

Appendix A: GPS and IMU Processing Reports for Each Mission

General Information

Mission Information

Project name	03082019
Processing date	2019-03-10 17:41:42
Mission date	2019-03-08 22:33:42
Mission duration	01:27:59.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9524
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
190308_223323_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm0670.19g	GLONASS Broadcast Ephemeris
Ephm0670.19n	GPS Broadcast Ephemeris
Ephm0680.19g	GLONASS Broadcast Ephemeris
Ephm0680.19n	GPS Broadcast Ephemeris
bkv10670.19o	GNSS SingleBase
bkv10680.19o	GNSS SingleBase
dunn0670.19o	GNSS SingleBase
dunn0680.19o	GNSS SingleBase
flcb0670.19o	GNSS SingleBase
flcb0680.19o	GNSS SingleBase
fmyr0670.19o	GNSS SingleBase
fmyr0680.19o	GNSS SingleBase
mcd50670.19o	GPS SingleBase
mcd50680.19o	GPS SingleBase
napl0670.19o	GNSS SingleBase
napl0680.19o	GNSS SingleBase
xcty0670.19o	GNSS SingleBase
xcty0680.19o	GNSS SingleBase
zefr0670.19o	GNSS SingleBase
zefr0680.19o	GNSS SingleBase
igu20434_18.sp3	GPS Precise Ephemeris
igu20435_18.sp3	GPS Precise Ephemeris
igu20436_18.sp3	GPS Precise Ephemeris
igu20440_12.sp3	GPS Precise Ephemeris
wach0670.19o	GNSS SingleBase
wach0680.19o	GNSS SingleBase

Output Files

Filename	File type
sbet_Mission 1.out	SBET Trajectory File

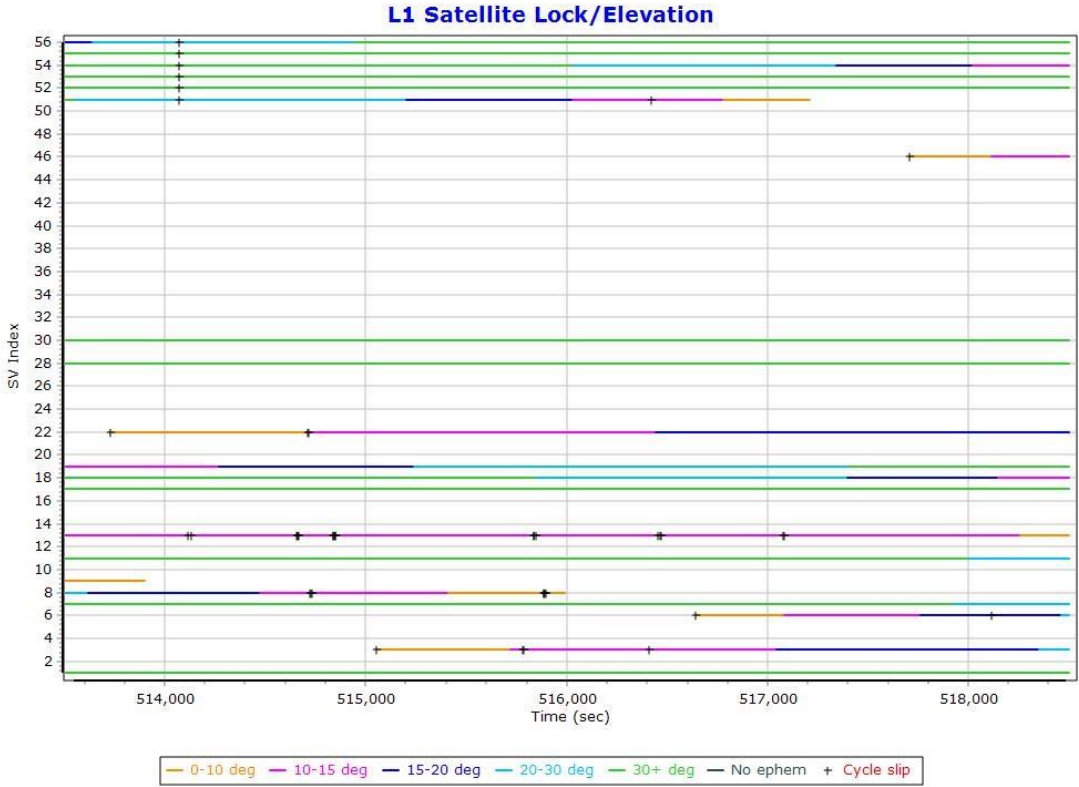
Rover Data Summary

First raw data file	190308_223323_INS-GPS_1.raw
Last raw data file	190308_223323_INS-GPS_1.raw
Start GPS week	2043
Start time	513203.454 (3/8/2019 10:33:23 PM)
End time	518483.734 (3/9/2019 12:01:23 AM)
Start of fine alignment	513488.837 (3/8/2019 10:38:08 PM)
Available subsystems	Primary GNSS, IMU

POS Event Input	Event 1 Input, Event 2 Input, Event 3 Input		
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	0.000
Reference to Primary GNSS lever arm [m]	0.102	-0.140	-0.961
Reference to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

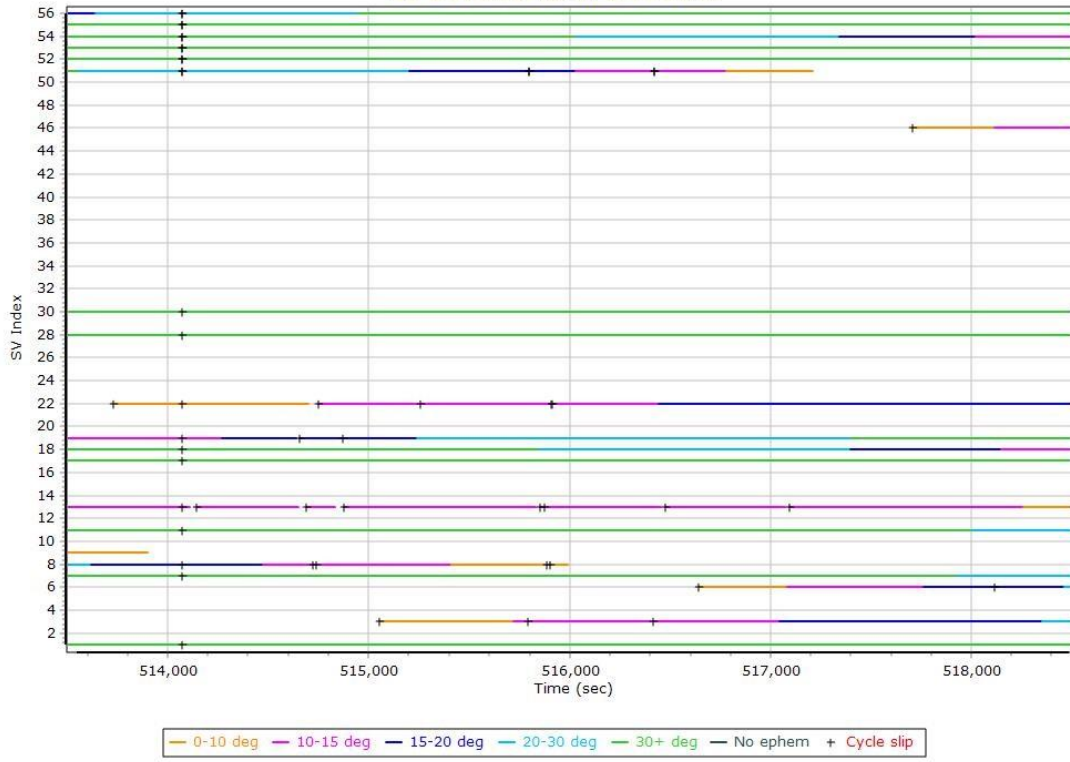
Raw Data QC

L1 Satellite Lock/Elevation



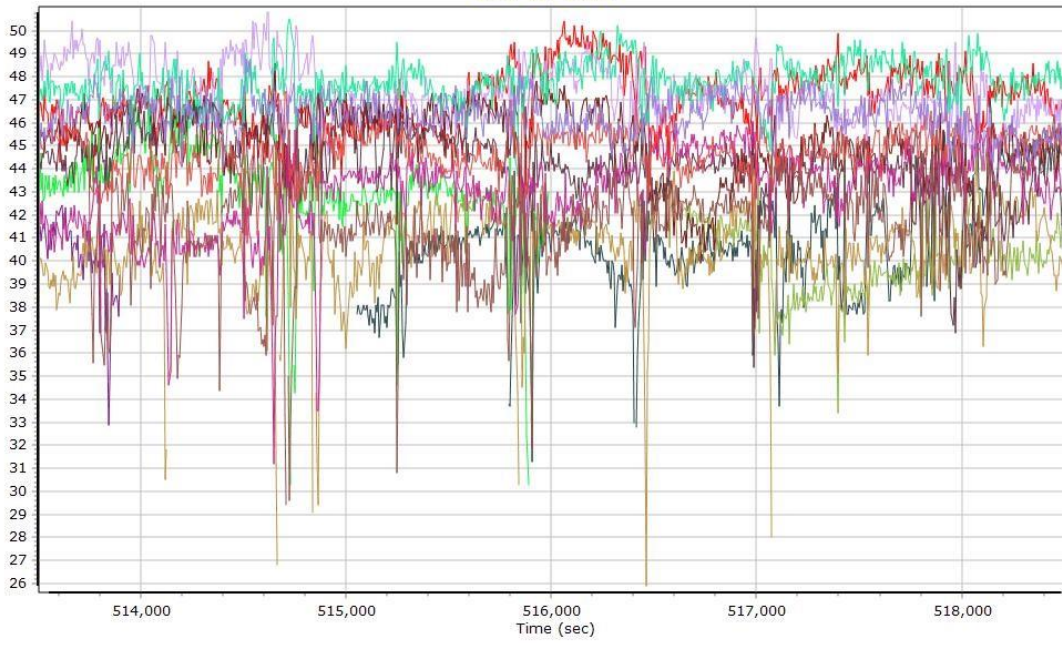
L2 Satellite Lock/Elevation

L2 Satellite Lock/Elevation



GPS L1 SNR

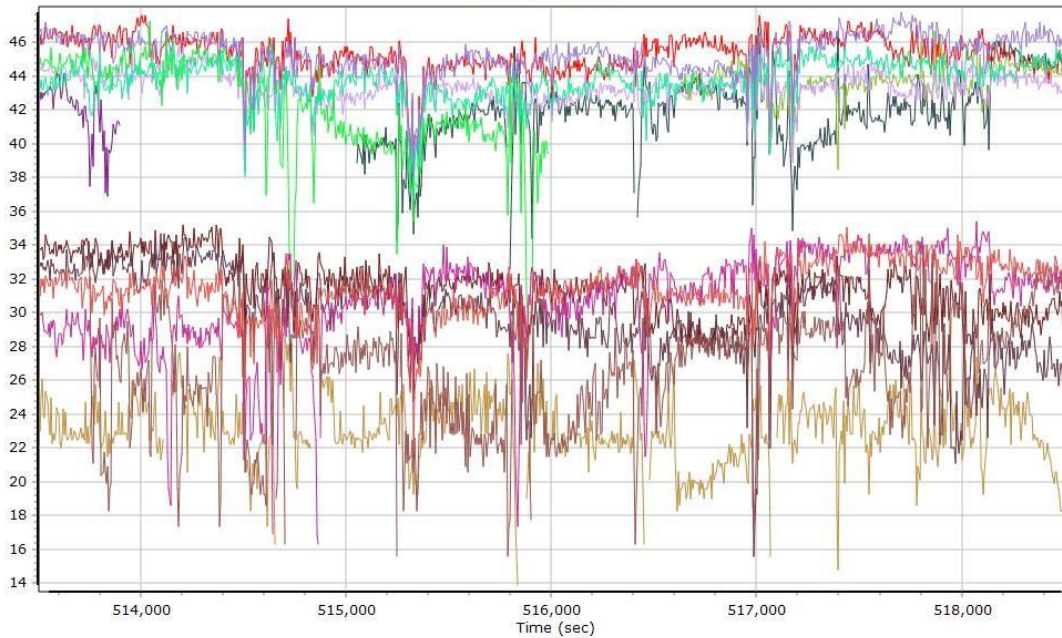
GPS L1 SNR



- | | | | |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| — GPS PRN 01 L1 SNR (dB/Hz) | — GPS PRN 03 L1 SNR (dB/Hz) | — GPS PRN 06 L1 SNR (dB/Hz) | — GPS PRN 07 L1 SNR (dB/Hz) |
| — GPS PRN 08 L1 SNR (dB/Hz) | — GPS PRN 09 L1 SNR (dB/Hz) | — GPS PRN 11 L1 SNR (dB/Hz) | — GPS PRN 13 L1 SNR (dB/Hz) |
| — GPS PRN 17 L1 SNR (dB/Hz) | — GPS PRN 18 L1 SNR (dB/Hz) | — GPS PRN 19 L1 SNR (dB/Hz) | — GPS PRN 22 L1 SNR (dB/Hz) |
| — GPS PRN 28 L1 SNR (dB/Hz) | — GPS PRN 30 L1 SNR (dB/Hz) | | |

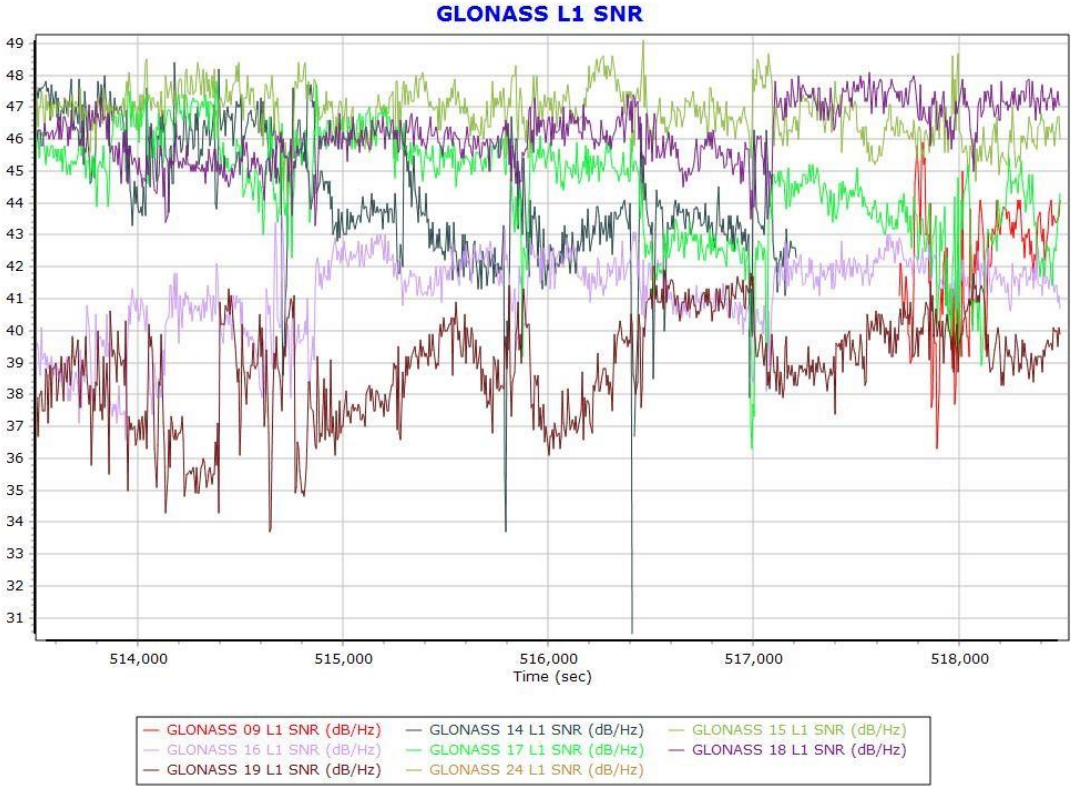
GPS L2 SNR

GPS L2 SNR



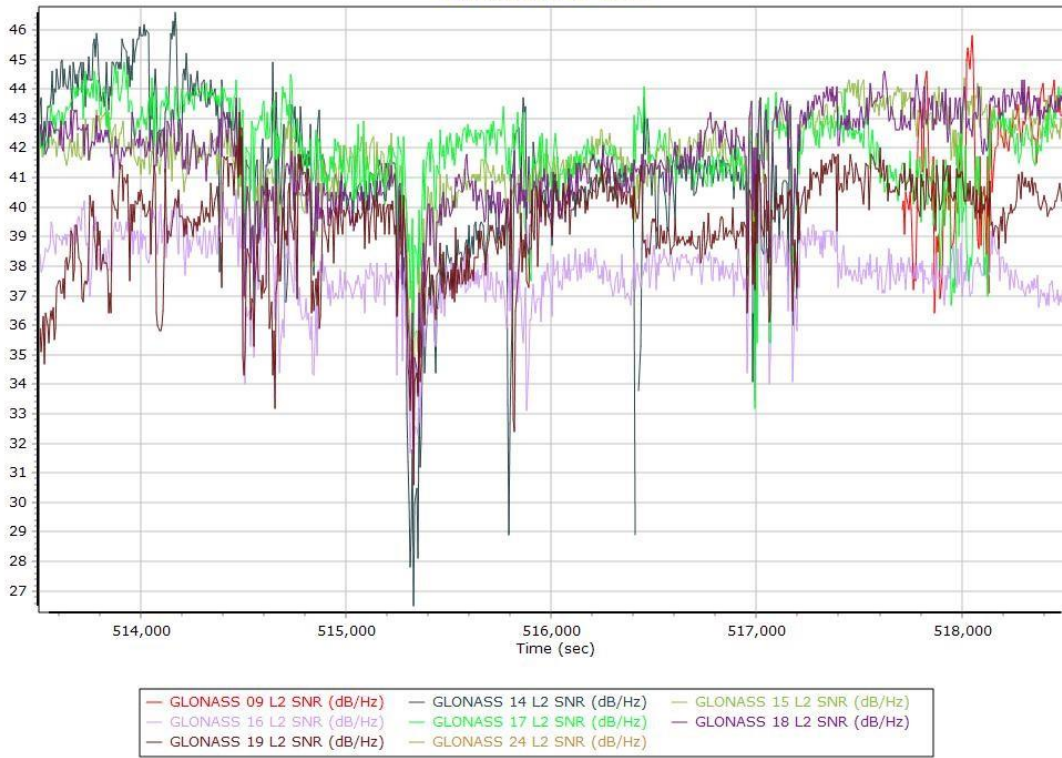
- | | | | |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| — GPS PRN 01 L2 SNR (dB/Hz) | — GPS PRN 03 L2 SNR (dB/Hz) | — GPS PRN 06 L2 SNR (dB/Hz) | — GPS PRN 07 L2 SNR (dB/Hz) |
| — GPS PRN 08 L2 SNR (dB/Hz) | — GPS PRN 09 L2 SNR (dB/Hz) | — GPS PRN 11 L2 SNR (dB/Hz) | — GPS PRN 13 L2 SNR (dB/Hz) |
| — GPS PRN 17 L2 SNR (dB/Hz) | — GPS PRN 18 L2 SNR (dB/Hz) | — GPS PRN 19 L2 SNR (dB/Hz) | — GPS PRN 22 L2 SNR (dB/Hz) |
| — GPS PRN 28 L2 SNR (dB/Hz) | — GPS PRN 30 L2 SNR (dB/Hz) | | |

GLONASS L1 SNR

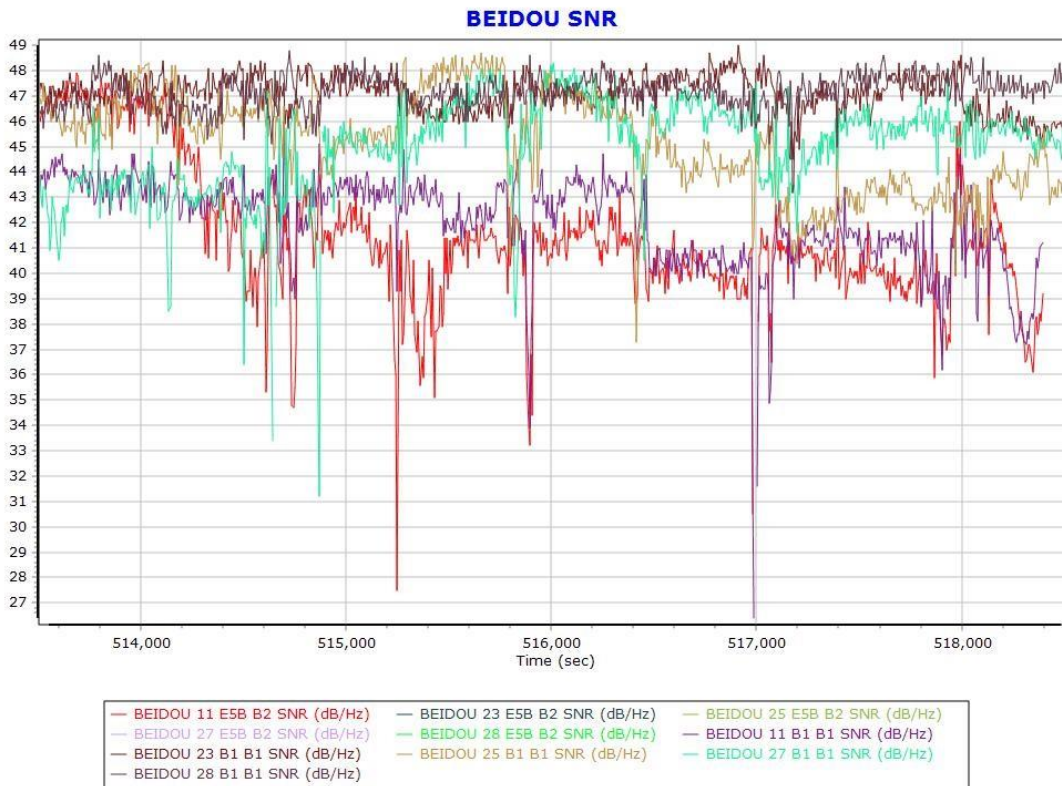


GLONASS L2 SNR

GLONASS L2 SNR



BEIDOU SNR



Trajectory Information

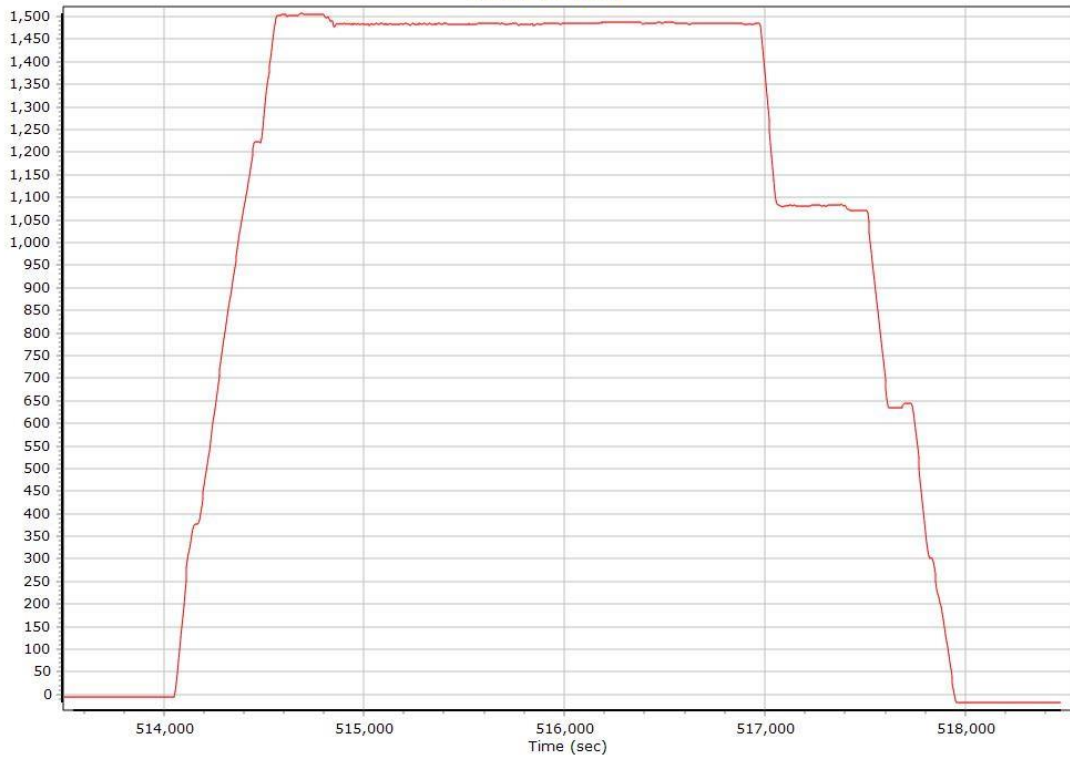
Top View

Top View: Latitude (deg)

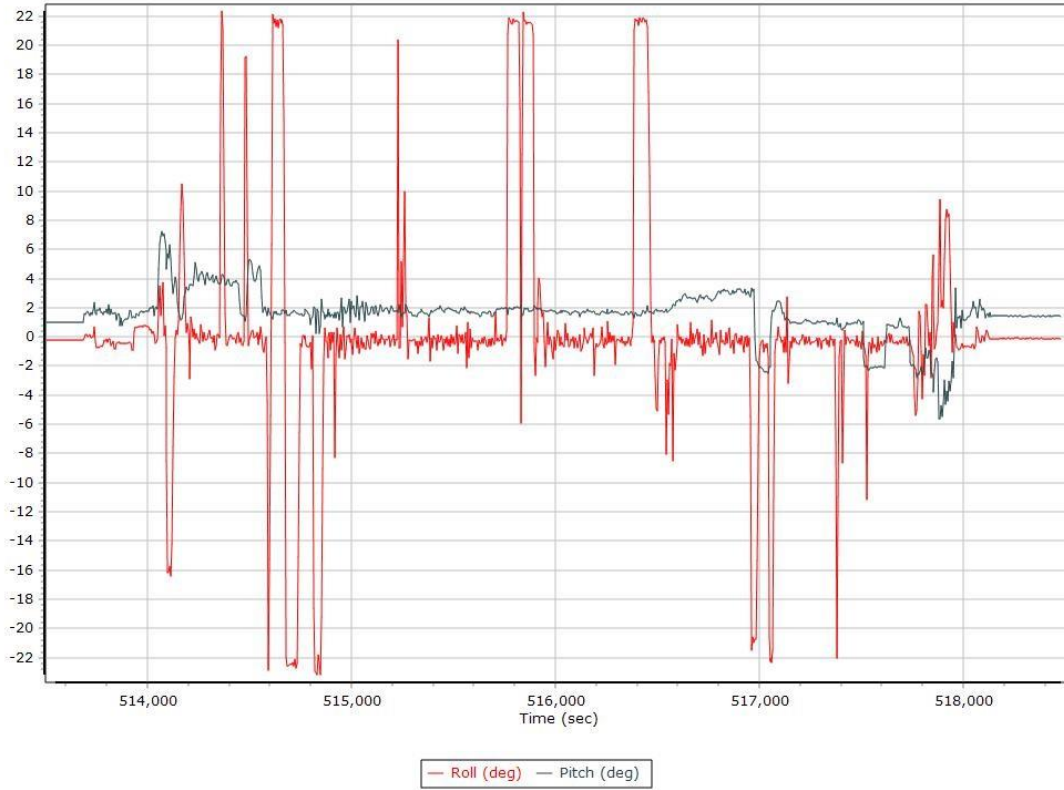


Altitude

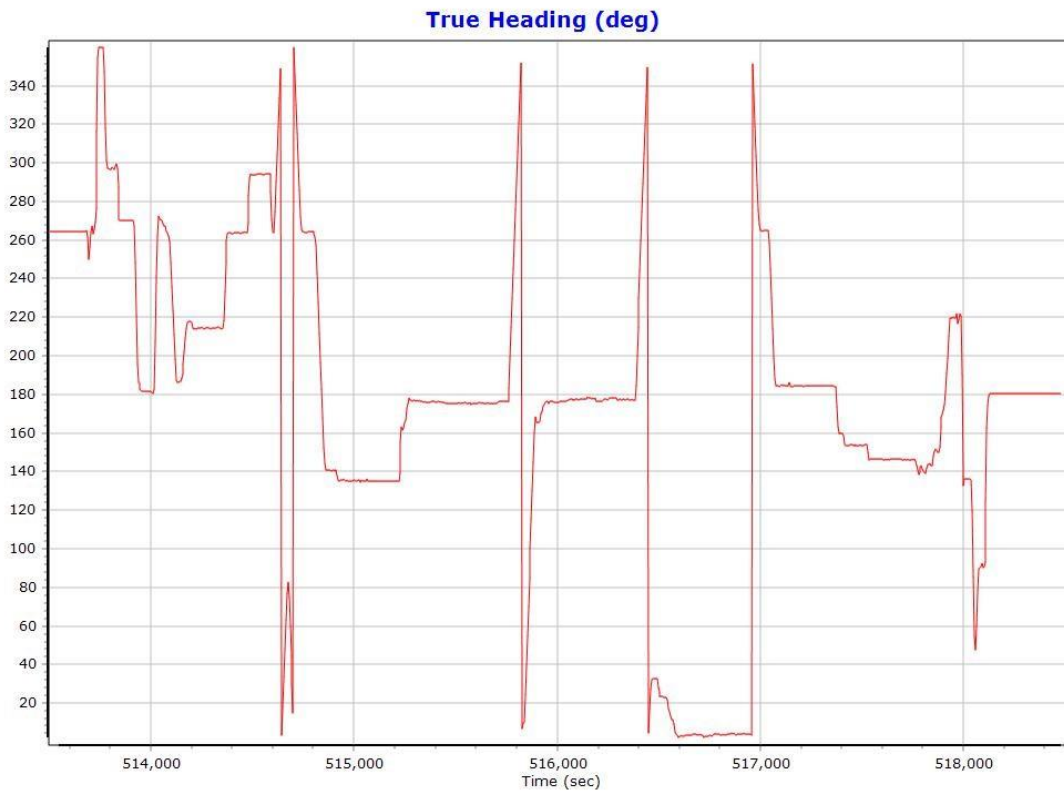
Altitude (m)



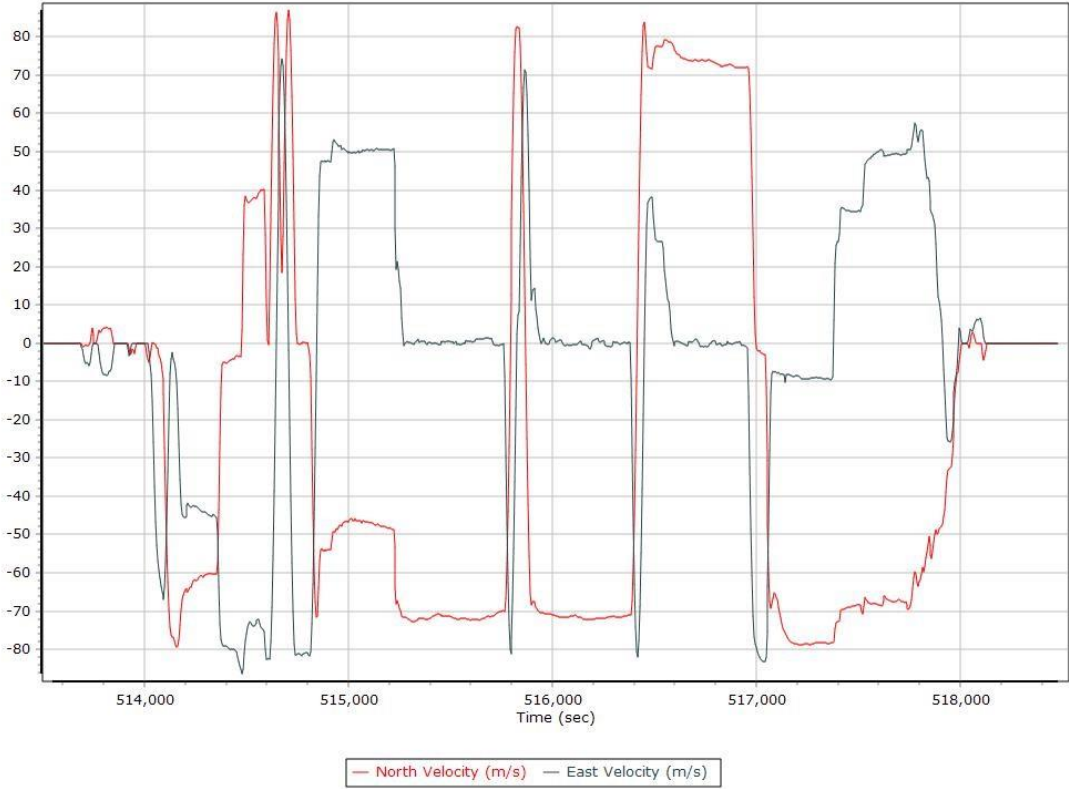
Roll/Pitch



Heading

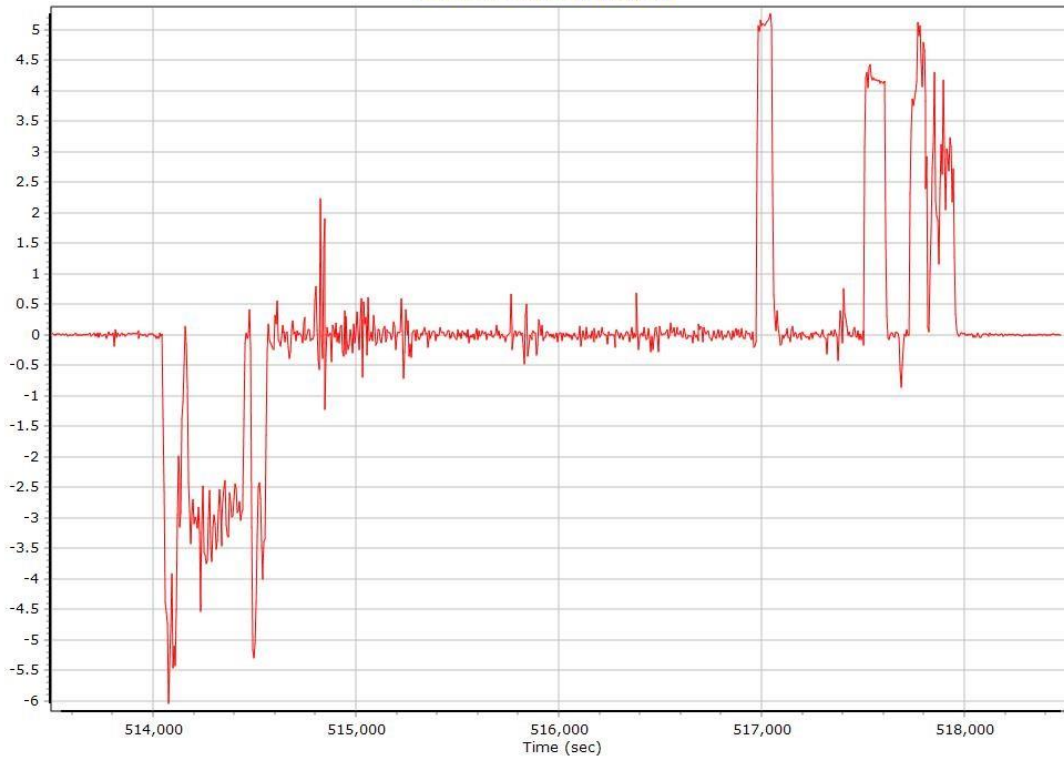


North/East Velocity



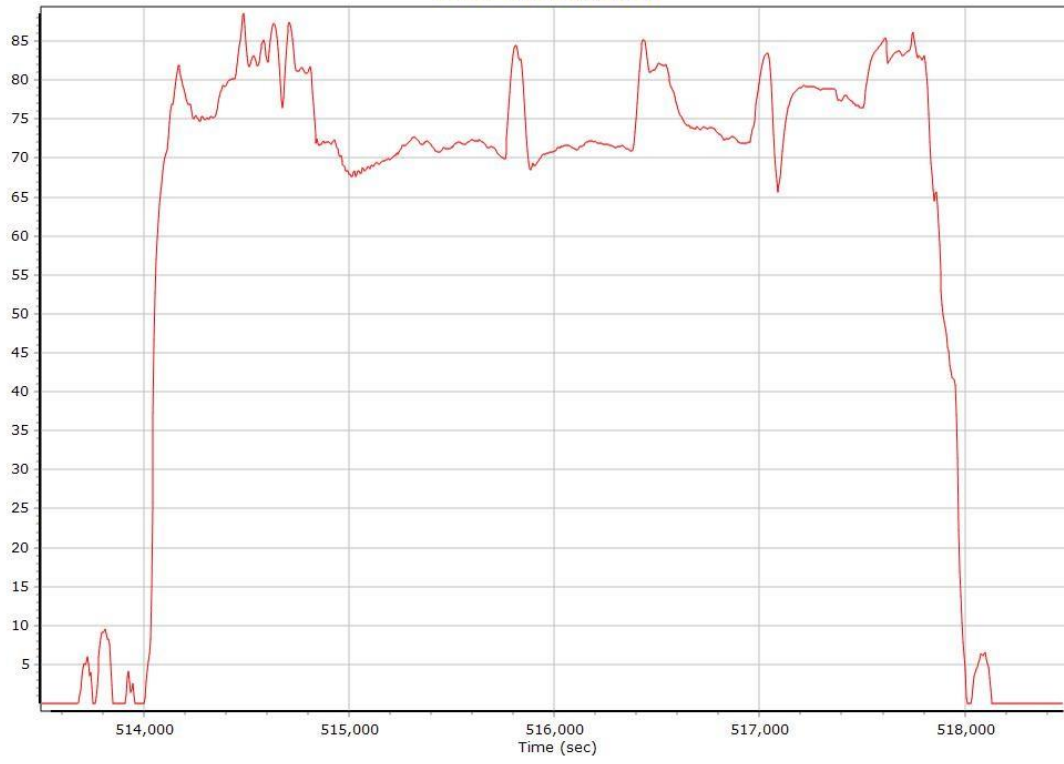
Down Velocity

Down Velocity (m/s)



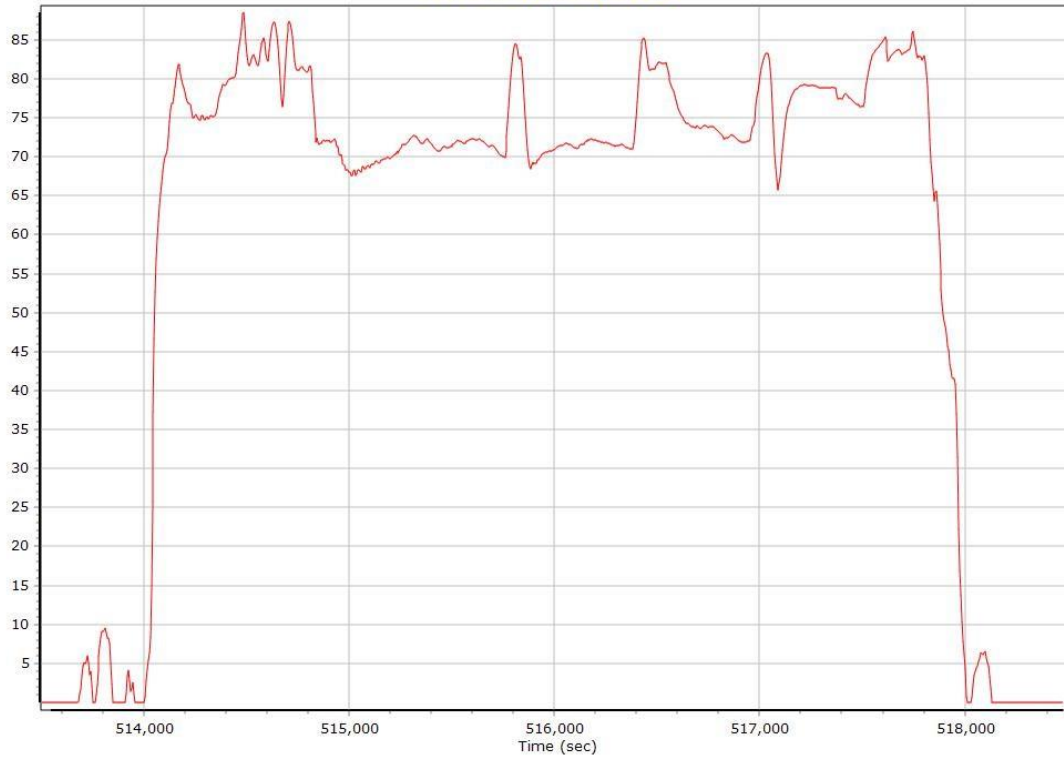
Total Speed

Total Speed (m/s)

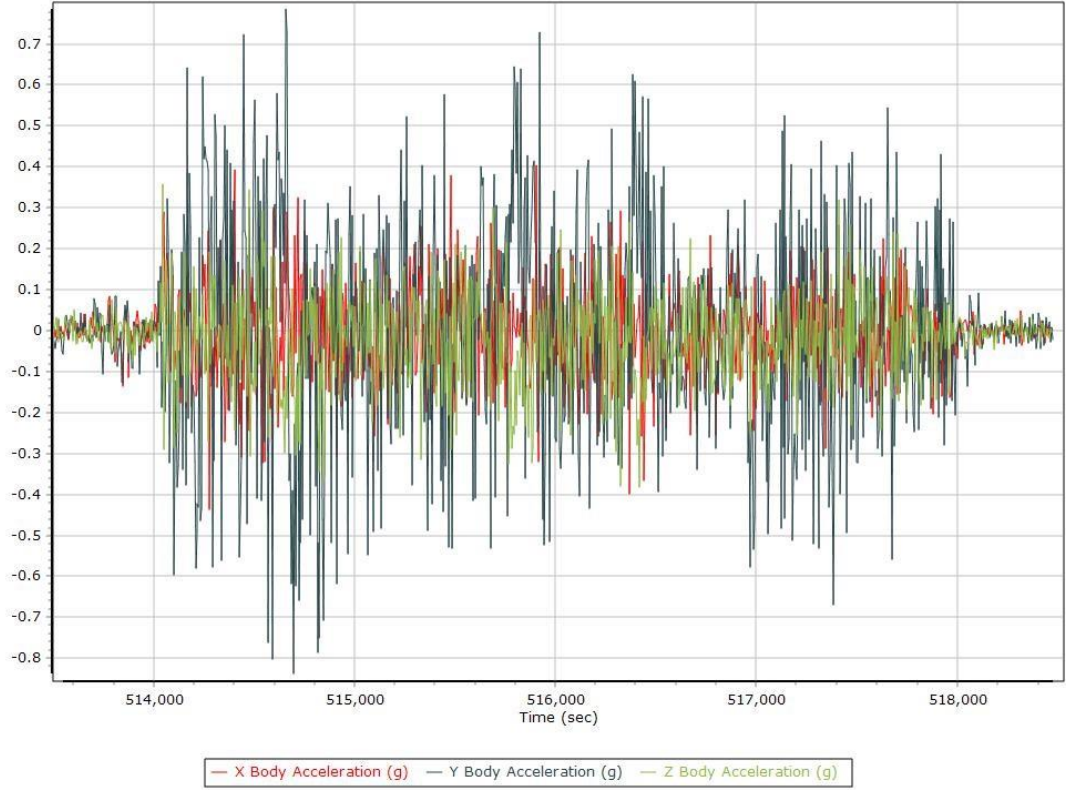


Ground Speed

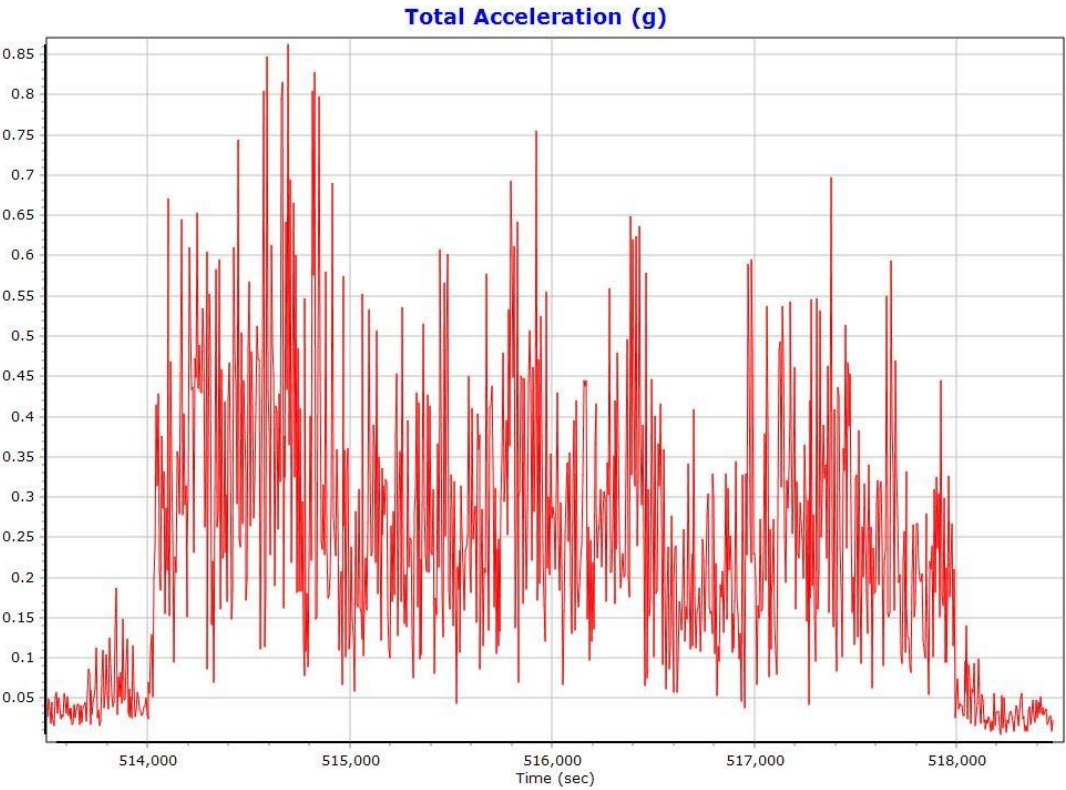
Ground Speed (m/s)



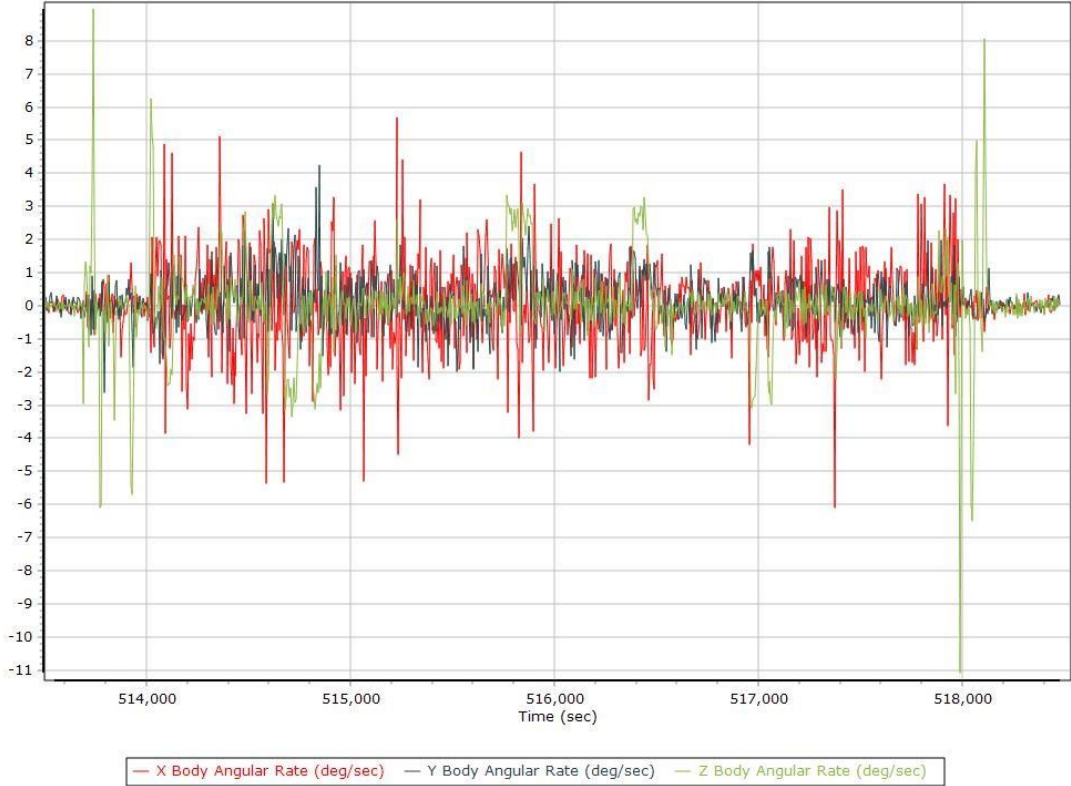
Body Acceleration



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
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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	

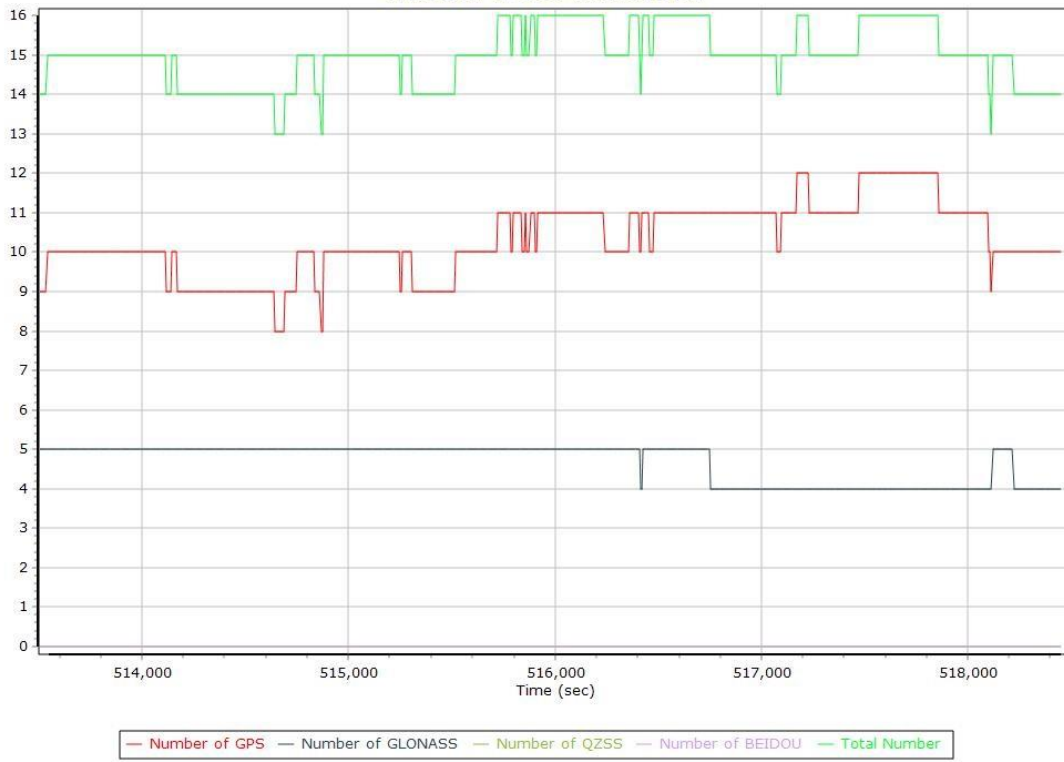
GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	3.51	66.68	
Number of GPS SV	7	12	10
Number of GLONASS SV	0	5	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	10	16	15
PDOP	1.24	1.95	1.36
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	5231.00	0.00	1.00
Percentage	99.98	0.00	0.02

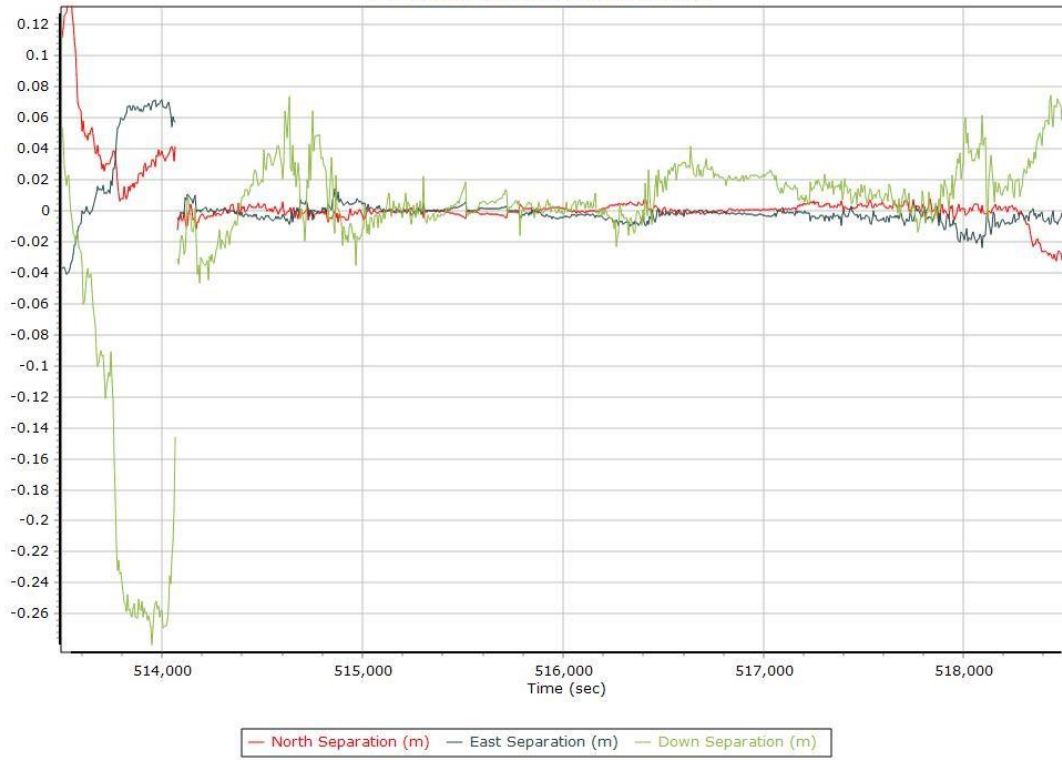
Num SVs in solution

Number of SVs in solution



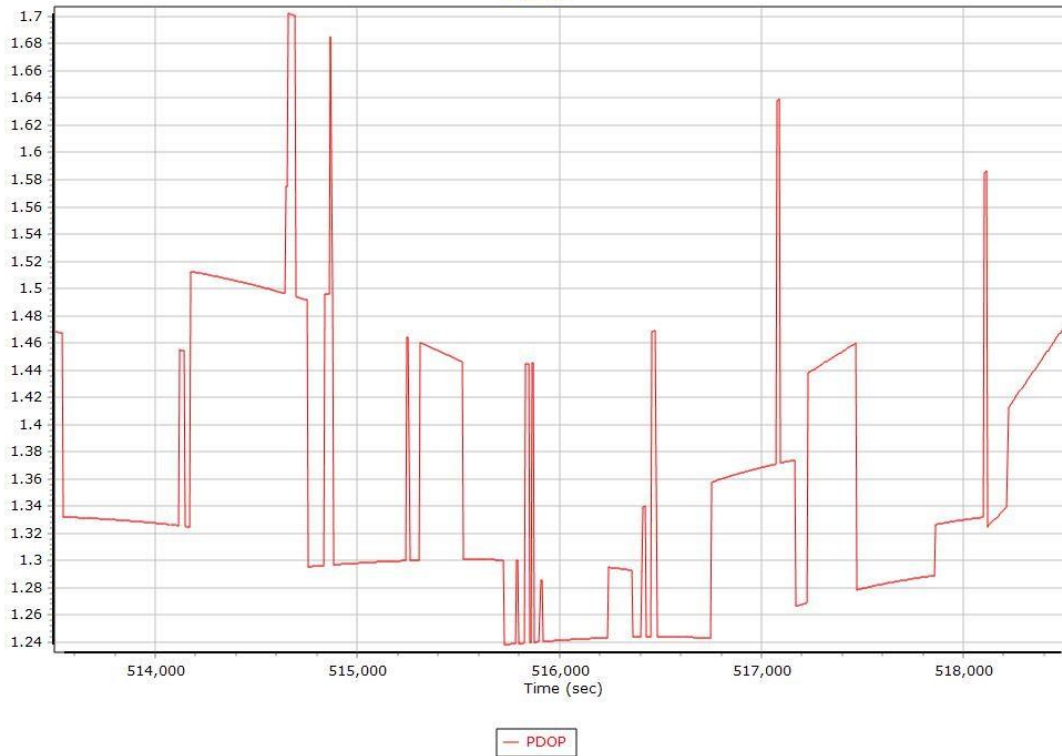
Forward/Reverse Separation

Forward/Reverse Separation

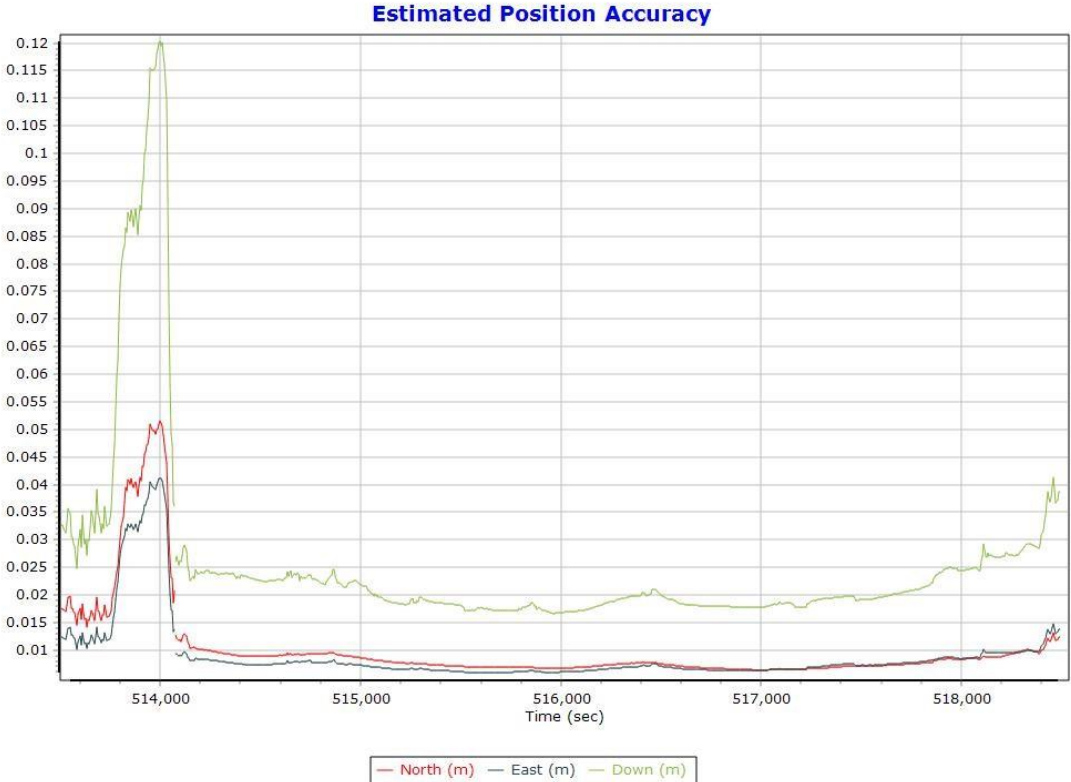


PDOP

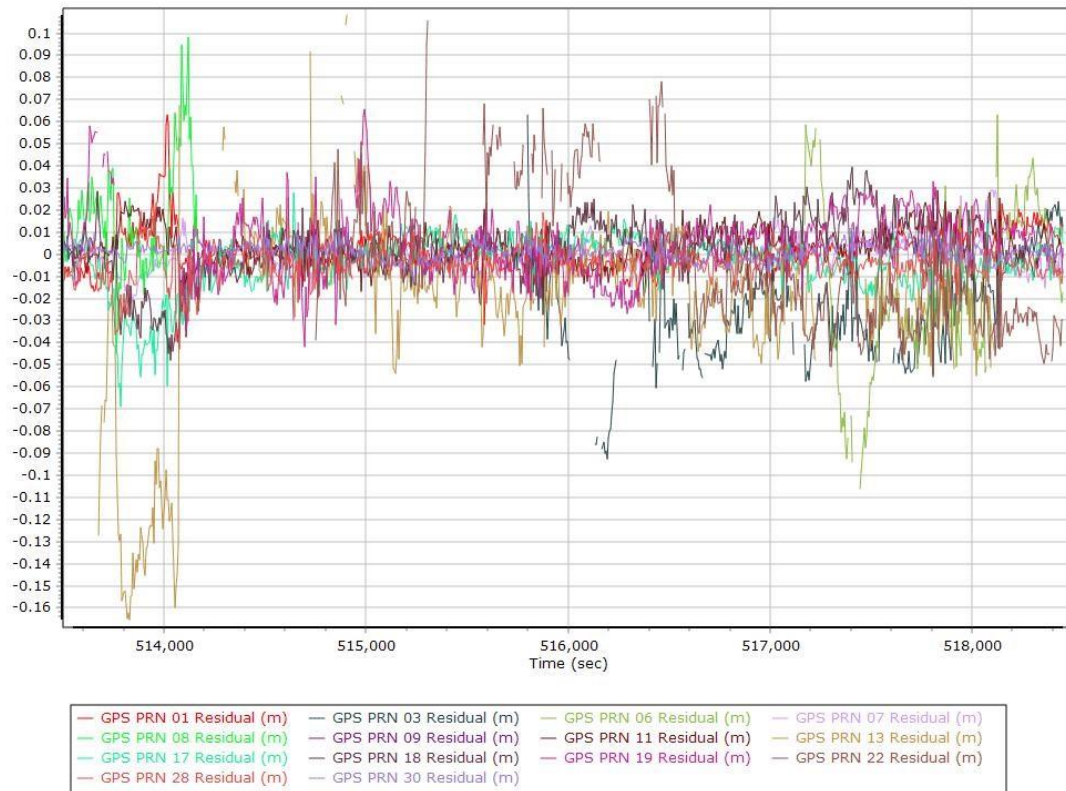
PDOP



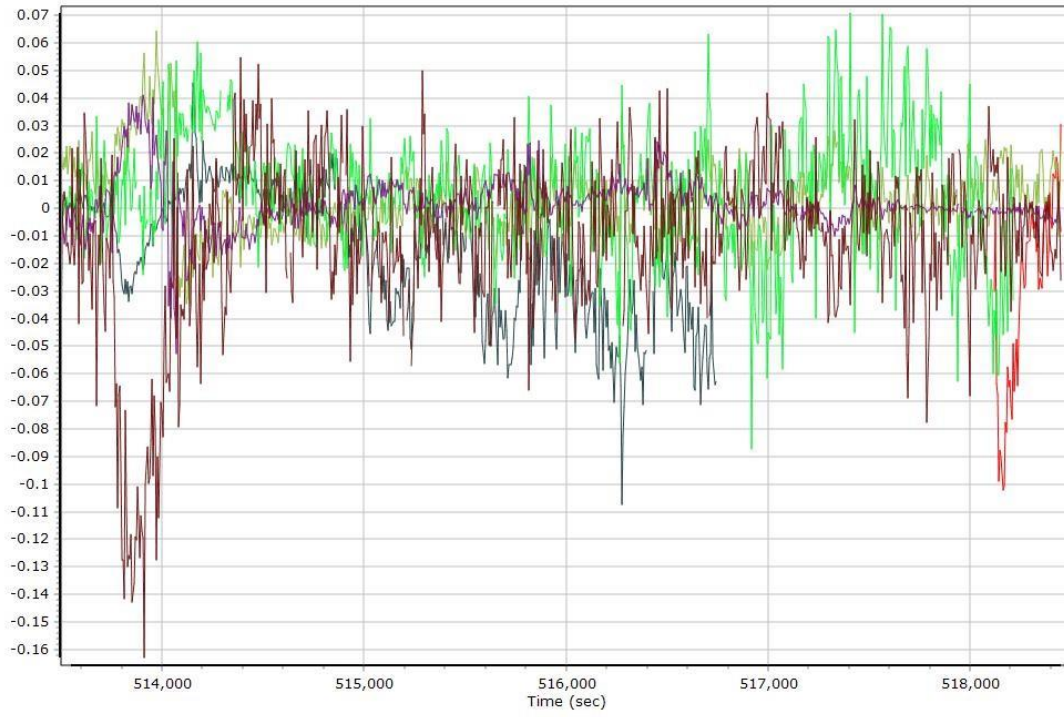
Estimated Position Accuracy



GPS Residuals



GLONASS Residuals



— GLONASS 09 Residual (m)	— GLONASS 14 Residual (m)	— GLONASS 15 Residual (m)	— GLONASS 16 Residual (m)
— GLONASS 17 Residual (m)	— GLONASS 18 Residual (m)	— GLONASS 19 Residual (m)	

GNSS-Inertial Processor Configuration

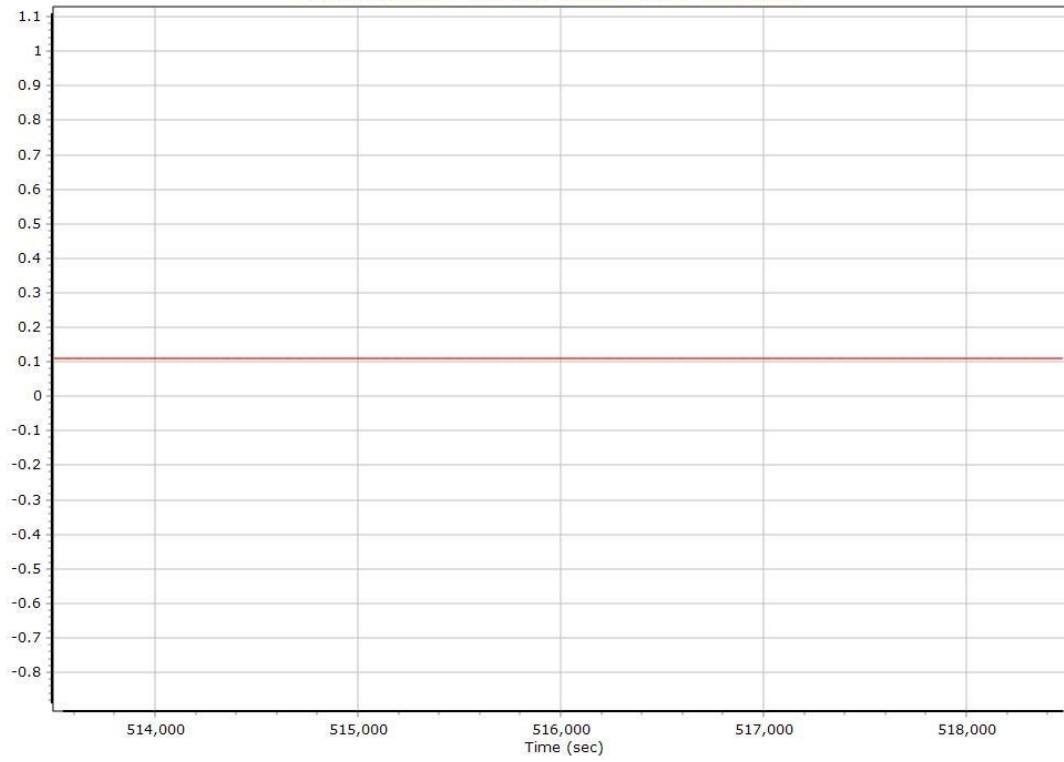
Processing mode	IN-Fusion SmartBase		
Stabilized mount	False		
Base station	ASB		
Processing start time	513204.000 (3/8/2019 10:33:24 PM)		
Processing end time	518483.000 (3/9/2019 12:01:23 AM)		
Initial attitude source	GYRO Compass		
IMU Sensor Context	Processing with Onboard IMU		
Reference to IMU 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]	0.110	-0.138	-0.963
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

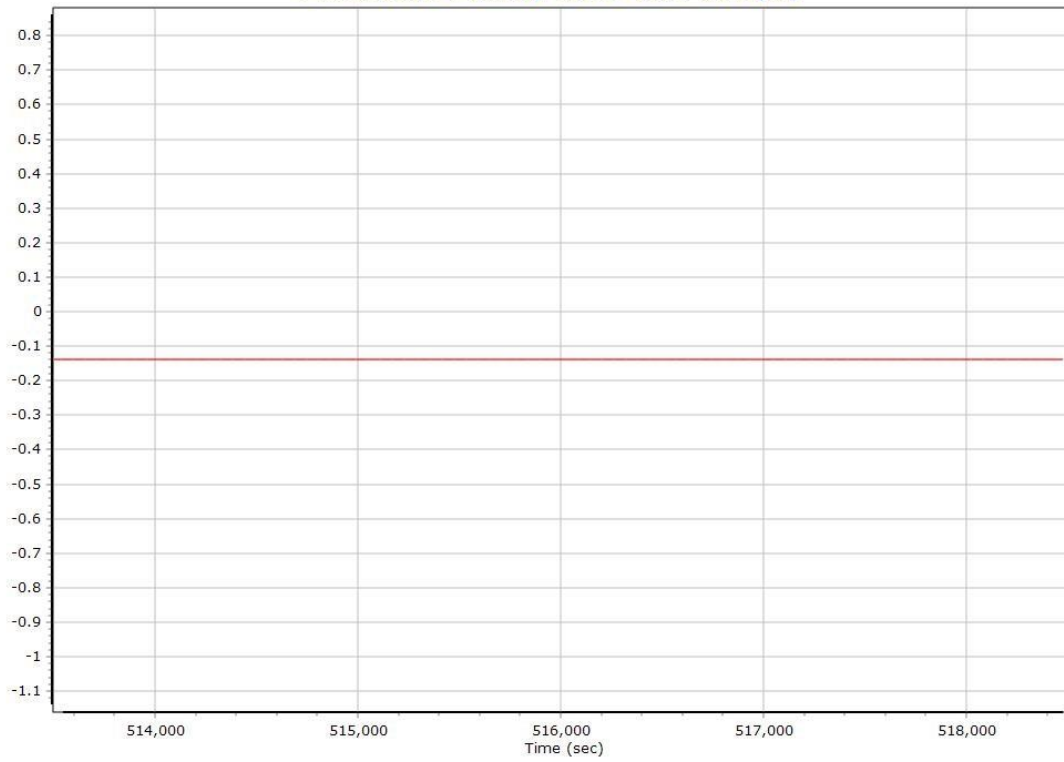
X Reference -Primary GNSS Lever Arm (m)

X Reference-Primary GNSS Lever Arm (m)



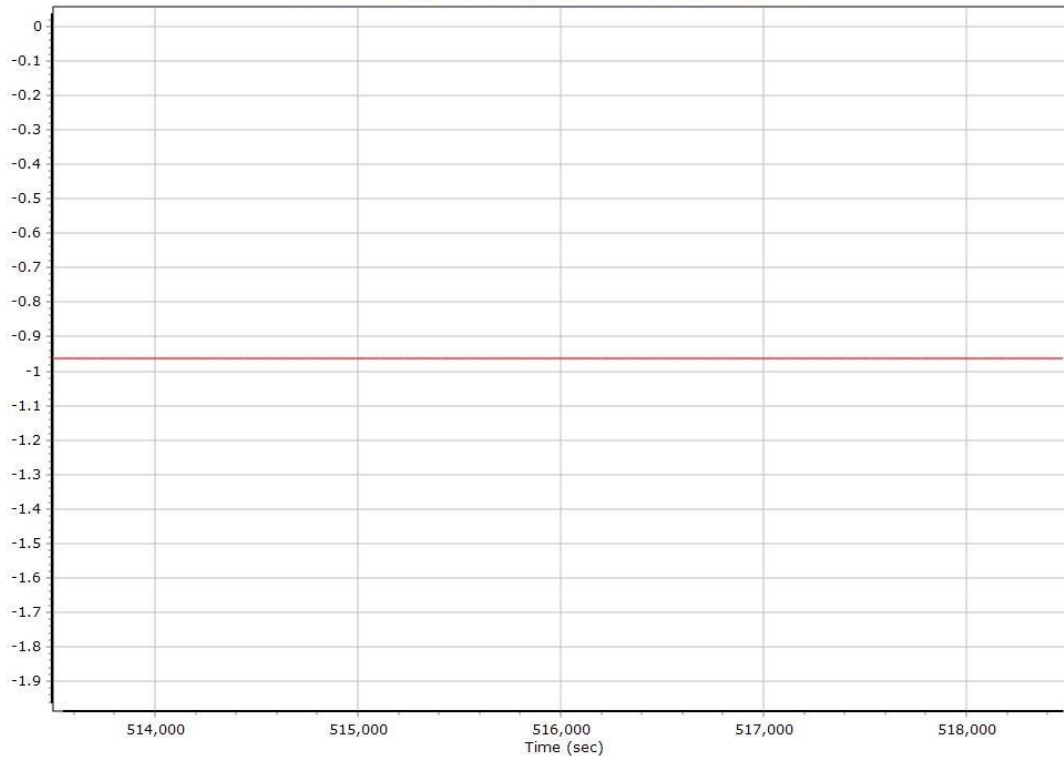
Y Reference -Primary GNSS Lever Arm (m)

Y Reference-Primary GNSS Lever Arm (m)



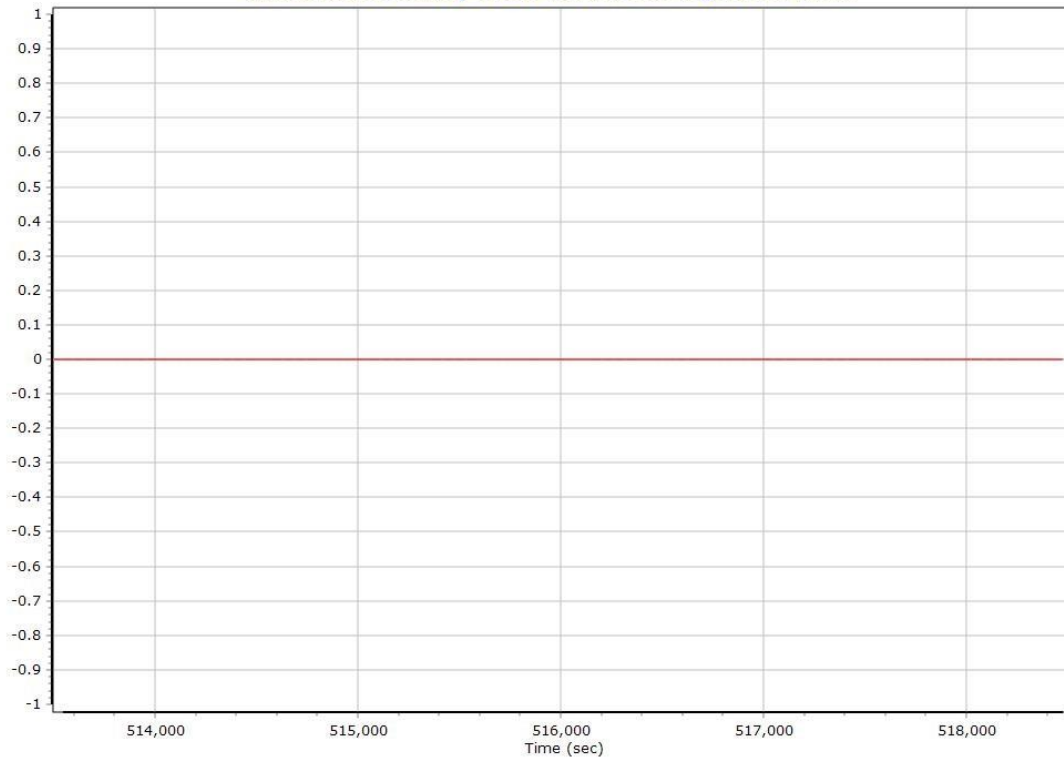
Z Reference -Primary GNSS Lever Arm (m)

Z Reference-Primary GNSS Lever Arm (m)



Reference -Primary GNSS Lever Arm Figure of Merit

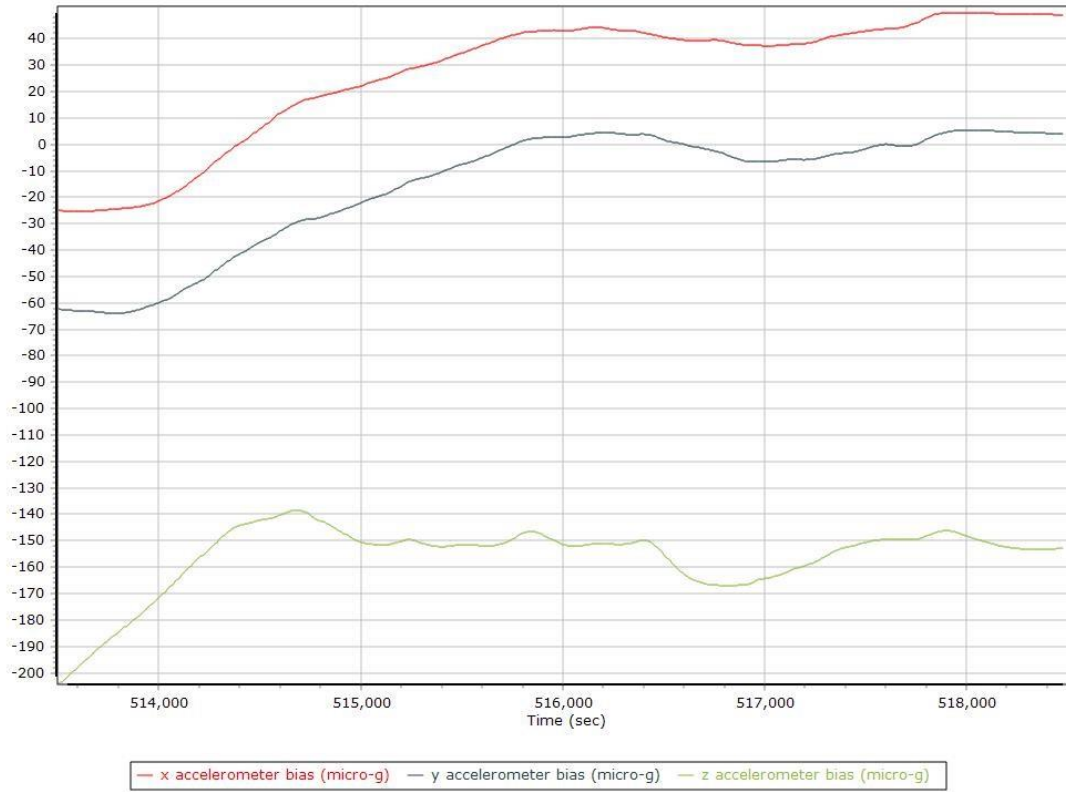
Reference-Primary GNSS Lever Arm Figure of Merit



Smoothed IN-Fusion QC

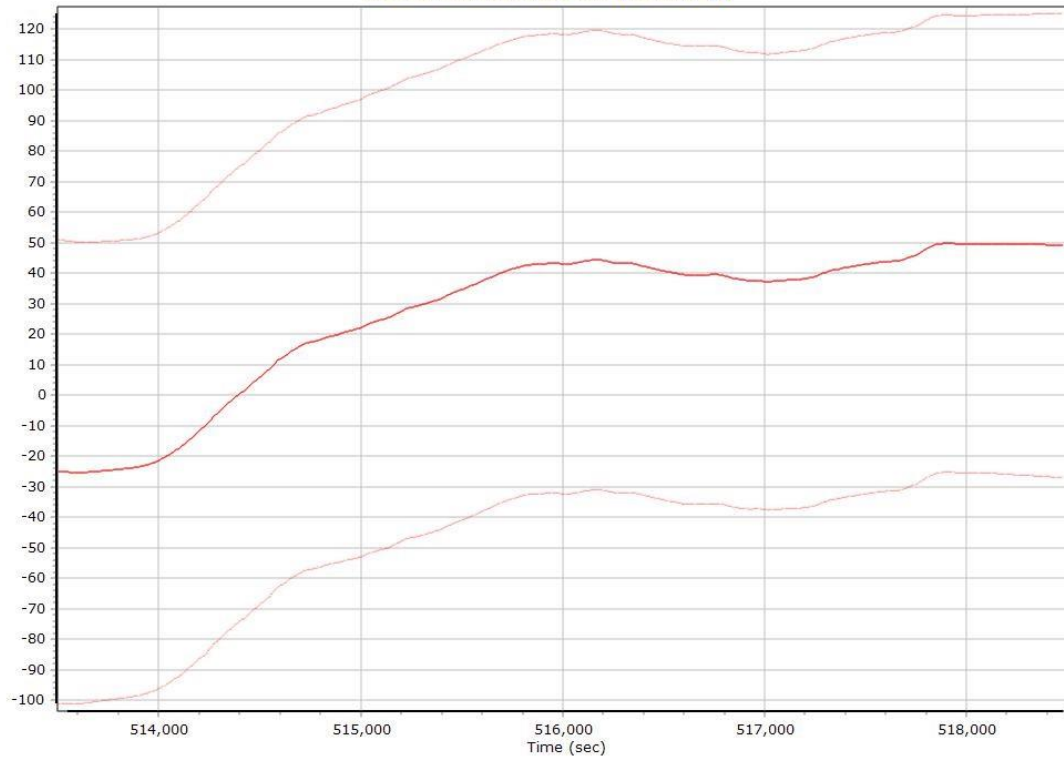
Smoothed Estimated Errors, Reference Frame

Accelerometer Bias (micro -g)



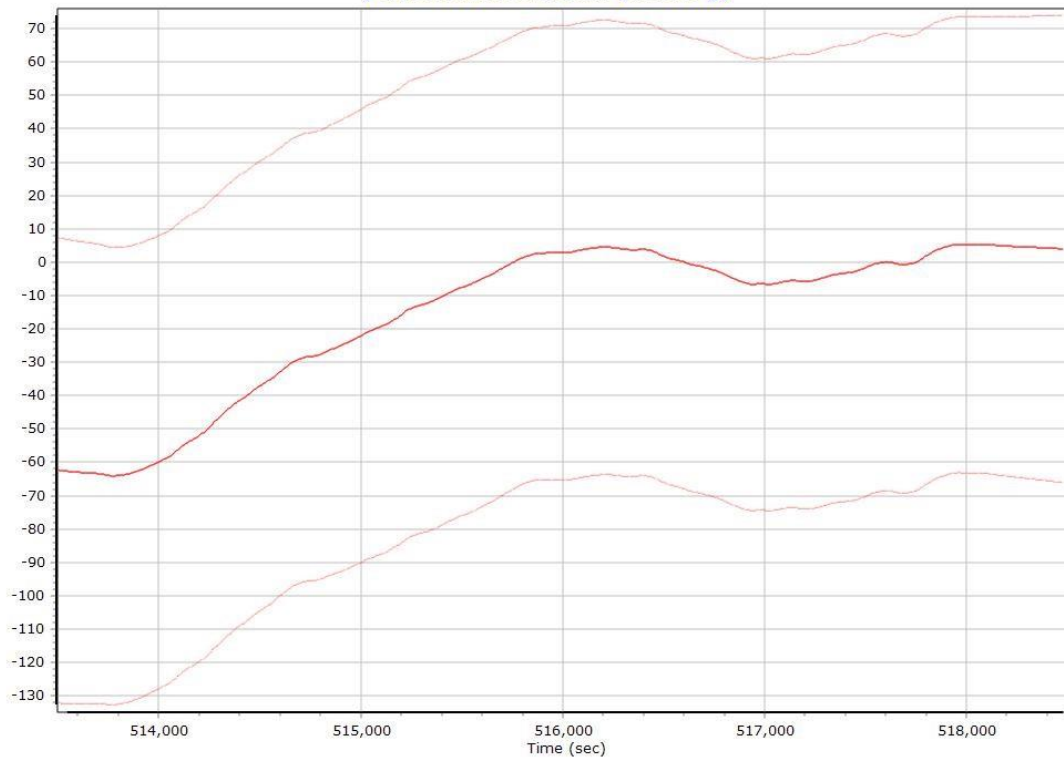
X Accelerometer Bias (micro -g)

x accelerometer bias (micro-g)



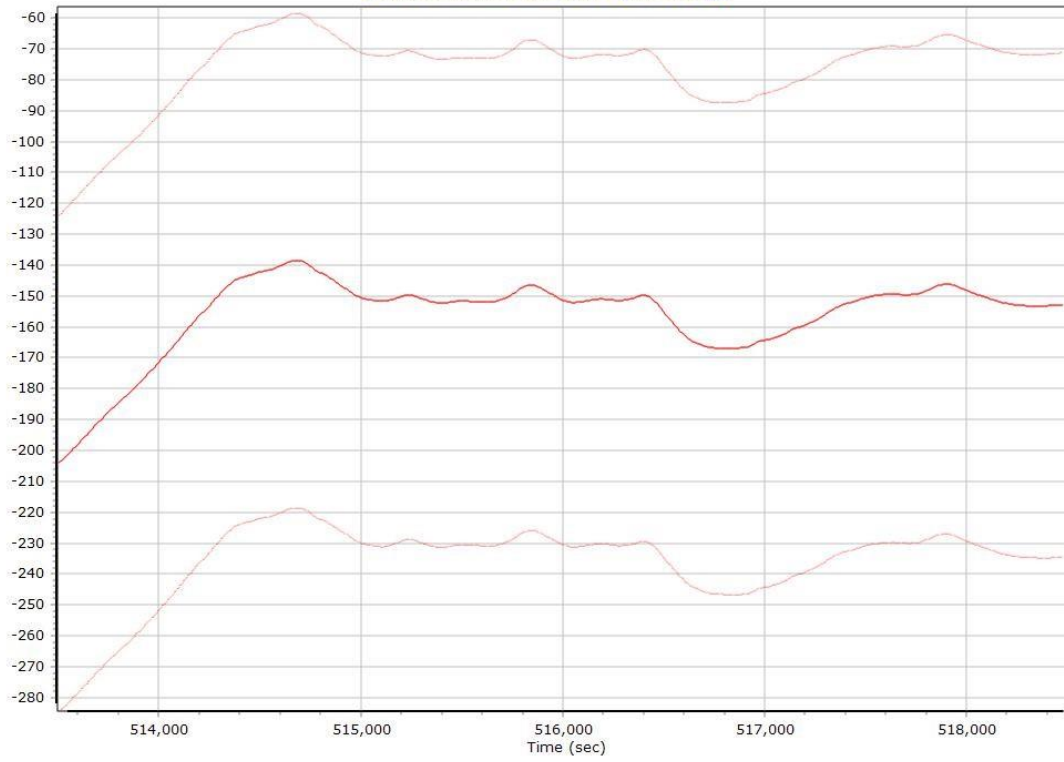
Y Accelerometer Bias (micro -g)

y accelerometer bias (micro-g)



Z Accelerometer Bias (micro -g)

z accelerometer bias (micro-g)

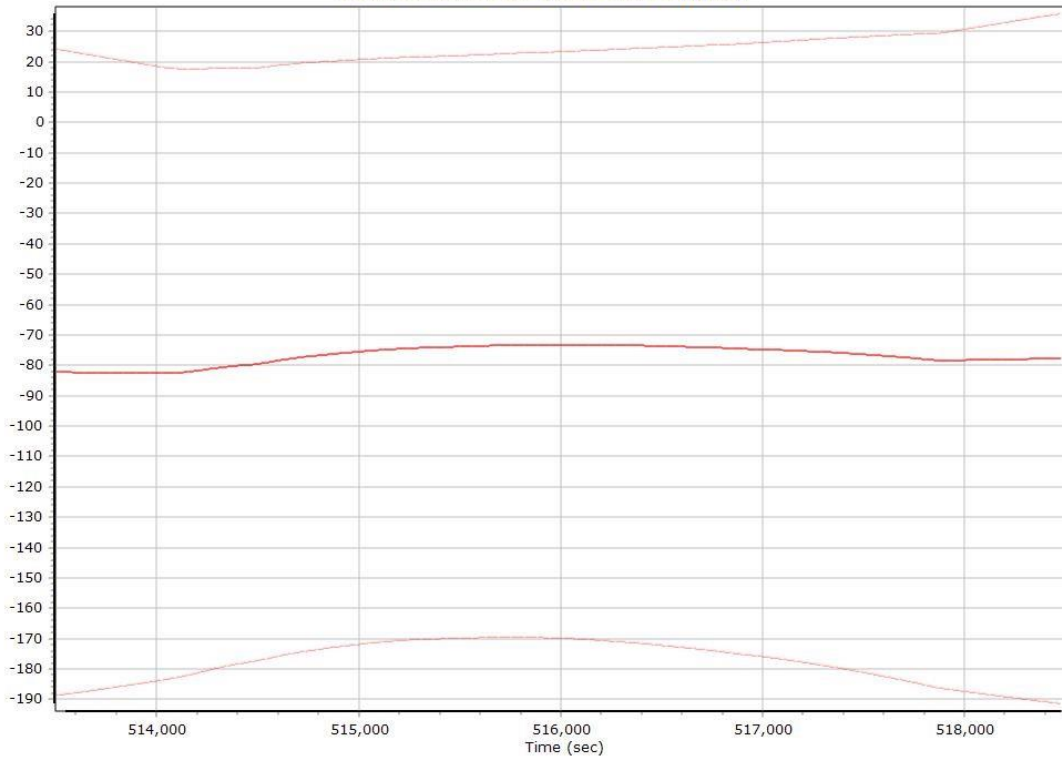


Accelerometer Scale Error (ppm)



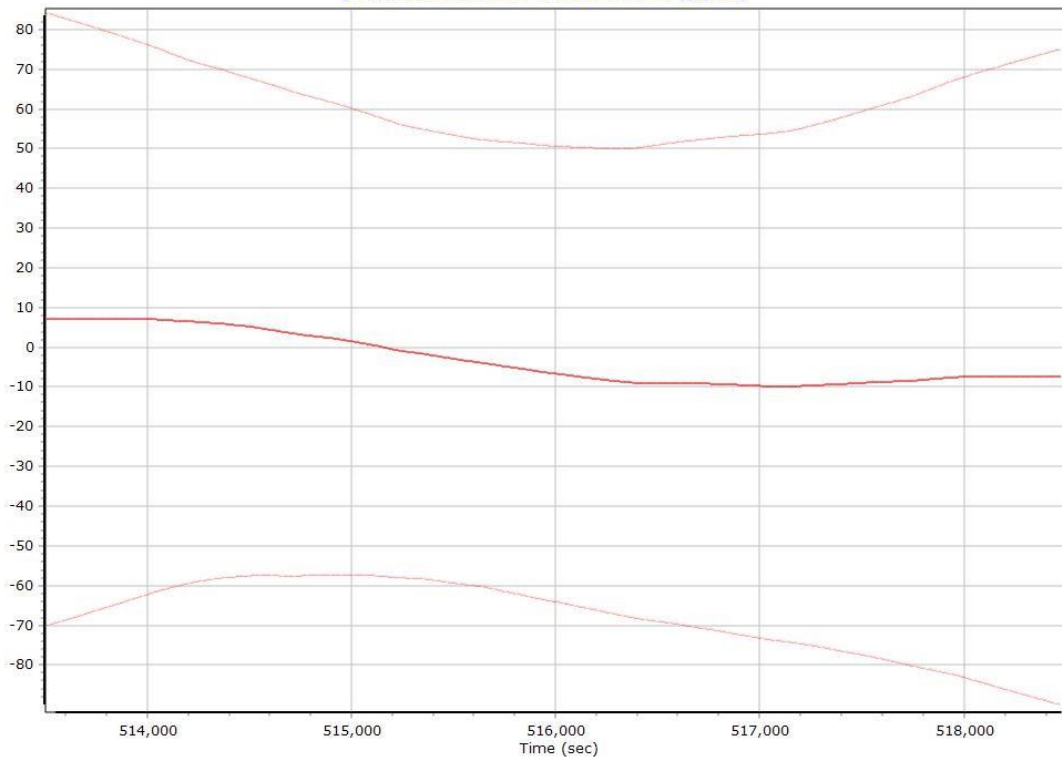
X Accelerometer Scale Error (ppm)

x accelerometer scale error (ppm)



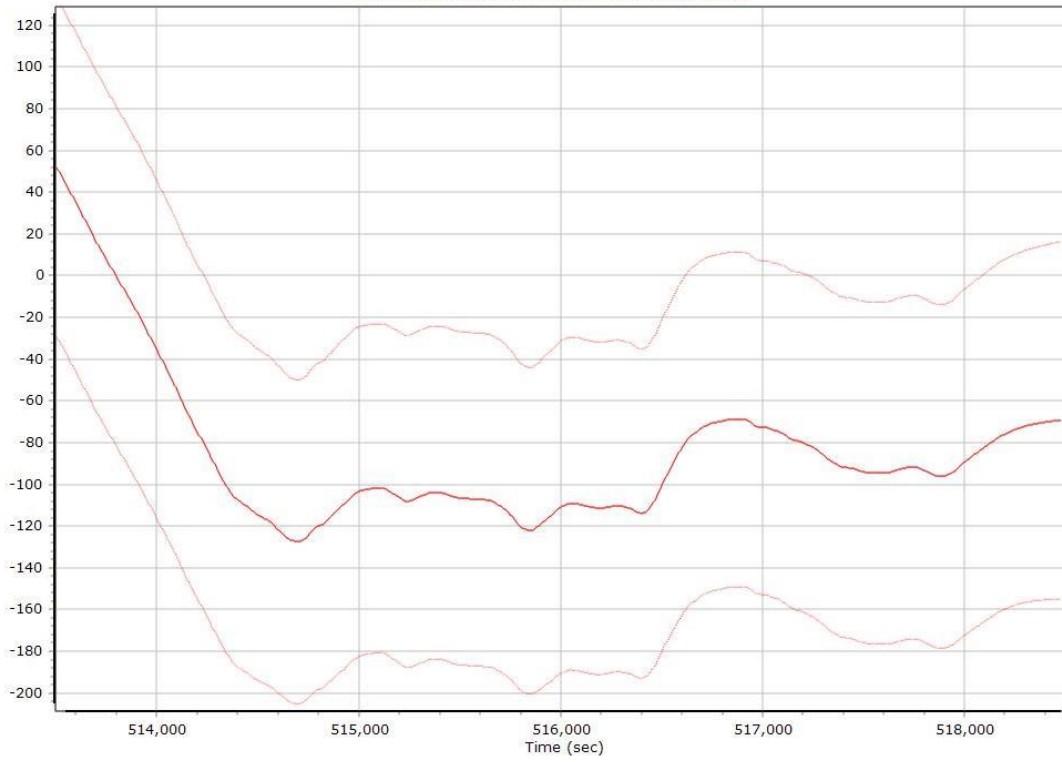
Y Accelerometer Scale Error (ppm)

y accelerometer scale error (ppm)

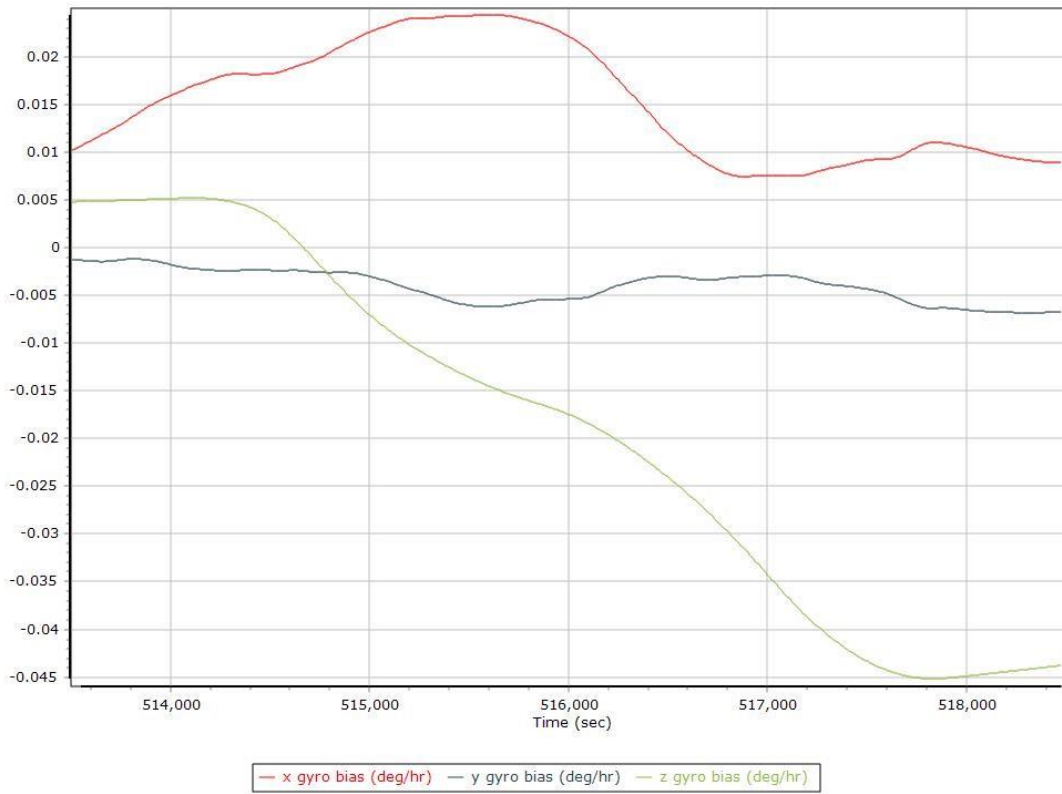


Z Accelerometer Scale Error (ppm)

z accelerometer scale error (ppm)

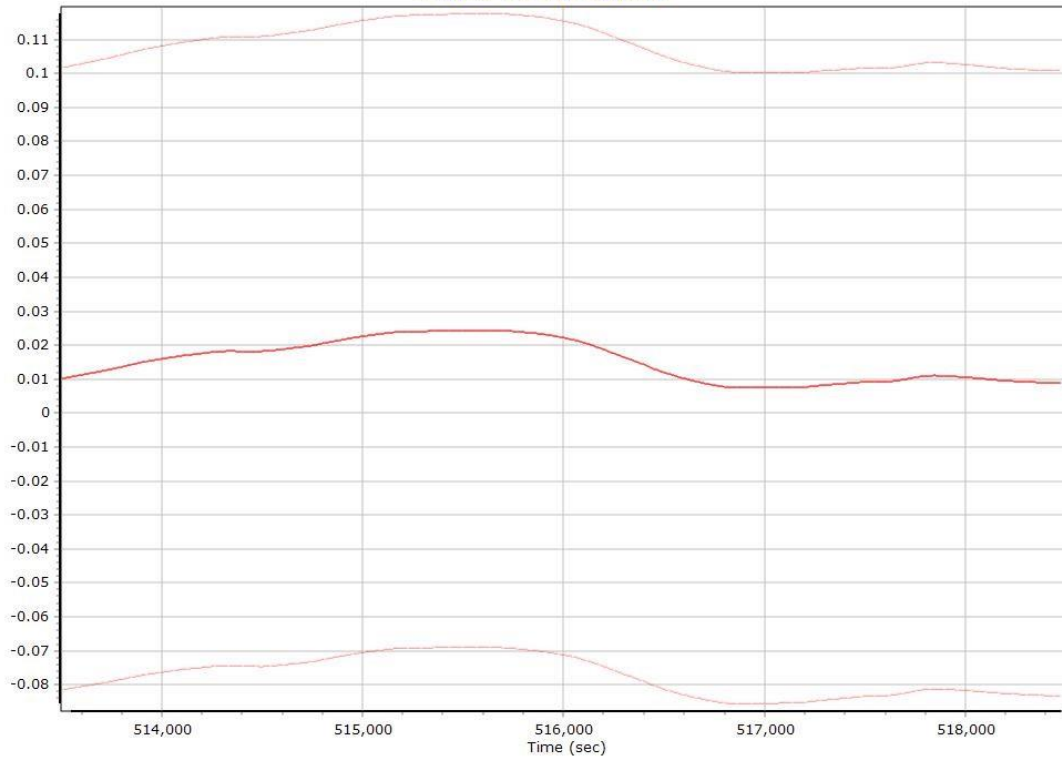


Gyro Bias (deg/h)



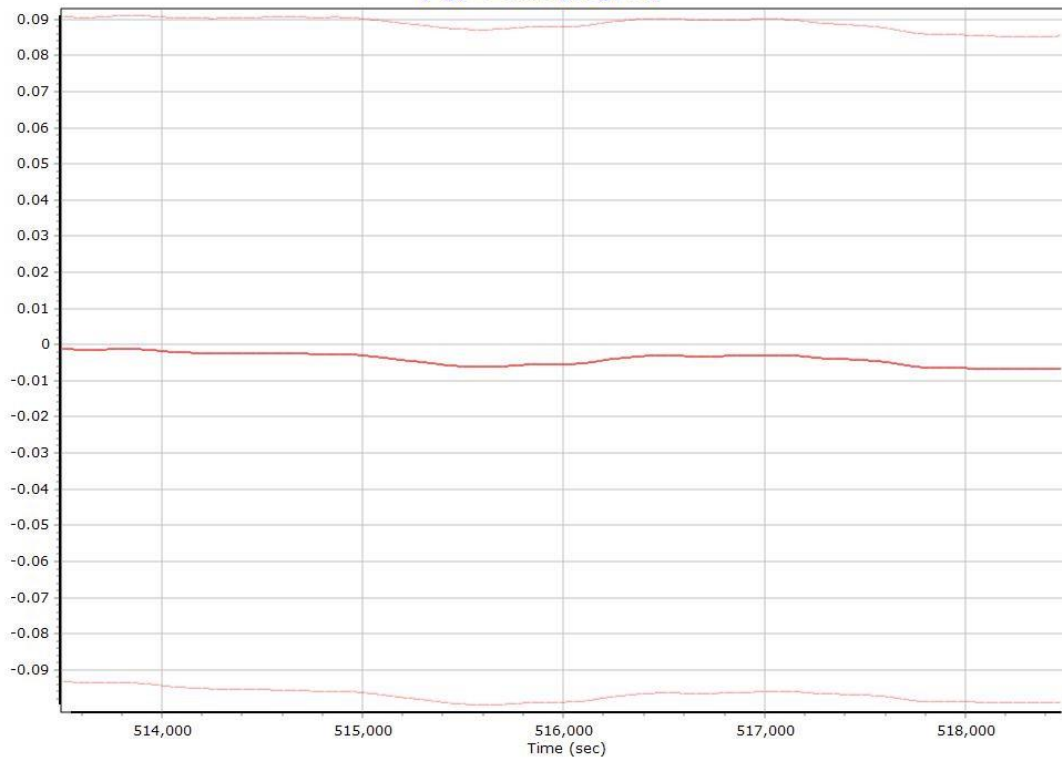
X Gyro Bias (deg/h)

x gyro bias (deg/hr)



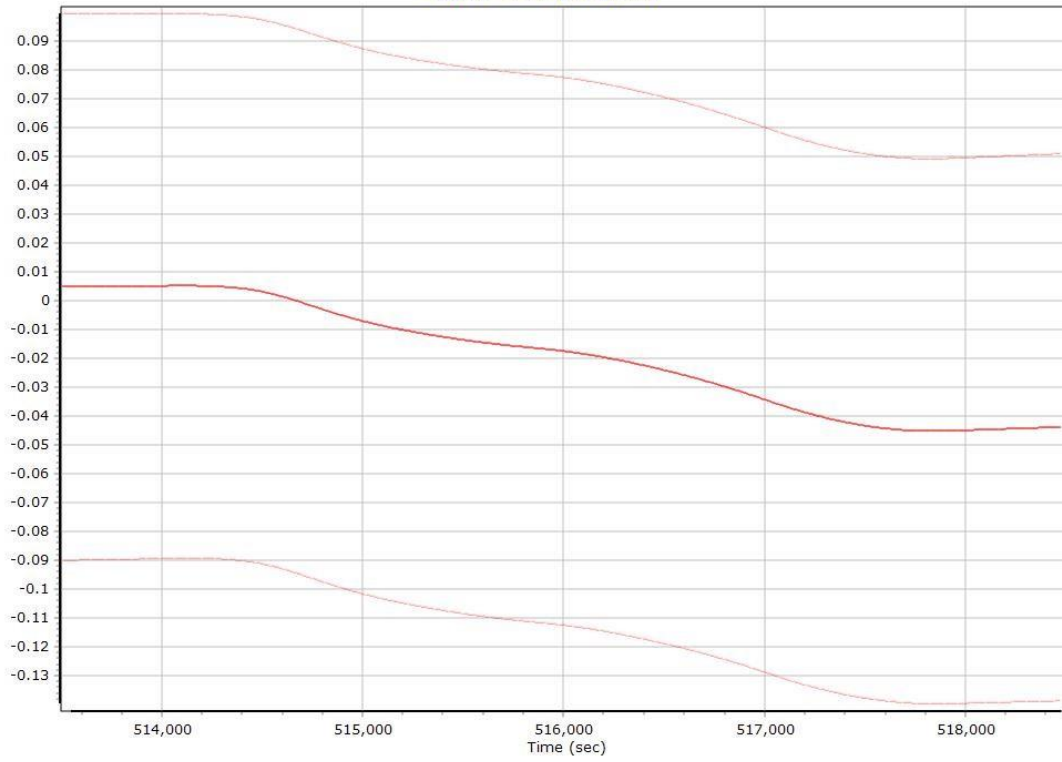
Y Gyro Bias (deg/h)

y gyro bias (deg/hr)

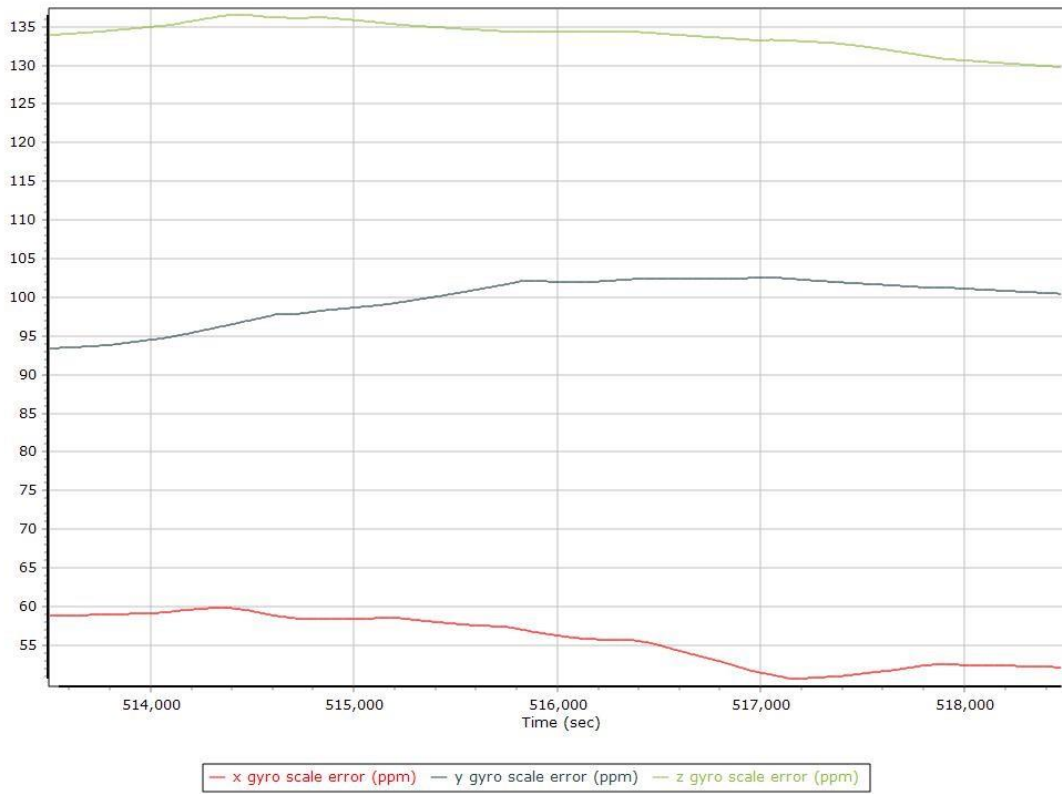


Z Gyro Bias (deg/h)

z gyro bias (deg/hr)

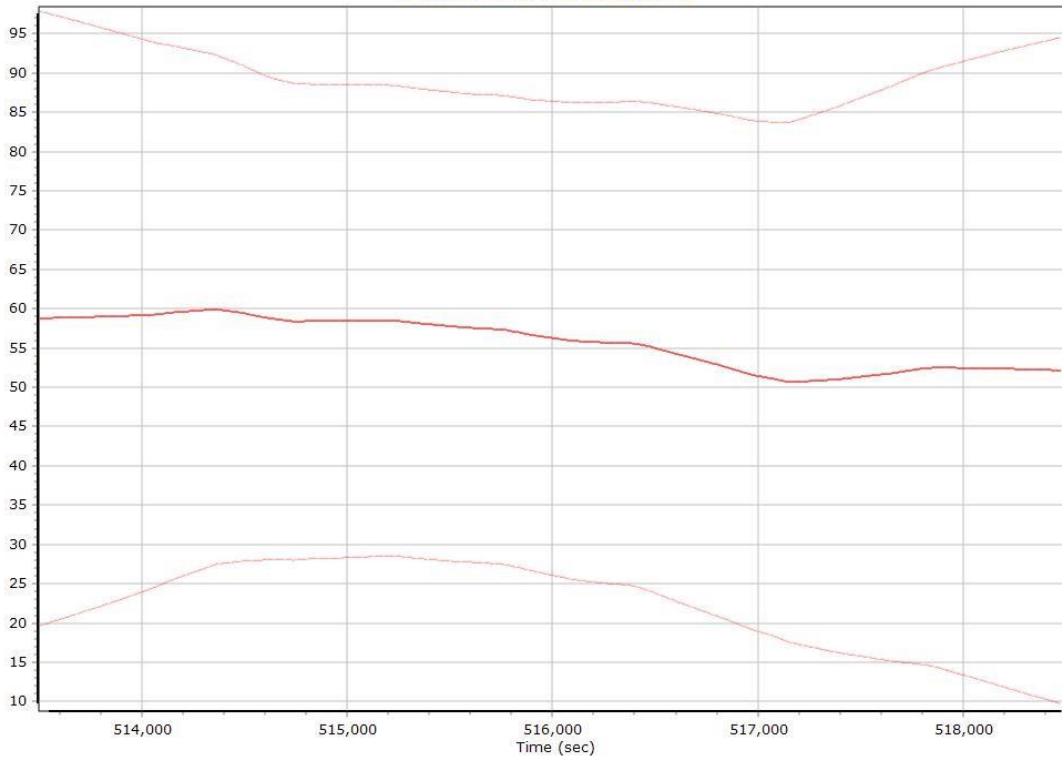


Gyro Scale Error (ppm)



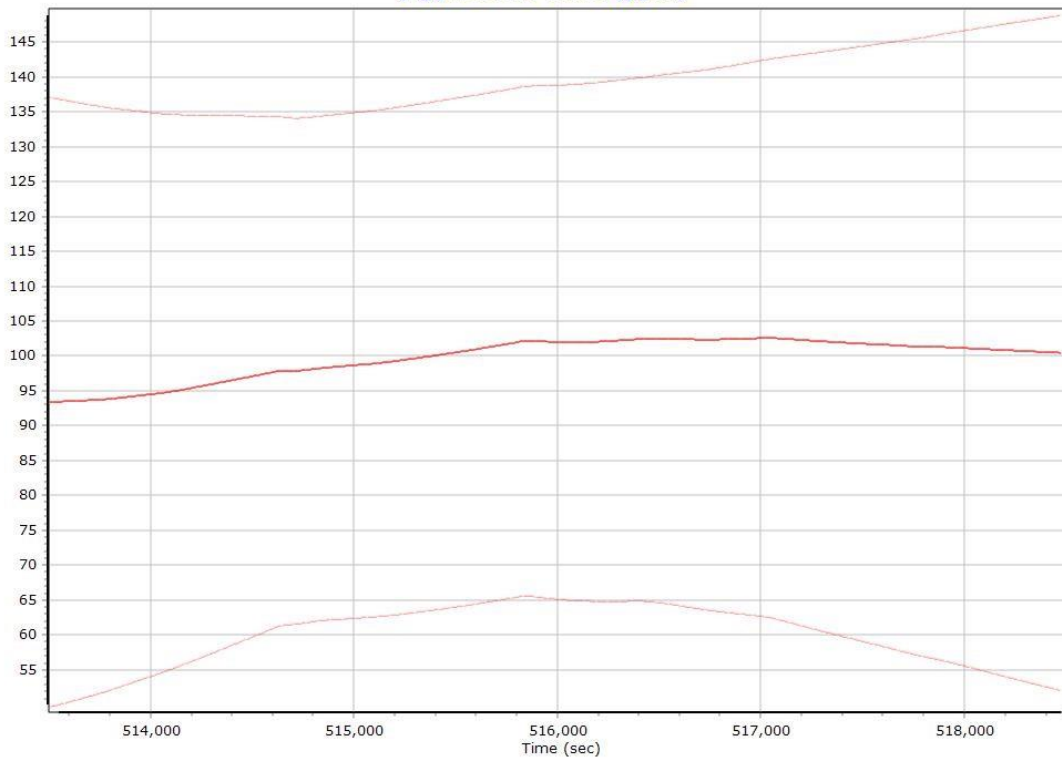
X Gyro Scale Error (ppm)

x gyro scale error (ppm)



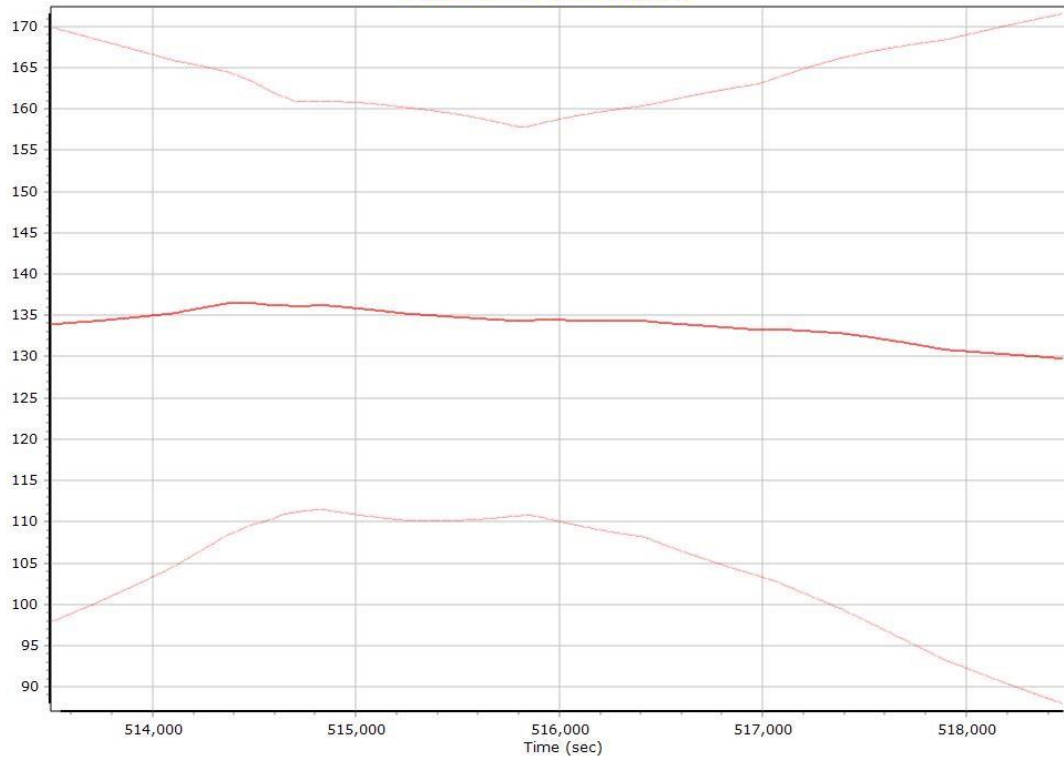
Y Gyro Scale Error (ppm)

y gyro scale error (ppm)



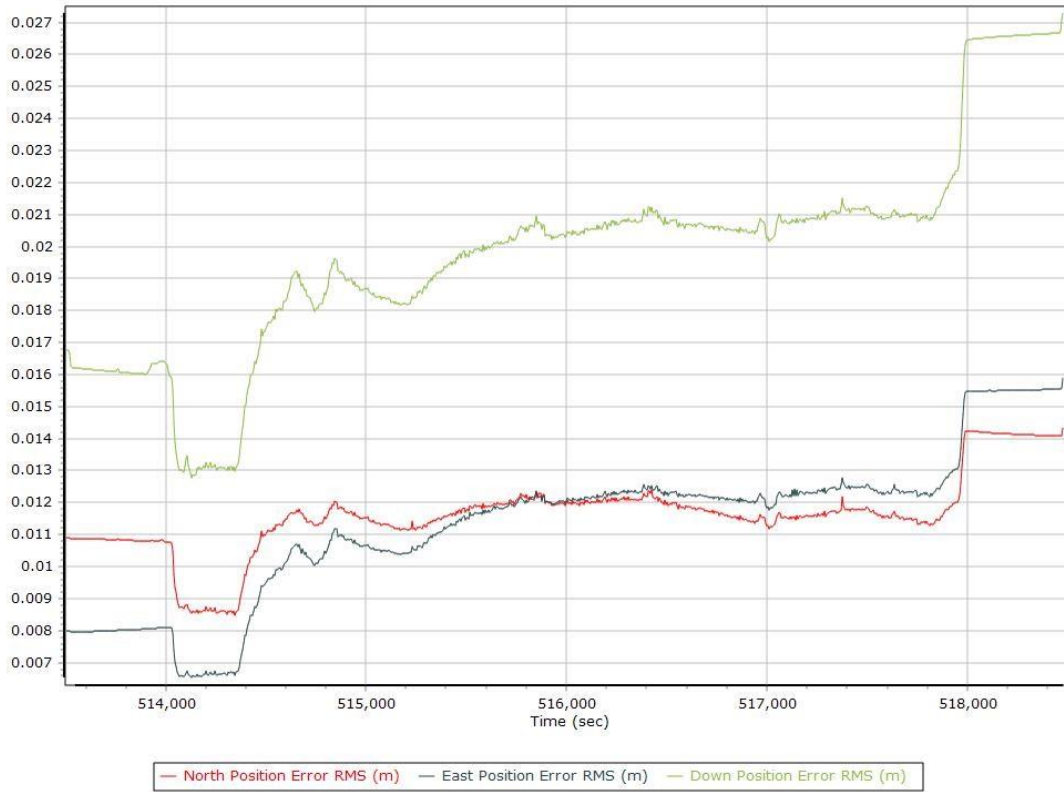
Z Gyro Scale Error (ppm)

z gyro scale error (ppm)

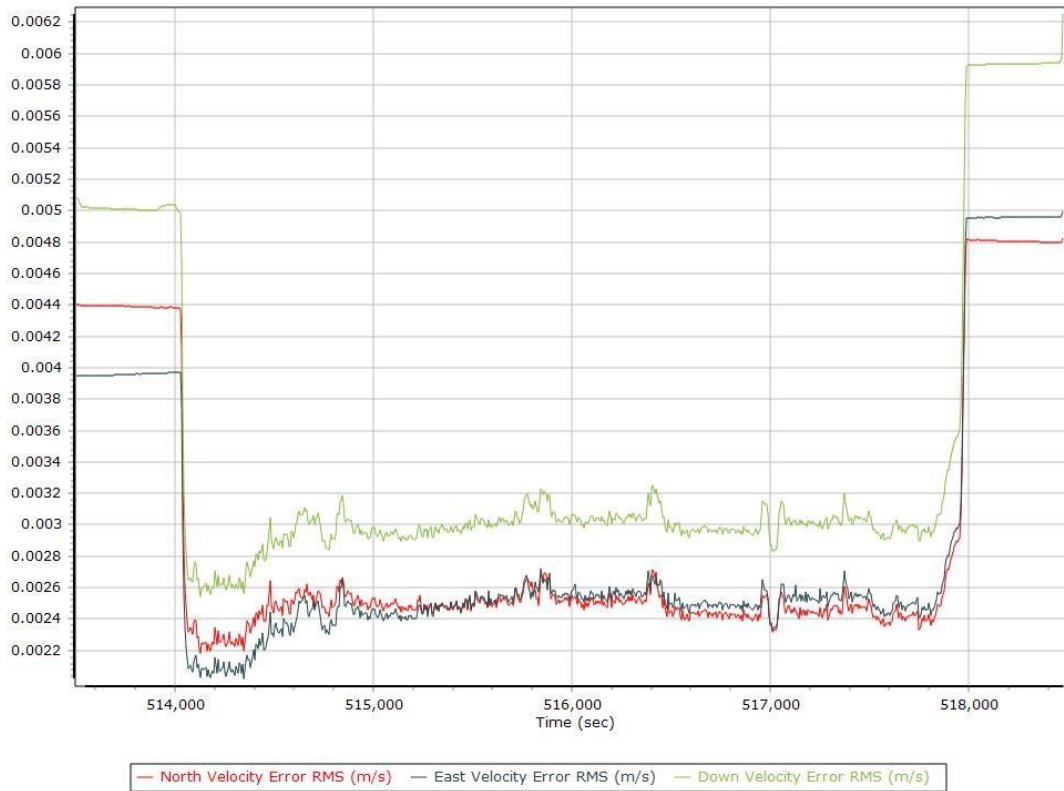


Smoothed Performance Metrics

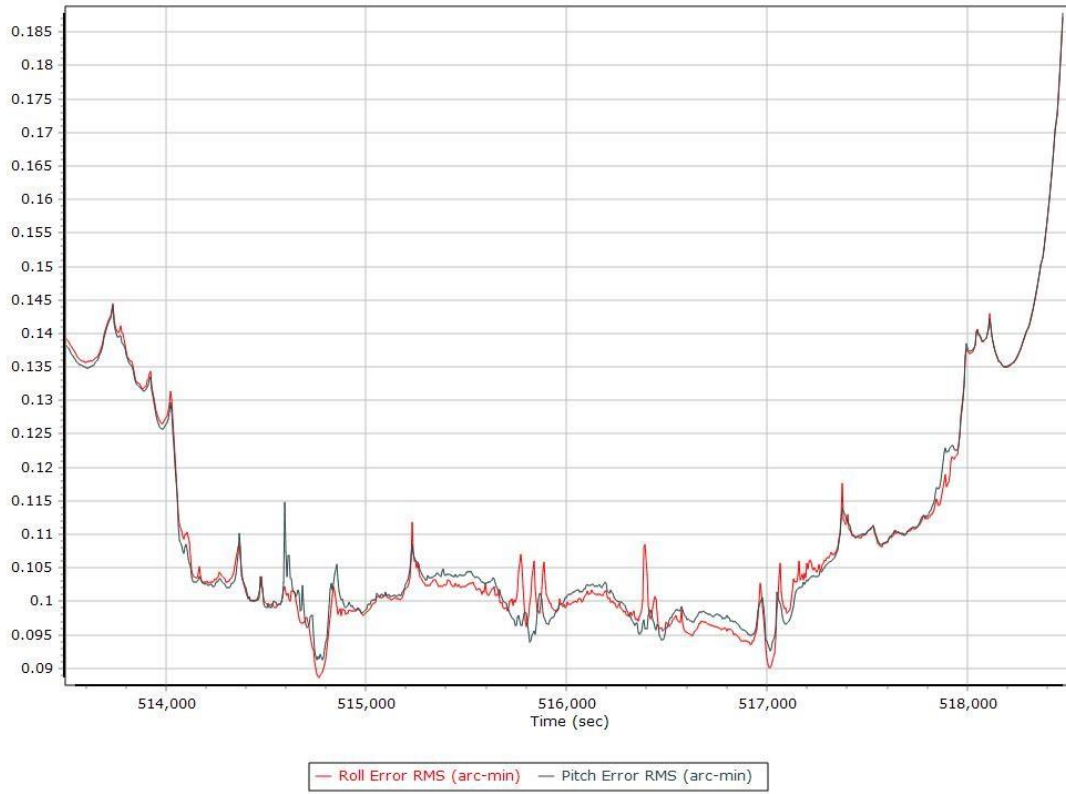
Position Error RMS (m)



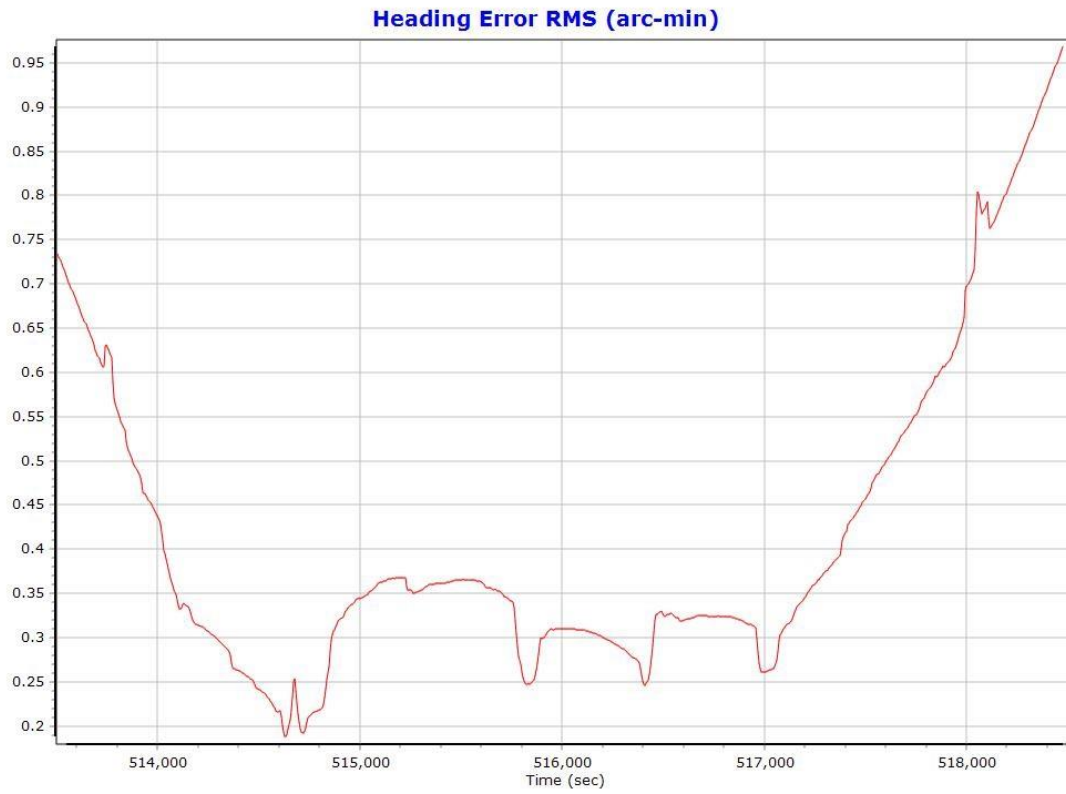
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc -min)



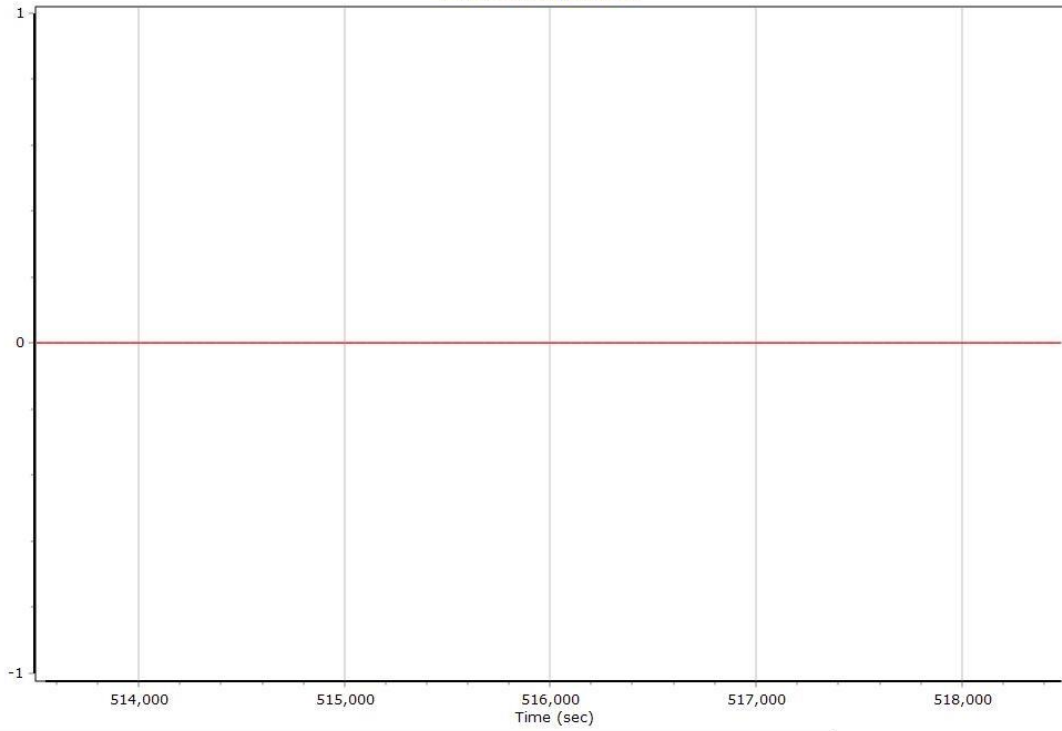
Heading Error RMS (arc-min)



Smoothed Solution Status

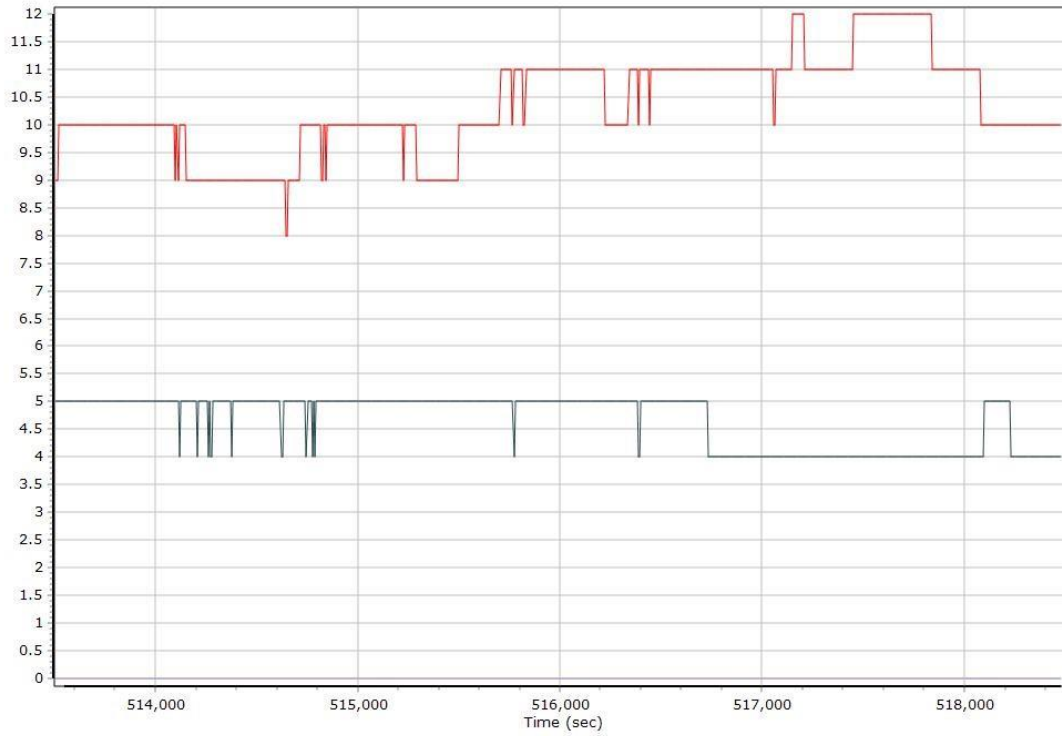
Processing Mode

Processing mode



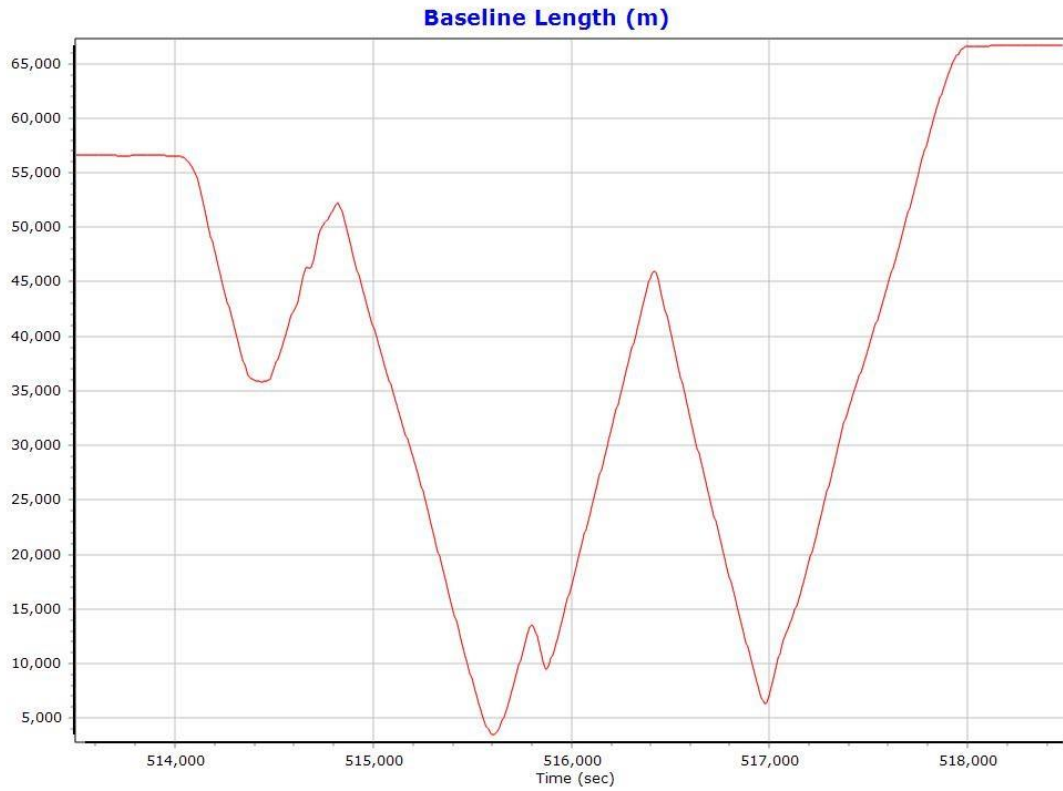
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR

Number of Satellites



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

Baseline Length



SBET IAKAR Separation



General Information

Mission Information

Project name	11292018NAD83
Processing date	2019-02-27 15:48:48
Mission date	2018-11-30 00:33:57
Mission duration	04:45:57.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9524
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
181130_003338_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3340.18g	GLONASS Broadcast Ephemeris
Ephm3340.18n	GPS Broadcast Ephemeris
igl20294.sp3	GLONASS Precise Ephemeris
igl20295.sp3	GLONASS Precise Ephemeris
igl20296.sp3	GLONASS Precise Ephemeris
igs20294.sp3	GPS Precise Ephemeris
igs20295.sp3	GPS Precise Ephemeris
igs20296.sp3	GPS Precise Ephemeris
flai333f00.18o	GNSS SingleBase
fld7333f00.18o	GNSS SingleBase
flib333f00.18o	GNSS SingleBase
flsi333f00.18o	GNSS SingleBase
fmyr333f00.18o	GNSS SingleBase
gsps333f00.18o	GNSS SingleBase
pnta333f00.18o	GNSS SingleBase
rcda333f00.18o	GNSS SingleBase
stpt333f00.18o	GNSS SingleBase
flai333f00.18g	GLONASS Broadcast Ephemeris
flai333f00.18n	GPS Broadcast Ephemeris
fld7333f00.18g	GLONASS Broadcast Ephemeris
fld7333f00.18n	GPS Broadcast Ephemeris
flib333f00.18g	GLONASS Broadcast Ephemeris
flib333f00.18n	GPS Broadcast Ephemeris
flsi333f00.18g	GLONASS Broadcast Ephemeris
flsi333f00.18n	GPS Broadcast Ephemeris
fmyr333f00.18g	GLONASS Broadcast Ephemeris
fmyr333f00.18n	GPS Broadcast Ephemeris
gsps333f00.18g	GLONASS Broadcast Ephemeris
gsps333f00.18n	GPS Broadcast Ephemeris
pnta333f00.18g	GLONASS Broadcast Ephemeris
pnta333f00.18n	GPS Broadcast Ephemeris
rcda333f00.18g	GLONASS Broadcast Ephemeris
rcda333f00.18n	GPS Broadcast Ephemeris
stpt333f00.18g	GLONASS Broadcast Ephemeris
stpt333f00.18n	GPS Broadcast Ephemeris
flai334f00.18o	GNSS SingleBase
fld7334f00.18o	GNSS SingleBase
flib334f00.18o	GNSS SingleBase
flsi334f00.18o	GNSS SingleBase
gsps334f00.18o	GNSS SingleBase
stpt334f00.18o	GNSS SingleBase
flai334f00.18g	GLONASS Broadcast Ephemeris
flai334f00.18n	GPS Broadcast Ephemeris
fld7334f00.18g	GLONASS Broadcast Ephemeris

f1d7334f00.18n	GPS Broadcast Ephemeris
f1ib334f00.18g	GLONASS Broadcast Ephemeris
f1ib334f00.18n	GPS Broadcast Ephemeris
f1si334f00.18g	GLONASS Broadcast Ephemeris
f1si334f00.18n	GPS Broadcast Ephemeris
gsps334f00.18g	GLONASS Broadcast Ephemeris
gsps334f00.18n	GPS Broadcast Ephemeris
stpt334f00.18g	GLONASS Broadcast Ephemeris
stpt334f00.18n	GPS Broadcast Ephemeris

Output Files

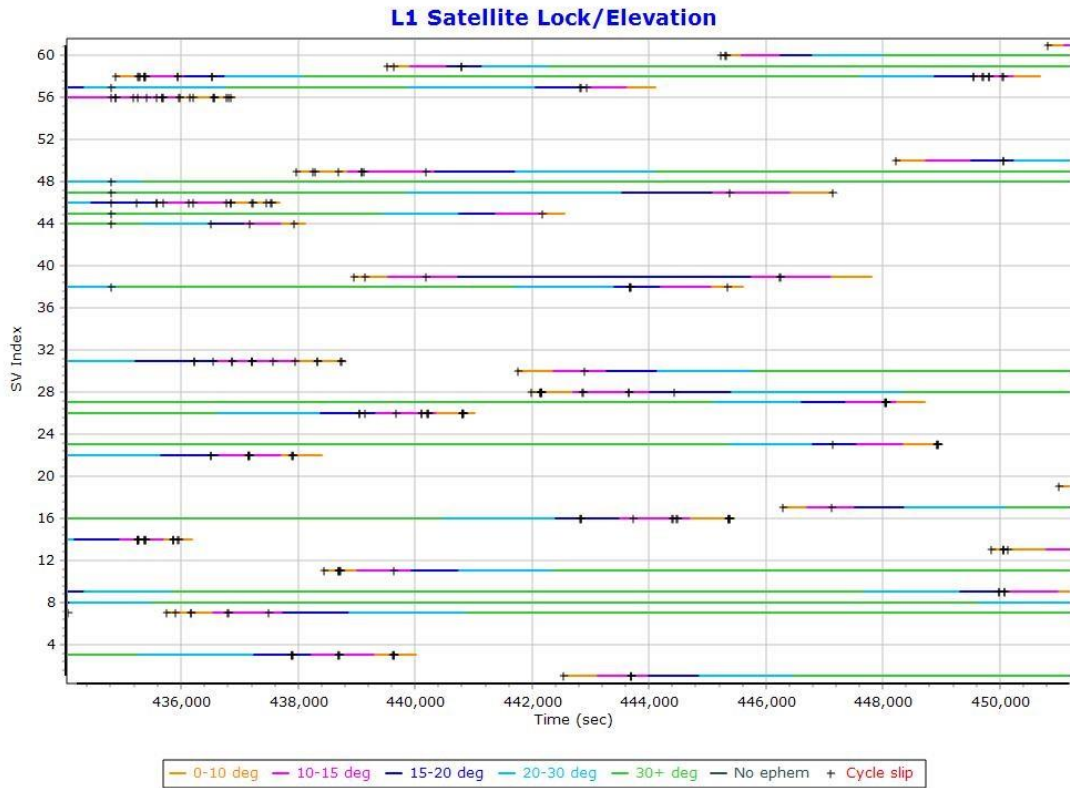
Filename	File type
sbet_Mission 1.out	SBET Trajectory File

Rover Data Summary

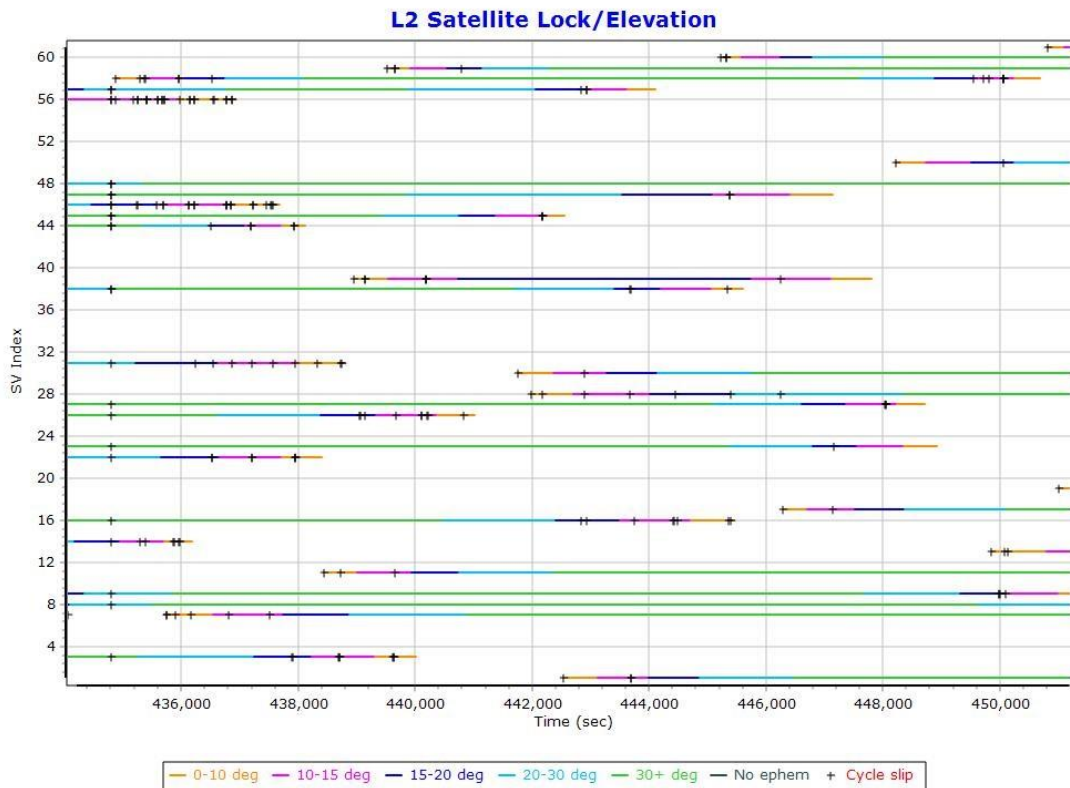
First raw data file	181130_003338_INS-GPS_1.raw		
Last raw data file	181130_003338_INS-GPS_1.raw		
Start GPS week	2029		
Start time	434018.787 (11/30/2018 12:33:38 AM)		
End time	451176.889 (11/30/2018 5:19:36 AM)		
Start of fine alignment	434158.229 (11/30/2018 12:35:58 AM)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	Event 2 Input, Event 3 Input		
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	0.000
Reference to Primary GNSS lever arm [m]	0.102	-0.140	-0.961
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

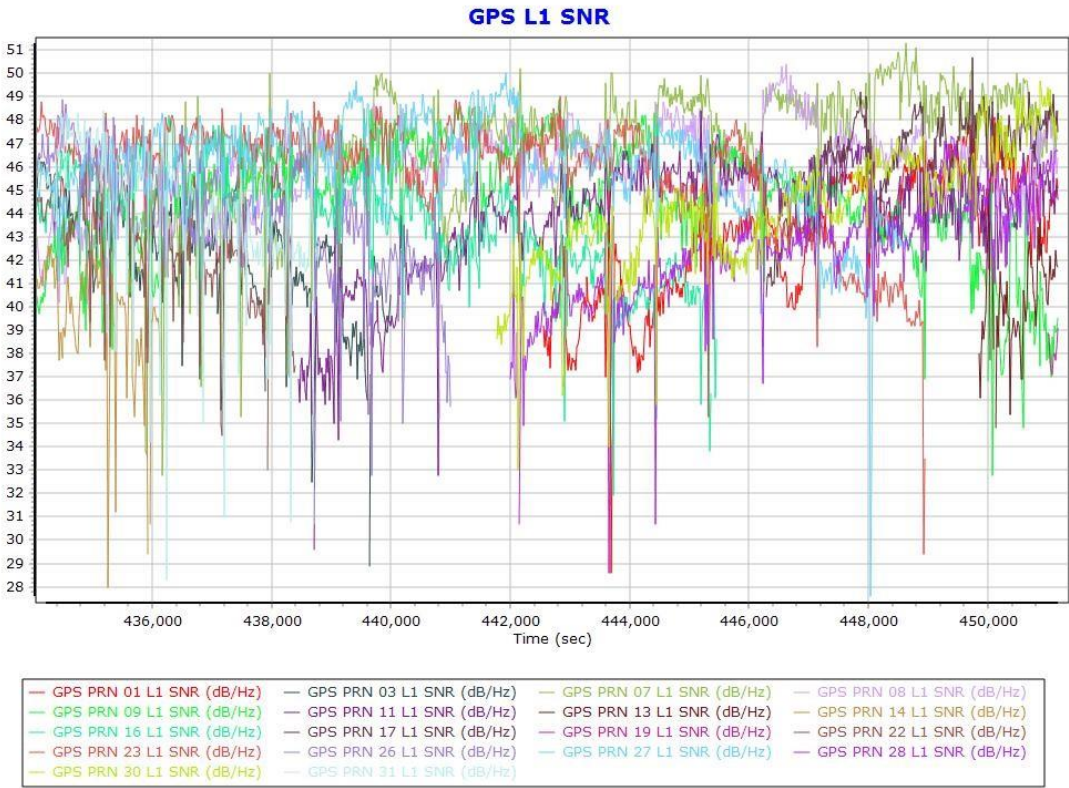
L1 Satellite Lock/Elevation



L2 Satellite Lock/Elevation

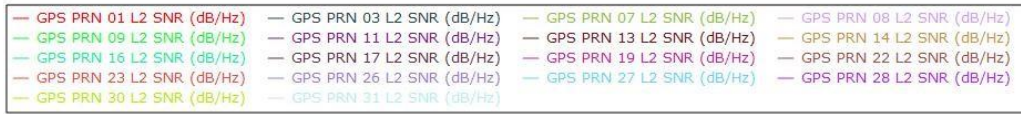
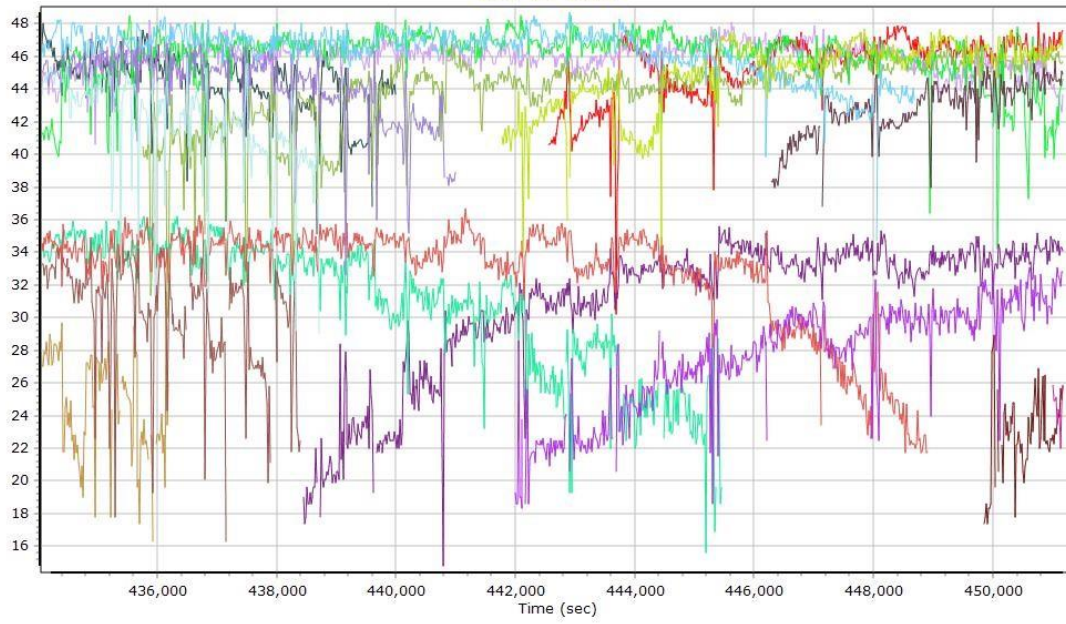


GPS L1 SNR



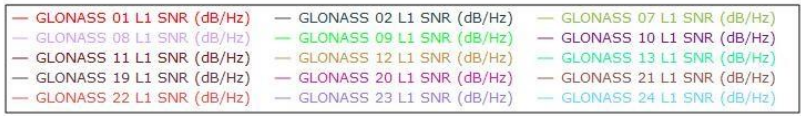
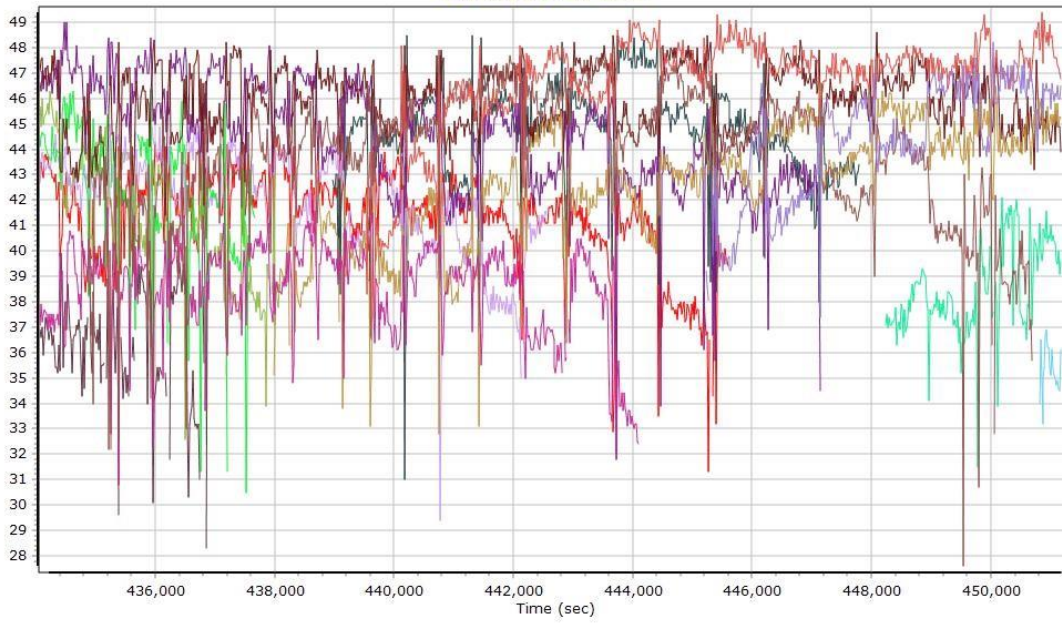
GPS L2 SNR

GPS L2 SNR



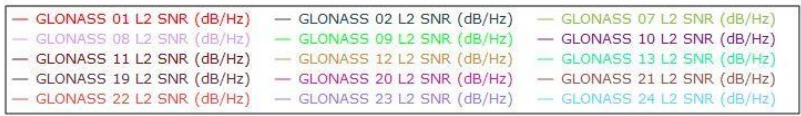
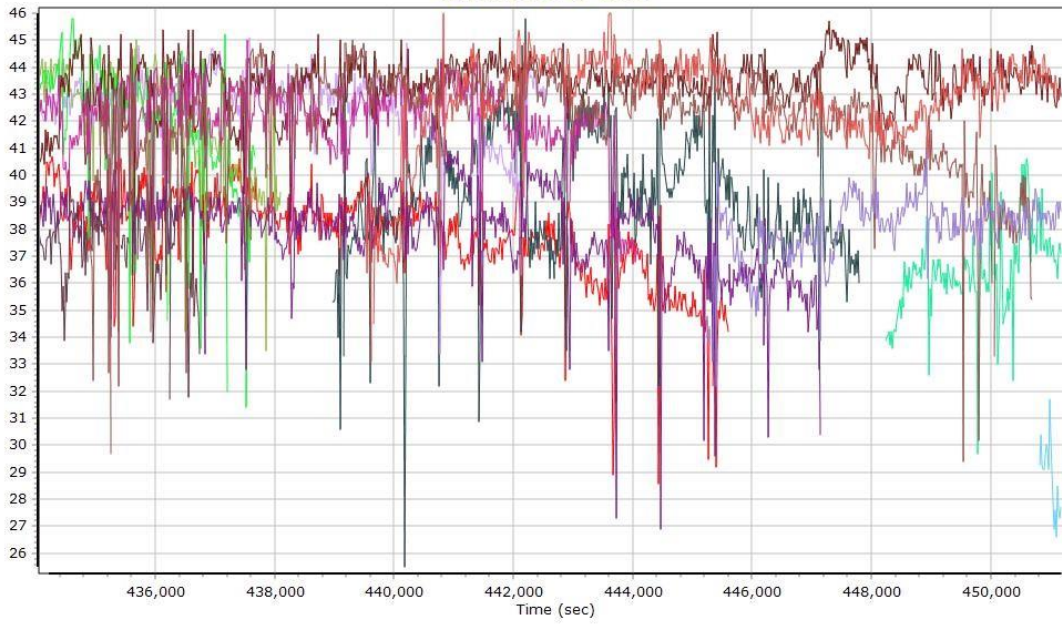
GLONASS L1 SNR

GLONASS L1 SNR



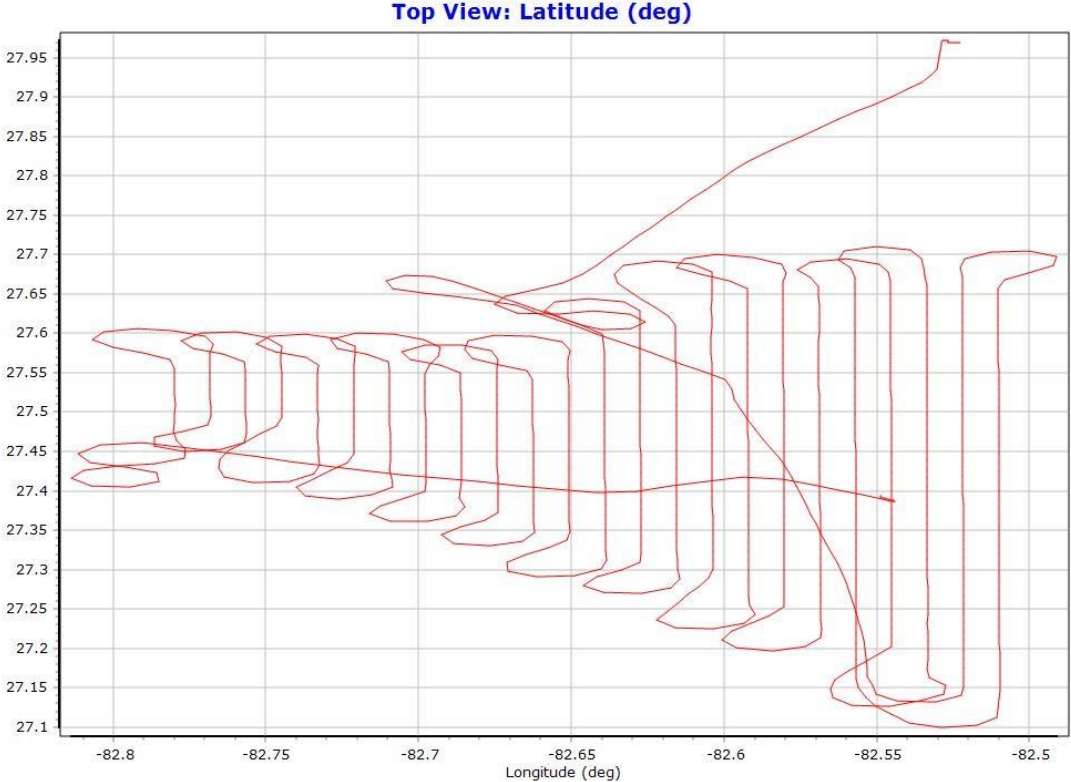
GLONASS L2 SNR

GLONASS L2 SNR

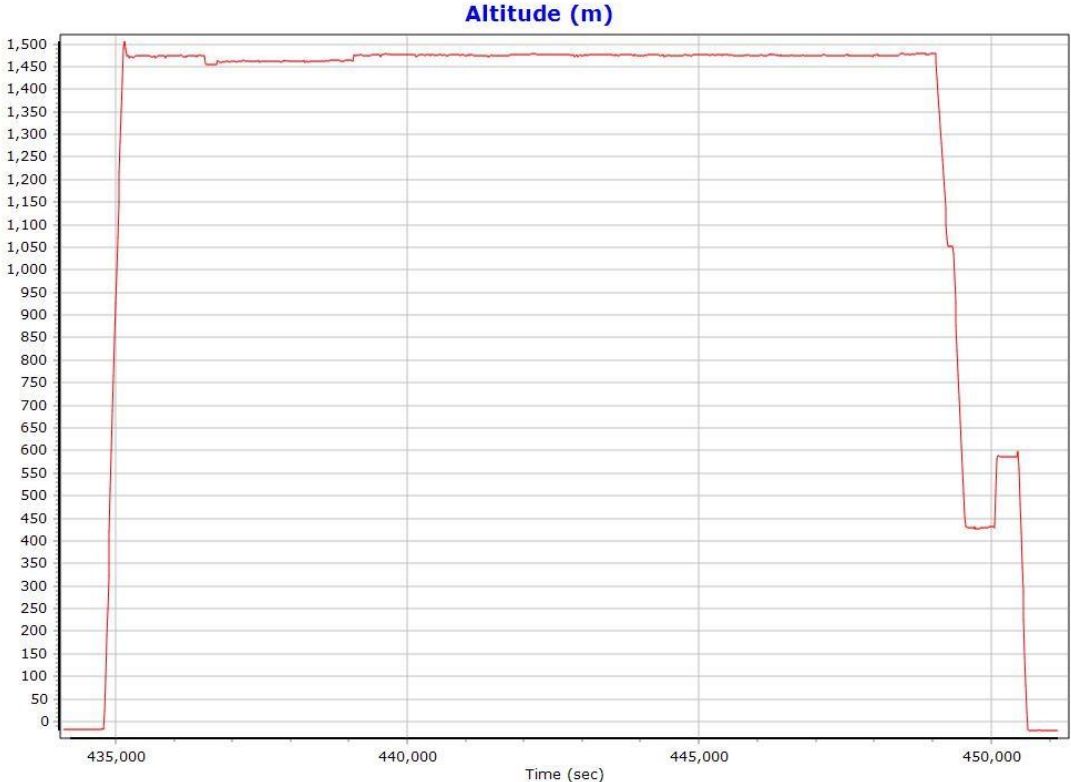


Trajectory Information

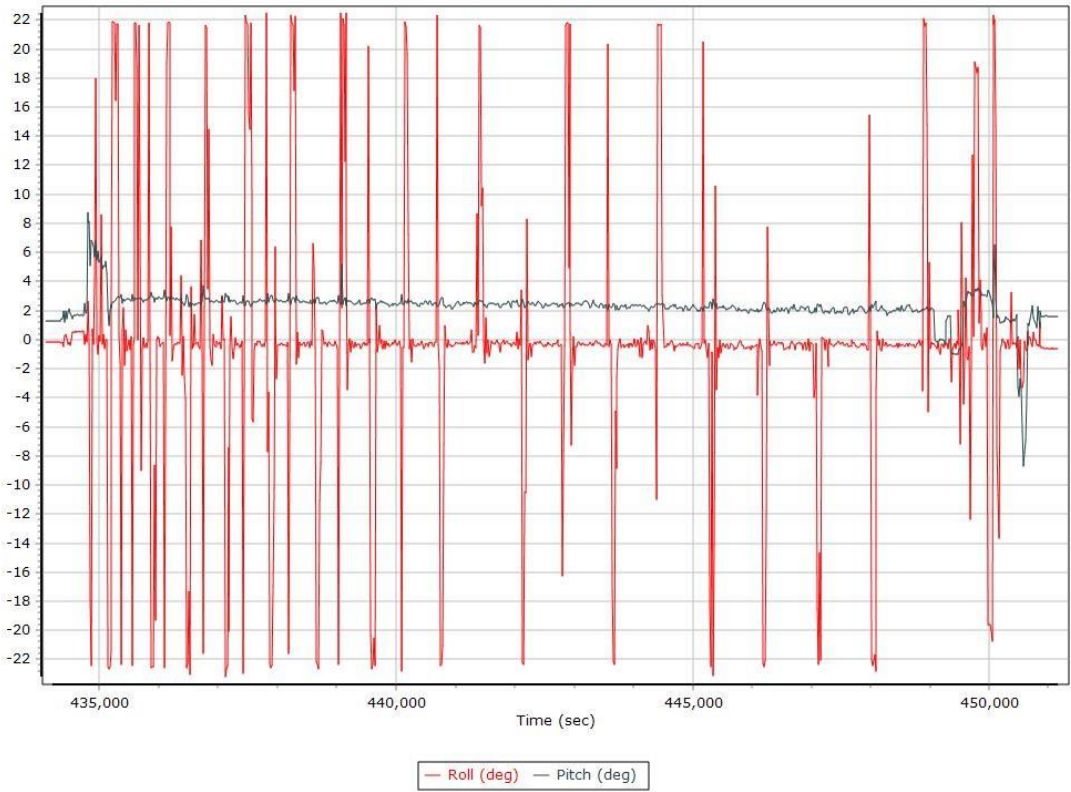
Top View



Altitude

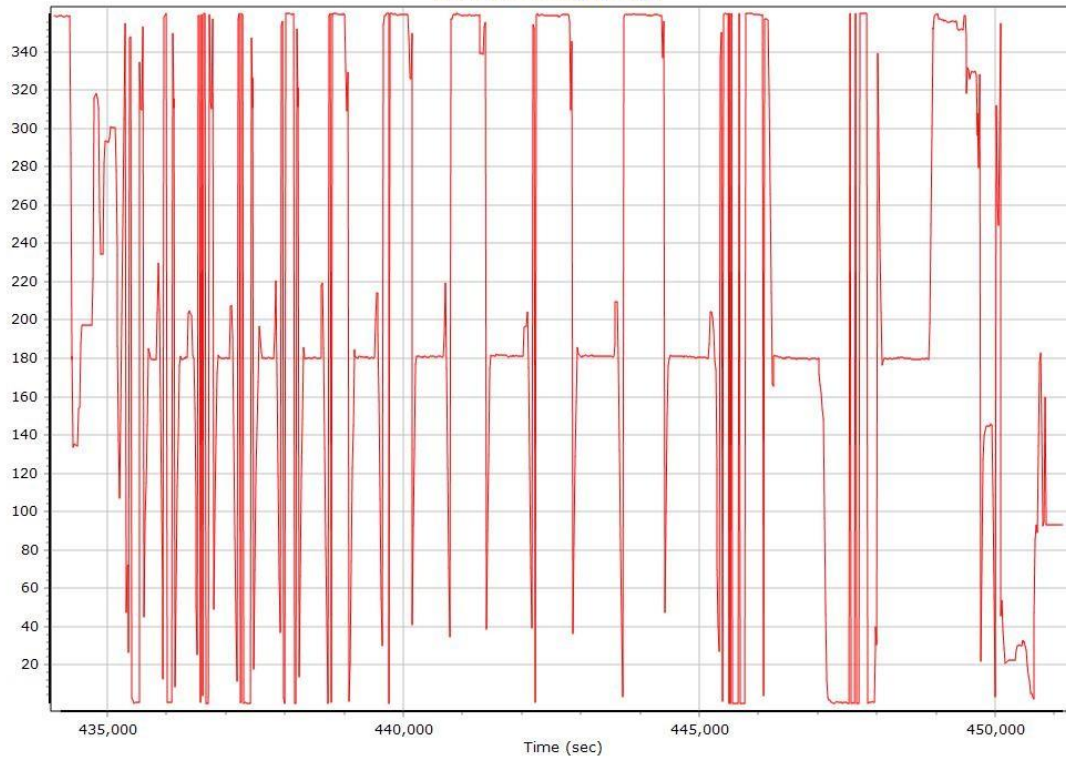


Roll/Pitch

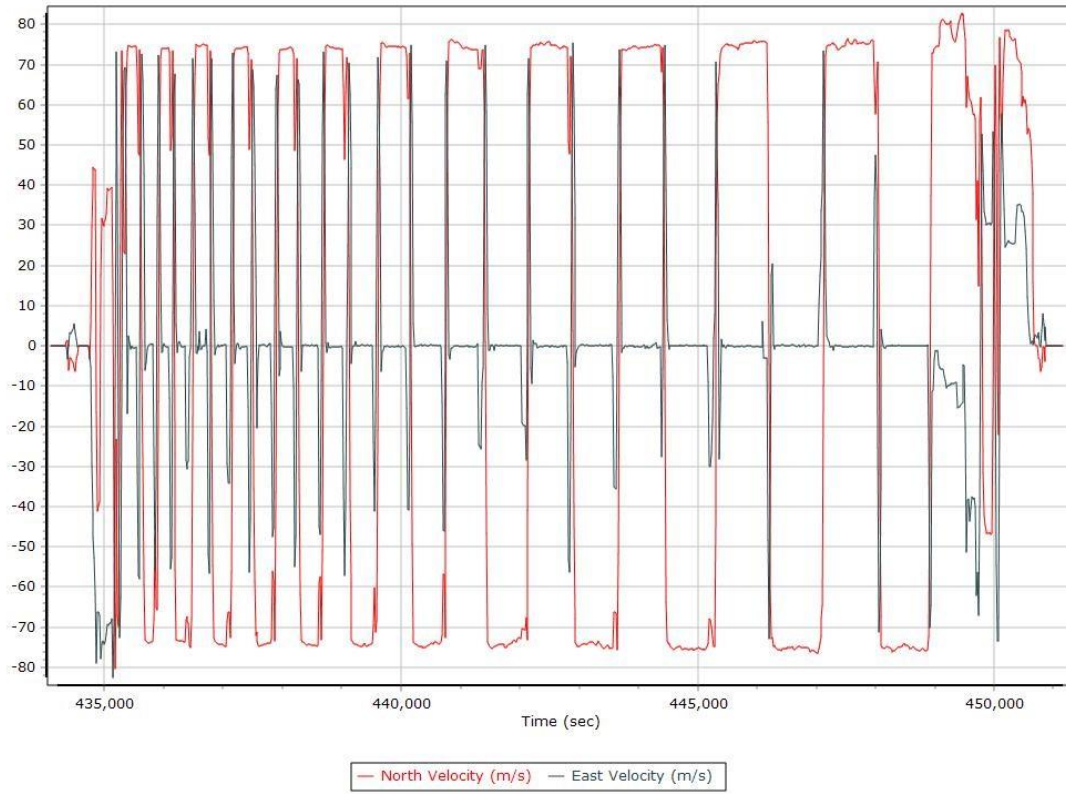


Heading

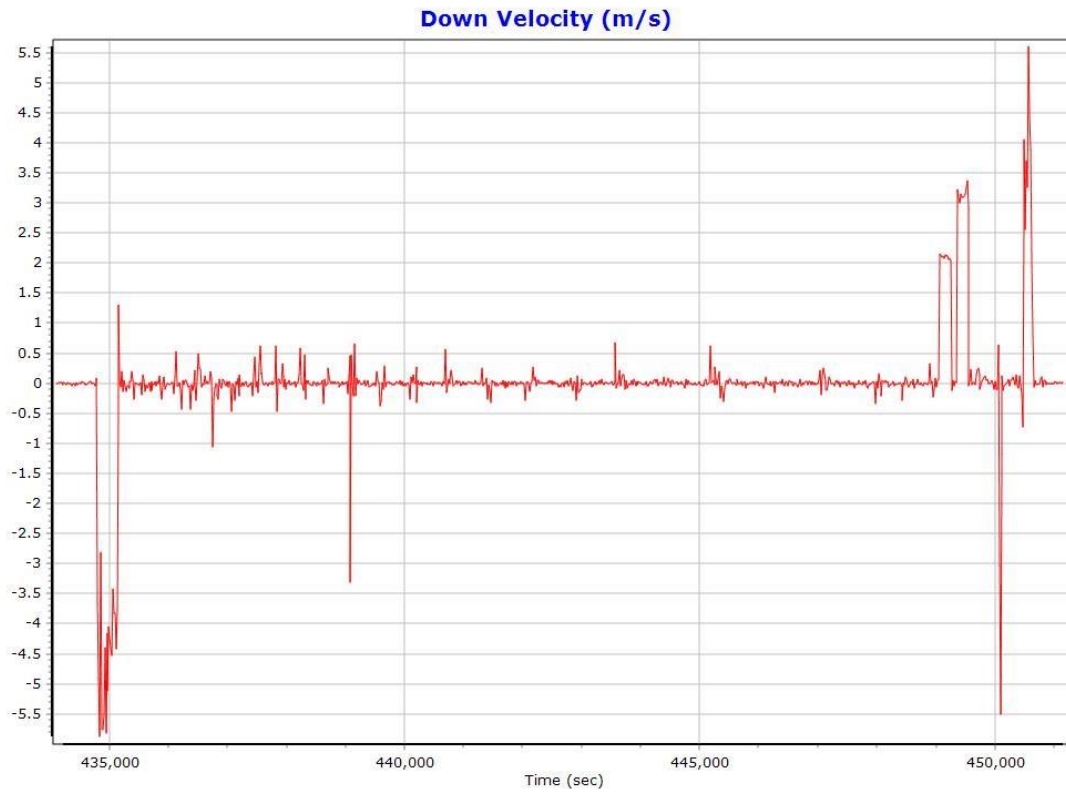
True Heading (deg)



North/East Velocity

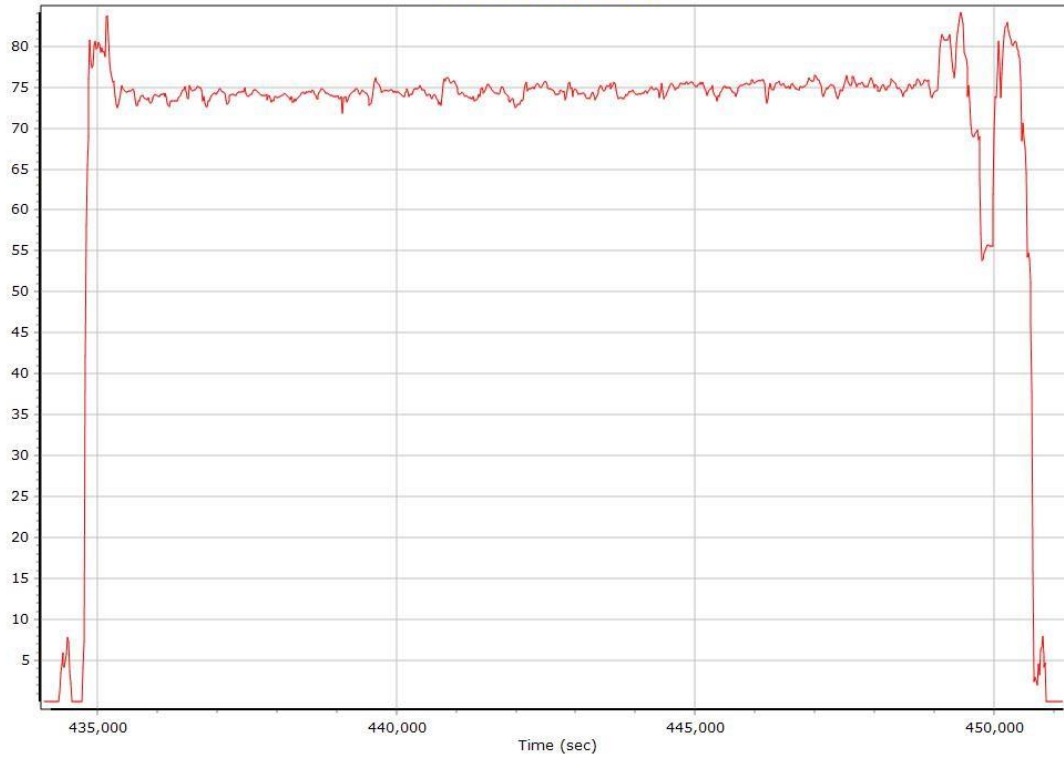


Down Velocity



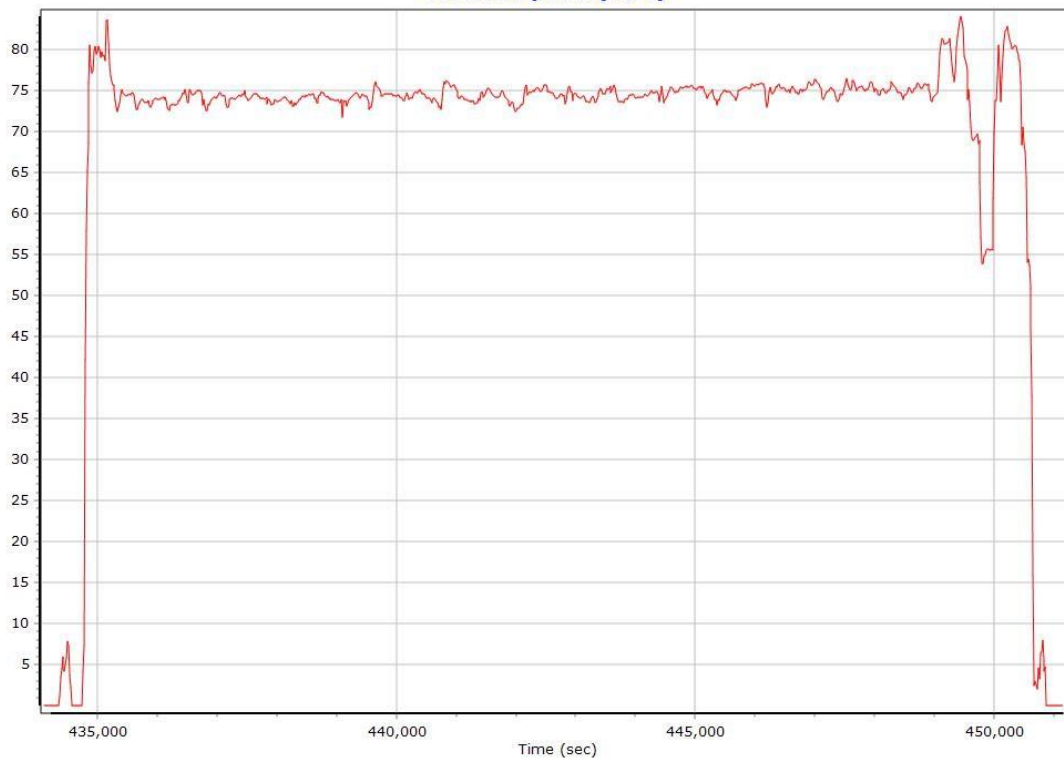
Total Speed

Total Speed (m/s)

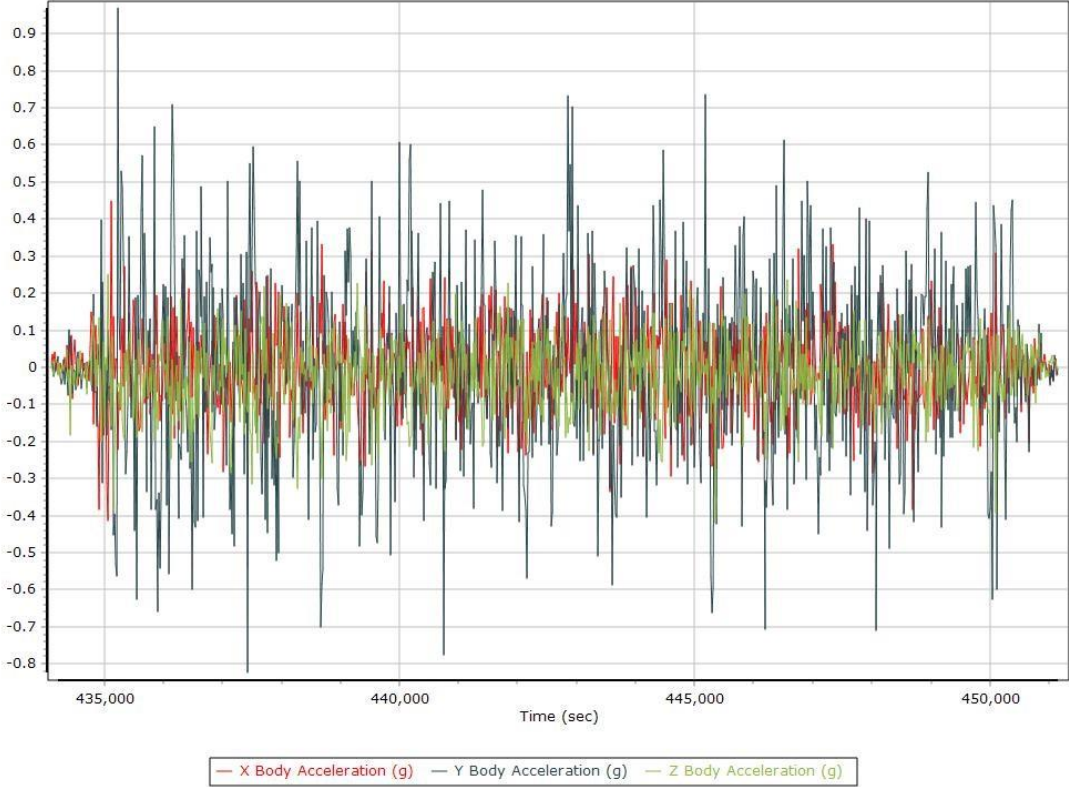


Ground Speed

Ground Speed (m/s)

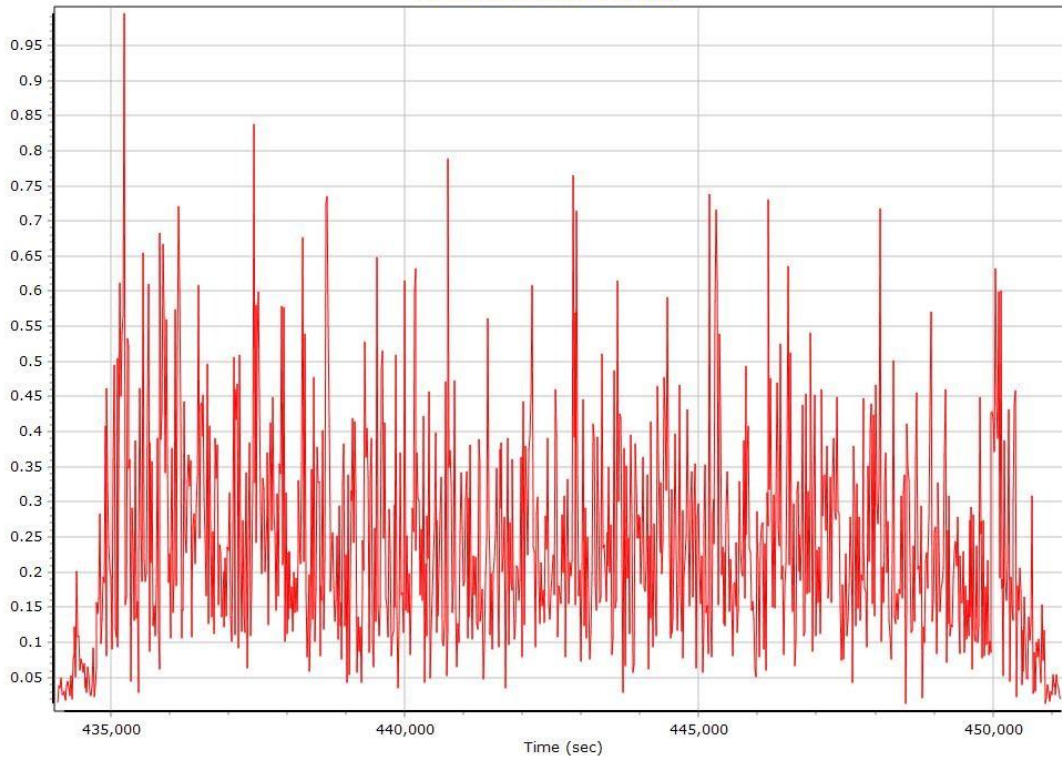


Body Acceleration

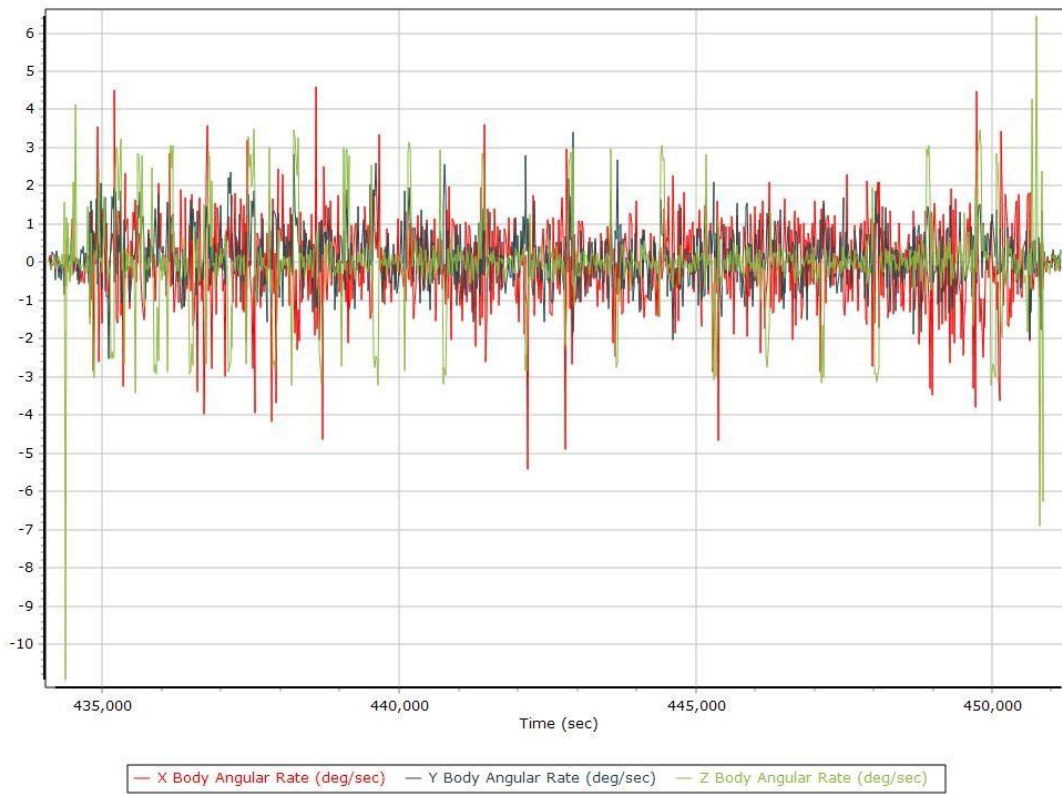


Total Body Acceleration

Total Acceleration (g)



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
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SmartBase Results

