

General Information

Mission Information

| | |
|------------------|--------------------------------|
| Project name | 201030_B_5060420_nad2011_FINAL |
| Processing date | 2020-11-06 16:17:03 |
| Mission date | 2020-10-31 01:12:21 |
| Mission duration | 03:45:56.970 |
| 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 |
|-------------|-----------|
| survey2.pos | POS Data |

Input Files

| File Name | File Type |
|--------------|-----------------------------|
| Ephm3050.20g | GLONASS Broadcast Ephemeris |
| Ephm3050.20n | GPS Broadcast Ephemeris |

Output Files

| Filename | File type |
|---|----------------------|
| sbet_201030_B_5060420_nad2011_FINAL.out | SBET Trajectory File |

Rover Data Summary

| | | | |
|--|------------------------------------|-------|---------|
| First raw data file | survey2.pos | | |
| Last raw data file | survey2.pos | | |
| Start GPS week | 2129 | | |
| Start time | 522741.045 (10/31/2020 1:12:21 AM) | | |
| End time | 536298.319 (10/31/2020 4:58:18 AM) | | |
| Start of fine alignment | 523055.390 (10/31/2020 1:17:35 AM) | | |
| 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 |

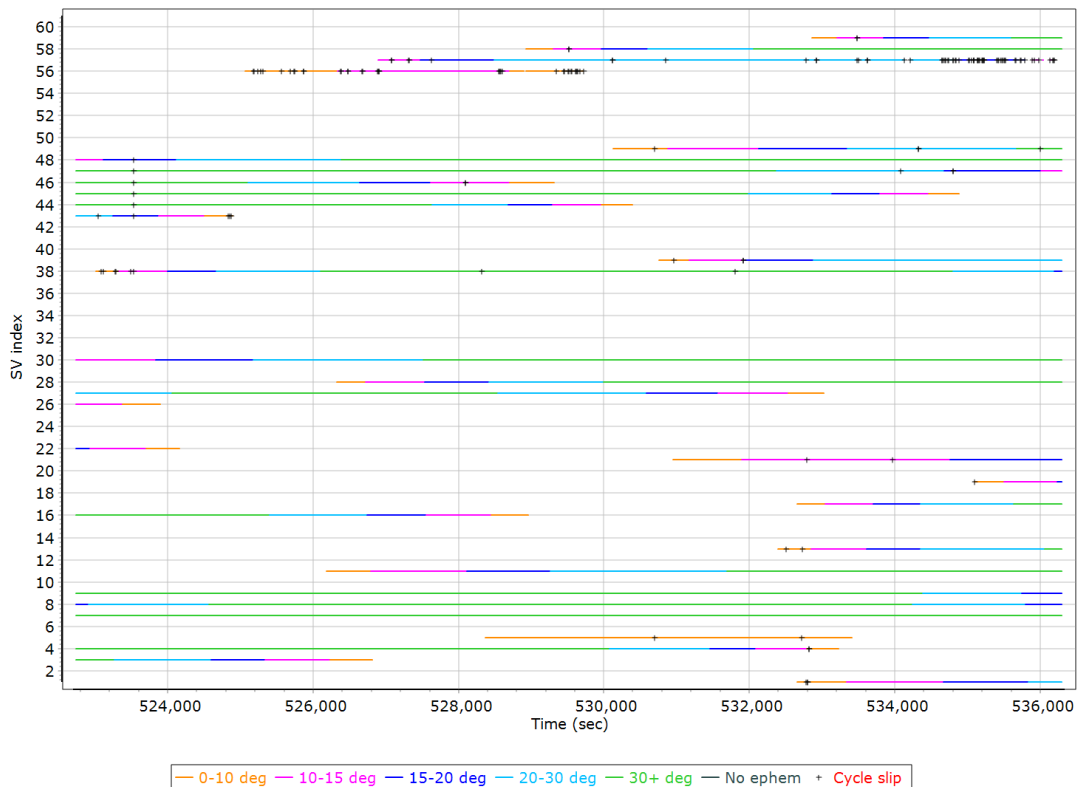
Rover Data QC

Raw IMU Import QC Summary

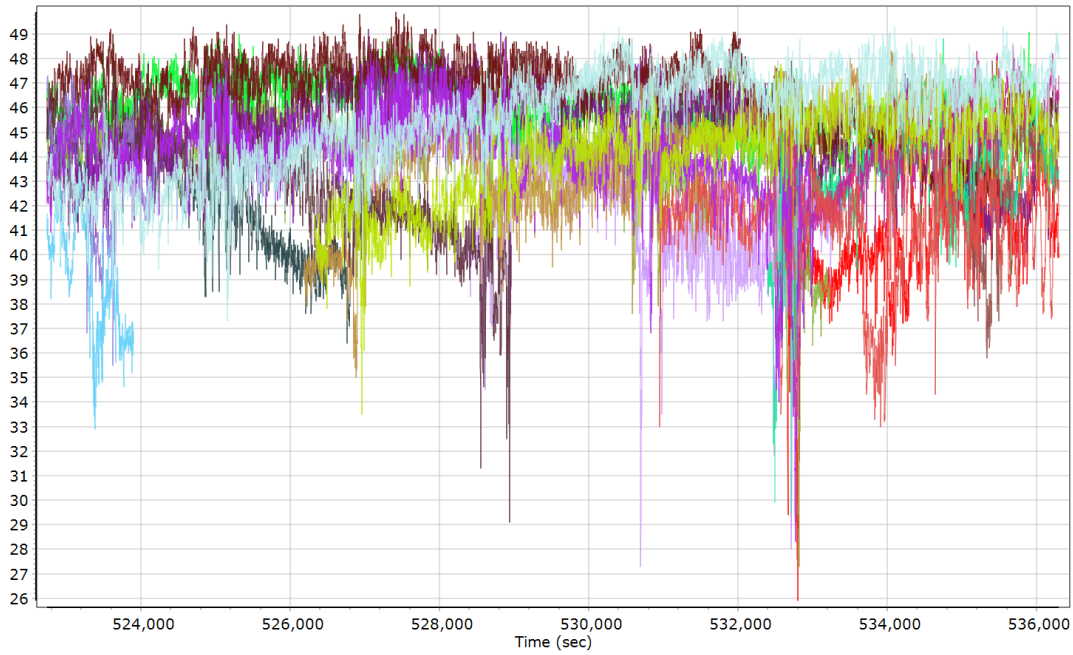
| | |
|-------------------------|--|
| IMU data input file | imu_201030_B_5060420_nad2011_FINAL.dat |
| IMU data check log file | imudt_201030_B_5060420_nad2011_FINAL.log |
| IMU Records Processed | 2710944 |
| Termination Status | Normal |
| IMU Anomalies | 0 |

Primary Observables & Satellite Data

GPS/GLONASS L1 Satellite Lock/Elevation

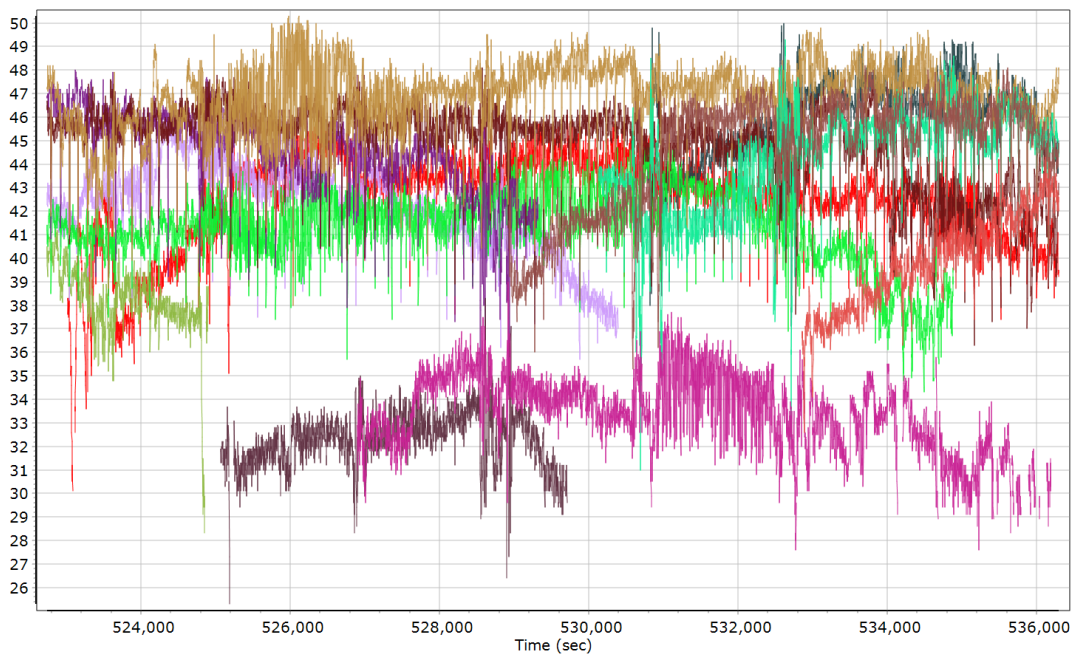


GPS L1 SNR



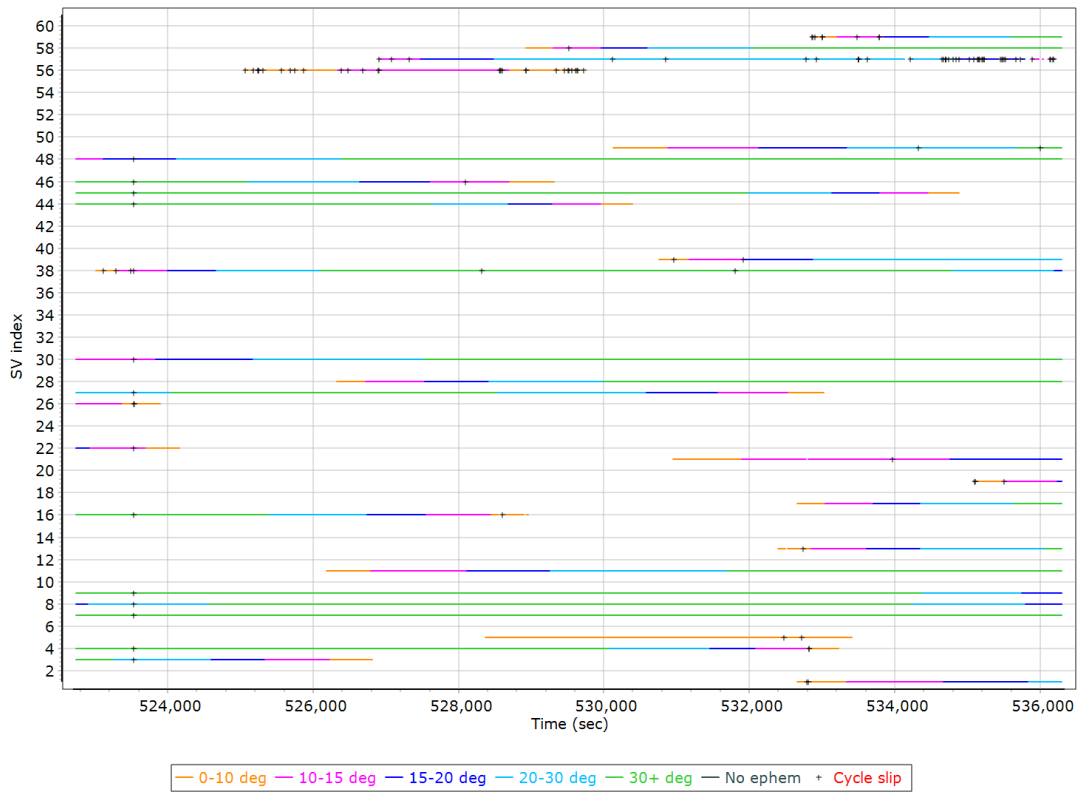
- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 01 L1 SNR (dB/Hz) | GPS PRN 03 L1 SNR (dB/Hz) | GPS PRN 04 L1 SNR (dB/Hz) | GPS PRN 05 L1 SNR (dB/Hz) |
| GPS PRN 07 L1 SNR (dB/Hz) | GPS PRN 08 L1 SNR (dB/Hz) | GPS PRN 09 L1 SNR (dB/Hz) | GPS PRN 11 L1 SNR (dB/Hz) |
| GPS PRN 13 L1 SNR (dB/Hz) | GPS PRN 16 L1 SNR (dB/Hz) | GPS PRN 17 L1 SNR (dB/Hz) | GPS PRN 19 L1 SNR (dB/Hz) |
| GPS PRN 21 L1 SNR (dB/Hz) | GPS PRN 22 L1 SNR (dB/Hz) | GPS PRN 26 L1 SNR (dB/Hz) | GPS PRN 27 L1 SNR (dB/Hz) |
| GPS PRN 28 L1 SNR (dB/Hz) | GPS PRN 30 L1 SNR (dB/Hz) | | |

GLONASS L1 SNR

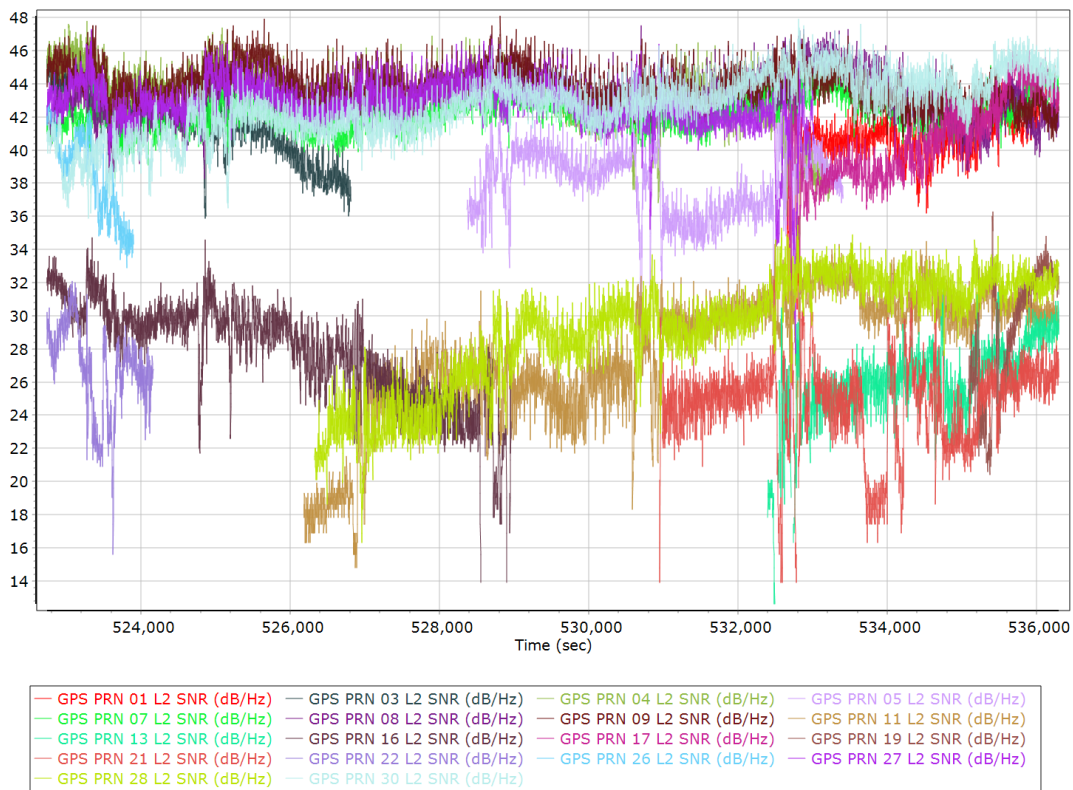


- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 01 L1 SNR (dB/Hz) | GLONASS 02 L1 SNR (dB/Hz) | GLONASS 06 L1 SNR (dB/Hz) |
| GLONASS 07 L1 SNR (dB/Hz) | GLONASS 08 L1 SNR (dB/Hz) | GLONASS 09 L1 SNR (dB/Hz) |
| GLONASS 10 L1 SNR (dB/Hz) | GLONASS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

