

General Information

Mission Information

Project name	11921
Processing date	2020-12-20 09:54:35
Mission date	2020-12-19 17:32:07
Mission duration	03:25:39.824
Processing mode	IN-Fusion PP-RTX

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N10633
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
20201219F1.647	POS Data
20201219F1.648	POS Data
20201219F1.649	POS Data
20201219F1.650	POS Data
20201219F1.651	POS Data
20201219F1.652	POS Data
20201219F1.653	POS Data
20201219F1.654	POS Data
20201219F1.655	POS Data
20201219F1.656	POS Data
20201219F1.657	POS Data
20201219F1.658	POS Data
20201219F1.659	POS Data
20201219F1.660	POS Data
20201219F1.661	POS Data
20201219F1.662	POS Data
20201219F1.663	POS Data
20201219F1.664	POS Data
20201219F1.665	POS Data
20201219F1.666	POS Data
20201219F1.667	POS Data
20201219F1.668	POS Data
20201219F1.669	POS Data
20201219F1.670	POS Data
20201219F1.671	POS Data
20201219F1.672	POS Data

Input Files

File Name	File Type
Ephm3540.20g	GLONASS Broadcast Ephemeris
Ephm3540.20n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_11921.out	SBET Trajectory File
eo_11921.txt	ZI Imaging POSEO Output
sbet_11921_NAD83(2011).out	Custom Smoothed BET Export Output
lever_arm_values.txt	ReferenceToPrimaryLeverArms Export Output

Rover Data Summary

First raw data file	20201219F1.647		
Last raw data file	20201219F1.672		
Start GPS week	2136		
Start time	581526.224 (12/19/2020 17:32:06)		
End time	593866.048 (12/19/2020 20:57:46)		
Start of fine alignment	581895.858 (12/19/2020 17:38:15)		
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)	-0.485	-0.379	-1.087
Reference to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

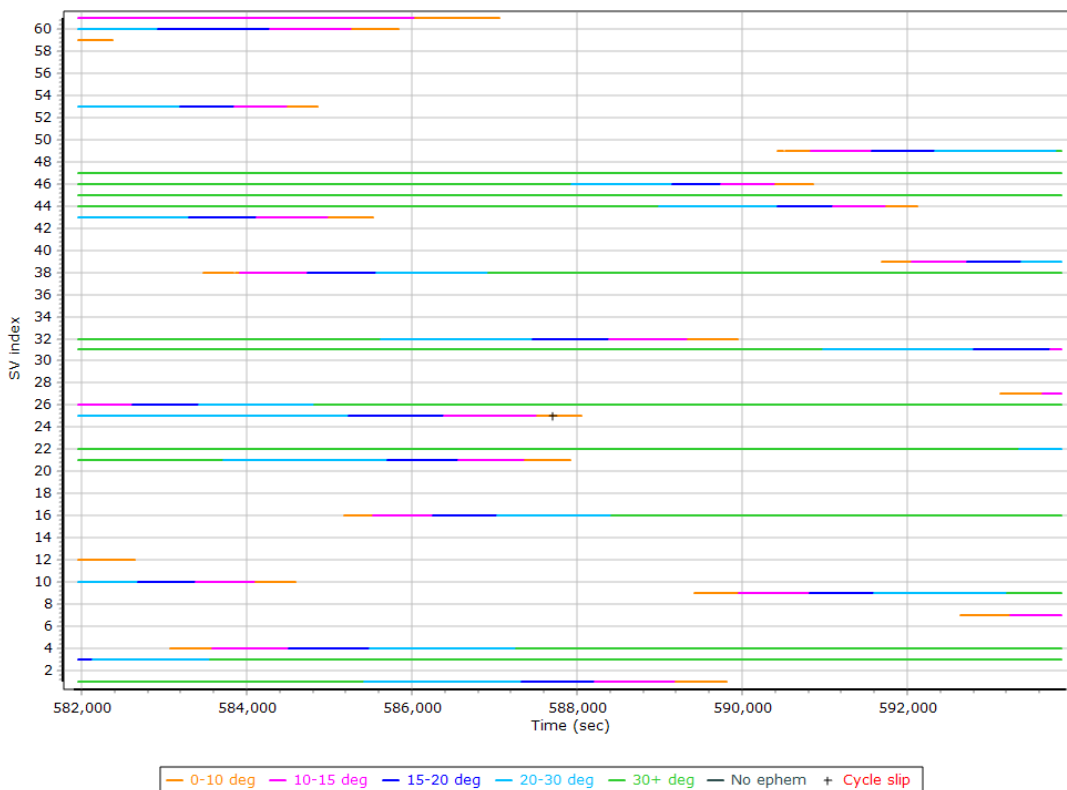
Rover Data QC

Raw IMU Import QC Summary

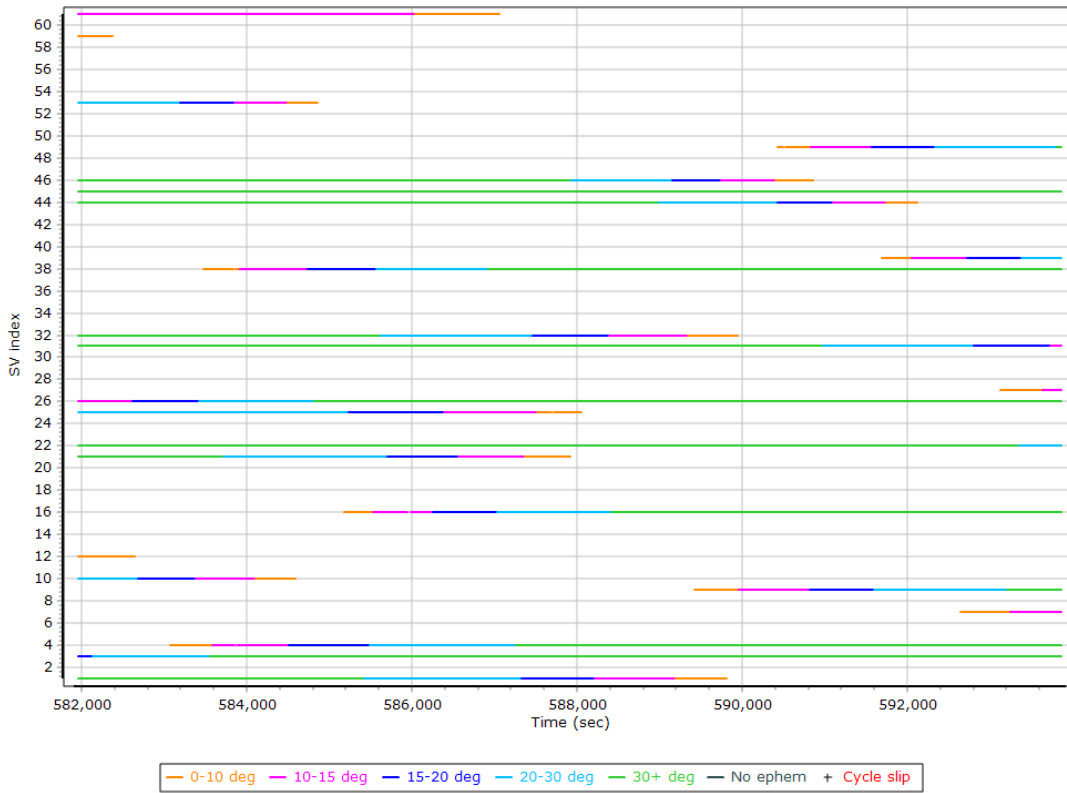
IMU data input file	imu_11921.dat
IMU data check log file	imudt_11921.log
IMU Records Processed	2467598
Termination Status	Normal
IMU Anomalies	0

