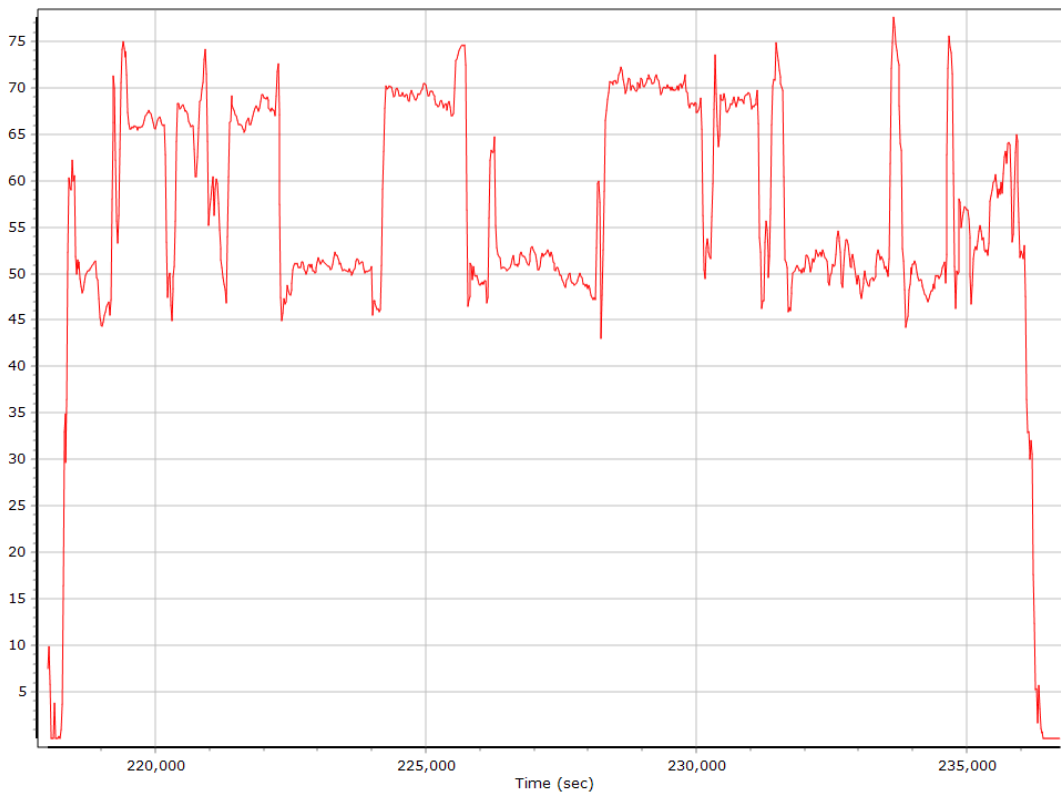
Down Velocity



Total Speed



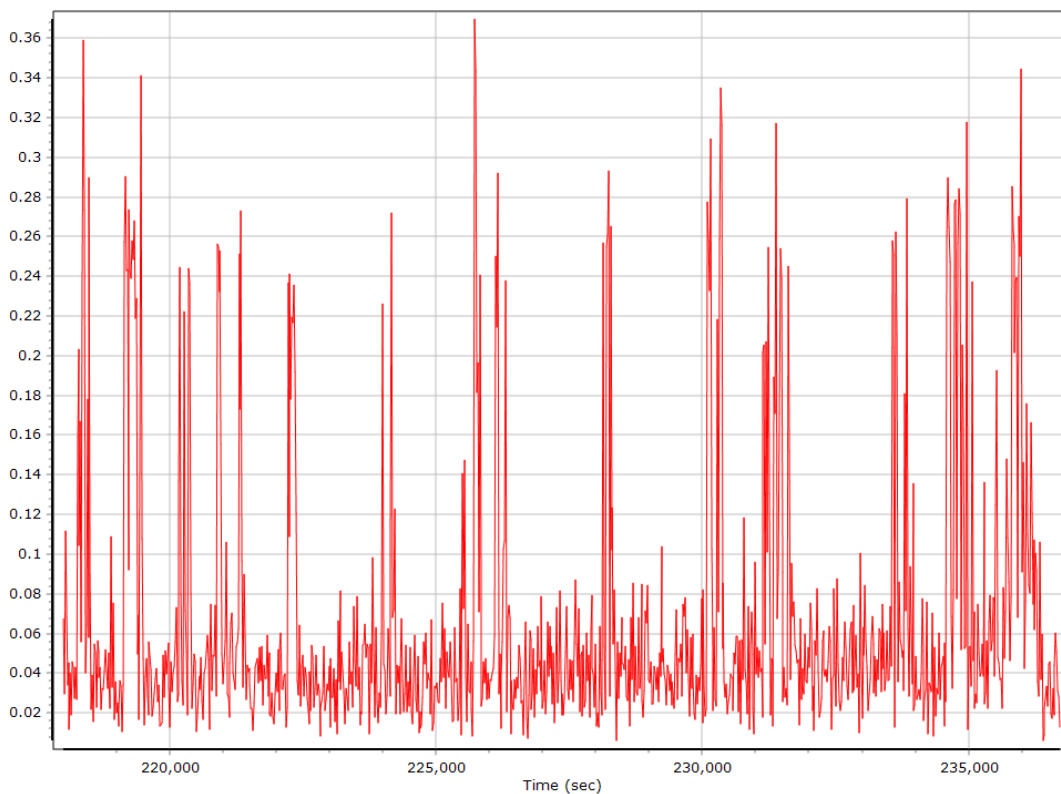
Ground Speed



Body Acceleration



Total Body Acceleration

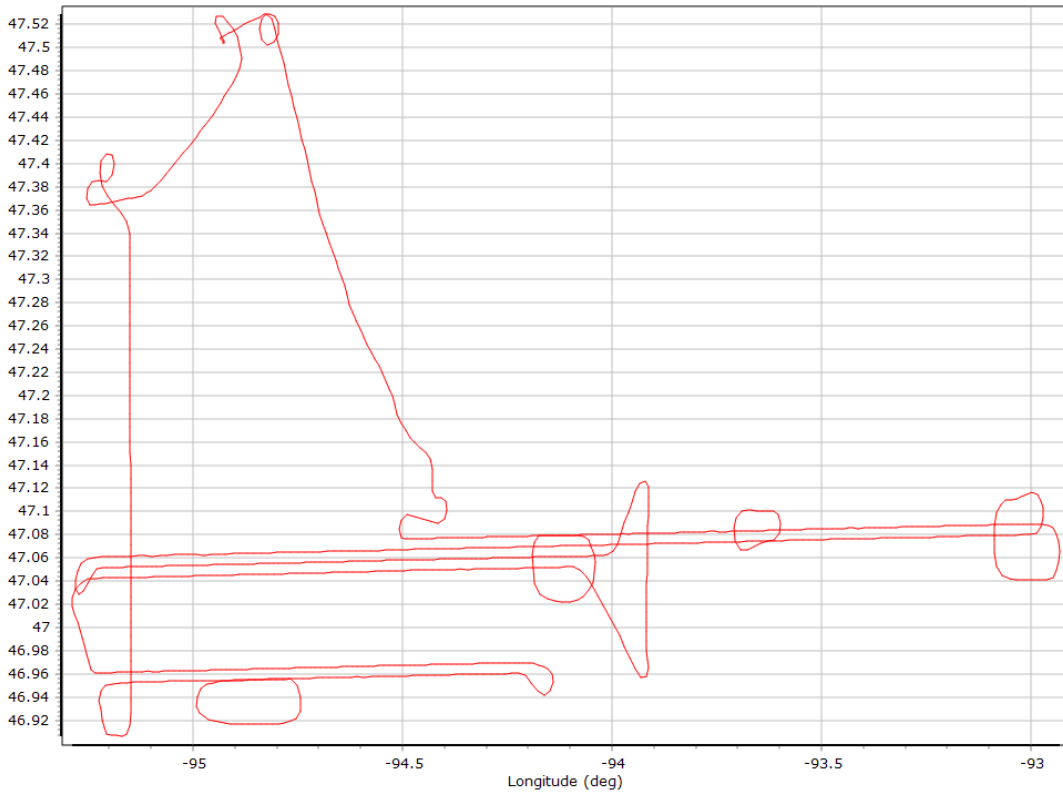


Body Angular Rate

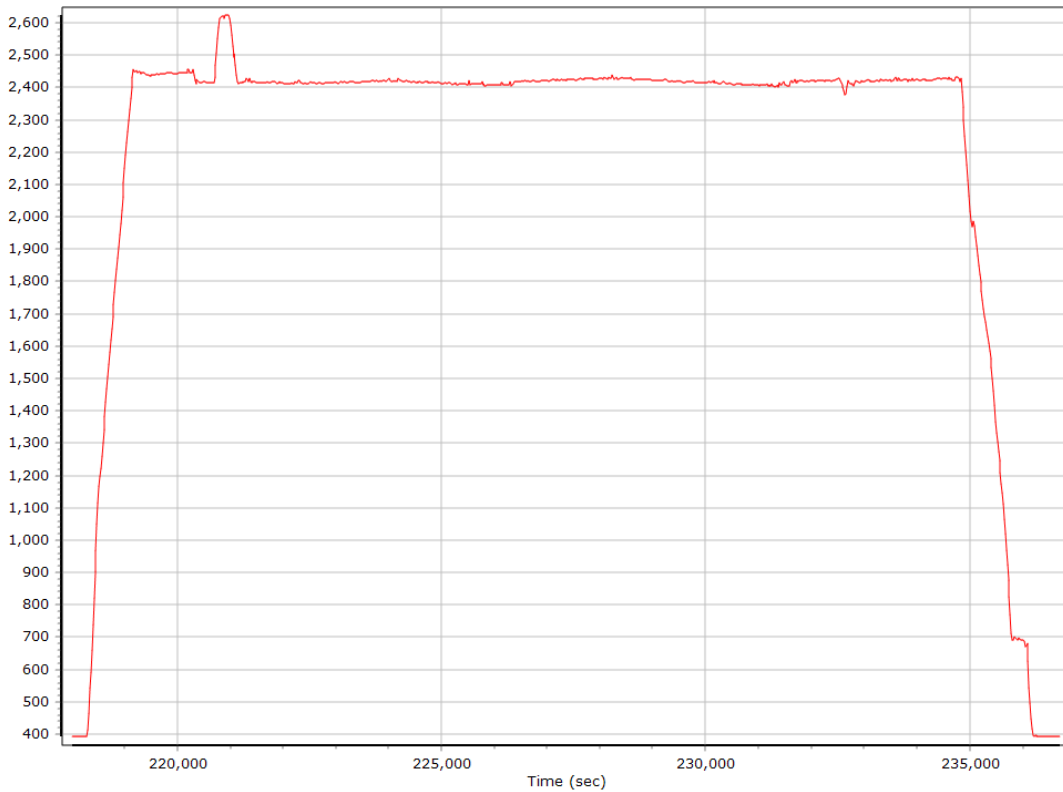


Forward Processed Trajectory Information

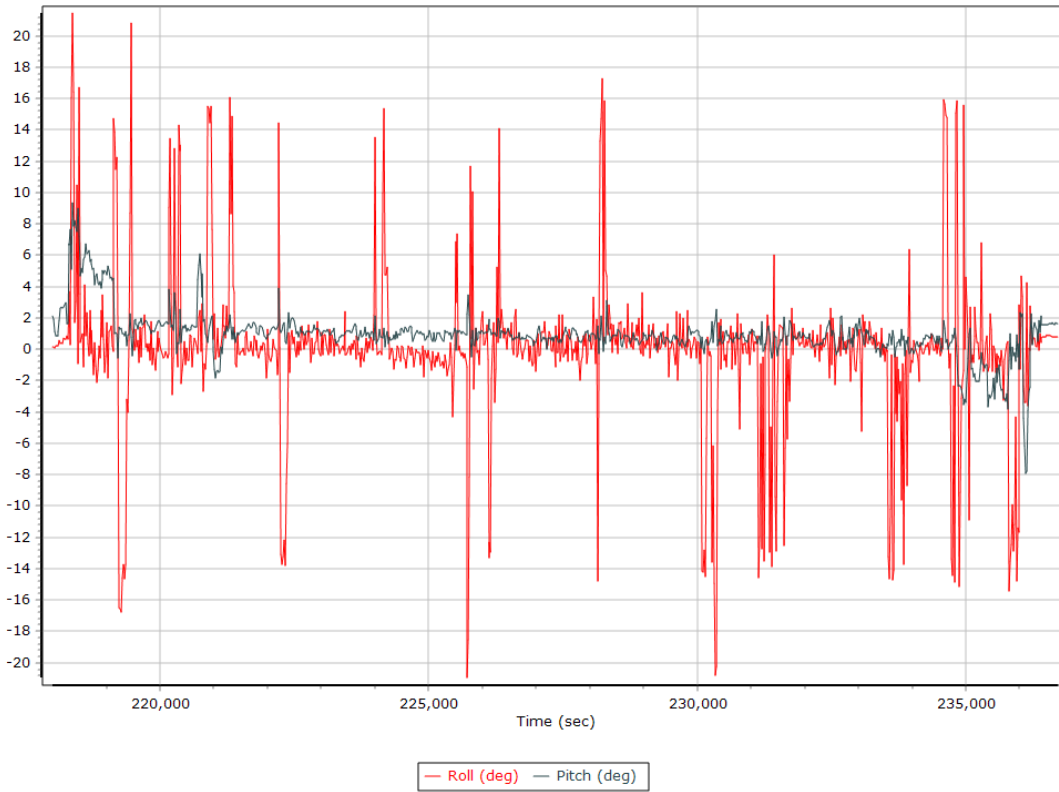
Top View



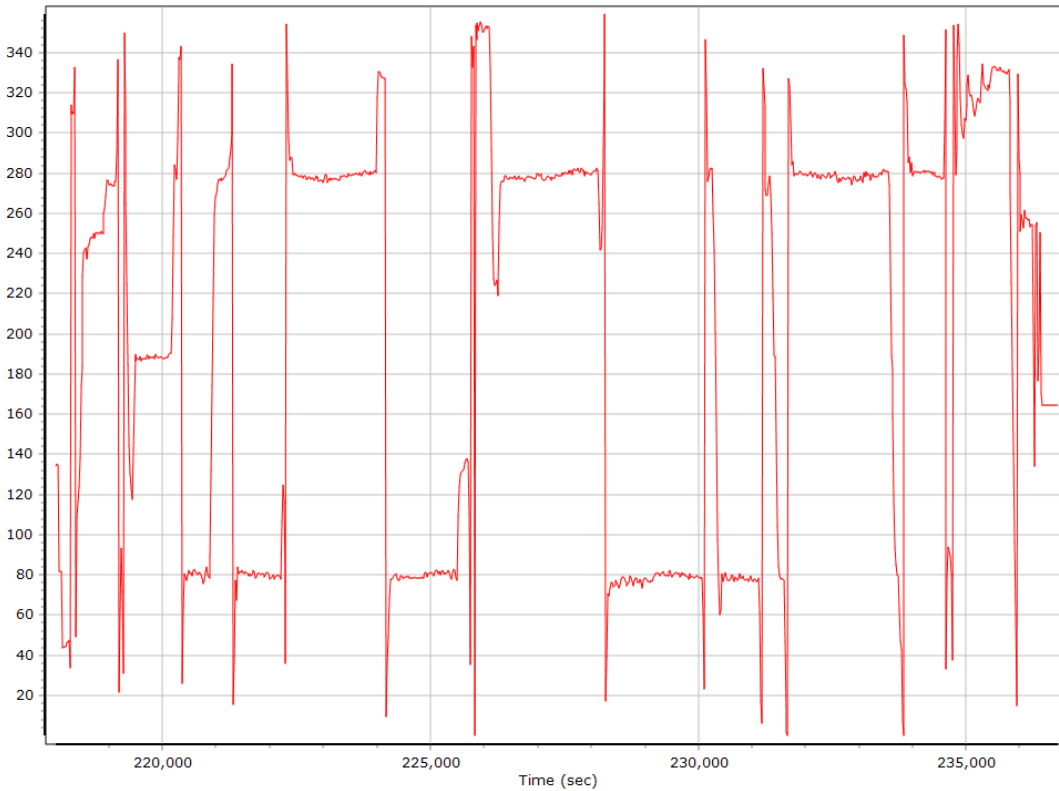
Altitude



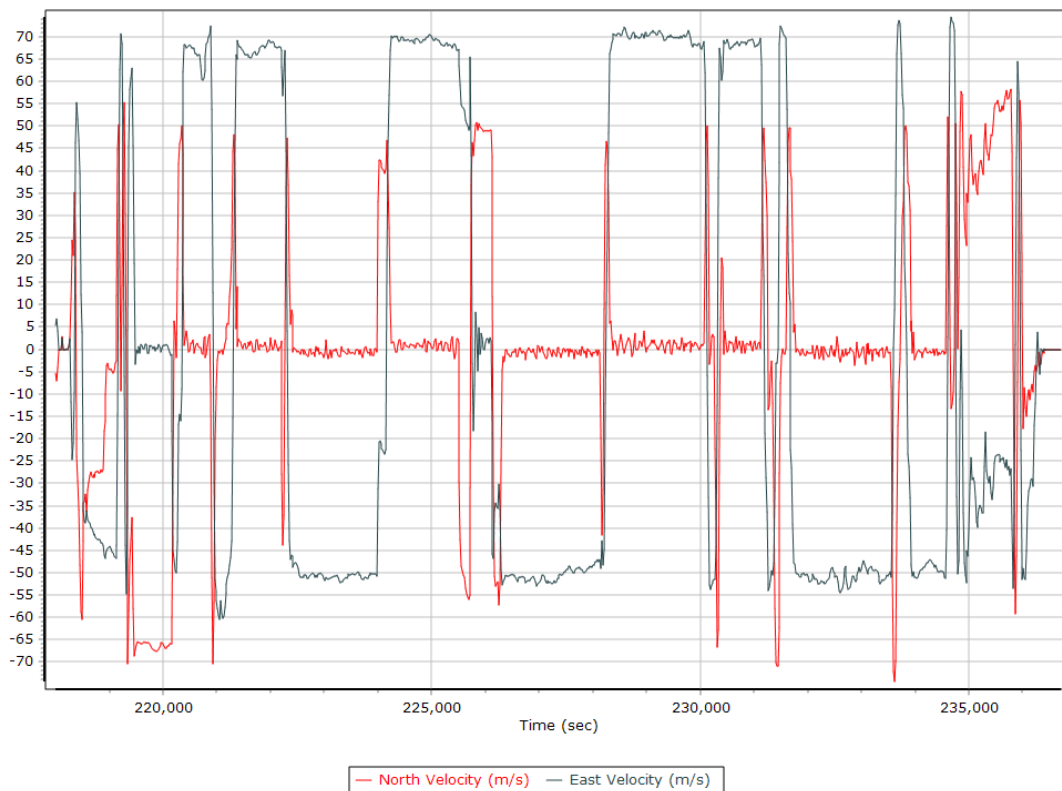
Roll/Pitch



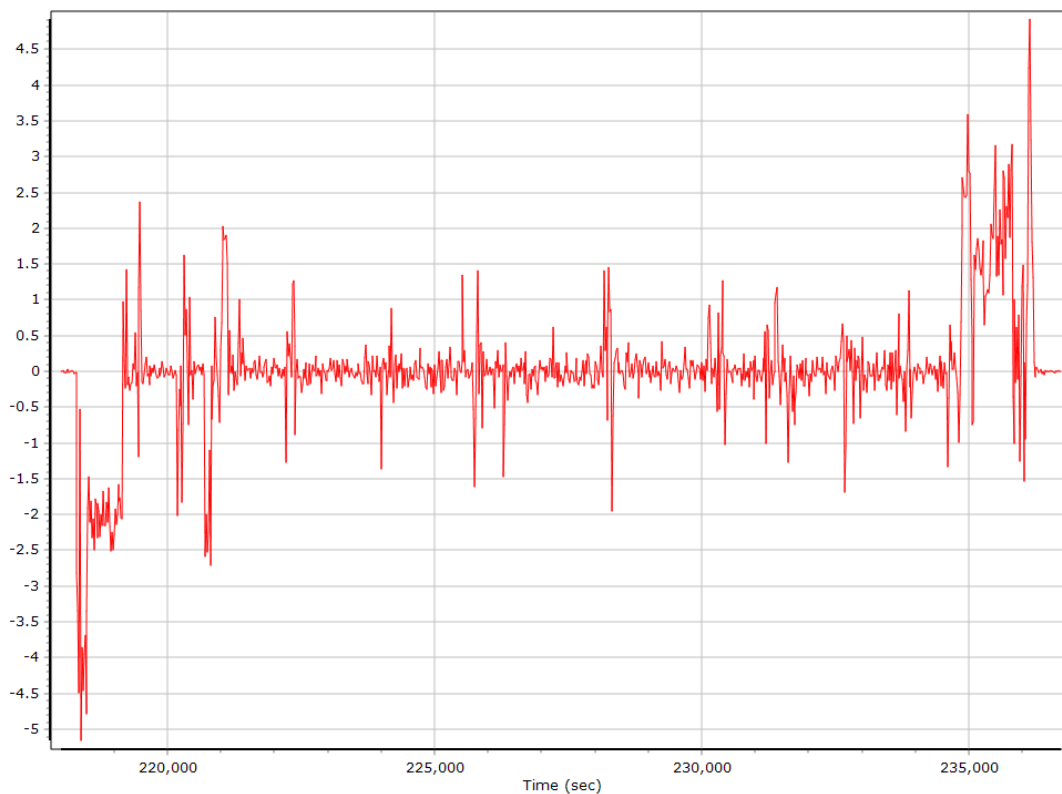
Heading



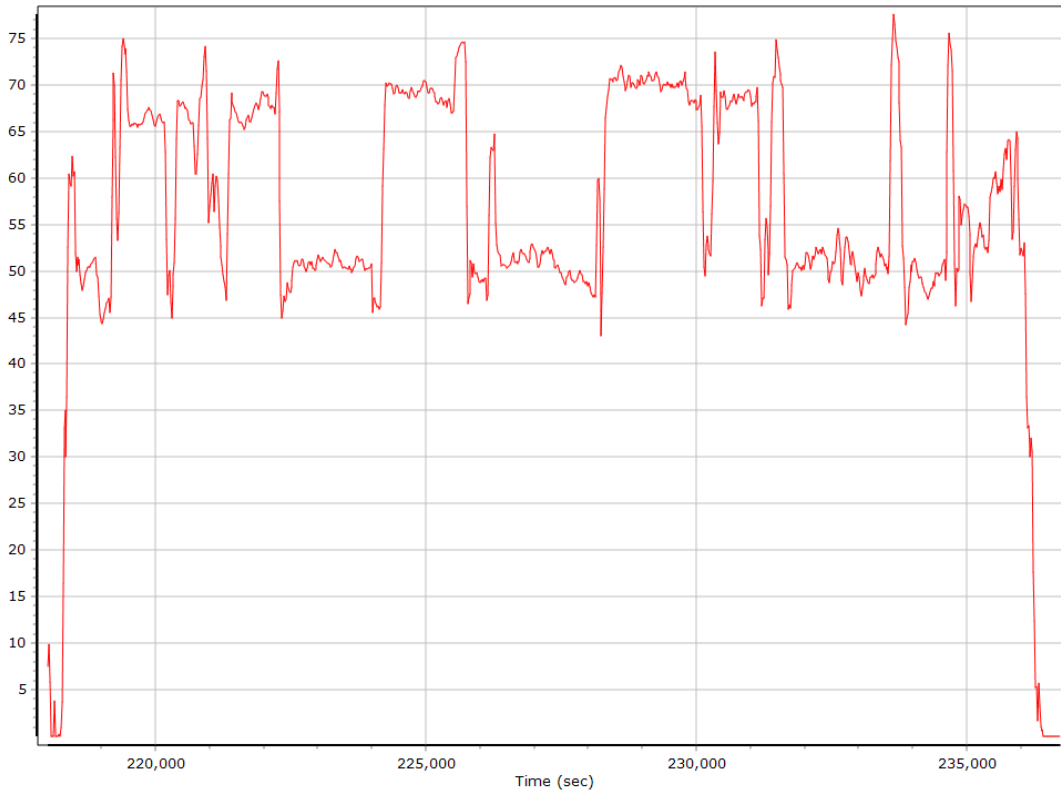
North/East Velocity



Down Velocity



Total Speed



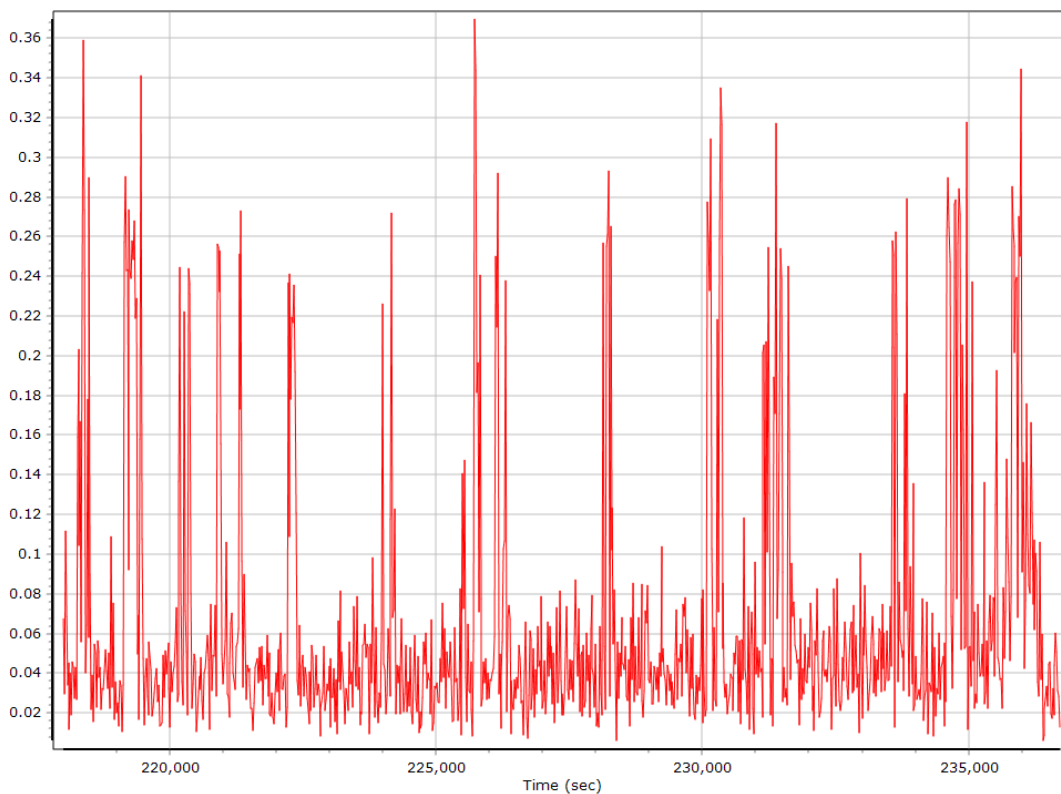
