General Information

Mission Information

Project name	200717_A_5060449_nad2011_FINAL
Processing date	2020-07-20 11:16:06
Mission date	2020-07-17 12:56:56
Mission duration	04:17:08.000
Processing mode	IN-Fusion PP-RTX

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N11407
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
200717A.563	POS Data
200717A.564	POS Data
200717A.565	POS Data
200717A.566	POS Data
200717A.567	POS Data
200717A.568	POS Data
200717A.569	POS Data
200717A.570	POS Data
200717A.571	POS Data
200717A.572	POS Data
200717A.573	POS Data
200717A.574	POS Data
200717A.575	POS Data
200717A.576	POS Data
200717A.577	POS Data
200717A.578	POS Data
200717A.579	POS Data
200717A.580	POS Data
200717A.581	POS Data
200717A.582	POS Data
200717A.583	POS Data
200717A.584	POS Data
200717A.585	POS Data
200717A.586	POS Data
200717A.587	POS Data
200717A.588	POS Data
200717A.589	POS Data
200717A.590	POS Data
200717A.591	POS Data
200717A.592	POS Data
200717A.593	POS Data
200717A.594	POS Data
200717A.595	POS Data
200717A.596	POS Data

Input Files

File Name	File Type
Ephm1990.20g	GLONASS Broadcast Ephemeris
Ephm1990.20n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_200717_A_5060449_nad2011_FINAL.out	SBET Trajectory File
sbet_200717_A_5060449_nad2011_FINAL.shp	Shapefile Export Output

Rover Data Summary

First raw data file	200717A.563		
Last raw data file	200717A.596		
Start GPS week	2114		
Start time	478628.544 (07/17/2020 12:57:08)		
End time	494044.284 (07/17/2020 17:14:04)		
Start of fine alignment	478787.347 (07/17/2020 12:59:47)		
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)	-0.026	-0.220	-0.918
Reference to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

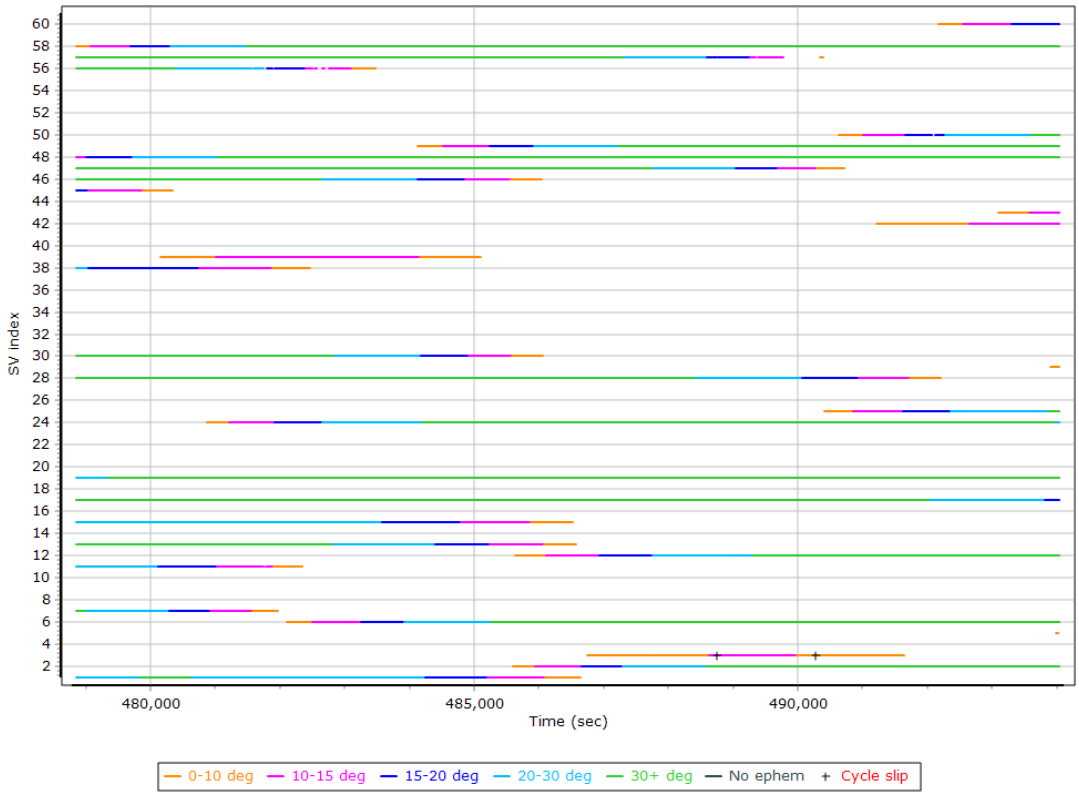
Rover Data QC

Raw IMU Import QC Summary

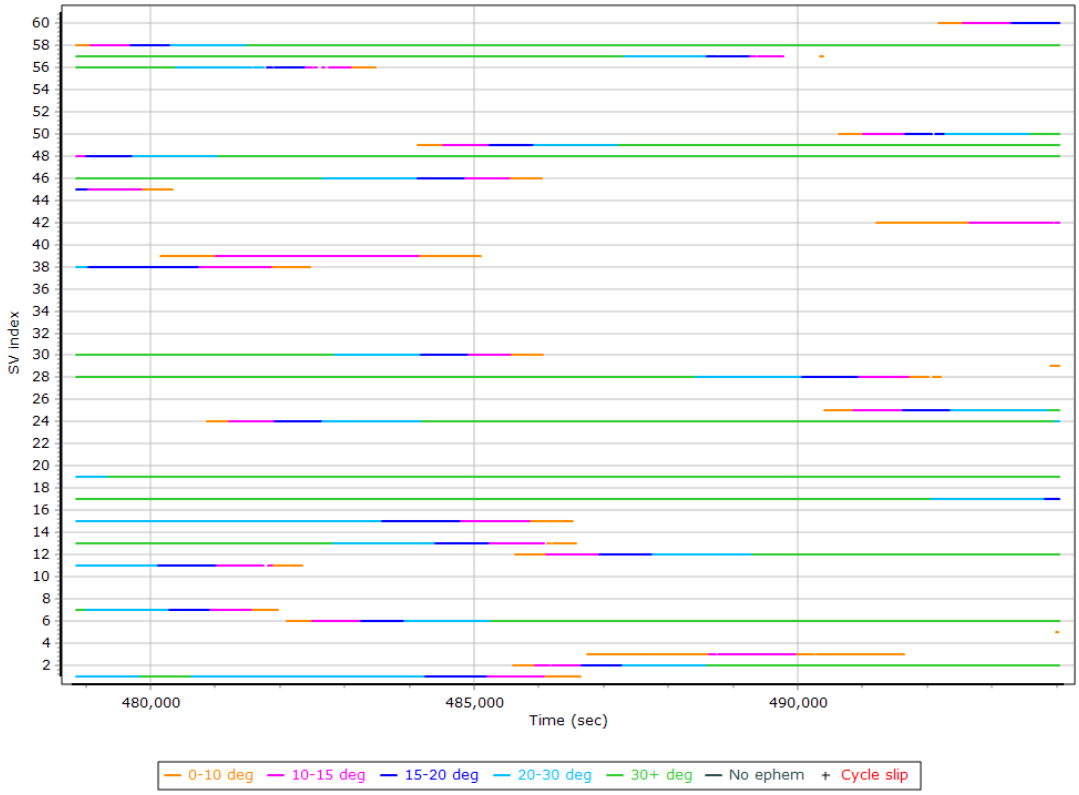
IMU data input file	imu_200717_A_5060449_nad2011_FINAL.dat
IMU data check log file	imudt_200717_A_5060449_nad2011_FINAL.log
IMU Records Processed	3085128
Termination Status	Warnings
IMU Anomalies	1
IMU Failure Messages	
478628.294 : WARNING : Gap of 478600.3038 seconds in CHECKDT input data	