Primary Observables & Satellite Data

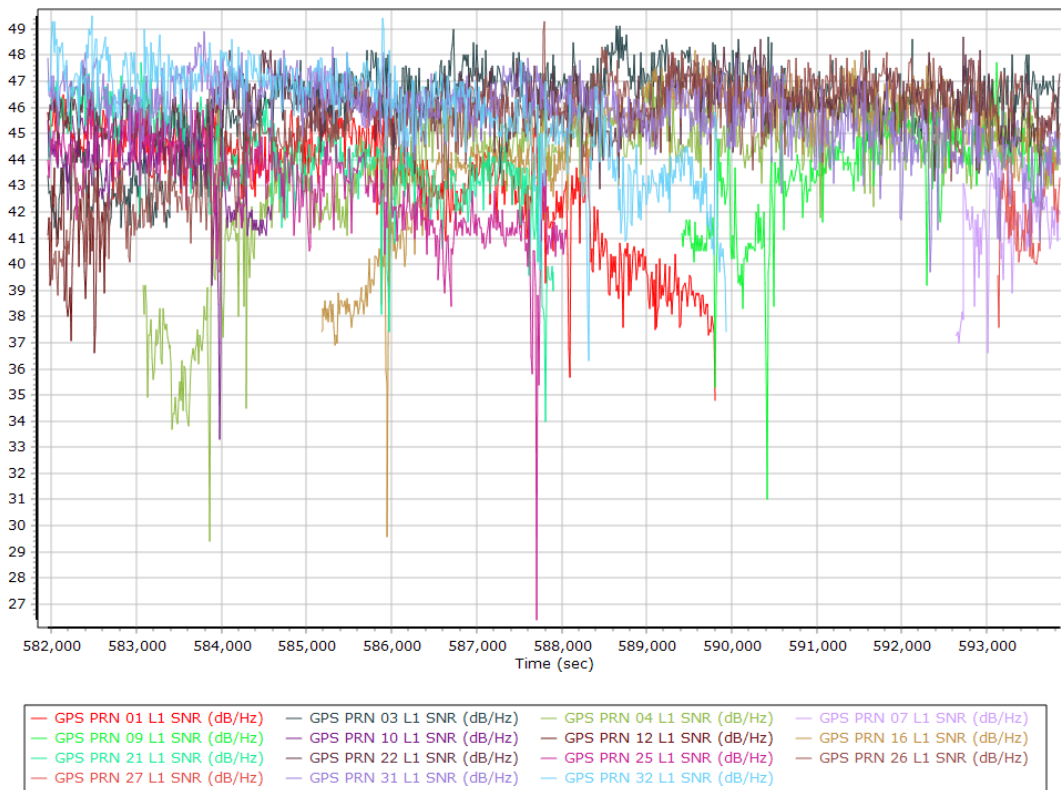
L1 Satellite Lock/Elevation



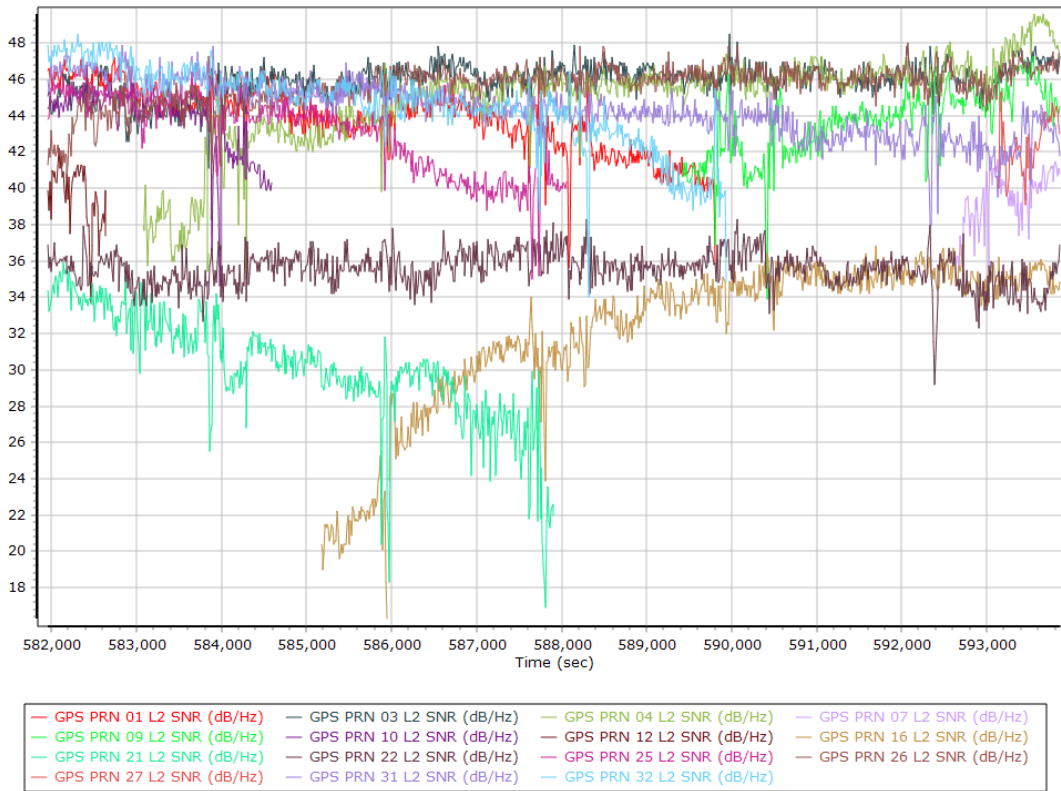
L2 Satellite Lock/Elevation



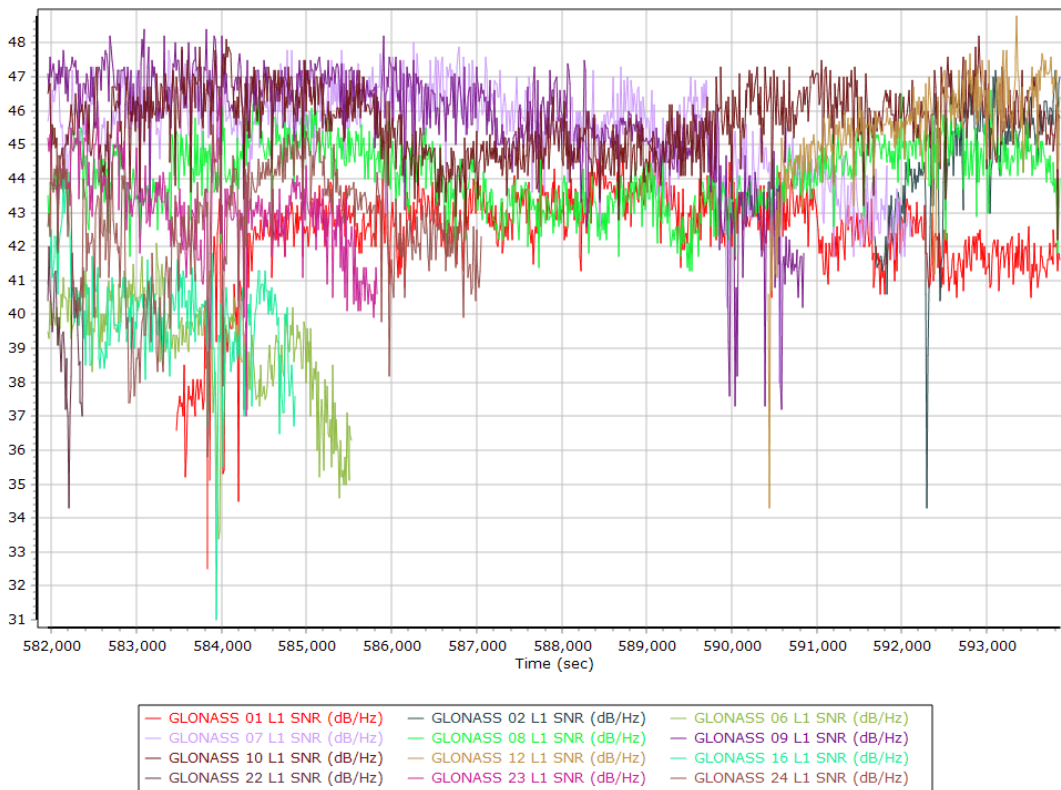
GPS L1 SNR



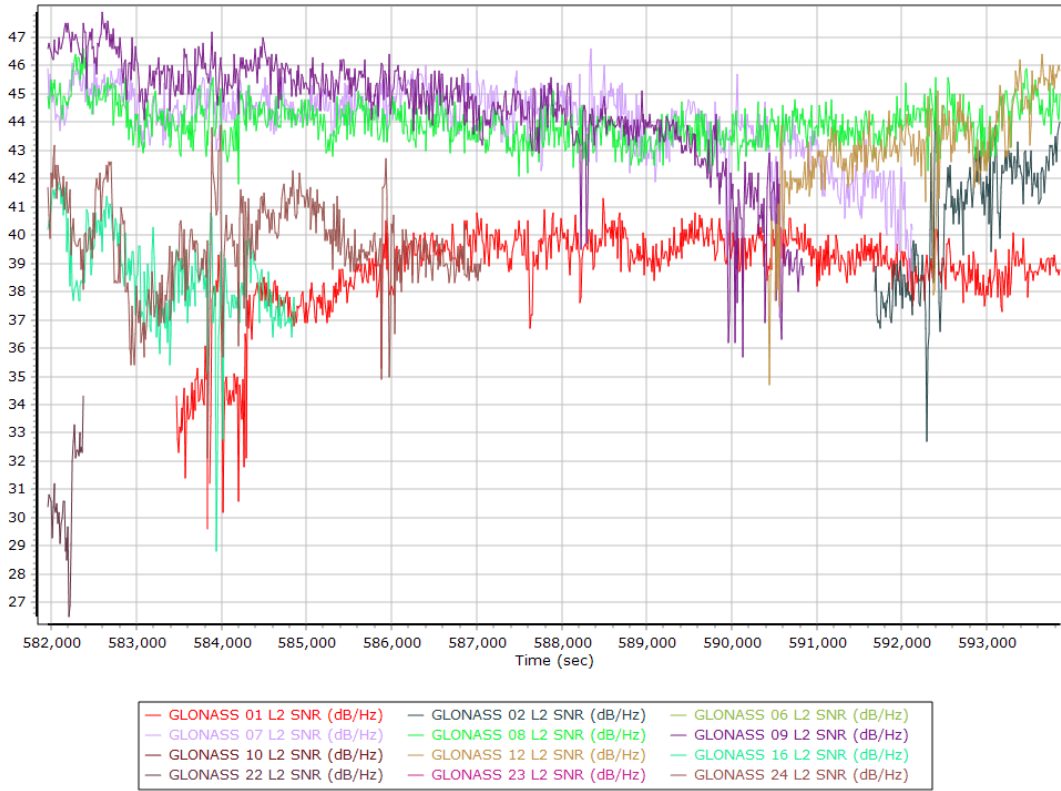
GPS L2 SNR



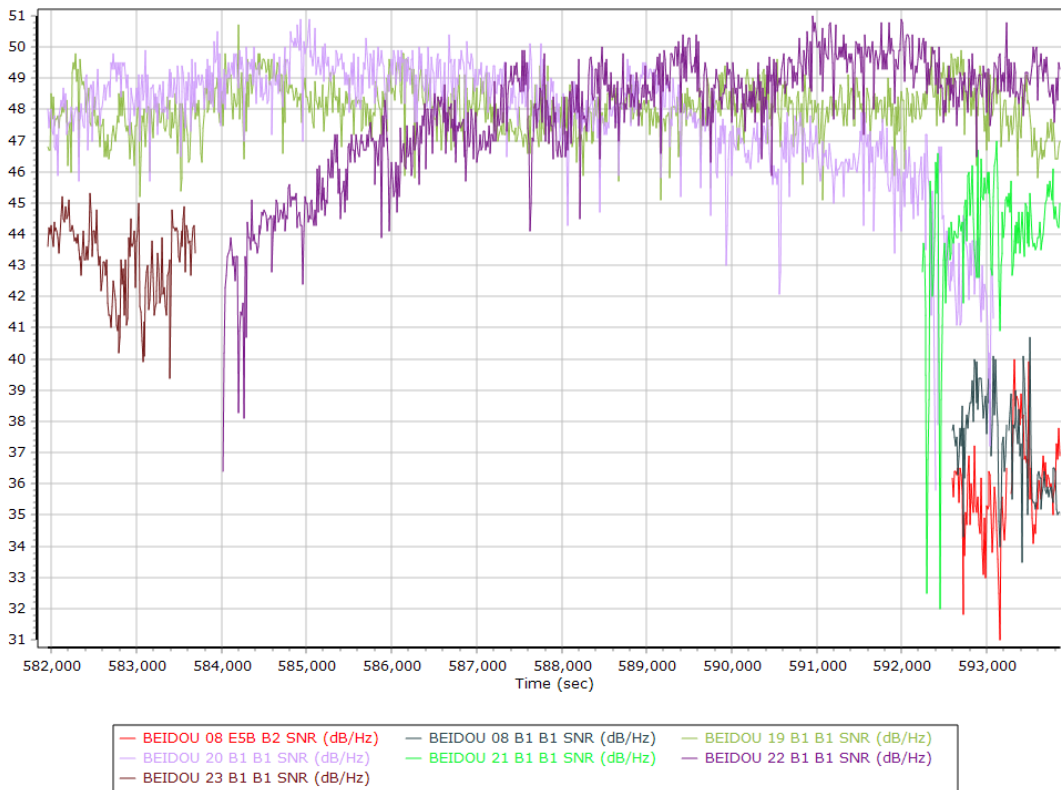
GLONASS L1 SNR



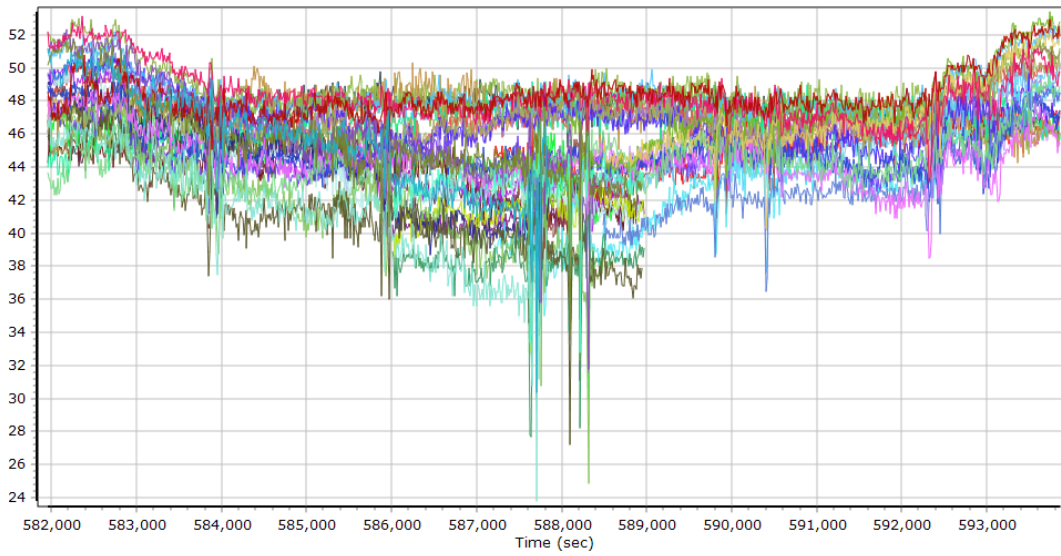
GLONASS L2 SNR



BEIDOU SNR



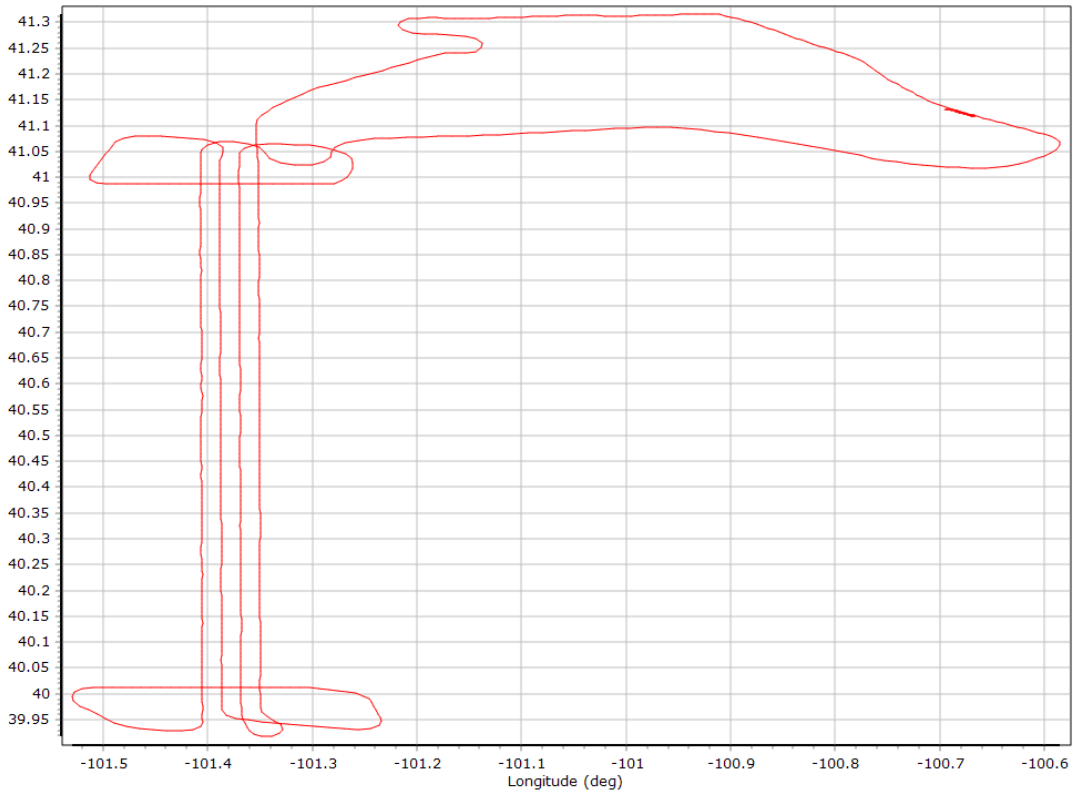
GALILEO SNR



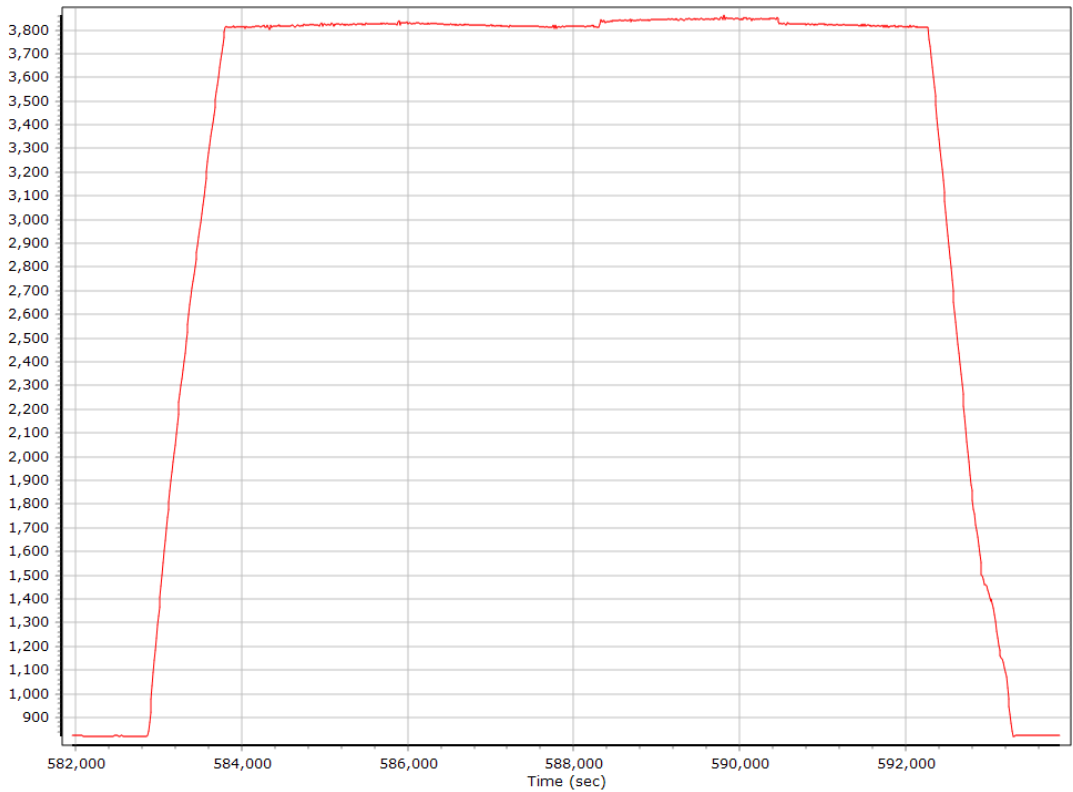
- | | |
|--|--|
| — GALILEO 02 L1 BOC_1_1_D_MBOC SNR (dB/Hz) | — GALILEO 03 L1 BOC_1_1_D_MBOC SNR (dB/Hz) |
| — GALILEO 05 L1 BOC_1_1_D_MBOC SNR (dB/Hz) | — GALILEO 08 L1 BOC_1_1_D_MBOC SNR (dB/Hz) |
| — GALILEO 09 L1 BOC_1_1_D_MBOC SNR (dB/Hz) | — GALILEO 13 L1 BOC_1_1_D_MBOC SNR (dB/Hz) |
| — GALILEO 15 L1 BOC_1_1_D_MBOC SNR (dB/Hz) | — GALILEO 24 L1 BOC_1_1_D_MBOC SNR (dB/Hz) |
| — GALILEO 25 L1 BOC_1_1_D_MBOC SNR (dB/Hz) | — GALILEO 31 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 05 L5E5A BPSK10_PD SNR (dB/Hz) |
| — GALILEO 08 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 09 L5E5A BPSK10_PD SNR (dB/Hz) |
| — GALILEO 13 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 15 L5E5A BPSK10_PD SNR (dB/Hz) |
| — GALILEO 24 L5E5A BPSK10_PD SNR (dB/Hz) | — GALILEO 25 L5E5A BPSK10_PD SNR (dB/Hz) |

