

General Information

Mission Information

| | |
|------------------|--------------------------------|
| Project name | 211024_A_5060428_nad2011_FINAL |
| Processing date | 2021-11-05 13:35:11 |
| Mission date | 2021-10-24 14:22:46 |
| Mission duration | 03:58:06.000 |
| Processing mode | IN-Fusion PP-RTX |

Rover Hardware Information

| | |
|---------------|--------------------------|
| Product | POS AV 610 VER6 HW2.5-12 |
| Serial number | S/N10633 |
| IMU type | 57 |
| Receiver type | BD982 |
| Antenna type | AV39 |

Project File List

Rover Data Files

| File name | File type |
|-------------|-----------|
| survey4.pos | POS Data |

Input Files

| File Name | File Type |
|--------------|-----------------------------|
| Ephm2970.21g | GLONASS Broadcast Ephemeris |
| Ephm2970.21n | GPS Broadcast Ephemeris |
| igl21806.sp3 | GLONASS Precise Ephemeris |
| igs21806.sp3 | GPS Precise Ephemeris |

Output Files

| Filename | File type |
|---|----------------------|
| sbet_211024_A_5060428_nad2011_FINAL.out | SBET Trajectory File |

Rover Data Summary

| | | | |
|--|---------------------------------|-------|---------|
| First raw data file | survey4.pos | | |
| Last raw data file | survey4.pos | | |
| Start GPS week | 2181 | | |
| Start time | 51765.811 (10/24/2021 14:22:45) | | |
| End time | 66052.150 (10/24/2021 18:20:52) | | |
| Start of fine alignment | 52126.337 (10/24/2021 14:28:46) | | |
| 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 | -90.000 |
| Reference to Primary GNSS lever arm (m) | 0.534 | 0.060 | -1.199 |
| Reference to Primary GNSS lever arm std dev (m) | -1.000 | | |
| Aircraft to Reference mounting angles (deg) | 0.000 | 0.000 | 0.000 |

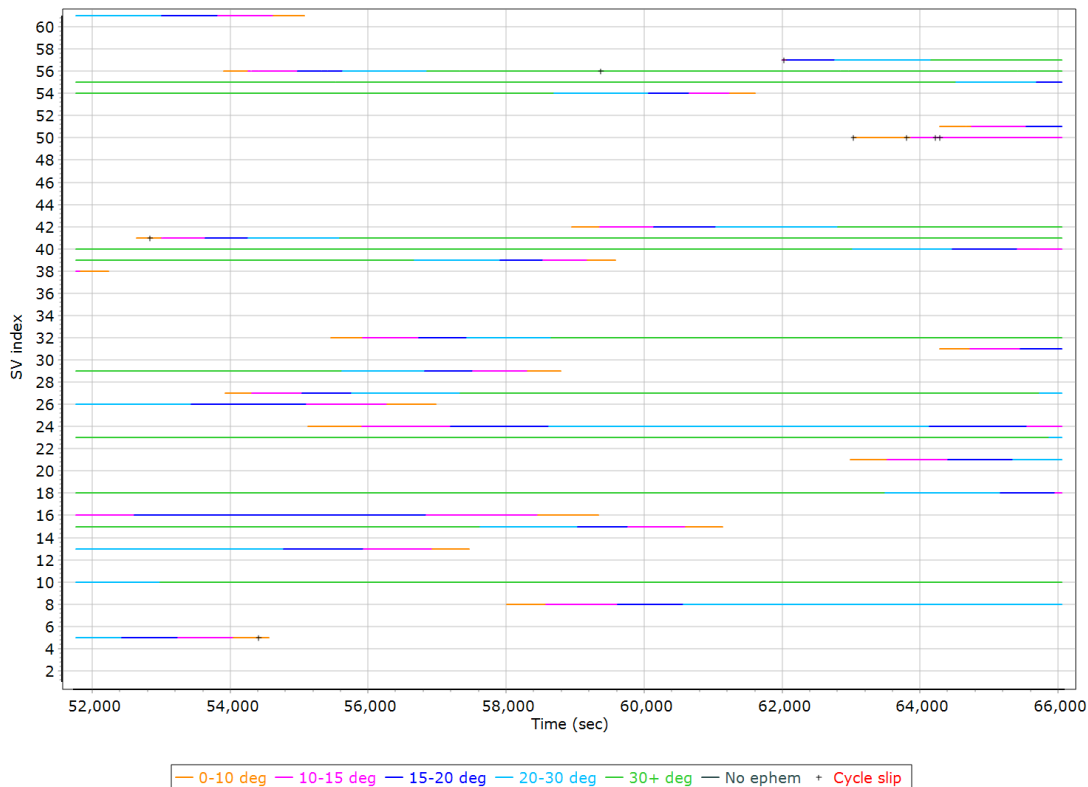
Rover Data QC

Raw IMU Import QC Summary

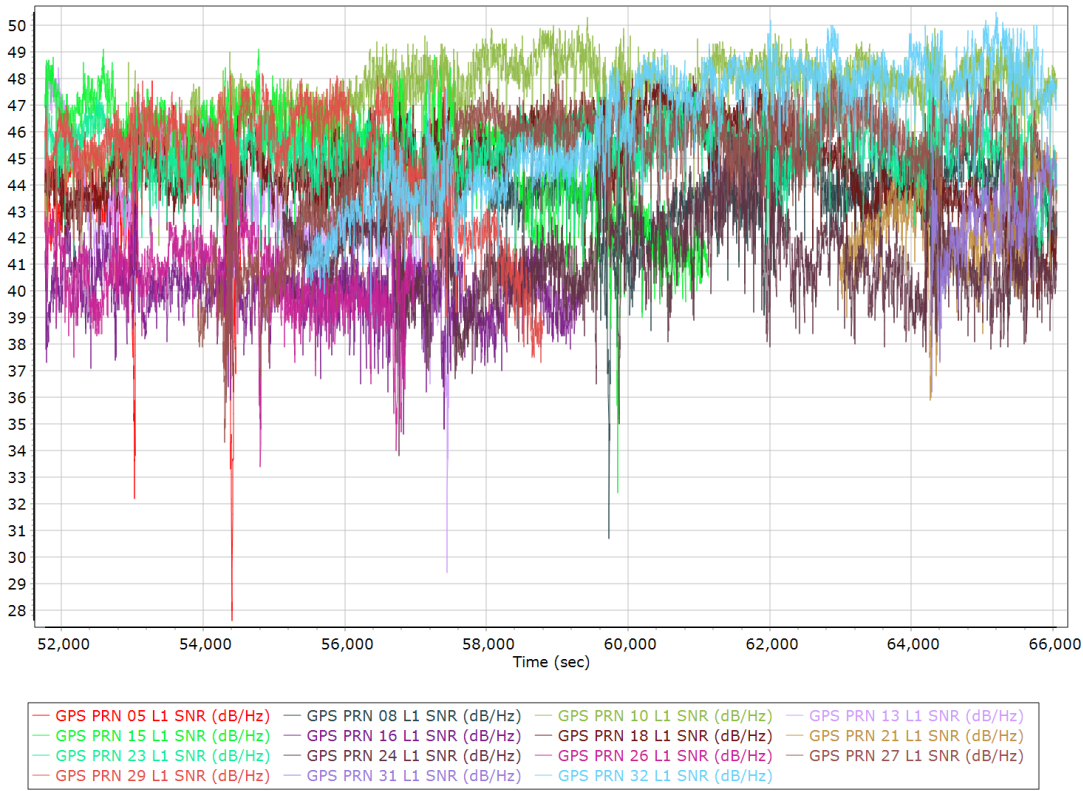
| | |
|-------------------------|--|
| IMU data input file | imu_211024_A_5060428_nad2011_FINAL.dat |
| IMU data check log file | imudt_211024_A_5060428_nad2011_FINAL.log |
| IMU Records Processed | 2856795 |
| Termination Status | Normal |
| IMU Anomalies | 0 |

