

General Information

Mission Information

| | |
|------------------|--------------------------------|
| Project name | 201018_A_5060420_nad2011_FINAL |
| Processing date | 2020-10-26 20:31:23 |
| Mission date | 2020-10-18 13:23:48 |
| Mission duration | 05:04:55.000 |
| Processing mode | IN-Fusion PP-RTX |

Rover Hardware Information

| | |
|---------------|--------------------------|
| Product | POS AV 610 VER6 HW2.5-12 |
| Serial number | S/N9825 |
| IMU type | 57 |
| Receiver type | BD982 |
| Antenna type | AV39 |

Project File List

Rover Data Files

| File name | File type |
|-------------|-----------|
| survey3.pos | POS Data |

Input Files

| File Name | File Type |
|--------------|-----------------------------|
| Ephm2920.20g | GLONASS Broadcast Ephemeris |
| Ephm2920.20n | GPS Broadcast Ephemeris |

Output Files

| Filename | File type |
|---|----------------------|
| sbet_201018_A_5060420_nad2011_FINAL.out | SBET Trajectory File |

Rover Data Summary

| | | | |
|--|-----------------------------------|-------|---------|
| First raw data file | survey3.pos | | |
| Last raw data file | survey3.pos | | |
| Start GPS week | 2128 | | |
| Start time | 48227.502 (10/18/2020 1:23:47 PM) | | |
| End time | 66522.103 (10/18/2020 6:28:42 PM) | | |
| Start of fine alignment | 48543.940 (10/18/2020 1:29:03 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 | -90.000 |
| Reference to Primary GNSS lever arm (m) | 0.527 | 0.205 | -1.192 |
| Reference to Primary GNSS lever arm std dev (m) | -1.000 | | |
| Aircraft to Reference mounting angles (deg) | 0.000 | 0.000 | 0.000 |

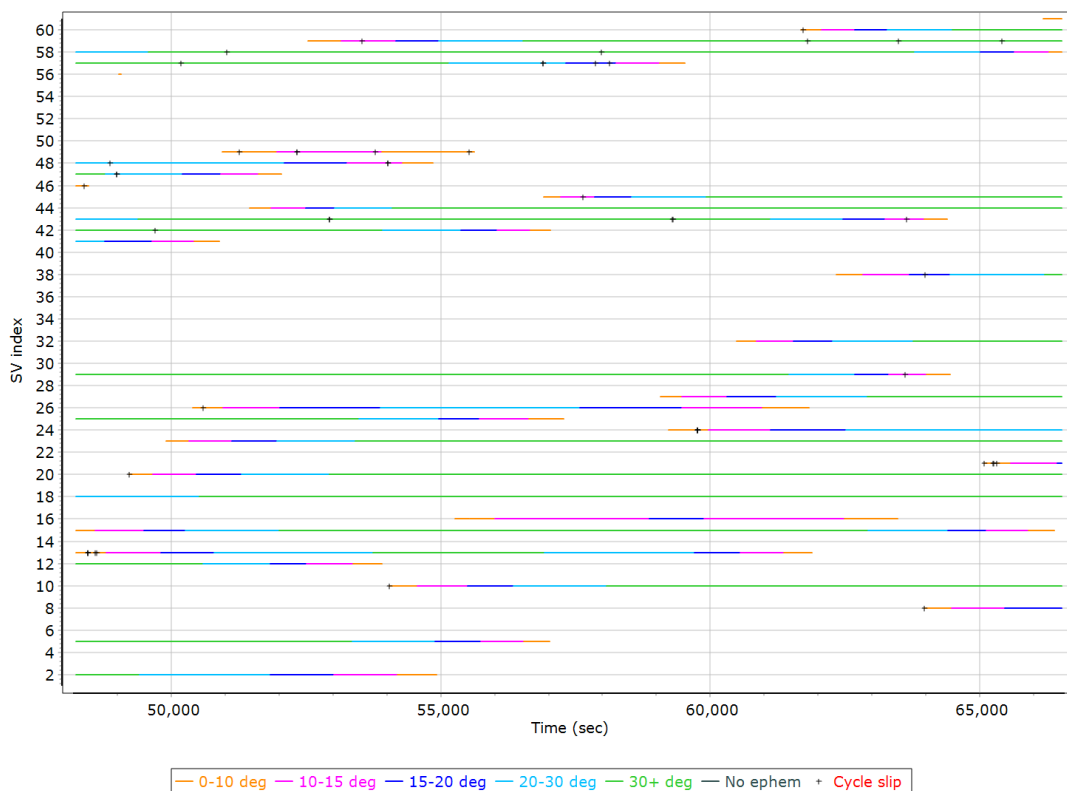
Rover Data QC

Raw IMU Import QC Summary

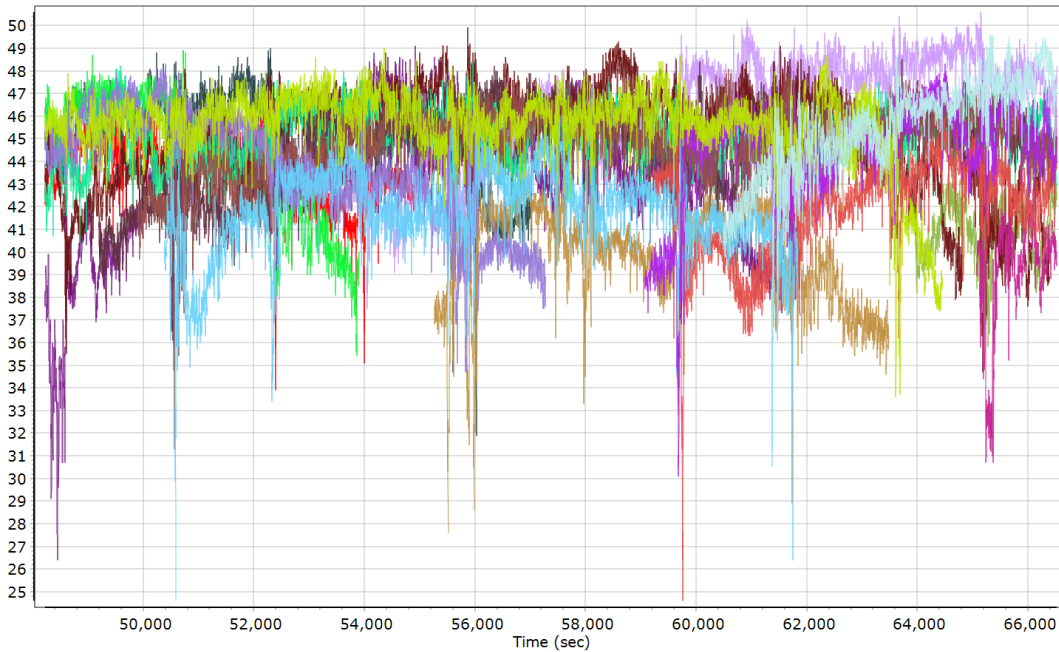
| | |
|---|--|
| IMU data input file | imu_201018_A_5060420_nad2011_FINAL.dat |
| IMU data check log file | imudt_201018_A_5060420_nad2011_FINAL.log |
| IMU Records Processed | 3658355 |
| Termination Status | Warnings |
| IMU Anomalies | 1 |
| IMU Failure Messages | |
| 48281.184 : WARNING : Gap of 0.2201 seconds in CHECKDT input data | |

Primary Observables & Satellite Data

GPS/GLONASS L1 Satellite Lock/Elevation

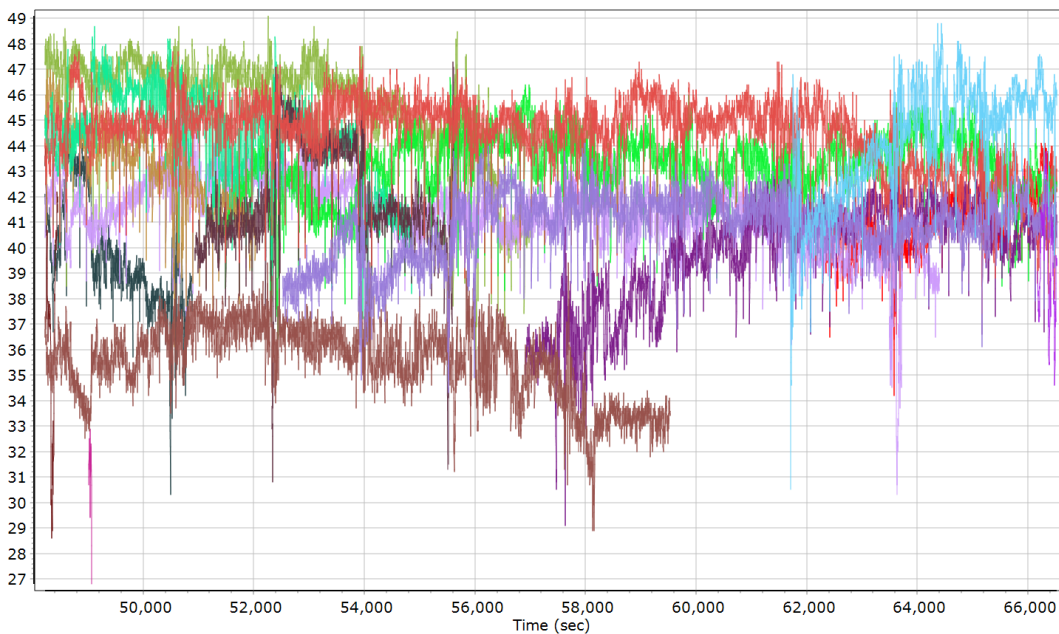


GPS L1 SNR



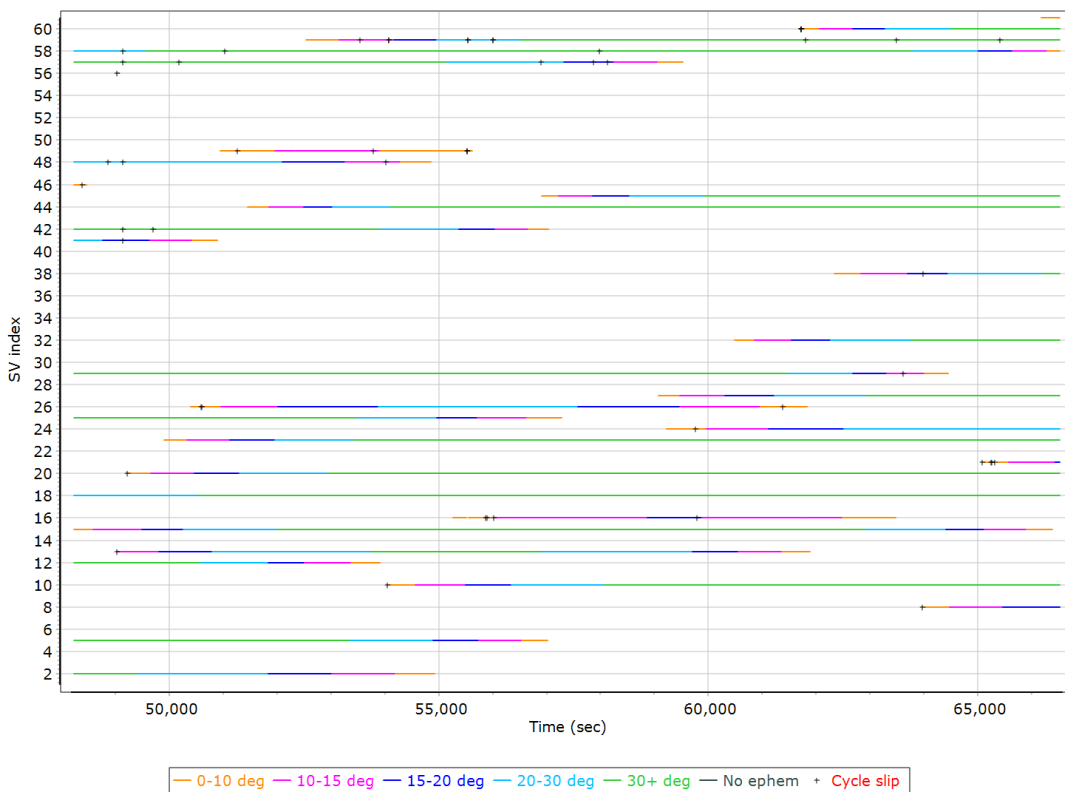
- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 02 L1 SNR (dB/Hz) | GPS PRN 05 L1 SNR (dB/Hz) | GPS PRN 08 L1 SNR (dB/Hz) | GPS PRN 10 L1 SNR (dB/Hz) |
| GPS PRN 12 L1 SNR (dB/Hz) | GPS PRN 13 L1 SNR (dB/Hz) | GPS PRN 15 L1 SNR (dB/Hz) | GPS PRN 16 L1 SNR (dB/Hz) |
| GPS PRN 18 L1 SNR (dB/Hz) | GPS PRN 20 L1 SNR (dB/Hz) | GPS PRN 21 L1 SNR (dB/Hz) | GPS PRN 23 L1 SNR (dB/Hz) |
| GPS PRN 24 L1 SNR (dB/Hz) | GPS PRN 25 L1 SNR (dB/Hz) | GPS PRN 26 L1 SNR (dB/Hz) | GPS PRN 27 L1 SNR (dB/Hz) |
| GPS PRN 29 L1 SNR (dB/Hz) | GPS PRN 32 L1 SNR (dB/Hz) | | |

GLONASS L1 SNR

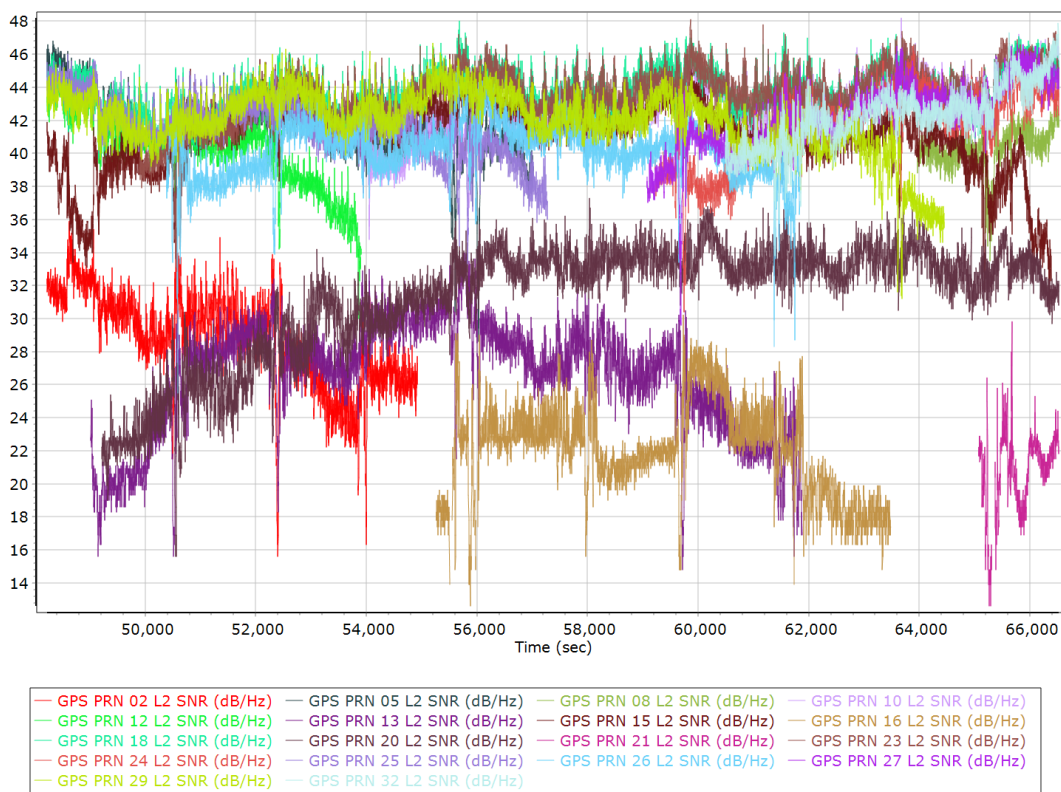


- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 01 L1 SNR (dB/Hz) | GLONASS 04 L1 SNR (dB/Hz) | GLONASS 05 L1 SNR (dB/Hz) |
| GLONASS 06 L1 SNR (dB/Hz) | GLONASS 07 L1 SNR (dB/Hz) | GLONASS 08 L1 SNR (dB/Hz) |
| GLONASS 09 L1 SNR (dB/Hz) | GLONASS 10 L1 SNR (dB/Hz) | GLONASS 11 L1 SNR (dB/Hz) |
| GLONASS 12 L1 SNR (dB/Hz) | GLONASS 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 24 L1 SNR (dB/Hz) | | |