Smoothed Trajectory Information

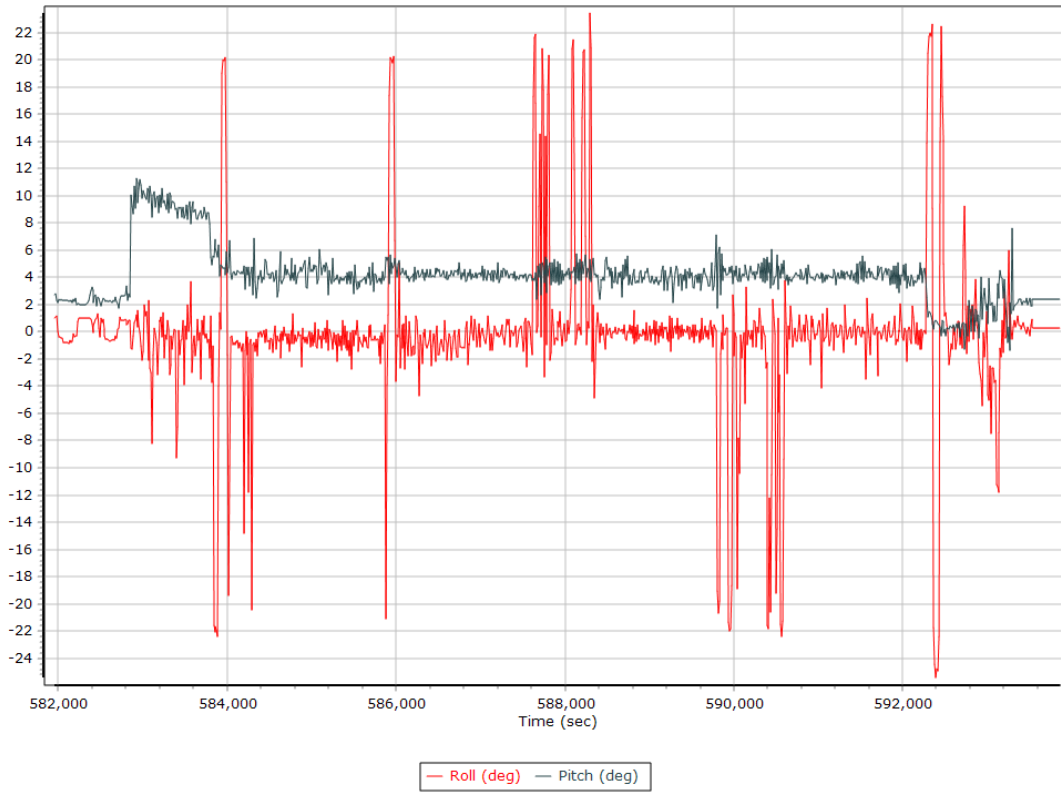
Top View



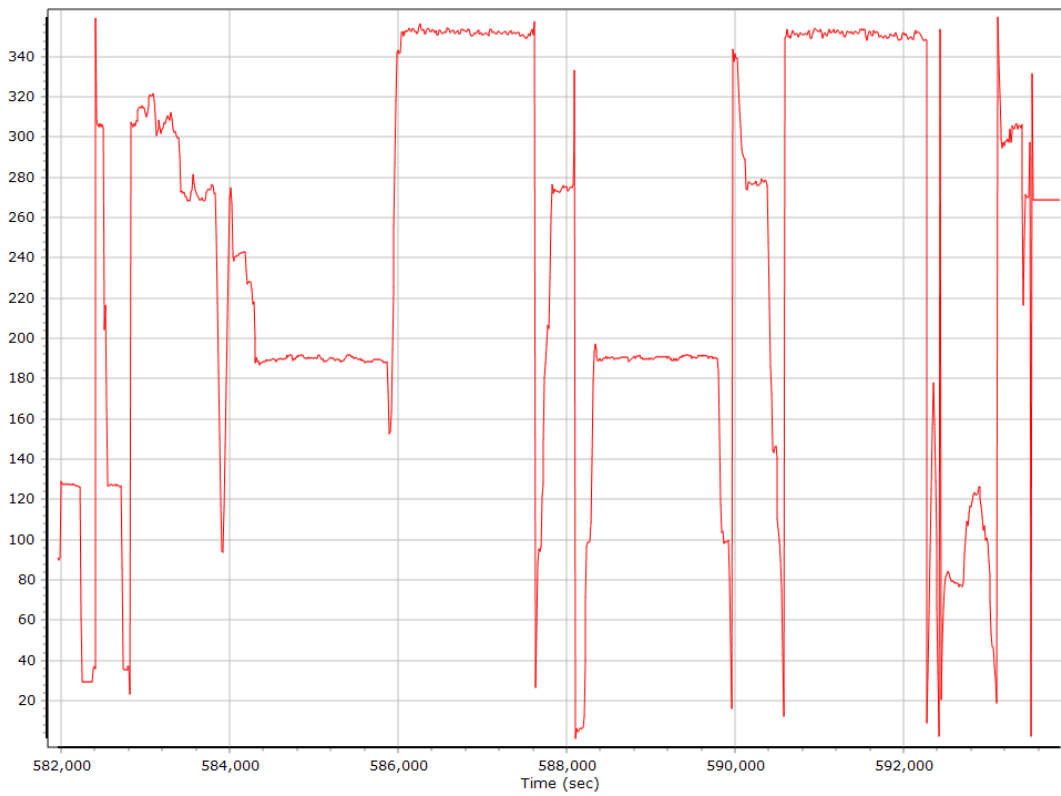
Altitude



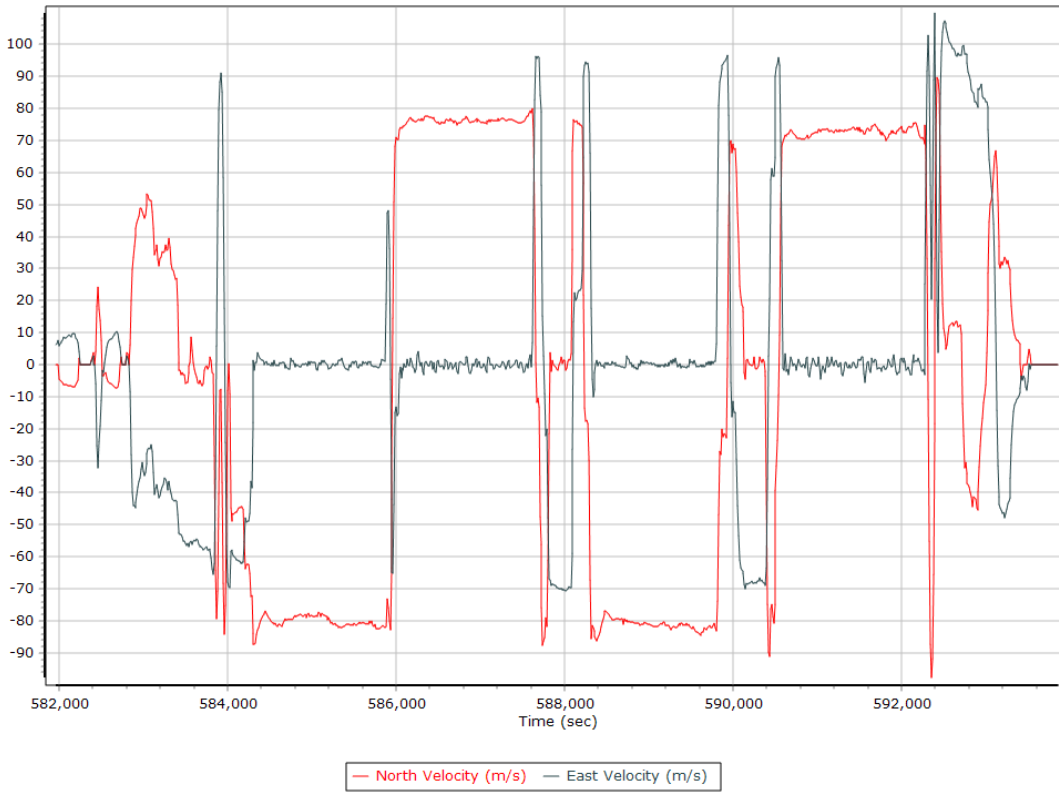
Roll/Pitch



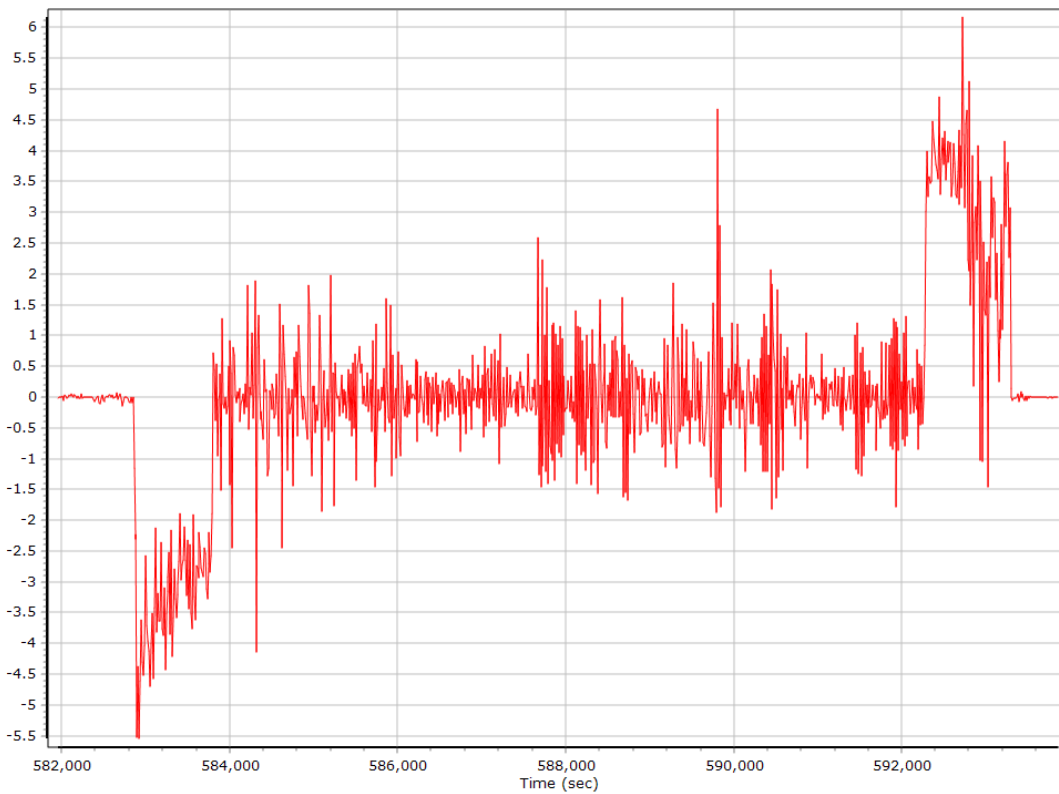
Heading



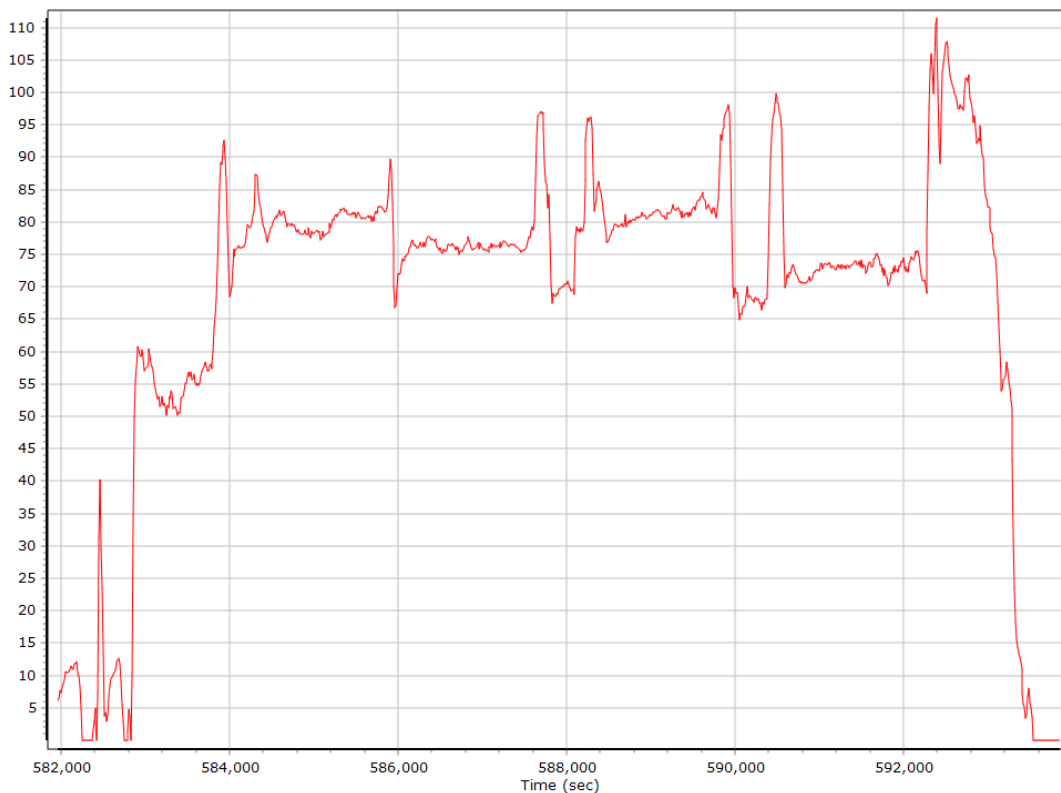
North/East Velocity



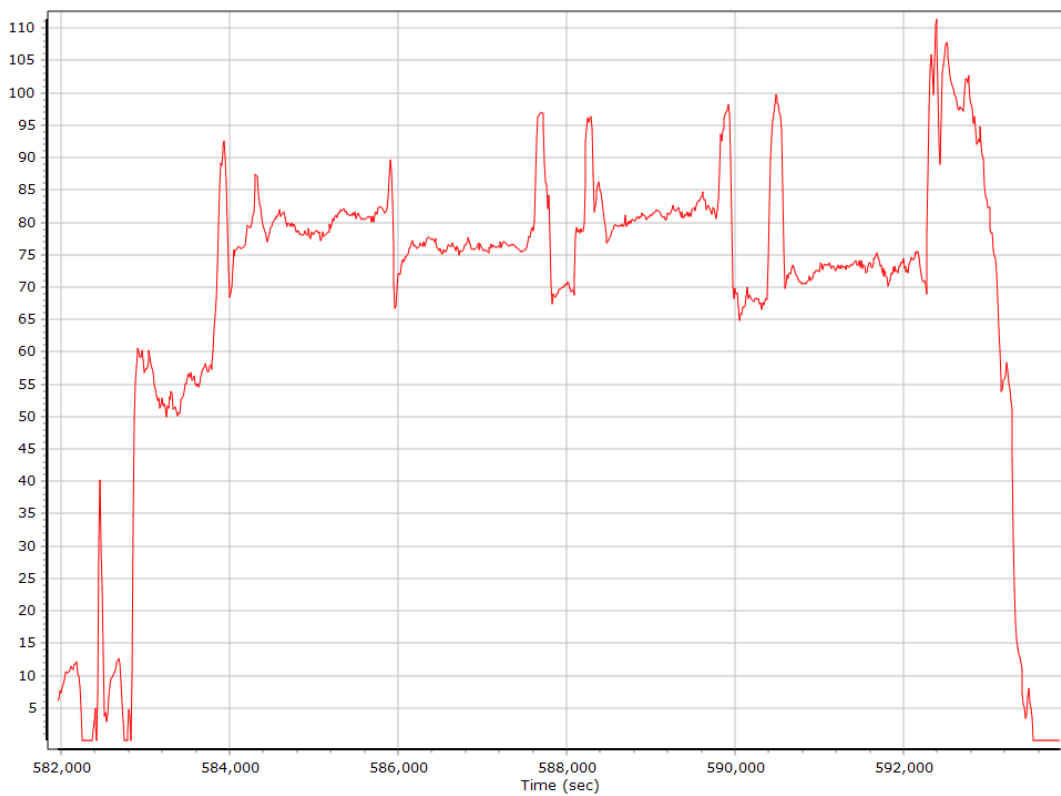
Down Velocity



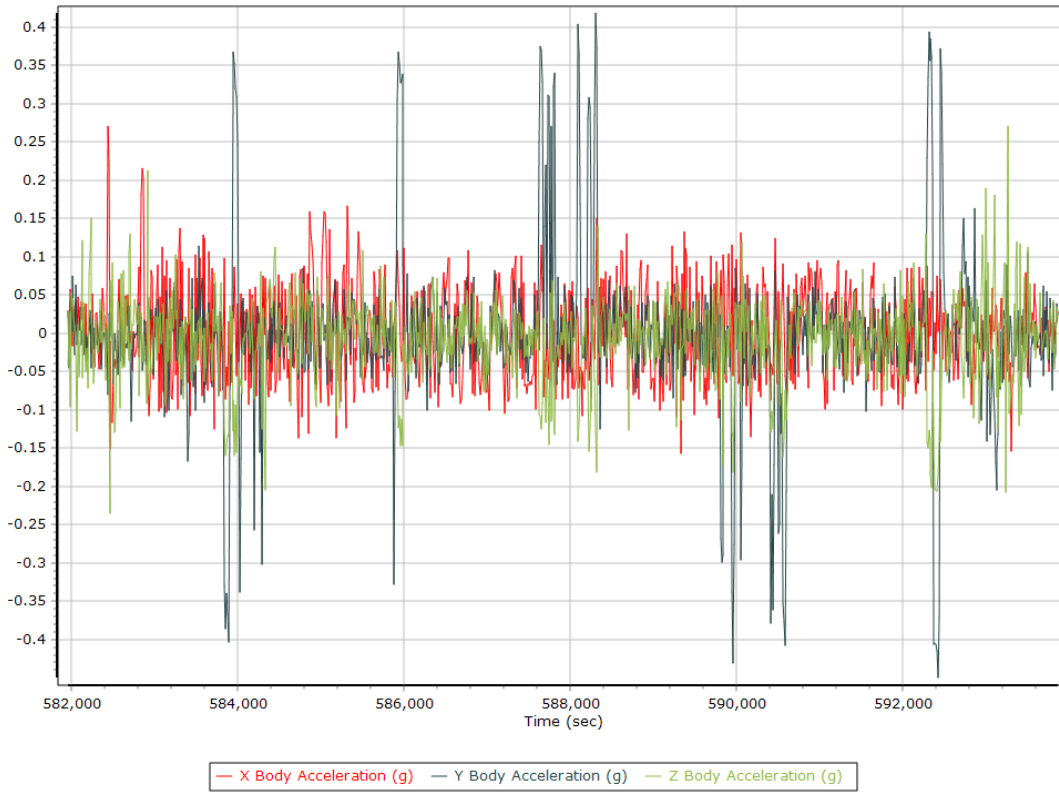
Total Speed



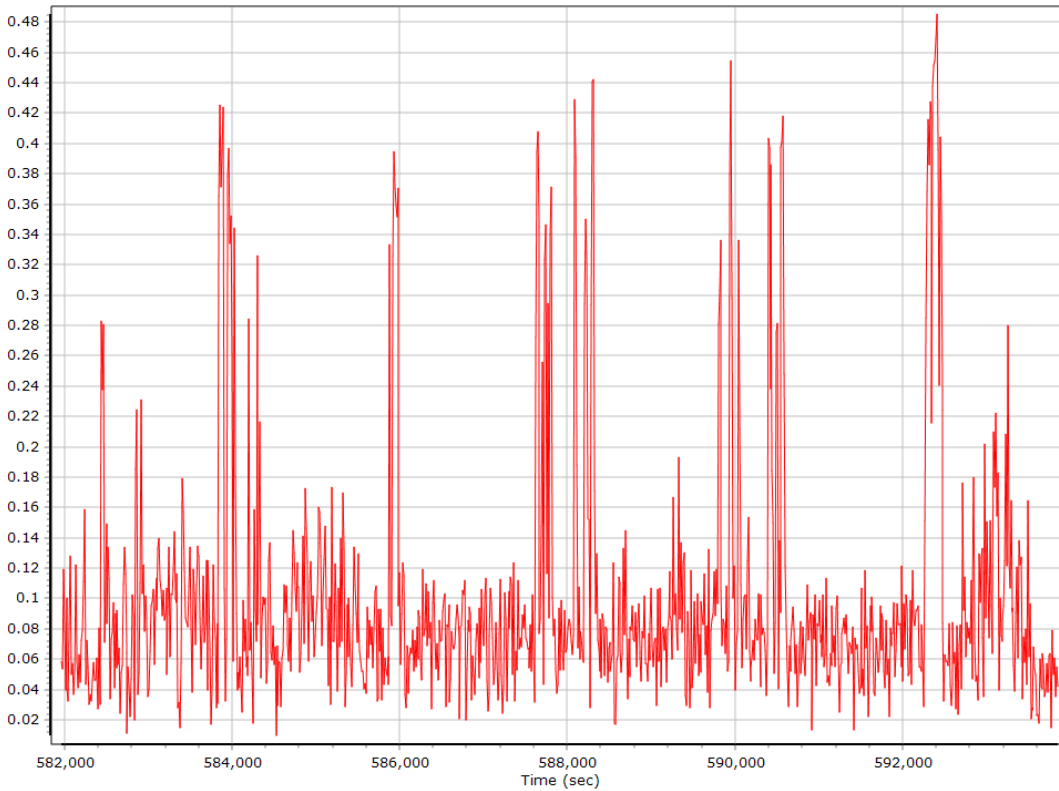
Ground Speed



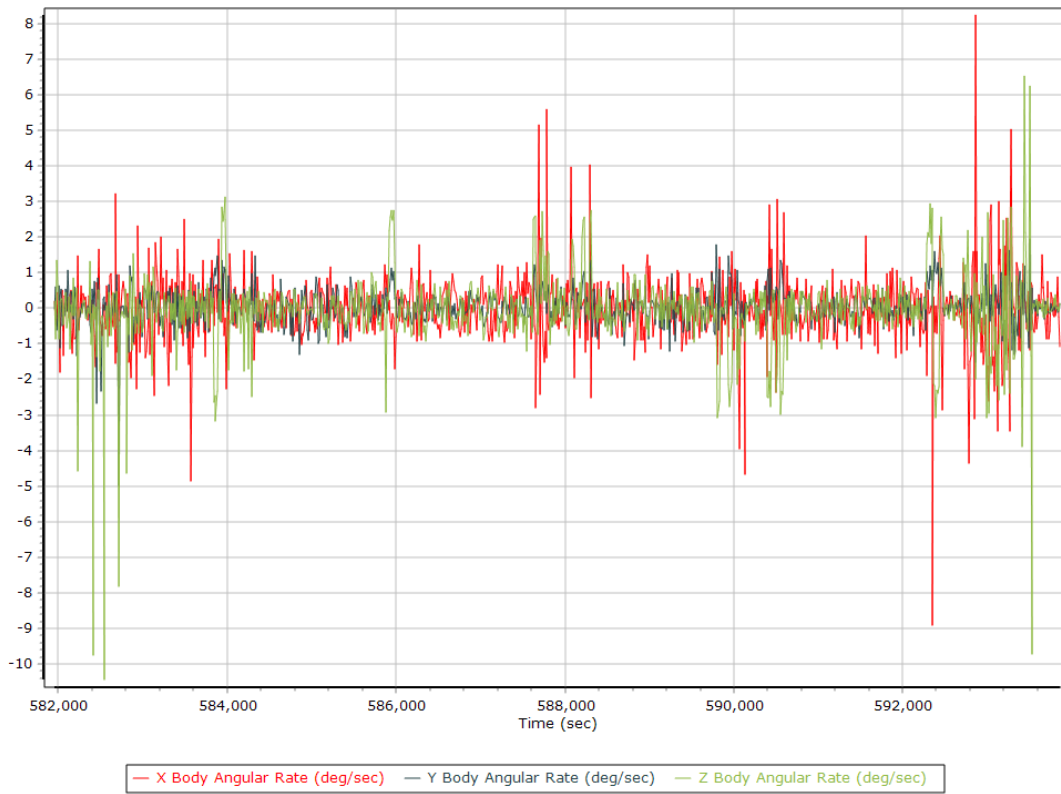
Body Acceleration



Total Body Acceleration

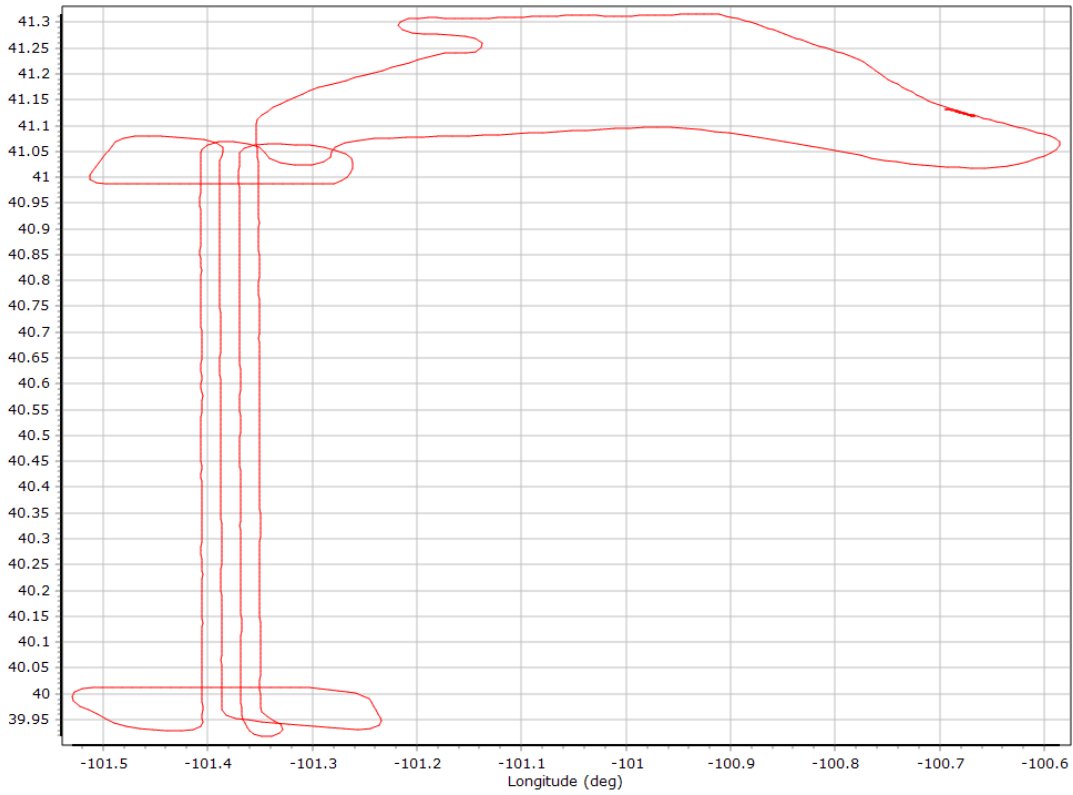


Body Angular Rate

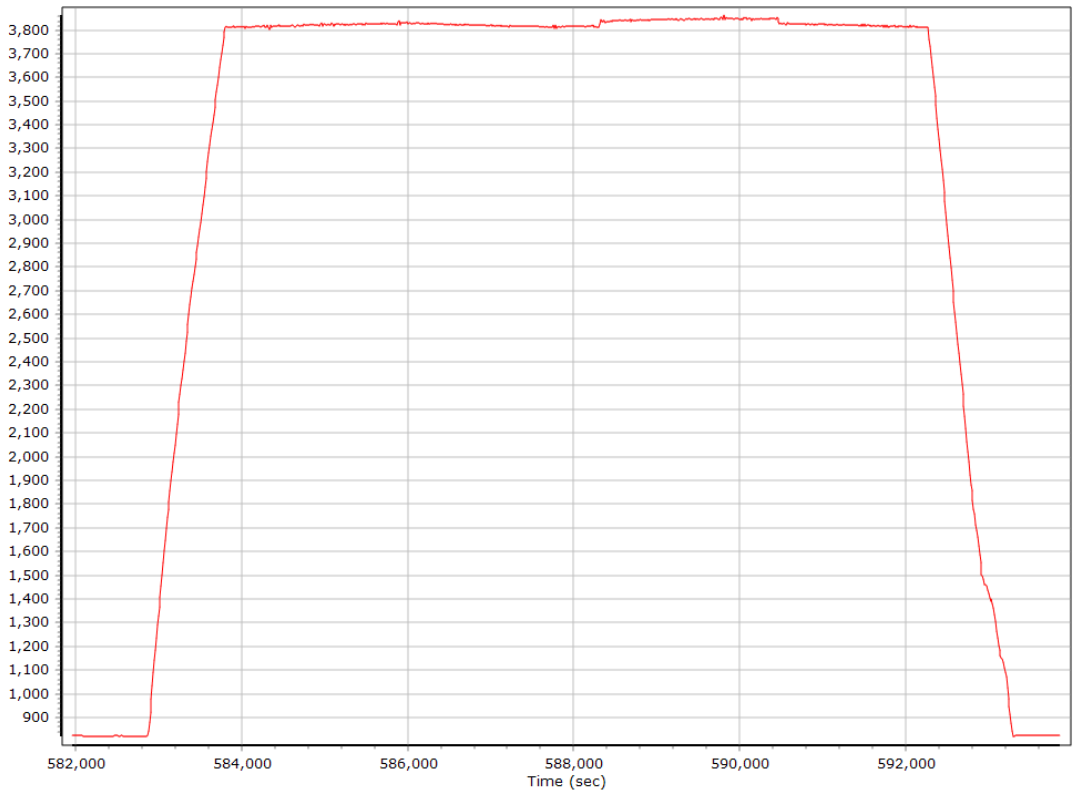


Forward Processed Trajectory Information

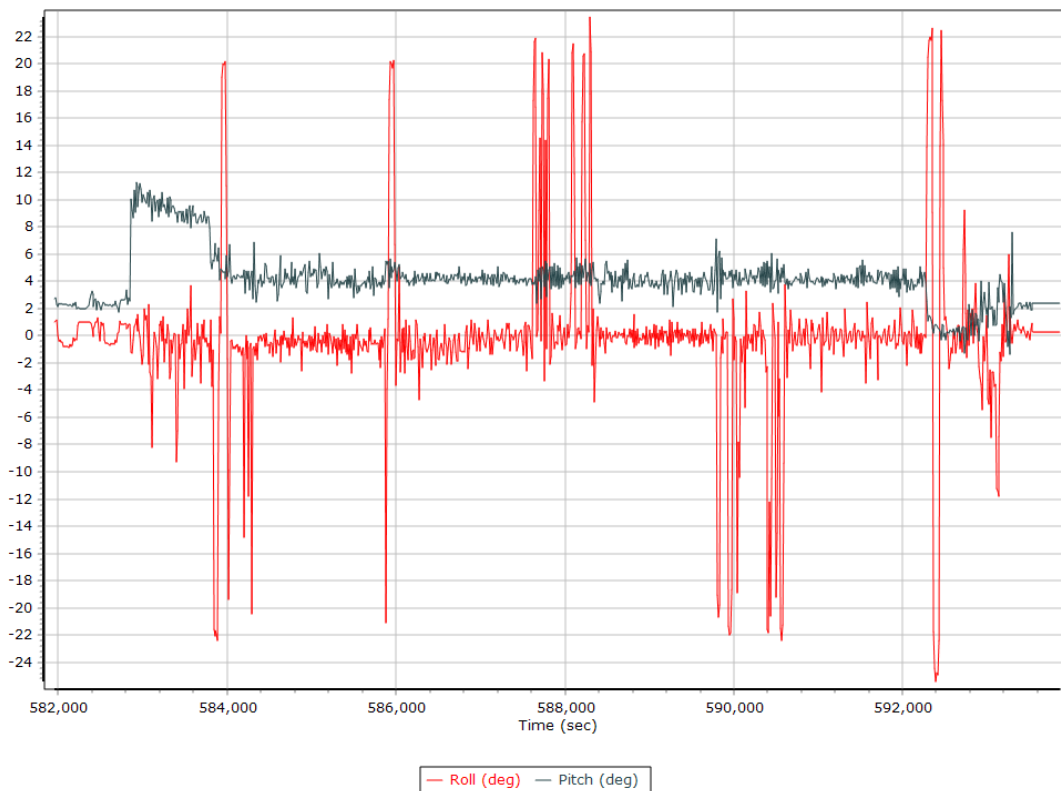
Top View



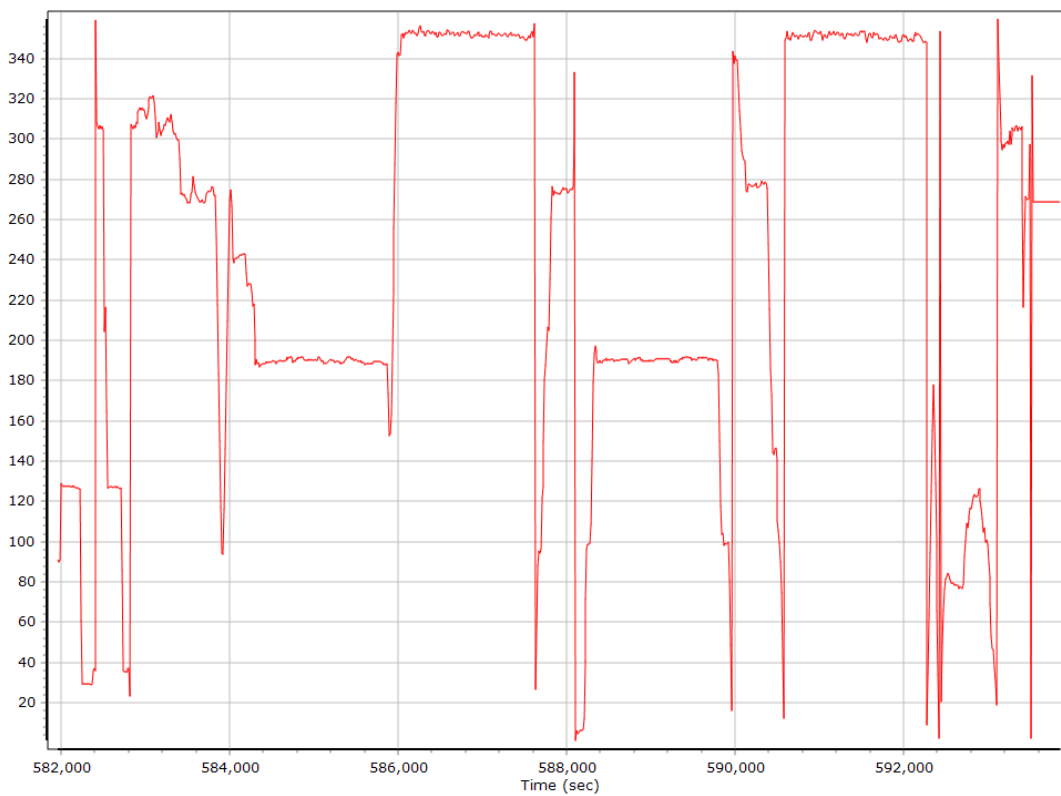
Altitude



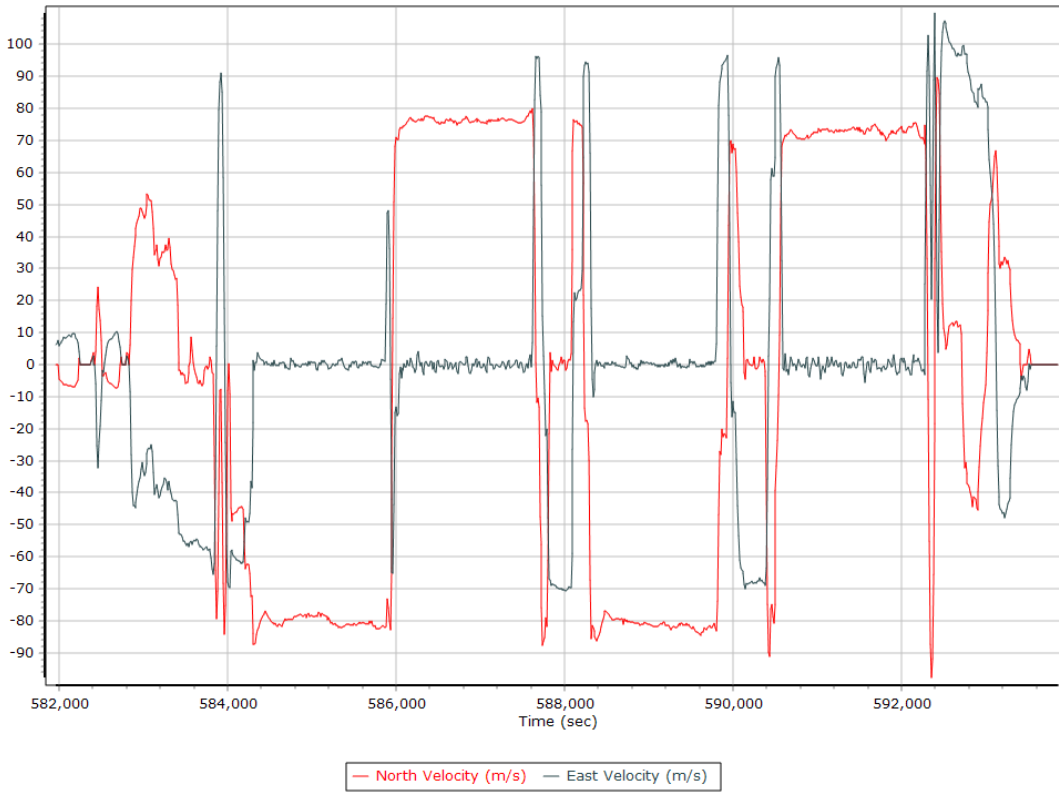
Roll/Pitch



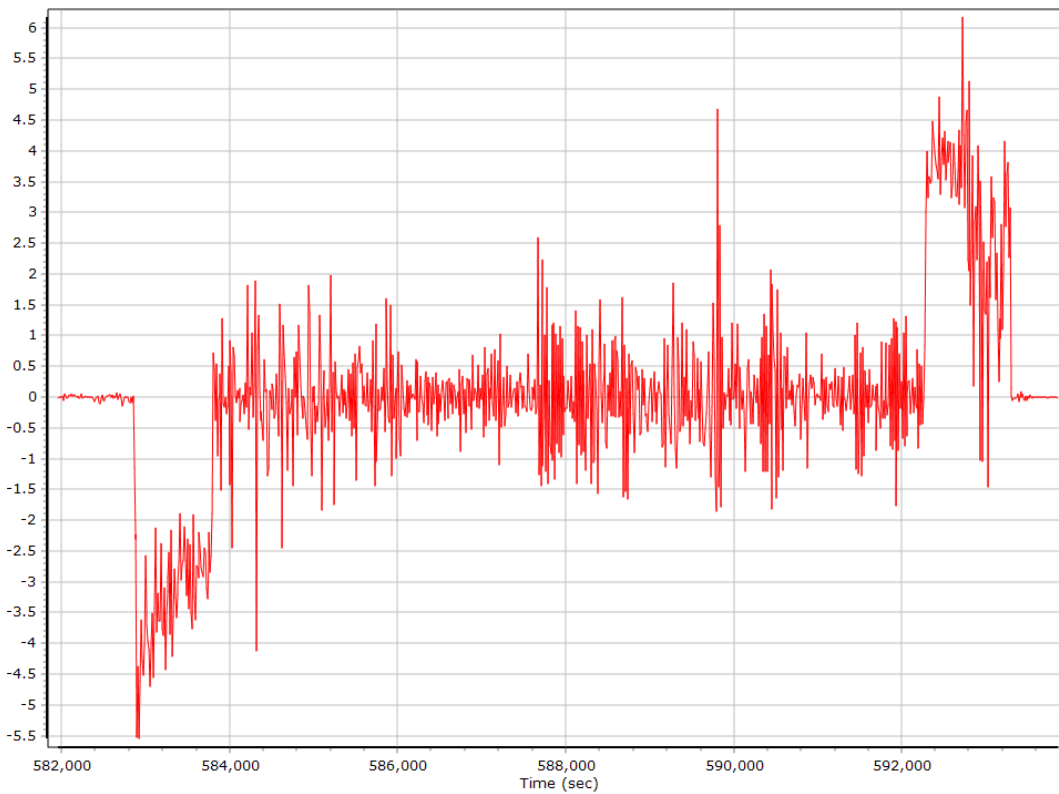
Heading



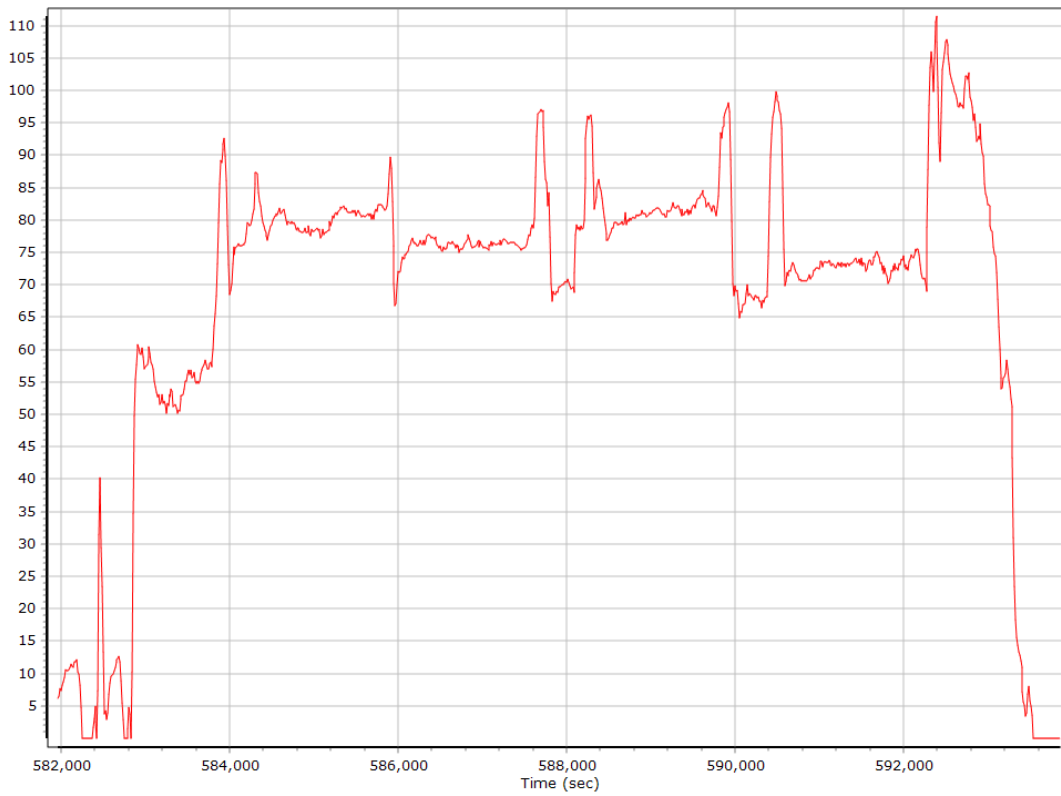
North/East Velocity



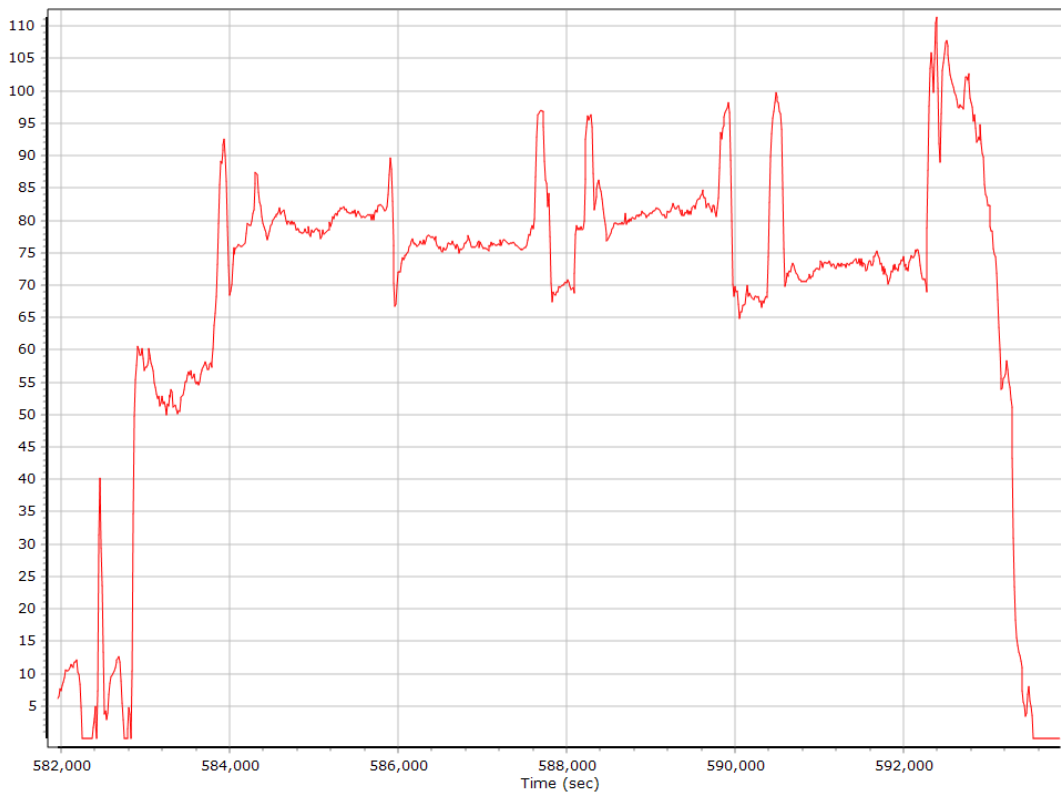
Down Velocity



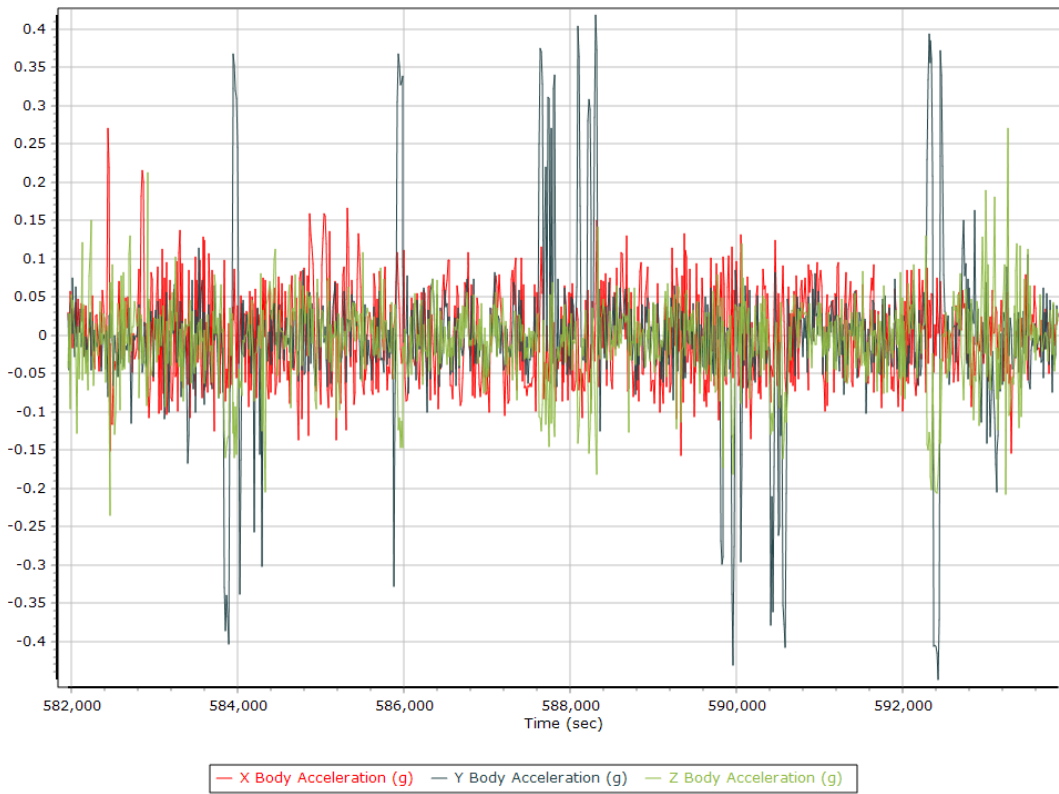
Total Speed



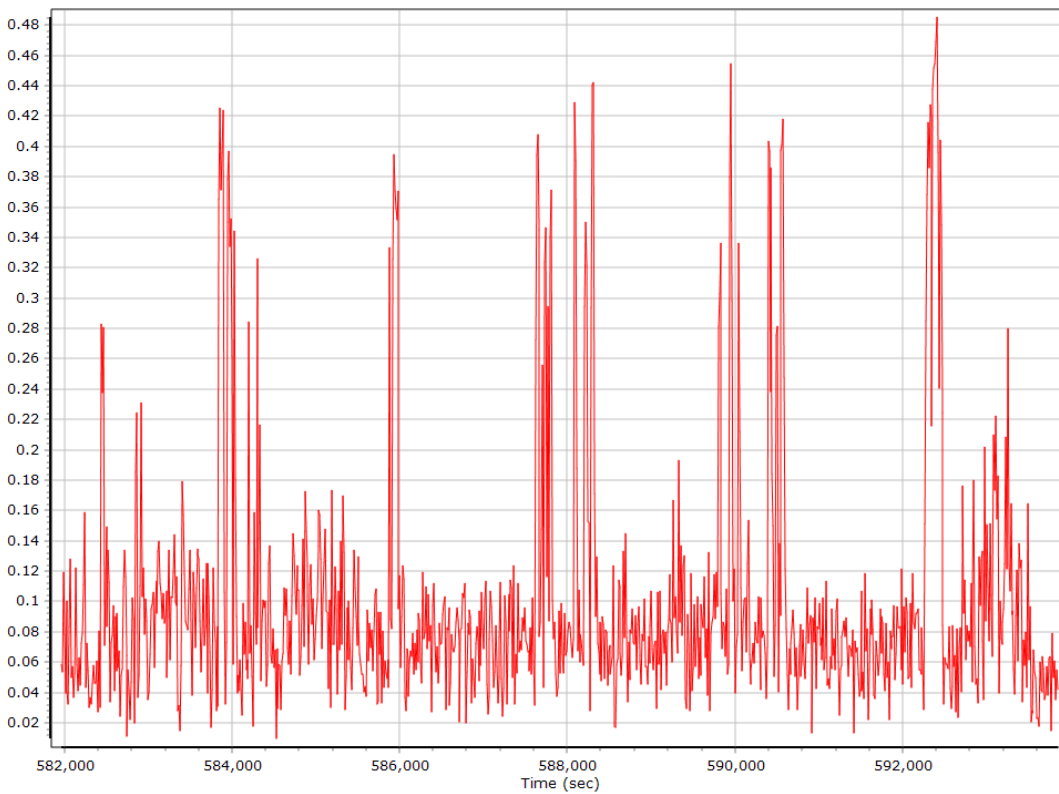
Ground Speed



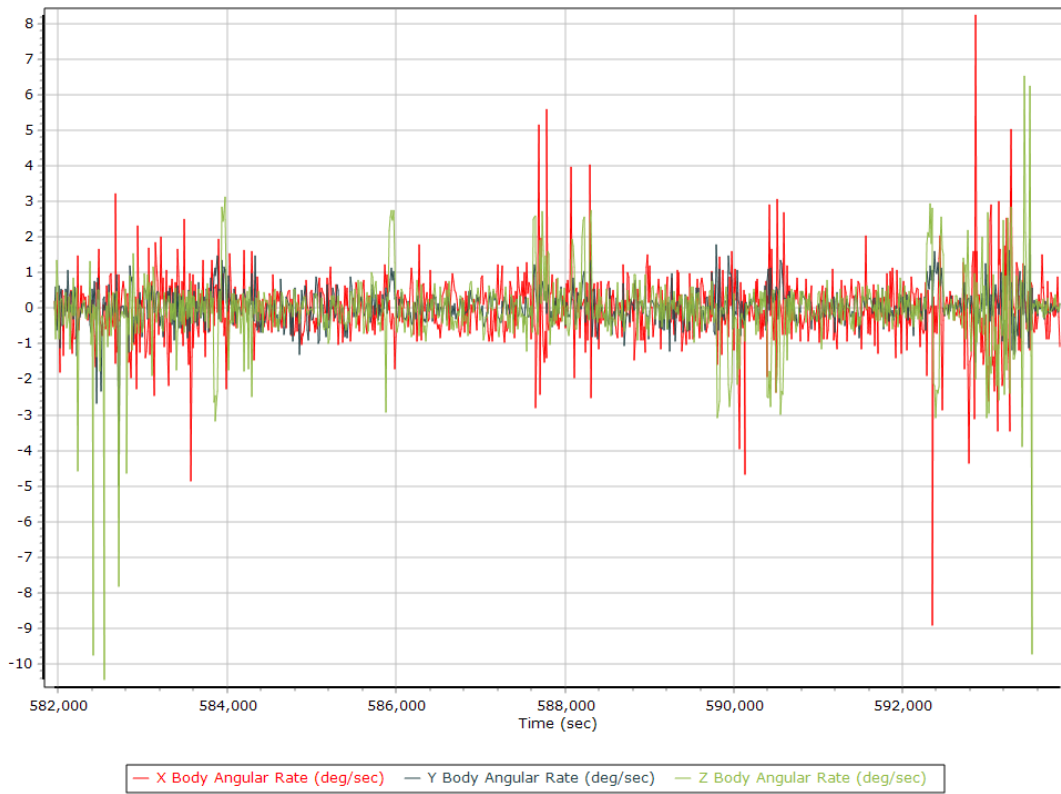
Body Acceleration



Total Body Acceleration



Body Angular Rate

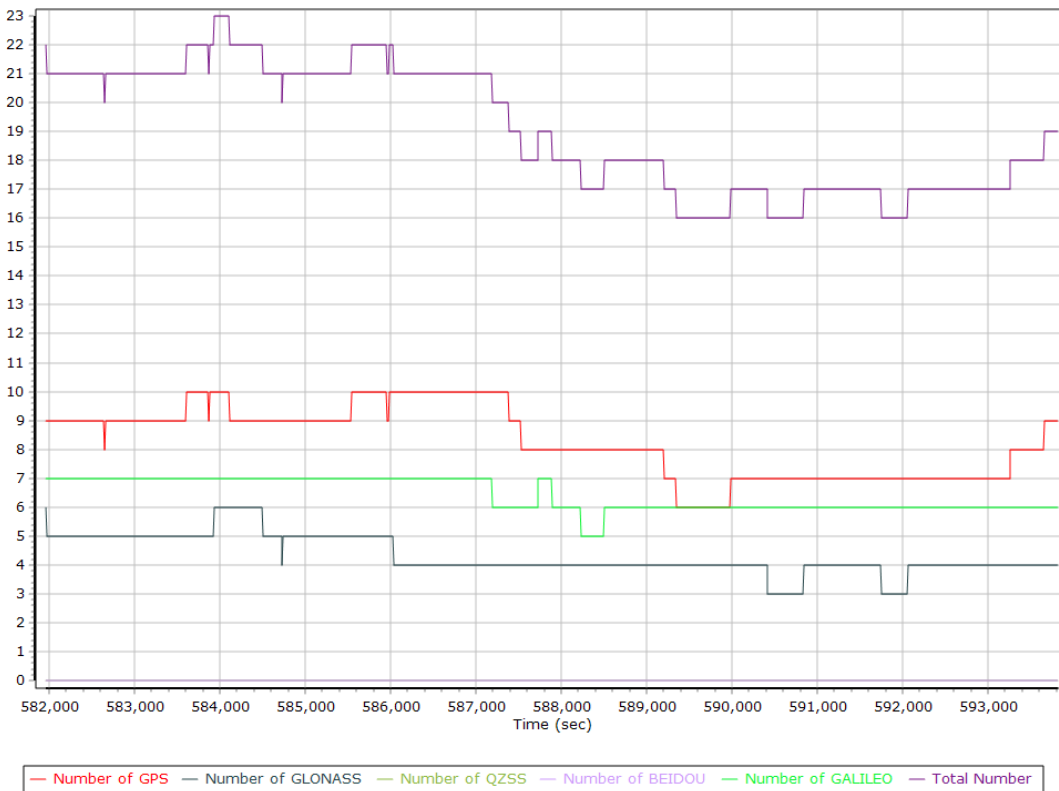


GNSS QC

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	3	6	4
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	16	23	19
PDOP	1.04	1.41	1.21