SmartBase status	
Primary station Id	

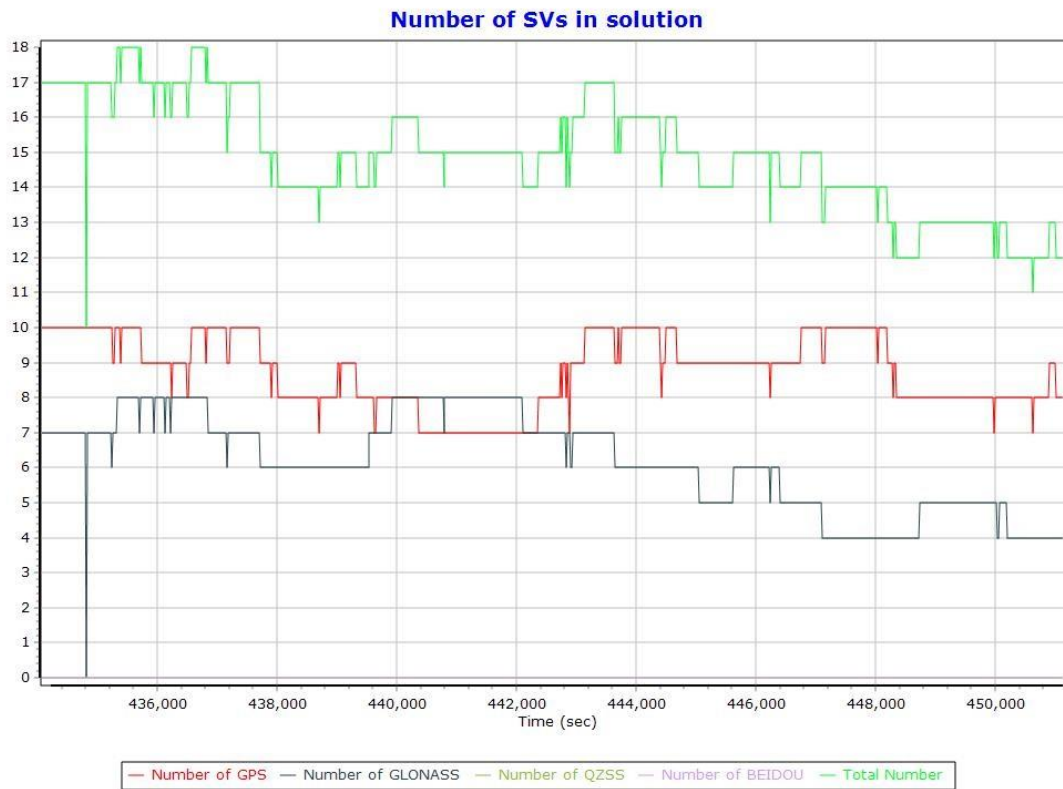
Primary station data rate [sec]	0.0
VRS/ASB generation rate [sec]	0.0
VRS/ASB timespan	
Number of reference stations	0
Primary station GPS measurement usage [%]	0.0
Average number of satellites per epoch	0.0
Max number of GPS stations used	0
Min number of GPS stations used	0
Total full data gap [sec]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

GNSS QC

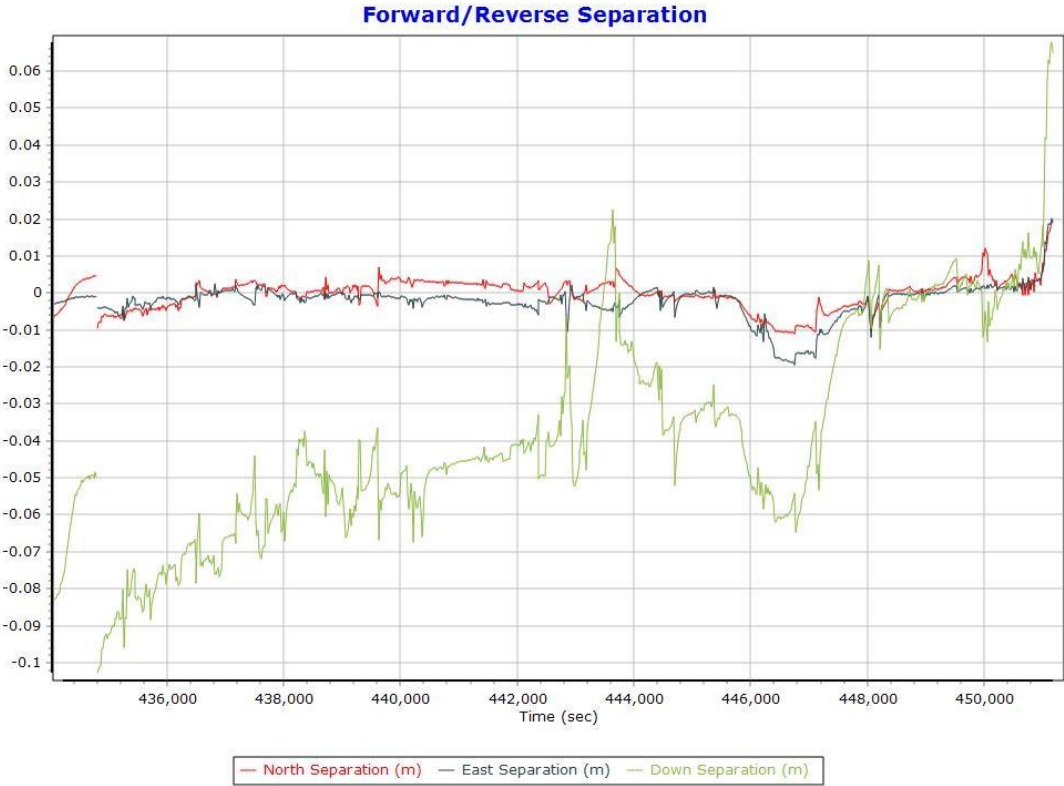
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	0.50	55.47	
Number of GPS SV	7	10	9
Number of GLONASS SV	0	8	6
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	10	18	15
PDOP	1.17	1.97	1.42
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	17121.00	0.00	1.00
Percentage	99.99	0.00	0.01

Num SVs in solution

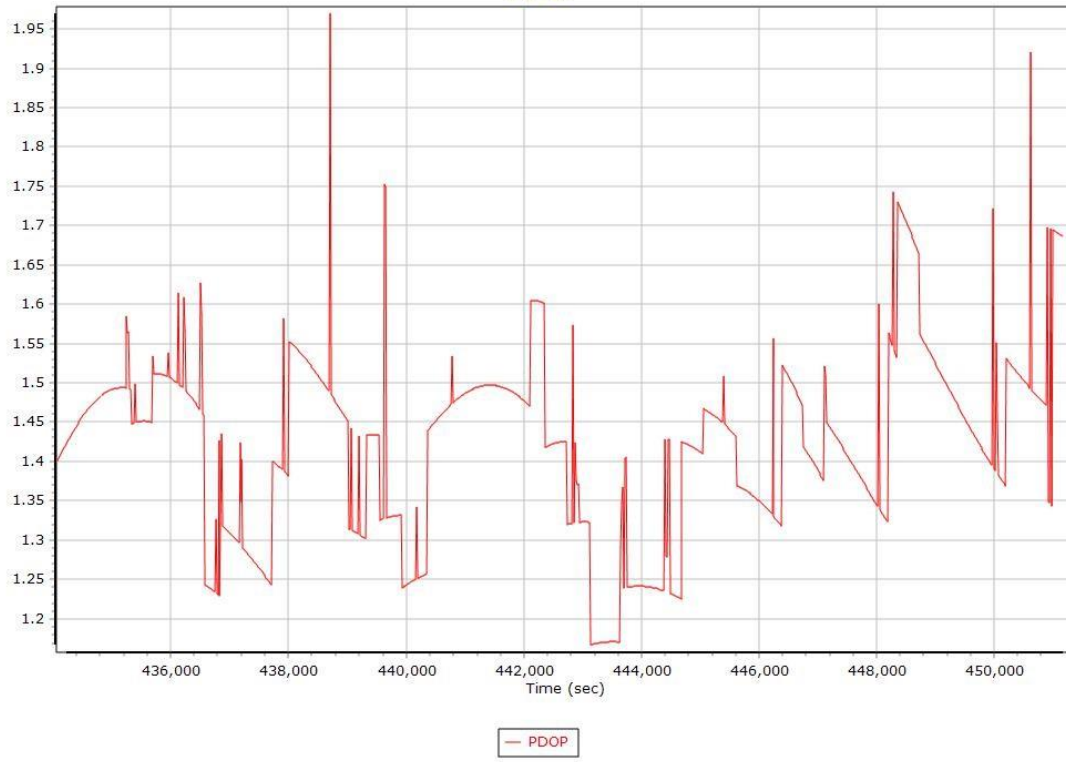


Forward/Reverse Separation



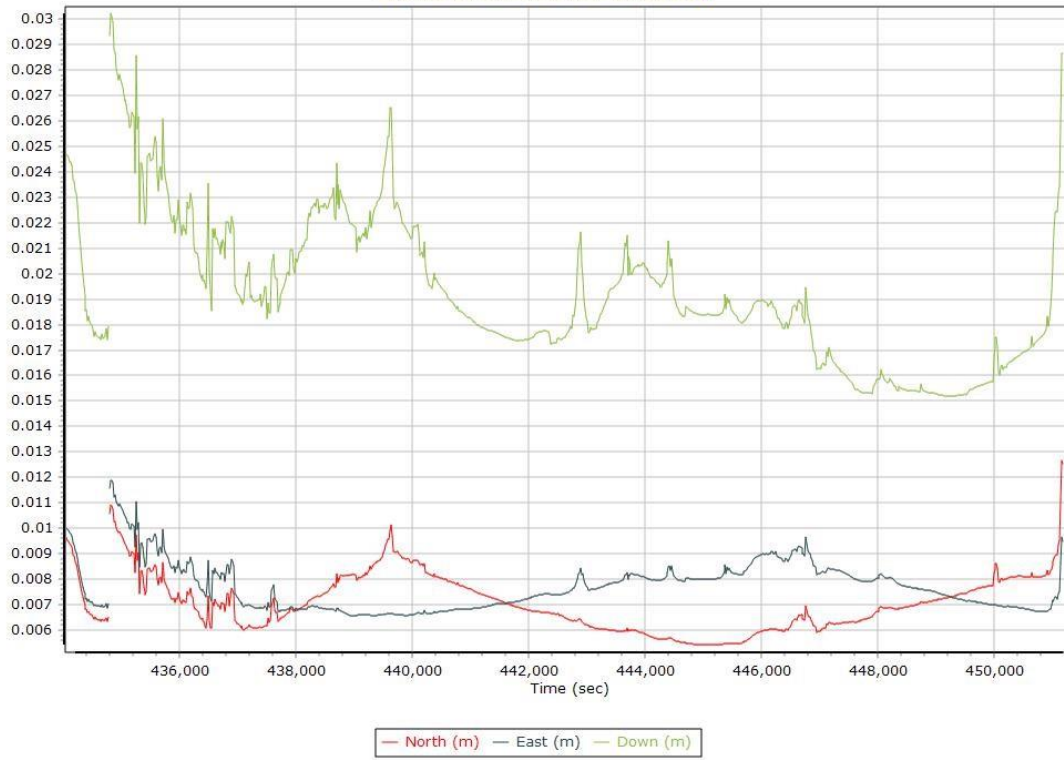
PDOP

PDOP

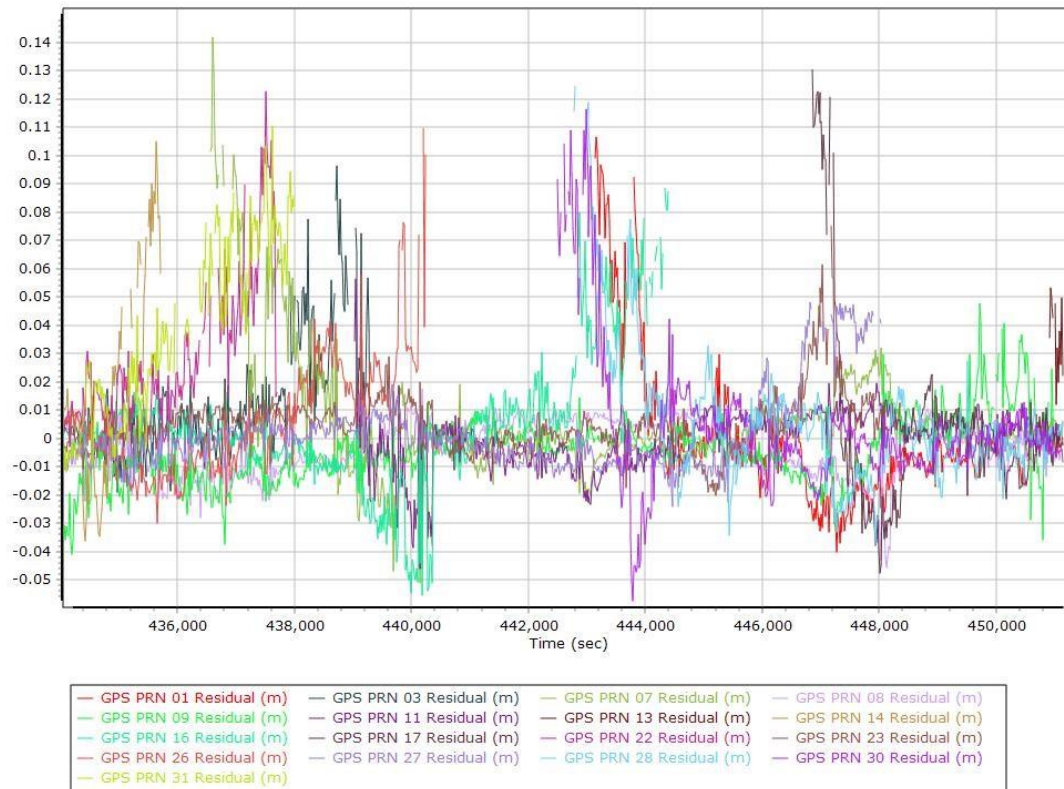


Estimated Position Accuracy

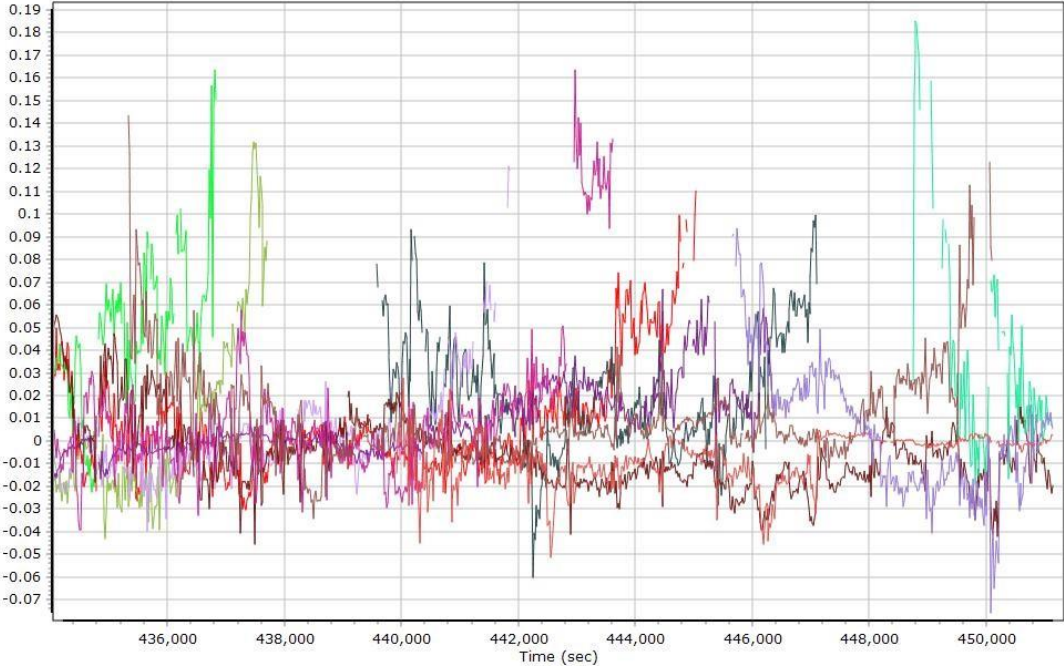
Estimated Position Accuracy



GPS Residuals



GLONASS Residuals



GLONASS 01 Residual (m)	GLONASS 02 Residual (m)	GLONASS 07 Residual (m)	GLONASS 08 Residual (m)
GLONASS 09 Residual (m)	GLONASS 10 Residual (m)	GLONASS 11 Residual (m)	GLONASS 12 Residual (m)
GLONASS 13 Residual (m)	GLONASS 19 Residual (m)	GLONASS 20 Residual (m)	GLONASS 21 Residual (m)
GLONASS 22 Residual (m)	GLONASS 23 Residual (m)	GLONASS 24 Residual (m)	

GNSS-Inertial Processor Configuration

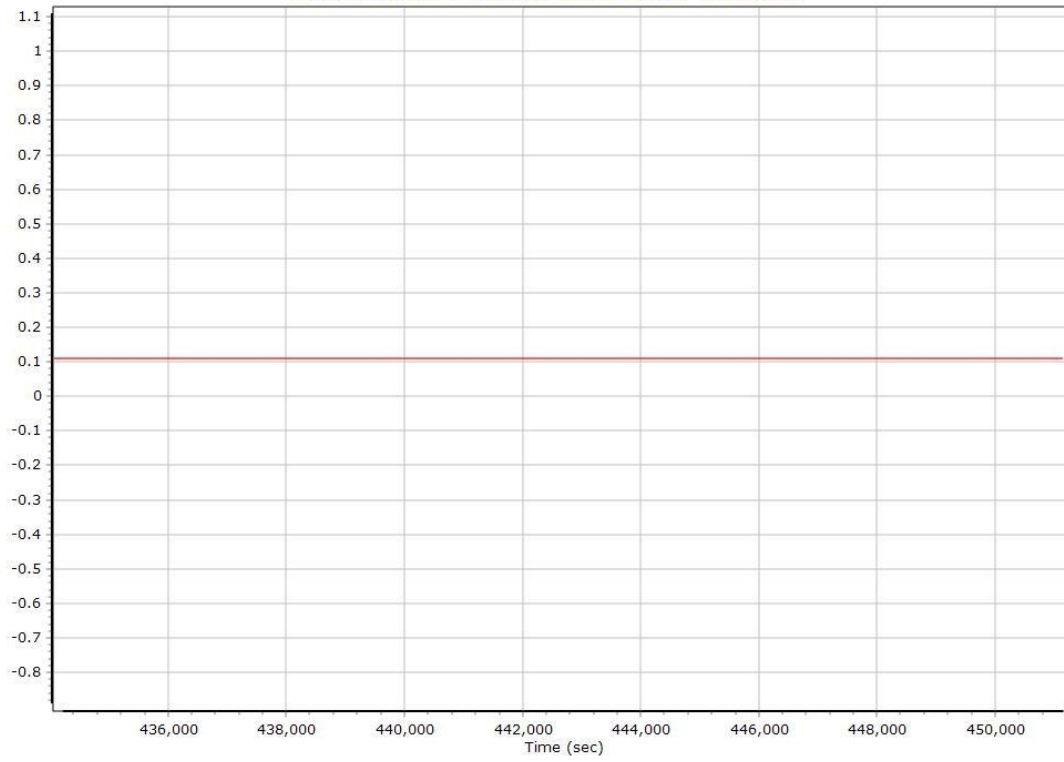
Processing mode	IN-Fusion SmartBase		
Stabilized mount	False		
Base station	ASB		
Processing start time	434019.000 (11/30/2018 12:33:39 AM)		
Processing end time	451176.000 (11/30/2018 5:19:36 AM)		
Initial attitude source	GYRO Compass		
IMU Sensor Context	Processing with Onboard IMU		
Reference to IMU 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]	0.110	-0.138	-0.963
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

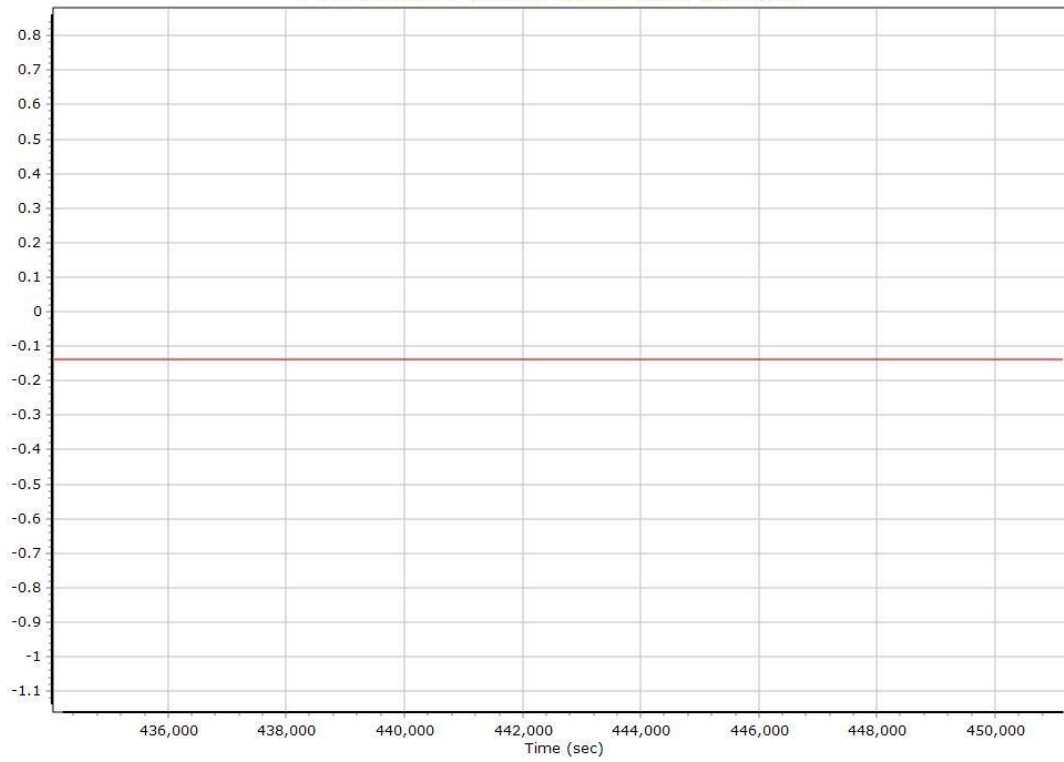
X Reference -Primary GNSS Lever Arm (m)

X Reference-Primary GNSS Lever Arm (m)



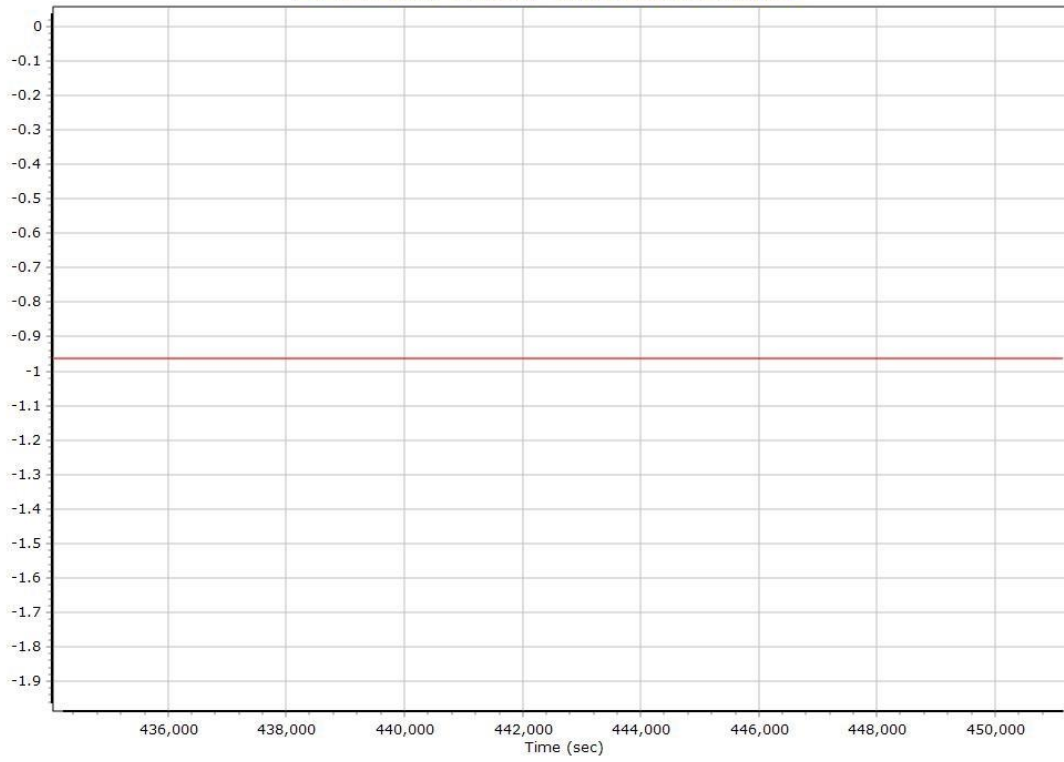
Y Reference -Primary GNSS Lever Arm (m)

Y Reference-Primary GNSS Lever Arm (m)



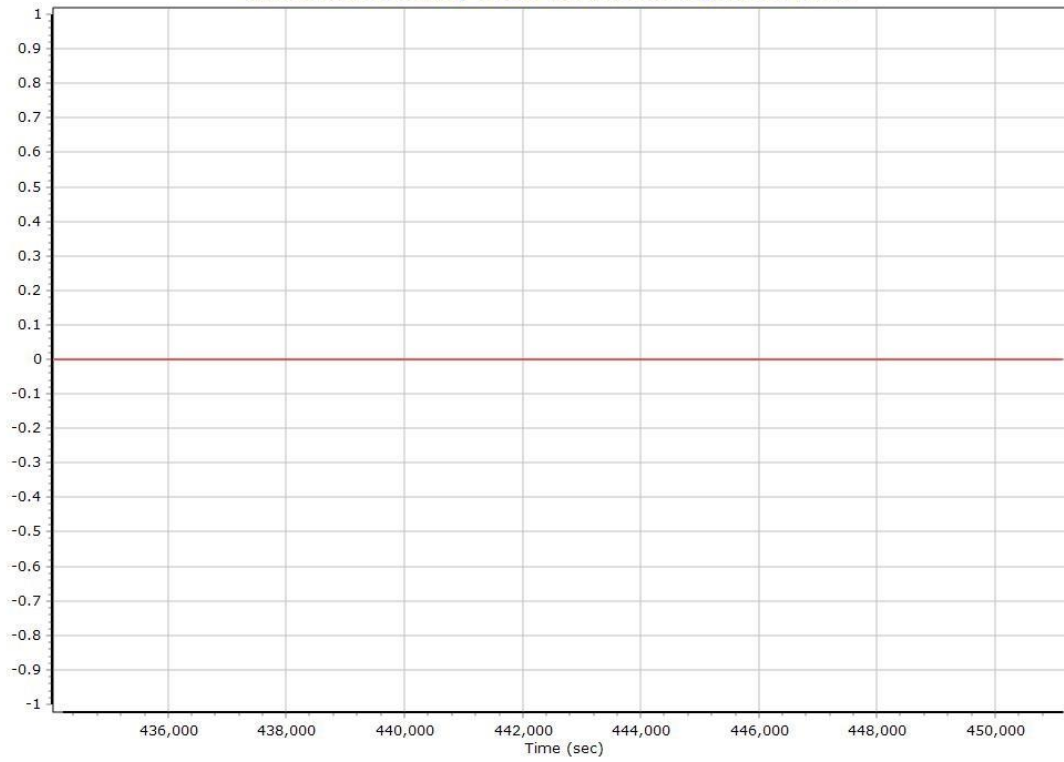
Z Reference -Primary GNSS Lever Arm (m)

Z Reference-Primary GNSS Lever Arm (m)



Reference-Primary GNSS Lever Arm Figure of Merit

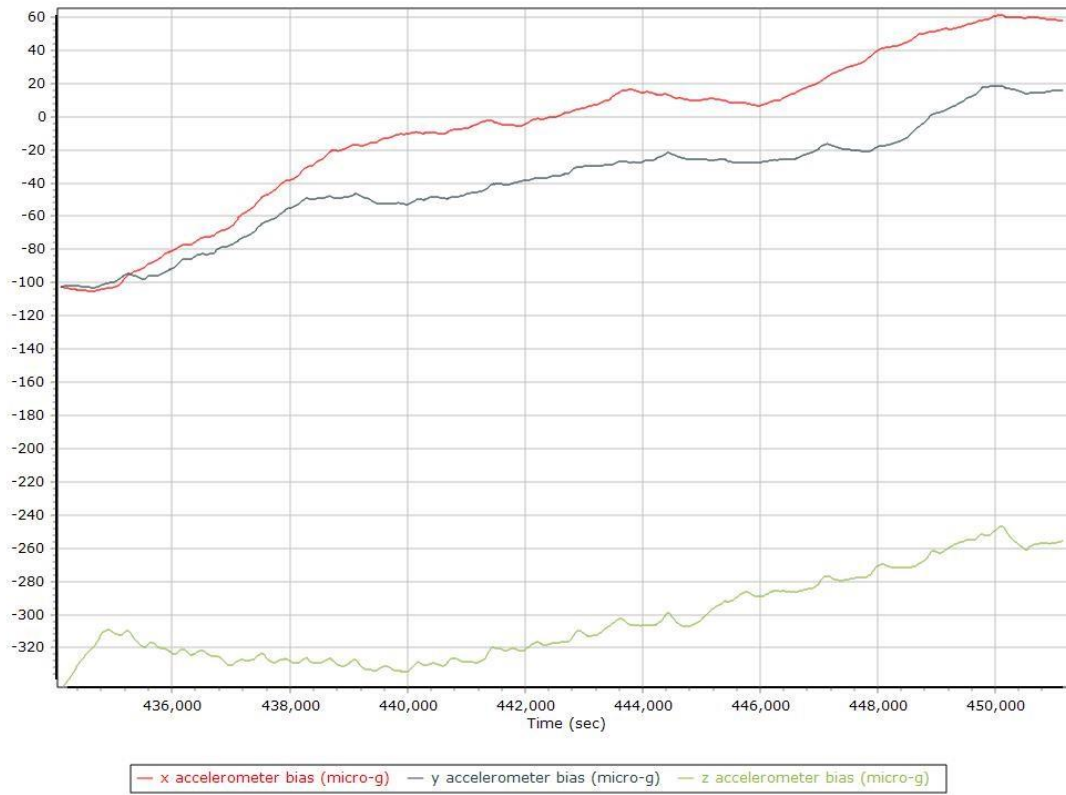
Reference-Primary GNSS Lever Arm Figure of Merit



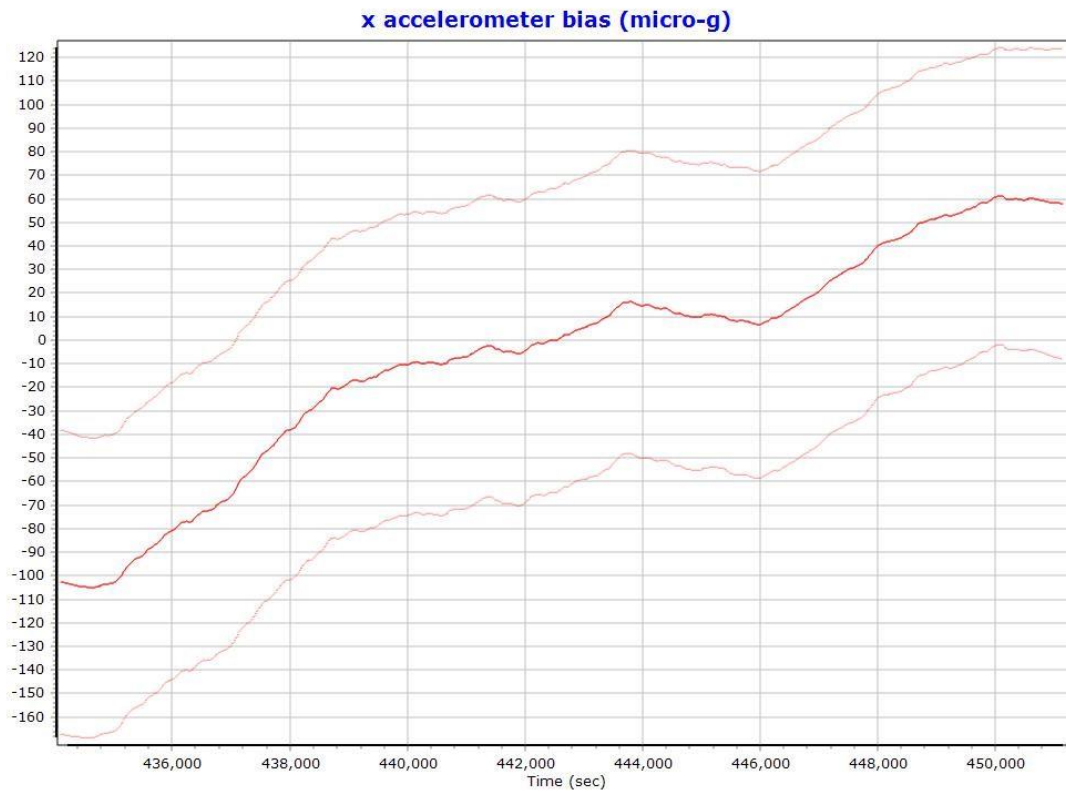
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

Accelerometer Bias (micro -g)

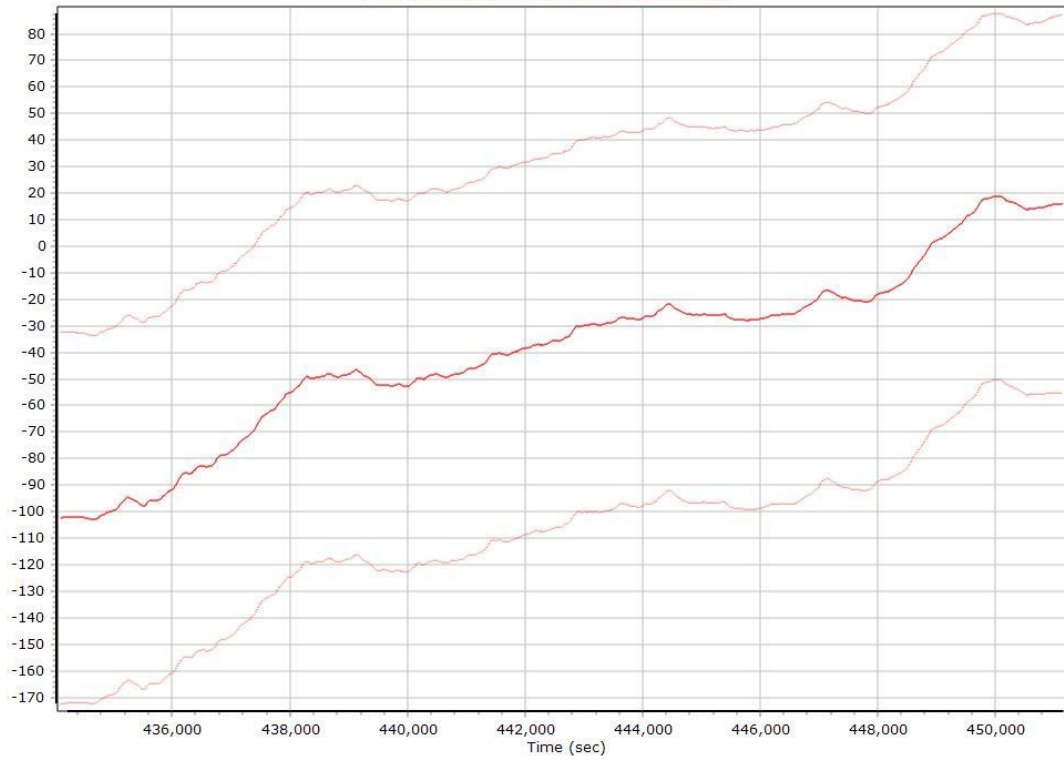


X Accelerometer Bias (micro -g)



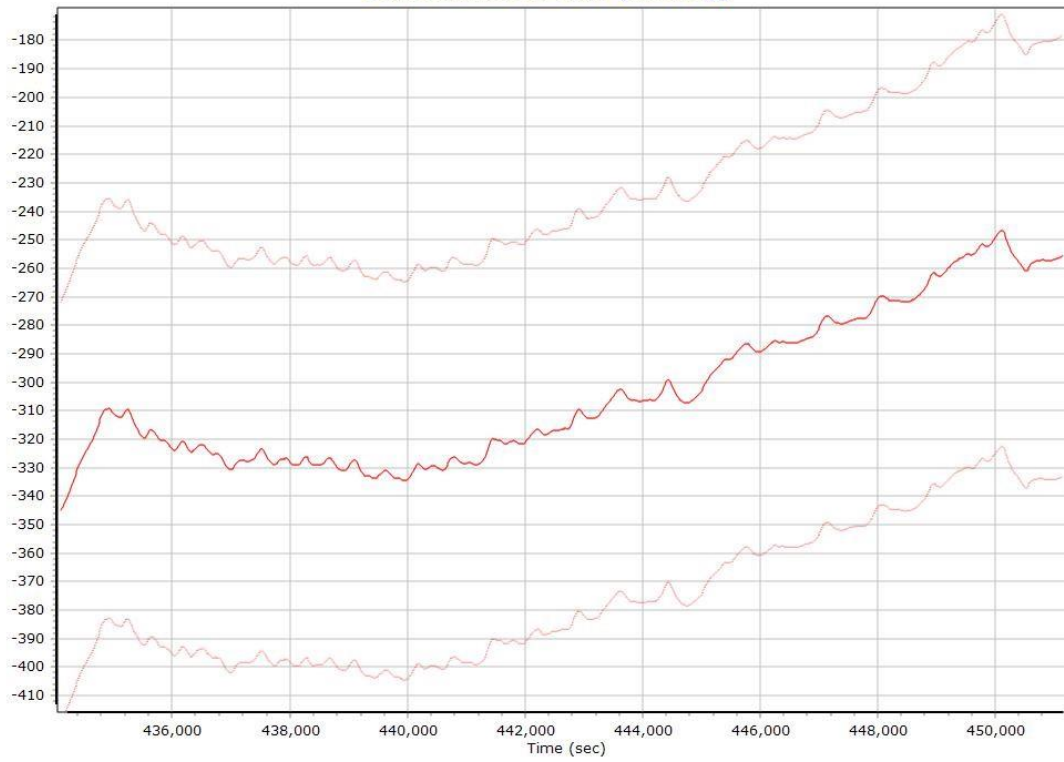
Y Accelerometer Bias (micro -g)

y accelerometer bias (micro-g)

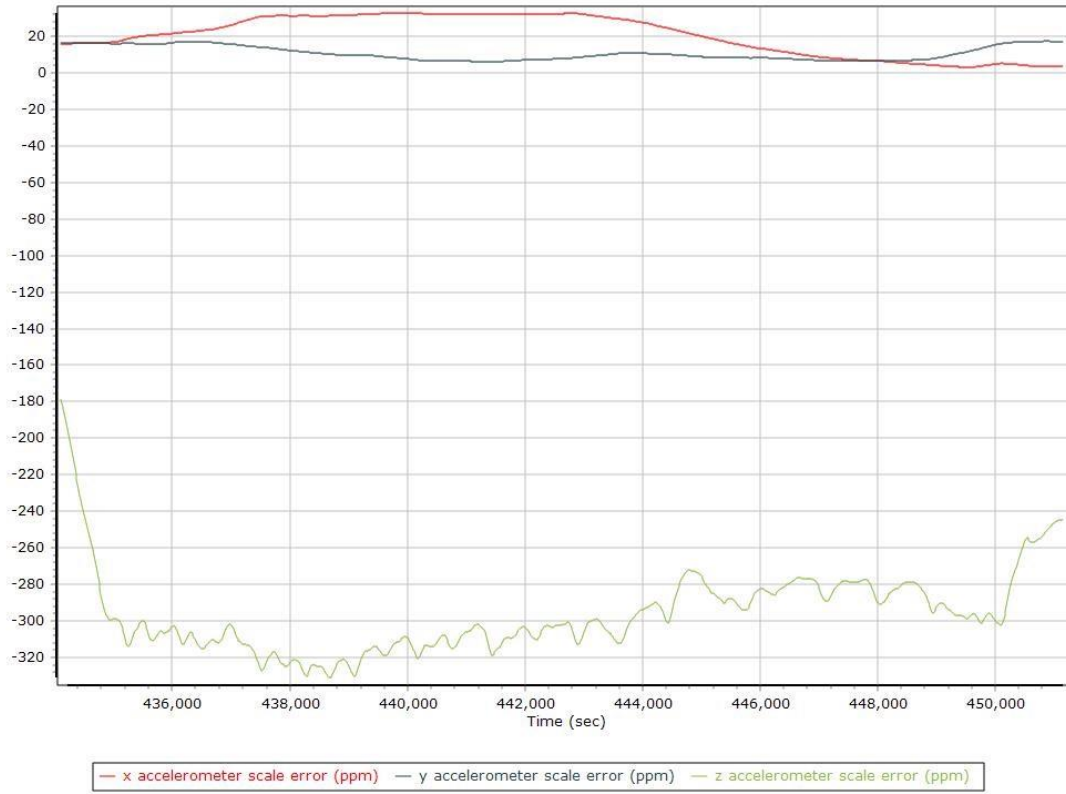


Z Accelerometer Bias (micro -g)

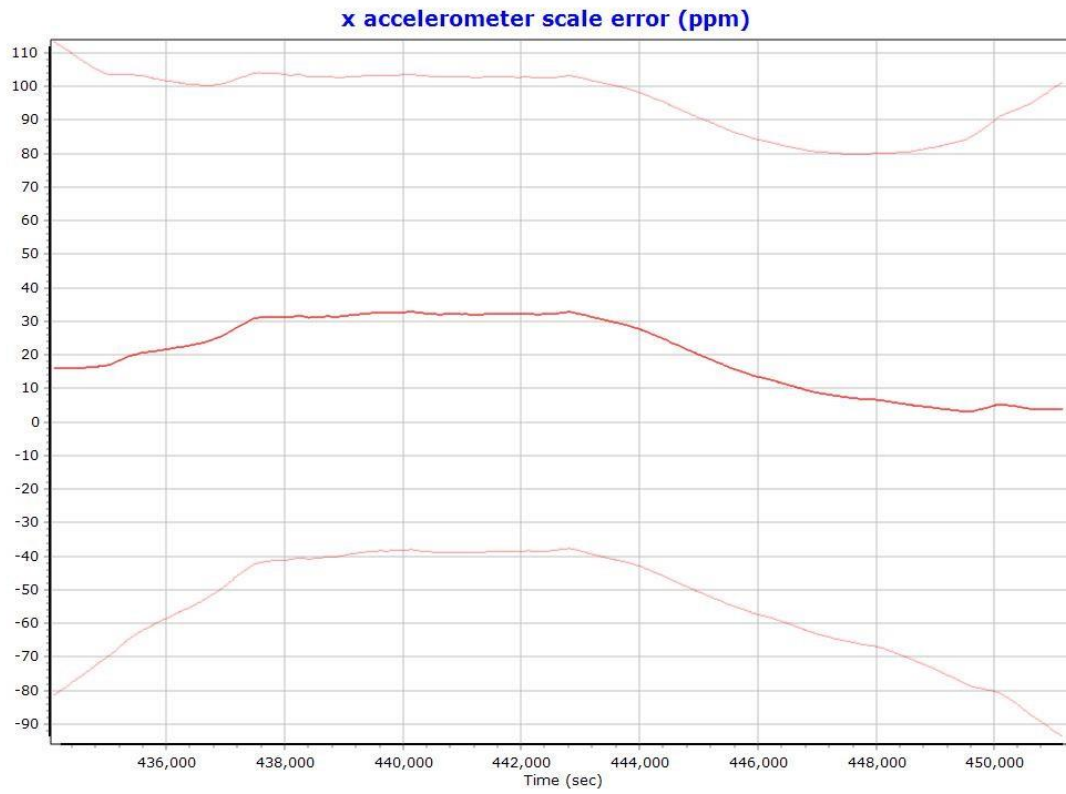
z accelerometer bias (micro-g)



Accelerometer Scale Error (ppm)

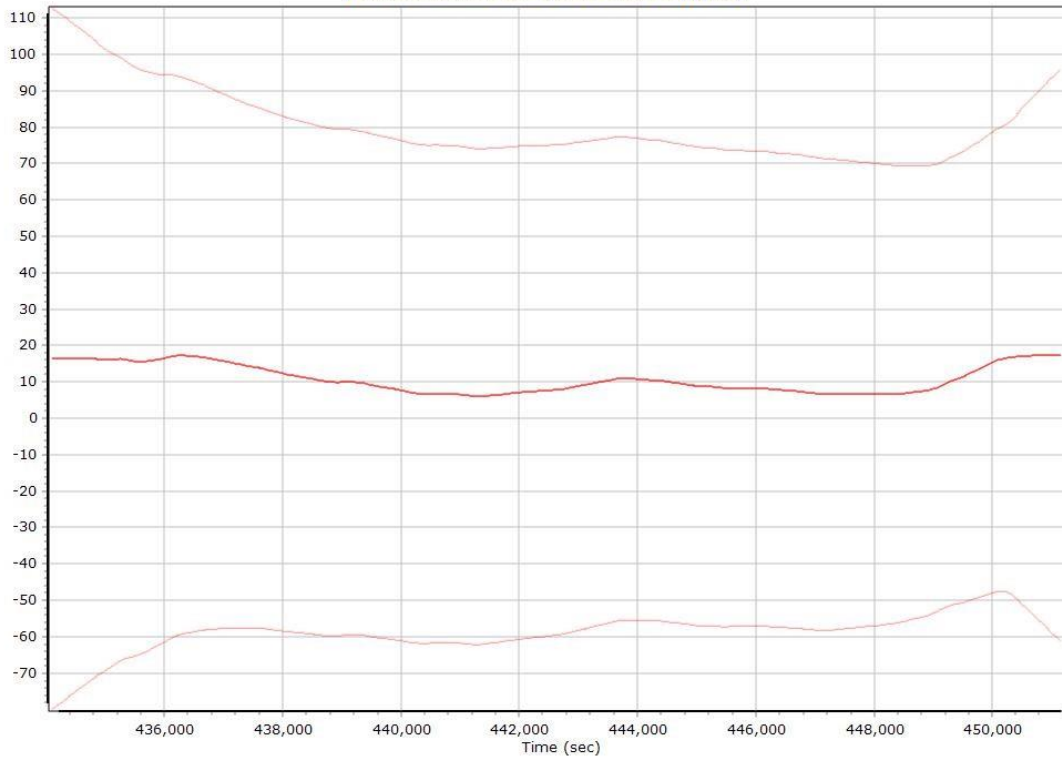


X Accelerometer Scale Error (ppm)



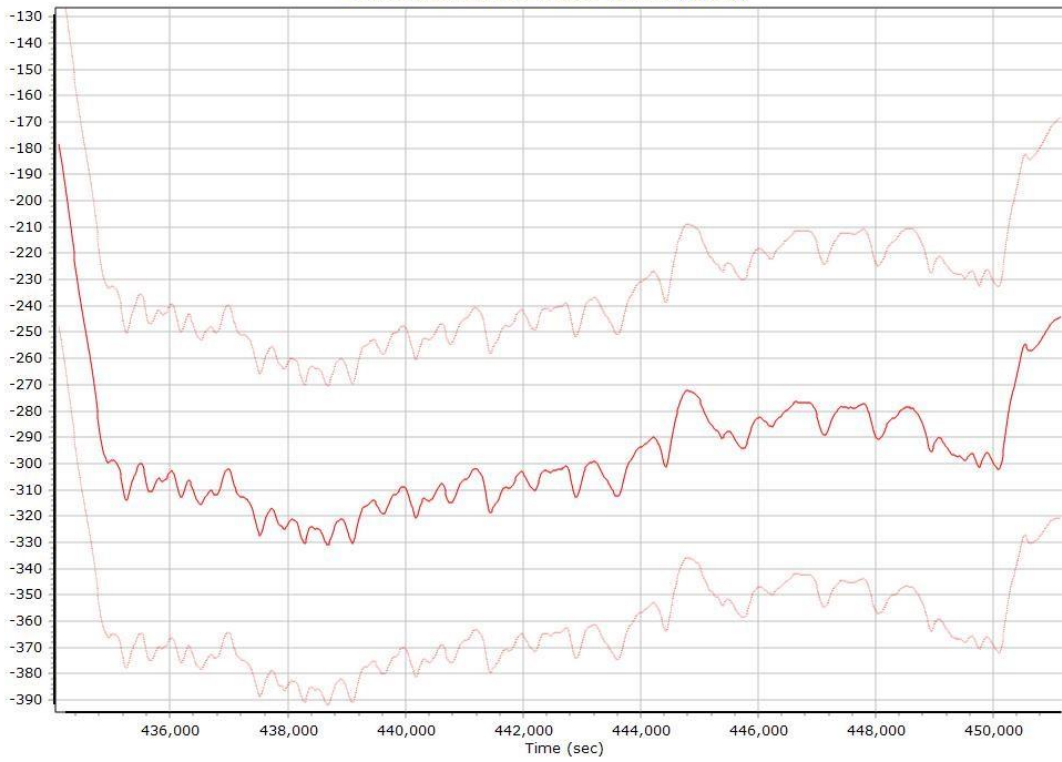
Y Accelerometer Scale Error (ppm)

y accelerometer scale error (ppm)

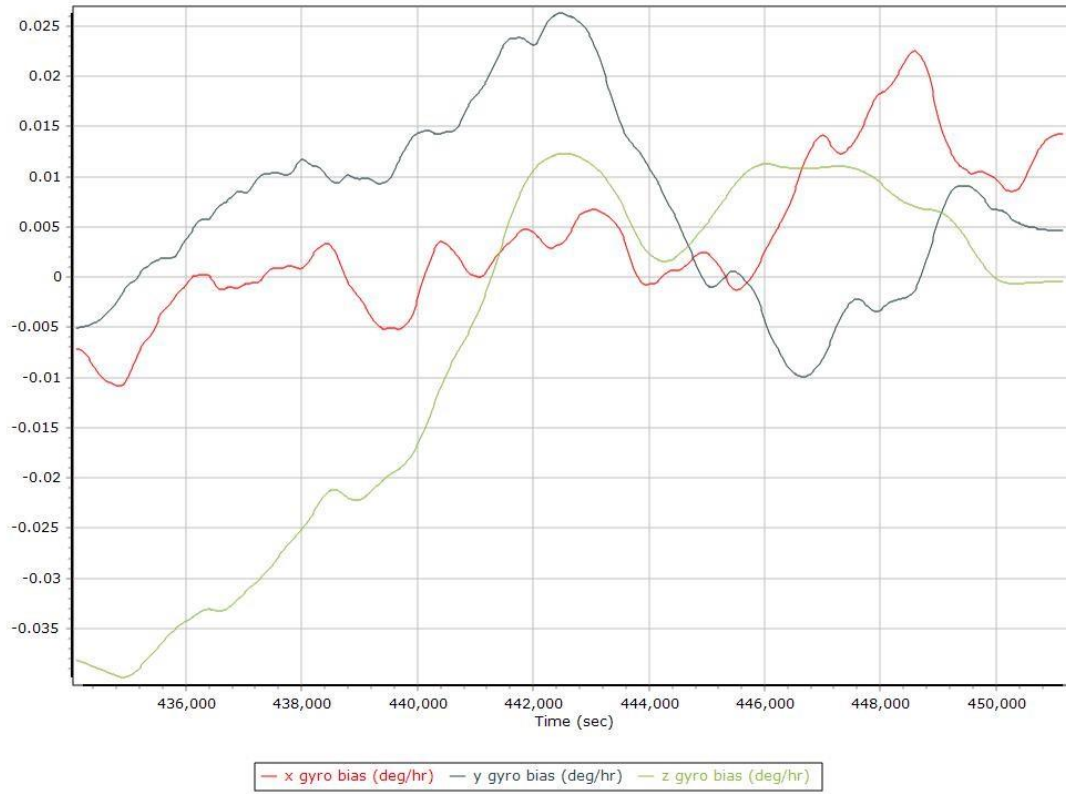


Z Accelerometer Scale Error (ppm)

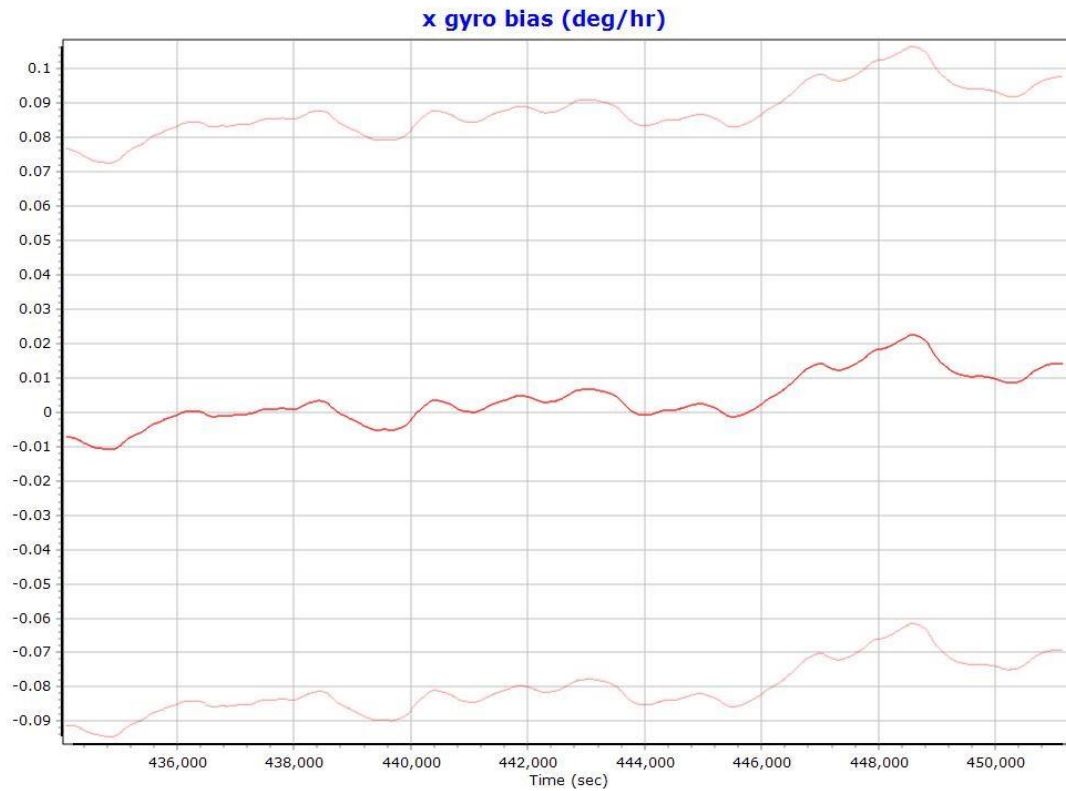
z accelerometer scale error (ppm)



Gyro Bias (deg/h)

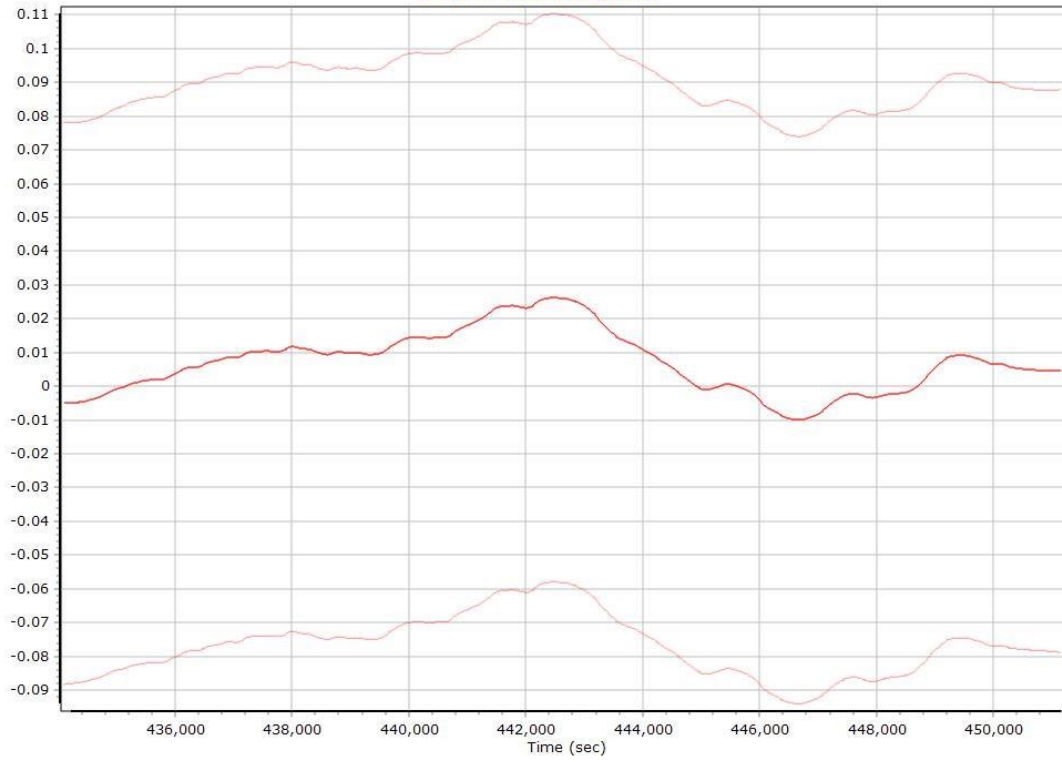


X Gyro Bias (deg/h)



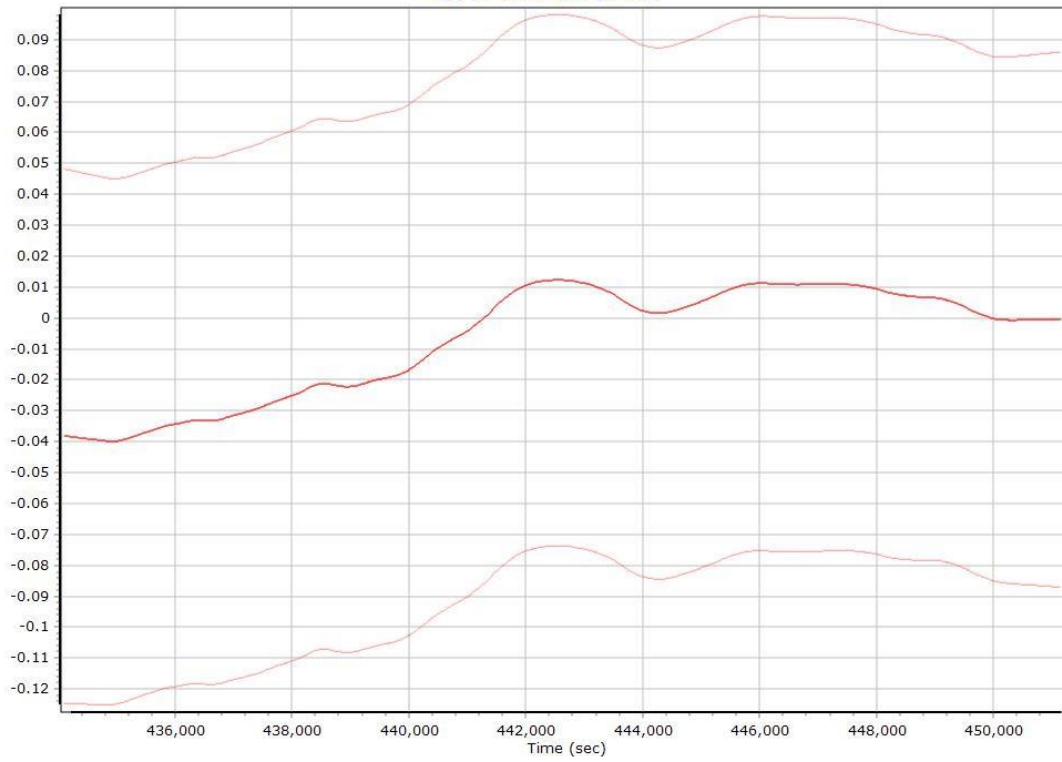
Y Gyro Bias (deg/h)

y gyro bias (deg/hr)

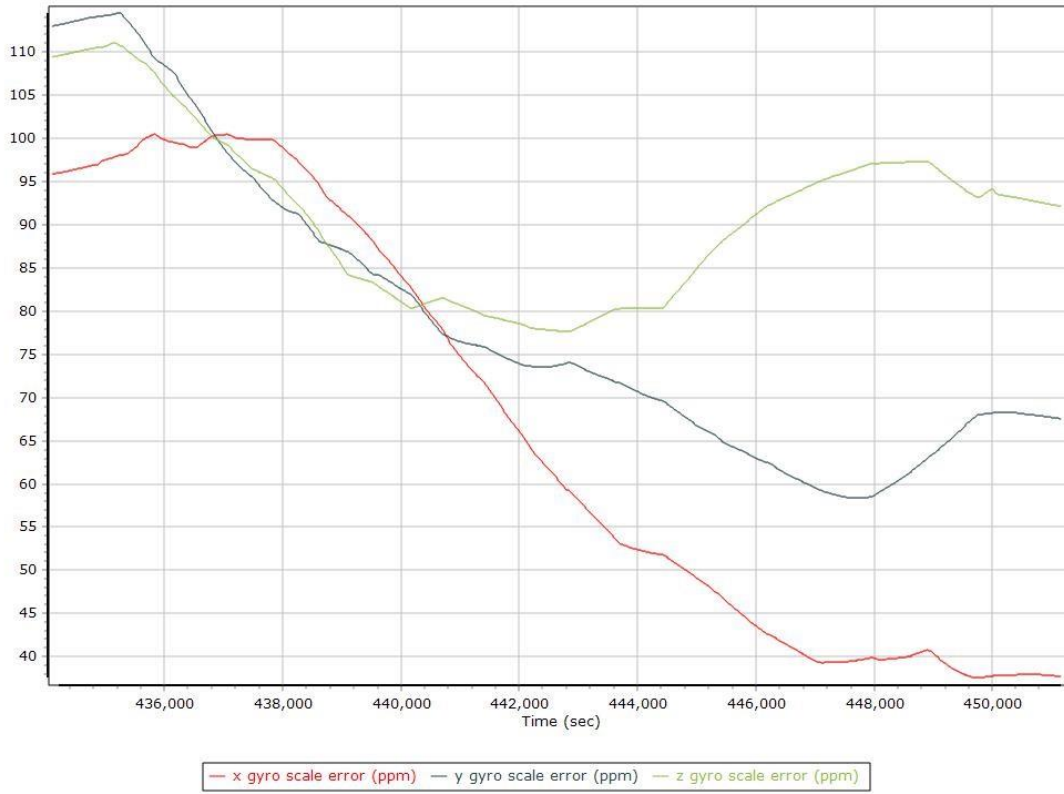


Z Gyro Bias (deg/h)

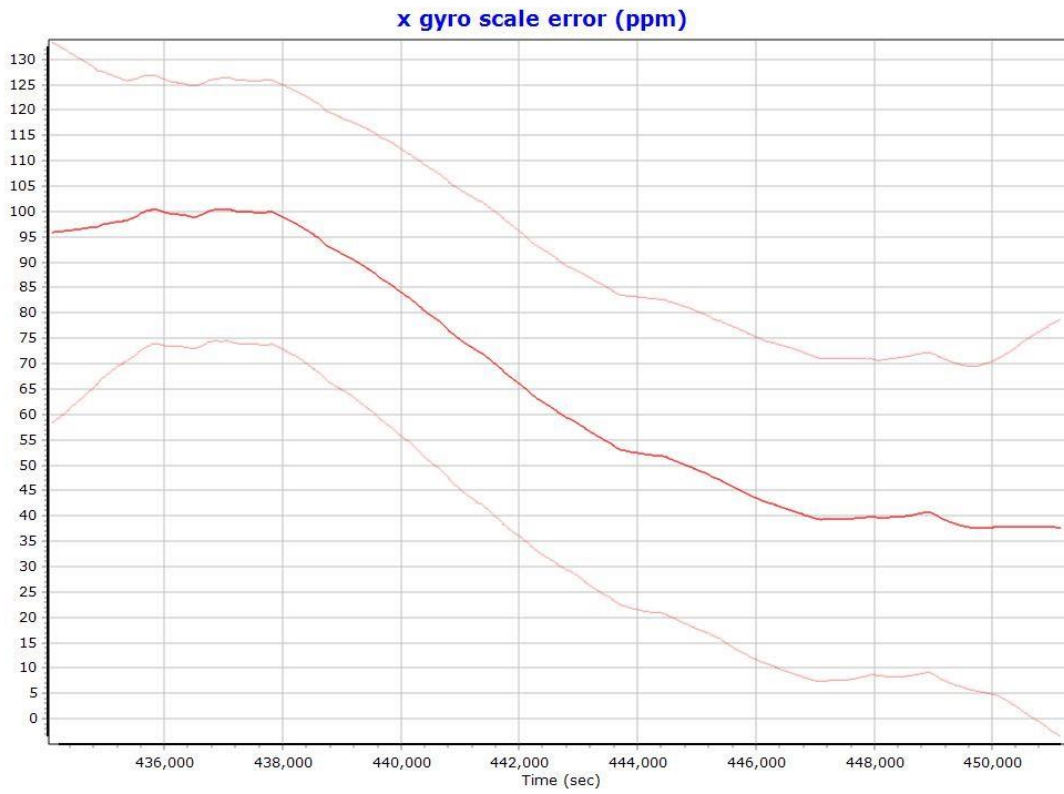
z gyro bias (deg/hr)



Gyro Scale Error (ppm)

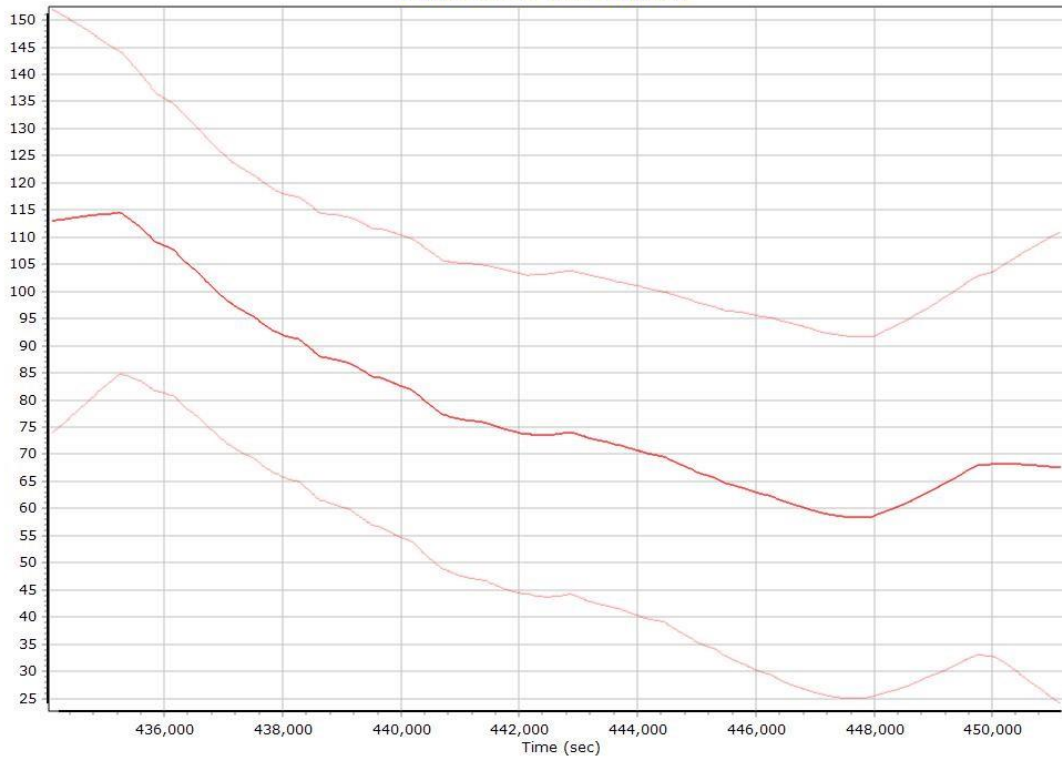


X Gyro Scale Error (ppm)



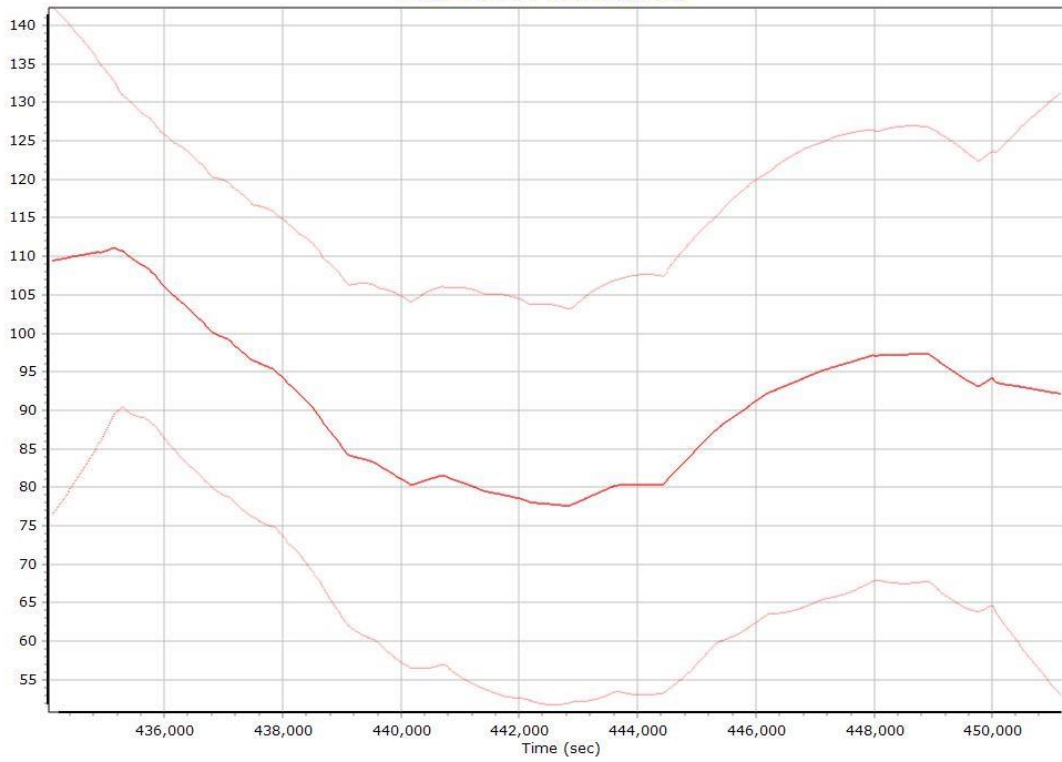
Y Gyro Scale Error (ppm)

y gyro scale error (ppm)



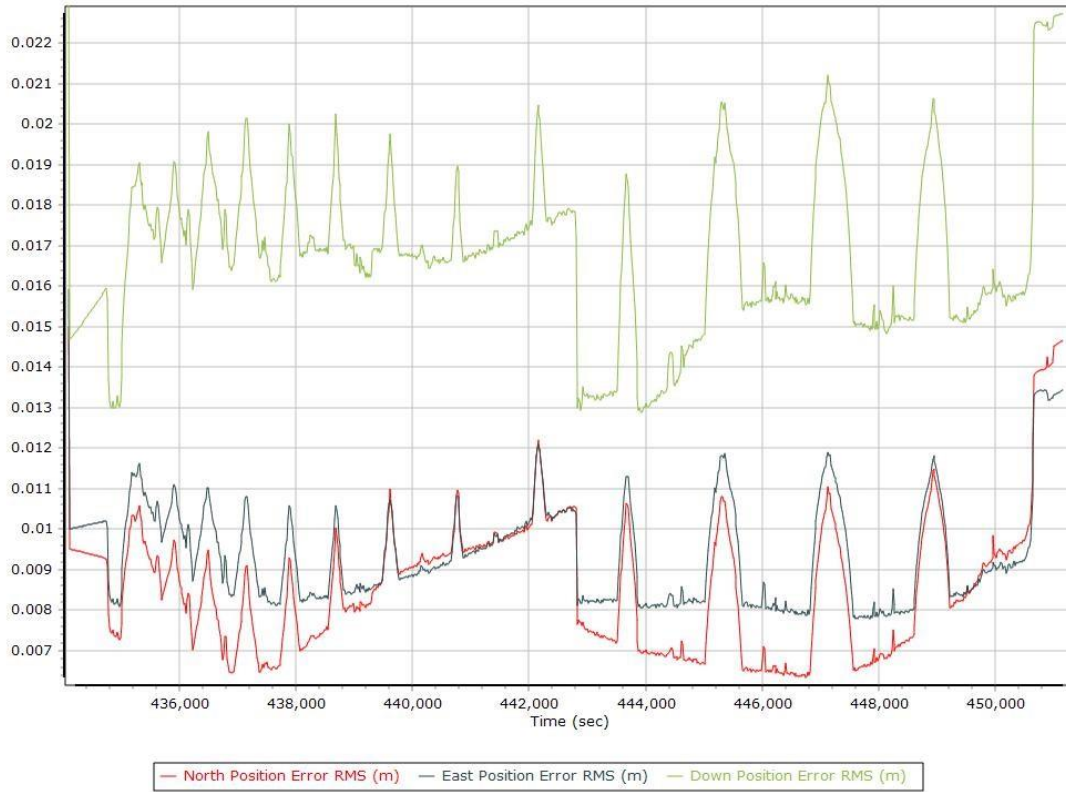
Z Gyro Scale Error (ppm)

z gyro scale error (ppm)

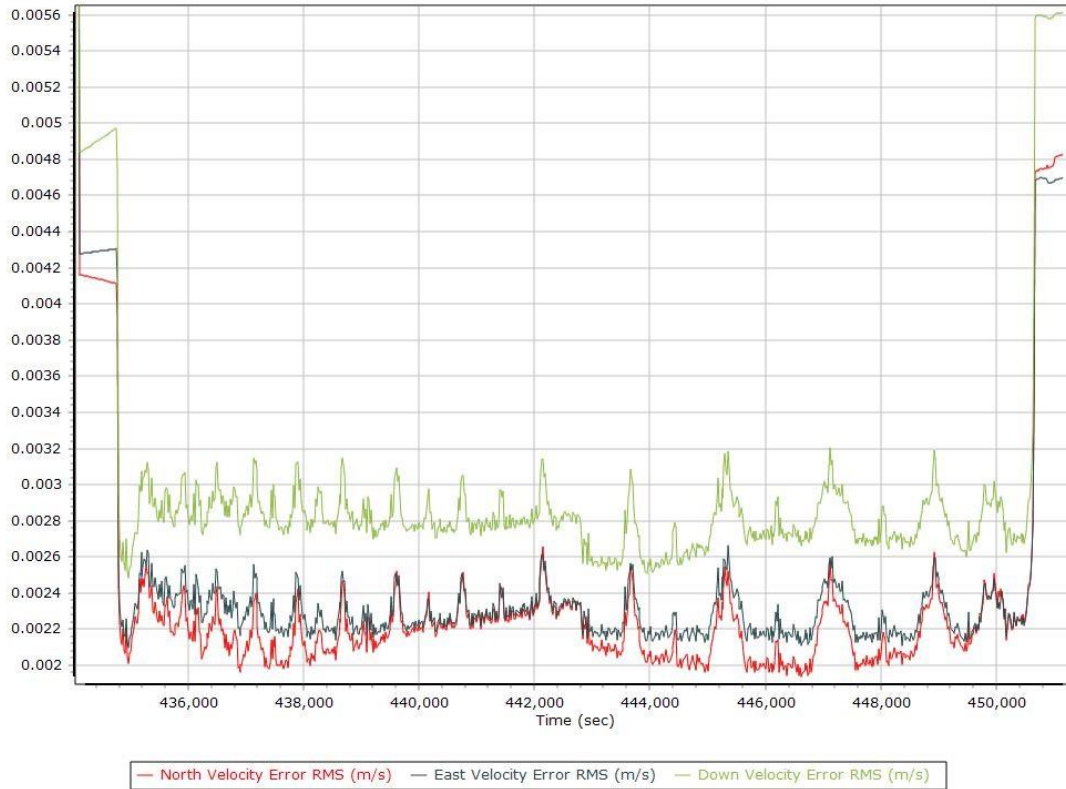


Smoothed Performance Metrics

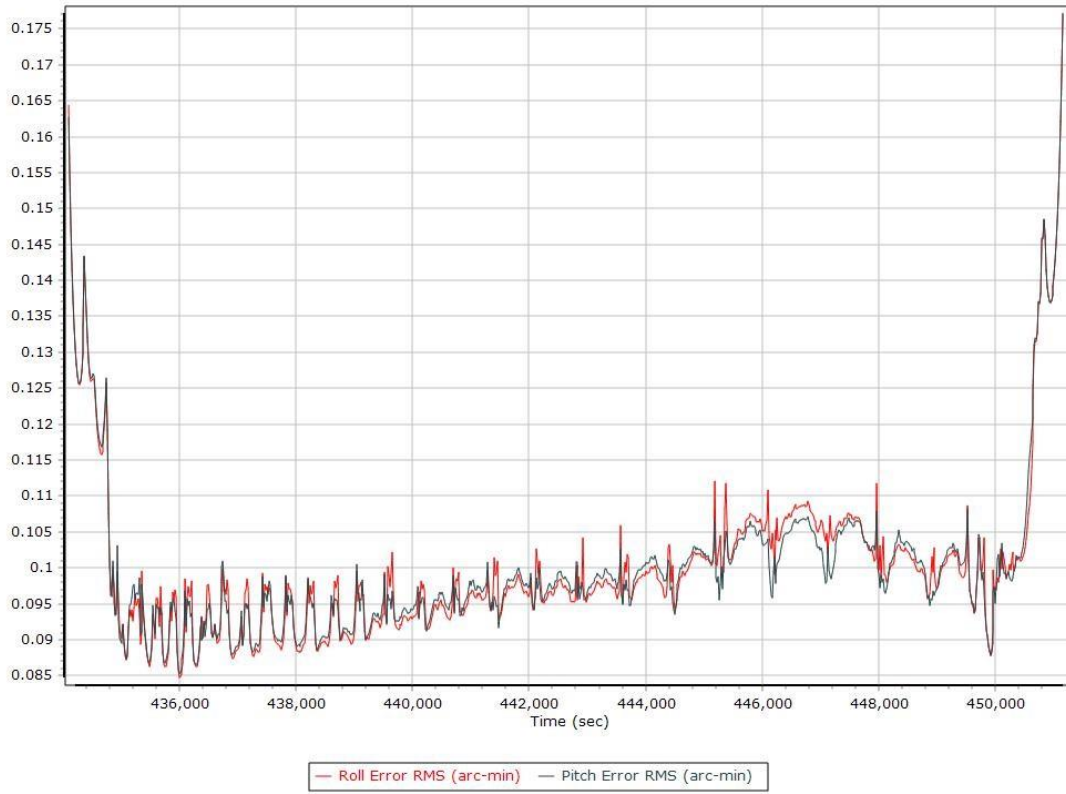
Position Error RMS (m)



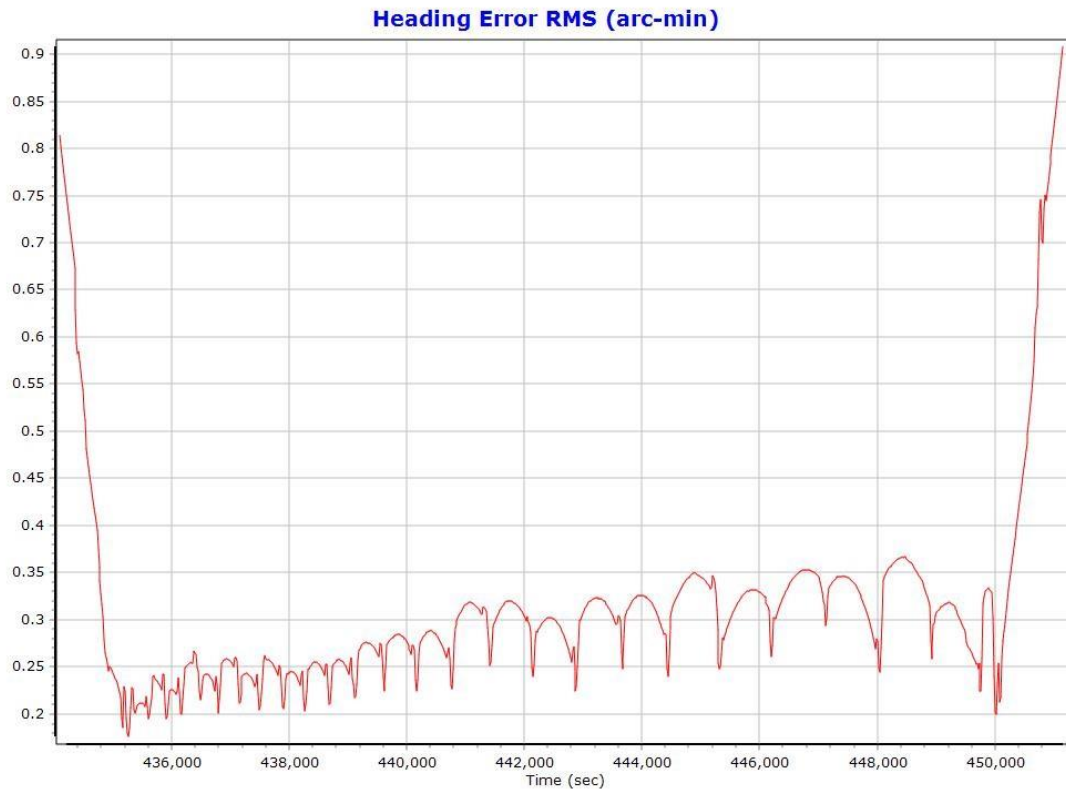
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc -min)



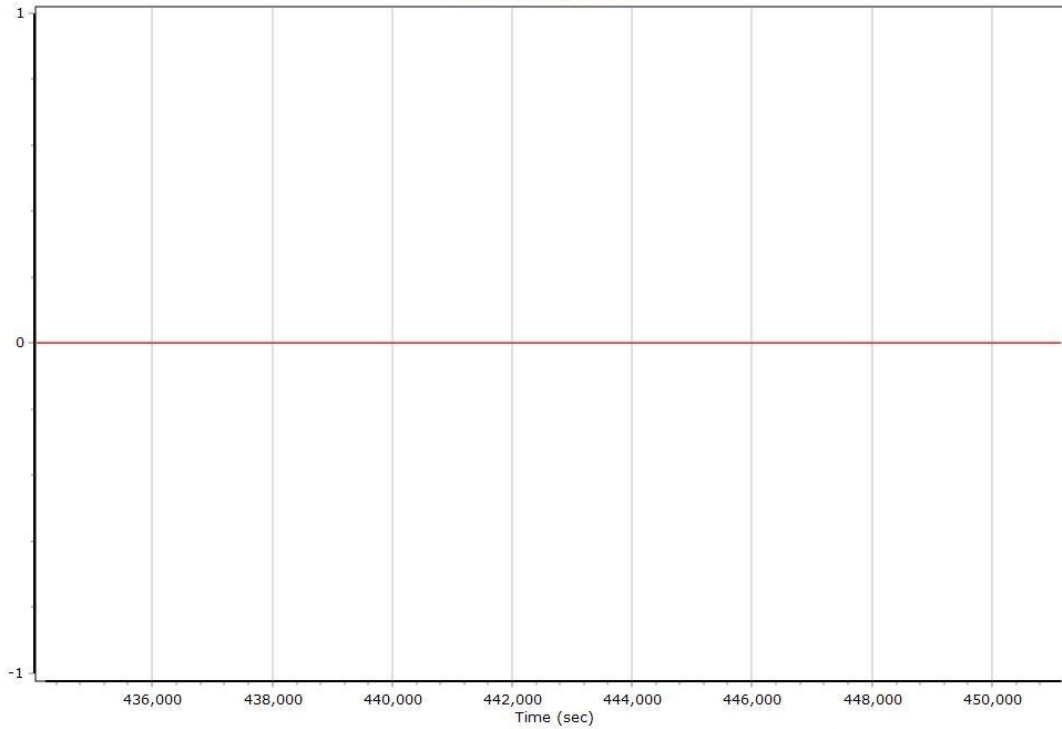
Heading Error RMS (arc -min)



Smoothed Solution Status

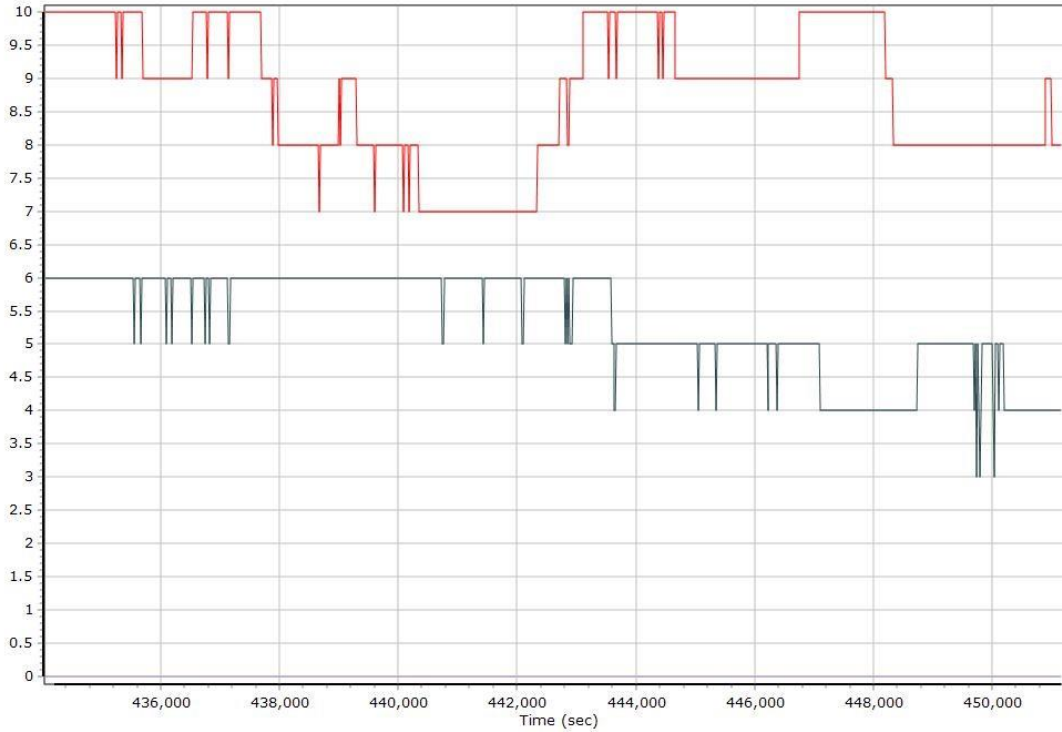
Processing Mode

Processing mode



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

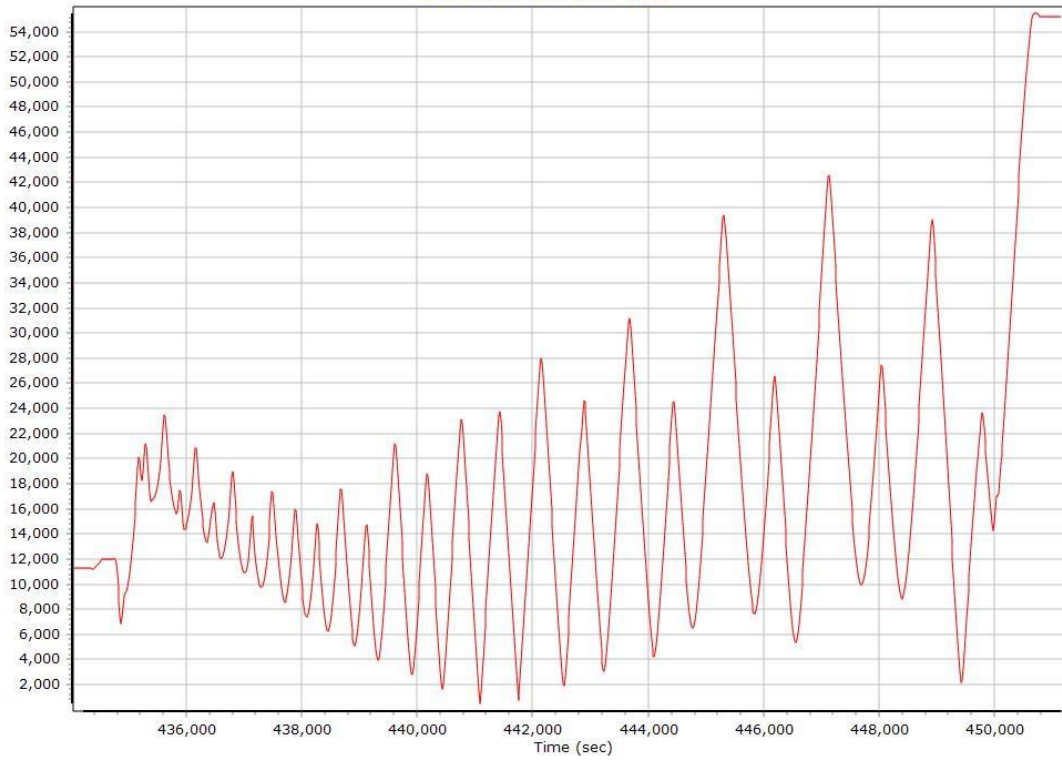
Number of Satellites



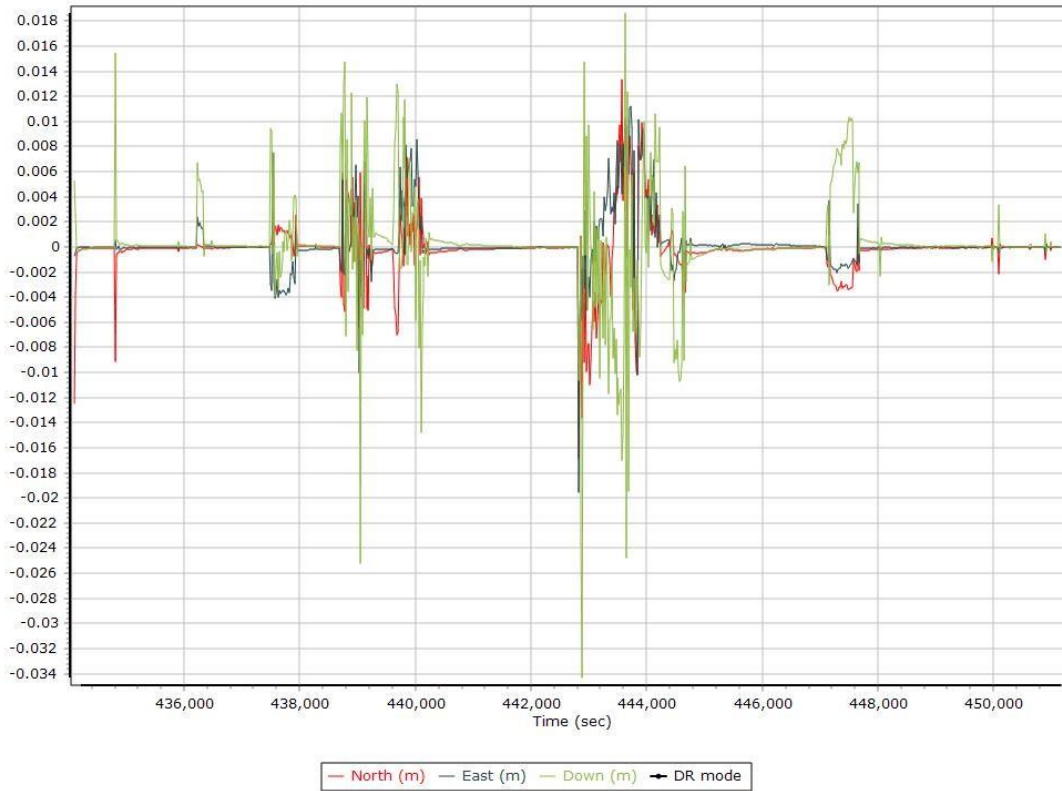
— Number of GPS Satellites — Number of GLONASS Satellites — Number of QZSS Satellites — Number of BEIDOU Satellites

Baseline Length

Baseline Length (m)



SBET IAKAR Separation



General Information Mission Information

Project name	11302018NAD83
Processing date	2019-02-27 16:04:30
Mission date	2018-11-30 06:37:32
Mission duration	03:52:56.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9524
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List Rover

Data Files

File name	File type
181130_063713_INS-GPS_1.raw	POS Data

Input Files

Filename	File type
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sbet_Mission 1.out	SBET Trajectory File
File Name	File type
Ephm3340.18g	GLONASS Broadcast Ephemeris
Ephm3340.18n	GPS Broadcast Ephemeris
igl20294.sp3	GLONASS Precise Ephemeris
igl20295.sp3	GLONASS Precise Ephemeris
igl20296.sp3	GLONASS Precise Ephemeris
igs20294.sp3	GPS Precise Ephemeris
igs20295.sp3	GPS Precise Ephemeris
igs20296.sp3	GPS Precise Ephemeris
flai334f00.18o	GNSS SingleBase
fld7334f00.18o	GNSS SingleBase
flem334f00.18o	GNSS SingleBase
flgr334f00.18o	GNSS SingleBase
flib334f00.18o	GNSS SingleBase
flsi334f00.18o	GNSS SingleBase
fmyr334f00.18o	GNSS SingleBase
gsps334f00.18o	GNSS SingleBase
pnta334f00.18o	GNSS SingleBase
rcda334f00.18o	GNSS SingleBase
stpt334f00.18o	GNSS SingleBase
wach334f00.18o	GNSS SingleBase
zefr334f00.18o	GNSS SingleBase
flai334f00.18g	GLONASS Broadcast Ephemeris
flai334f00.18n	GPS Broadcast Ephemeris
fld7334f00.18g	GLONASS Broadcast Ephemeris
fld7334f00.18n	GPS Broadcast Ephemeris
flem334f00.18g	GLONASS Broadcast Ephemeris
flem334f00.18n	GPS Broadcast Ephemeris
flgr334f00.18g	GLONASS Broadcast Ephemeris
flgr334f00.18n	GPS Broadcast Ephemeris
flib334f00.18g	GLONASS Broadcast Ephemeris
flib334f00.18n	GPS Broadcast Ephemeris
flsi334f00.18g	GLONASS Broadcast Ephemeris
flsi334f00.18n	GPS Broadcast Ephemeris
fmyr334f00.18g	GLONASS Broadcast Ephemeris
fmyr334f00.18n	GPS Broadcast Ephemeris
gsps334f00.18g	GLONASS Broadcast Ephemeris
gsps334f00.18n	GPS Broadcast Ephemeris
pnta334f00.18g	GLONASS Broadcast Ephemeris
pnta334f00.18n	GPS Broadcast Ephemeris
rcda334f00.18g	GLONASS Broadcast Ephemeris
rcda334f00.18n	GPS Broadcast Ephemeris
stpt334f00.18g	GLONASS Broadcast Ephemeris
stpt334f00.18n	GPS Broadcast Ephemeris
wach334f00.18g	GLONASS Broadcast Ephemeris
wach334f00.18n	GPS Broadcast Ephemeris
zefr334f00.18g	GLONASS Broadcast Ephemeris
zefr334f00.18n	GPS Broadcast Ephemeris

Output Files

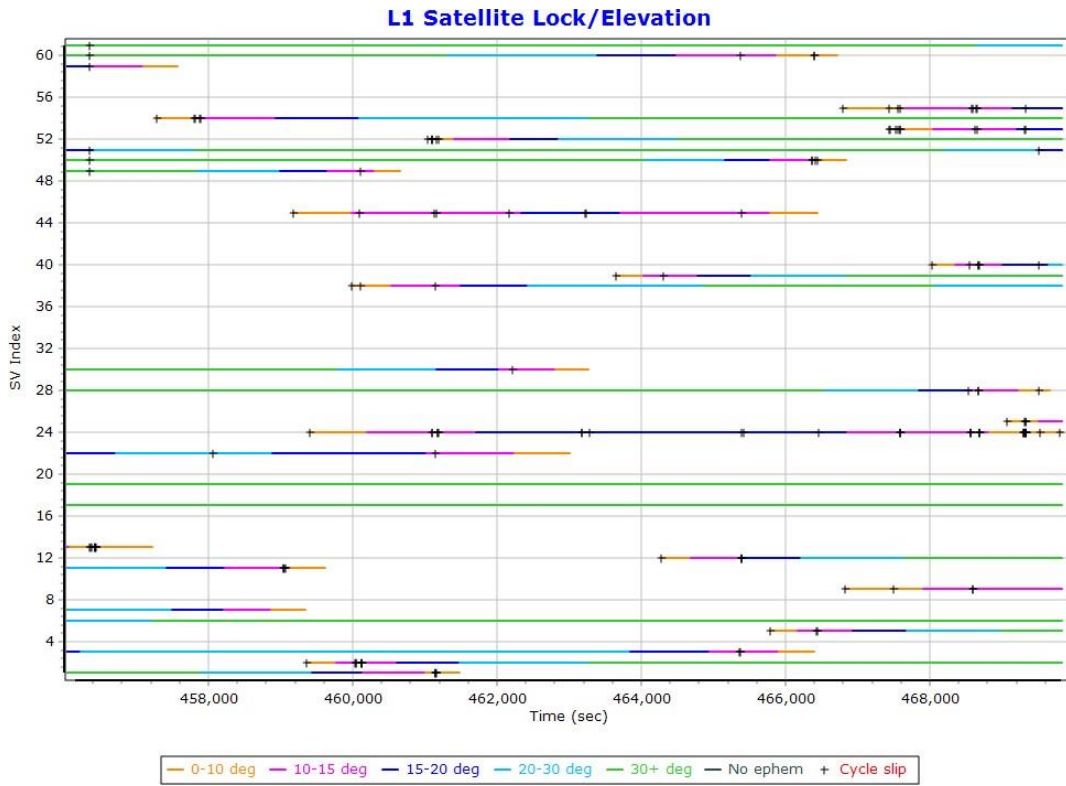
Rover Data Summary

First raw data file	181130_063713_INS-GPS_1.raw
Last raw data file	181130_063713_INS-GPS_1.raw

Start GPS week	2029		
Start time	455833.286 (11/30/2018 6:37:13 AM)		
End time	469810.630 (11/30/2018 10:30:10 AM)		
Start of fine alignment	456099.758 (11/30/2018 6:41:39 AM)		
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	0.000
Reference to Primary GNSS lever arm [m]	0.102	-0.140	-0.961
Reference to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

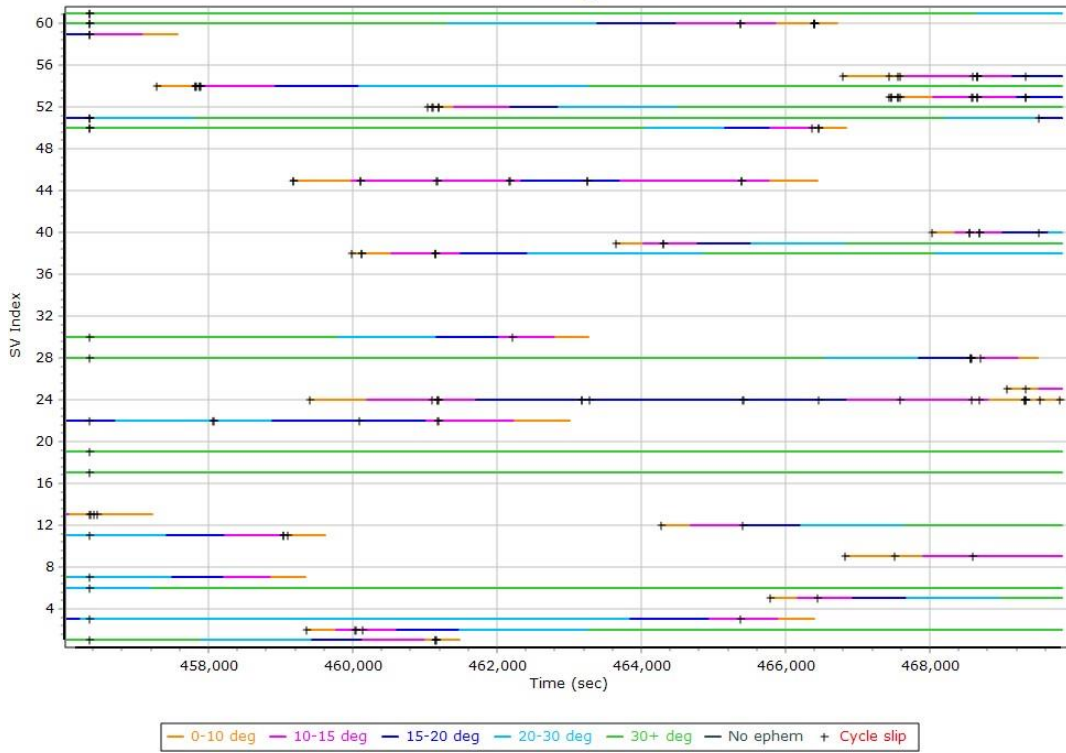
Raw Data QC

L1 Satellite Lock/Elevation



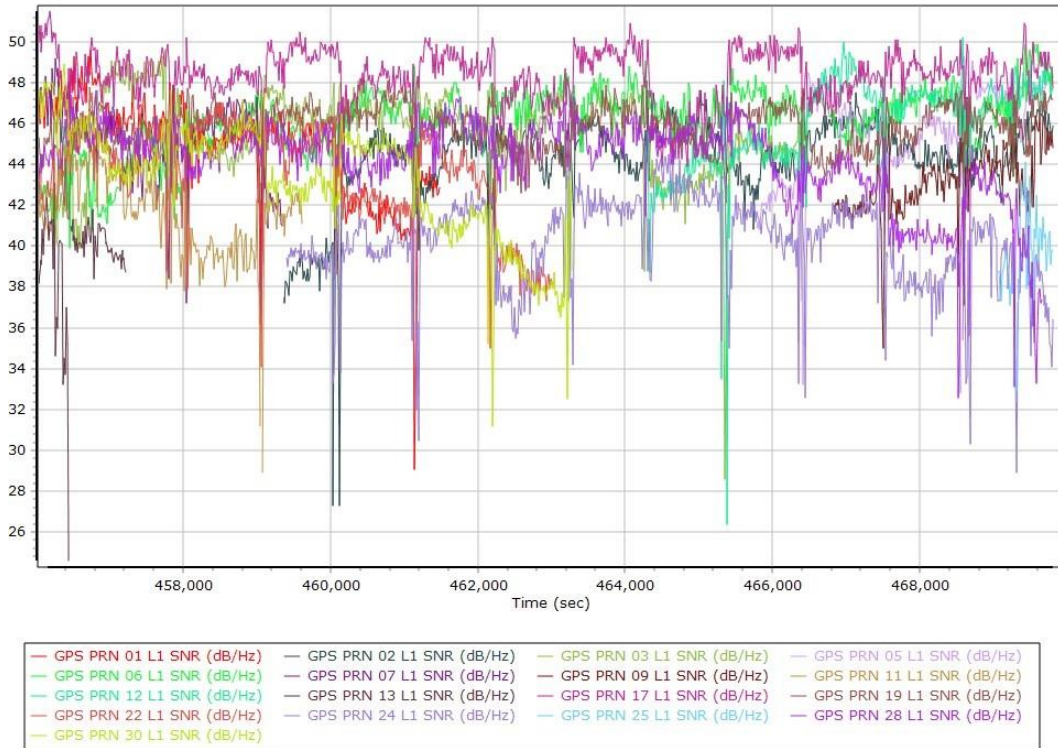
L2 Satellite Lock/Elevation

L2 Satellite Lock/Elevation



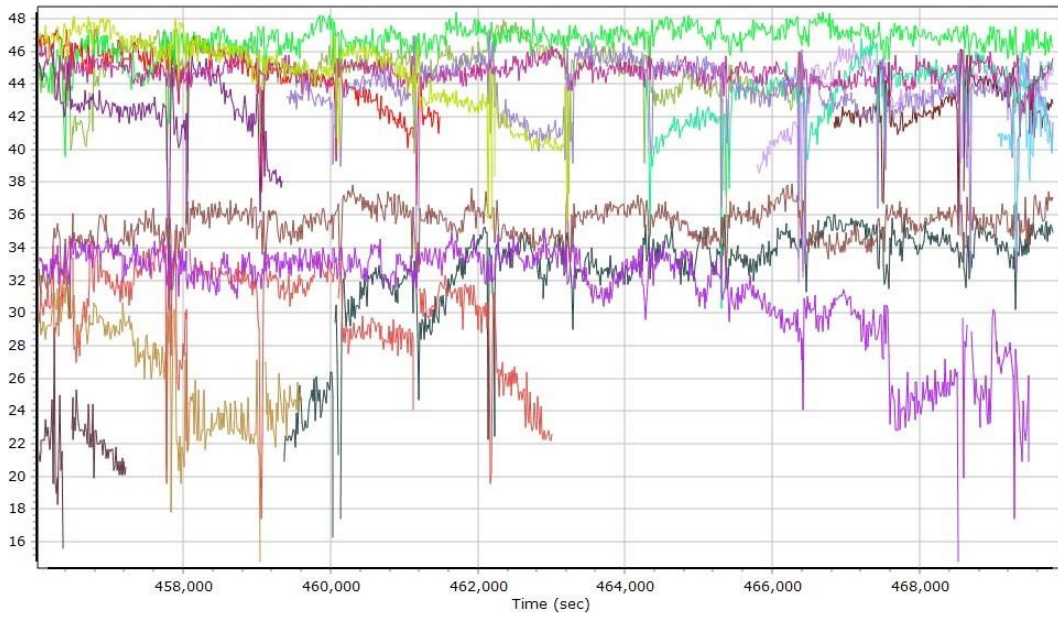
GPS L1 SNR

GPS L1 SNR



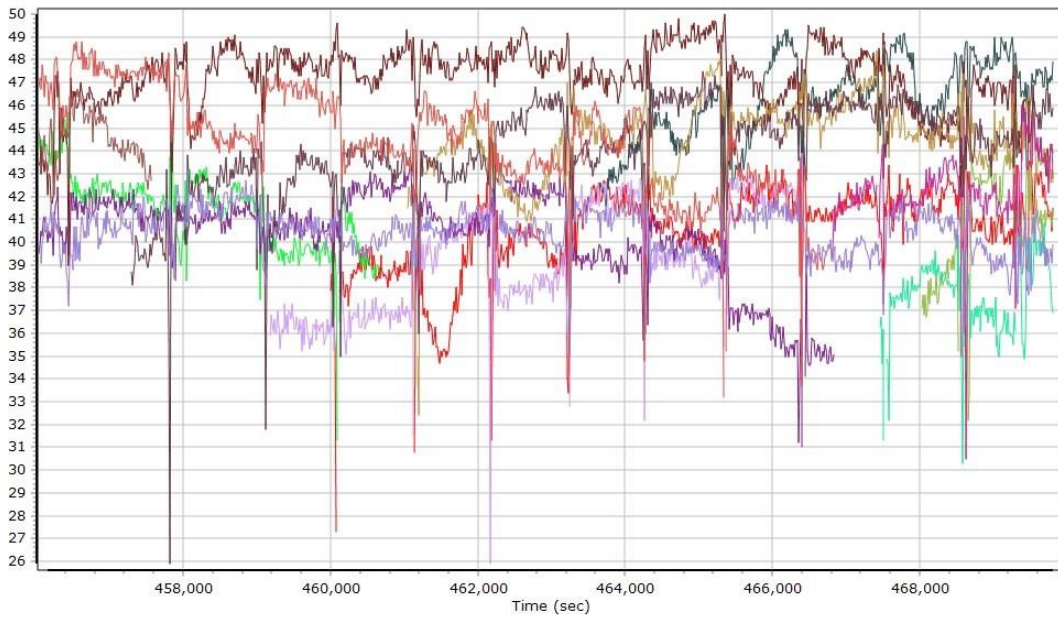
GPS L2 SNR

GPS L2 SNR



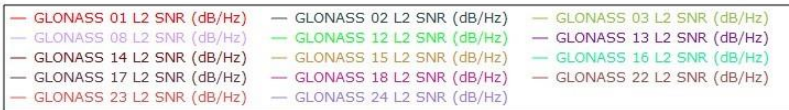
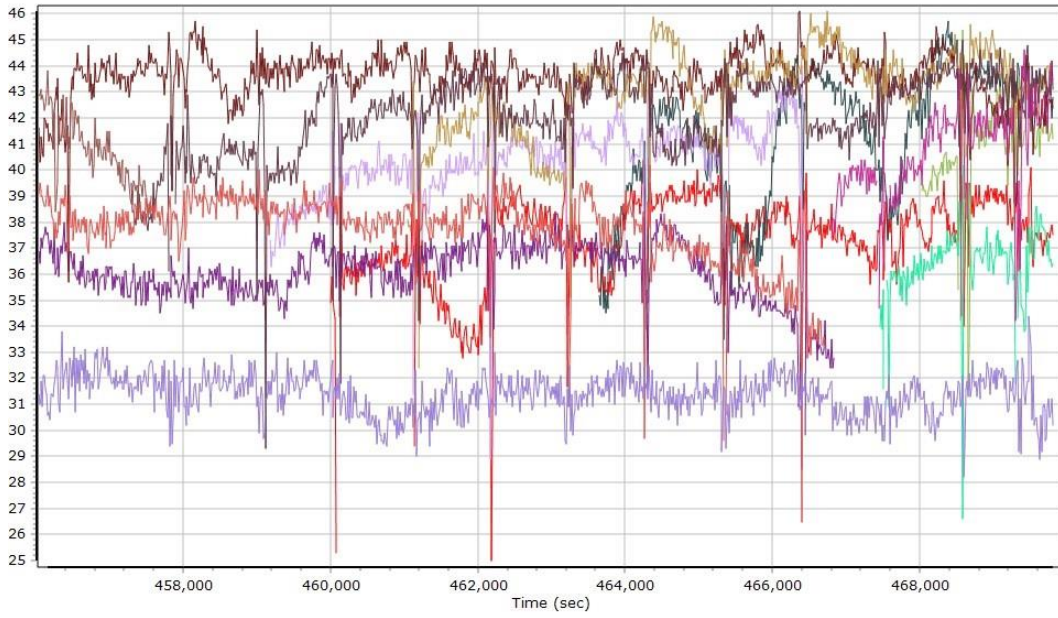
GLONASS L1 SNR

GLONASS L1 SNR



GLONASS L2 SNR

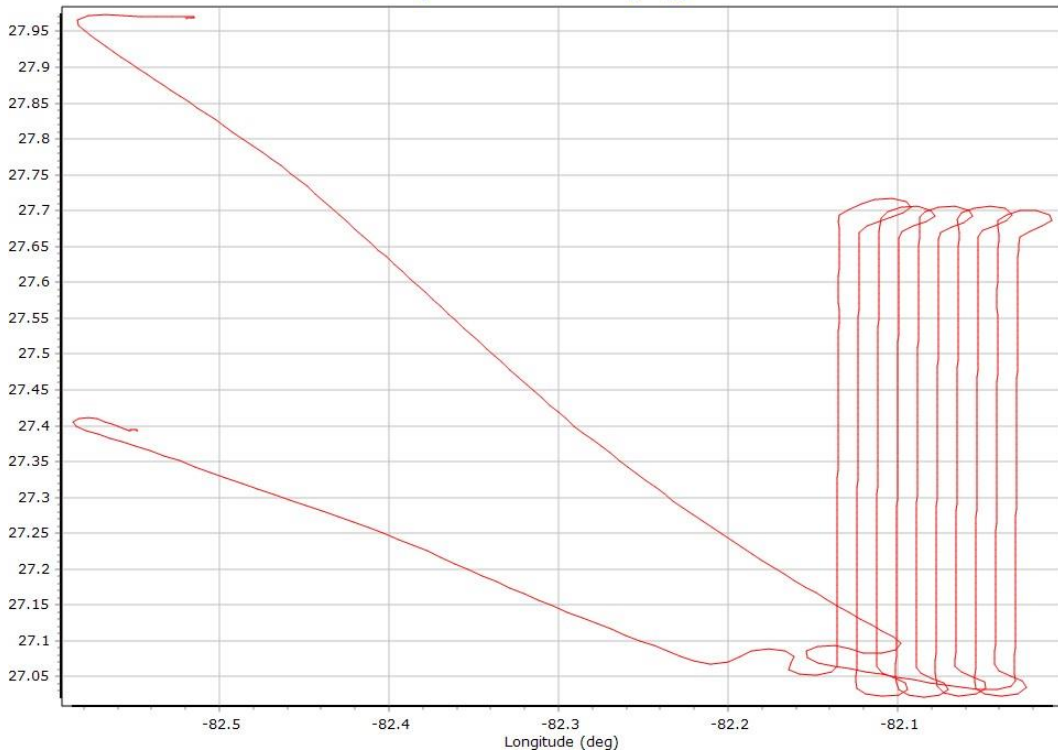
GLONASS L2 SNR



Trajectory Information

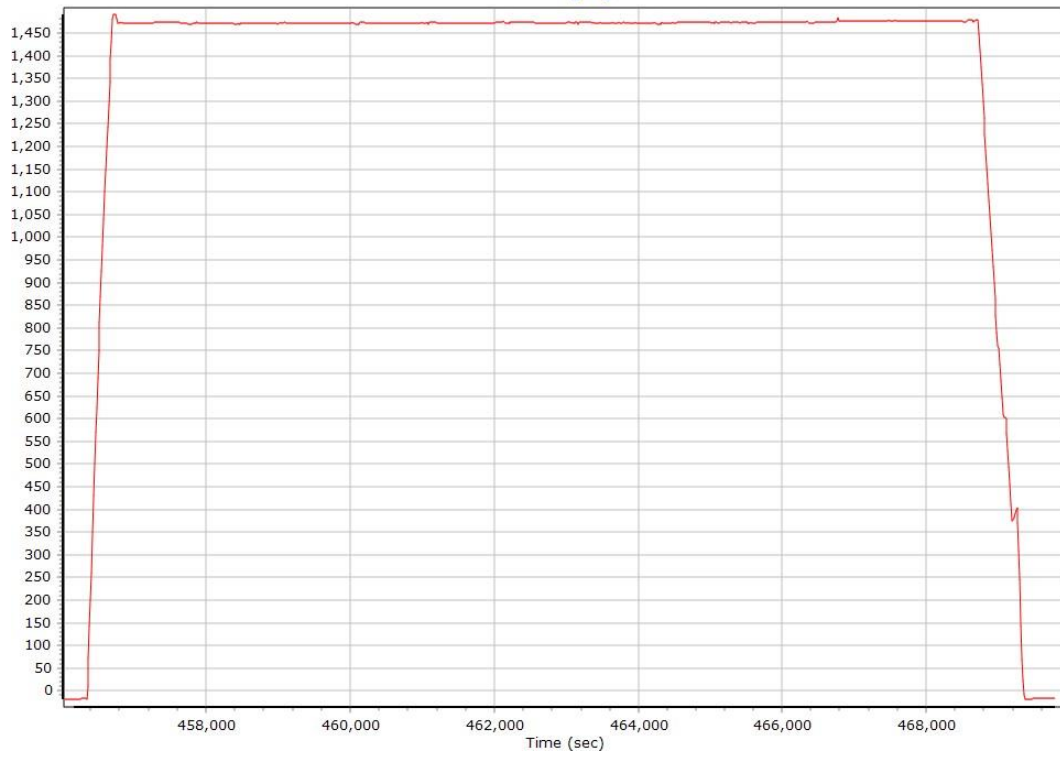
Top View

Top View: Latitude (deg)

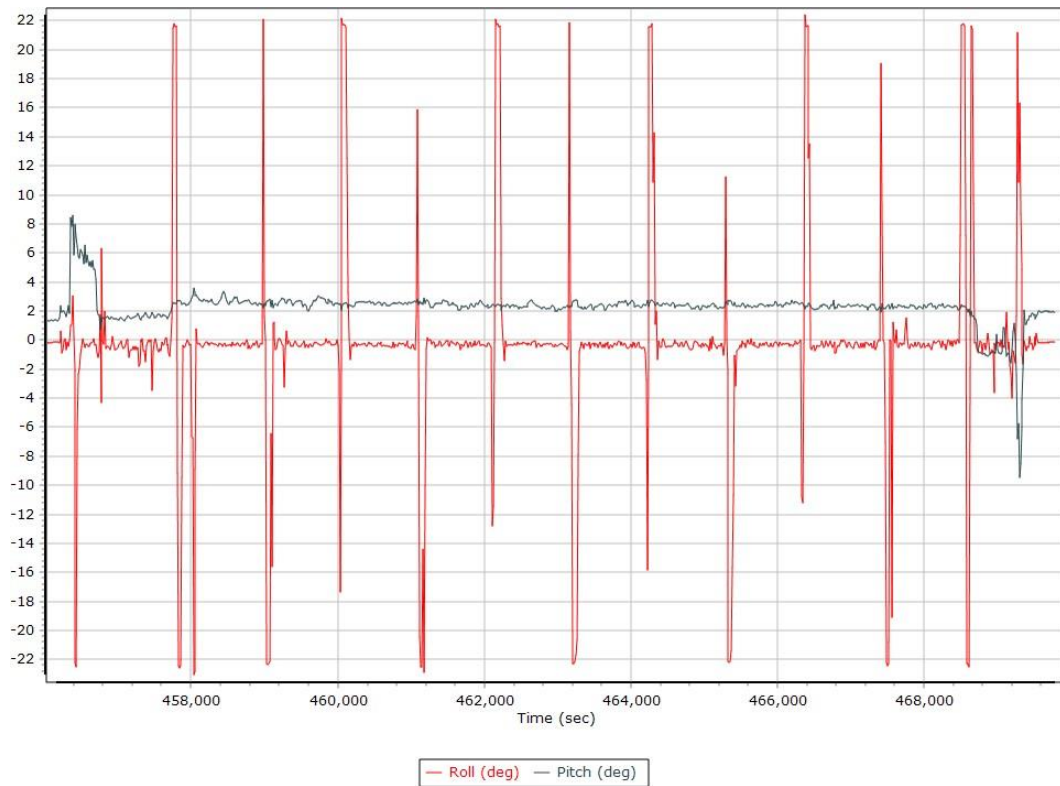


Altitude

Altitude (m)

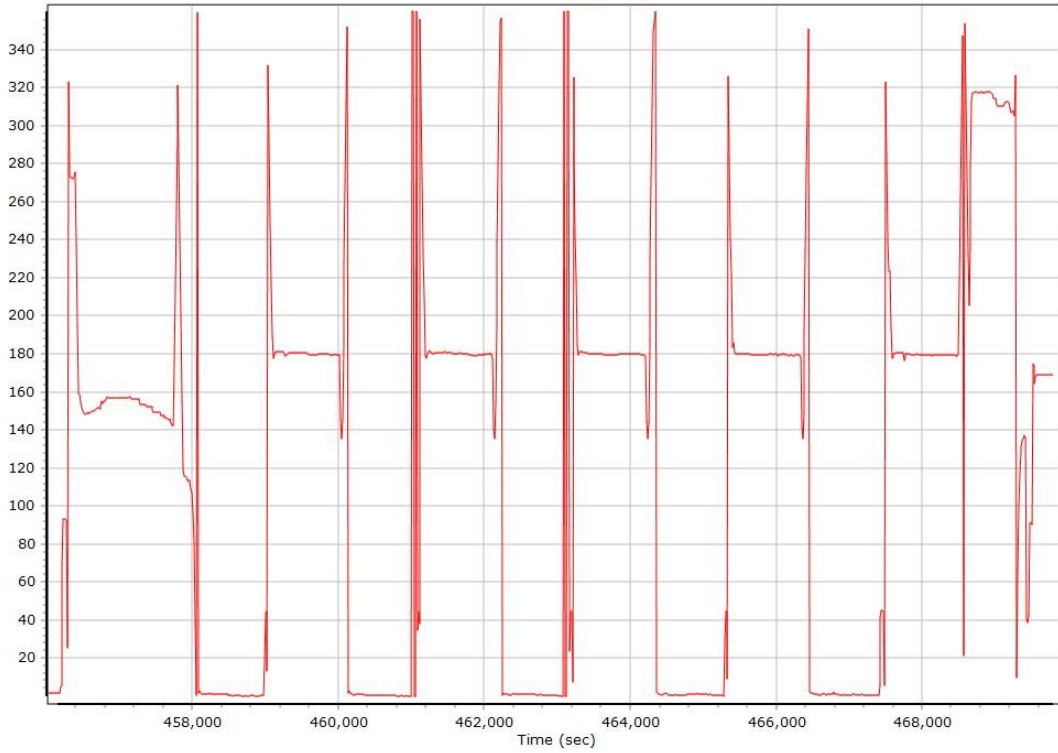


Roll/Pitch

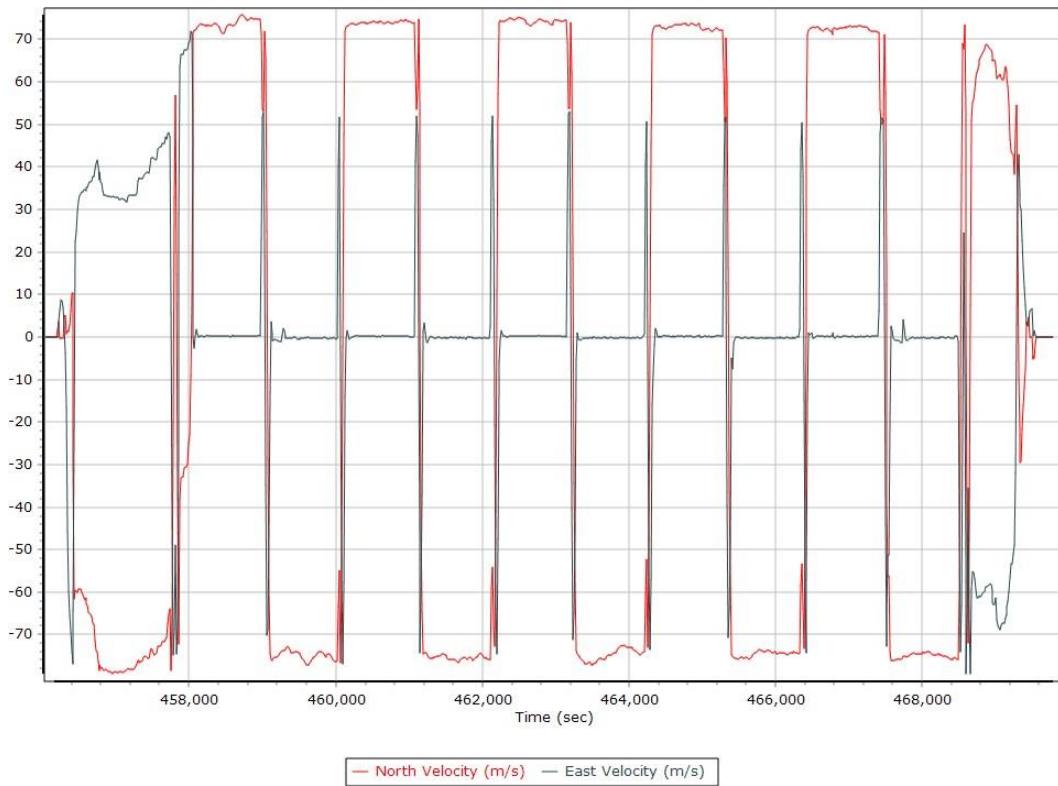


Heading

True Heading (deg)

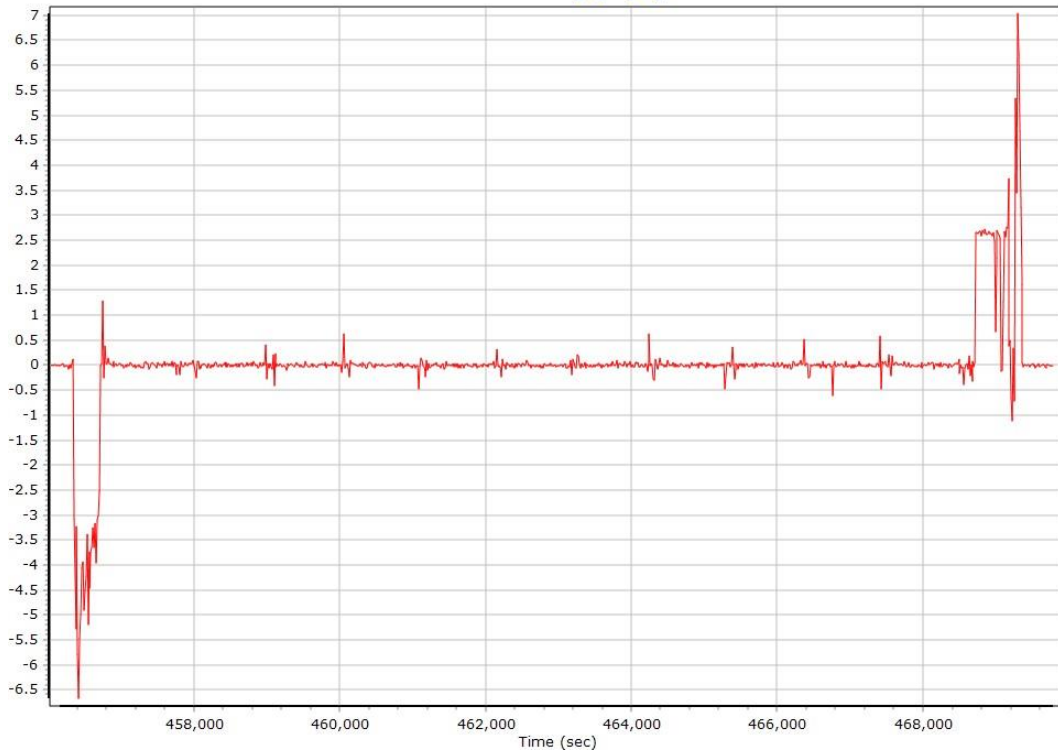


North/East Velocity



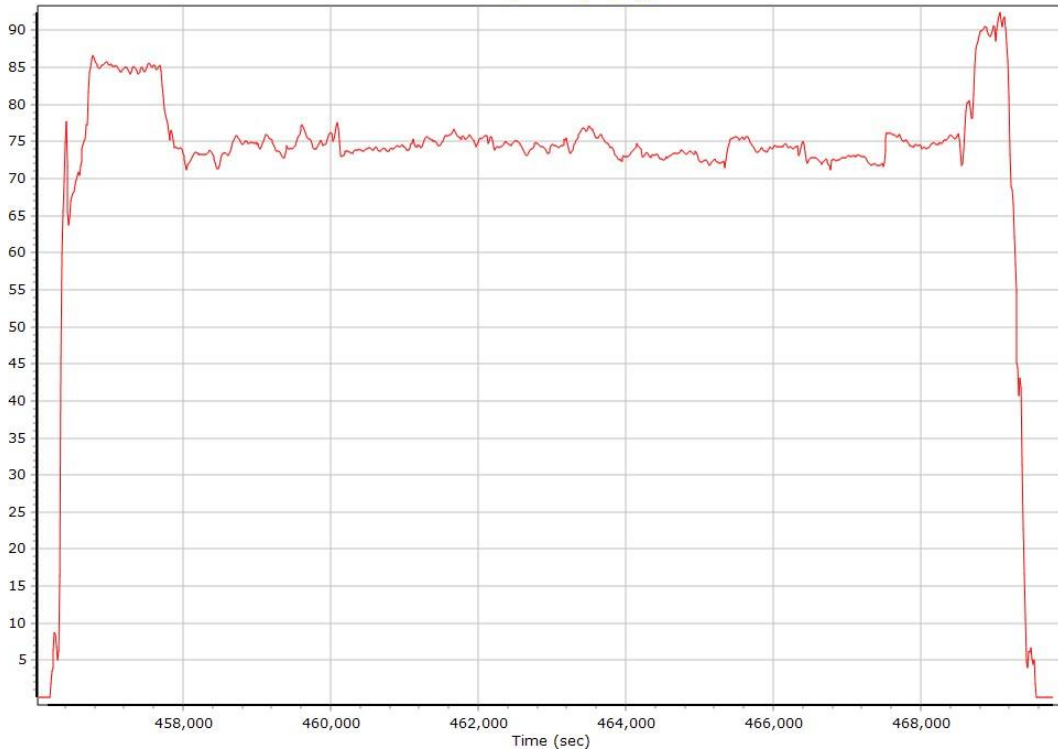
Down Velocity

Down Velocity (m/s)



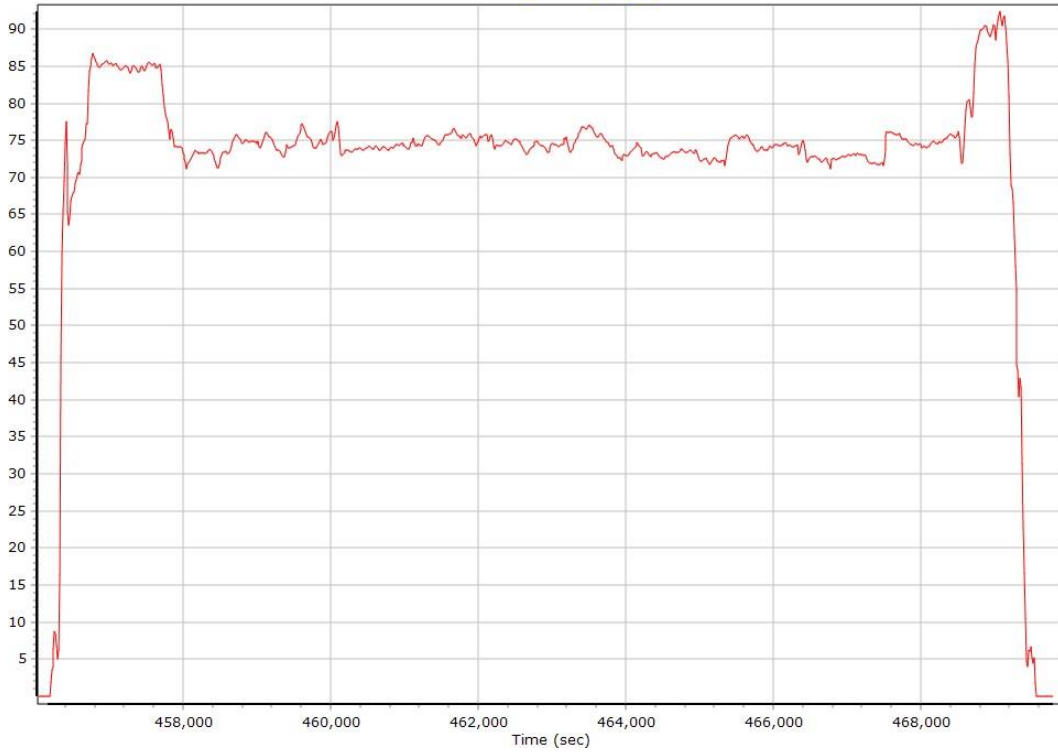
Total Speed

Total Speed (m/s)

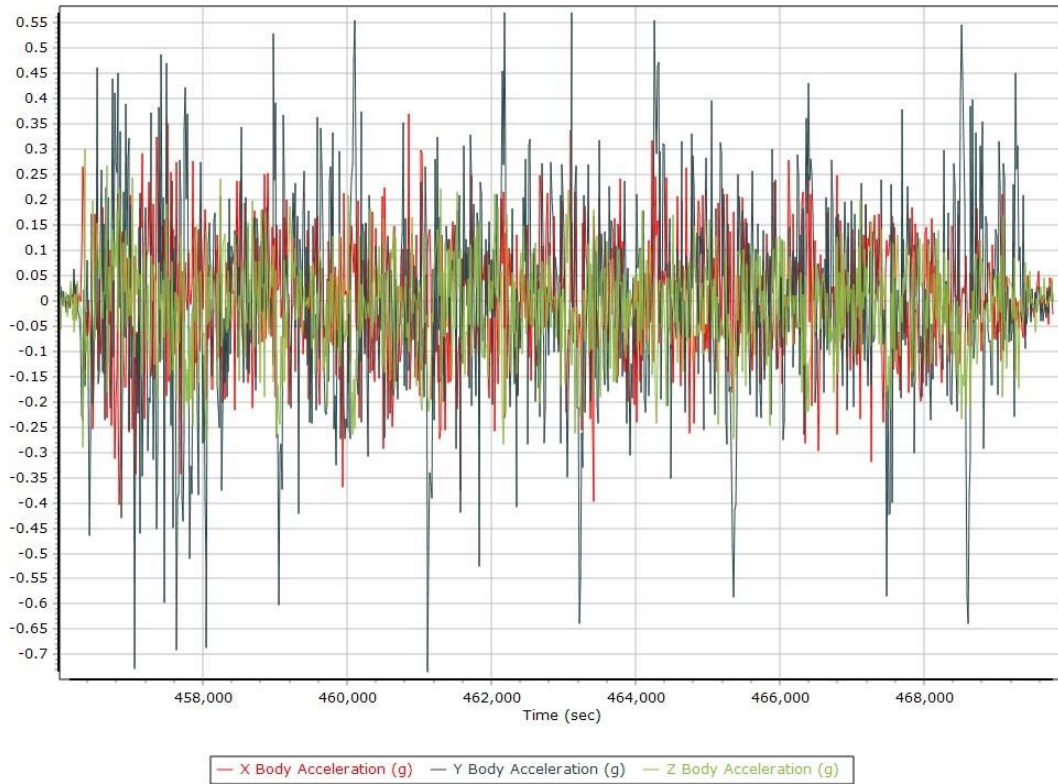


Ground Speed

Ground Speed (m/s)

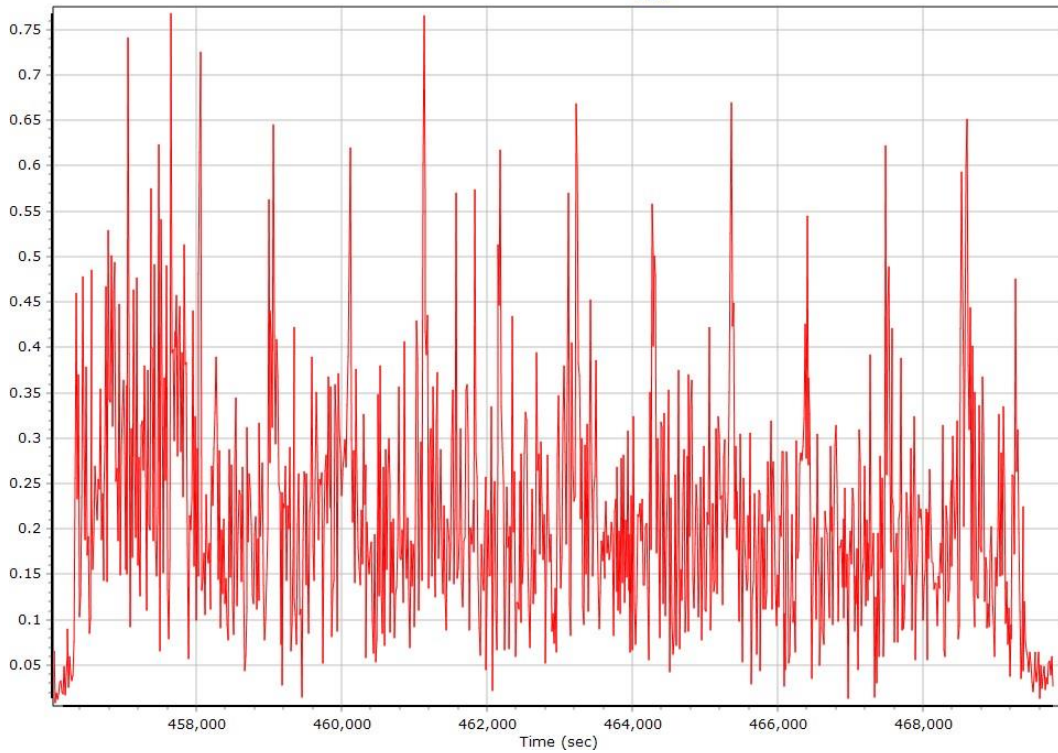


Body Acceleration

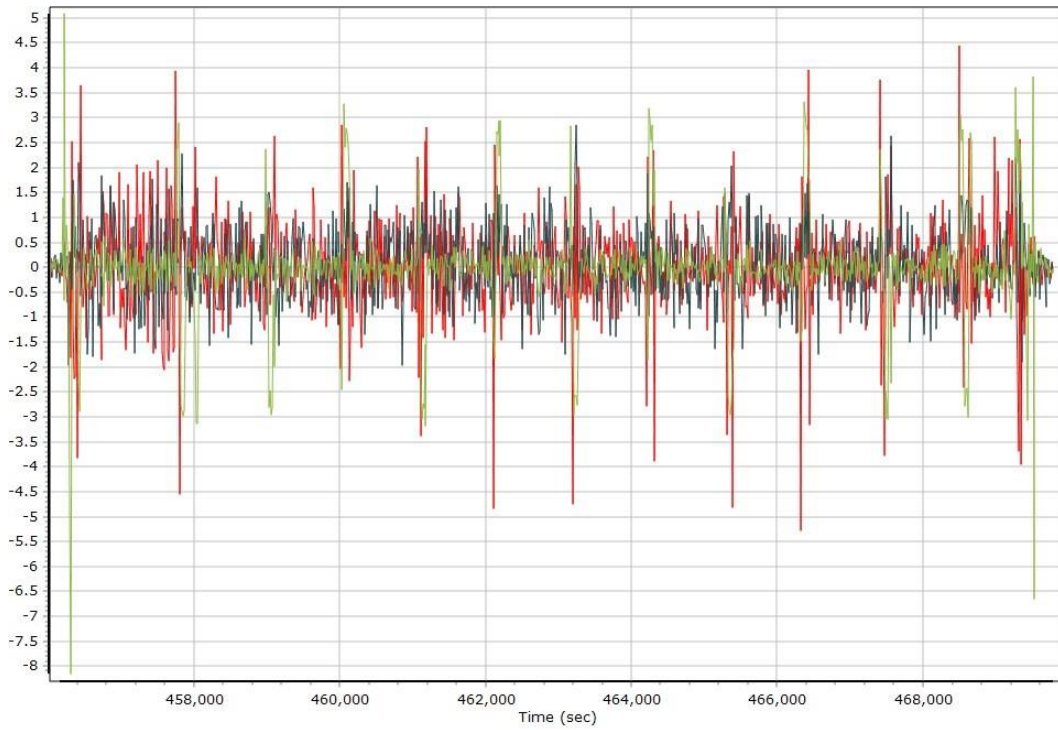


Total Body Acceleration

Total Acceleration (g)



Body Angular Rate



— X Body Angular Rate (deg/sec) — Y Body Angular Rate (deg/sec) — Z Body Angular Rate (deg/sec)

SmartBase Processing Summary

Smart Select Options

Archive enabled	False
User database enabled	False
Include high-rate data sites	False

Target GNSS Selection	GNSS
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Basestation Selection

Date	ID	Dist	Data Type	Rate	Service	Database	Status
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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	

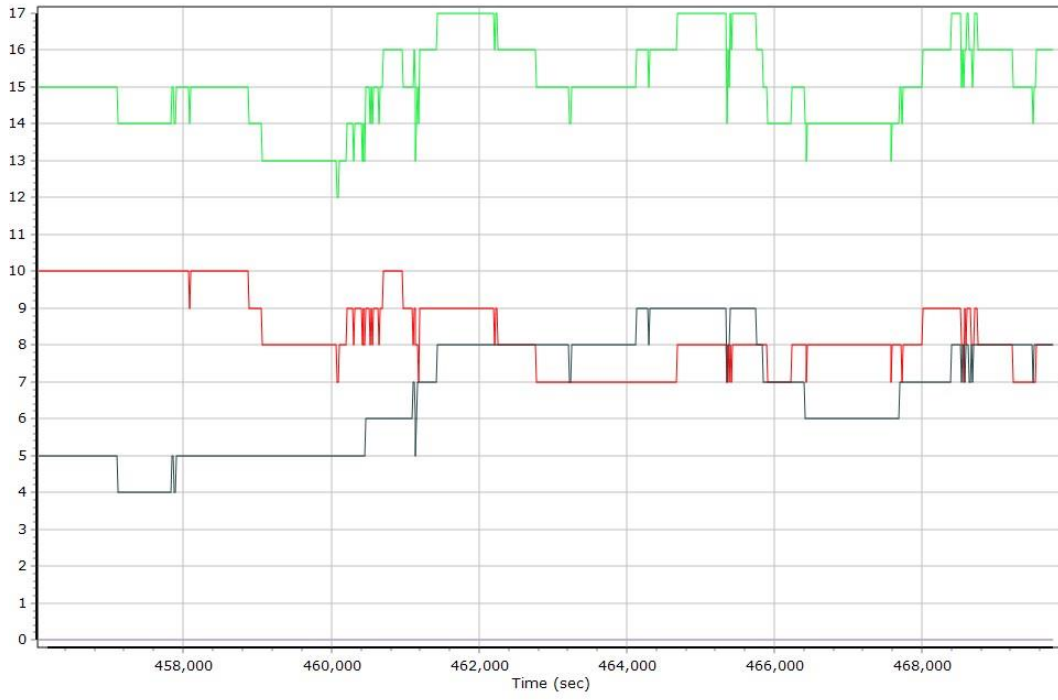
GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	2.40	76.06	
Number of GPS SV	6	11	8
Number of GLONASS SV	0	9	7
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	10	17	15
PDOP	1.14	2.35	1.49
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	13935.00	0.00	1.00
Percentage	99.99	0.00	0.01

Num SVs in solution

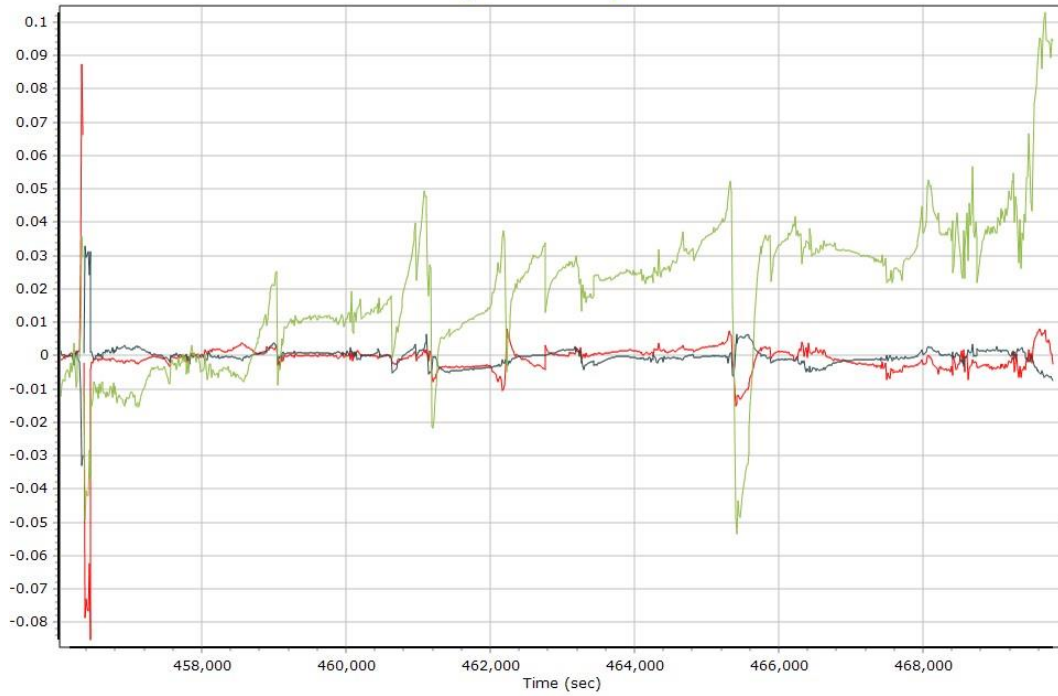
Number of SVs in solution



— Number of GPS — Number of GLONASS — Number of QZSS — Number of BEIDOU — Total Number

Forward/Reverse Separation

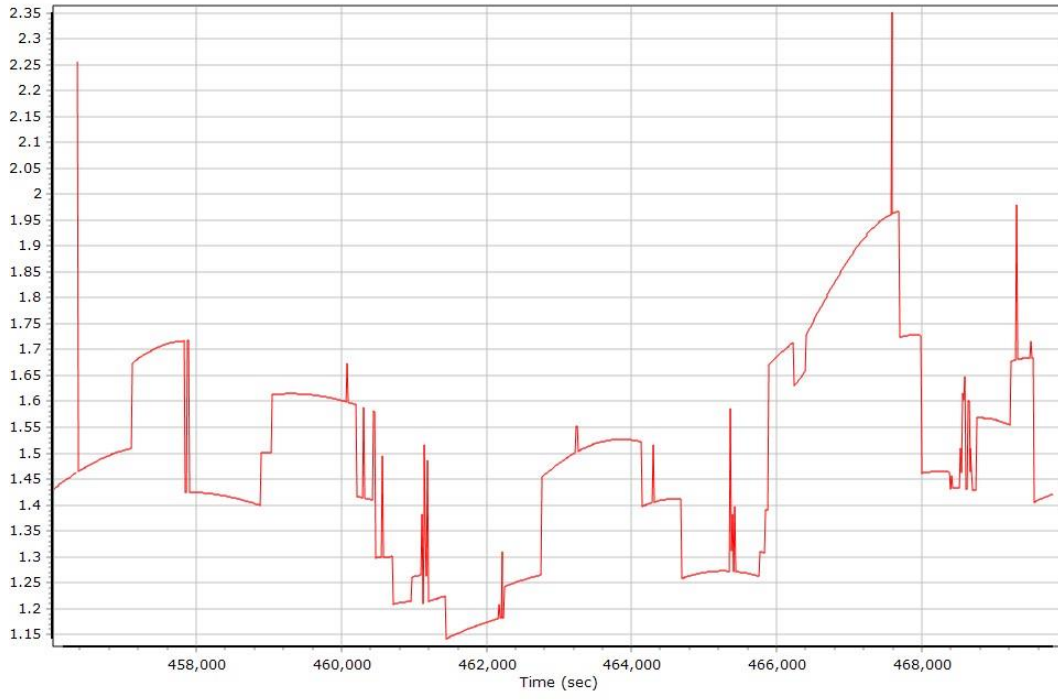
Forward/Reverse Separation



— North Separation (m) — East Separation (m) — Down Separation (m)

PDOP

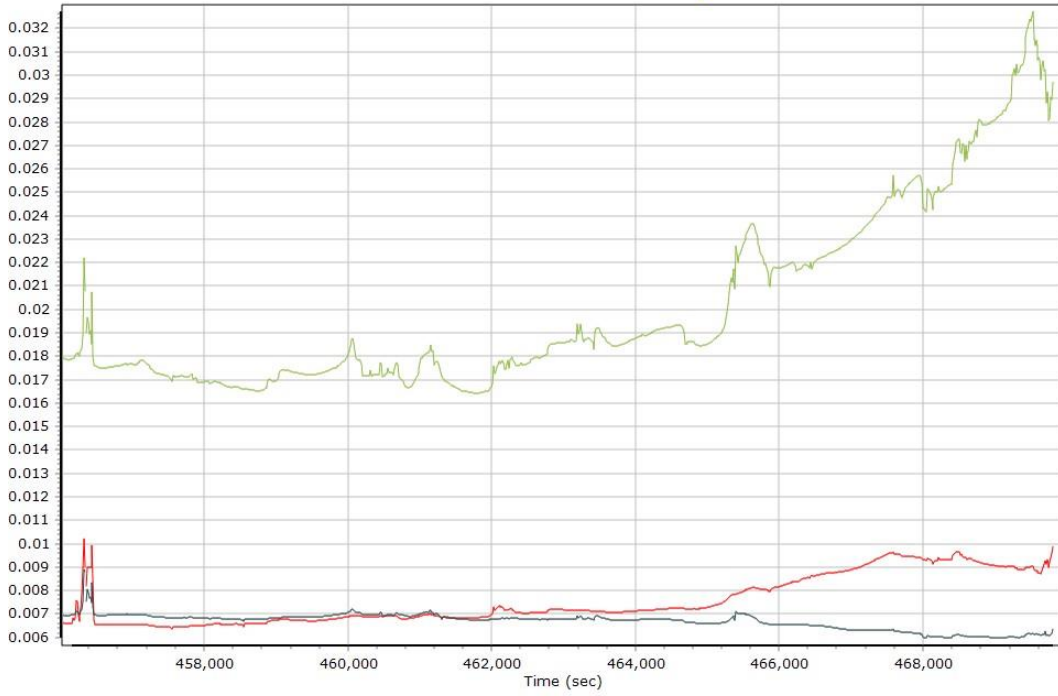
PDOP



— PDOP

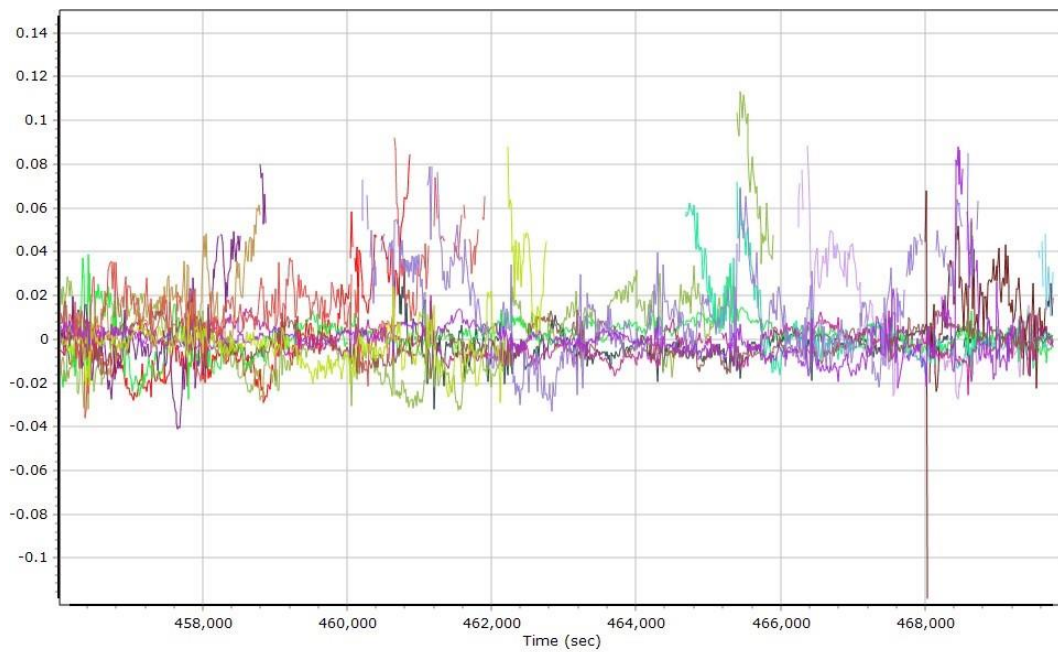
Estimated Position Accuracy

Estimated Position Accuracy

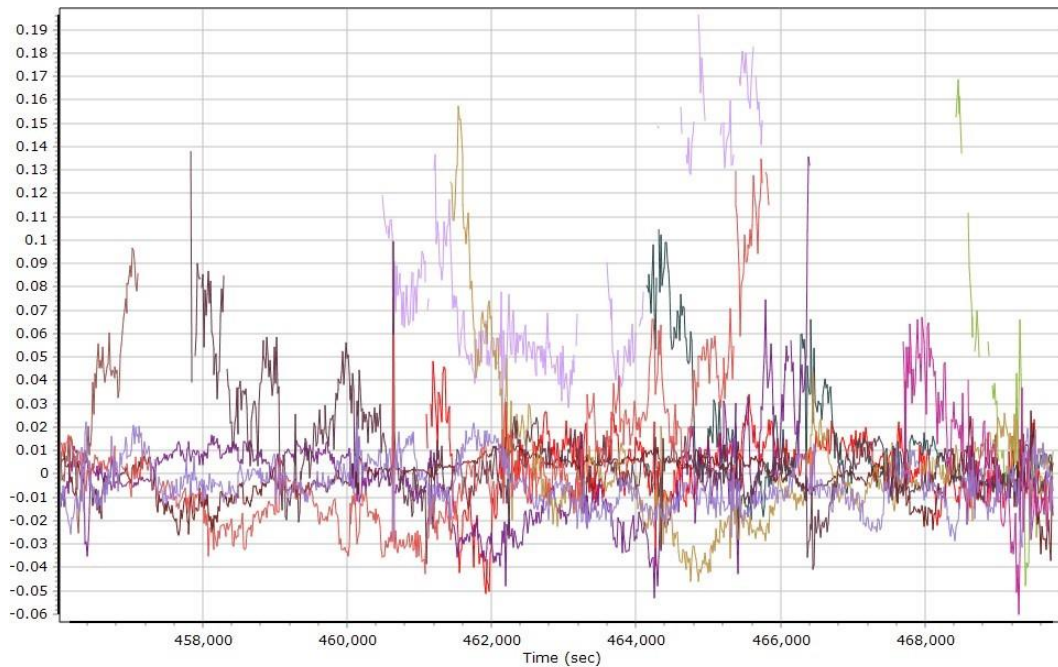


— North (m) — East (m) — Down (m)

GPS Residuals



GLONASS Residuals



GNSS-Inertial Processor Configuration

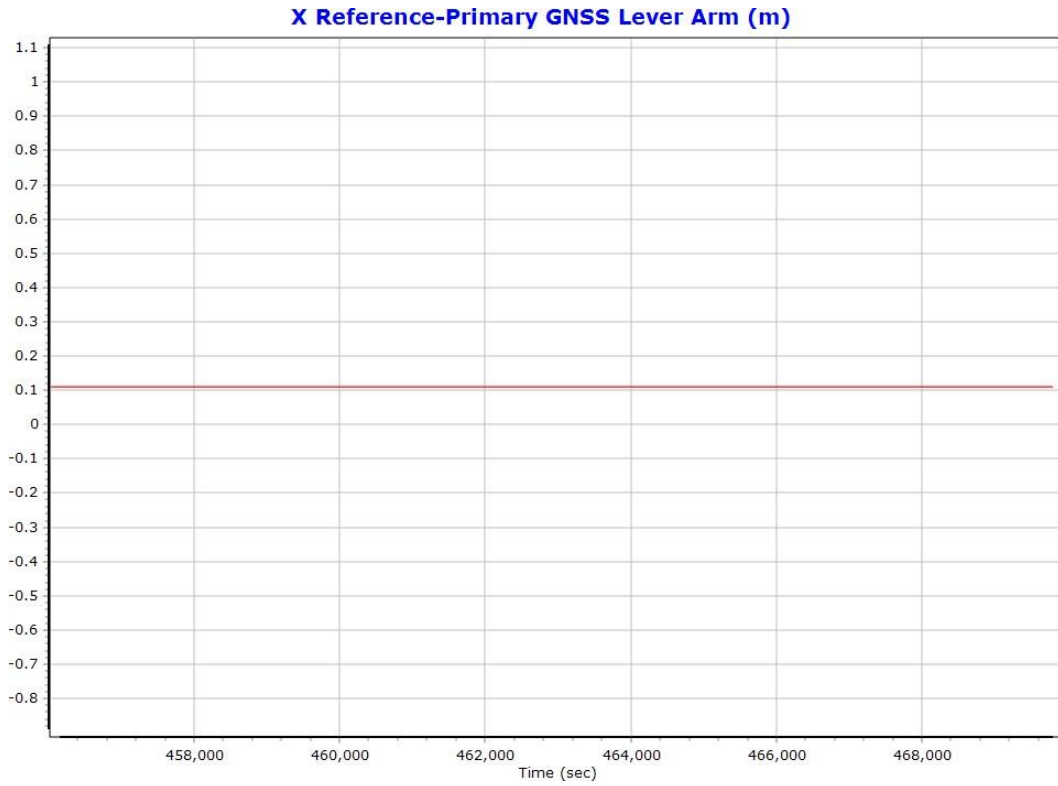
Processing mode	IN-Fusion SmartBase
Stabilized mount	False
Base station	ASB
Processing start time	455834.000 (11/30/2018 6:37:14 AM)
Processing end time	469810.000 (11/30/2018 10:30:10 AM)

Initial attitude source	GYRO Compass		
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]	0.110	-0.138	-0.963
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

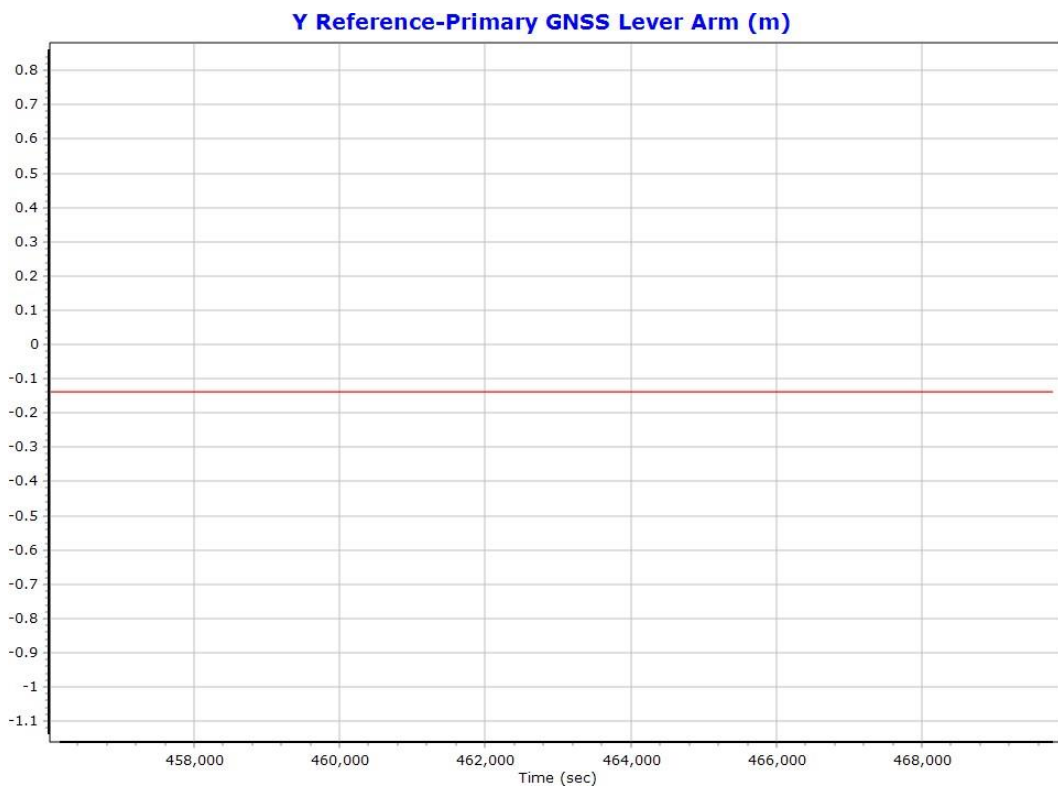
Reference-Primary GNSS Lever Arm

X Reference-Primary GNSS Lever Arm (m)

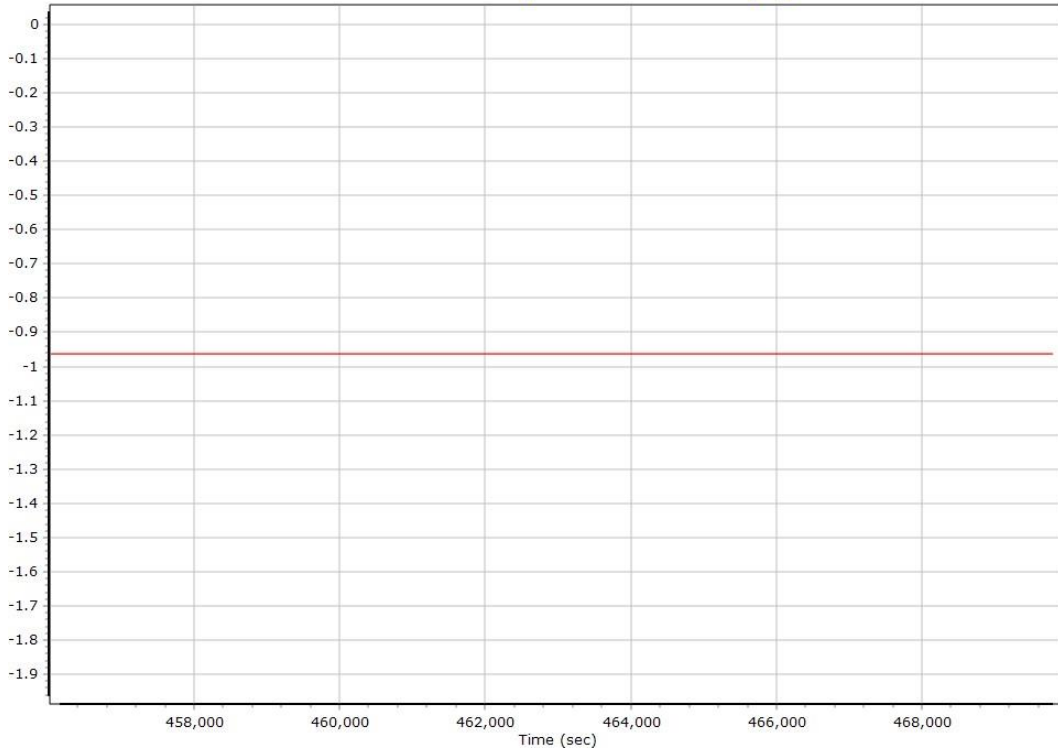


Y Reference-Primary GNSS Lever Arm (m)

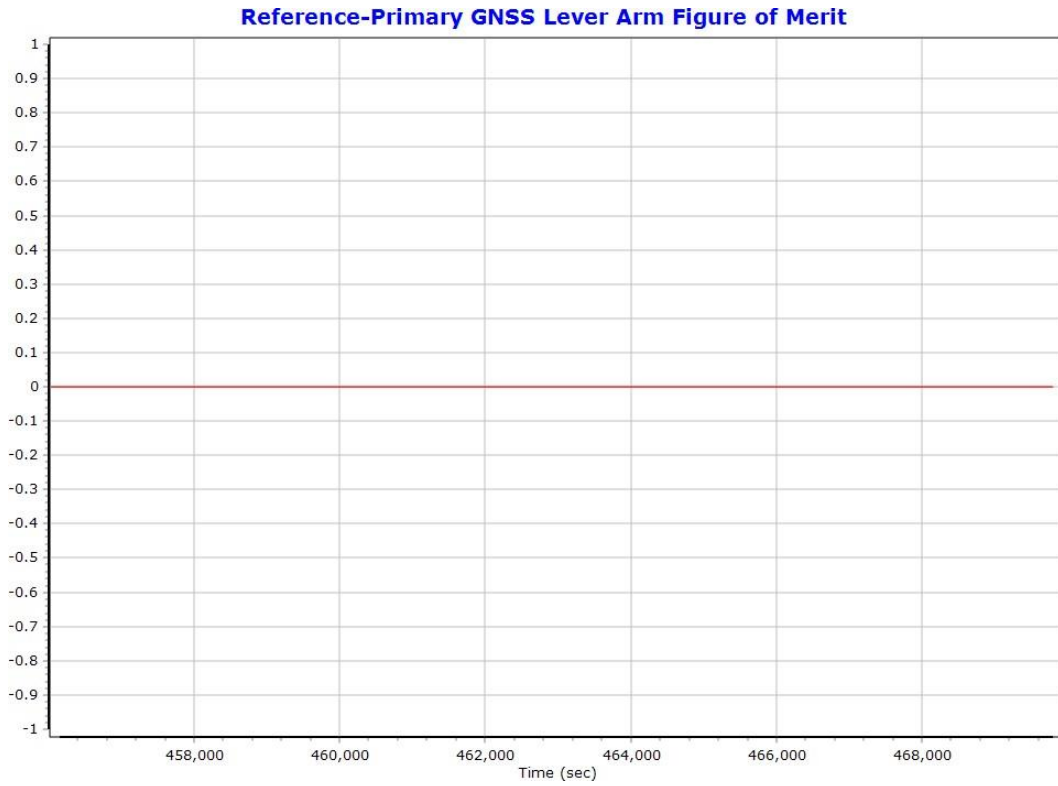
Z Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



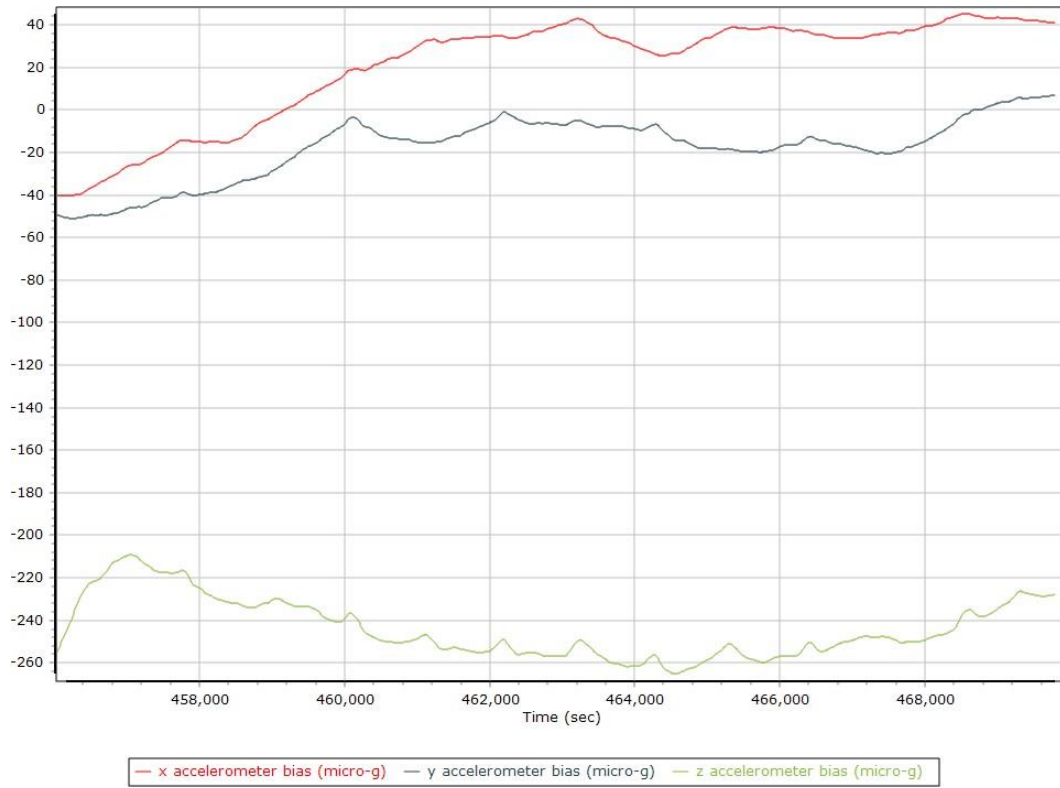
Reference-Primary GNSS Lever Arm Figure of Merit



Smoothed IN-Fusion QC

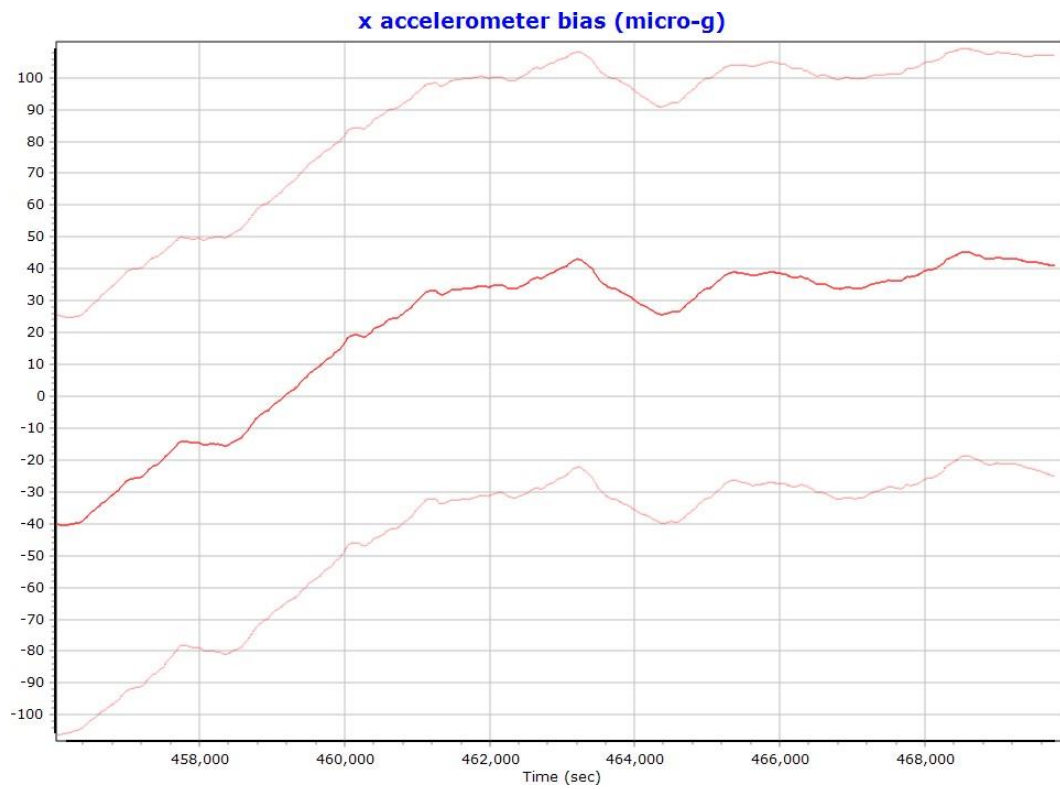
Smoothed Estimated Errors, Reference Frame

Accelerometer Bias (micro-g)

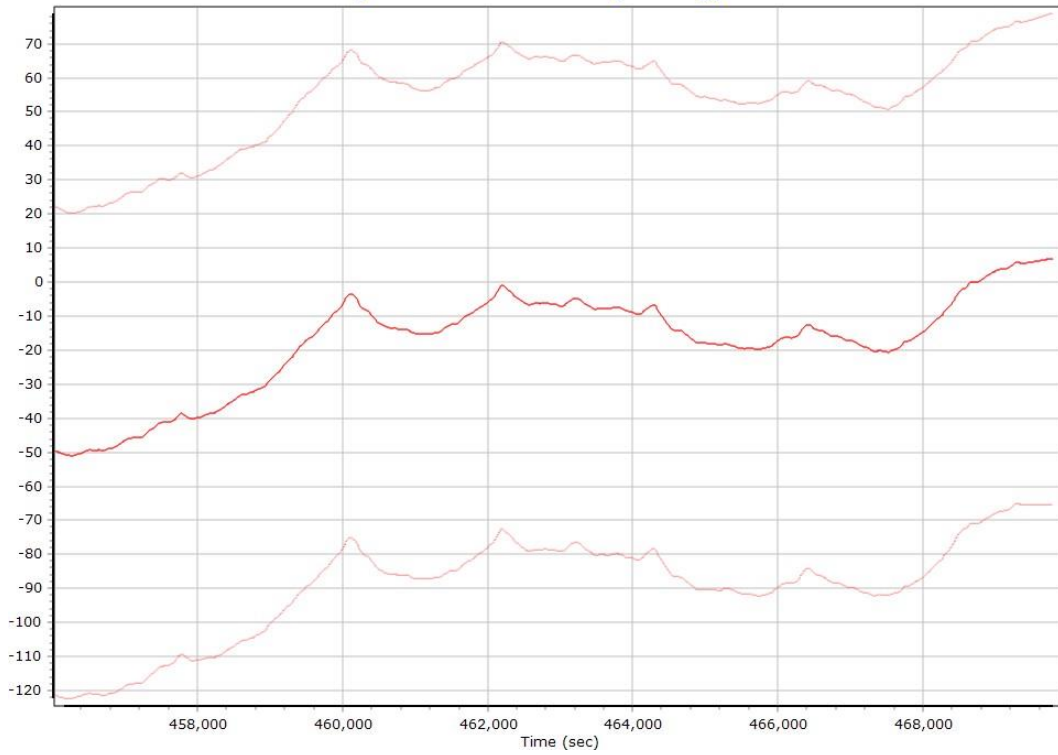


X Accelerometer Bias (micro-g)

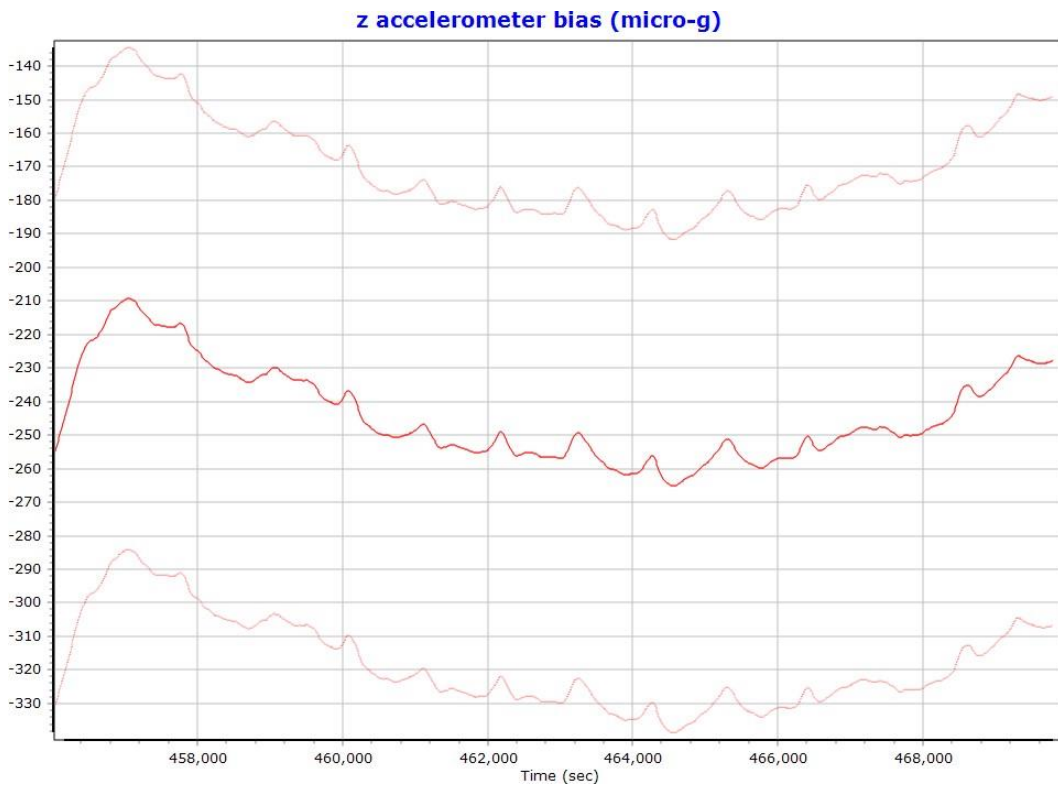
Y Accelerometer Bias (micro-g)



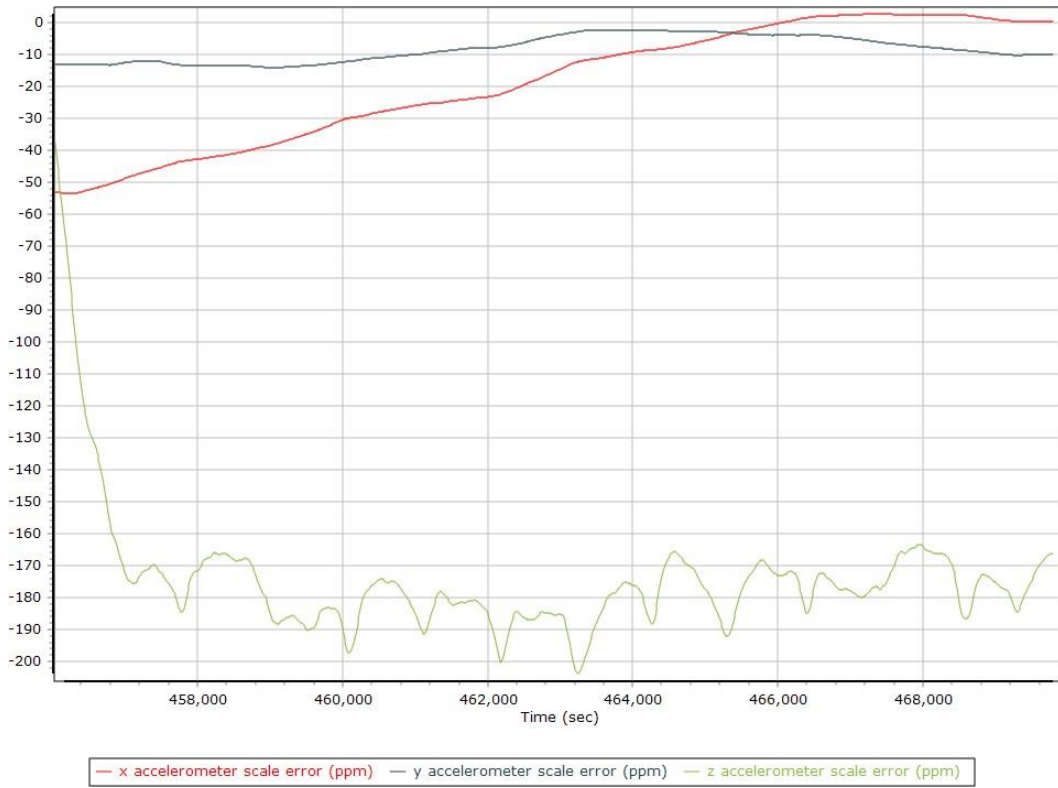
y accelerometer bias (micro-g)



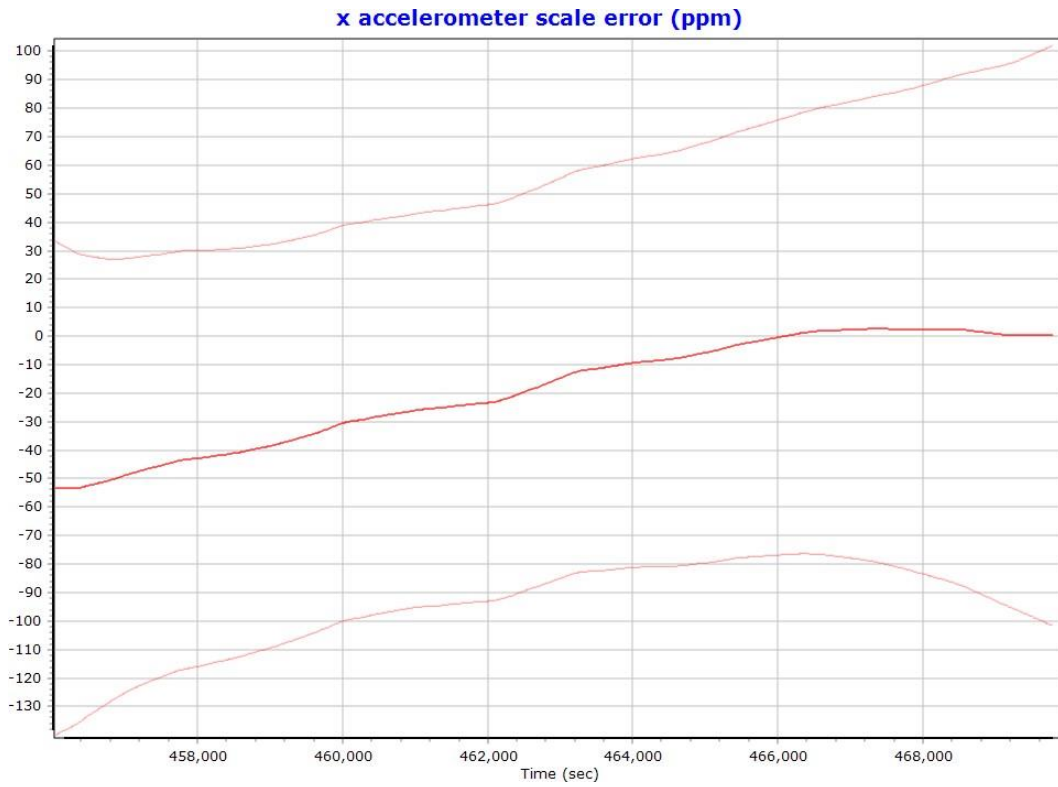
Z Accelerometer Bias (micro-g)



Accelerometer Scale Error (ppm)

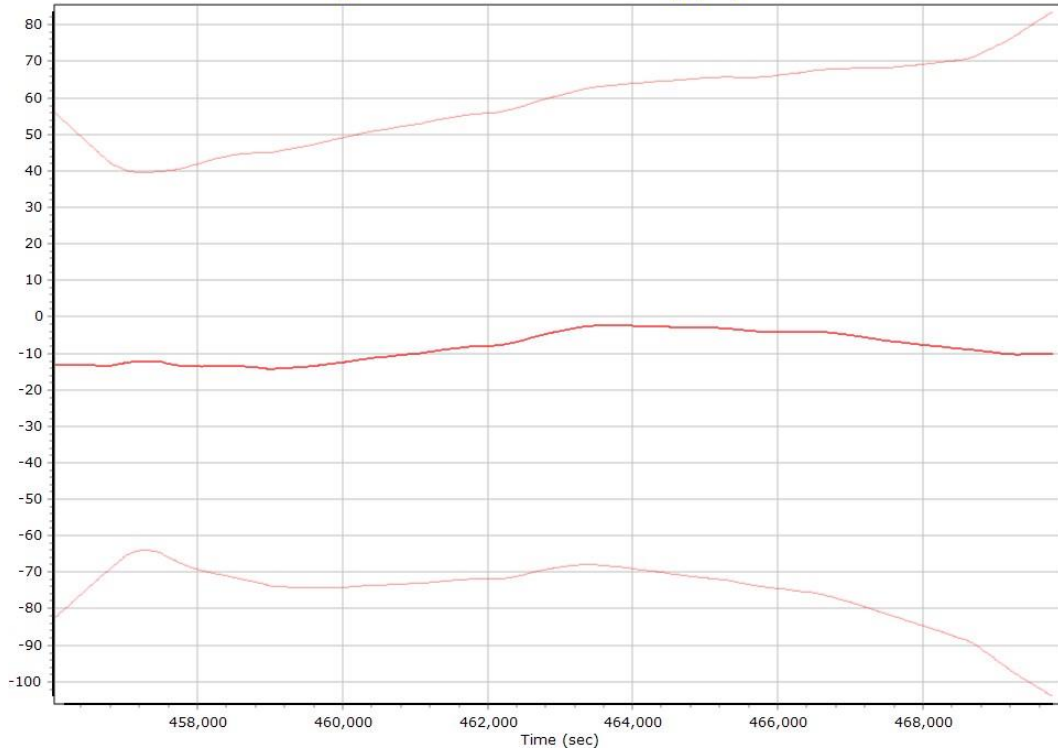


X Accelerometer Scale Error (ppm)



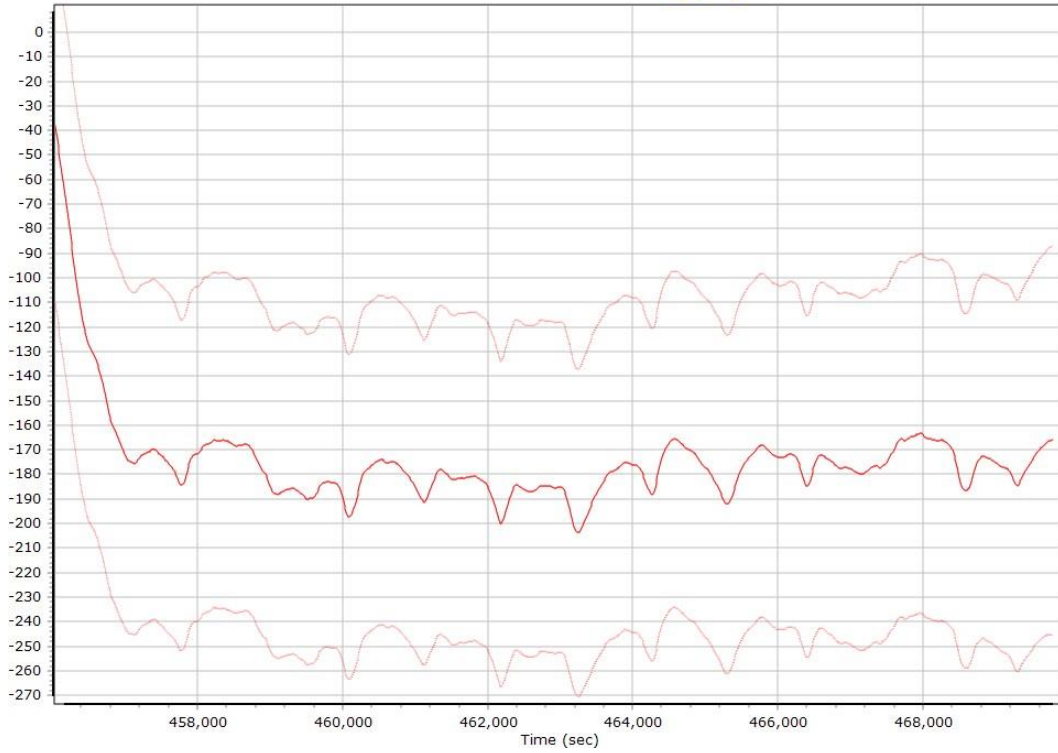
Y Accelerometer Scale Error (ppm)

y accelerometer scale error (ppm)

