

General Information

Mission Information

Project name	220516_C_5060475_nad2011_FINAL
Processing date	2022-05-25 14:33:21
Mission date	2022-05-17 01:34:17
Mission duration	04:30:23.865
Processing mode	IN-Fusion PP-RTX

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N7881
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
Ephm1370.22g	GLONASS Broadcast Ephemeris
Ephm1370.22n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_220516_C_5060475_nad2011_FINAL.out	SBET Trajectory File

Rover Data Summary

First raw data file	survey3.pos		
Last raw data file	survey3.pos		
Start GPS week	2210		
Start time	178457.135 (5/17/2022 1:34:17 AM)		
End time	194408.868 (5/17/2022 6:00:08 AM)		
Start of fine alignment	178988.381 (5/17/2022 1:43:08 AM)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	Event 1 Input		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Reference to IMU lever arm (m)	-0.230	-0.010	-0.133
Reference to IMU mounting angles (deg)	0.000	0.000	180.000
Reference to Primary GNSS lever arm (m)	0.126	-0.066	-1.071
Reference to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

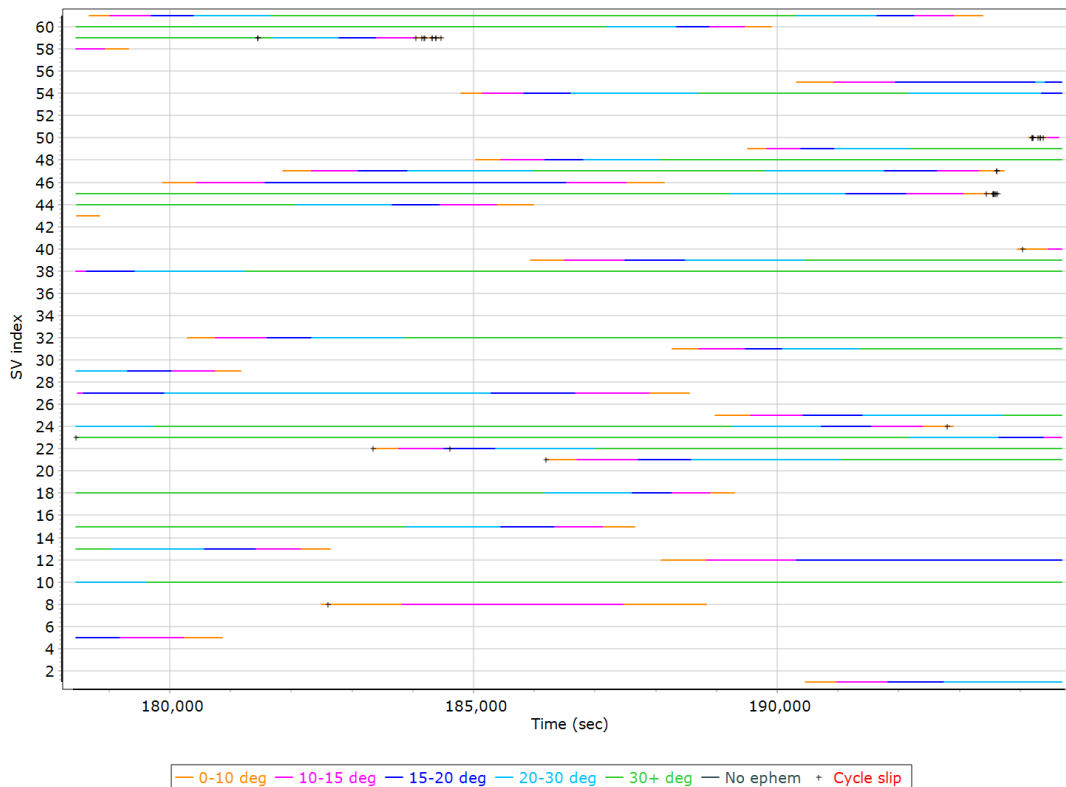
Rover Data QC

Raw IMU Import QC Summary

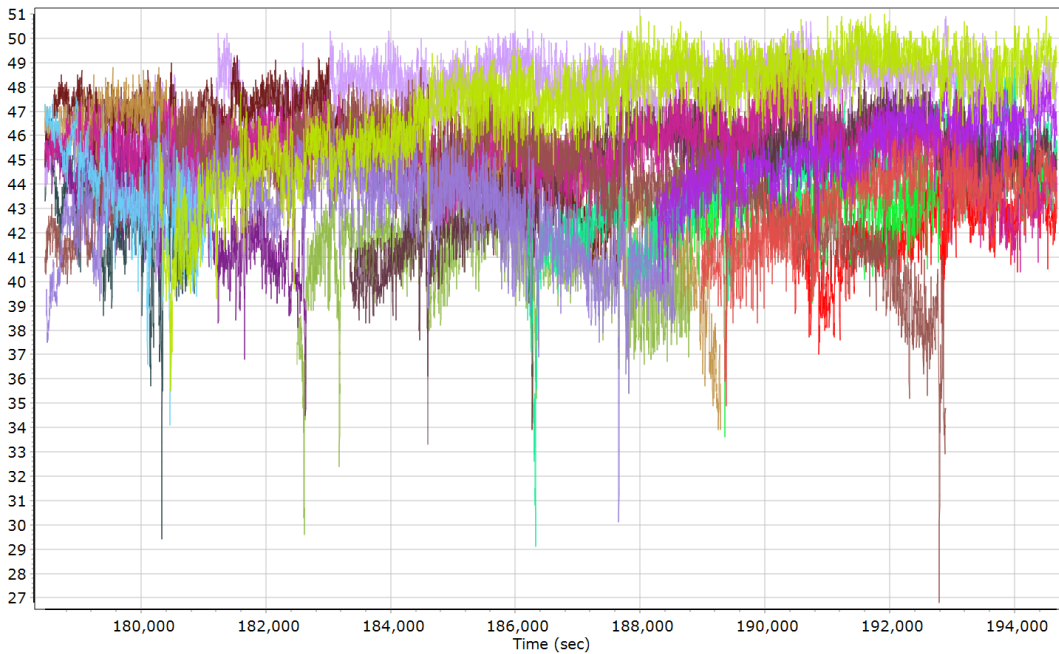
IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_220516_C_5060475_nad2011_FINAL.log
IMU Records Processed	3244210
Termination Status	Normal
IMU Anomalies	0

Primary Observables & Satellite Data

GPS/GLONASS L1 Satellite Lock/Elevation

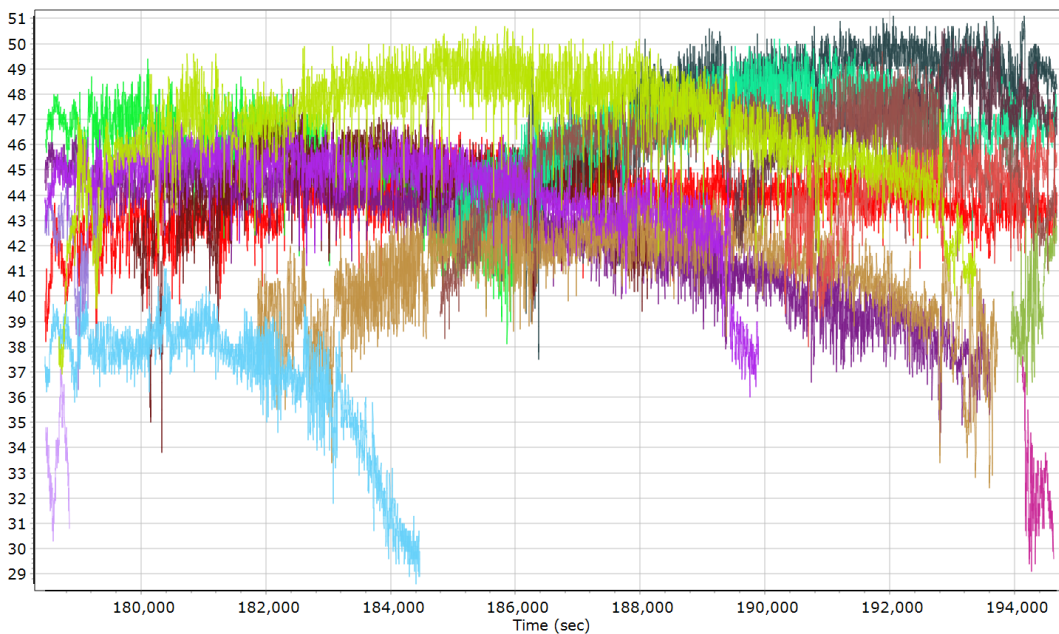


GPS L1 SNR



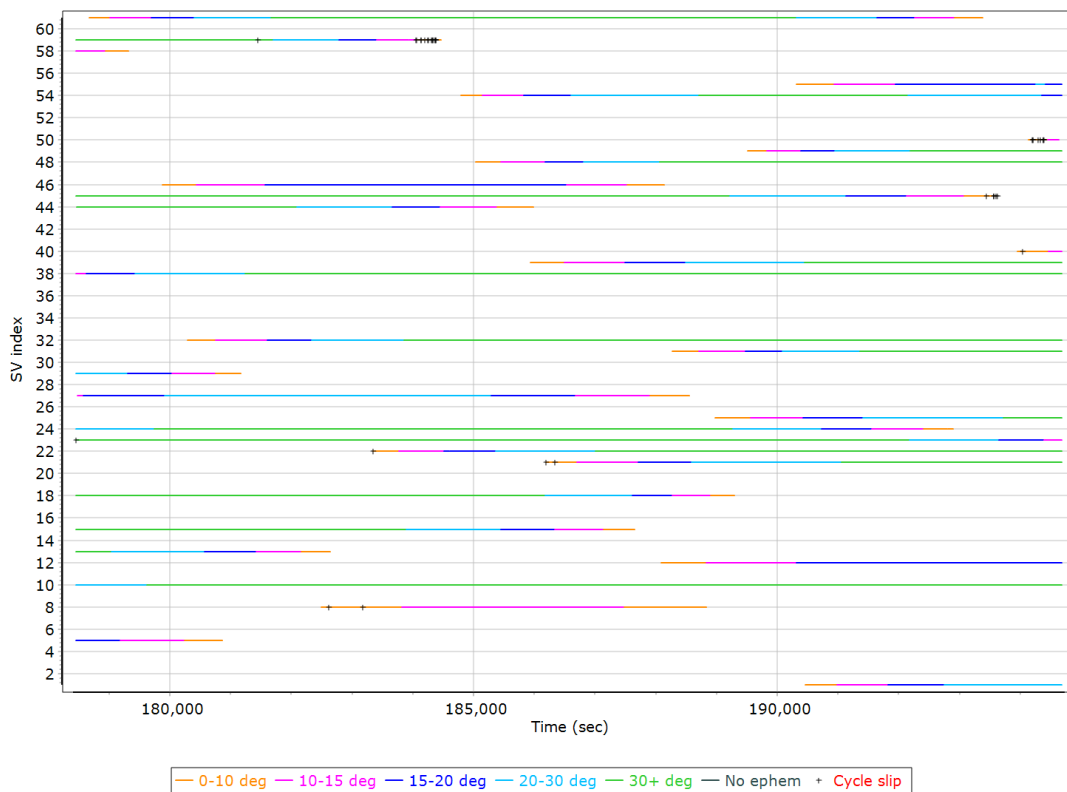
- GPS PRN 01 L1 SNR (dB/Hz)
- GPS PRN 05 L1 SNR (dB/Hz)
- GPS PRN 08 L1 SNR (dB/Hz)
- GPS PRN 10 L1 SNR (dB/Hz)
- GPS PRN 12 L1 SNR (dB/Hz)
- GPS PRN 13 L1 SNR (dB/Hz)
- GPS PRN 15 L1 SNR (dB/Hz)
- GPS PRN 18 L1 SNR (dB/Hz)
- GPS PRN 21 L1 SNR (dB/Hz)
- GPS PRN 22 L1 SNR (dB/Hz)
- GPS PRN 23 L1 SNR (dB/Hz)
- GPS PRN 24 L1 SNR (dB/Hz)
- GPS PRN 25 L1 SNR (dB/Hz)
- GPS PRN 27 L1 SNR (dB/Hz)
- GPS PRN 29 L1 SNR (dB/Hz)
- GPS PRN 31 L1 SNR (dB/Hz)
- GPS PRN 32 L1 SNR (dB/Hz)

GLONASS L1 SNR

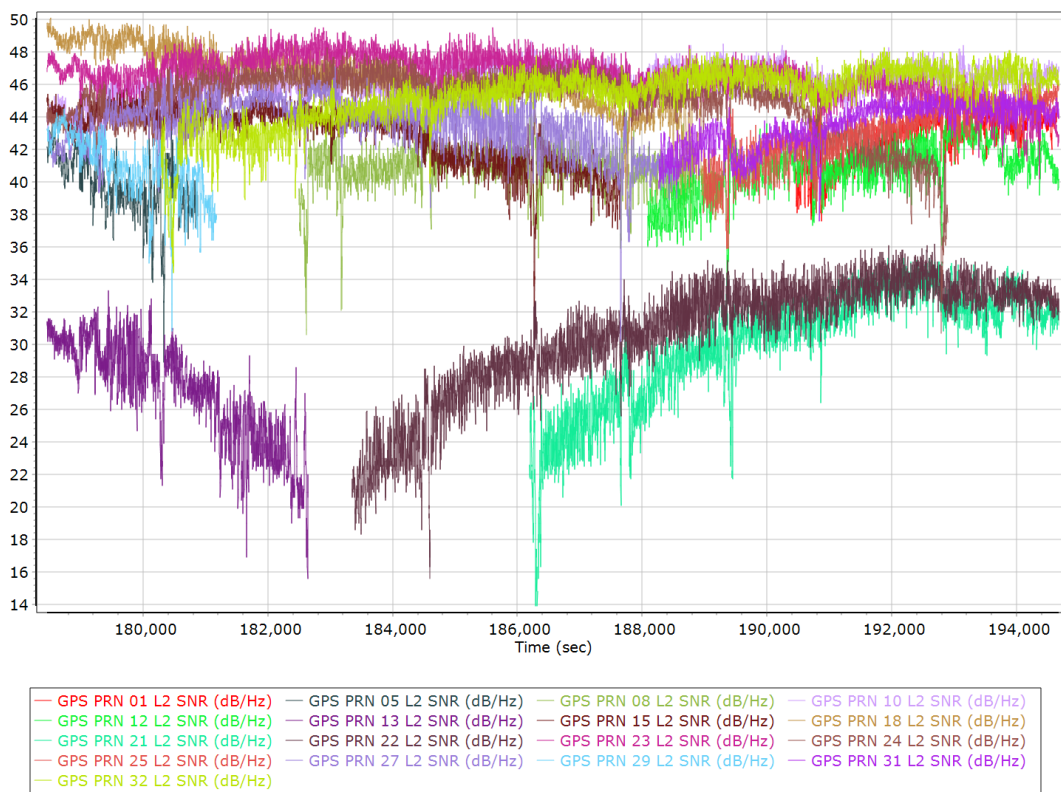


- GLONASS 01 L1 SNR (dB/Hz)
- GLONASS 02 L1 SNR (dB/Hz)
- GLONASS 03 L1 SNR (dB/Hz)
- GLONASS 06 L1 SNR (dB/Hz)
- GLONASS 07 L1 SNR (dB/Hz)
- GLONASS 08 L1 SNR (dB/Hz)
- GLONASS 09 L1 SNR (dB/Hz)
- GLONASS 10 L1 SNR (dB/Hz)
- GLONASS 11 L1 SNR (dB/Hz)
- GLONASS 12 L1 SNR (dB/Hz)
- GLONASS 13 L1 SNR (dB/Hz)
- GLONASS 17 L1 SNR (dB/Hz)
- GLONASS 18 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)

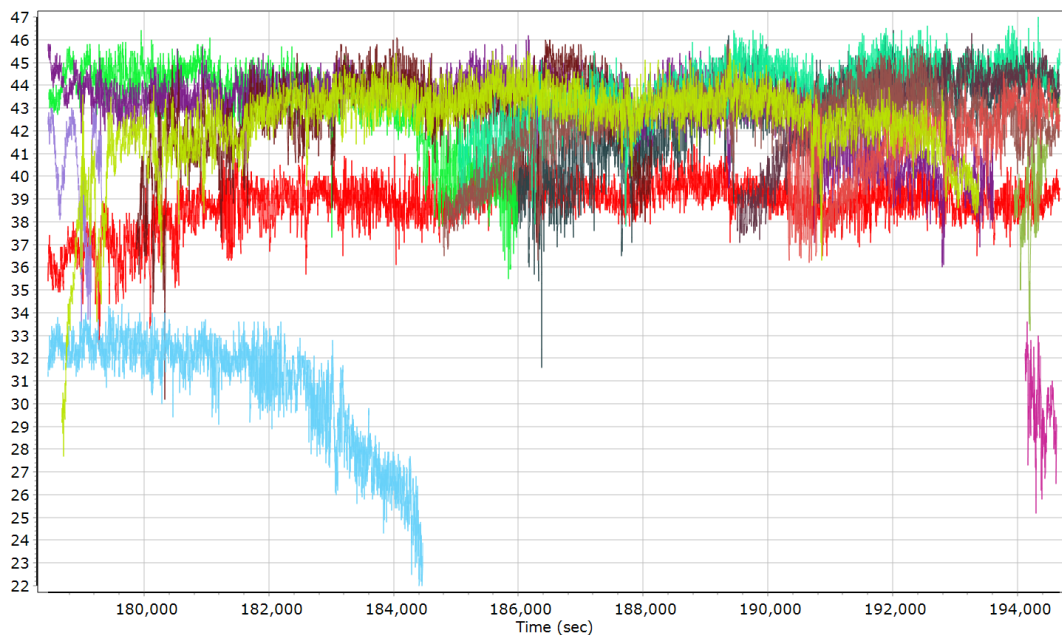
GPS/GLONASS L2 Satellite Lock/Elevation



GPS L2 SNR

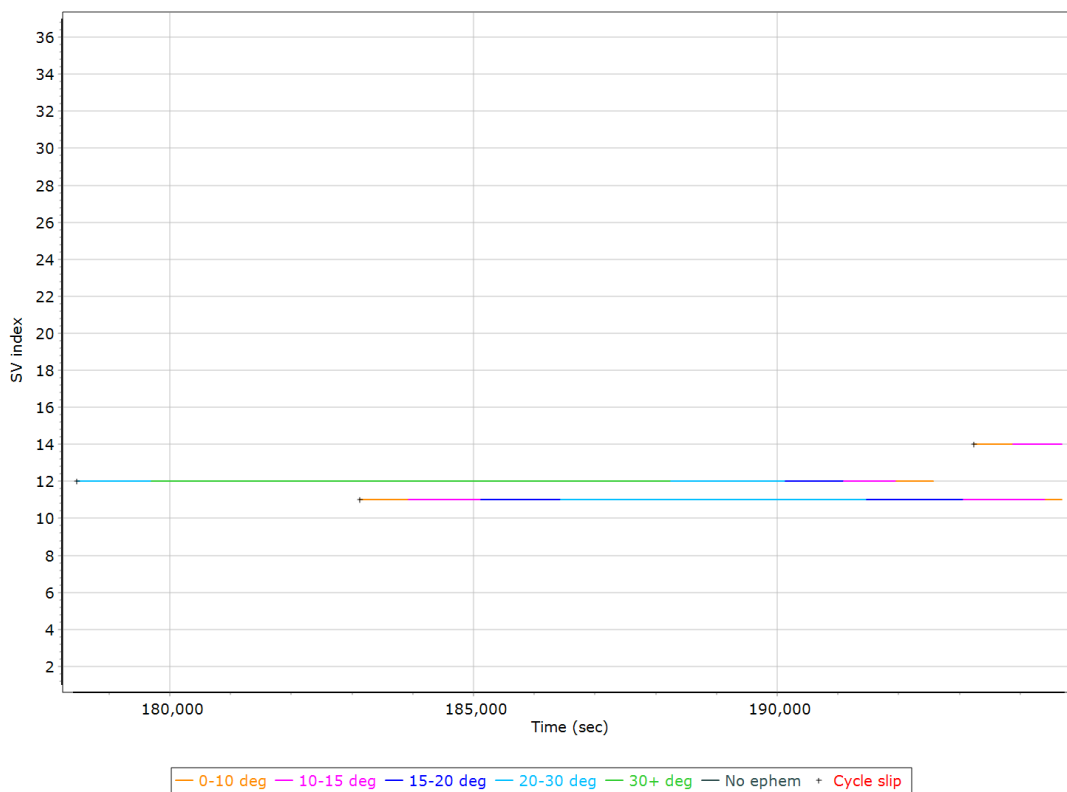


GLONASS L2 SNR

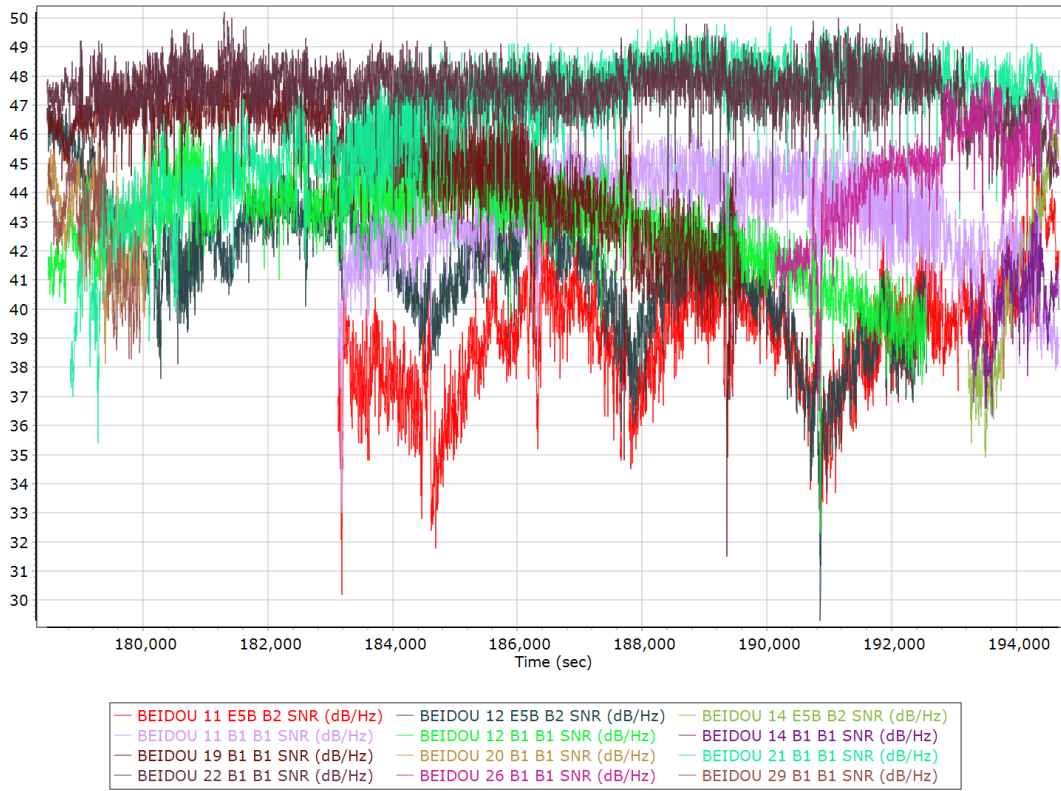


- GLONASS 01 L2 SNR (dB/Hz)
- GLONASS 02 L2 SNR (dB/Hz)
- GLONASS 03 L2 SNR (dB/Hz)
- GLONASS 06 L2 SNR (dB/Hz)
- GLONASS 07 L2 SNR (dB/Hz)
- GLONASS 08 L2 SNR (dB/Hz)
- GLONASS 09 L2 SNR (dB/Hz)
- GLONASS 10 L2 SNR (dB/Hz)
- GLONASS 11 L2 SNR (dB/Hz)
- GLONASS 12 L2 SNR (dB/Hz)
- GLONASS 13 L2 SNR (dB/Hz)
- GLONASS 17 L2 SNR (dB/Hz)
- GLONASS 18 L2 SNR (dB/Hz)
- GLONASS 21 L2 SNR (dB/Hz)
- GLONASS 22 L2 SNR (dB/Hz)
- GLONASS 23 L2 SNR (dB/Hz)
- GLONASS 24 L2 SNR (dB/Hz)

