General Information

Mission Information

Project name	2SU20300A_186_Nav
Processing date	2020-12-01 12:57:25
Mission date	2020-10-26 15:04:32
Mission duration	03:58:48.641
Processing mode	IN-Fusion PP-RTX

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9642
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
2SU20300A.192	POS Data
2SU20300A.193	POS Data
2SU20300A.194	POS Data
2SU20300A.195	POS Data
2SU20300A.196	POS Data
2SU20300A.197	POS Data
2SU20300A.198	POS Data
2SU20300A.199	POS Data
2SU20300A.200	POS Data
2SU20300A.201	POS Data
2SU20300A.202	POS Data
2SU20300A.203	POS Data
2SU20300A.204	POS Data
2SU20300A.205	POS Data
2SU20300A.206	POS Data
2SU20300A.207	POS Data
2SU20300A.208	POS Data
2SU20300A.209	POS Data
2SU20300A.210	POS Data
2SU20300A.211	POS Data
2SU20300A.212	POS Data
2SU20300A.213	POS Data
2SU20300A.214	POS Data
2SU20300A.215	POS Data
2SU20300A.216	POS Data
2SU20300A.217	POS Data
2SU20300A.218	POS Data
2SU20300A.219	POS Data
2SU20300A.220	POS Data
2SU20300A.221	POS Data
2SU20300A.222	POS Data
2SU20300A.223	POS Data
2SU20300A.224	POS Data
2SU20300A.225	POS Data
2SU20300A.226	POS Data
2SU20300A.227	POS Data
2SU20300A.228	POS Data
2SU20300A.229	POS Data
2SU20300A.230	POS Data
2SU20300A.231	POS Data
2SU20300A.232	POS Data
2SU20300A.233	POS Data
2SU20300A.234	POS Data
2SU20300A.235	POS Data

Input Files

File Name	File Type
Ephm3000.20g	GLONASS Broadcast Ephemeris
Ephm3000.20n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_2SU20300A_186.out	SBET Trajectory File
export_2SU20300A_186.out	Custom Smoothed BET Export Output

Rover Data Summary

First raw data file	2SU20300A.192		
Last raw data file	2SU20300A.235		
Start GPS week	2129		
Start time	140653.419 (10/26/2020 3:04:13 PM)		
End time	158230.543 (10/26/2020 7:57:10 PM)		
Start of fine alignment	142916.575 (10/26/2020 3:41:56 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm (m)	0.000	0.000	0.000
Gimbal to IMU mounting angles (deg)	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm (m)	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

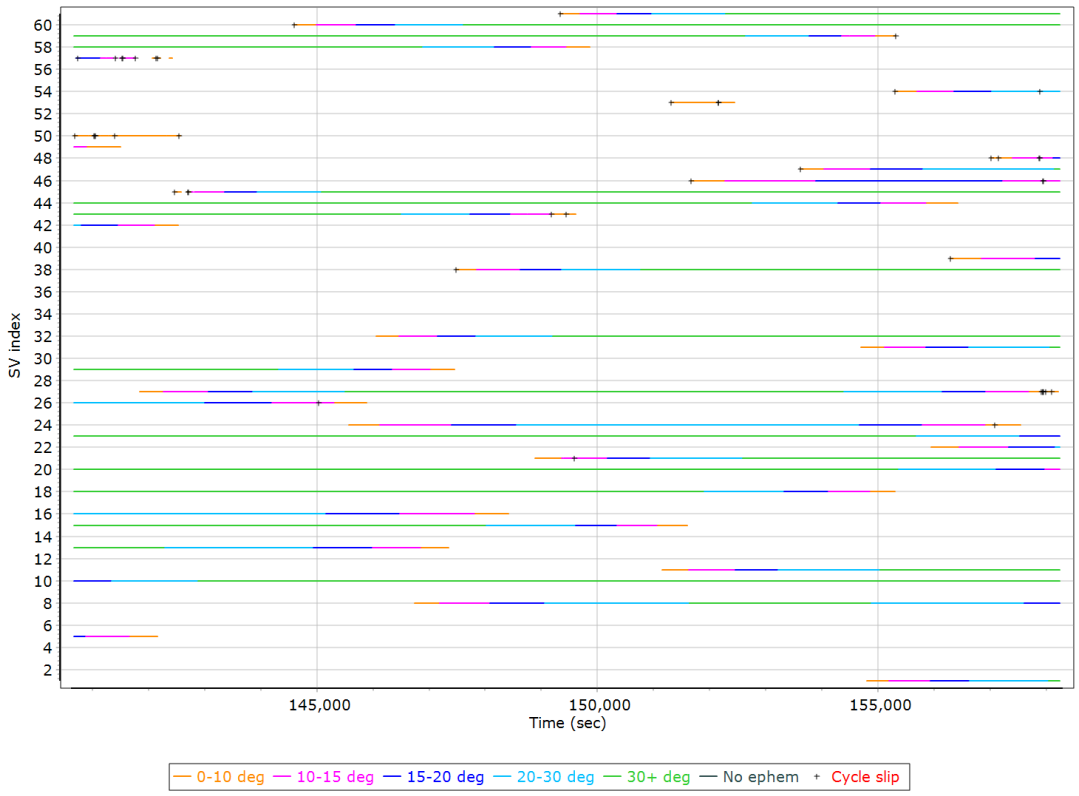
Rover Data QC

Raw IMU Import QC Summary

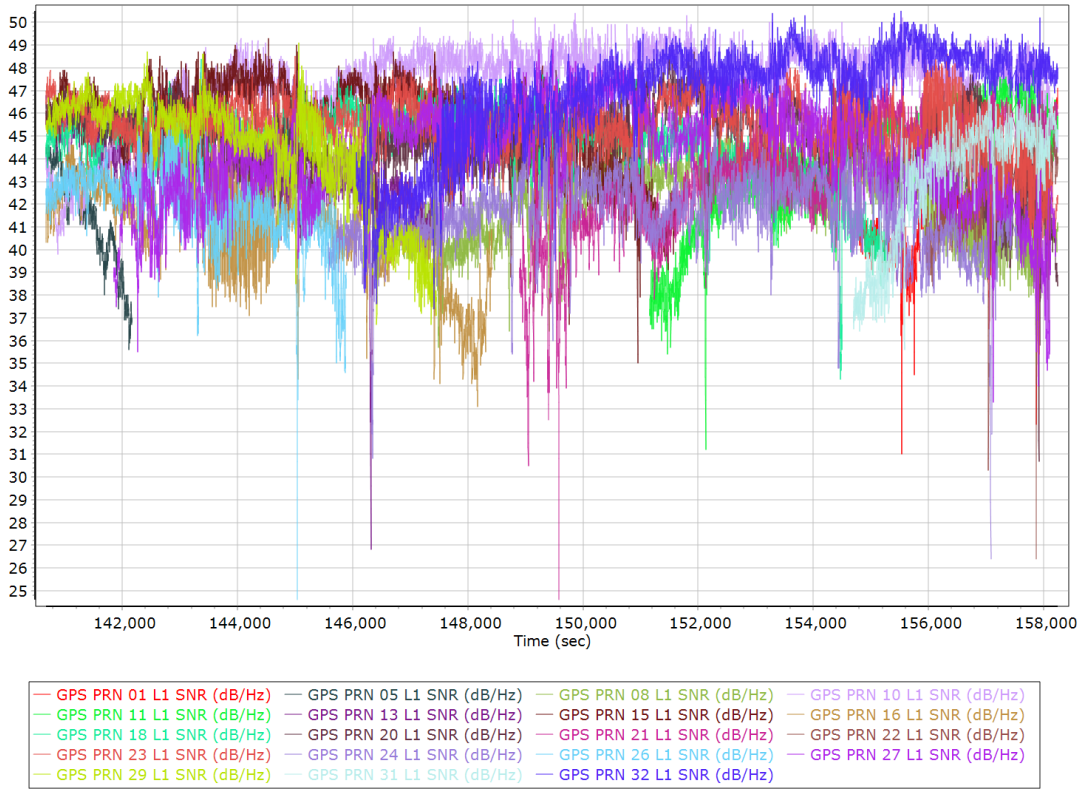
IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_2SU20300A_186.log
IMU Records Processed	3505452
Termination Status	Warnings
IMU Anomalies	1
IMU Failure Messages	
157492.628 : WARNING : Gap of 46.9089 seconds in CHECKDT input data	

