

General Information

Mission Information

Project name	11898
Processing date	2020-12-09 09:35:19
Mission date	2020-12-08 14:23:24
Mission duration	03:45:07.099
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
20201208F1DAY.565	POS Data
20201208F1DAY.566	POS Data
20201208F1DAY.567	POS Data
20201208F1DAY.568	POS Data
20201208F1DAY.569	POS Data
20201208F1DAY.570	POS Data
20201208F1DAY.571	POS Data
20201208F1DAY.572	POS Data
20201208F1DAY.573	POS Data
20201208F1DAY.574	POS Data
20201208F1DAY.575	POS Data
20201208F1DAY.576	POS Data
20201208F1DAY.577	POS Data
20201208F1DAY.578	POS Data
20201208F1DAY.579	POS Data
20201208F1DAY.580	POS Data
20201208F1DAY.581	POS Data
20201208F1DAY.582	POS Data
20201208F1DAY.583	POS Data
20201208F1DAY.584	POS Data
20201208F1DAY.585	POS Data
20201208F1DAY.586	POS Data
20201208F1DAY.587	POS Data
20201208F1DAY.588	POS Data
20201208F1DAY.589	POS Data
20201208F1DAY.590	POS Data
20201208F1DAY.591	POS Data
20201208F1DAY.592	POS Data
20201208F1DAY.593	POS Data
20201208F1DAY.594	POS Data

Input Files

File Name	File Type
Ephm3430.20g	GLONASS Broadcast Ephemeris
Ephm3430.20n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_11898.out	SBET Trajectory File
eo_11898.txt	ZI Imaging POSEO Output
sbet_11898_NAD83(2011).out	Custom Smoothed BET Export Output
lever_arm_values.txt	ReferenceToPrimaryLeverArms Export Output

Rover Data Summary

First raw data file	20201208F1DAY.565		
Last raw data file	20201208F1DAY.594		
Start GPS week	2135		
Start time	224603.440 (12/08/2020 14:23:23)		
End time	238110.539 (12/08/2020 18:08:30)		
Start of fine alignment	224950.065 (12/08/2020 14:29:10)		
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

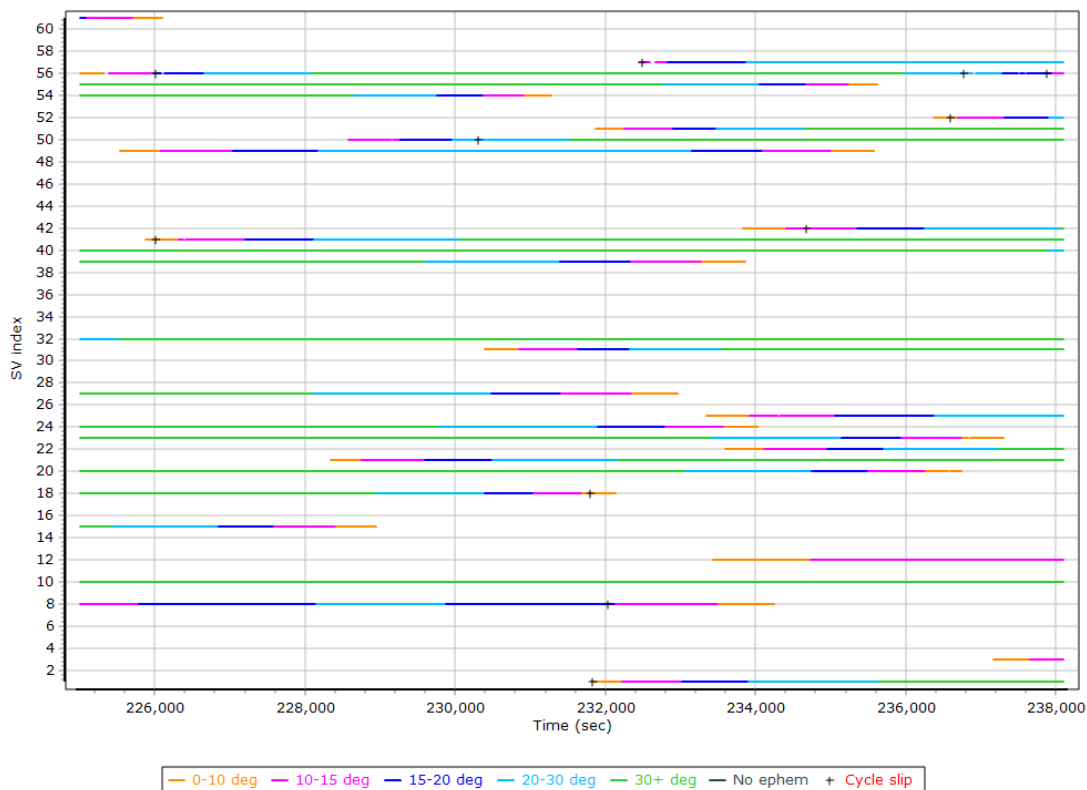
Rover Data QC

Raw IMU Import QC Summary

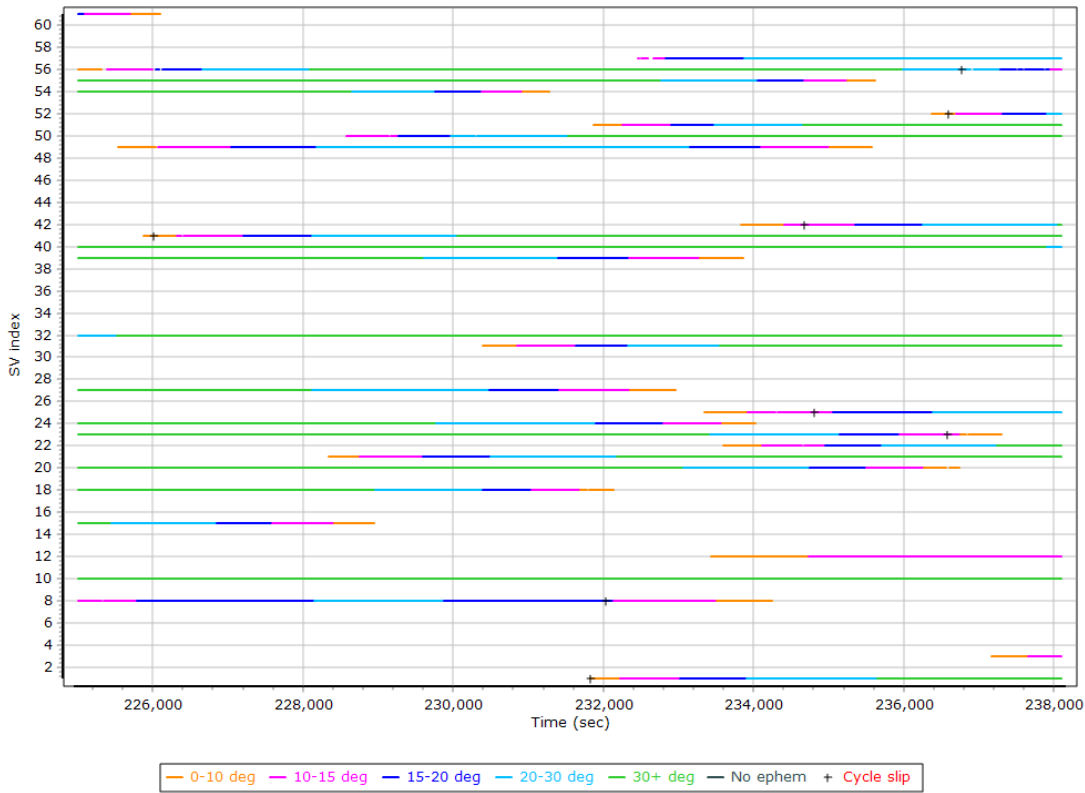
IMU data input file	imu_11898.dat
IMU data check log file	imudt_11898.log
IMU Records Processed	2700854
Termination Status	Normal
IMU Anomalies	0

Primary Observables & Satellite Data

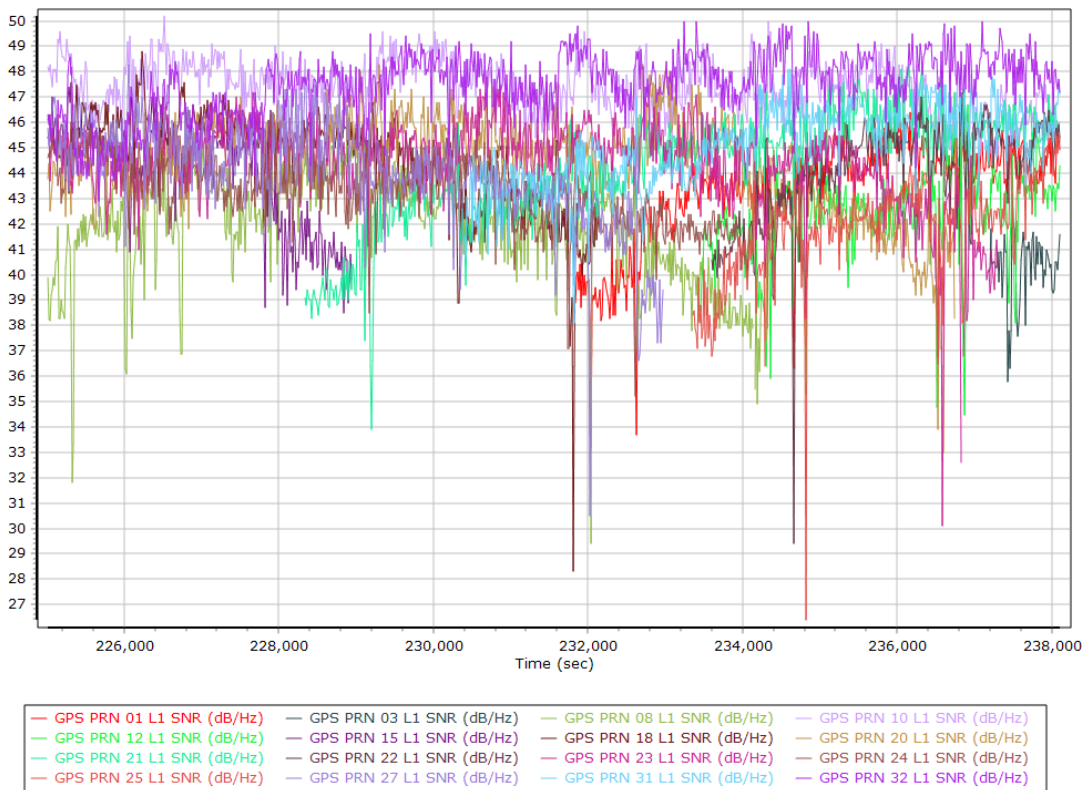
L1 Satellite Lock/Elevation



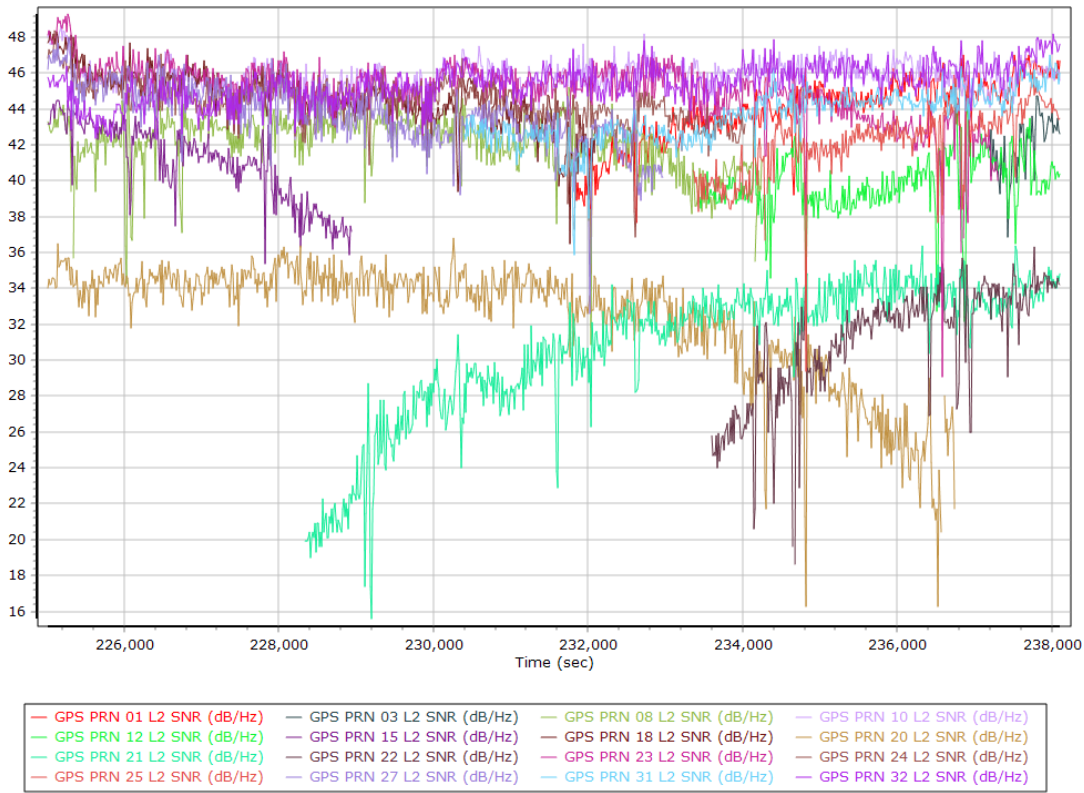
L2 Satellite Lock/Elevation



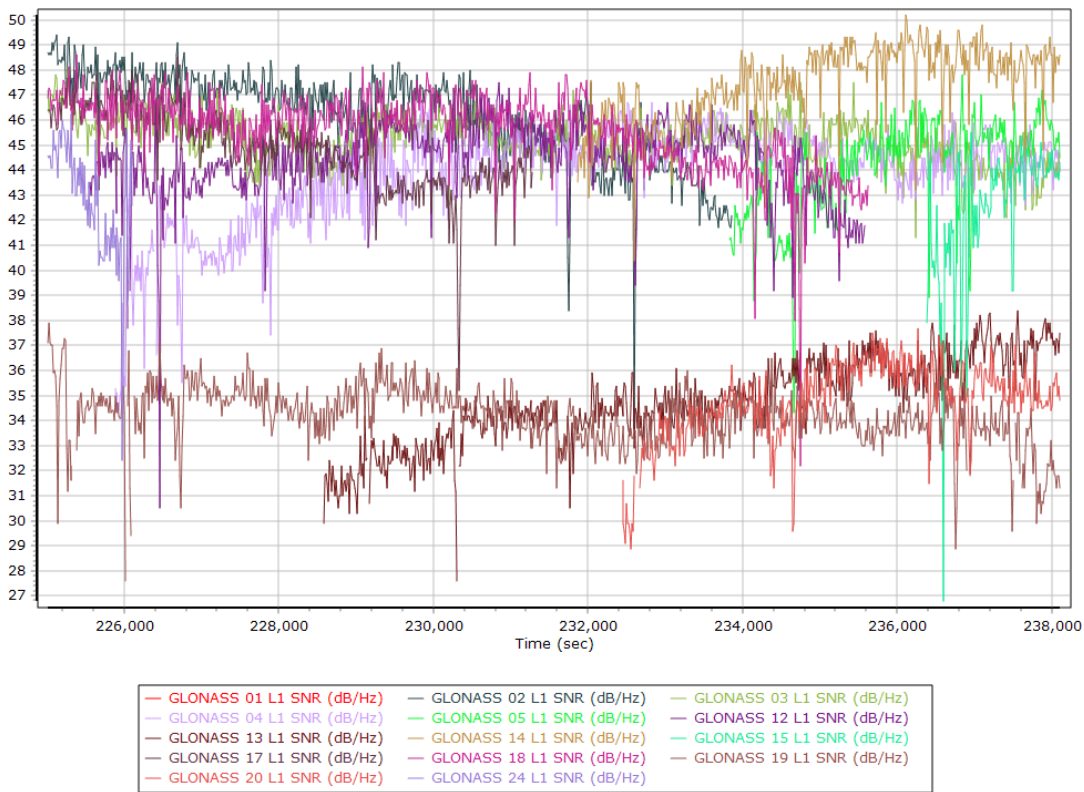
GPS L1 SNR



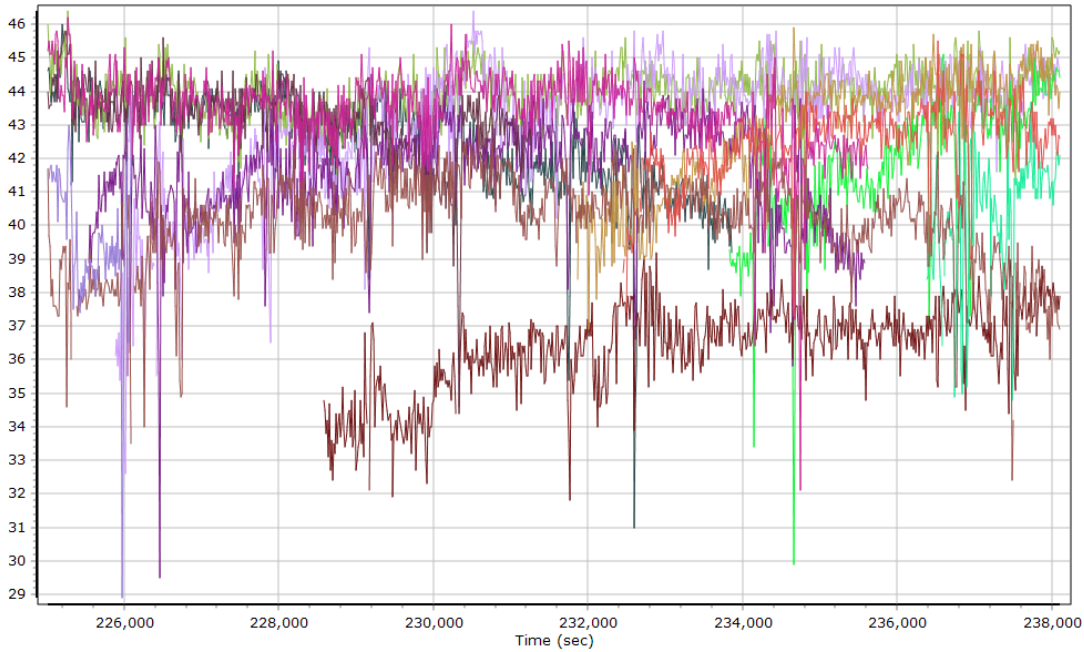
GPS L2 SNR



GLONASS L1 SNR

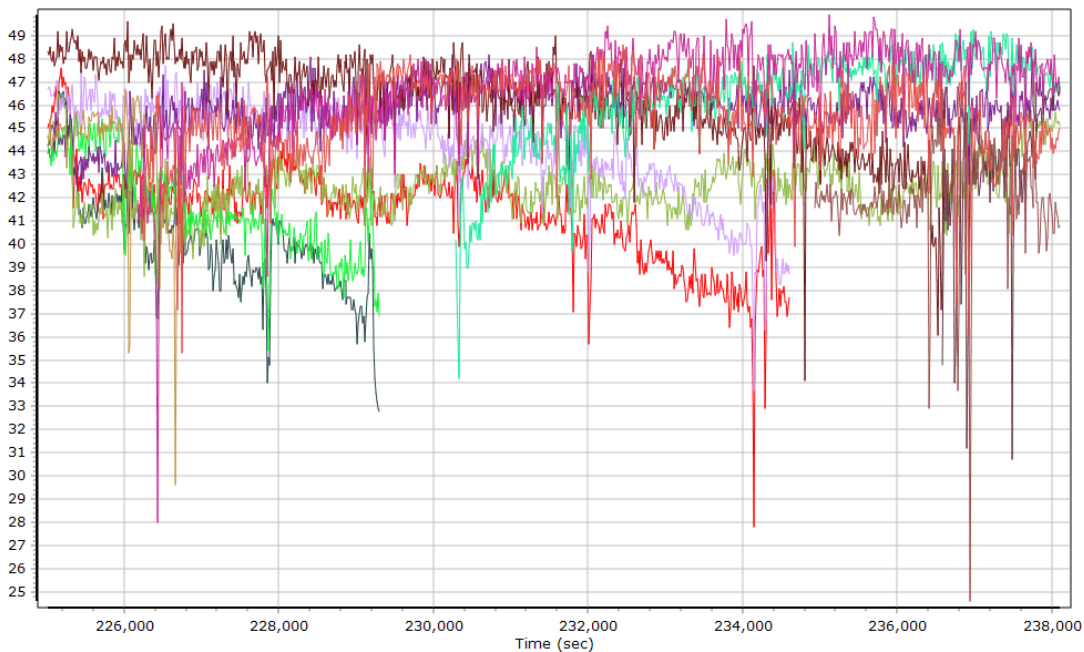


GLONASS L2 SNR



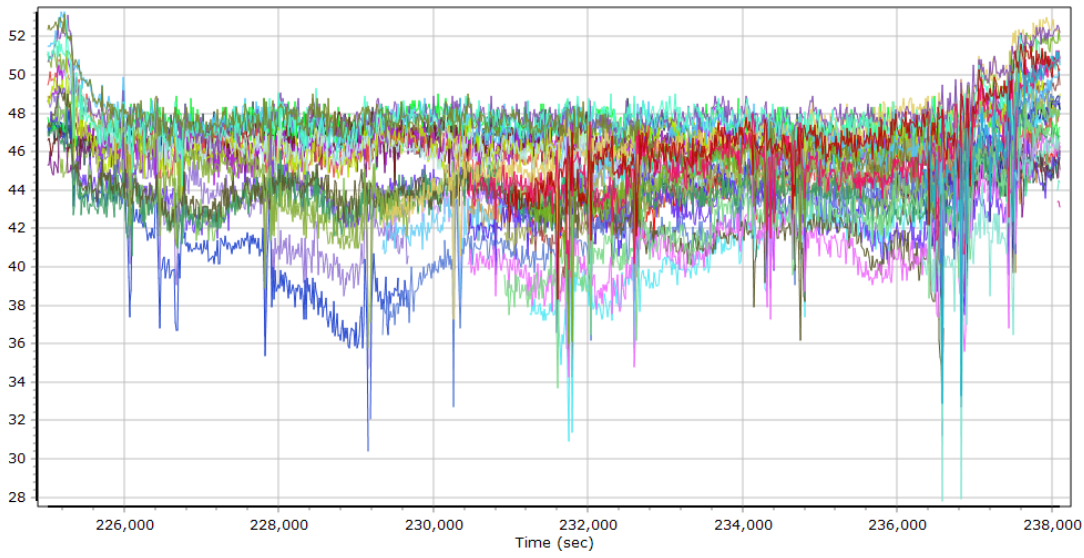
- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 01 L2 SNR (dB/Hz) | GLONASS 02 L2 SNR (dB/Hz) | GLONASS 03 L2 SNR (dB/Hz) |
| GLONASS 04 L2 SNR (dB/Hz) | GLONASS 05 L2 SNR (dB/Hz) | GLONASS 12 L2 SNR (dB/Hz) |
| GLONASS 13 L2 SNR (dB/Hz) | GLONASS 14 L2 SNR (dB/Hz) | GLONASS 15 L2 SNR (dB/Hz) |
| GLONASS 17 L2 SNR (dB/Hz) | GLONASS 18 L2 SNR (dB/Hz) | GLONASS 19 L2 SNR (dB/Hz) |
| GLONASS 20 L2 SNR (dB/Hz) | GLONASS 24 L2 SNR (dB/Hz) | |

BEIDOU SNR



- | | | |
|------------------------------|------------------------------|------------------------------|
| BEIDOU 11 E5B B2 SNR (dB/Hz) | BEIDOU 12 E5B B2 SNR (dB/Hz) | BEIDOU 14 E5B B2 SNR (dB/Hz) |
| BEIDOU 11 B1 B1 SNR (dB/Hz) | BEIDOU 12 B1 B1 SNR (dB/Hz) | BEIDOU 14 B1 B1 SNR (dB/Hz) |
| BEIDOU 21 B1 B1 SNR (dB/Hz) | BEIDOU 22 B1 B1 SNR (dB/Hz) | BEIDOU 24 B1 B1 SNR (dB/Hz) |
| BEIDOU 25 B1 B1 SNR (dB/Hz) | BEIDOU 26 B1 B1 SNR (dB/Hz) | BEIDOU 27 B1 B1 SNR (dB/Hz) |
| BEIDOU 28 B1 B1 SNR (dB/Hz) | | |