Primary Observables & Satellite Data

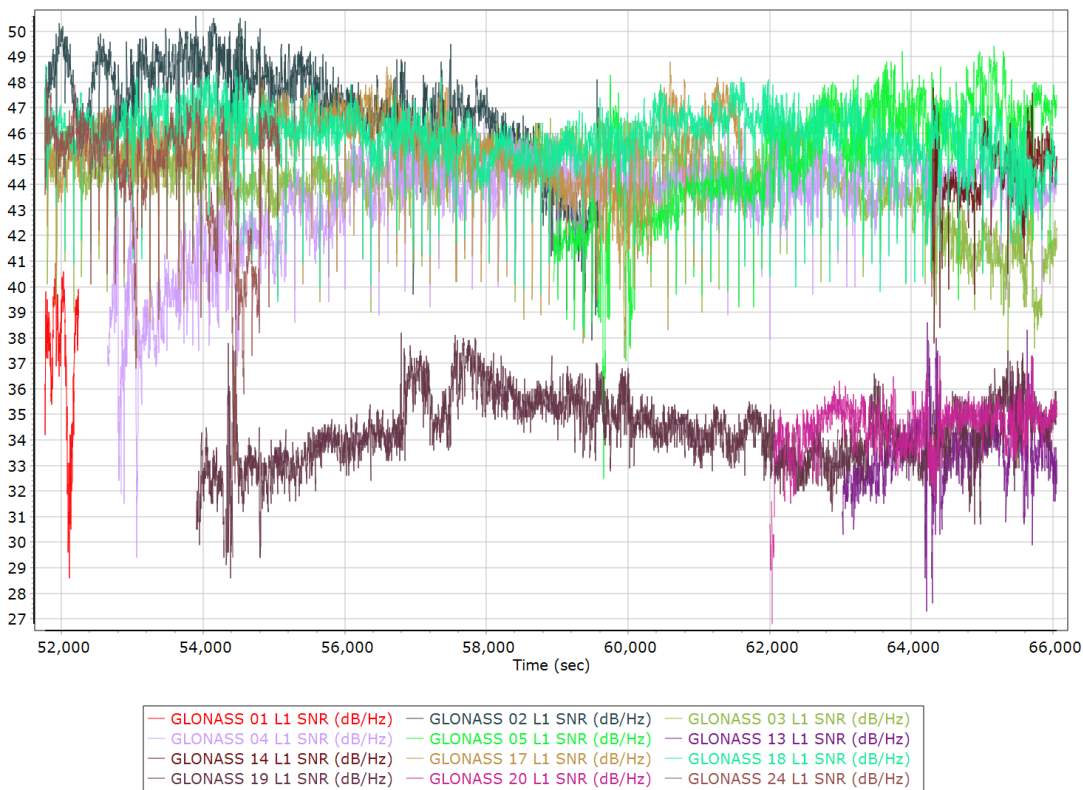
GPS/GLONASS L1 Satellite Lock/Elevation



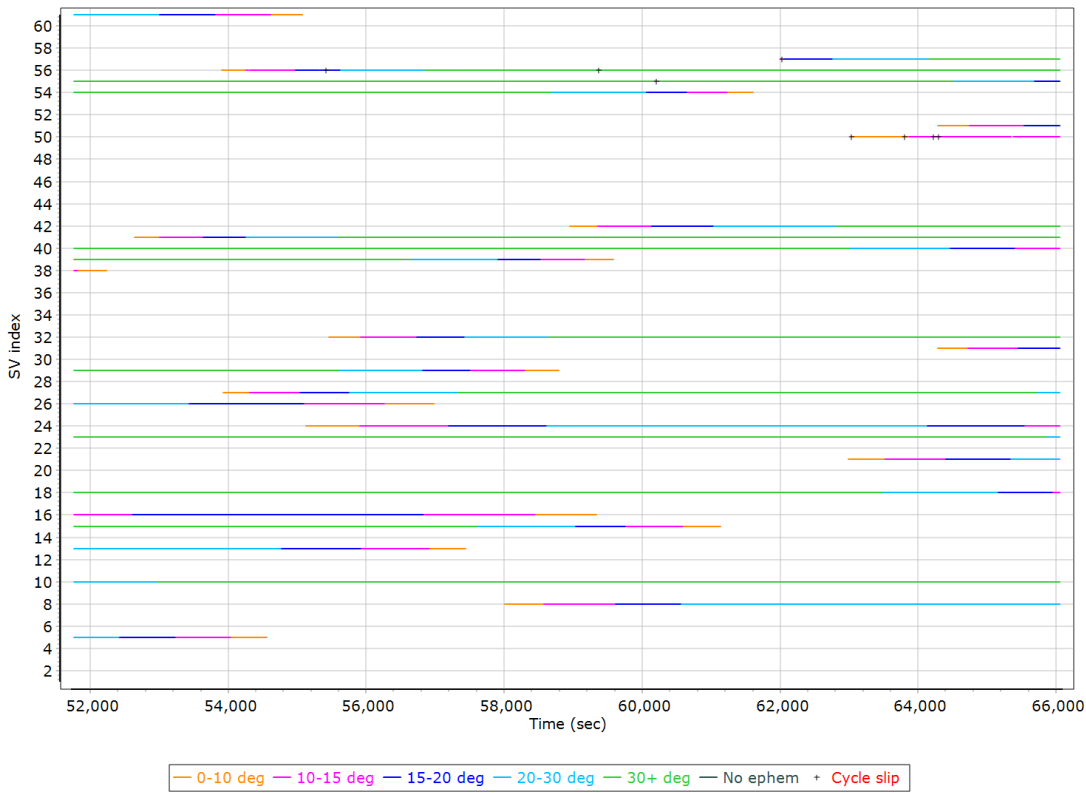
GPS L1 SNR



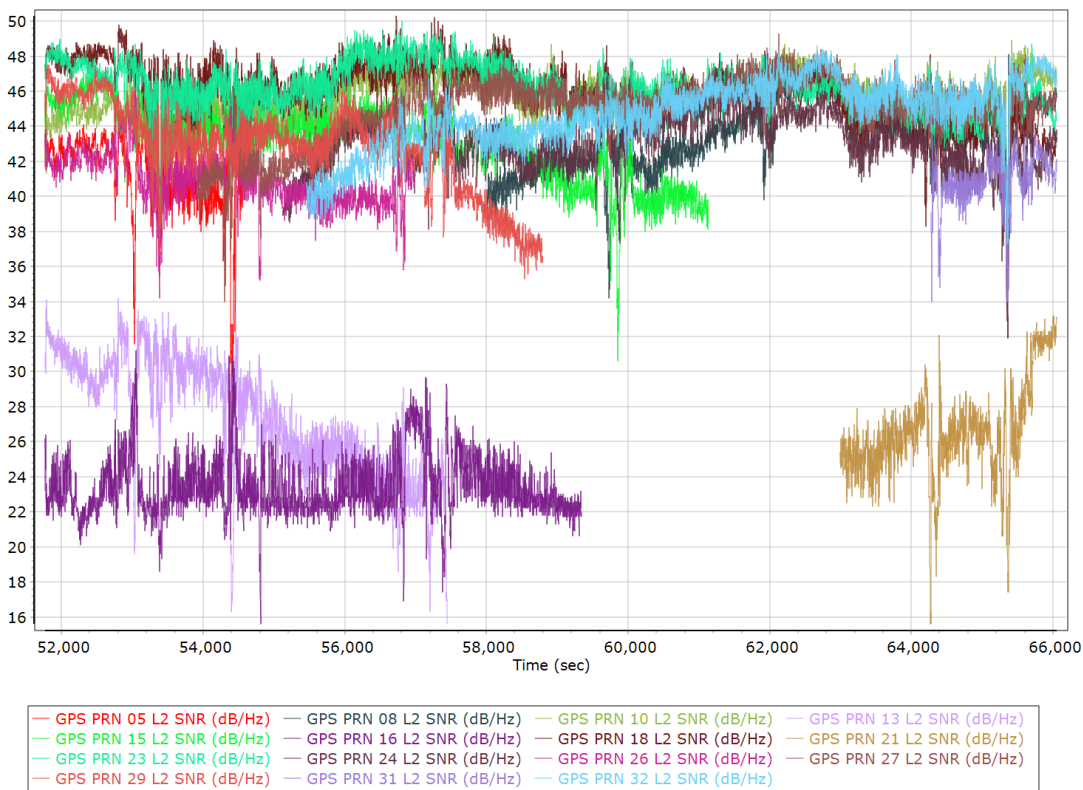
GLONASS L1 SNR



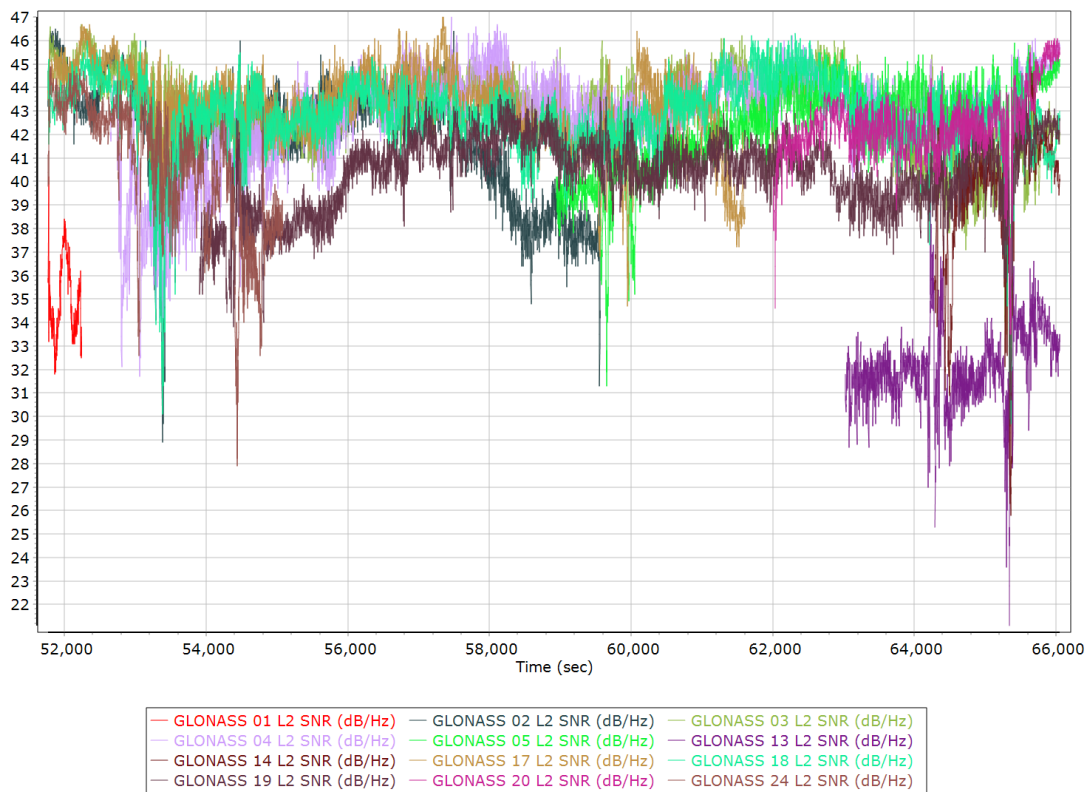
GPS/GLONASS L2 Satellite Lock/Elevation



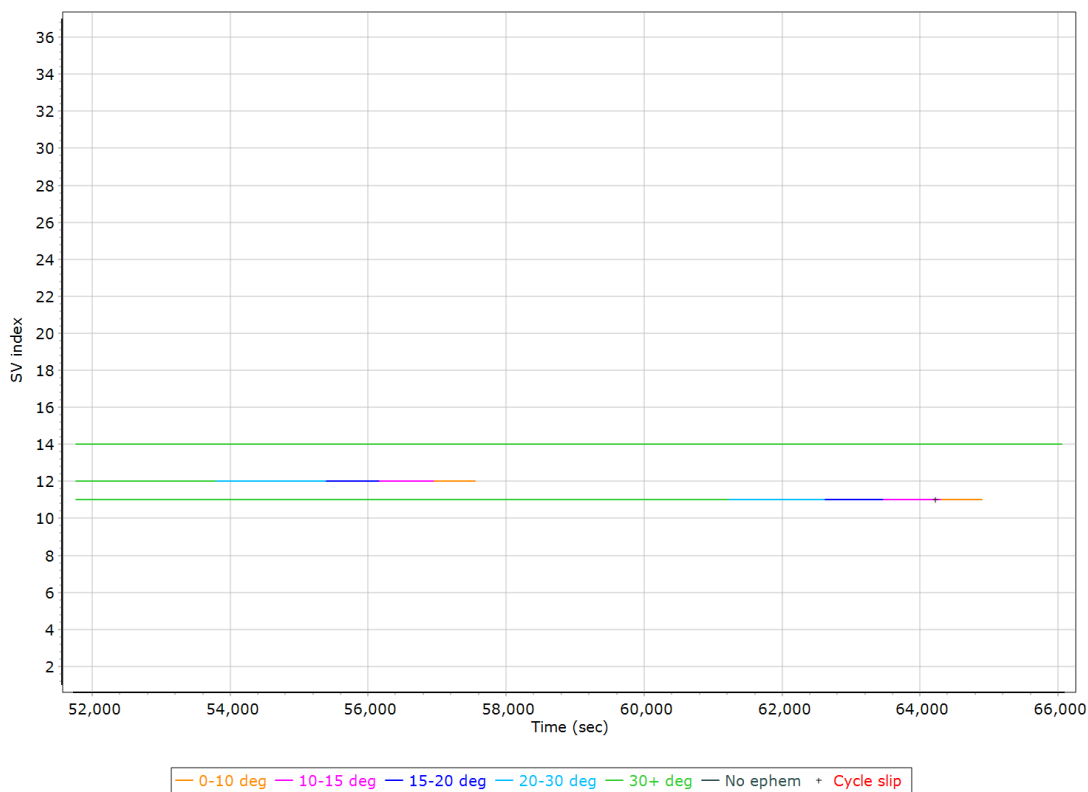
GPS L2 SNR



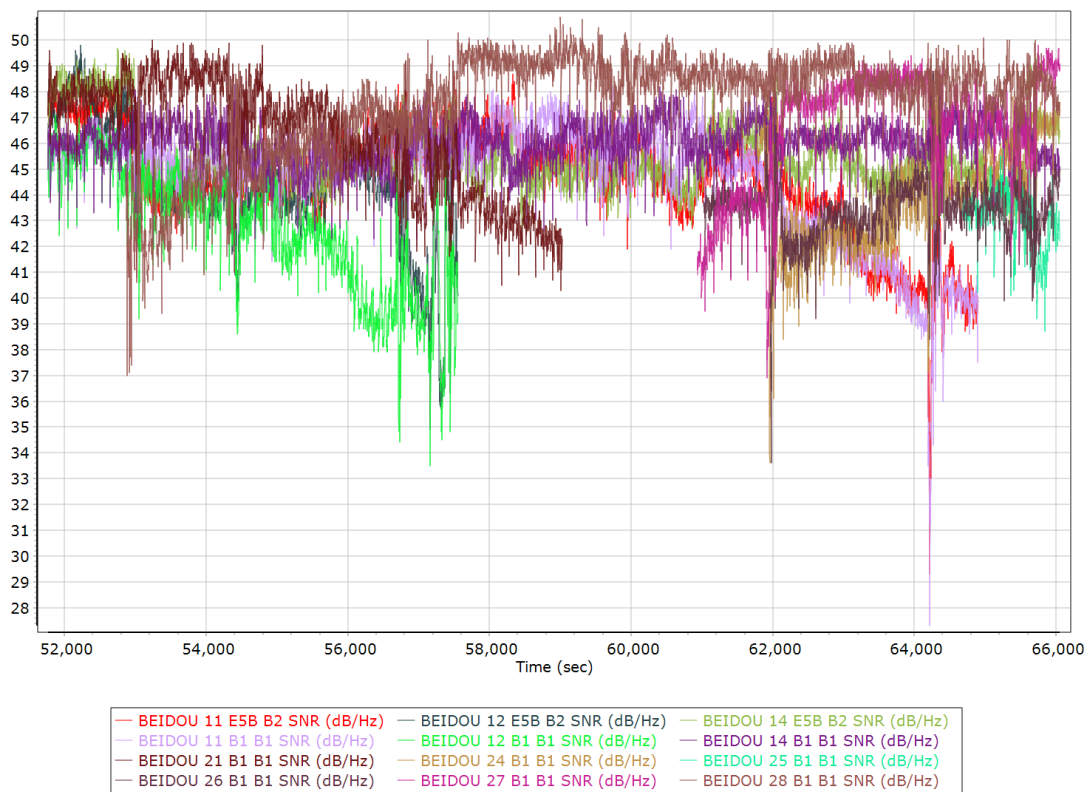
GLONASS L2 SNR



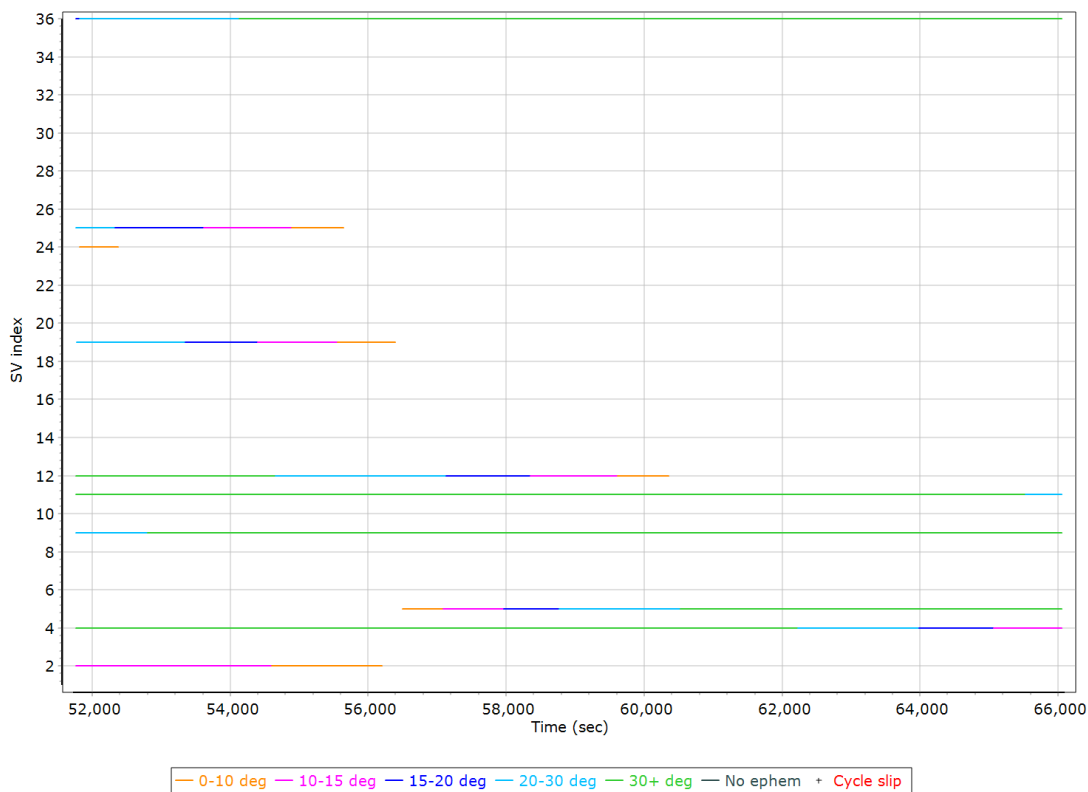
BEIDOU Satellite Lock/Elevation



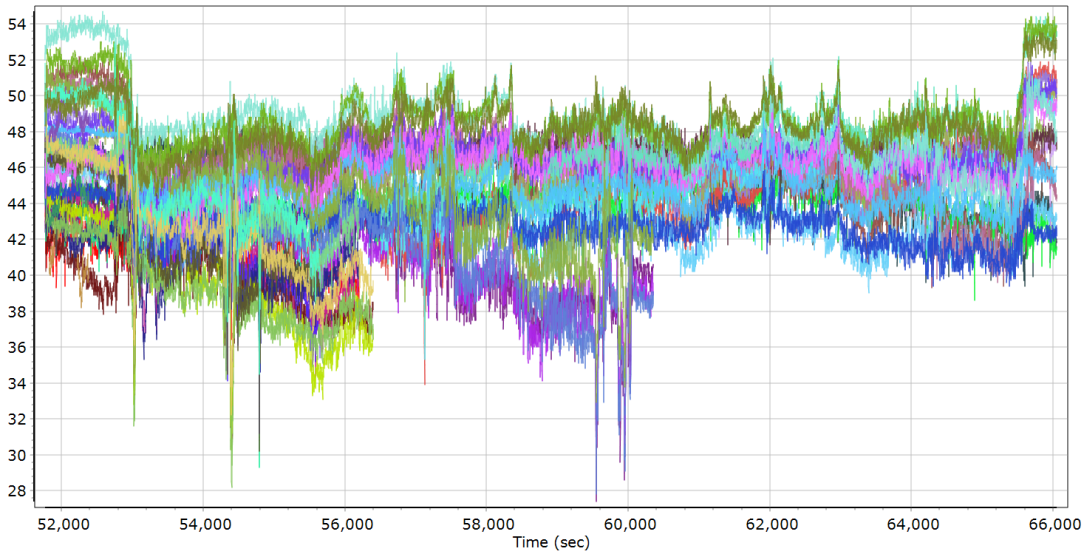
BEIDOU SNR



GALILEO Satellite Lock/Elevation



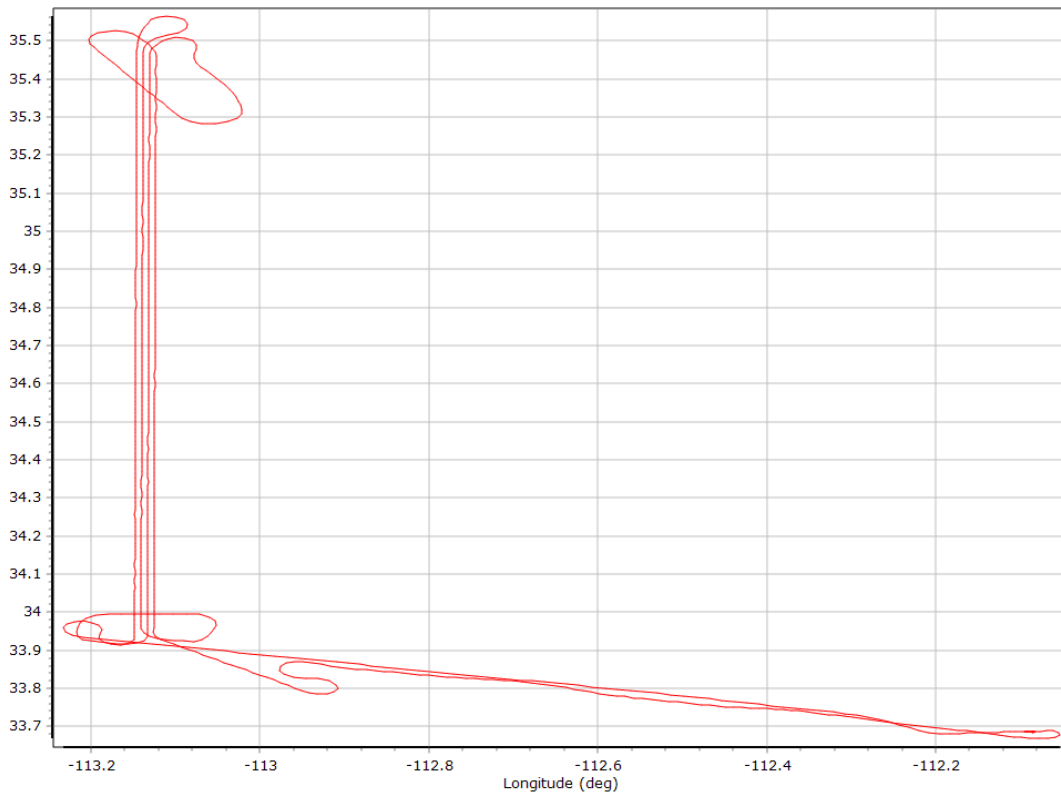
GALILEO SNR



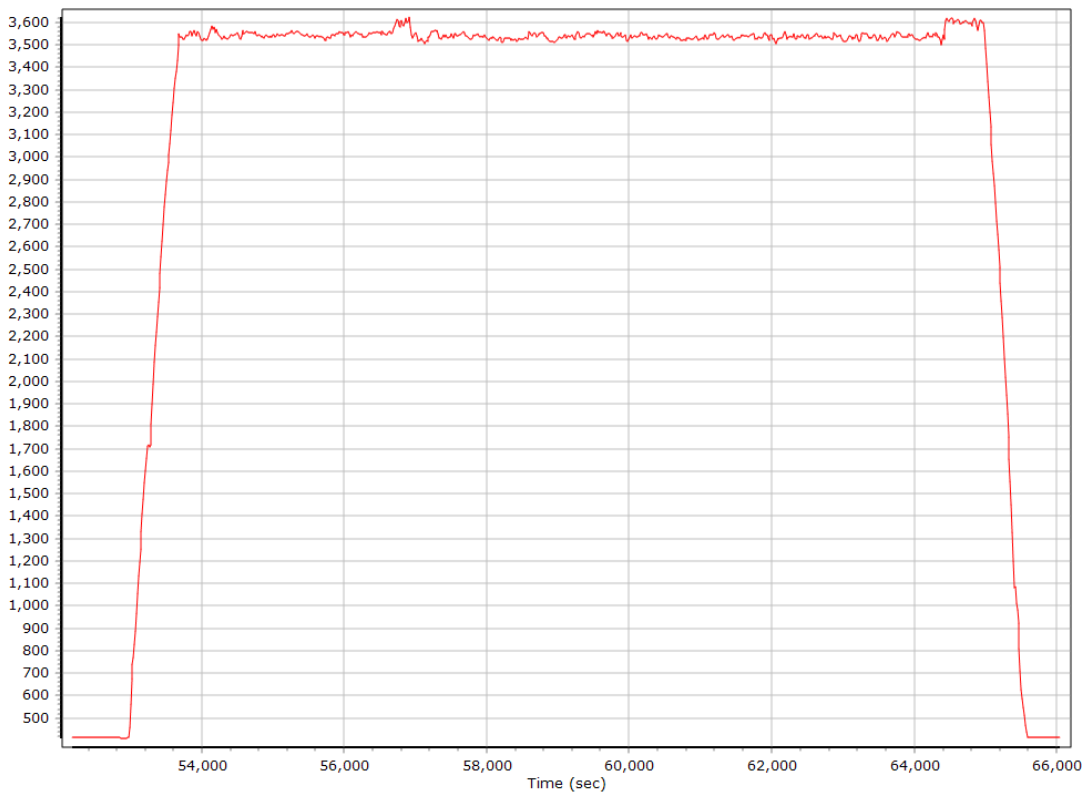
| | |
|---|---|
| — GALILEO 02 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 04 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 05 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 09 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 11 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 12 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 19 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 24 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 25 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 36 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 02 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 04 L5E5A BPSK10_PD SNR (dB/Hz) |
| — GALILEO 05 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 09 L5E5A BPSK10_PD SNR (dB/Hz) |
| — GALILEO 11 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 12 L5E5A BPSK10_PD SNR (dB/Hz) |
| — GALILEO 19 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 24 L5E5A BPSK10_PD SNR (dB/Hz) |
| — GALILEO 25 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 36 L5E5A BPSK10_PD SNR (dB/Hz) |