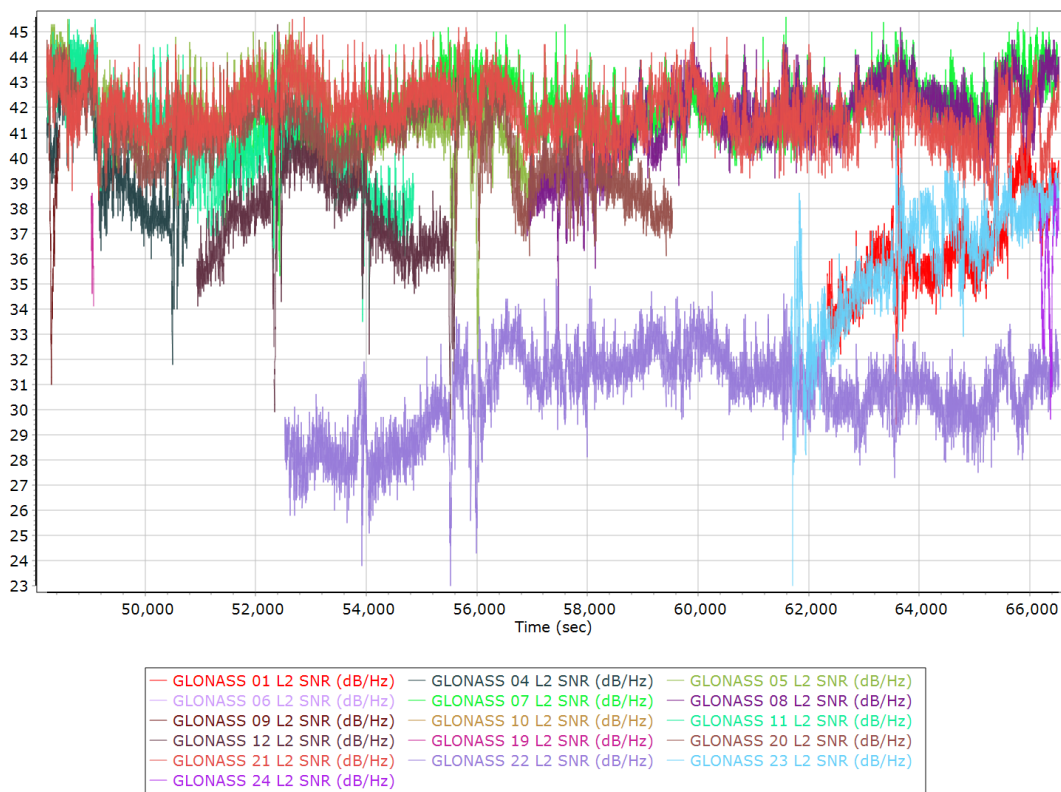
GPS/GLONASS L2 Satellite Lock/Elevation



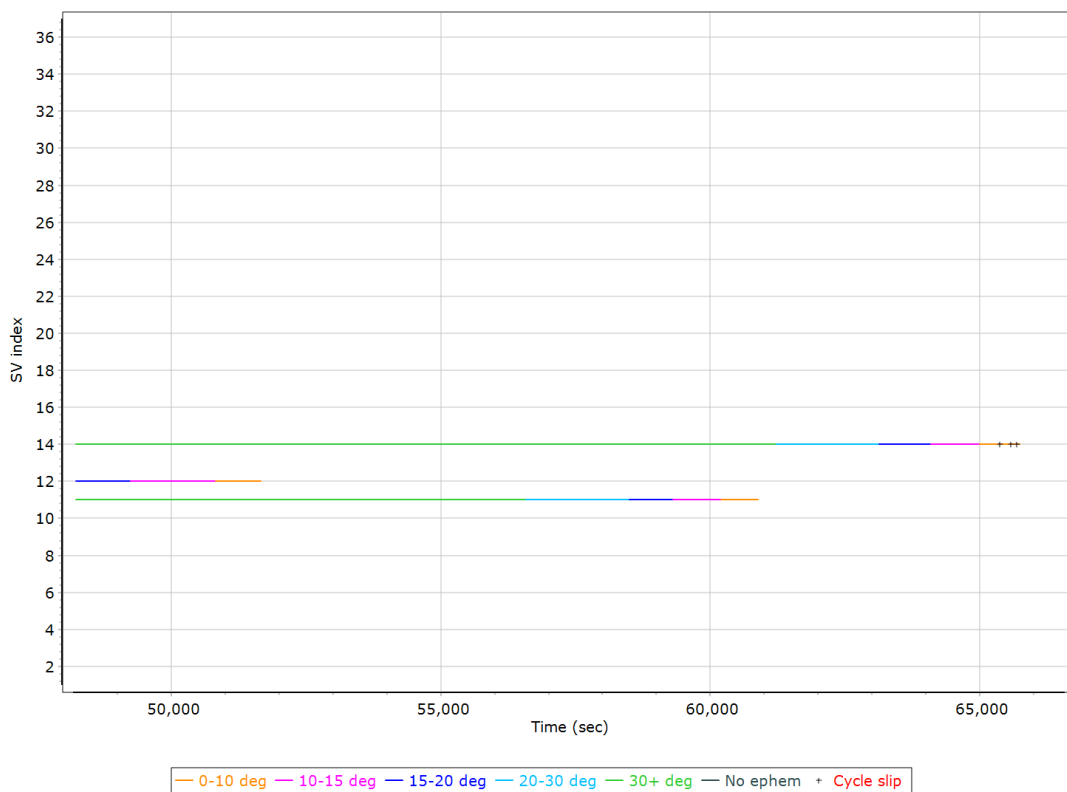
GPS L2 SNR



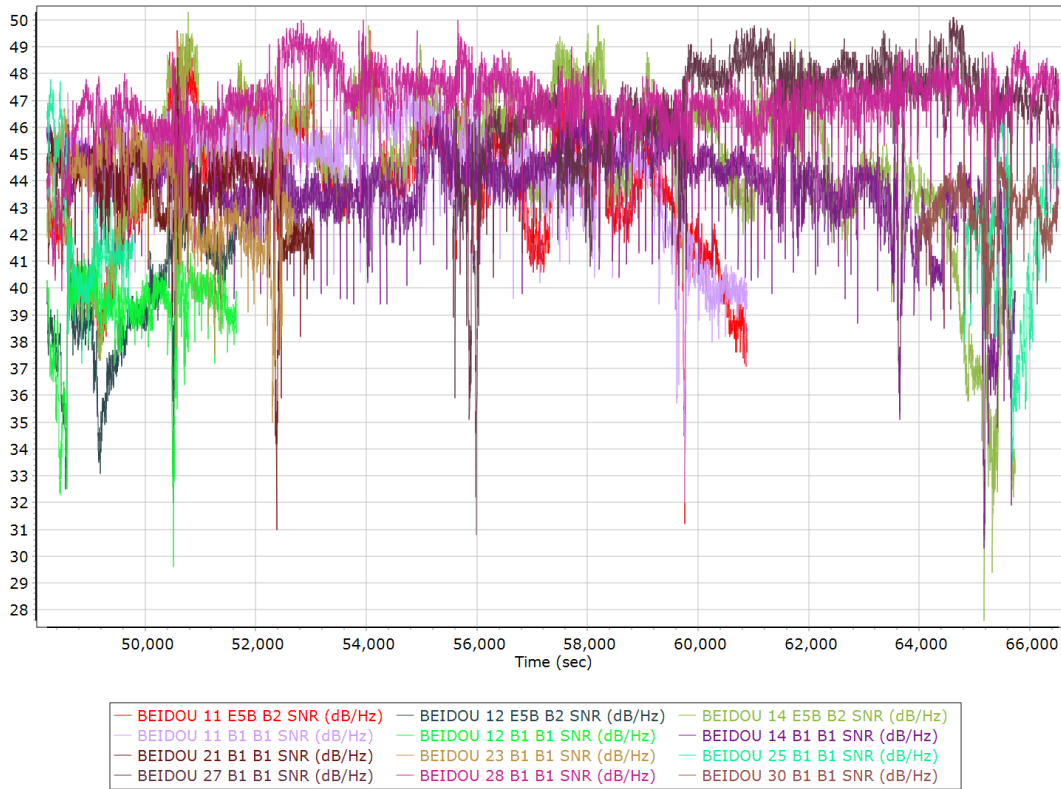
GLONASS L2 SNR



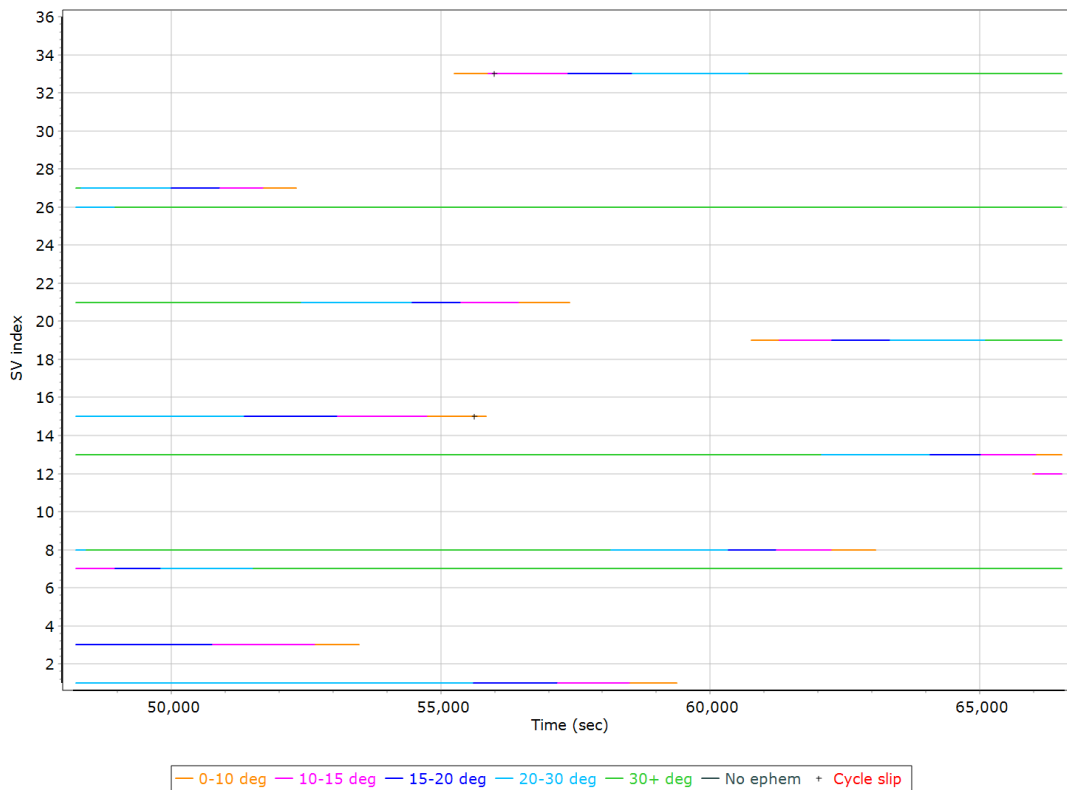
BEIDOU Satellite Lock/Elevation



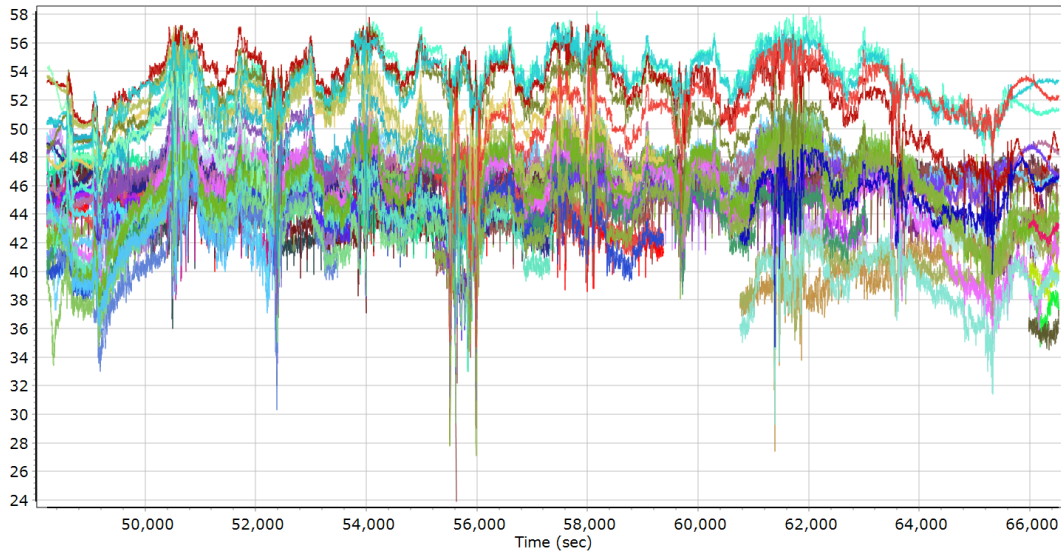
BEIDOU SNR



GALILEO Satellite Lock/Elevation



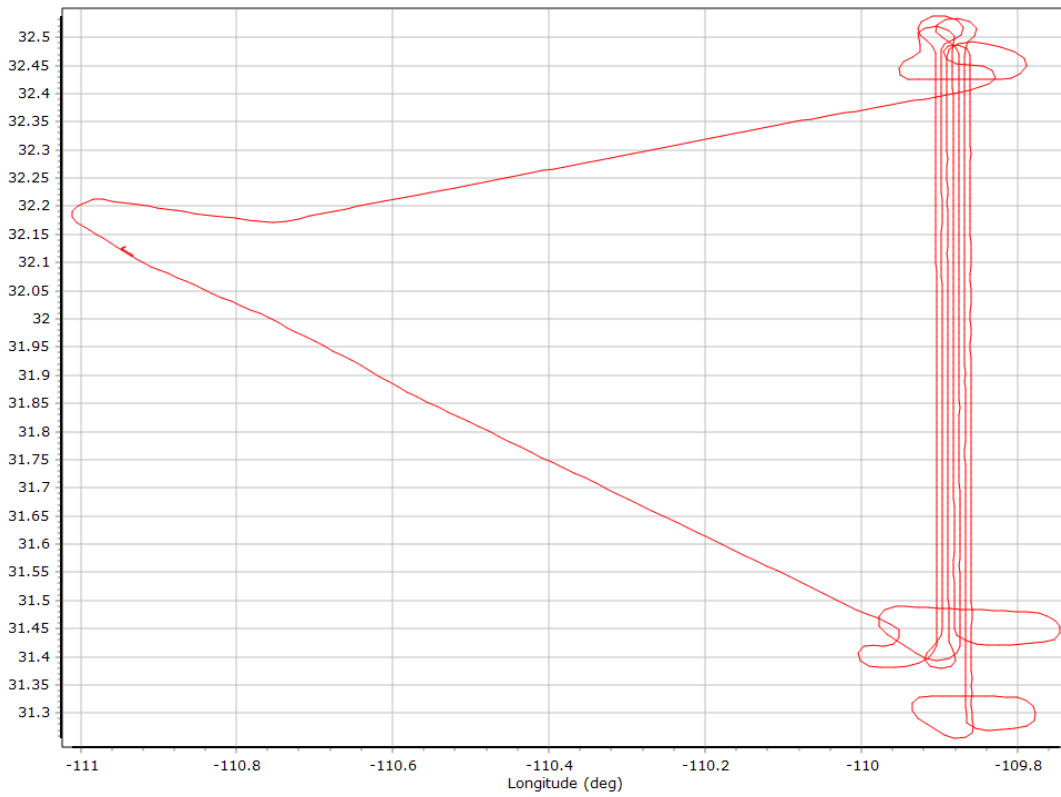
GALILEO SNR



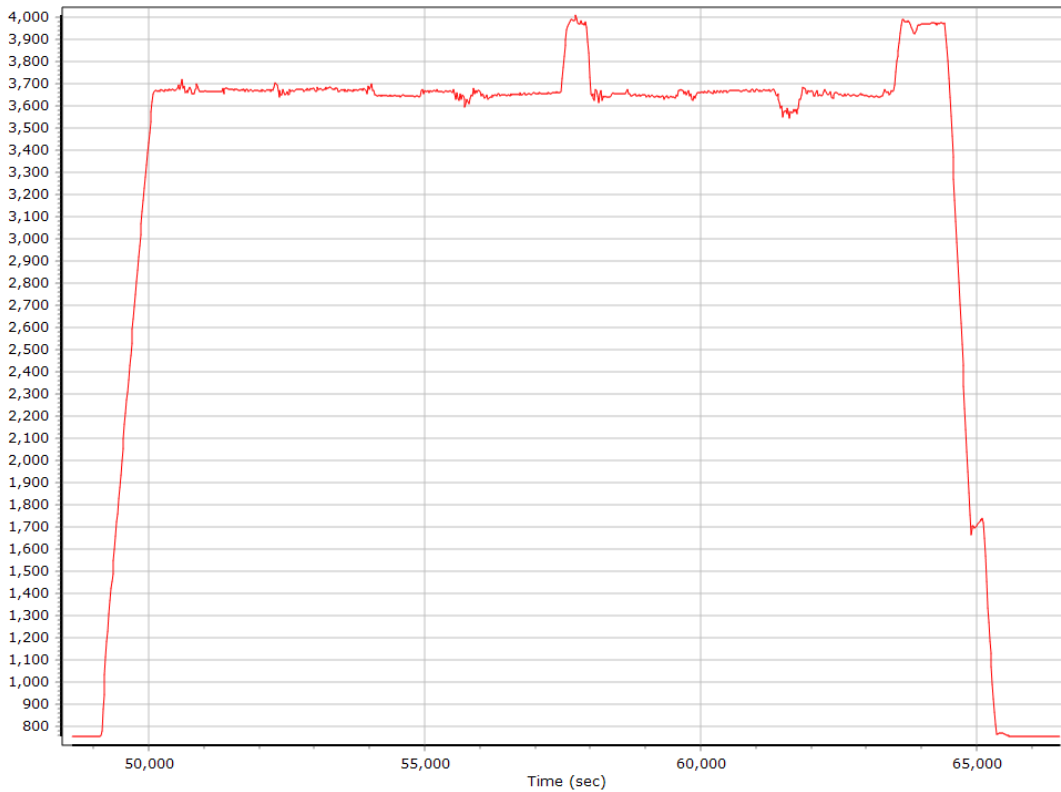
| | |
|---|---|
| — GALILEO 01 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 03 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 07 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 08 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 12 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 13 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 15 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 19 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 21 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 26 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 27 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 33 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 01 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 03 L5E5A BPSK10_PD SNR (dB/Hz) |
| — GALILEO 07 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 08 L5E5A BPSK10_PD SNR (dB/Hz) |
| — GALILEO 12 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 13 L5E5A BPSK10_PD SNR (dB/Hz) |
| — GALILEO 15 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 19 L5E5A BPSK10_PD SNR (dB/Hz) |