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate

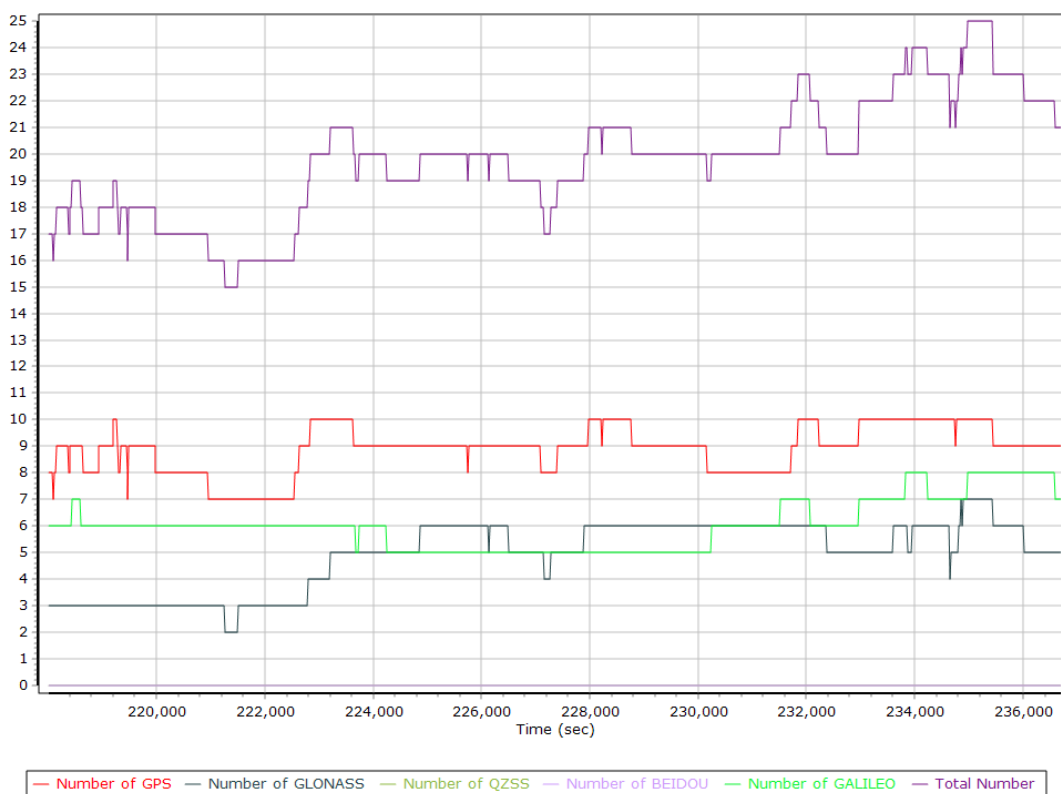


GNSS QC

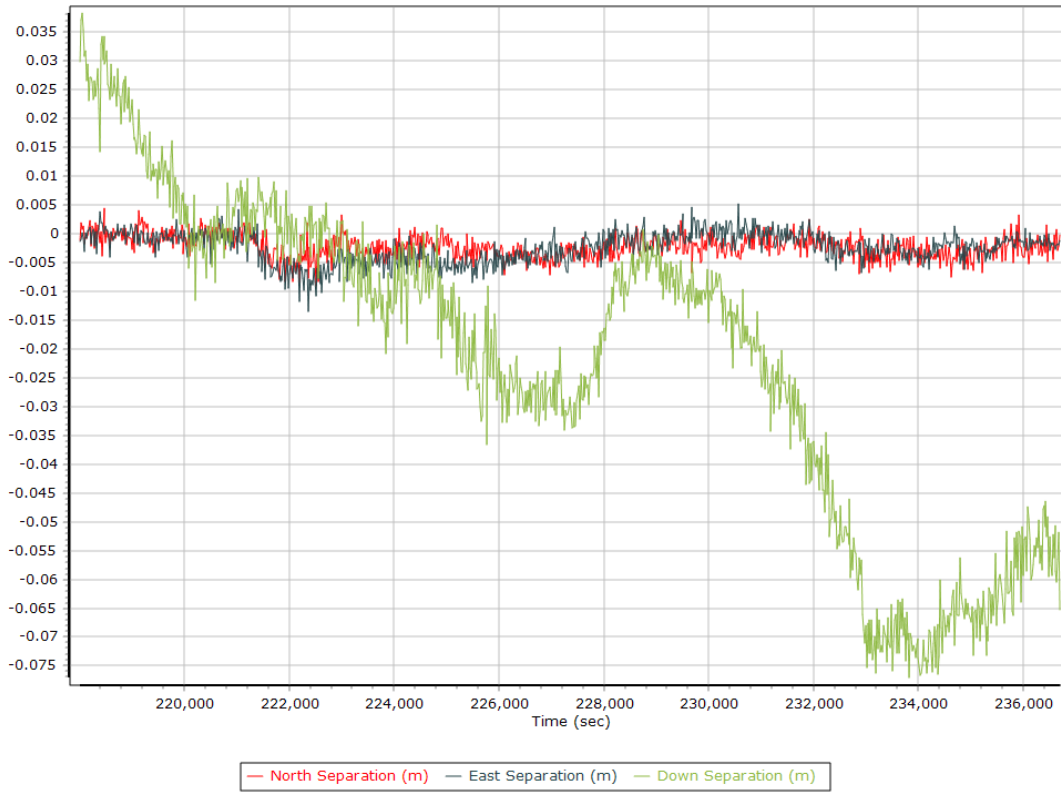
GNSS QC Statistics

| Statistics | Min | Max | Mean |
|----------------------|----------|-------|-------------|
| Baseline length (km) | 0.00 | 0.00 | |
| Number of GPS SV | 7 | 10 | 9 |
| Number of GLONASS SV | 0 | 7 | 5 |
| Number of QZSS SV | 0 | 0 | 0 |
| Number of BEIDOU SV | 0 | 0 | 0 |
| Number of GALILEO SV | 5 | 8 | 6 |
| Total number of SV | 14 | 25 | 20 |
| PDOP | 0.96 | 1.54 | 1.18 |
| QC Solution Gaps | 0.00 | 0.00 | |
| Solution Type | Fixed | Float | No solution |
| Epoch (sec) | 19109.00 | 0.00 | 0.00 |
| Percentage | 100.00 | 0.00 | 0.00 |