Smoothed Trajectory Information

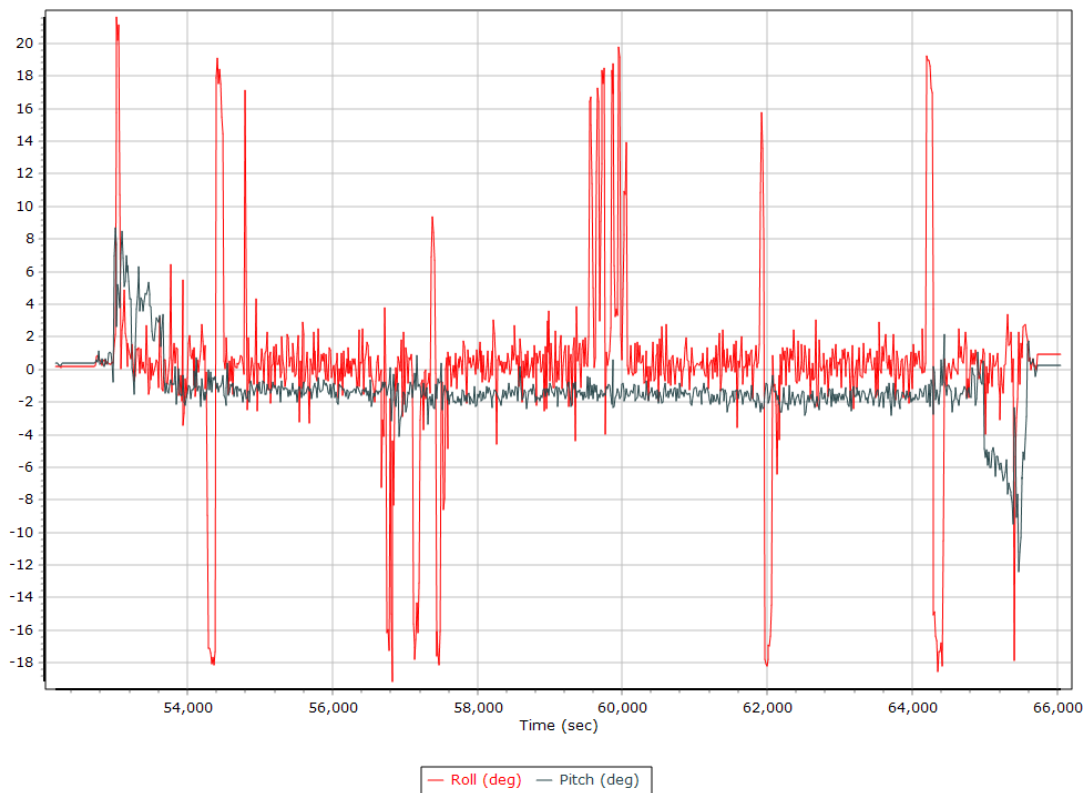
Top View



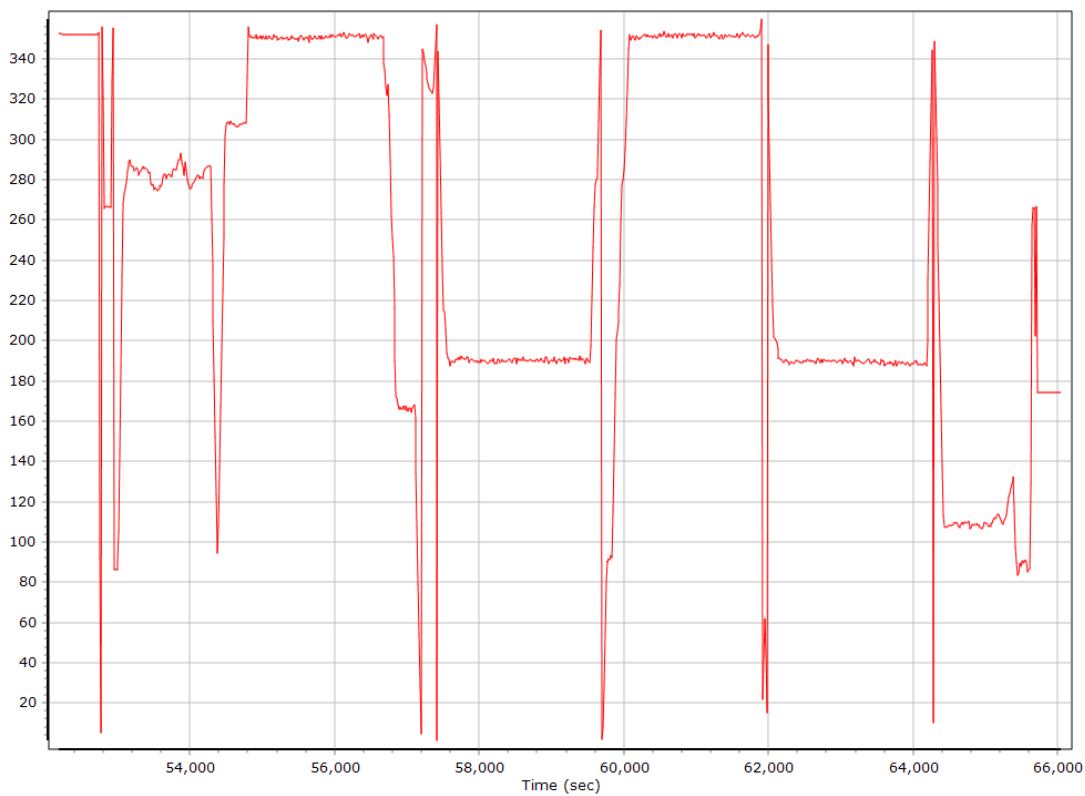
Altitude



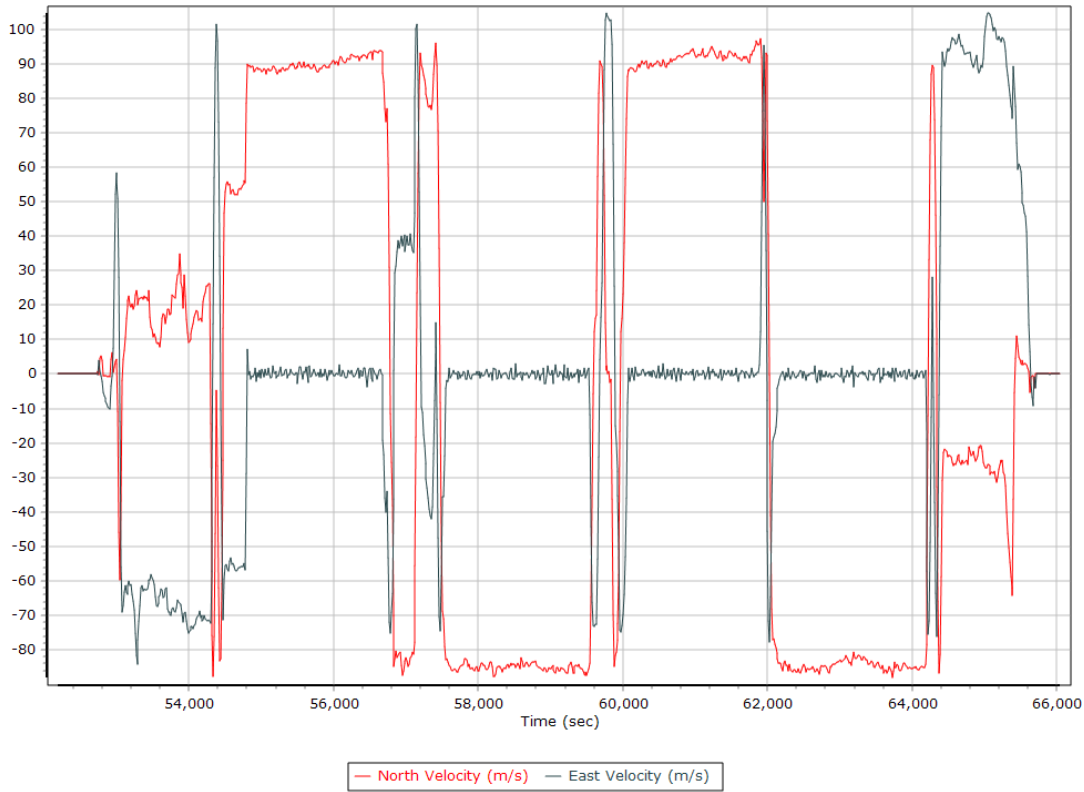
Roll/Pitch



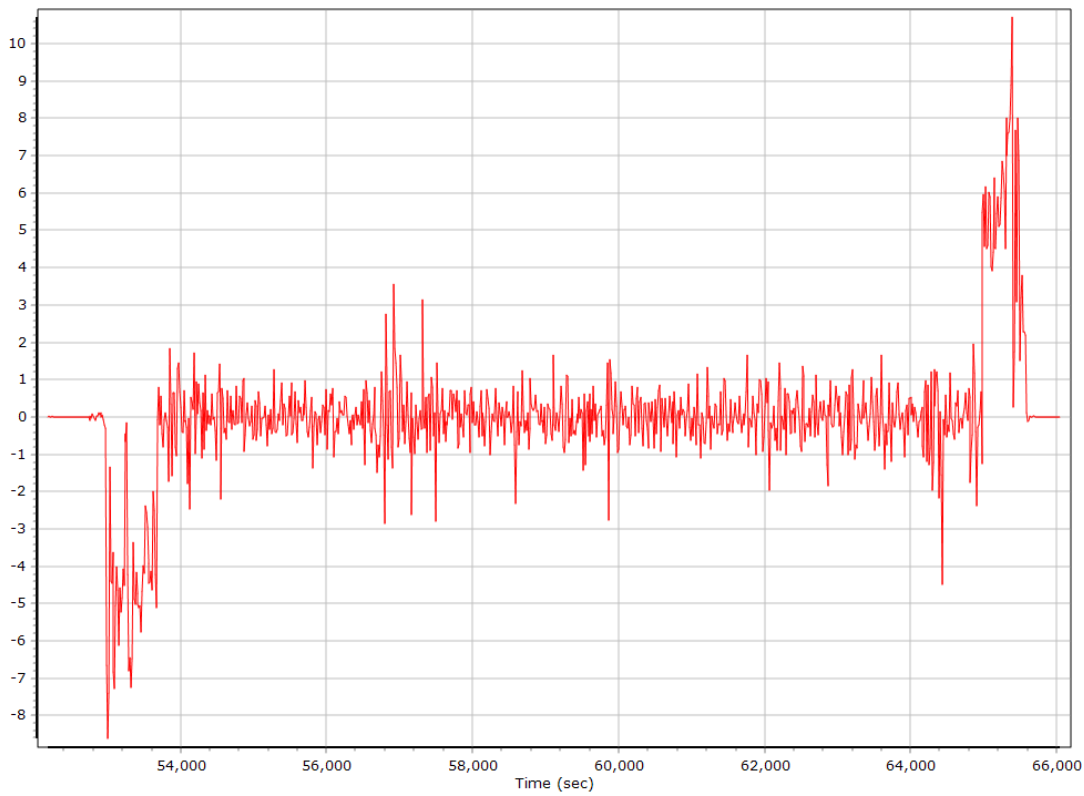
Heading



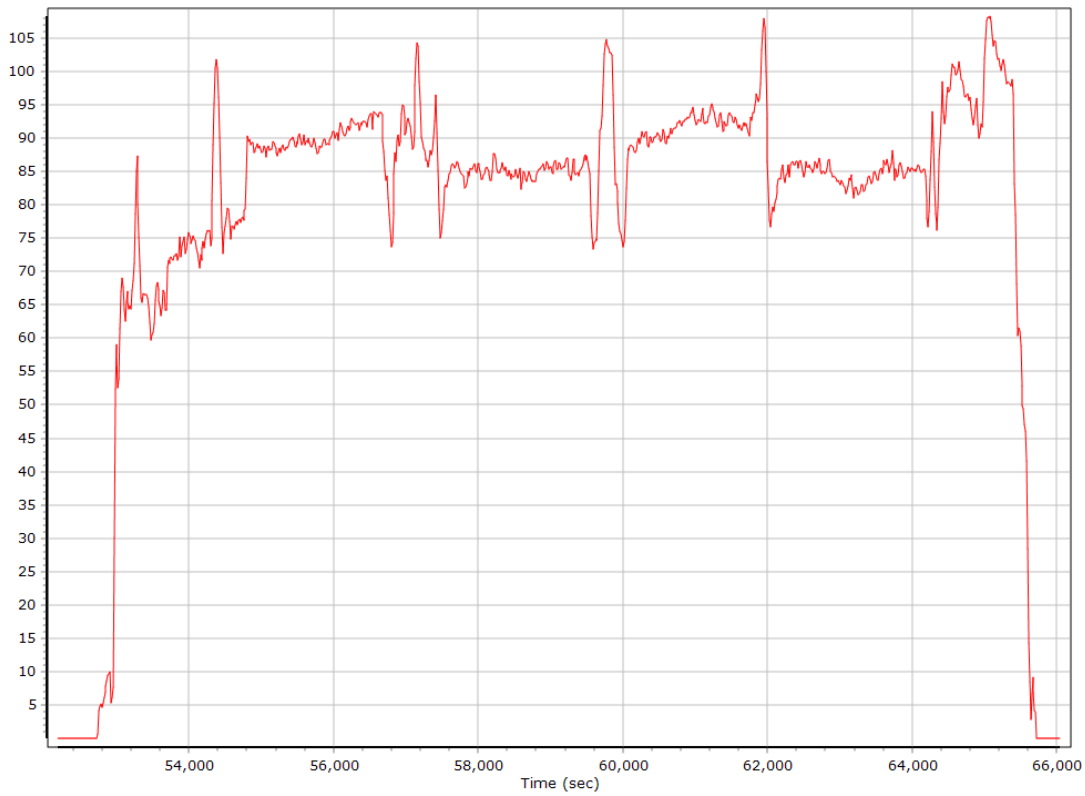
North/East Velocity



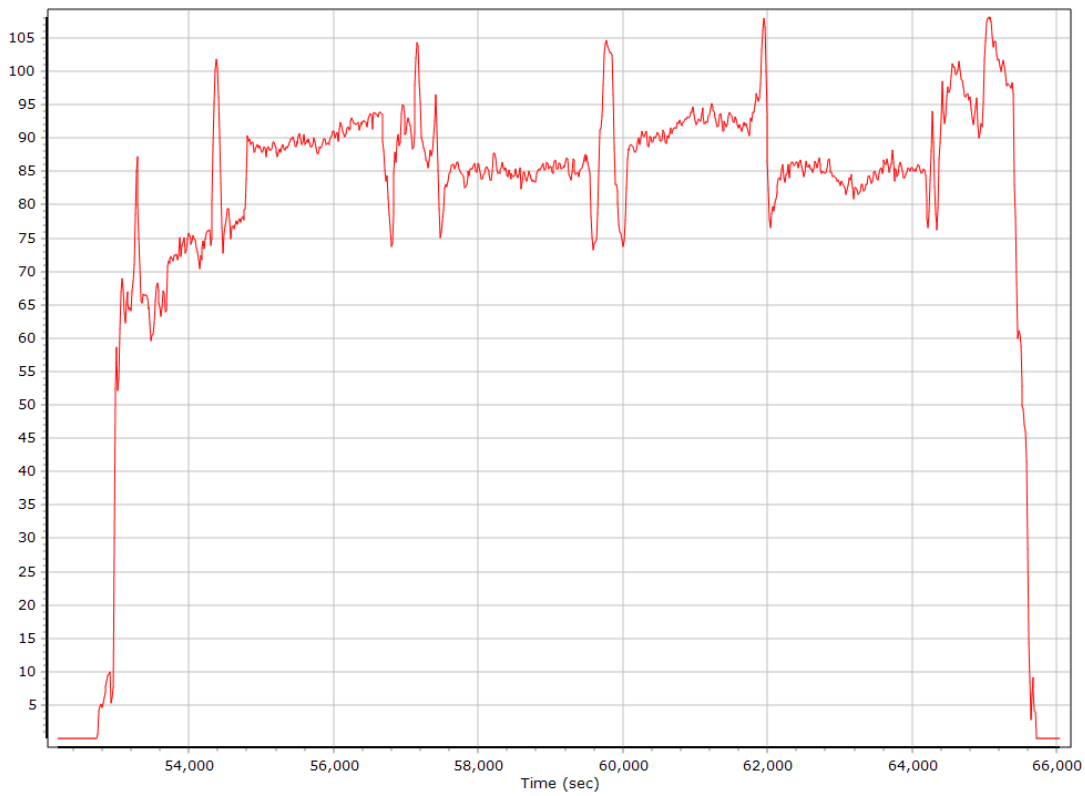
Down Velocity



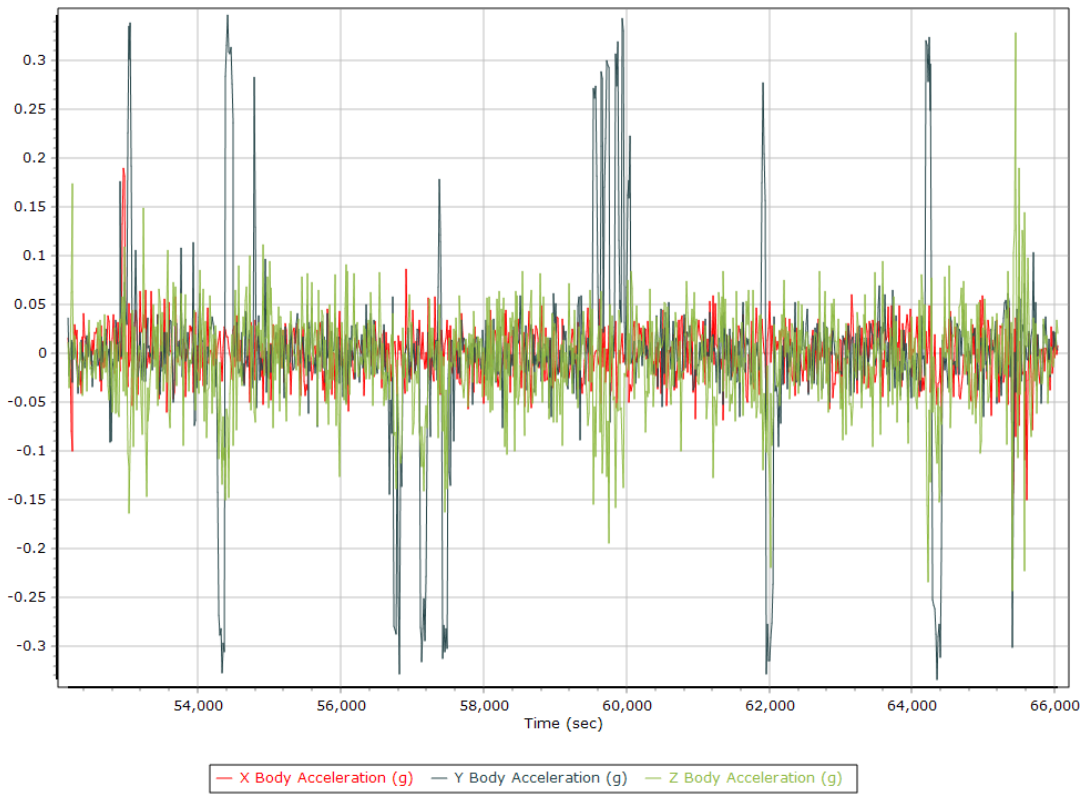
Total Speed



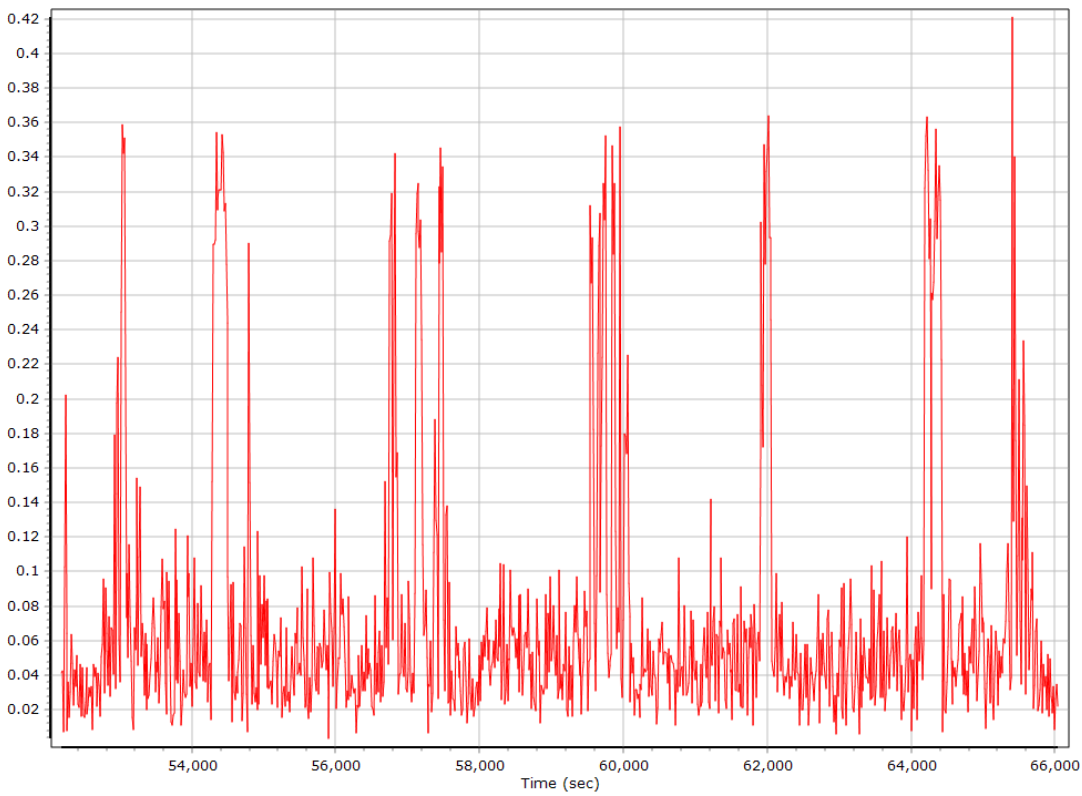
Ground Speed



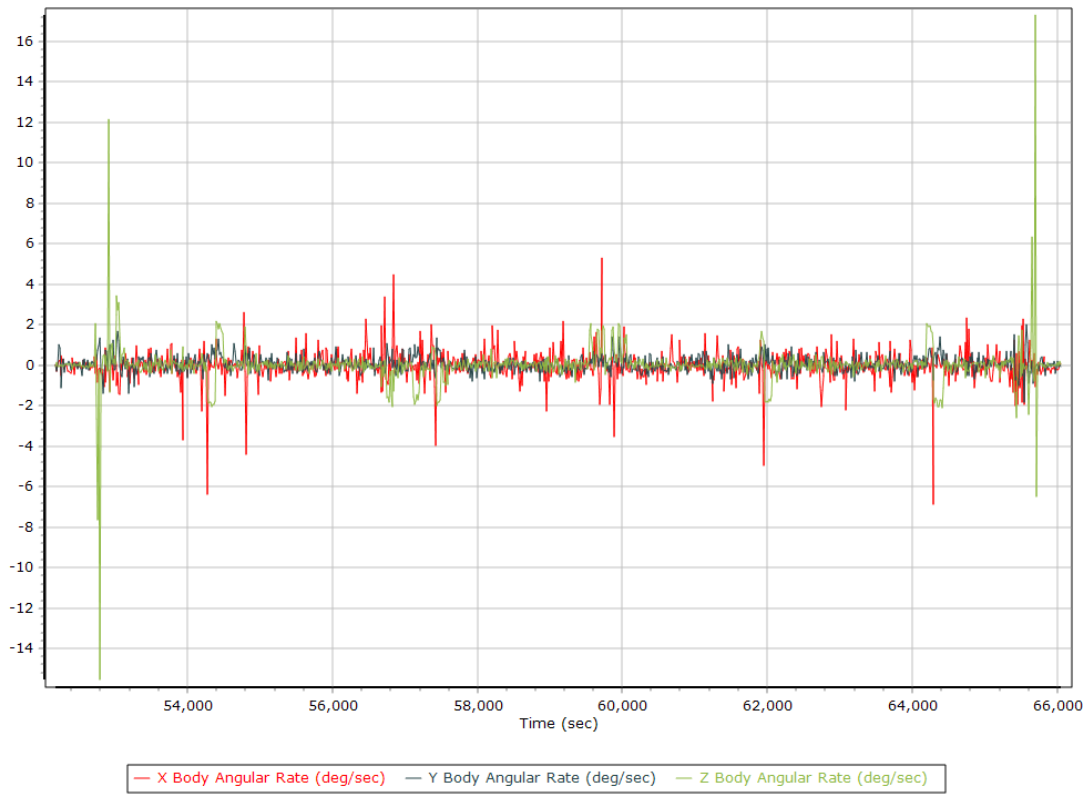
Body Acceleration



Total Body Acceleration

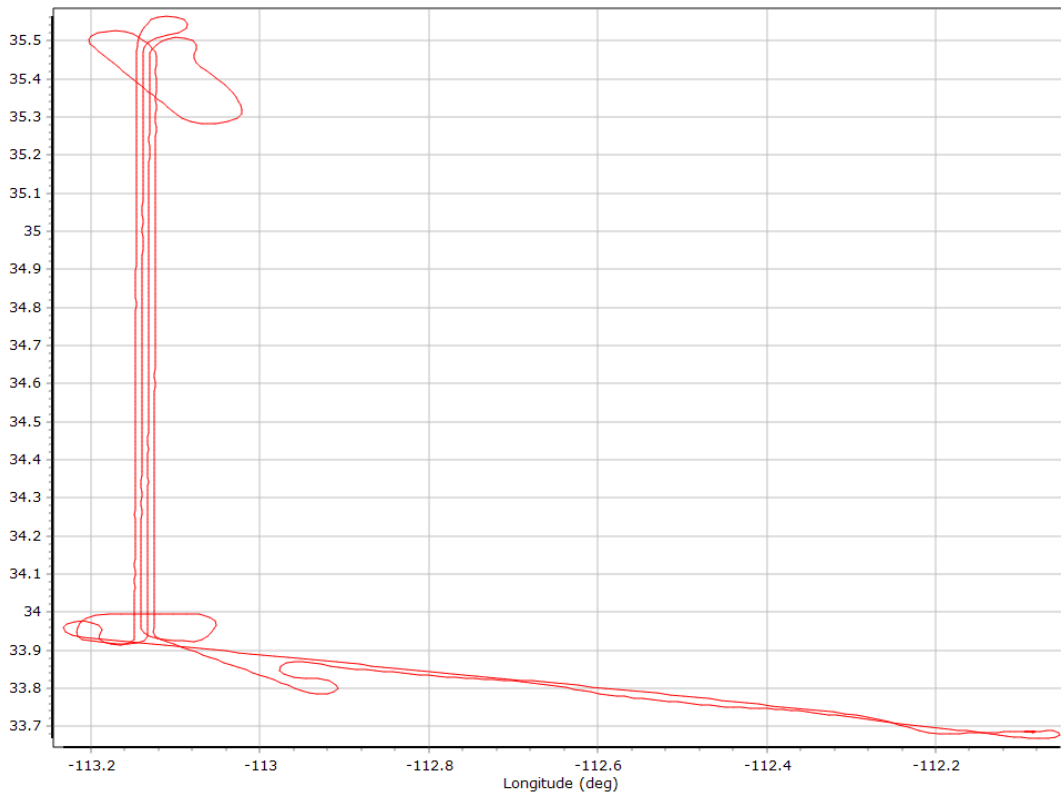


Body Angular Rate

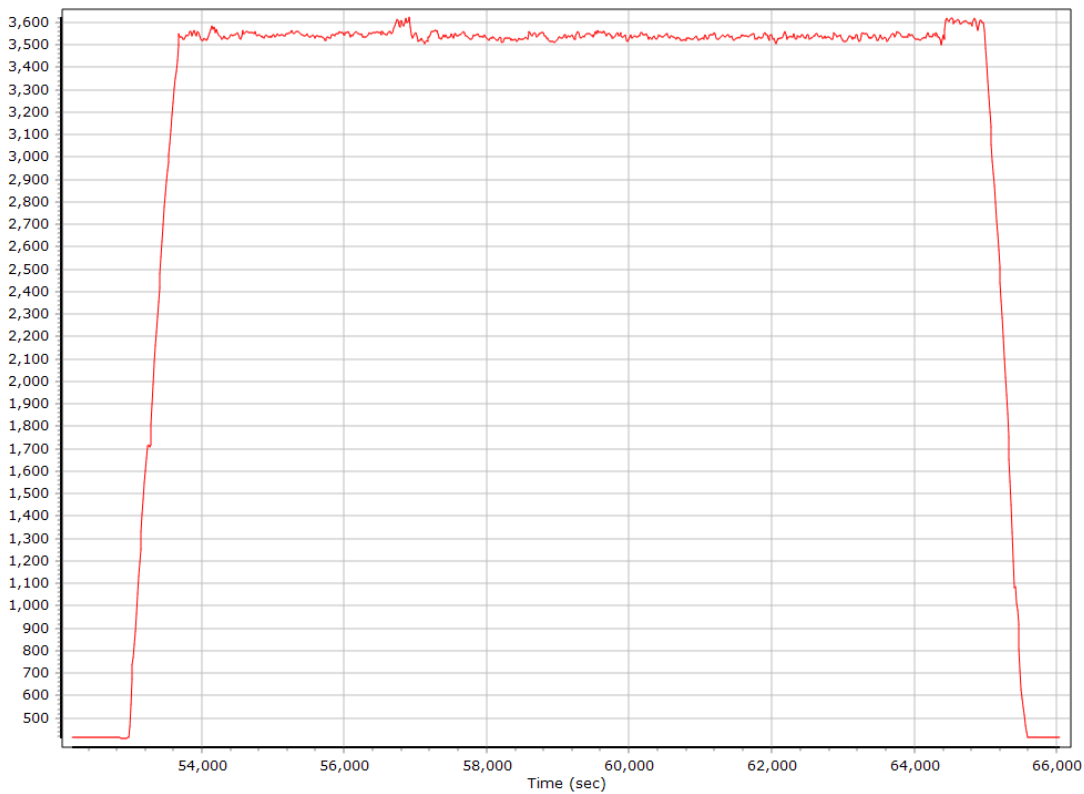


Forward Processed Trajectory Information

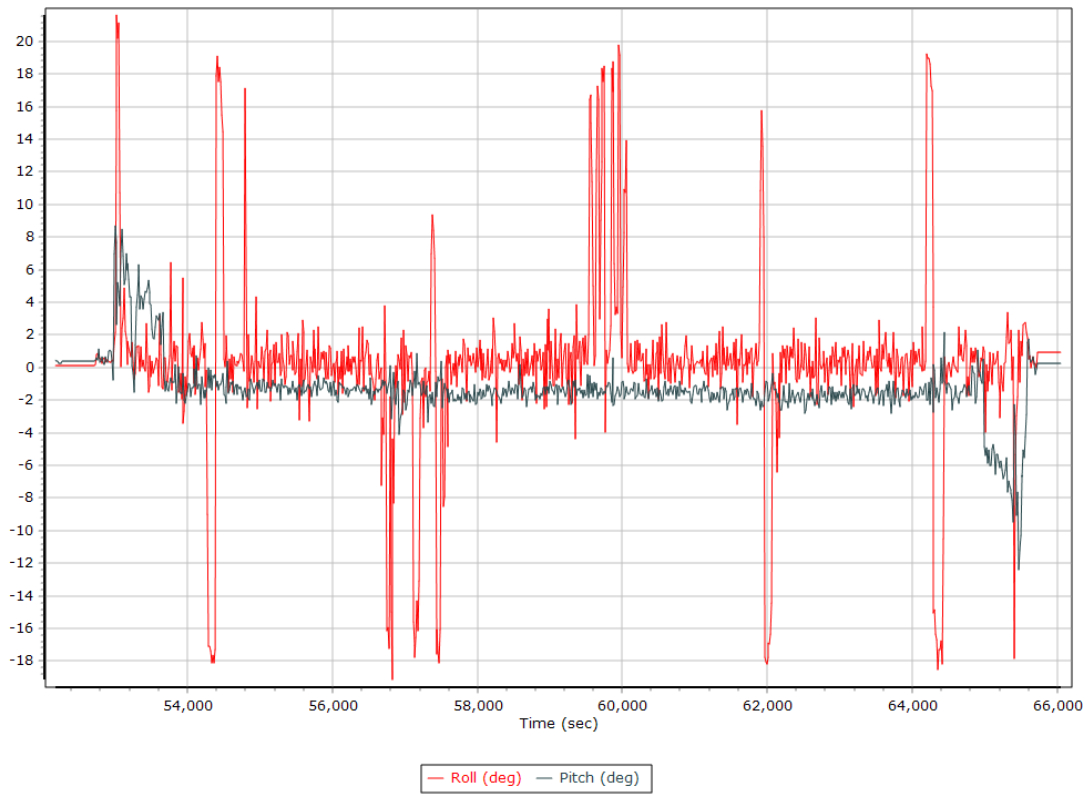
Top View



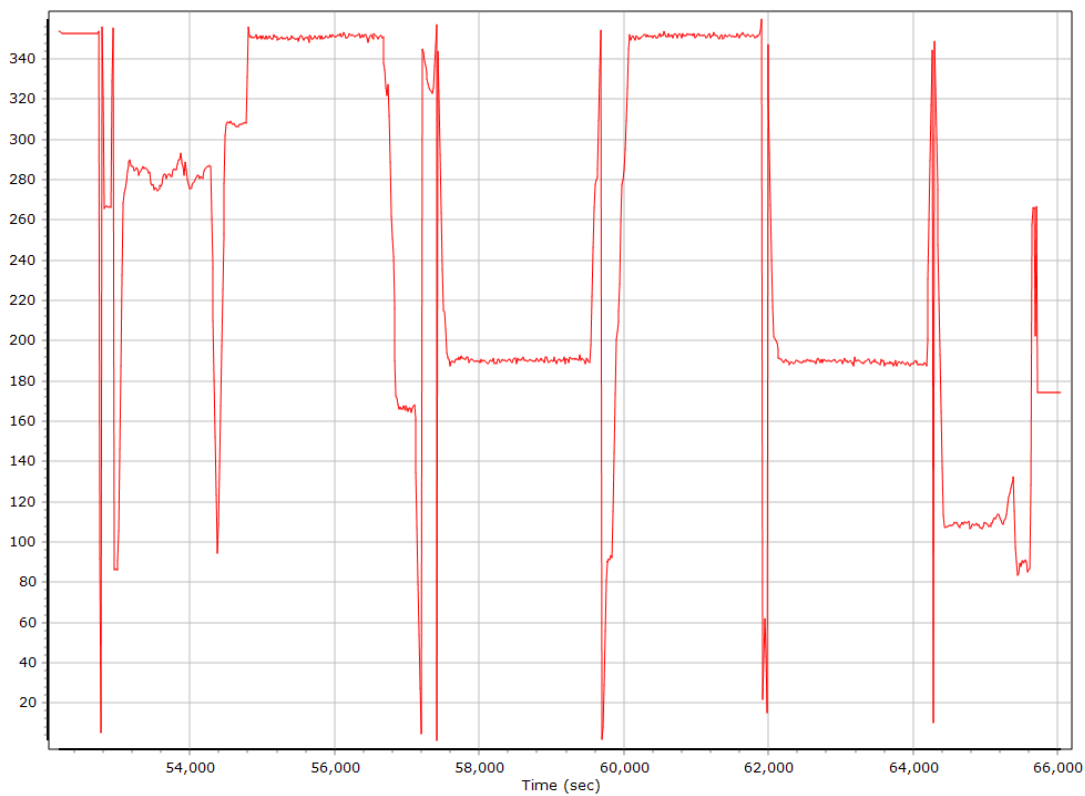
Altitude



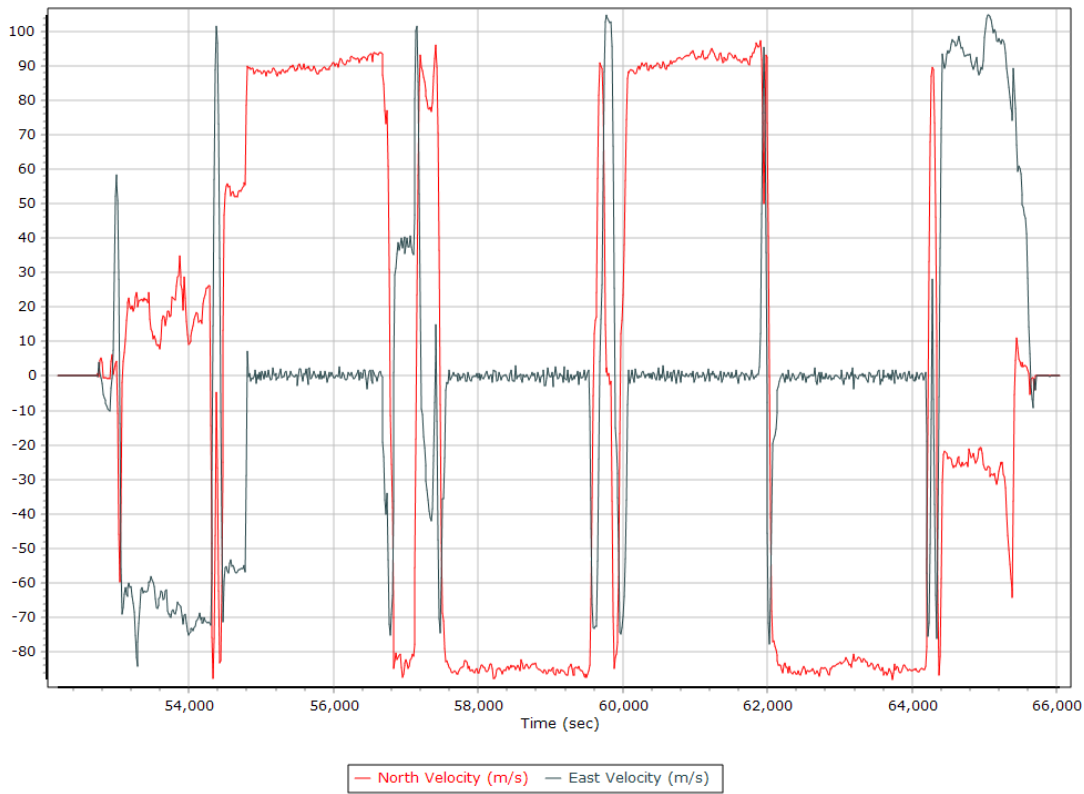
Roll/Pitch



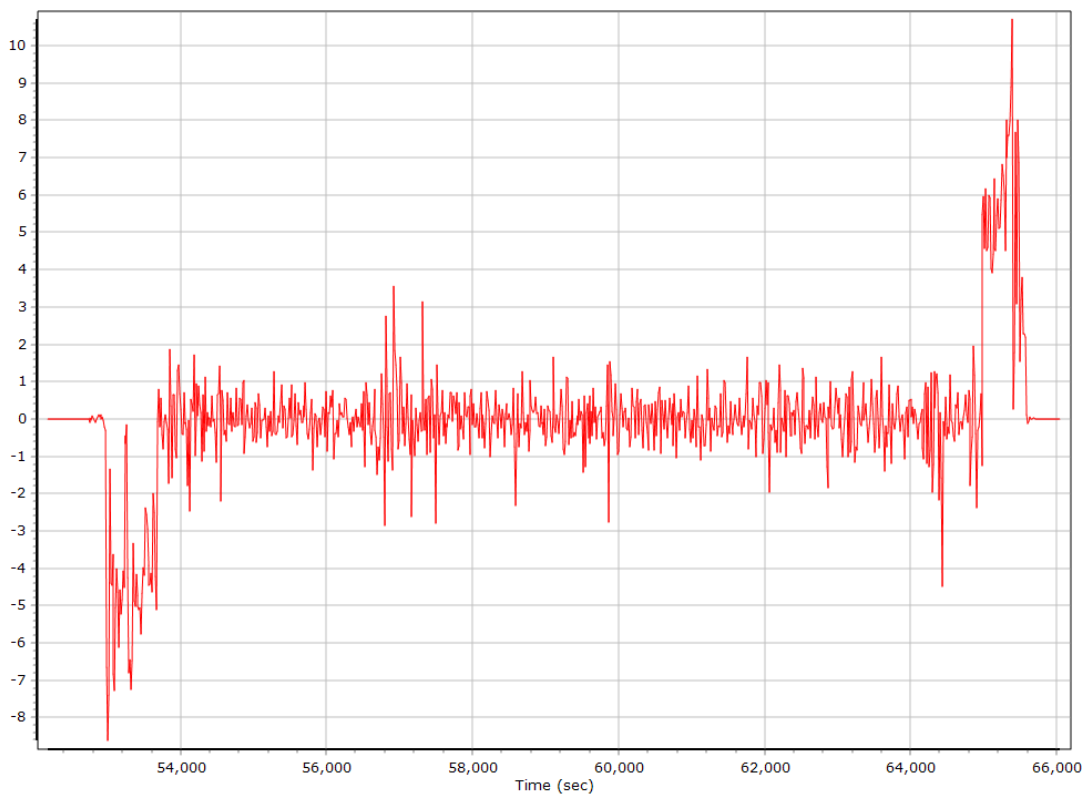
Heading



