General Information

Mission Information

Project name	19-058_110319
Processing date	2019-11-26 22:11:37
Mission date	2019-11-03 16:16:14
Mission duration	00:43:26.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 510 VER6 HW2.4-11
Serial number	S/N6310
IMU type	46
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
ALS.348	POS Data
ALS.349	POS Data
ALS.350	POS Data
ALS.351	POS Data
ALS.352	POS Data

Input Files

File Name	File type
Ephm3070.19g	GLONASS Broadcast Ephemeris
Ephm3070.19n	GPS Broadcast Ephemeris
igl20776.sp3	GLONASS Precise Ephemeris
igl20780.sp3	GLONASS Precise Ephemeris
igl20781.sp3	GLONASS Precise Ephemeris
igs20776.sp3	GPS Precise Ephemeris
igs20780.sp3	GPS Precise Ephemeris
igs20781.sp3	GPS Precise Ephemeris
idby3070.19o	GNSS SingleBase
iddu3070.19o	GNSS SingleBase
idif3070.19o	GNSS SingleBase
idpo3070.19o	GNSS SingleBase
p3593070.19o	GPS SingleBase
p6853070.19o	GNSS SingleBase

Output Files

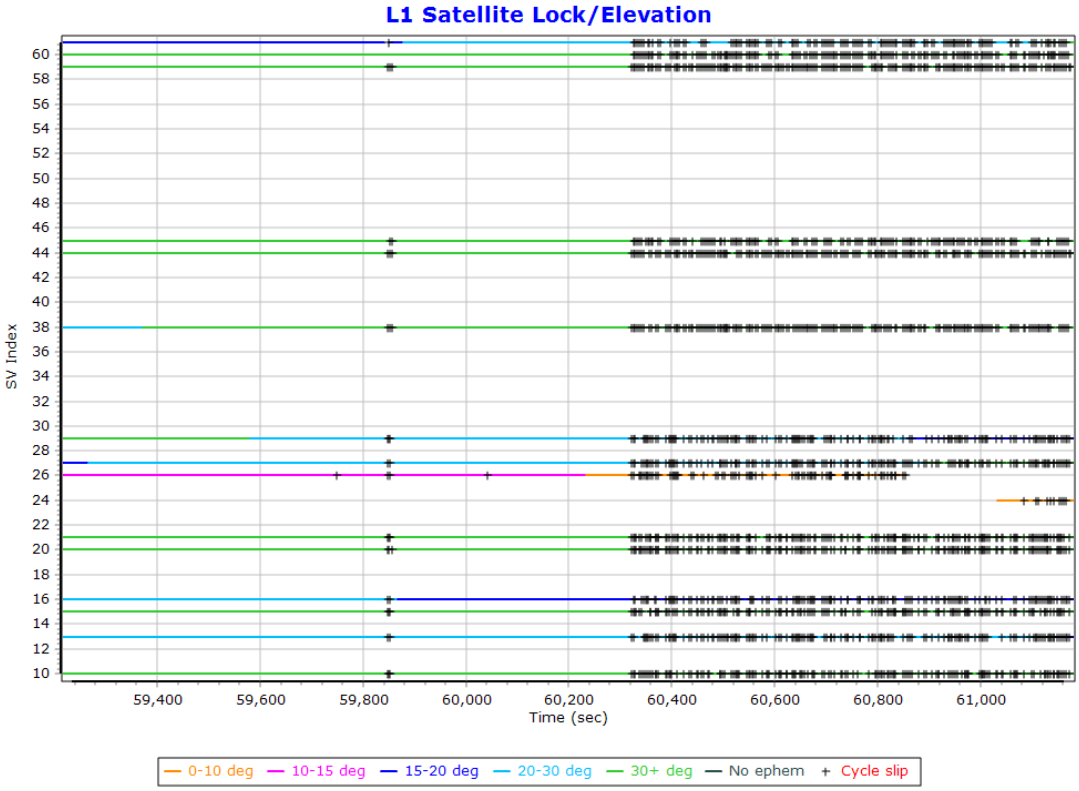
Filename	File type
sbet_19-058_110319a.out	SBET Trajectory File
export_19-058_110319a.out	Custom Smoothed BET Export Output

Rover Data Summary

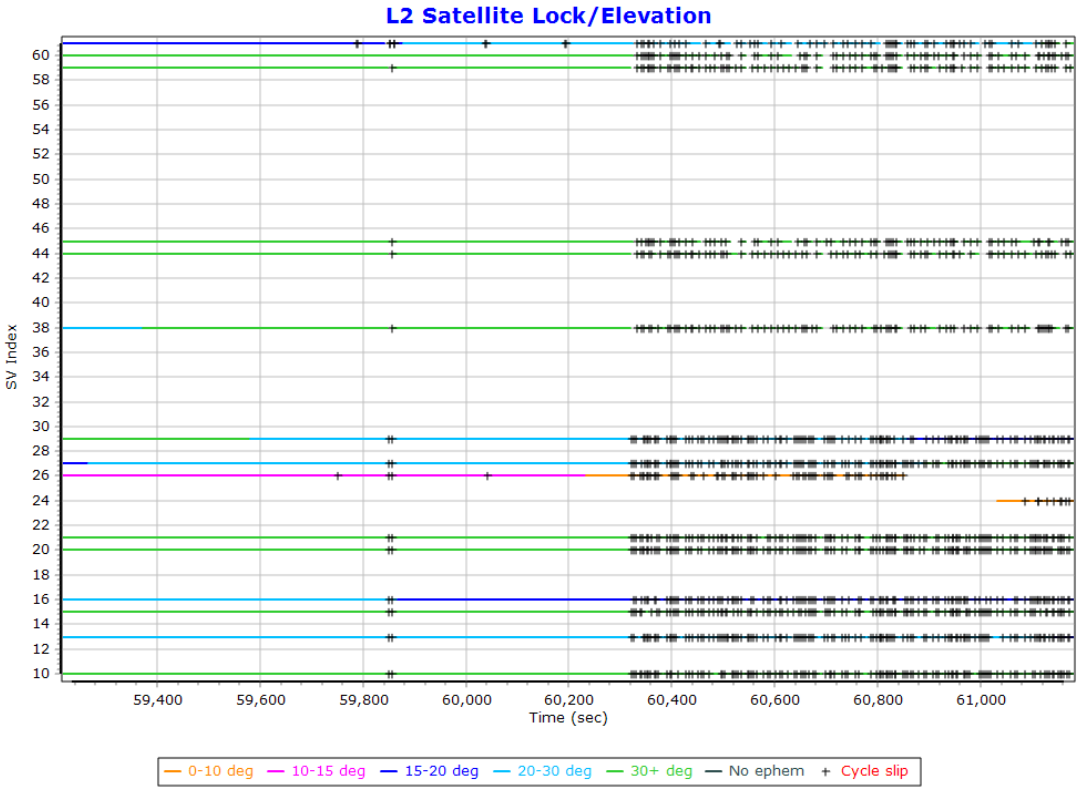
First raw data file	ALS.348		
Last raw data file	ALS.352		
Start GPS week	2078		
Start time	58567.677 (11/03/2019 16:16:07)		
End time	61161.308 (11/03/2019 16:59:21)		
Start of fine alignment	59174.412 (11/03/2019 16:26:14)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	None		
Correction data	Trimble RTX		
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	0.000
Reference to Primary GNSS lever arm [m]	-0.011	0.039	-1.017
Reference to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