QC Solution Gaps	0.00	0.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	12283.00	0.00	0.00
Percentage	100.00	0.00	0.00

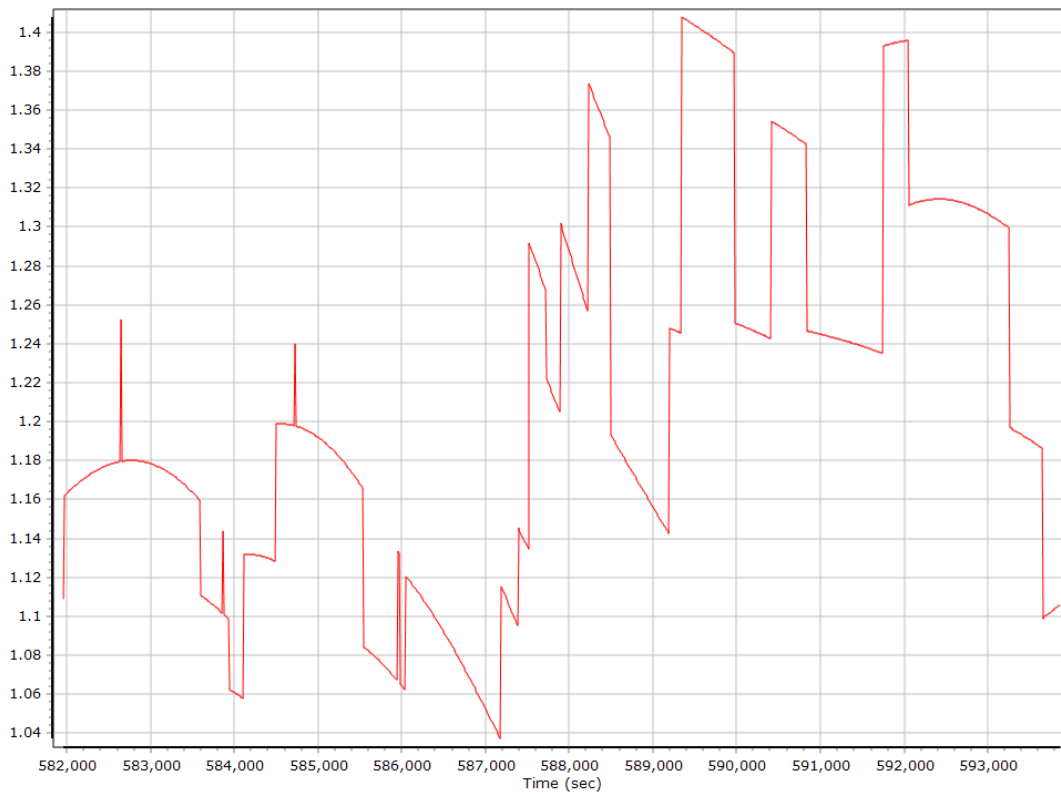
Num SVs in solution



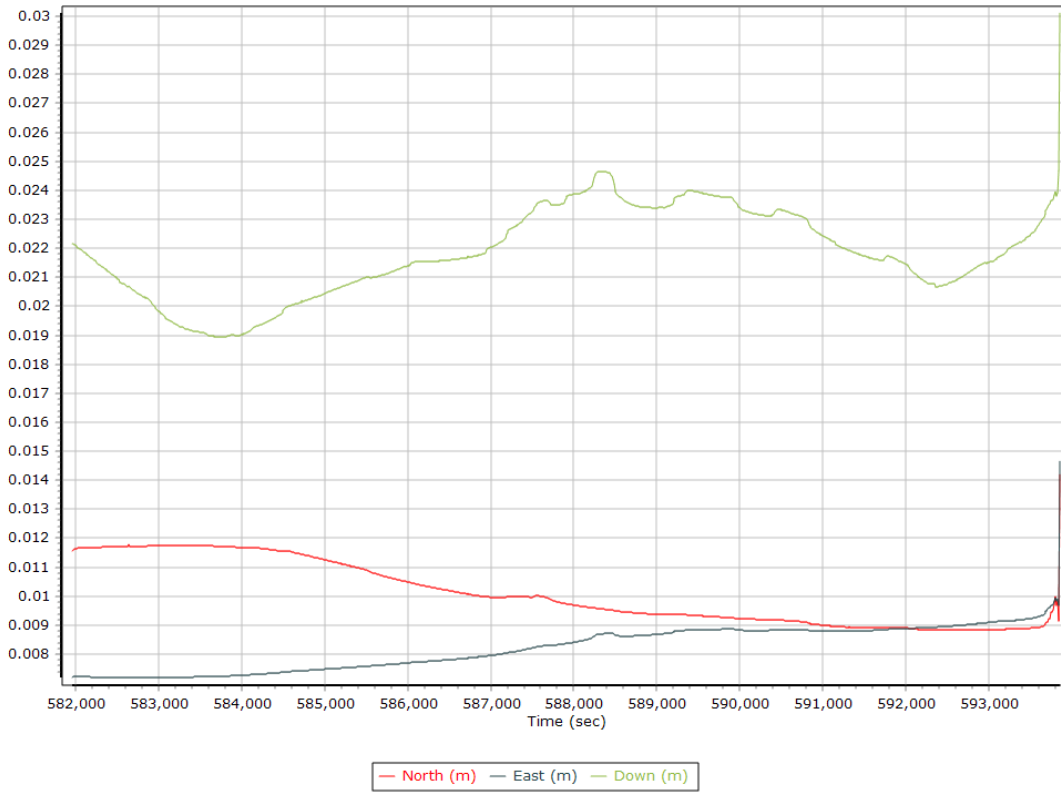
Forward/Reverse Separation



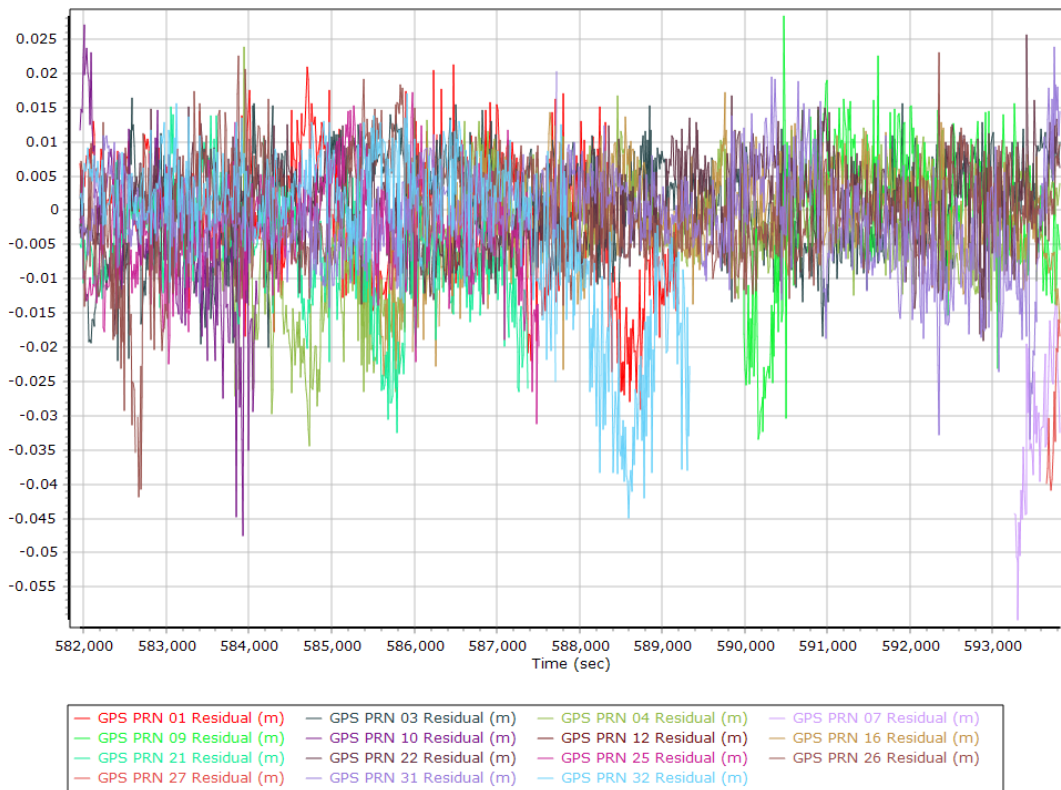
PDOP



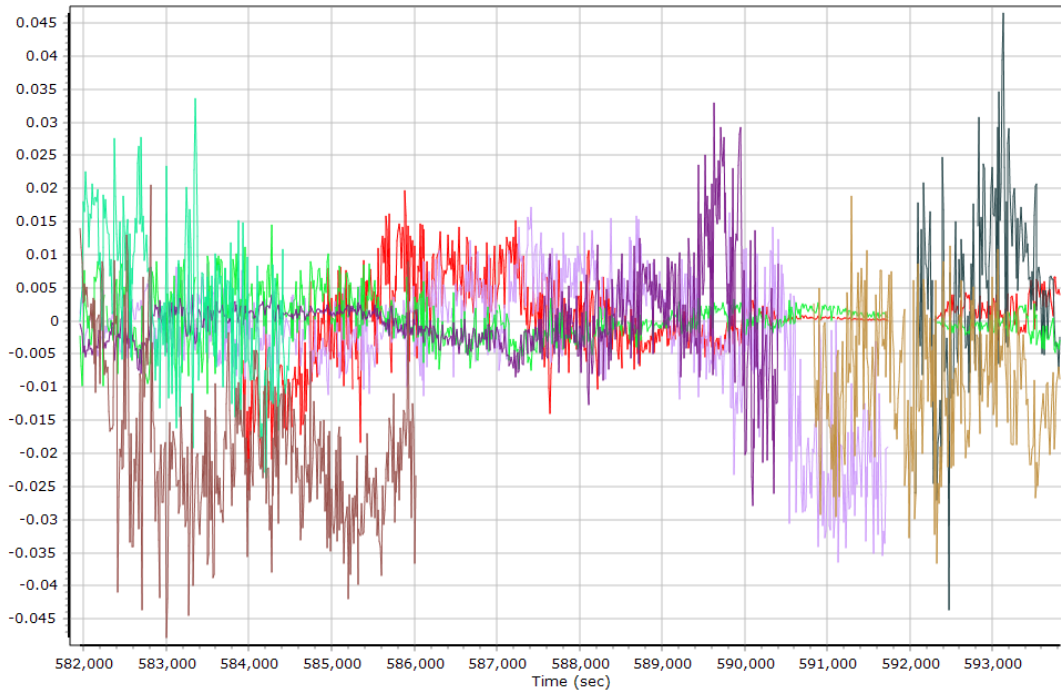
Estimated Position Accuracy



GPS Residuals

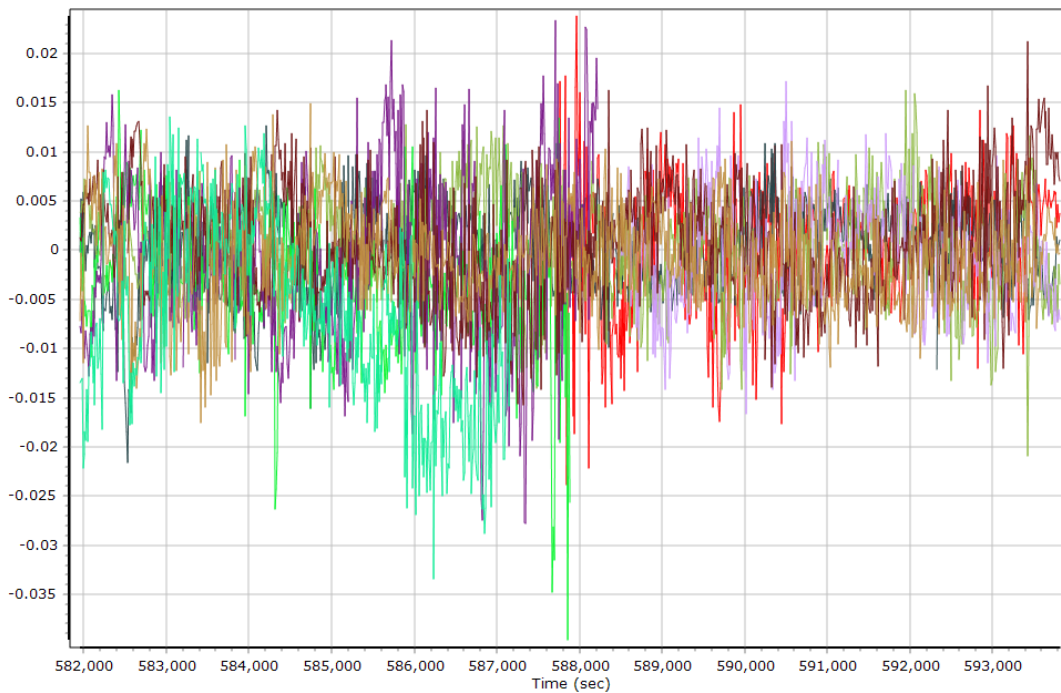


GLONASS Residuals



- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GLONASS 01 Residual (m) | GLONASS 02 Residual (m) | GLONASS 06 Residual (m) | GLONASS 07 Residual (m) |
| GLONASS 08 Residual (m) | GLONASS 09 Residual (m) | GLONASS 10 Residual (m) | GLONASS 12 Residual (m) |
| GLONASS 16 Residual (m) | GLONASS 22 Residual (m) | GLONASS 23 Residual (m) | GLONASS 24 Residual (m) |

GALILEO Residuals



- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GALILEO 02 Residual (m) | GALILEO 03 Residual (m) | GALILEO 05 Residual (m) | GALILEO 08 Residual (m) |
| GALILEO 09 Residual (m) | GALILEO 15 Residual (m) | GALILEO 24 Residual (m) | GALILEO 25 Residual (m) |
| GALILEO 31 Residual (m) | | | |

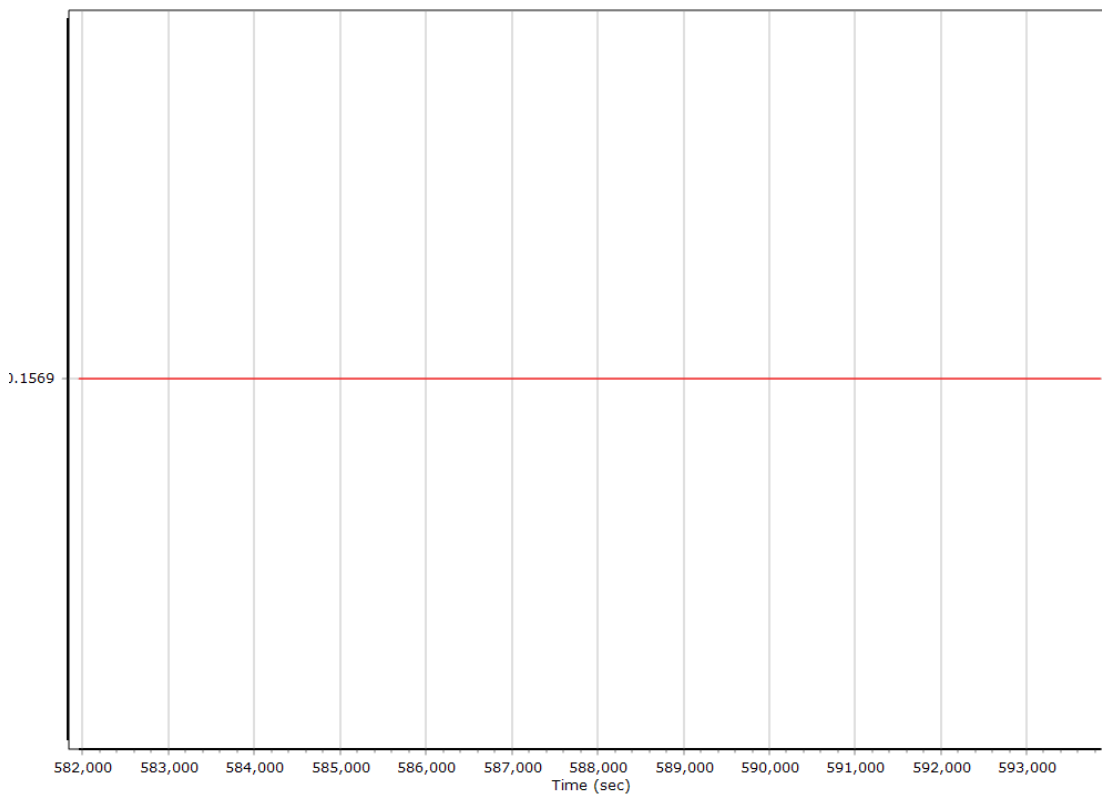
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	581527.000 (12/19/2020 17:32:07)		
Processing end time	593866.000 (12/19/2020 20:57:46)		
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)	0.157	-0.150	-1.090
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