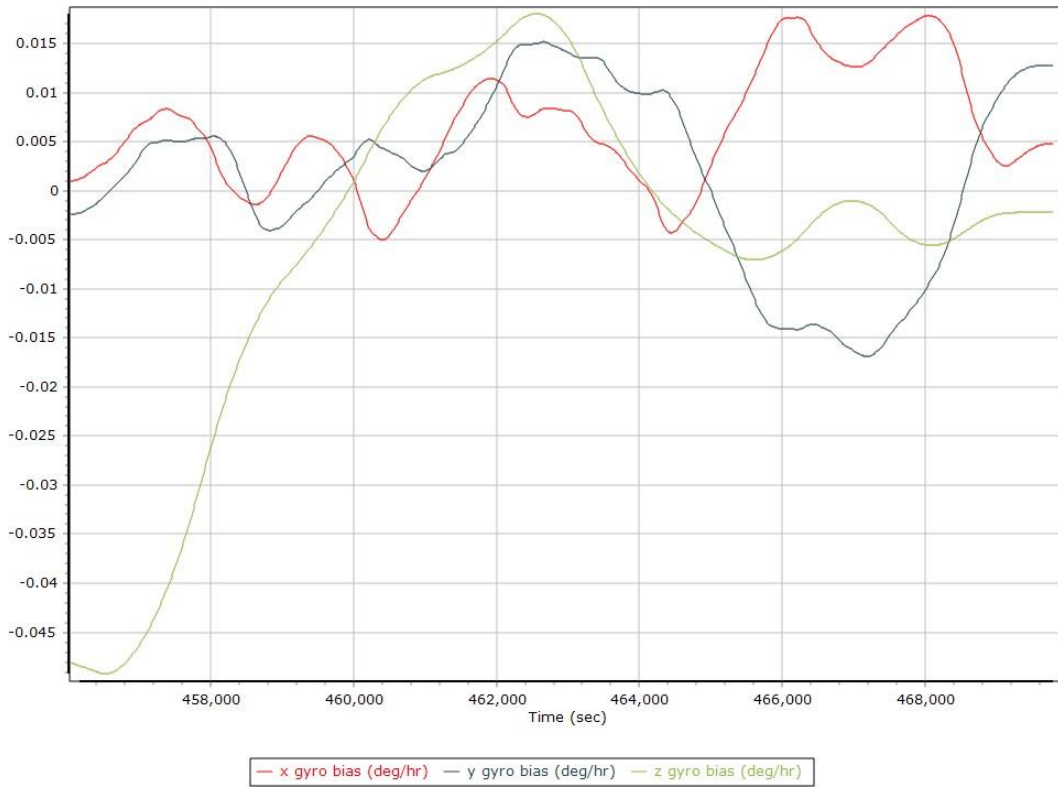


Z Accelerometer Scale Error (ppm)

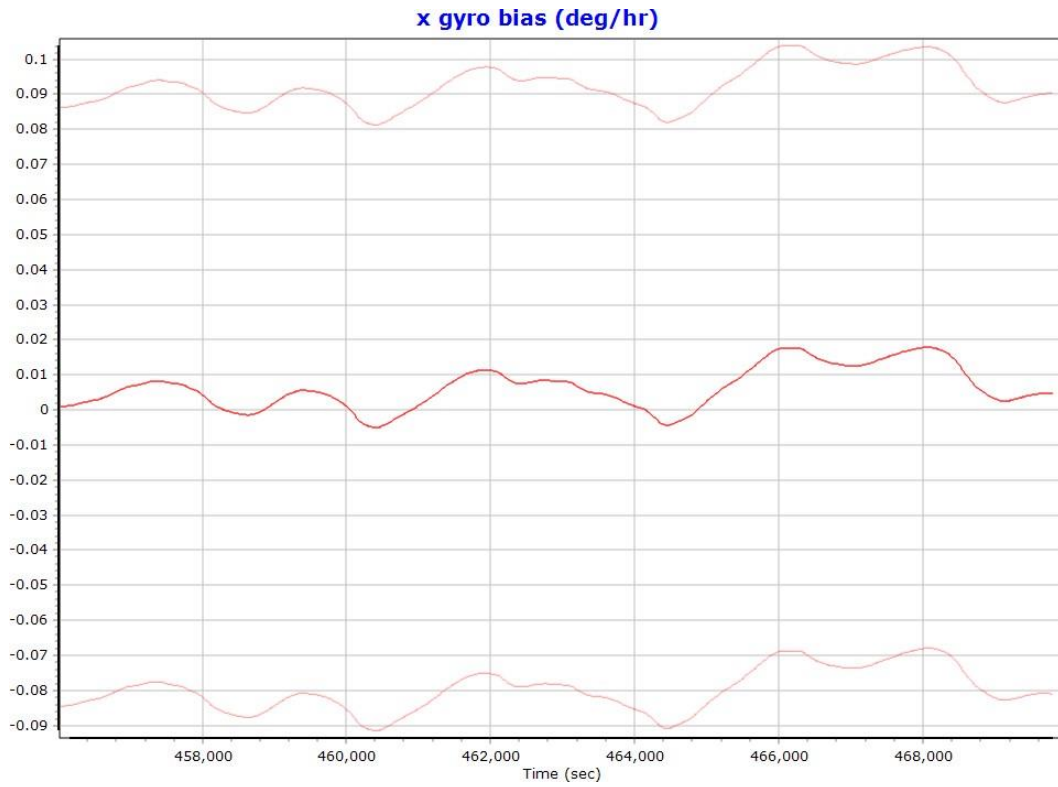
z accelerometer scale error (ppm)



Gyro Bias (deg/h)

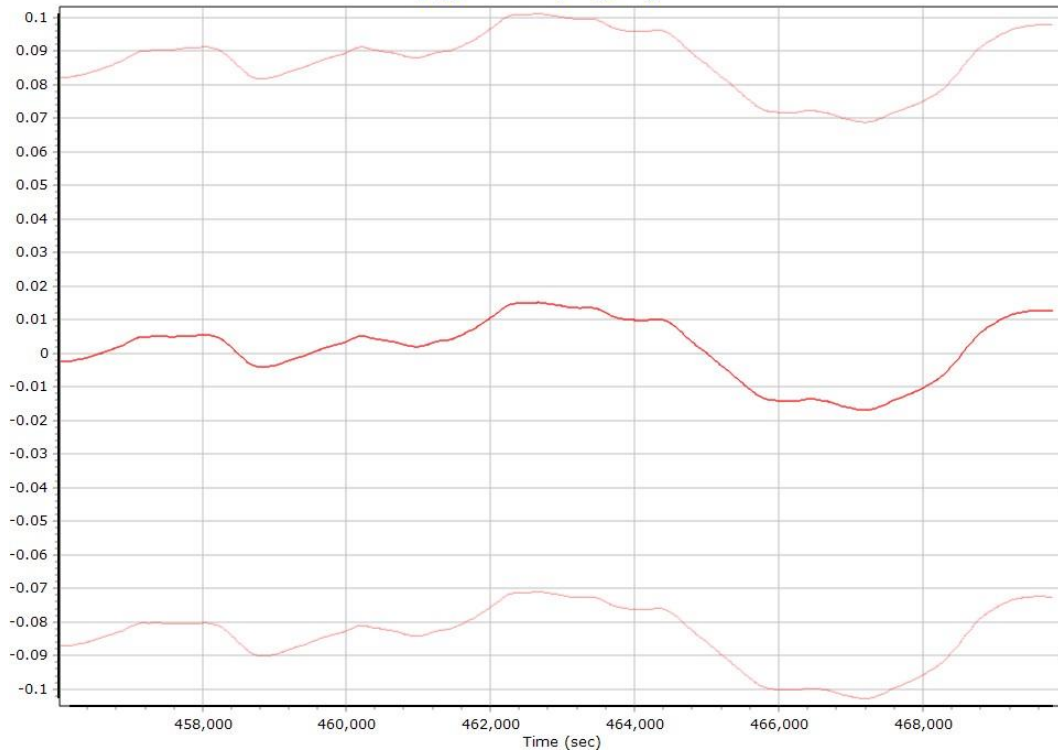


X Gyro Bias (deg/h)



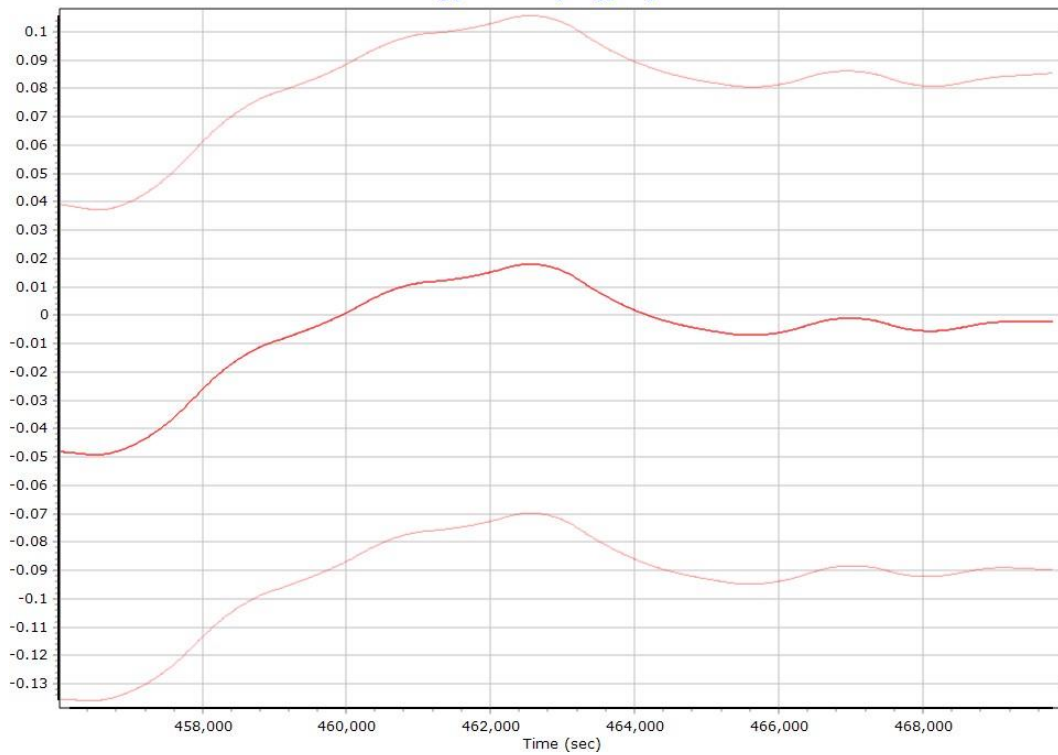
Y Gyro Bias (deg/h)

y gyro bias (deg/hr)

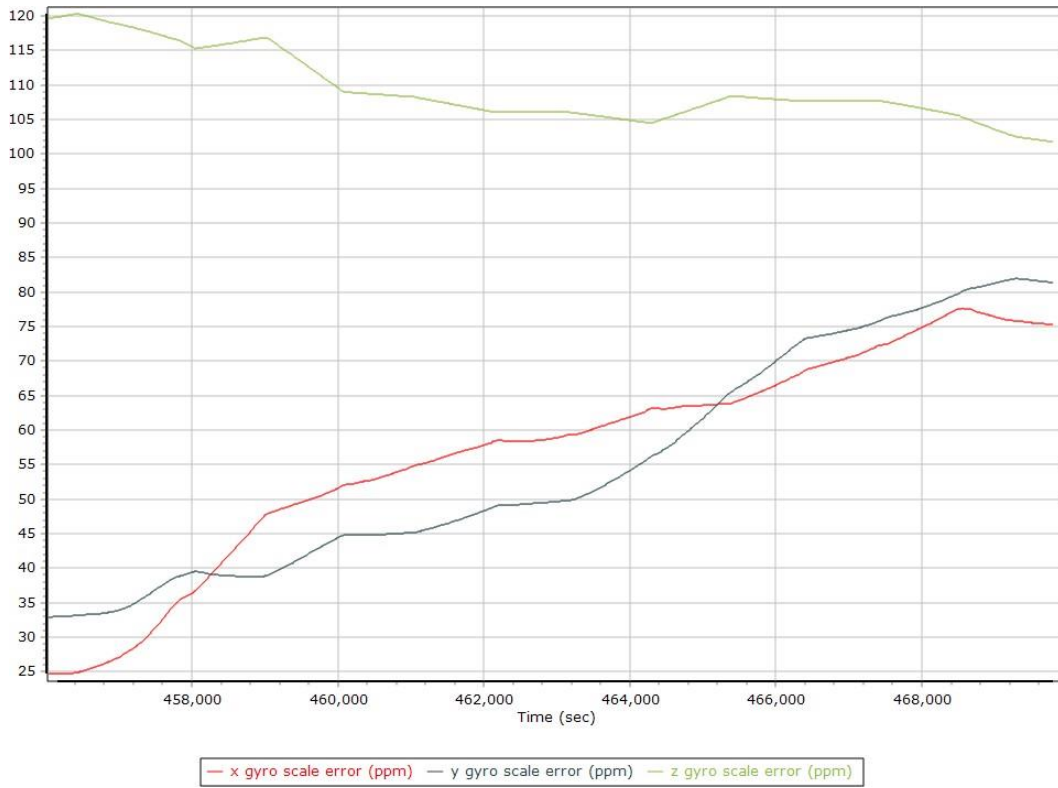


Z Gyro Bias (deg/h)

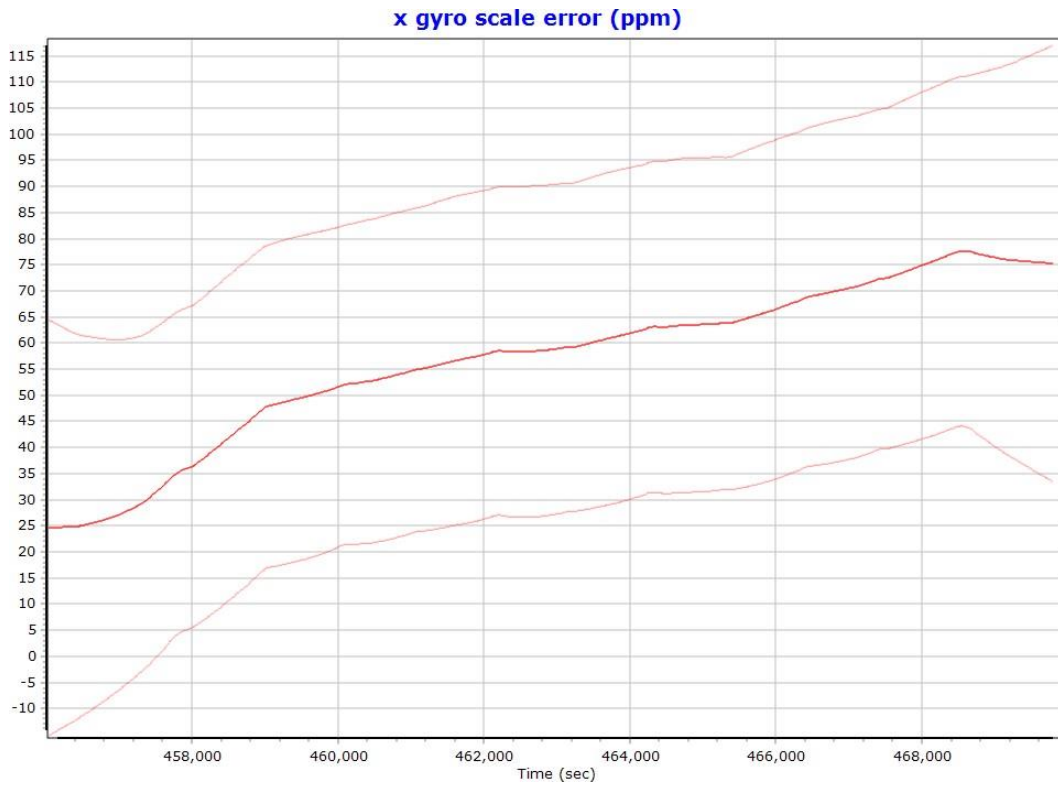
z gyro bias (deg/hr)



Gyro Scale Error (ppm)

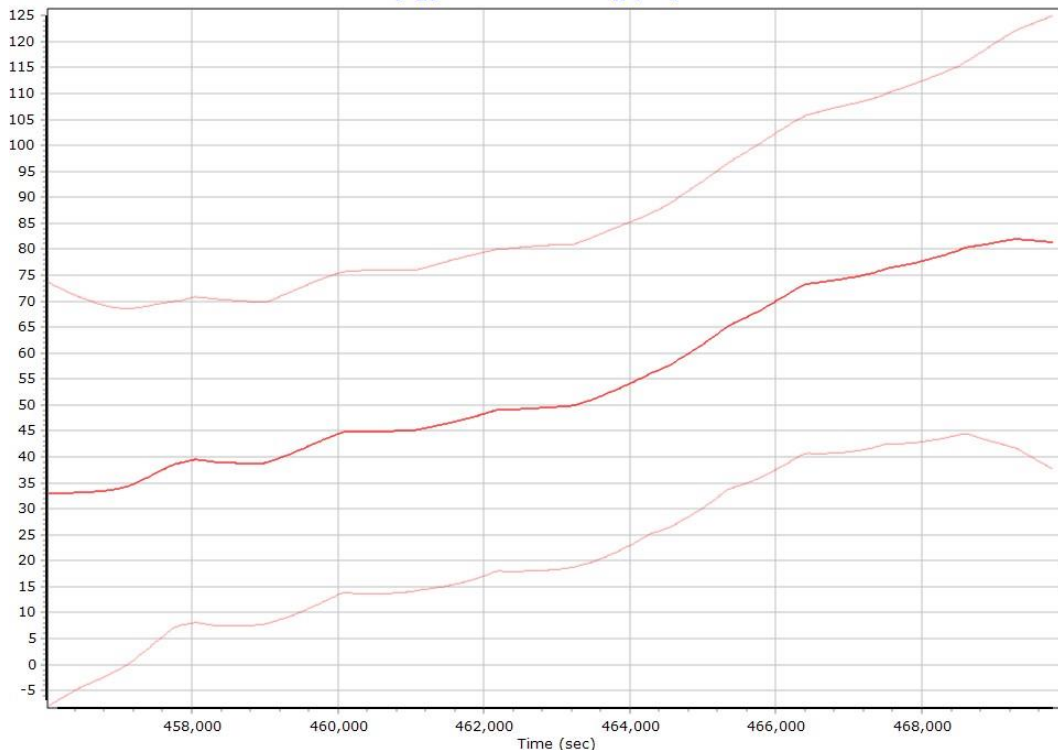


X Gyro Scale Error (ppm)



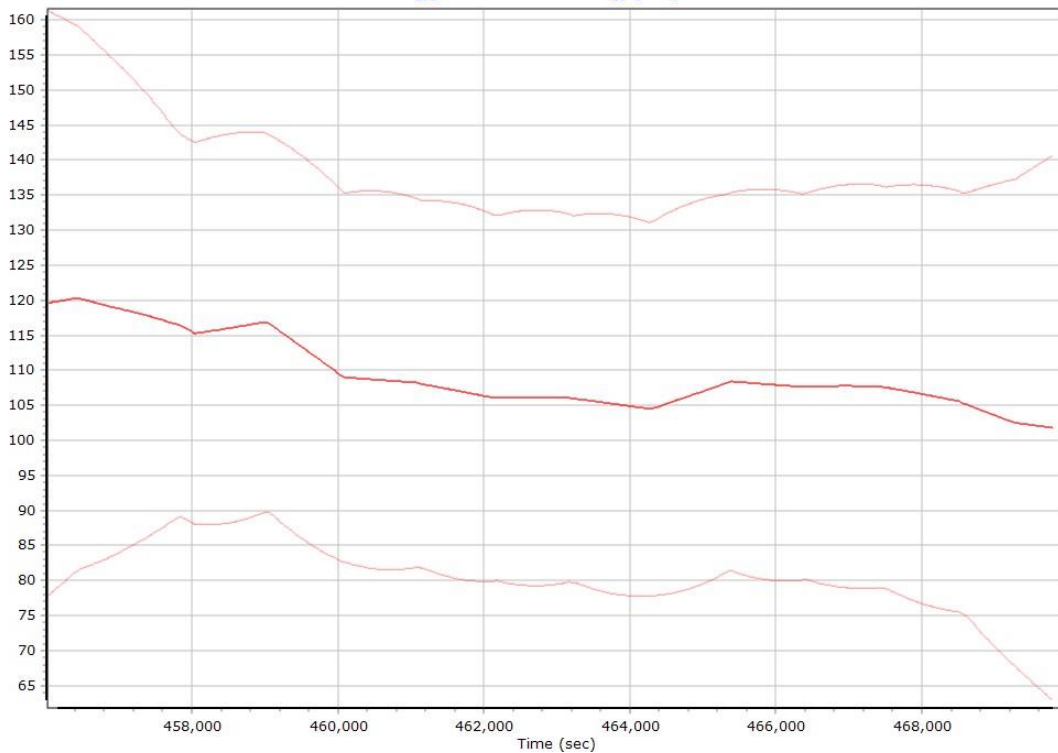
Y Gyro Scale Error (ppm)

y gyro scale error (ppm)



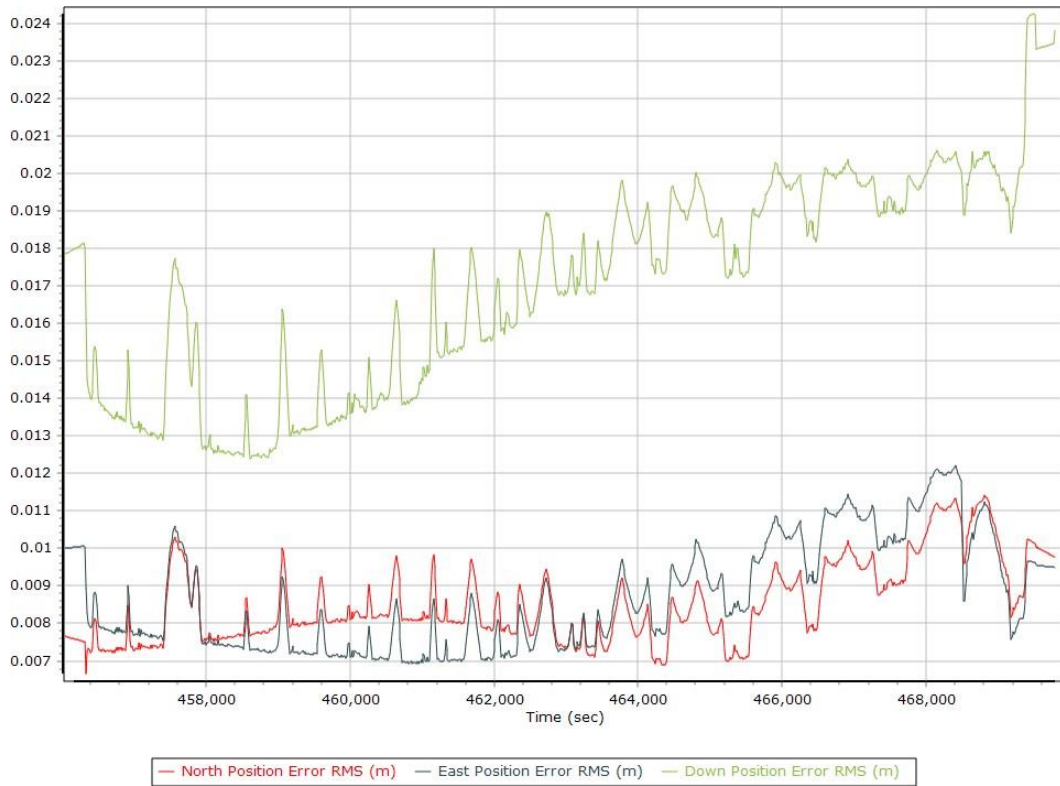
Z Gyro Scale Error (ppm)

z gyro scale error (ppm)

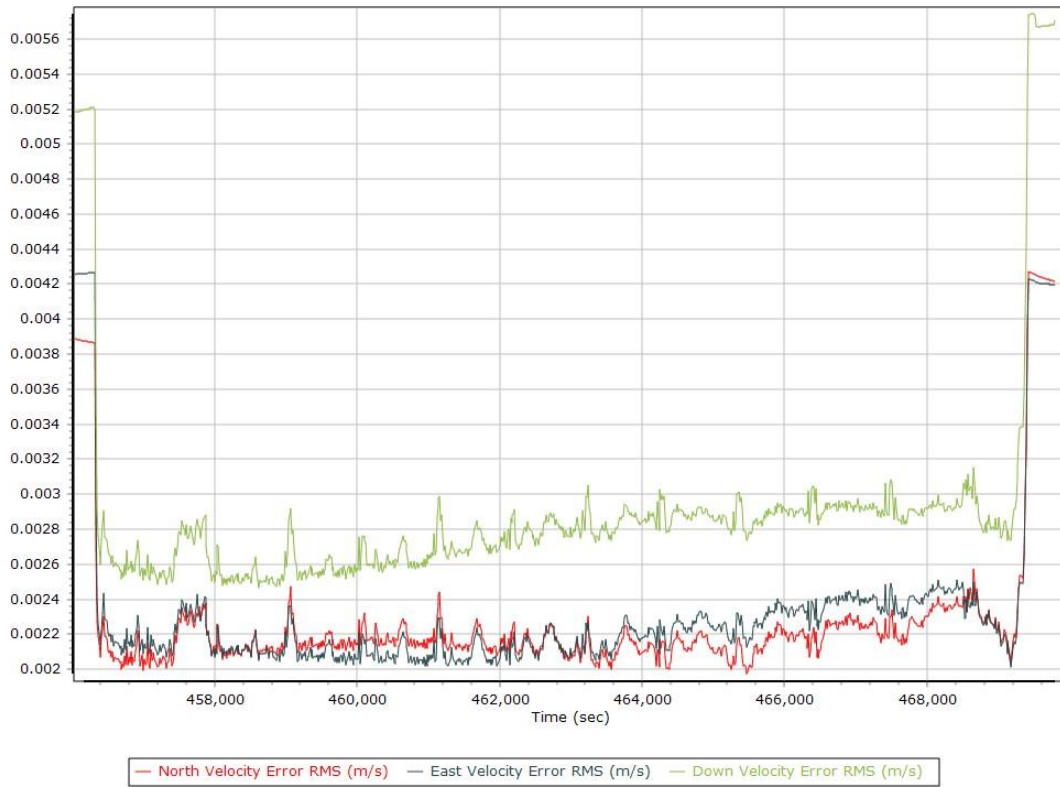


Smoothed Performance Metrics

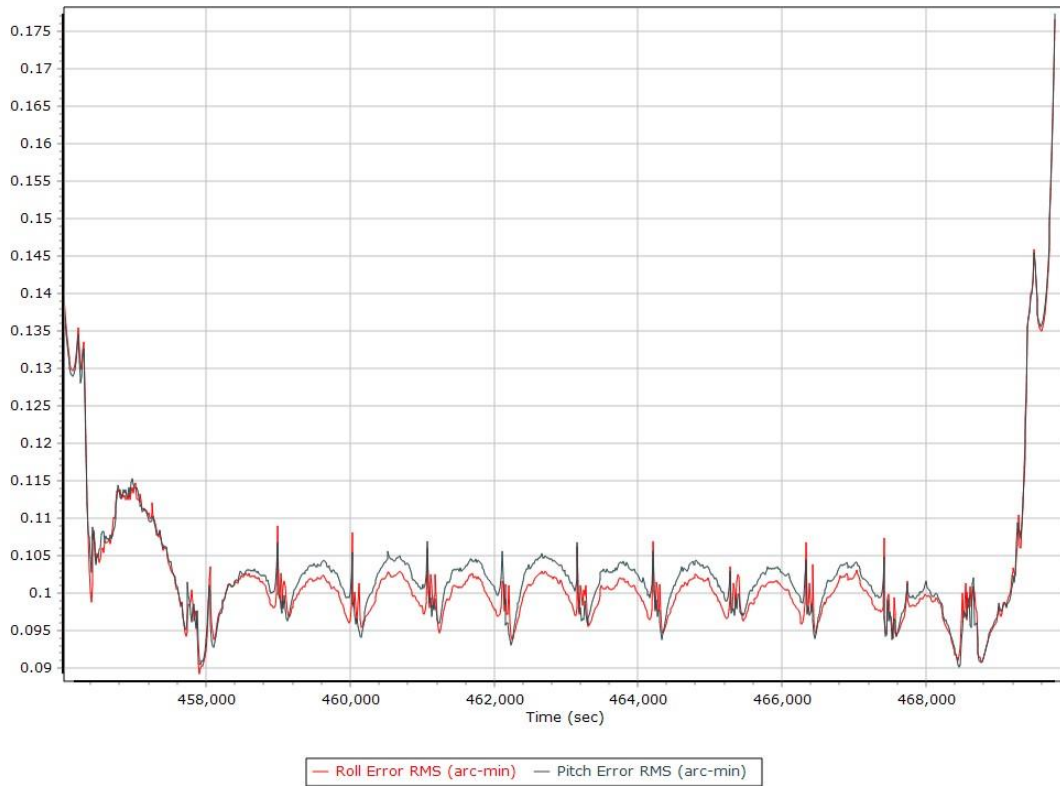
Position Error RMS (m)



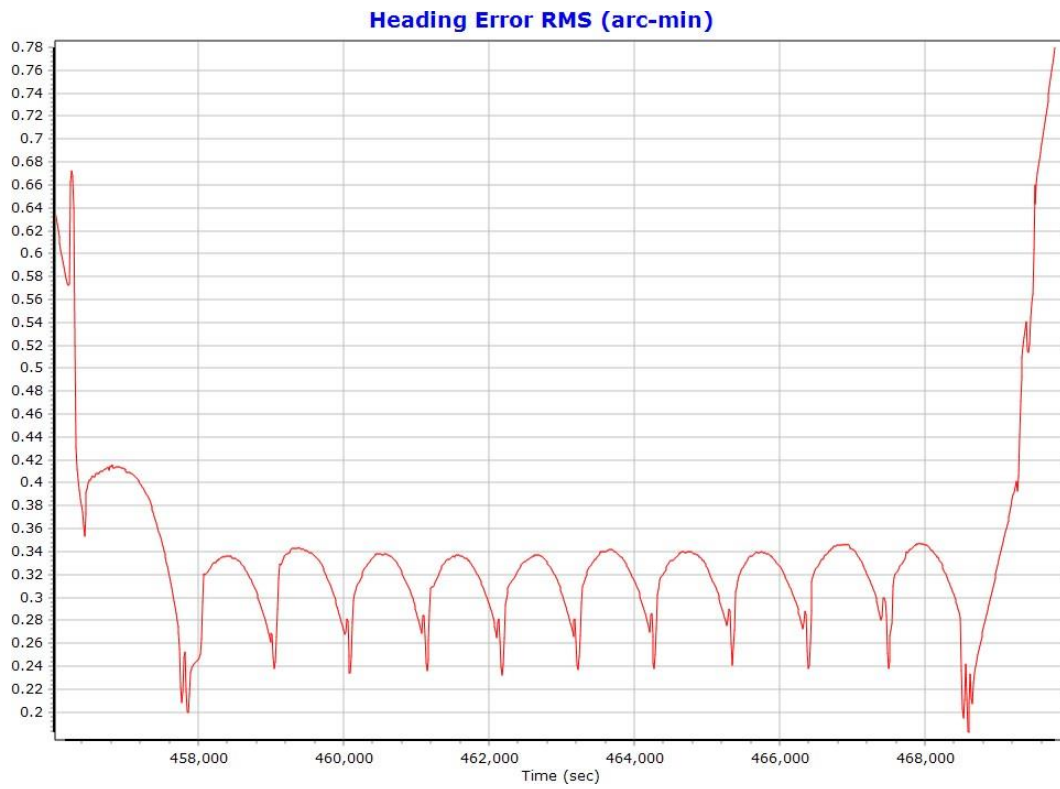
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)



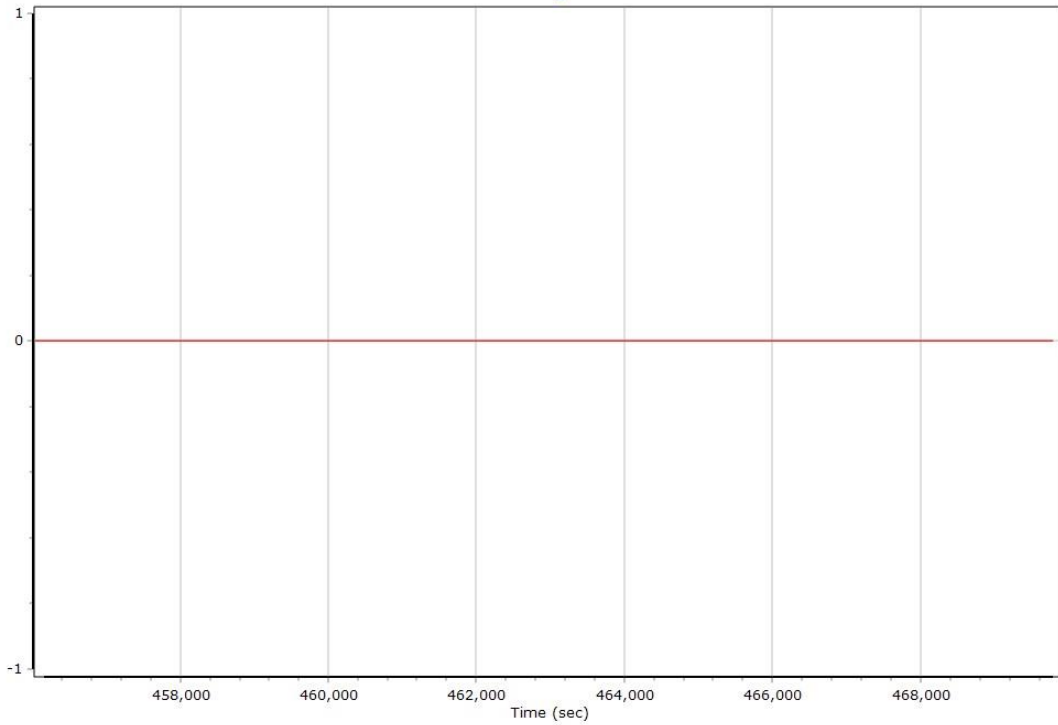
Heading Error RMS (arc-min)



Smoothed Solution Status

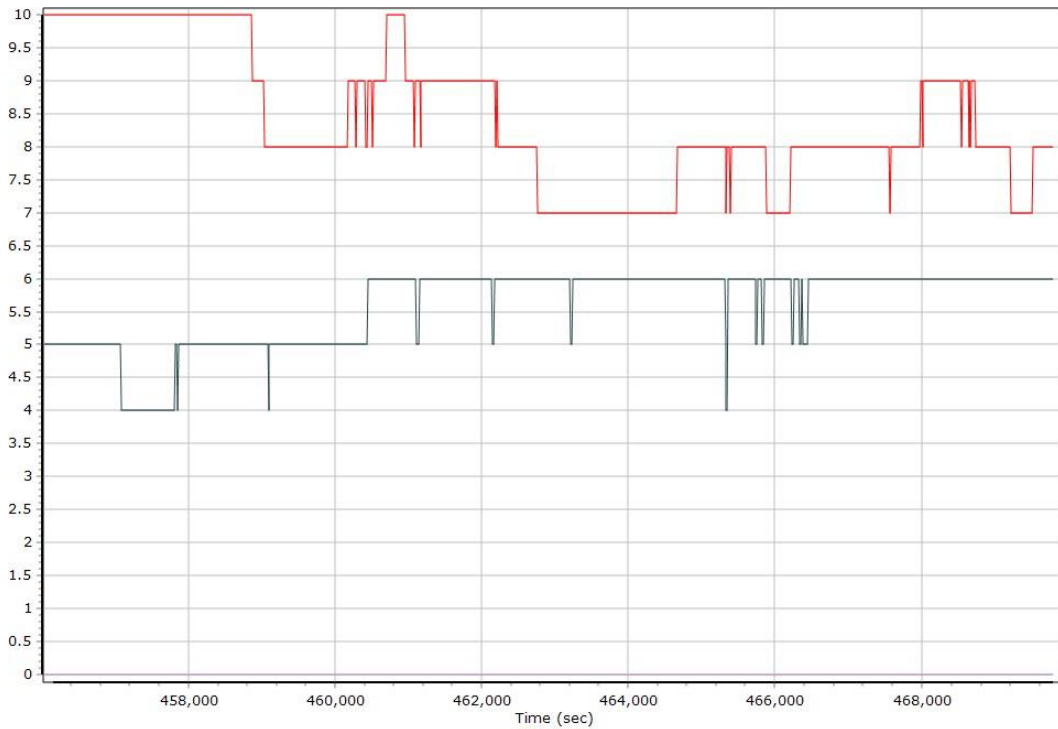
Processing Mode

Processing mode



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

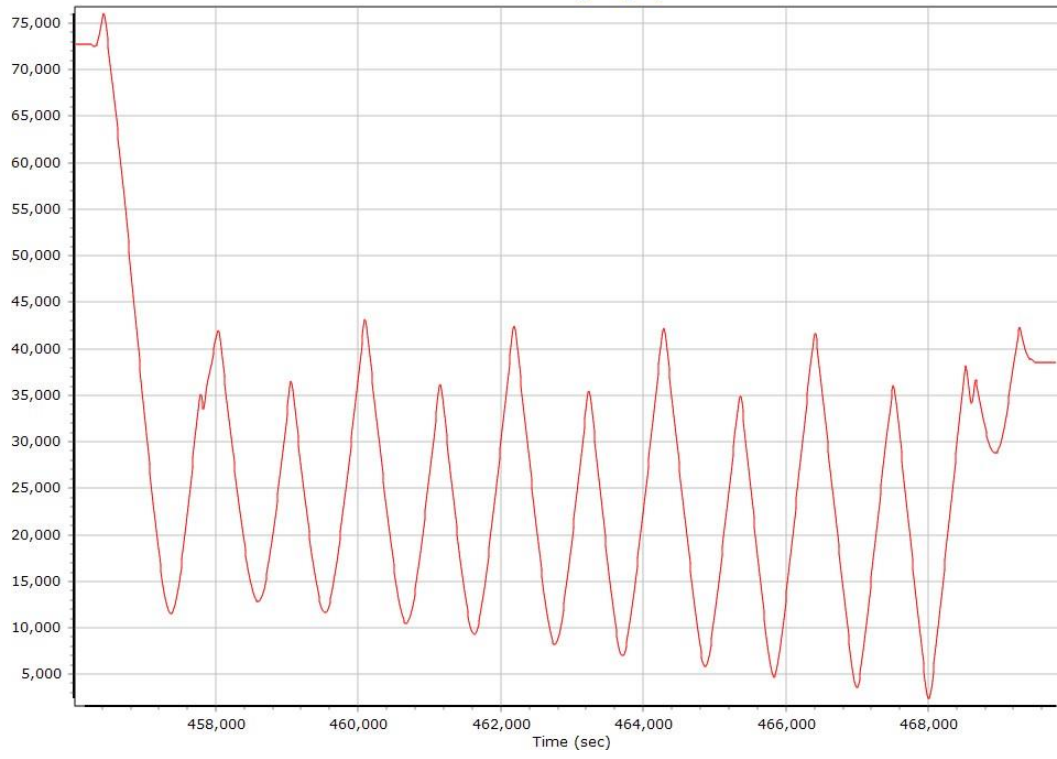
Number of Satellites



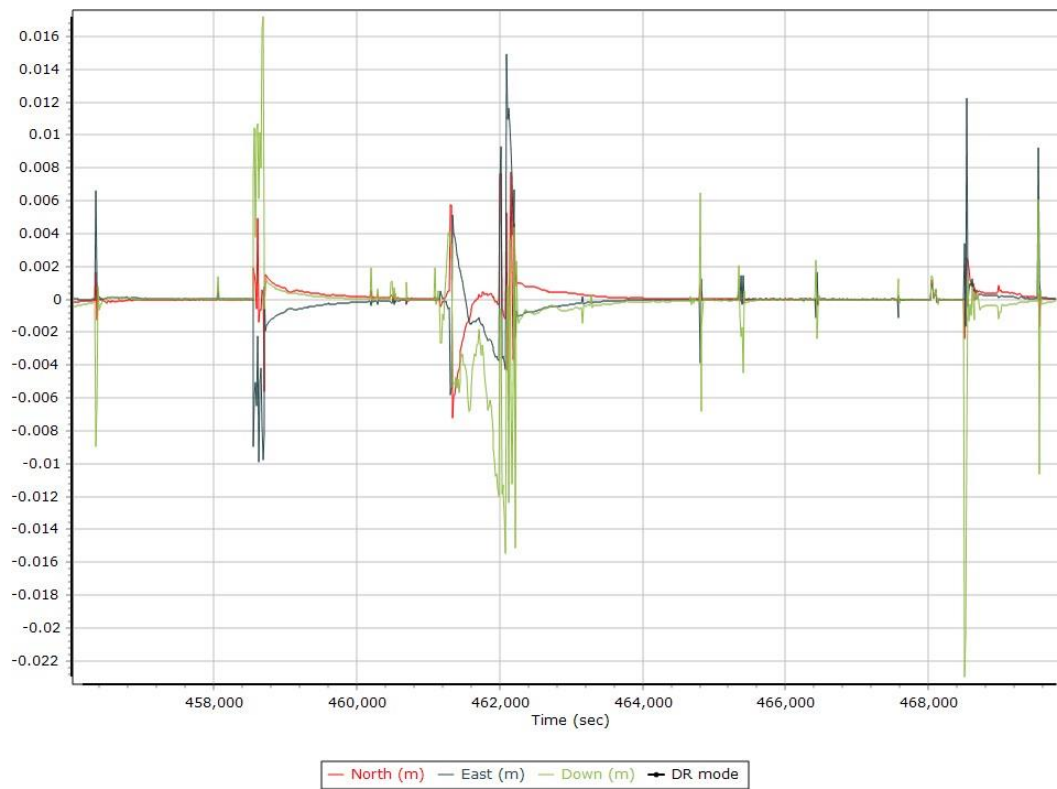
— Number of GPS Satellites — Number of GLONASS Satellites — Number of QZSS Satellites — Number of BEIDOU Satellites

Baseline Length

Baseline Length (m)



SBET IAKAR Separation



General Information

Mission Information

Project name	12022018NAD83
Processing date	2019-02-27 20:55:10
Mission date	2018-12-03 00:24:20
Mission duration	05:36:09.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9524
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
181203_002401_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3370.18g	GLONASS Broadcast Ephemeris
Ephm3370.18n	GPS Broadcast Ephemeris
igl20300.sp3	GLONASS Precise Ephemeris
igl20301.sp3	GLONASS Precise Ephemeris
igl20302.sp3	GLONASS Precise Ephemeris
igs20300.sp3	GPS Precise Ephemeris
igs20301.sp3	GPS Precise Ephemeris
igs20302.sp3	GPS Precise Ephemeris
flai336f00.18o	GNSS SingleBase
flai337f00.18o	GNSS SingleBase
flgr336f00.18o	GNSS SingleBase
fmyr336f00.18o	GNSS SingleBase
fmyr337f00.18o	GNSS SingleBase
gsps336f00.18o	GNSS SingleBase
gsps337f00.18o	GNSS SingleBase
rcda336f00.18o	GNSS SingleBase
rcda337f00.18o	GNSS SingleBase
stpt336f00.18o	GNSS SingleBase
stpt337f00.18o	GNSS SingleBase
wach336f00.18o	GNSS SingleBase
wach337f00.18o	GNSS SingleBase
flai336f00.18g	GLONASS Broadcast Ephemeris
flai336f00.18n	GPS Broadcast Ephemeris
flai337f00.18g	GLONASS Broadcast Ephemeris
flai337f00.18n	GPS Broadcast Ephemeris
flgr336f00.18g	GLONASS Broadcast Ephemeris
flgr336f00.18n	GPS Broadcast Ephemeris
fmyr336f00.18g	GLONASS Broadcast Ephemeris
fmyr336f00.18n	GPS Broadcast Ephemeris
fmyr337f00.18g	GLONASS Broadcast Ephemeris
fmyr337f00.18n	GPS Broadcast Ephemeris
gsps336f00.18g	GLONASS Broadcast Ephemeris
gsps336f00.18n	GPS Broadcast Ephemeris
gsps337f00.18g	GLONASS Broadcast Ephemeris
gsps337f00.18n	GPS Broadcast Ephemeris
rcda336f00.18g	GLONASS Broadcast Ephemeris
rcda336f00.18n	GPS Broadcast Ephemeris
rcda337f00.18g	GLONASS Broadcast Ephemeris
rcda337f00.18n	GPS Broadcast Ephemeris
stpt336f00.18g	GLONASS Broadcast Ephemeris
stpt336f00.18n	GPS Broadcast Ephemeris
stpt337f00.18g	GLONASS Broadcast Ephemeris
stpt337f00.18n	GPS Broadcast Ephemeris
wach336f00.18g	GLONASS Broadcast Ephemeris

wach336f00.18n	GPS Broadcast Ephemeris
wach337f00.18g	GLONASS Broadcast Ephemeris
wach337f00.18n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_Mission 1.out	SBET Trajectory File

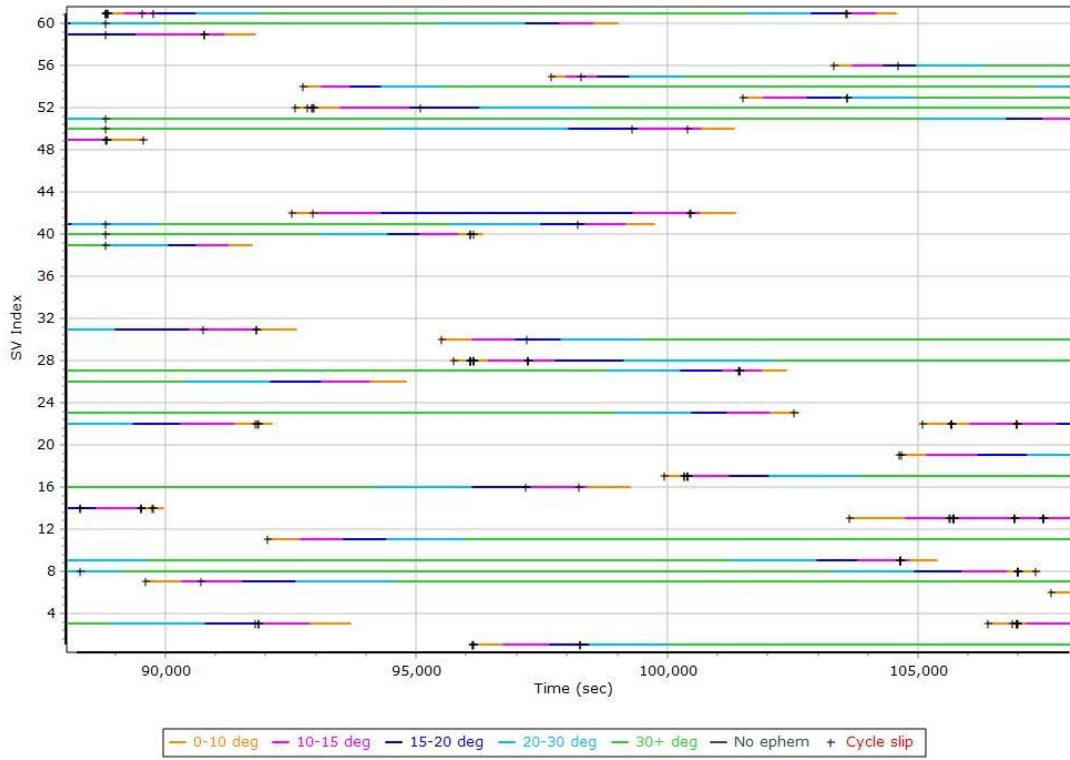
Rover Data Summary

First raw data file	181203_002401_INS-GPS_1.raw		
Last raw data file	181203_002401_INS-GPS_1.raw		
Start GPS week	2030		
Start time	87841.314 (12/3/2018 12:24:01 AM)		
End time	108006.205 (12/3/2018 6:00:06 AM)		
Start of fine alignment	88166.201 (12/3/2018 12:29:26 AM)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	Event 2 Input, Event 3 Input		
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	0.000
Reference to Primary GNSS lever arm [m]	0.102	-0.140	-0.961
Reference to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

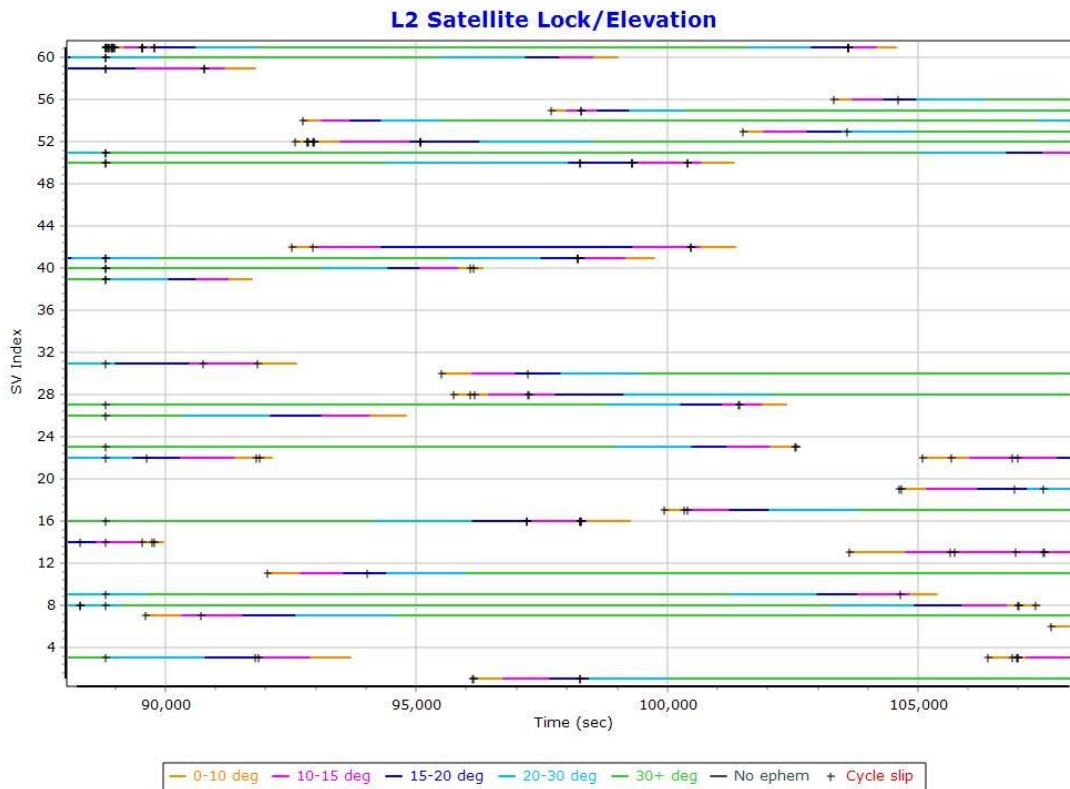
Raw Data QC

L1 Satellite Lock/Elevation

L1 Satellite Lock/Elevation

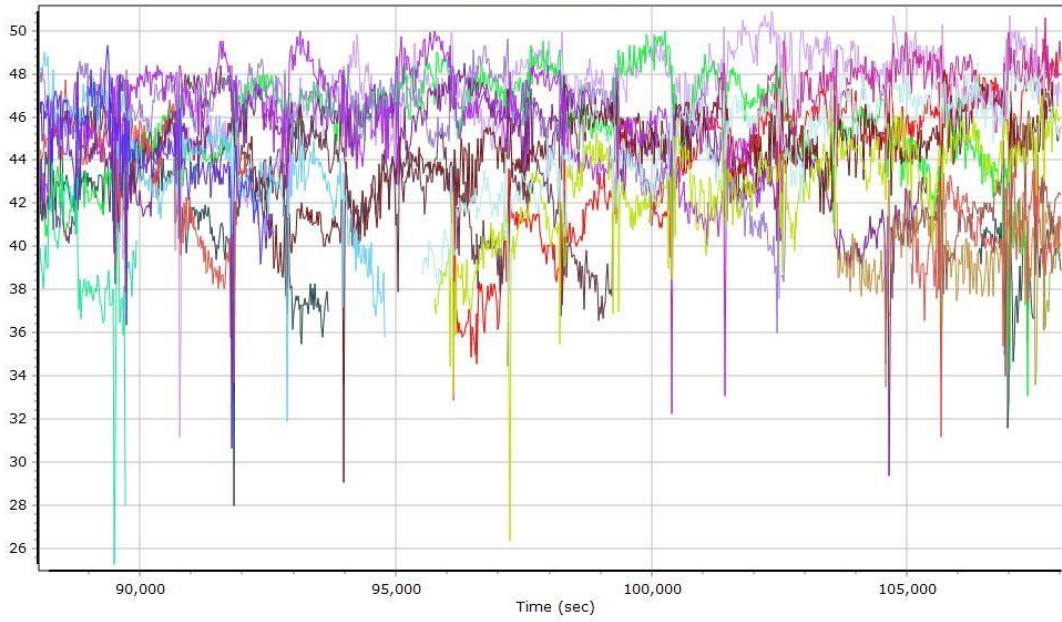


L2 Satellite Lock/Elevation



GPS L1 SNR

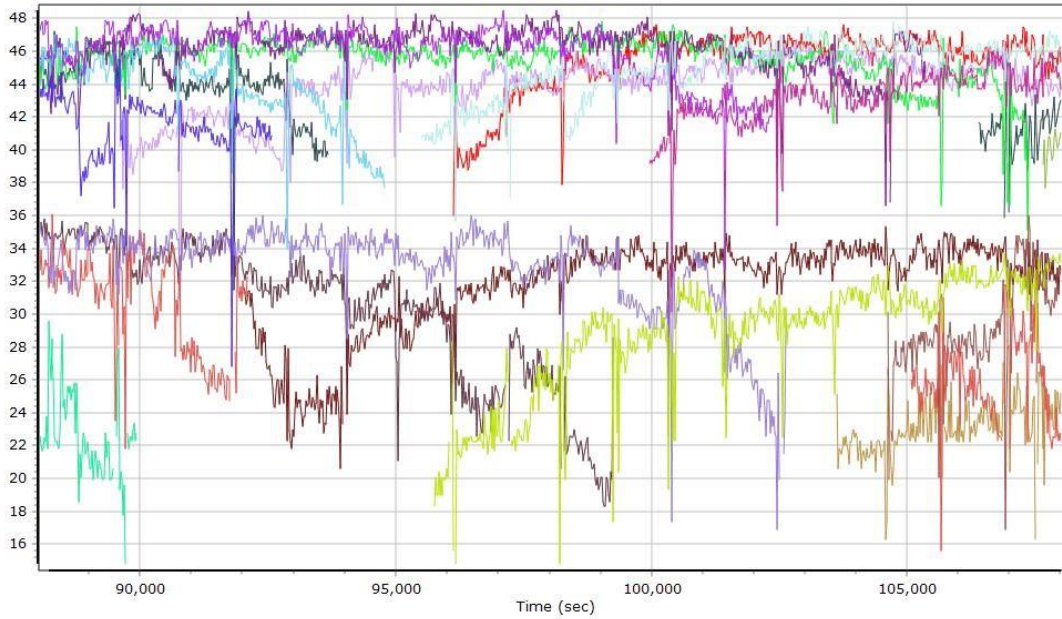
GPS L1 SNR



- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 01 L1 SNR (dB/Hz) | GPS PRN 03 L1 SNR (dB/Hz) | GPS PRN 06 L1 SNR (dB/Hz) | GPS PRN 07 L1 SNR (dB/Hz) |
| GPS PRN 08 L1 SNR (dB/Hz) | GPS PRN 09 L1 SNR (dB/Hz) | GPS PRN 11 L1 SNR (dB/Hz) | GPS PRN 13 L1 SNR (dB/Hz) |
| GPS PRN 14 L1 SNR (dB/Hz) | GPS PRN 16 L1 SNR (dB/Hz) | GPS PRN 17 L1 SNR (dB/Hz) | GPS PRN 19 L1 SNR (dB/Hz) |
| GPS PRN 22 L1 SNR (dB/Hz) | GPS PRN 23 L1 SNR (dB/Hz) | GPS PRN 26 L1 SNR (dB/Hz) | GPS PRN 27 L1 SNR (dB/Hz) |
| GPS PRN 28 L1 SNR (dB/Hz) | GPS PRN 30 L1 SNR (dB/Hz) | GPS PRN 31 L1 SNR (dB/Hz) | |

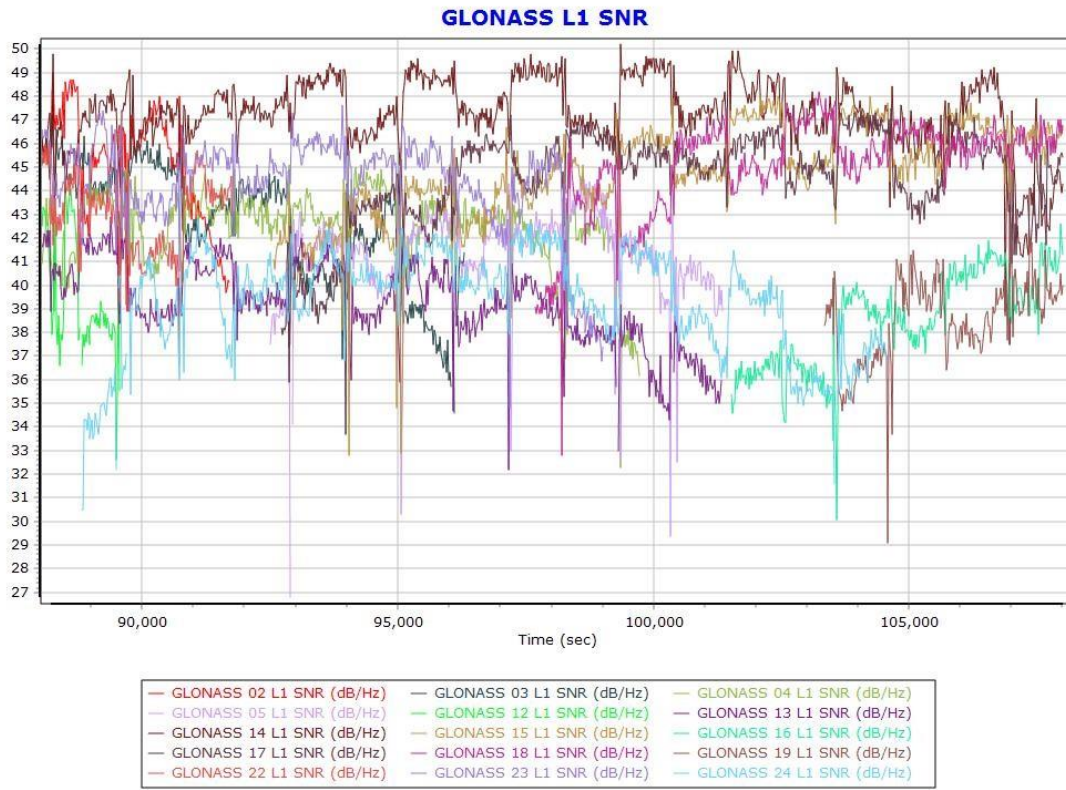
GPS L2 SNR

GPS L2 SNR



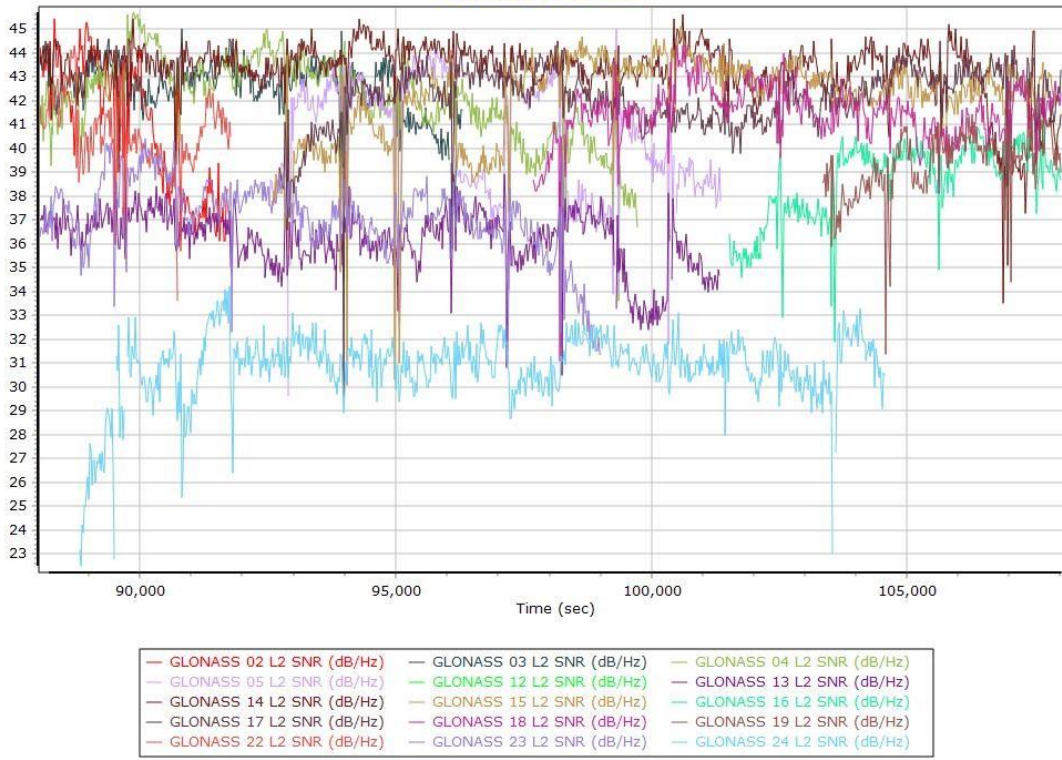
- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| GPS PRN 01 L2 SNR (dB/Hz) | GPS PRN 03 L2 SNR (dB/Hz) | GPS PRN 06 L2 SNR (dB/Hz) | GPS PRN 07 L2 SNR (dB/Hz) |
| GPS PRN 08 L2 SNR (dB/Hz) | GPS PRN 09 L2 SNR (dB/Hz) | GPS PRN 11 L2 SNR (dB/Hz) | GPS PRN 13 L2 SNR (dB/Hz) |
| GPS PRN 14 L2 SNR (dB/Hz) | GPS PRN 16 L2 SNR (dB/Hz) | GPS PRN 17 L2 SNR (dB/Hz) | GPS PRN 19 L2 SNR (dB/Hz) |
| GPS PRN 22 L2 SNR (dB/Hz) | GPS PRN 23 L2 SNR (dB/Hz) | GPS PRN 26 L2 SNR (dB/Hz) | GPS PRN 27 L2 SNR (dB/Hz) |
| GPS PRN 28 L2 SNR (dB/Hz) | GPS PRN 30 L2 SNR (dB/Hz) | GPS PRN 31 L2 SNR (dB/Hz) | |

GLONASS L1 SNR

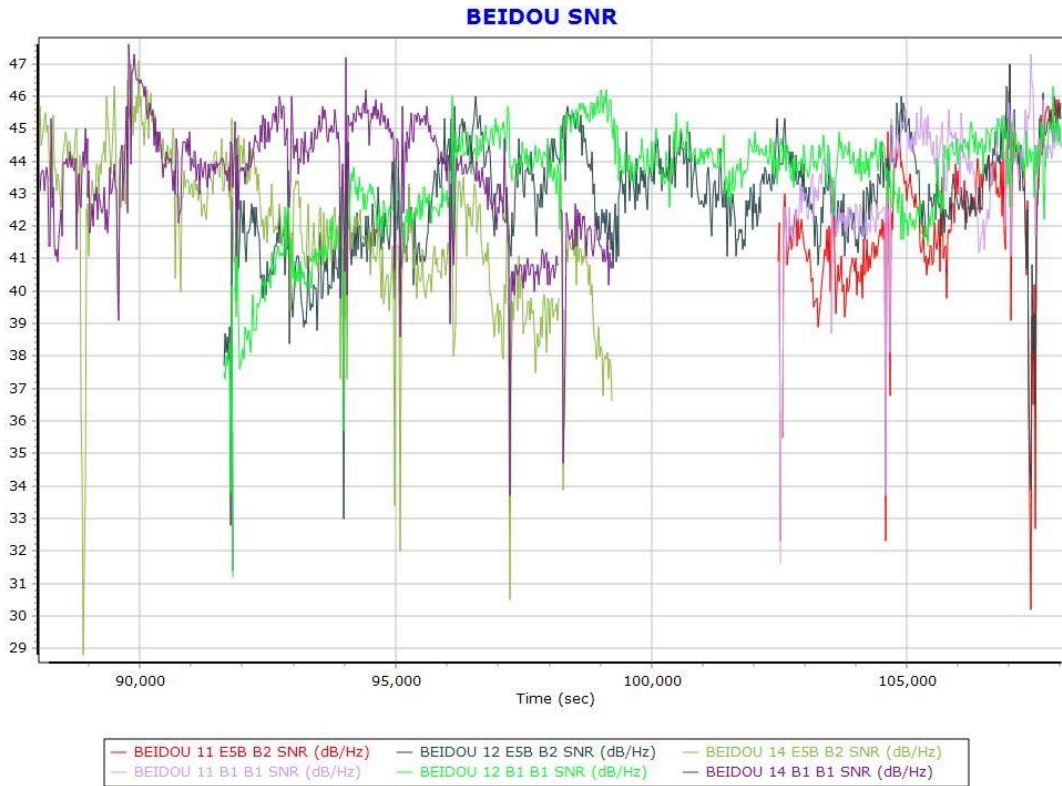


GLONASS L2 SNR

GLONASS L2 SNR



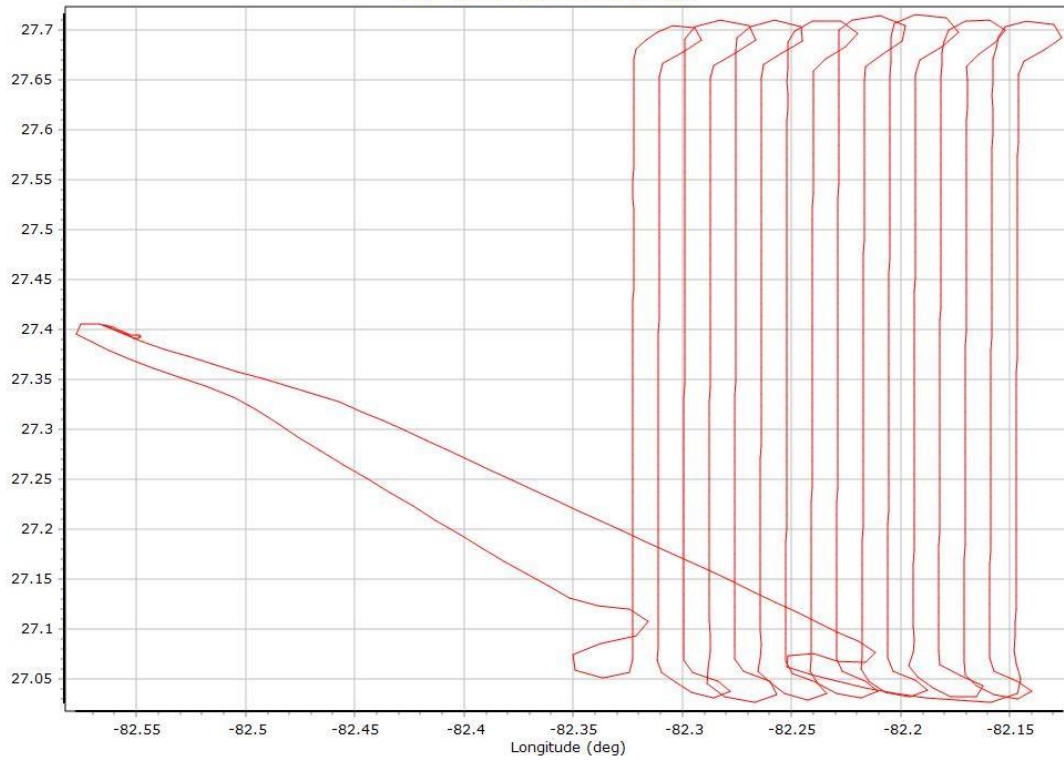
BEIDOU SNR



Trajectory Information

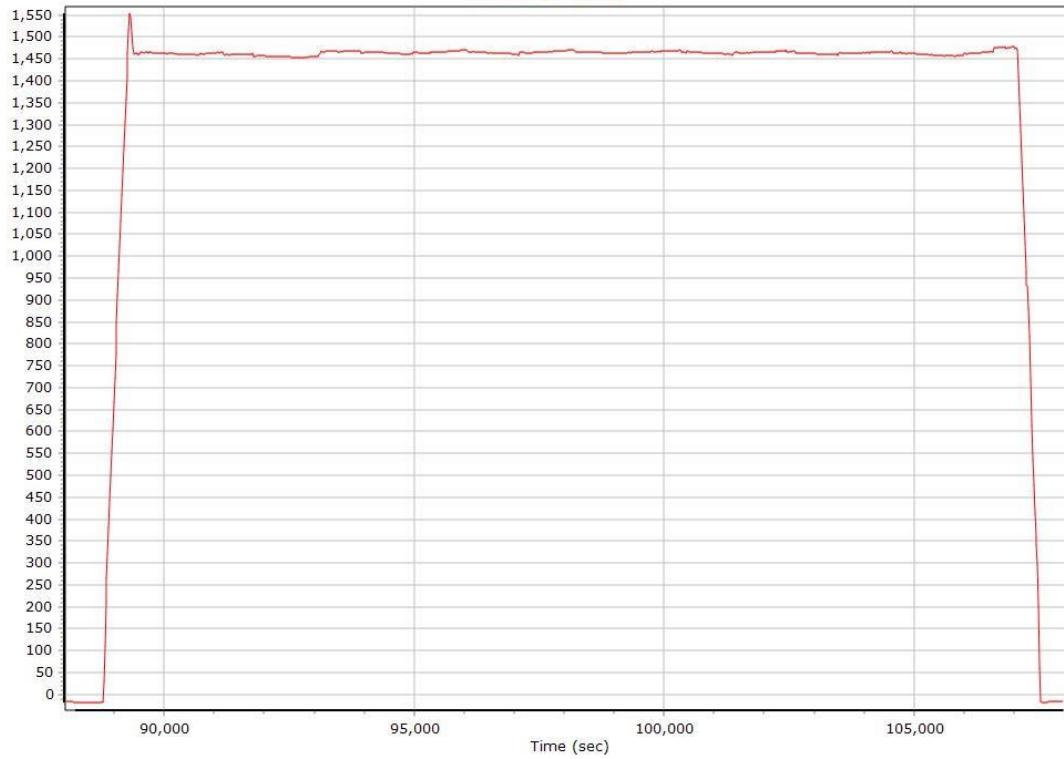
Top View

Top View: Latitude (deg)

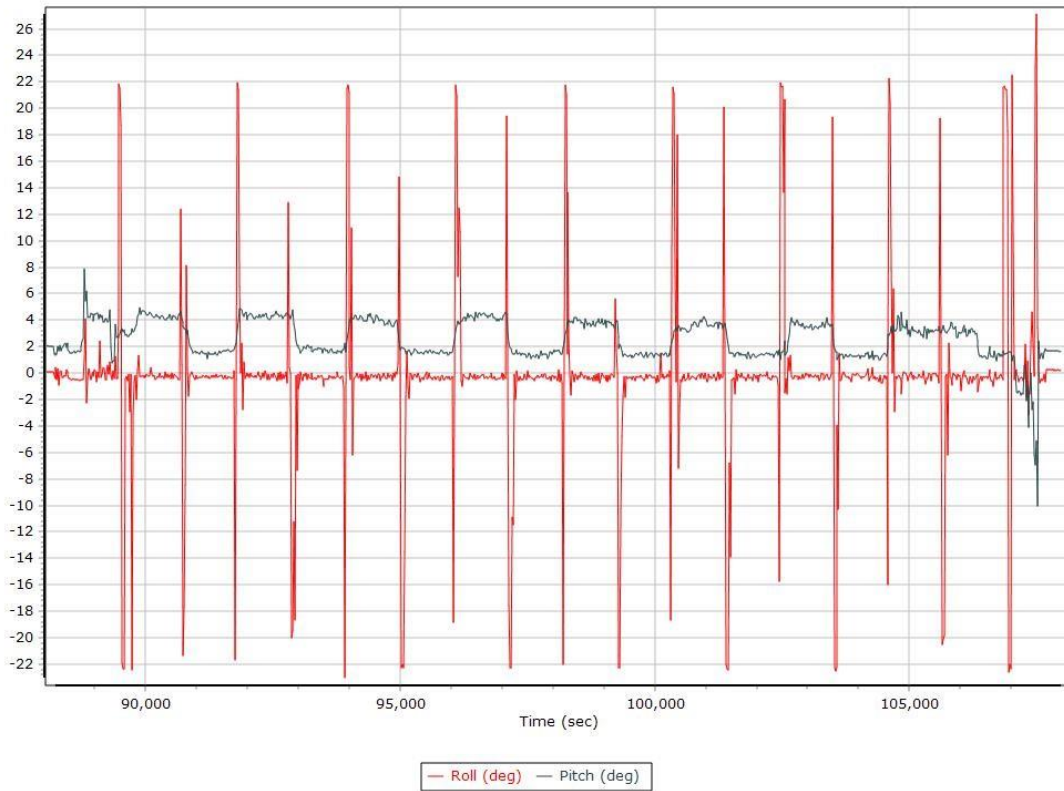


Altitude

Altitude (m)

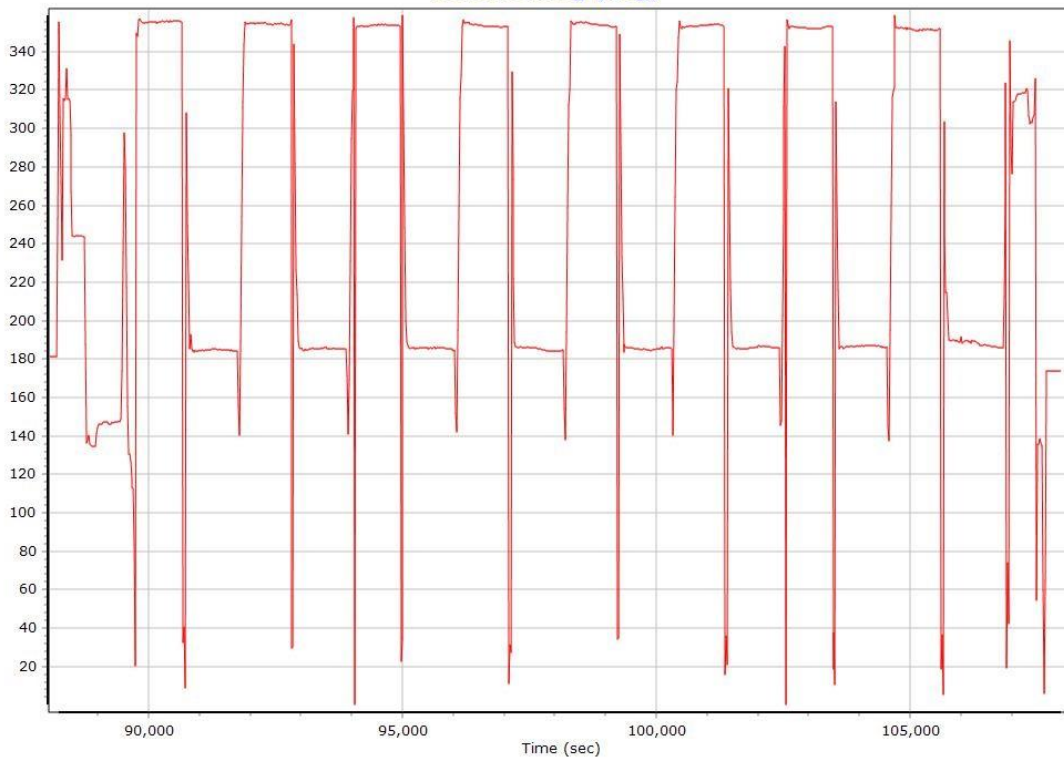


Roll/Pitch

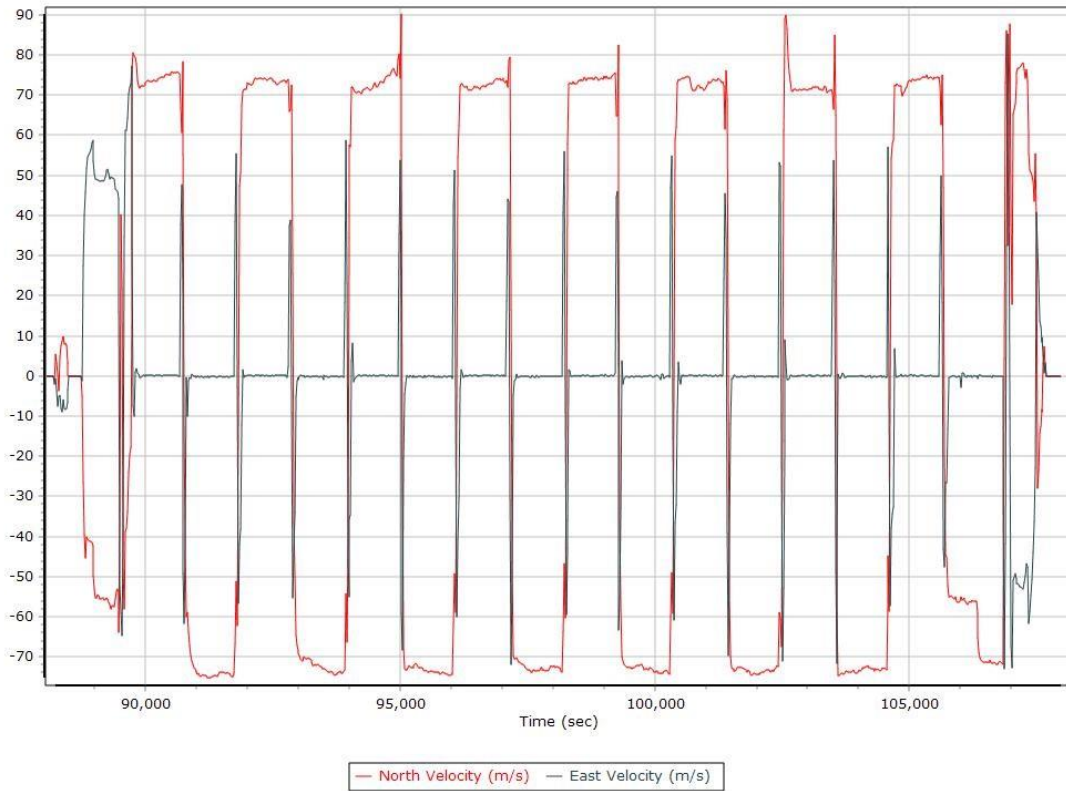


Heading

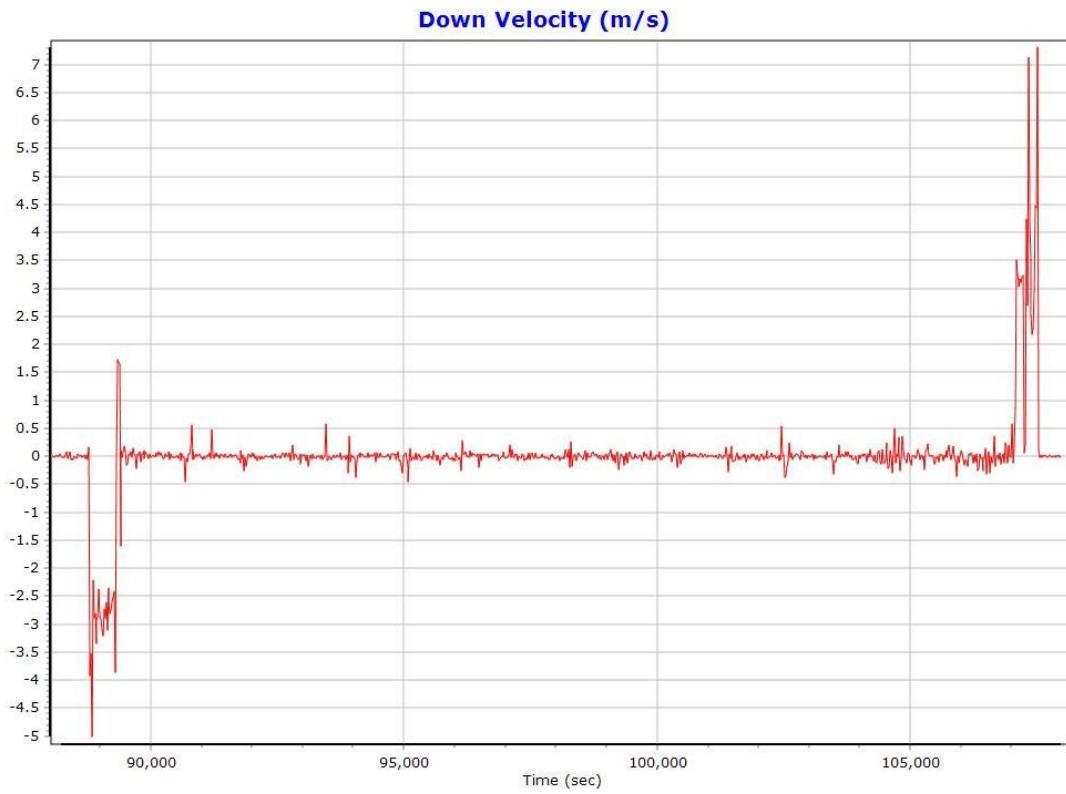
True Heading (deg)



North/East Velocity

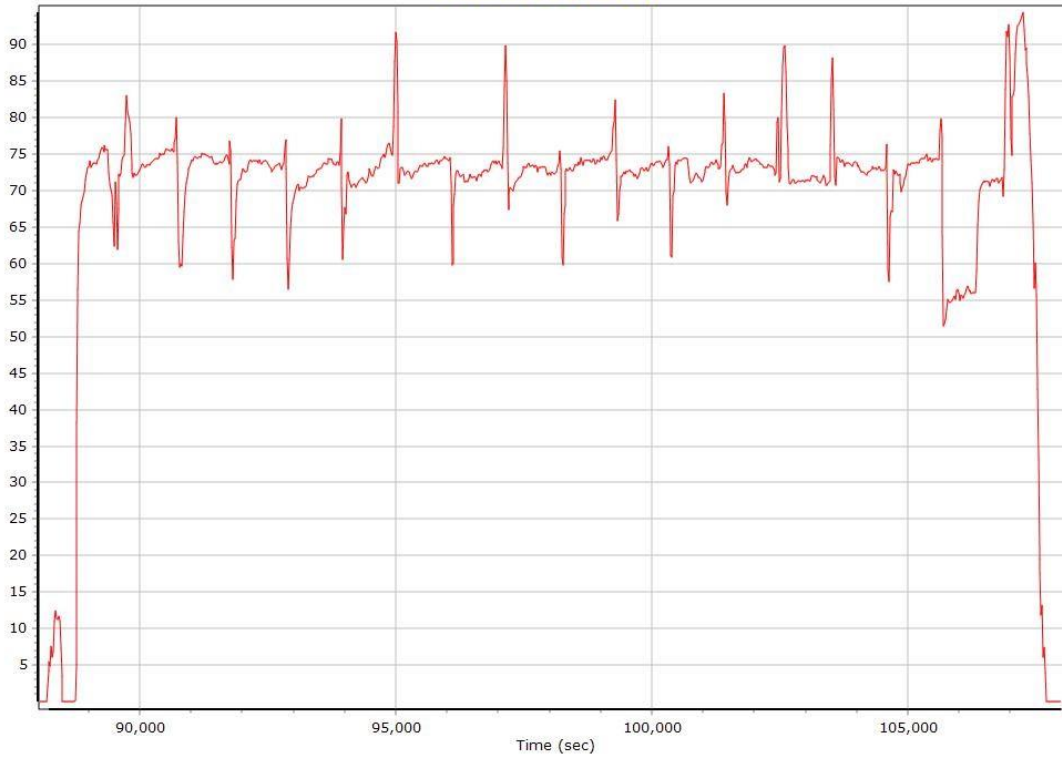


Down Velocity



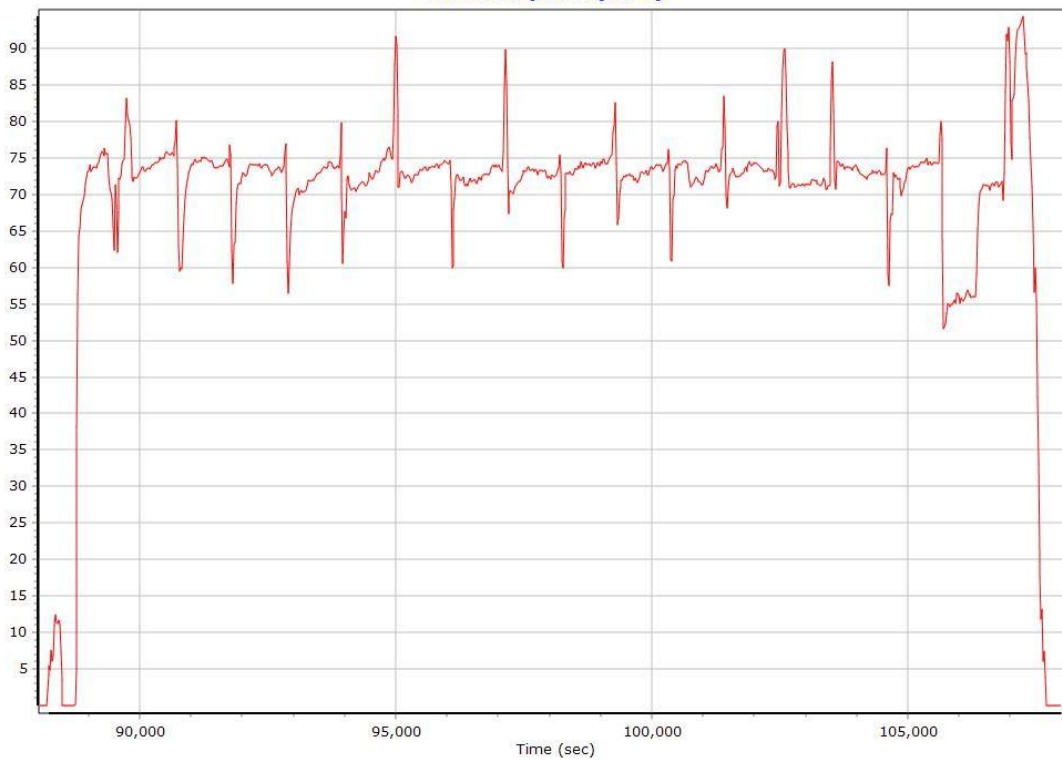
Total Speed

Total Speed (m/s)

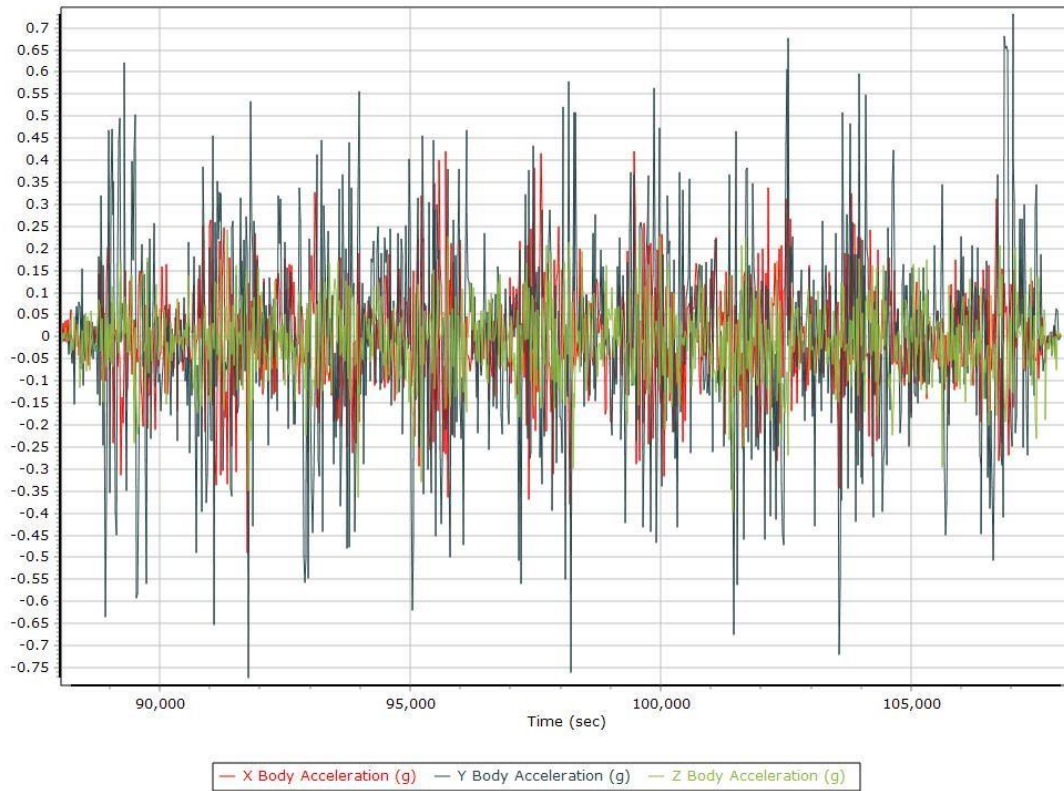


Ground Speed

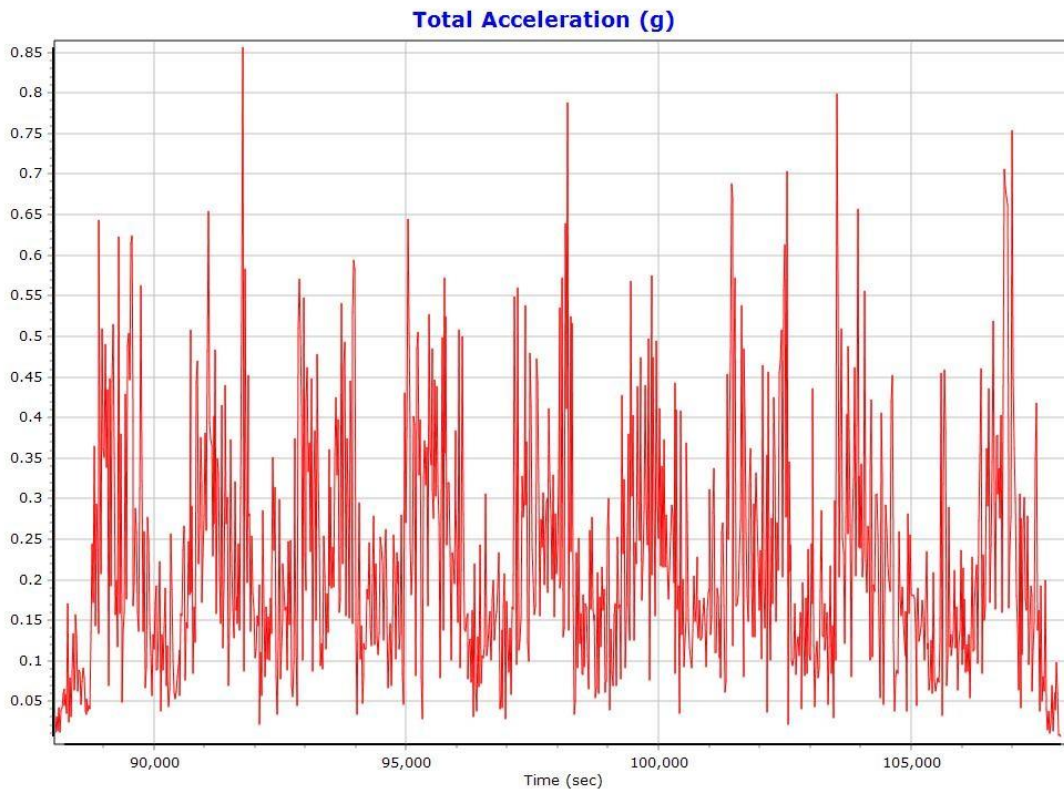
Ground Speed (m/s)



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	

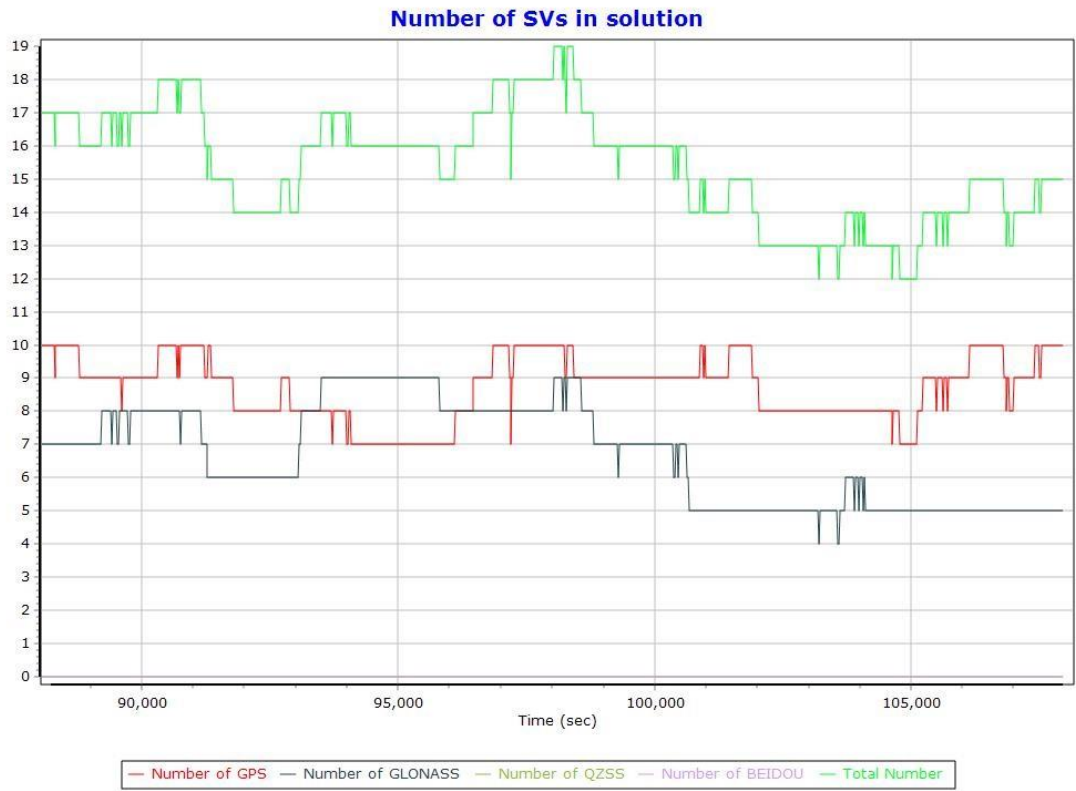
GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	0.43	40.76	
Number of GPS SV	6	10	9
Number of GLONASS SV	0	9	7
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	9	19	15
PDOP	1.12	2.07	1.39
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution

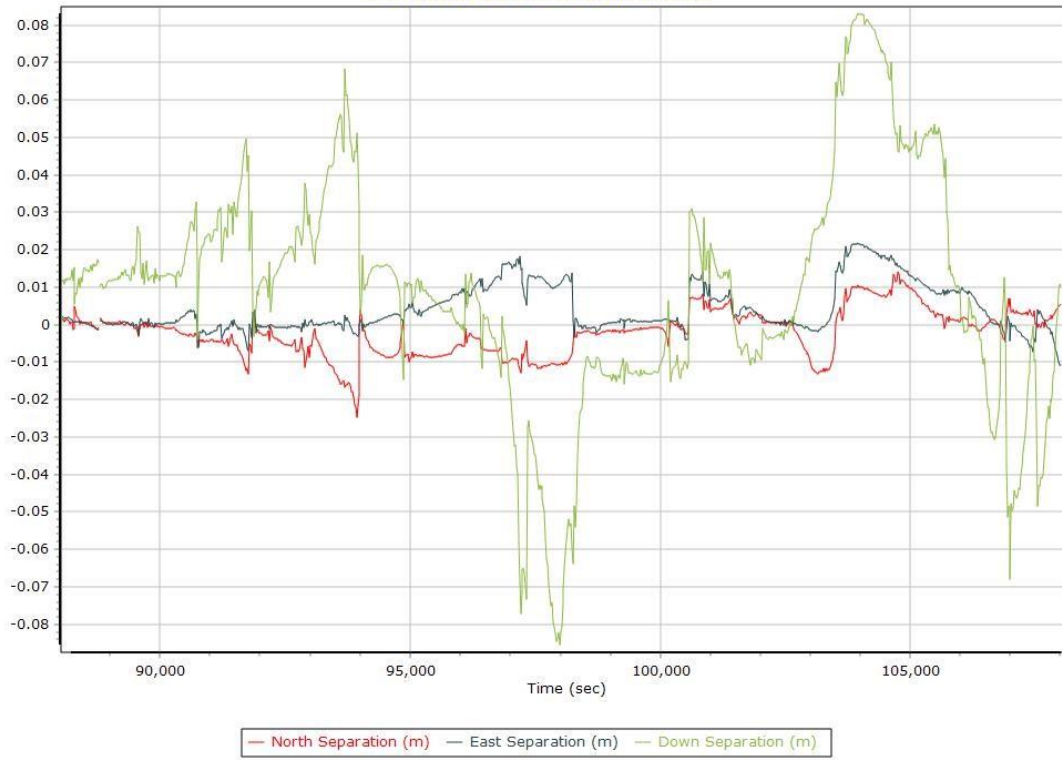
Epoch (s)	20136.00	0.00	1.00
Percentage	100.00	0.00	0.00

Num SVs in solution

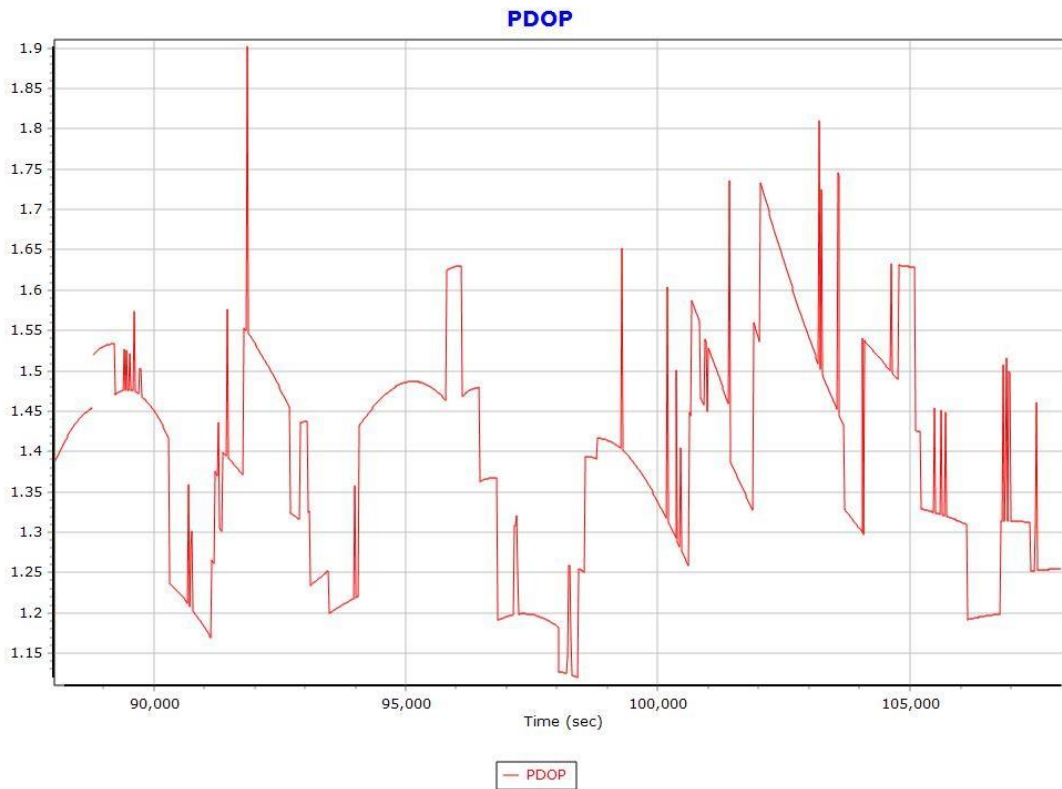


Forward/Reverse Separation

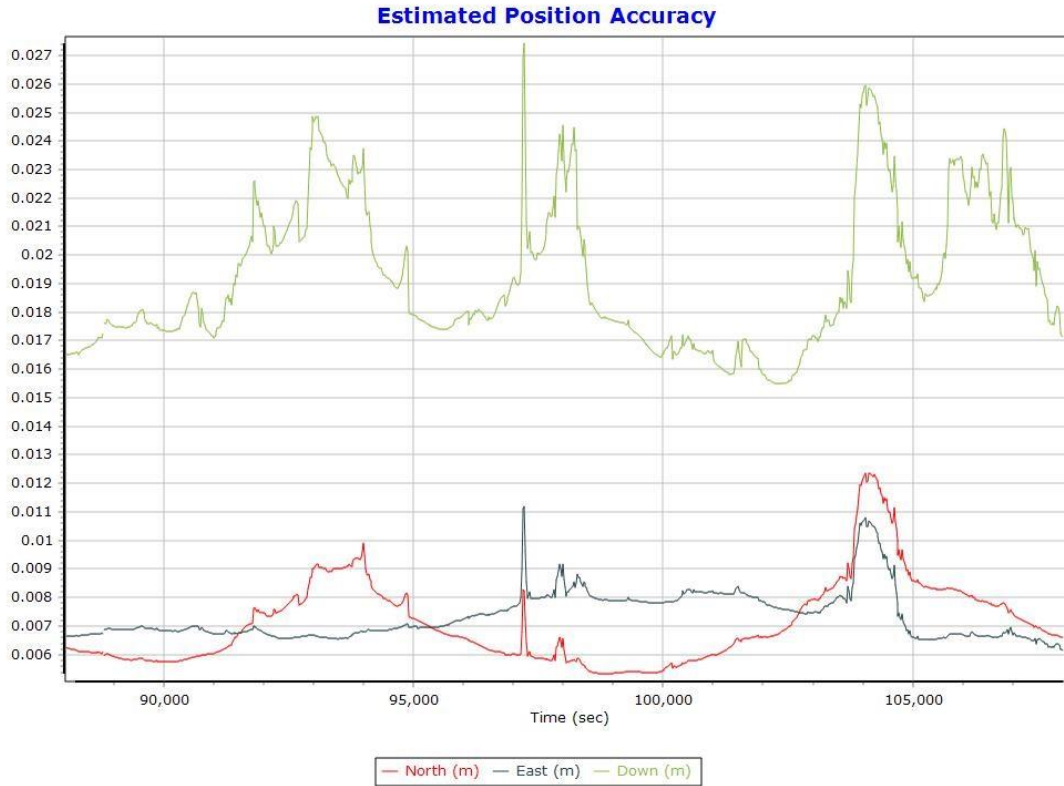
Forward/Reverse Separation



PDOP



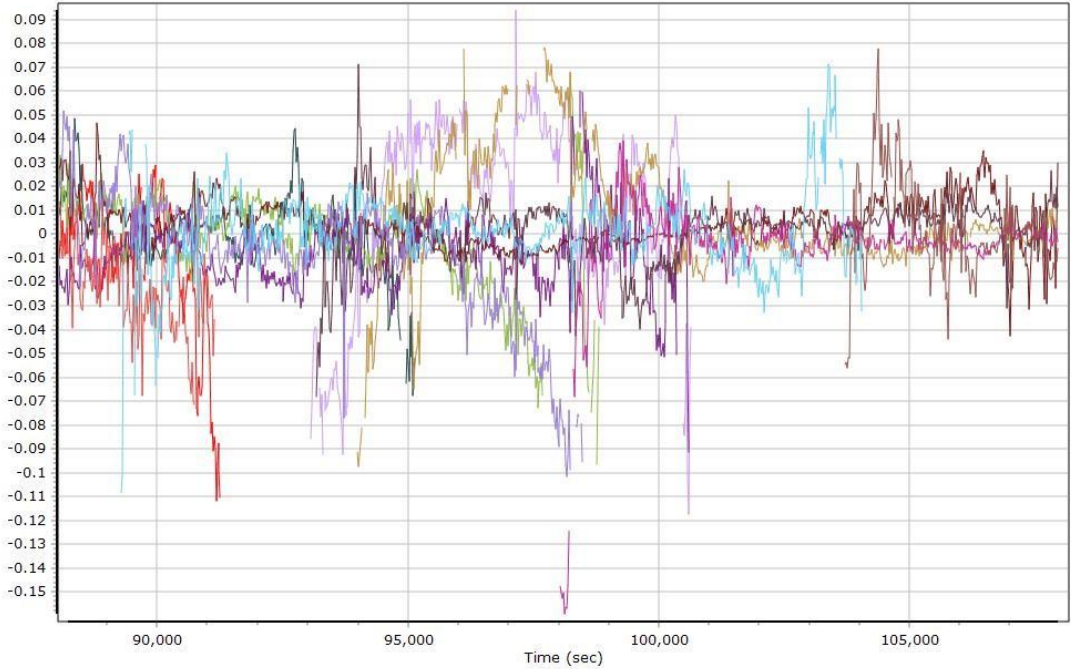
Estimated Position Accuracy



GPS Residuals



GLONASS Residuals



GLONASS 02 Residual (m)	GLONASS 03 Residual (m)	GLONASS 04 Residual (m)	GLONASS 05 Residual (m)
GLONASS 12 Residual (m)	GLONASS 13 Residual (m)	GLONASS 14 Residual (m)	GLONASS 15 Residual (m)
GLONASS 16 Residual (m)	GLONASS 17 Residual (m)	GLONASS 18 Residual (m)	GLONASS 19 Residual (m)
GLONASS 22 Residual (m)	GLONASS 23 Residual (m)	GLONASS 24 Residual (m)	

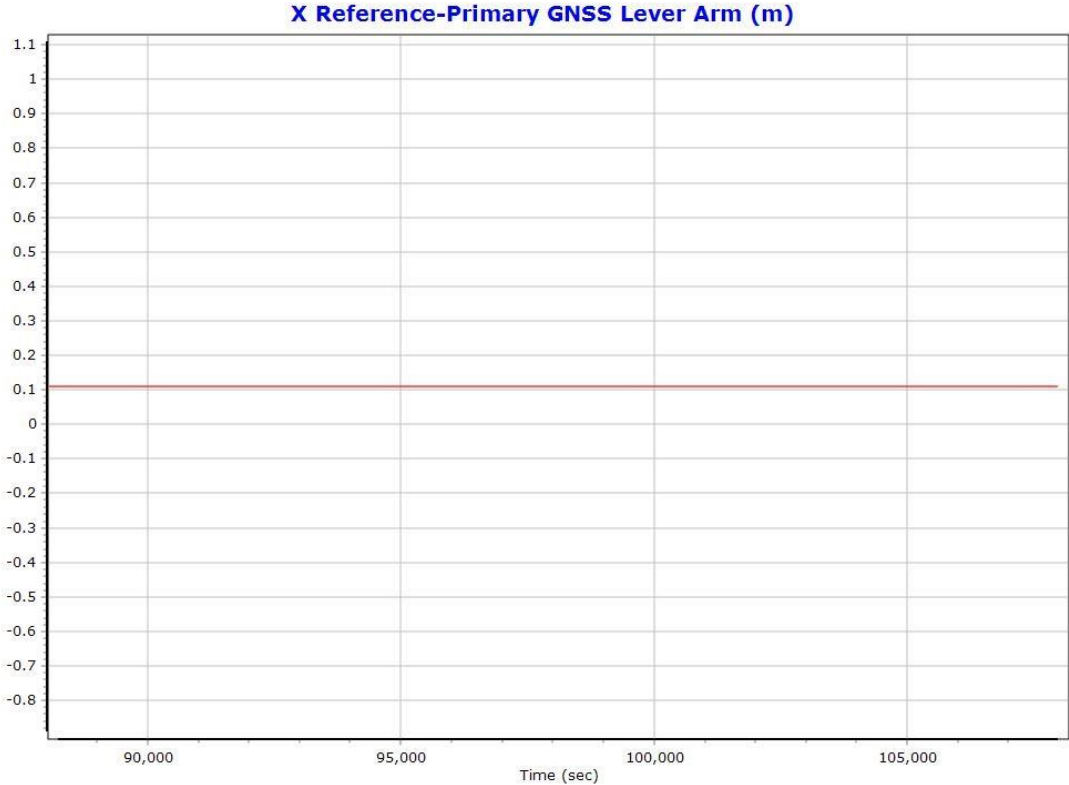
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	False		
Base station	ASB		
Processing start time	87842.000 (12/3/2018 12:24:02 AM)		
Processing end time	108011.000 (12/3/2018 6:00:11 AM)		
Initial attitude source	GYRO Compass		
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]	0.110	-0.138	-0.963
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

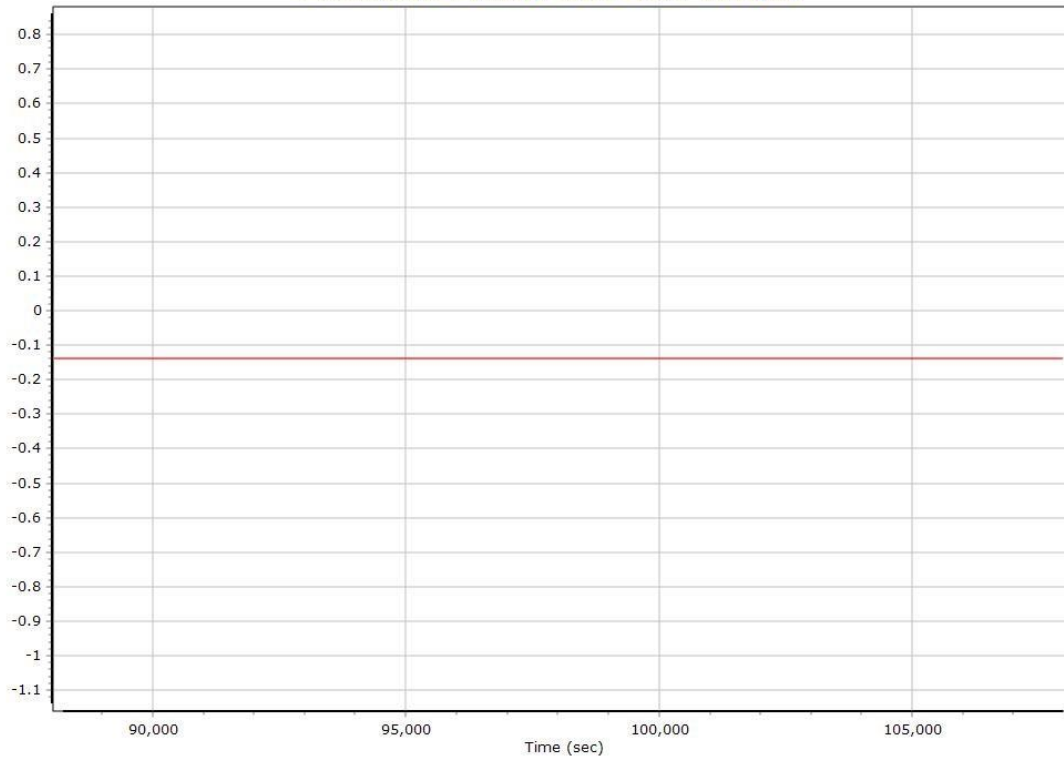
Reference-Primary GNSS Lever Arm

X Reference -Primary GNSS Lever Arm (m)



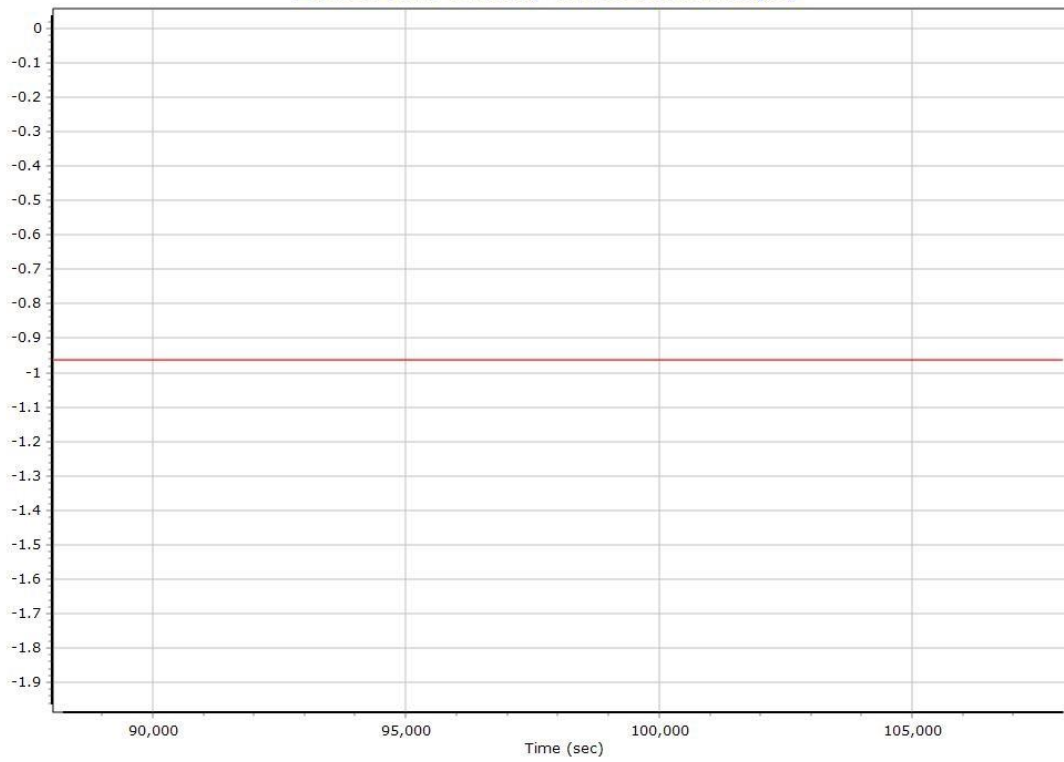
Y Reference -Primary GNSS Lever Arm (m)

Y Reference-Primary GNSS Lever Arm (m)



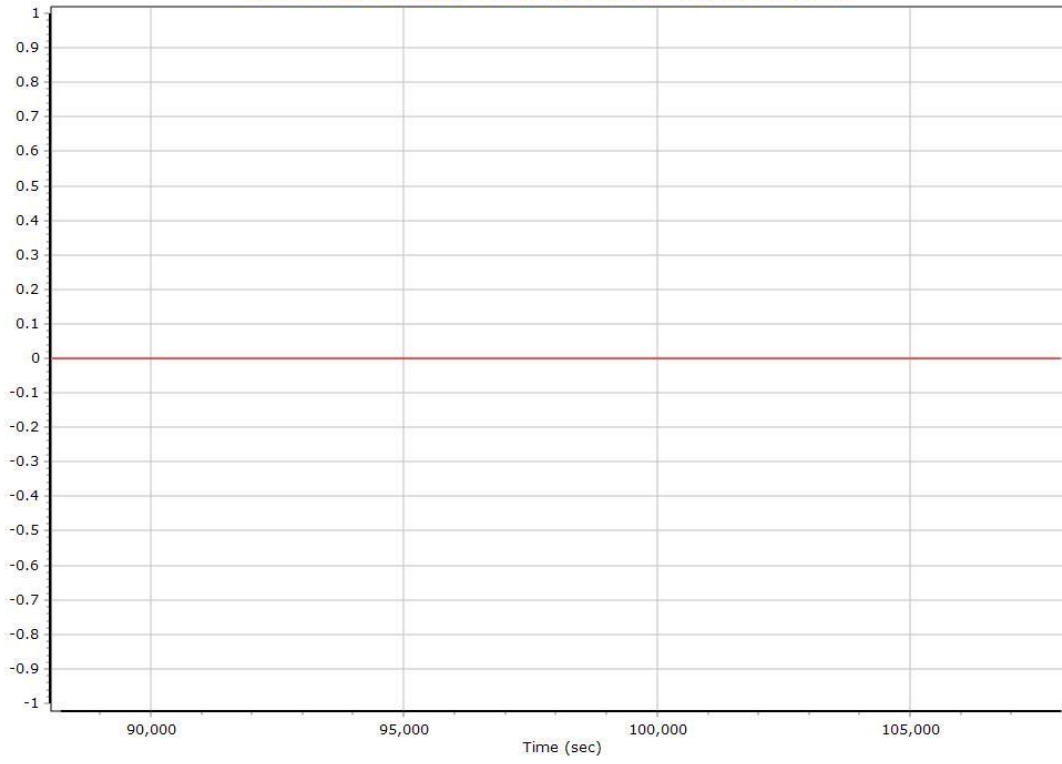
Z Reference-Primary GNSS Lever Arm (m)

Z Reference-Primary GNSS Lever Arm (m)



Reference -Primary GNSS Lever Arm Figure of Merit

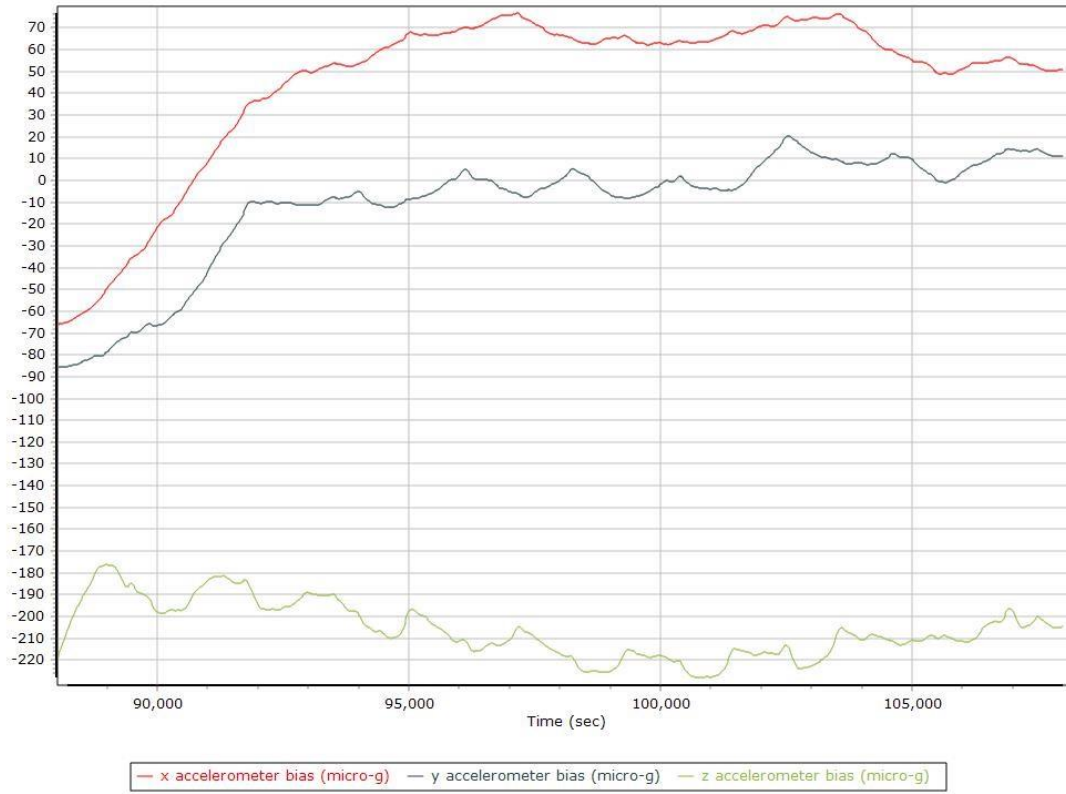
Reference-Primary GNSS Lever Arm Figure of Merit



Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

Accelerometer Bias (micro -g)

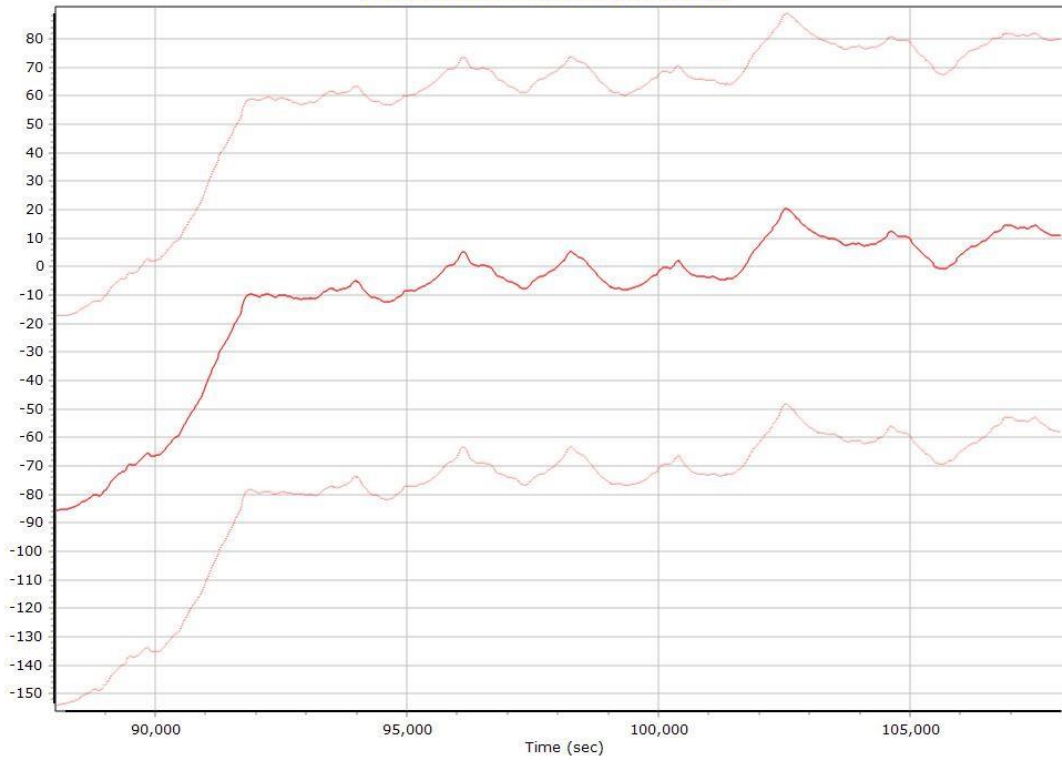


X Accelerometer Bias (micro -g)



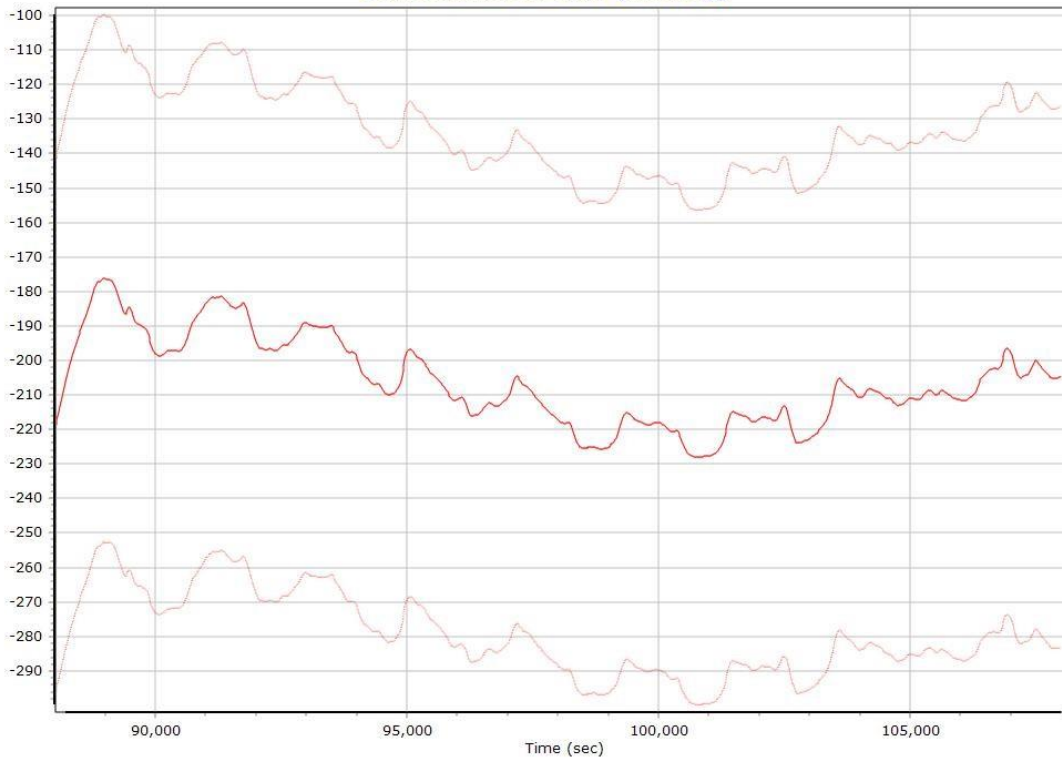
Y Accelerometer Bias (micro -g)

y accelerometer bias (micro-g)

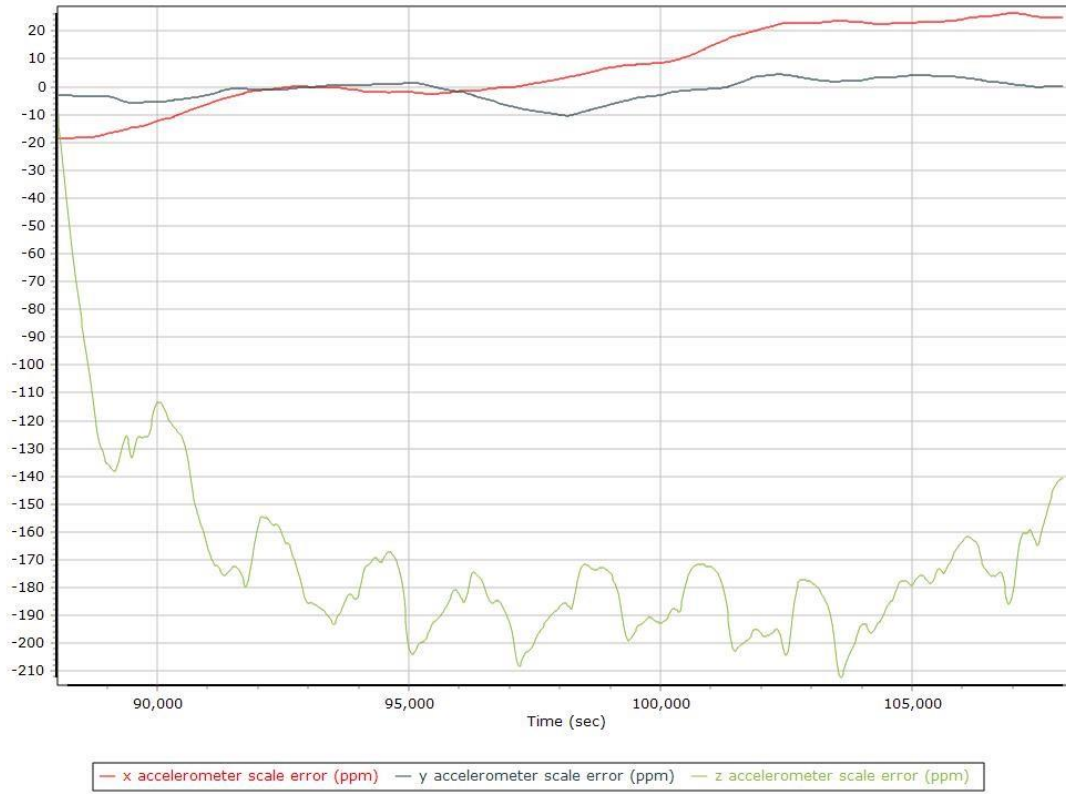


Z Accelerometer Bias (micro-g)

z accelerometer bias (micro-g)



Accelerometer Scale Error (ppm)

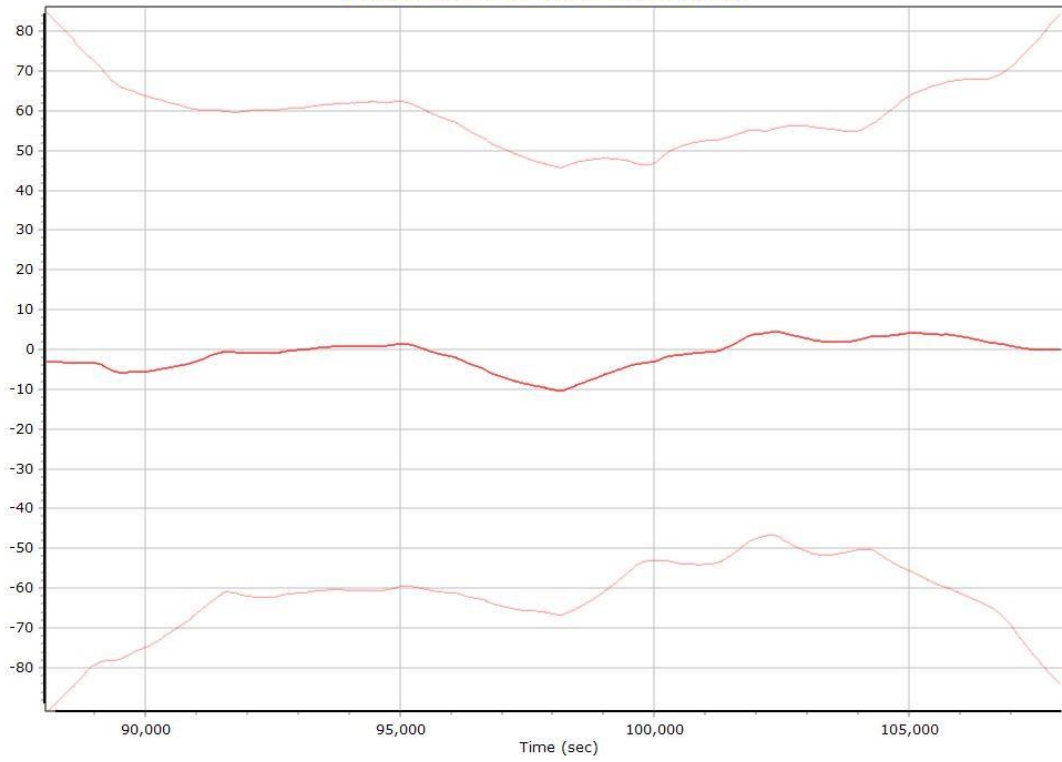


X Accelerometer Scale Error (ppm)



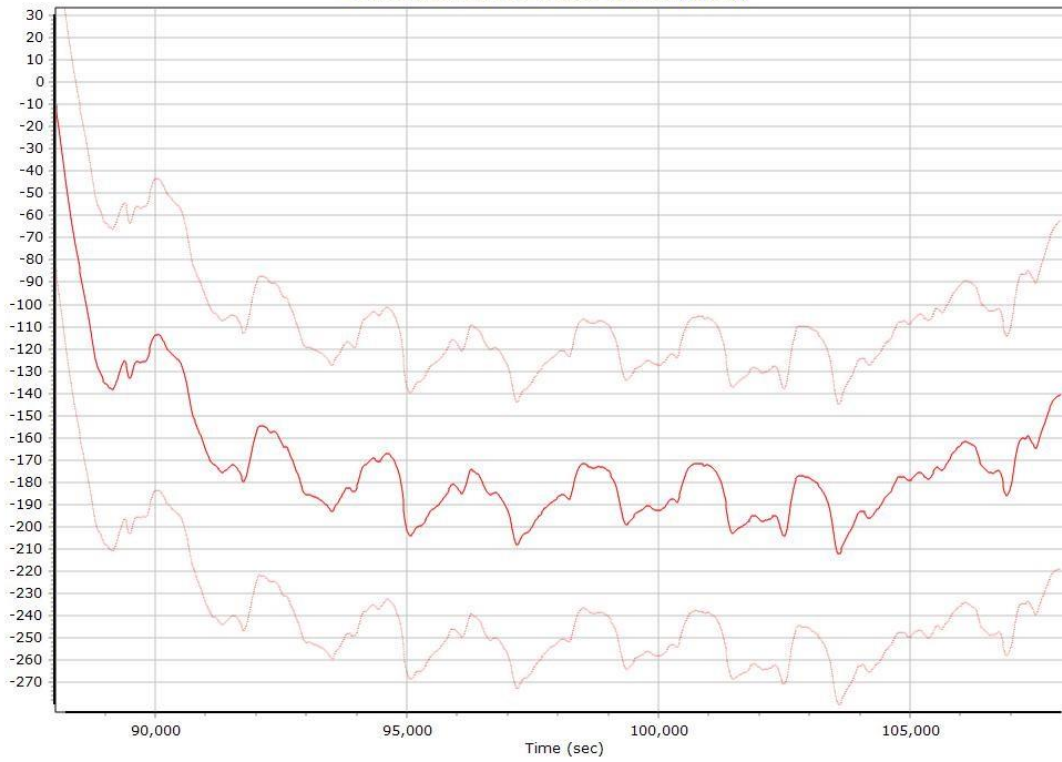
Y Accelerometer Scale Error (ppm)

y accelerometer scale error (ppm)

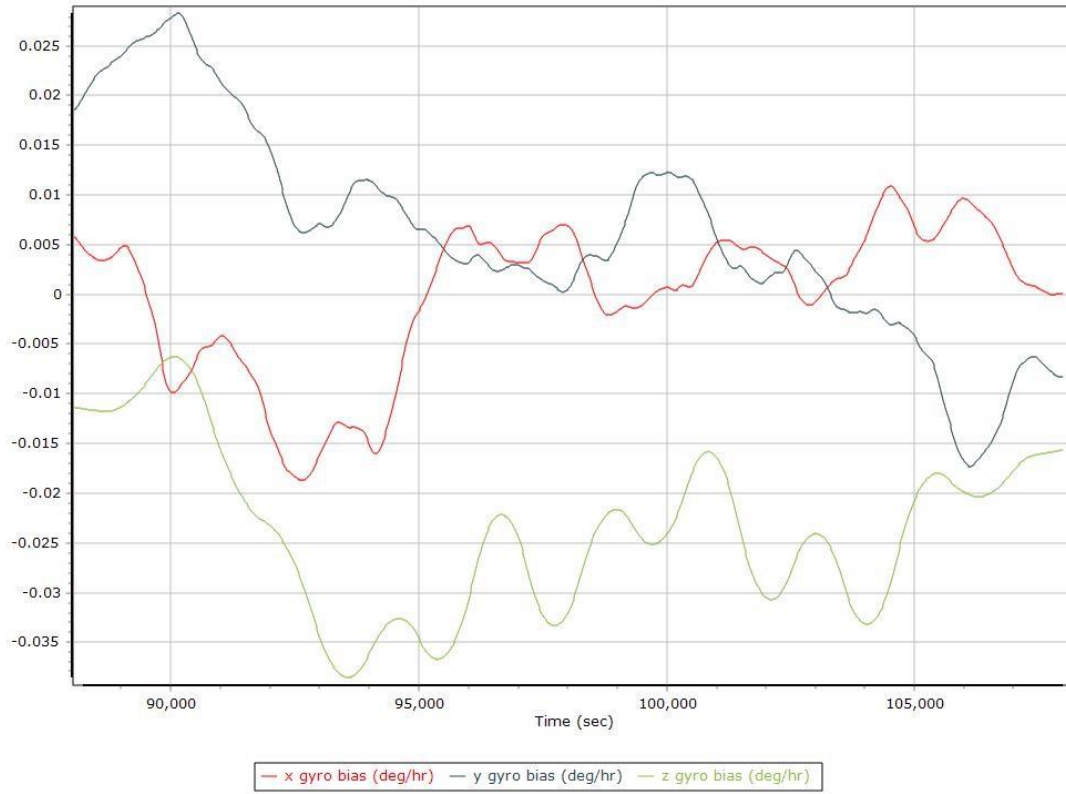


Z Accelerometer Scale Error (ppm)

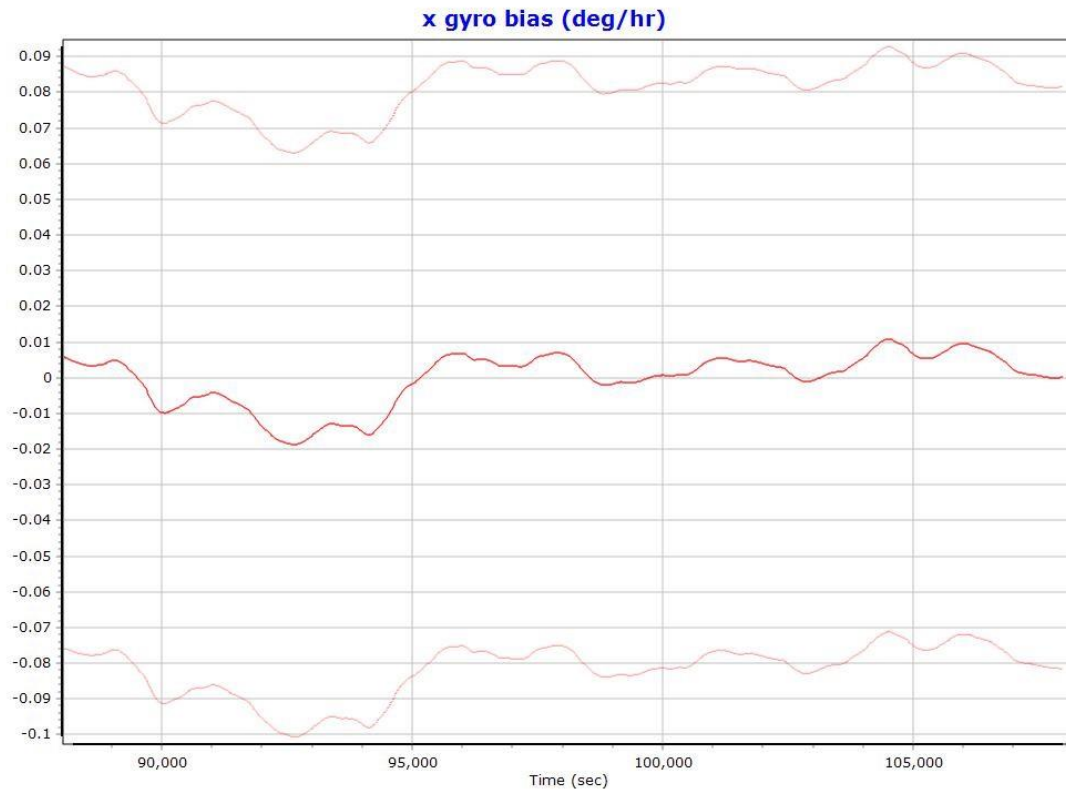
z accelerometer scale error (ppm)



Gyro Bias (deg/h)

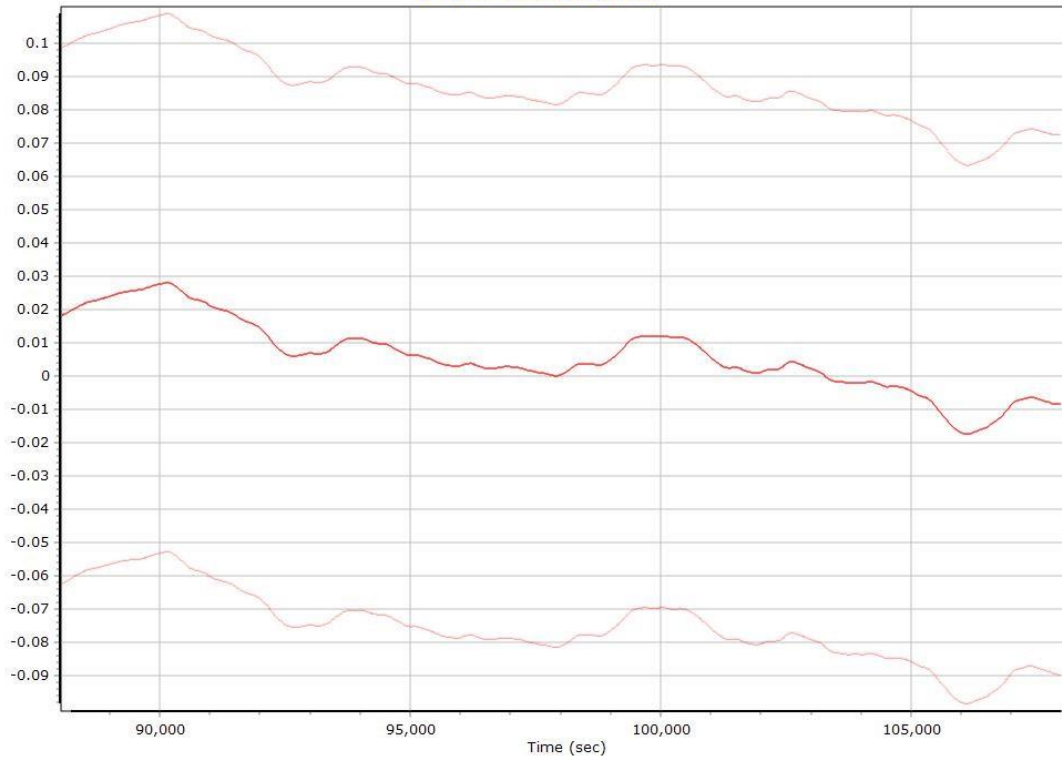


X Gyro Bias (deg/h)



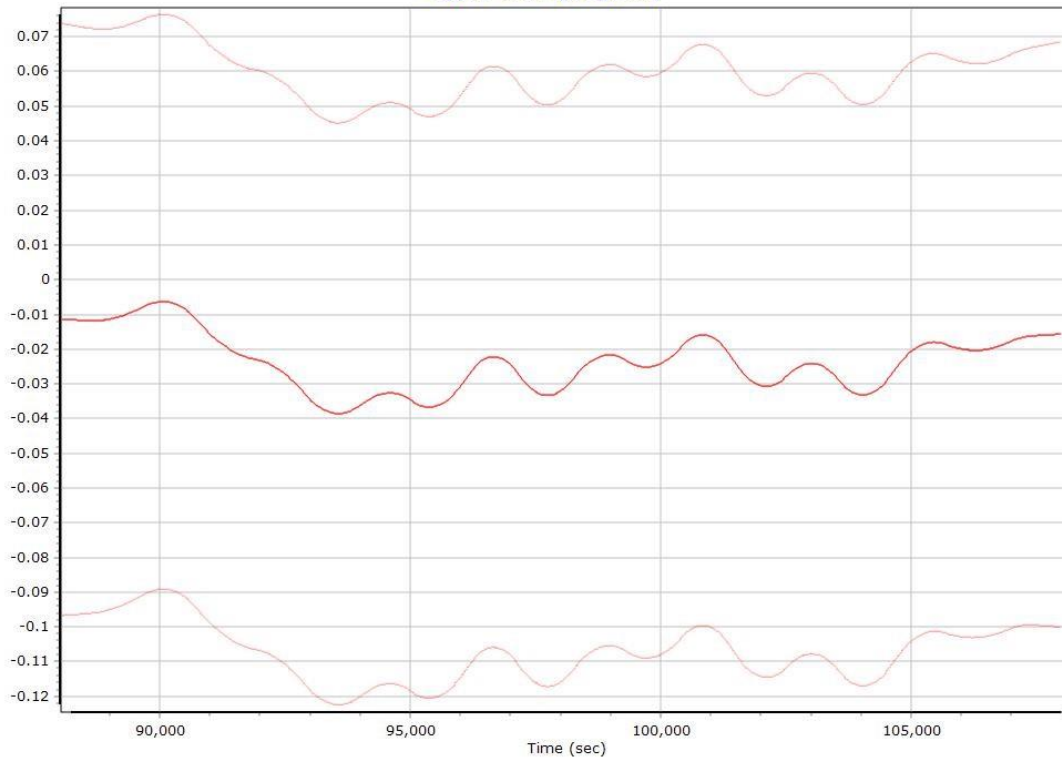
Y Gyro Bias (deg/h)

y gyro bias (deg/hr)

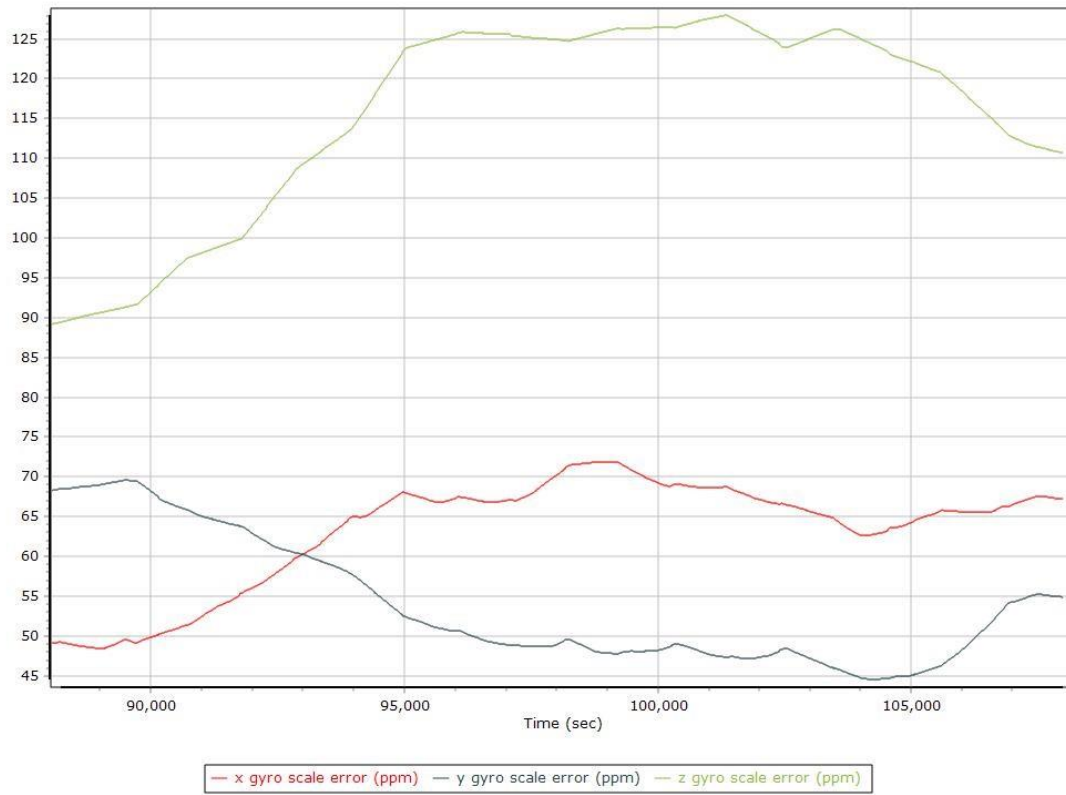


Z Gyro Bias (deg/h)

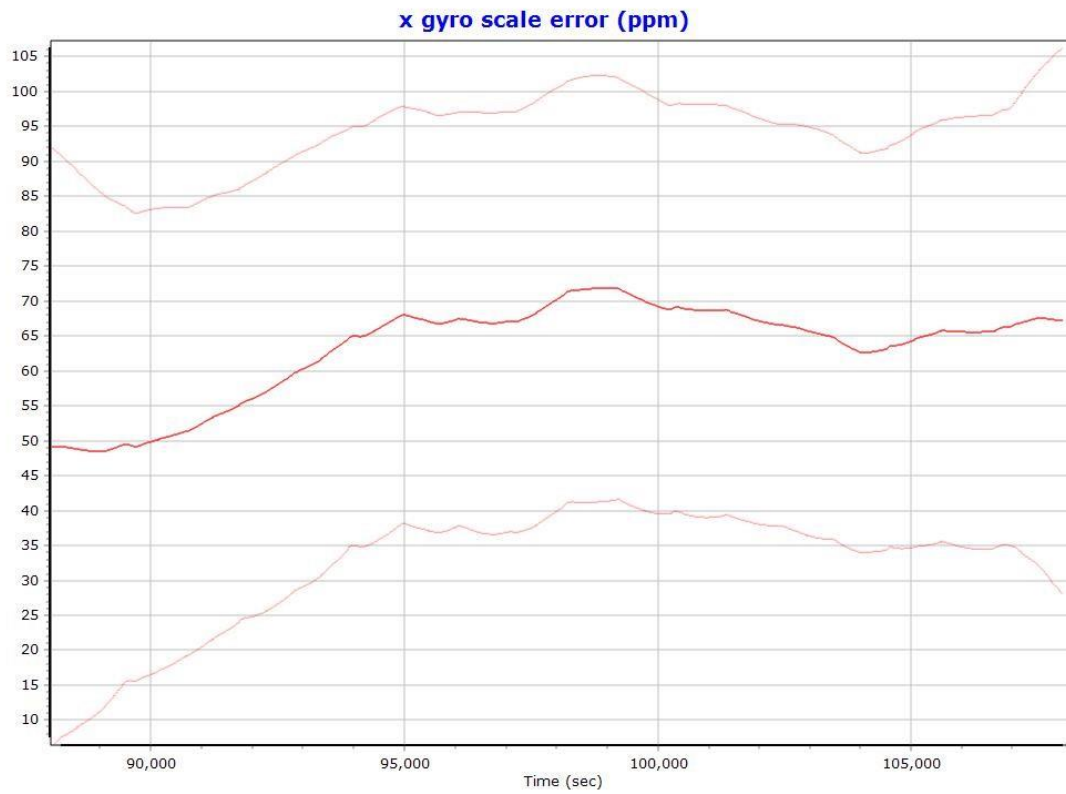
z gyro bias (deg/hr)

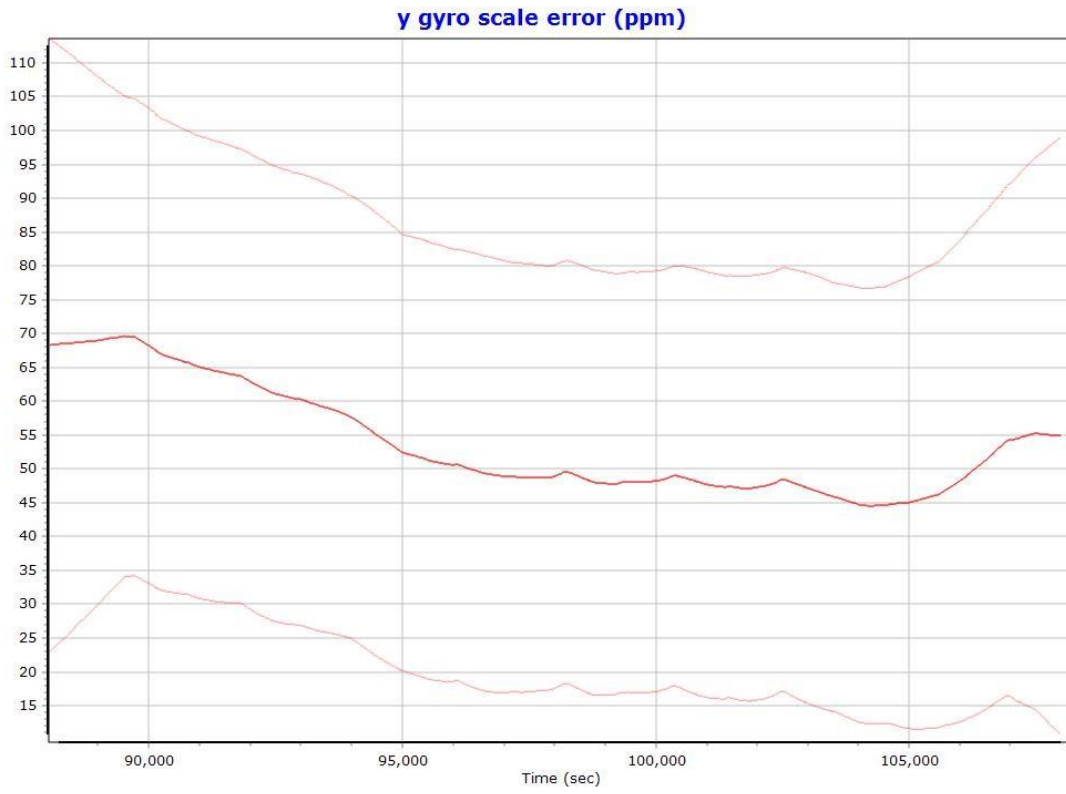


Gyro Scale Error (ppm)



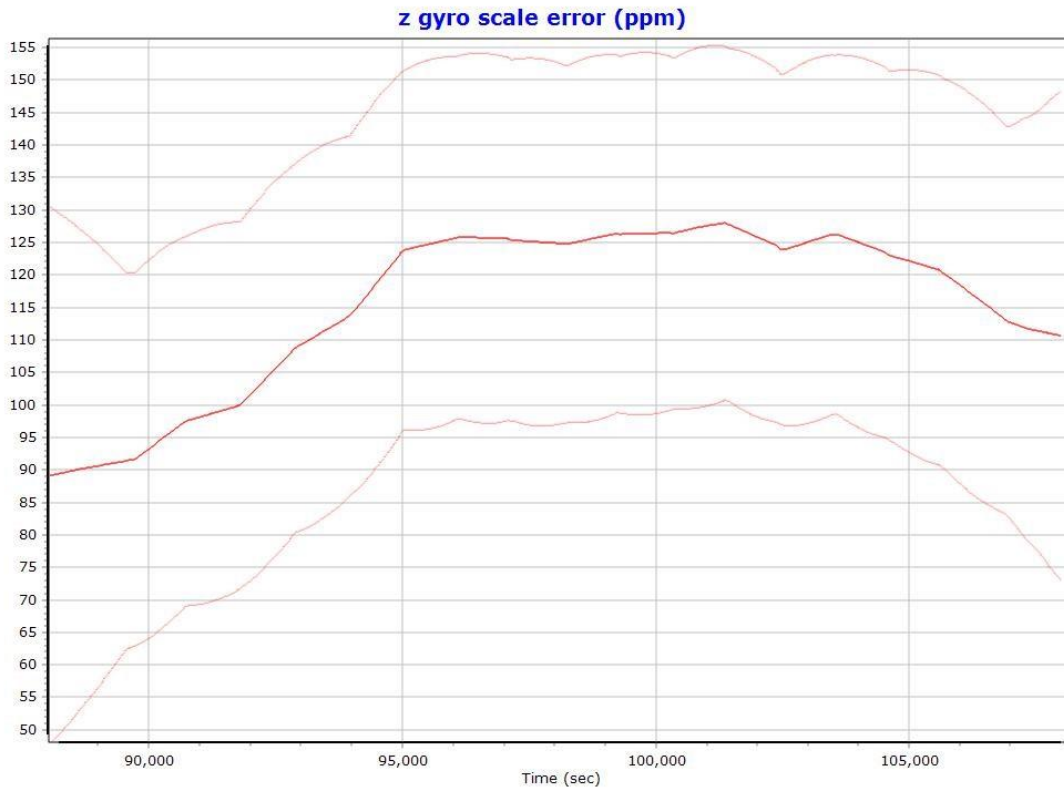
X Gyro Scale Error (ppm)





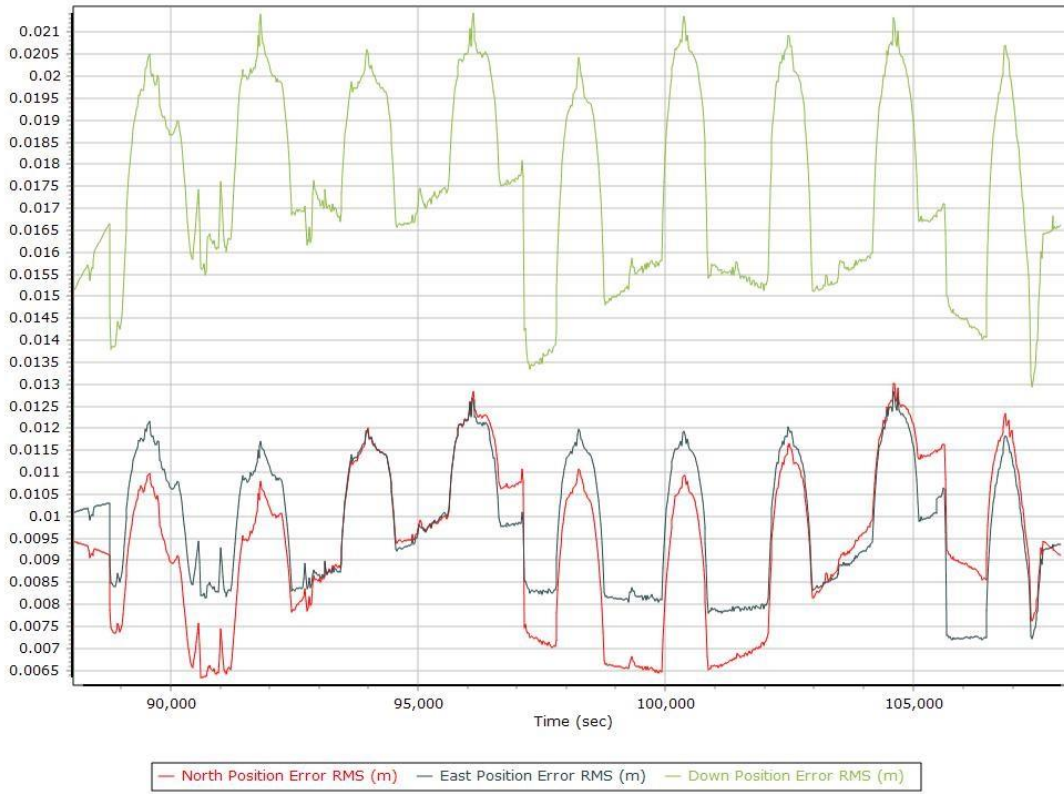
Y Gyro Scale Error (ppm)

Z Gyro Scale Error (ppm)

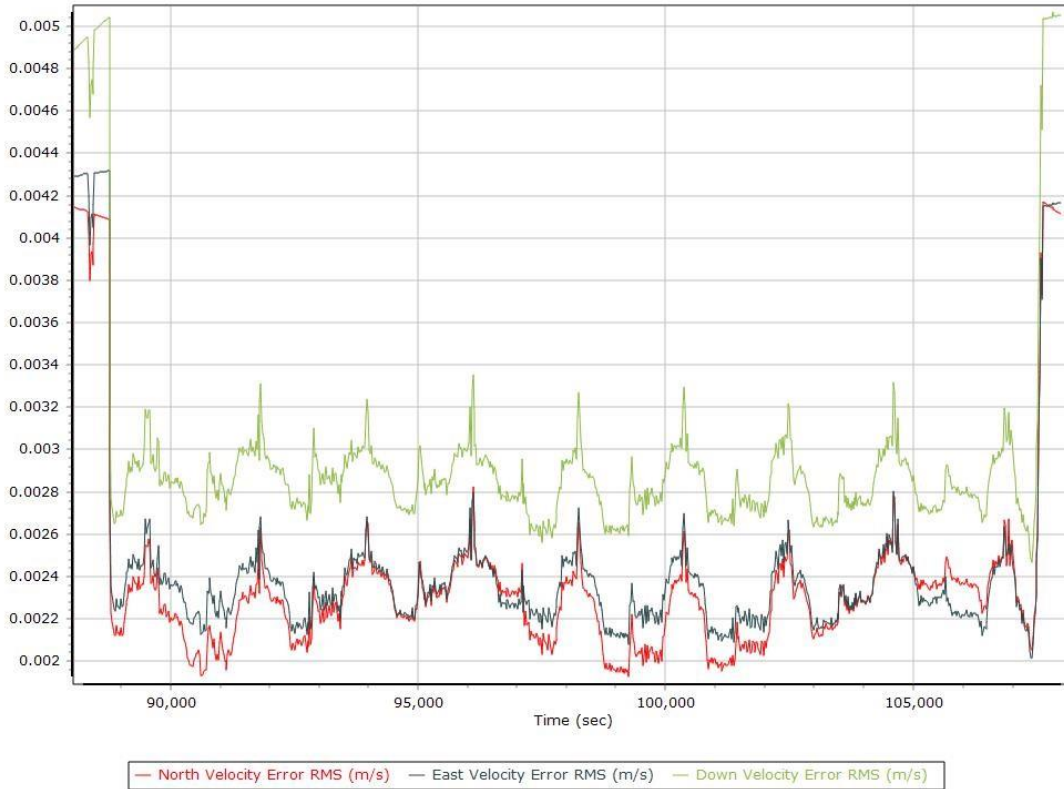


Smoothed Performance Metrics

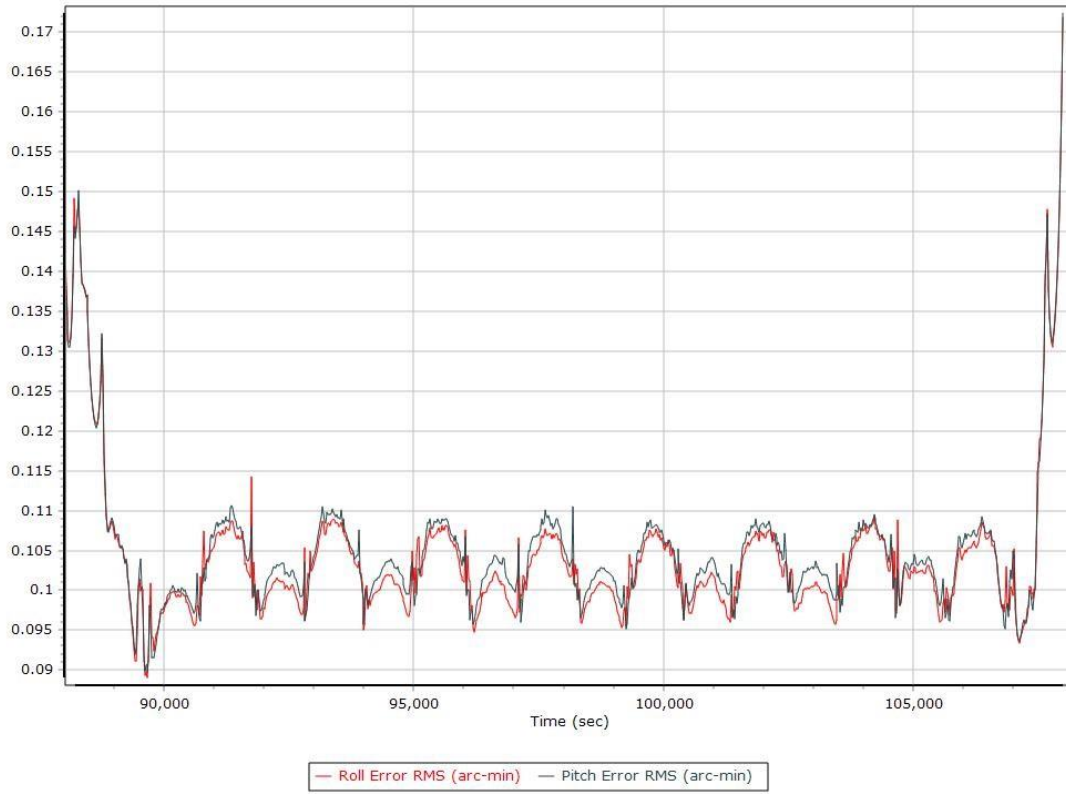
Position Error RMS (m)



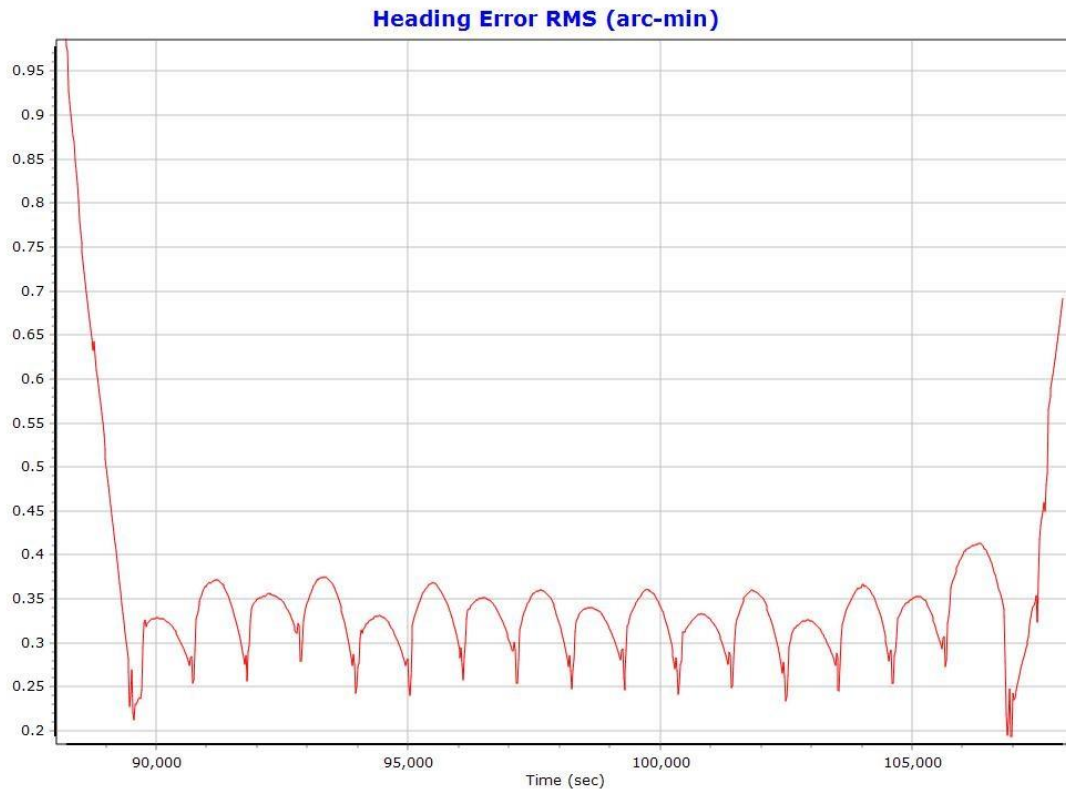
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

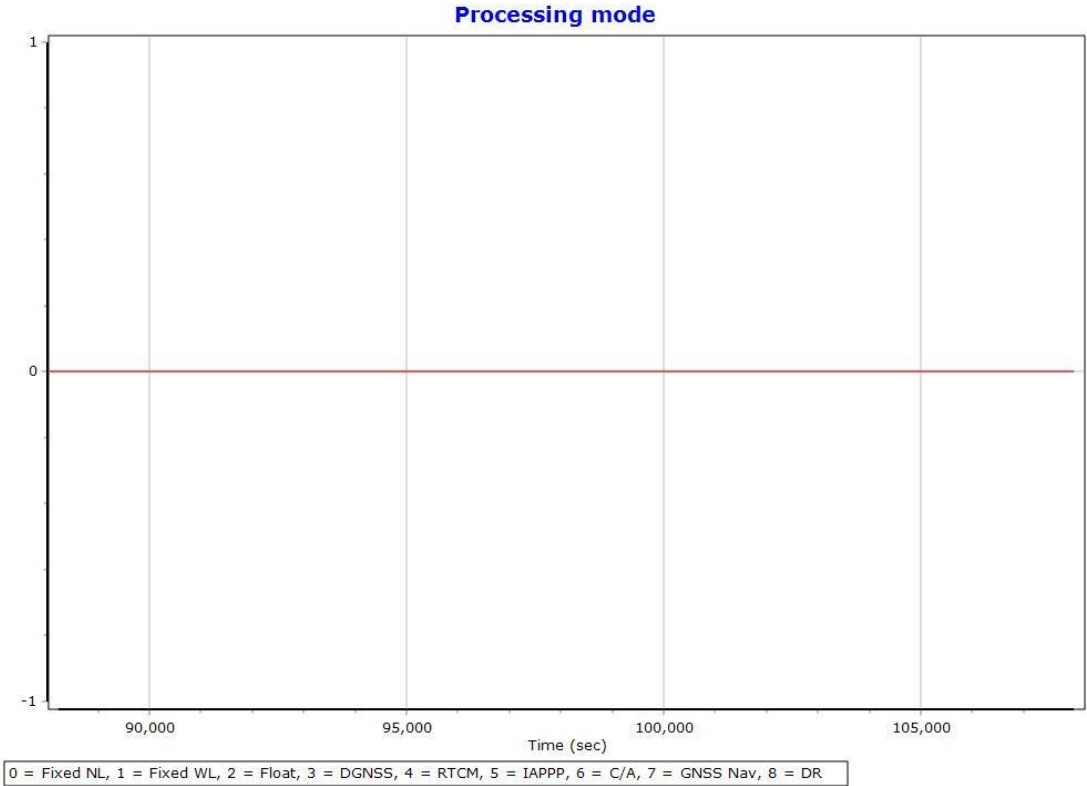


Heading Error RMS (arc -min)

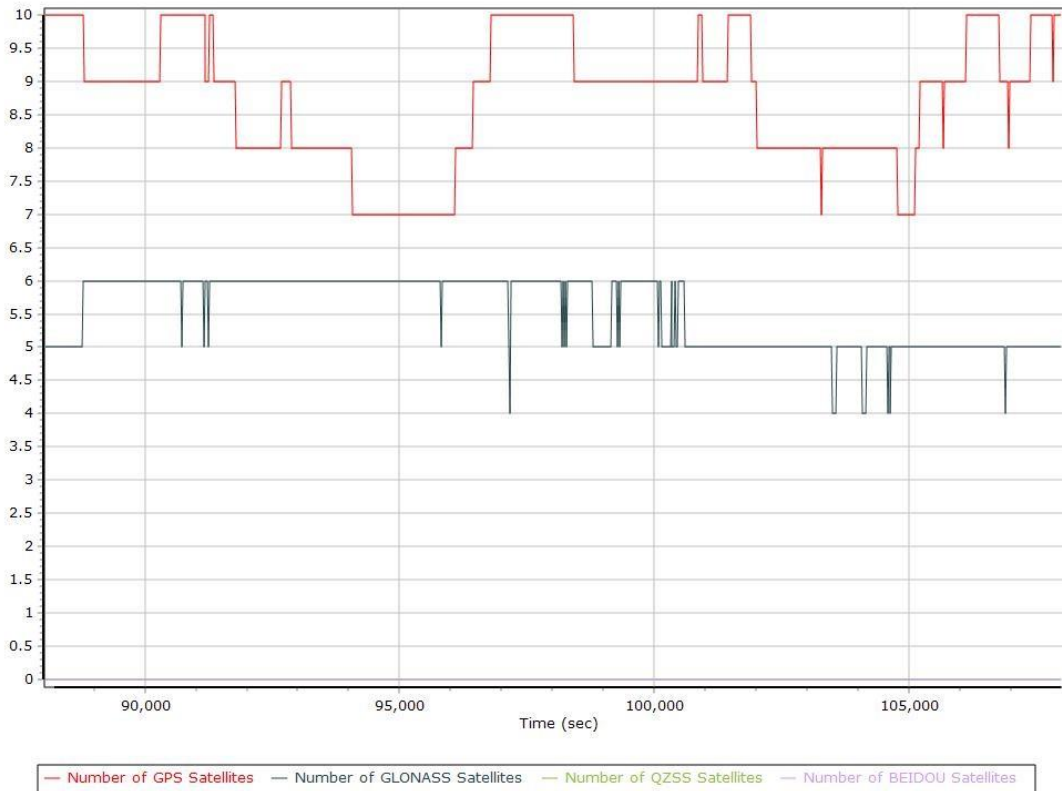


Smoothed Solution Status

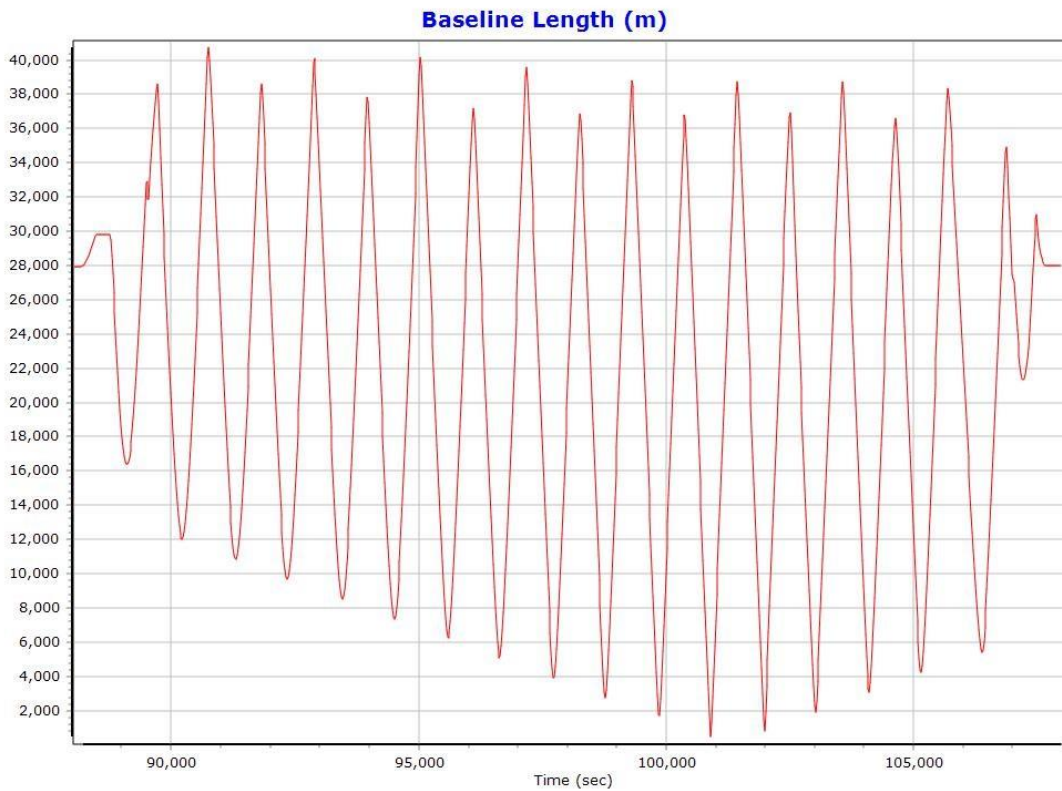
Processing Mode



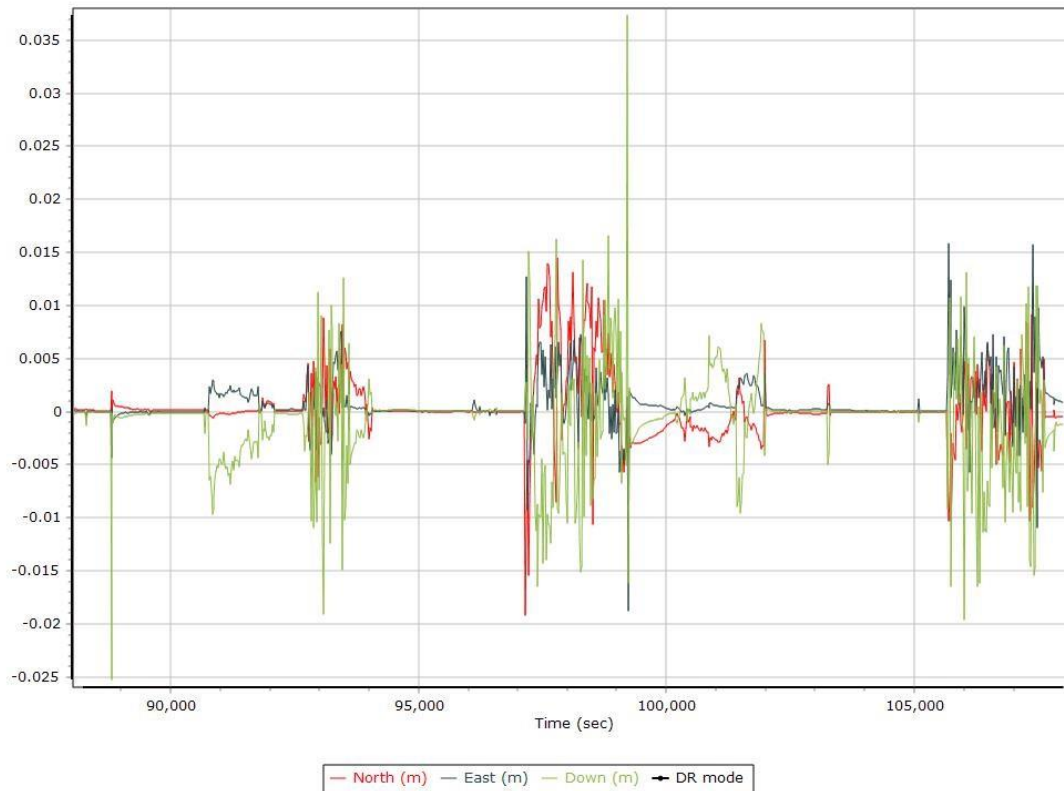
Number of Satellites



Baseline Length



SBET IAKAR Separation



General Information

Mission Information

Project name	12052018NAD83
Processing date	2019-02-21 21:25:18
Mission date	2018-12-05 05:38:03
Mission duration	05:29:06.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9524
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
181205_053747_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3390.18g	GLONASS Broadcast Ephemeris
Ephm3390.18n	GPS Broadcast Ephemeris
igl20302.sp3	GLONASS Precise Ephemeris
igl20303.sp3	GLONASS Precise Ephemeris
igl20304.sp3	GLONASS Precise Ephemeris
igs20302.sp3	GPS Precise Ephemeris
igs20303.sp3	GPS Precise Ephemeris
igs20304.sp3	GPS Precise Ephemeris
flai339f00.18o	GNSS SingleBase
fld7339f00.18o	GNSS SingleBase
fldc339f00.18o	GNSS SingleBase
flem339f00.18o	GNSS SingleBase
flib339f00.18o	GNSS SingleBase
flsi339f00.18o	GNSS SingleBase
stpt339f00.18o	GNSS SingleBase
zefr339f00.18o	GNSS SingleBase
flai339f00.18g	GLONASS Broadcast Ephemeris
flai339f00.18n	GPS Broadcast Ephemeris
fld7339f00.18g	GLONASS Broadcast Ephemeris
fld7339f00.18n	GPS Broadcast Ephemeris
fldc339f00.18n	GPS Broadcast Ephemeris
flem339f00.18g	GLONASS Broadcast Ephemeris
flem339f00.18n	GPS Broadcast Ephemeris
flib339f00.18g	GLONASS Broadcast Ephemeris
flib339f00.18n	GPS Broadcast Ephemeris
flsi339f00.18g	GLONASS Broadcast Ephemeris
flsi339f00.18n	GPS Broadcast Ephemeris
zefr339f00.18g	GLONASS Broadcast Ephemeris
zefr339f00.18n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_Mission 1.out	SBET Trajectory File

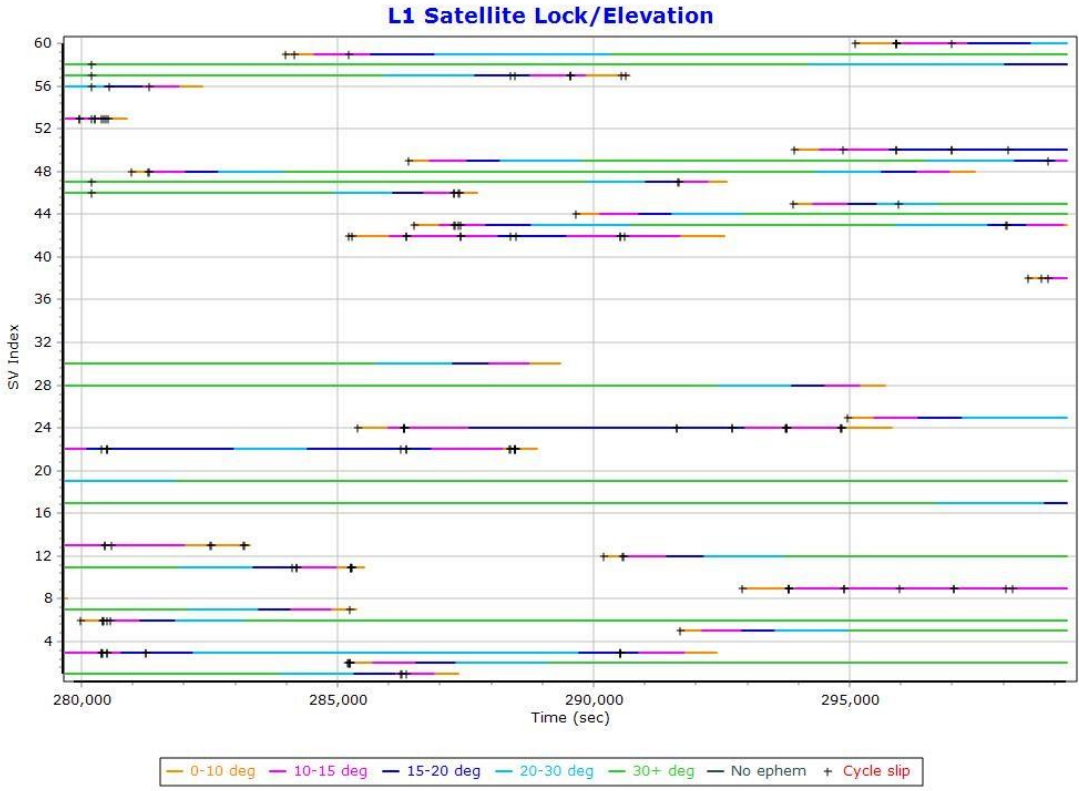
Rover Data Summary

First raw data file	181205_053747_INS-GPS_1.raw
Last raw data file	181205_053747_INS-GPS_1.raw
Start GPS week	2030
Start time	279464.060 (12/5/2018 5:37:44 AM)
End time	299208.793 (12/5/2018 11:06:48 AM)
Start of fine alignment	279786.244 (12/5/2018 5:43:06 AM)

Available subsystems	Primary GNSS, IMU		
POS Event Input	Event 2 Input, Event 3 Input		
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	0.000
Reference to Primary GNSS lever arm [m]	0.102	-0.140	-0.961
Reference to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