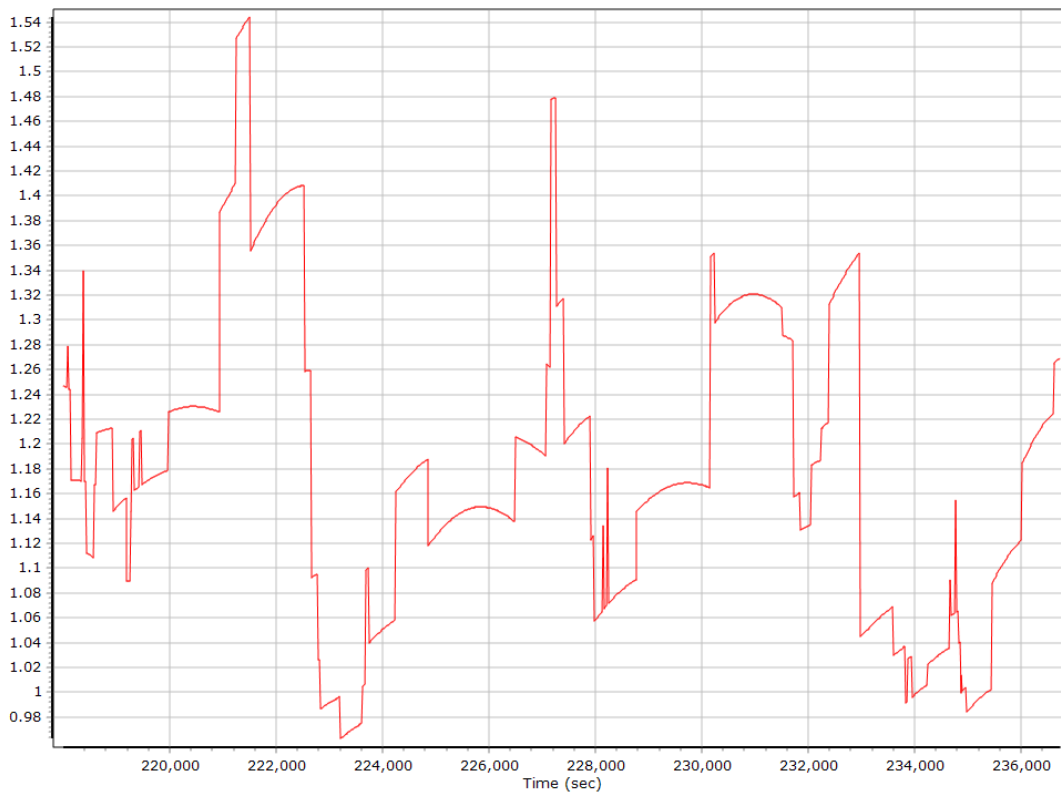
Num SVs in solution



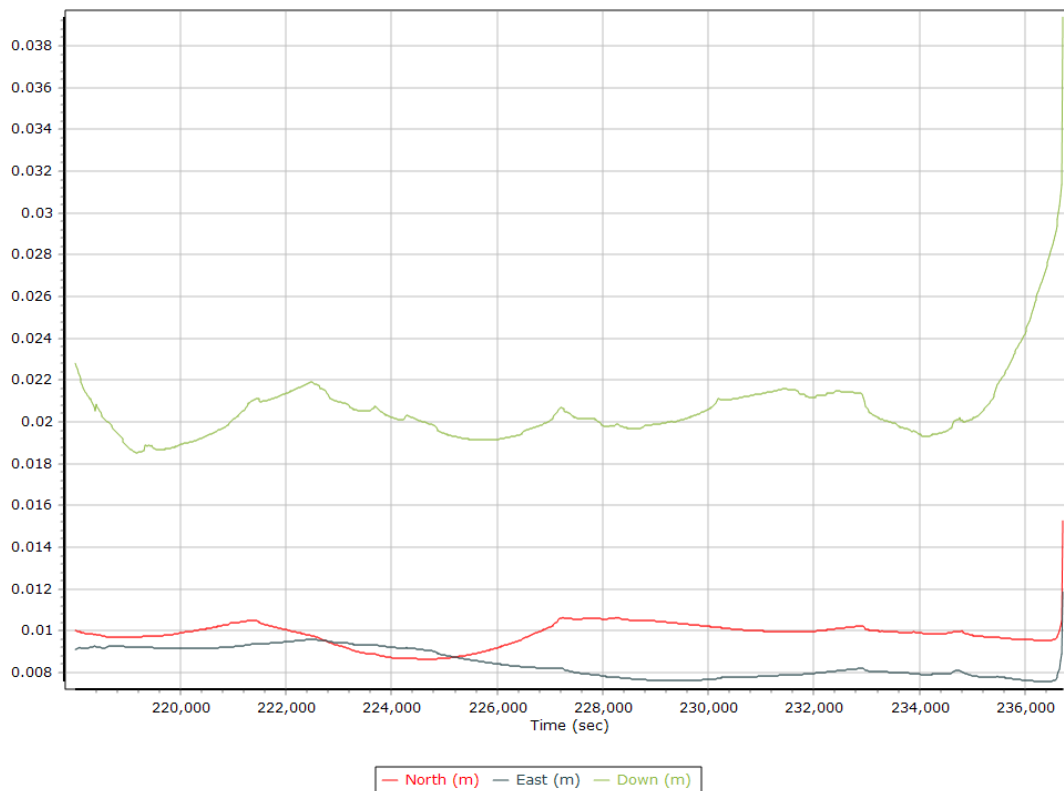
Forward/Reverse Separation



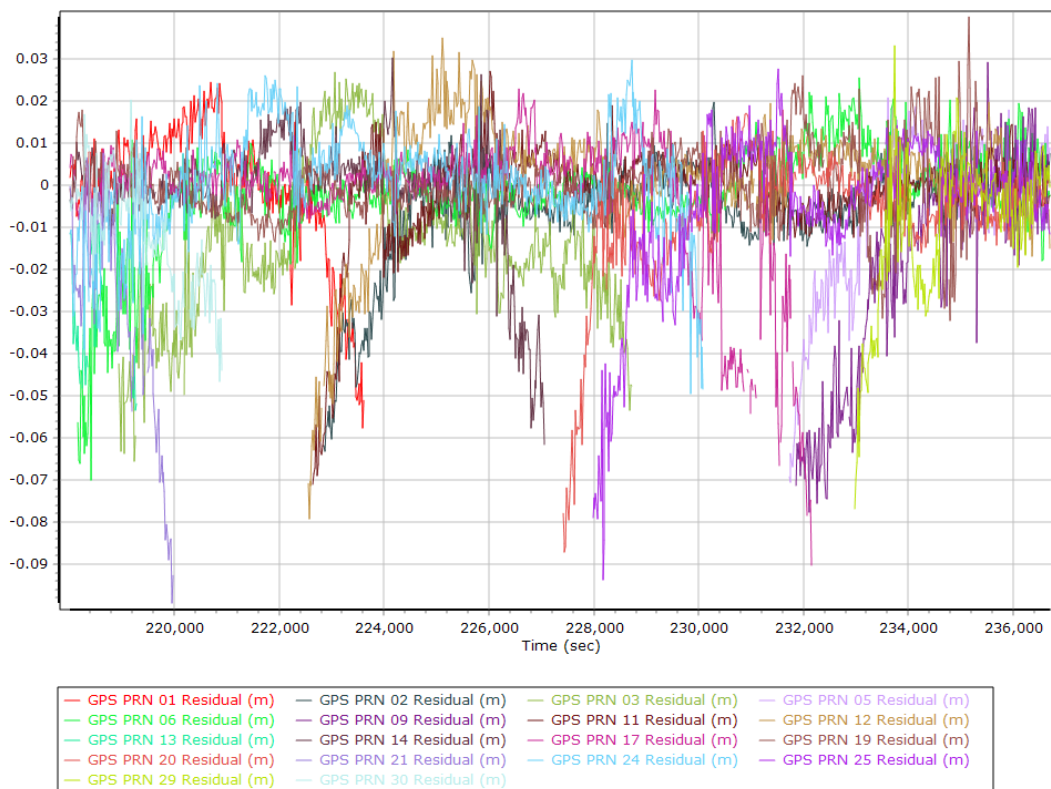
PDOP



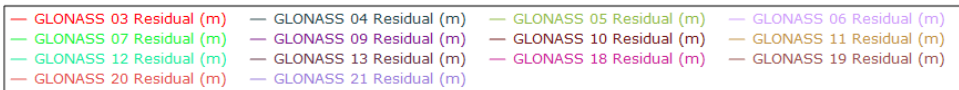
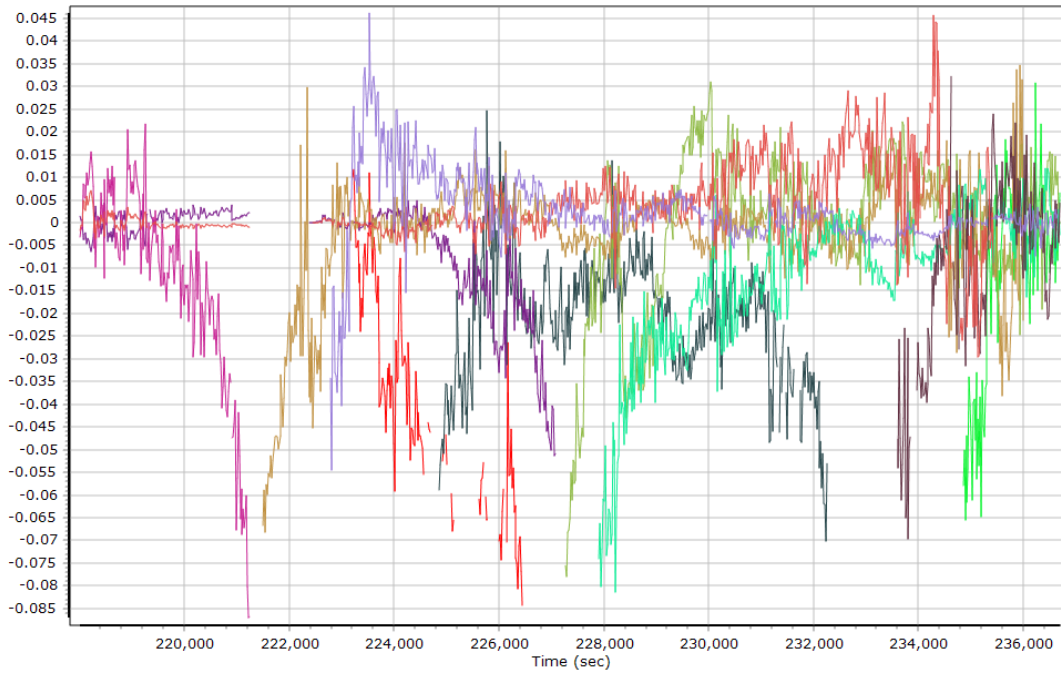
Estimated Position Accuracy



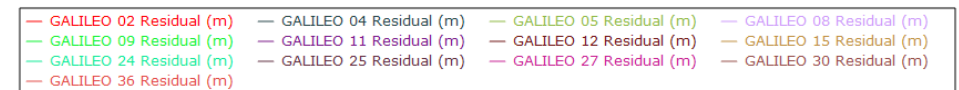
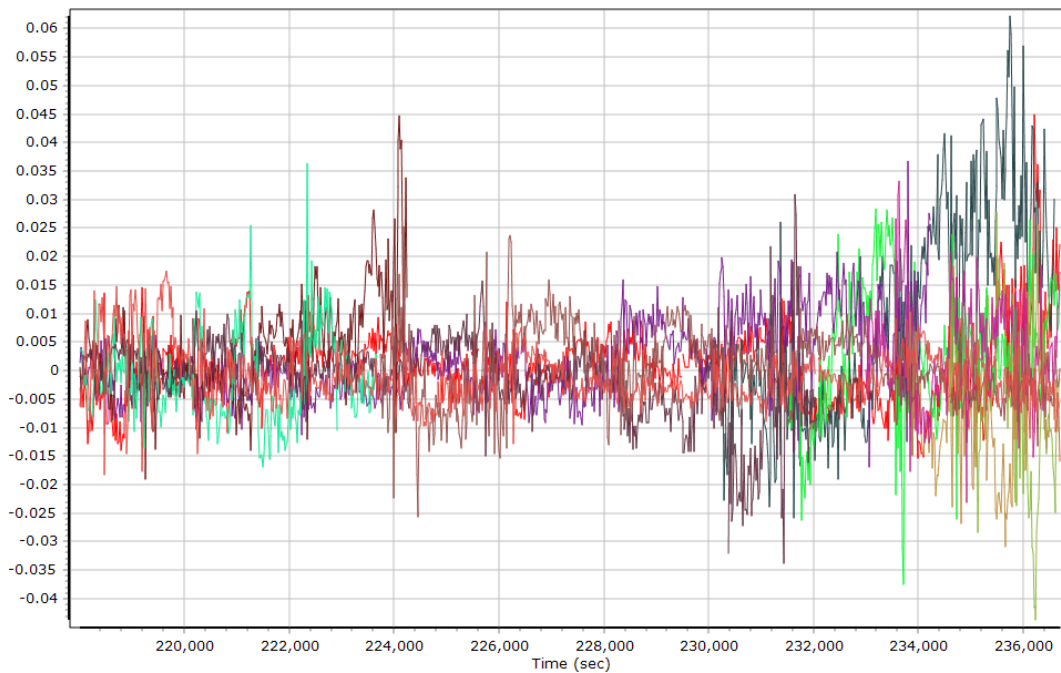
GPS Residuals