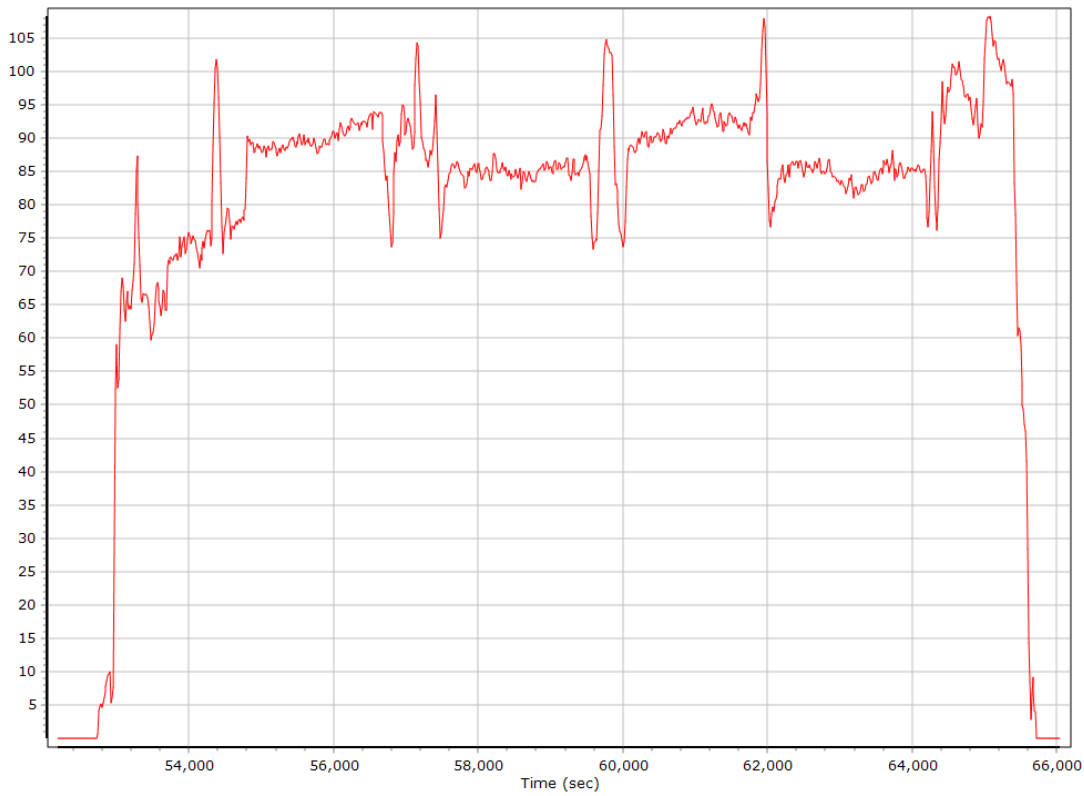
North/East Velocity



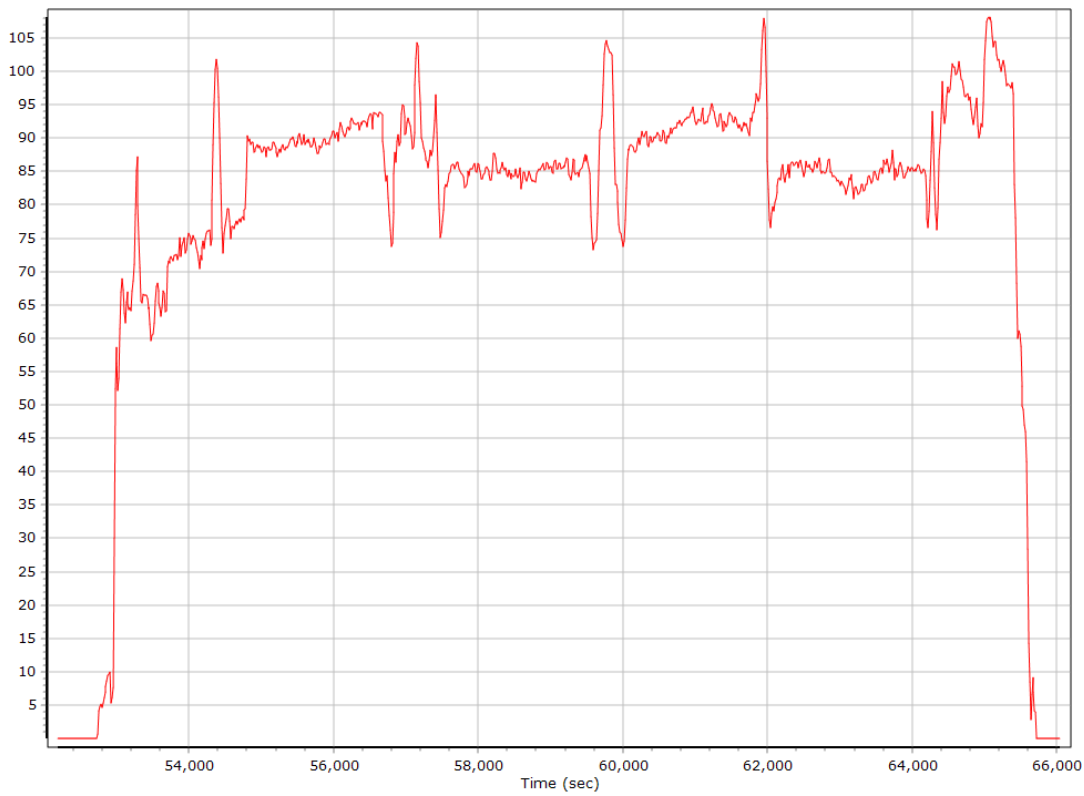
Down Velocity



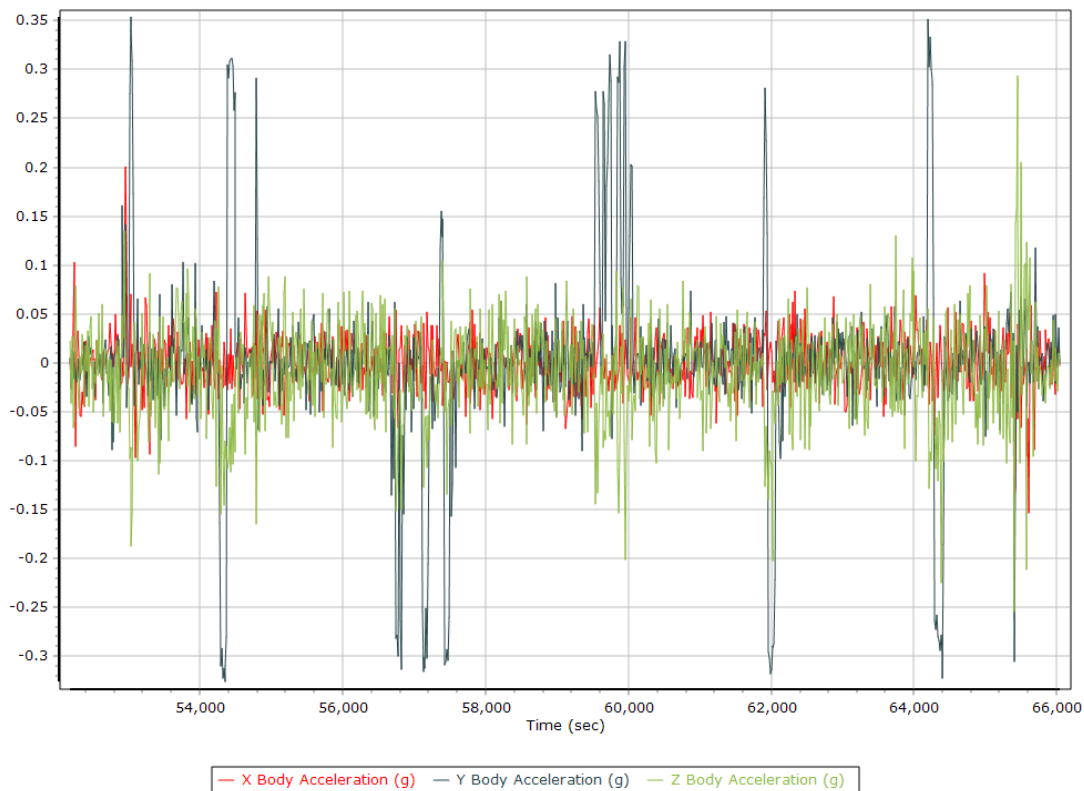
Total Speed



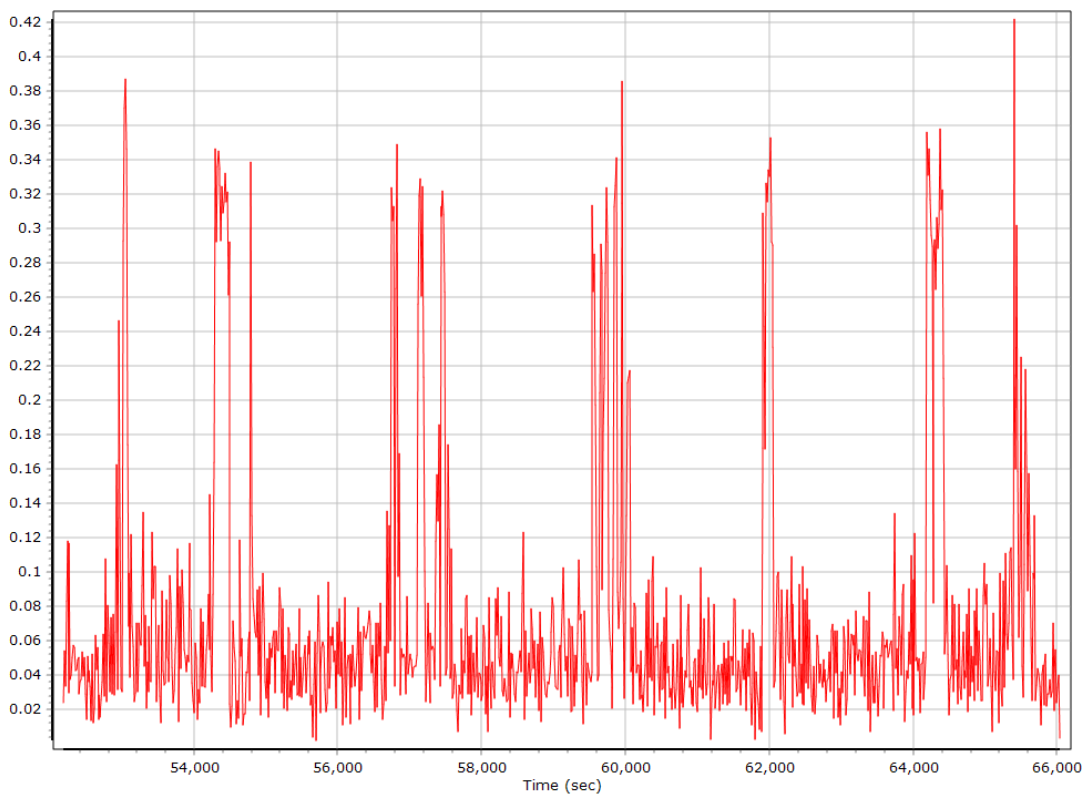
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate

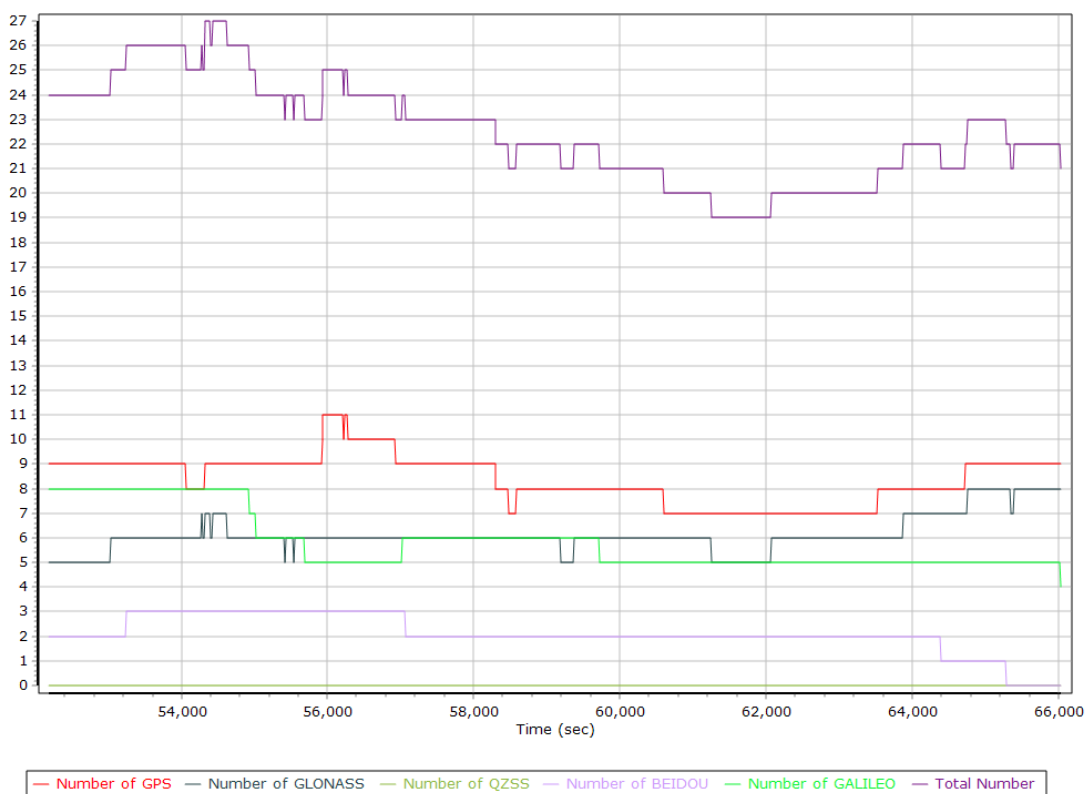


GNSS QC

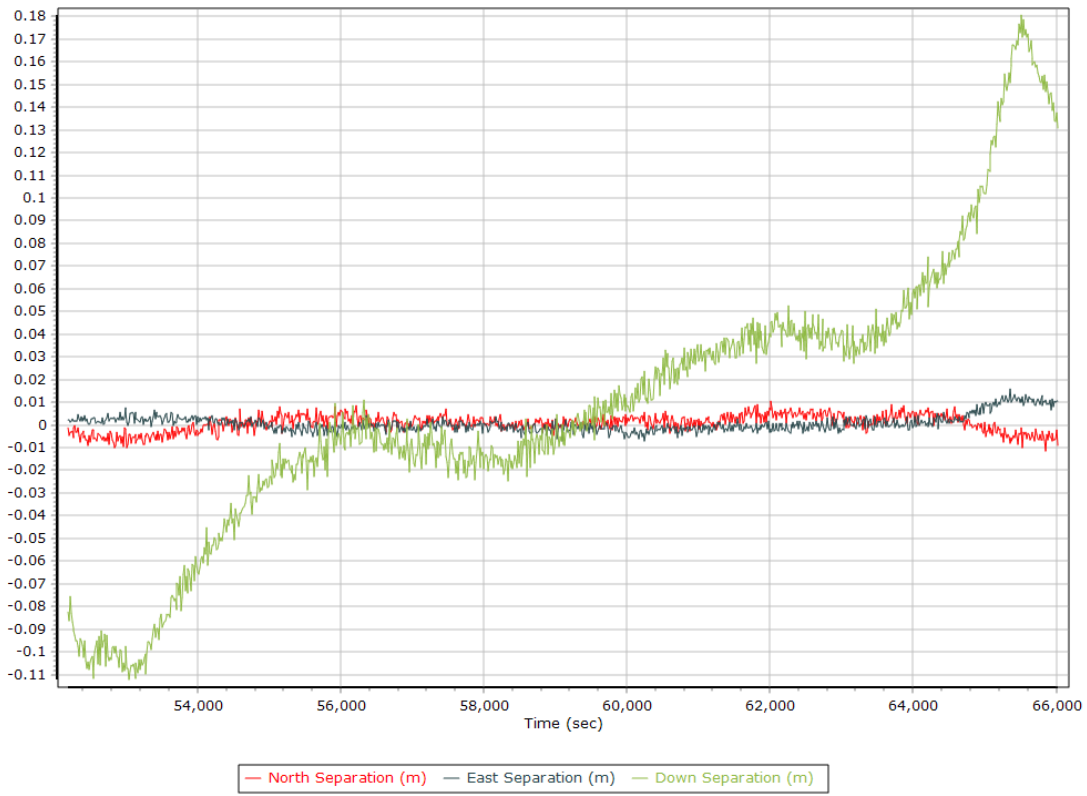
GNSS QC Statistics

| Statistics | Min | Max | Mean |
|----------------------|----------|-------|-------------|
| Baseline length (km) | 0.00 | 0.00 | |
| Number of GPS SV | 7 | 11 | 8 |
| Number of GLONASS SV | 4 | 8 | 6 |
| Number of QZSS SV | 0 | 0 | 0 |
| Number of BEIDOU SV | 0 | 3 | 2 |
| Number of GALILEO SV | 5 | 8 | 6 |
| Total number of SV | 19 | 27 | 23 |
| PDOP | 0.90 | 1.44 | 1.13 |
| QC Solution Gaps | 1.00 | 1.00 | |
| Solution Type | Fixed | Float | No solution |
| Epoch (sec) | 14274.00 | 0.00 | 3.00 |
| Percentage | 99.98 | 0.00 | 0.02 |