Primary Observables & Satellite Data

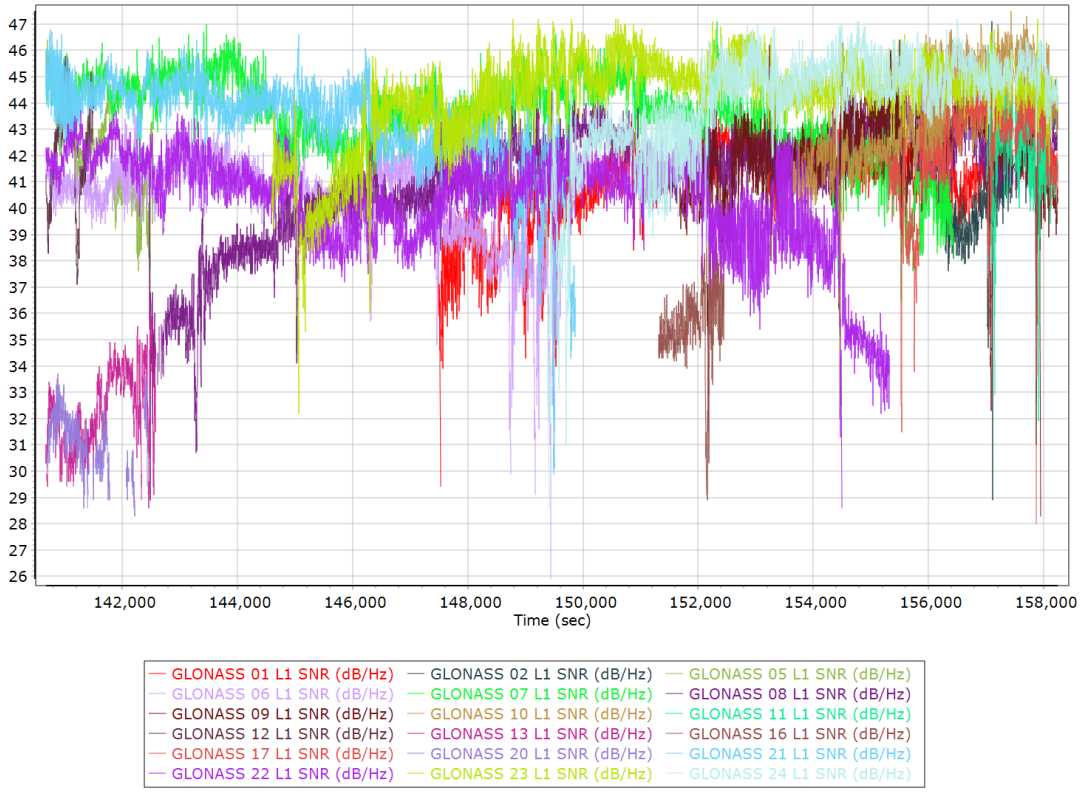
GPS/GLONASS L1 Satellite Lock/Elevation



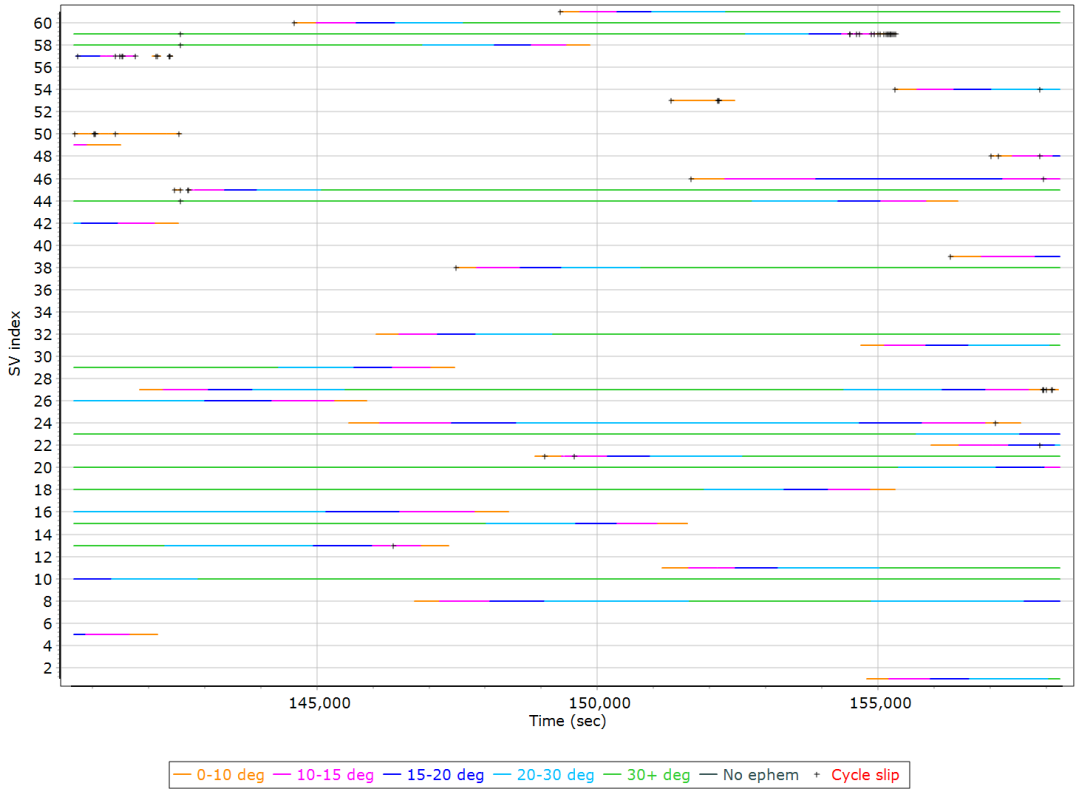
GPS L1 SNR



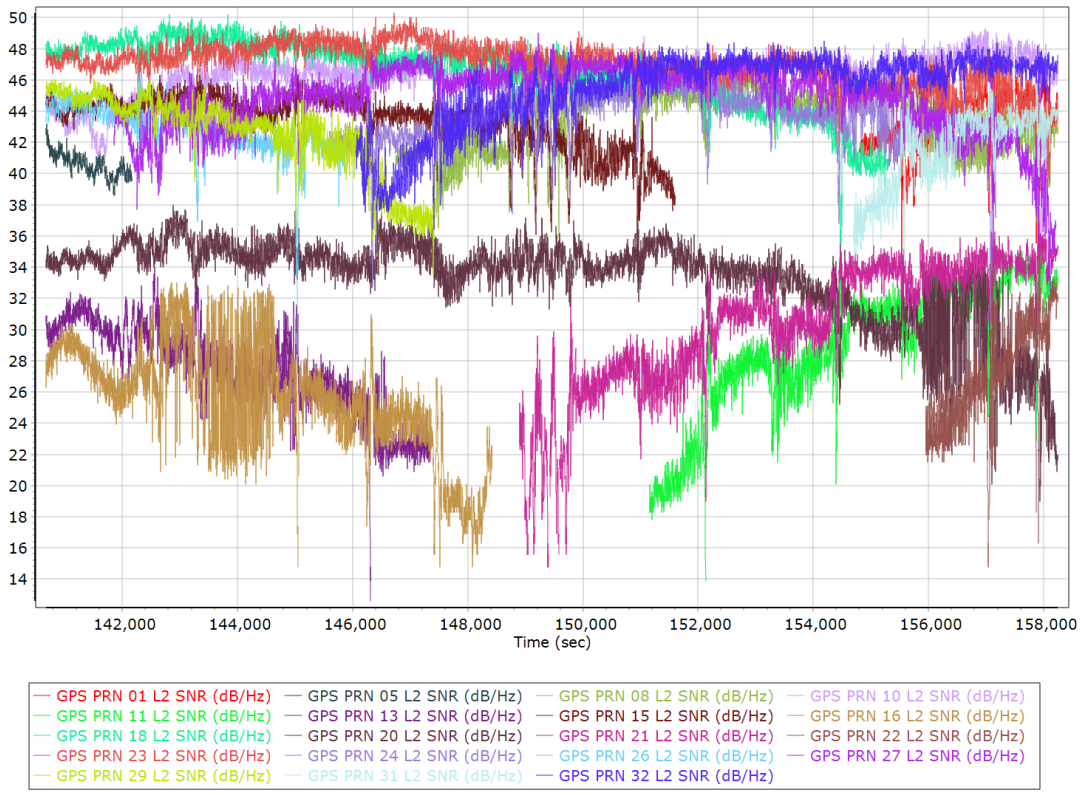
GLONASS L1 SNR



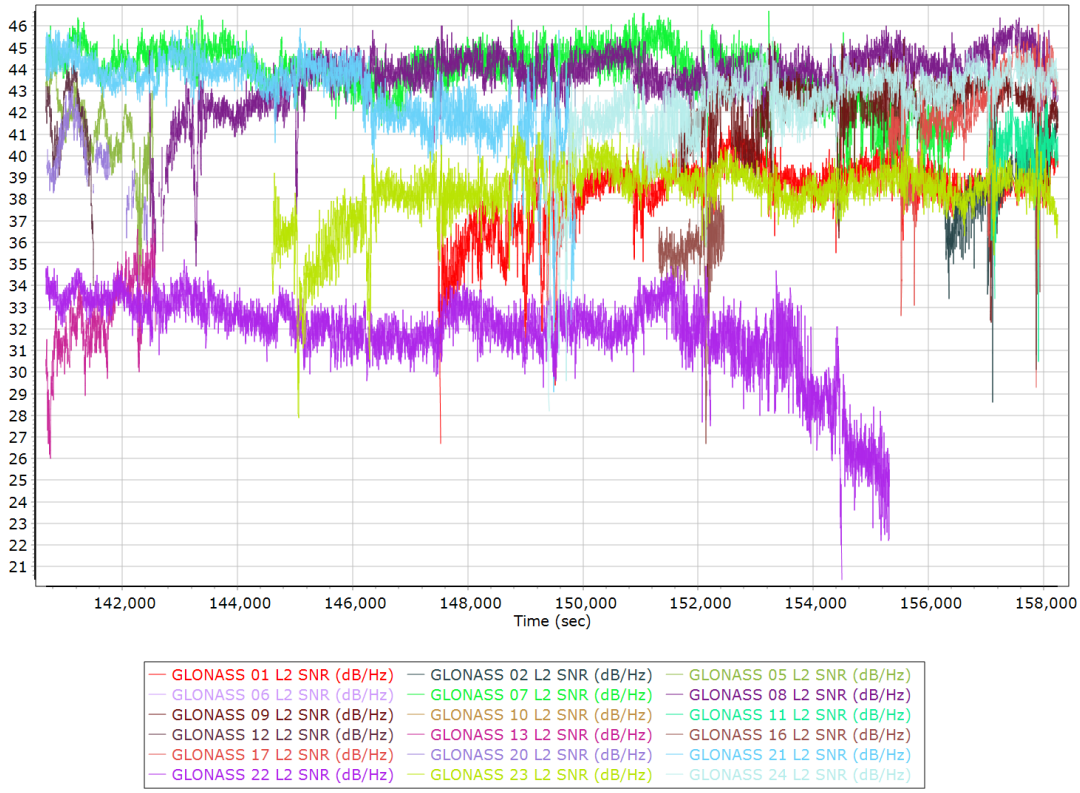
GPS/GLONASS L2 Satellite Lock/Elevation



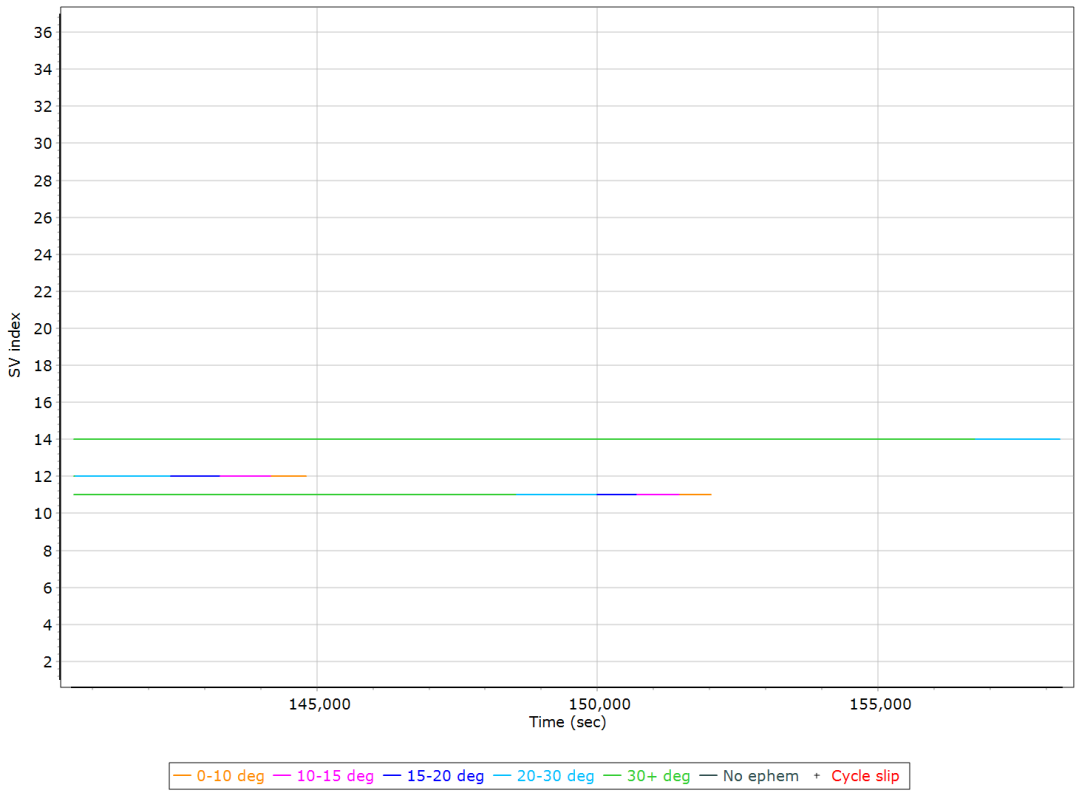
GPS L2 SNR



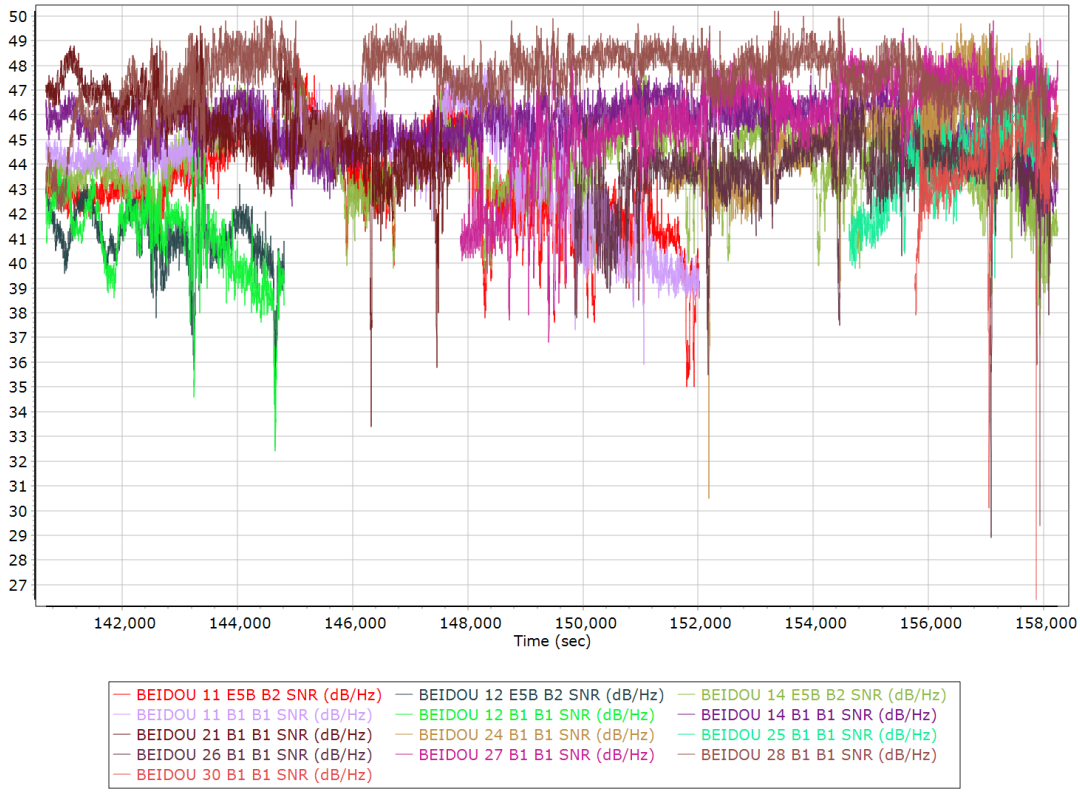
GLONASS L2 SNR



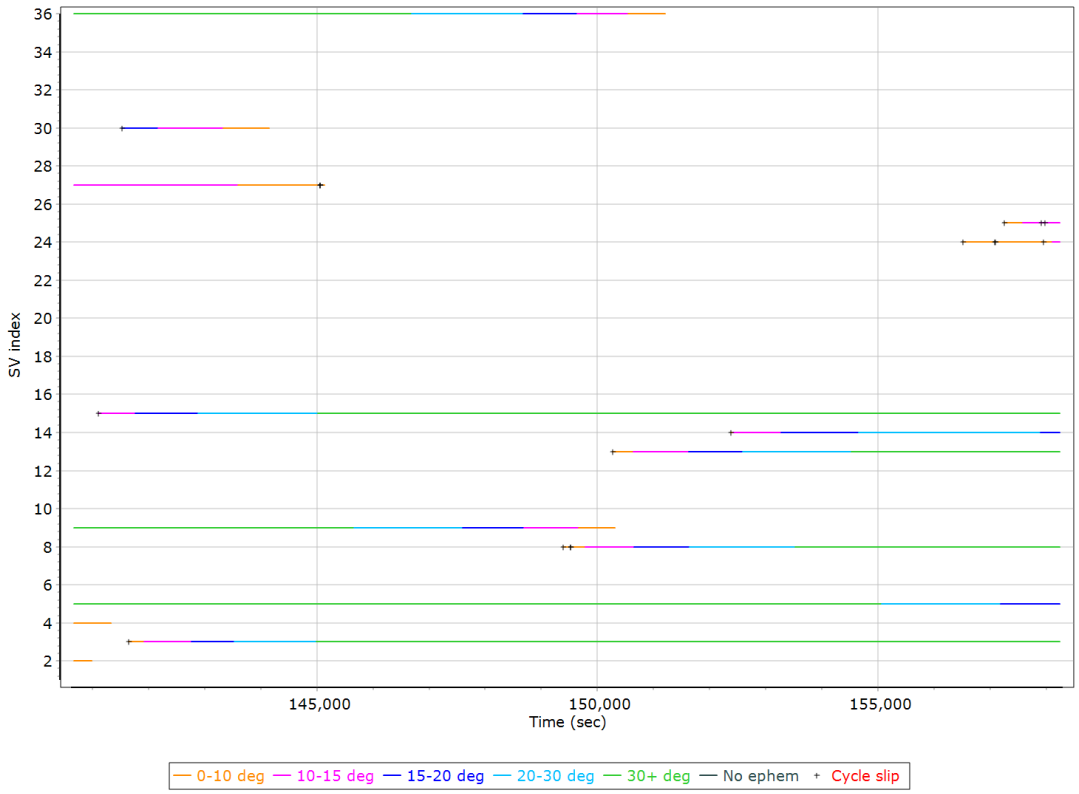
BEIDOU Satellite Lock/Elevation



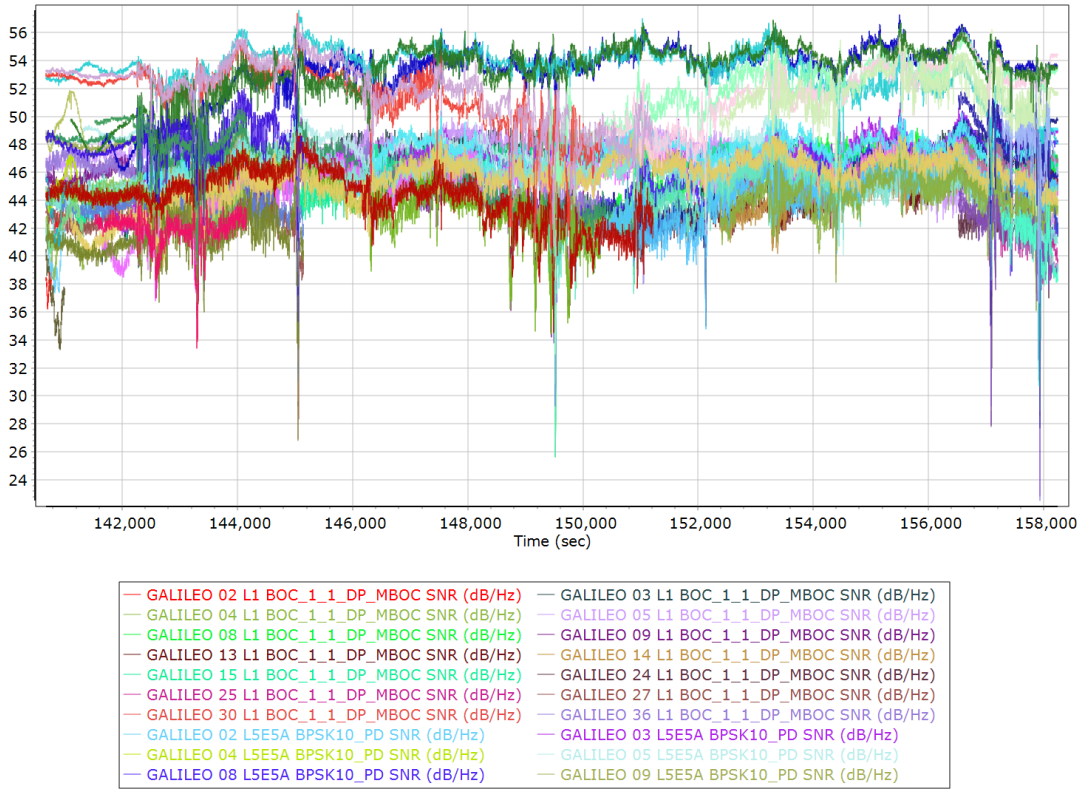
BEIDOU SNR



GALILEO Satellite Lock/Elevation

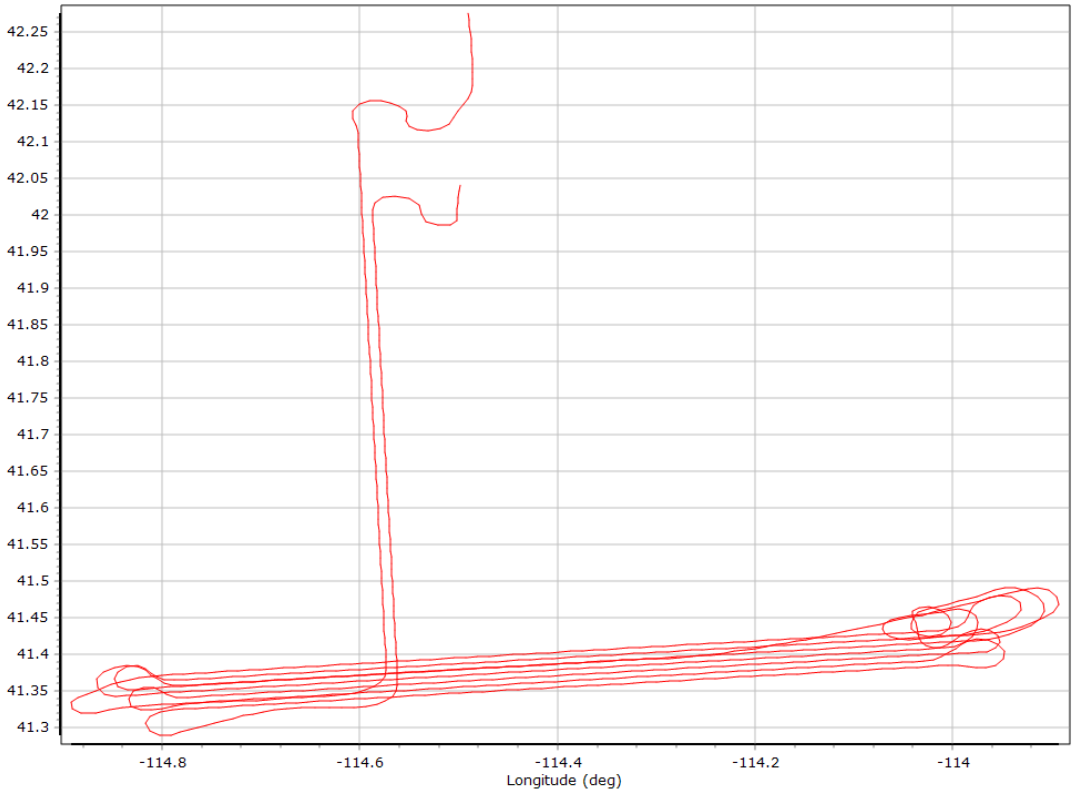


GALILEO SNR

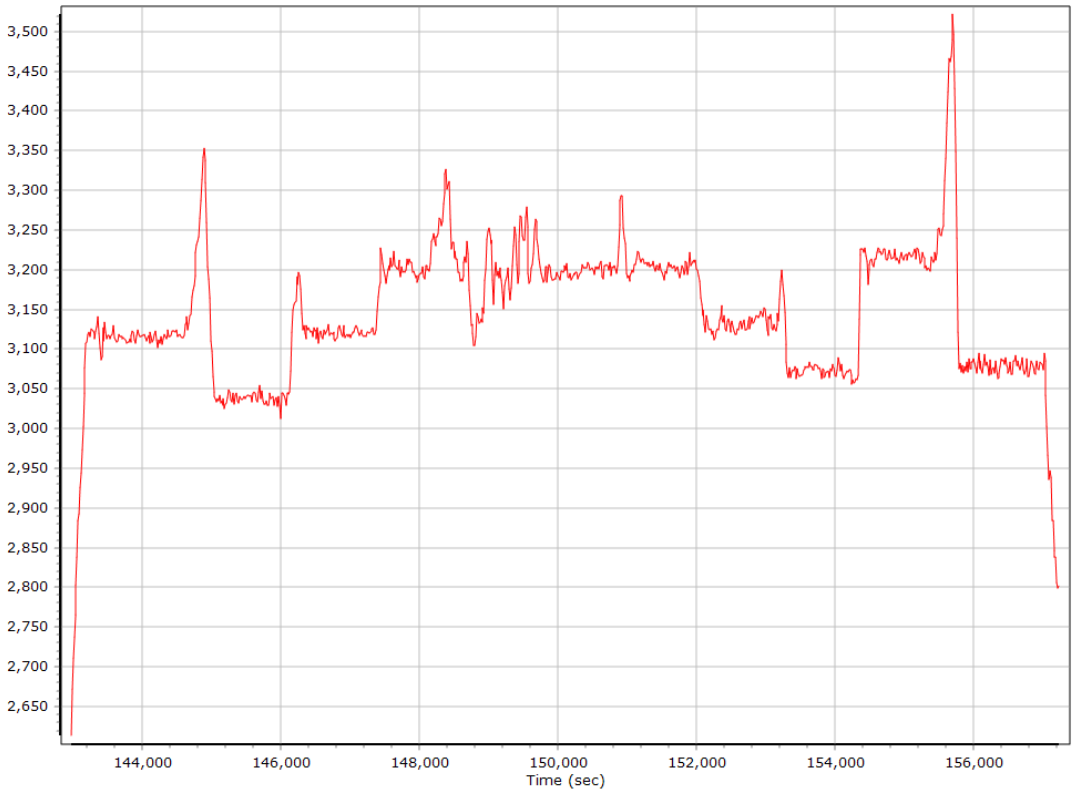

56
54
52
50
48
46
44
42
40
38
36
34
32
30
28
26
24
142,000
144,000
146,000
148,000
150,000
152,000
154,000
156,000
158,000
Time (sec)
GALILEO 02 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
GALILEO 03 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
GALILEO 04 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
GALILEO 05 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
GALILEO 08 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
GALILEO 09 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
GALILEO 13 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
GALILEO 14 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
GALILEO 15 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 27 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 04 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)