Smoothed Trajectory Information

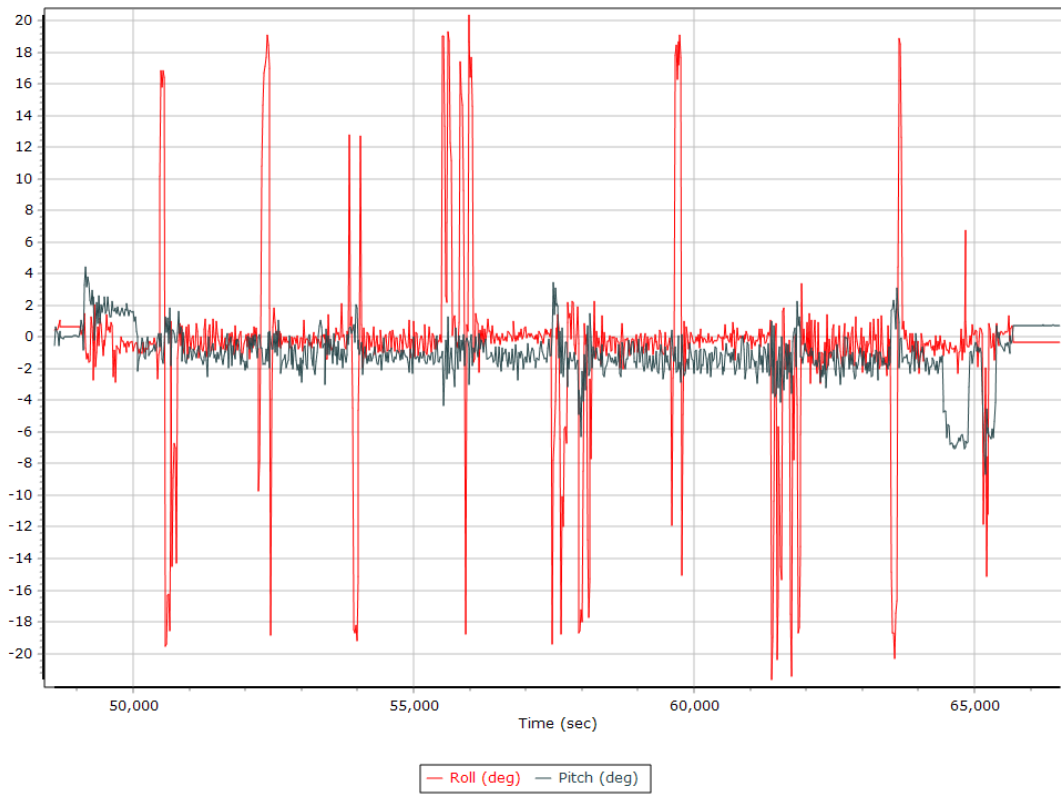
Top View



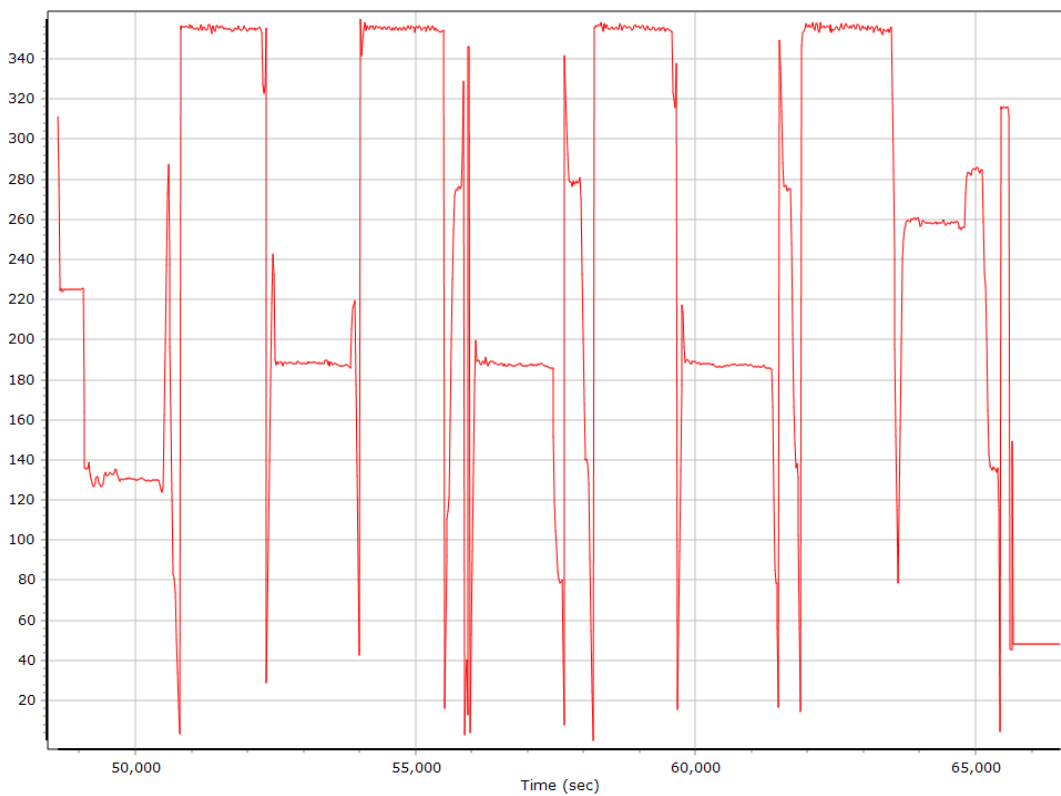
Altitude



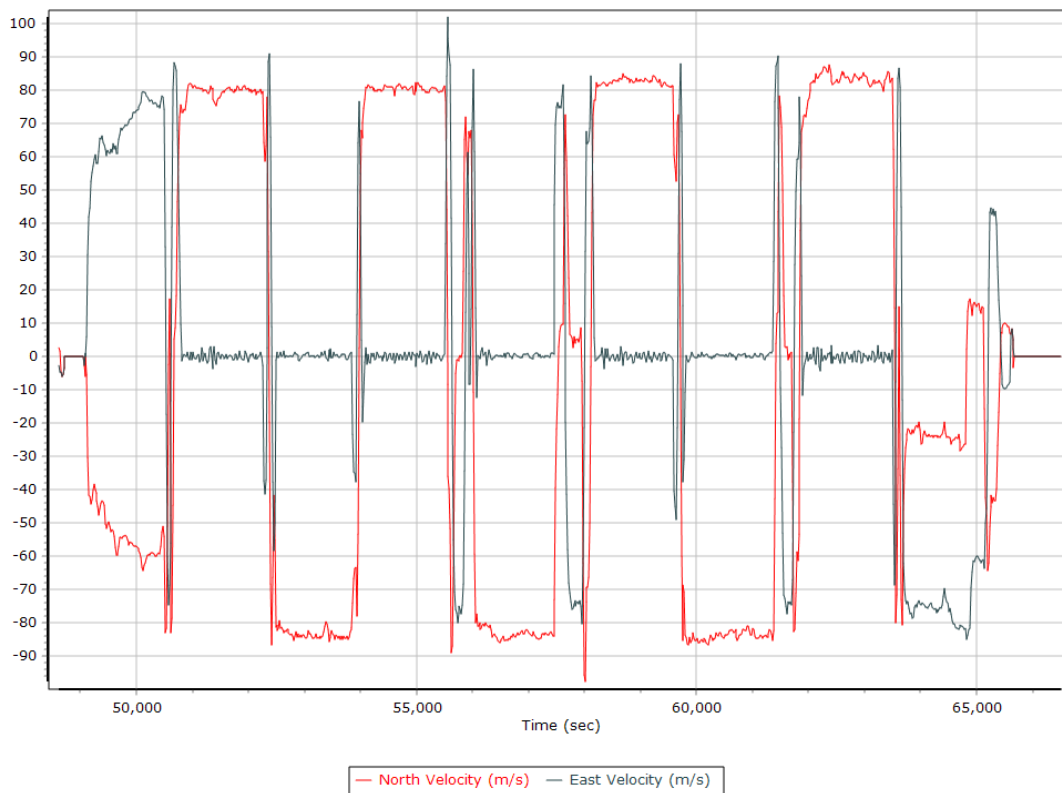
Roll/Pitch



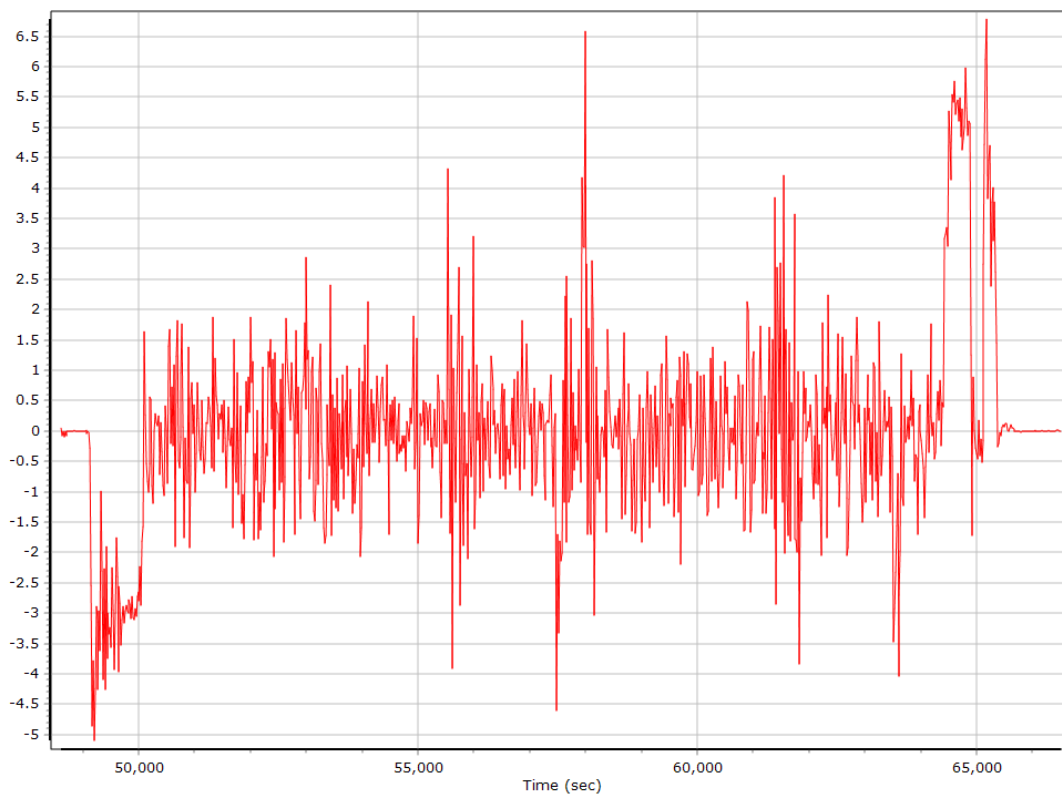
Heading



North/East Velocity



Down Velocity



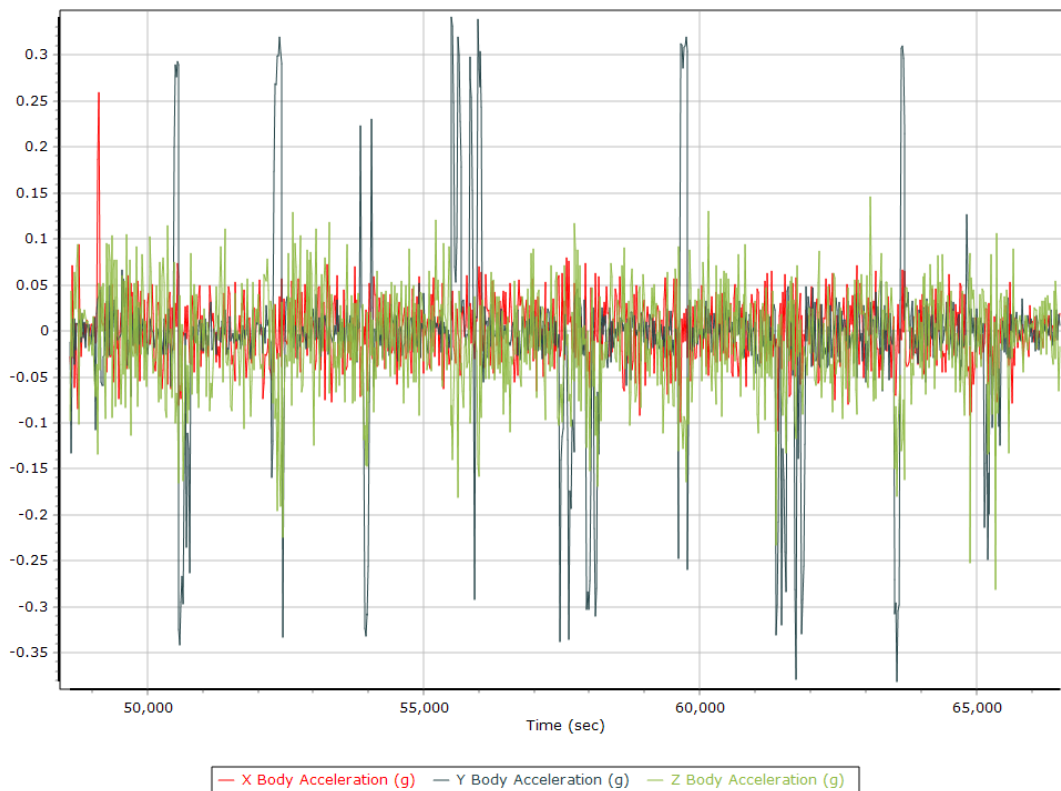
Total Speed



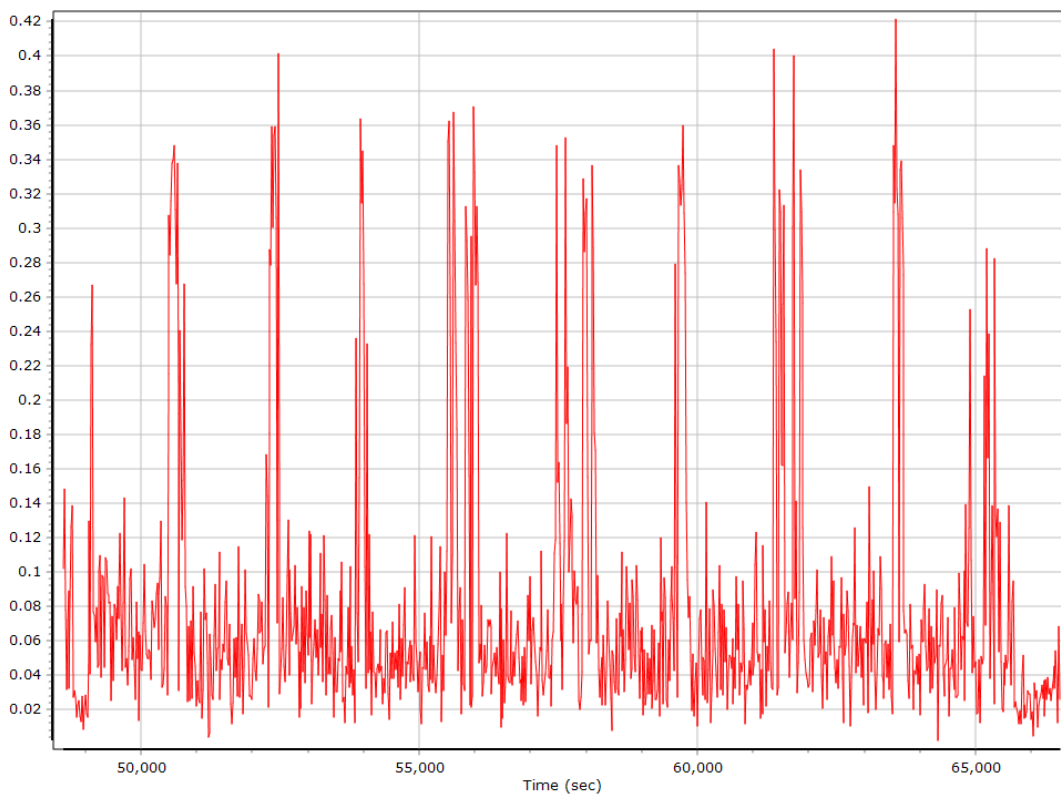
Ground Speed



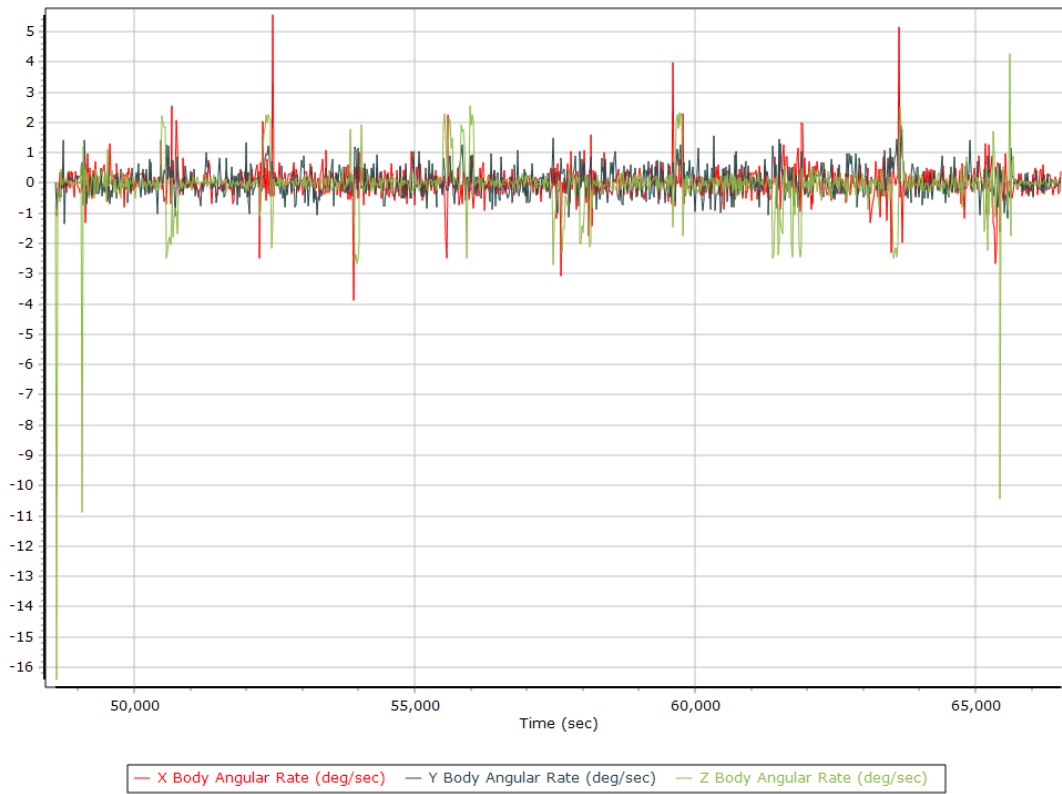
Body Acceleration



Total Body Acceleration

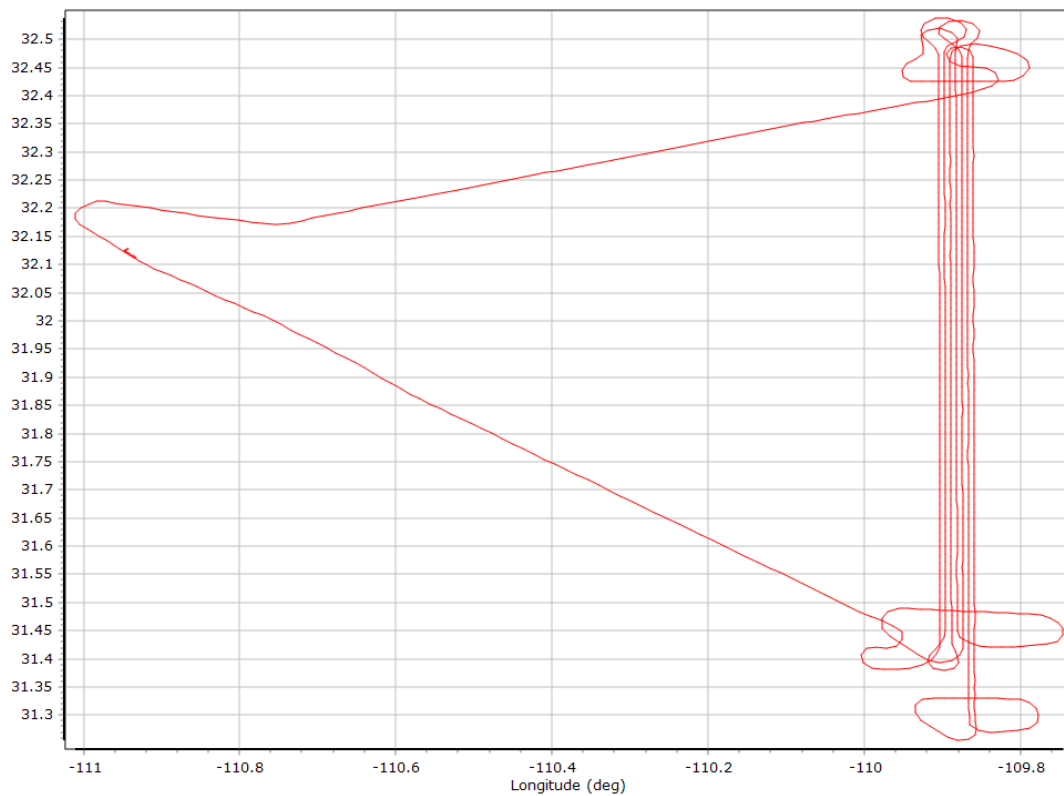


Body Angular Rate

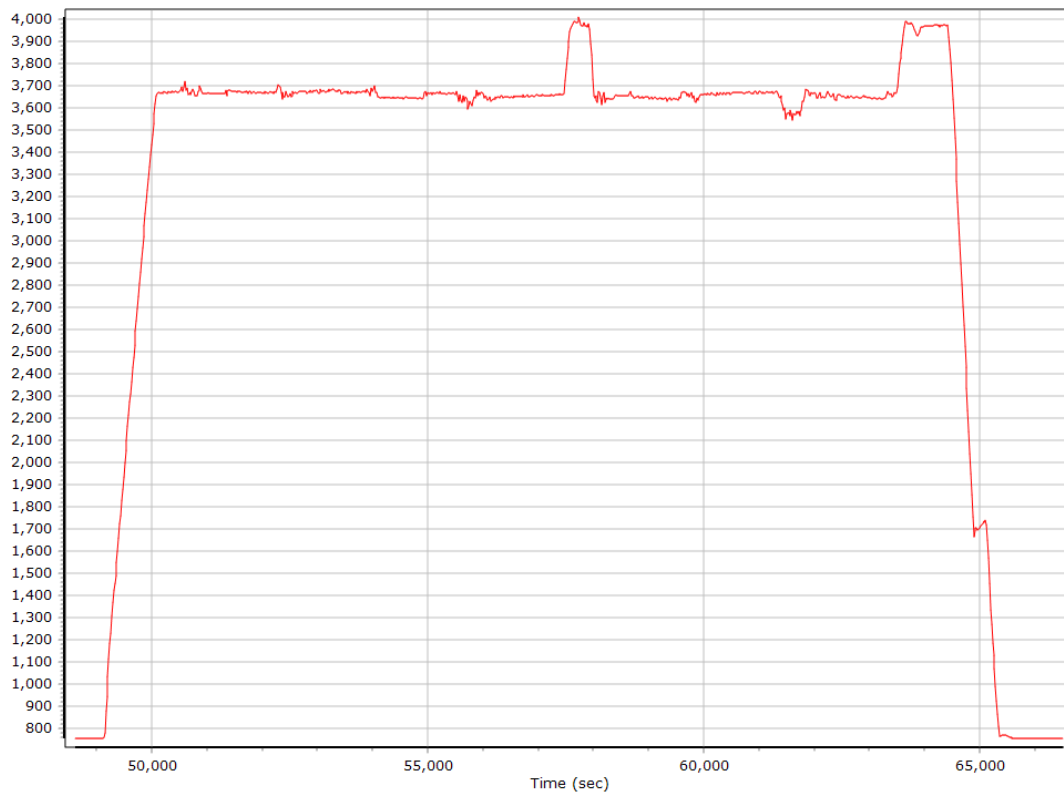


Forward Processed Trajectory Information

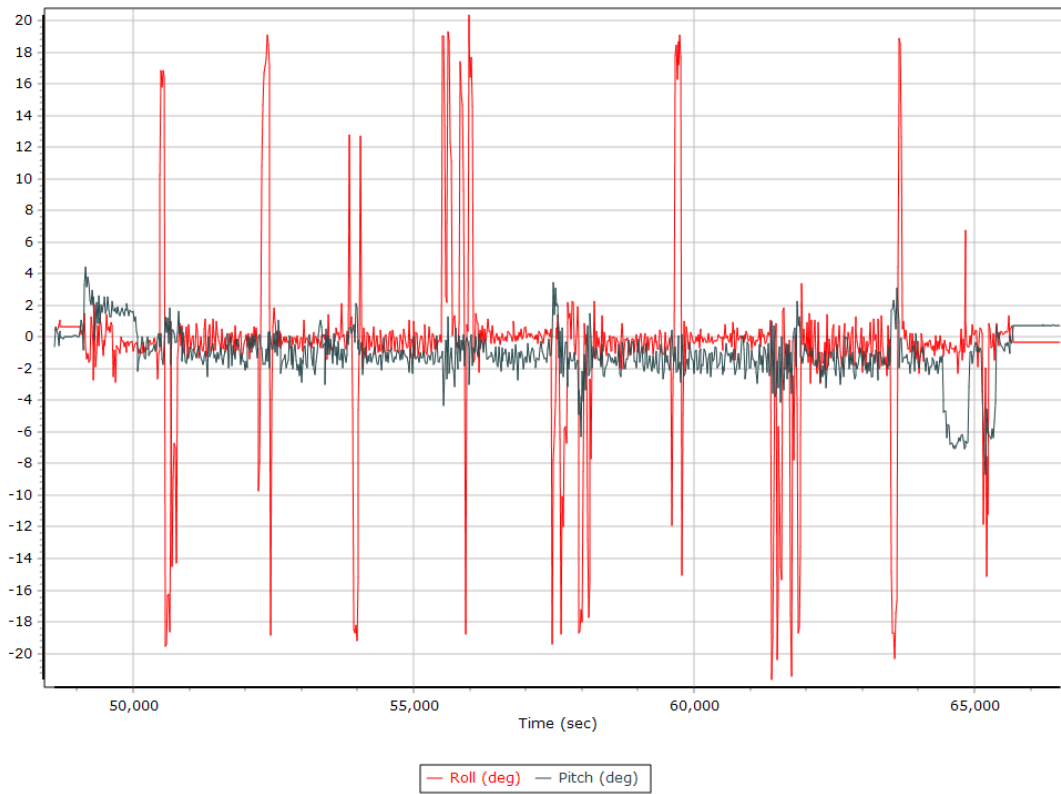
Top View



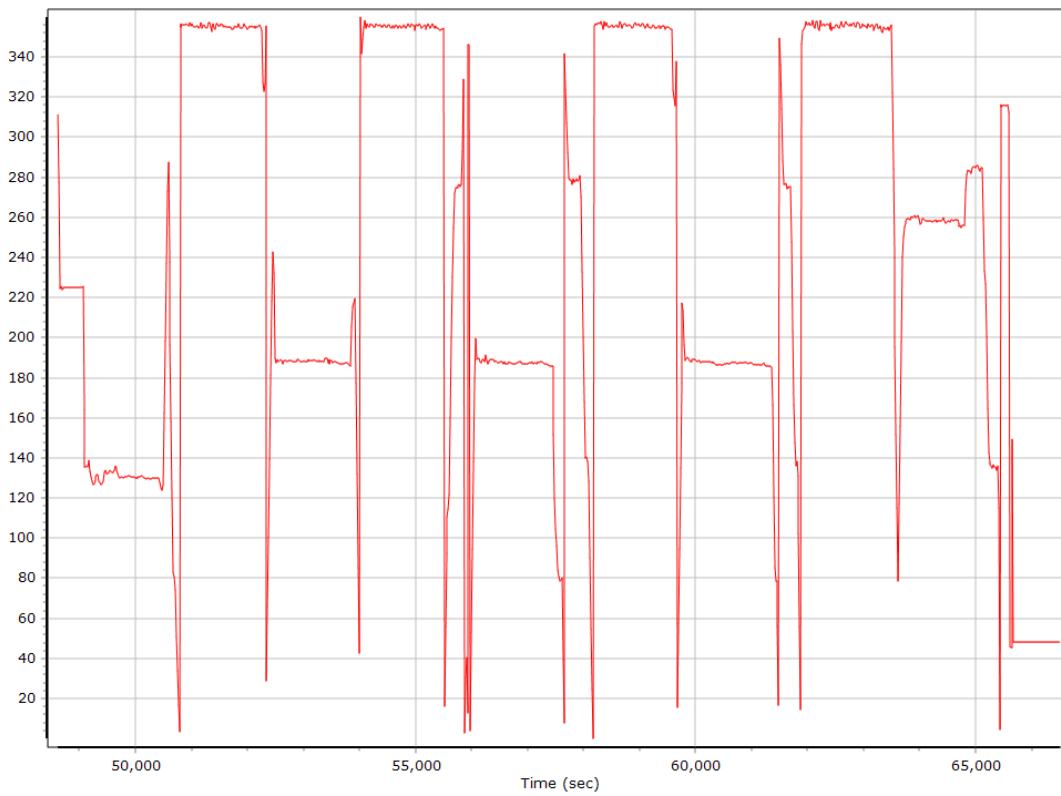
Altitude



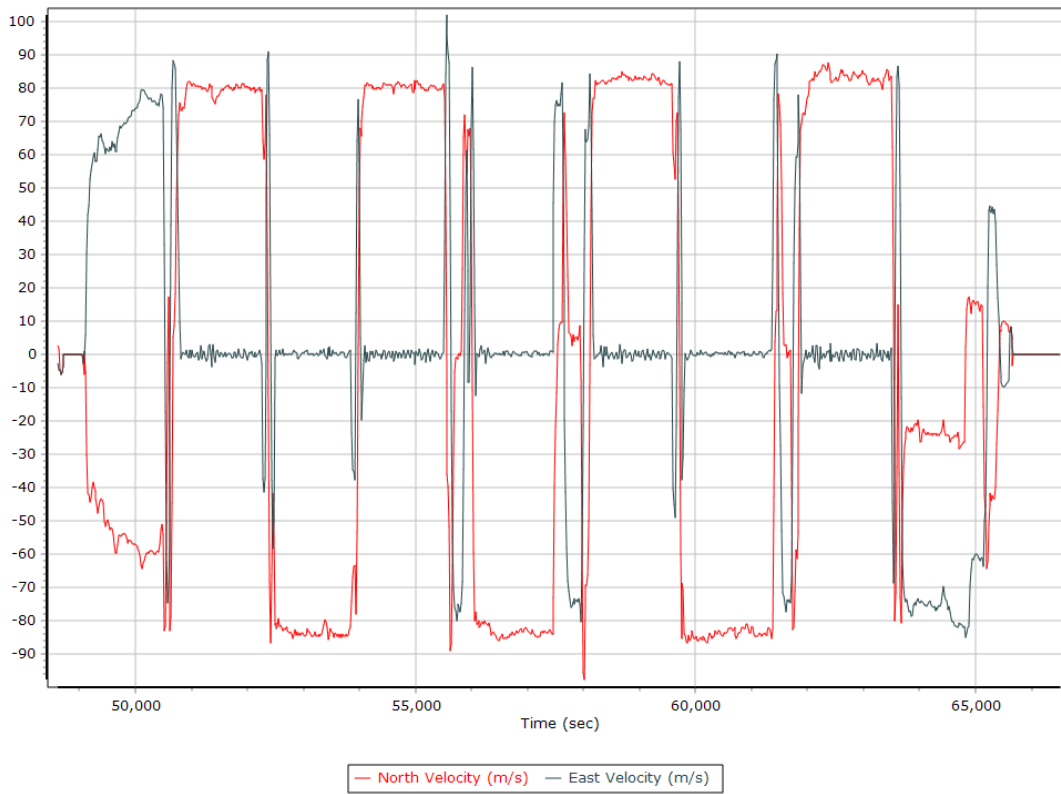
Roll/Pitch



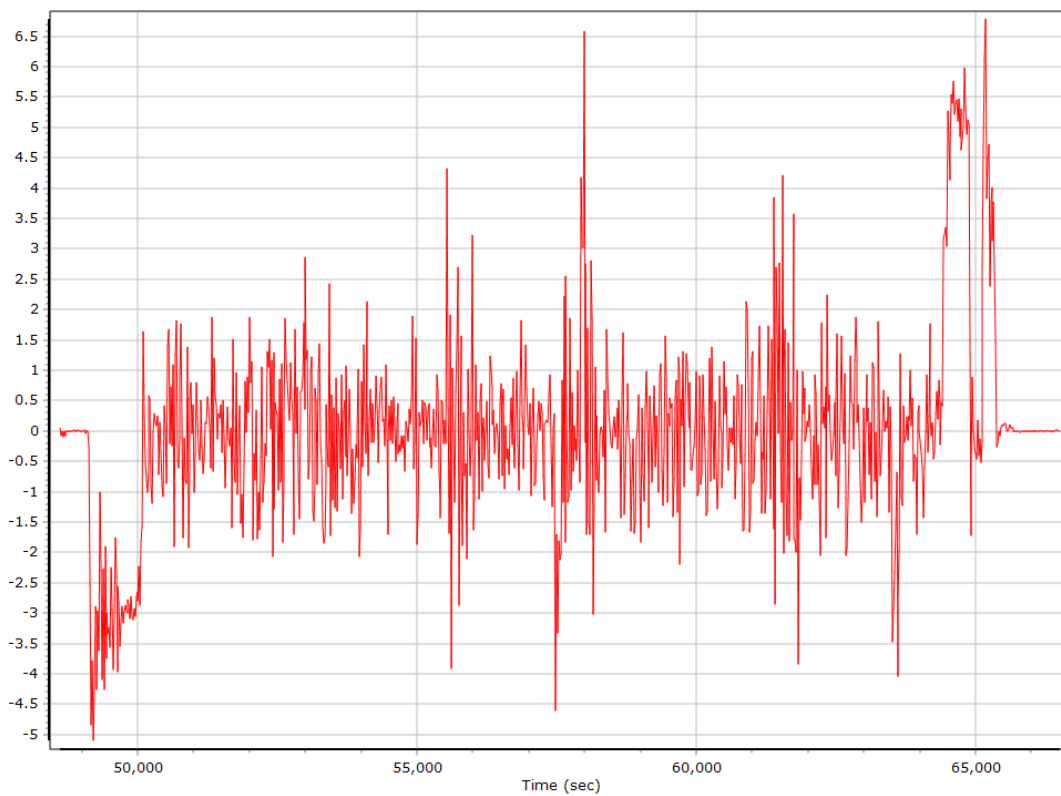
Heading



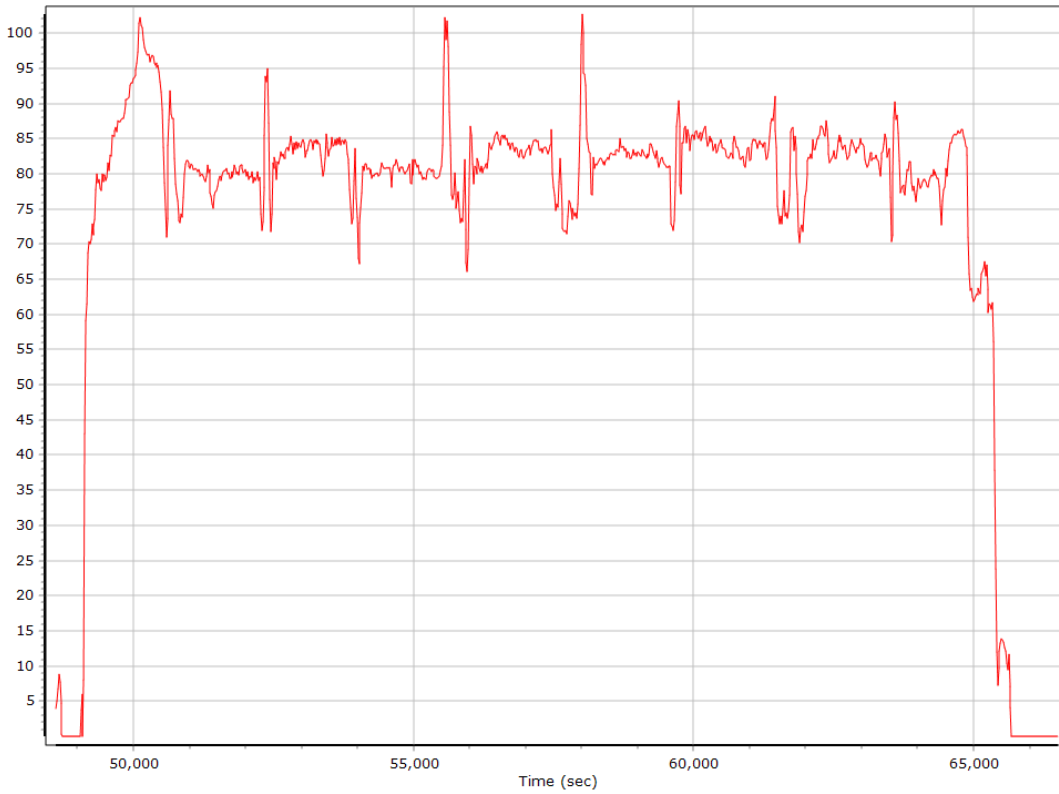
North/East Velocity



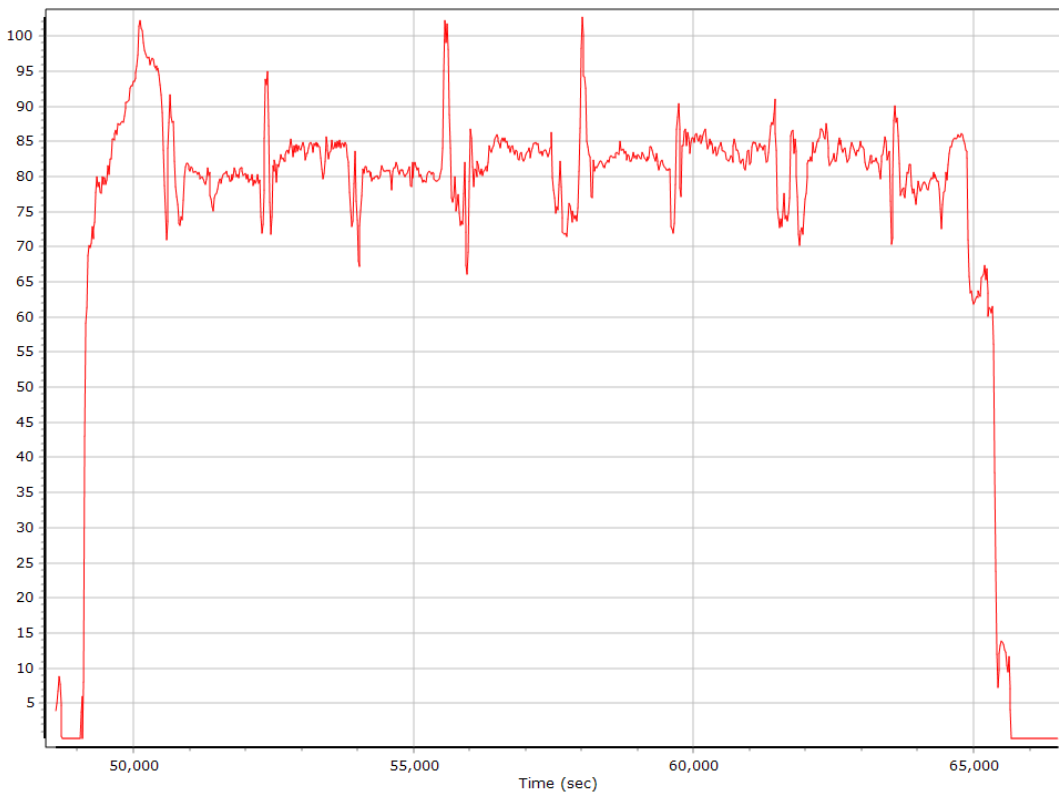
Down Velocity



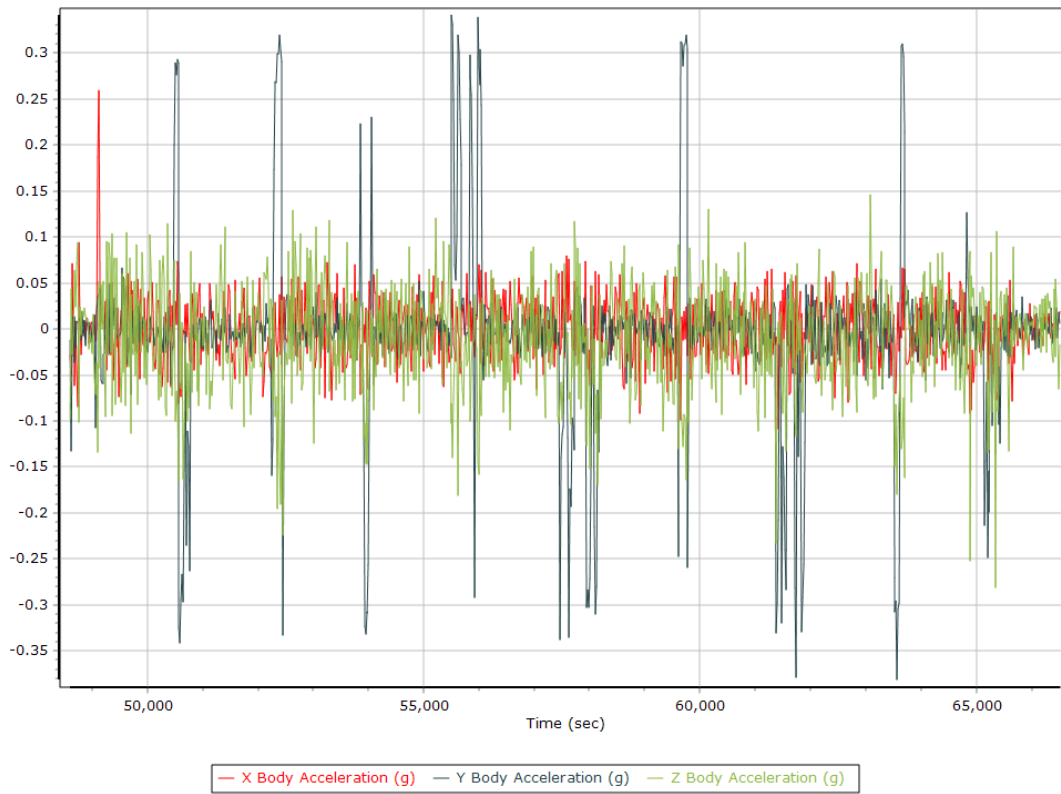
Total Speed



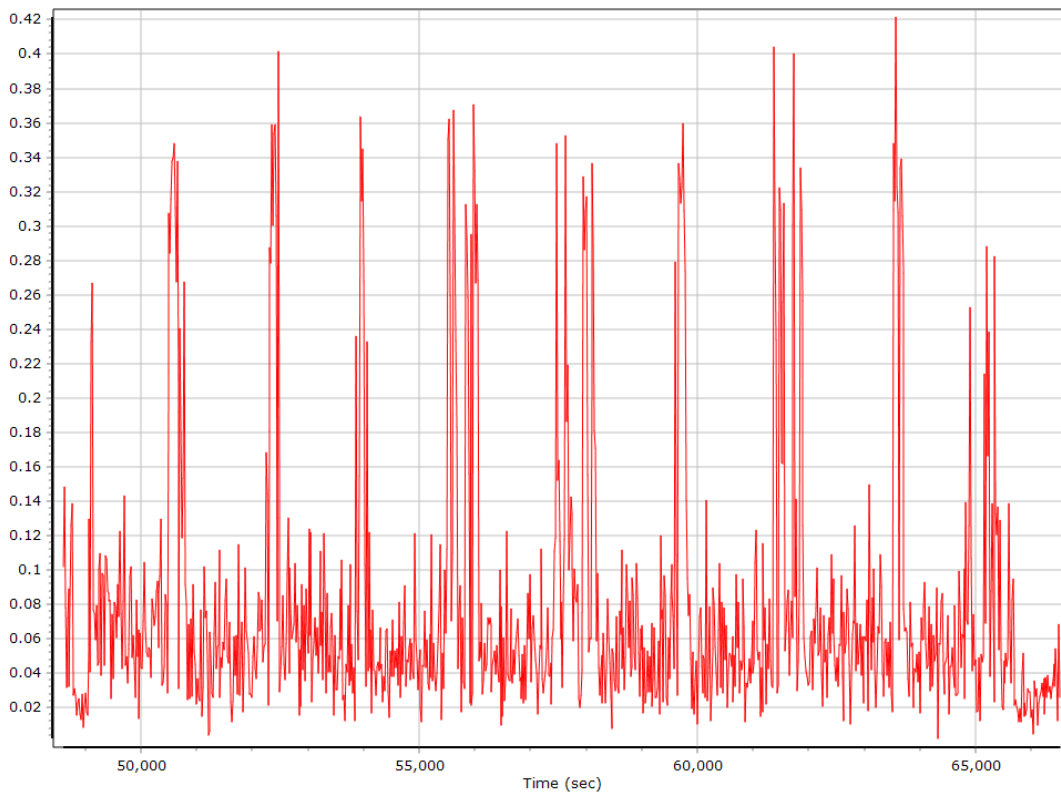
Ground Speed



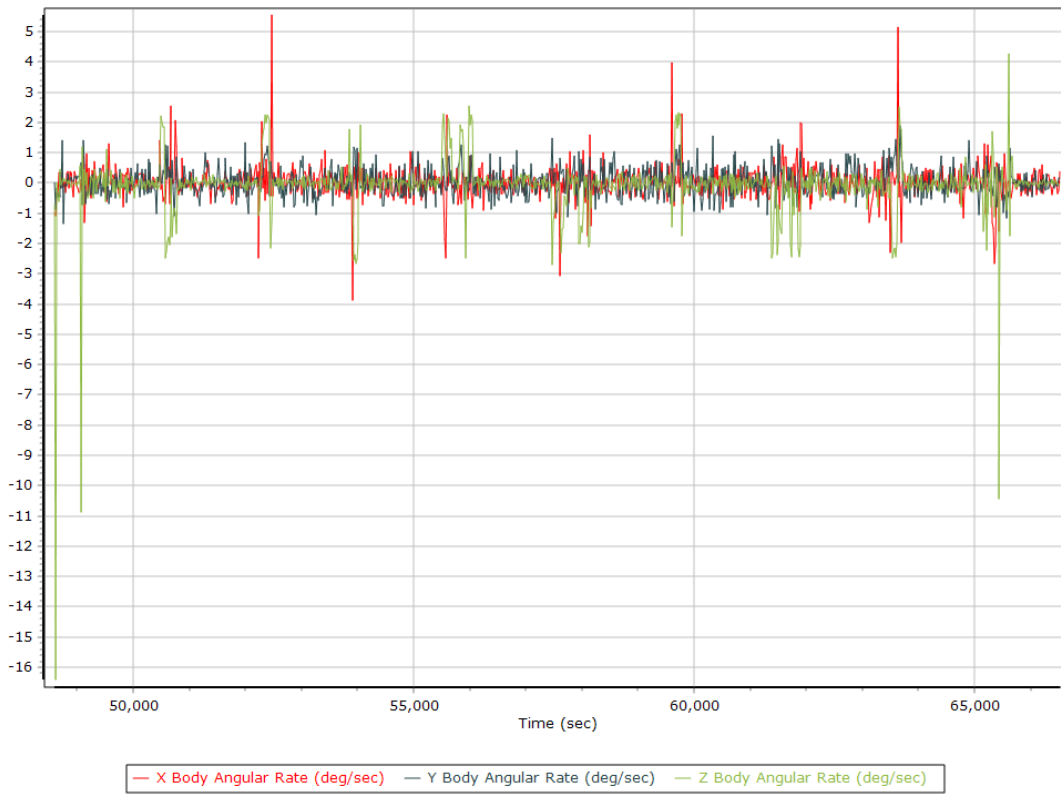
Body Acceleration



Total Body Acceleration



Body Angular Rate

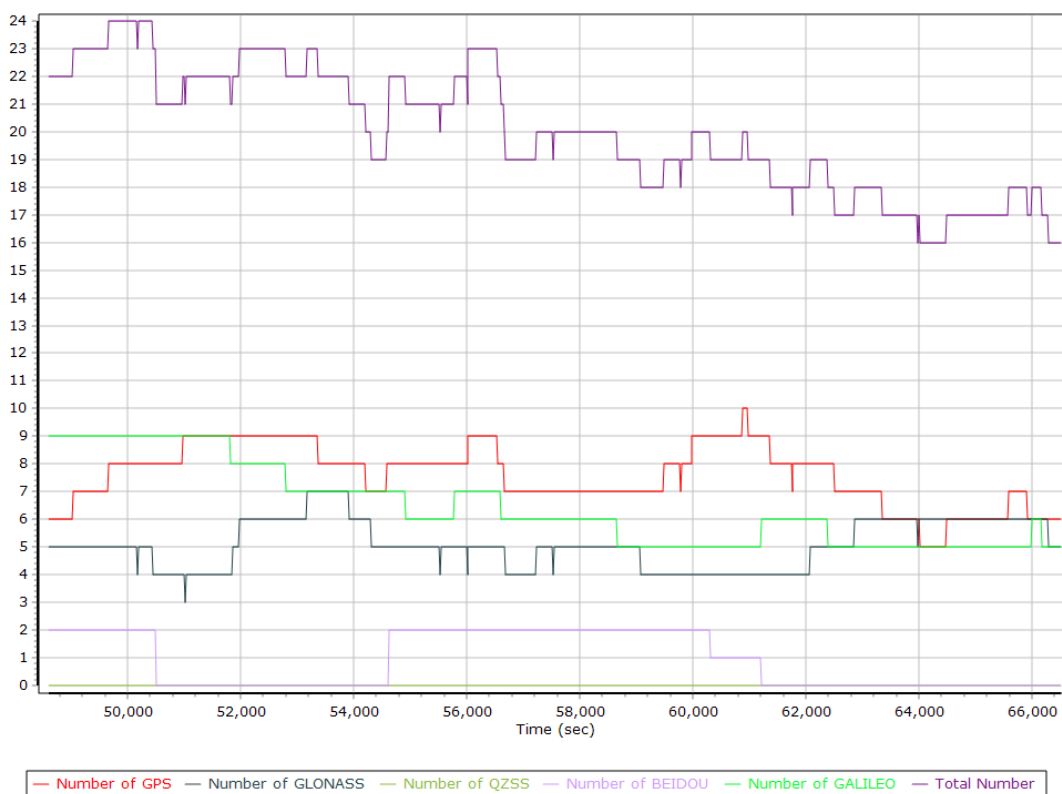


GNSS QC

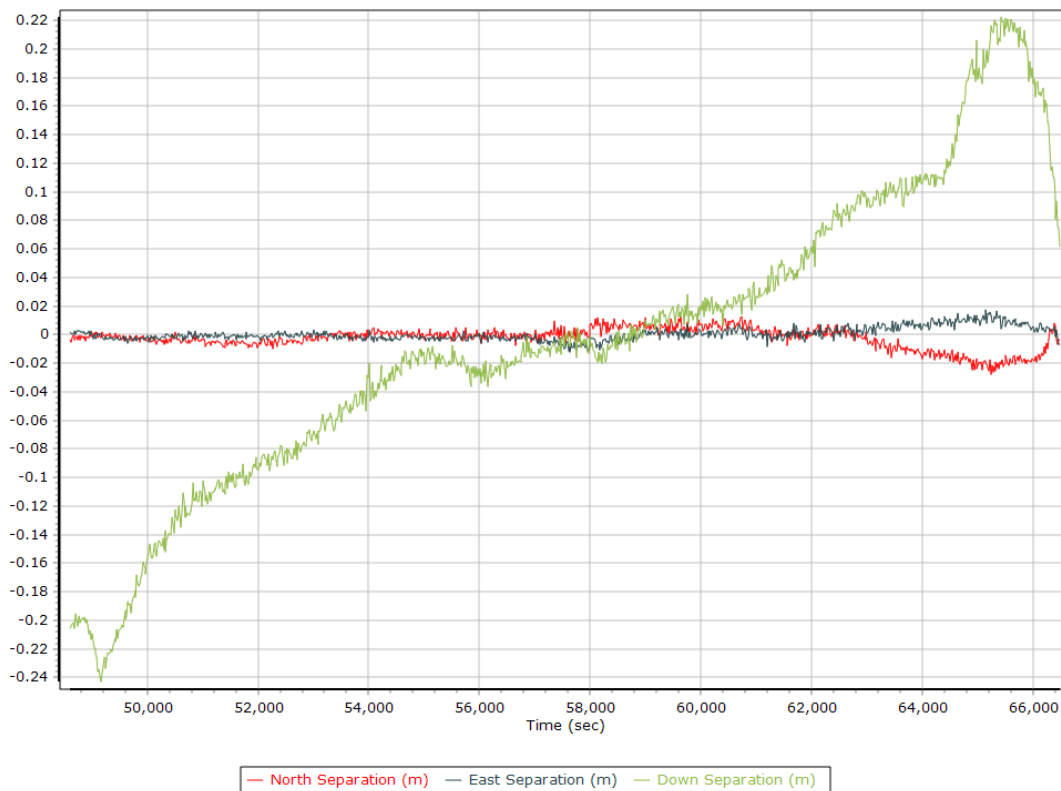
GNSS QC Statistics