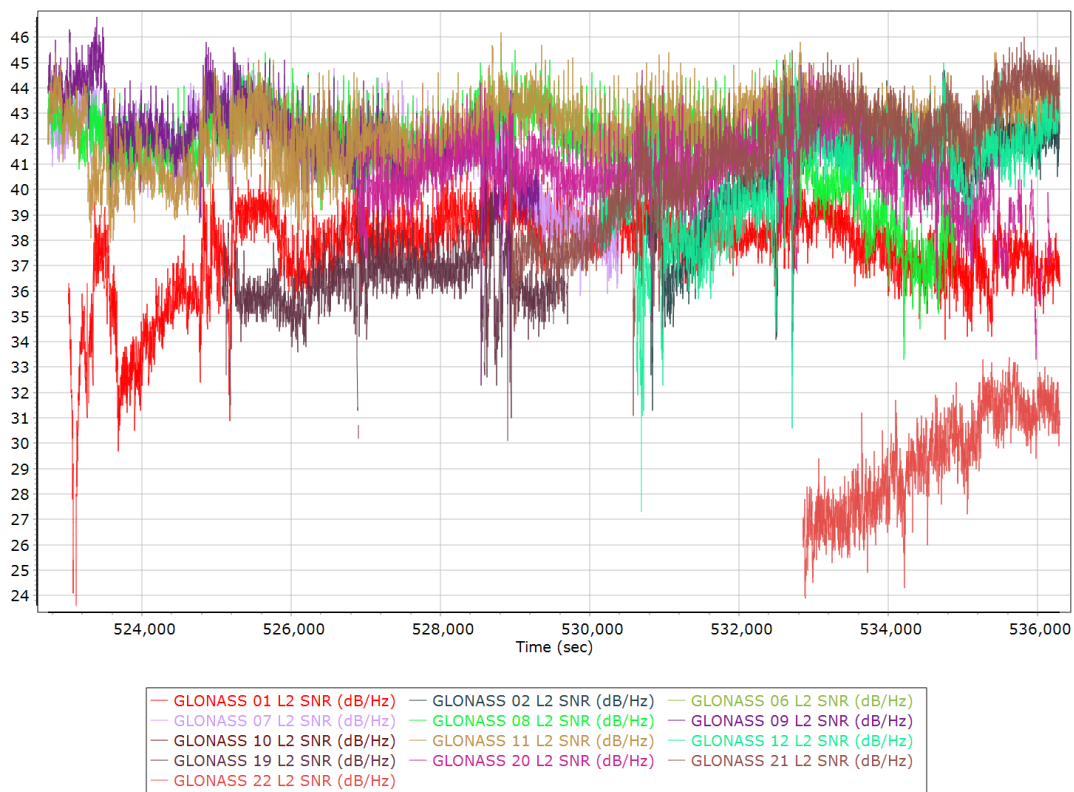
GPS/GLONASS L2 Satellite Lock/Elevation



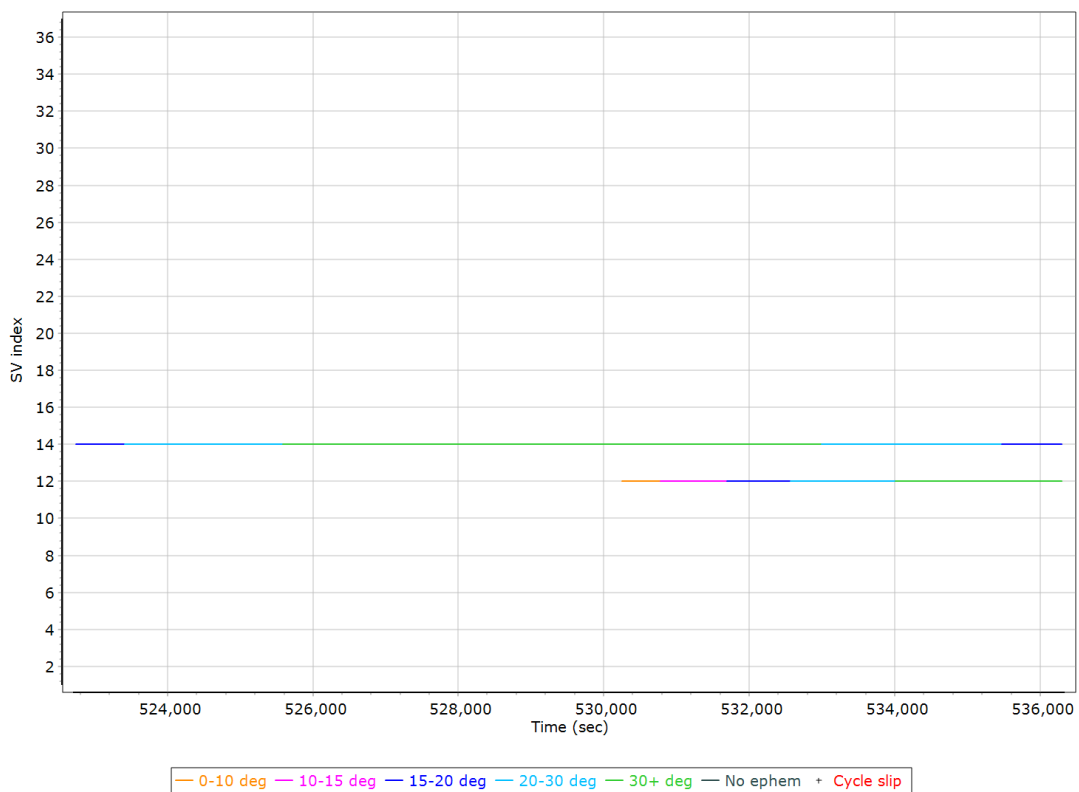
GPS L2 SNR



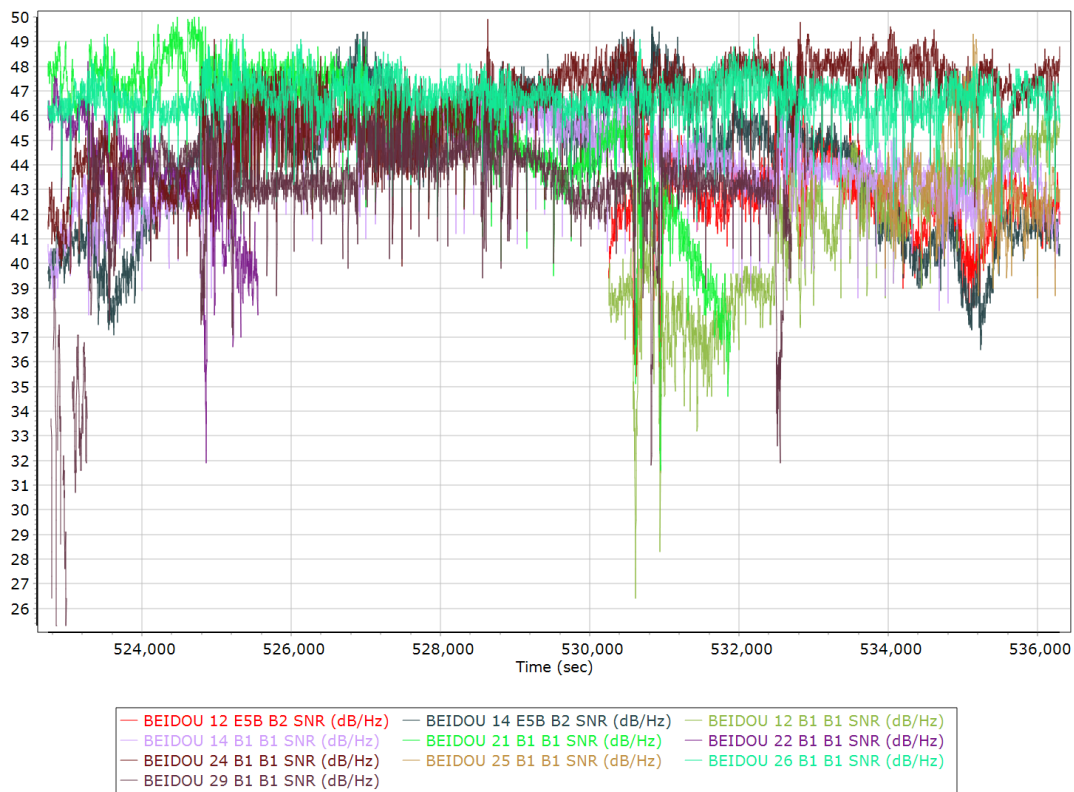
GLONASS L2 SNR



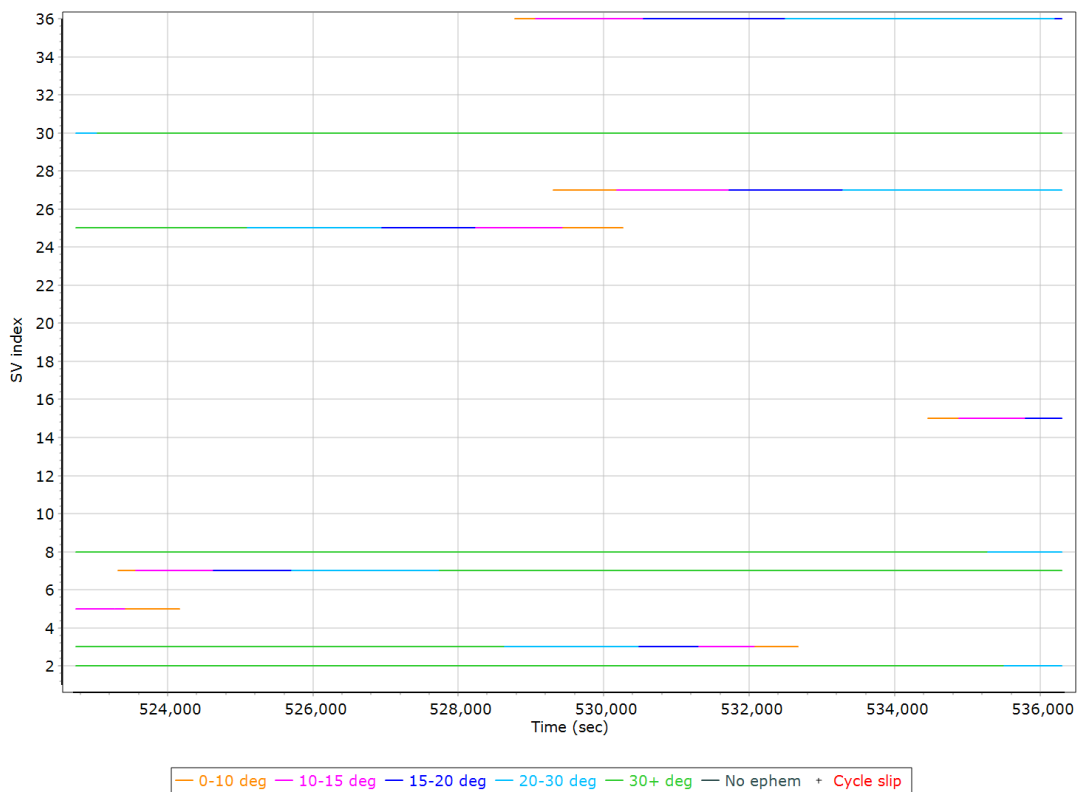
BEIDOU Satellite Lock/Elevation



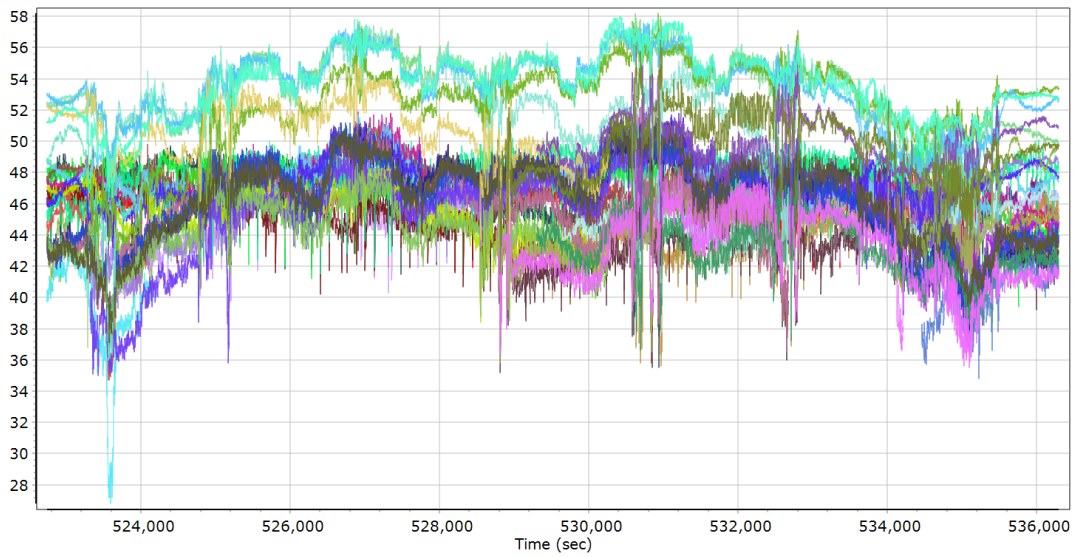
BEIDOU SNR



GALILEO Satellite Lock/Elevation



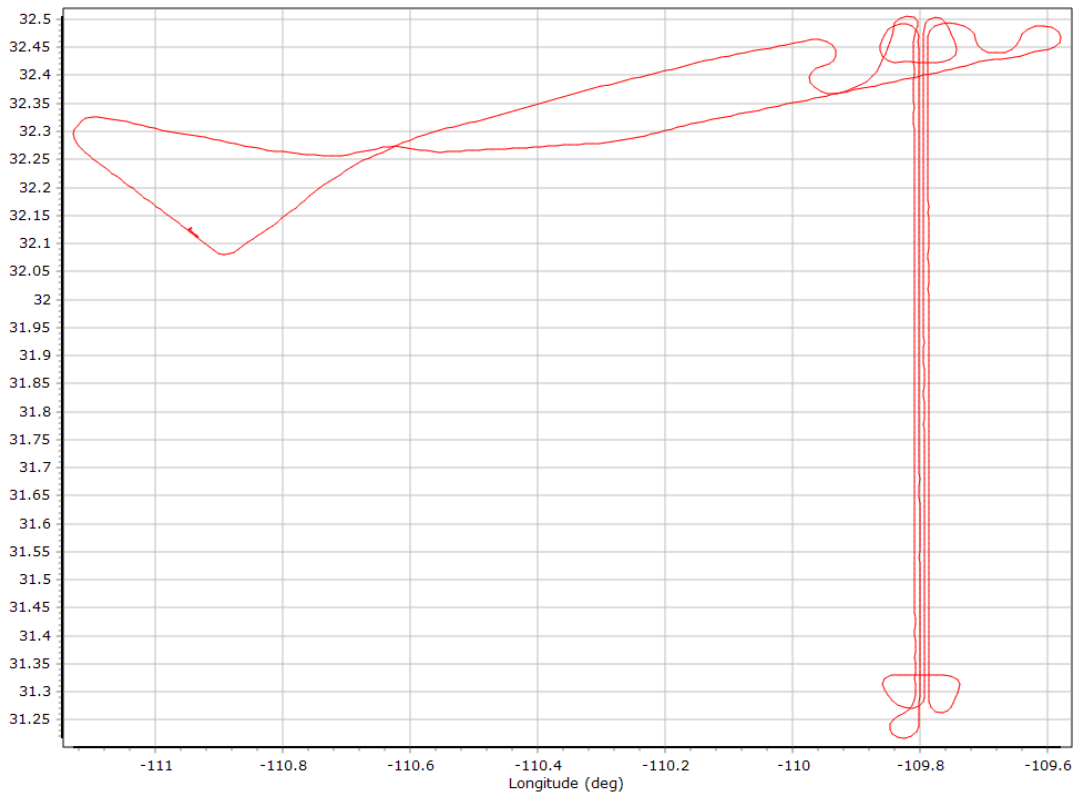
GALILEO SNR



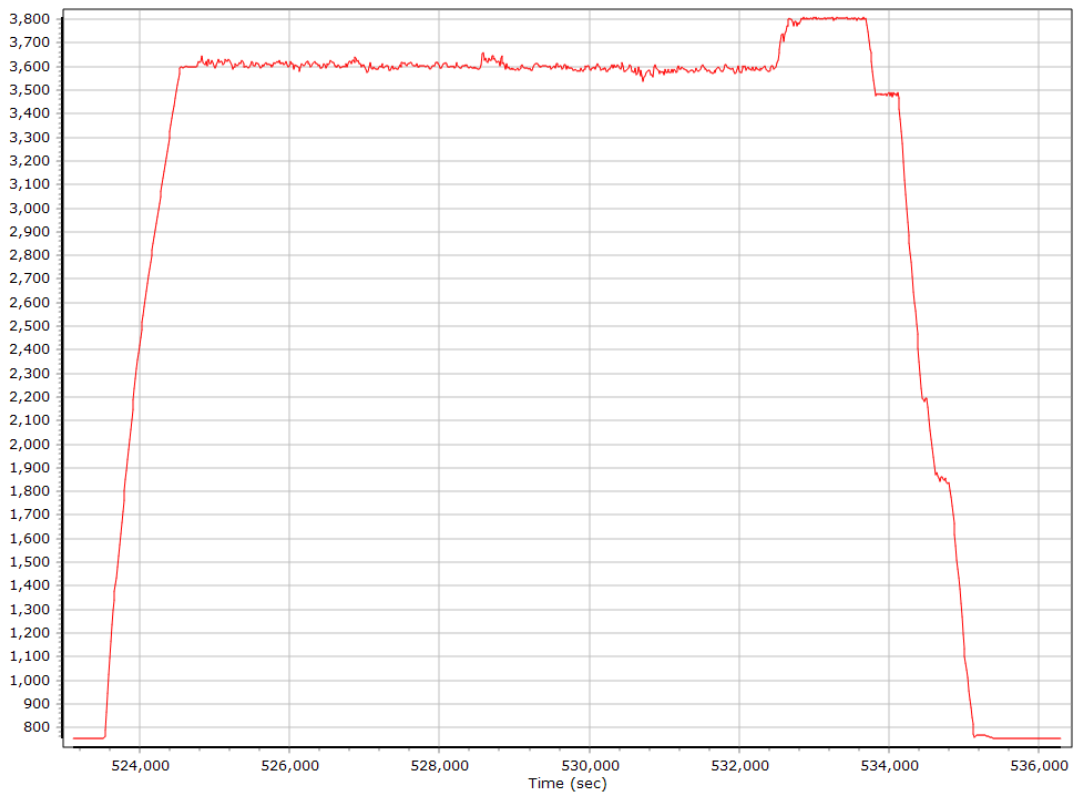
| | |
|---|---|
| — GALILEO 02 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 03 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 05 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 07 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 08 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 15 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 25 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) | — GALILEO 27 L1 BOC_1_1_DP_MBOC SNR (dB/Hz) |
| — GALILEO 30 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 03 L5E5A BPSK10_PD SNR (dB/Hz) |
| — GALILEO 05 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 07 L5E5A BPSK10_PD SNR (dB/Hz) |
| — GALILEO 08 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 15 L5E5A BPSK10_PD SNR (dB/Hz) |
| — GALILEO 25 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 27 L5E5A BPSK10_PD SNR (dB/Hz) |
| — GALILEO 30 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 36 L5E5A BPSK10_PD SNR (dB/Hz) |

