

General Information

Mission Information

Project name	220729_A_5060492_nad2011_FINAL
Processing date	2022-07-31 00:03:42
Mission date	2022-07-29 12:25:03
Mission duration	03:48:28.000
Processing mode	IN-Fusion PP-RTX

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N12686
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
220729a.454	POS Data
220729a.455	POS Data
220729a.456	POS Data
220729a.457	POS Data
220729a.458	POS Data
220729a.459	POS Data
220729a.460	POS Data
220729a.461	POS Data
220729a.462	POS Data
220729a.463	POS Data
220729a.464	POS Data
220729a.465	POS Data
220729a.466	POS Data
220729a.467	POS Data
220729a.468	POS Data
220729a.469	POS Data
220729a.470	POS Data
220729a.471	POS Data
220729a.472	POS Data
220729a.473	POS Data
220729a.474	POS Data
220729a.475	POS Data
220729a.476	POS Data
220729a.477	POS Data
220729a.478	POS Data
220729a.479	POS Data
220729a.480	POS Data
220729a.481	POS Data
220729a.482	POS Data
220729a.483	POS Data

Input Files

File Name	File Type
Ephm2100.22g	GLONASS Broadcast Ephemeris
Ephm2100.22n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_220729_A_5060492_nad2011_FINAL.out	SBET Trajectory File
sbet_220729_A_5060492_nad2011_FINAL.shp	Shapefile Export Output

Rover Data Summary

First raw data file	220729a.454		
Last raw data file	220729a.483		
Start GPS week	2220		
Start time	25.248 (07/24/2022 00:00:25)		
End time	490411.810 (07/29/2022 16:13:31)		
Start of fine alignment	476888.617 (07/29/2022 12:28:08)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Reference to IMU lever arm (m)	0.000	0.000	0.000
Reference to IMU mounting angles (deg)	0.000	0.000	180.000
Reference to Primary GNSS lever arm (m)	0.361	-0.429	-0.945
Reference to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

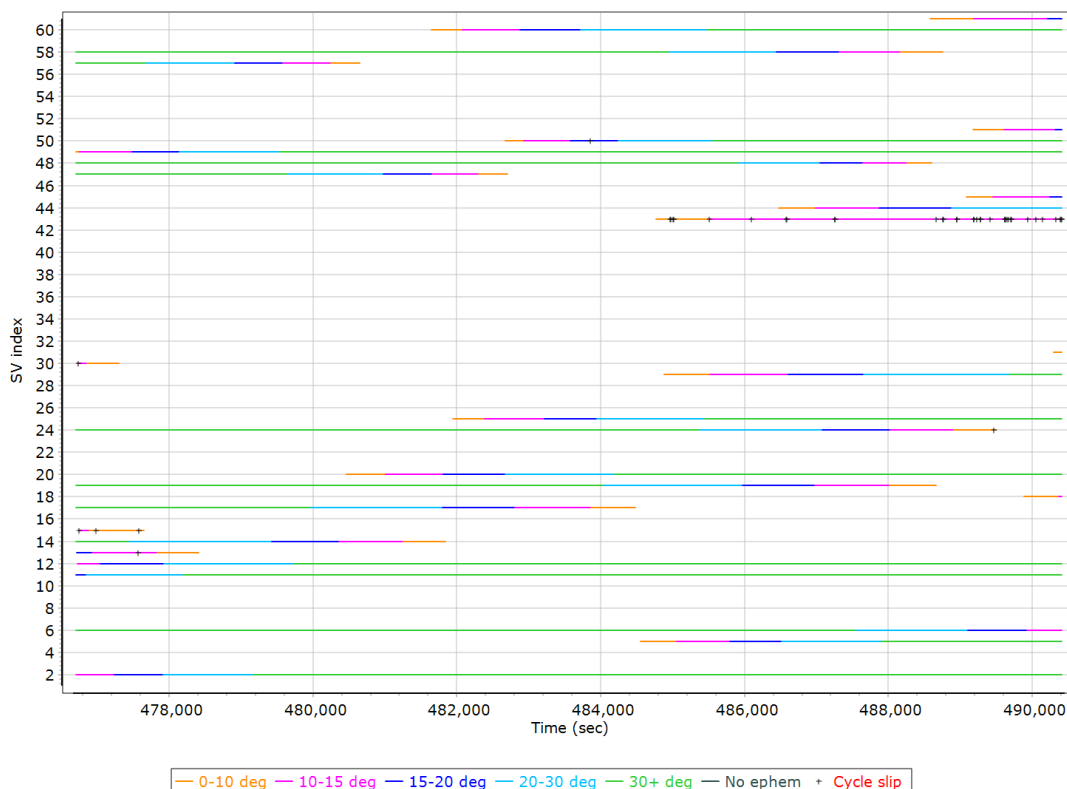
Rover Data QC

Raw IMU Import QC Summary

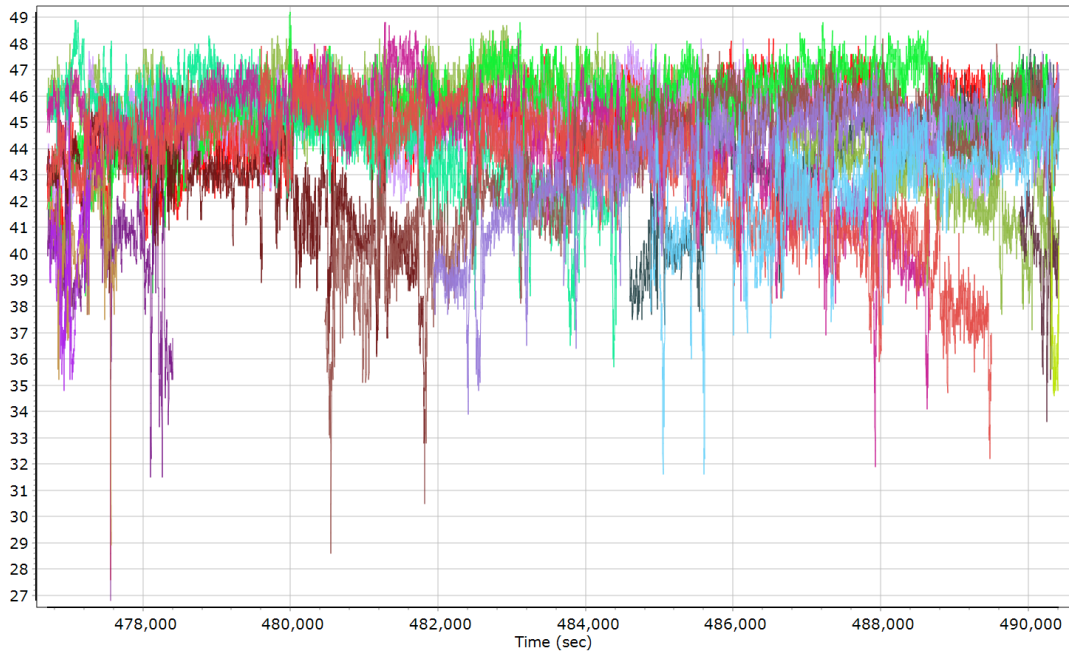
IMU data input file	imu_220729_A_5060492_nad2011_FINAL.dat
IMU data check log file	imudt_220729_A_5060492_nad2011_FINAL.log
IMU Records Processed	2741402
Termination Status	Warnings
IMU Anomalies	1
IMU Failure Messages	
476710.575 : WARNING : Gap of 476684.5819 seconds in CHECKDT input data	

Primary Observables & Satellite Data

GPS/GLONASS L1 Satellite Lock/Elevation

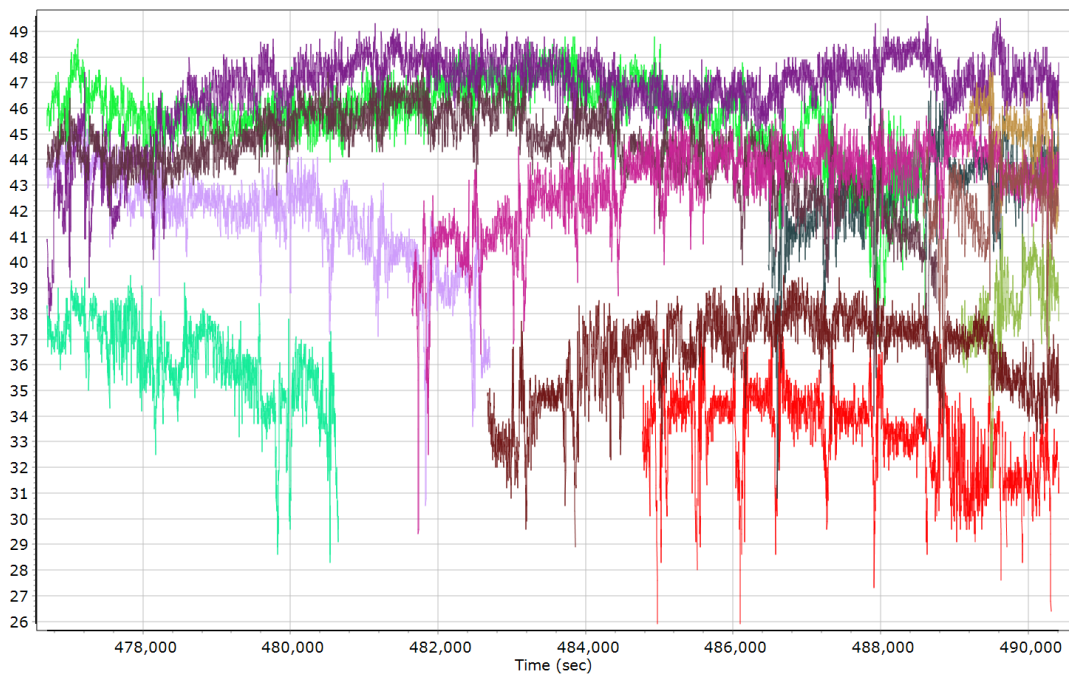


GPS L1 SNR



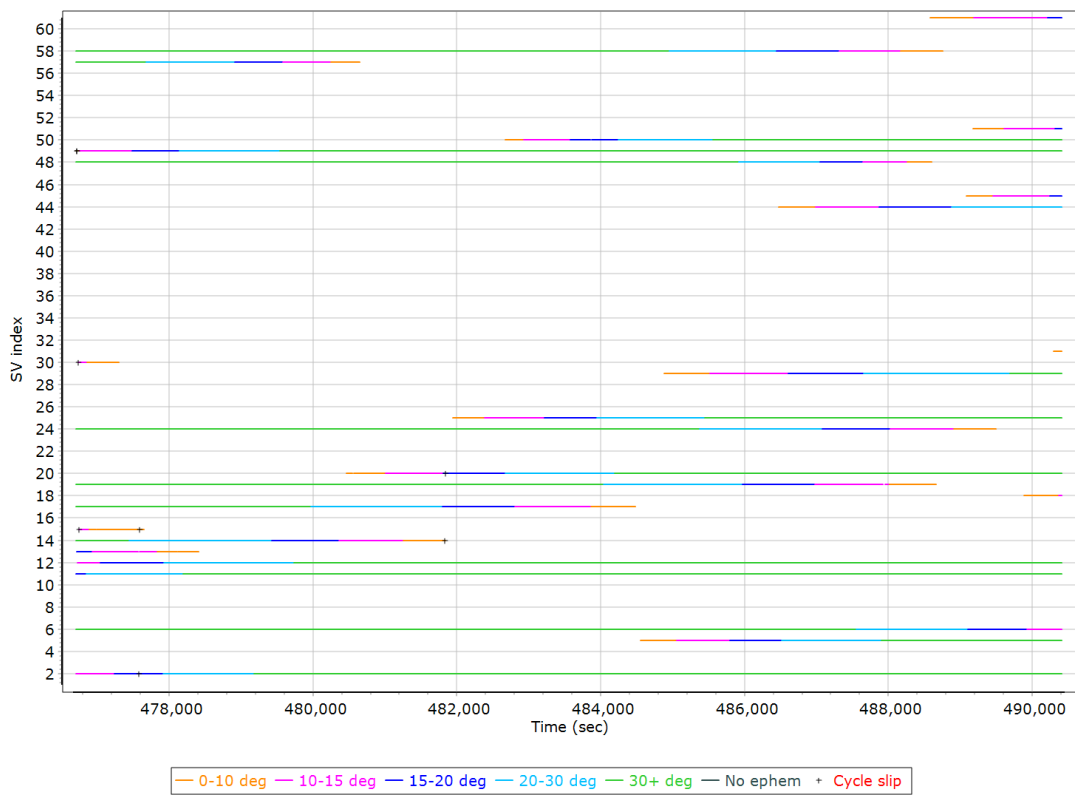
- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 02 L1 SNR (dB/Hz) | GPS PRN 05 L1 SNR (dB/Hz) | GPS PRN 06 L1 SNR (dB/Hz) | GPS PRN 11 L1 SNR (dB/Hz) |
| GPS PRN 12 L1 SNR (dB/Hz) | GPS PRN 13 L1 SNR (dB/Hz) | GPS PRN 14 L1 SNR (dB/Hz) | GPS PRN 15 L1 SNR (dB/Hz) |
| GPS PRN 17 L1 SNR (dB/Hz) | GPS PRN 18 L1 SNR (dB/Hz) | GPS PRN 19 L1 SNR (dB/Hz) | GPS PRN 20 L1 SNR (dB/Hz) |
| GPS PRN 24 L1 SNR (dB/Hz) | GPS PRN 25 L1 SNR (dB/Hz) | GPS PRN 29 L1 SNR (dB/Hz) | GPS PRN 30 L1 SNR (dB/Hz) |
| GPS PRN 31 L1 SNR (dB/Hz) | | | |

GLONASS L1 SNR

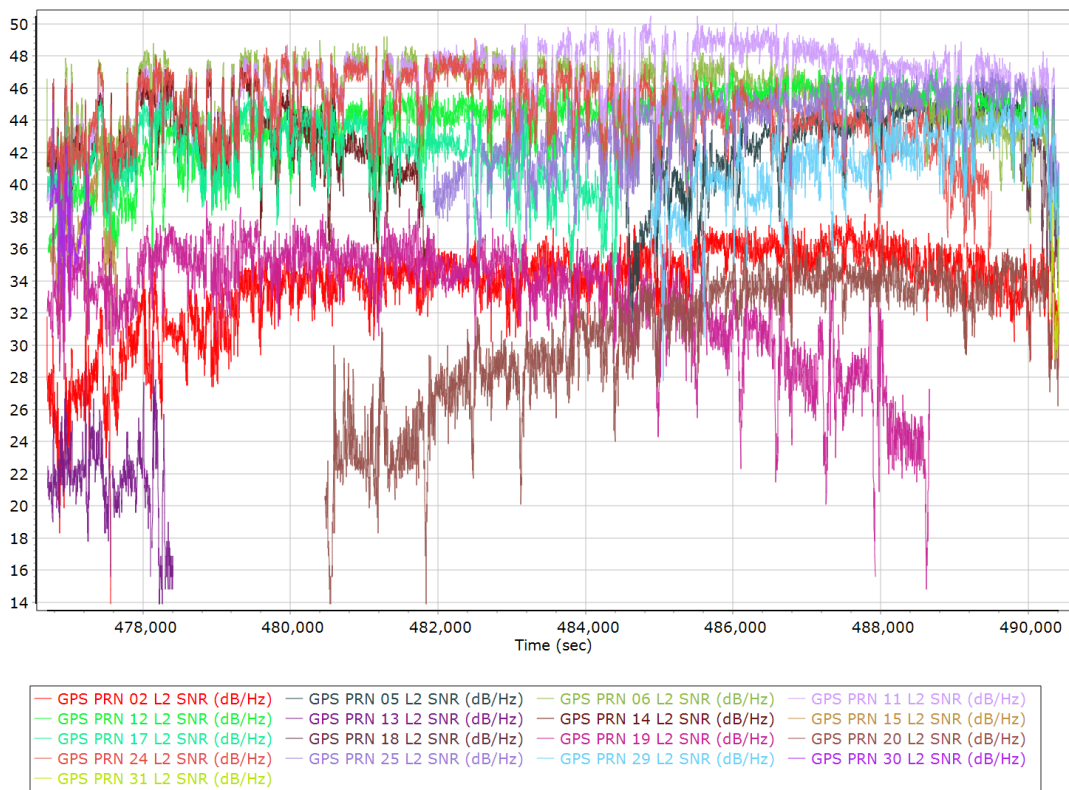


- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 06 L1 SNR (dB/Hz) | GLONASS 07 L1 SNR (dB/Hz) | GLONASS 08 L1 SNR (dB/Hz) |
| GLONASS 10 L1 SNR (dB/Hz) | GLONASS 11 L1 SNR (dB/Hz) | GLONASS 12 L1 SNR (dB/Hz) |
| GLONASS 13 L1 SNR (dB/Hz) | GLONASS 14 L1 SNR (dB/Hz) | GLONASS 20 L1 SNR (dB/Hz) |
| GLONASS 21 L1 SNR (dB/Hz) | GLONASS 23 L1 SNR (dB/Hz) | GLONASS 24 L1 SNR (dB/Hz) |