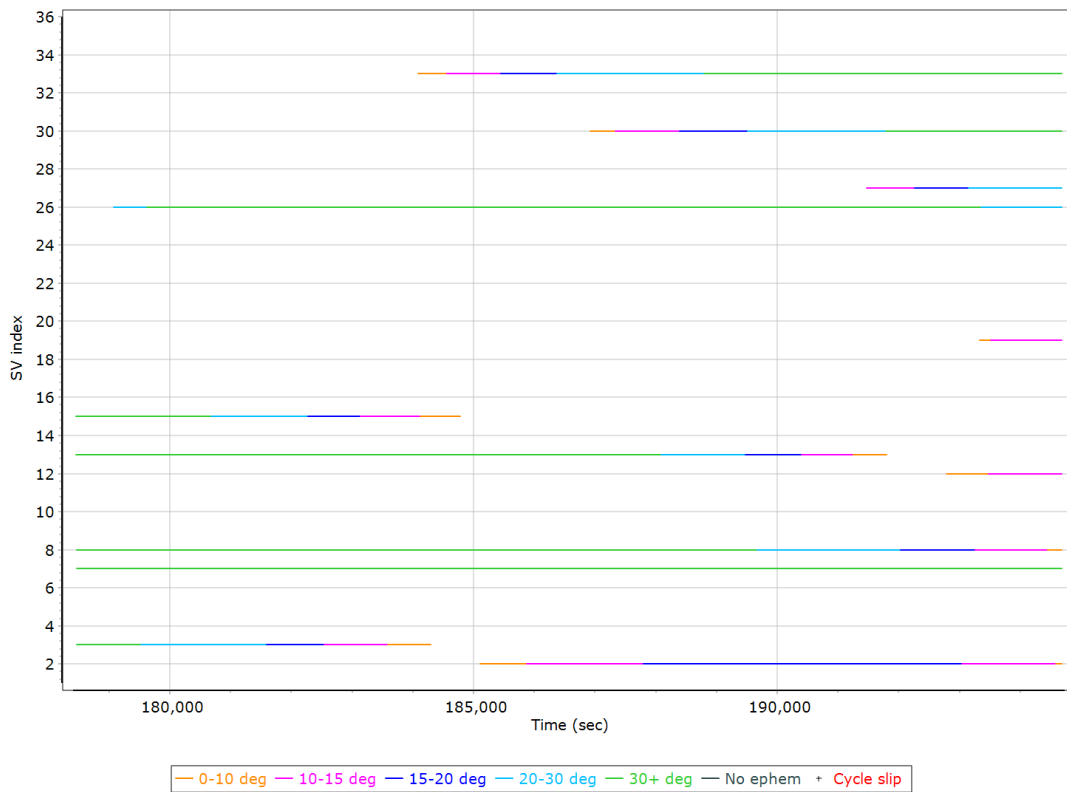
BEIDOU Satellite Lock/Elevation



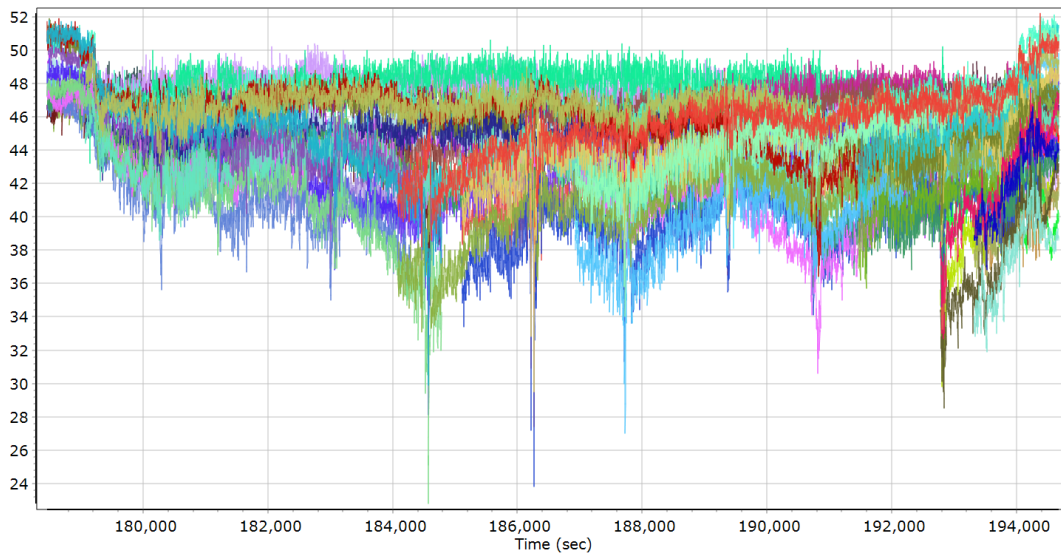
BEIDOU SNR



GALILEO Satellite Lock/Elevation



GALILEO SNR



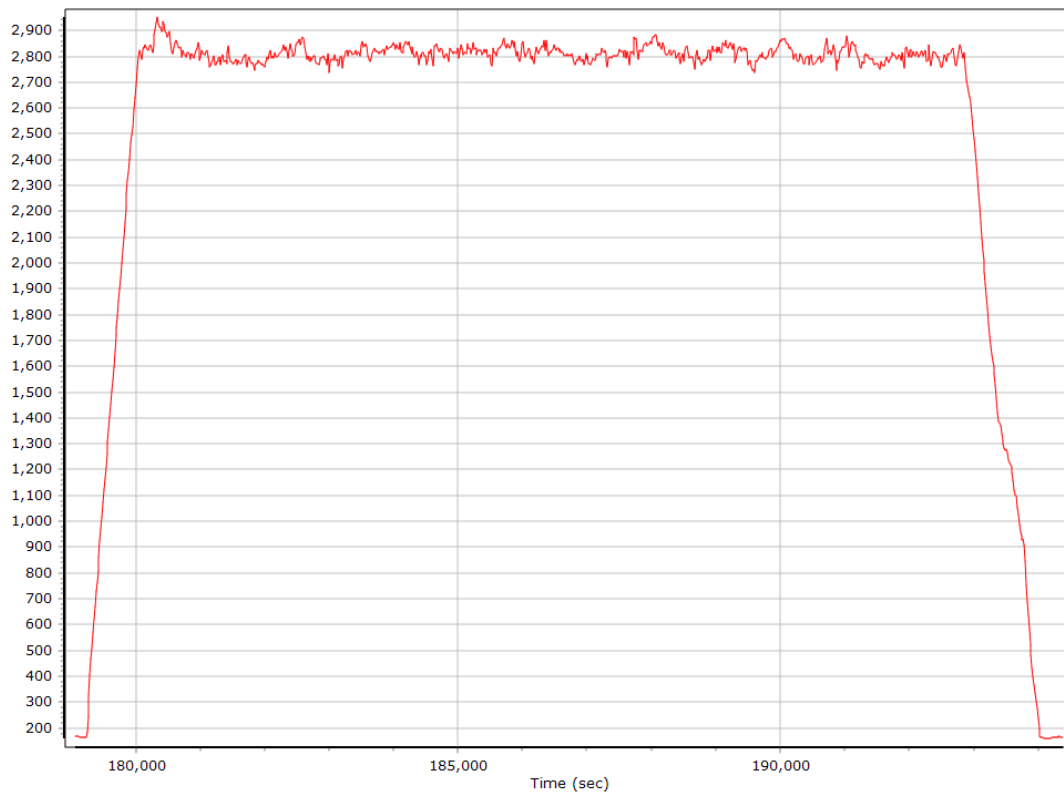
— GALILEO 02 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 03 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 07 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 08 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 12 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 13 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 15 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 19 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 26 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 33 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 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