Smoothed Trajectory Information

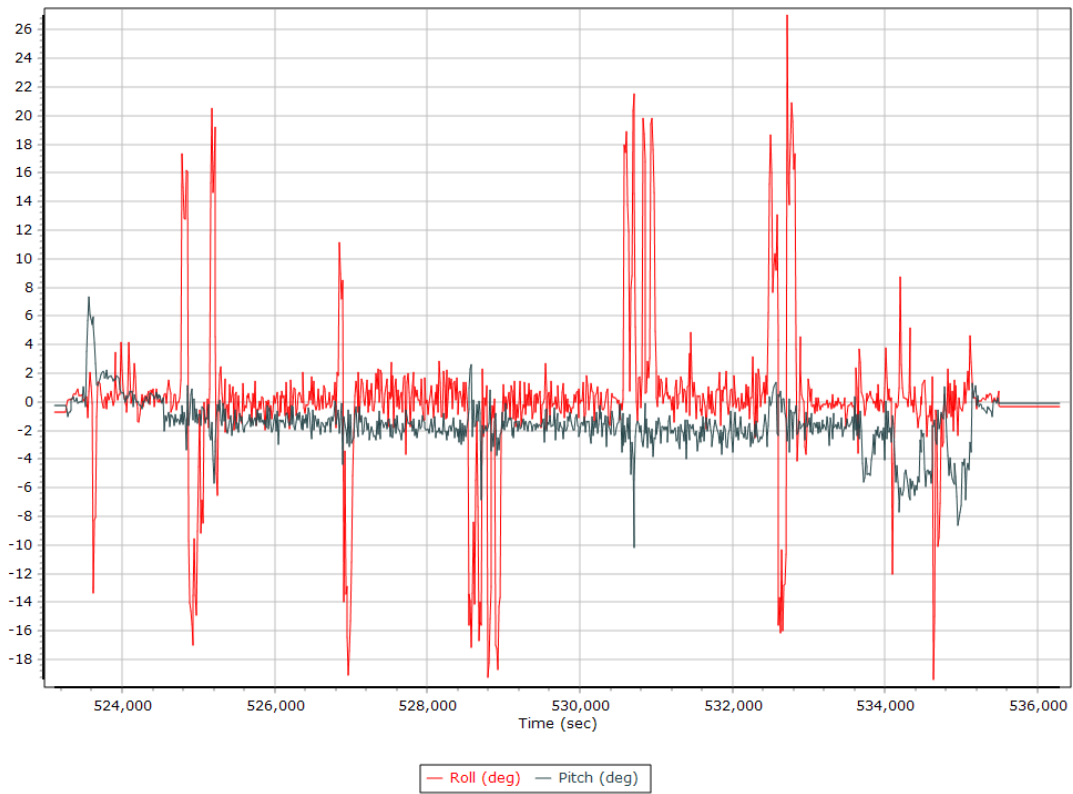
Top View



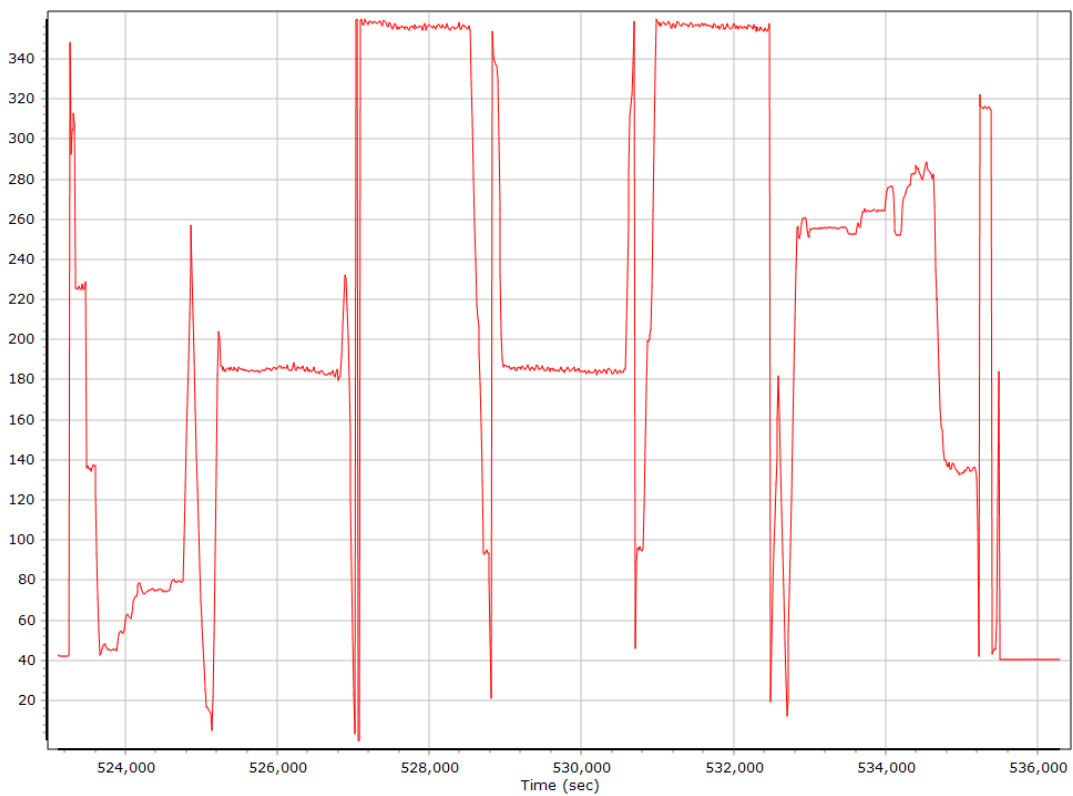
Altitude



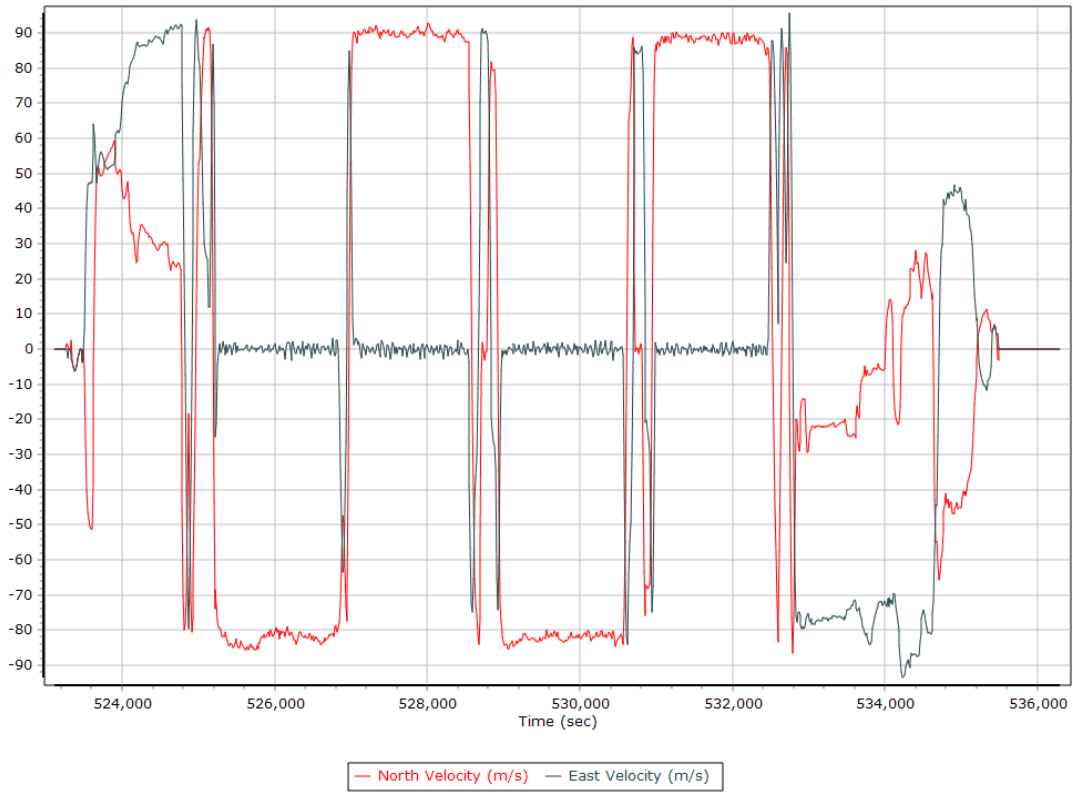
Roll/Pitch



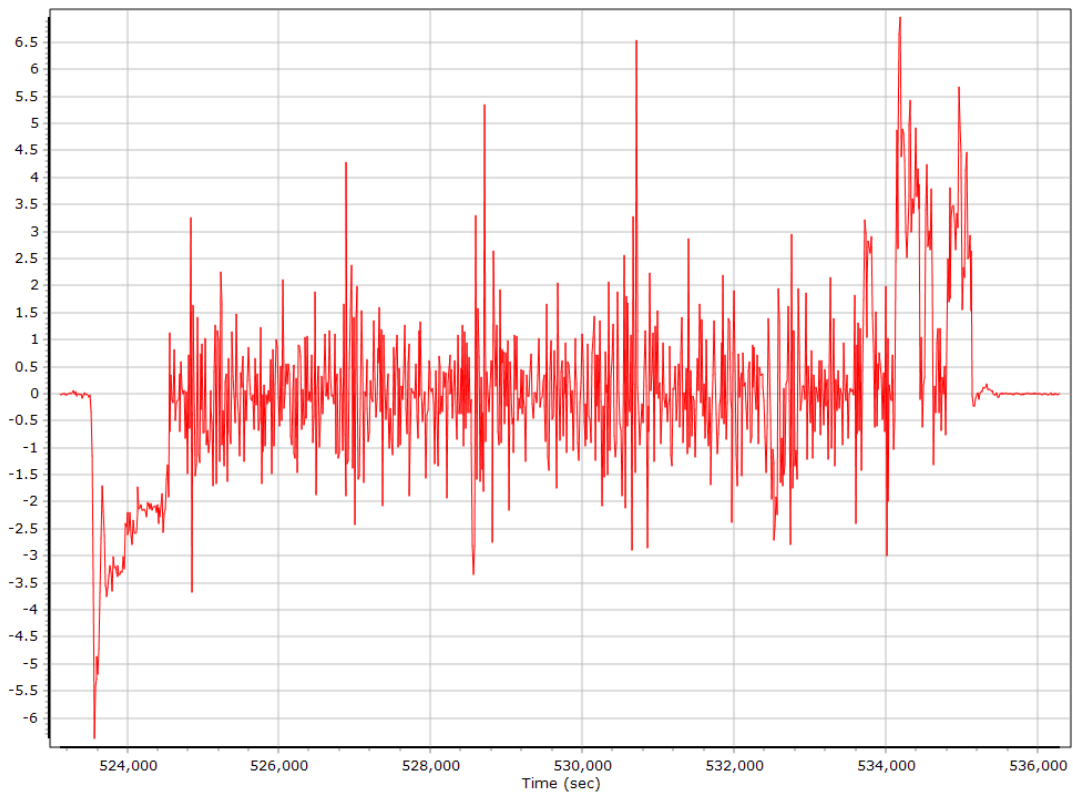
Heading



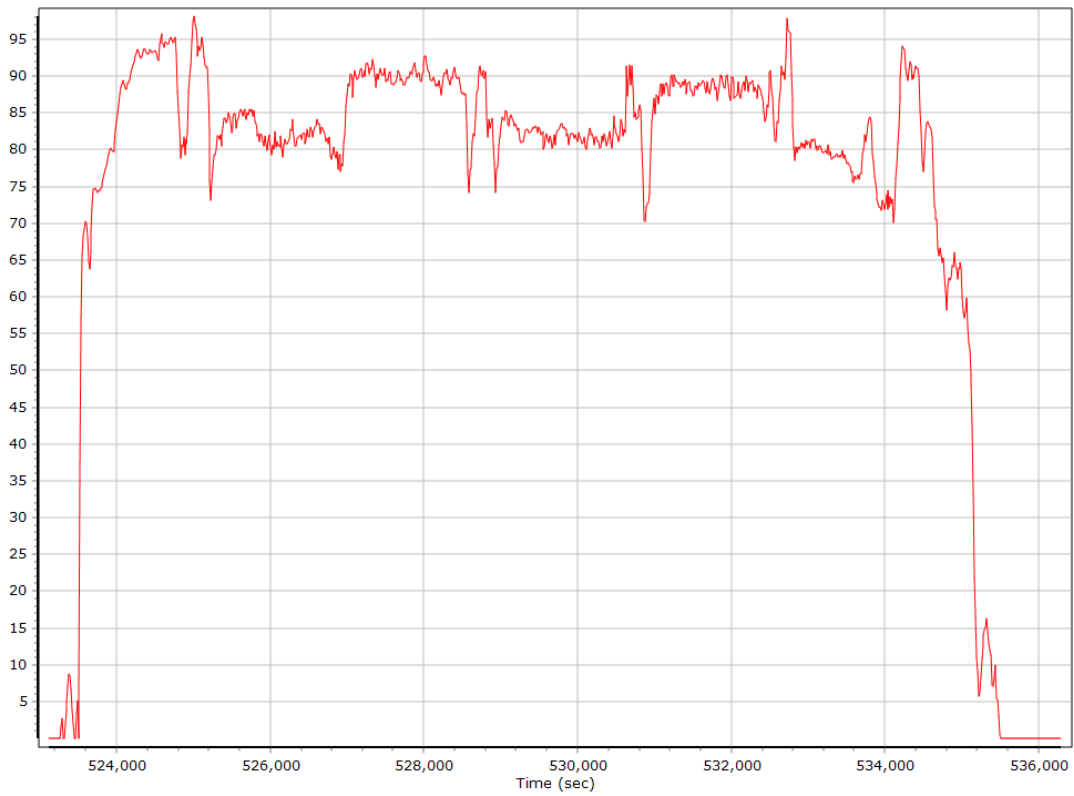
North/East Velocity



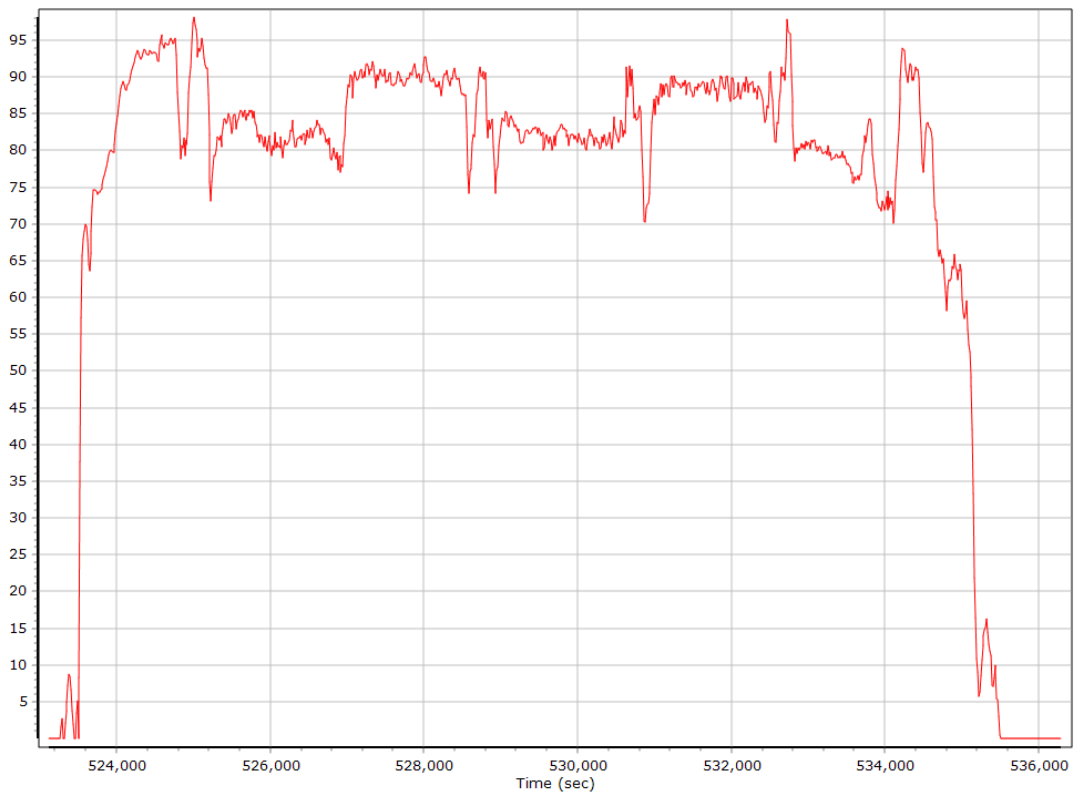
Down Velocity



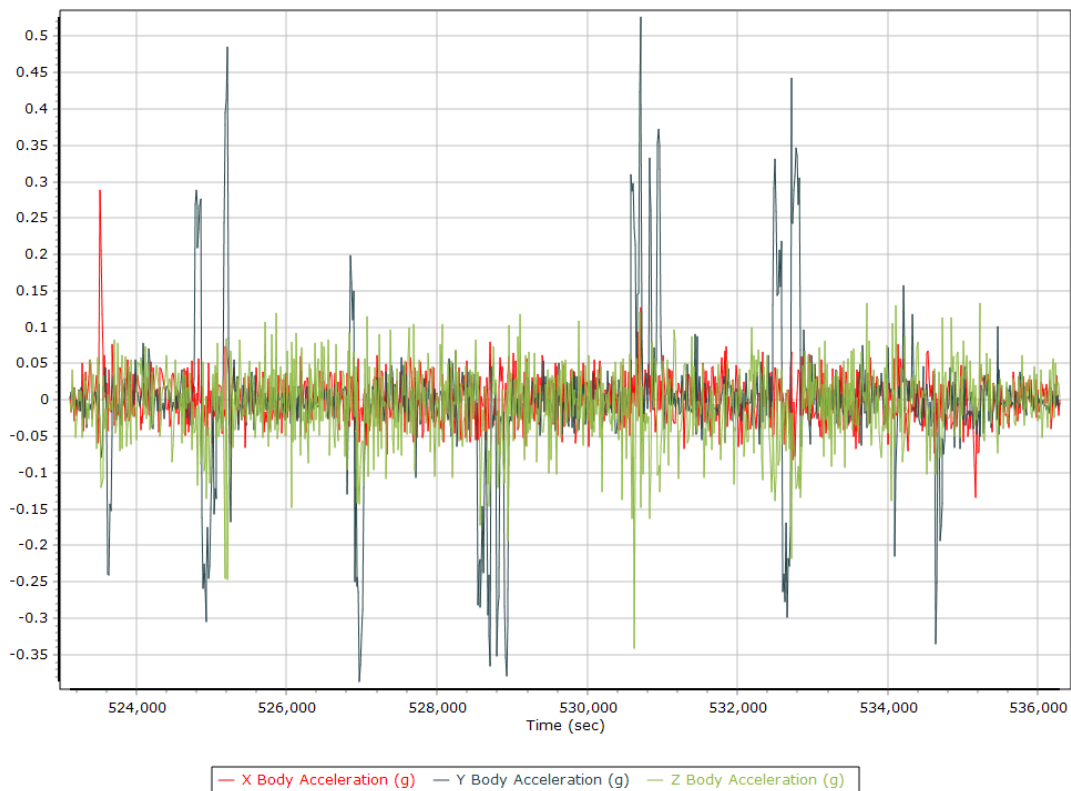
Total Speed



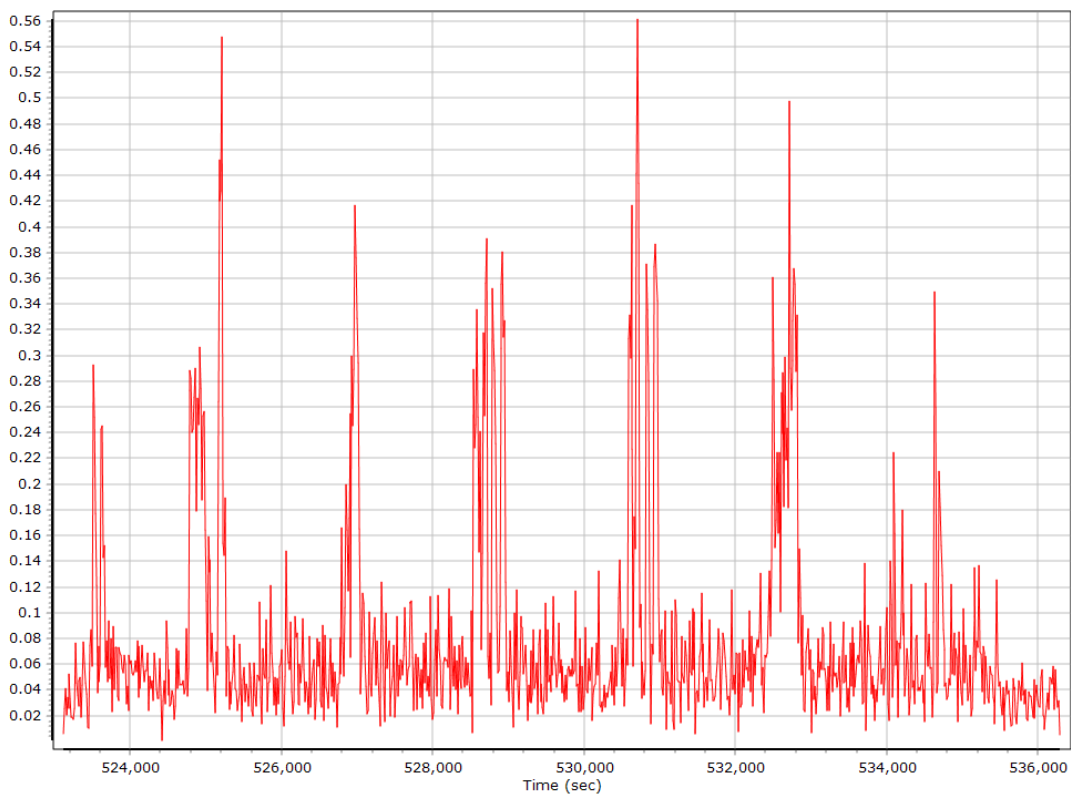
Ground Speed



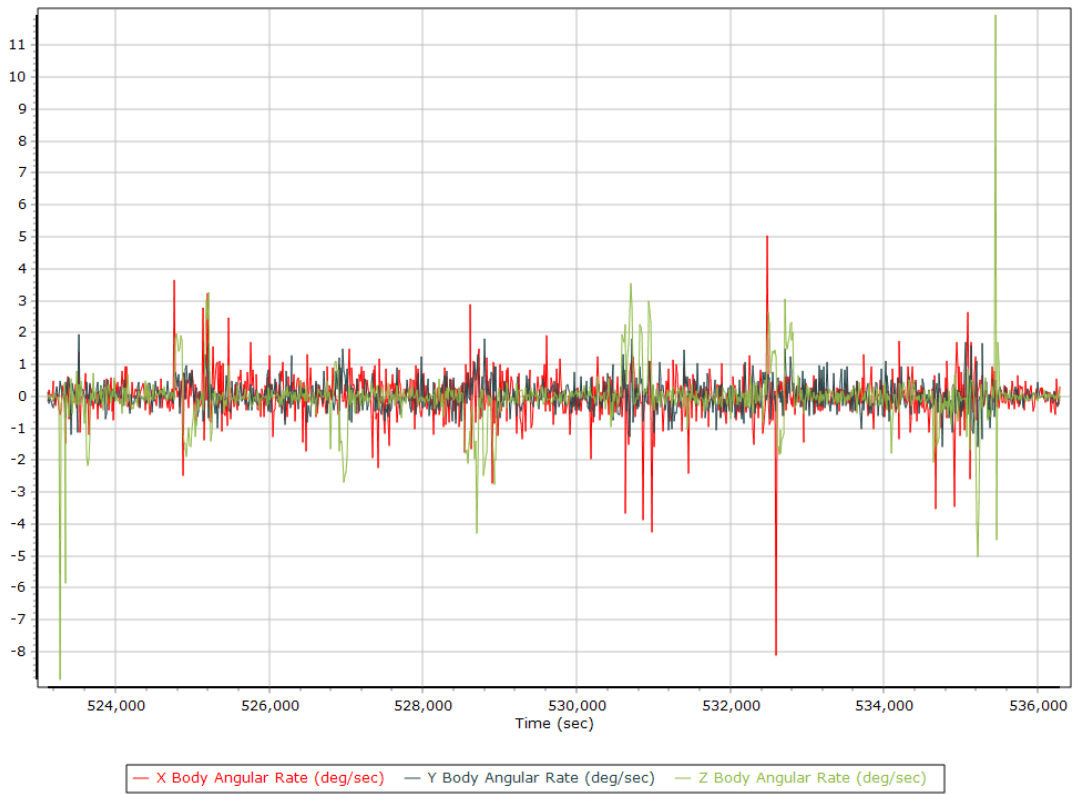
Body Acceleration



Total Body Acceleration

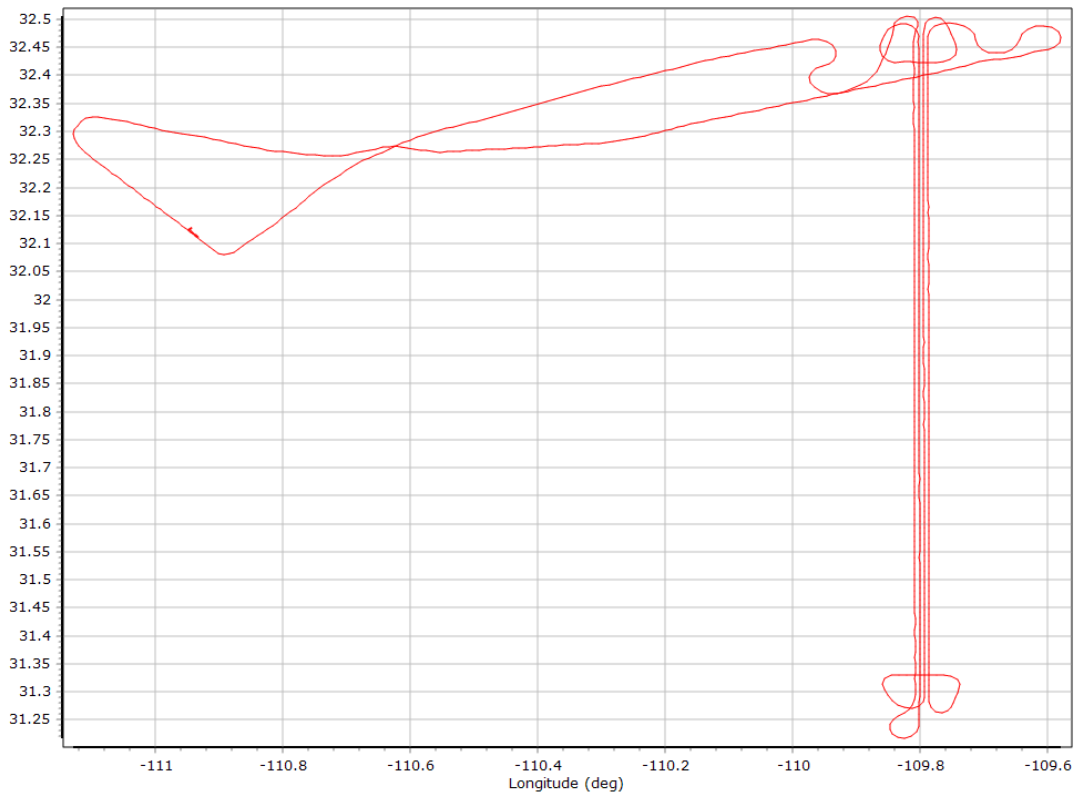


Body Angular Rate

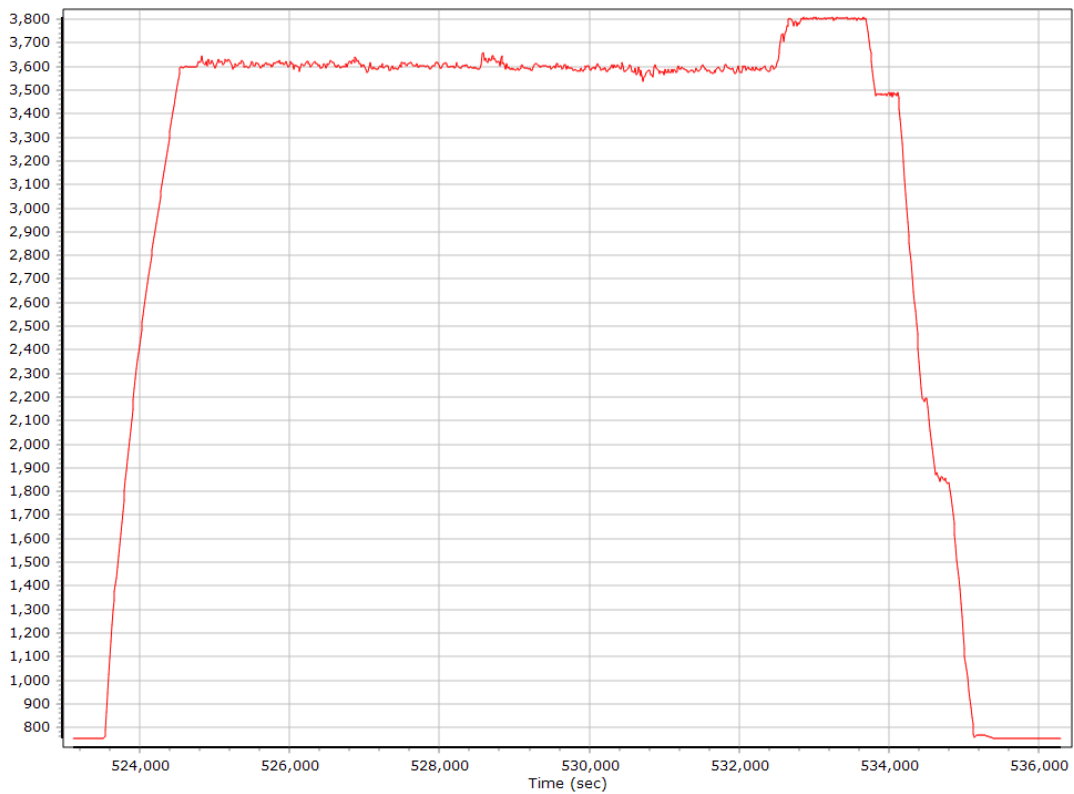


Forward Processed Trajectory Information

Top View



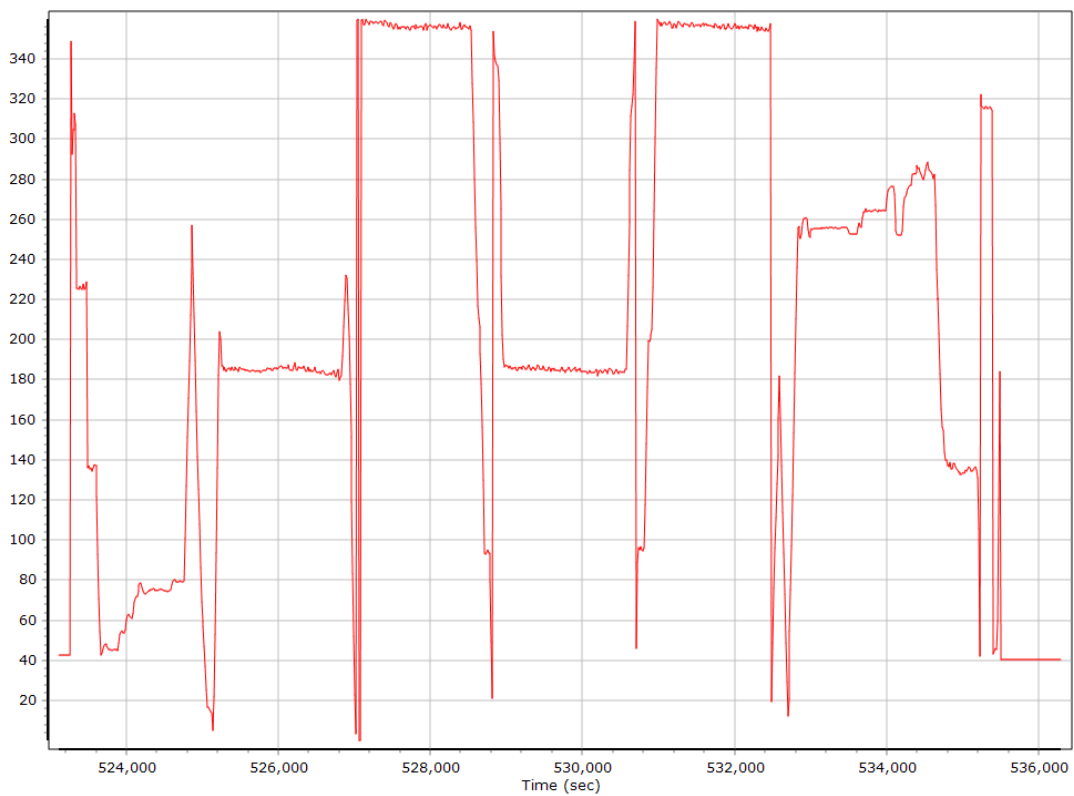
Altitude



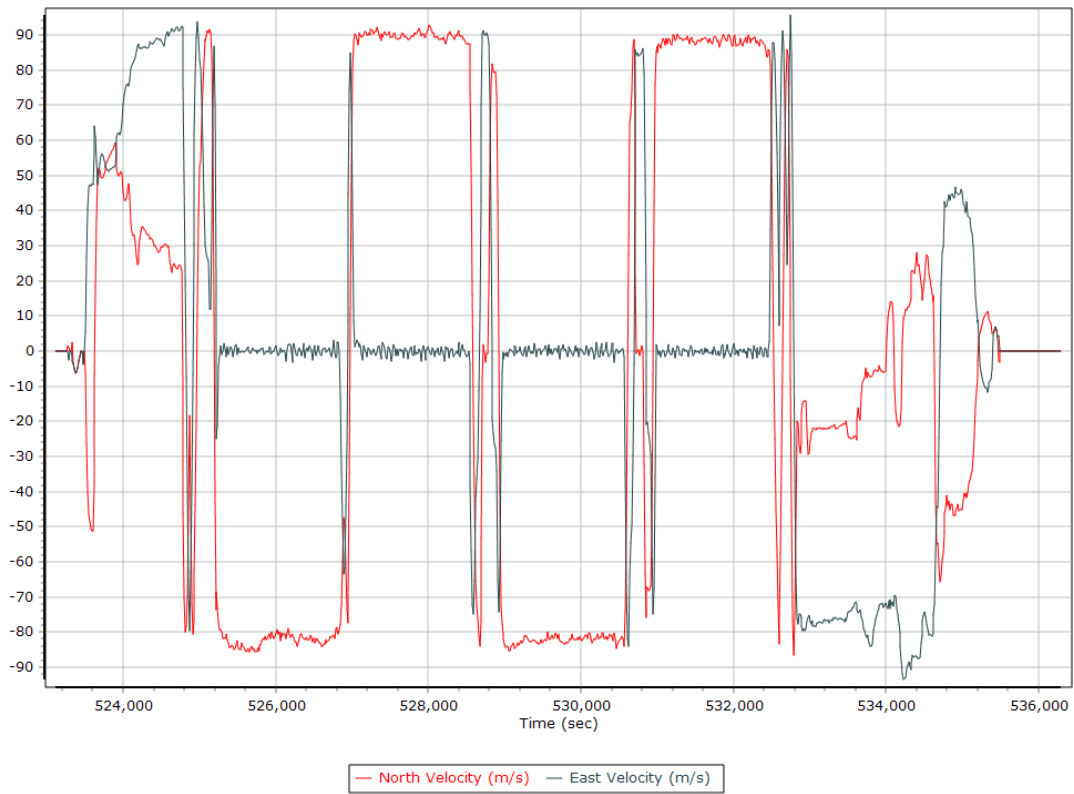
Roll/Pitch



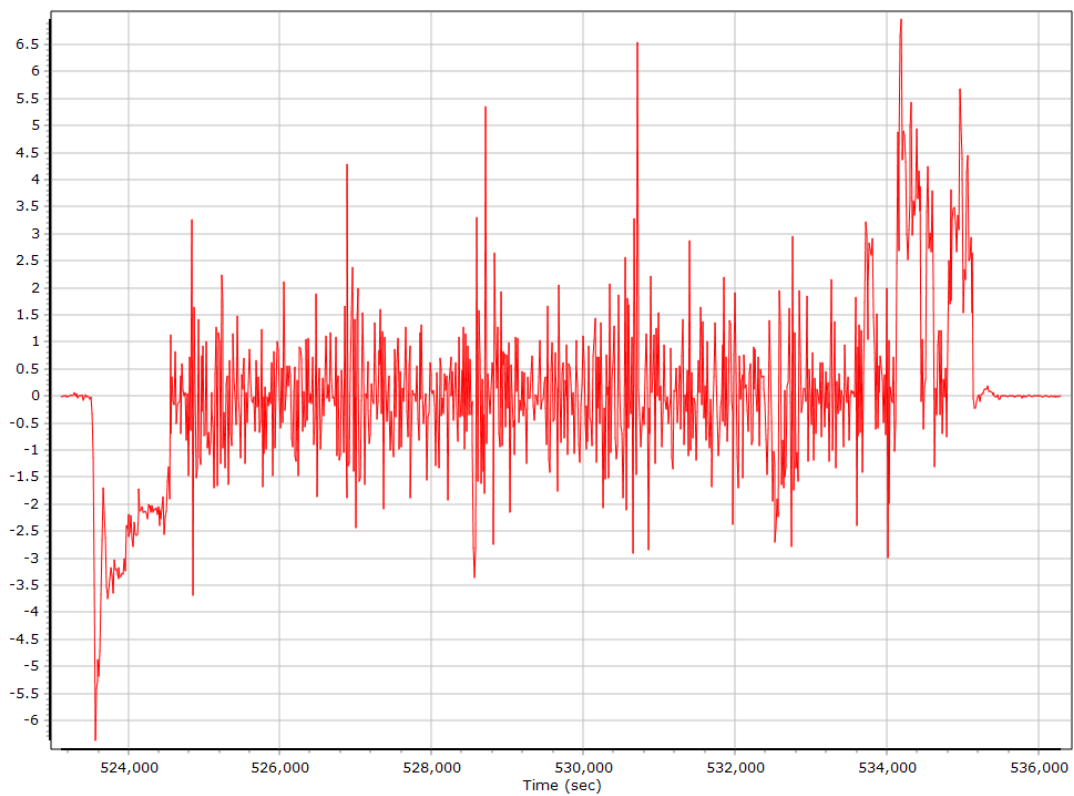
Heading



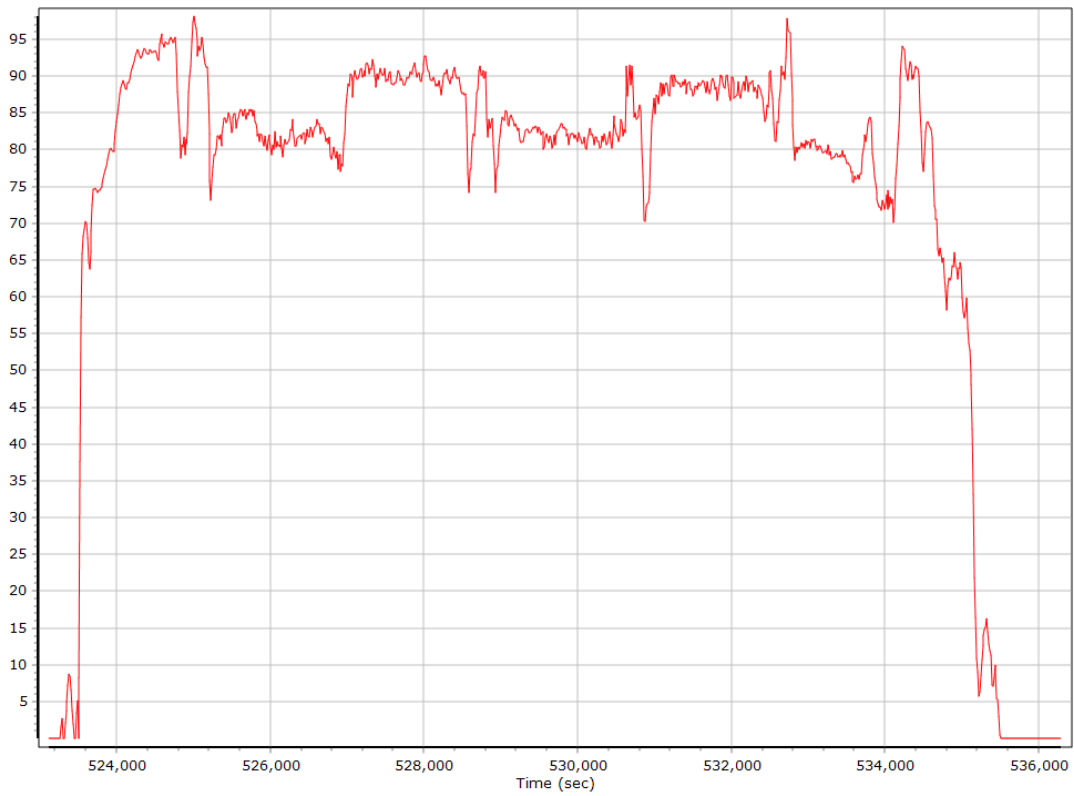
North/East Velocity



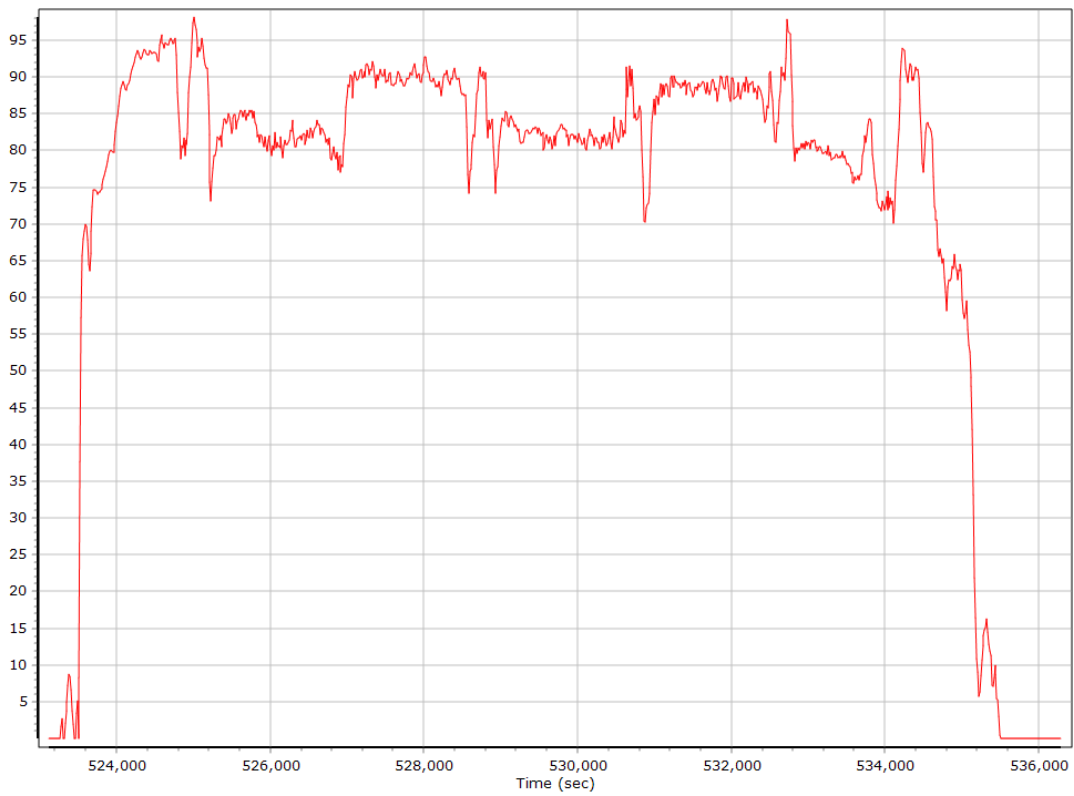
Down Velocity



Total Speed



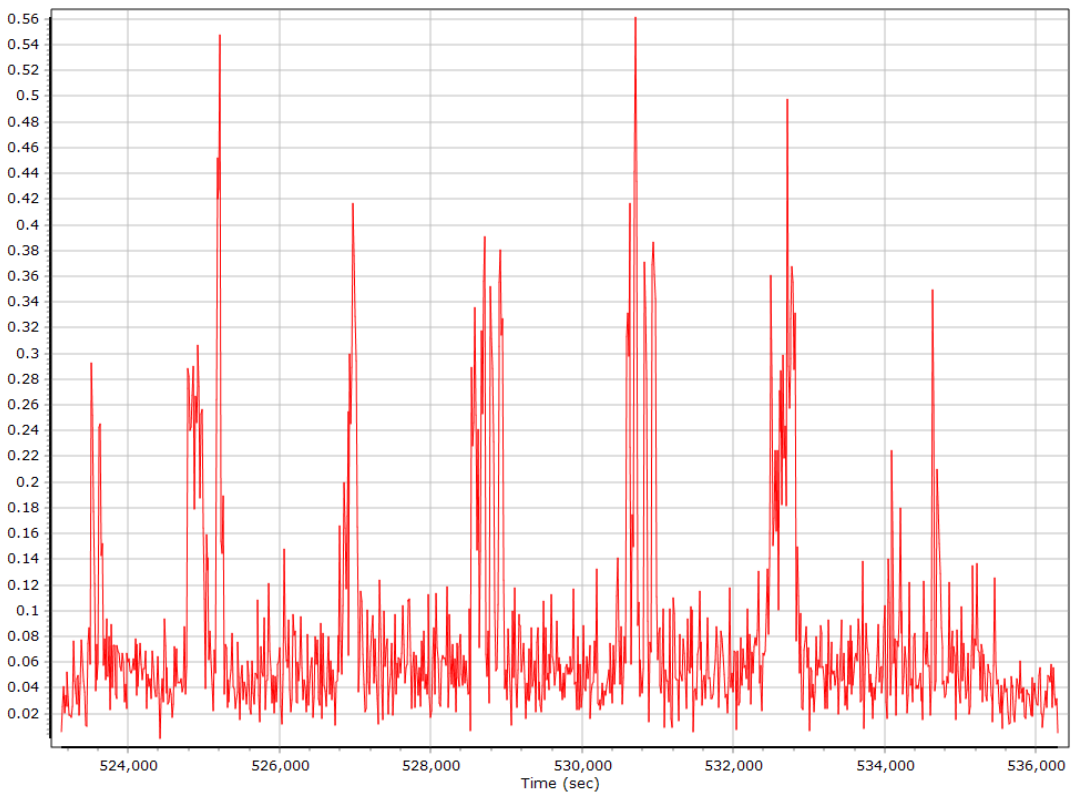
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate

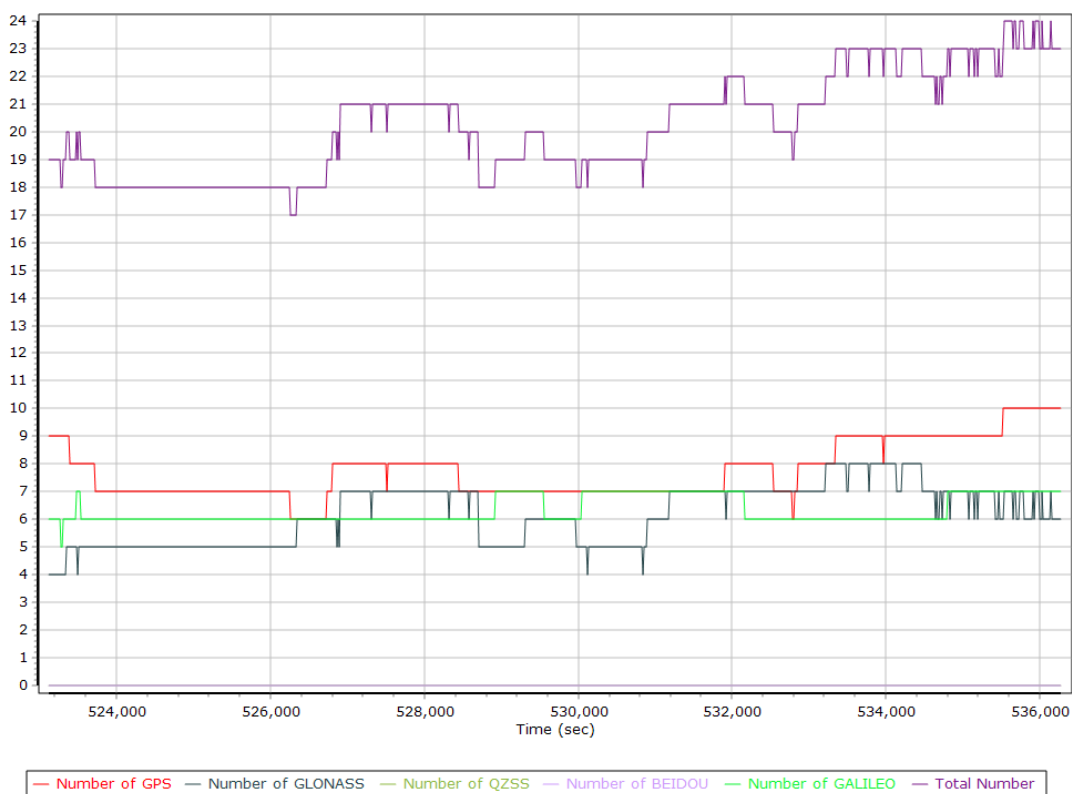


GNSS QC

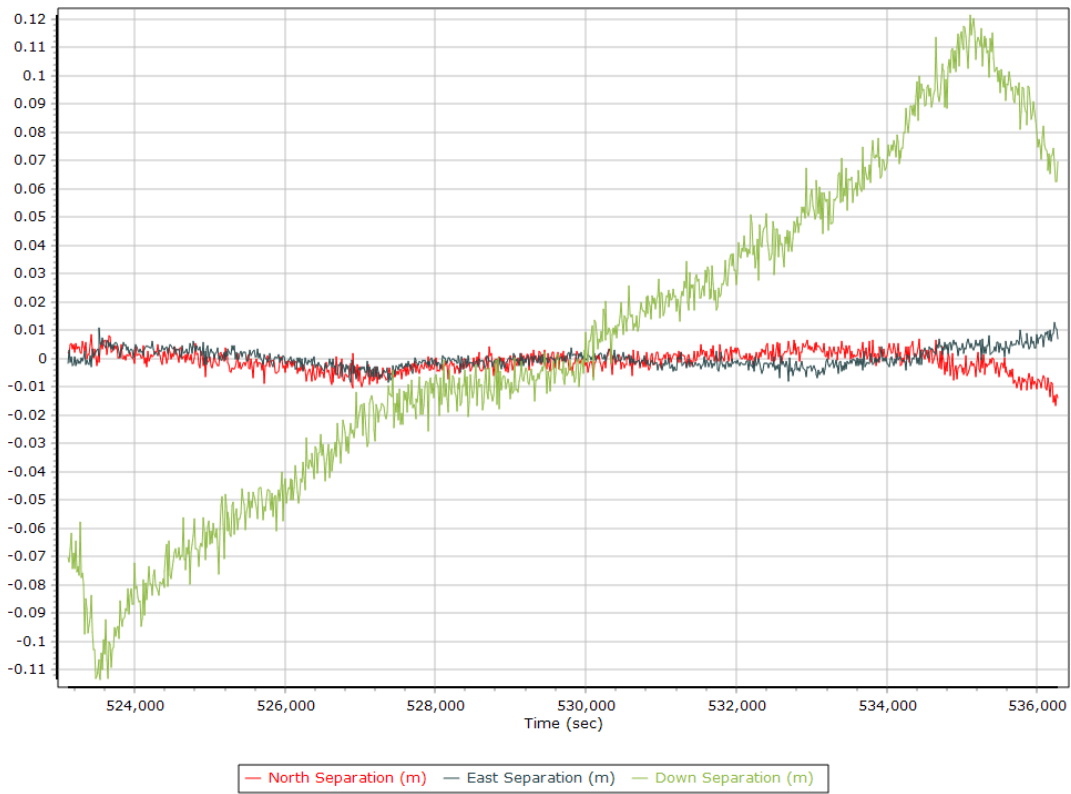
GNSS QC Statistics

| Statistics | Min | Max | Mean |
|----------------------|----------|-------|-------------|