| Statistics | Min | Max | Mean |
|----------------------|----------|-------|-------------|
| Baseline length (km) | 0.00 | 0.00 | |
| Number of GPS SV | 5 | 10 | 8 |
| Number of GLONASS SV | 0 | 7 | 5 |
| Number of QZSS SV | 0 | 0 | 0 |
| Number of BEIDOU SV | 0 | 2 | 1 |
| Number of GALILEO SV | 5 | 9 | 6 |
| Total number of SV | 16 | 24 | 20 |
| PDOP | 1.00 | 1.61 | 1.25 |
| QC Solution Gaps | 1.00 | 1.00 | |
| Solution Type | Fixed | Float | No solution |
| Epoch (sec) | 18256.00 | 0.00 | 31.00 |
| Percentage | 99.83 | 0.00 | 0.17 |

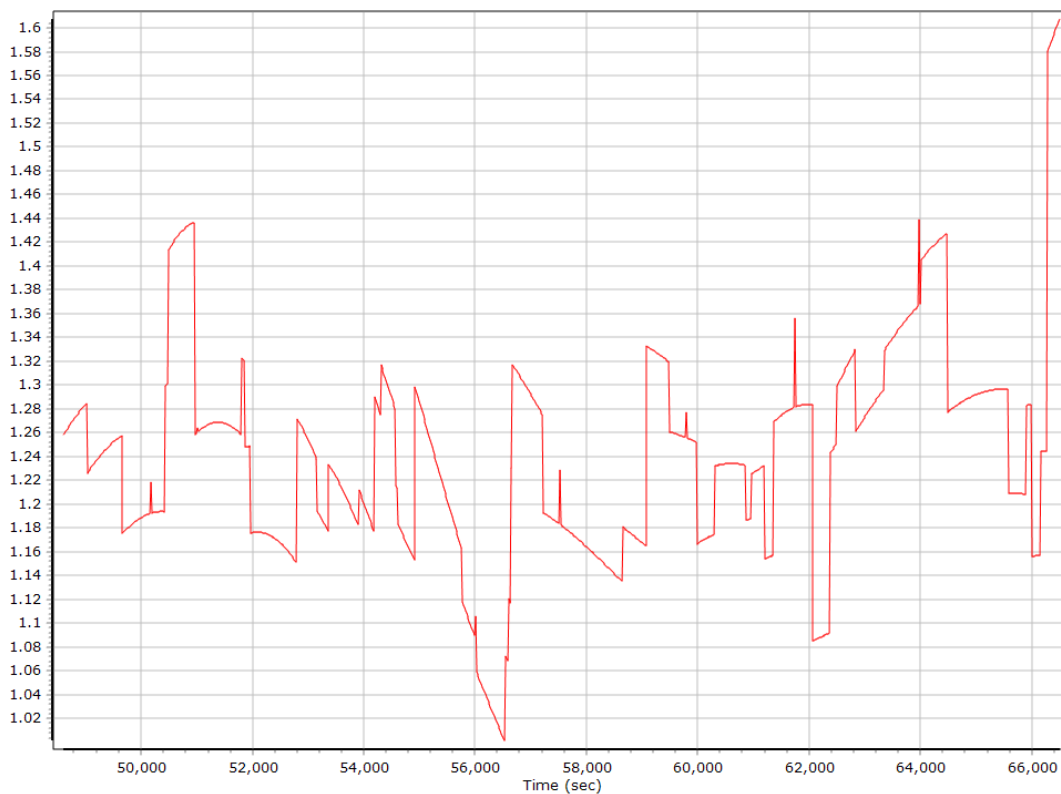
Num SVs in solution



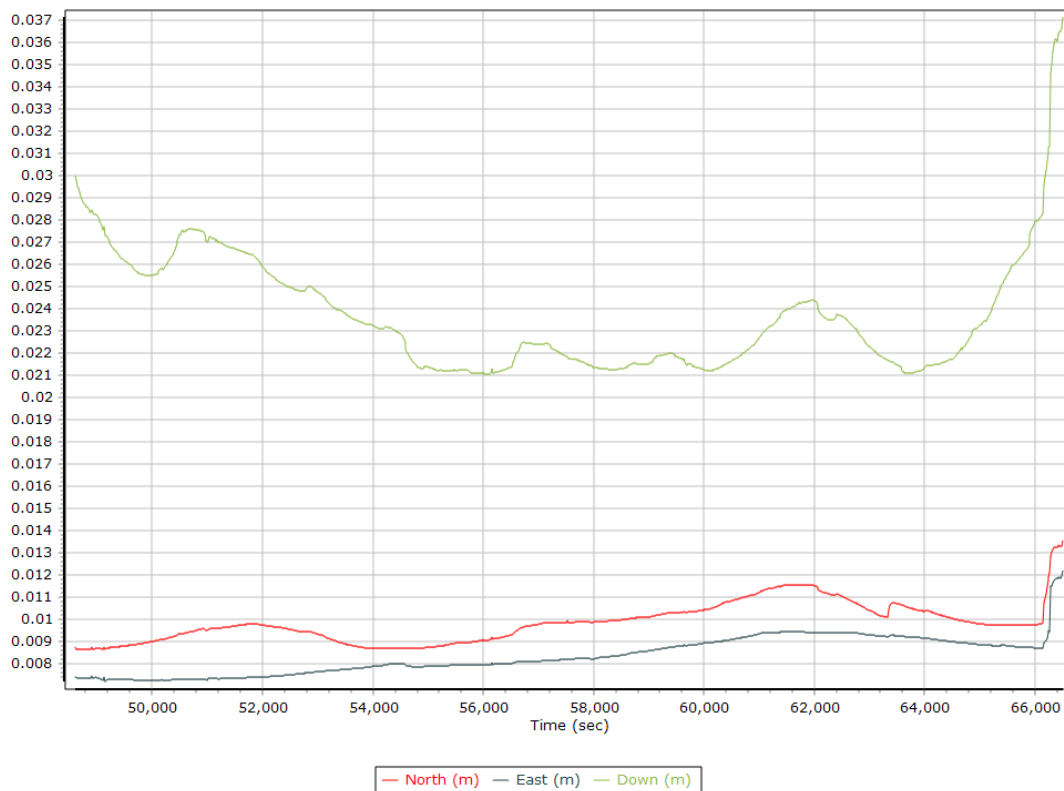
Forward/Reverse Separation



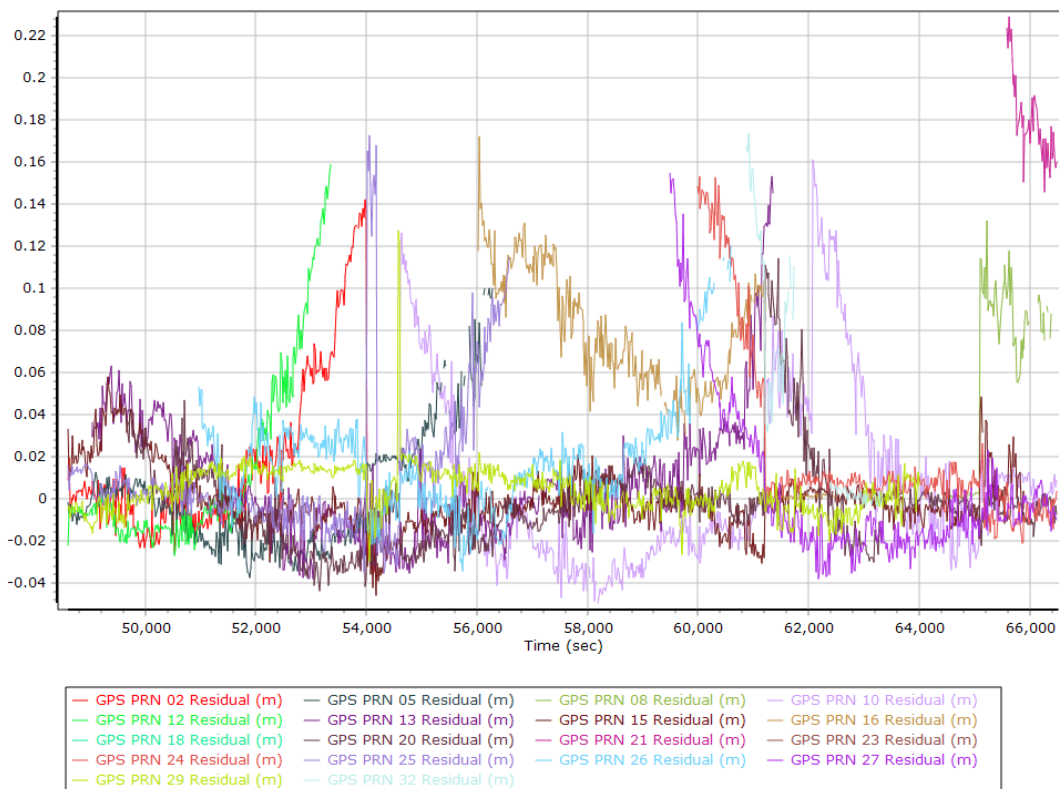
PDOP



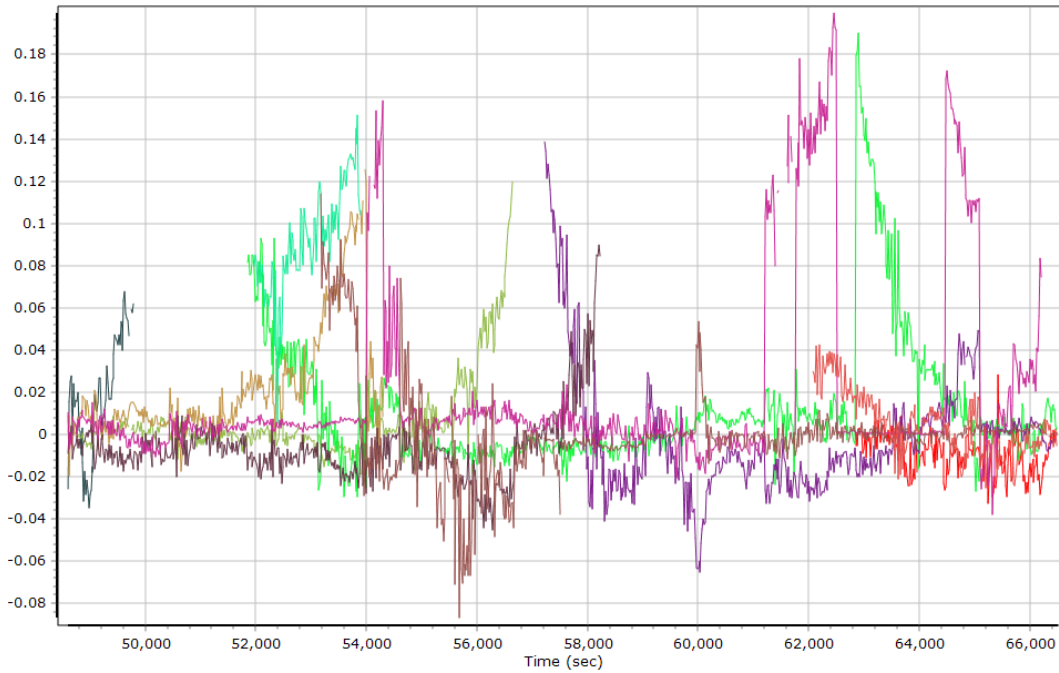
Estimated Position Accuracy



GPS Residuals

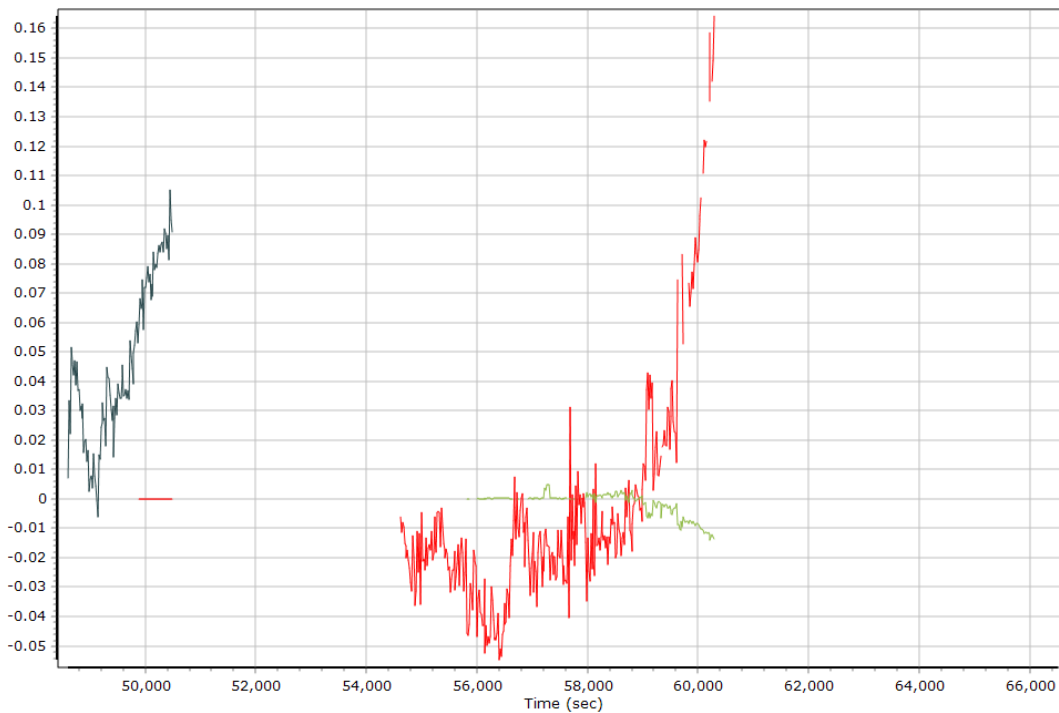


GLONASS Residuals



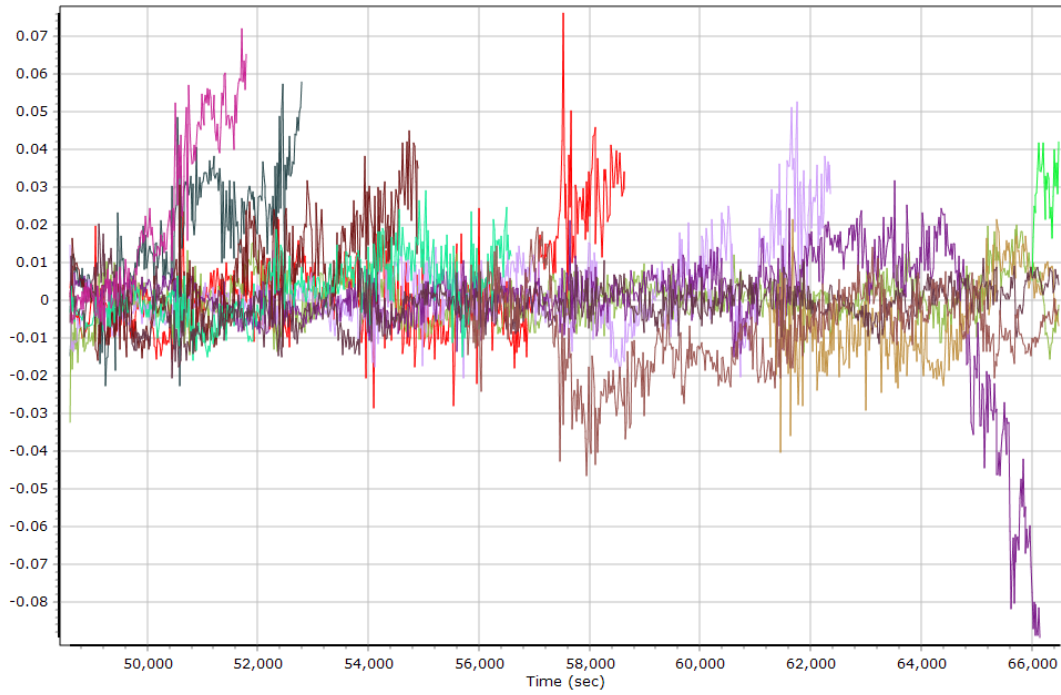
- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GLONASS 01 Residual (m) | GLONASS 04 Residual (m) | GLONASS 05 Residual (m) | GLONASS 06 Residual (m) |
| GLONASS 07 Residual (m) | GLONASS 08 Residual (m) | GLONASS 10 Residual (m) | GLONASS 11 Residual (m) |
| GLONASS 12 Residual (m) | GLONASS 20 Residual (m) | GLONASS 21 Residual (m) | GLONASS 22 Residual (m) |
| GLONASS 23 Residual (m) | | | |