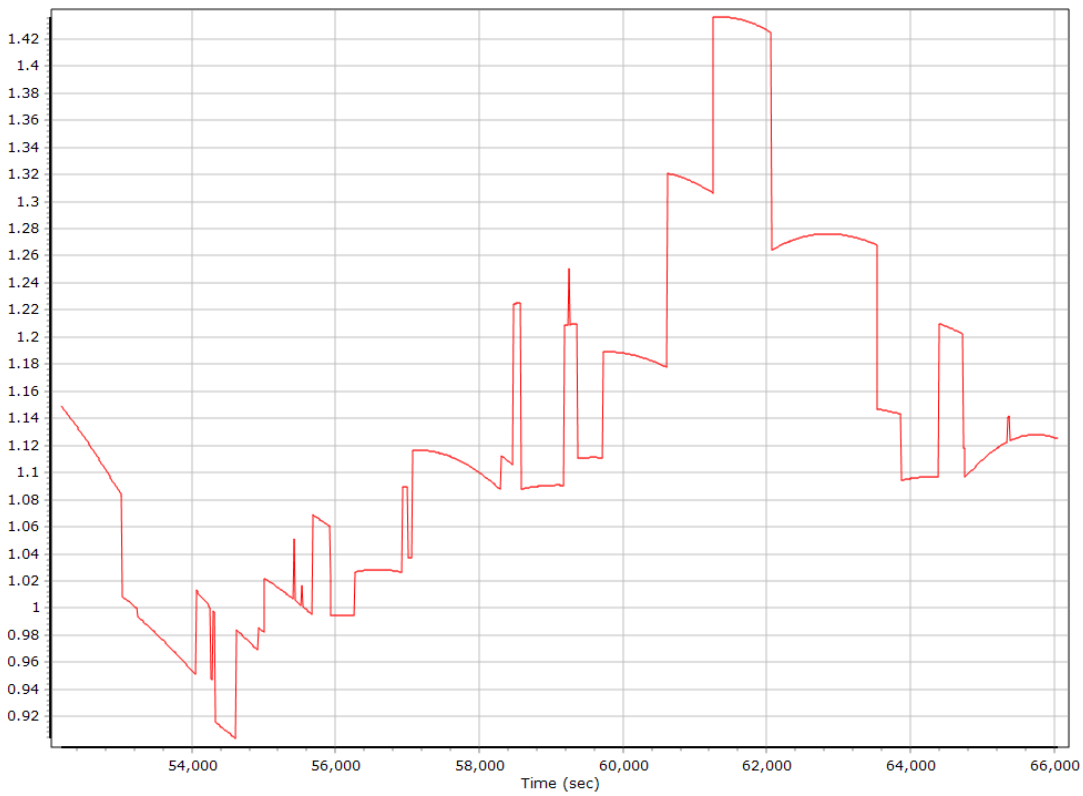
Num SVs in solution



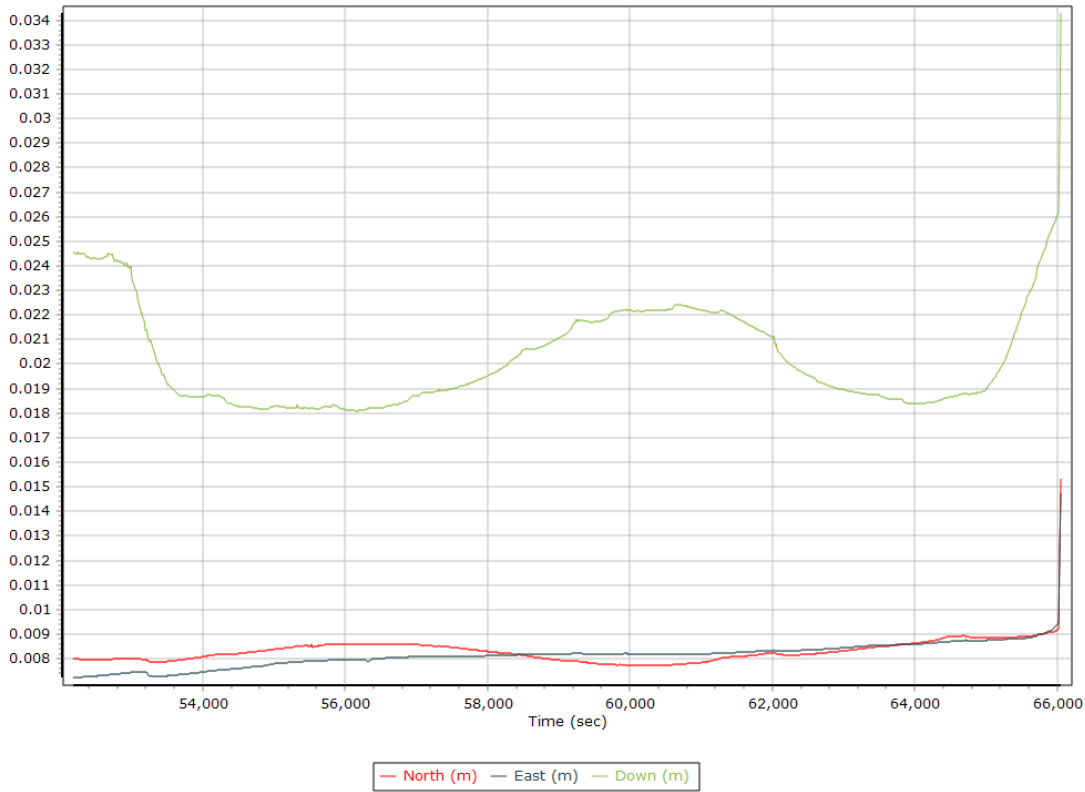
Forward/Reverse Separation



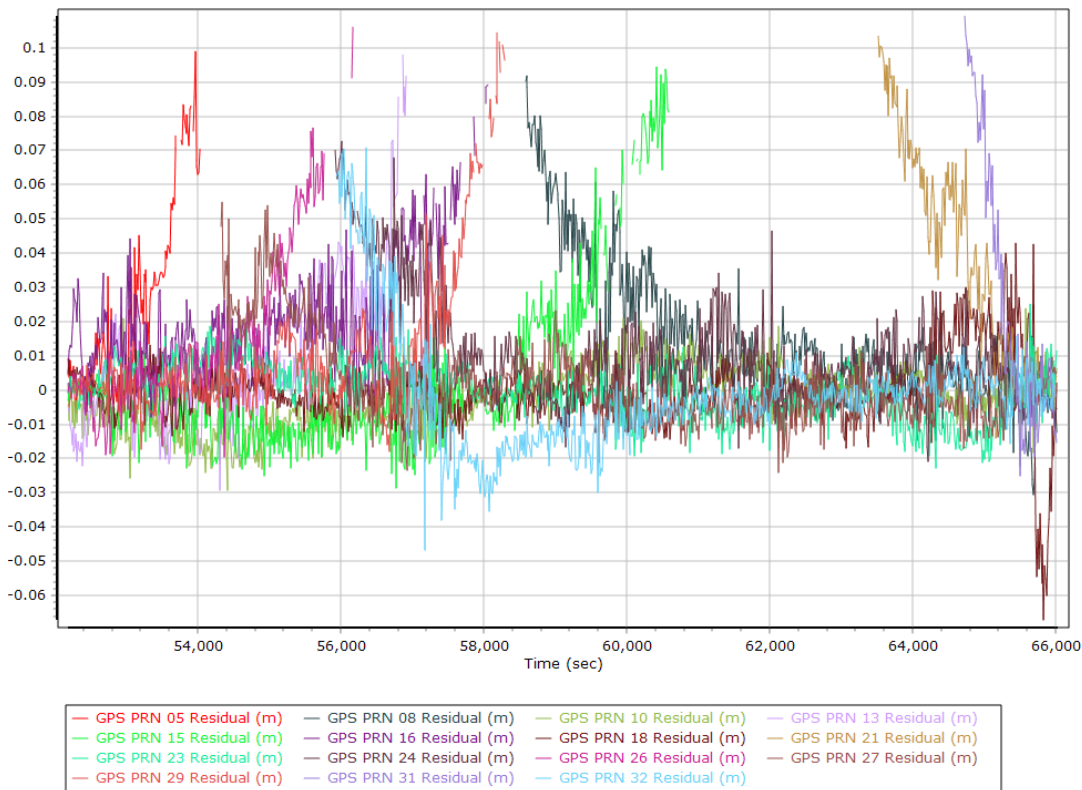
PDOP



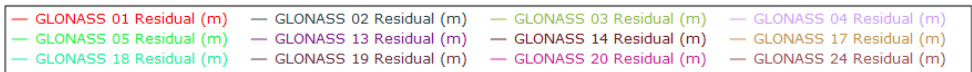
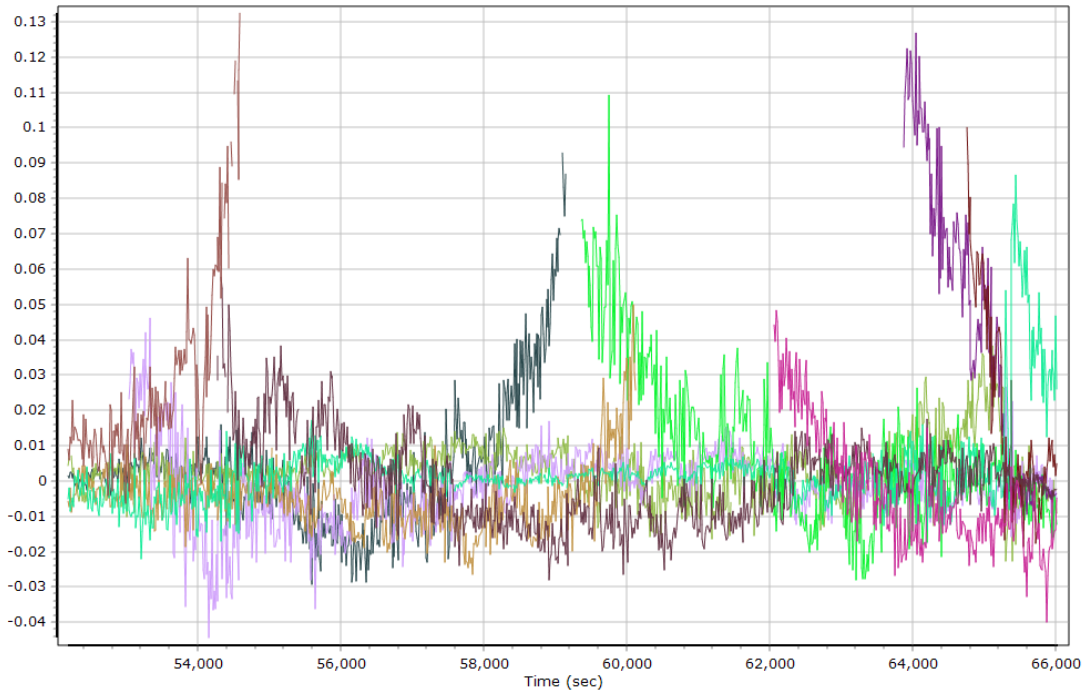
Estimated Position Accuracy



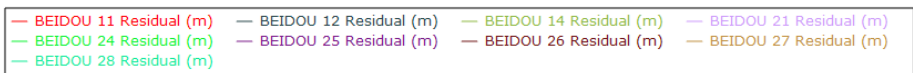
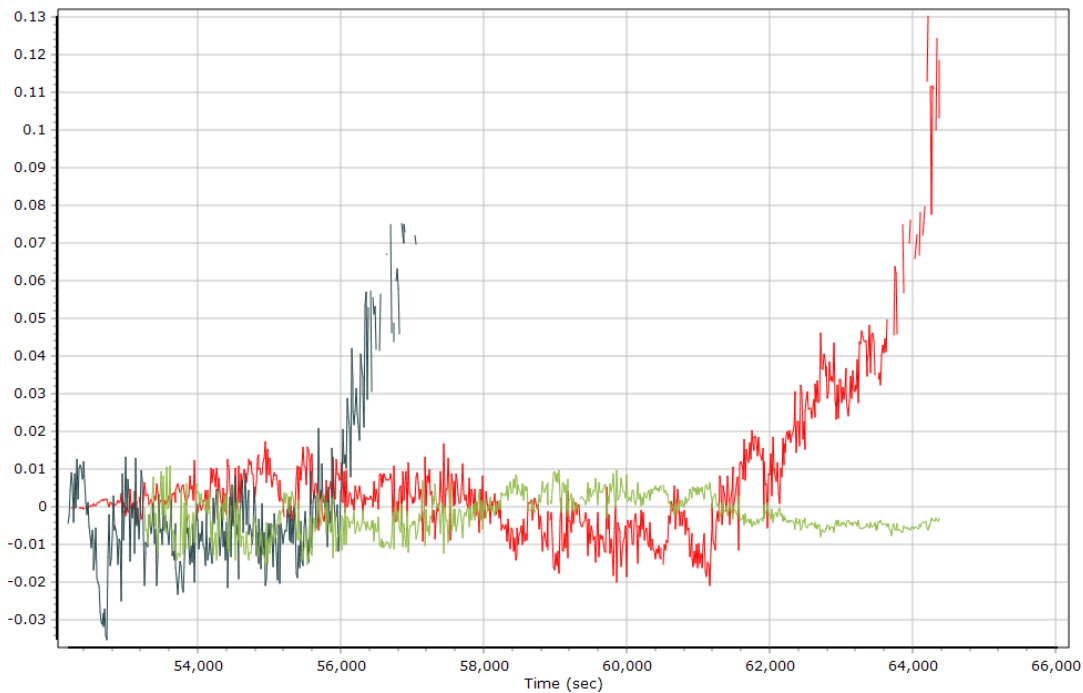
GPS Residuals



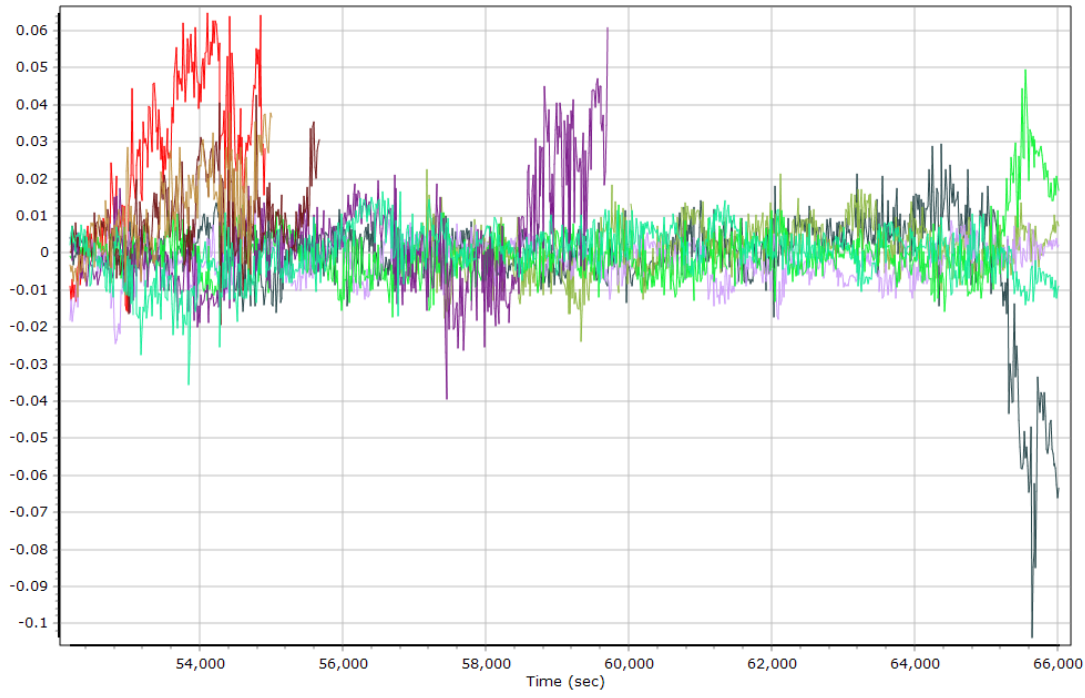
GLONASS Residuals



BEIDOU Residuals



GALILEO Residuals



- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| — GALILEO 02 Residual (m) | — GALILEO 04 Residual (m) | — GALILEO 05 Residual (m) | — GALILEO 09 Residual (m) |
| — GALILEO 11 Residual (m) | — GALILEO 12 Residual (m) | — GALILEO 19 Residual (m) | — GALILEO 25 Residual (m) |
| — GALILEO 36 Residual (m) | | | |

GNSS-Inertial Processor Configuration

| | | | |
|---|---------------------------------|-------|---------|
| Processing mode | IN-Fusion PP-RTX | | |
| Stabilized mount | False | | |
| Processing start time | 51766.000 (10/24/2021 14:22:46) | | |
| Processing end time | 66052.000 (10/24/2021 18:20:52) | | |
| 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 | -90.000 |
| Reference to Primary GNSS lever arm (m) | 0.530 | 0.041 | -1.182 |
| 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 |

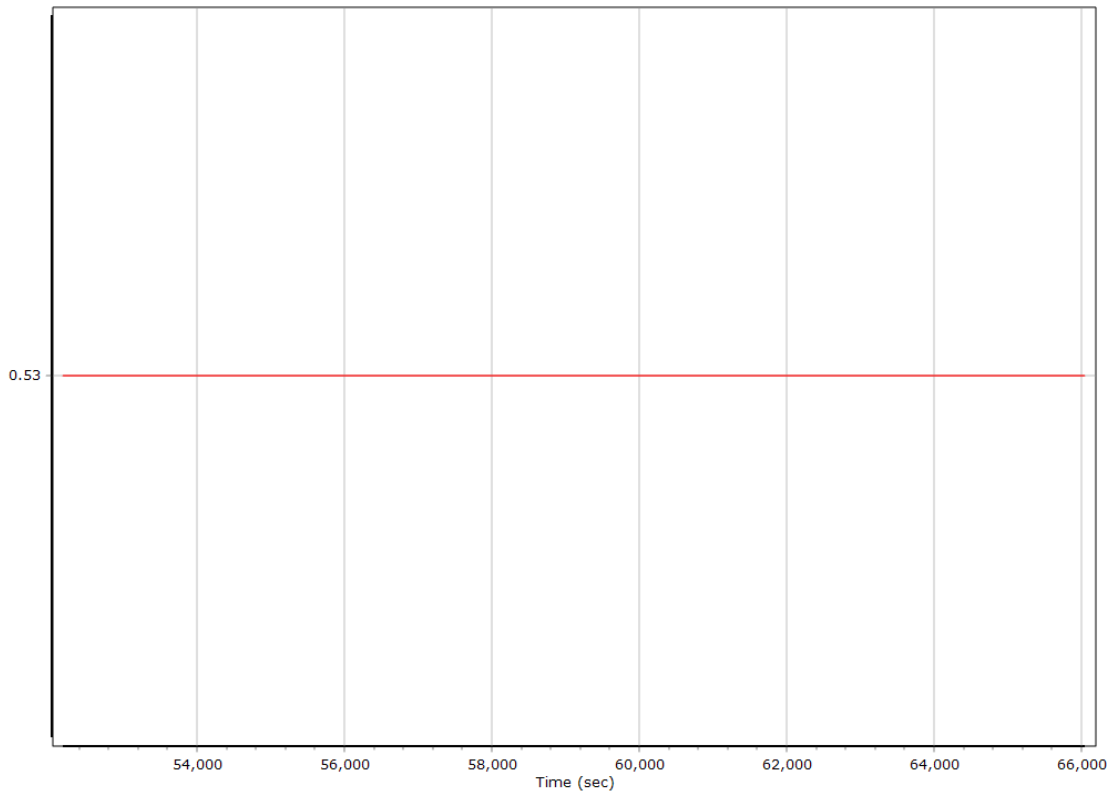
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

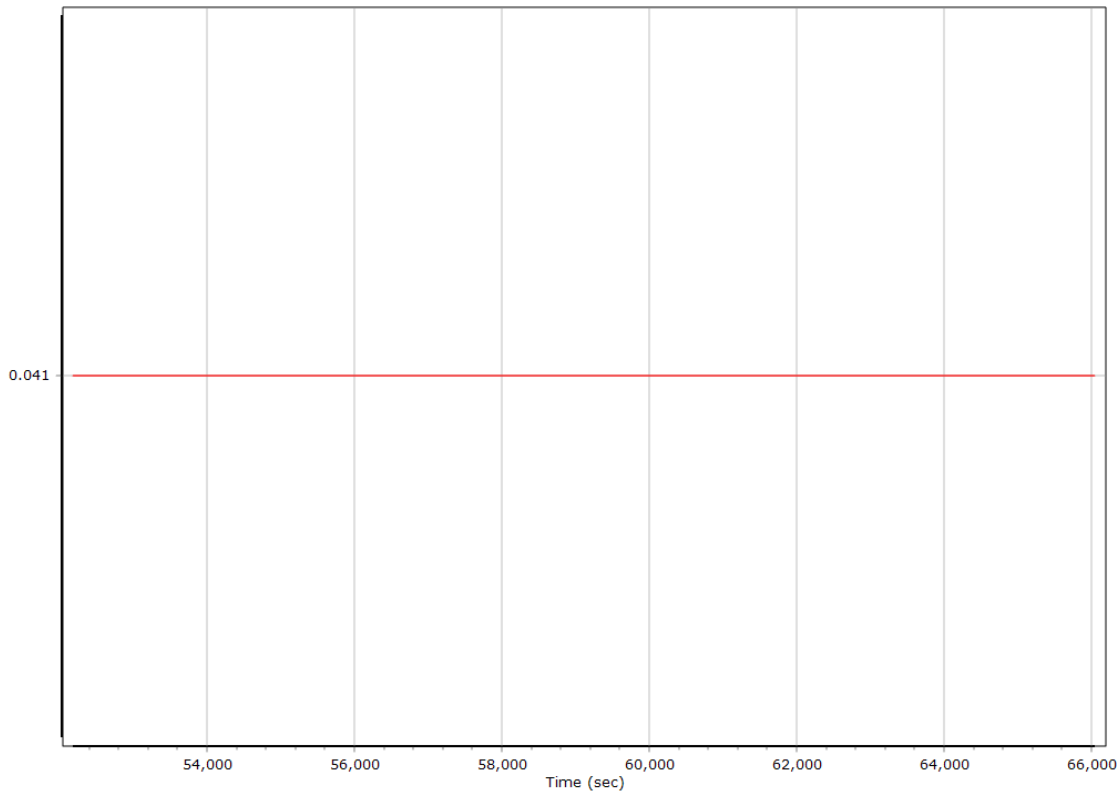
Reference-Primary GNSS Lever Arm Automatic Calibration Results

| | | | |
|---|-------------|-------|--------|
| Original Reference to Primary GNSS lever arm (m) | 0.534 | 0.060 | -1.199 |
| Iteration 1 Reference to Primary GNSS lever arm (m) | 0.530 | 0.042 | -1.183 |
| Iteration 2 Reference to Primary GNSS lever arm (m) | 0.530 | 0.041 | -1.182 |
| Primary GNSS Lever Arm In use | Iteration 2 | | |