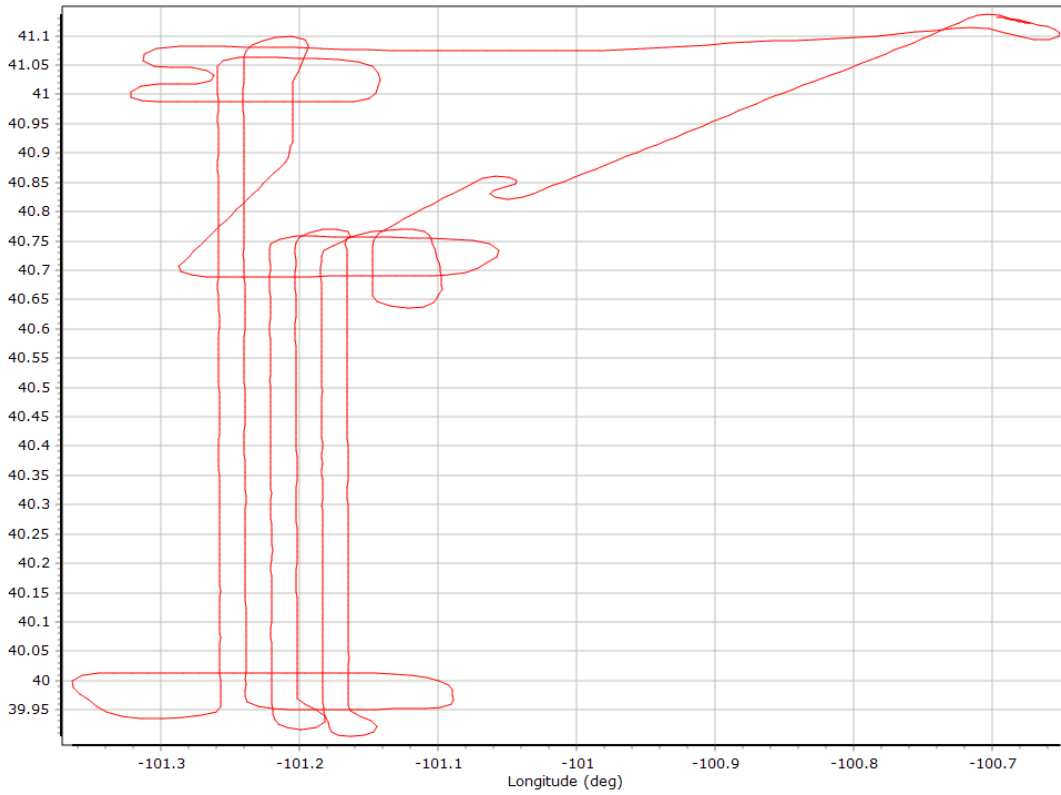
GALILEO SNR



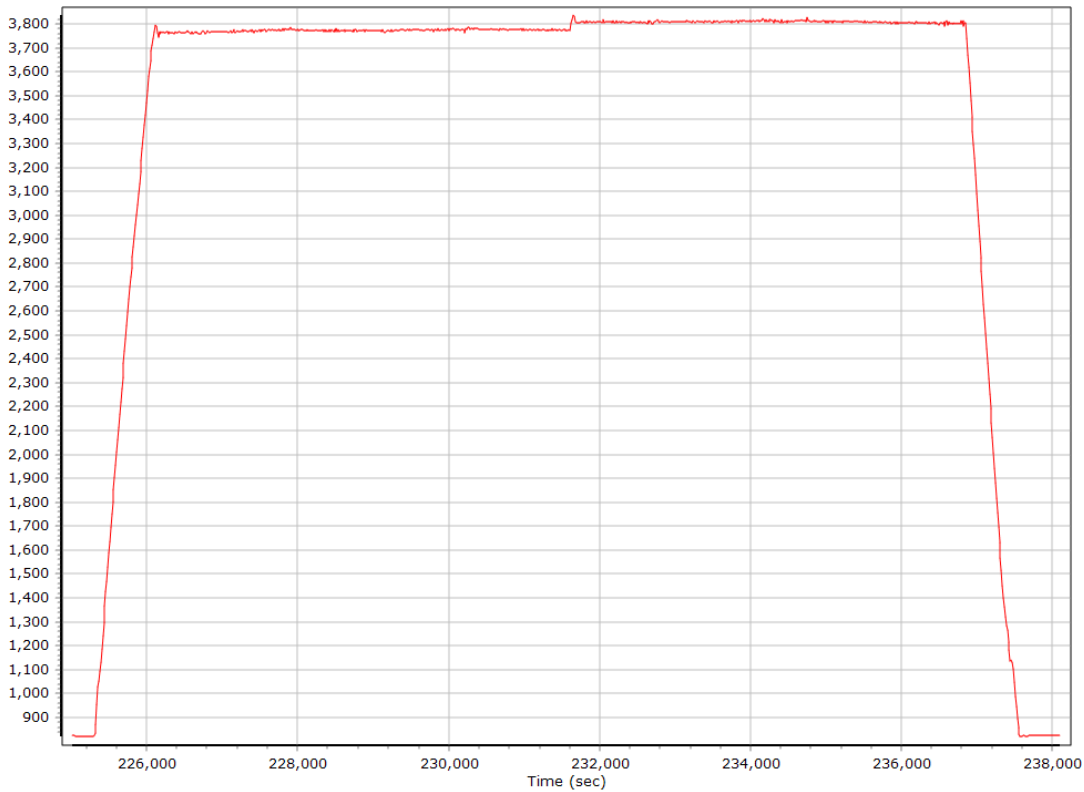
— GALILEO 02 L1 BOC_1_1_D_MBOC SNR (dB/Hz)	— GALILEO 03 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
— GALILEO 05 L1 BOC_1_1_D_MBOC SNR (dB/Hz)	— GALILEO 07 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
— GALILEO 08 L1 BOC_1_1_D_MBOC SNR (dB/Hz)	— GALILEO 13 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
— GALILEO 15 L1 BOC_1_1_D_MBOC SNR (dB/Hz)	— GALILEO 25 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
— GALILEO 26 L1 BOC_1_1_D_MBOC SNR (dB/Hz)	— GALILEO 30 L1 BOC_1_1_D_MBOC SNR (dB/Hz)
— GALILEO 33 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 07 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 08 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 13 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 15 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 25 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 26 L5E5A BPSK10_PD SNR (dB/Hz)