BEIDOU Residuals



- | | | | |
|------------------------|------------------------|------------------------|------------------------|
| BEIDOU 11 Residual (m) | BEIDOU 12 Residual (m) | BEIDOU 14 Residual (m) | BEIDOU 21 Residual (m) |
| BEIDOU 23 Residual (m) | BEIDOU 25 Residual (m) | BEIDOU 27 Residual (m) | BEIDOU 28 Residual (m) |

GALILEO Residuals



| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GALILEO 01 Residual (m) | GALILEO 03 Residual (m) | GALILEO 07 Residual (m) | GALILEO 08 Residual (m) |
| GALILEO 12 Residual (m) | GALILEO 13 Residual (m) | GALILEO 15 Residual (m) | GALILEO 19 Residual (m) |
| GALILEO 21 Residual (m) | GALILEO 26 Residual (m) | GALILEO 27 Residual (m) | GALILEO 33 Residual (m) |

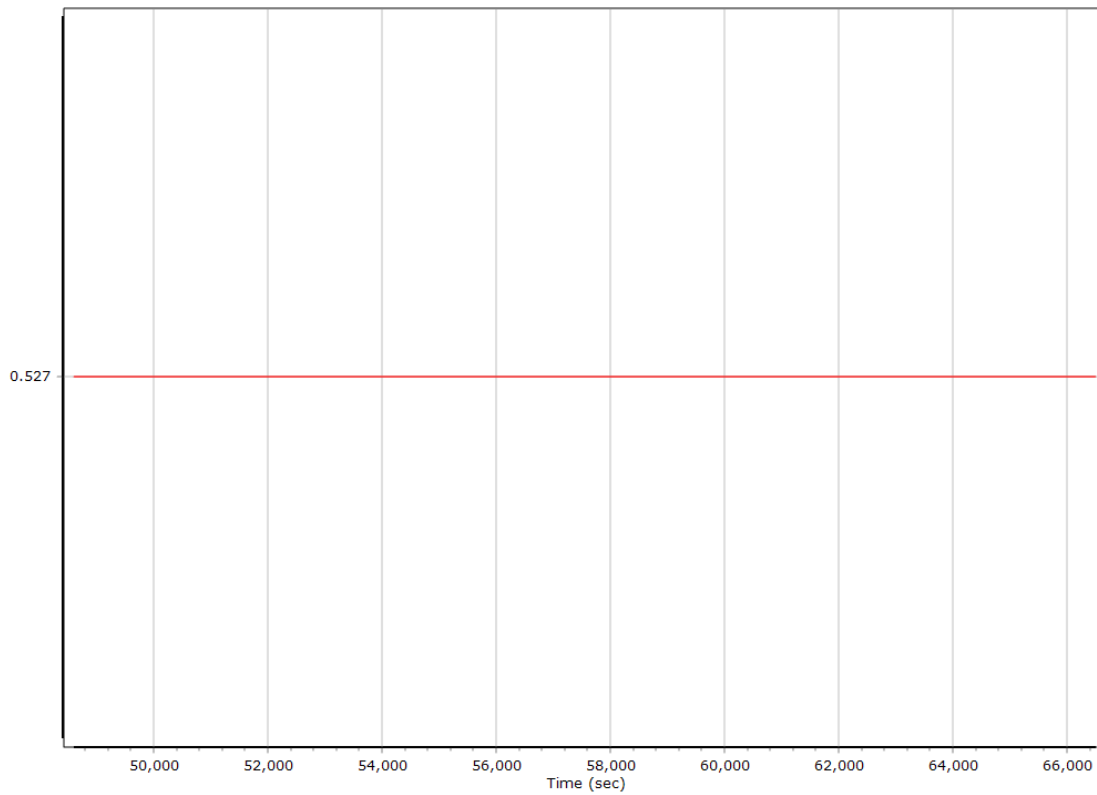
GNSS-Inertial Processor Configuration

| | | | |
|---|-----------------------------------|-------|---------|
| Processing mode | IN-Fusion PP-RTX | | |
| Stabilized mount | False | | |
| Processing start time | 48228.000 (10/18/2020 1:23:48 PM) | | |
| Processing end time | 66523.000 (10/18/2020 6:28:43 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 | -90.000 |
| Reference to Primary GNSS lever arm (m) | 0.527 | 0.203 | -1.194 |
| 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 |

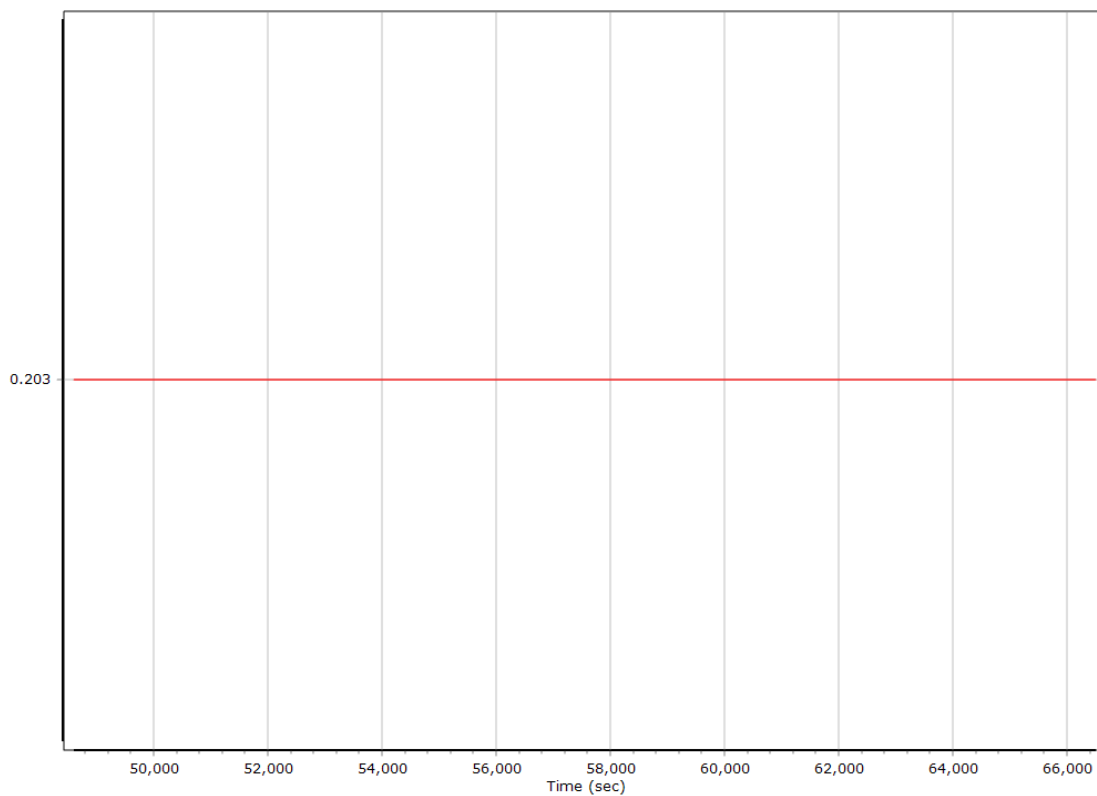
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

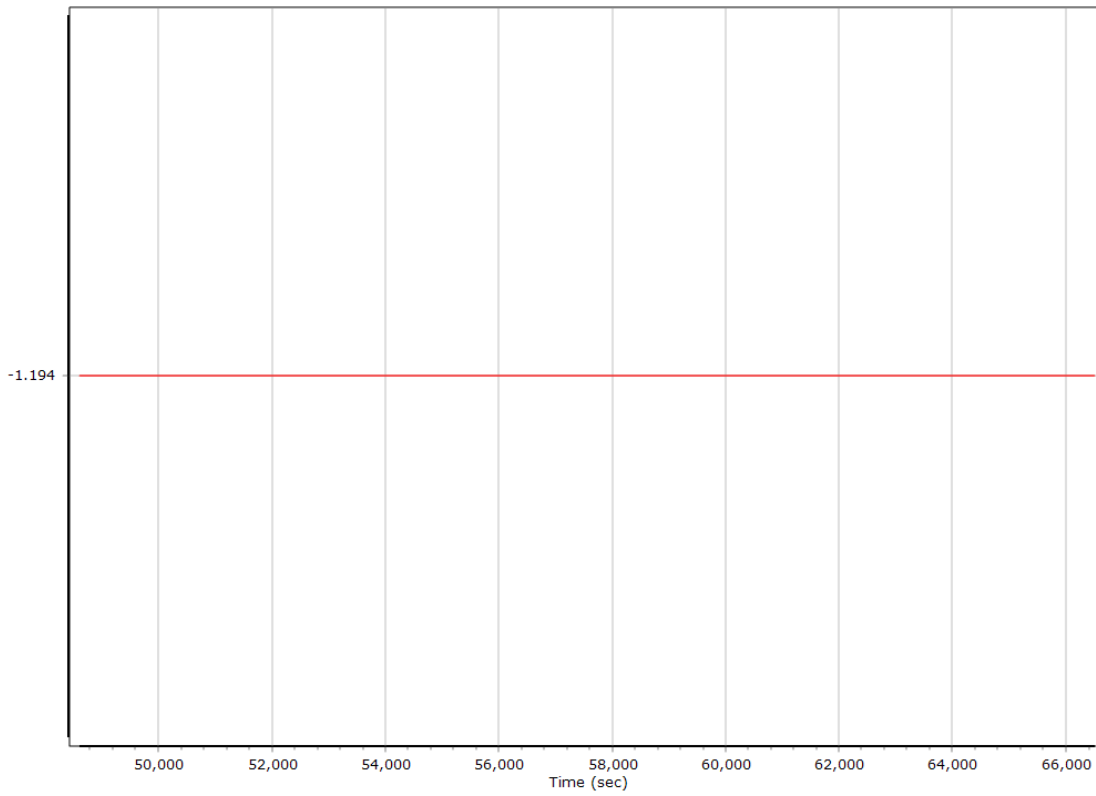
X Reference-Primary GNSS Lever Arm (m)



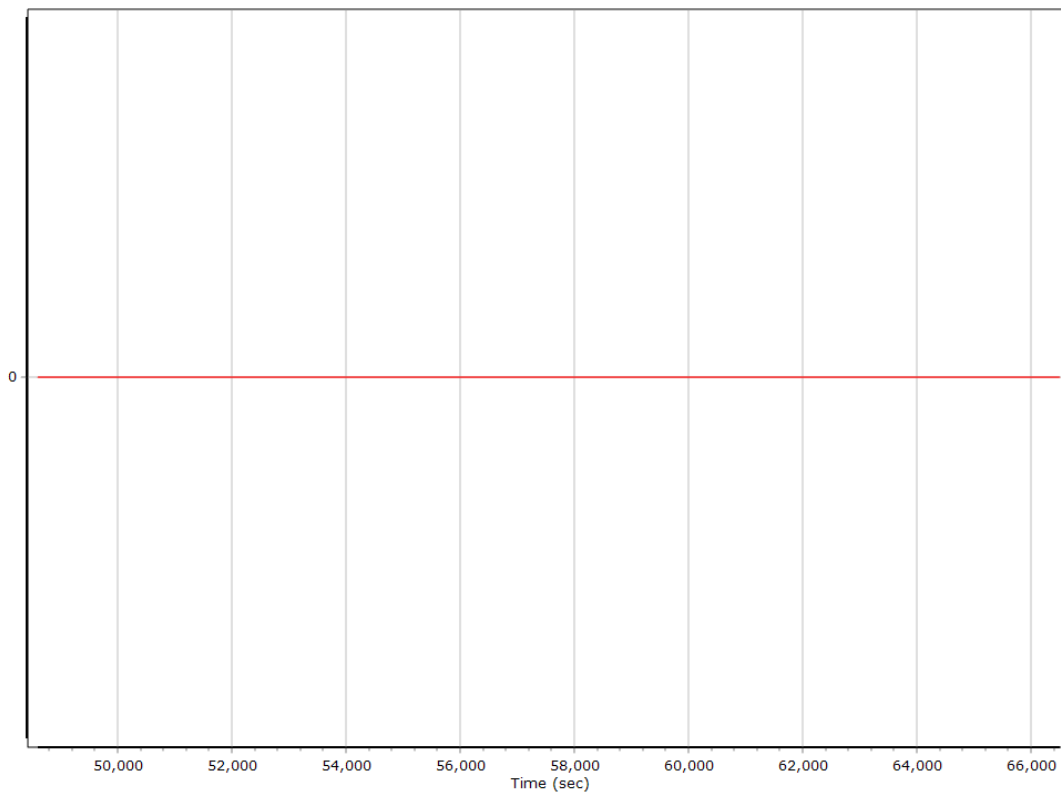
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



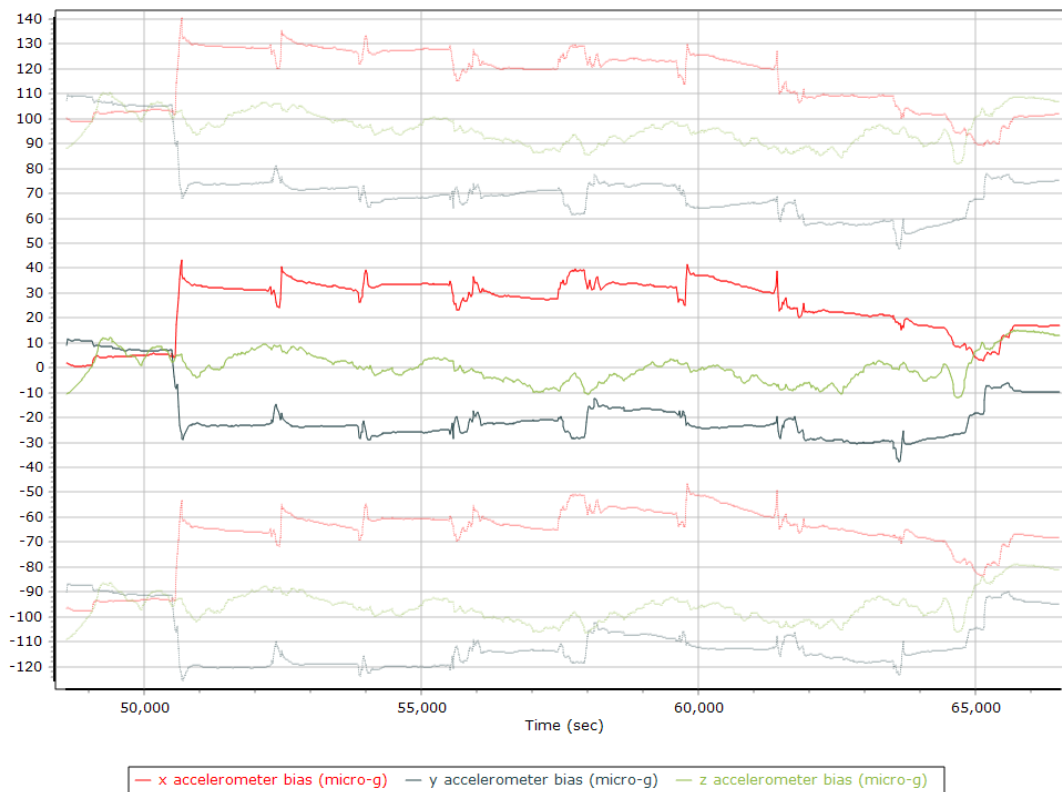
Reference-Primary GNSS Lever Arm Figure of Merit



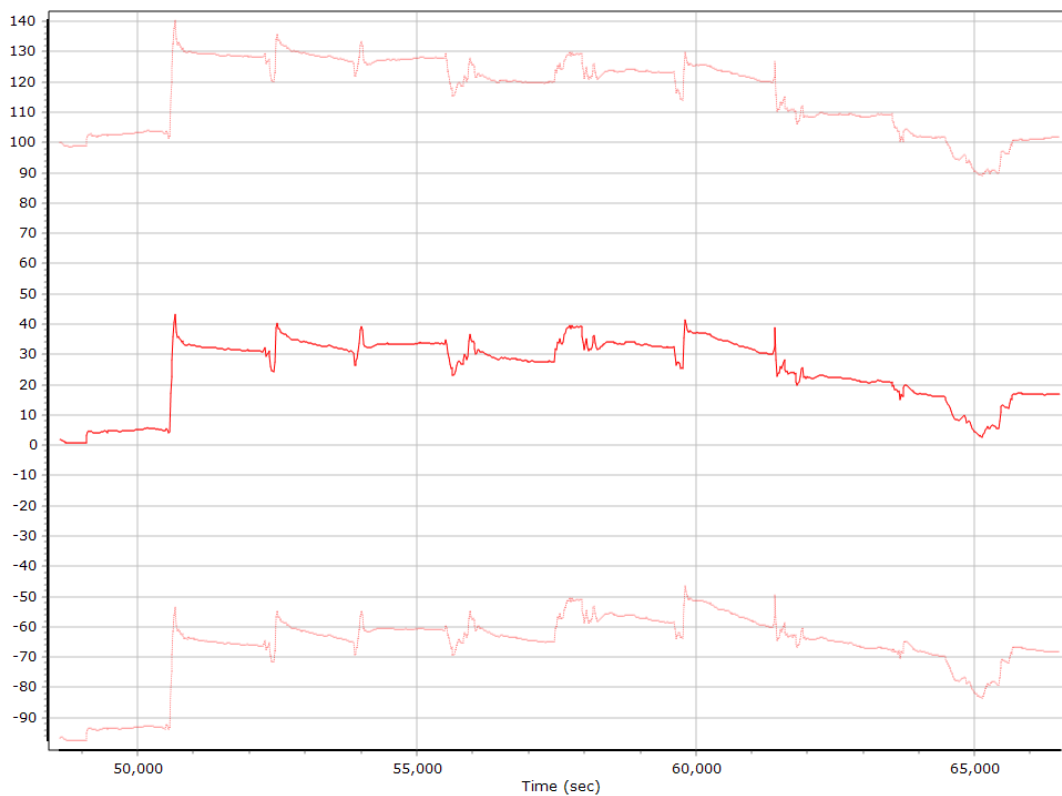
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

Accelerometer Bias (micro-g)



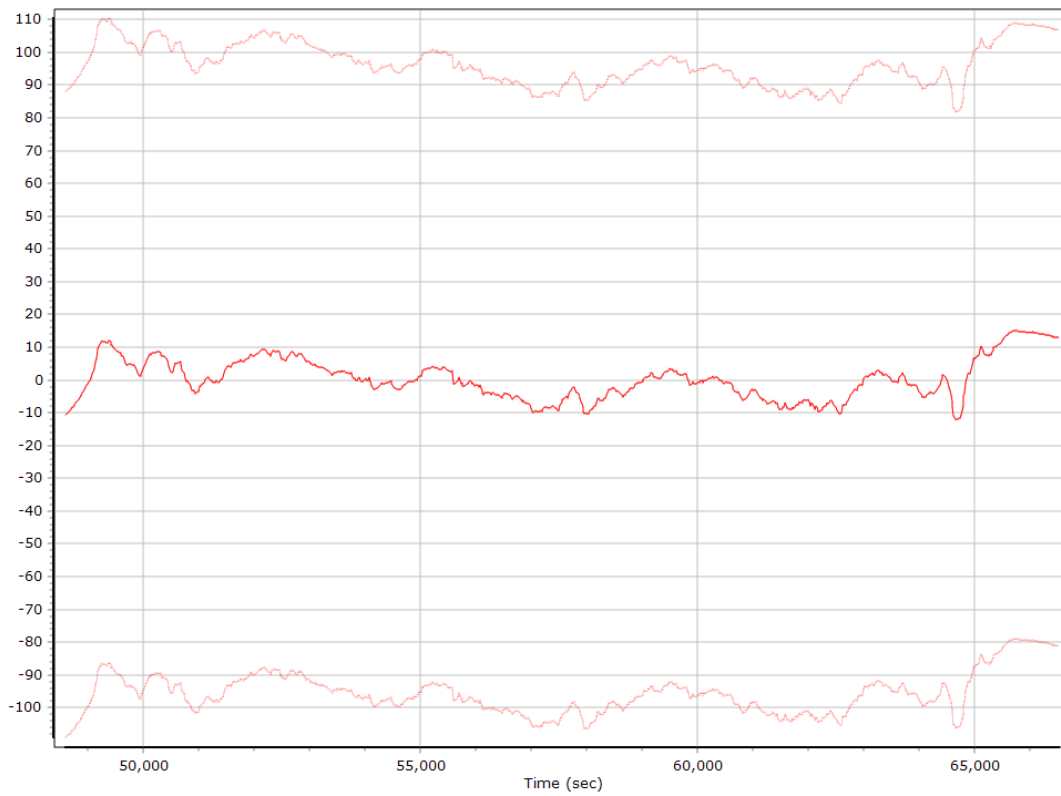
X Accelerometer Bias (micro-g)



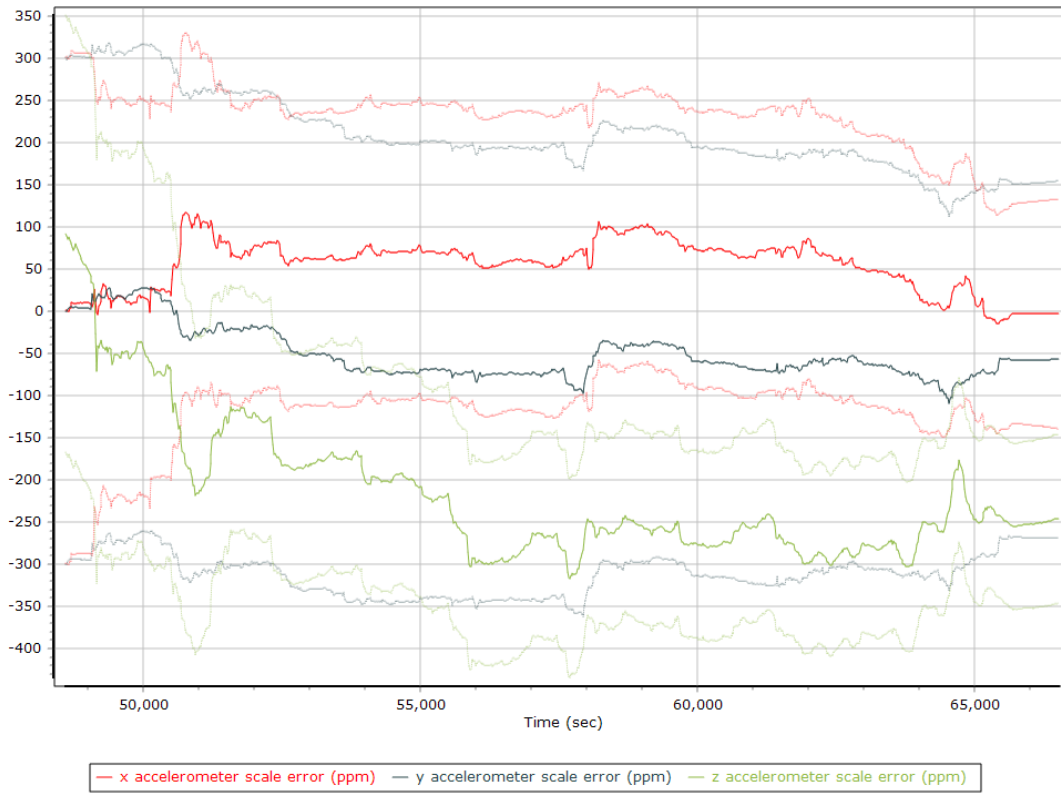
Y Accelerometer Bias (micro-g)