| Baseline length (km) | 0.00 | 0.00 | |
| Number of GPS SV | 6 | 10 | 8 |
| Number of GLONASS SV | 0 | 8 | 6 |
| Number of QZSS SV | 0 | 0 | 0 |
| Number of BEIDOU SV | 0 | 0 | 0 |
| Number of GALILEO SV | 5 | 7 | 6 |
| Total number of SV | 14 | 24 | 20 |
| PDOP | 1.06 | 1.59 | 1.24 |
| QC Solution Gaps | 1.00 | 1.00 | |
| Solution Type | Fixed | Float | No solution |
| Epoch (sec) | 13534.00 | 0.00 | 1.00 |
| Percentage | 99.99 | 0.00 | 0.01 |

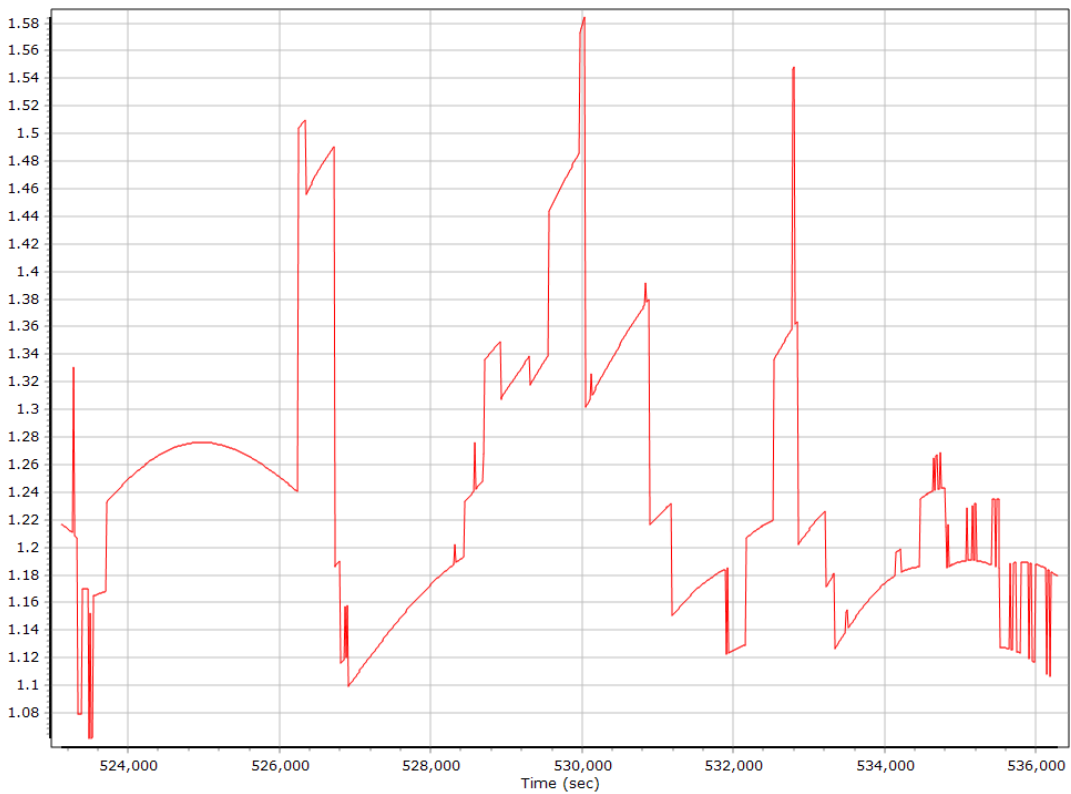
Num SVs in solution



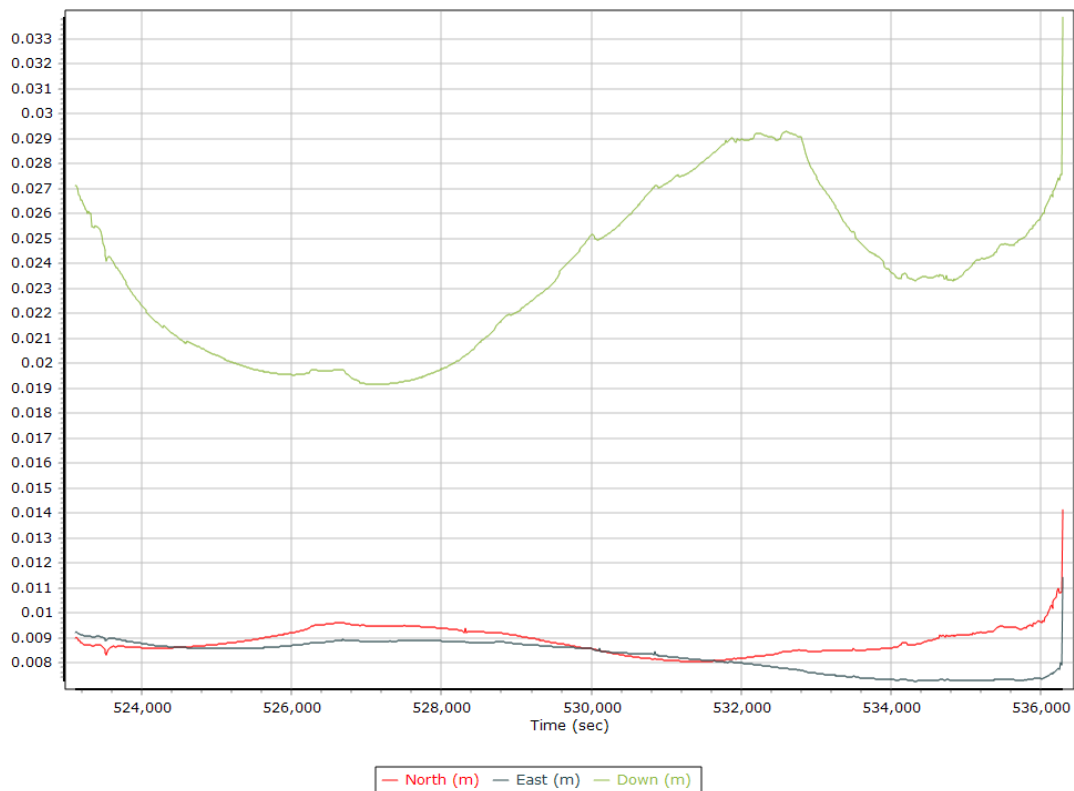
Forward/Reverse Separation



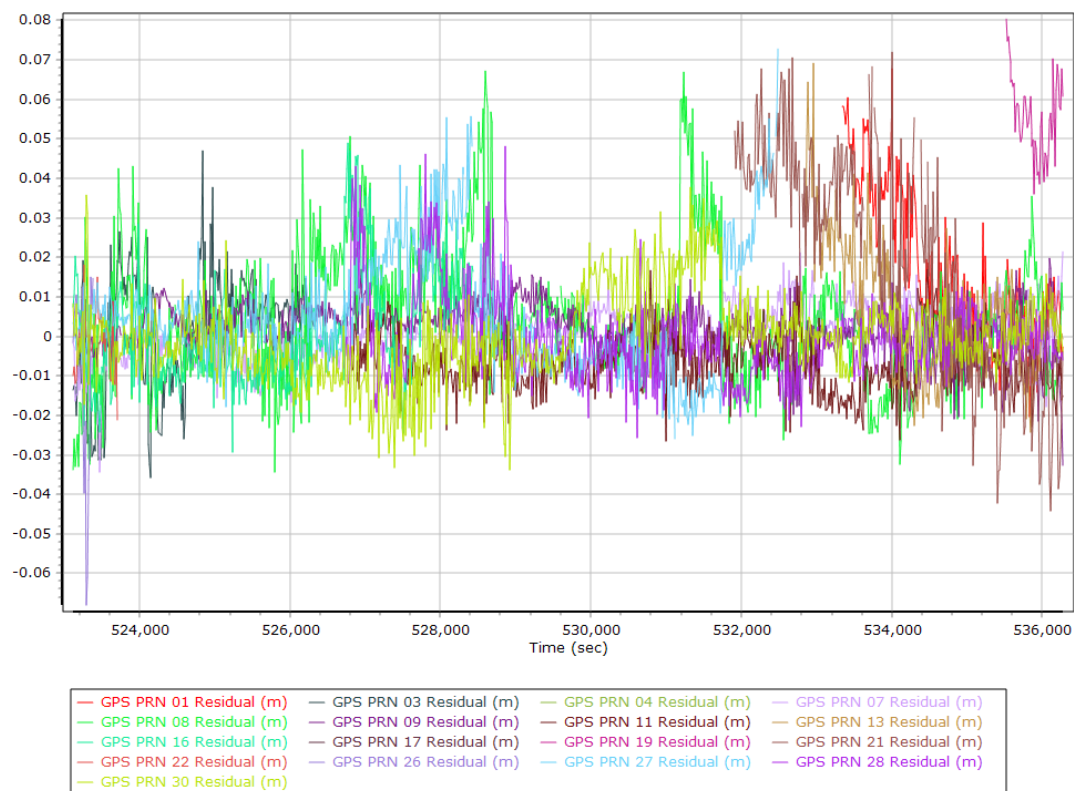
PDOP



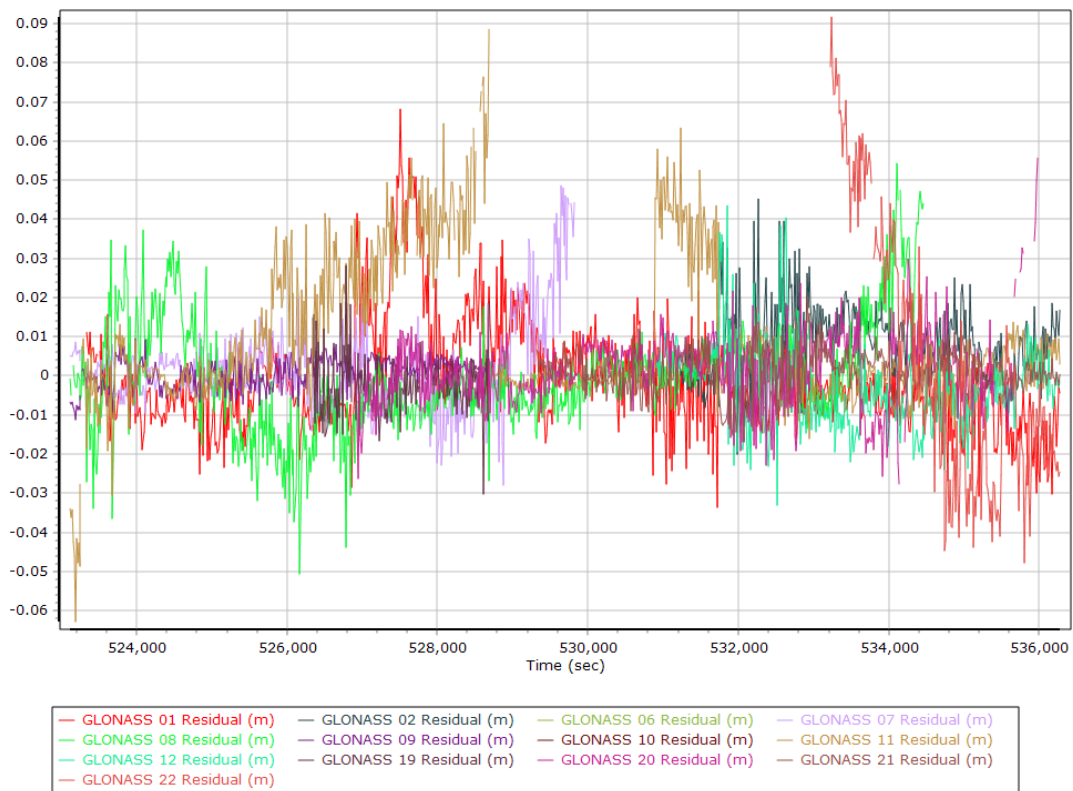
Estimated Position Accuracy



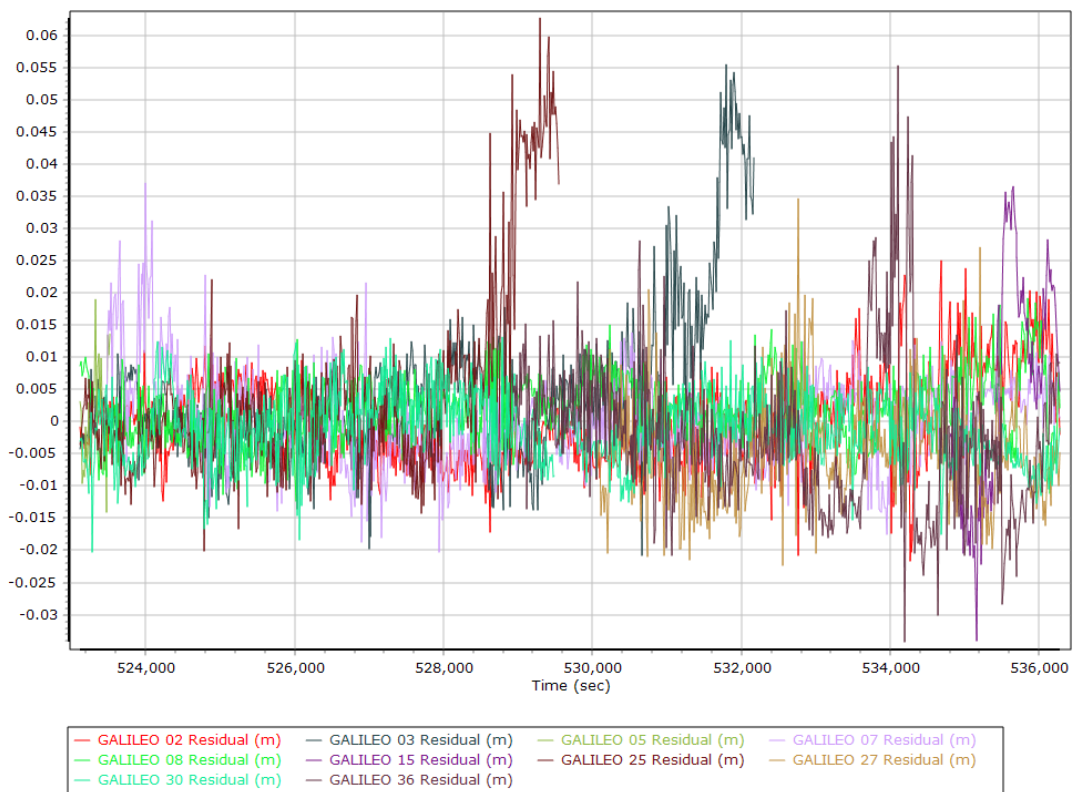
GPS Residuals



GLONASS Residuals



GALILEO Residuals



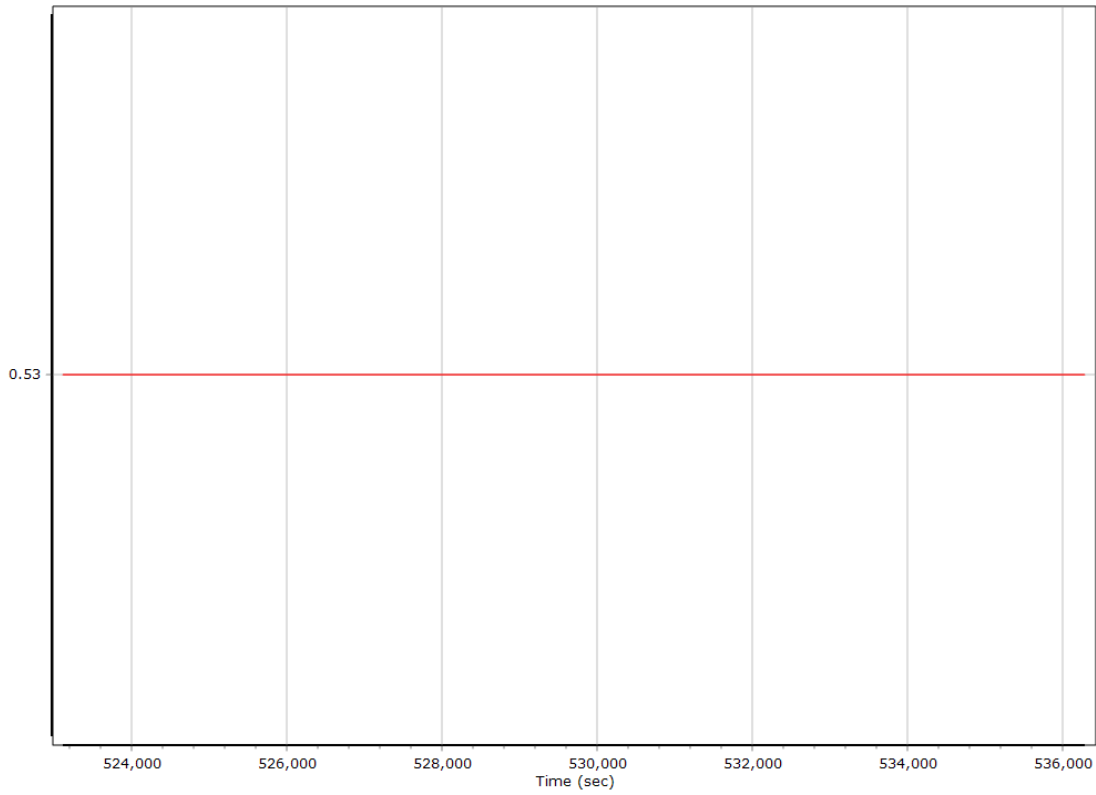
GNSS-Inertial Processor Configuration

| | | | |
|---|------------------------------------|-------|---------|
| Processing mode | IN-Fusion PP-RTX | | |
| Stabilized mount | False | | |
| Processing start time | 522741.030 (10/31/2020 1:12:21 AM) | | |
| Processing end time | 536298.000 (10/31/2020 4:58:18 AM) | | |
| 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 | 0.195 | -1.200 |
| 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 |