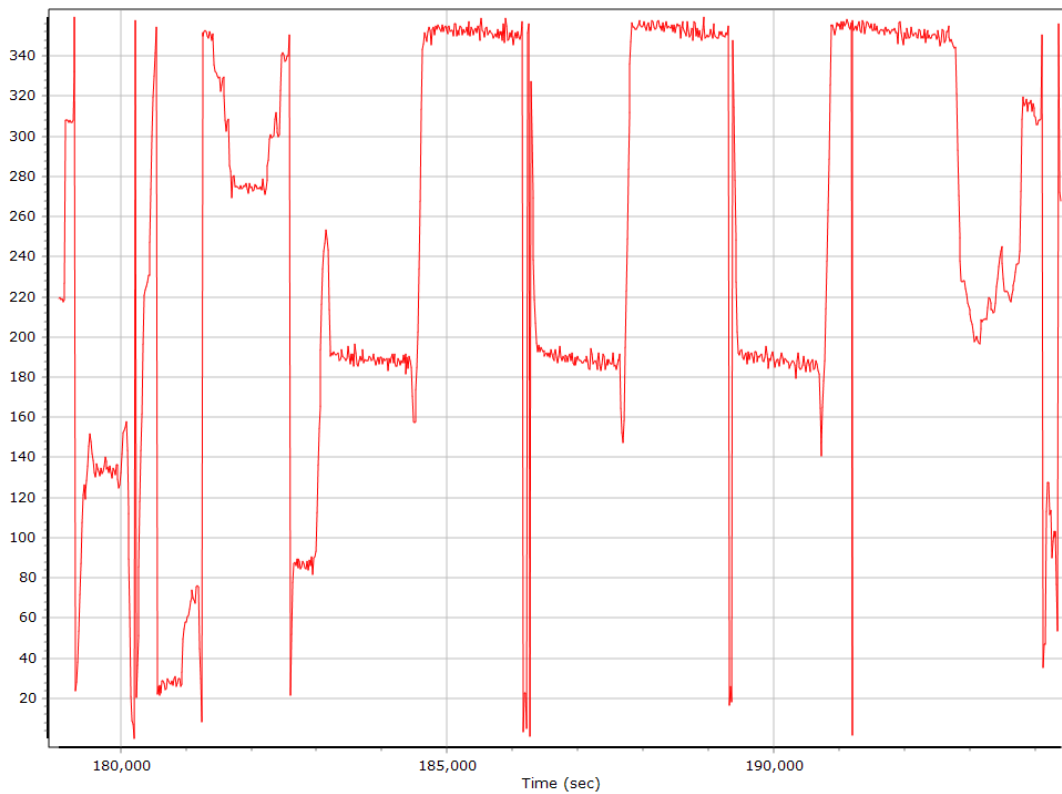
Altitude



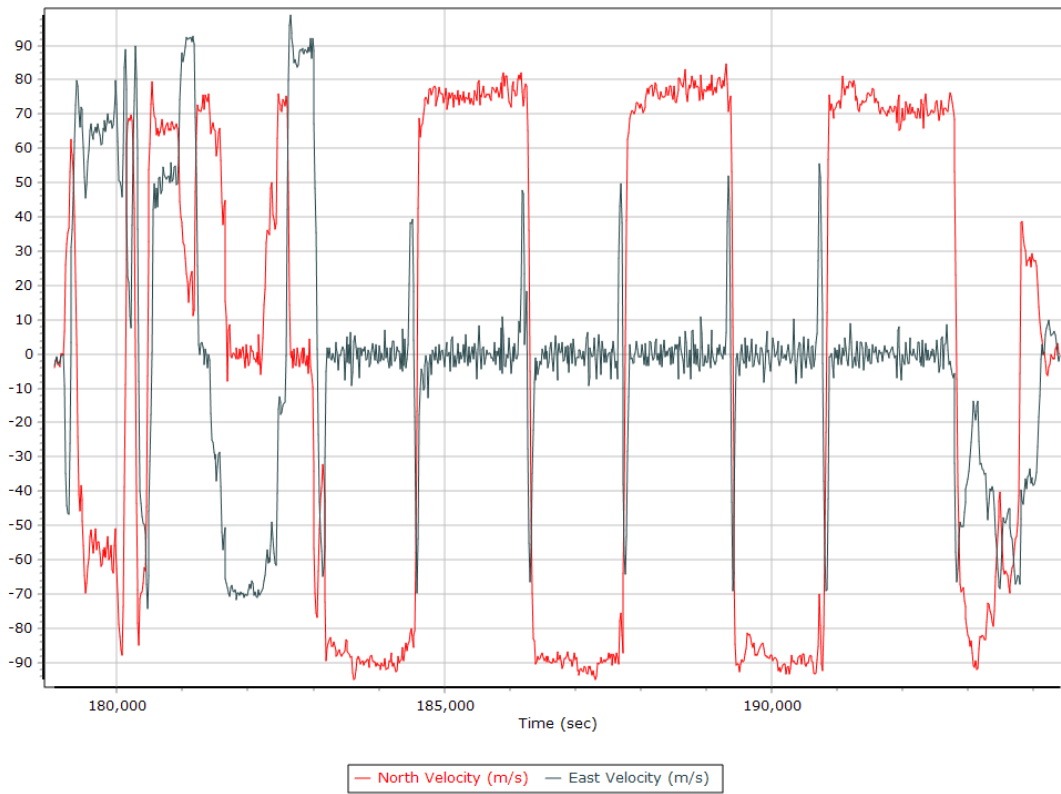
Roll/Pitch



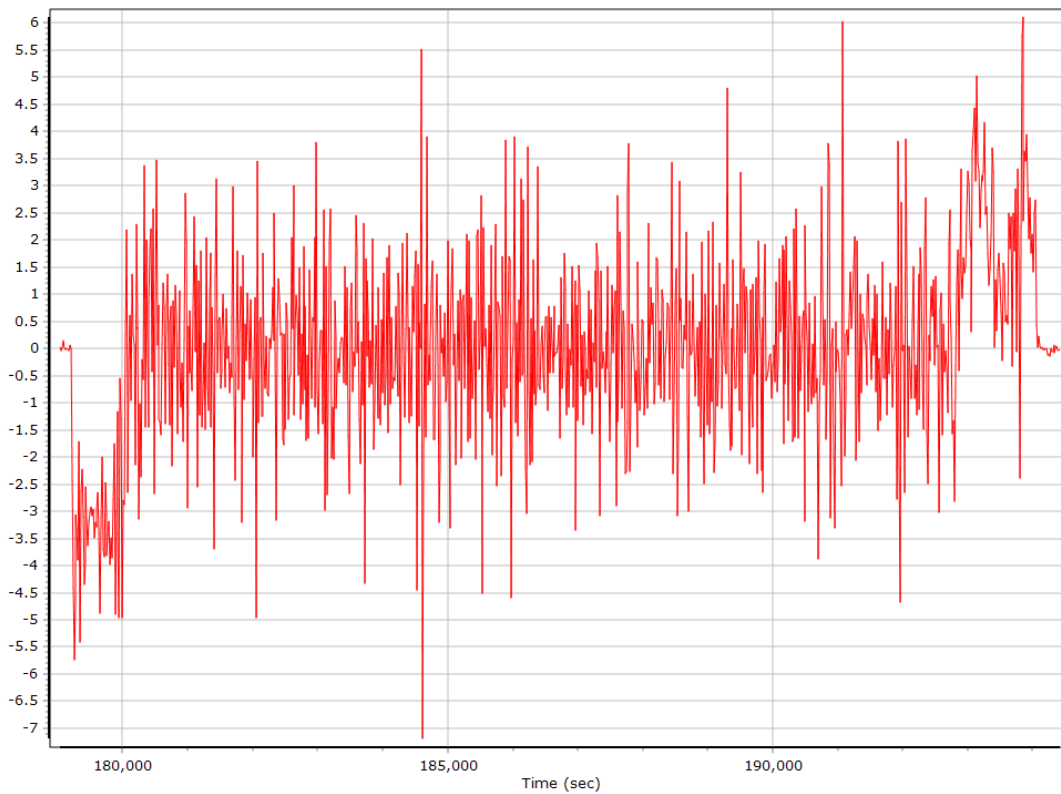
Heading



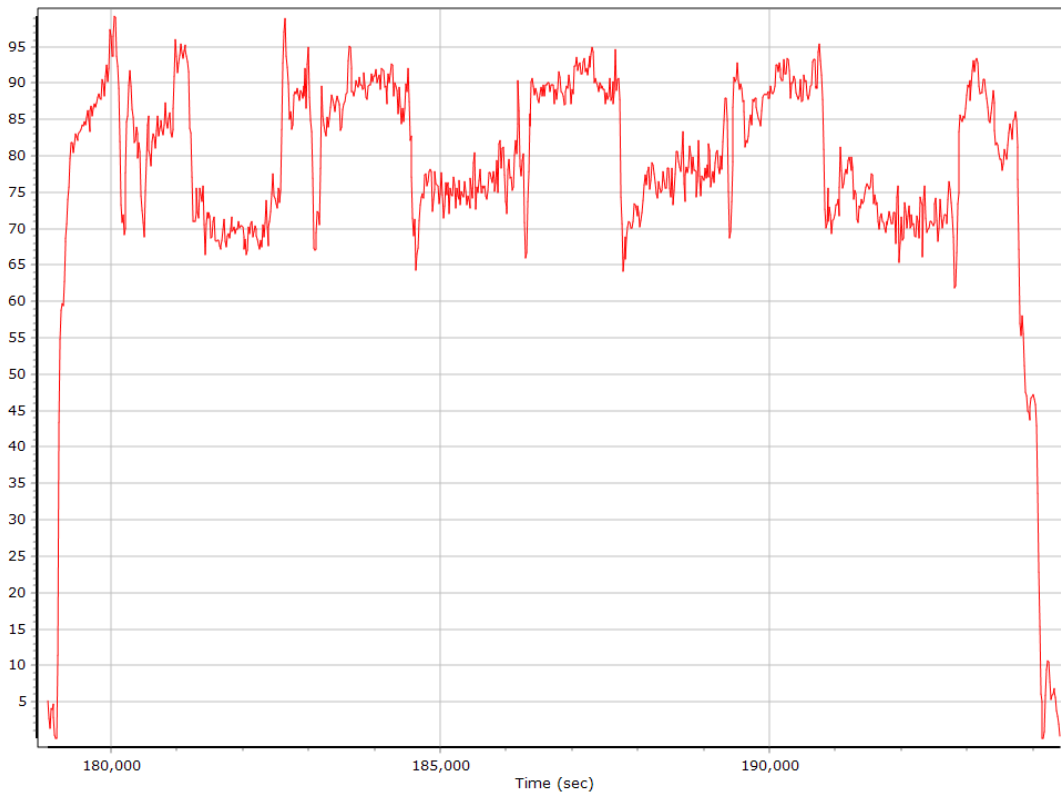
North/East Velocity



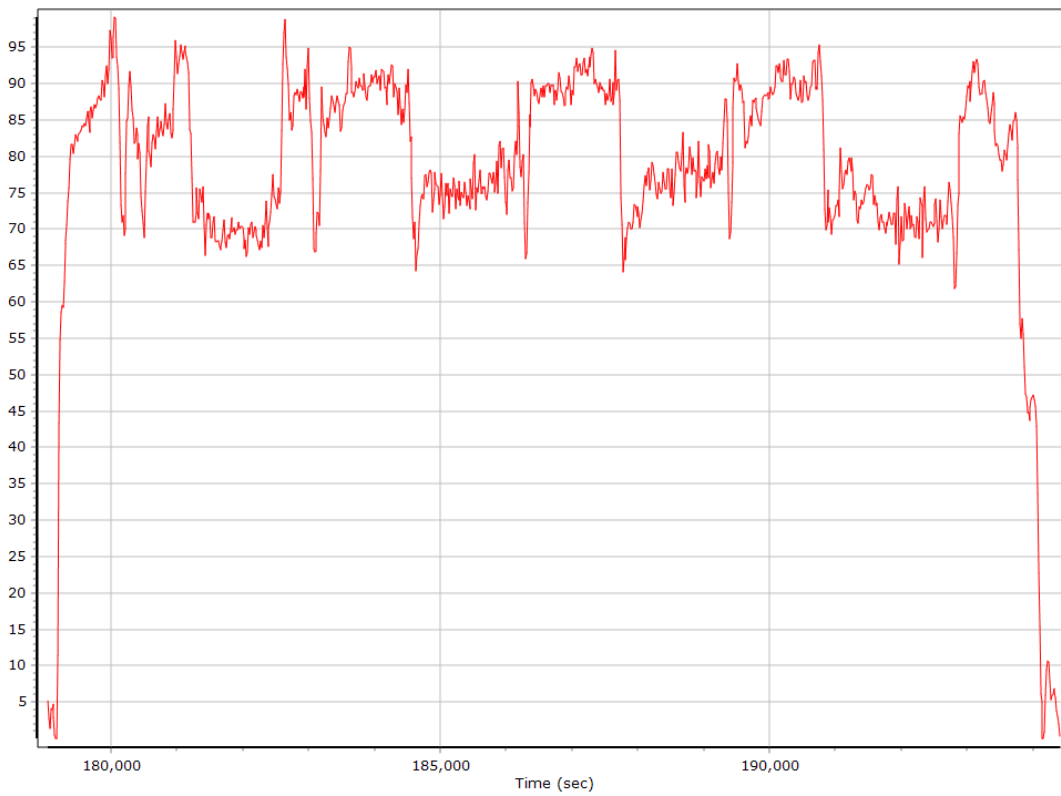
Down Velocity



Total Speed



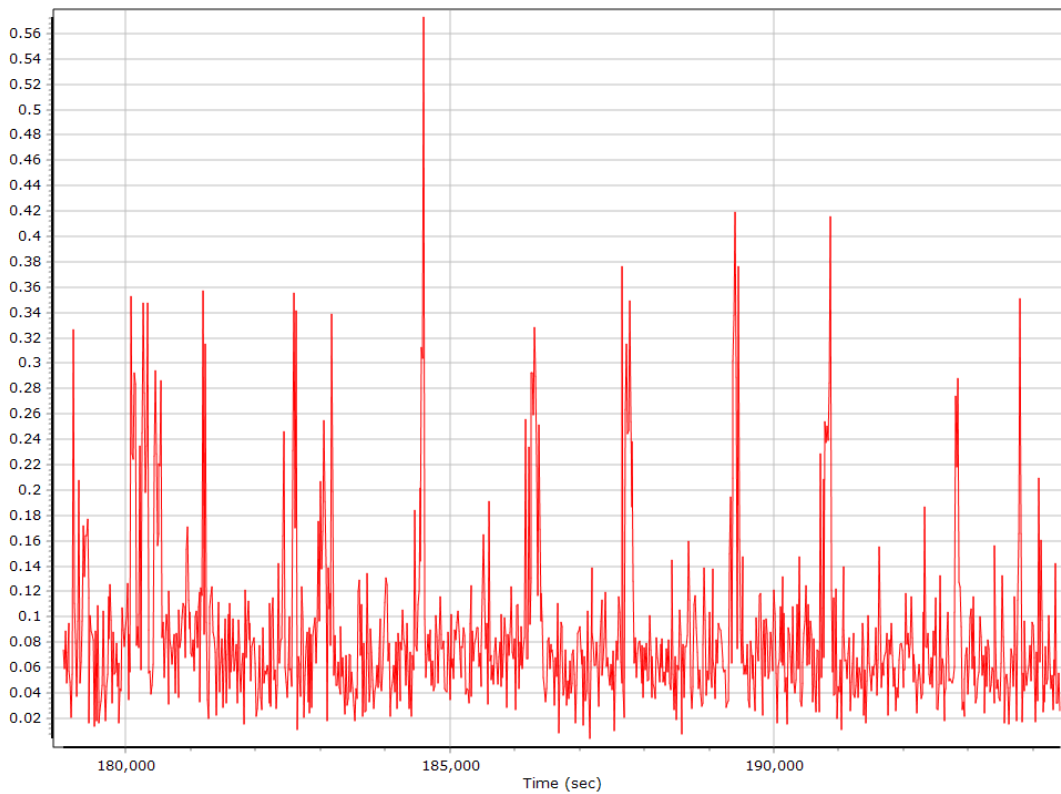
Ground Speed



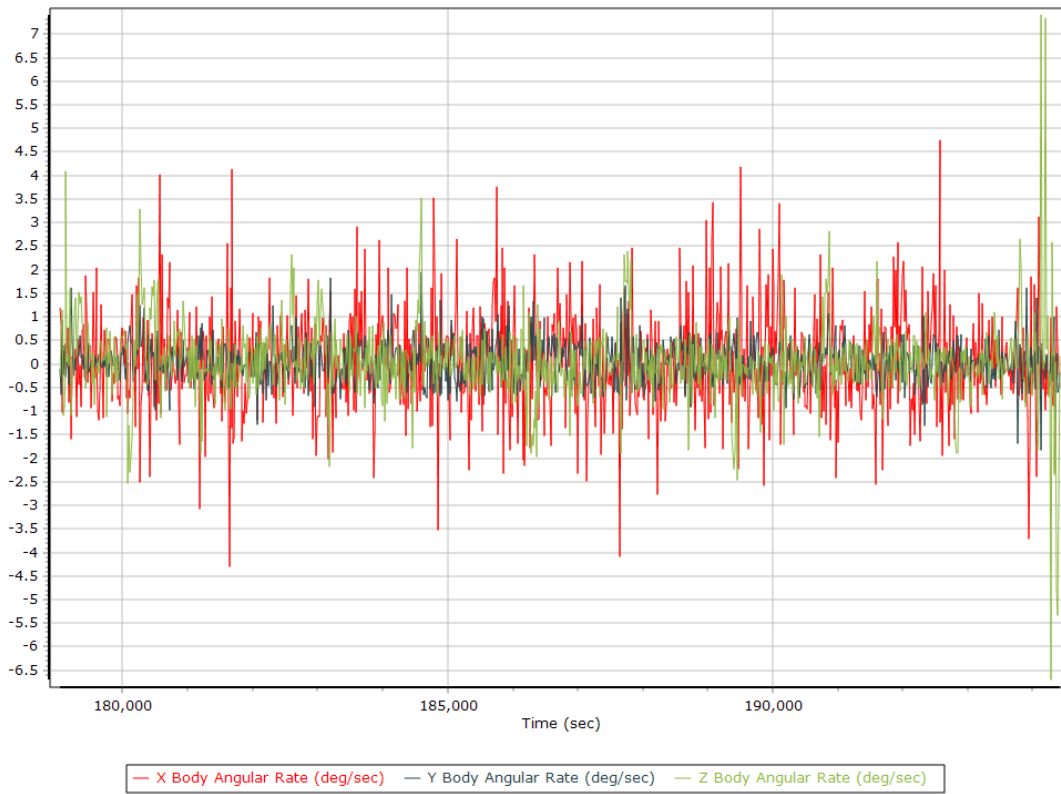
Body Acceleration



Total Body Acceleration

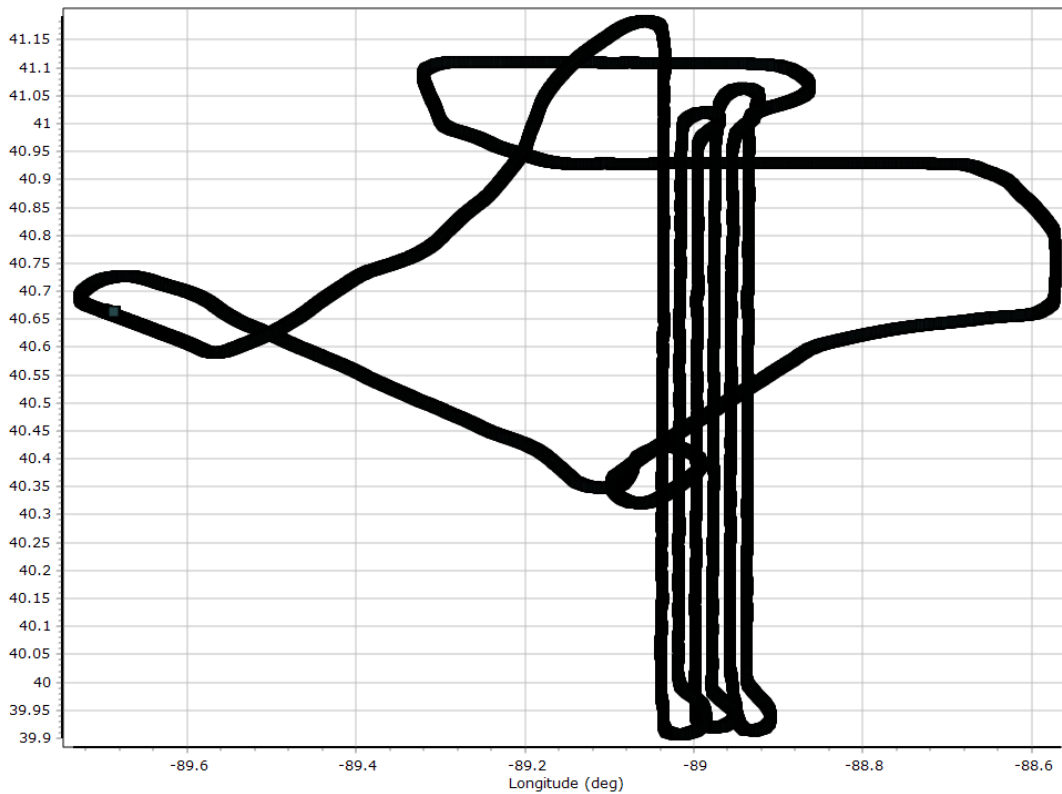


Body Angular Rate

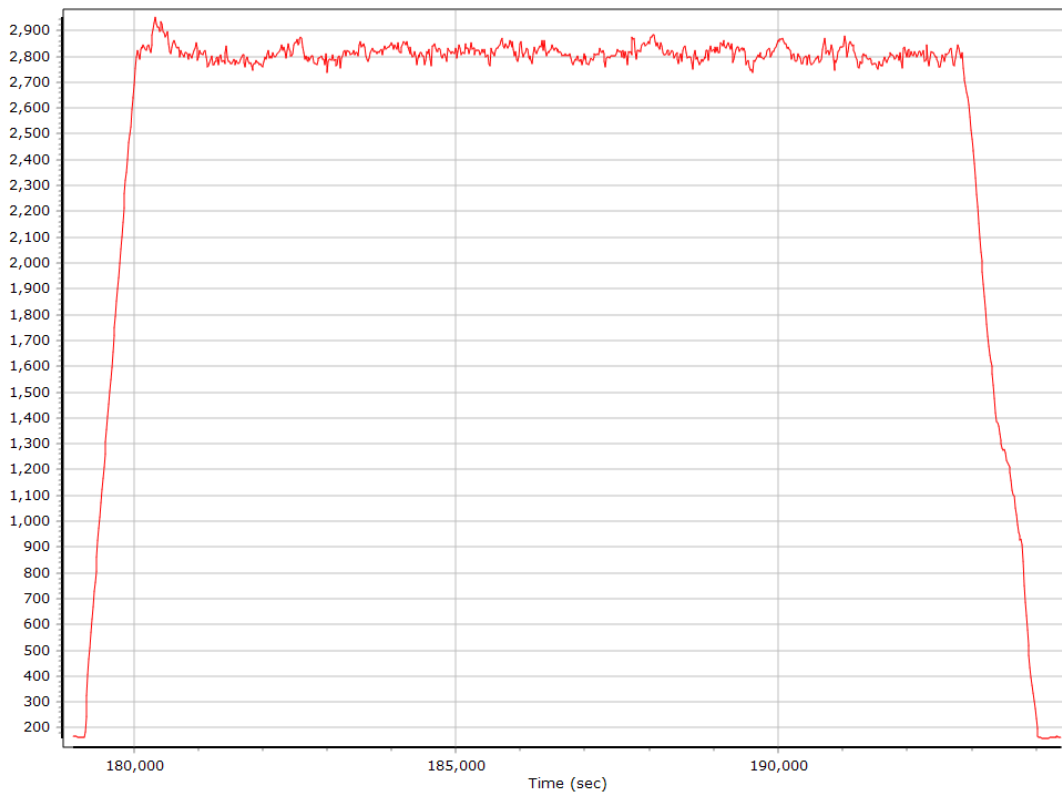


Forward Processed Trajectory Information

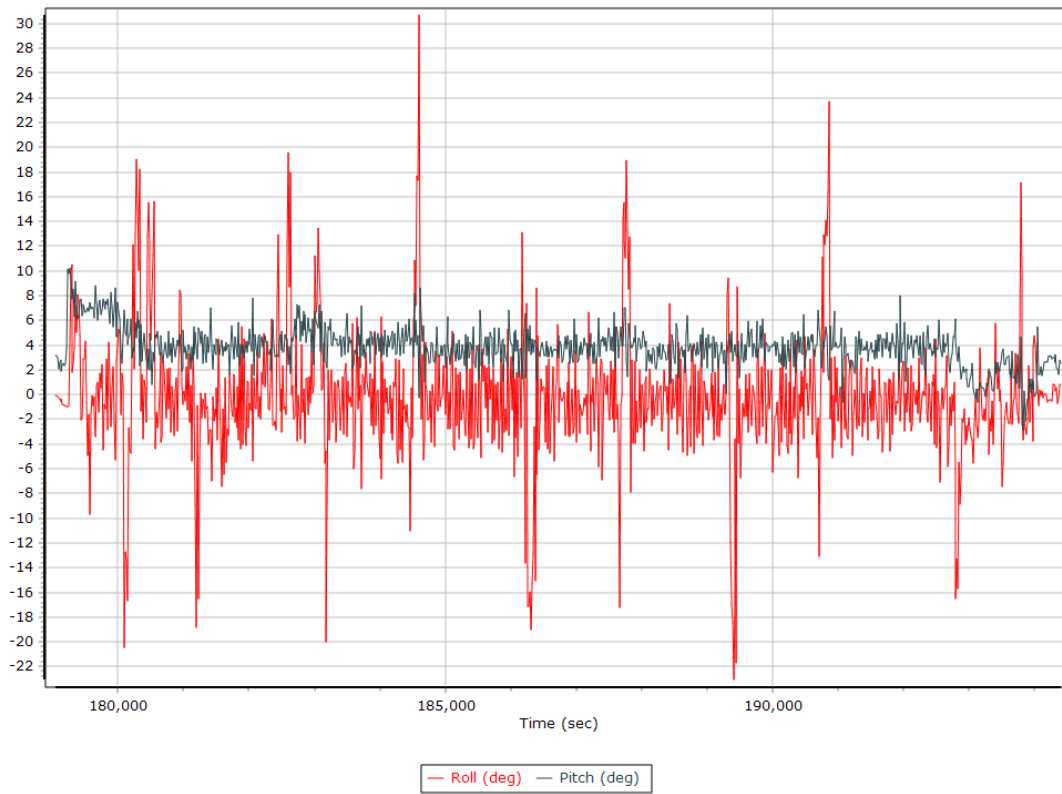
Top View



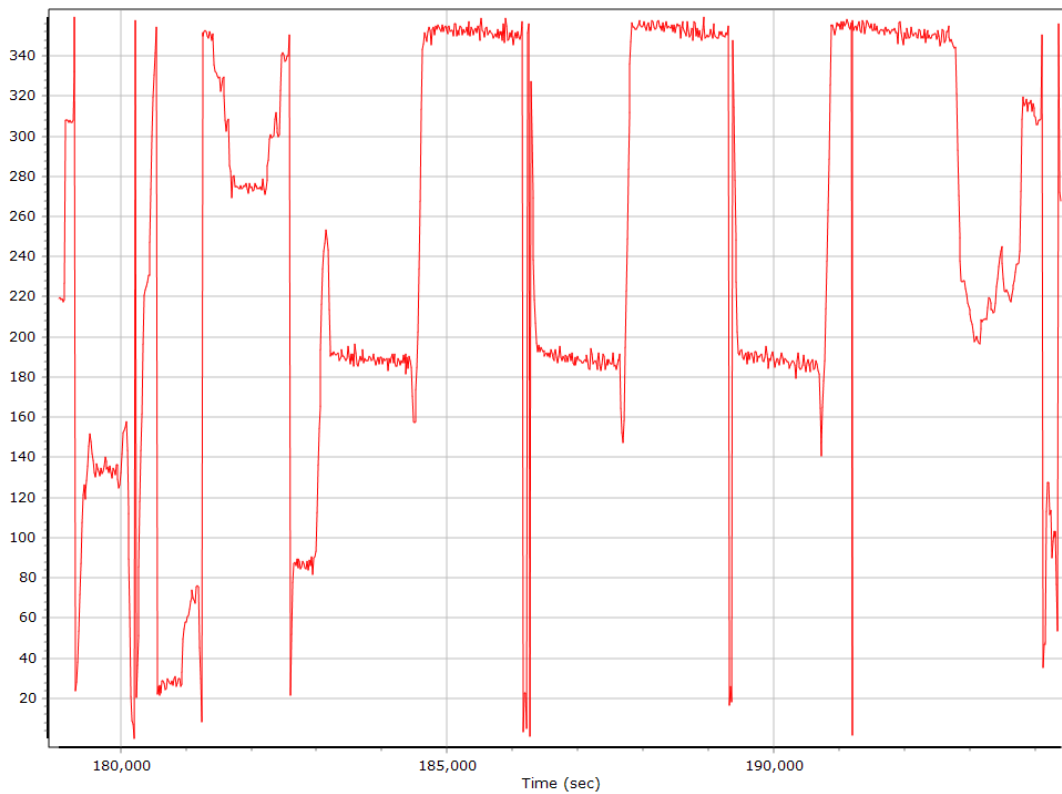
Altitude



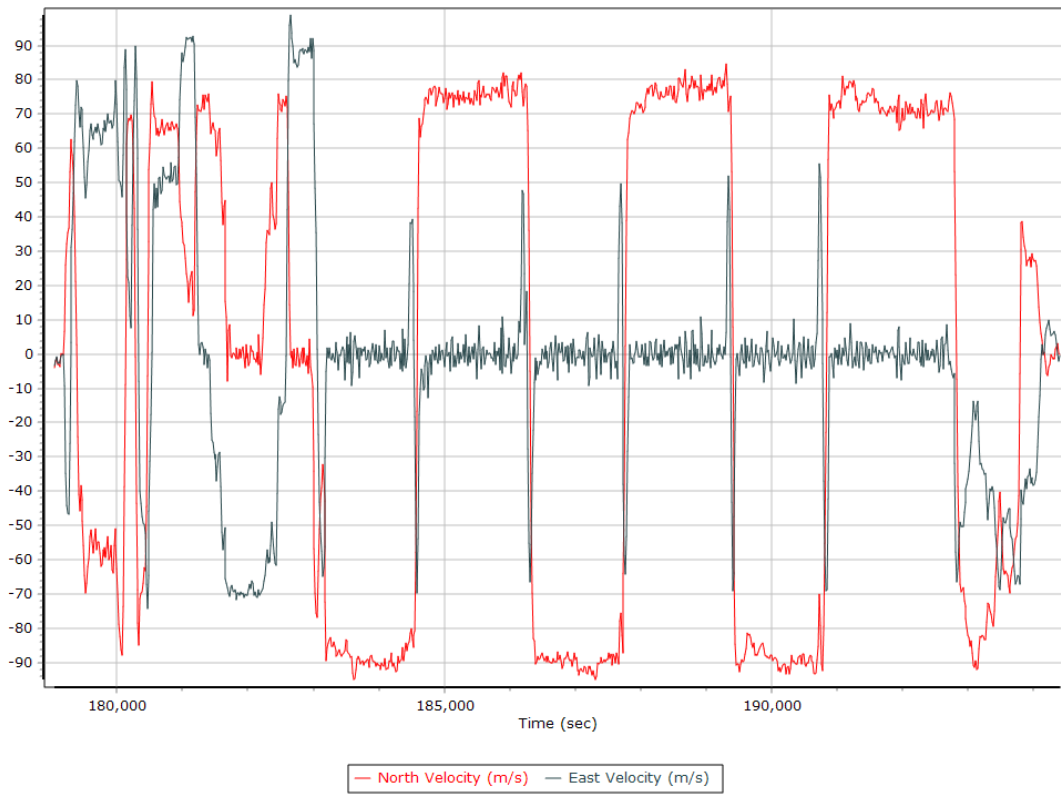
Roll/Pitch



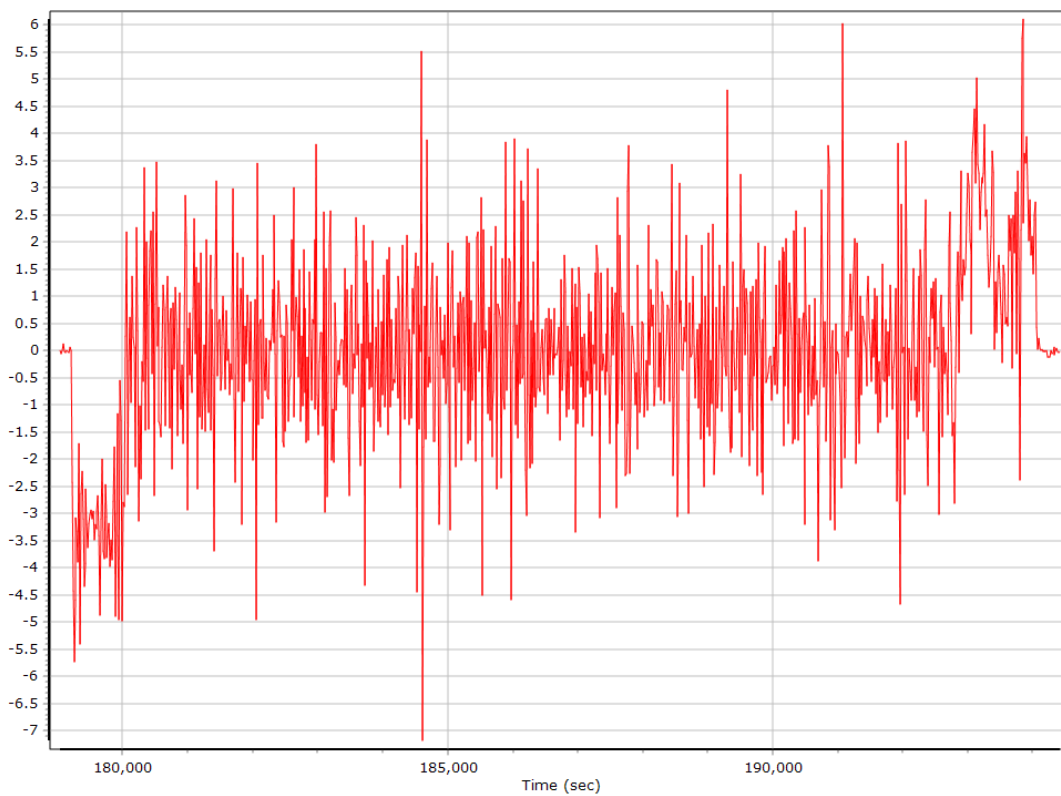