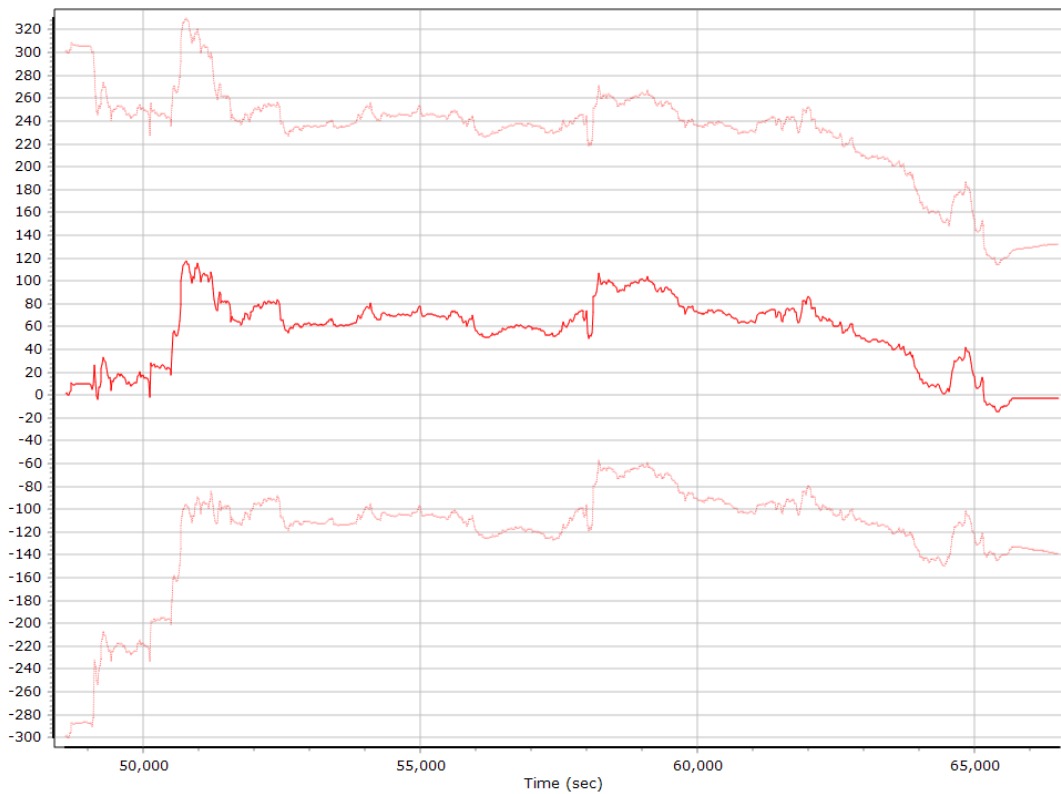
Z Accelerometer Bias (micro-g)



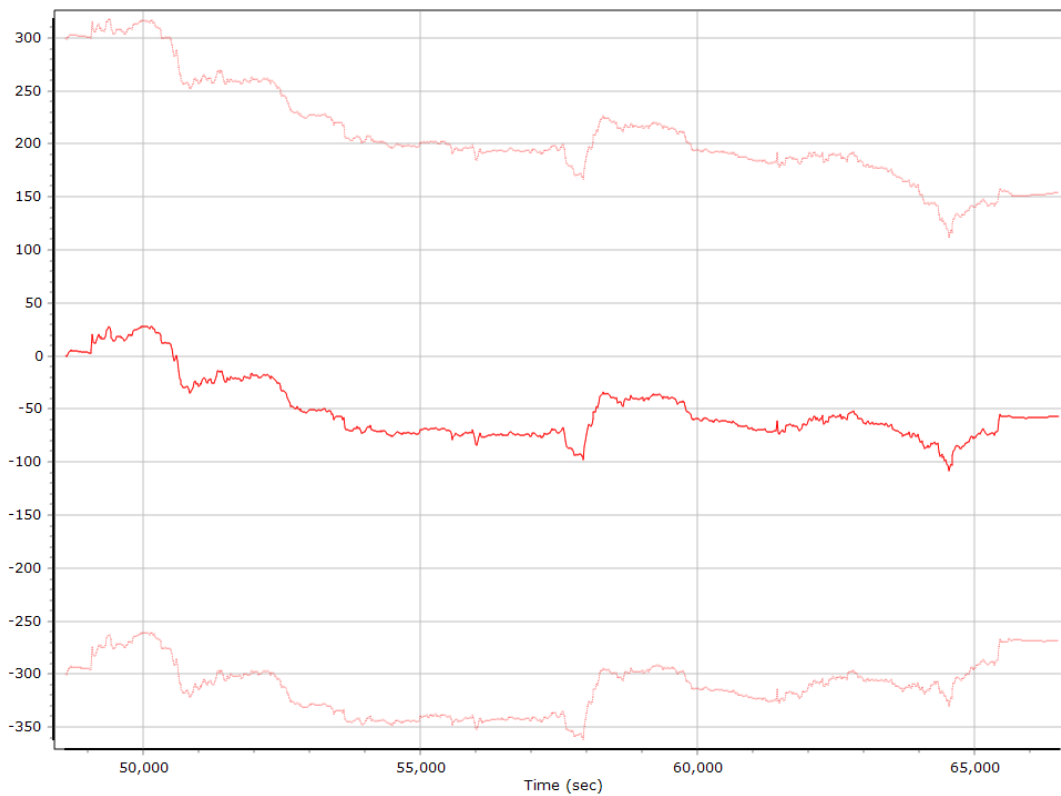
Accelerometer Scale Error (ppm)



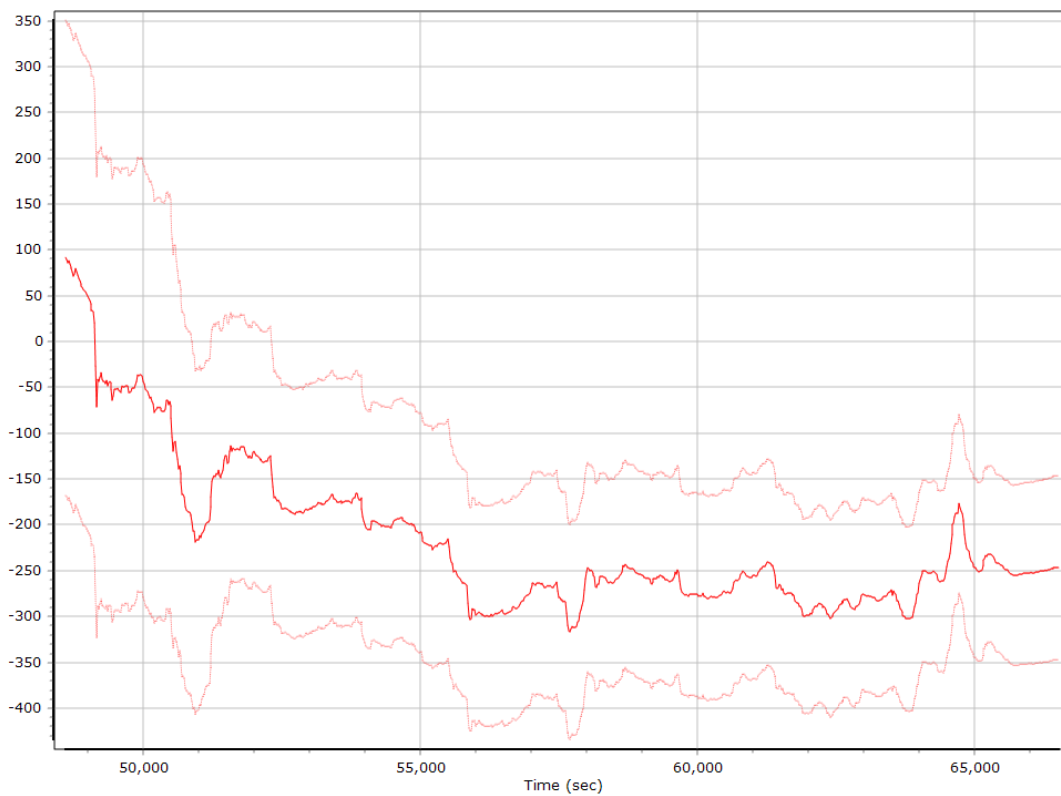
X Accelerometer Scale Error (ppm)



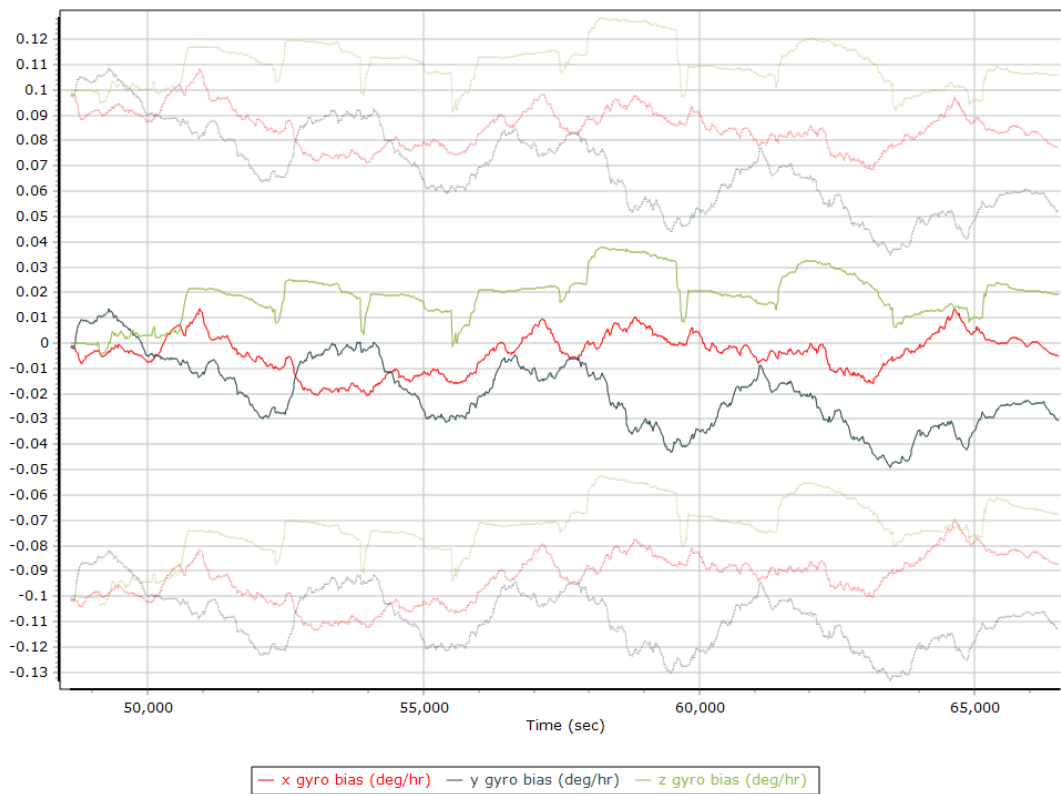
Y Accelerometer Scale Error (ppm)



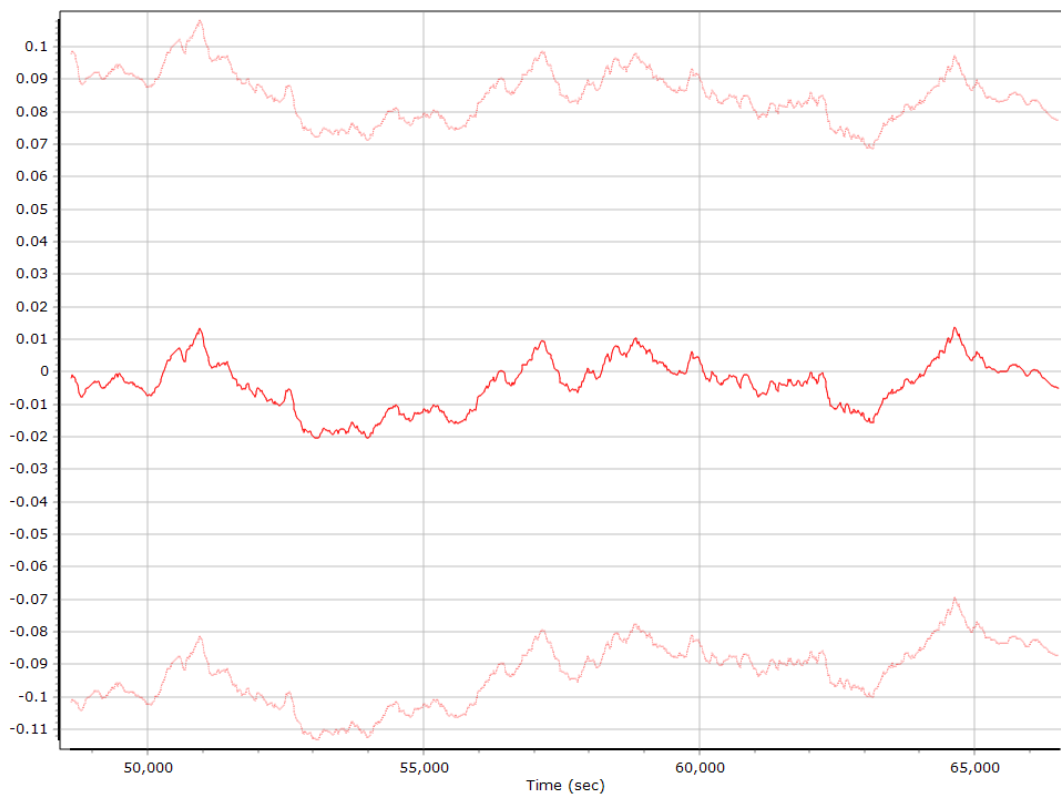
Z Accelerometer Scale Error (ppm)



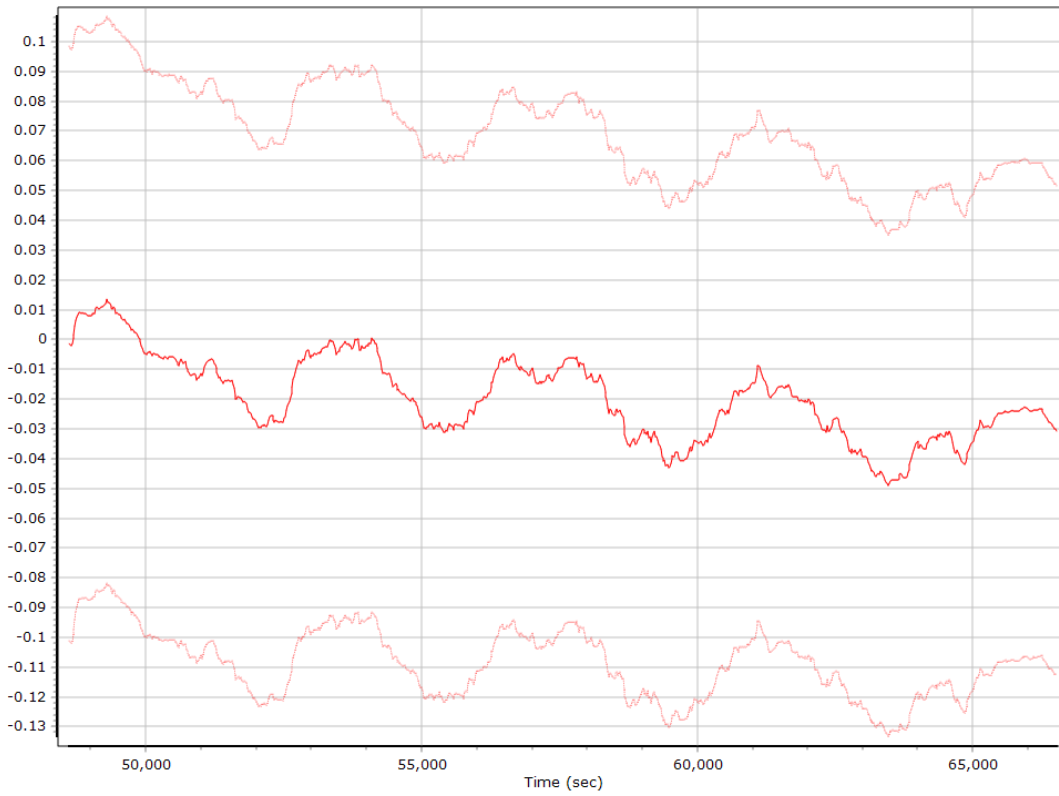
Gyro Bias (deg/h)



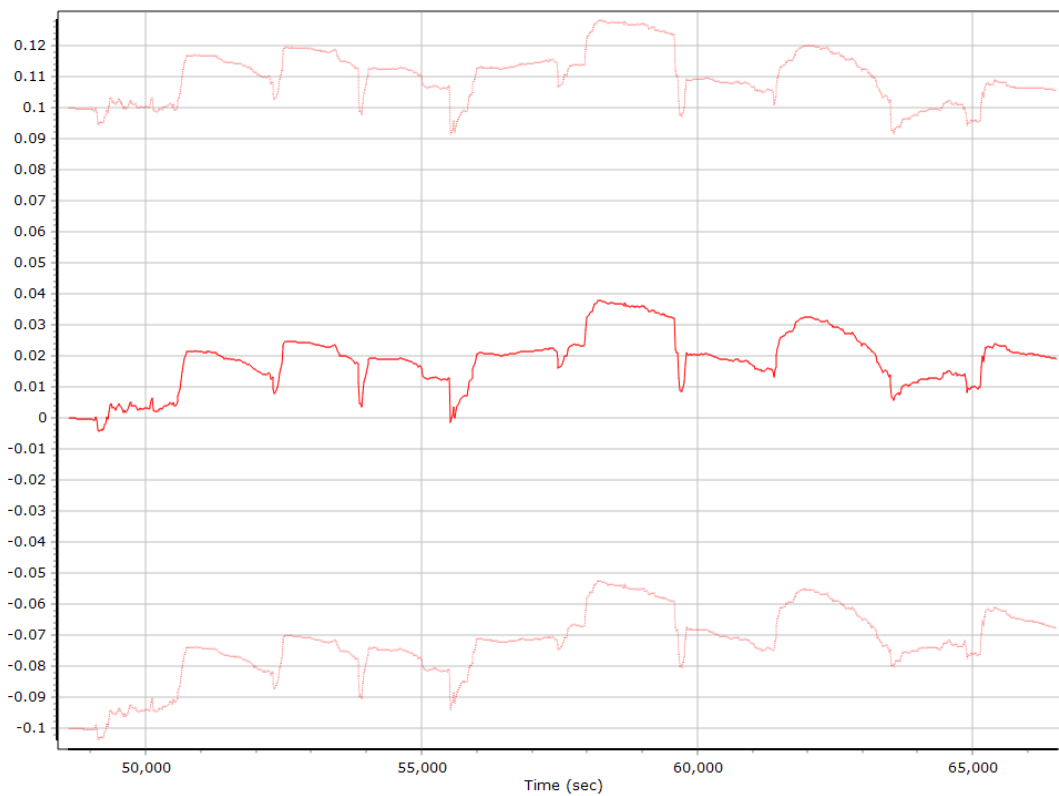
X Gyro Bias (deg/h)



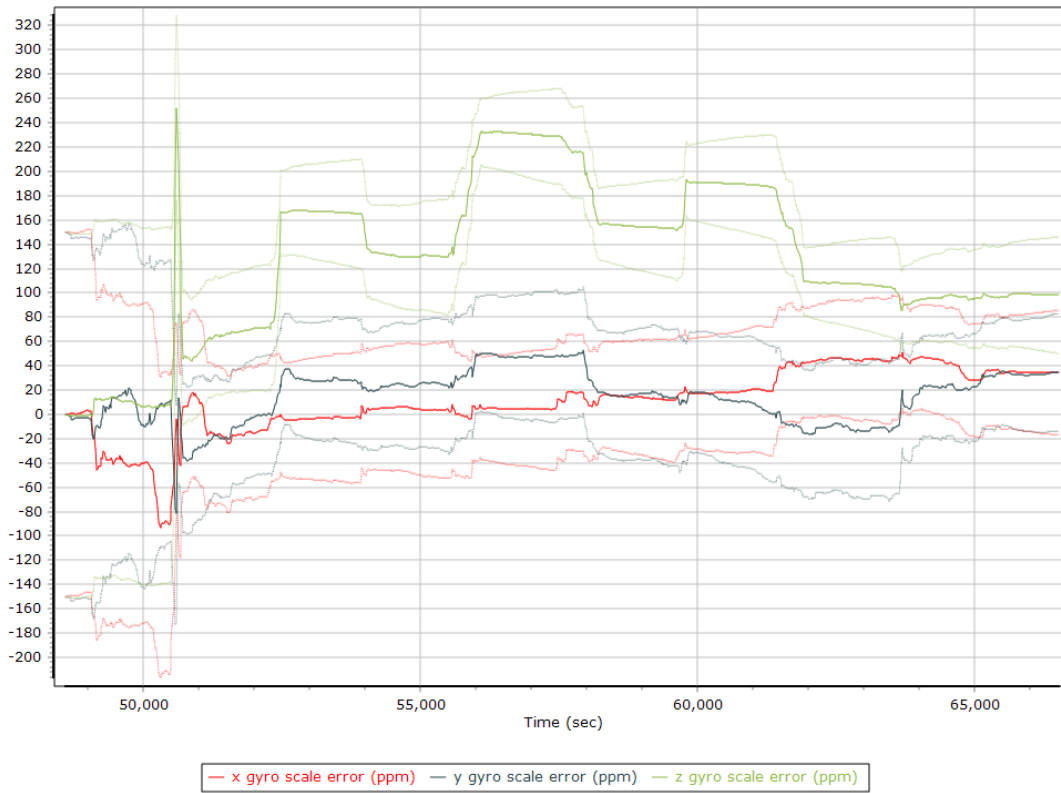
Y Gyro Bias (deg/h)



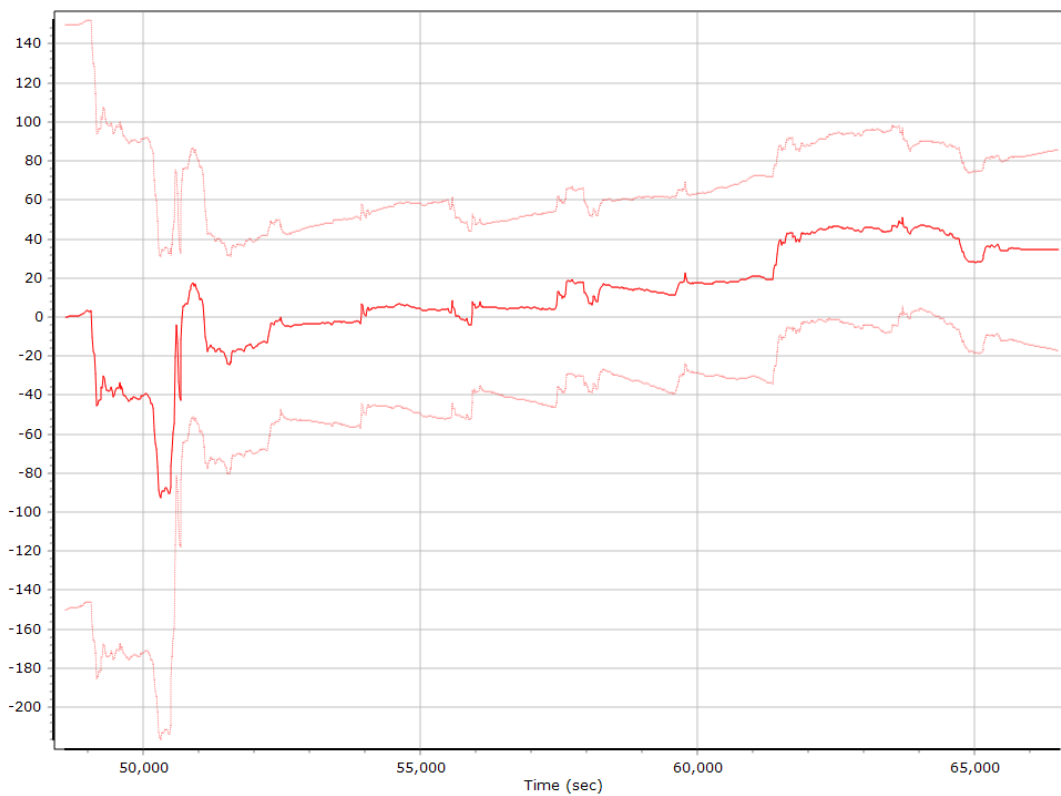
Z Gyro Bias (deg/h)



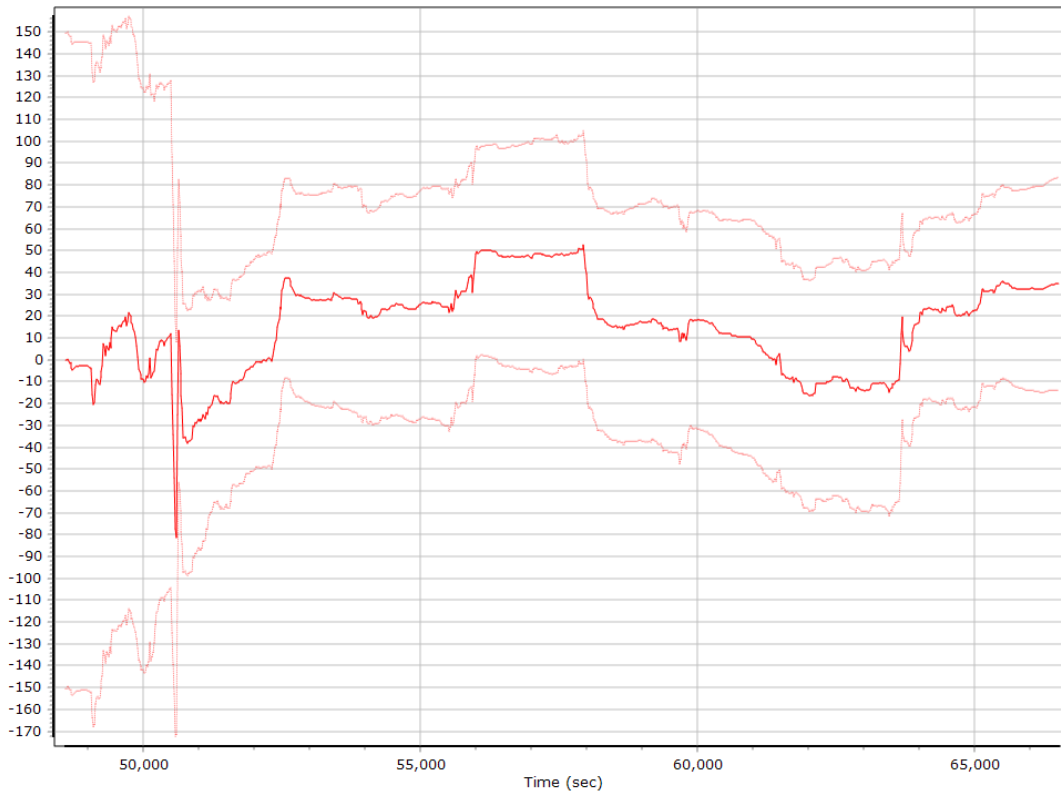
Gyro Scale Error (ppm)