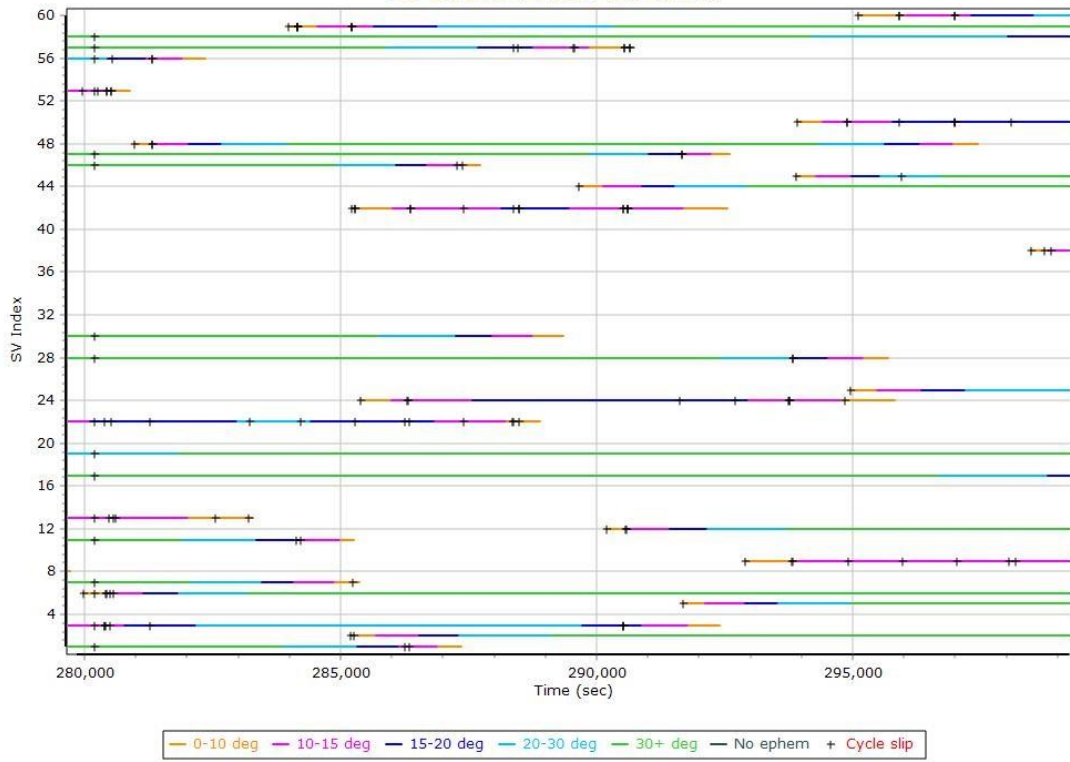
Raw Data QC

L1 Satellite Lock/Elevation



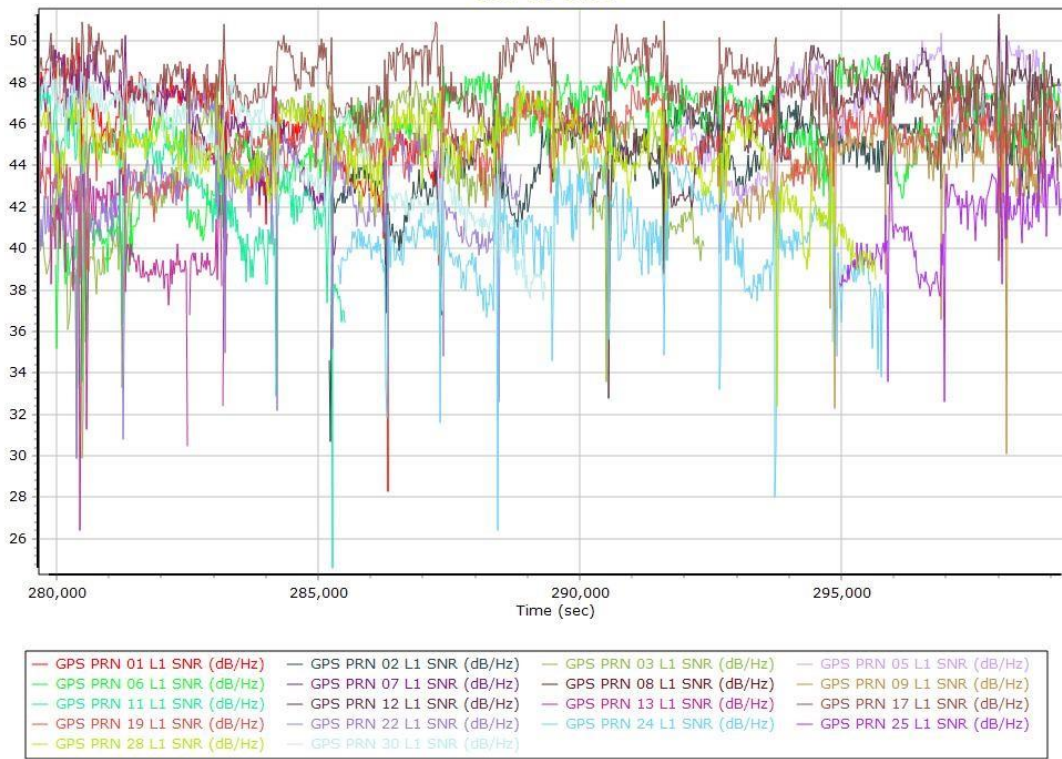
L2 Satellite Lock/Elevation

L2 Satellite Lock/Elevation



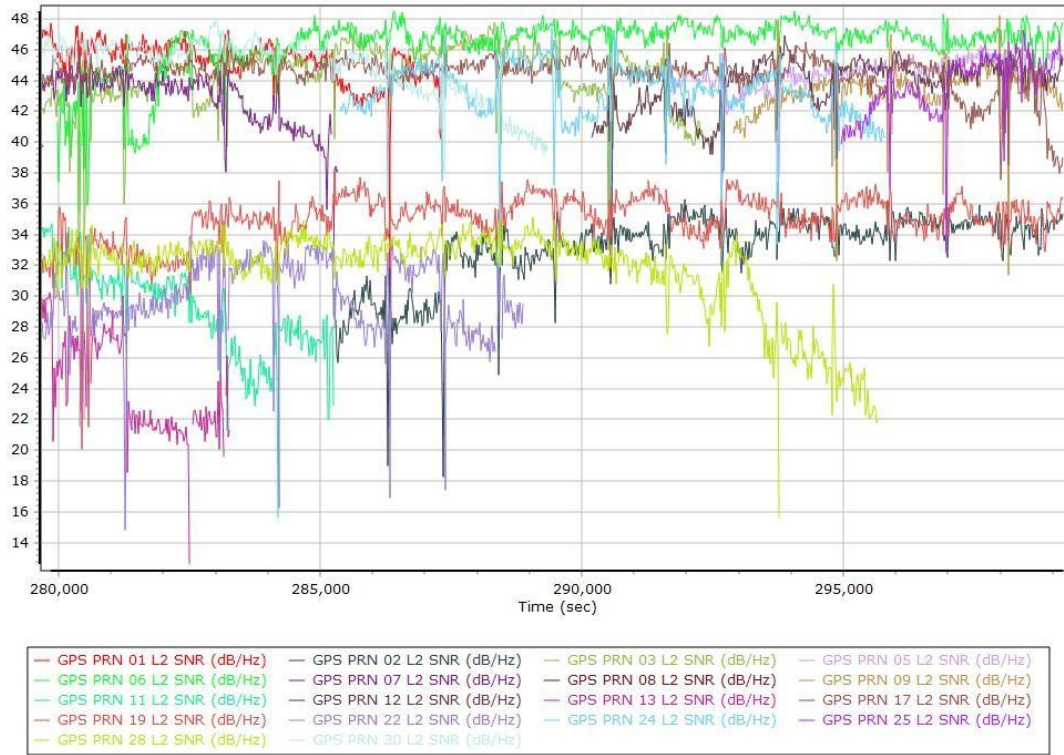
GPS L1 SNR

GPS L1 SNR



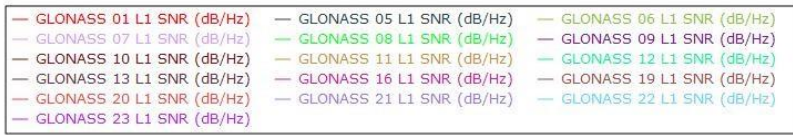
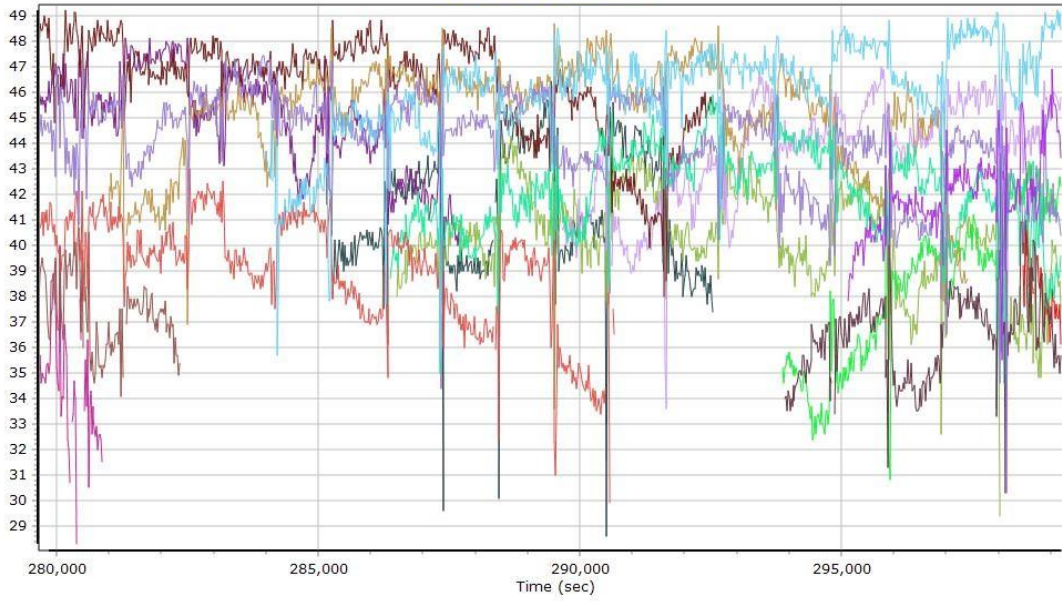
GPS L2 SNR

GPS L2 SNR



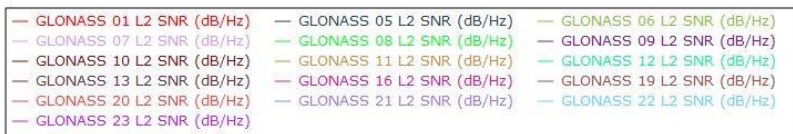
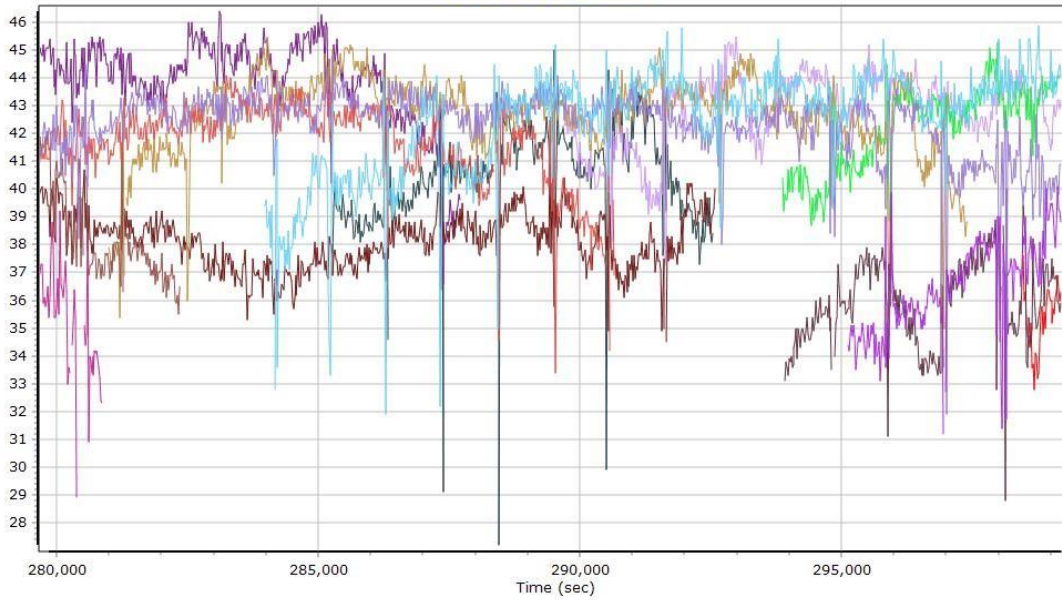
GLONASS L1 SNR

GLONASS L1 SNR

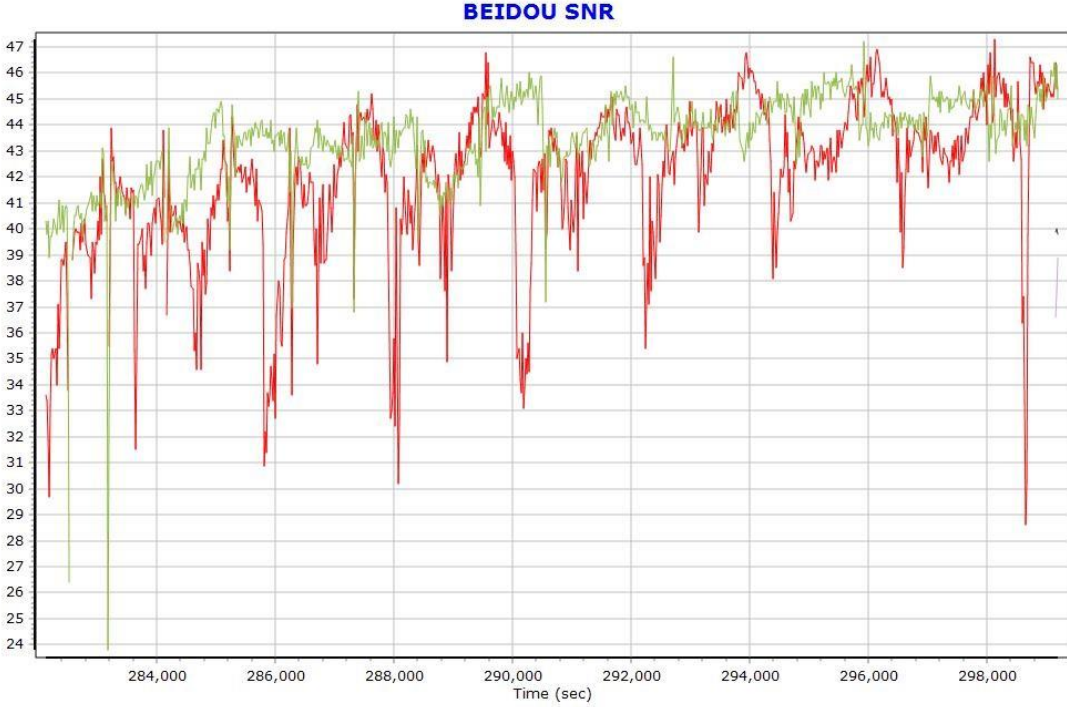


GLONASS L2 SNR

GLONASS L2 SNR



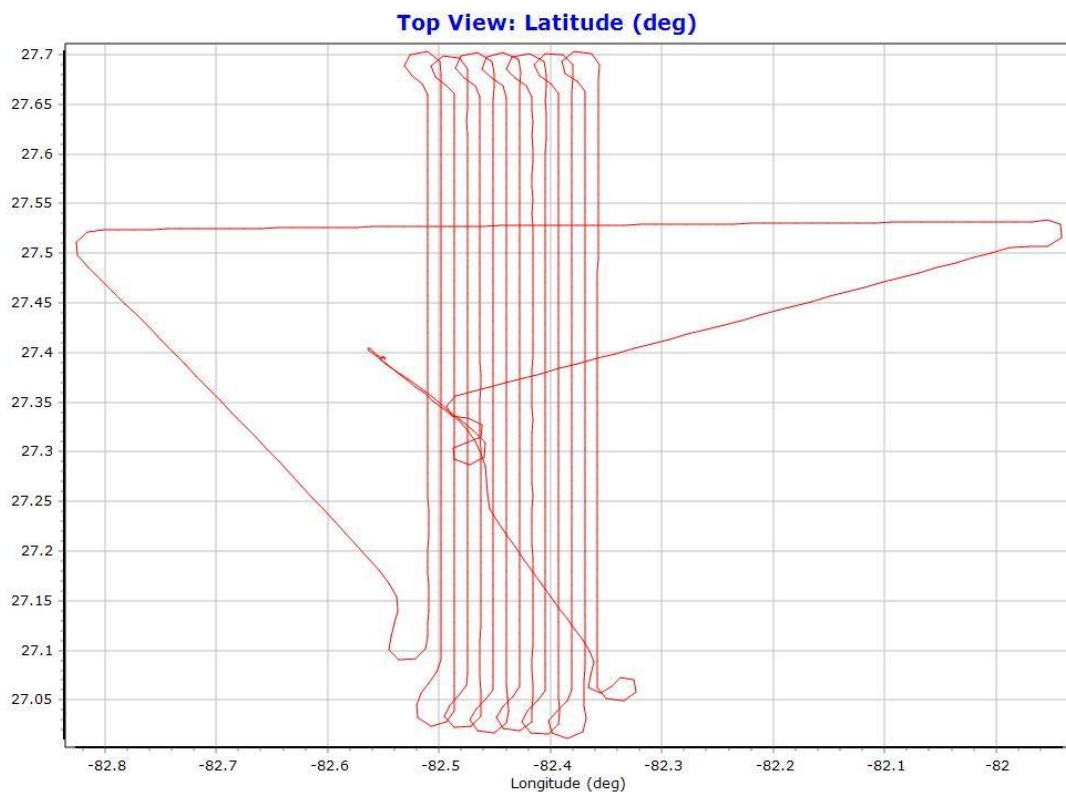
BEIDOU SNR



— BEIDOU 12 E5B B2 SNR (dB/Hz) — BEIDOU 14 E5B B2 SNR (dB/Hz) — BEIDOU 12 B1 B1 SNR (dB/Hz)
— BEIDOU 14 B1 B1 SNR (dB/Hz)

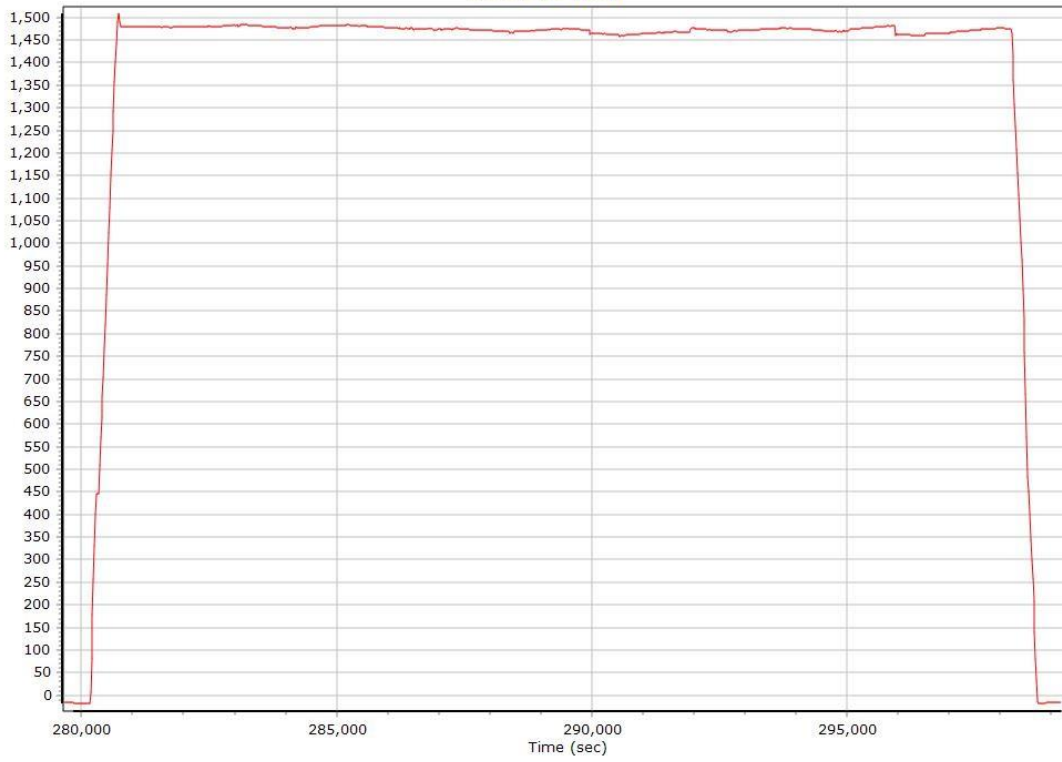
Trajectory Information

Top View

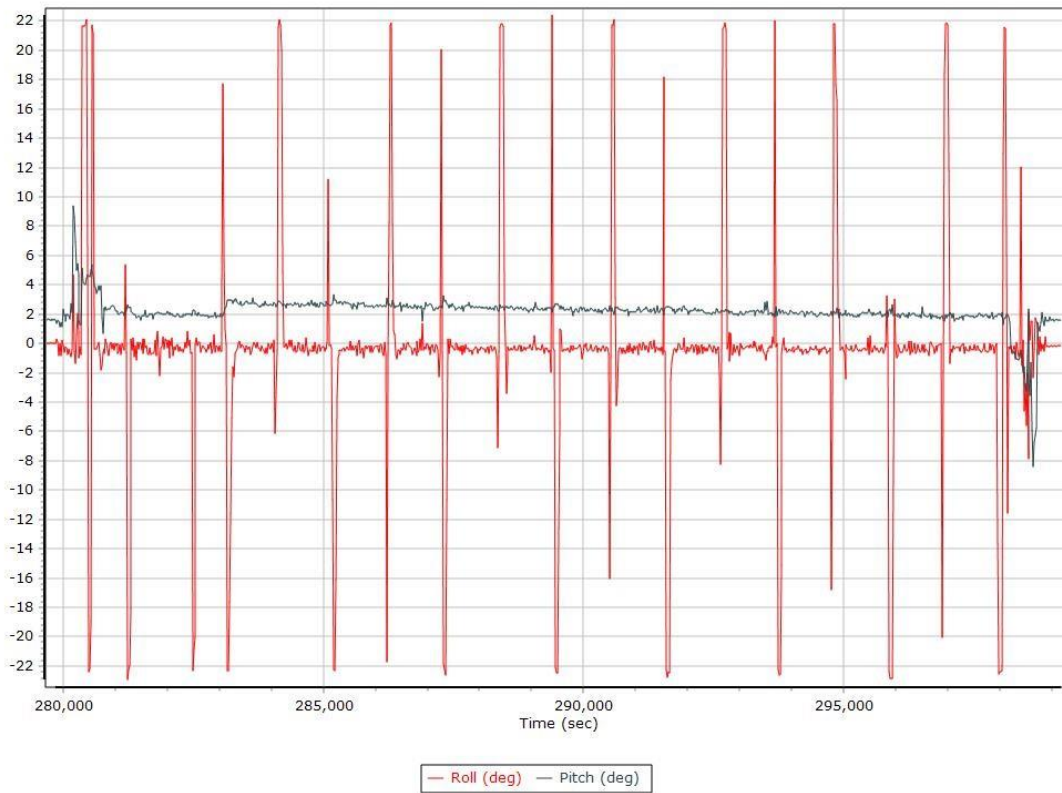


Altitude

Altitude (m)

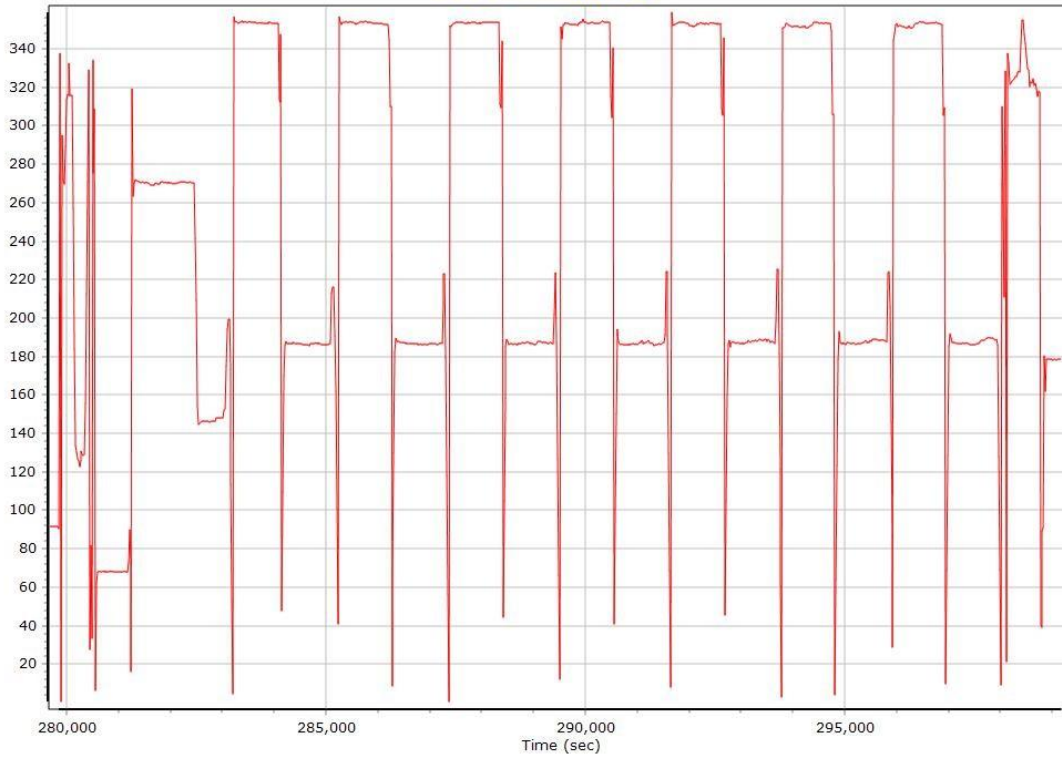


Roll/Pitch

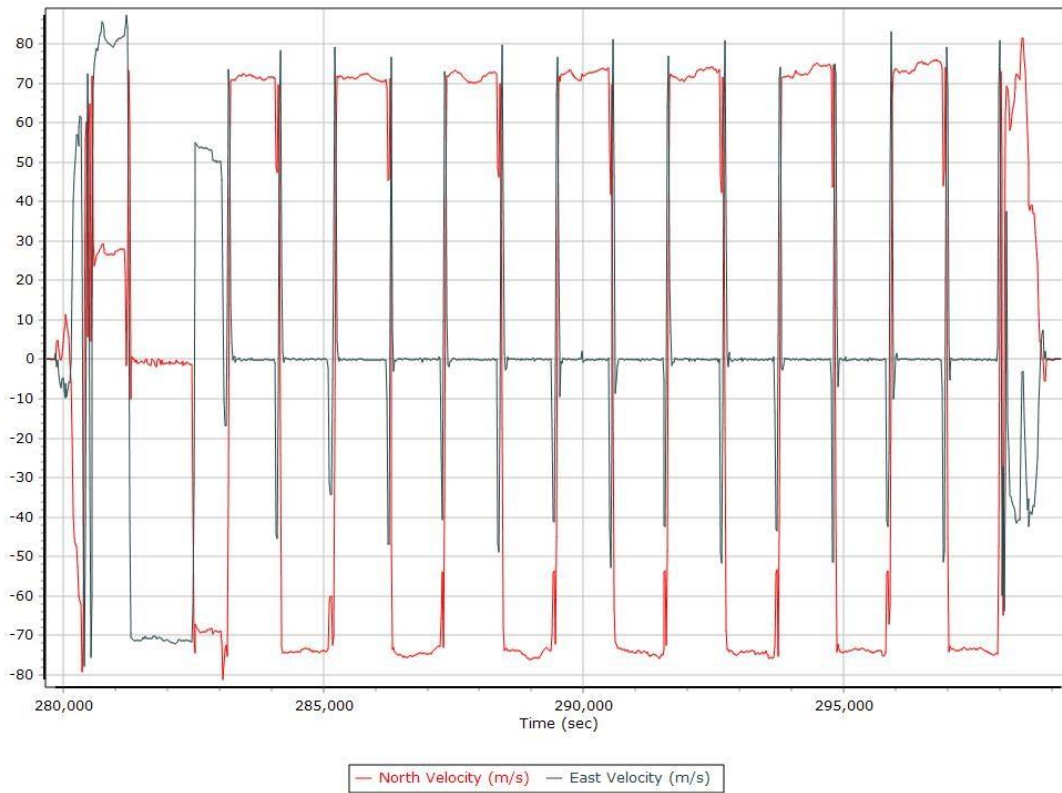


Heading

True Heading (deg)

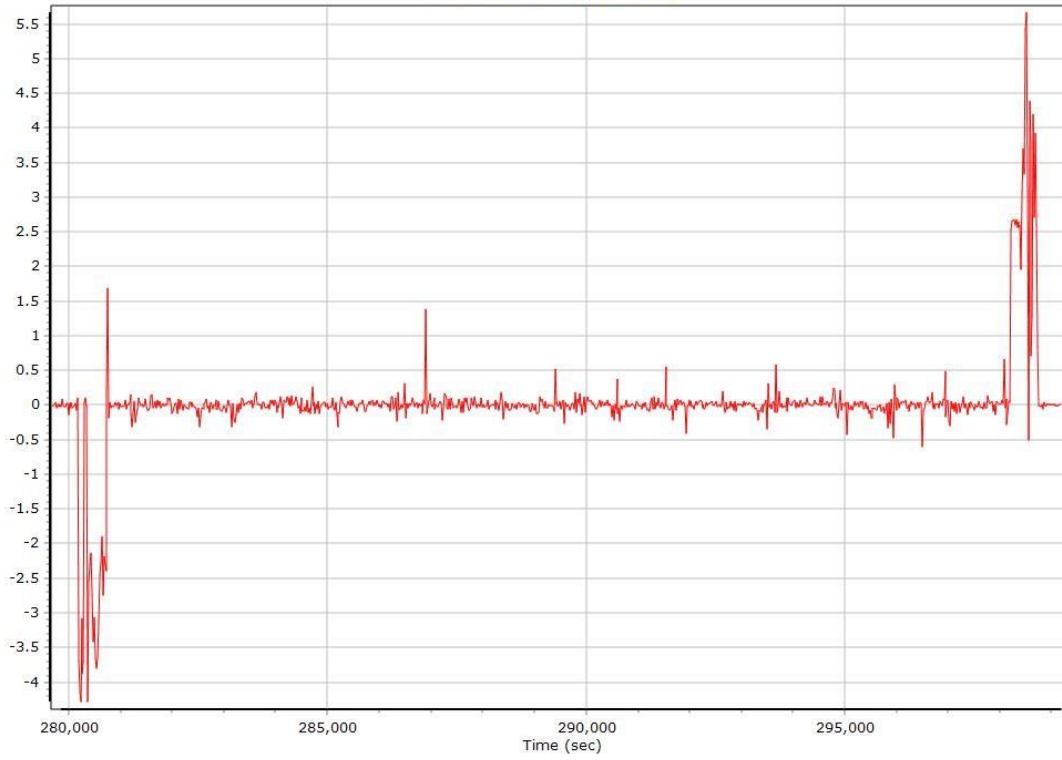


North/East Velocity



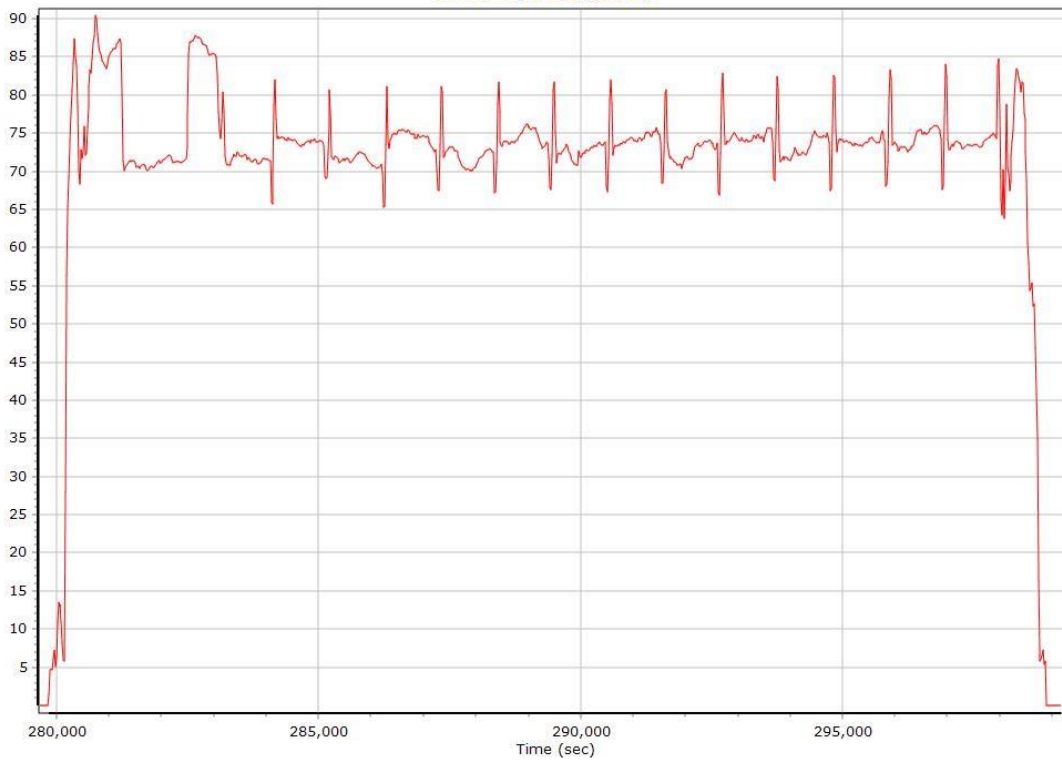
Down Velocity

Down Velocity (m/s)



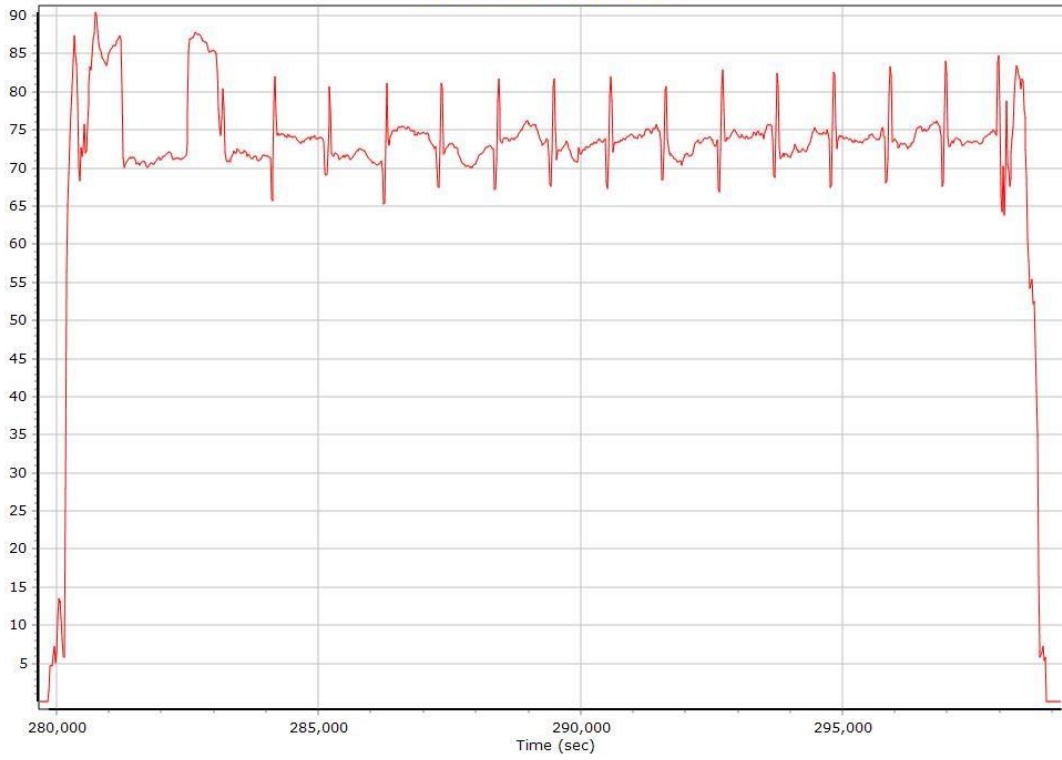
Total Speed

Total Speed (m/s)

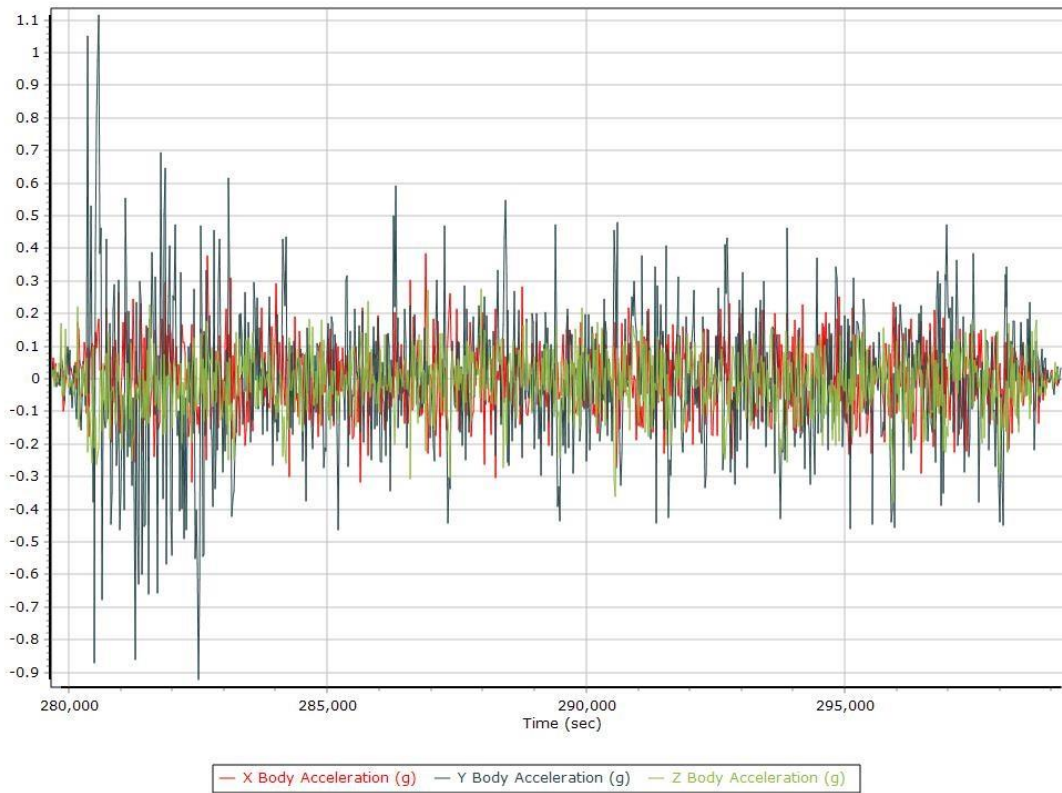


Ground Speed

Ground Speed (m/s)

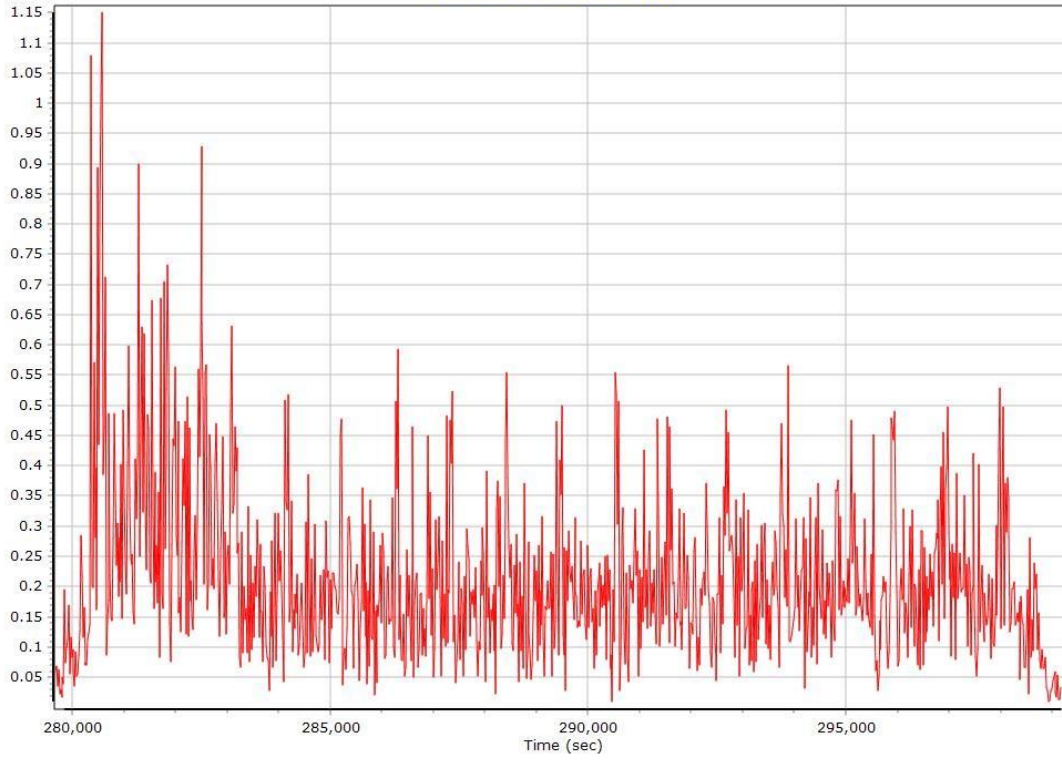


Body Acceleration

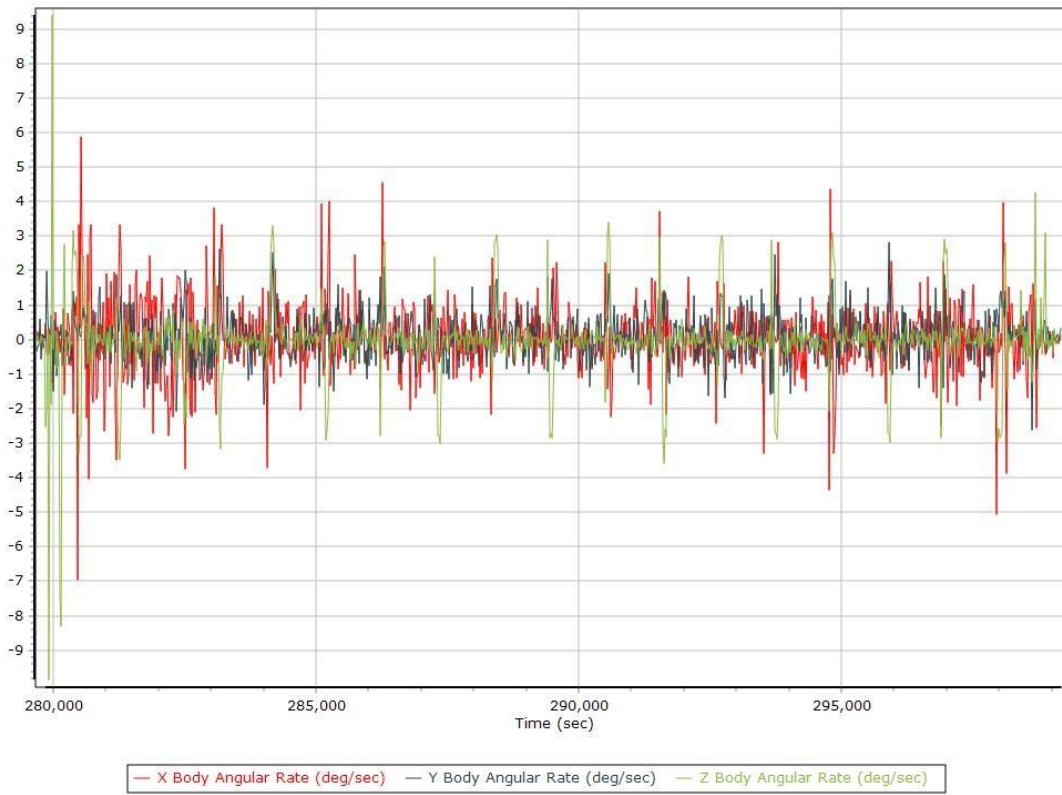


Total Body Acceleration

Total Acceleration (g)



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	Data Type	Rate	Service	Database	Status
------	----	------	-----------	------	---------	----------	--------

SmartBase Results

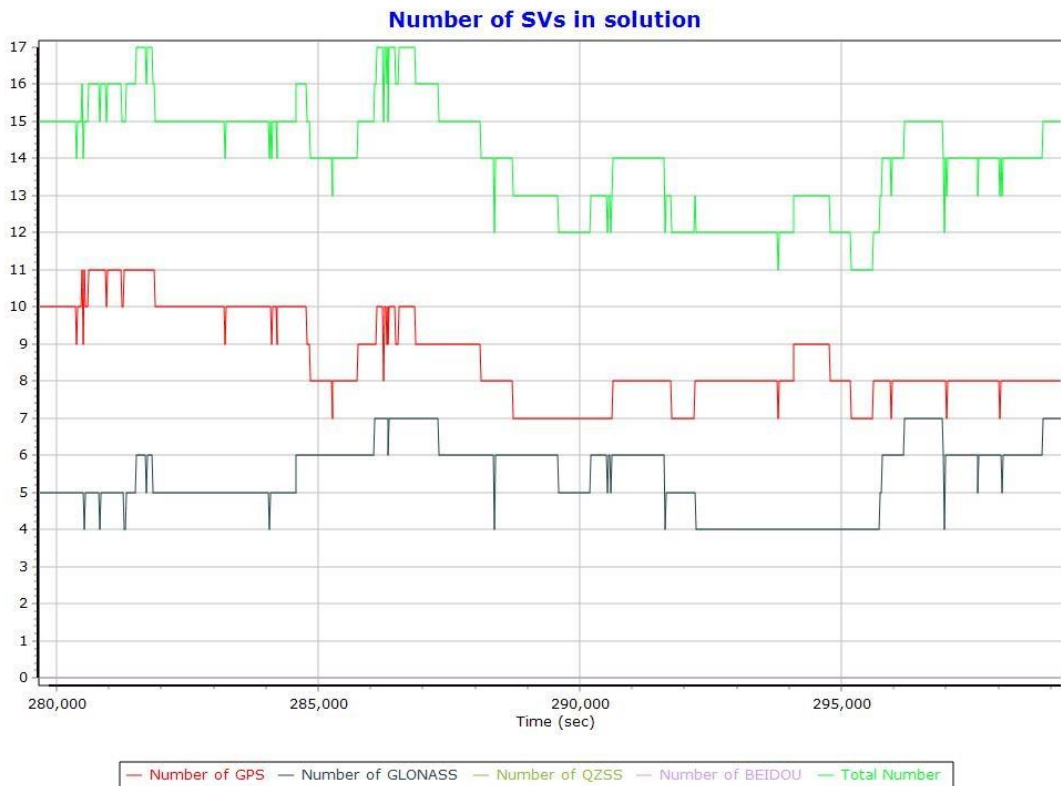
SmartBase status	
Primary station Id	
Primary station data rate [sec]	0.0
VRS/ASB generation rate [sec]	0.0
VRS/ASB timespan	
Number of reference stations	0
Primary station GPS measurement usage [%]	0.0
Average number of satellites per epoch	0.0
Max number of GPS stations used	0
Min number of GPS stations 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	

GNSS QC

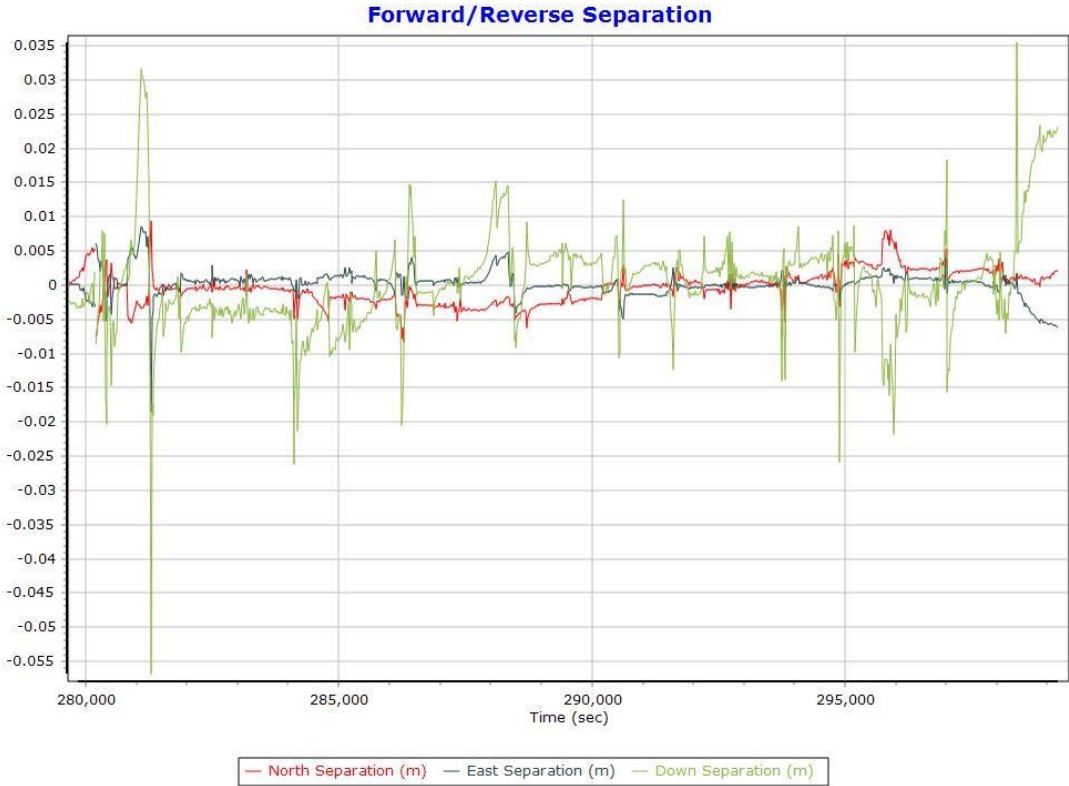
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	0.09	52.25	
Number of GPS SV	6	11	9
Number of GLONASS SV	0	7	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	10	17	14
PDOP	1.13	2.48	1.52
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	19738.00	0.00	1.00
Percentage	99.99	0.00	0.01

Num SVs in solution

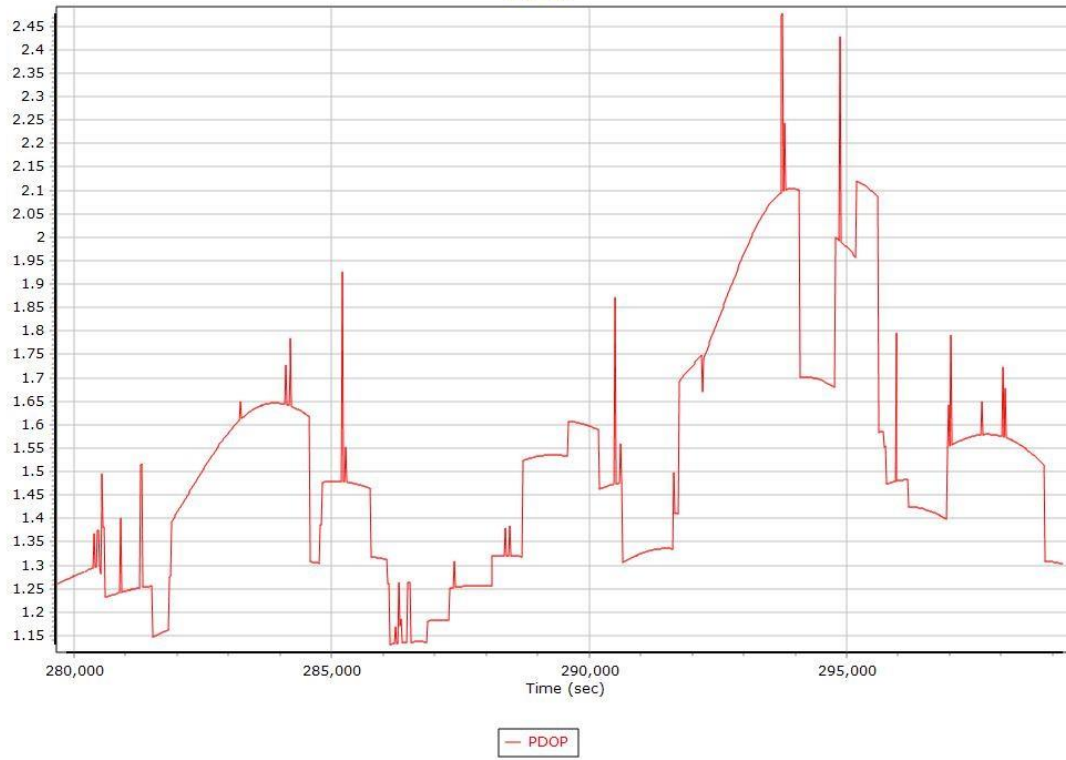


Forward/Reverse Separation



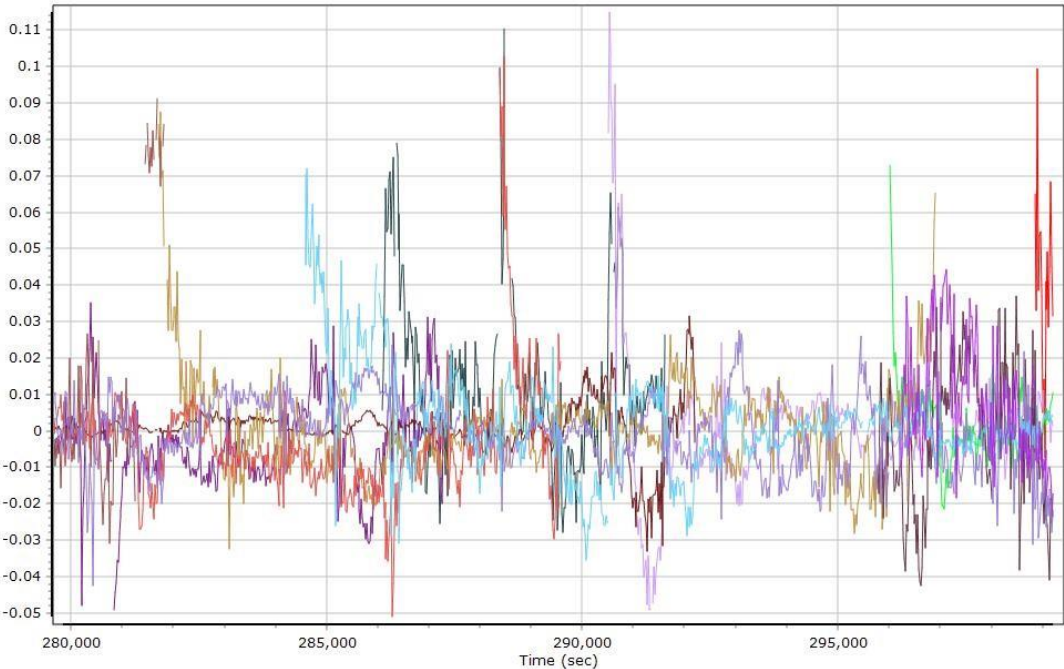
PDOP

PDOP



Estimated Position Accuracy

GLONASS Residuals



- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GLONASS 01 Residual (m) | GLONASS 05 Residual (m) | GLONASS 06 Residual (m) | GLONASS 07 Residual (m) |
| GLONASS 08 Residual (m) | GLONASS 09 Residual (m) | GLONASS 10 Residual (m) | GLONASS 11 Residual (m) |
| GLONASS 12 Residual (m) | GLONASS 13 Residual (m) | GLONASS 16 Residual (m) | GLONASS 19 Residual (m) |
| GLONASS 20 Residual (m) | GLONASS 21 Residual (m) | GLONASS 22 Residual (m) | GLONASS 23 Residual (m) |

GNSS-Inertial Processor Configuration

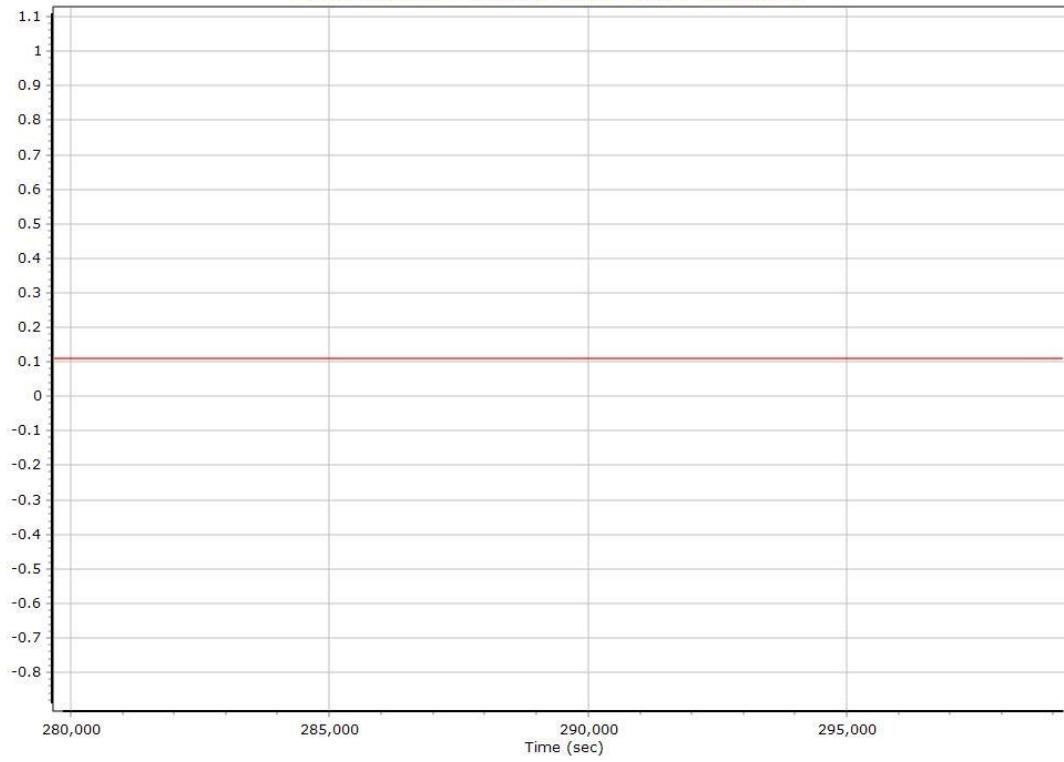
Processing mode	IN-Fusion SmartBase		
Stabilized mount	False		
Base station	ASB		
Processing start time	279465.000 (12/5/2018 5:37:45 AM)		
Processing end time	299211.000 (12/5/2018 11:06:51 AM)		
Initial attitude source	GYRO Compass		
IMU Sensor Context	Processing with Onboard IMU		
Reference to IMU 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]	0.110	-0.138	-0.963
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

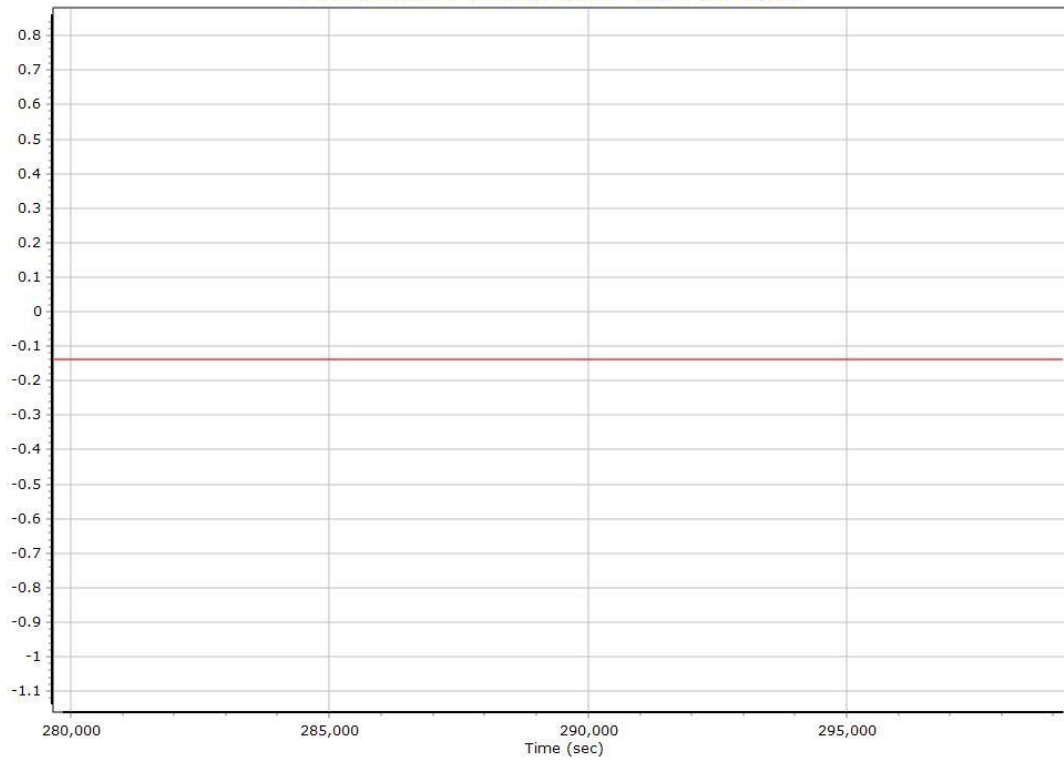
X Reference -Primary GNSS Lever Arm (m)

X Reference-Primary GNSS Lever Arm (m)



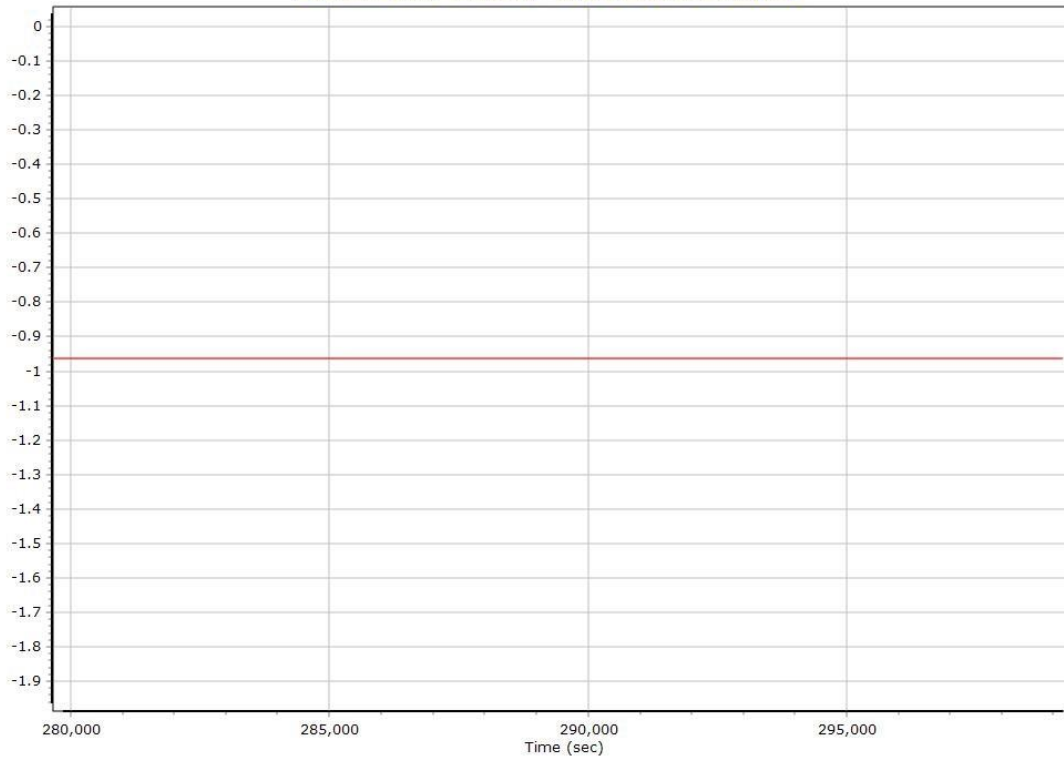
Y Reference -Primary GNSS Lever Arm (m)

Y Reference-Primary GNSS Lever Arm (m)



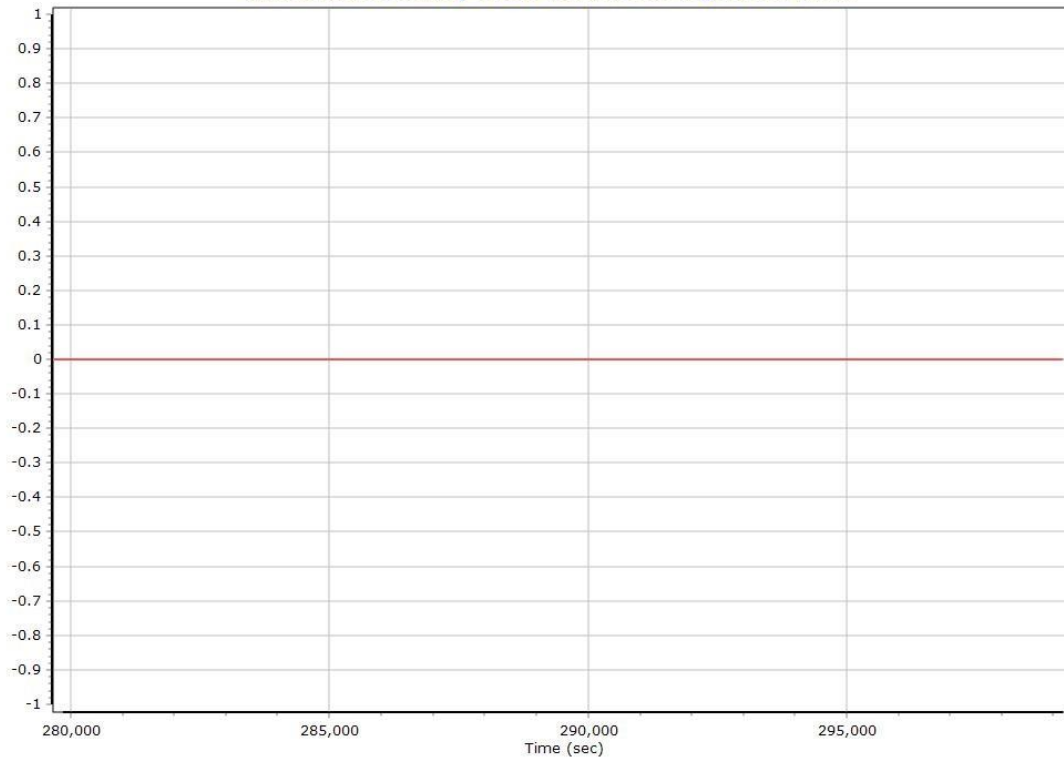
Z Reference -Primary GNSS Lever Arm (m)

Z Reference-Primary GNSS Lever Arm (m)



Reference -Primary GNSS Lever Arm Figure of Merit

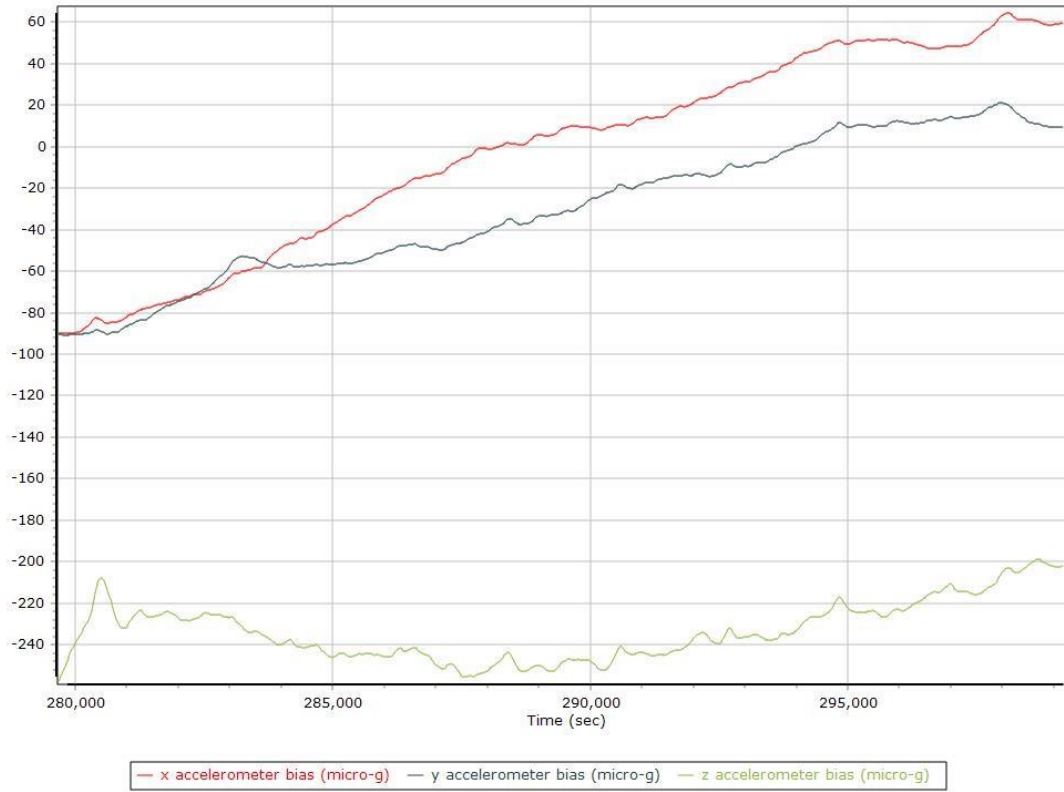
Reference-Primary GNSS Lever Arm Figure of Merit



Smoothed IN-Fusion QC

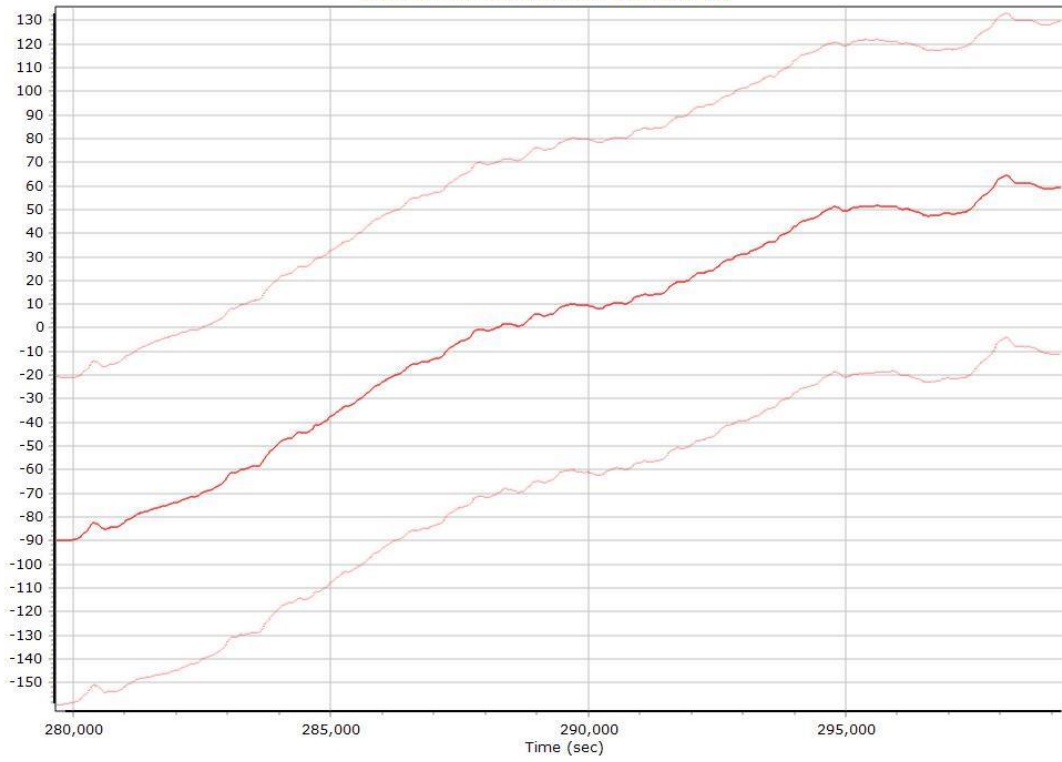
Smoothed Estimated Errors, Reference Frame

Accelerometer Bias (micro -g)



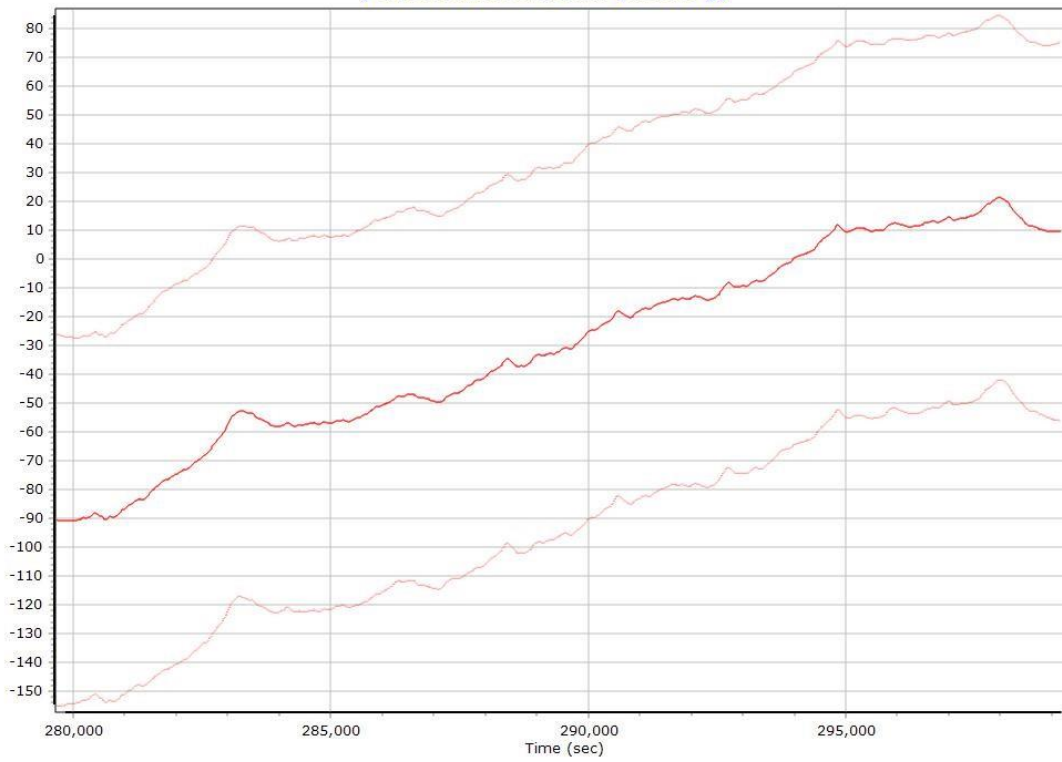
X Accelerometer Bias (micro -g)

x accelerometer bias (micro-g)



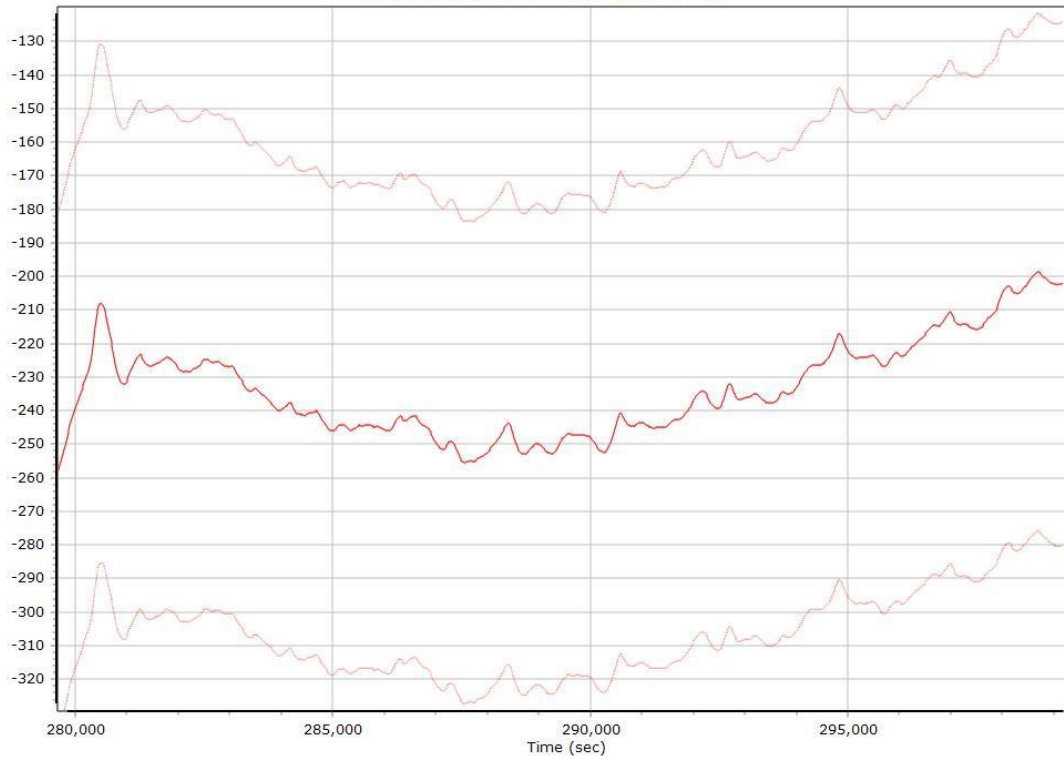
Y Accelerometer Bias (micro -g)

y accelerometer bias (micro-g)

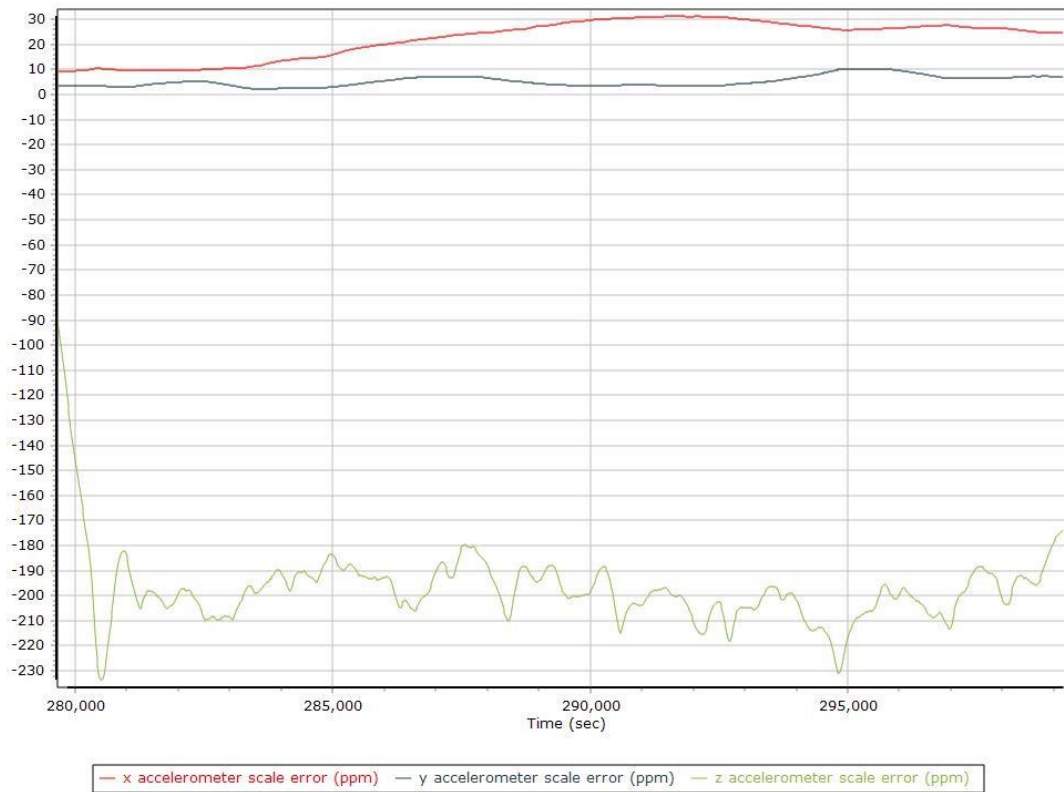


Z Accelerometer Bias (micro -g)

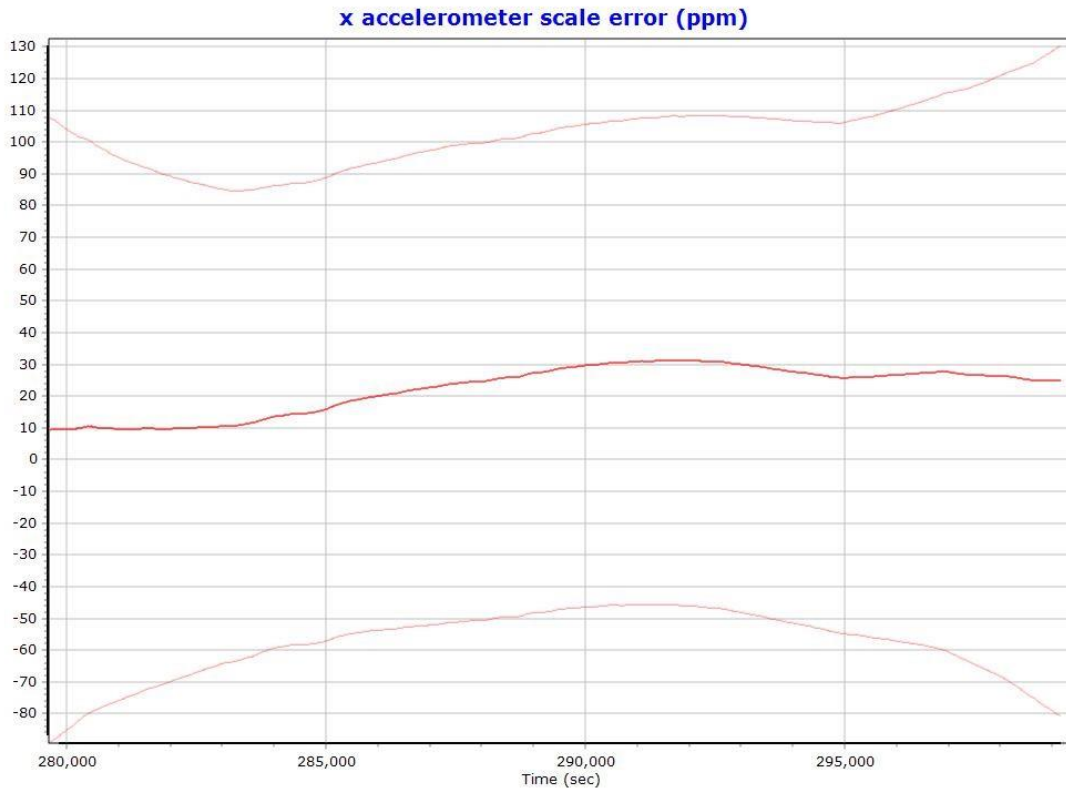
z accelerometer bias (micro-g)



Accelerometer Scale Error (ppm)

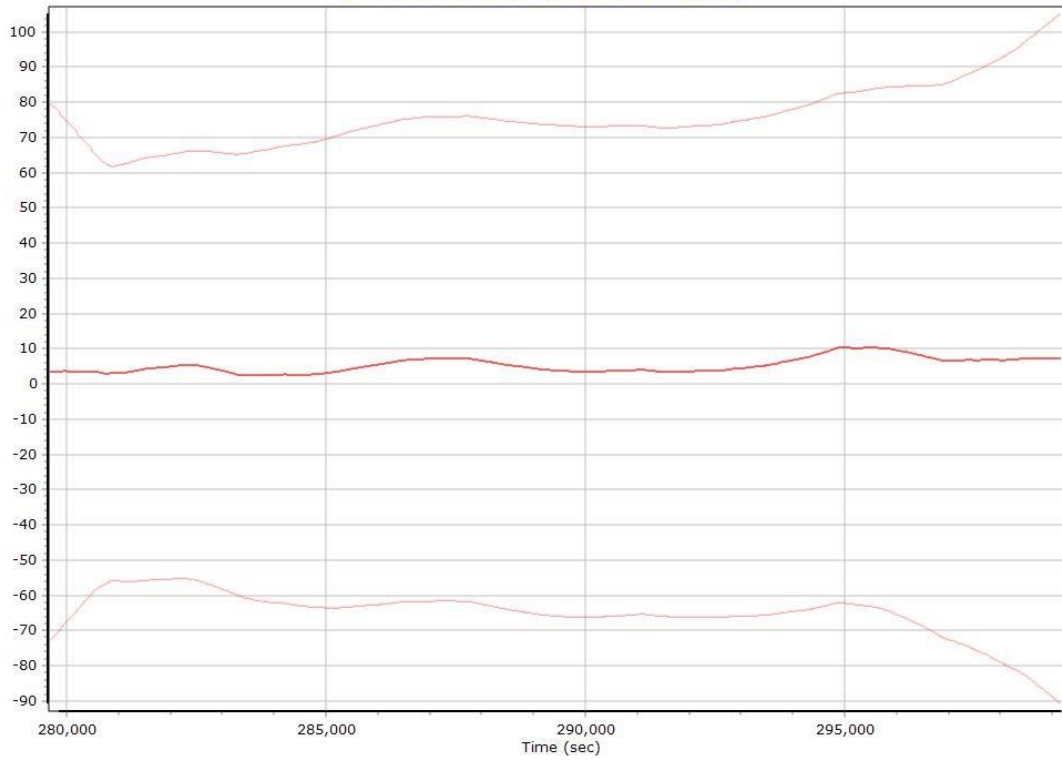


X Accelerometer Scale Error (ppm)



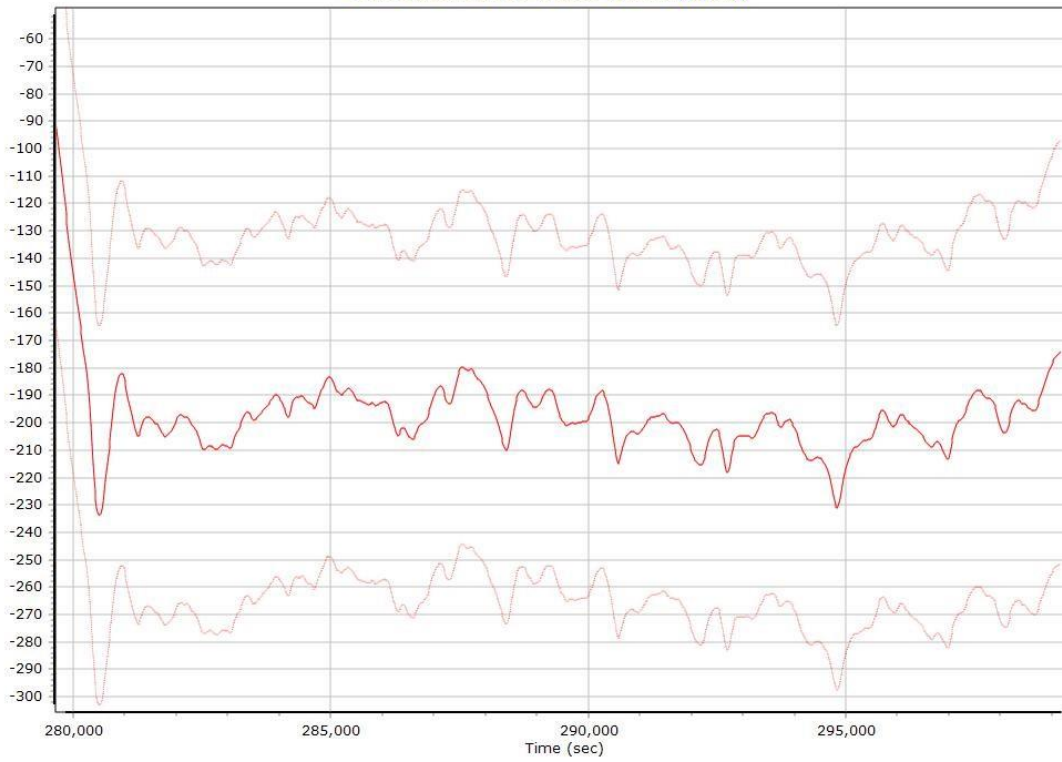
Y Accelerometer Scale Error (ppm)

y accelerometer scale error (ppm)

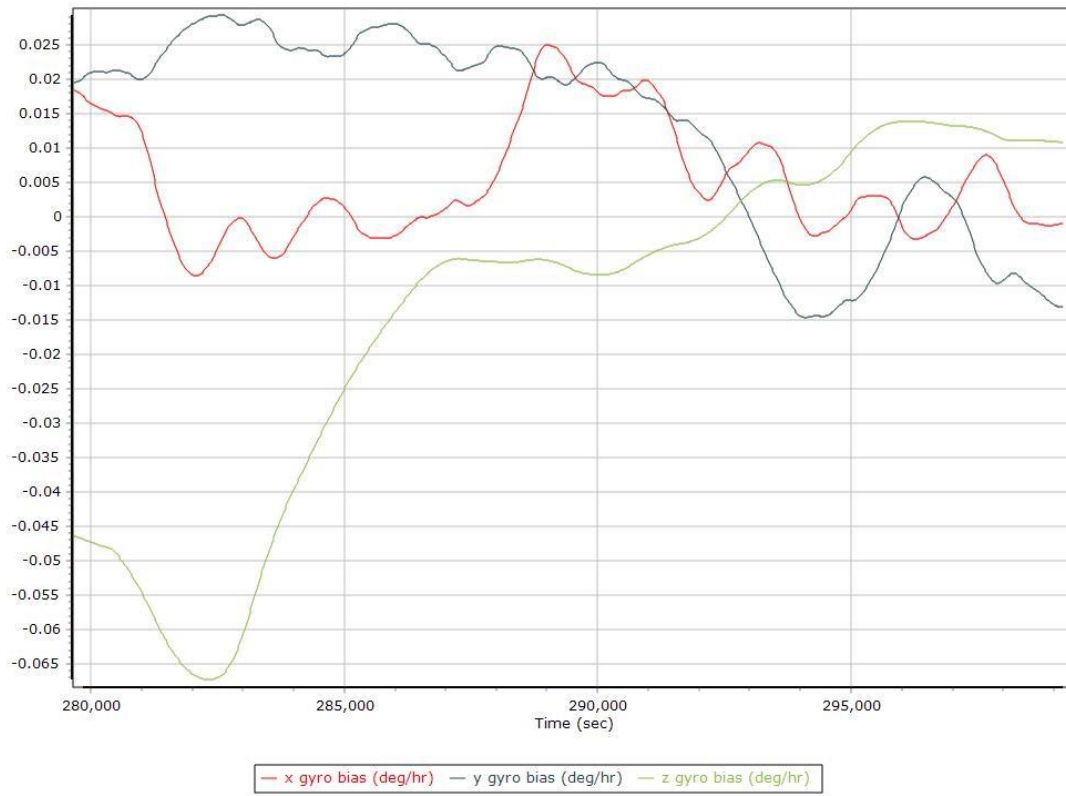


Z Accelerometer Scale Error (ppm)

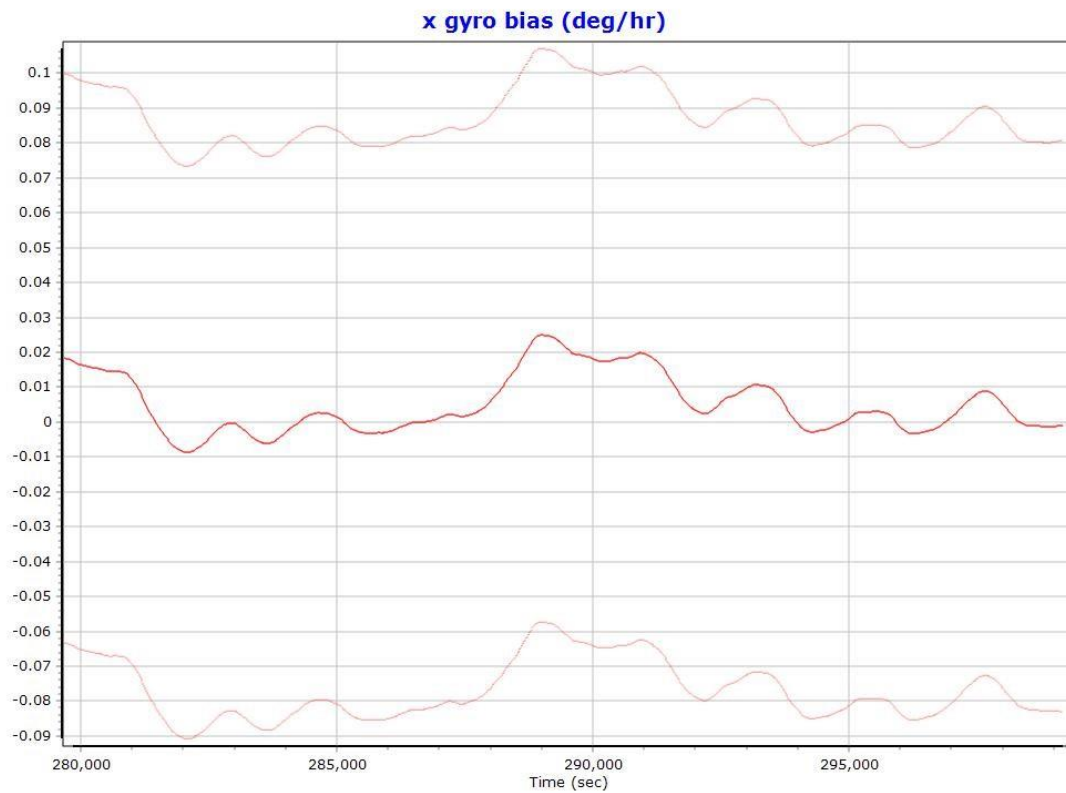
z accelerometer scale error (ppm)



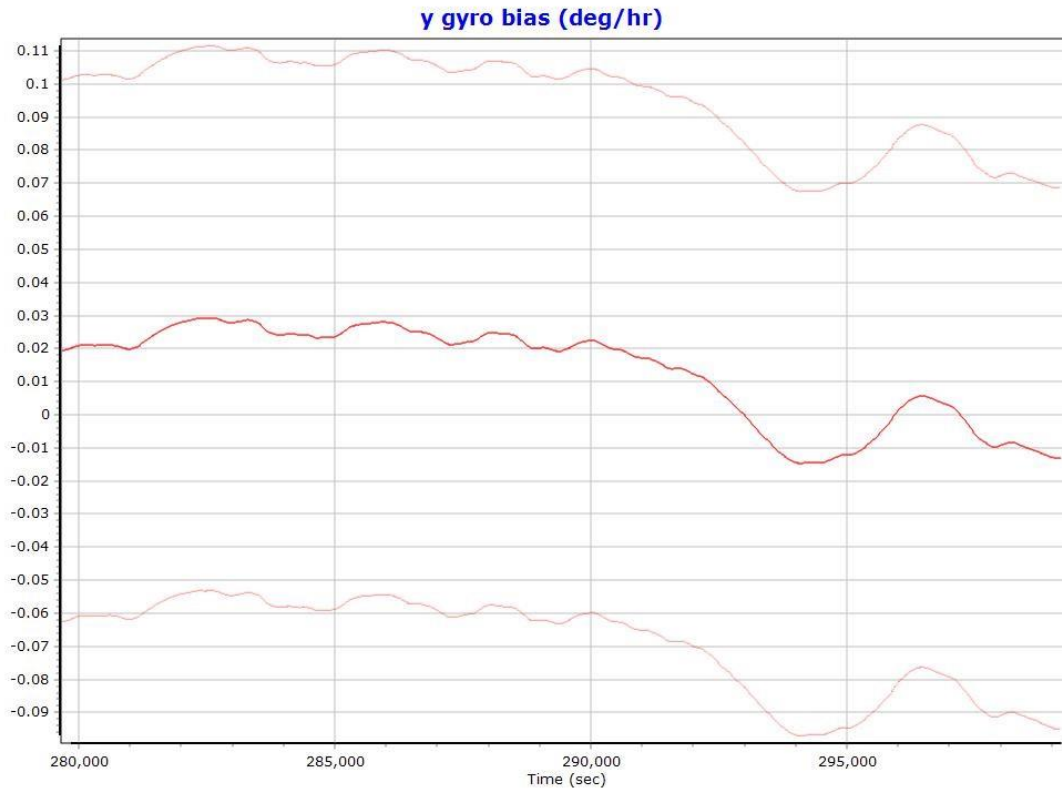
Gyro Bias (deg/h)



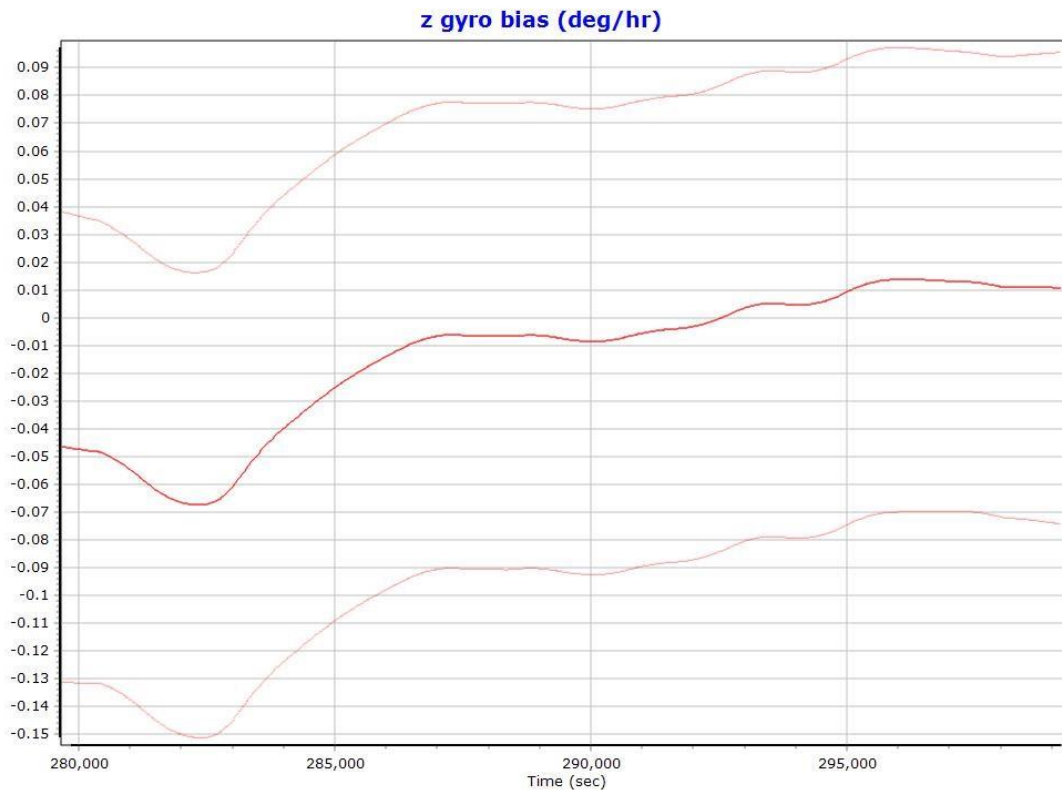
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)



Z Gyro Bias (deg/h)



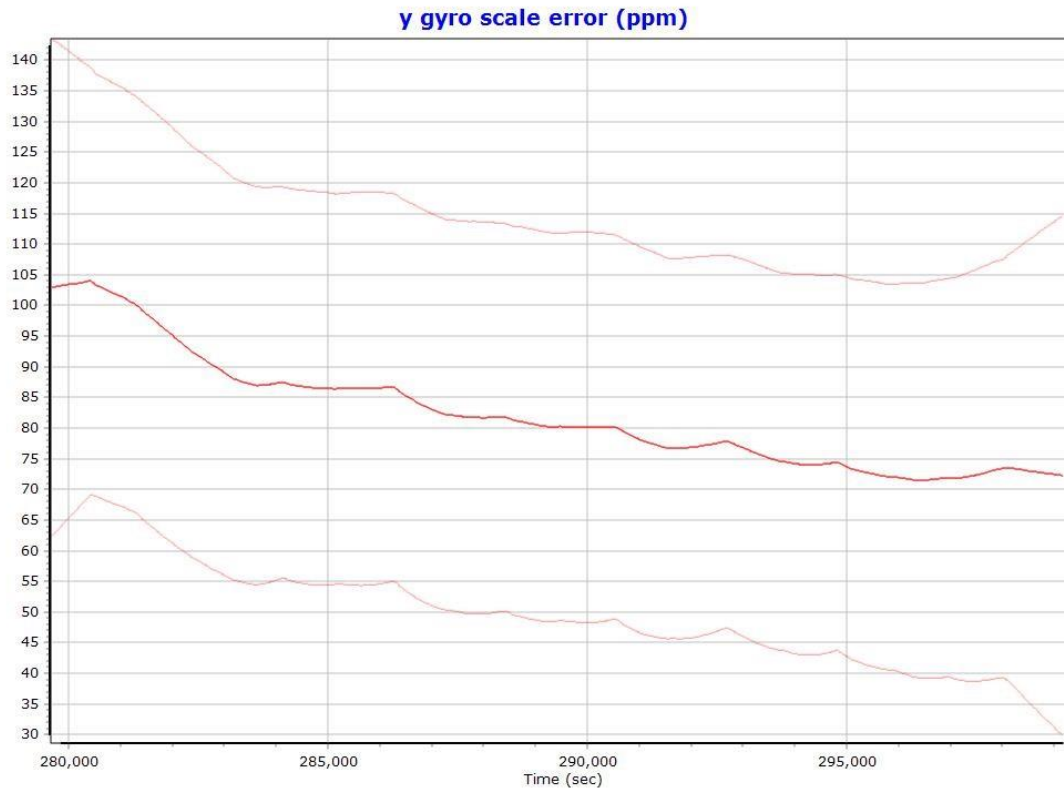
Gyro Scale Error (ppm)



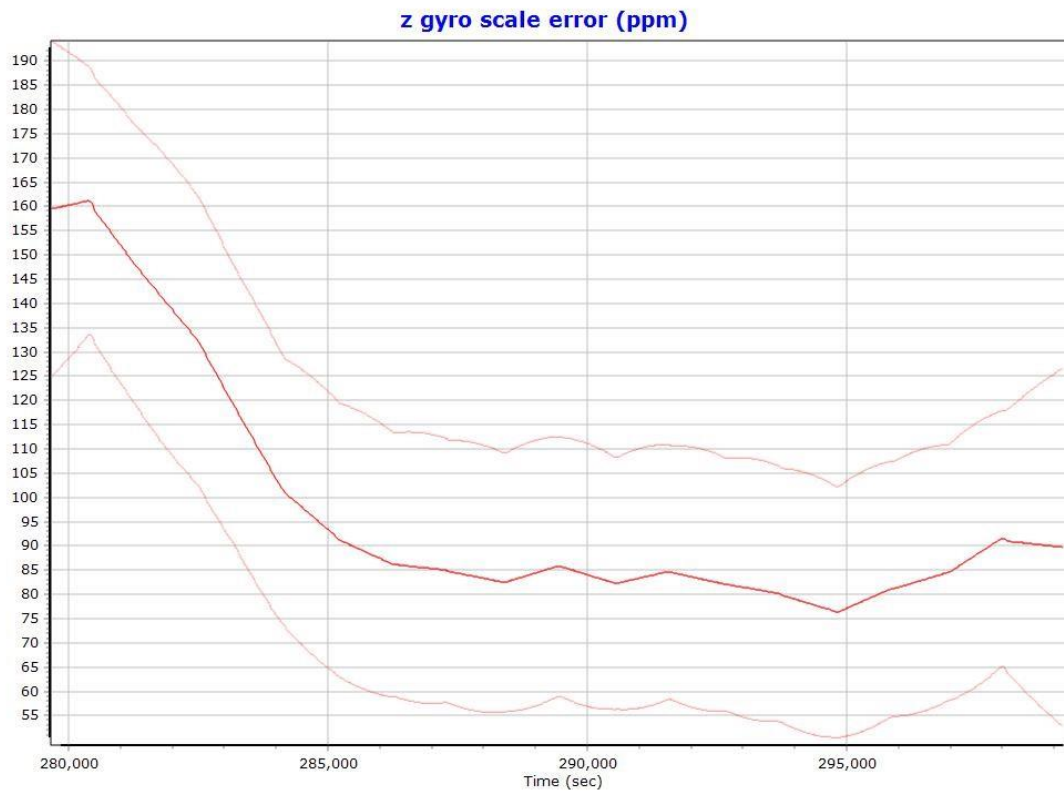
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

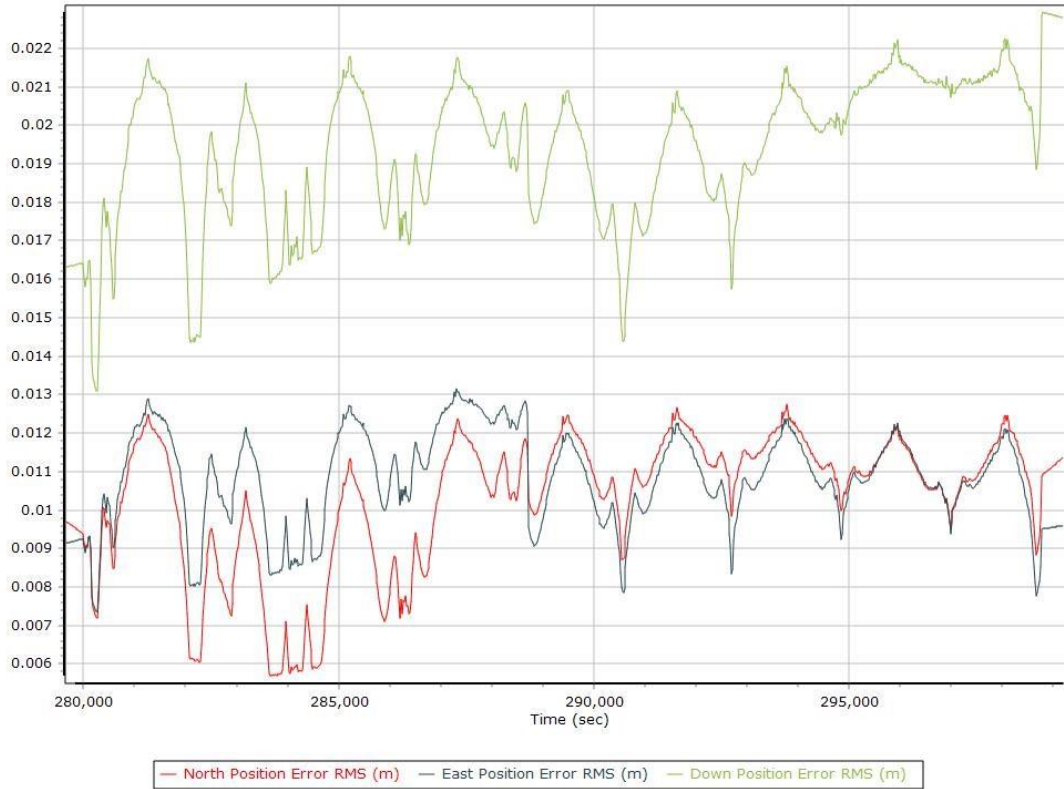


Z Gyro Scale Error (ppm)

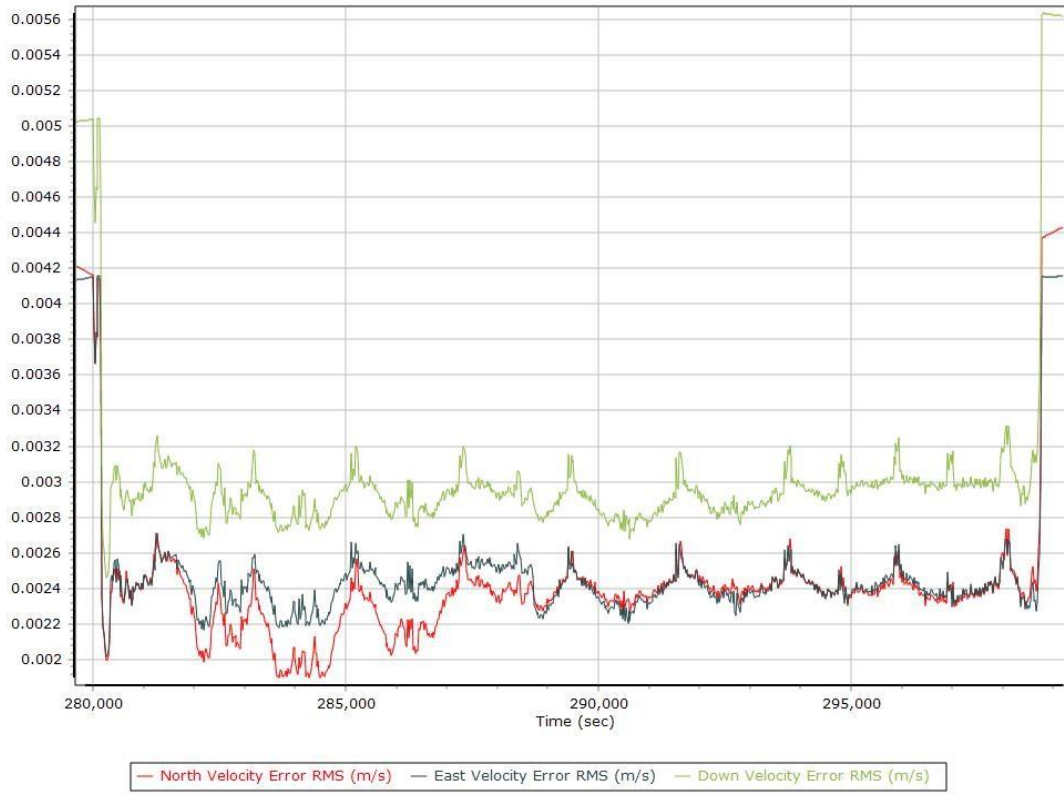


Smoothed Performance Metrics

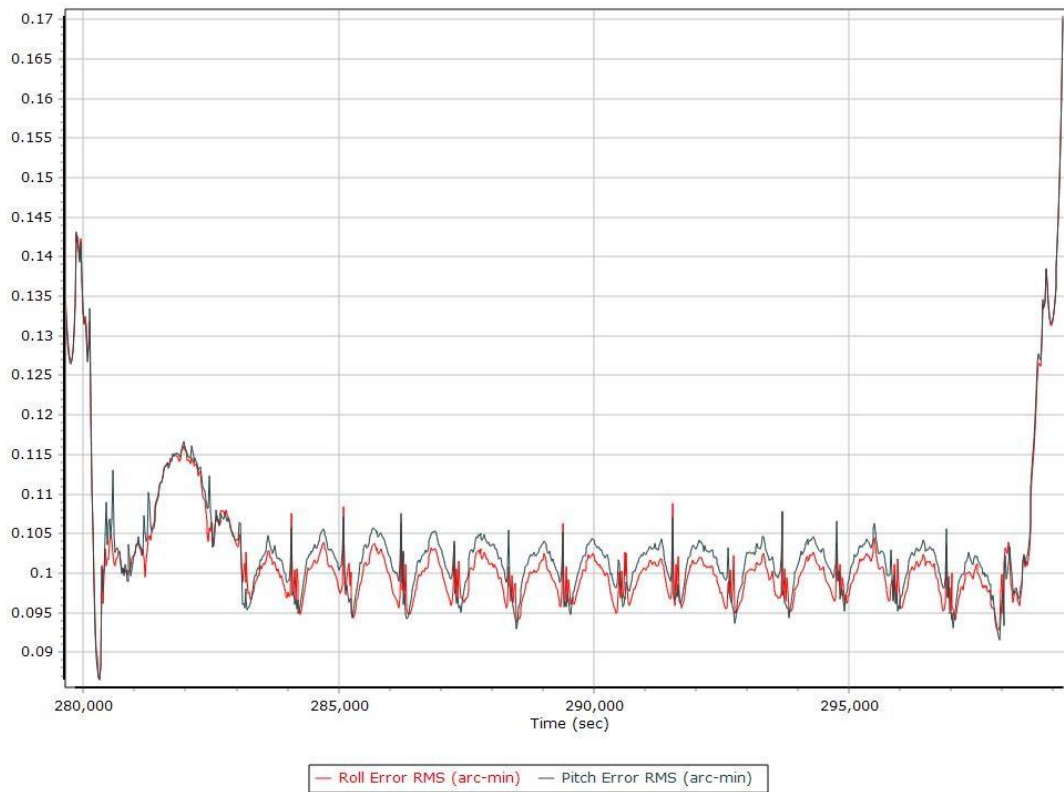
Position Error RMS (m)



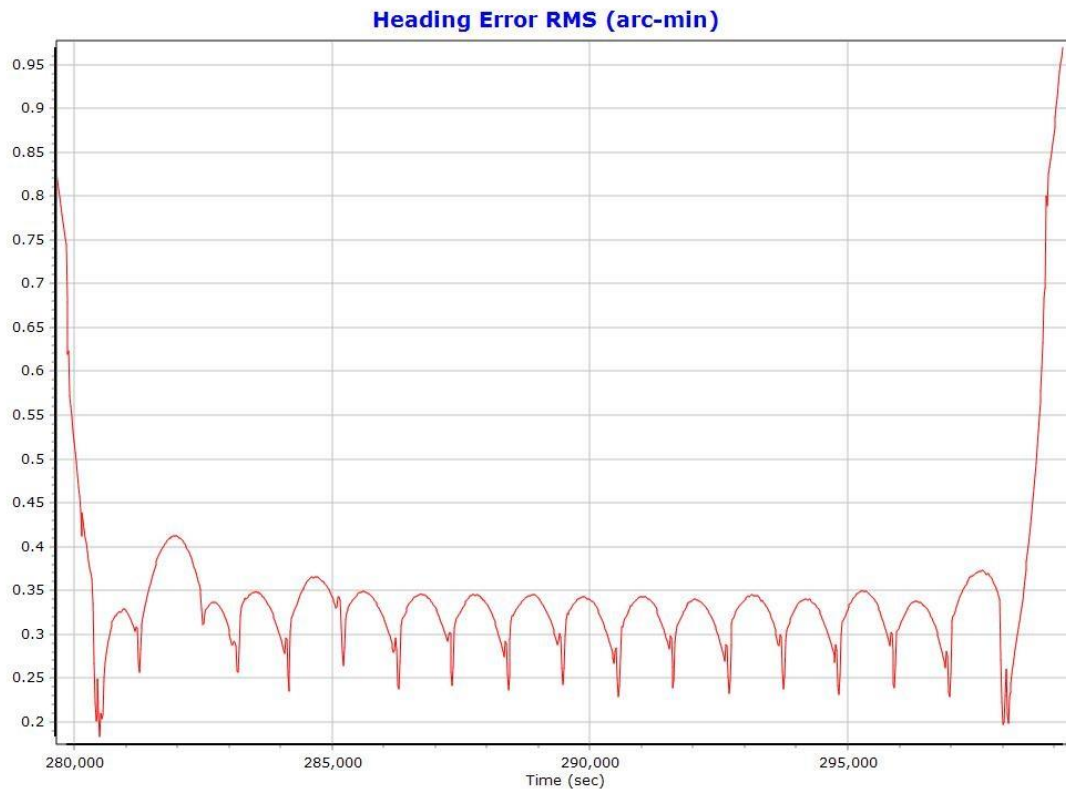
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc -min)



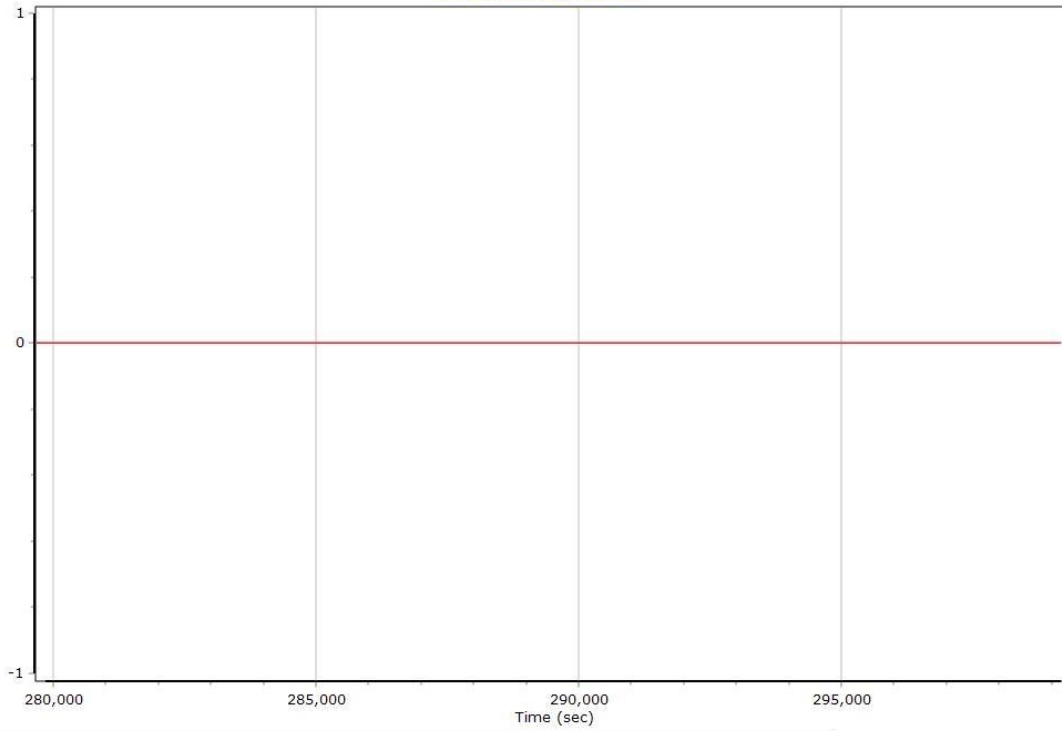
Heading Error RMS (arc -min)



Smoothed Solution Status

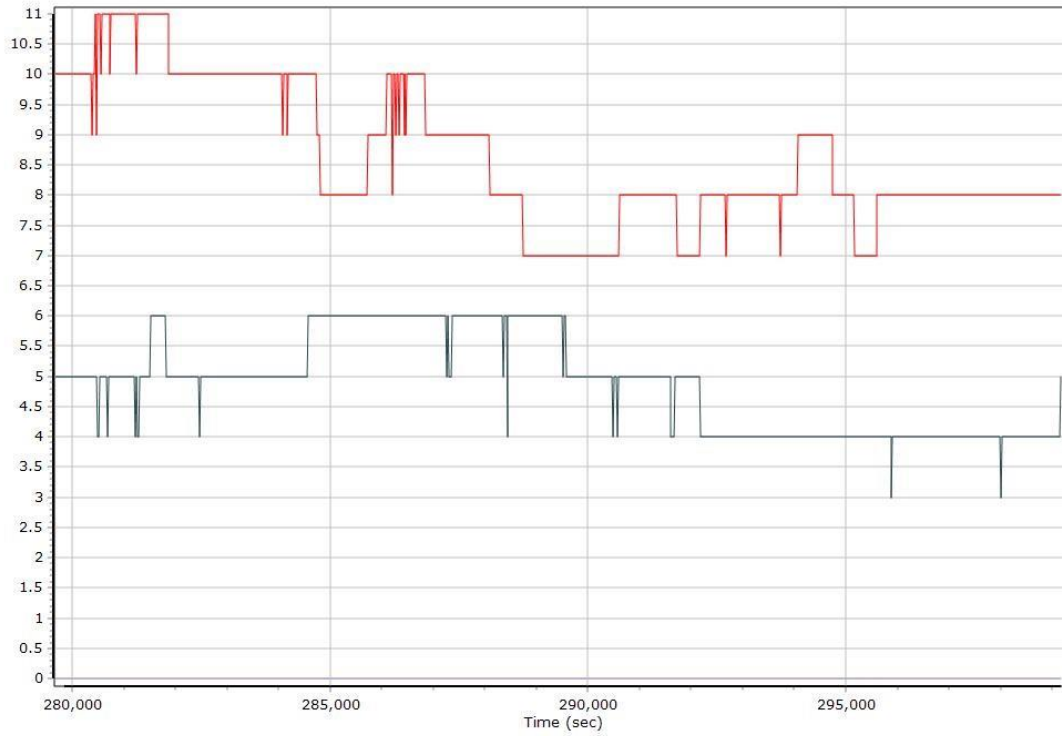
Processing Mode

Processing mode



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

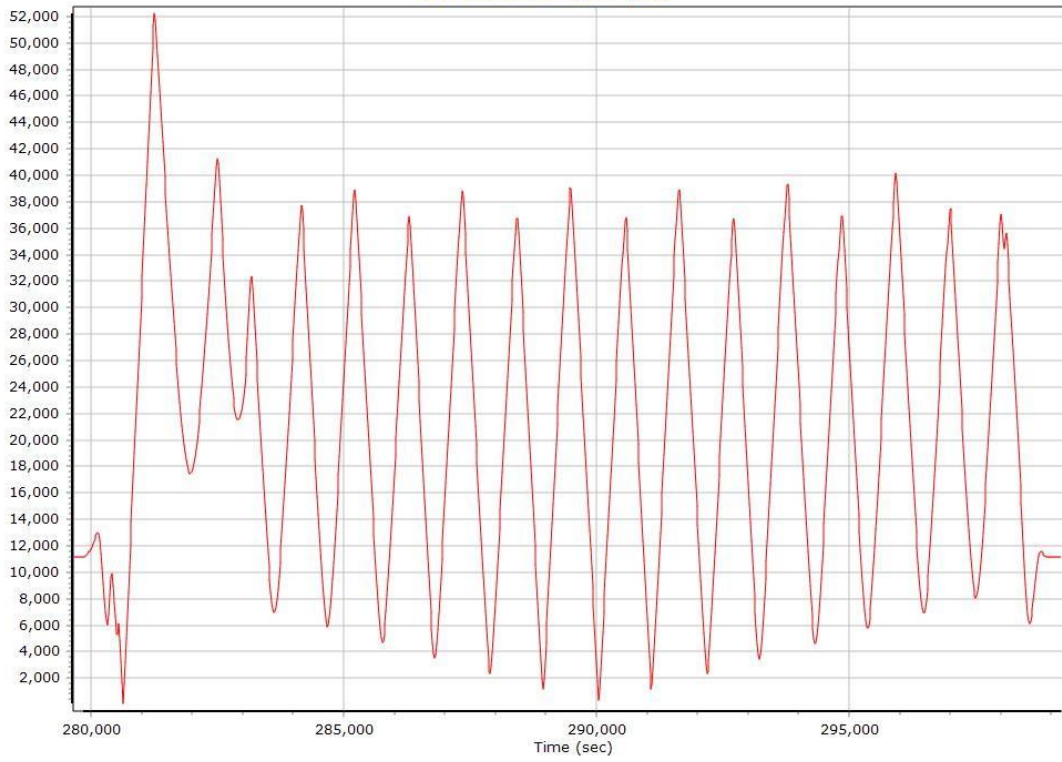
Number of Satellites



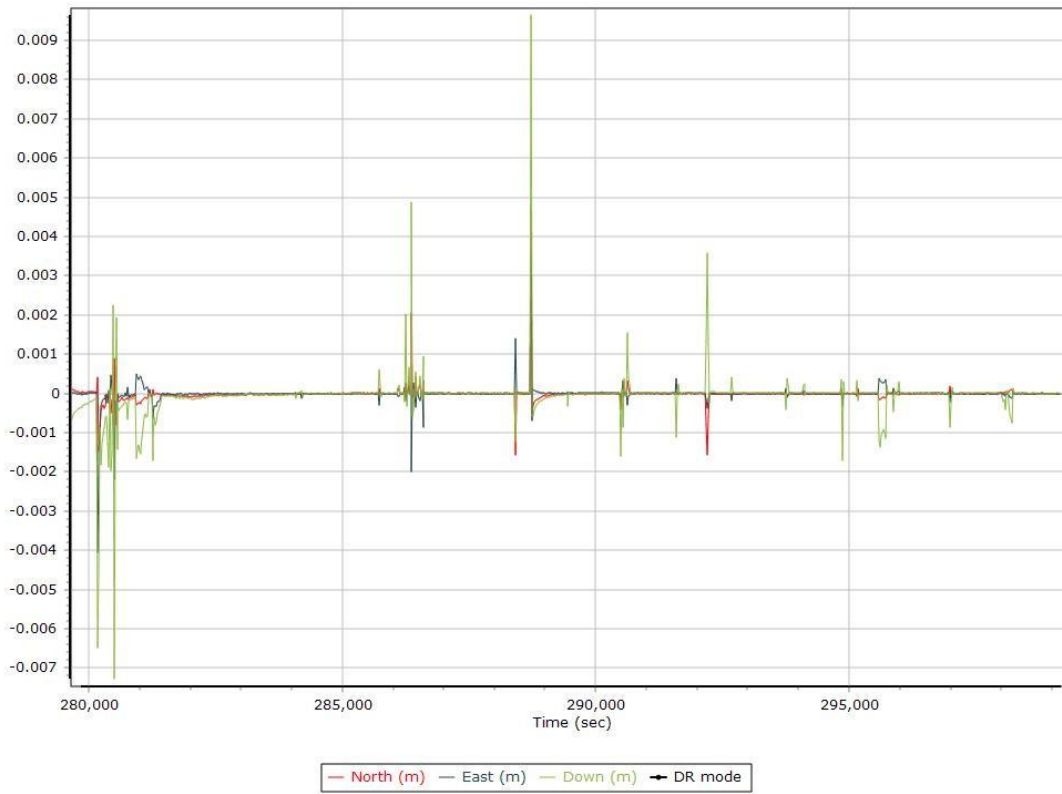
— Number of GPS Satellites — Number of GLONASS Satellites — Number of QZSS Satellites — Number of BEIDOU Satellites

Baseline Length

Baseline Length (m)



SBET IAKAR Separation



General Information

Mission Information

Project name	12052018BNAD83
Processing date	2019-02-27 22:08:37
Mission date	2018-12-06 02:59:49
Mission duration	04:49:07.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9524
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
181206_025930_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3400.18g	GLONASS Broadcast Ephemeris
Ephm3400.18n	GPS Broadcast Ephemeris
igl20303.sp3	GLONASS Precise Ephemeris
igl20304.sp3	GLONASS Precise Ephemeris
igl20305.sp3	GLONASS Precise Ephemeris
igs20303.sp3	GPS Precise Ephemeris
igs20304.sp3	GPS Precise Ephemeris
igs20305.sp3	GPS Precise Ephemeris
chin3400.18o	GNSS SingleBase
fmyr3400.18o	GNSS SingleBase
mcd53400.18o	GPS SingleBase
napl3400.18o	GNSS SingleBase
okcb3400.18o	GNSS SingleBase
unpm3400.18o	GPS SingleBase
flbn3400.18o	GNSS SingleBase
pbch3400.18o	GNSS SingleBase
pltk3400.18o	GNSS SingleBase
bkv13400.18o	GNSS SingleBase
prry3400.18o	GNSS SingleBase
xcty3400.18o	GNSS SingleBase
zefr3400.18o	GNSS SingleBase

Output Files

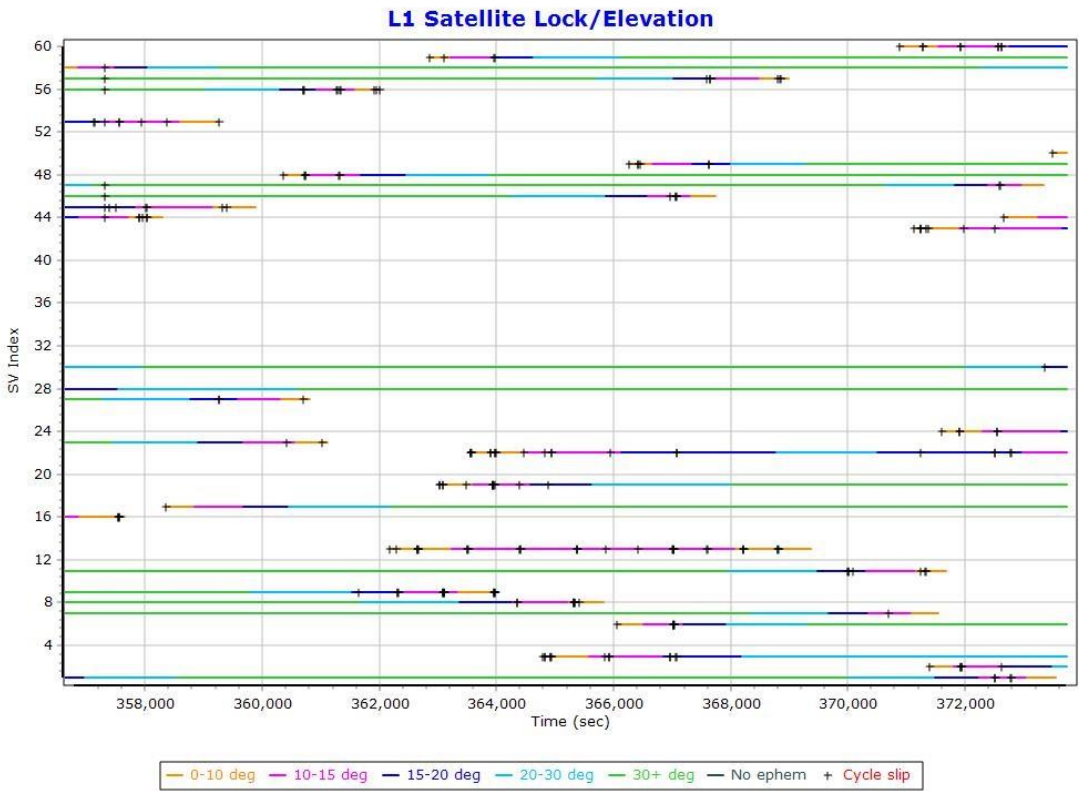
Filename	File type
sbet_Mission 1.out	SBET Trajectory File

Rover Data Summary

First raw data file	181206_025930_INS-GPS_1.raw		
Last raw data file	181206_025930_INS-GPS_1.raw		
Start GPS week	2030		
Start time	356370.831 (12/6/2018 2:59:30 AM)		
End time	373718.941 (12/6/2018 7:48:38 AM)		
Start of fine alignment	356721.720 (12/6/2018 3:05:21 AM)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	Event 1 Input, Event 2 Input, Event 3 Input		
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	0.000
Reference to Primary GNSS lever arm [m]	0.102	-0.140	-0.961
Reference to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

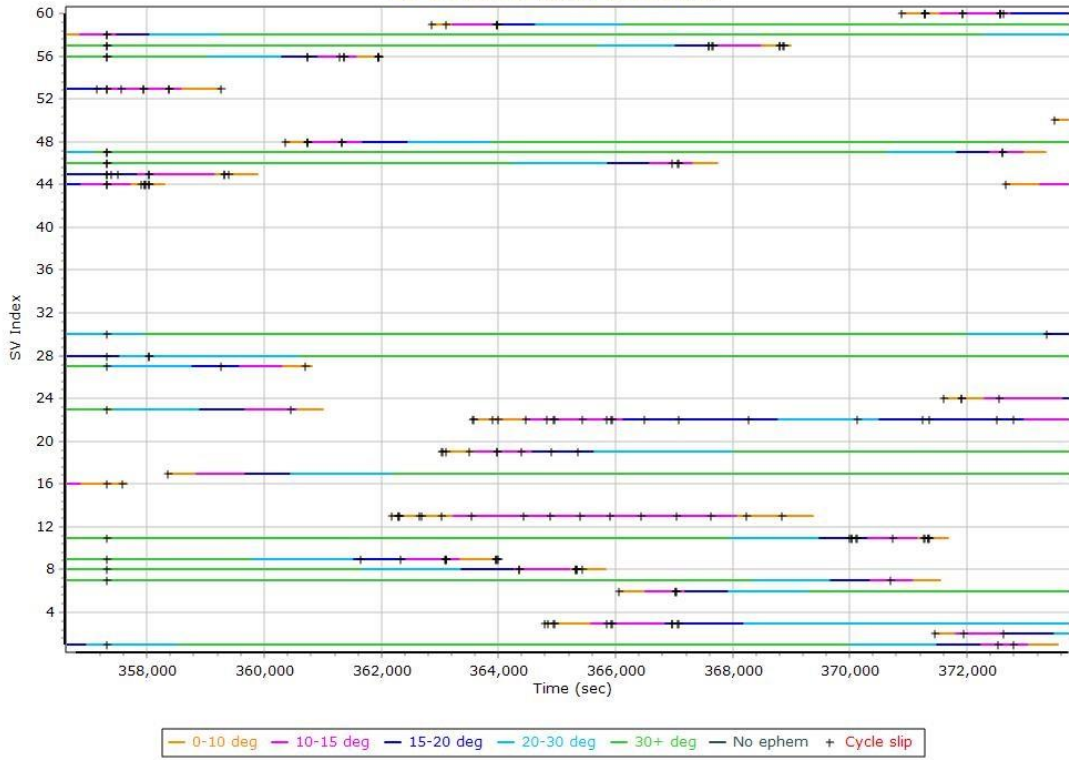
Raw Data QC

L1 Satellite Lock/Elevation



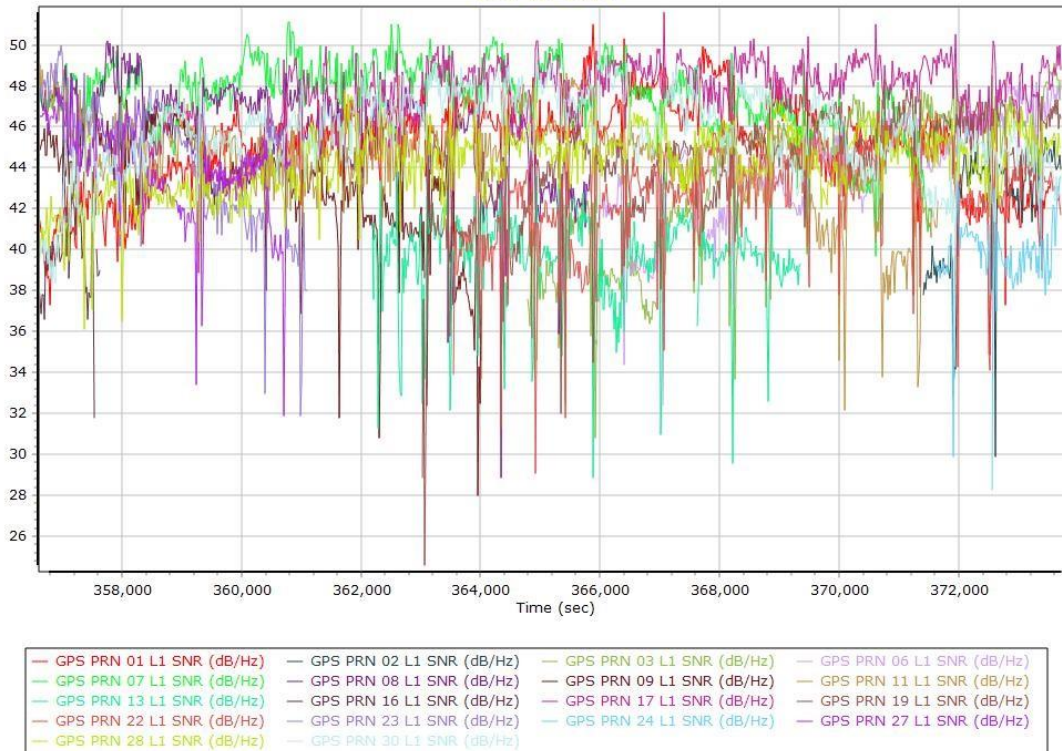
L2 Satellite Lock/Elevation

L2 Satellite Lock/Elevation

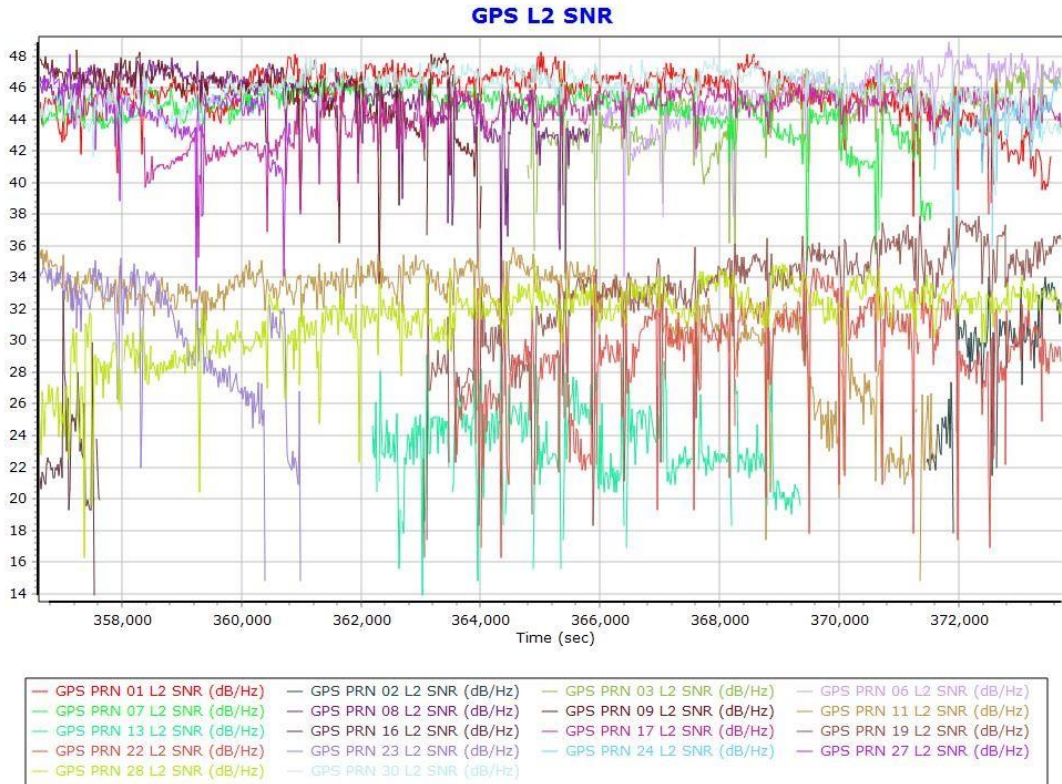


GPS L1 SNR

GPS L1 SNR

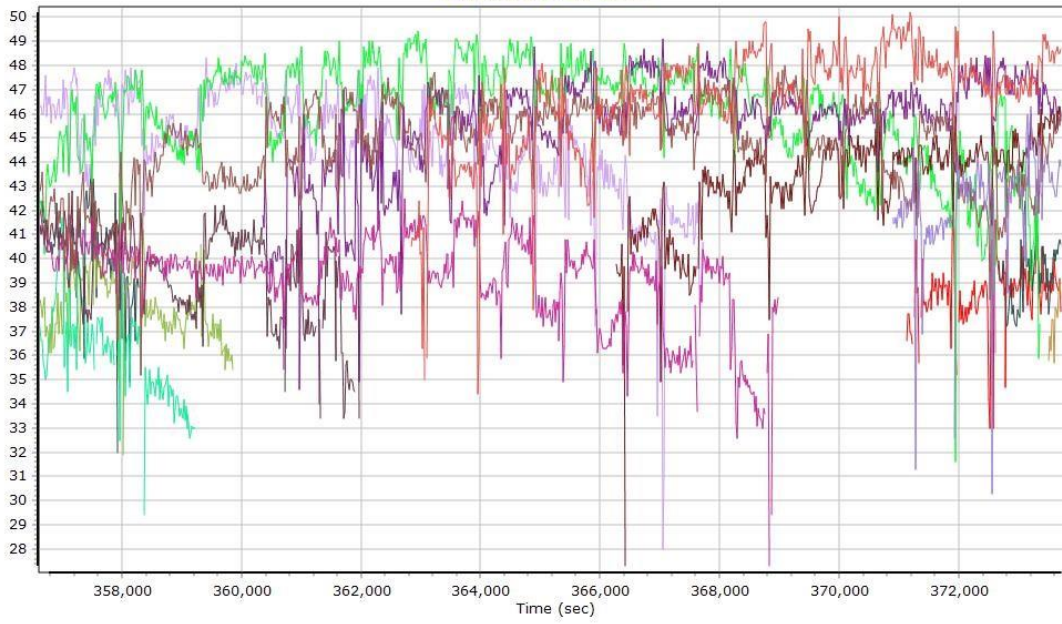


GPS L2 SNR



GLONASS L1 SNR

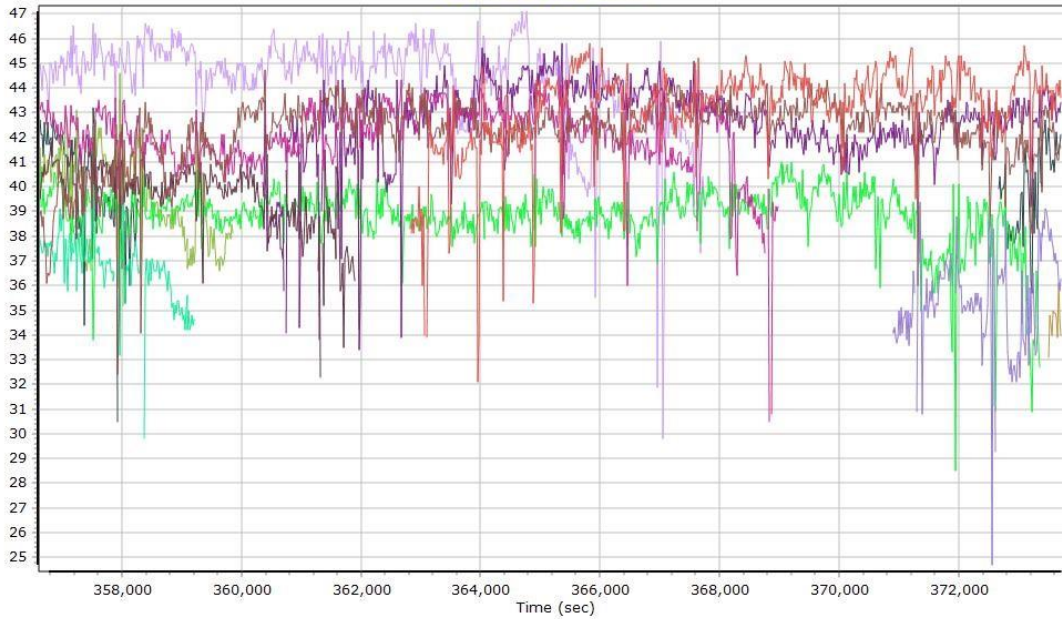
GLONASS L1 SNR



- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 06 L1 SNR (dB/Hz) | GLONASS 07 L1 SNR (dB/Hz) | GLONASS 08 L1 SNR (dB/Hz) |
| GLONASS 09 L1 SNR (dB/Hz) | GLONASS 10 L1 SNR (dB/Hz) | GLONASS 11 L1 SNR (dB/Hz) |
| GLONASS 12 L1 SNR (dB/Hz) | GLONASS 13 L1 SNR (dB/Hz) | GLONASS 16 L1 SNR (dB/Hz) |
| GLONASS 19 L1 SNR (dB/Hz) | GLONASS 20 L1 SNR (dB/Hz) | GLONASS 21 L1 SNR (dB/Hz) |
| GLONASS 22 L1 SNR (dB/Hz) | GLONASS 23 L1 SNR (dB/Hz) | |

GLONASS L2 SNR

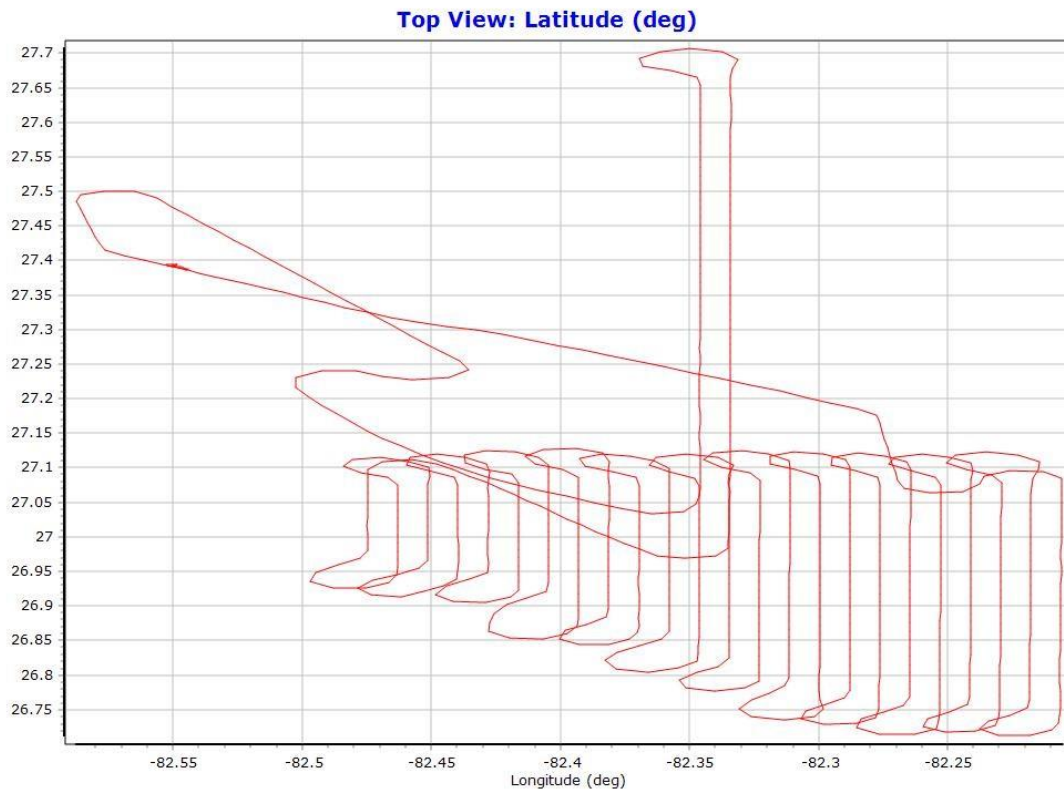
GLONASS L2 SNR



- | | | |
|---------------------------|---------------------------|---------------------------|
| GLONASS 06 L2 SNR (dB/Hz) | GLONASS 07 L2 SNR (dB/Hz) | GLONASS 08 L2 SNR (dB/Hz) |
| GLONASS 09 L2 SNR (dB/Hz) | GLONASS 10 L2 SNR (dB/Hz) | GLONASS 11 L2 SNR (dB/Hz) |
| GLONASS 12 L2 SNR (dB/Hz) | GLONASS 13 L2 SNR (dB/Hz) | GLONASS 16 L2 SNR (dB/Hz) |
| GLONASS 19 L2 SNR (dB/Hz) | GLONASS 20 L2 SNR (dB/Hz) | GLONASS 21 L2 SNR (dB/Hz) |
| GLONASS 22 L2 SNR (dB/Hz) | GLONASS 23 L2 SNR (dB/Hz) | |

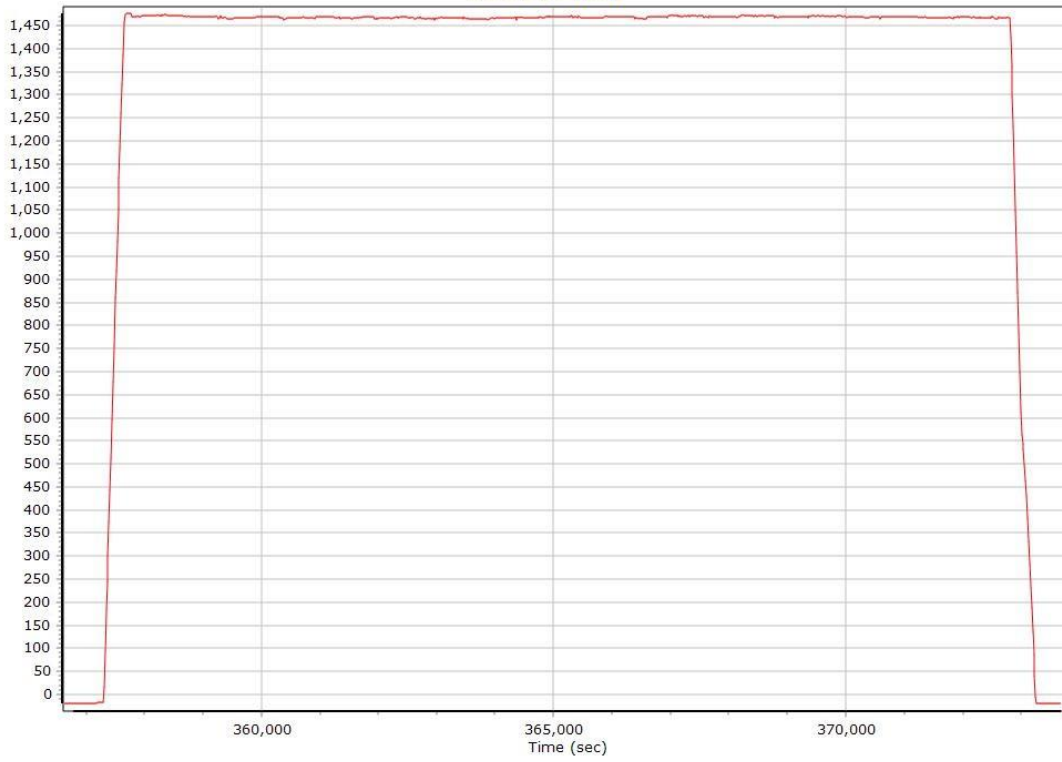
Trajectory Information

Top View

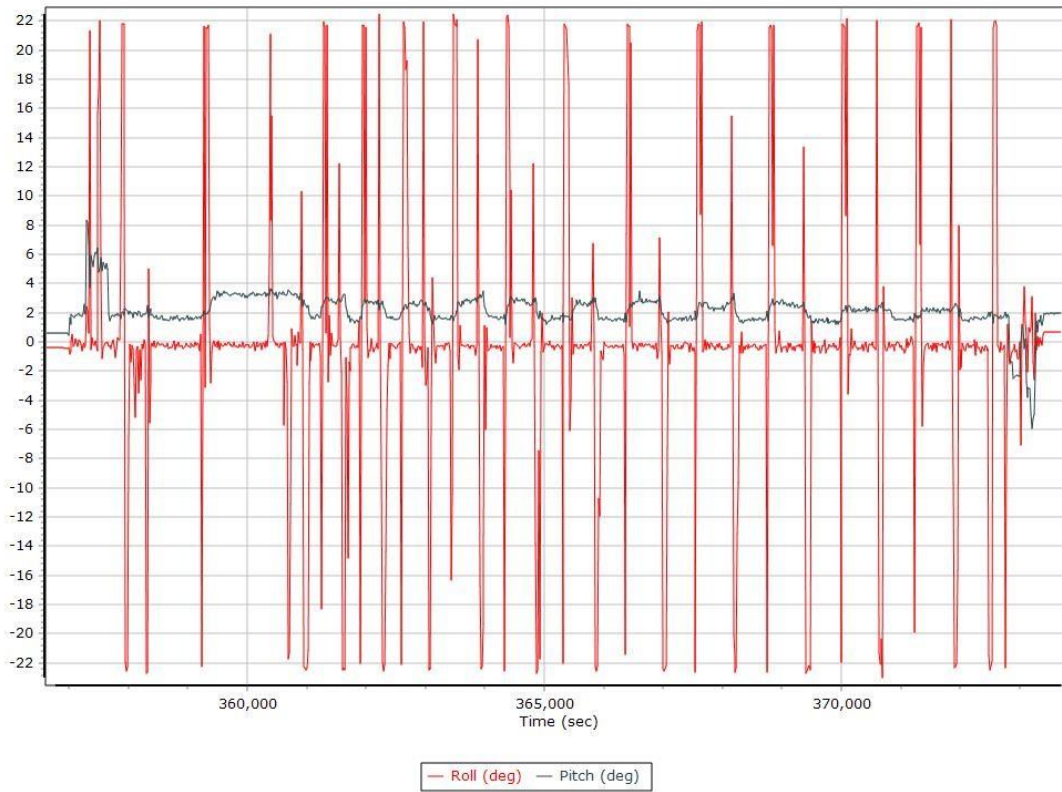


Altitude

Altitude (m)

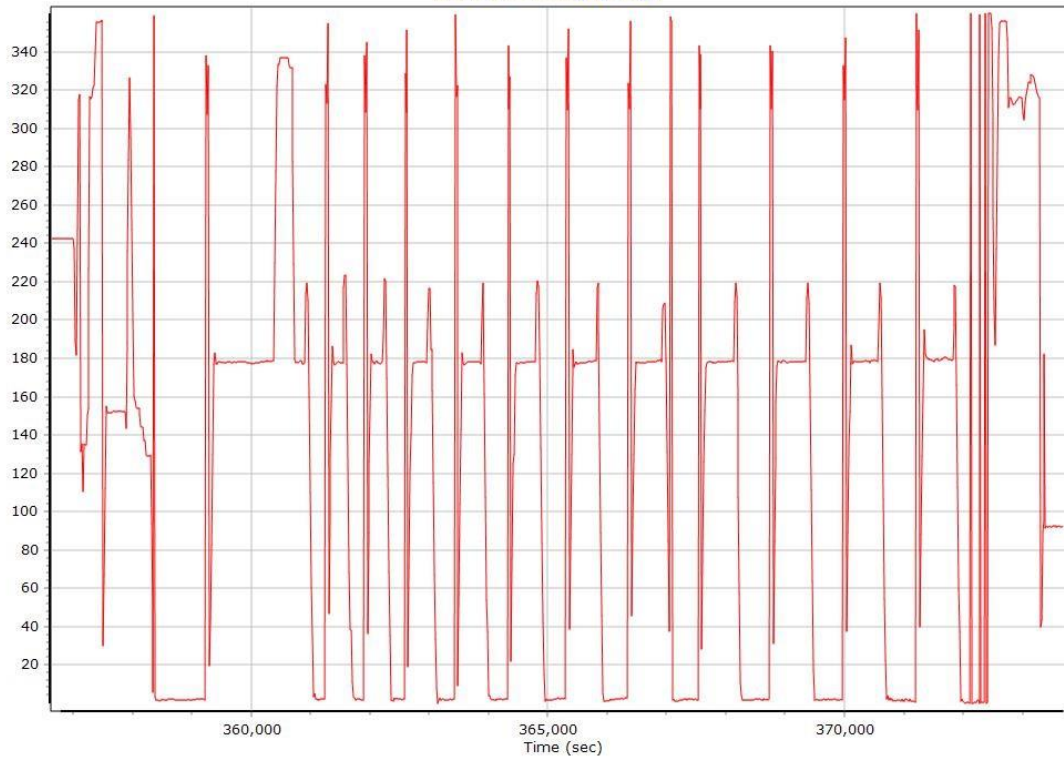


Roll/Pitch

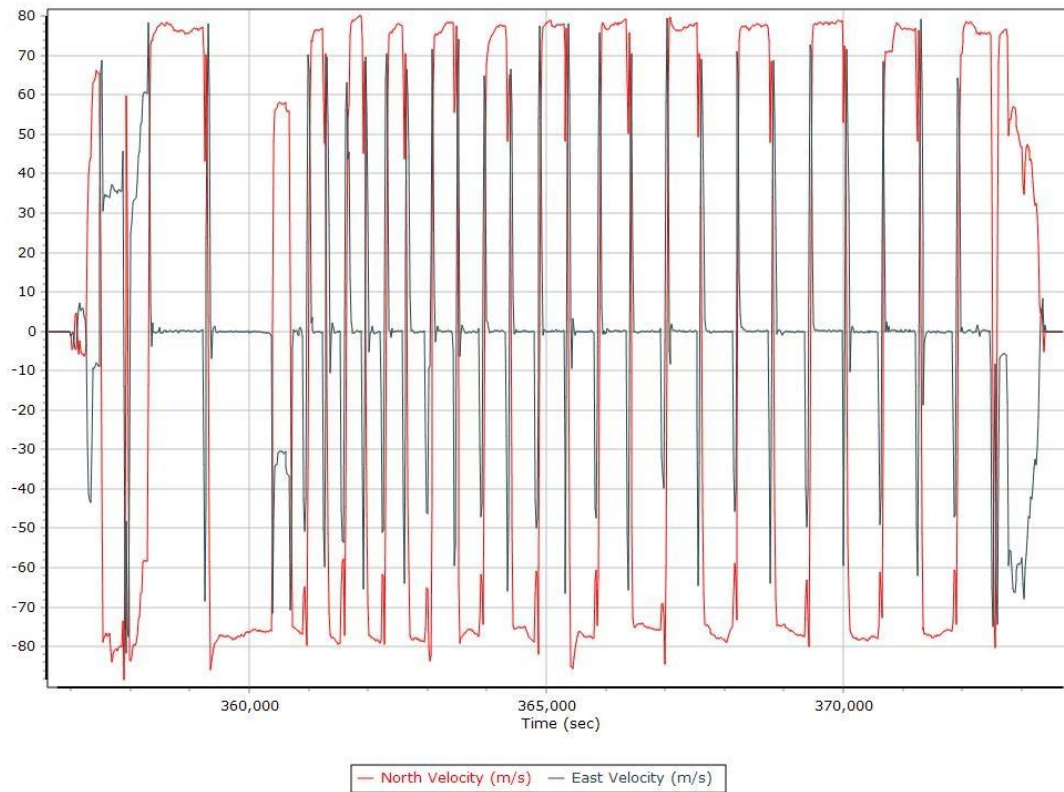


Heading

True Heading (deg)

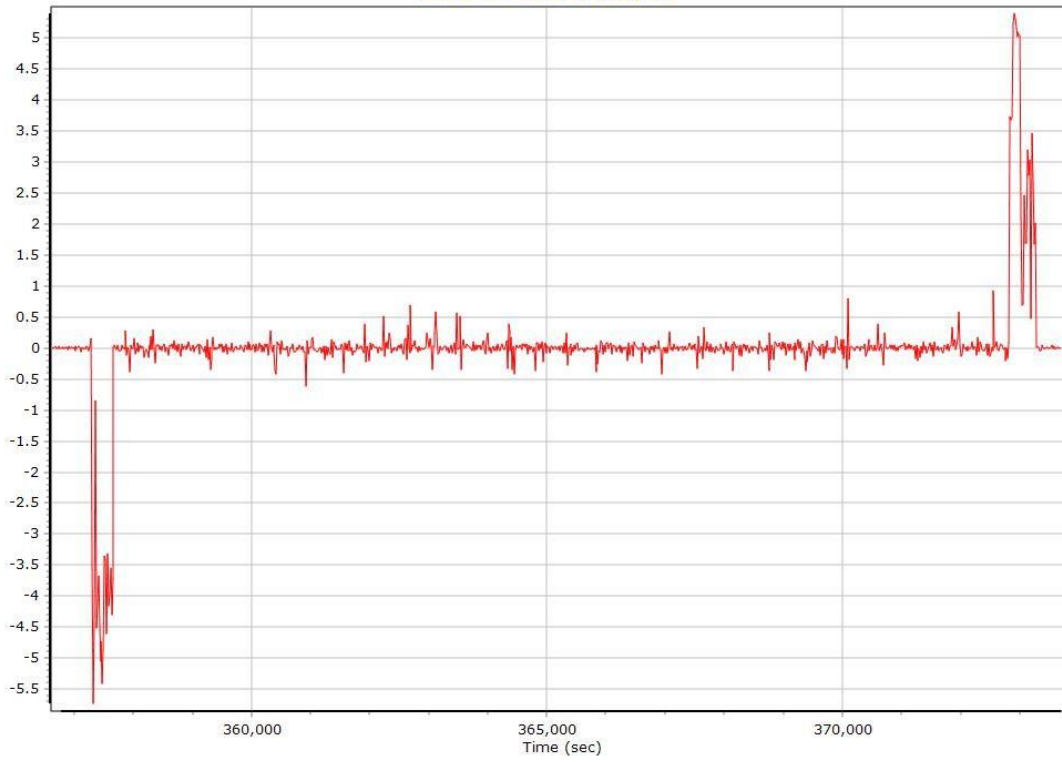


North/East Velocity



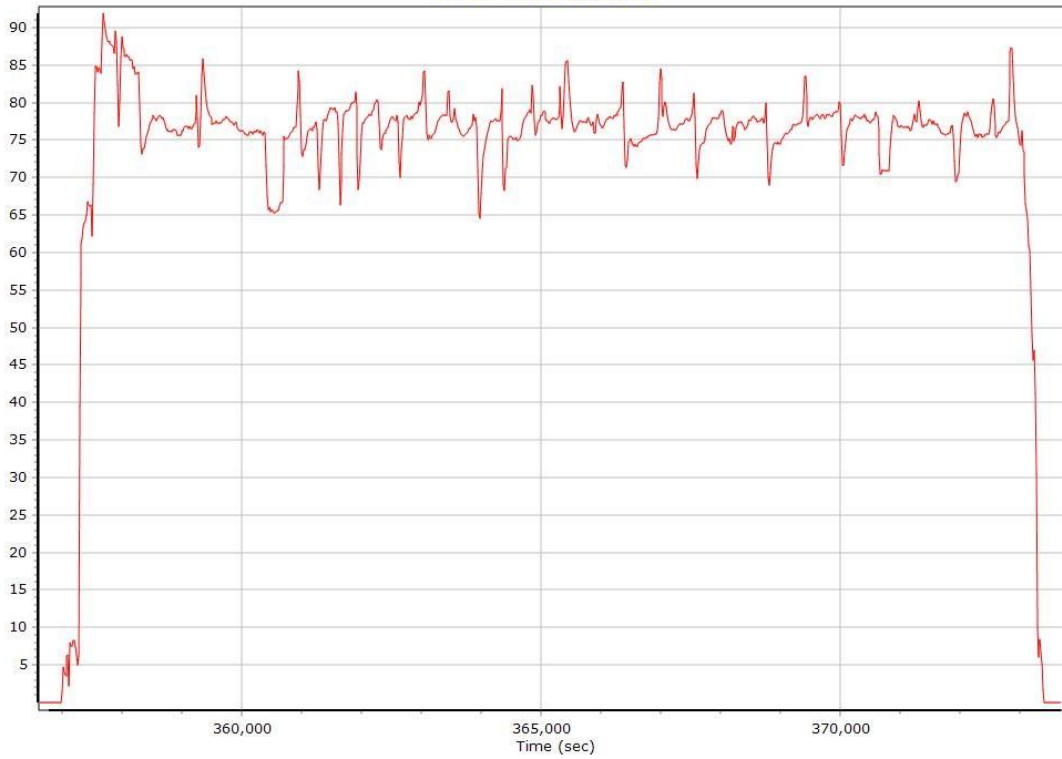
Down Velocity

Down Velocity (m/s)

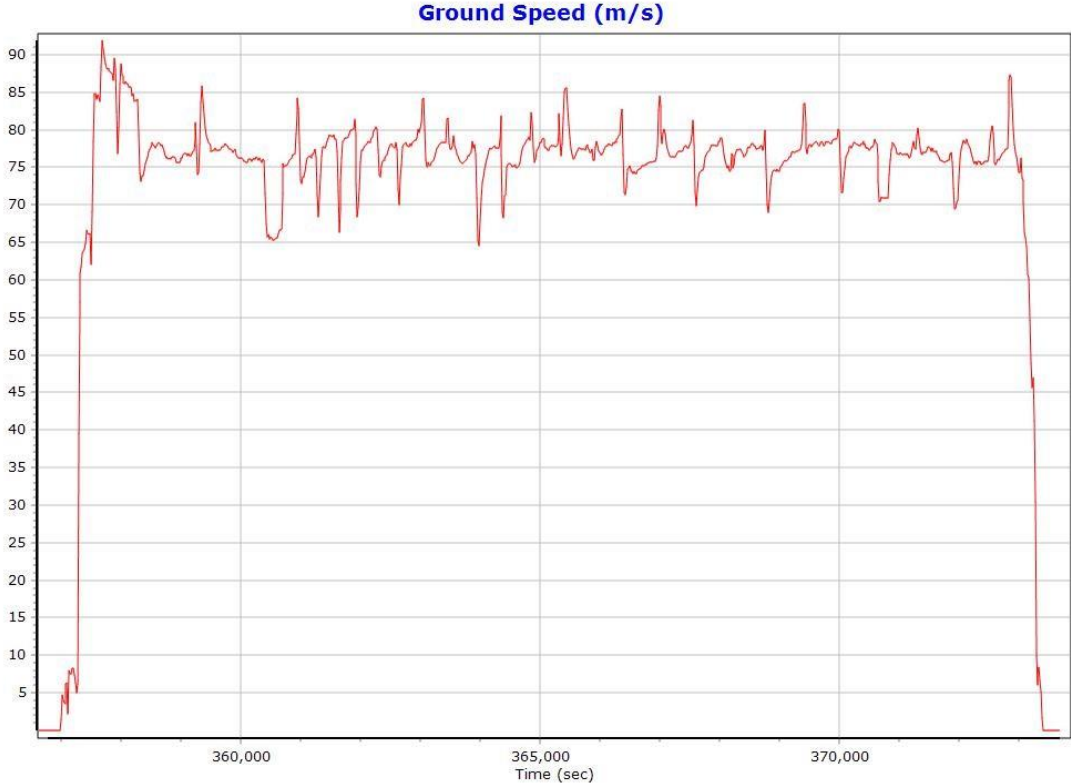


Total Speed

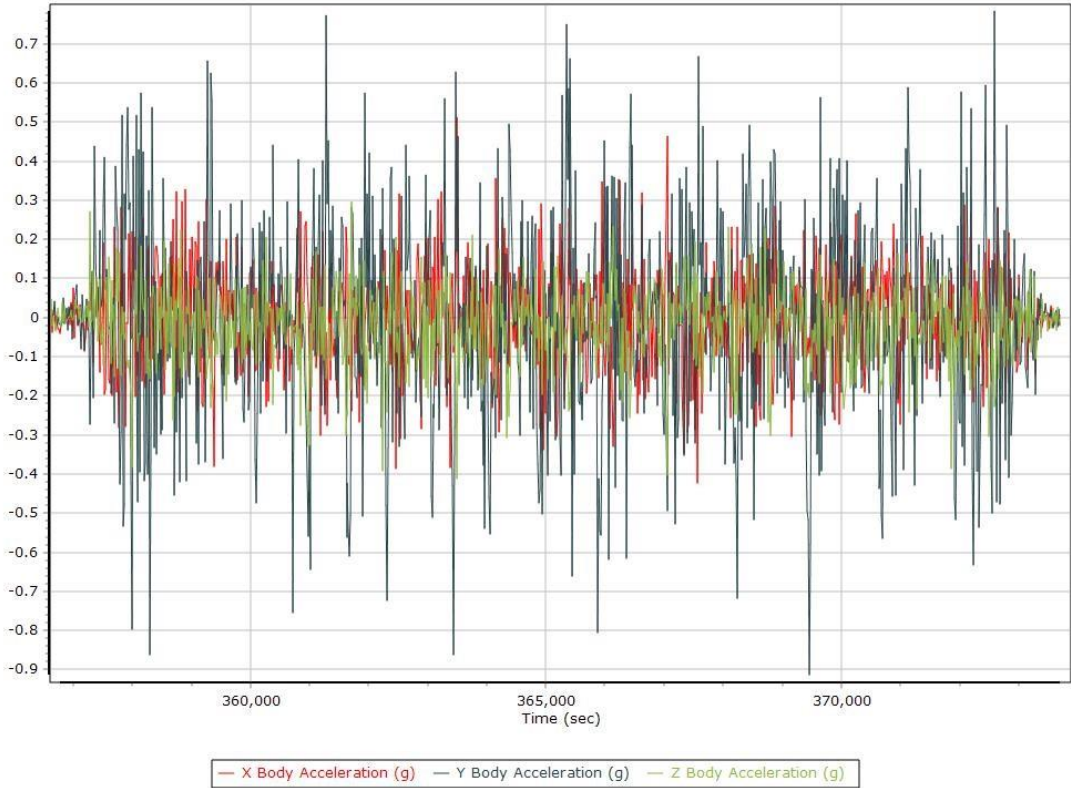
Total Speed (m/s)



Ground Speed

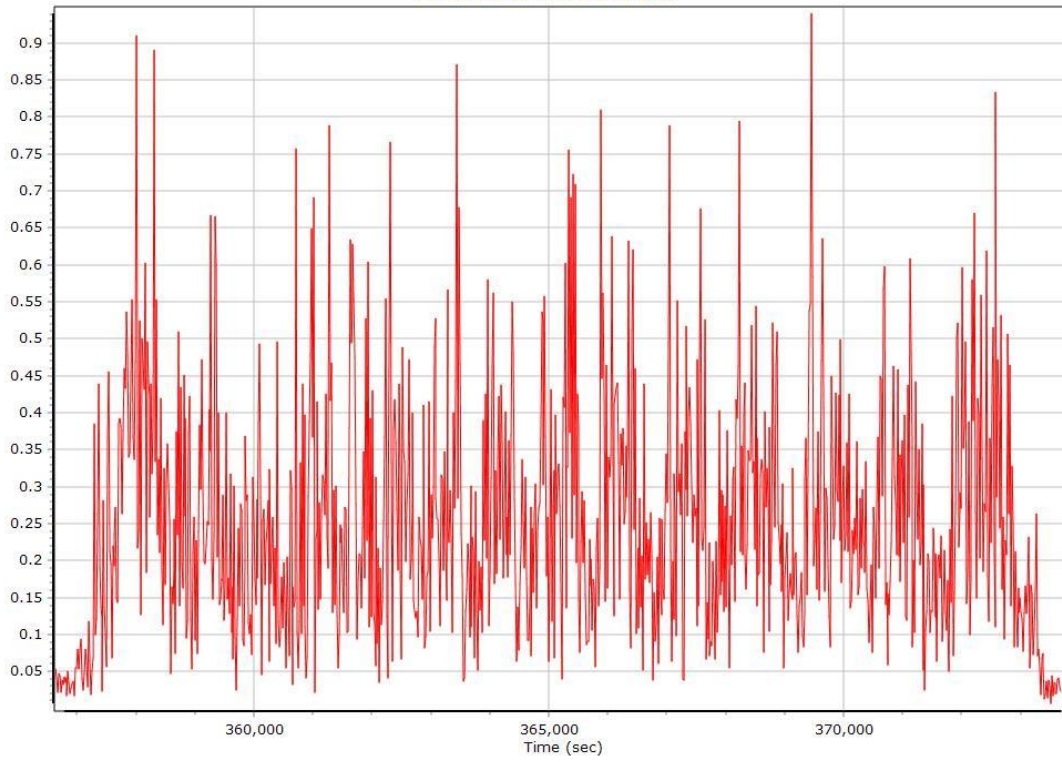


Body Acceleration

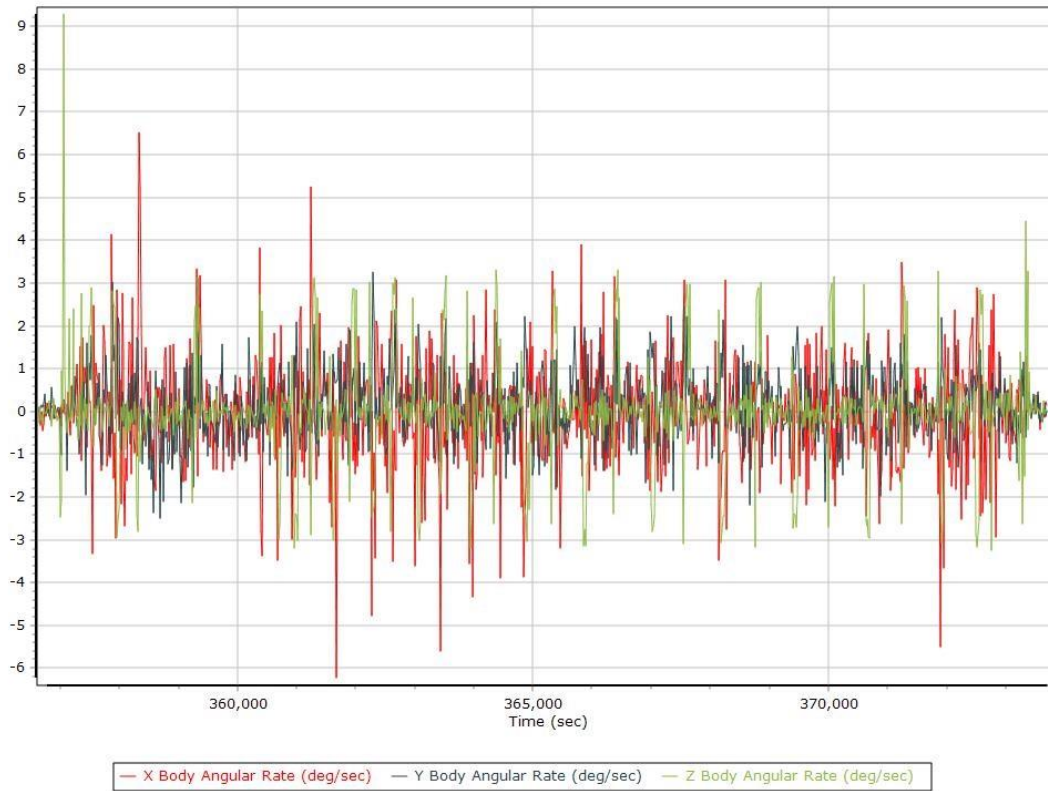


Total Body Acceleration

Total Acceleration (g)



Body Angular Rate



SmartBase Processing Summary

Smart Select Options

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

Basestation Selection

Date	ID	Dist	DataType	Rate	Service	Database	Status
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SmartBase Results

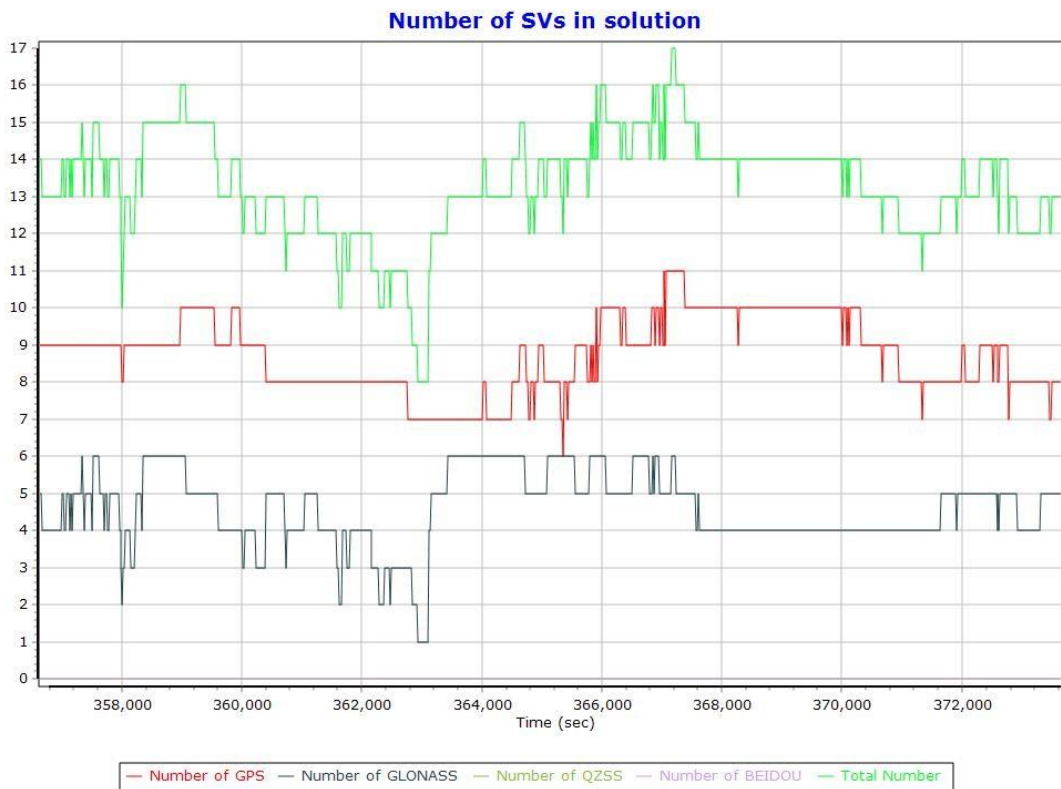
SmartBase status	
Primary station Id	
Primary station data rate [sec]	0.0
VRS/ASB generation rate [sec]	0.0
VRS/ASB timespan	
Number of reference stations	0
Primary station GPS measurement usage [%]	0.0
Average number of satellites per epoch	0.0
Max number of GPS stations used	0
Min number of GPS stations 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	

GNSS QC

GNSS QC Statistics

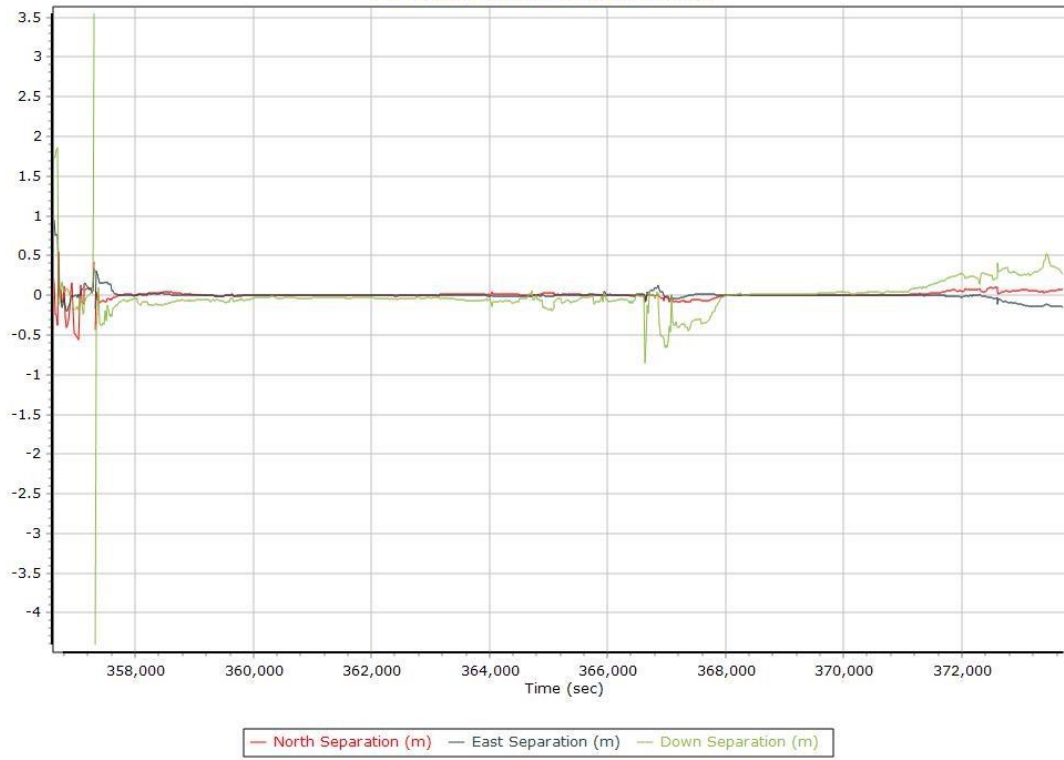
Statistics	Min	Max	Mean
Baseline length [km]	0.15	70.66	
Number of GPS SV	6	11	9
Number of GLONASS SV	0	6	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	7	17	13
PDOP	1.20	2.55	1.68
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	16841.00	451.00	1.00
Percentage	97.39	2.61	0.01

Num SVs in solution

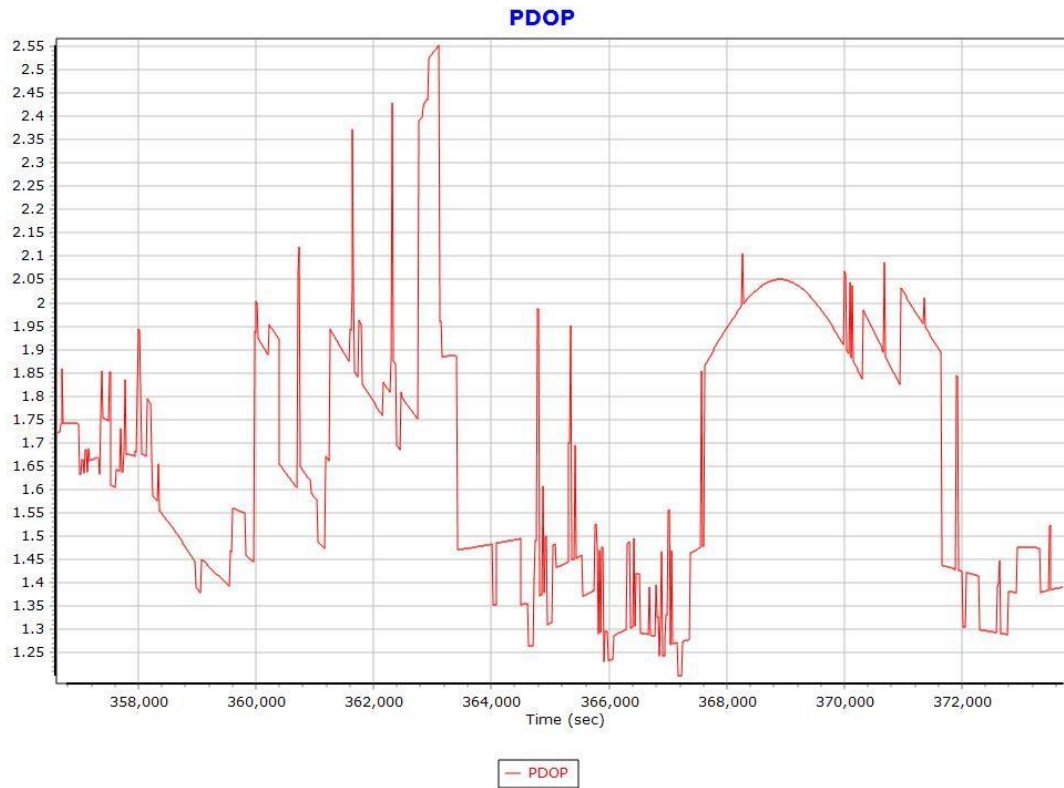


Forward/Reverse Separation

Forward/Reverse Separation

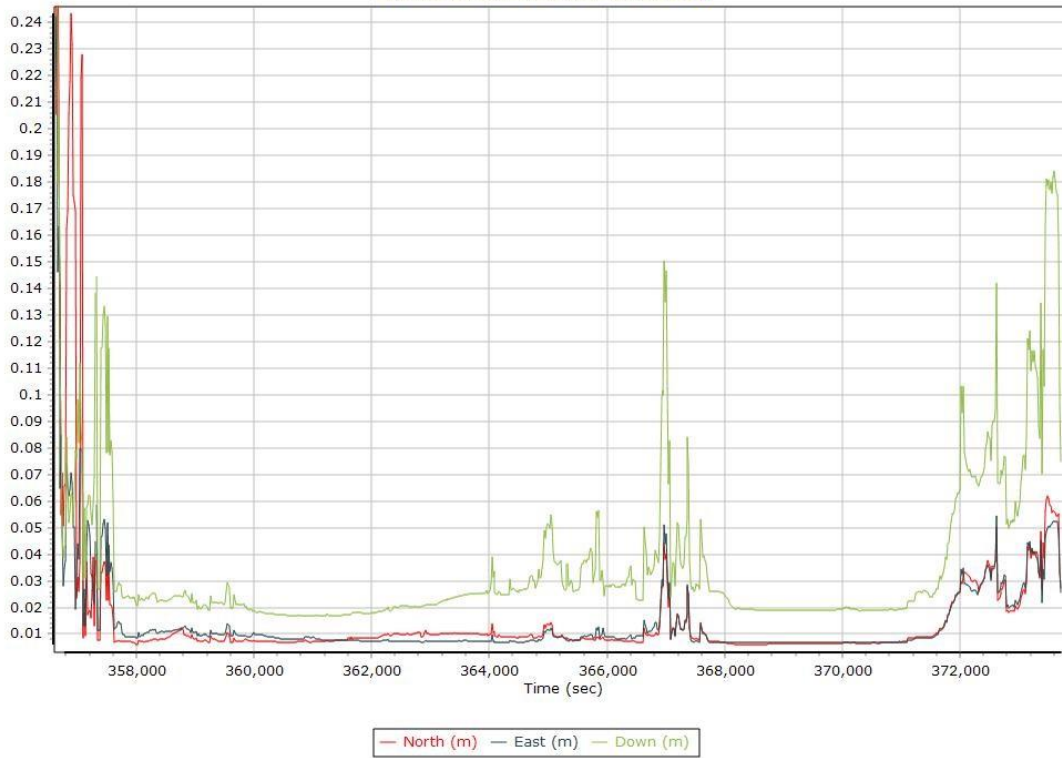


PDOP

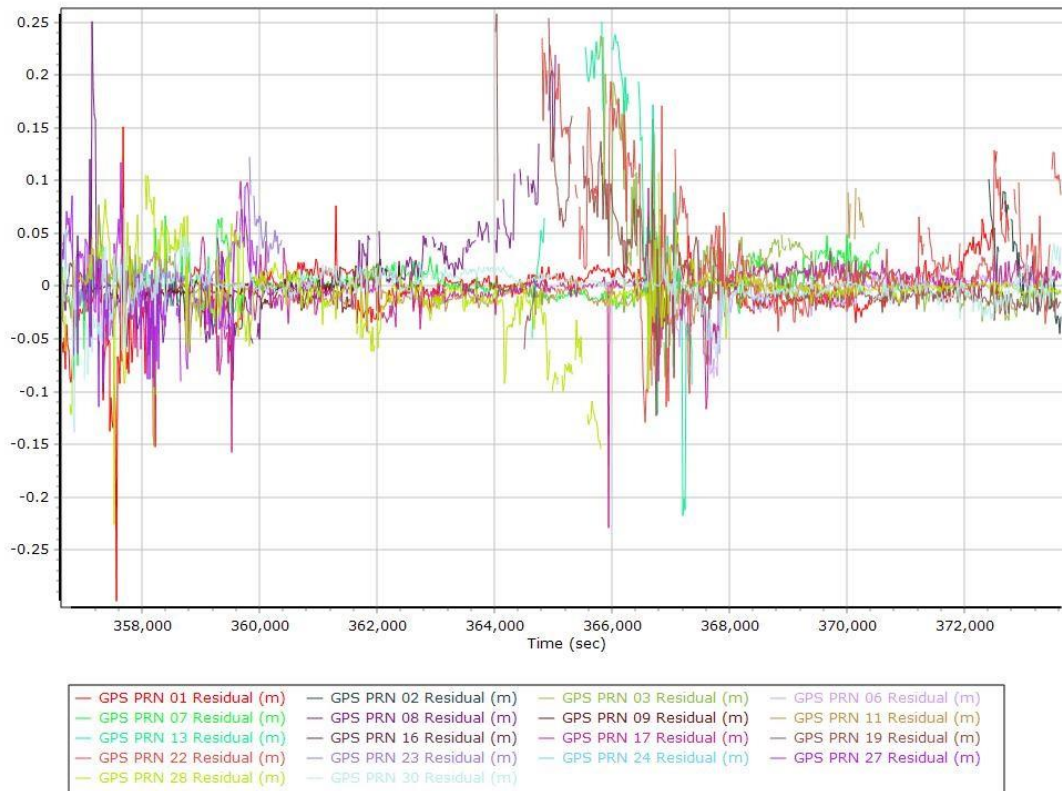


Estimated Position Accuracy

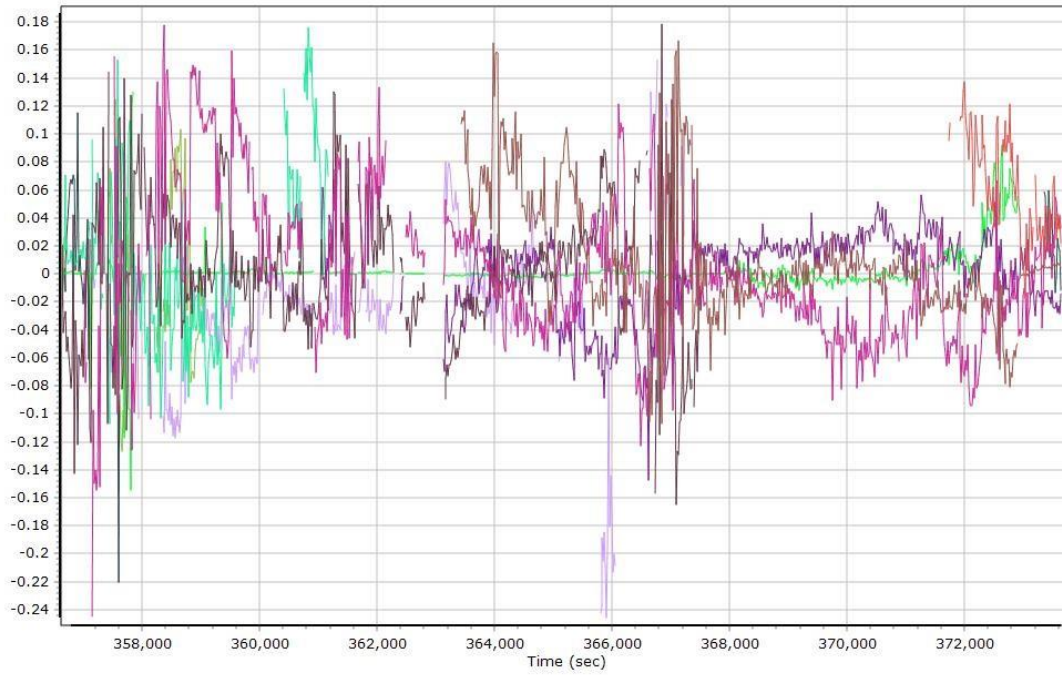
Estimated Position Accuracy



GPS Residuals



GLONASS Residuals



- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GLONASS 06 Residual (m) | GLONASS 07 Residual (m) | GLONASS 08 Residual (m) | GLONASS 09 Residual (m) |
| GLONASS 10 Residual (m) | GLONASS 11 Residual (m) | GLONASS 12 Residual (m) | GLONASS 16 Residual (m) |
| GLONASS 19 Residual (m) | GLONASS 20 Residual (m) | GLONASS 21 Residual (m) | GLONASS 22 Residual (m) |
| GLONASS 23 Residual (m) | | | |