Smoothed Trajectory Information

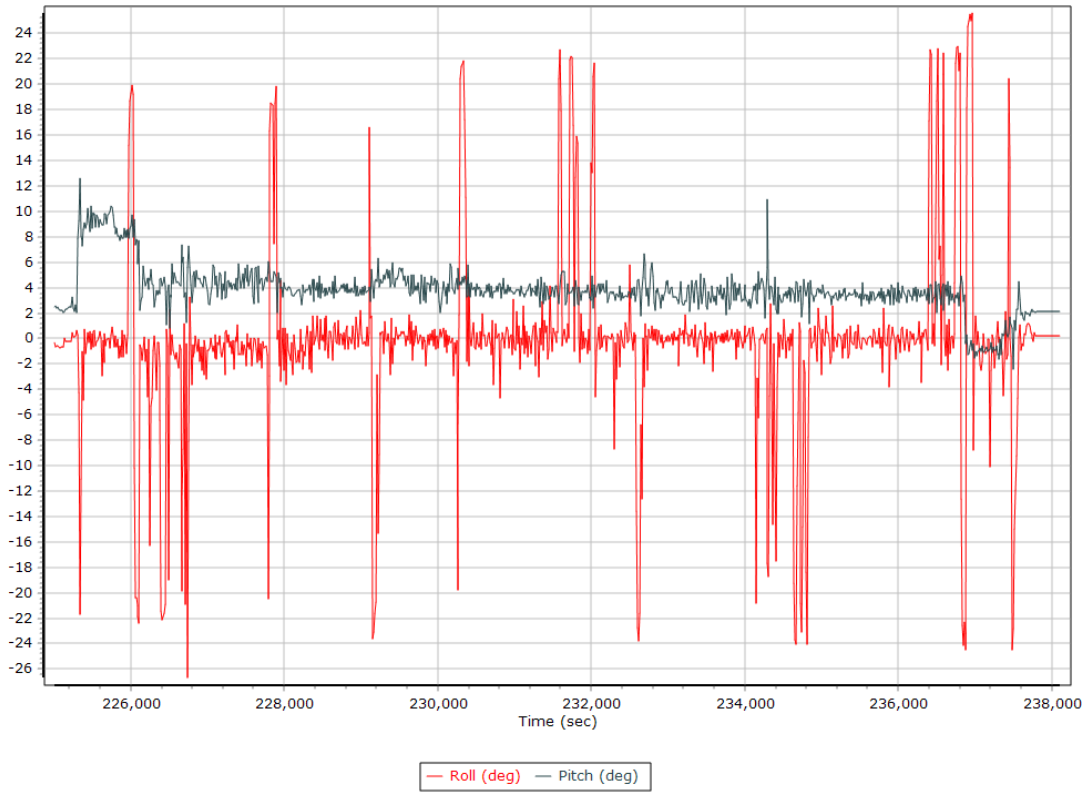
Top View



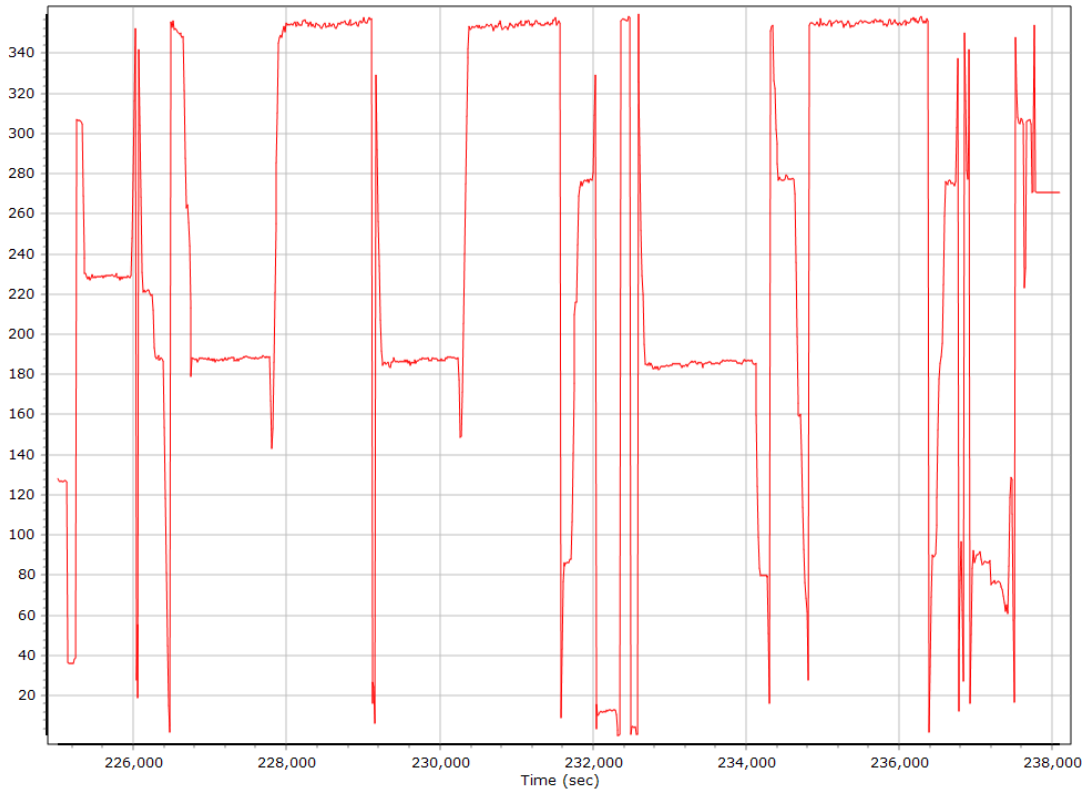
Altitude



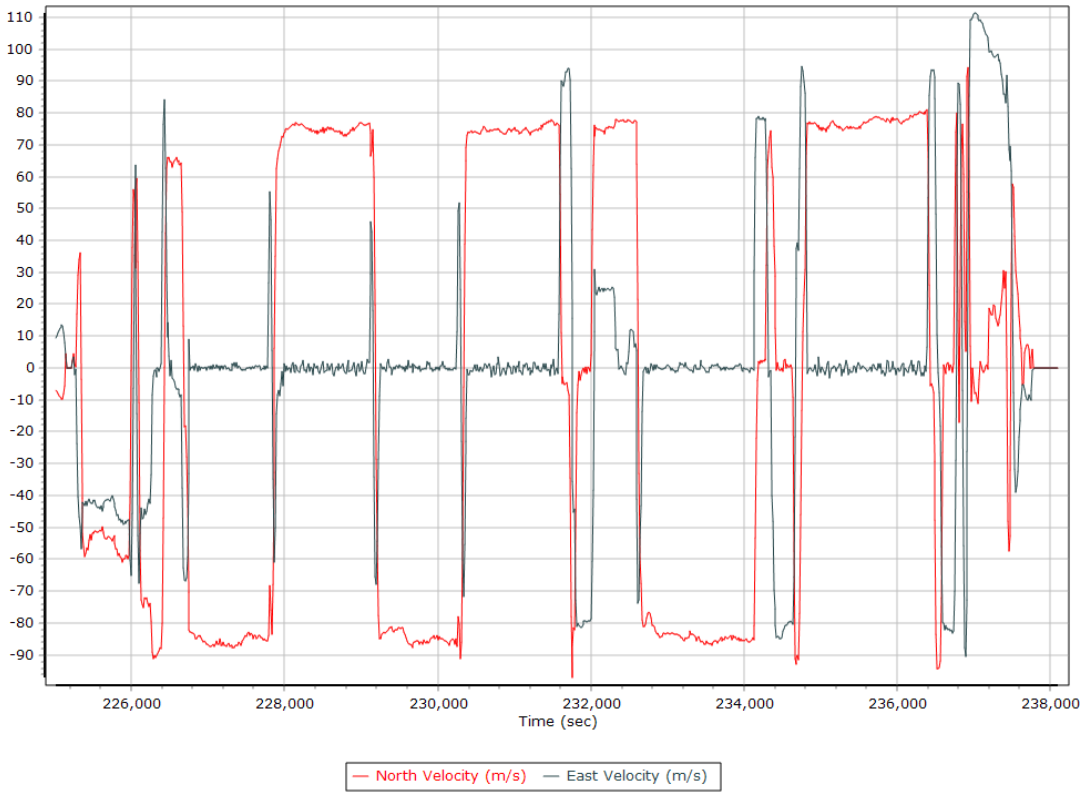
Roll/Pitch



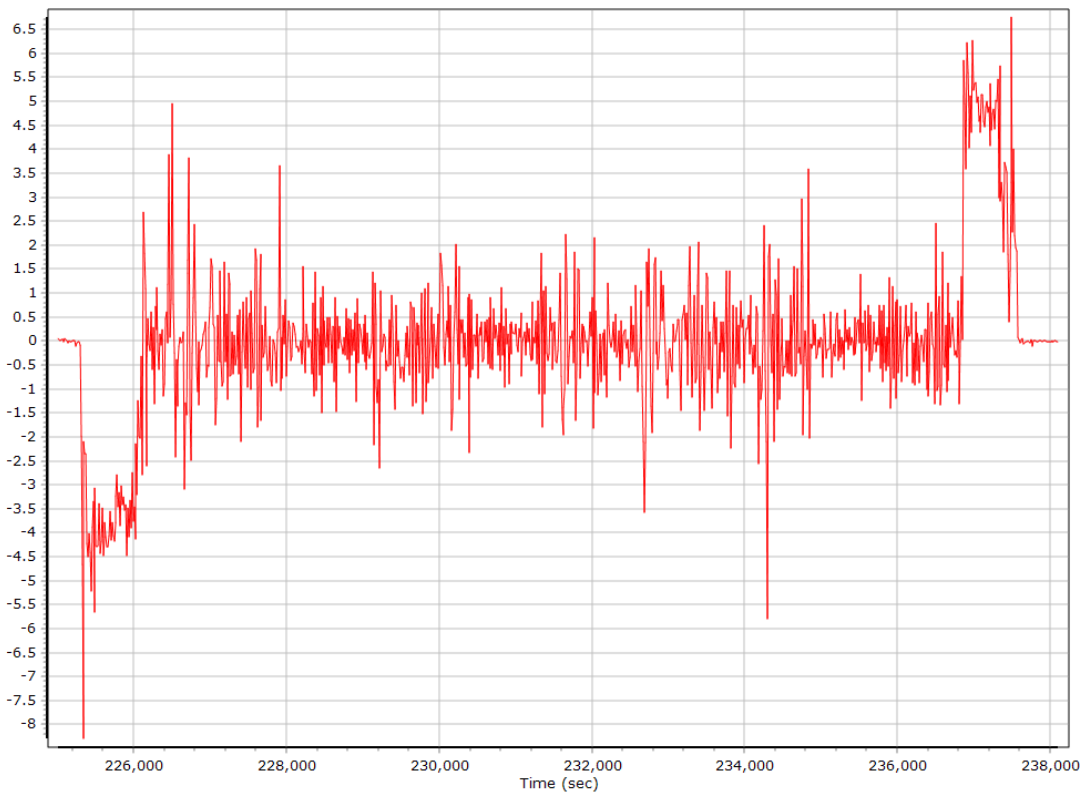
Heading



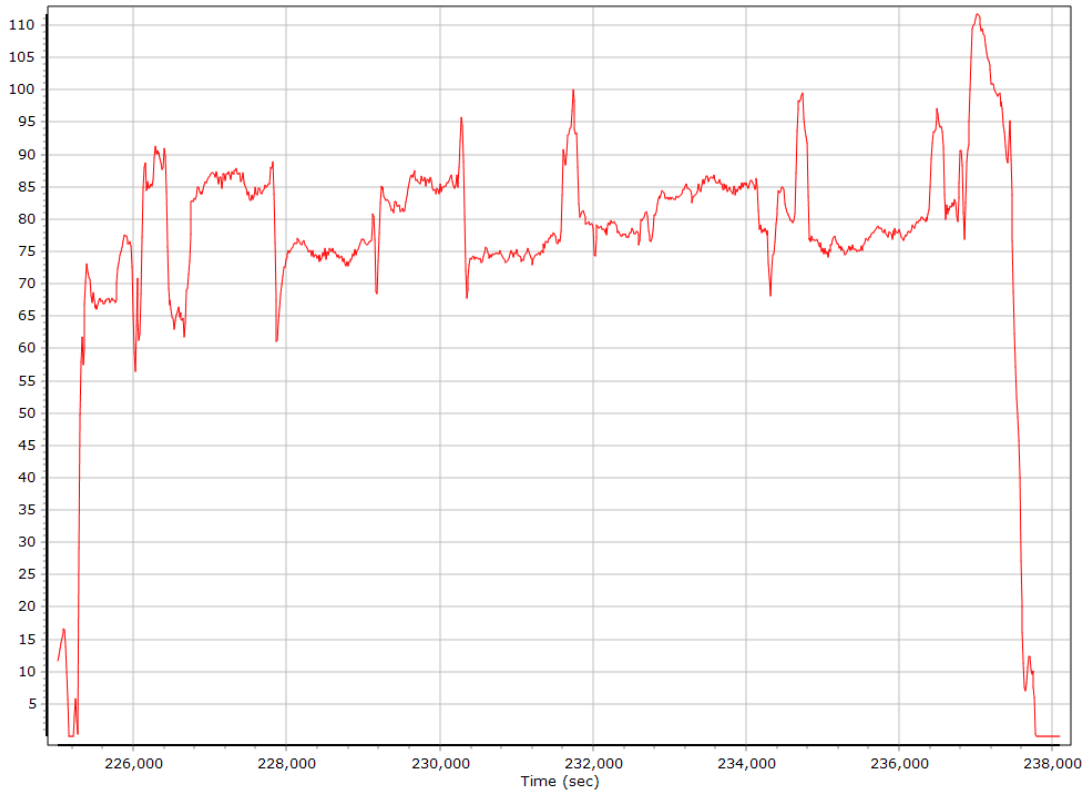
North/East Velocity



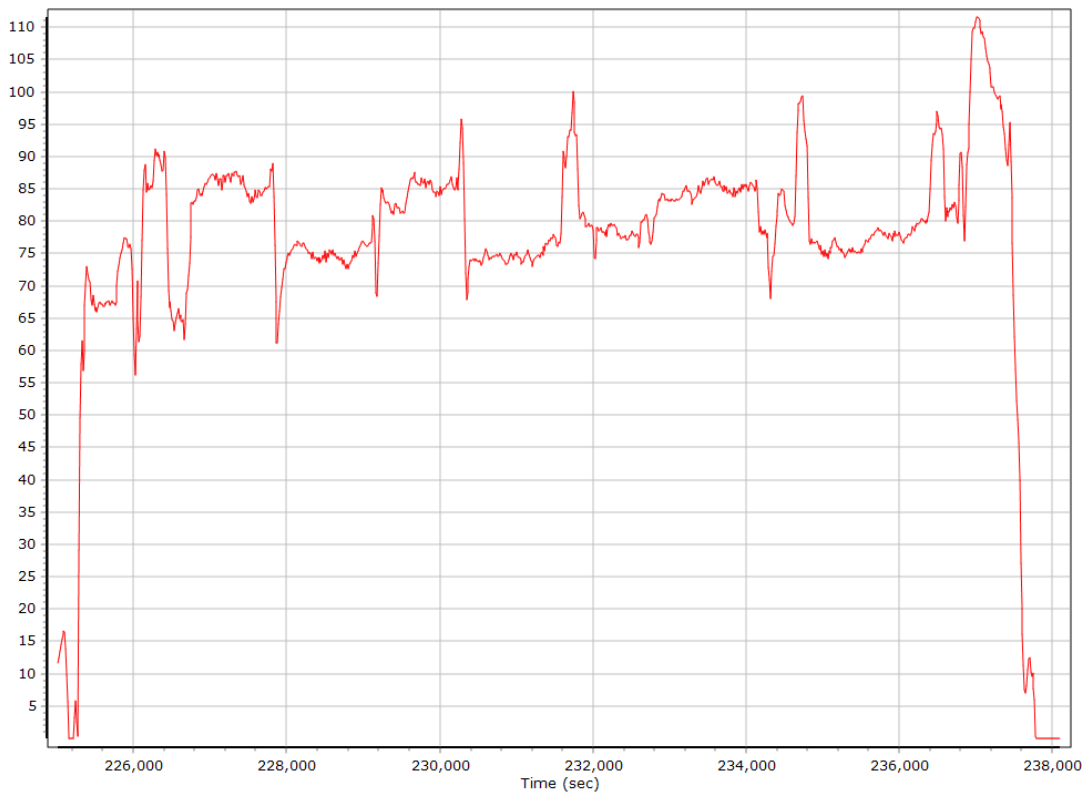
Down Velocity



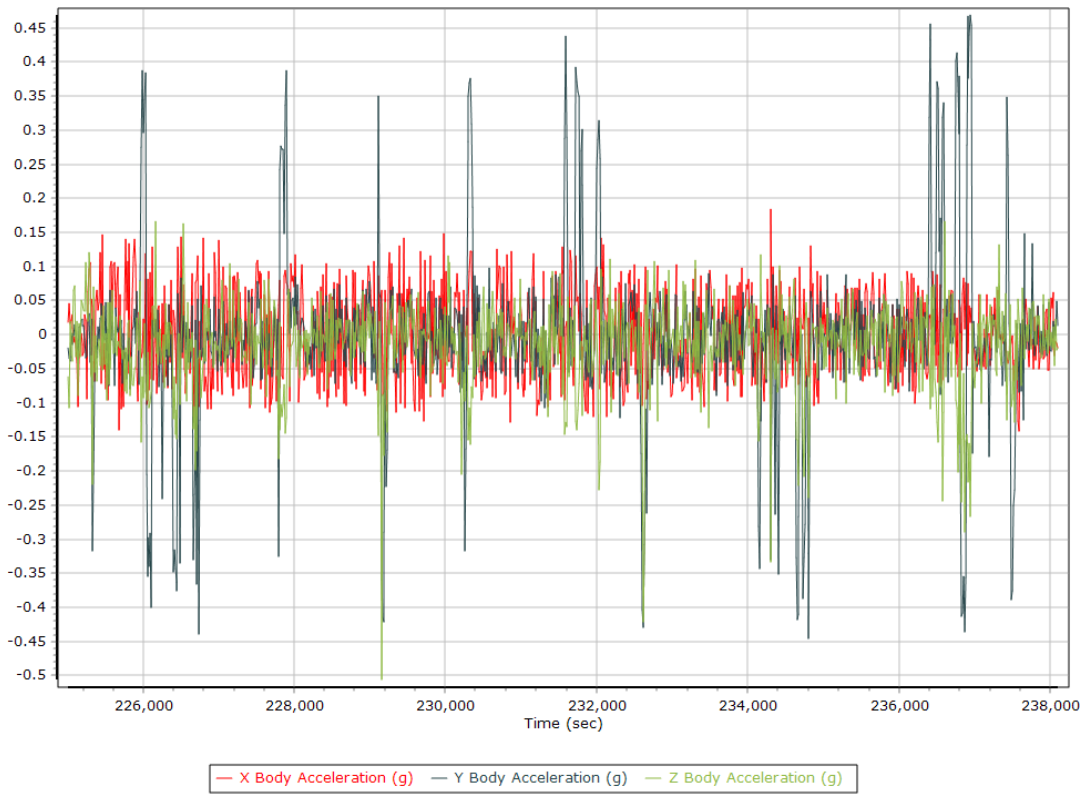
Total Speed



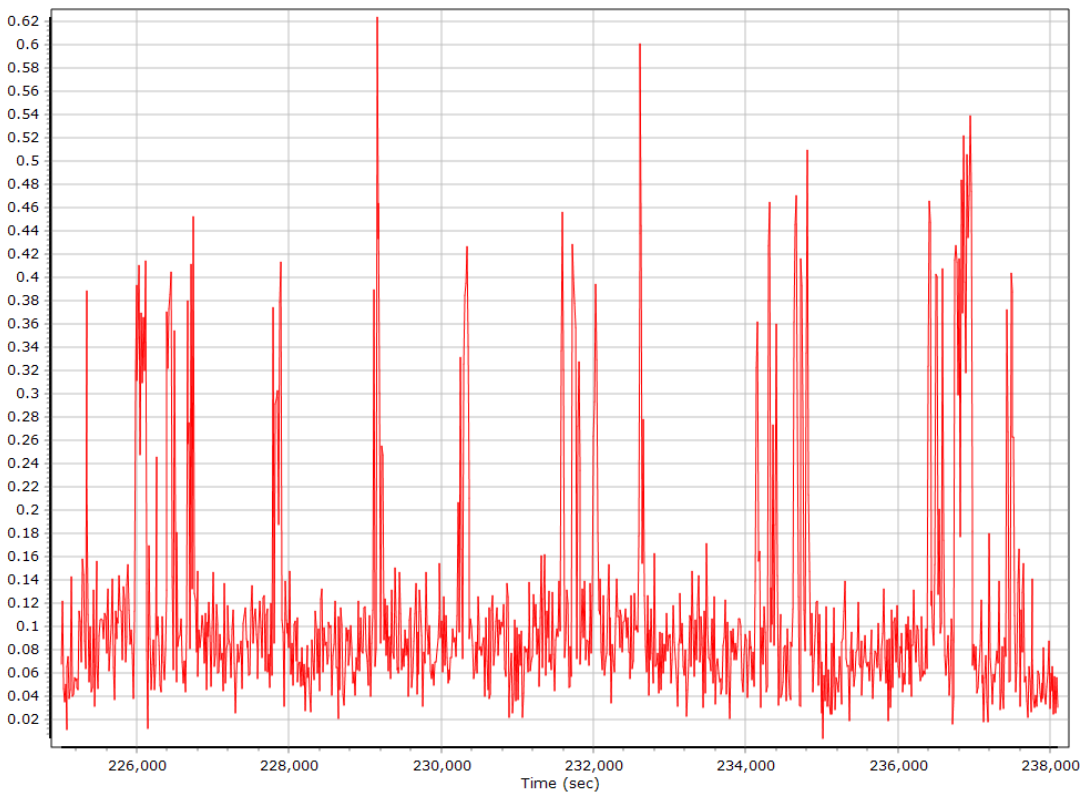
Ground Speed



Body Acceleration



Total Body Acceleration

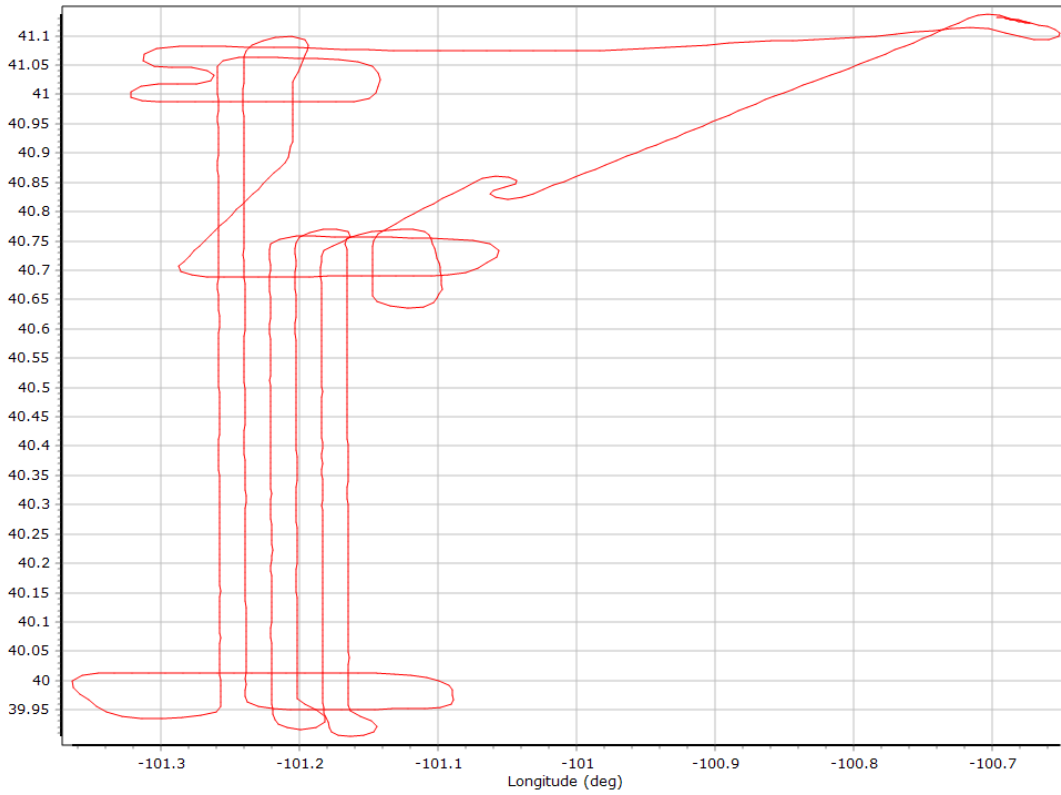


Body Angular Rate

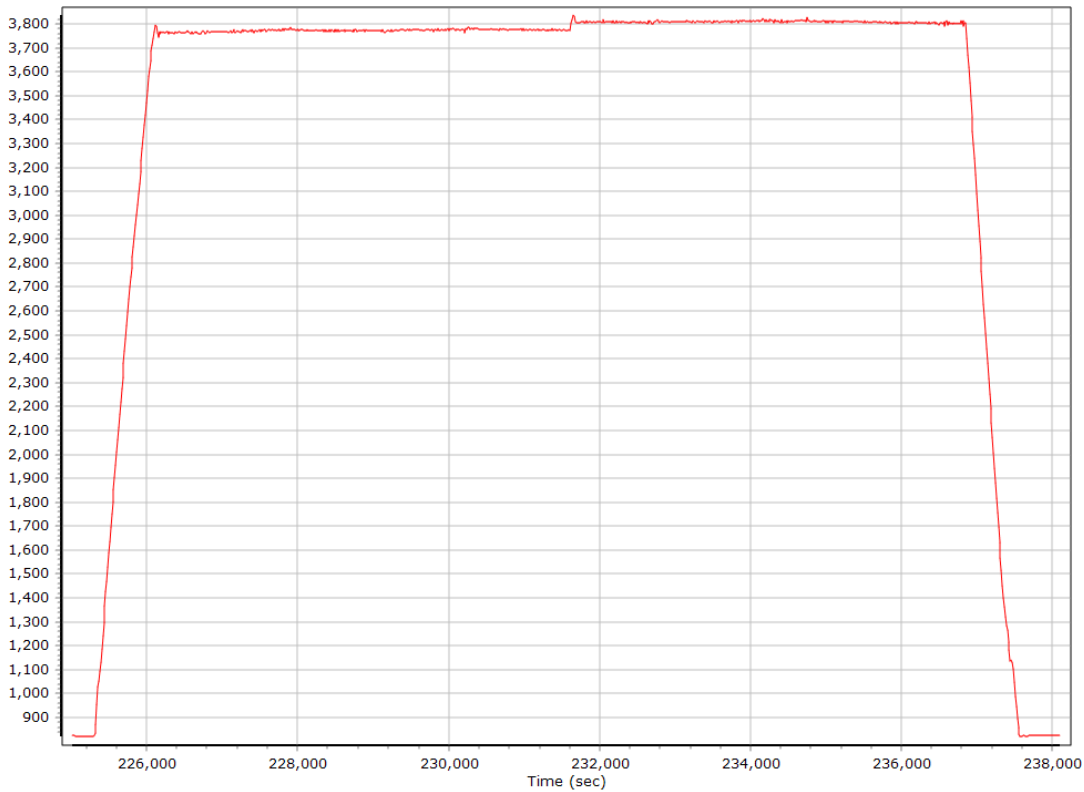


Forward Processed Trajectory Information

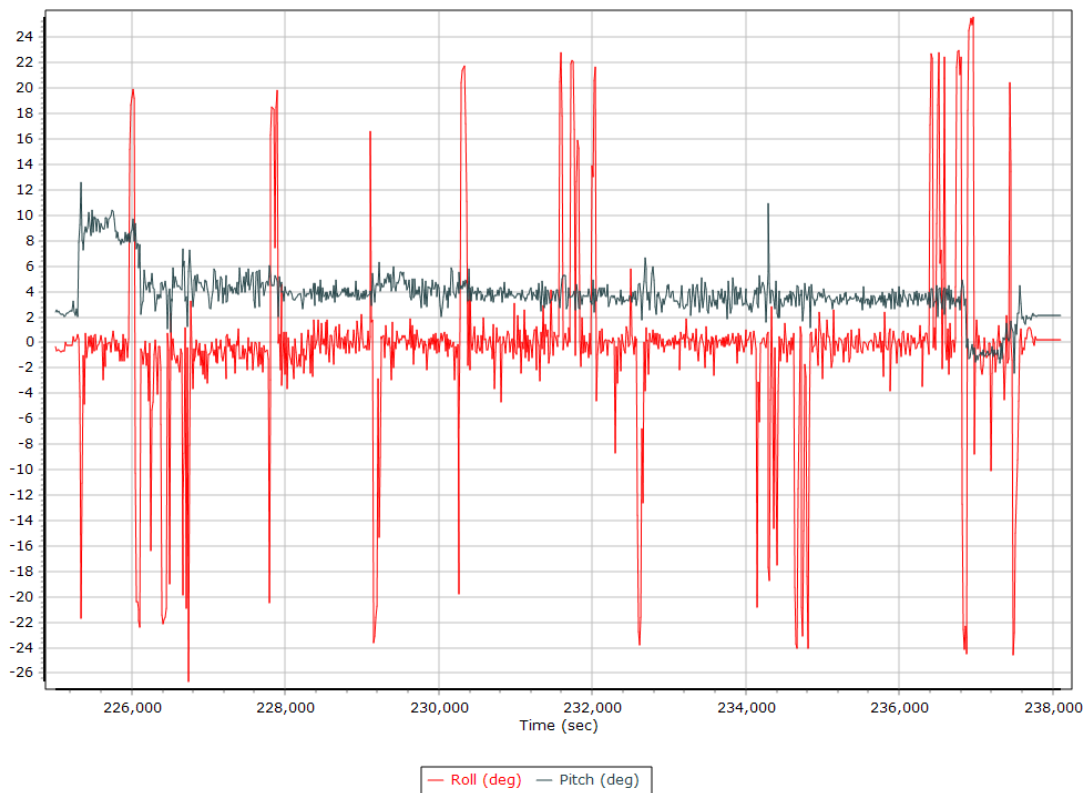
Top View



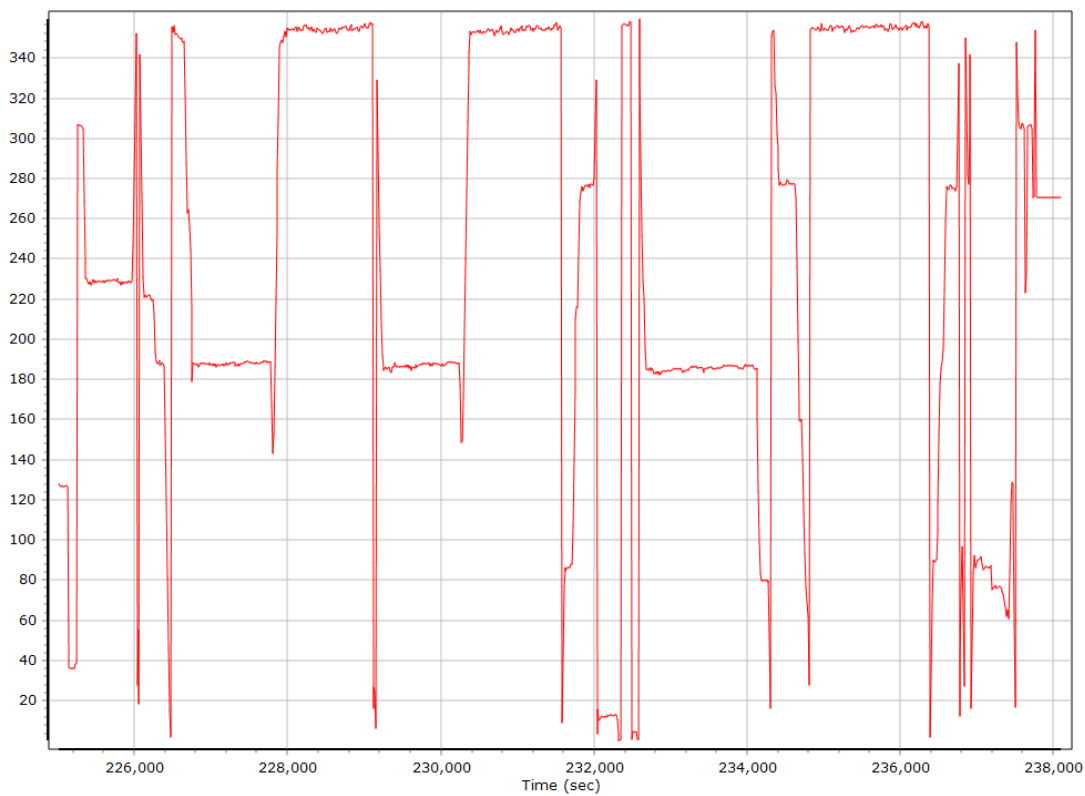
Altitude



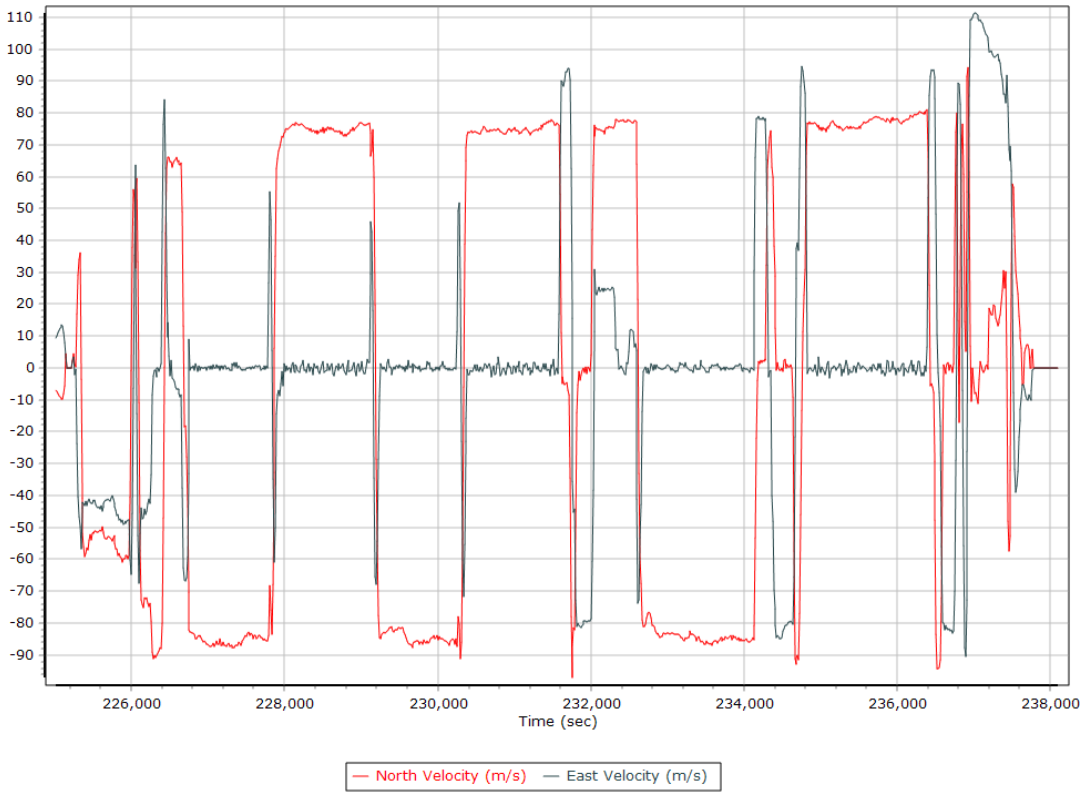
Roll/Pitch



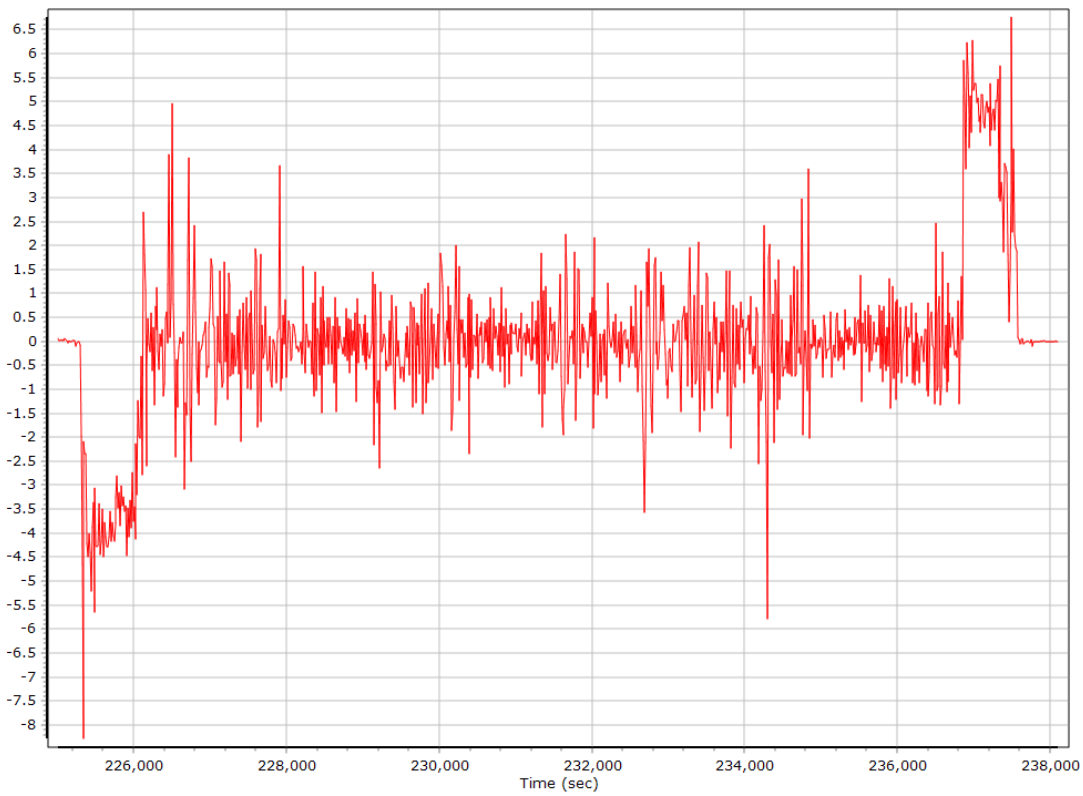
Heading



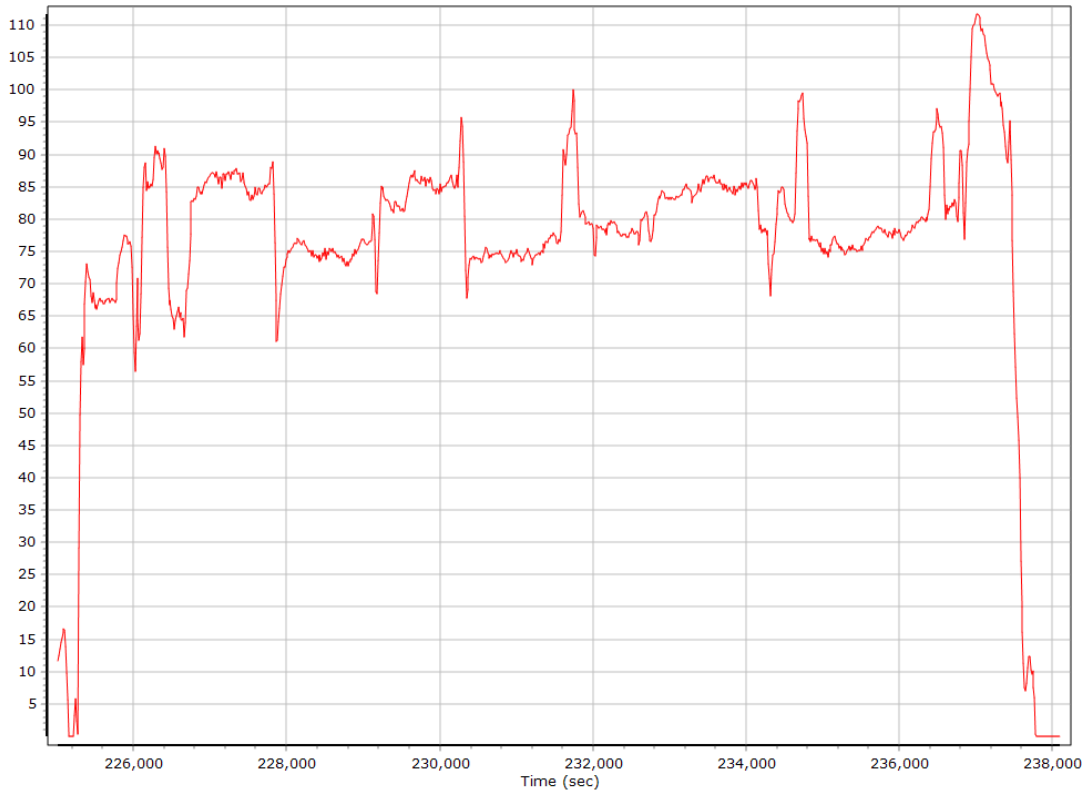
North/East Velocity



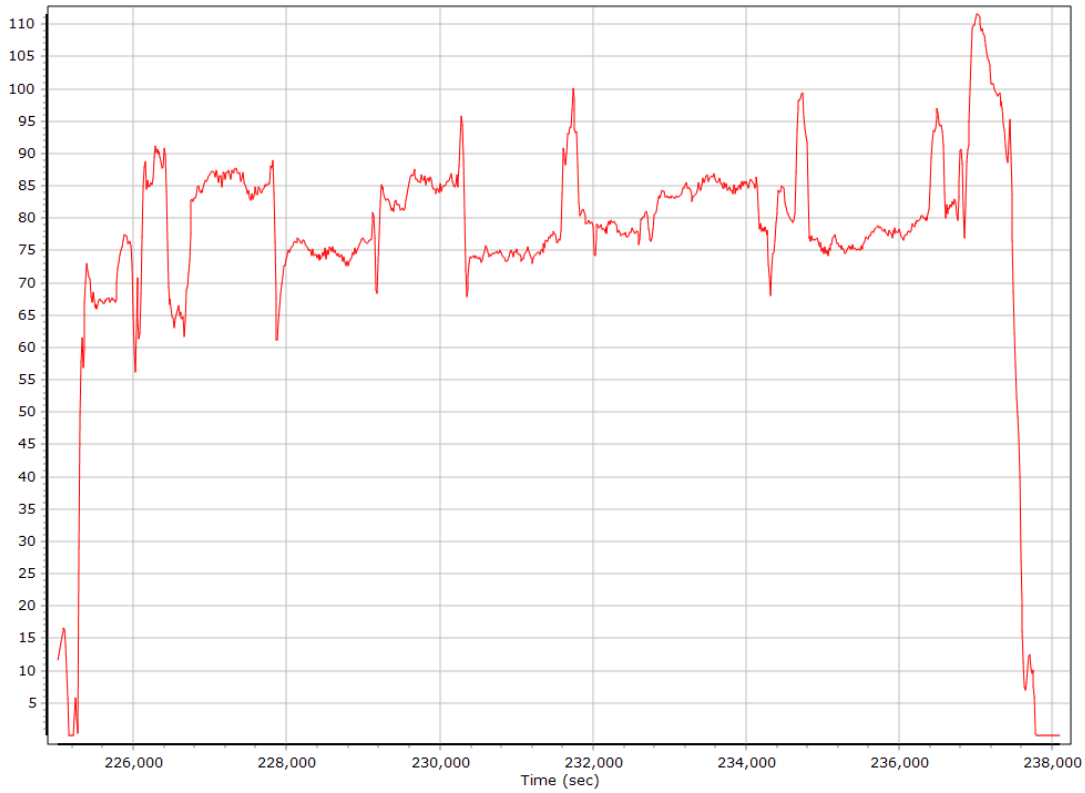
Down Velocity



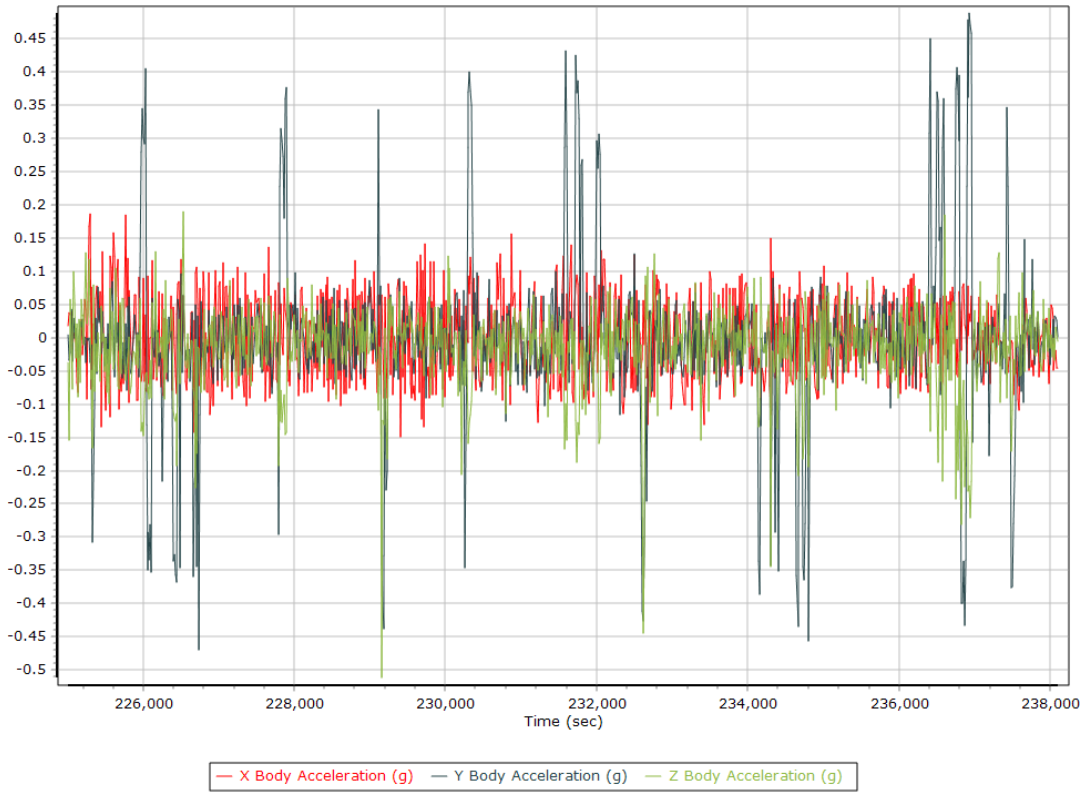
Total Speed



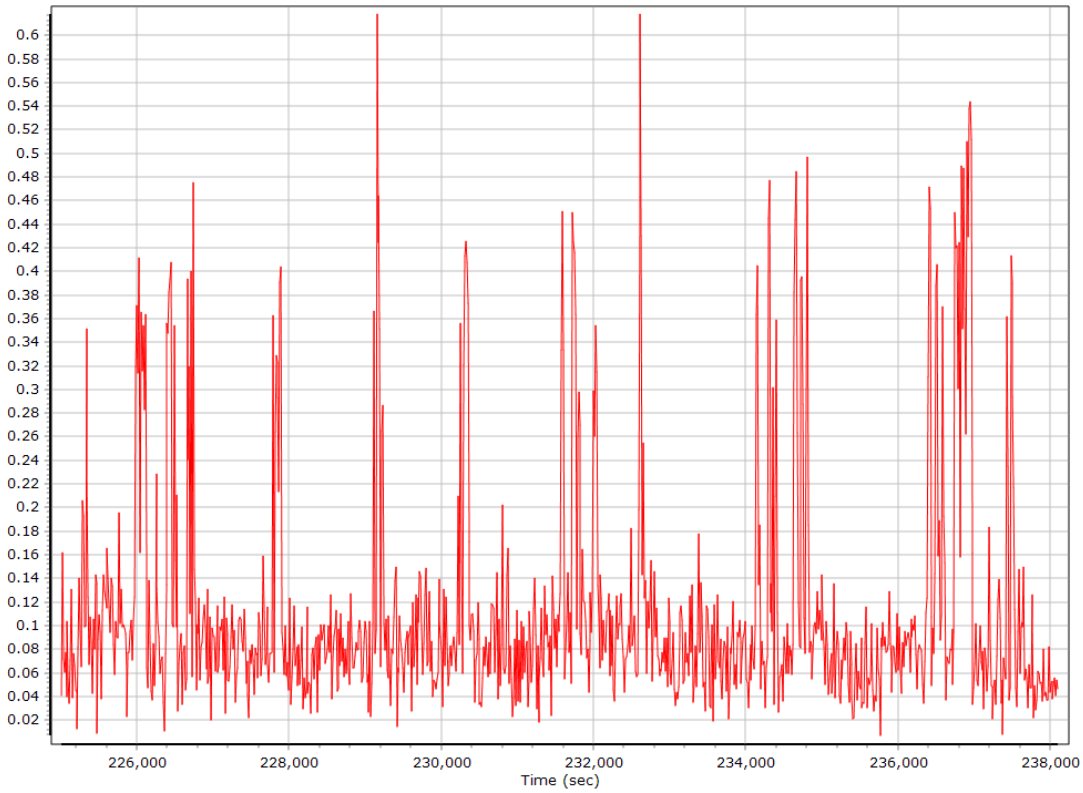
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate

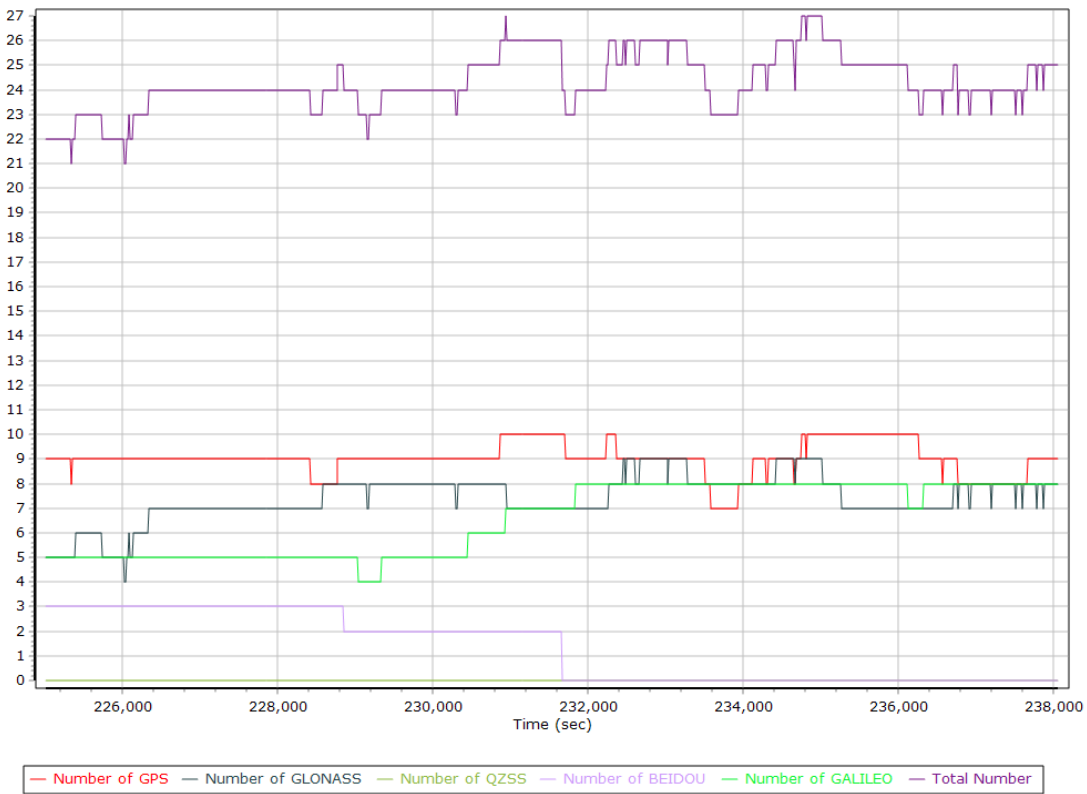


GNSS QC

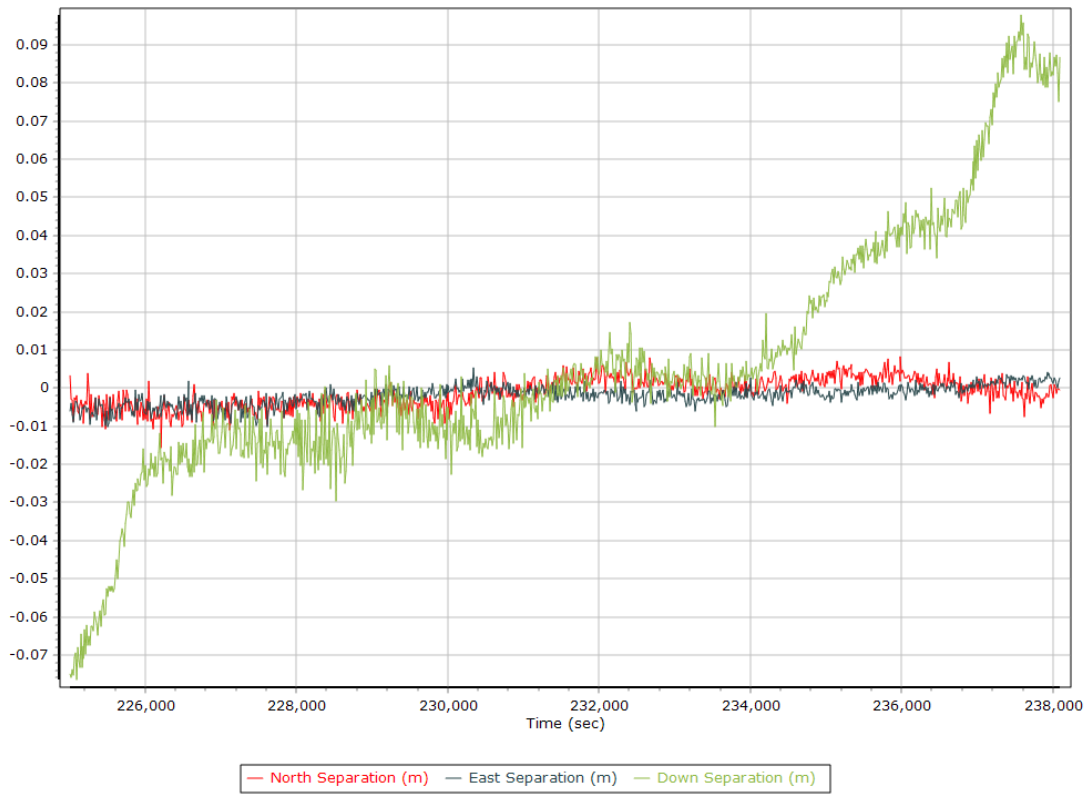
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	7	10	9
Number of GLONASS SV	4	9	7
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	3	1
Number of GALILEO SV	4	8	7
Total number of SV	21	27	24
PDOP	0.95	1.39	1.10
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	13420.00	0.00	43.00
Percentage	99.68	0.00	0.32

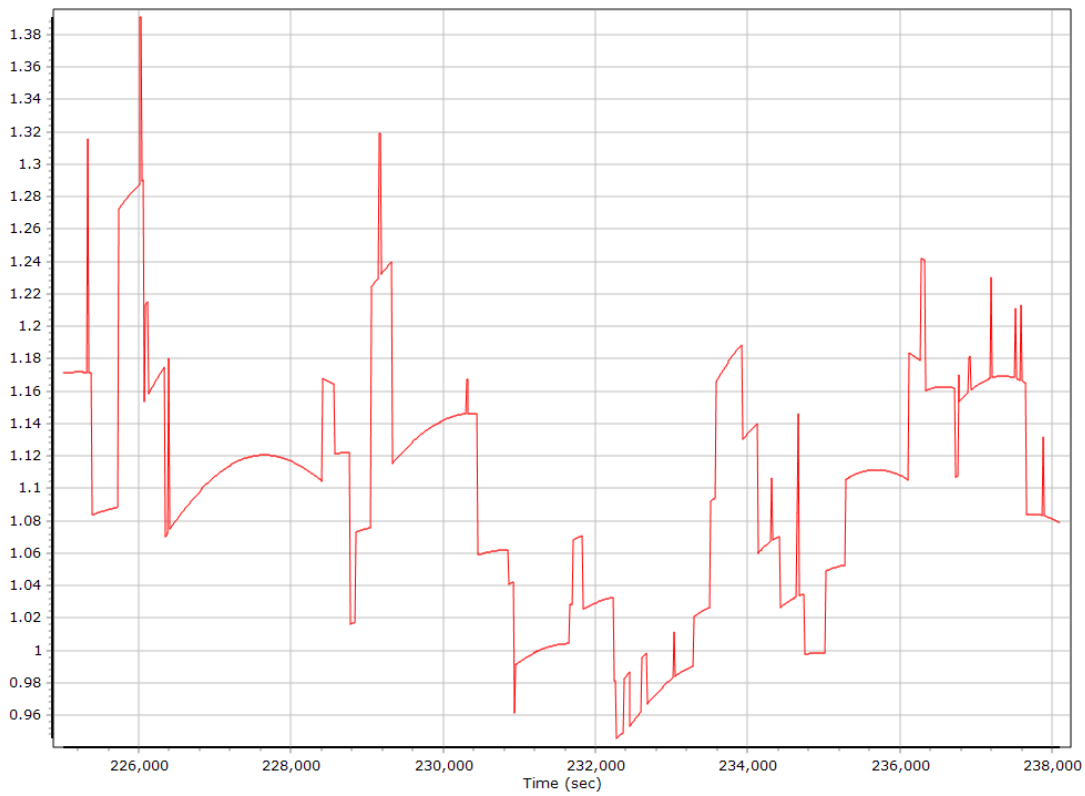
Num SVs in solution



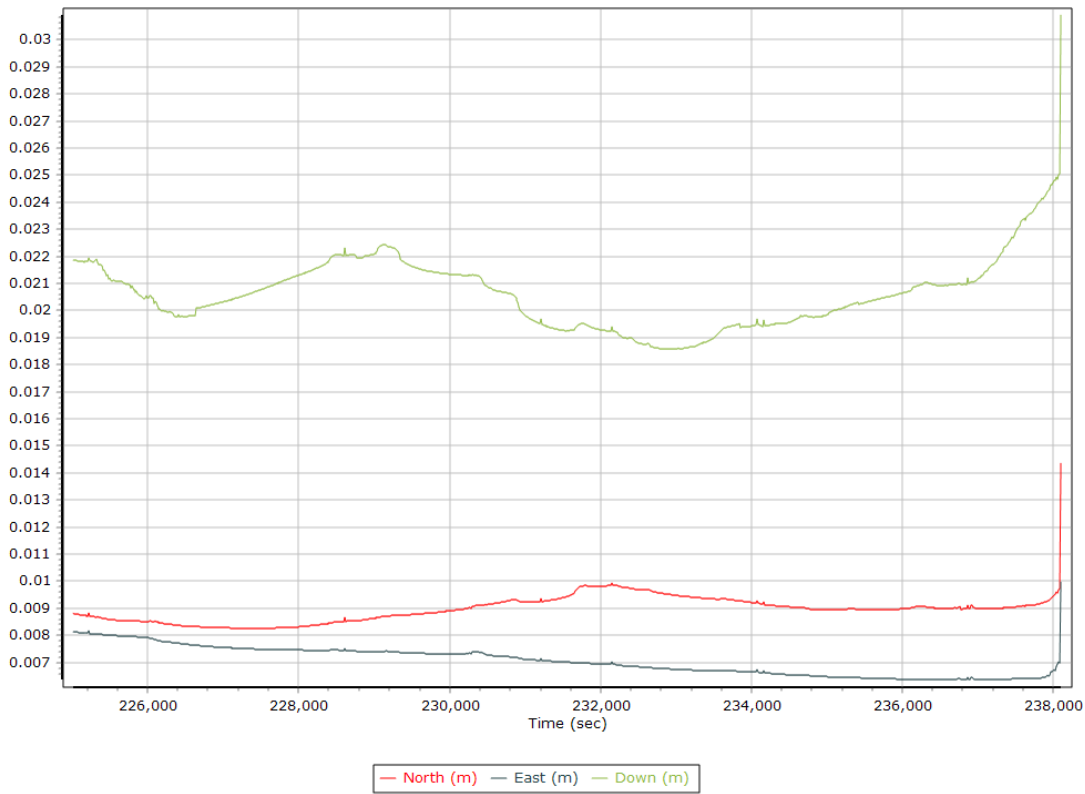
Forward/Reverse Separation



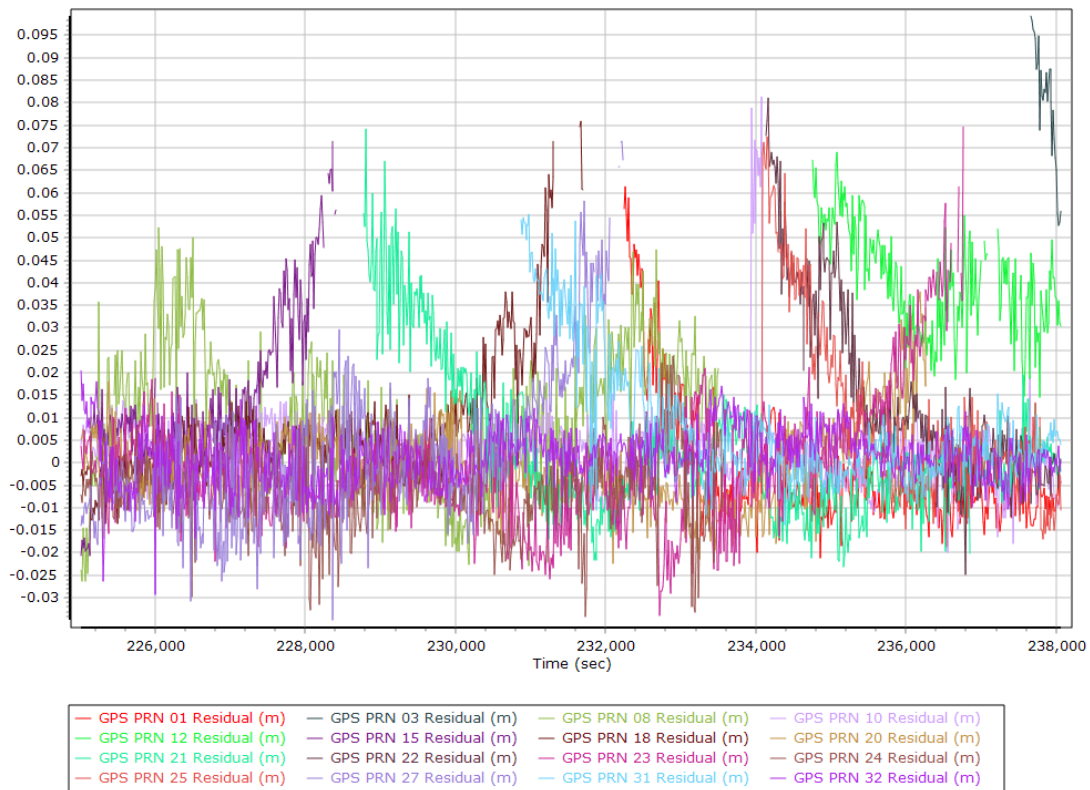
PDOP



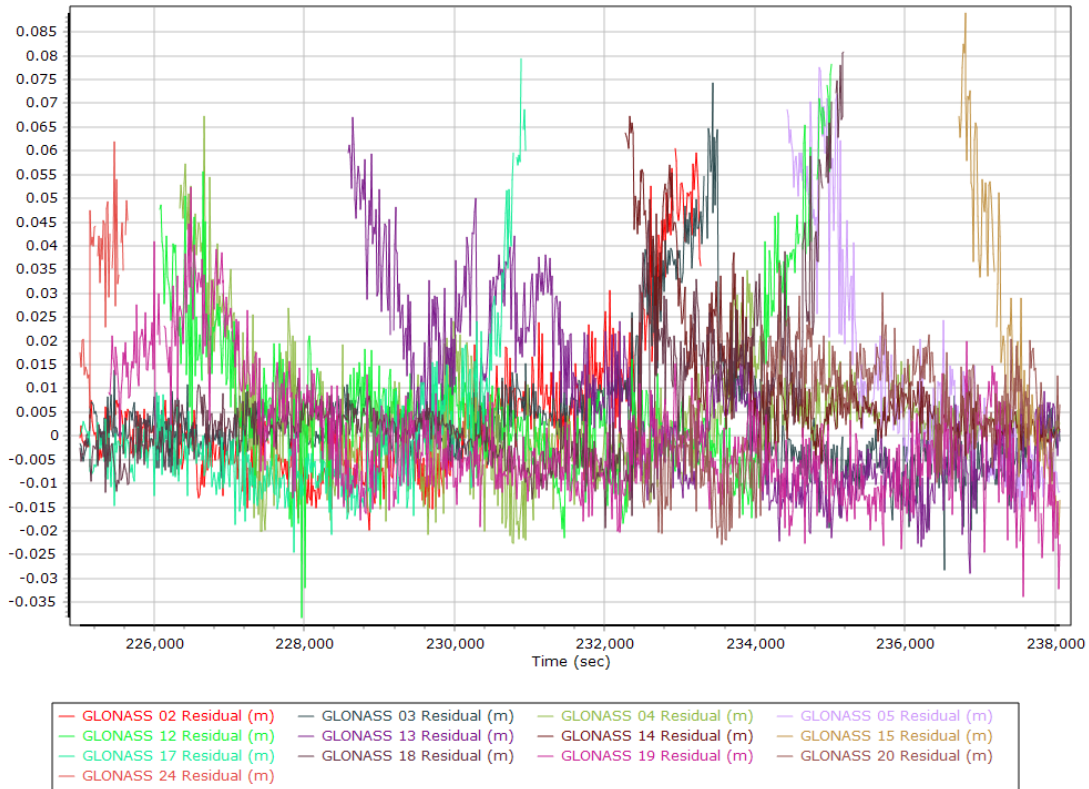
Estimated Position Accuracy



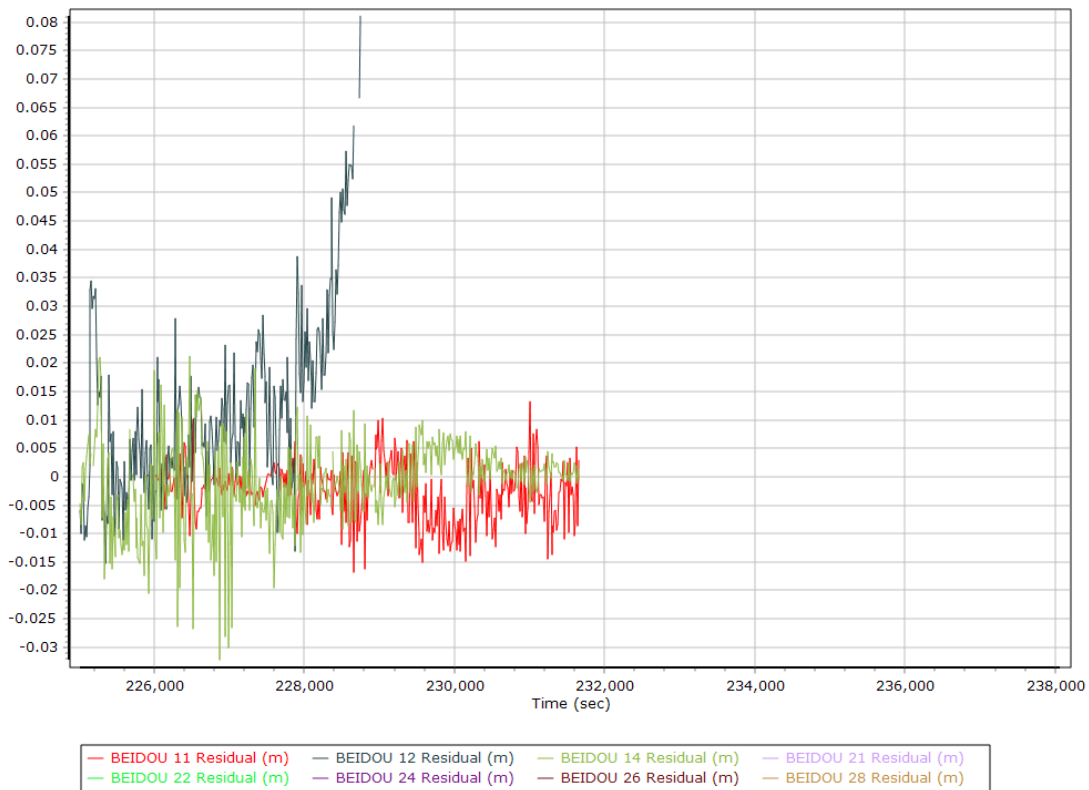
GPS Residuals



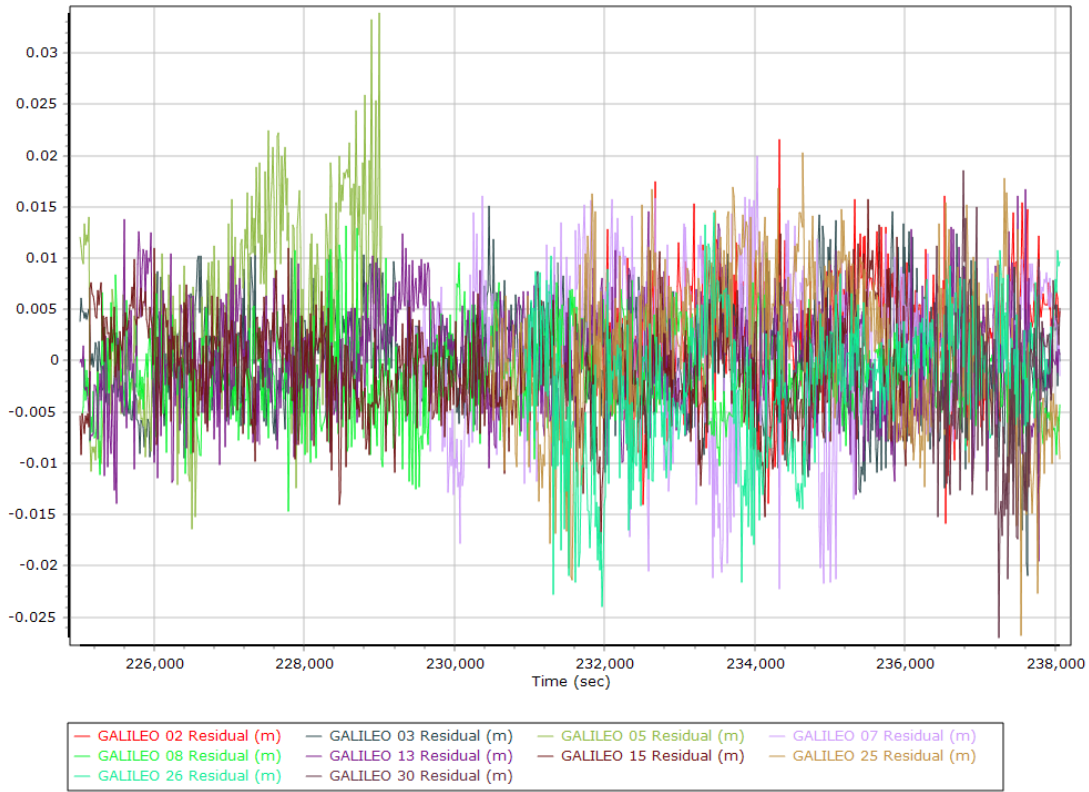
GLONASS Residuals



BEIDOU Residuals



GALILEO Residuals



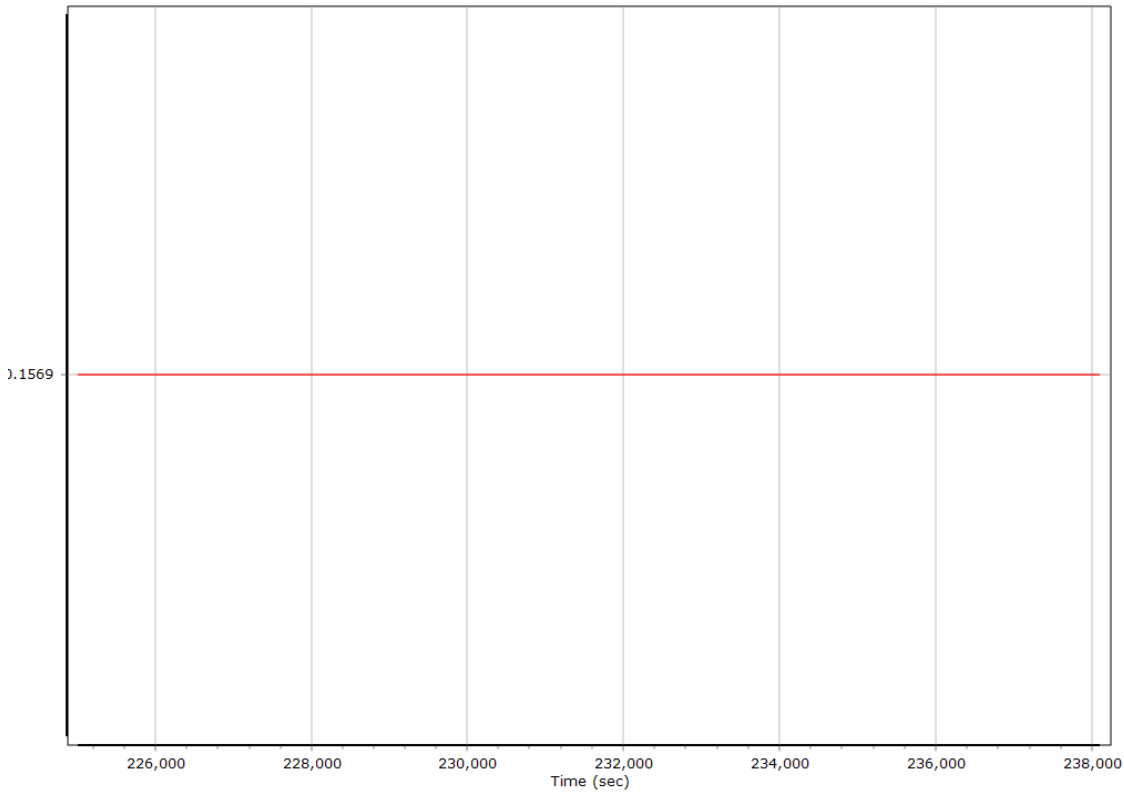
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	False		
Processing start time	224604.000 (12/08/2020 14:23:24)		
Processing end time	238110.000 (12/08/2020 18:08:30)		
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