GLONASS Residuals



GALILEO Residuals



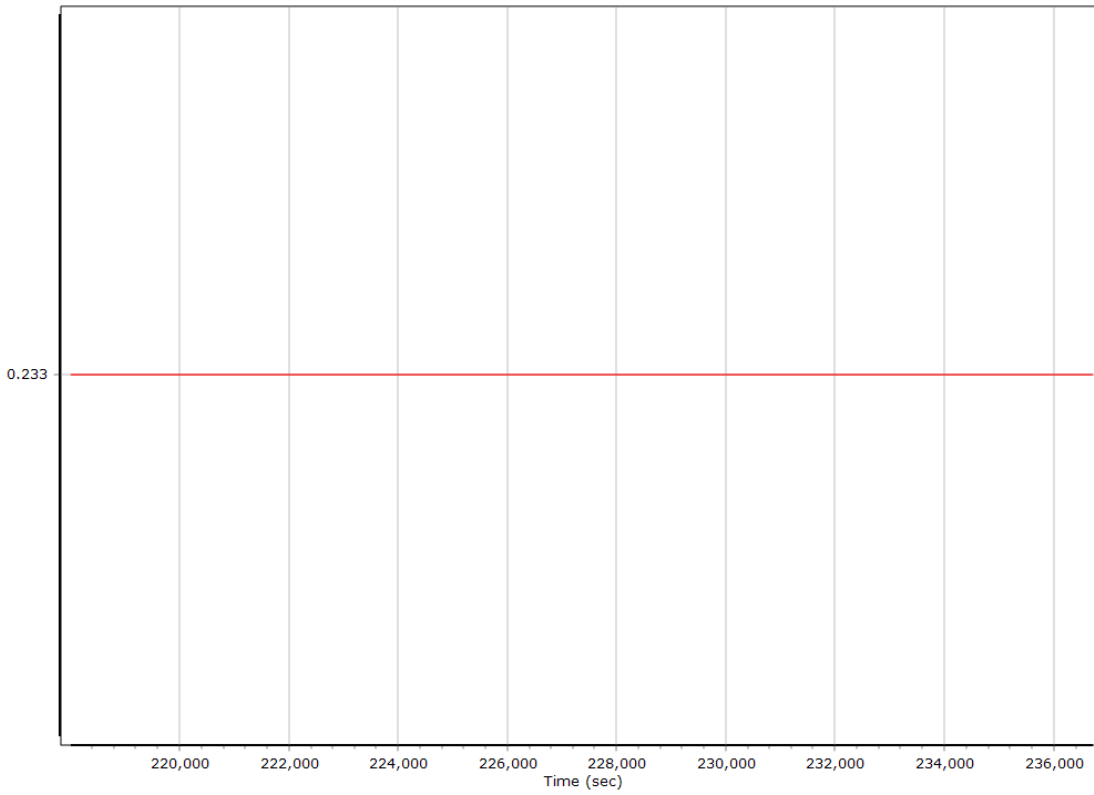
GNSS-Inertial Processor Configuration

| | | | |
|---|----------------------------------|--------|---------|
| Processing mode | IN-Fusion PP-RTX | | |
| Stabilized mount | False | | |
| Processing start time | 217590.000 (07/12/2022 12:26:30) | | |
| Processing end time | 236725.000 (07/12/2022 17:45:25) | | |
| 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 | 180.000 |
| Reference to Primary GNSS lever arm (m) | 0.233 | -0.289 | -0.957 |
| 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 |

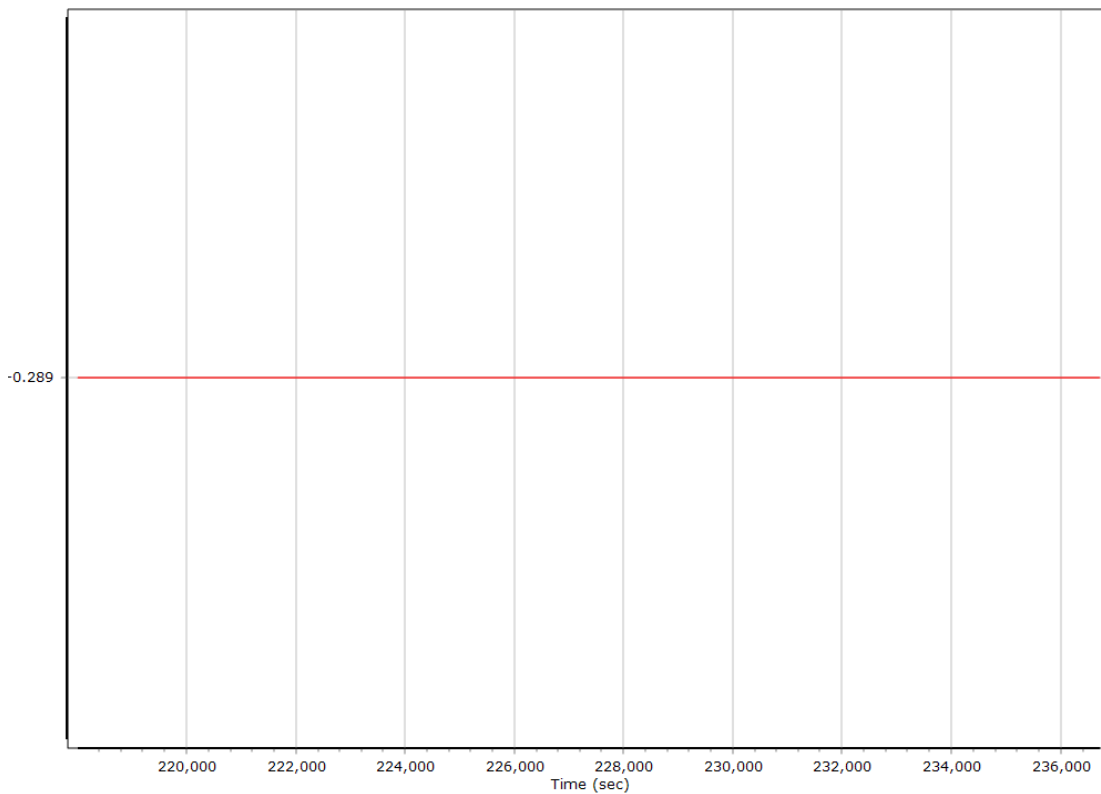
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

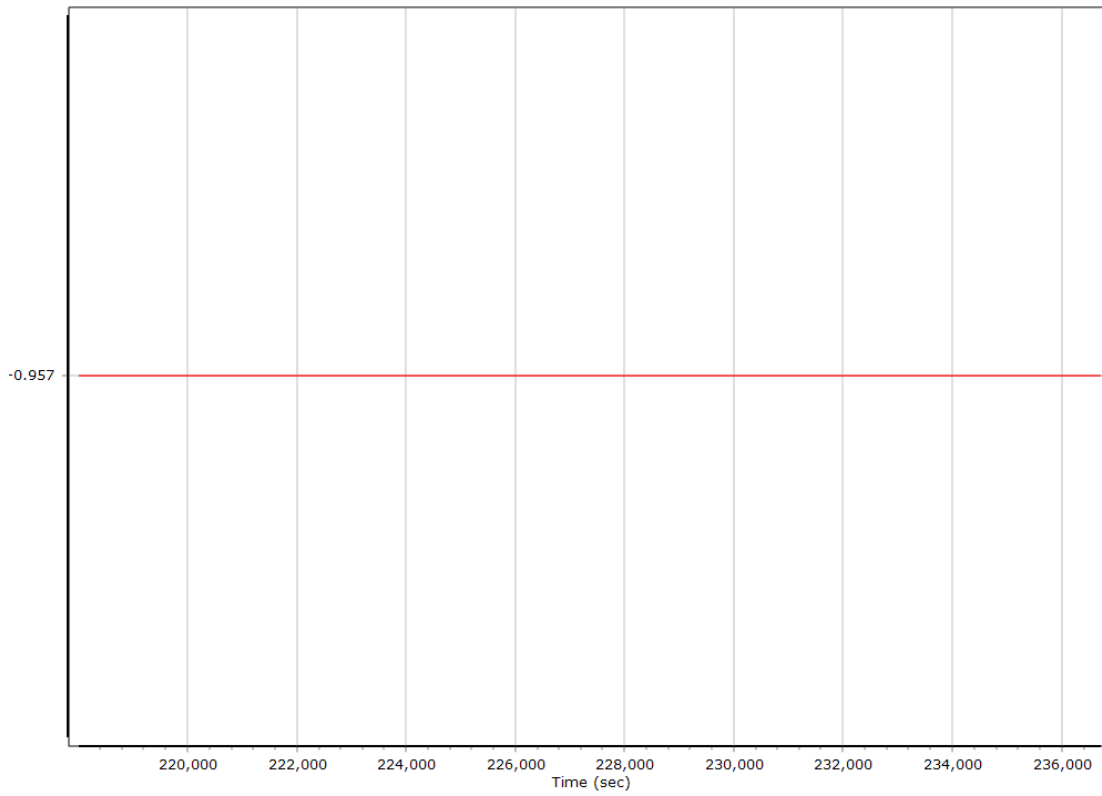
X Reference-Primary GNSS Lever Arm (m)



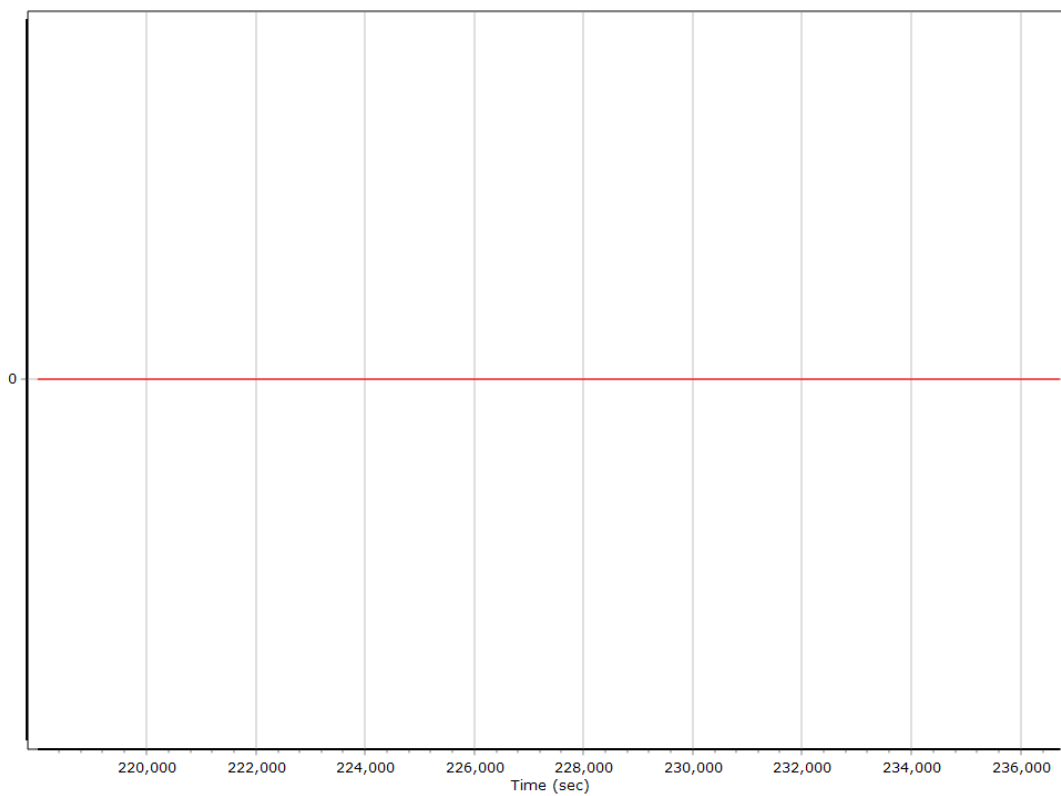
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



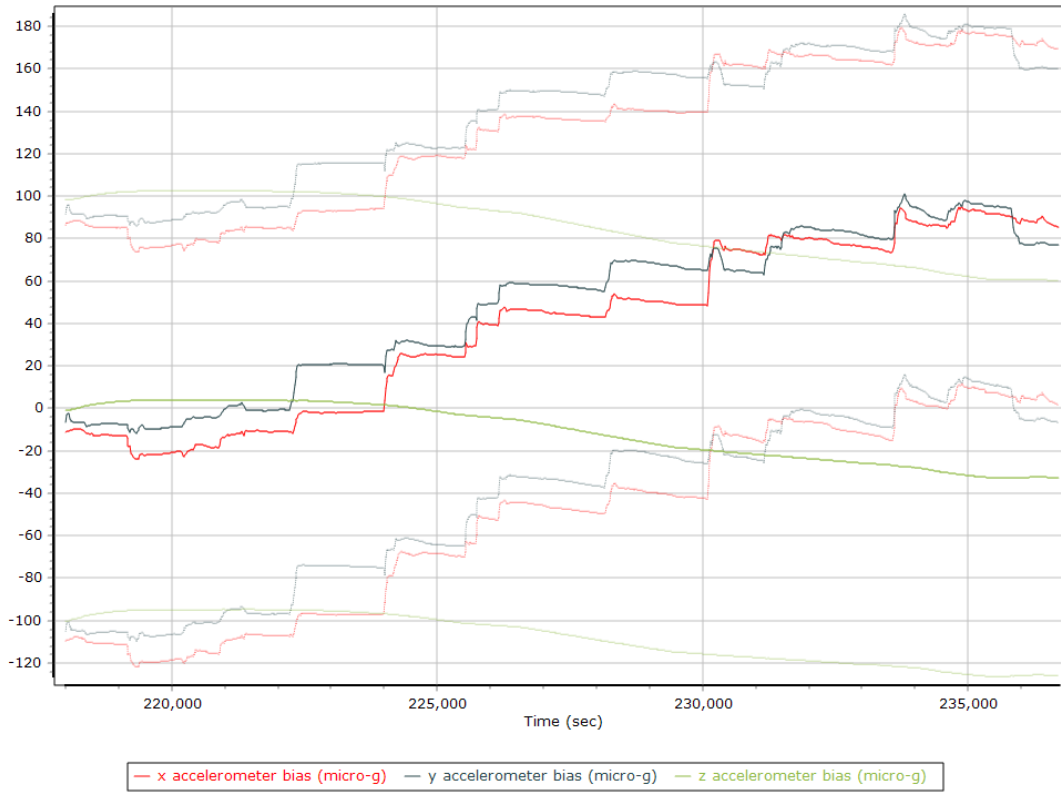
Reference-Primary GNSS Lever Arm Figure of Merit



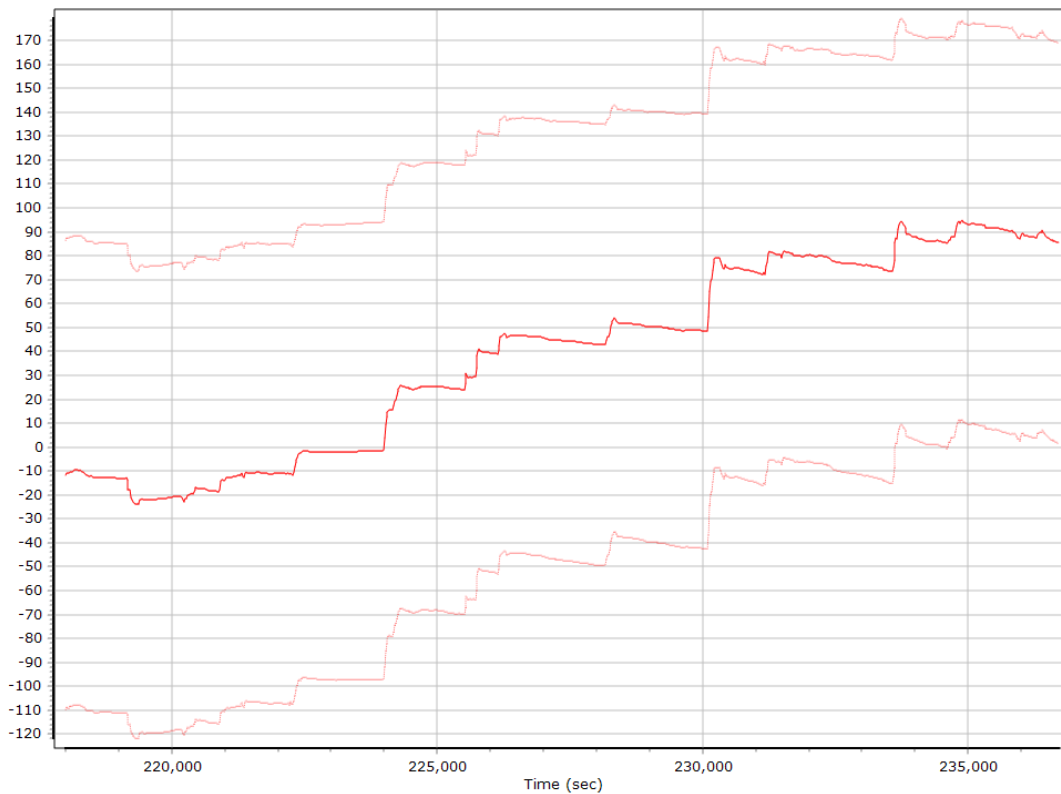
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