Heading



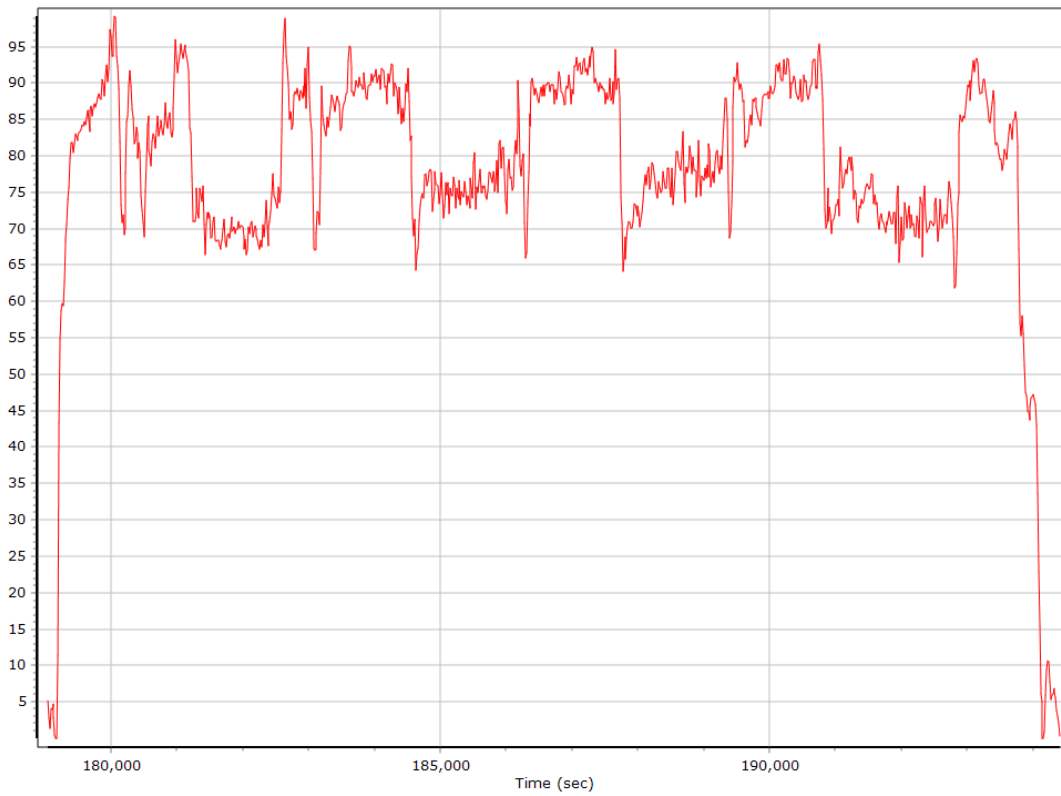
North/East Velocity



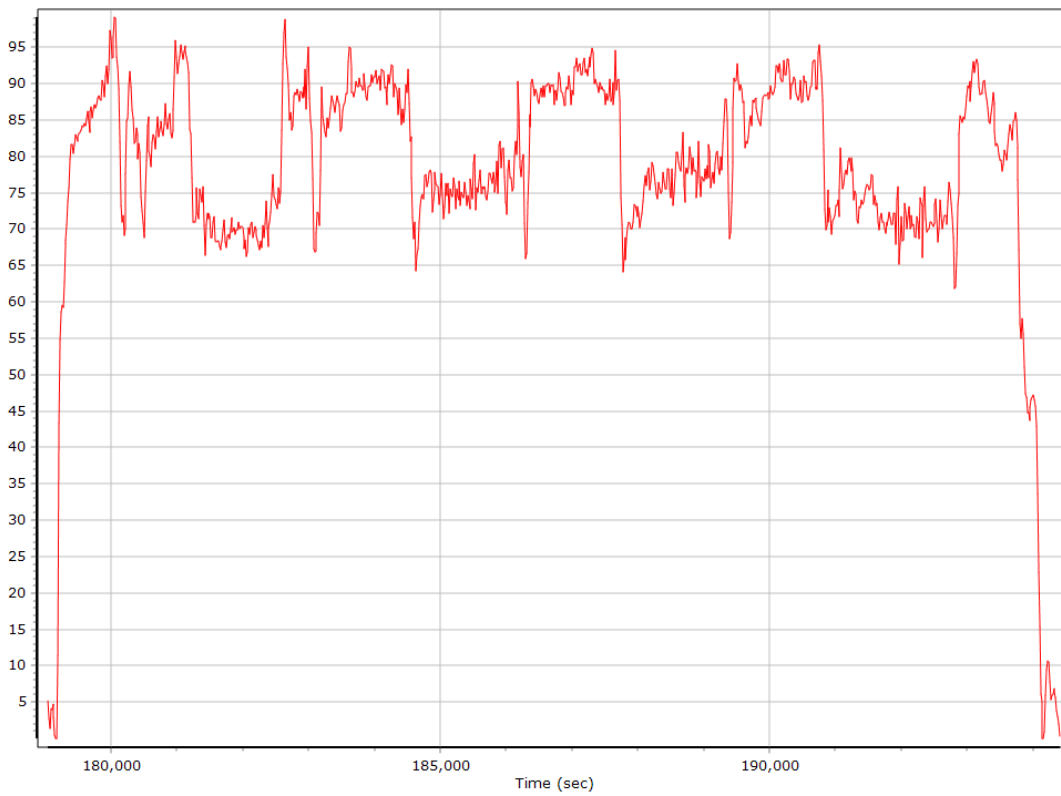
Down Velocity



Total Speed



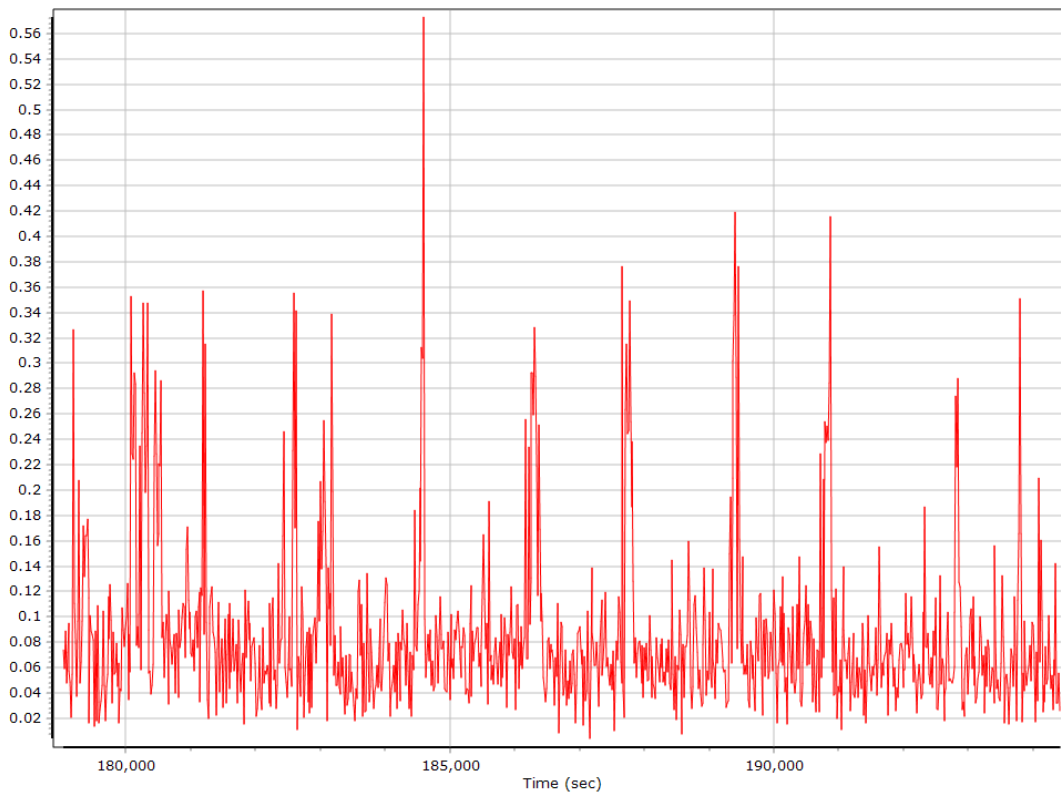
Ground Speed



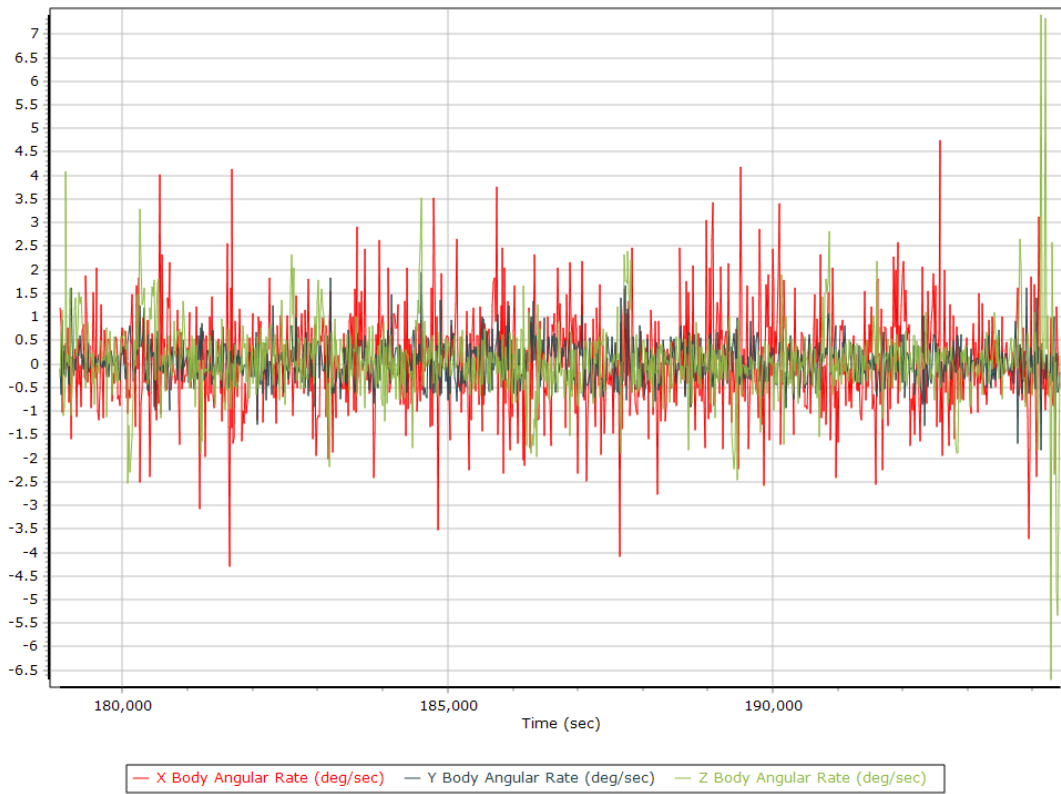
Body Acceleration



Total Body Acceleration



Body Angular Rate

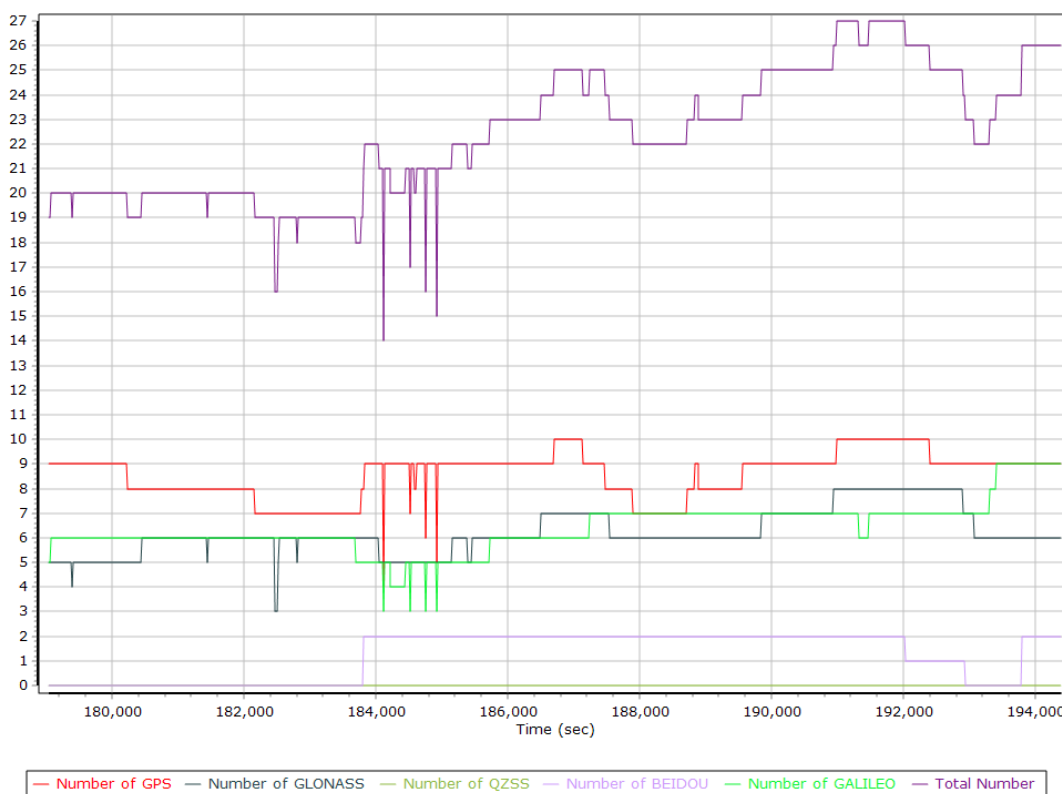


GNSS QC

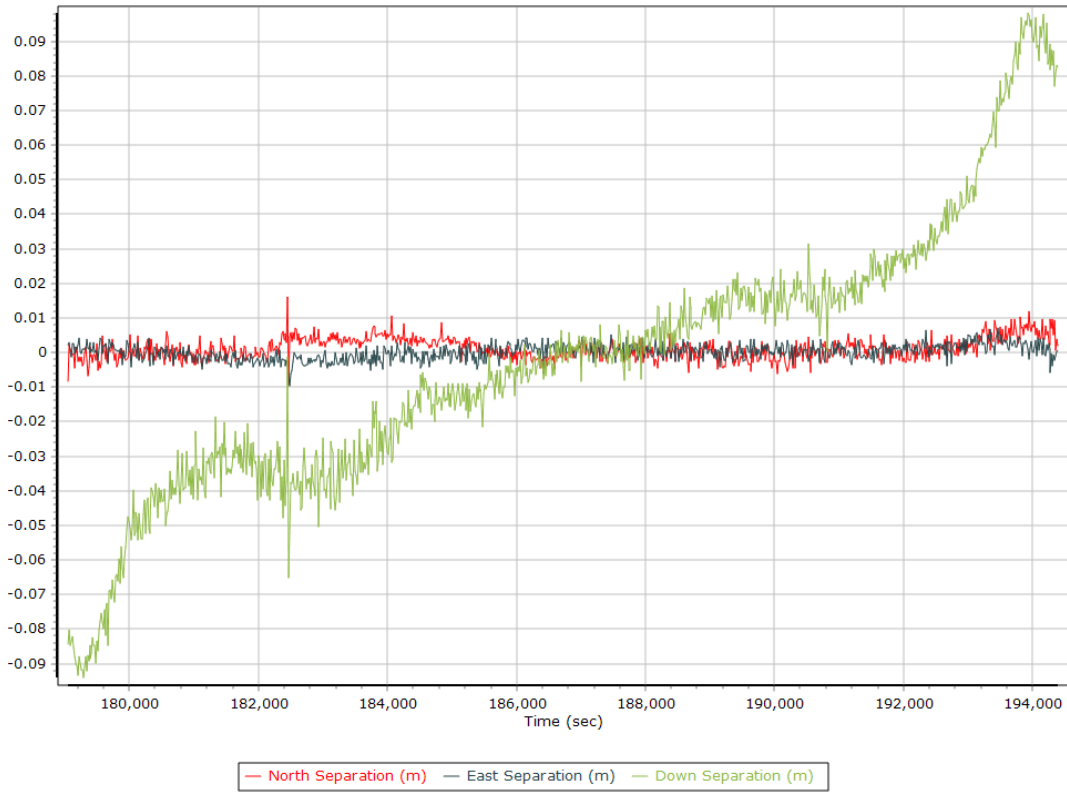
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	4	10	9
Number of GLONASS SV	3	8	6
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	2	1
Number of GALILEO SV	2	9	6
Total number of SV	13	28	22
PDOP	0.96	2.20	1.12
QC Solution Gaps	0.00	0.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	16208.00	0.00	0.00
Percentage	100.00	0.00	0.00