Raw Data QC

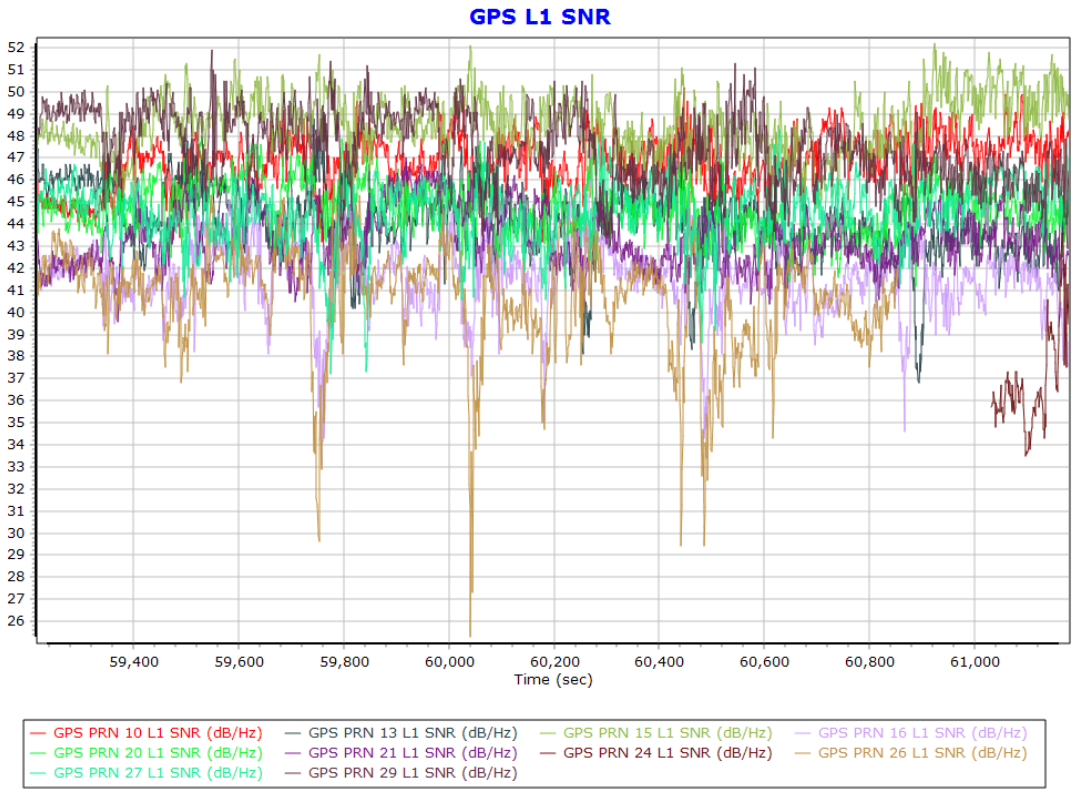
L1 Satellite Lock/Elevation



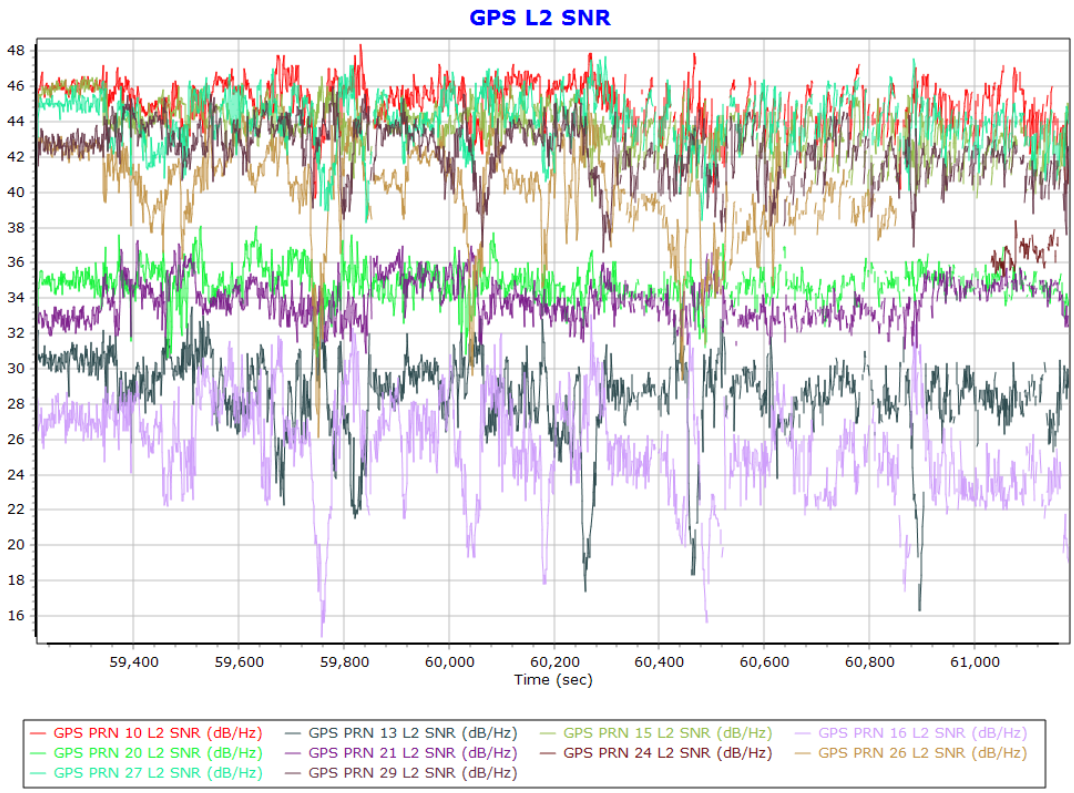
L2 Satellite Lock/Elevation



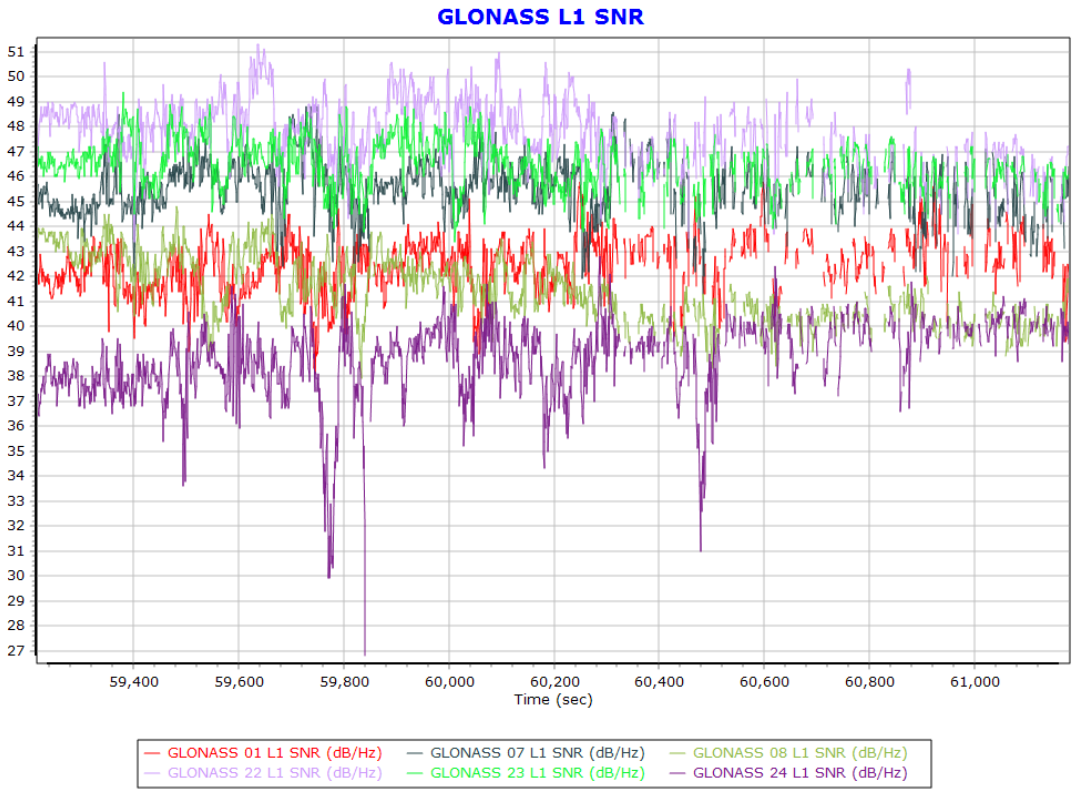
GPS L1 SNR



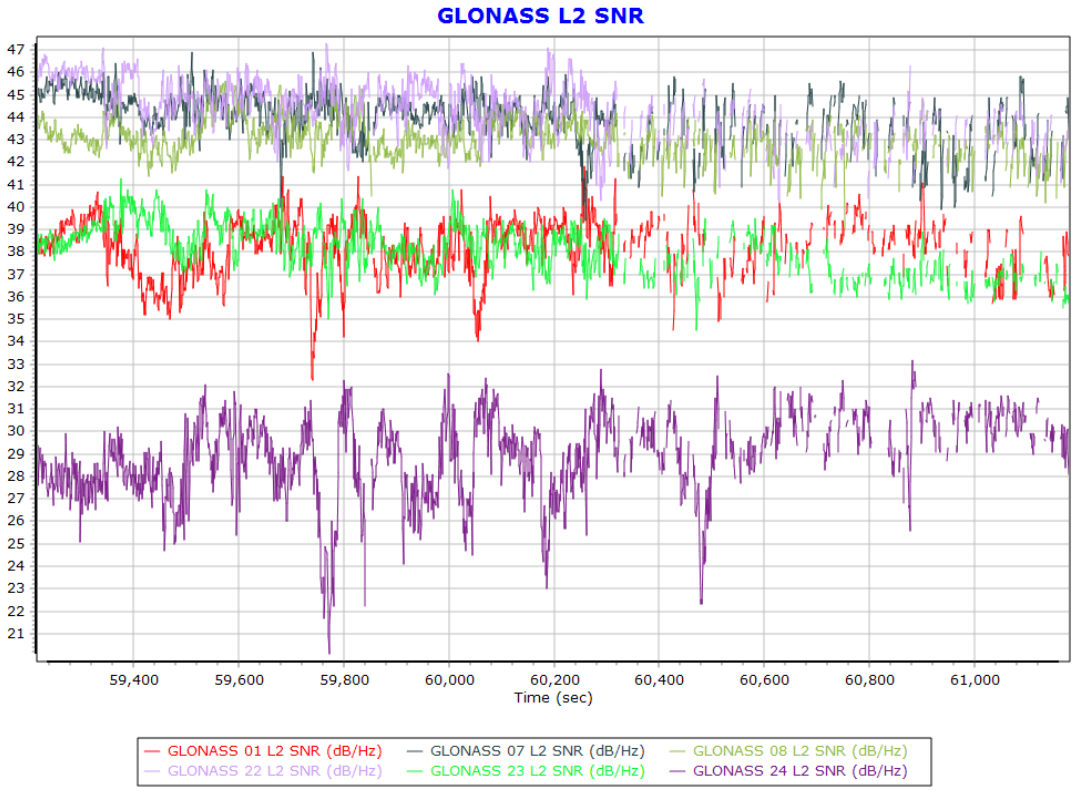
GPS L2 SNR



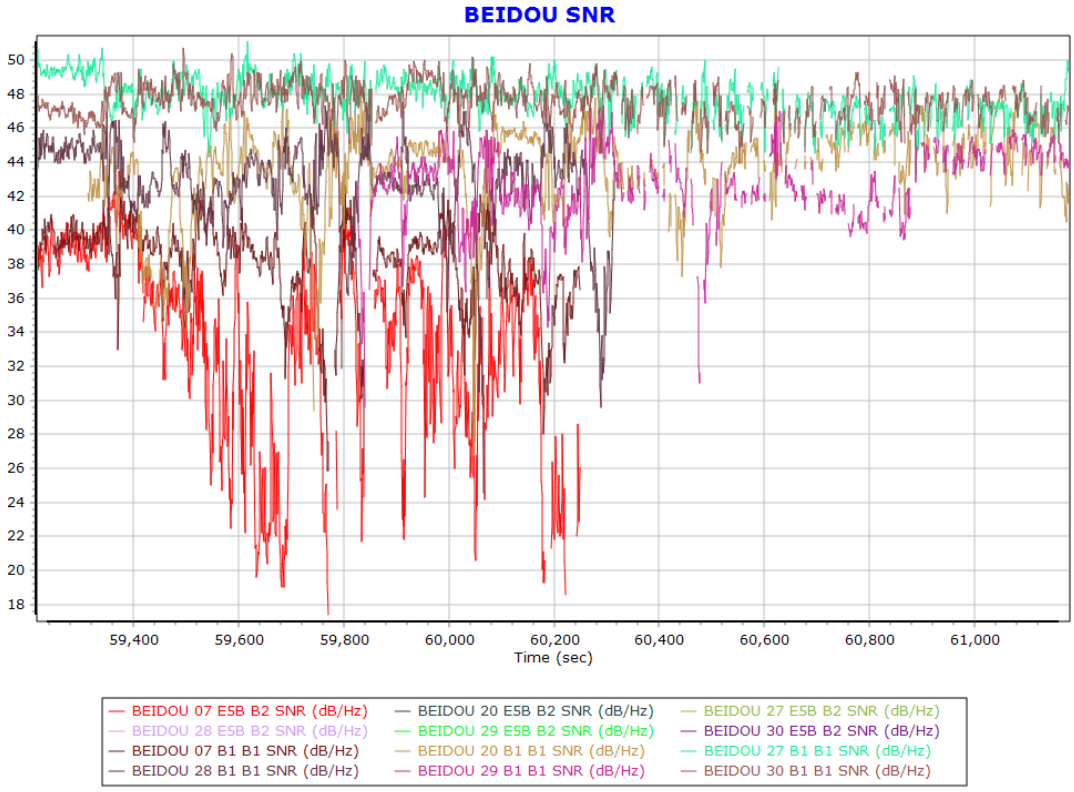
GLONASS L1 SNR



GLONASS L2 SNR

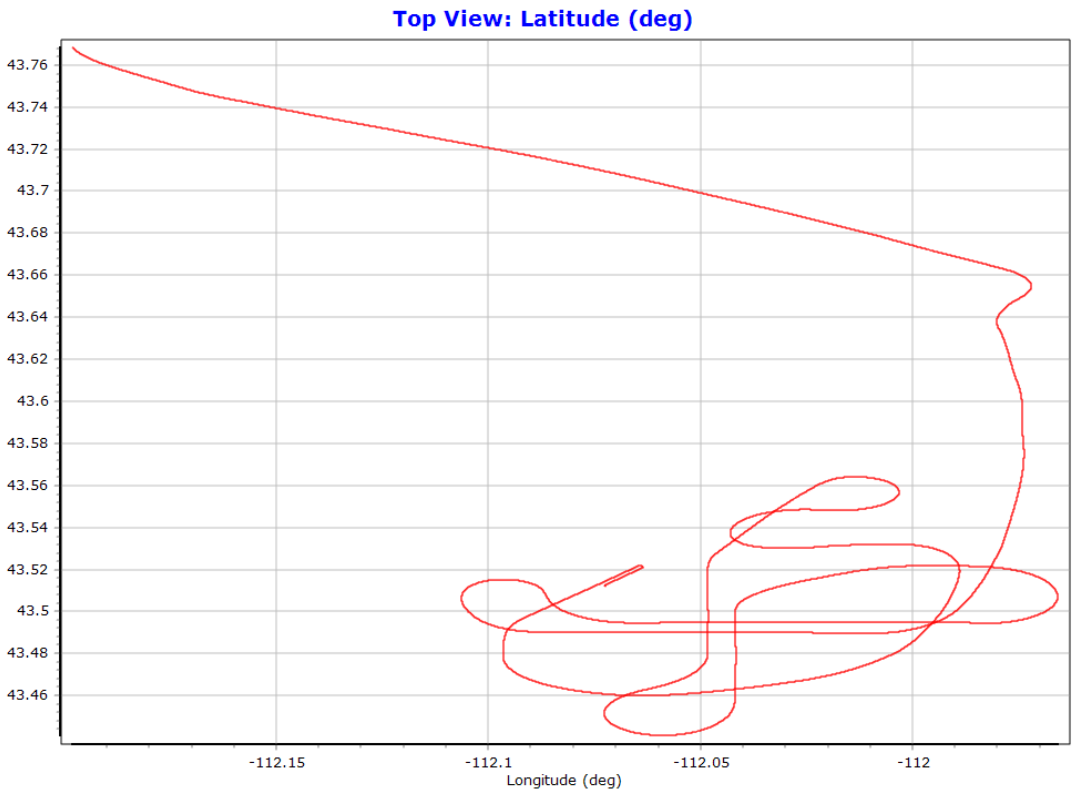


BEIDOU SNR

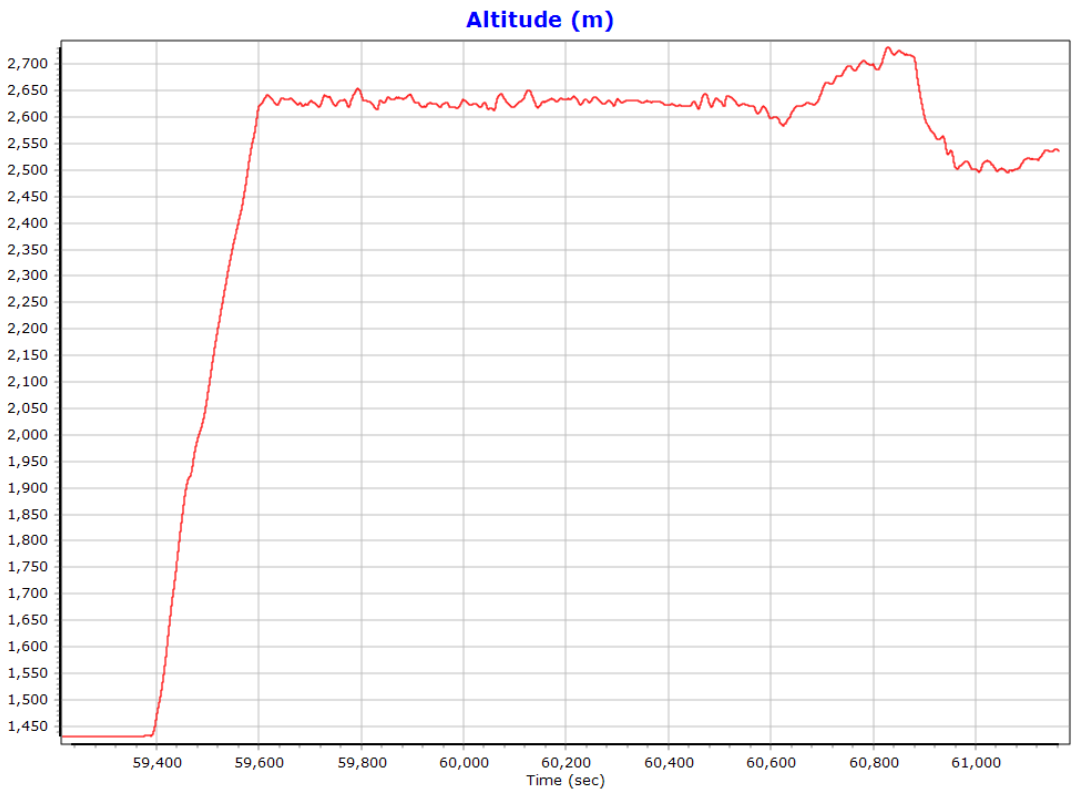

BEIDOU SNR
50
48
46
44
42
40
38
36
34
32
30
28
26
24
22
20
18
59,400
59,600
59,800
60,000
60,200
60,400
60,600
60,800
61,000
Time (sec)
BEIDOU 07 E5B B2 SNR (dB/Hz)
BEIDOU 20 E5B B2 SNR (dB/Hz)
BEIDOU 27 E5B B2 SNR (dB/Hz)
BEIDOU 28 E5B B2 SNR (dB/Hz)
BEIDOU 29 E5B B2 SNR (dB/Hz)
BEIDOU 30 E5B B2 SNR (dB/Hz)
BEIDOU 07 B1 B1 SNR (dB/Hz)
BEIDOU 20 B1 B1 SNR (dB/Hz)
BEIDOU 27 B1 B1 SNR (dB/Hz)
BEIDOU 28 B1 B1 SNR (dB/Hz)
BEIDOU 29 B1 B1 SNR (dB/Hz)
BEIDOU 30 B1 B1 SNR (dB/Hz)