Primary Observables & Satellite Data

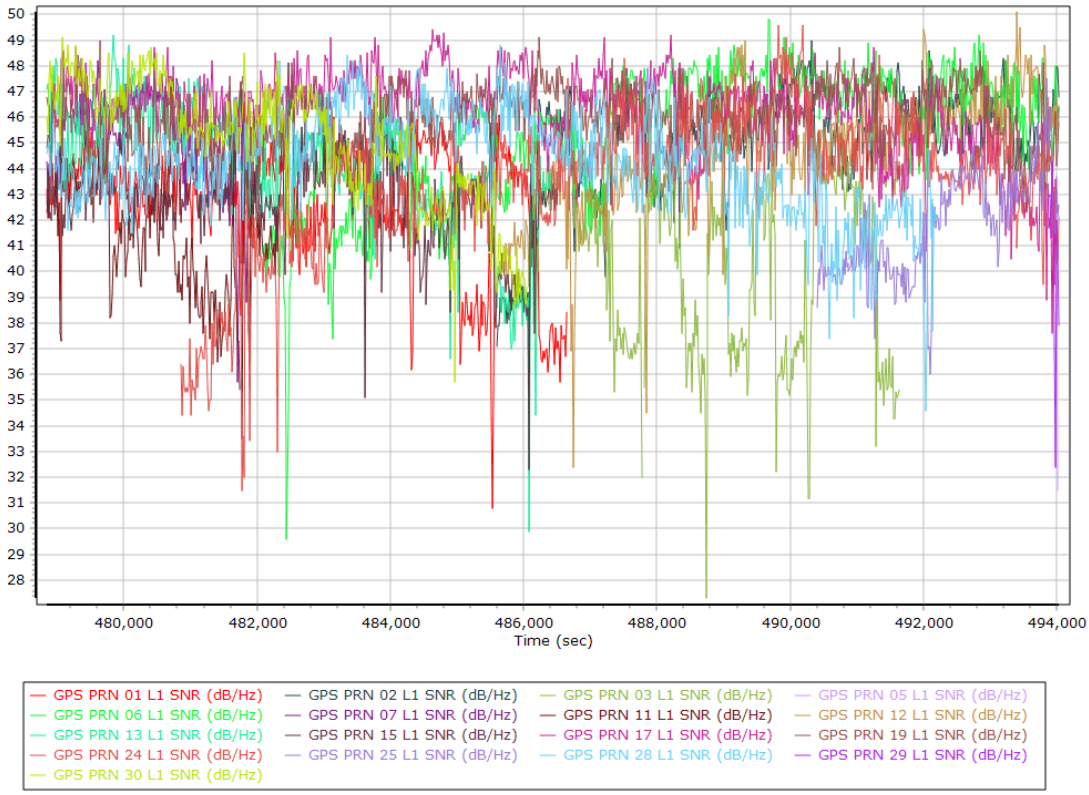
L1 Satellite Lock/Elevation



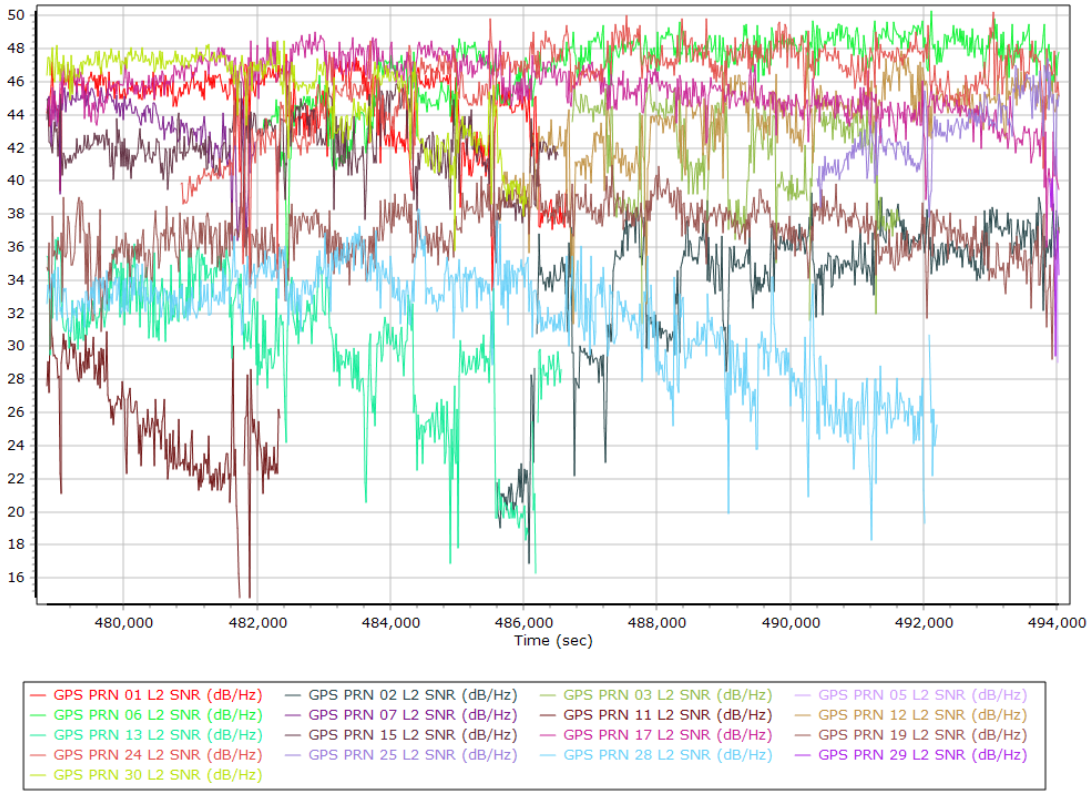
L2 Satellite Lock/Elevation



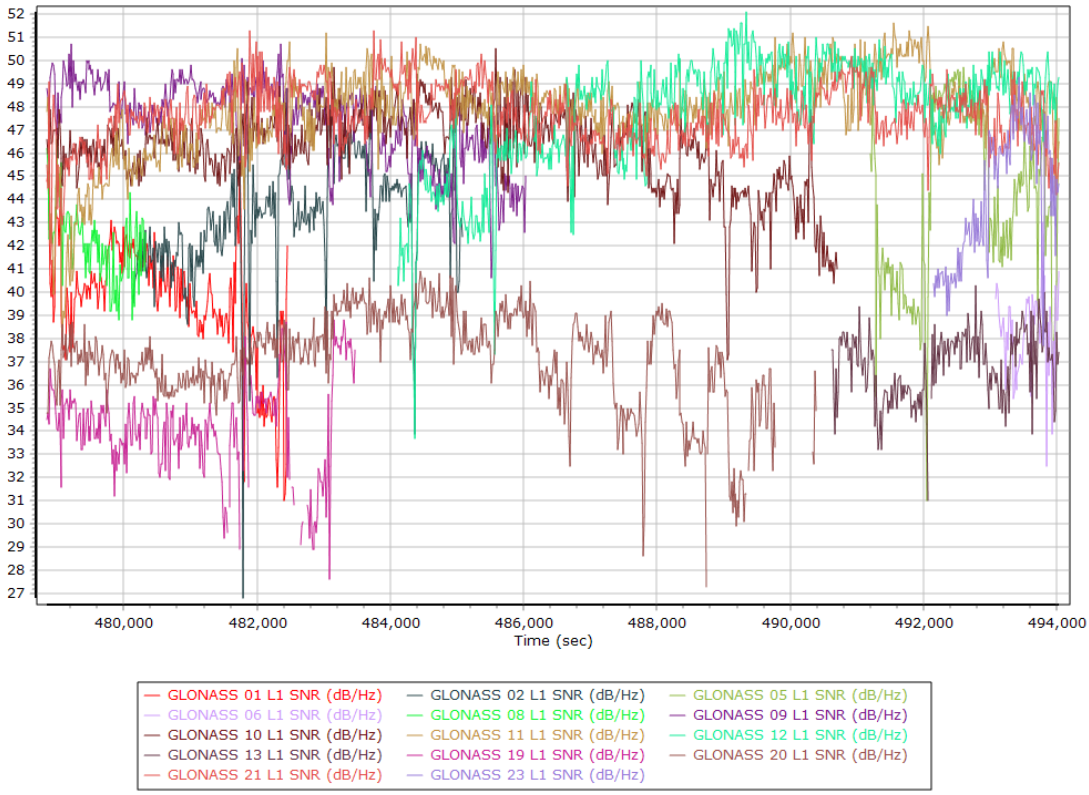
GPS L1 SNR



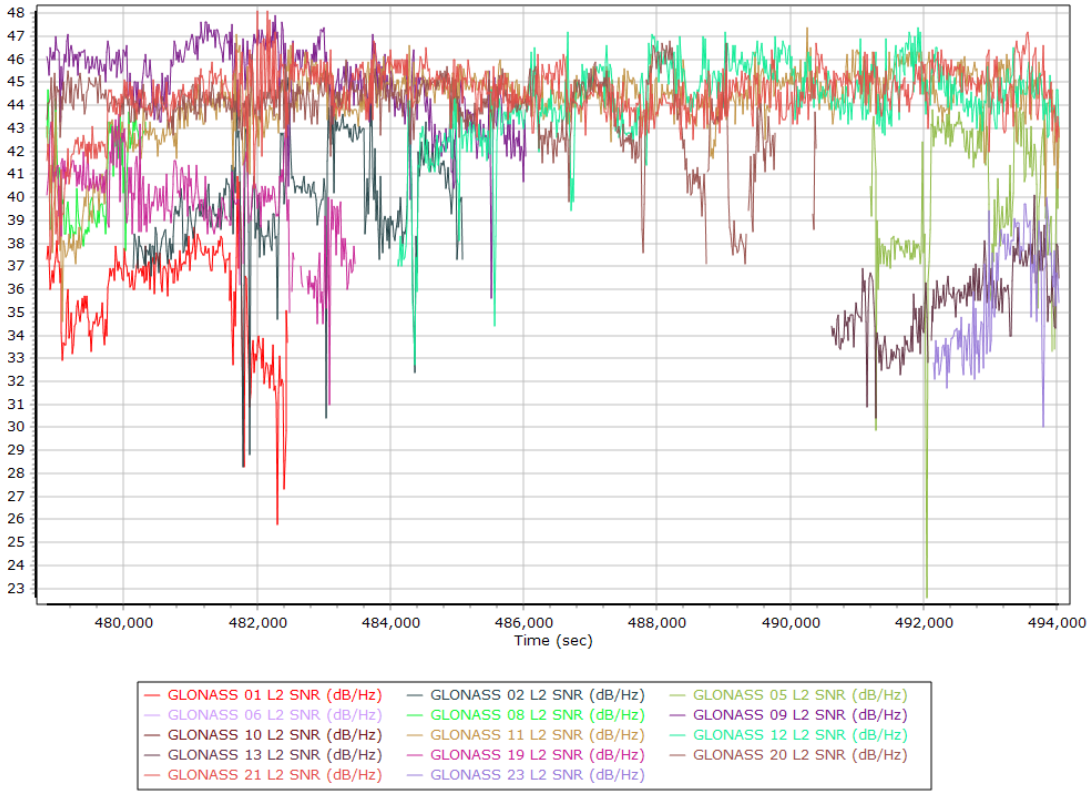
GPS L2 SNR



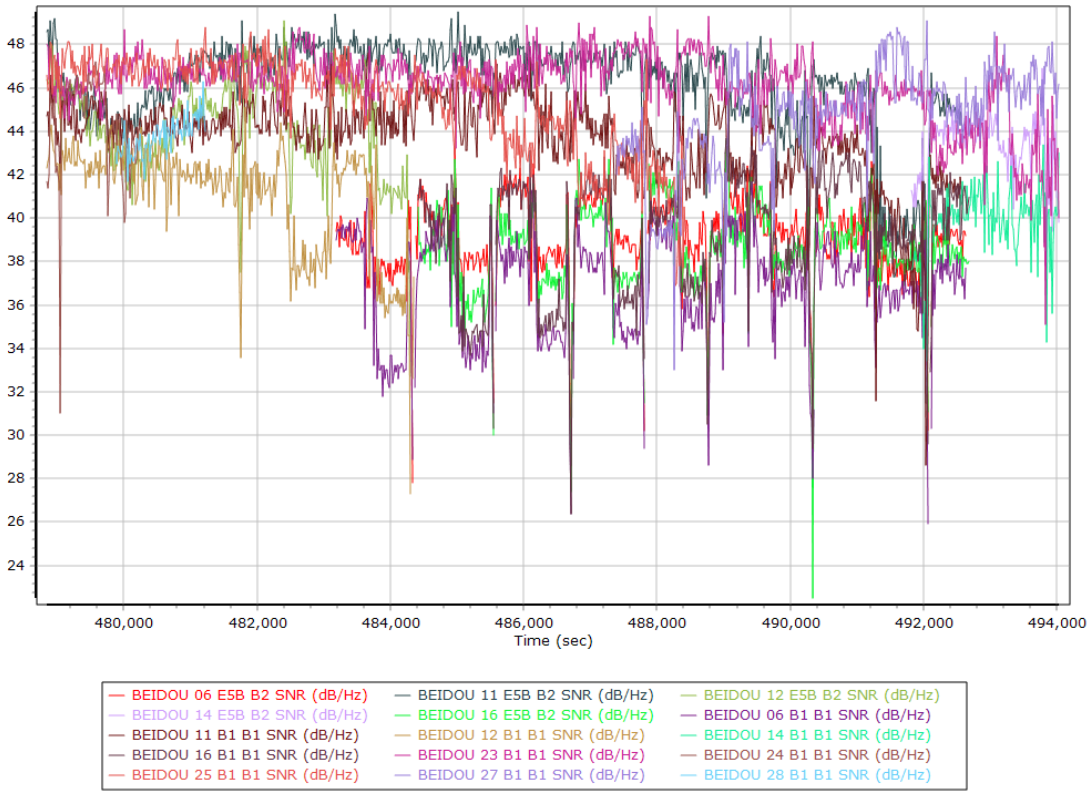
GLONASS L1 SNR



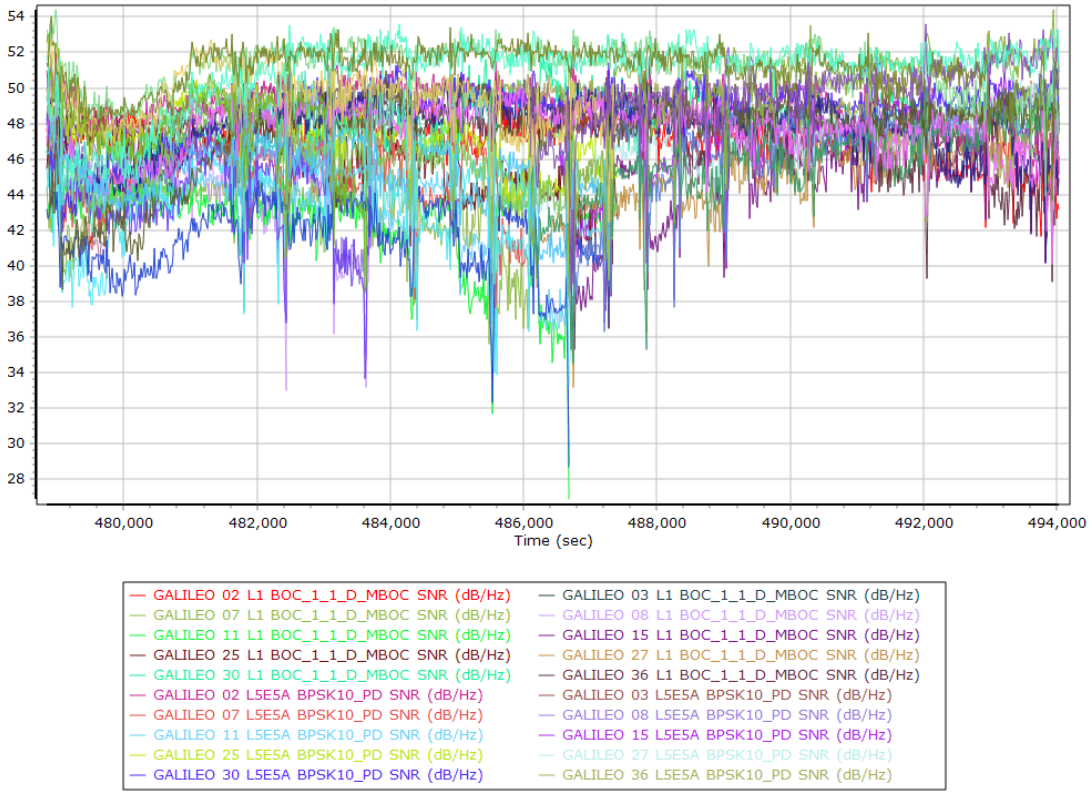
GLONASS L2 SNR



BEIDOU SNR

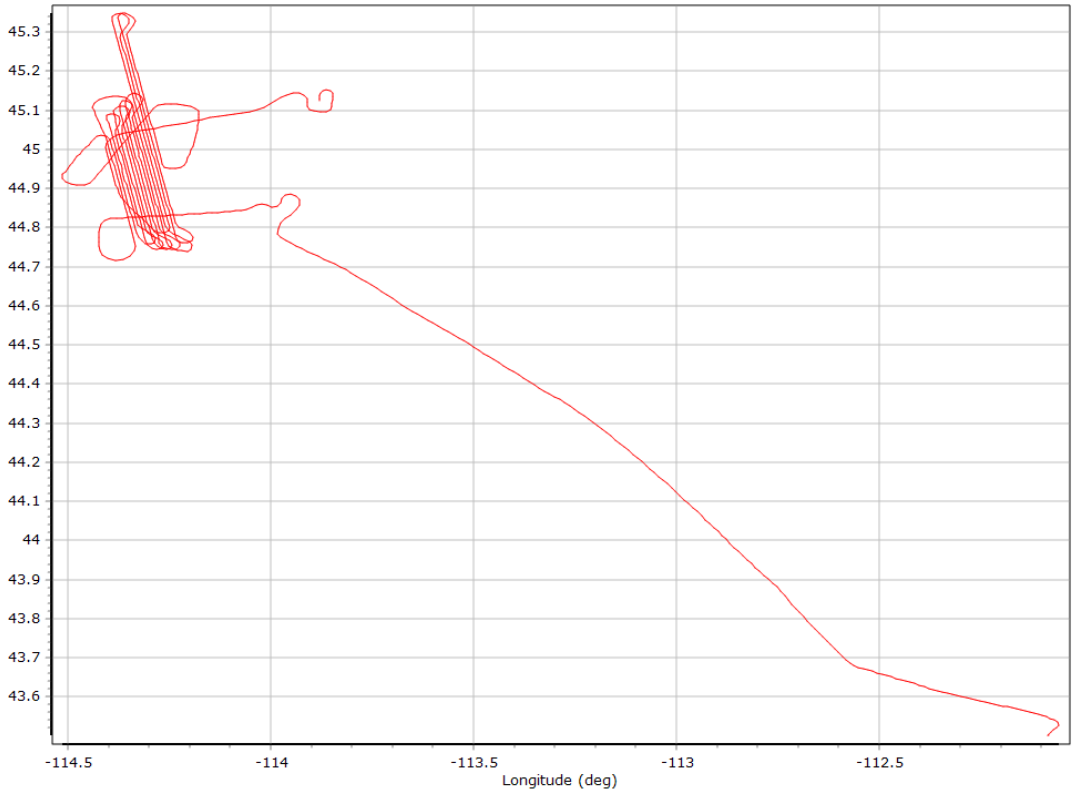


GALILEO SNR

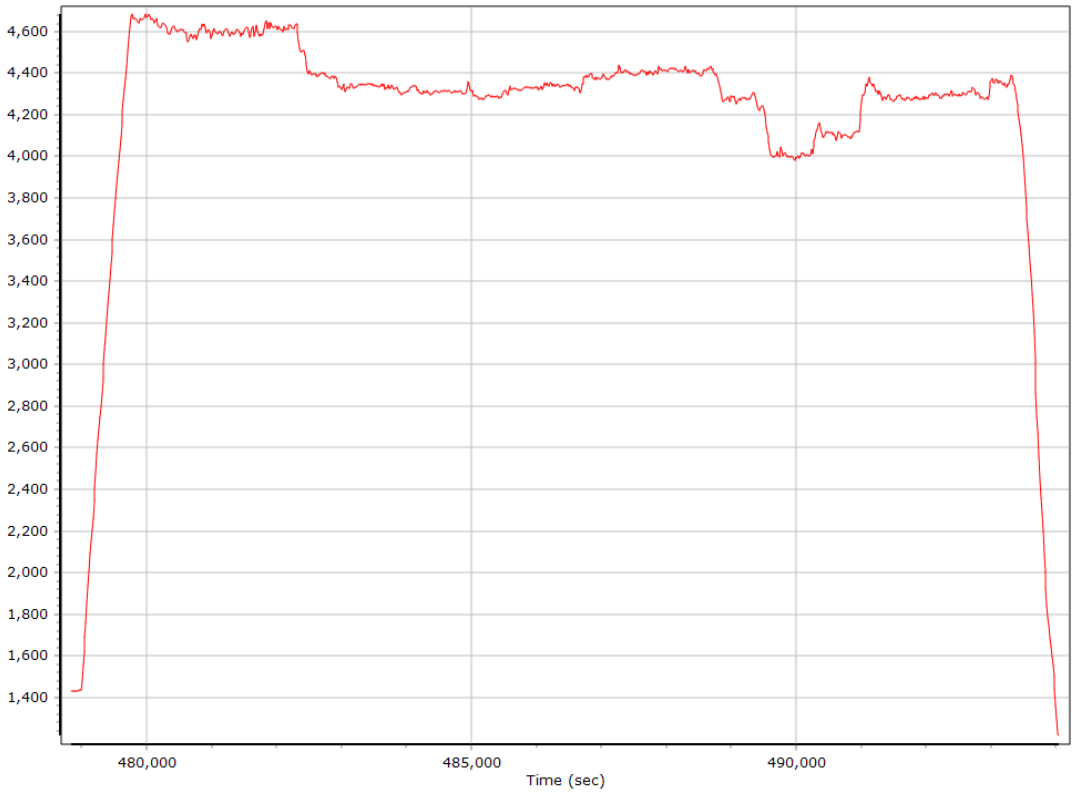

54
52
50
48
46
44
42
40
38
36
34
32
30
28
480,000
482,000
484,000
486,000
488,000
490,000
492,000
494,000
Time (sec)
GALILEO 02 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 03 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 07 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 08 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 11 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 15 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 25 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 27 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 30 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
GALILEO 36 L1 BOC_1_1_D_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 11 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