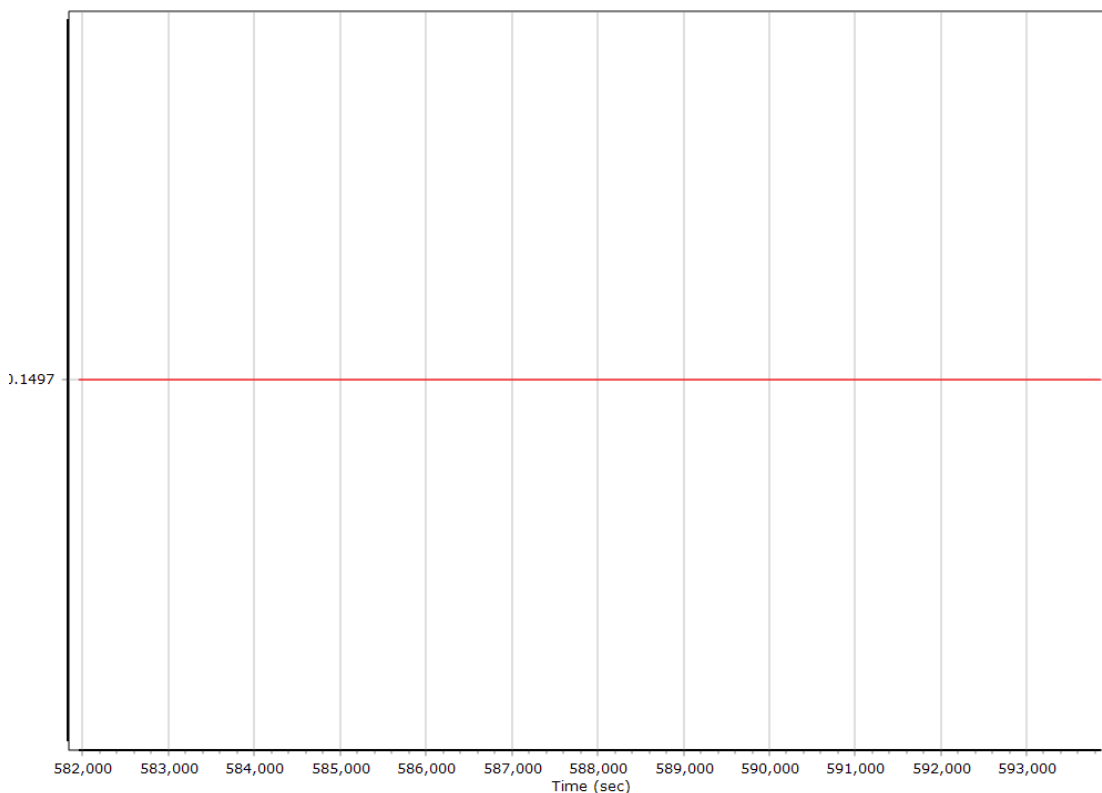
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

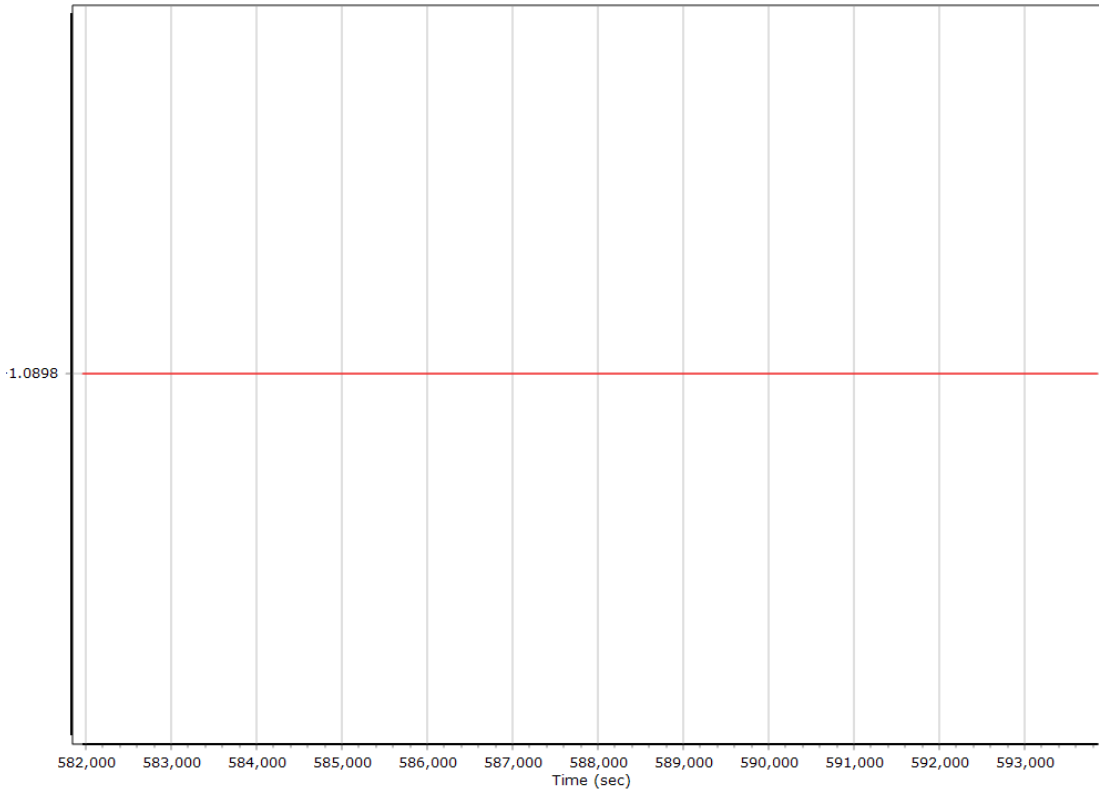
X Reference-Primary GNSS Lever Arm (m)



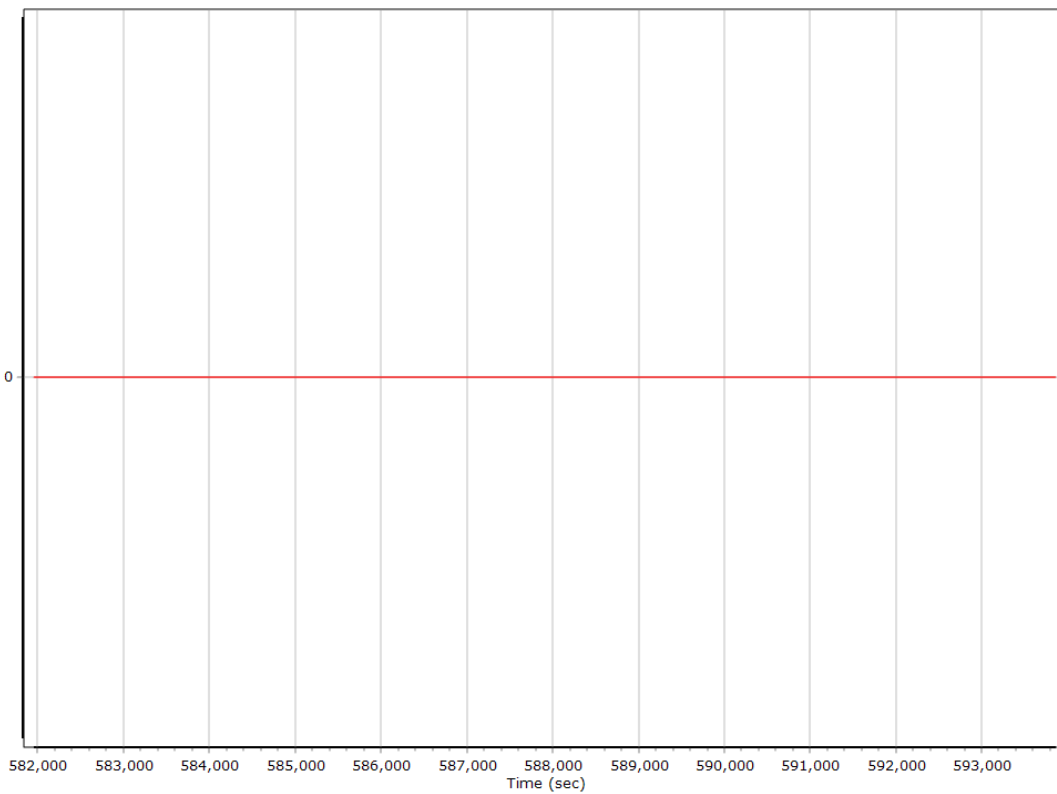
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



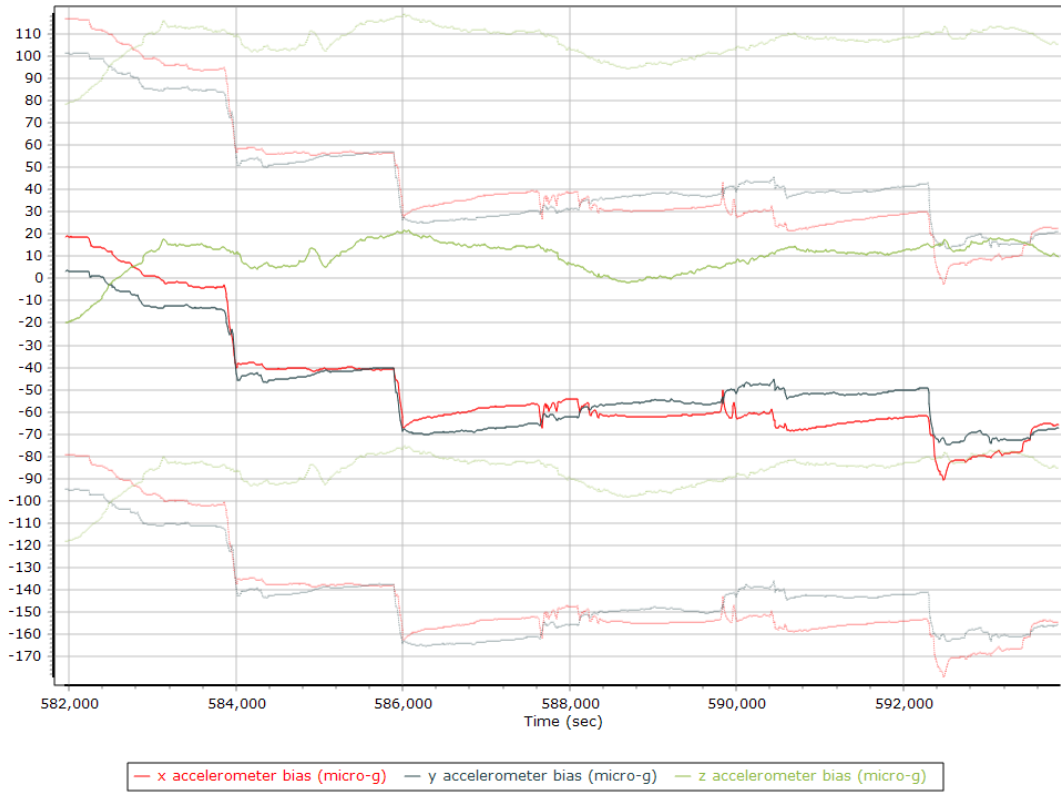
Reference-Primary GNSS Lever Arm Figure of Merit



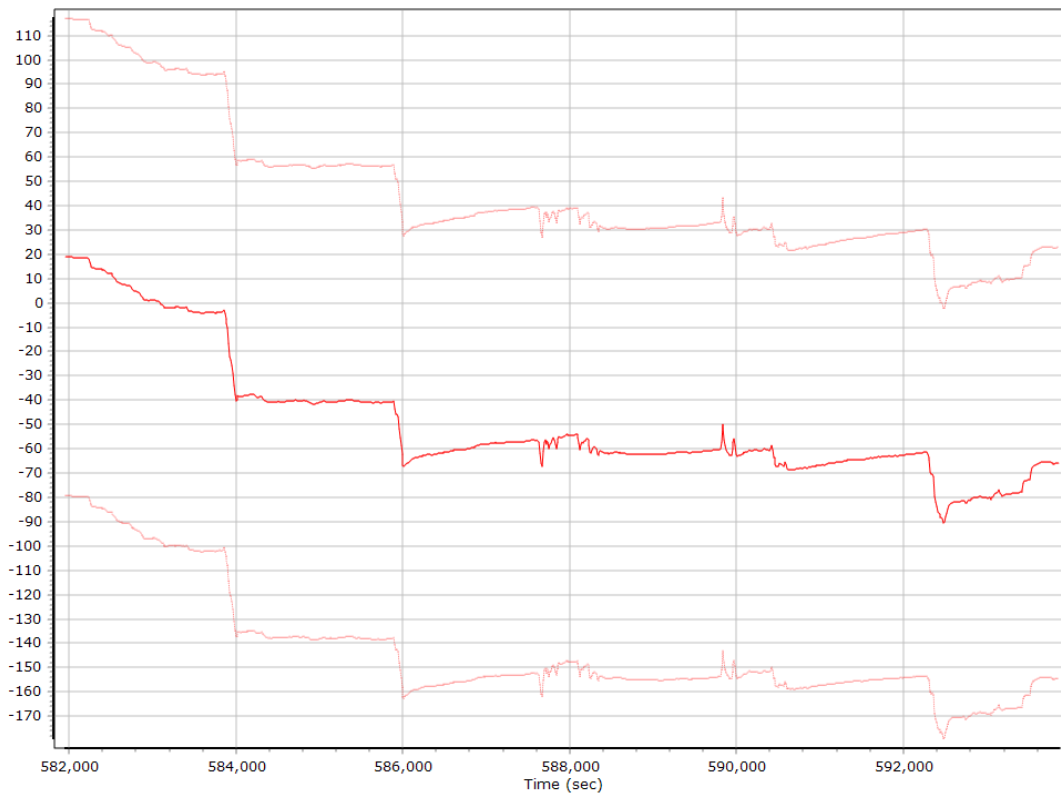
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

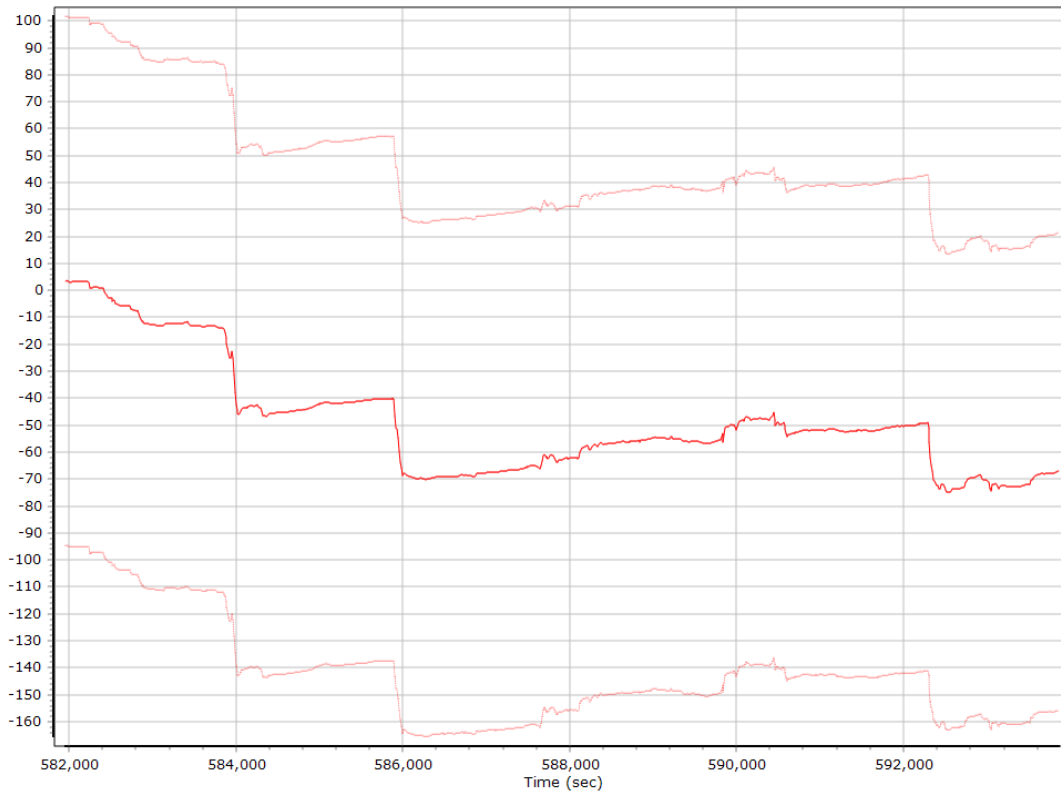
Accelerometer Bias (micro-g)



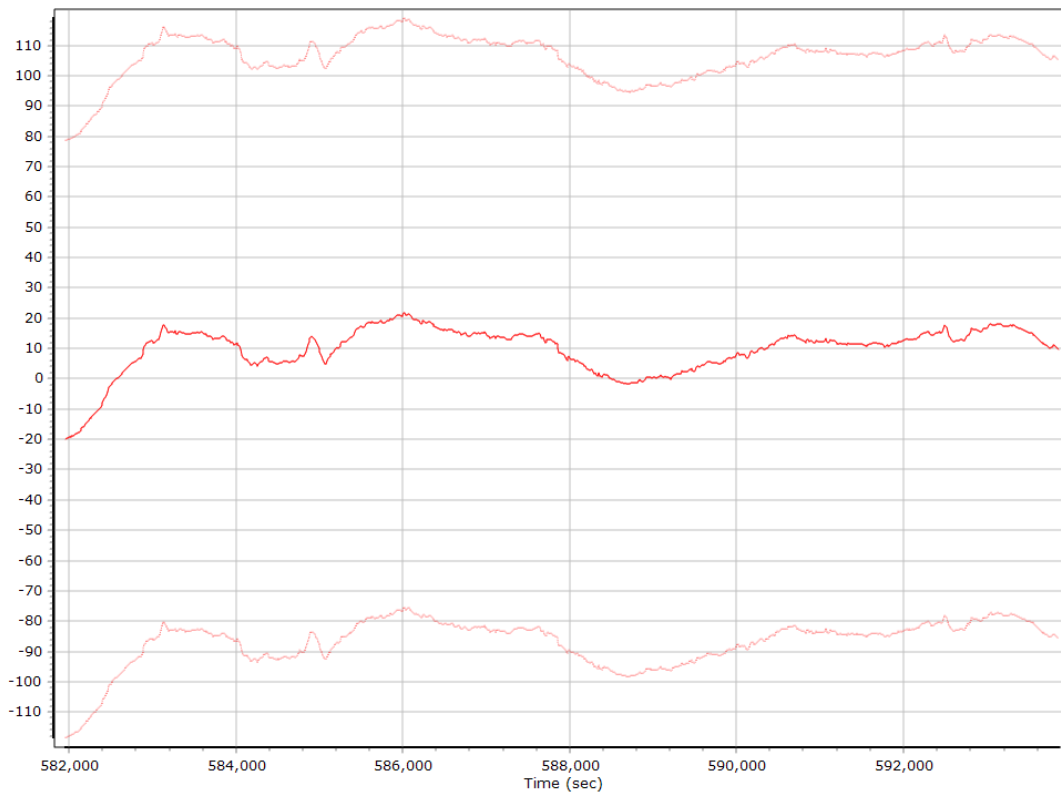
X Accelerometer Bias (micro-g)



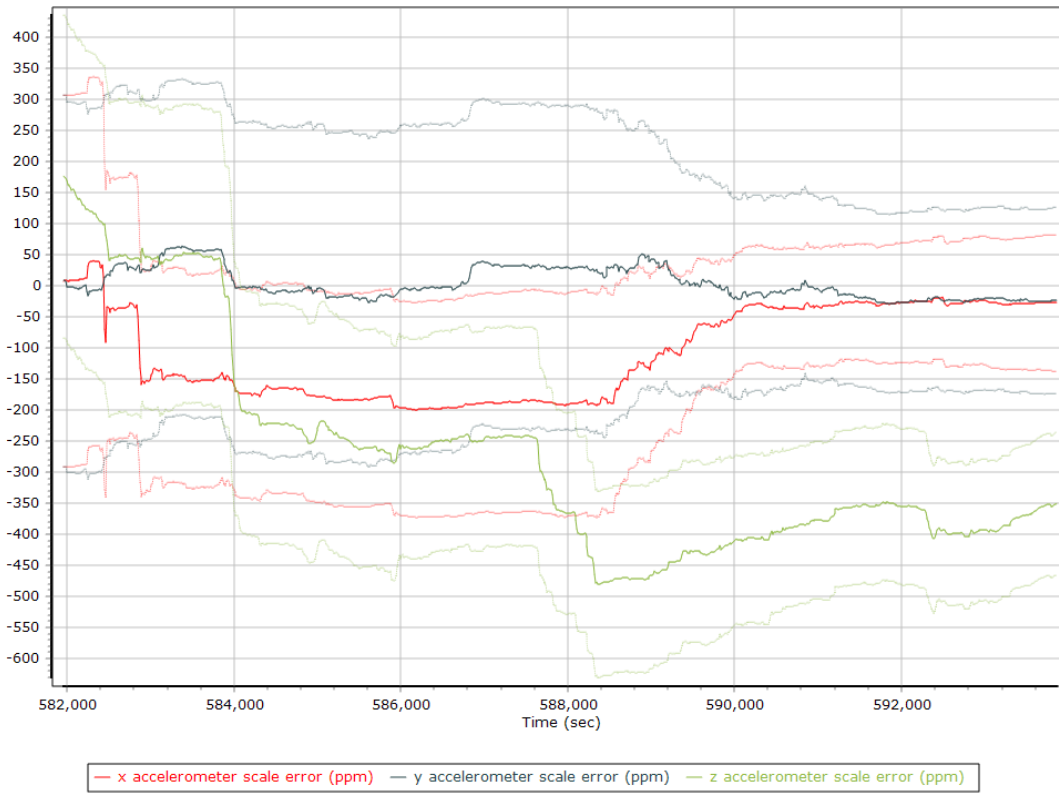
Y Accelerometer Bias (micro-g)



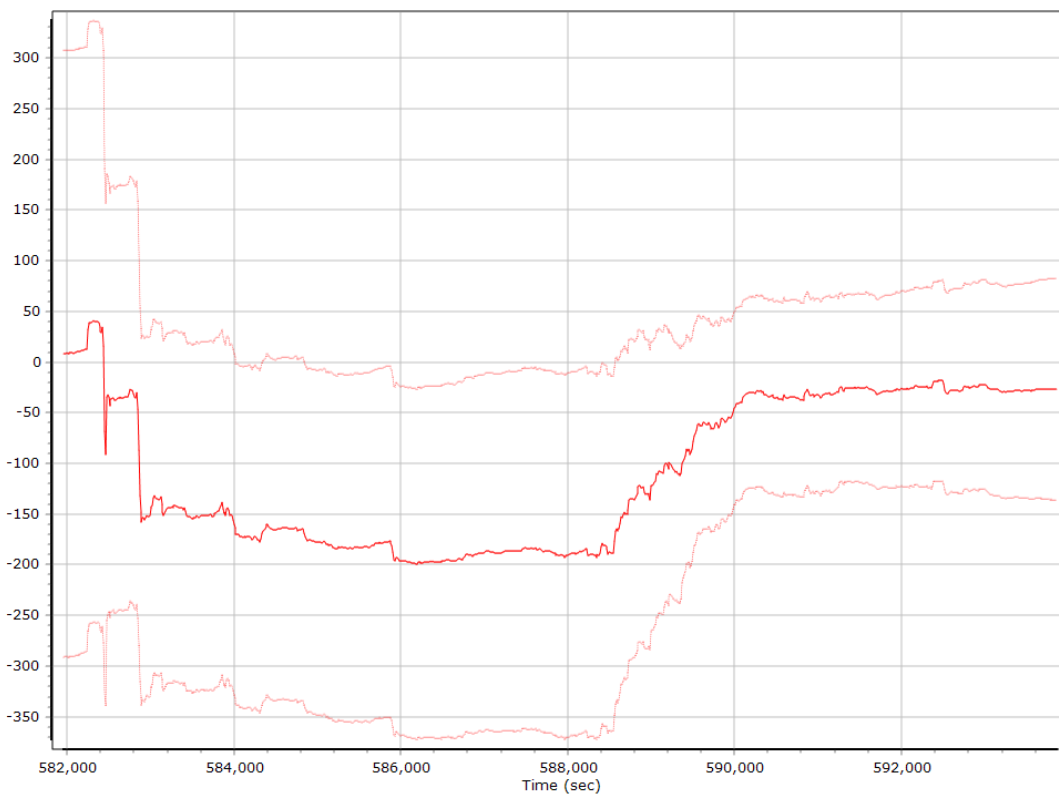
Z Accelerometer Bias (micro-g)