Trajectory Information

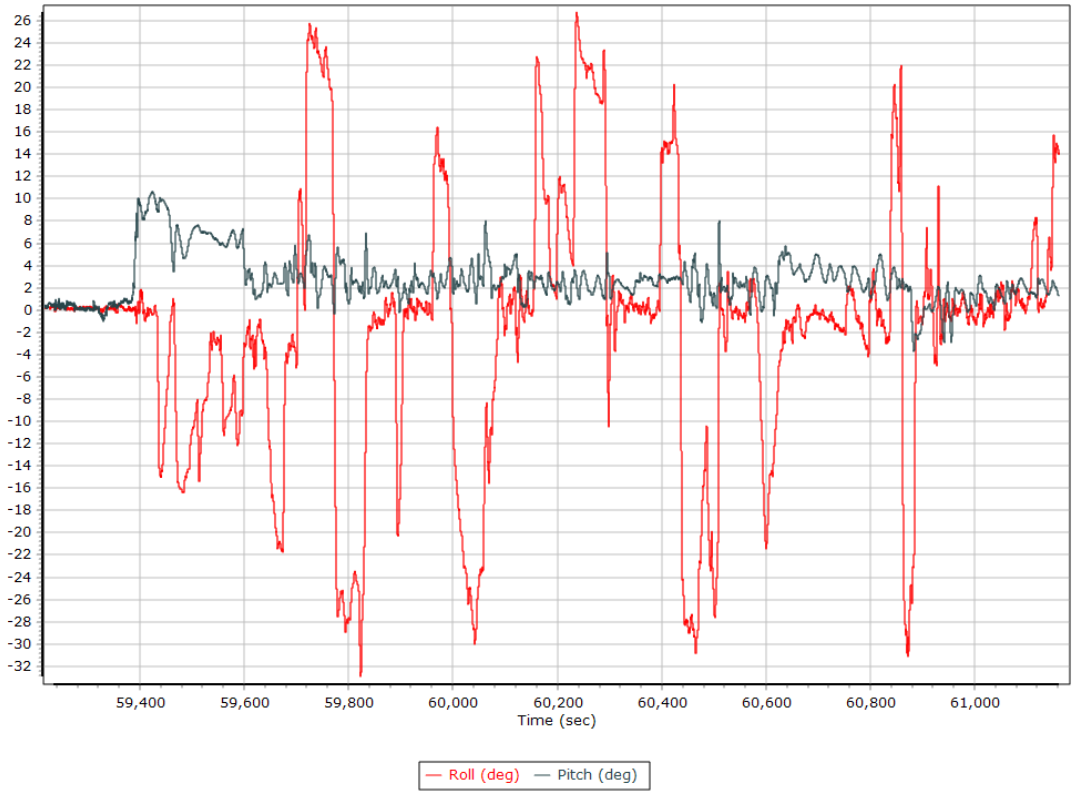
Top View



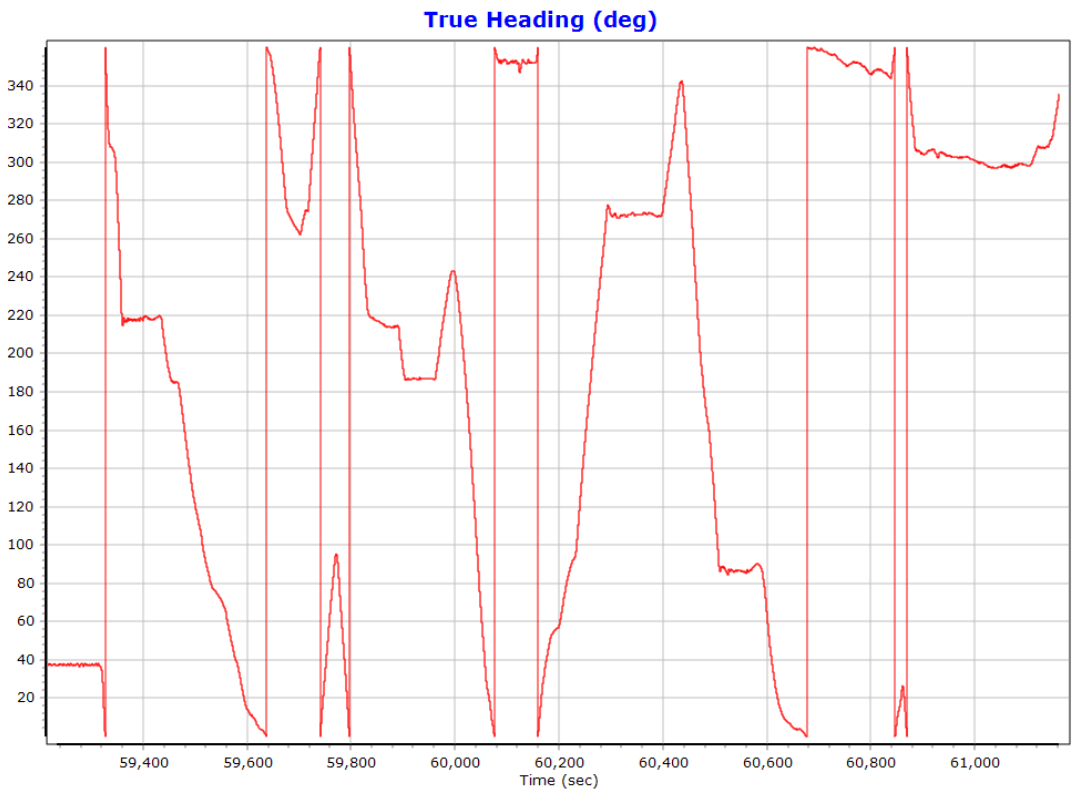
Altitude



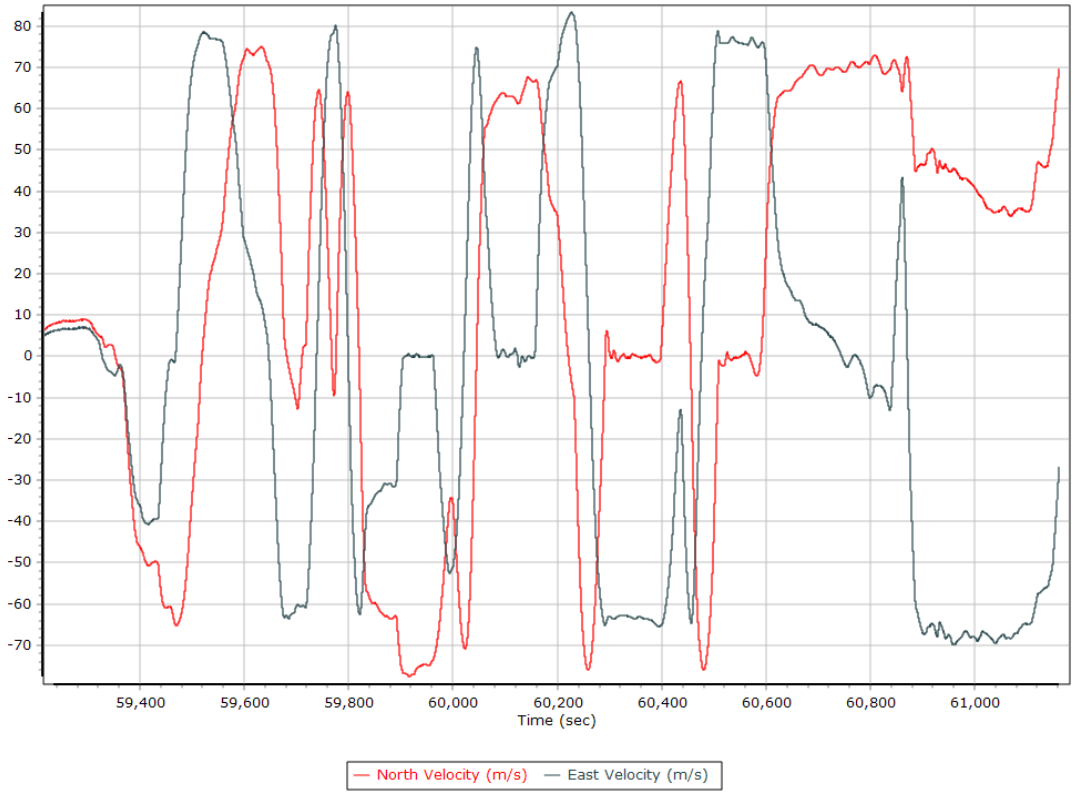
Roll/Pitch



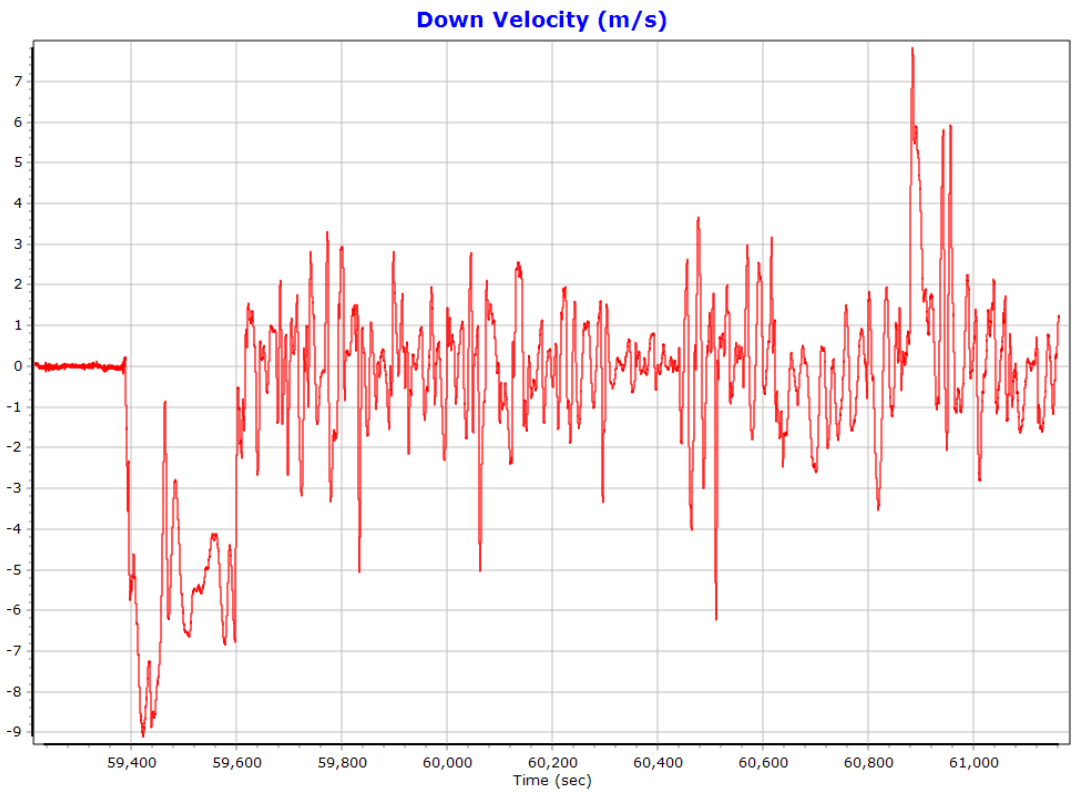
Heading



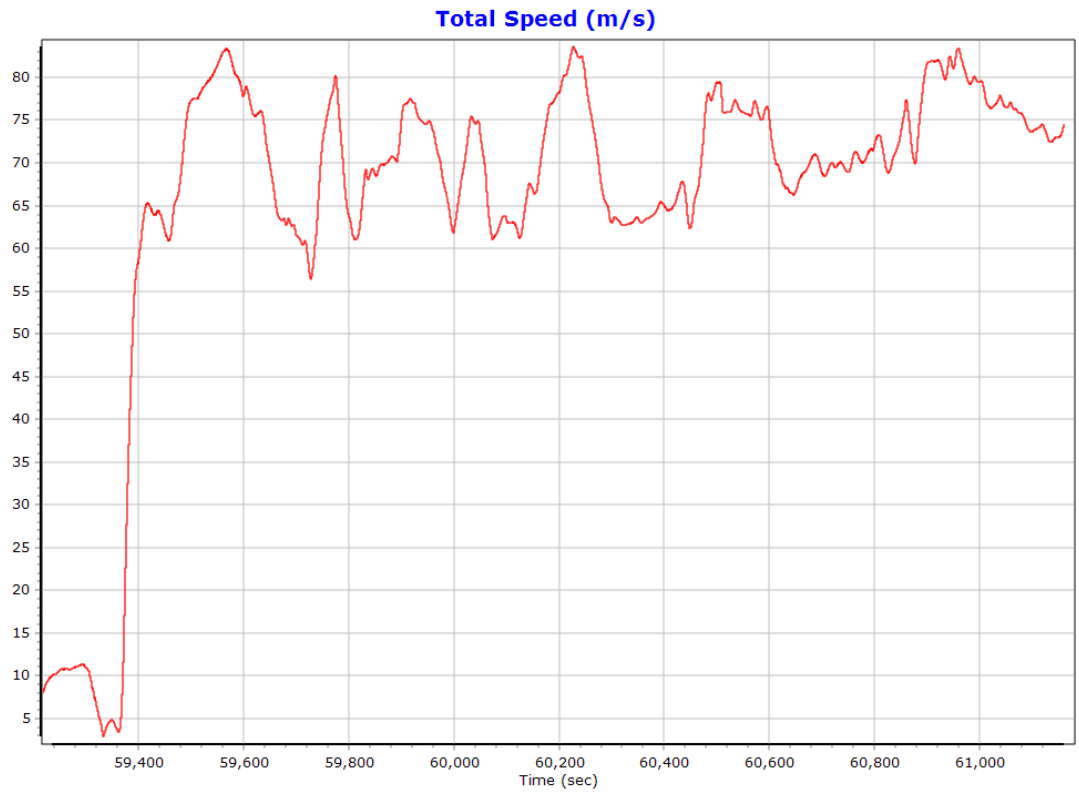
North/East Velocity



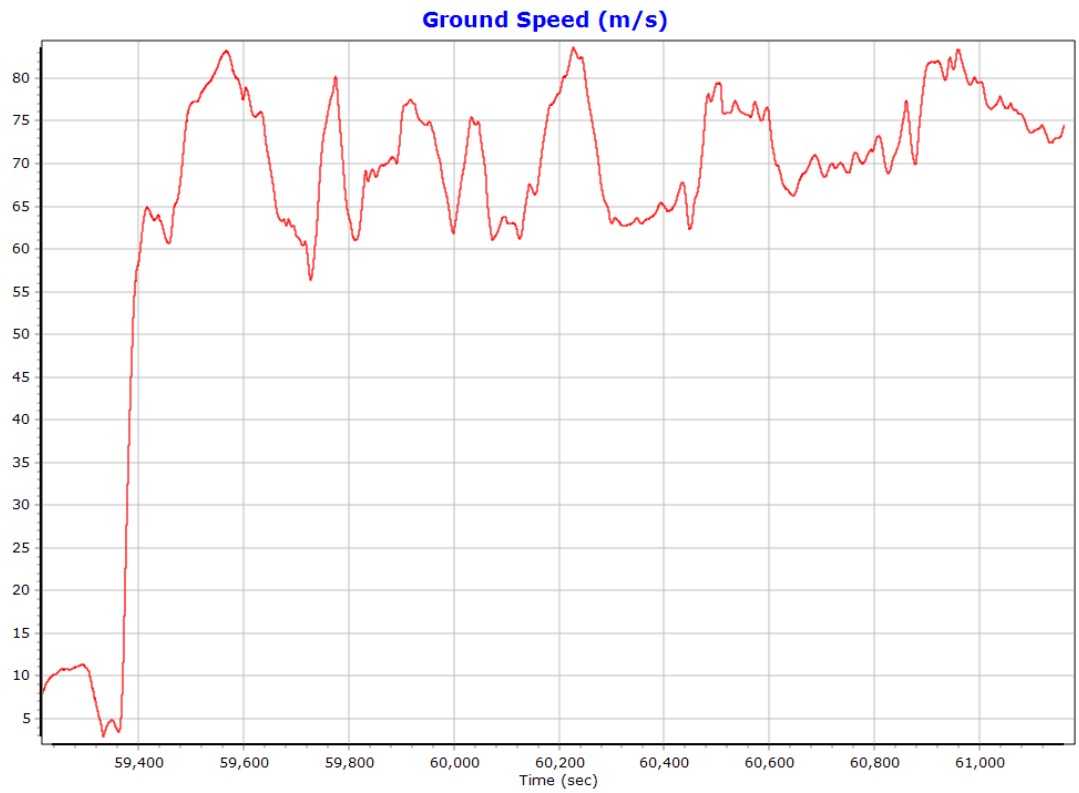
Down Velocity



Total Speed

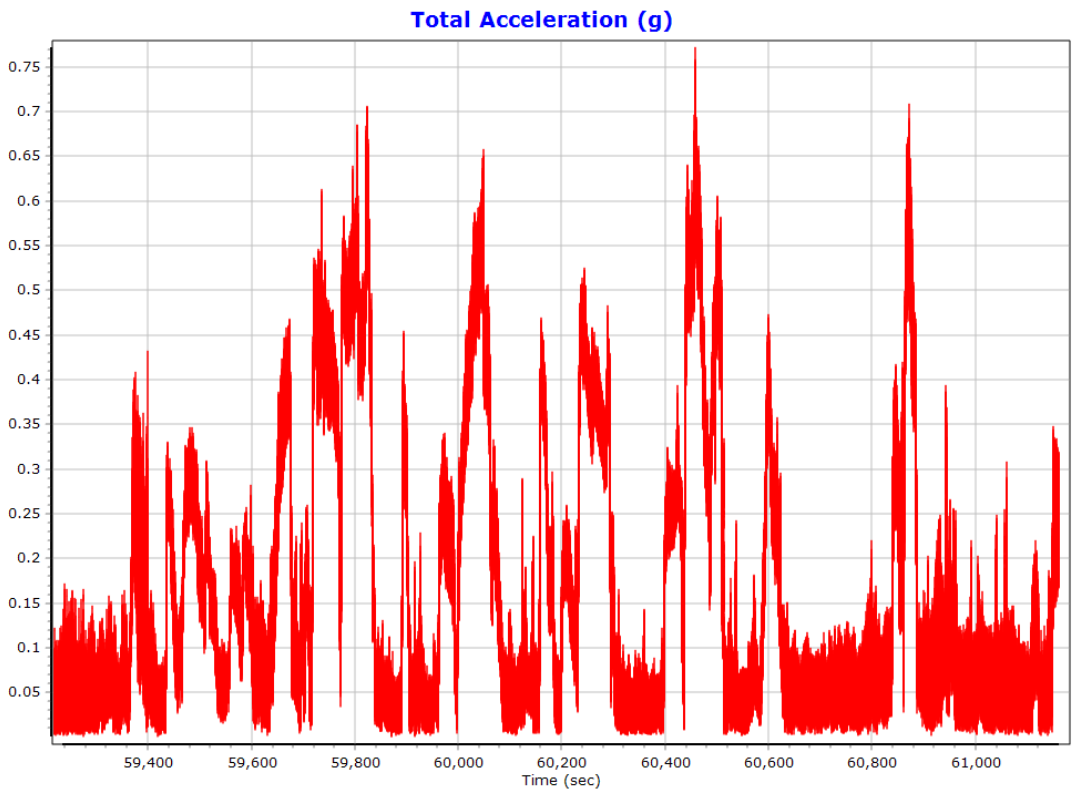


Ground Speed

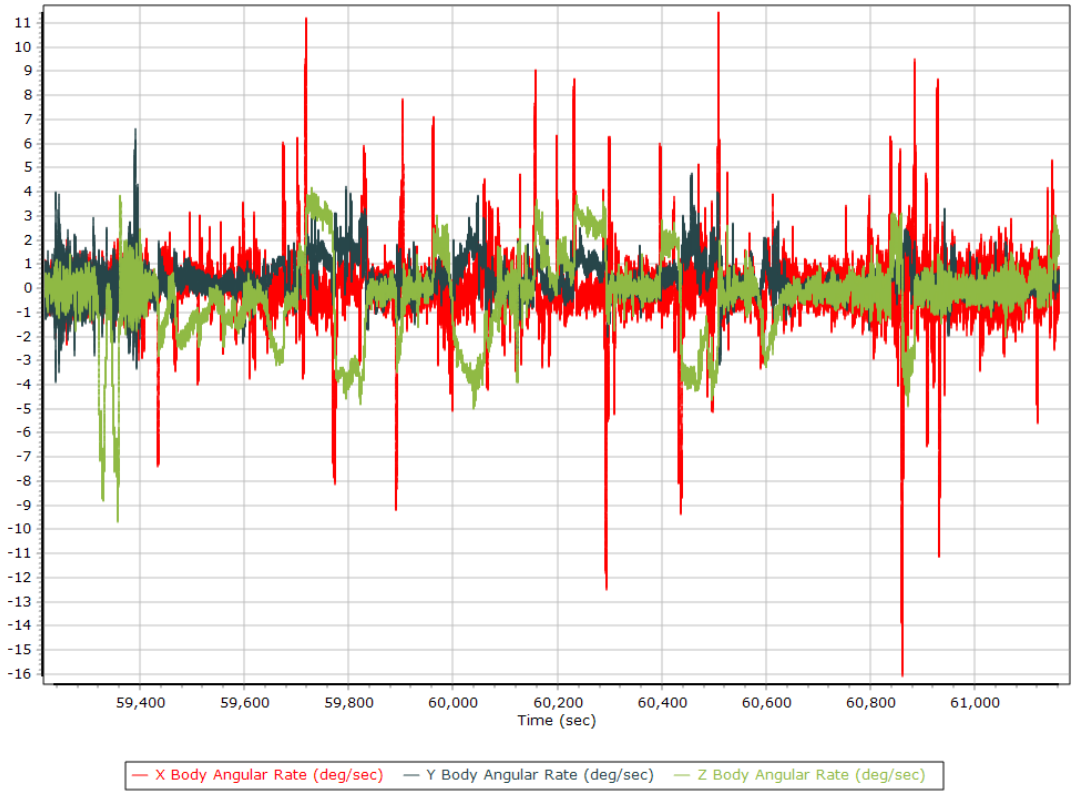


Body Acceleration

Total Body Acceleration



Body Angular Rate



SmartBase Processing Summary

Smart Select Options

Archive enabled	False
User database enabled	False
Include high-rate data sites	False
Target GNSS Selection	GNSS

Basestation Selection

Date	ID	Dist	DataType	Rate	Service	Database	Status

SmartBase Results

SmartBase status	
Primary station Id	
Primary station data rate [sec]	0.0
VRS/ASB generation rate [sec]	0.0
VRS/ASB timespan	
Number of reference stations	0
Primary station GPS measurement usage [%]	0.0
Average number of satellites per epoch	0.0
Max number of GPS stations used	0
Min number of GPS stations used	0
Total full data gap [sec]	0
Total individual satellite data gap [sec]	0
GPS precise vs. broadcast ephemeris used	0.0 % / 0.0 %
Termination Status	

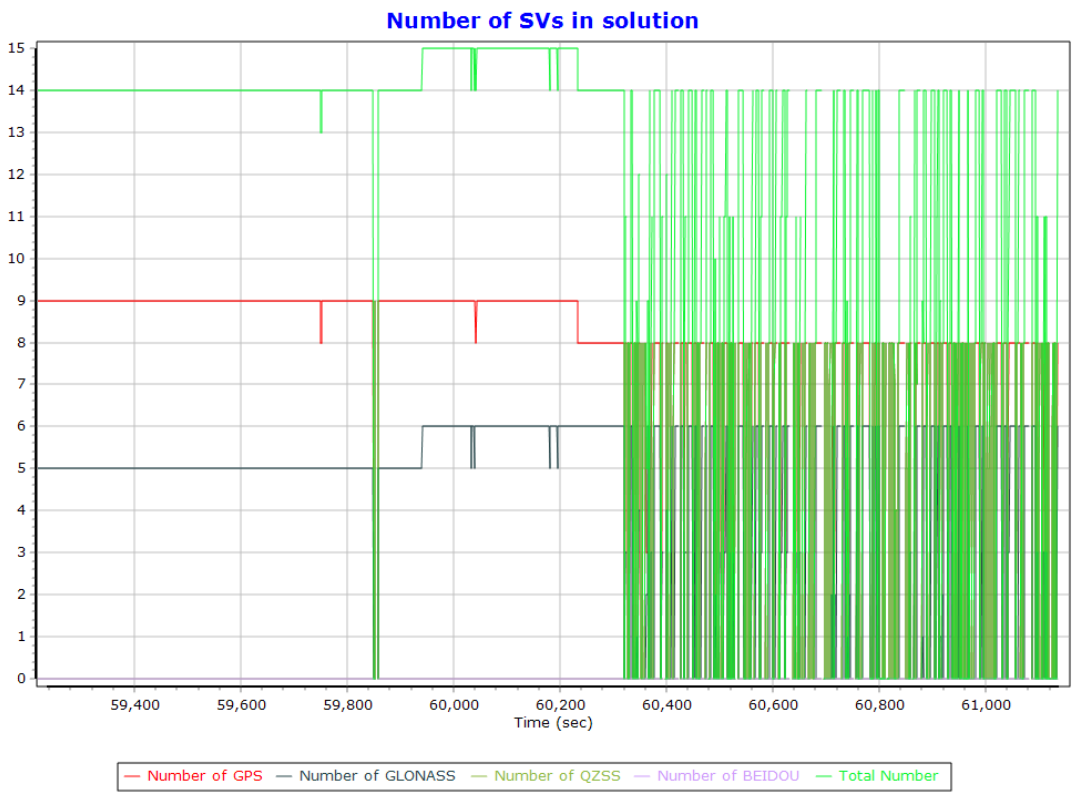
SmartBase Quality Check

GNSS QC

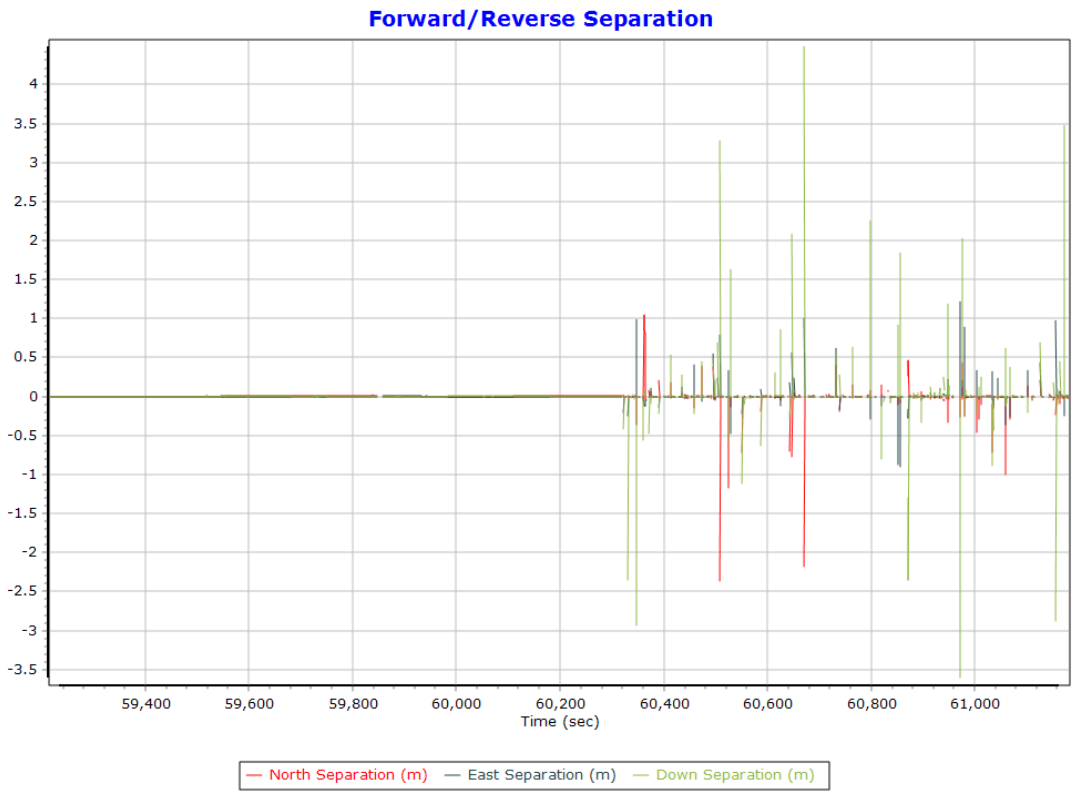
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	0.60	25.73	
Number of GPS SV	3	9	9
Number of GLONASS SV	0	6	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	4	15	13
PDOP	1.34	6.73	1.60
QC Solution Gaps	1.00	11.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	2117.00	76.00	367.00
Percentage	82.70	2.97	14.34