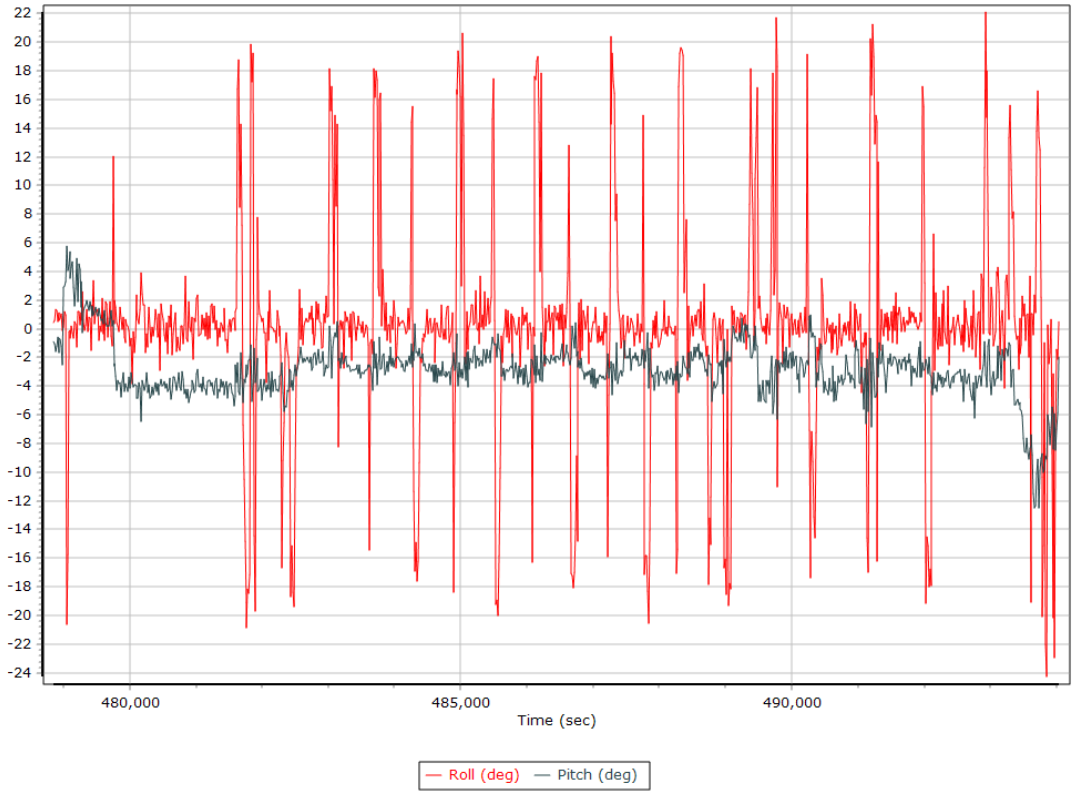
Top View



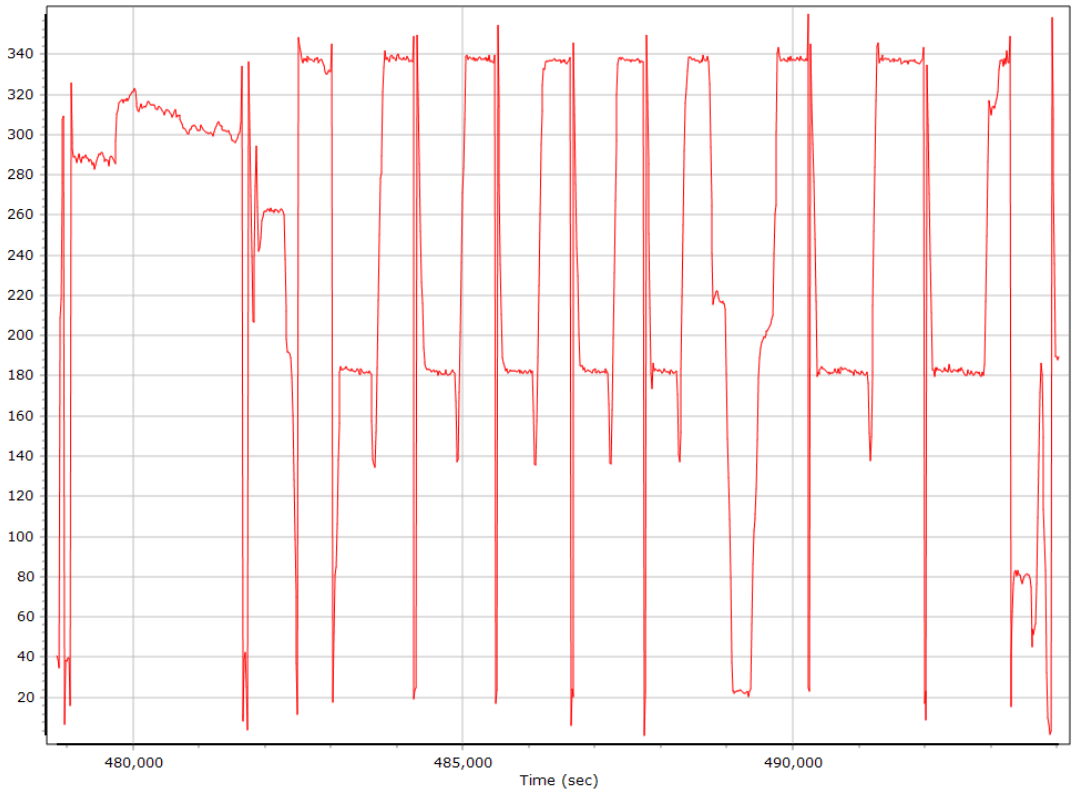
Altitude



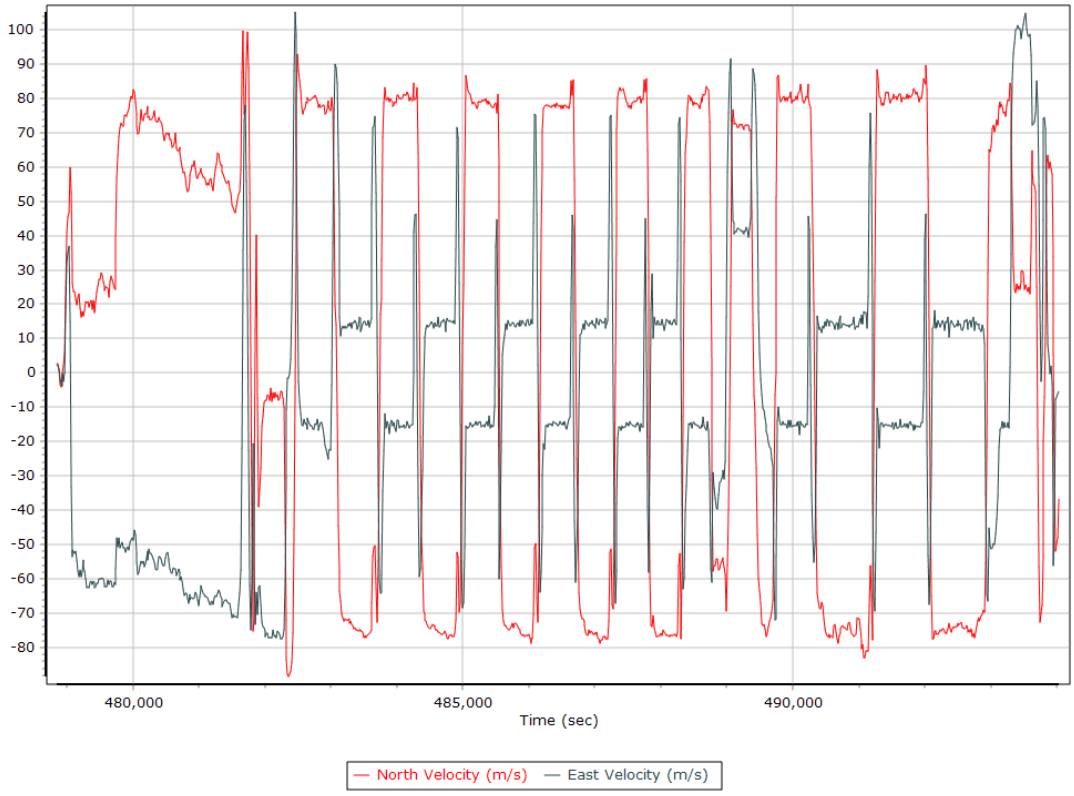
Roll/Pitch



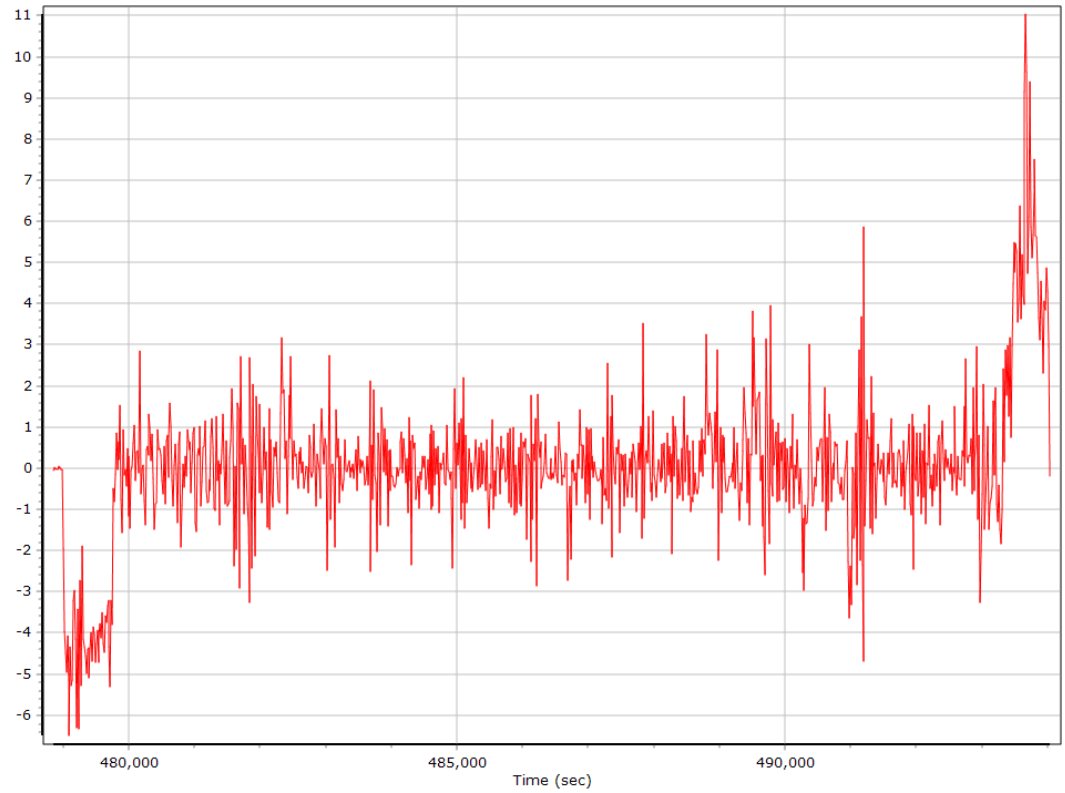
Heading



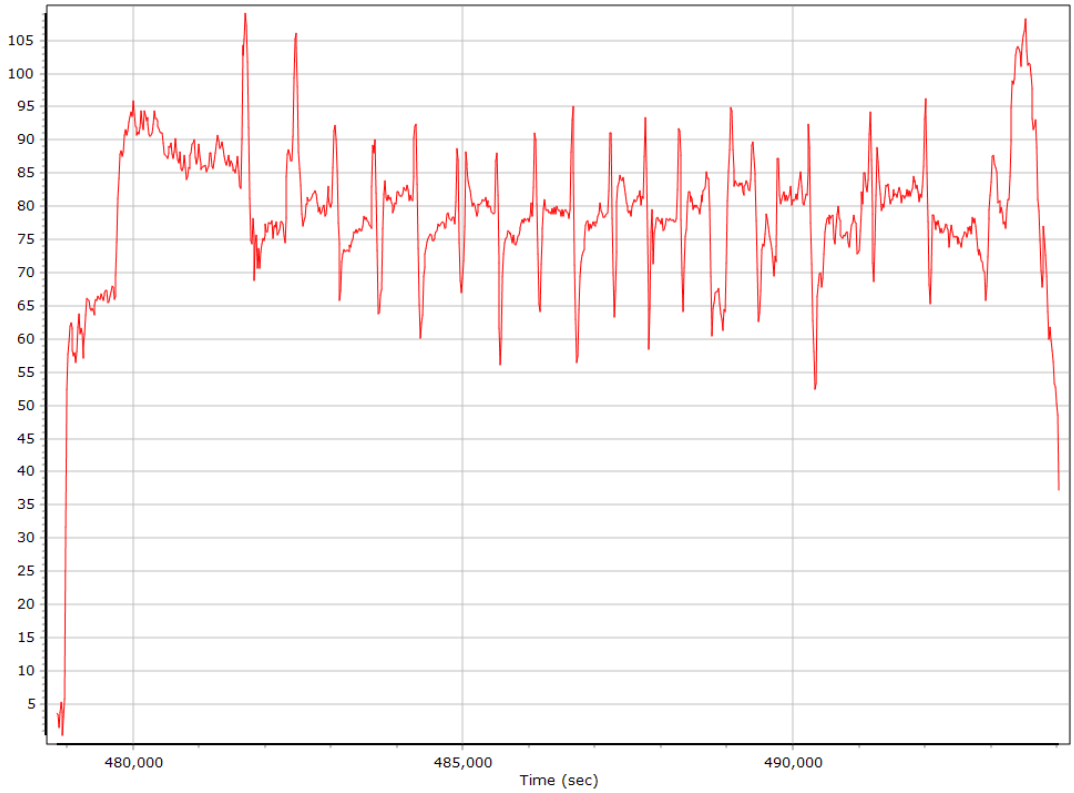
North/East Velocity



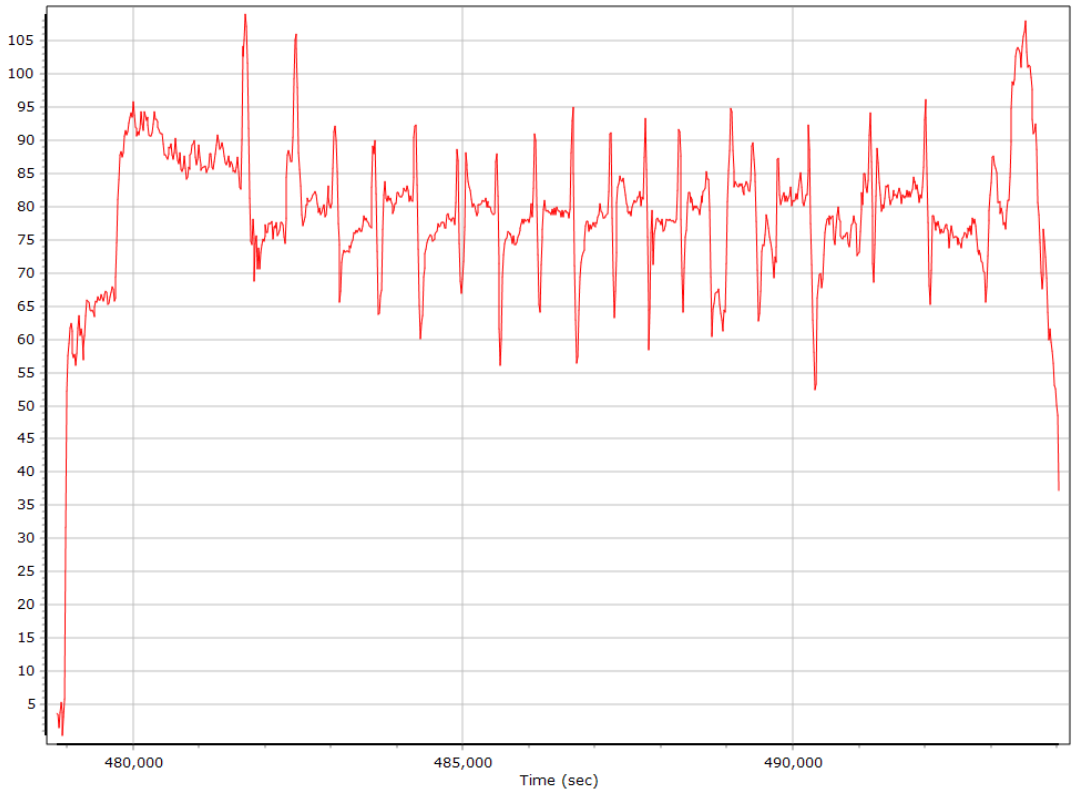
Down Velocity



Total Speed

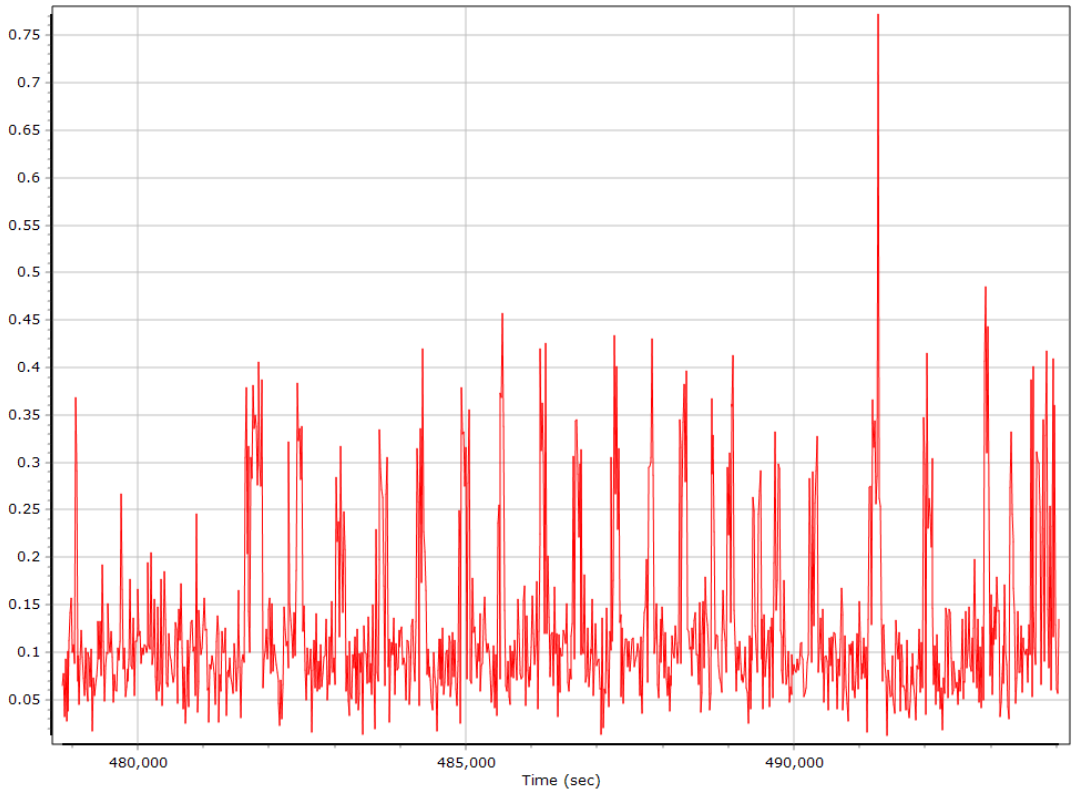


Ground Speed



Body Acceleration

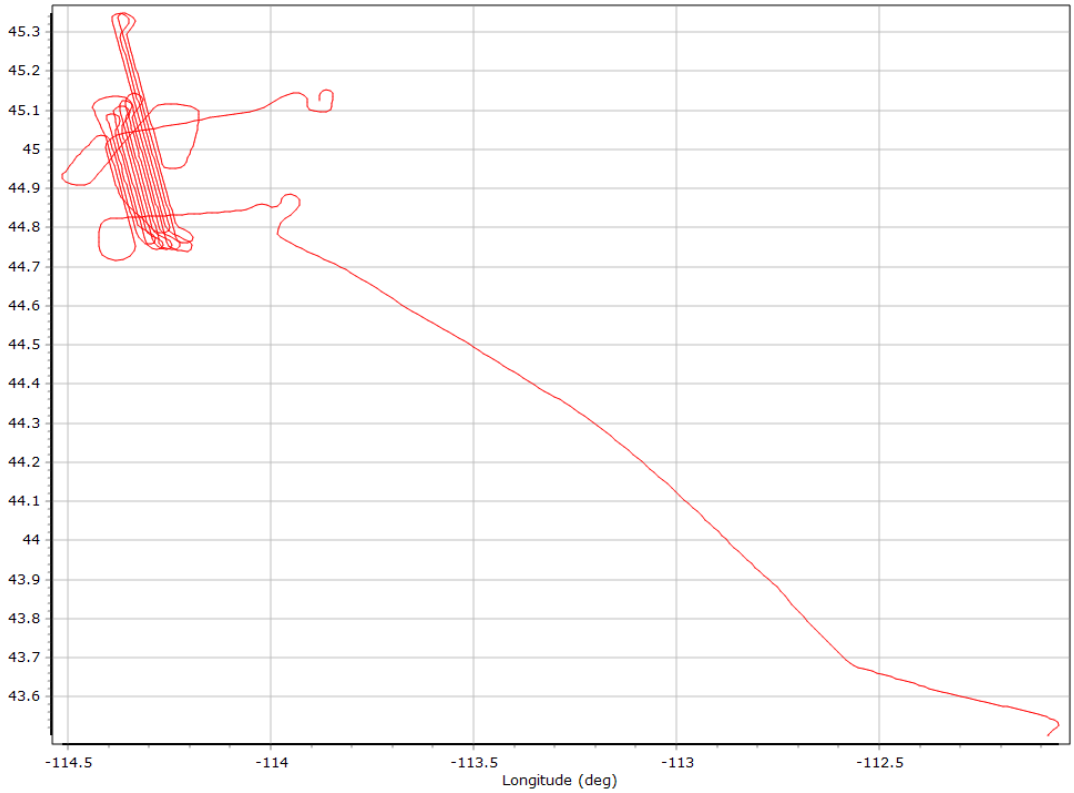
Total Body Acceleration



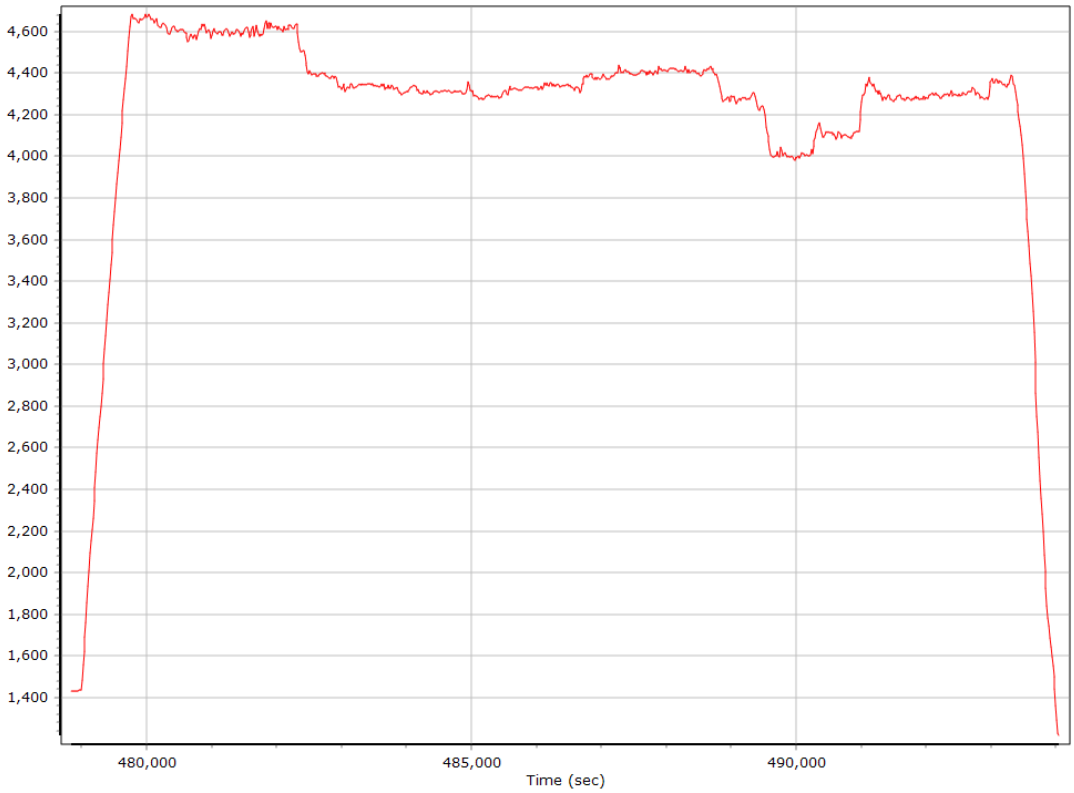
Body Angular Rate

Forward Processed Trajectory Information

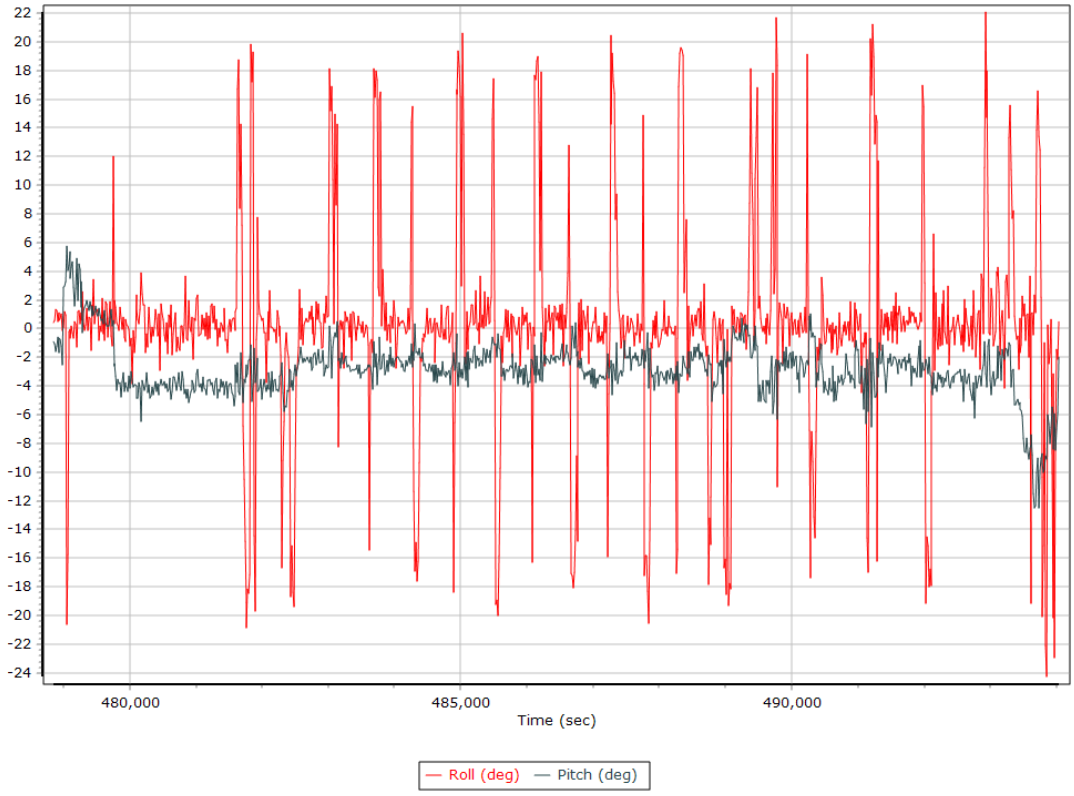
Top View



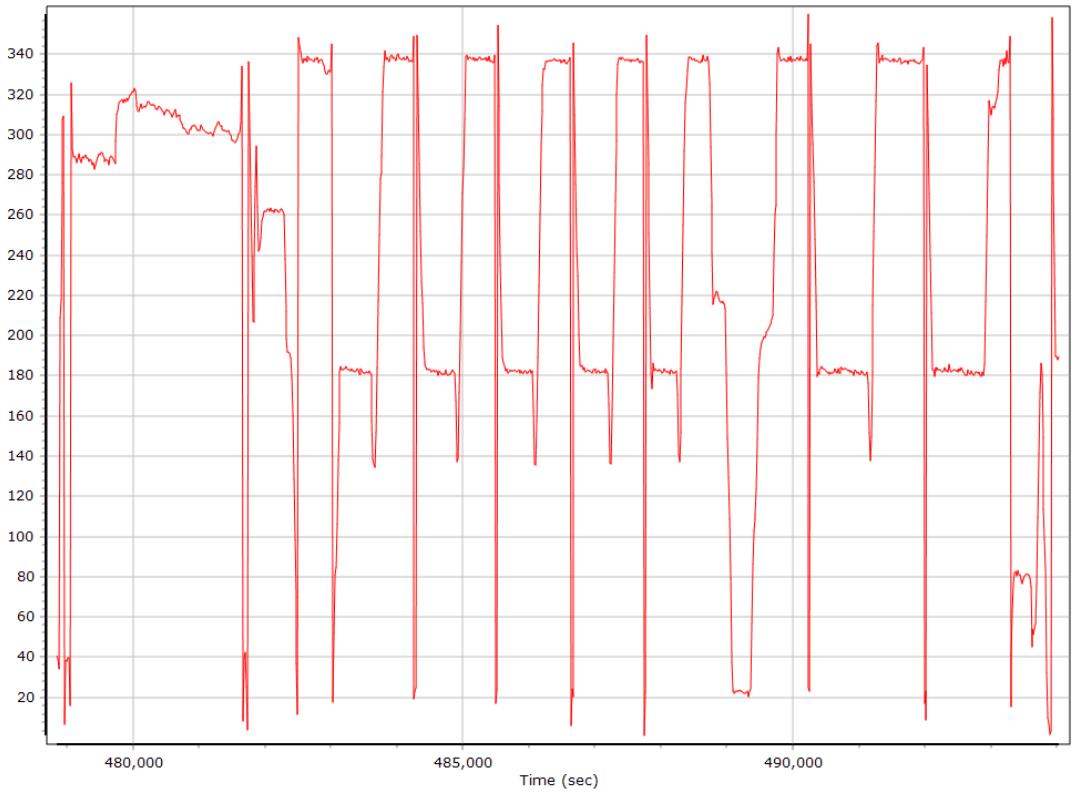
Altitude



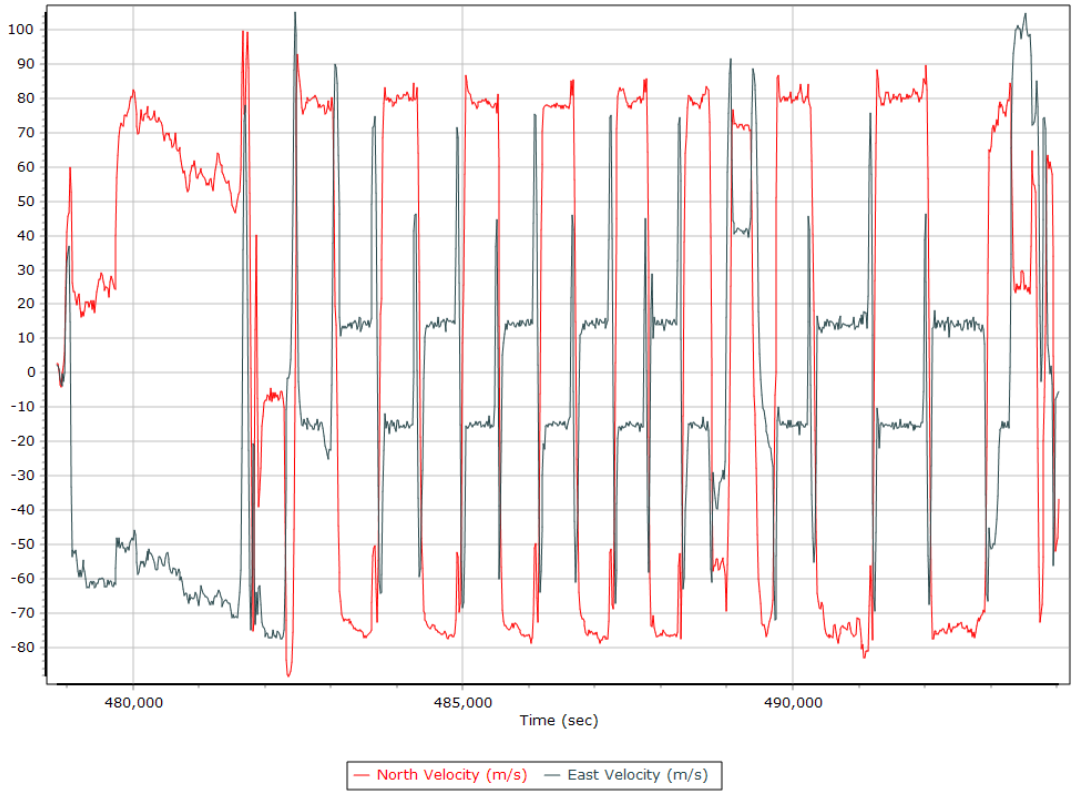
Roll/Pitch



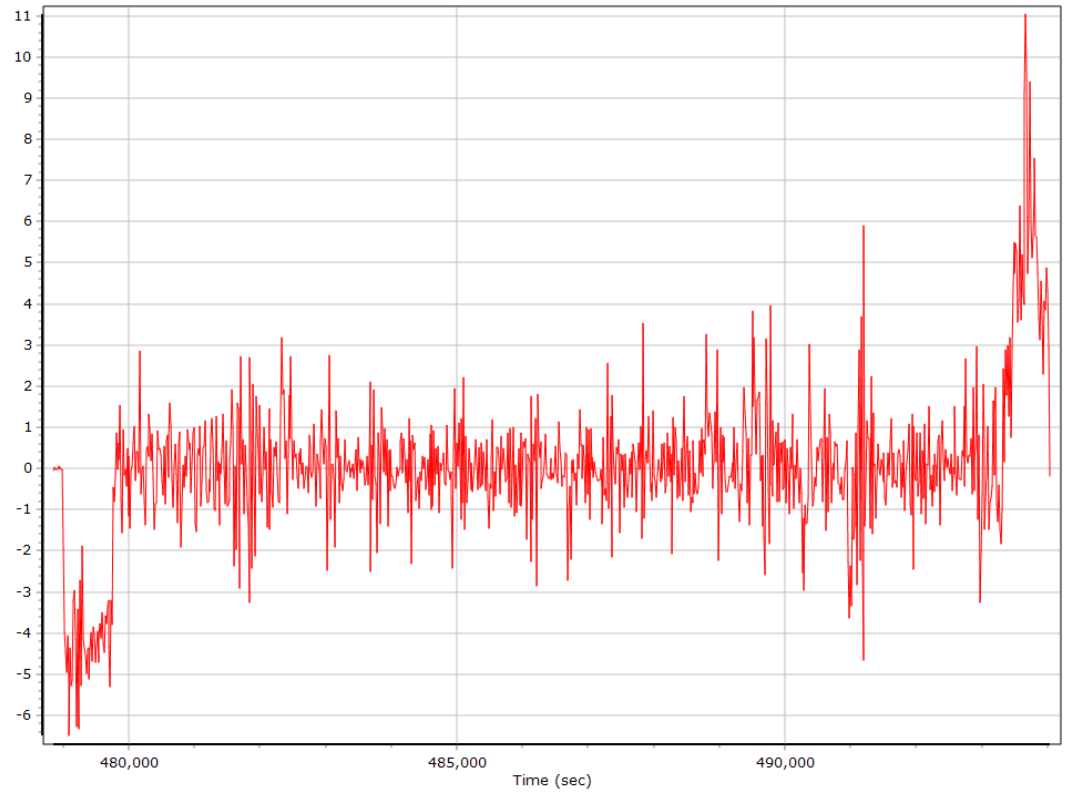
Heading



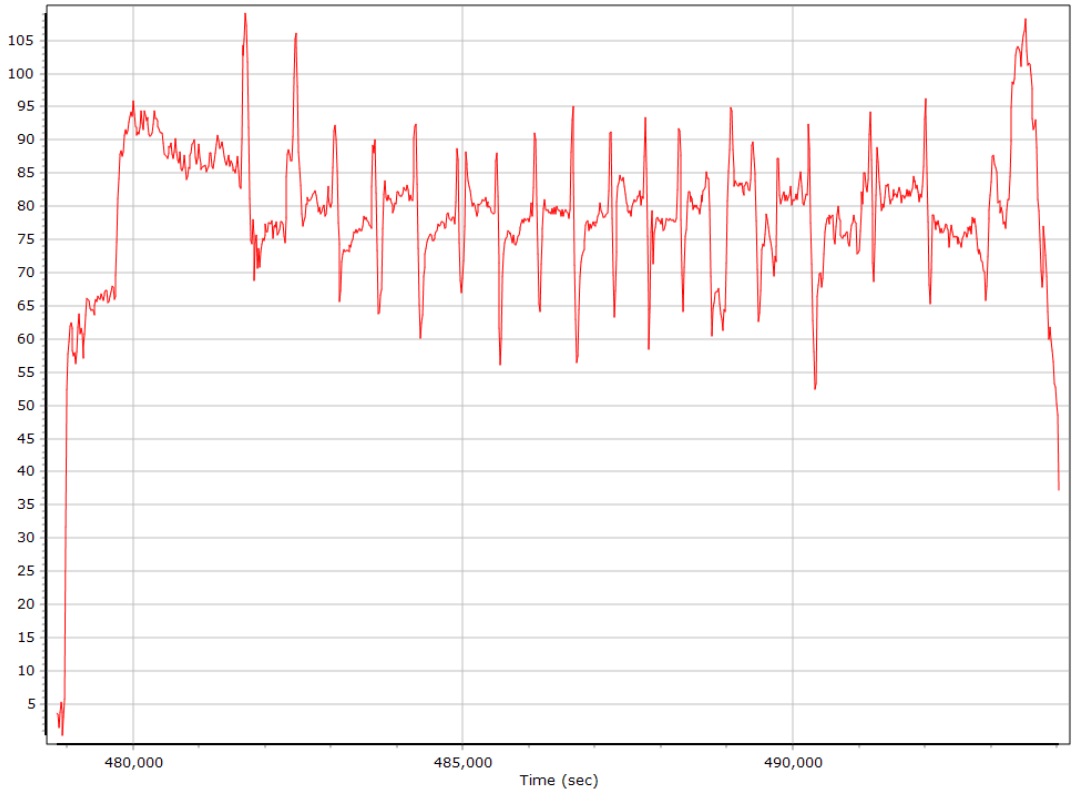
North/East Velocity



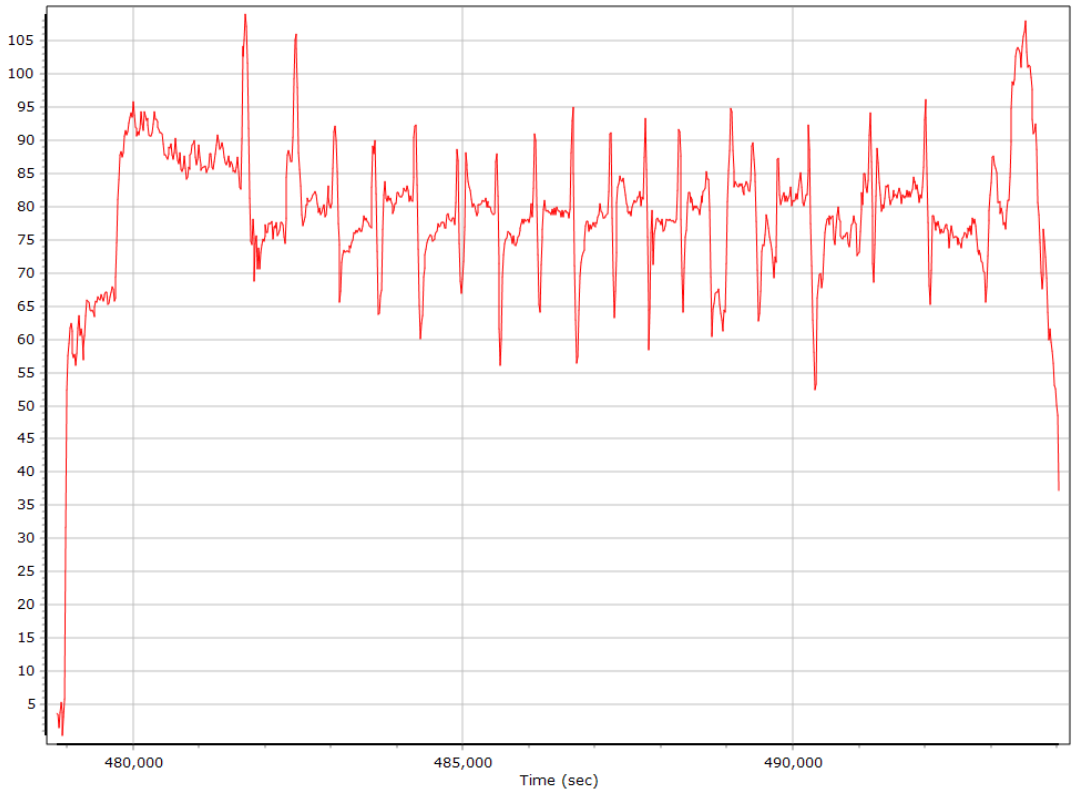
Down Velocity



Total Speed

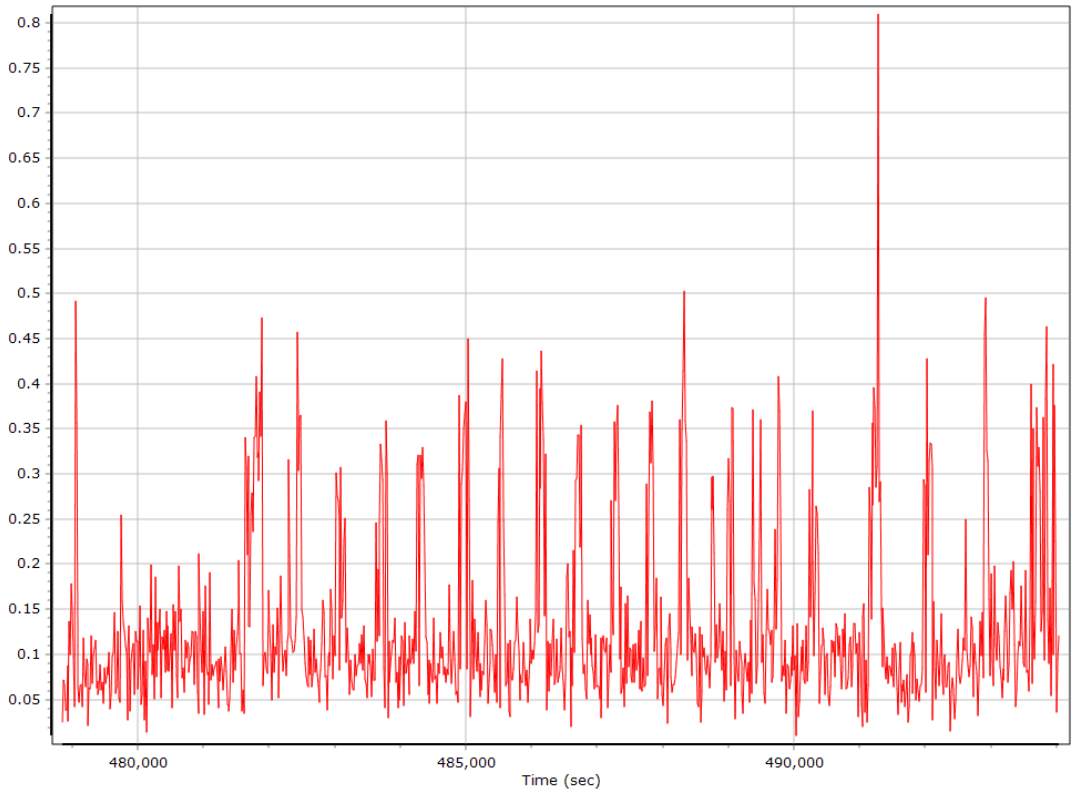


Ground Speed

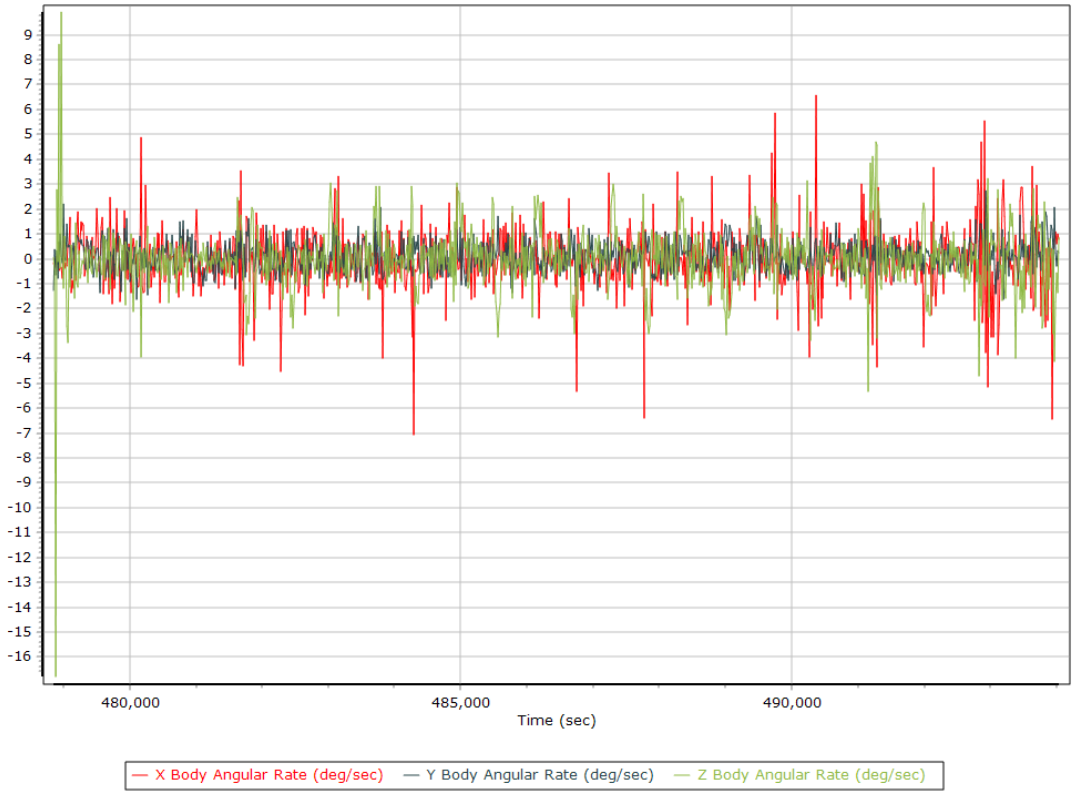


Body Acceleration

Total Body Acceleration



Body Angular Rate

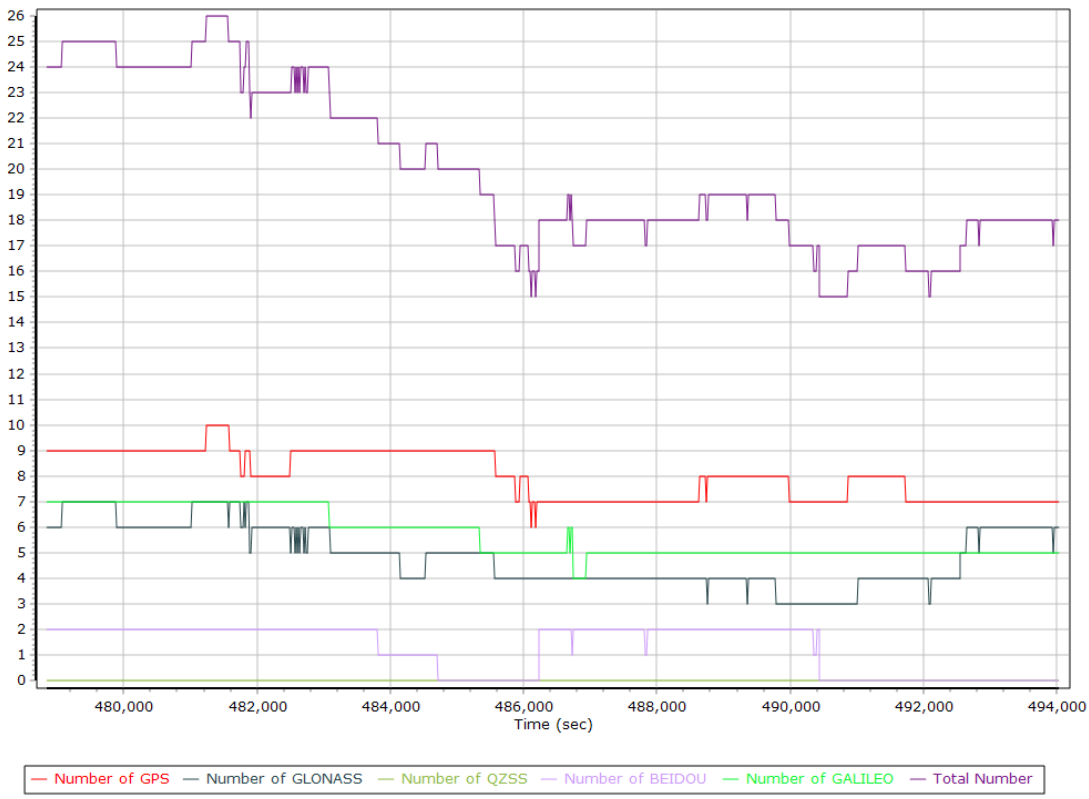