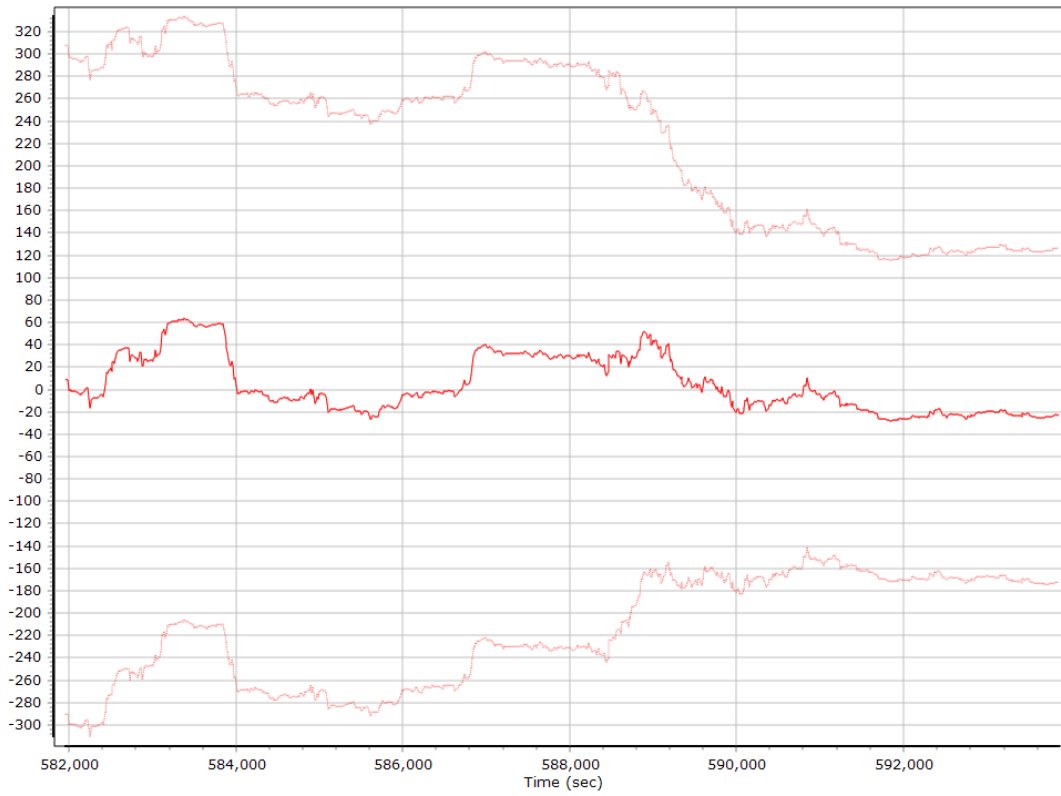
Accelerometer Scale Error (ppm)



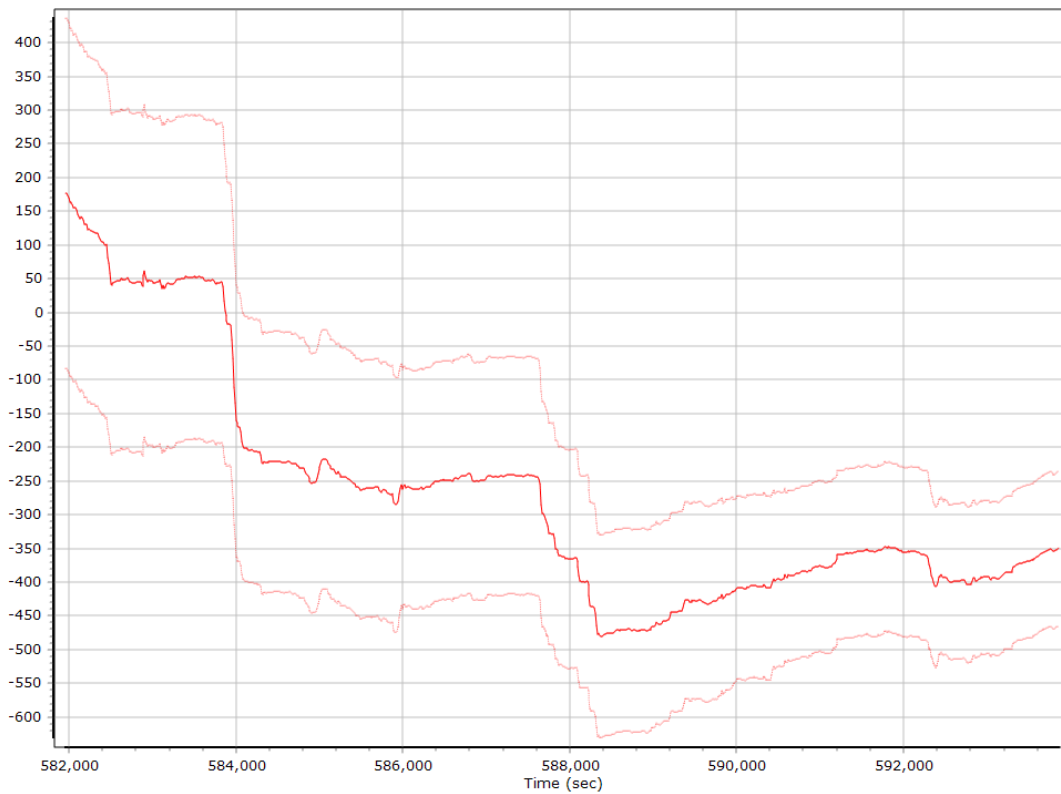
X Accelerometer Scale Error (ppm)



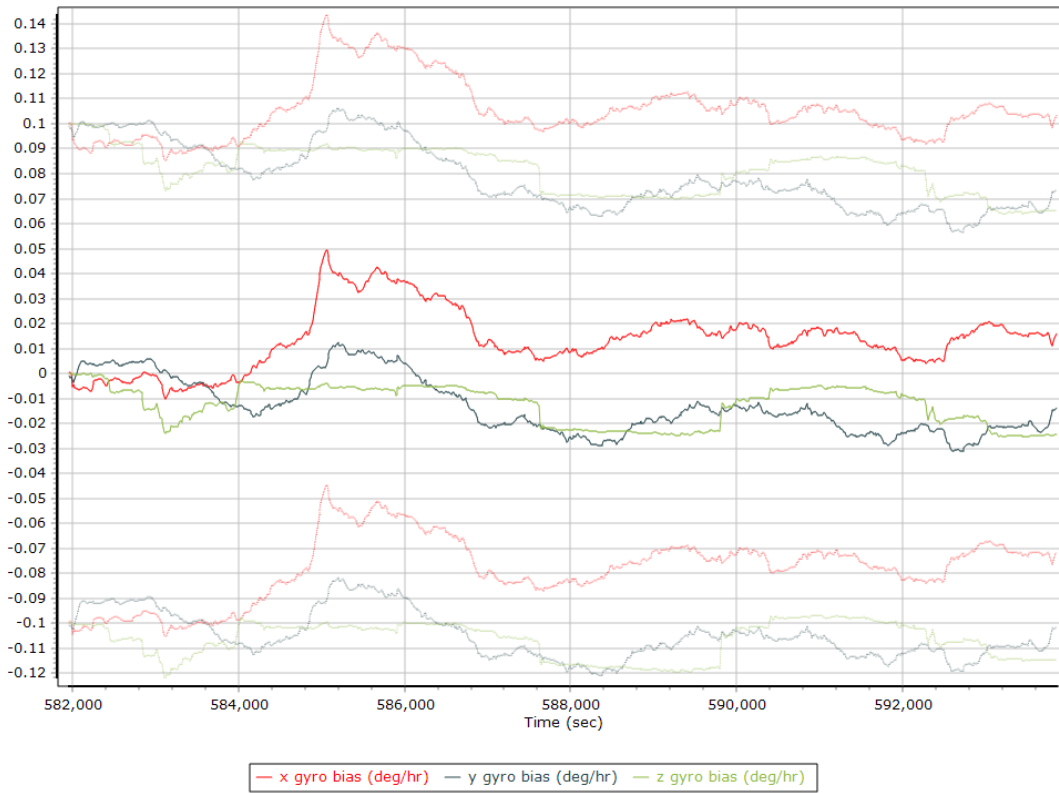
Y Accelerometer Scale Error (ppm)



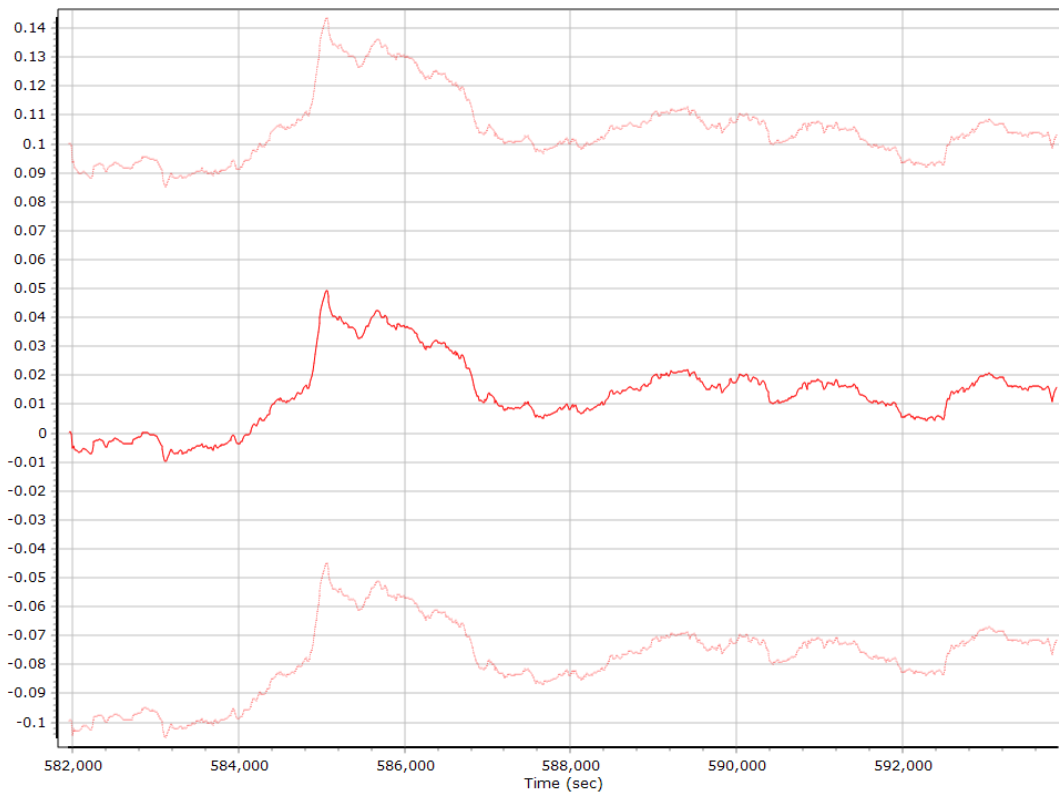
Z Accelerometer Scale Error (ppm)



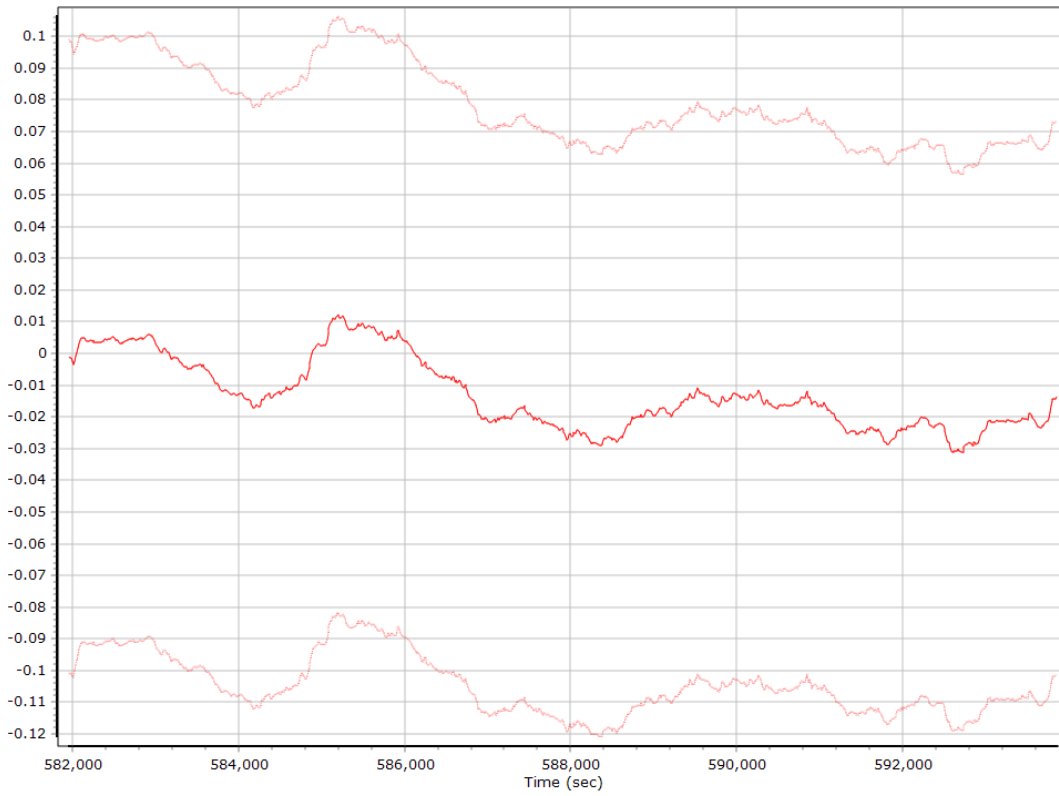
Gyro Bias (deg/h)



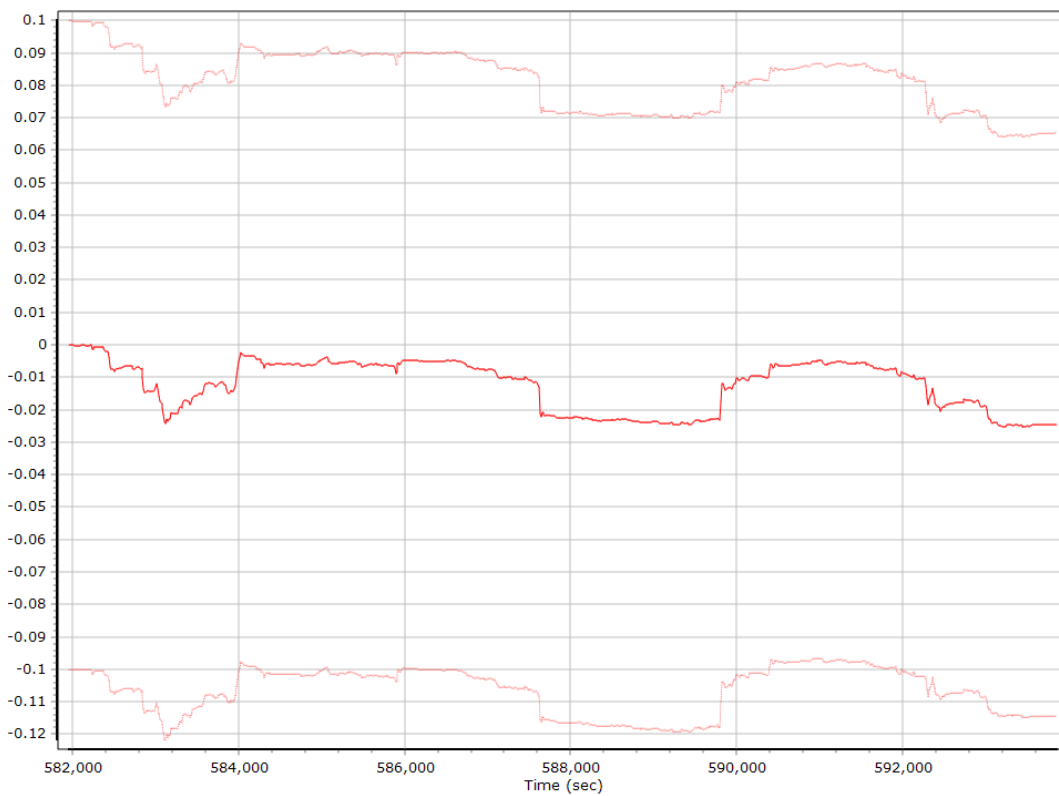
X Gyro Bias (deg/h)



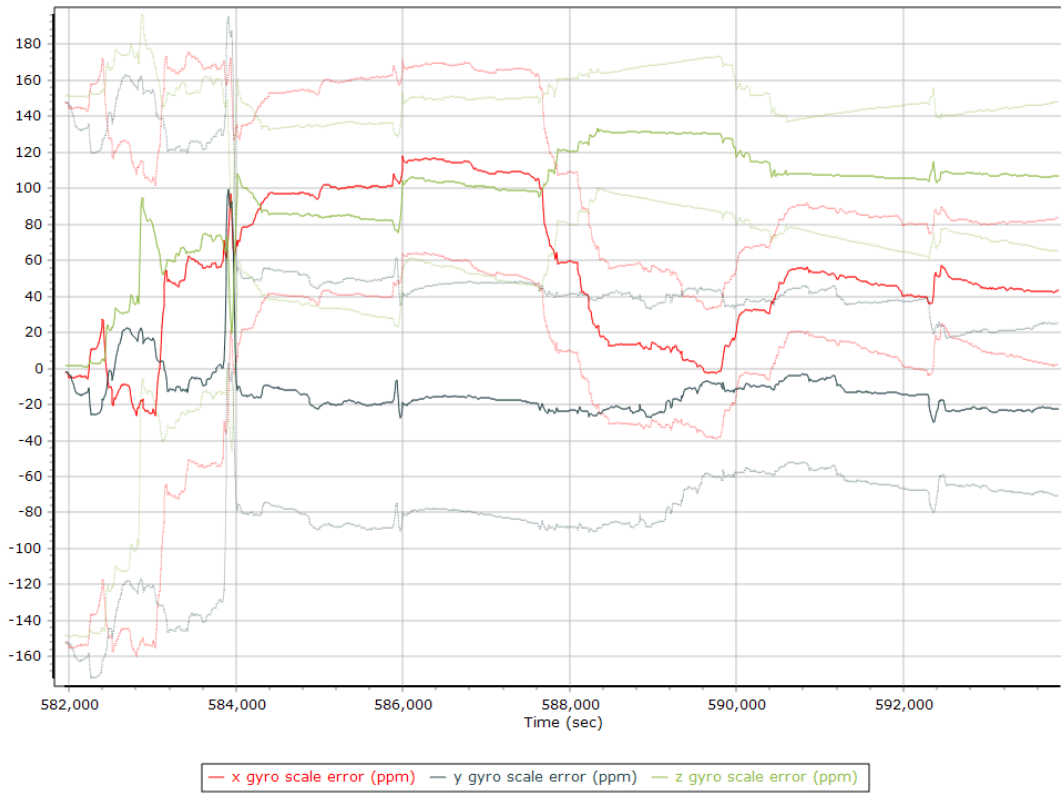
Y Gyro Bias (deg/h)



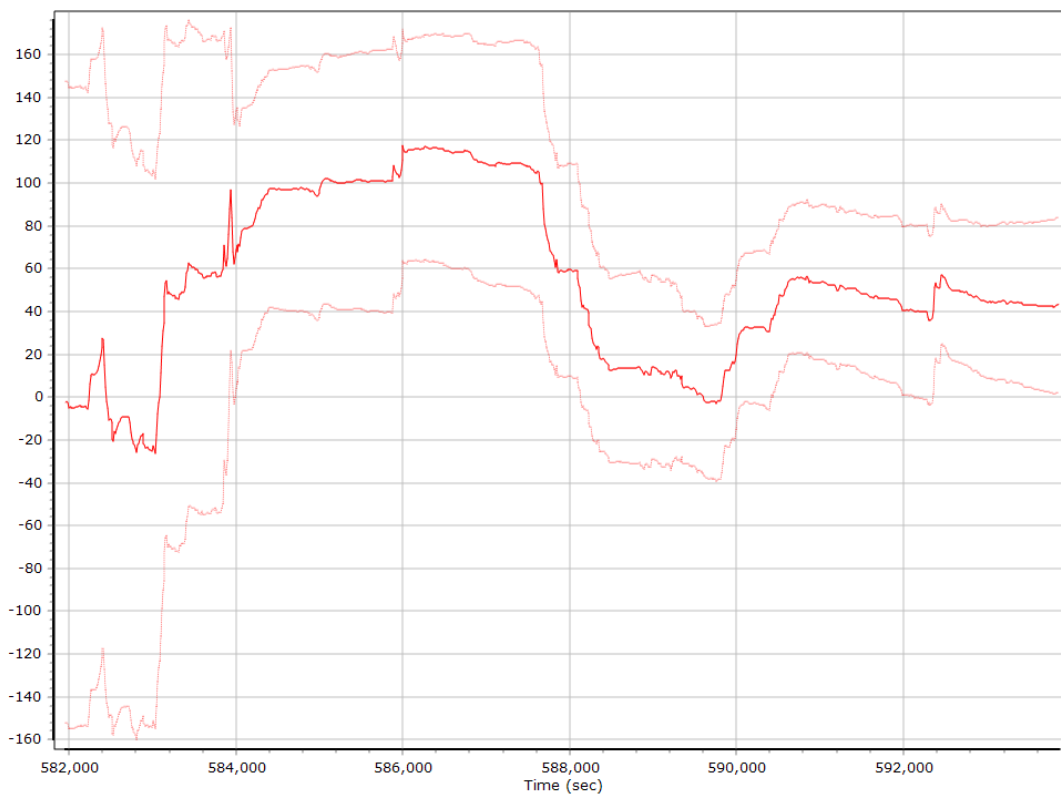
Z Gyro Bias (deg/h)



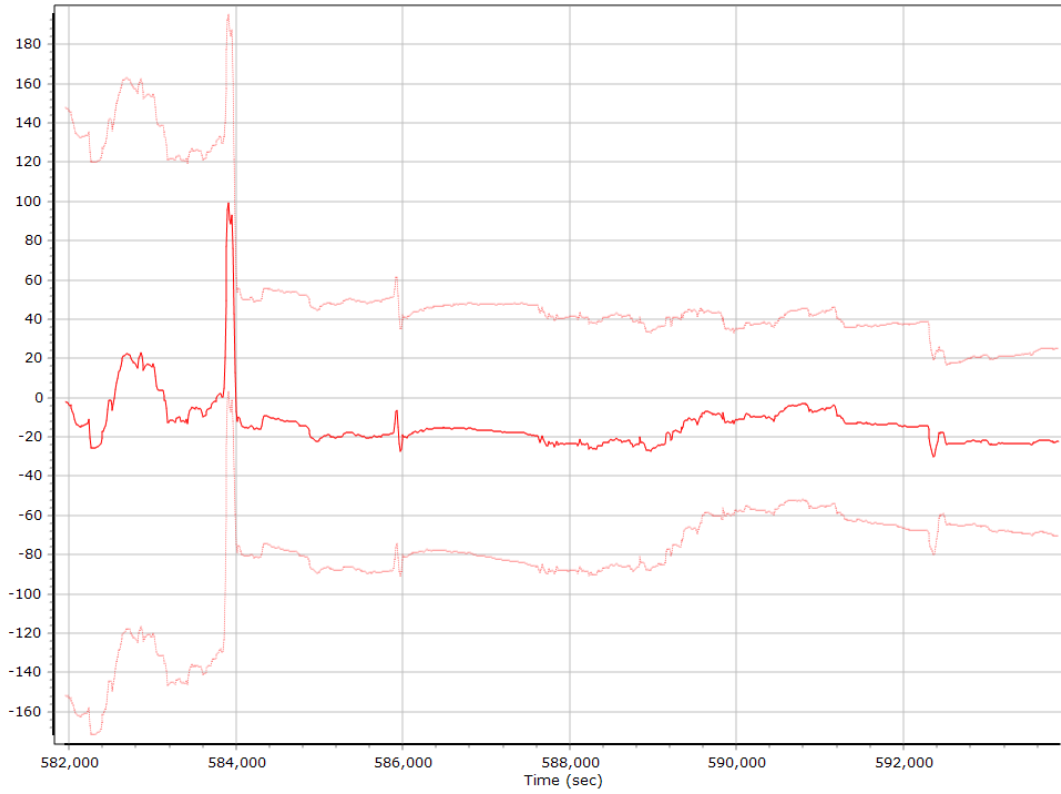
Gyro Scale Error (ppm)



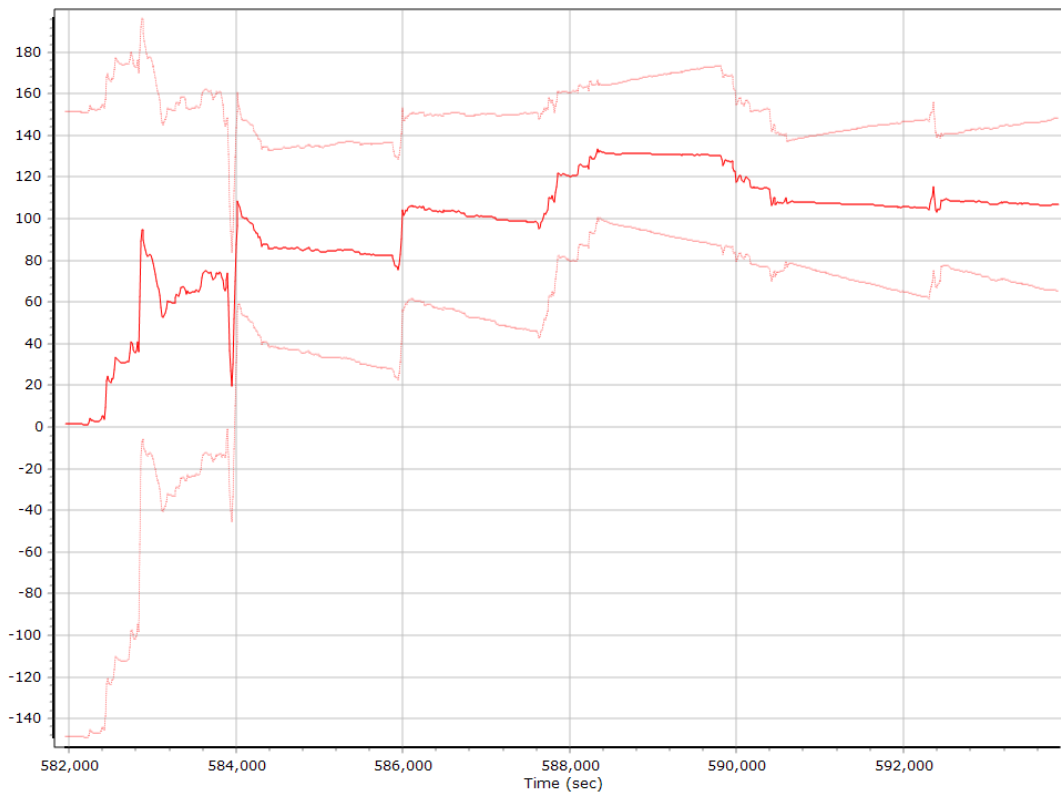
X Gyro Scale Error (ppm)