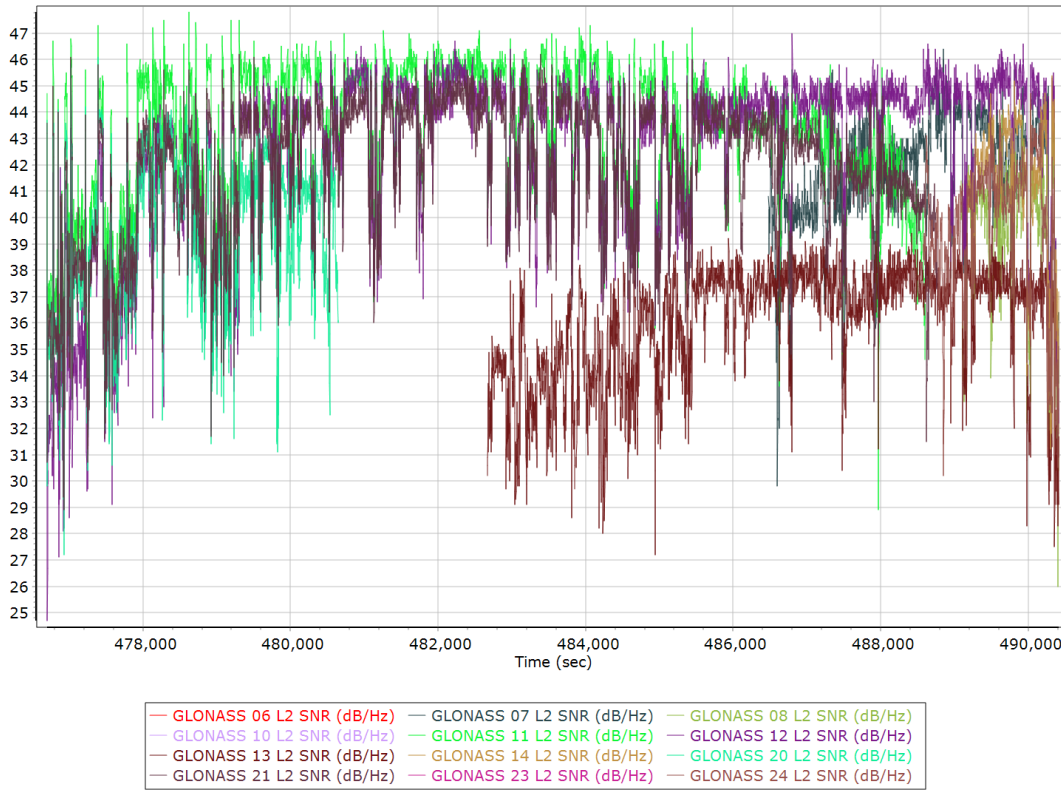
GPS/GLONASS L2 Satellite Lock/Elevation



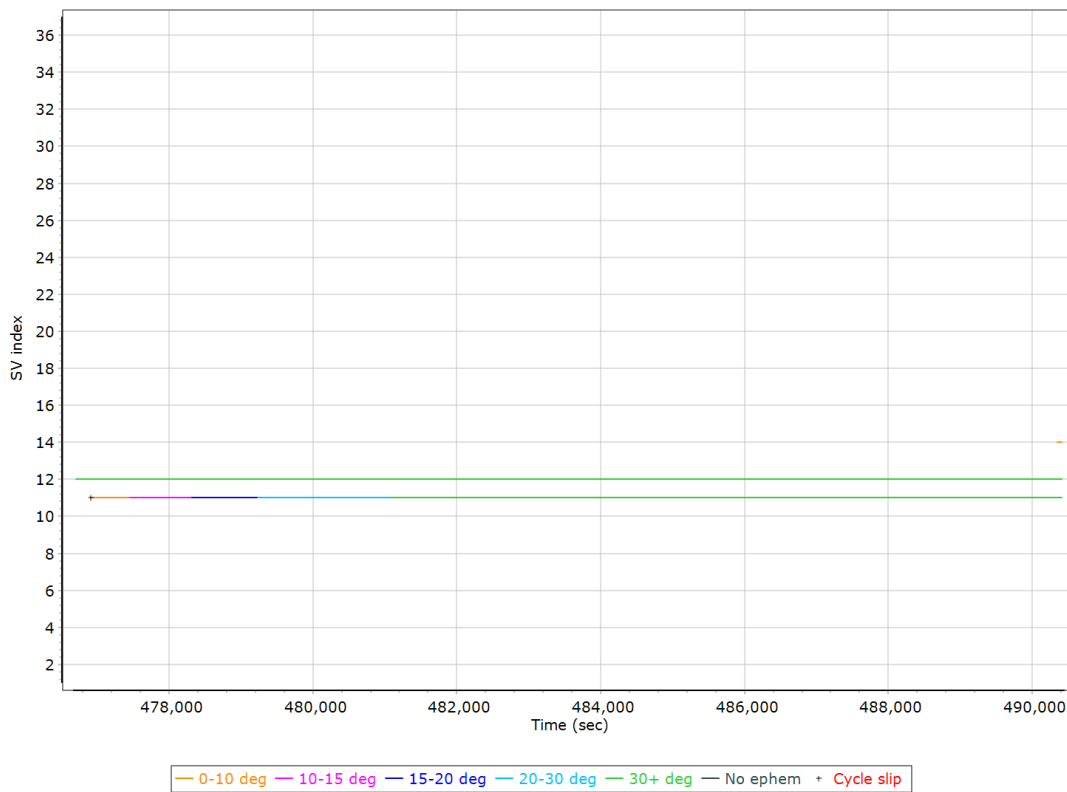
GPS L2 SNR



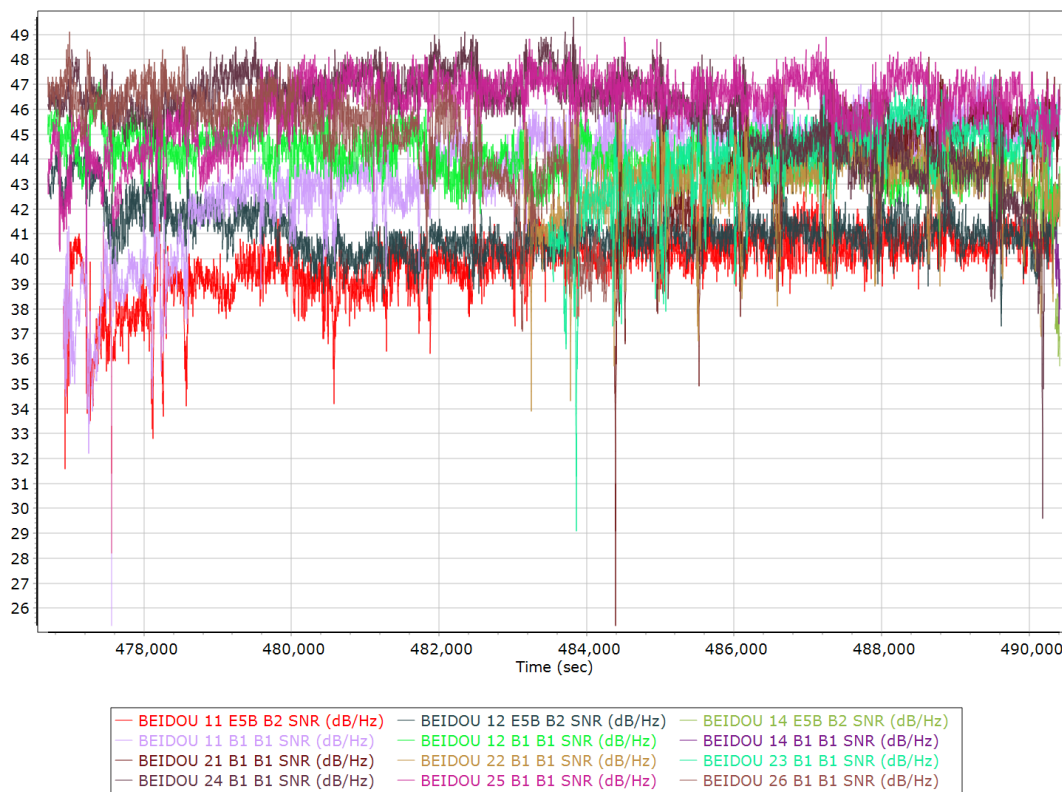
GLONASS L2 SNR



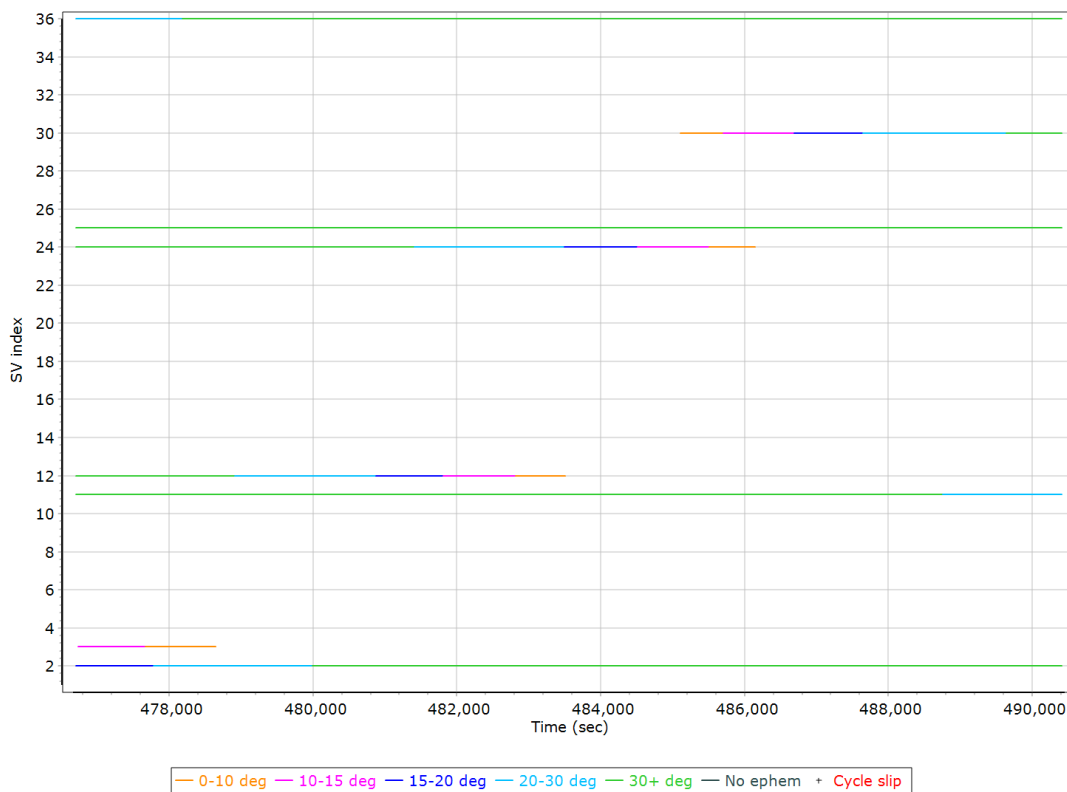
BEIDOU Satellite Lock/Elevation



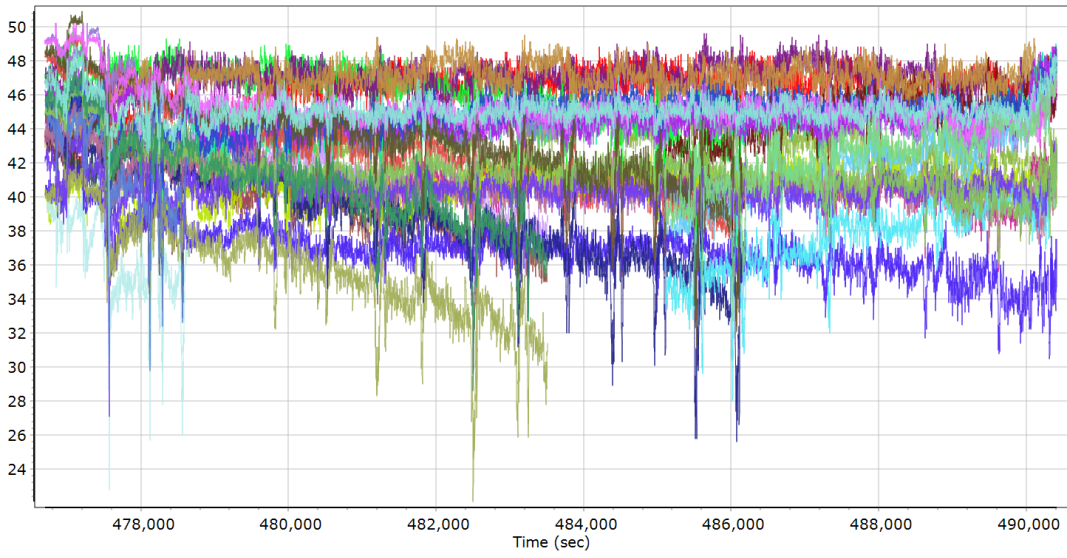
BEIDOU SNR



GALILEO Satellite Lock/Elevation



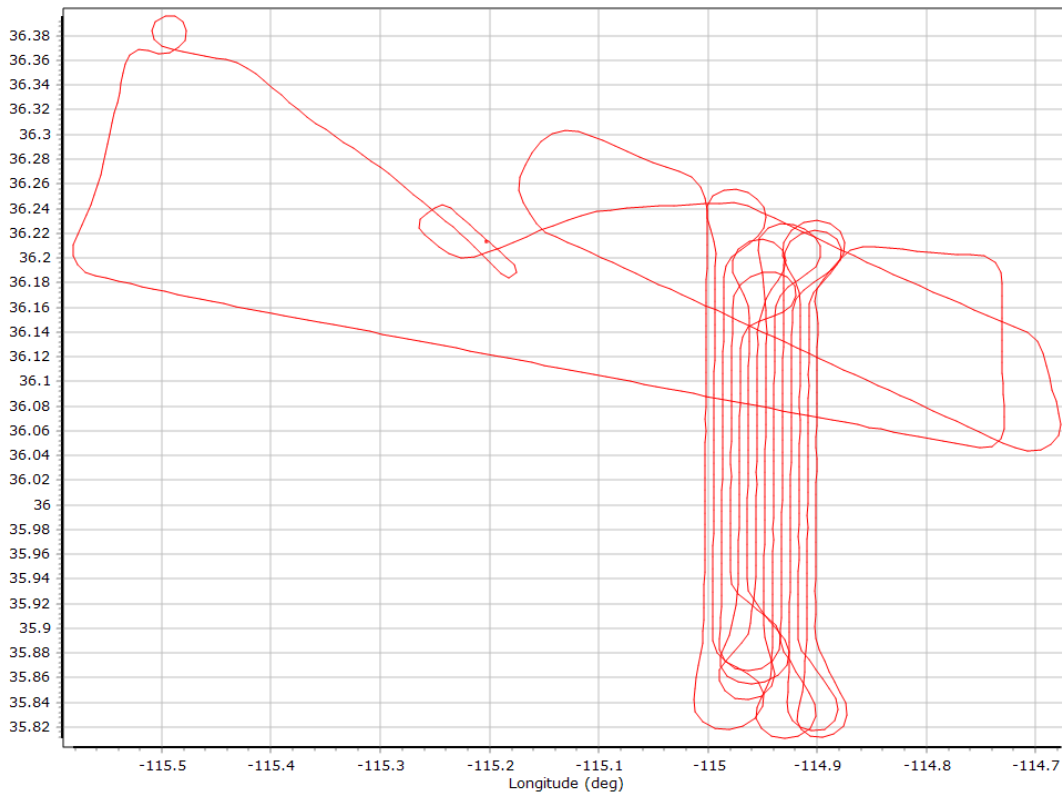
GALILEO SNR



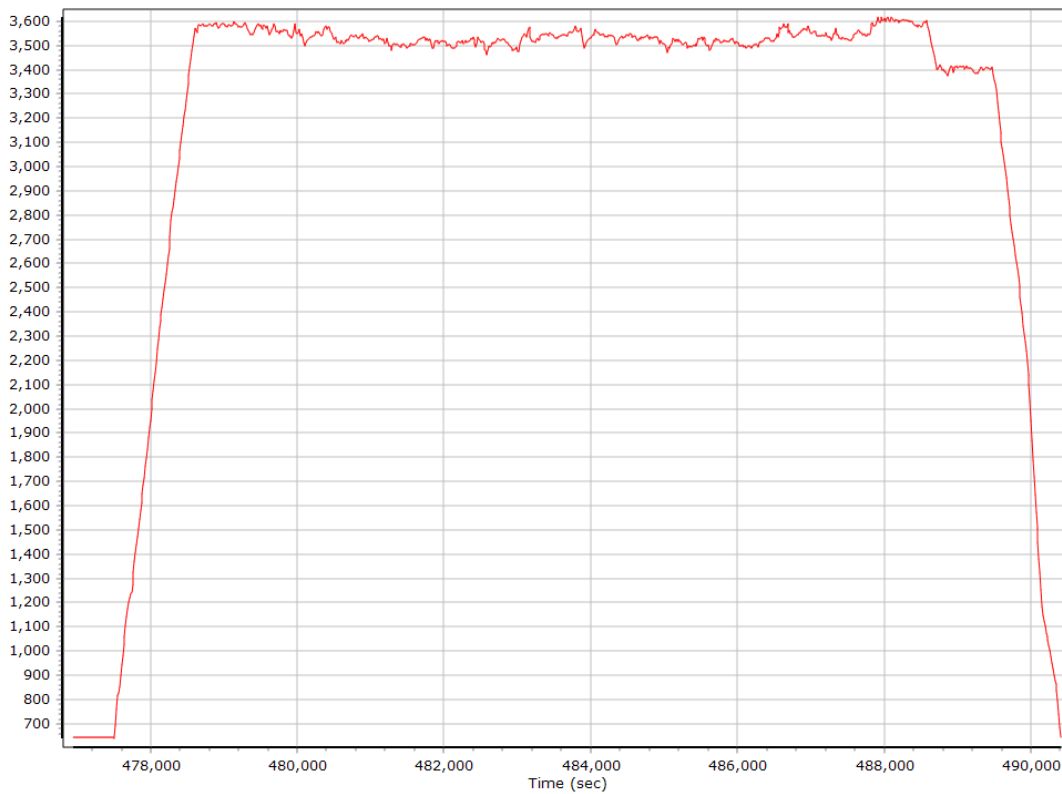
— GALILEO 02 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 03 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 11 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 12 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 24 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 25 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 30 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— 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 11 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 12 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 24 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 25 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 30 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 36 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 02 E5B BPSK10_PD SNR (dB/Hz)	— GALILEO 03 E5B BPSK10_PD SNR (dB/Hz)
— GALILEO 11 E5B BPSK10_PD SNR (dB/Hz)	— GALILEO 12 E5B BPSK10_PD SNR (dB/Hz)