Smoothed Trajectory Information

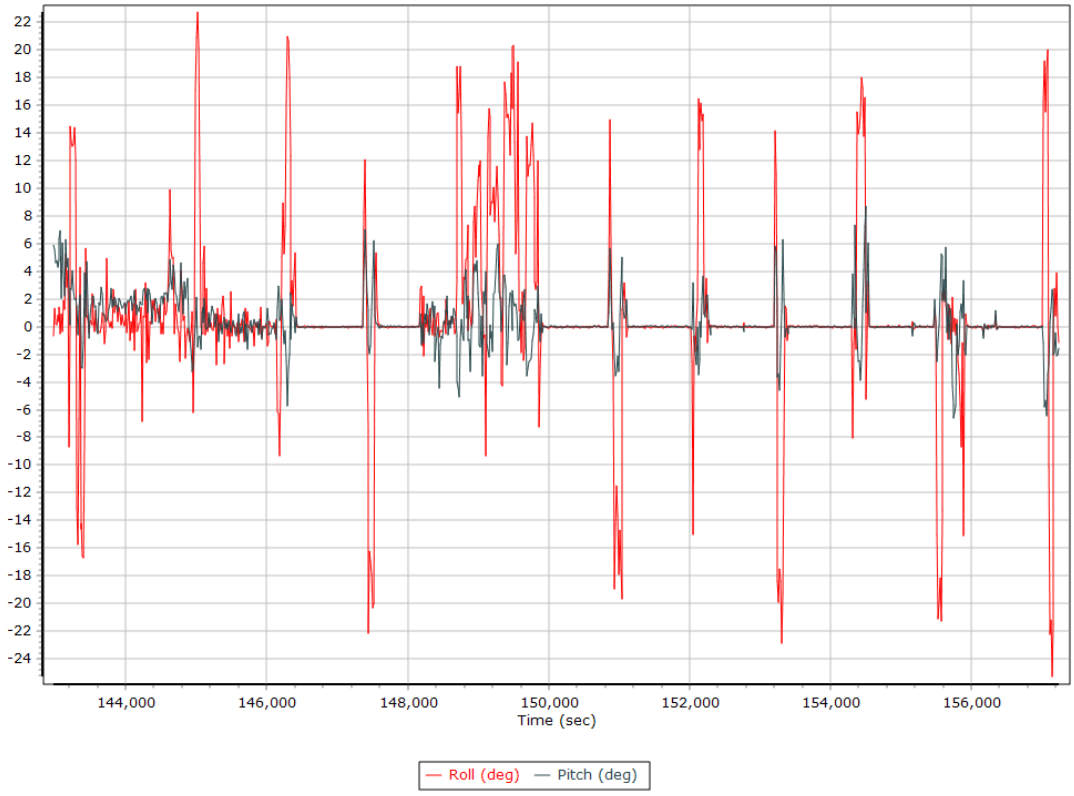
Top View



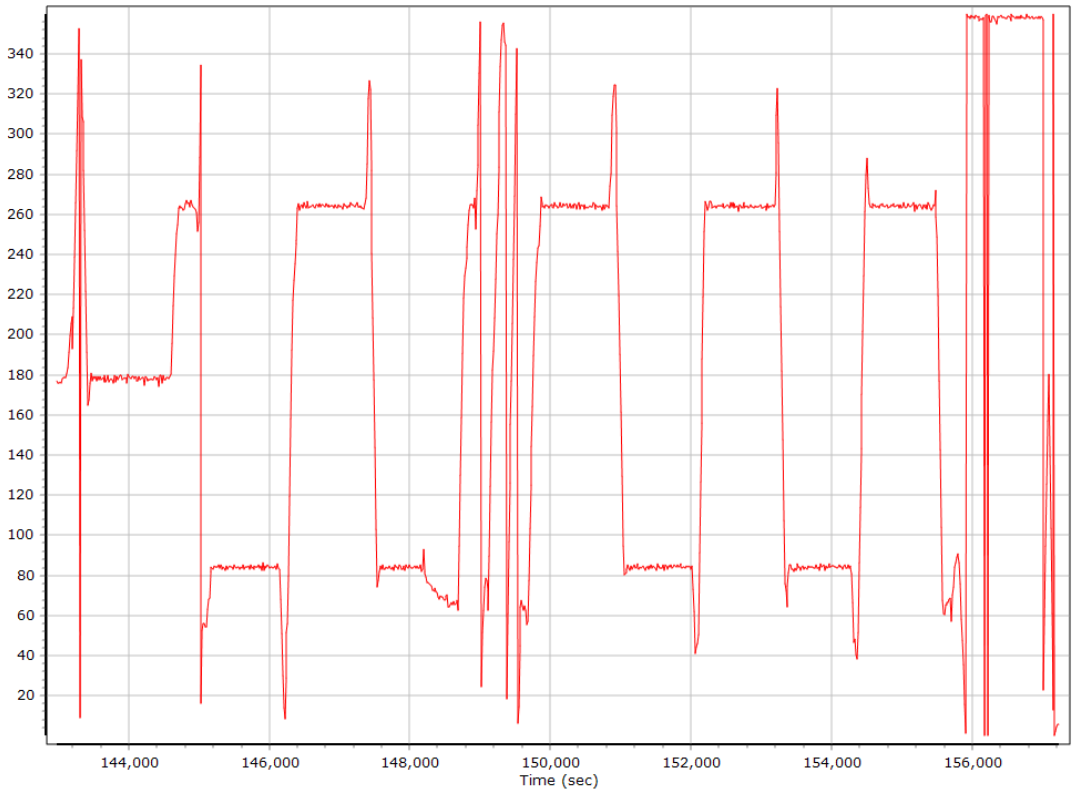
Altitude



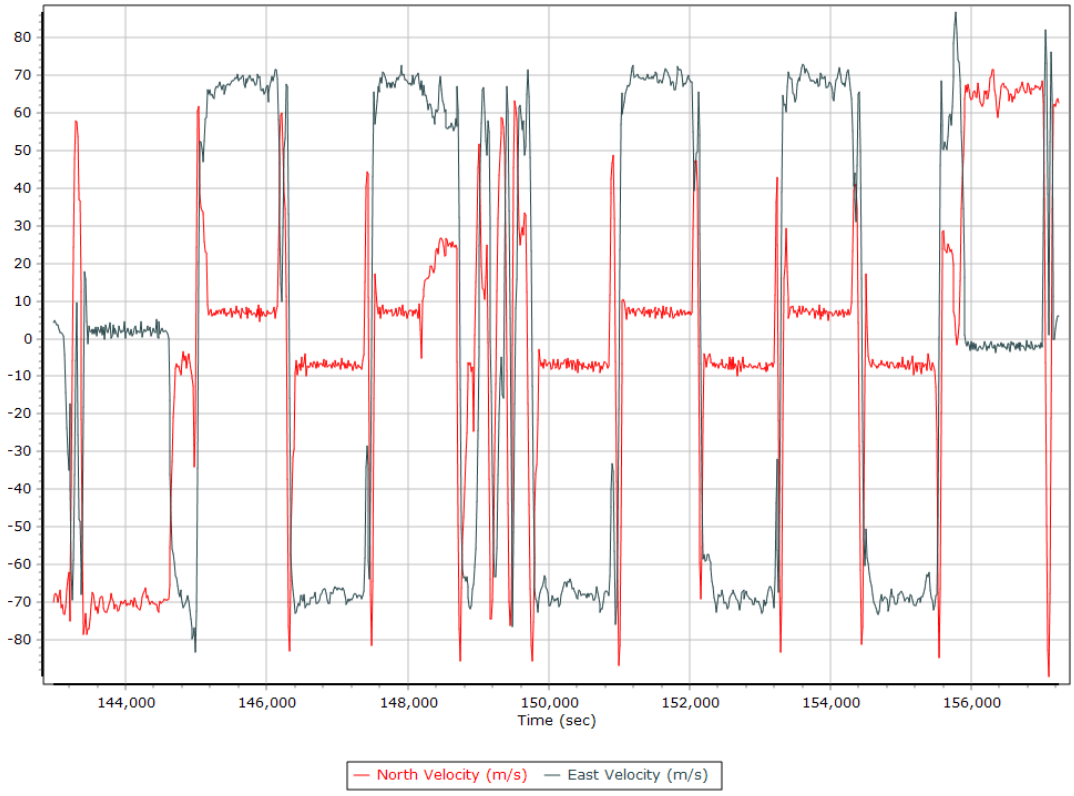
Roll/Pitch



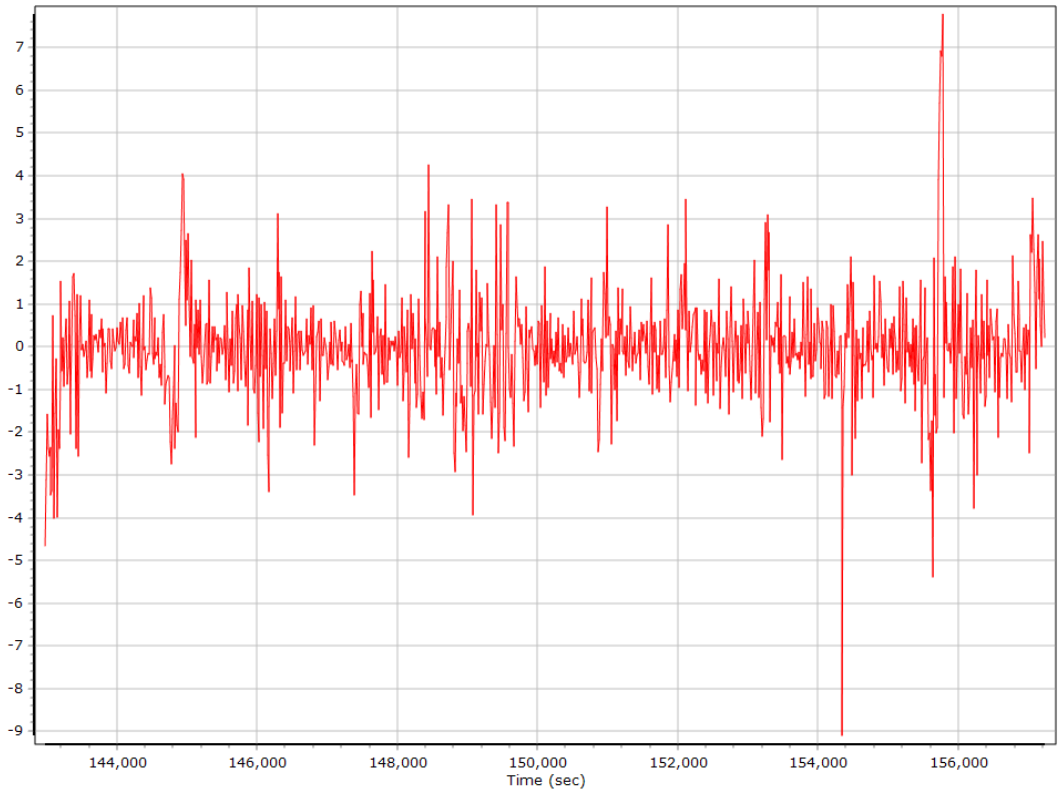
Heading



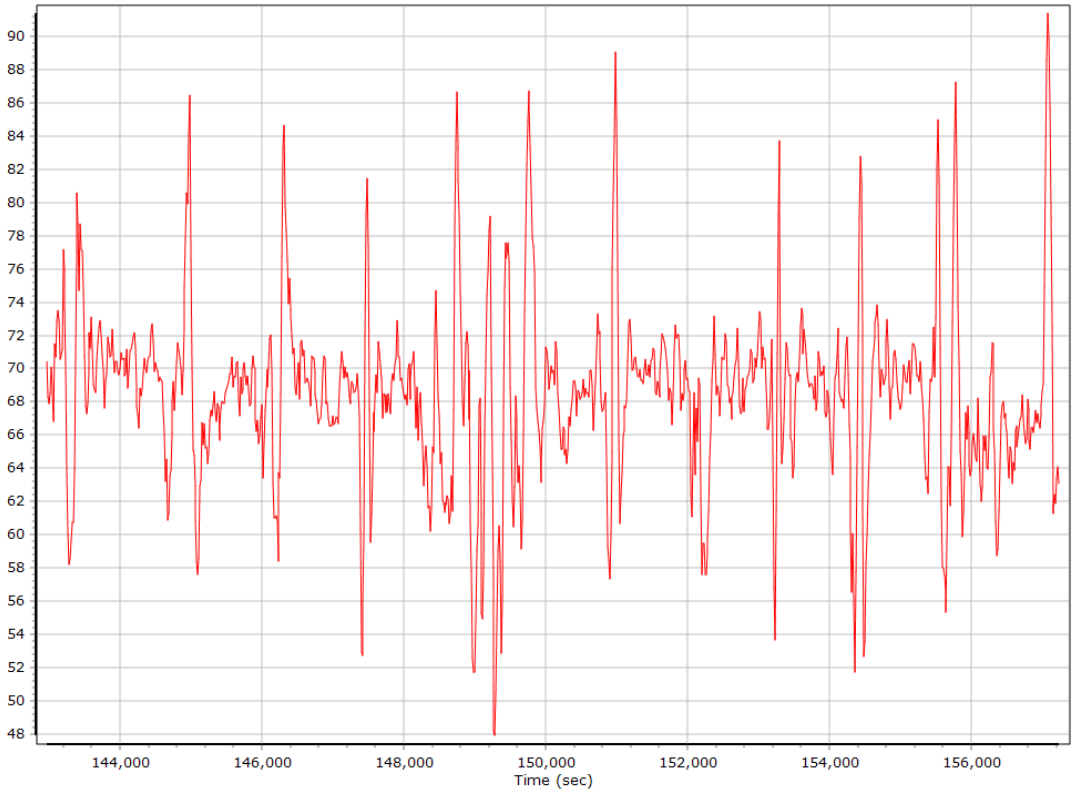
North/East Velocity



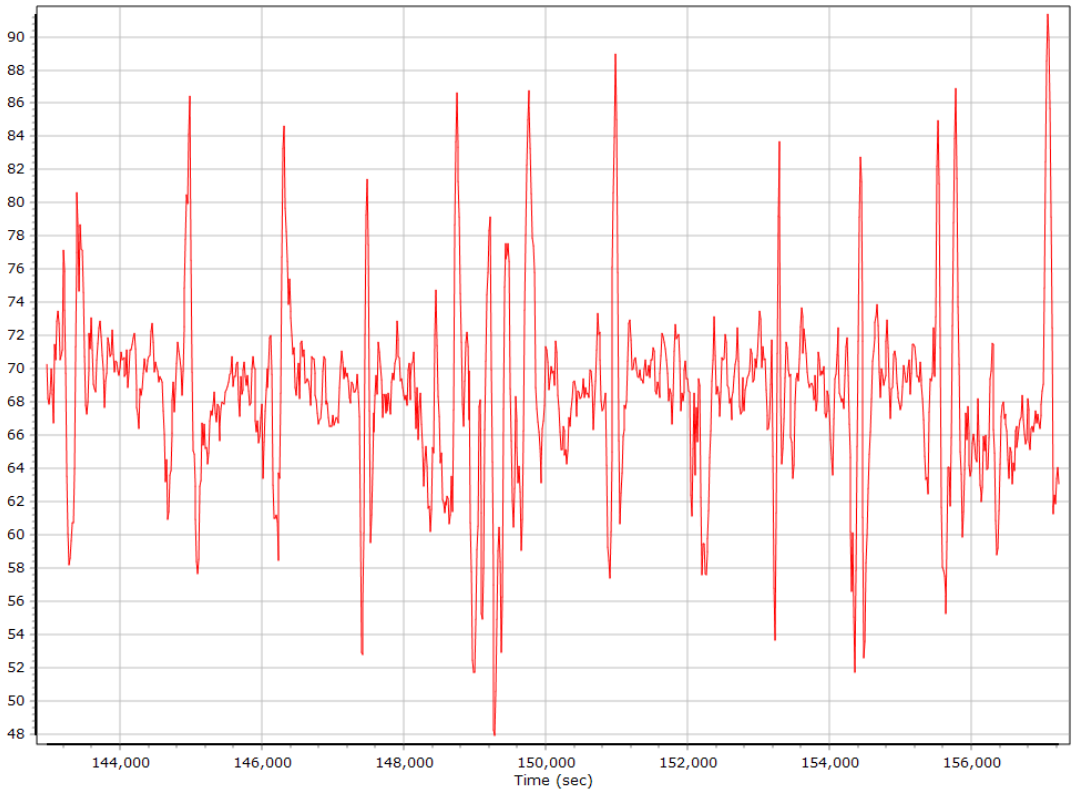
Down Velocity



Total Speed

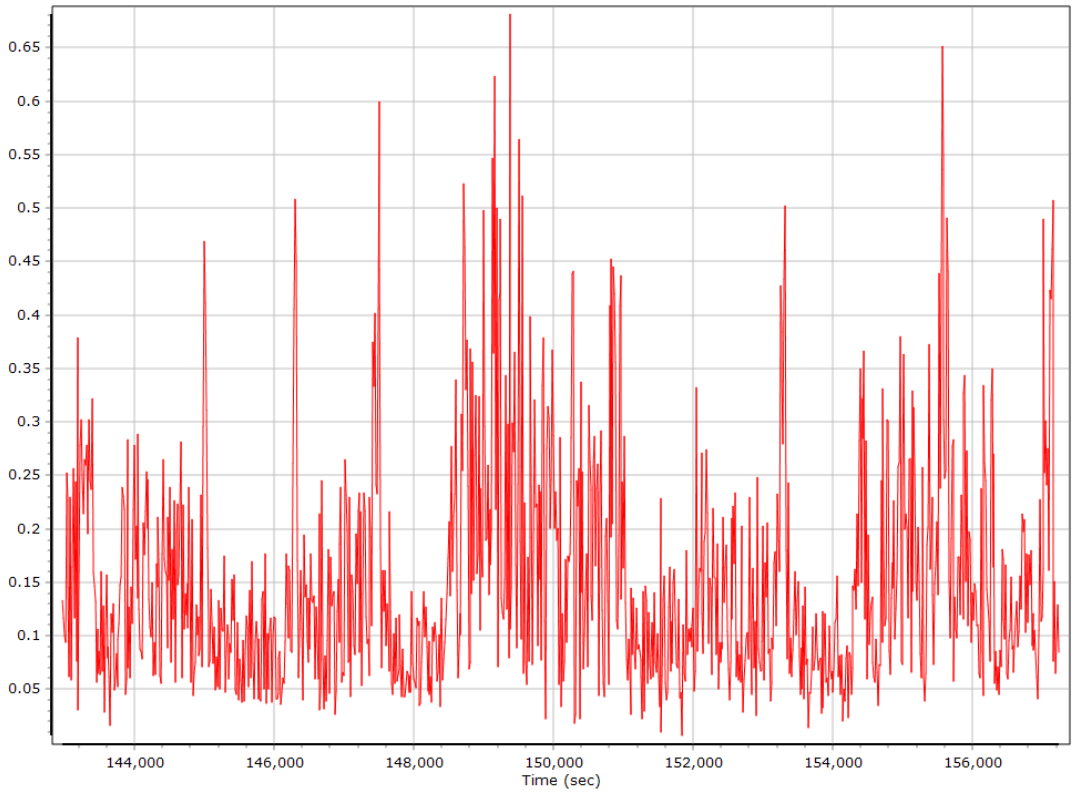


Ground Speed

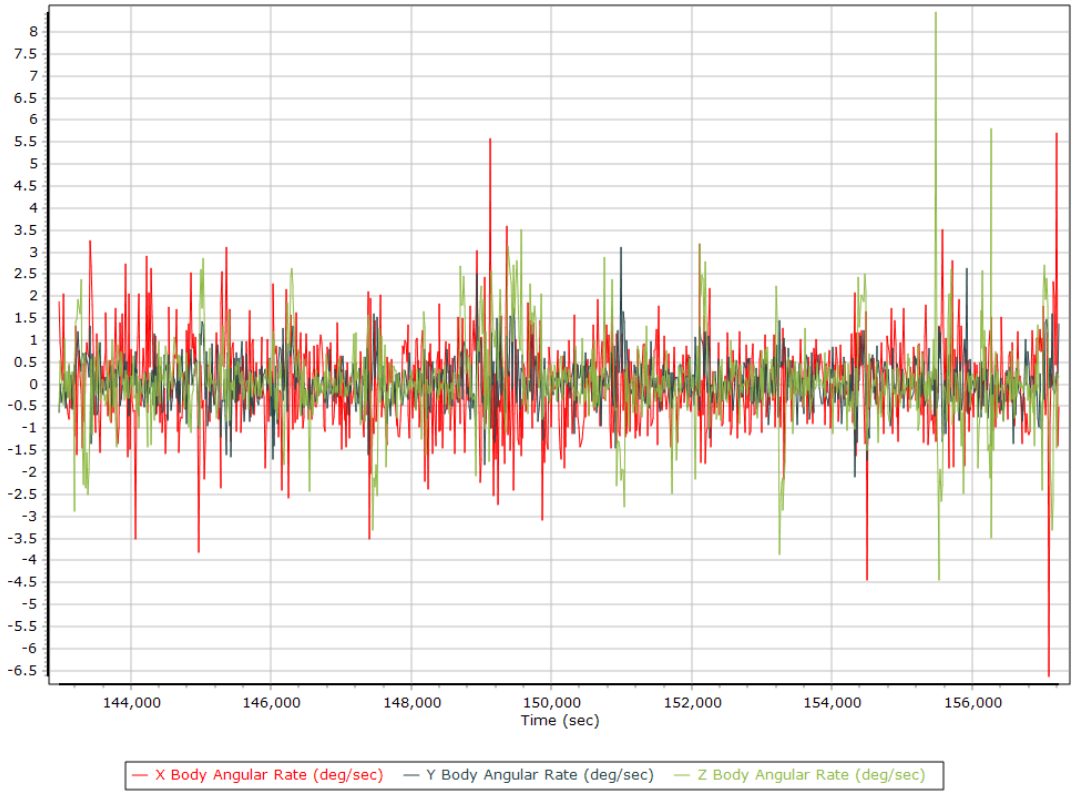


Body Acceleration

Total Body Acceleration

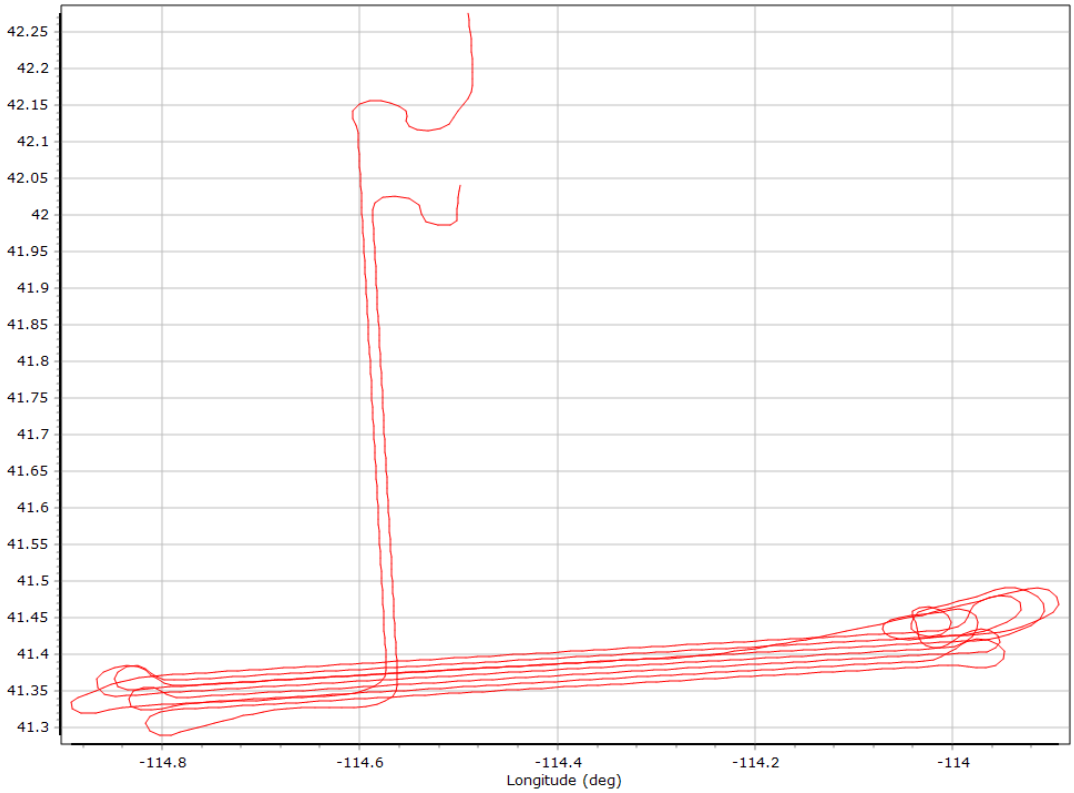


Body Angular Rate

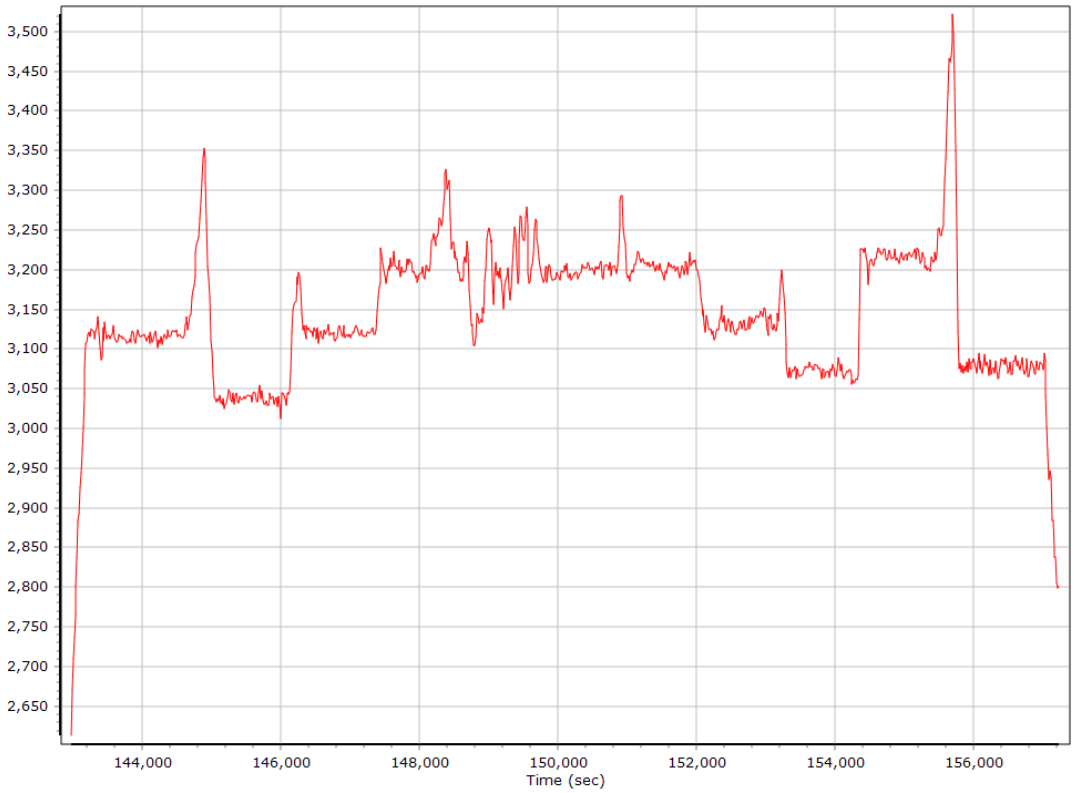


Forward Processed Trajectory Information

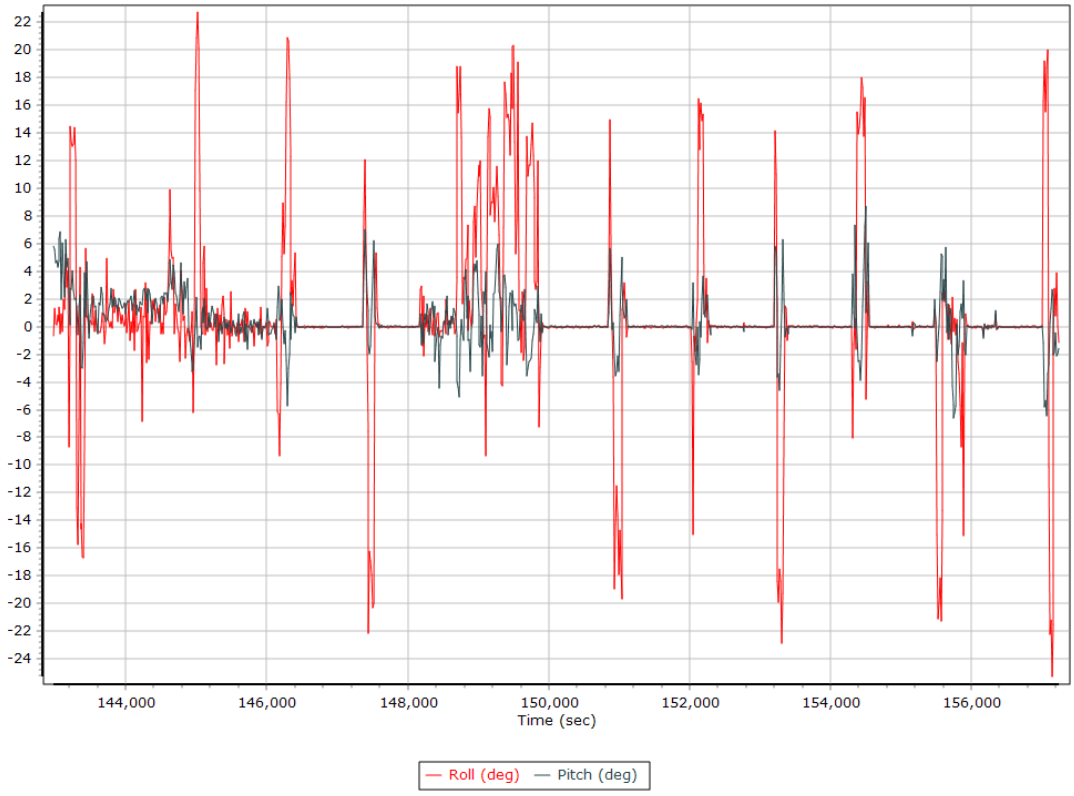
Top View



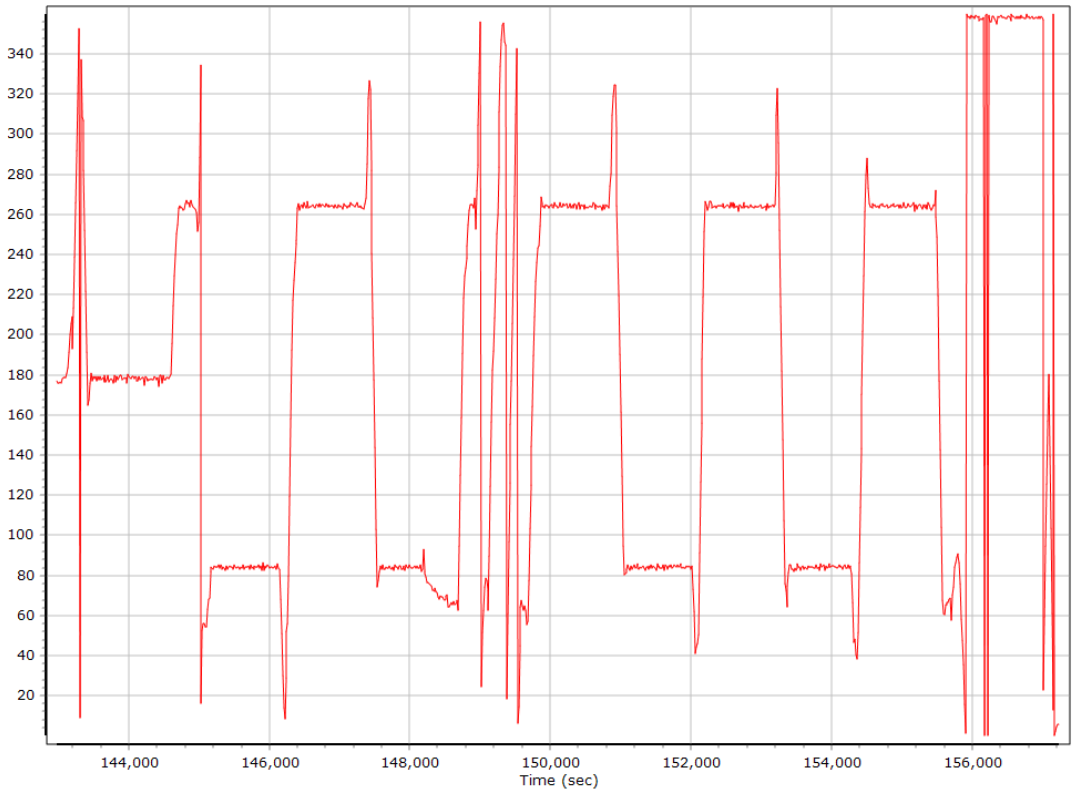
Altitude



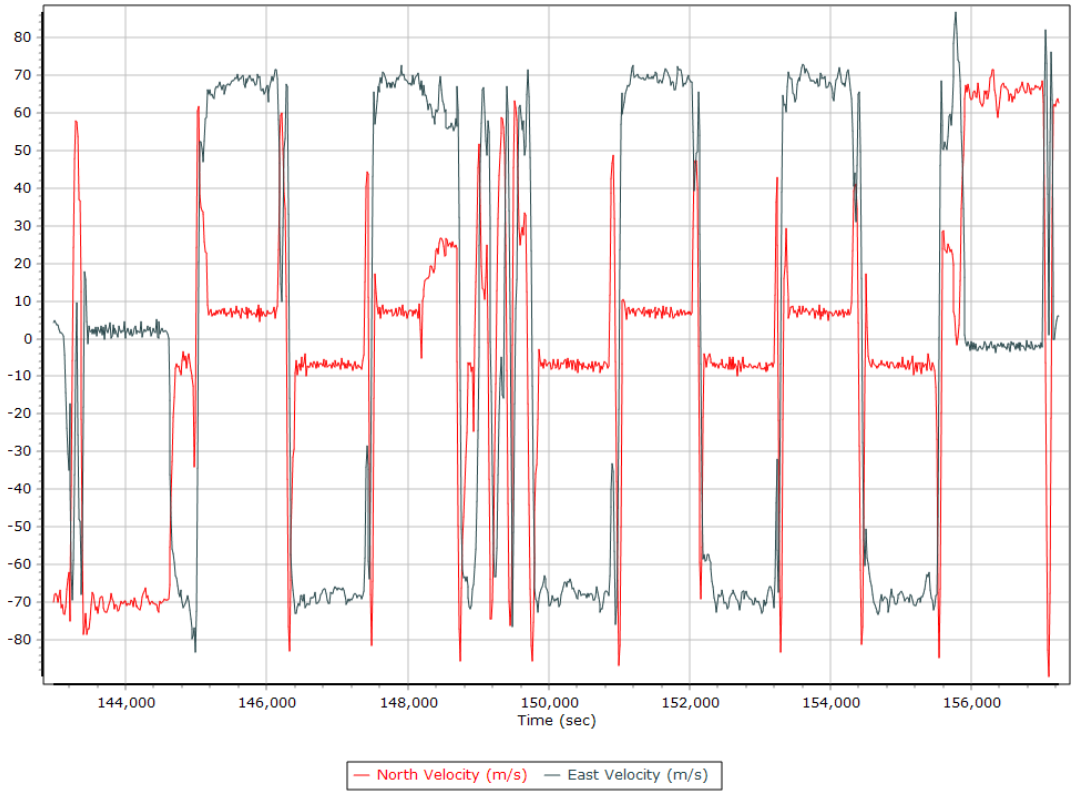
Roll/Pitch



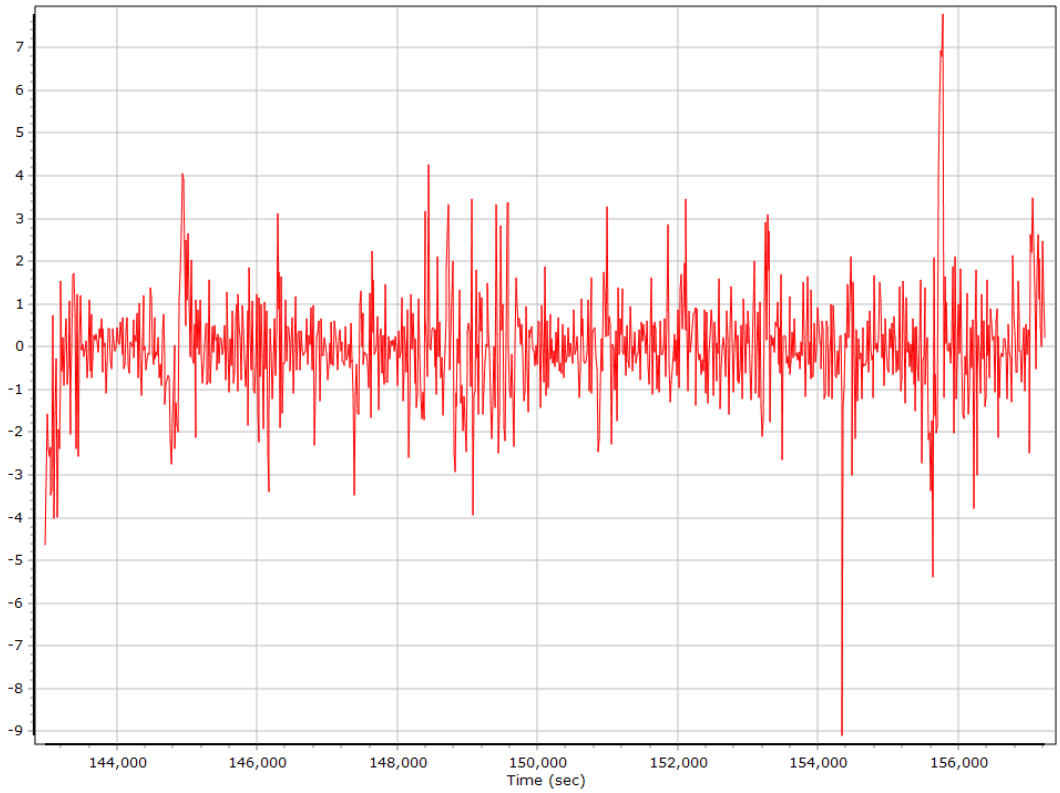
Heading



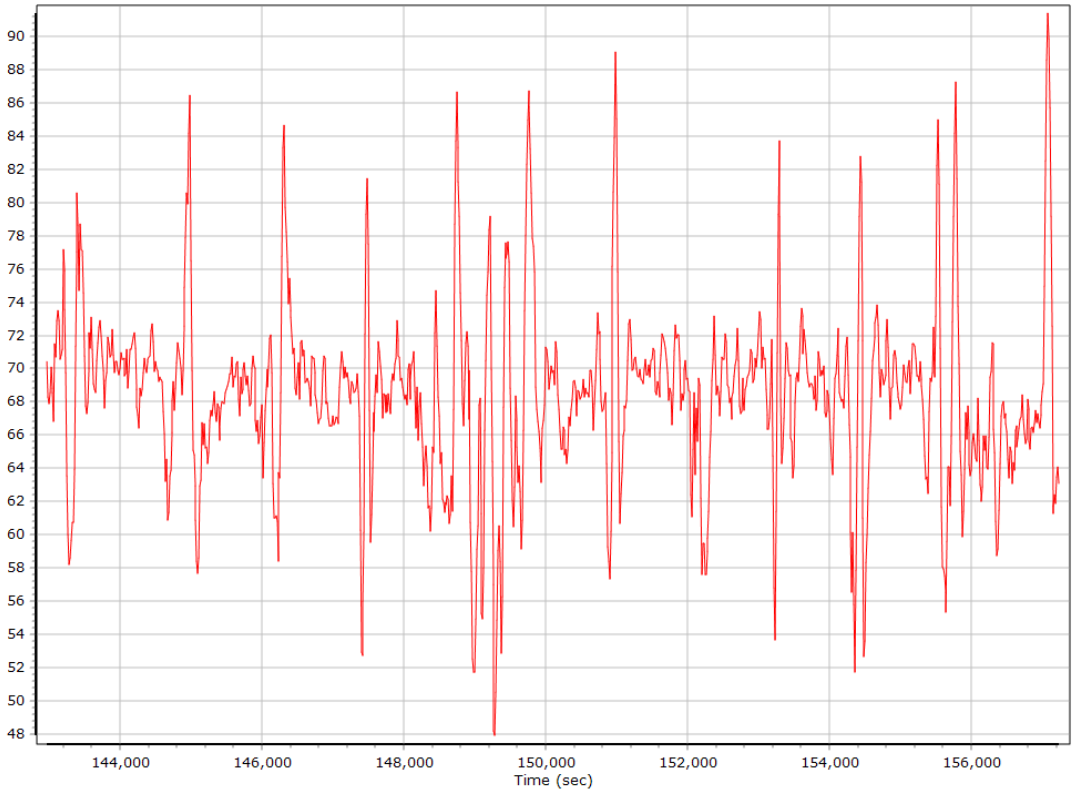
North/East Velocity



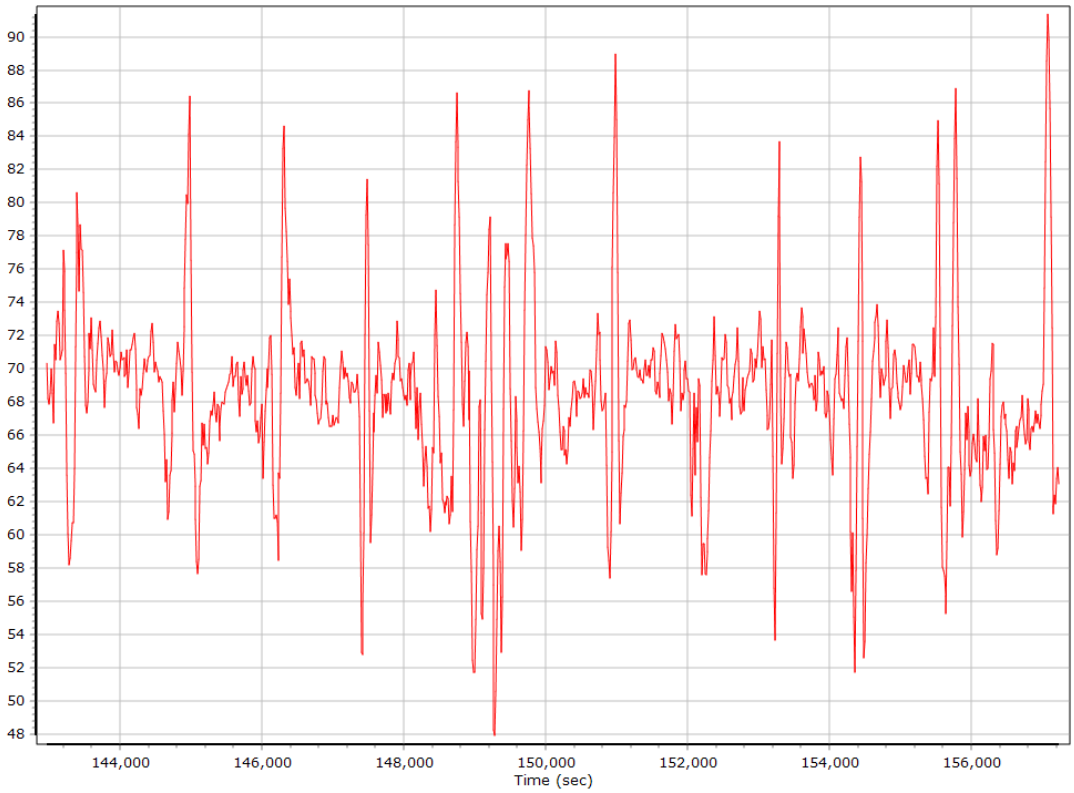
Down Velocity



Total Speed

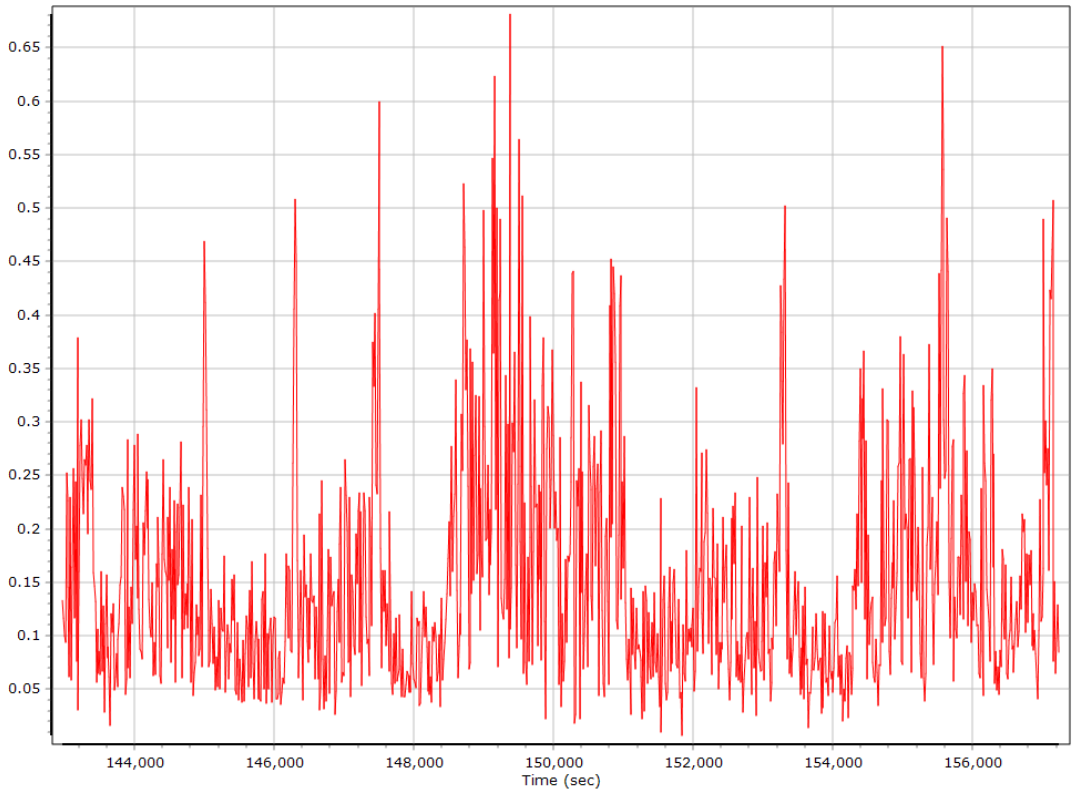


Ground Speed

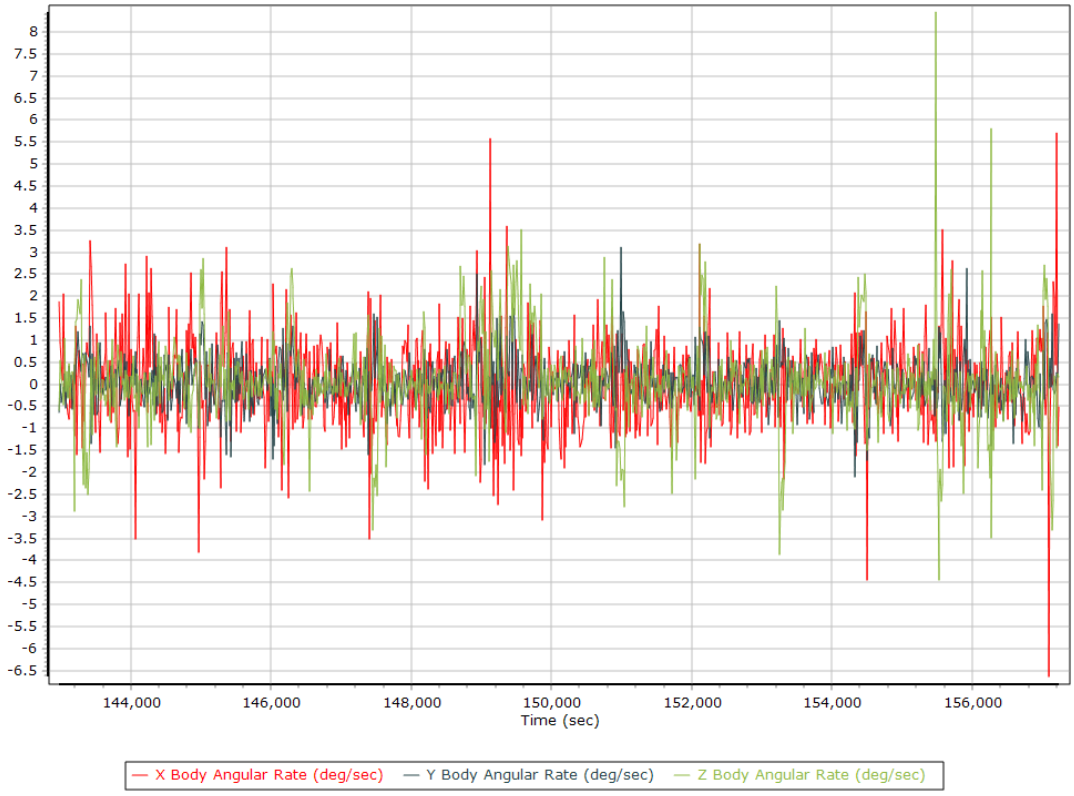


Body Acceleration

Total Body Acceleration



Body Angular Rate

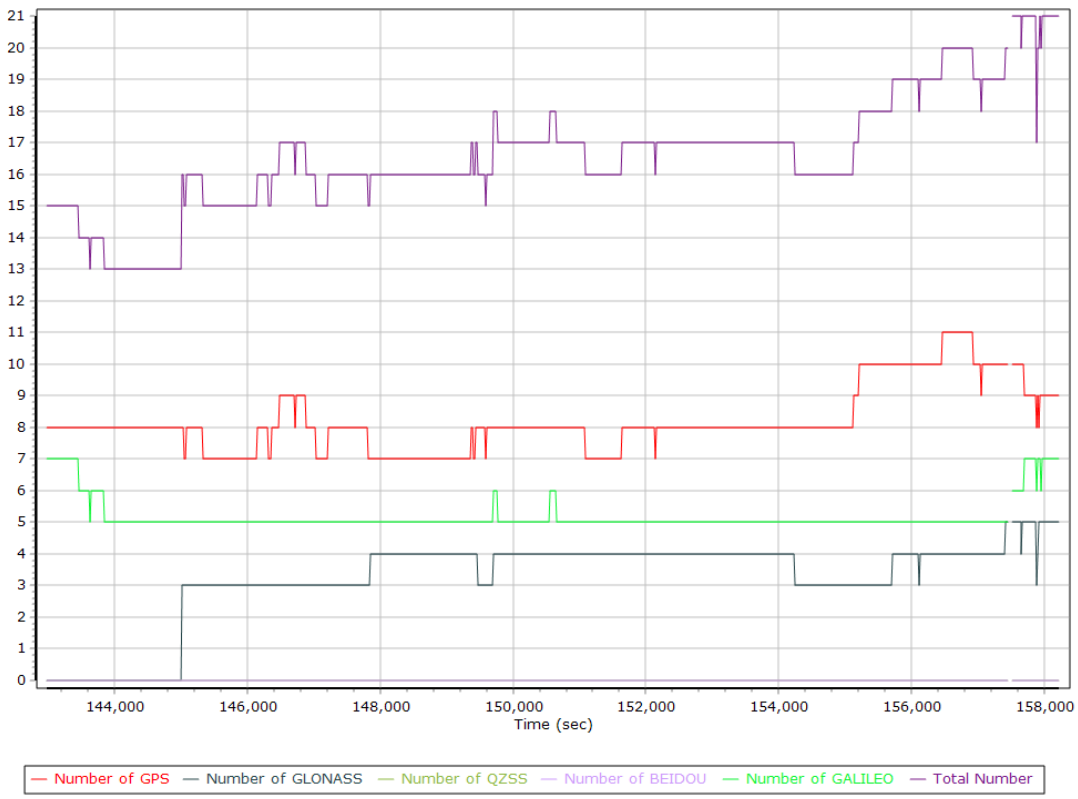