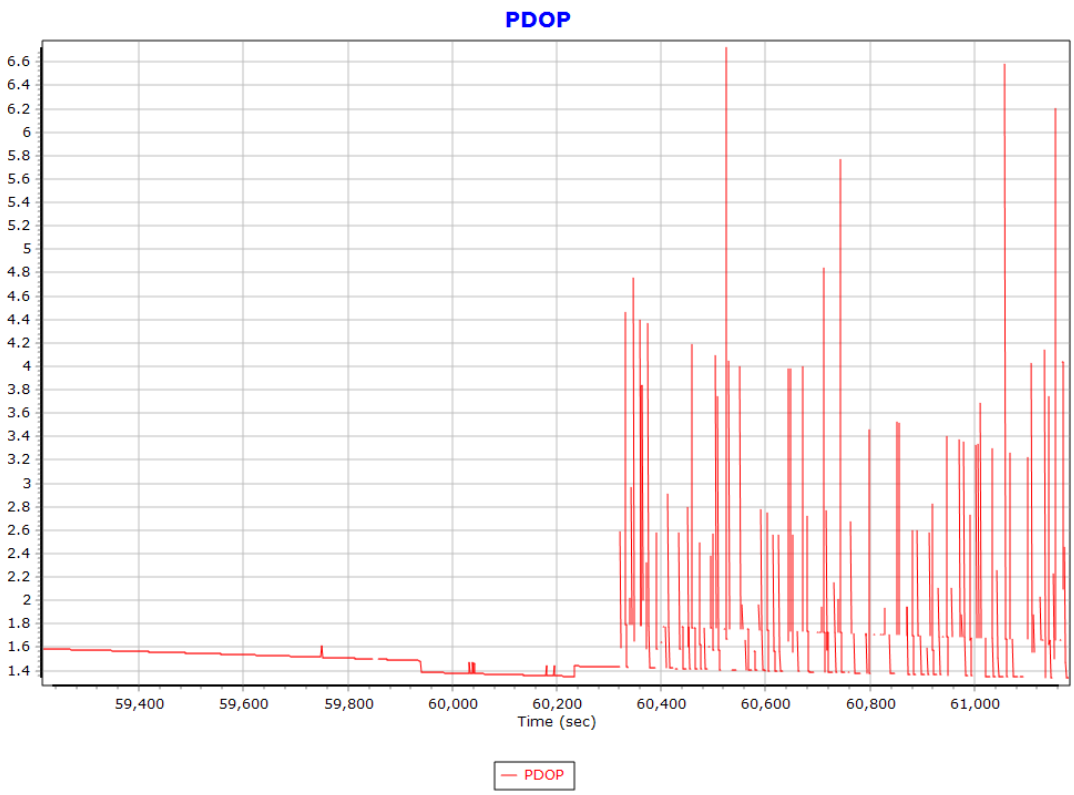
Num SVs in solution



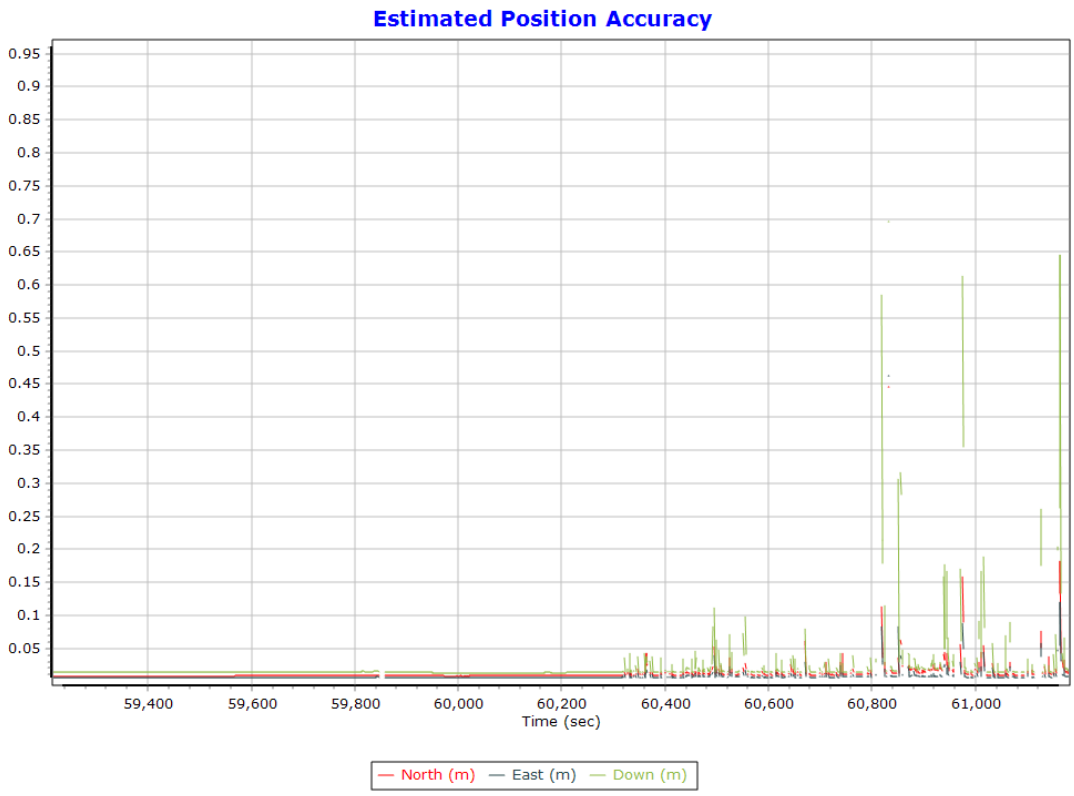
Forward/Reverse Separation



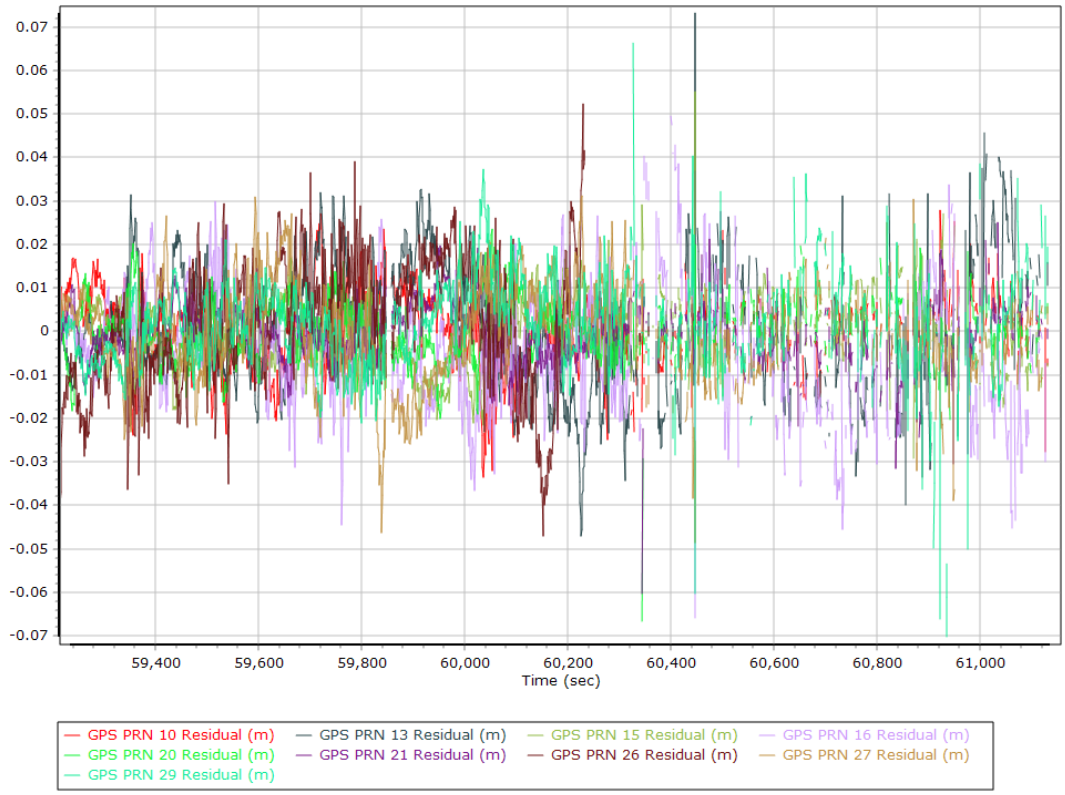
PDOP



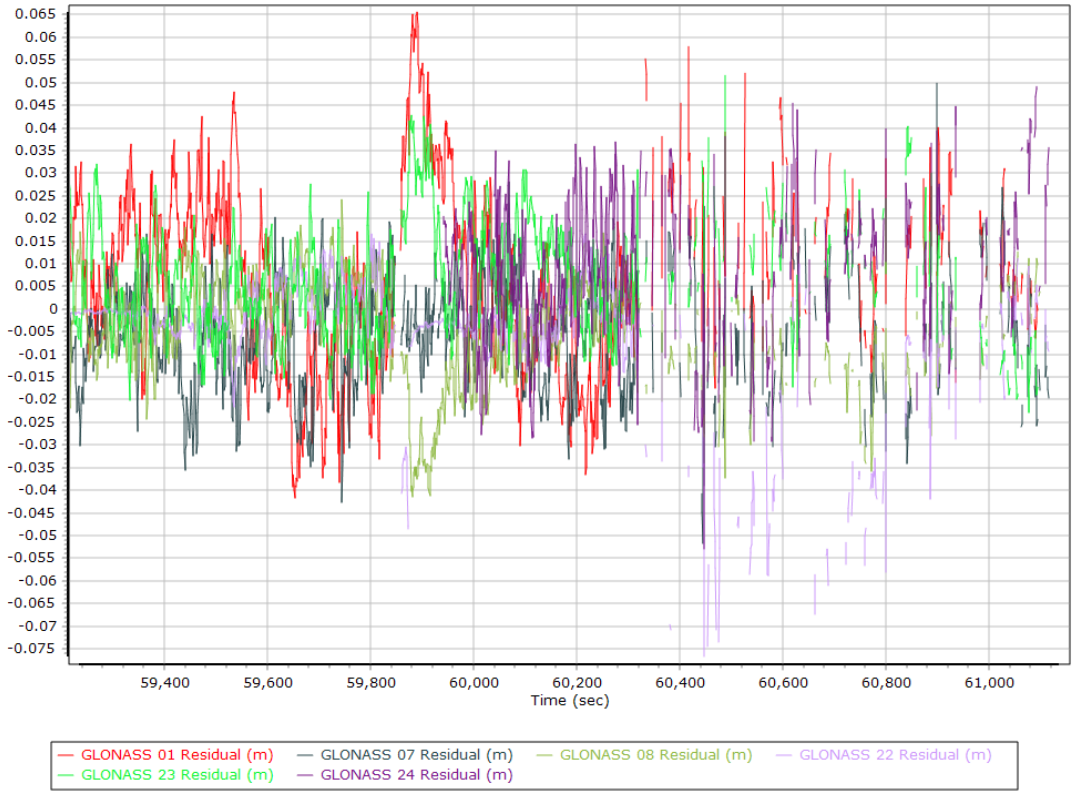
Estimated Position Accuracy



GPS Residuals



GLONASS Residuals



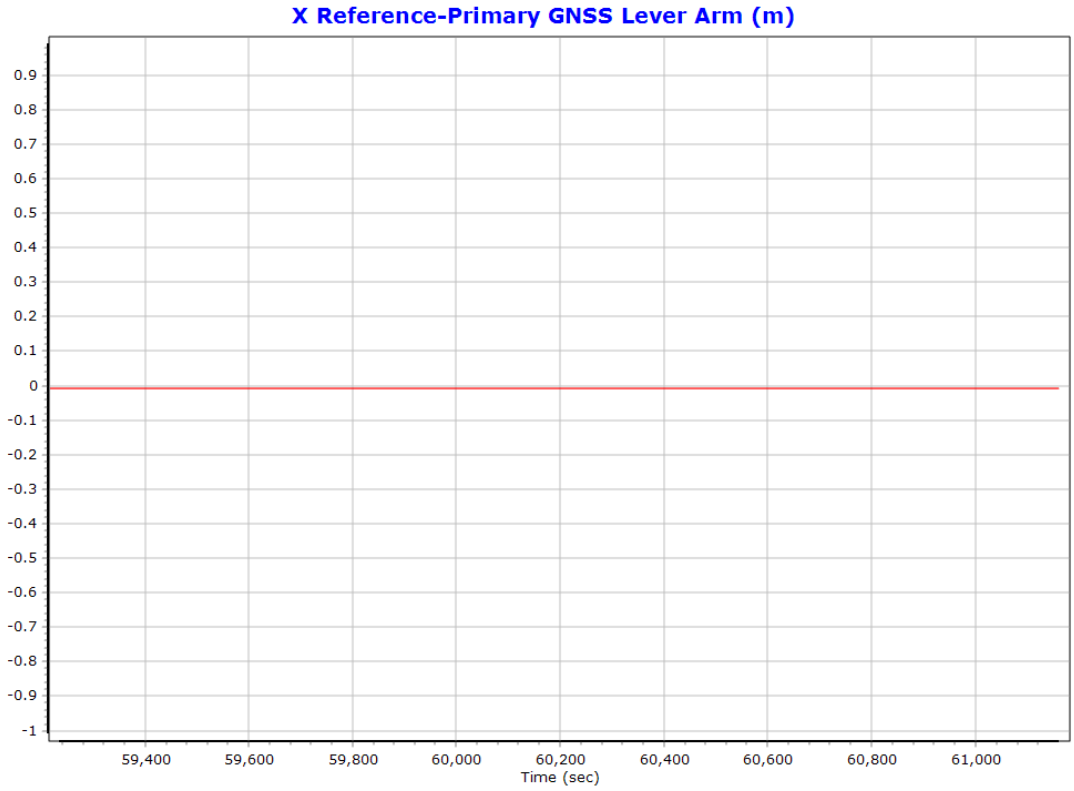
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	False		
Base station	ASB		
Processing start time	58556.000 (11/03/2019 16:15:56)		
Processing end time	61162.000 (11/03/2019 16:59:22)		
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	0.000
Reference to Primary GNSS lever arm [m]	-0.008	0.046	-1.014
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