GNSS QC

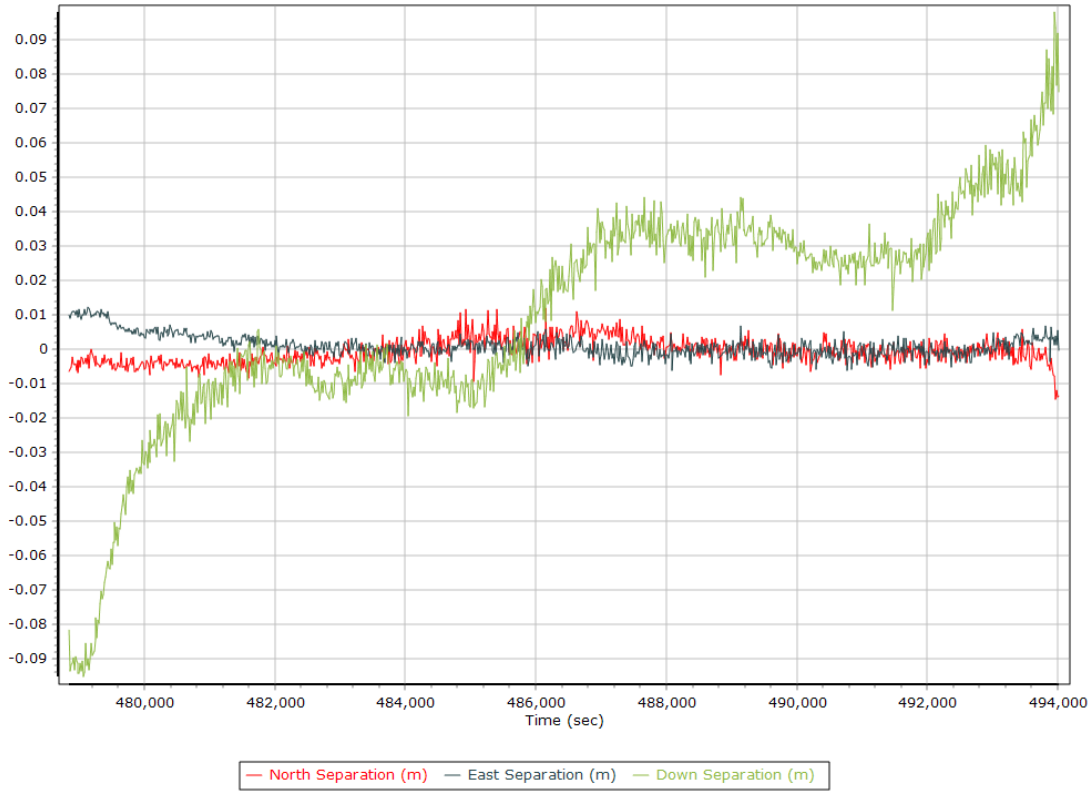
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	6	10	8
Number of GLONASS SV	0	7	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	2	1
Number of GALILEO SV	3	7	6
Total number of SV	9	26	20
PDOP	0.96	4.86	1.24
QC Solution Gaps	0.00	0.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	15402.00	0.00	0.00
Percentage	100.00	0.00	0.00

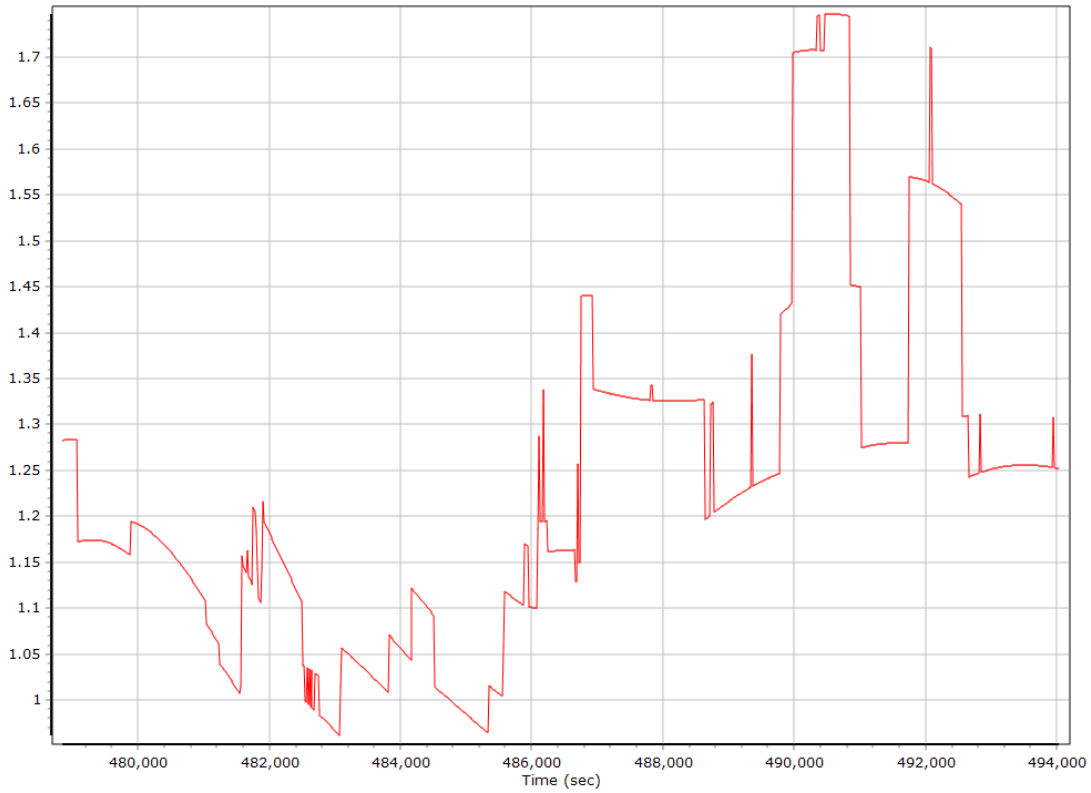
Num SVs in solution



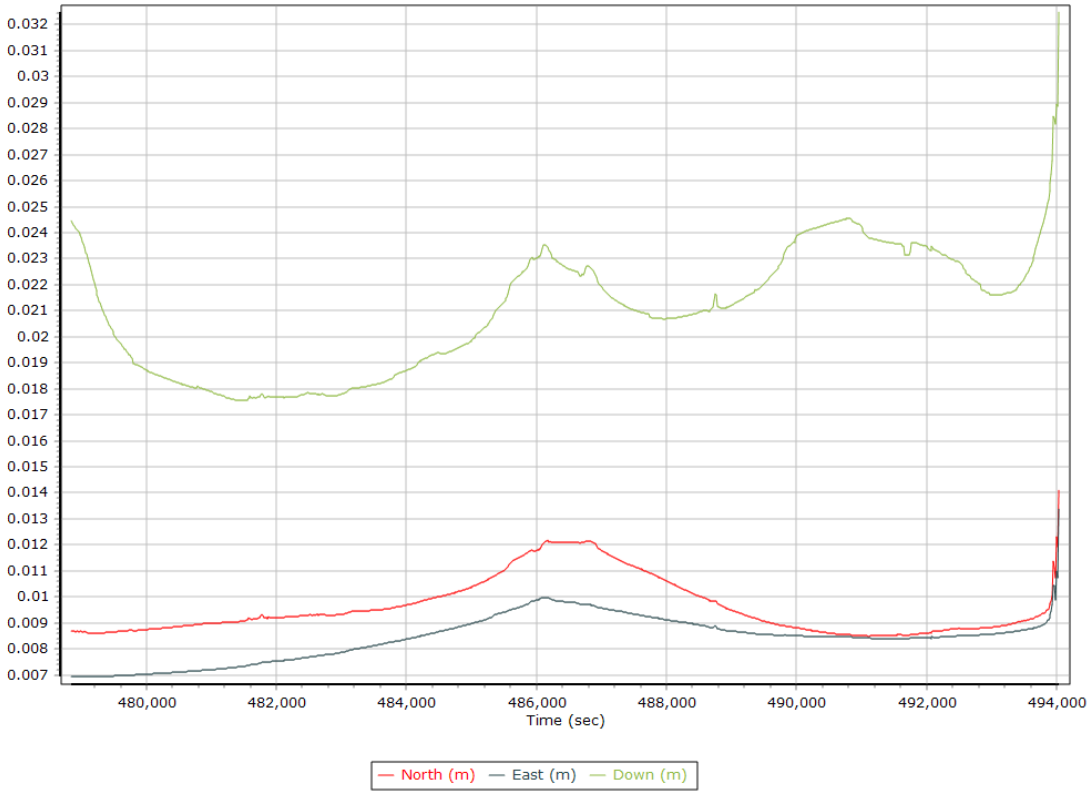
Forward/Reverse Separation



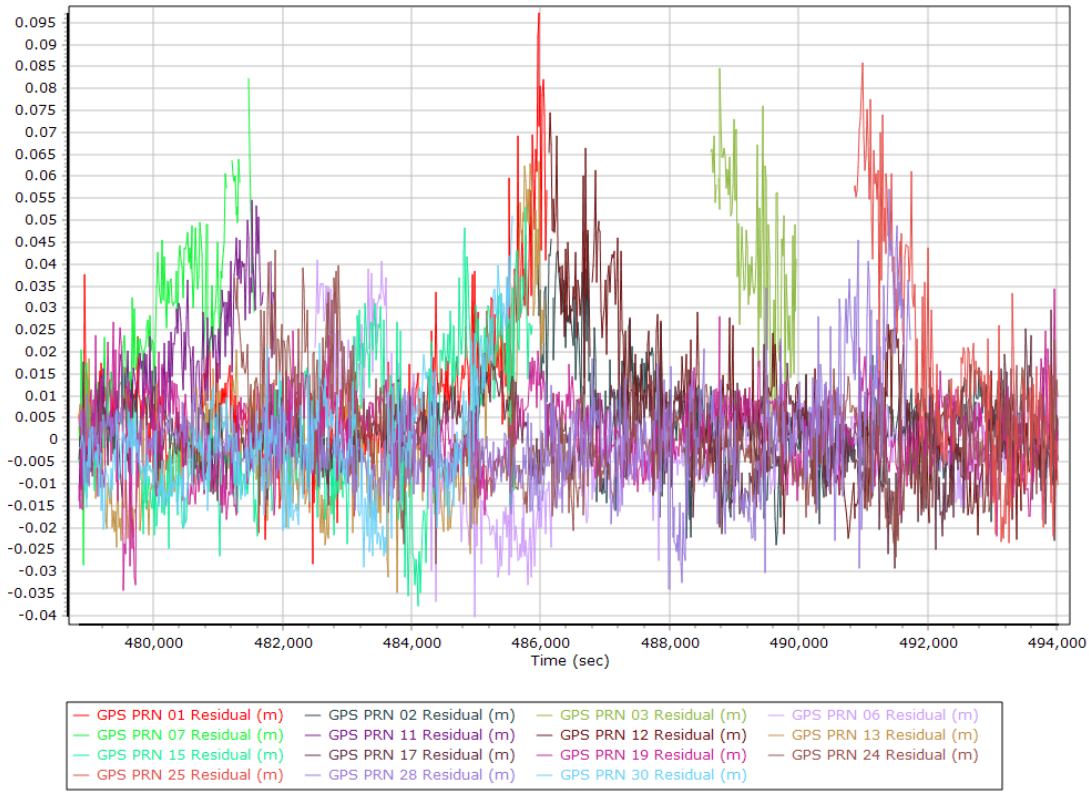
PDOP



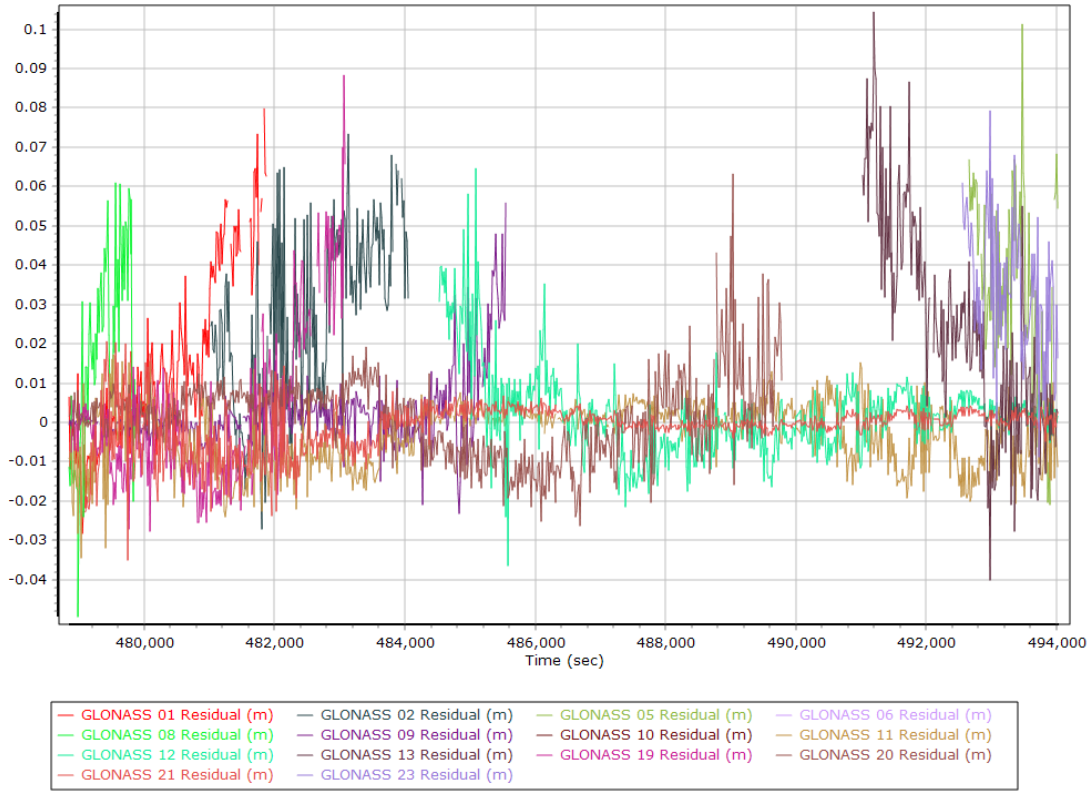
Estimated Position Accuracy



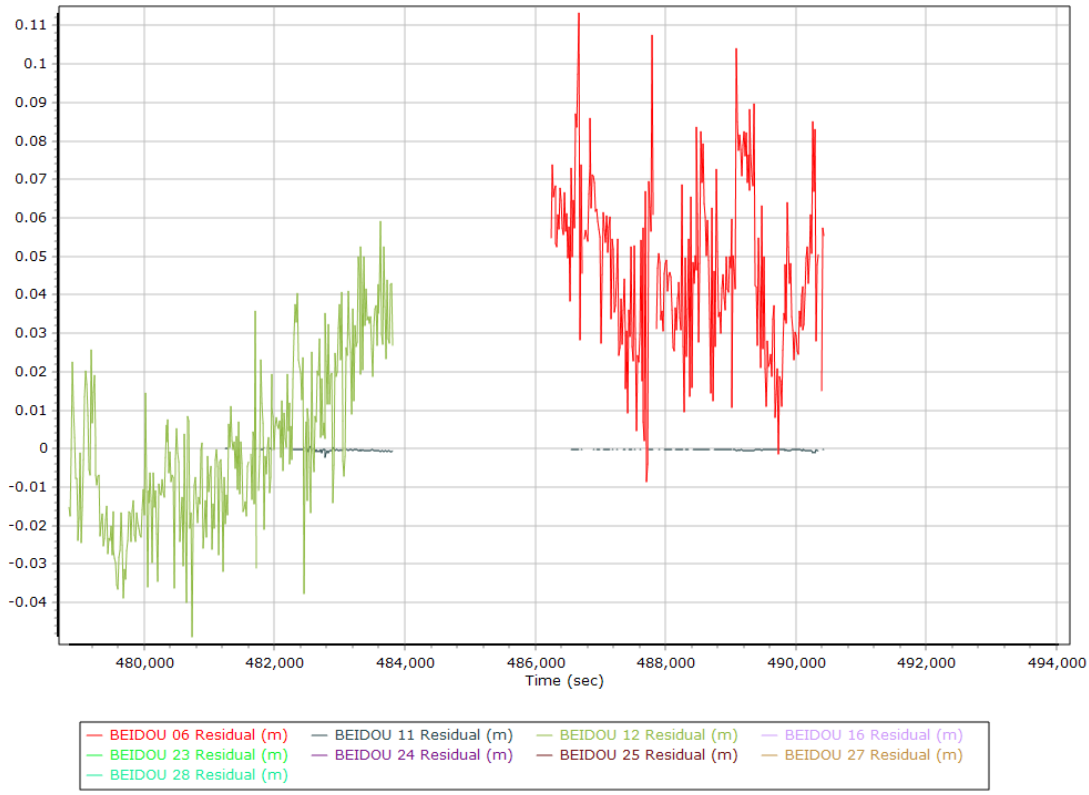
GPS Residuals



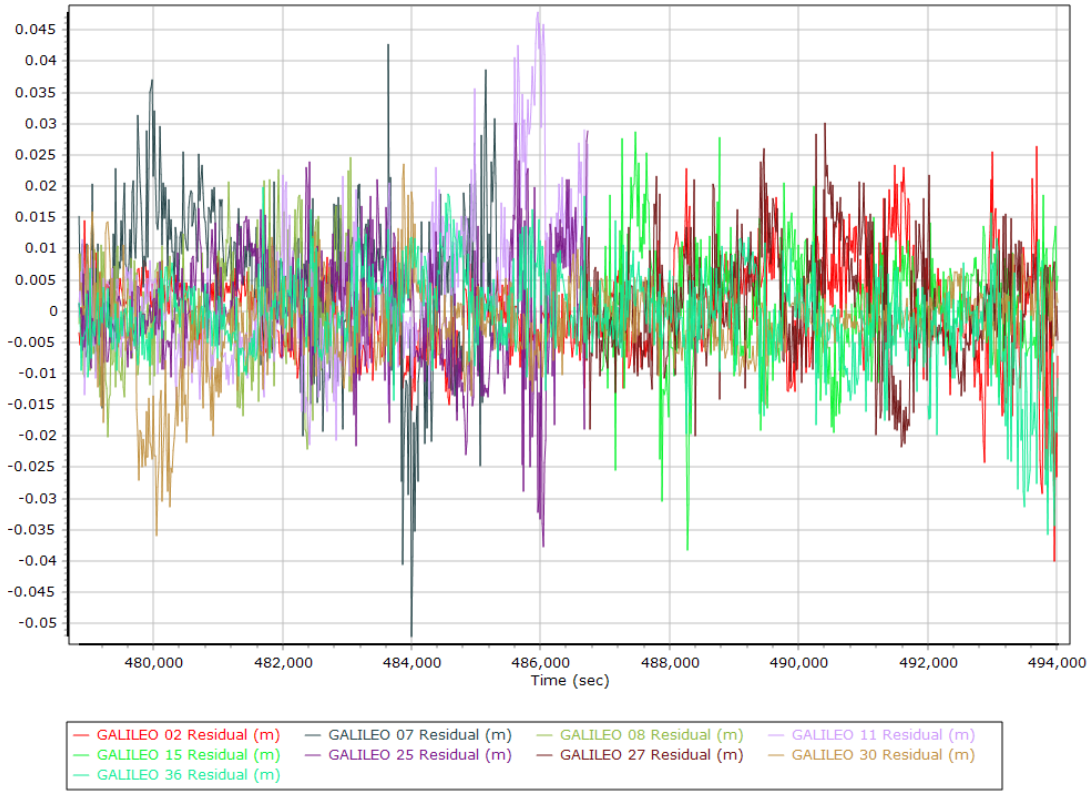
GLONASS Residuals



BEIDOU Residuals



GALILEO Residuals



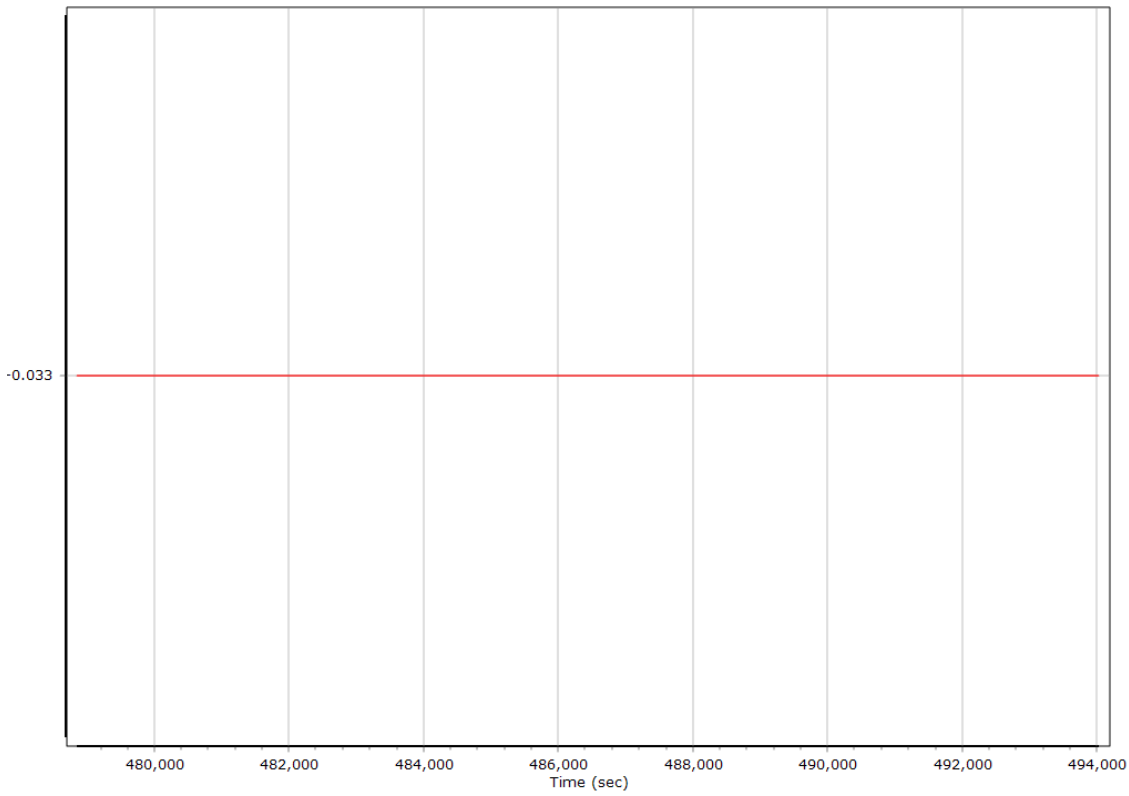
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	478616.000 (07/17/2020 12:56:56)		
Processing end time	494044.000 (07/17/2020 17:14:04)		
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)	-0.033	-0.216	-0.908
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