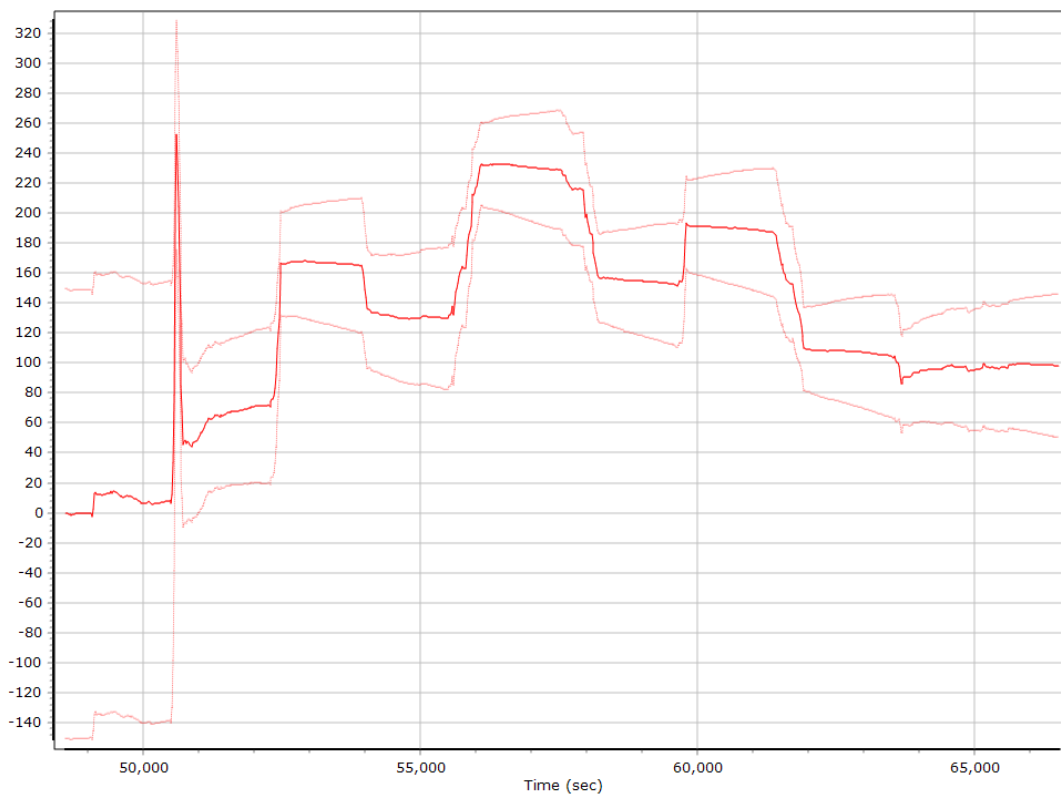
X Gyro Scale Error (ppm)



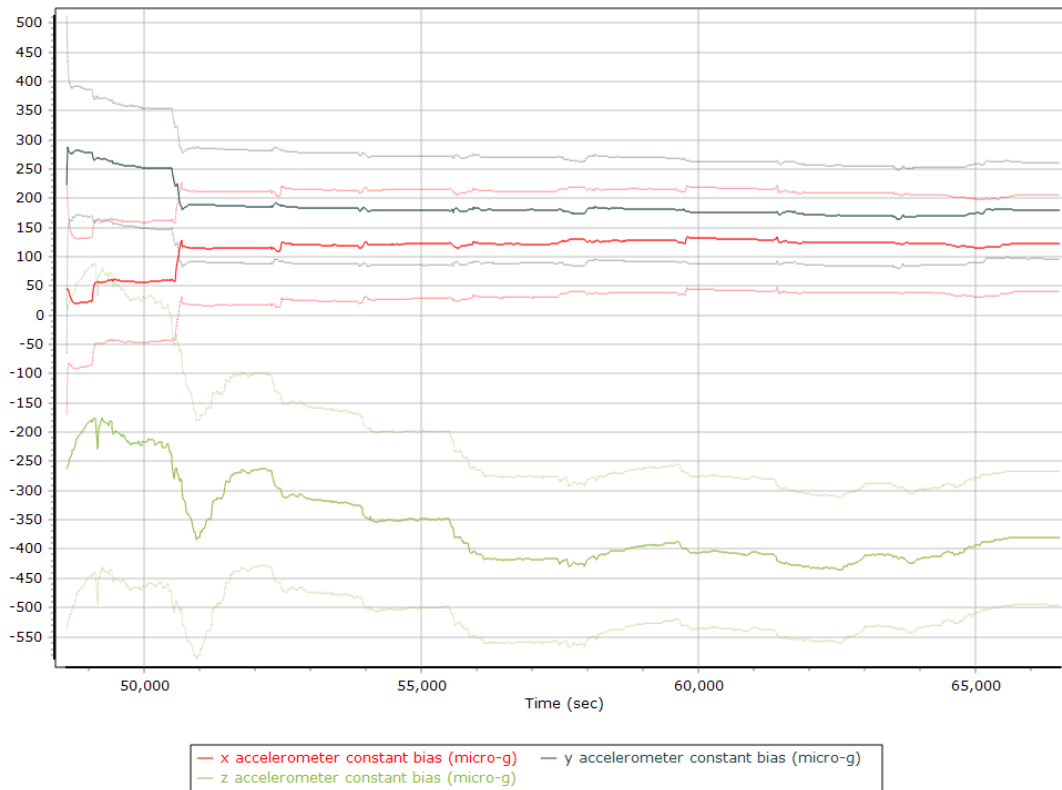
Y Gyro Scale Error (ppm)



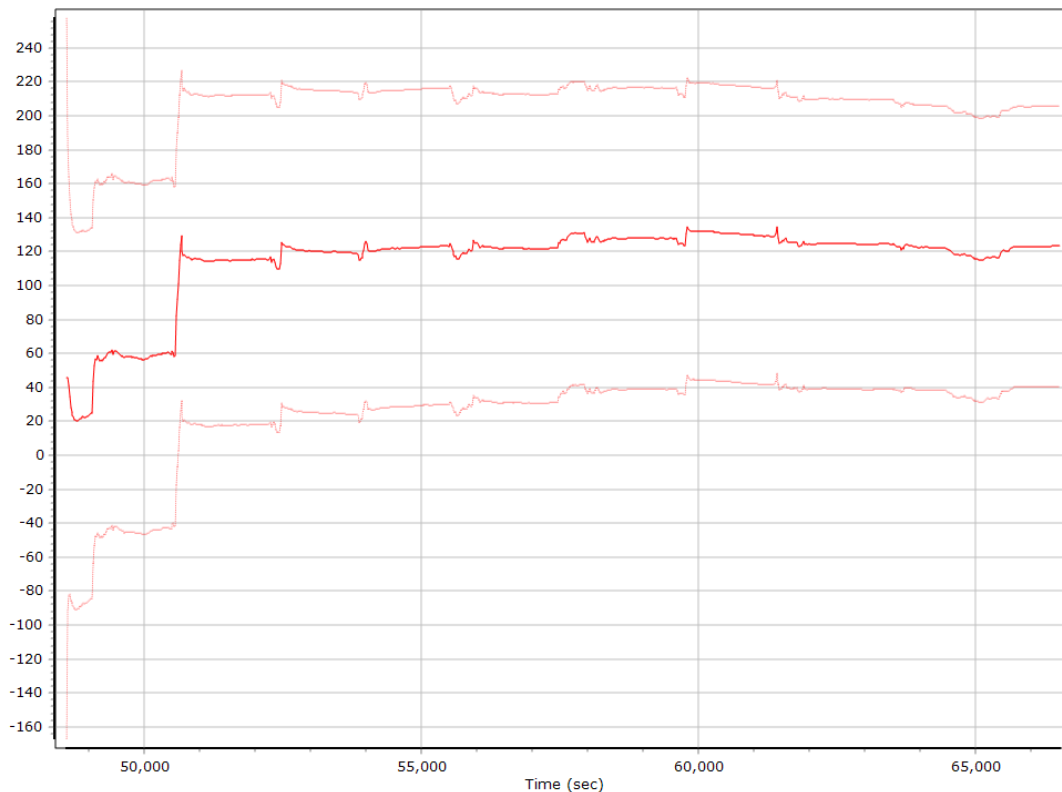
Z Gyro Scale Error (ppm)



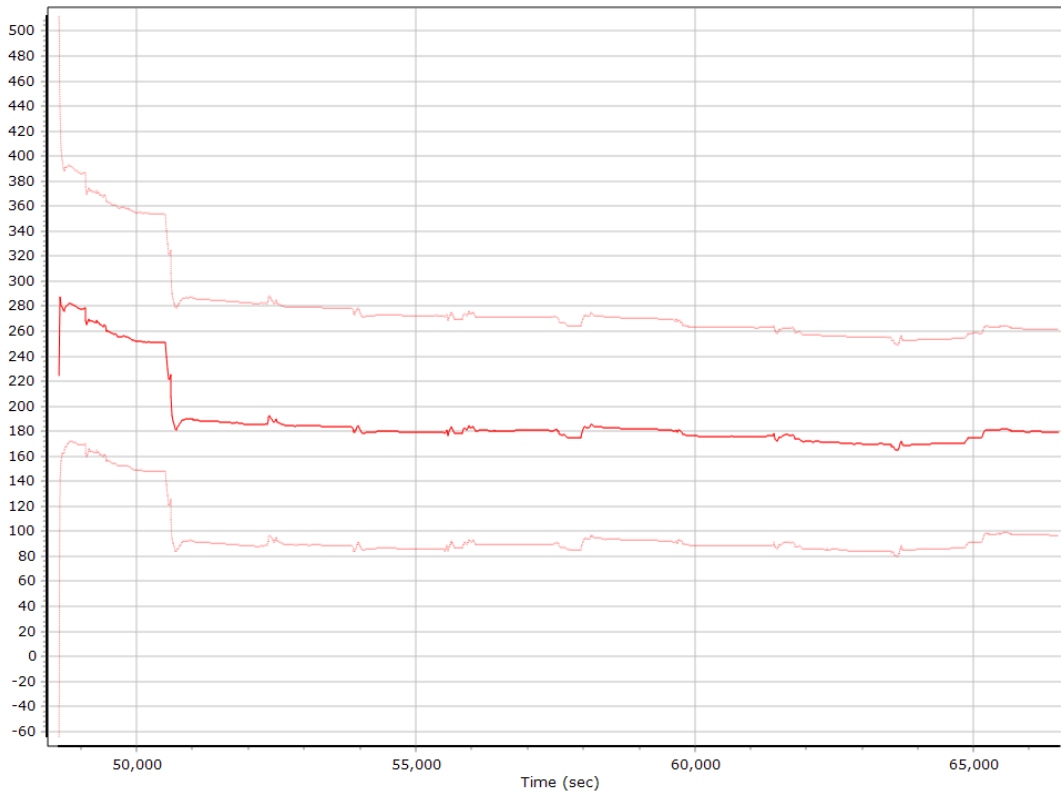
Forward Processed Estimated Constant Errors, Reference Frame Accelerometer Bias (micro-g)



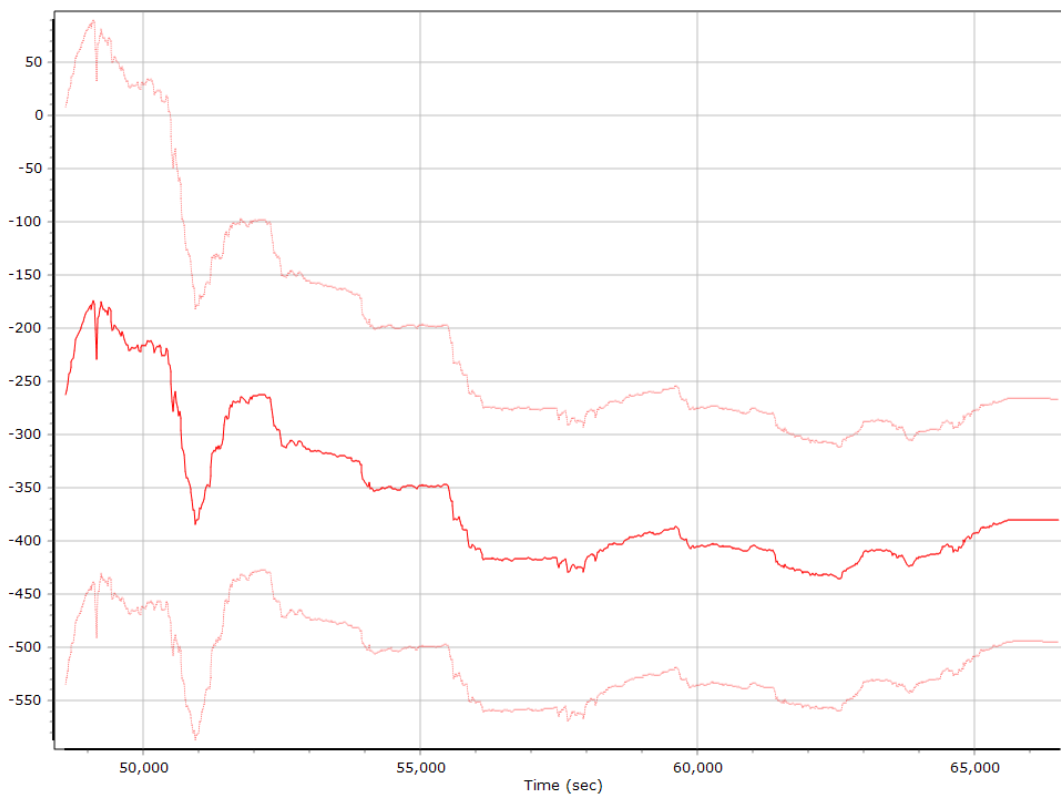
X Accelerometer Bias (micro-g)



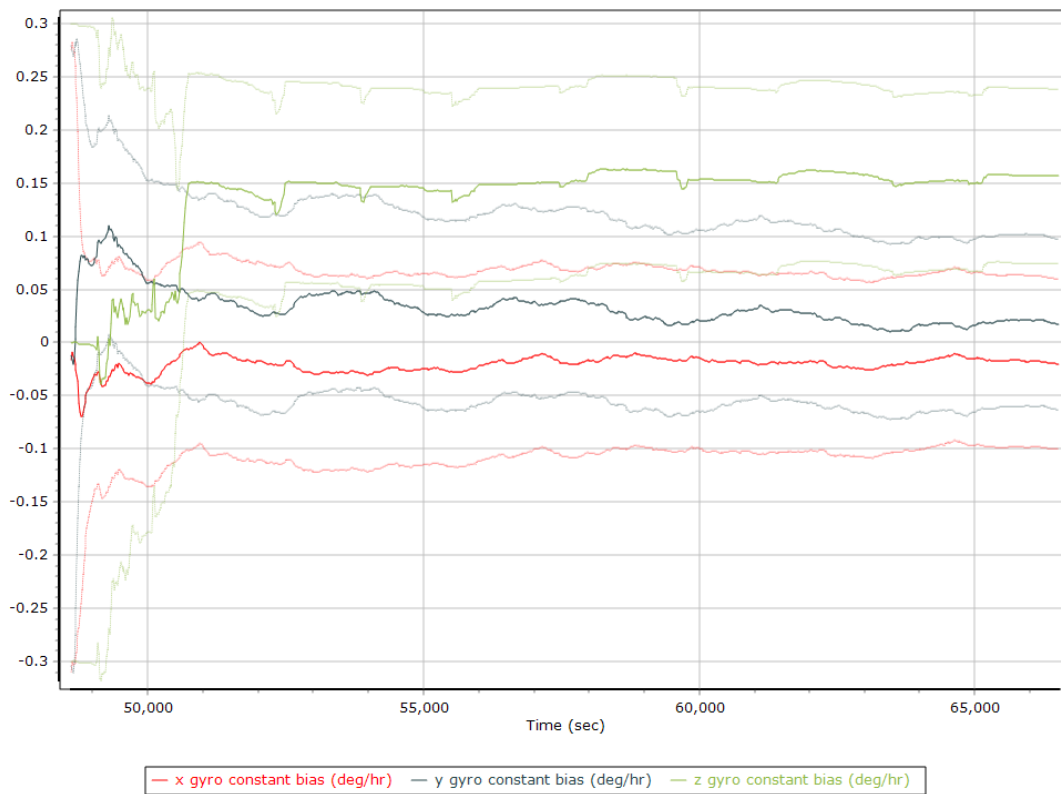
Y Accelerometer Bias (micro-g)



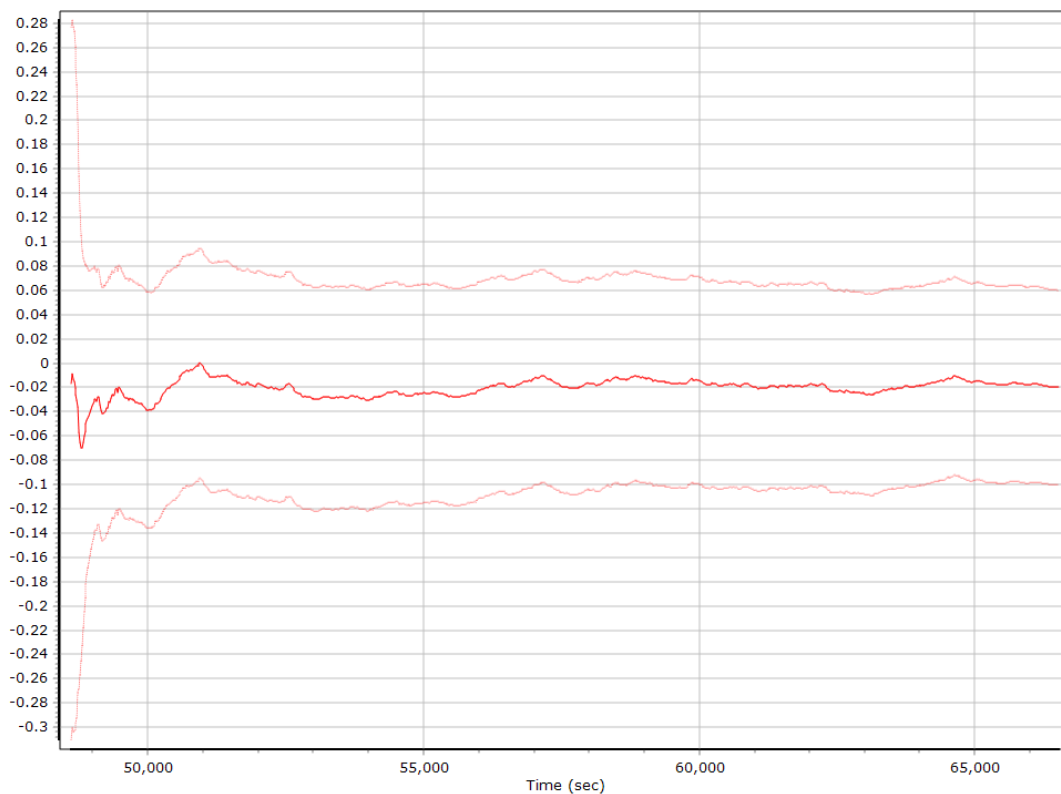
Z Accelerometer Bias (micro-g)



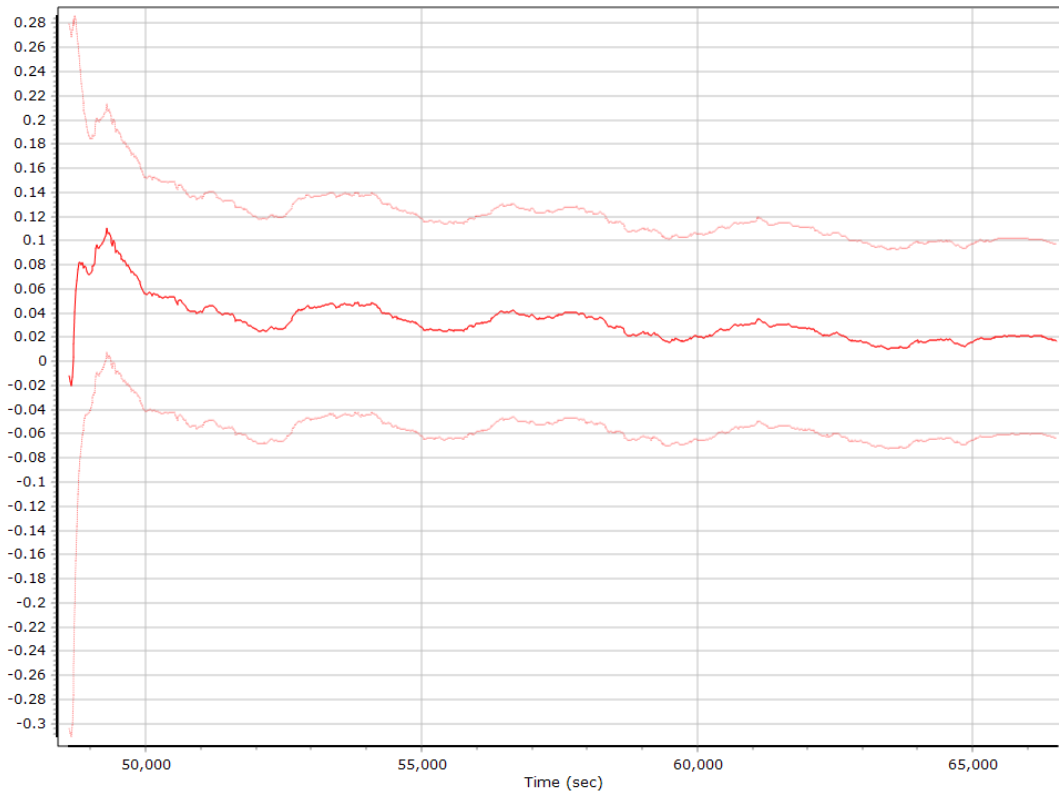
Gyro Bias (deg/h)



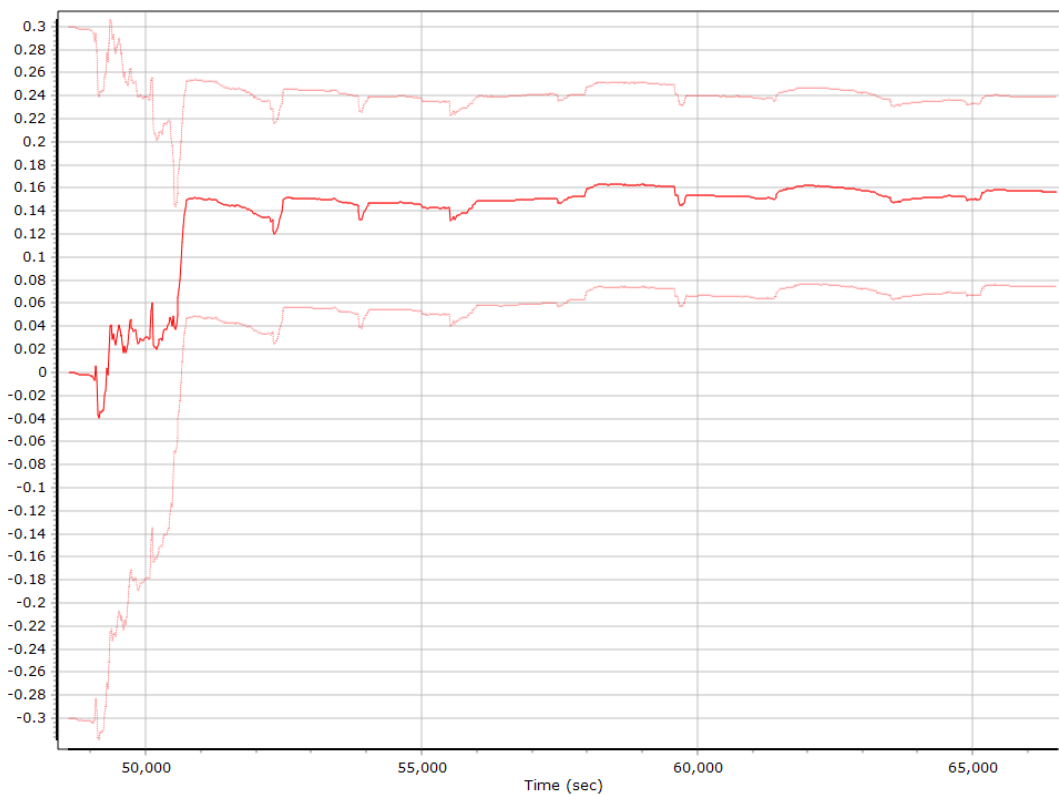
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)