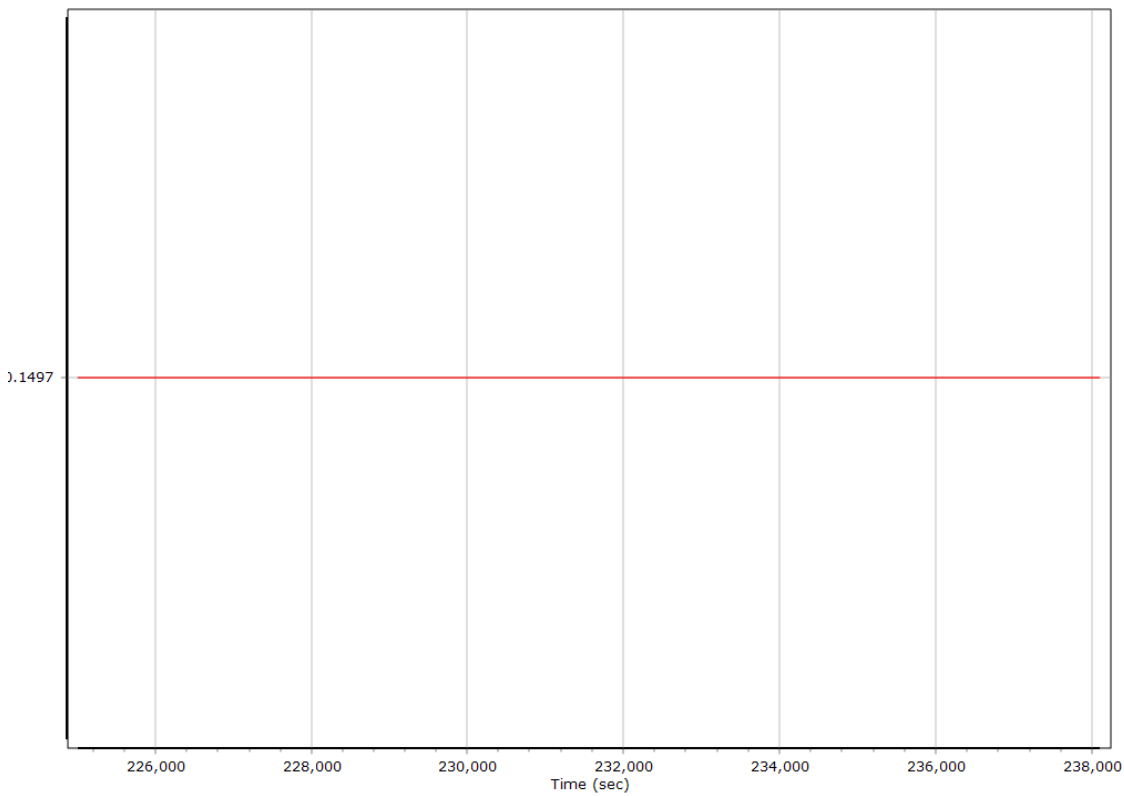
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

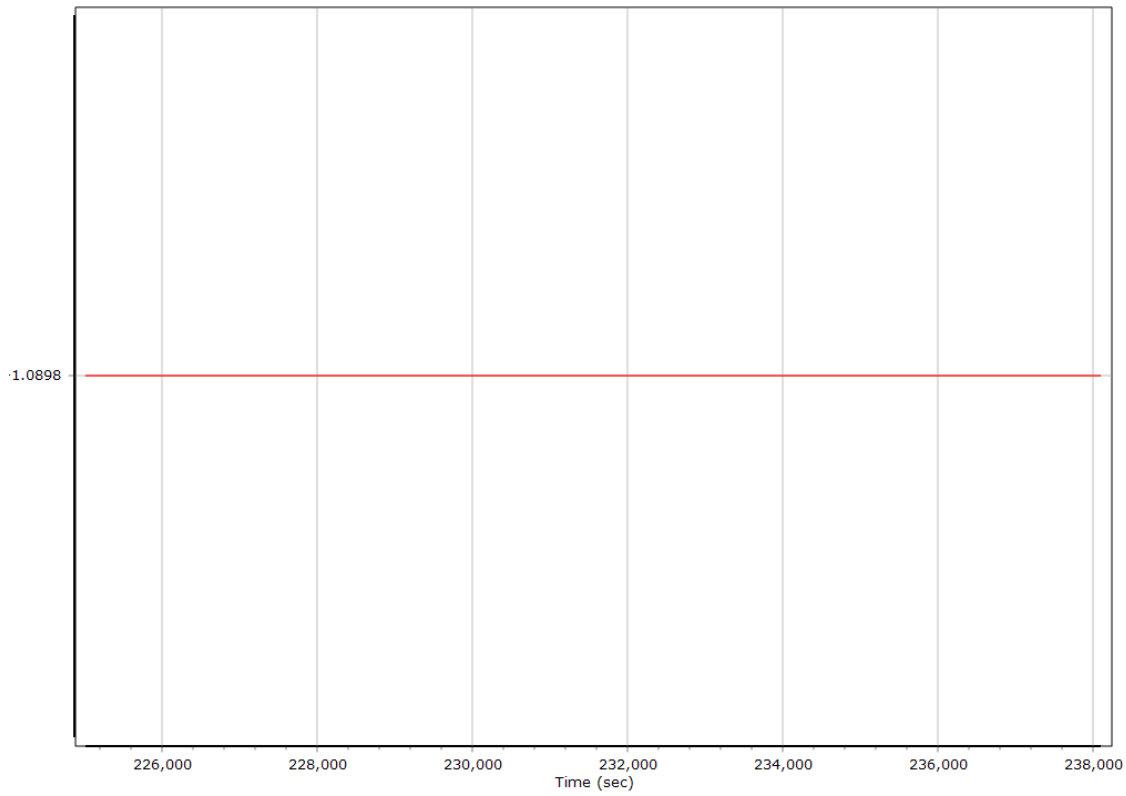
X Reference-Primary GNSS Lever Arm (m)



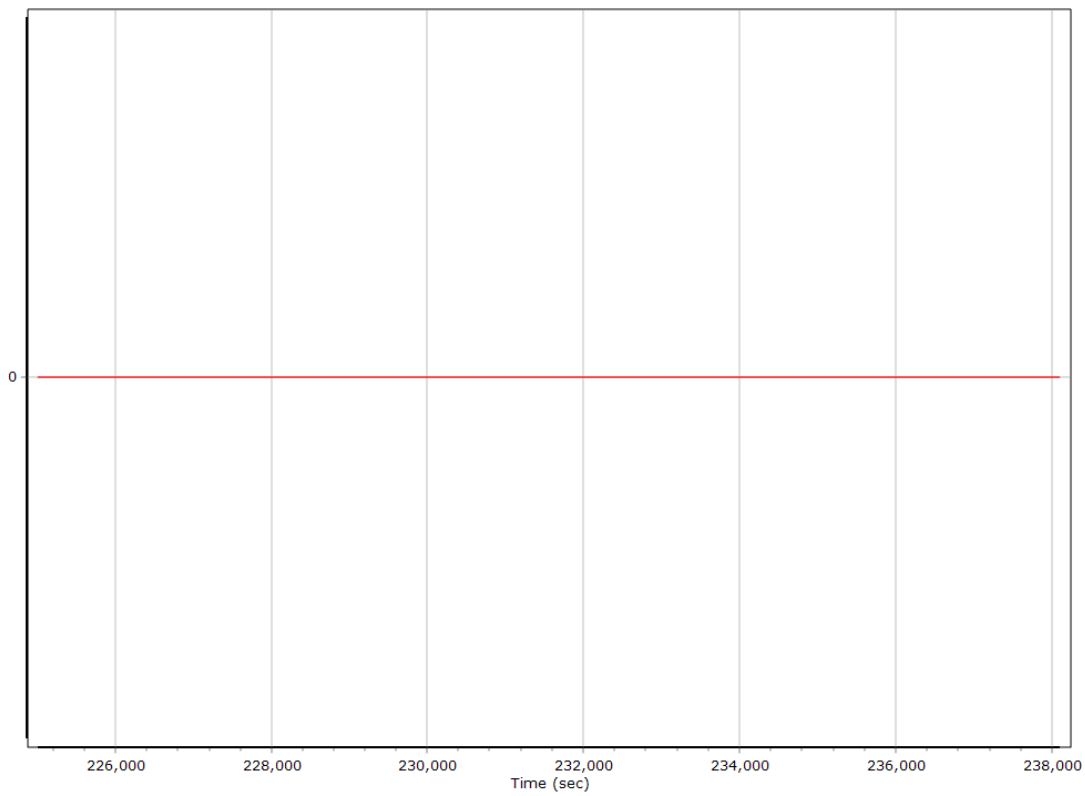
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



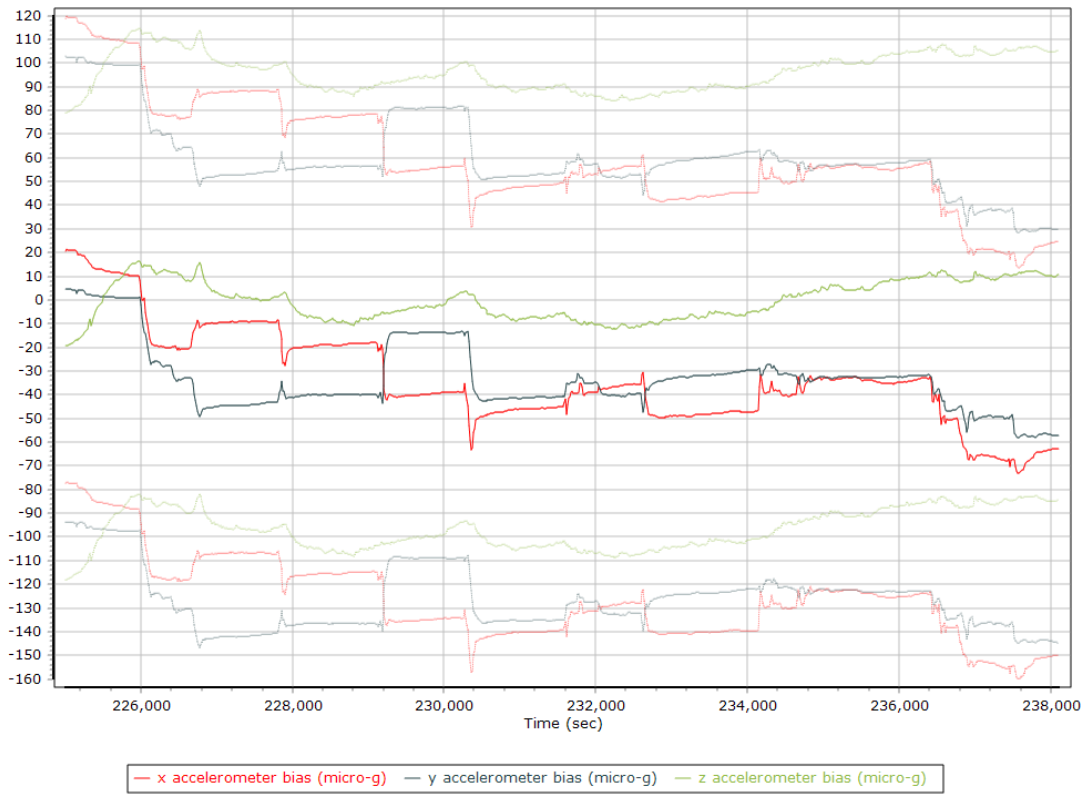
Reference-Primary GNSS Lever Arm Figure of Merit



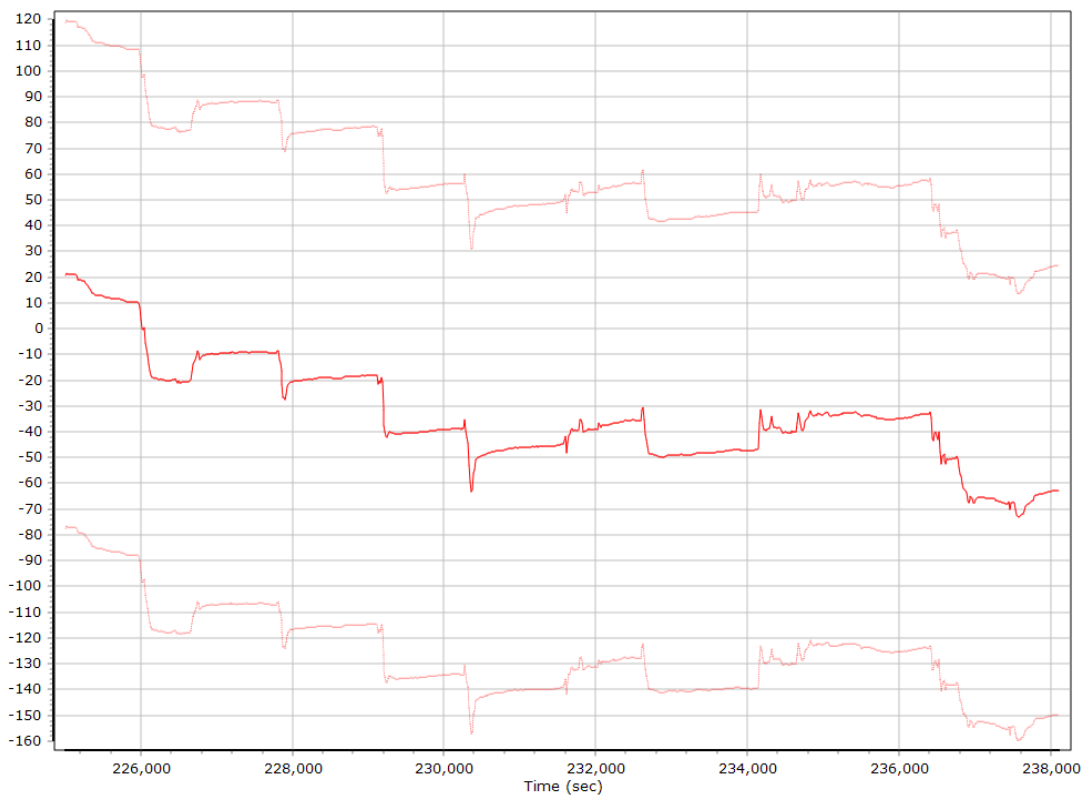
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

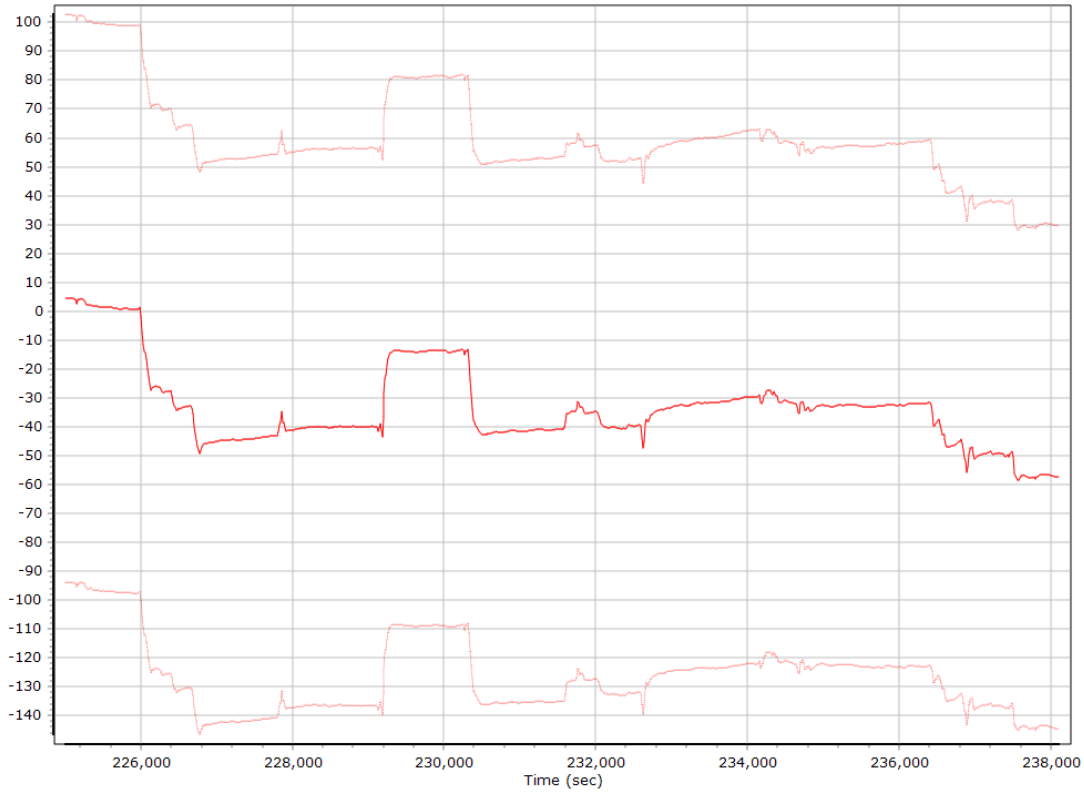
Accelerometer Bias (micro-g)



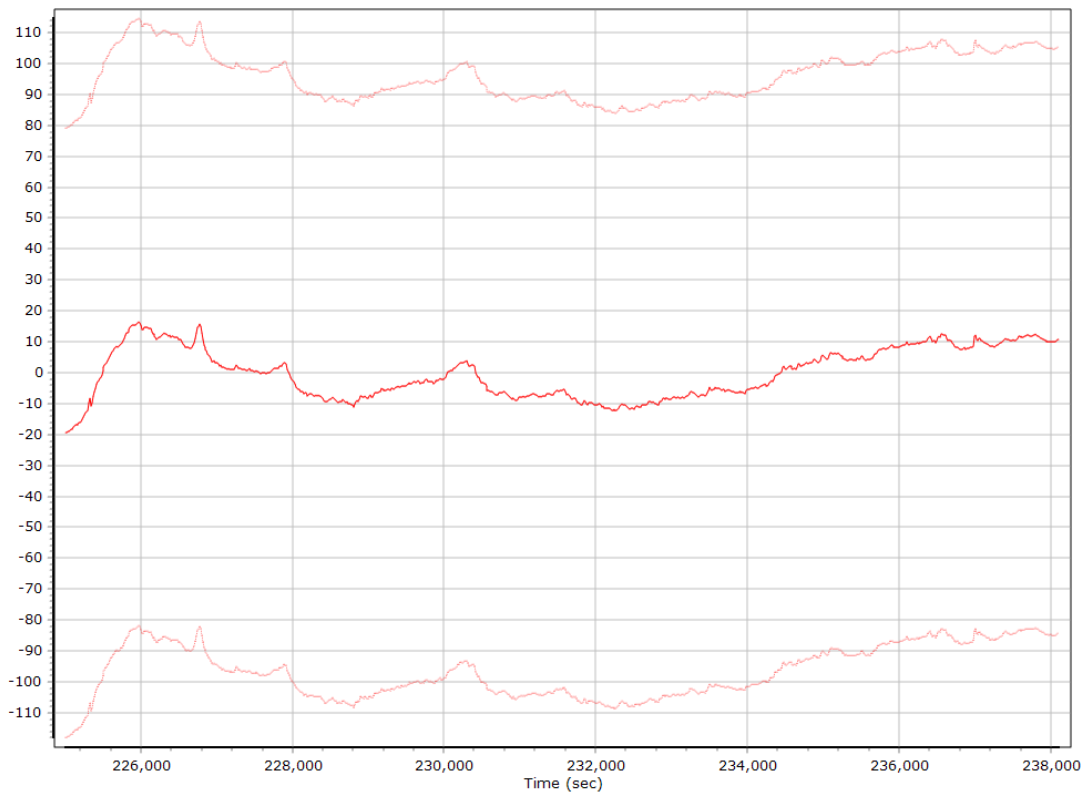
X Accelerometer Bias (micro-g)



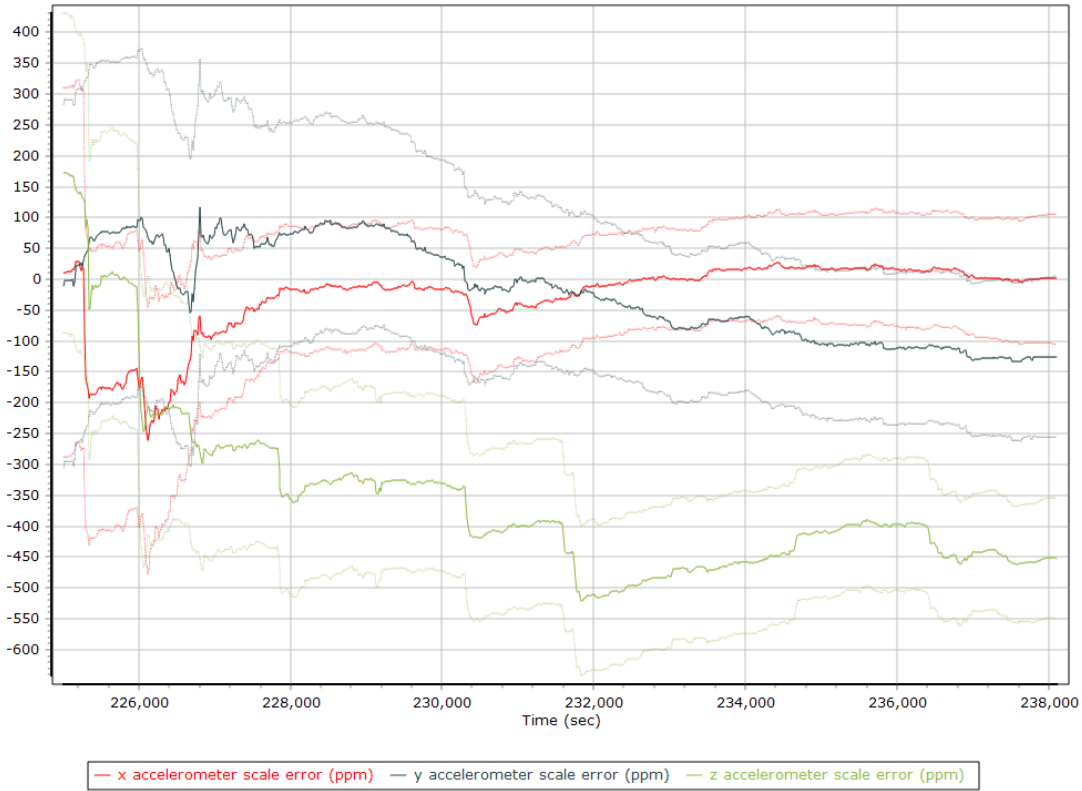
Y Accelerometer Bias (micro-g)



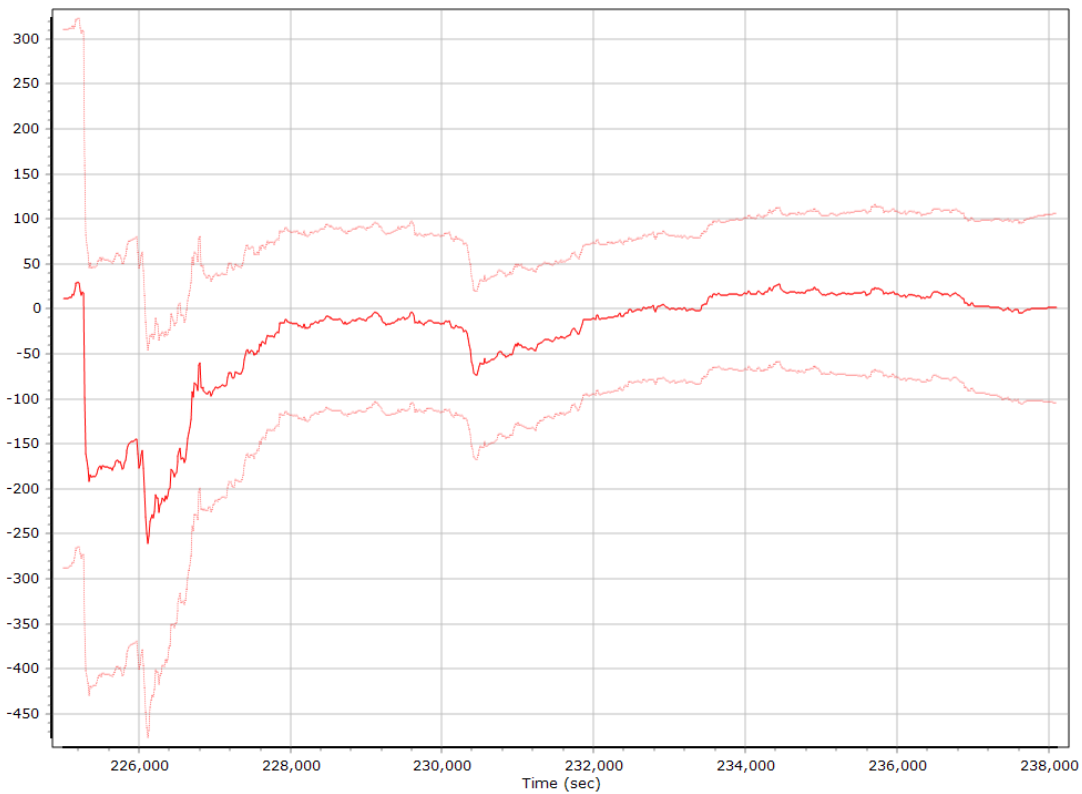
Z Accelerometer Bias (micro-g)



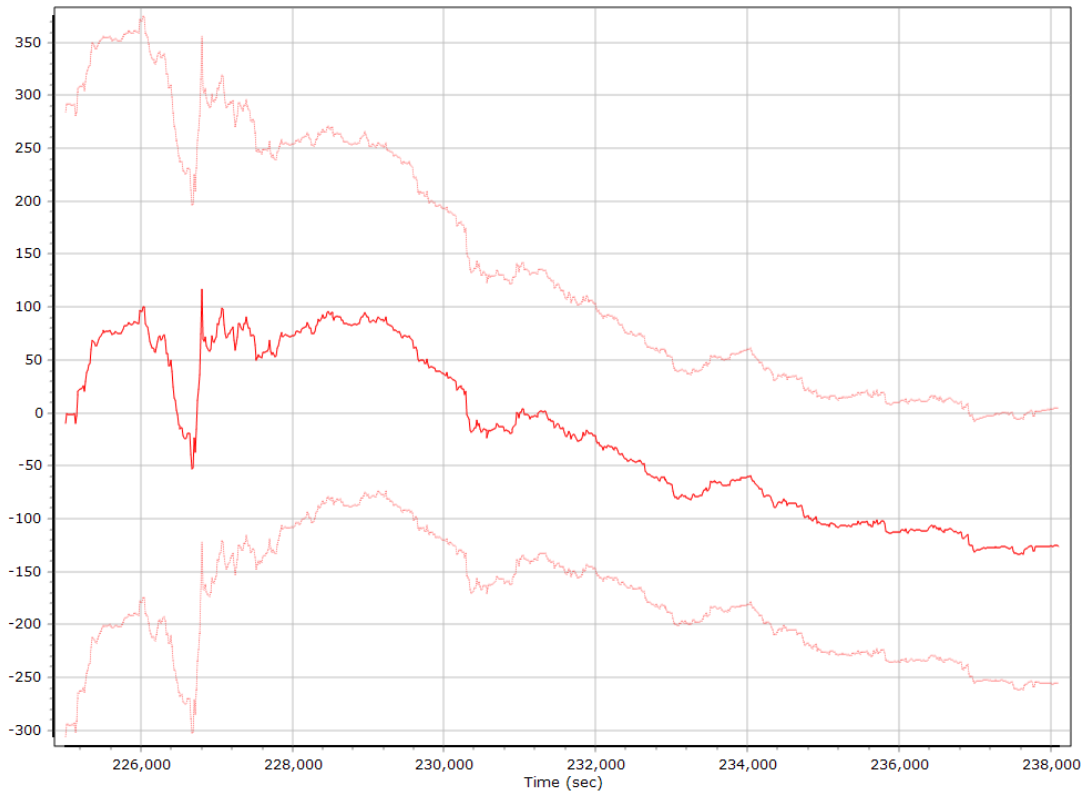
Accelerometer Scale Error (ppm)