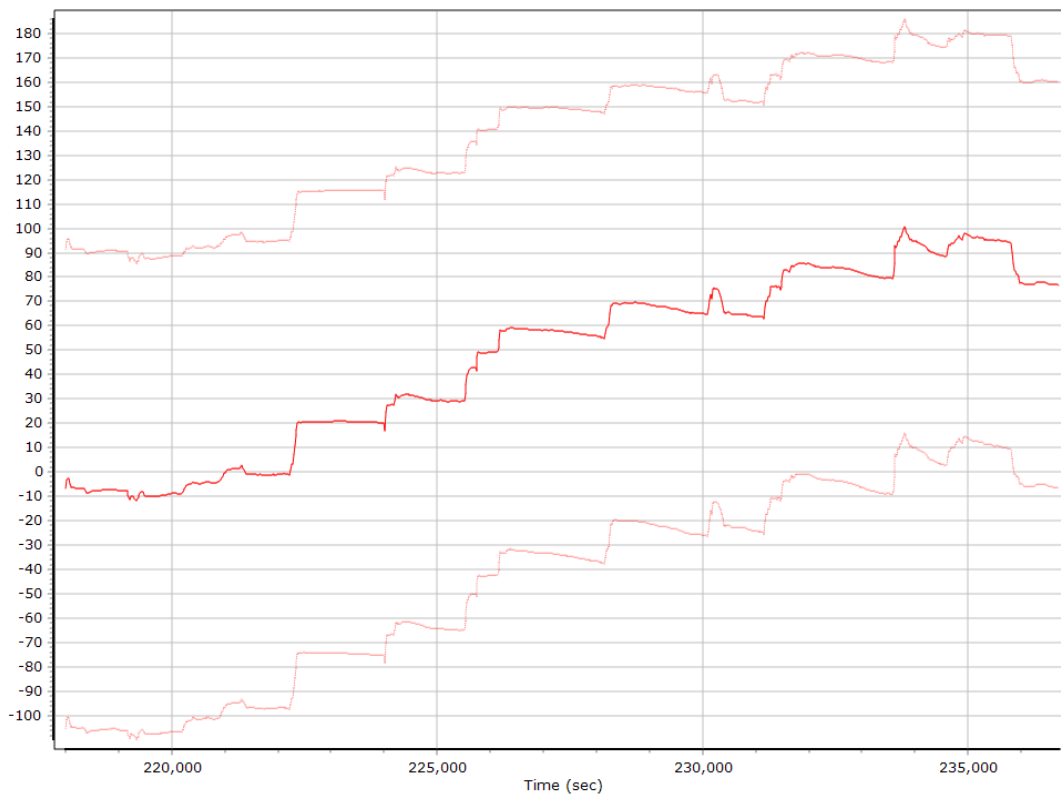
Accelerometer Bias (micro-g)



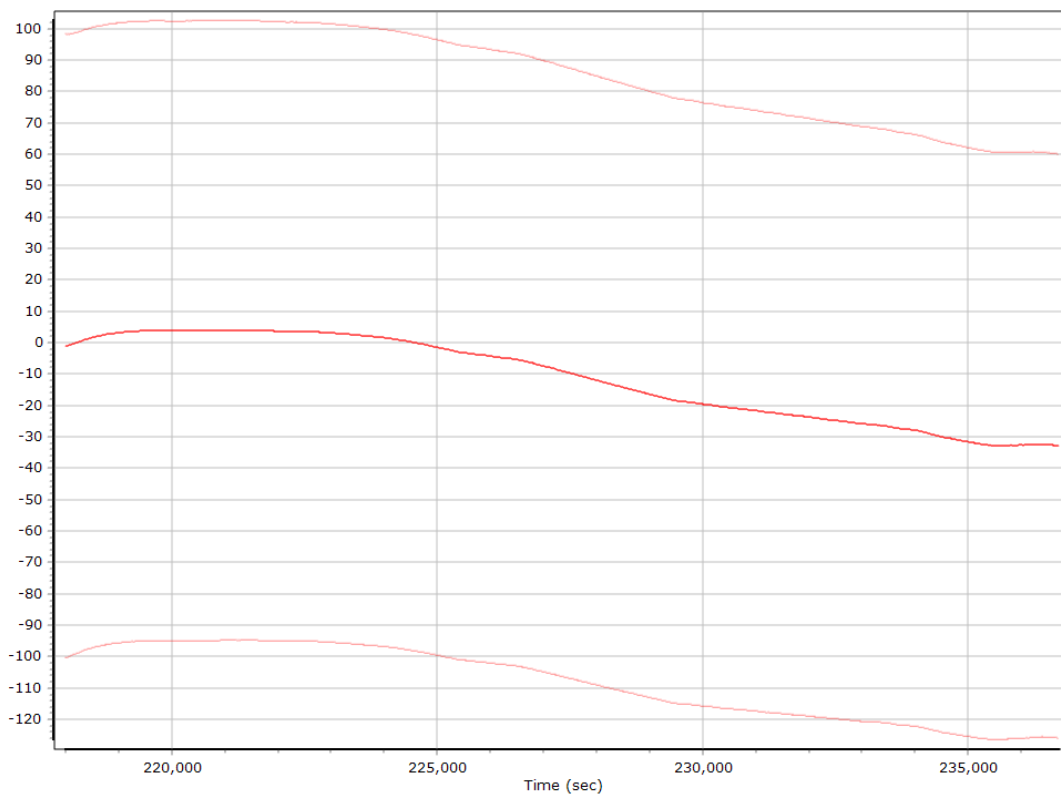
X Accelerometer Bias (micro-g)



Y Accelerometer Bias (micro-g)



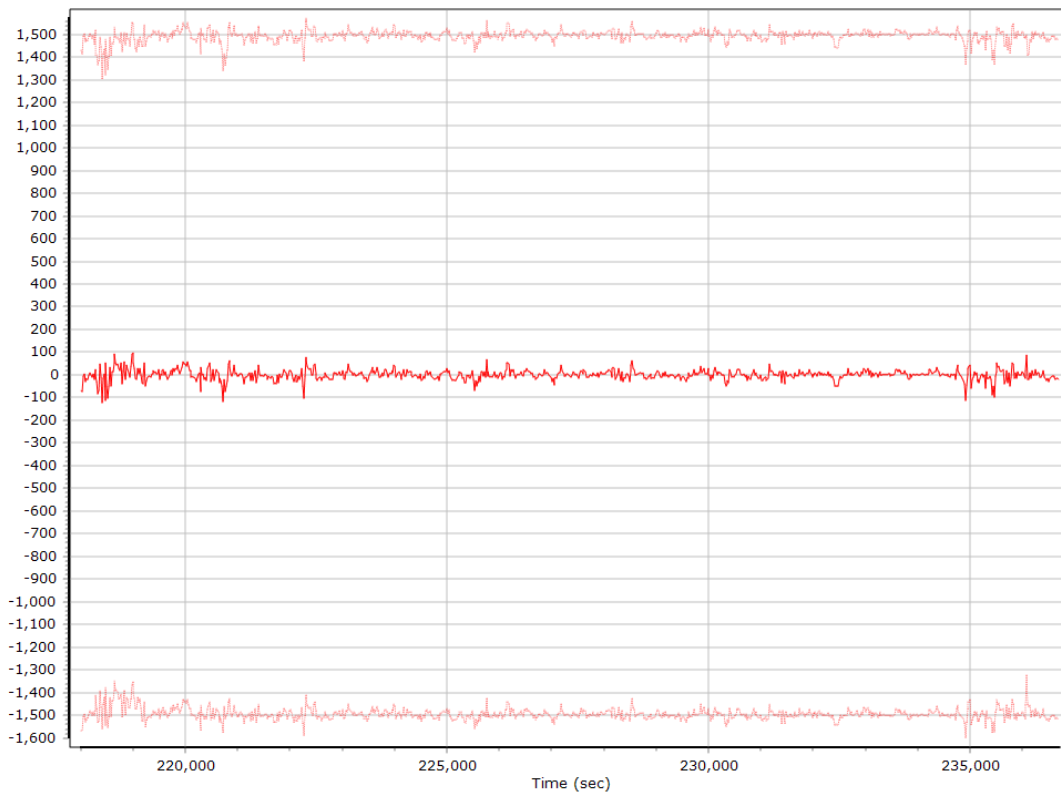
Z Accelerometer Bias (micro-g)



Accelerometer Scale Error (ppm)



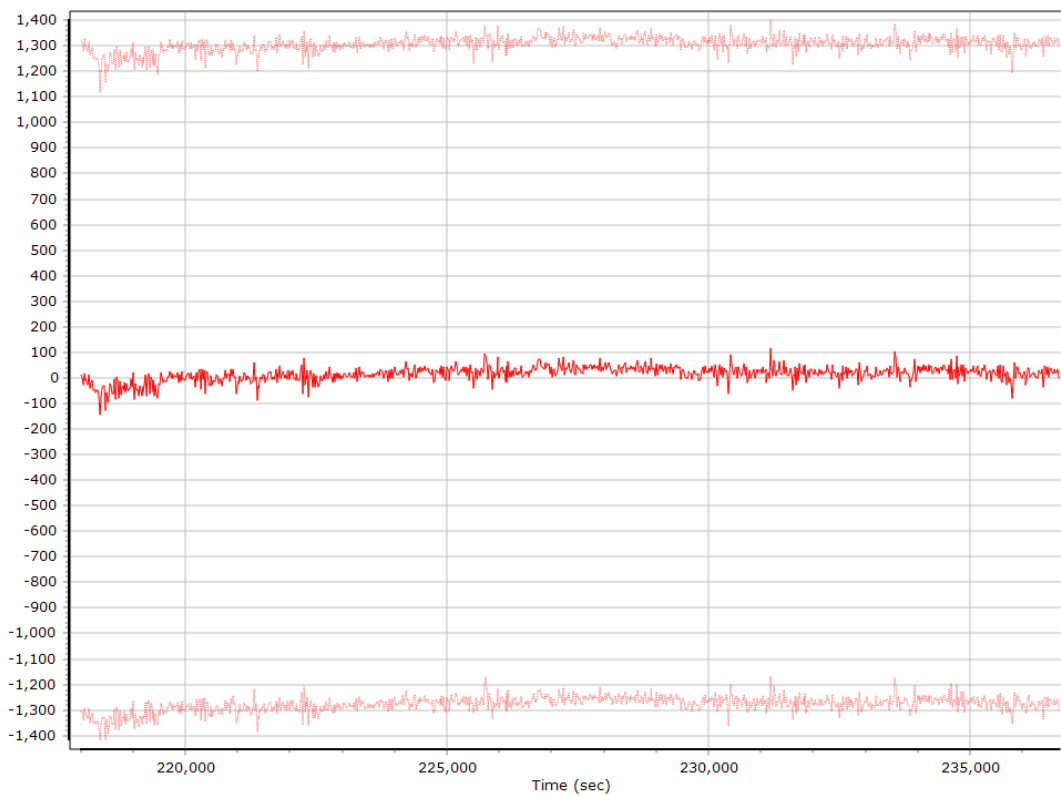
X Accelerometer Scale Error (ppm)



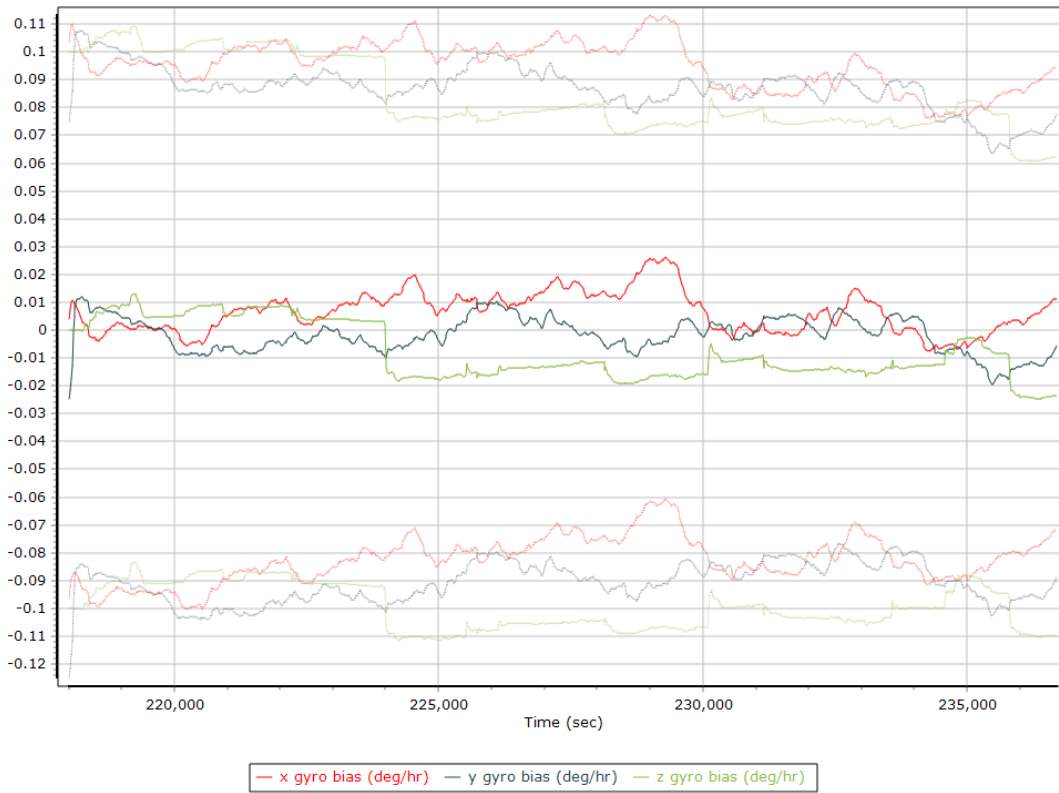
Y Accelerometer Scale Error (ppm)



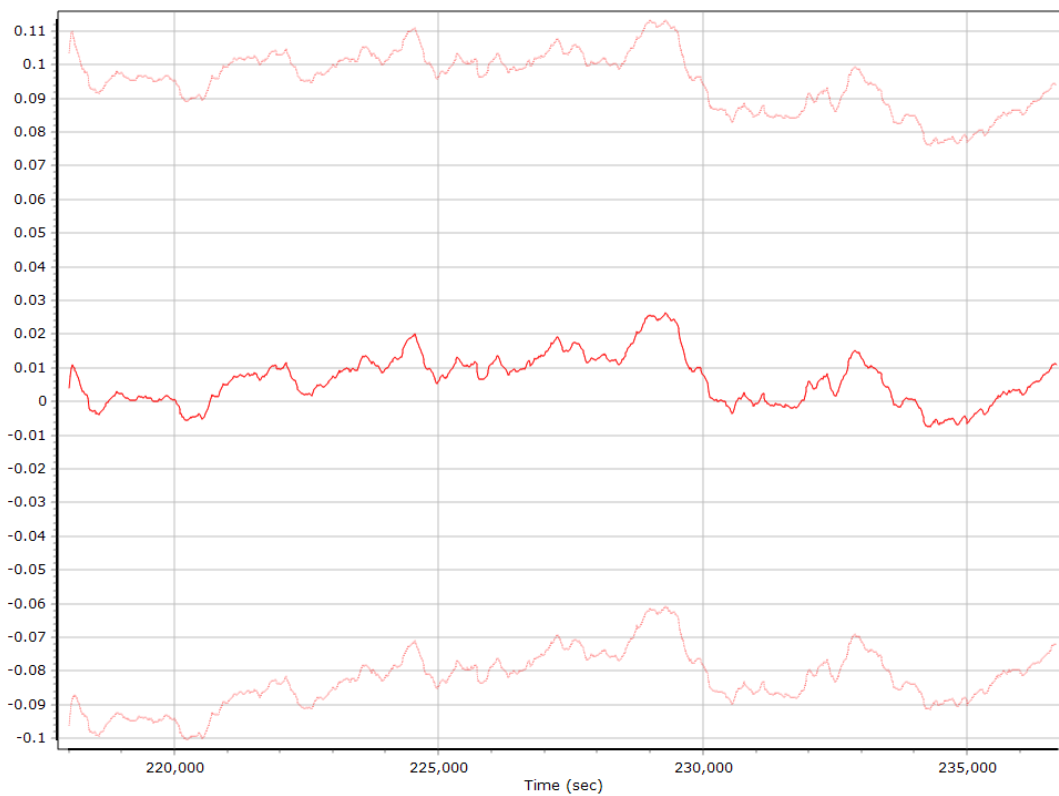
Z Accelerometer Scale Error (ppm)