Smoothed Trajectory Information

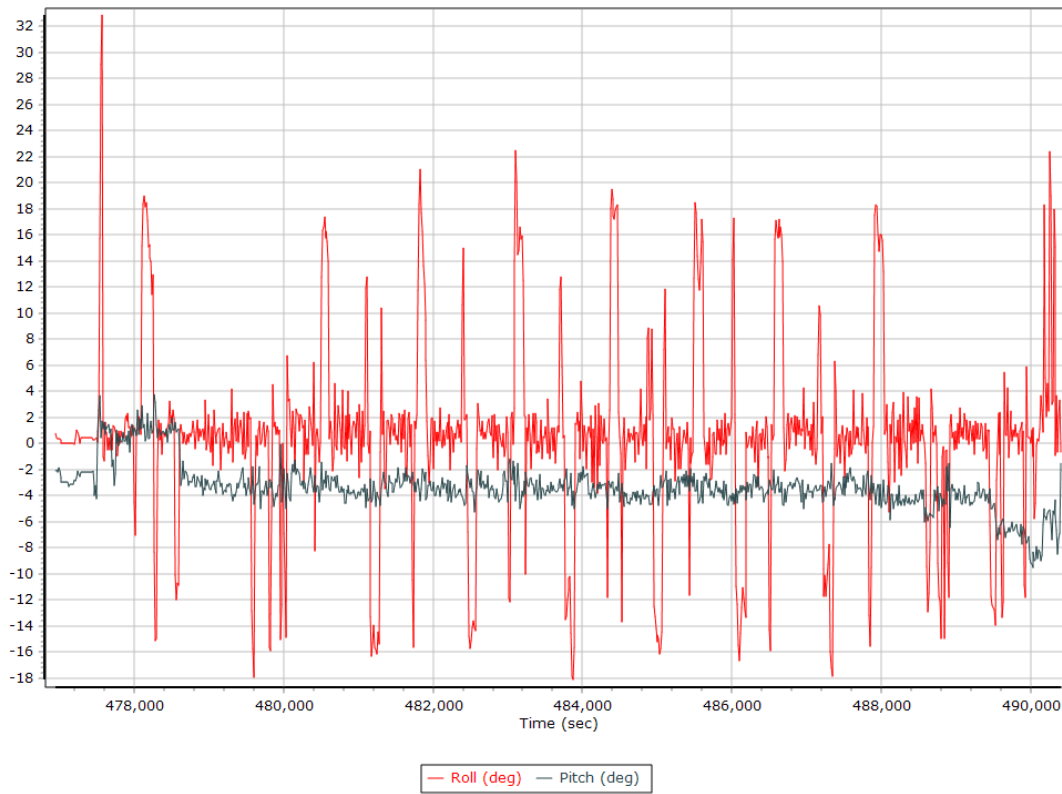
Top View



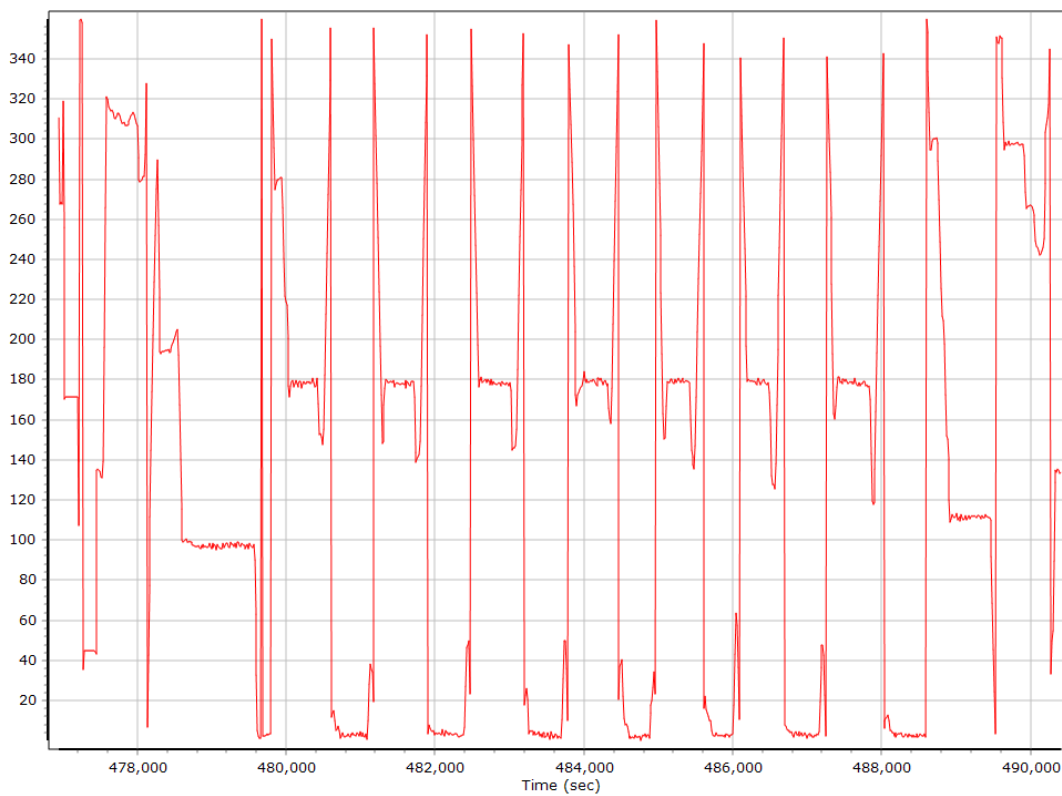
Altitude



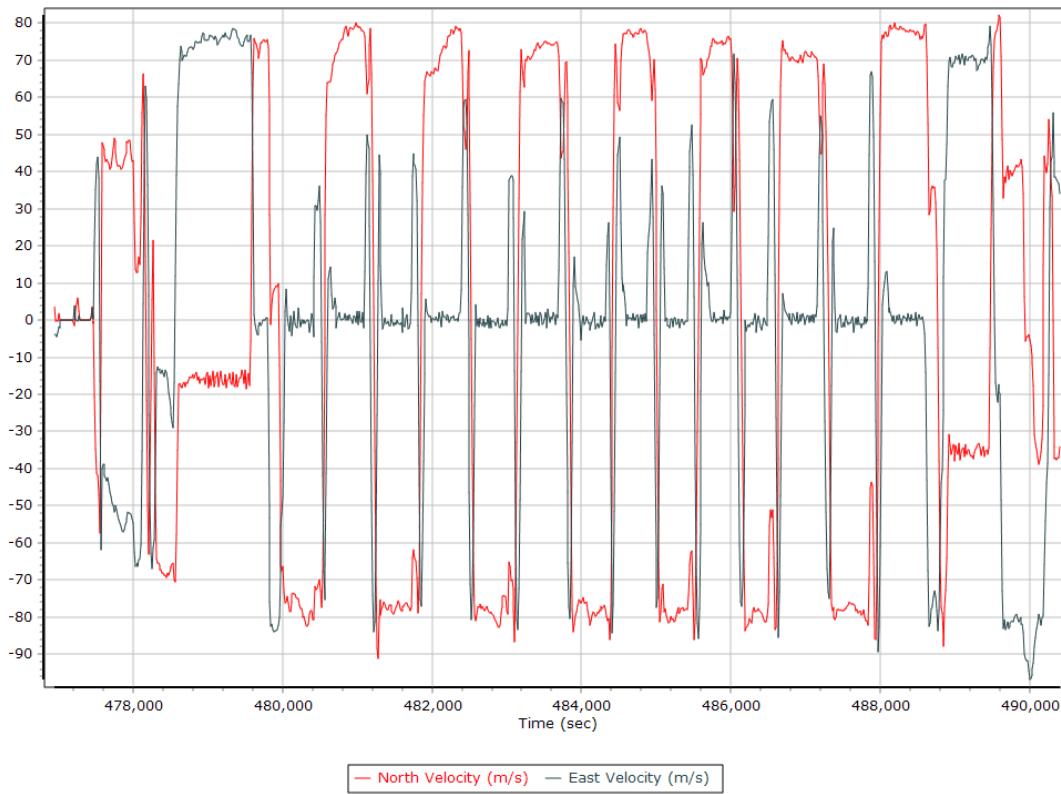
Roll/Pitch



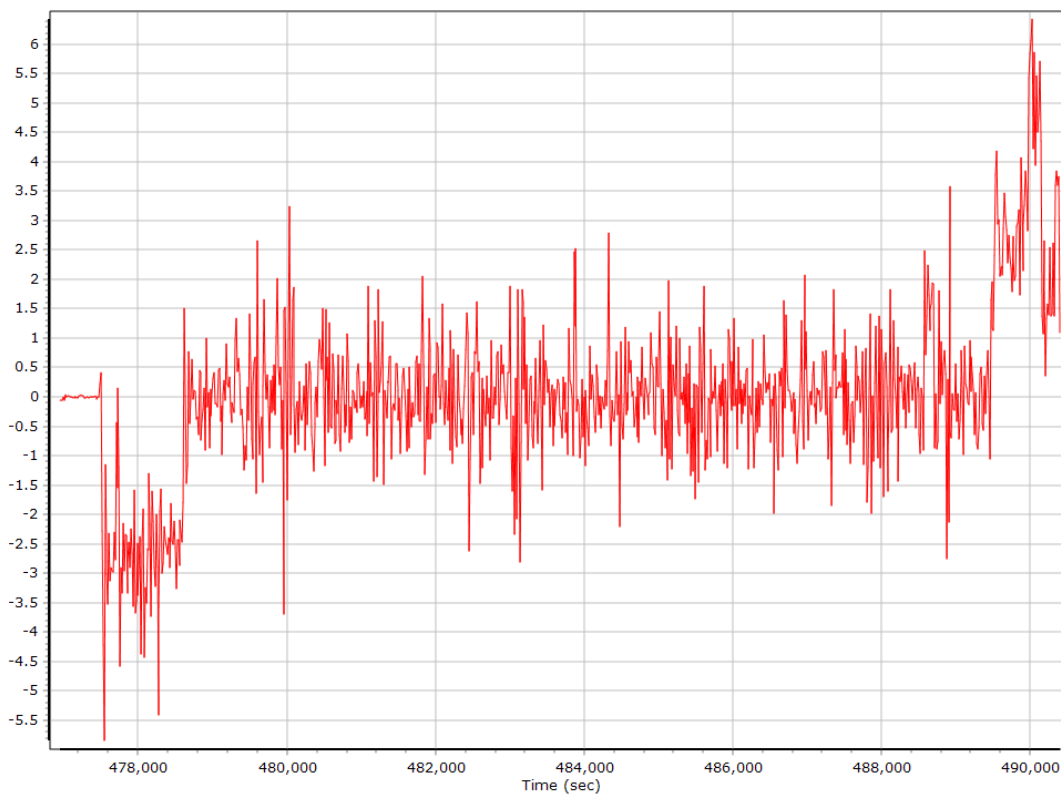
Heading



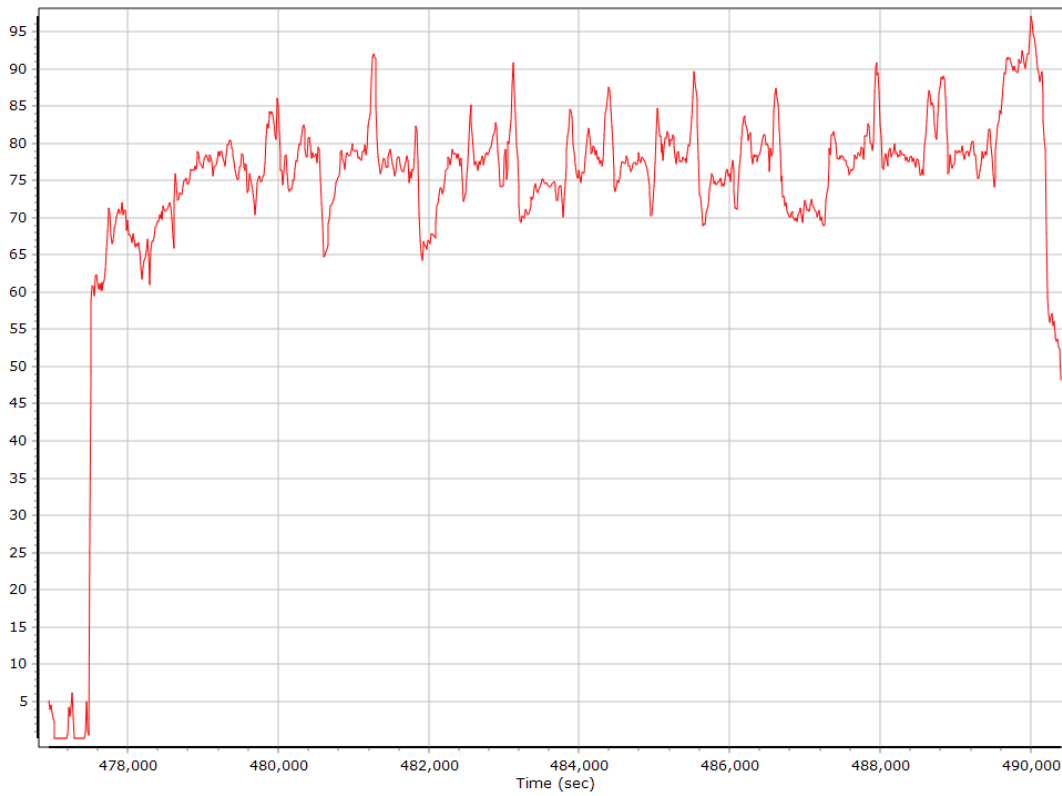
North/East Velocity



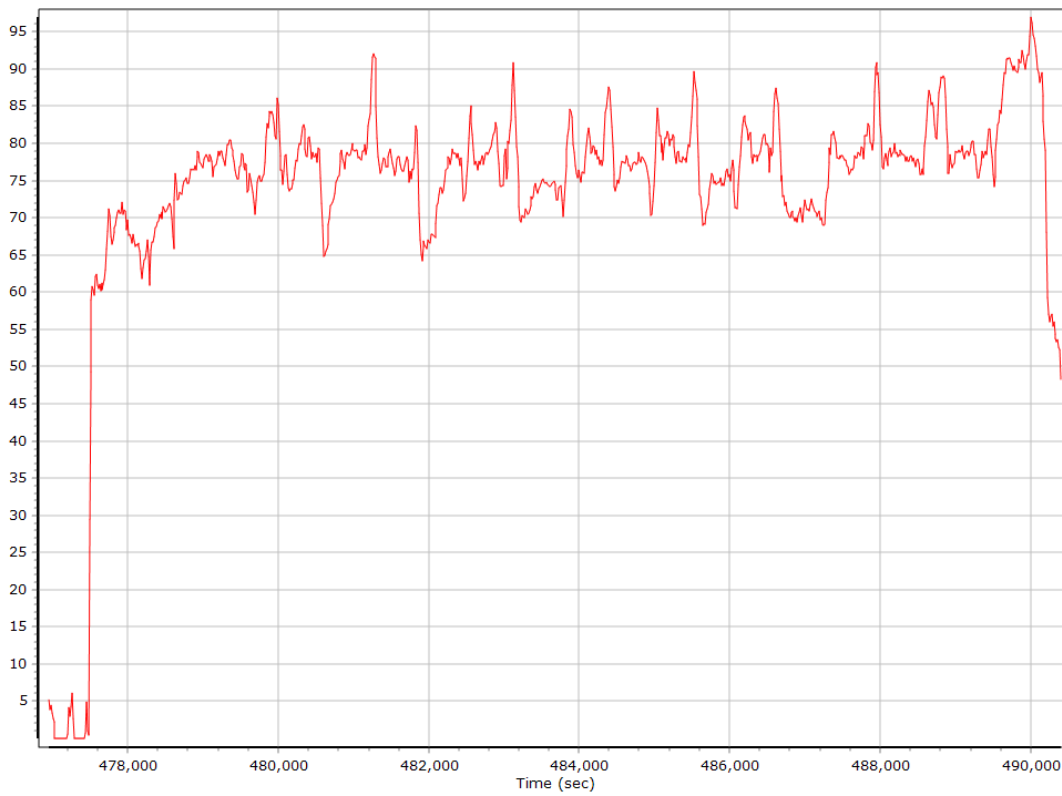
Down Velocity



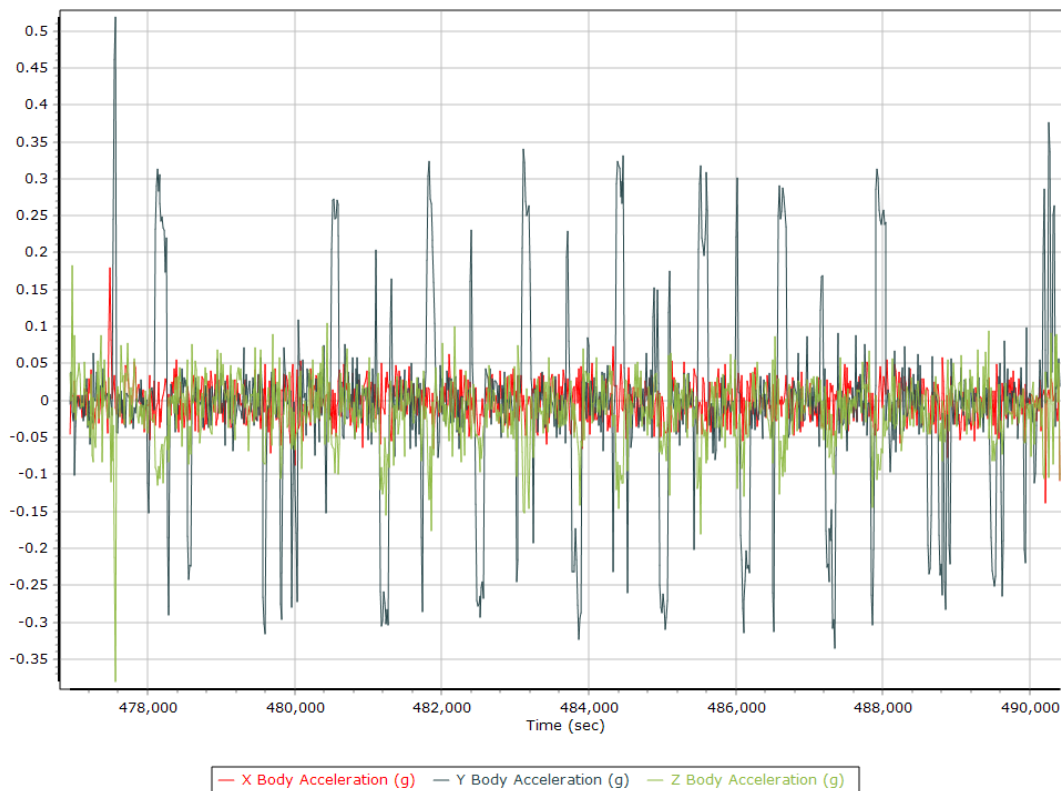
Total Speed



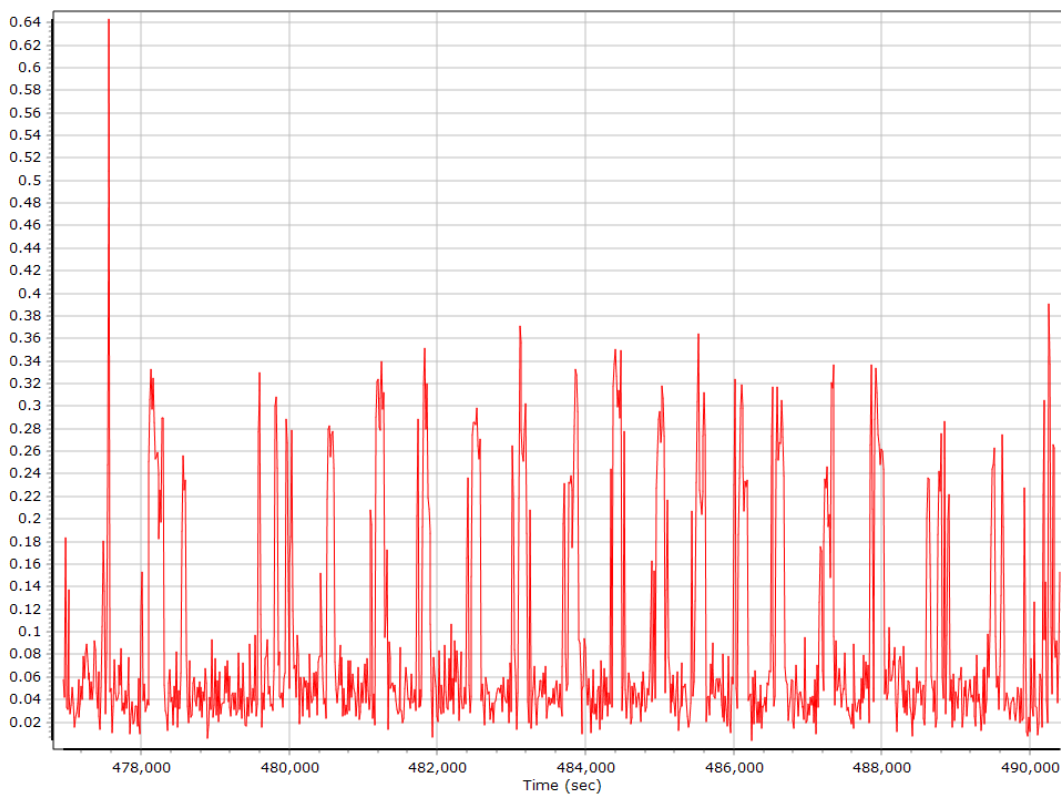
Ground Speed



Body Acceleration



Total Body Acceleration

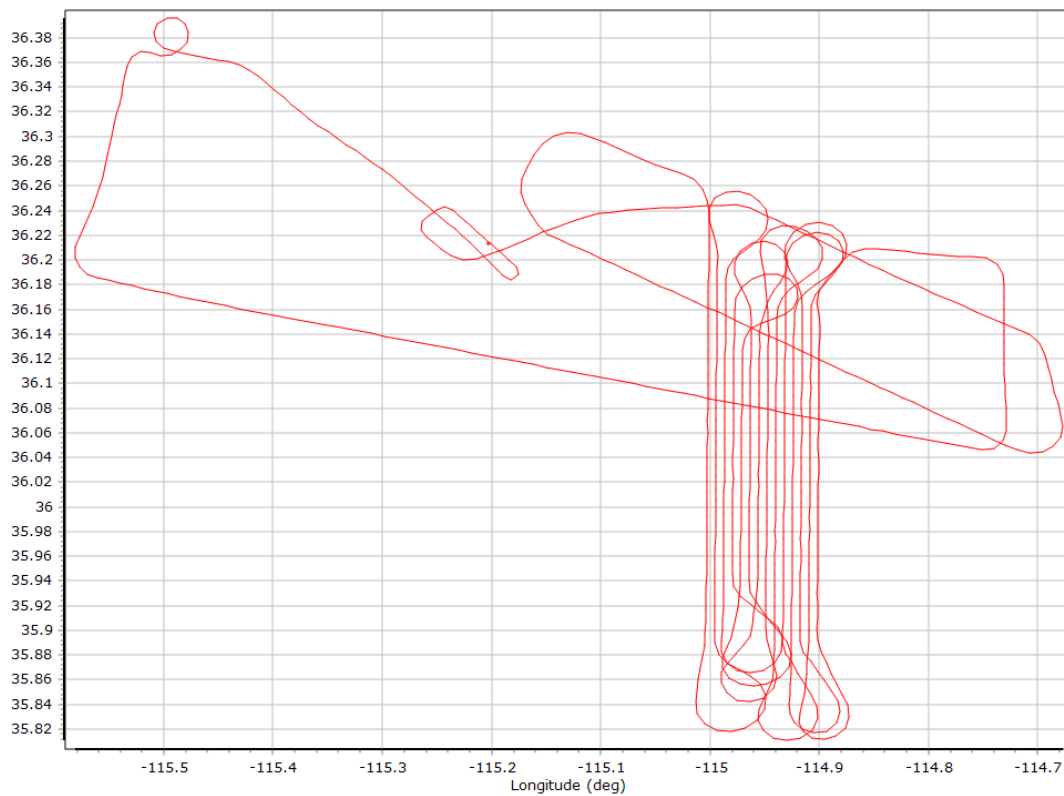


Body Angular Rate

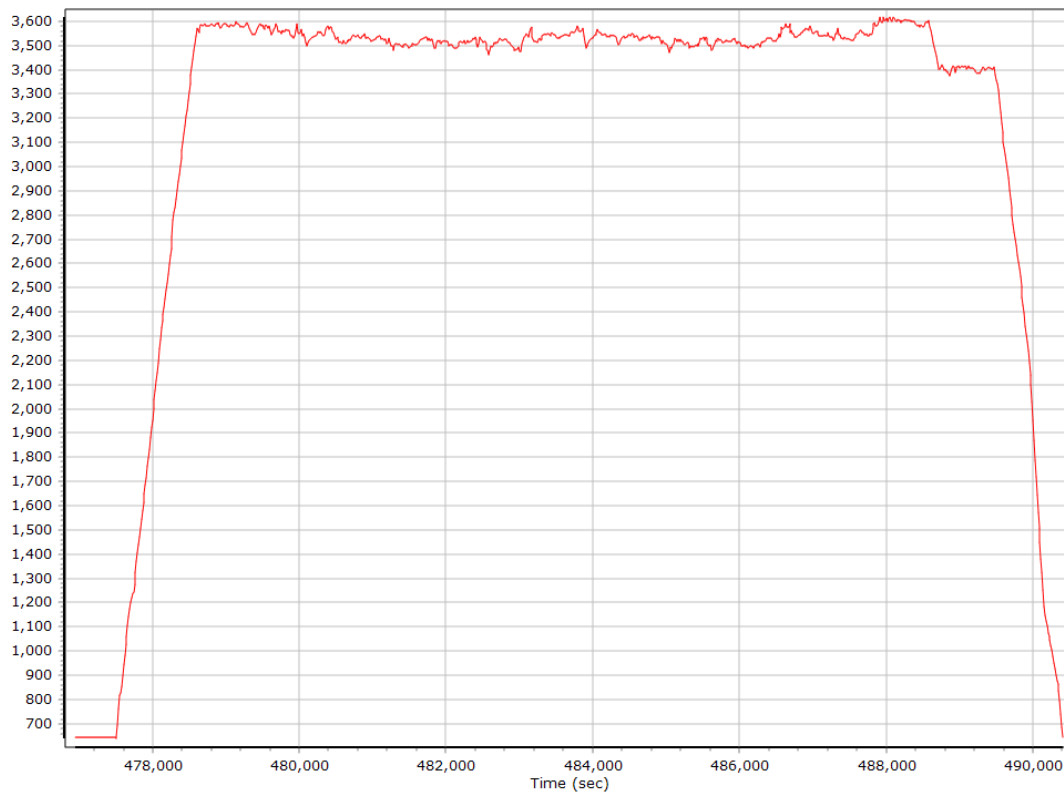


Forward Processed Trajectory Information

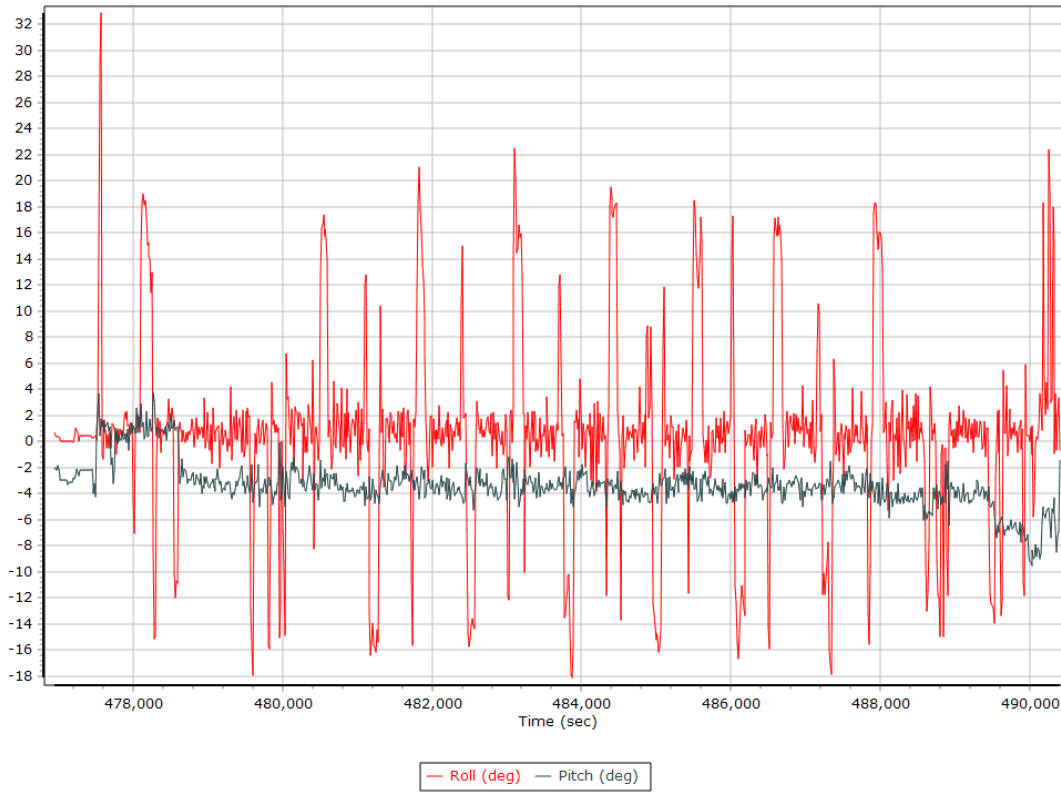
Top View



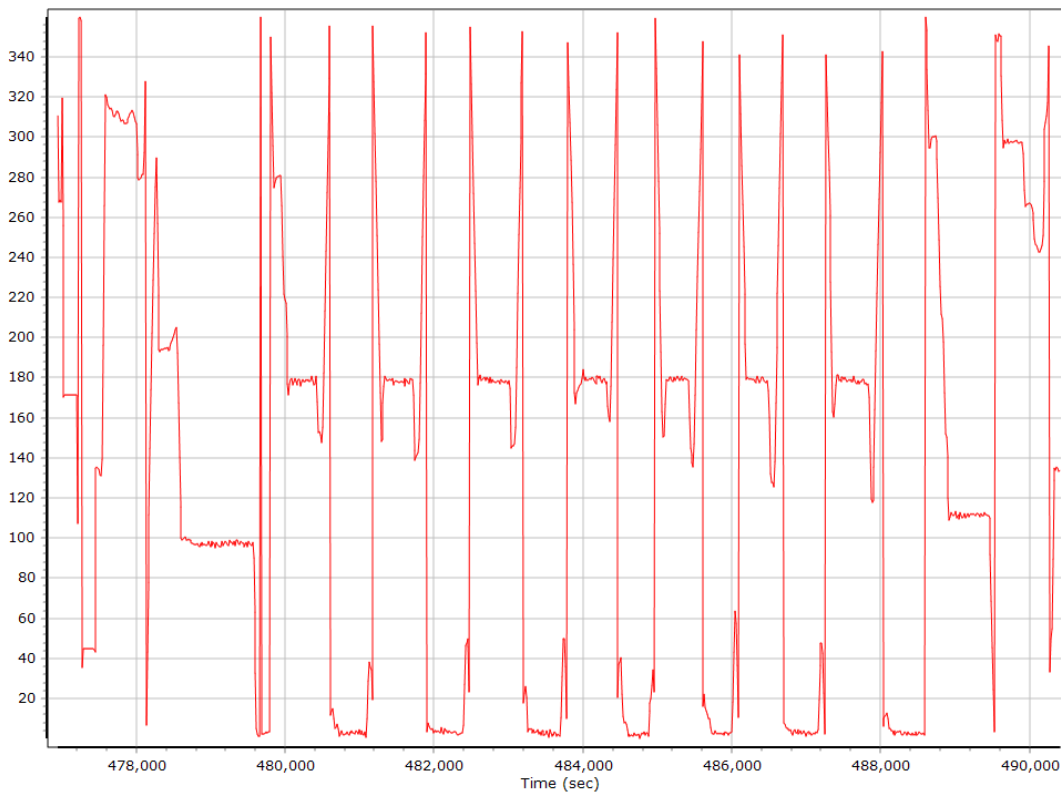
Altitude



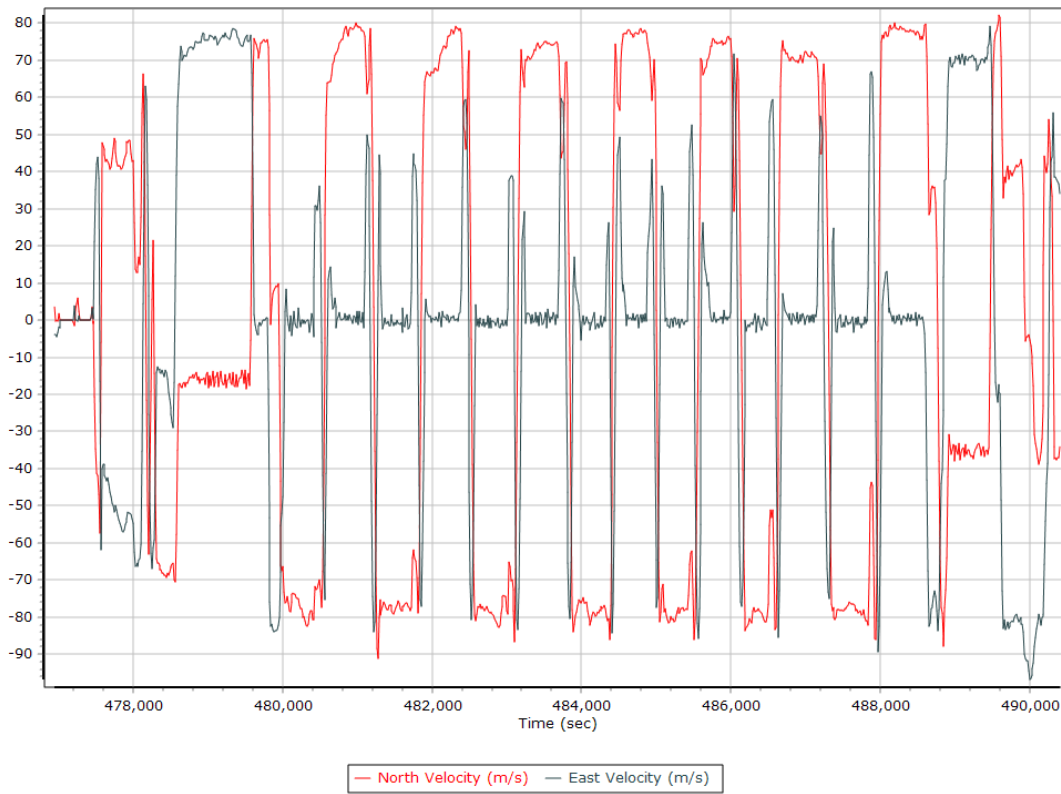
Roll/Pitch