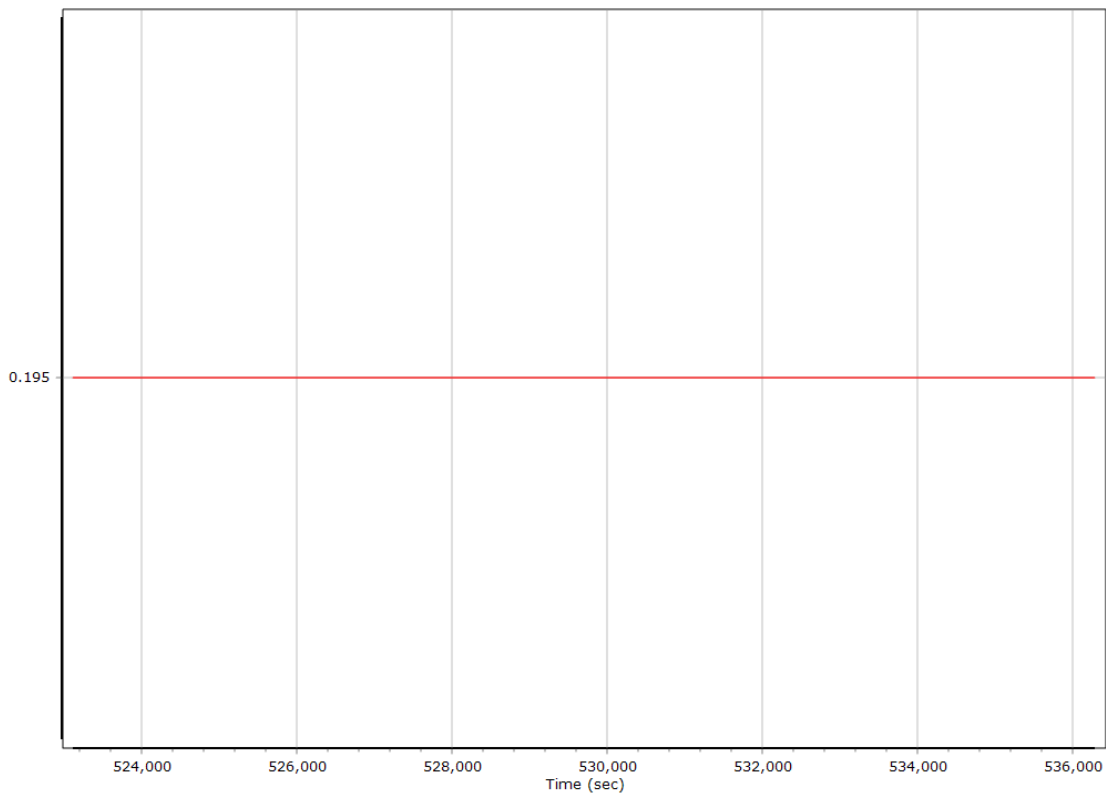
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

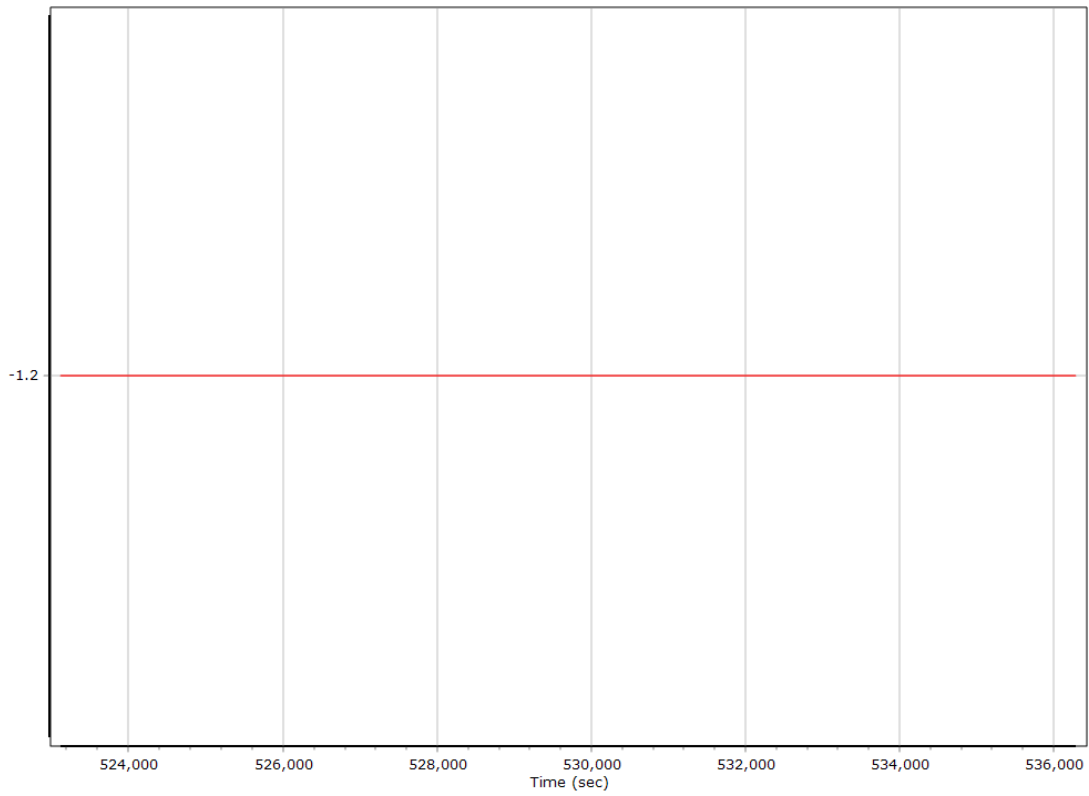
X Reference-Primary GNSS Lever Arm (m)



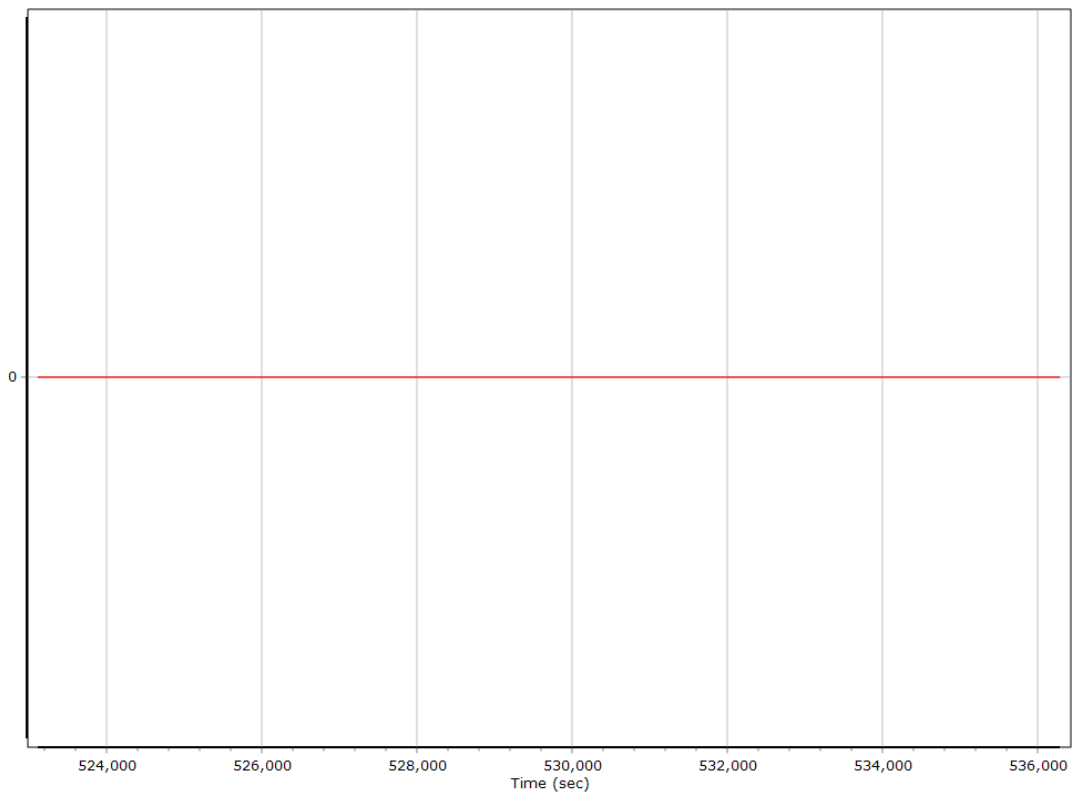
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



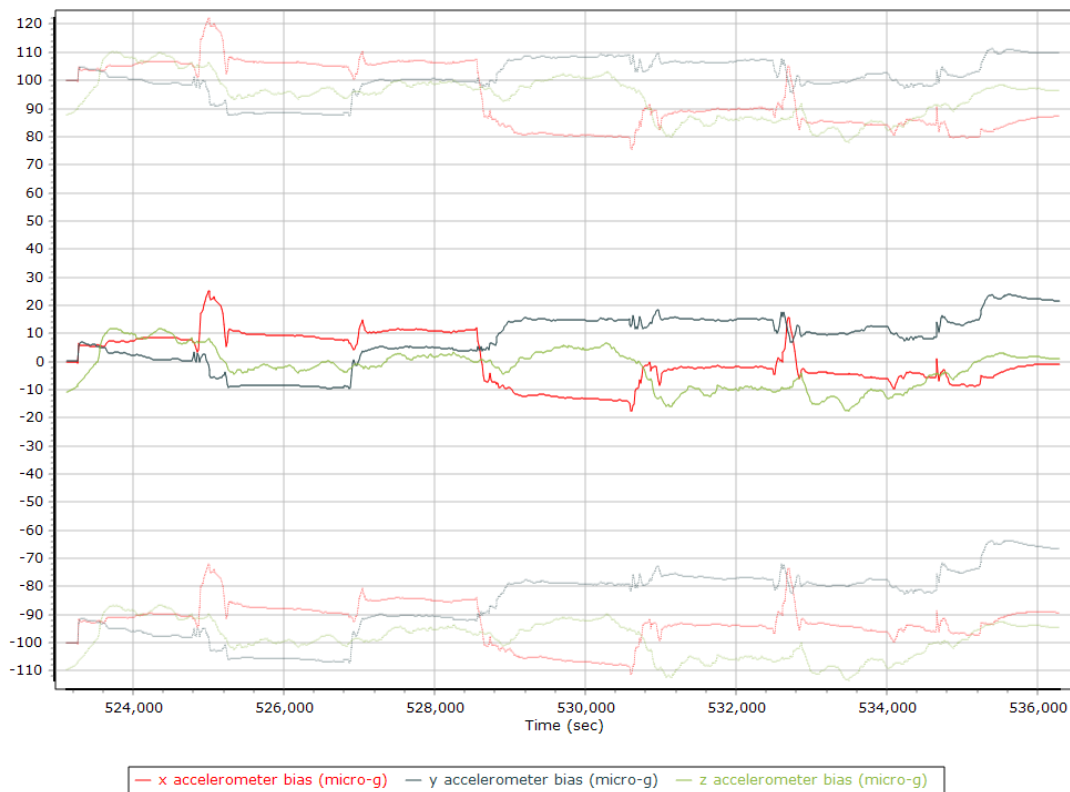
Reference-Primary GNSS Lever Arm Figure of Merit



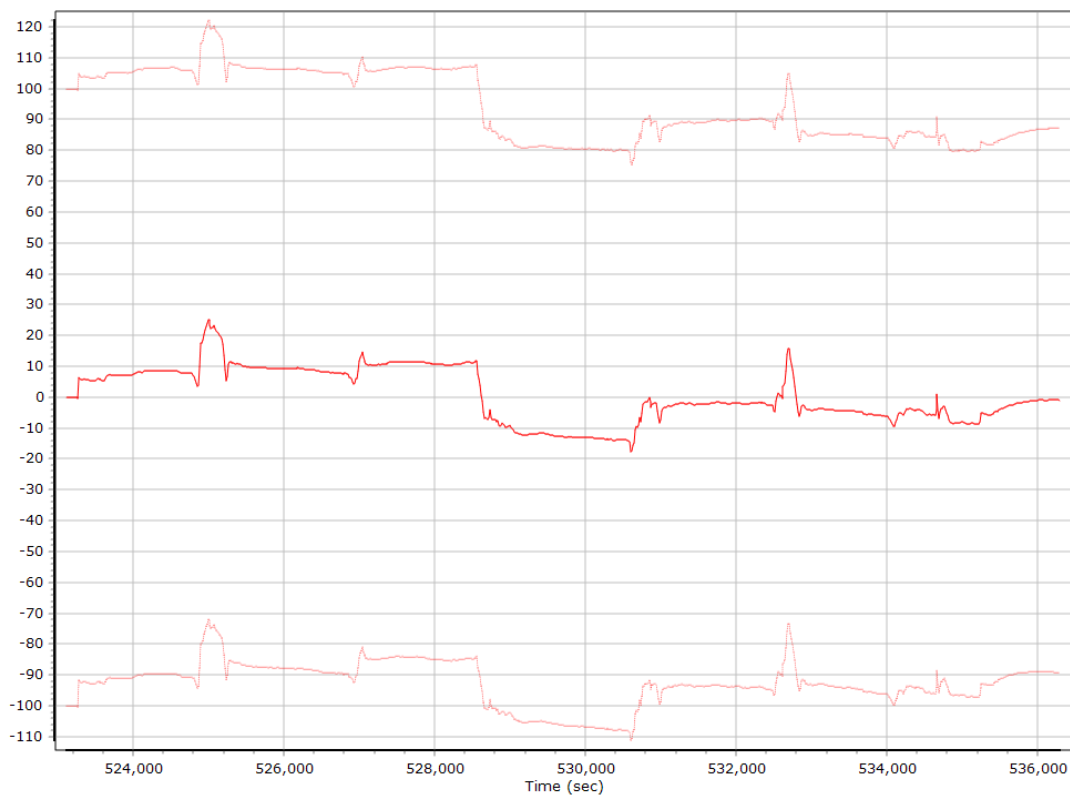
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

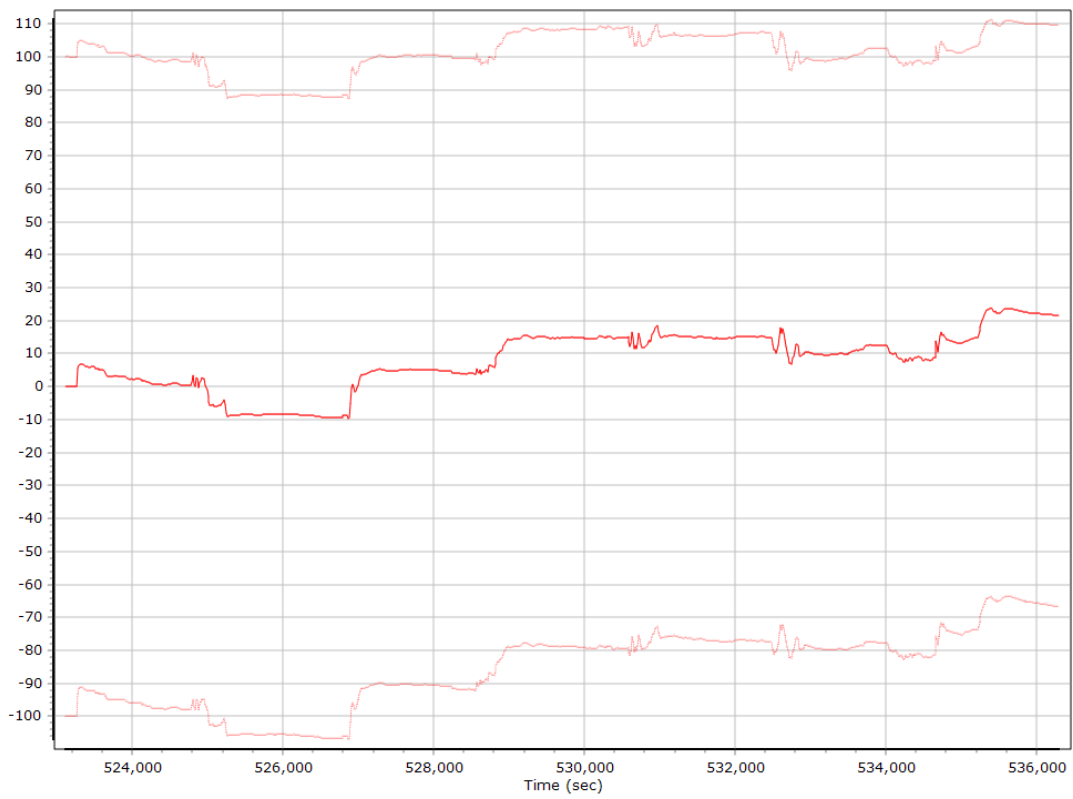
Accelerometer Bias (micro-g)



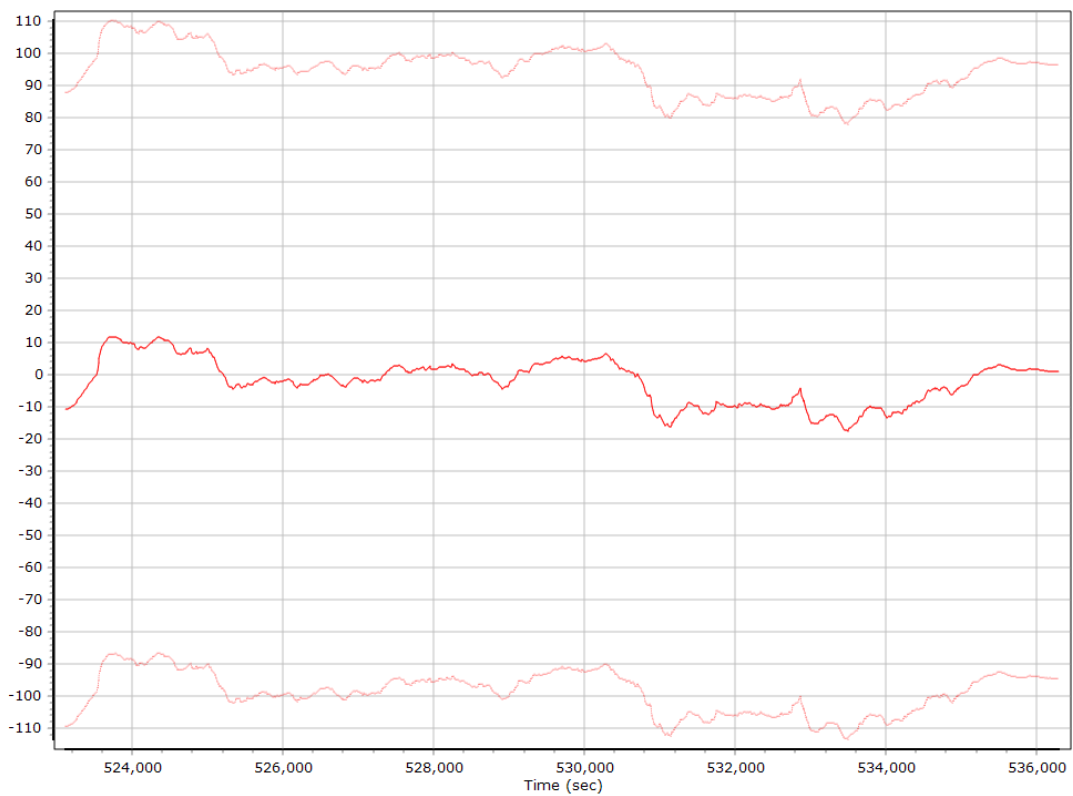
X Accelerometer Bias (micro-g)



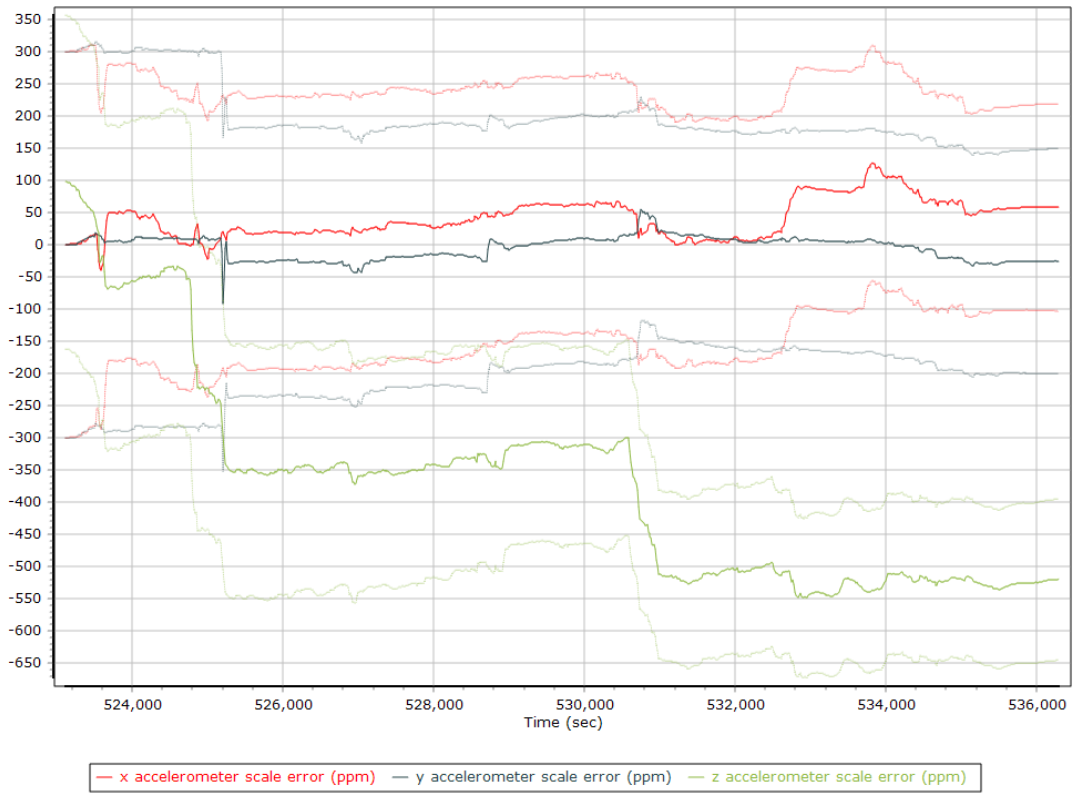
Y Accelerometer Bias (micro-g)



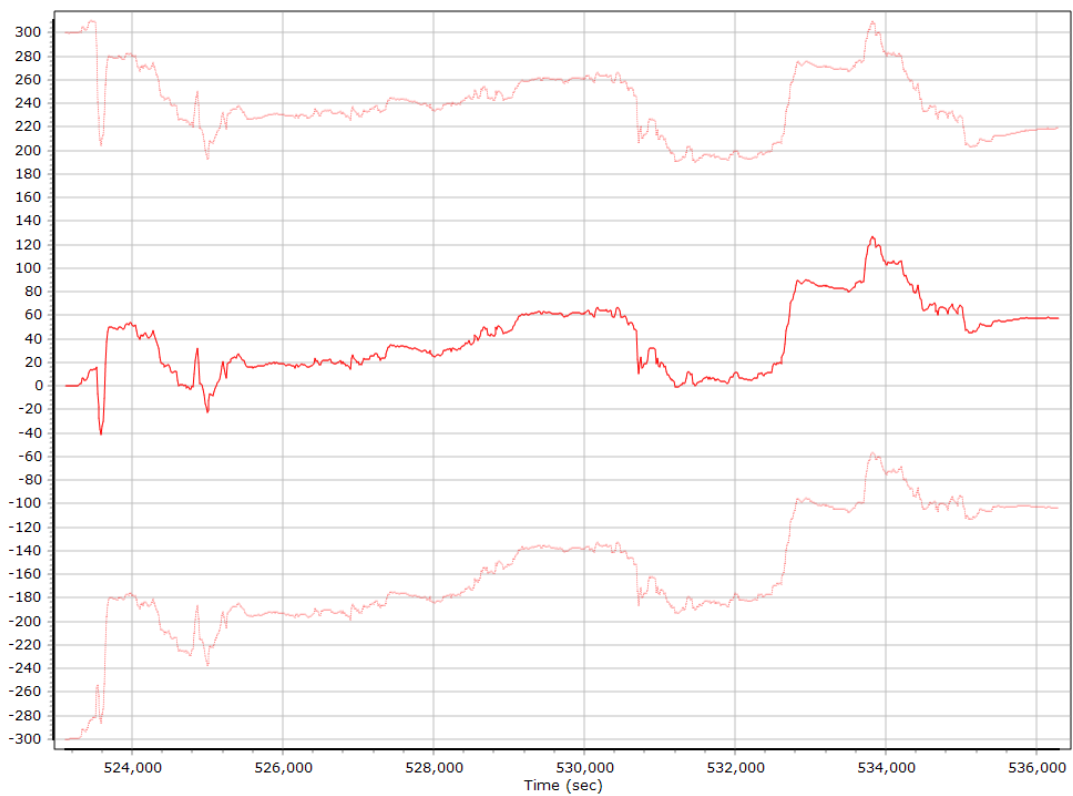
Z Accelerometer Bias (micro-g)