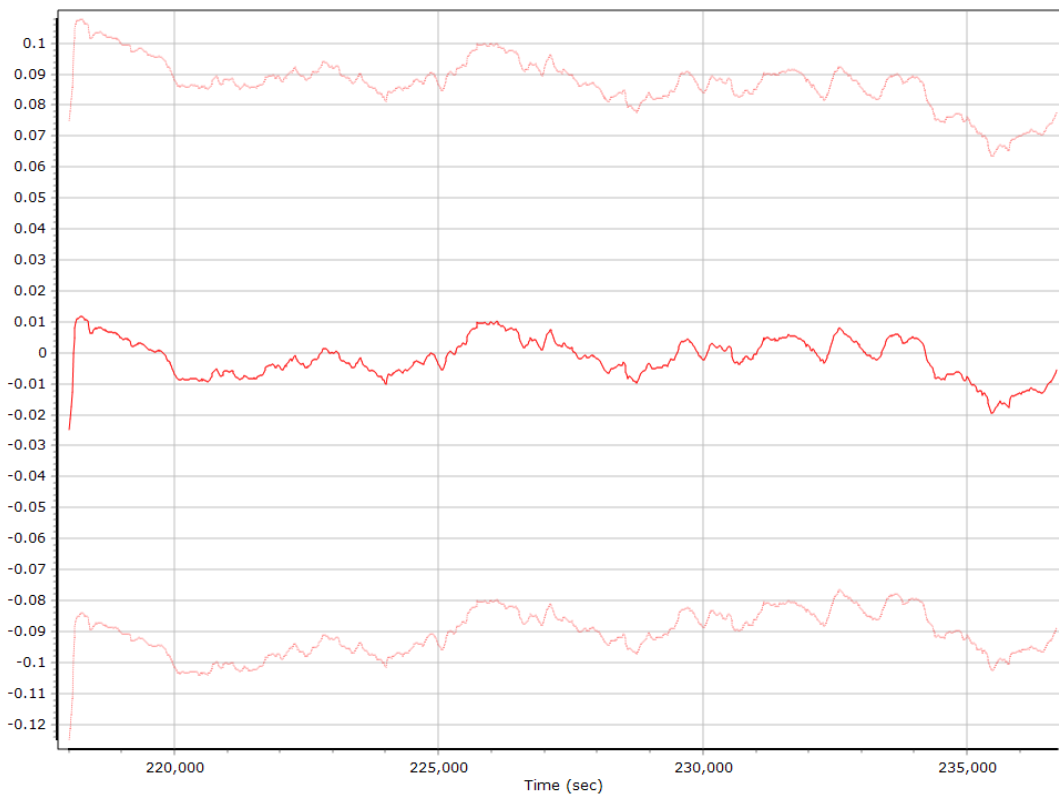
Gyro Bias (deg/h)



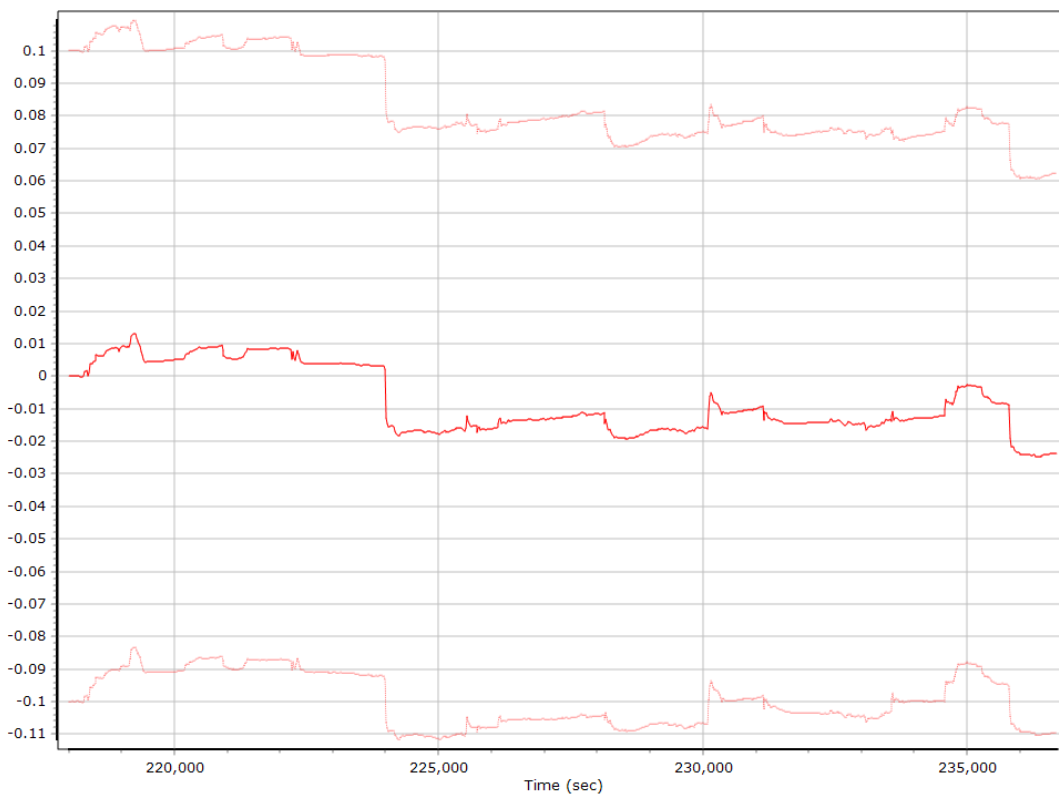
X Gyro Bias (deg/h)



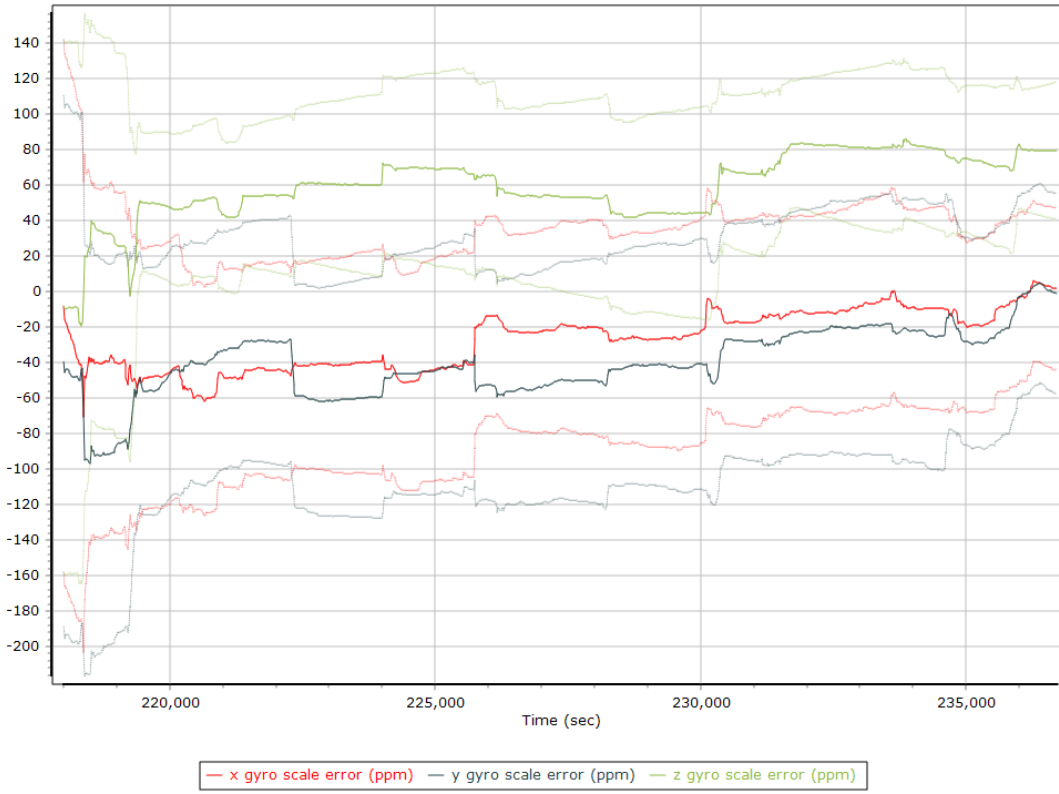
Y Gyro Bias (deg/h)



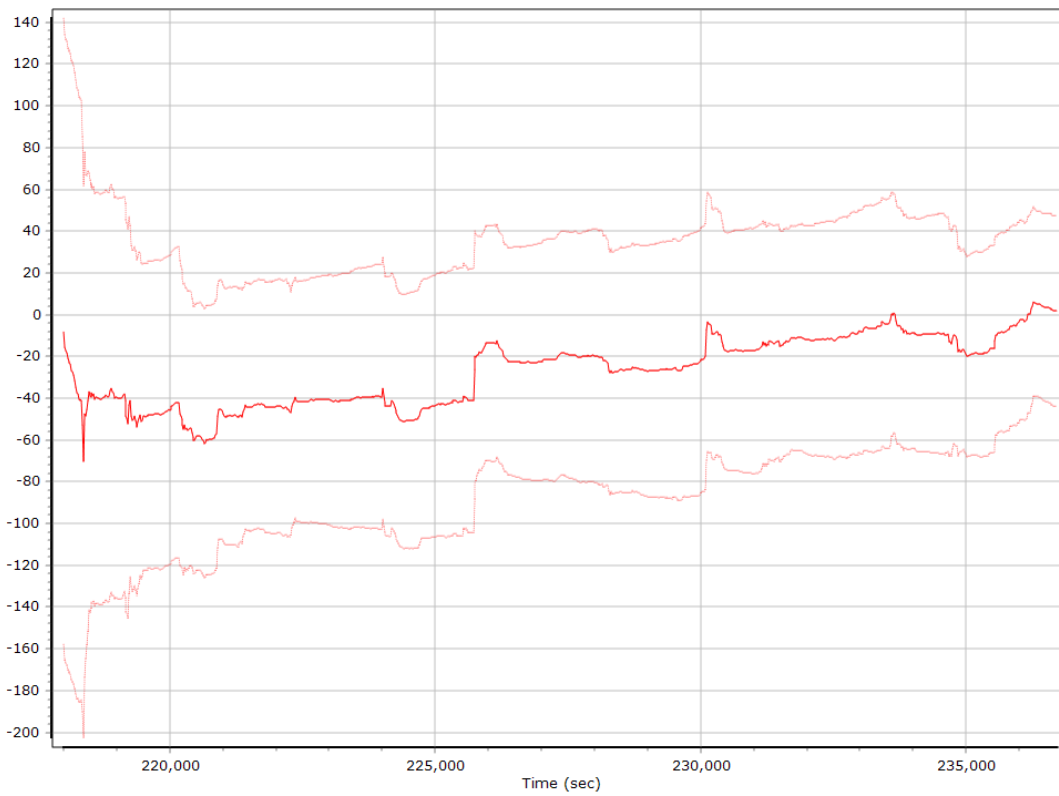
Z Gyro Bias (deg/h)



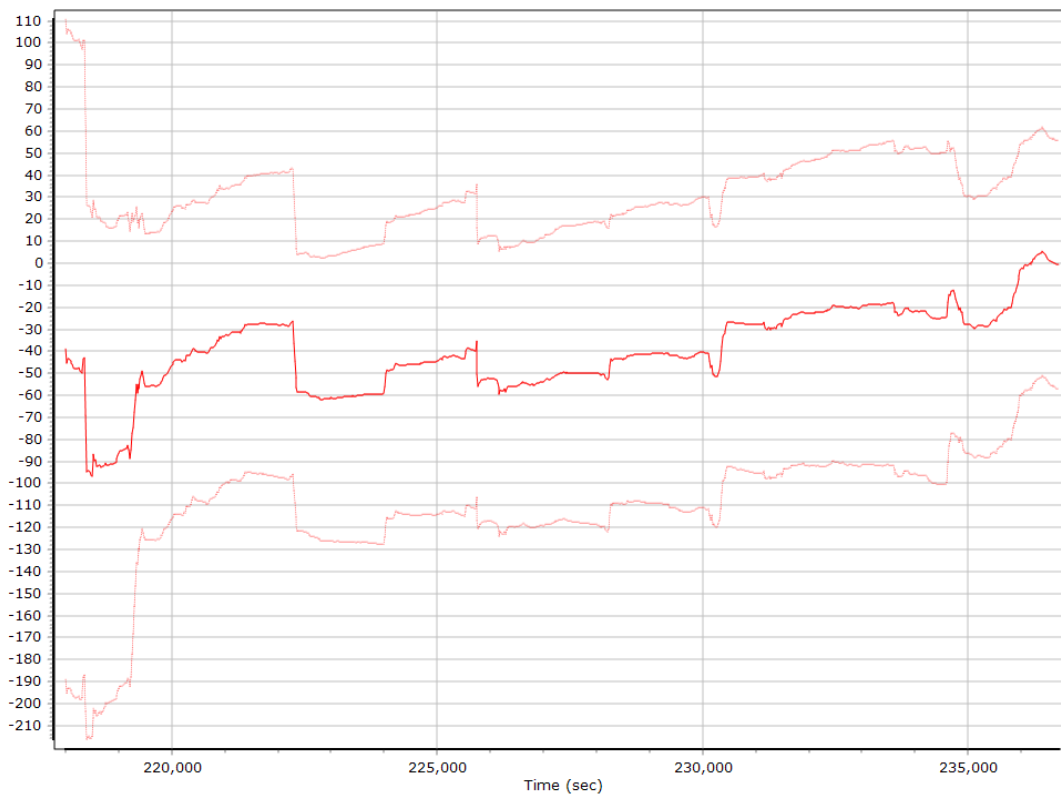
Gyro Scale Error (ppm)



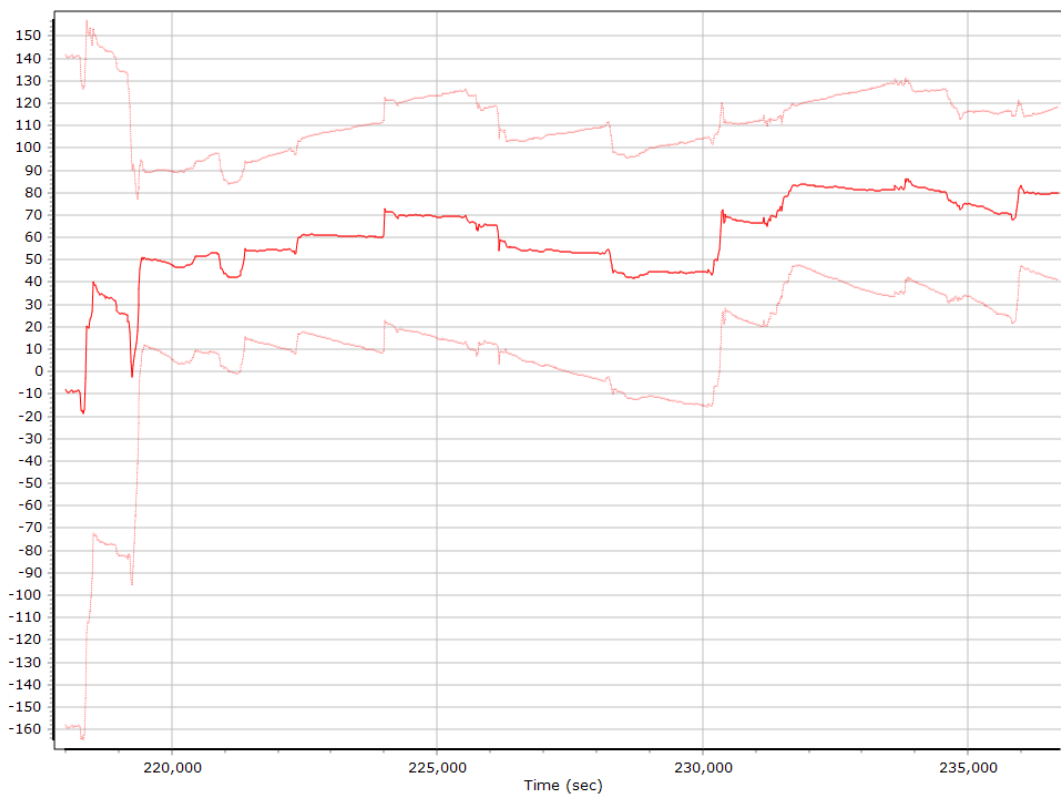
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