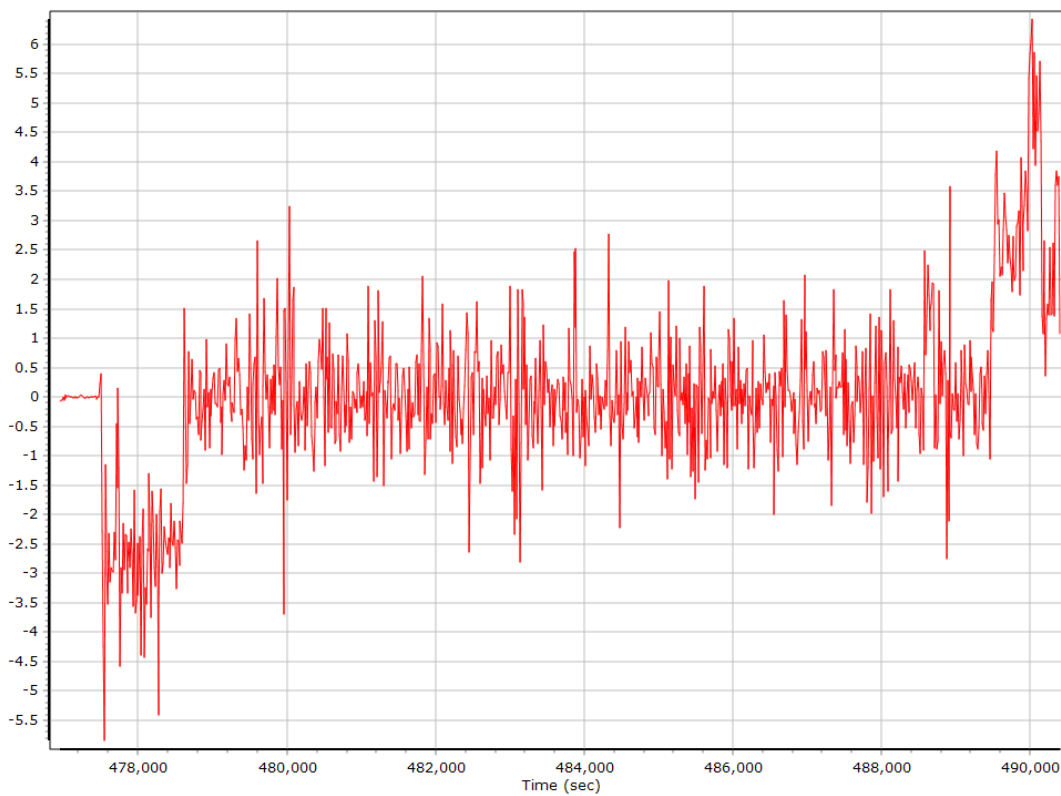
Heading



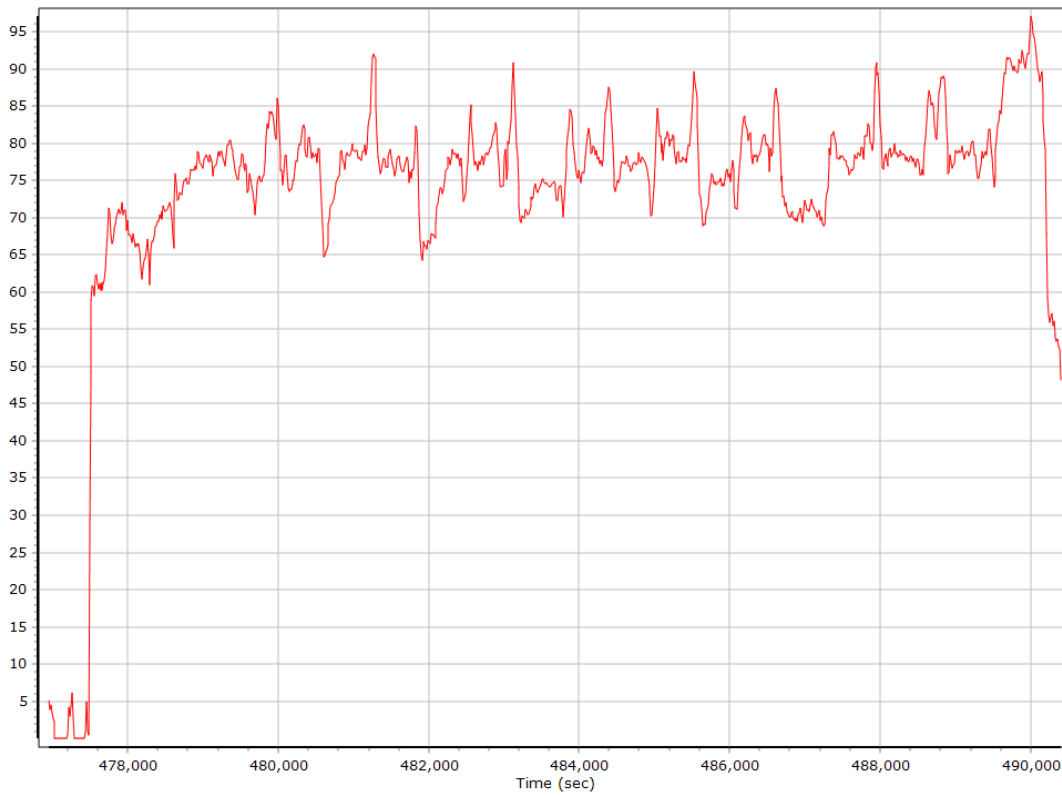
North/East Velocity



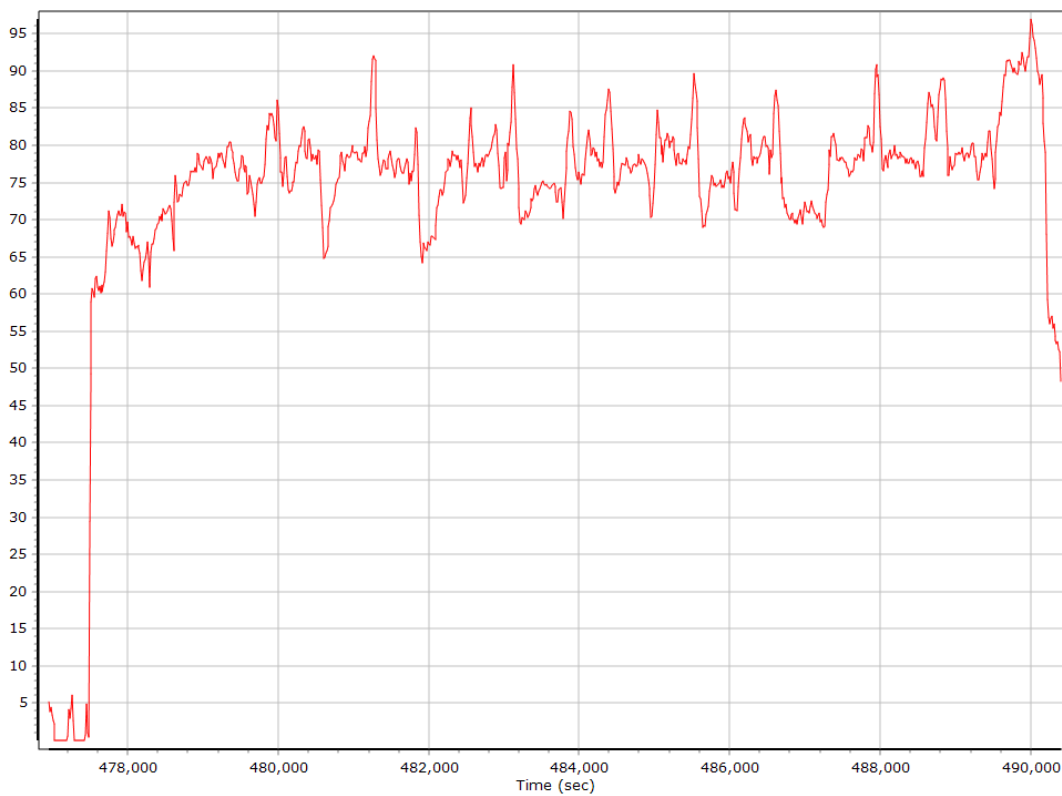
Down Velocity



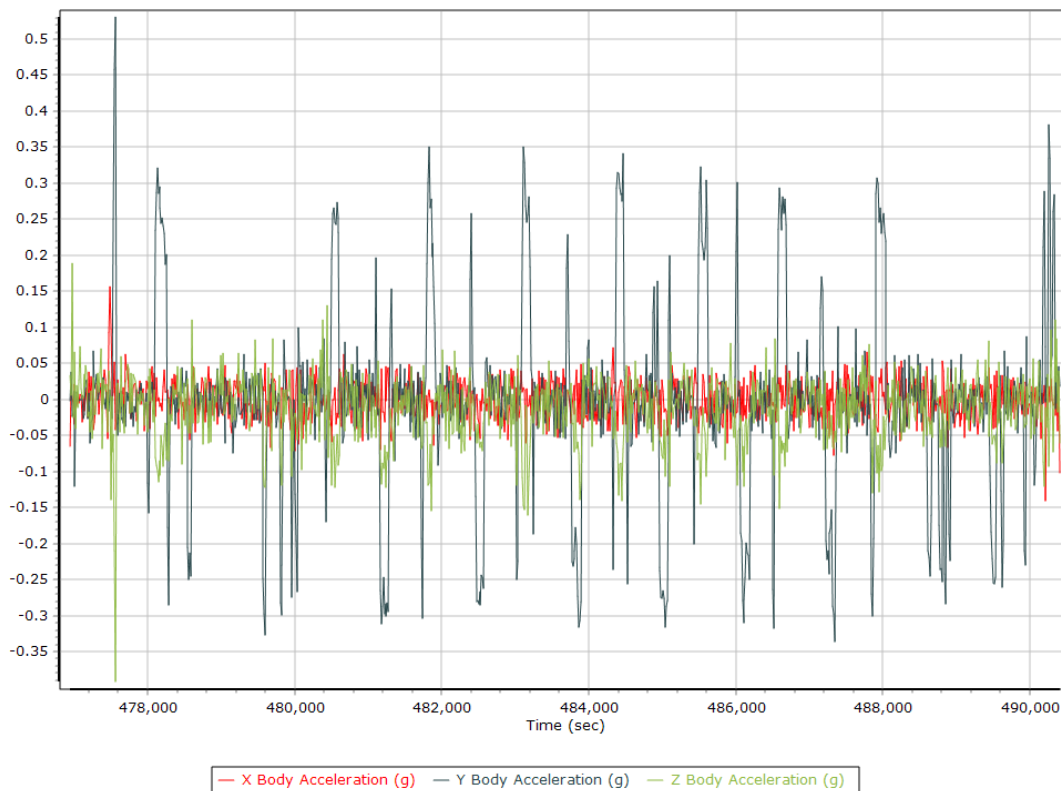
Total Speed



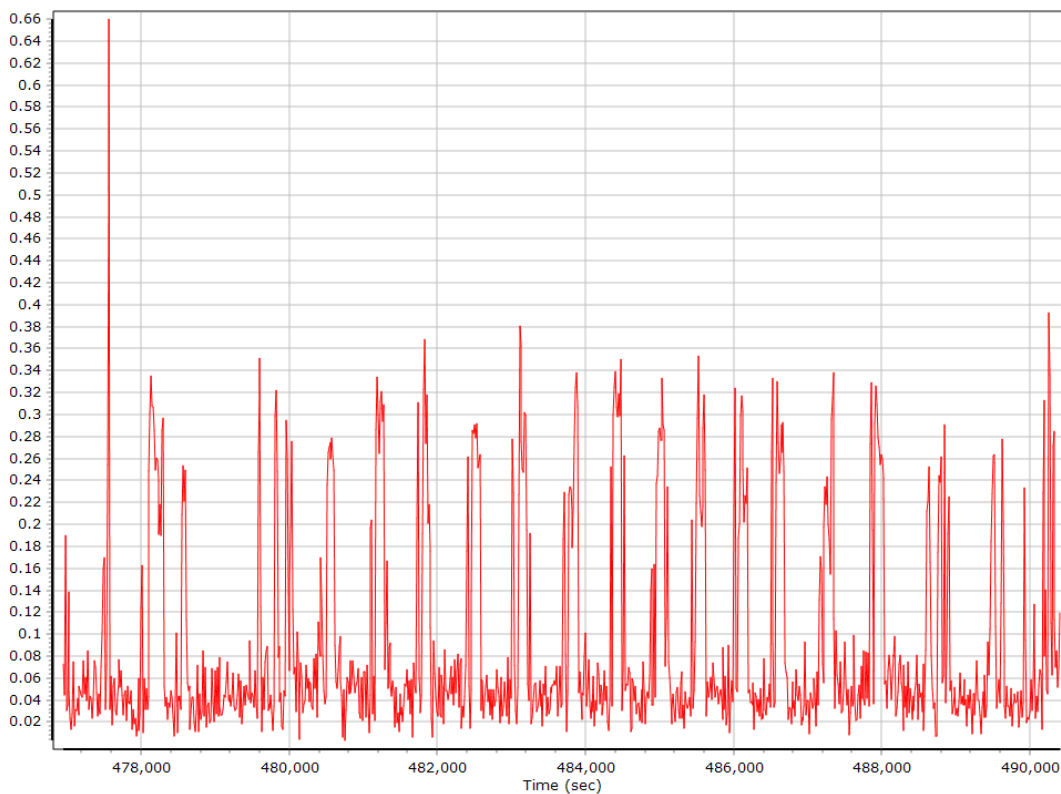
Ground Speed



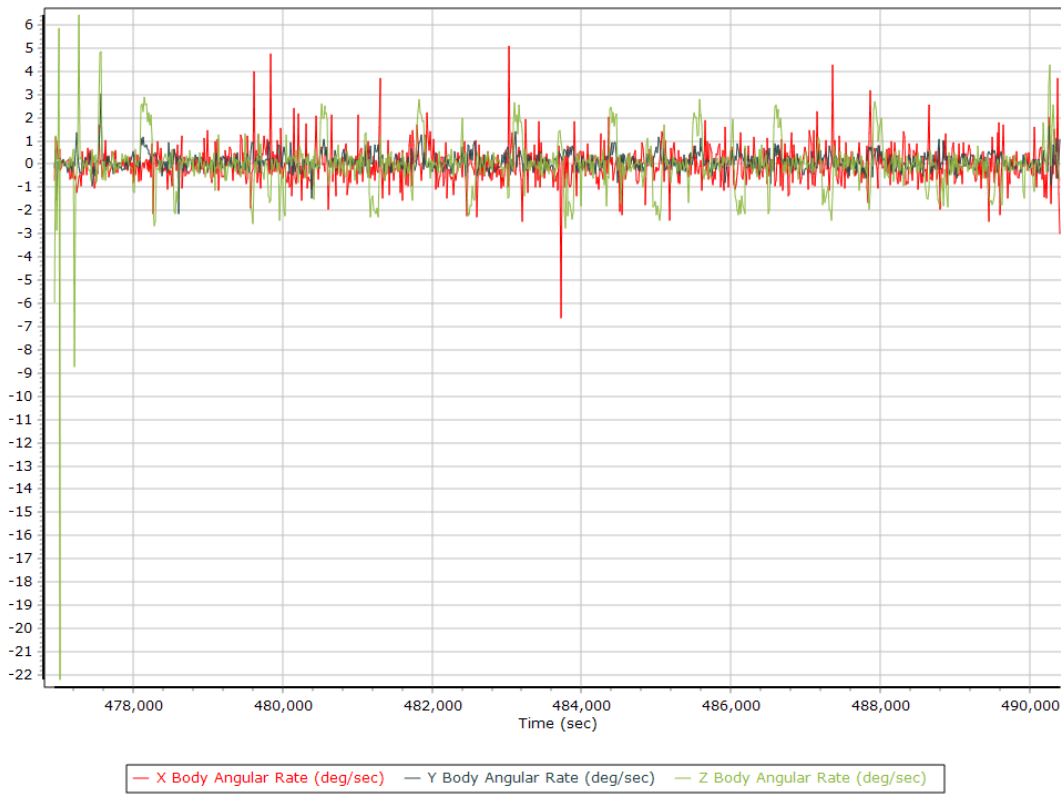
Body Acceleration



Total Body Acceleration



Body Angular Rate

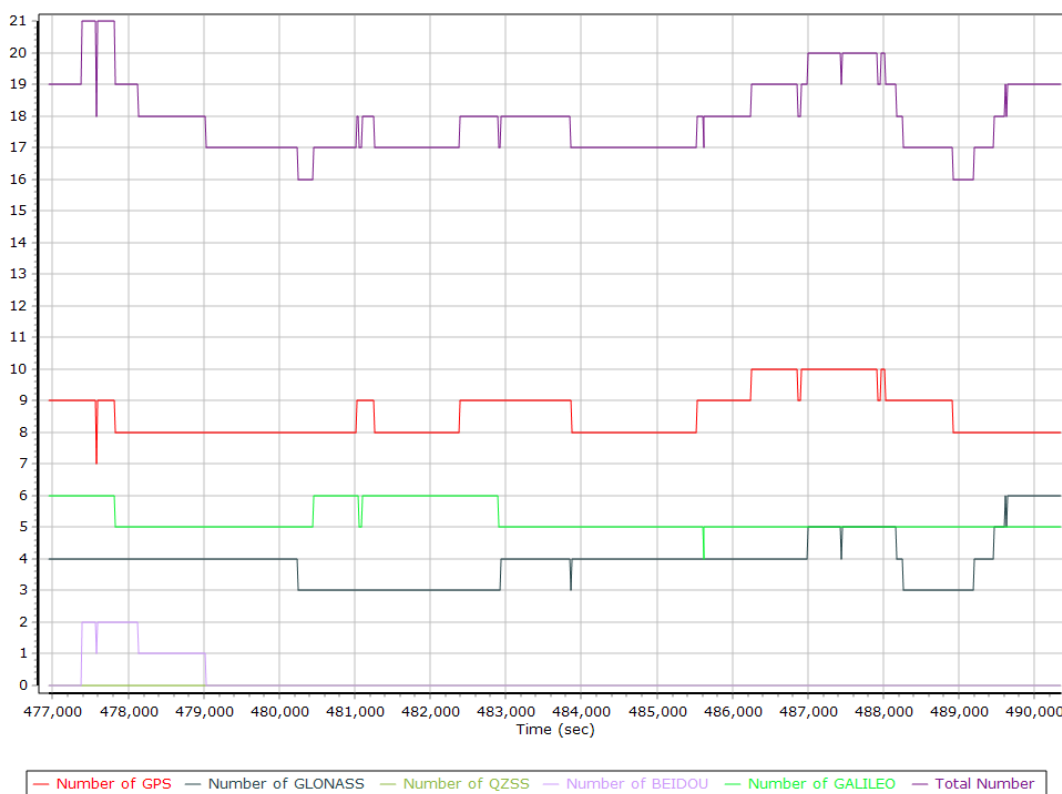


GNSS QC

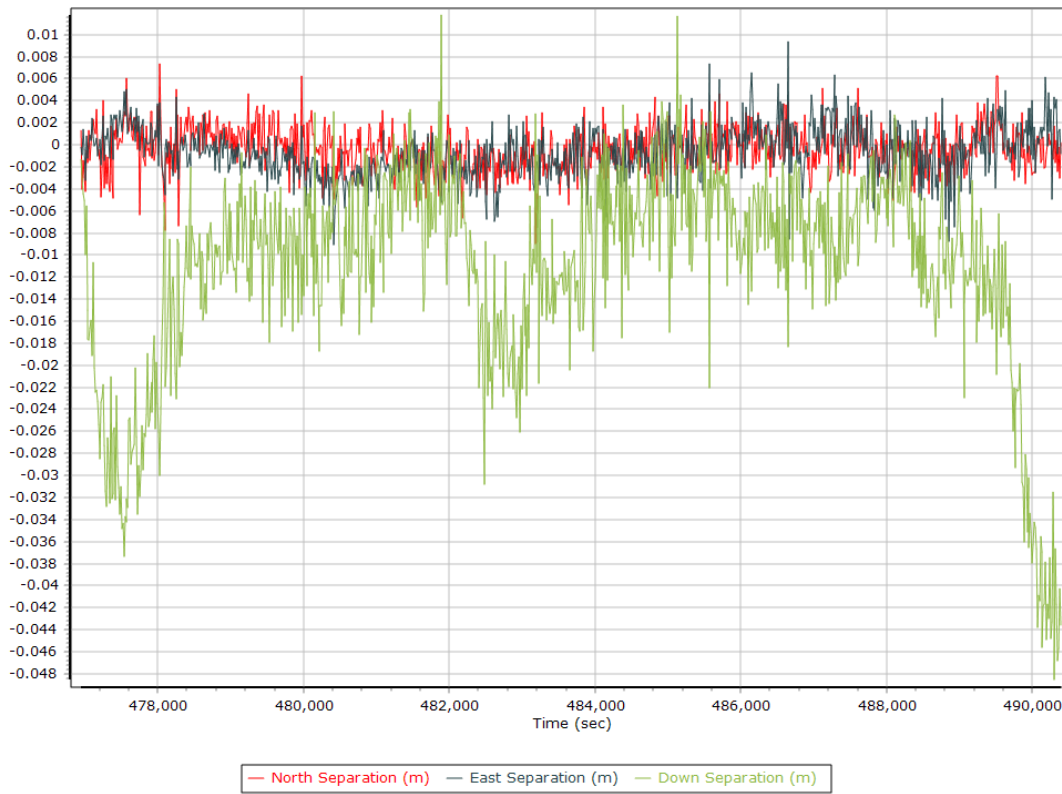
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	2	11	9
Number of GLONASS SV	3	6	4
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	2	0
Number of GALILEO SV	3	6	5
Total number of SV	8	21	18
PDOP	1.04	2.42	1.28
QC Solution Gaps	0.00	0.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	13647.00	0.00	0.00
Percentage	100.00	0.00	0.00