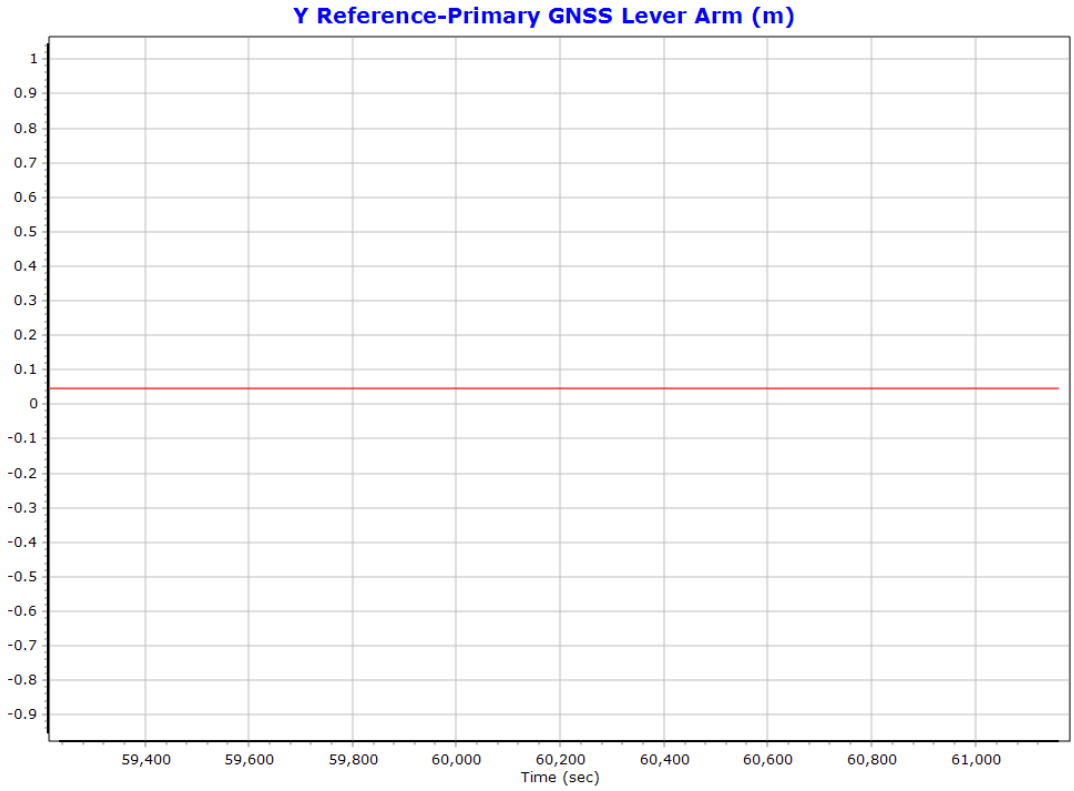
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

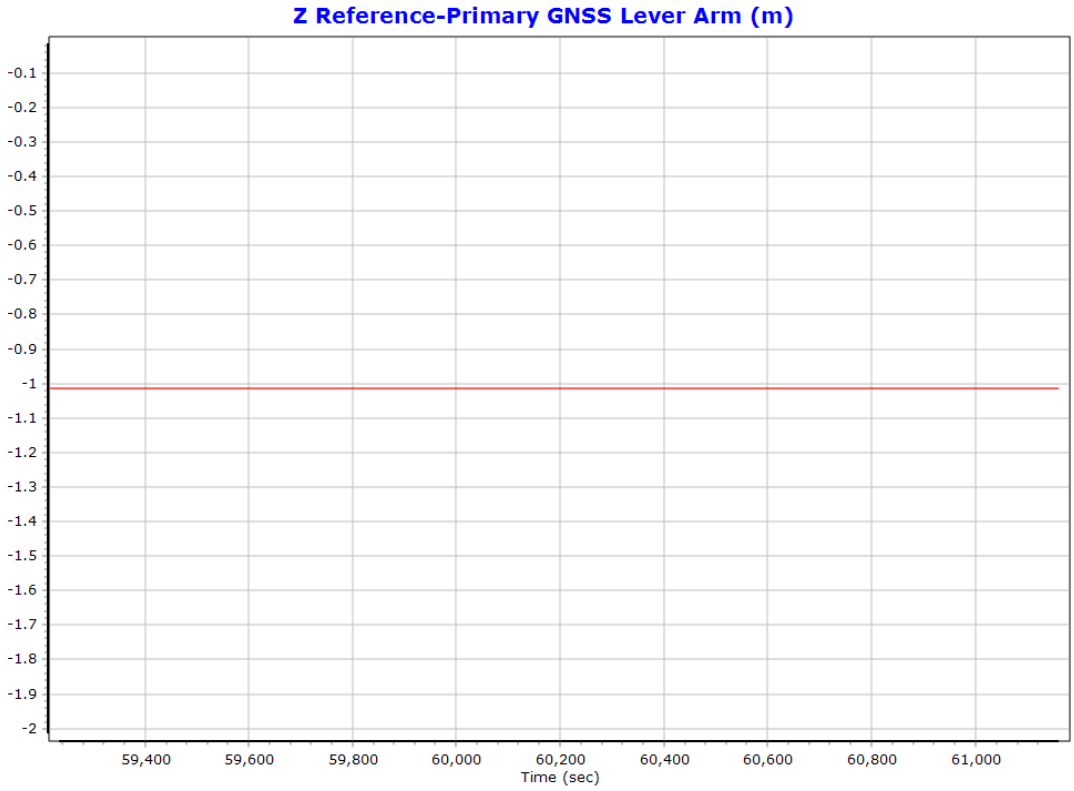
X Reference-Primary GNSS Lever Arm (m)



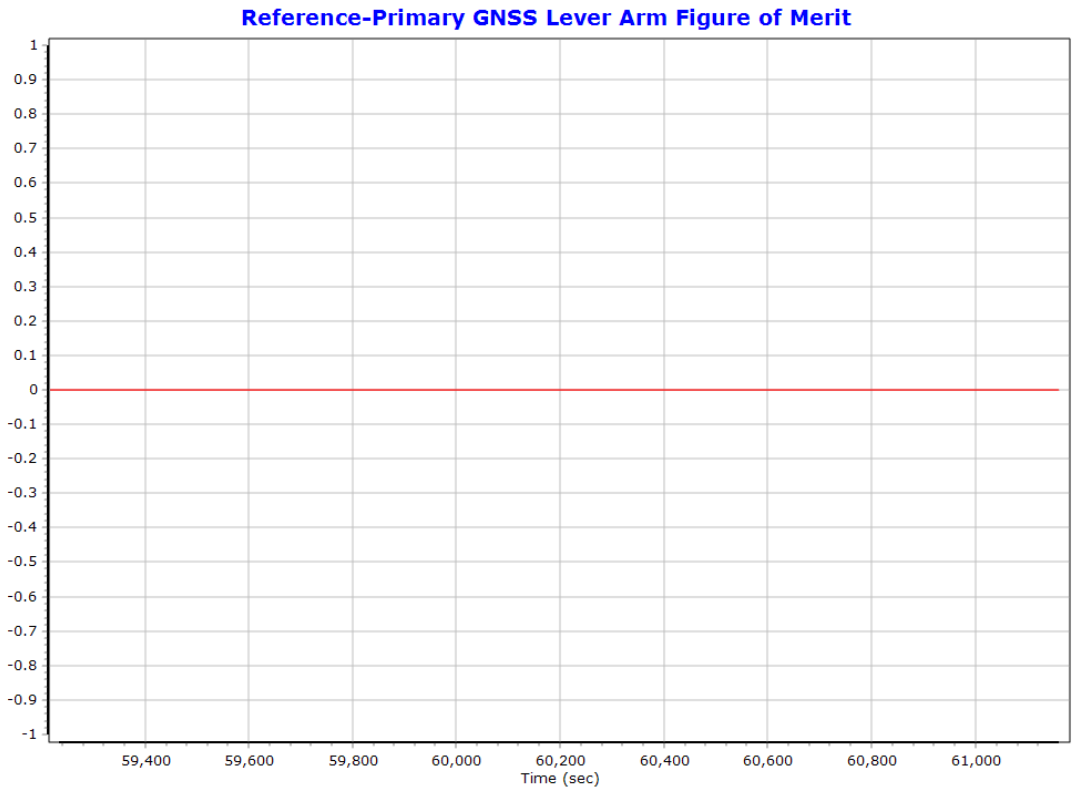
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



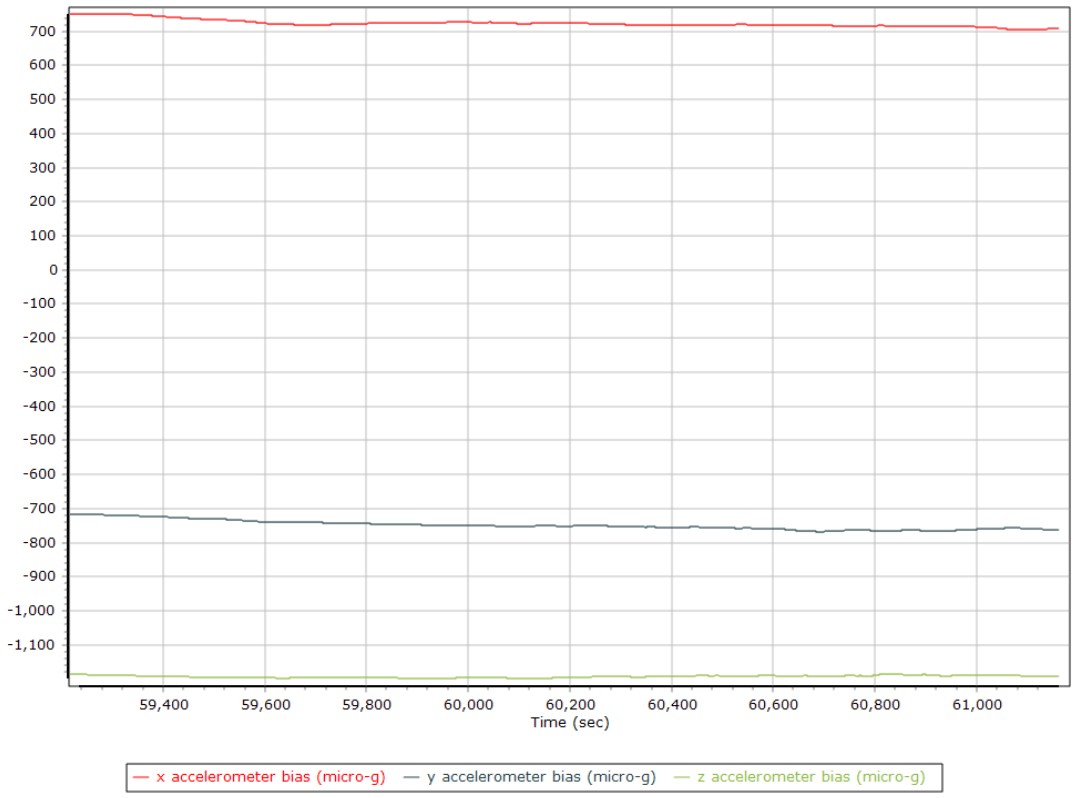
Reference-Primary GNSS Lever Arm Figure of Merit



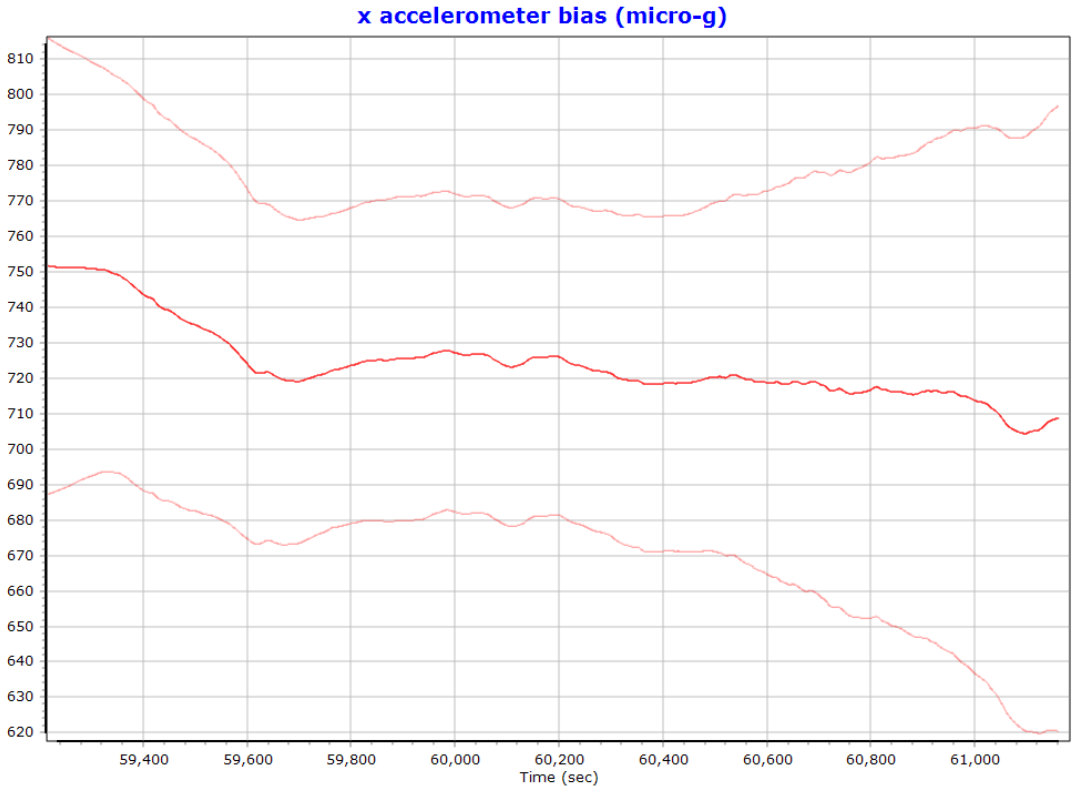
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

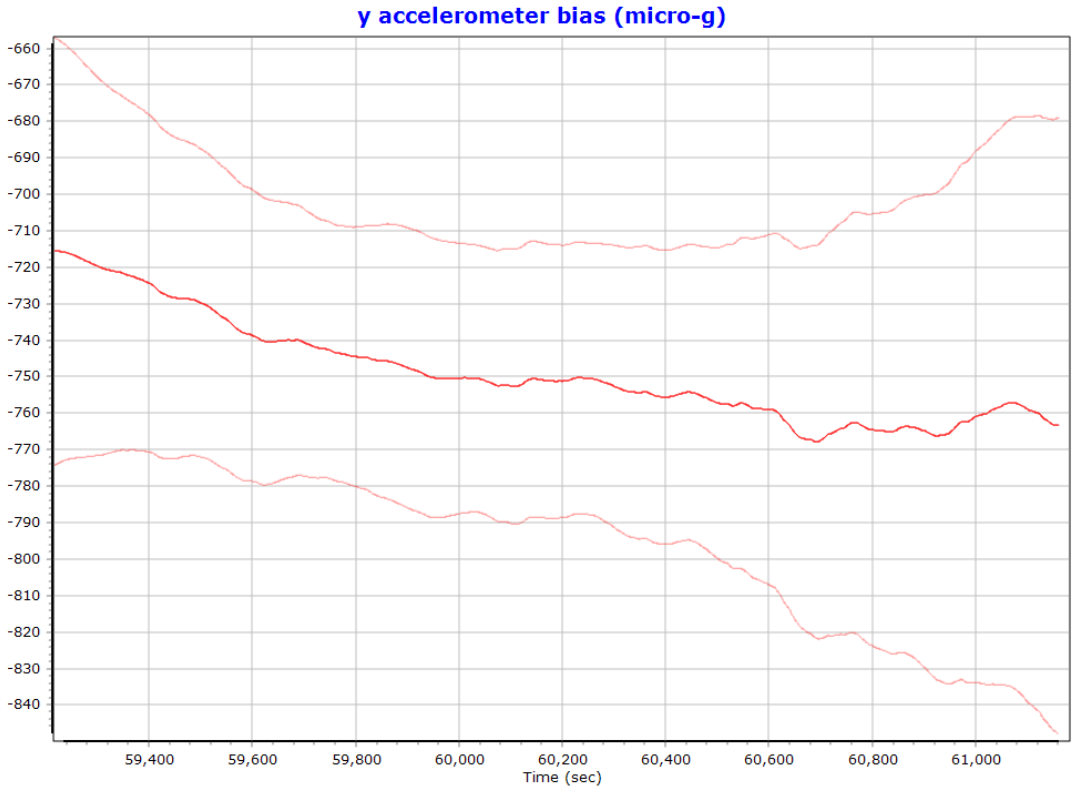
Accelerometer Bias (micro-g)



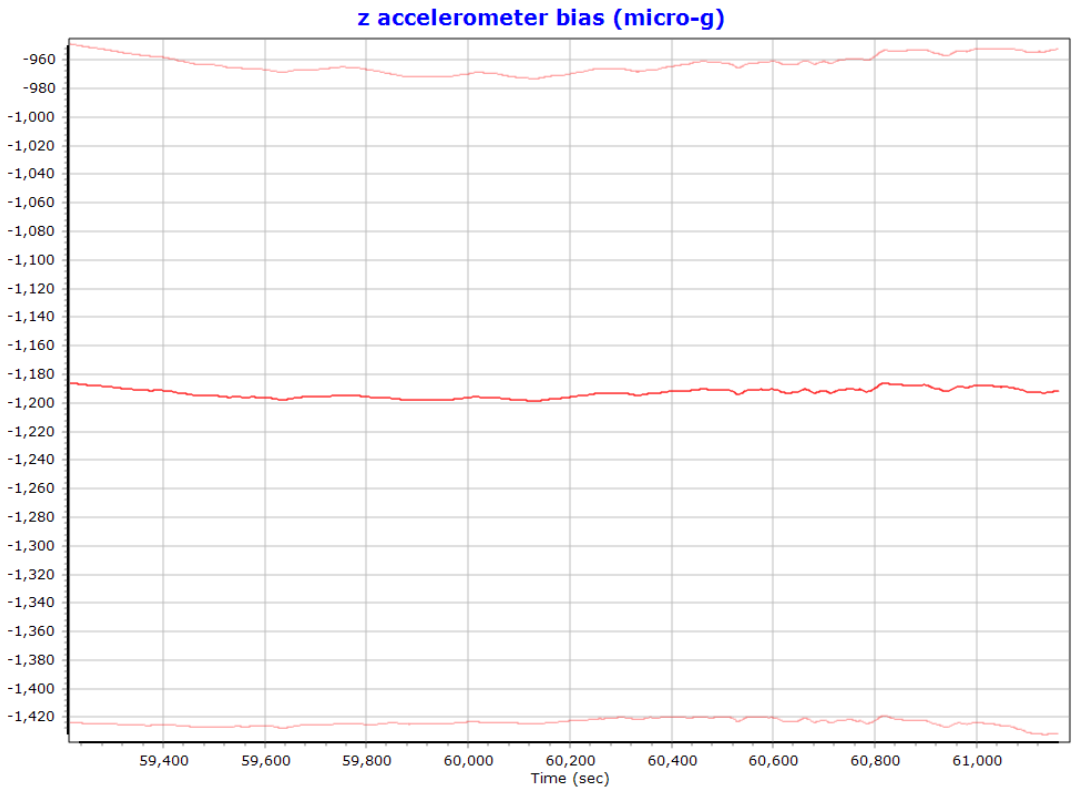
X Accelerometer Bias (micro-g)