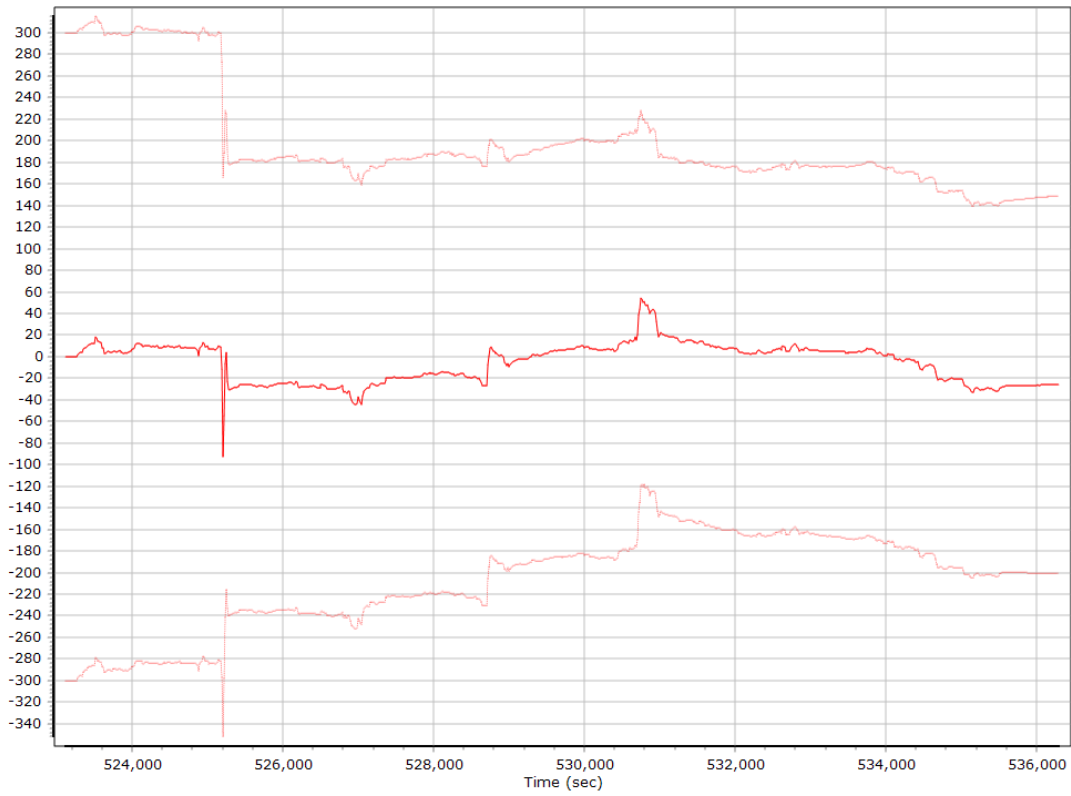
Accelerometer Scale Error (ppm)



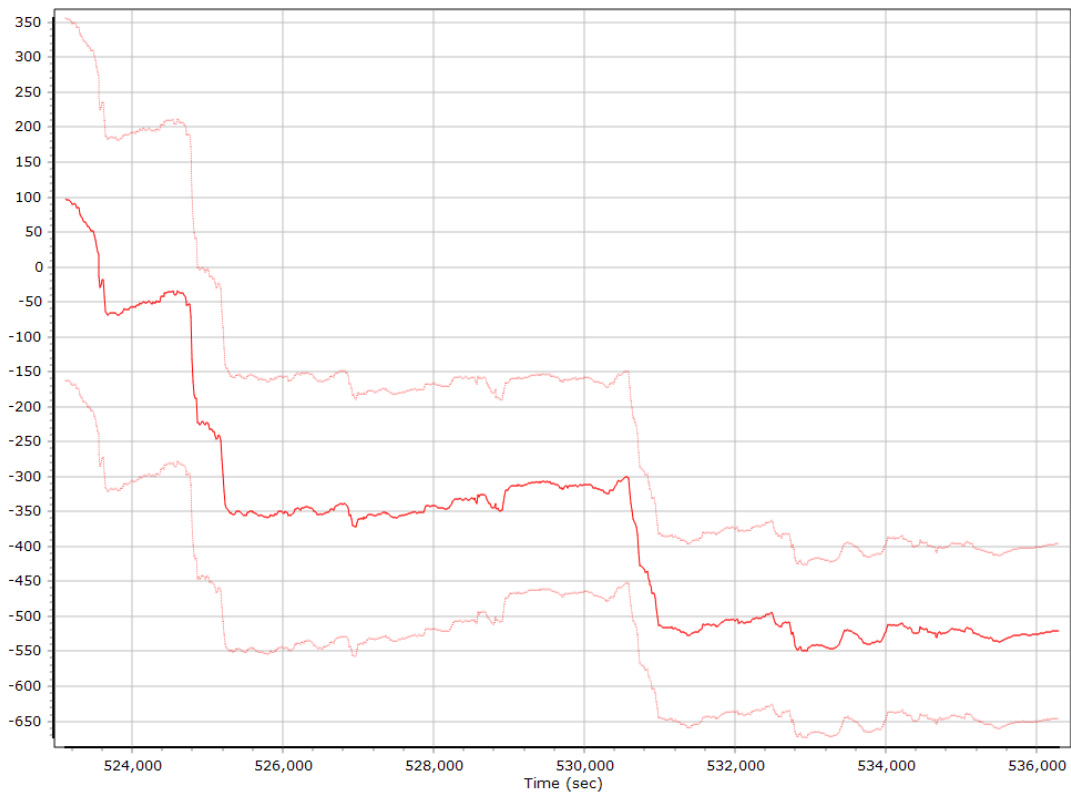
X Accelerometer Scale Error (ppm)



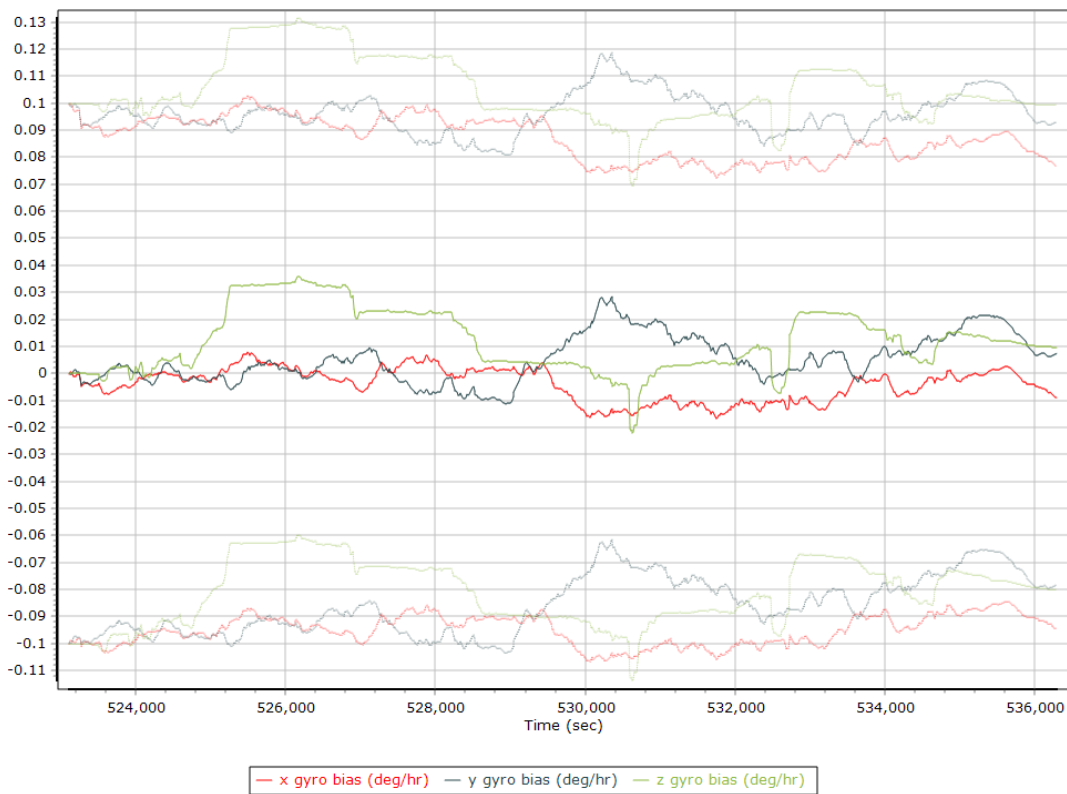
Y Accelerometer Scale Error (ppm)



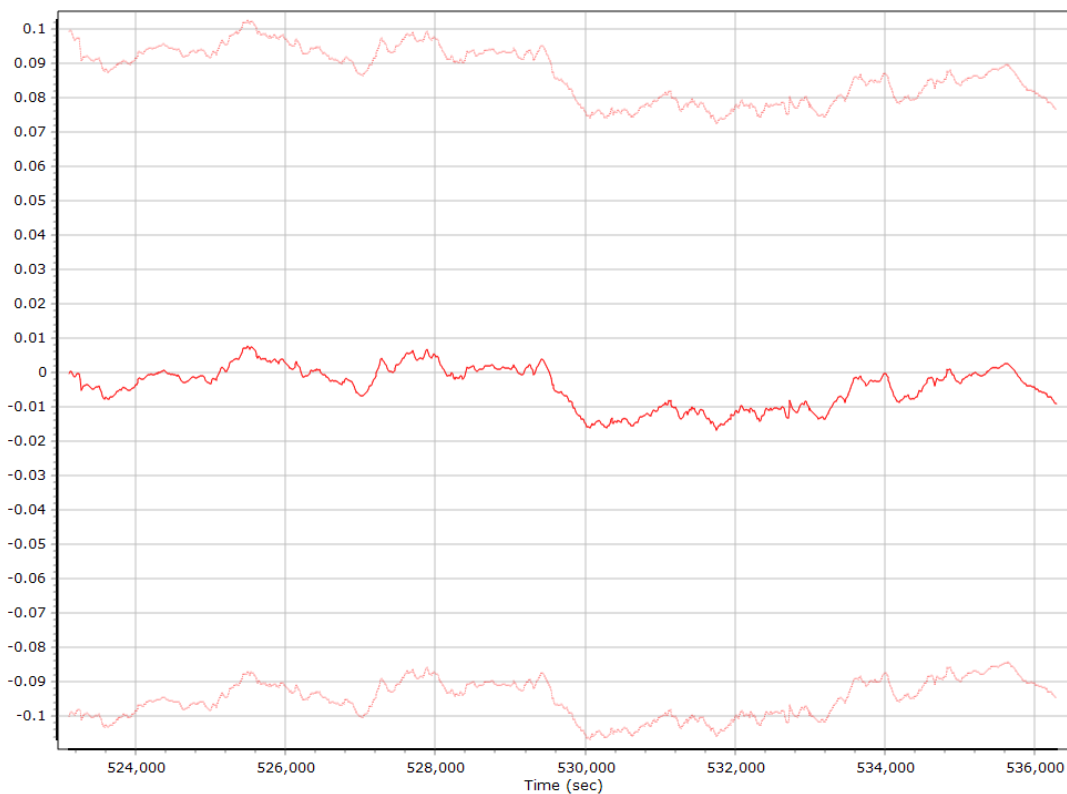
Z Accelerometer Scale Error (ppm)



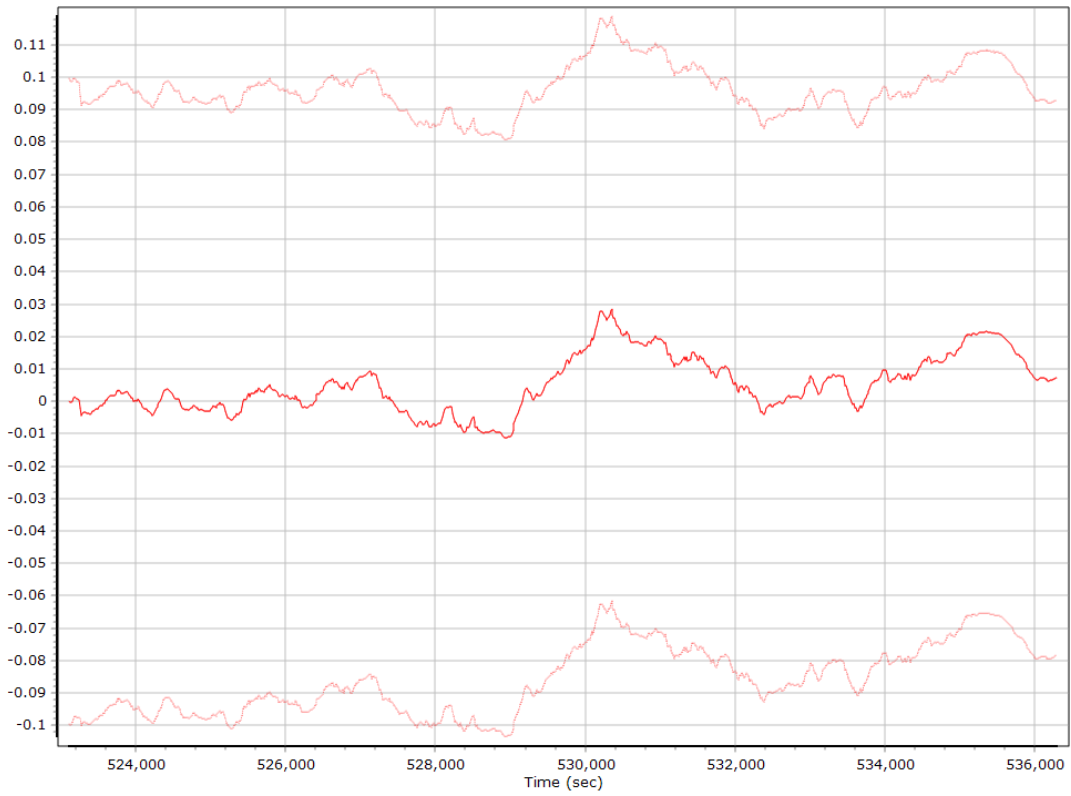
Gyro Bias (deg/h)



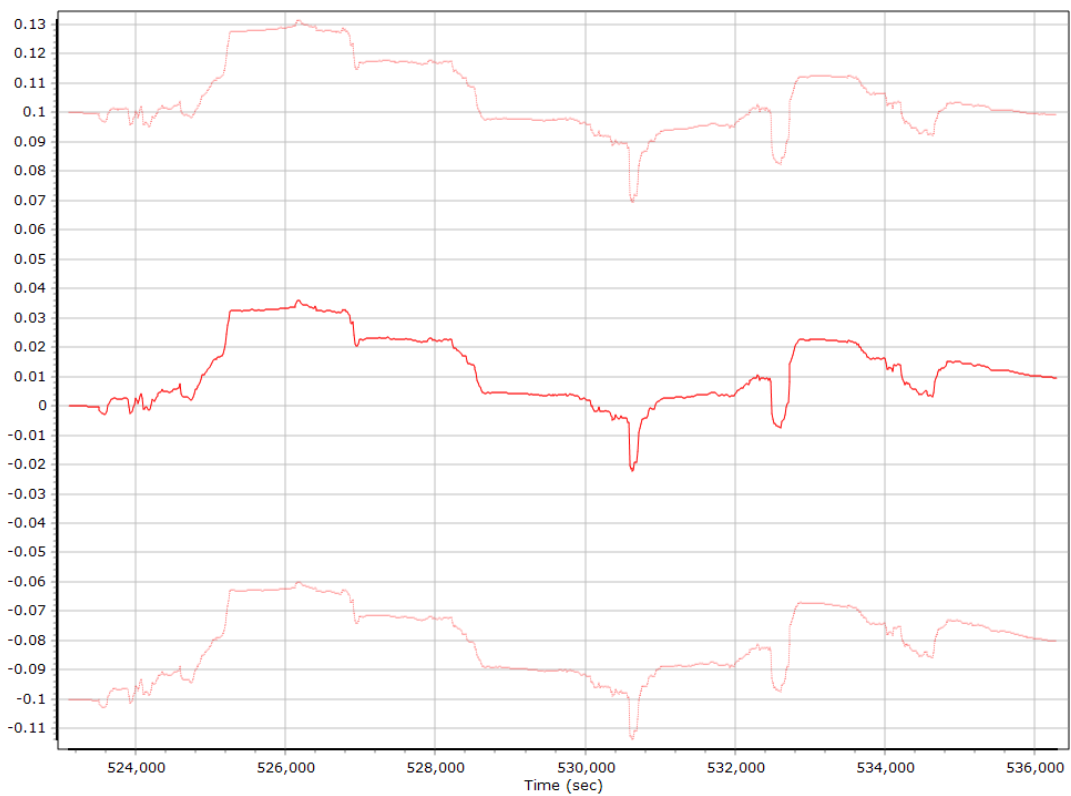
X Gyro Bias (deg/h)



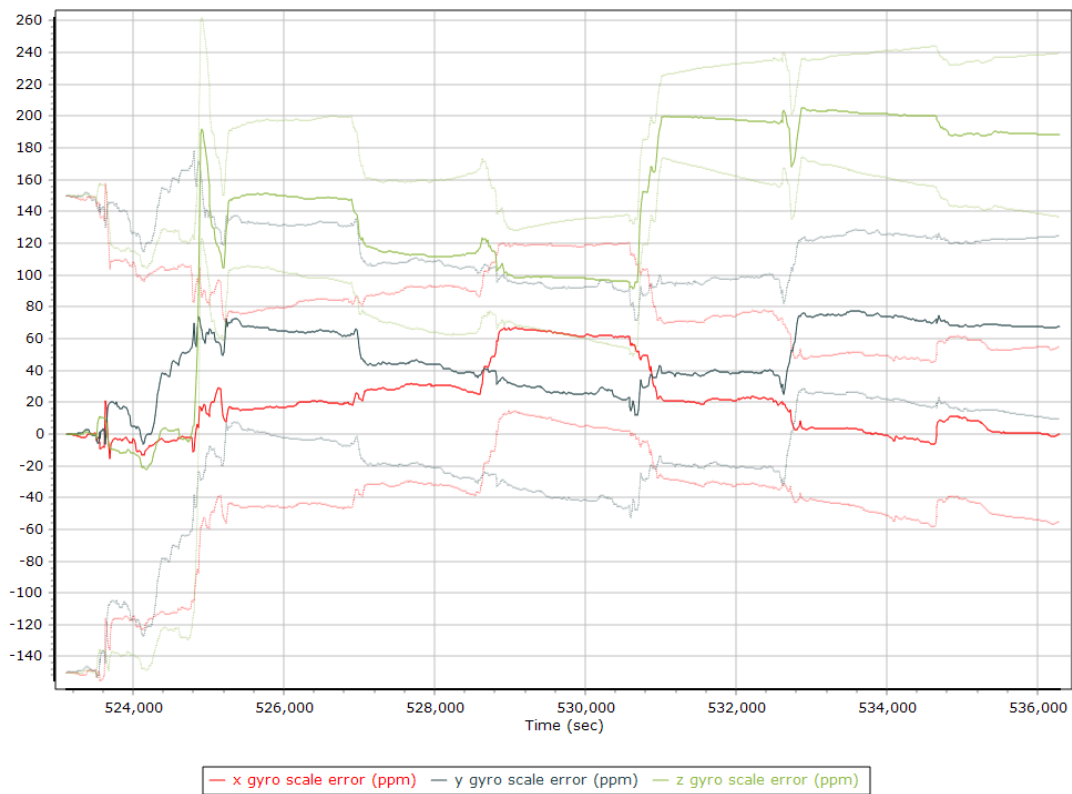
Y Gyro Bias (deg/h)



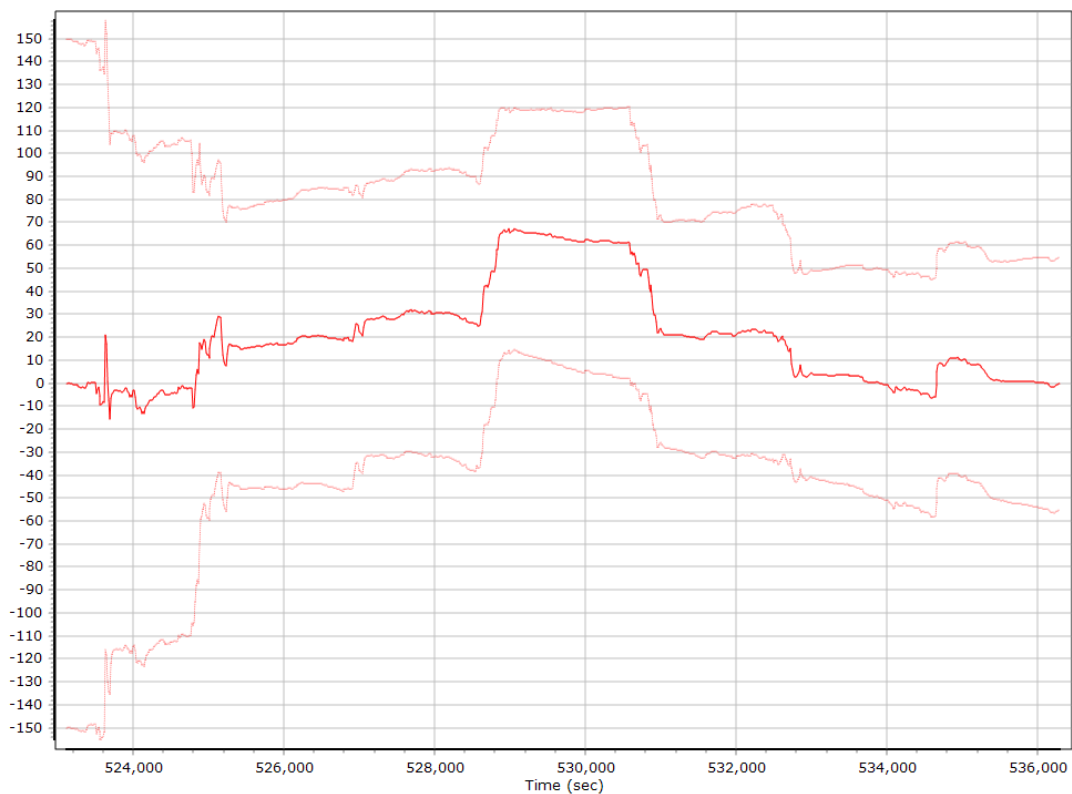
Z Gyro Bias (deg/h)



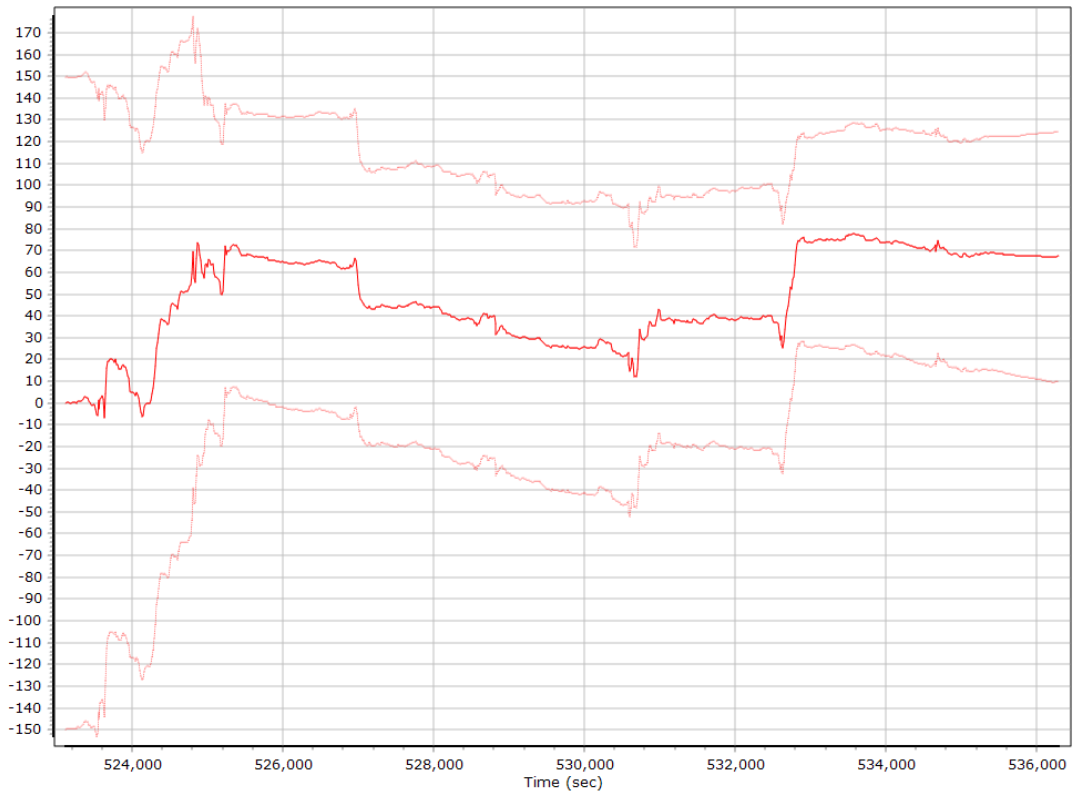
Gyro Scale Error (ppm)