GNSS QC

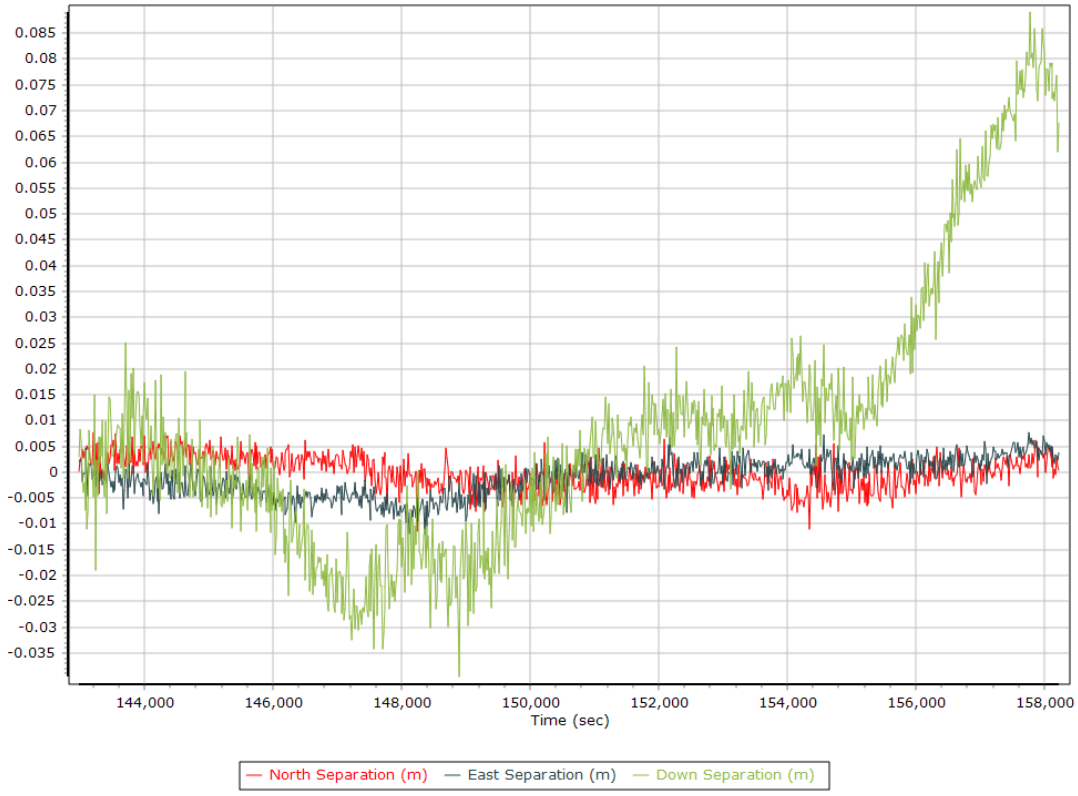
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	3	11	8
Number of GLONASS SV	0	5	3
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Number of GALILEO SV	2	7	5
Total number of SV	9	22	17
PDOP	1.03	2.52	1.37
QC Solution Gaps	47.00	47.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	17516.00	0.00	47.00
Percentage	99.73	0.00	0.27

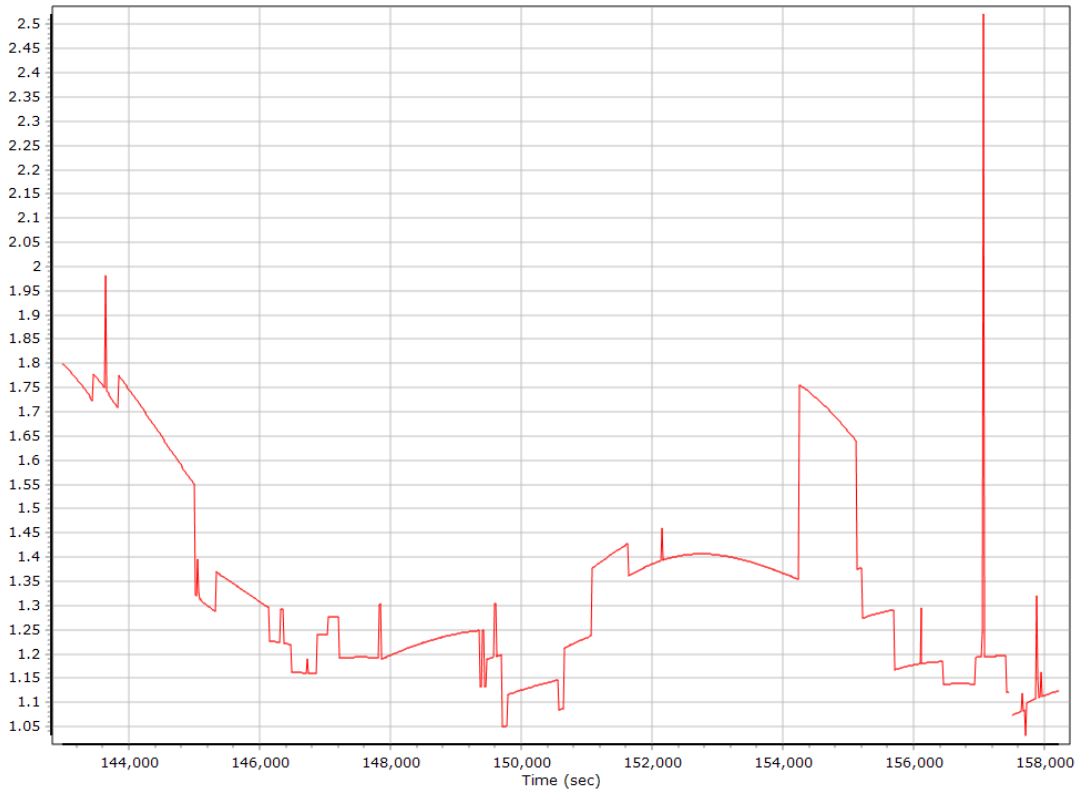
Num SVs in solution



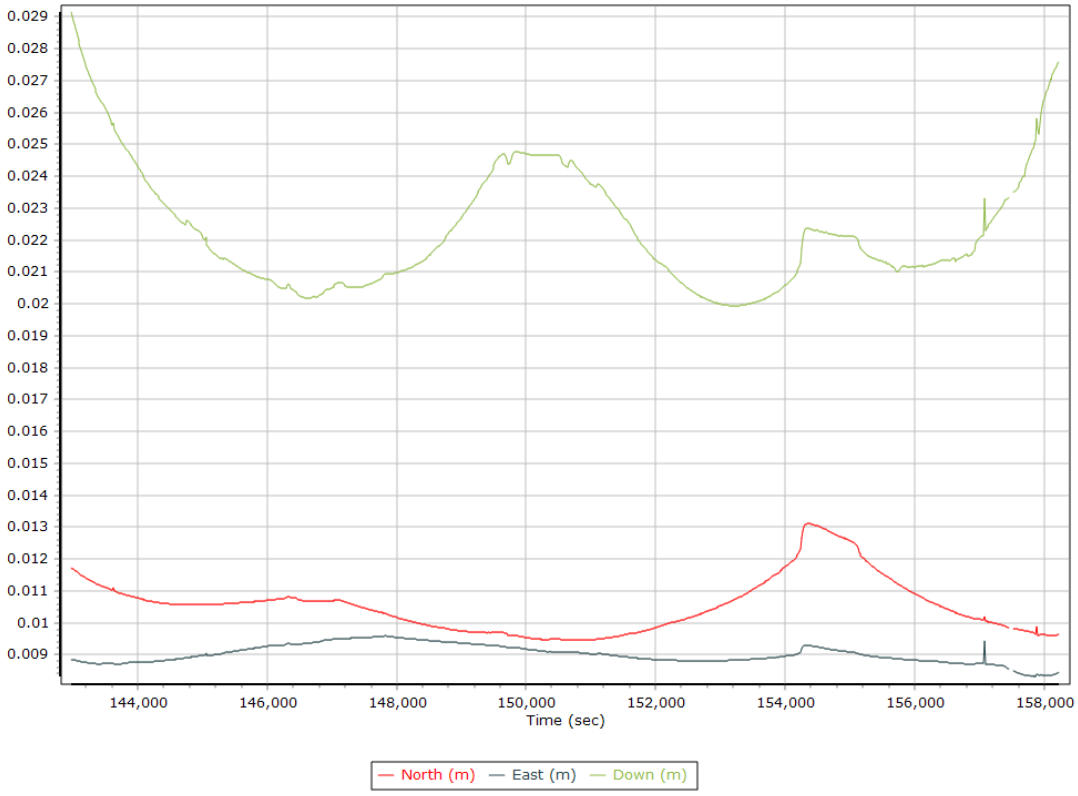
Forward/Reverse Separation



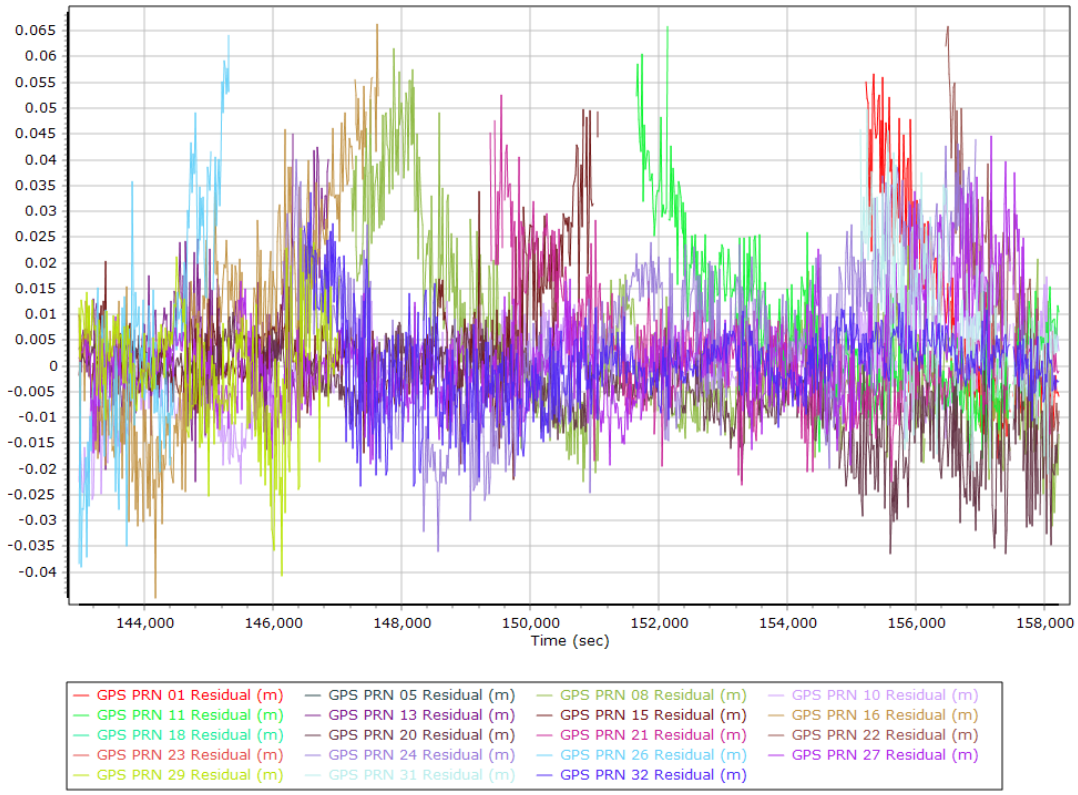
PDOP



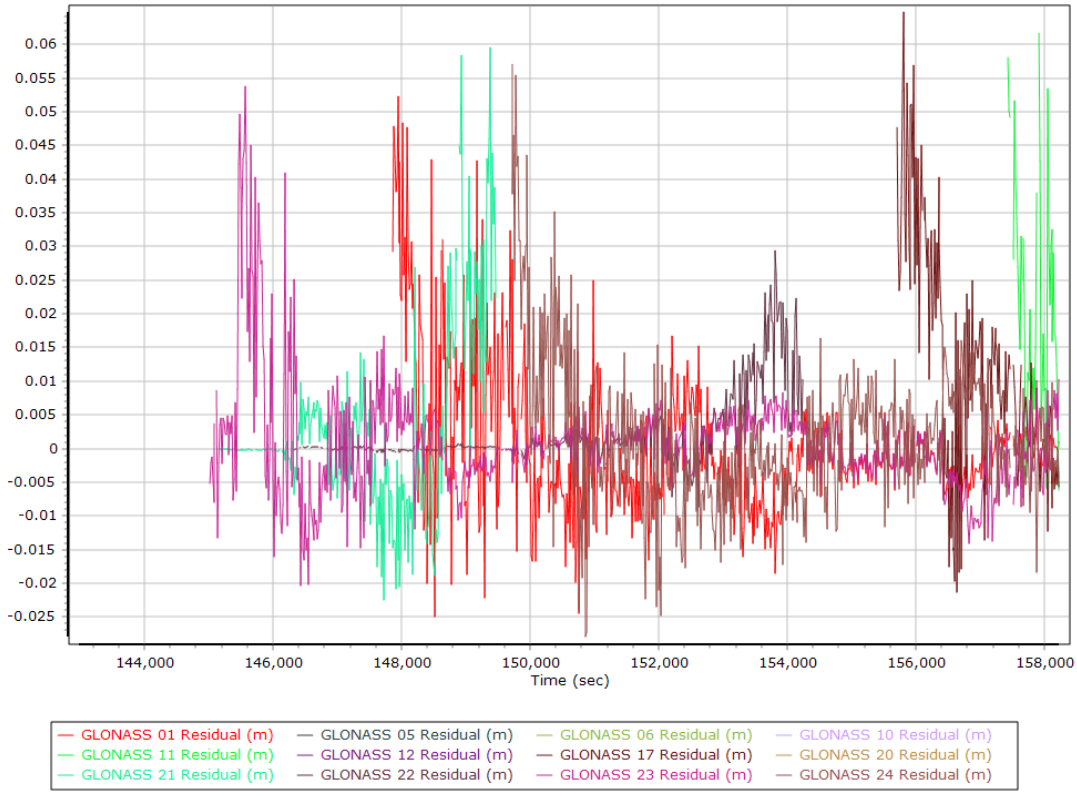
Estimated Position Accuracy



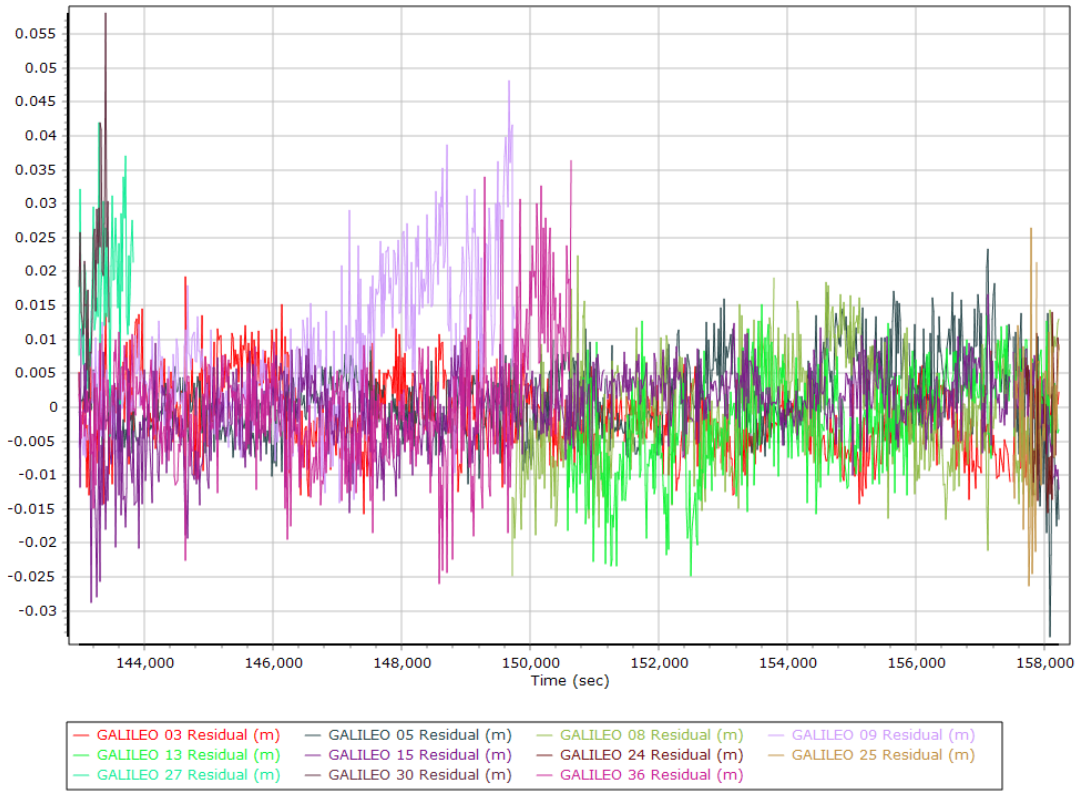
GPS Residuals



GLONASS Residuals



GALILEO Residuals



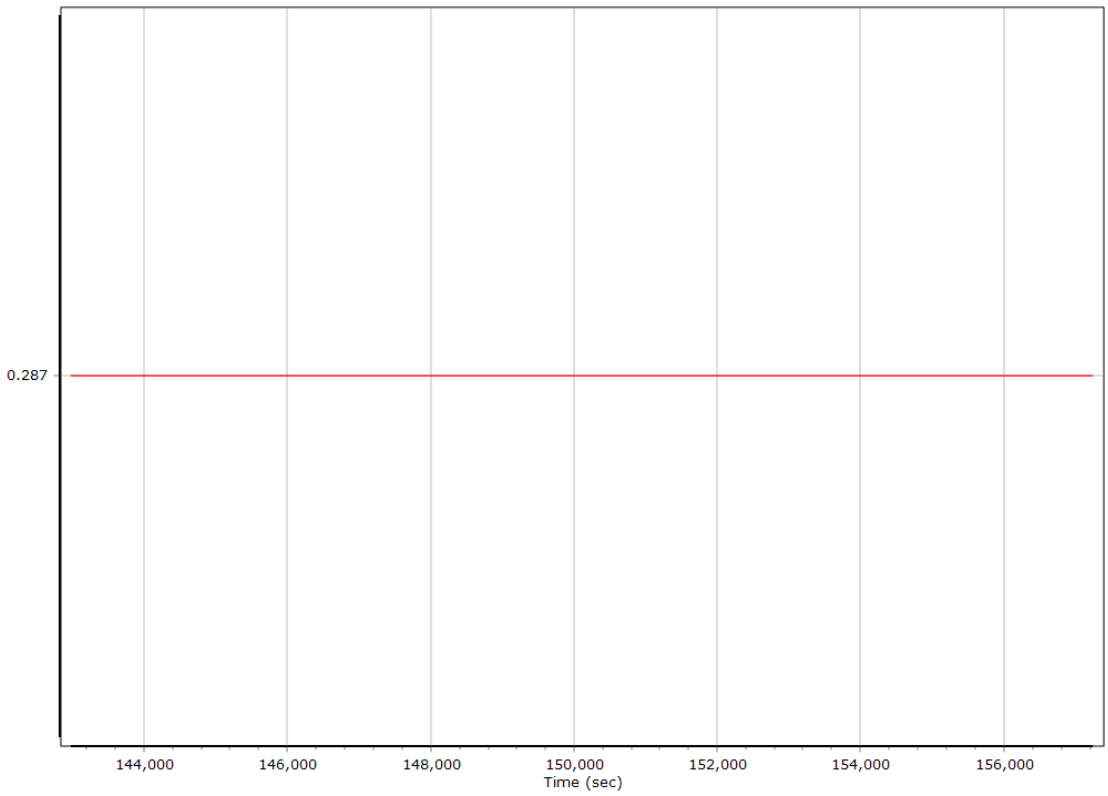
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	True		
Processing start time	142915.815 (10/26/2020 3:41:55 PM)		
Processing end time	157244.456 (10/26/2020 7:40:44 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm (m)	0.000	0.000	0.000
Gimbal to IMU mounting angles (deg)	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm (m)	0.287	0.144	-1.269
Gimbal 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