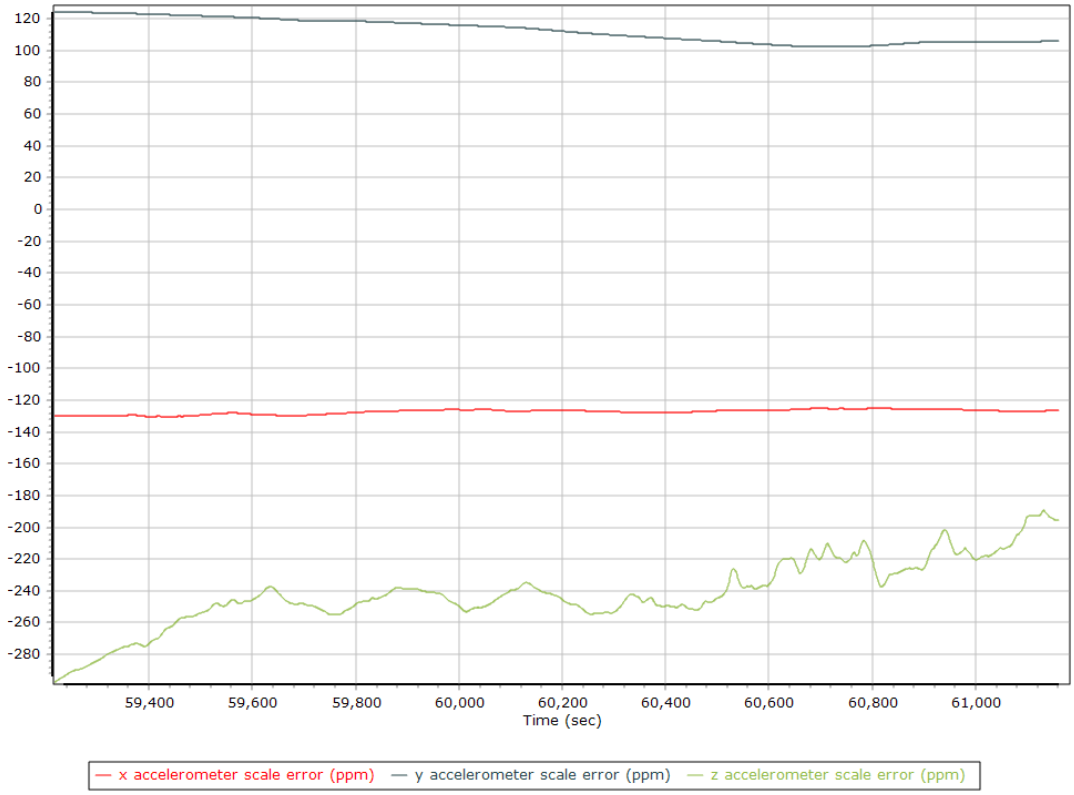
Y Accelerometer Bias (micro-g)



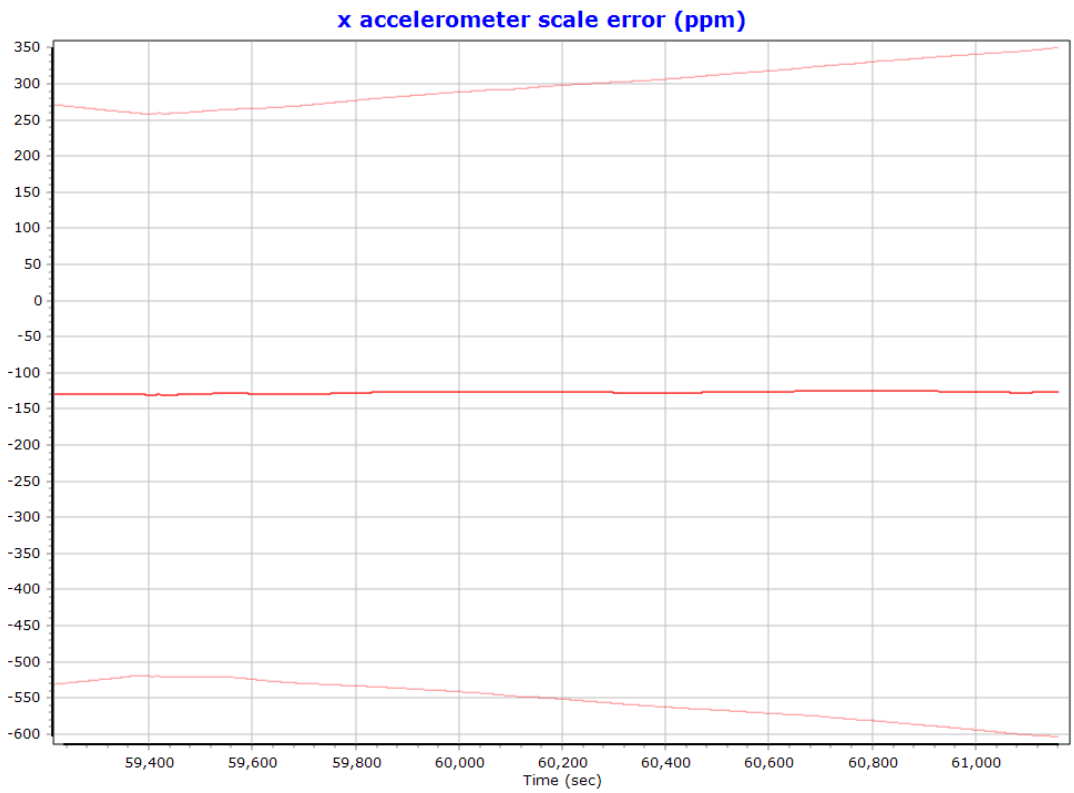
Z Accelerometer Bias (micro-g)



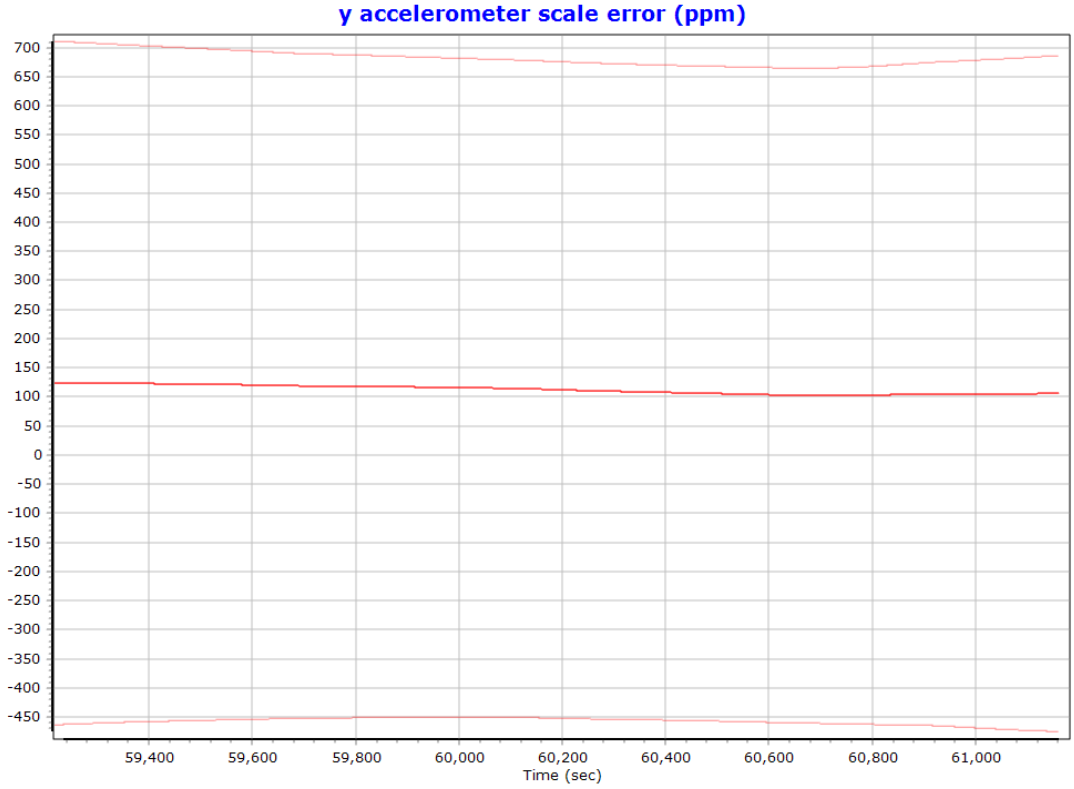
Accelerometer Scale Error (ppm)



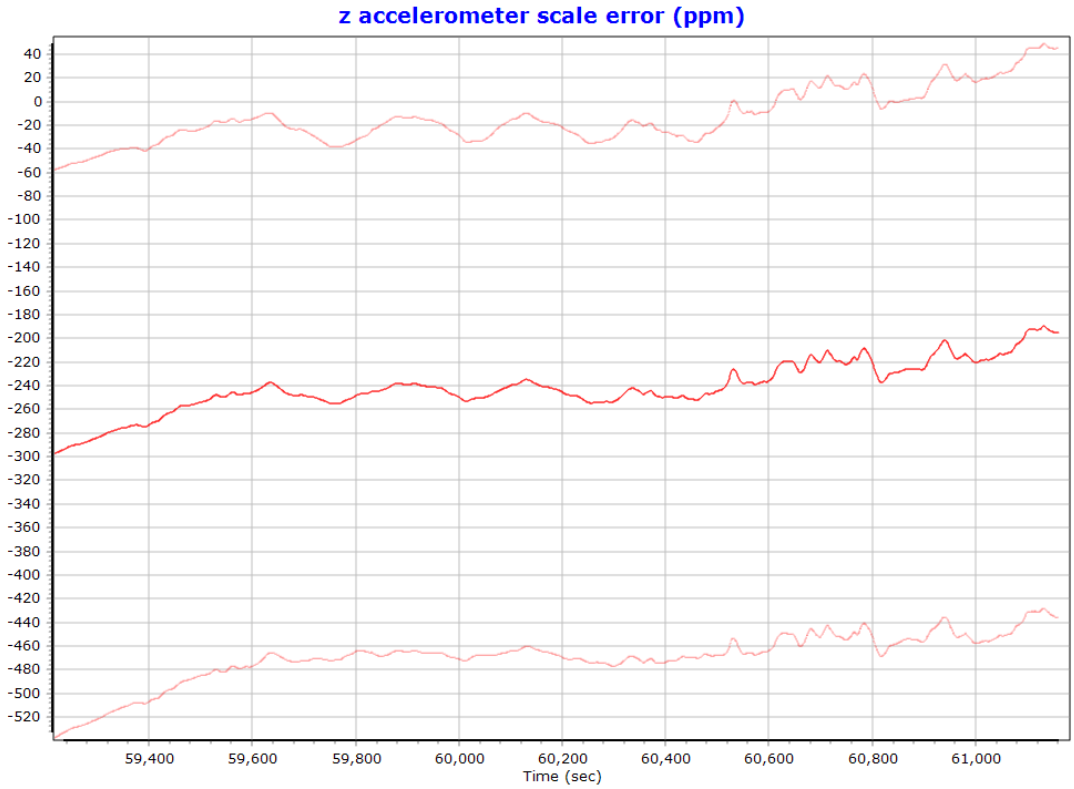
X Accelerometer Scale Error (ppm)



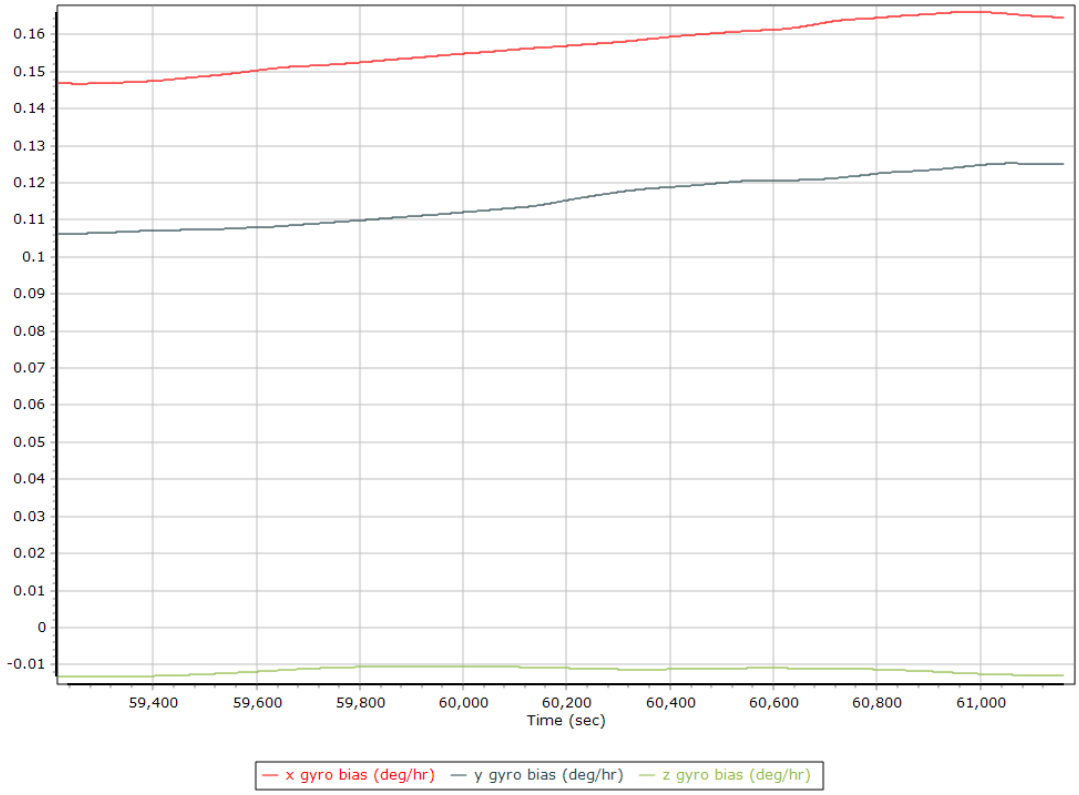
Y Accelerometer Scale Error (ppm)



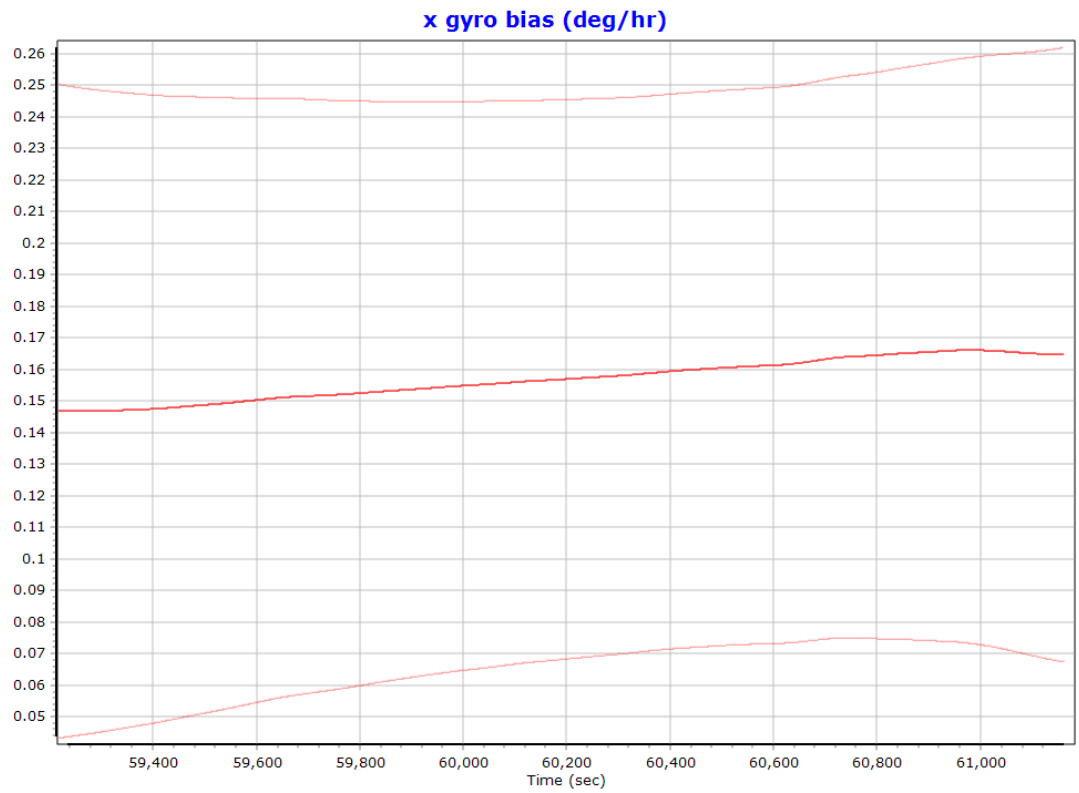
Z Accelerometer Scale Error (ppm)