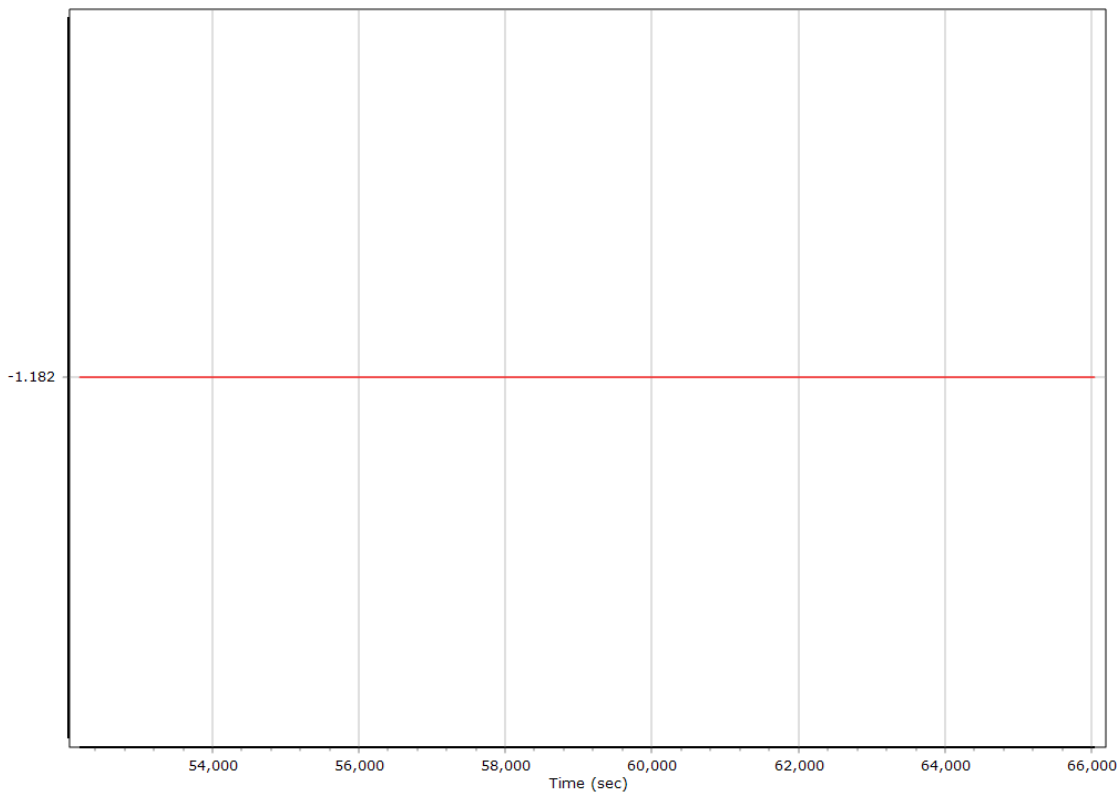
X Reference-Primary GNSS Lever Arm (m)



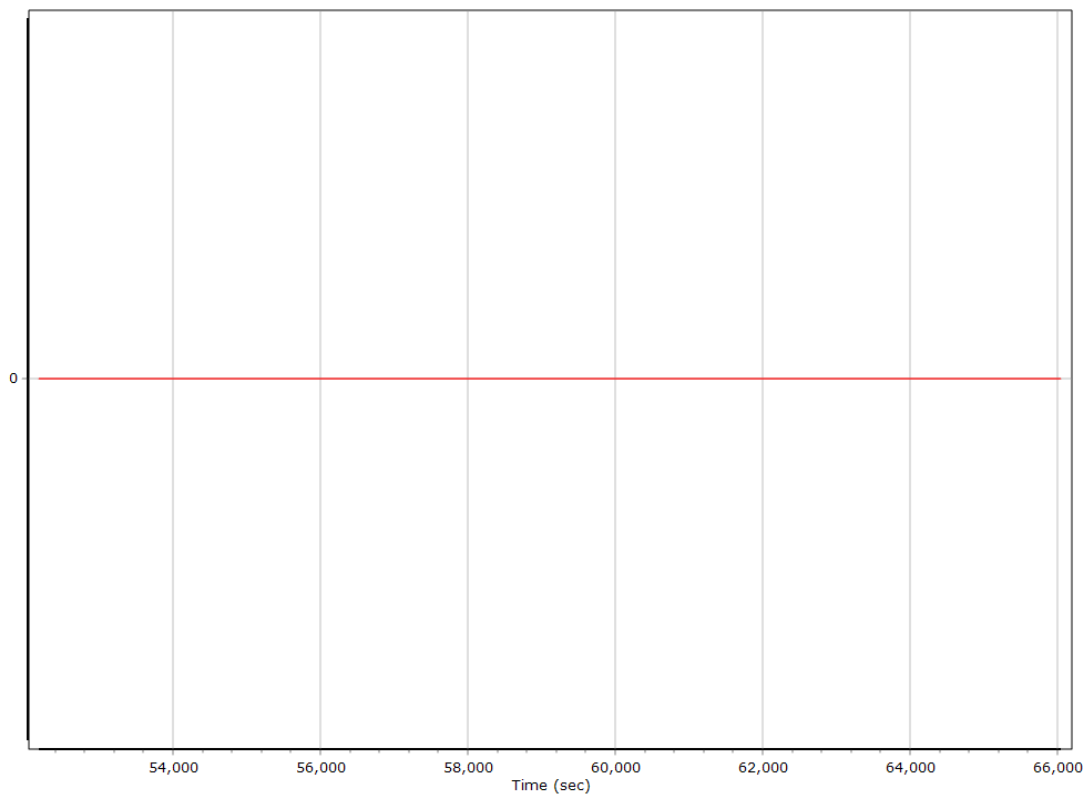
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



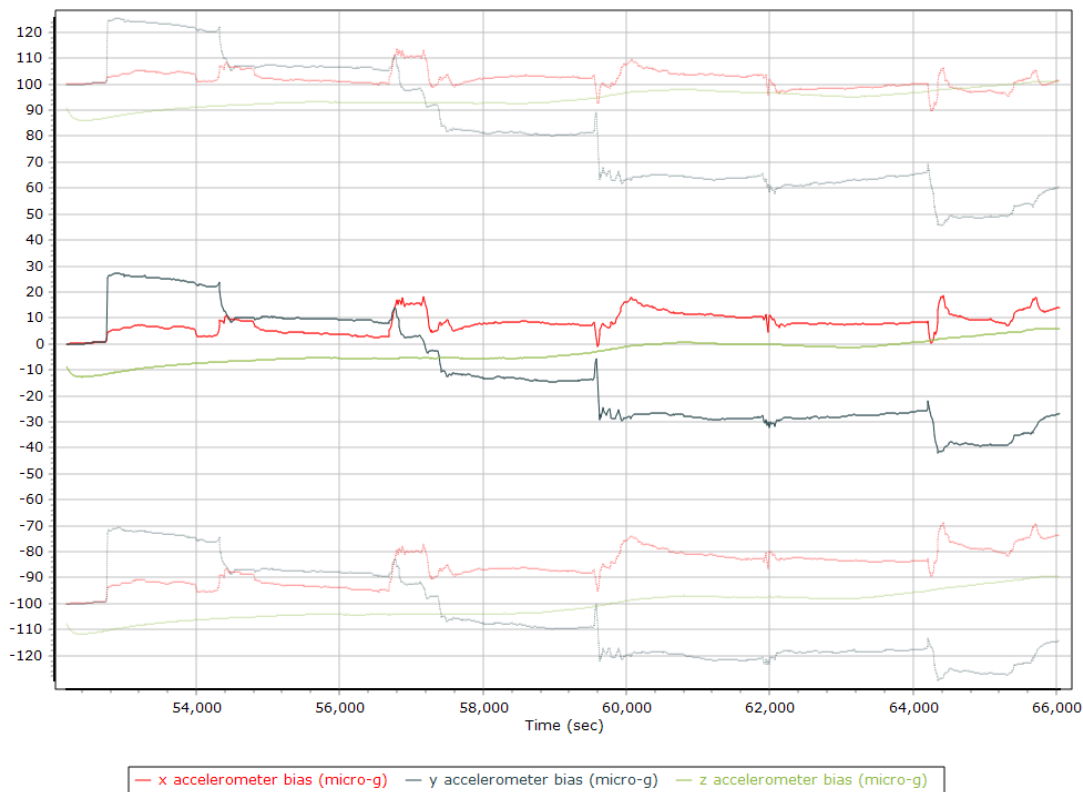
Reference-Primary GNSS Lever Arm Figure of Merit



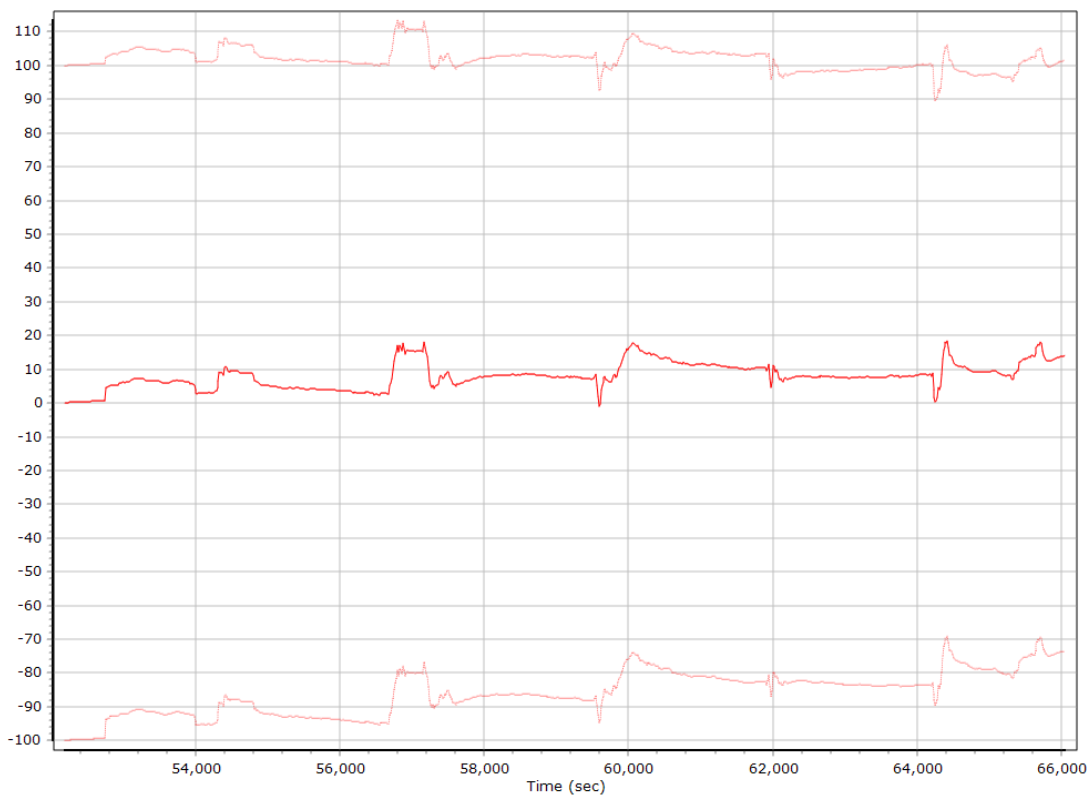
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

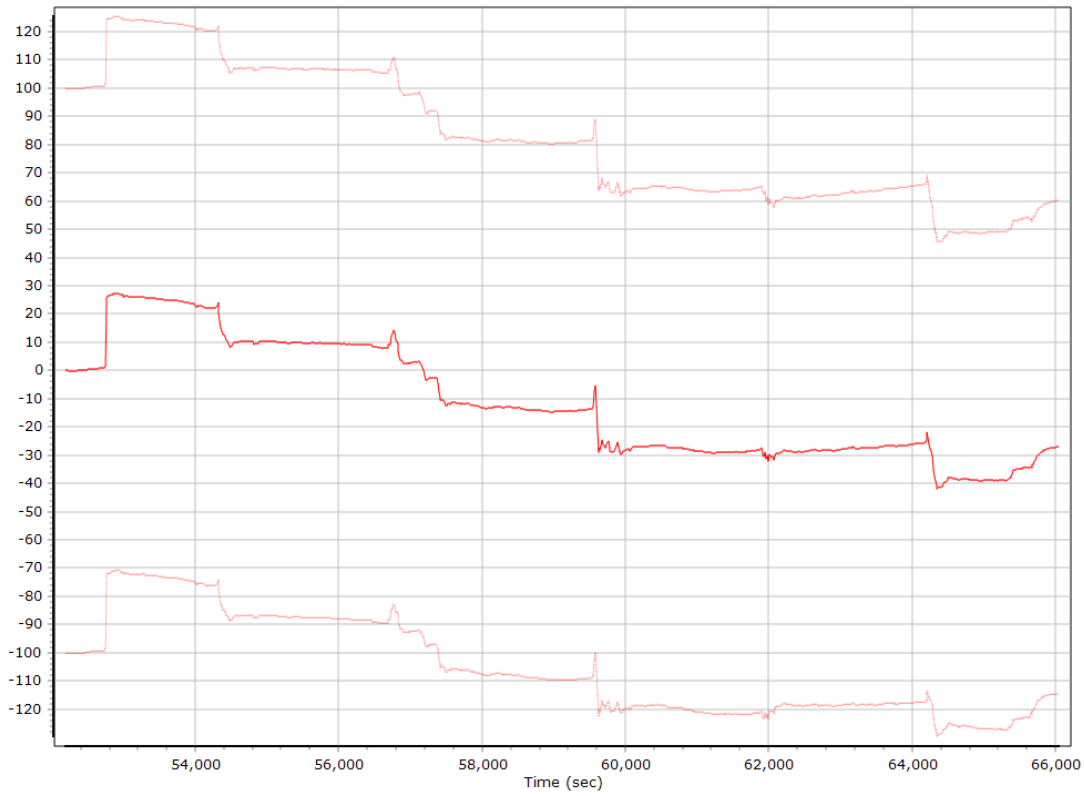
Accelerometer Bias (micro-g)



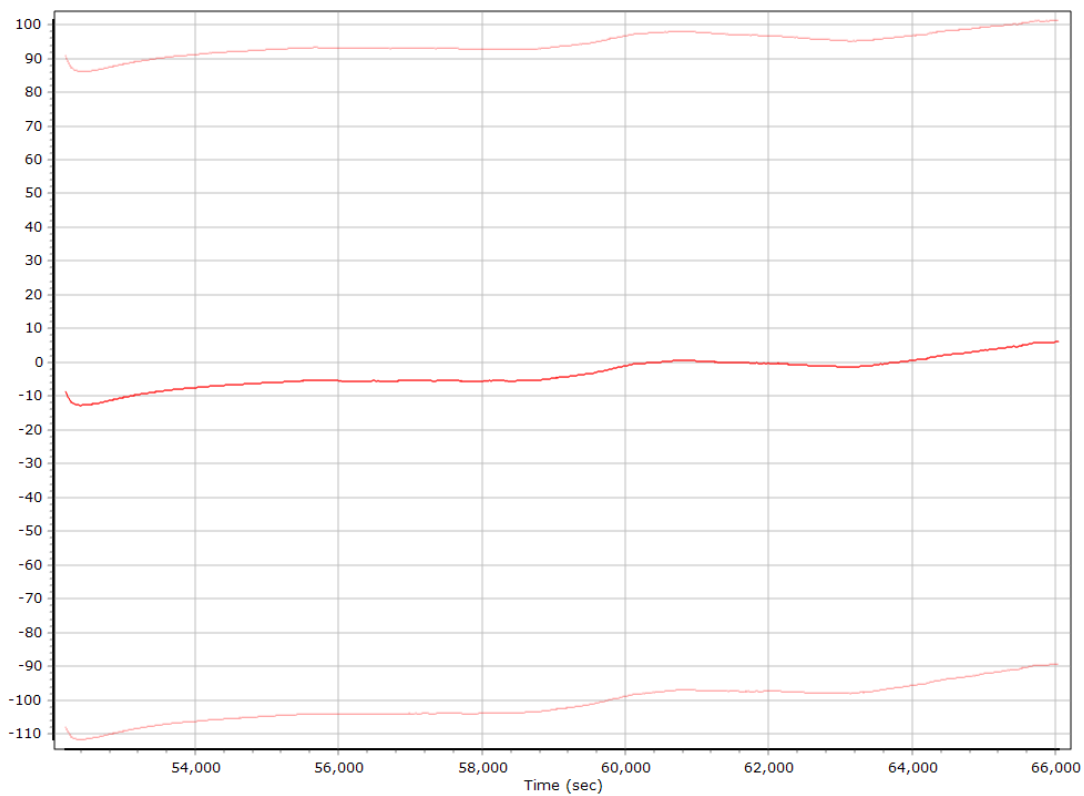
X Accelerometer Bias (micro-g)



Y Accelerometer Bias (micro-g)



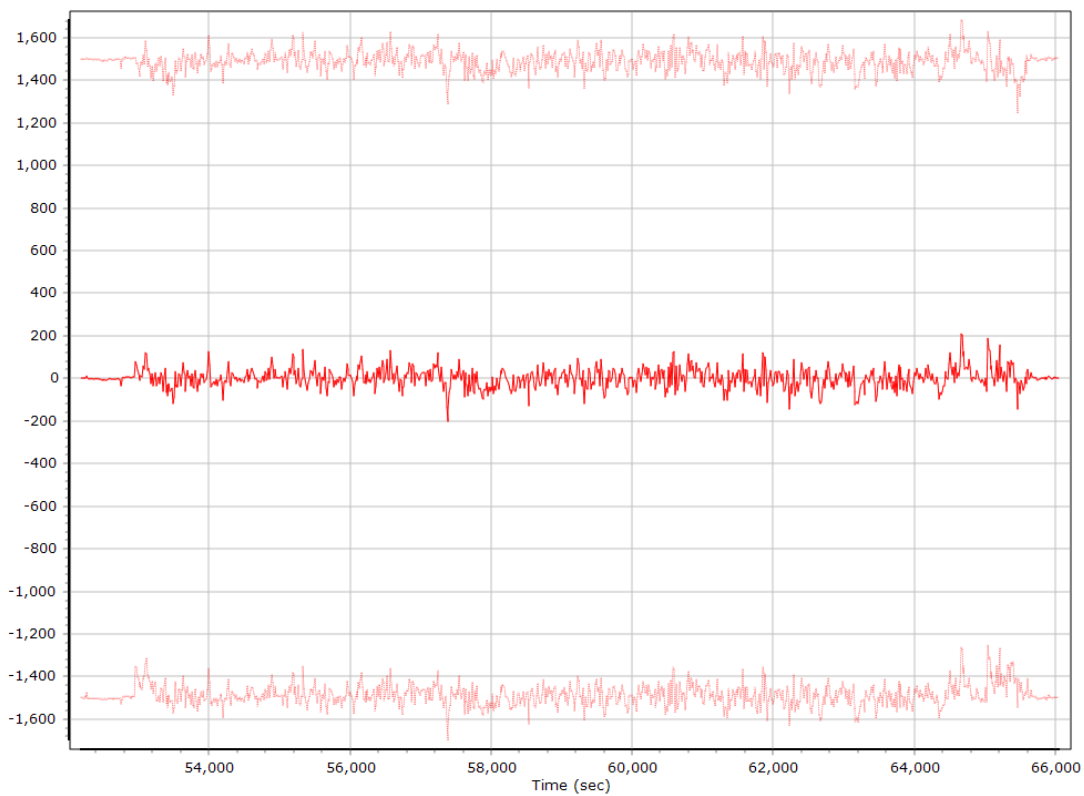
Z Accelerometer Bias (micro-g)



Accelerometer Scale Error (ppm)



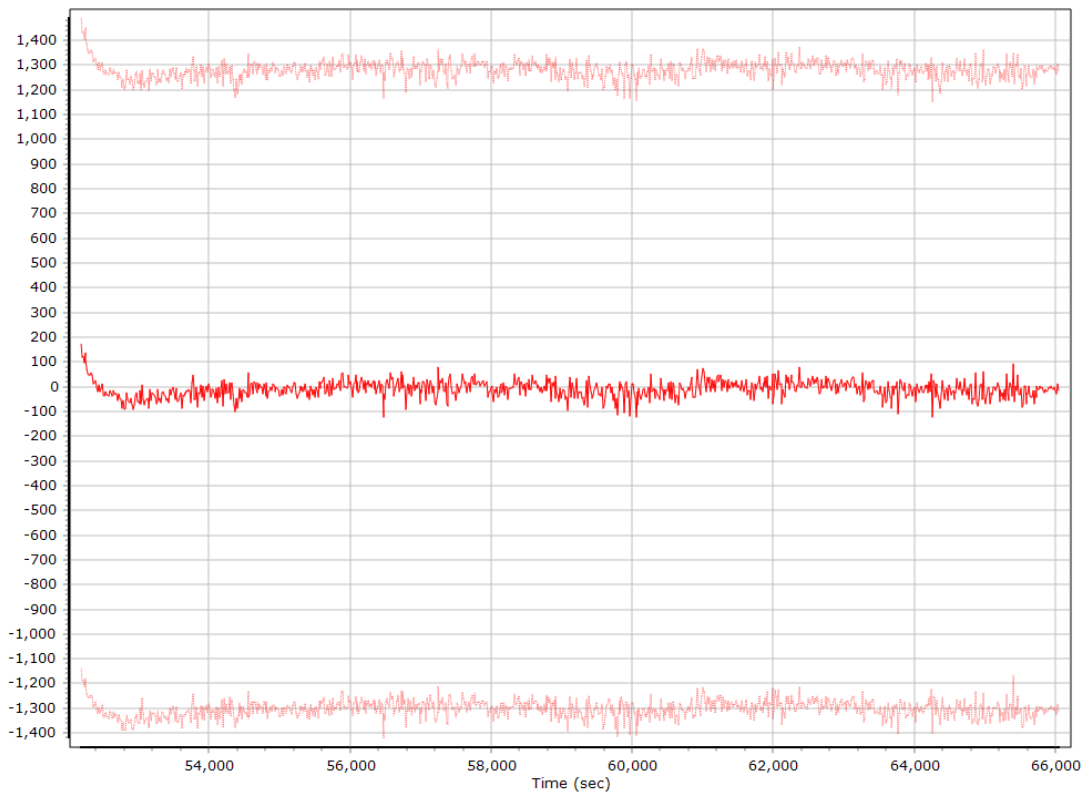
X Accelerometer Scale Error (ppm)



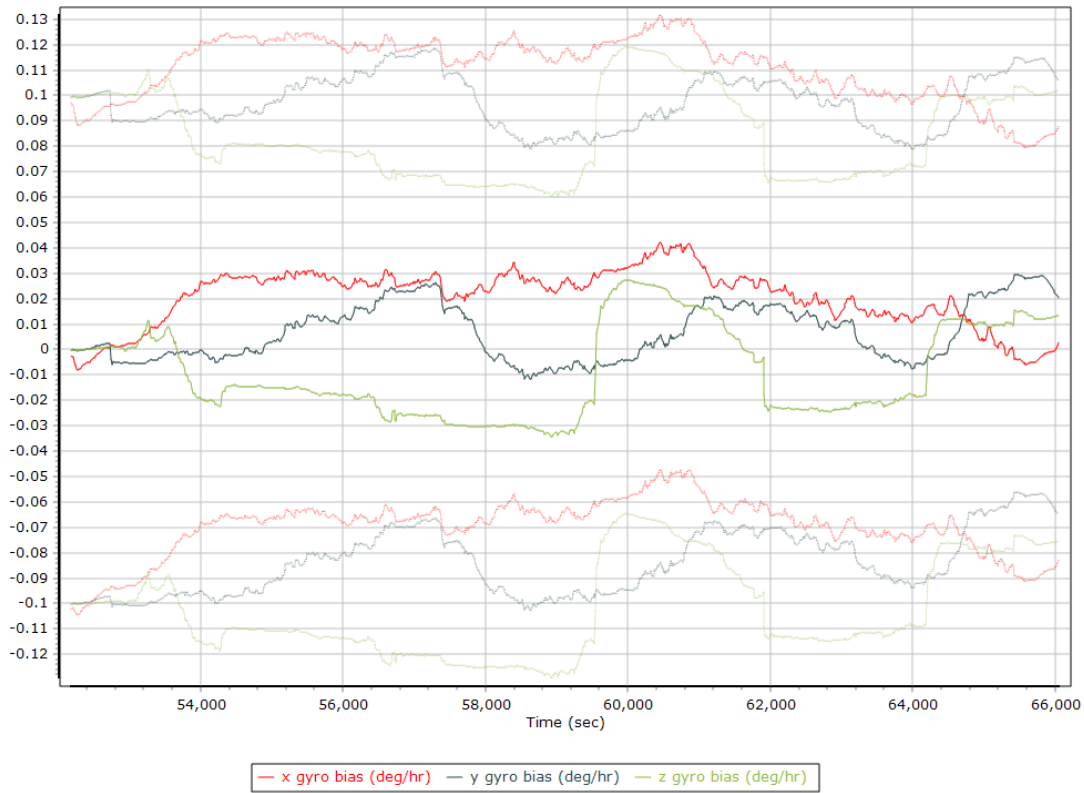
Y Accelerometer Scale Error (ppm)