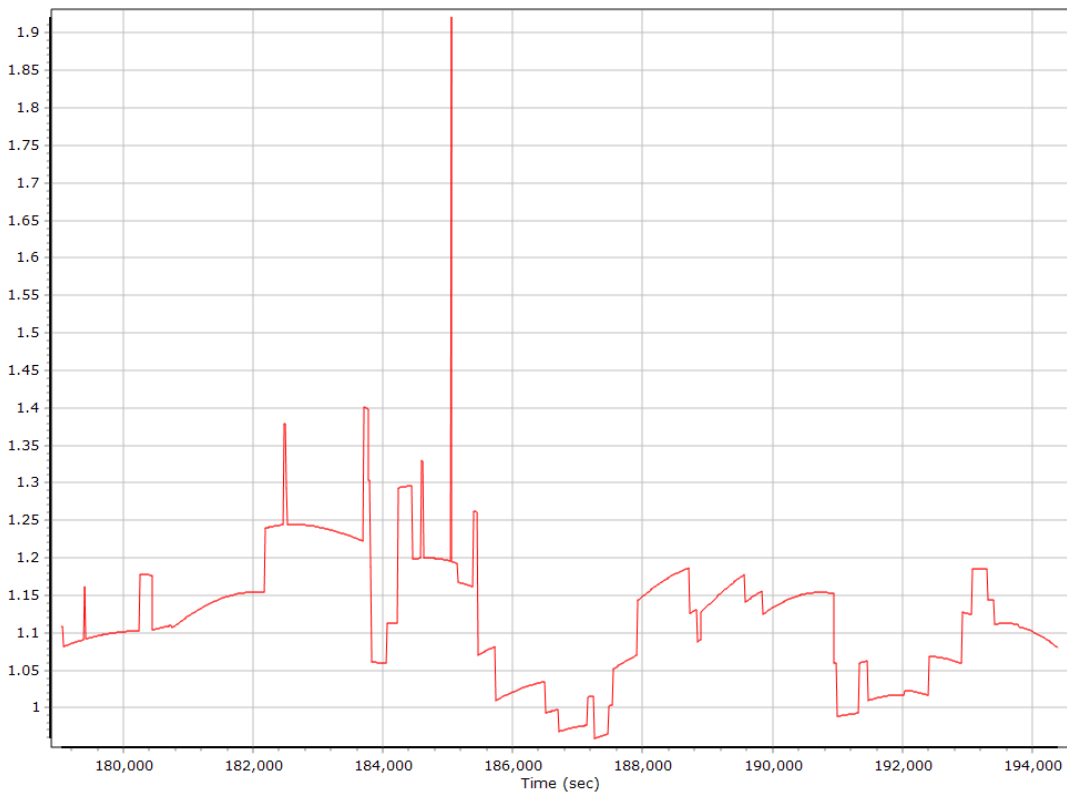
Num SVs in solution



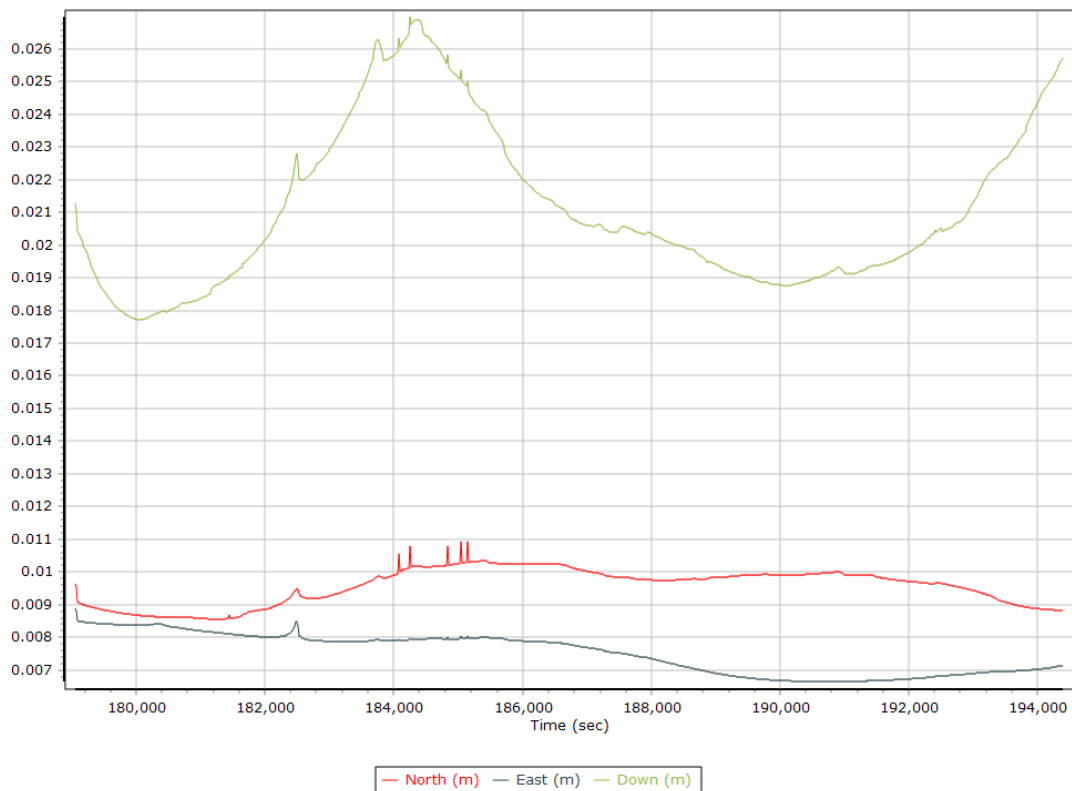
Forward/Reverse Separation



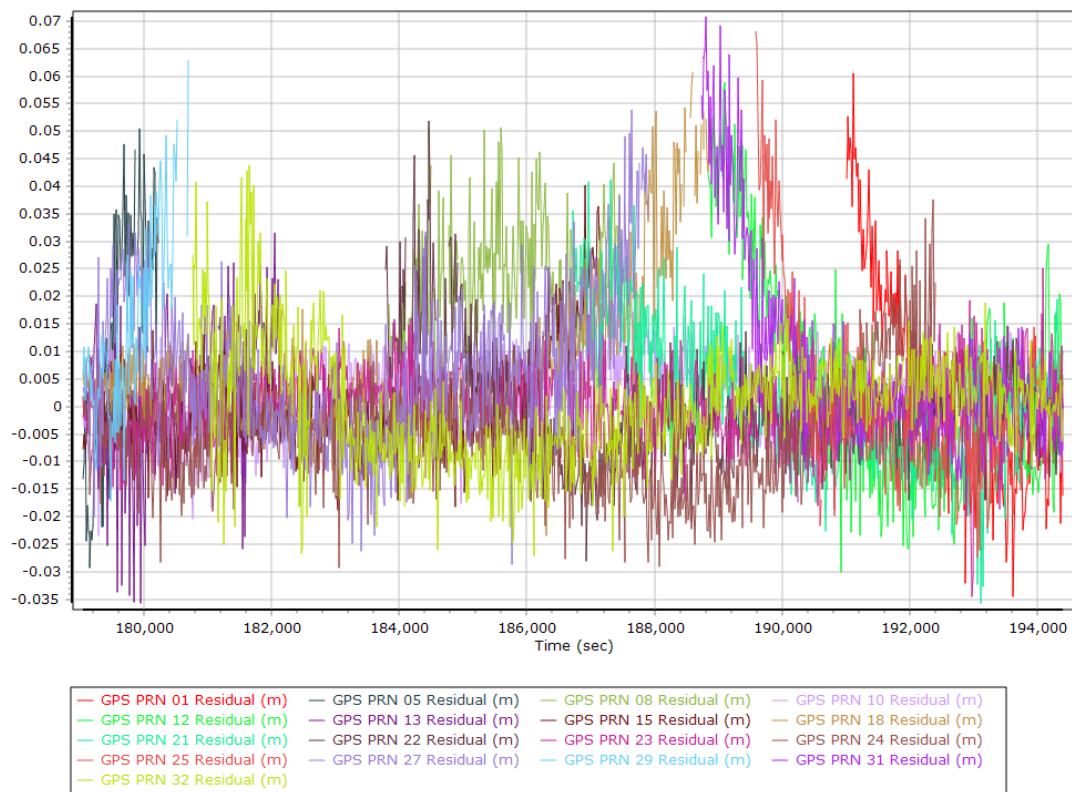
PDOP



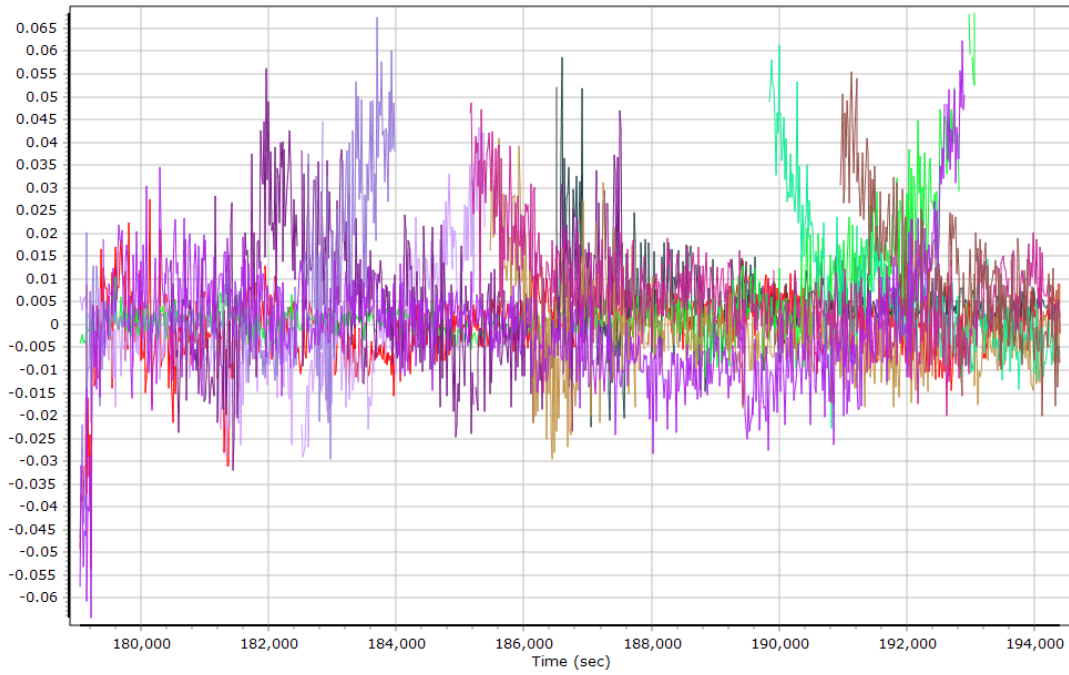
Estimated Position Accuracy



GPS Residuals

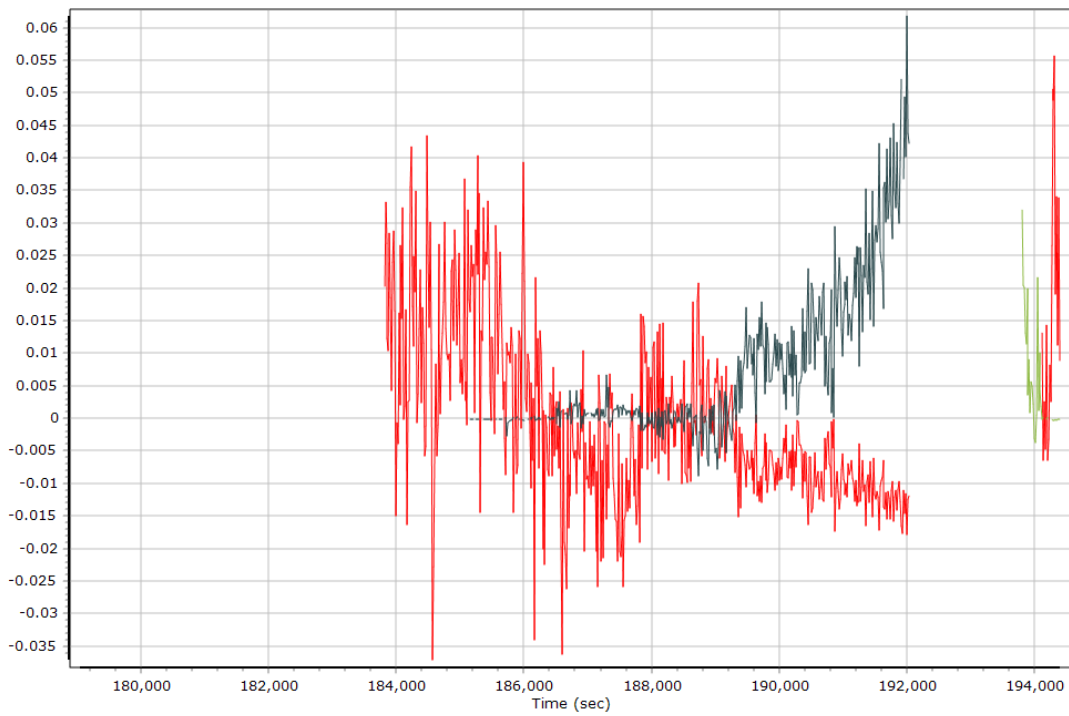


GLONASS Residuals



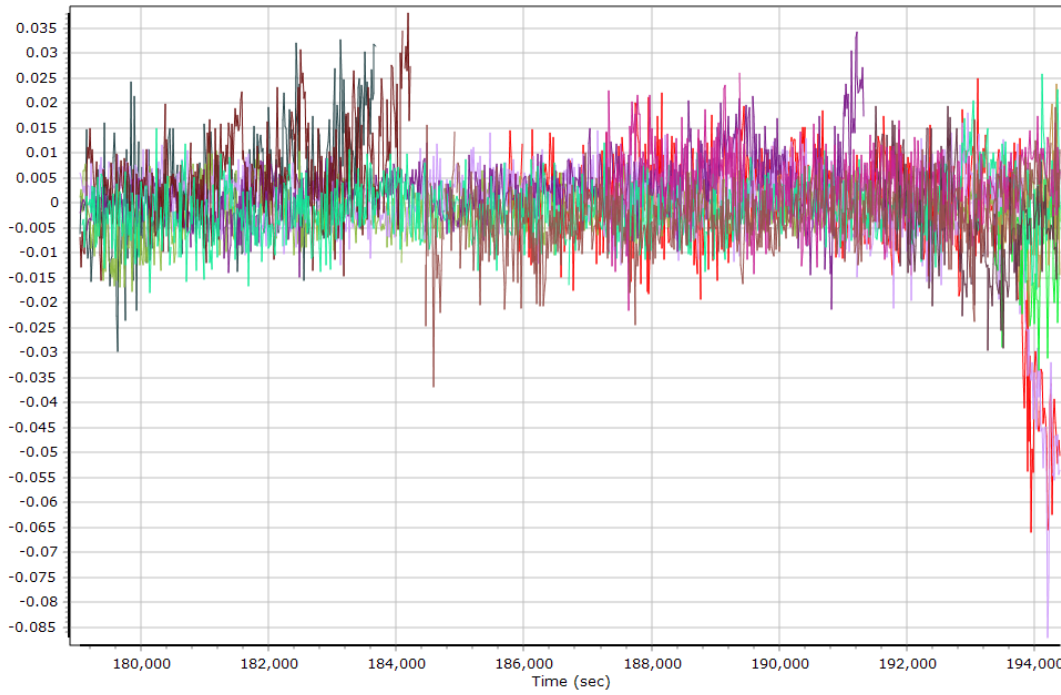
- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GLONASS 01 Residual (m) | GLONASS 02 Residual (m) | GLONASS 03 Residual (m) | GLONASS 07 Residual (m) |
| GLONASS 08 Residual (m) | GLONASS 09 Residual (m) | GLONASS 10 Residual (m) | GLONASS 11 Residual (m) |
| GLONASS 12 Residual (m) | GLONASS 13 Residual (m) | GLONASS 17 Residual (m) | GLONASS 18 Residual (m) |
| GLONASS 21 Residual (m) | GLONASS 22 Residual (m) | GLONASS 23 Residual (m) | GLONASS 24 Residual (m) |

BEIDOU Residuals



- | | | | |
|------------------------|------------------------|------------------------|------------------------|
| BEIDOU 11 Residual (m) | BEIDOU 12 Residual (m) | BEIDOU 14 Residual (m) | BEIDOU 19 Residual (m) |
| BEIDOU 21 Residual (m) | BEIDOU 22 Residual (m) | BEIDOU 26 Residual (m) | |

GALILEO Residuals



GALILEO 02 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 26 Residual (m)	GALILEO 27 Residual (m)	GALILEO 30 Residual (m)	GALILEO 33 Residual (m)

GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	178457.135 (5/17/2022 1:34:17 AM)		
Processing end time	194681.000 (5/17/2022 6:04:41 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	180.000
Reference to Primary GNSS lever arm (m)	0.254	-0.204	-1.066
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

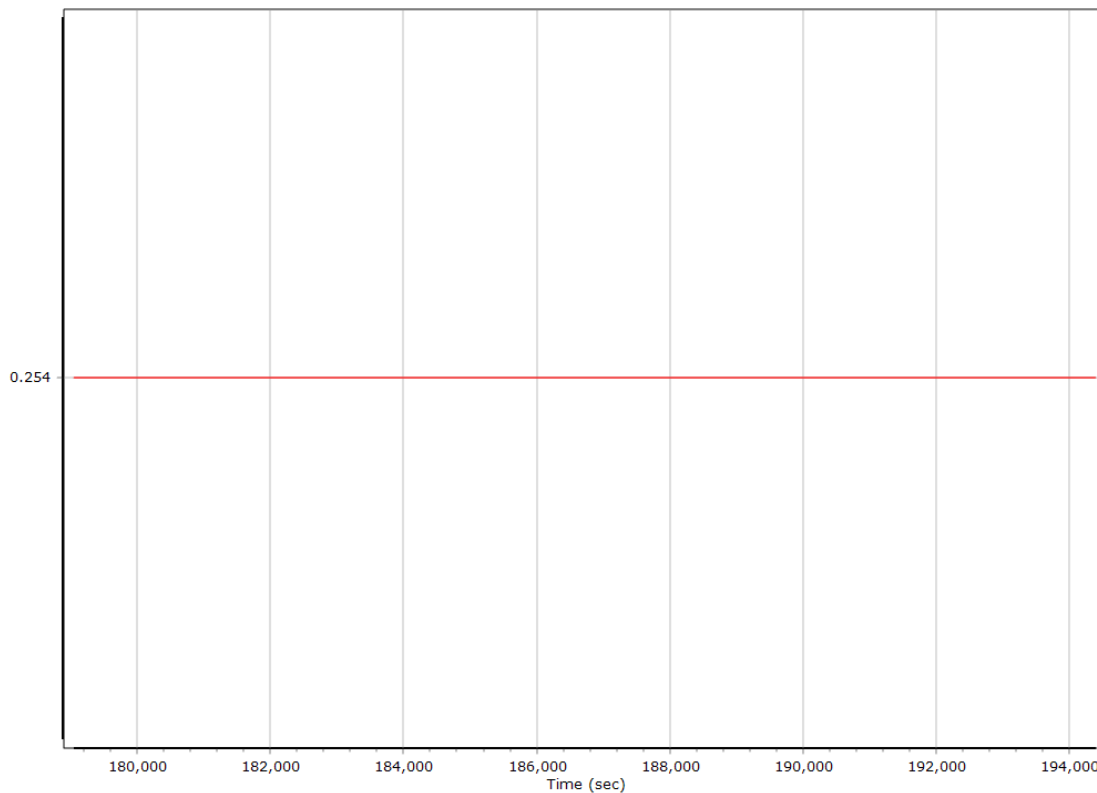
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

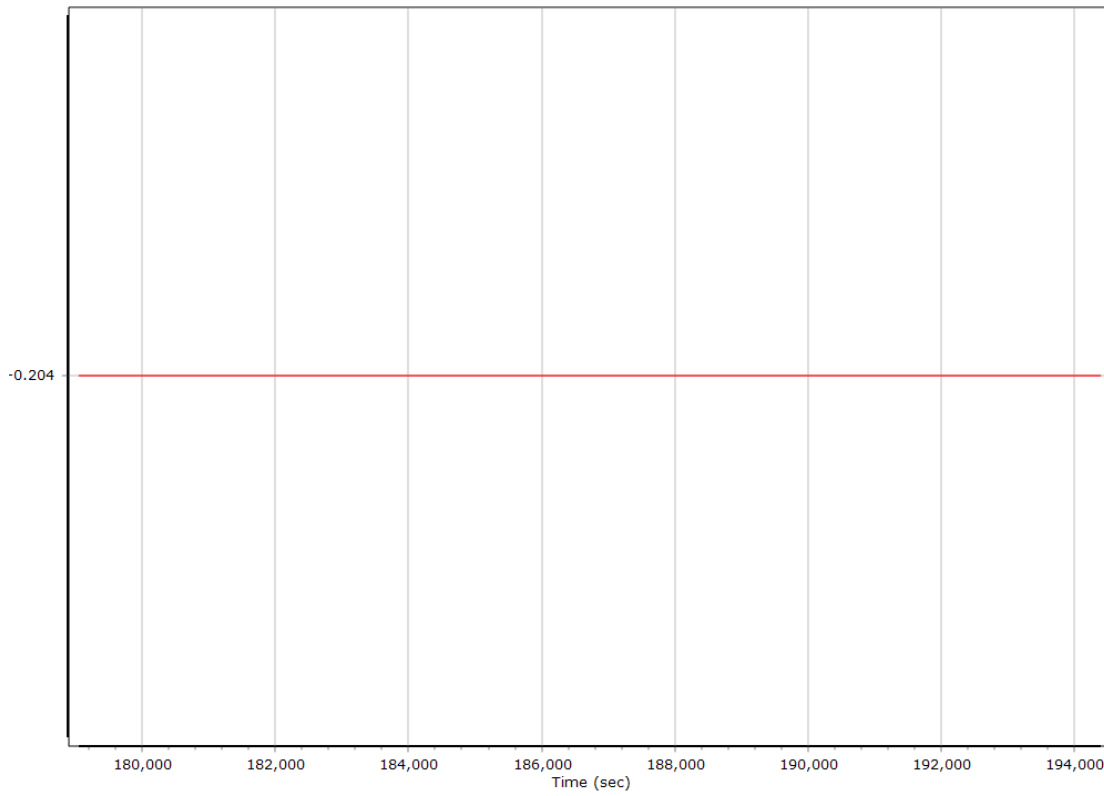
Reference-Primary GNSS Lever Arm Automatic Calibration Results

Original Reference to Primary GNSS lever arm (m)	0.126	-0.066	-1.071
Iteration 1 Reference to Primary GNSS lever arm (m)	0.248	-0.200	-1.067
Iteration 2 Reference to Primary GNSS lever arm (m)	0.254	-0.204	-1.066
Primary GNSS Lever Arm In use	Iteration 2		

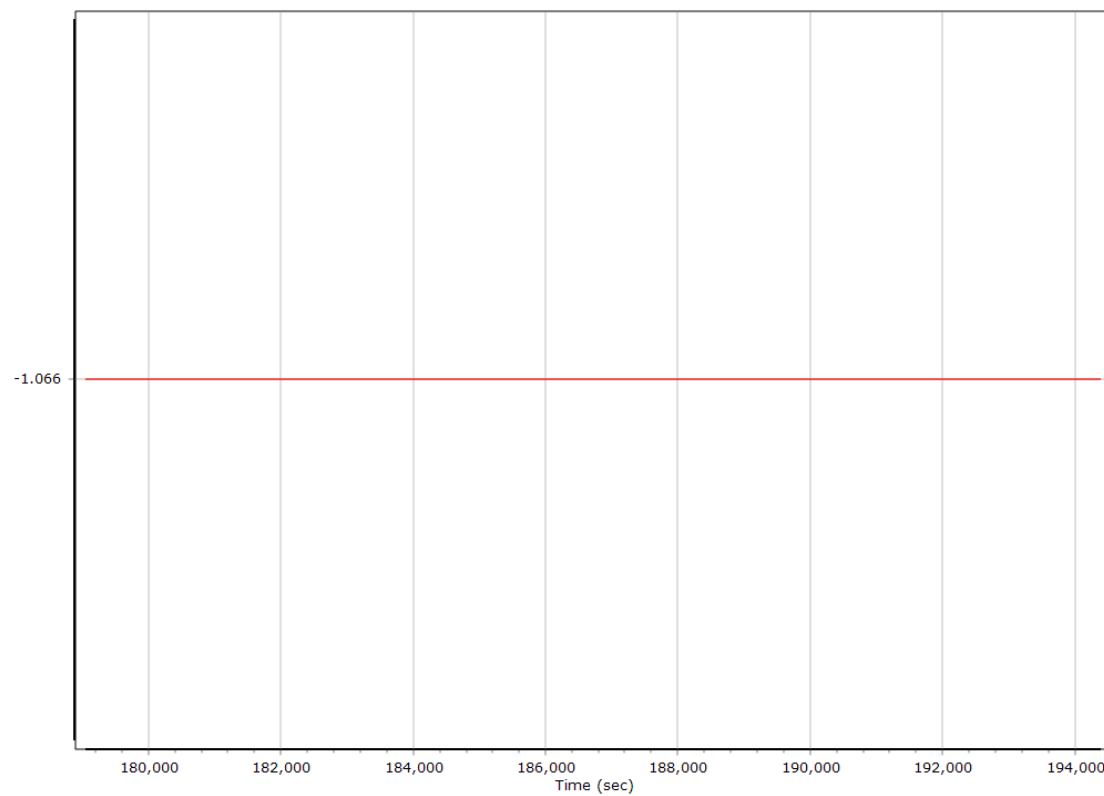
X Reference-Primary GNSS Lever Arm (m)



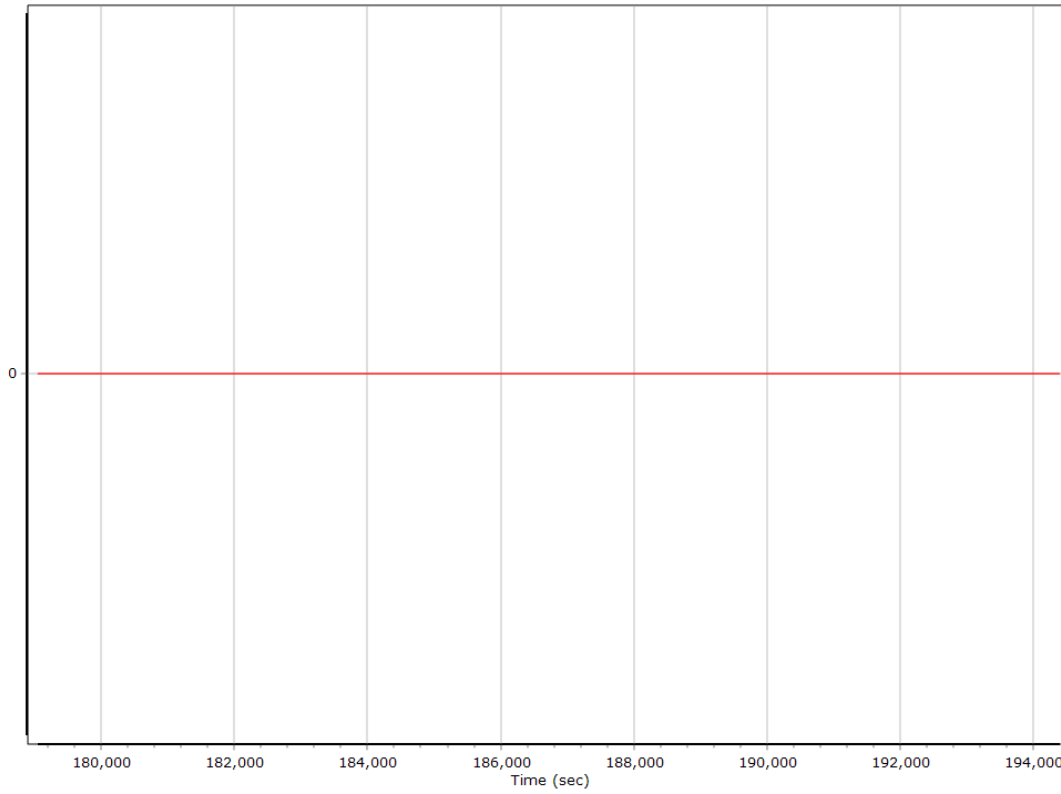
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