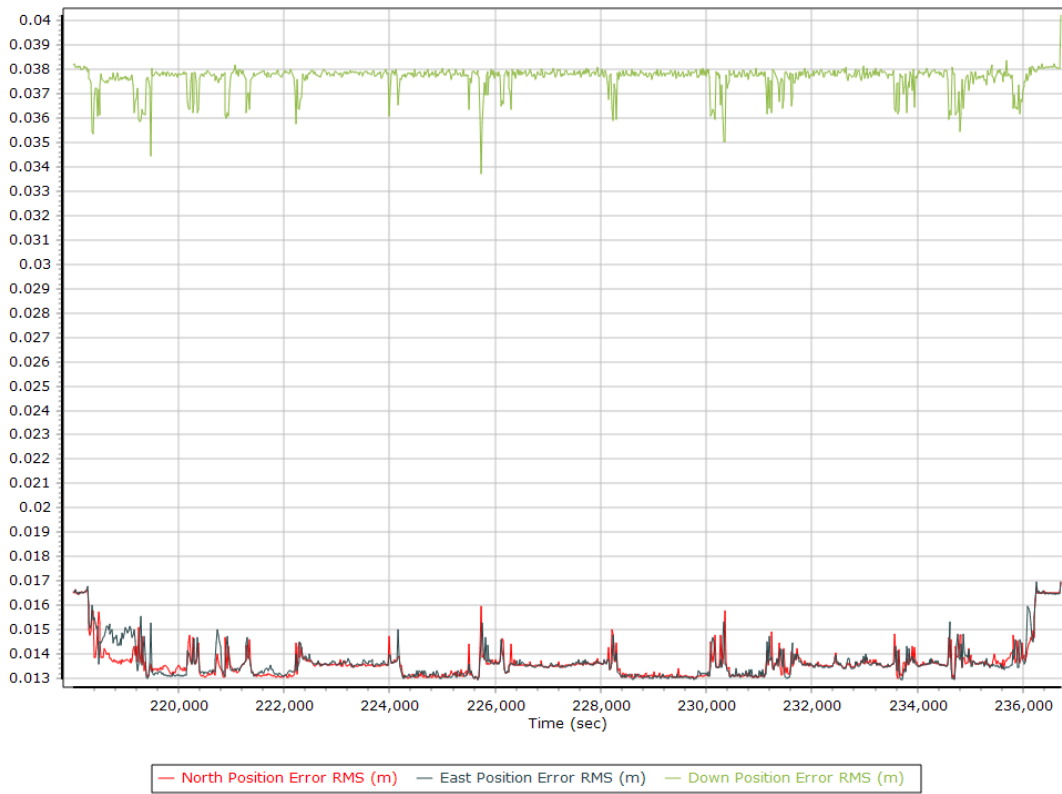


Z Gyro Scale Error (ppm)

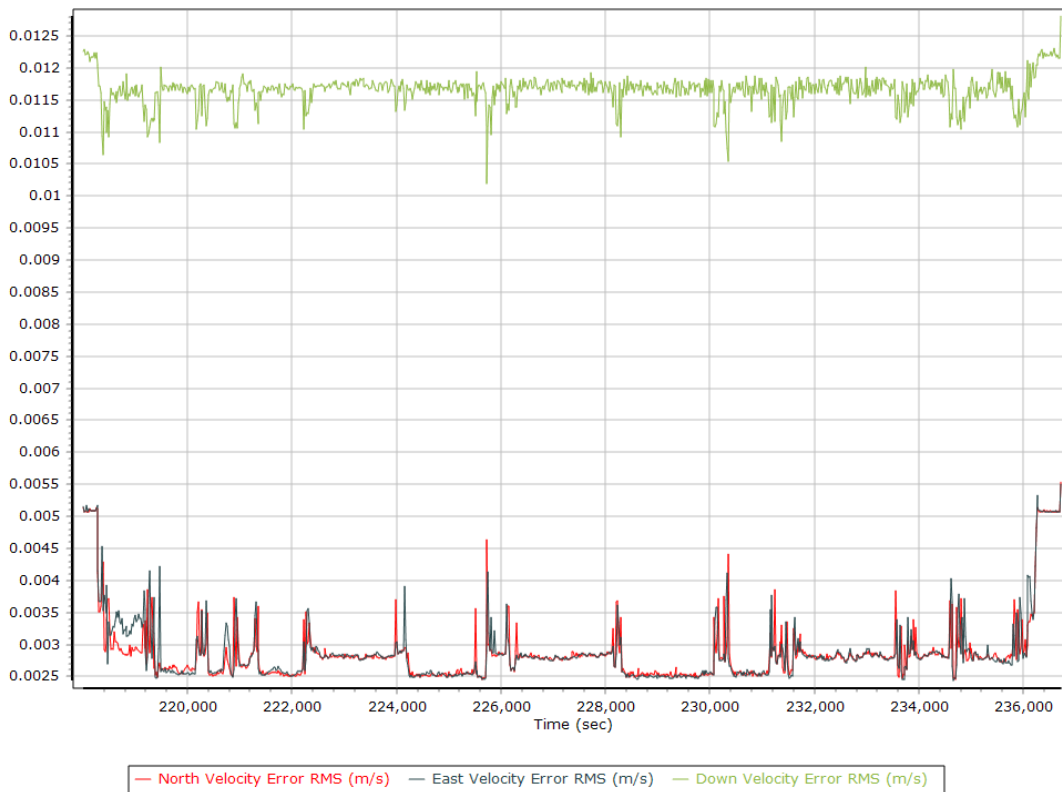


Smoothed Performance Metrics

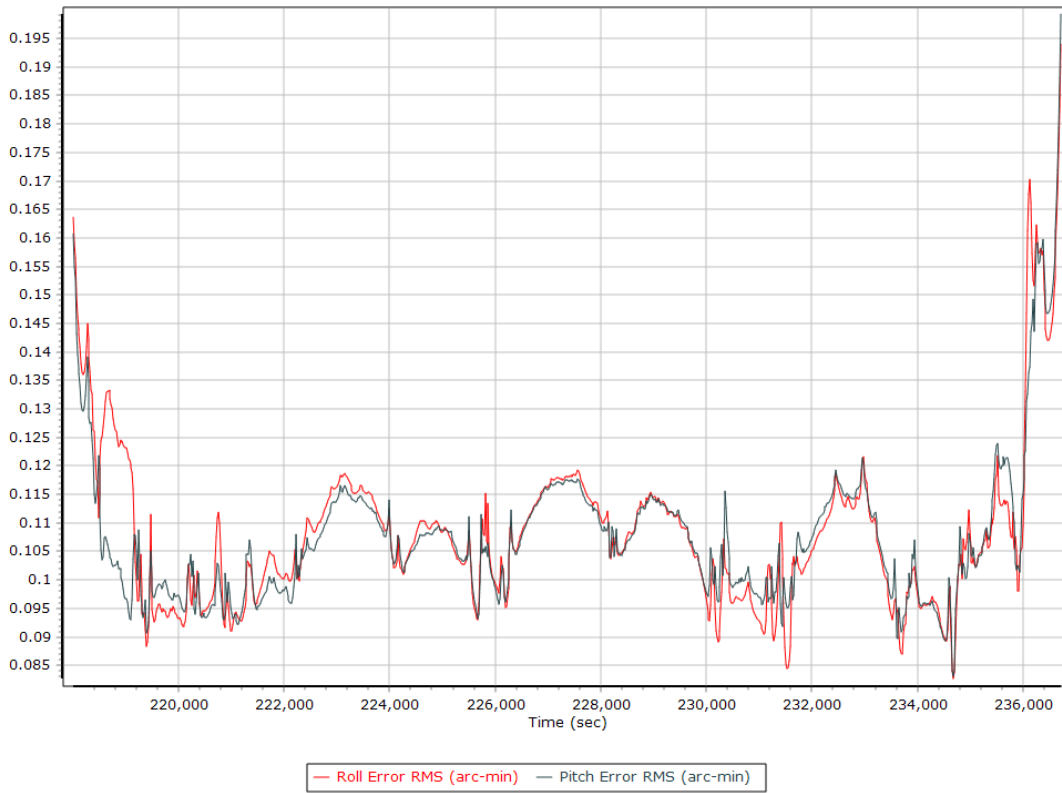
Position Error RMS (m)



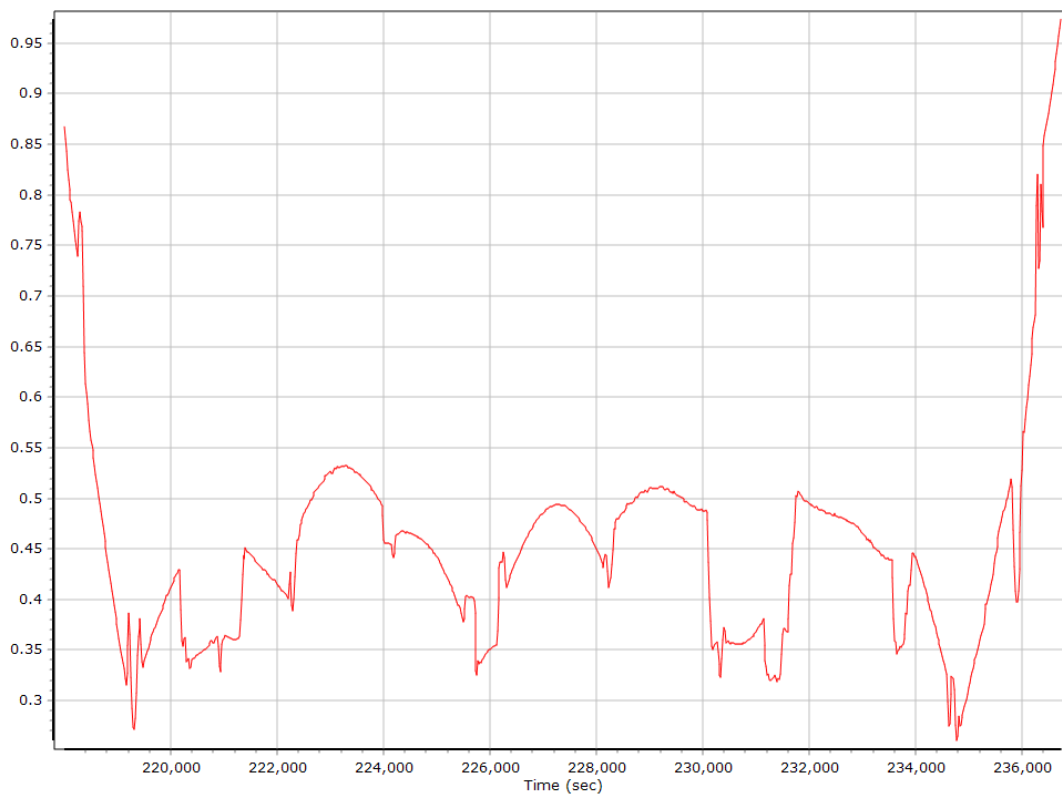
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

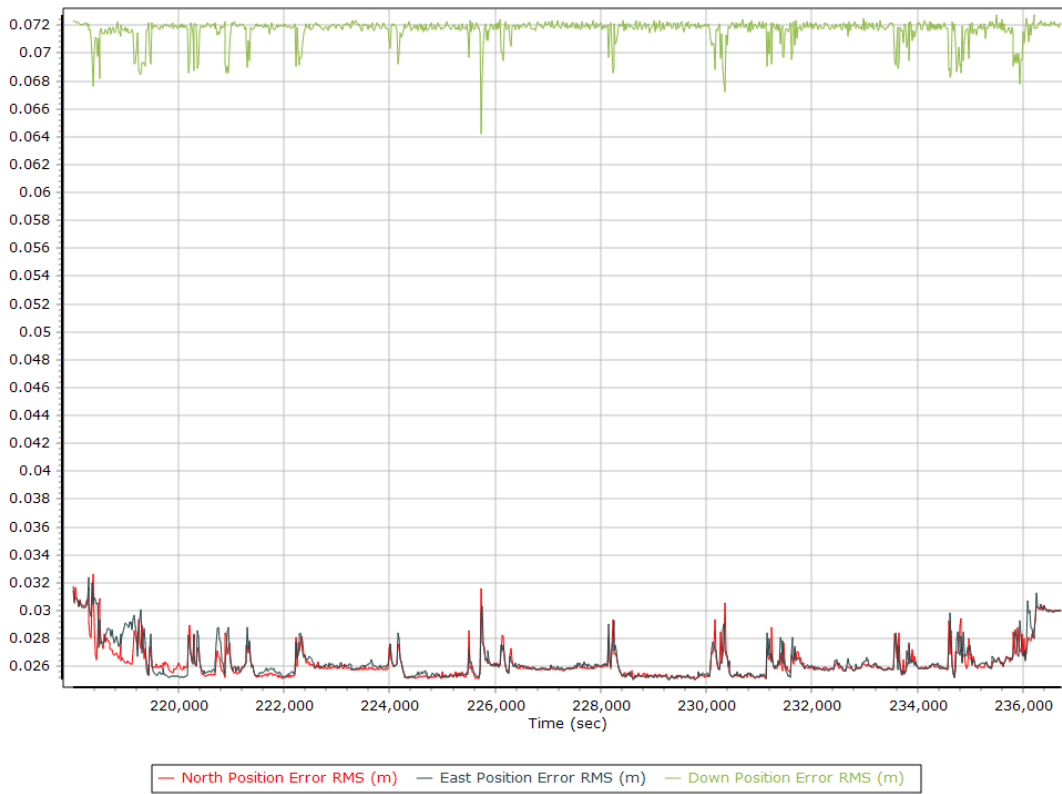


Heading Error RMS (arc-min)