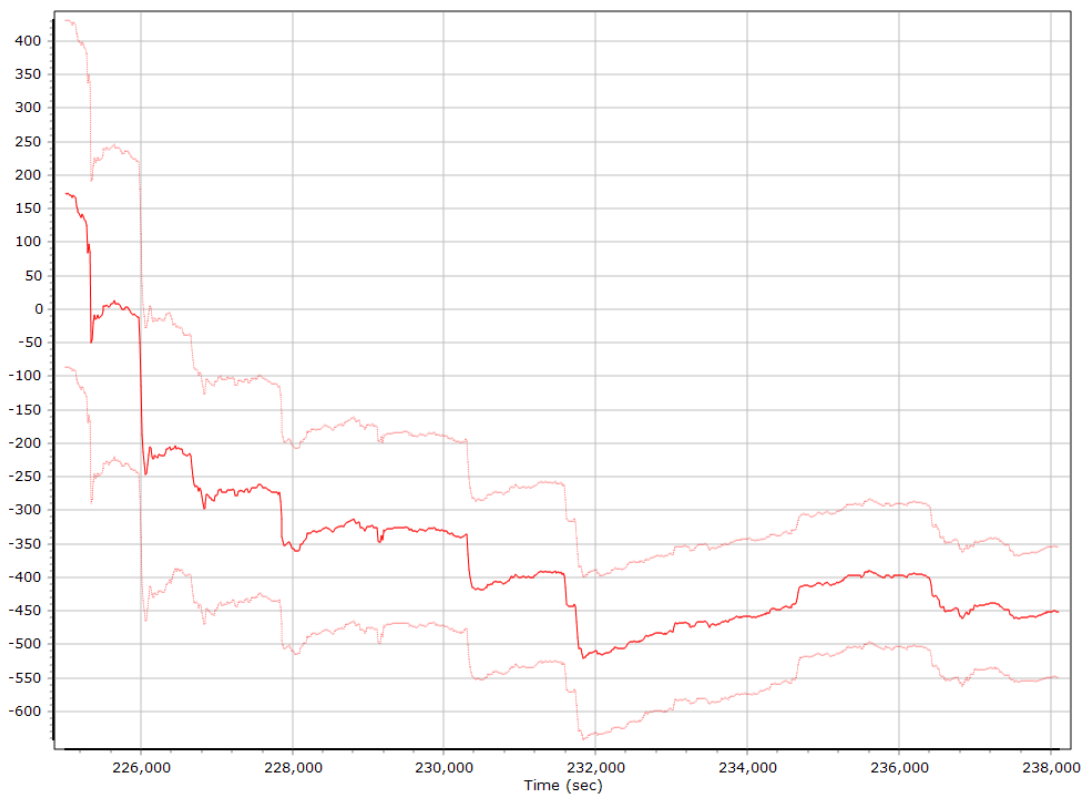
X Accelerometer Scale Error (ppm)



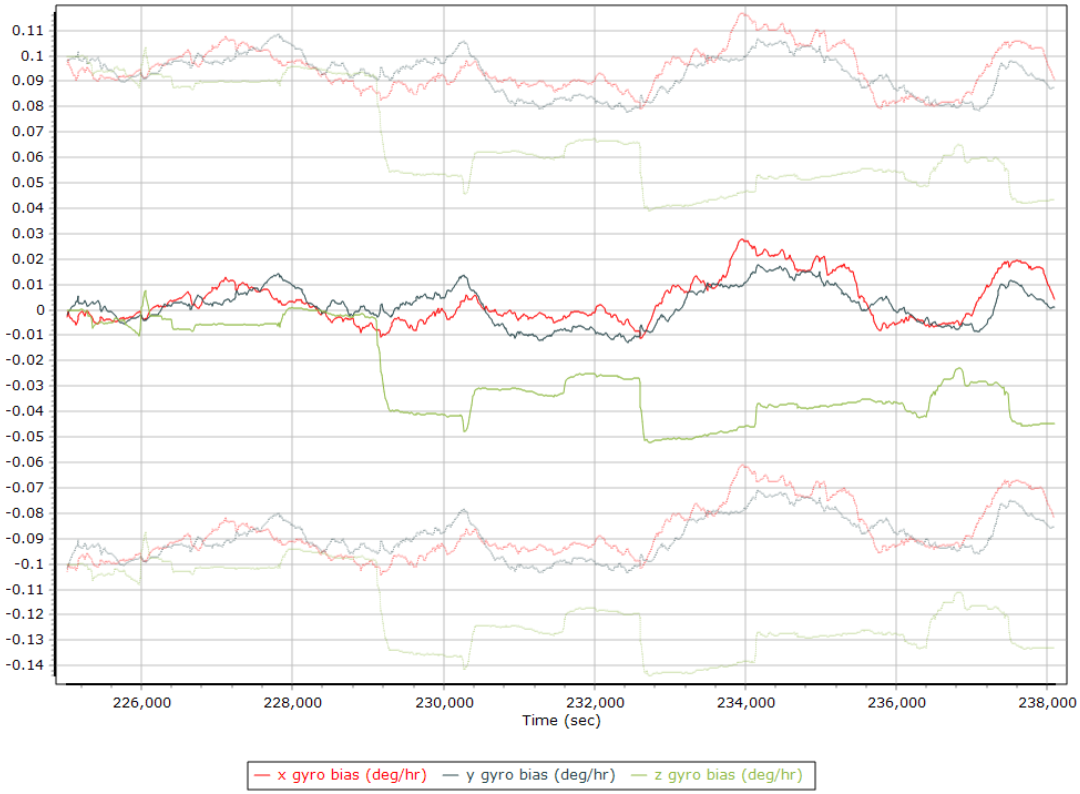
Y Accelerometer Scale Error (ppm)



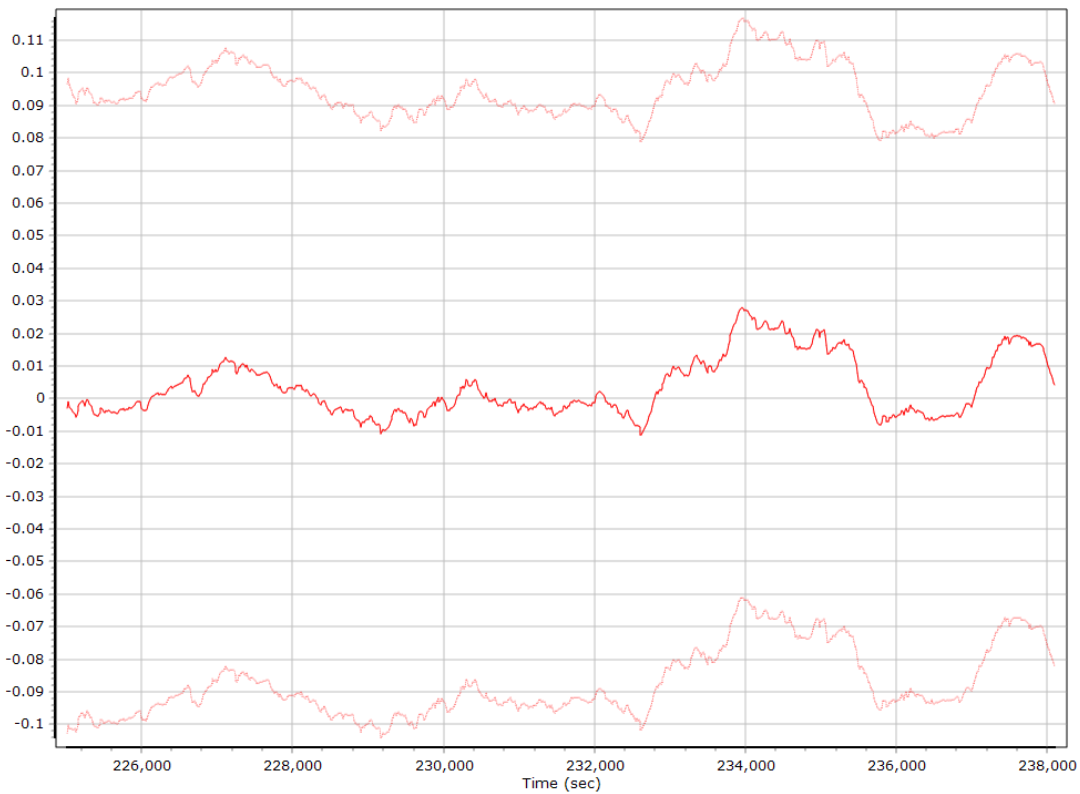
Z Accelerometer Scale Error (ppm)



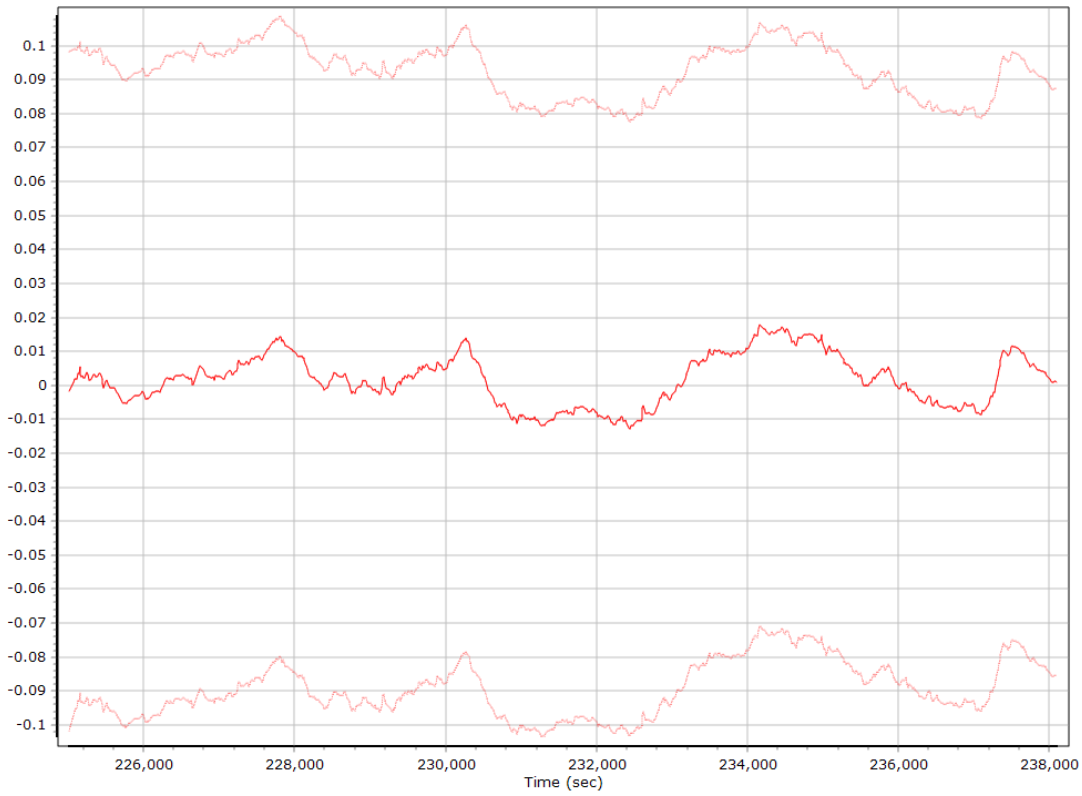
Gyro Bias (deg/h)



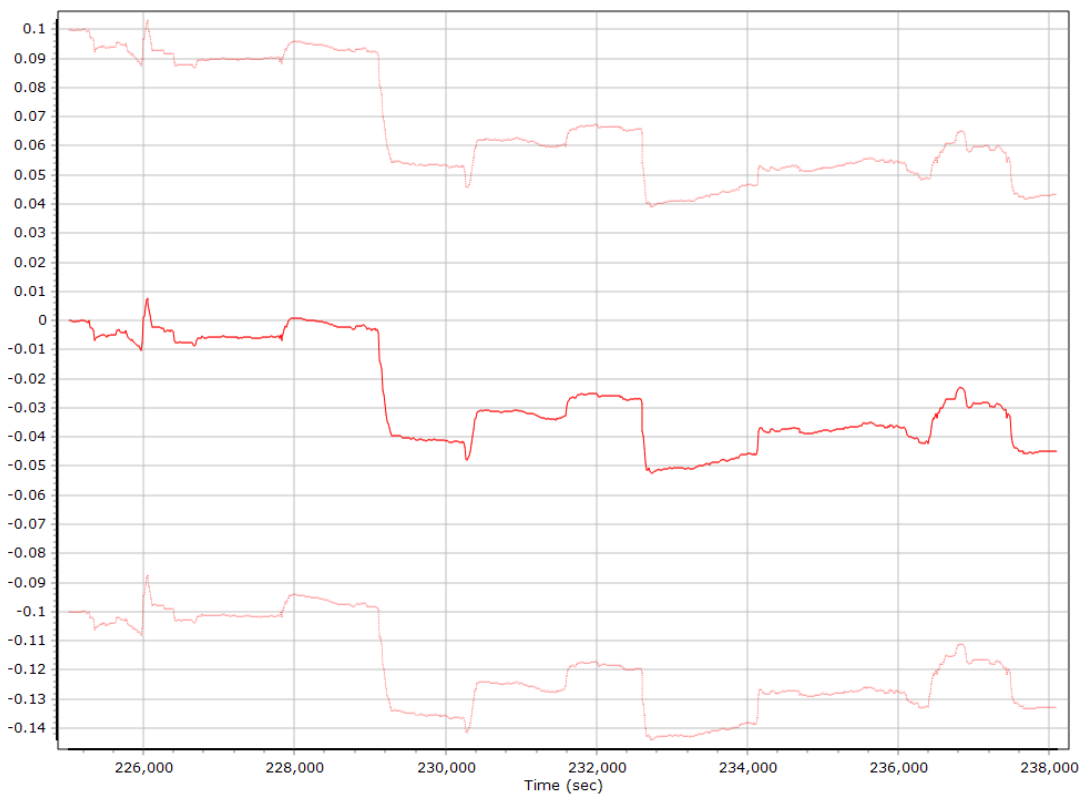
X Gyro Bias (deg/h)



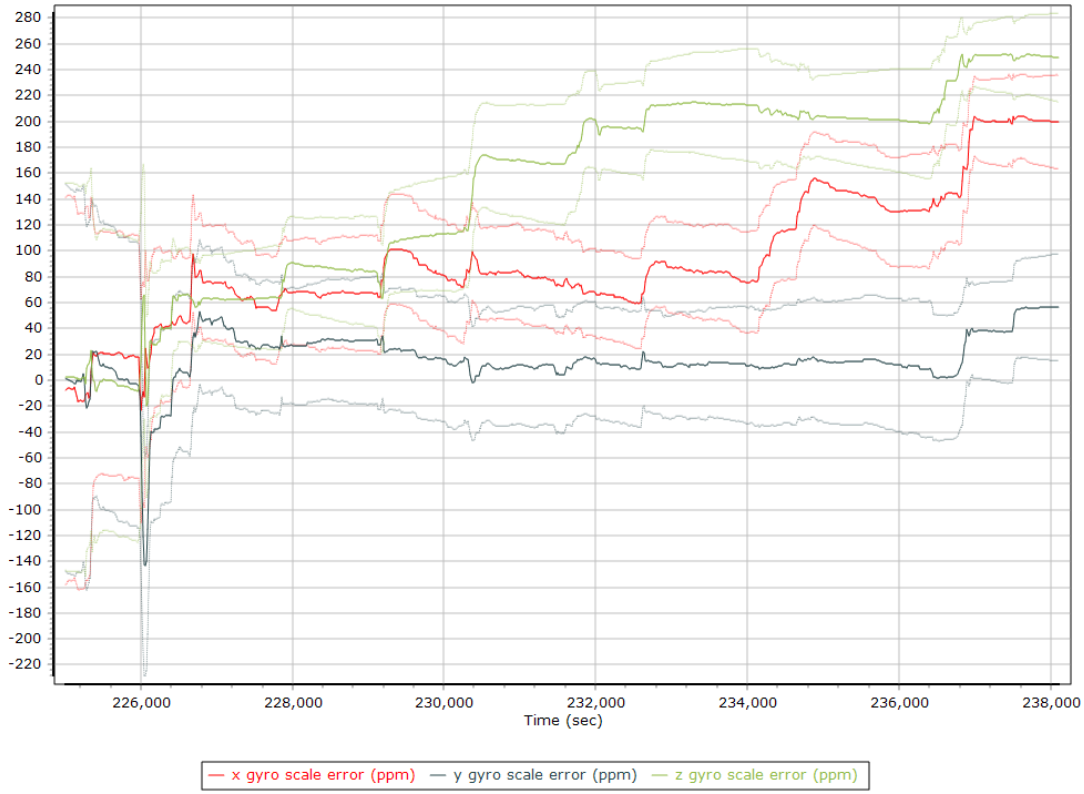
Y Gyro Bias (deg/h)



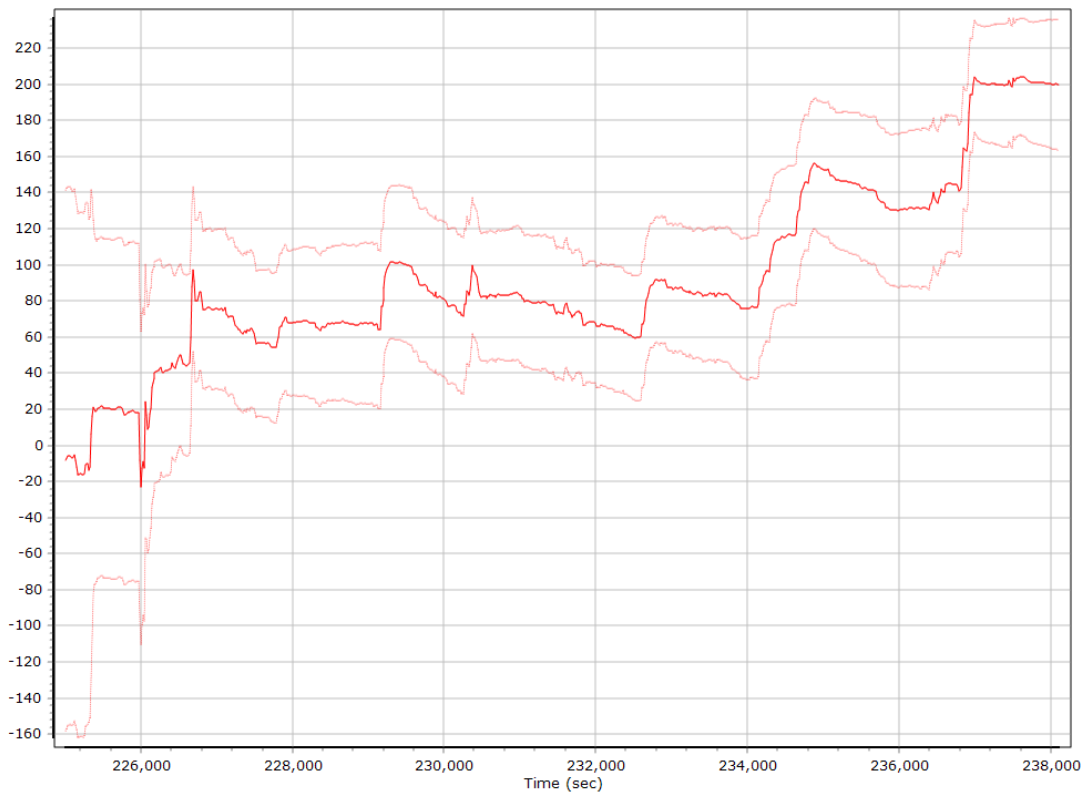
Z Gyro Bias (deg/h)



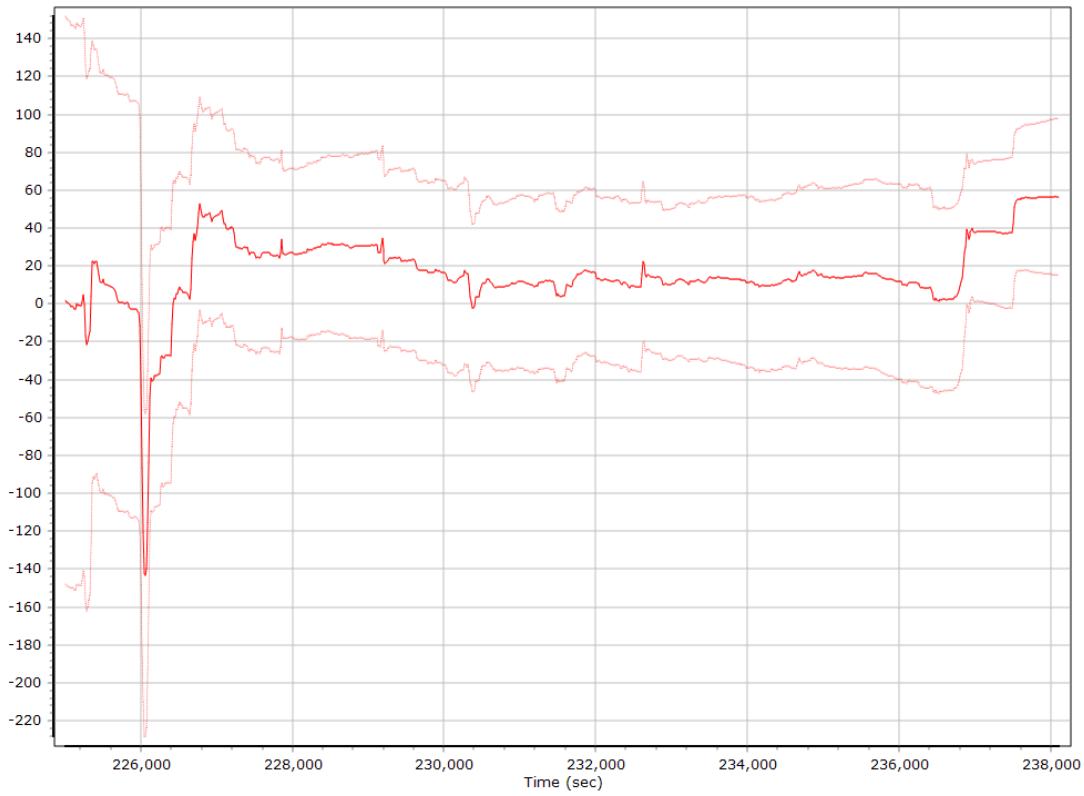
Gyro Scale Error (ppm)



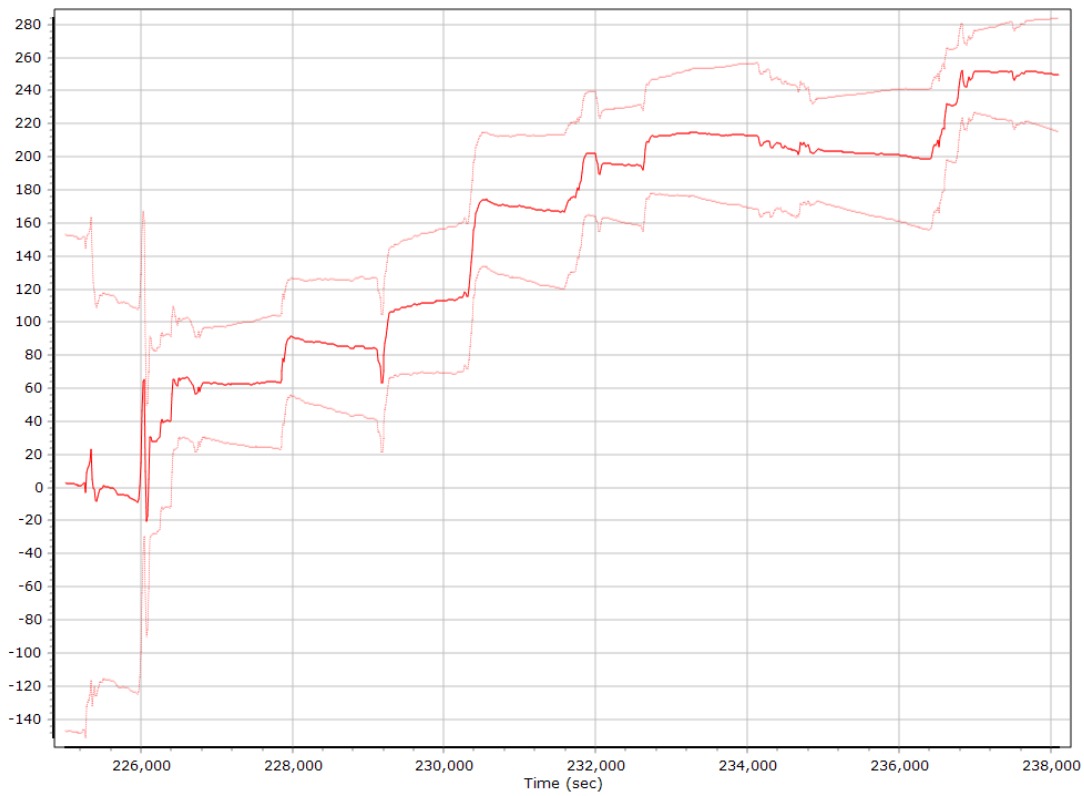
X Gyro Scale Error (ppm)