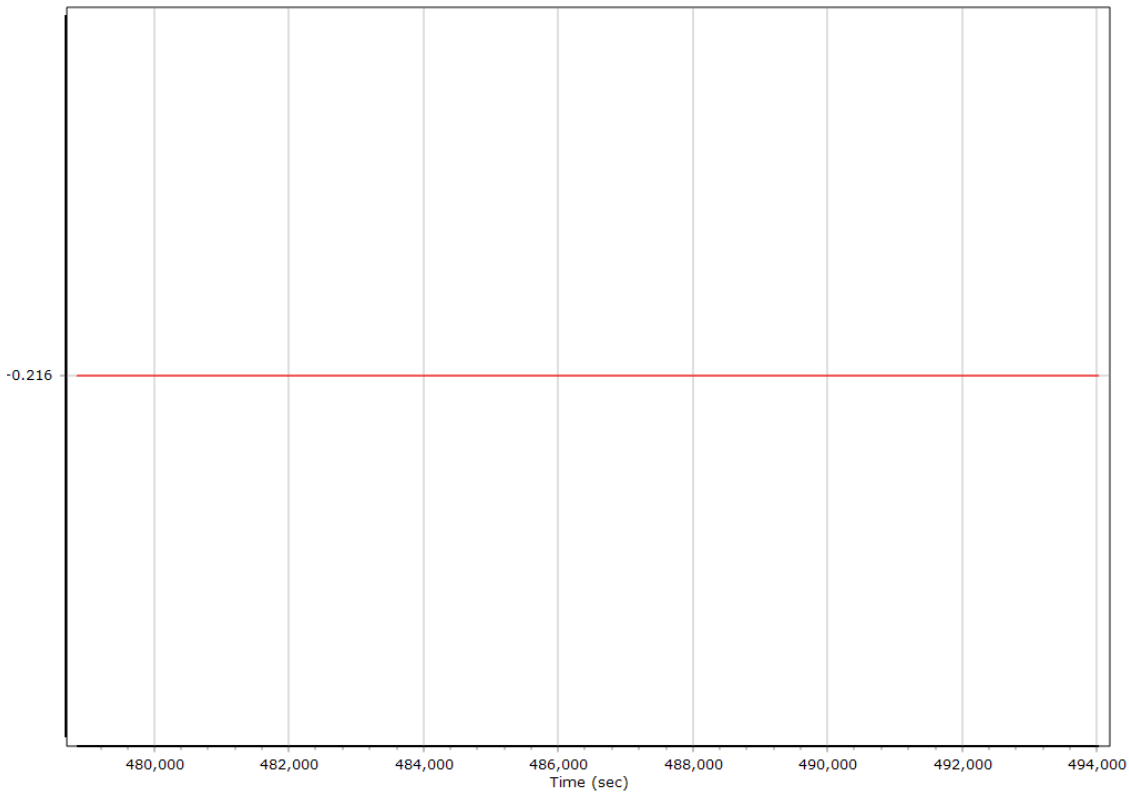
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

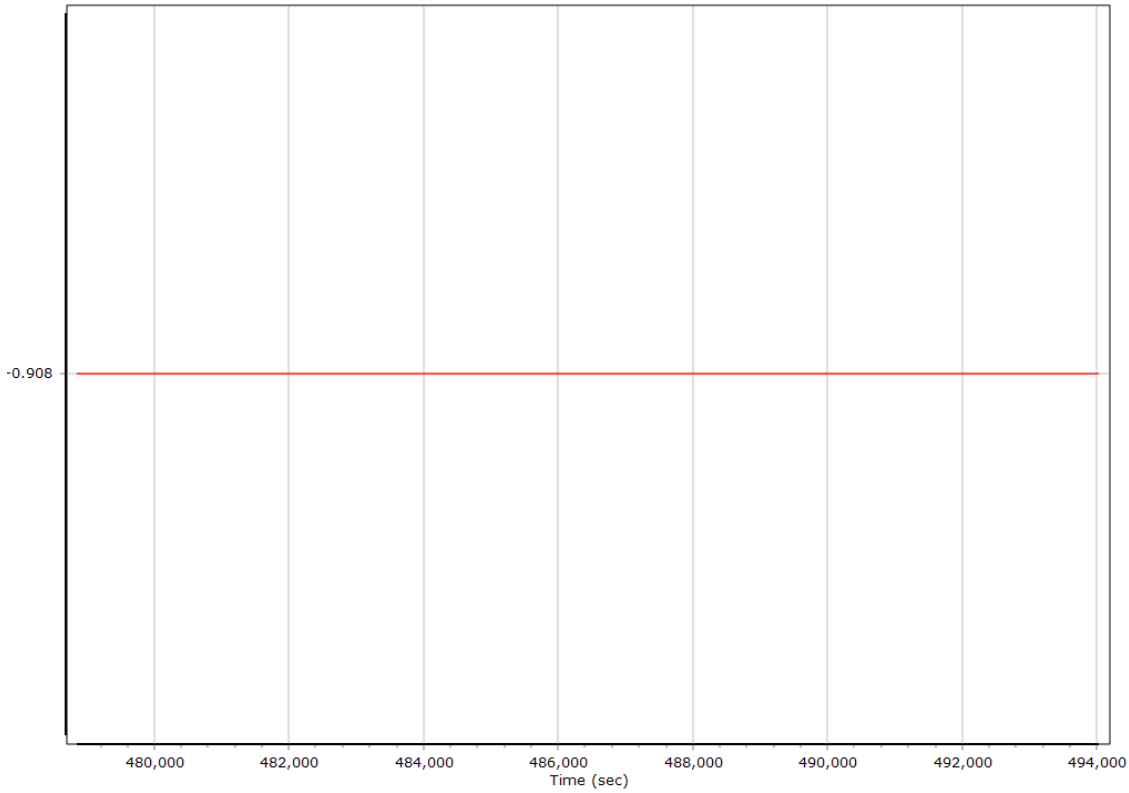
X Reference-Primary GNSS Lever Arm (m)



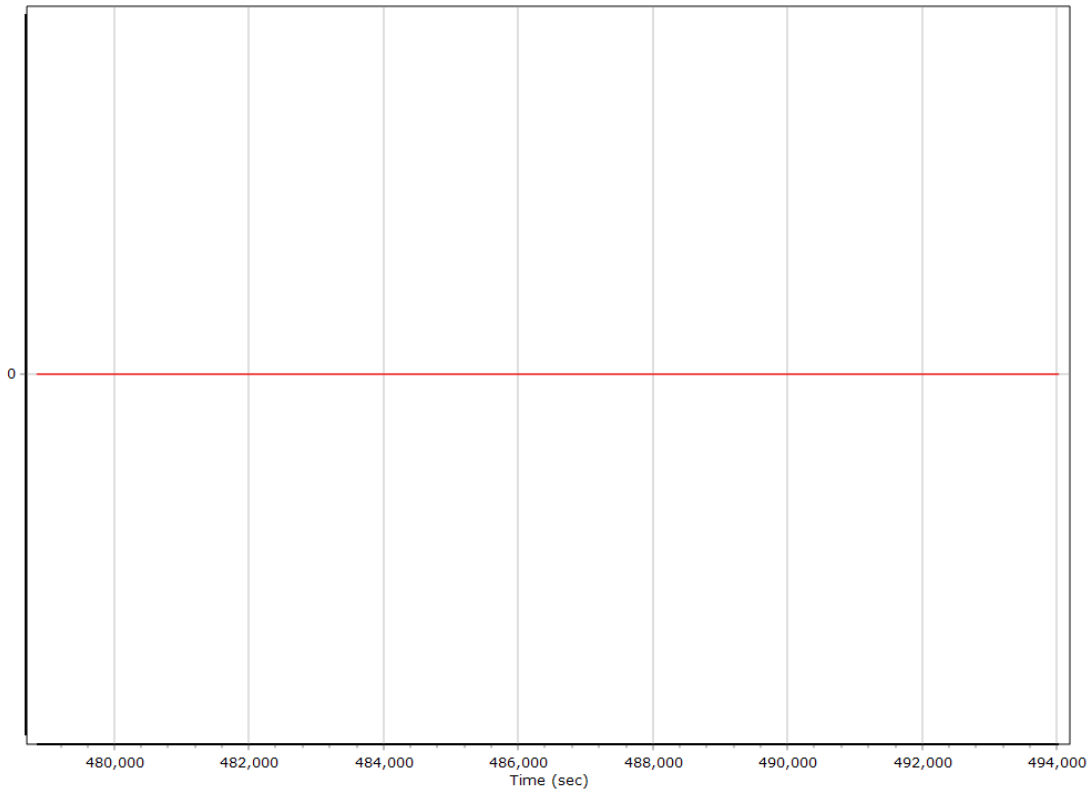
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



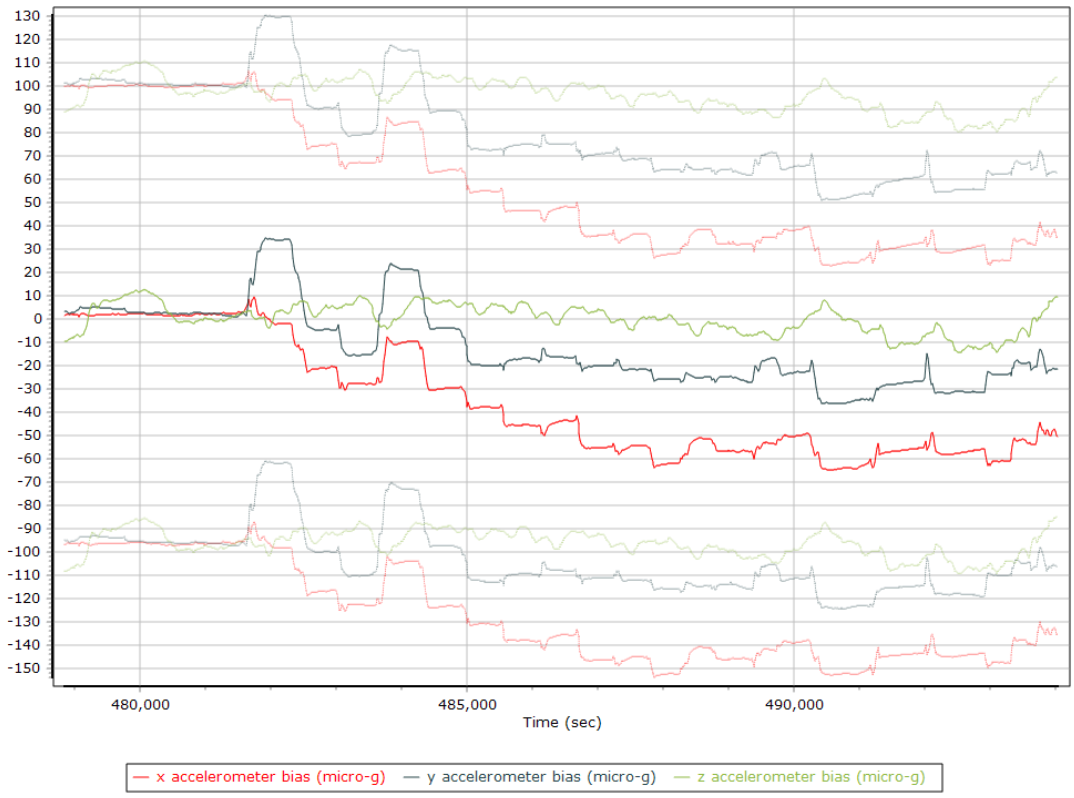
Reference-Primary GNSS Lever Arm Figure of Merit



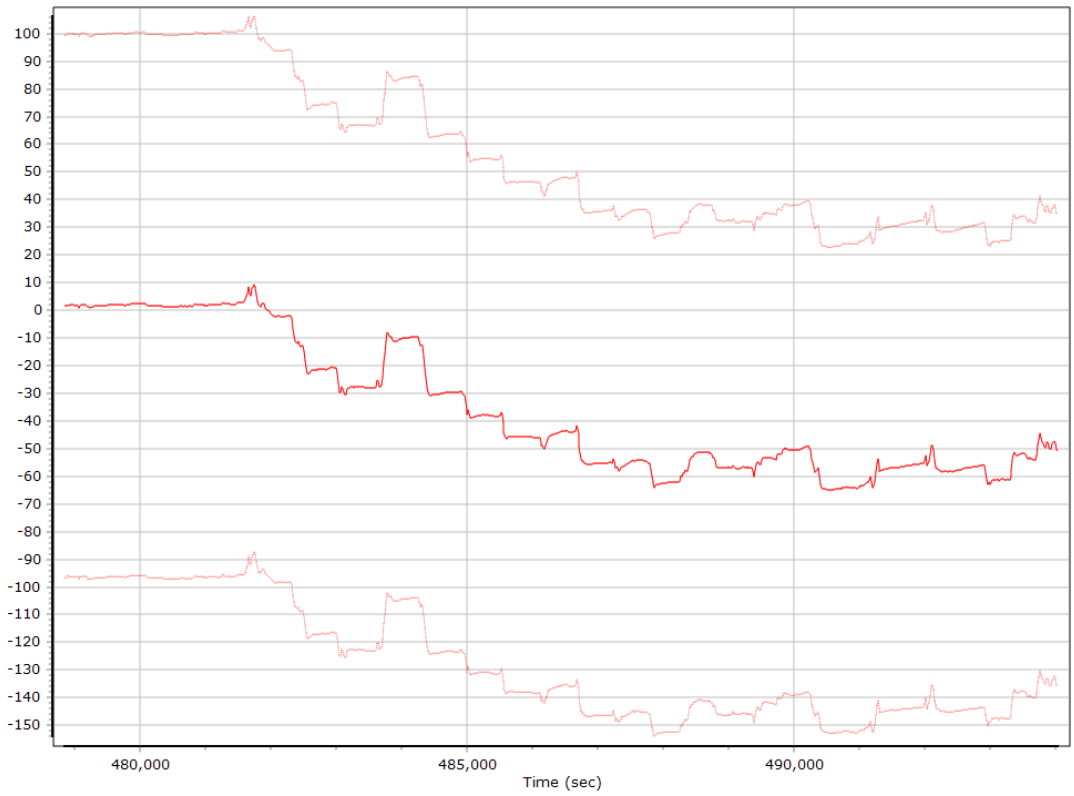
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

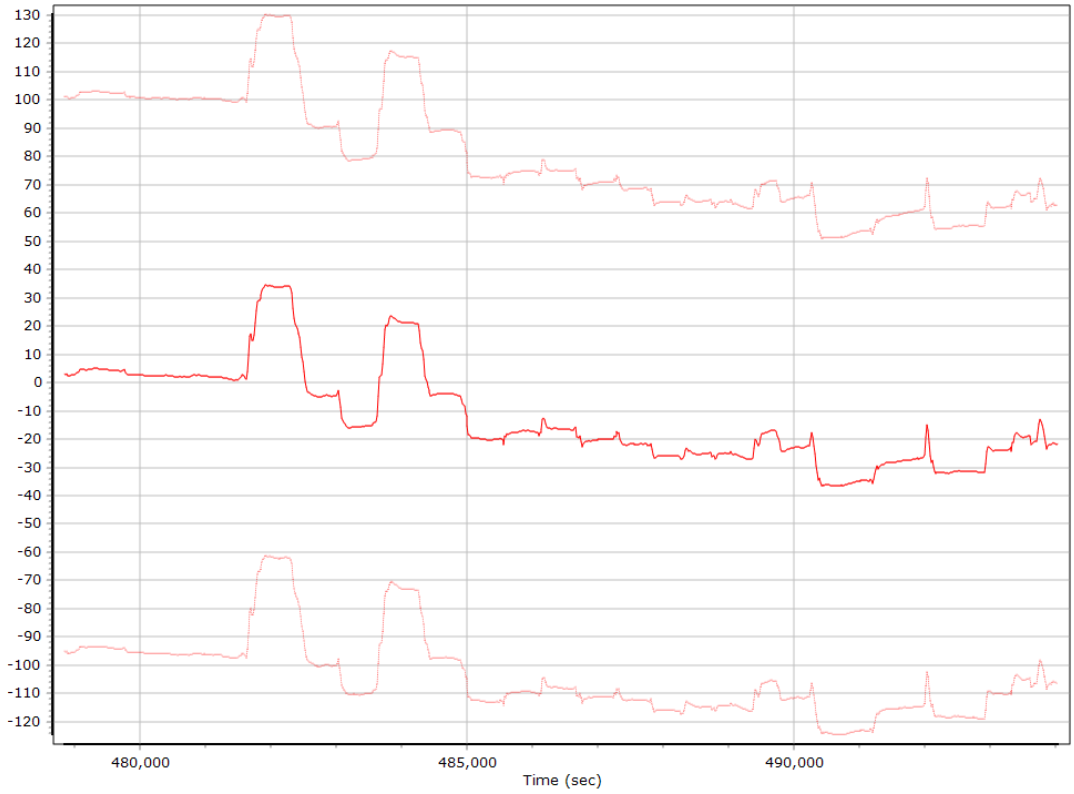
Accelerometer Bias (micro-g)



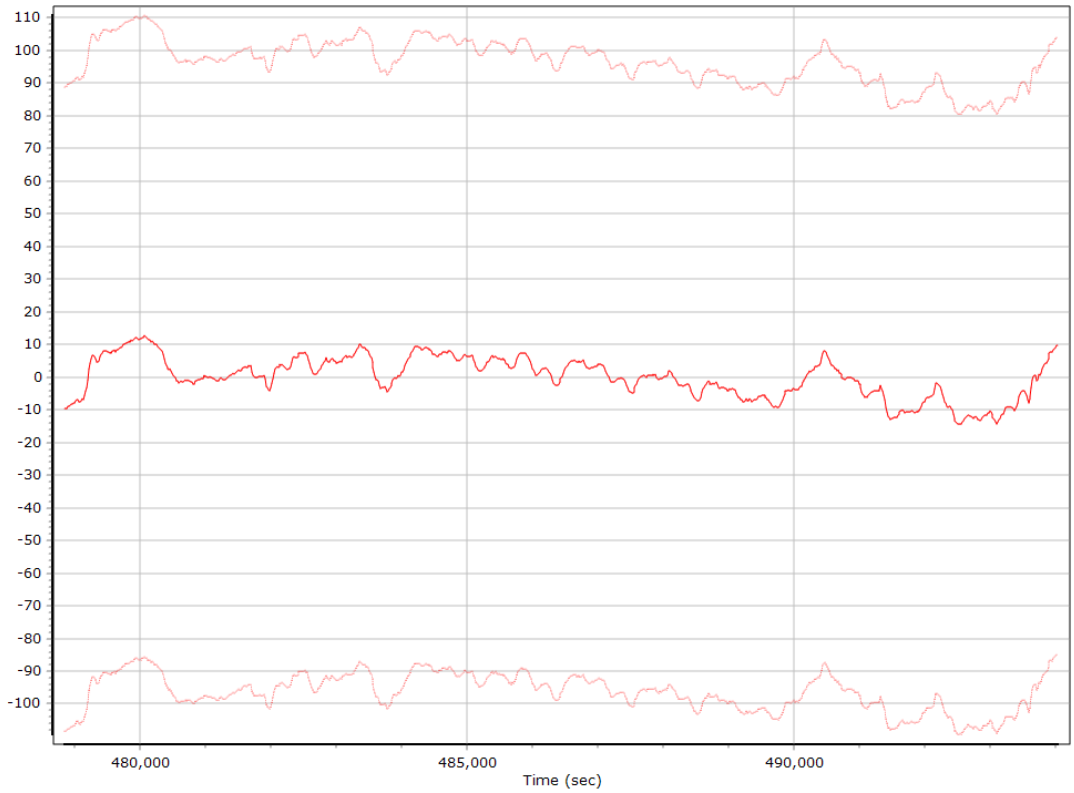
X Accelerometer Bias (micro-g)



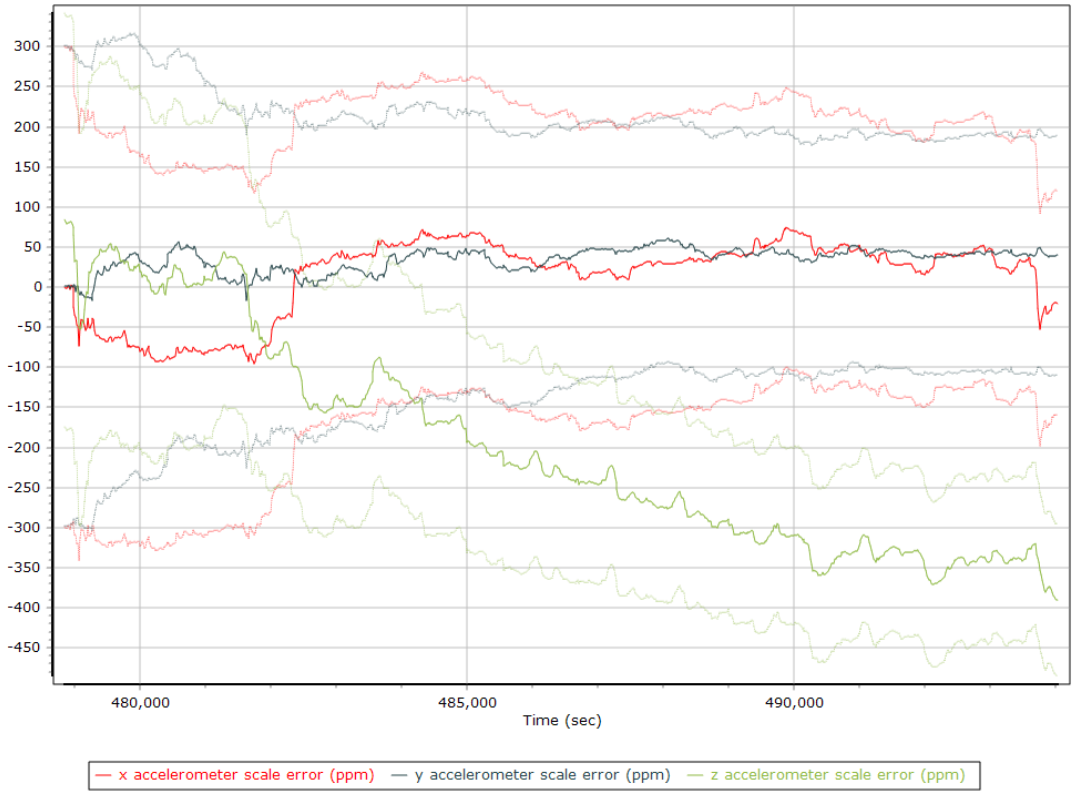
Y Accelerometer Bias (micro-g)



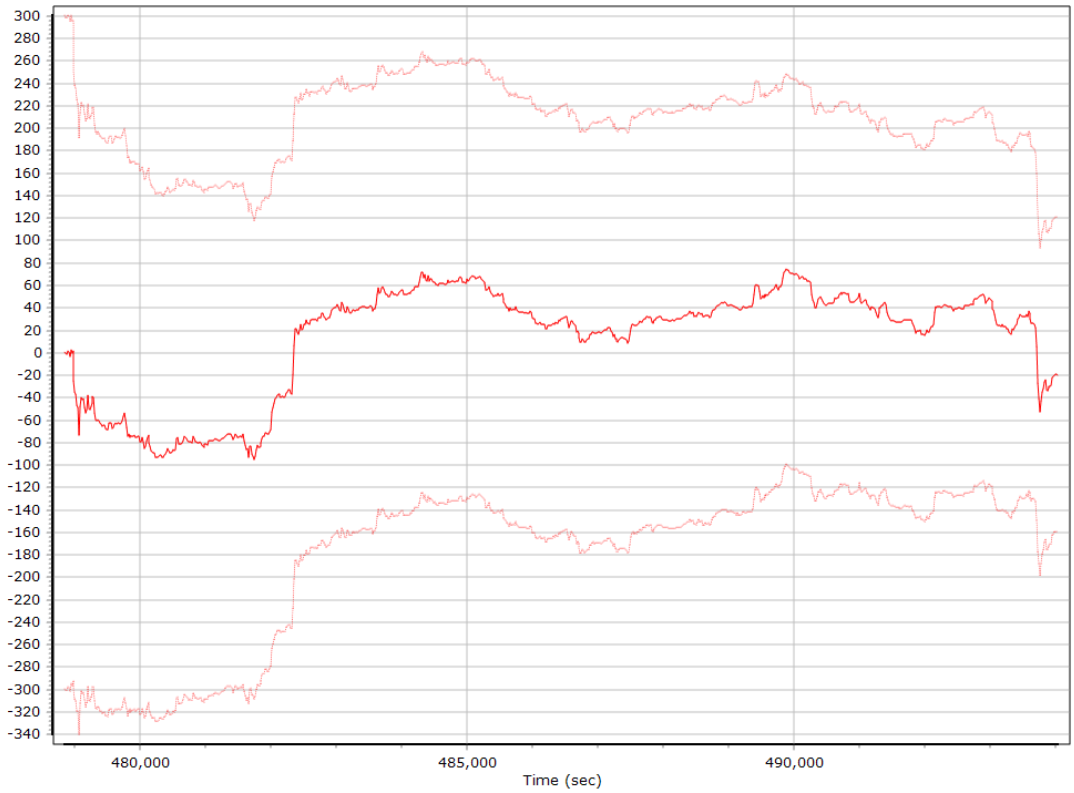
Z Accelerometer Bias (micro-g)