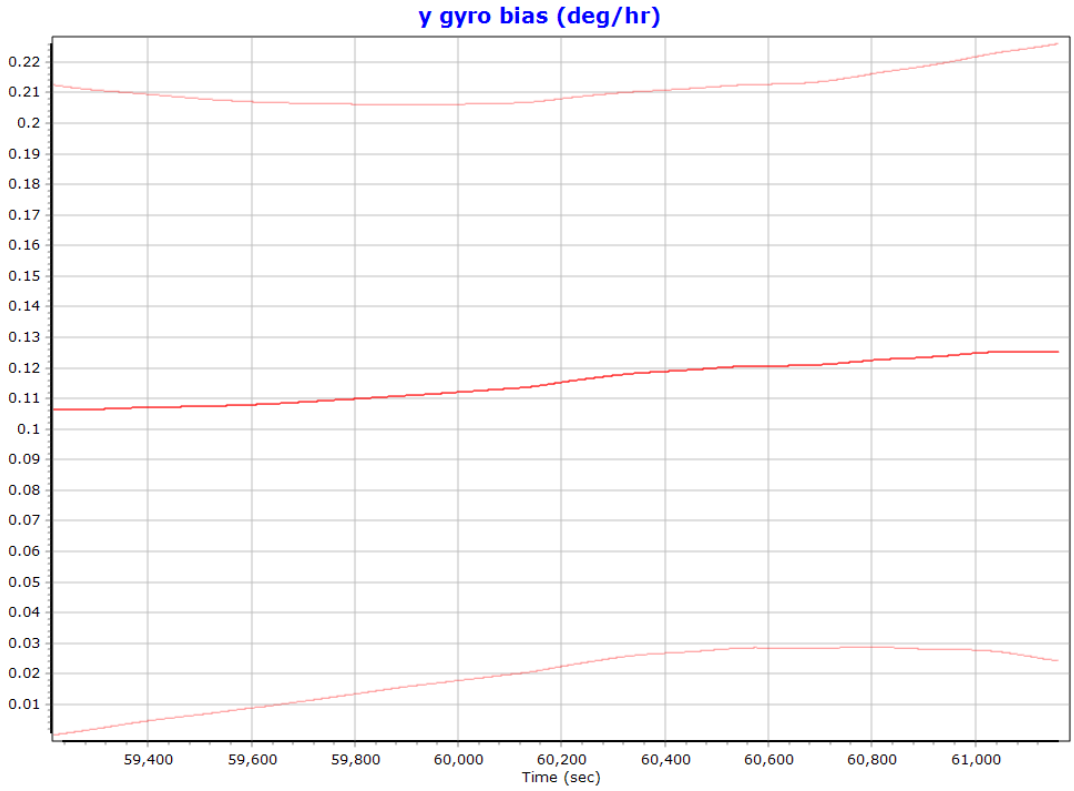
Gyro Bias (deg/h)



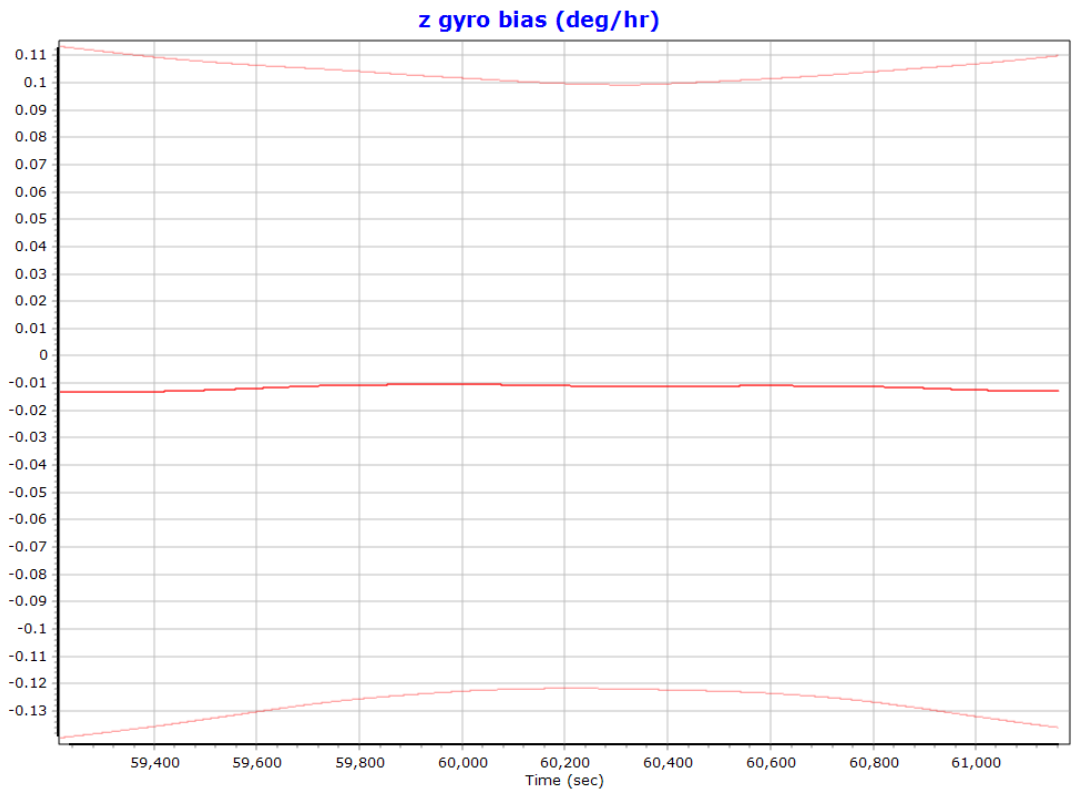
X Gyro Bias (deg/h)



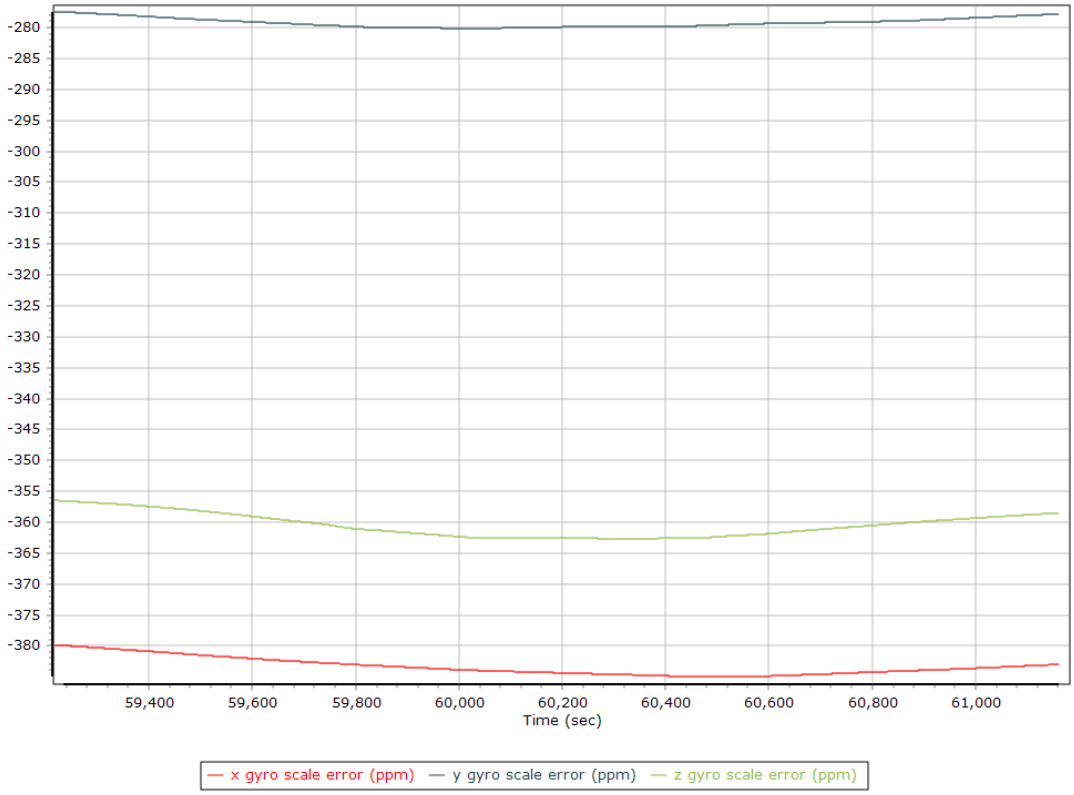
Y Gyro Bias (deg/h)



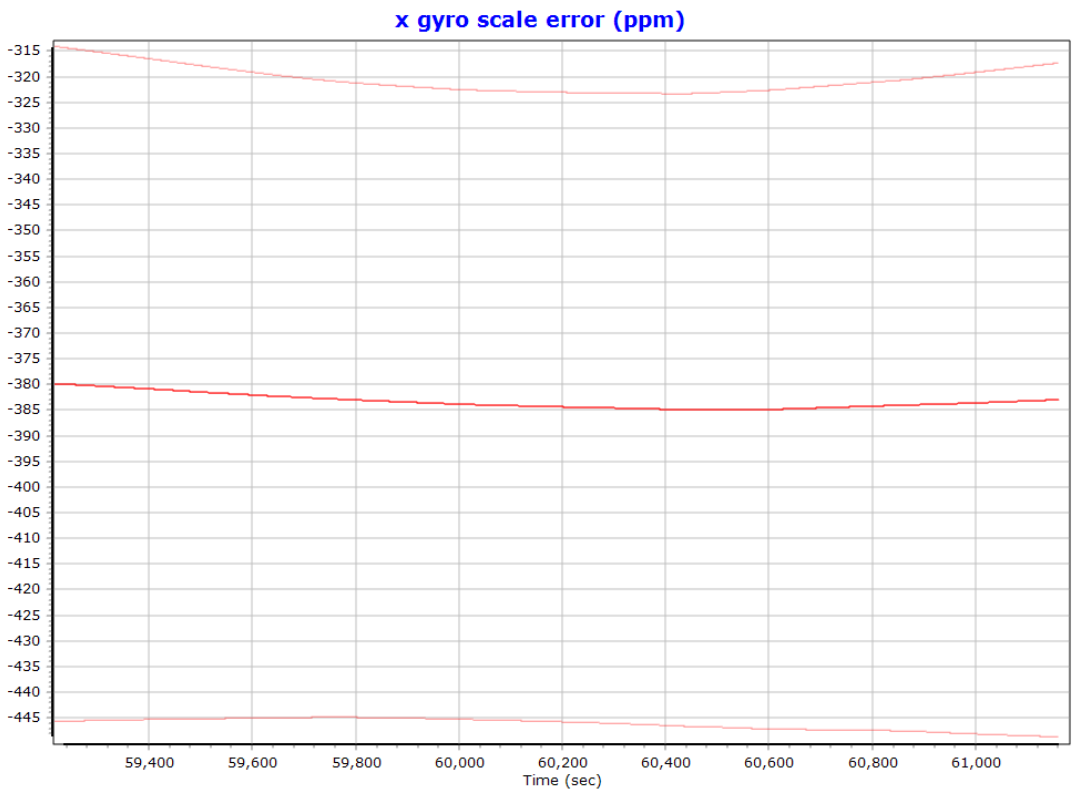
Z Gyro Bias (deg/h)



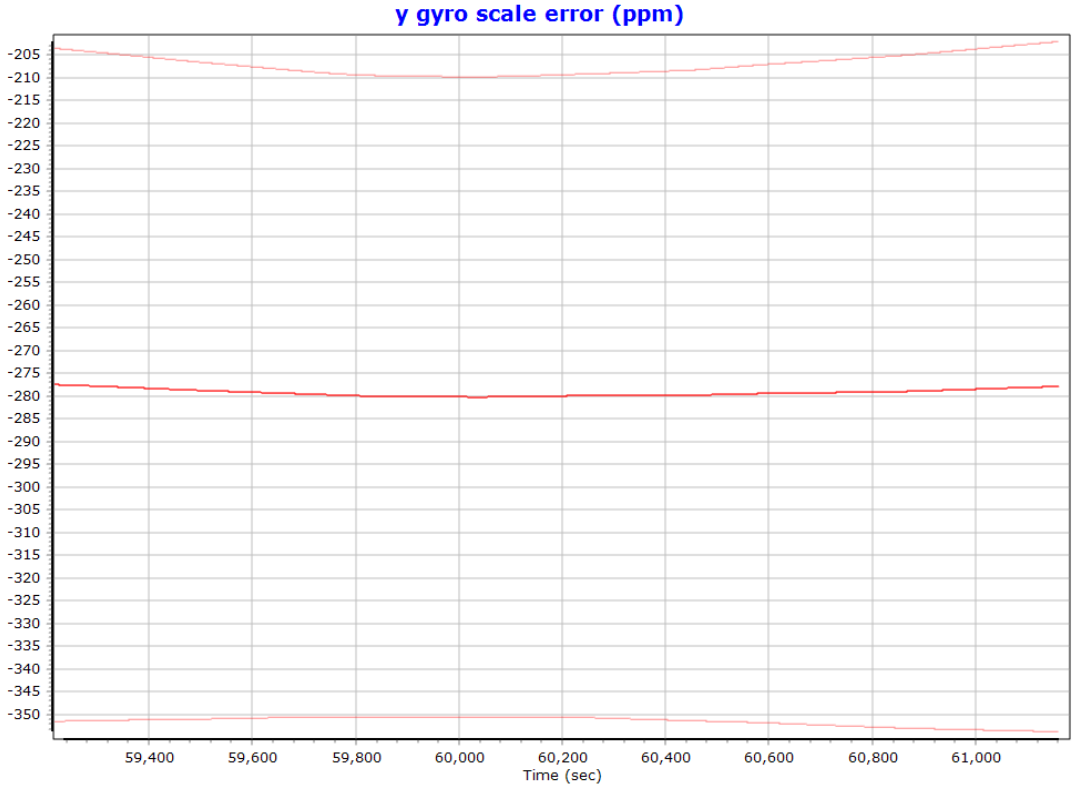
Gyro Scale Error (ppm)



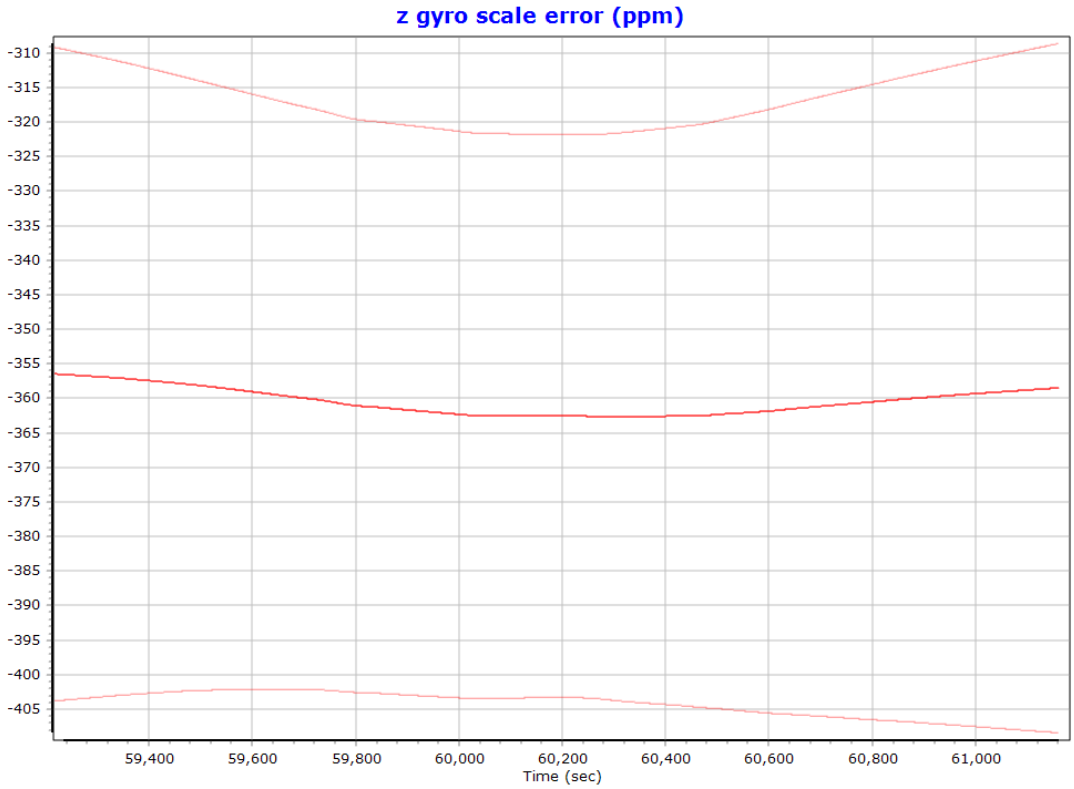
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

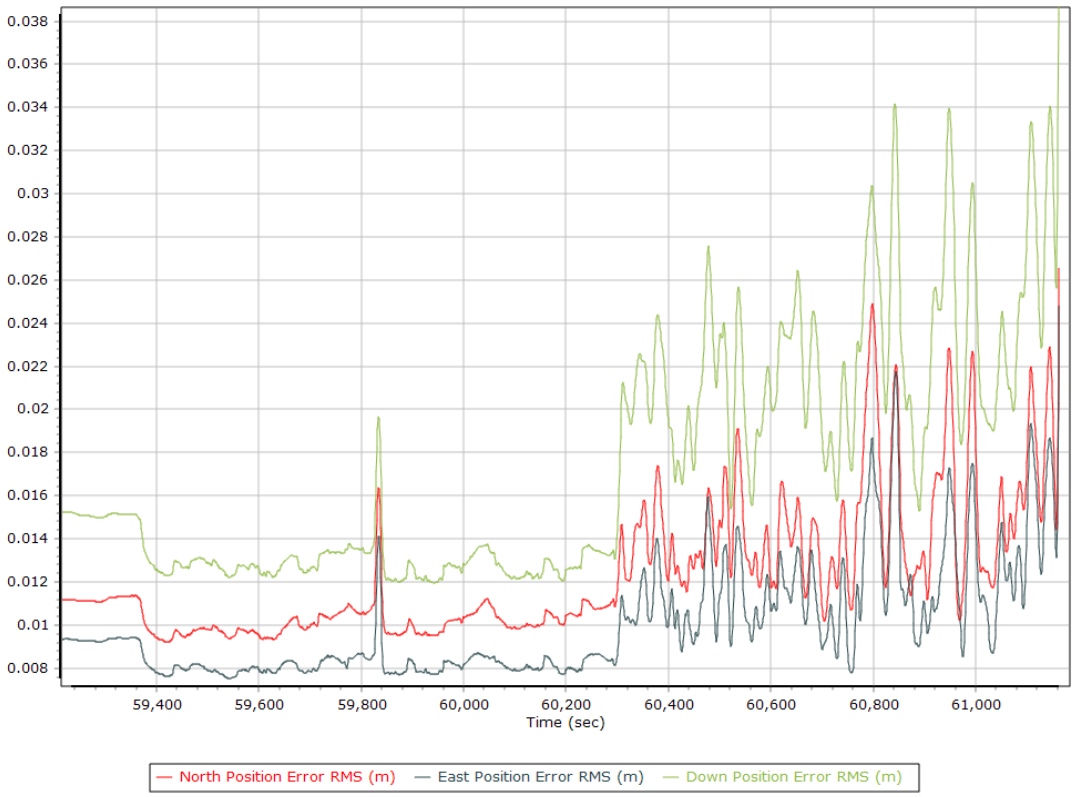


Z Gyro Scale Error (ppm)