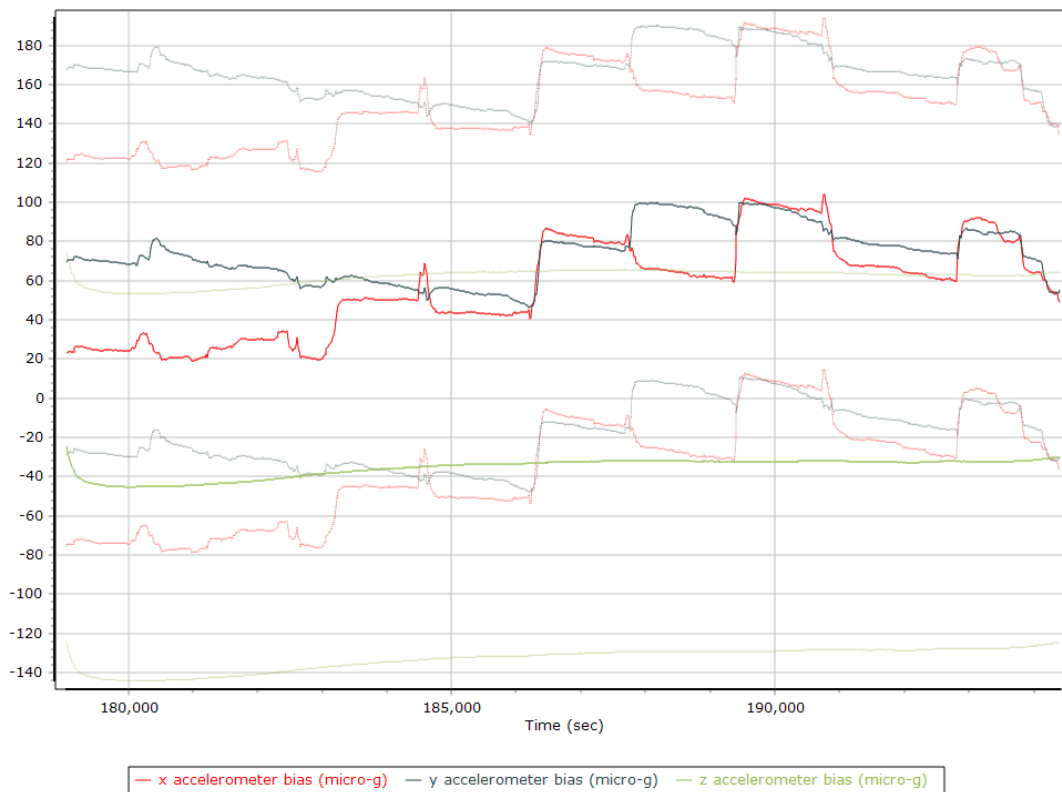
Reference-Primary GNSS Lever Arm Figure of Merit



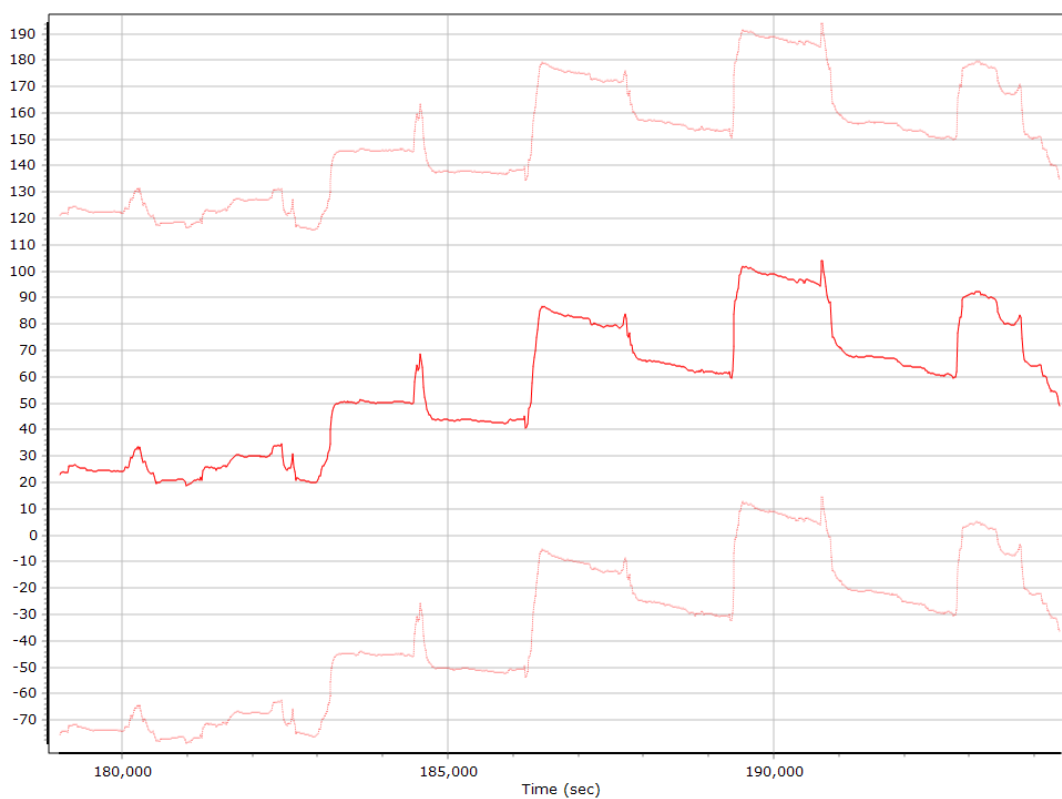
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

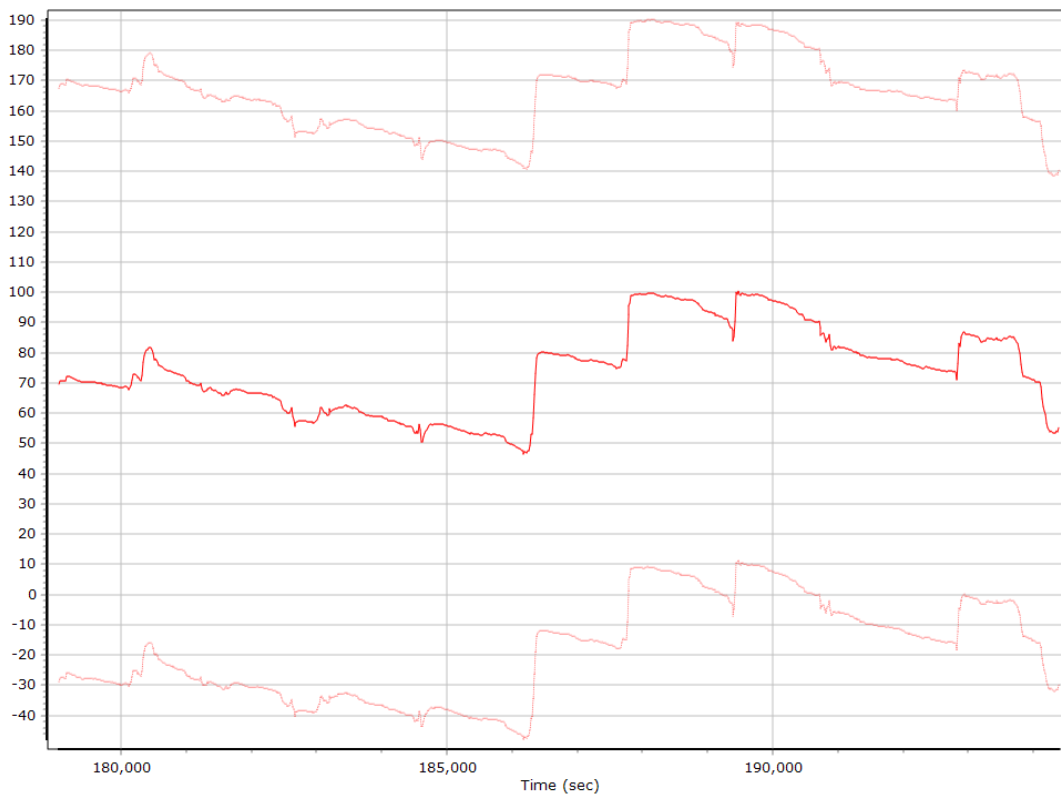
Accelerometer Bias (micro-g)



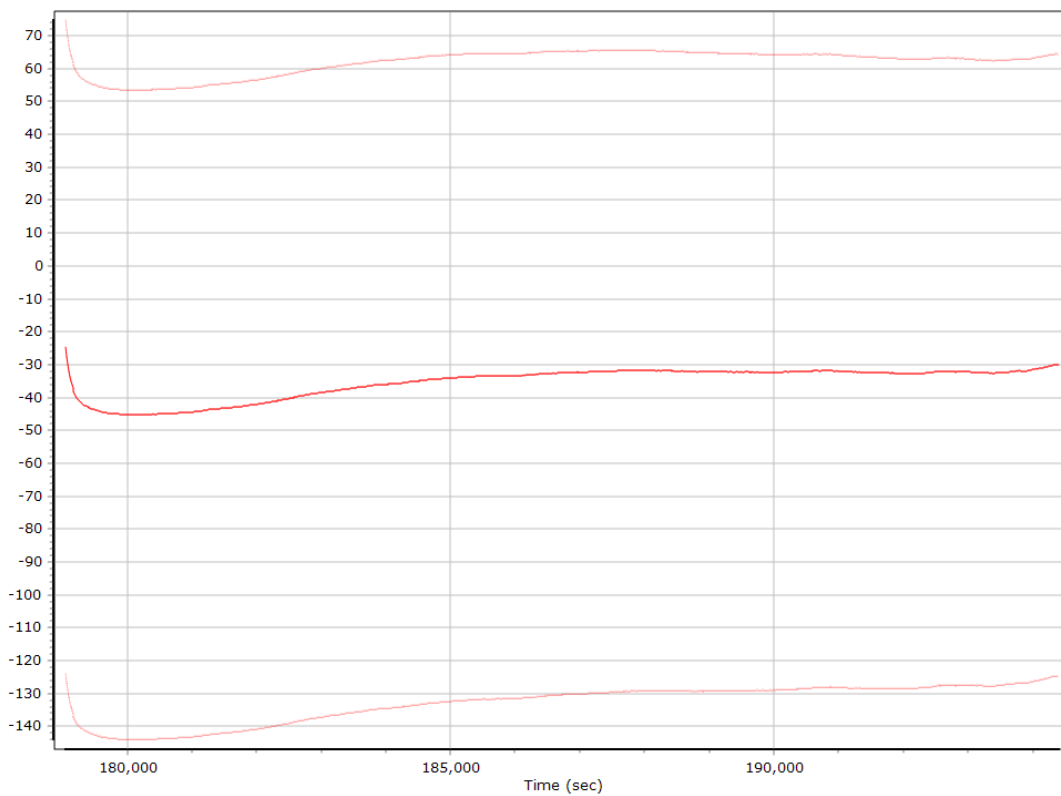
X Accelerometer Bias (micro-g)



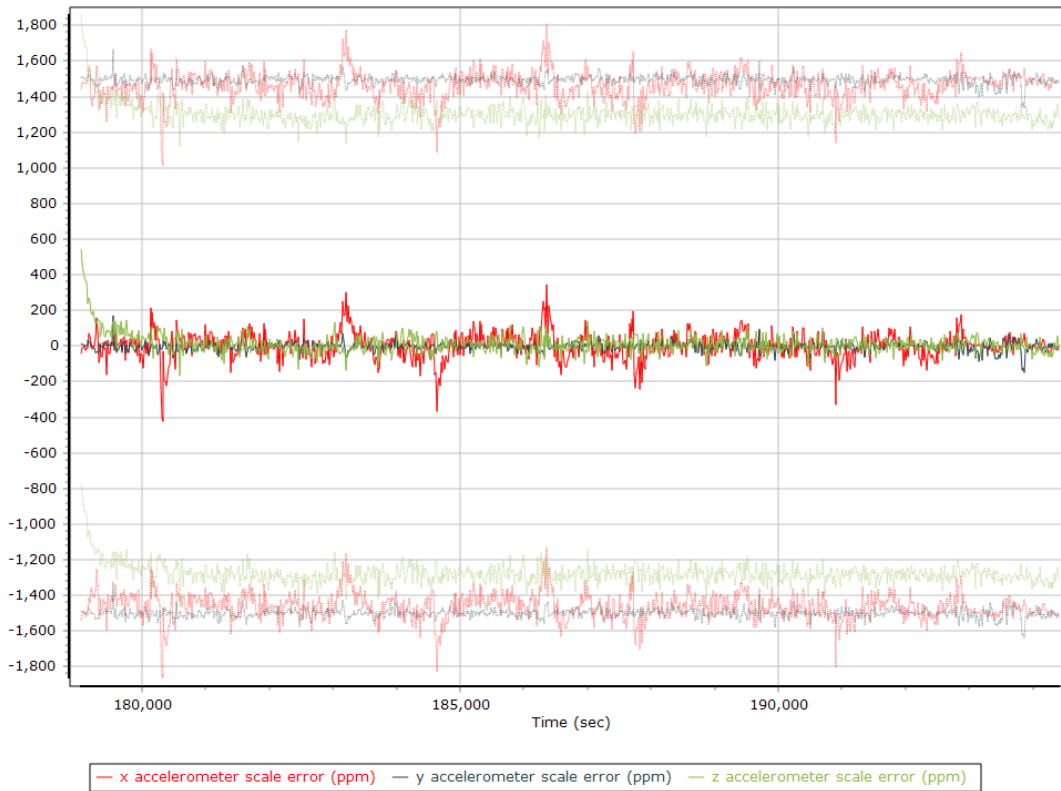
Y Accelerometer Bias (micro-g)



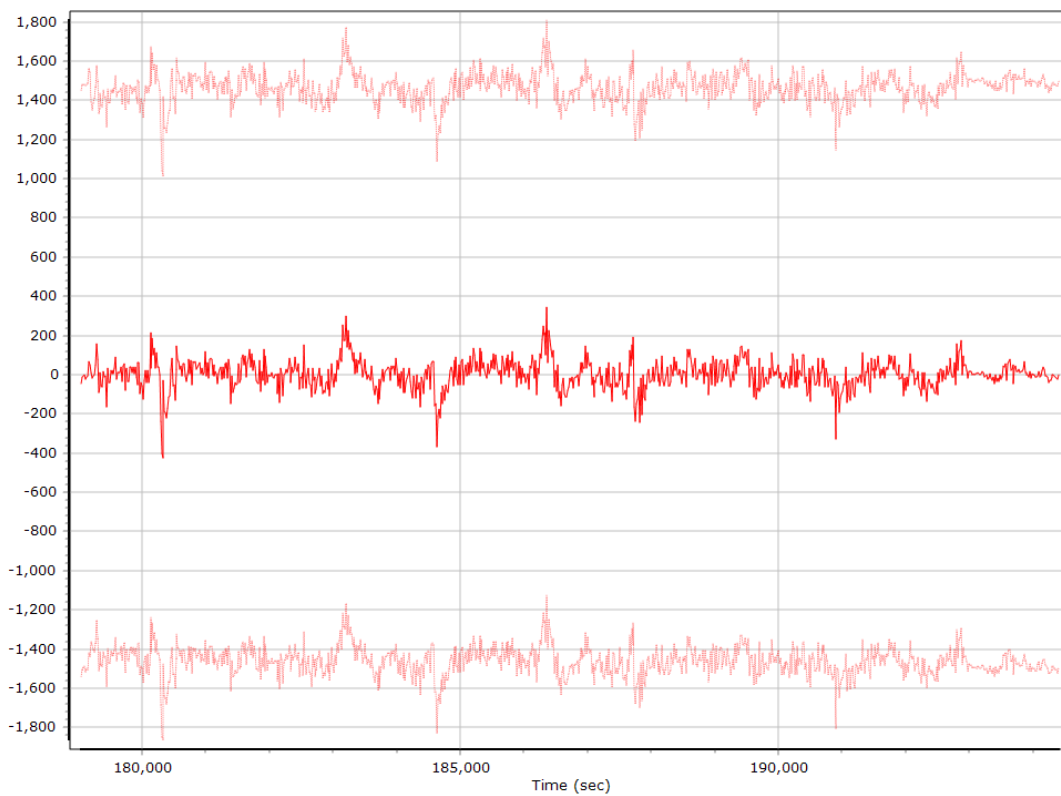
Z Accelerometer Bias (micro-g)



Accelerometer Scale Error (ppm)



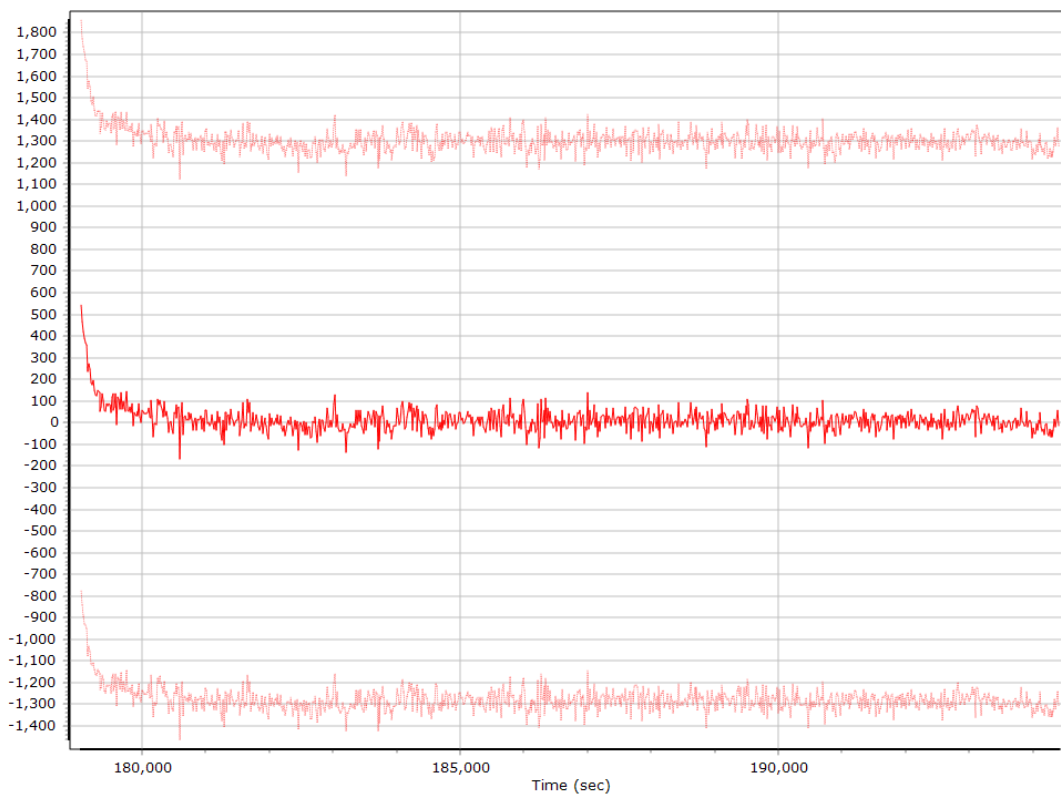
X Accelerometer Scale Error (ppm)



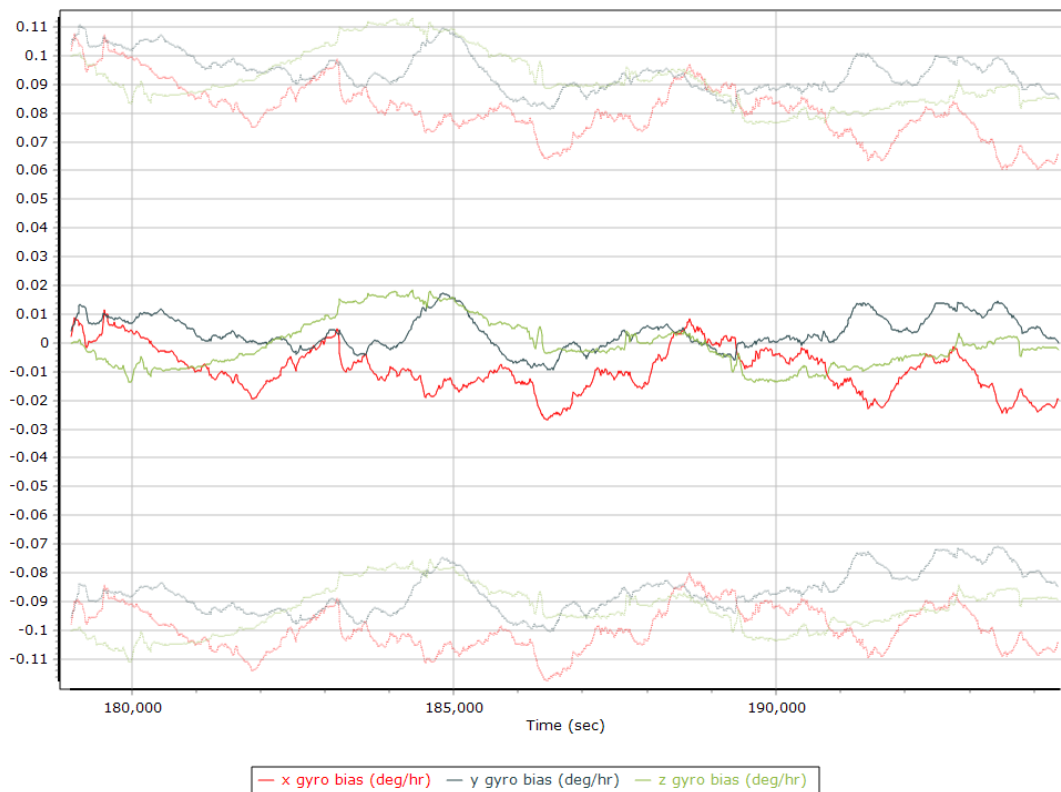
Y Accelerometer Scale Error (ppm)