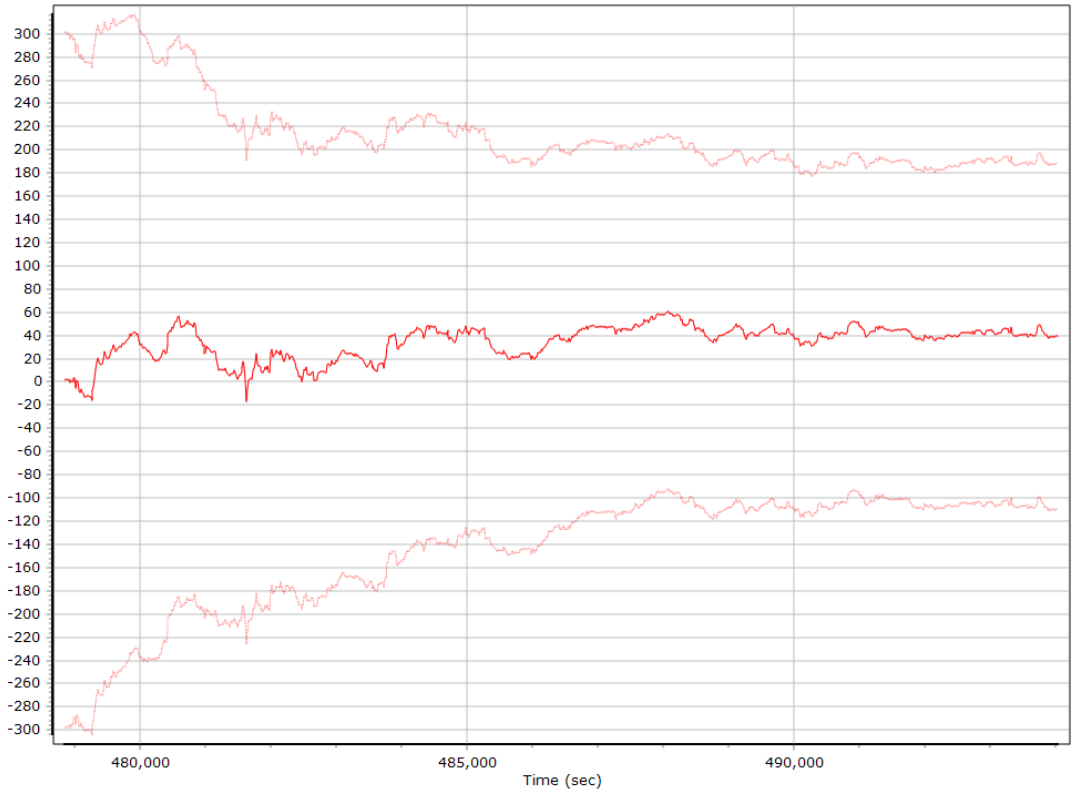
Accelerometer Scale Error (ppm)



X Accelerometer Scale Error (ppm)

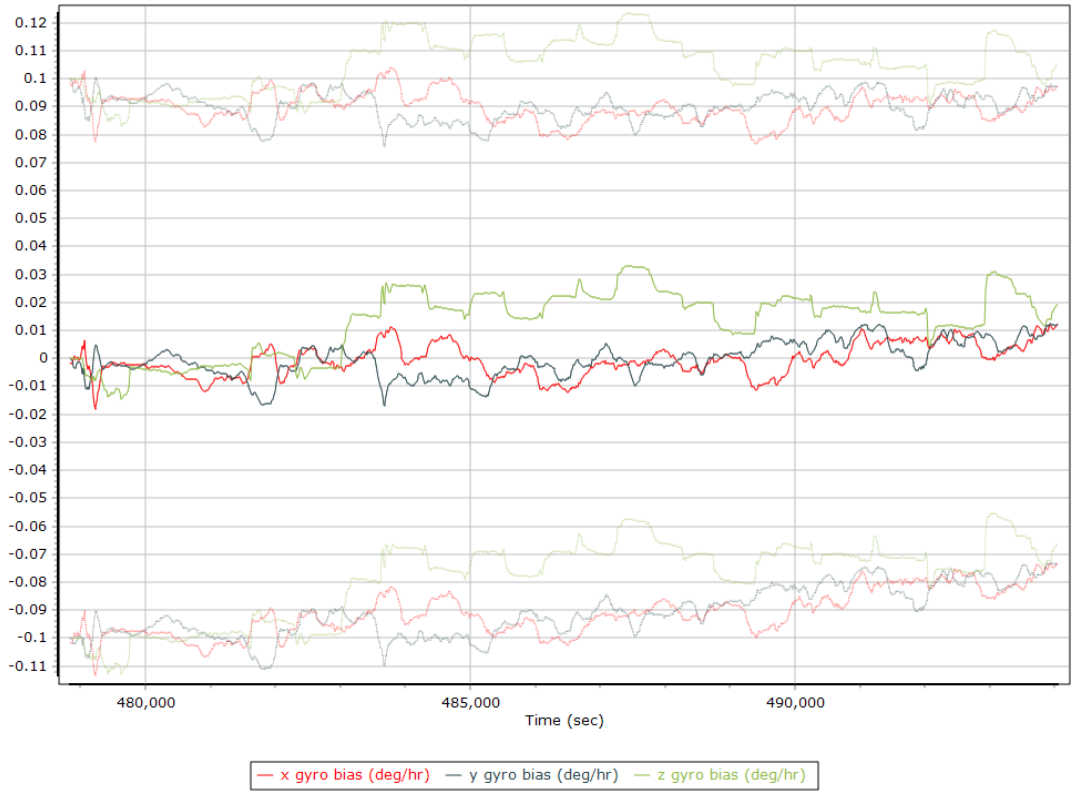


Y Accelerometer Scale Error (ppm)

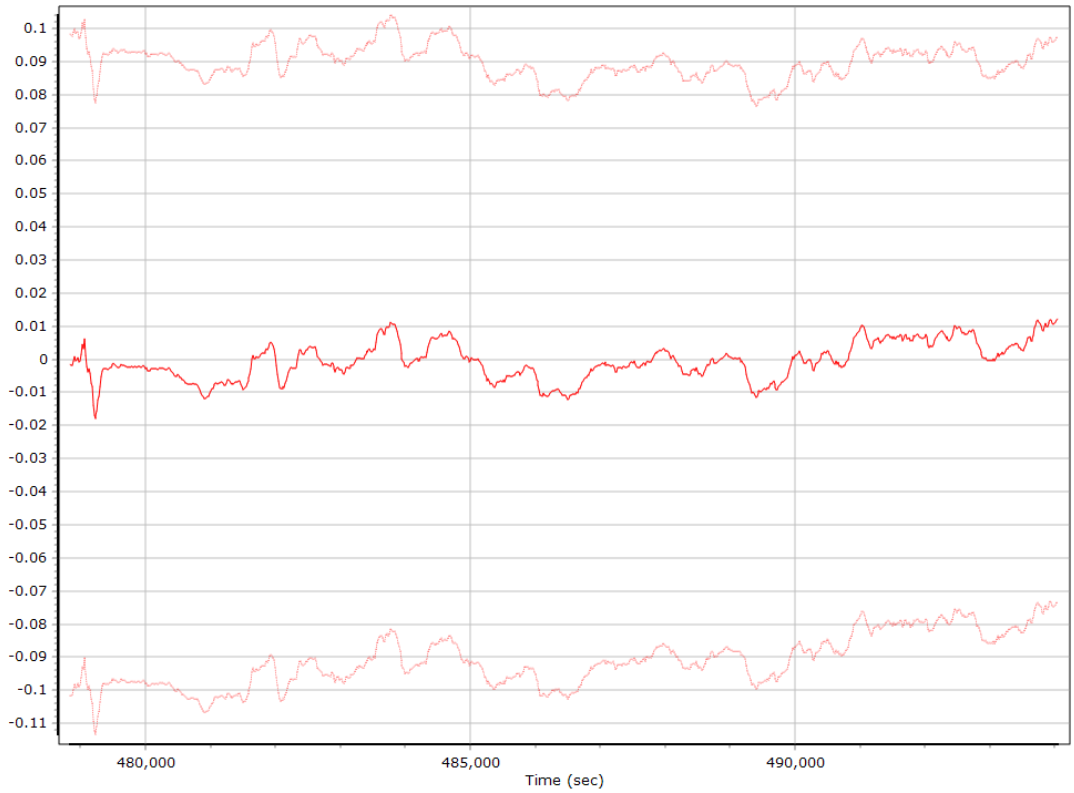


Z Accelerometer Scale Error (ppm)

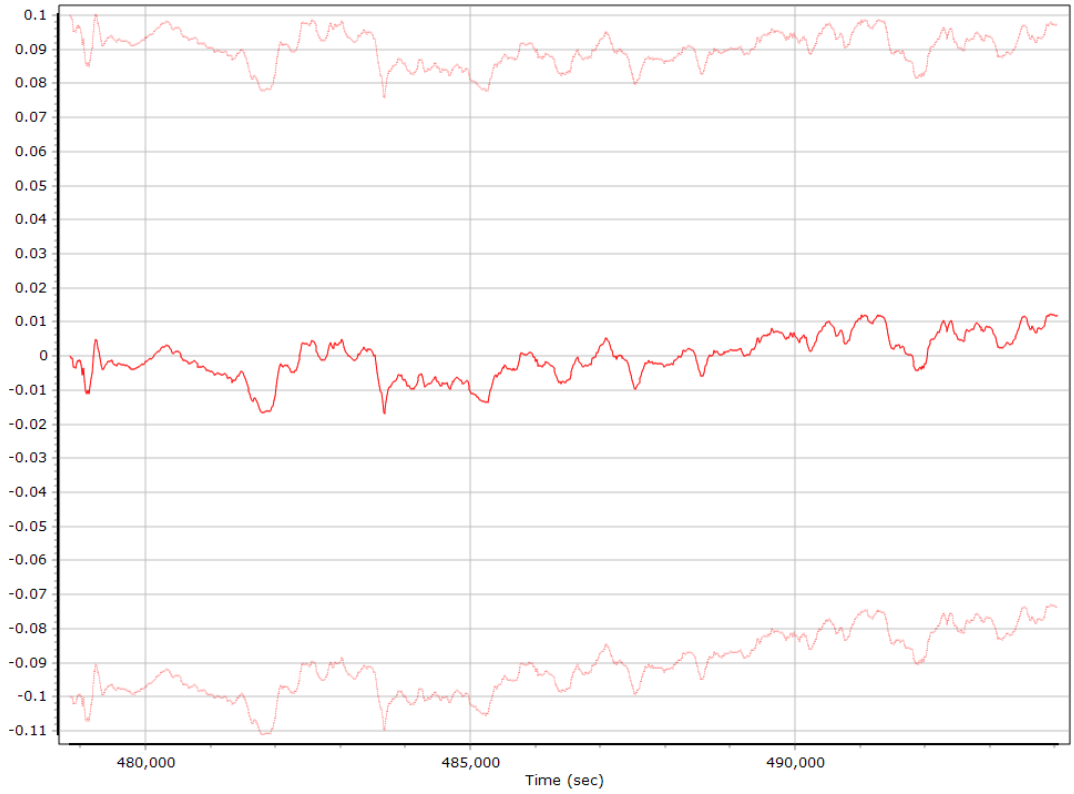
Gyro Bias (deg/h)



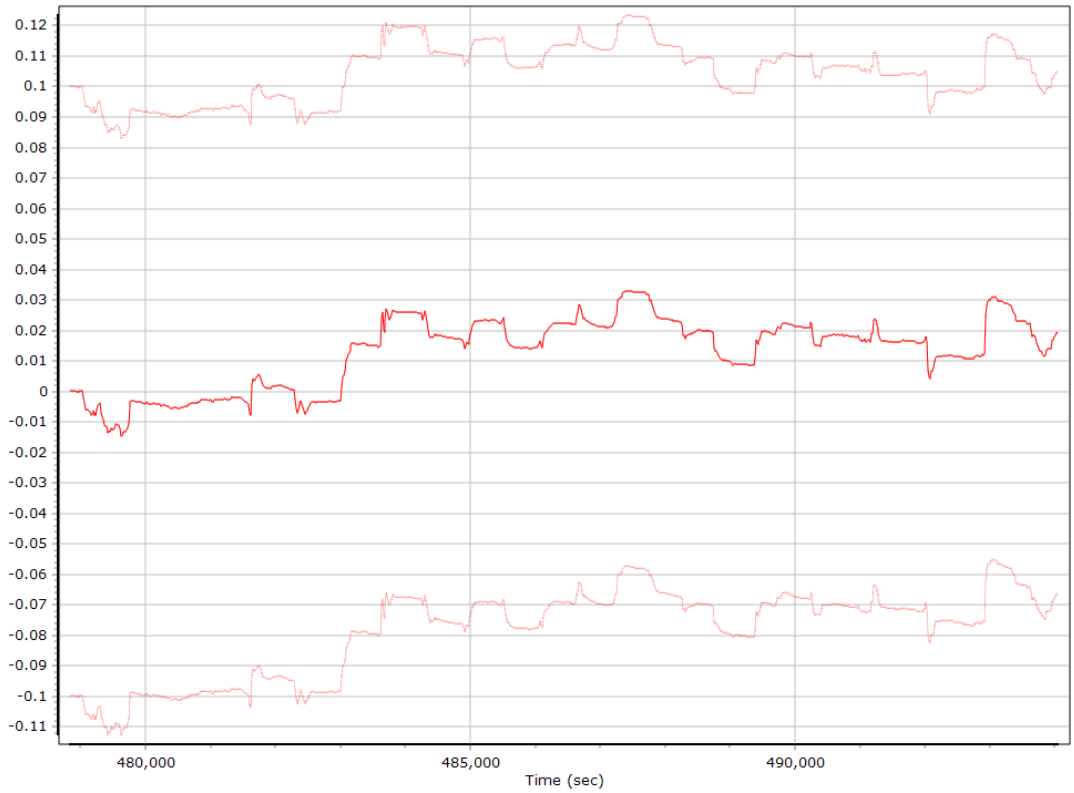
X Gyro Bias (deg/h)



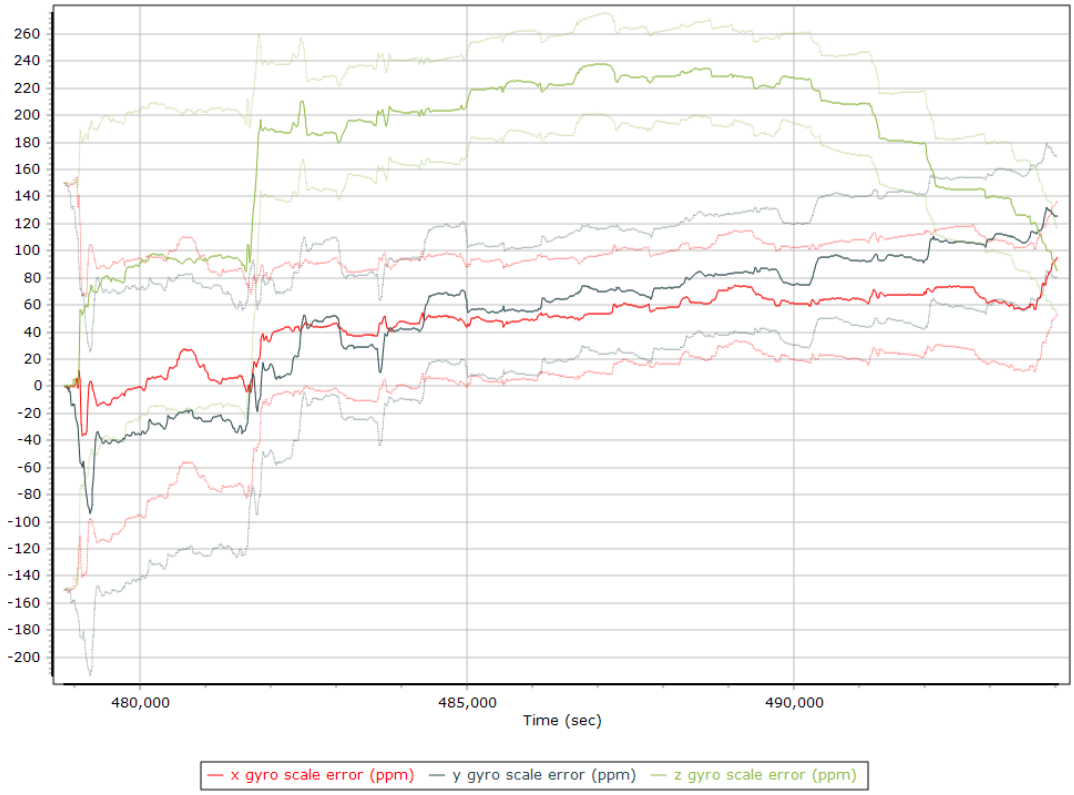
Y Gyro Bias (deg/h)



Z Gyro Bias (deg/h)



Gyro Scale Error (ppm)



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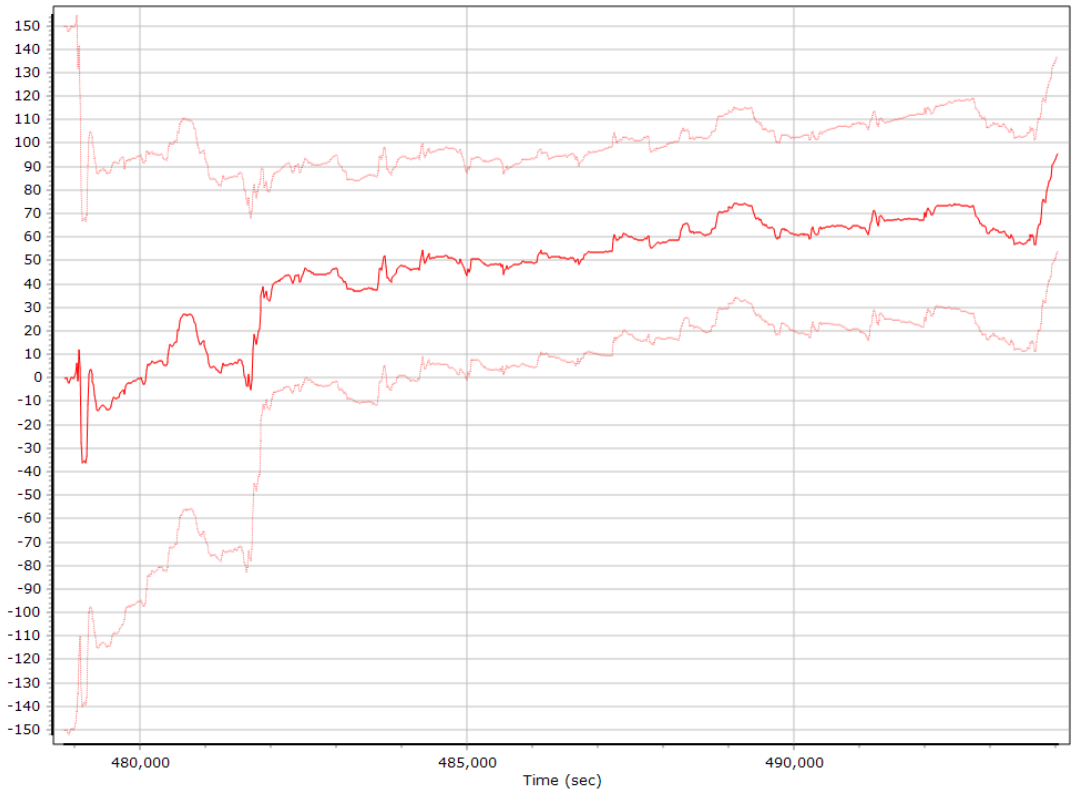
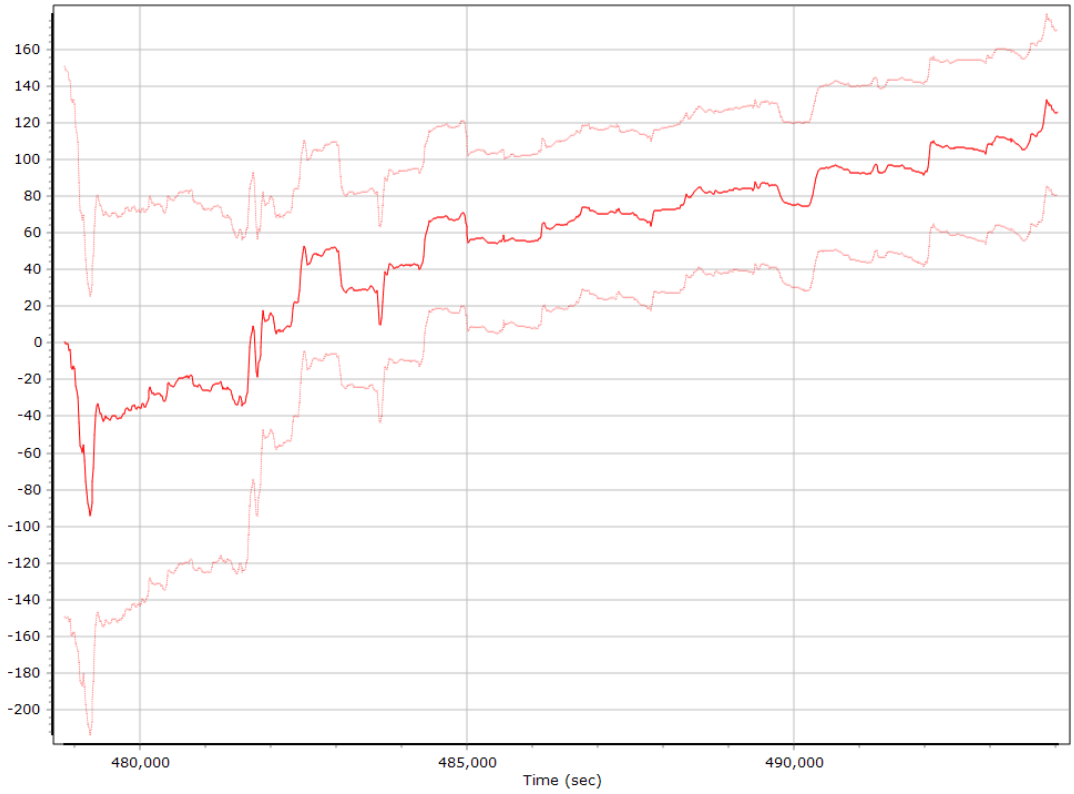
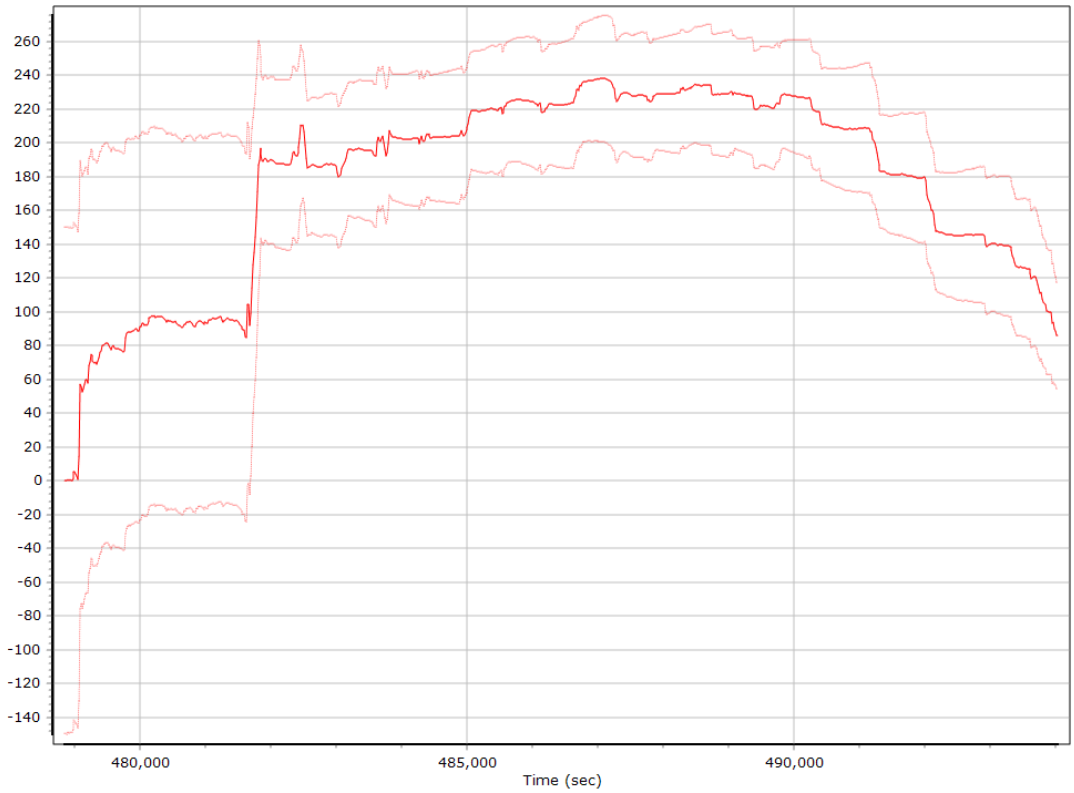