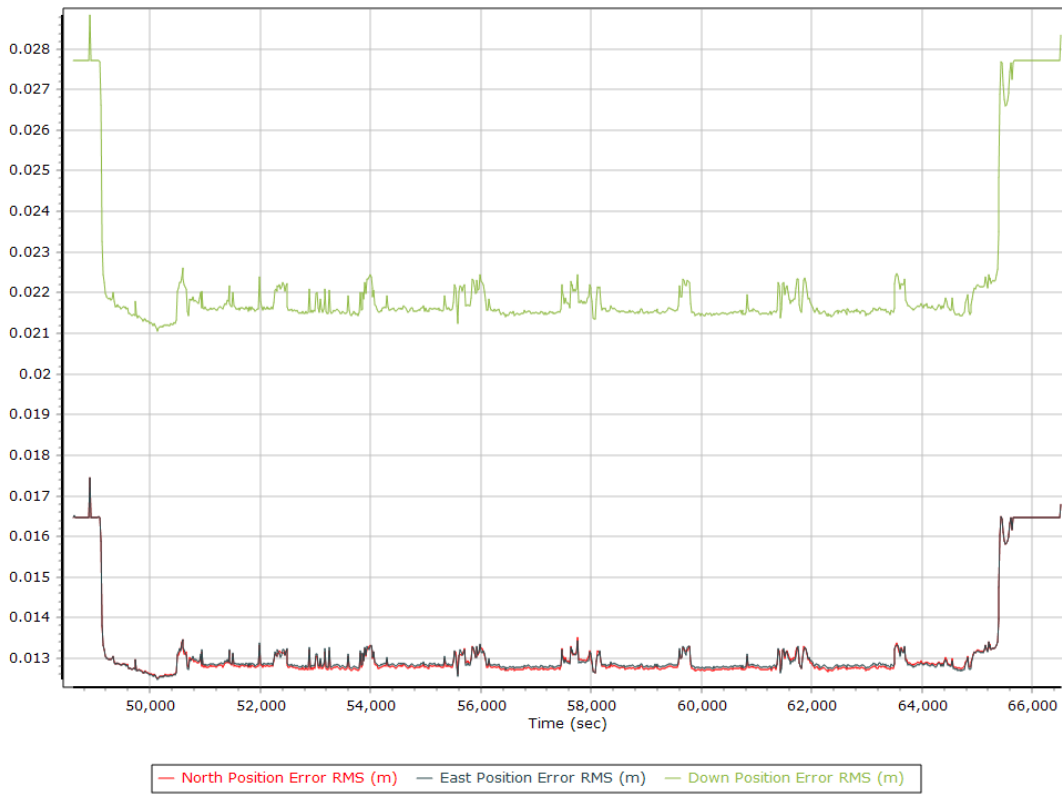


Z Gyro Bias (deg/h)

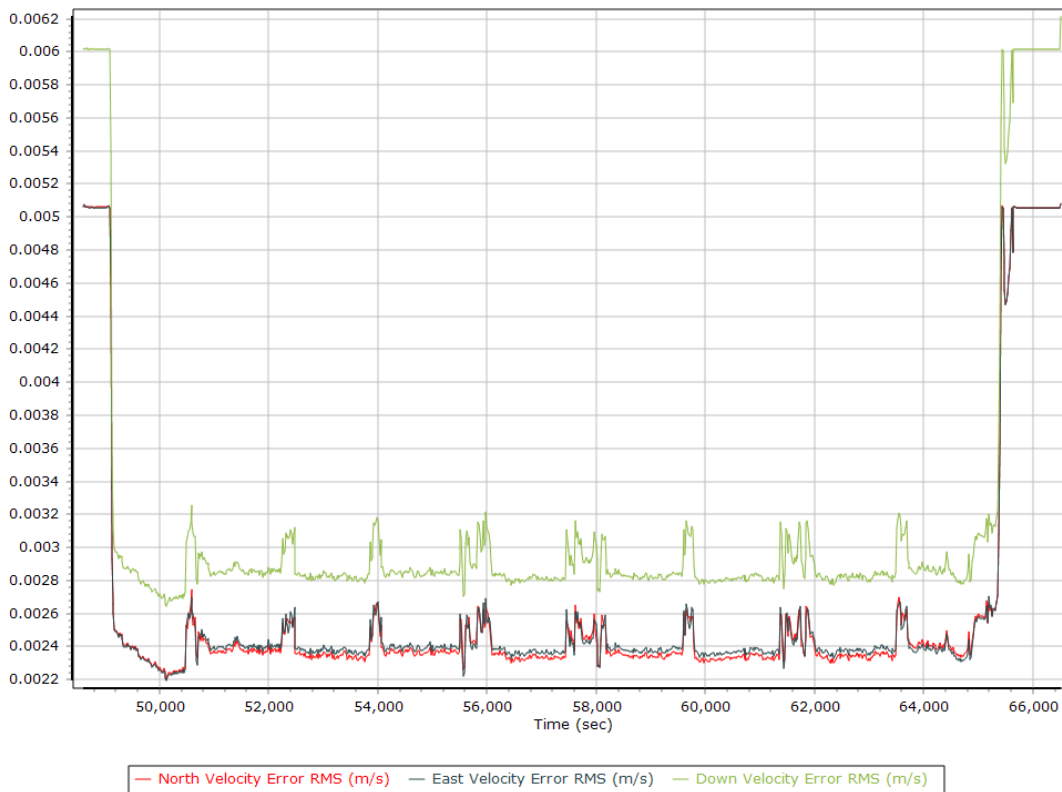


Smoothed Performance Metrics

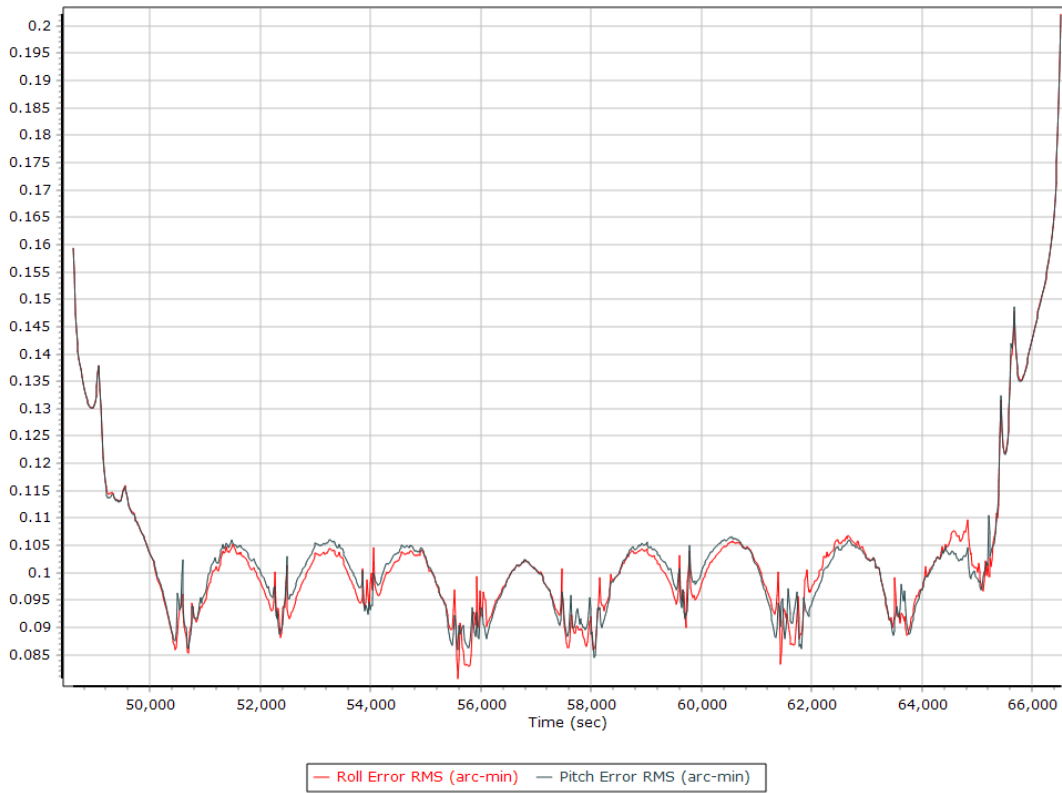
Position Error RMS (m)



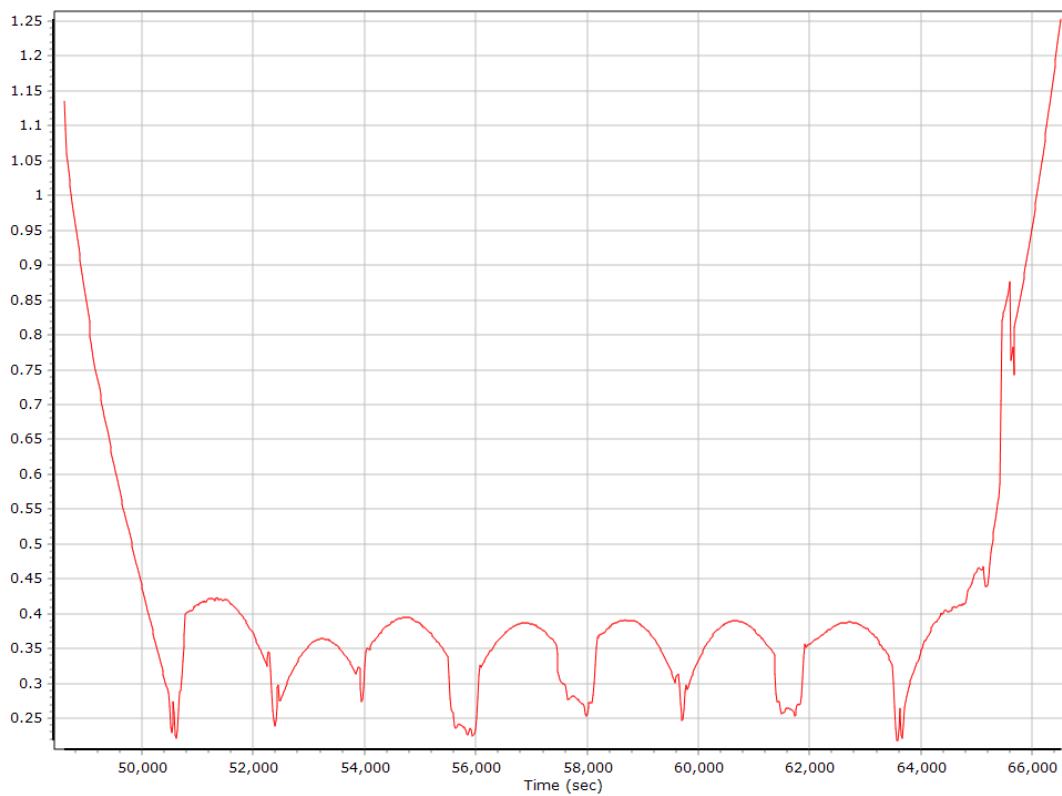
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

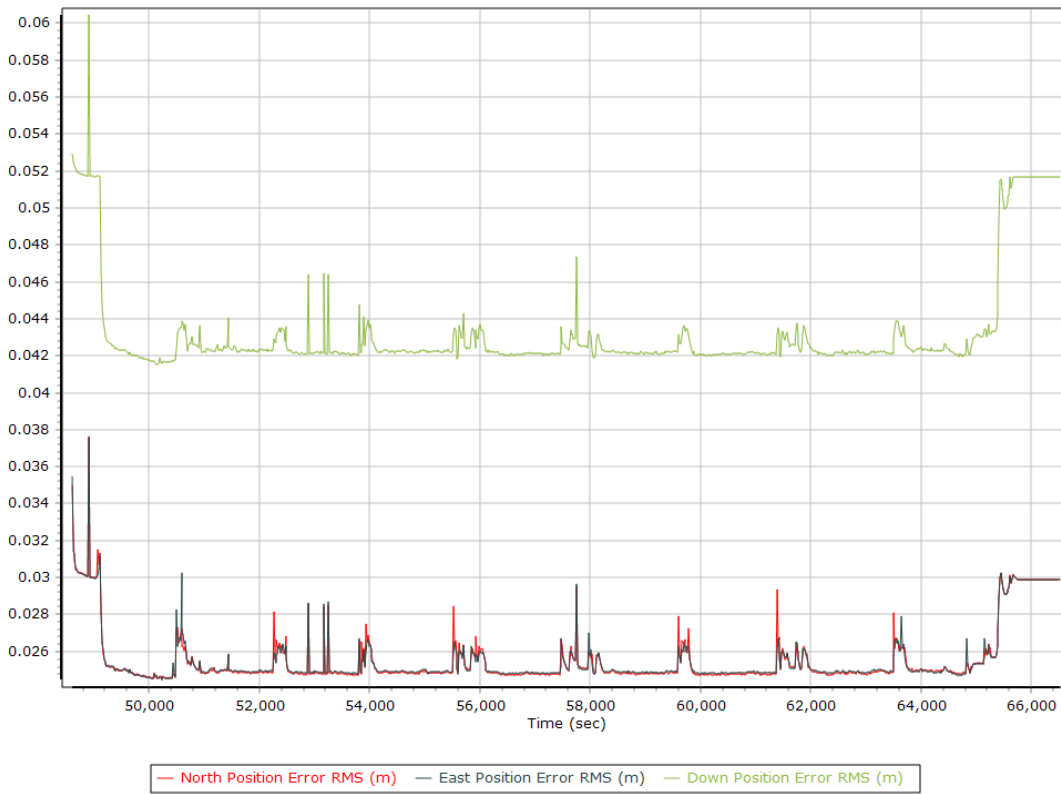


Heading Error RMS (arc-min)

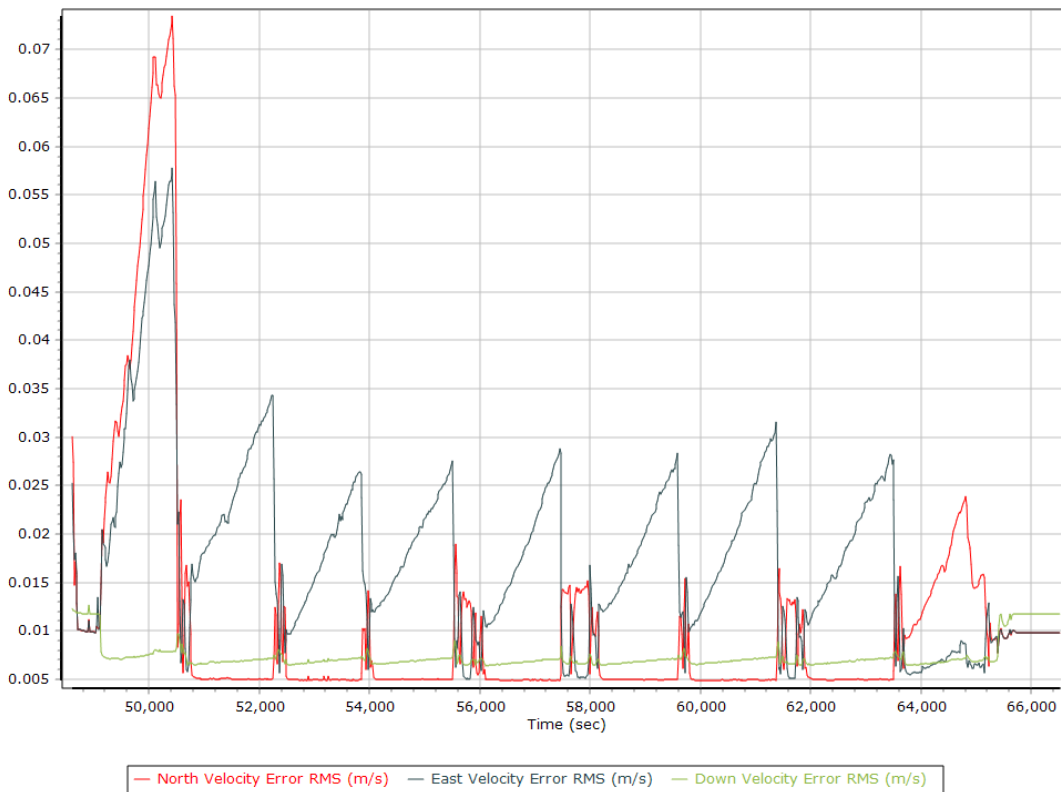


Forward Processed Performance Metrics

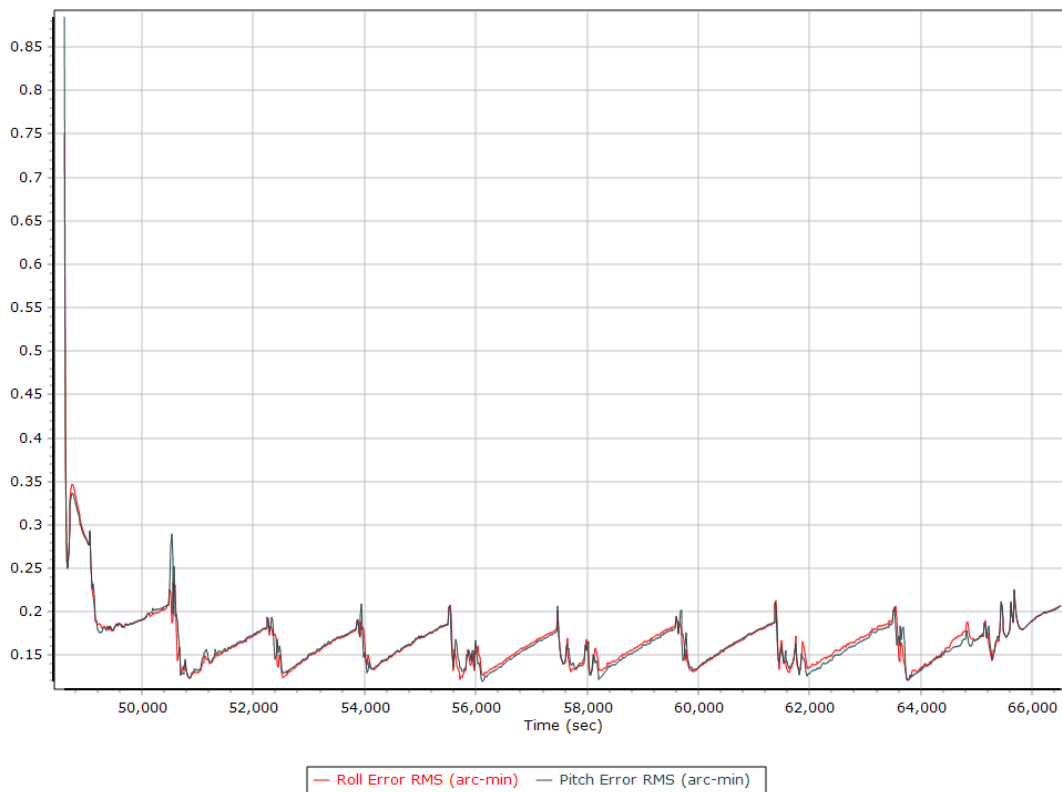
Position Error RMS (m)



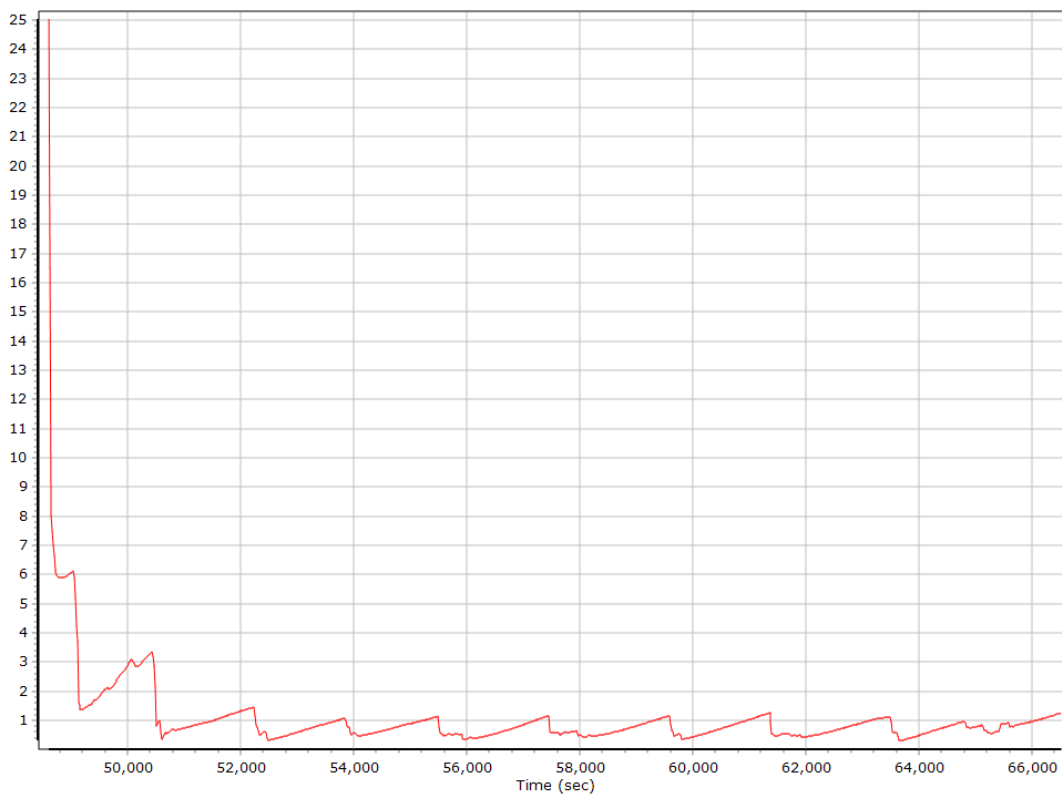
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

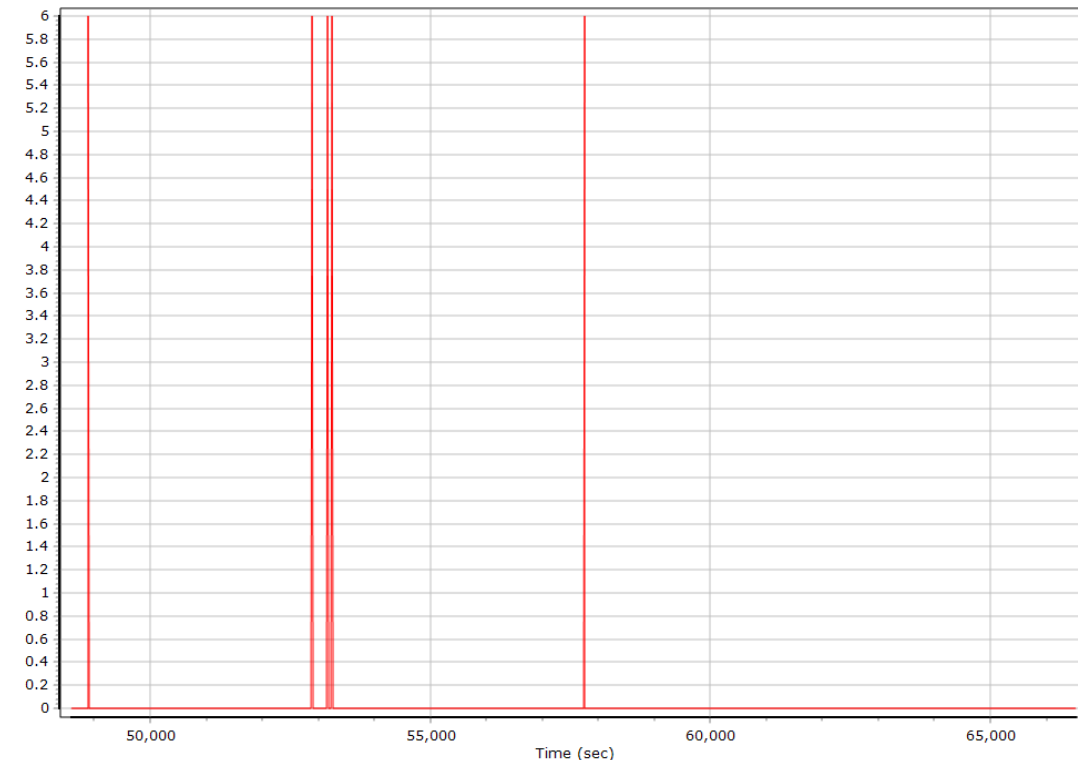


Heading Error RMS (arc-min)



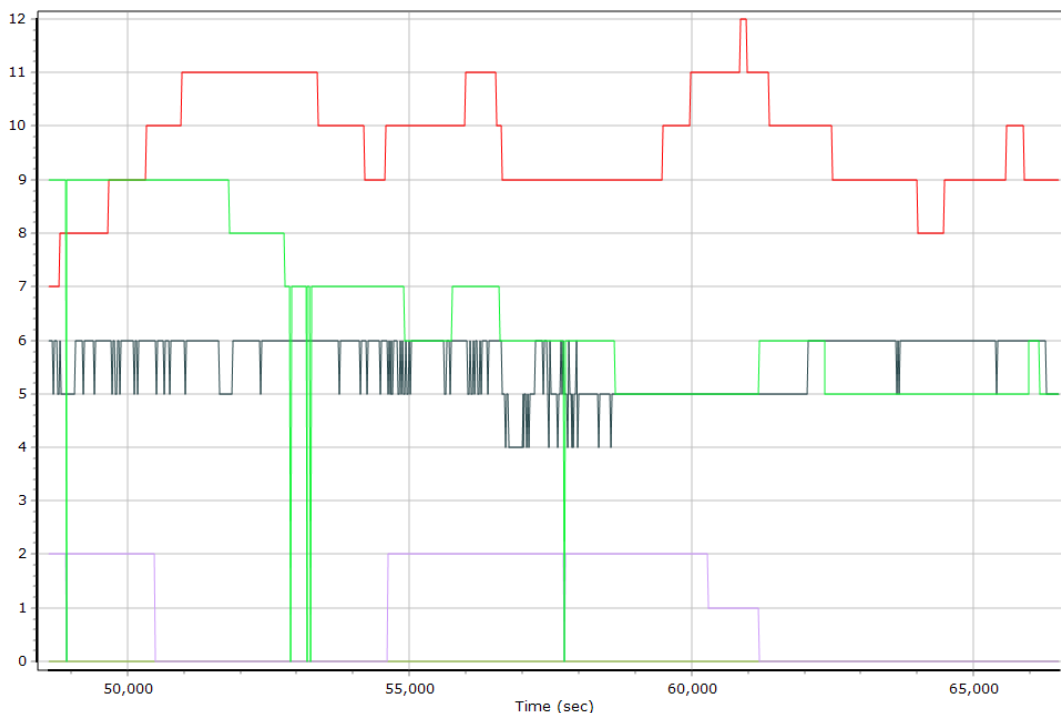
Forward Processed Solution Status

Processing Mode



0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR

Number of Satellites



— Number of GPS Satellites — Number of GLONASS Satellites — Number of QZSS Satellites
 — Number of BEIDOU Satellites — Number of GALILEO Satellites

Baseline Length