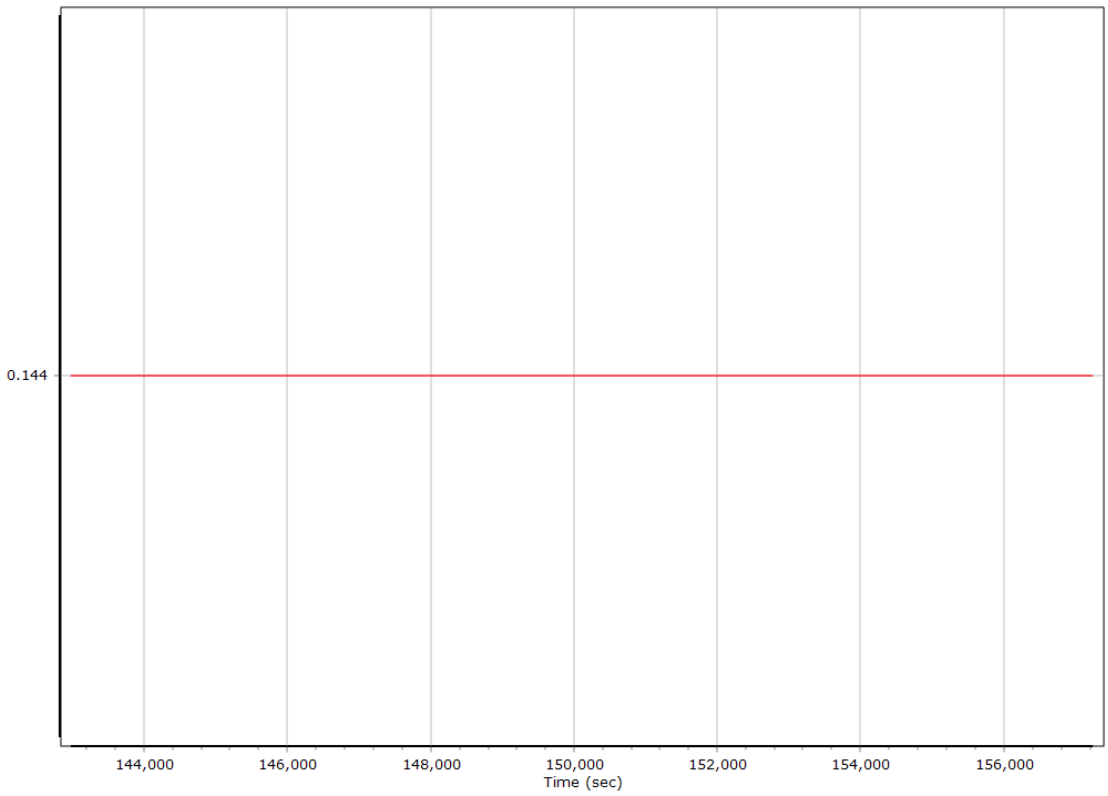
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

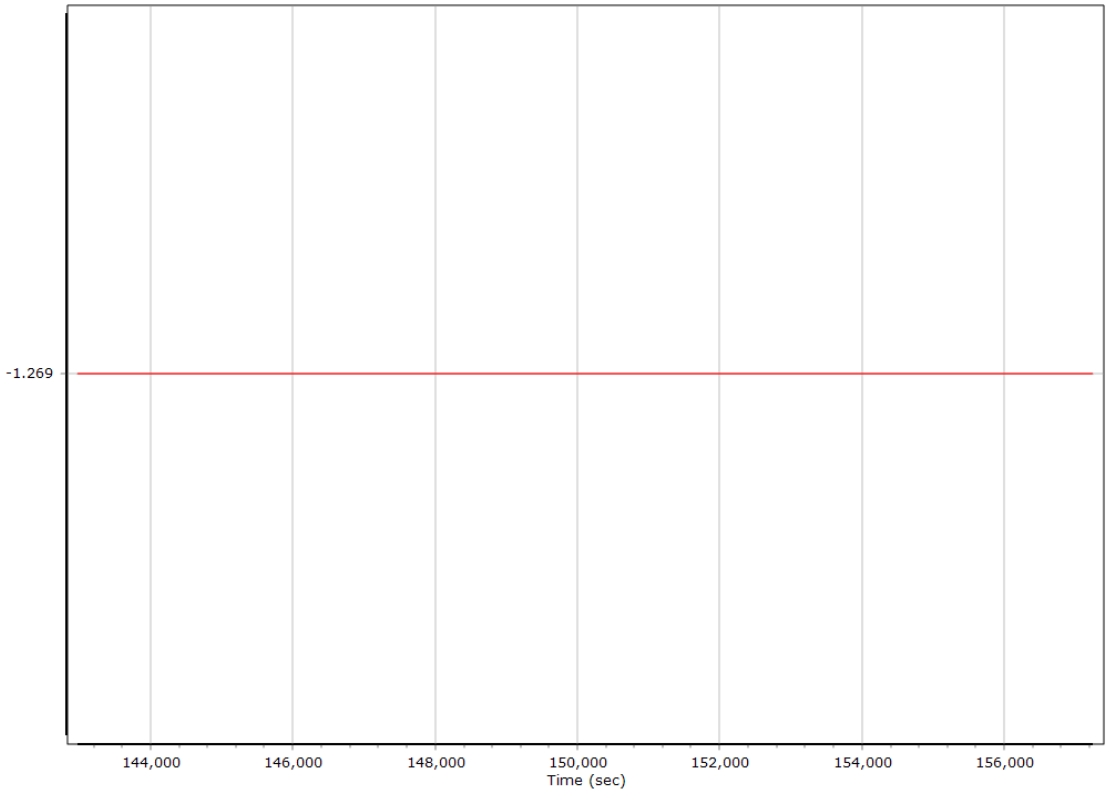
X Reference-Primary GNSS Lever Arm (m)



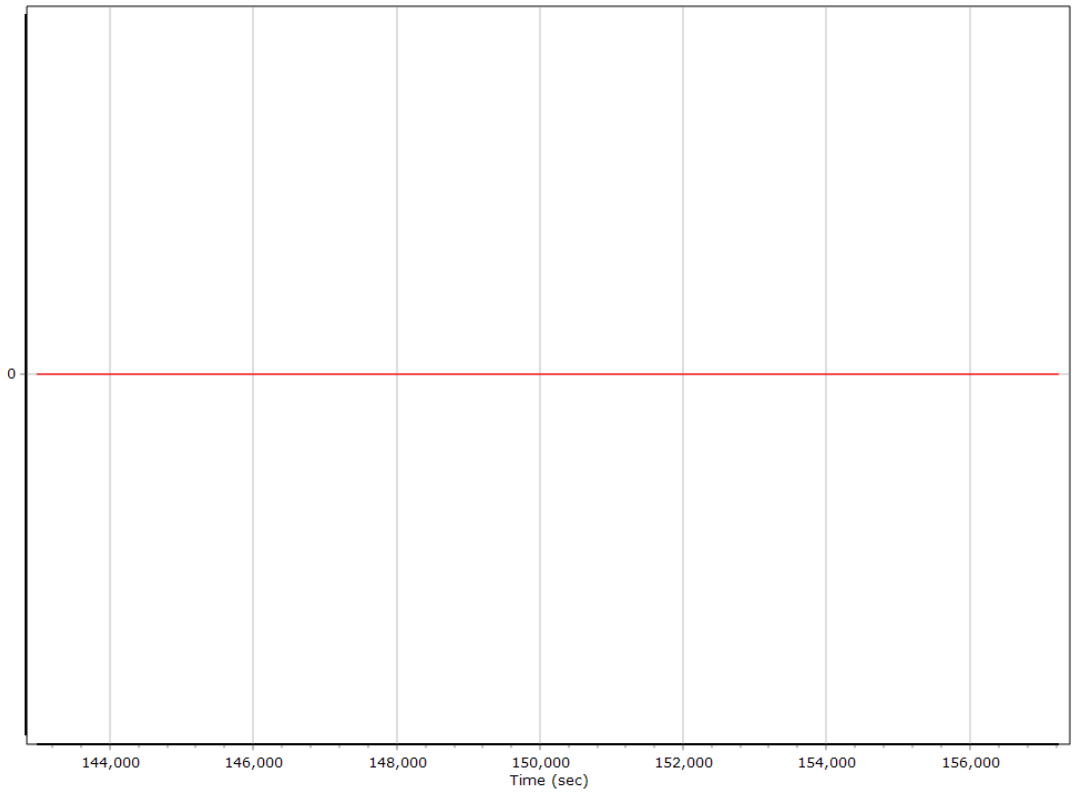
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



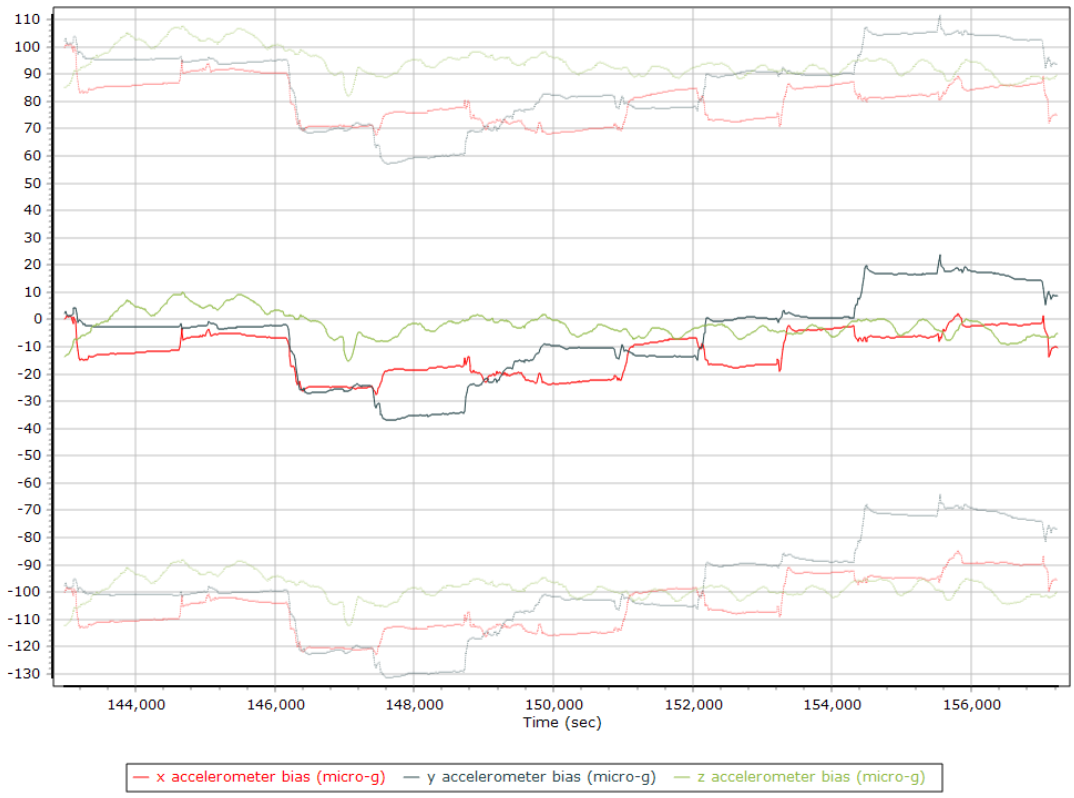
Reference-Primary GNSS Lever Arm Figure of Merit



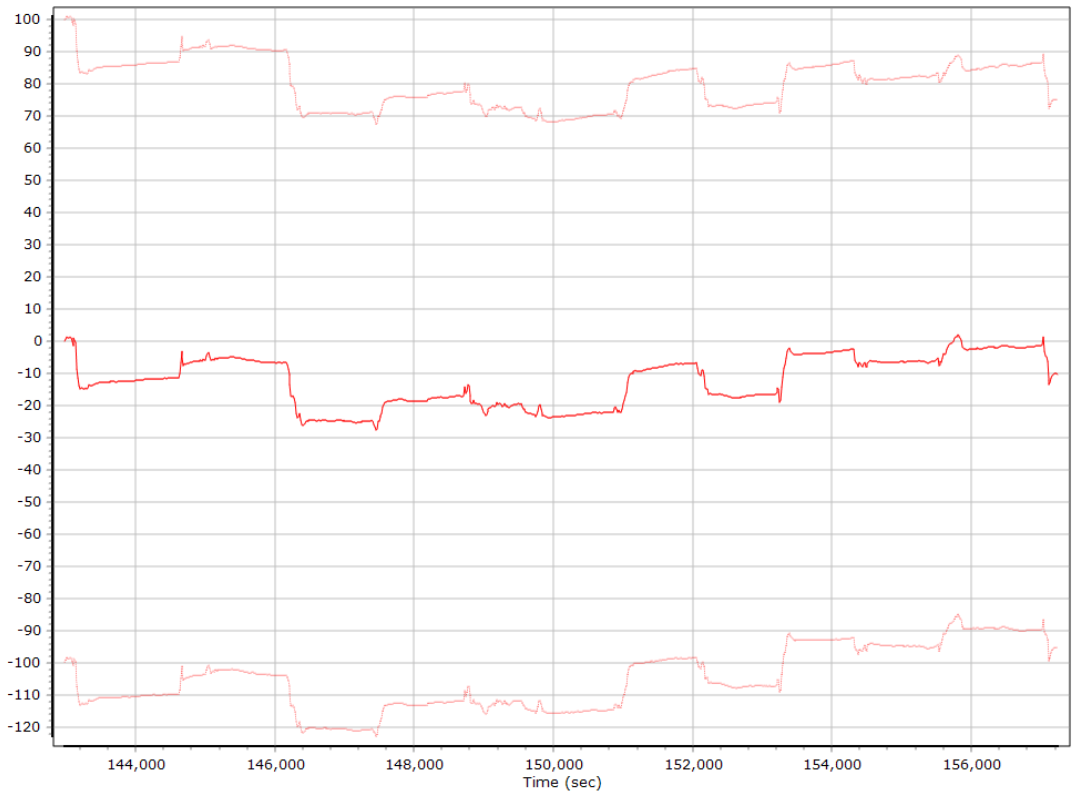
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

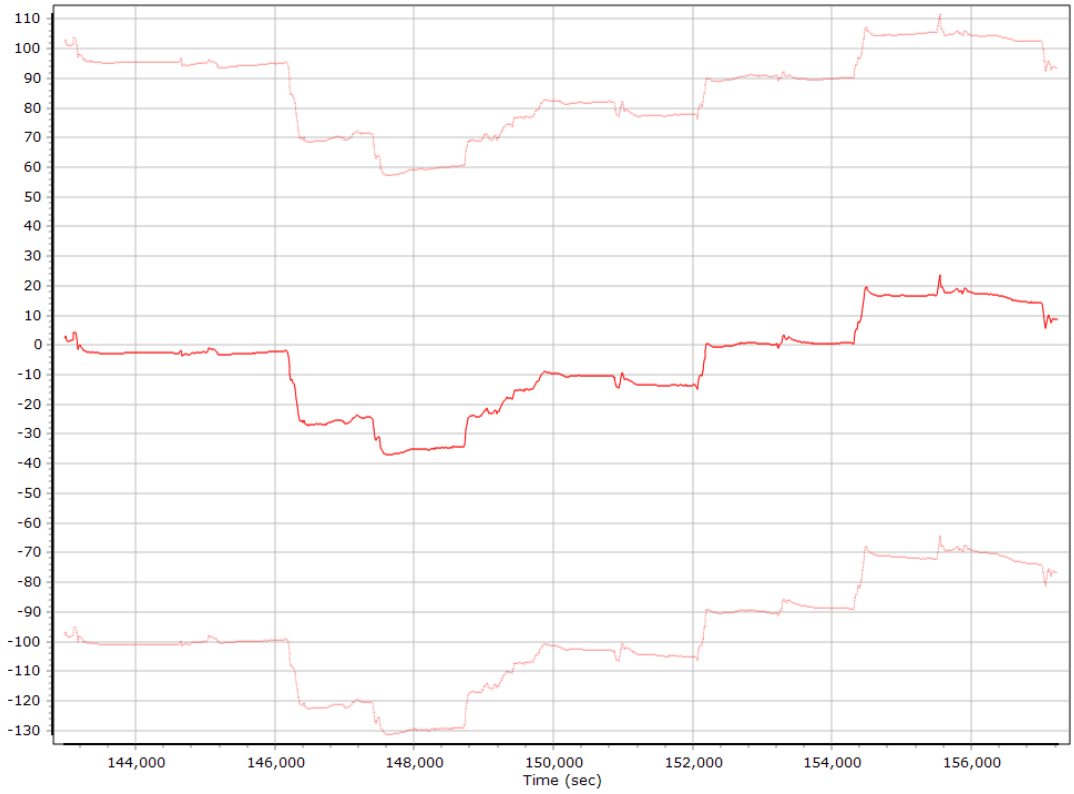
Accelerometer Bias (micro-g)



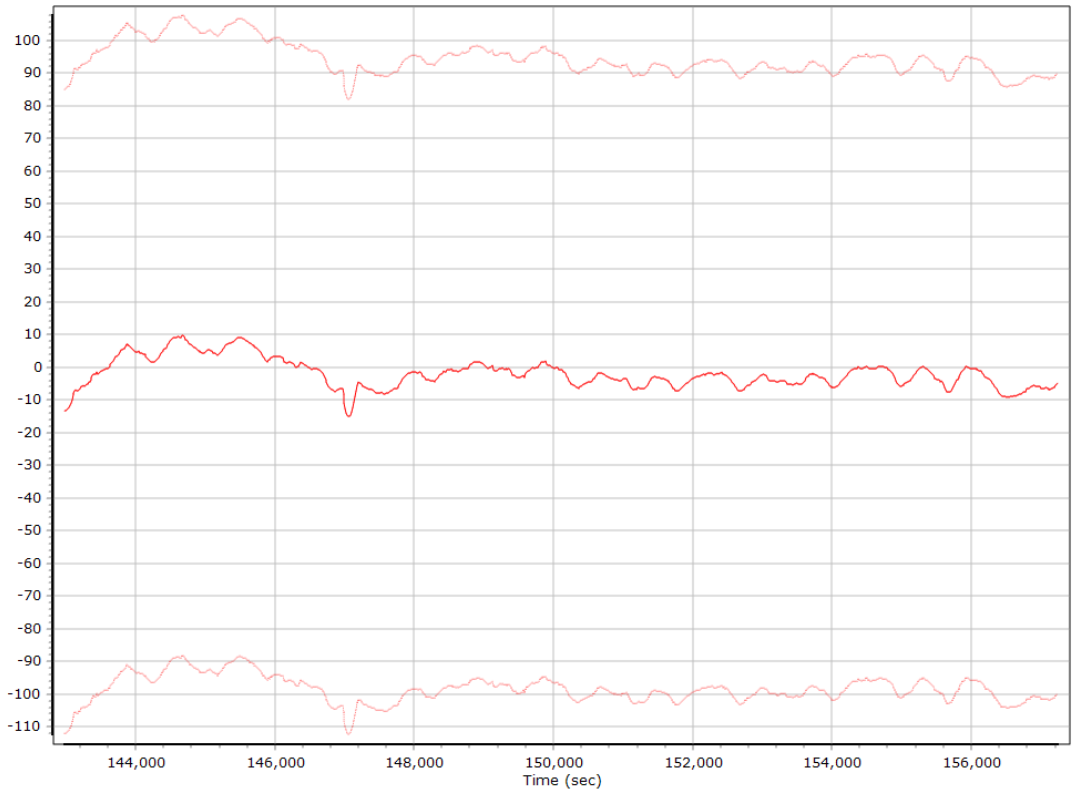
X Accelerometer Bias (micro-g)



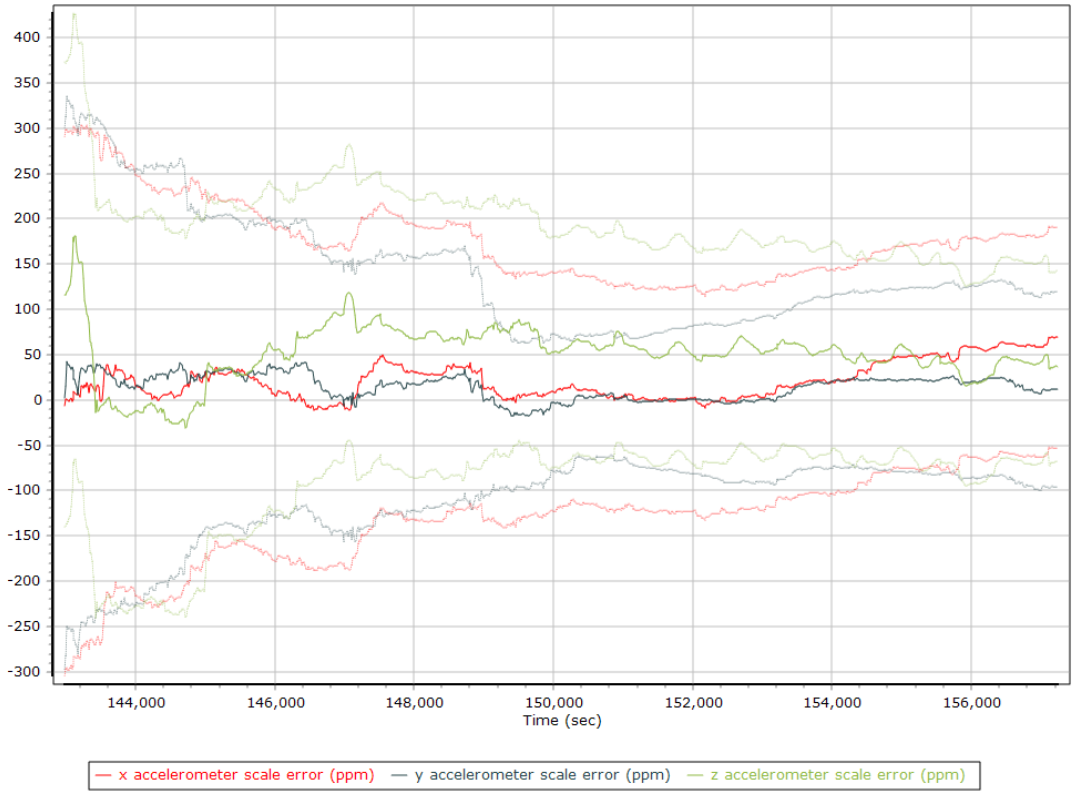
Y Accelerometer Bias (micro-g)



Z Accelerometer Bias (micro-g)



Accelerometer Scale Error (ppm)