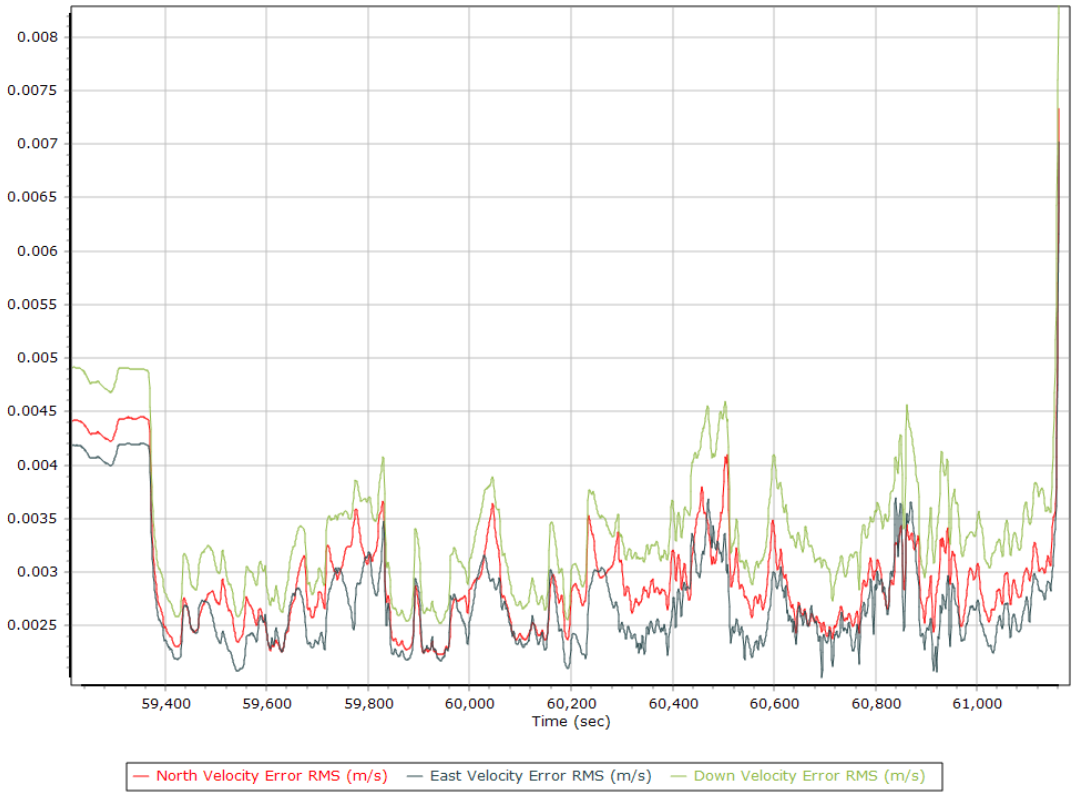


Smoothed Performance Metrics

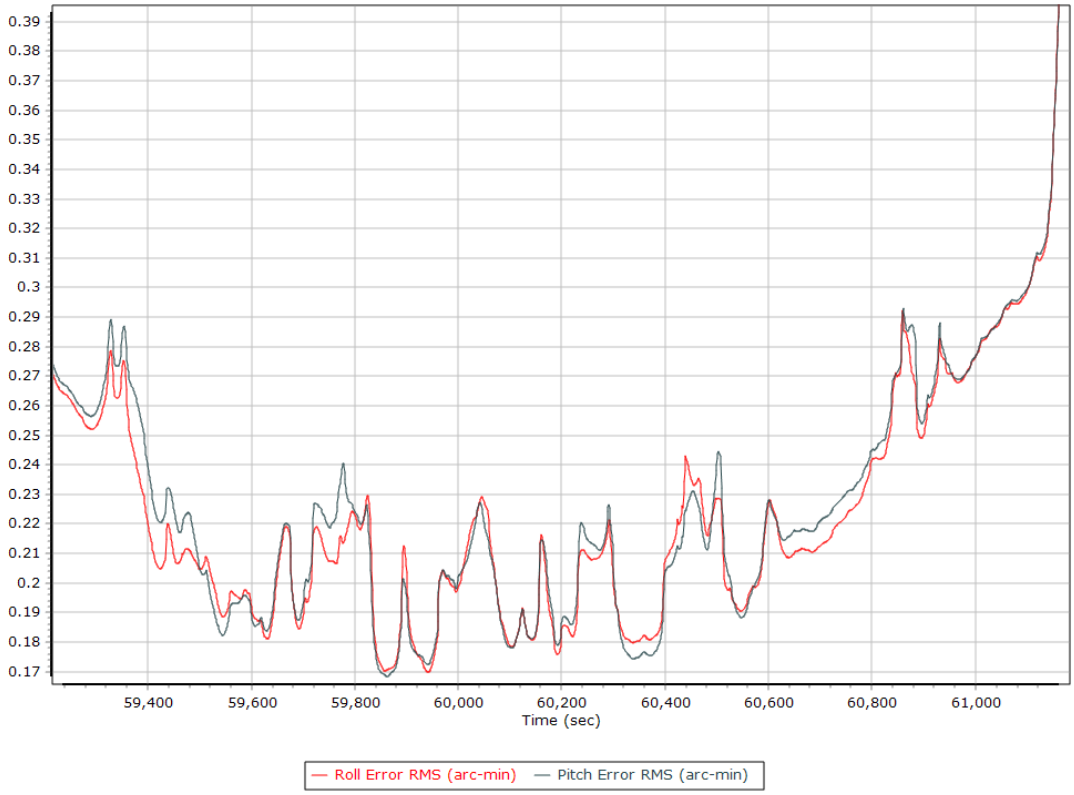
Position Error RMS (m)



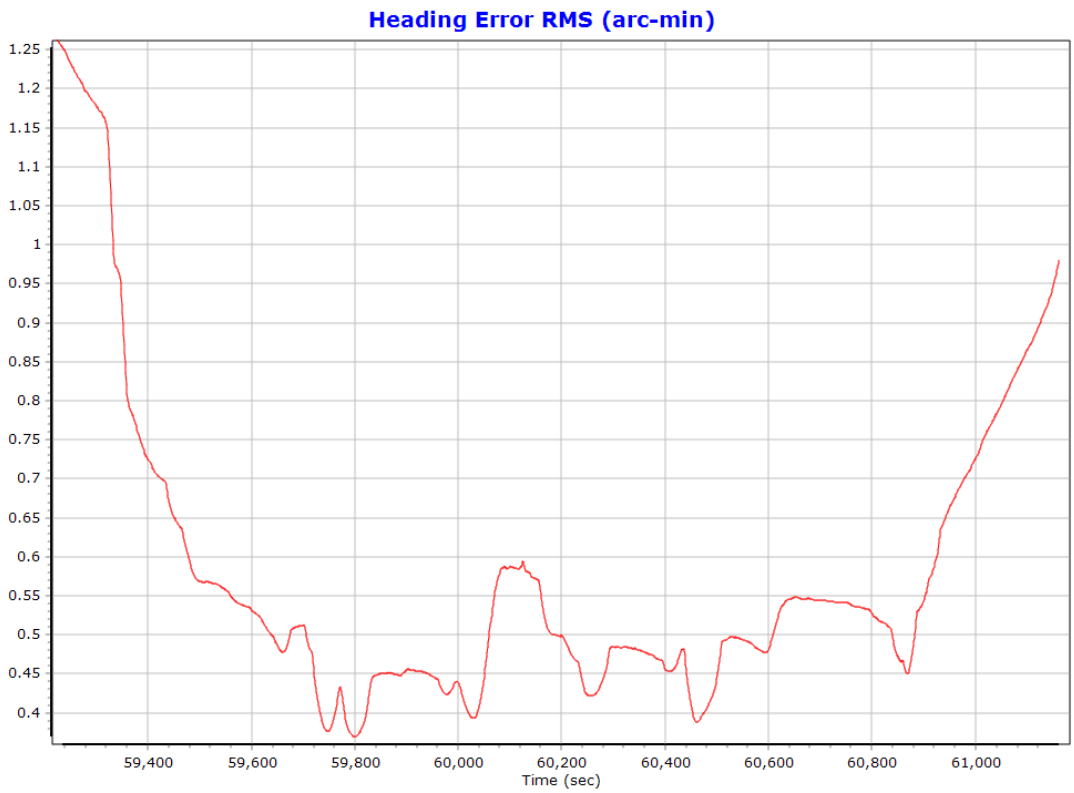
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

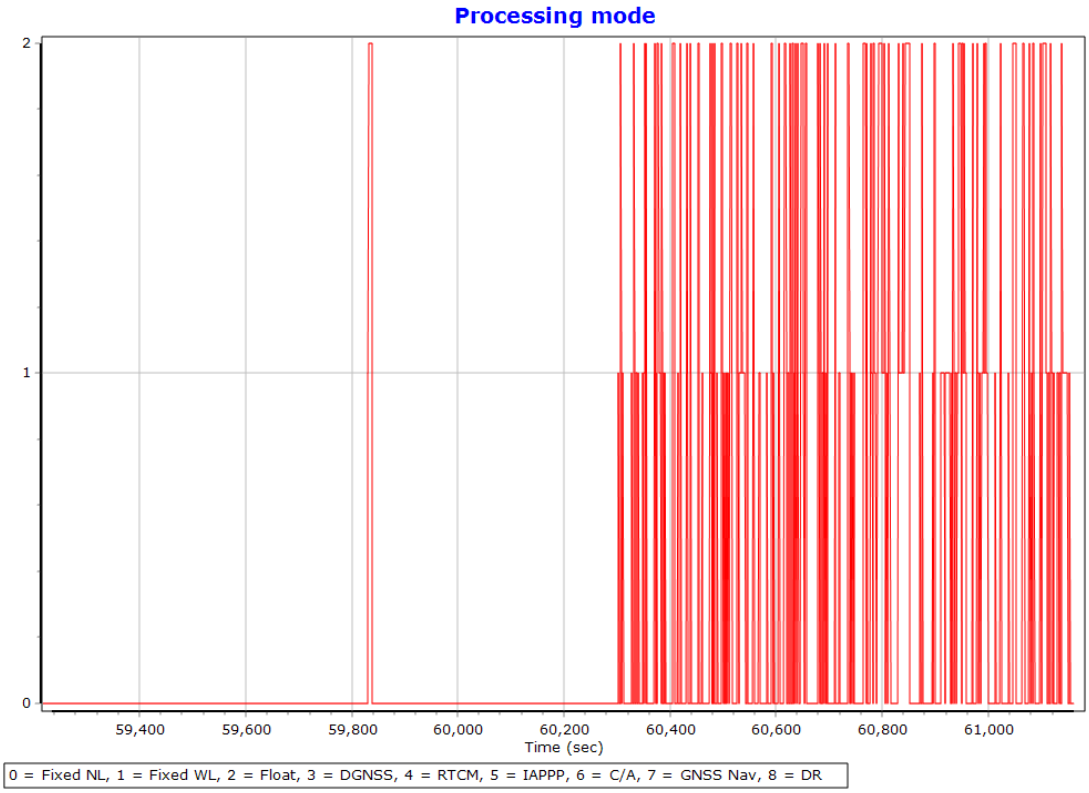


Heading Error RMS (arc-min)

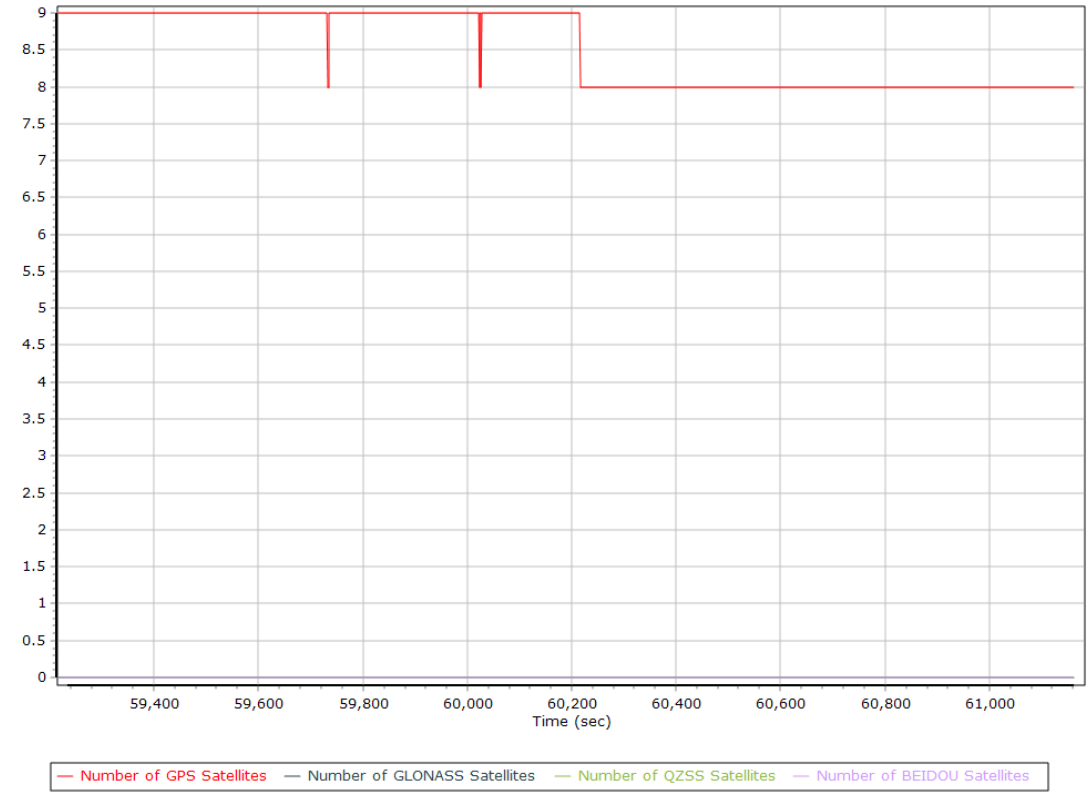


Smoothed Solution Status

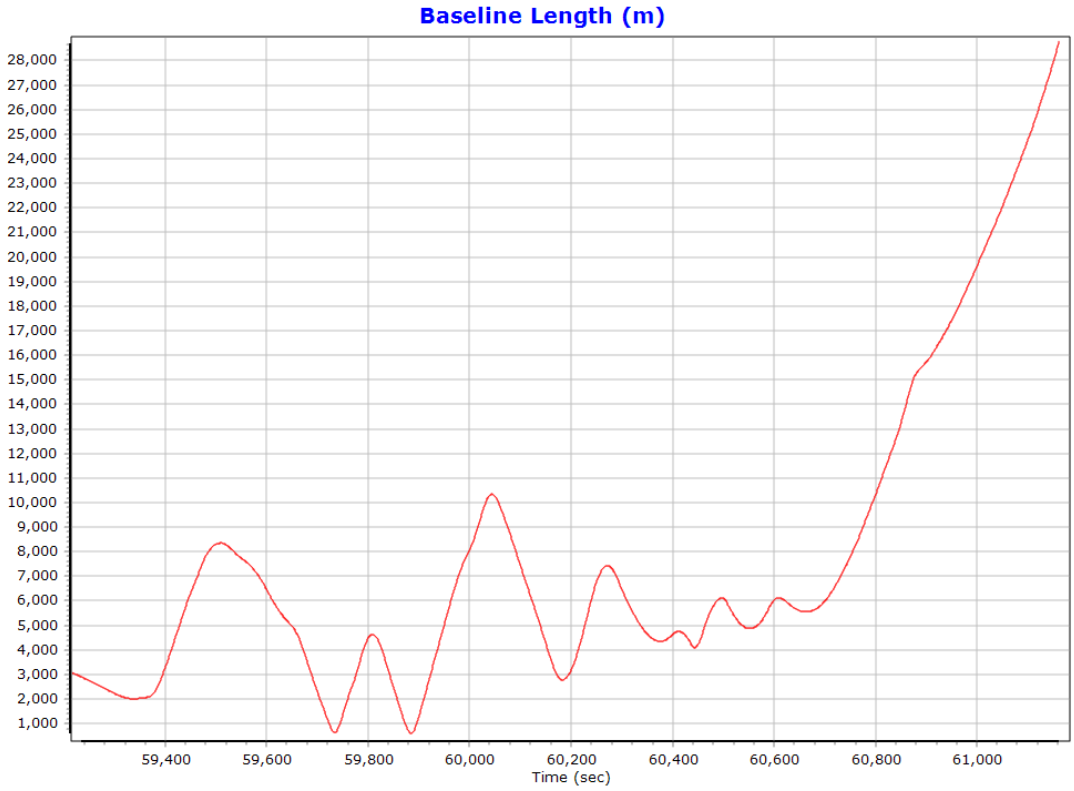
Processing Mode



Number of Satellites



Baseline Length



SBET IAKAR Separation

Export Summary

Export file	export_19-058_110319a.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	59176.002 (11/03/2019 16:26:16)		
Export end time	61161.308 (11/03/2019 16:59:21)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 12 (114W to 108W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2010		

EO Summary

EO file			
EO format			
Lever arm [m]	-0.032	0.010	-0.282
Boresight angles [arcmin]	302.837	-45.779	-1265.005
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	59176.002 (11/03/2019 16:26:16)		
EO end time	61162.003 (11/03/2019 16:59:22)		
Grid	Universal Transverse Mercator		
Zone	UTM North 12 (114W to 108W)		
Datum	WGS84		
Ellipsoid	WGS84		
Local Transformation	NONE		
Target Epoch	2019.838356		