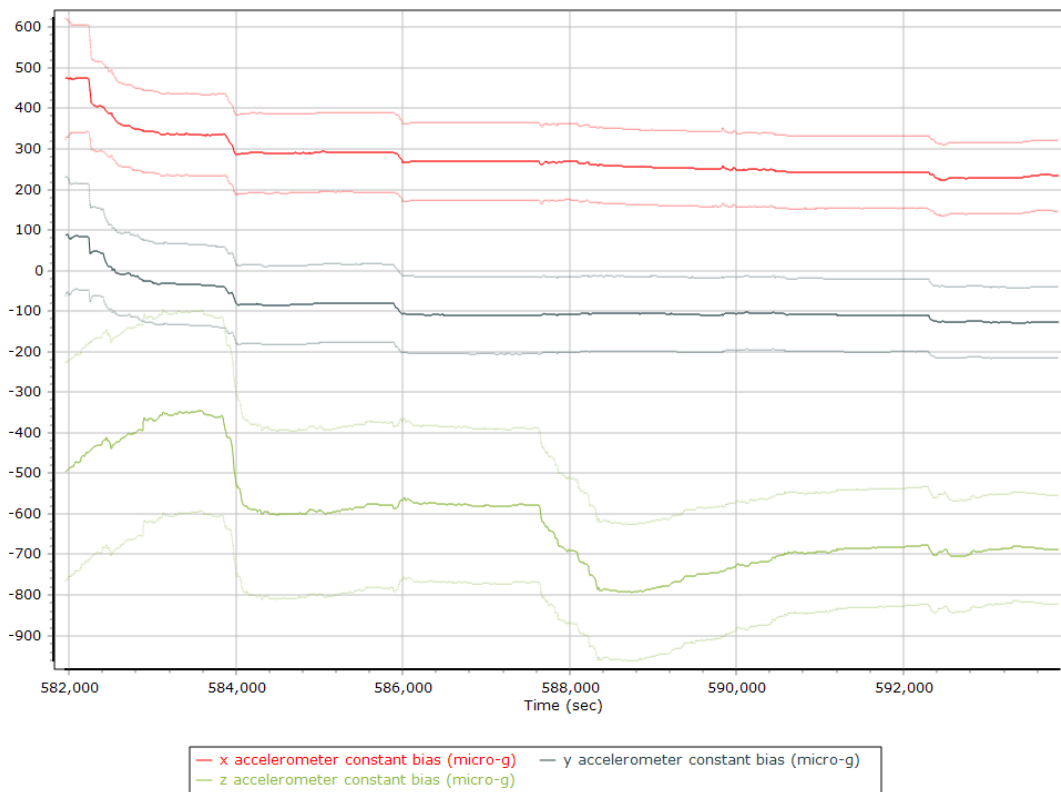
Y Gyro Scale Error (ppm)



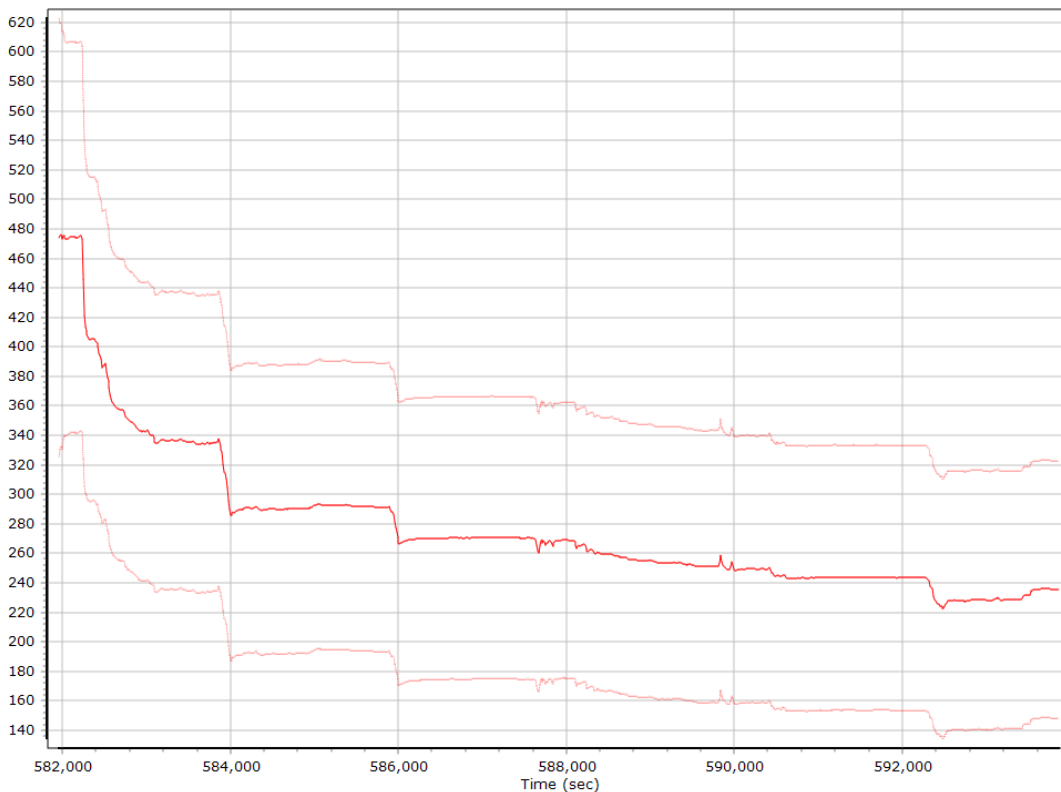
Z Gyro Scale Error (ppm)



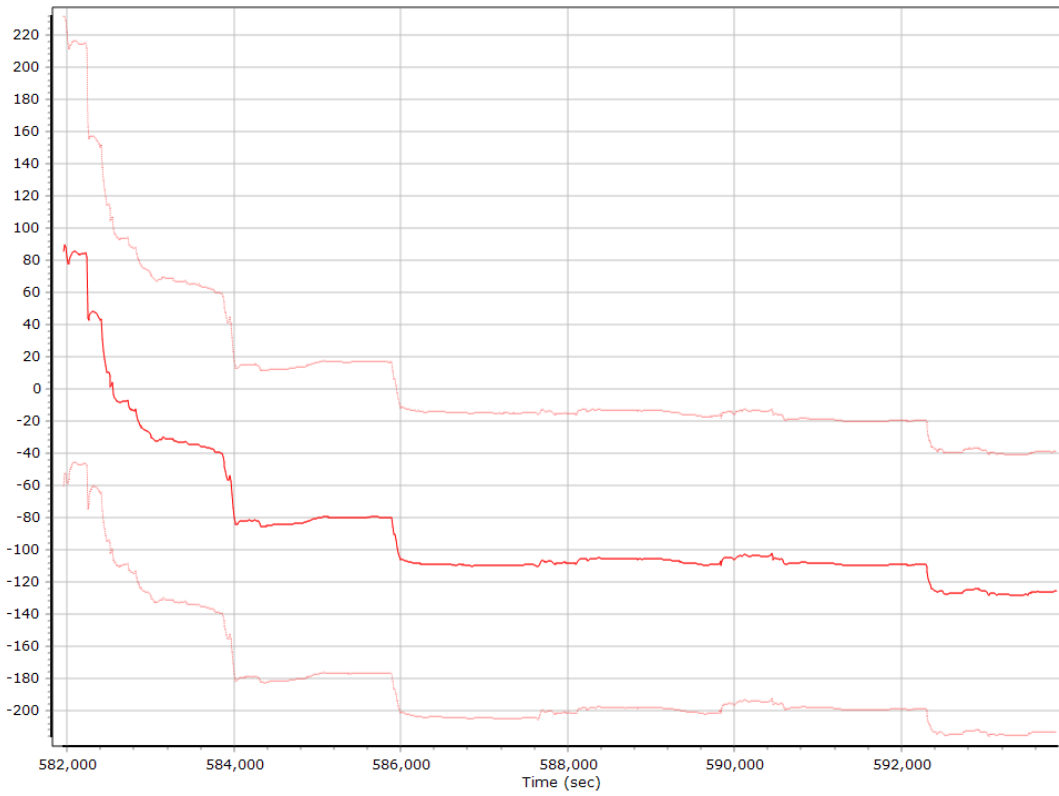
Forward Processed Estimated Constant Errors, Reference Frame Accelerometer Bias (micro-g)



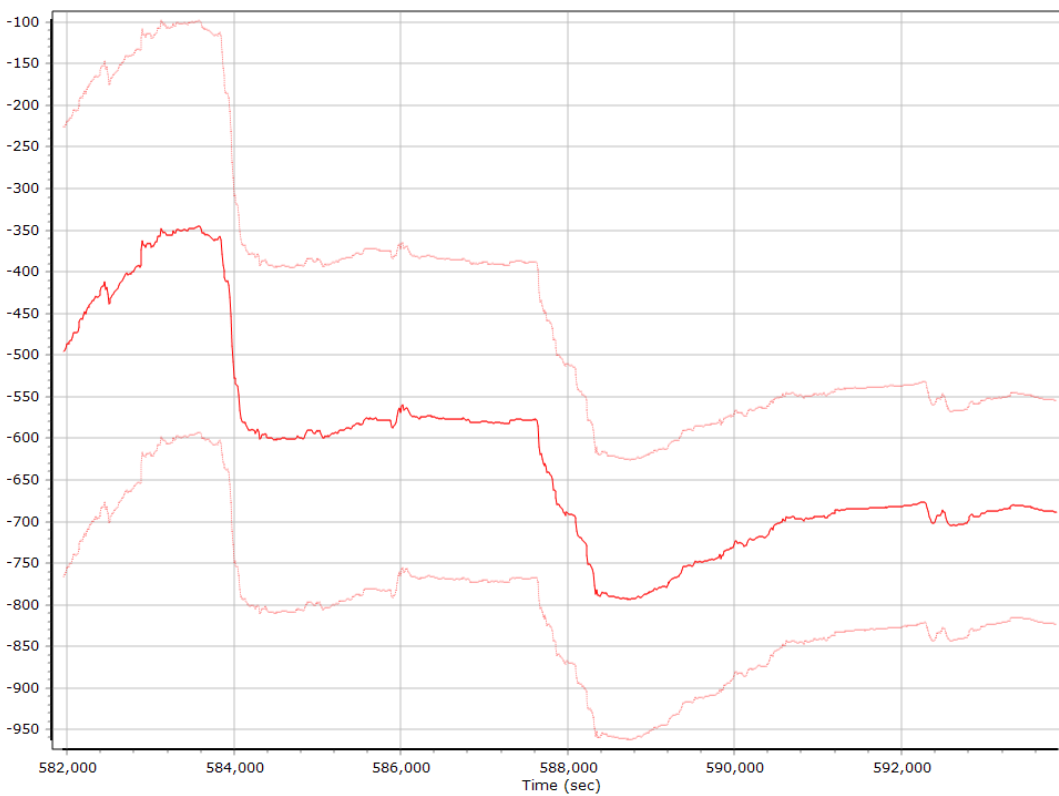
X Accelerometer Bias (micro-g)



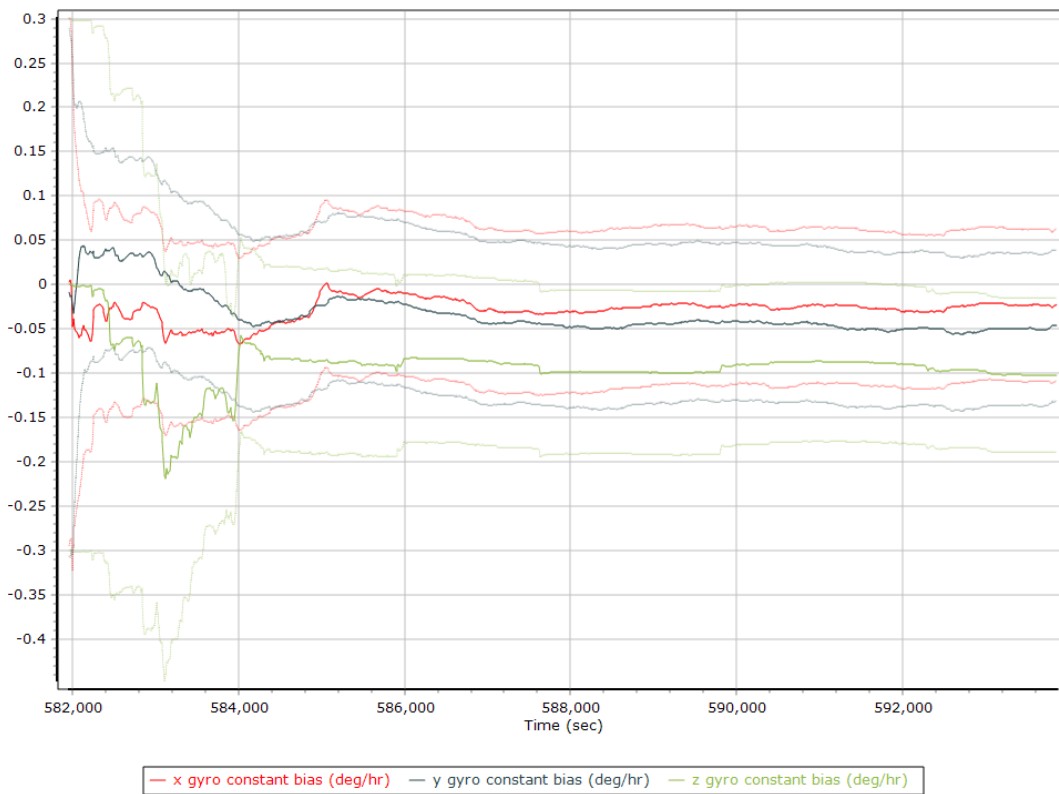
Y Accelerometer Bias (micro-g)



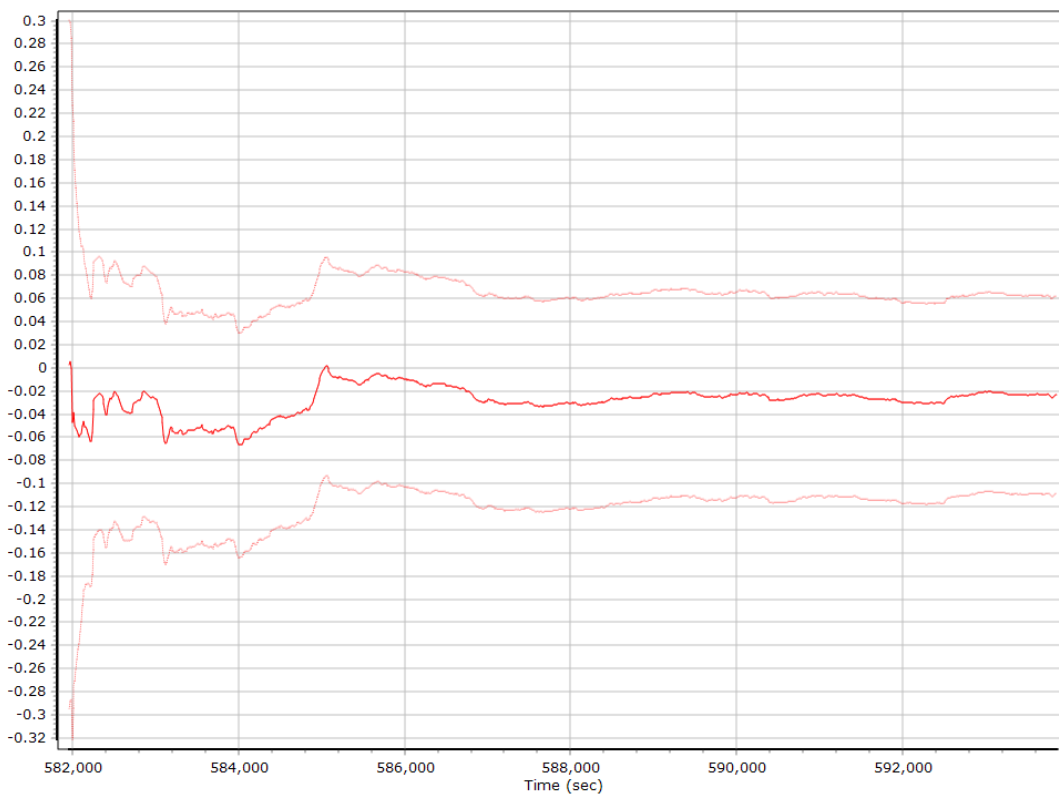
Z Accelerometer Bias (micro-g)



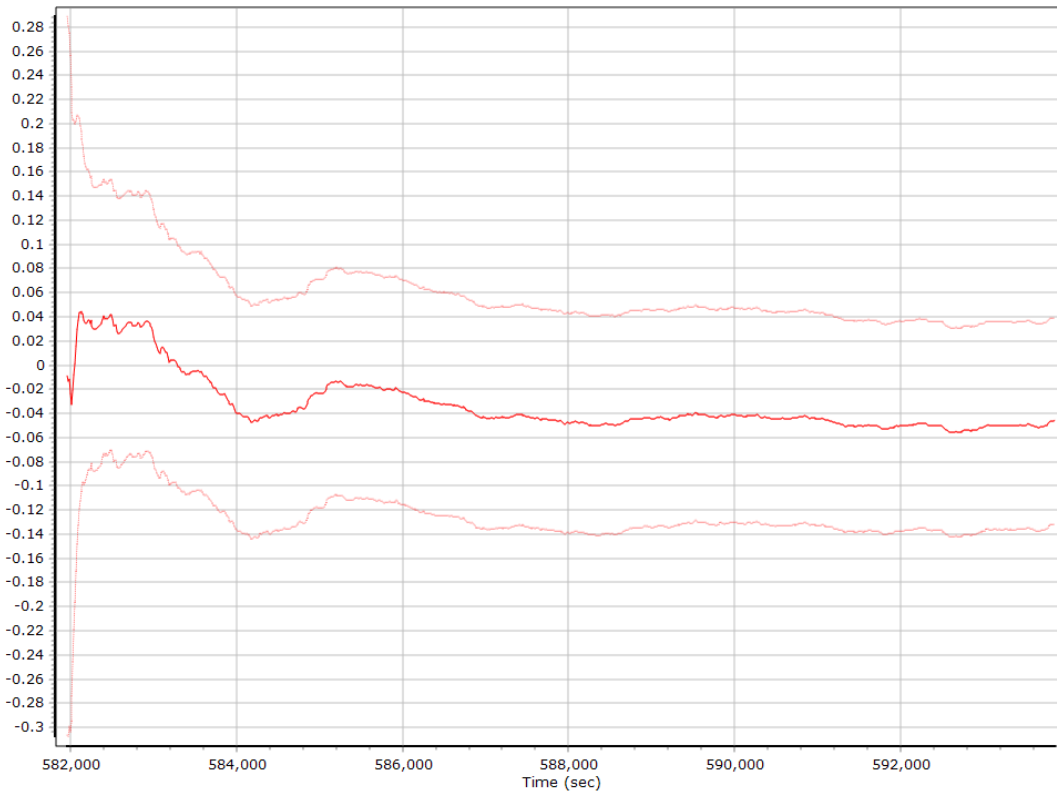
Gyro Bias (deg/h)



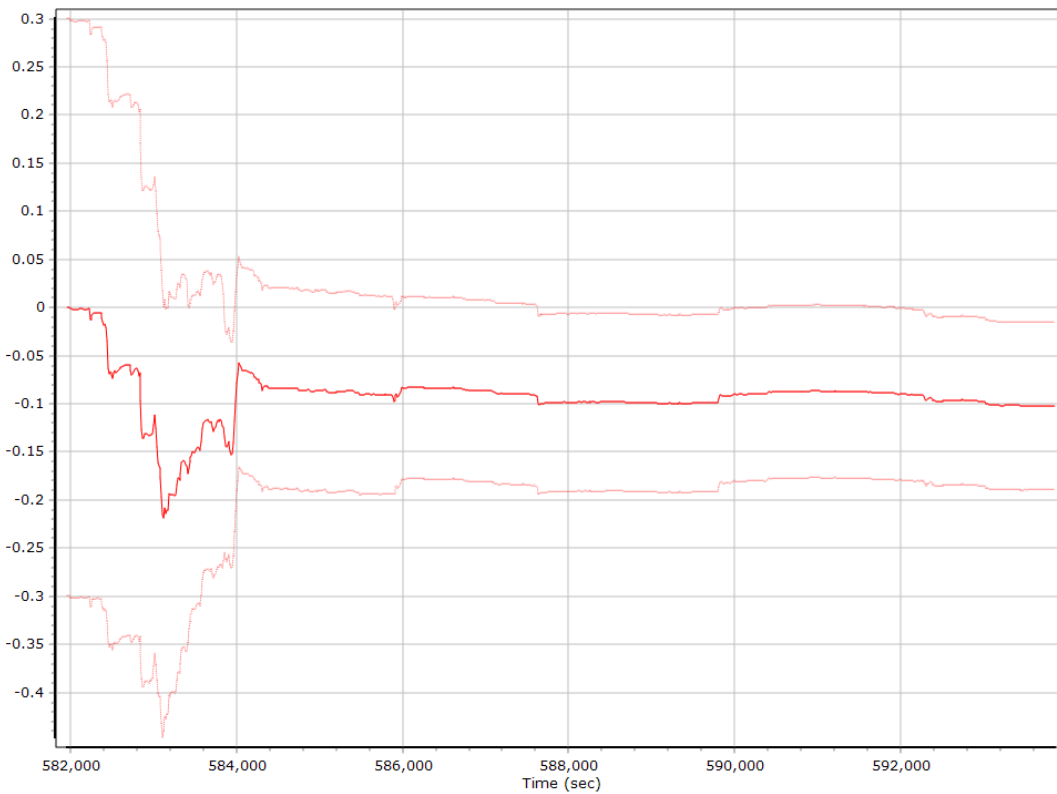
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)



Z Gyro Bias (deg/h)

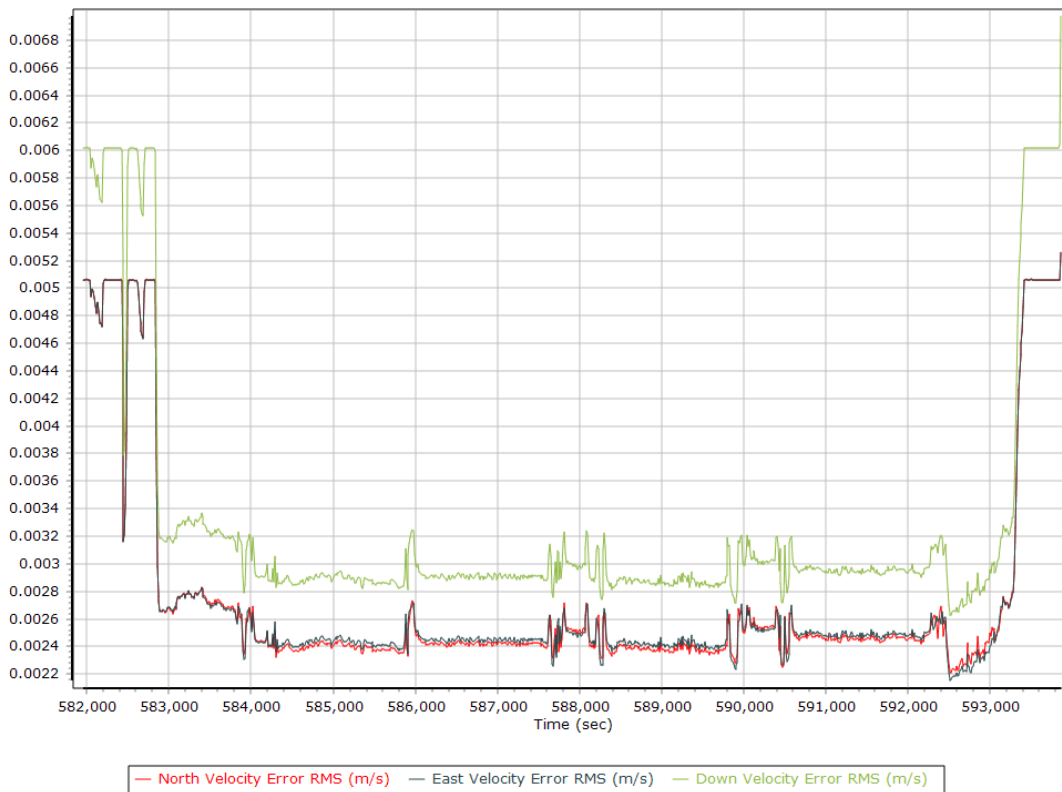


Smoothed Performance Metrics

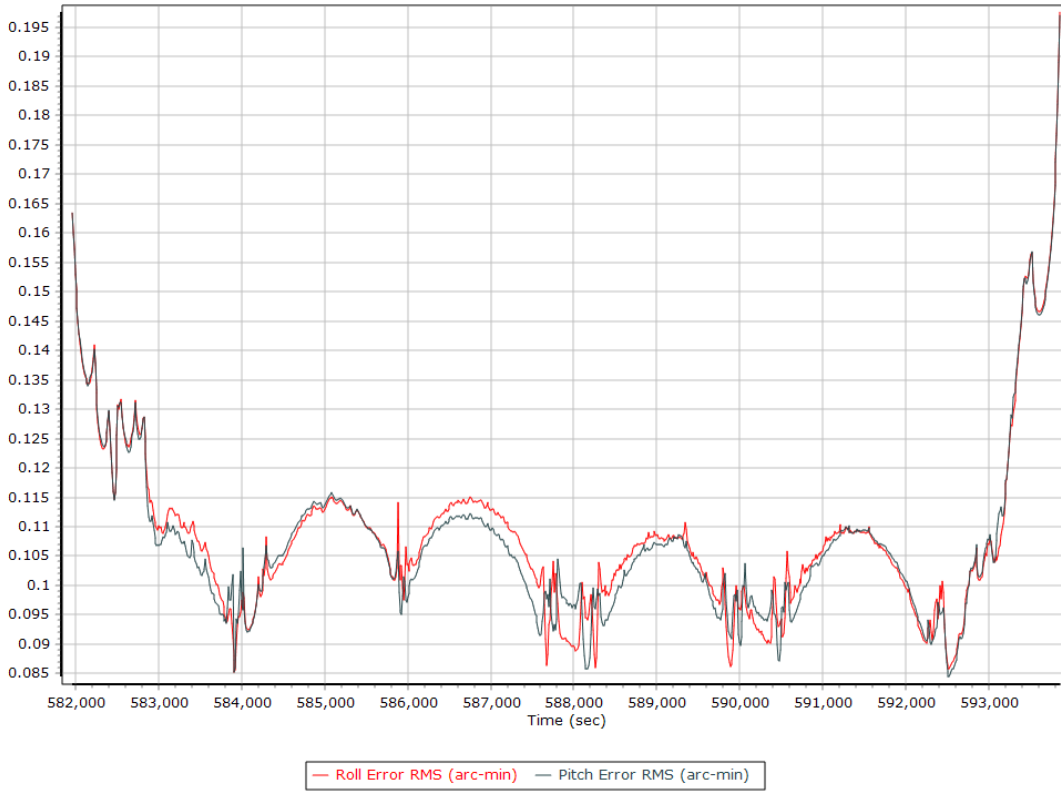
Position Error RMS (m)