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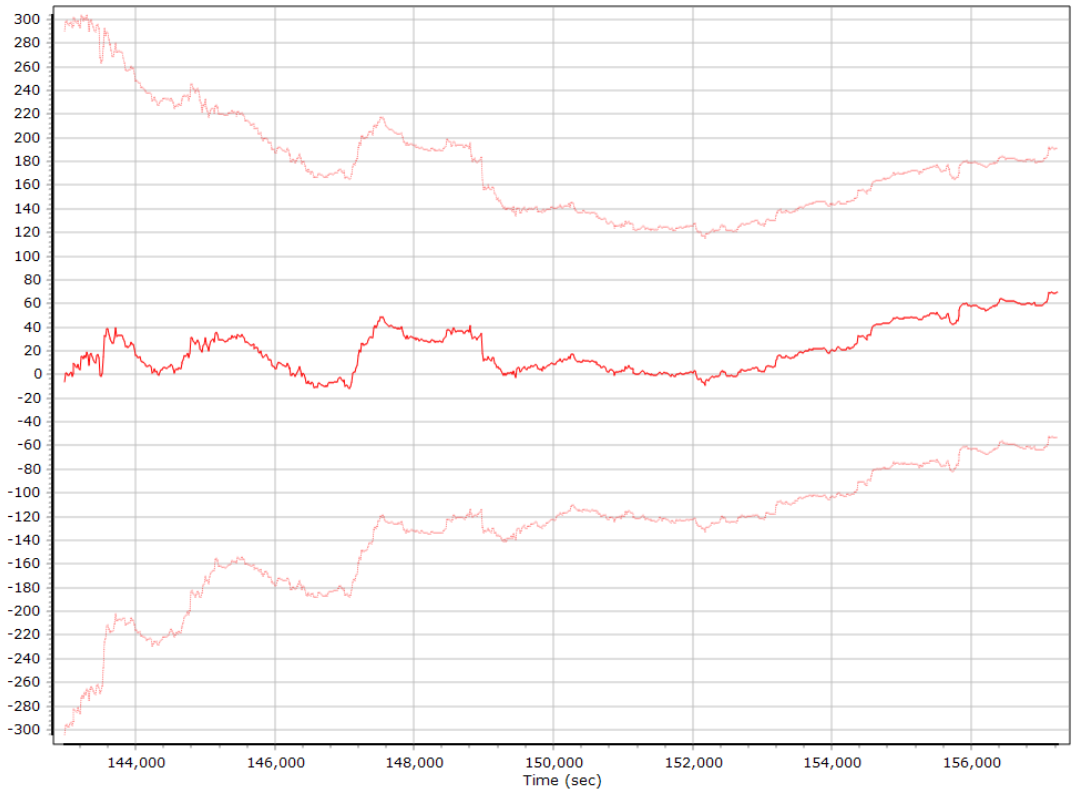
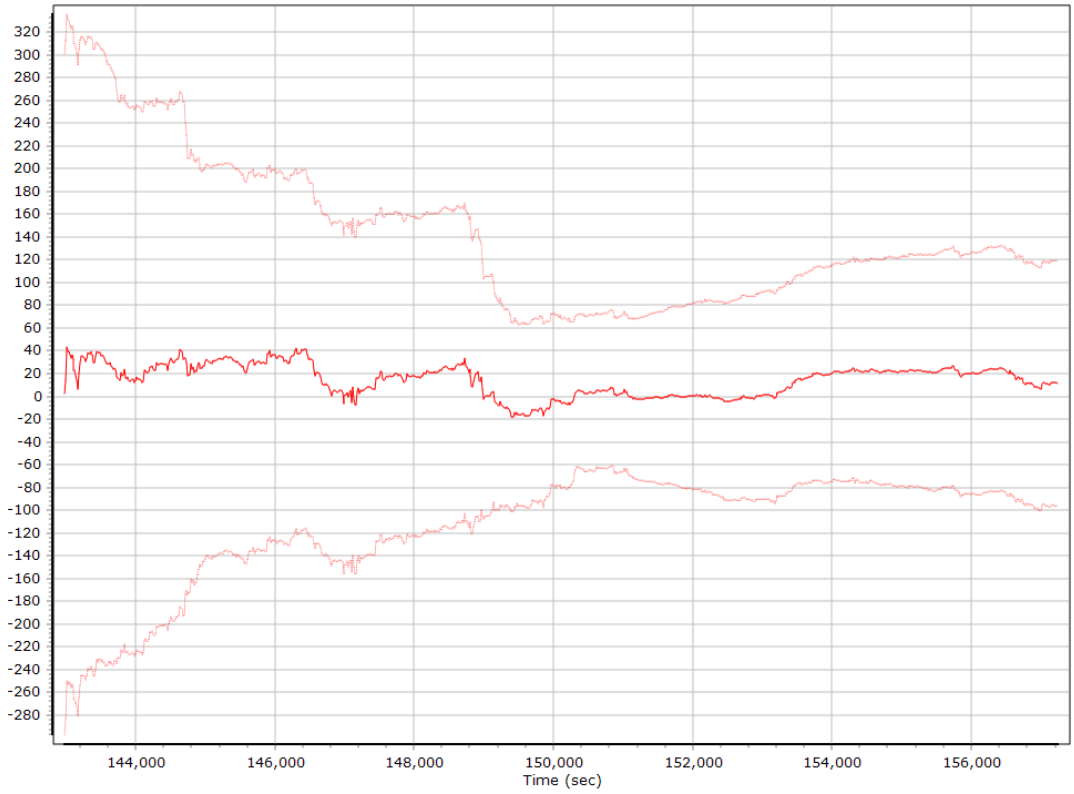
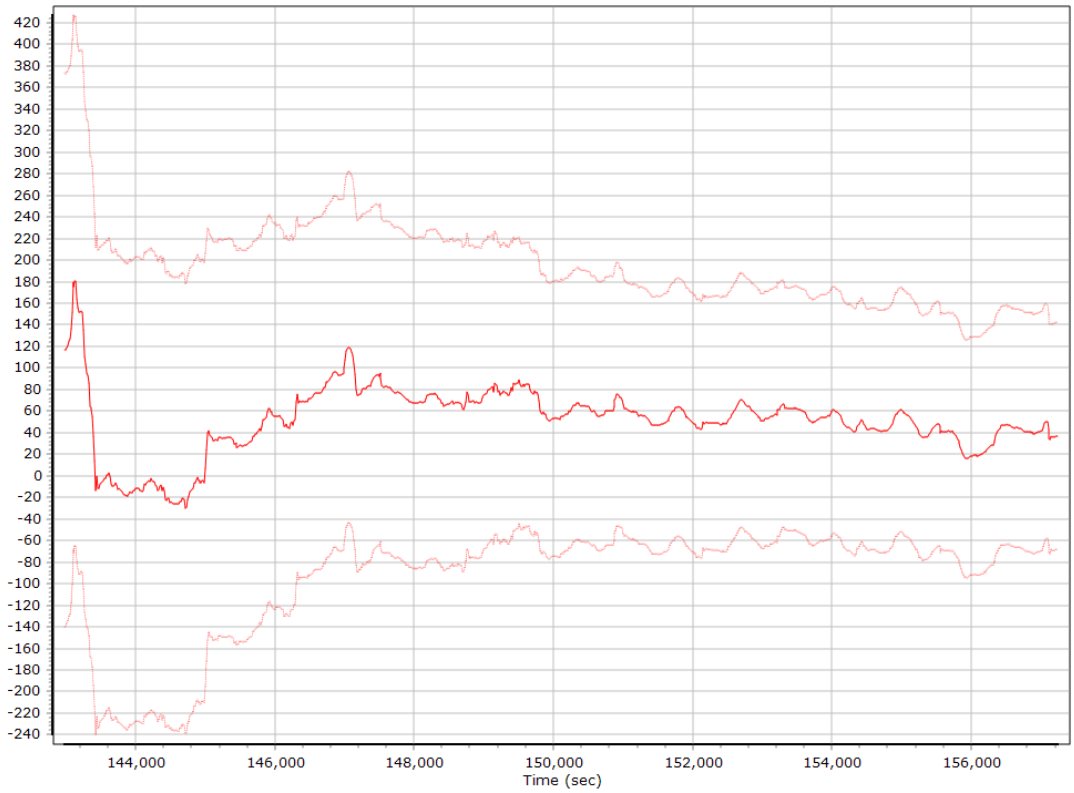


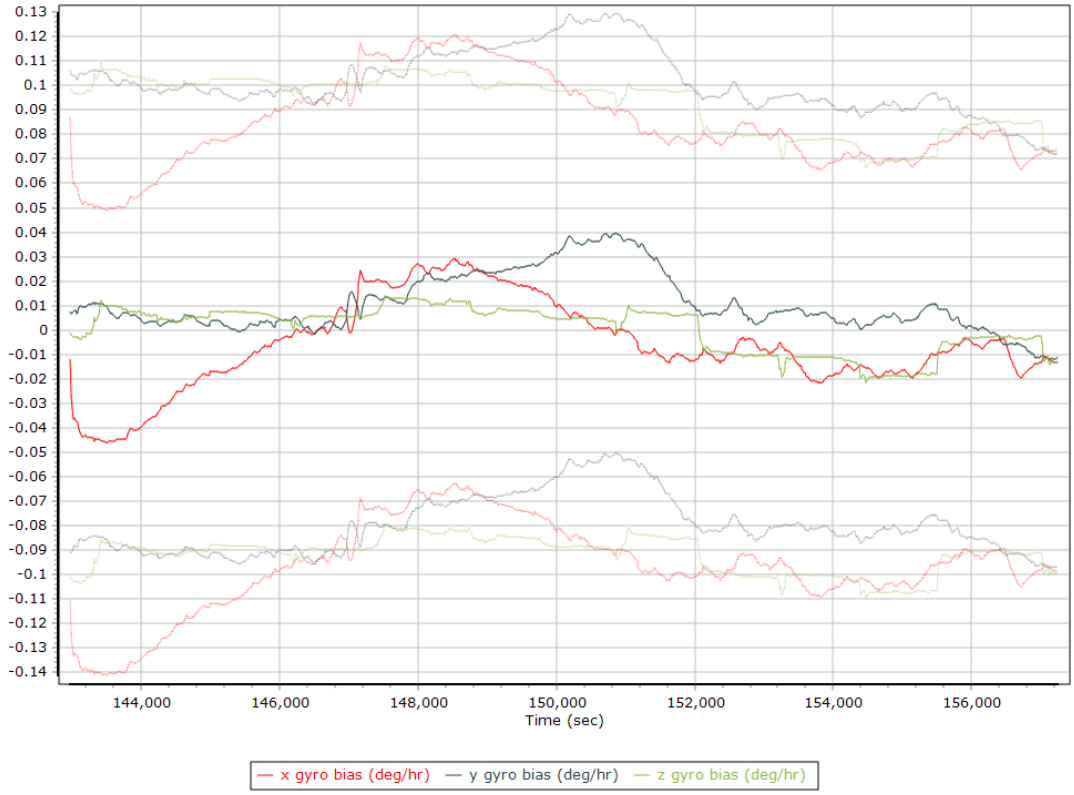
Y Accelerometer Scale Error (ppm)



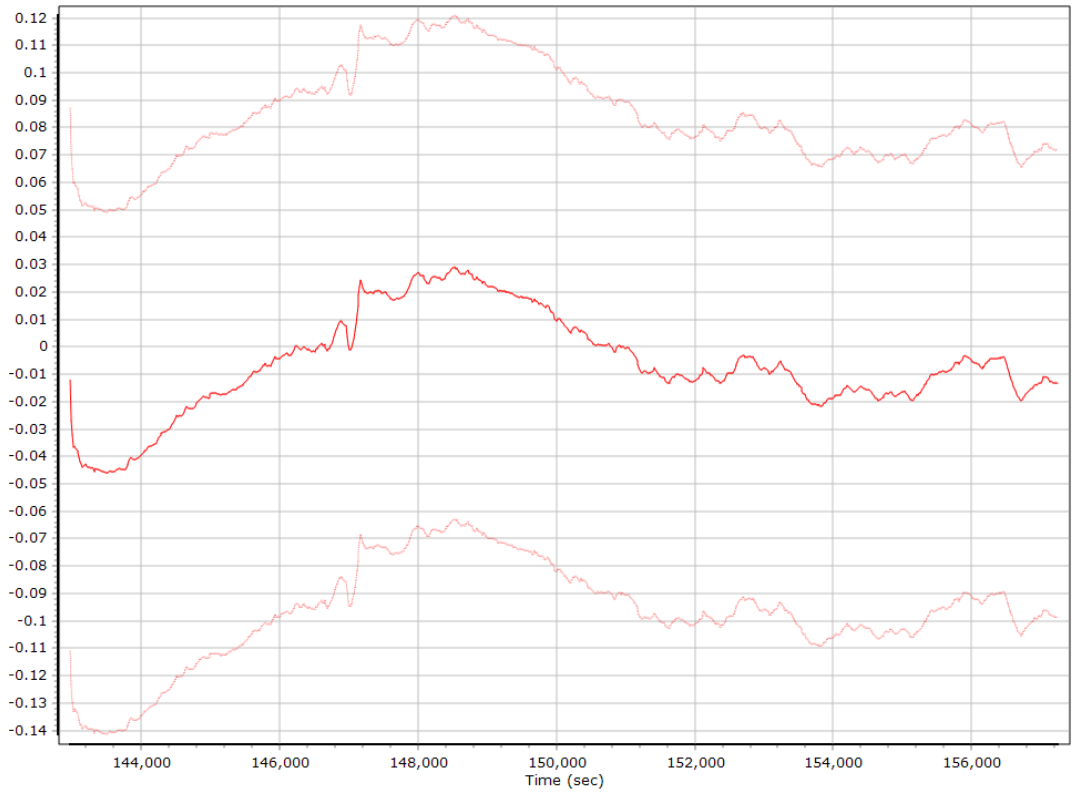
Z Accelerometer Scale Error (ppm)



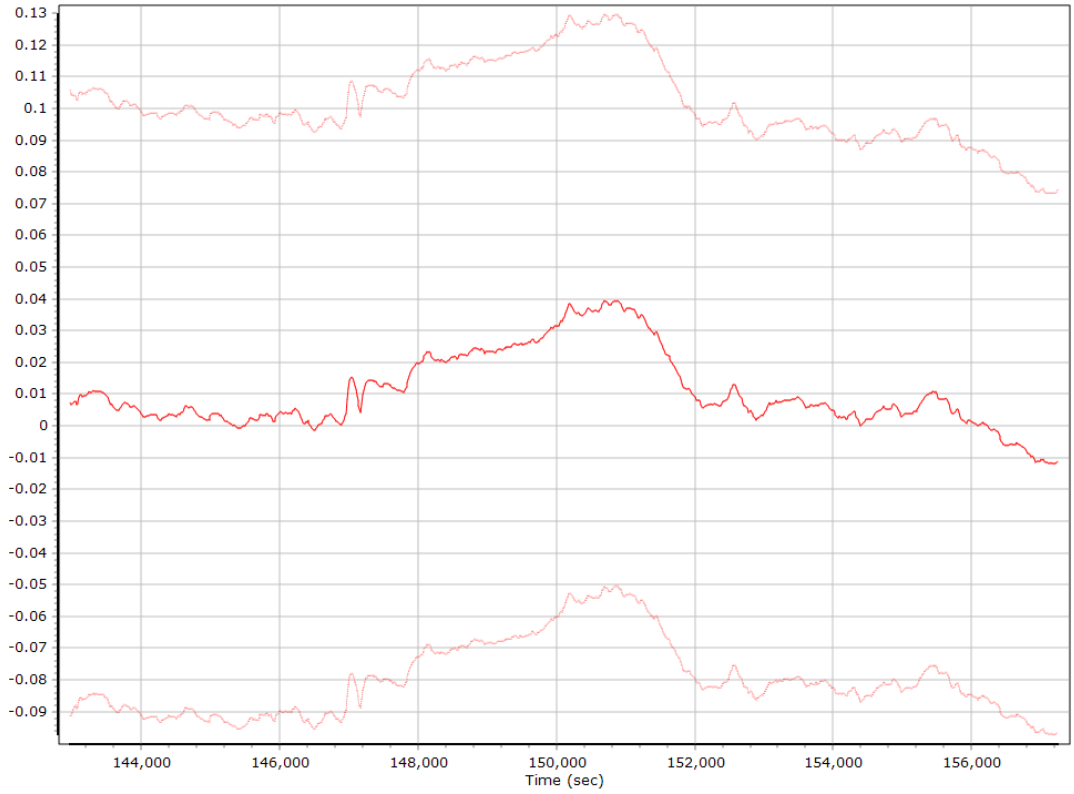
Gyro Bias (deg/h)



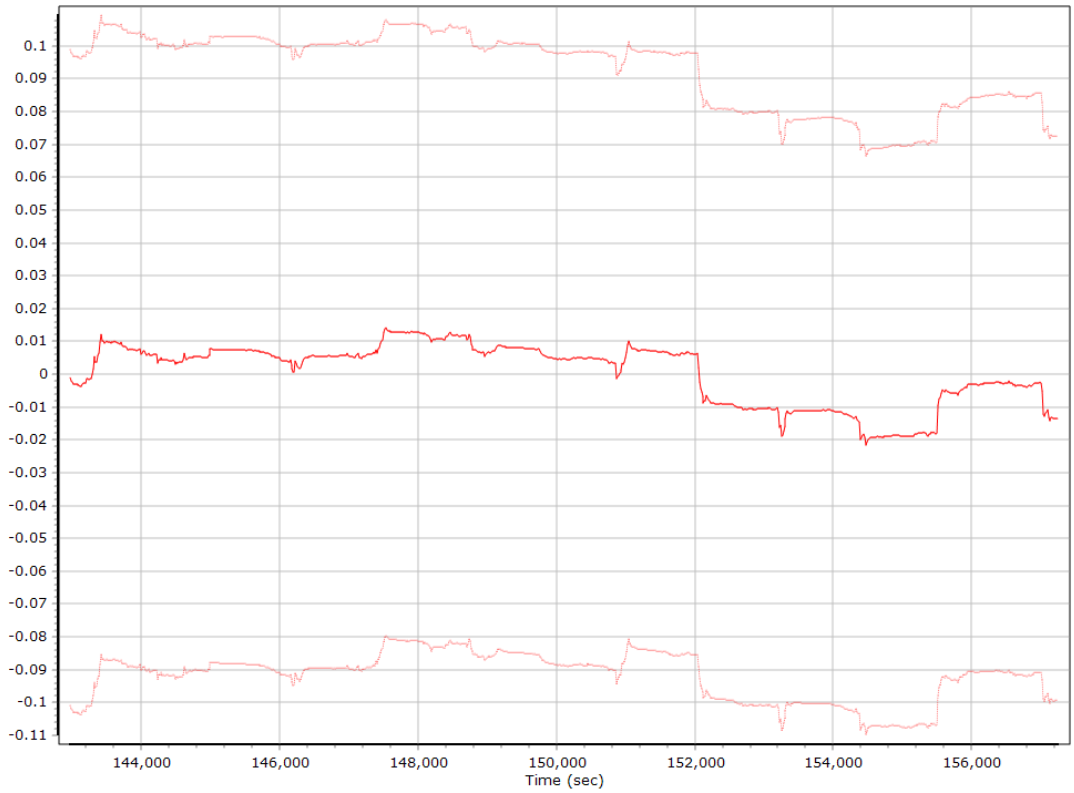
X Gyro Bias (deg/h)



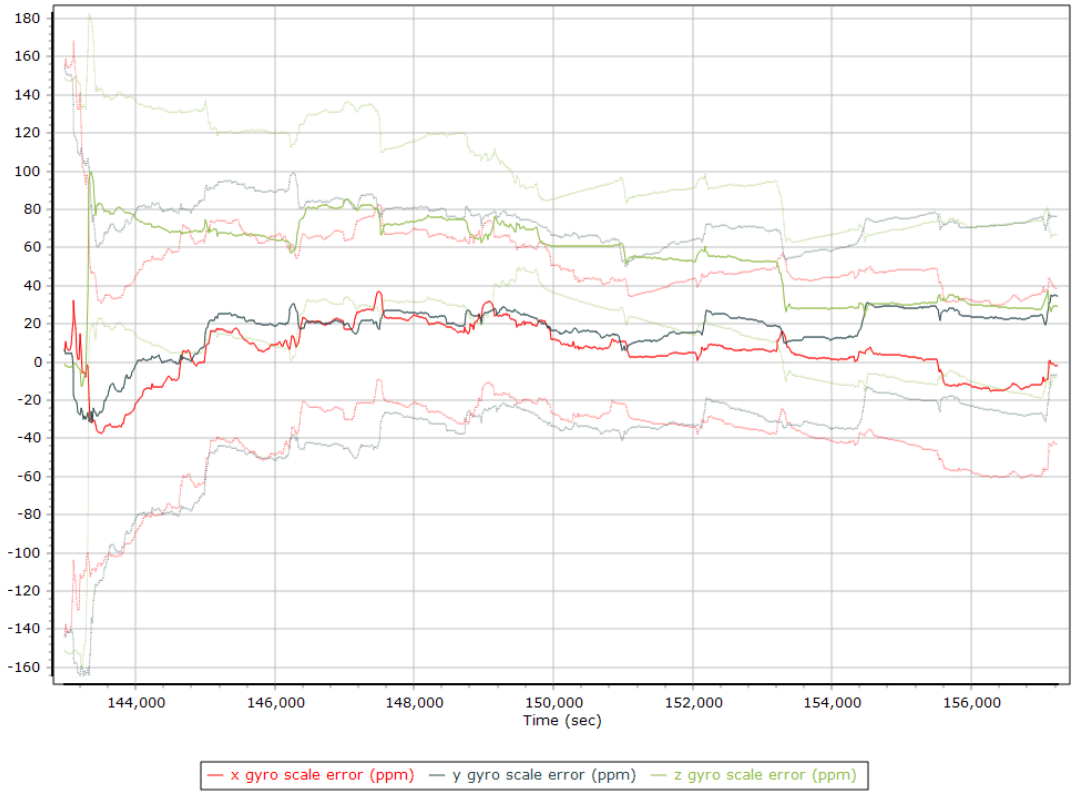
Y Gyro Bias (deg/h)



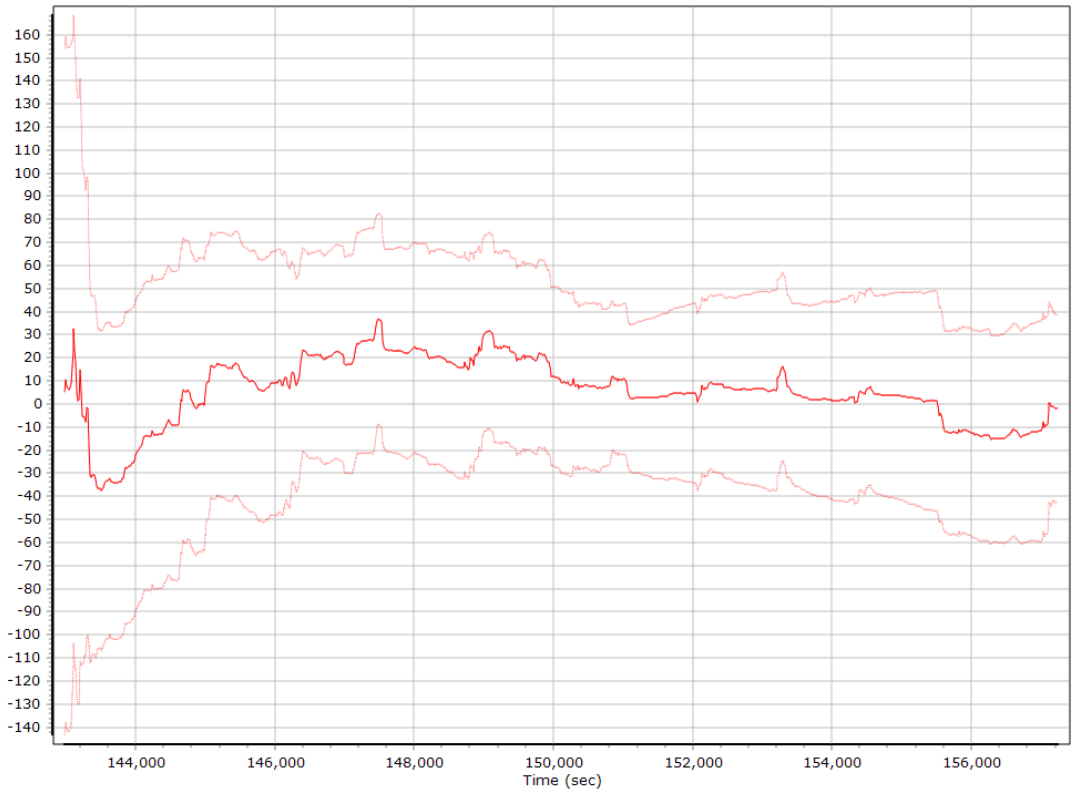
Z Gyro Bias (deg/h)



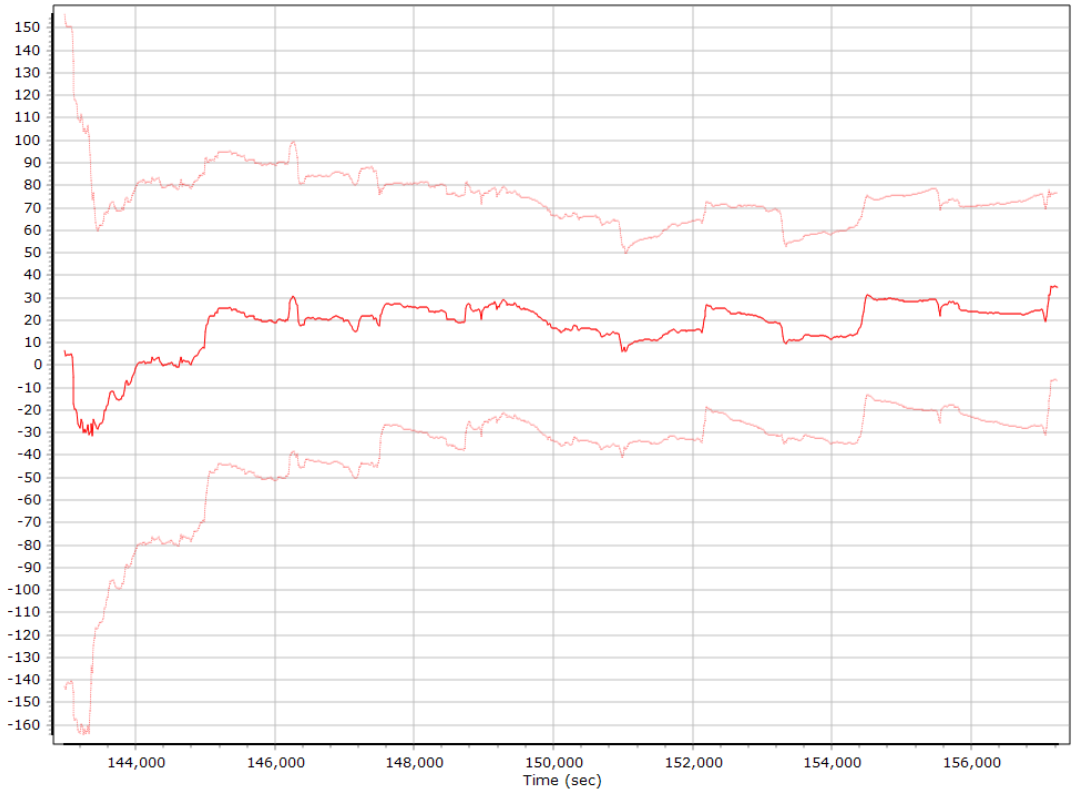
Gyro Scale Error (ppm)



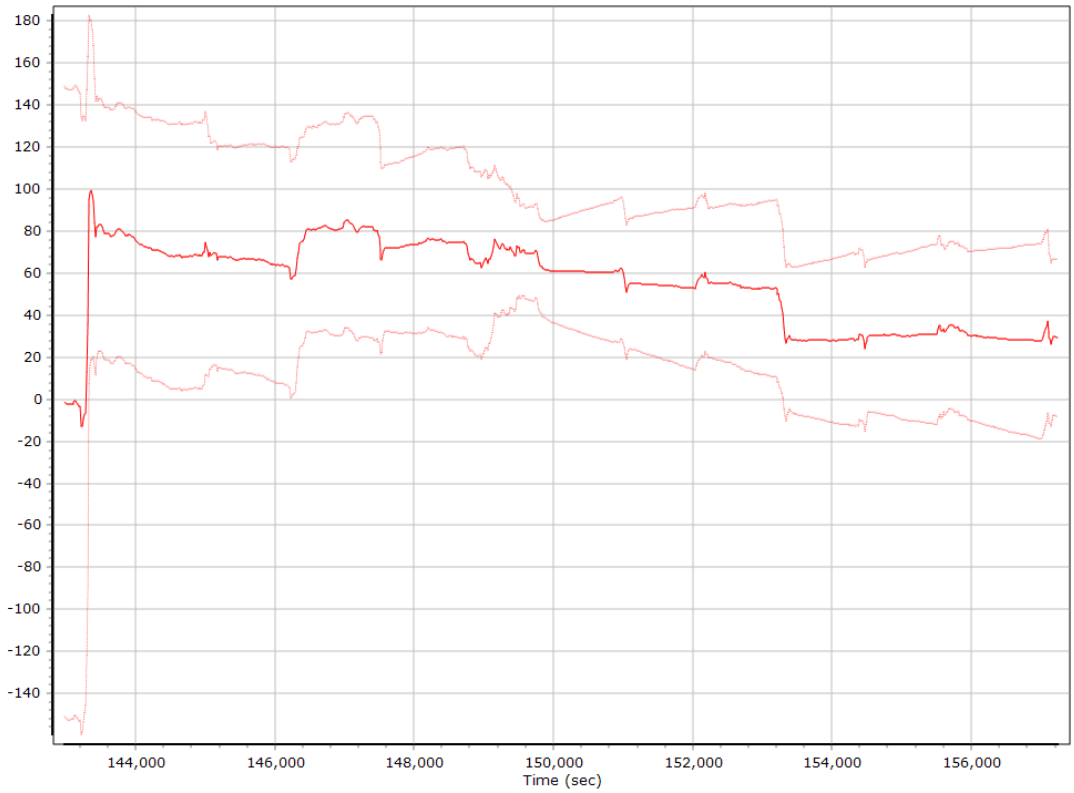
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