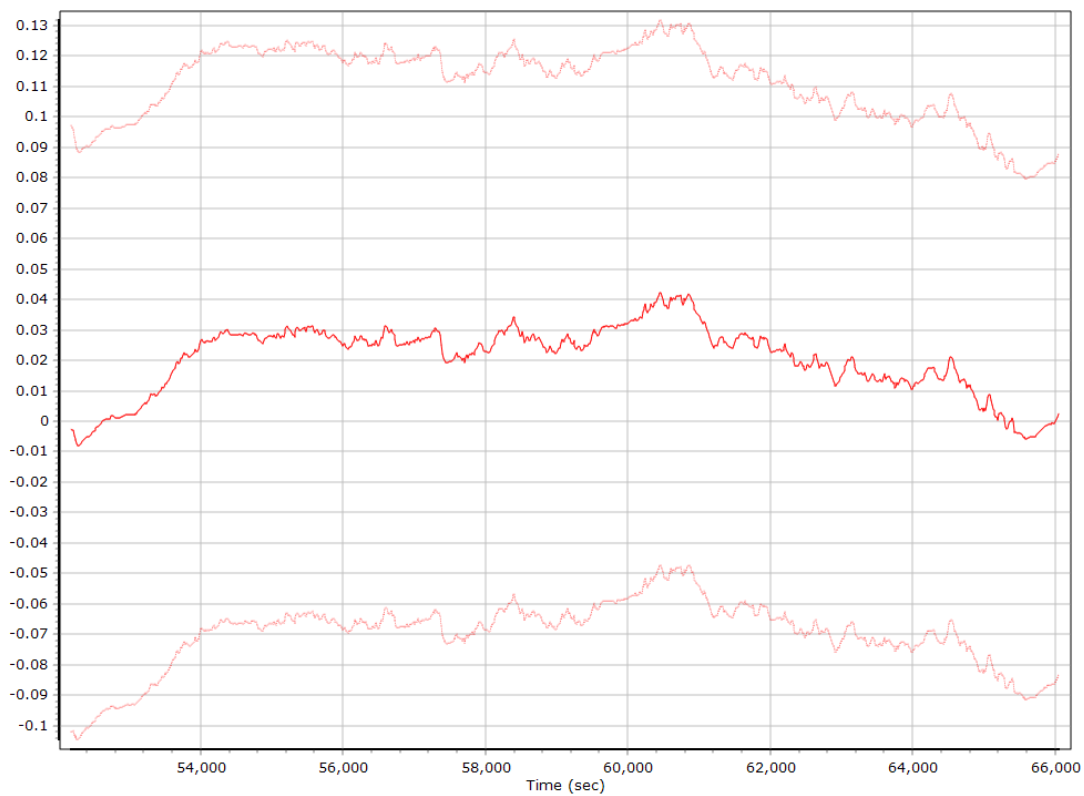
Z Accelerometer Scale Error (ppm)



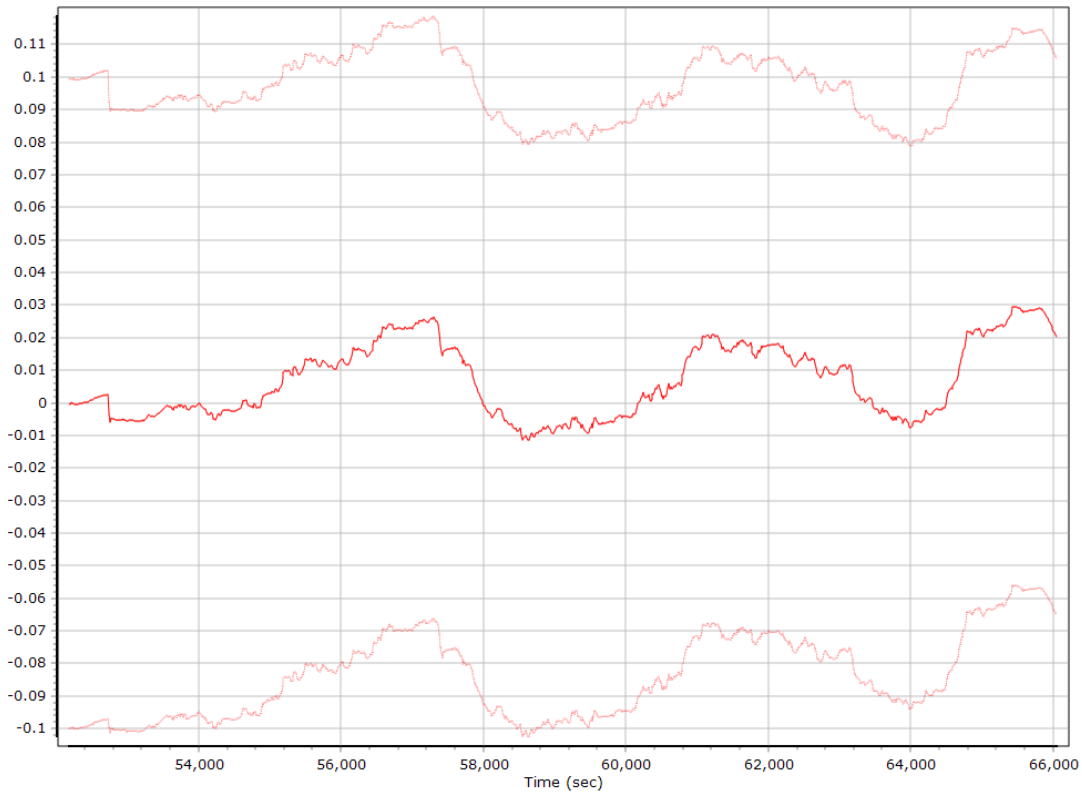
Gyro Bias (deg/h)



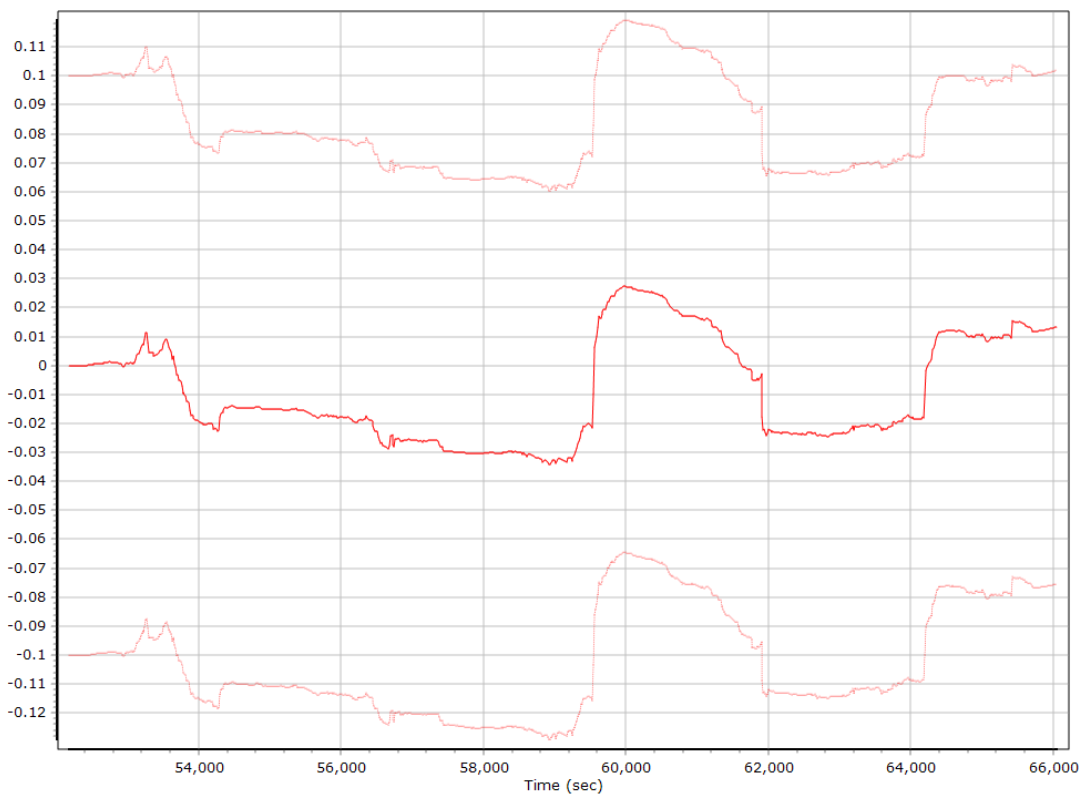
X Gyro Bias (deg/h)



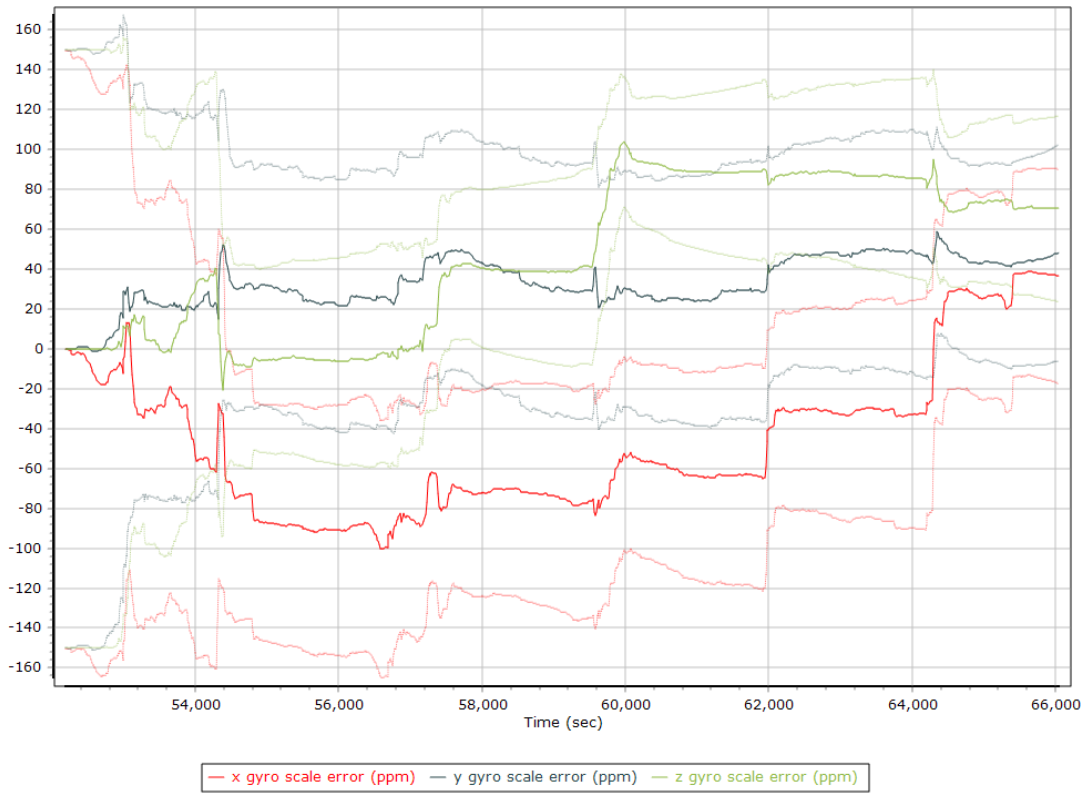
Y Gyro Bias (deg/h)



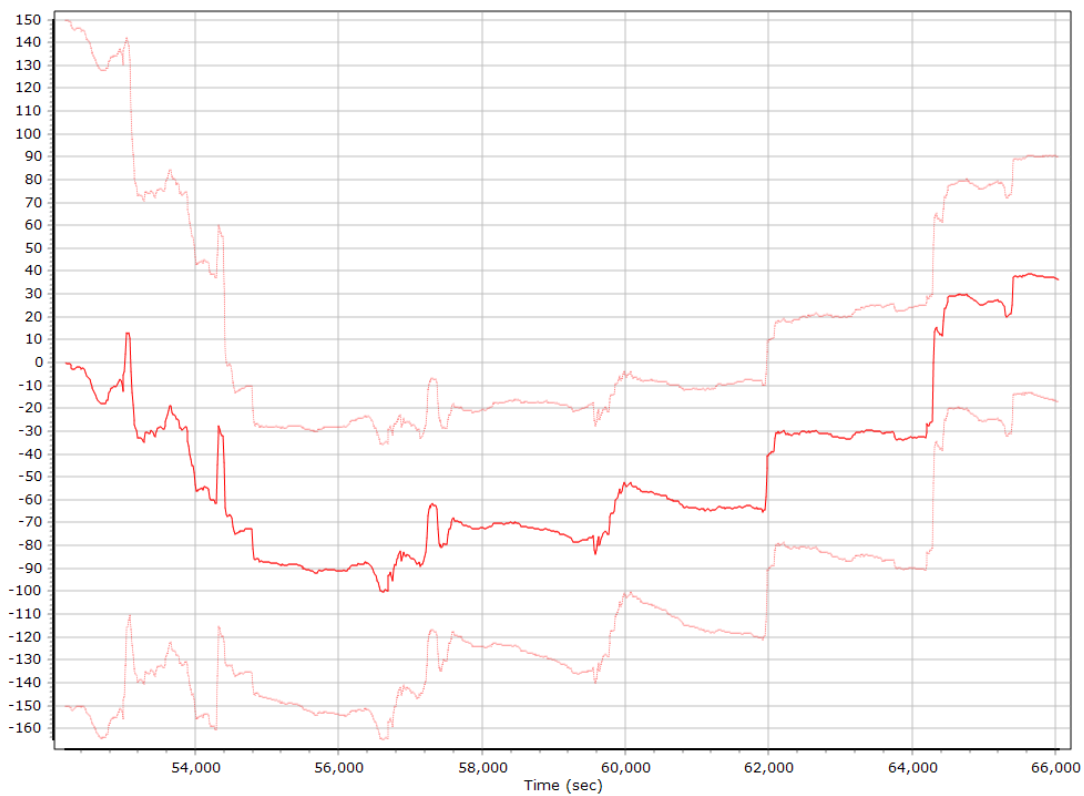
Z Gyro Bias (deg/h)



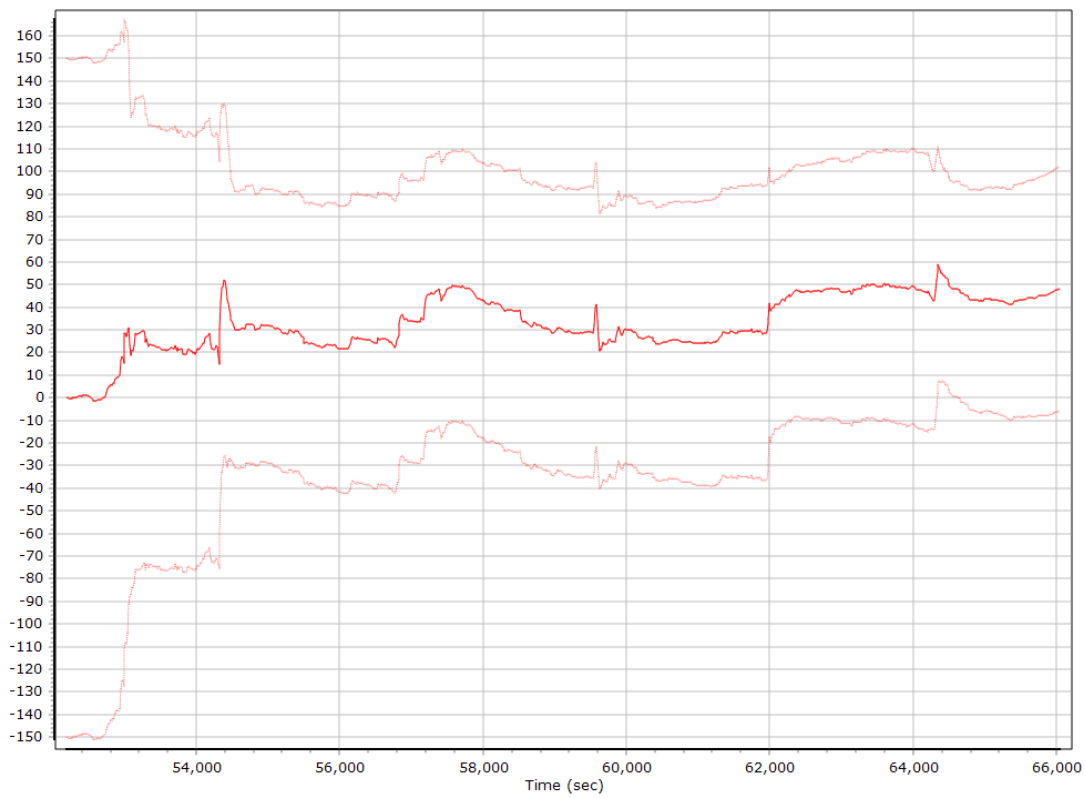
Gyro Scale Error (ppm)



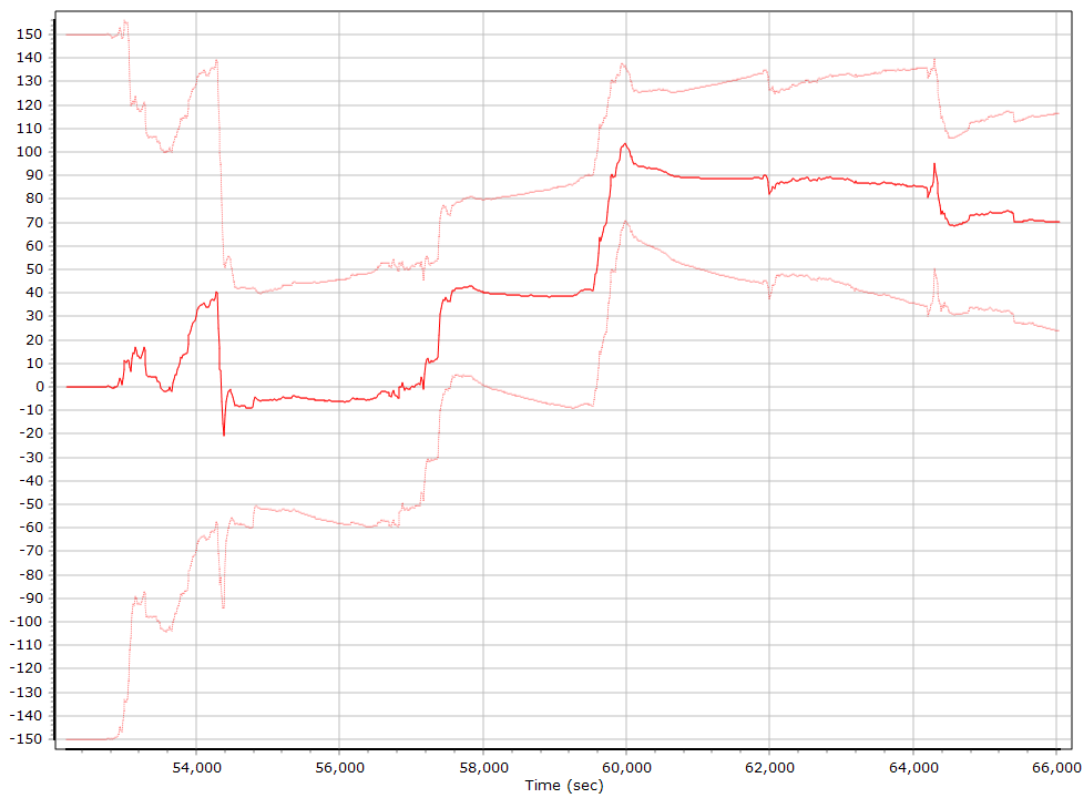
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

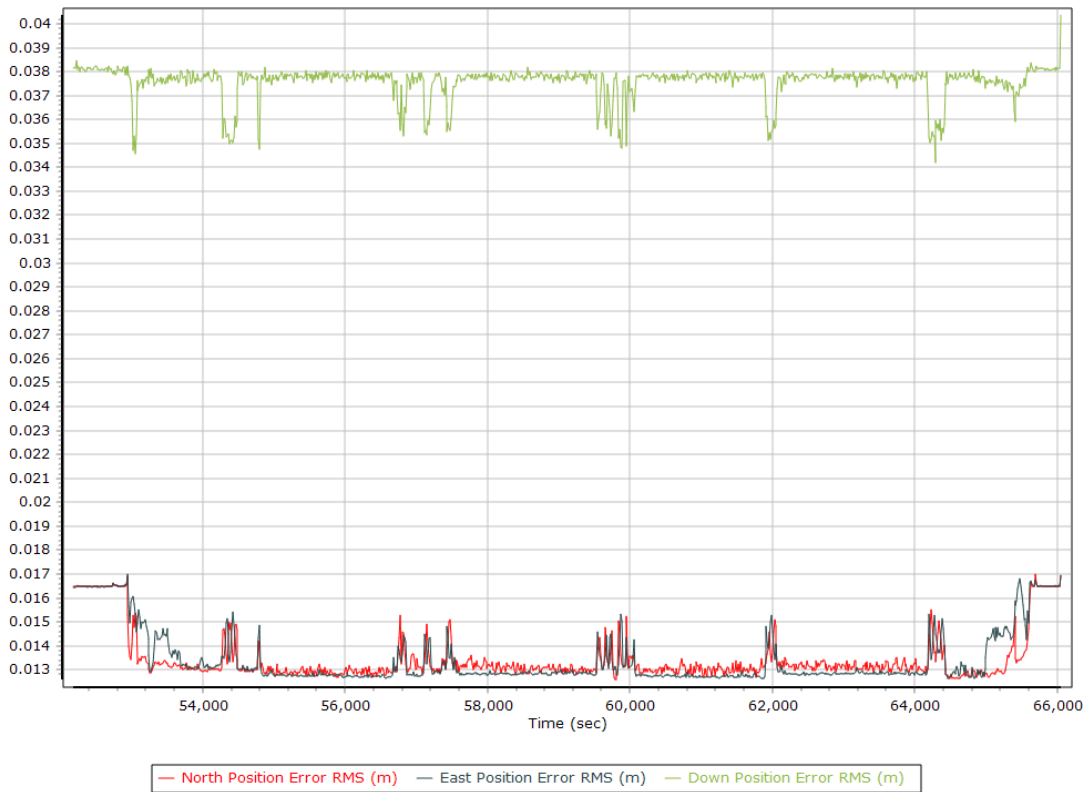


Z Gyro Scale Error (ppm)