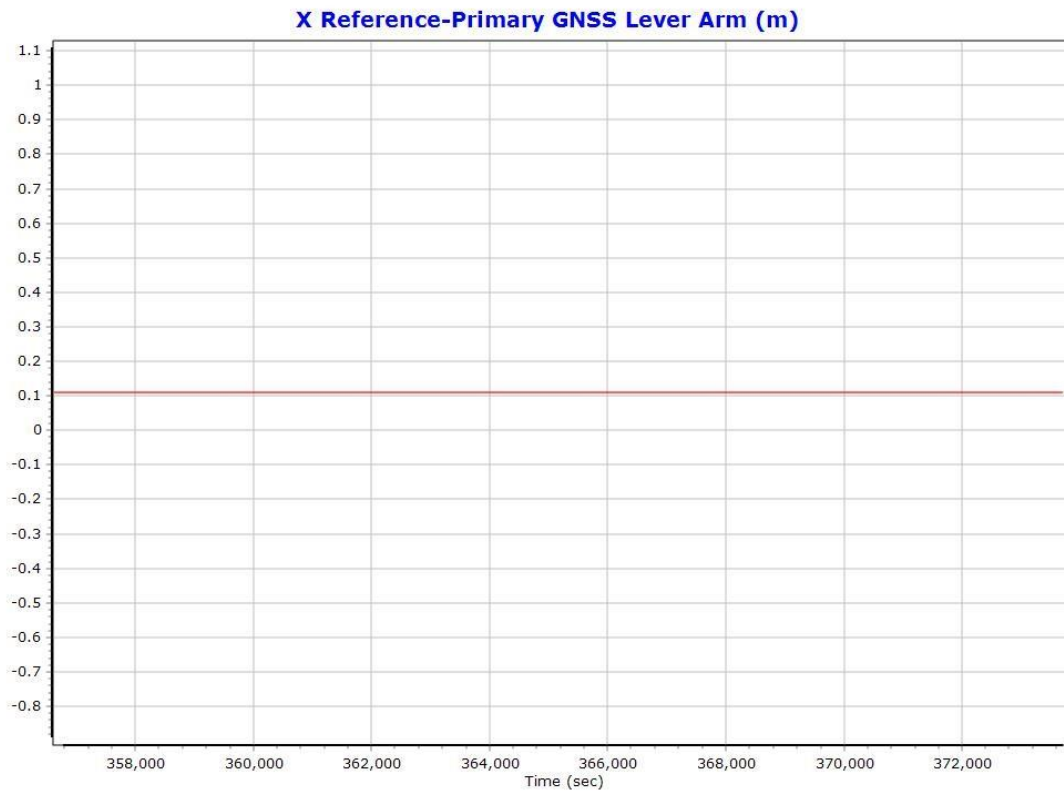
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	False		
Base station	ASB		
Processing start time	356371.000 (12/6/2018 2:59:31 AM)		
Processing end time	373718.000 (12/6/2018 7:48:38 AM)		
Initial attitude source	GYRO Compass		
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]	0.110	-0.138	-0.963
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

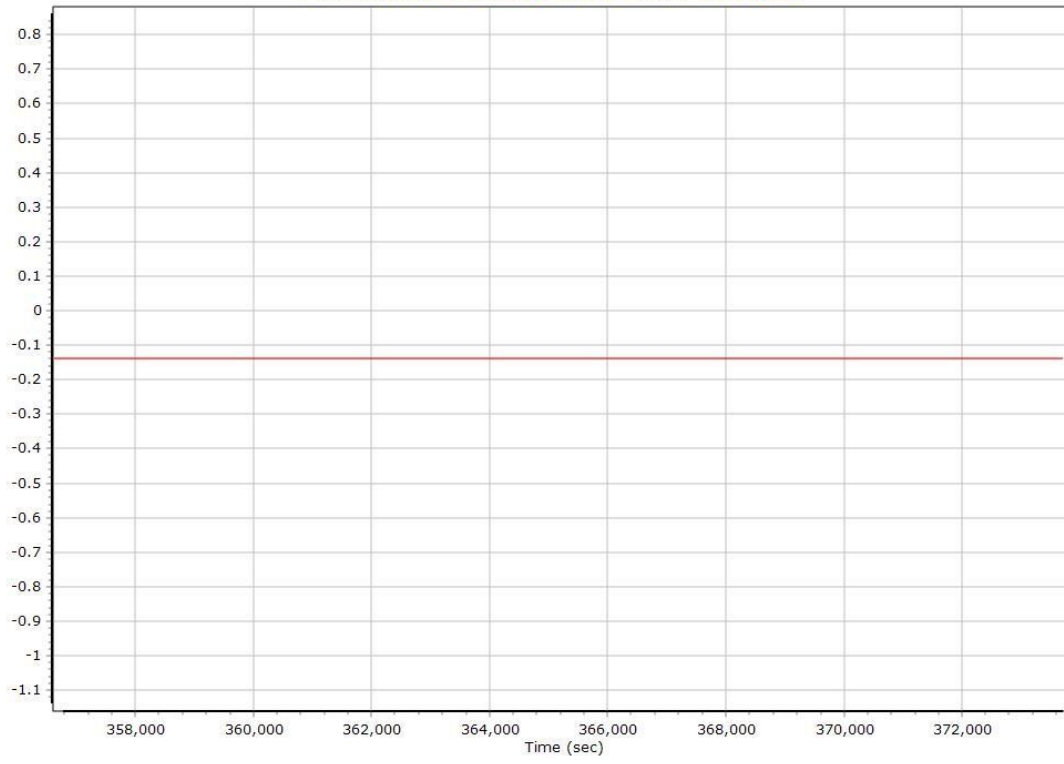
Reference-Primary GNSS Lever Arm

X Reference -Primary GNSS Lever Arm (m)



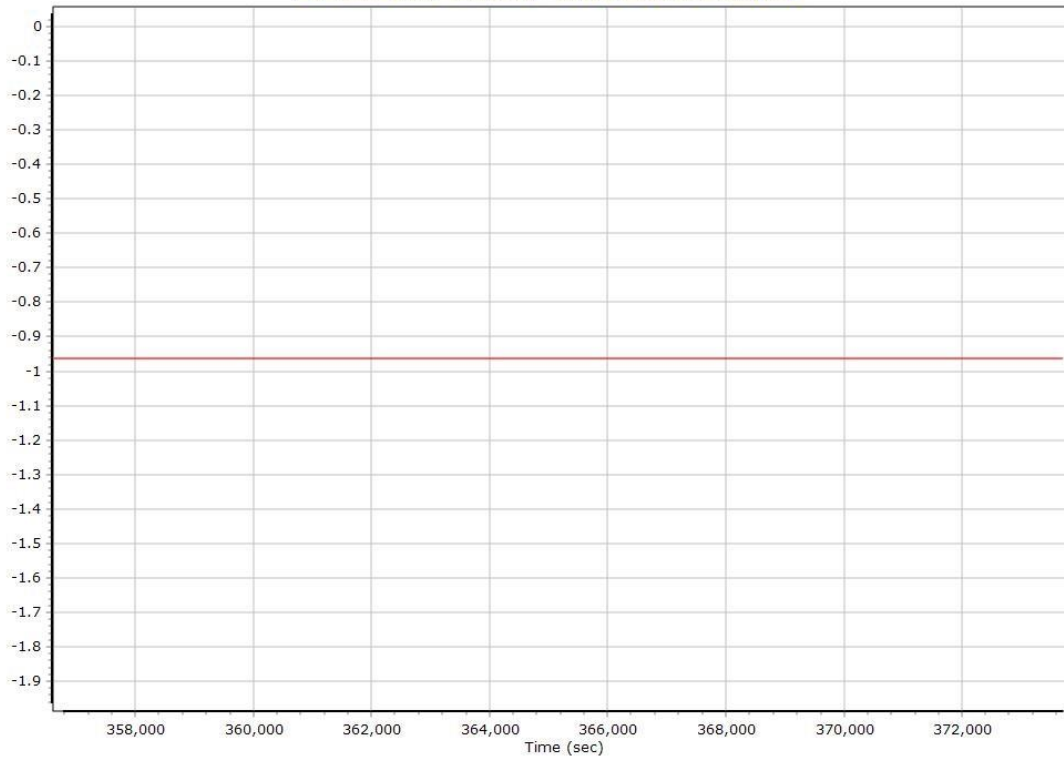
Y Reference-Primary GNSS Lever Arm (m)

Y Reference-Primary GNSS Lever Arm (m)



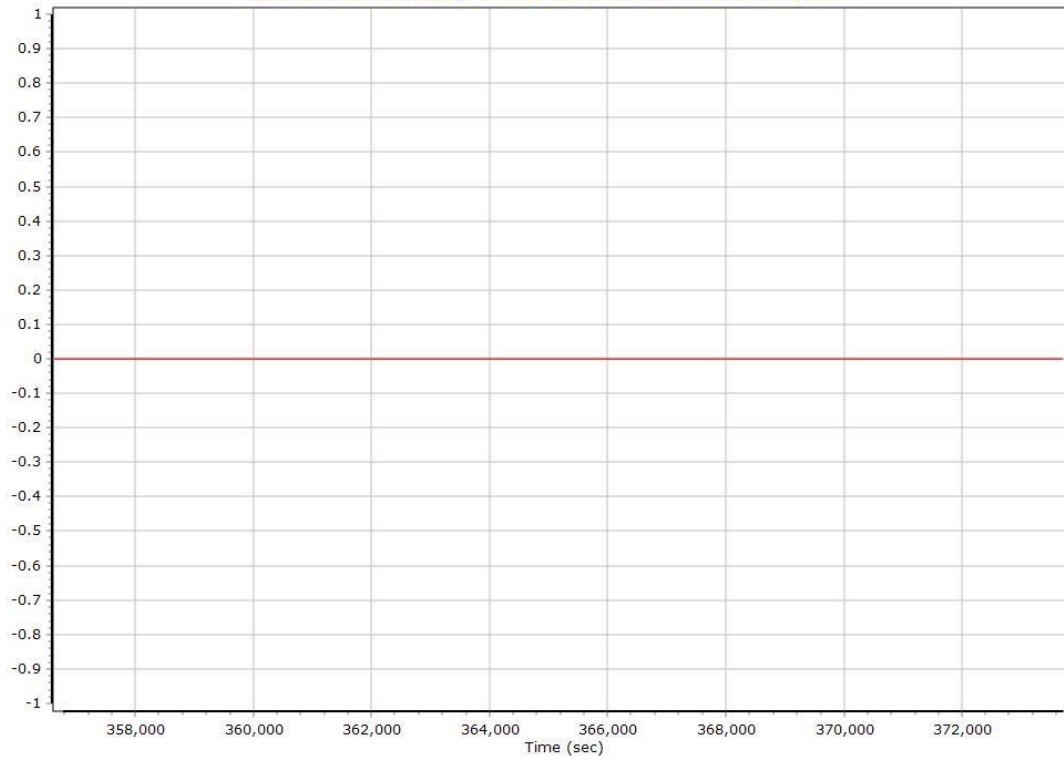
Z Reference -Primary GNSS Lever Arm (m)

Z Reference-Primary GNSS Lever Arm (m)



ReferencePrimary GNSSLever Arm Figure of Merit

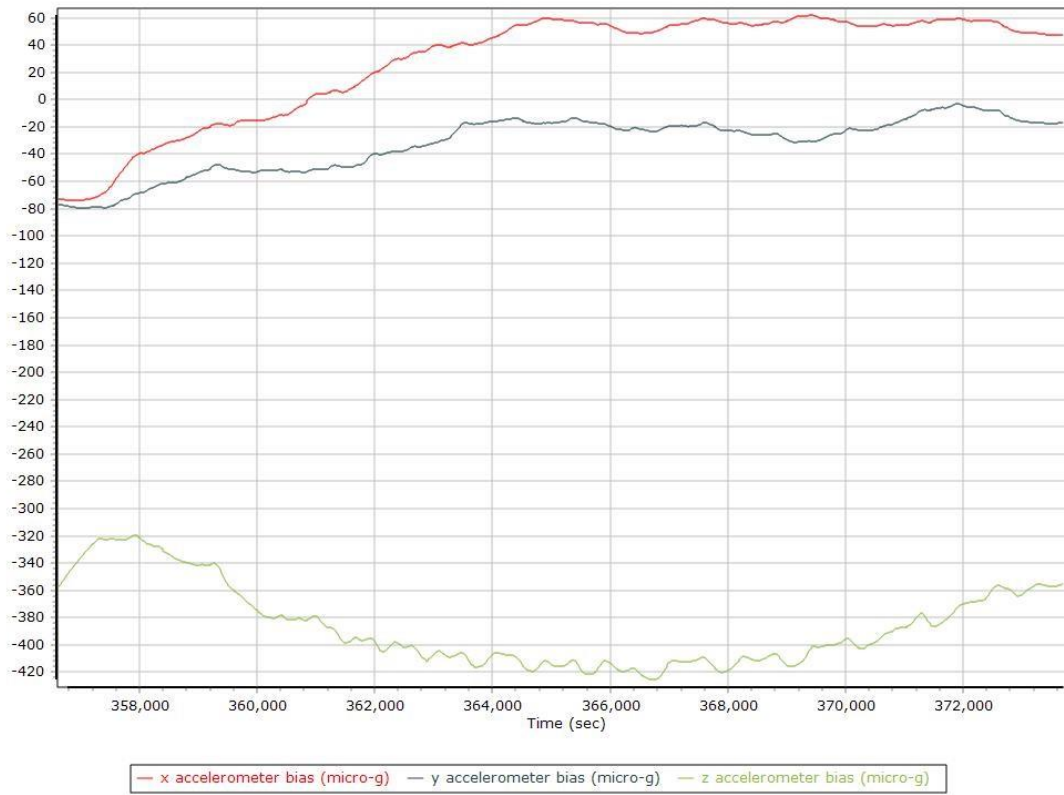
Reference-Primary GNSS Lever Arm Figure of Merit



Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

Accelerometer Bias (micro -g)

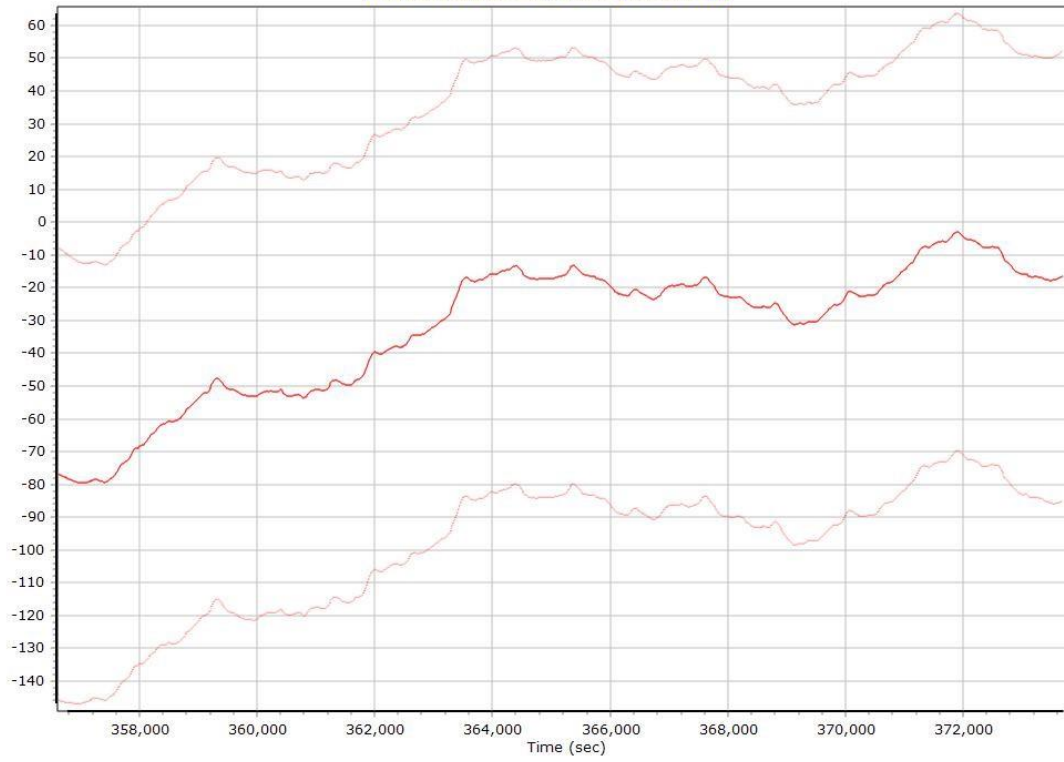


X Accelerometer Bias (micro-g)



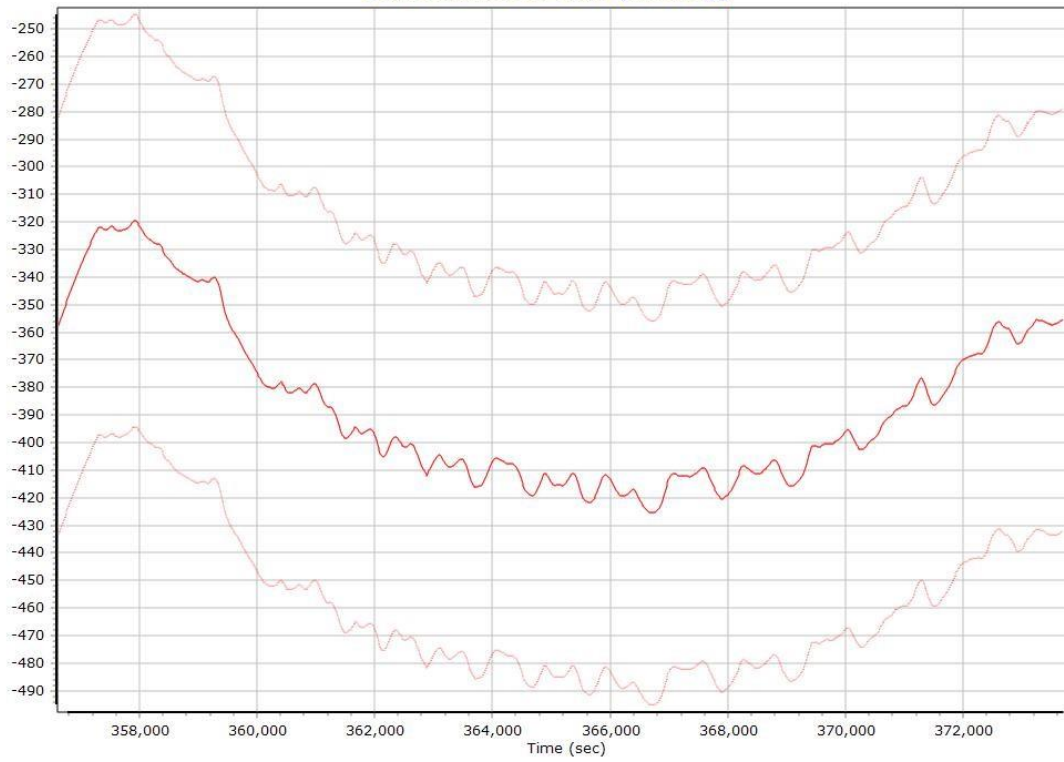
Y Accelerometer Bias (micro -g)

y accelerometer bias (micro-g)

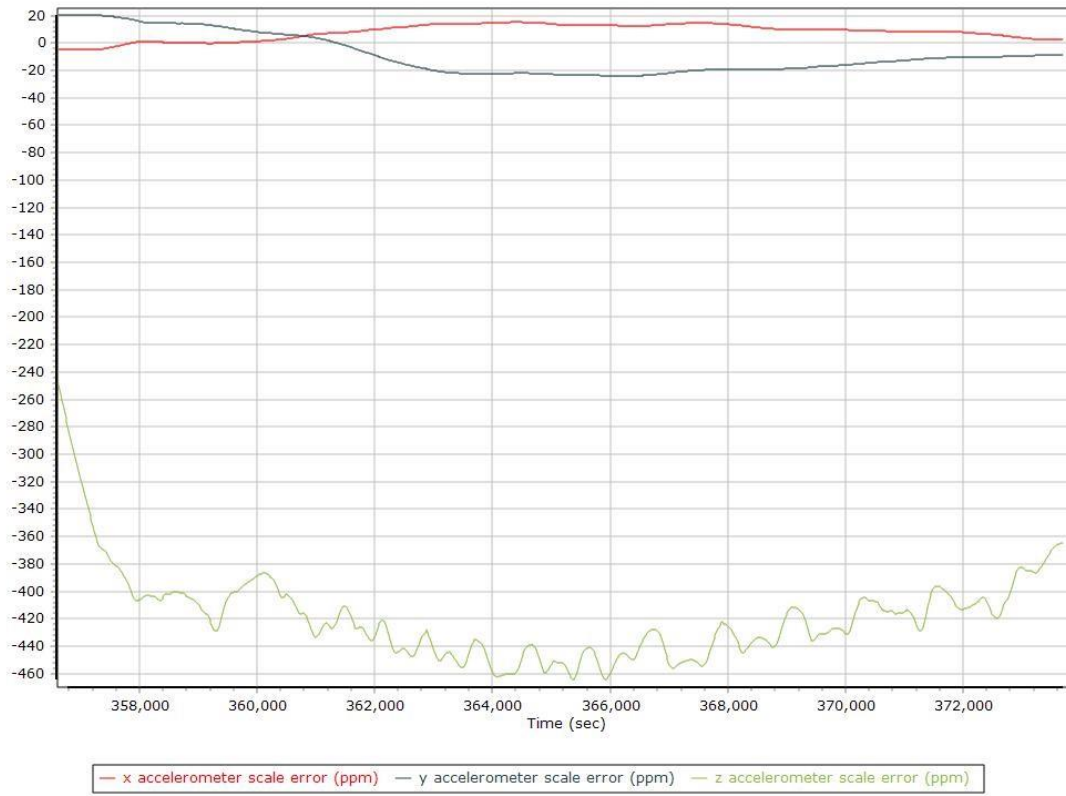


Z Accelerometer Bias (micro-g)

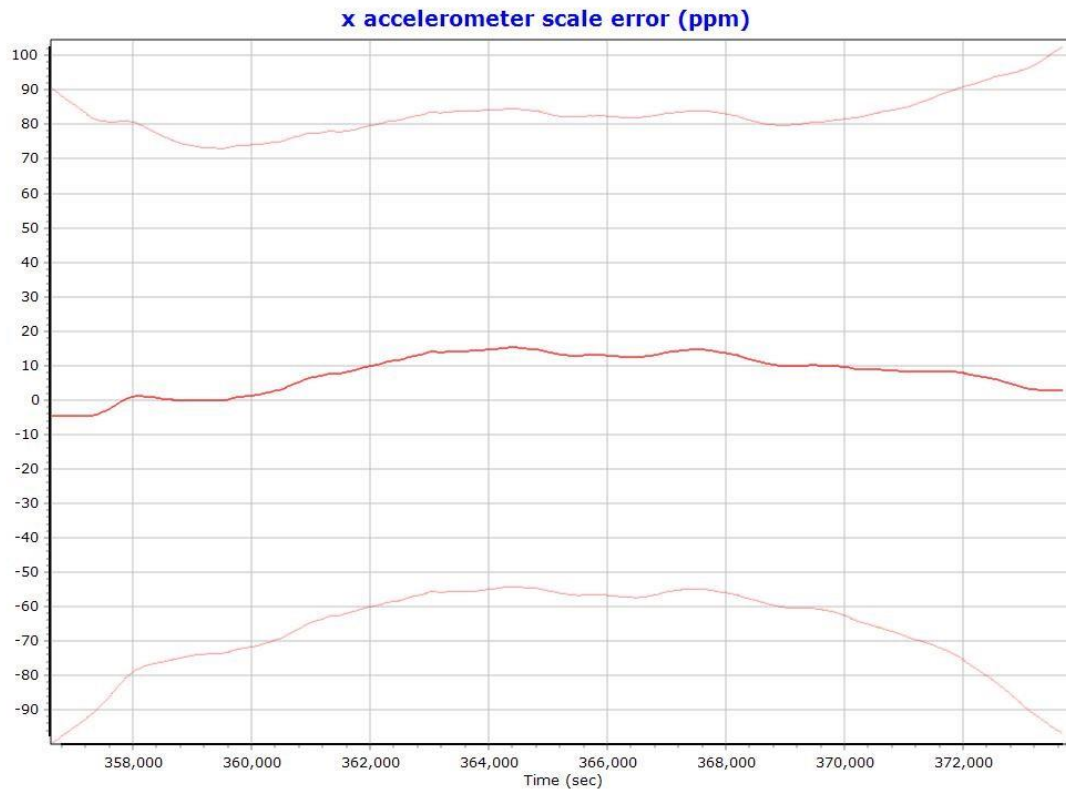
z accelerometer bias (micro-g)



Accelerometer Scale Error (ppm)

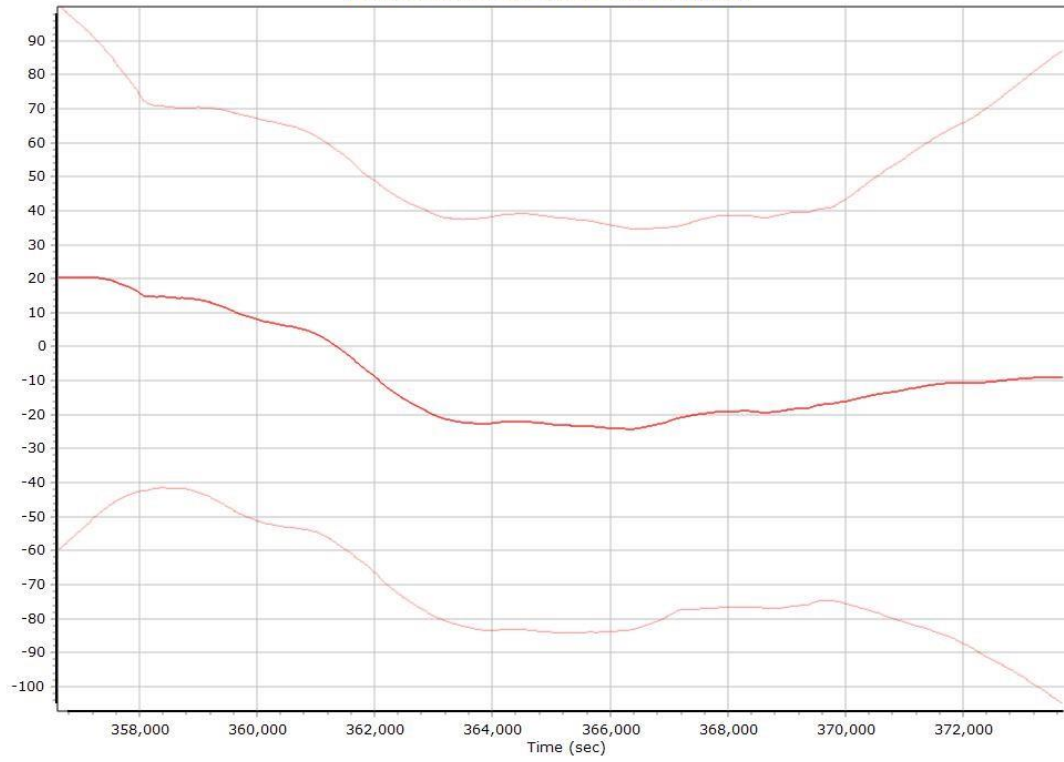


X Accelerometer Scale Error (ppm)



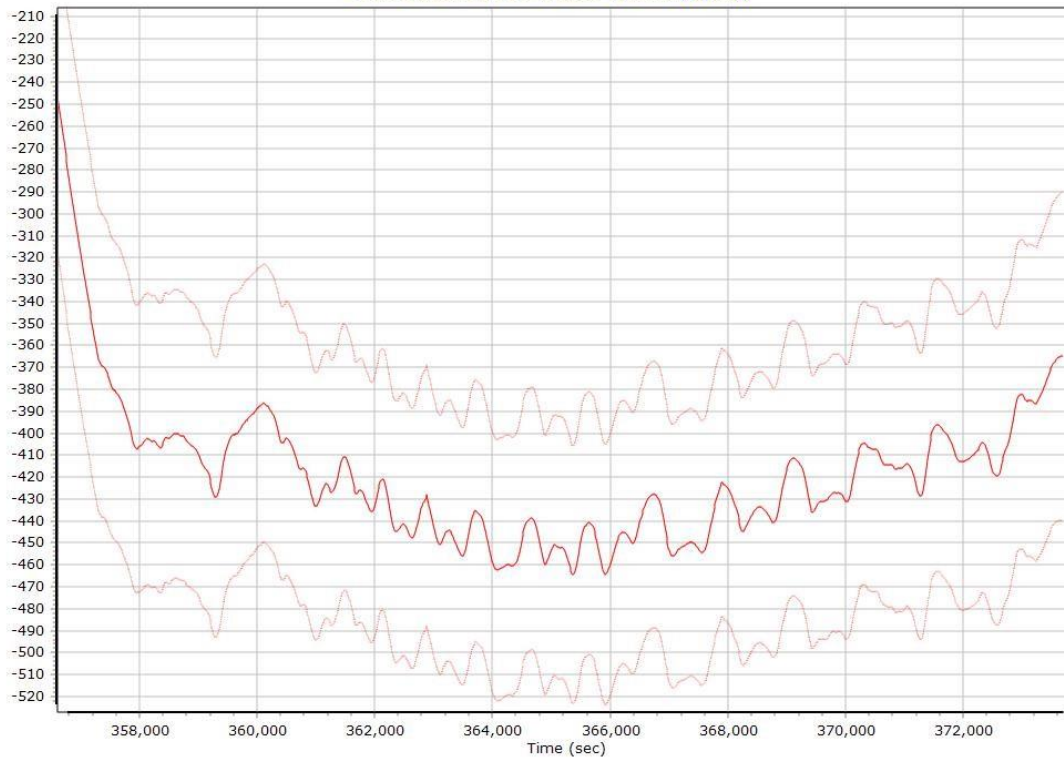
Y Accelerometer Scale Error (ppm)

y accelerometer scale error (ppm)

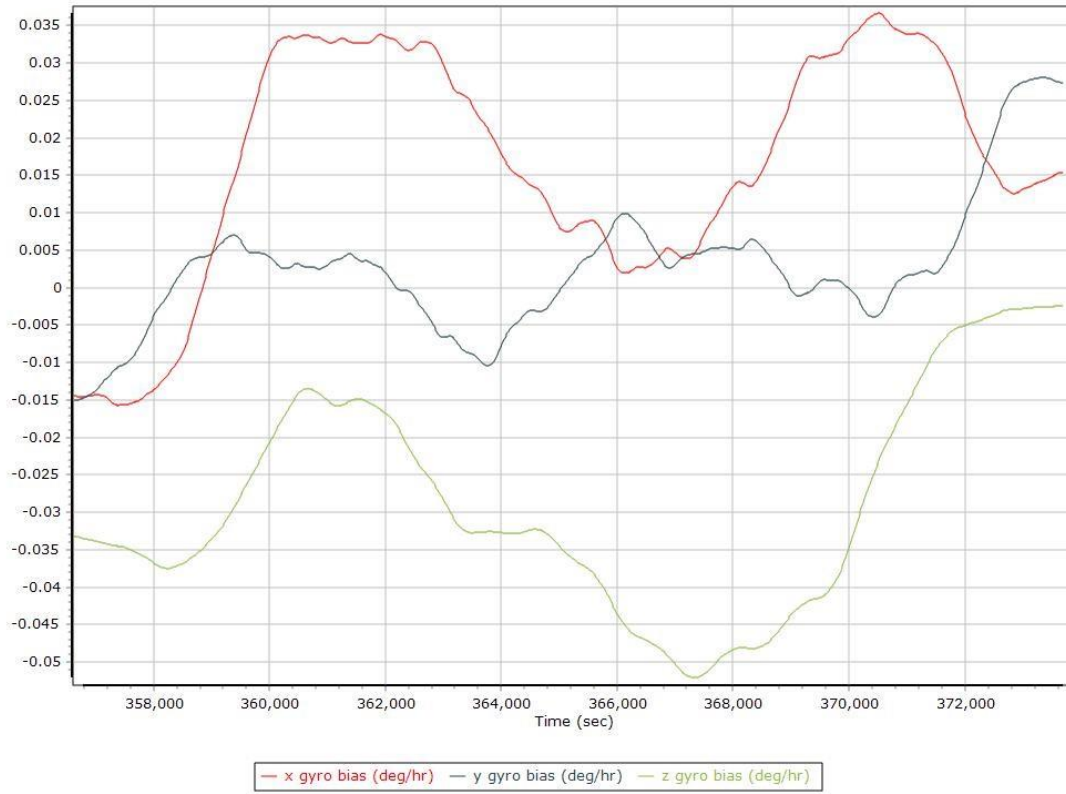


Z Accelerometer Scale Error (ppm)

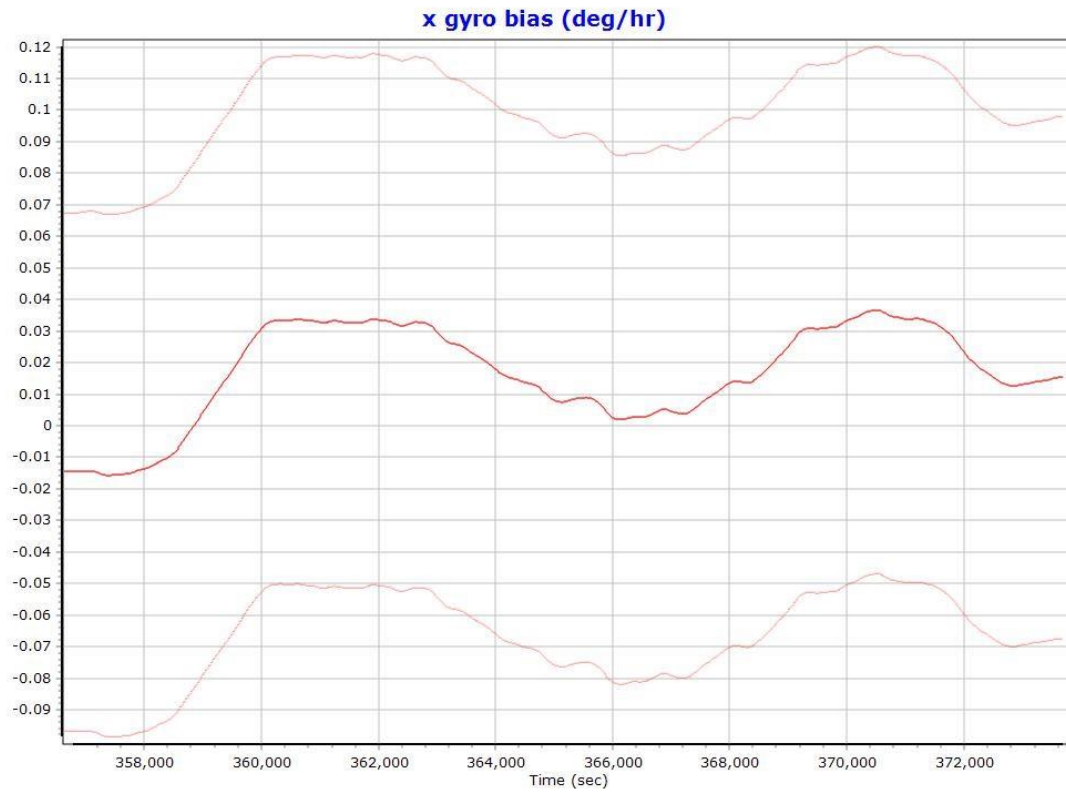
z accelerometer scale error (ppm)



Gyro Bias (deg/h)

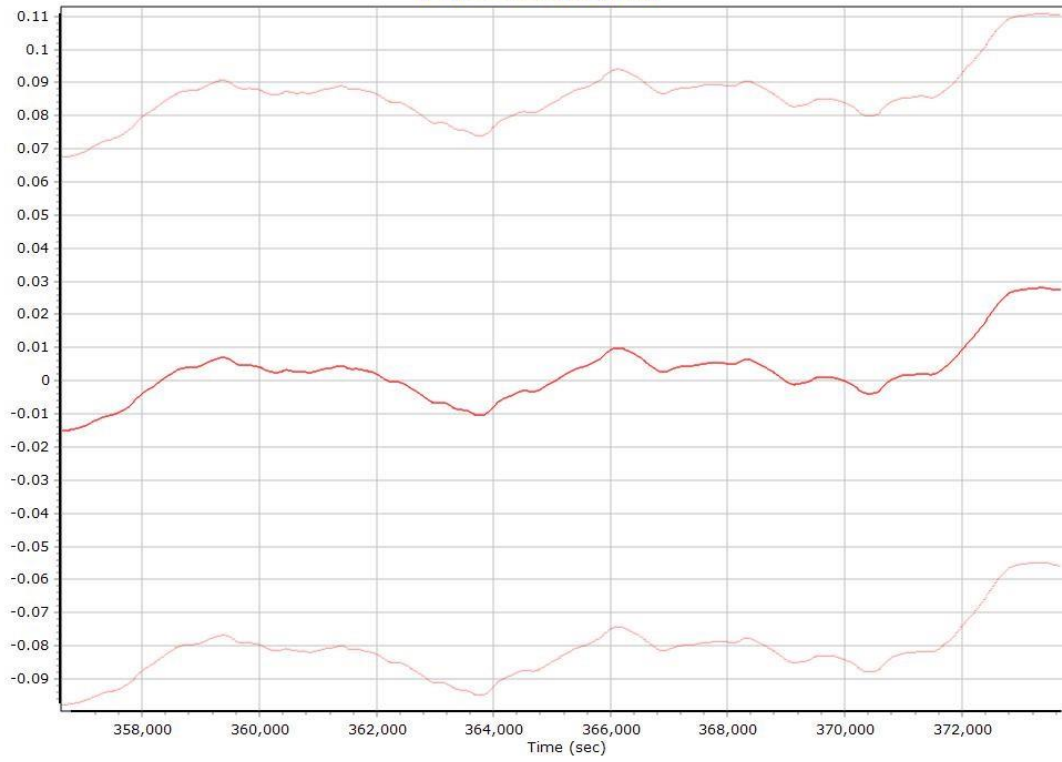


X Gyro Bias (deg/h)



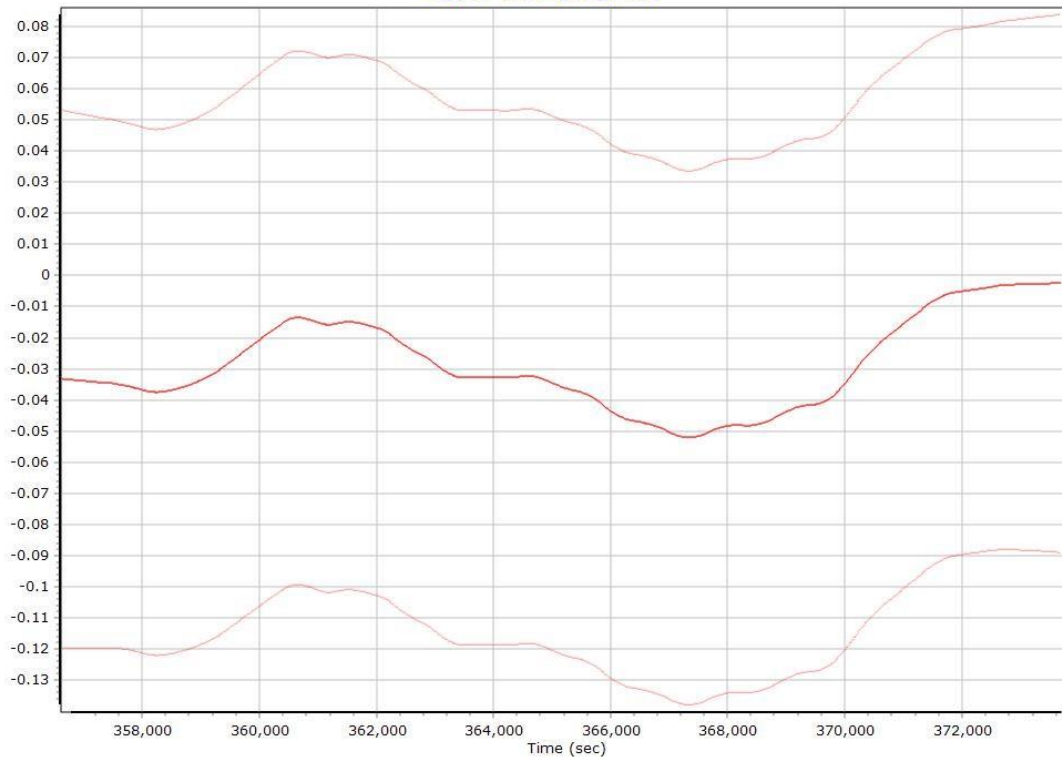
Y Gyro Bias (deg/h)

y gyro bias (deg/hr)

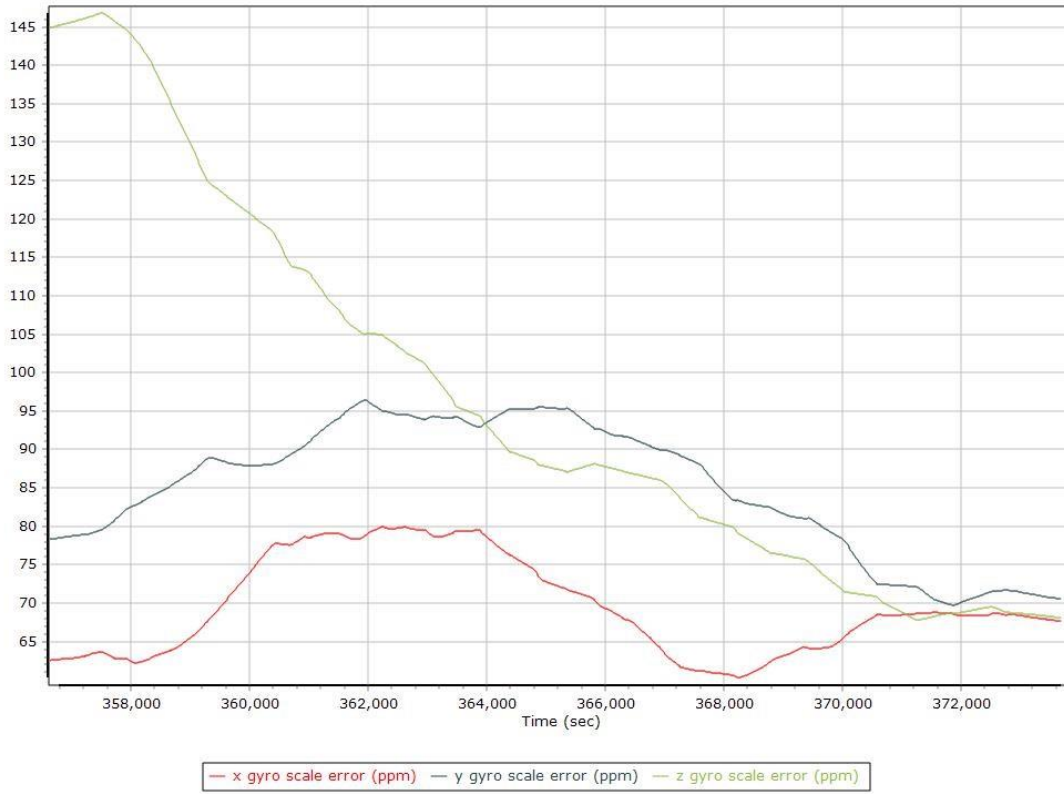


Z Gyro Bias (deg/h)

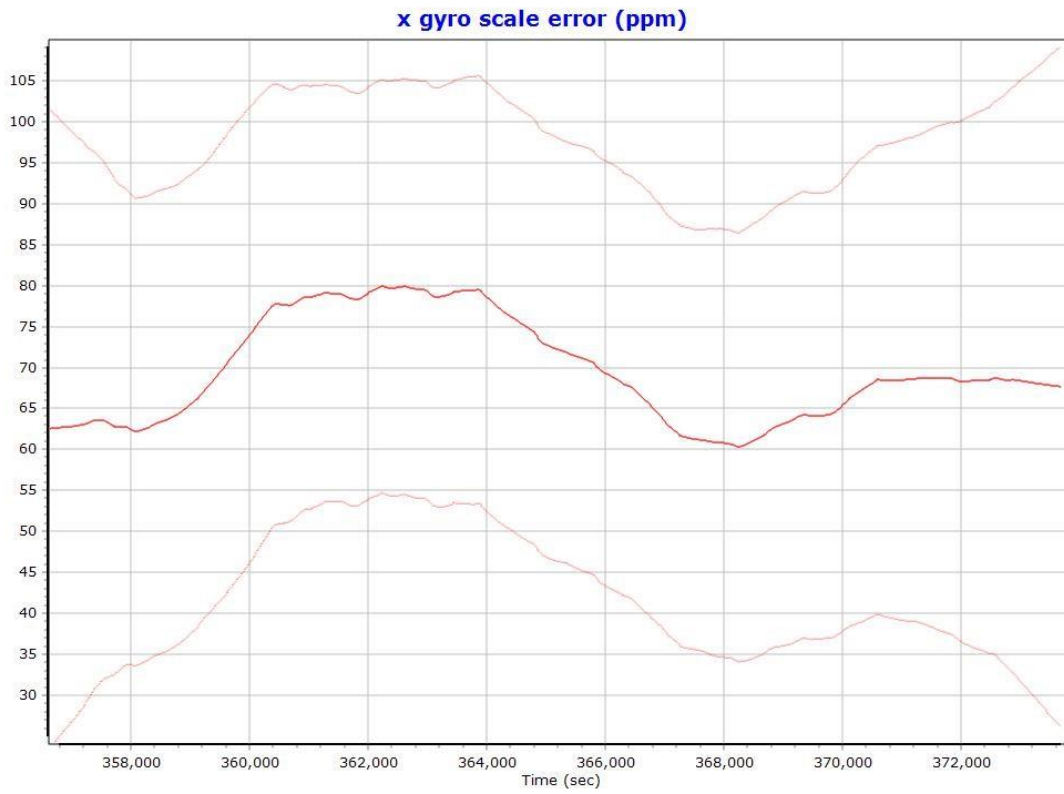
z gyro bias (deg/hr)



Gyro Scale Error (ppm)

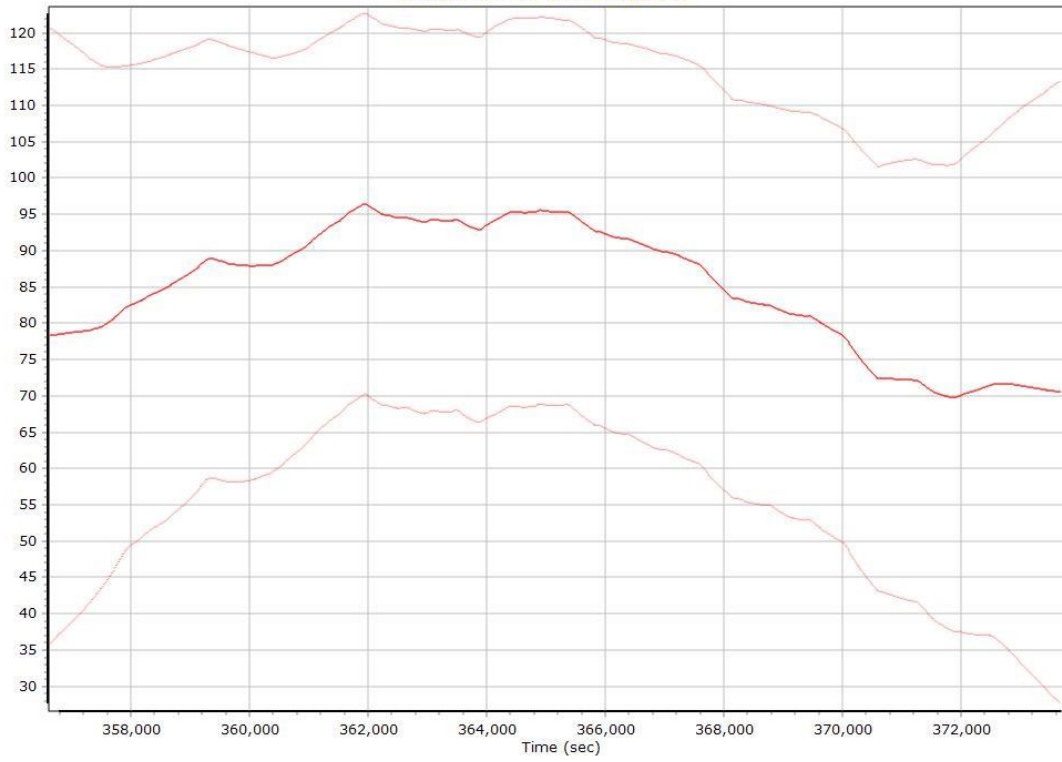


X Gyro Scale Error (ppm)



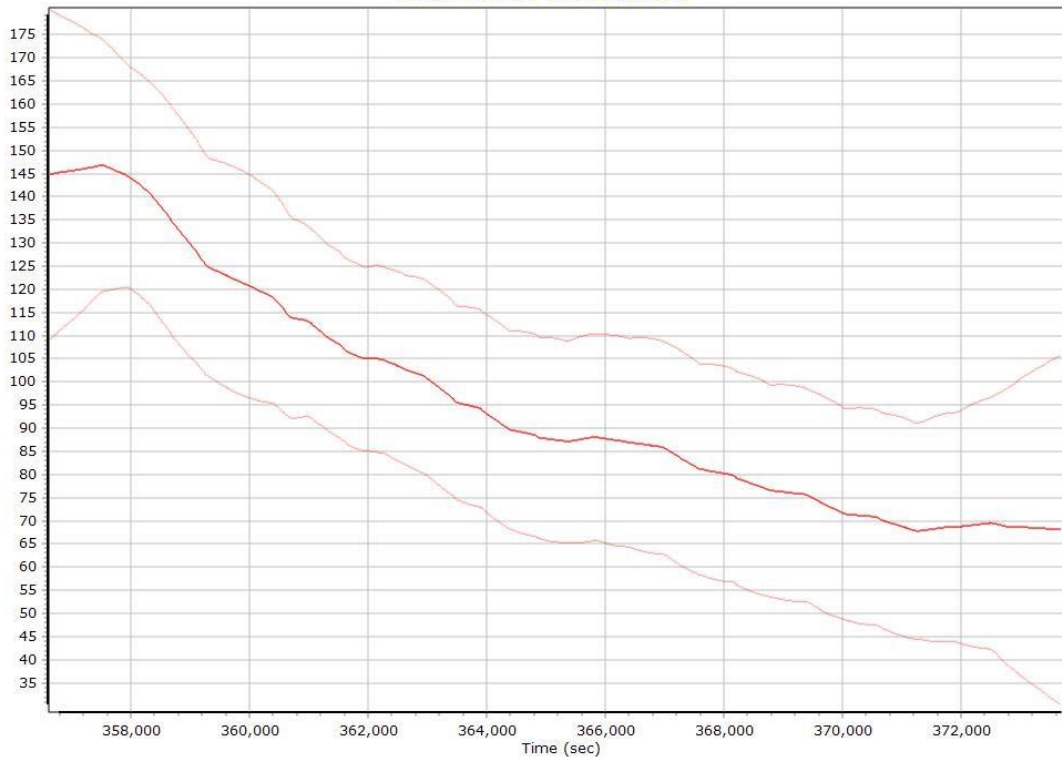
Y Gyro Scale Error (ppm)

y gyro scale error (ppm)



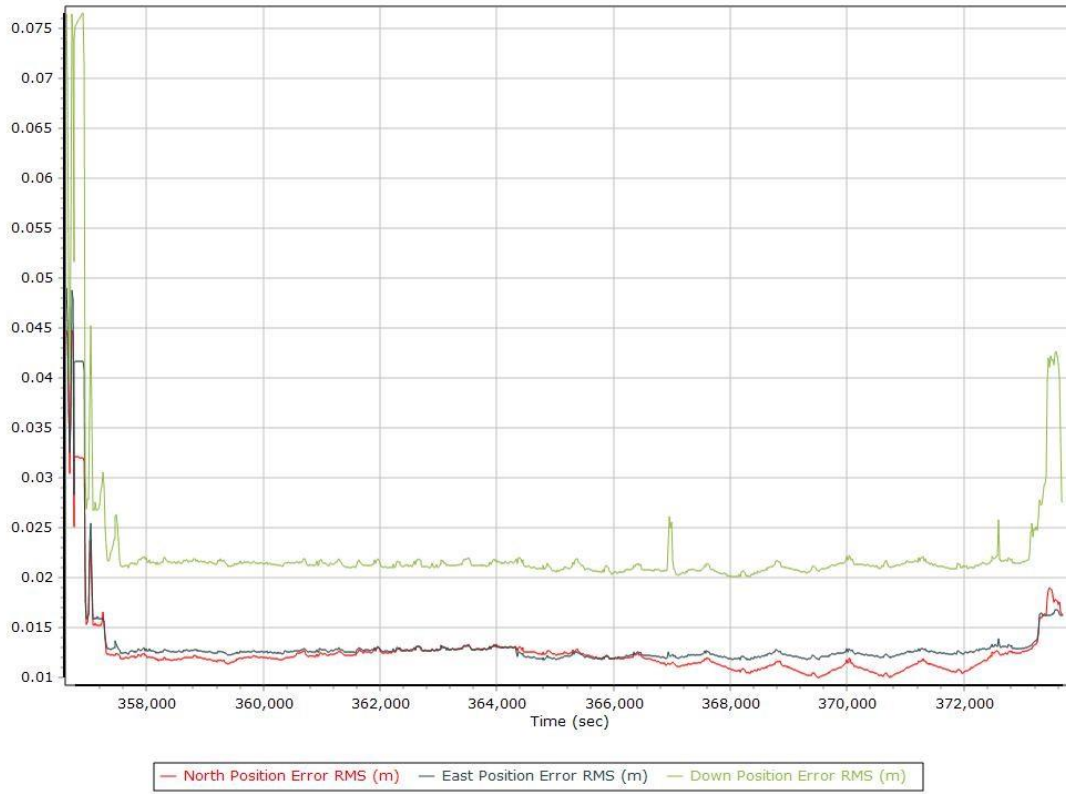
Z Gyro Scale Error (ppm)

z gyro scale error (ppm)

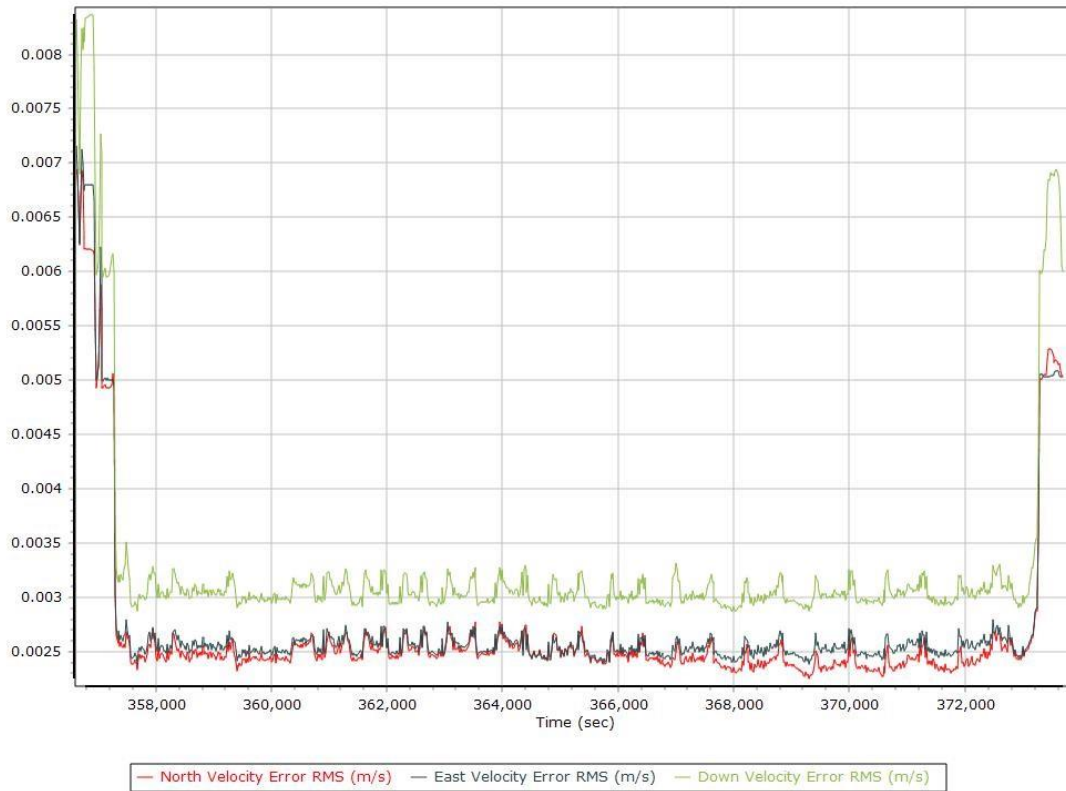


Smoothed Performance Metrics

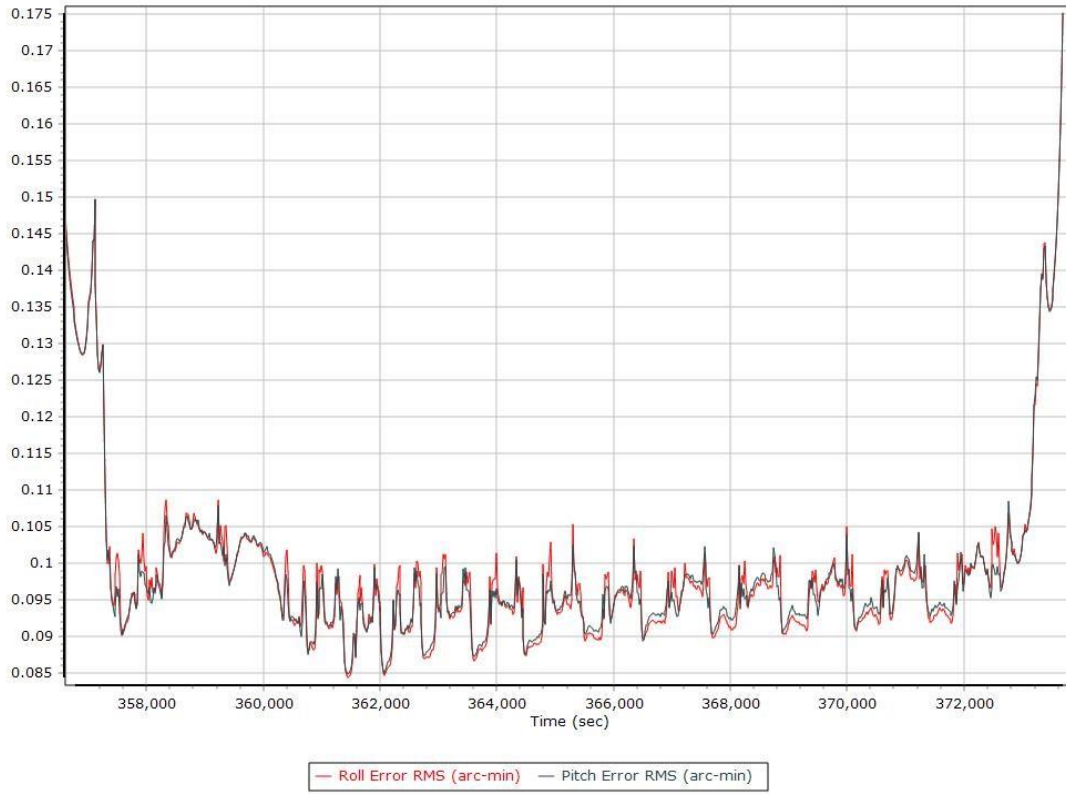
Position Error RMS (m)



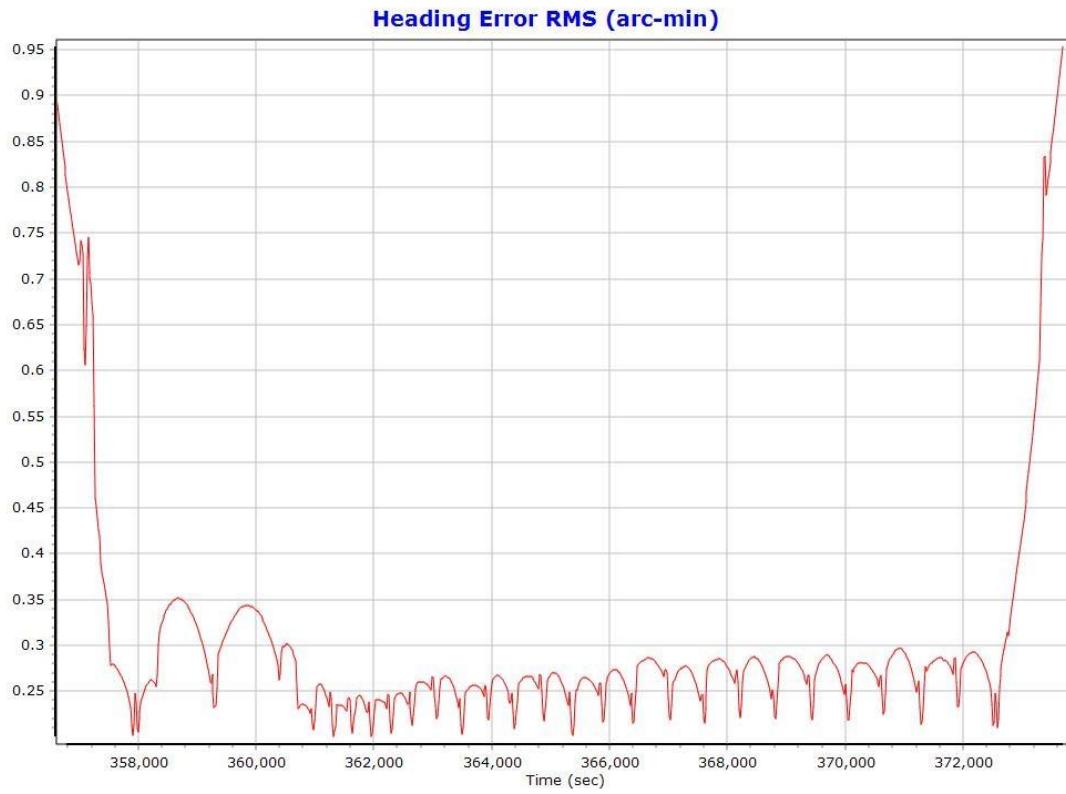
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc -min)



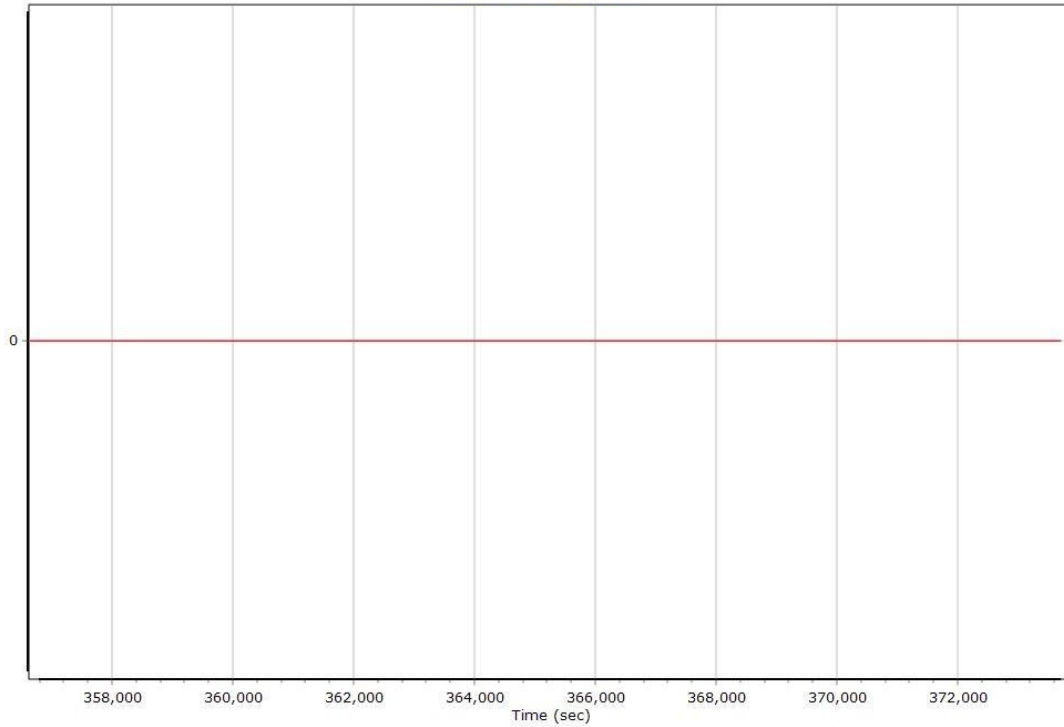
Heading Error RMS (arc-min)



Smoothed Solution Status

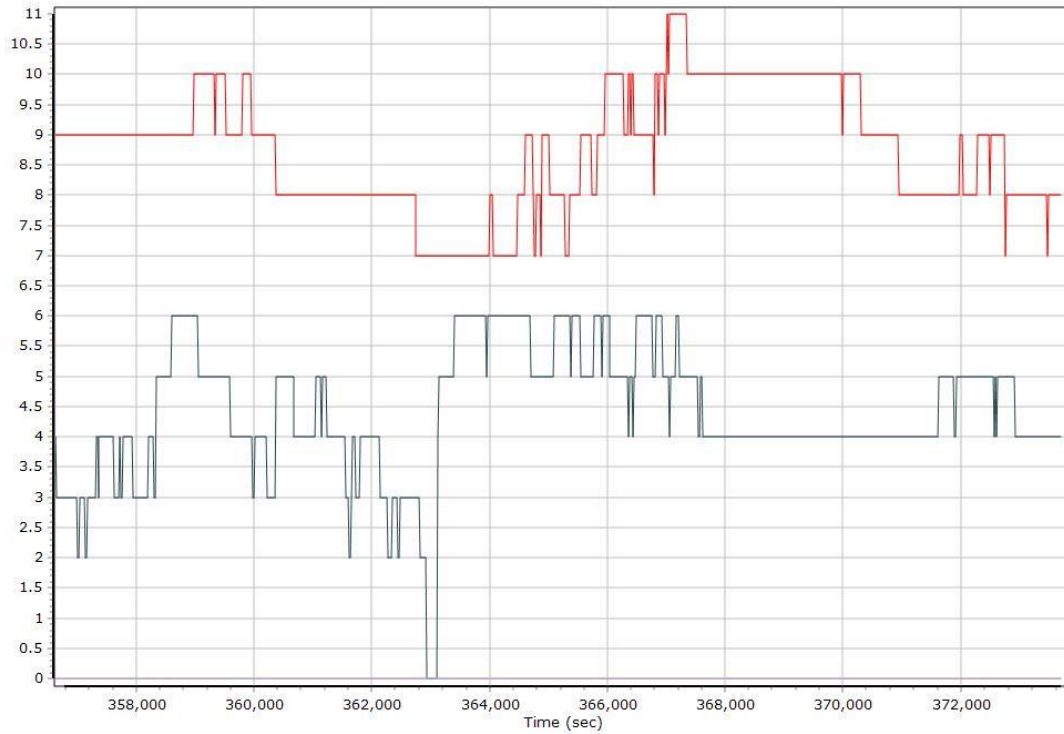
Processing Mode

Processing mode



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

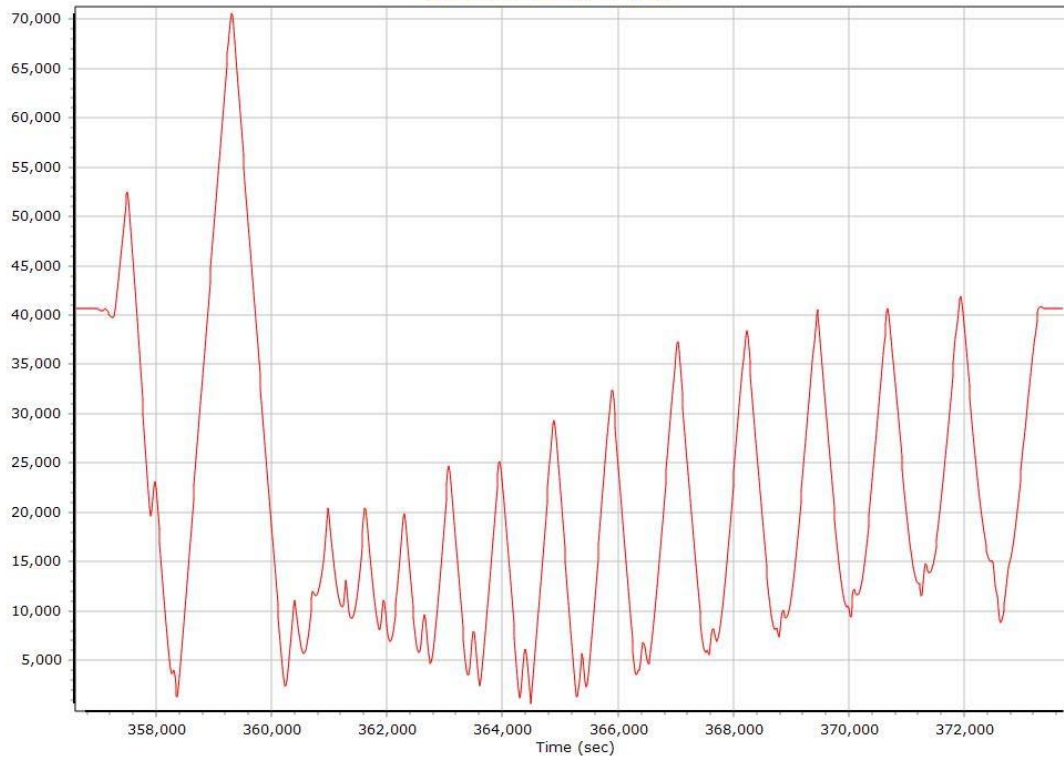
Number of Satellites



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

Baseline Length

Baseline Length (m)



SBET IAKAR Separation



General Information

Mission Information

Project name	12072018NAD83
Processing date	2019-02-27 22:18:16
Mission date	2018-12-07 06:16:13
Mission duration	05:05:54.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9524
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
181207_061554_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3410.18g	GLONASS Broadcast Ephemeris
Ephm3410.18n	GPS Broadcast Ephemeris
igl20304.sp3	GLONASS Precise Ephemeris
igl20305.sp3	GLONASS Precise Ephemeris
igl20306.sp3	GLONASS Precise Ephemeris
igs20304.sp3	GPS Precise Ephemeris
igs20305.sp3	GPS Precise Ephemeris
igs20306.sp3	GPS Precise Ephemeris
flai341f00.18o	GNSS SingleBase
fld7341f00.18o	GNSS SingleBase
flem341f00.18o	GNSS SingleBase
flib341f00.18o	GNSS SingleBase
gsps341f00.18o	GNSS SingleBase
stpt341f00.18o	GNSS SingleBase
flai341f00.18g	GLONASS Broadcast Ephemeris
flai341f00.18n	GPS Broadcast Ephemeris
fld7341f00.18g	GLONASS Broadcast Ephemeris
fld7341f00.18n	GPS Broadcast Ephemeris
flem341f00.18g	GLONASS Broadcast Ephemeris
flem341f00.18n	GPS Broadcast Ephemeris
flib341f00.18g	GLONASS Broadcast Ephemeris
flib341f00.18n	GPS Broadcast Ephemeris
gsps341f00.18g	GLONASS Broadcast Ephemeris
gsps341f00.18n	GPS Broadcast Ephemeris
stpt341f00.18g	GLONASS Broadcast Ephemeris
stpt341f00.18n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbt_Mission 1.out	SBET Trajectory File

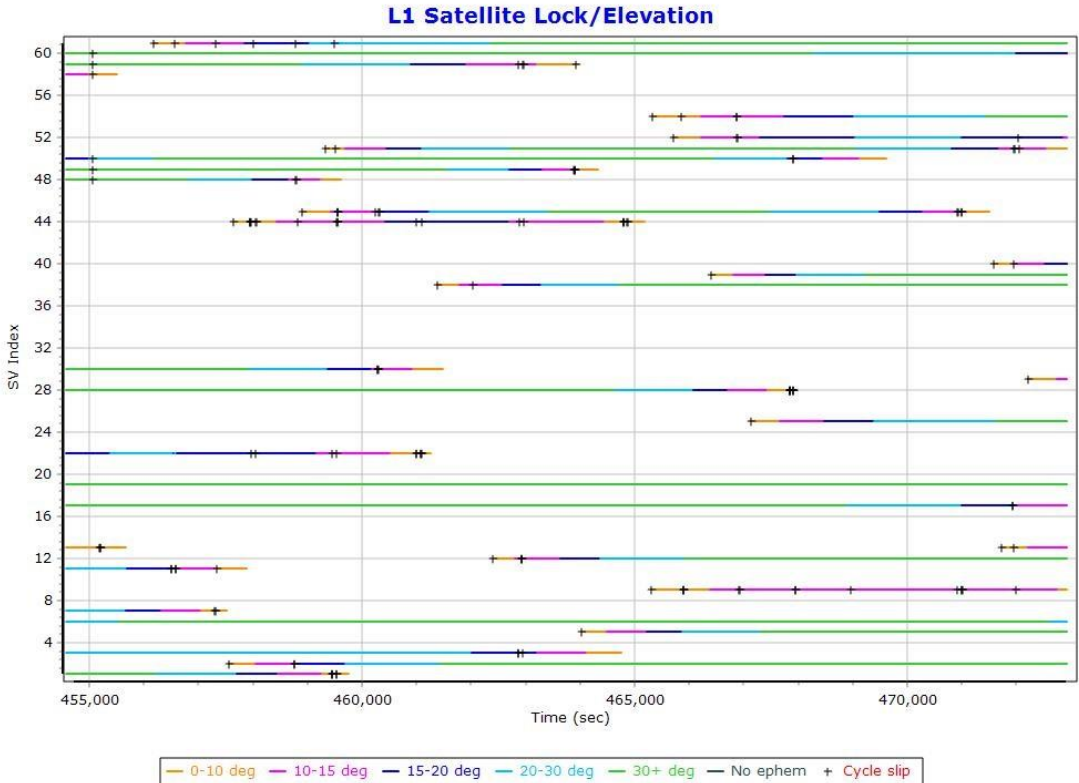
Rover Data Summary

First raw data file	181207_061554_INS-GPS_1.raw
Last raw data file	181207_061554_INS-GPS_1.raw
Start GPS week	2030
Start time	454554.590 (12/7/2018 6:15:54 AM)
End time	472908.968 (12/7/2018 11:21:48 AM)
Start of fine alignment	454665.025 (12/7/2018 6:17:45 AM)
Available subsystems	Primary GNSS, IMU
POS Event Input	Event 1 Input, Event 2 Input, Event 3 Input
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	0.000
Reference to Primary GNSS lever arm [m]	0.102	-0.140	-0.961
Reference to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

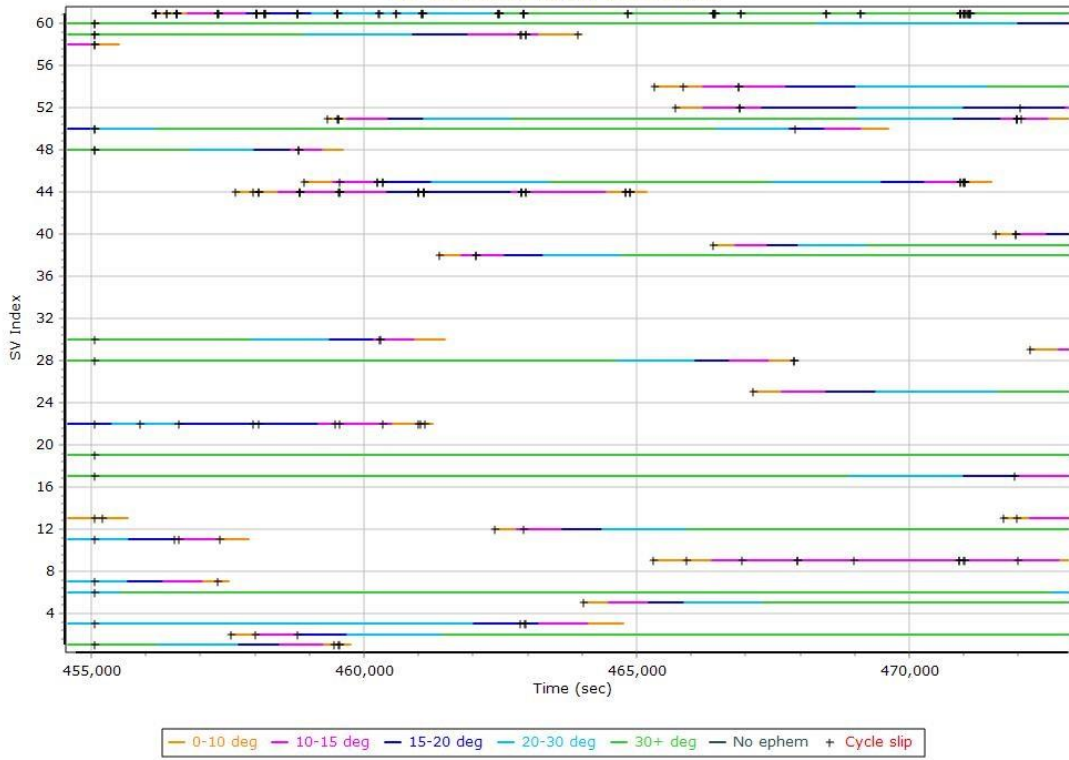
Raw Data QC

L1 Satellite Lock/Elevation



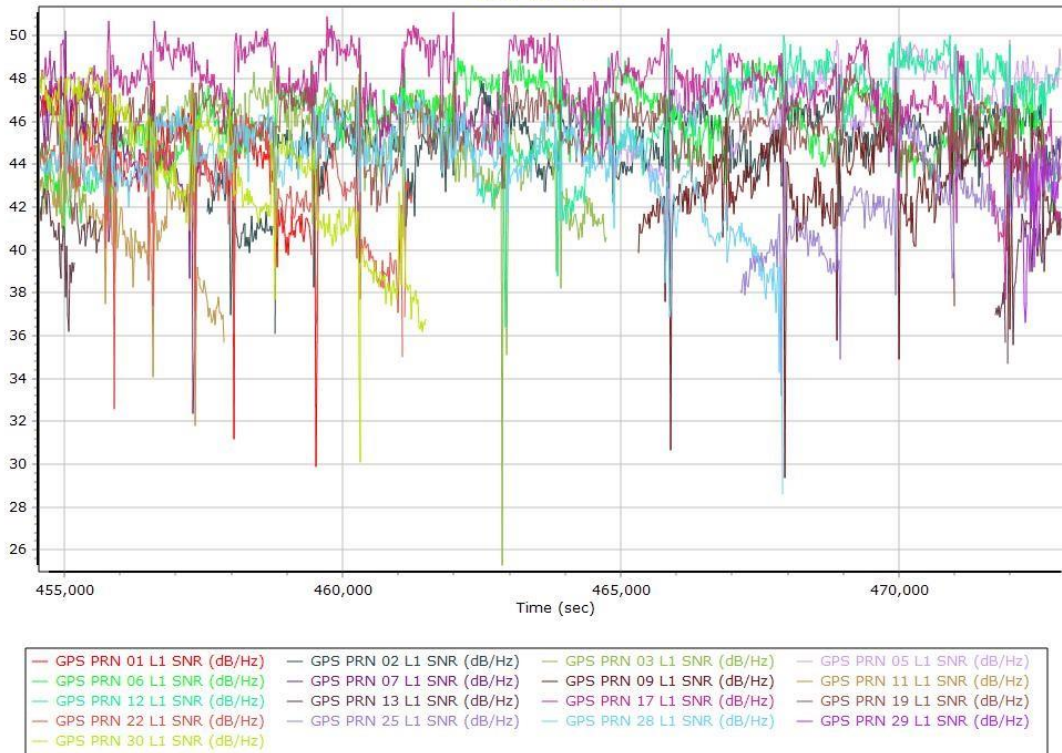
L2 Satellite Lock/Elevation

L2 Satellite Lock/Elevation



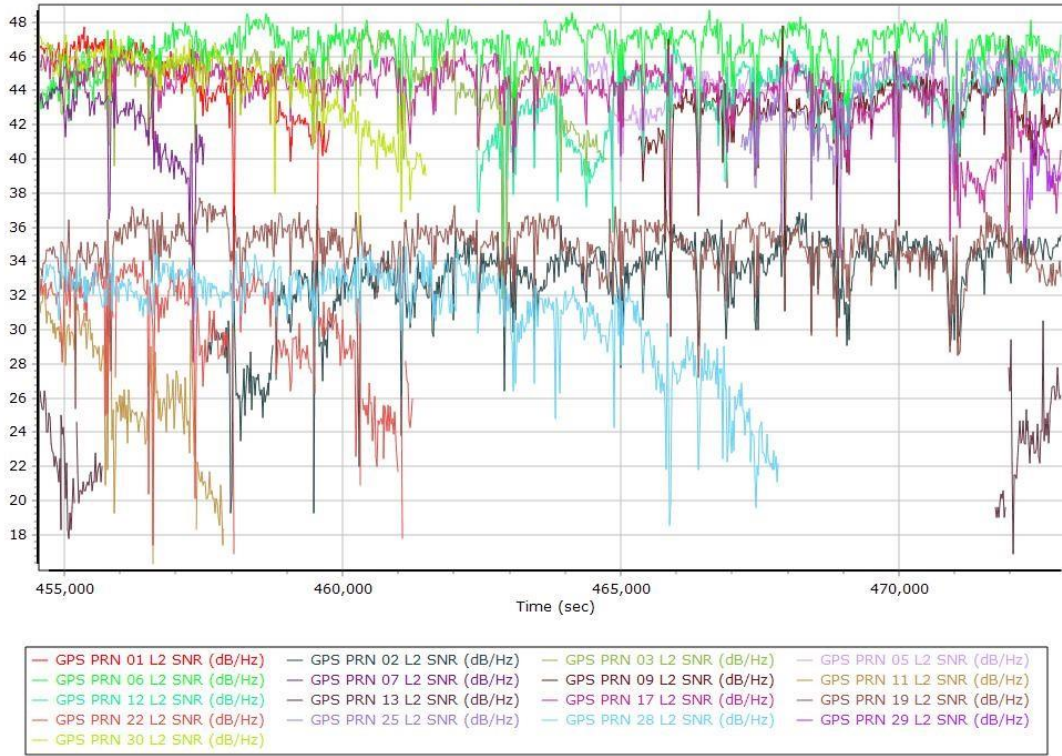
GPS L1 SNR

GPS L1 SNR

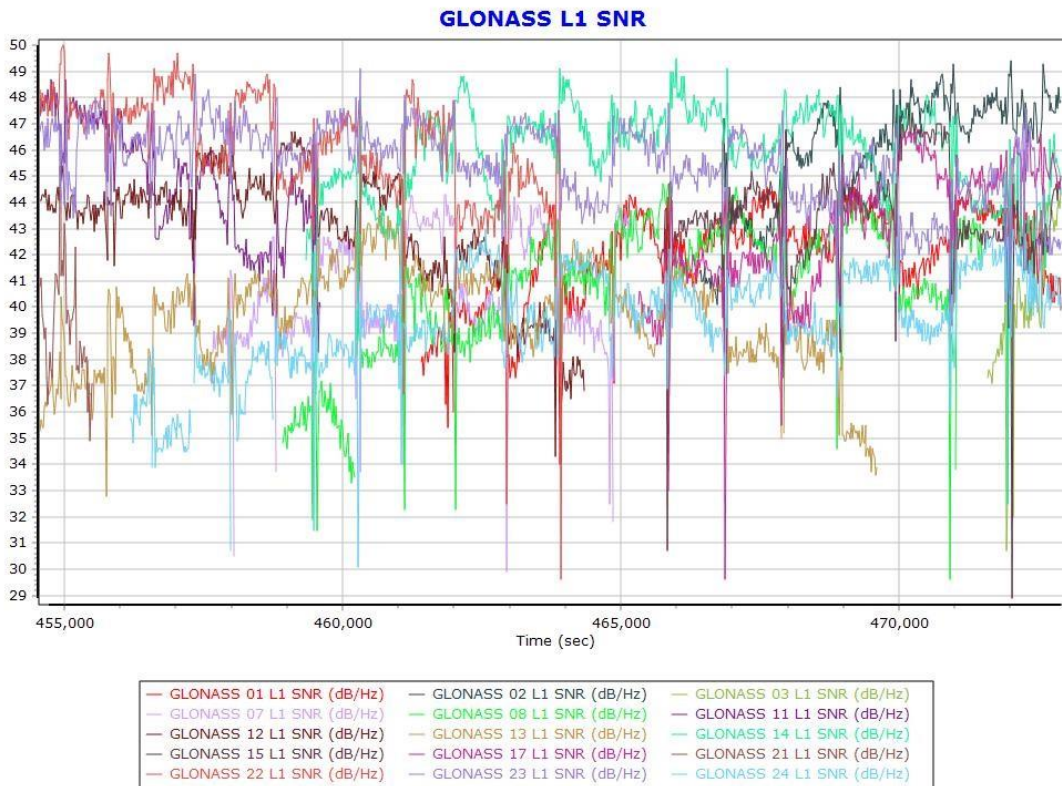


GPS L2 SNR

GPS L2 SNR

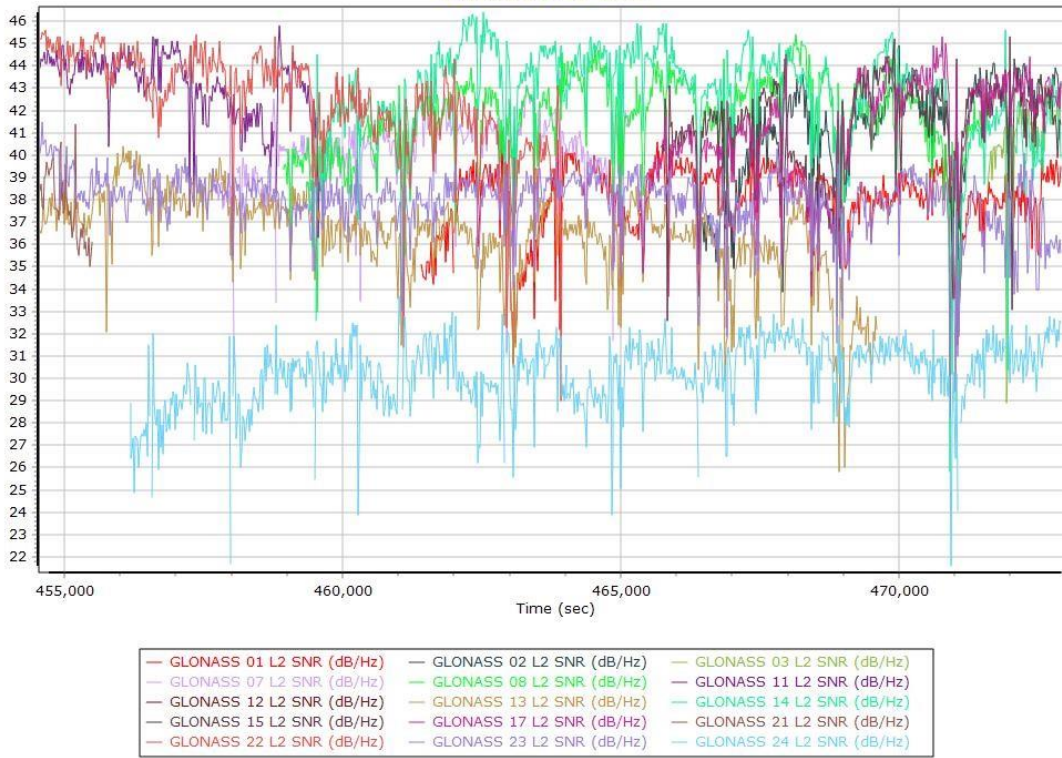


GLONASS L1 SNR



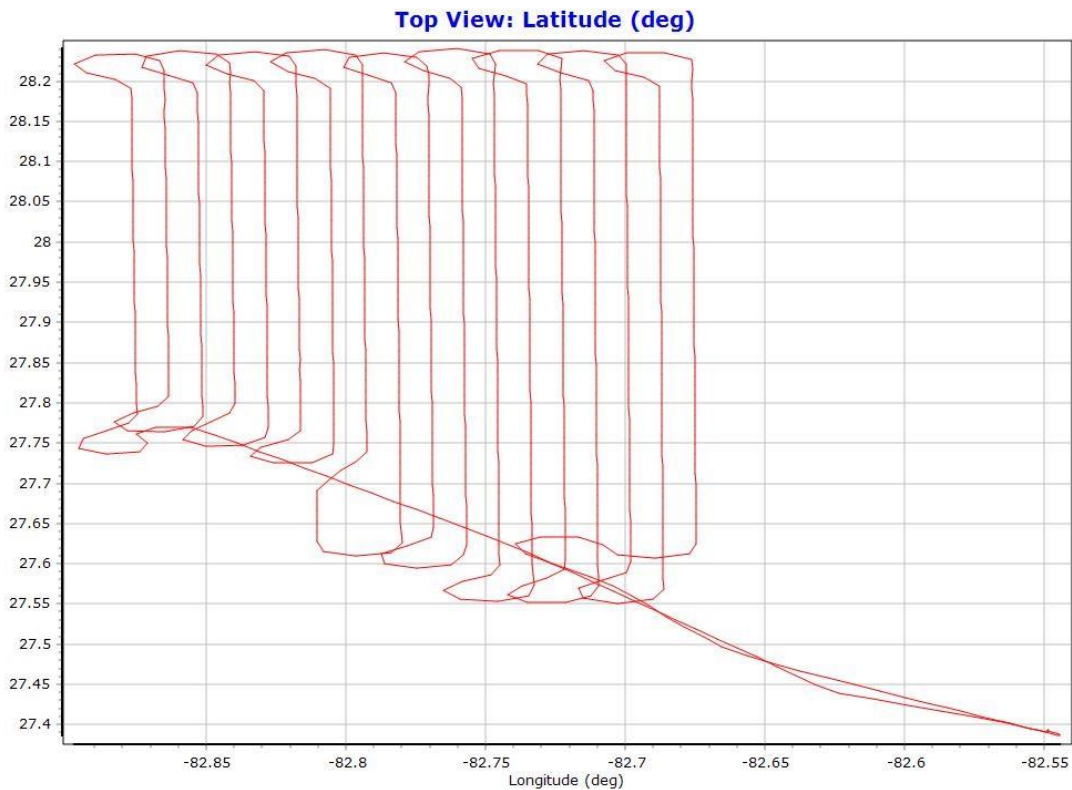
GLONASS L2 SNR

GLONASS L2 SNR

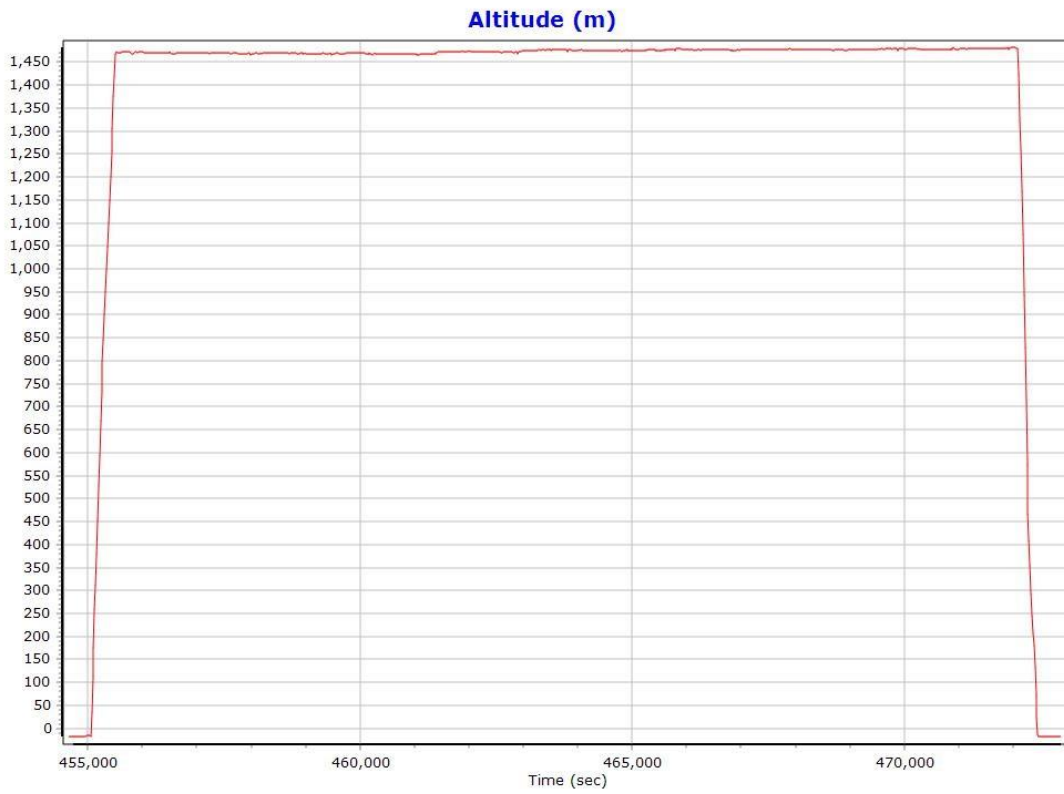


Trajectory Information

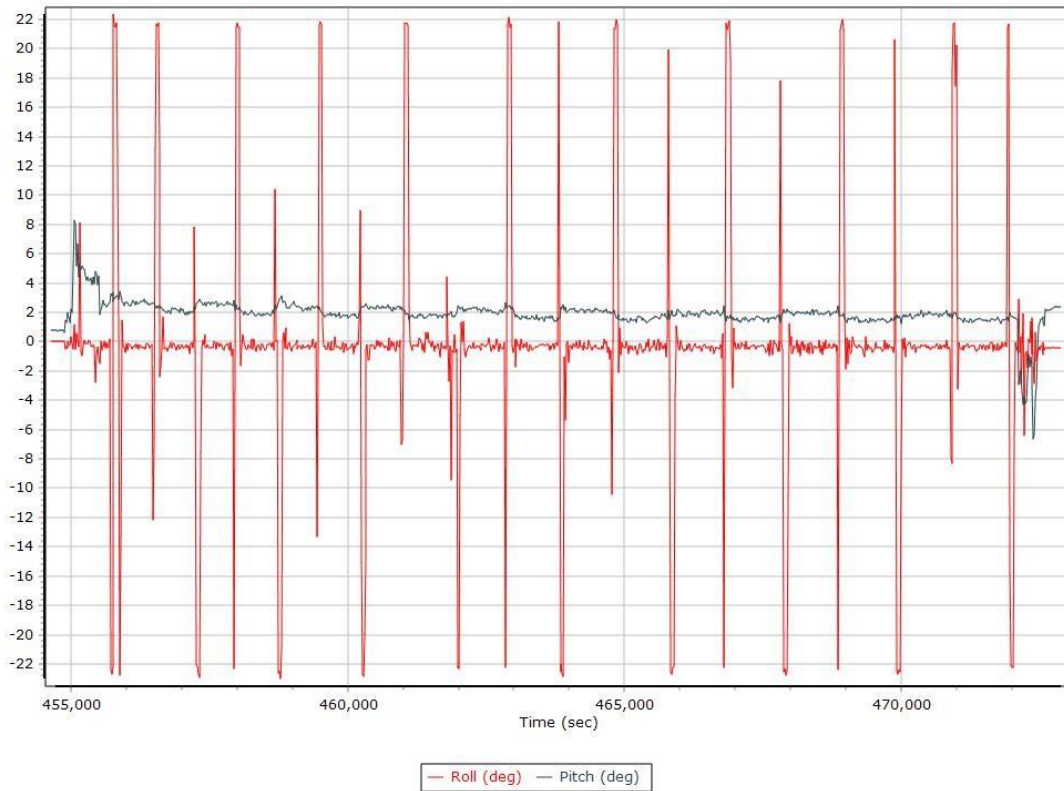
Top View



Altitude

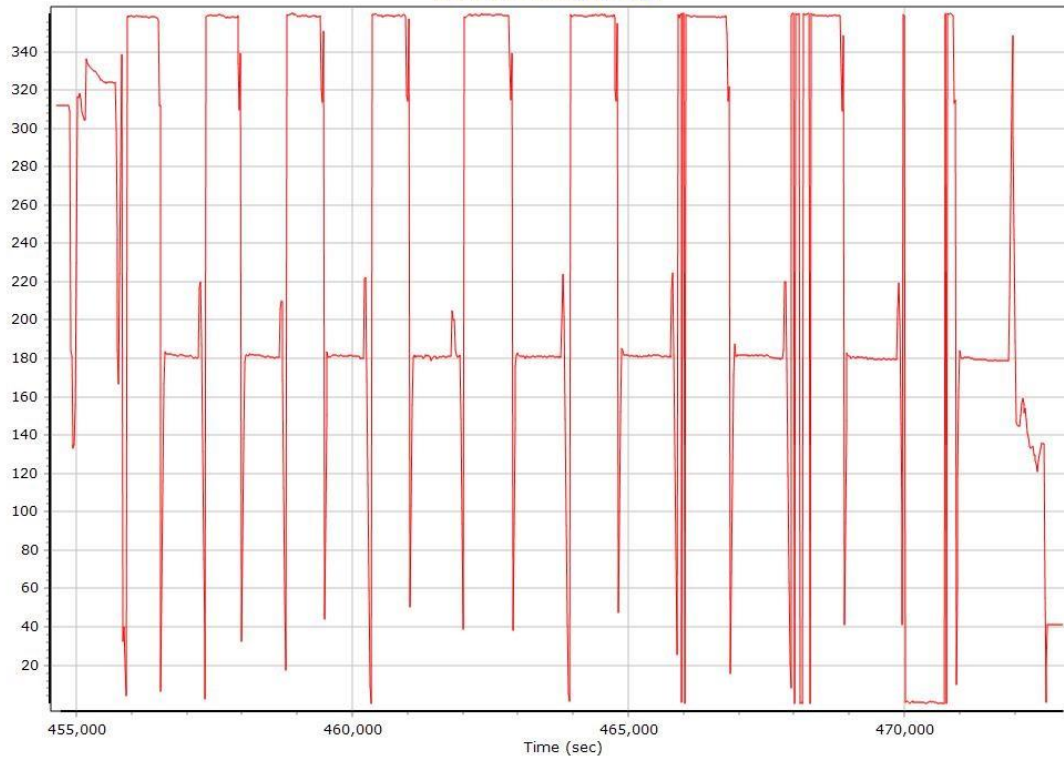


Roll/Pitch

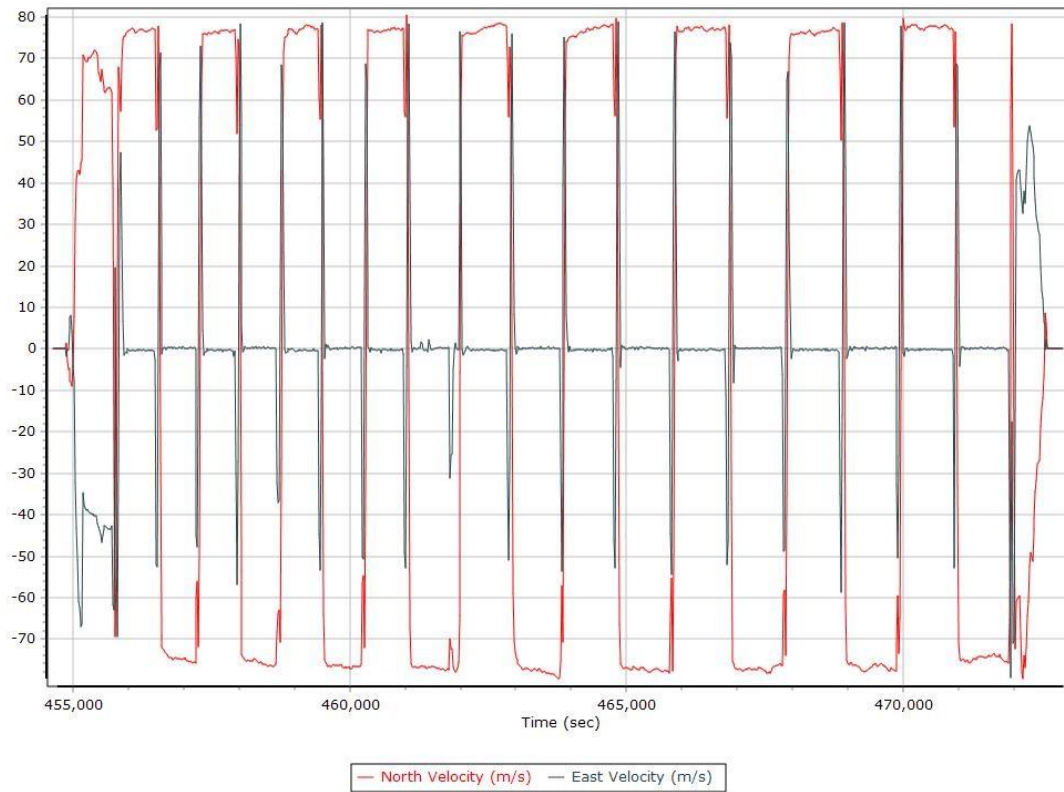


Heading

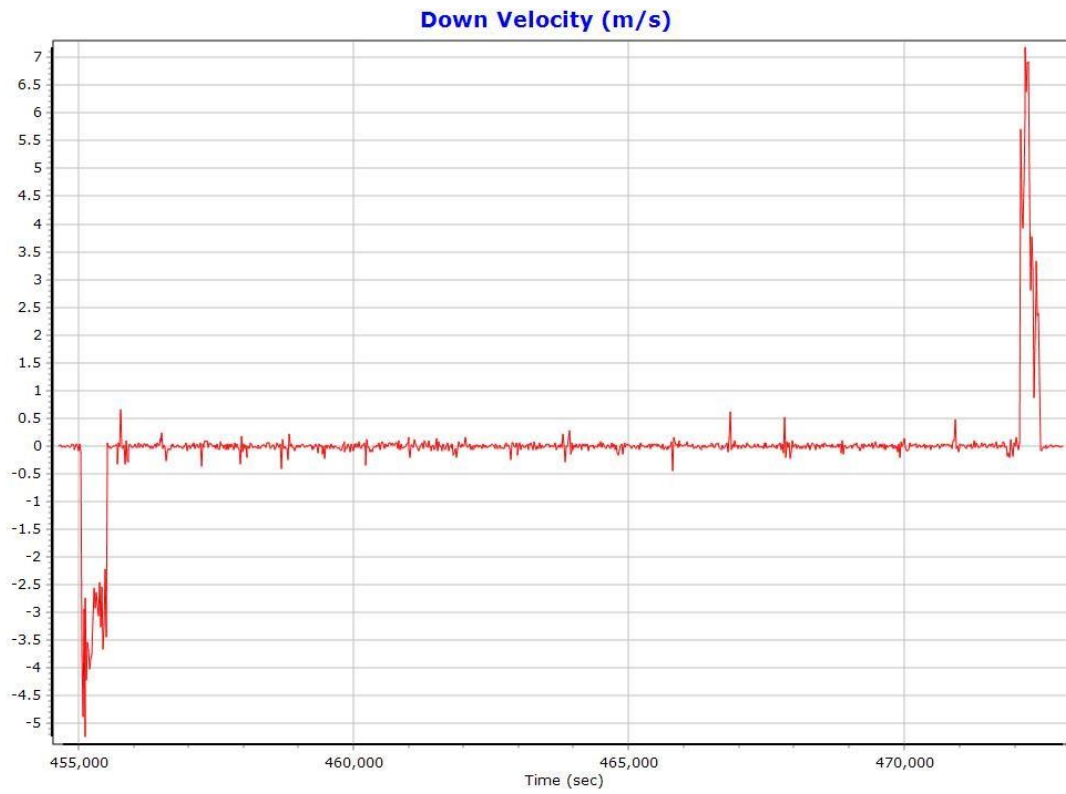
True Heading (deg)



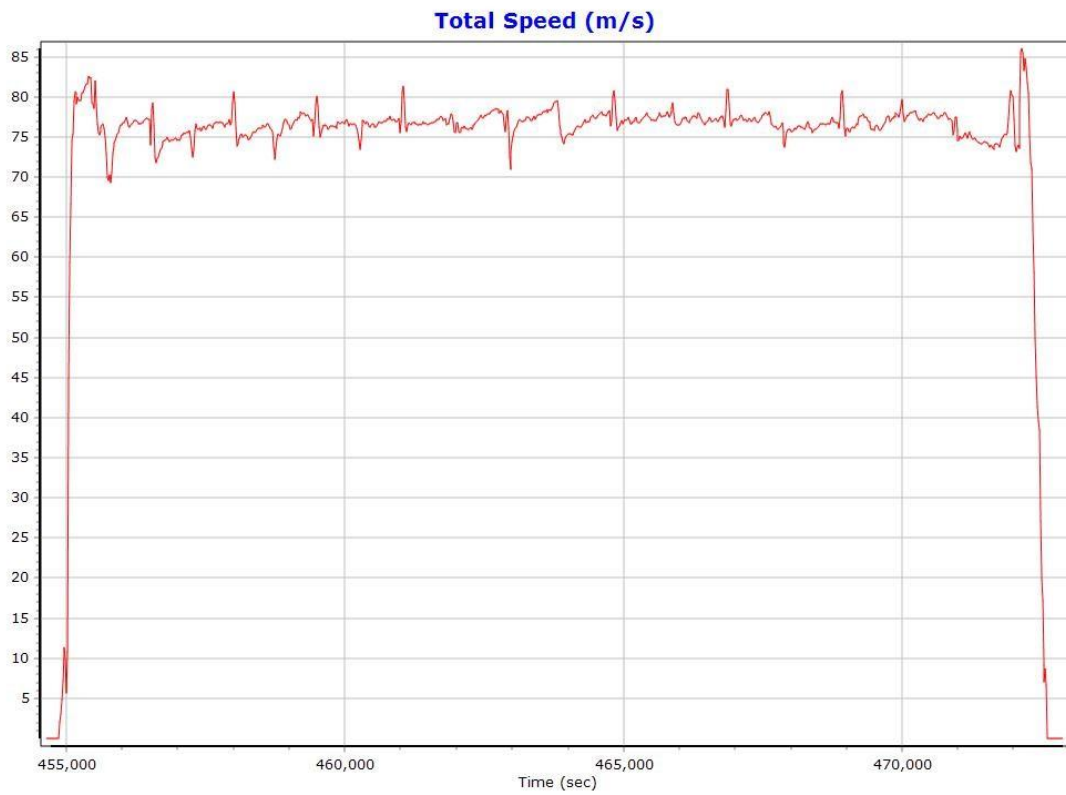
North/East Velocity



Down Velocity

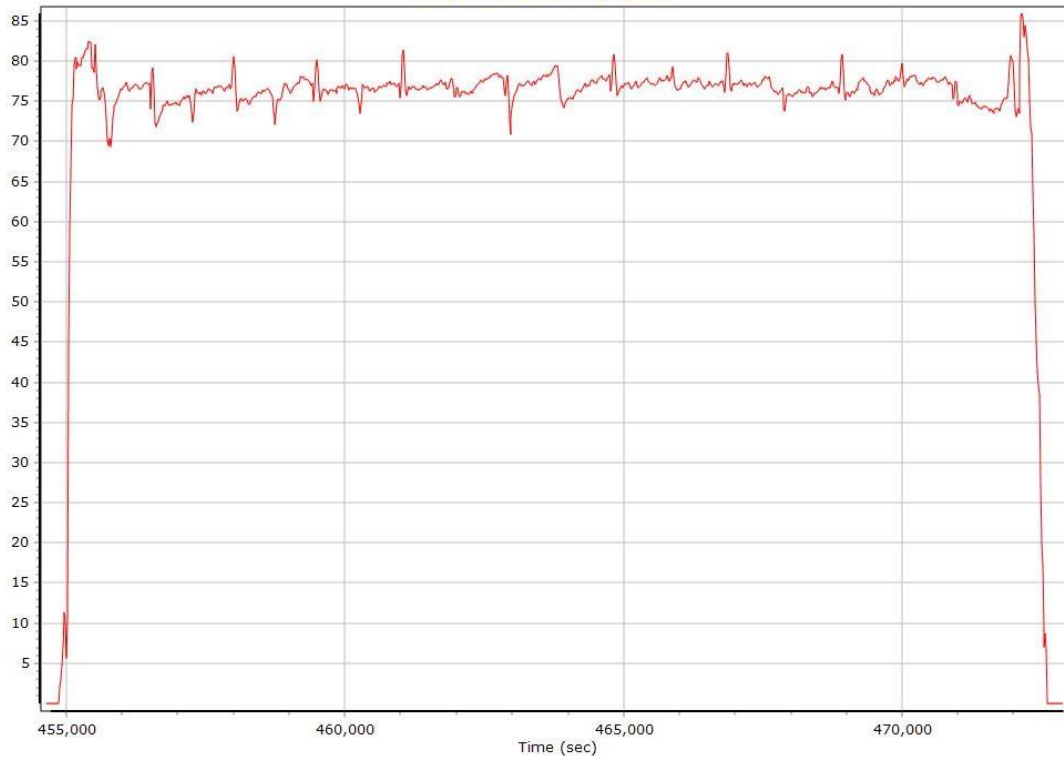


Total Speed

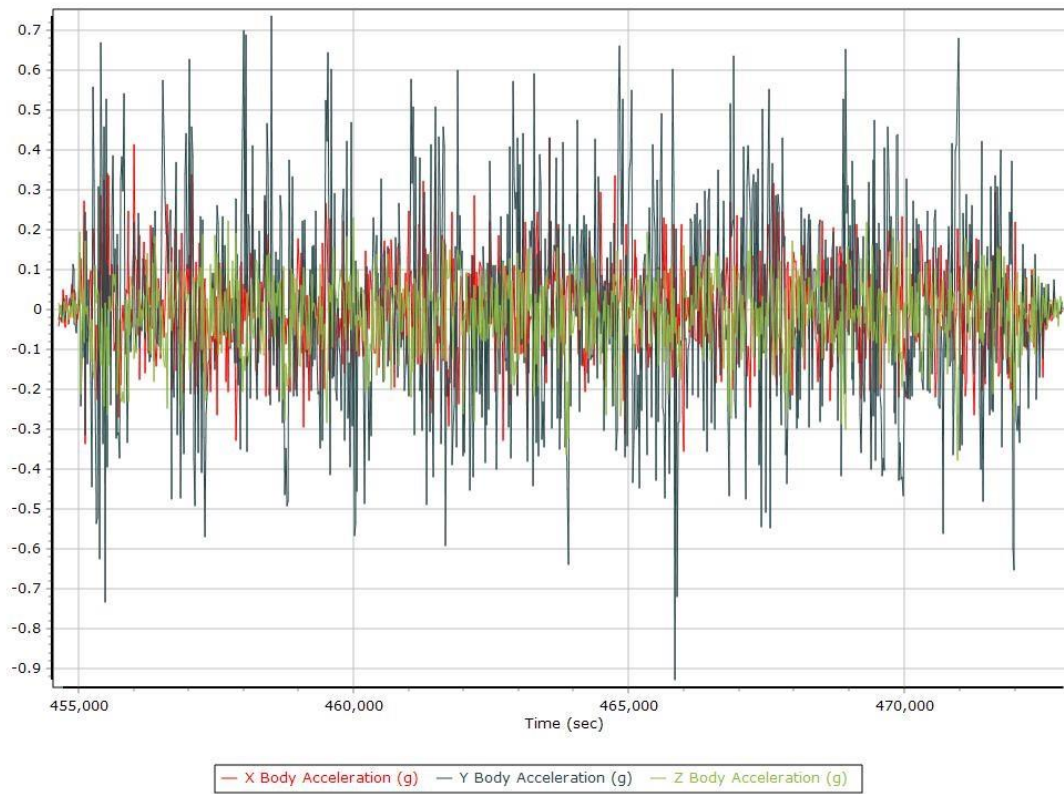


Ground Speed

Ground Speed (m/s)

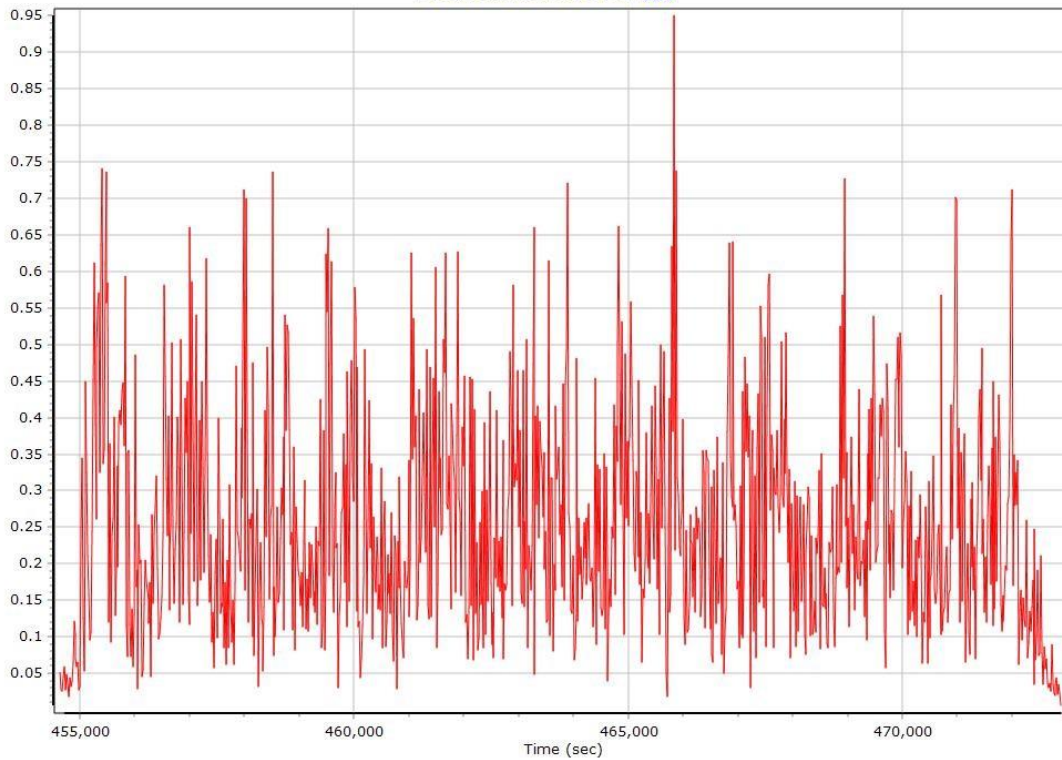


Body Acceleration

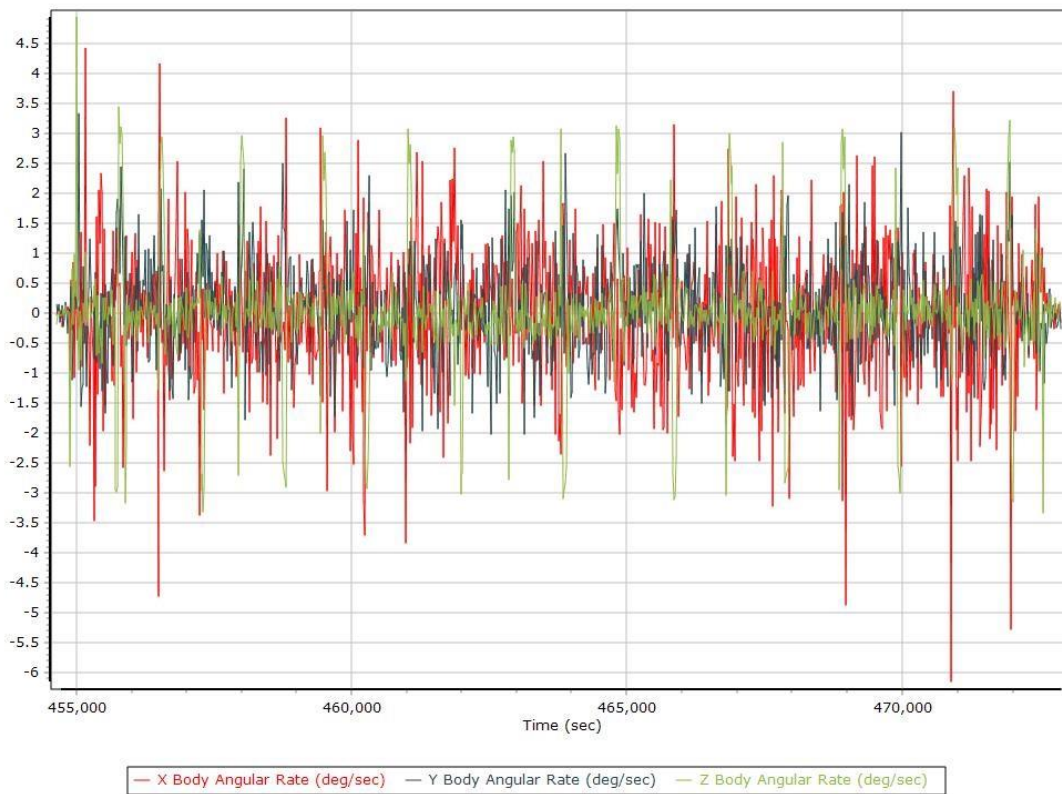


Total Body Acceleration

Total Acceleration (g)



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
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SmartBase Results

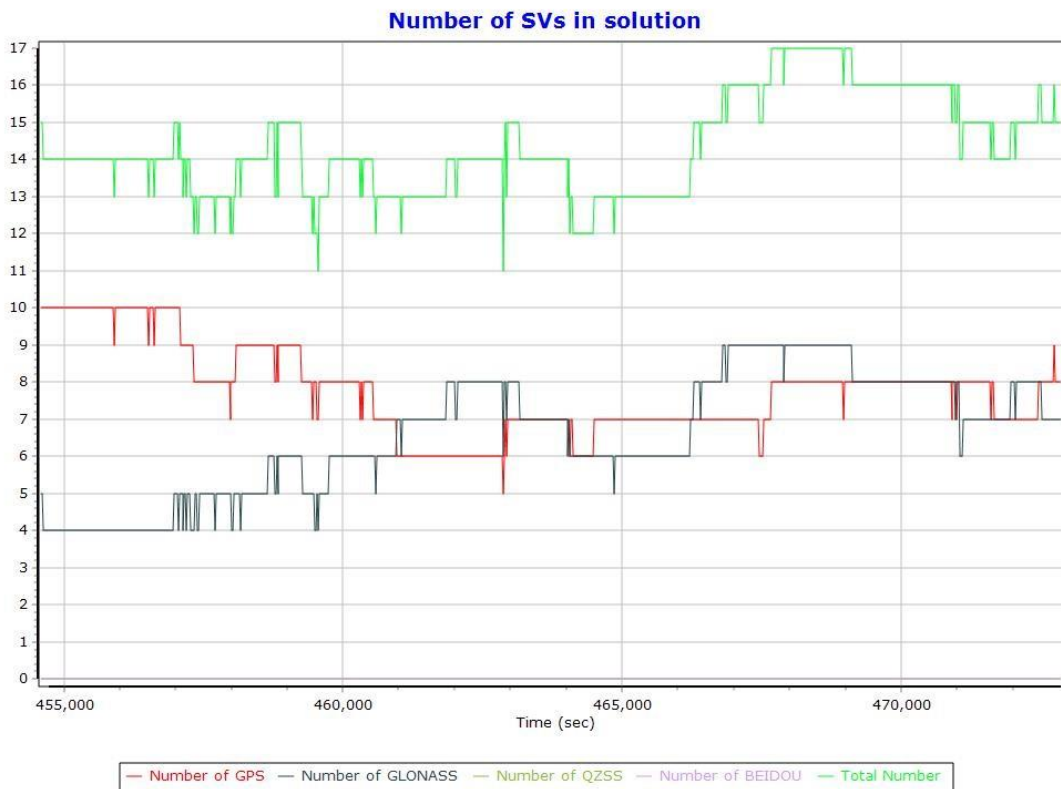
SmartBase status	
Primary station Id	
Primary station data rate [sec]	0.0
VRS/ASB generation rate [sec]	0.0
VRS/ASB timespan	
Number of reference stations	0
Primary station GPS measurement usage [%]	0.0
Average number of satellites per epoch	0.0
Max number of GPS stations used	0
Min number of GPS stations 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	

GNSS QC

GNSS QC Statistics

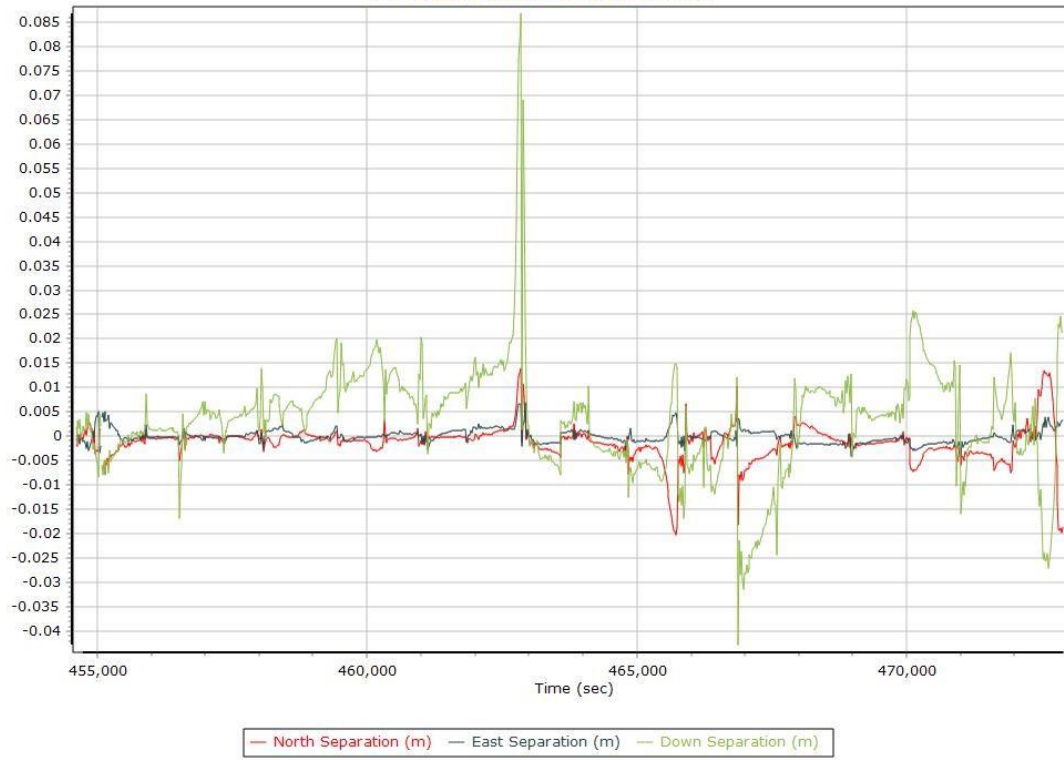
Statistics	Min	Max	Mean
Baseline length [km]	0.42	58.48	
Number of GPS SV	5	10	8
Number of GLONASS SV	0	9	7
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	10	17	14
PDOP	1.17	2.50	1.65
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	18316.00	0.00	1.00
Percentage	99.99	0.00	0.01

Num SVs in solution



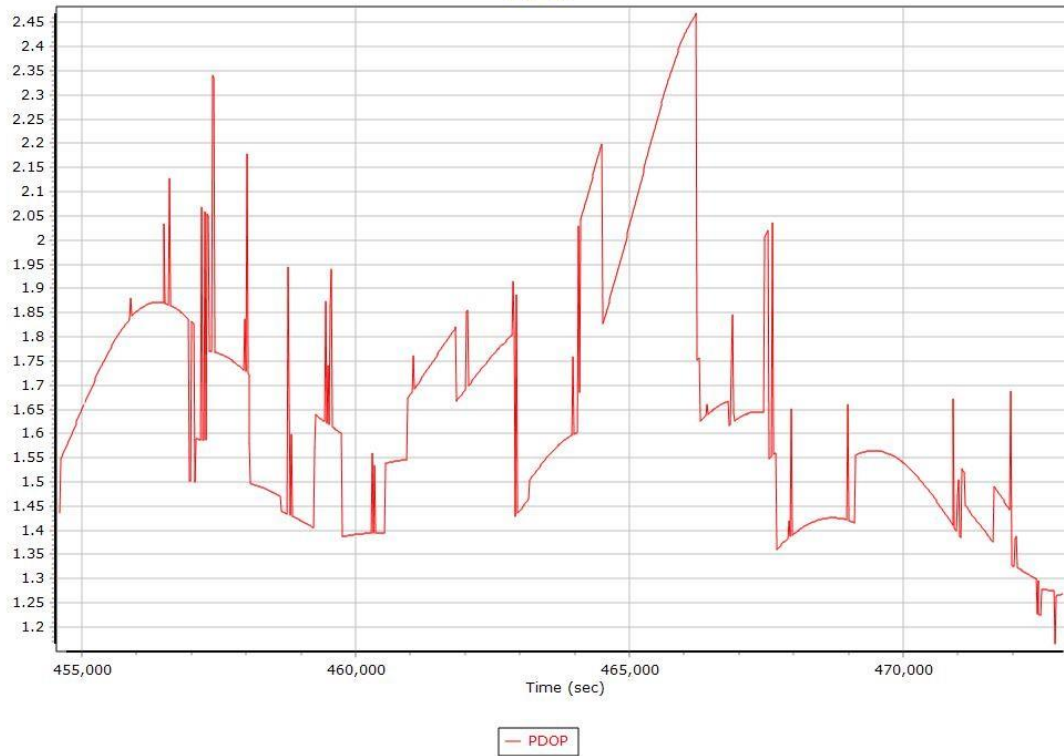
Forward/Reverse Separation

Forward/Reverse Separation



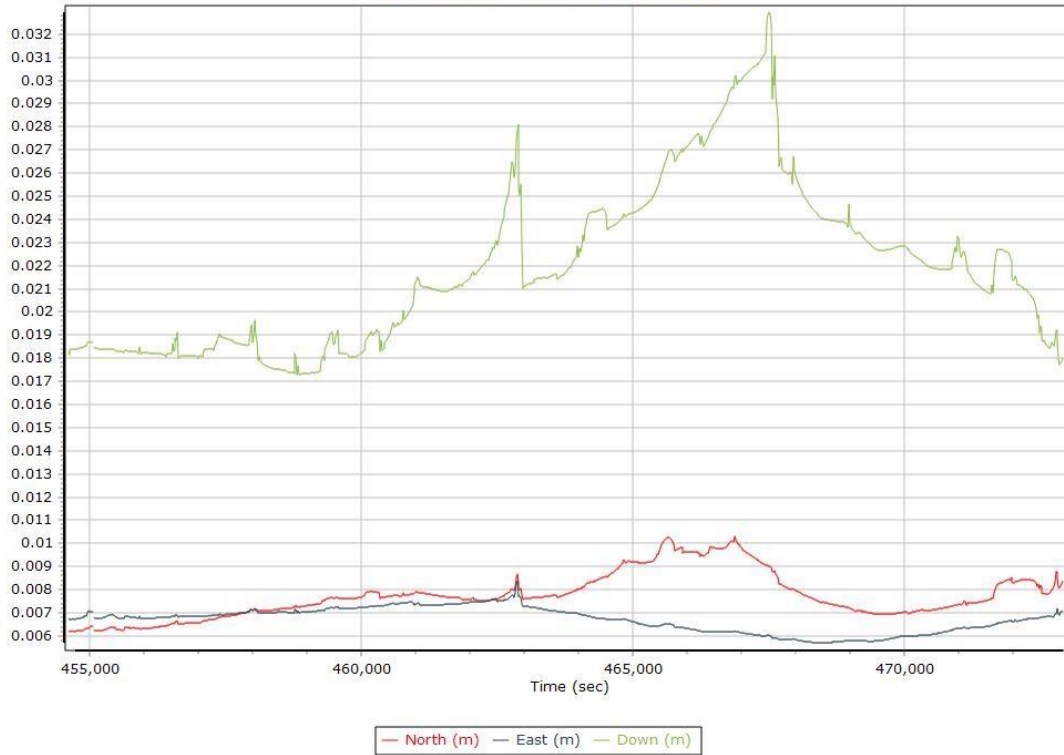
PDOP

PDOP

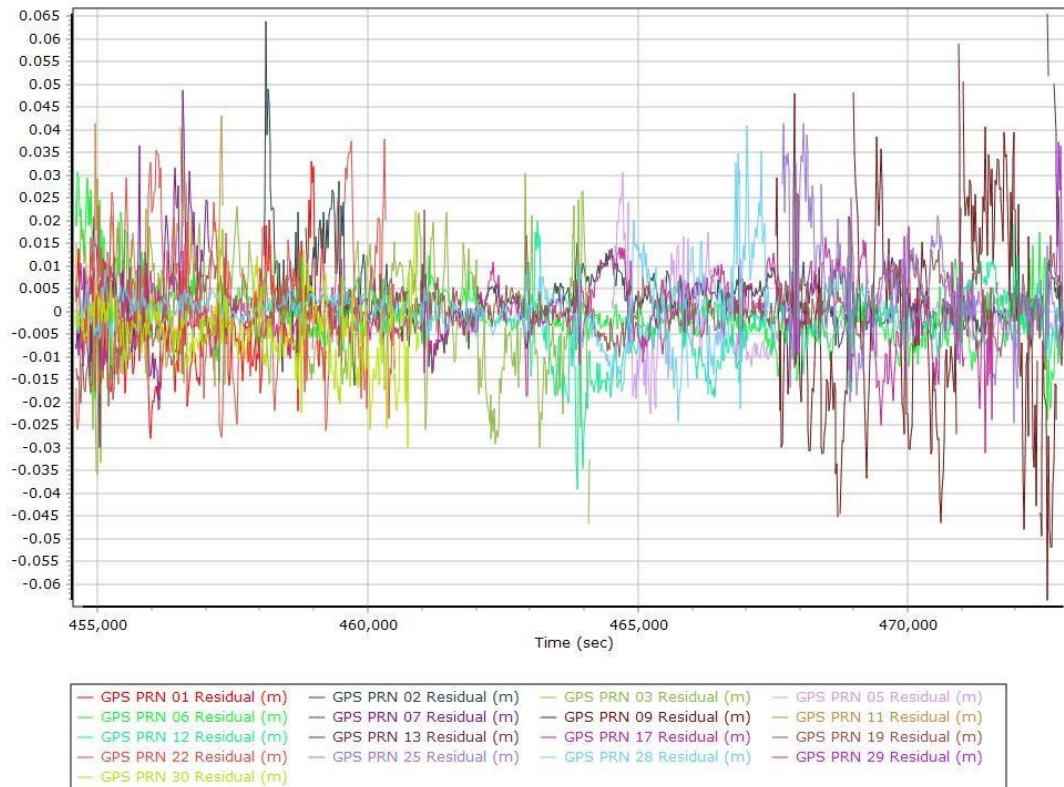


Estimated Position Accuracy

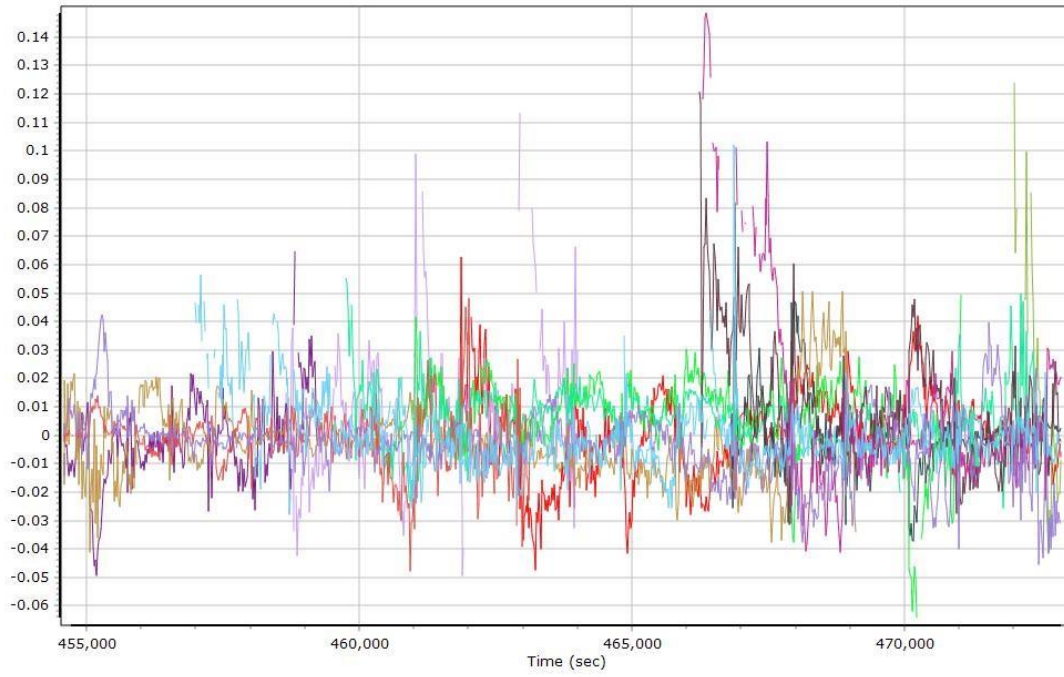
Estimated Position Accuracy



GPS Residuals



GLONASS Residuals



- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GLONASS 01 Residual (m) | GLONASS 02 Residual (m) | GLONASS 03 Residual (m) | GLONASS 07 Residual (m) |
| GLONASS 08 Residual (m) | GLONASS 11 Residual (m) | GLONASS 12 Residual (m) | GLONASS 13 Residual (m) |
| GLONASS 14 Residual (m) | GLONASS 15 Residual (m) | GLONASS 17 Residual (m) | GLONASS 21 Residual (m) |
| GLONASS 22 Residual (m) | GLONASS 23 Residual (m) | GLONASS 24 Residual (m) | |

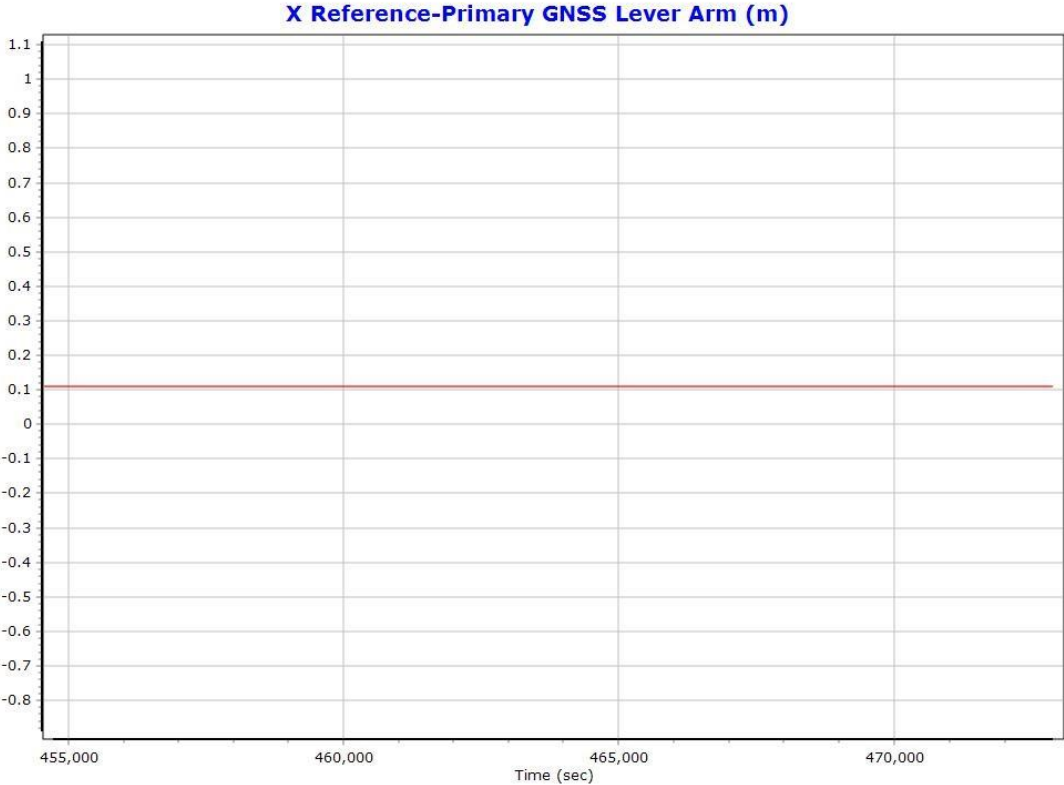
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	False		
Base station	ASB		
Processing start time	454555.000 (12/7/2018 6:15:55 AM)		
Processing end time	472909.000 (12/7/2018 11:21:49 AM)		
Initial attitude source	GYRO Compass		
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]	0.110	-0.138	-0.963
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

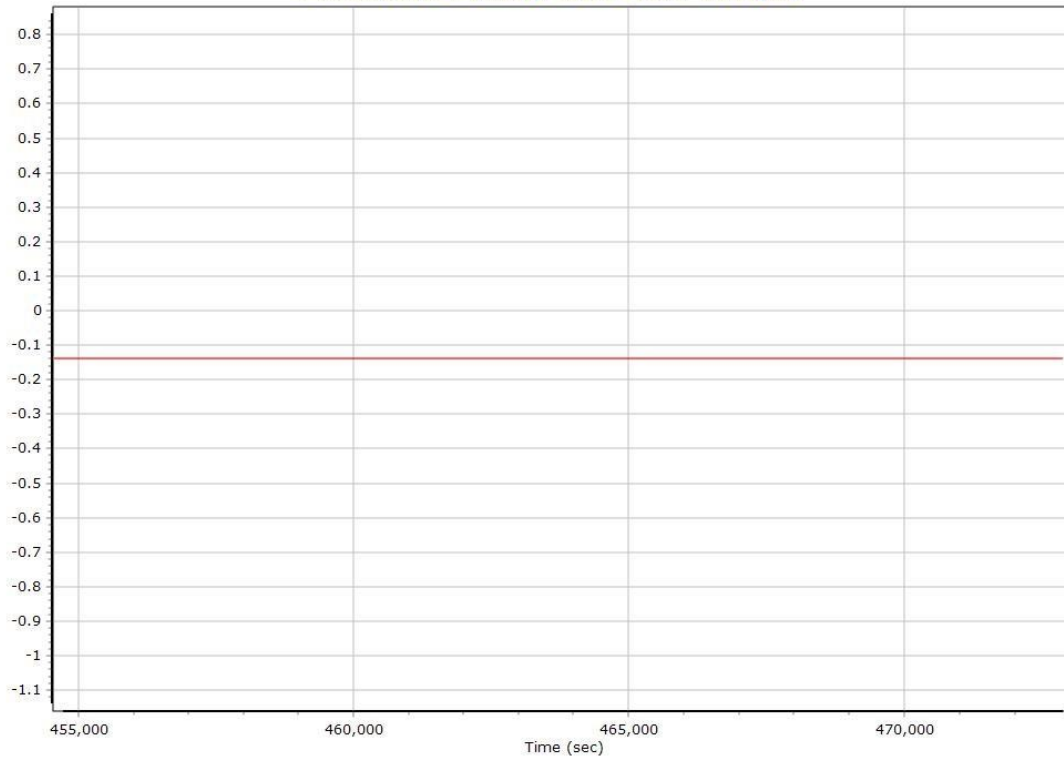
Reference-Primary GNSS Lever Arm

X Reference -Primary GNSS Lever Arm (m)



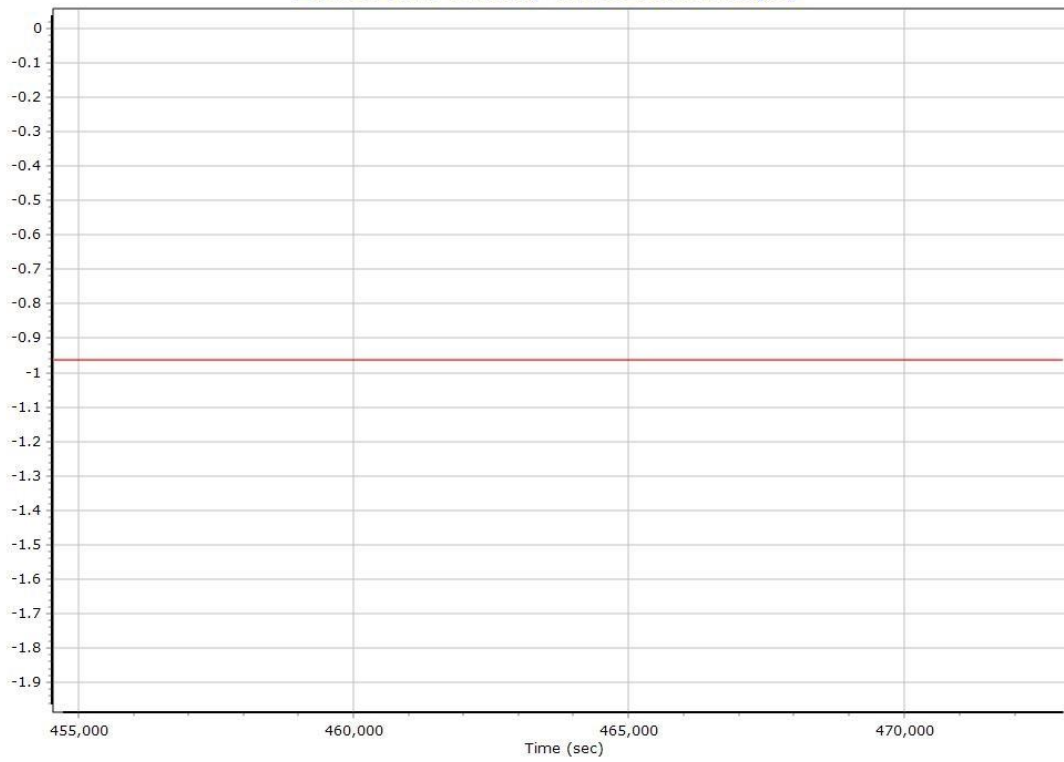
Y Reference-Primary GNSS Lever Arm (m)

Y Reference-Primary GNSS Lever Arm (m)



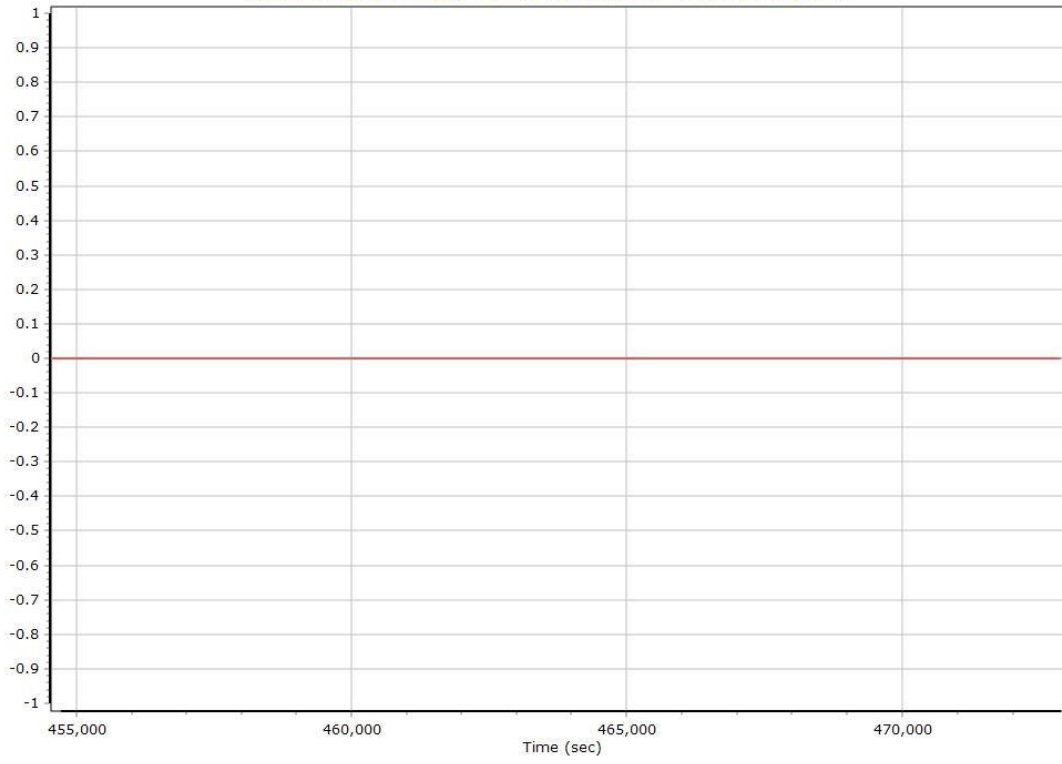
Z Reference -Primary GNSS Lever Arm (m)

Z Reference-Primary GNSS Lever Arm (m)



Reference-Primary GNSS Lever Arm Figure of Merit

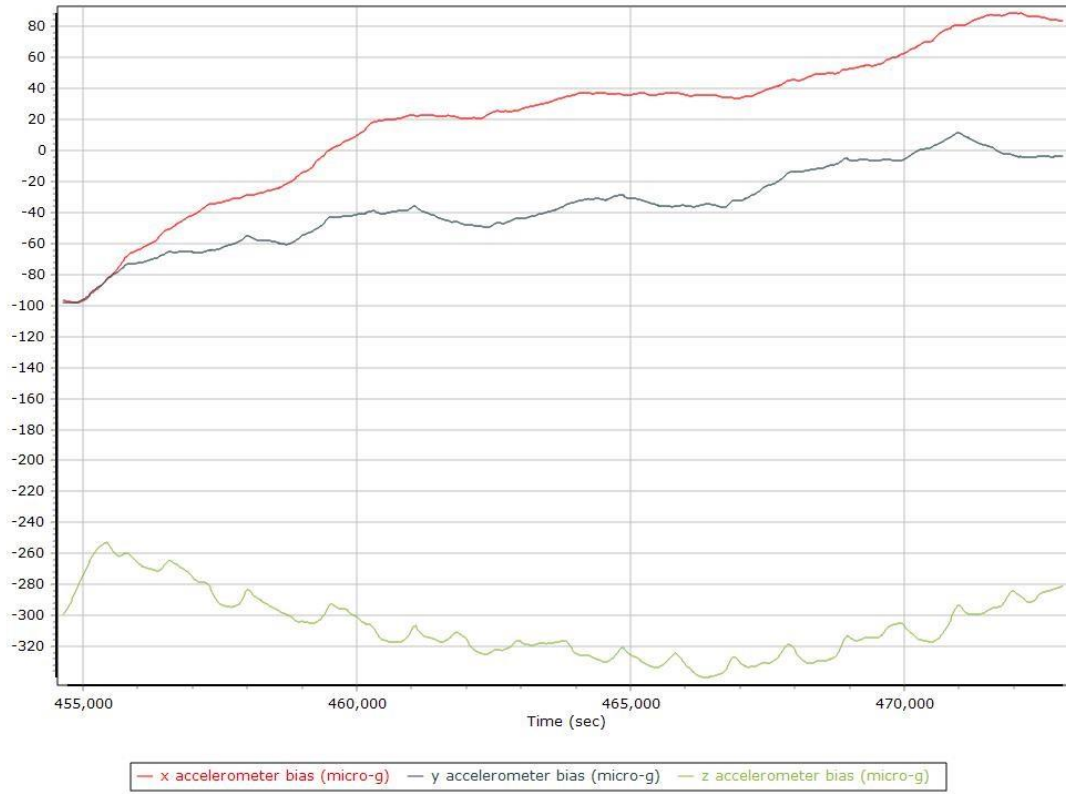
Reference-Primary GNSS Lever Arm Figure of Merit



Smoothed IN-Fusion QC

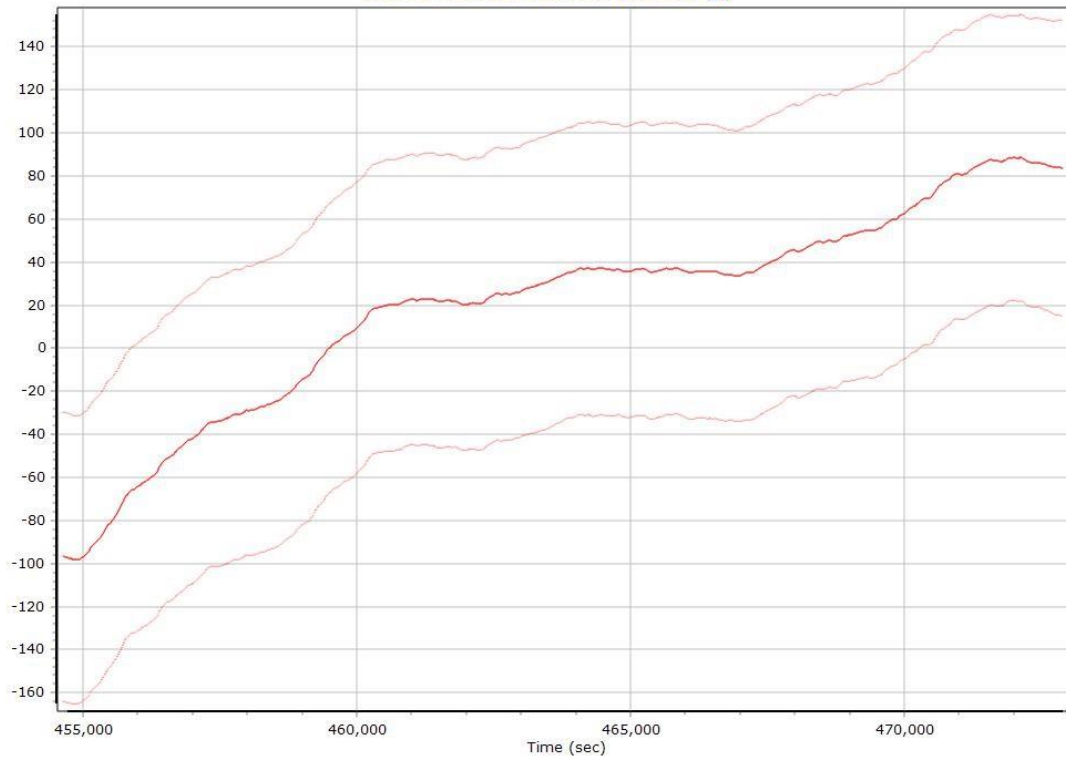
Smoothed Estimated Errors, Reference Frame

Accelerometer Bias (micro -g)



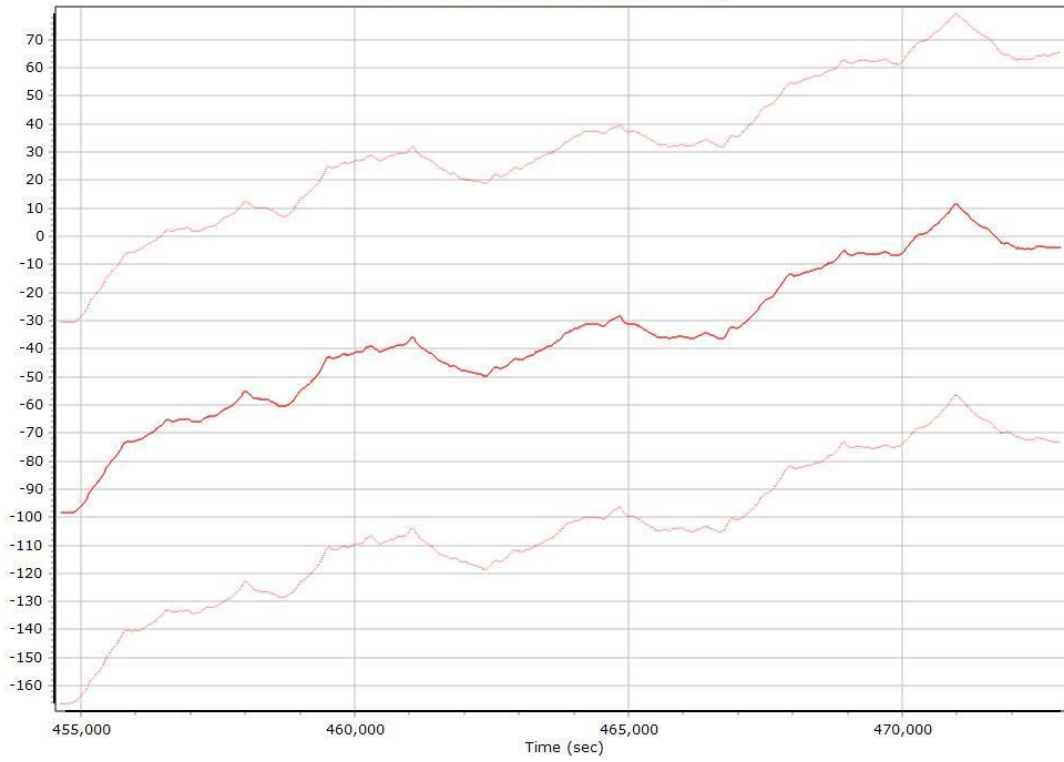
X Accelerometer Bias (micro-g)

x accelerometer bias (micro-g)



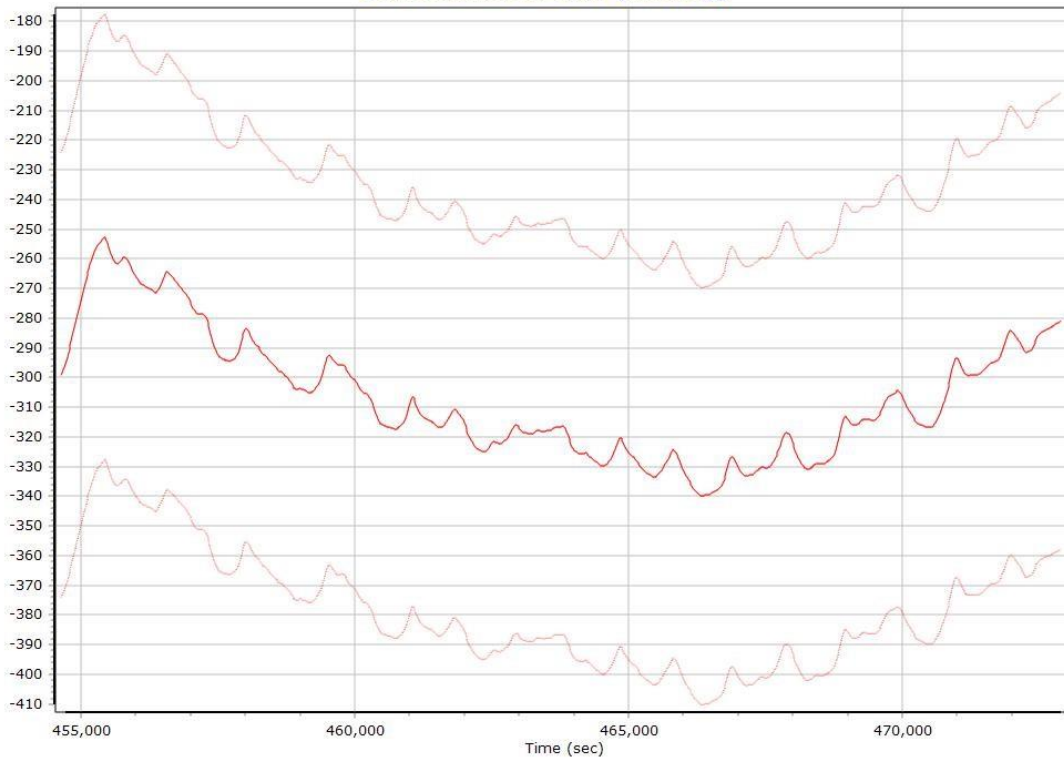
Y Accelerometer Bias (micro-g)

y accelerometer bias (micro-g)

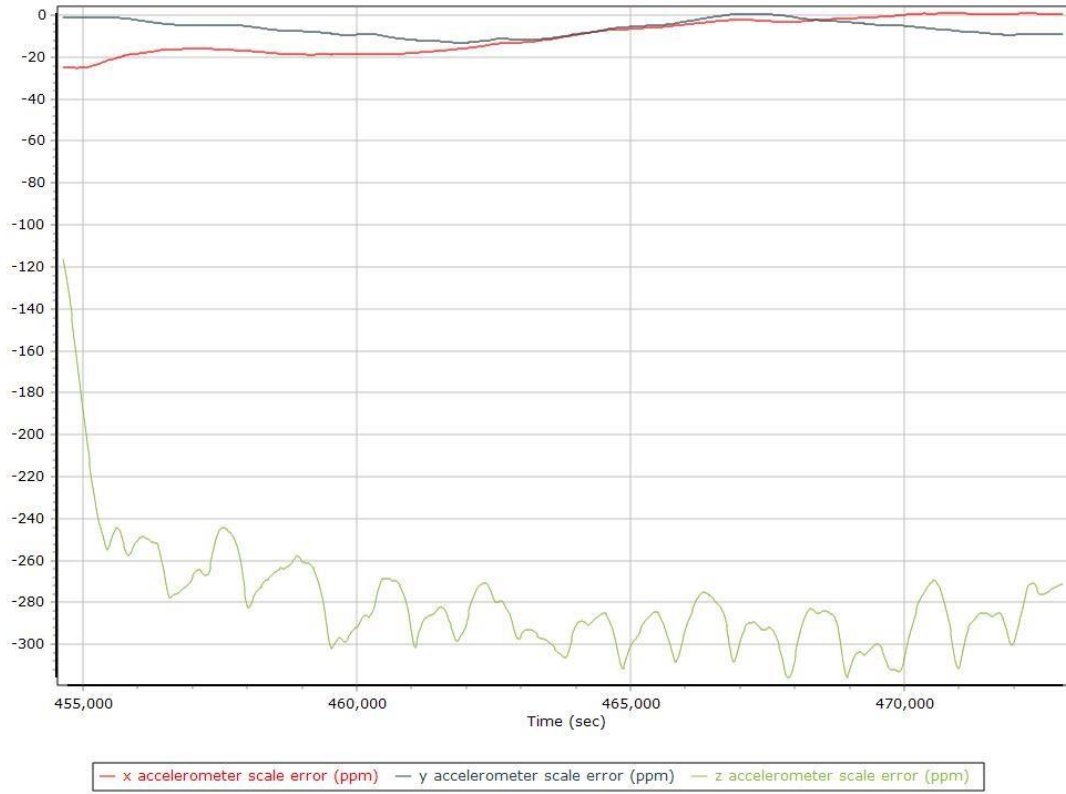


Z Accelerometer Bias (micro-g)

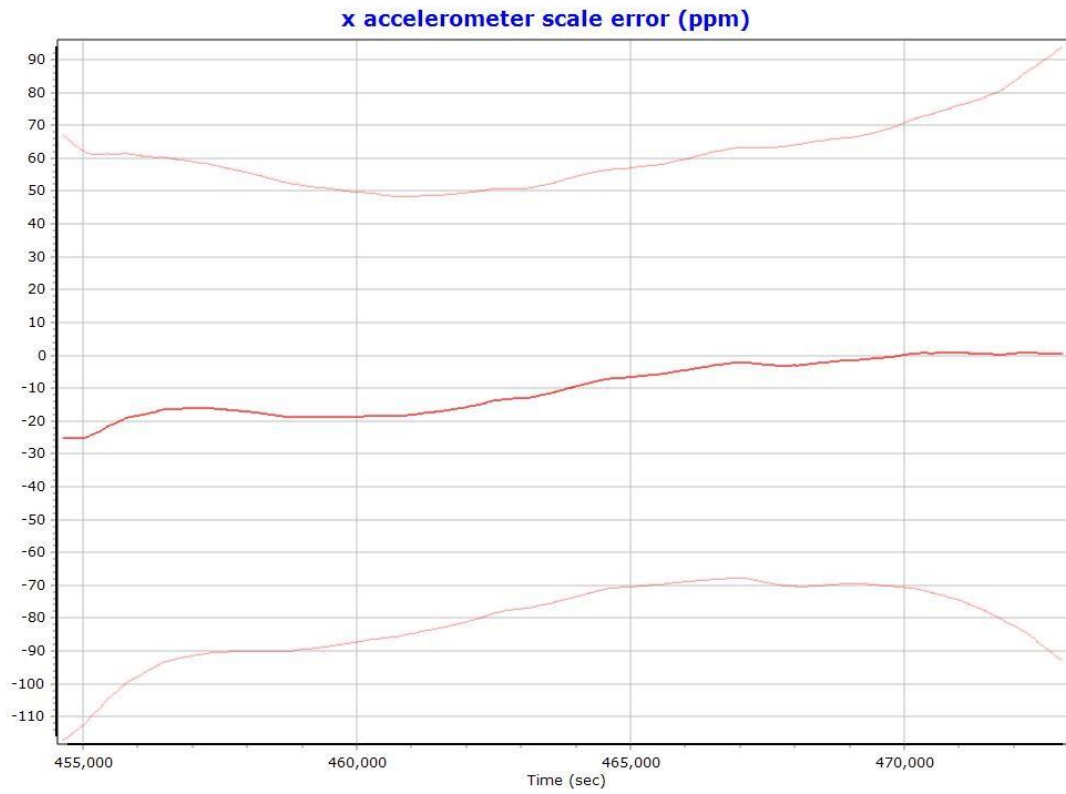
z accelerometer bias (micro-g)



Accelerometer Scale Error (ppm)

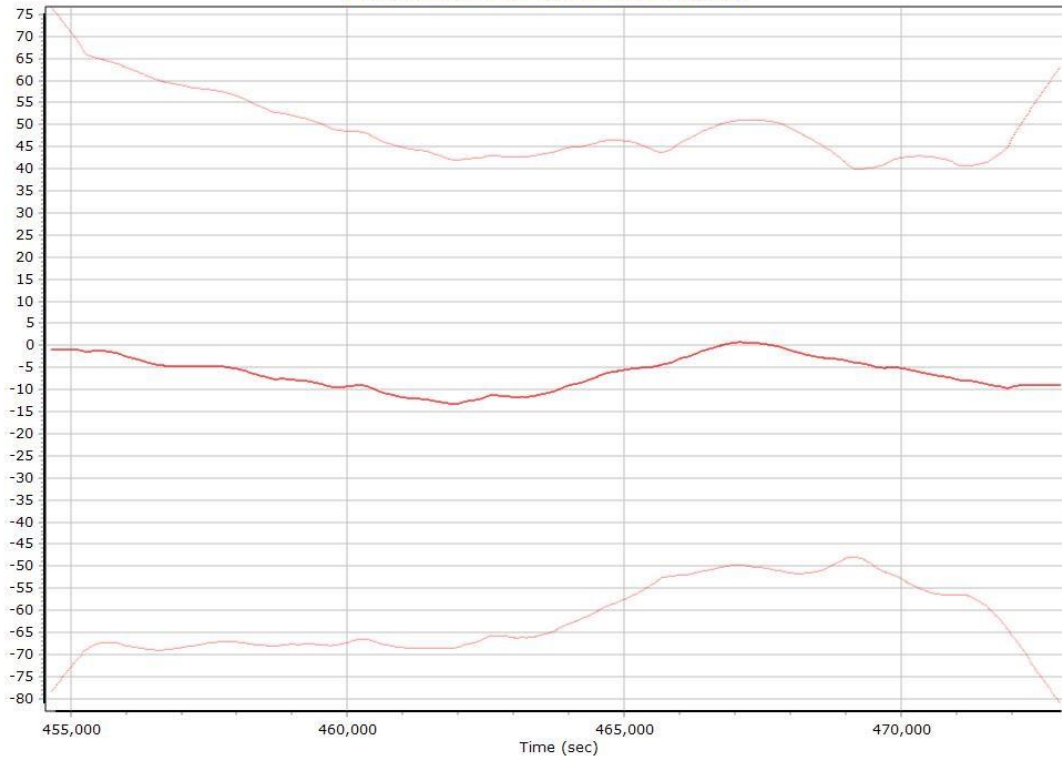


X Accelerometer Scale Error (ppm)



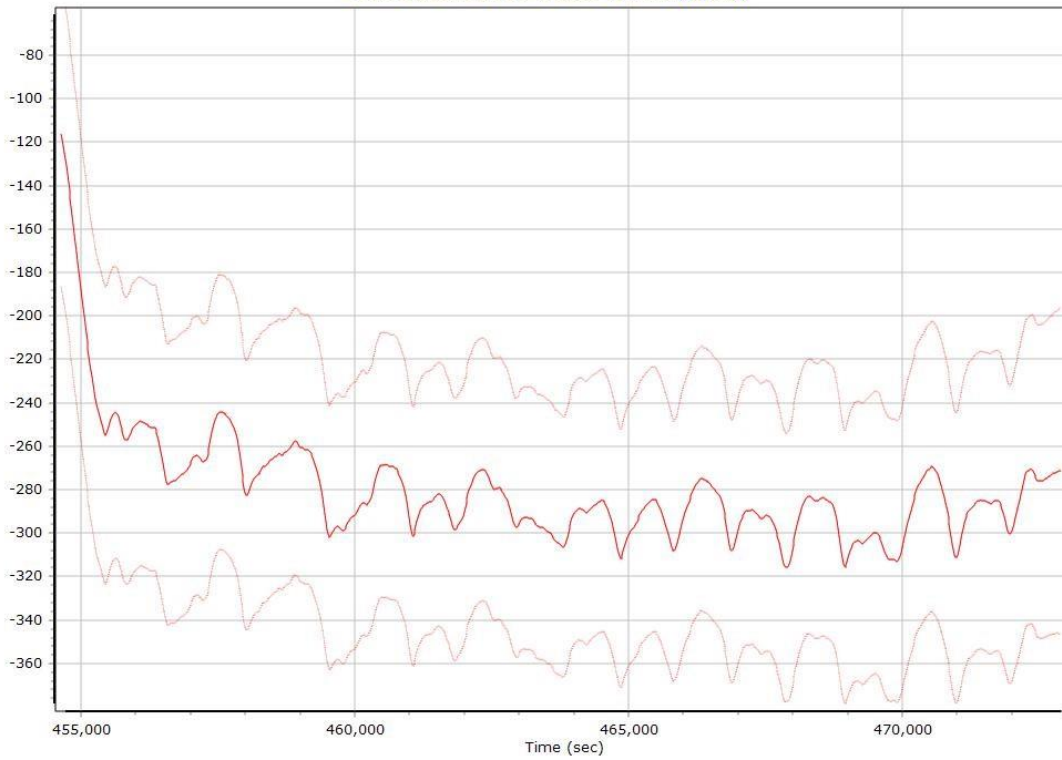
Y Accelerometer Scale Error (ppm)

y accelerometer scale error (ppm)

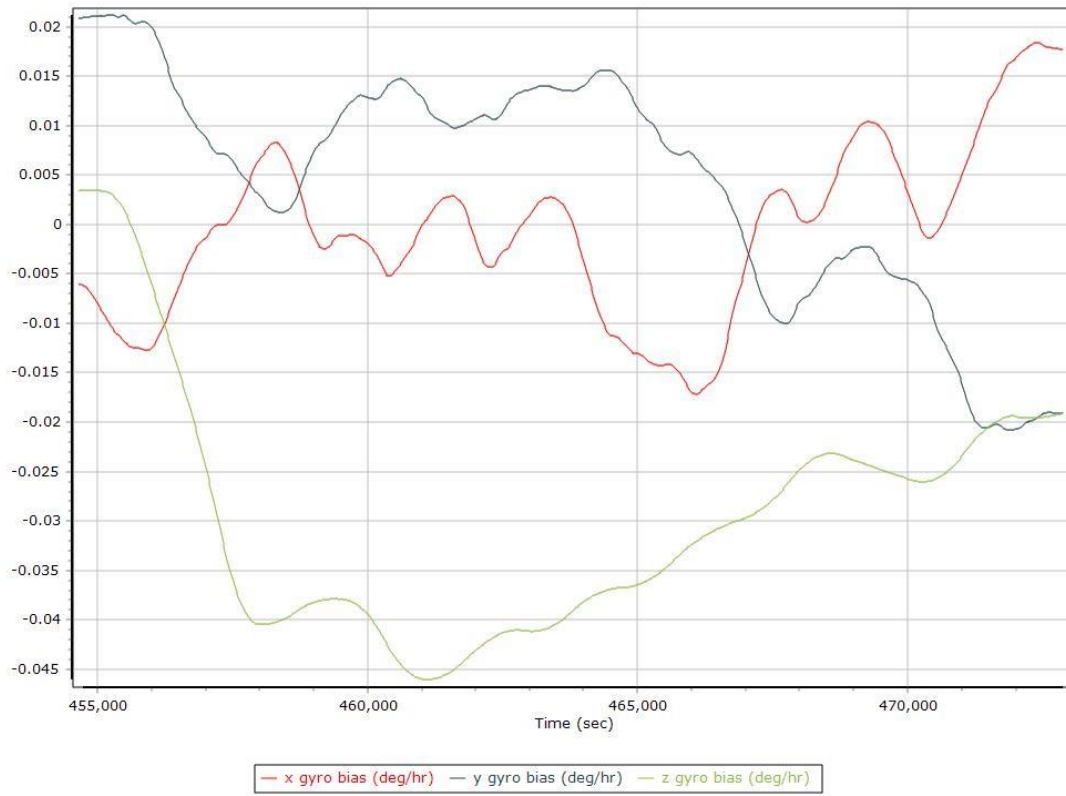


Z Accelerometer Scale Error (ppm)

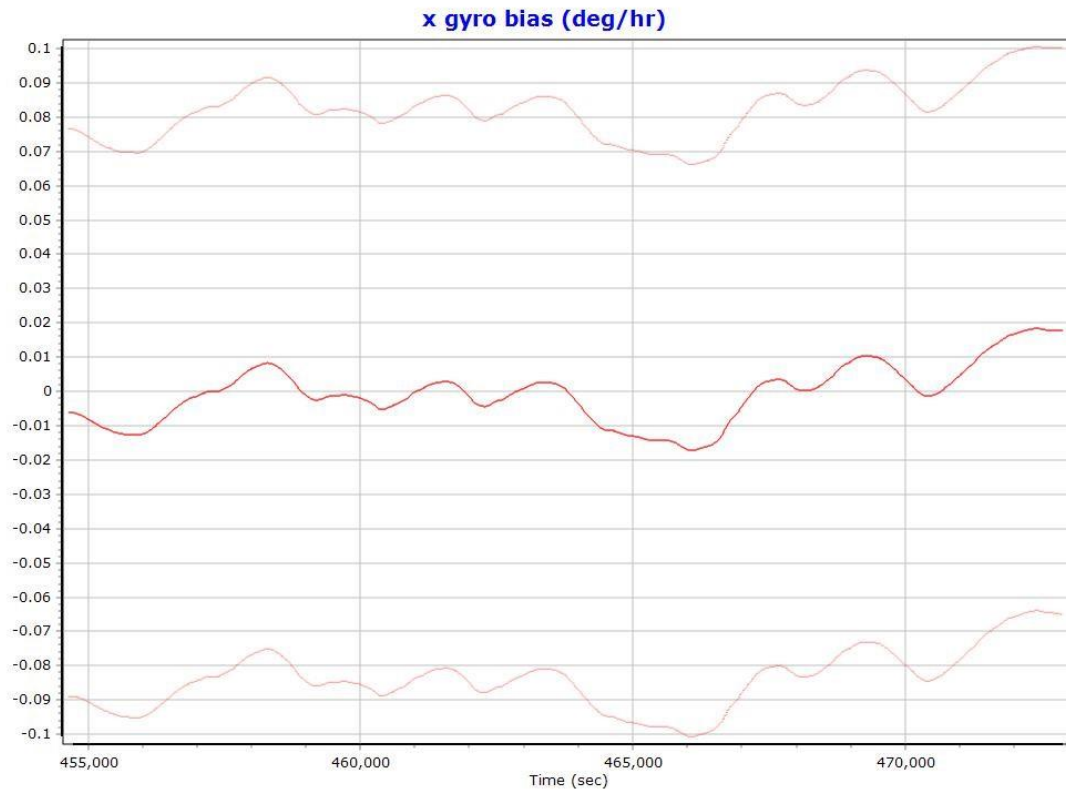
z accelerometer scale error (ppm)



Gyro Bias (deg/h)

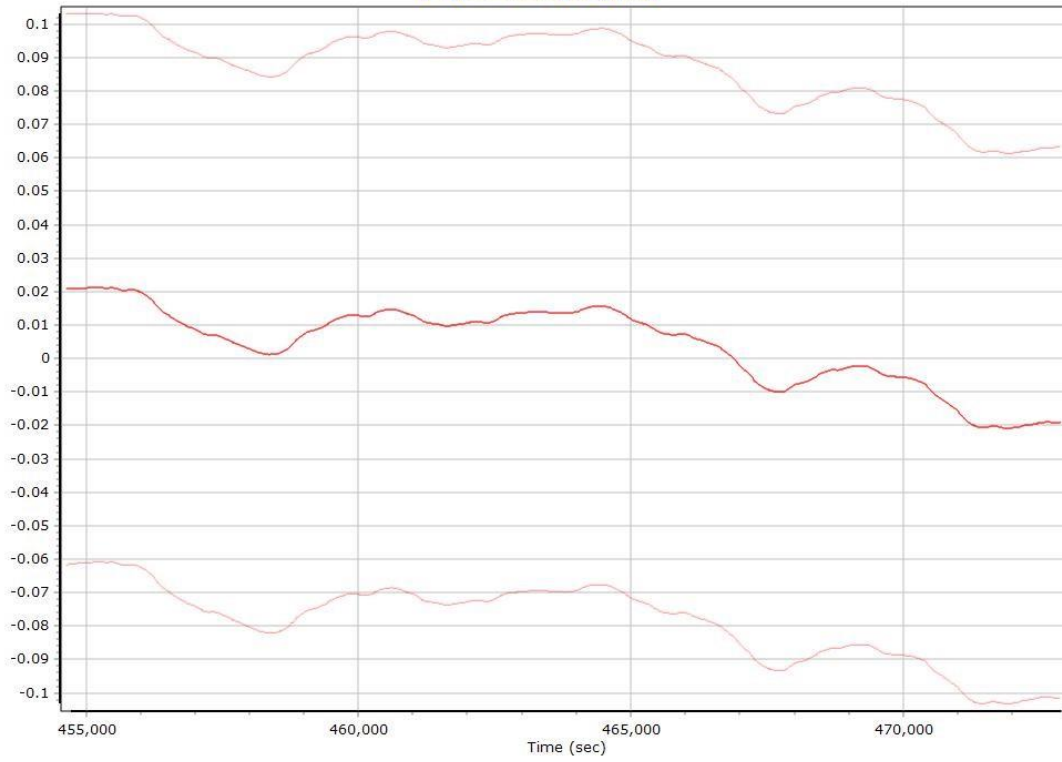


X Gyro Bias (deg/h)



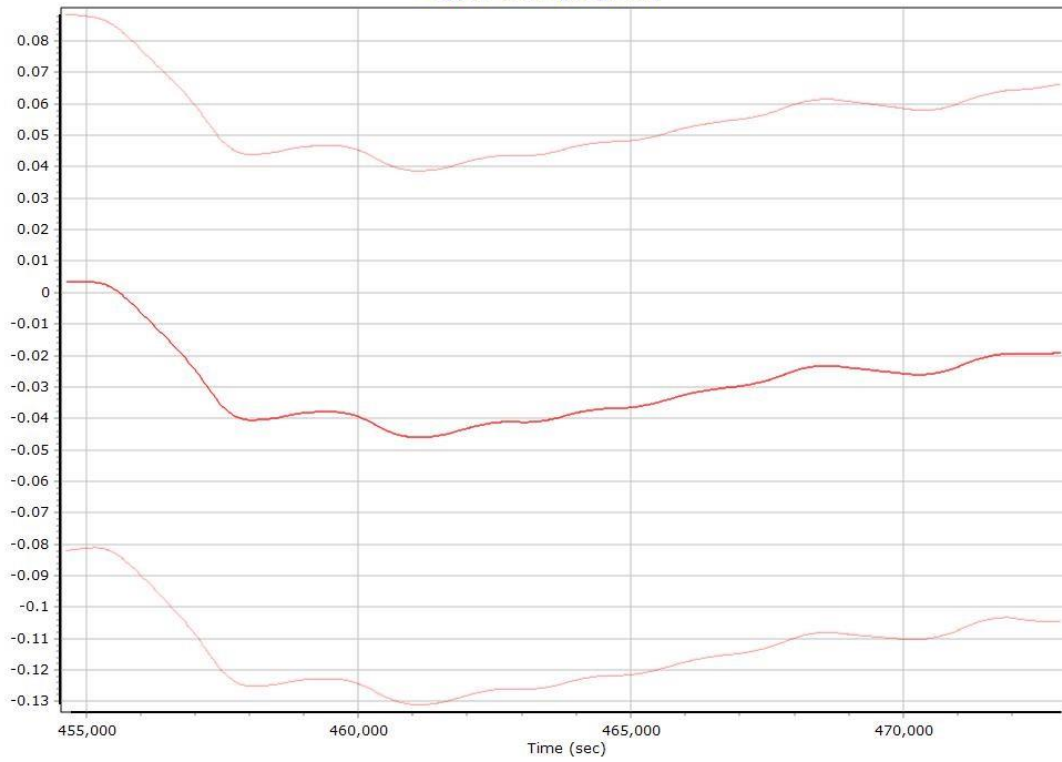
Y Gyro Bias (deg/h)

y gyro bias (deg/hr)

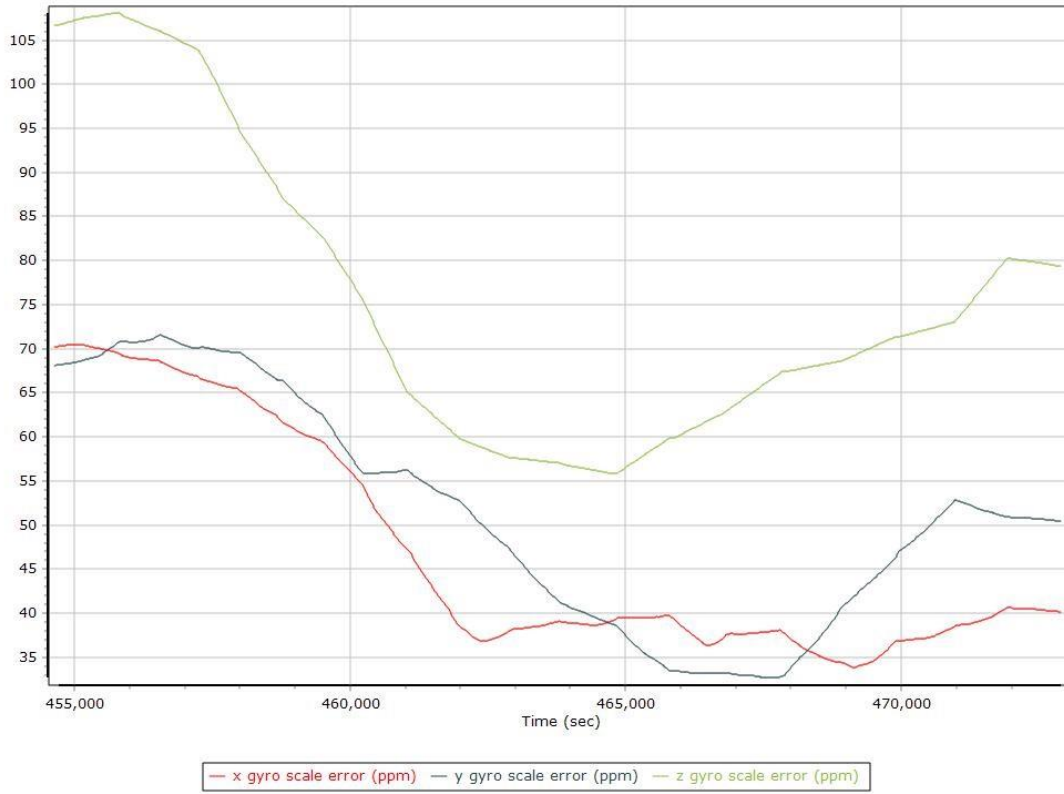


Z Gyro Bias (deg/h)

z gyro bias (deg/hr)



Gyro Scale Error (ppm)

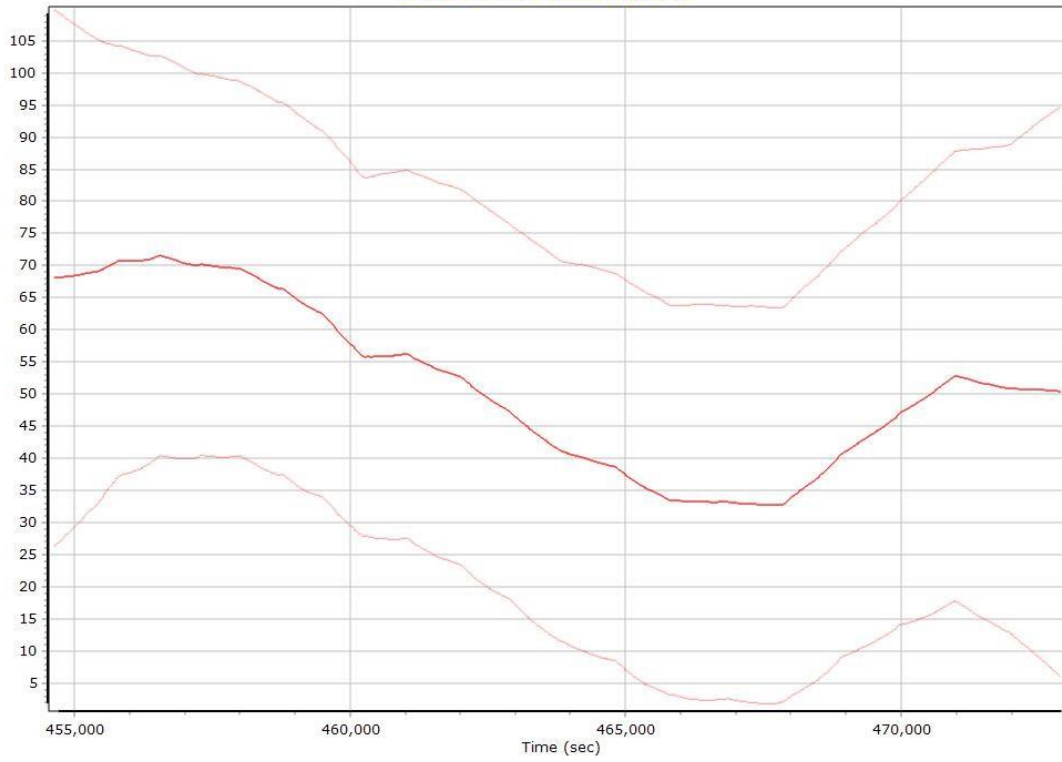


X Gyro Scale Error (ppm)