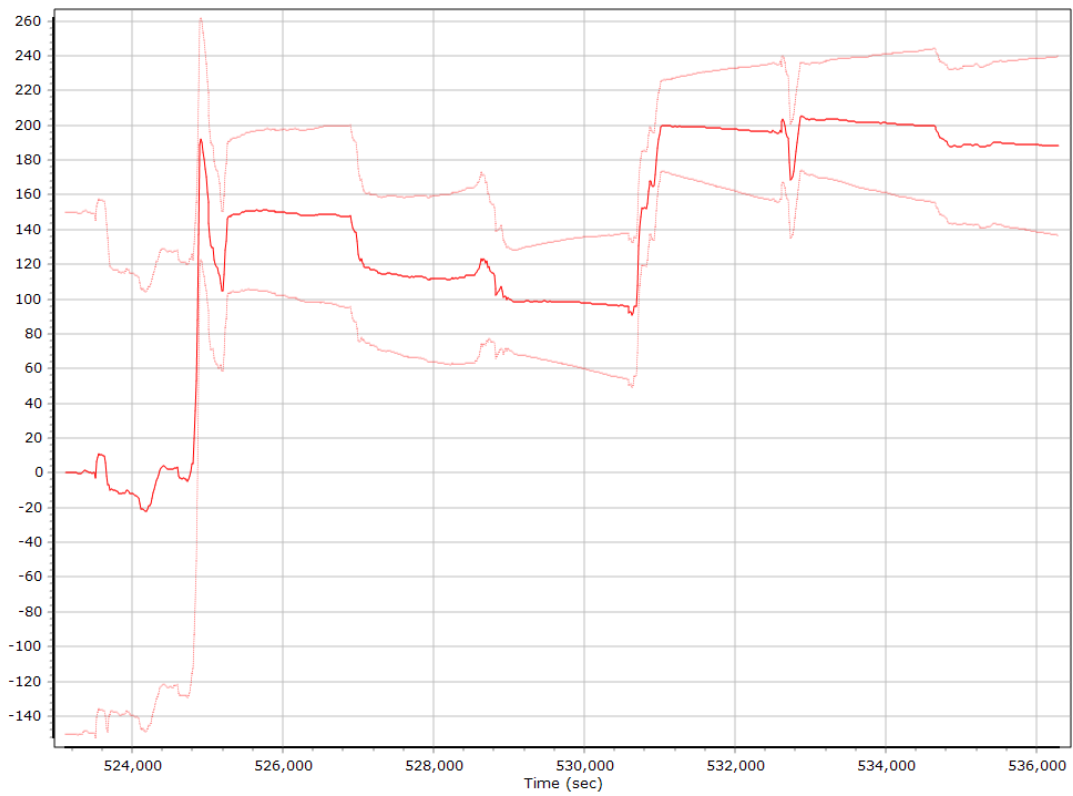
X Gyro Scale Error (ppm)



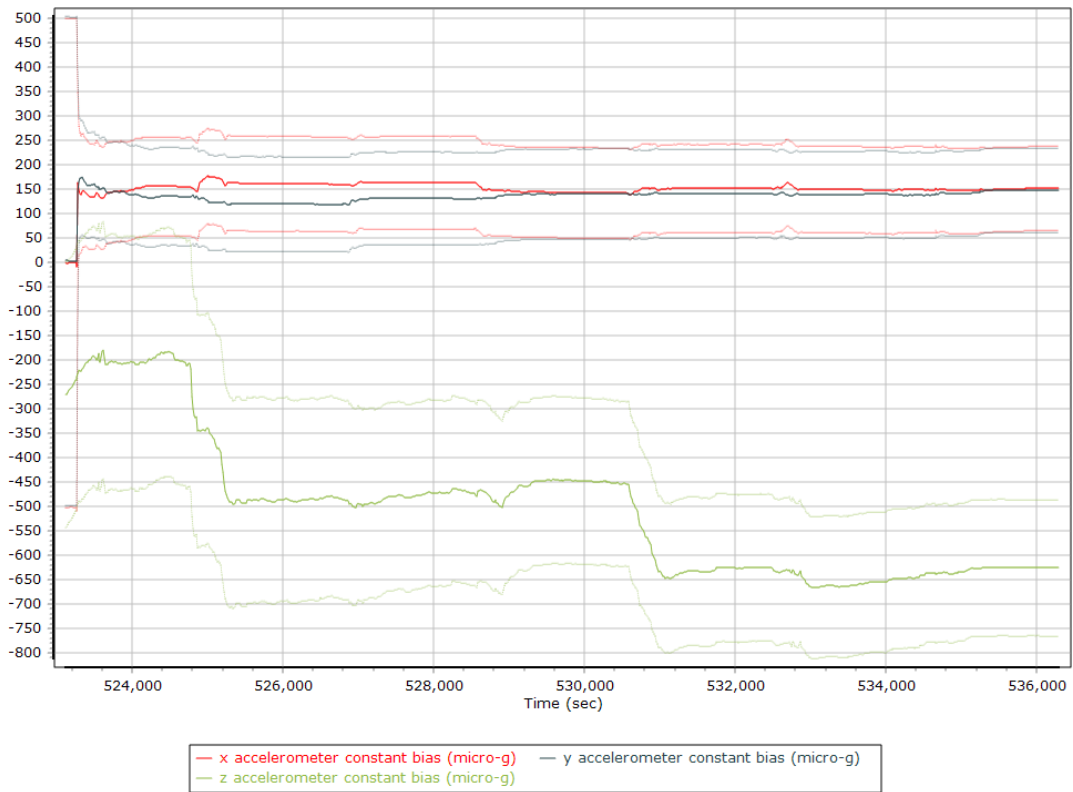
Y Gyro Scale Error (ppm)



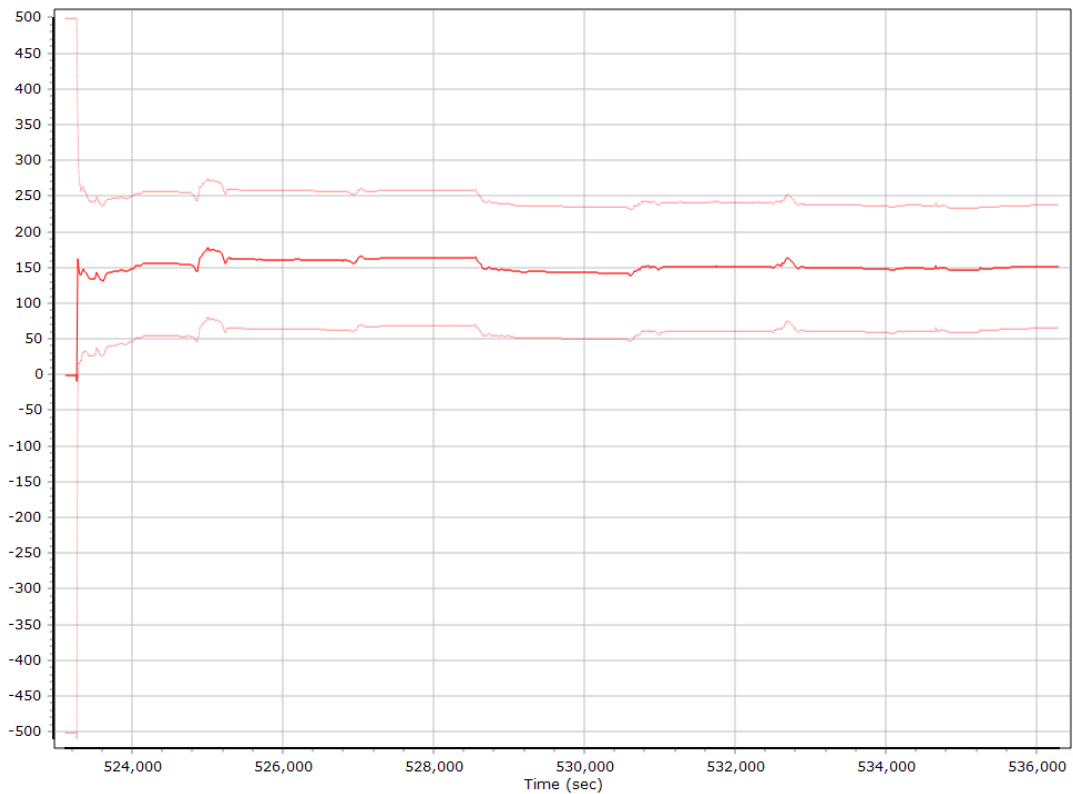
Z Gyro Scale Error (ppm)



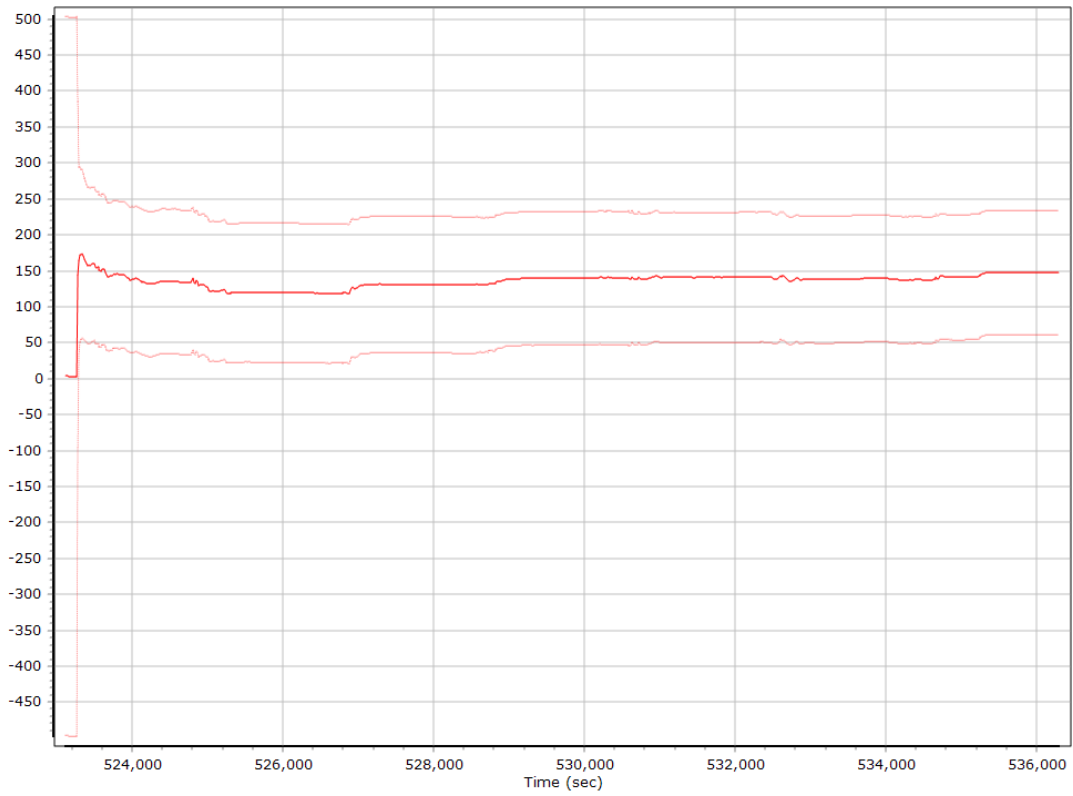
Forward Processed Estimated Constant Errors, Reference Frame Accelerometer Bias (micro-g)



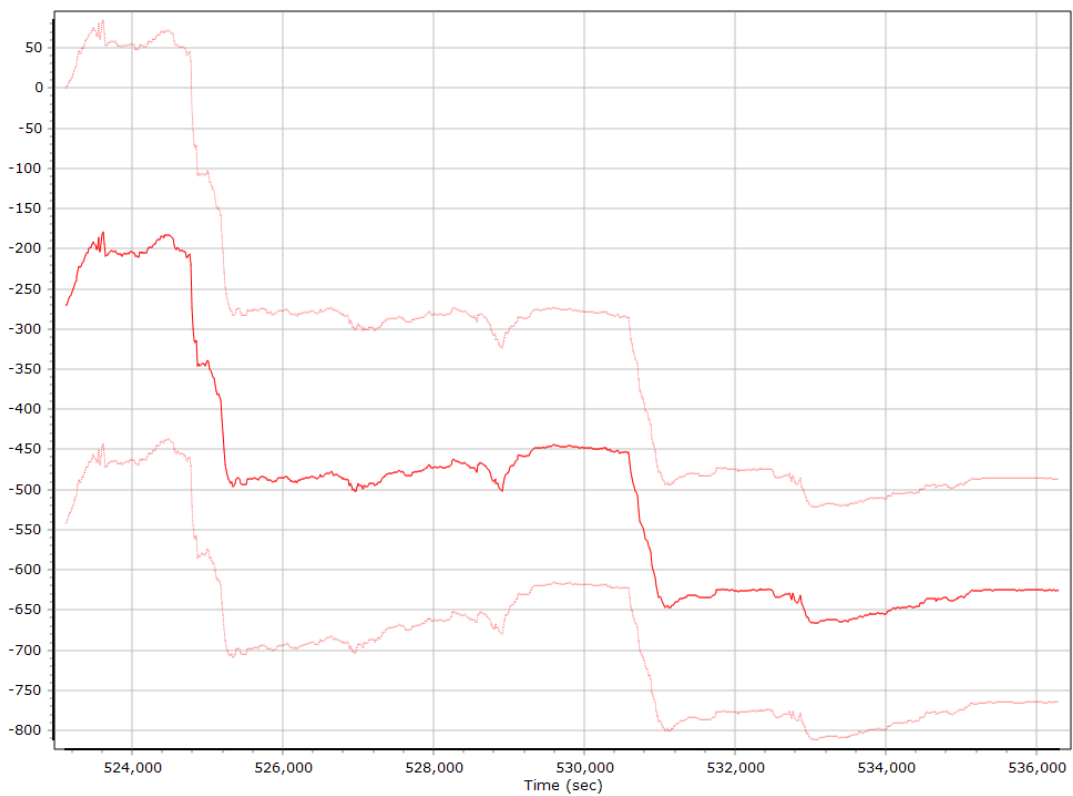
X Accelerometer Bias (micro-g)



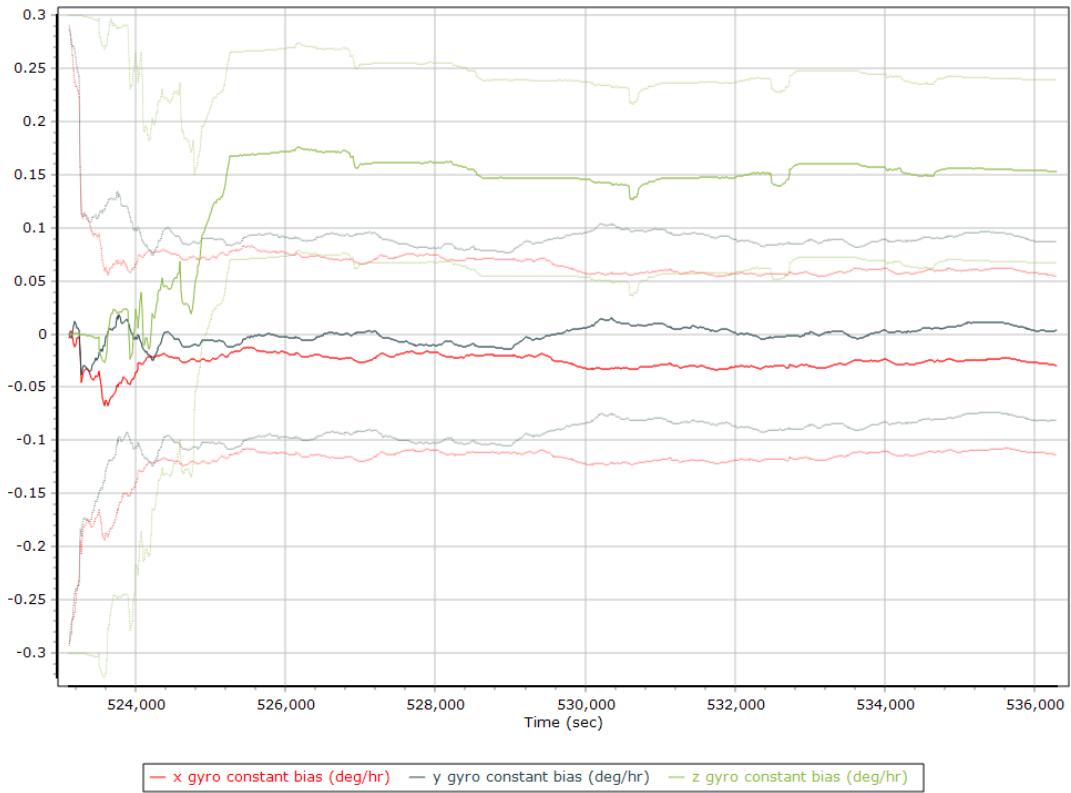
Y Accelerometer Bias (micro-g)



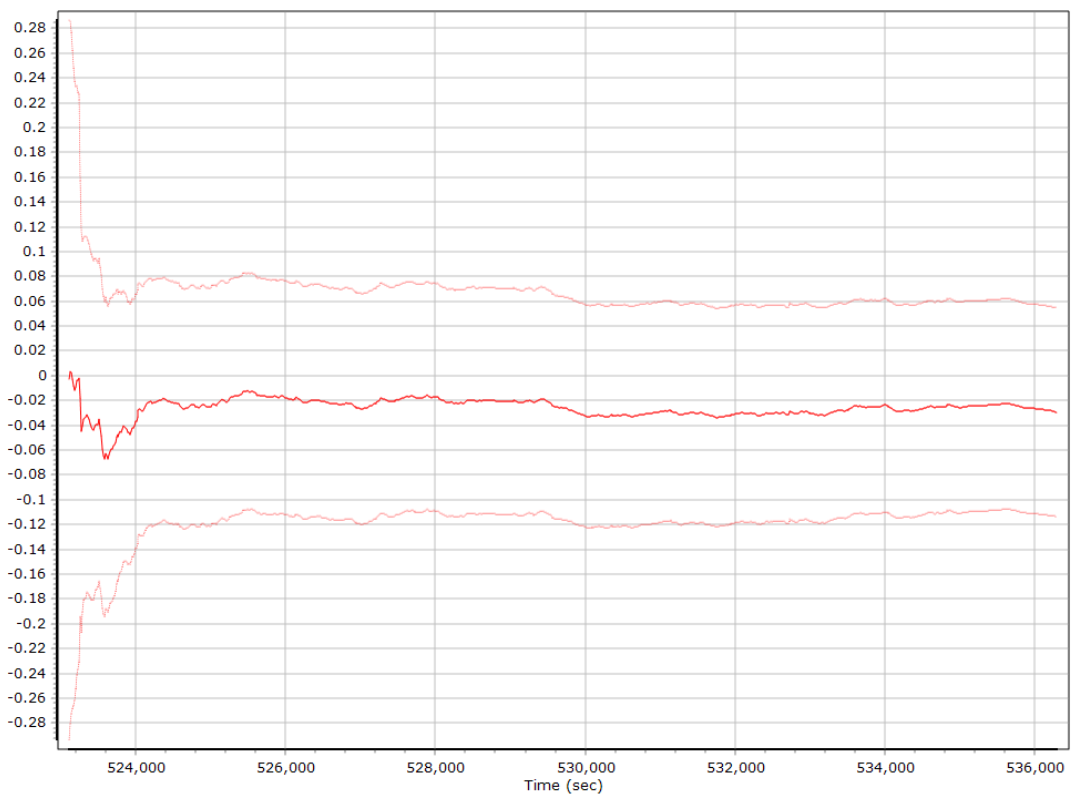
Z Accelerometer Bias (micro-g)



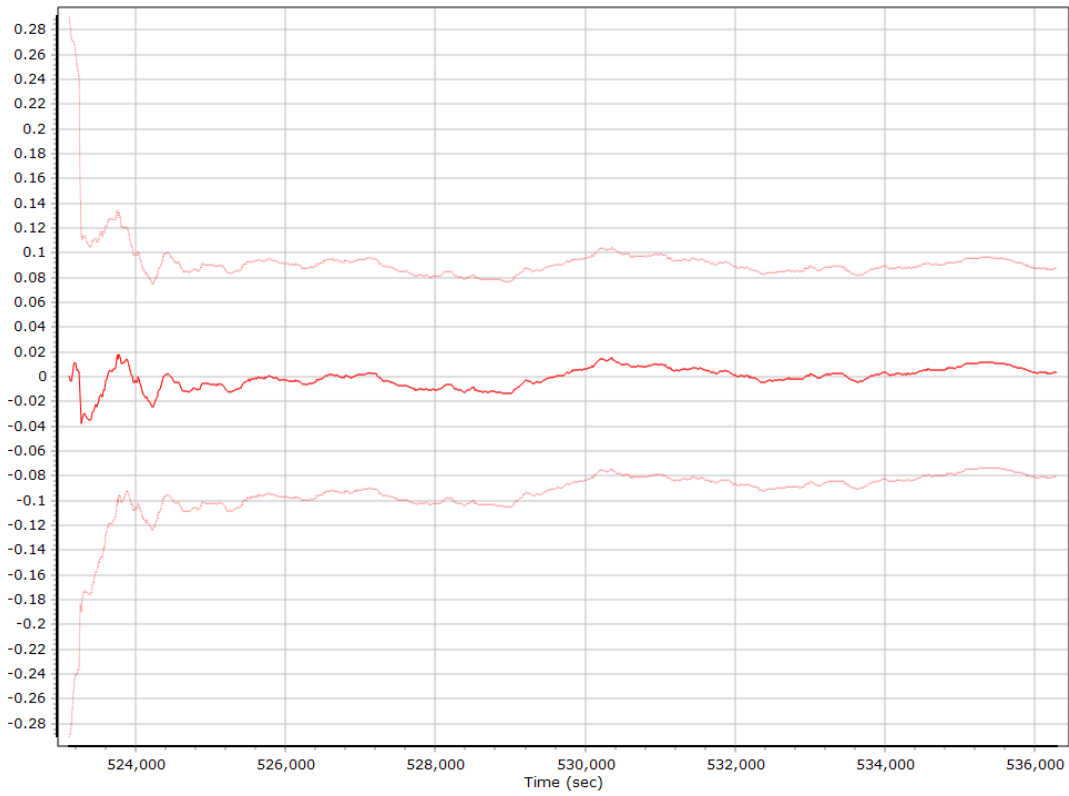
Gyro Bias (deg/h)



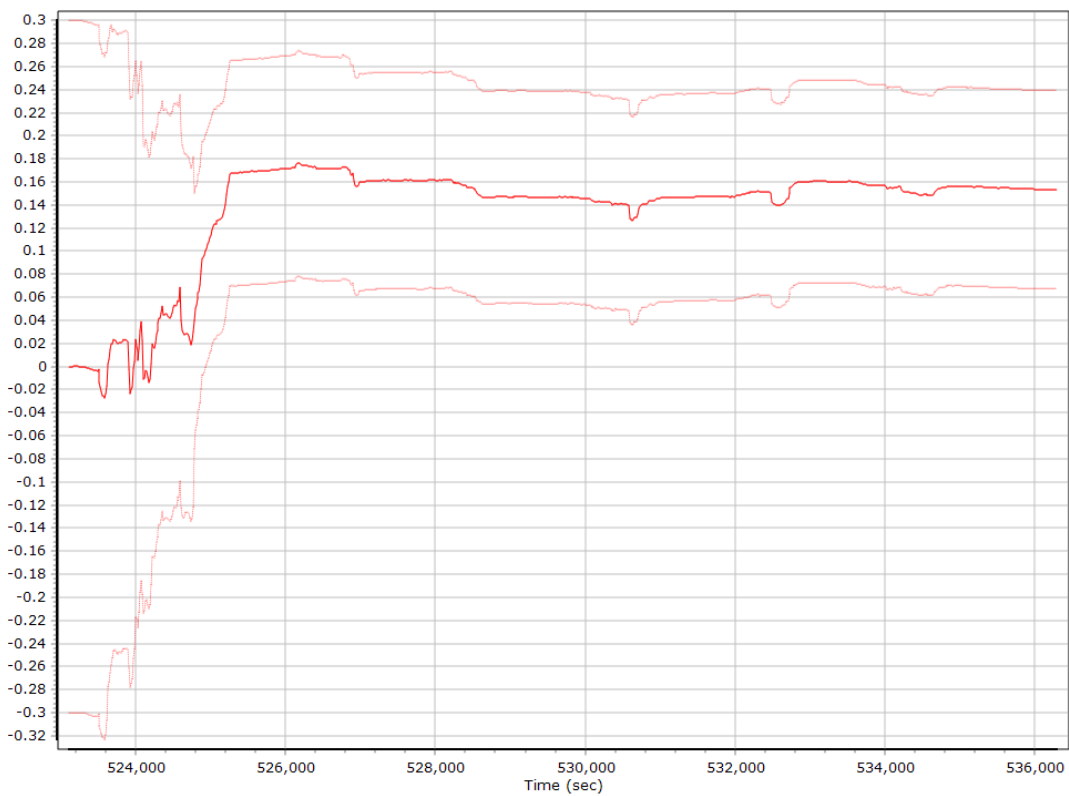
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)

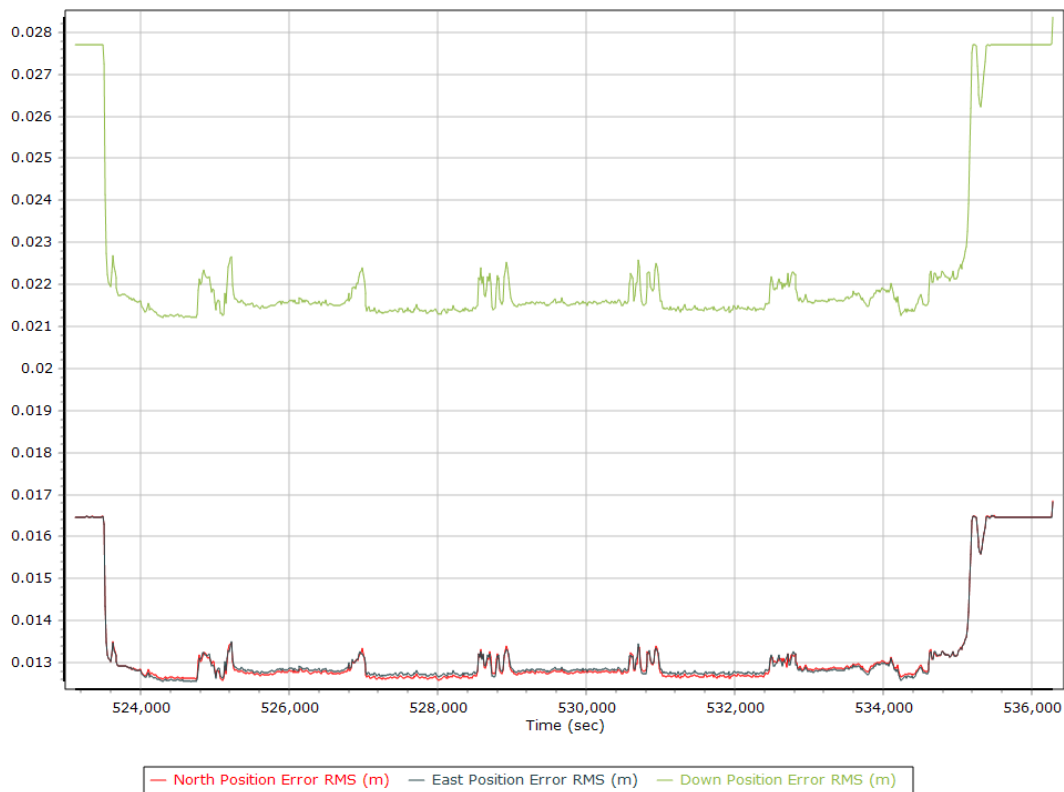


Z Gyro Bias (deg/h)