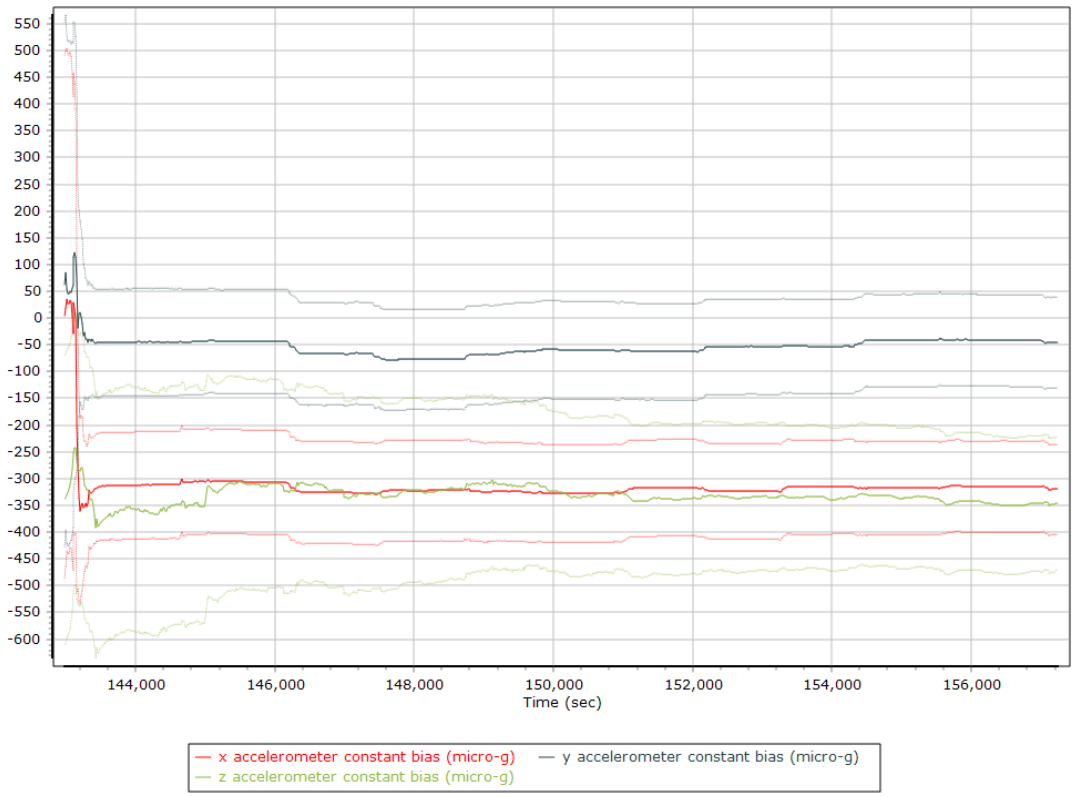


Z Gyro Scale Error (ppm)

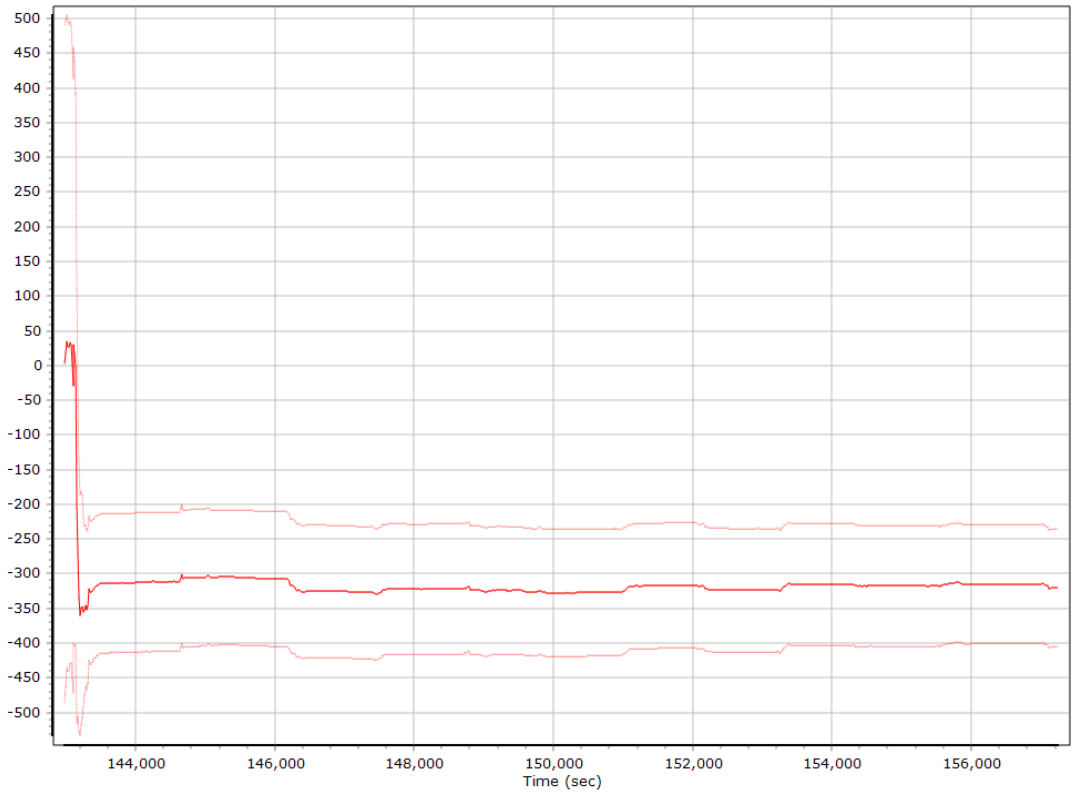


Forward Processed Estimated Constant Errors, Reference Frame

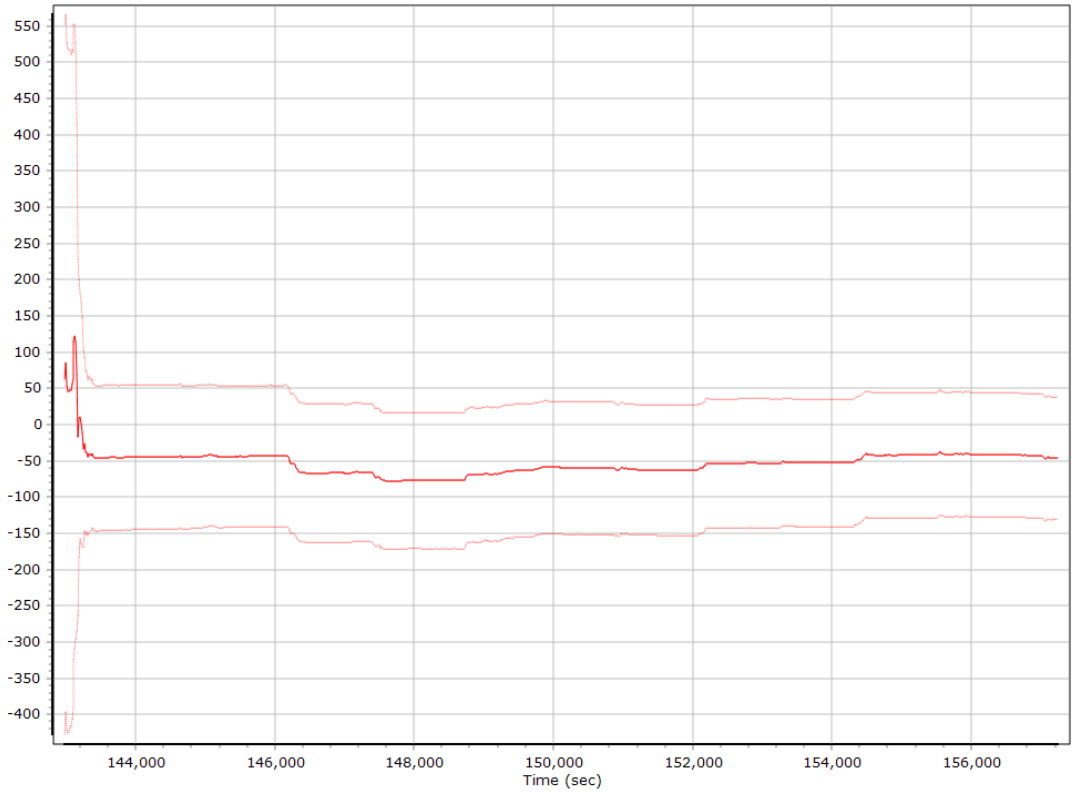
Accelerometer Bias (micro-g)



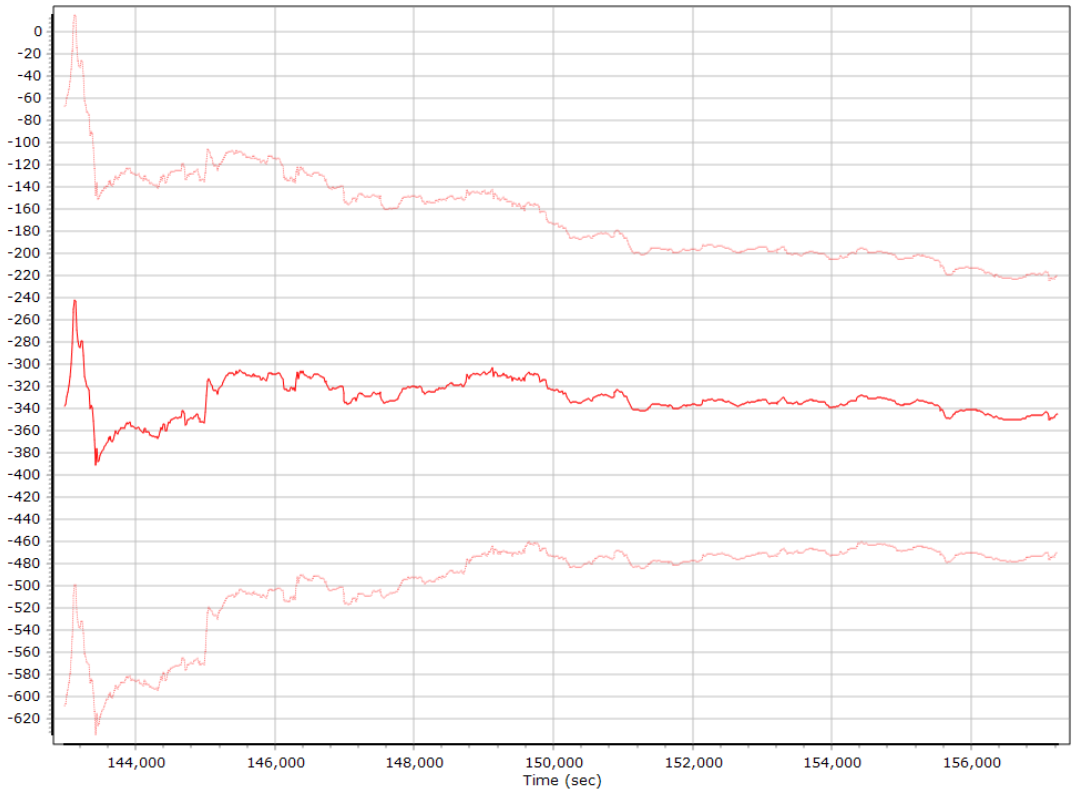
X Accelerometer Bias (micro-g)



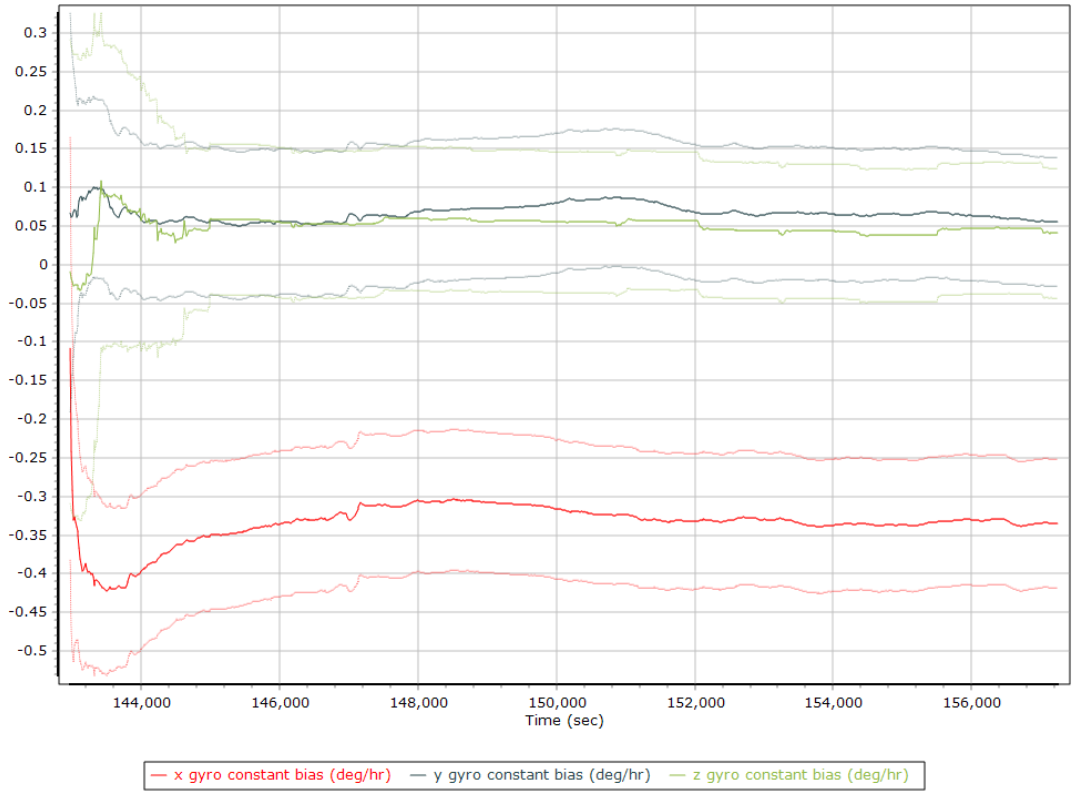
Y Accelerometer Bias (micro-g)



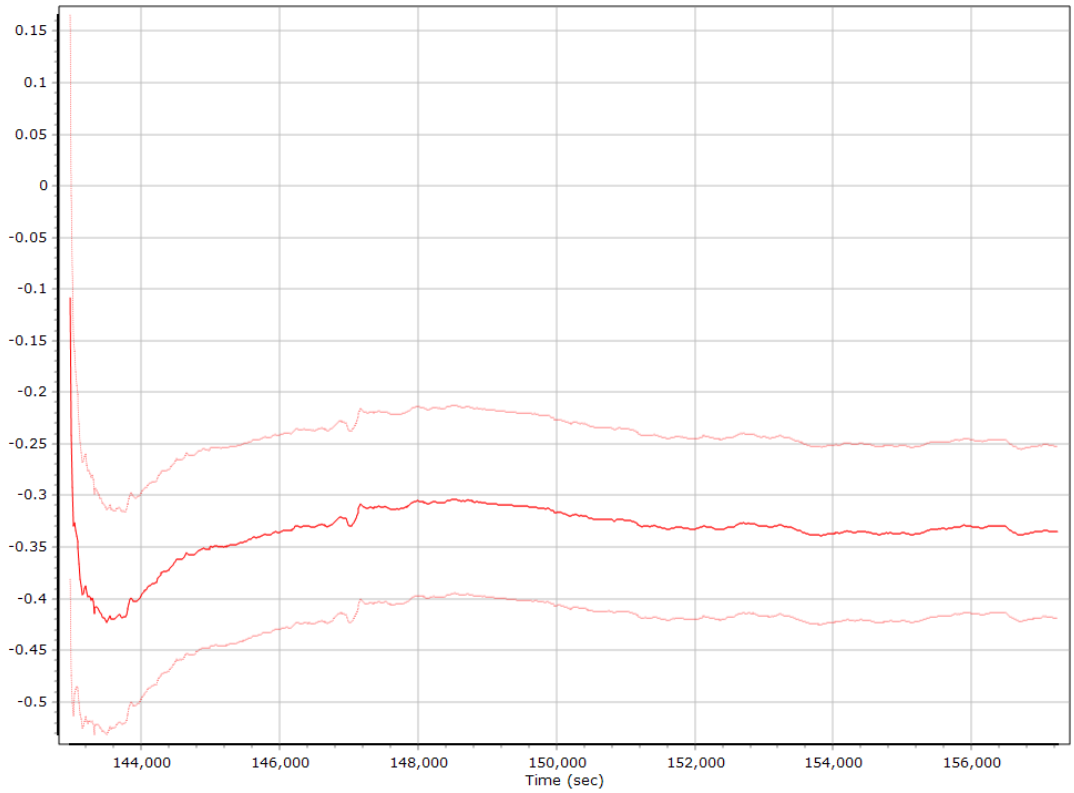
Z Accelerometer Bias (micro-g)



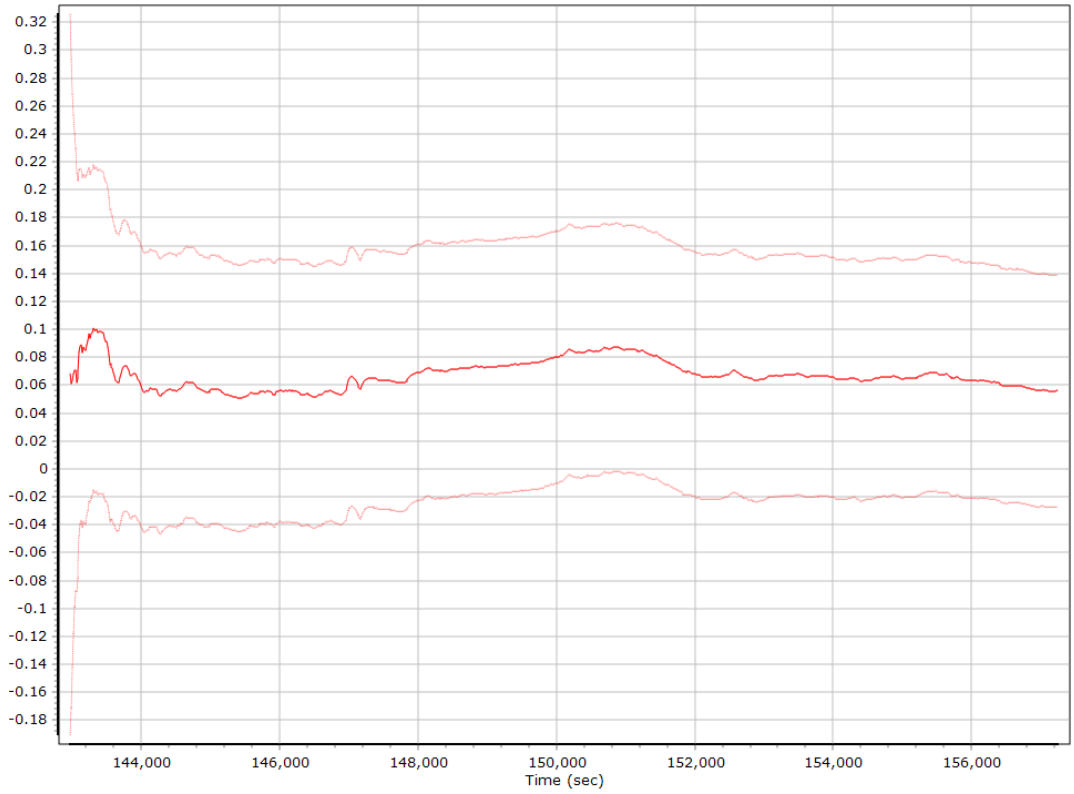
Gyro Bias (deg/h)



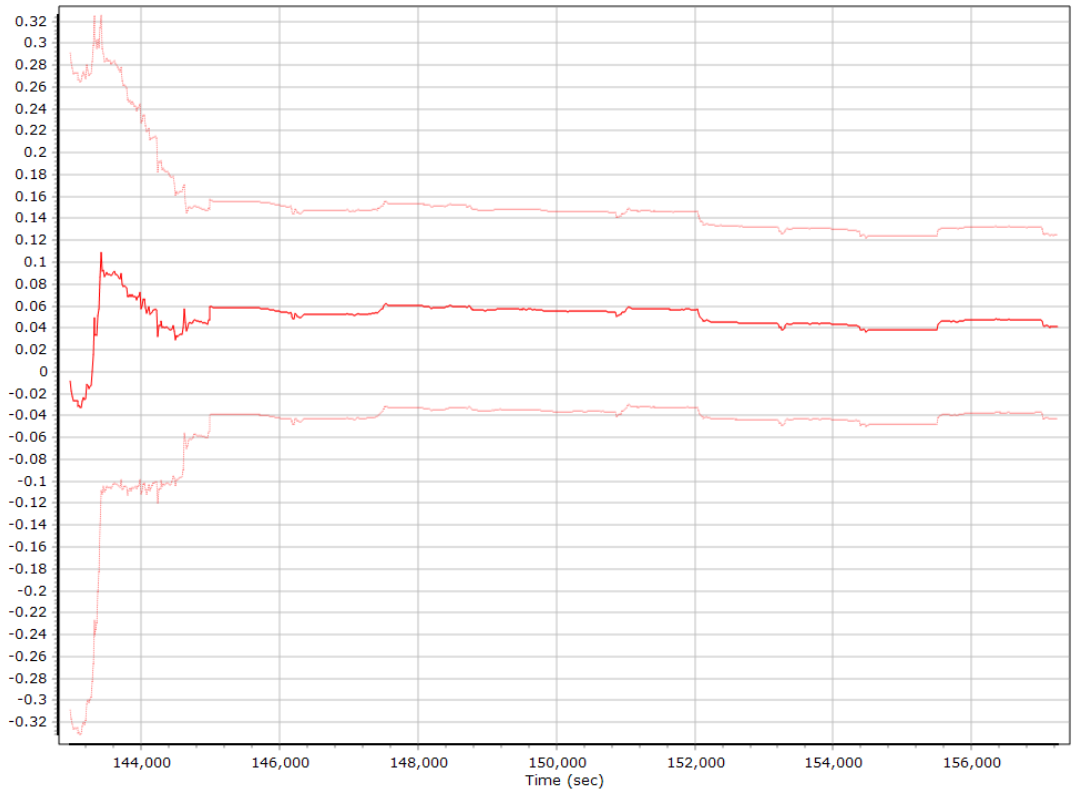
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)

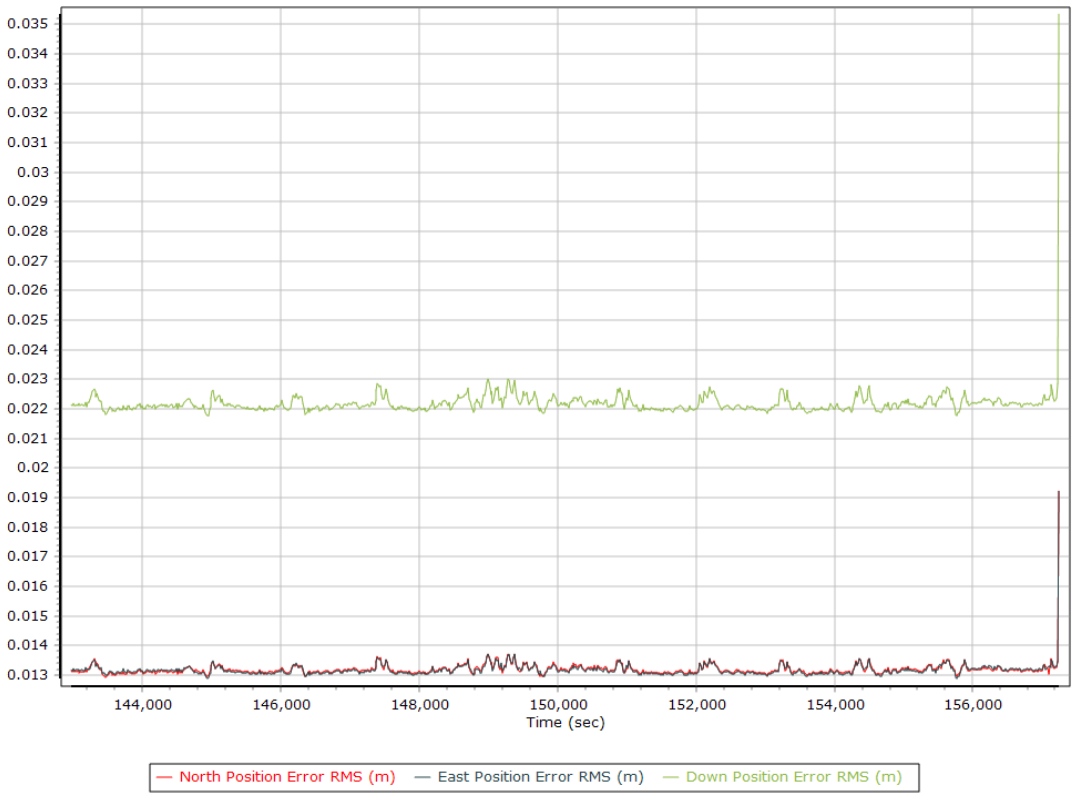


Z Gyro Bias (deg/h)