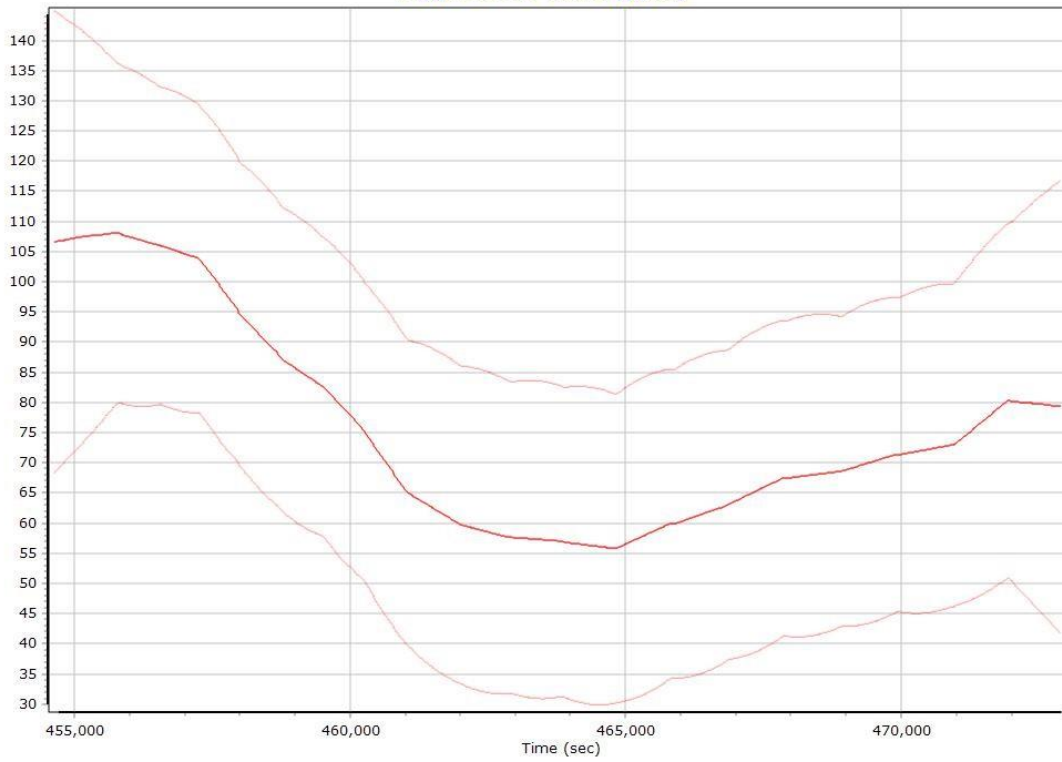
Y Gyro Scale Error (ppm)

y gyro scale error (ppm)



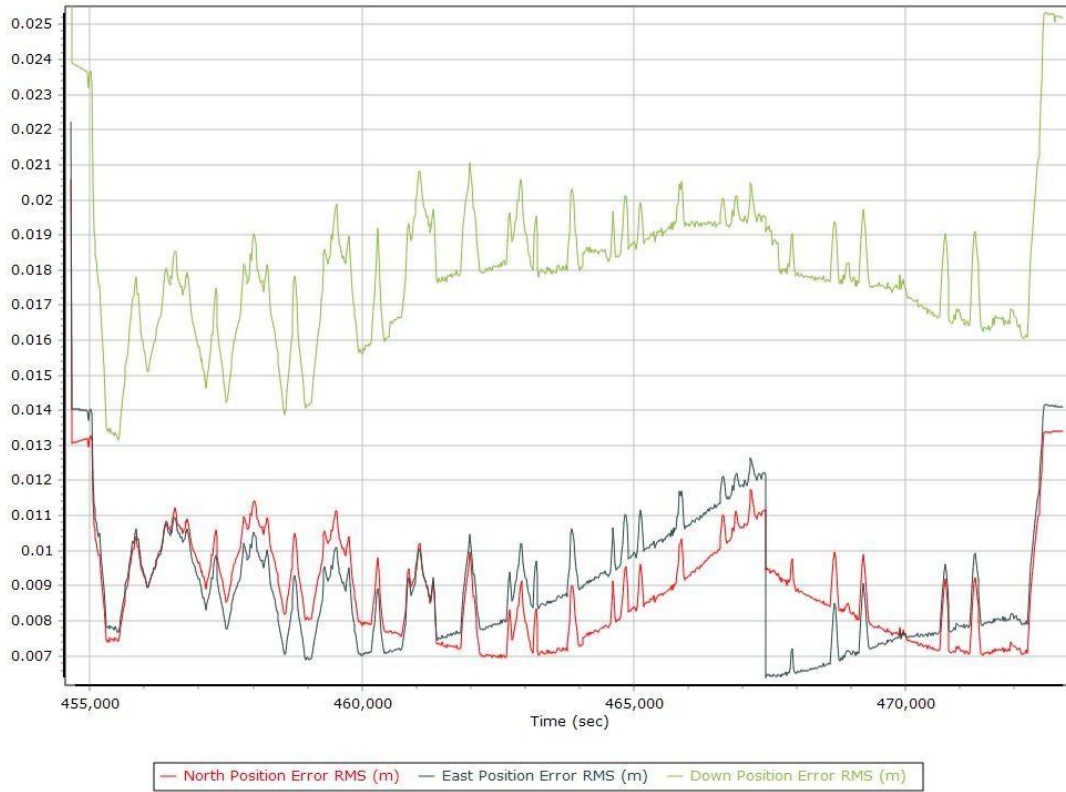
Z Gyro Scale Error (ppm)

z gyro scale error (ppm)

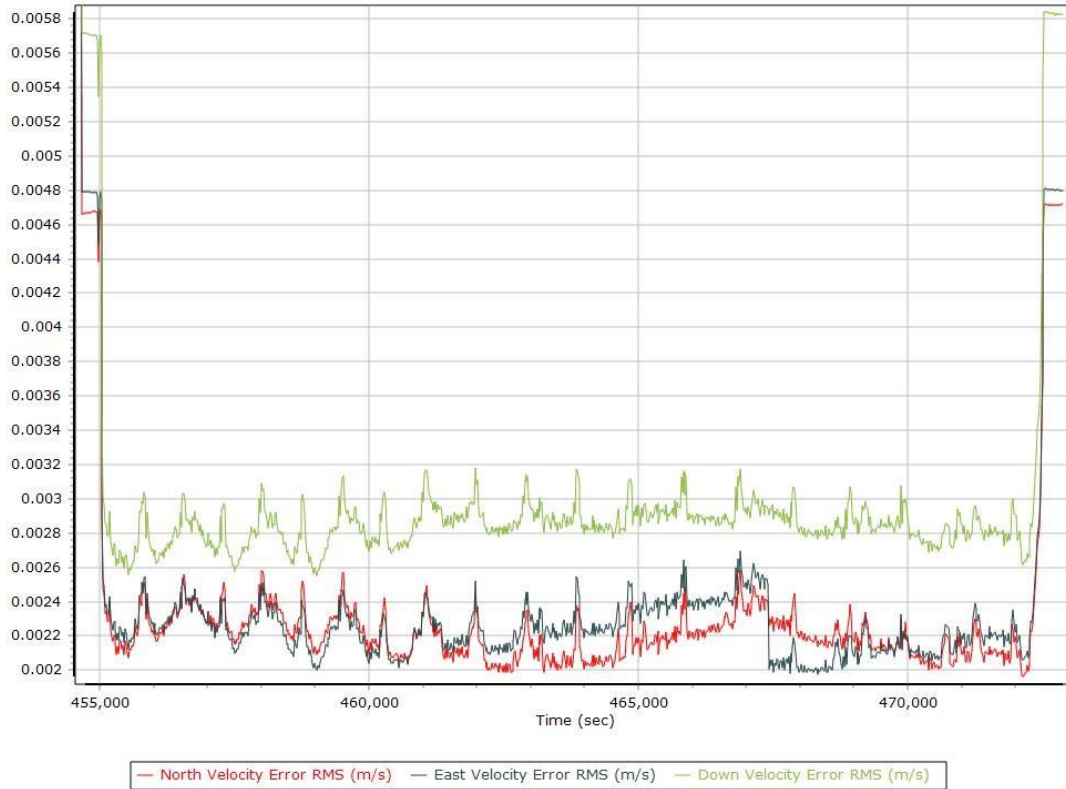


Smoothed Performance Metrics

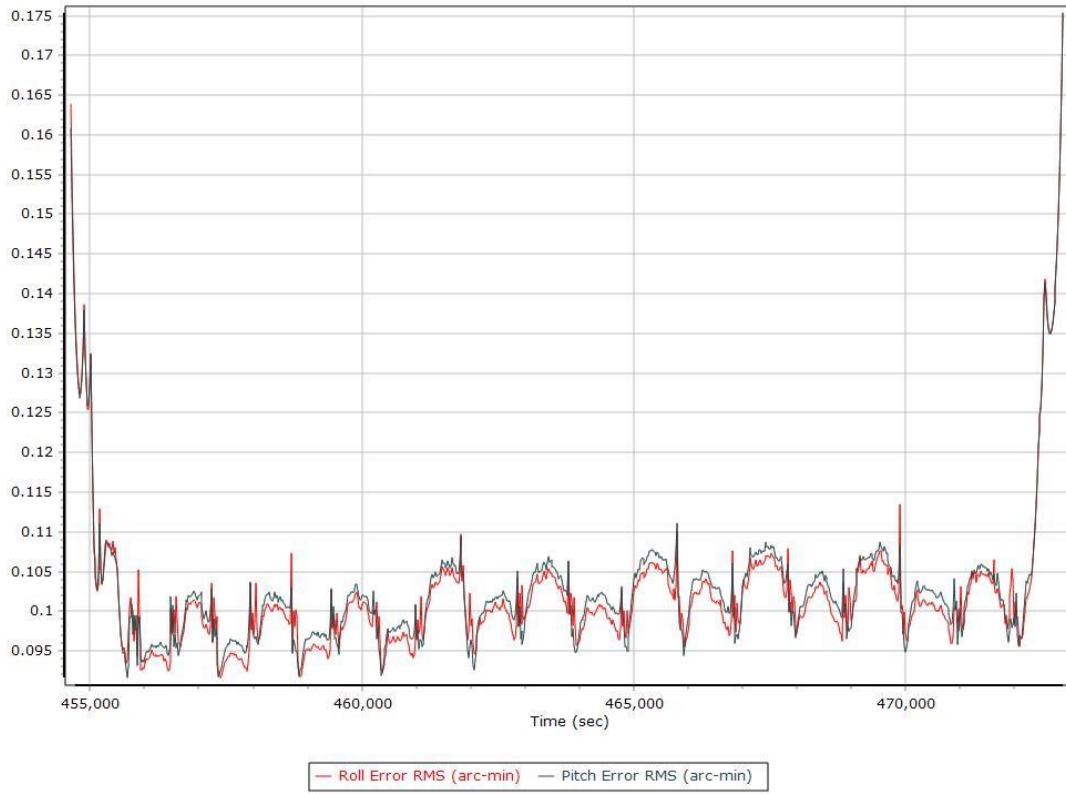
Position Error RMS (m)



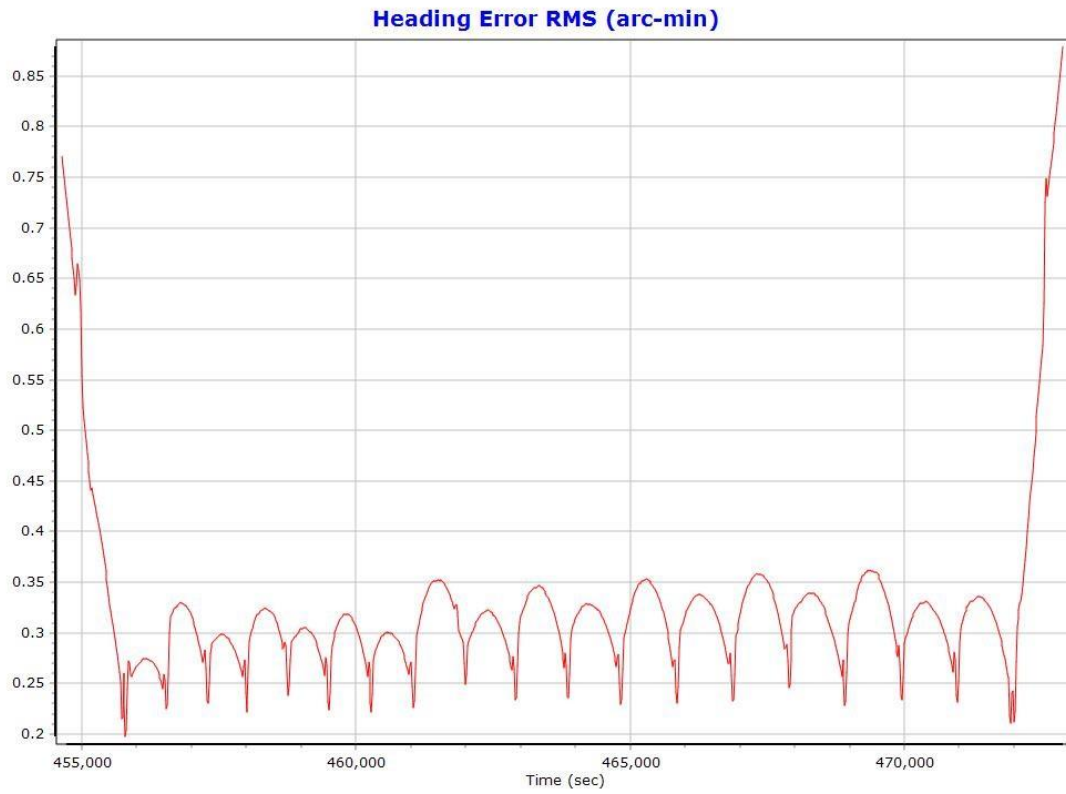
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc -min)



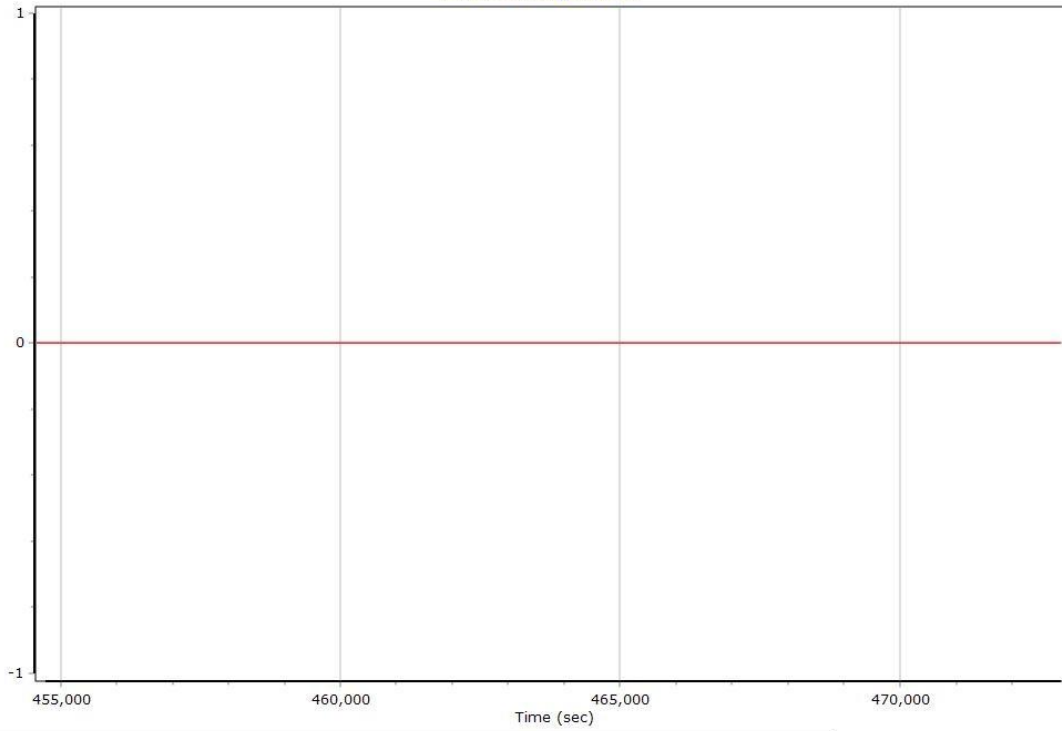
Heading Error RMS (arc-min)



Smoothed Solution Status

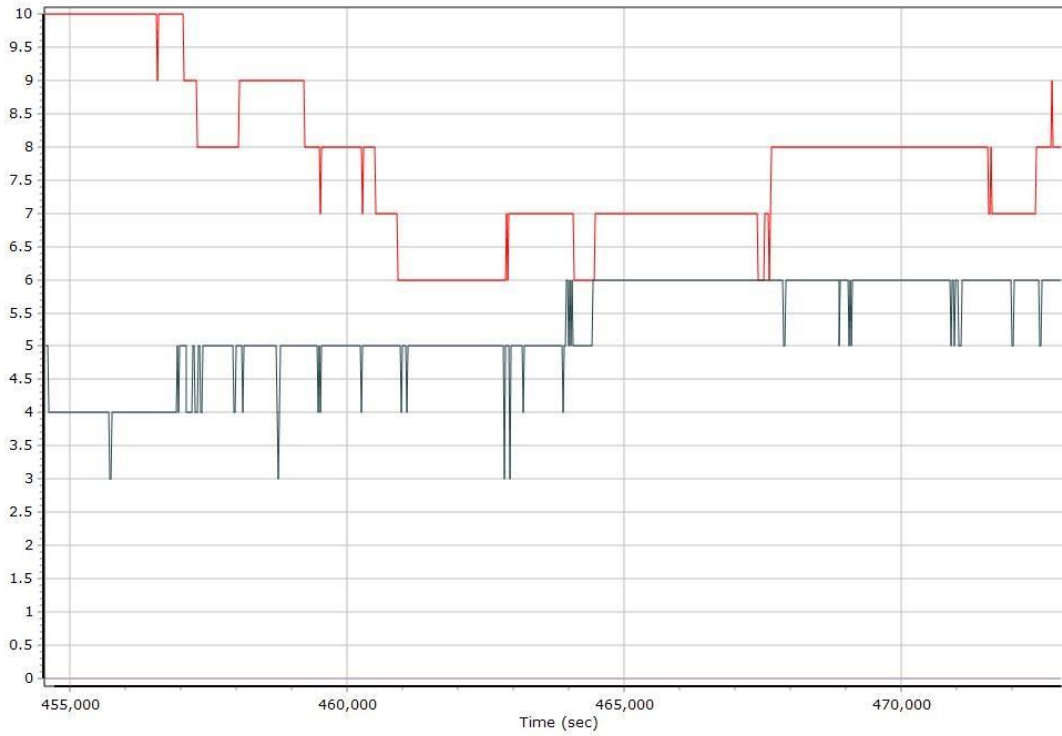
Processing Mode

Processing mode



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

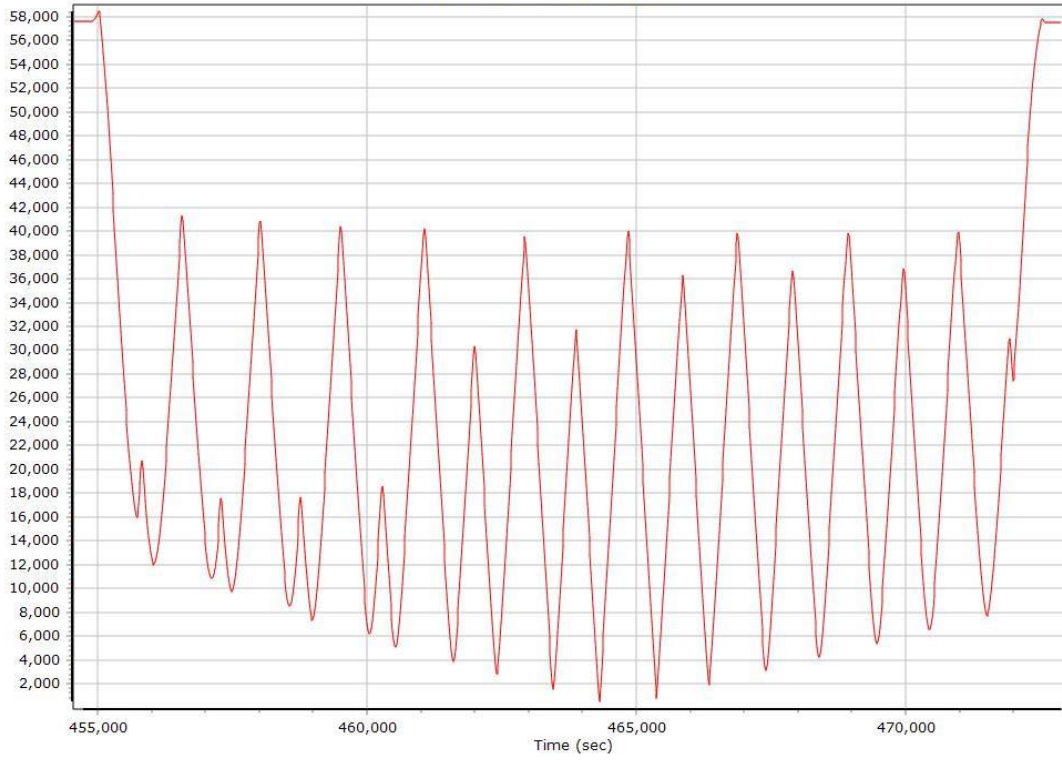
Number of Satellites



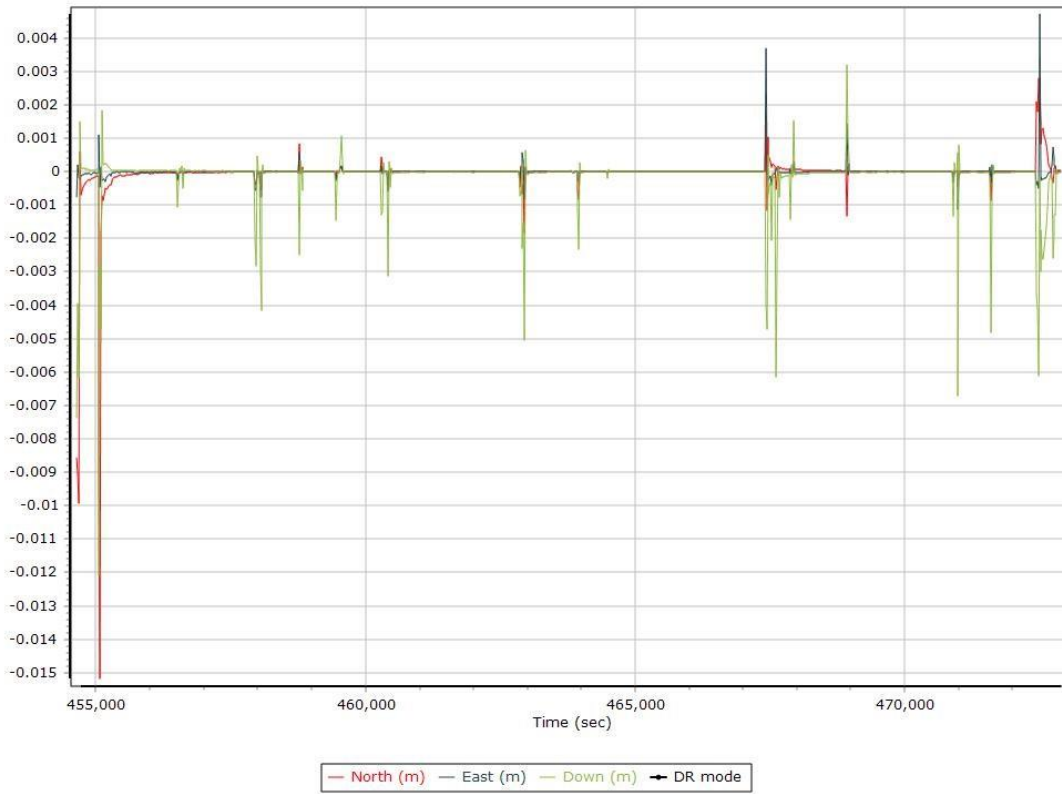
— Number of GPS Satellites — Number of GLONASS Satellites — Number of QZSS Satellites — Number of BEIDOU Satellites

Baseline Length

Baseline Length (m)



SBET IAKAR Separation



General Information

Mission Information

Project name	12112018NAD83
Processing date	2019-02-27 23:05:06
Mission date	2018-12-12 00:04:23
Mission duration	03:31:07.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9524
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
181212_000405_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3450.18g	GLONASS Broadcast Ephemeris
Ephm3450.18n	GPS Broadcast Ephemeris
Ephm3460.18g	GLONASS Broadcast Ephemeris
Ephm3460.18n	GPS Broadcast Ephemeris
igl20312.sp3	GLONASS Precise Ephemeris
igl20313.sp3	GLONASS Precise Ephemeris
igl20314.sp3	GLONASS Precise Ephemeris
igs20312.sp3	GPS Precise Ephemeris
igs20313.sp3	GPS Precise Ephemeris
igs20314.sp3	GPS Precise Ephemeris
flai345f00.18o	GNSS SingleBase
flai346f00.18o	GNSS SingleBase
fld7345f00.18o	GNSS SingleBase
fld7346f00.18o	GNSS SingleBase
flgr345f00.18o	GNSS SingleBase
flsi345f00.18o	GNSS SingleBase
flsi346f00.18o	GNSS SingleBase
fmyr345f00.18o	GNSS SingleBase
fmyr346f00.18o	GNSS SingleBase
gsps345f00.18o	GNSS SingleBase
gsps346f00.18o	GNSS SingleBase
rcda345f00.18o	GNSS SingleBase
rcda346f00.18o	GNSS SingleBase
stpt345f00.18o	GNSS SingleBase
stpt346f00.18o	GNSS SingleBase
wach345f00.18o	GNSS SingleBase
wach346f00.18o	GNSS SingleBase
flai345f00.18g	GLONASS Broadcast Ephemeris
flai345f00.18n	GPS Broadcast Ephemeris
flai346f00.18g	GLONASS Broadcast Ephemeris
flai346f00.18n	GPS Broadcast Ephemeris
fld7345f00.18g	GLONASS Broadcast Ephemeris
fld7345f00.18n	GPS Broadcast Ephemeris
fld7346f00.18g	GLONASS Broadcast Ephemeris
fld7346f00.18n	GPS Broadcast Ephemeris
flgr345f00.18g	GLONASS Broadcast Ephemeris
flgr345f00.18n	GPS Broadcast Ephemeris
flsi345f00.18g	GLONASS Broadcast Ephemeris
flsi345f00.18n	GPS Broadcast Ephemeris
flsi346f00.18g	GLONASS Broadcast Ephemeris
flsi346f00.18n	GPS Broadcast Ephemeris
fmyr345f00.18g	GLONASS Broadcast Ephemeris
fmyr345f00.18n	GPS Broadcast Ephemeris
fmyr346f00.18g	GLONASS Broadcast Ephemeris

fmyr346f00.18n	GPS Broadcast Ephemeris
gsps345f00.18g	GLONASS Broadcast Ephemeris
gsps345f00.18n	GPS Broadcast Ephemeris
gsps346f00.18g	GLONASS Broadcast Ephemeris
gsps346f00.18n	GPS Broadcast Ephemeris
rcda345f00.18g	GLONASS Broadcast Ephemeris
rcda345f00.18n	GPS Broadcast Ephemeris
rcda346f00.18g	GLONASS Broadcast Ephemeris
rcda346f00.18n	GPS Broadcast Ephemeris
stpt345f00.18g	GLONASS Broadcast Ephemeris
stpt345f00.18n	GPS Broadcast Ephemeris

File Name	File type
stpt346f00.18g	GLONASS Broadcast Ephemeris
stpt346f00.18n	GPS Broadcast Ephemeris
wach345f00.18g	GLONASS Broadcast Ephemeris
wach345f00.18n	GPS Broadcast Ephemeris
wach346f00.18g	GLONASS Broadcast Ephemeris
wach346f00.18n	GPS Broadcast Ephemeris

Output Files

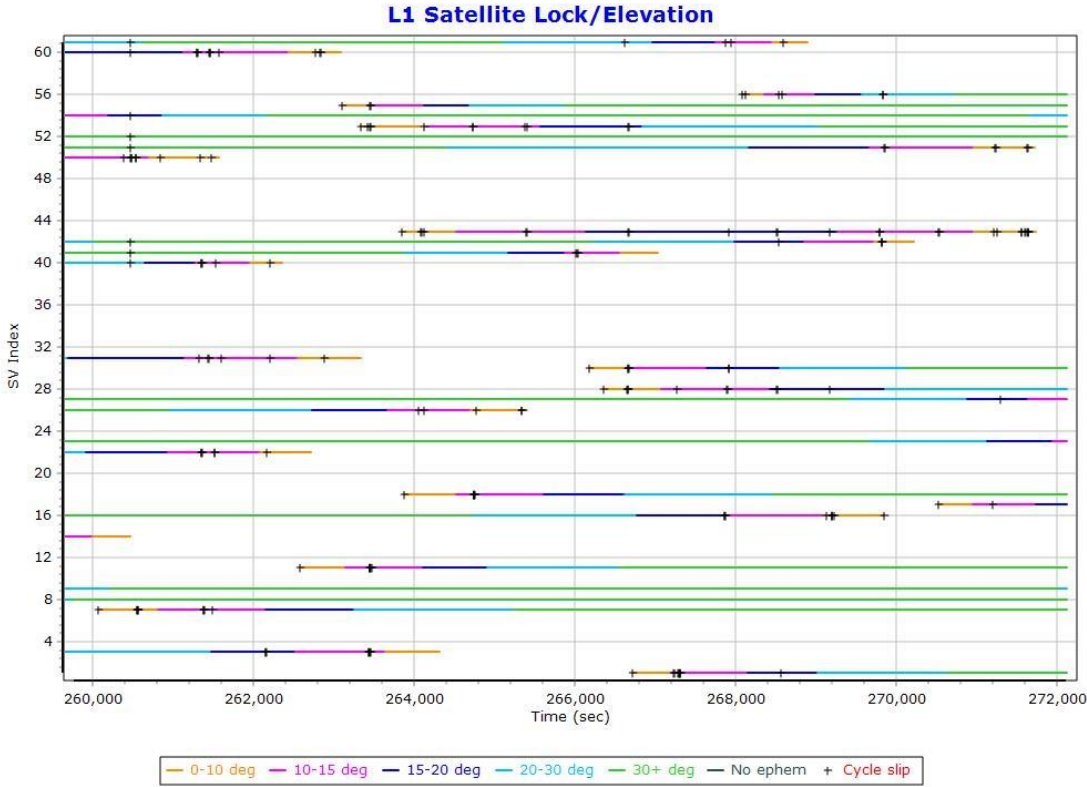
Filename	File type
sbet_Mission 1.out	SBET Trajectory File

Rover Data Summary

First raw data file	181212_000405_INS-GPS_1.raw		
Last raw data file	181212_000405_INS-GPS_1.raw		
Start GPS week	2031		
Start time	259445.012 (12/12/2018 12:04:05 AM)		
End time	272113.020 (12/12/2018 3:35:13 AM)		
Start of fine alignment	259700.380 (12/12/2018 12:08:20 AM)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	Event 2 Input, Event 3 Input		
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	0.000
Reference to Primary GNSS lever arm [m]	0.102	-0.140	-0.961
Reference to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

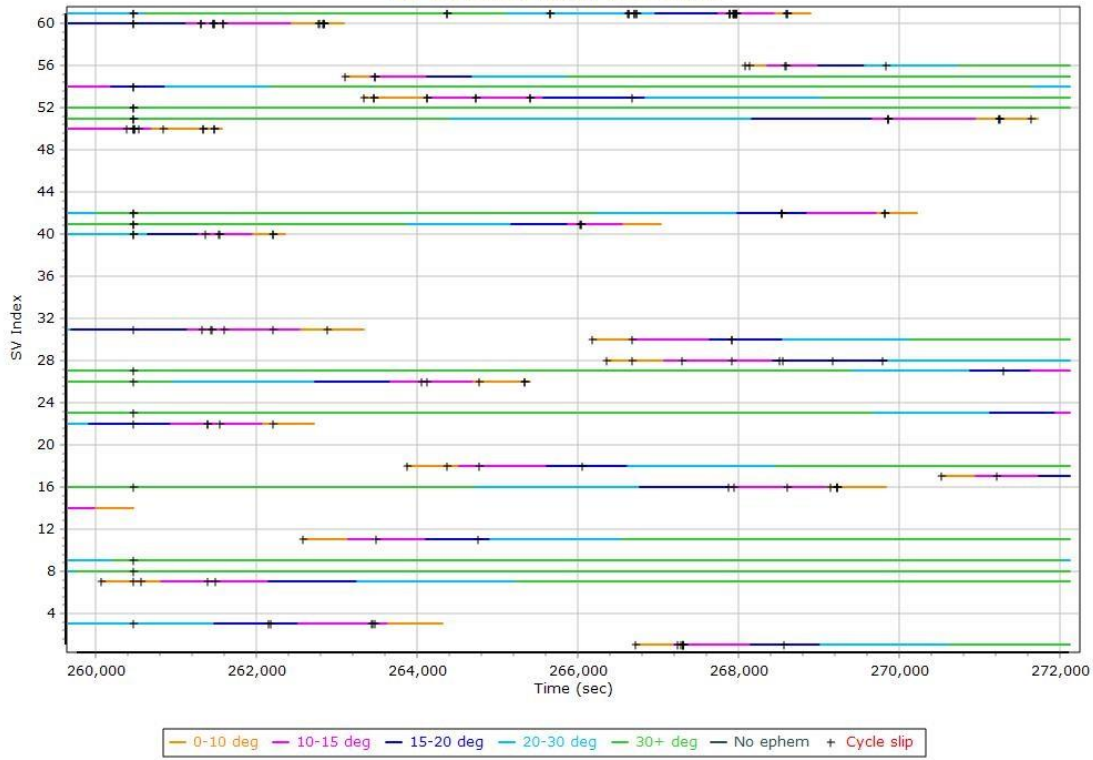
Raw Data QC

L1 Satellite Lock/Elevation



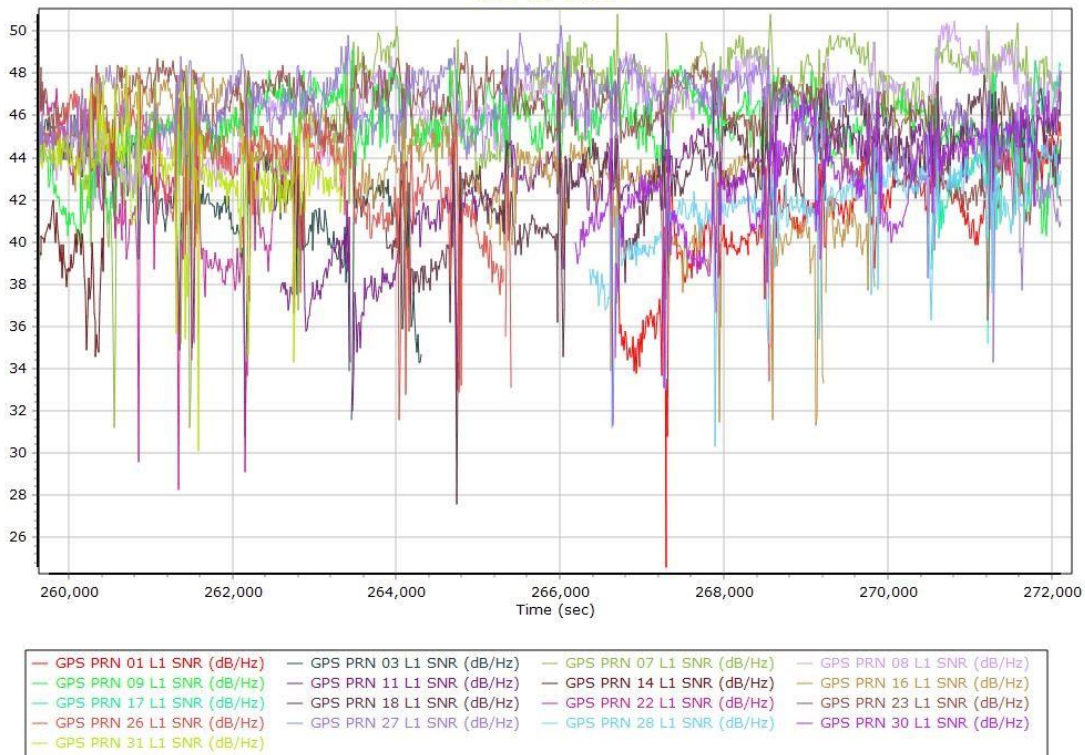
L2 Satellite Lock/Elevation

L2 Satellite Lock/Elevation



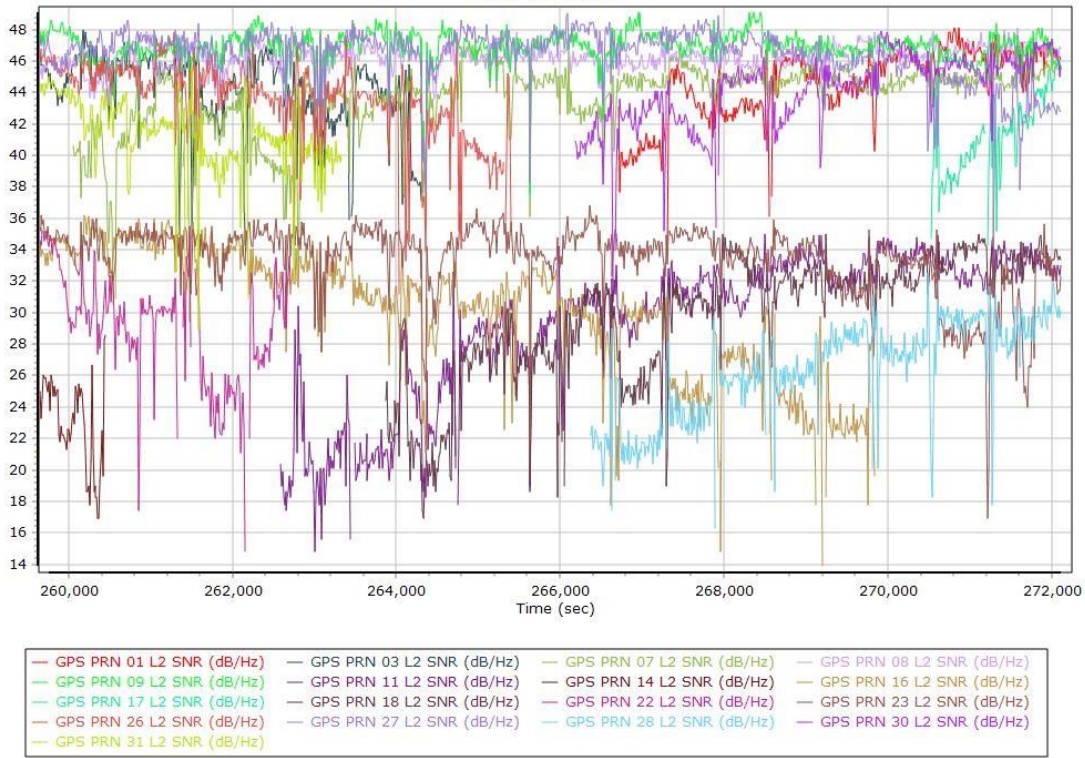
GPS L1 SNR

GPS L1 SNR

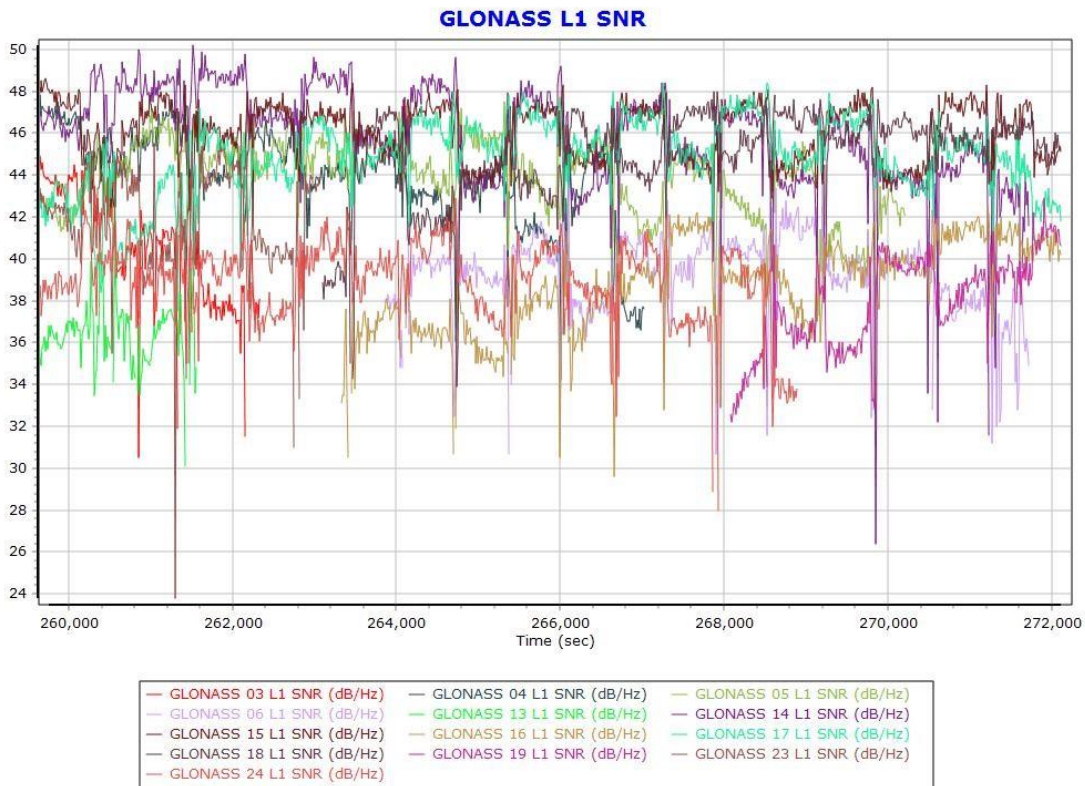


GPS L2 SNR

GPS L2 SNR

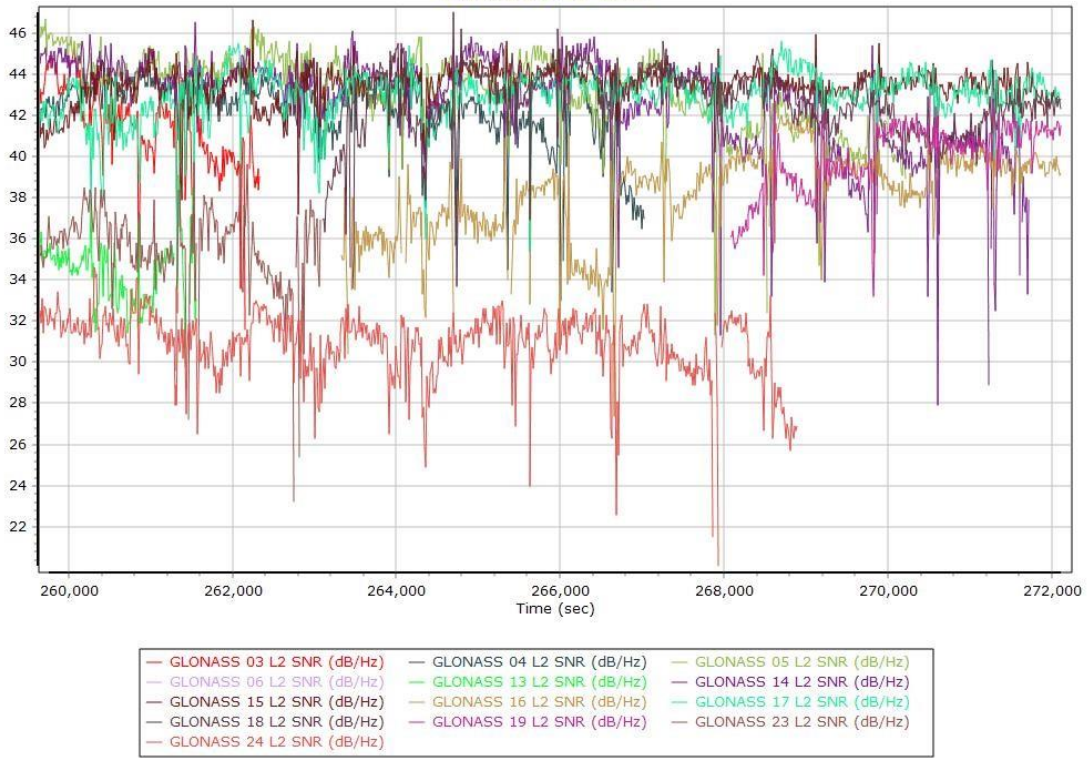


GLONASS L1 SNR



GLONASS L2 SNR

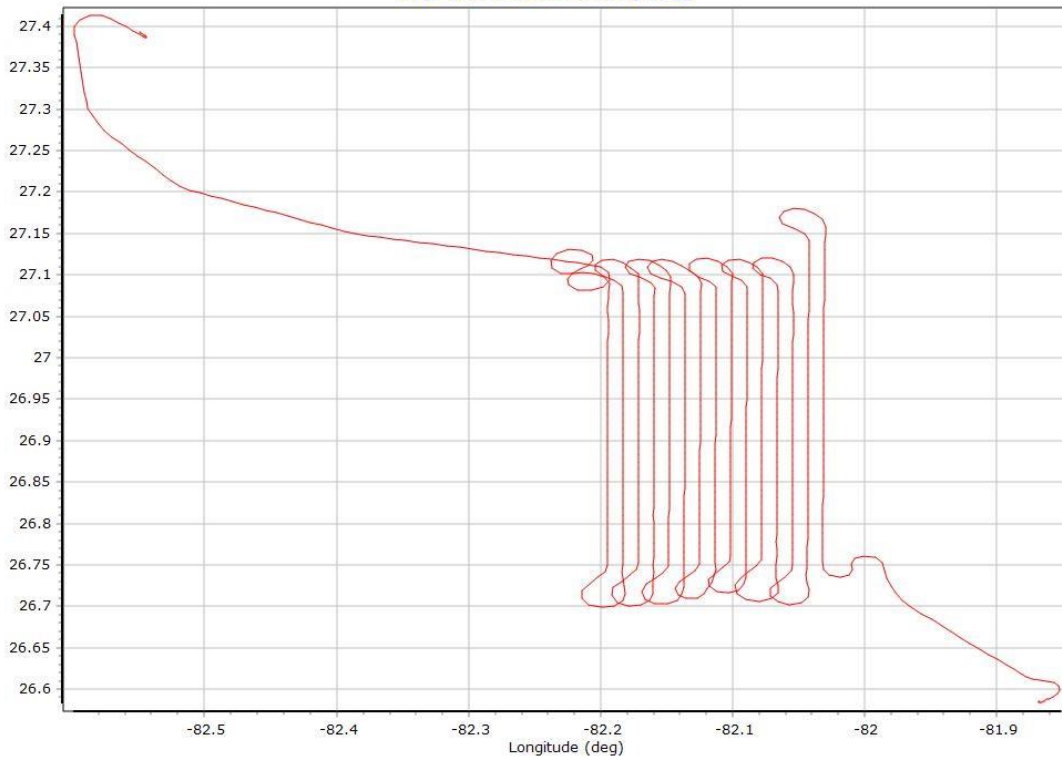
GLONASS L2 SNR



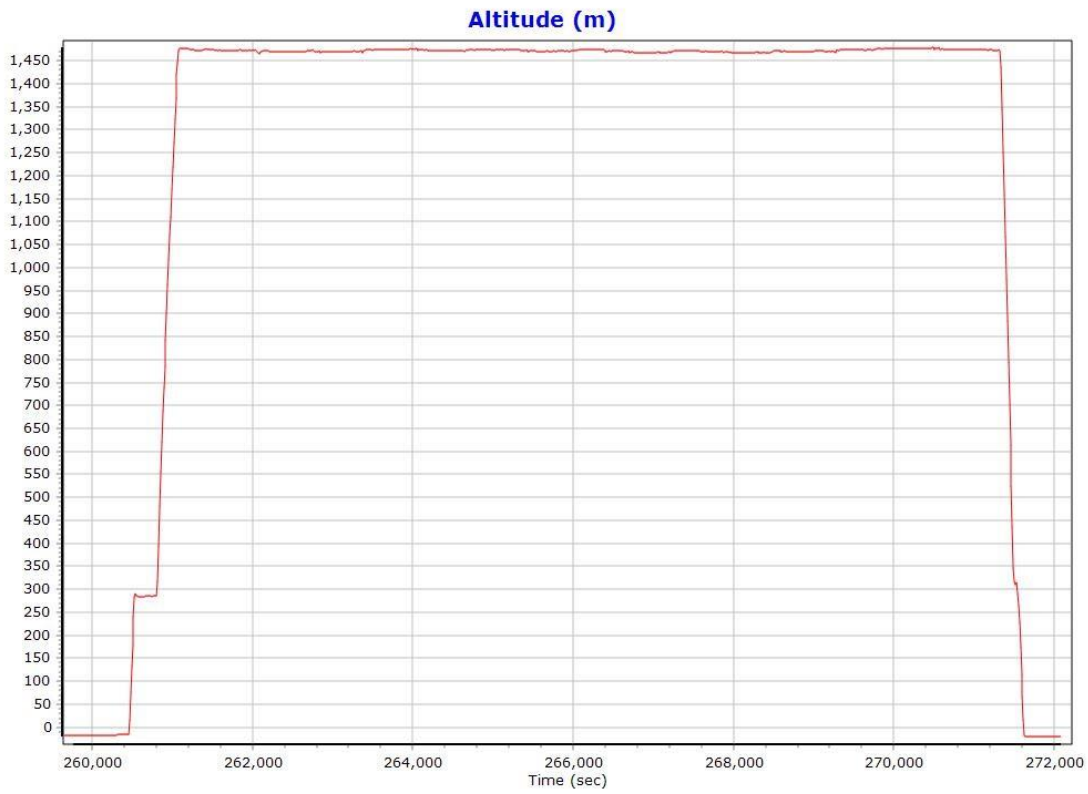
Trajectory Information

Top View

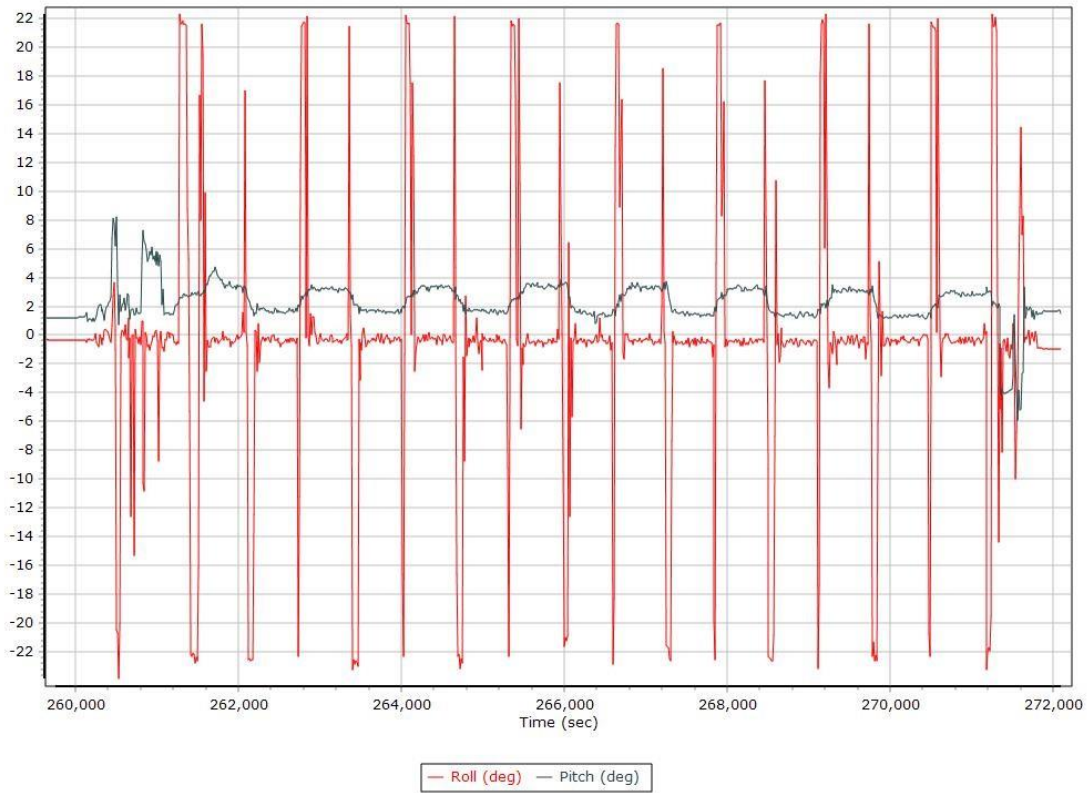
Top View: Latitude (deg)



Altitude

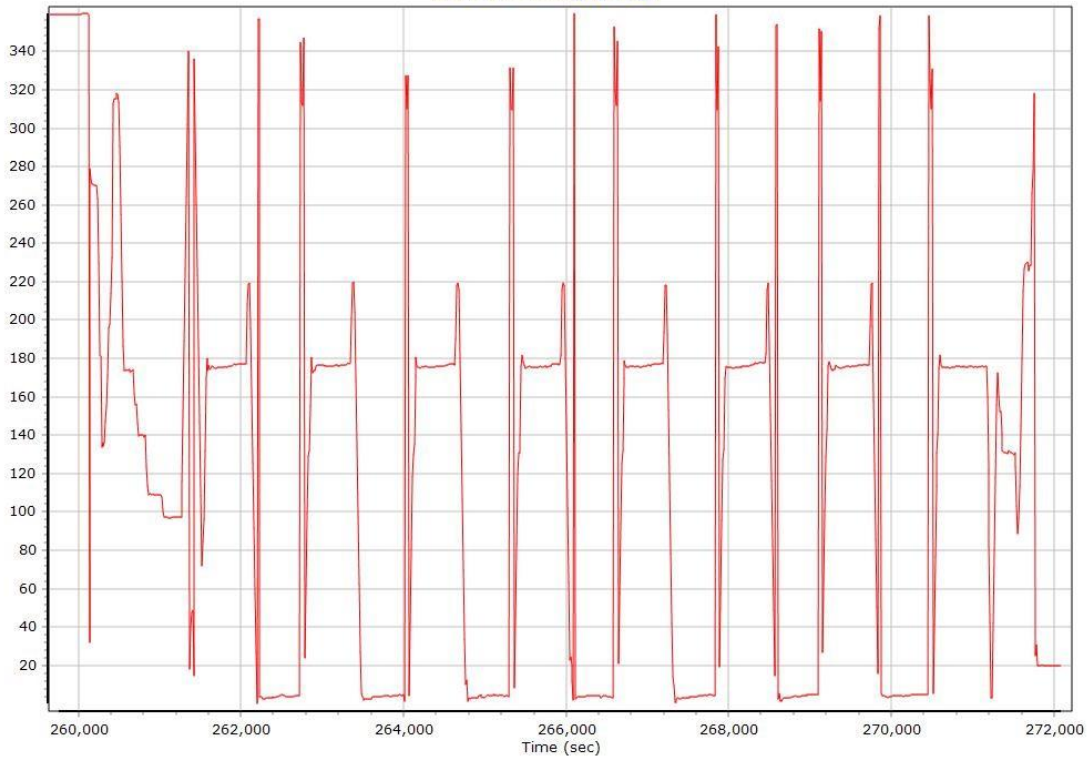


Roll/Pitch

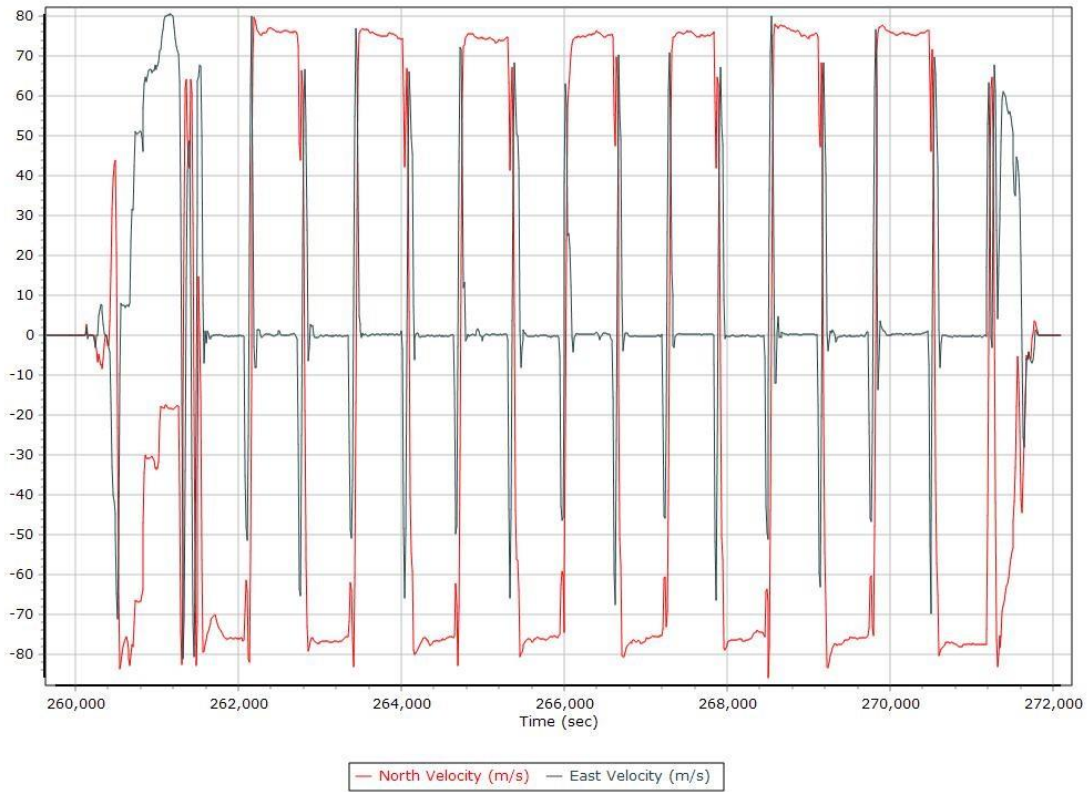


Heading

True Heading (deg)

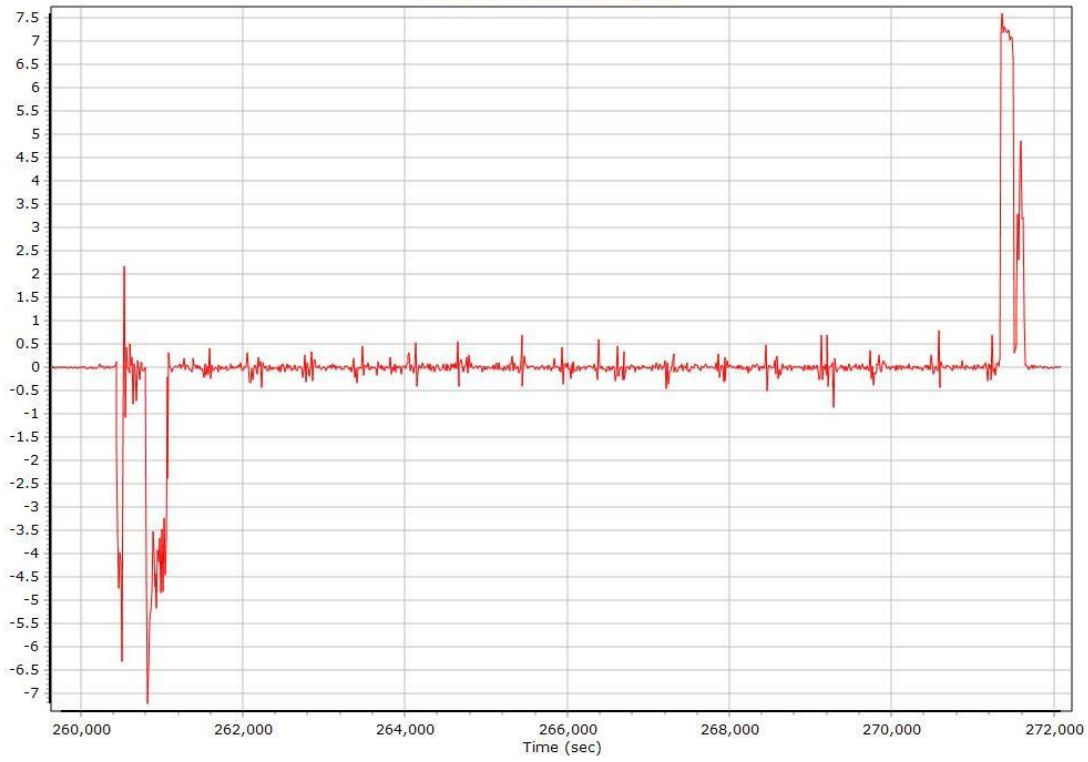


North/East Velocity



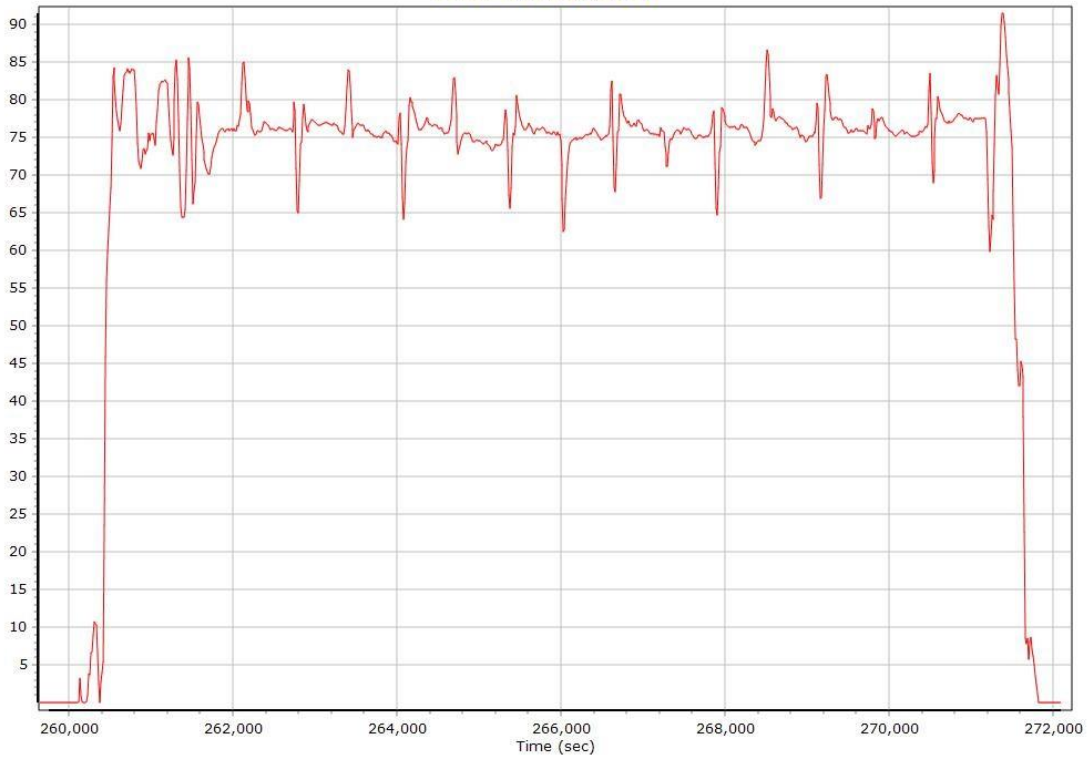
Down Velocity

Down Velocity (m/s)



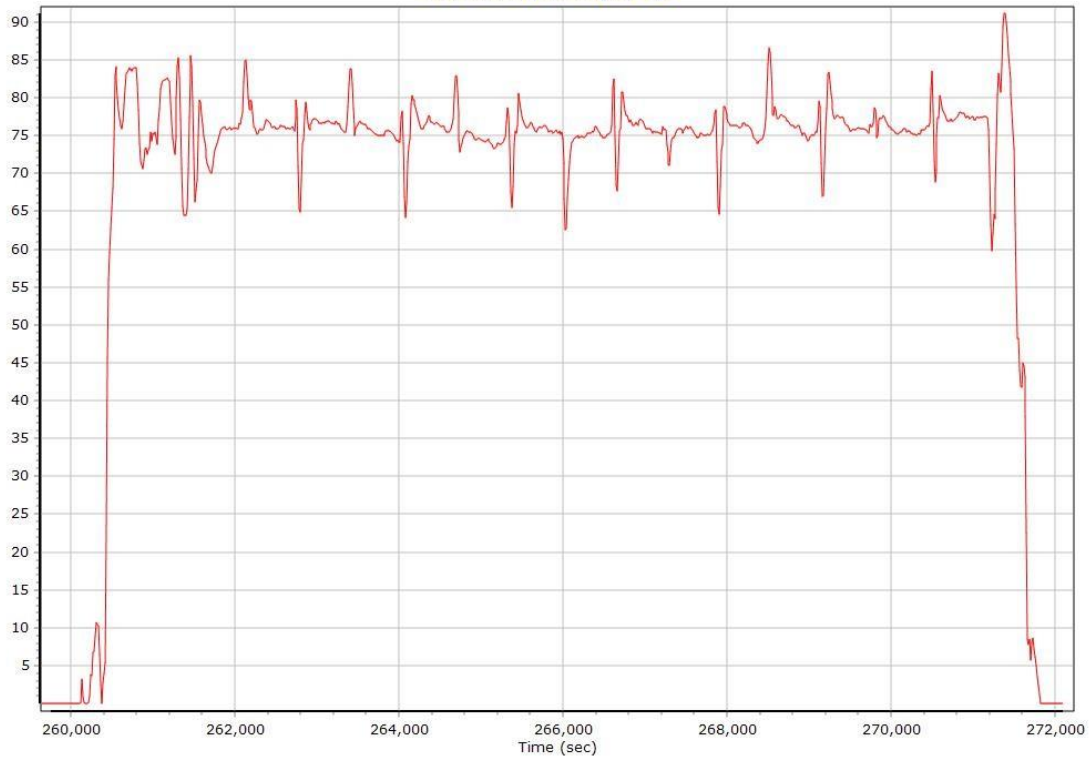
Total Speed

Total Speed (m/s)

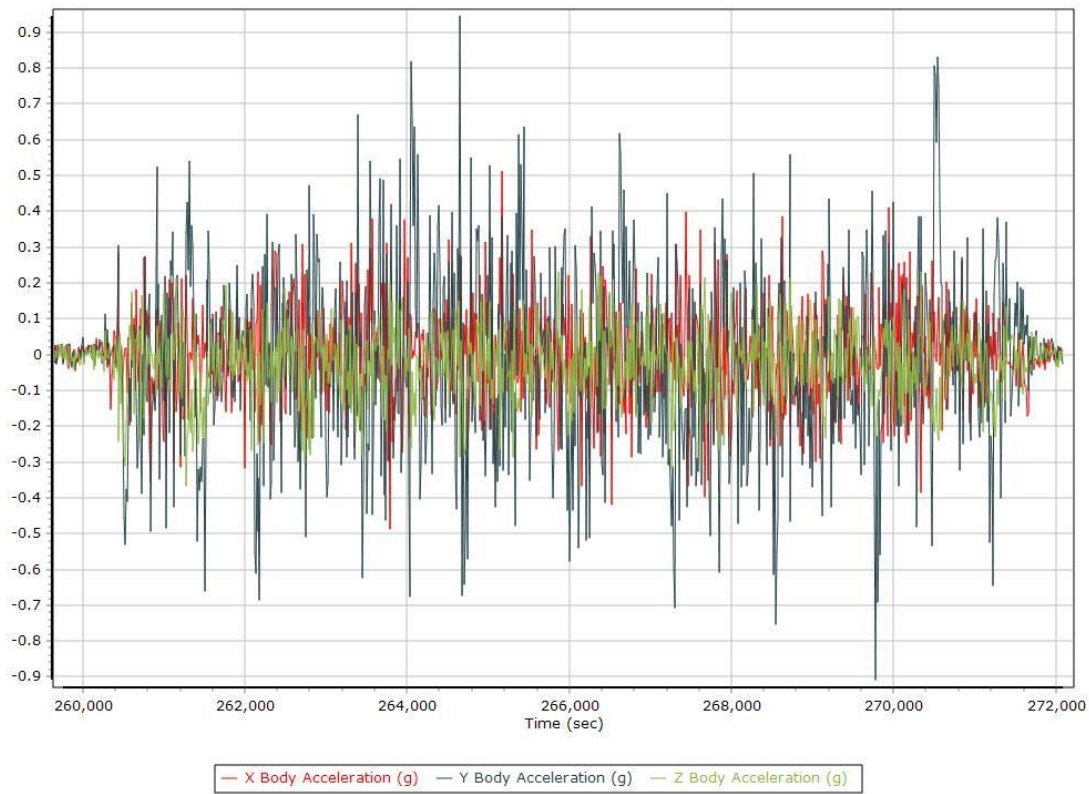


Ground Speed

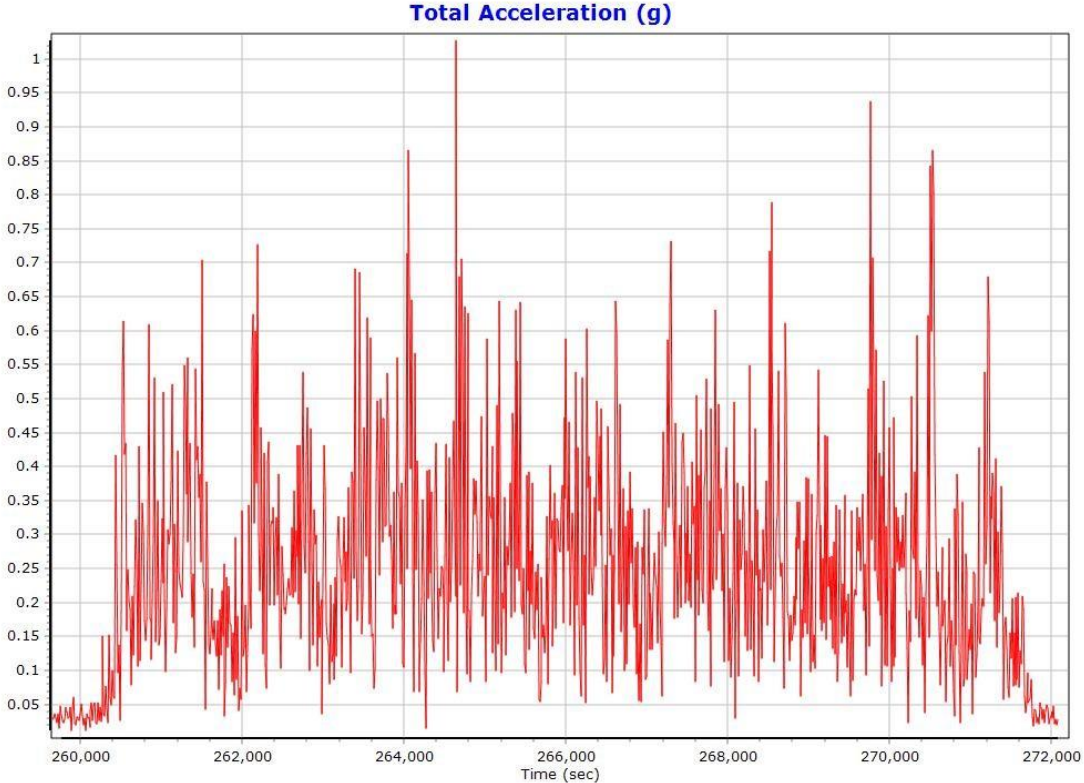
Ground Speed (m/s)



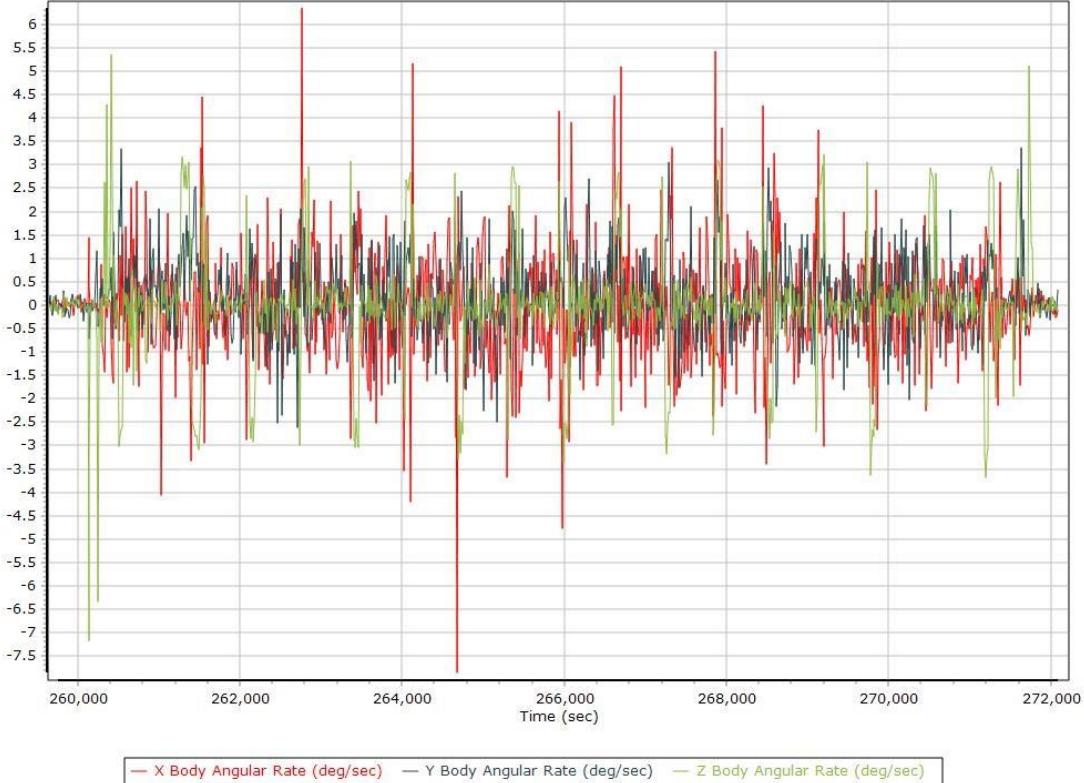
Body Acceleration



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
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SmartBase Results

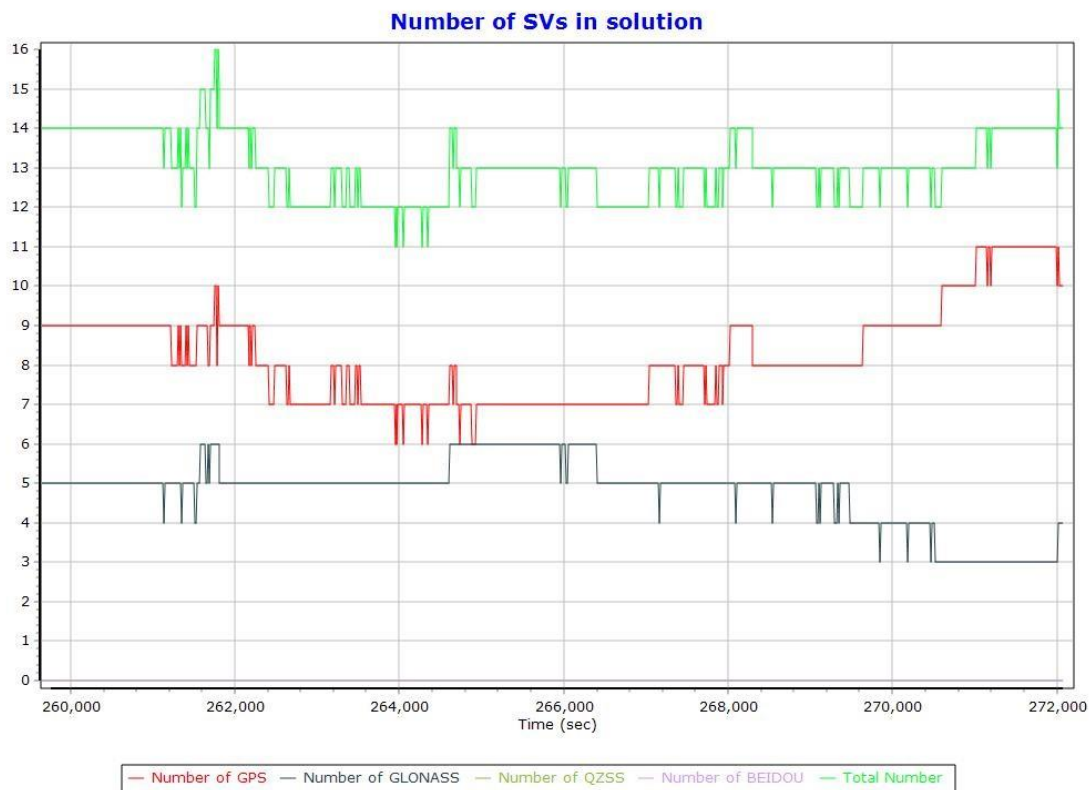
SmartBase status	
Primary station Id	
Primary station data rate [sec]	0.0
VRS/ASB generation rate [sec]	0.0
VRS/ASB timespan	
Number of reference stations	0
Primary station GPS measurement usage [%]	0.0
Average number of satellites per epoch	0.0
Max number of GPS stations used	0
Min number of GPS stations 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	

GNSS QC

GNSS QC Statistics

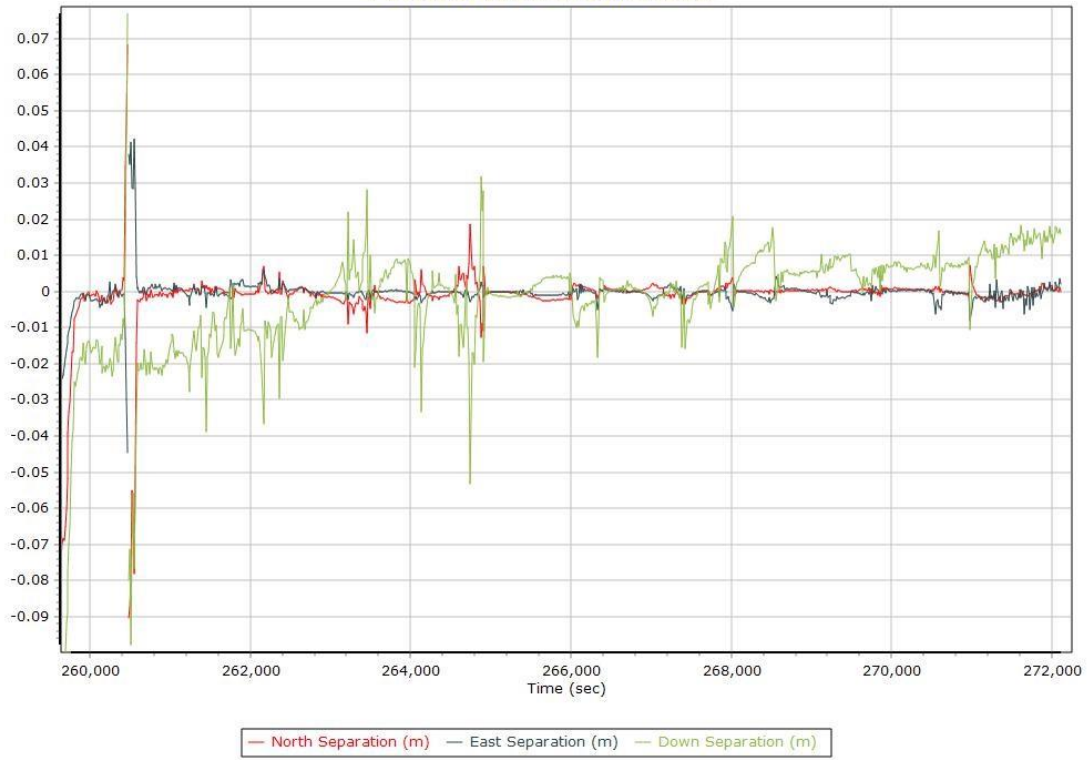
Statistics	Min	Max	Mean
Baseline length [km]	0.27	65.83	
Number of GPS SV	6	11	8
Number of GLONASS SV	0	6	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	9	16	13
PDOP	1.28	2.48	1.68
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	12627.00	0.00	1.00
Percentage	99.99	0.00	0.01

Num SVs in solution



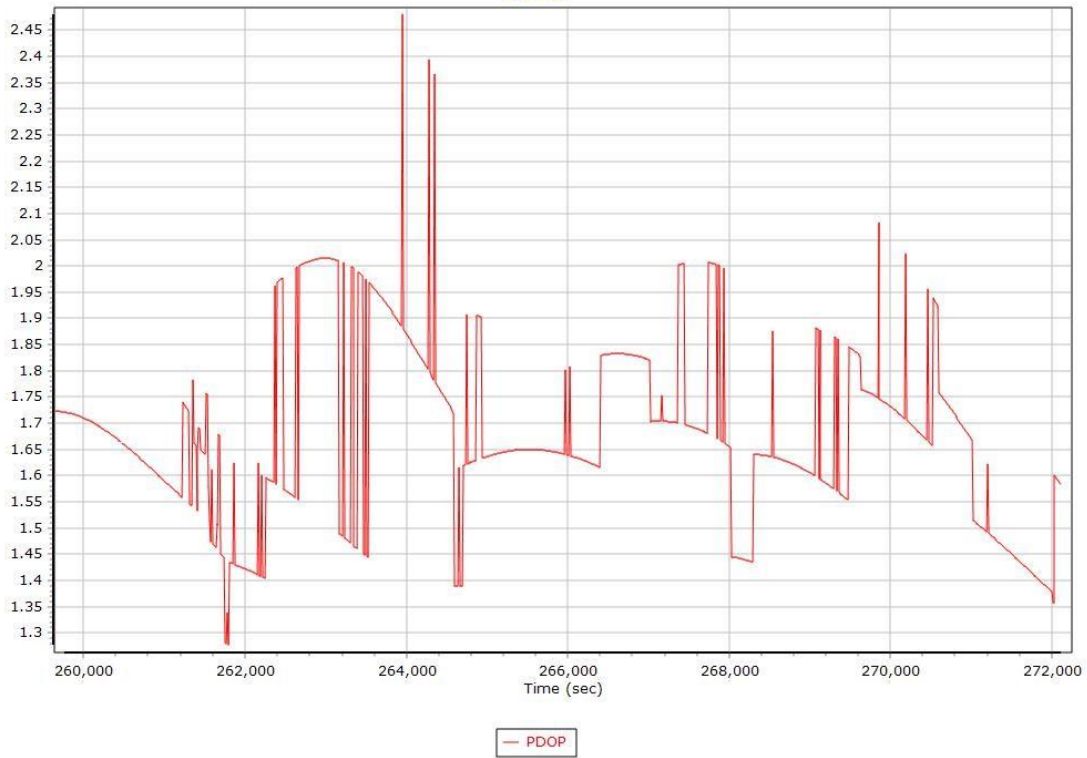
Forward/Reverse Separation

Forward/Reverse Separation



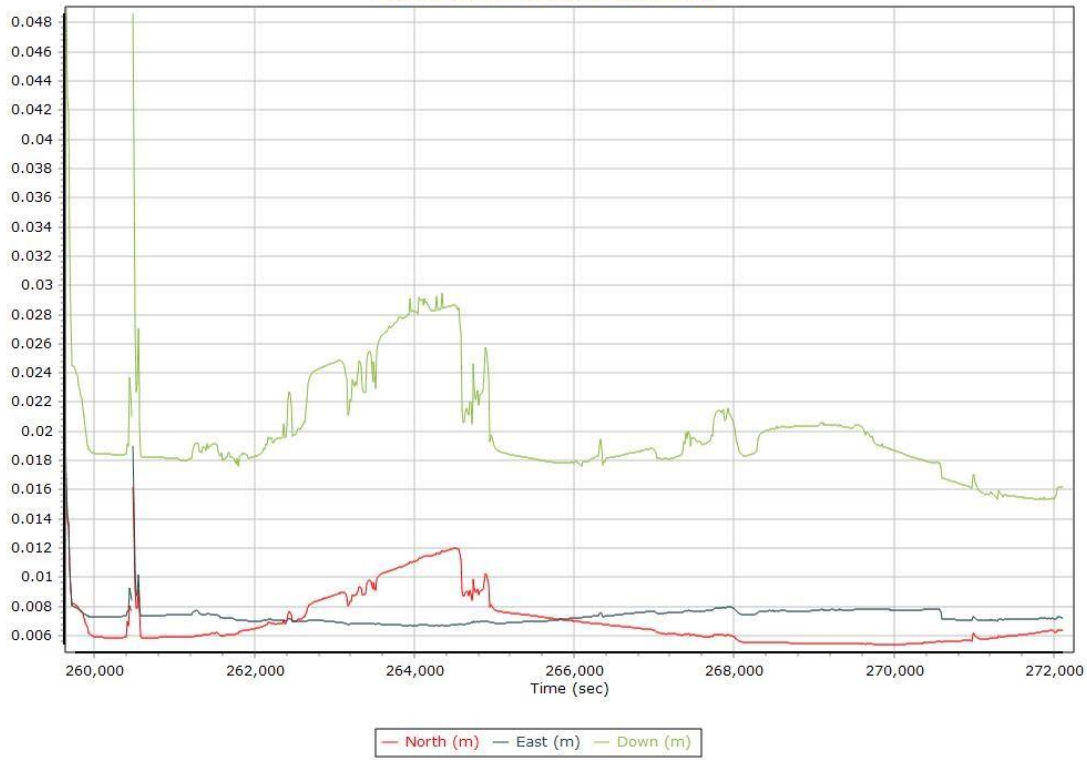
PDOP

PDOP

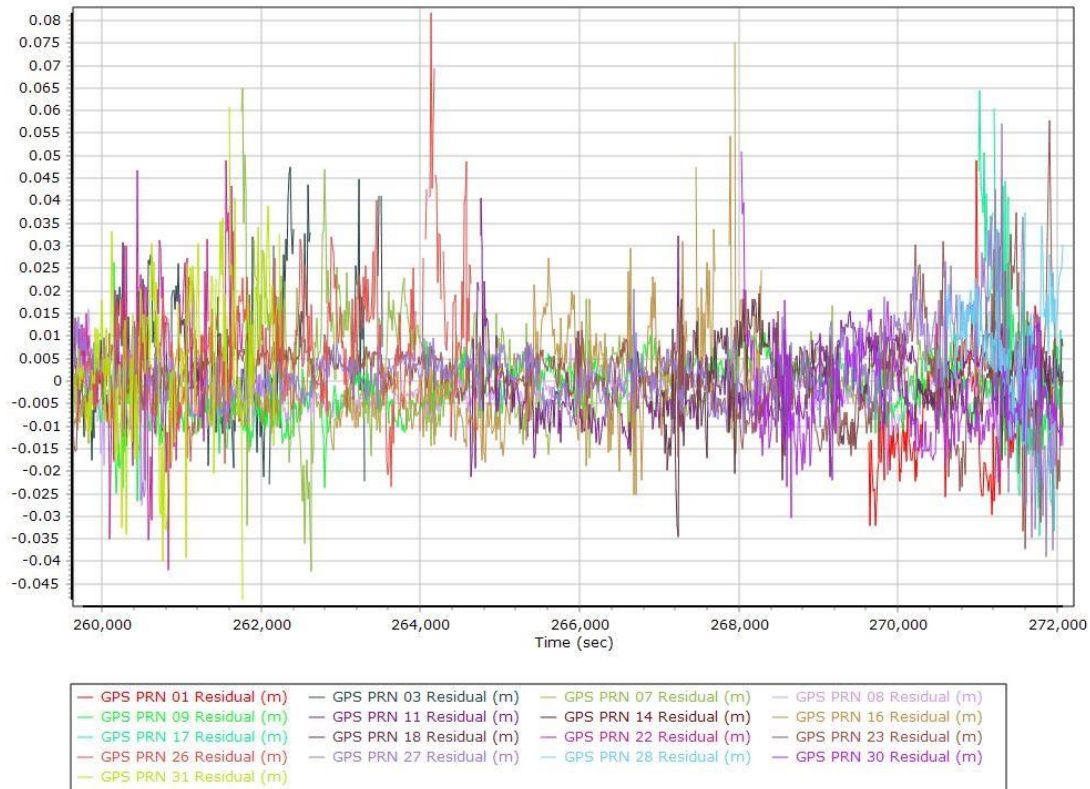


Estimated Position Accuracy

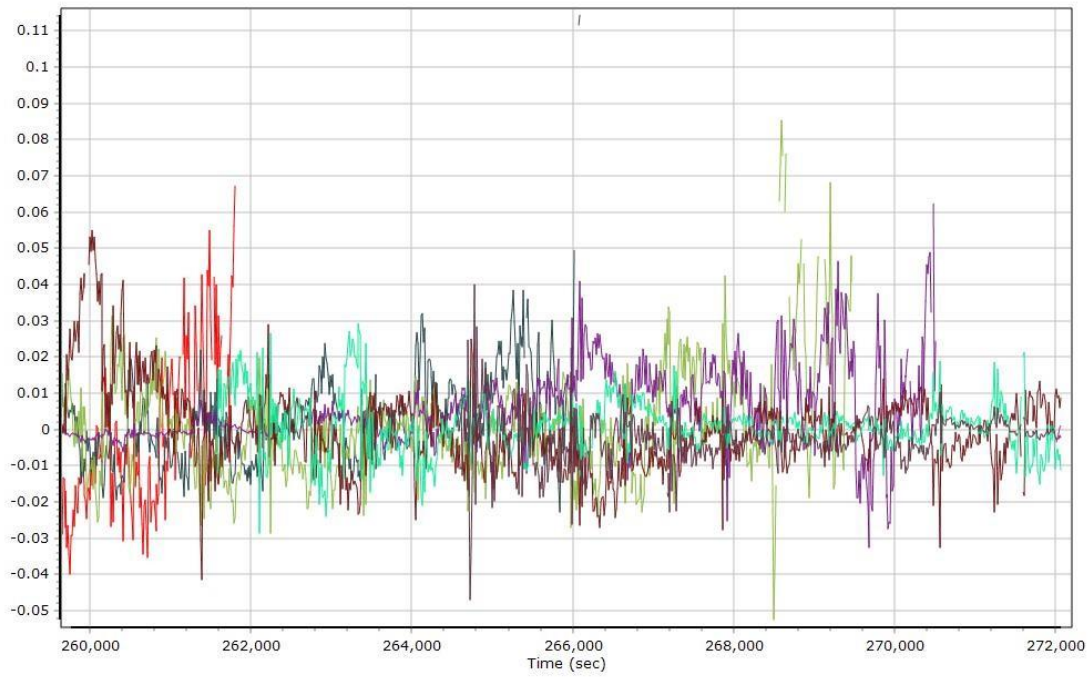
Estimated Position Accuracy



GPS Residuals



GLONASS Residuals



- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GLONASS 03 Residual (m) | GLONASS 04 Residual (m) | GLONASS 05 Residual (m) | GLONASS 06 Residual (m) |
| GLONASS 13 Residual (m) | GLONASS 14 Residual (m) | GLONASS 15 Residual (m) | GLONASS 16 Residual (m) |
| GLONASS 17 Residual (m) | GLONASS 18 Residual (m) | GLONASS 19 Residual (m) | GLONASS 23 Residual (m) |
| GLONASS 24 Residual (m) | | | |

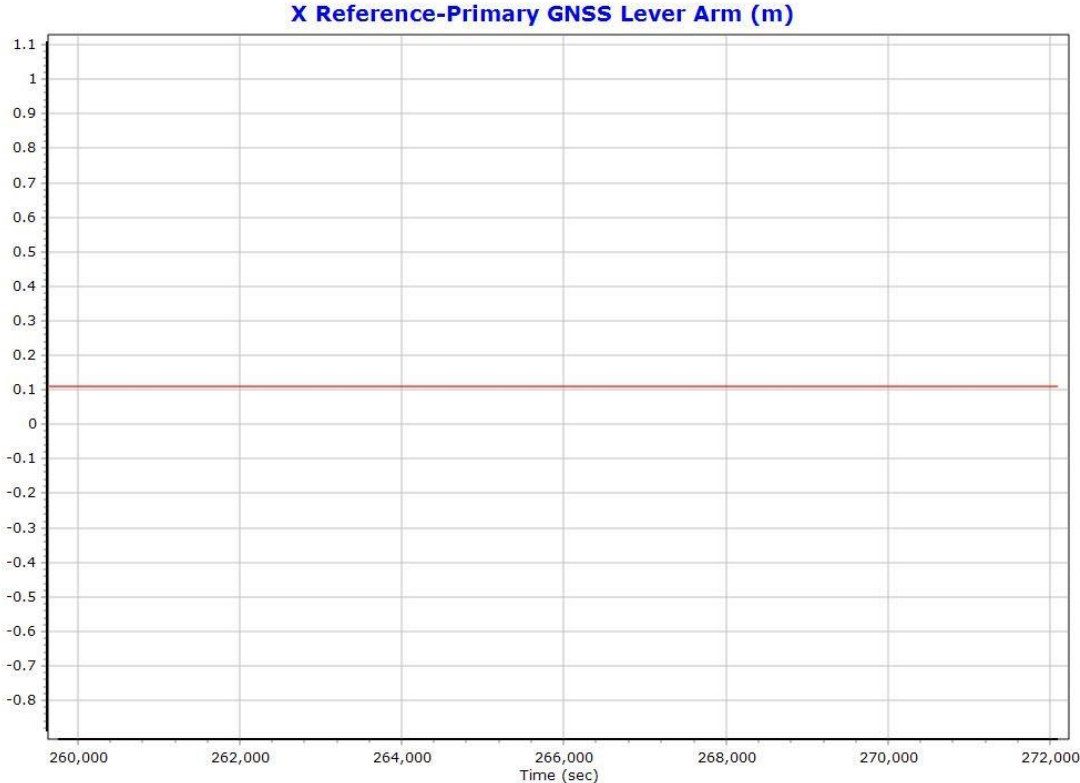
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	False		
Base station	ASB		
Processing start time	259445.000 (12/12/2018 12:04:05 AM)		
Processing end time	272112.000 (12/12/2018 3:35:12 AM)		
Initial attitude source	GYRO Compass		
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]	0.110	-0.138	-0.963
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

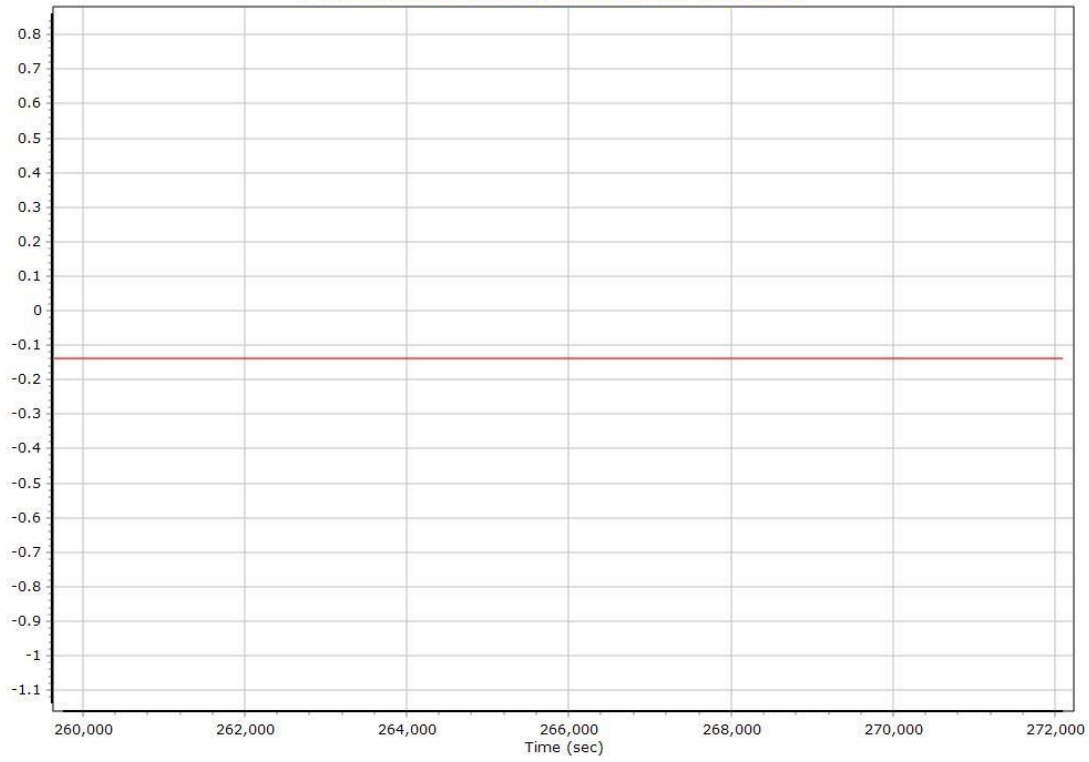
Reference-Primary GNSS Lever Arm

X Reference -Primary GNSS Lever Arm (m)



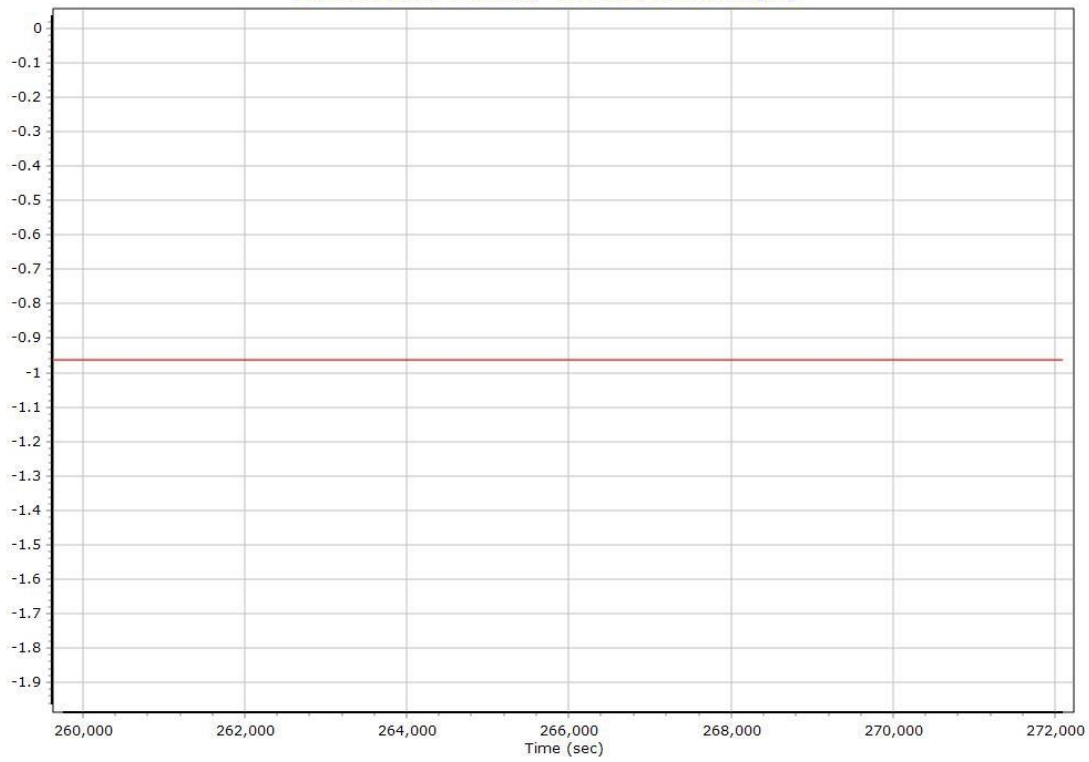
Y Reference-Primary GNSS Lever Arm (m)

Y Reference-Primary GNSS Lever Arm (m)



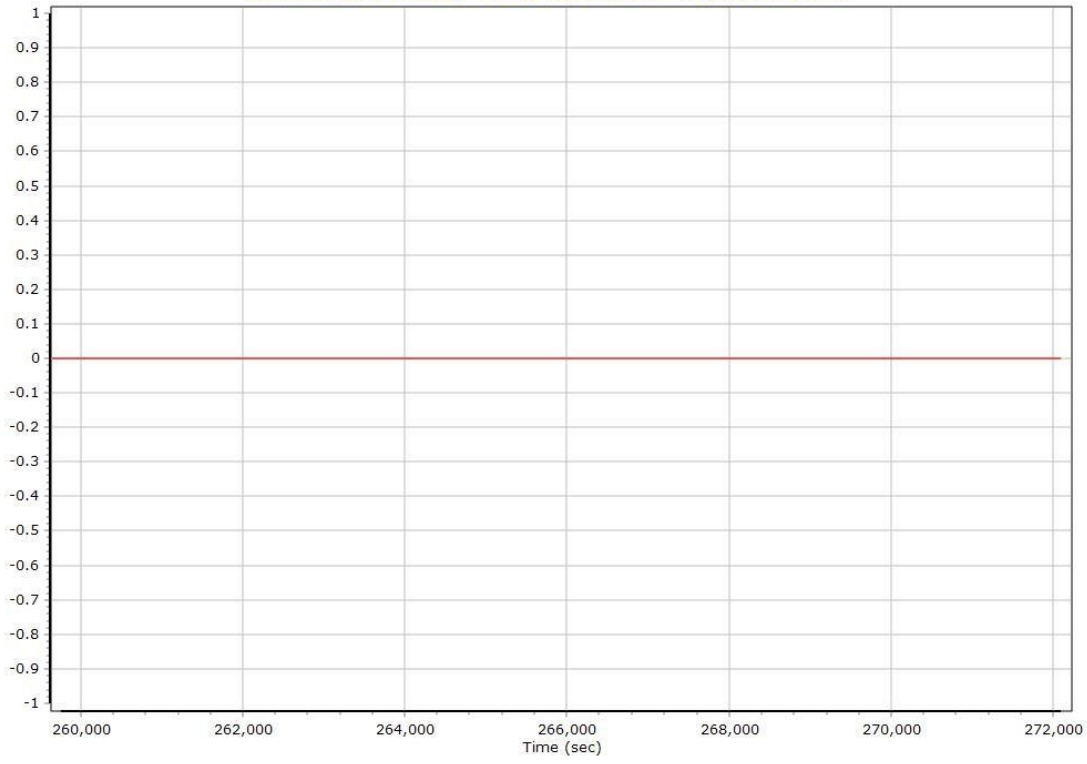
Z Reference -Primary GNSS Lever Arm (m)

Z Reference-Primary GNSS Lever Arm (m)



Reference-Primary GNSS Lever Arm Figure of Merit

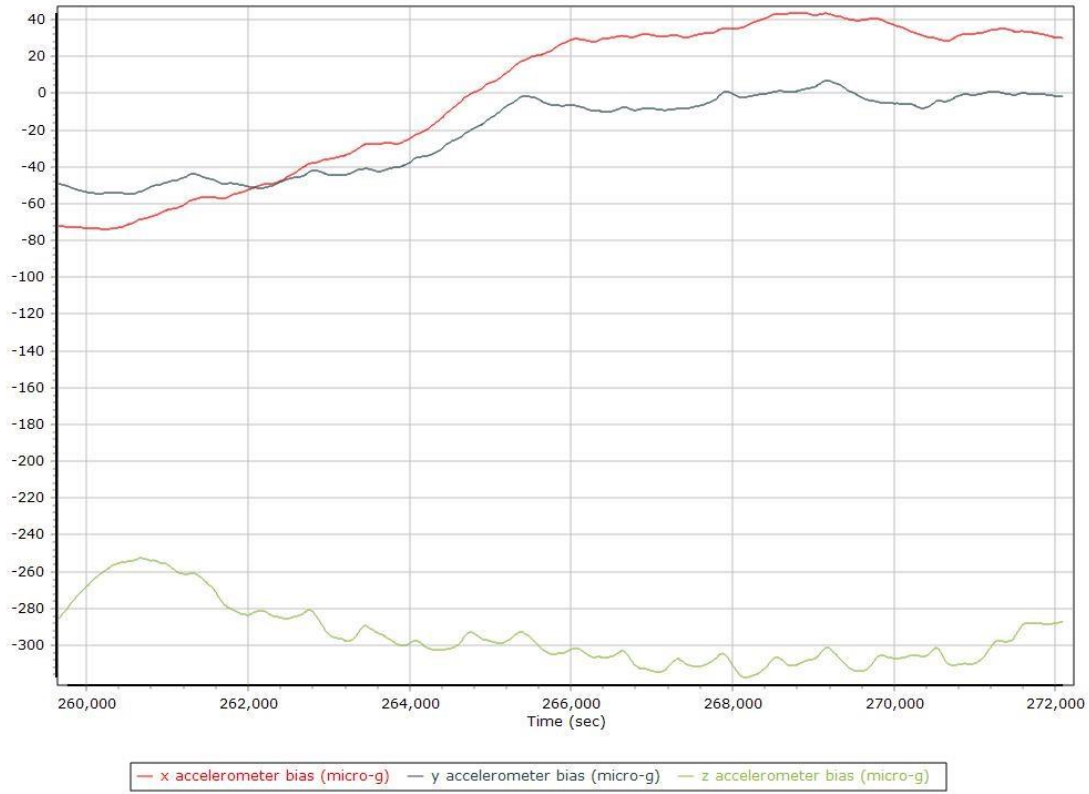
Reference-Primary GNSS Lever Arm Figure of Merit



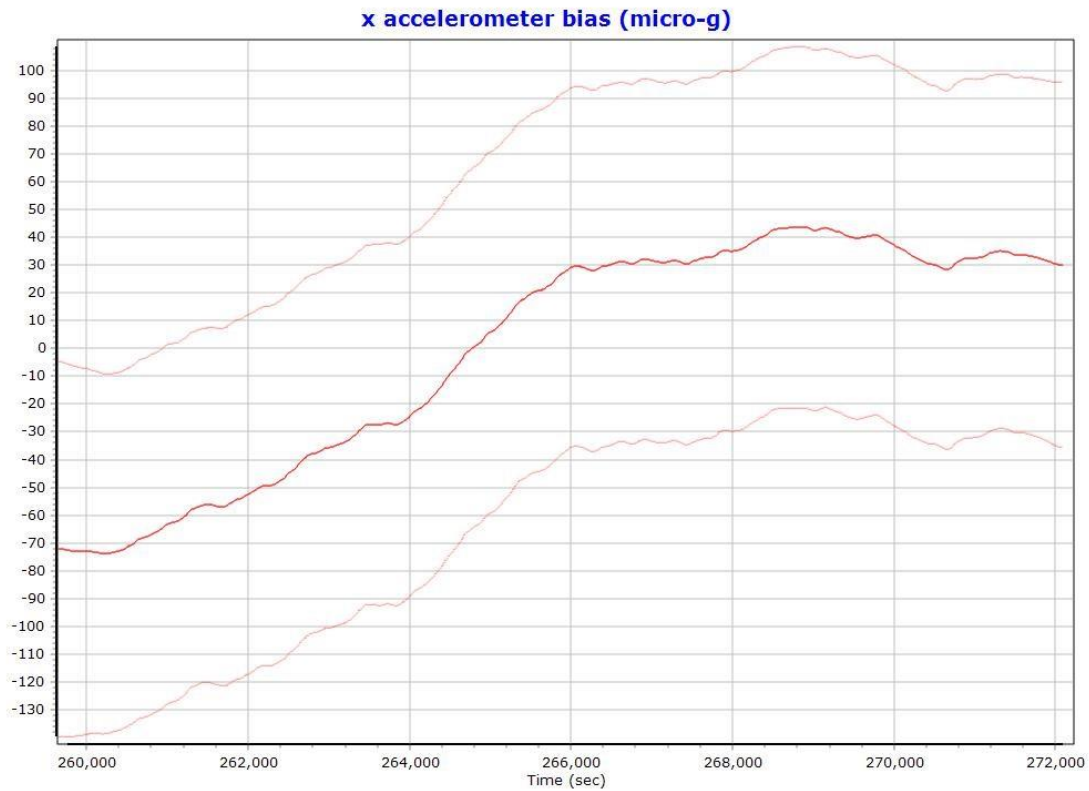
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

Accelerometer Bias (micro -g)

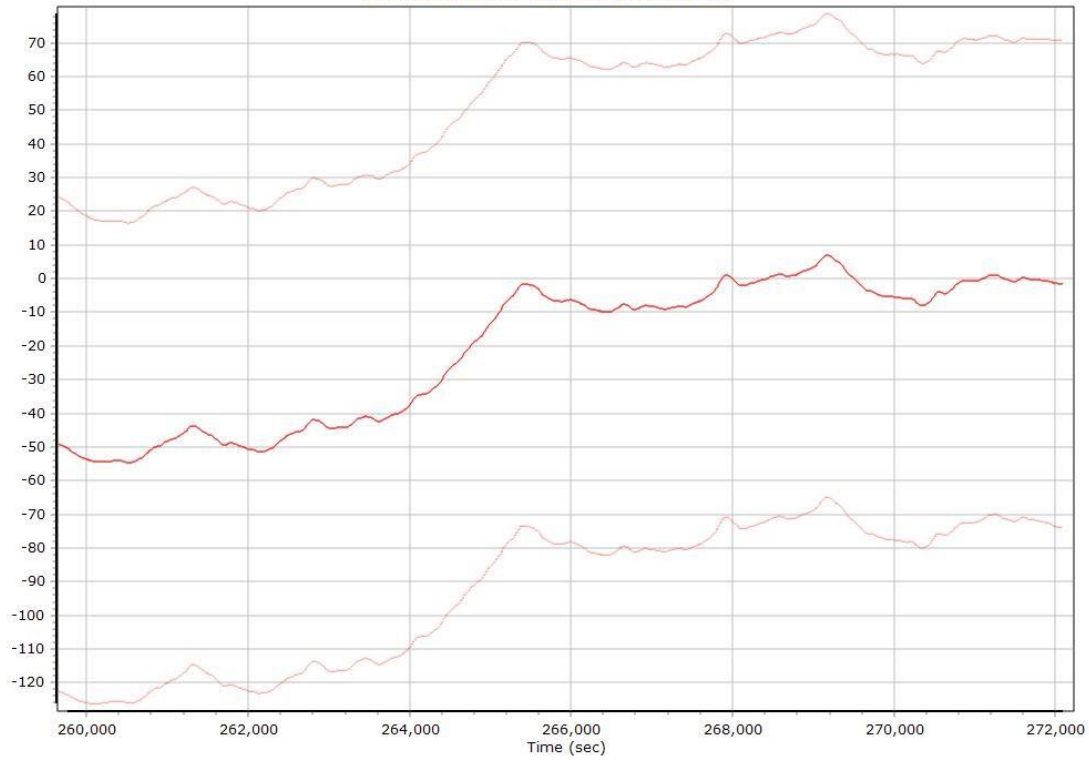


X Accelerometer Bias (micro-g)



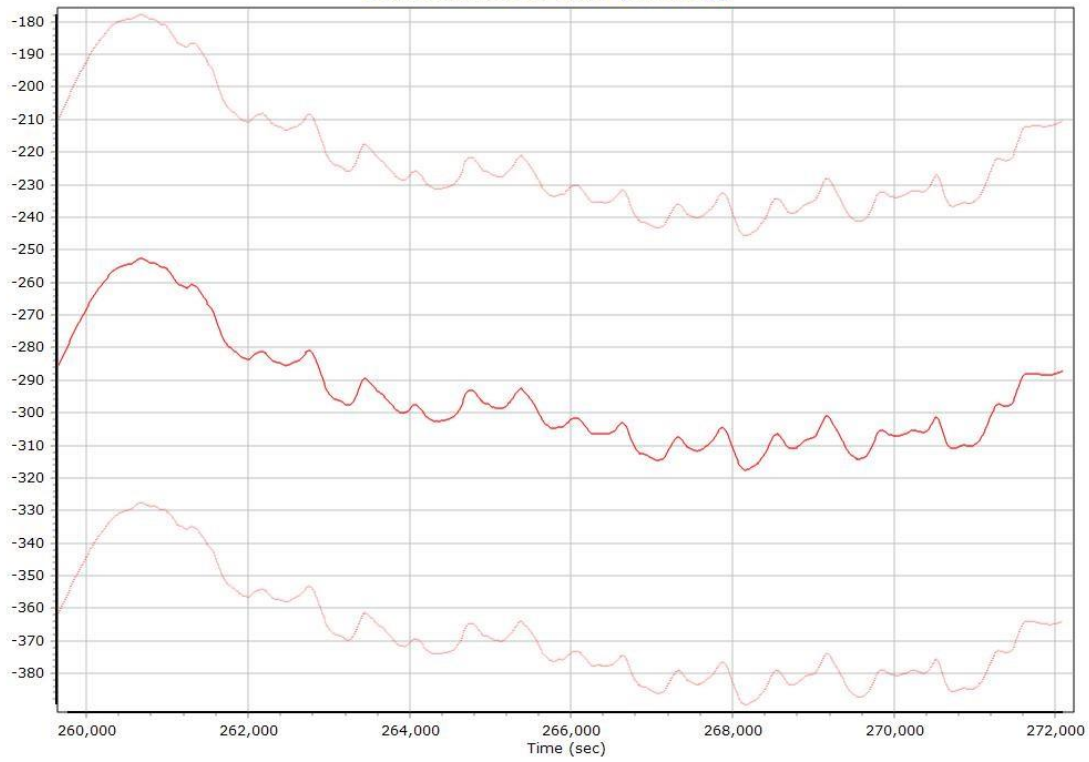
Y Accelerometer Bias (micro -g)

y accelerometer bias (micro-g)

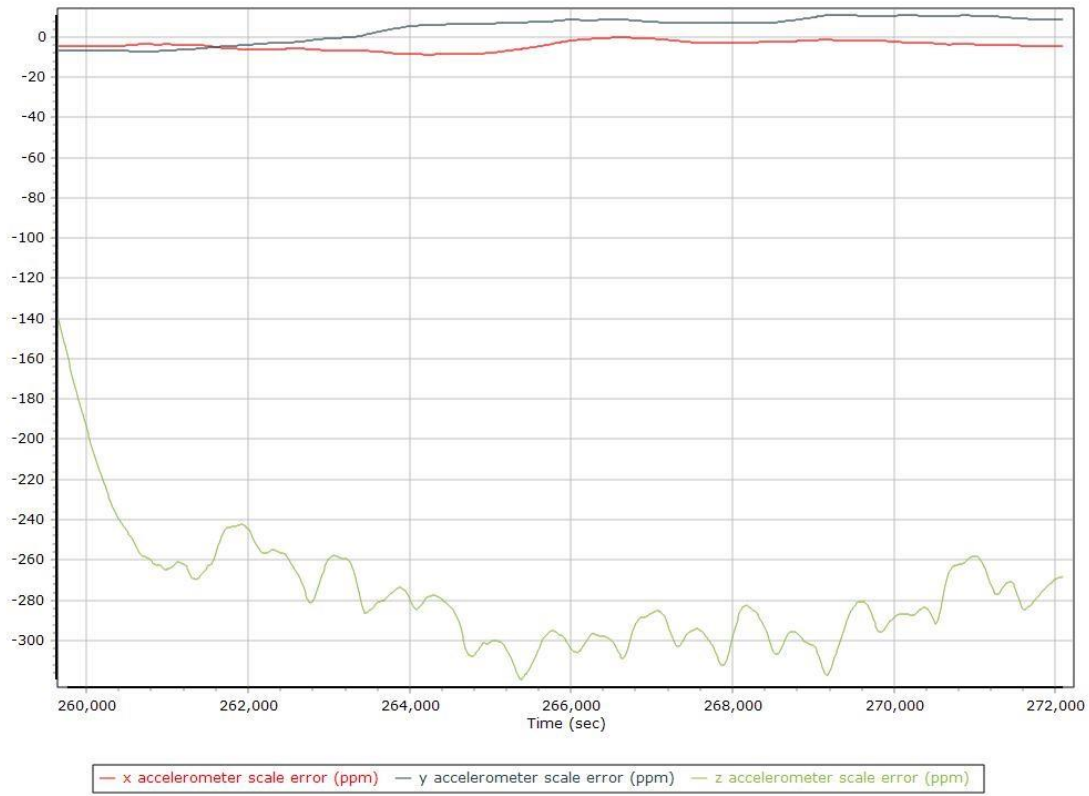


Z Accelerometer Bias (micro-g)

z accelerometer bias (micro-g)

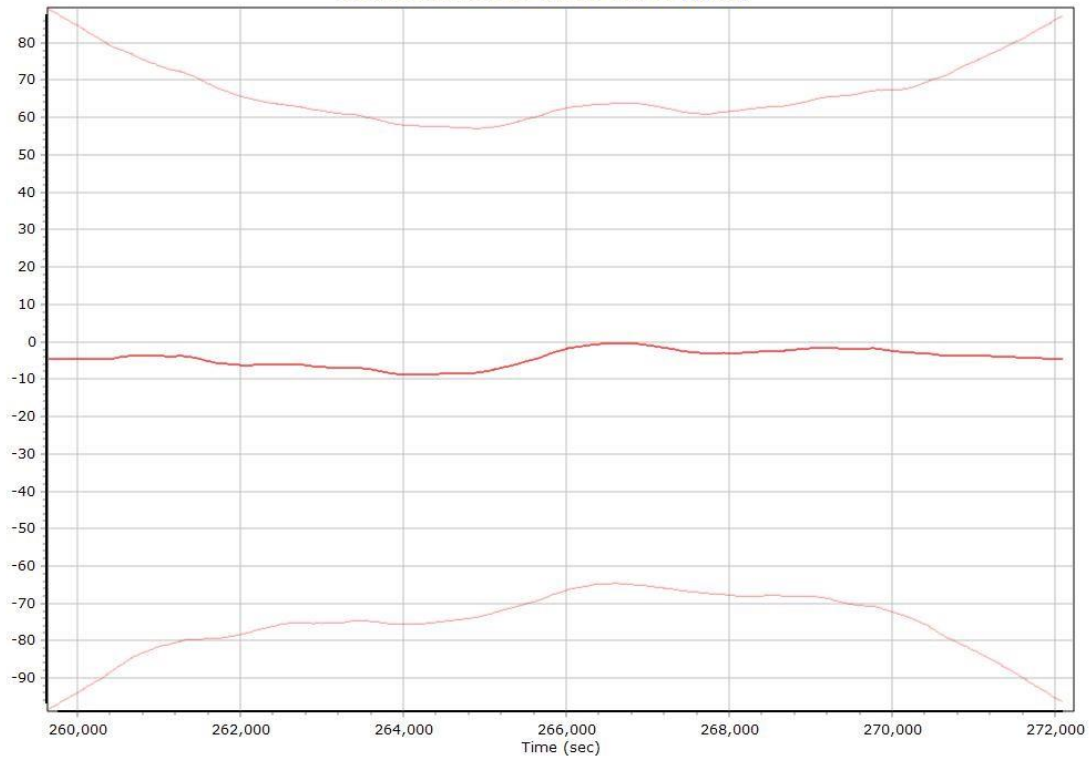


Accelerometer Scale Error (ppm)



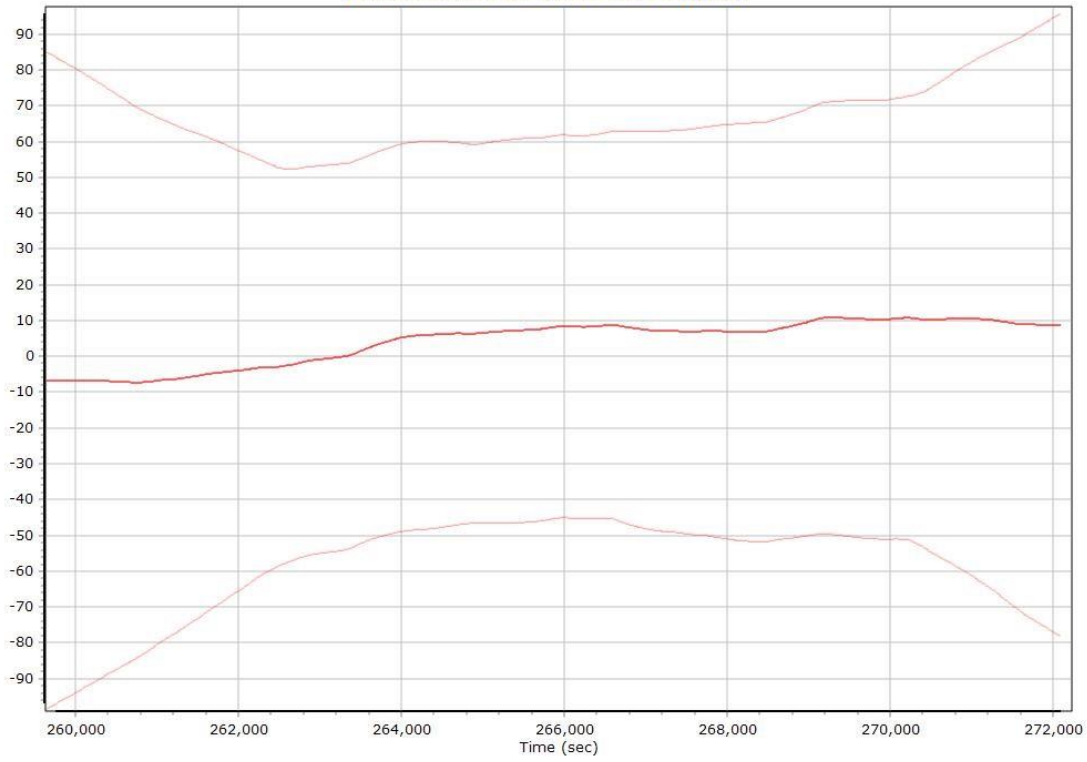
X Accelerometer Scale Error (ppm)

x accelerometer scale error (ppm)



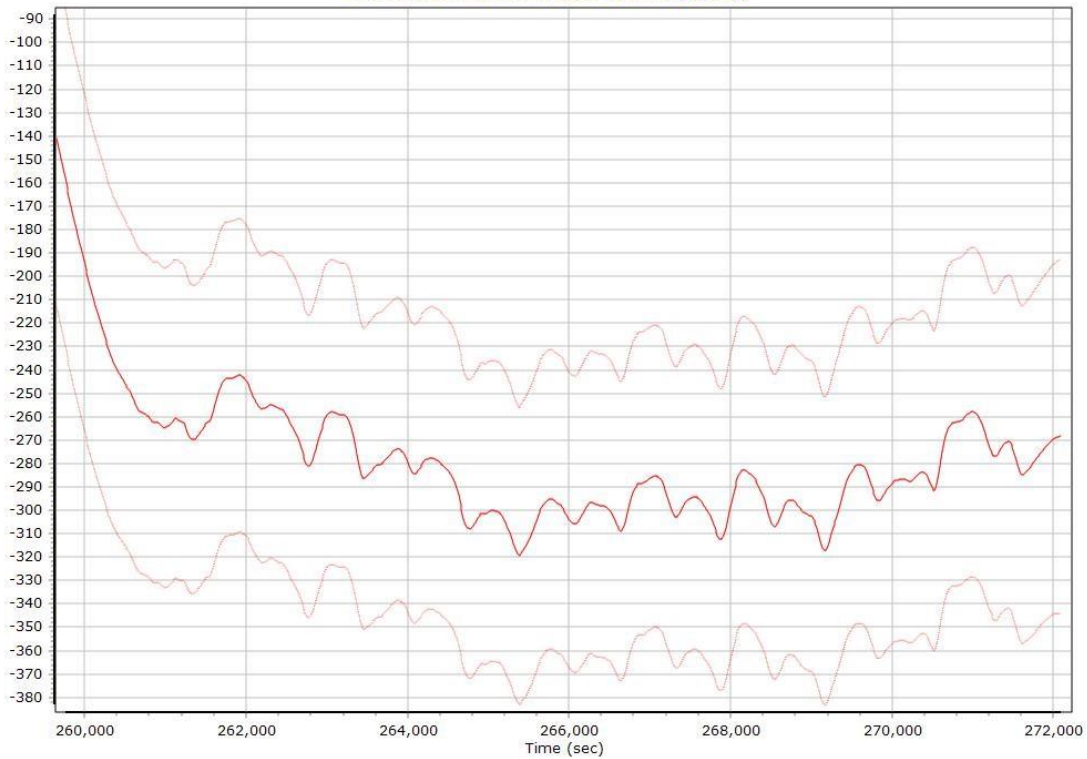
Y Accelerometer Scale Error (ppm)

y accelerometer scale error (ppm)

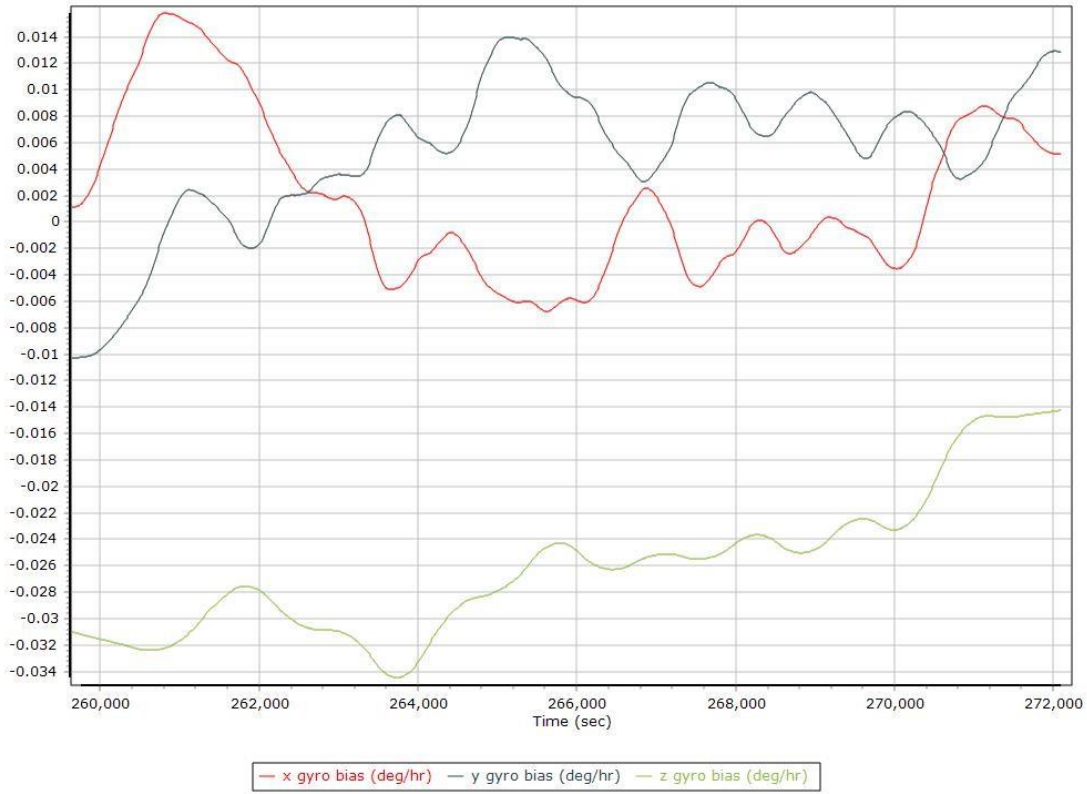


Z Accelerometer Scale Error (ppm)

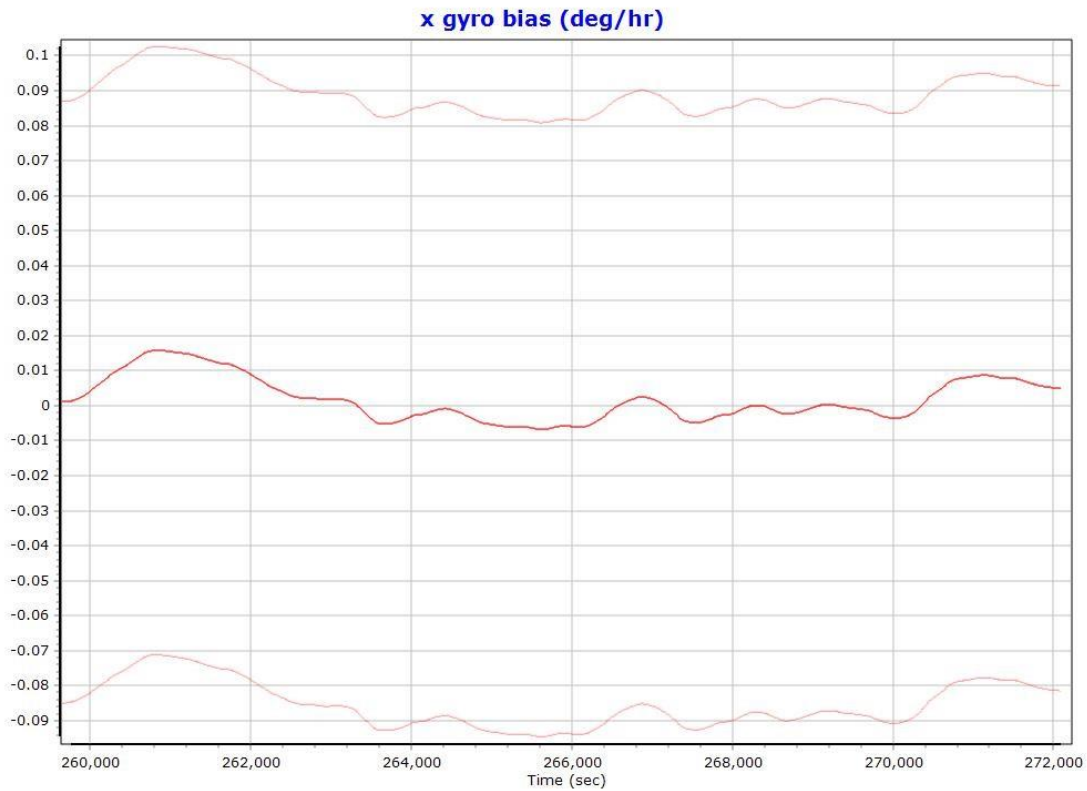
z accelerometer scale error (ppm)



Gyro Bias (deg/h)

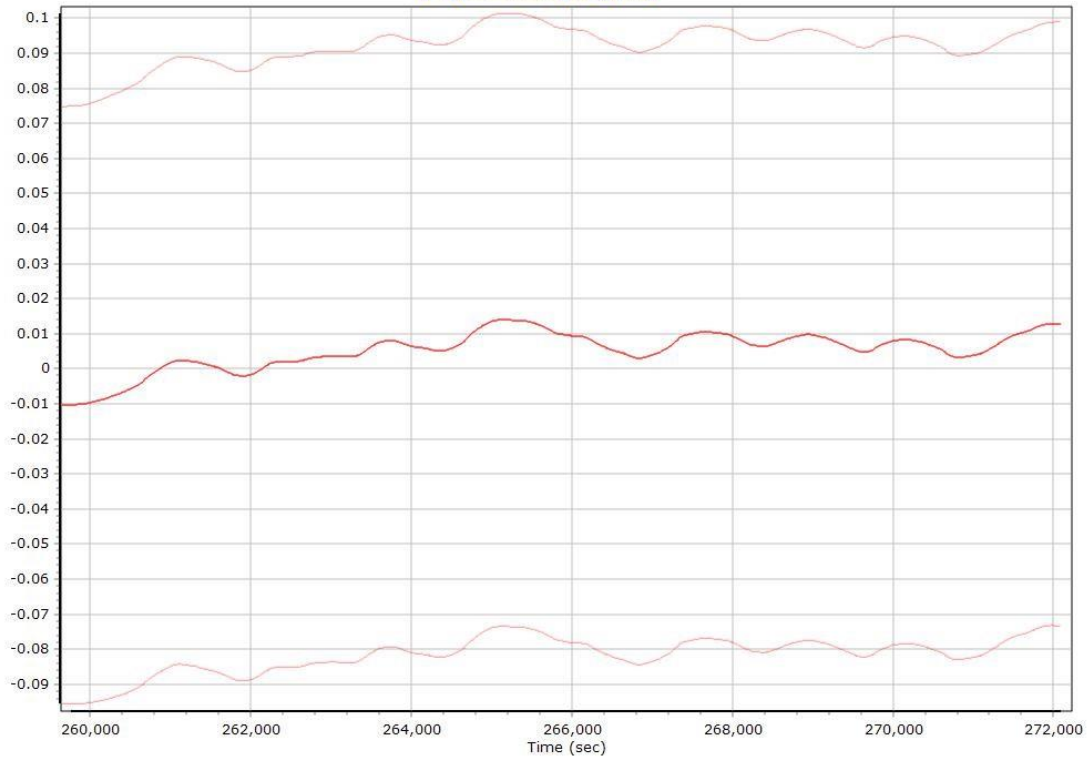


X Gyro Bias (deg/h)



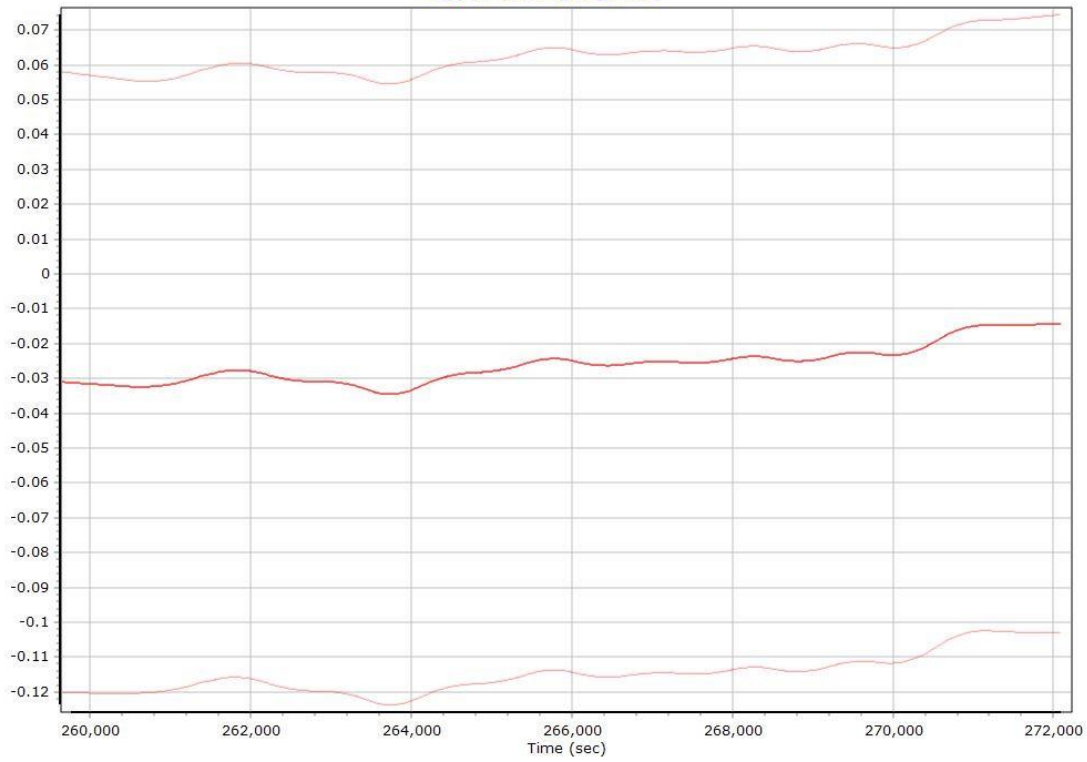
Y Gyro Bias (deg/h)

y gyro bias (deg/hr)

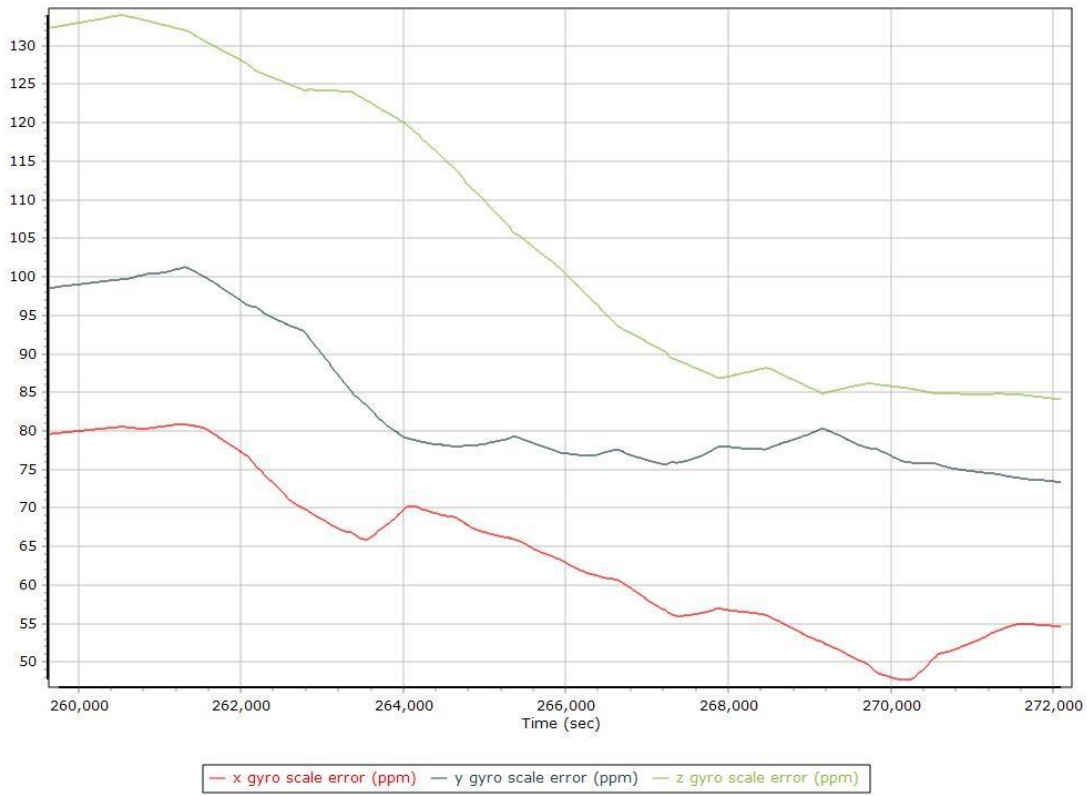


Z Gyro Bias (deg/h)

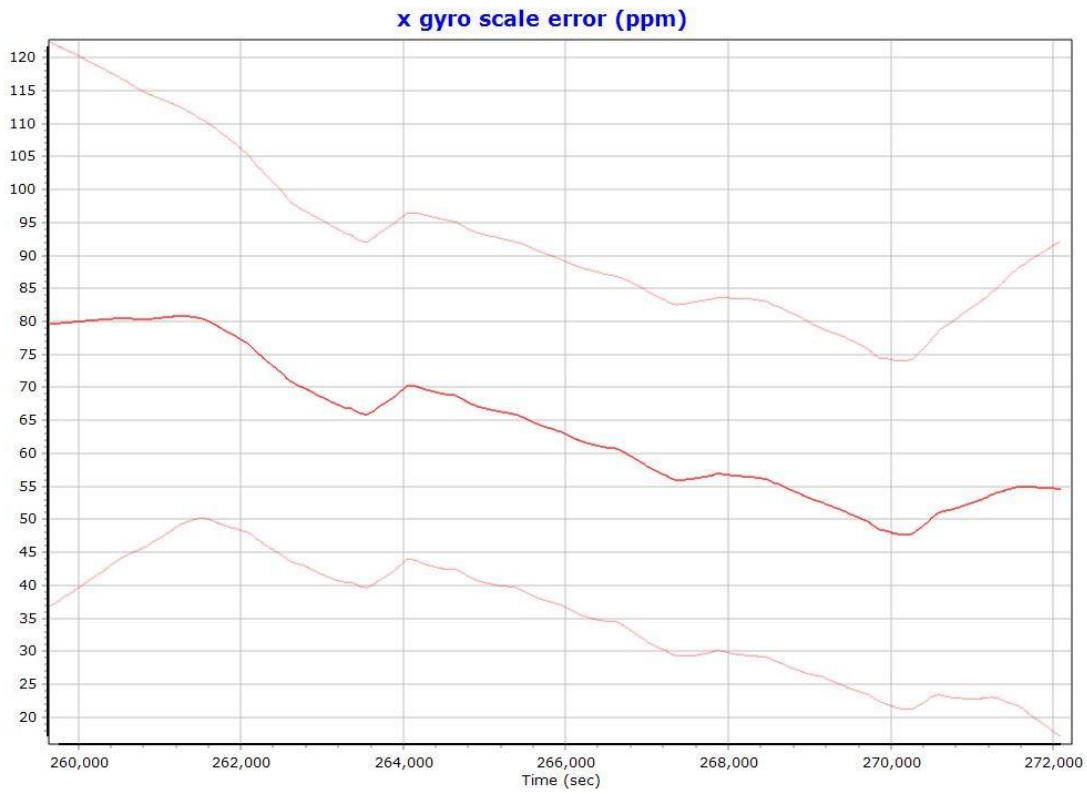
z gyro bias (deg/hr)



Gyro Scale Error (ppm)

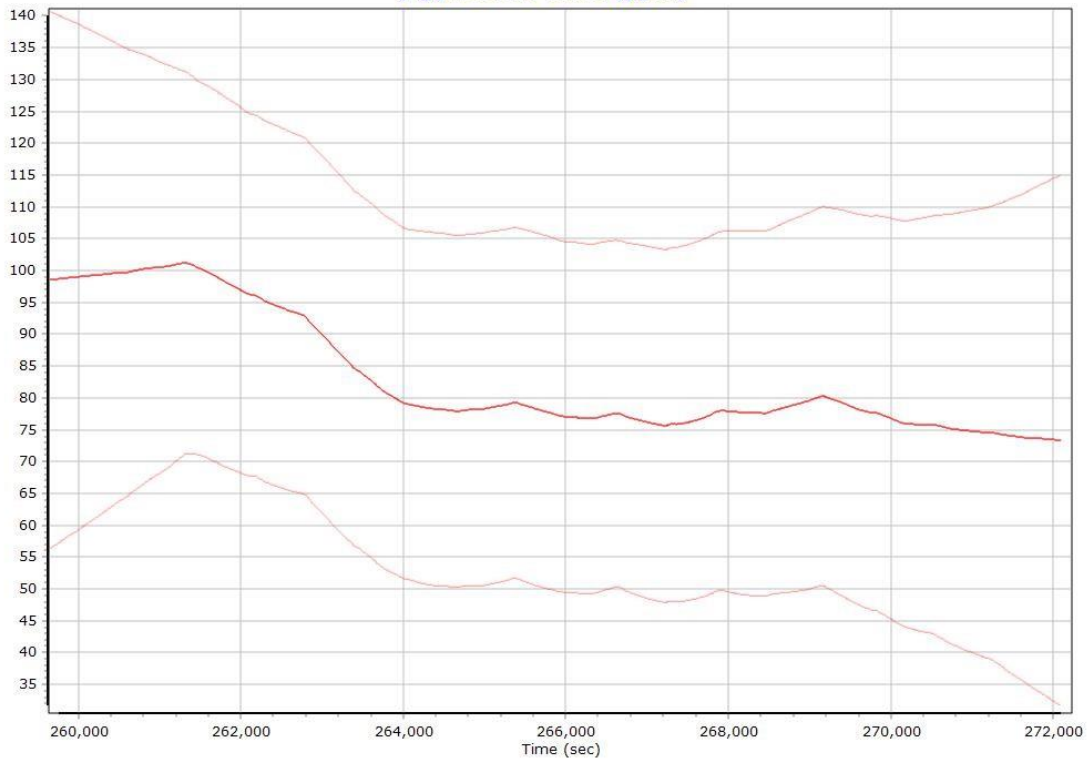


X Gyro Scale Error (ppm)



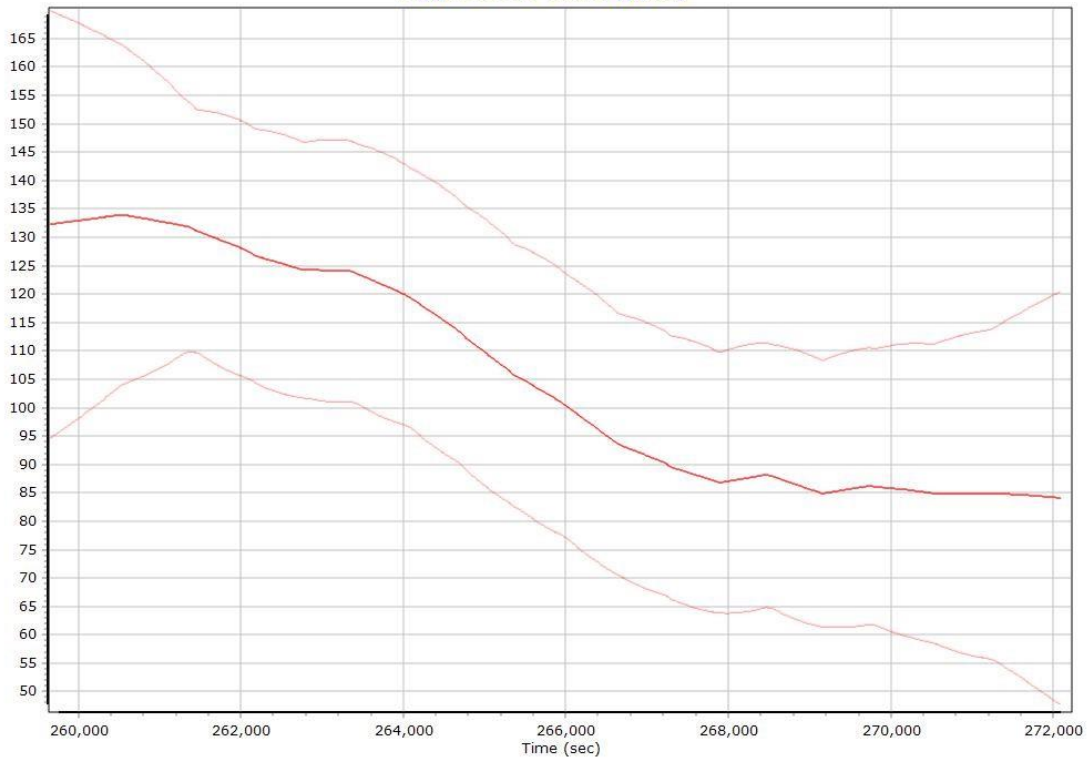
Y Gyro Scale Error (ppm)

y gyro scale error (ppm)



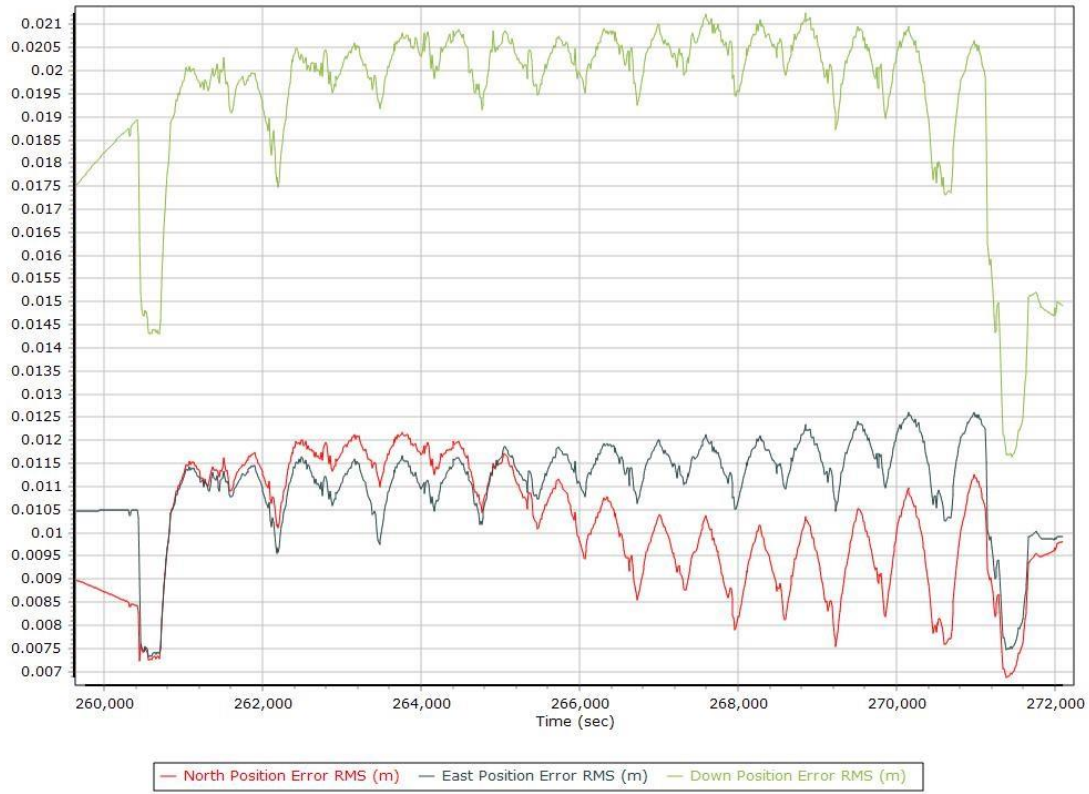
Z Gyro Scale Error (ppm)

z gyro scale error (ppm)

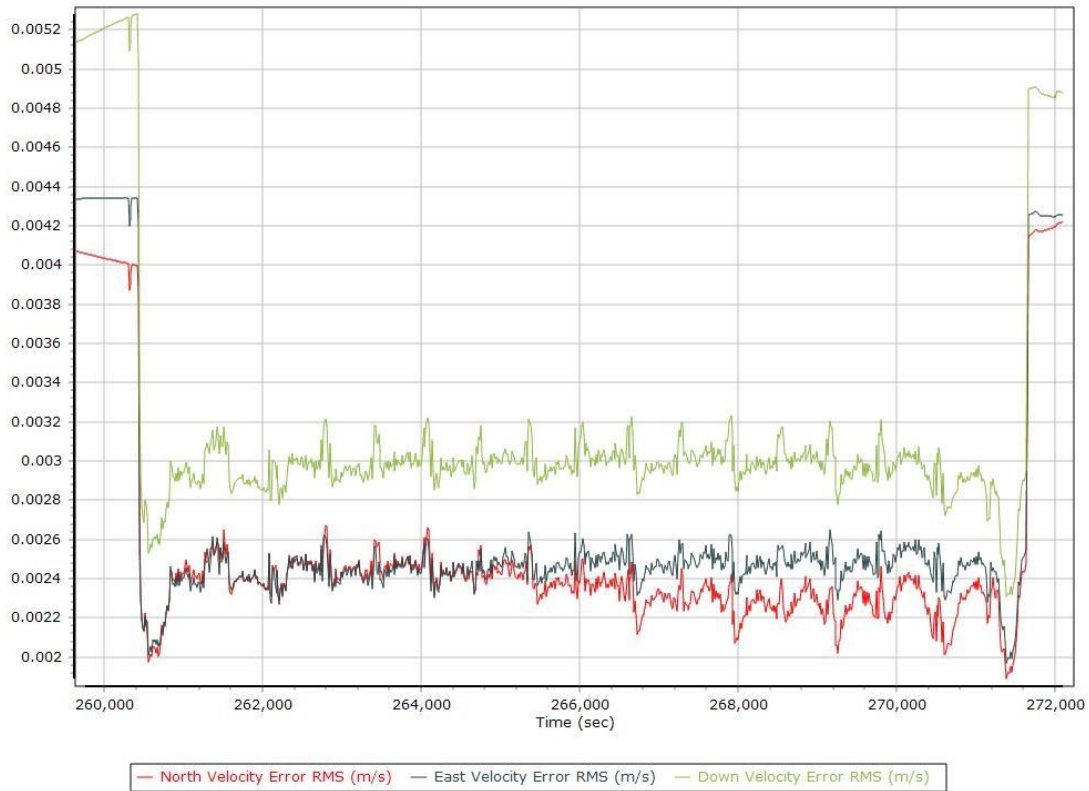


Smoothed Performance Metrics

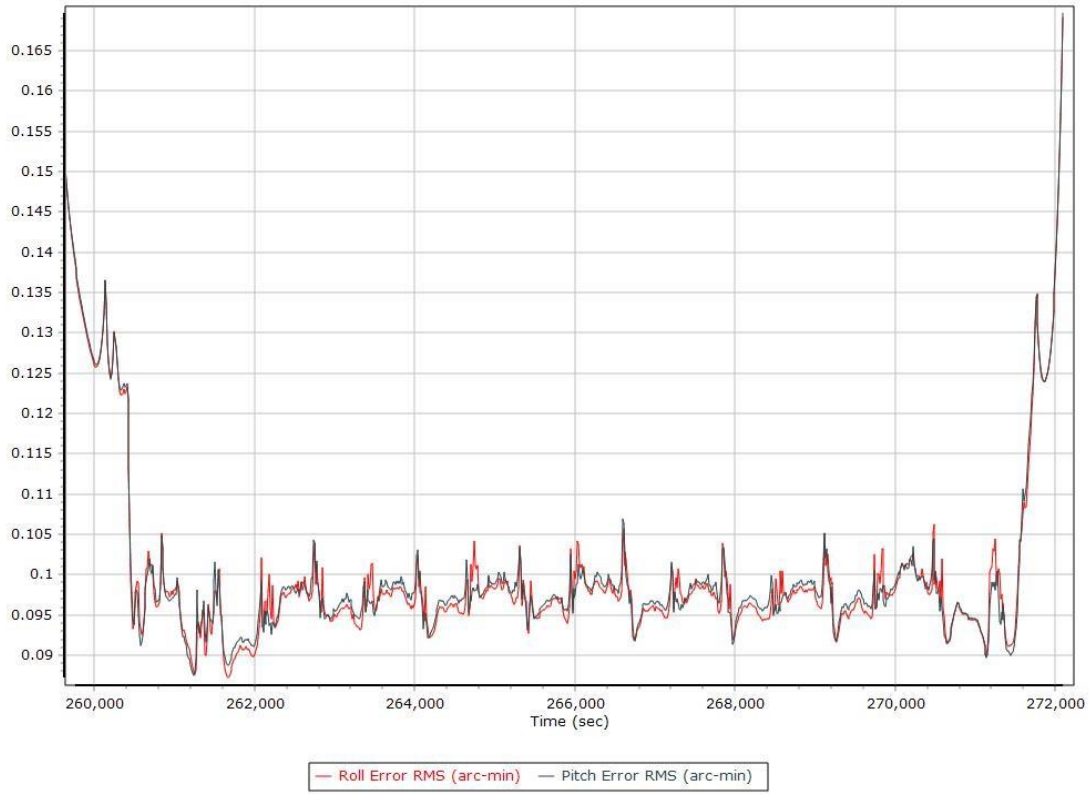
Position Error RMS (m)



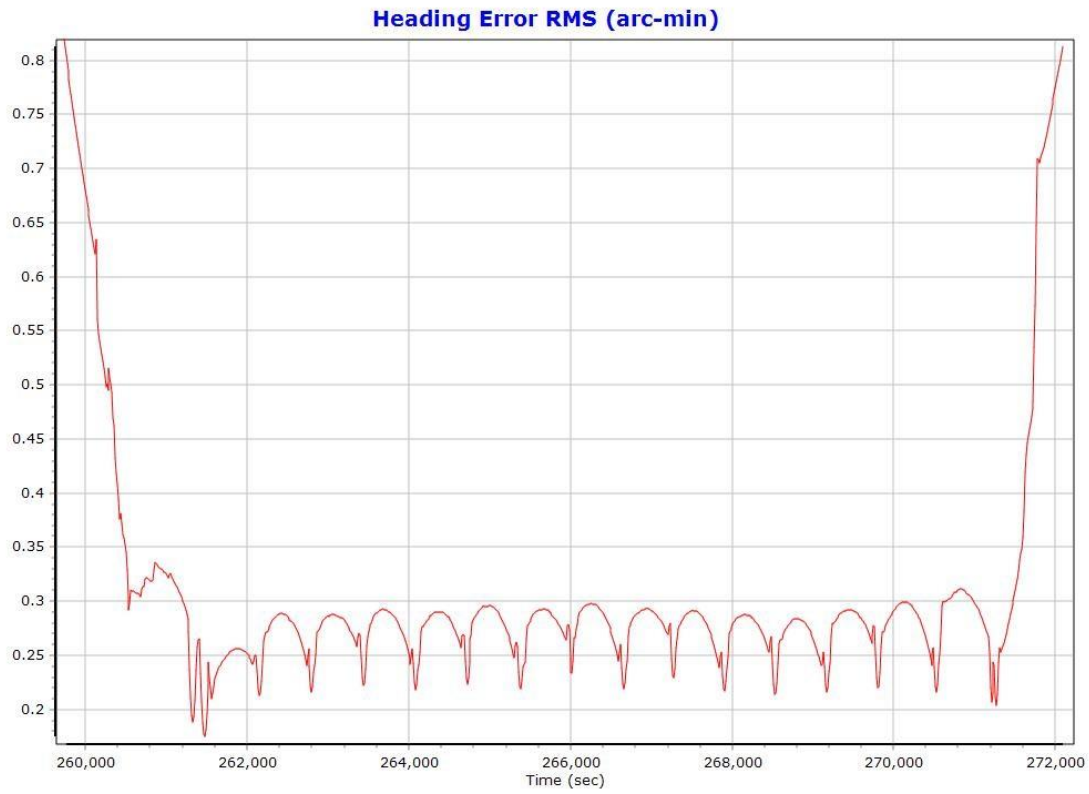
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc -min)



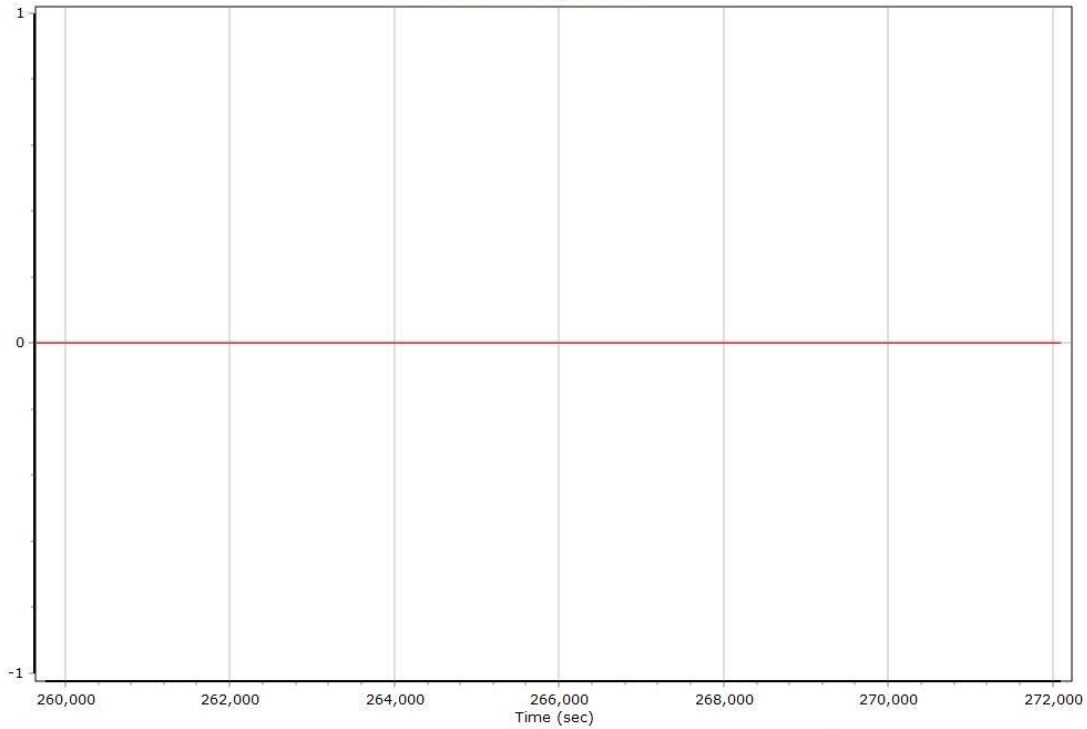
Heading Error RMS (arc-min)



Smoothed Solution Status

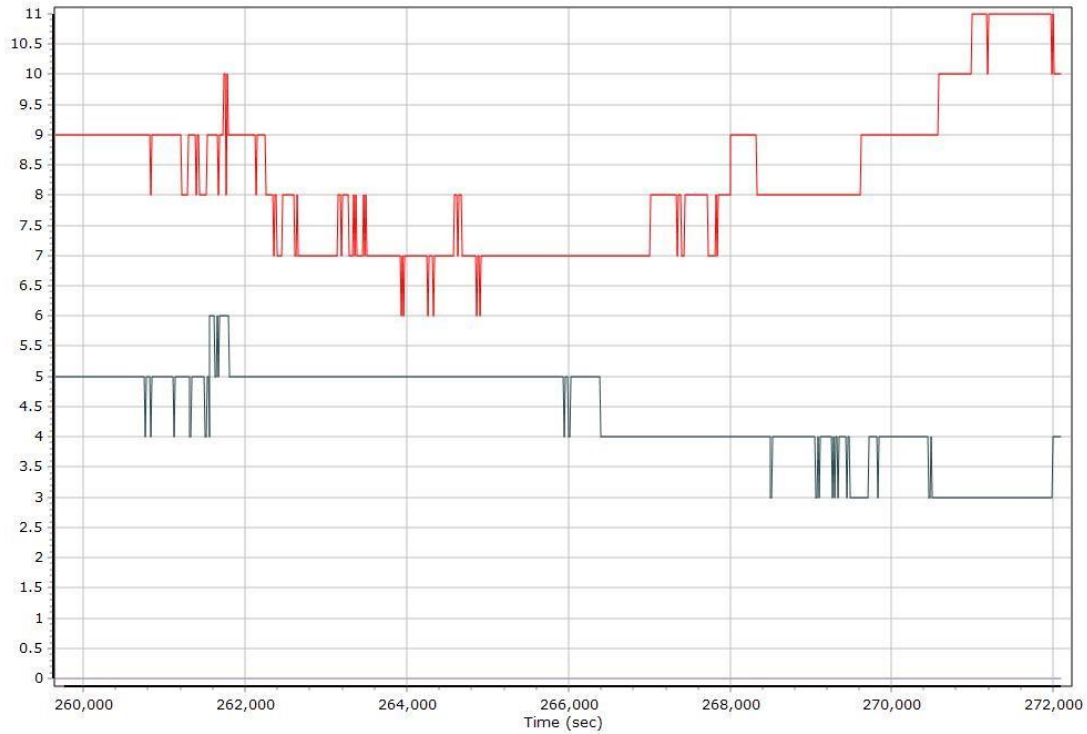
Processing Mode

Processing mode



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

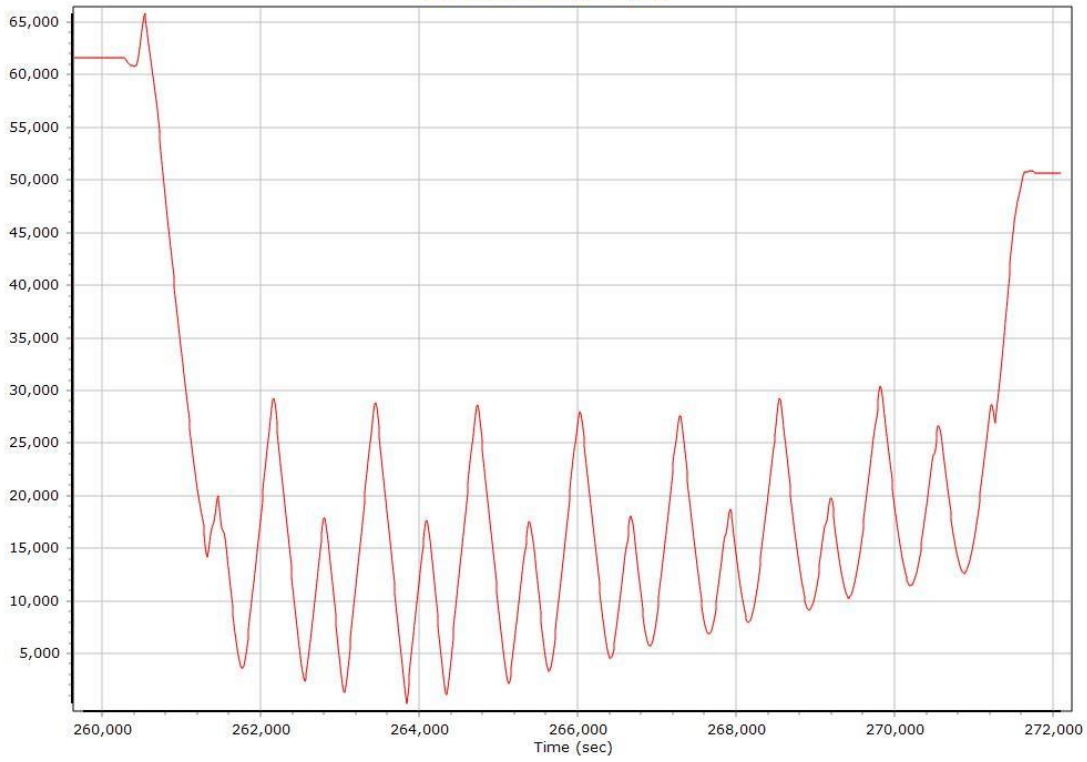
Number of Satellites



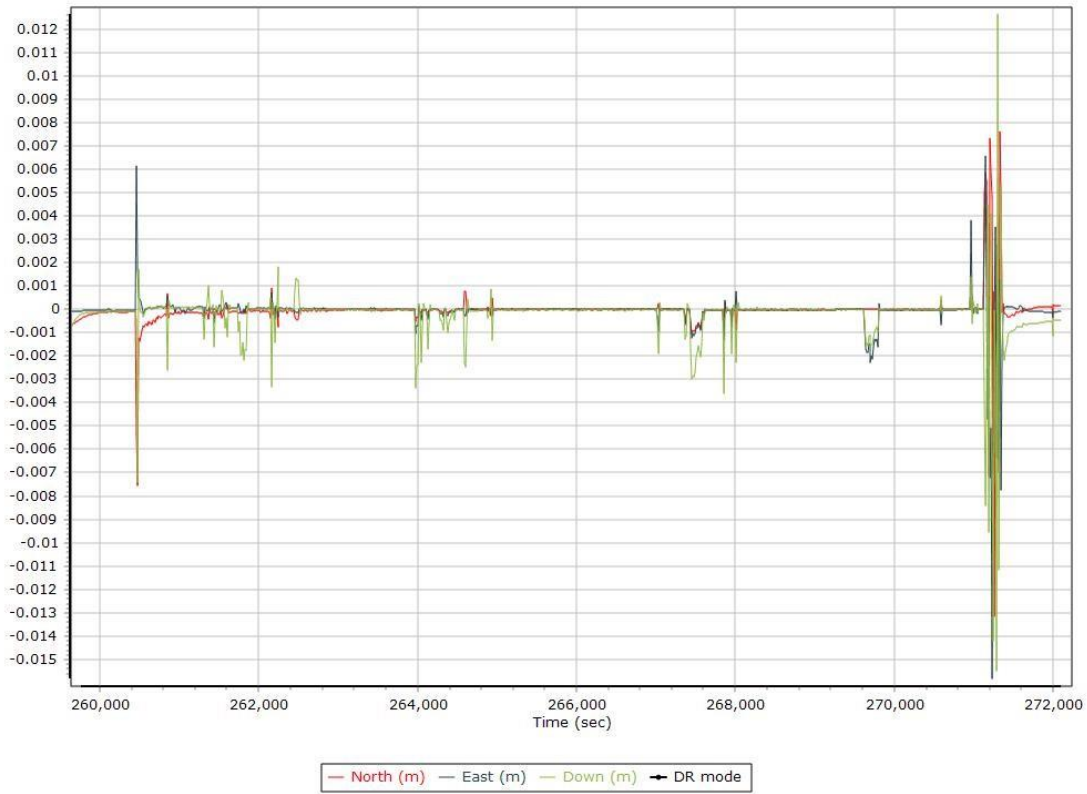
— Number of GPS Satellites — Number of GLONASS Satellites — Number of QZSS Satellites — Number of BEIDOU Satellites

Baseline Length

Baseline Length (m)



SBET IAKAR Separation



General Information

Mission Information

Project name	12112018BNAD83Final
Processing date	2019-03-04 14:59:04
Mission date	2018-12-12 04:09:51
Mission duration	00:48:58.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9524
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
181212_040932_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3460.18g	GLONASS Broadcast Ephemeris
Ephm3460.18n	GPS Broadcast Ephemeris
igl20312.sp3	GLONASS Precise Ephemeris
igl20313.sp3	GLONASS Precise Ephemeris
igl20314.sp3	GLONASS Precise Ephemeris
igs20312.sp3	GPS Precise Ephemeris
igs20313.sp3	GPS Precise Ephemeris
igs20314.sp3	GPS Precise Ephemeris
fmyr3460.18o	GNSS SingleBase
nap13460.18o	GNSS SingleBase
wach3460.18o	GNSS SingleBase
zefr3460.18o	GNSS SingleBase
chin3460.18o	GNSS SingleBase

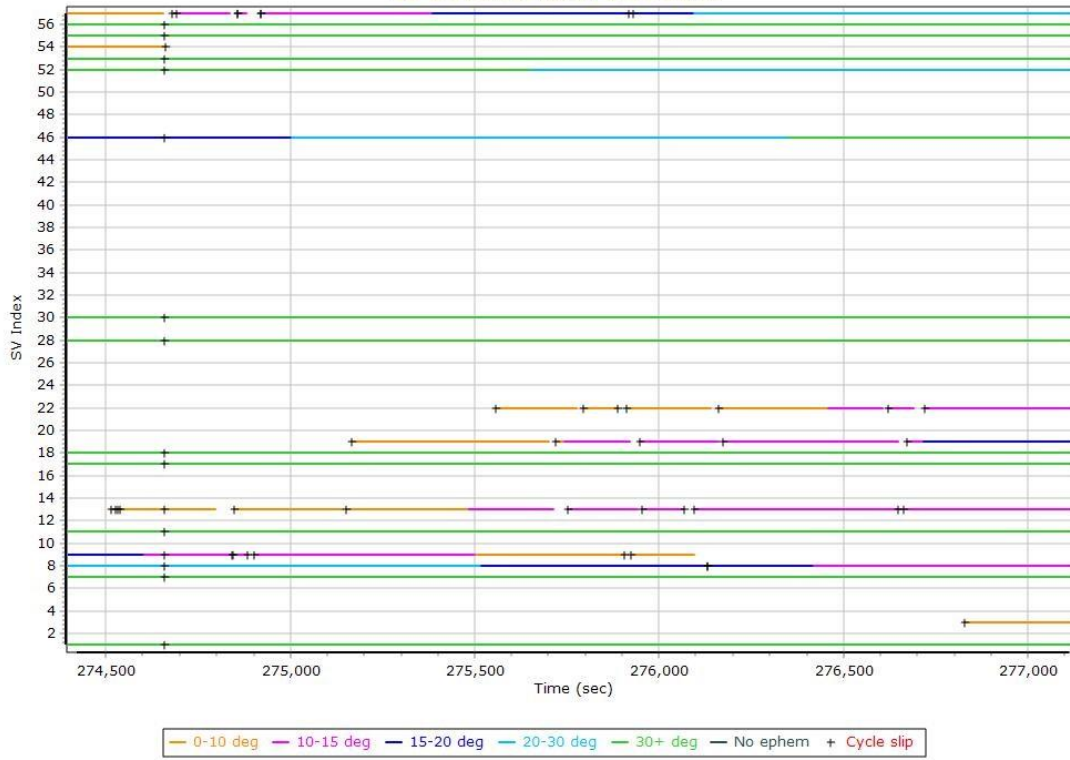
Output Files

Filename	File type
sbet_Mission 1.out	SBET Trajectory File

Rover Data Summary

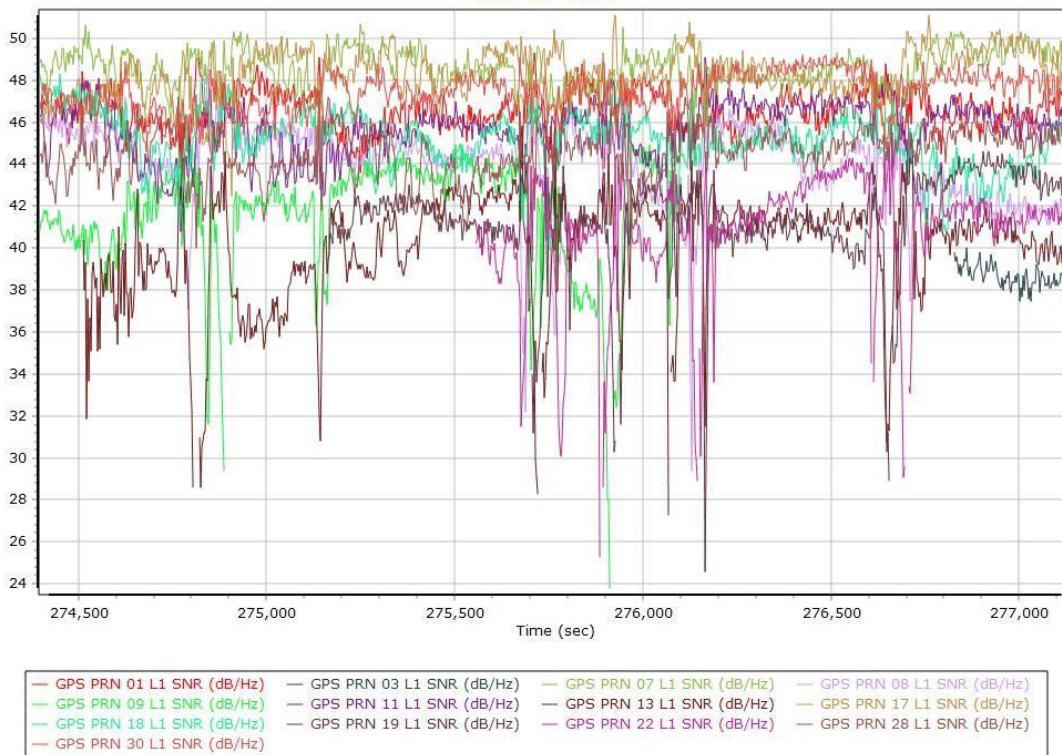
First raw data file	181212_040932_INS-GPS_1.raw		
Last raw data file	181212_040932_INS-GPS_1.raw		
Start GPS week	2031		
Start time	274172.700 (12/12/2018 4:09:32 AM)		
End time	277111.399 (12/12/2018 4:58:31 AM)		
Start of fine alignment	274361.054 (12/12/2018 4:12:41 AM)		
Available subsystems	Primary 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	0.000
Reference to Primary GNSS lever arm [m]	0.102	-0.140	-0.961
Reference to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

L2 Satellite Lock/Elevation

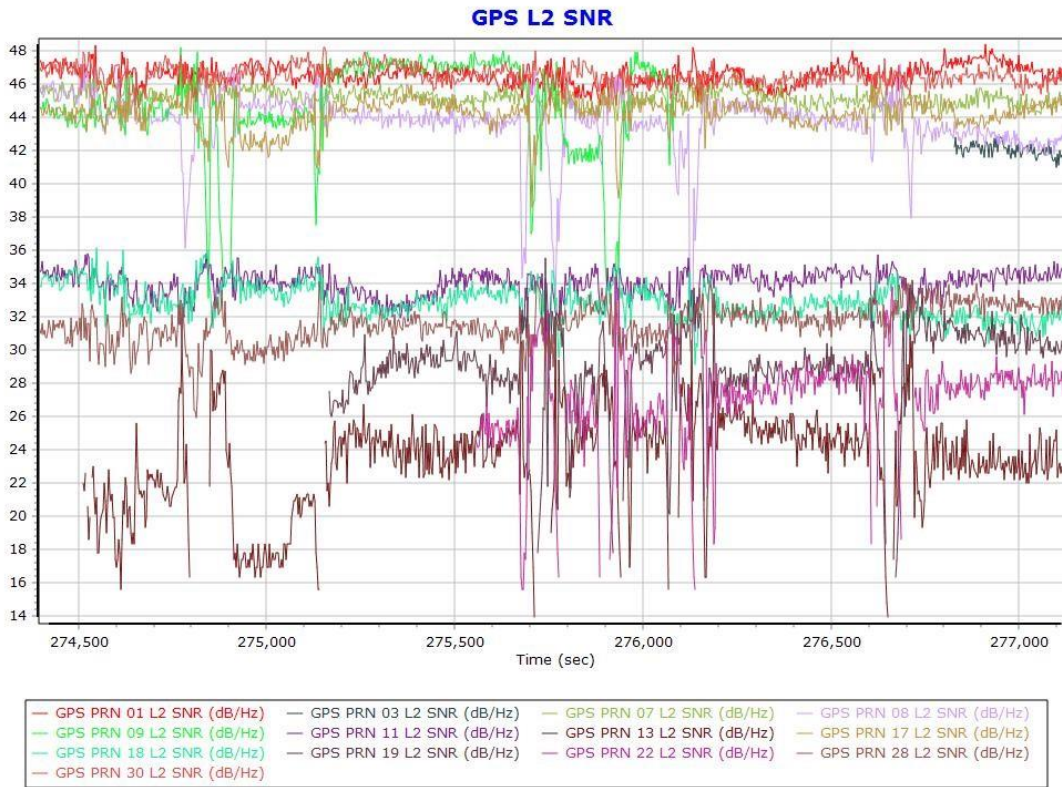


GPS L1 SNR

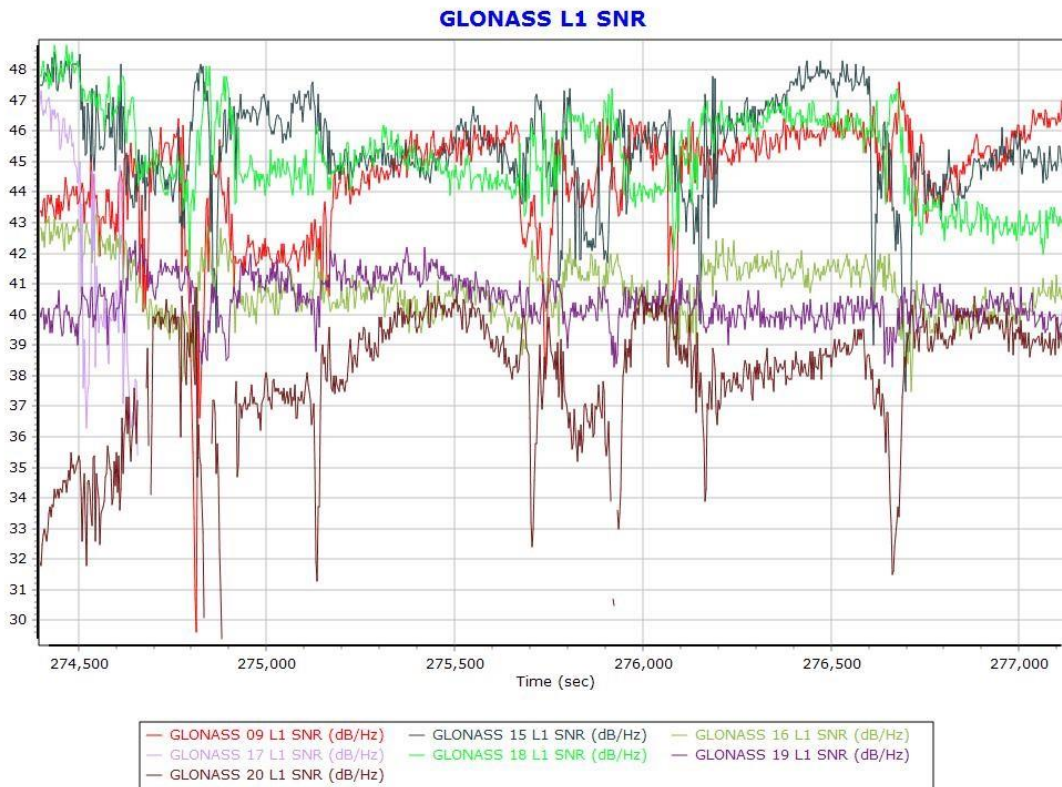
GPS L1 SNR



GPS L2 SNR

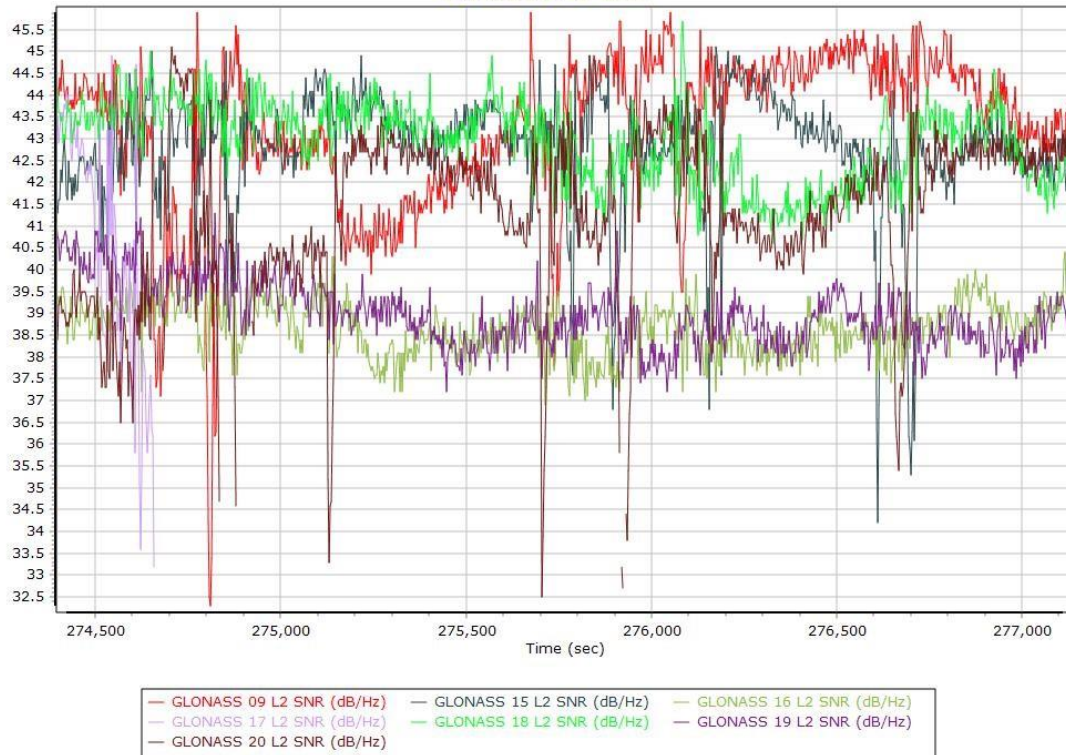


GLONASS L1 SNR



GLONASS L2 SNR

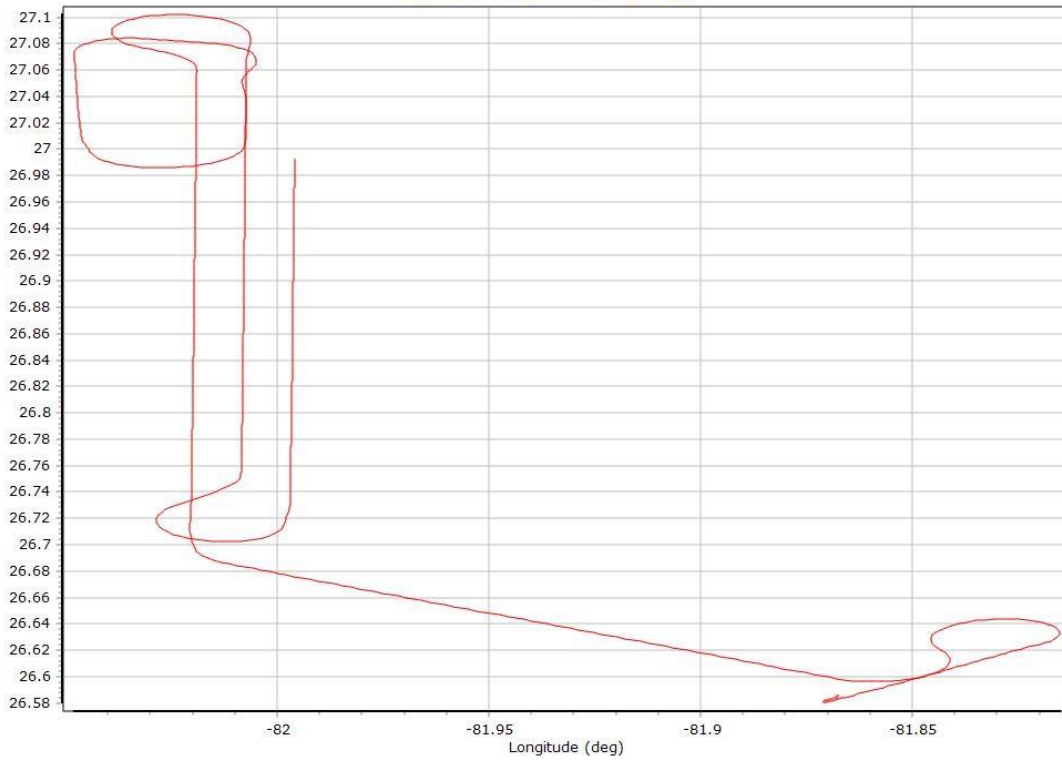
GLONASS L2 SNR



Trajectory Information

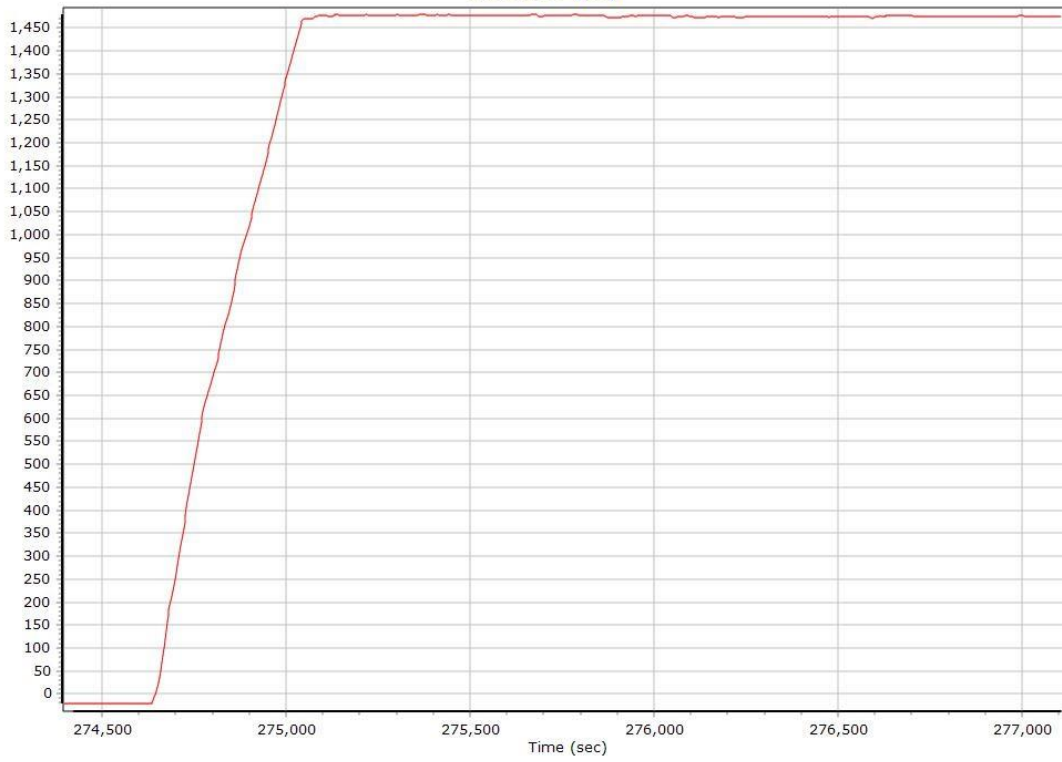
Top View

Top View: Latitude (deg)