Y Gyro Scale Error (ppm)

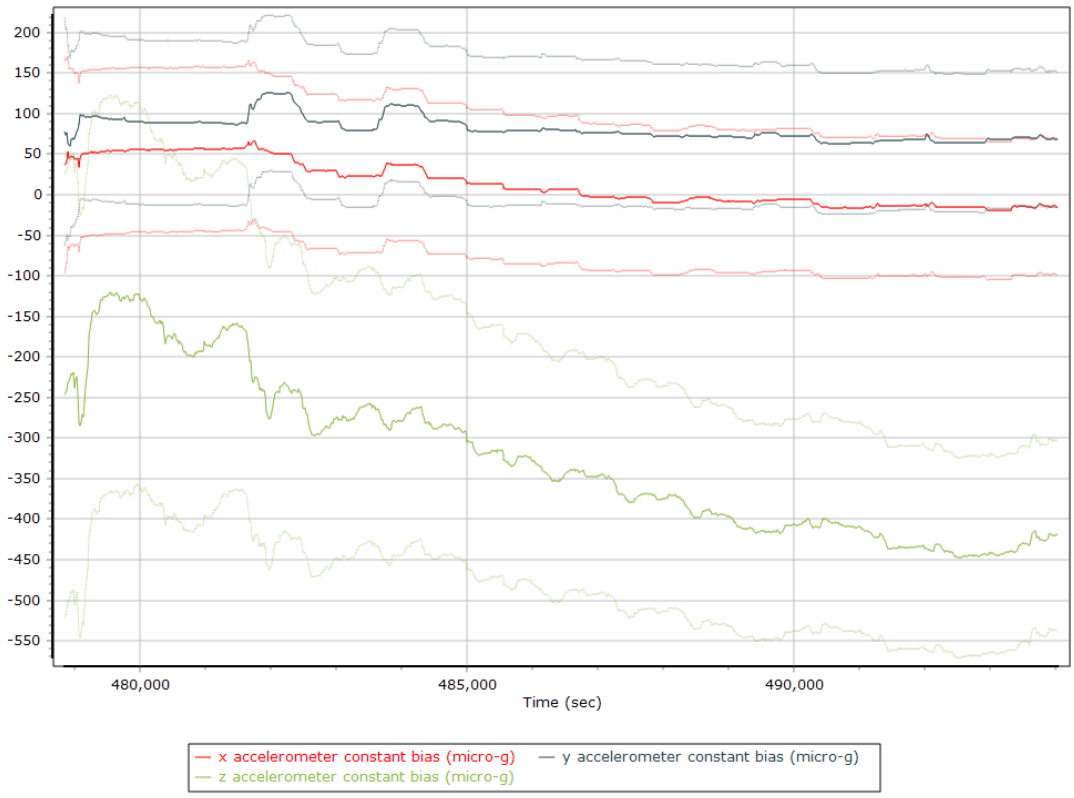


Z Gyro Scale Error (ppm)

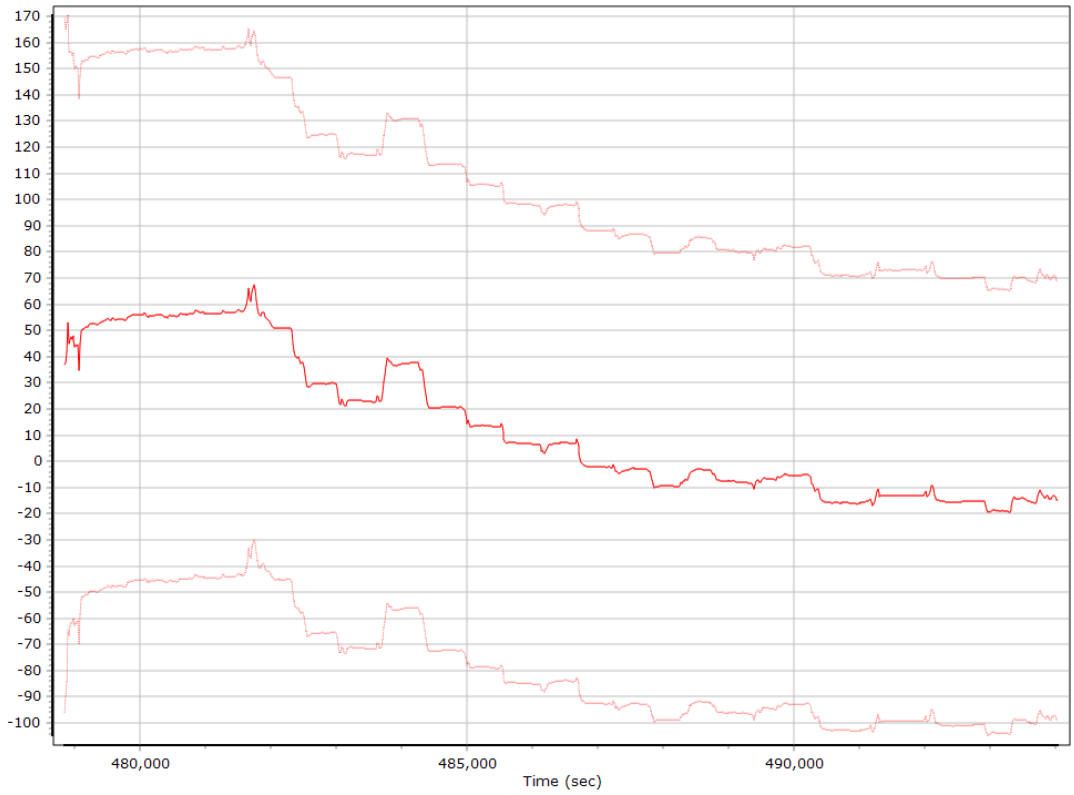


Forward Processed Estimated Constant Errors, Reference Frame

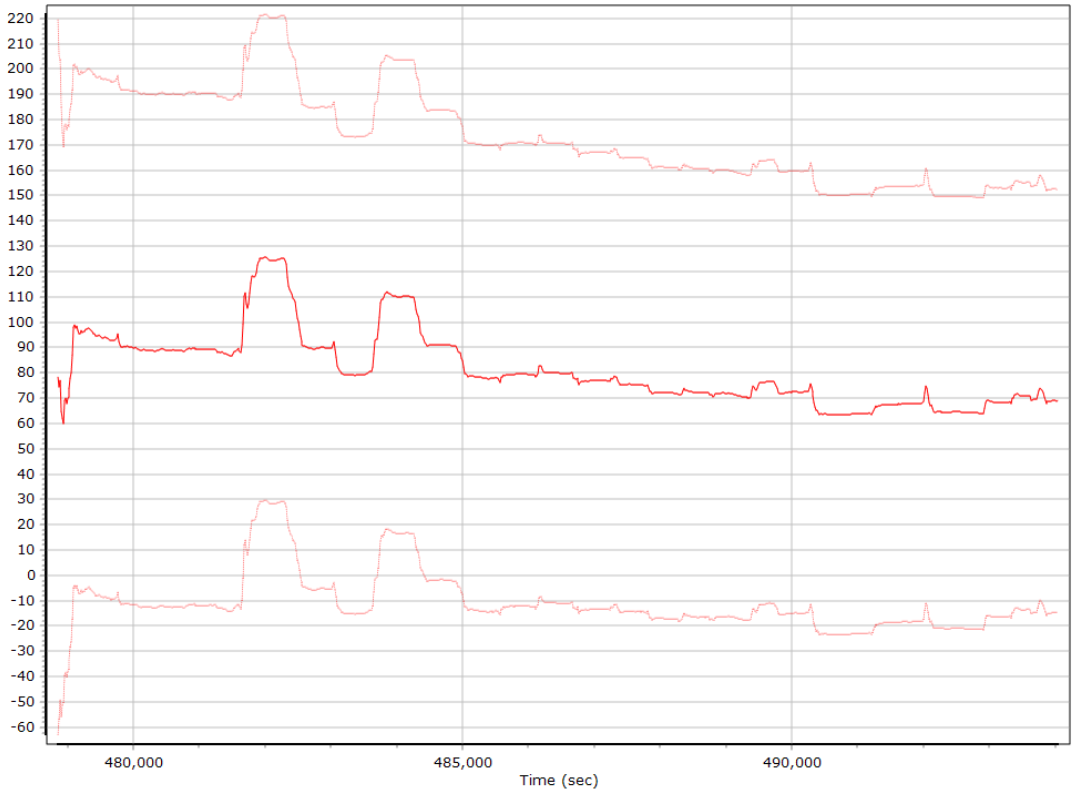
Accelerometer Bias (micro-g)



X Accelerometer Bias (micro-g)

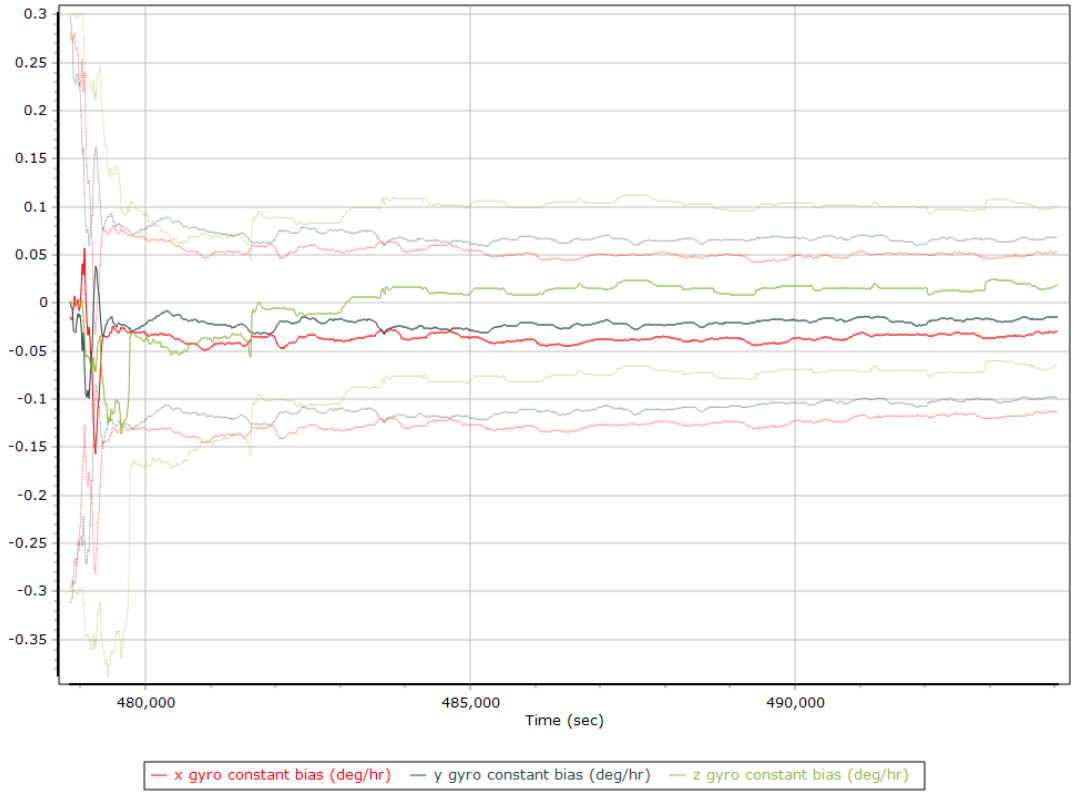


Y Accelerometer Bias (micro-g)

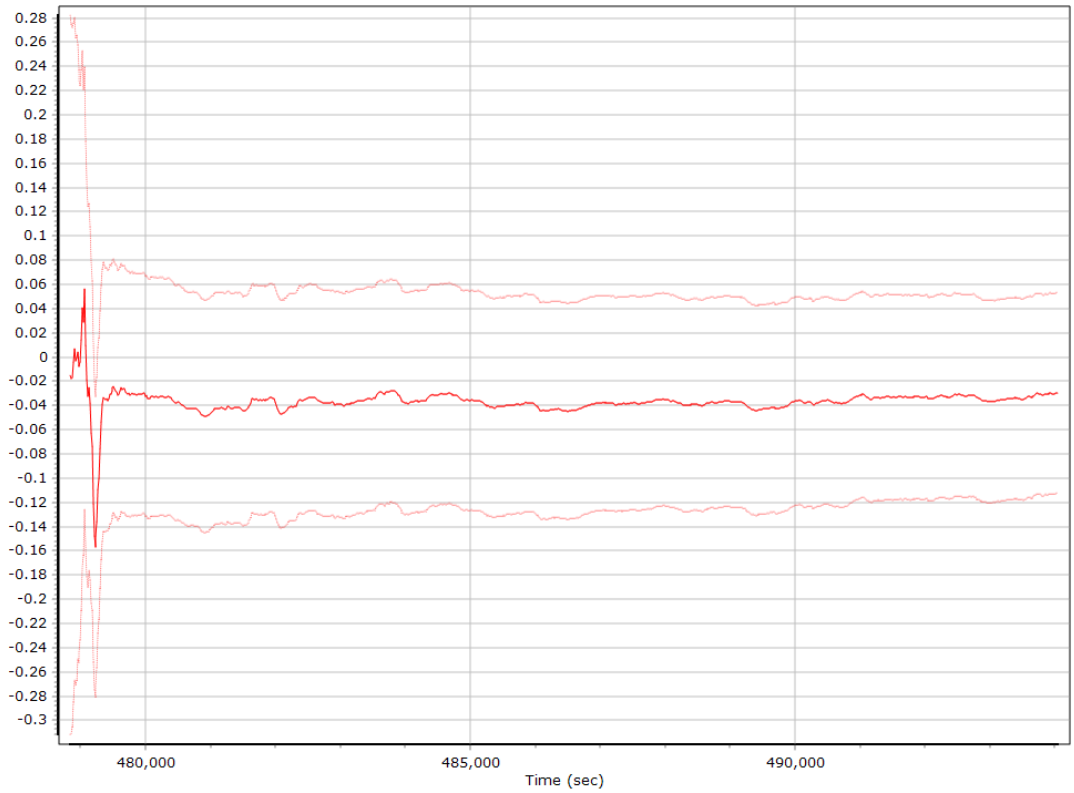


Z Accelerometer Bias (micro-g)

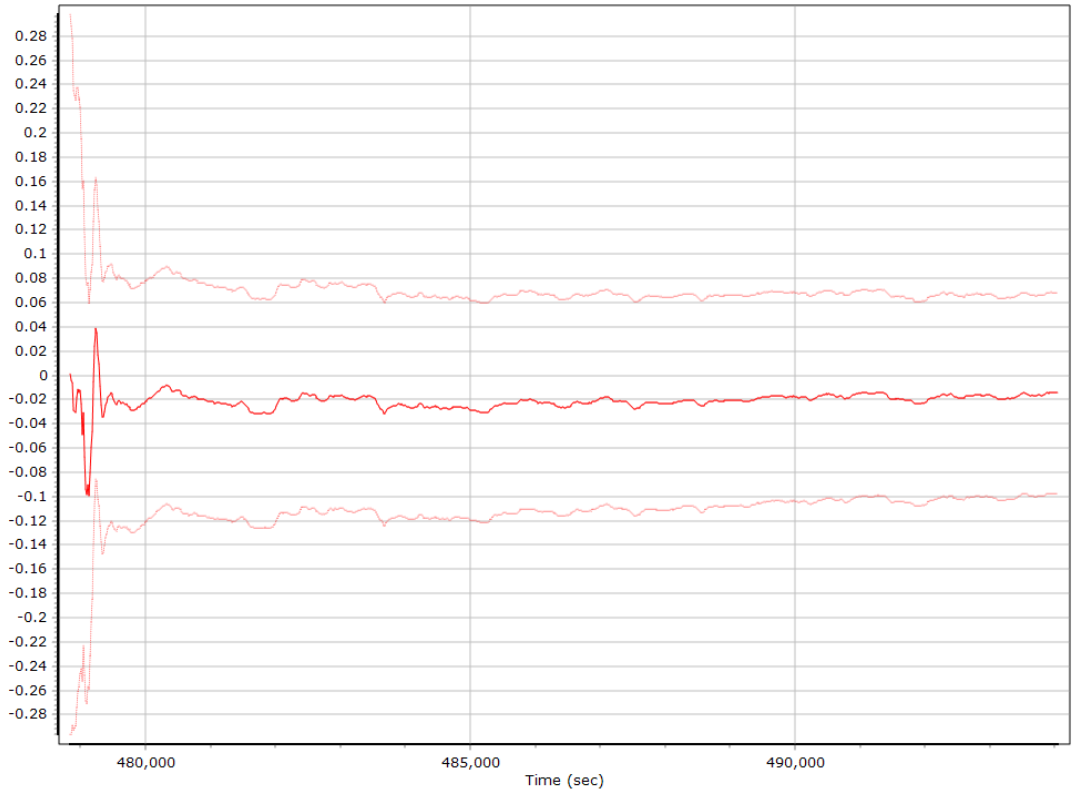
Gyro Bias (deg/h)



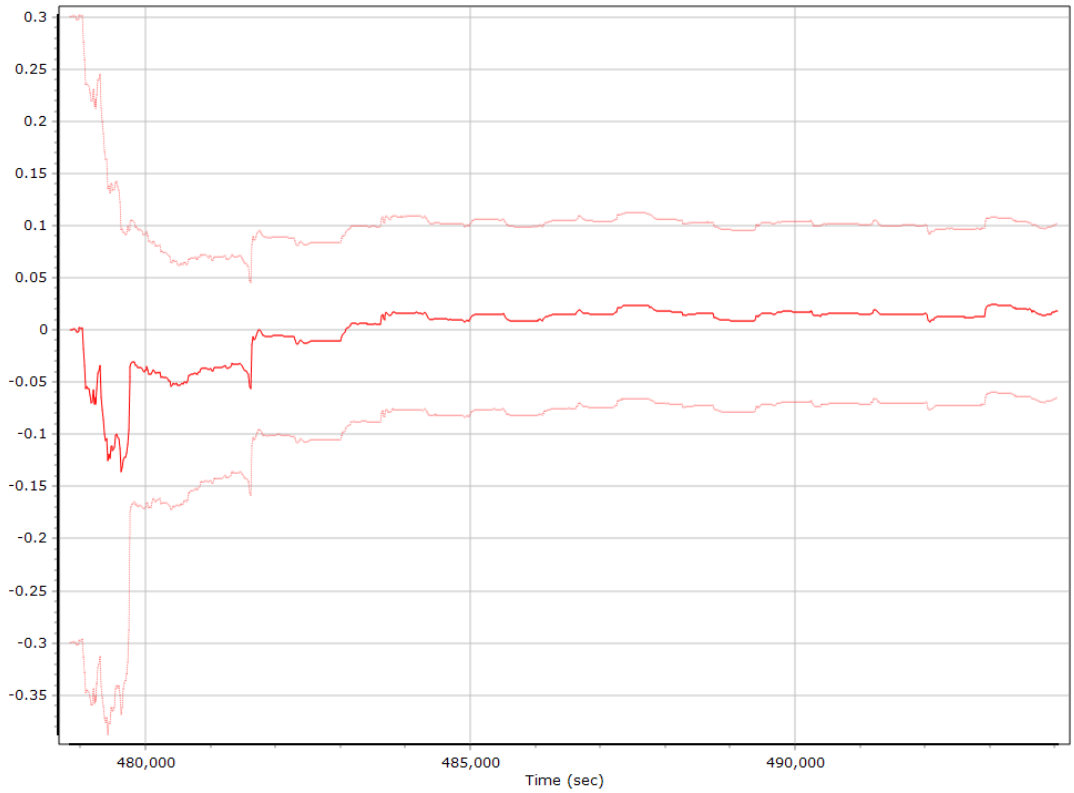
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)

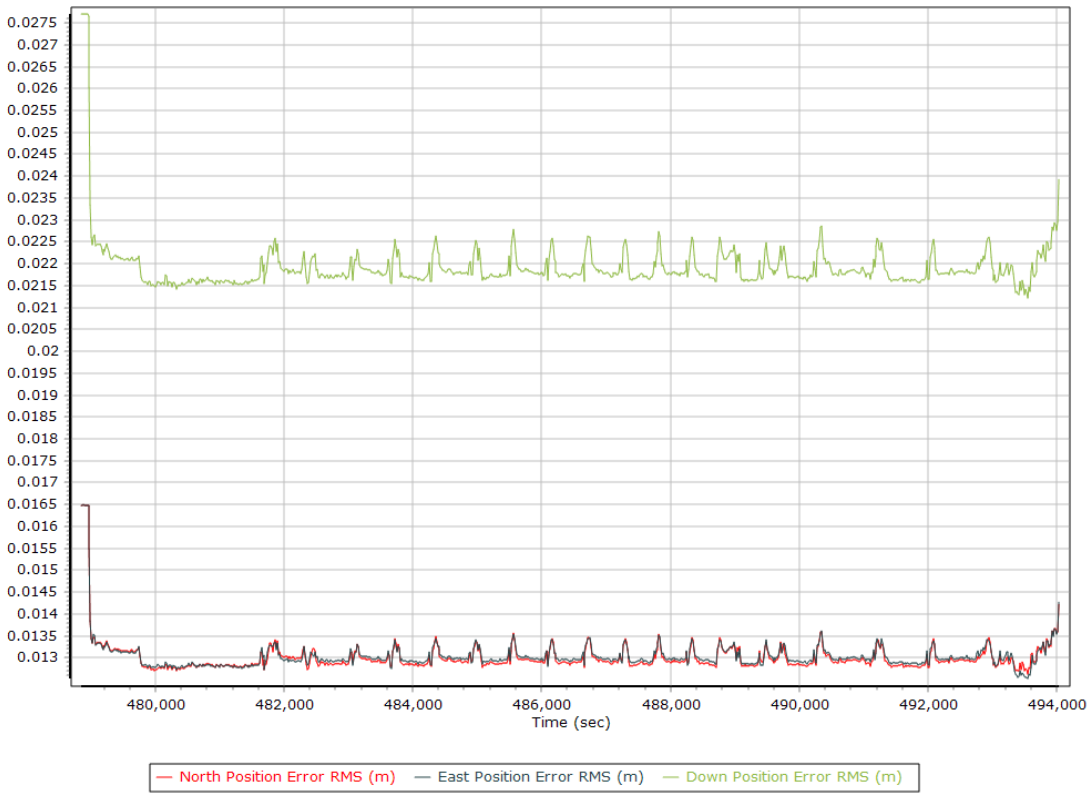


Z Gyro Bias (deg/h)