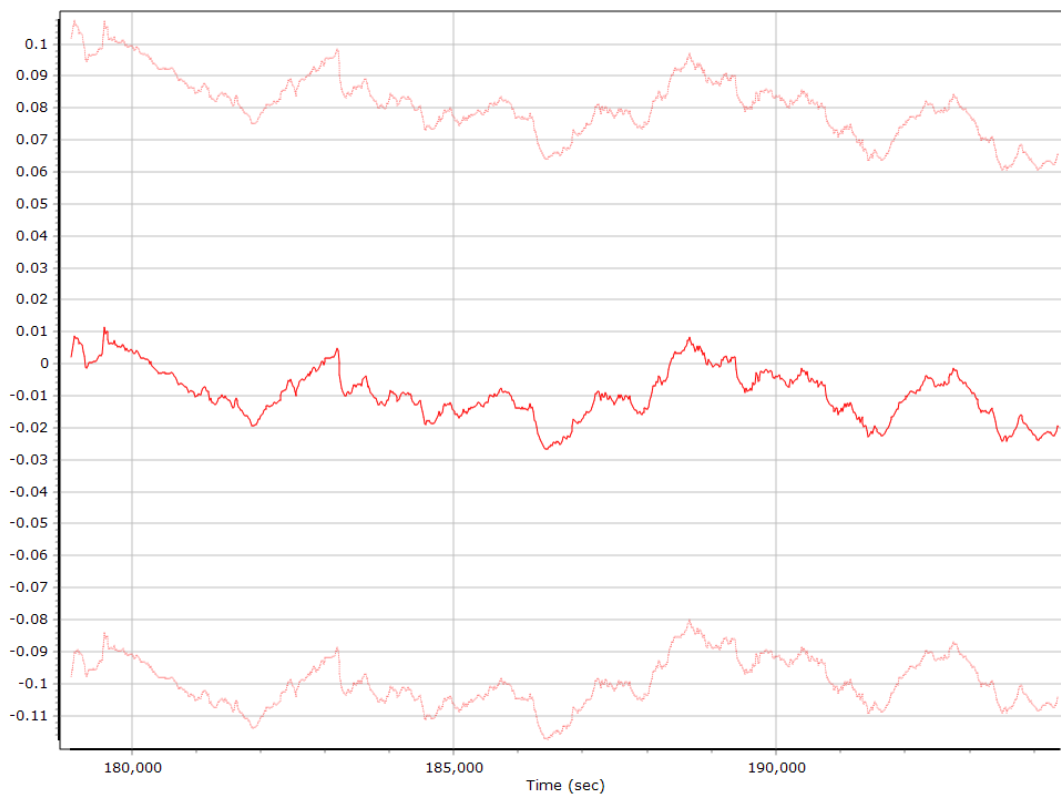
Z Accelerometer Scale Error (ppm)



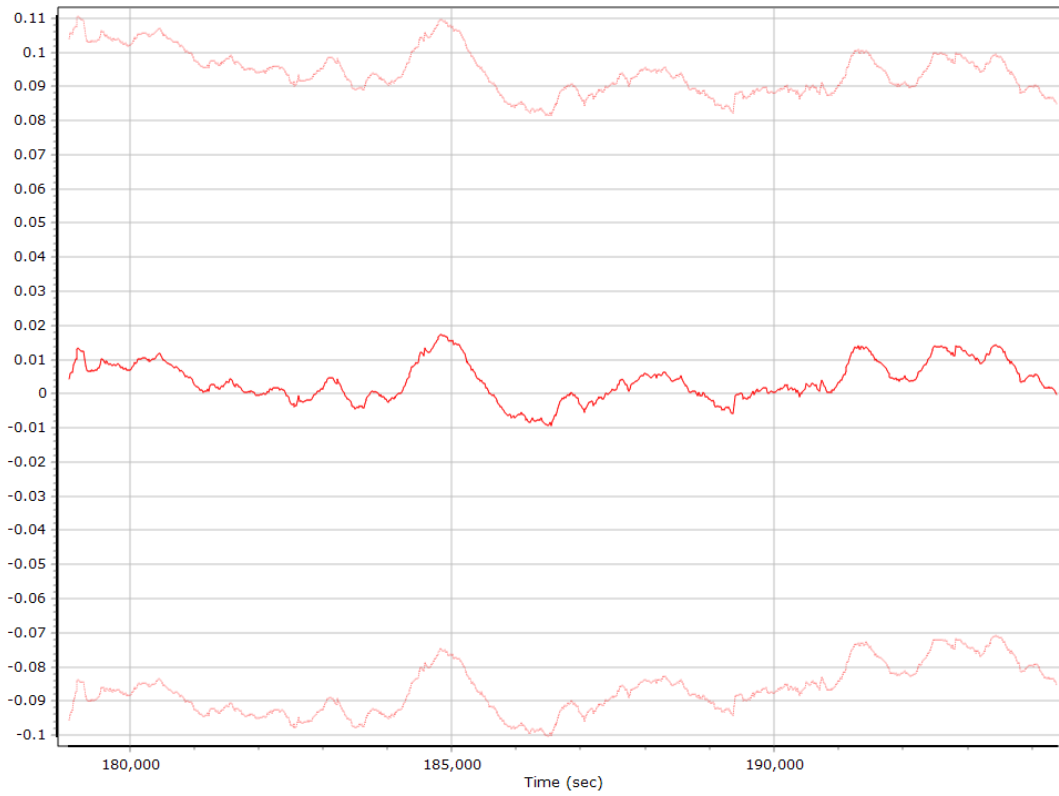
Gyro Bias (deg/h)



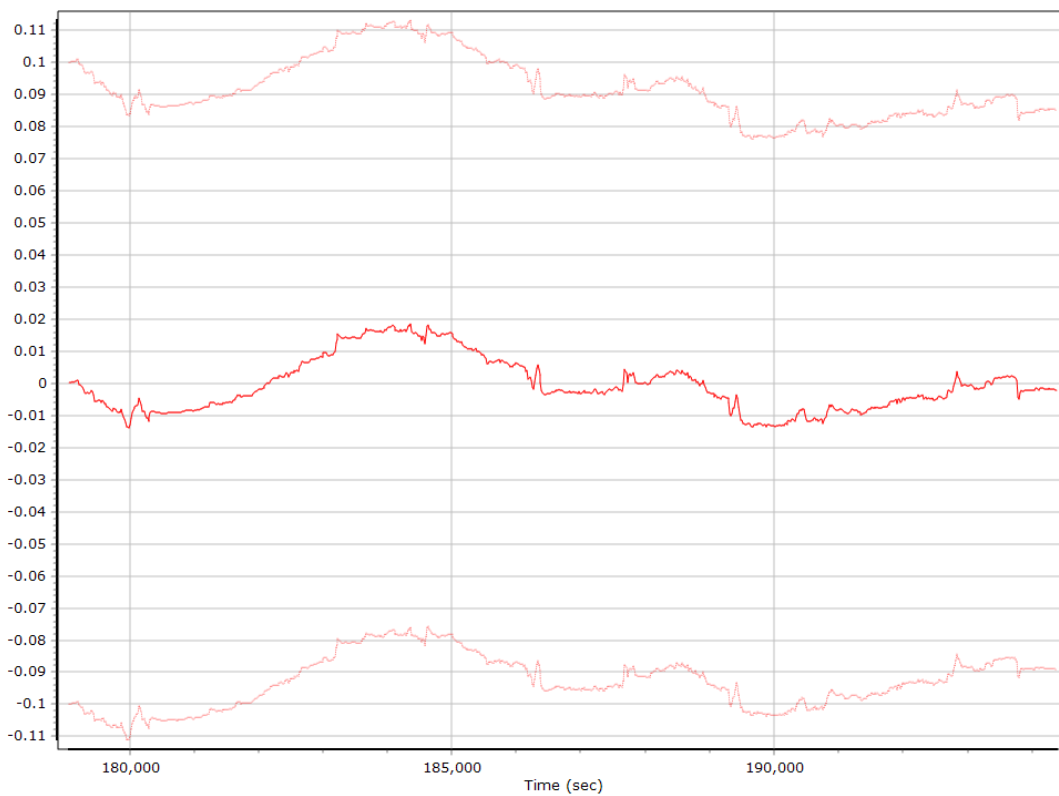
X Gyro Bias (deg/h)



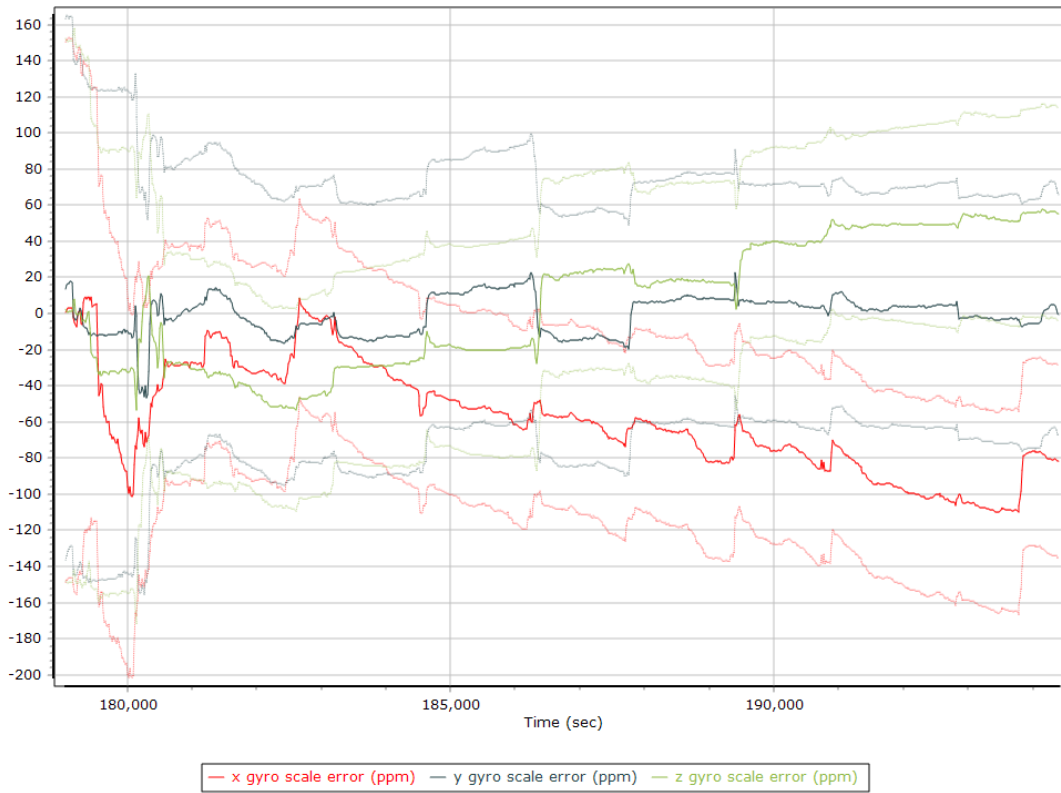
Y Gyro Bias (deg/h)



Z Gyro Bias (deg/h)



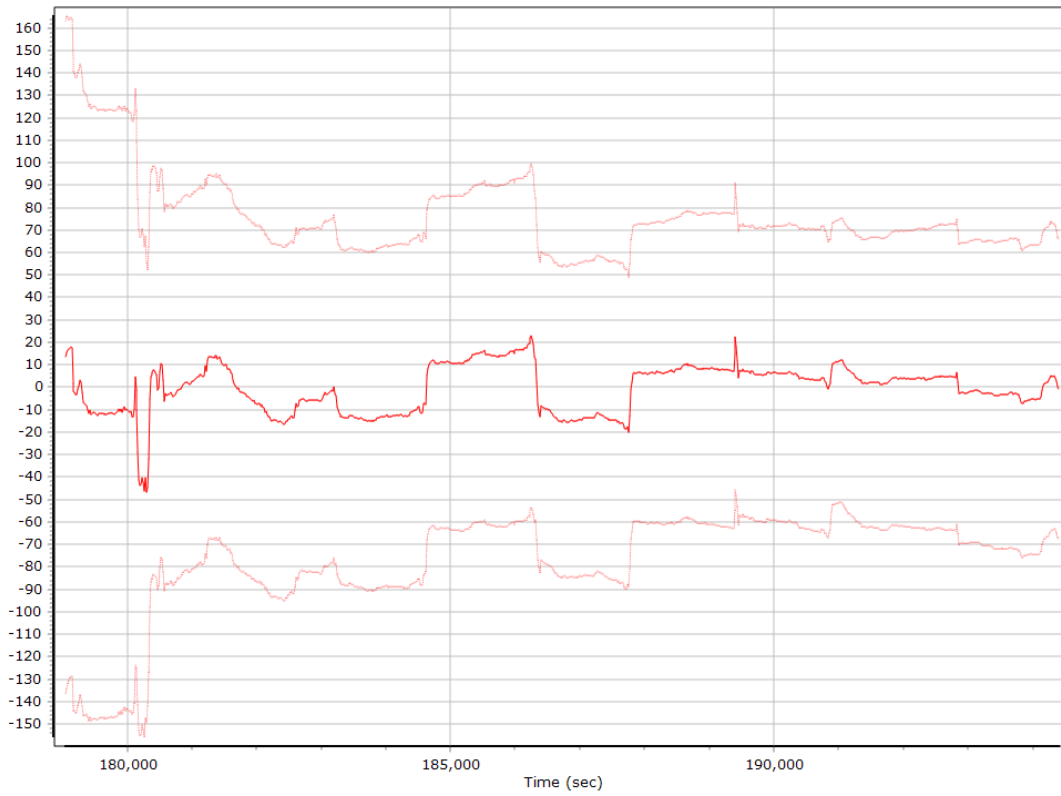
Gyro Scale Error (ppm)



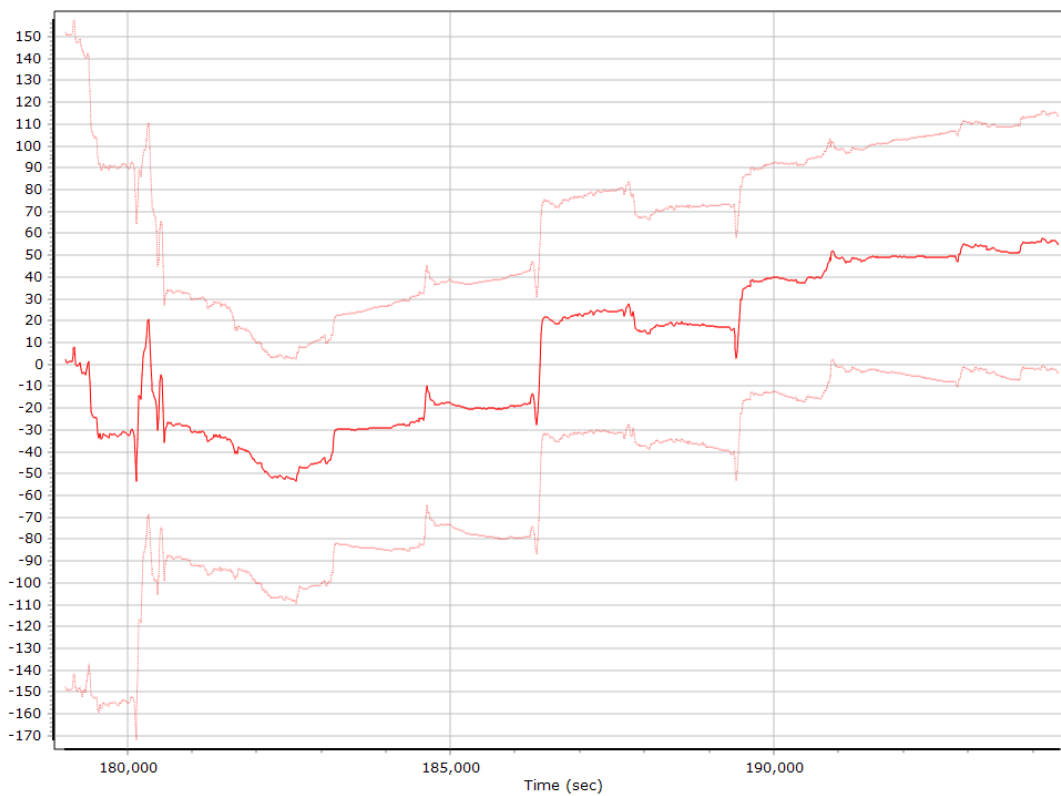
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

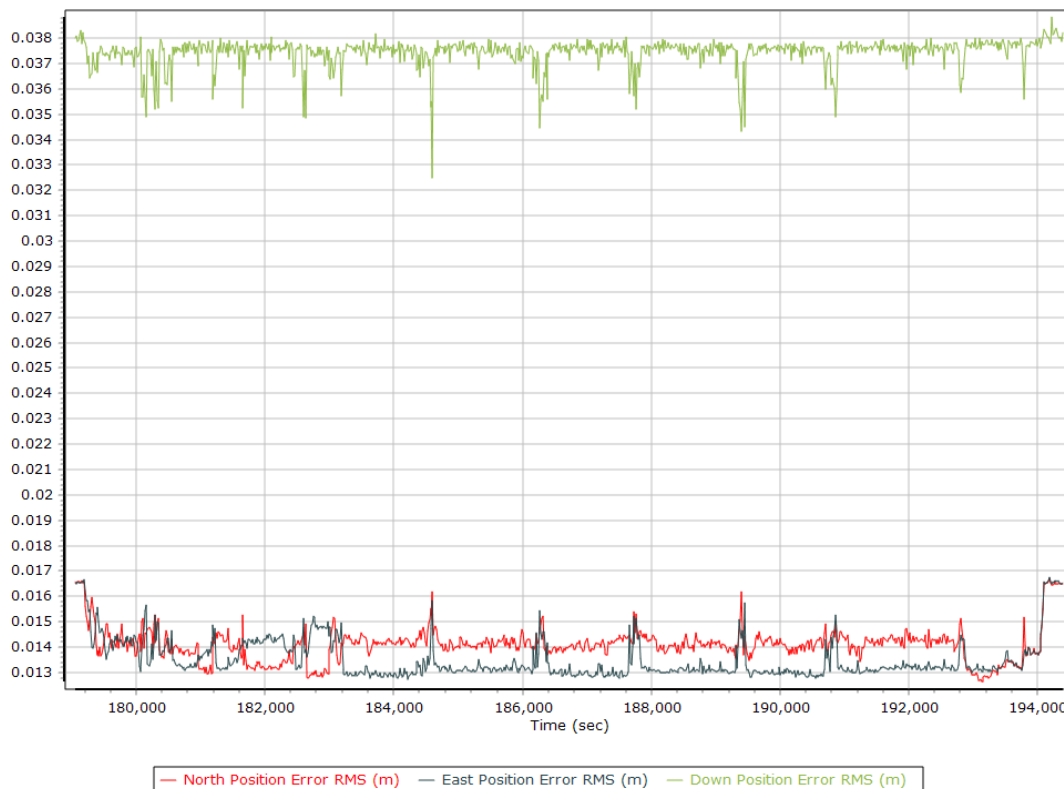


Z Gyro Scale Error (ppm)