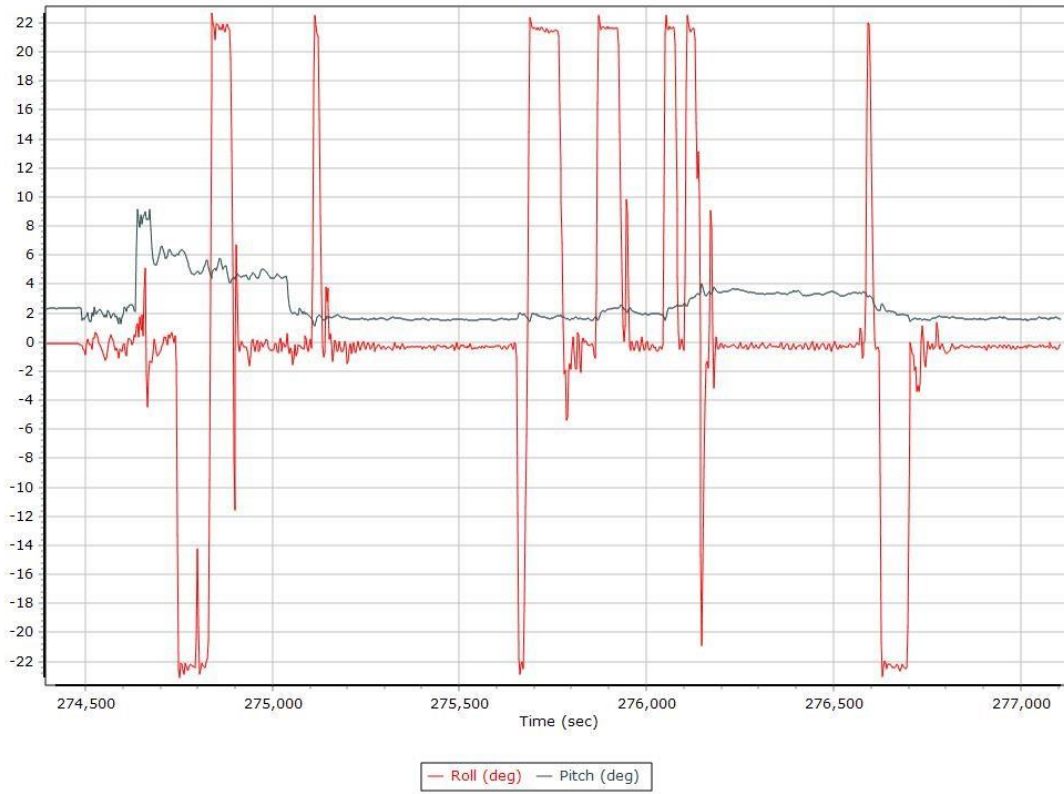


Altitude

Altitude (m)

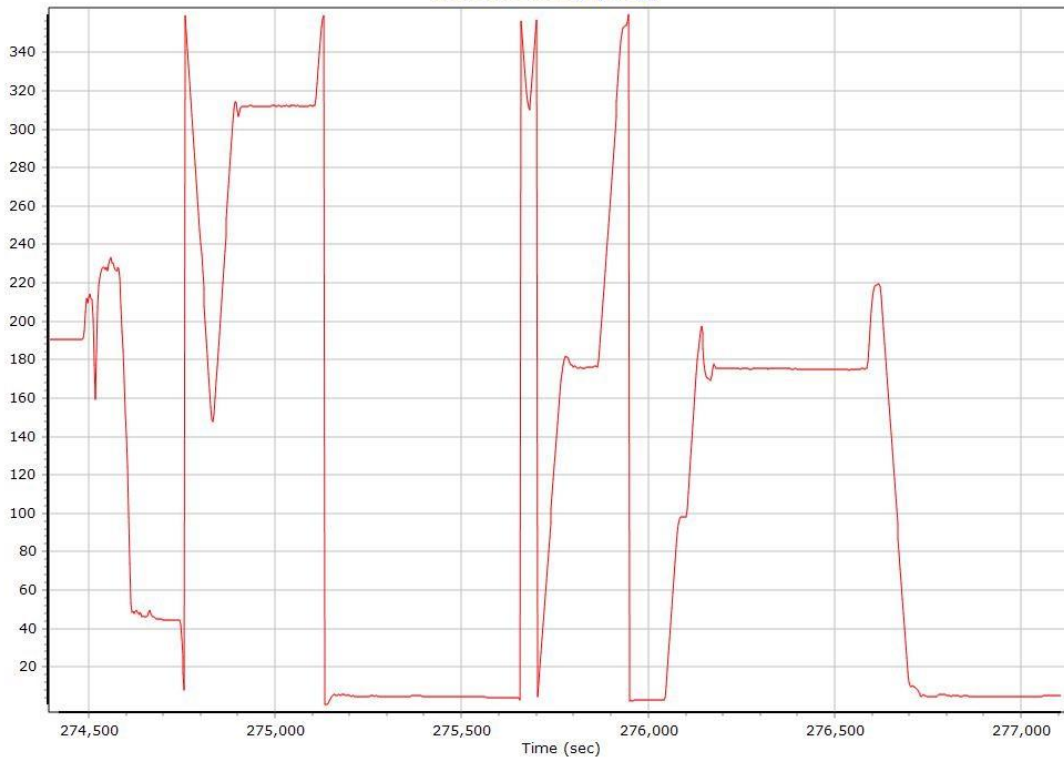


Roll/Pitch

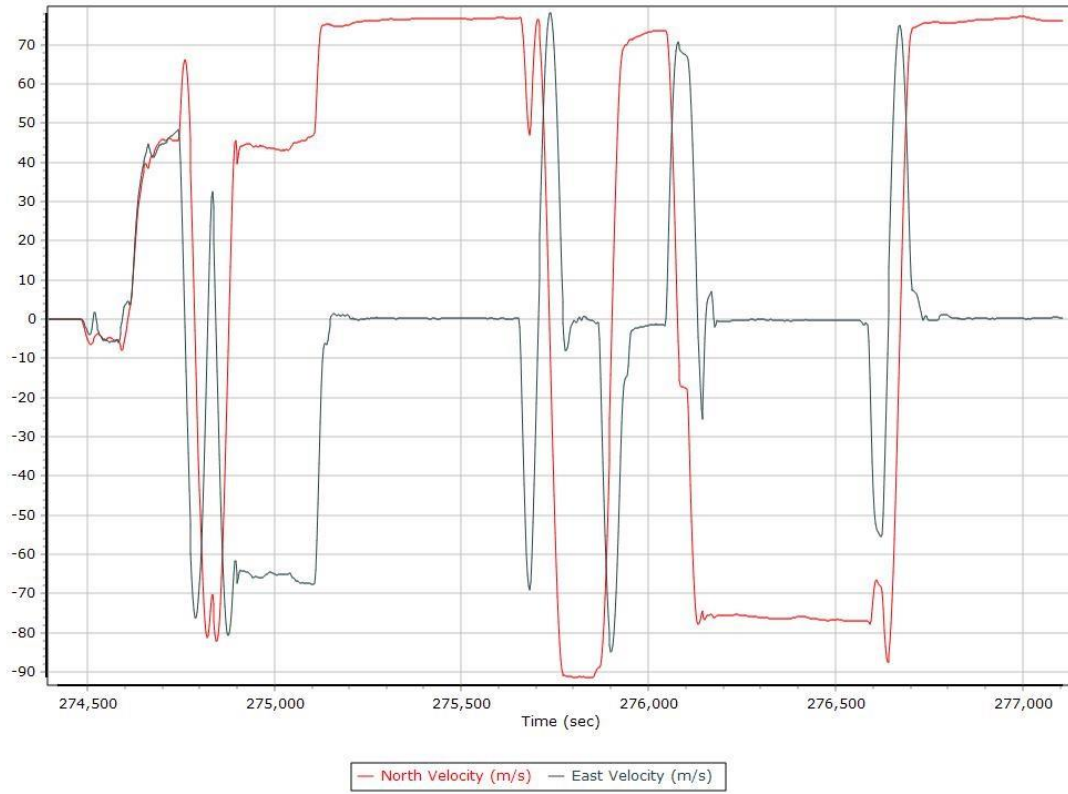


Heading

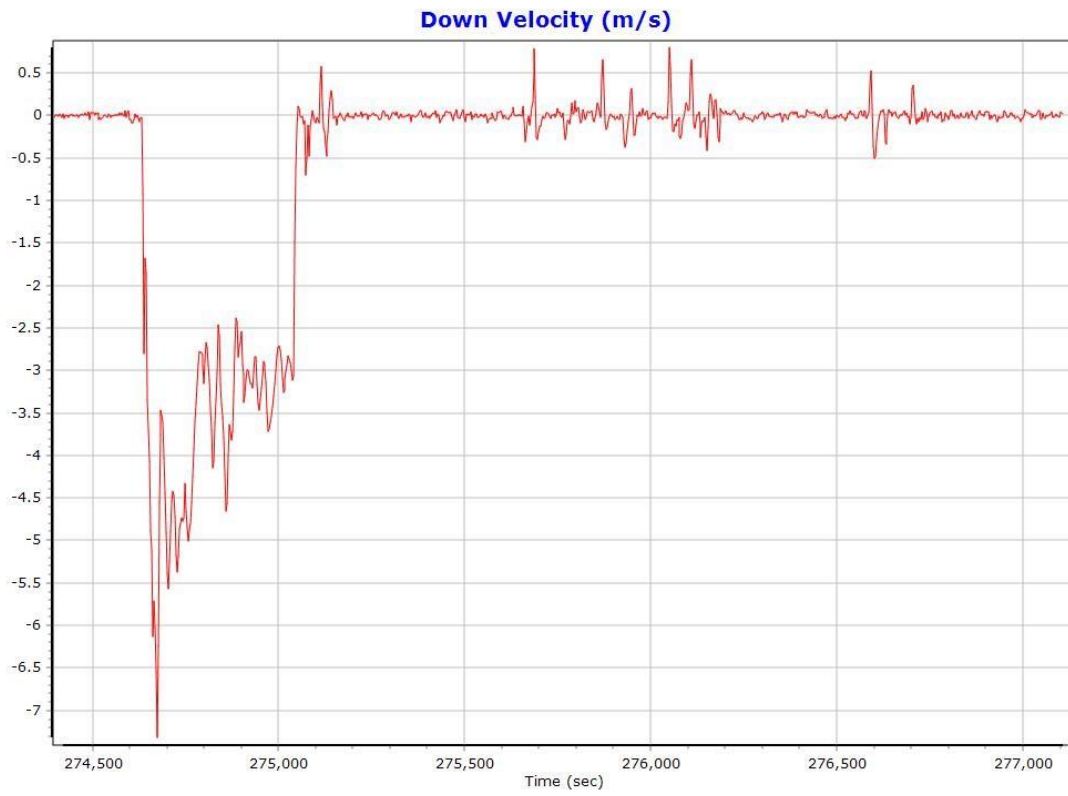
True Heading (deg)



North/East Velocity

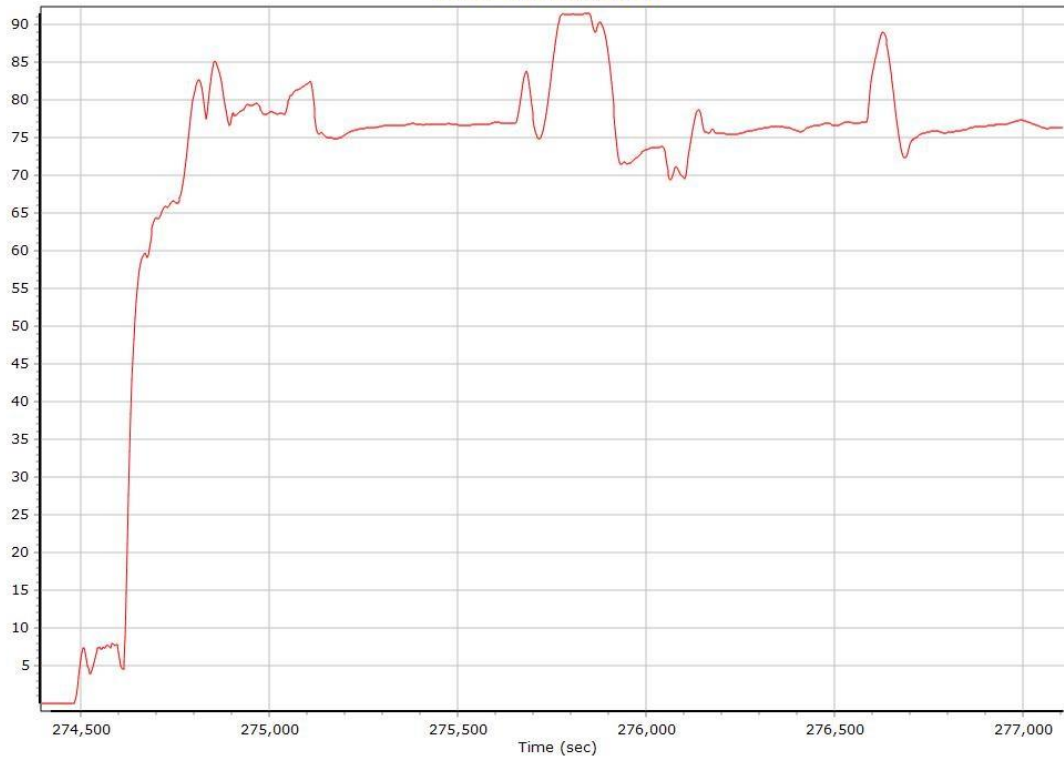


Down Velocit



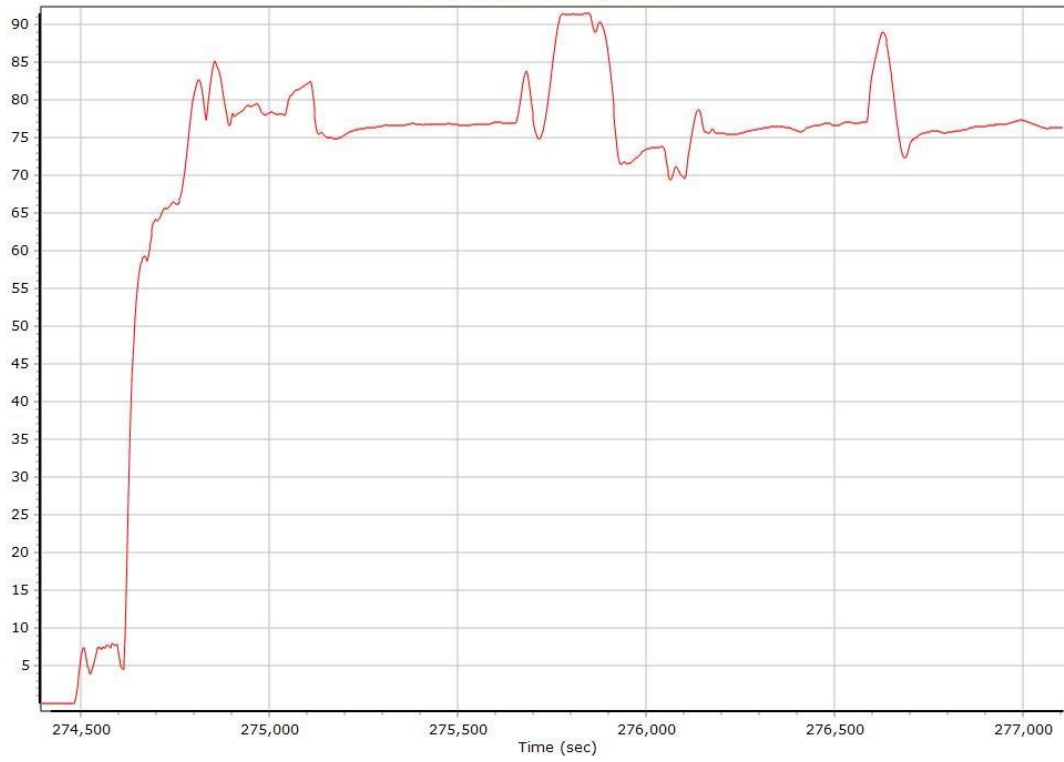
Total Speed

Total Speed (m/s)

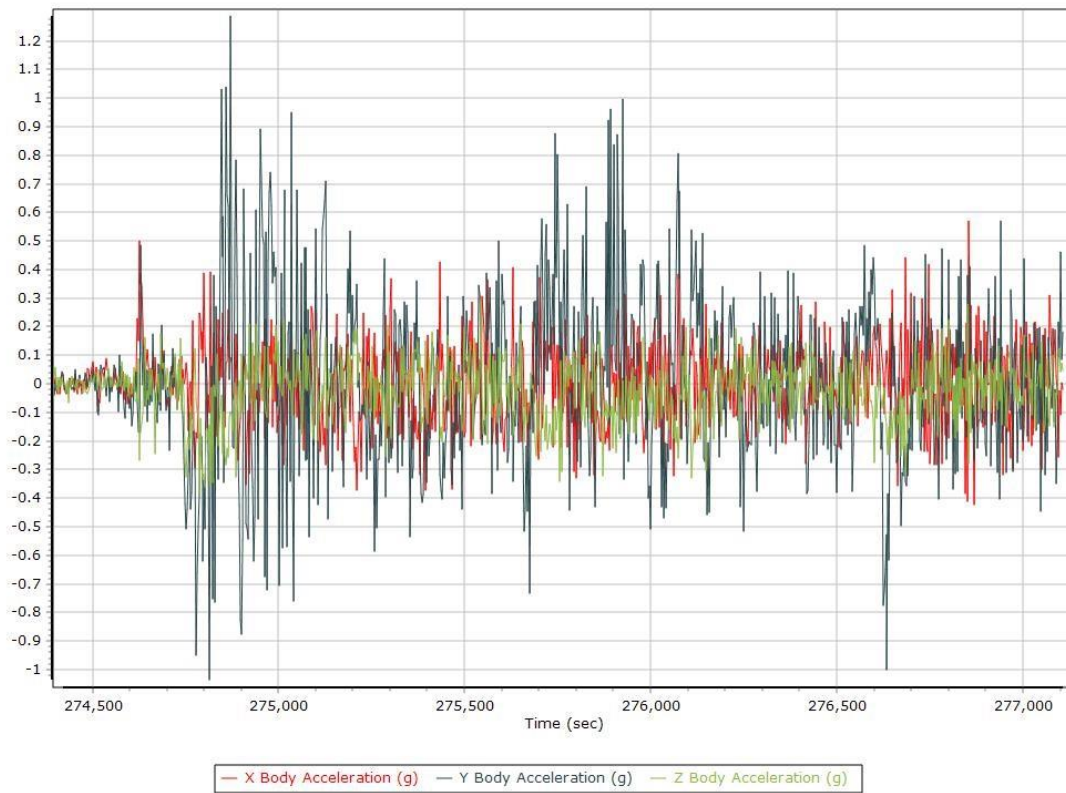


Ground Speed

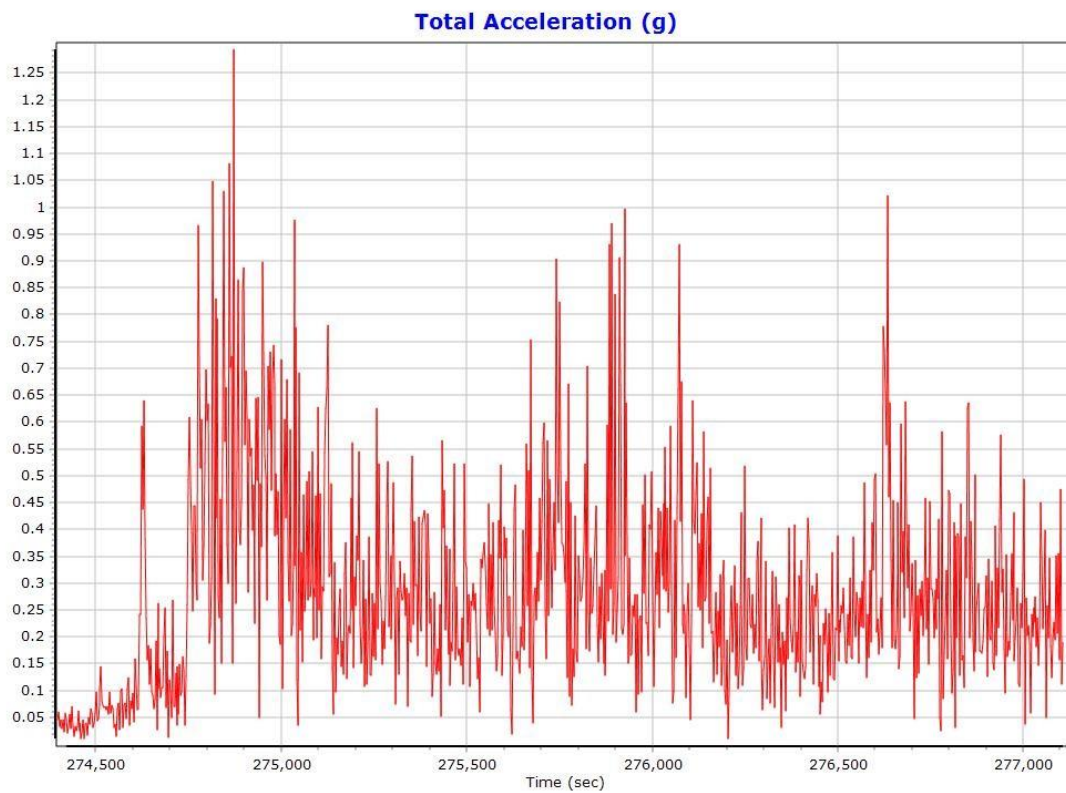
Ground Speed (m/s)



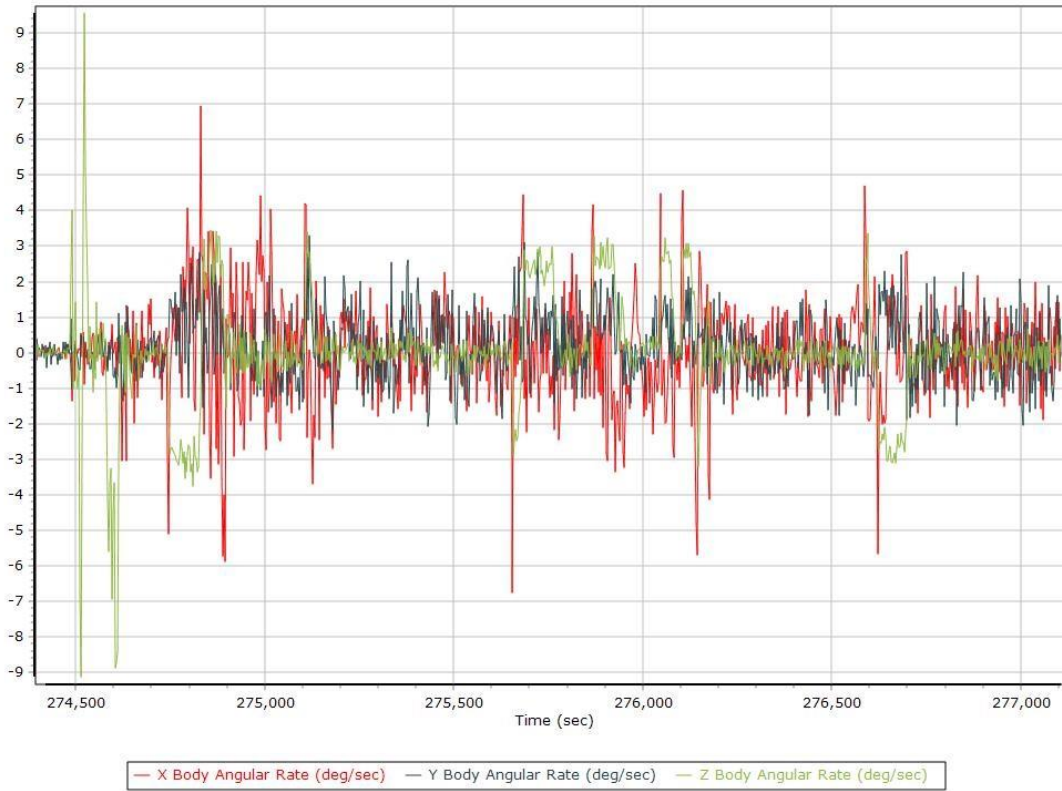
Body Acceleration



Total Body Acceleration



Body Angular Rate



SmartBase Processing Summary

Smart Select Options

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

Basestation Selection

Date	ID	Dist	DataType	Rate	Service	Database	Status
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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

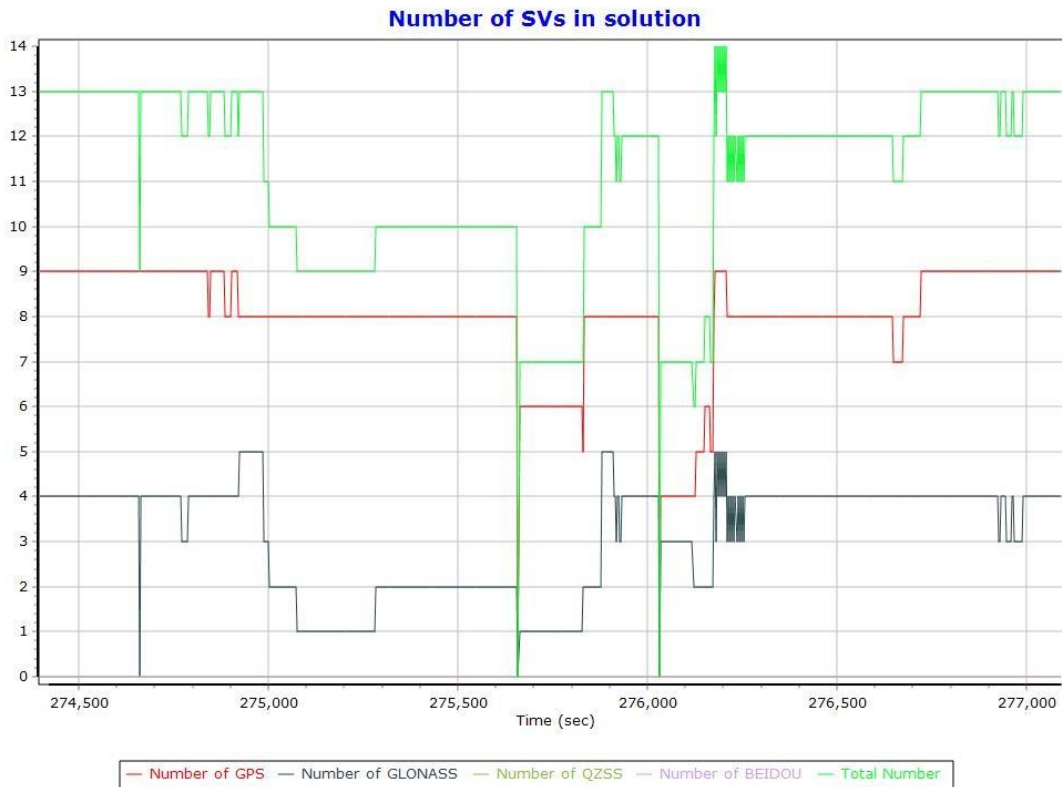
Total full data gap [sec]	0
Total individual satellite data gap [sec]	0
GPS precise vs. broadcast ephemeris used	0.0 % / 0.0 %
Termination Status	

GNSS QC

GNSS QC Statistics

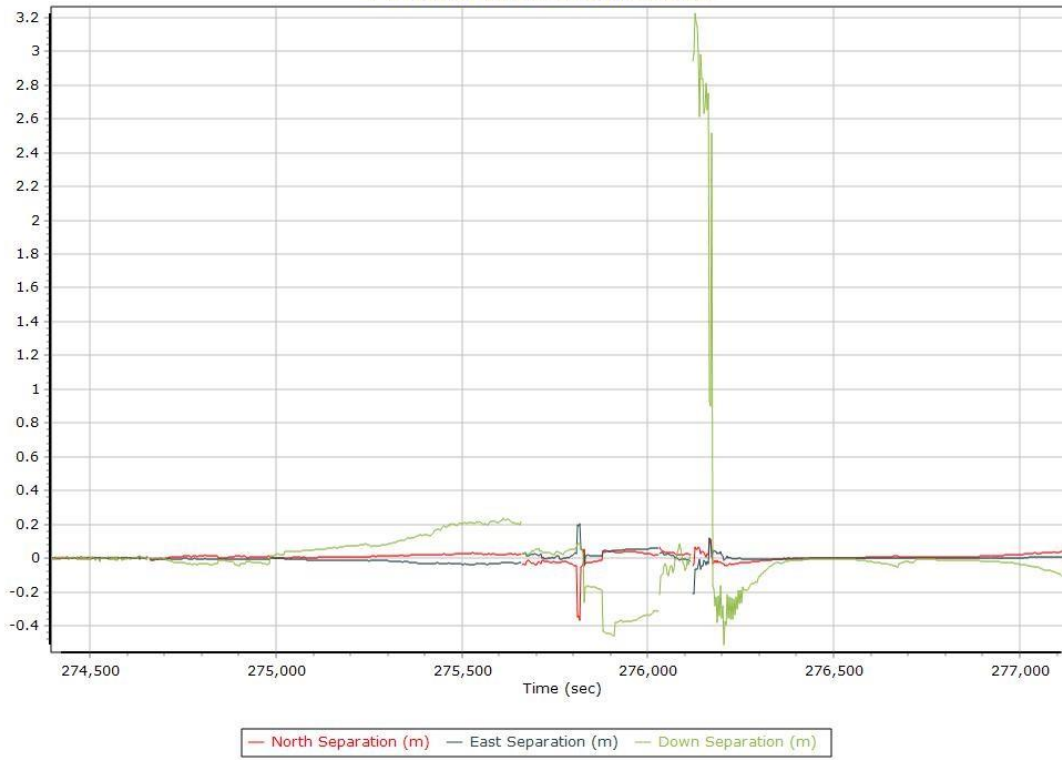
Statistics	Min	Max	Mean
Baseline length [km]	2.66	32.53	
Number of GPS SV	4	9	8
Number of GLONASS SV	0	5	3
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	6	14	11
PDOP	1.37	6.45	2.15
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	2781.00	115.00	4.00
Percentage	95.90	3.97	0.14

Num SVs in solution

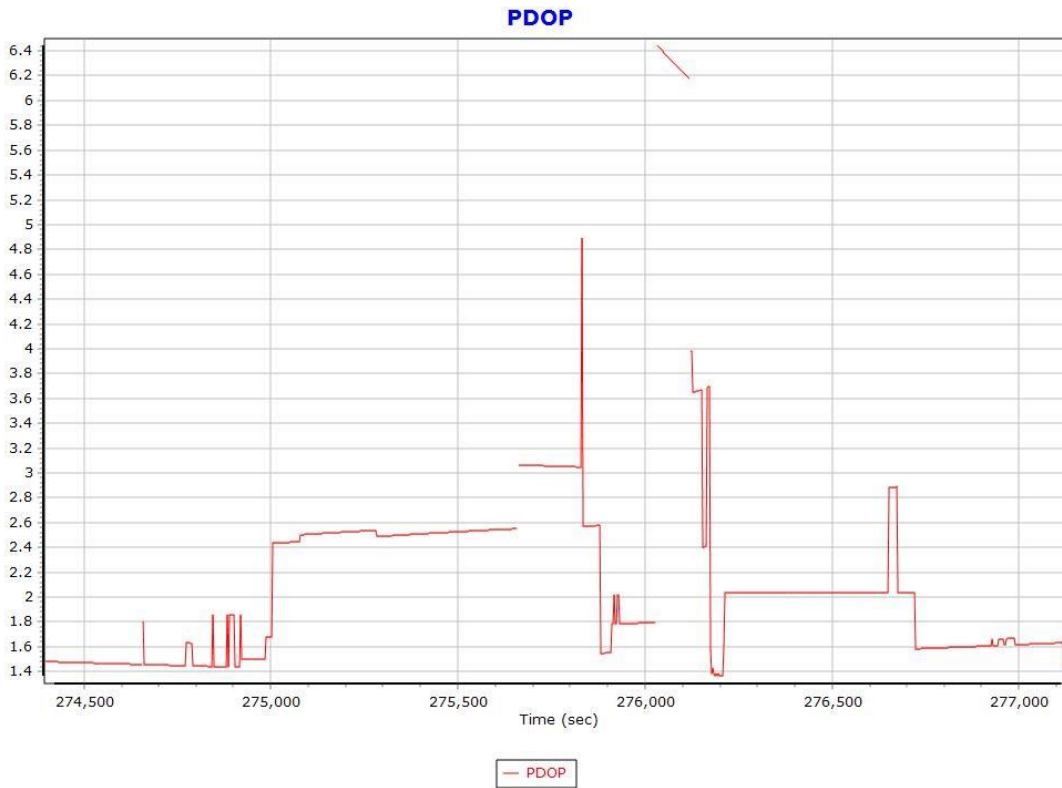


Forward/Reverse Separation

Forward/Reverse Separation

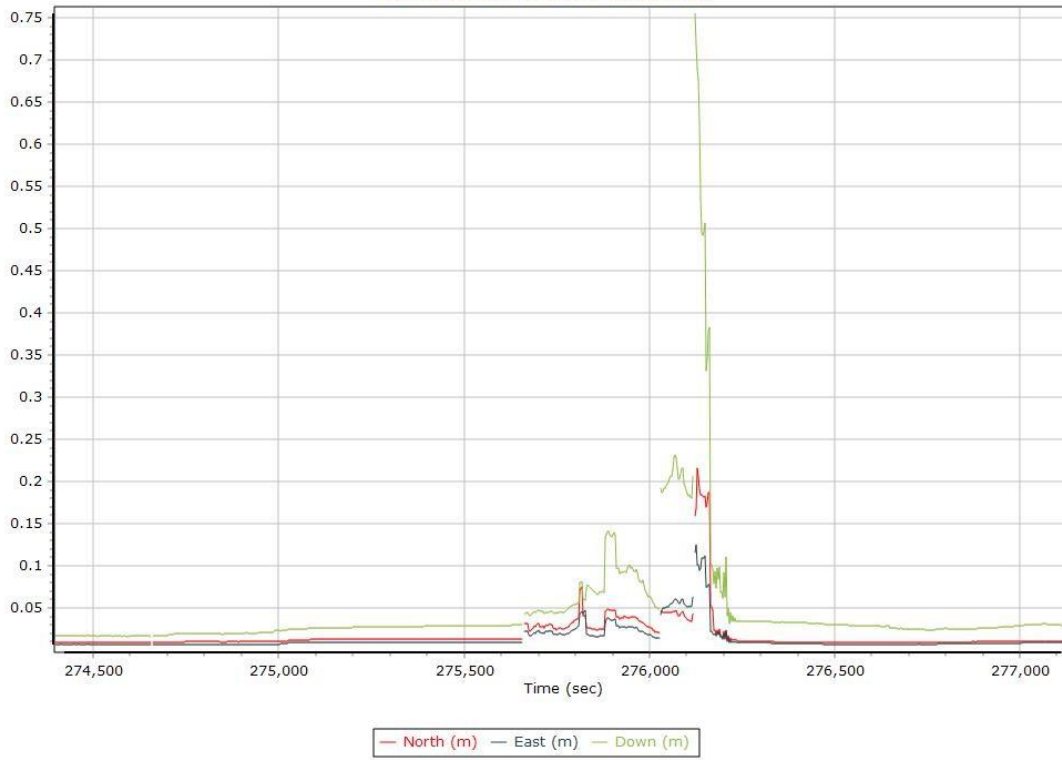


PDOP

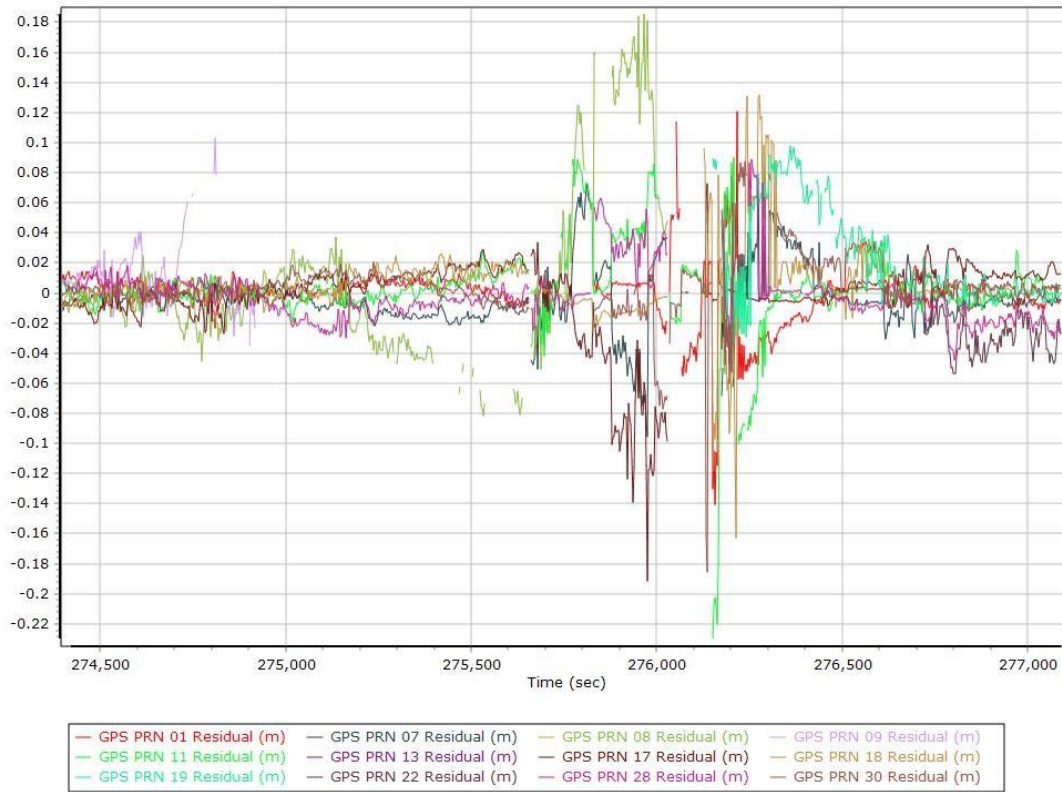


Estimated Position Accuracy

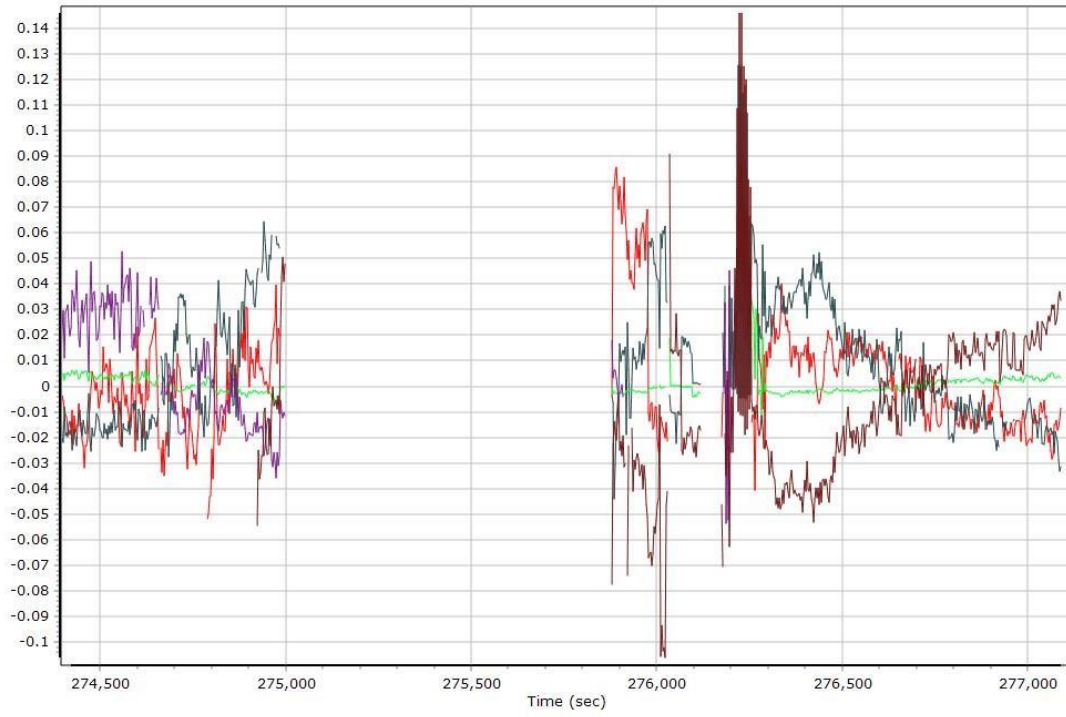
Estimated Position Accuracy



GPS Residuals



GLONASS Residuals



— GLONASS 09 Residual (m)	— GLONASS 15 Residual (m)	— GLONASS 16 Residual (m)	— GLONASS 17 Residual (m)
— GLONASS 18 Residual (m)	— GLONASS 19 Residual (m)	— GLONASS 20 Residual (m)	

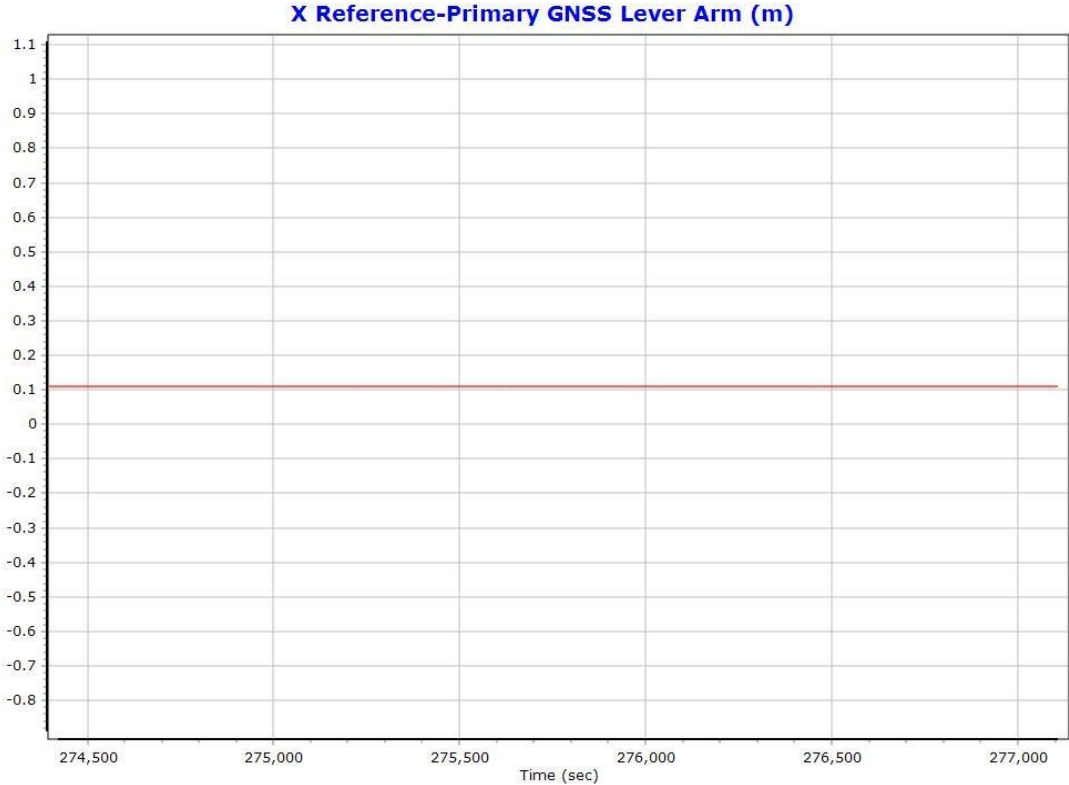
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	False		
Base station	ASB		
Processing start time	274173.000 (12/12/2018 4:09:33 AM)		
Processing end time	277111.000 (12/12/2018 4:58:31 AM)		
Initial attitude source	GYRO Compass		
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]	0.110	-0.138	-0.963
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

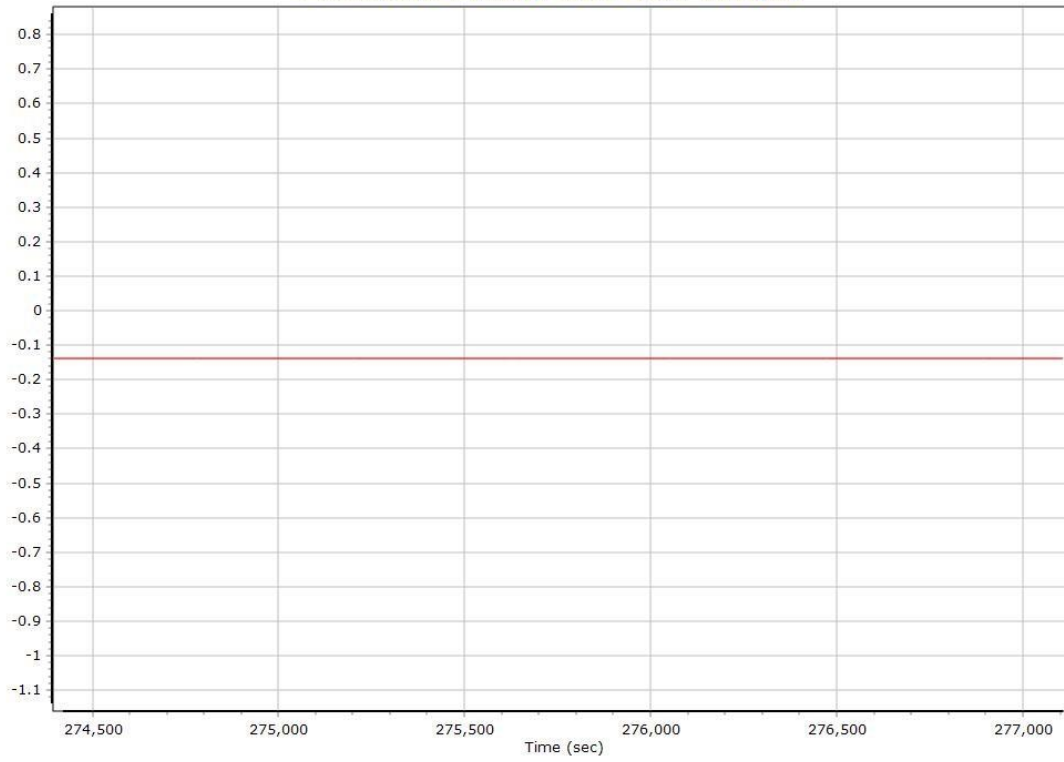
Reference-Primary GNSS Lever Arm

X Reference -Primary GNSS Lever Arm (m)



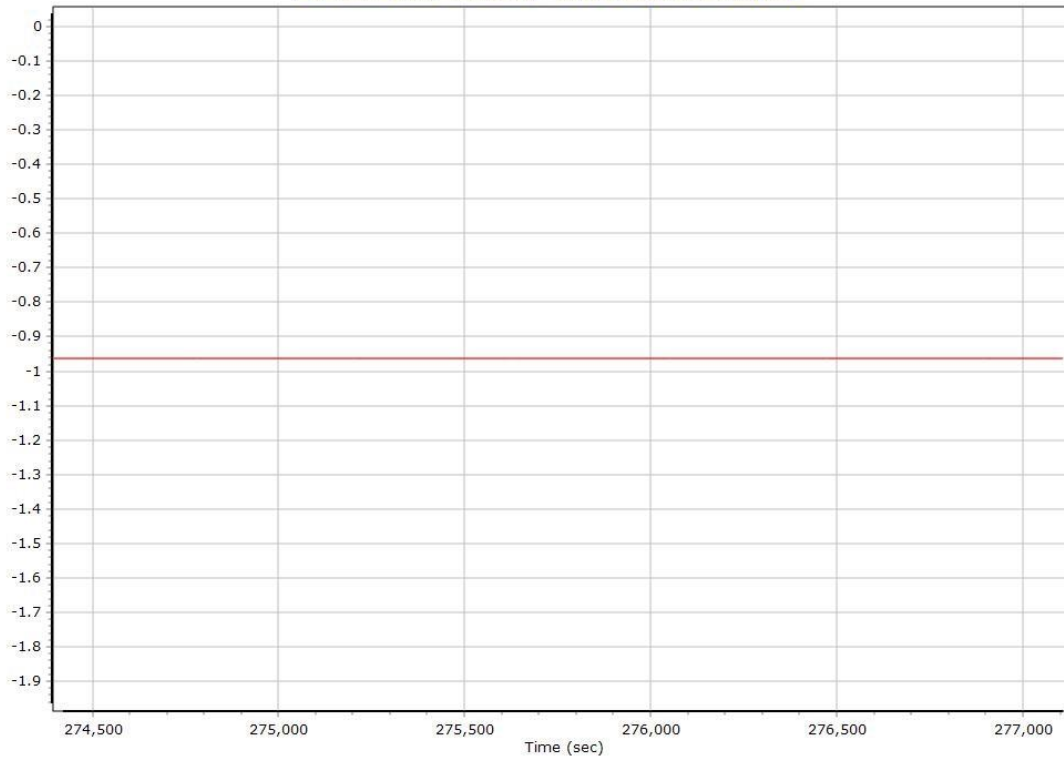
Y Reference-Primary GNSS Lever Arm (m)

Y Reference-Primary GNSS Lever Arm (m)



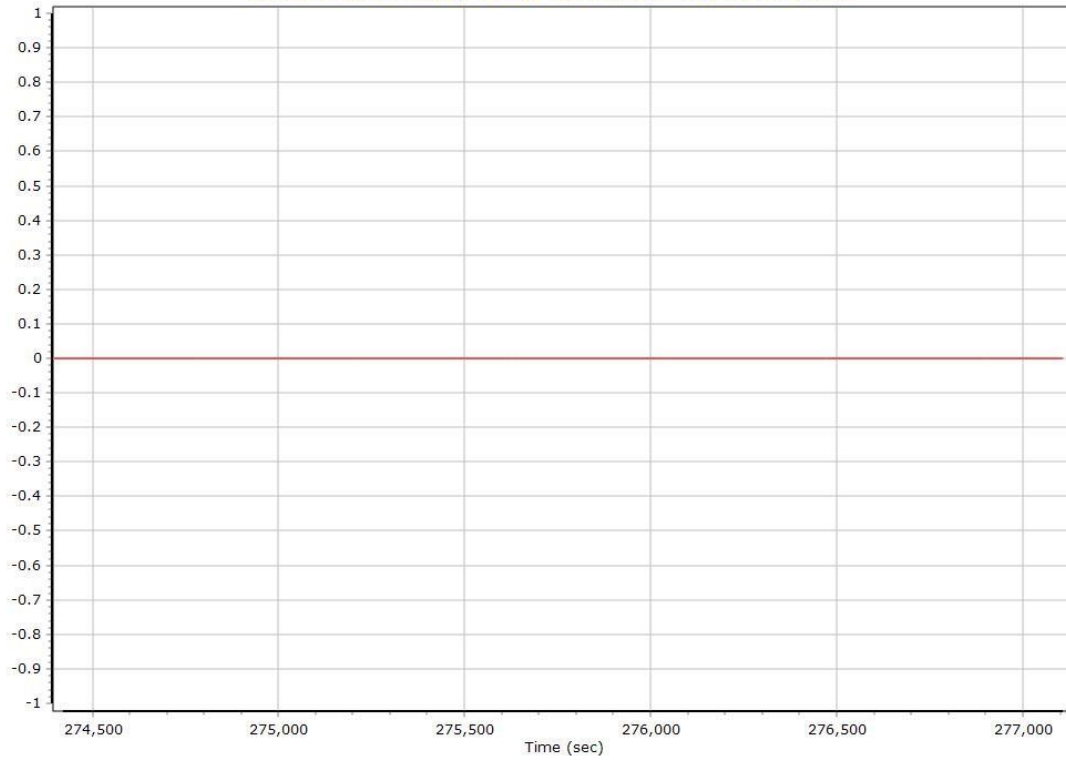
Z Reference -Primary GNSS Lever Arm (m)

Z Reference-Primary GNSS Lever Arm (m)



Reference-Primary GNSS Lever Arm Figure of Merit

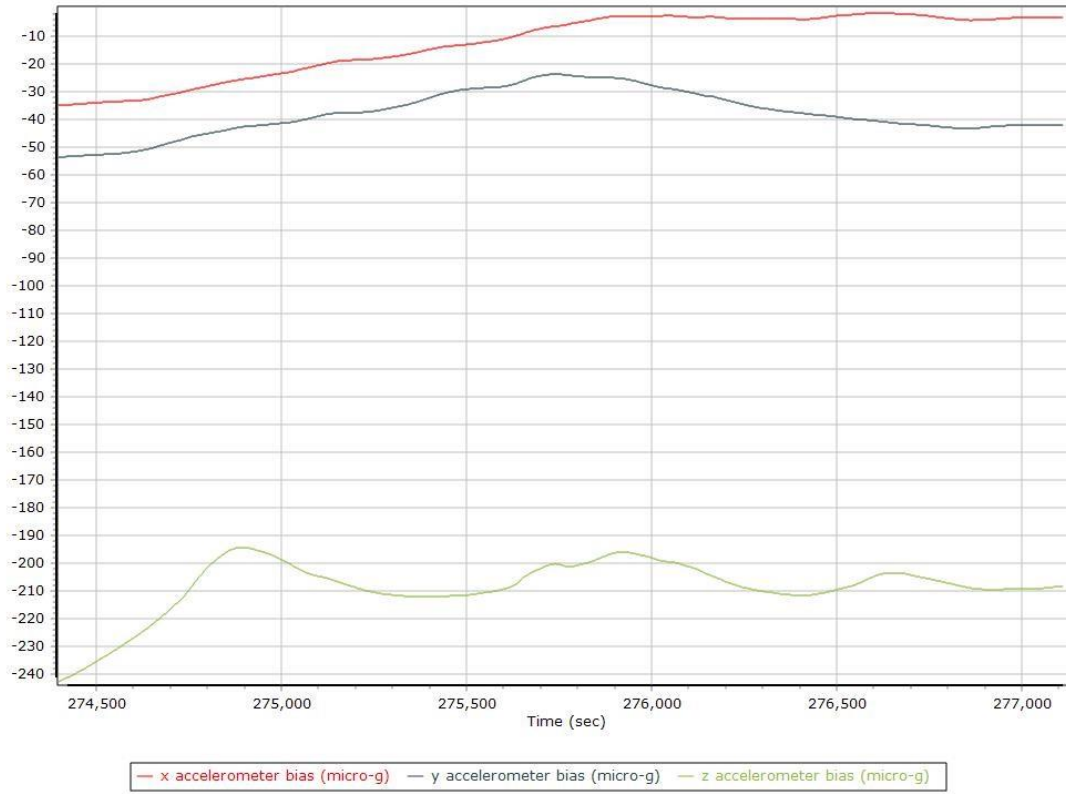
Reference-Primary GNSS Lever Arm Figure of Merit



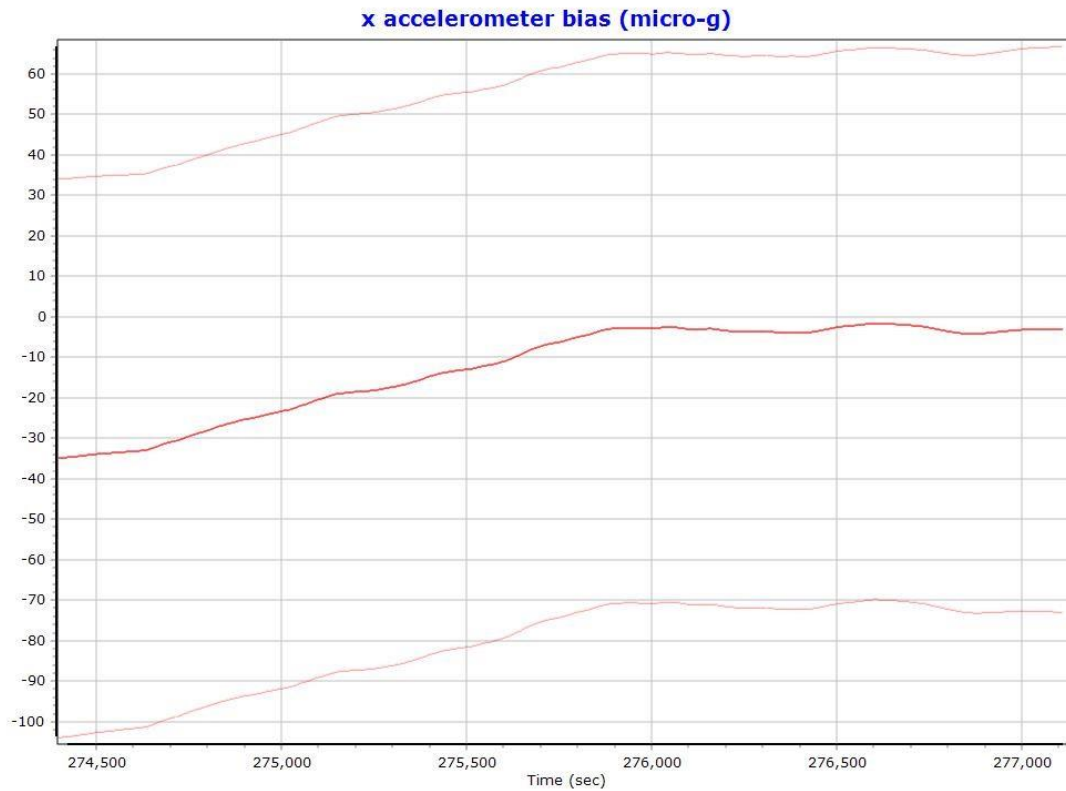
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

Accelerometer Bias (micro -g)

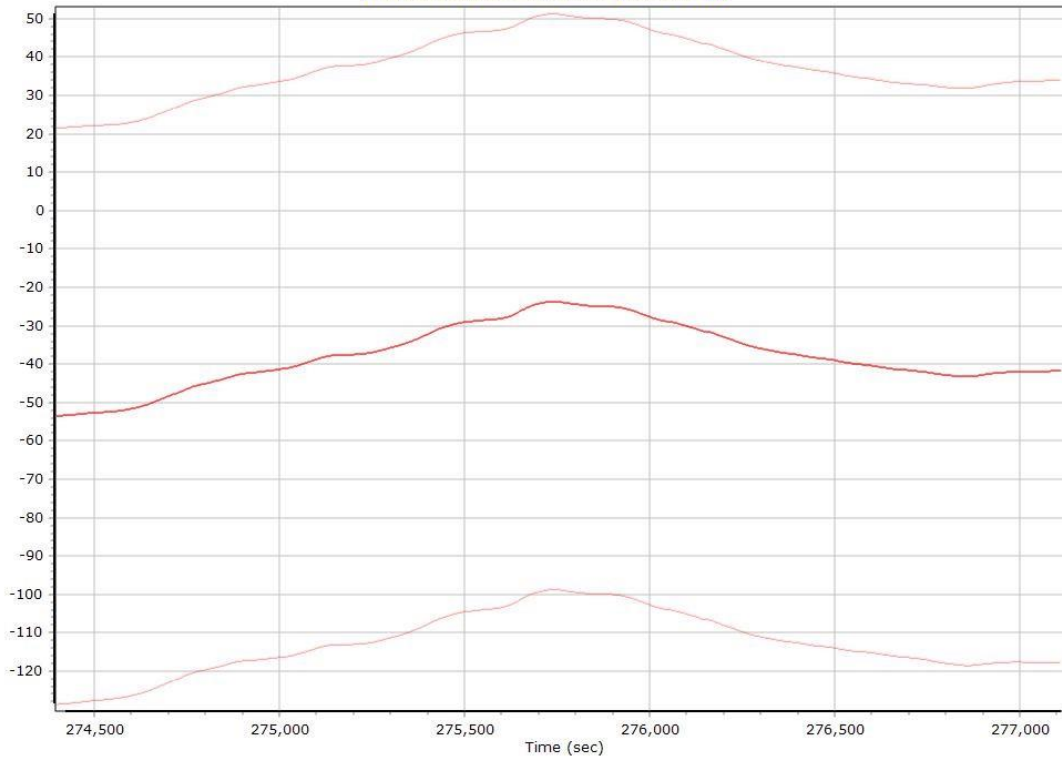


X Accelerometer Bias (micro-g)



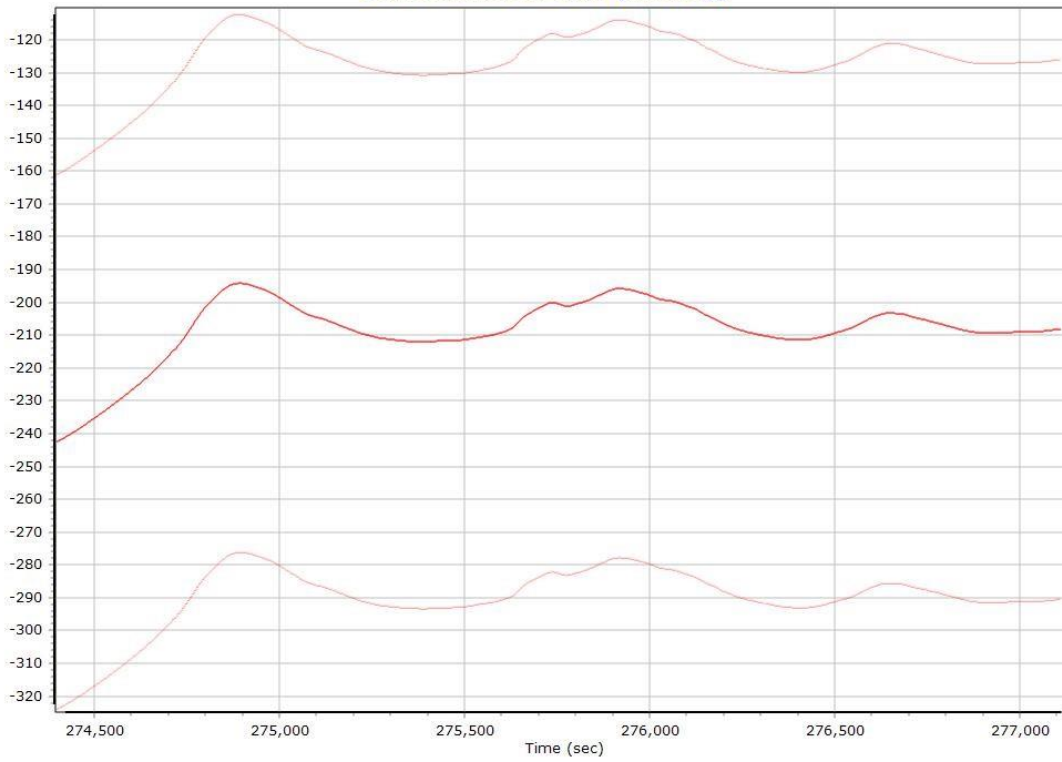
Y Accelerometer Bias (micro -g)

y accelerometer bias (micro-g)

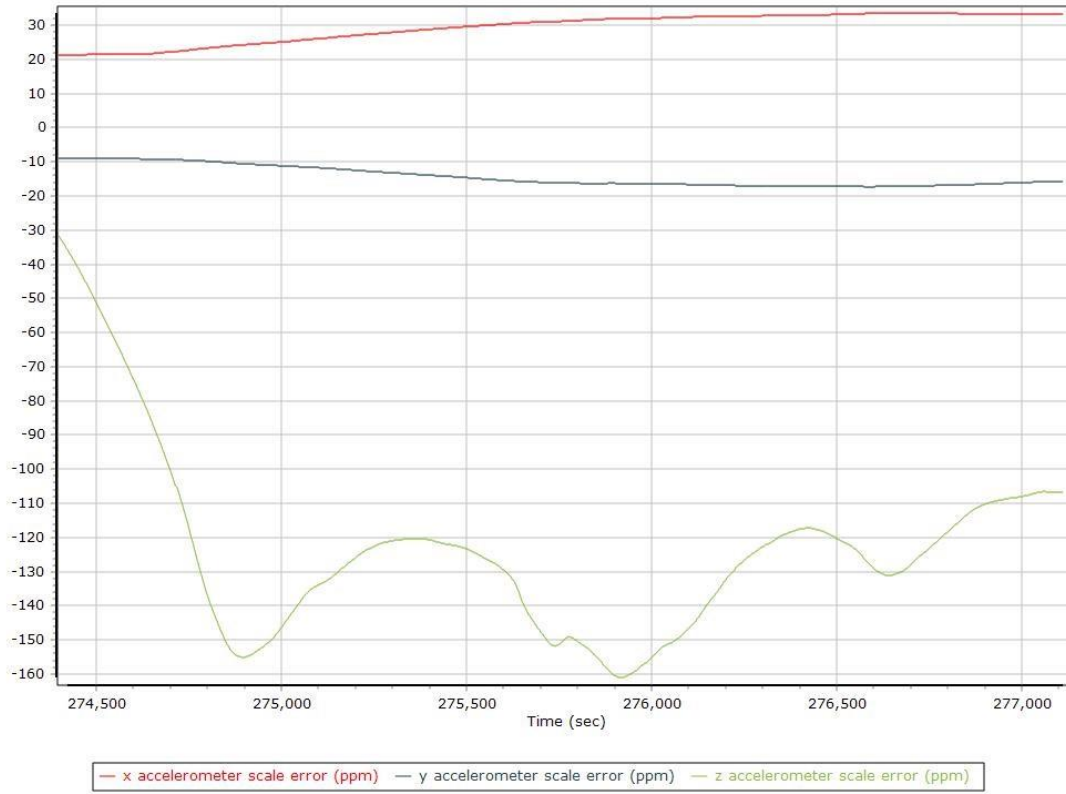


Z Accelerometer Bias (micro-g)

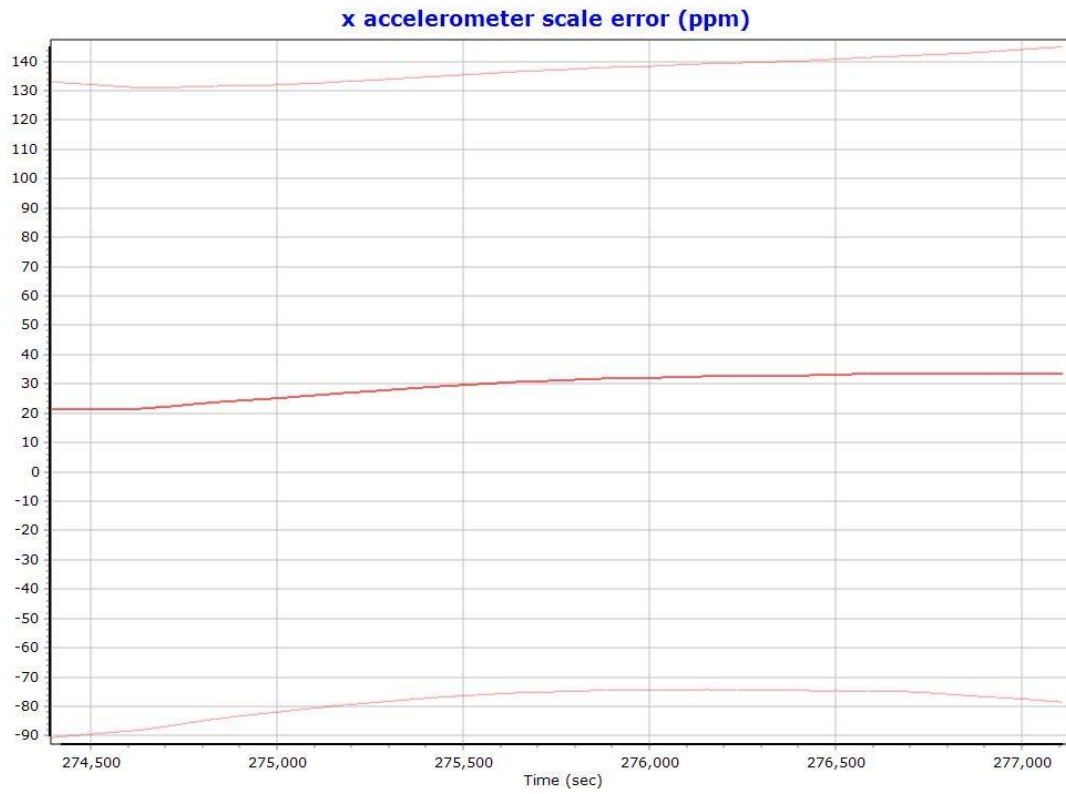
z accelerometer bias (micro-g)



Accelerometer Scale Error (ppm)

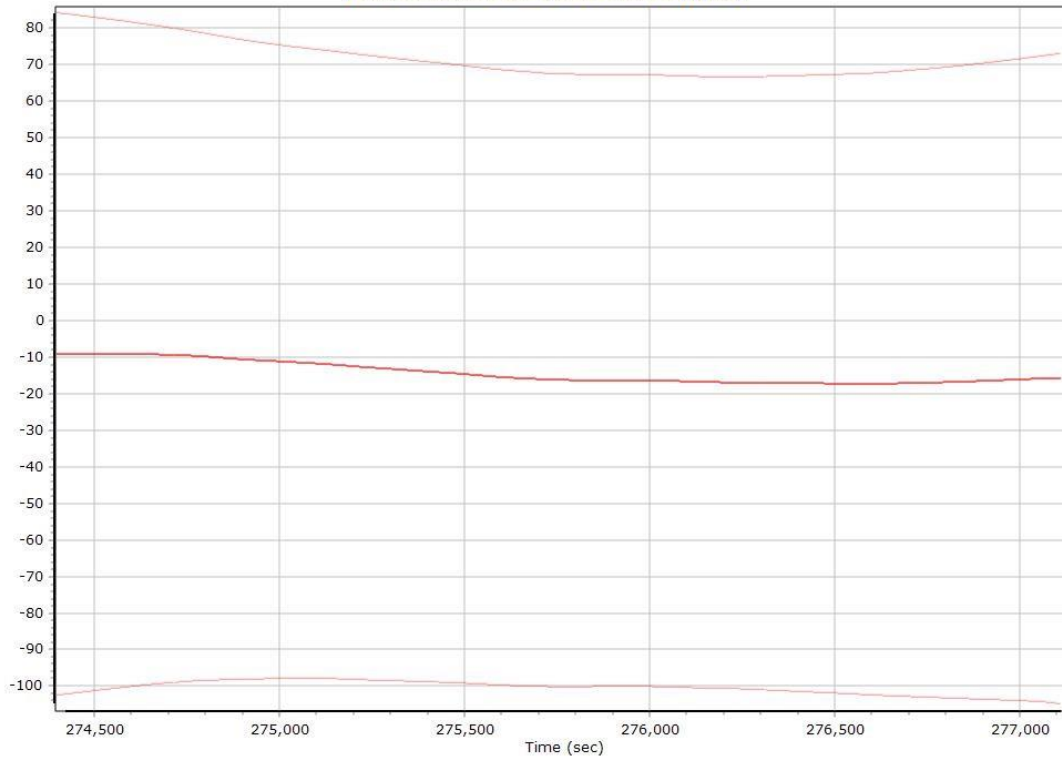


X Accelerometer Scale Error (ppm)



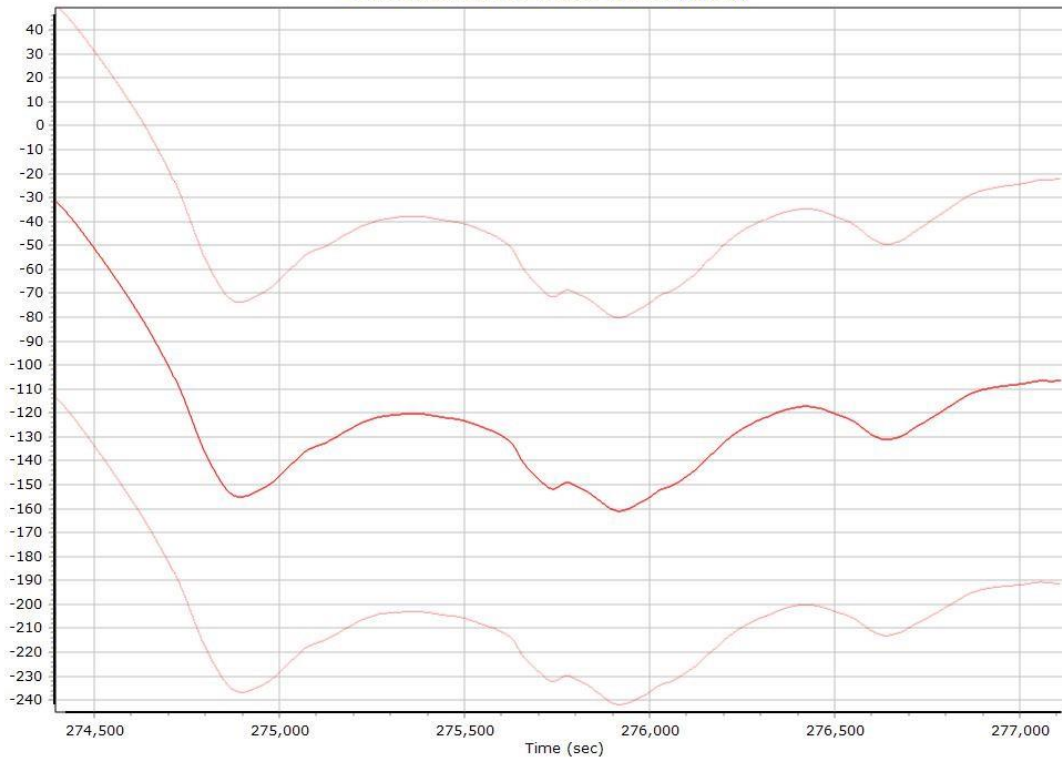
Y Accelerometer Scale Error (ppm)

y accelerometer scale error (ppm)

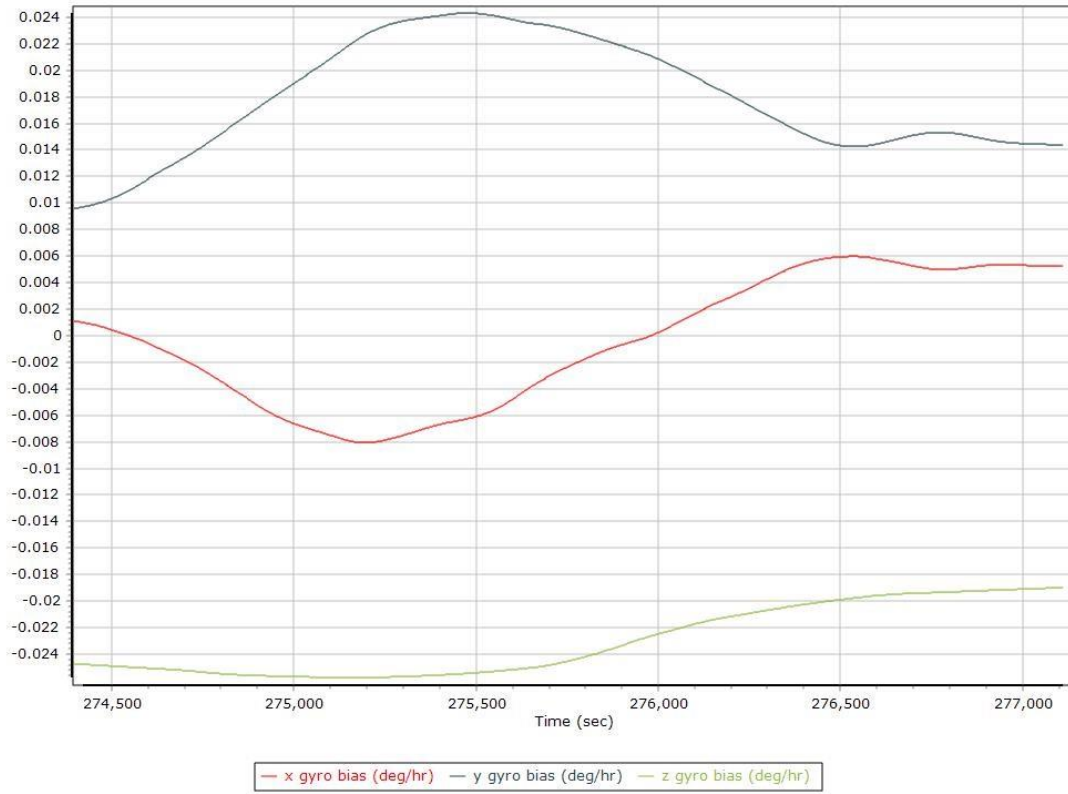


Z Accelerometer Scale Error (ppm)

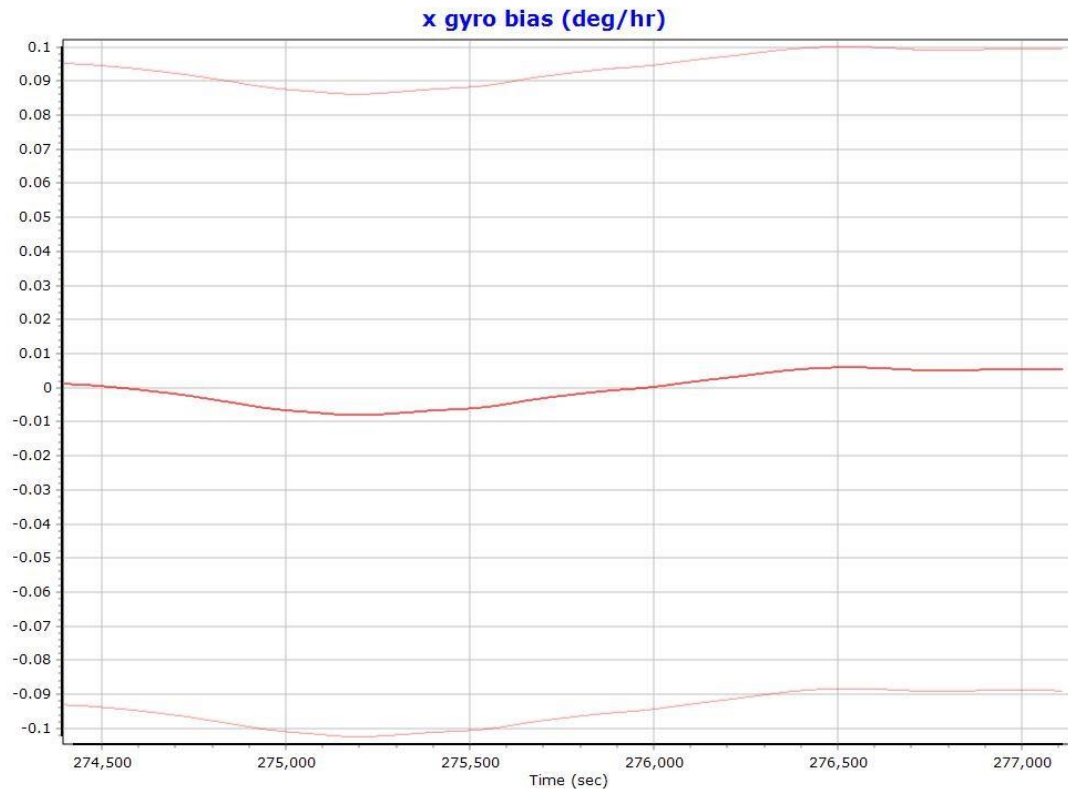
z accelerometer scale error (ppm)



Gyro Bias (deg/h)

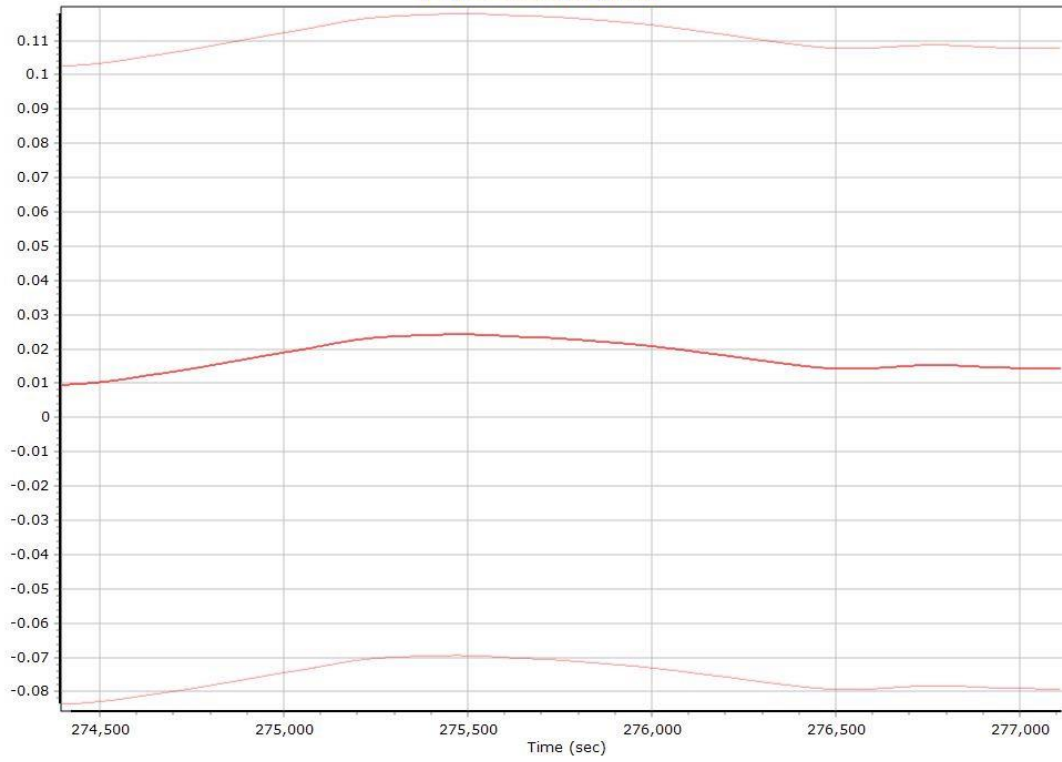


X Gyro Bias (deg/h)



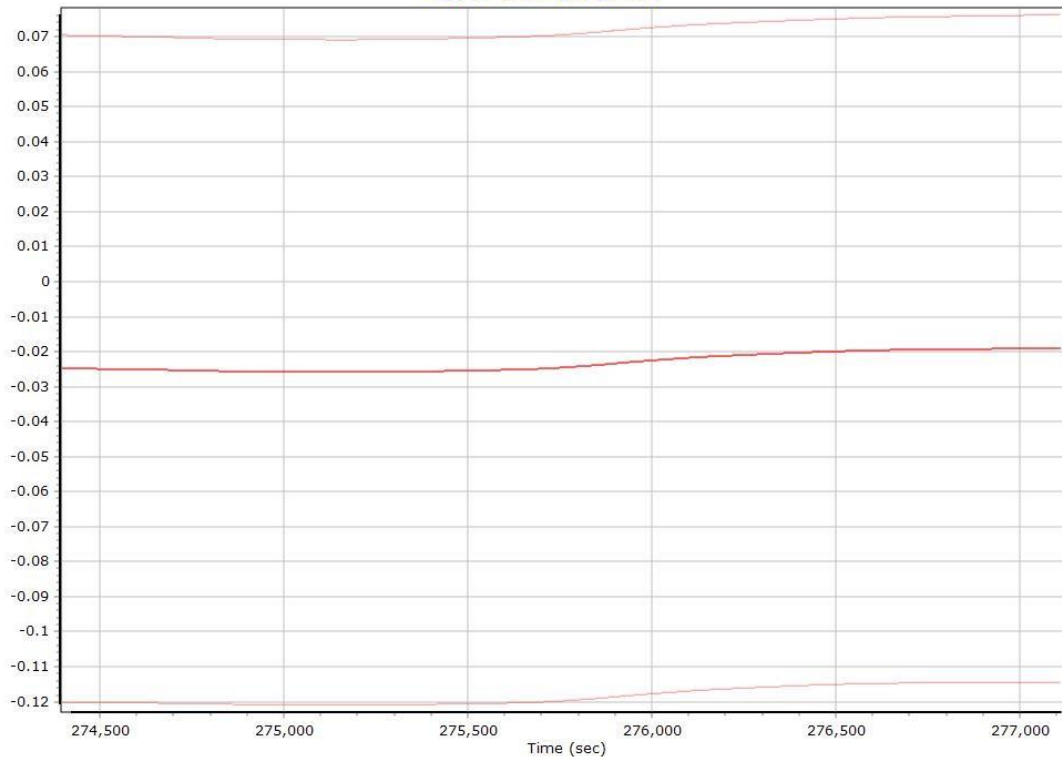
Y Gyro Bias (deg/h)

y gyro bias (deg/hr)

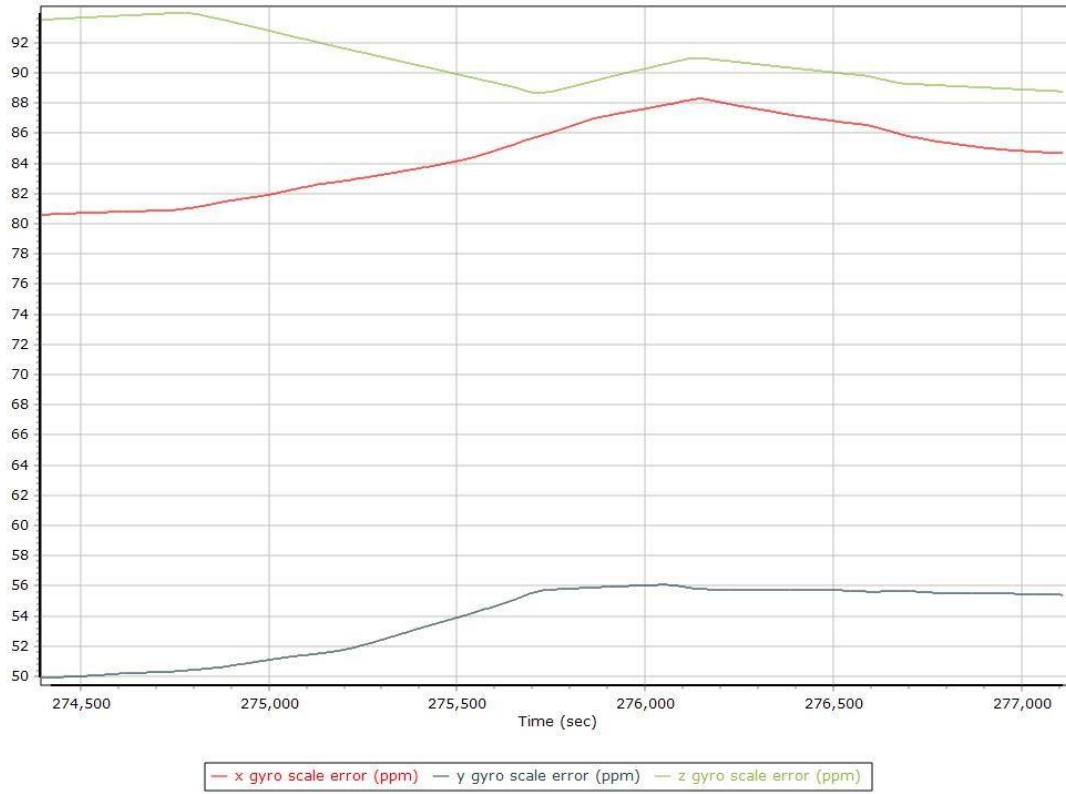


Z Gyro Bias (deg/h)

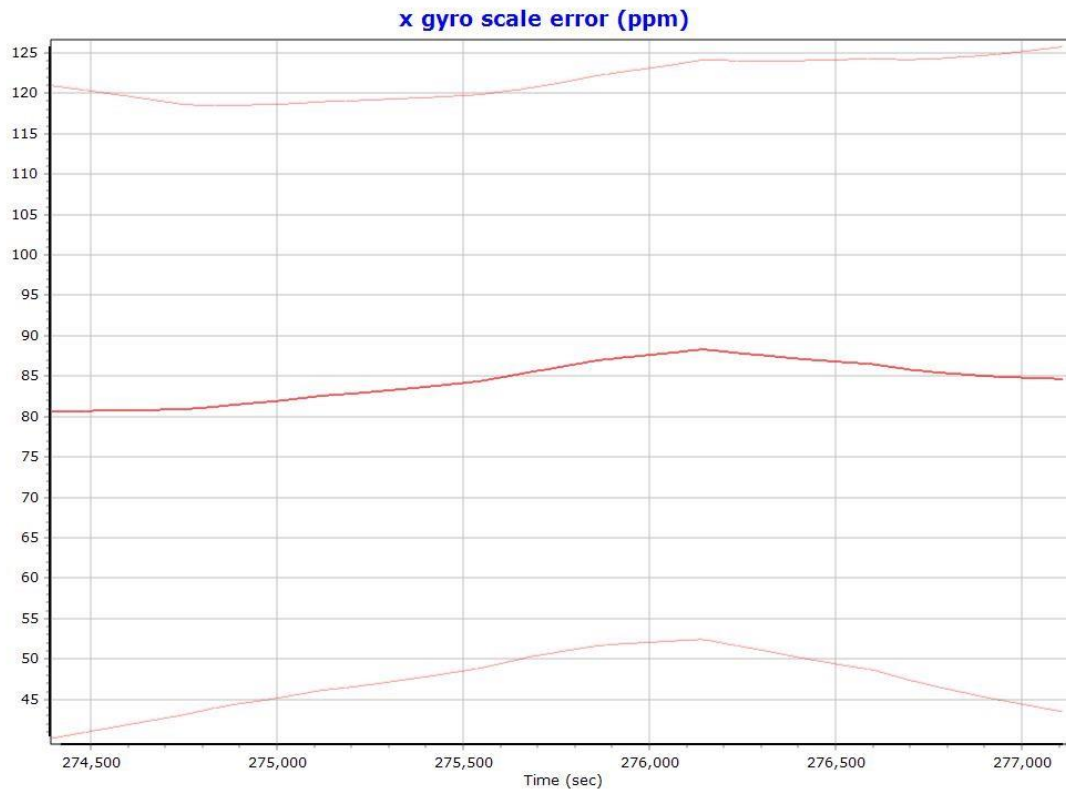
z gyro bias (deg/hr)



Gyro Scale Error (ppm)

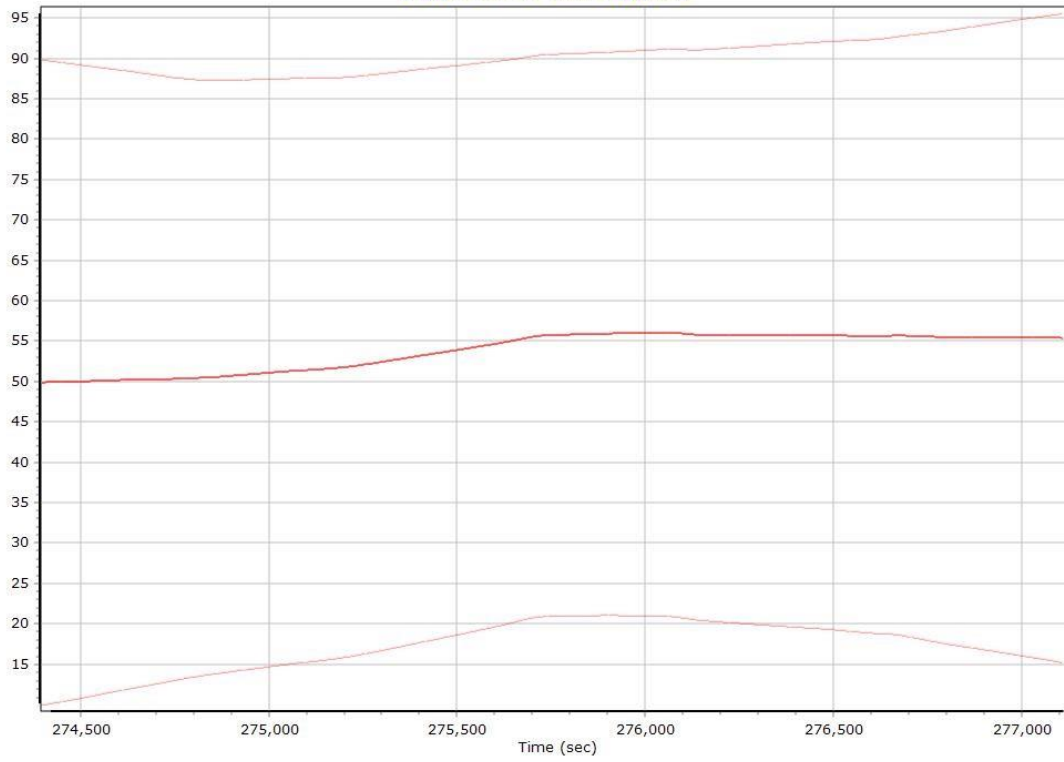


X Gyro Scale Error (ppm)



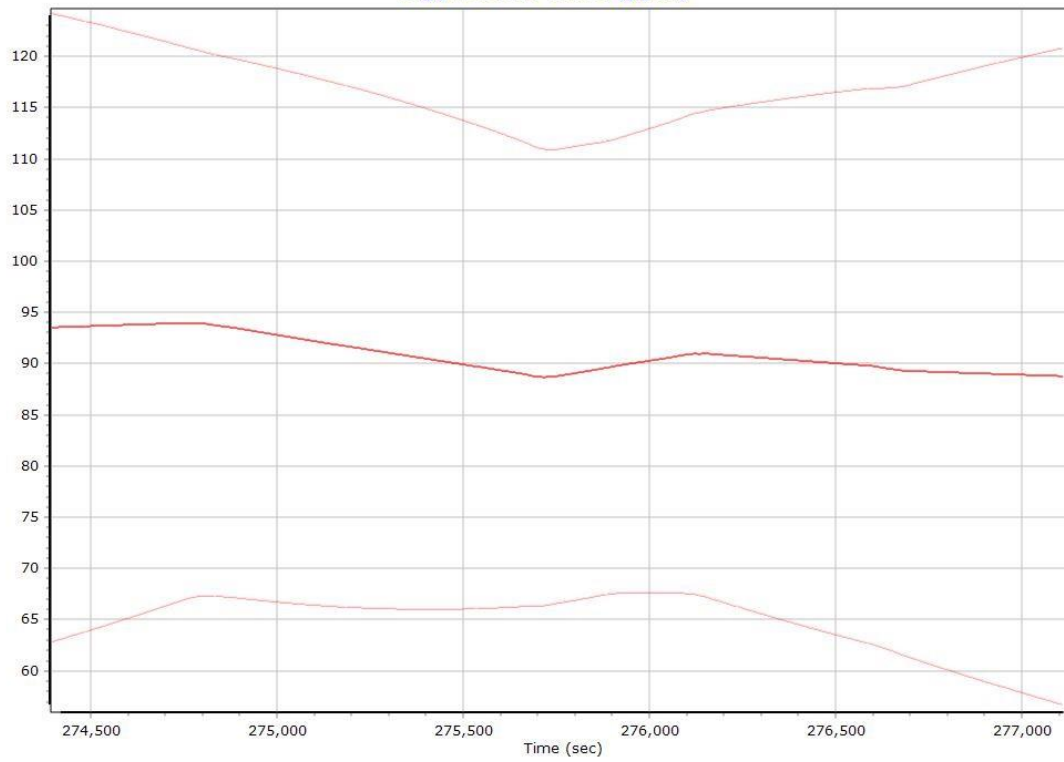
Y Gyro Scale Error (ppm)

y gyro scale error (ppm)



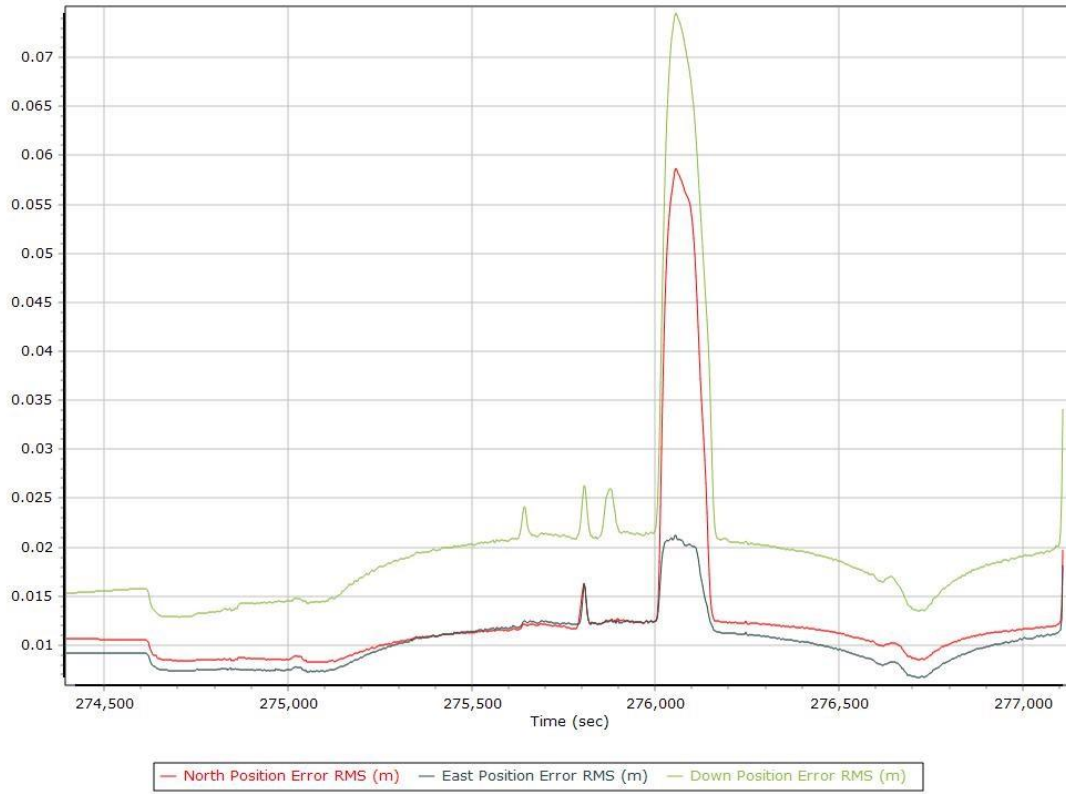
Z Gyro Scale Error (ppm)

z gyro scale error (ppm)

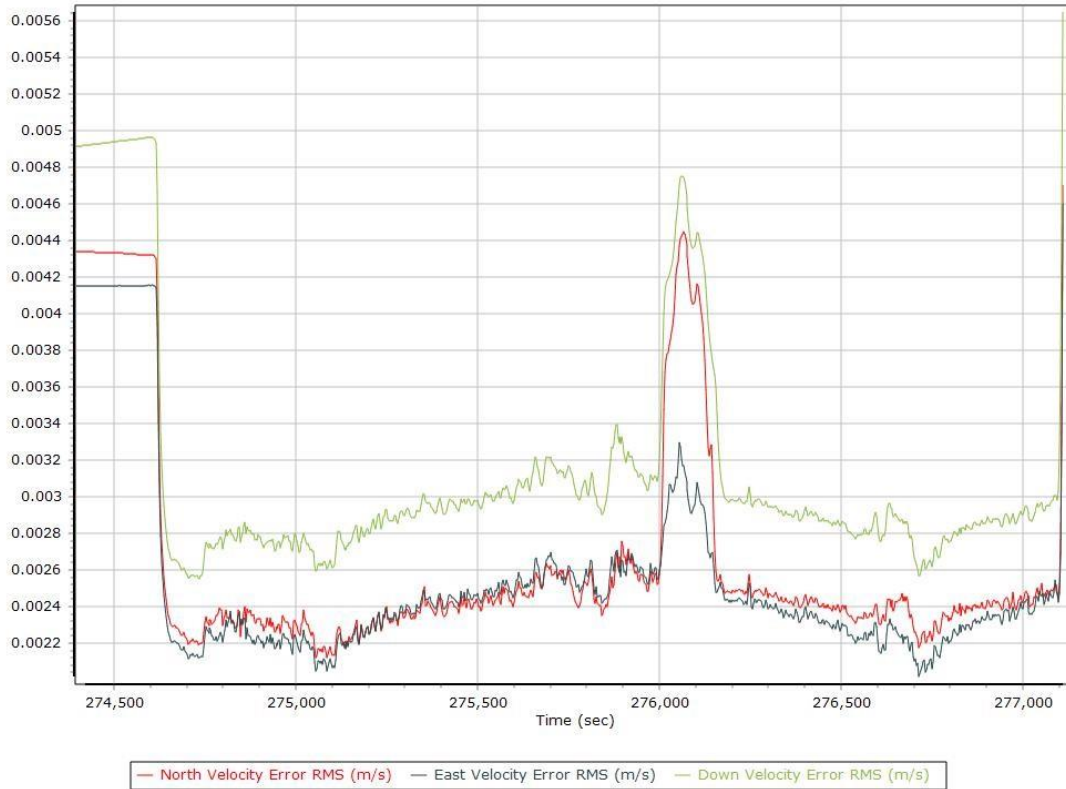


Smoothed Performance Metrics

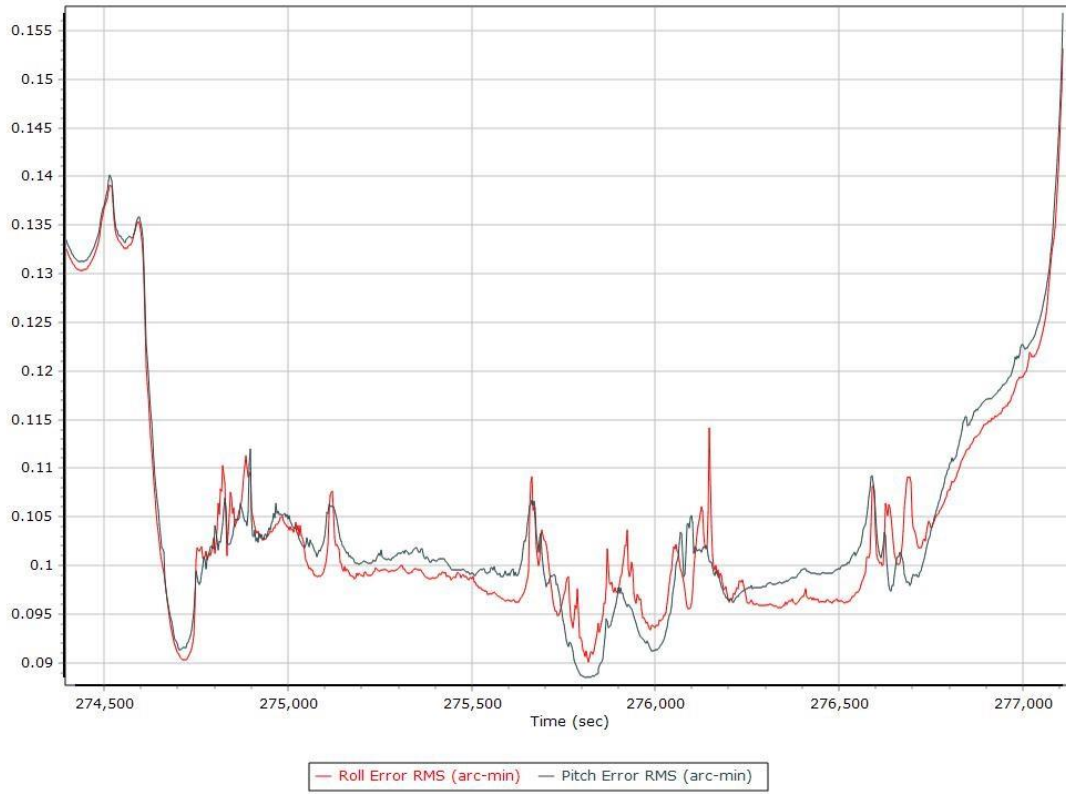
Position Error RMS (m)



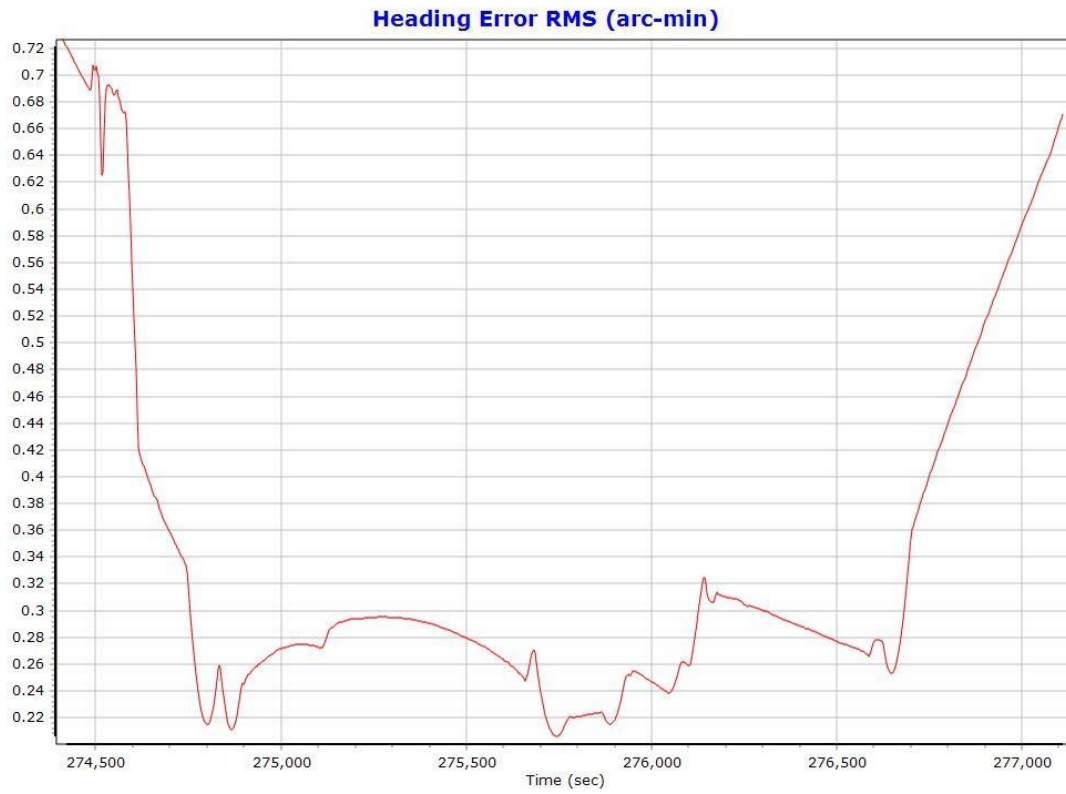
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc -min)



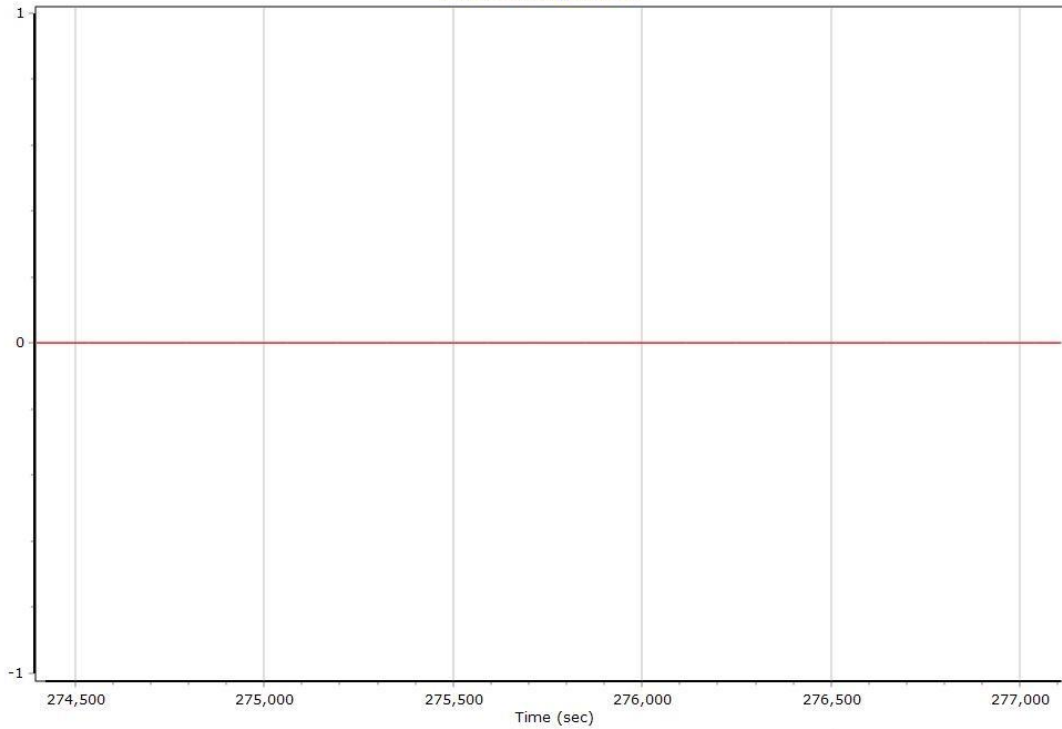
Heading Error RMS (arc-min)



Smoothed Solution Status

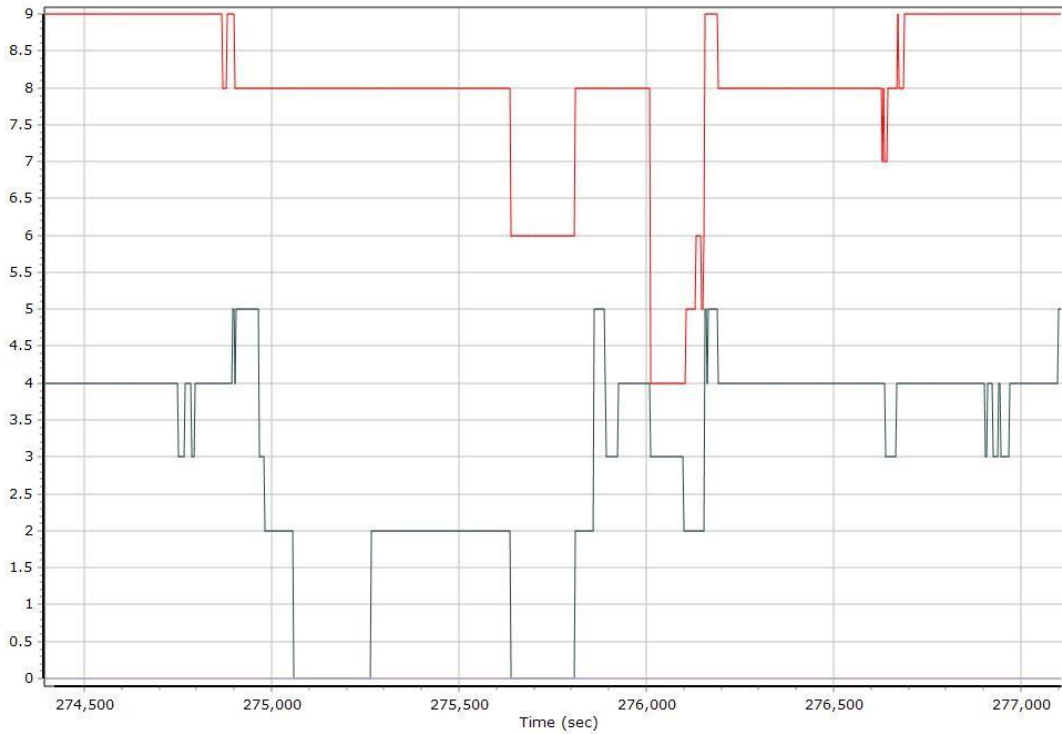
Processing Mode

Processing mode



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

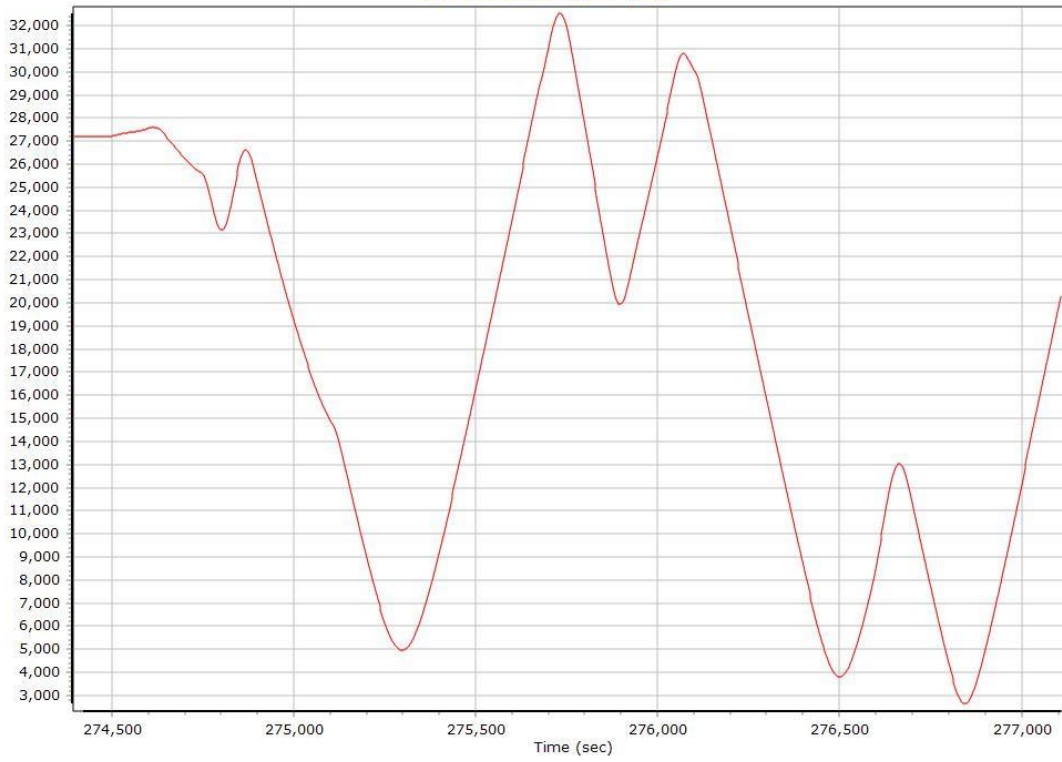
Number of Satellites



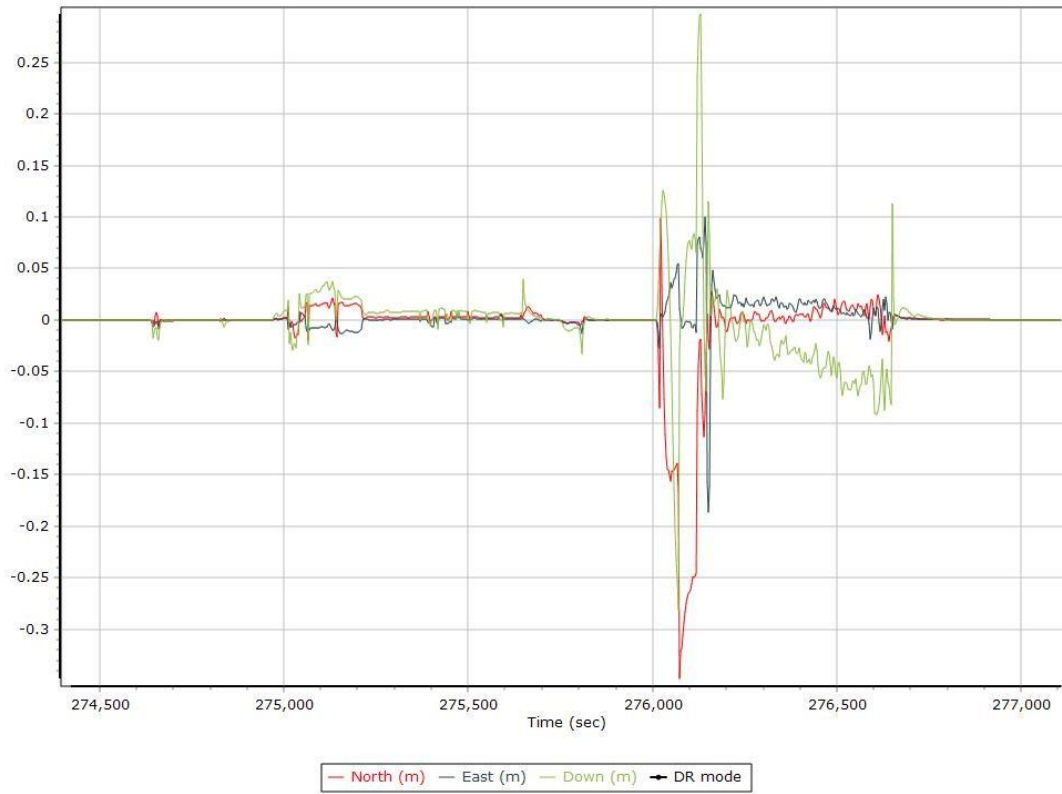
— Number of GPS Satellites — Number of GLONASS Satellites — Number of QZSS Satellites — Number of BEIDOU Satellites

Baseline Length

Baseline Length (m)



SBET IAKAR Separation



General Information

Mission Information

Project name	12122018NAD83
Processing date	2019-02-27 23:25:26
Mission date	2018-12-12 05:16:57
Mission duration	00:27:44.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9524
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
181212_051645_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3460.18g	GLONASS Broadcast Ephemeris
Ephm3460.18n	GPS Broadcast Ephemeris
igl20312.sp3	GLONASS Precise Ephemeris
igl20313.sp3	GLONASS Precise Ephemeris
igl20314.sp3	GLONASS Precise Ephemeris
igs20312.sp3	GPS Precise Ephemeris
igs20313.sp3	GPS Precise Ephemeris
igs20314.sp3	GPS Precise Ephemeris
flai345f00.18o	GNSS SingleBase
flai346f00.18o	GNSS SingleBase
fld7345f00.18o	GNSS SingleBase
fld7346f00.18o	GNSS SingleBase
flgr345f00.18o	GNSS SingleBase
flsi345f00.18o	GNSS SingleBase
flsi346f00.18o	GNSS SingleBase
fmyr345f00.18o	GNSS SingleBase
fmyr346f00.18o	GNSS SingleBase
gsps345f00.18o	GNSS SingleBase
gsps346f00.18o	GNSS SingleBase
rcda345f00.18o	GNSS SingleBase
rcda346f00.18o	GNSS SingleBase
stpt345f00.18o	GNSS SingleBase
stpt346f00.18o	GNSS SingleBase
wach345f00.18o	GNSS SingleBase
wach346f00.18o	GNSS SingleBase
flai345f00.18g	GLONASS Broadcast Ephemeris
flai345f00.18n	GPS Broadcast Ephemeris
flai346f00.18g	GLONASS Broadcast Ephemeris
flai346f00.18n	GPS Broadcast Ephemeris
fld7345f00.18g	GLONASS Broadcast Ephemeris
fld7345f00.18n	GPS Broadcast Ephemeris
fld7346f00.18g	GLONASS Broadcast Ephemeris
fld7346f00.18n	GPS Broadcast Ephemeris
flgr345f00.18g	GLONASS Broadcast Ephemeris
flgr345f00.18n	GPS Broadcast Ephemeris
flsi345f00.18g	GLONASS Broadcast Ephemeris
flsi345f00.18n	GPS Broadcast Ephemeris
flsi346f00.18g	GLONASS Broadcast Ephemeris
flsi346f00.18n	GPS Broadcast Ephemeris
fmyr345f00.18g	GLONASS Broadcast Ephemeris
fmyr345f00.18n	GPS Broadcast Ephemeris
fmyr346f00.18g	GLONASS Broadcast Ephemeris
fmyr346f00.18n	GPS Broadcast Ephemeris
gsps345f00.18g	GLONASS Broadcast Ephemeris

gsps345f00.18n	GPS Broadcast Ephemeris
gsps346f00.18g	GLONASS Broadcast Ephemeris
gsps346f00.18n	GPS Broadcast Ephemeris
rcda345f00.18g	GLONASS Broadcast Ephemeris
rcda345f00.18n	GPS Broadcast Ephemeris
rcda346f00.18g	GLONASS Broadcast Ephemeris
rcda346f00.18n	GPS Broadcast Ephemeris
stpt345f00.18g	GLONASS Broadcast Ephemeris
stpt345f00.18n	GPS Broadcast Ephemeris
stpt346f00.18g	GLONASS Broadcast Ephemeris
stpt346f00.18n	GPS Broadcast Ephemeris

File Name	File type
wach345f00.18g	GLONASS Broadcast Ephemeris
wach345f00.18n	GPS Broadcast Ephemeris
wach346f00.18g	GLONASS Broadcast Ephemeris
wach346f00.18n	GPS Broadcast Ephemeris

Output Files

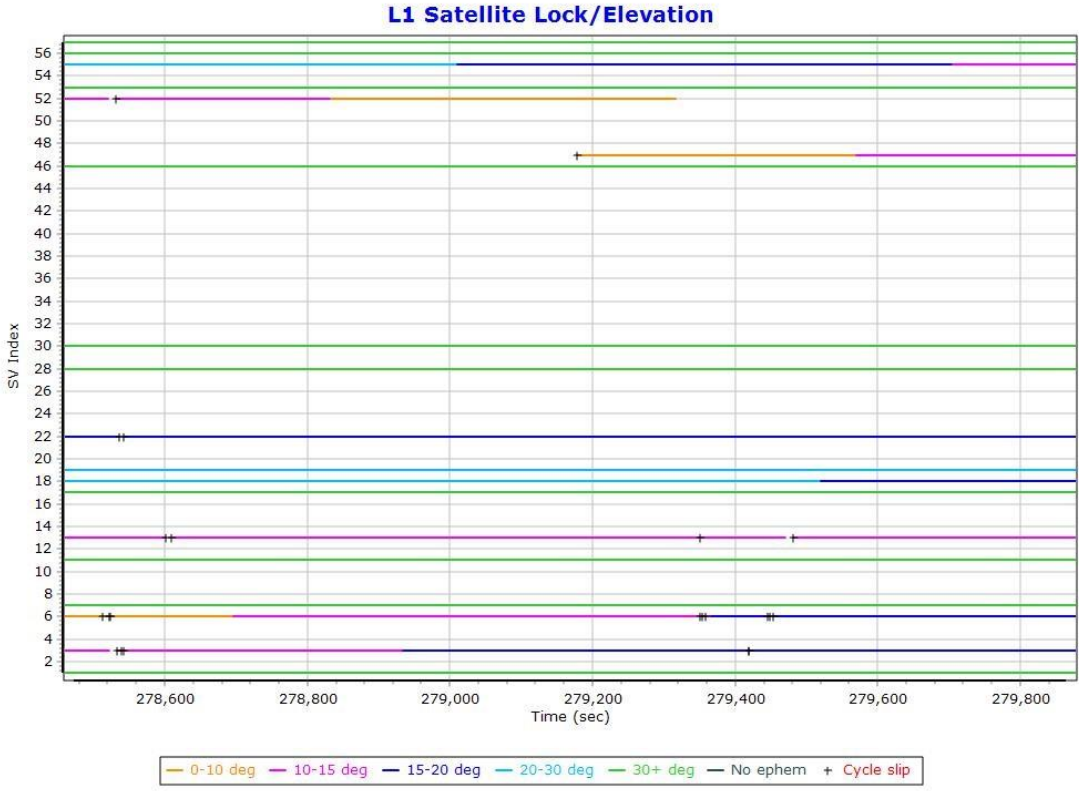
Filename	File type
sbet_Mission 1.out	SBET Trajectory File

Rover Data Summary

First raw data file	181212_051645_INS-GPS_1.raw		
Last raw data file	181212_051645_INS-GPS_1.raw		
Start GPS week	2031		
Start time	278198.540 (12/12/2018 5:16:38 AM)		
End time	279863.938 (12/12/2018 5:44:23 AM)		
Start of fine alignment	278412.701 (12/12/2018 5:20:12 AM)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	Event 1 Input, Event 2 Input, Event 3 Input		
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	0.000
Reference to Primary GNSS lever arm [m]	0.102	-0.140	-0.961
Reference to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

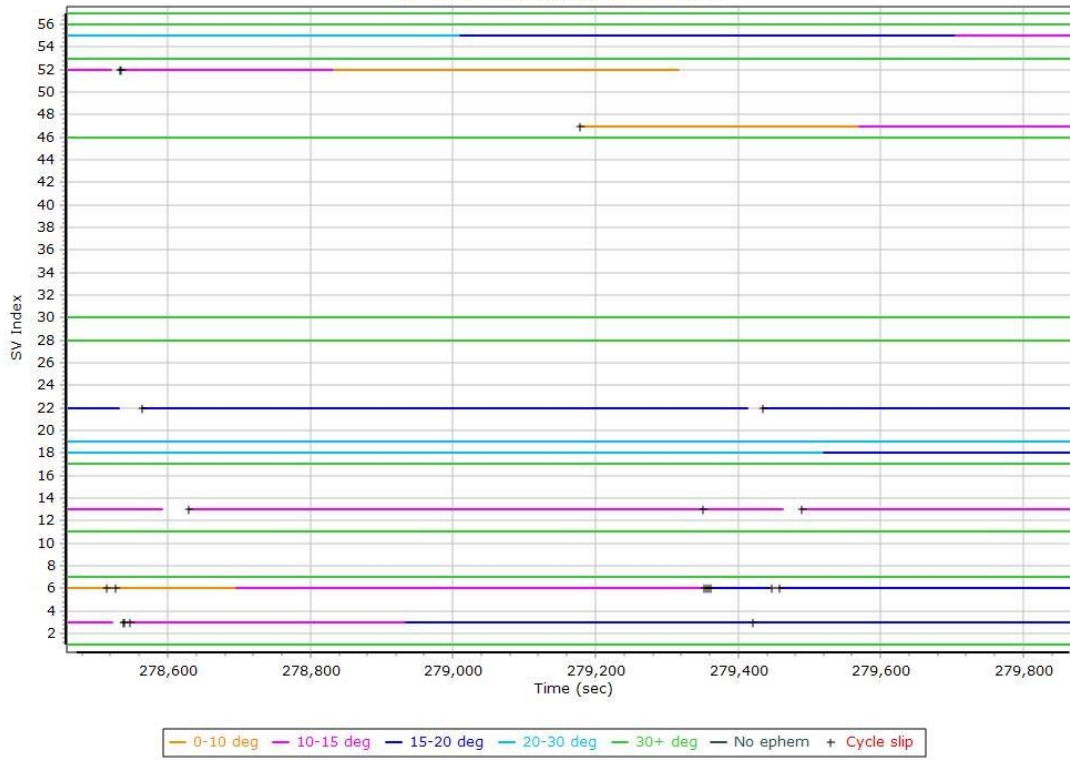
Raw Data QC

L1 Satellite Lock/Elevation

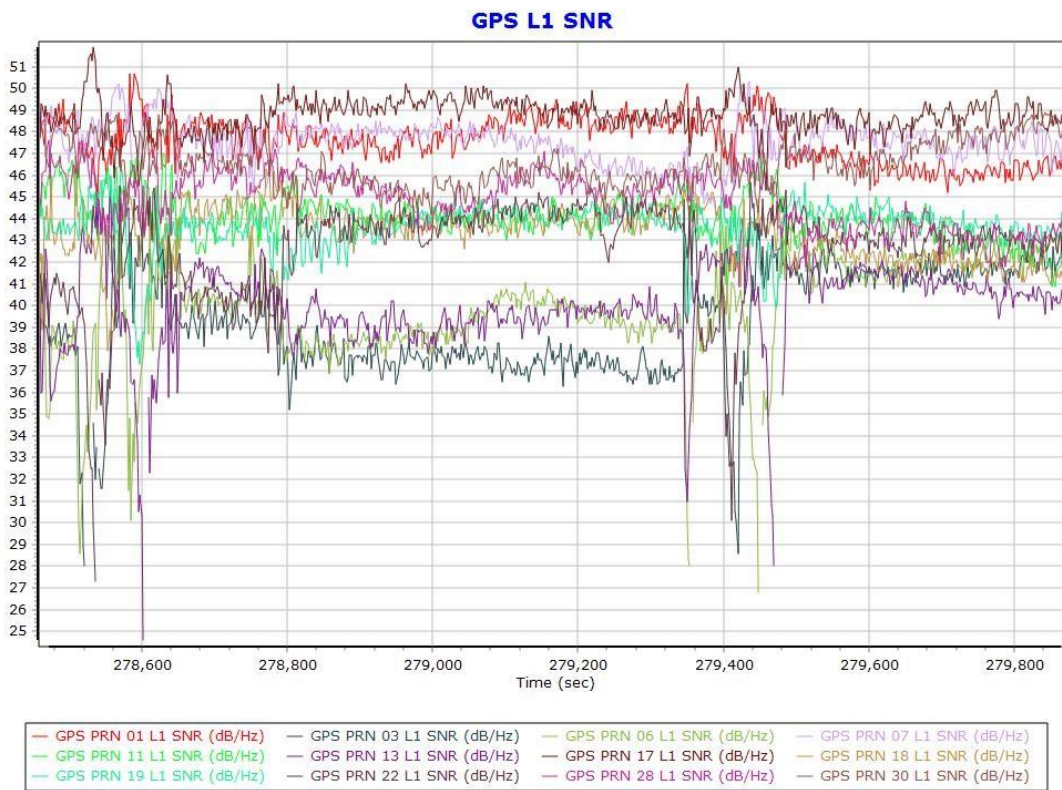


L2 Satellite Lock/Elevation

L2 Satellite Lock/Elevation

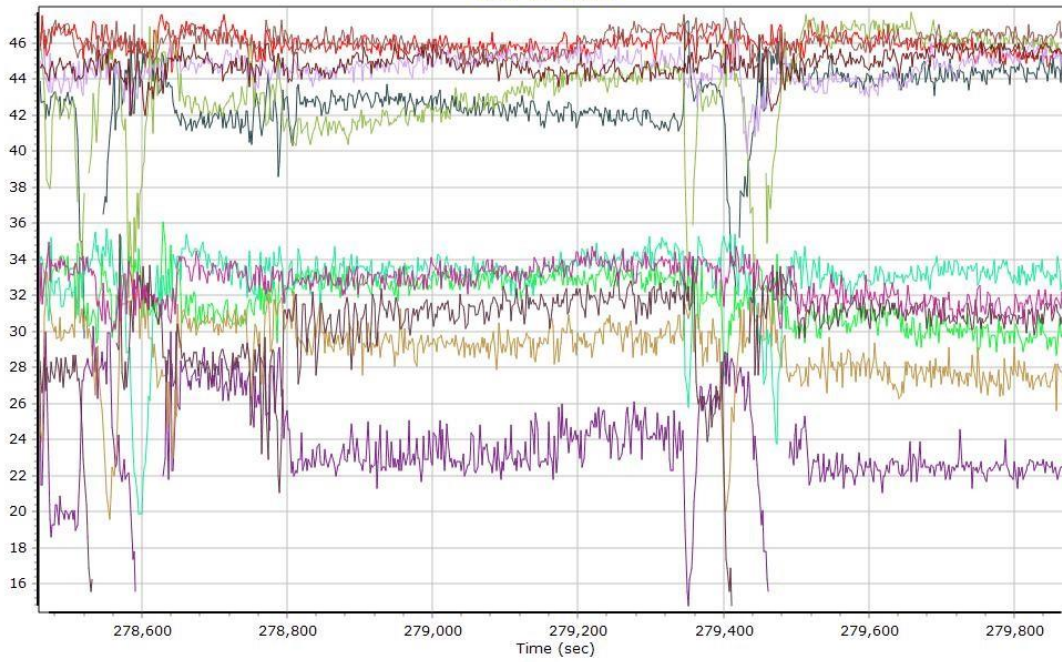


GPS L1 SNR



GPS L2 SNR

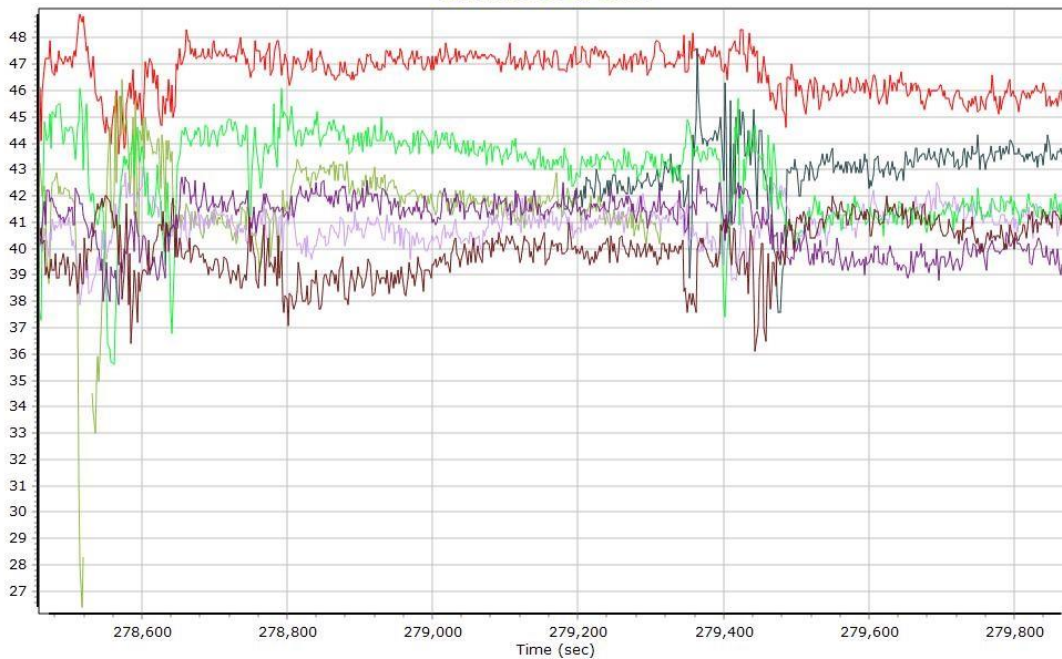
GPS L2 SNR



- | | | | |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| — GPS PRN 01 L2 SNR (dB/Hz) | — GPS PRN 03 L2 SNR (dB/Hz) | — GPS PRN 06 L2 SNR (dB/Hz) | — GPS PRN 07 L2 SNR (dB/Hz) |
| — GPS PRN 11 L2 SNR (dB/Hz) | — GPS PRN 13 L2 SNR (dB/Hz) | — GPS PRN 17 L2 SNR (dB/Hz) | — GPS PRN 18 L2 SNR (dB/Hz) |
| — GPS PRN 19 L2 SNR (dB/Hz) | — GPS PRN 22 L2 SNR (dB/Hz) | — GPS PRN 28 L2 SNR (dB/Hz) | — GPS PRN 30 L2 SNR (dB/Hz) |

GLONASS L1 SNR

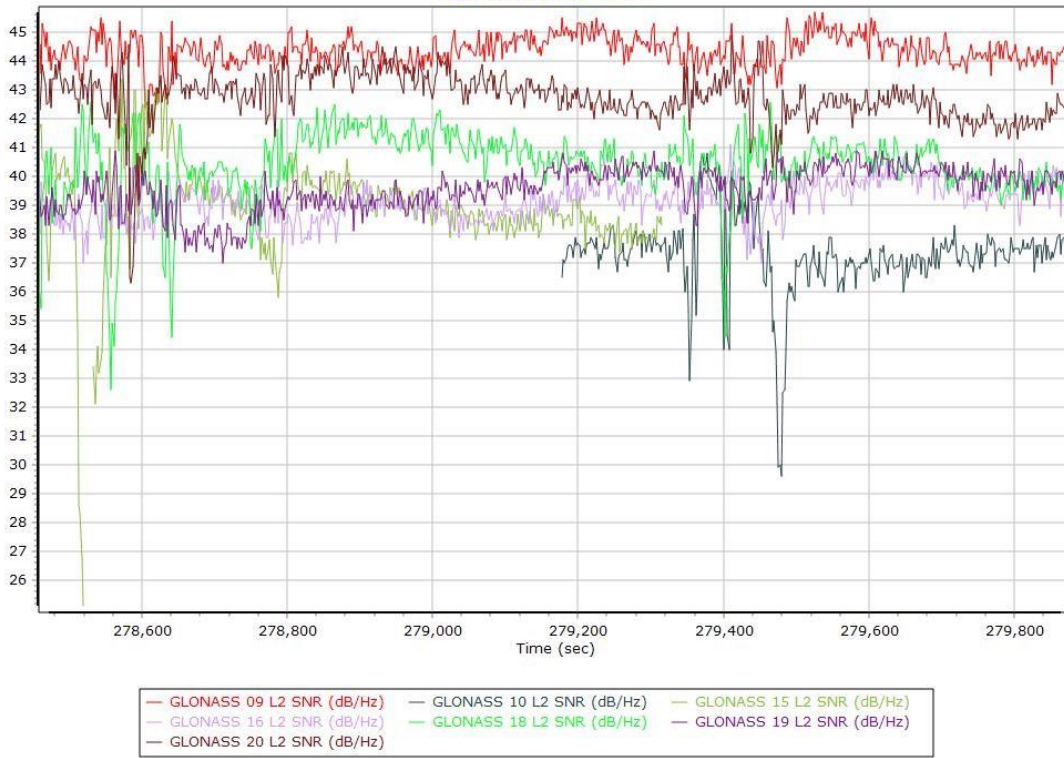
GLONASS L1 SNR



- | | | |
|-----------------------------|-----------------------------|-----------------------------|
| — GLONASS 09 L1 SNR (dB/Hz) | — GLONASS 10 L1 SNR (dB/Hz) | — GLONASS 15 L1 SNR (dB/Hz) |
| — GLONASS 16 L1 SNR (dB/Hz) | — GLONASS 18 L1 SNR (dB/Hz) | — GLONASS 19 L1 SNR (dB/Hz) |
| — GLONASS 20 L1 SNR (dB/Hz) | | |

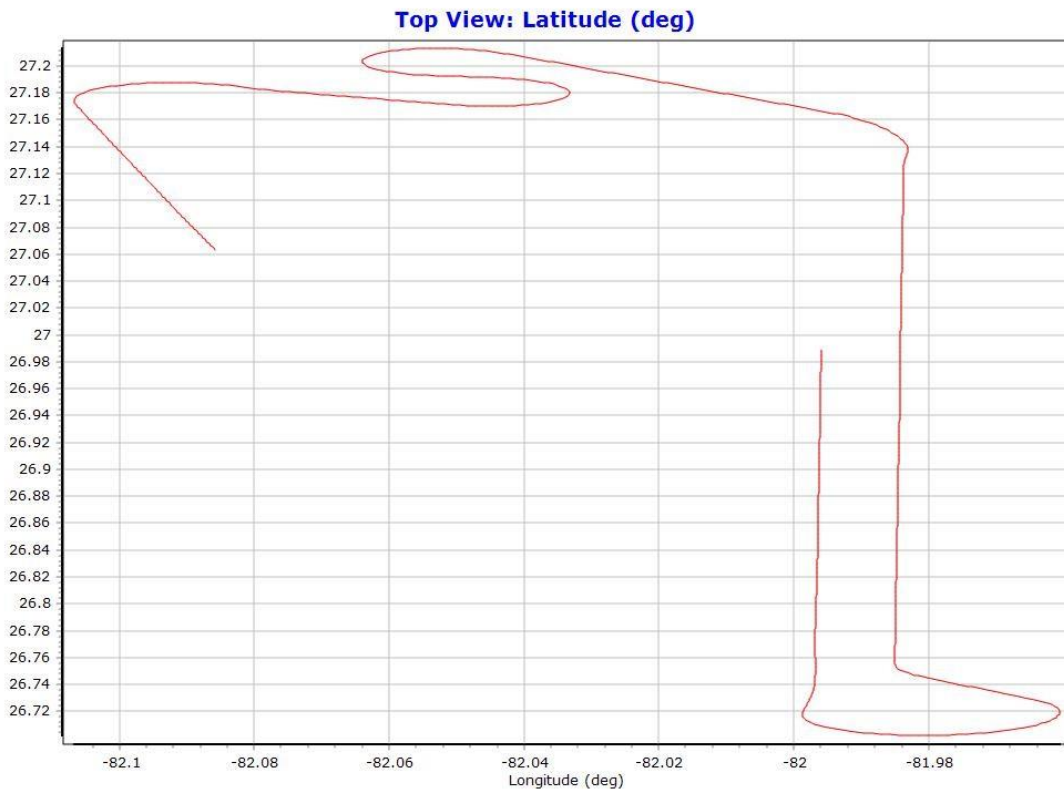
GLONASS L2 SNR

GLONASS L2 SNR

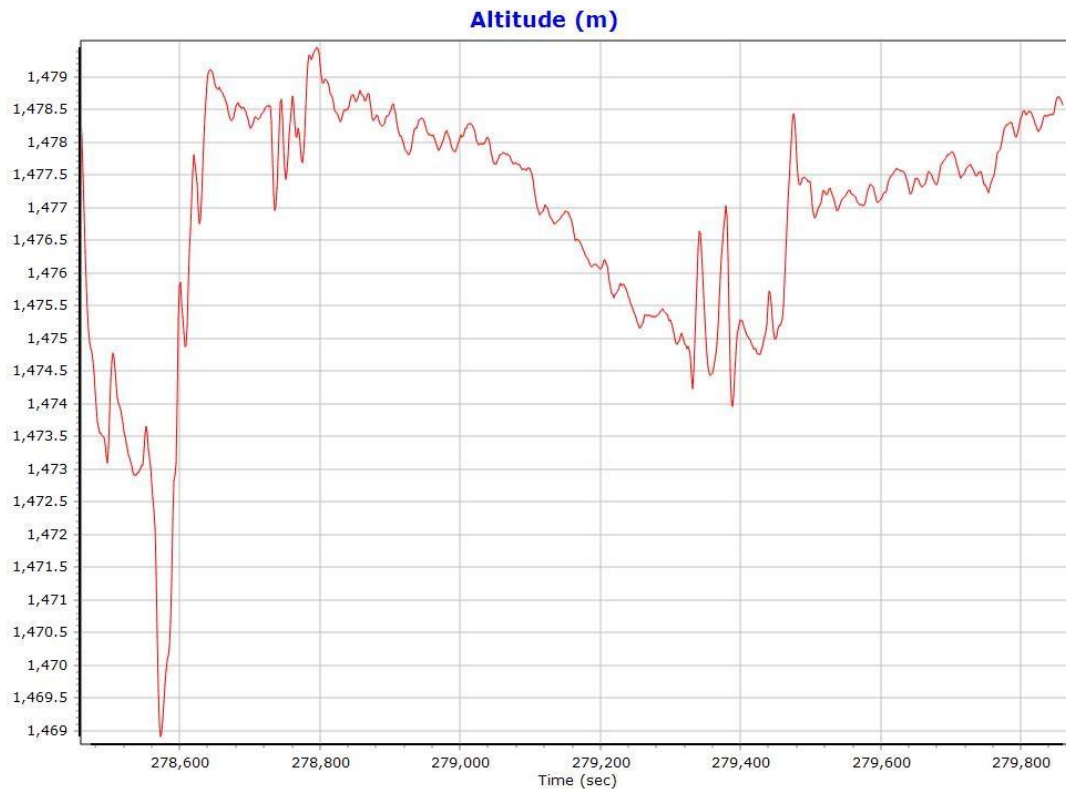


Trajectory Information

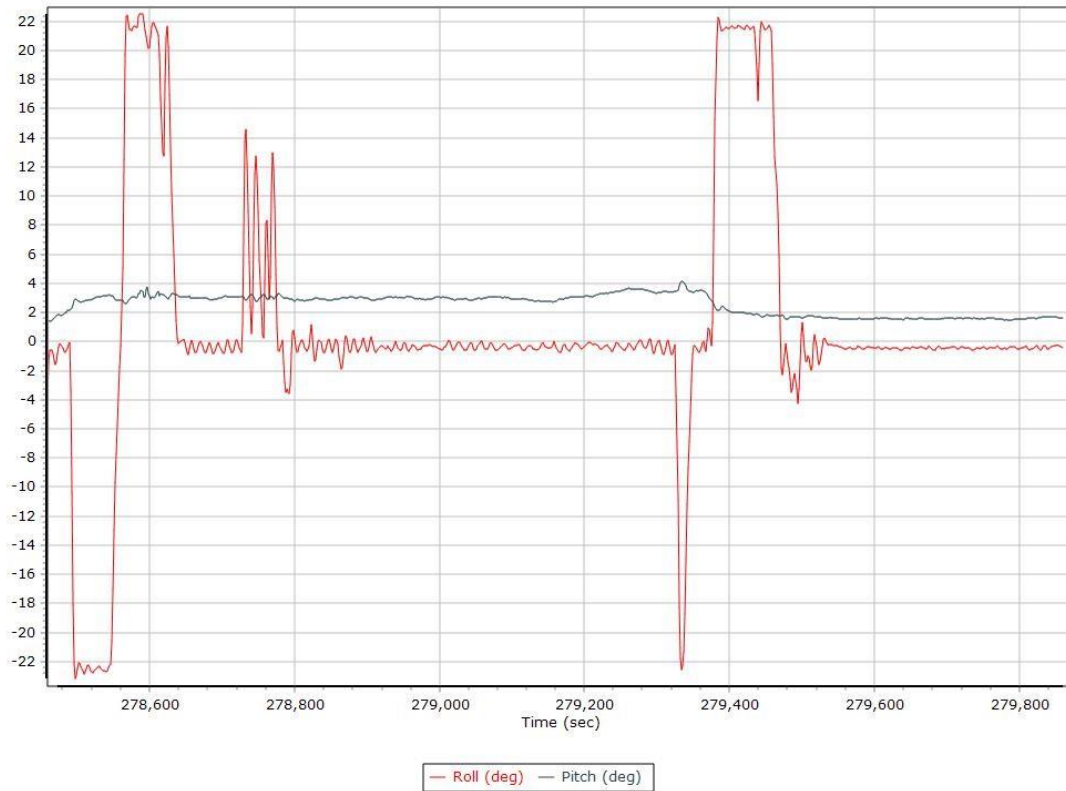
Top View



Altitude

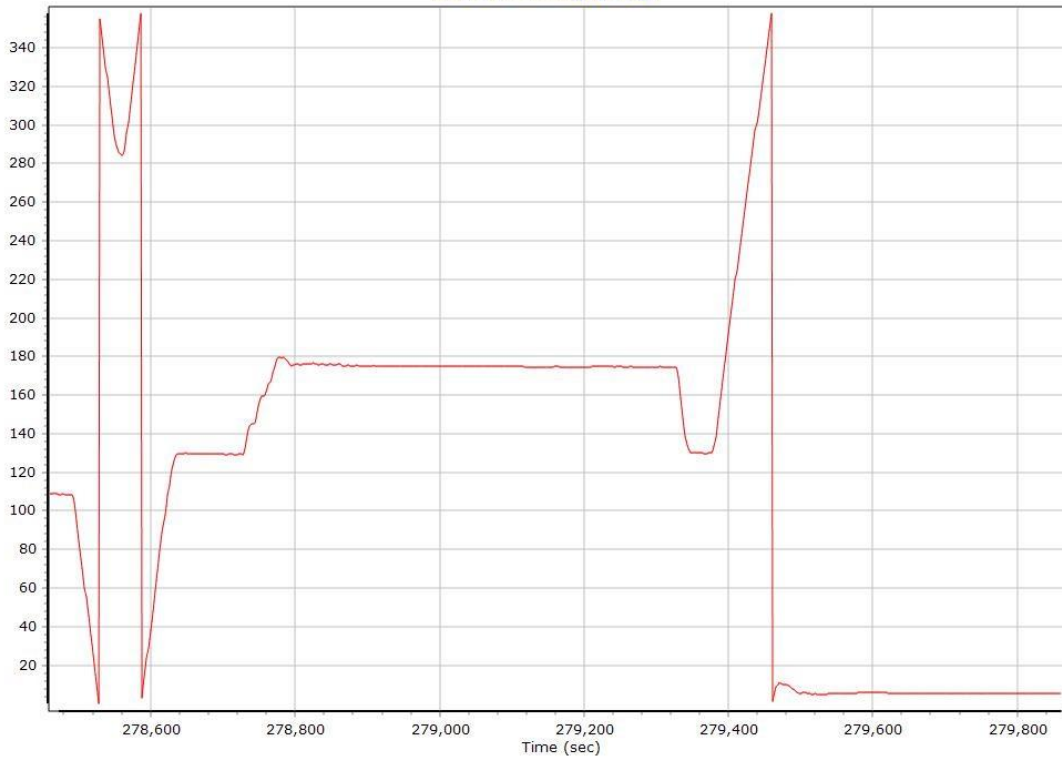


Roll/Pitch

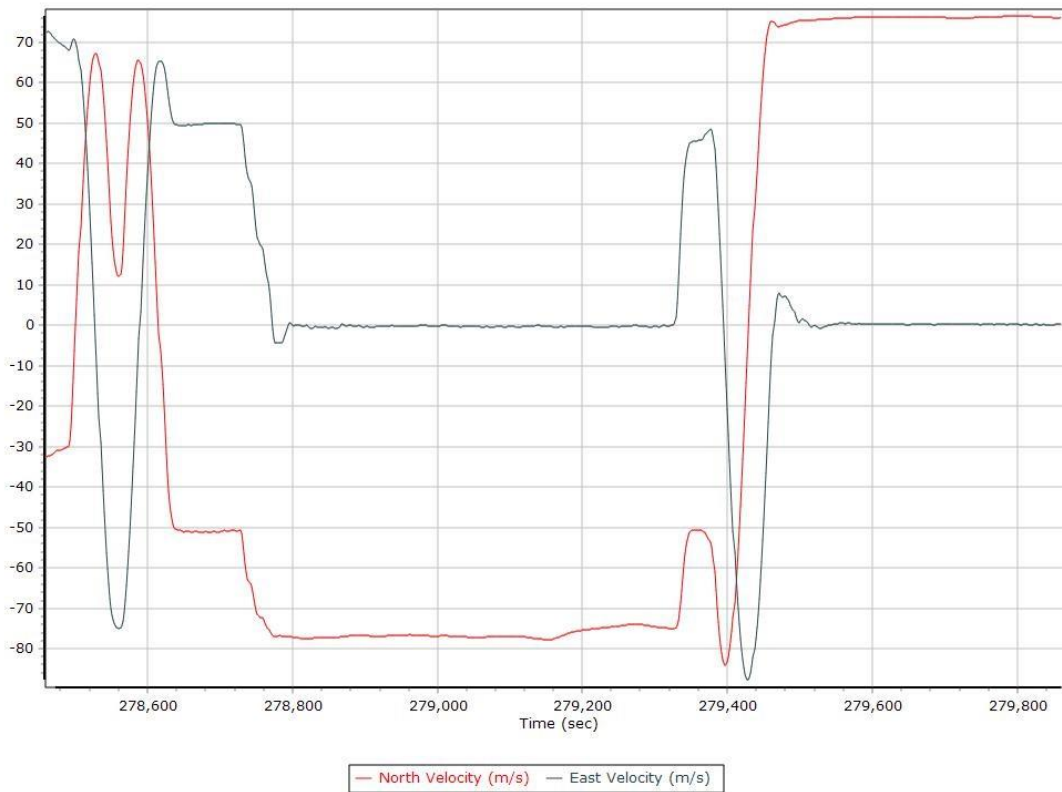


Heading

True Heading (deg)

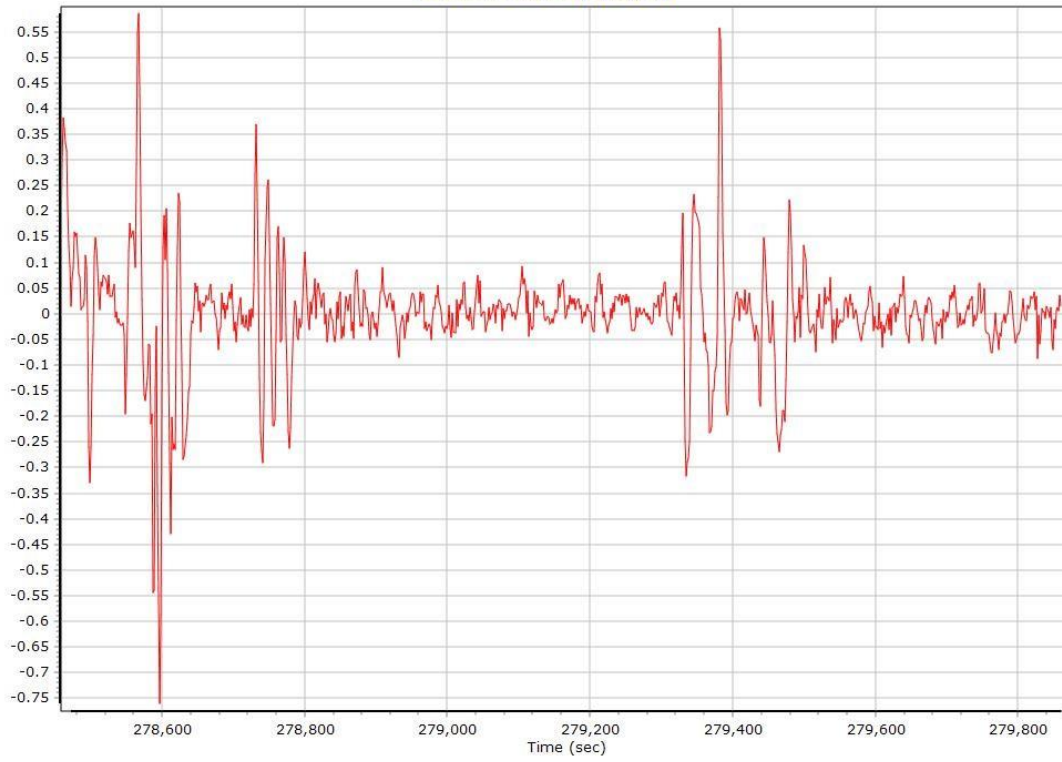


North/East Velocity



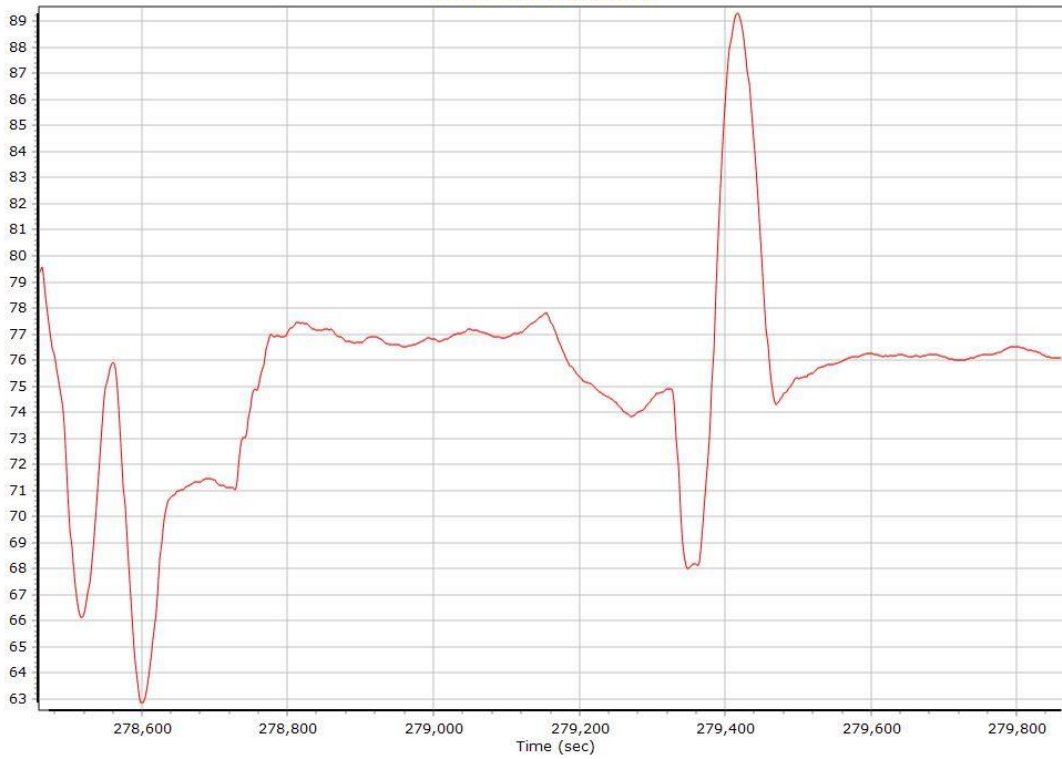
Down Velocity

Down Velocity (m/s)



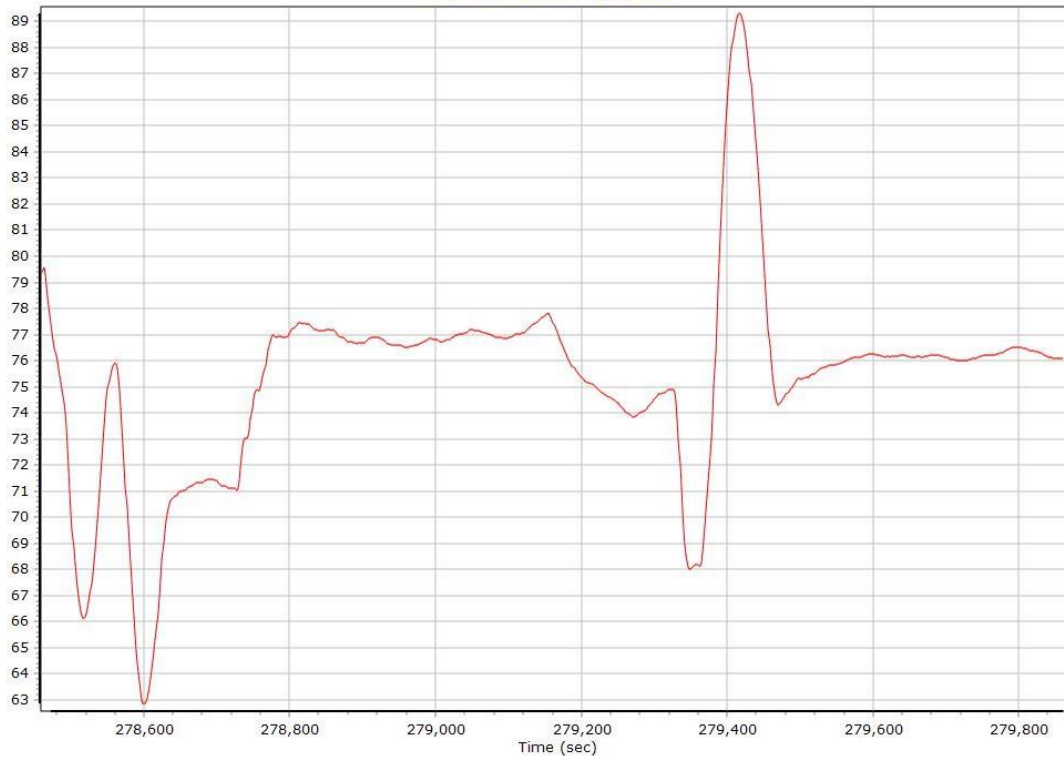
Total Speed

Total Speed (m/s)

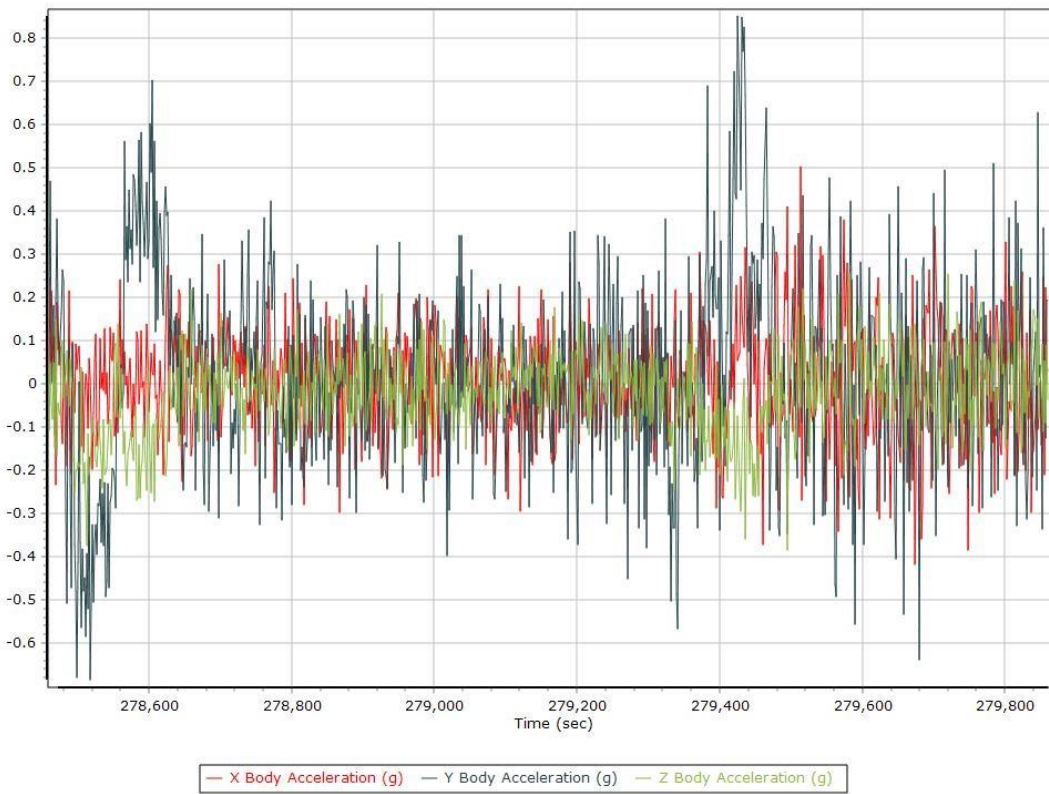


Ground Speed

Ground Speed (m/s)

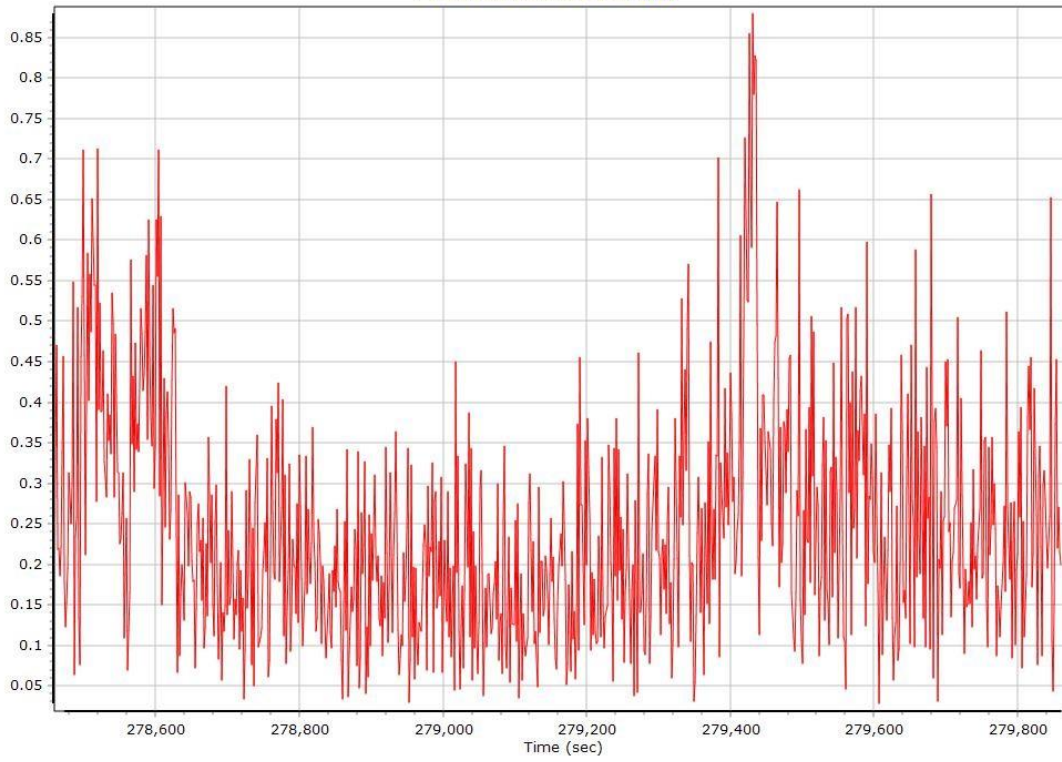


Body Acceleration

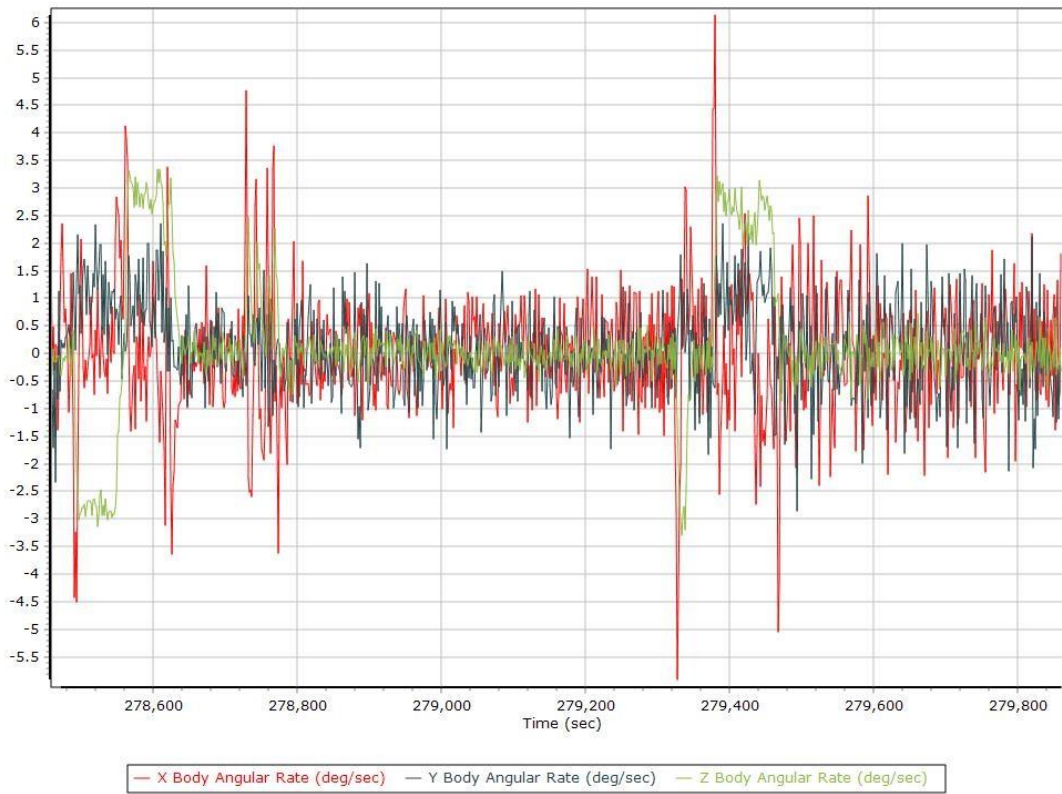


Total Body Acceleration

Total Acceleration (g)



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	

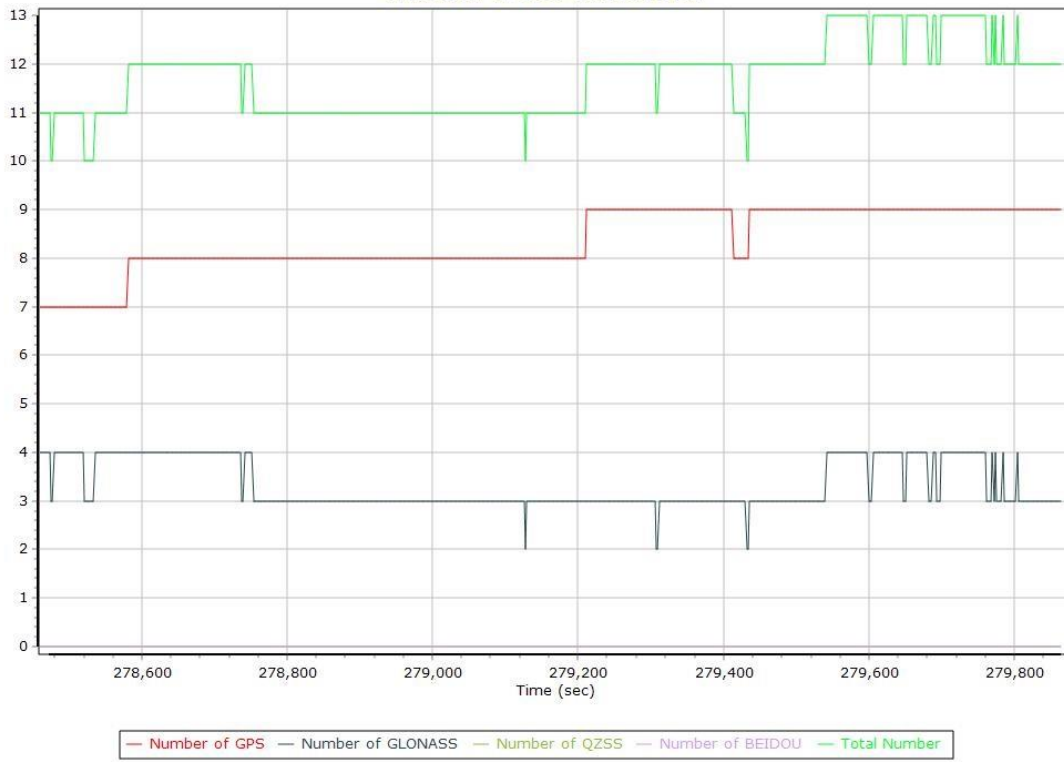
GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	1.68	30.71	
Number of GPS SV	7	9	8
Number of GLONASS SV	2	4	3
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	10	13	12
PDOP	1.68	2.82	1.97
QC Solution Gaps	0.00	0.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	1648.00	0.00	0.00
Percentage	100.00	0.00	0.00

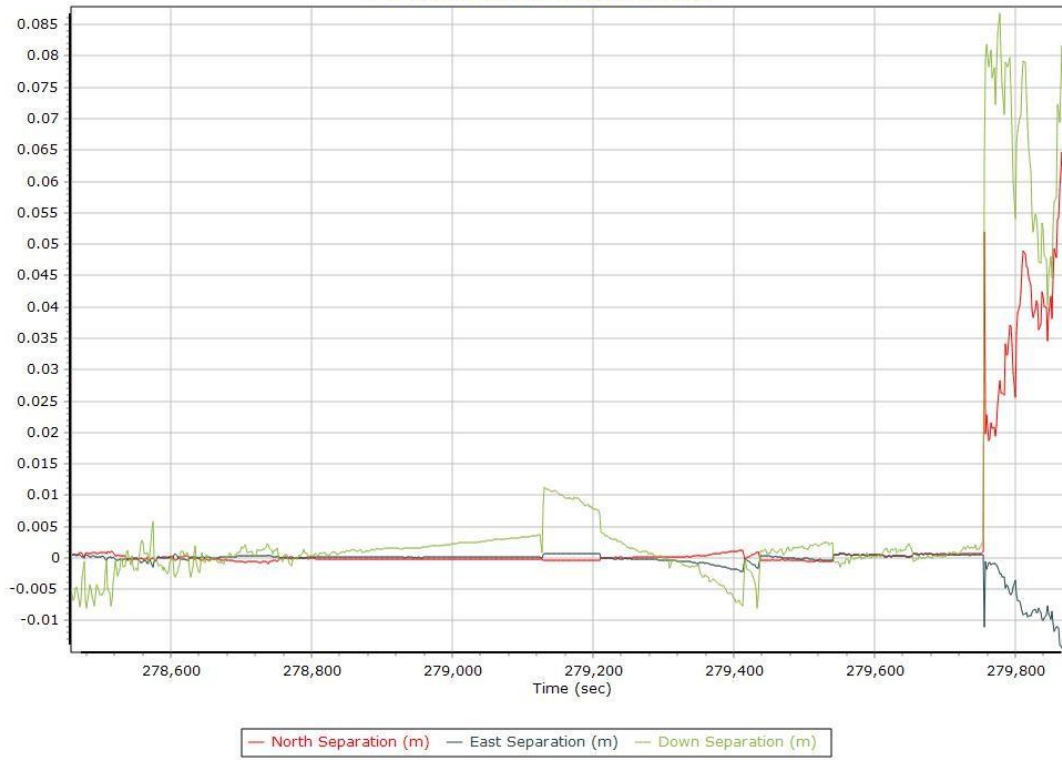
Num SVs in solution

Number of SVs in solution

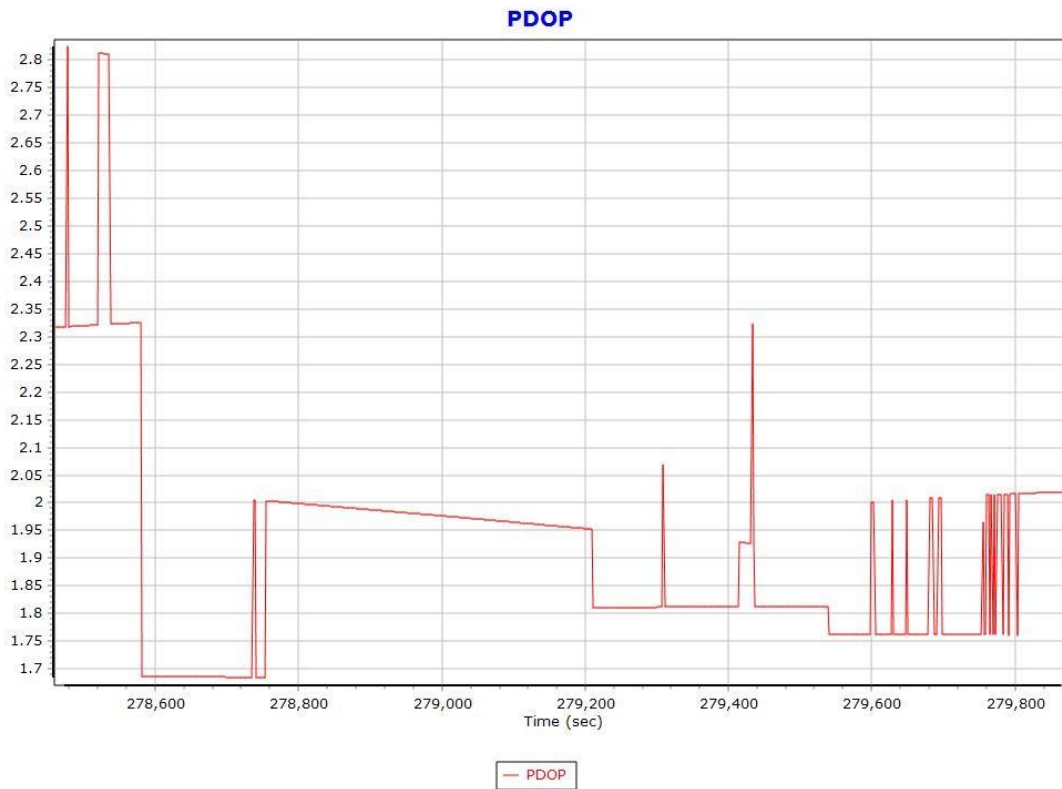


Forward/Reverse Separation

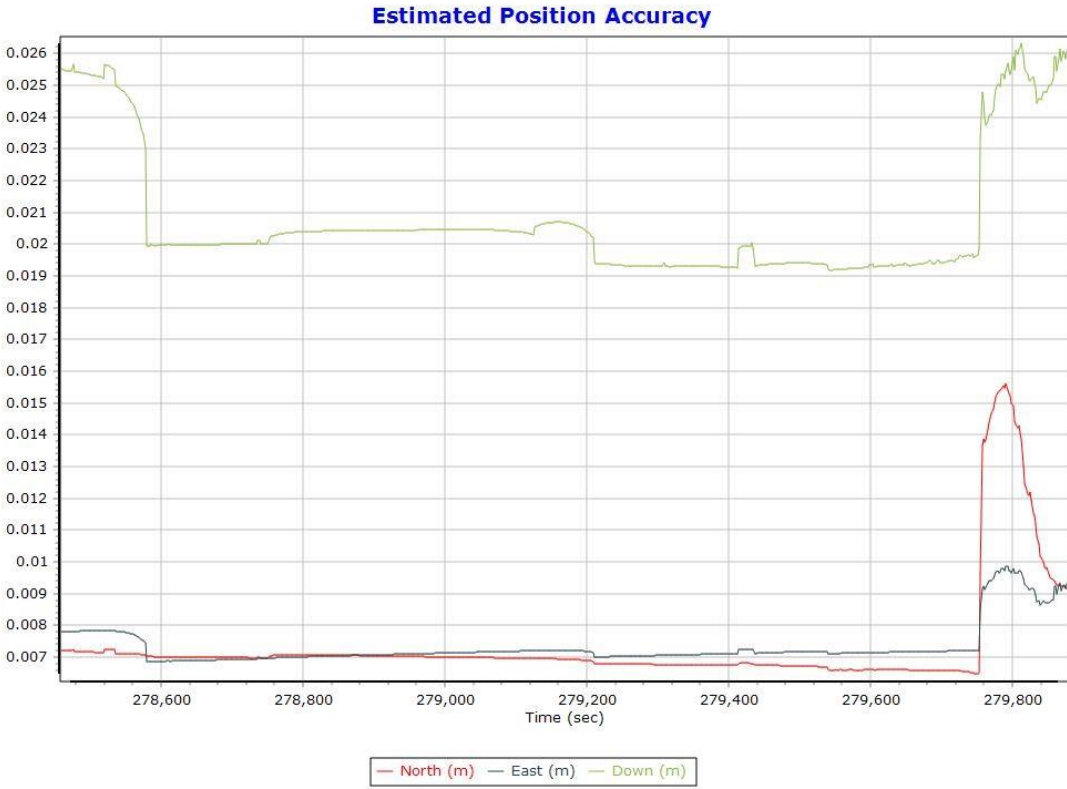
Forward/Reverse Separation



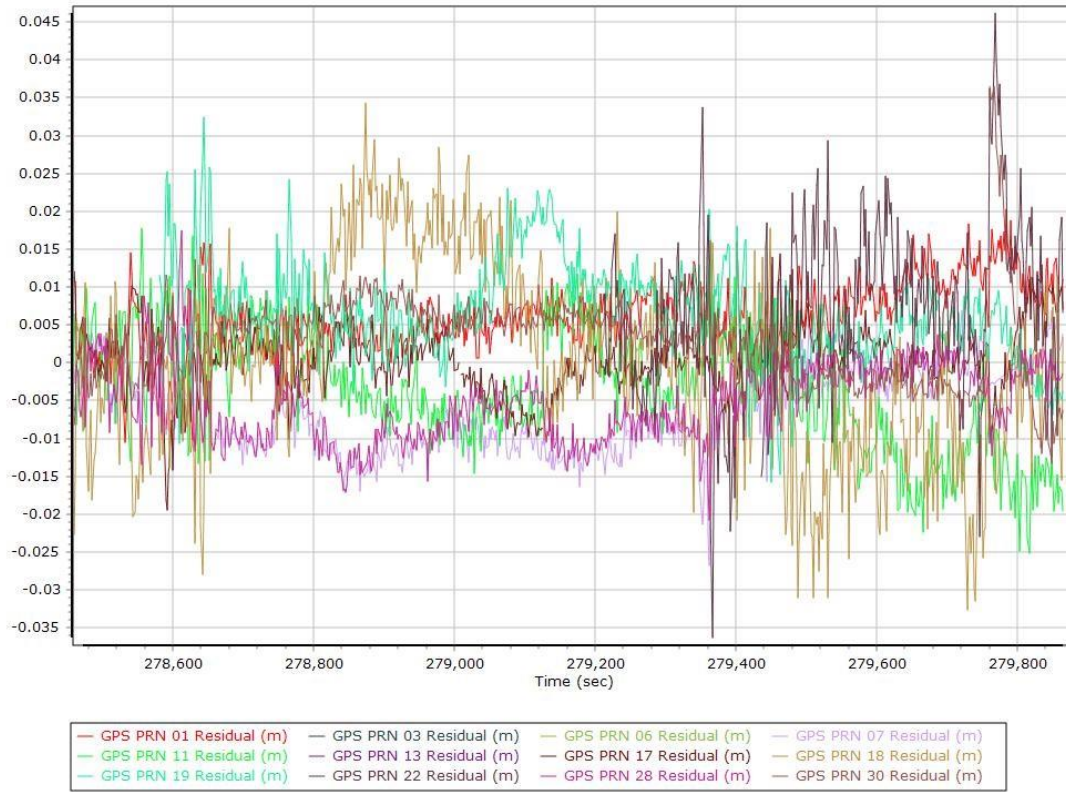
PDOP



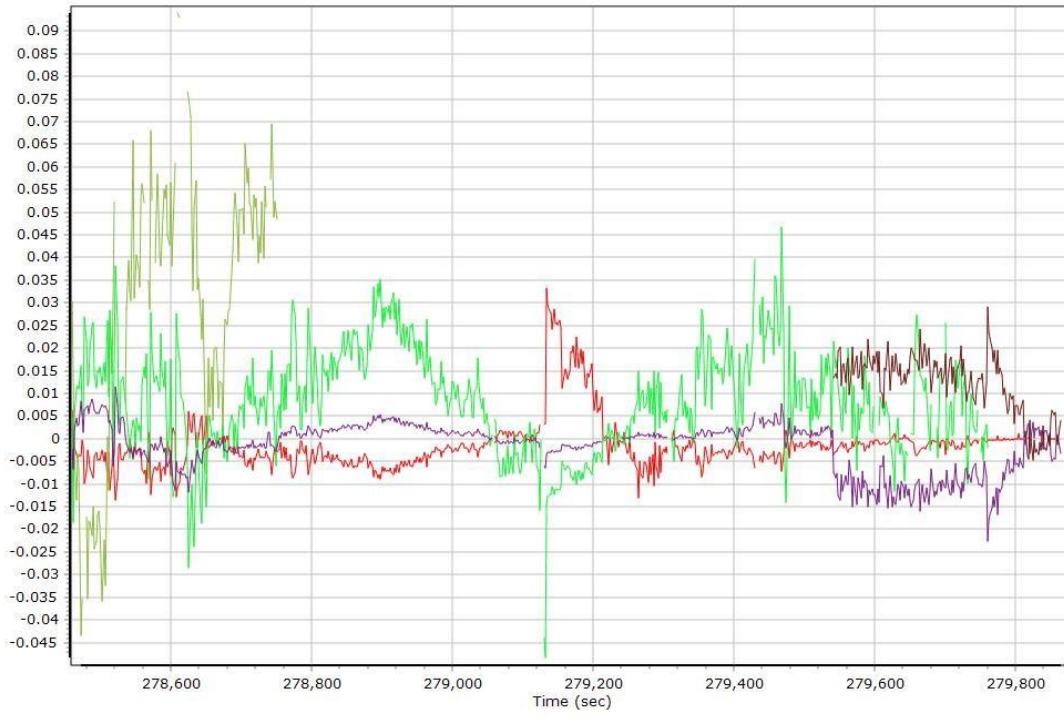
Estimated Position Accuracy



GPS Residuals



GLONASS Residuals



— GLONASS 09 Residual (m)	— GLONASS 10 Residual (m)	— GLONASS 15 Residual (m)	— GLONASS 16 Residual (m)
— GLONASS 18 Residual (m)	— GLONASS 19 Residual (m)	— GLONASS 20 Residual (m)	