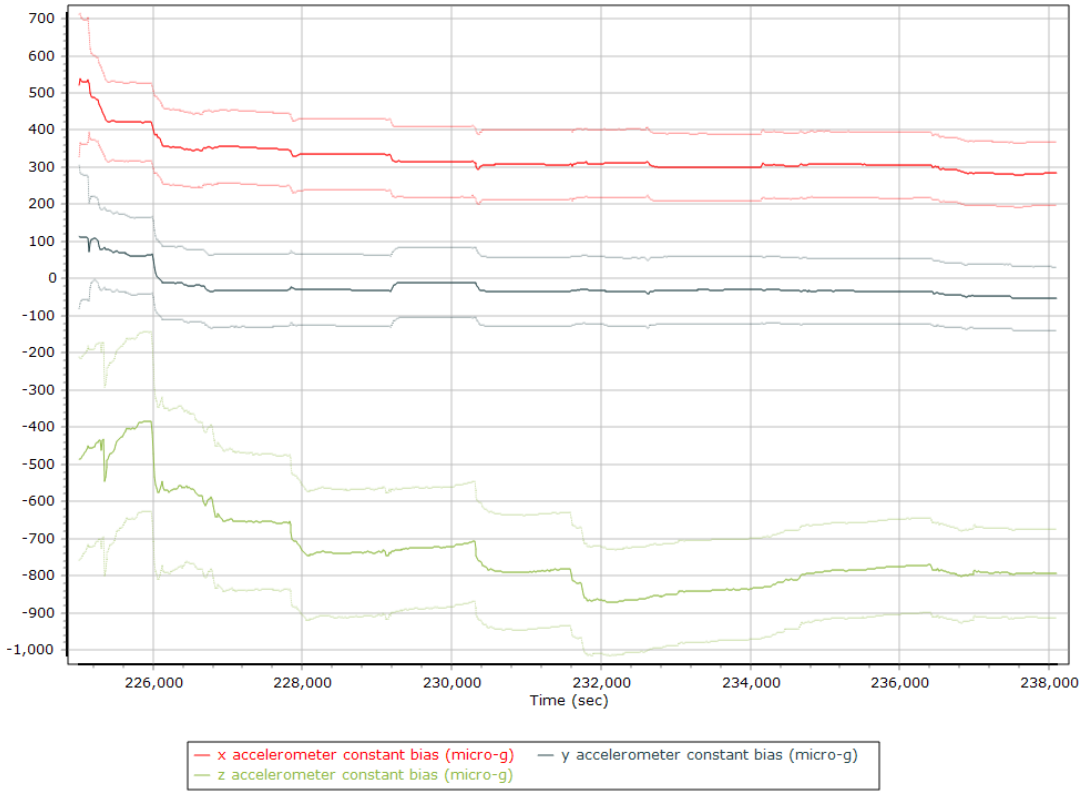
Y Gyro Scale Error (ppm)



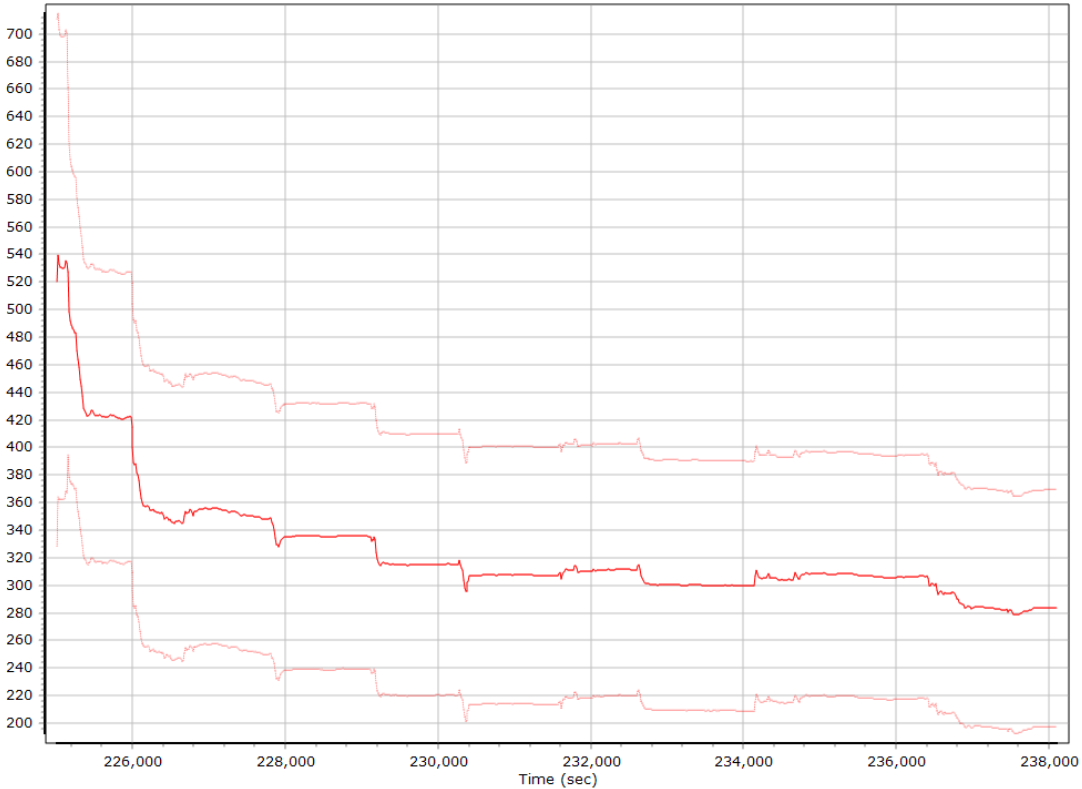
Z Gyro Scale Error (ppm)



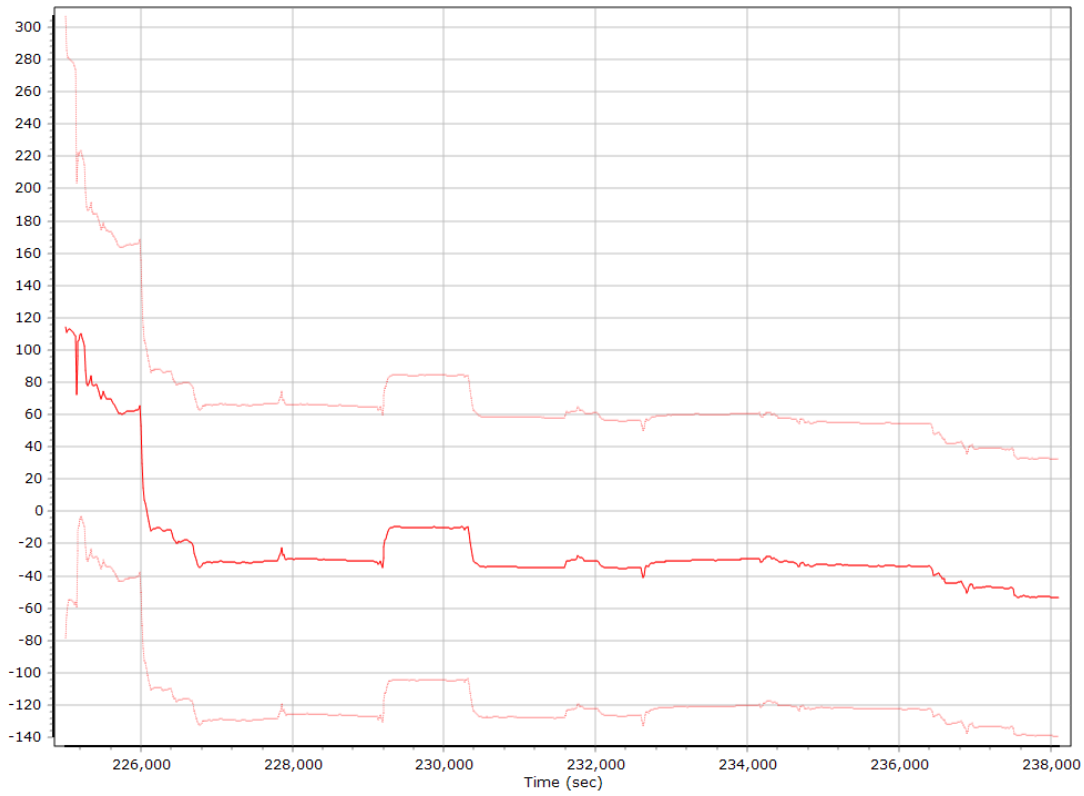
Forward Processed Estimated Constant Errors, Reference Frame Accelerometer Bias (micro-g)



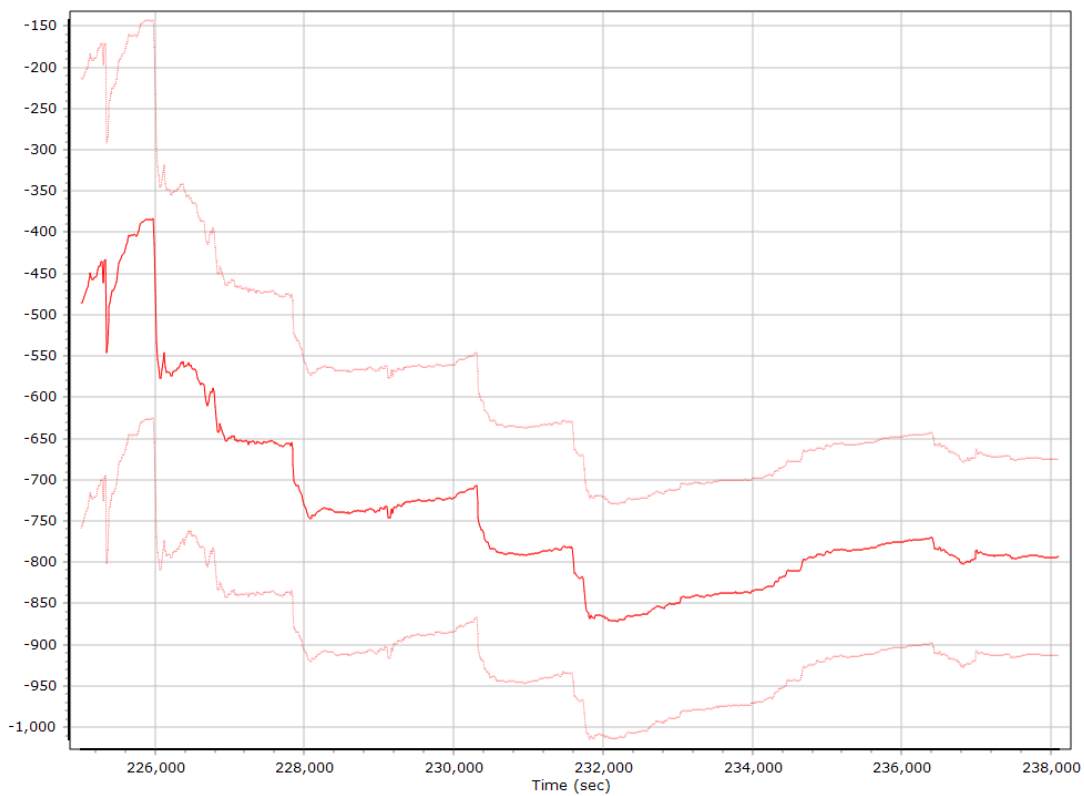
X Accelerometer Bias (micro-g)



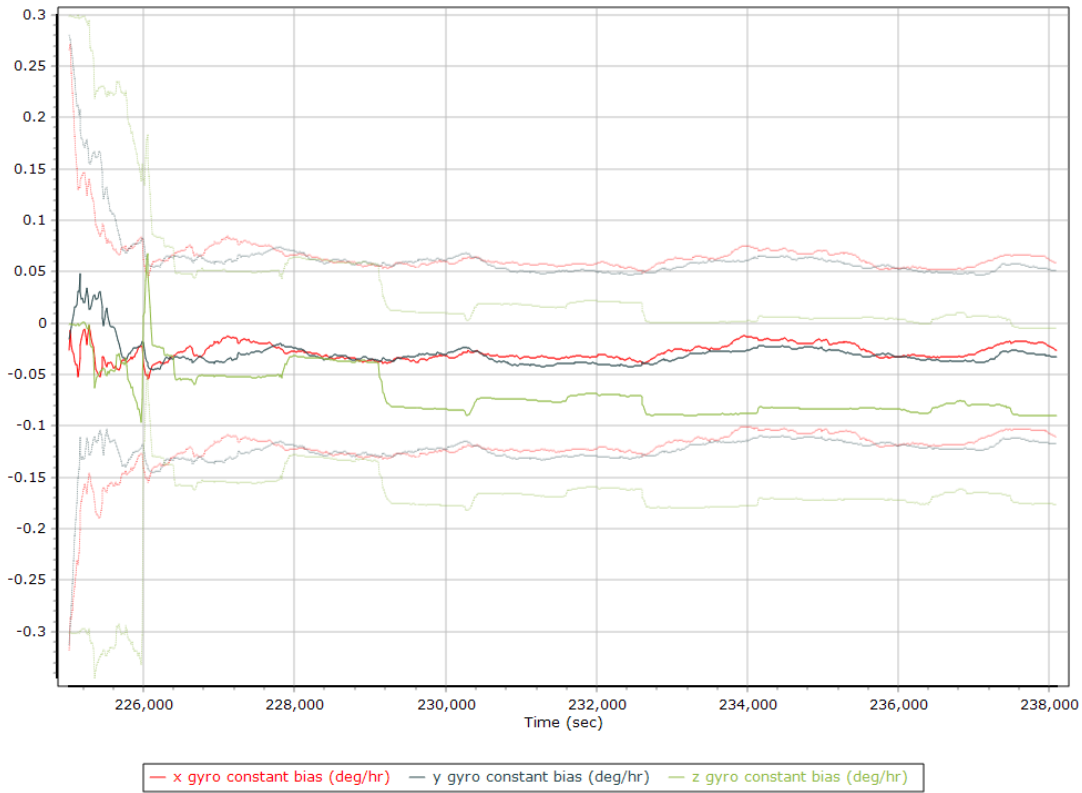
Y Accelerometer Bias (micro-g)



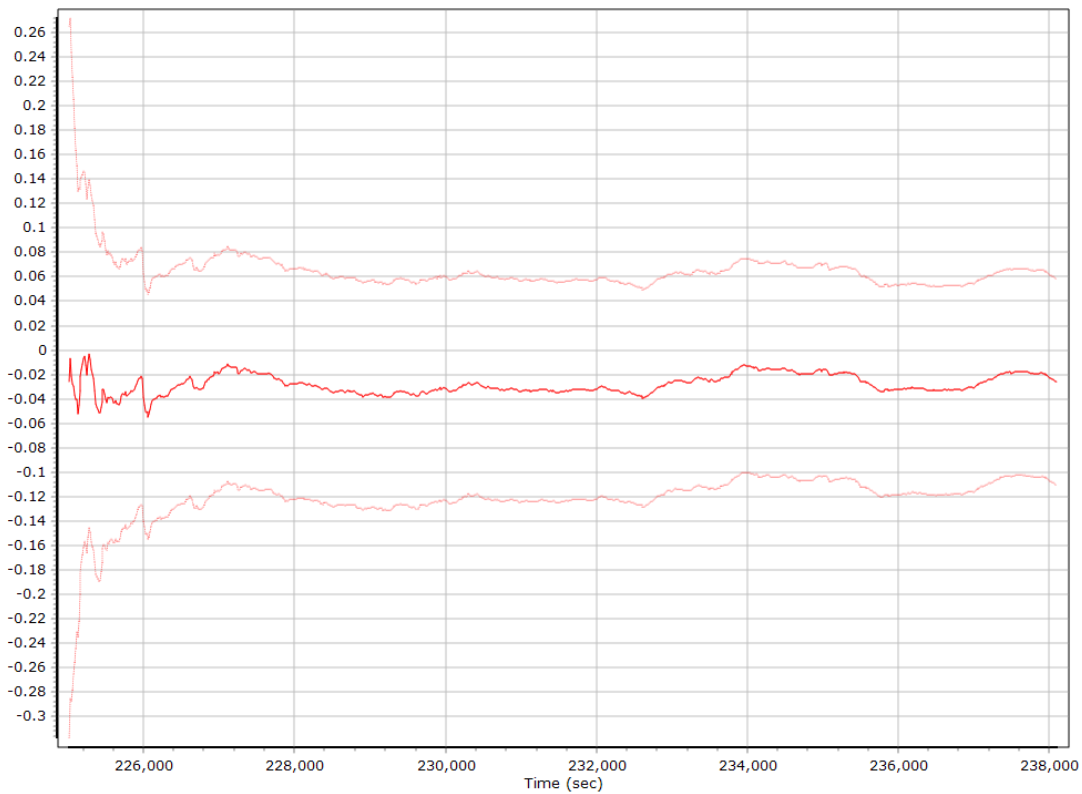
Z Accelerometer Bias (micro-g)



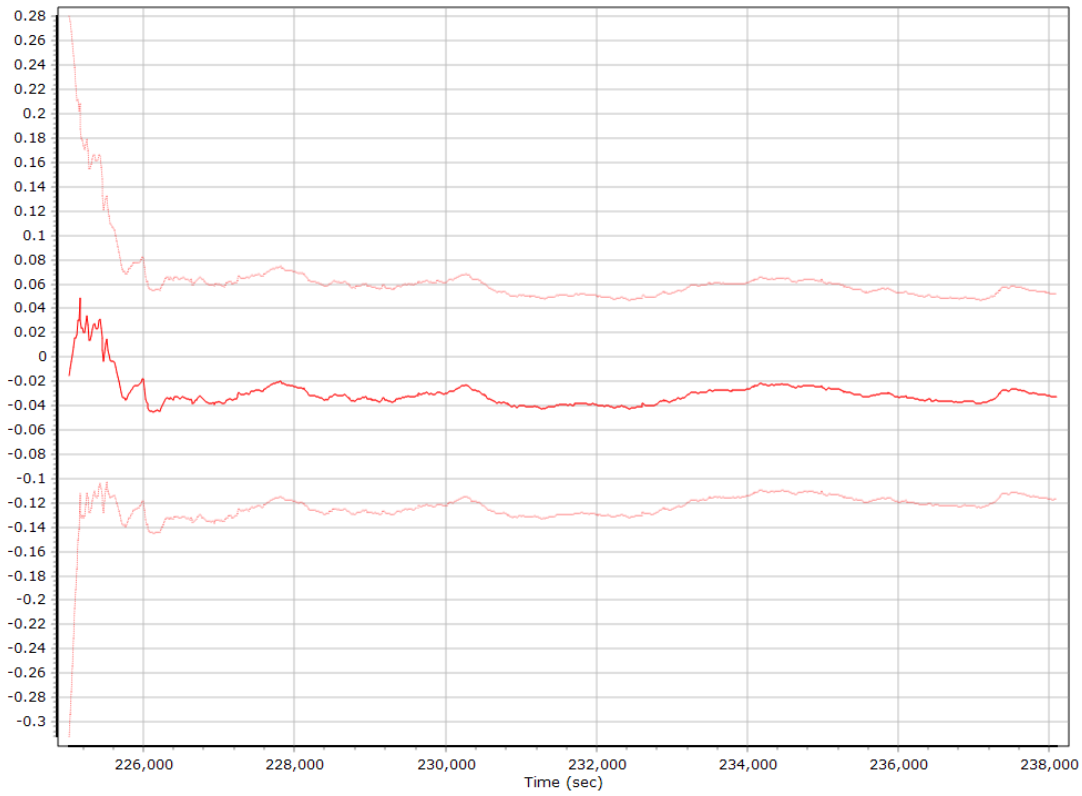
Gyro Bias (deg/h)



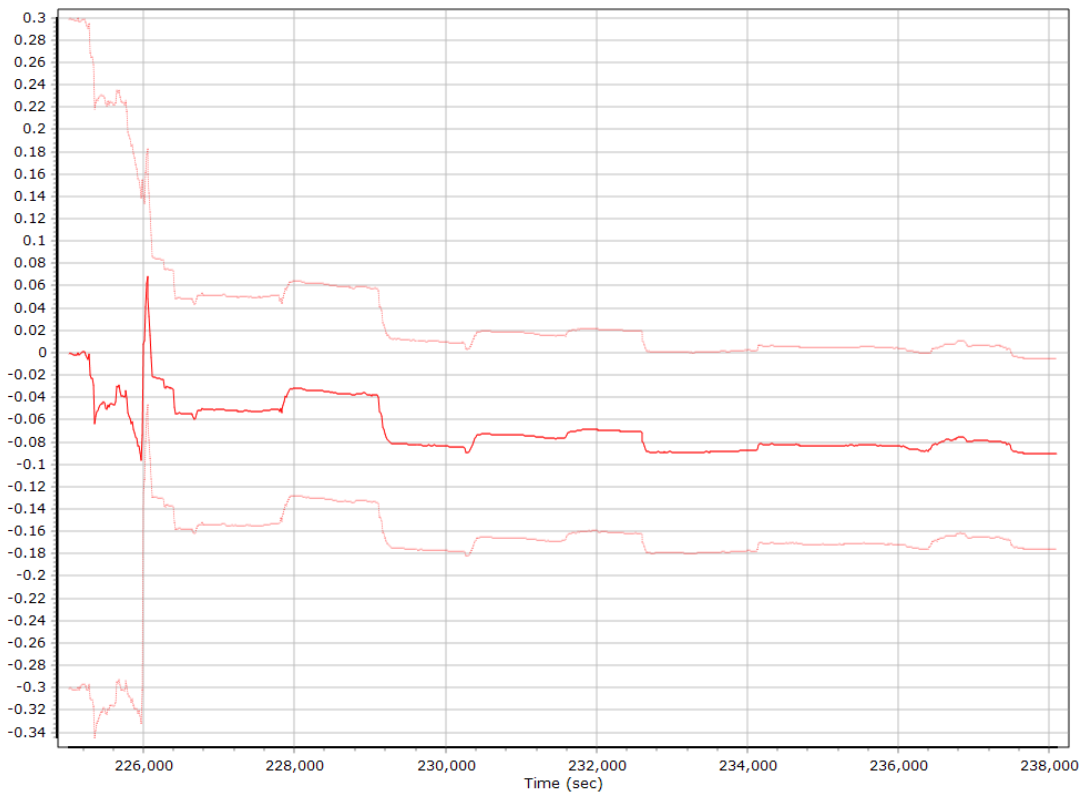
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)

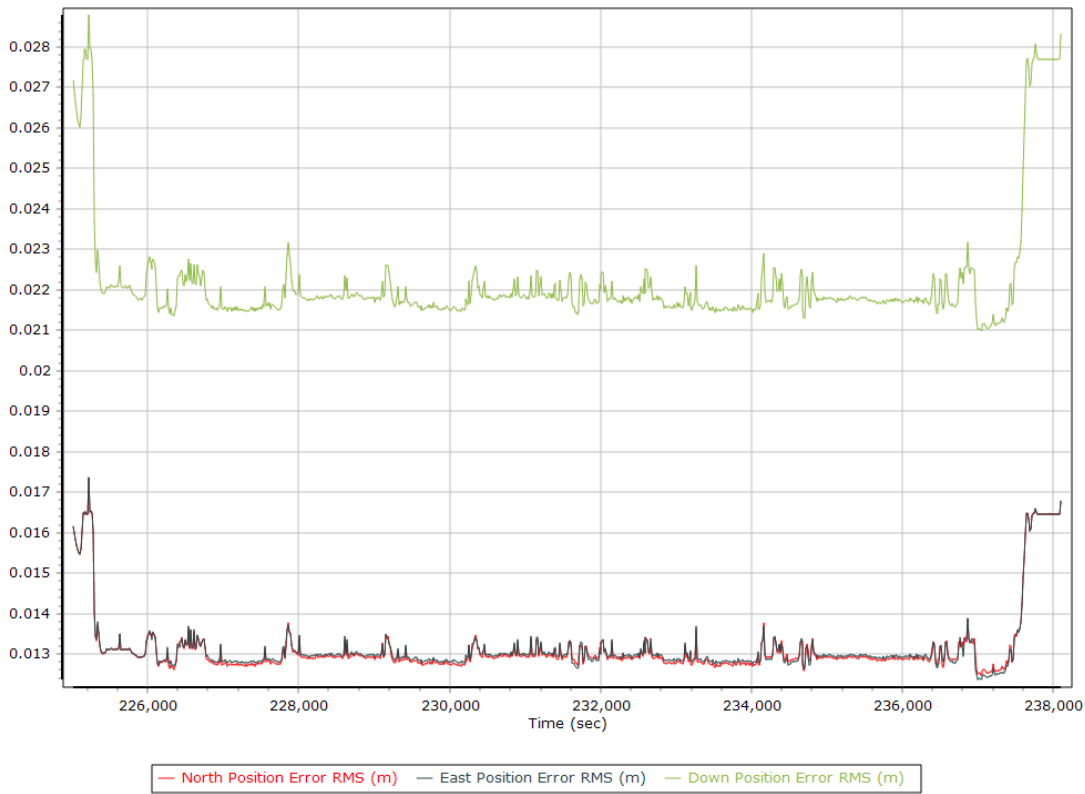


Z Gyro Bias (deg/h)