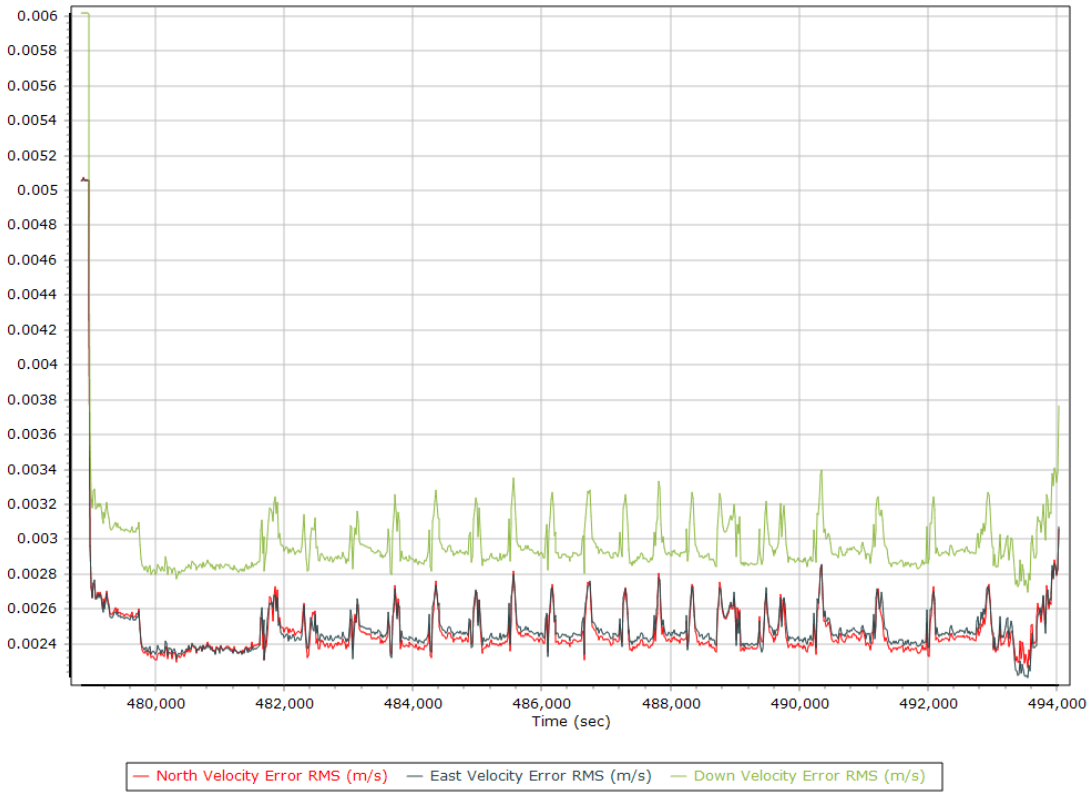


Smoothed Performance Metrics

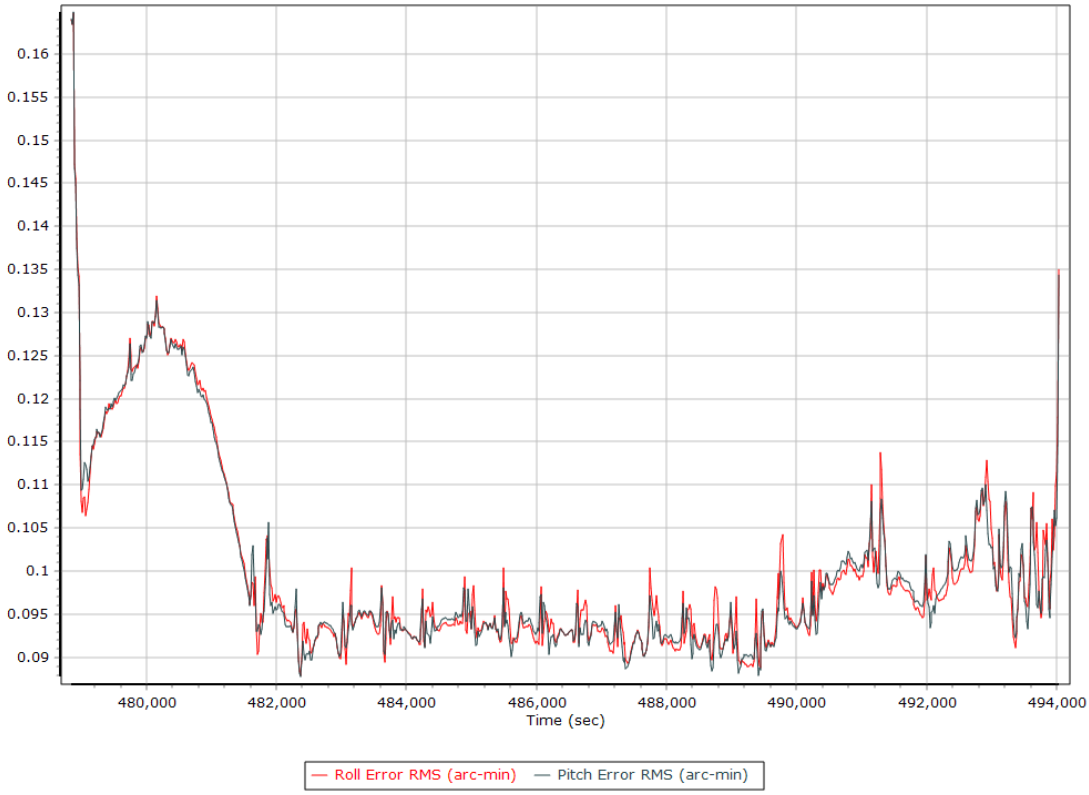
Position Error RMS (m)



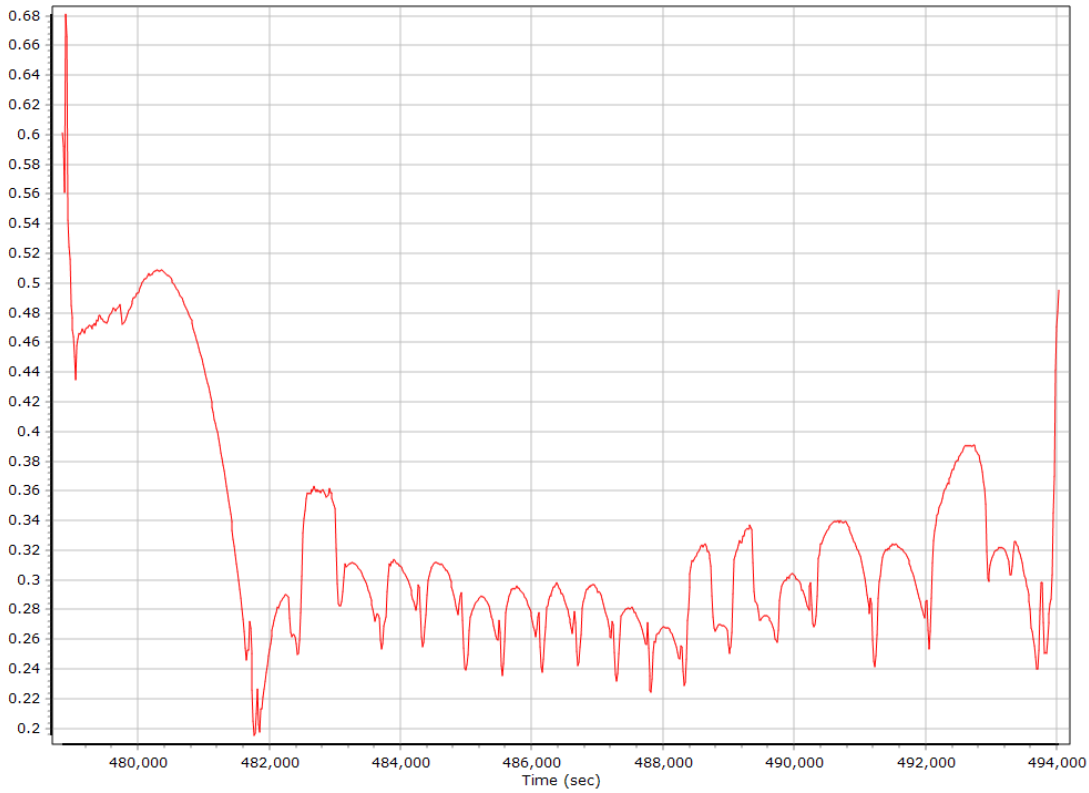
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

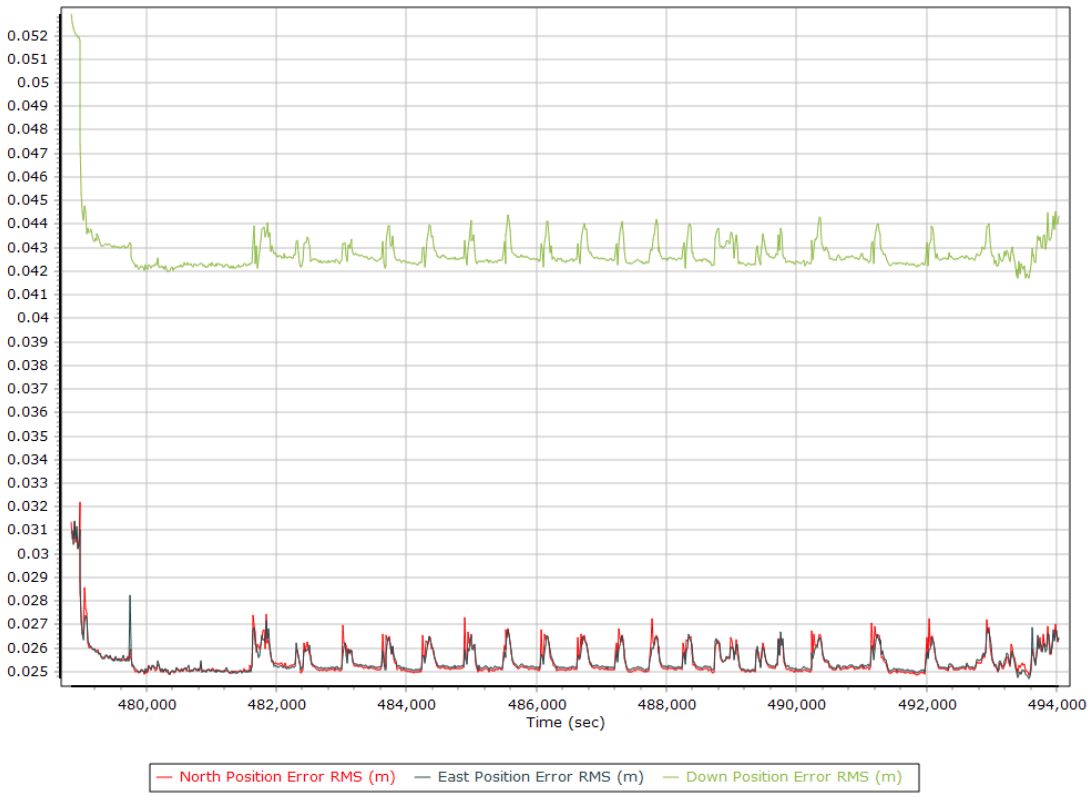


Heading Error RMS (arc-min)

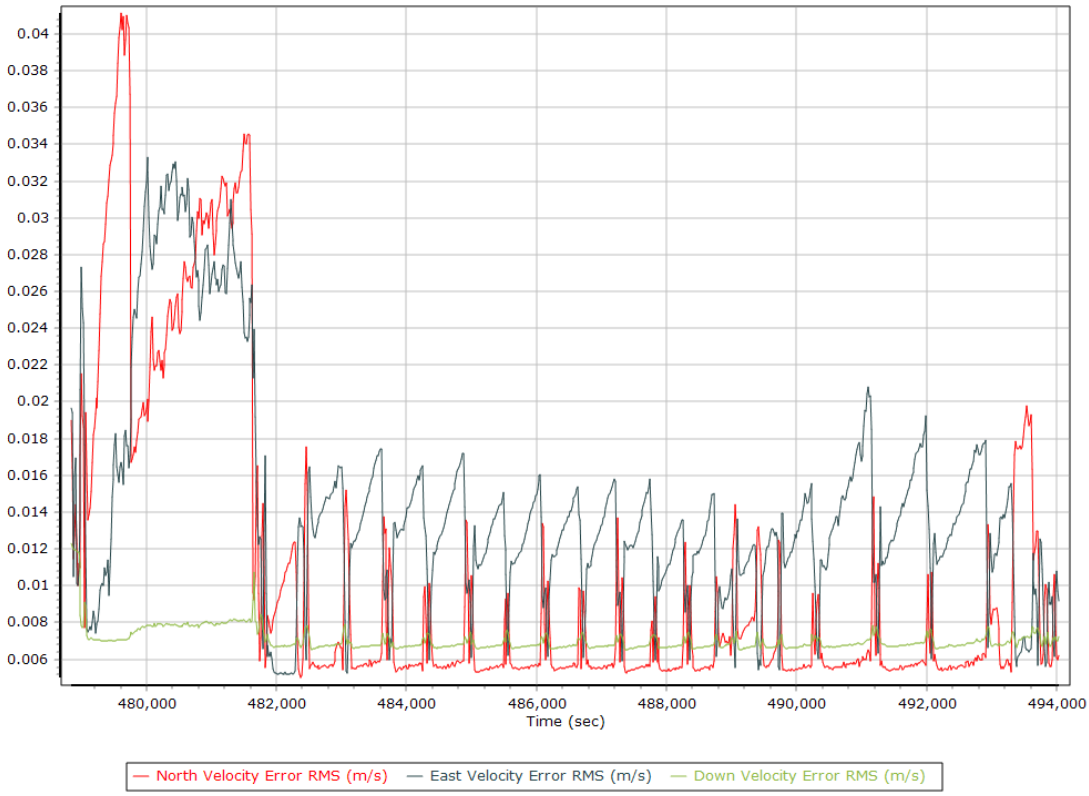


Forward Processed Performance Metrics

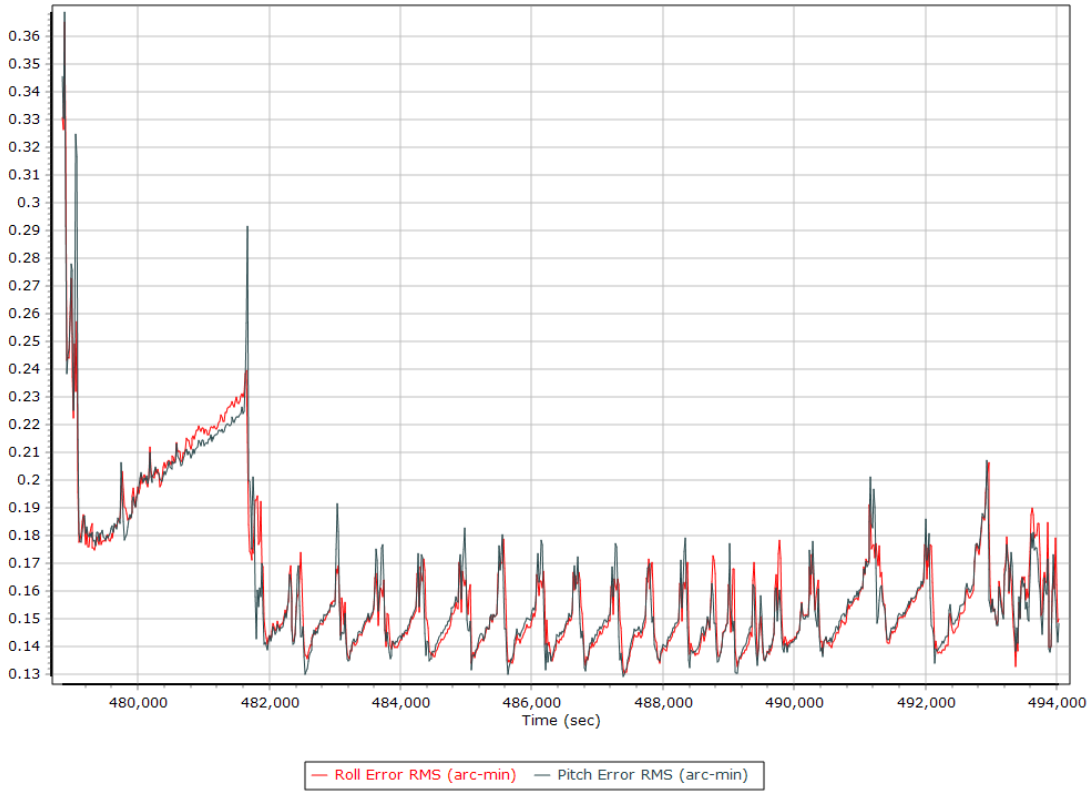
Position Error RMS (m)



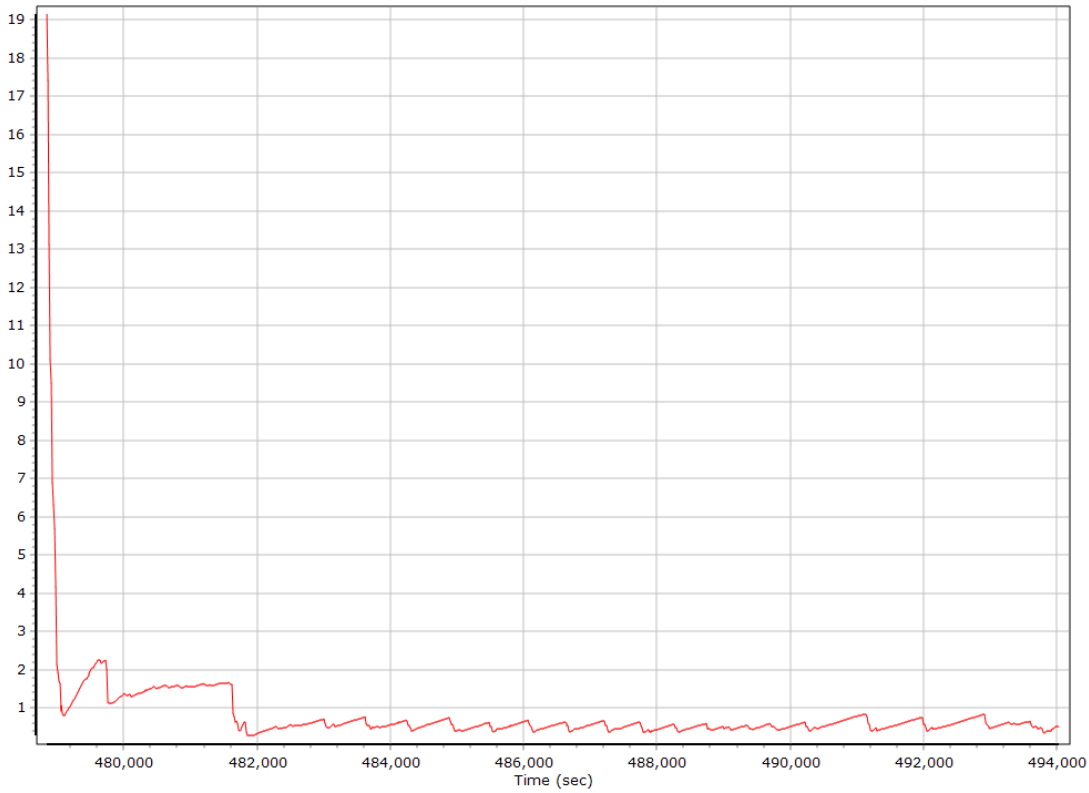
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

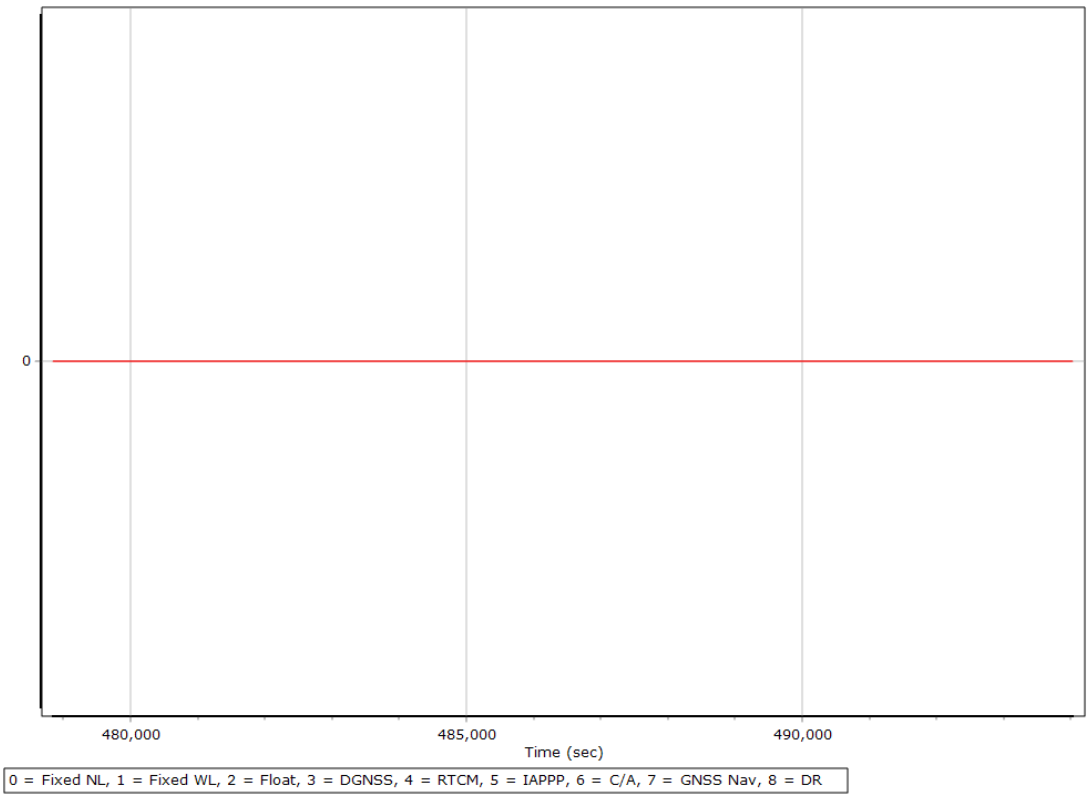


Heading Error RMS (arc-min)

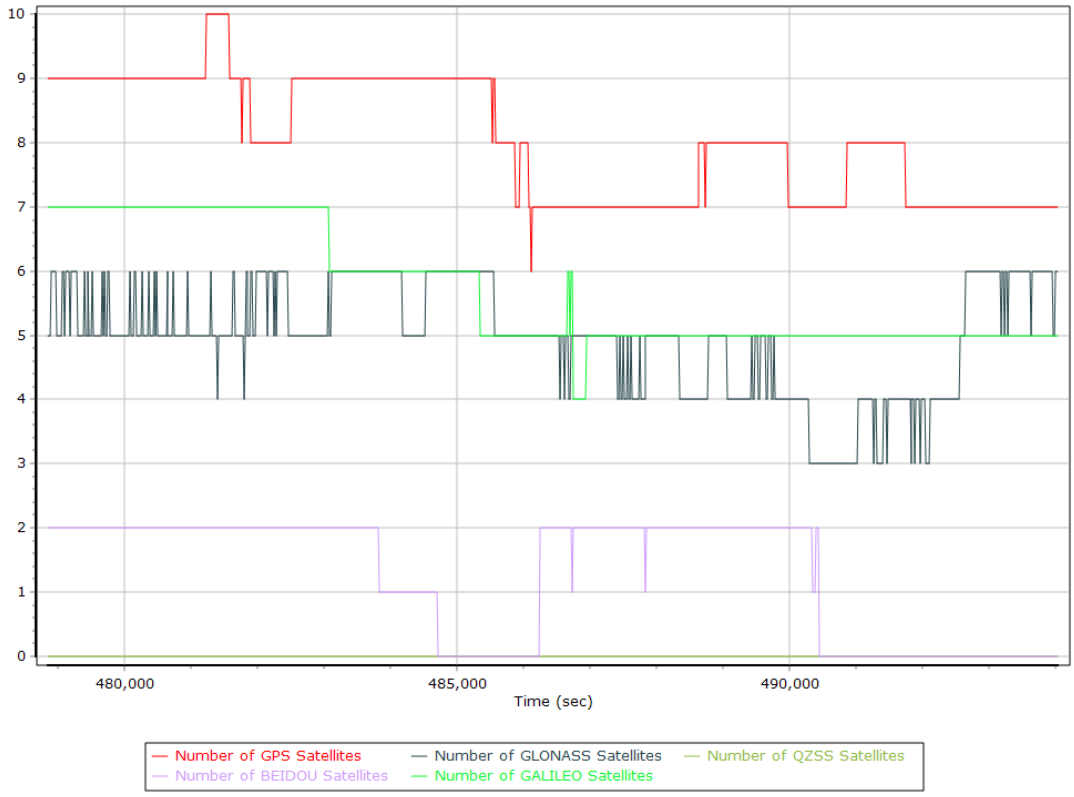


Forward Processed Solution Status

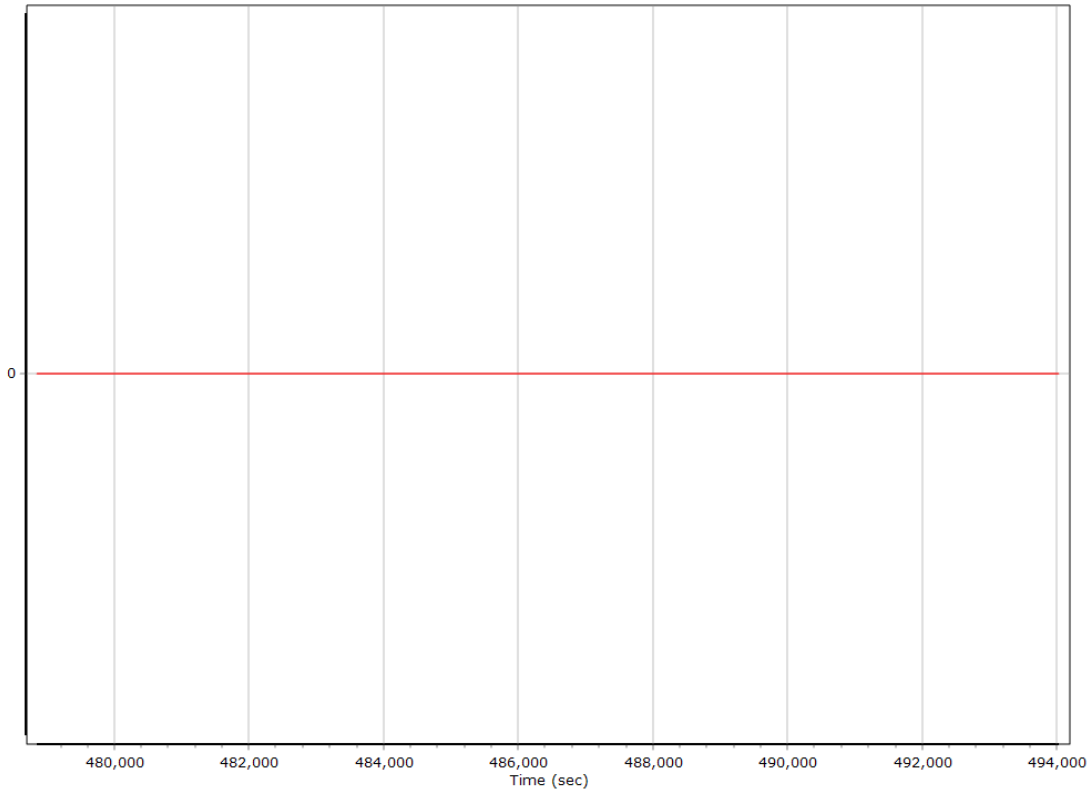
Processing Mode



Number of Satellites



Baseline Length



Export Summary

Export file	sbet_200717_A_5060449_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	478789.003 (07/17/2020 12:59:49)		
Export end time	494044.004 (07/17/2020 17:14:04)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	CONUS Albers		
Zone	CONUS Albers		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2010		