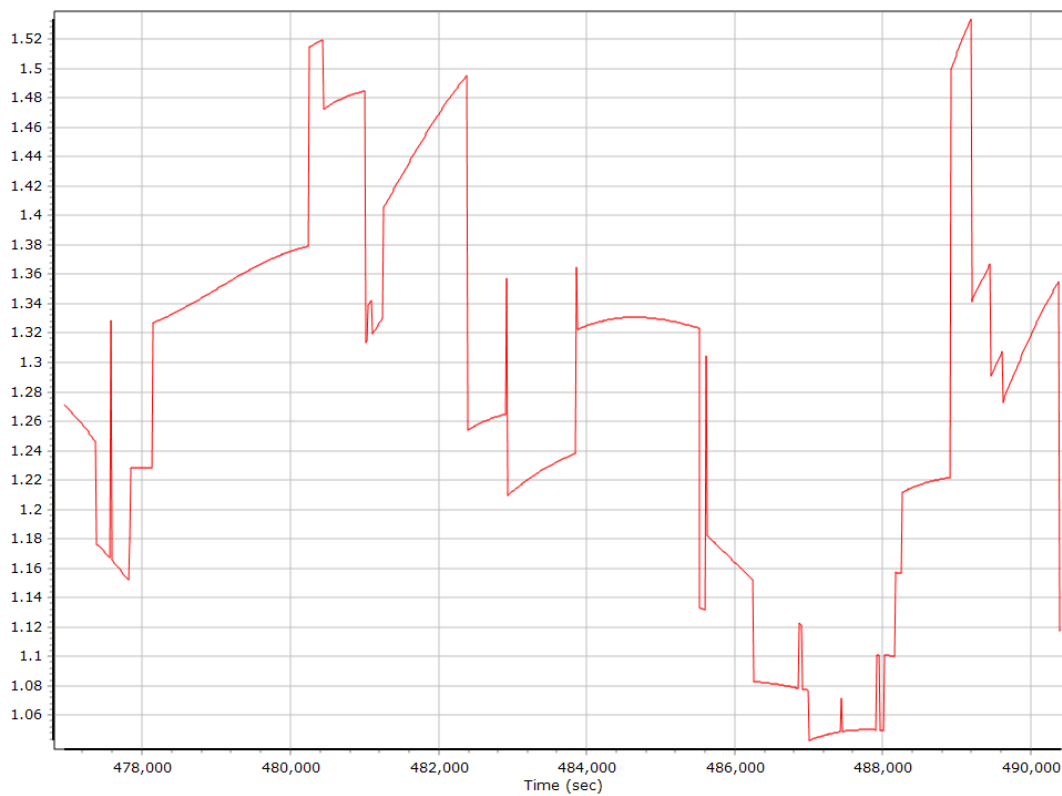
Num SVs in solution



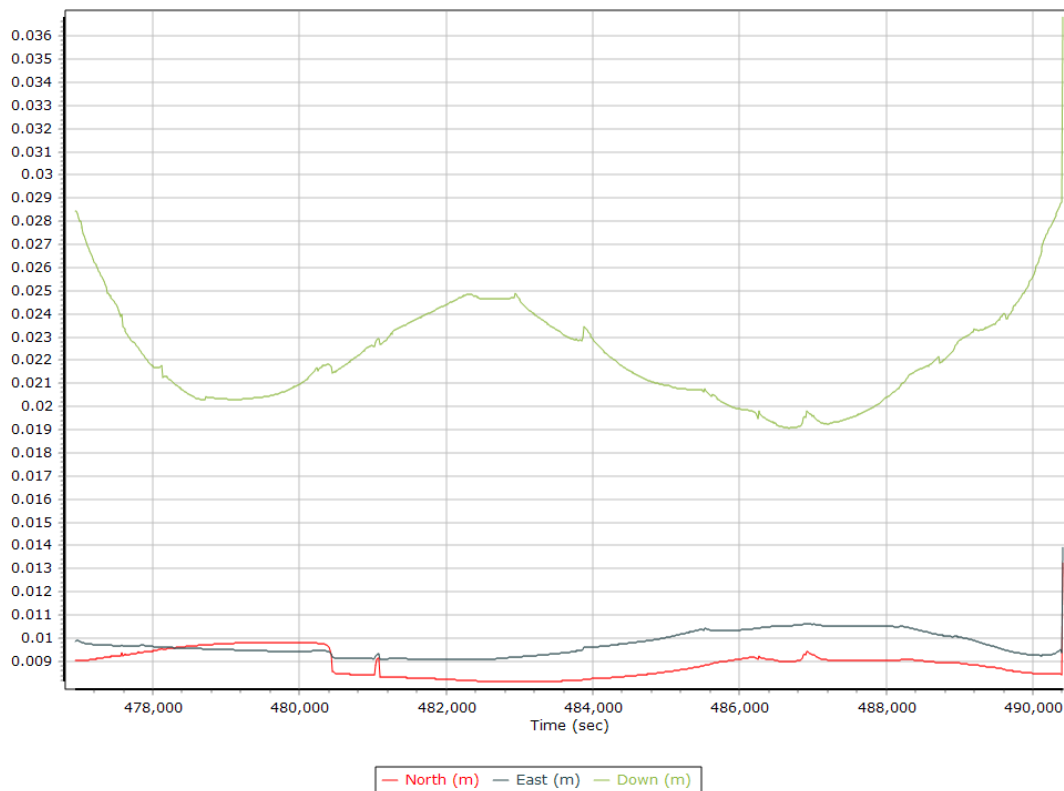
Forward/Reverse Separation



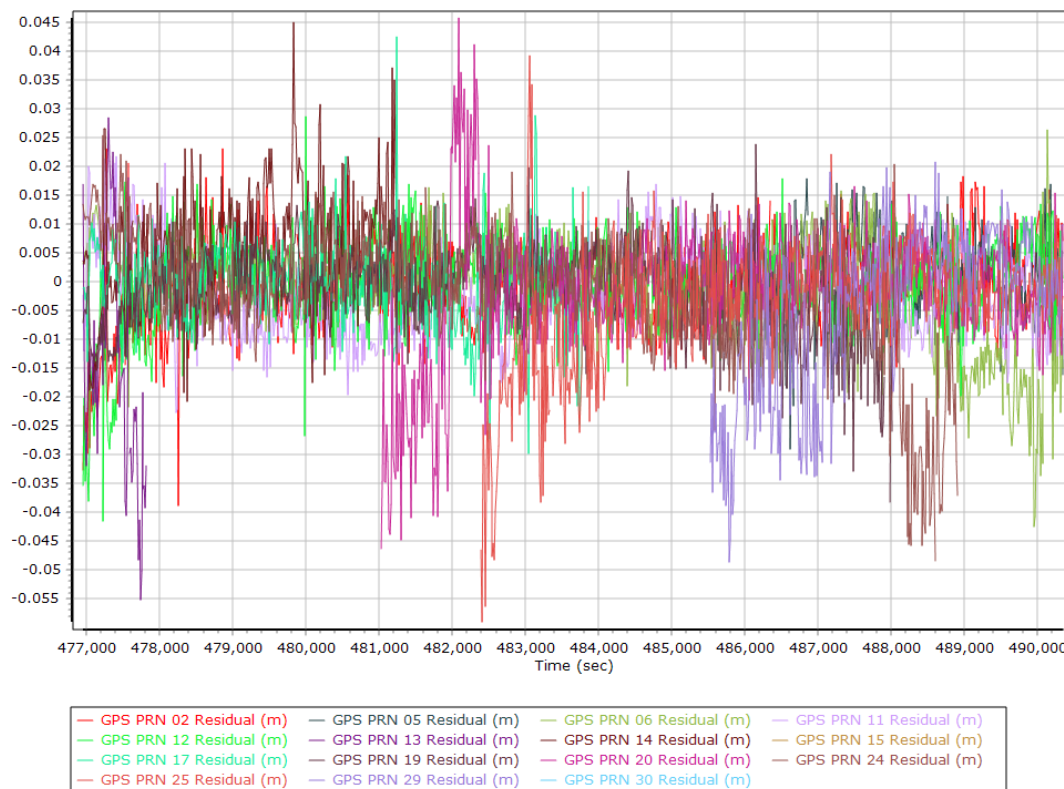
PDOP



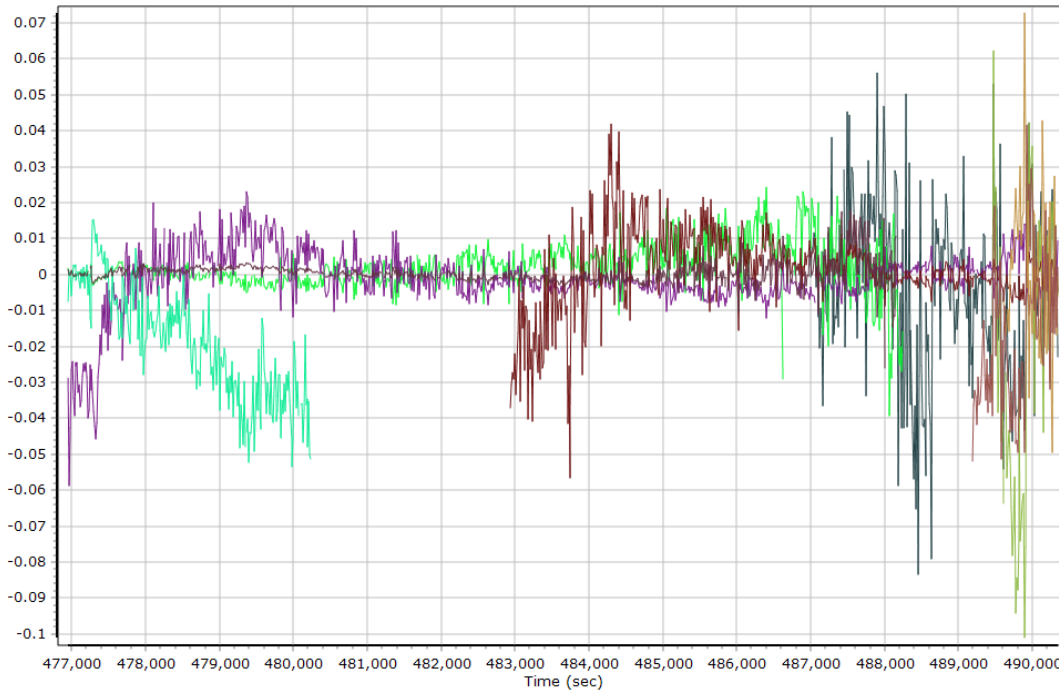
Estimated Position Accuracy



GPS Residuals

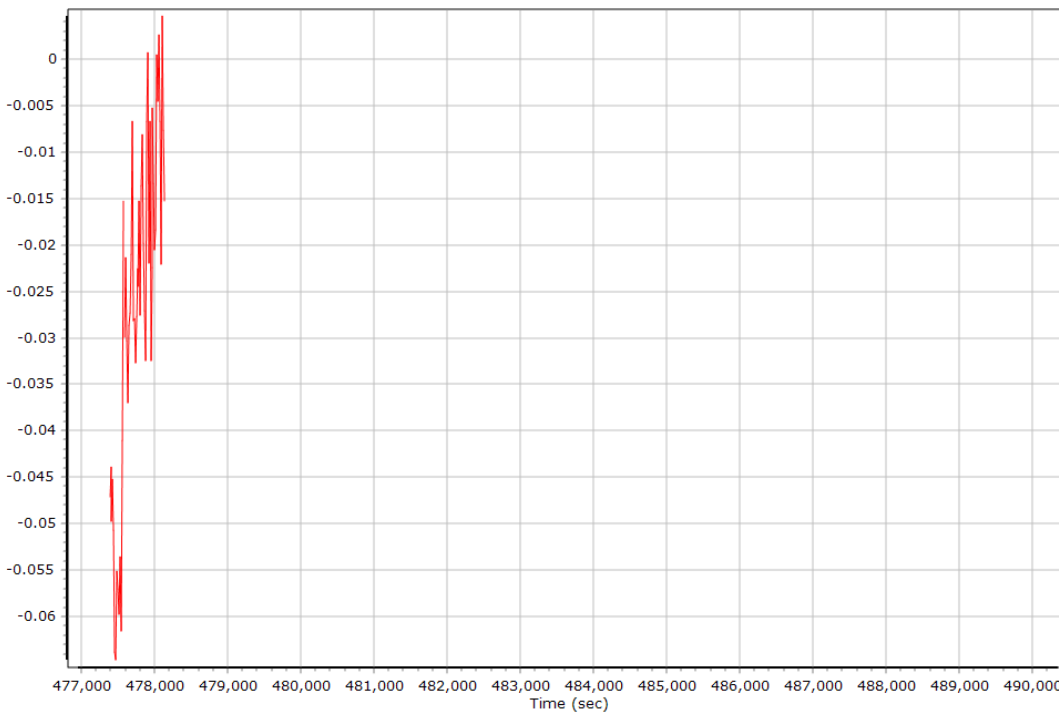


GLONASS Residuals



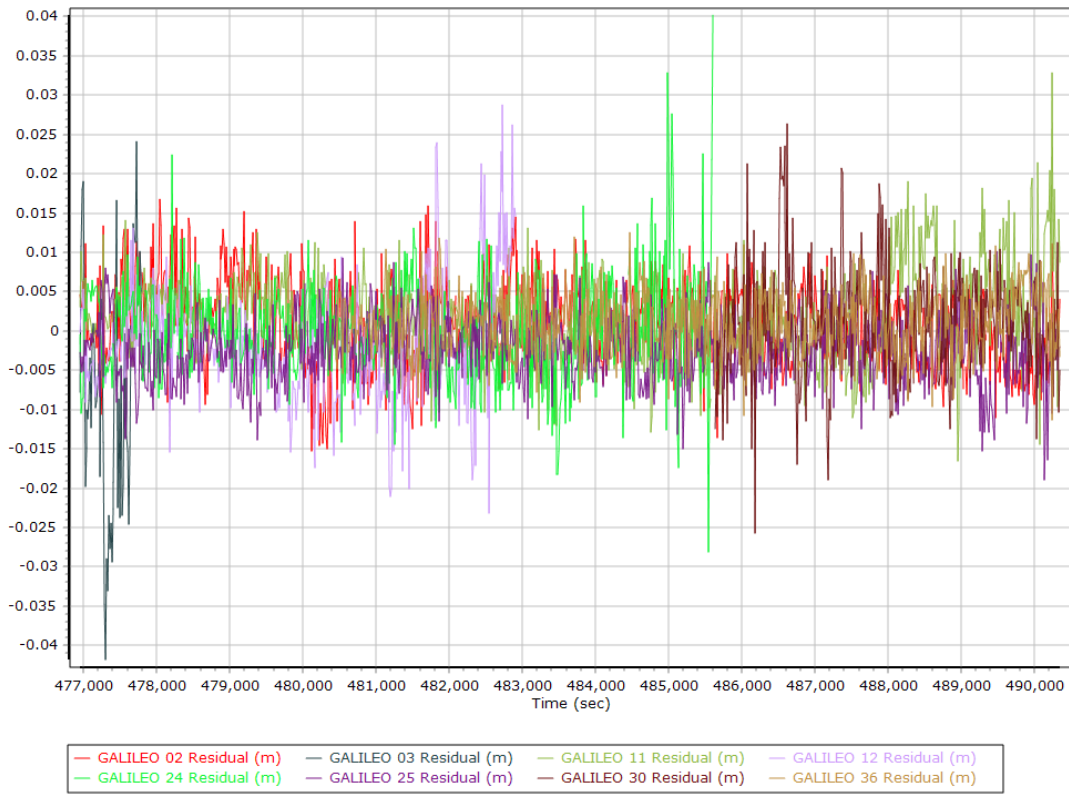
- GLONASS 06 Residual (m)
- GLONASS 07 Residual (m)
- GLONASS 08 Residual (m)
- GLONASS 10 Residual (m)
- GLONASS 11 Residual (m)
- GLONASS 12 Residual (m)
- GLONASS 13 Residual (m)
- GLONASS 14 Residual (m)
- GLONASS 20 Residual (m)
- GLONASS 21 Residual (m)
- GLONASS 23 Residual (m)
- GLONASS 24 Residual (m)

BEIDOU Residuals



- BEIDOU 11 Residual (m)
- BEIDOU 12 Residual (m)
- BEIDOU 24 Residual (m)
- BEIDOU 25 Residual (m)
- BEIDOU 26 Residual (m)

GALILEO Residuals



GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	476703.000 (07/29/2022 12:25:03)		
Processing end time	490411.000 (07/29/2022 16:13:31)		
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)	0.370	-0.429	-1.091
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

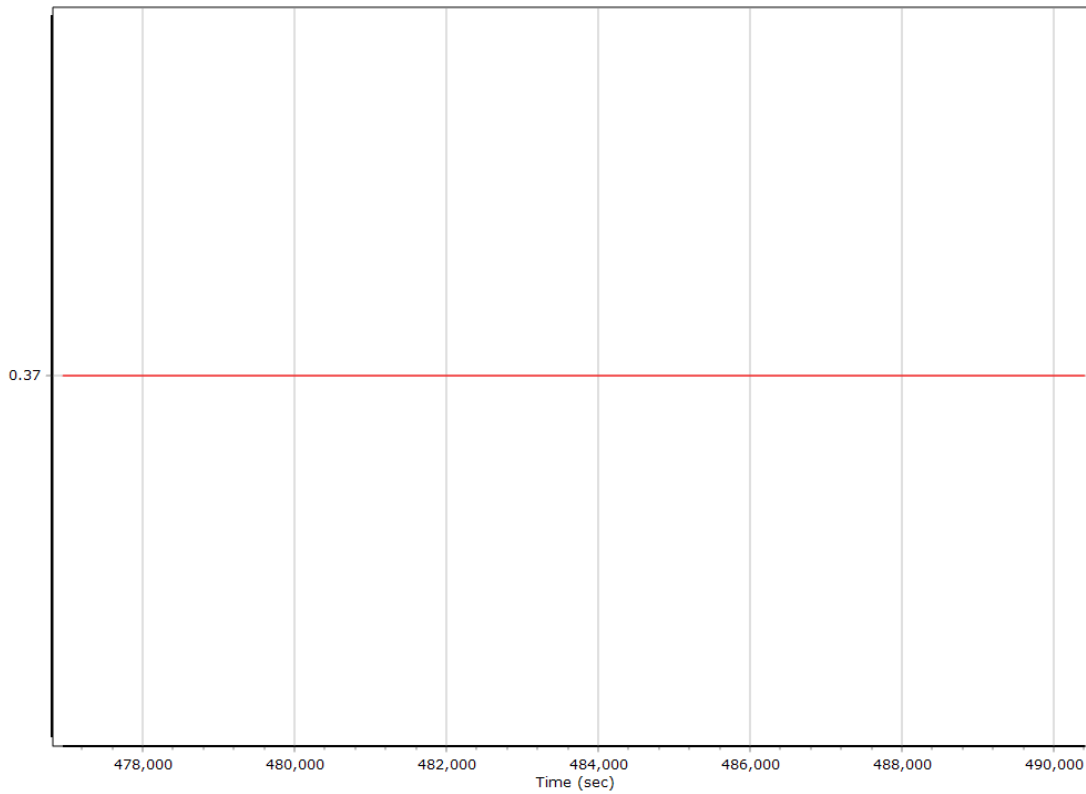
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

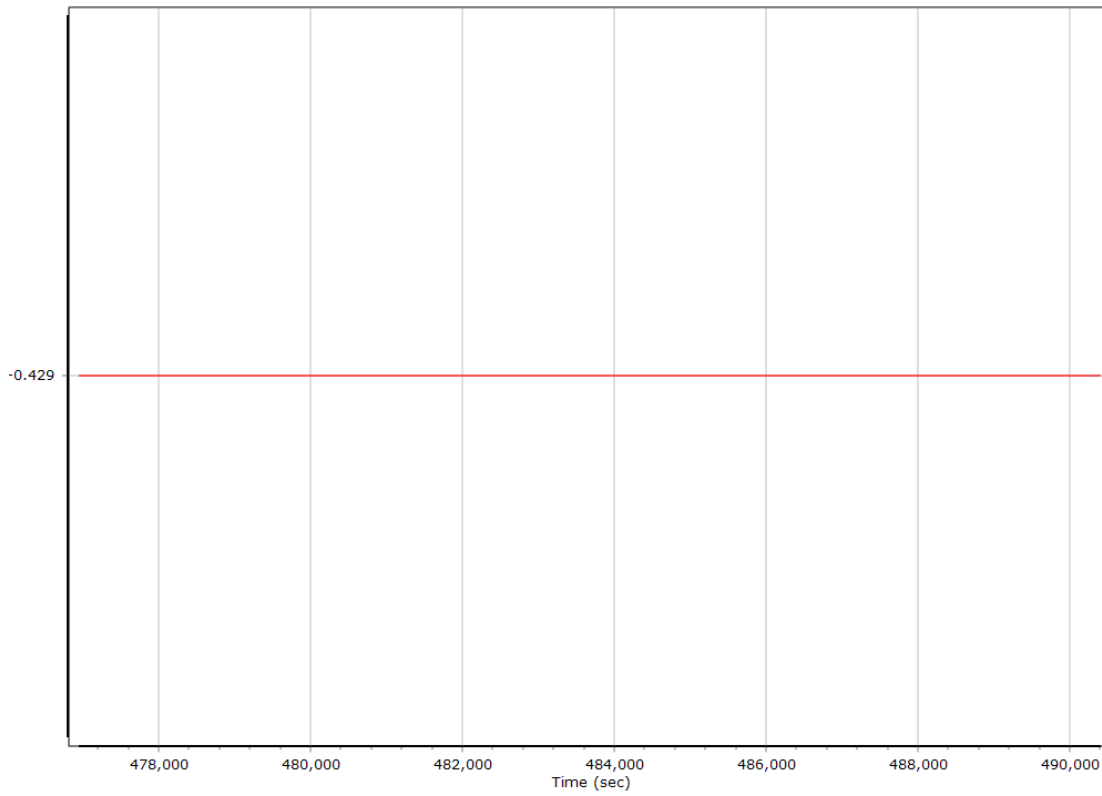
Reference-Primary GNSS Lever Arm Automatic Calibration Results

Original Reference to Primary GNSS lever arm (m)	0.361	-0.429	-0.945
Iteration 1 Reference to Primary GNSS lever arm (m)	0.370	-0.429	-1.089
Iteration 2 Reference to Primary GNSS lever arm (m)	0.370	-0.429	-1.091
Primary GNSS Lever Arm In use	Iteration 2		