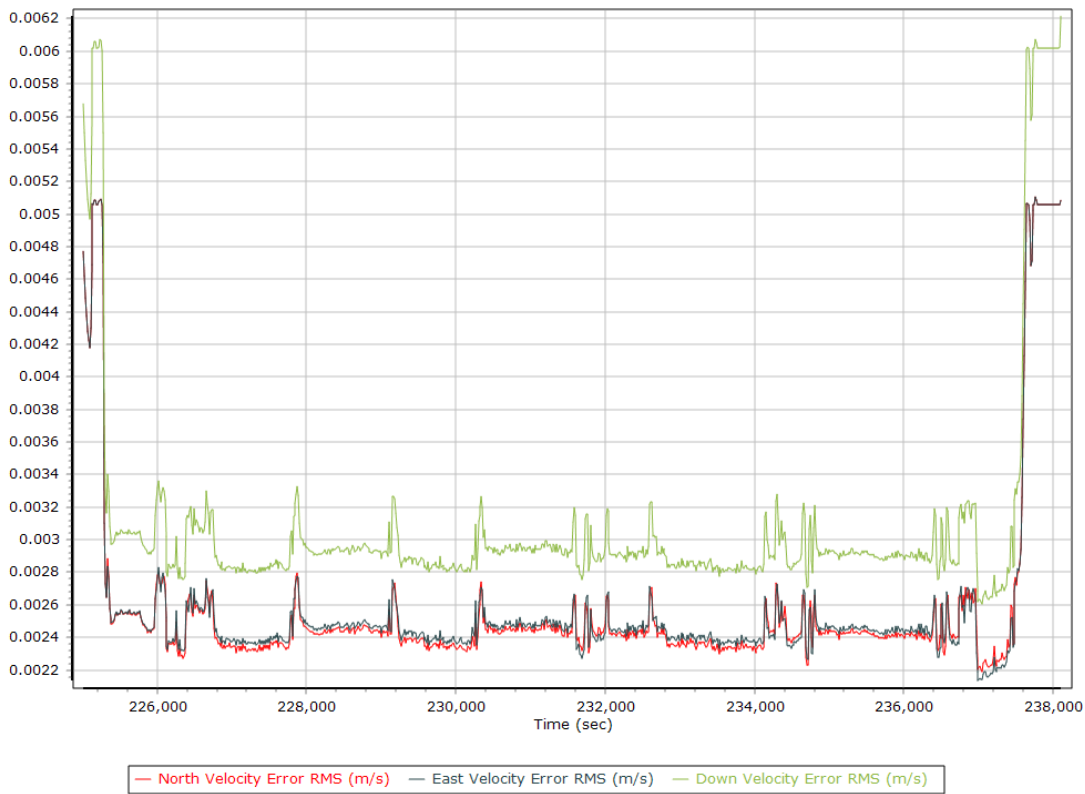


Smoothed Performance Metrics

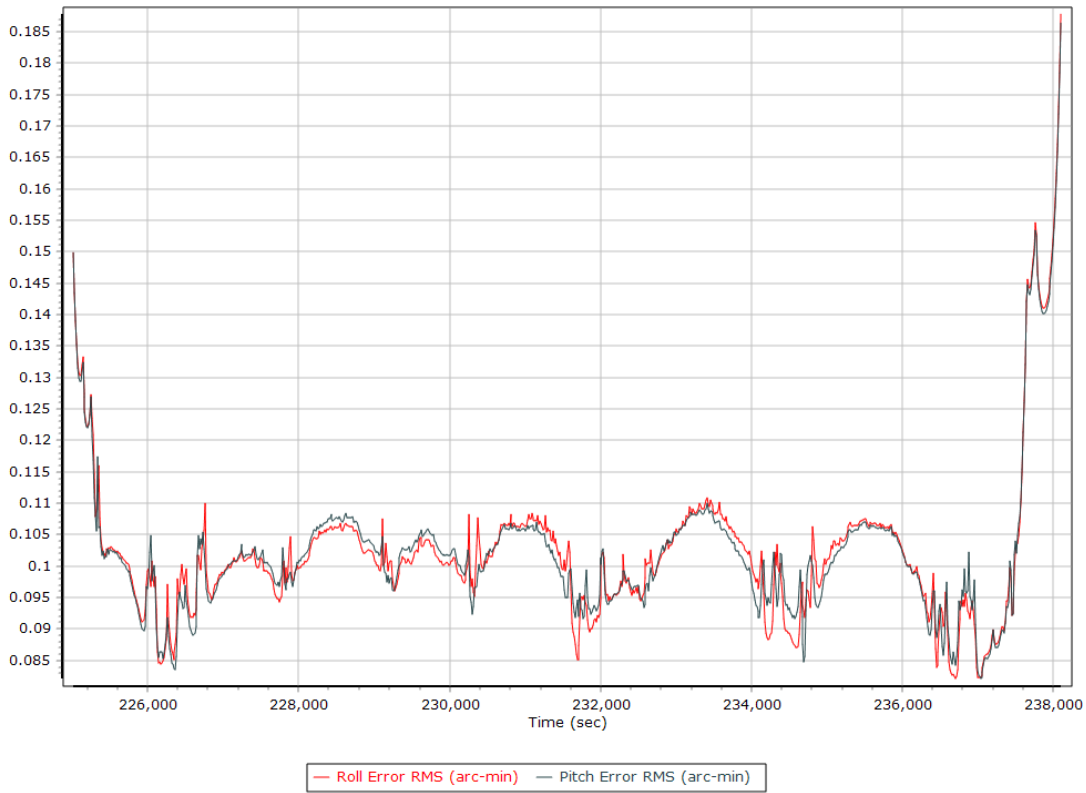
Position Error RMS (m)



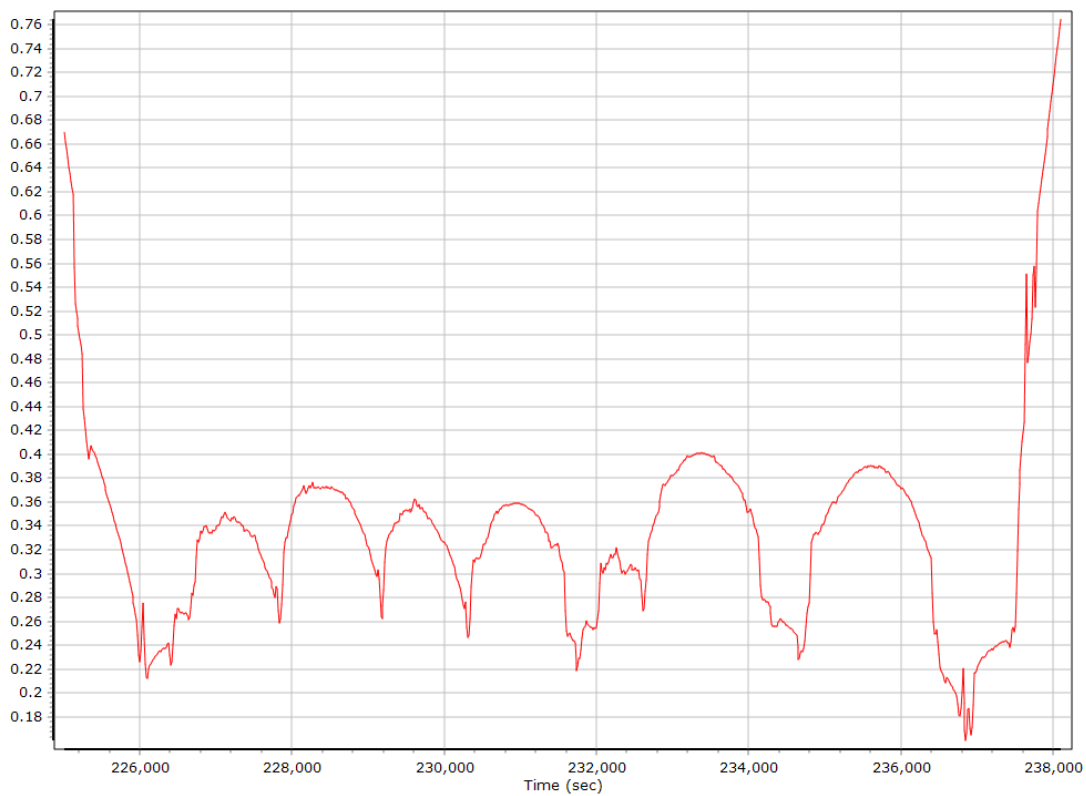
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

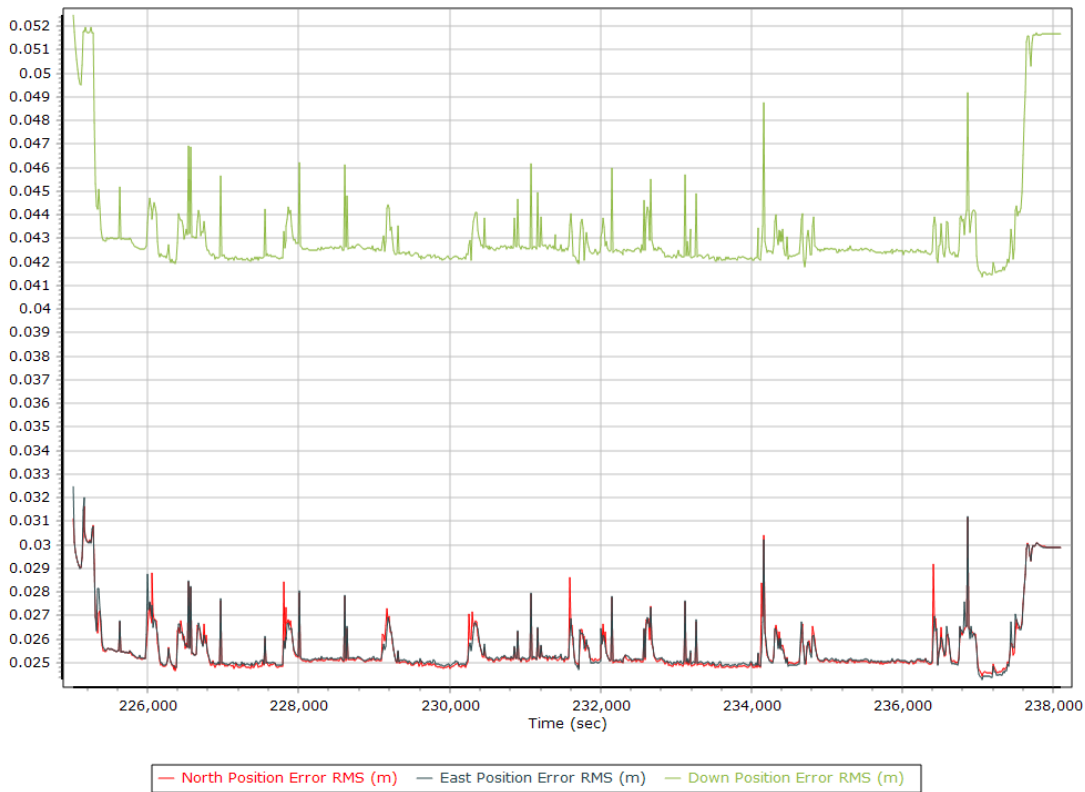


Heading Error RMS (arc-min)

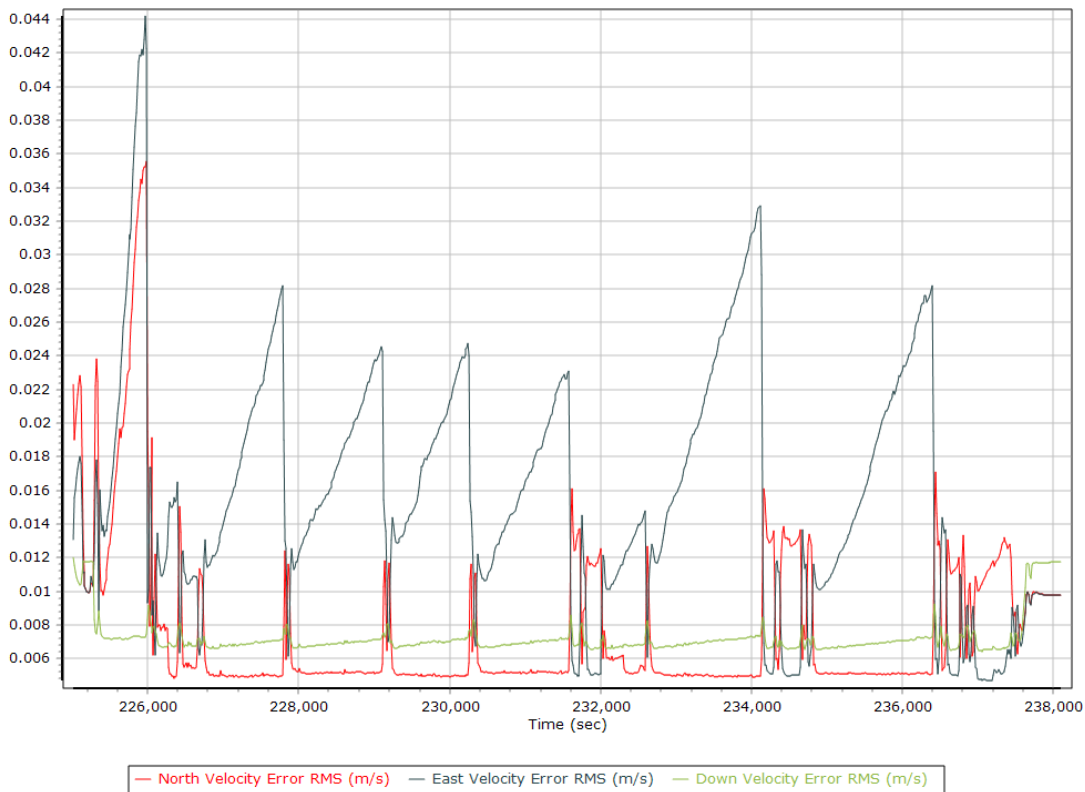


Forward Processed Performance Metrics

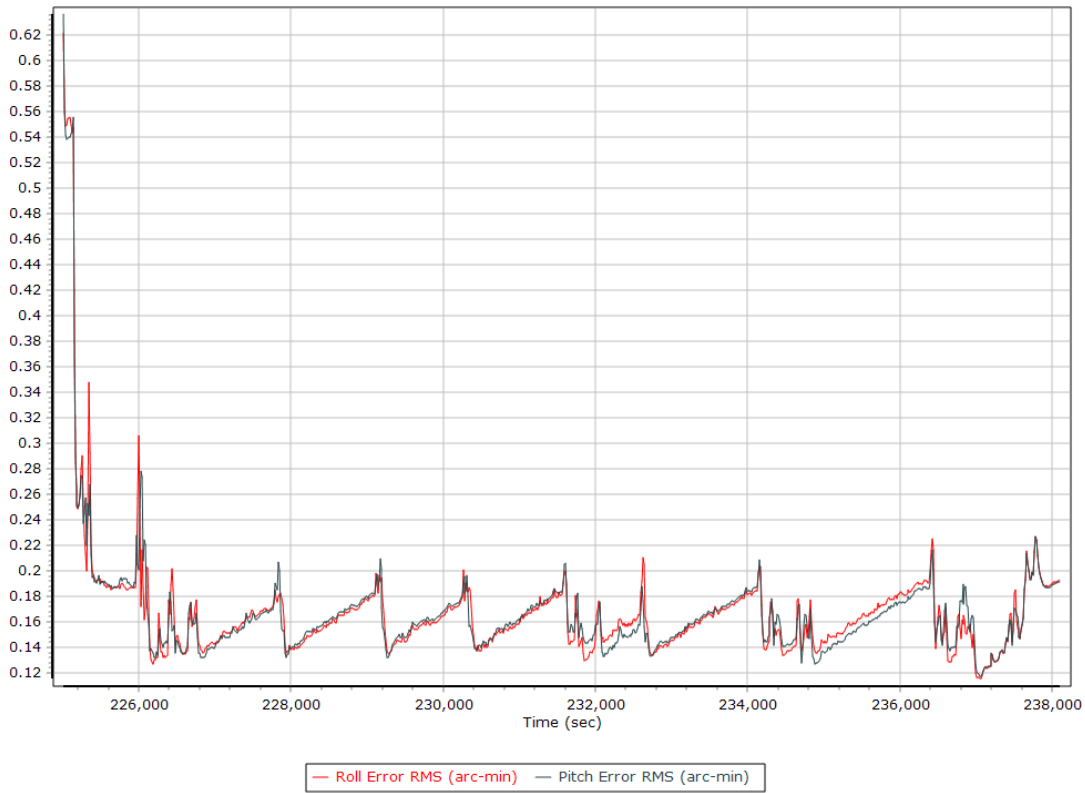
Position Error RMS (m)



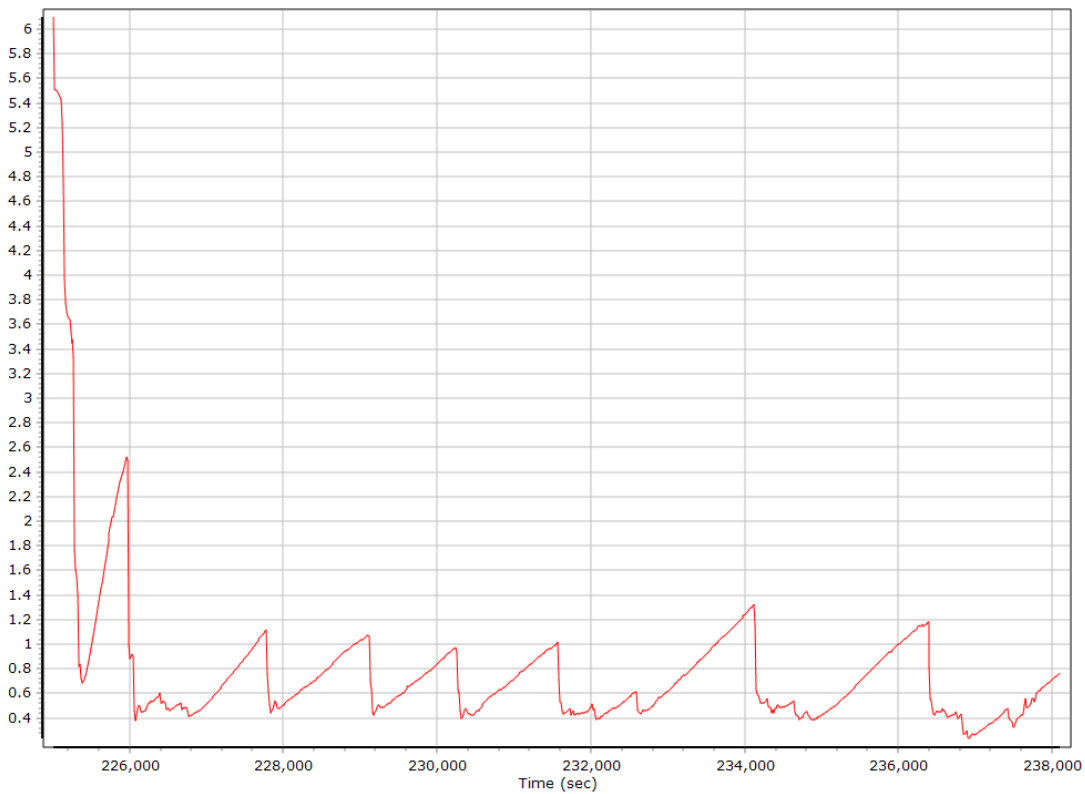
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

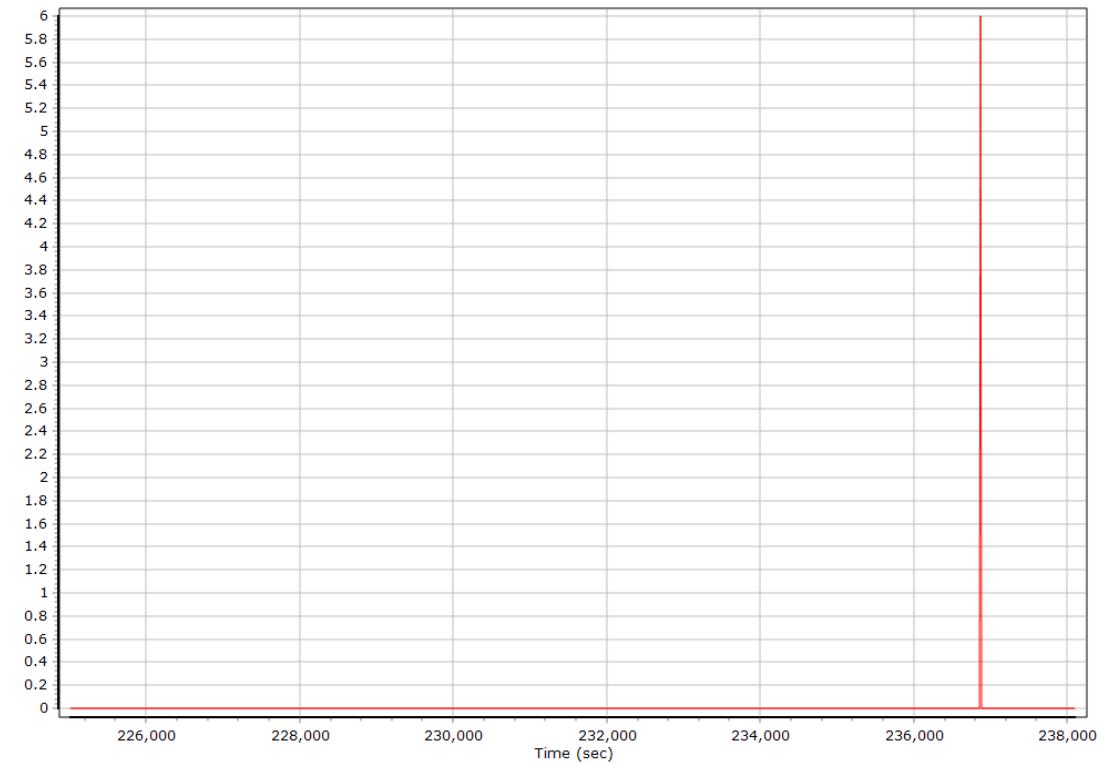


Heading Error RMS (arc-min)



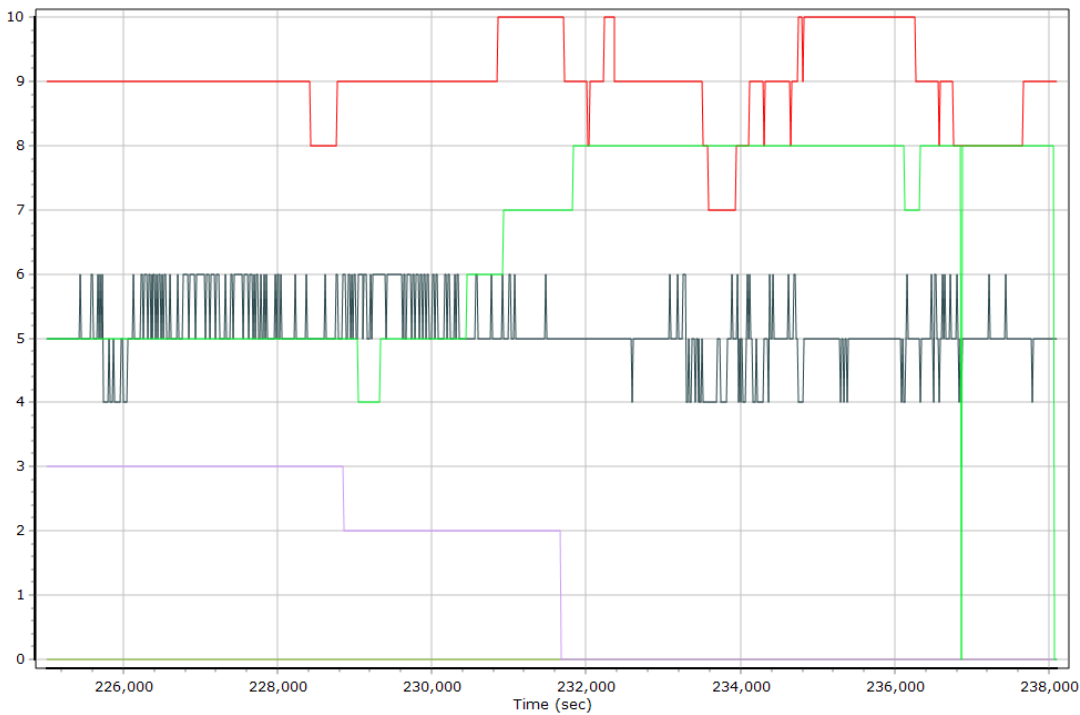
Forward Processed Solution Status

Processing Mode



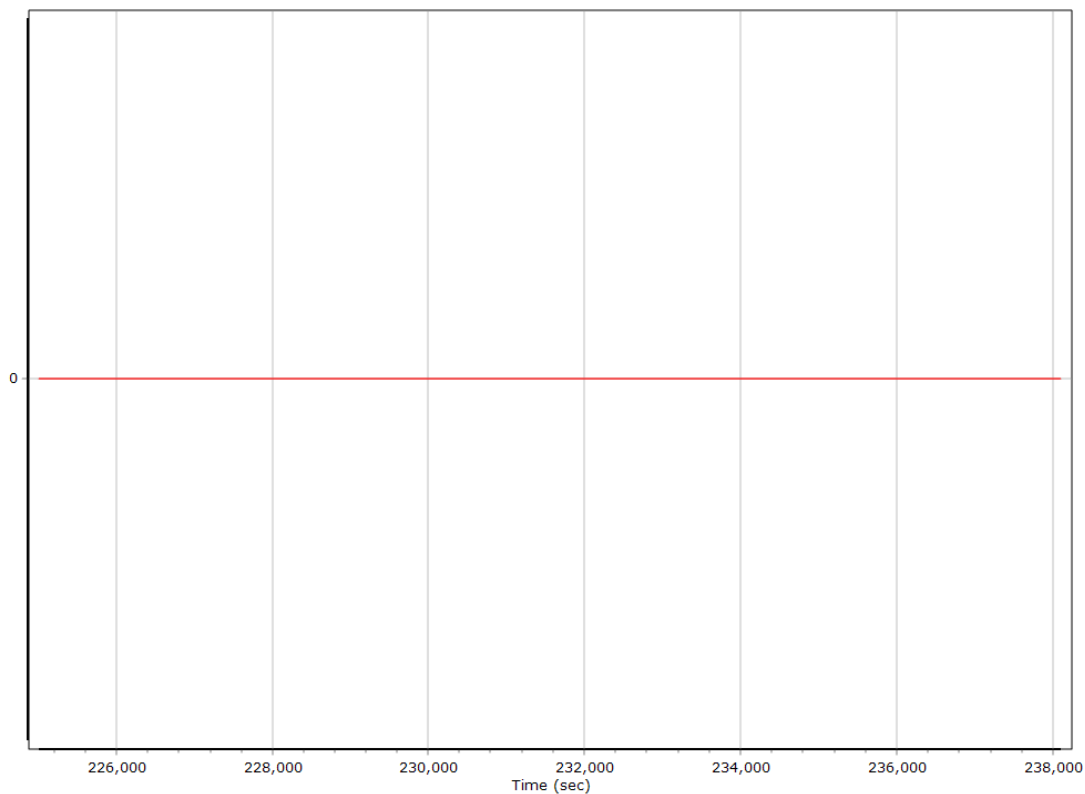
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR

Number of Satellites



— Number of GPS Satellites — Number of GLONASS Satellites — Number of QZSS Satellites
 — Number of BEIDOU Satellites — Number of GALILEO Satellites

Baseline Length



Export Summary Section 1

Export file	sbet_11898_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	224952.001 (12/08/2020 14:29:12)		
Export end time	238110.004 (12/08/2020 18:08:30)		
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	224952.001 (12/08/2020 14:29:12)		
Export end time	238110.004 (12/08/2020 18:08:30)		
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	224952.001 (12/08/2020 14:29:12)		
EO end time	238110.004 (12/08/2020 18:08:30)		
Grid	Universal Transverse Mercator		
Zone	UTM North 14 (102W to 96W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2010		