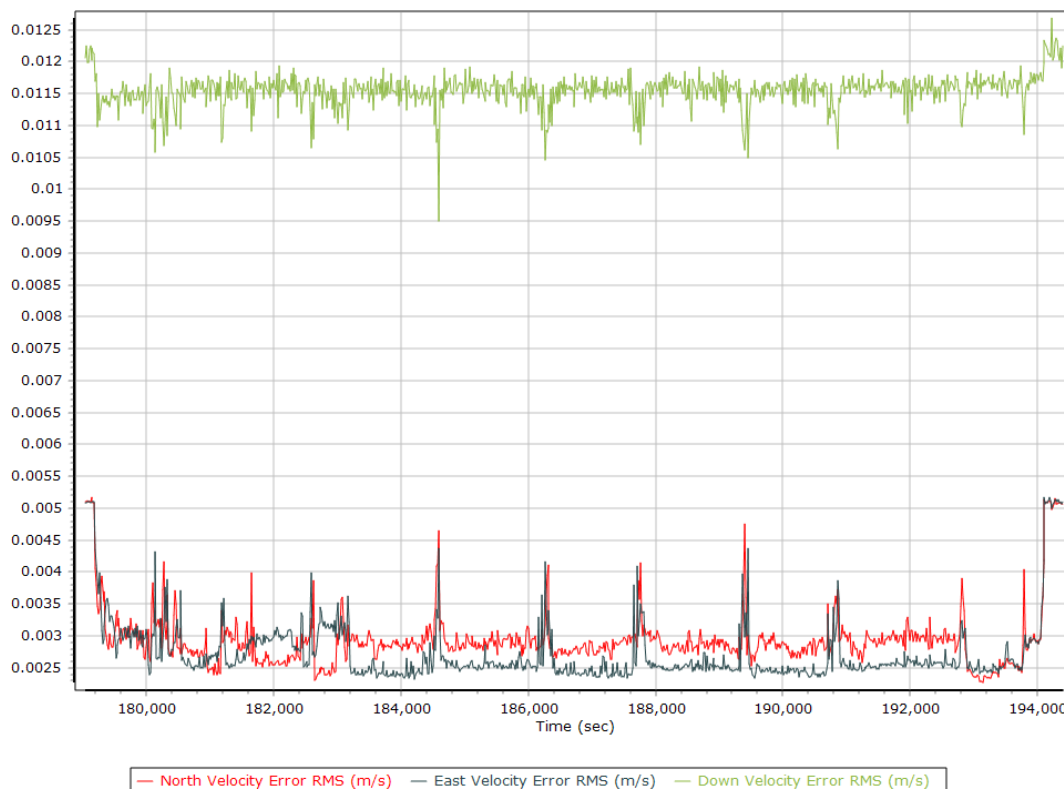


Smoothed Performance Metrics

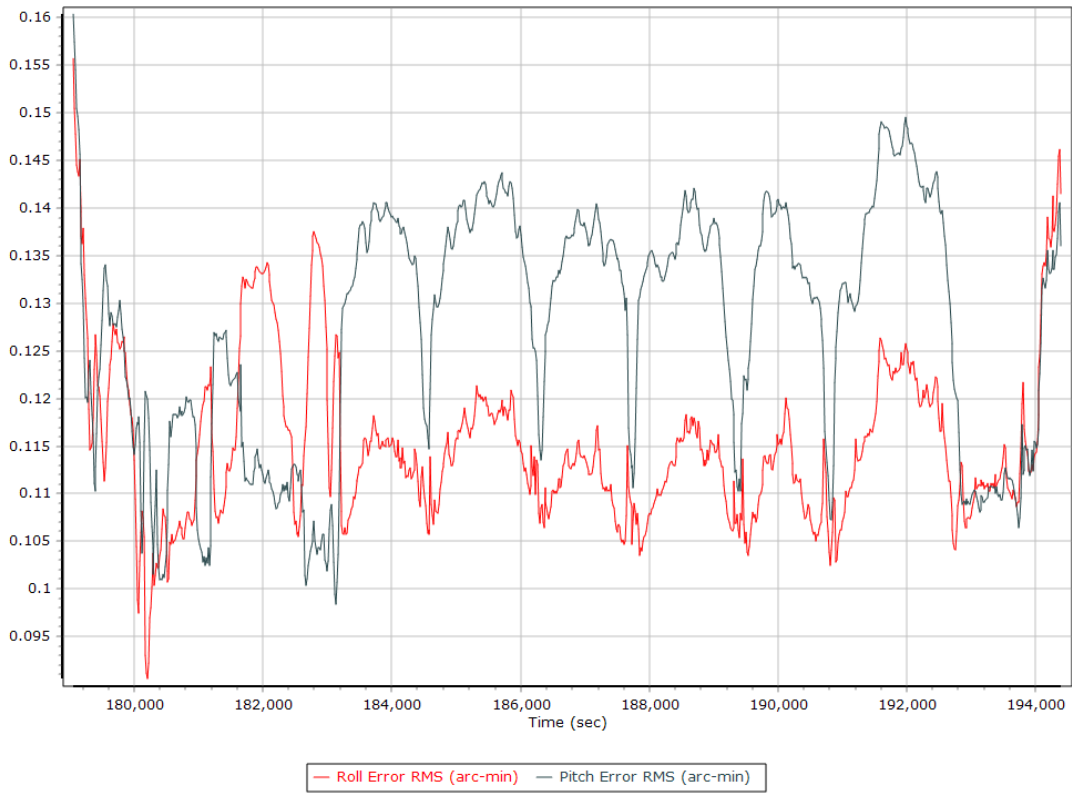
Position Error RMS (m)



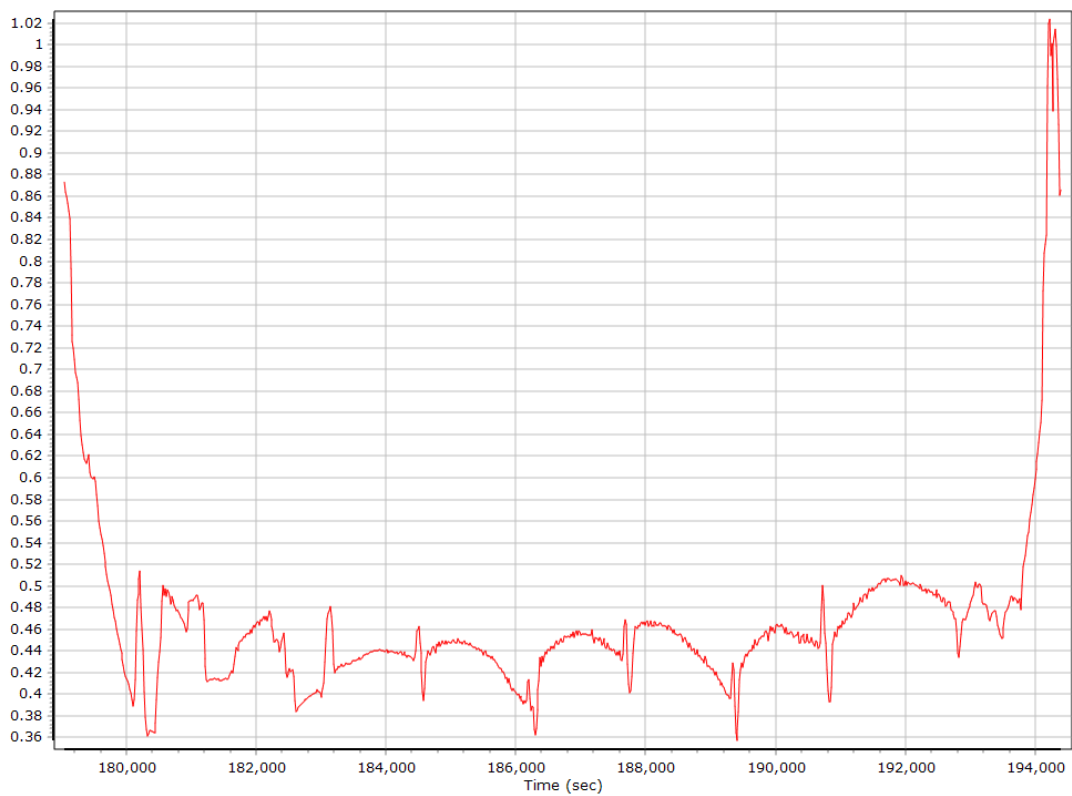
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

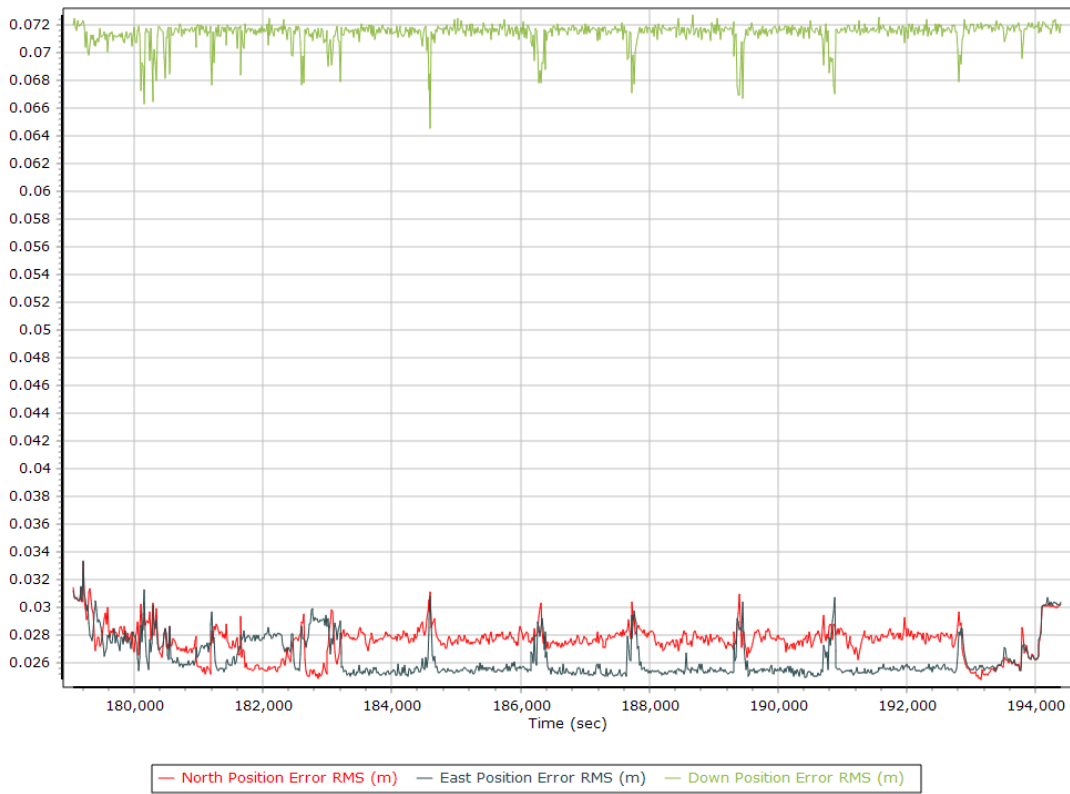


Heading Error RMS (arc-min)

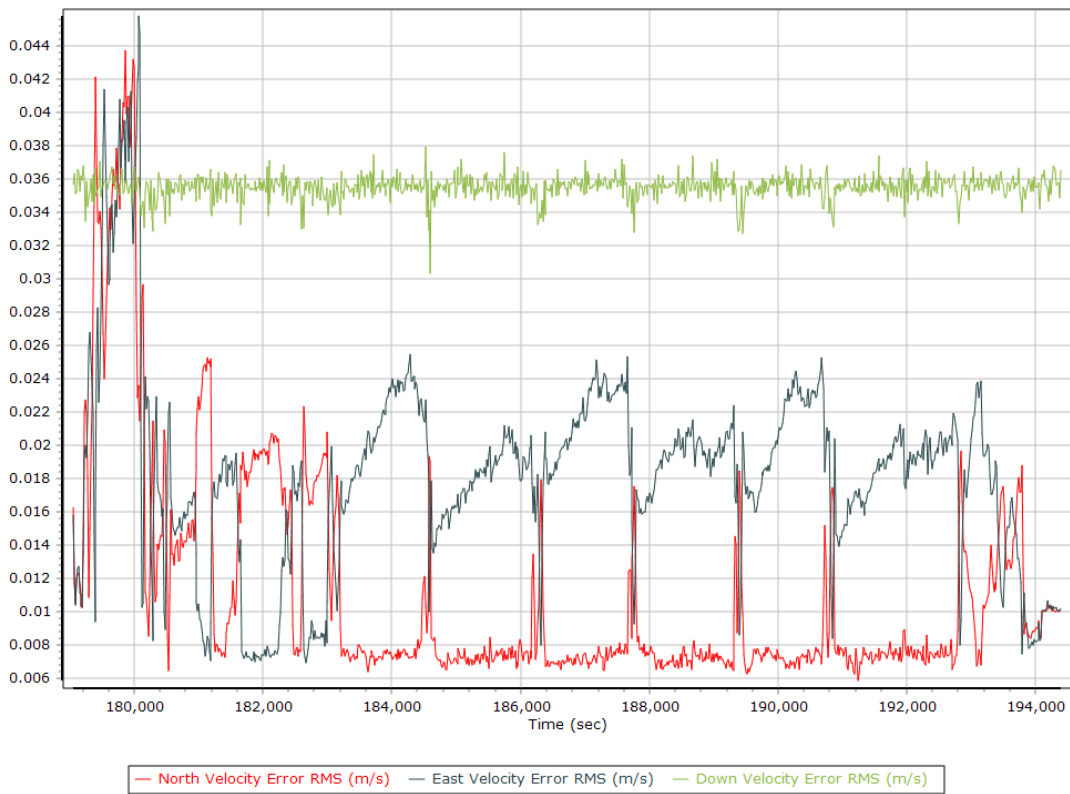


Forward Processed Performance Metrics

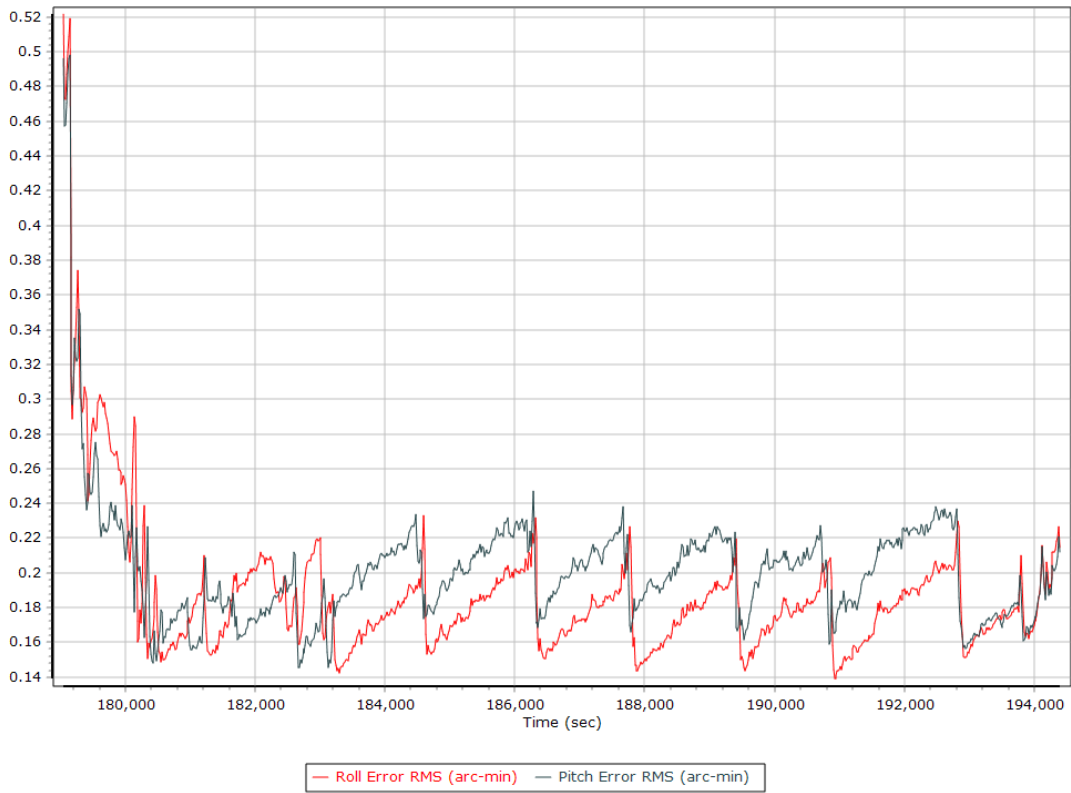
Position Error RMS (m)



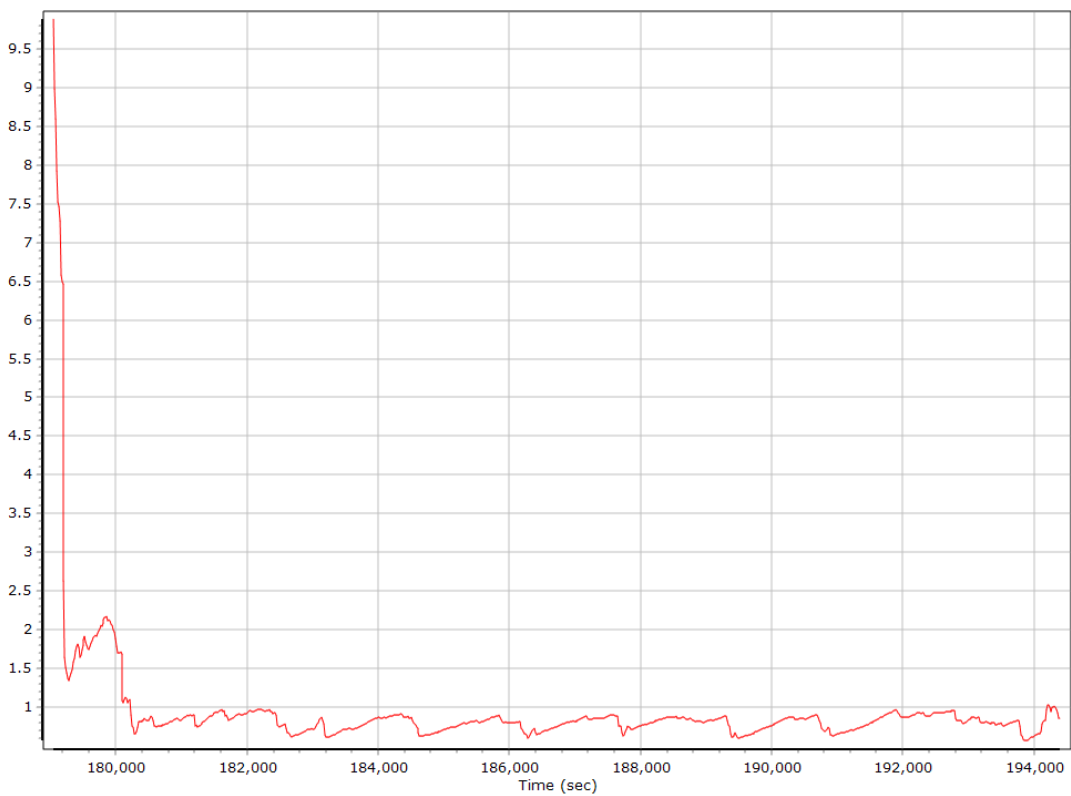
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

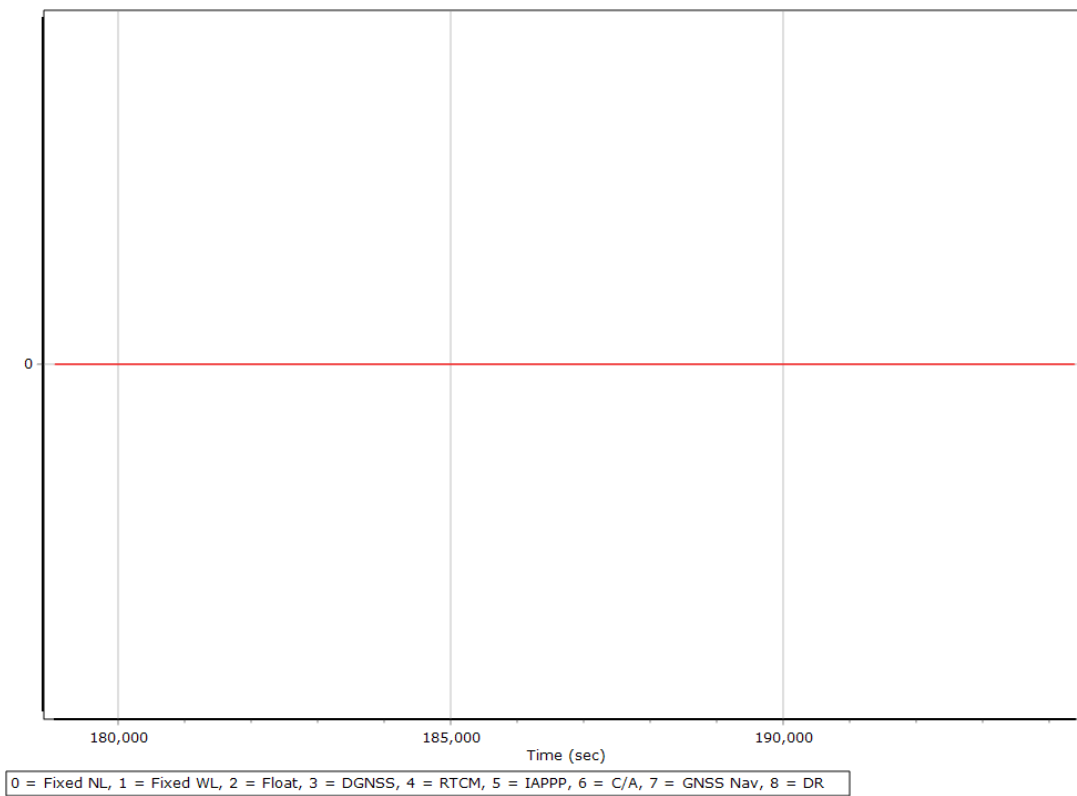


Heading Error RMS (arc-min)

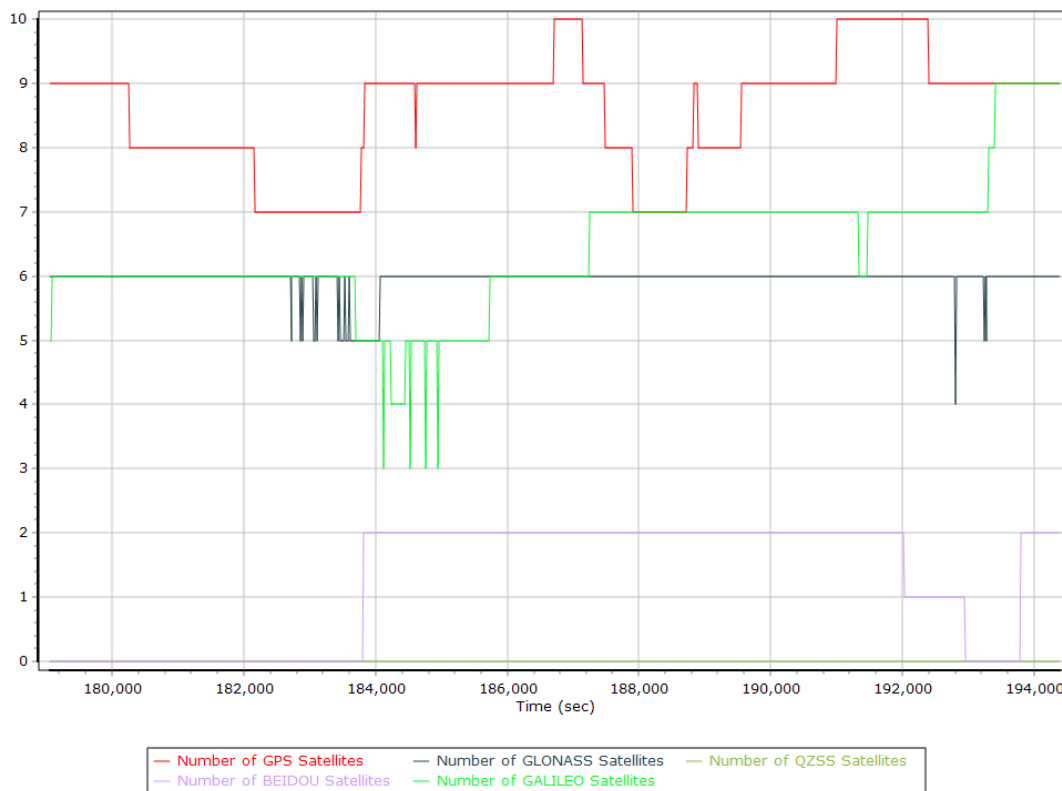


Forward Processed Solution Status

Processing Mode



Number of Satellites



Baseline Length