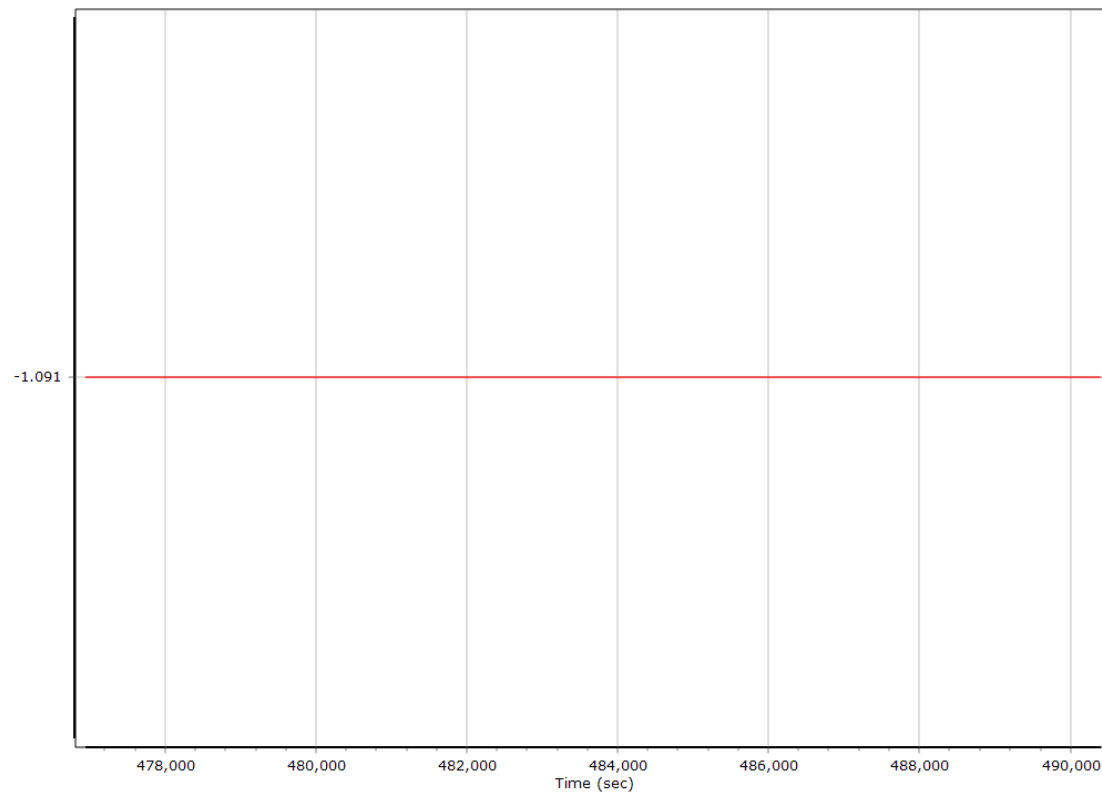
X Reference-Primary GNSS Lever Arm (m)



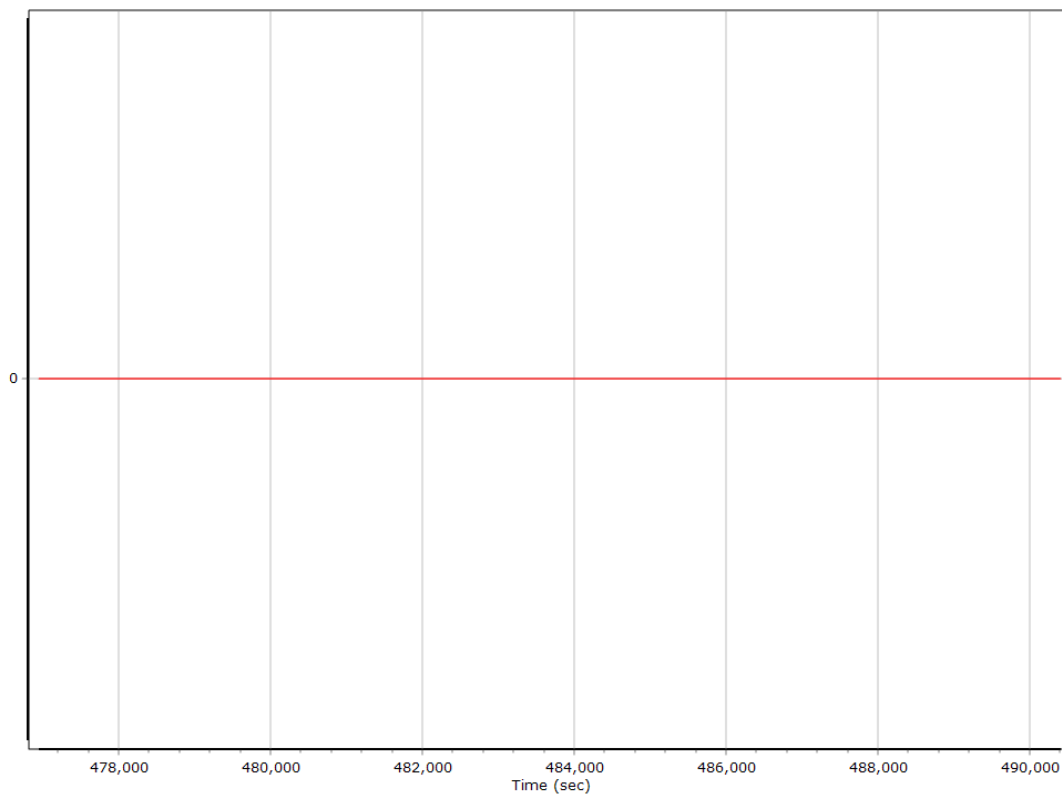
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



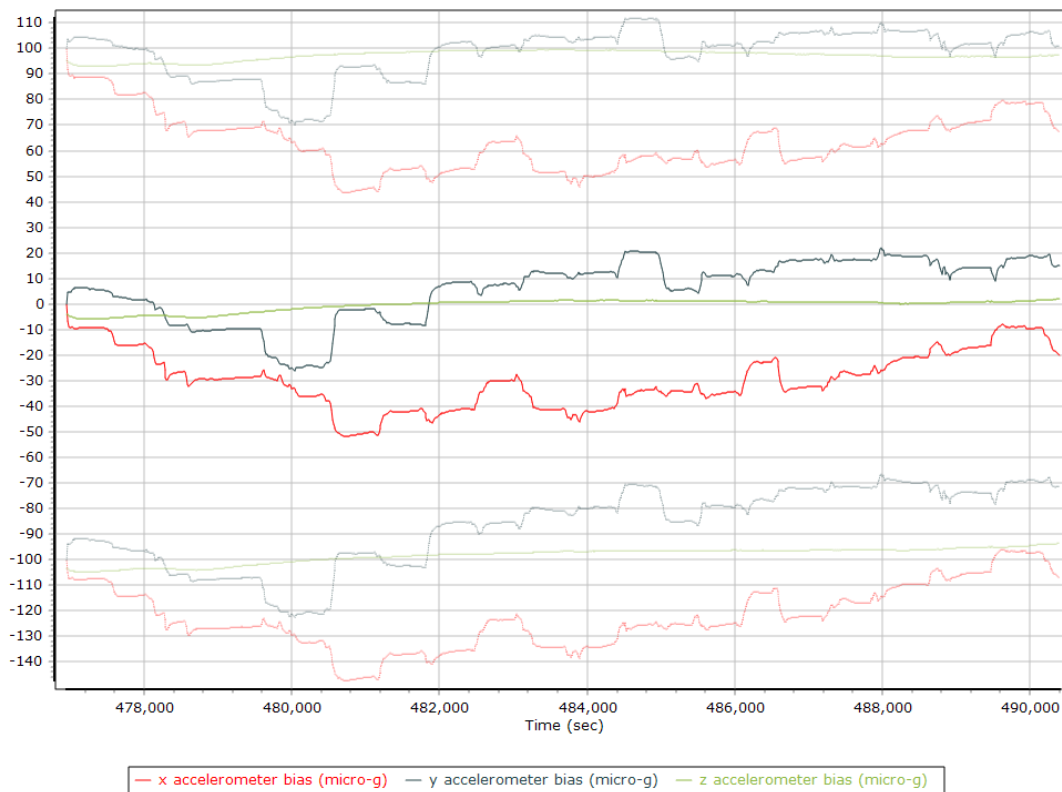
Reference-Primary GNSS Lever Arm Figure of Merit



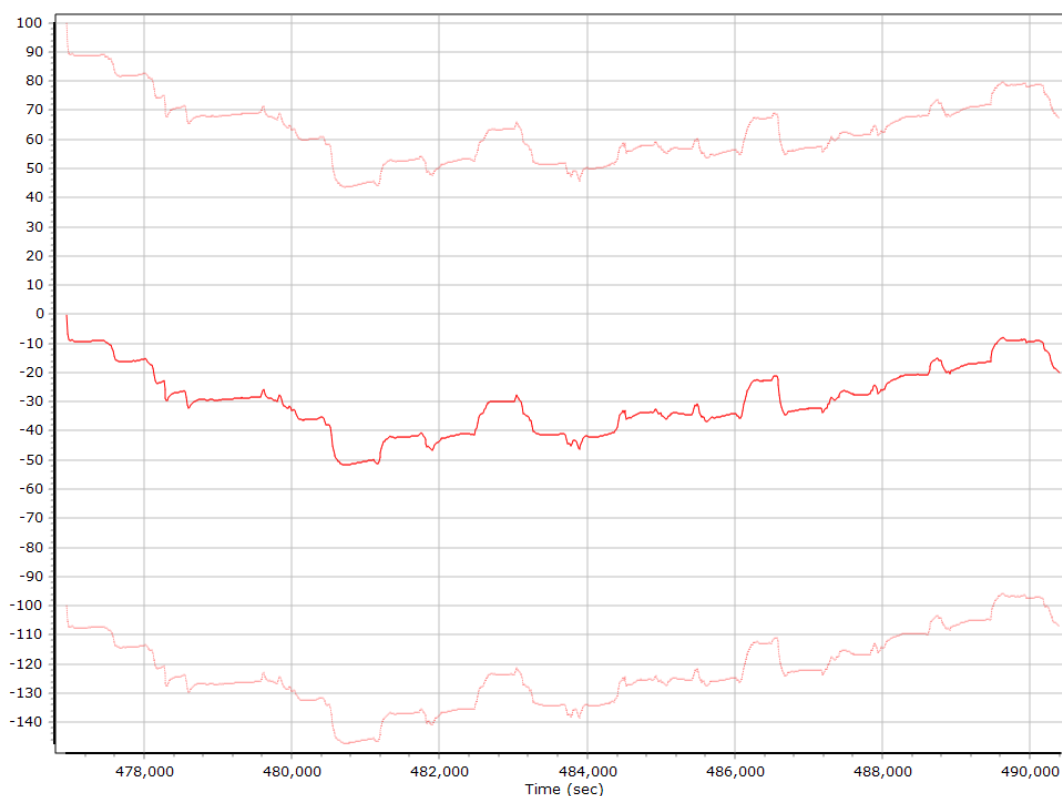
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

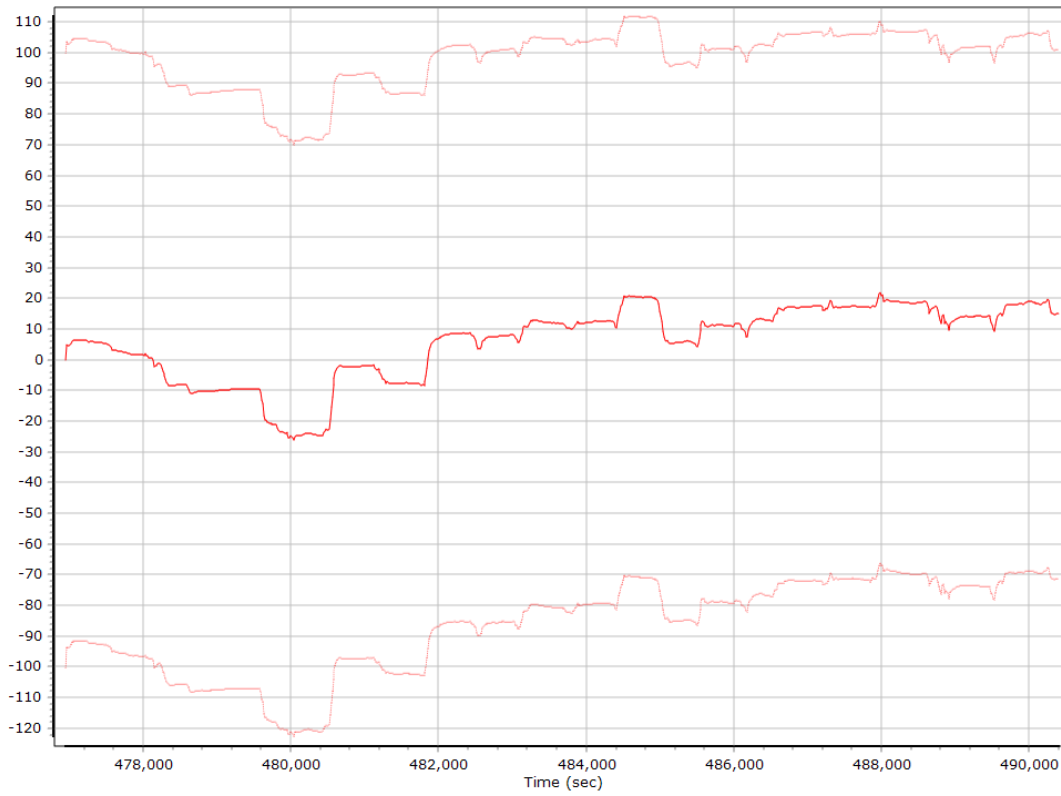
Accelerometer Bias (micro-g)



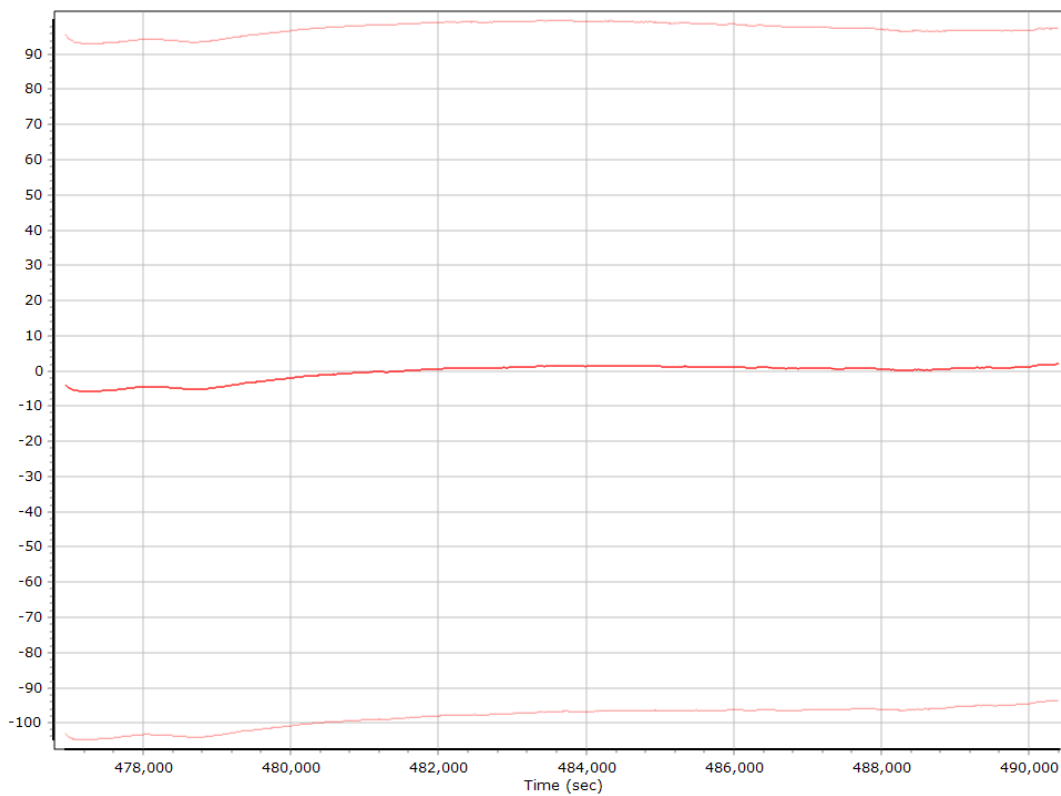
X Accelerometer Bias (micro-g)



Y Accelerometer Bias (micro-g)



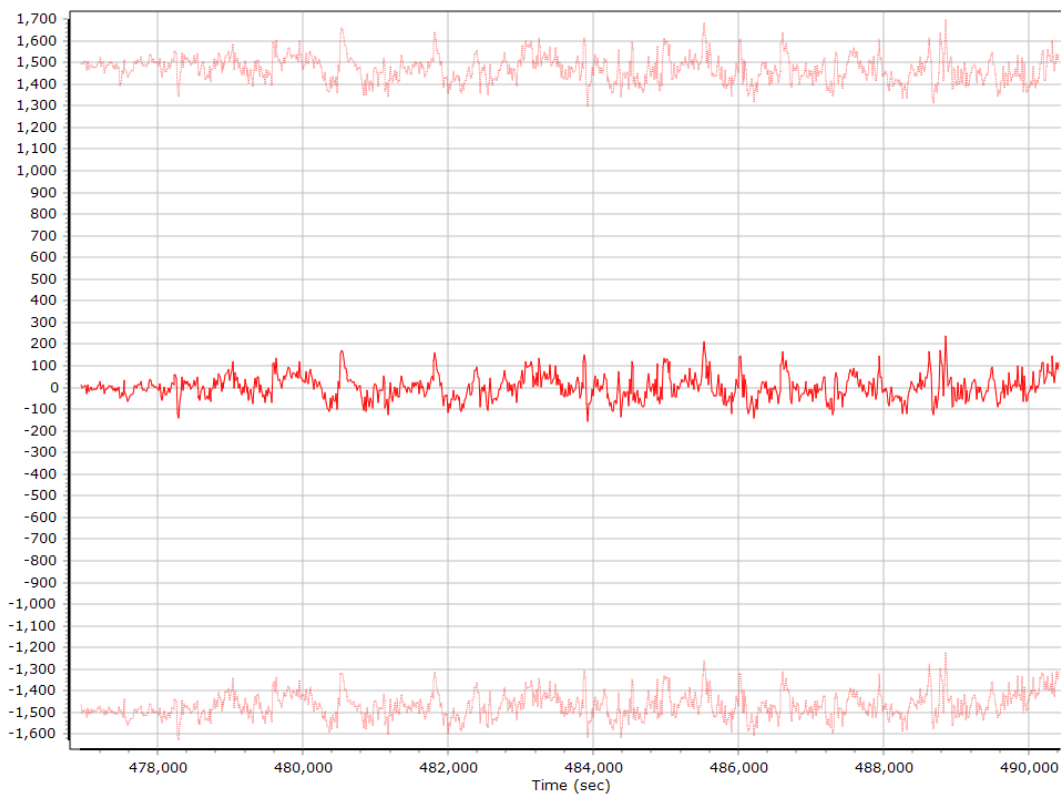
Z Accelerometer Bias (micro-g)



Accelerometer Scale Error (ppm)



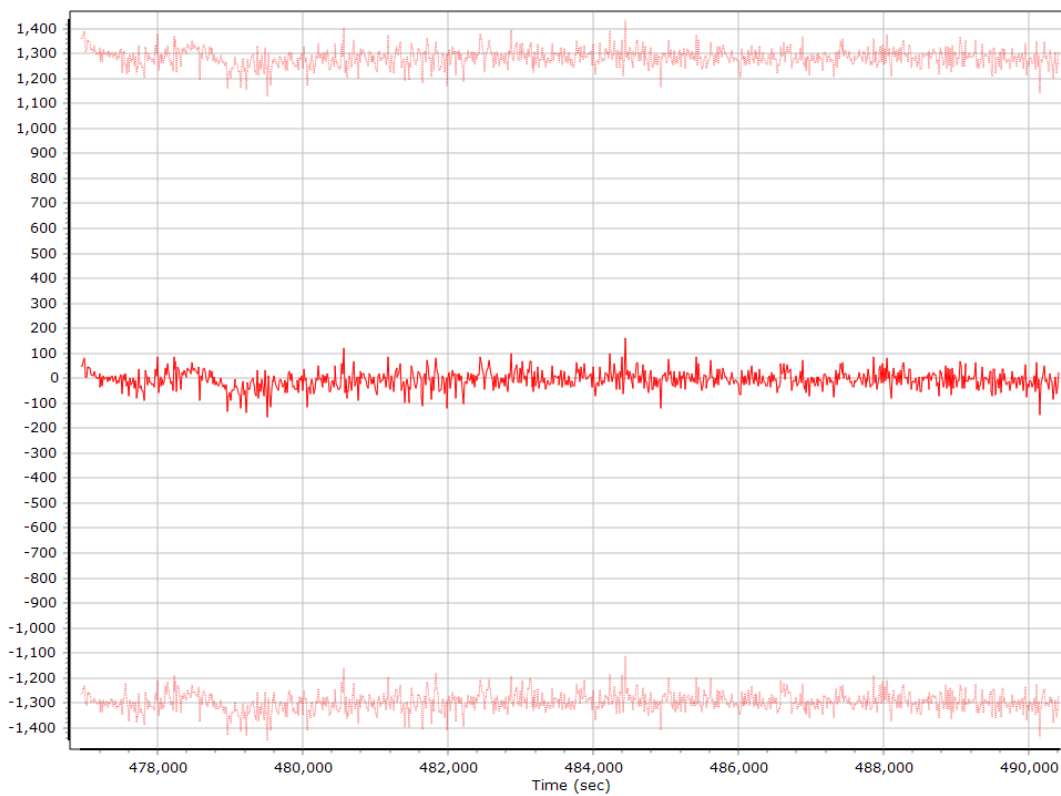
X Accelerometer Scale Error (ppm)



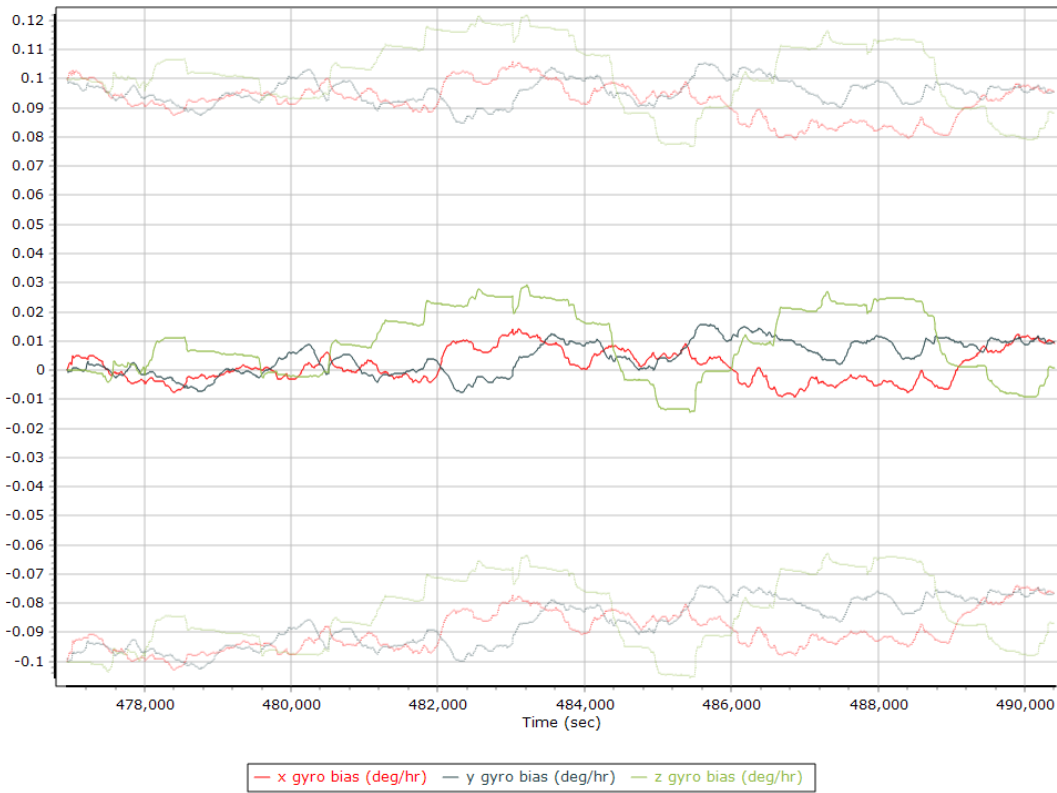
Y Accelerometer Scale Error (ppm)