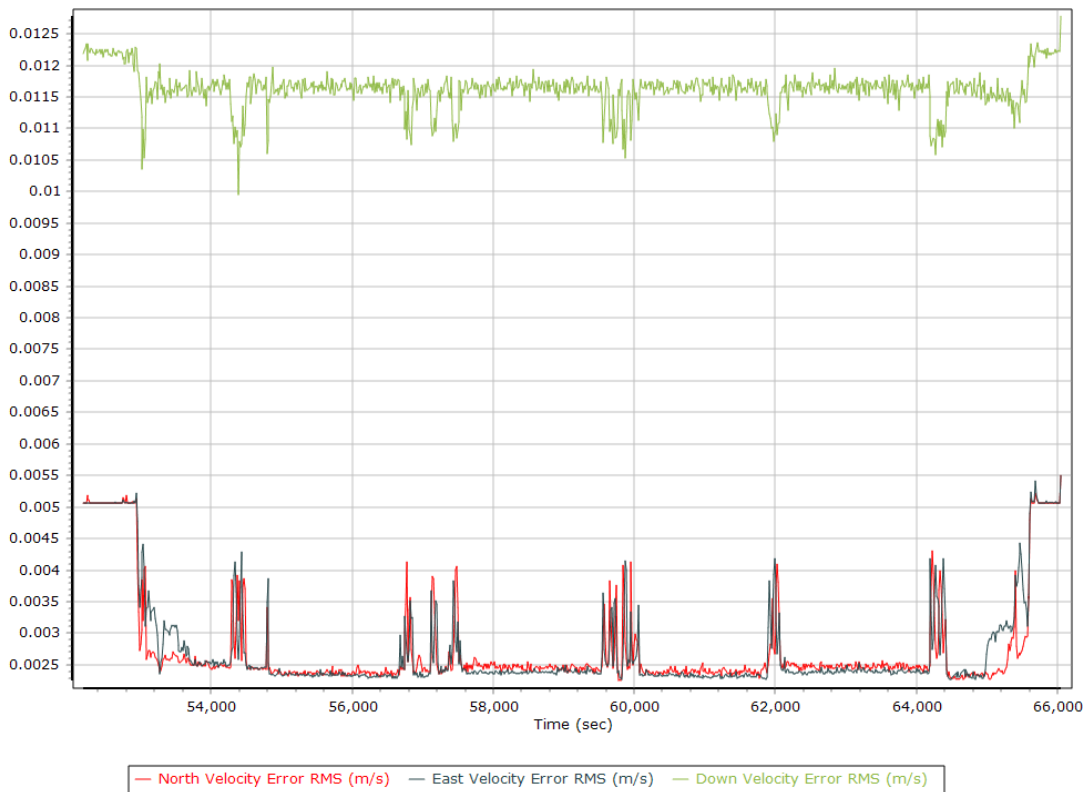


Smoothed Performance Metrics

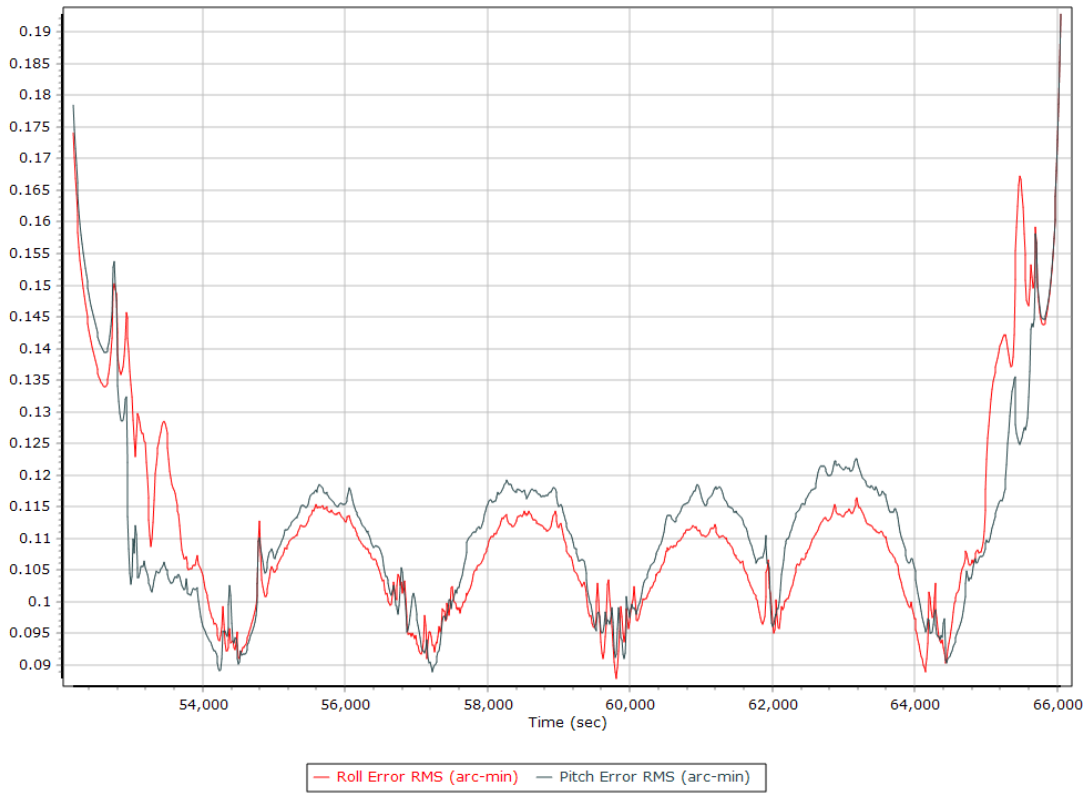
Position Error RMS (m)



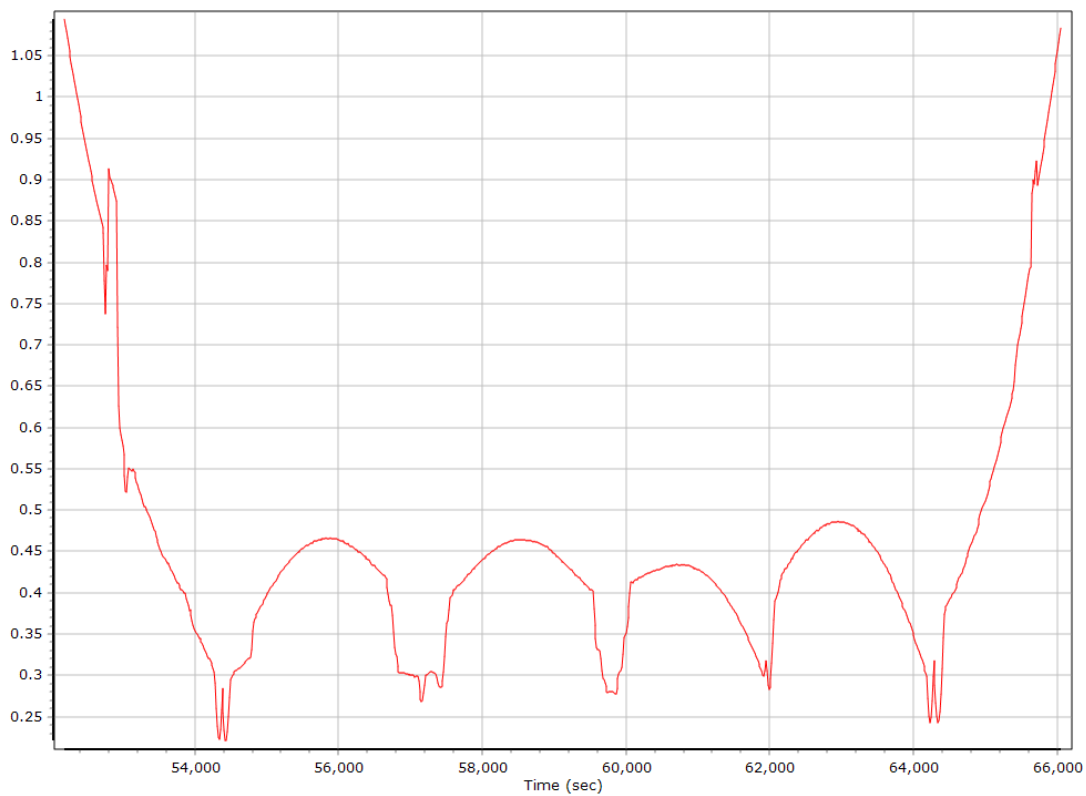
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

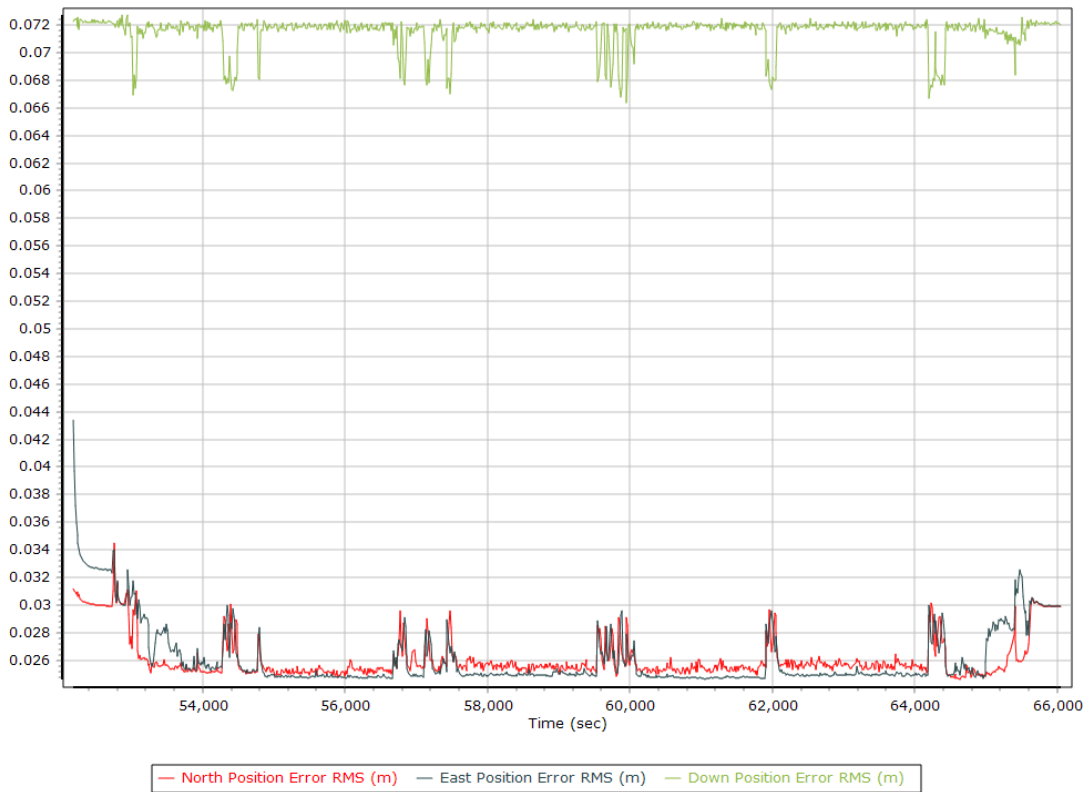


Heading Error RMS (arc-min)

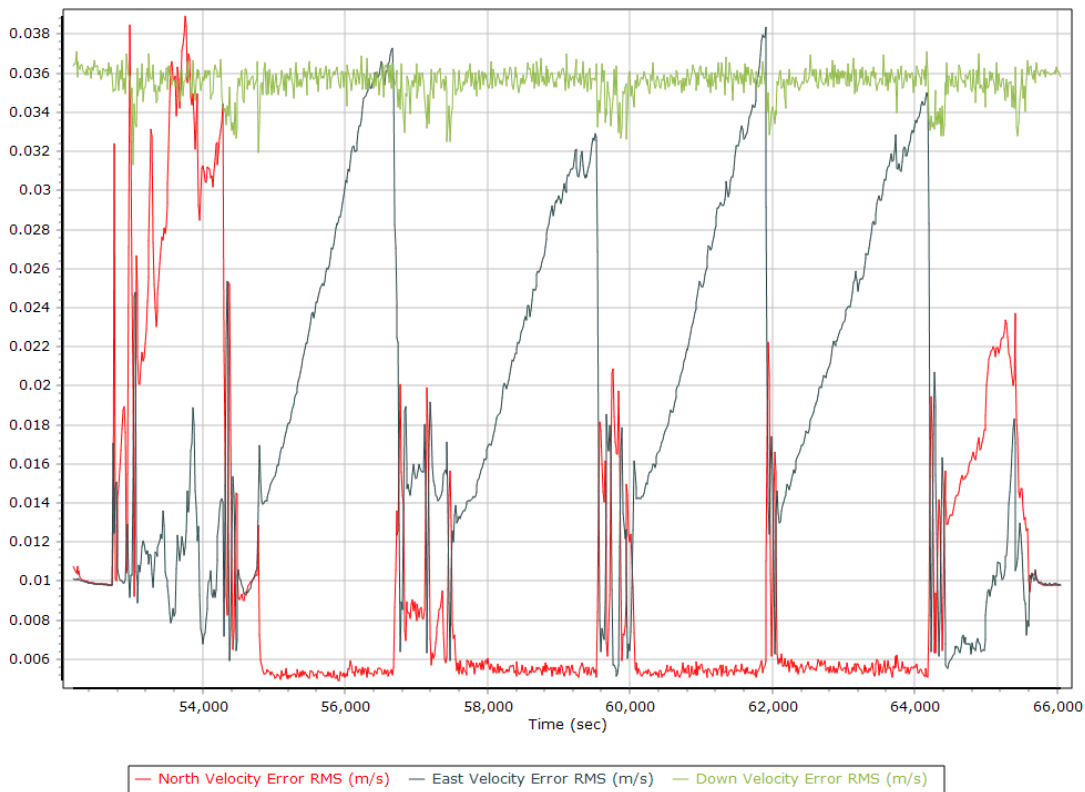


Forward Processed Performance Metrics

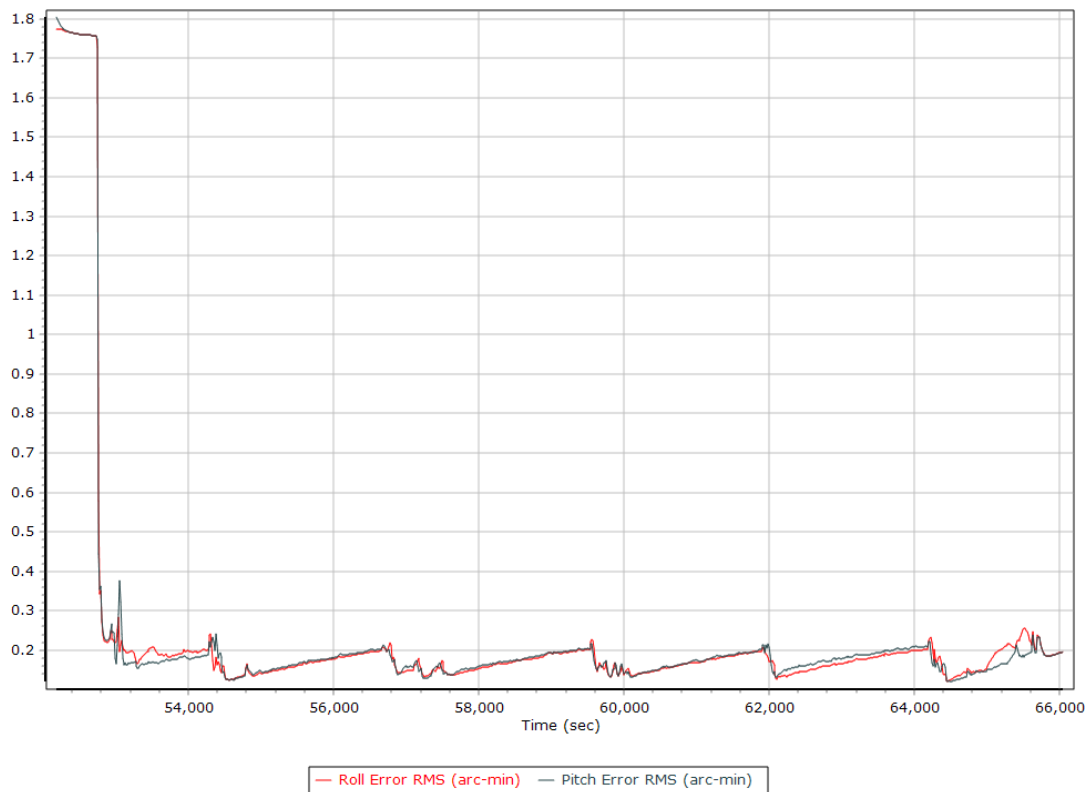
Position Error RMS (m)



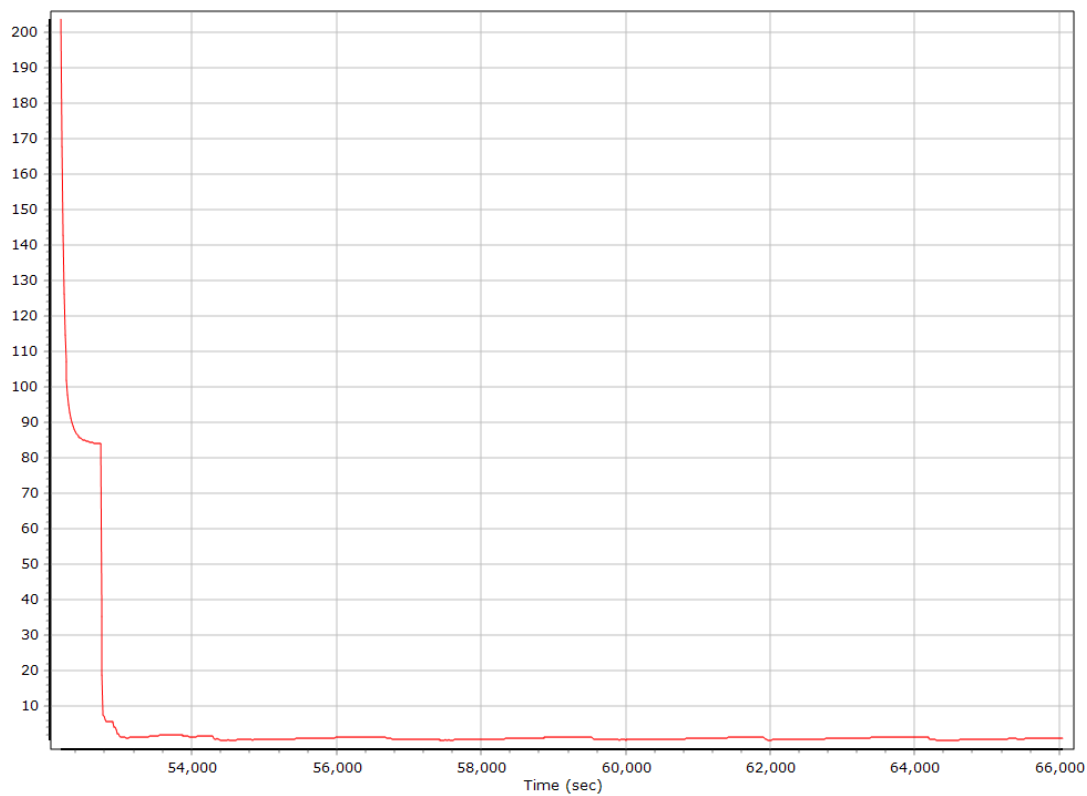
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

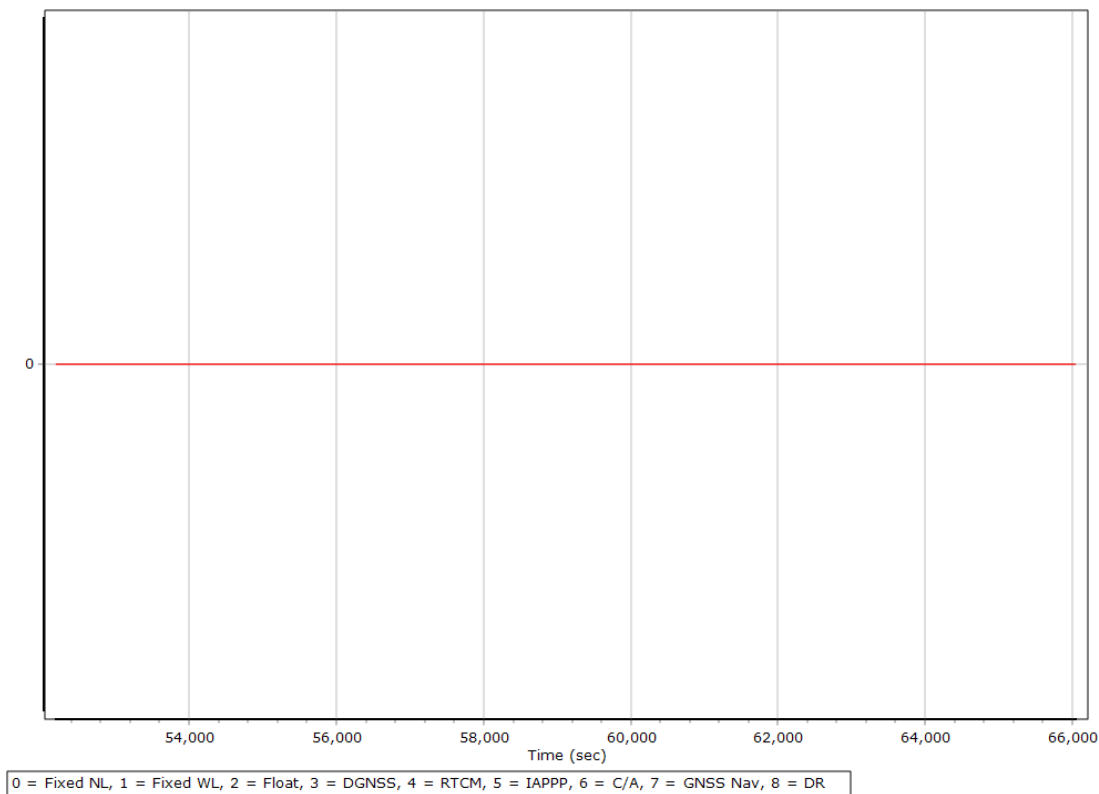


Heading Error RMS (arc-min)

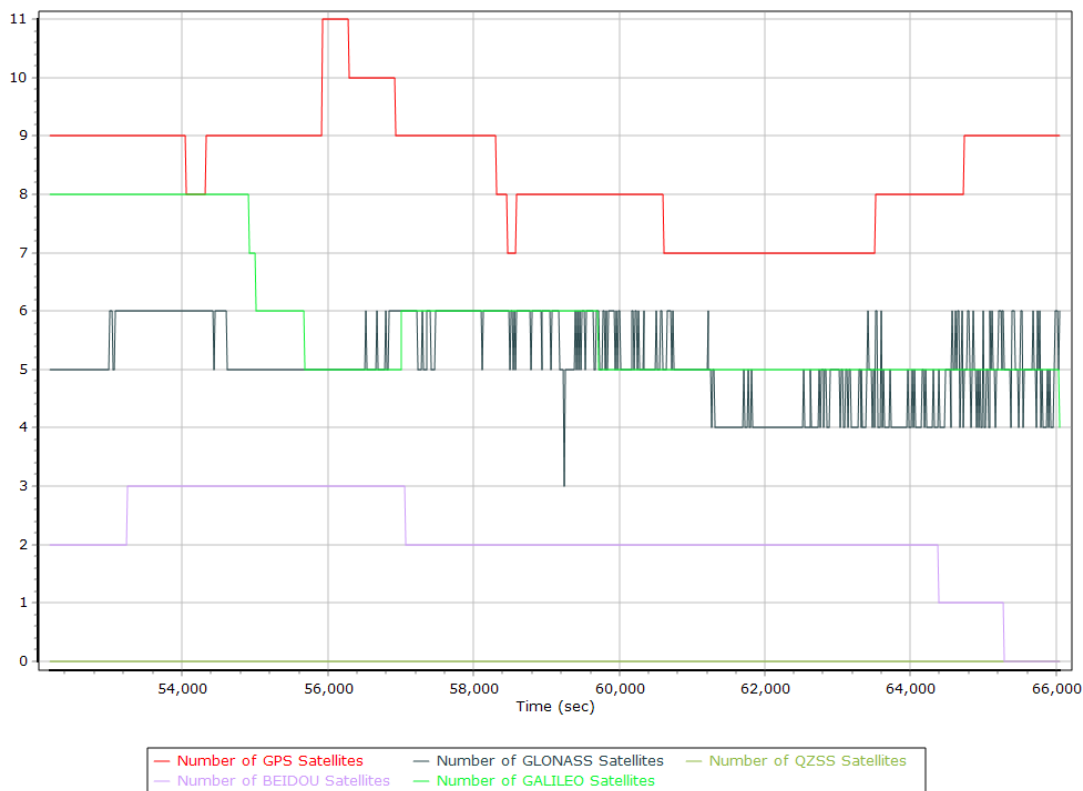


Forward Processed Solution Status

Processing Mode



Number of Satellites



Baseline Length