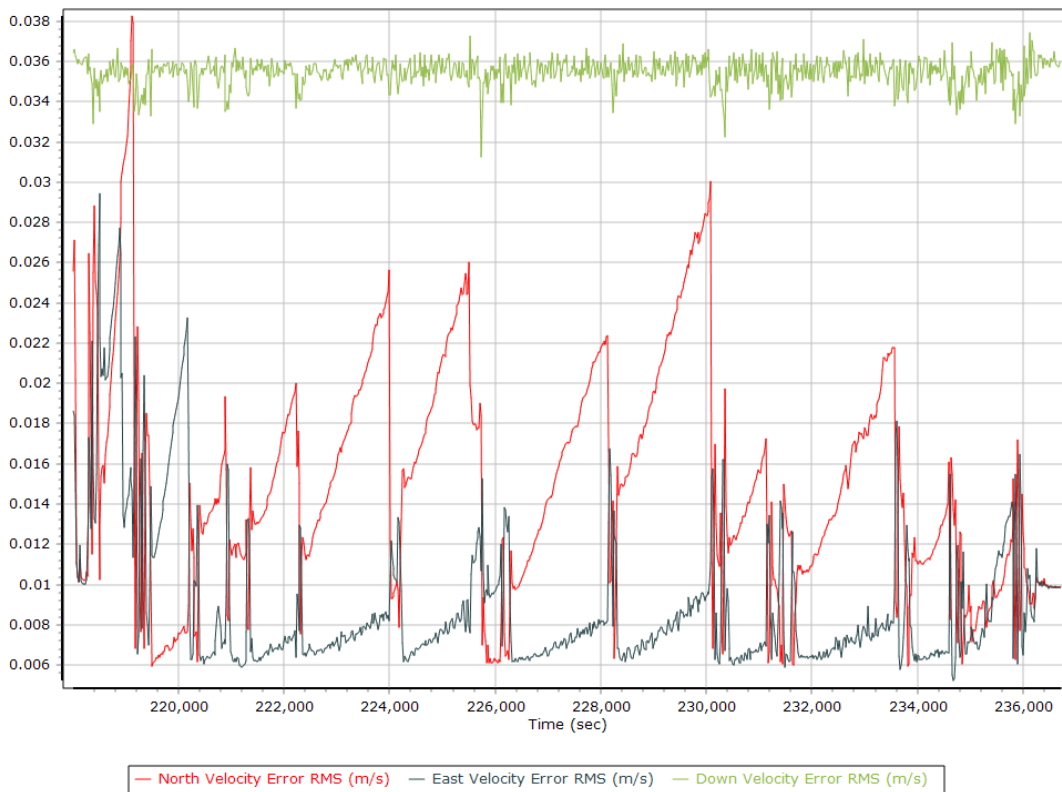


Forward Processed Performance Metrics

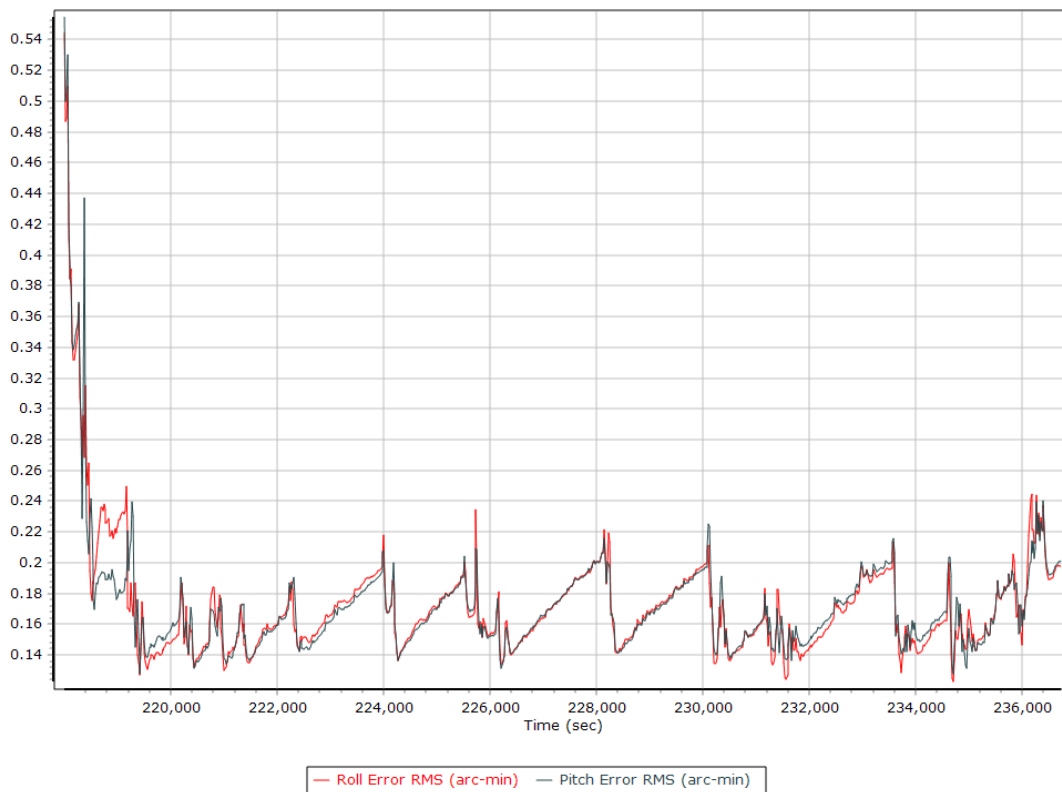
Position Error RMS (m)



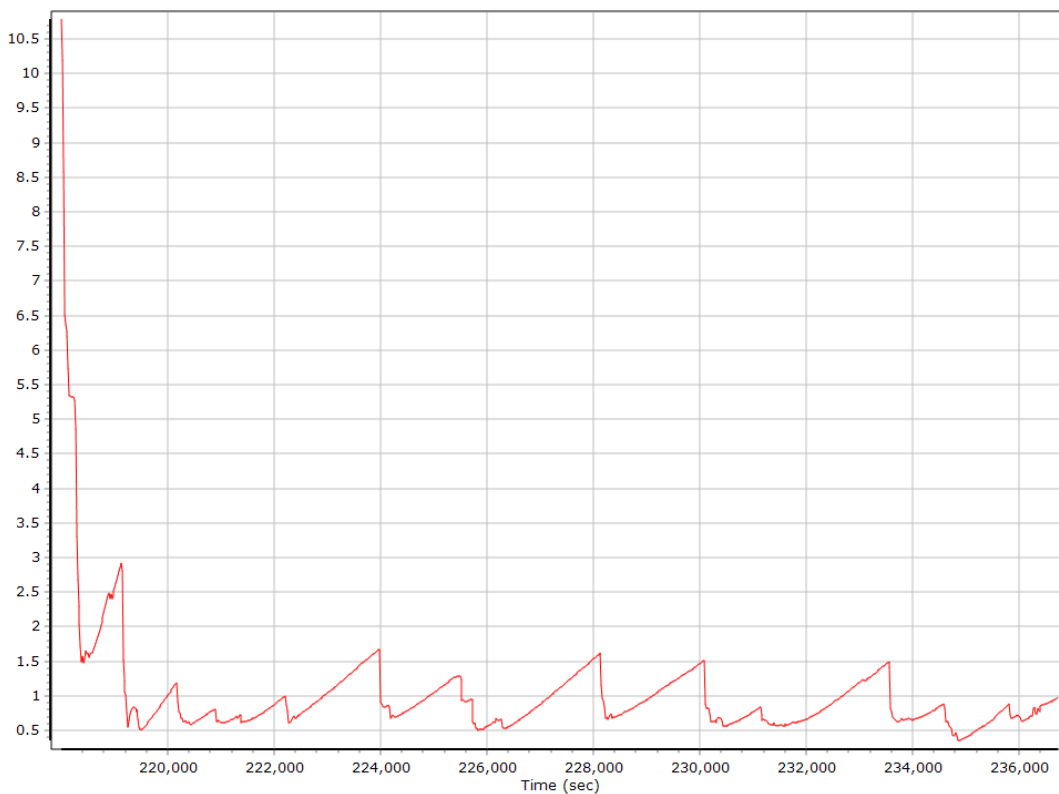
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

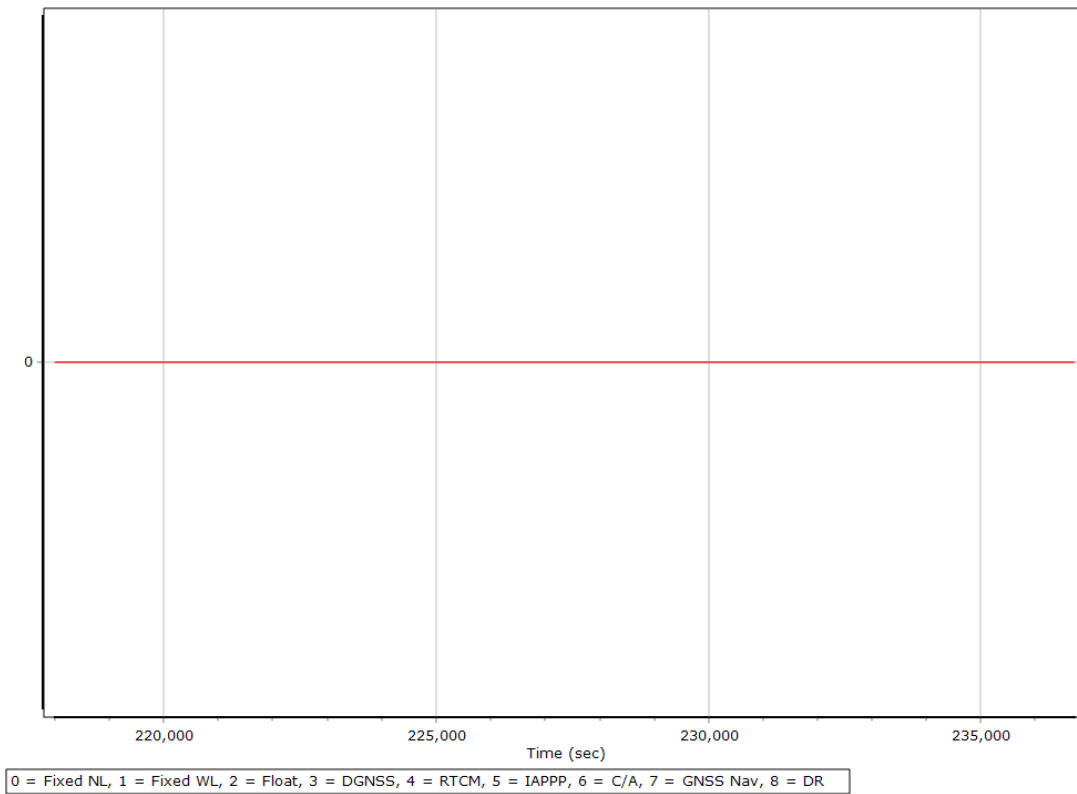


Heading Error RMS (arc-min)

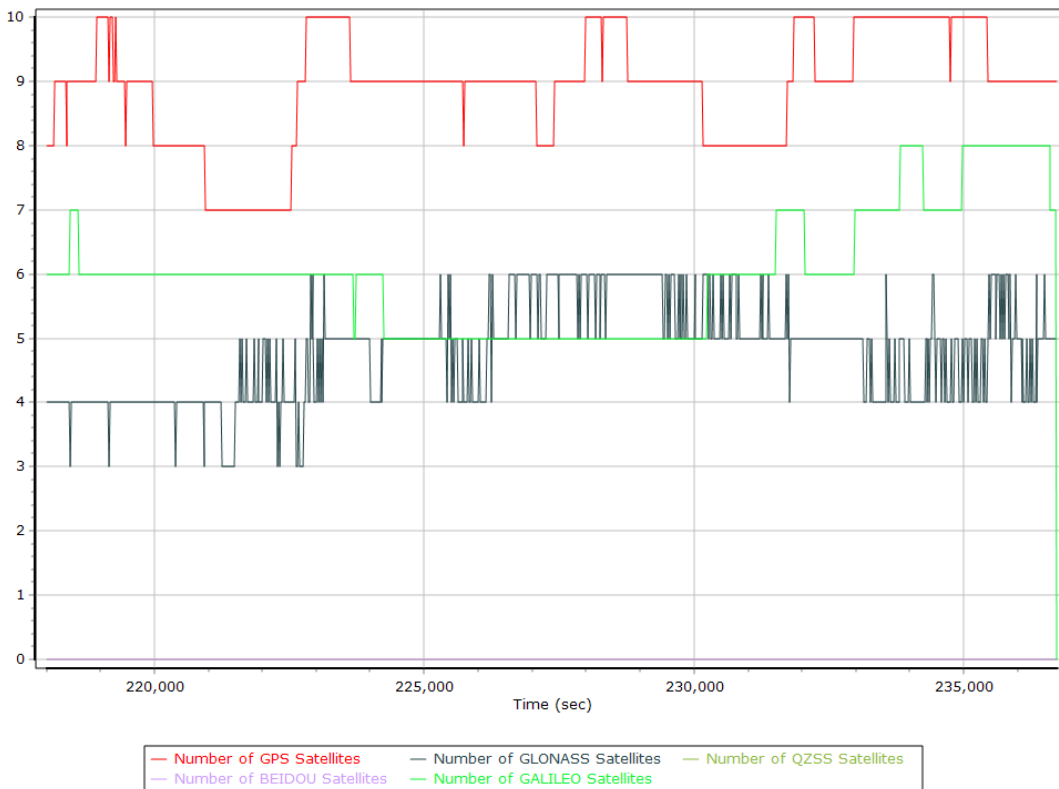


Forward Processed Solution Status

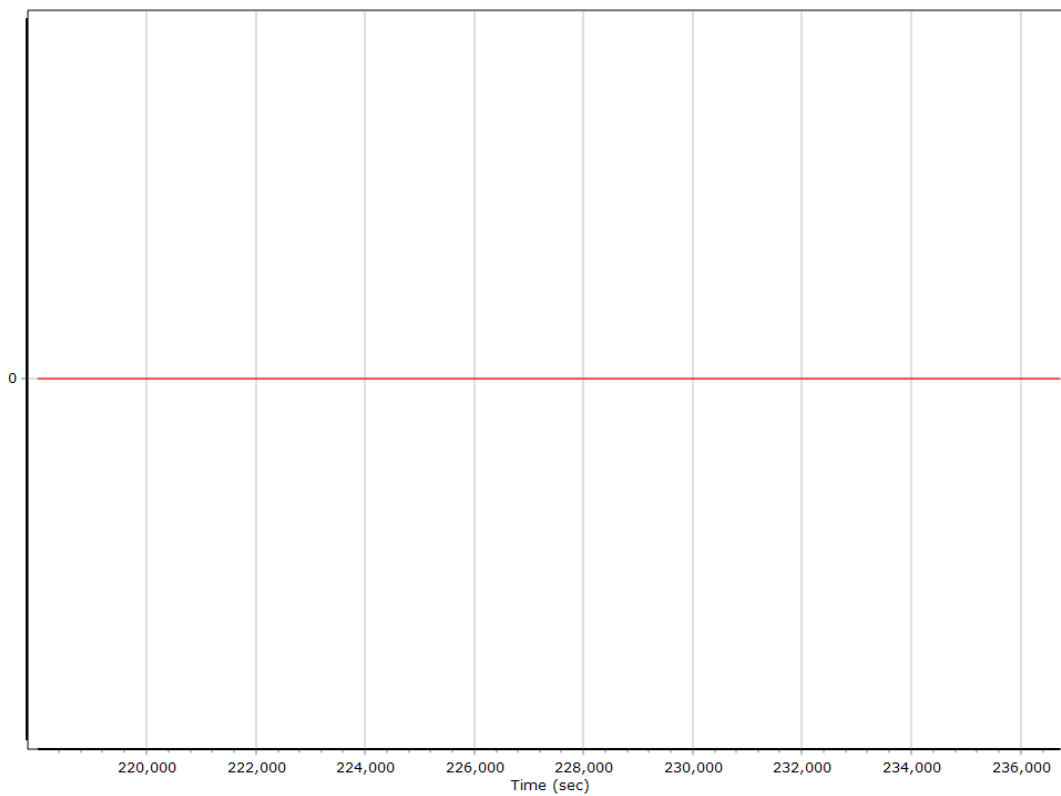
Processing Mode



Number of Satellites



Baseline Length



Export Summary Section 1

| | | | |
|---------------------------------------|----------------------------------|-------|-------|
| Export file | sbet_14624_NAD83(2011).out | | |
| Export format | Custom Smoothed BET | | |
| 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 | Meter | |
| Export start time | 217946.005 (07/12/2022 12:32:26) | | |
| Export end time | 236725.000 (07/12/2022 17:45:25) | | |
| Height option | Ellipsoid Height | | |
| WGS84 height flag | False | | |
| Grid | | | |
| Zone | | | |
| Datum | NAD83 (2011) | | |
| Ellipsoid | GRS 1980 | | |
| Local Transformation | | | |
| Target Epoch | 2010 | | |

EO Summary Section 1

| | | | |
|---|----------------------------------|--------|-------------|
| EO file | | | |
| EO format | ZI Imaging | | |
| Lever arm (m) | 0.000 | 0.000 | 0.000 |
| Boresight angles (arcmin) | 0.0000 | 0.0000 | 0.0000 |
| Output rate | All Records | | |
| 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 | 217946.005 (07/12/2022 12:32:26) | | |
| EO end time | 236725.000 (07/12/2022 17:45:25) | | |
| Grid | Universal Transverse Mercator | | |
| Zone | UTM North 15 (96W to 90W) | | |
| Datum | NAD83 (2011) | | |
| Ellipsoid | GRS 1980 | | |
| Local Transformation | NONE | | |
| Target Epoch | 2010 | | |