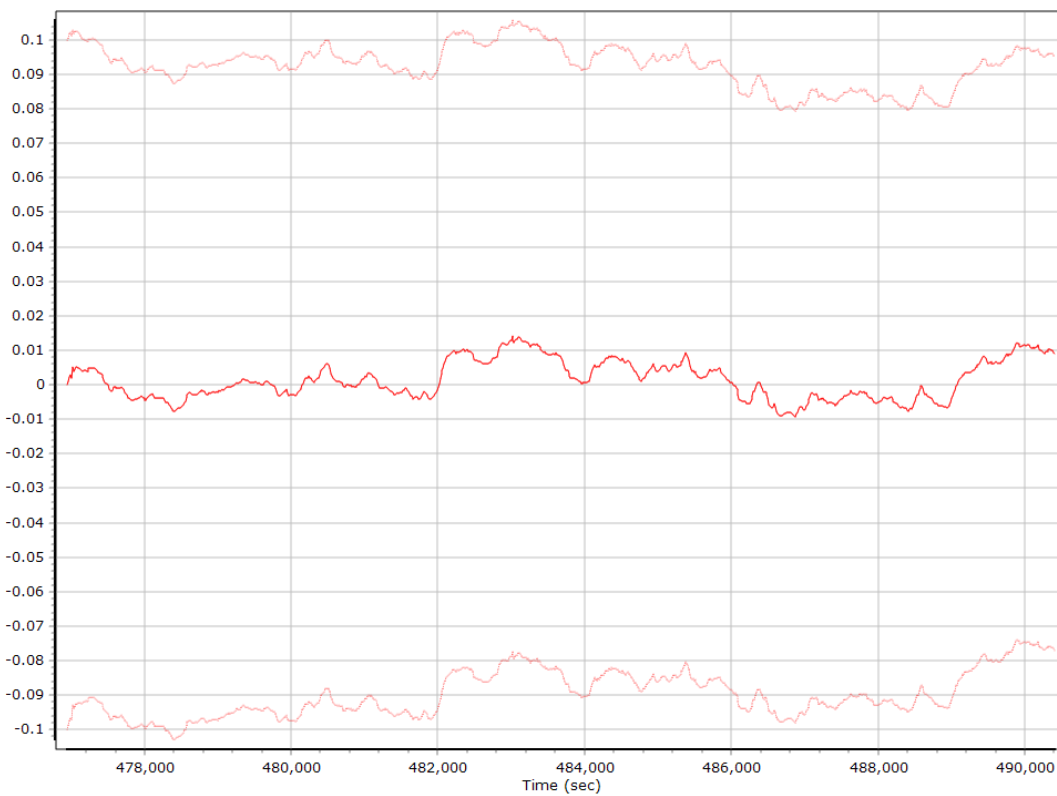
Z Accelerometer Scale Error (ppm)



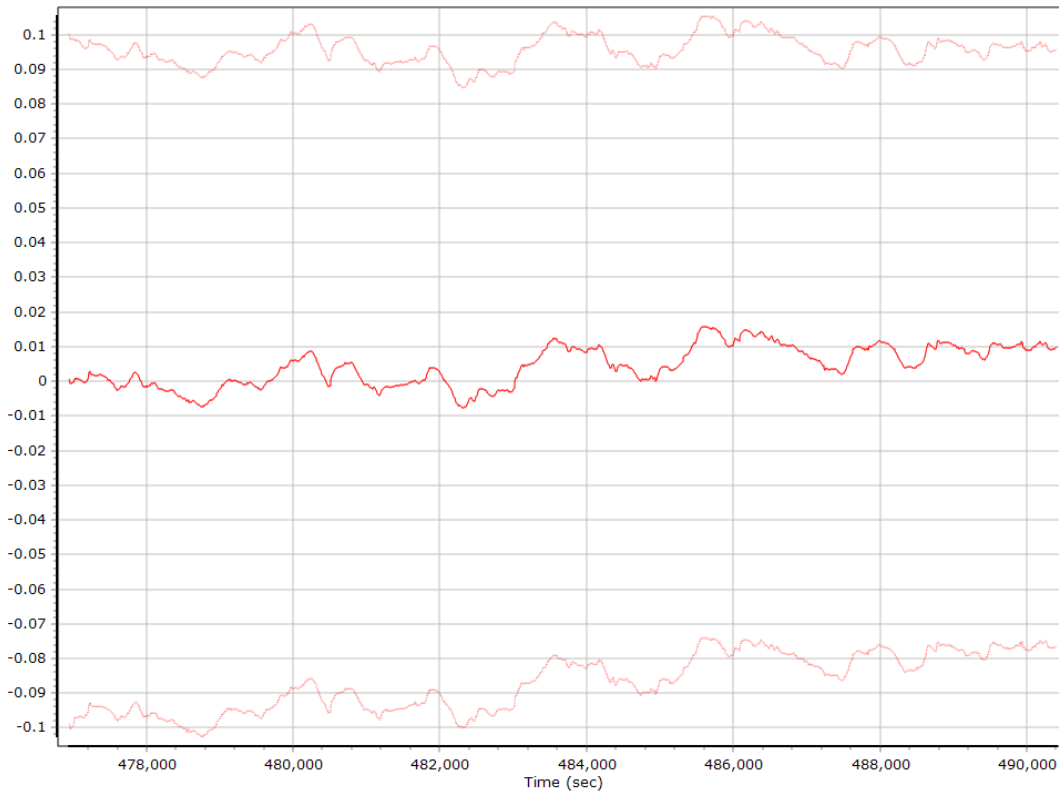
Gyro Bias (deg/h)



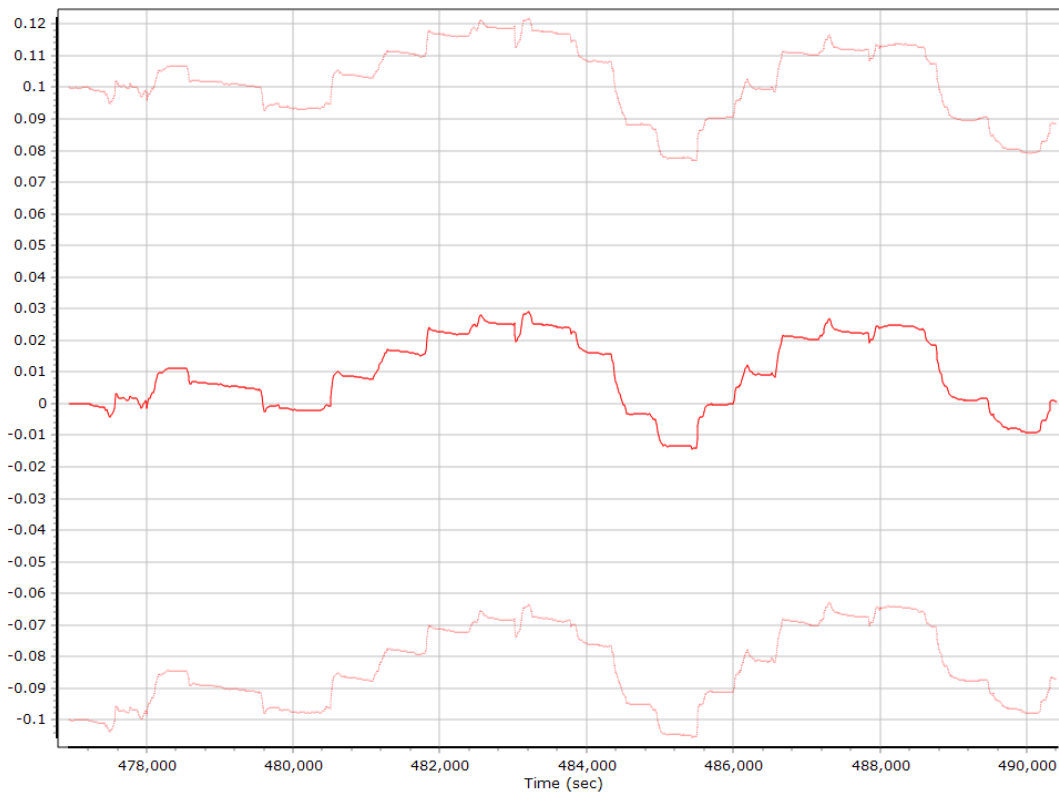
X Gyro Bias (deg/h)



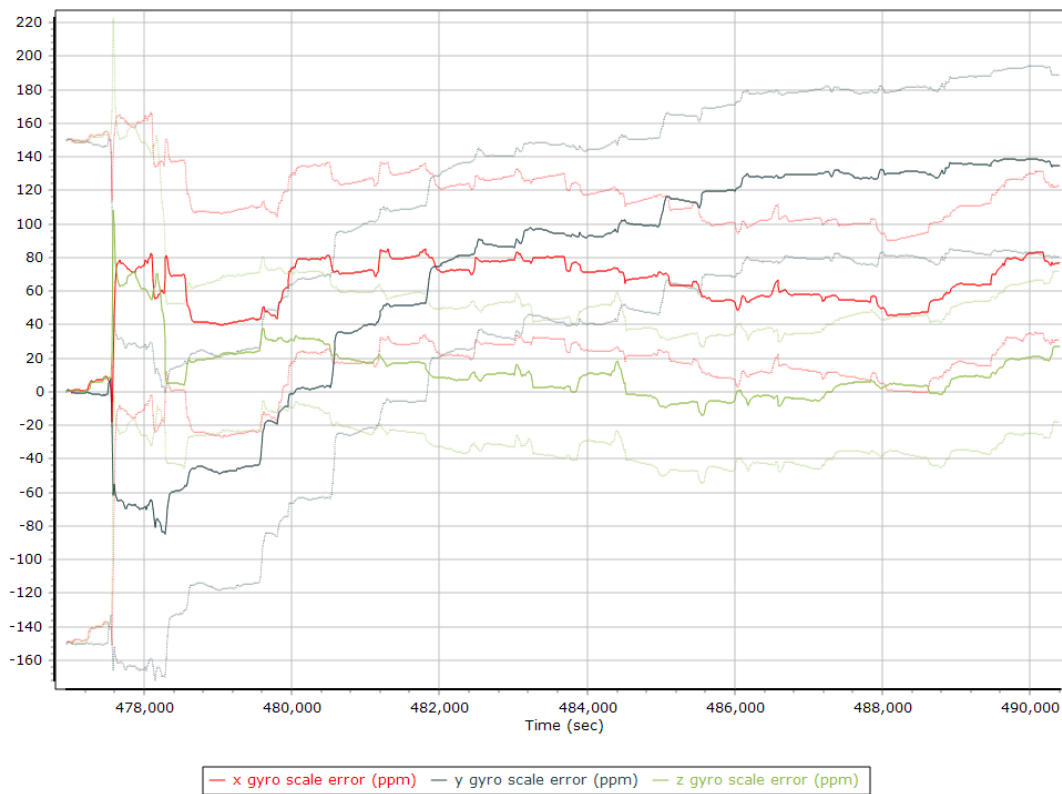
Y Gyro Bias (deg/h)



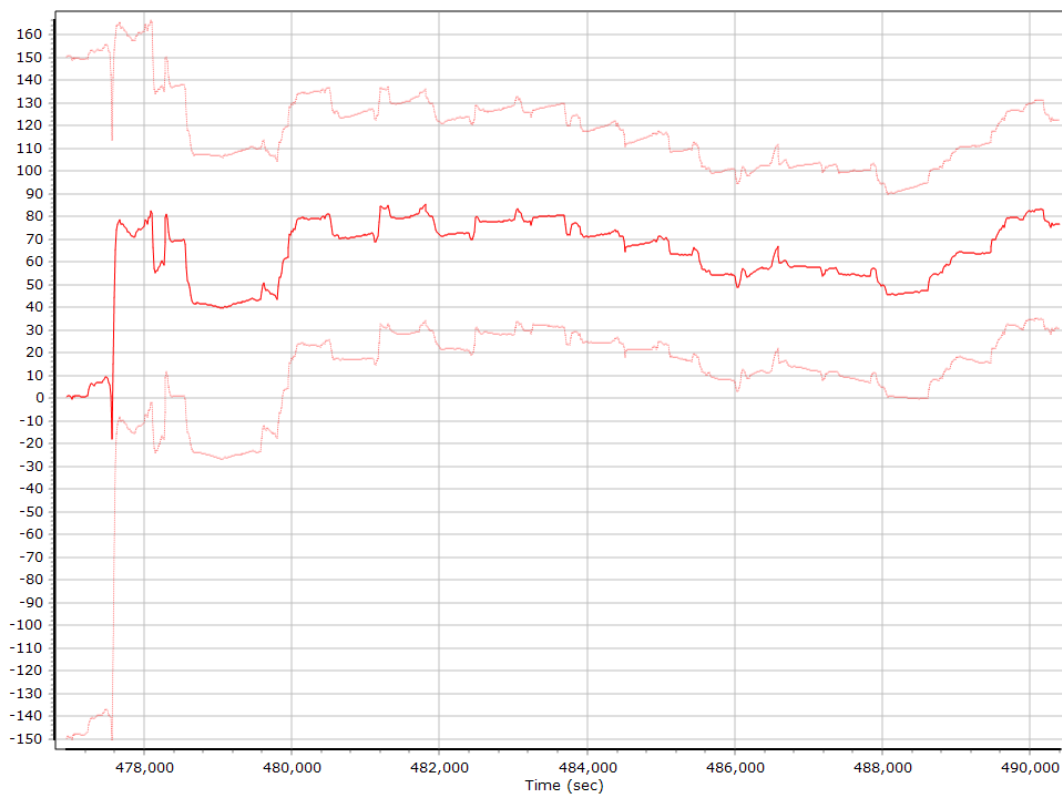
Z Gyro Bias (deg/h)



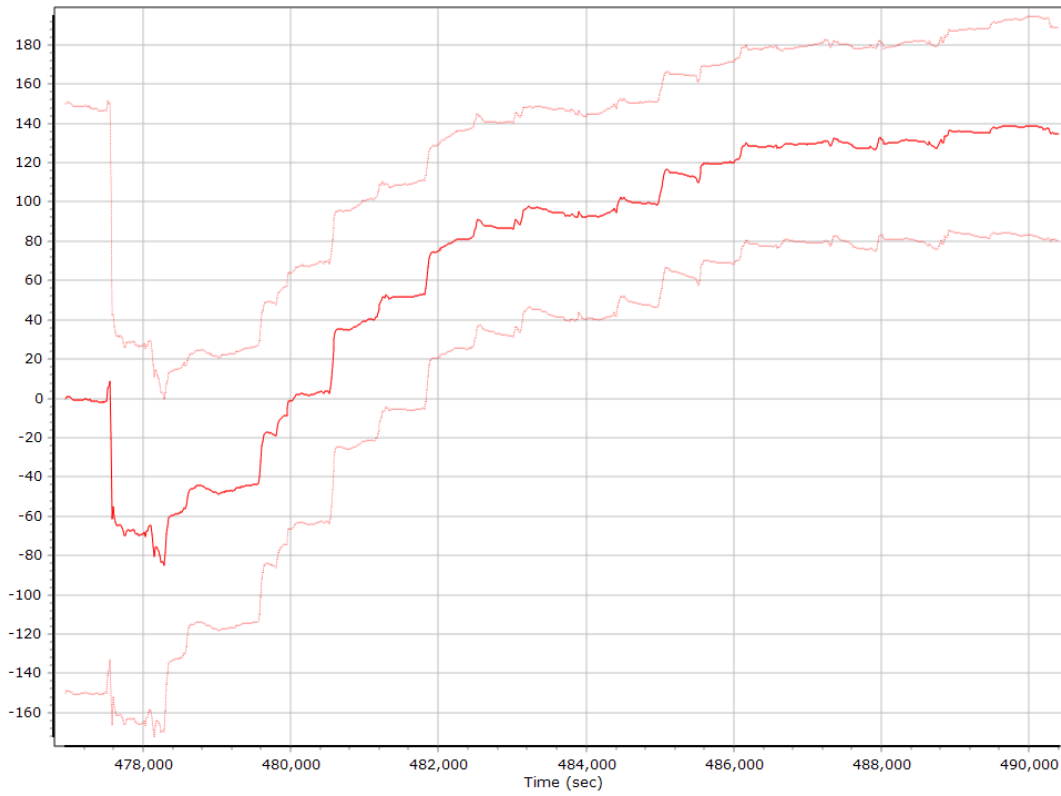
Gyro Scale Error (ppm)



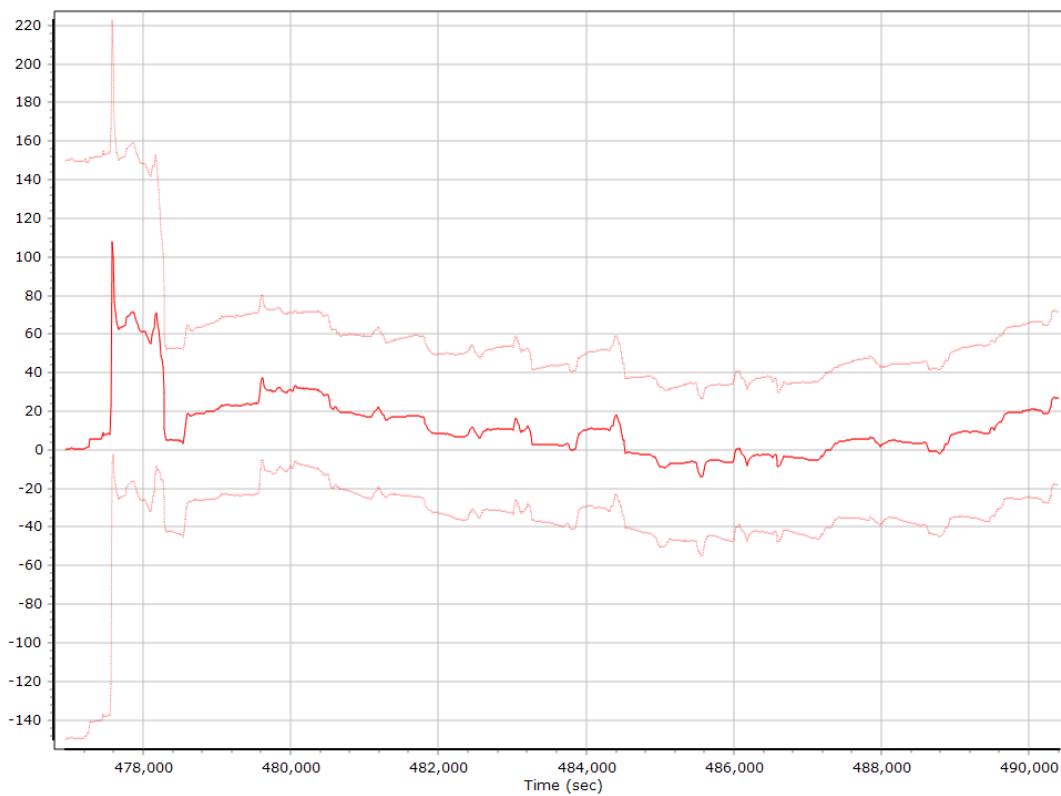
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

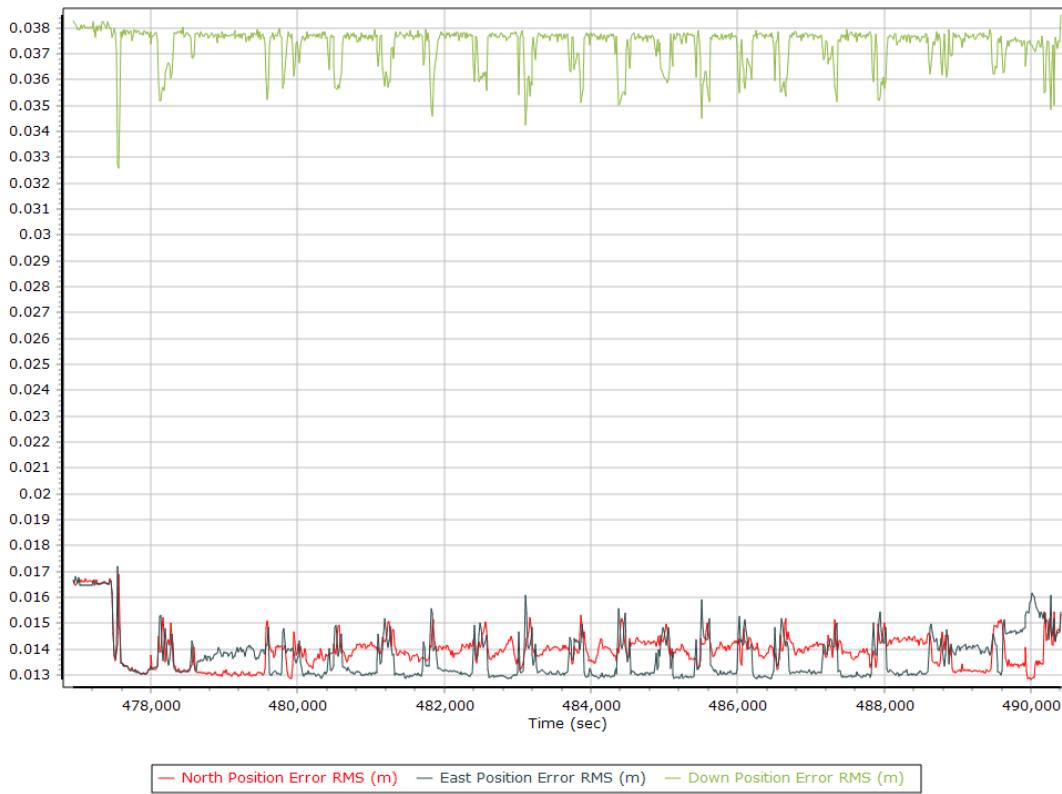


Z Gyro Scale Error (ppm)



Smoothed Performance Metrics

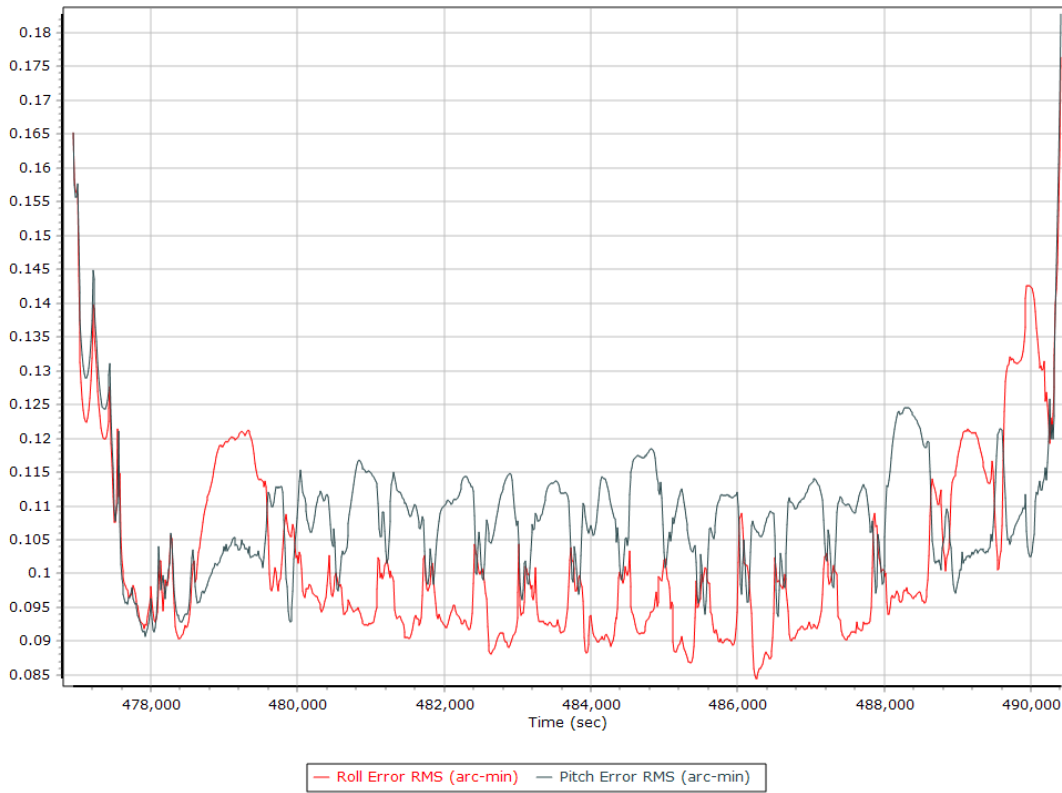
Position Error RMS (m)