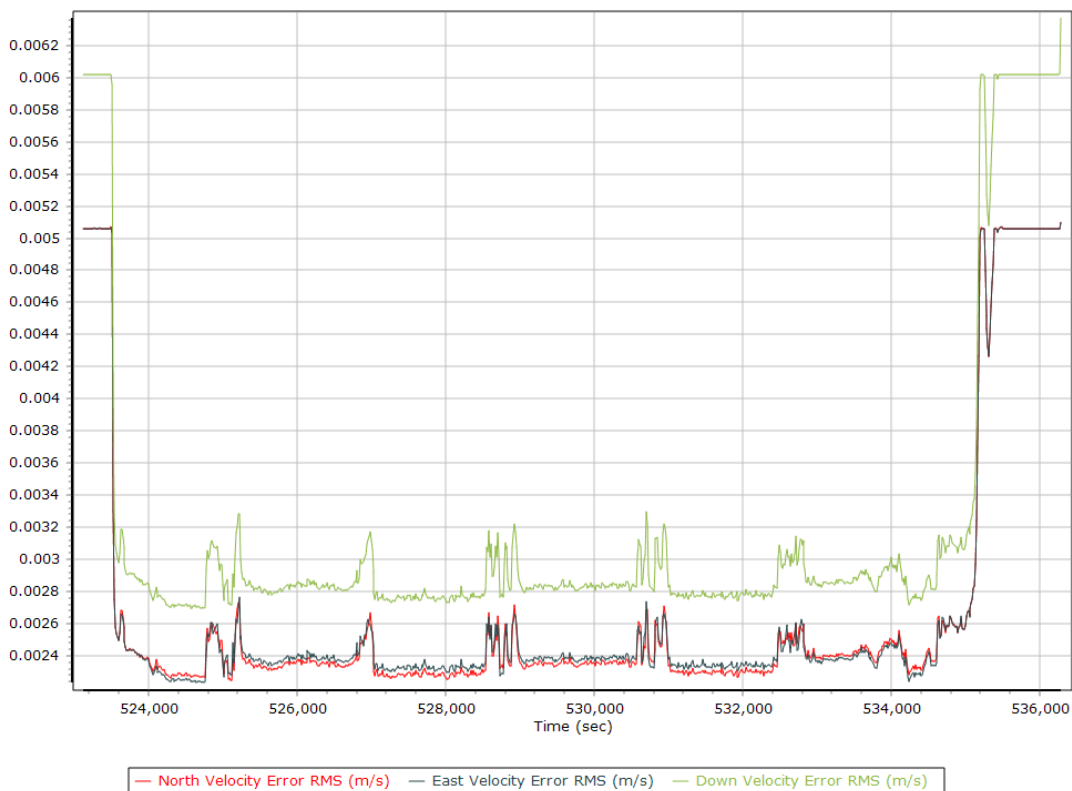


Smoothed Performance Metrics

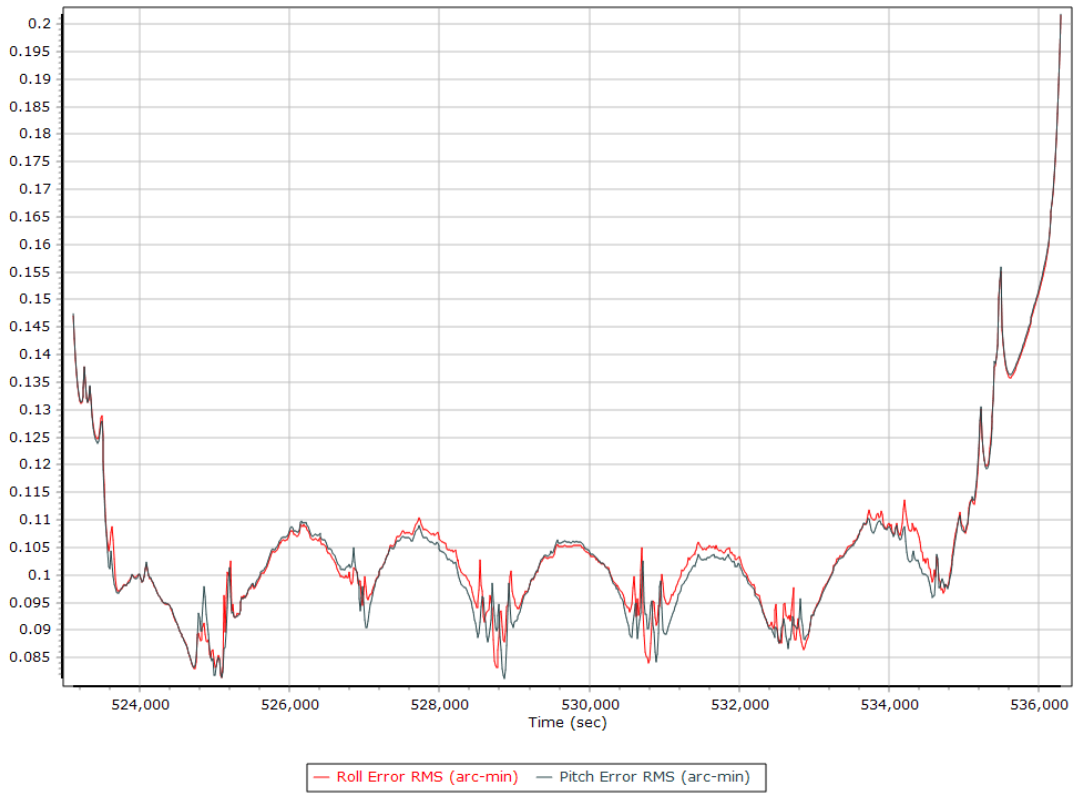
Position Error RMS (m)



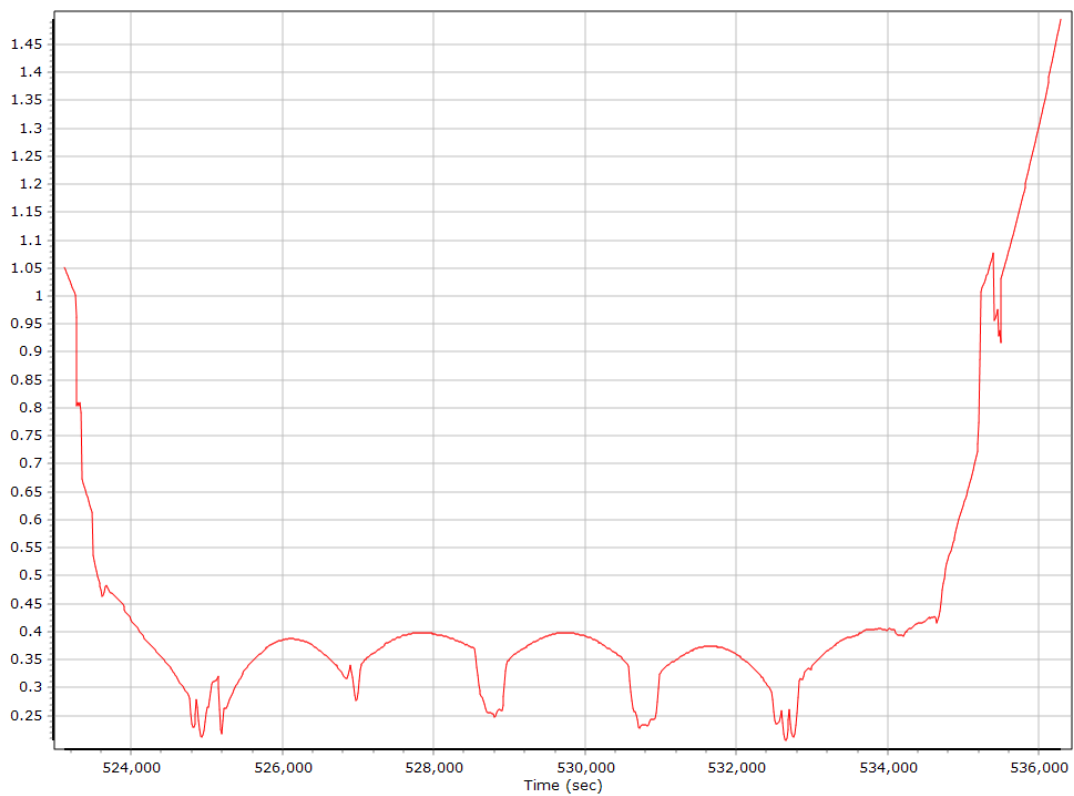
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

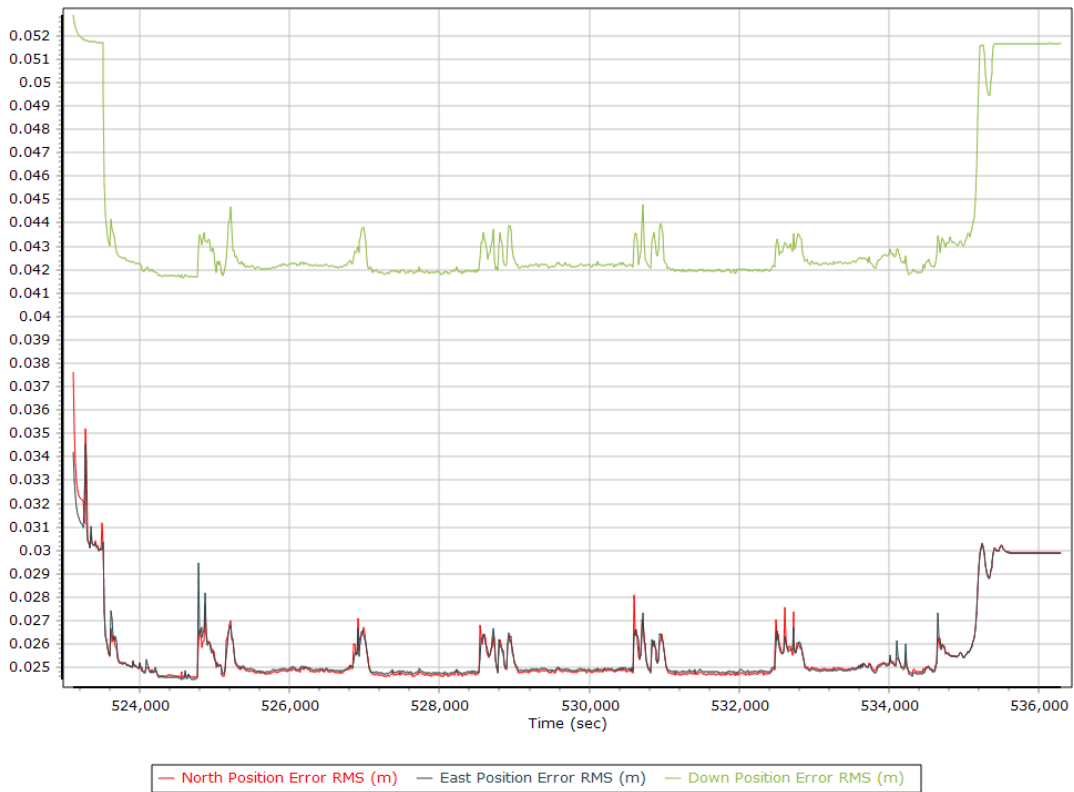


Heading Error RMS (arc-min)

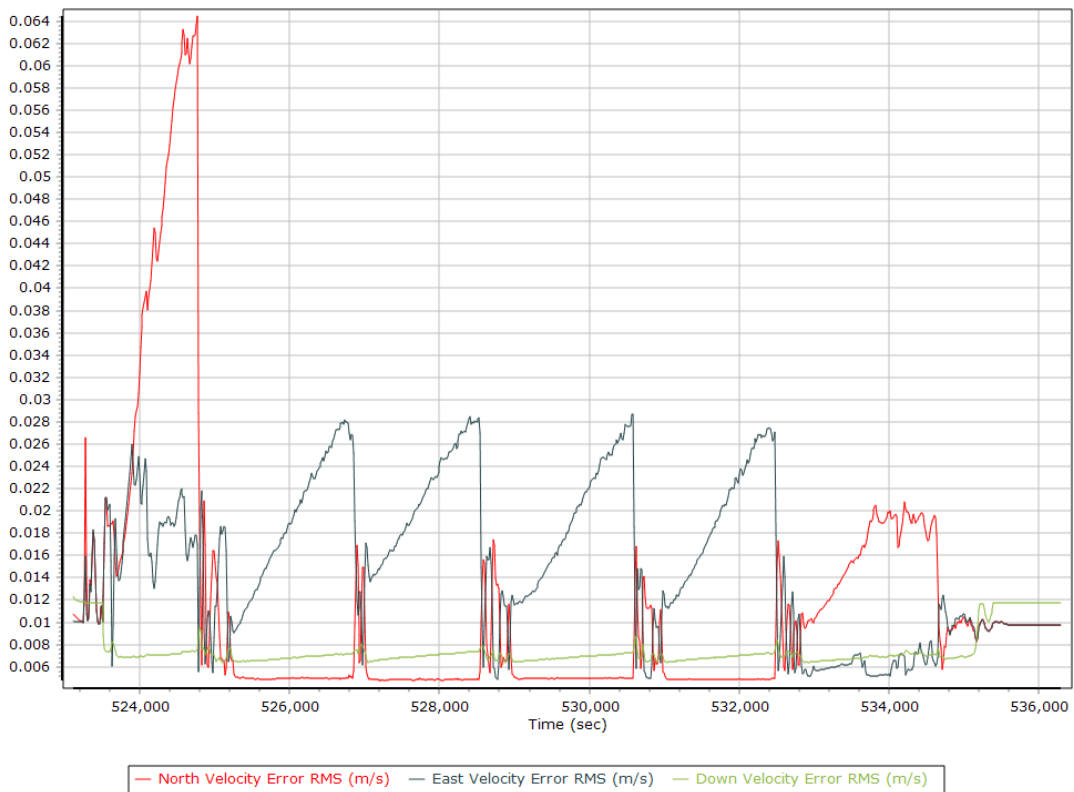


Forward Processed Performance Metrics

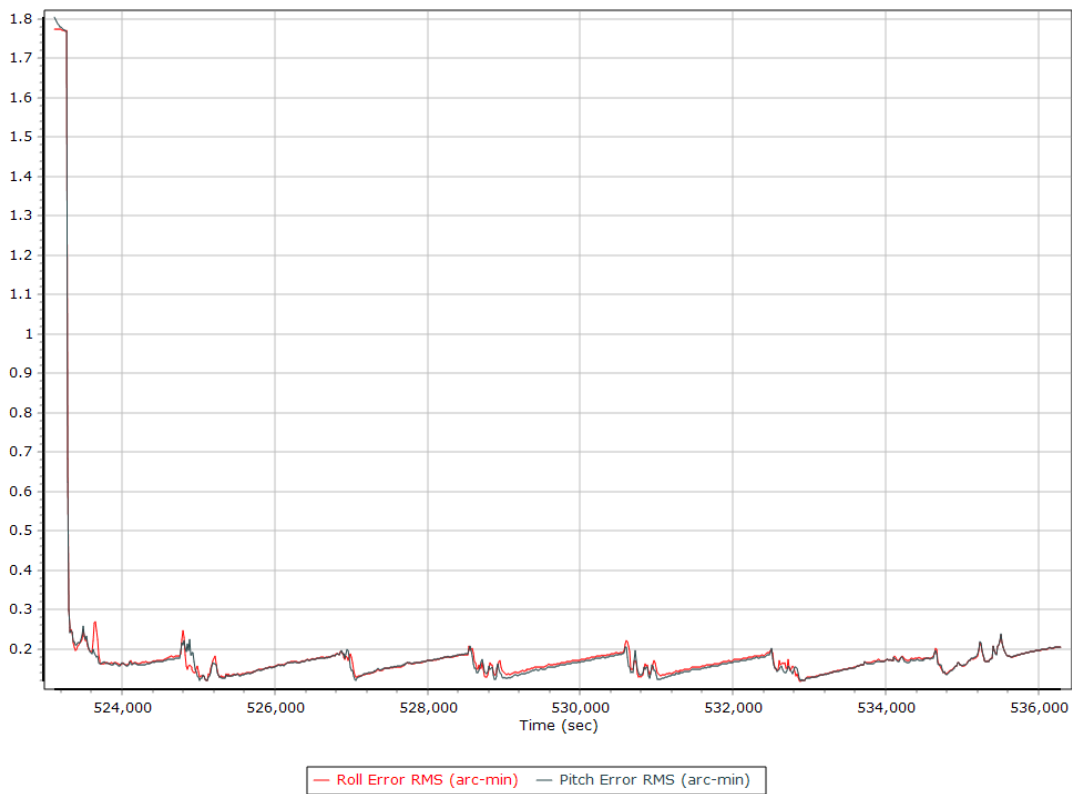
Position Error RMS (m)



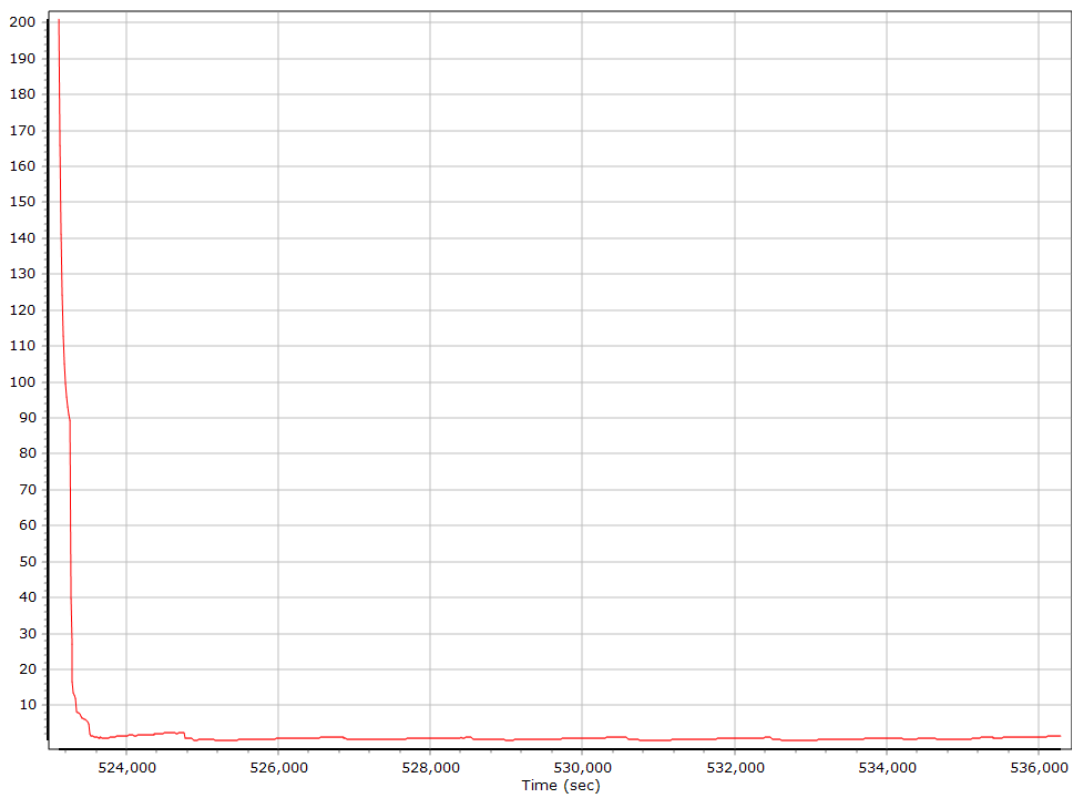
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

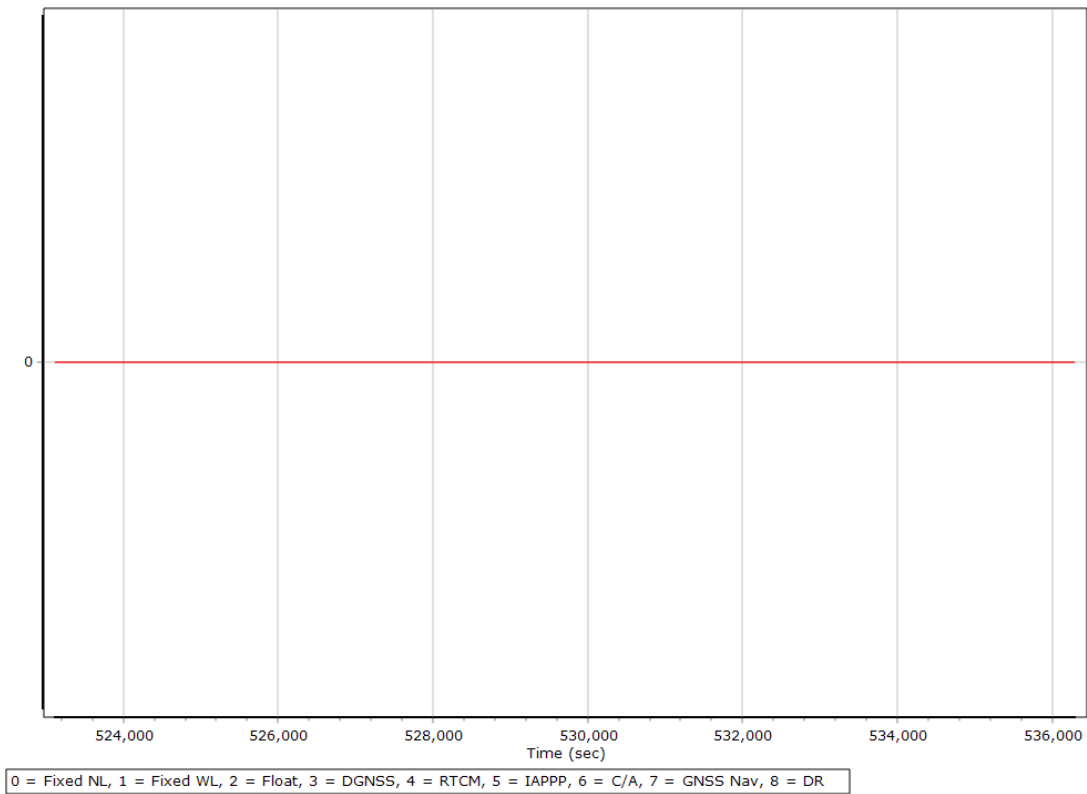


Heading Error RMS (arc-min)

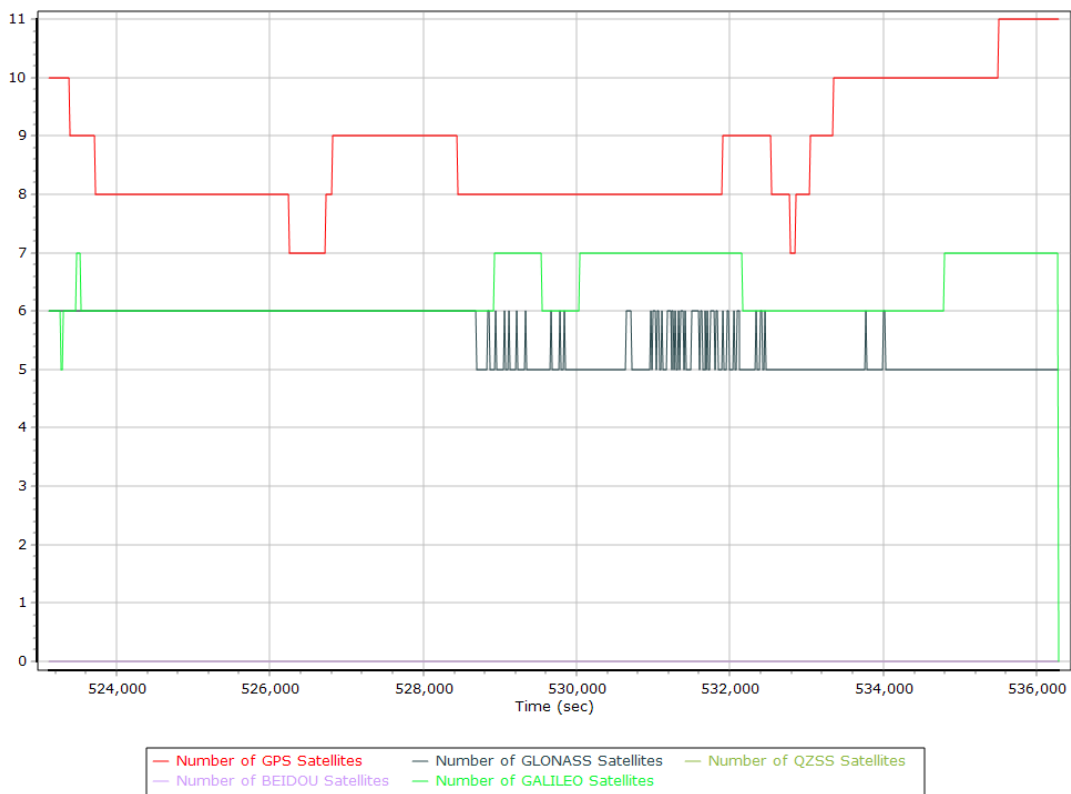


Forward Processed Solution Status

Processing Mode



Number of Satellites



Baseline Length