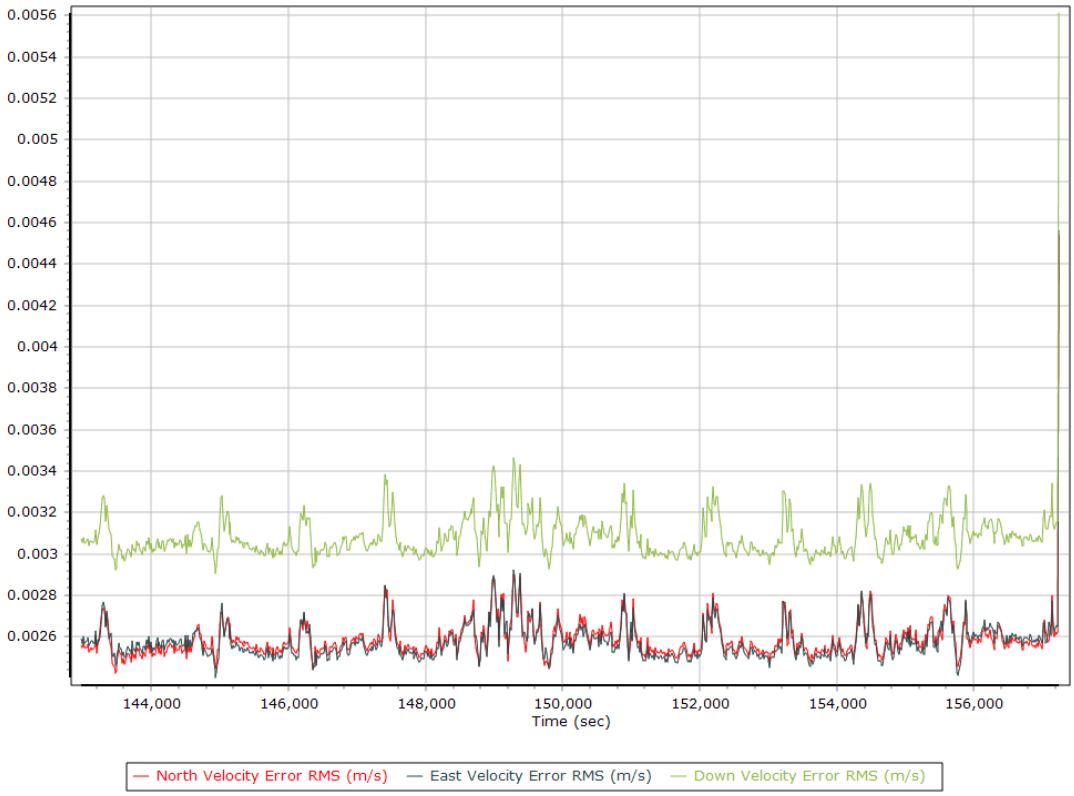


Smoothed Performance Metrics

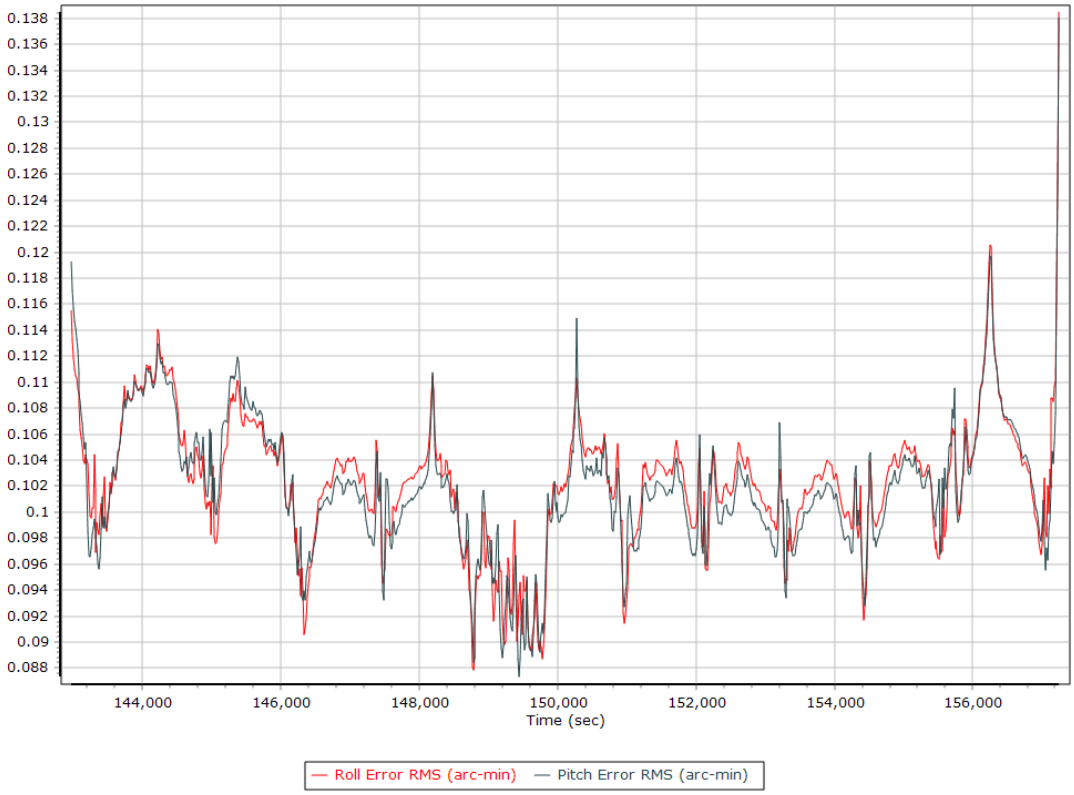
Position Error RMS (m)



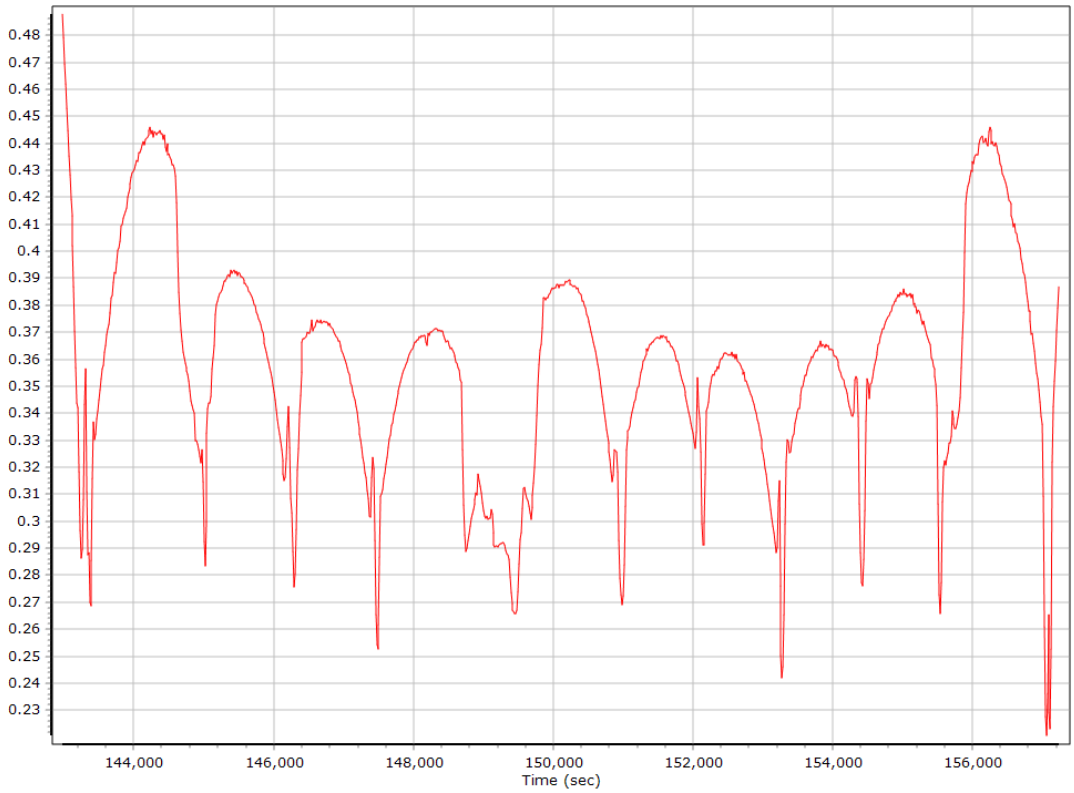
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

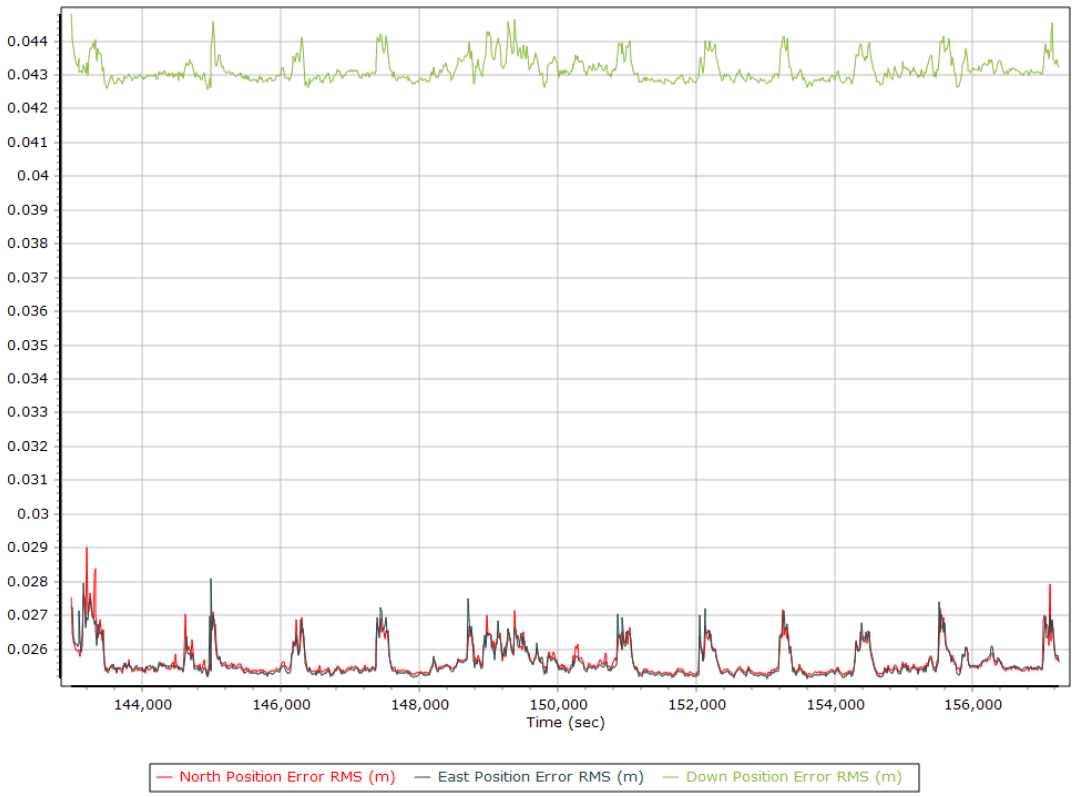


Heading Error RMS (arc-min)

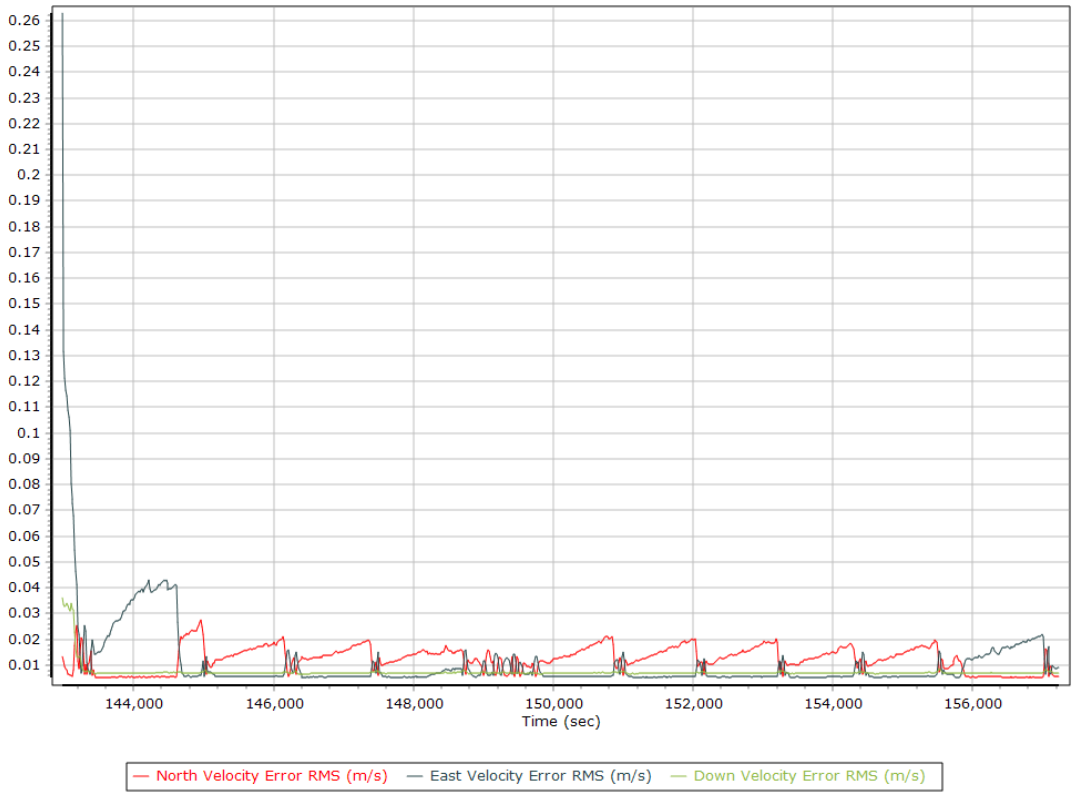


Forward Processed Performance Metrics

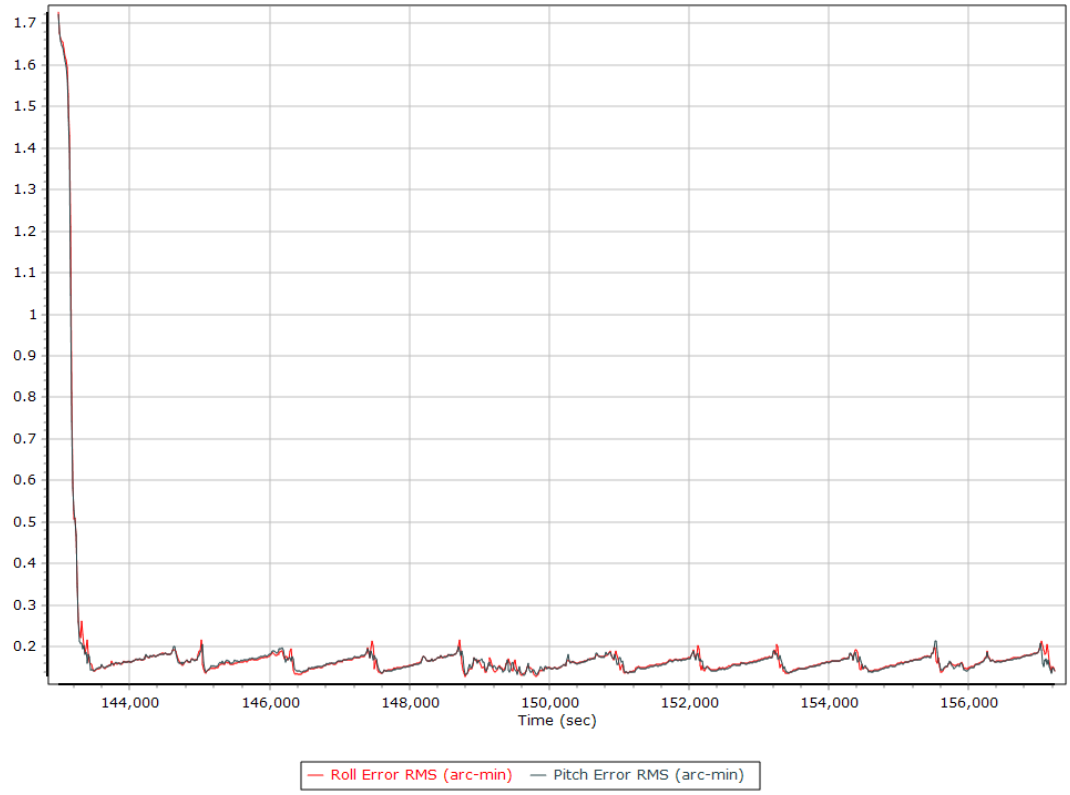
Position Error RMS (m)



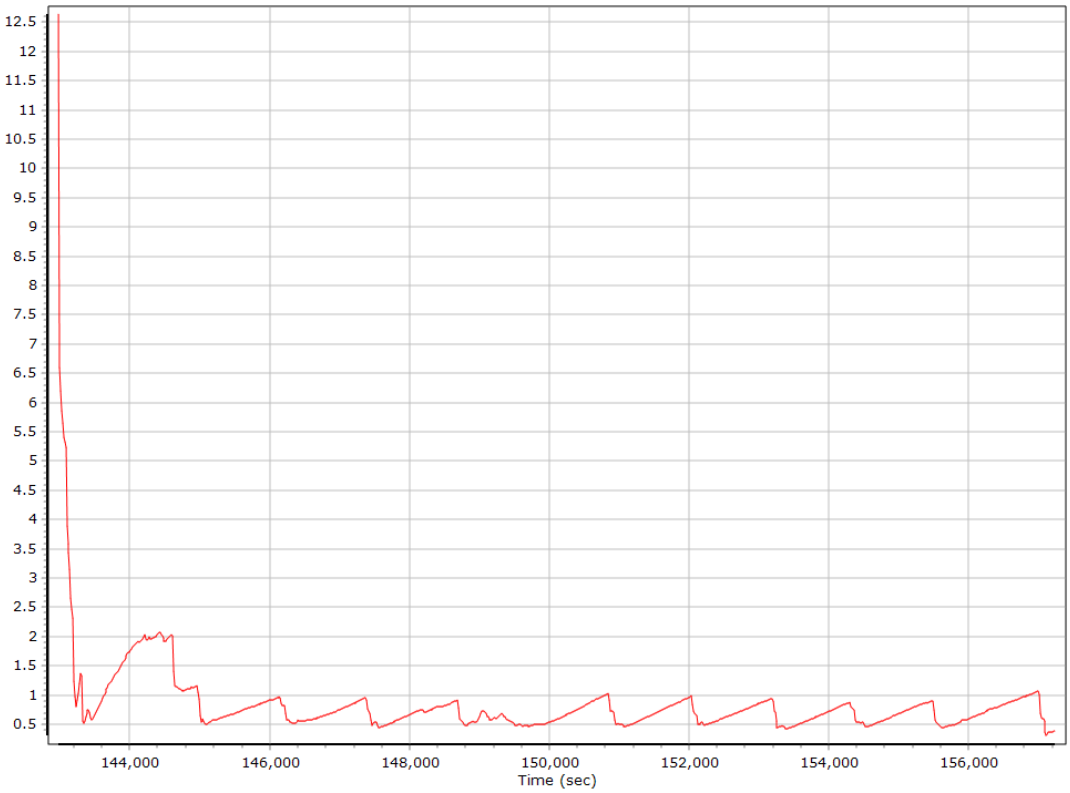
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

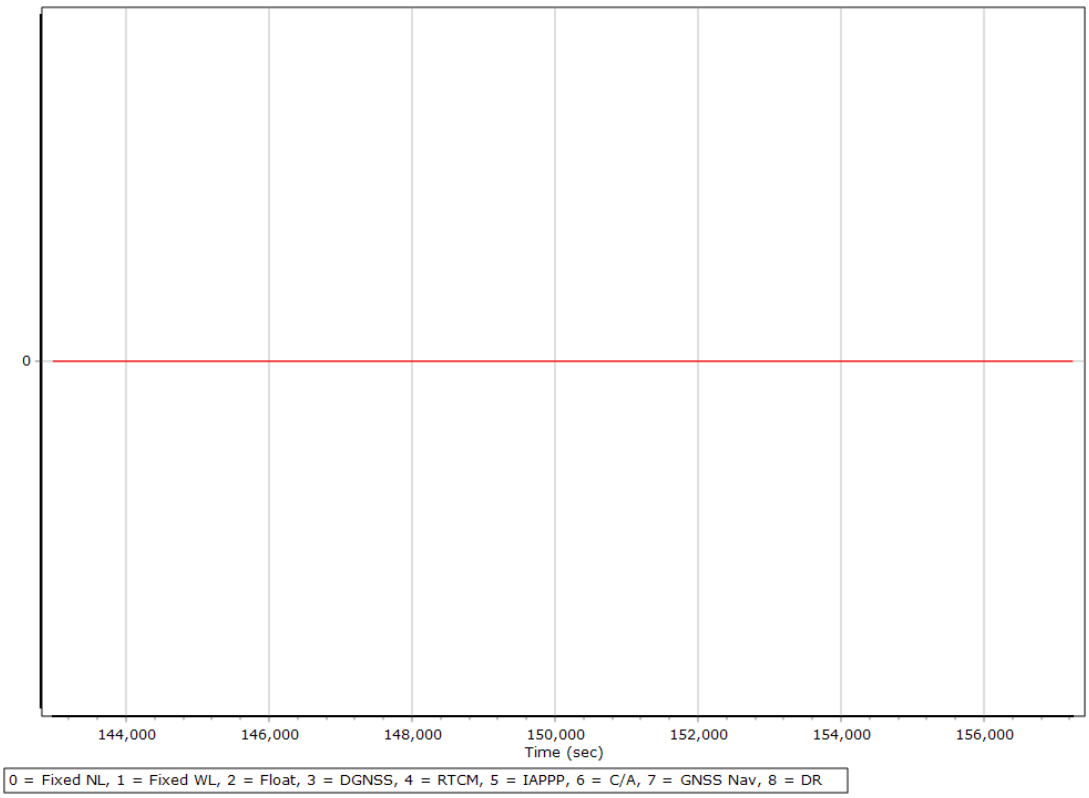


Heading Error RMS (arc-min)

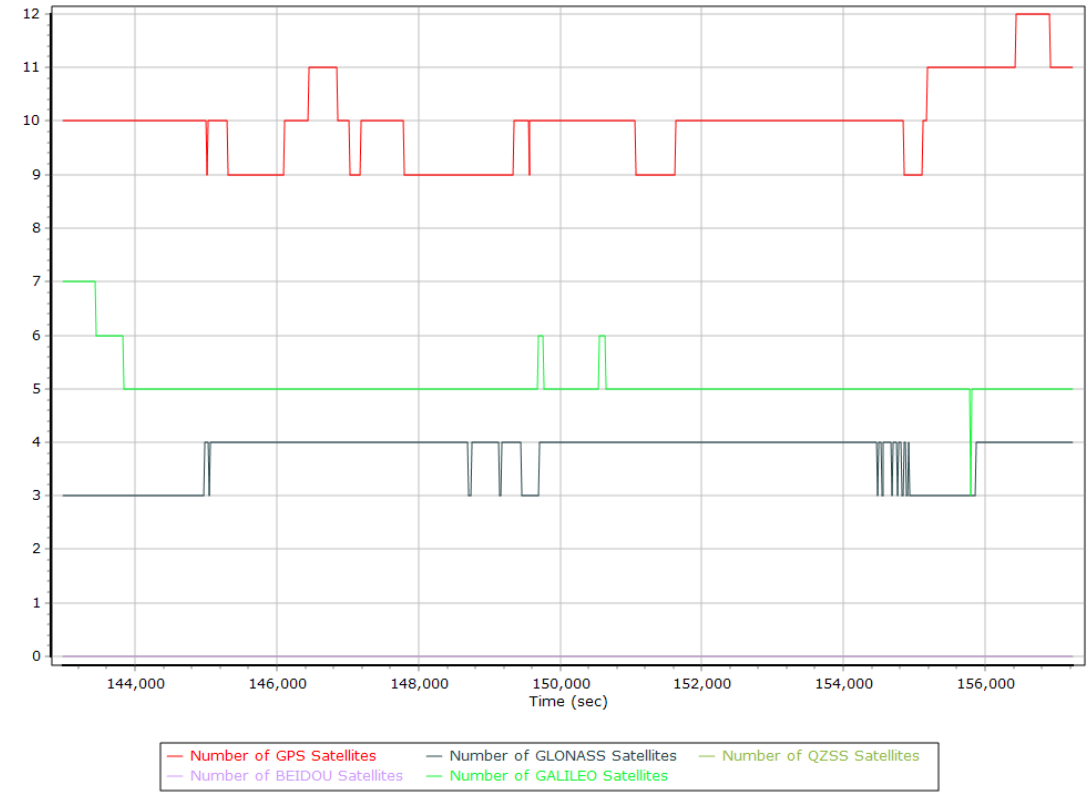


Forward Processed Solution Status

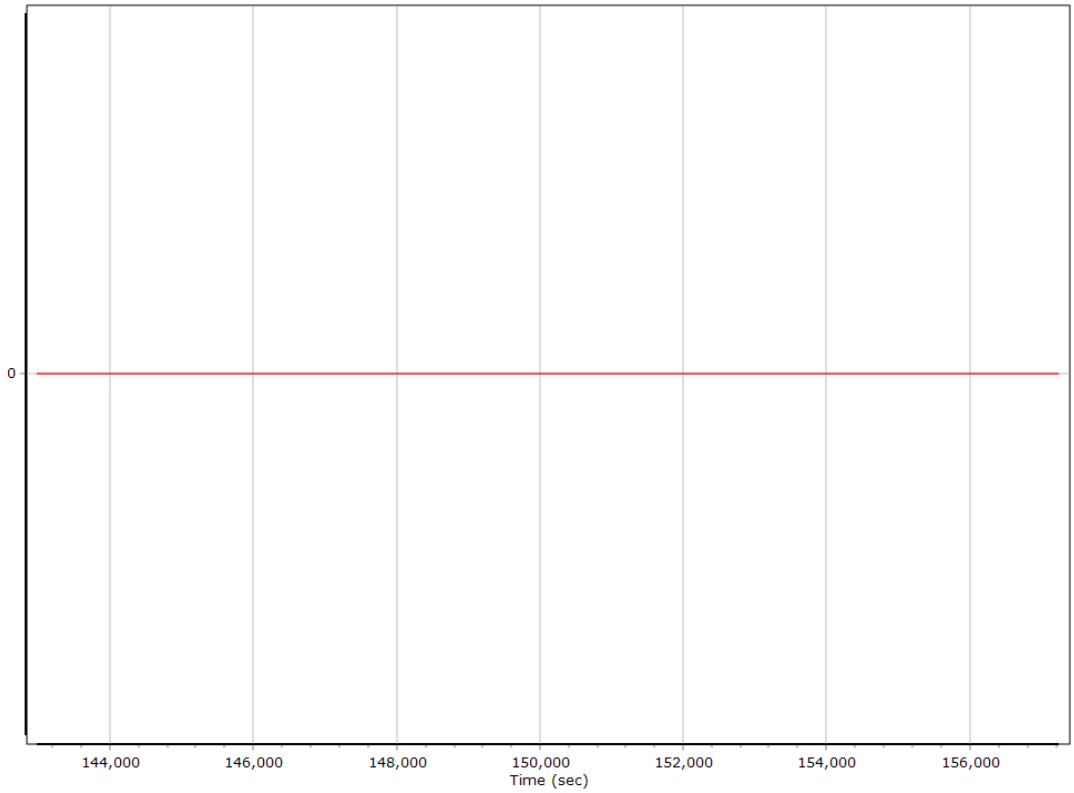
Processing Mode



Number of Satellites



Baseline Length



Export Summary

Export file	export_2SU20300A_186.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	Deg Decimal	
Export start time	144351.004 (10/26/2020 4:05:51 PM)		
Export end time	155494.129 (10/26/2020 7:11:34 PM)		
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	2010		