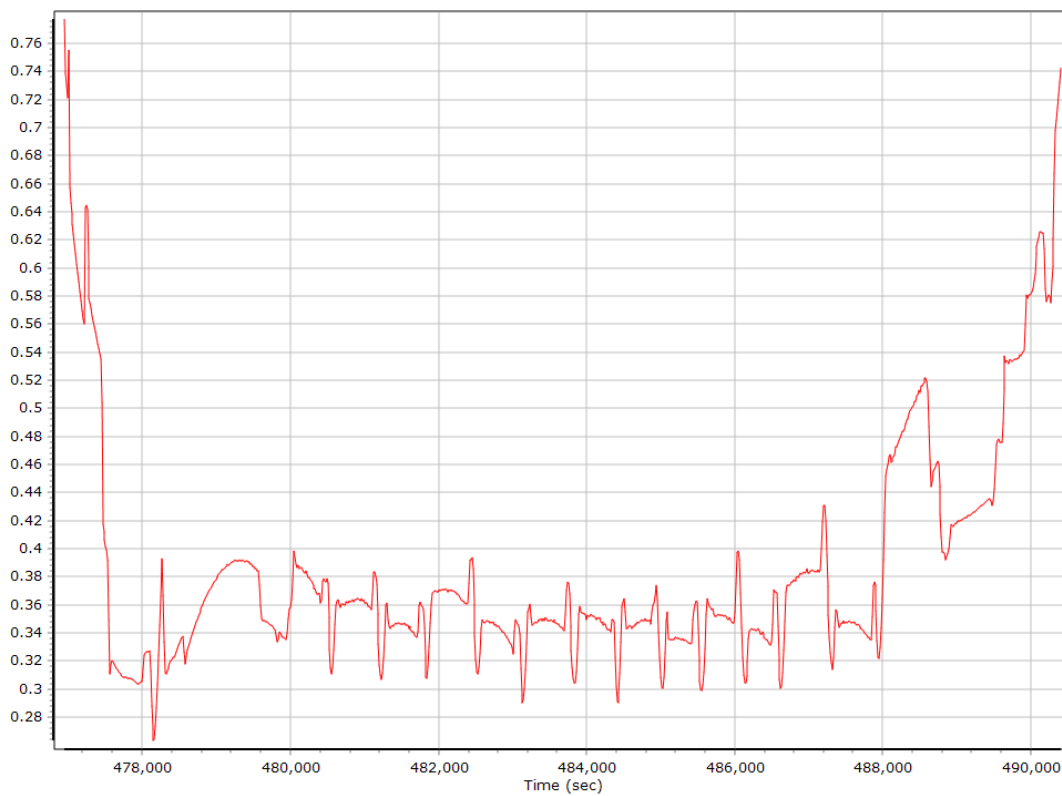
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

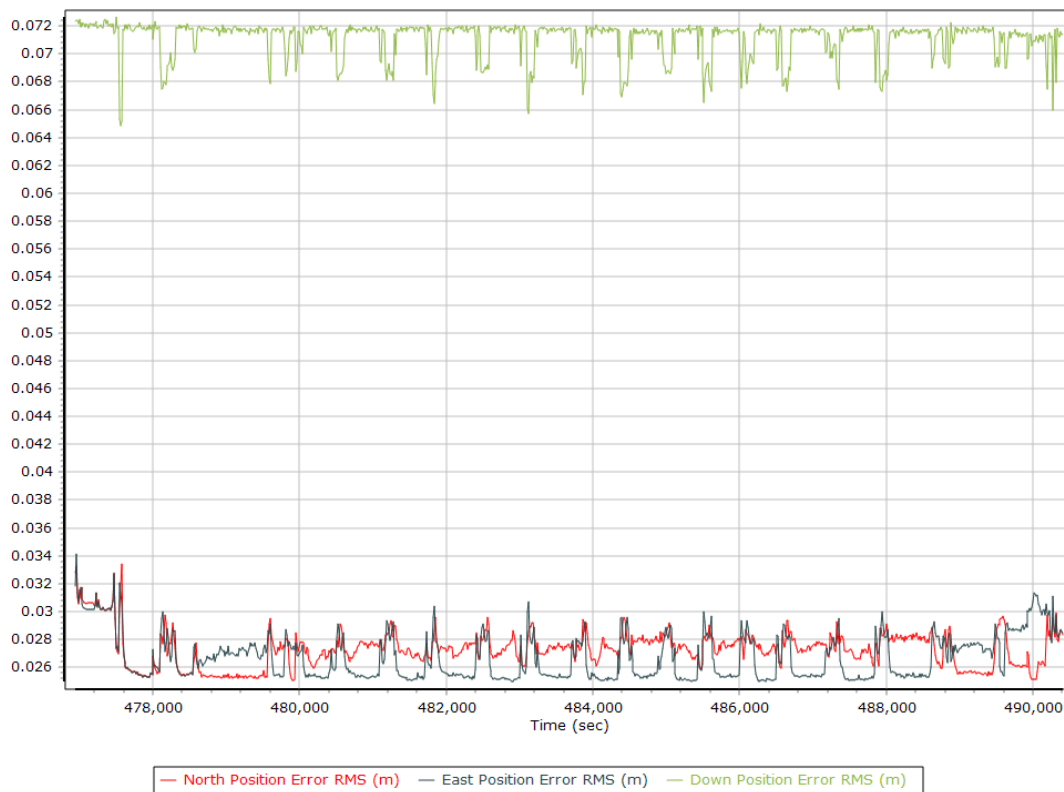


Heading Error RMS (arc-min)

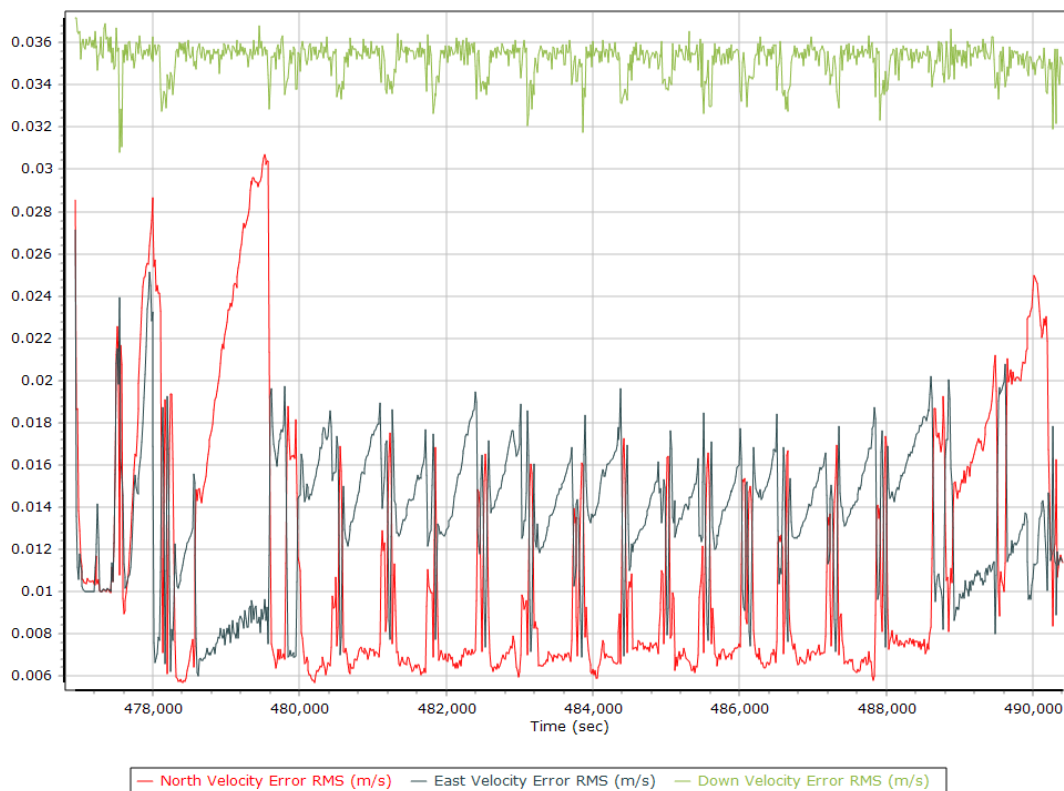


Forward Processed Performance Metrics

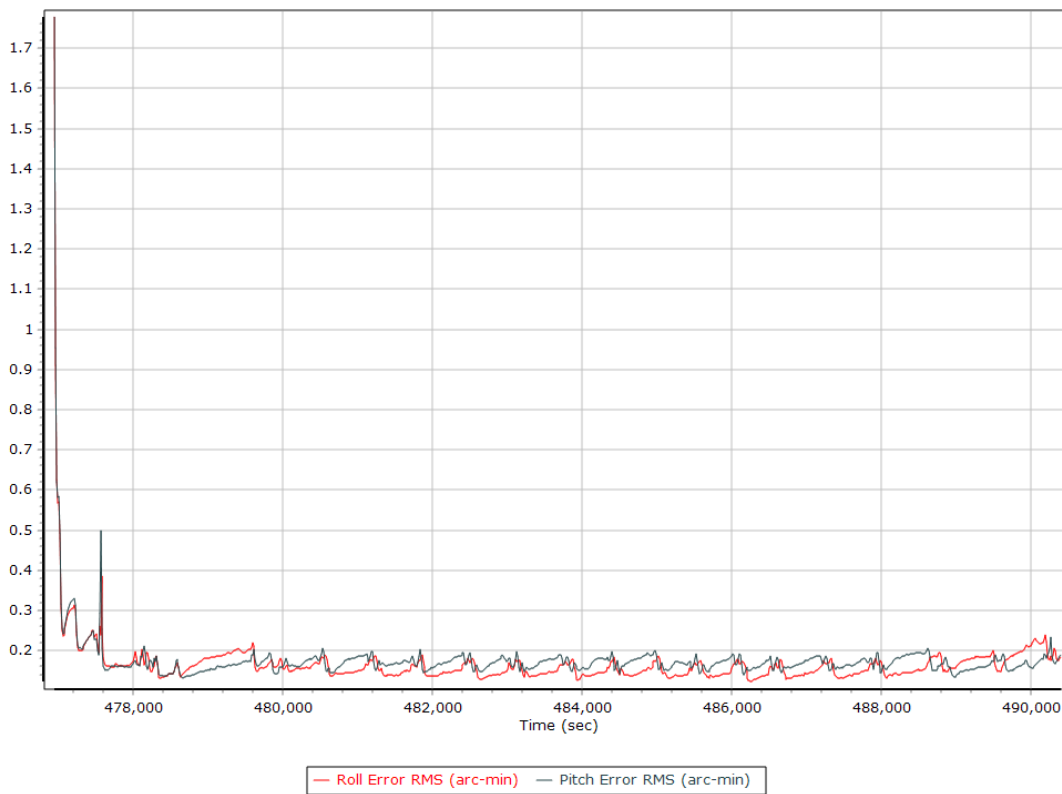
Position Error RMS (m)



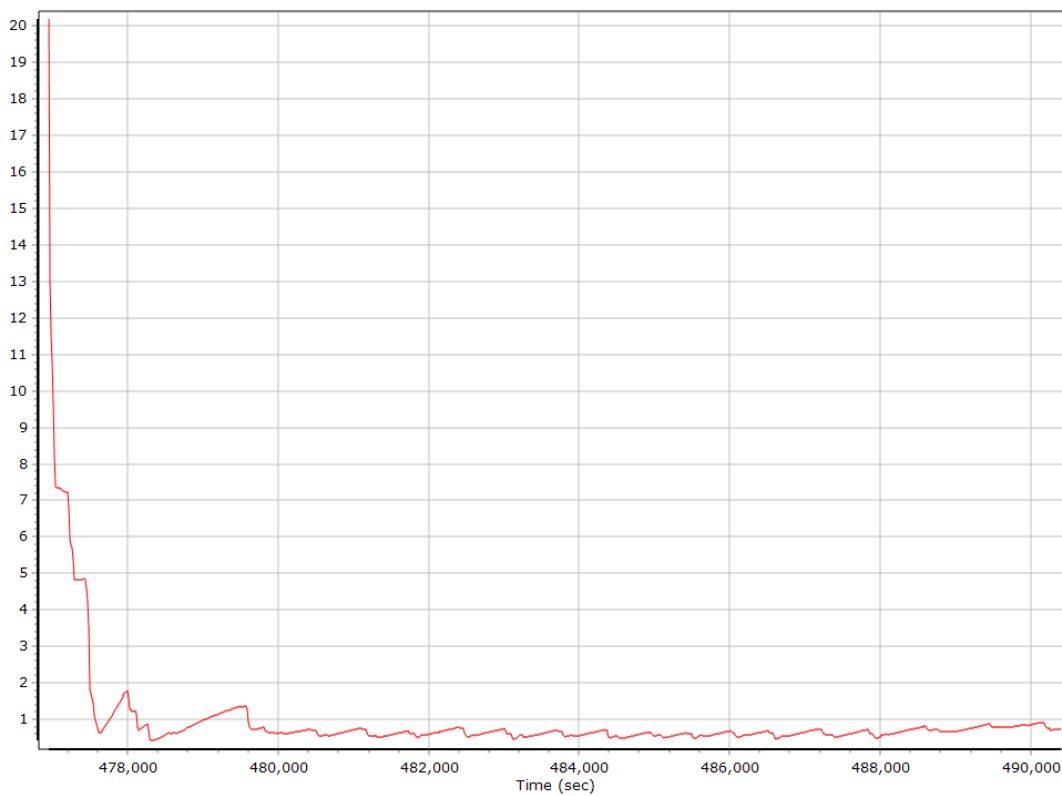
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

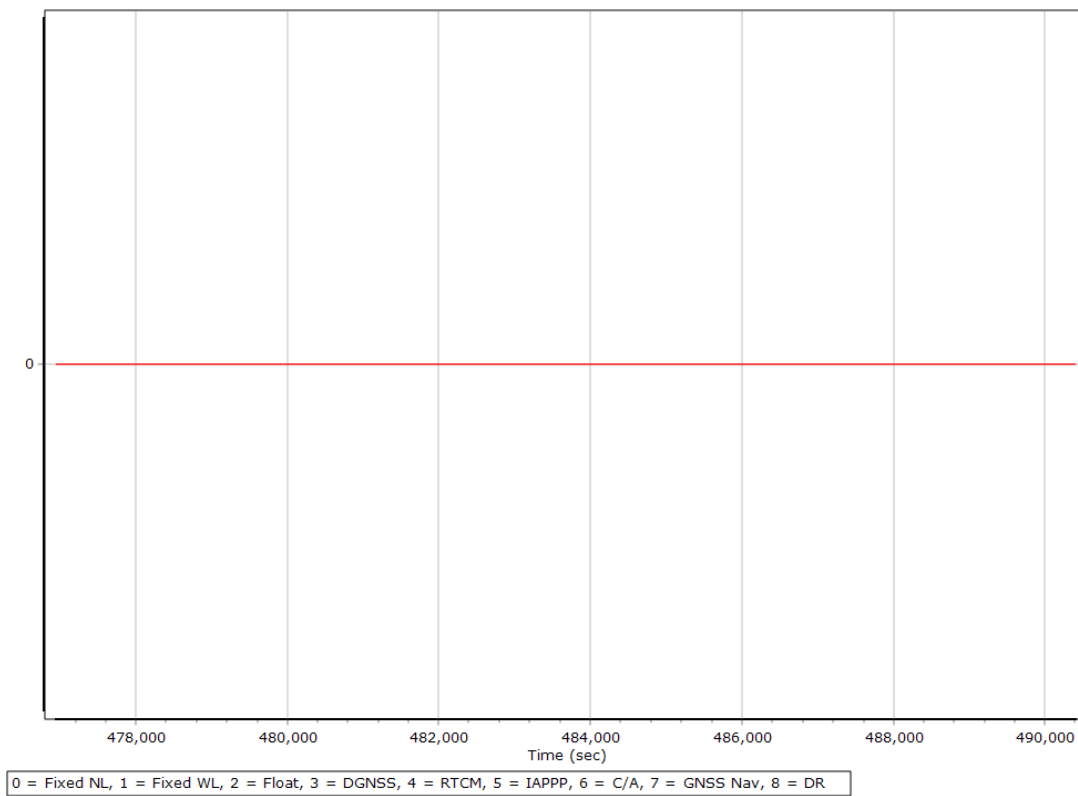


Heading Error RMS (arc-min)

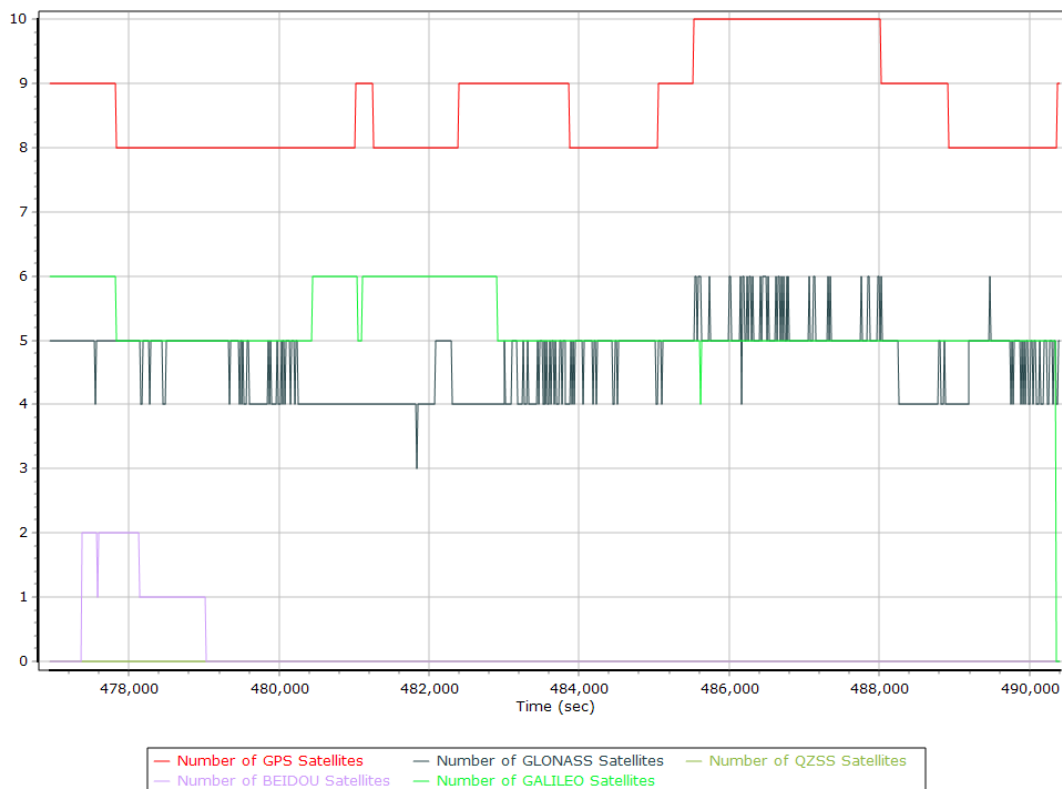


Forward Processed Solution Status

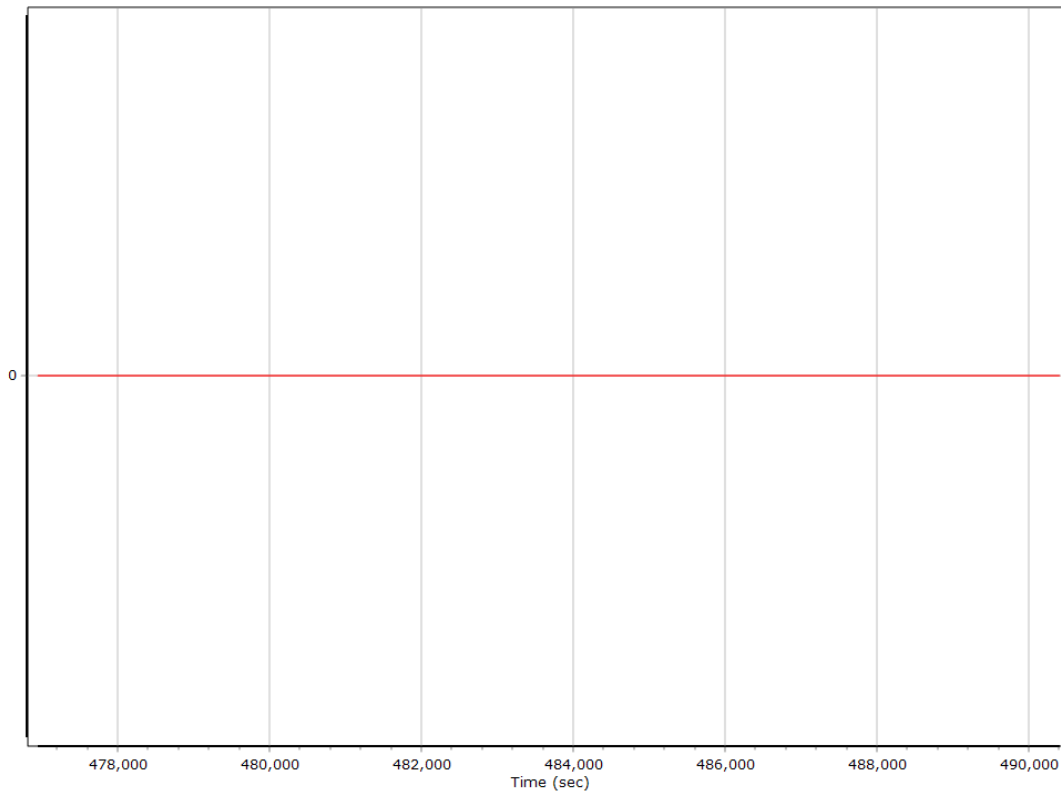
Processing Mode



Number of Satellites



Baseline Length



Export Summary

Export file	sbet_220729_A_5060492_nad2011_FINAL.shp		
Export format	Shapefile		
Solution in use	Post-processed		
Output rate	Specified Distance Interval		
Distance Interval (m)	10.000		
Reference to Output lever arm (m)	0.000	0.000	0.000
Reference mounting angles (deg)	0.000	0.000	0.000
Output units (Coordinate / Lat & Lon)	Meter	Deg Decimal	
Export start time	476890.003 (07/29/2022 12:28:10)		
Export end time	490411.000 (07/29/2022 16:13:31)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 11 (120W to 114W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2022.572603		