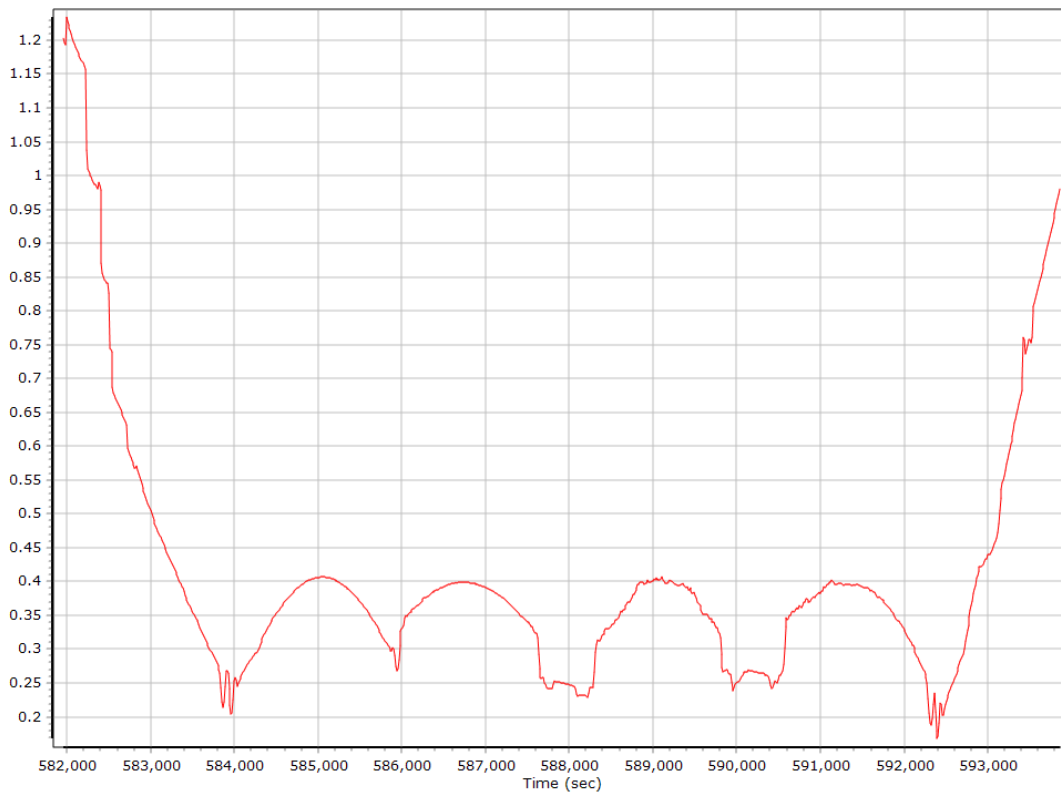
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

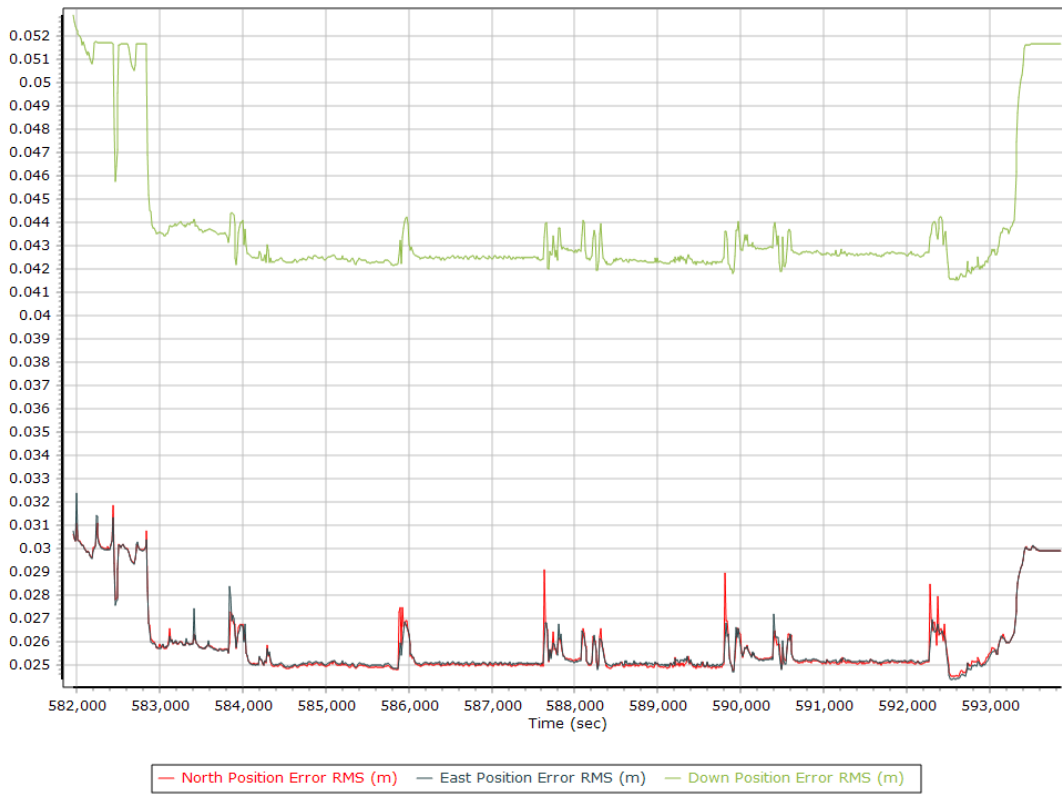


Heading Error RMS (arc-min)

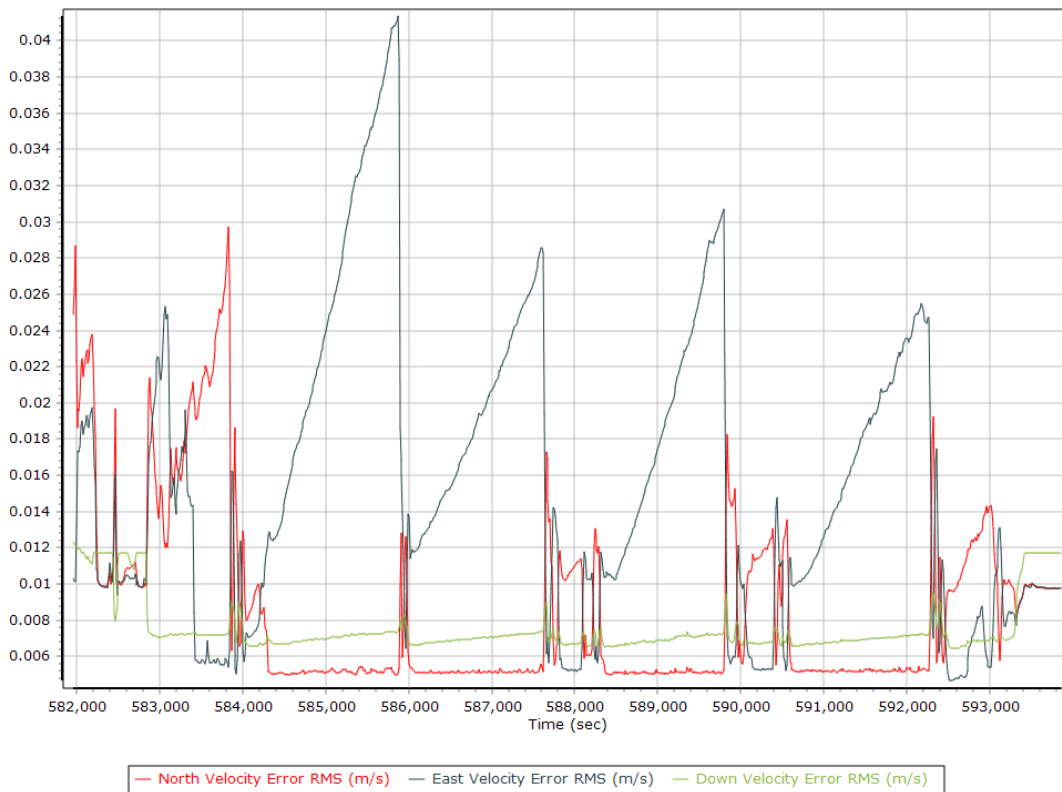


Forward Processed Performance Metrics

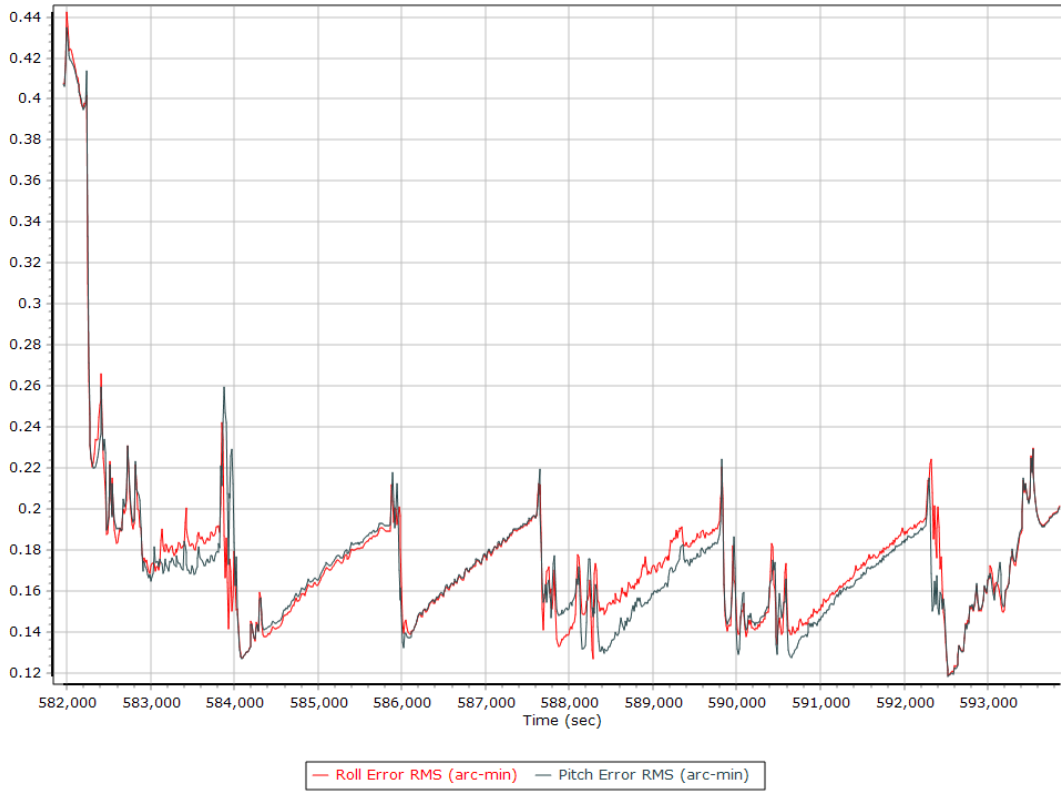
Position Error RMS (m)



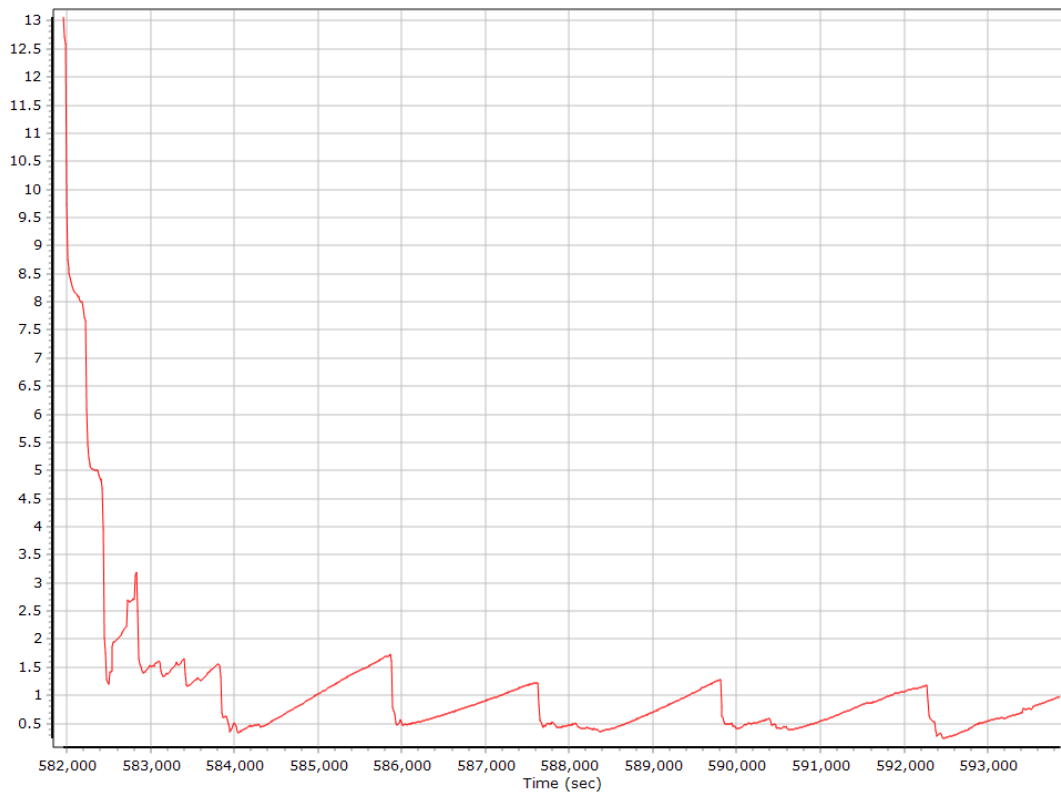
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

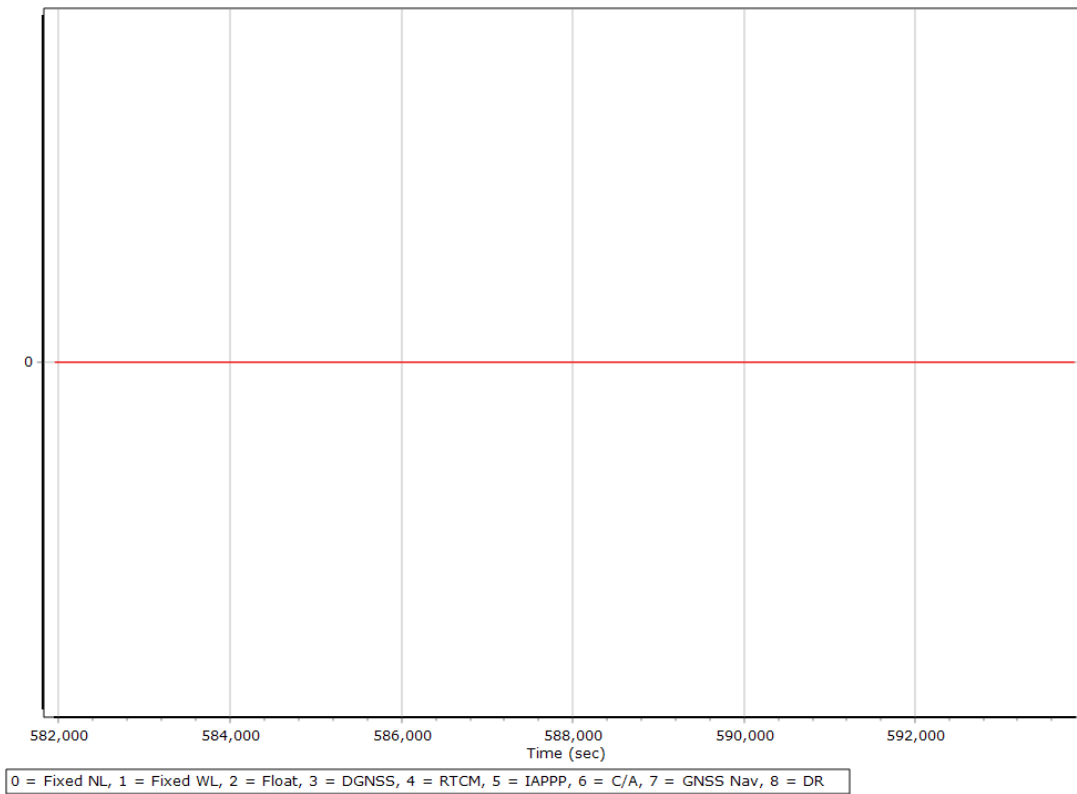


Heading Error RMS (arc-min)

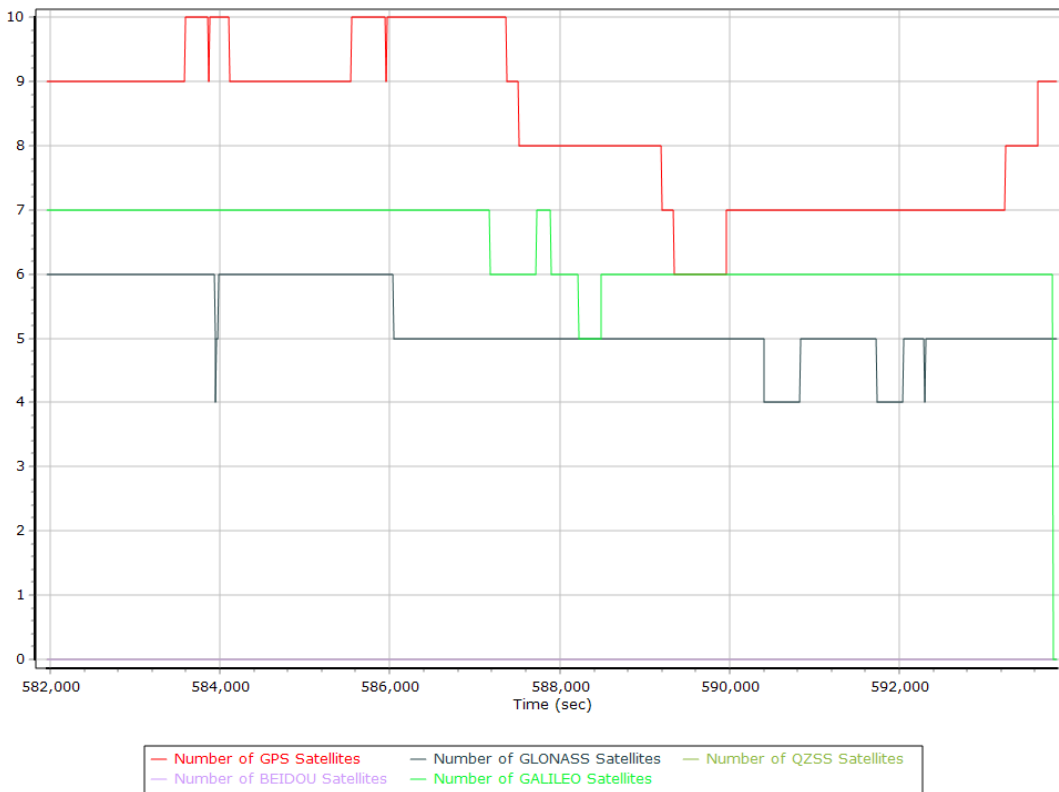


Forward Processed Solution Status

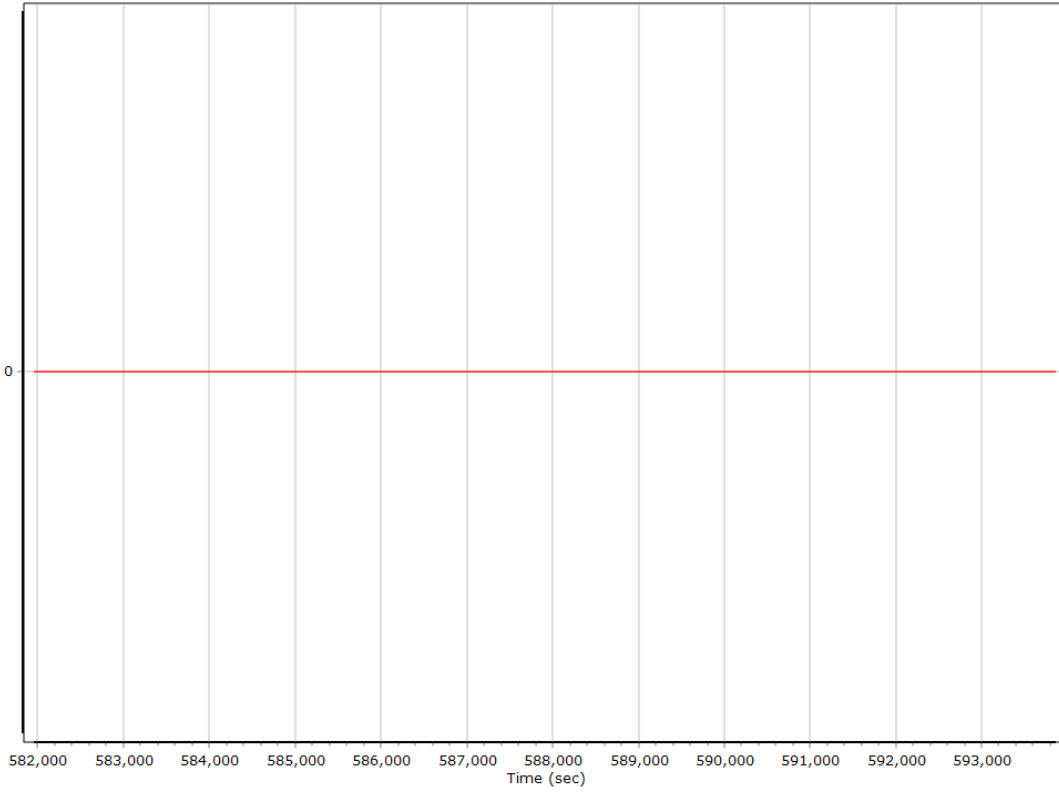
Processing Mode



Number of Satellites



Baseline Length



Export Summary Section 1

Export file	sbet_11921_NAD83(2011).out		
Export format	Custom Smoothed BET		
Solution in use	Post-processed		
Output rate	All Records		
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	Meter	
Export start time	581897.003 (12/19/2020 17:38:17)		
Export end time	593866.003 (12/19/2020 20:57:46)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid			
Zone			
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation			
Target Epoch	2010		

Export Summary Section 2

Export file	lever_arm_values.txt		
Export format	ReferenceToPrimaryLeverArms		
Solution in use	Post-processed		
Output rate	All Records		
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	Meter	
Export start time	581897.003 (12/19/2020 17:38:17)		
Export end time	593866.003 (12/19/2020 20:57:46)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 14 (102W to 96W)		
Datum	WGS84		
Ellipsoid	WGS84		
Local Transformation	NONE		
Target Epoch	2010		

EO Summary Section 1

EO file			
EO format	ZI Imaging		
Lever arm (m)	0.000	0.000	0.000
Boresight angles (arcmin)	0.0000	0.0000	0.0000
Output rate	All Records		
Rotation sequence	x omega	y phi	z kappa
Local shift (m)	0.000	0.000	0.000
Output units (coordinate / angle / lat & lon)	Meter	Degree	Deg Decimal
Height option	Ellipsoid Height		
WGS84 height flag	False		
Scale height option	False		
Kappa cardinal rotation (deg)	0		
Solution in use	Post-processed		
EO start time	581897.003 (12/19/2020 17:38:17)		
EO end time	593866.003 (12/19/2020 20:57:46)		
Grid	Universal Transverse Mercator		
Zone	UTM North 14 (102W to 96W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2010		