GNSS-Inertial Processor Configuration

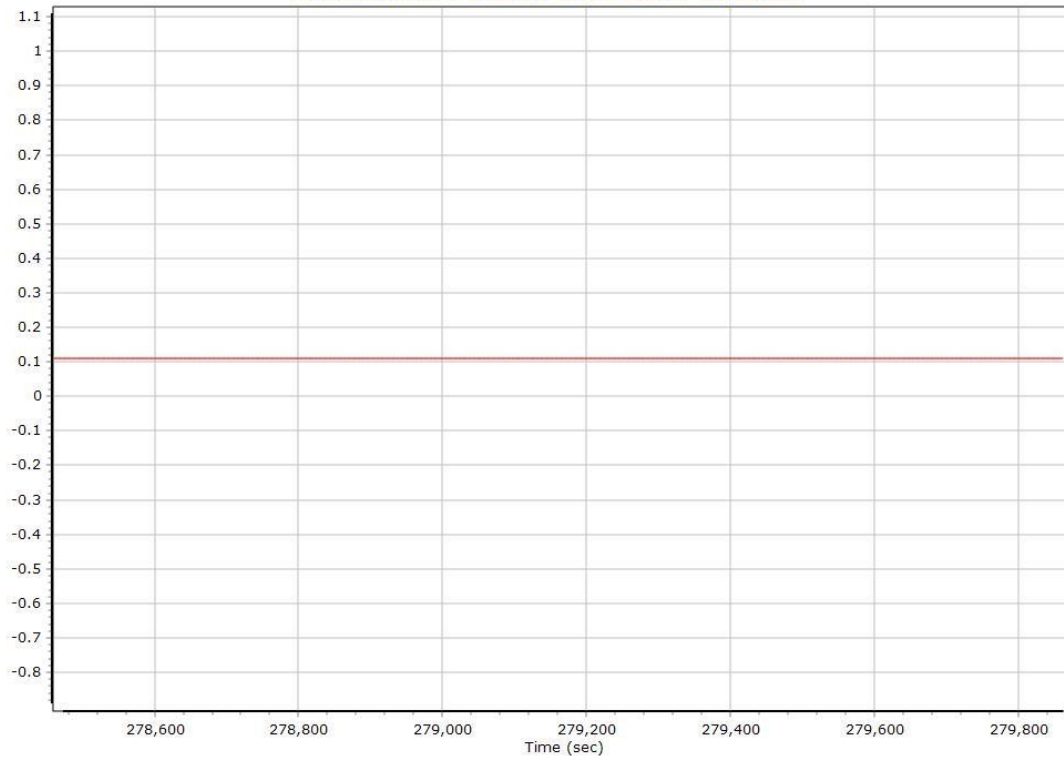
Processing mode	IN-Fusion SmartBase		
Stabilized mount	False		
Base station	ASB		
Processing start time	278199.000 (12/12/2018 5:16:39 AM)		
Processing end time	279863.000 (12/12/2018 5:44:23 AM)		
Initial attitude source	GYRO Compass		
IMU Sensor Context	Processing with Onboard IMU		
Reference to IMU 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]	0.110	-0.138	-0.963
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

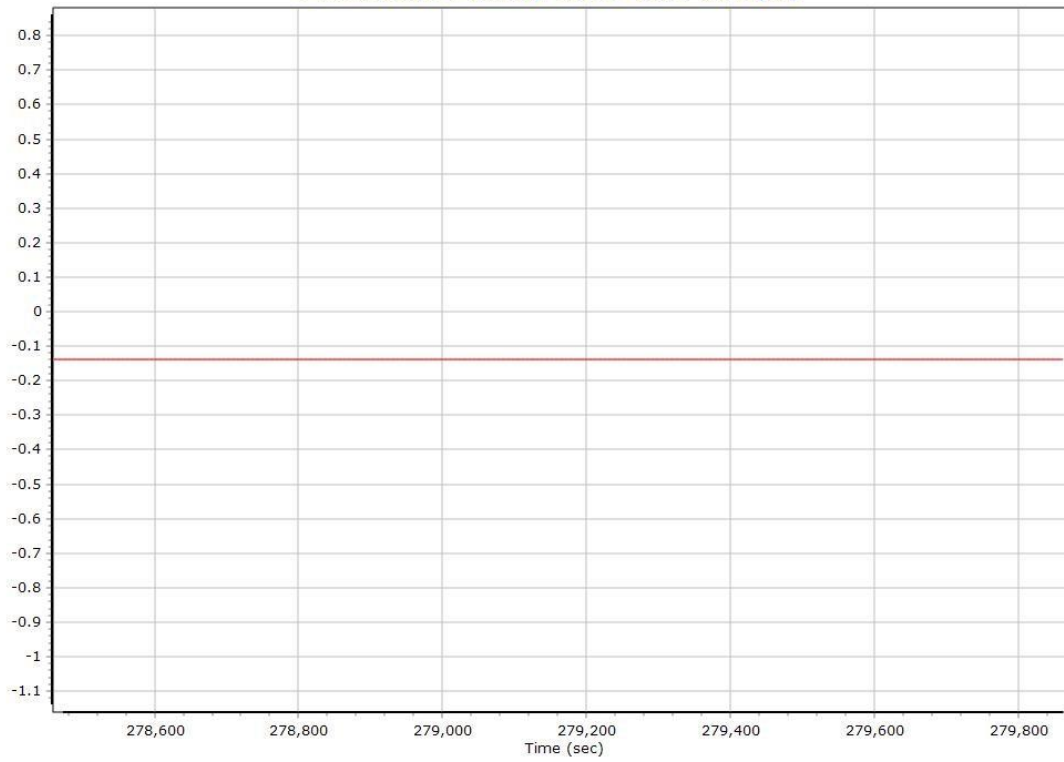
X Reference -Primary GNSS Lever Arm (m)

X Reference-Primary GNSS Lever Arm (m)



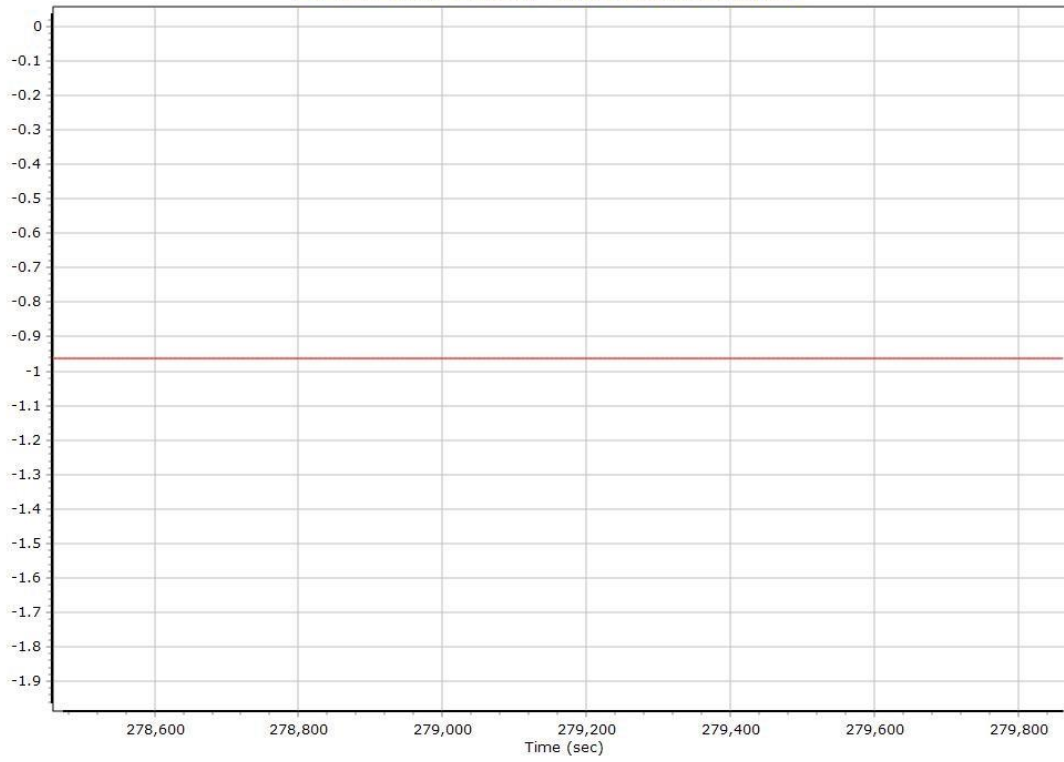
Y Reference -Primary GNSS Lever Arm (m)

Y Reference-Primary GNSS Lever Arm (m)



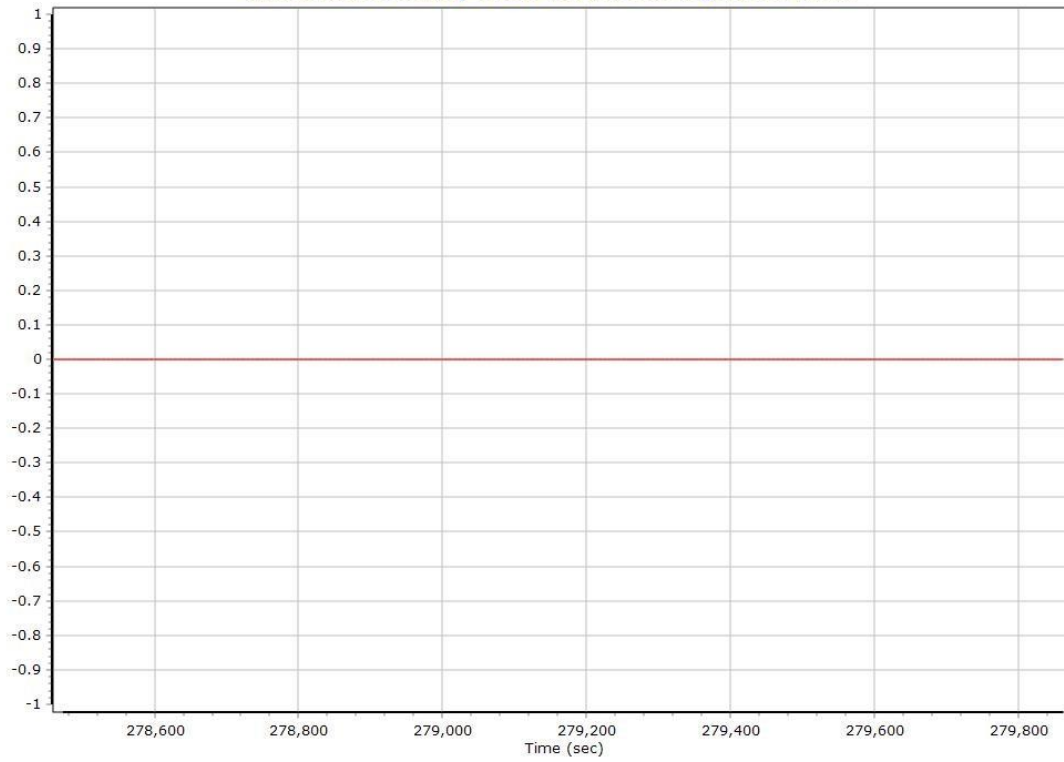
Z Reference -Primary GNSS Lever Arm (m)

Z Reference-Primary GNSS Lever Arm (m)



Reference -Primary GNSS Lever Arm Figure of Merit

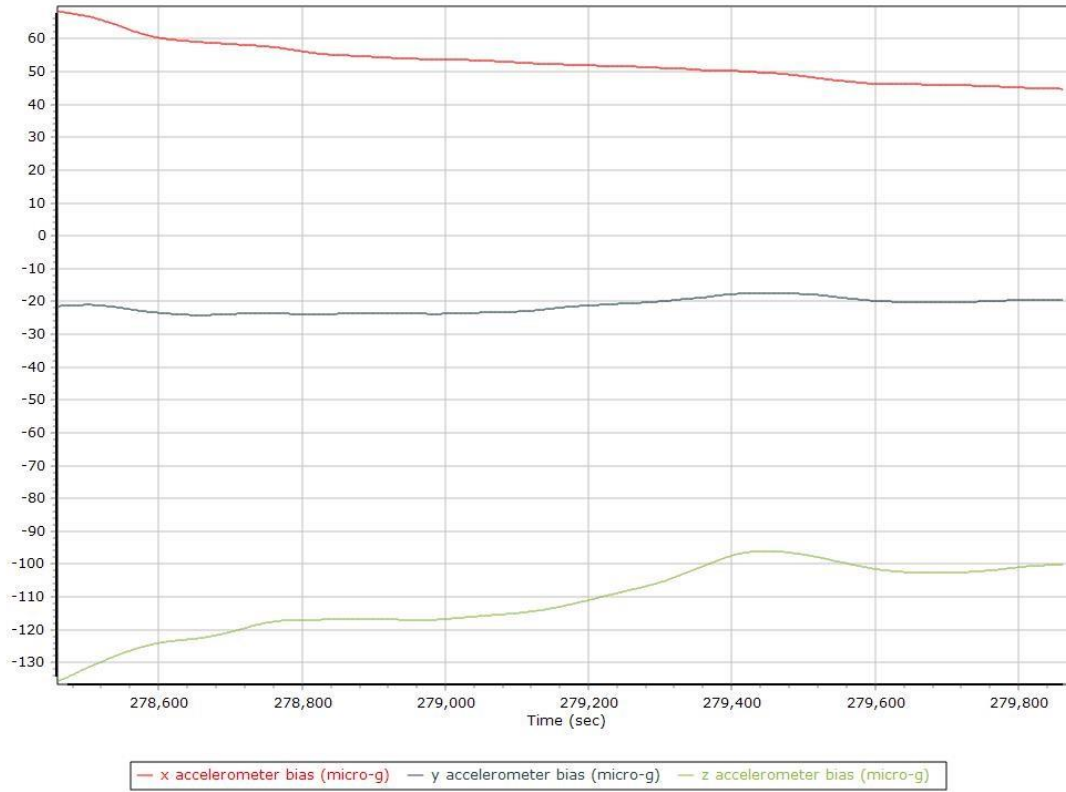
Reference-Primary GNSS Lever Arm Figure of Merit



Smoothed IN-Fusion QC

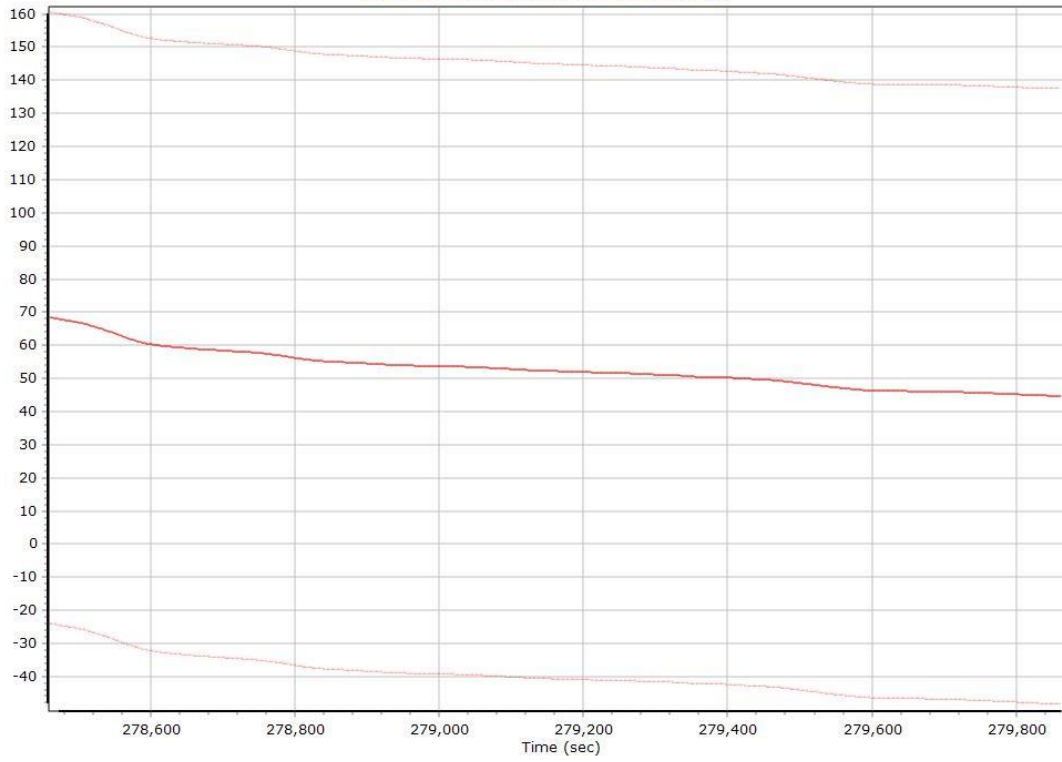
Smoothed Estimated Errors, Reference Frame

Accelerometer Bias (micro -g)



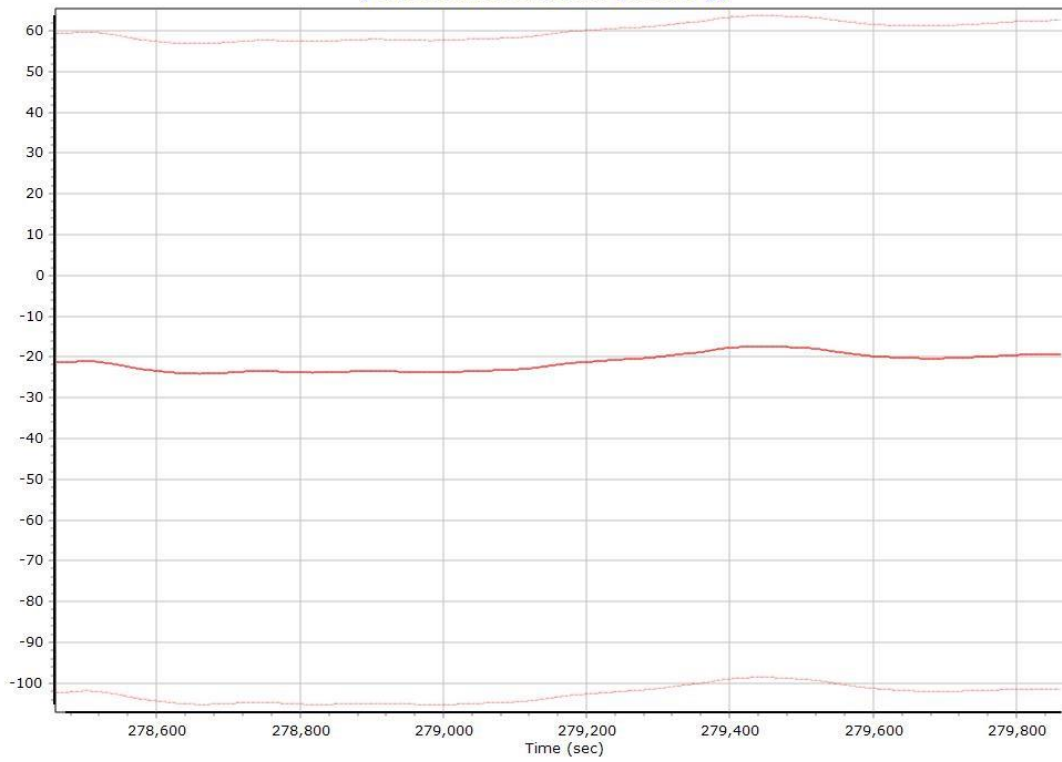
X Accelerometer Bias (micro -g)

x accelerometer bias (micro-g)



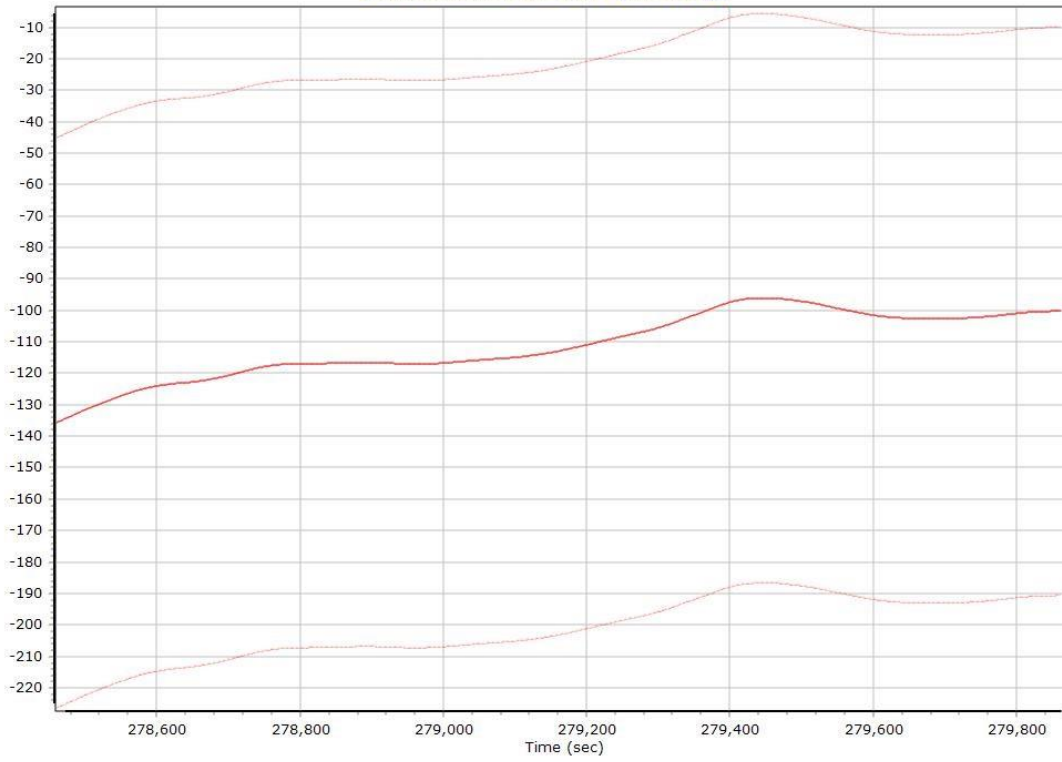
Y Accelerometer Bias (micro -g)

y accelerometer bias (micro-g)

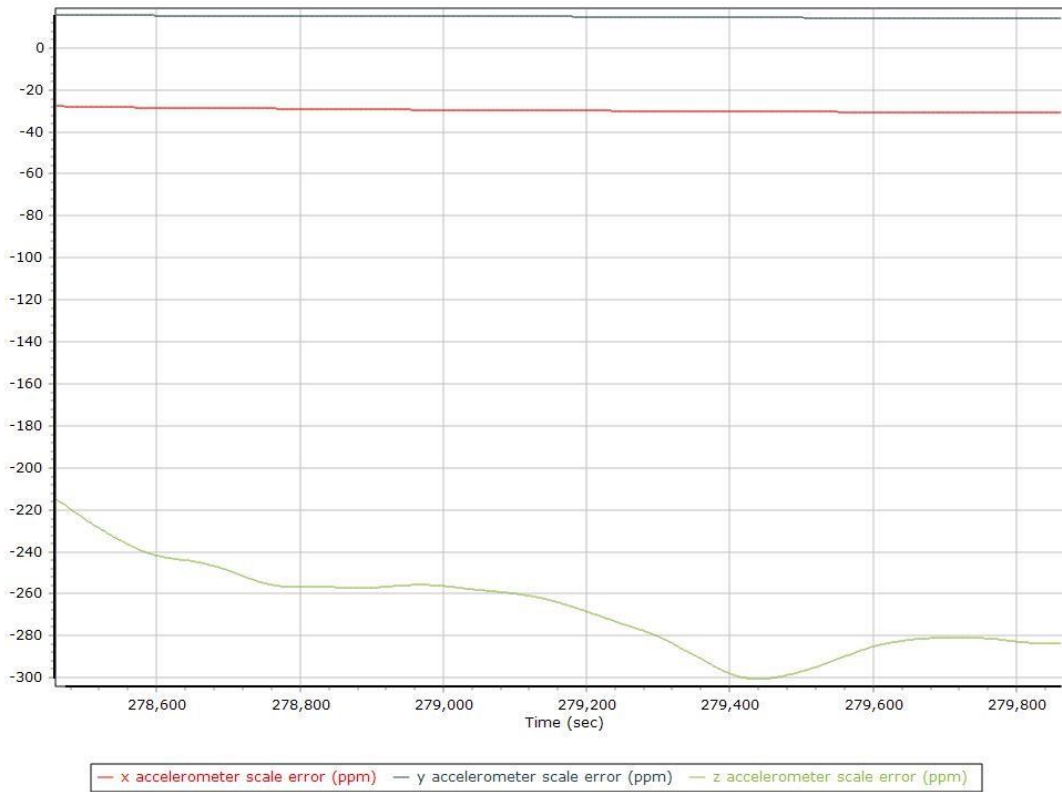


Z Accelerometer Bias (micro -g)

z accelerometer bias (micro-g)

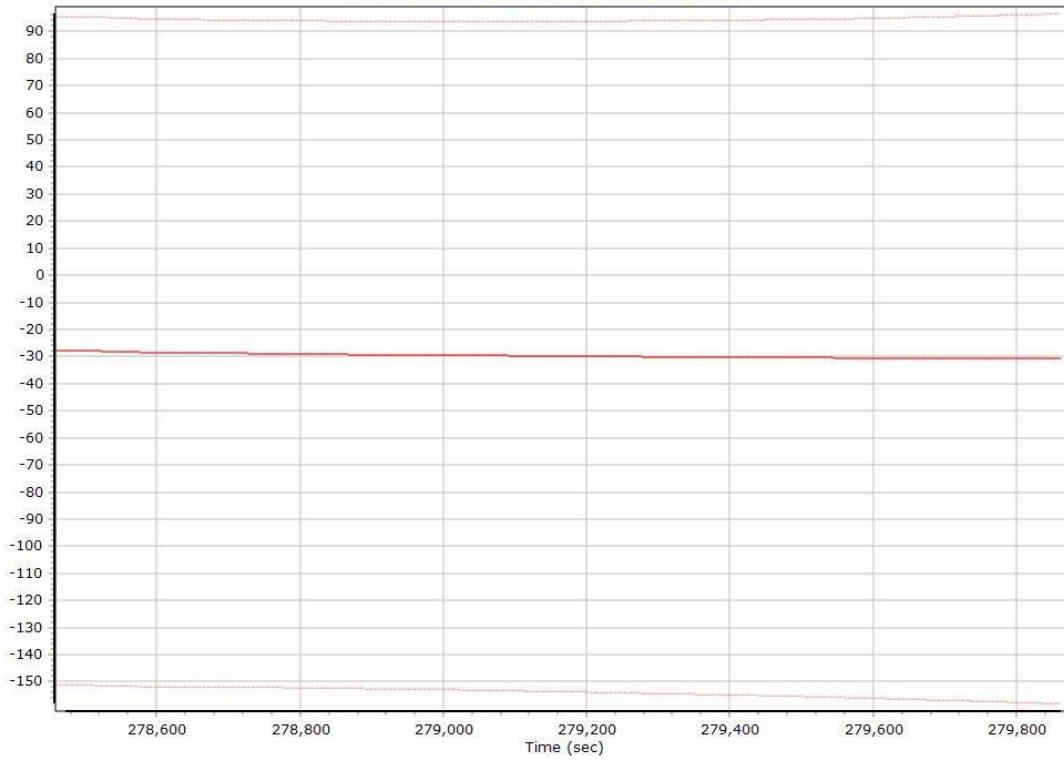


Accelerometer Scale Error (ppm)



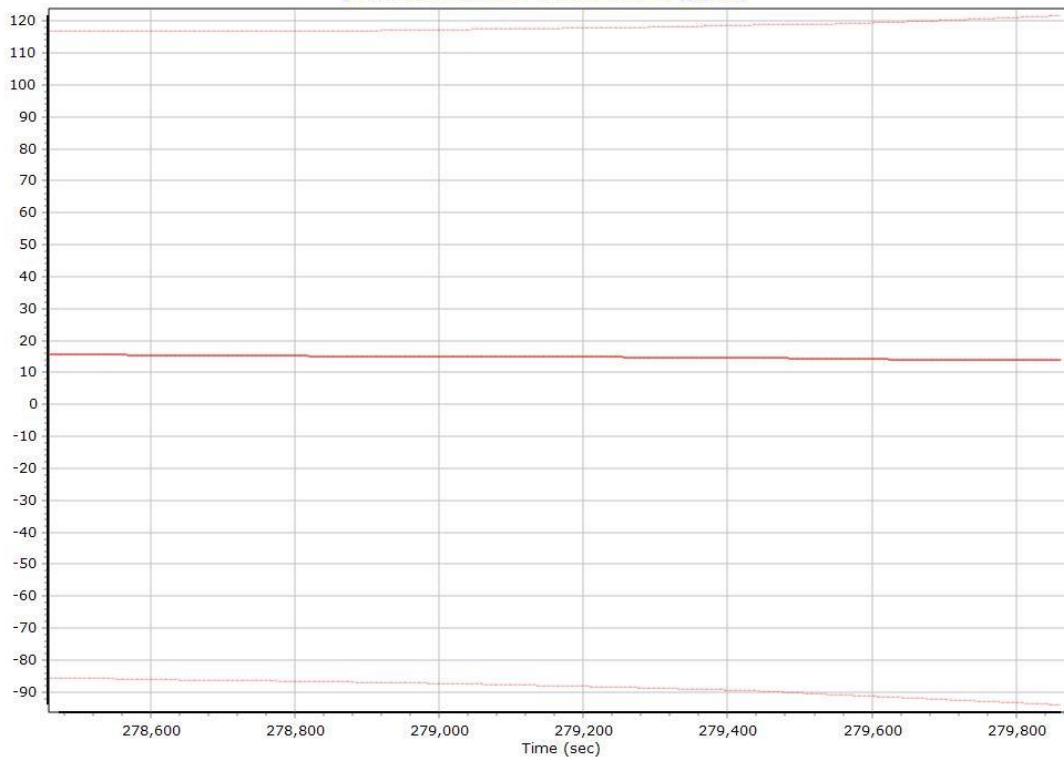
X Accelerometer Scale Error (ppm)

x accelerometer scale error (ppm)



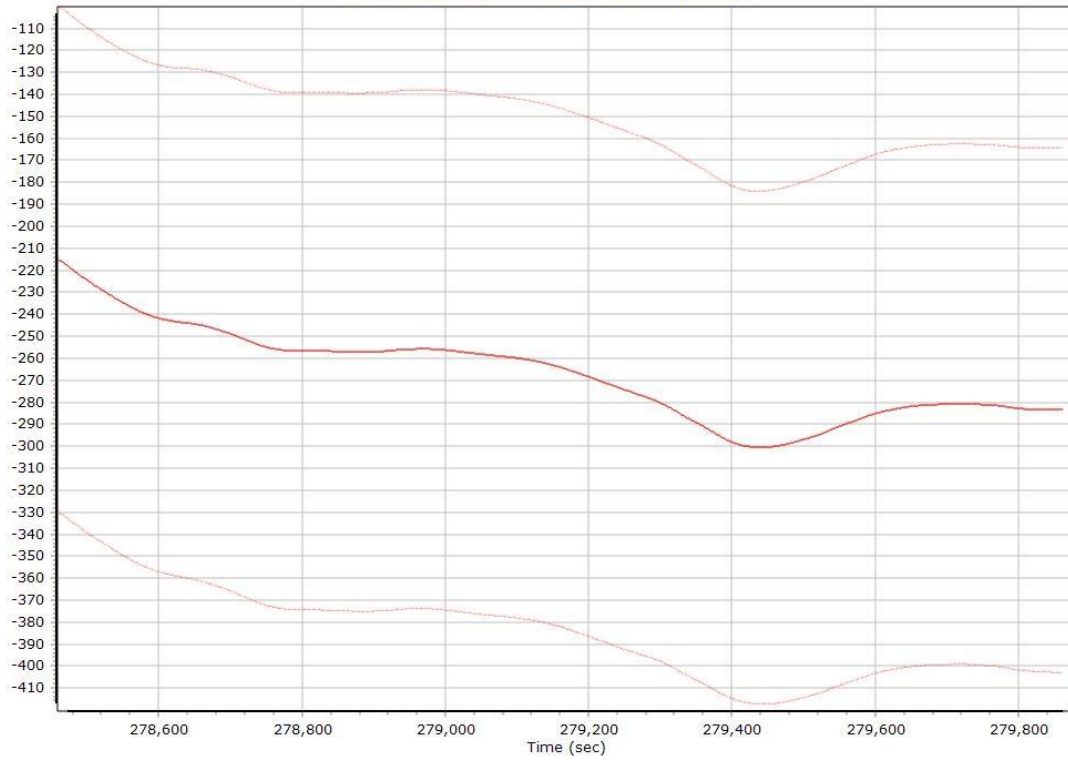
Y Accelerometer Scale Error (ppm)

y accelerometer scale error (ppm)

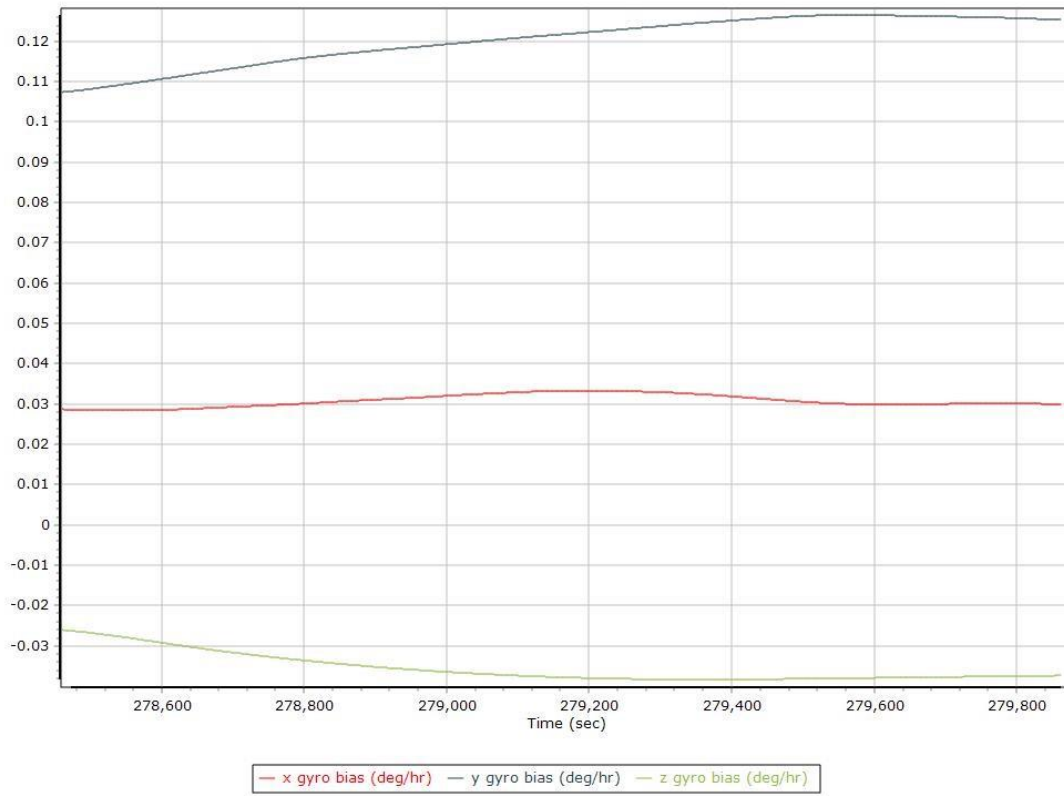


Z Accelerometer Scale Error (ppm)

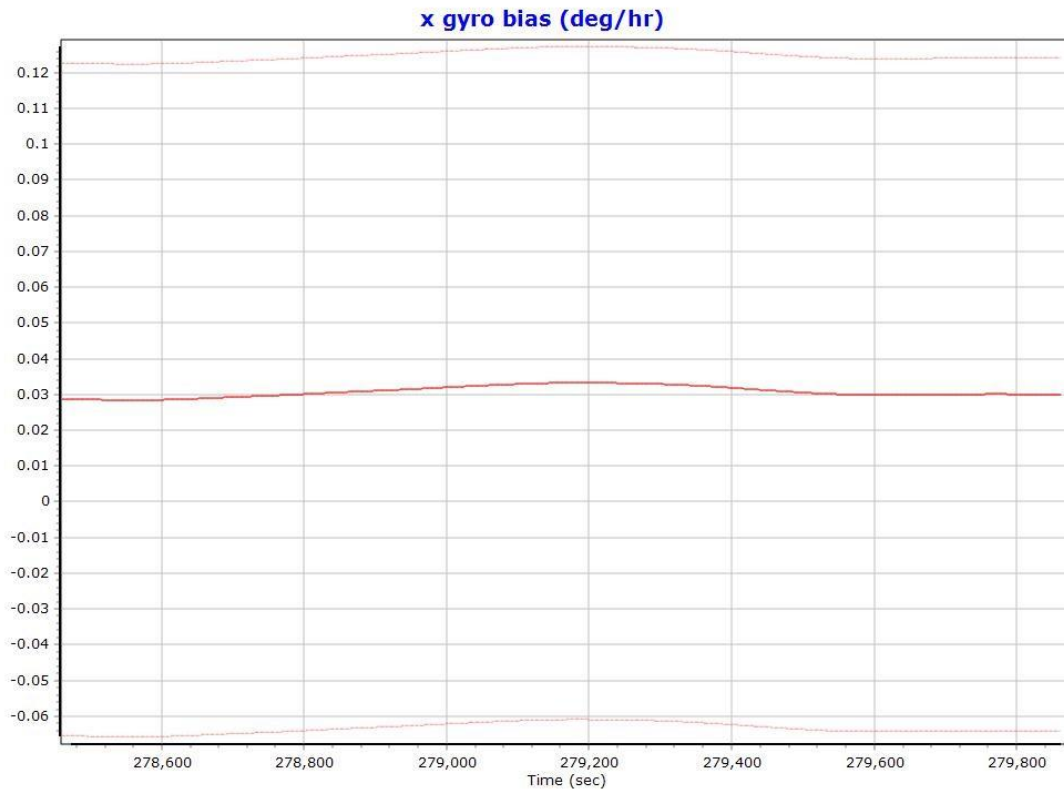
z accelerometer scale error (ppm)



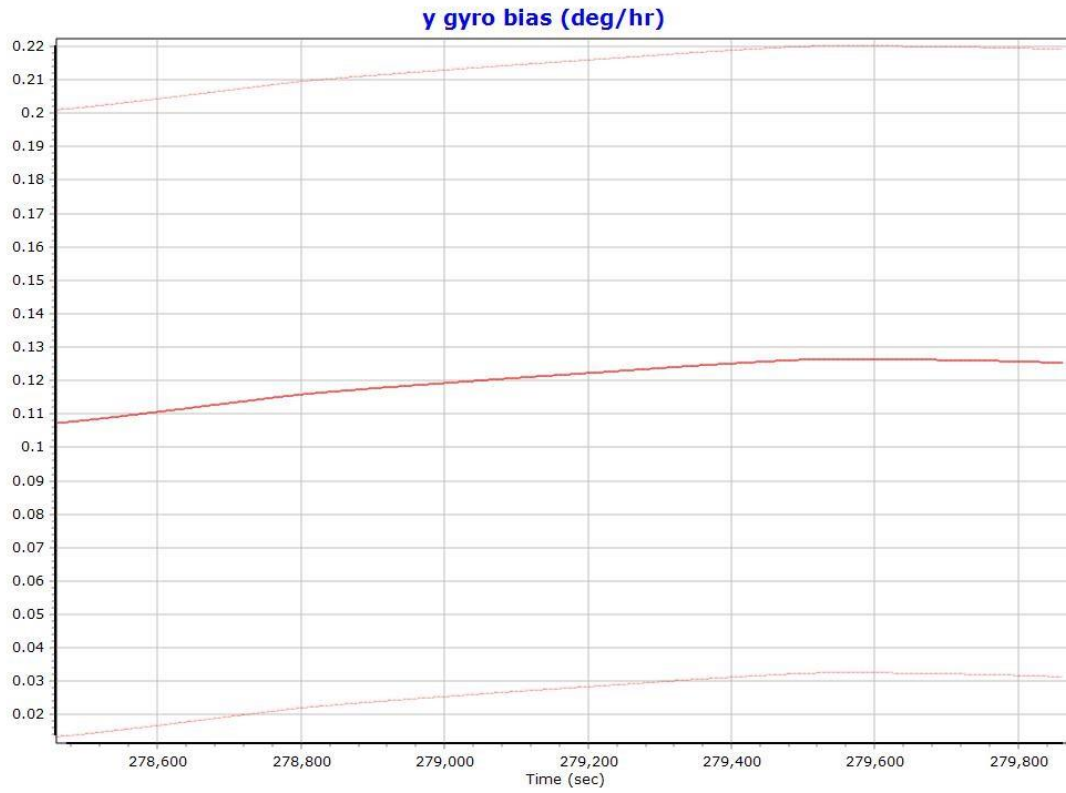
Gyro Bias (deg/h)



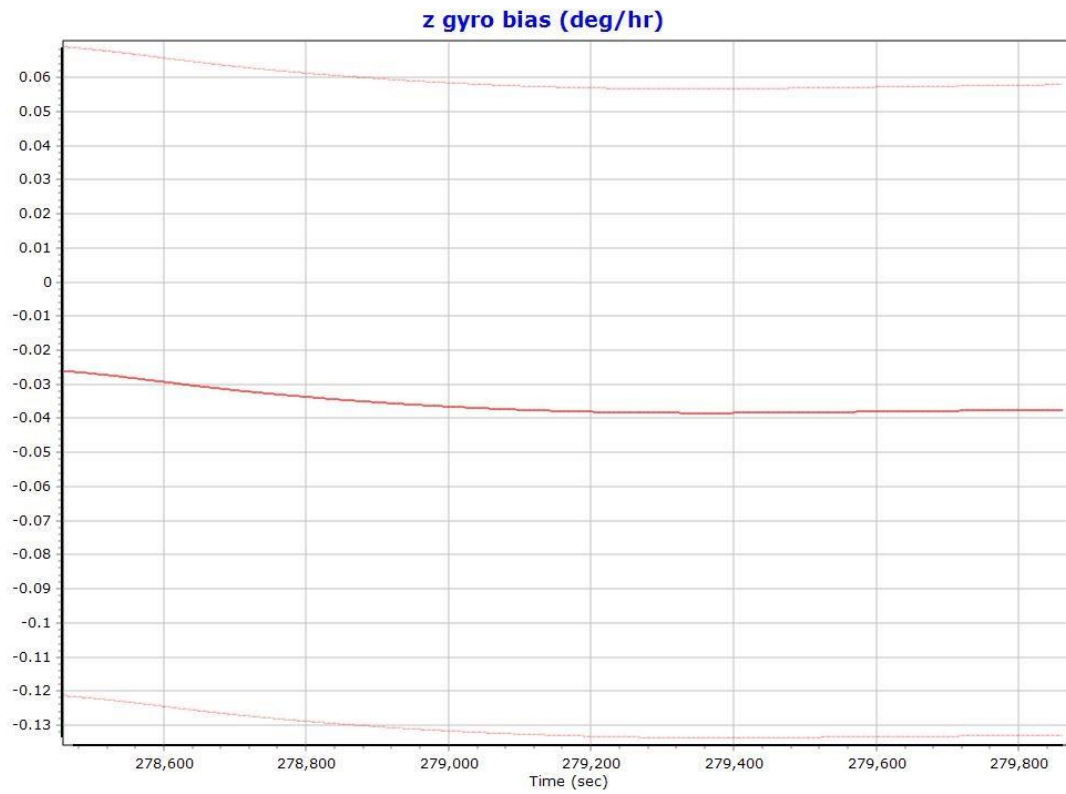
X Gyro Bias (deg/h)



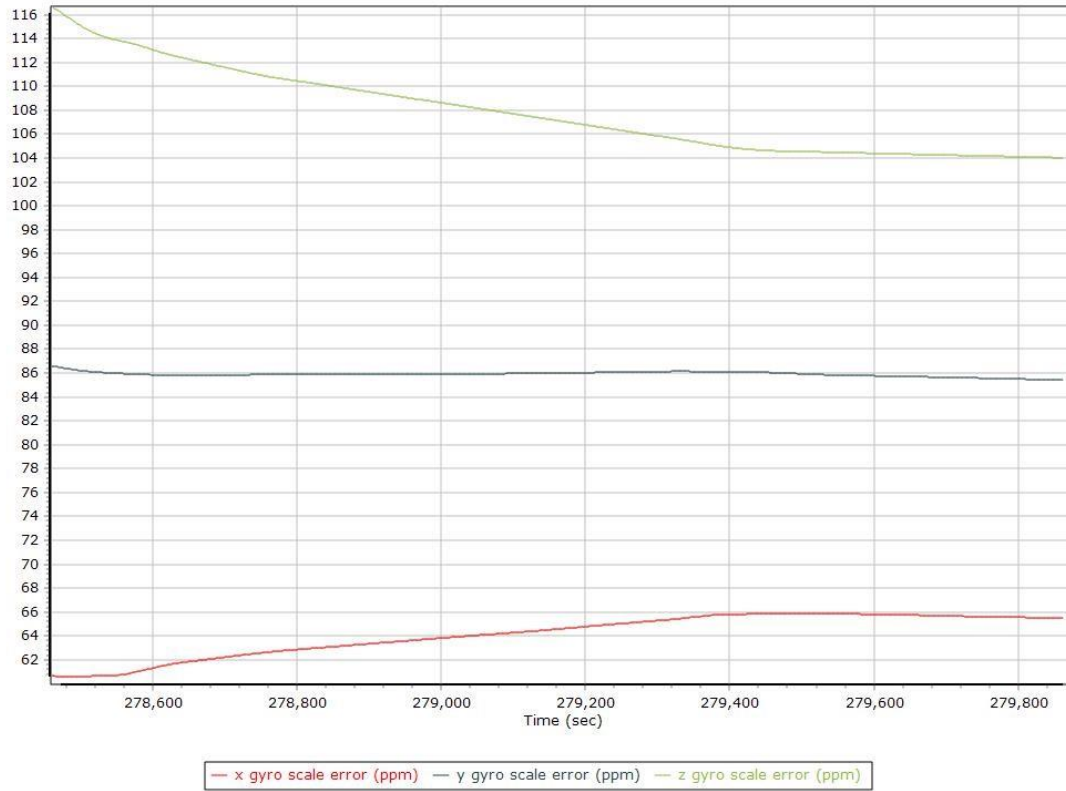
Y Gyro Bias (deg/h)



Z Gyro Bias (deg/h)

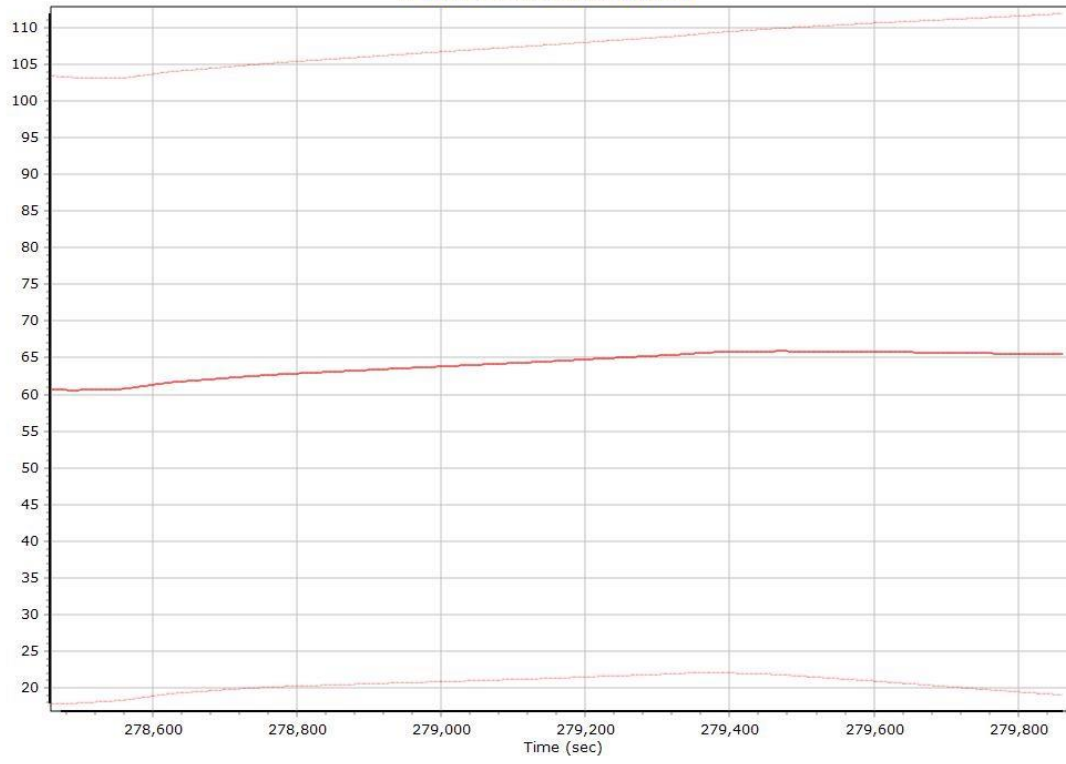


Gyro Scale Error (ppm)



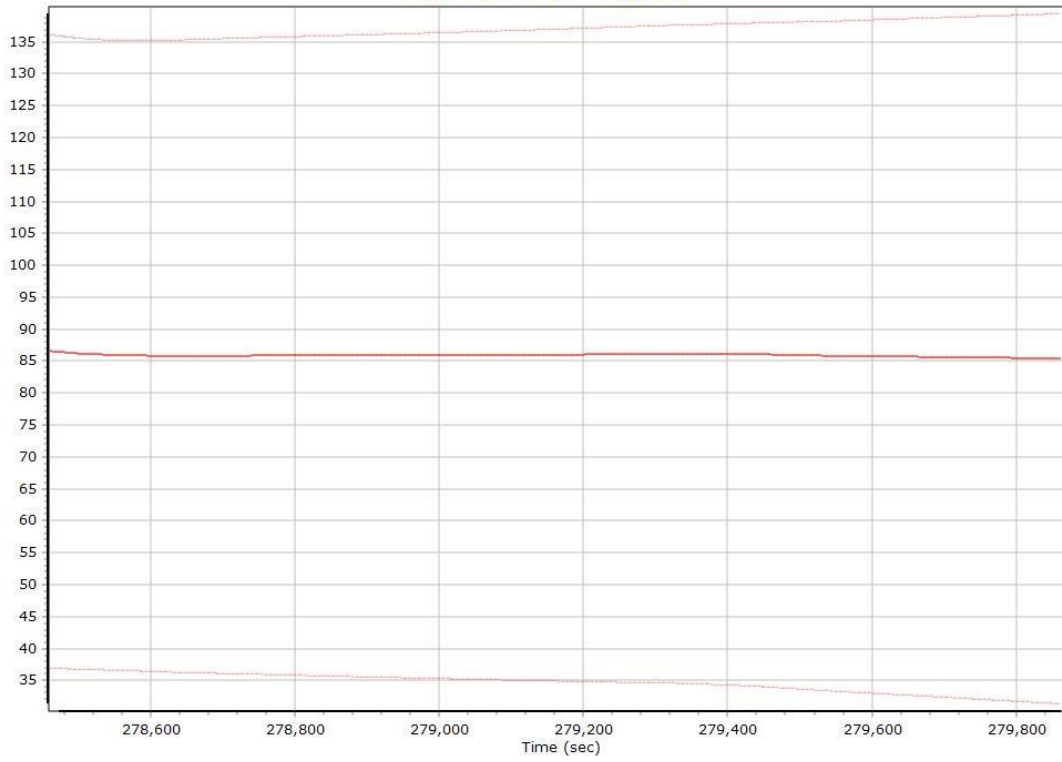
X Gyro Scale Error (ppm)

x gyro scale error (ppm)



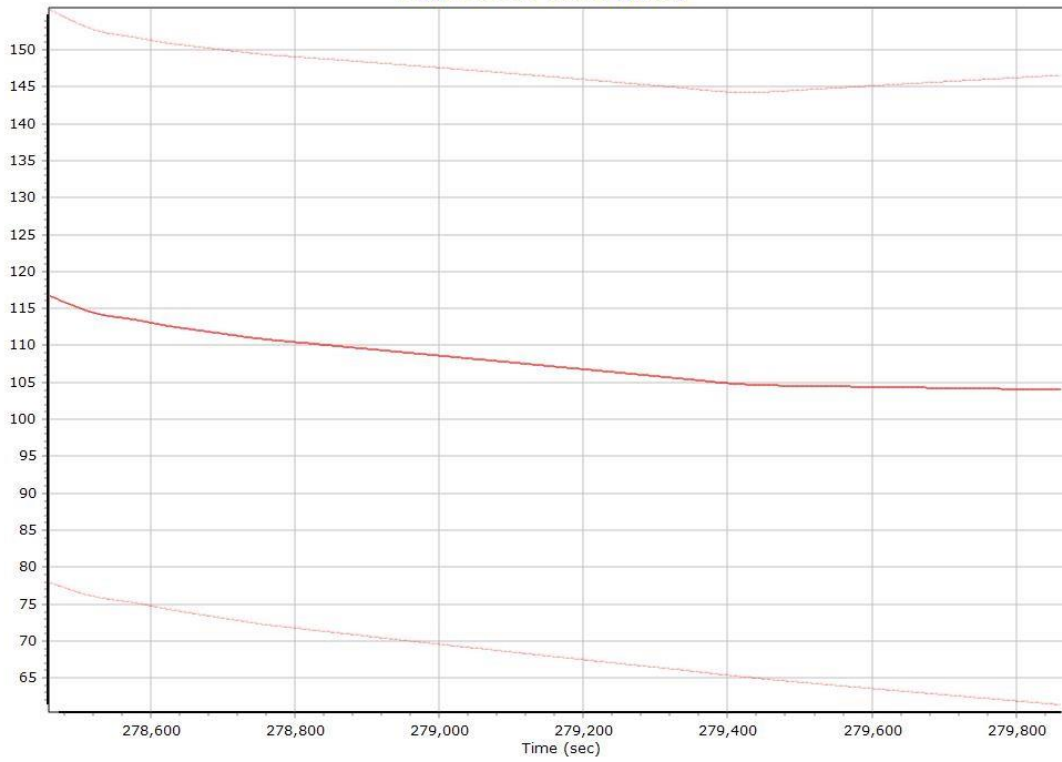
Y Gyro Scale Error (ppm)

y gyro scale error (ppm)



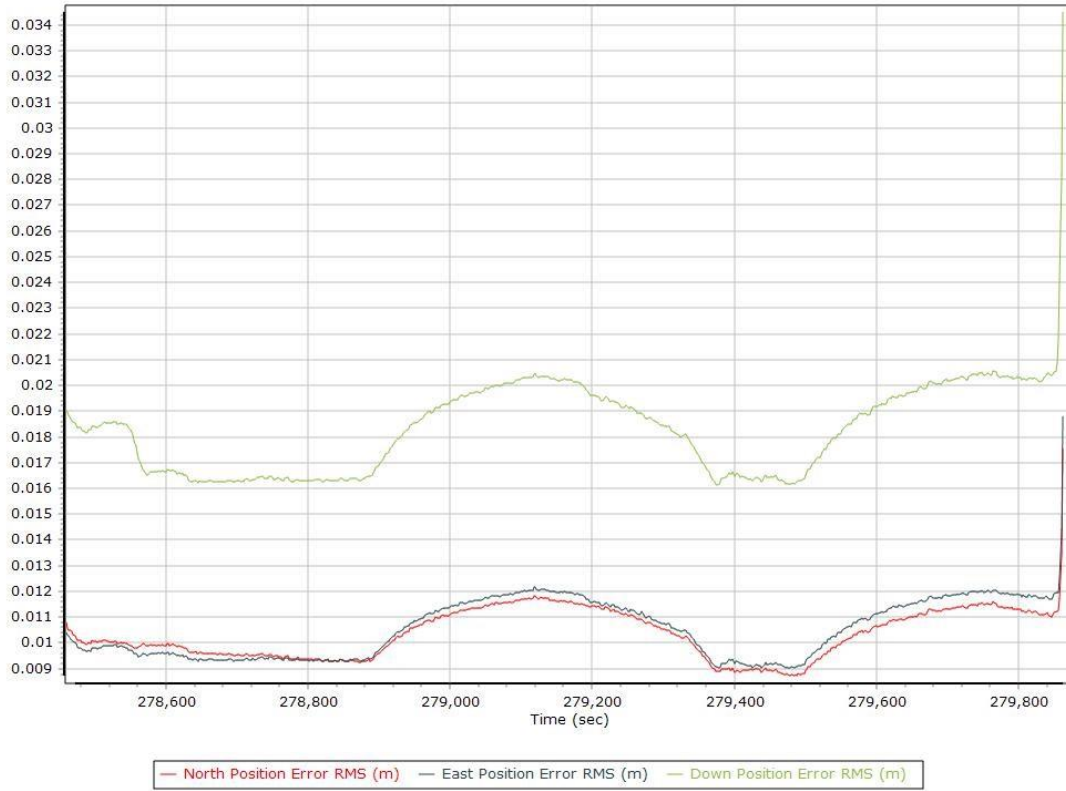
Z Gyro Scale Error (ppm)

z gyro scale error (ppm)

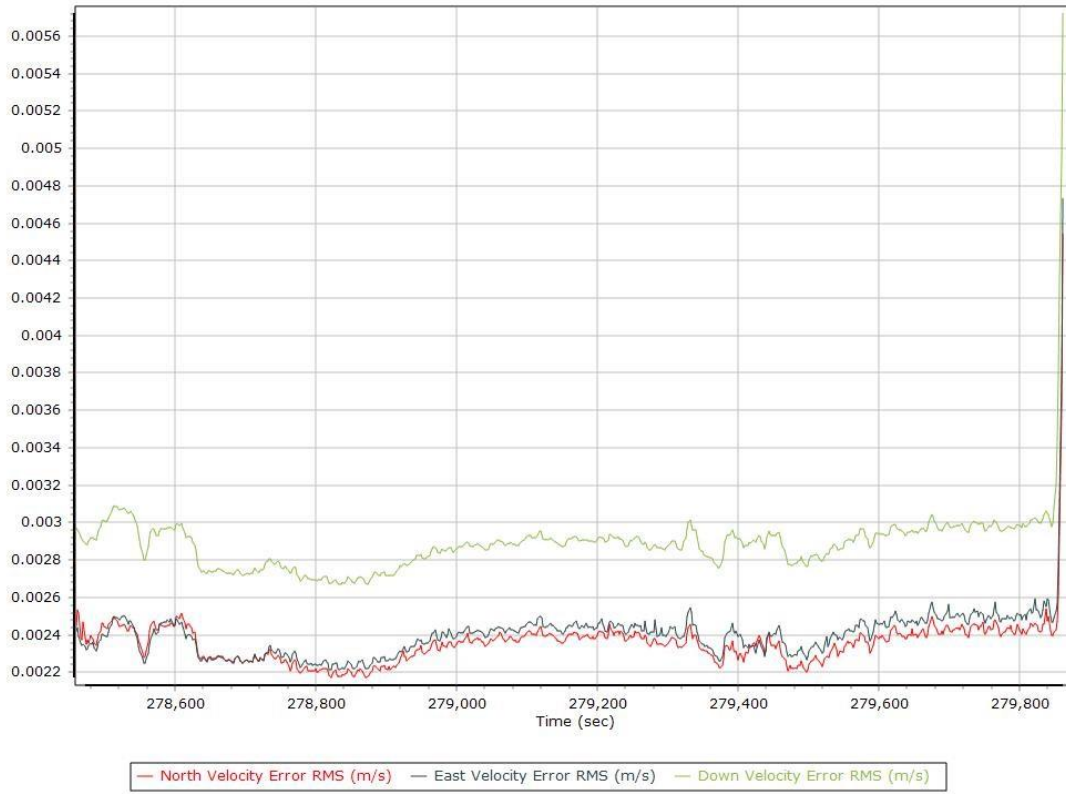


Smoothed Performance Metrics

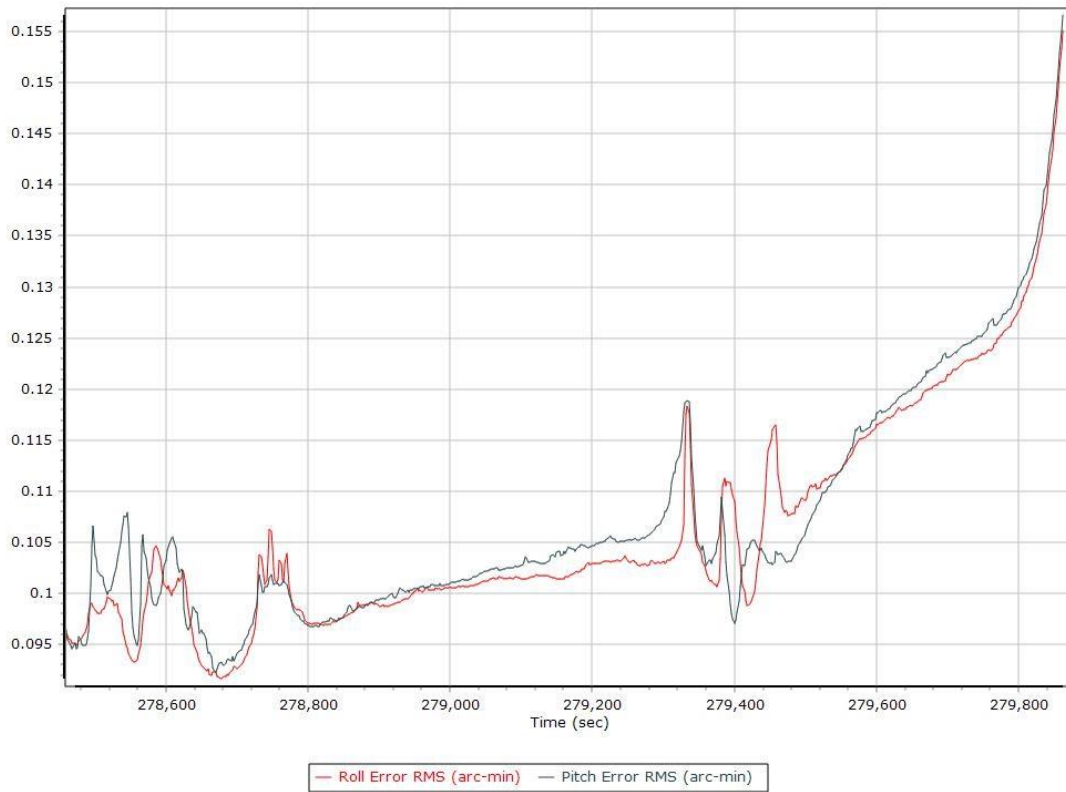
Position Error RMS (m)



Velocity Error RMS (m/s)

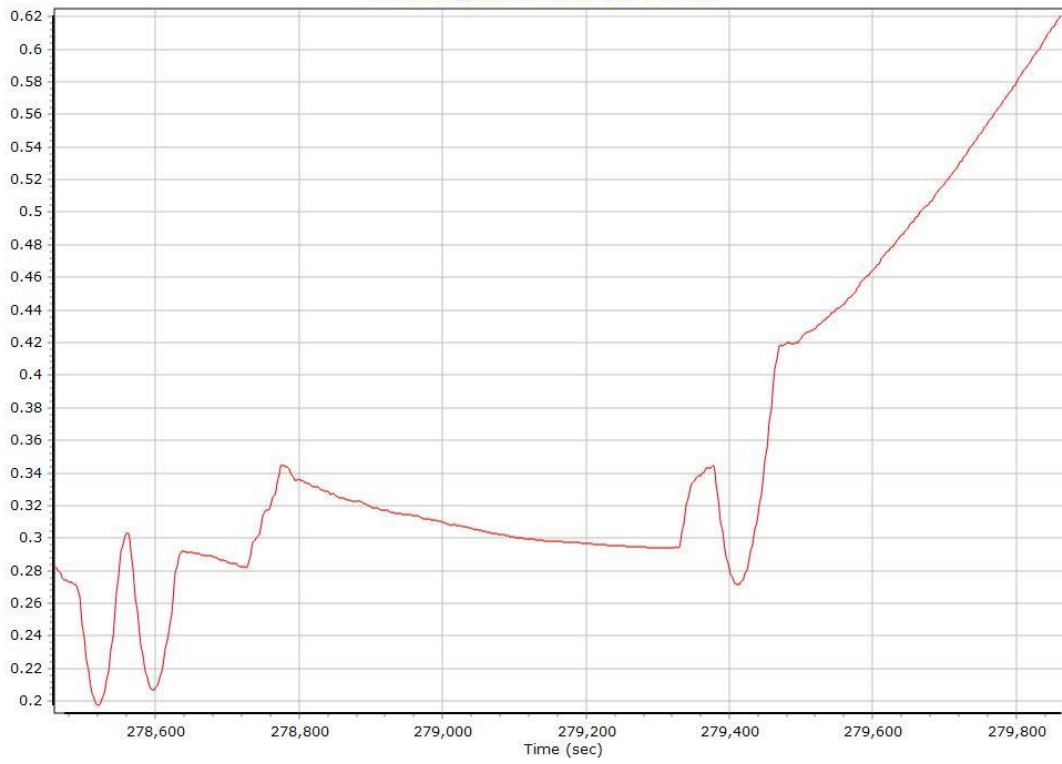


Roll/Pitch Error RMS (arc -min)



Heading Error RMS (arc-min)

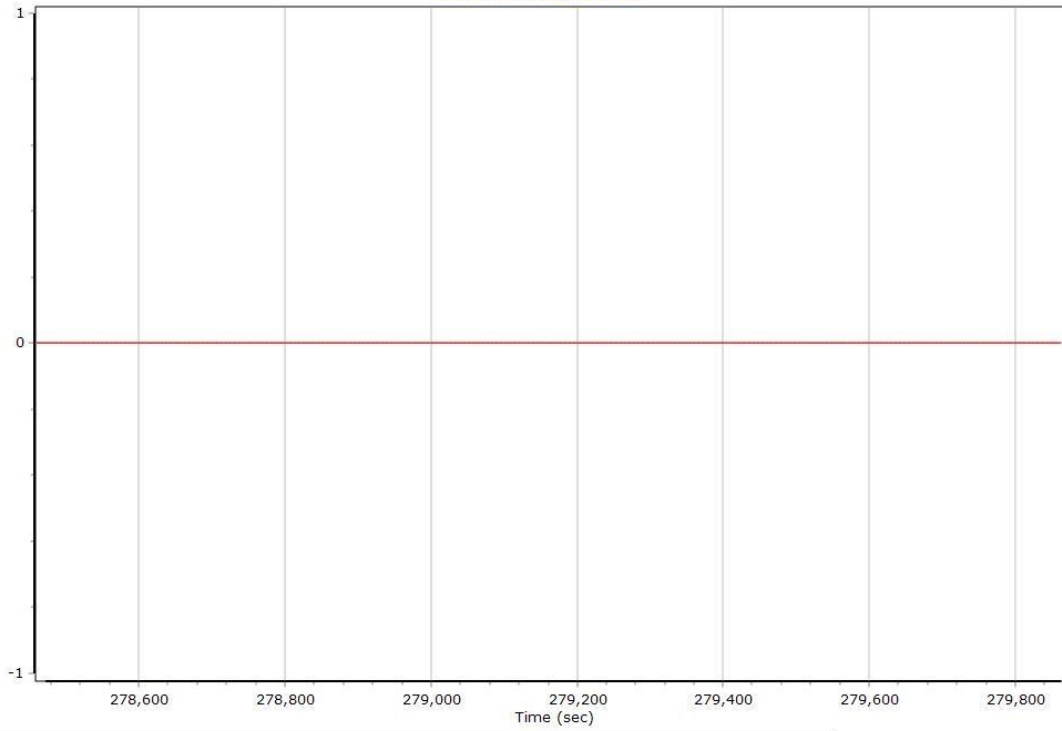
Heading Error RMS (arc-min)



Smoothed Solution Status

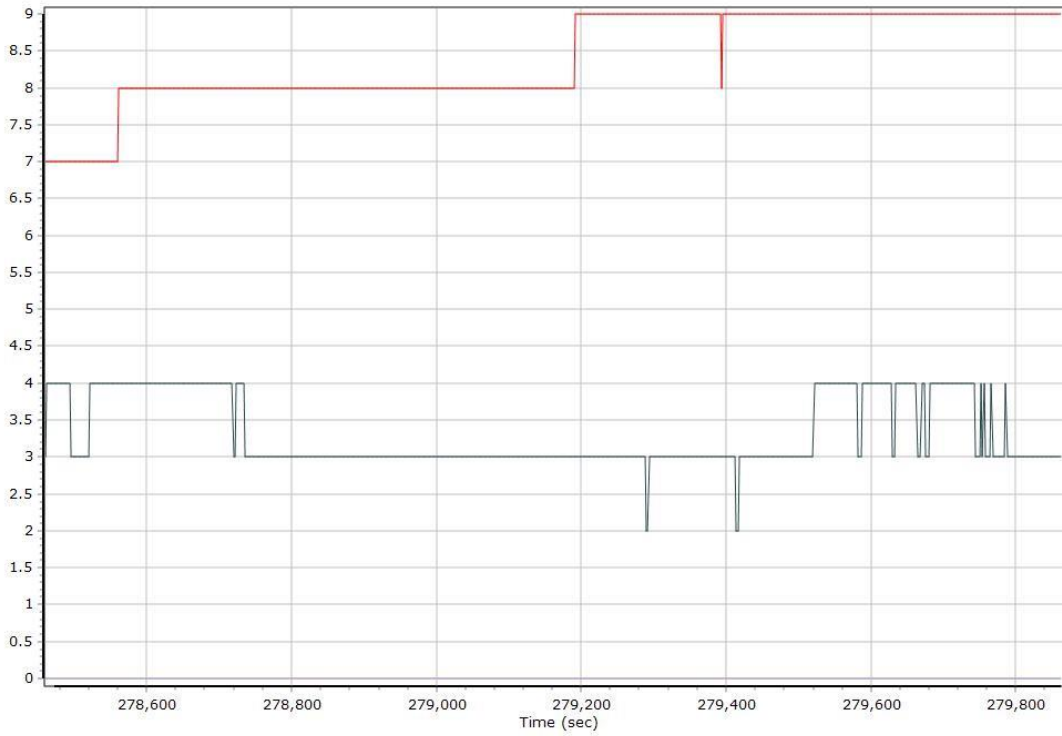
Processing Mode

Processing mode



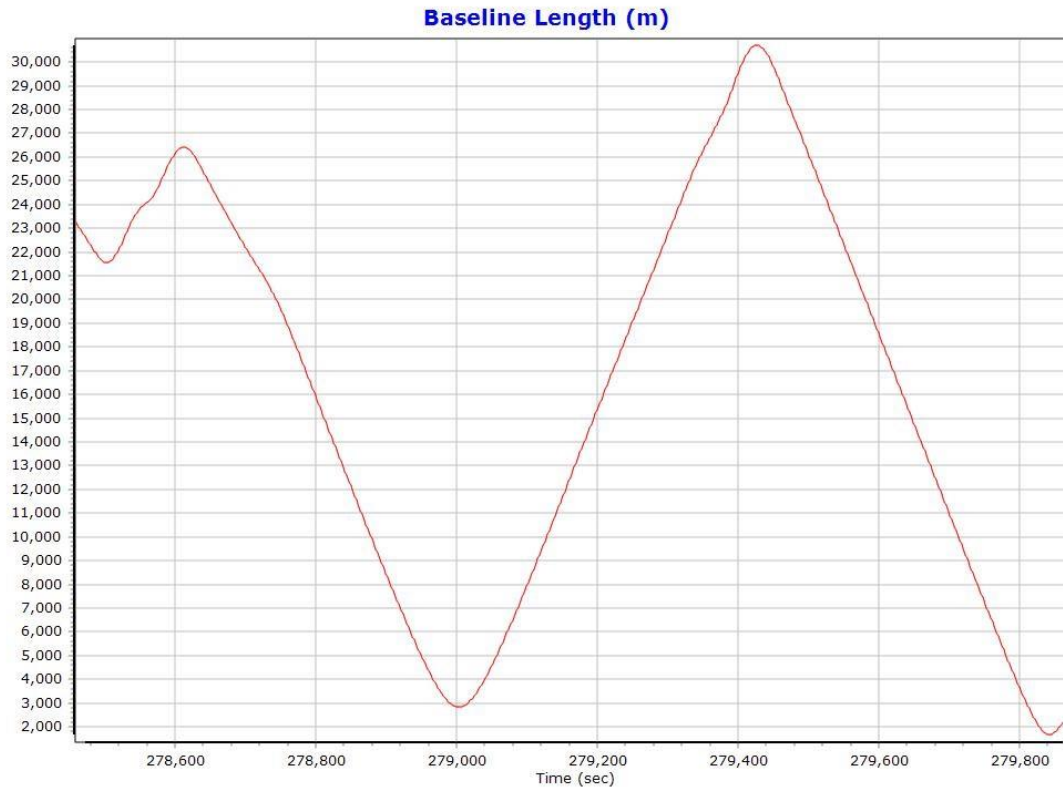
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR

Number of Satellites

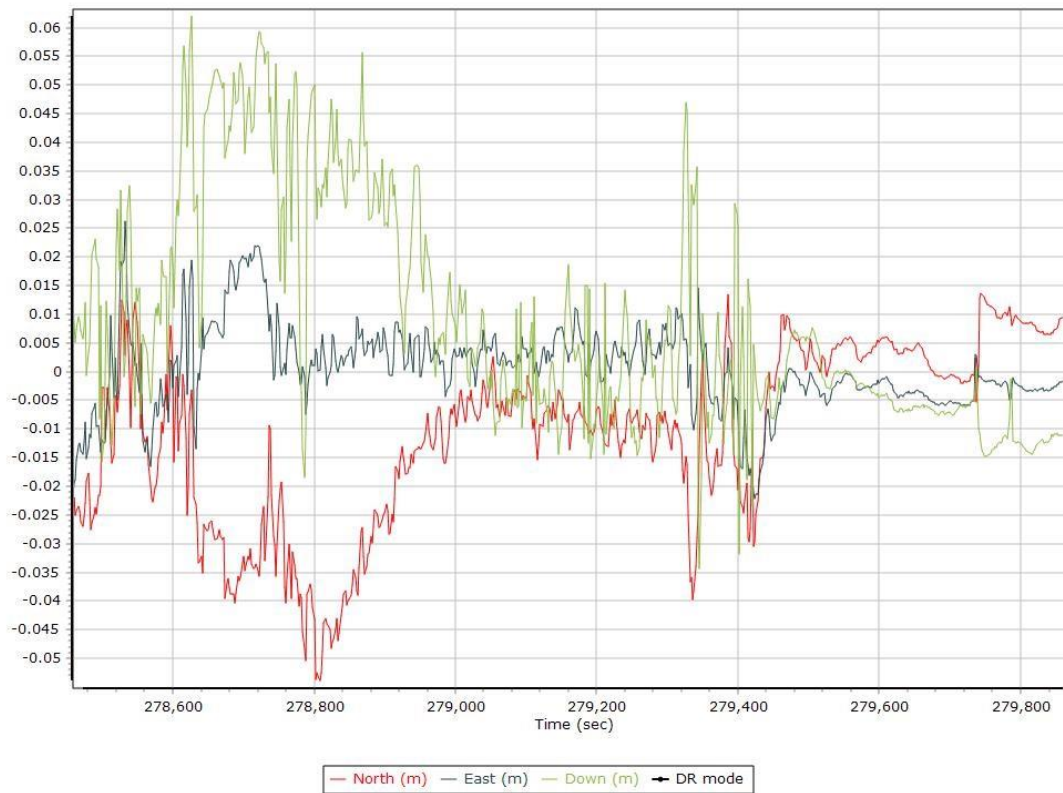


— Number of GPS Satellites — Number of GLONASS Satellites — Number of QZSS Satellites — Number of BEIDOU Satellites

Baseline Length



SBET IAKAR Separation



General Information

Mission Information

Project name	12192018NAD83
Processing date	2019-02-27 23:32:10
Mission date	2018-12-19 05:16:17
Mission duration	03:08:53.979
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9524
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
181219_051605_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3530.18g	GLONASS Broadcast Ephemeris
Ephm3530.18n	GPS Broadcast Ephemeris
igl20322.sp3	GLONASS Precise Ephemeris
igl20323.sp3	GLONASS Precise Ephemeris
igl20324.sp3	GLONASS Precise Ephemeris
igs20322.sp3	GPS Precise Ephemeris
igs20323.sp3	GPS Precise Ephemeris
igs20324.sp3	GPS Precise Ephemeris
fld7353f00.18o	GNSS SingleBase
flem353f00.18o	GNSS SingleBase
flib353f00.18o	GNSS SingleBase
gsps353f00.18o	GNSS SingleBase
stpt353f00.18o	GNSS SingleBase
fld7353f00.18g	GLONASS Broadcast Ephemeris
fld7353f00.18n	GPS Broadcast Ephemeris
flem353f00.18g	GLONASS Broadcast Ephemeris
flem353f00.18n	GPS Broadcast Ephemeris
flib353f00.18g	GLONASS Broadcast Ephemeris
flib353f00.18n	GPS Broadcast Ephemeris
gsps353f00.18g	GLONASS Broadcast Ephemeris
gsps353f00.18n	GPS Broadcast Ephemeris
stpt353f00.18g	GLONASS Broadcast Ephemeris
stpt353f00.18n	GPS Broadcast Ephemeris
flsi353f00.18o	GPS SingleBase
flsi353f00.18n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_Mission 1.out	SBET Trajectory File

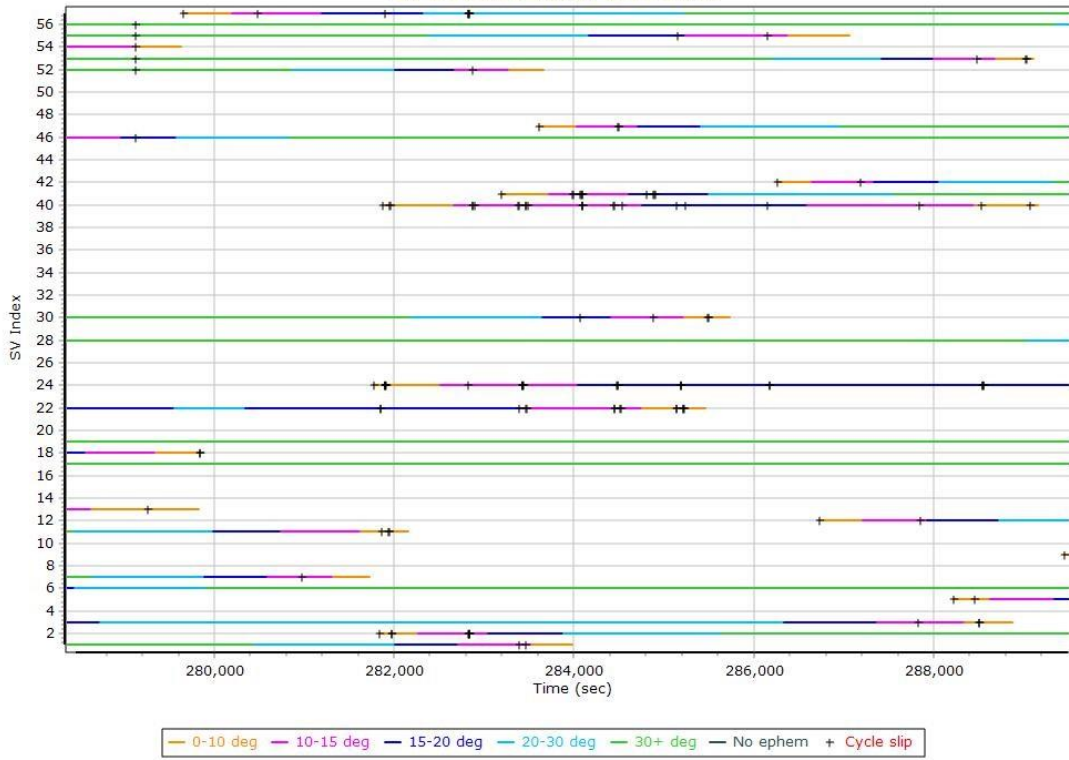
Rover Data Summary

First raw data file	181219_051605_INS-GPS_1.raw		
Last raw data file	181219_051605_INS-GPS_1.raw		
Start GPS week	2032		
Start time	278159.026 (12/19/2018 5:15:59 AM)		
End time	289494.709 (12/19/2018 8:24:54 AM)		
Start of fine alignment	278398.490 (12/19/2018 5:19:58 AM)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	Event 1 Input, Event 2 Input, Event 3 Input		
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	0.000
Reference to Primary GNSS lever arm [m]	0.102	-0.140	-0.961
Reference to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

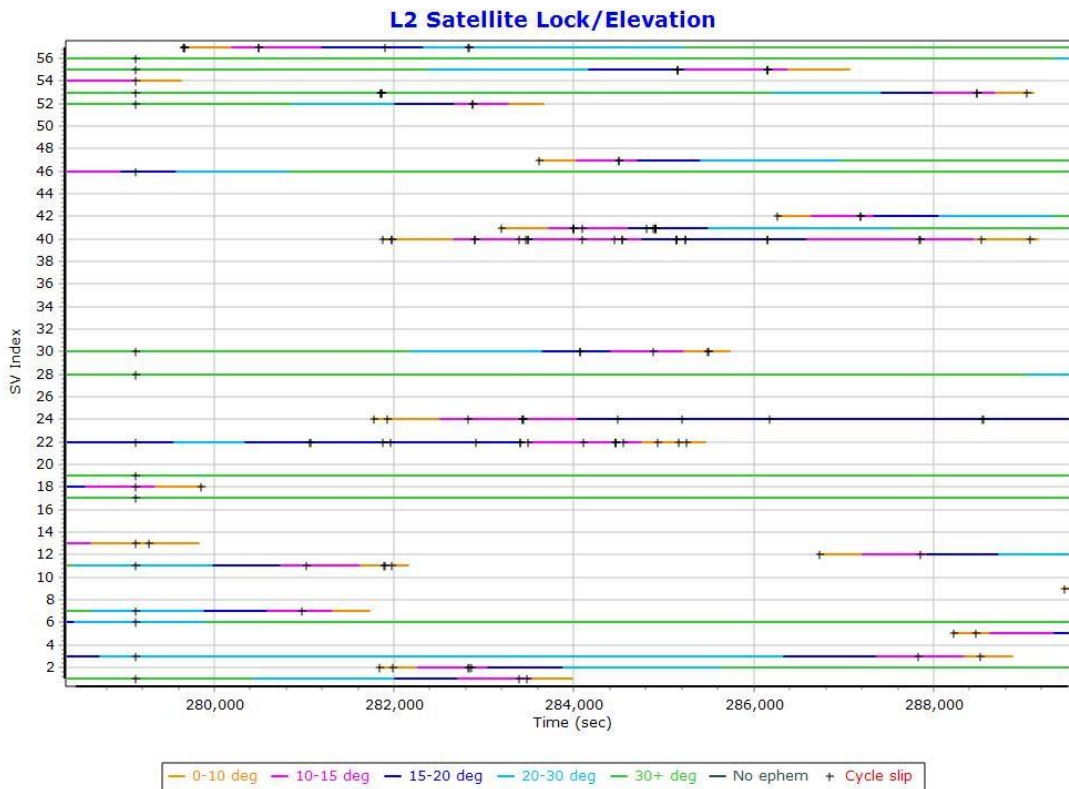
Raw Data QC

L1 Satellite Lock/Elevation

L1 Satellite Lock/Elevation

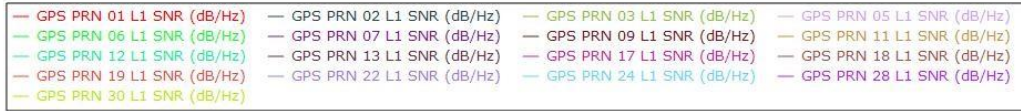
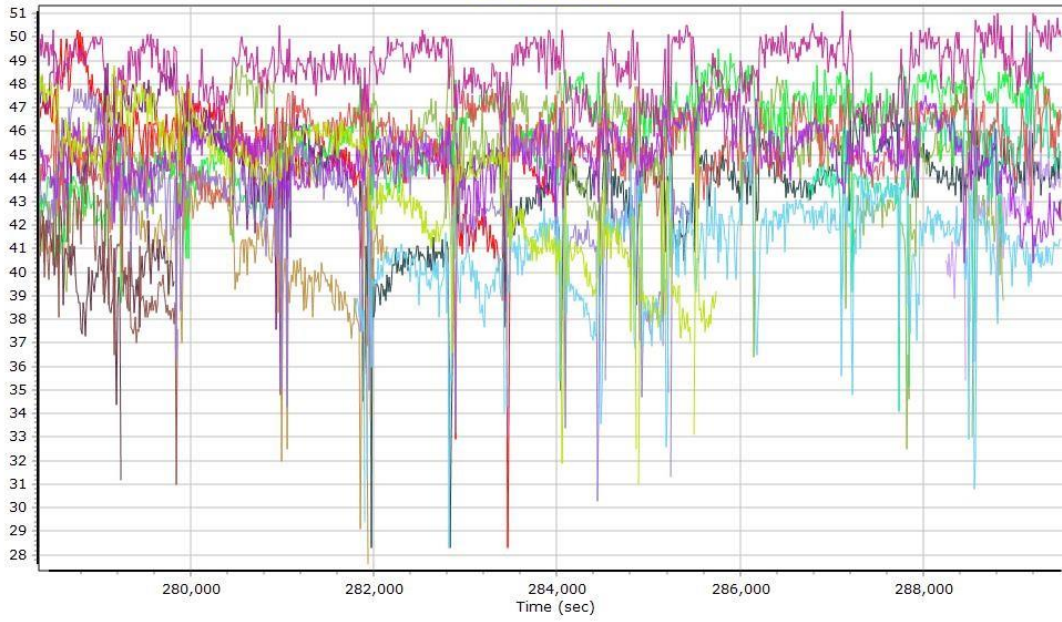


L2 Satellite Lock/Elevation



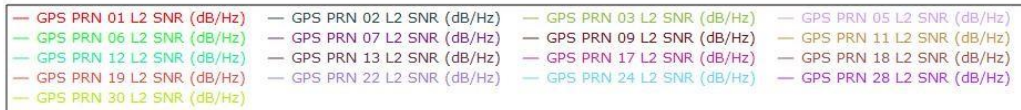
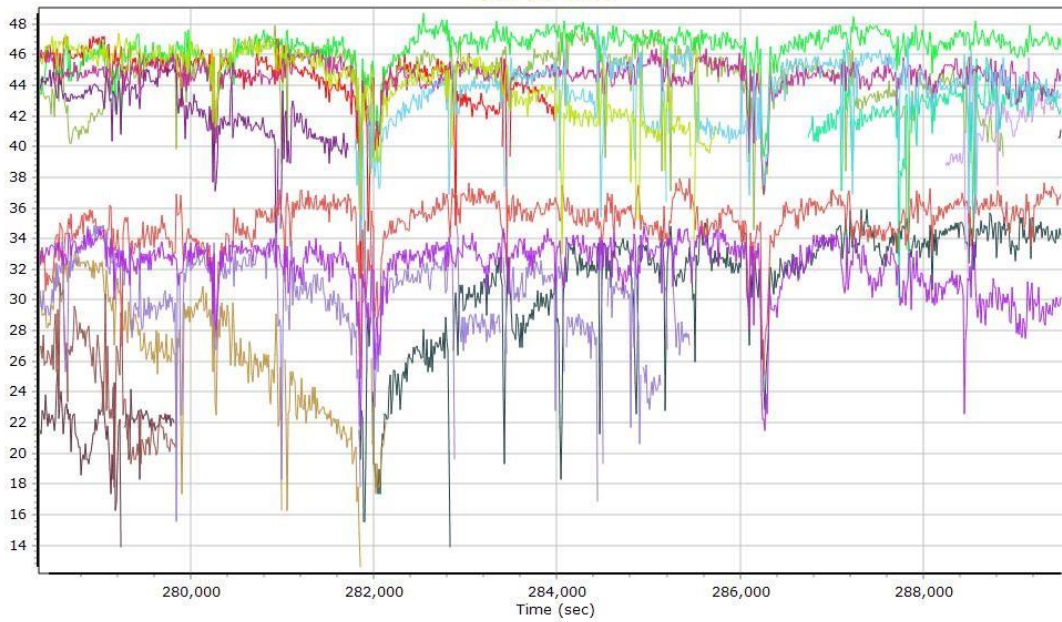
GPS L1 SNR

GPS L1 SNR

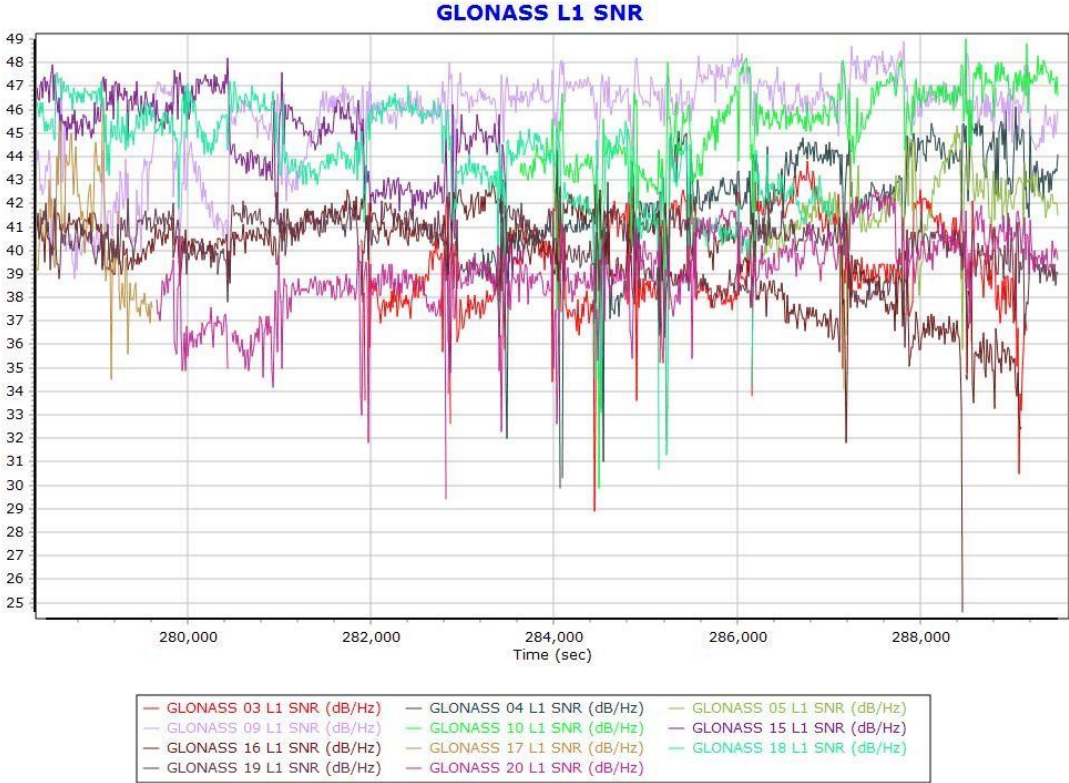


GPS L2 SNR

GPS L2 SNR

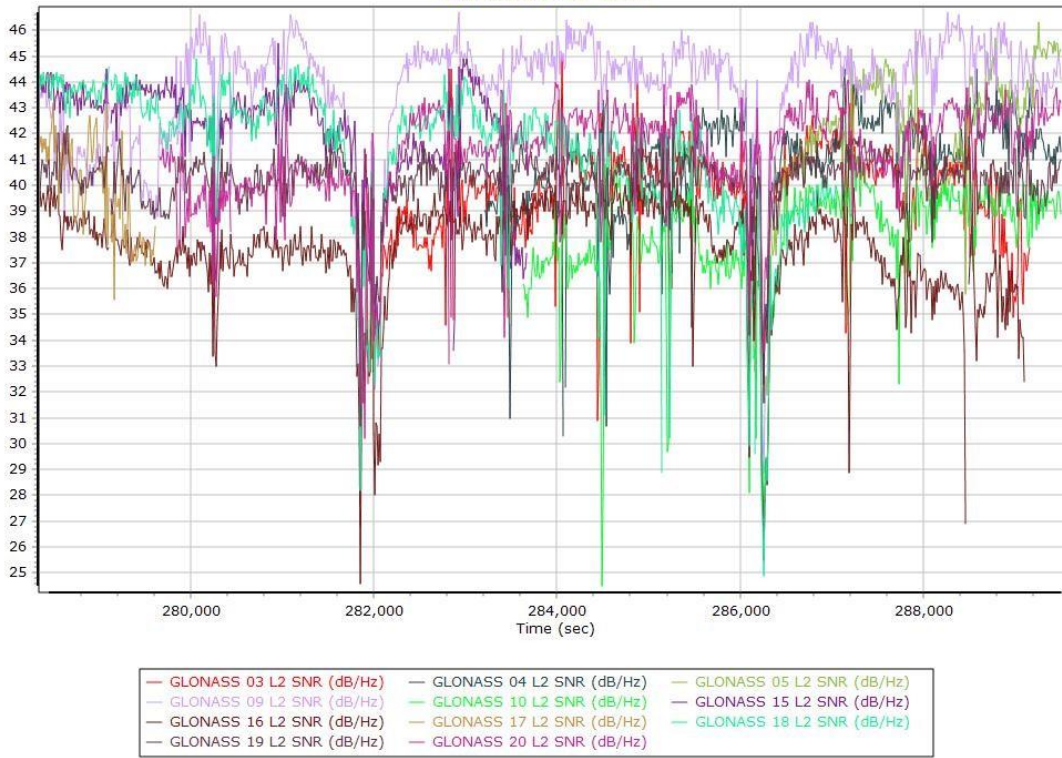


GLONASS L1 SNR

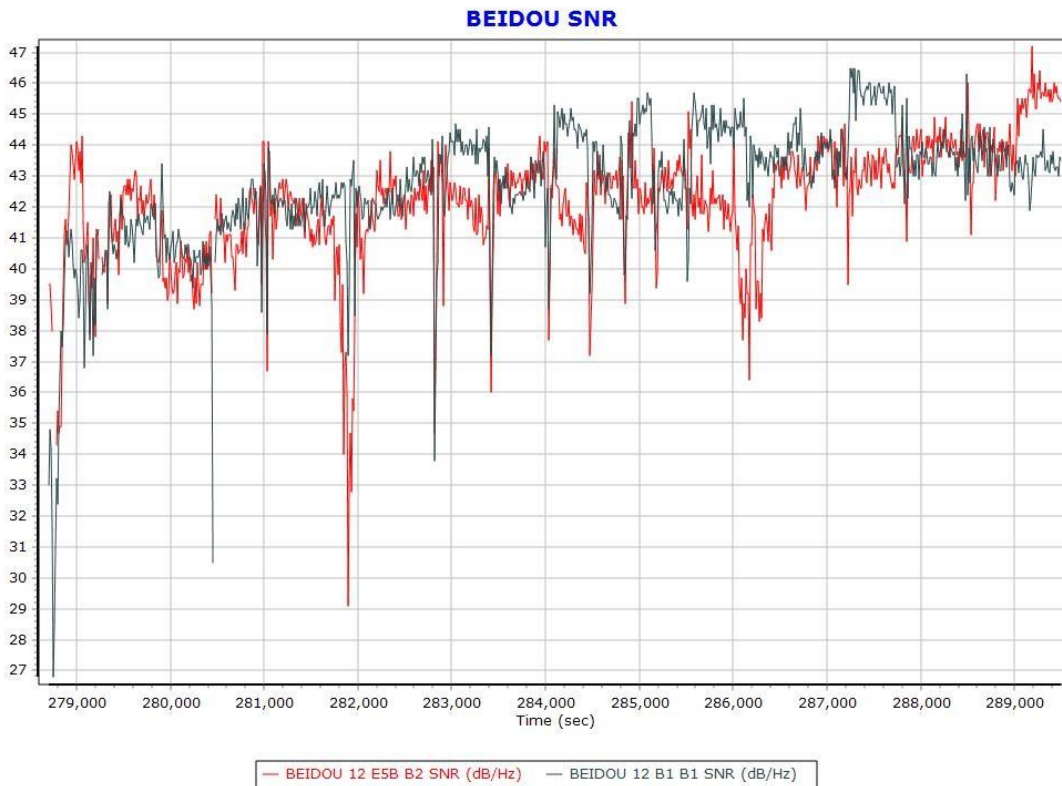


GLONASS L2 SNR

GLONASS L2 SNR



BEIDOU SNR



Trajectory Information

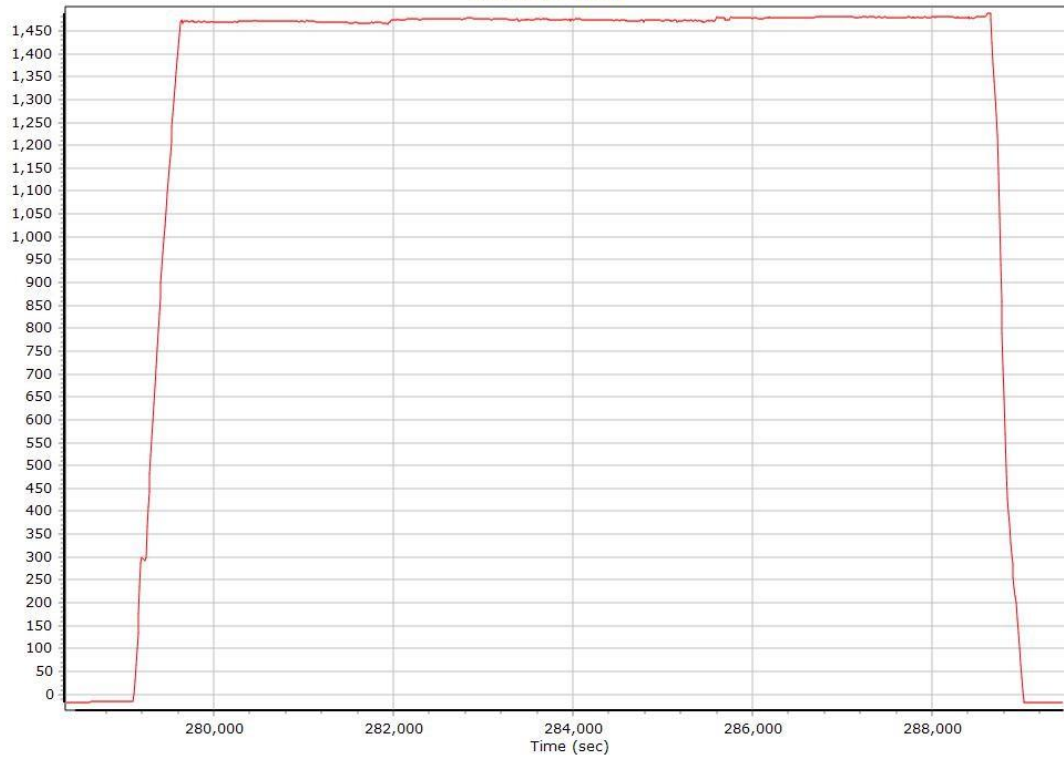
Top View

Top View: Latitude (deg)

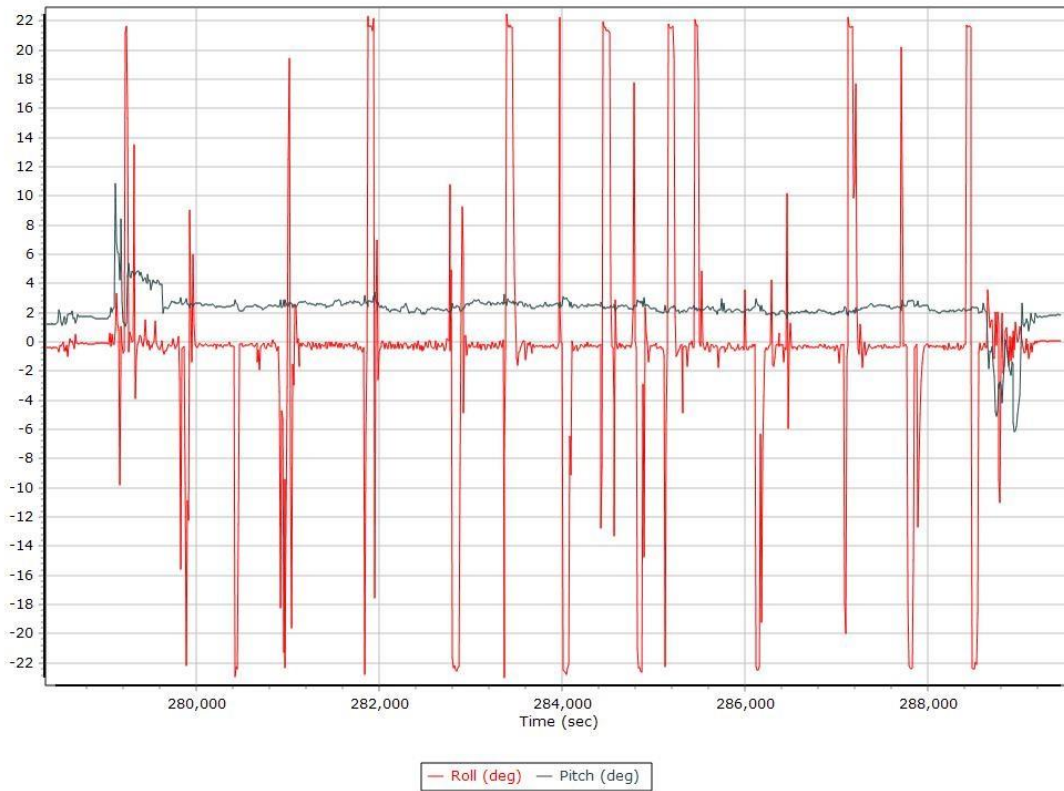


Altitude

Altitude (m)

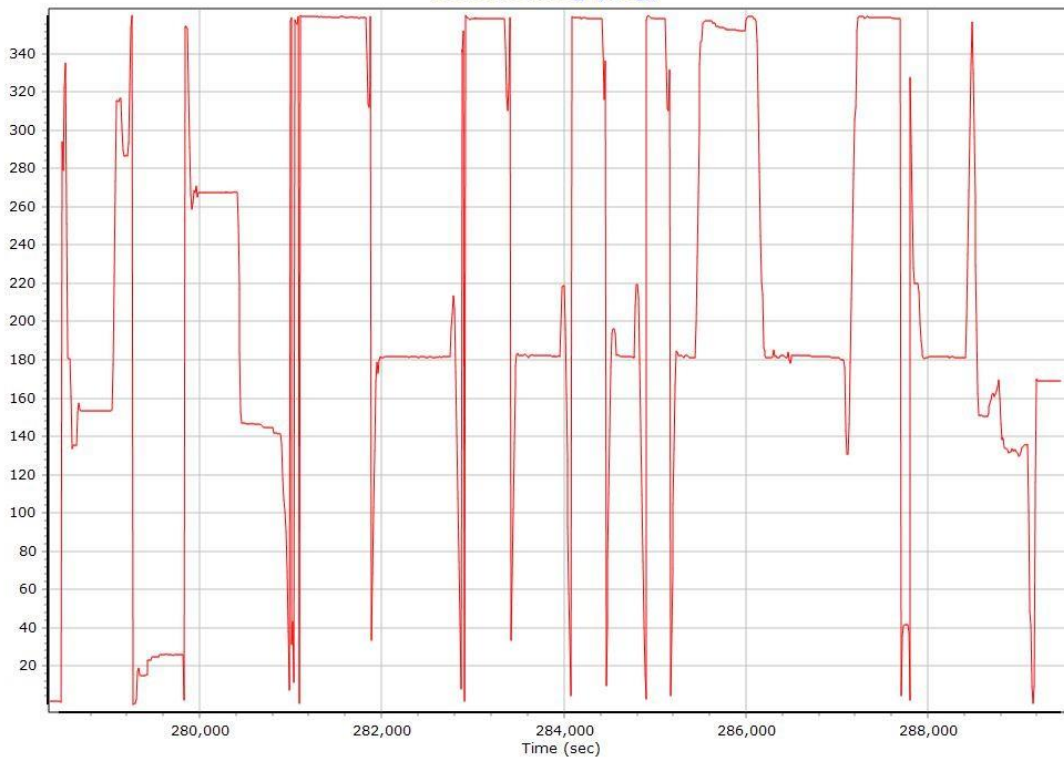


Roll/Pitch

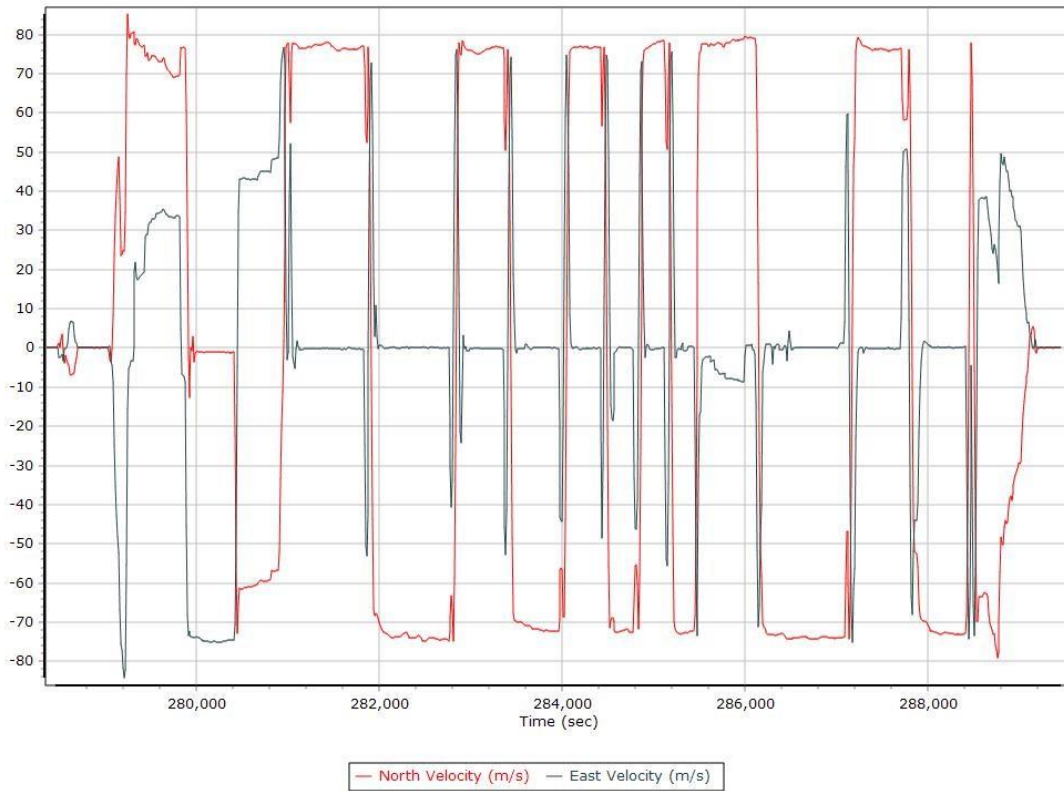


Heading

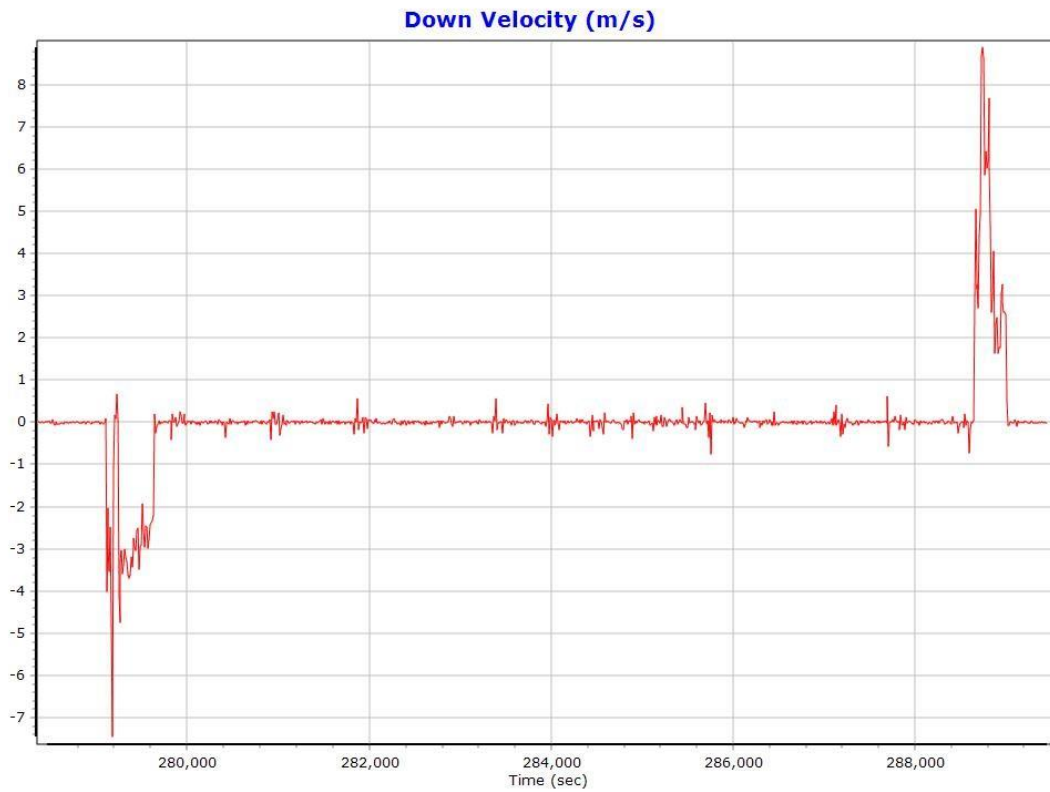
True Heading (deg)



North/East Velocity

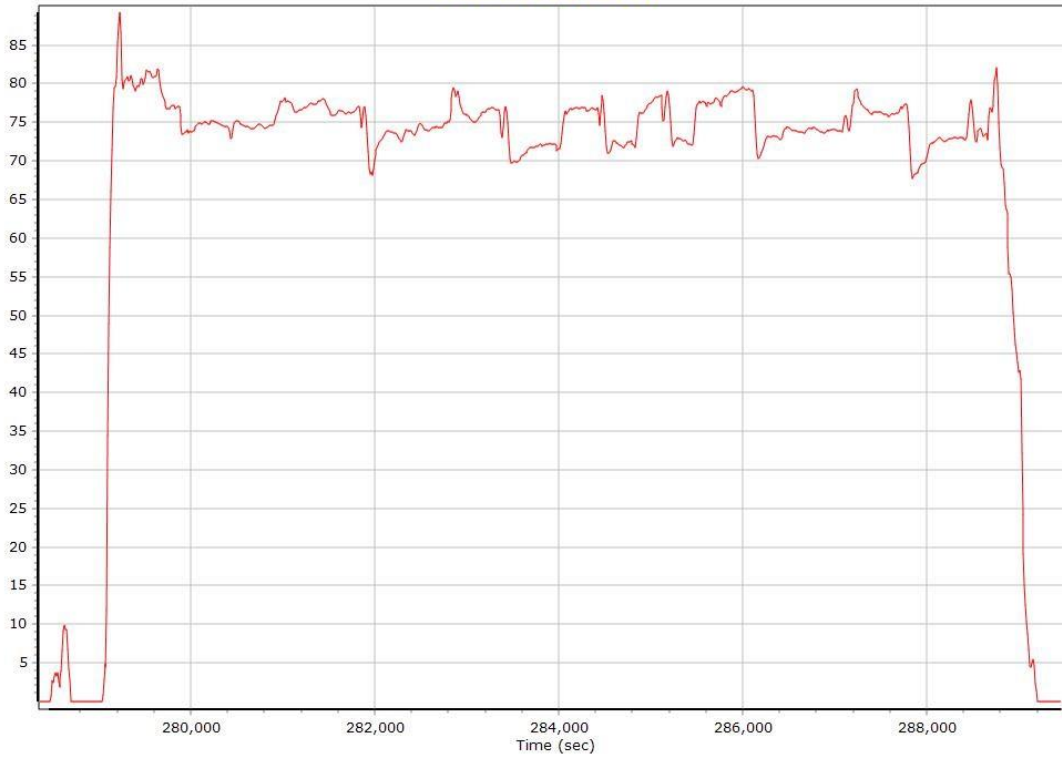


Down Velocity



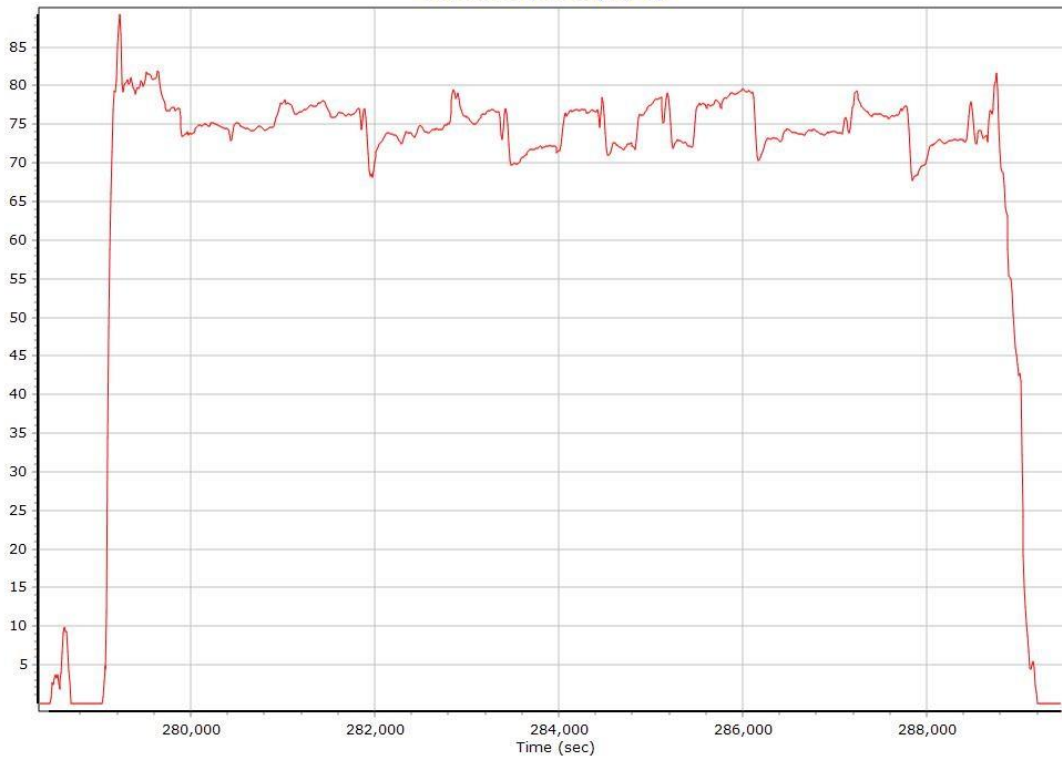
Total Speed

Total Speed (m/s)

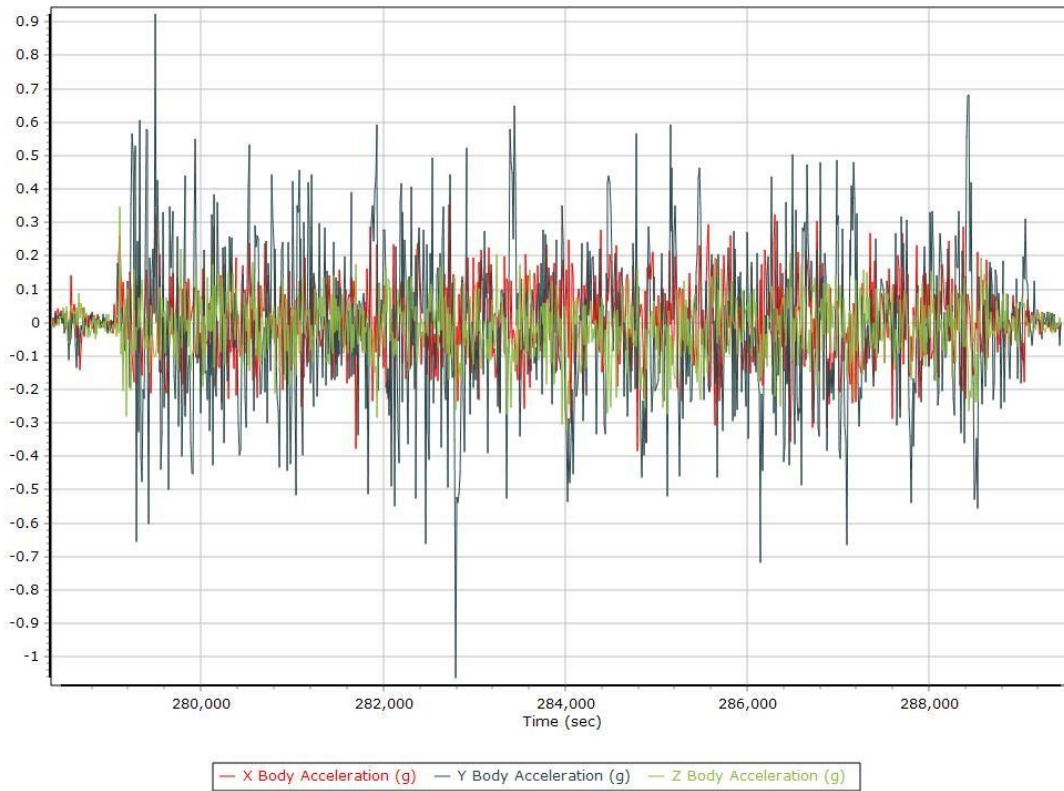


Ground Speed

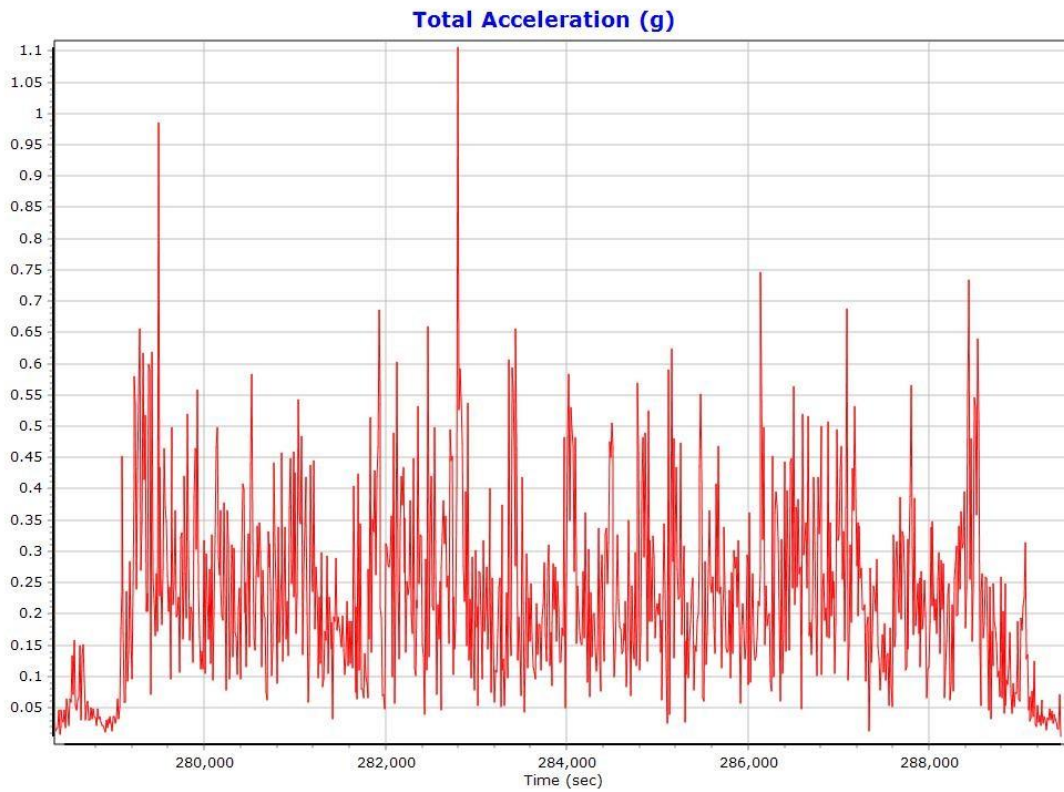
Ground Speed (m/s)



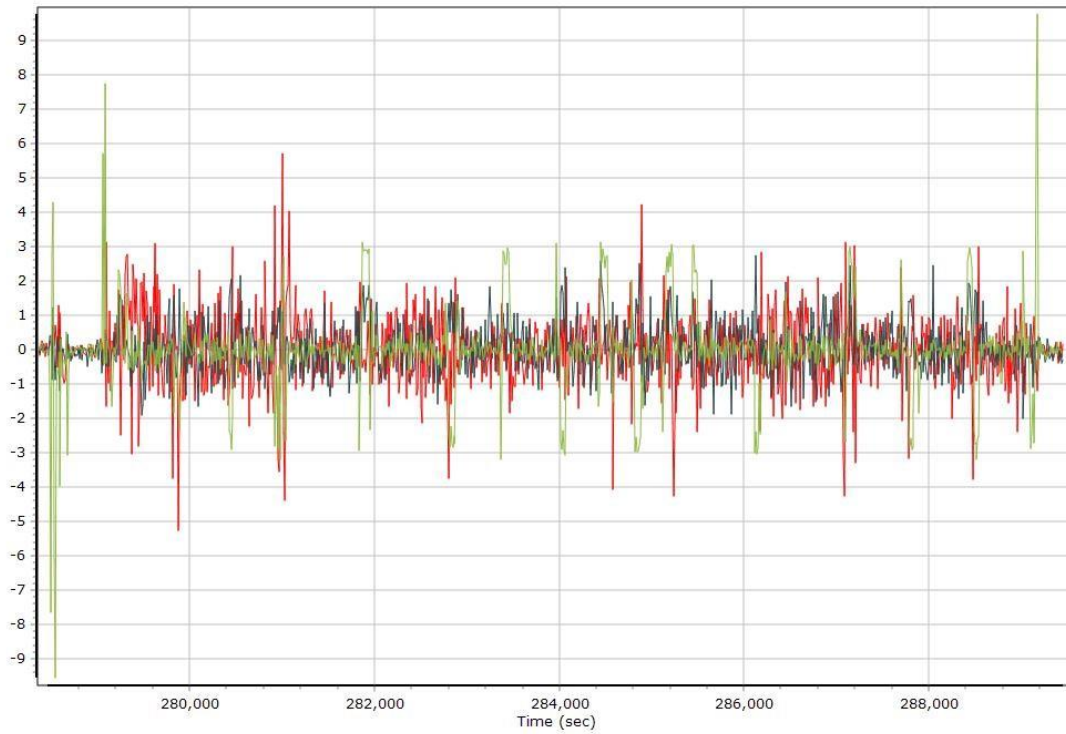
Body Acceleration



Total Body Acceleration



Body Angular Rate



— X Body Angular Rate (deg/sec) — Y Body Angular Rate (deg/sec) — Z Body Angular Rate (deg/sec)

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

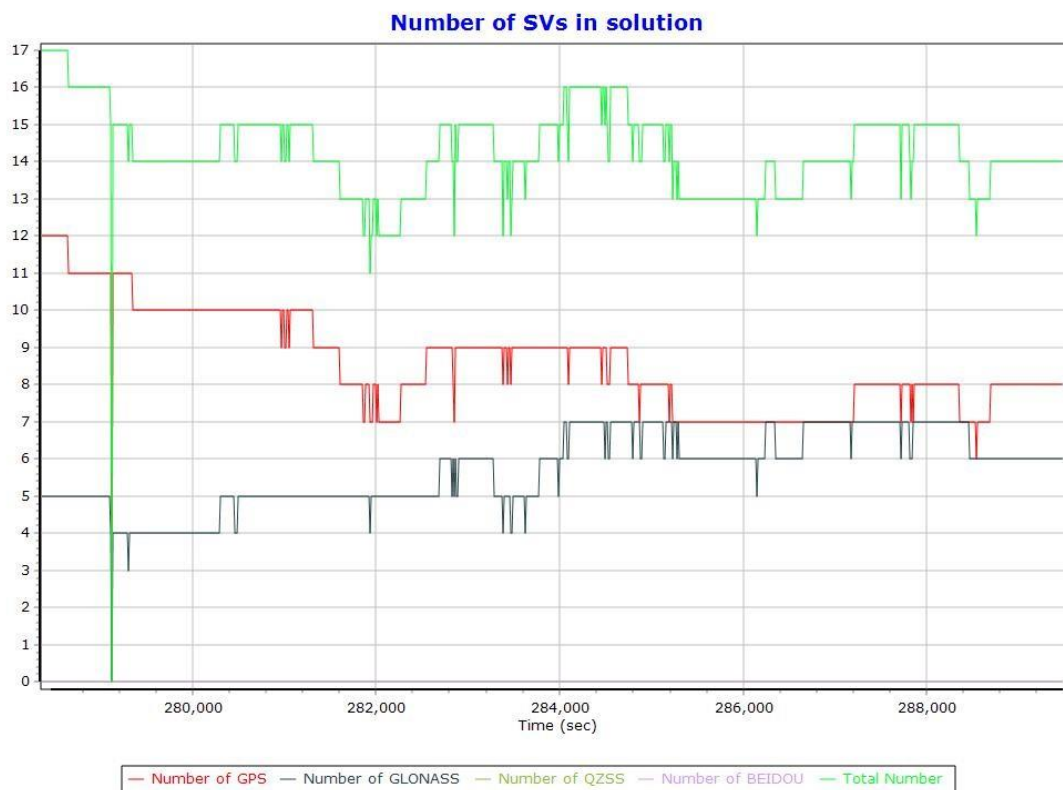
SmartBase status	
Primary station Id	
Primary station data rate [sec]	0.0
VRS/ASB generation rate [sec]	0.0
VRS/ASB timespan	
Number of reference stations	0
Primary station GPS measurement usage [%]	0.0
Average number of satellites per epoch	0.0
Max number of GPS stations used	0
Min number of GPS stations 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	

GNSS QC

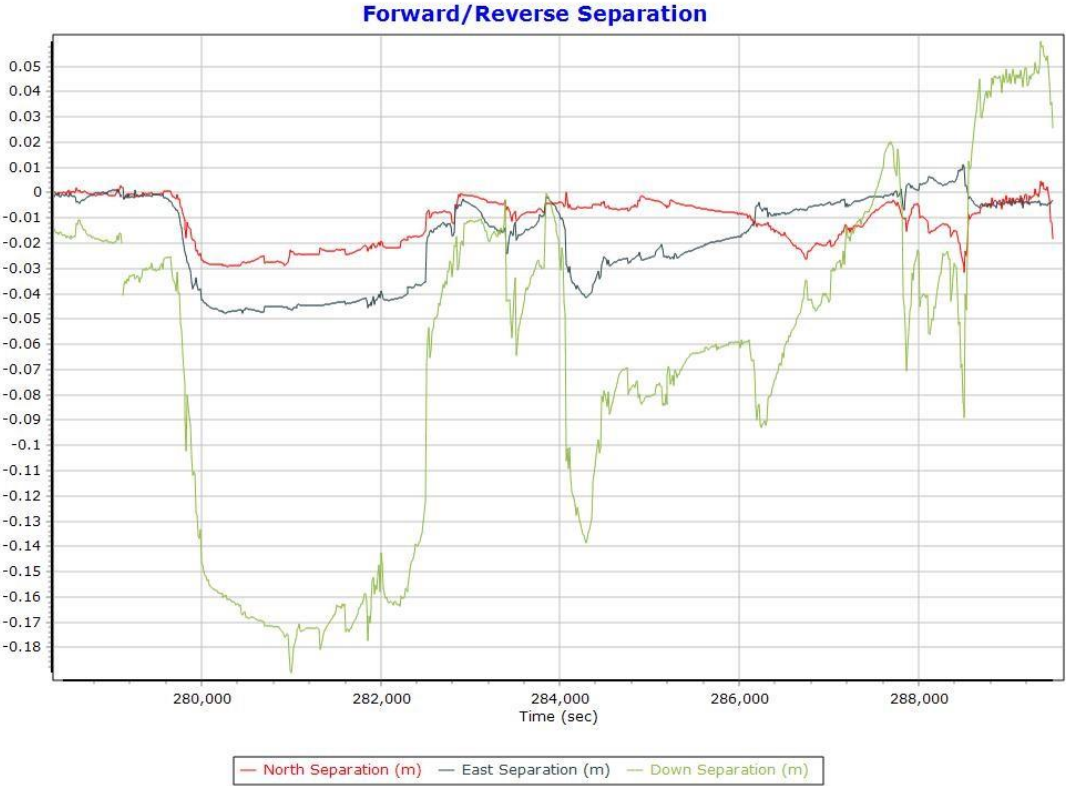
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	0.36	51.55	
Number of GPS SV	6	12	9
Number of GLONASS SV	0	7	6
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	11	17	14
PDOP	1.18	2.23	1.50
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	11318.00	0.00	1.00
Percentage	99.99	0.00	0.01

Num SVs in solution

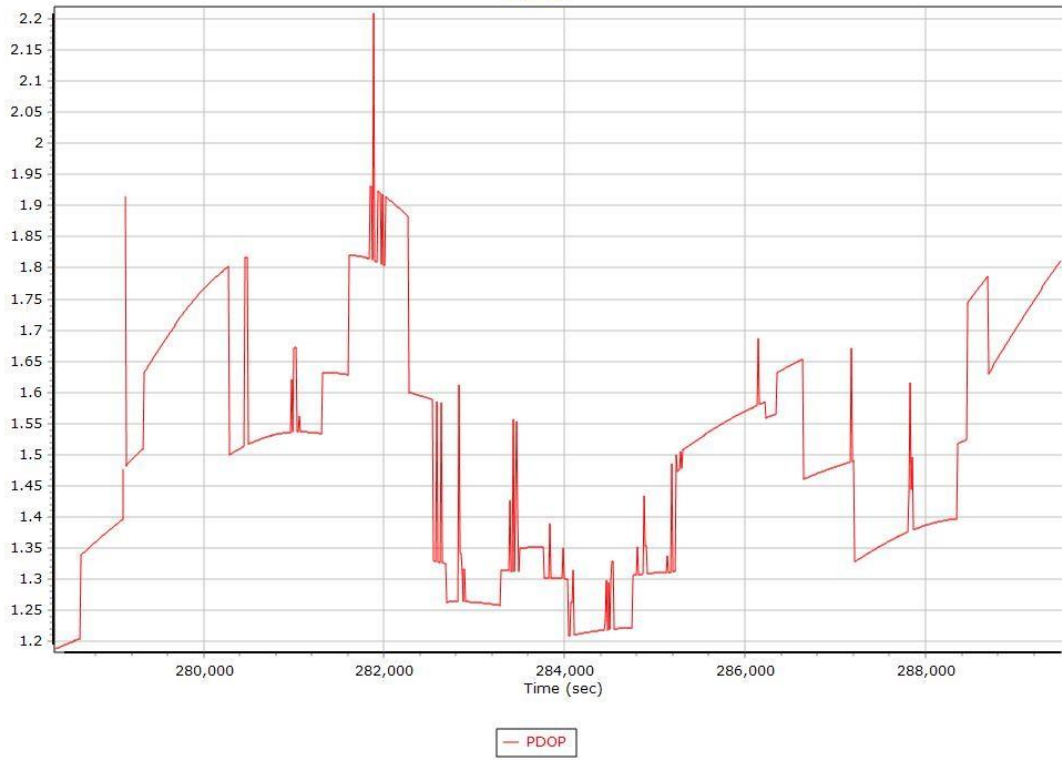


Forward/Reverse Separation



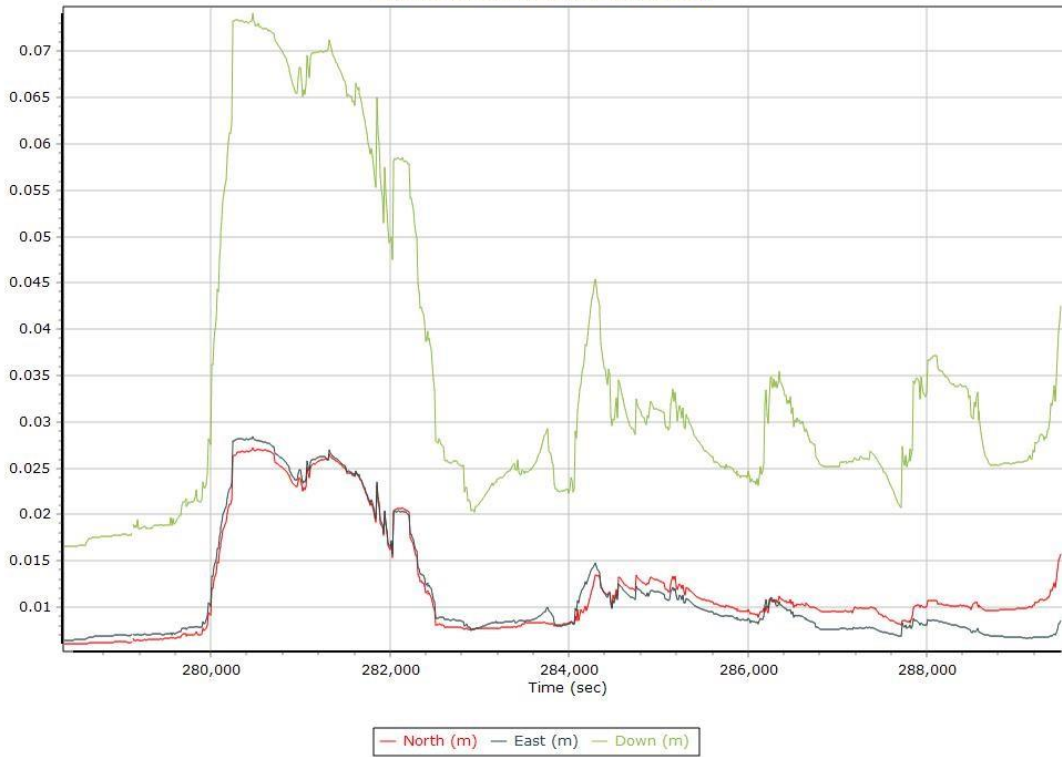
PDOP

PDOP

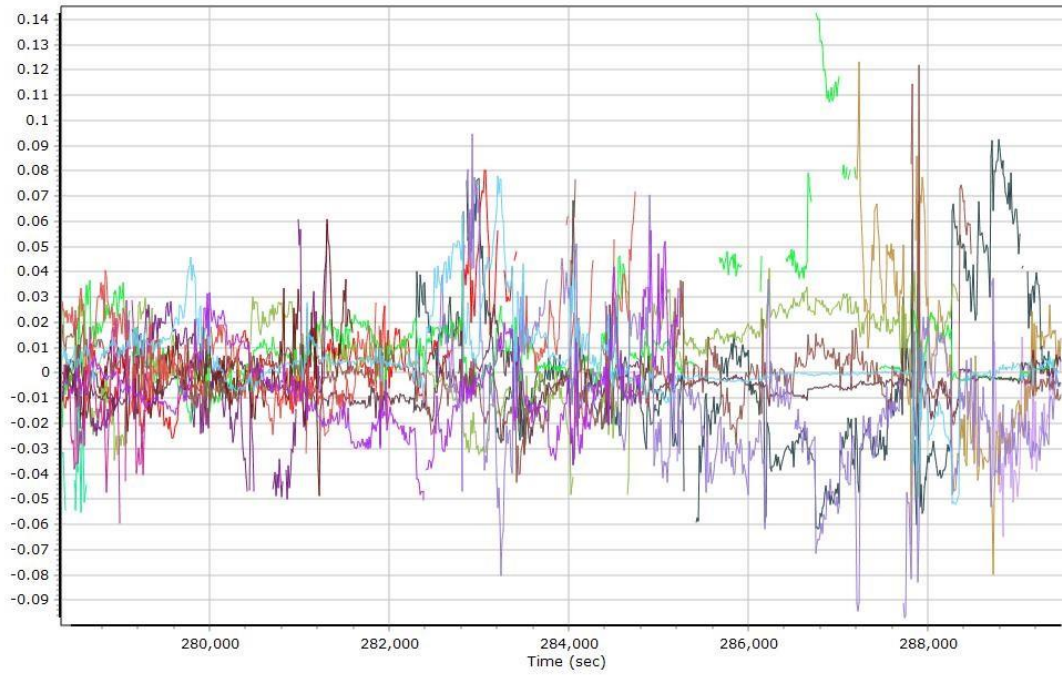


Estimated Position Accuracy

Estimated Position Accuracy

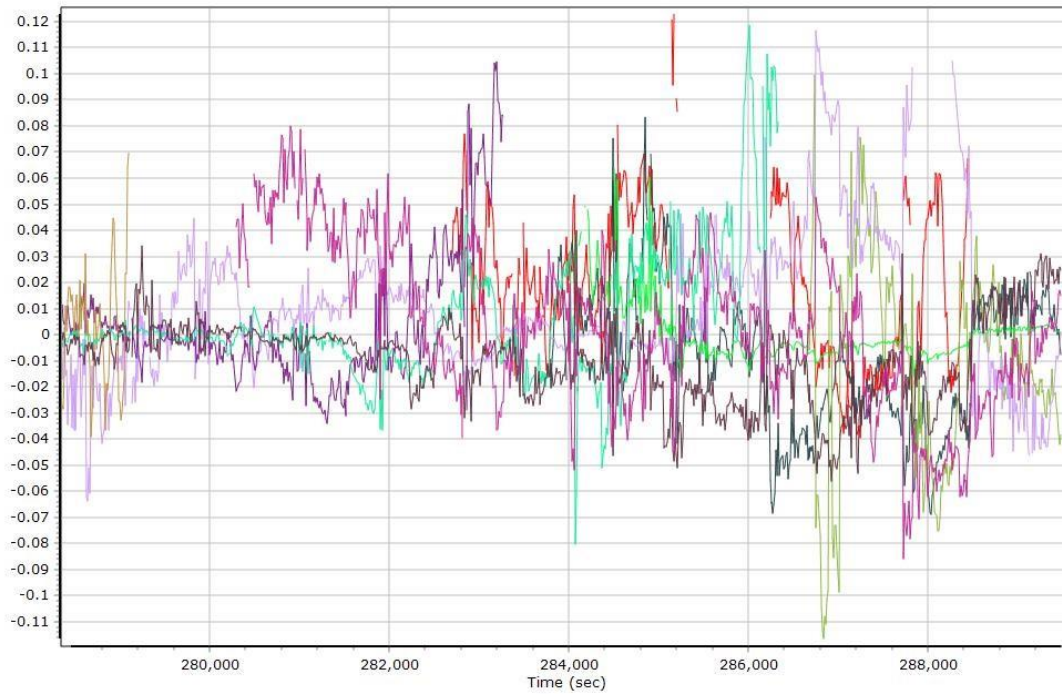


GPS Residuals



- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GPS PRN 01 Residual (m) | GPS PRN 02 Residual (m) | GPS PRN 03 Residual (m) | GPS PRN 05 Residual (m) |
| GPS PRN 06 Residual (m) | GPS PRN 07 Residual (m) | GPS PRN 11 Residual (m) | GPS PRN 12 Residual (m) |
| GPS PRN 13 Residual (m) | GPS PRN 17 Residual (m) | GPS PRN 18 Residual (m) | GPS PRN 19 Residual (m) |
| GPS PRN 22 Residual (m) | GPS PRN 24 Residual (m) | GPS PRN 28 Residual (m) | GPS PRN 30 Residual (m) |

GLONASS Residuals



- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| GLONASS 03 Residual (m) | GLONASS 04 Residual (m) | GLONASS 05 Residual (m) | GLONASS 09 Residual (m) |
| GLONASS 10 Residual (m) | GLONASS 15 Residual (m) | GLONASS 16 Residual (m) | GLONASS 17 Residual (m) |
| GLONASS 18 Residual (m) | GLONASS 19 Residual (m) | GLONASS 20 Residual (m) | |

GNSS-Inertial Processor Configuration

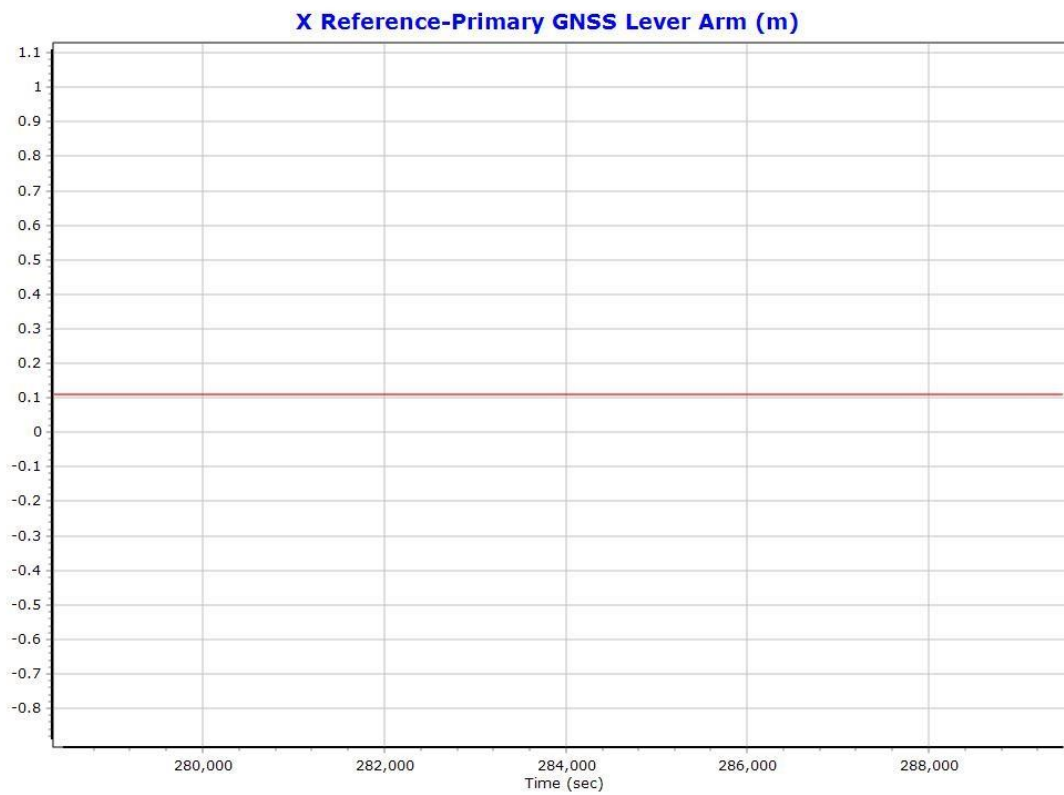
Processing mode	IN-Fusion SmartBase		
Stabilized mount	False		
Base station	ASB		
Processing start time	278159.021 (12/19/2018 5:15:59 AM)		
Processing end time	289493.000 (12/19/2018 8:24:53 AM)		
Initial attitude source	GYRO Compass		
IMU Sensor Context	Processing with Onboard IMU		
Reference to IMU 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]	0.110	-0.138	-0.963
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

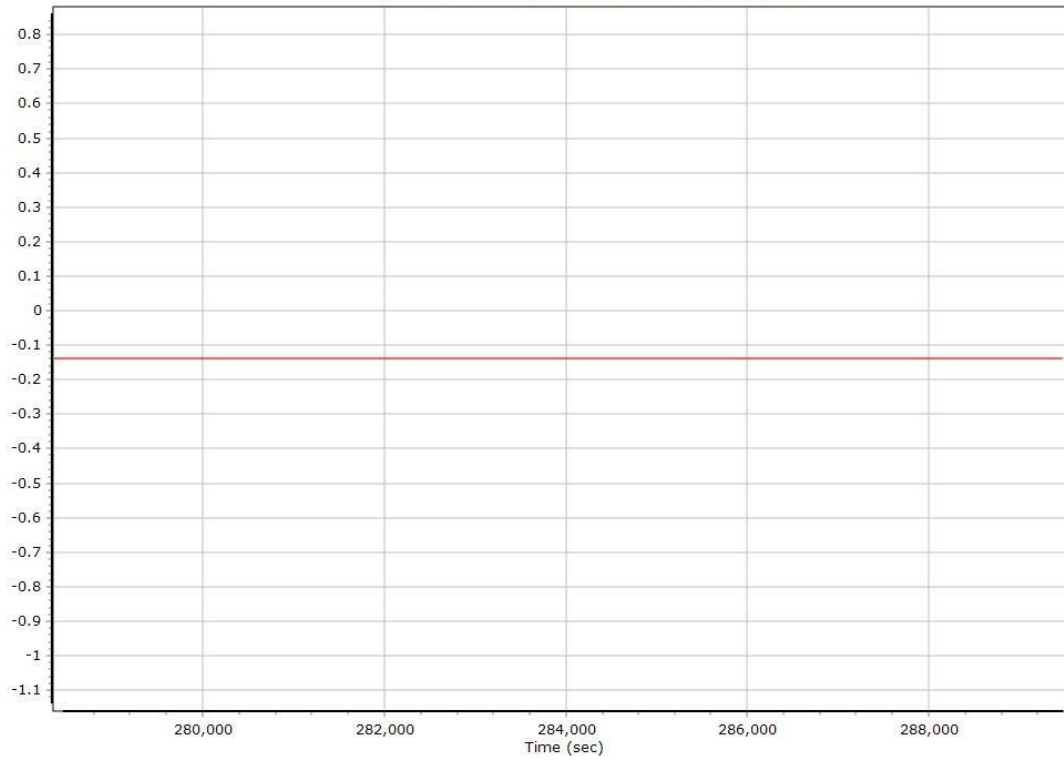
Reference-Primary GNSS Lever Arm

X Reference -Primary GNSS Lever Arm (m)



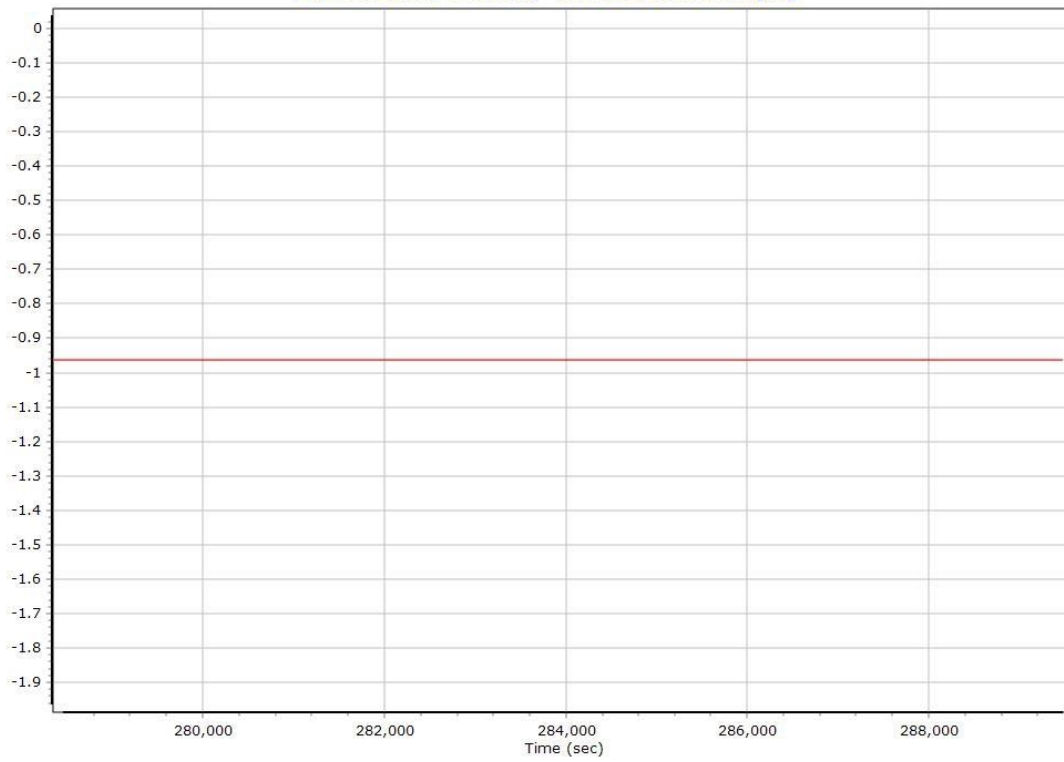
Y Reference -Primary GNSS Lever Arm (m)

Y Reference-Primary GNSS Lever Arm (m)



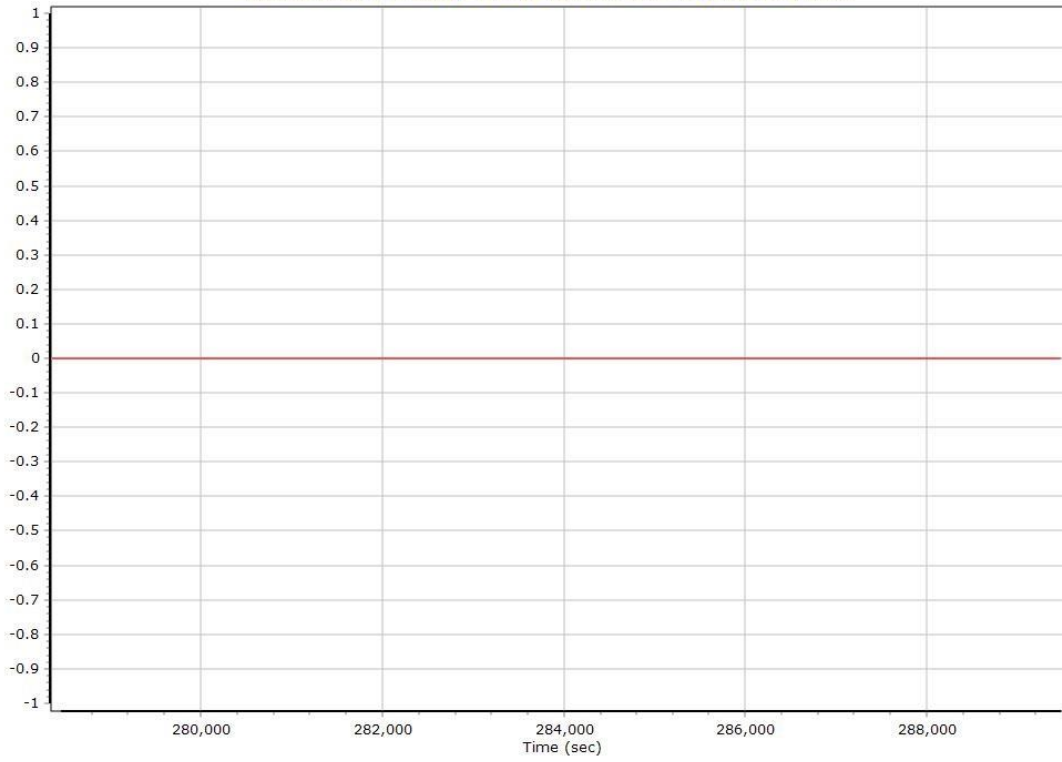
Z Reference -Primary GNSS Lever Arm (m)

Z Reference-Primary GNSS Lever Arm (m)



Reference -Primary GNSS Lever Arm Figure of Merit

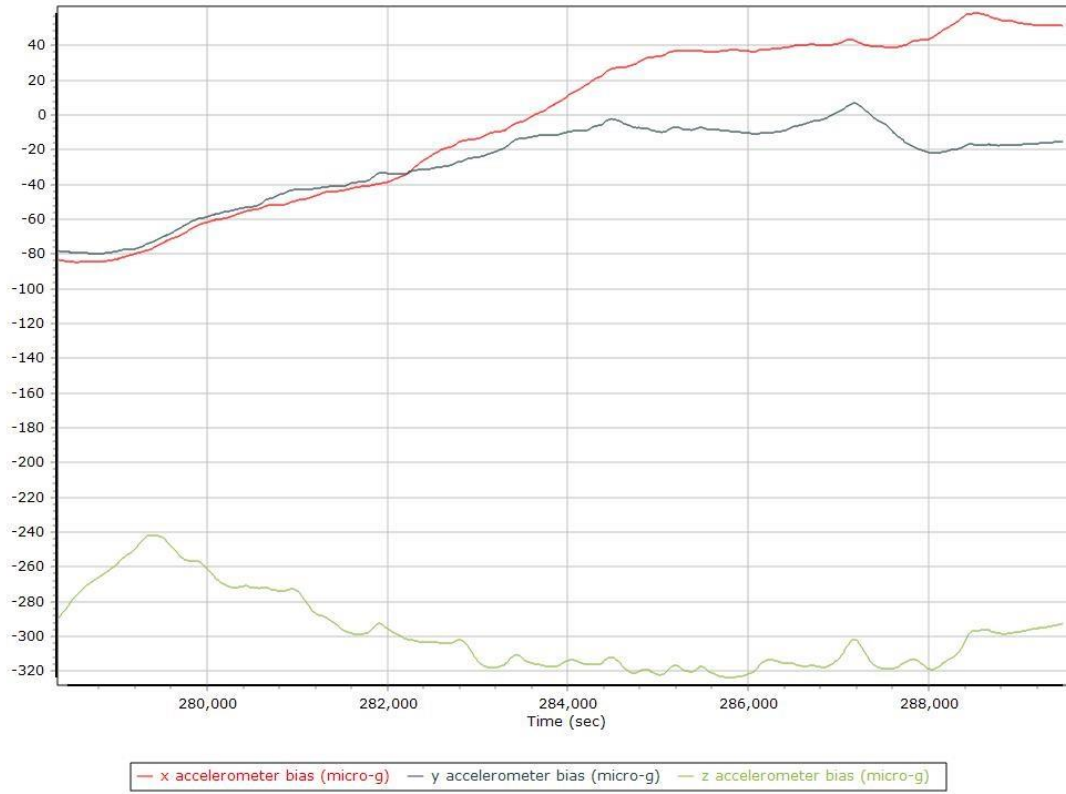
Reference-Primary GNSS Lever Arm Figure of Merit



Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

Accelerometer Bias (micro -g)

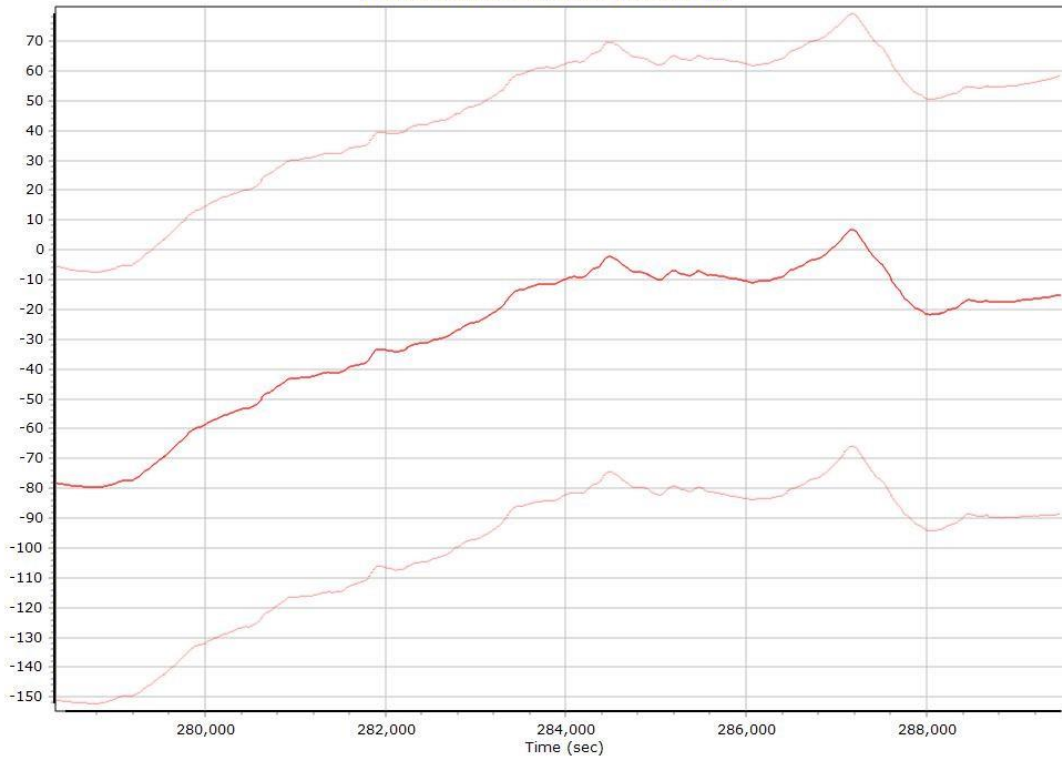


X Accelerometer Bias (micro -g)



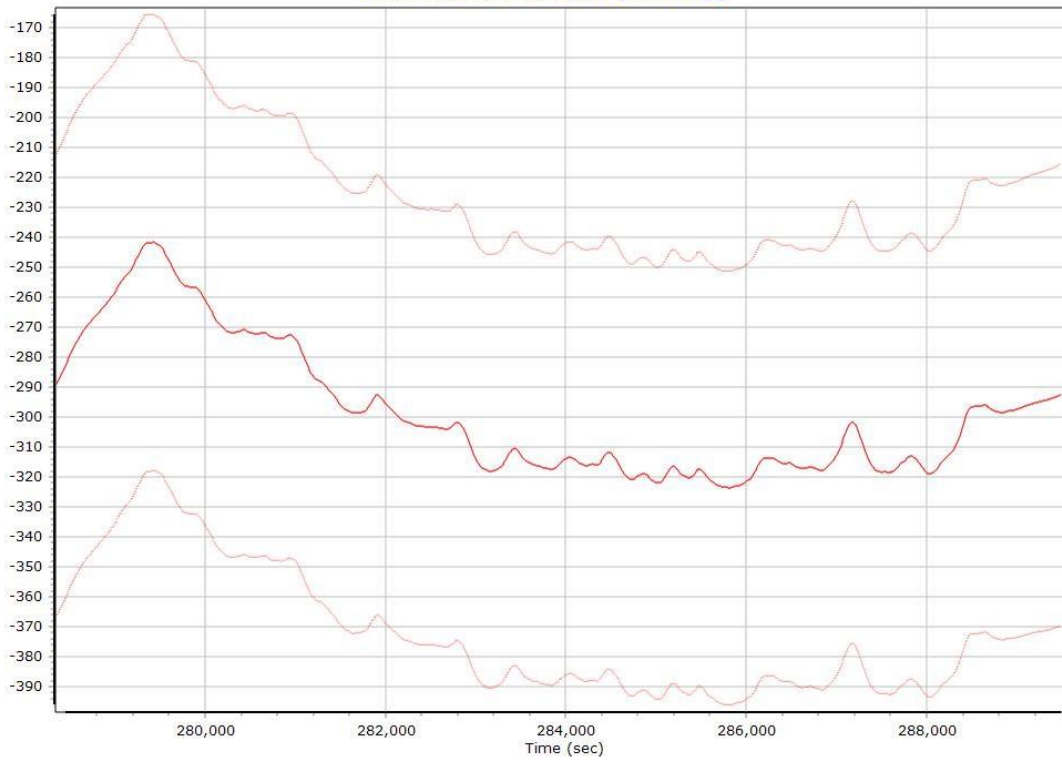
Y Accelerometer Bias (micro -g)

y accelerometer bias (micro-g)

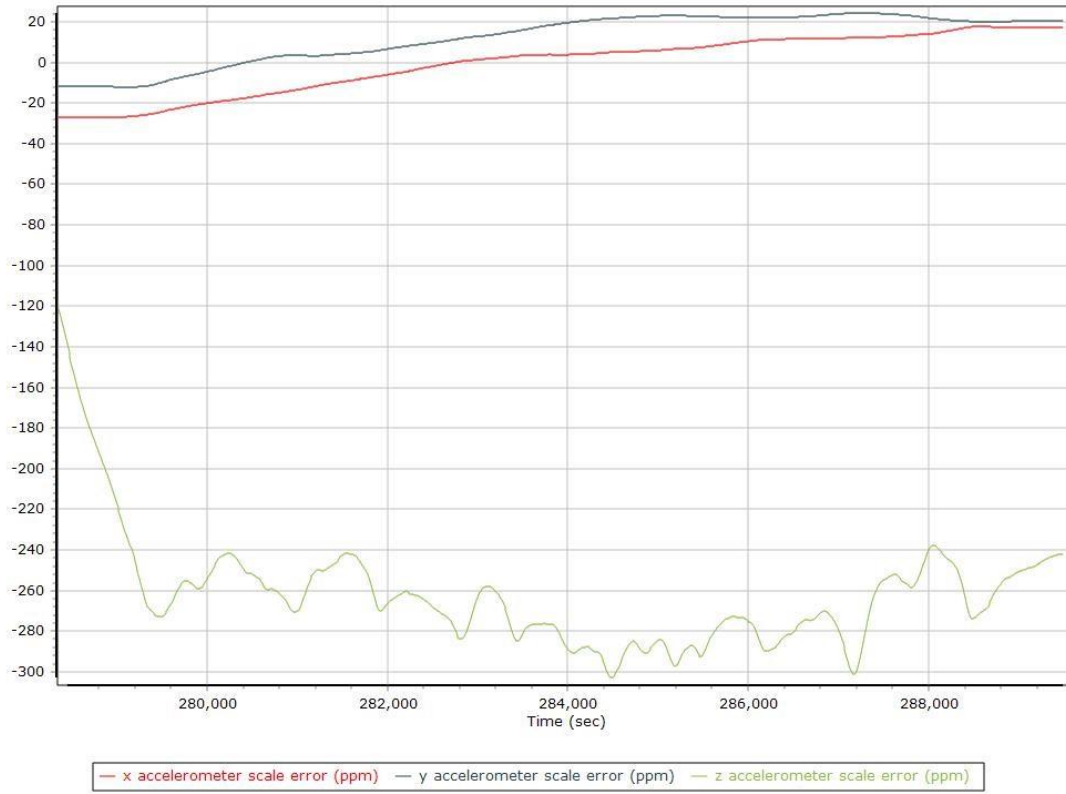


Z Accelerometer Bias (micro -g)

z accelerometer bias (micro-g)



Accelerometer Scale Error (ppm)

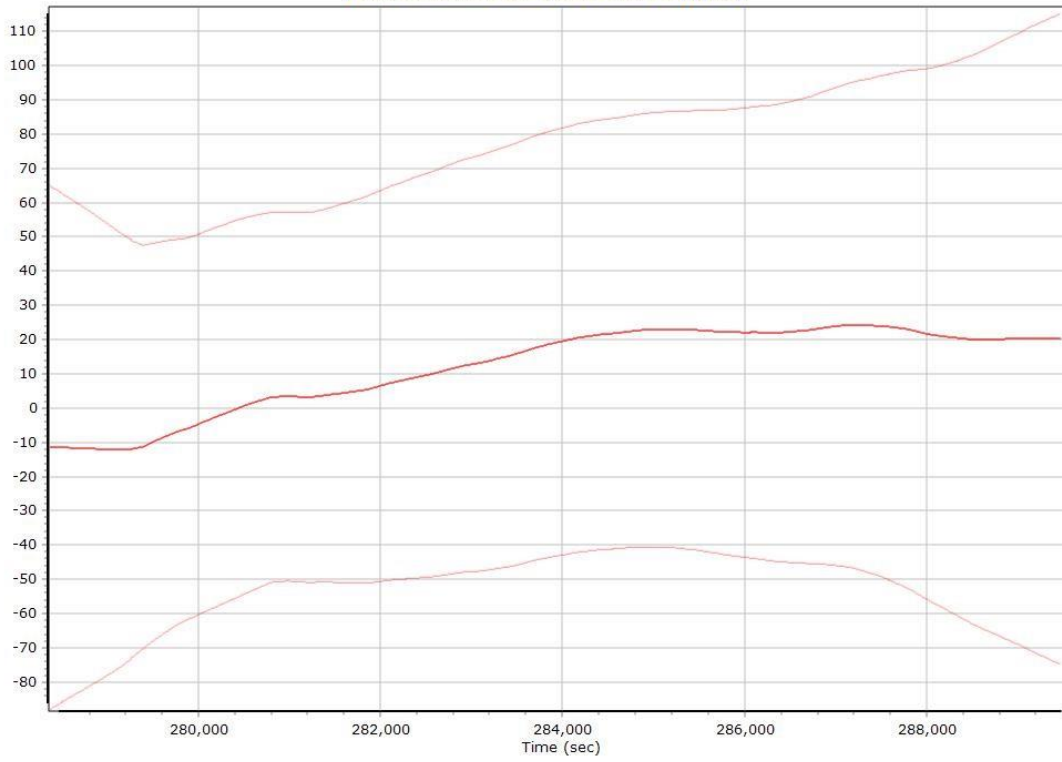


X Accelerometer Scale Error (ppm)



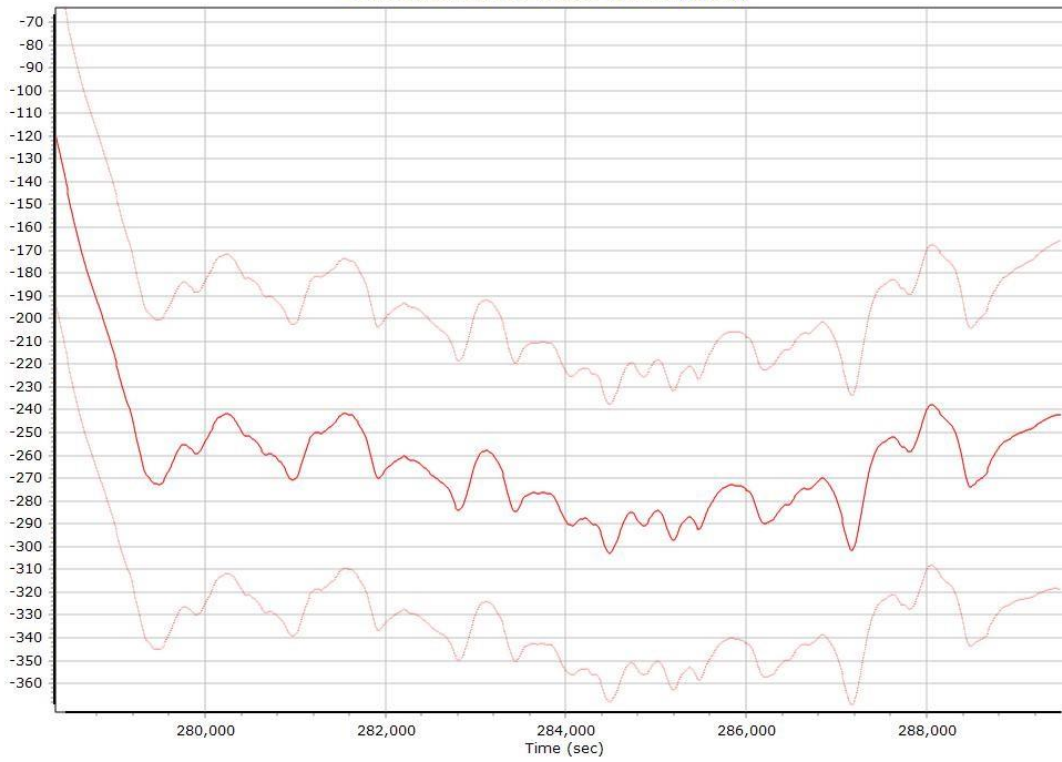
Y Accelerometer Scale Error (ppm)

y accelerometer scale error (ppm)

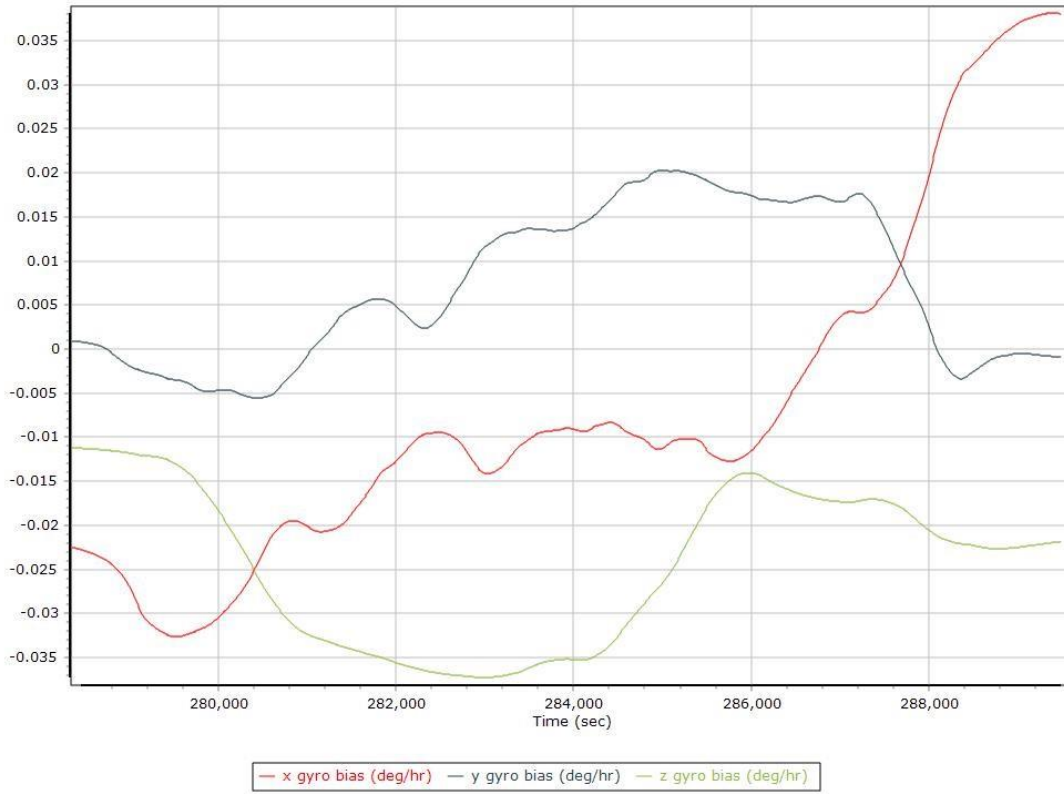


Z Accelerometer Scale Error (ppm)

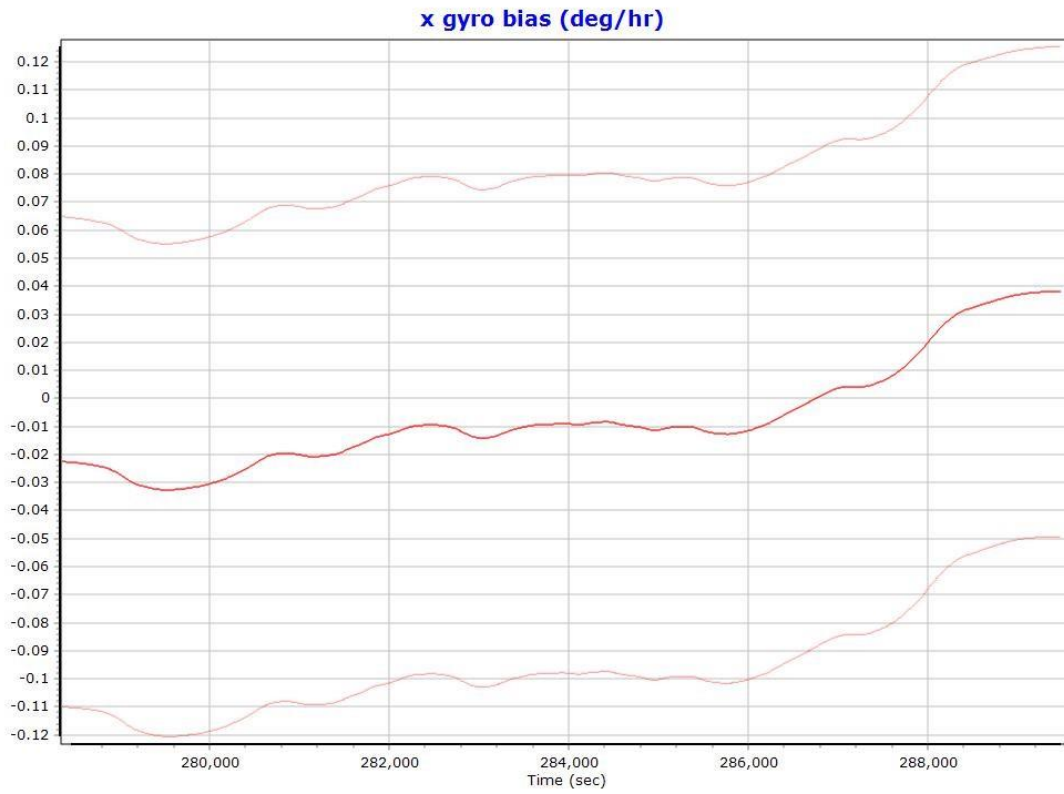
z accelerometer scale error (ppm)



Gyro Bias (deg/h)

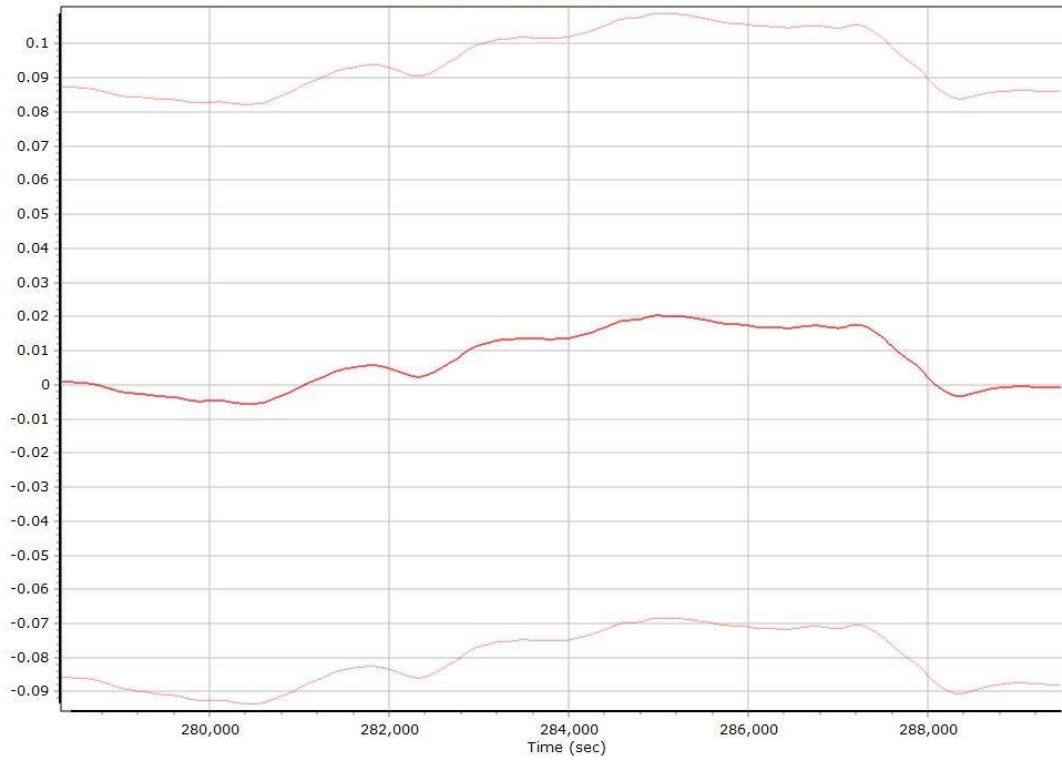


X Gyro Bias (deg/h)



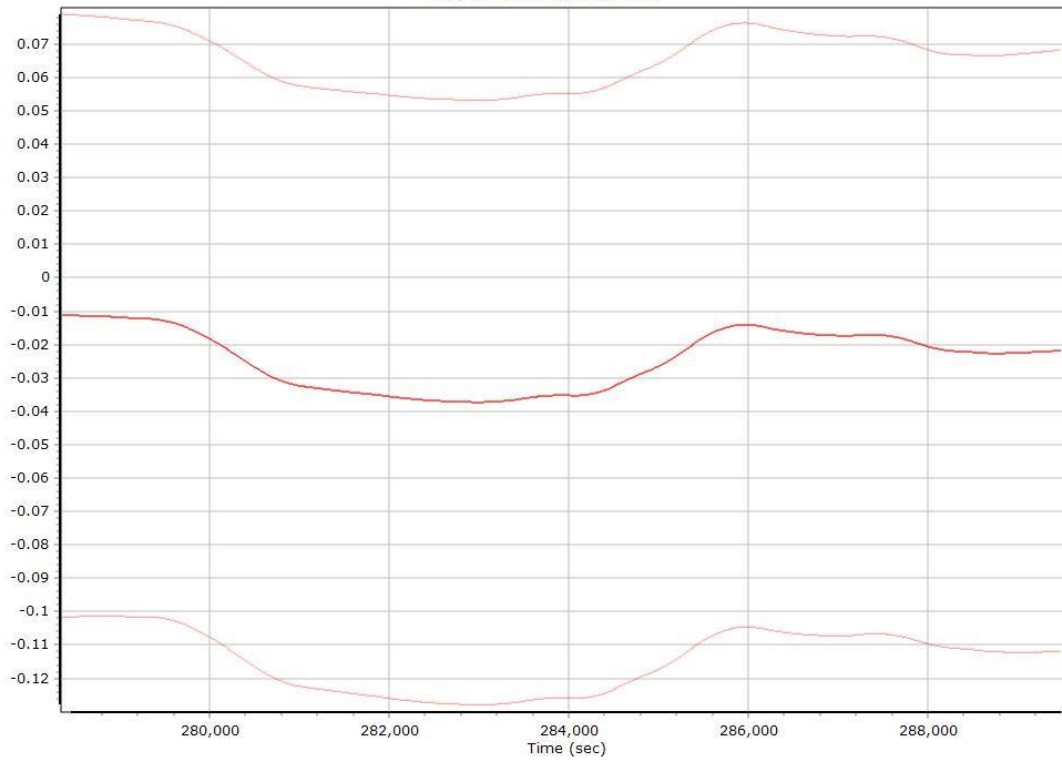
Y Gyro Bias (deg/h)

y gyro bias (deg/hr)

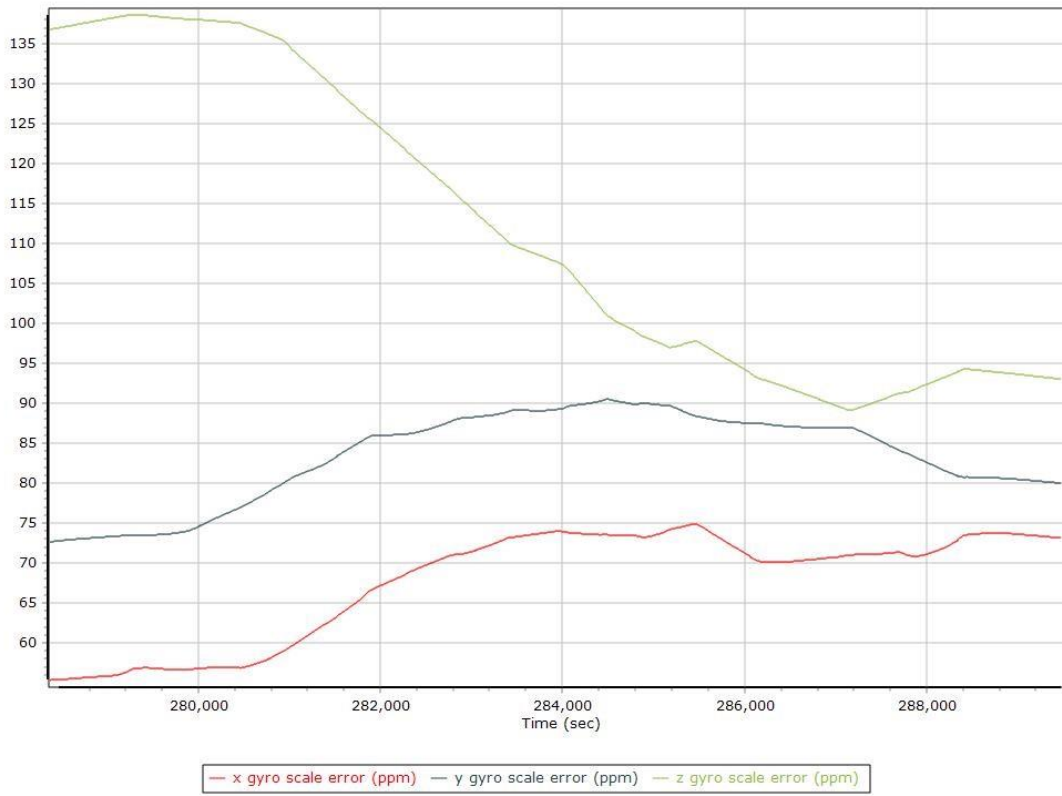


Z Gyro Bias (deg/h)

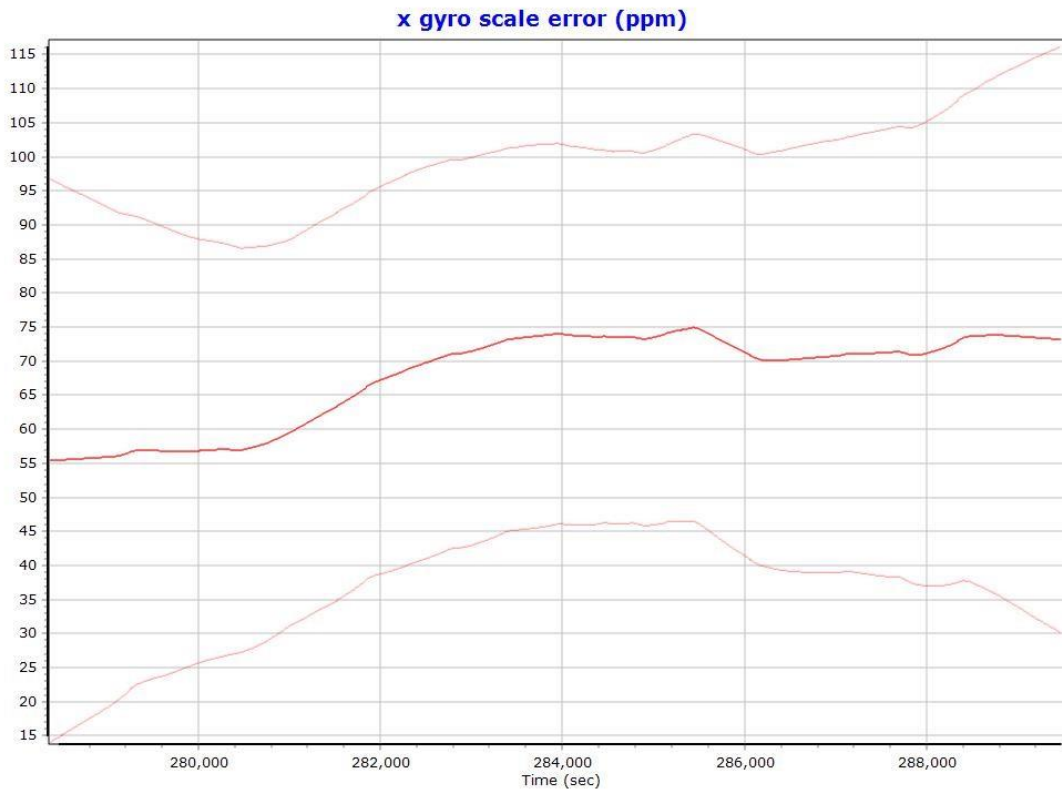
z gyro bias (deg/hr)



Gyro Scale Error (ppm)

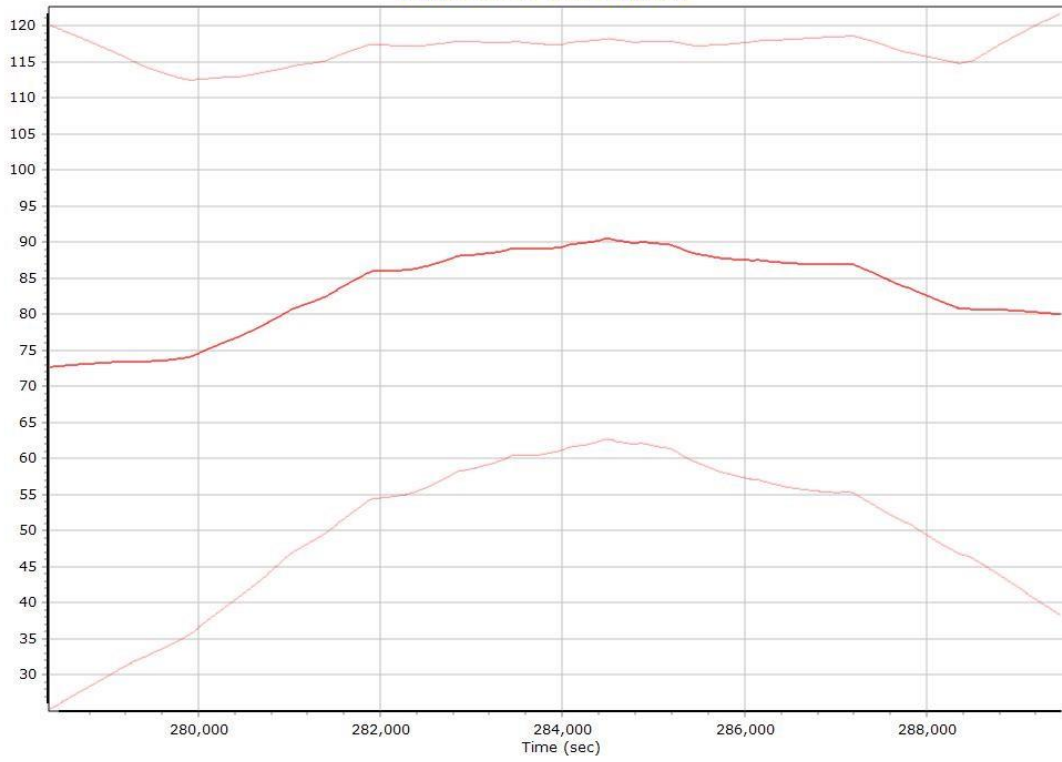


X Gyro Scale Error (ppm)



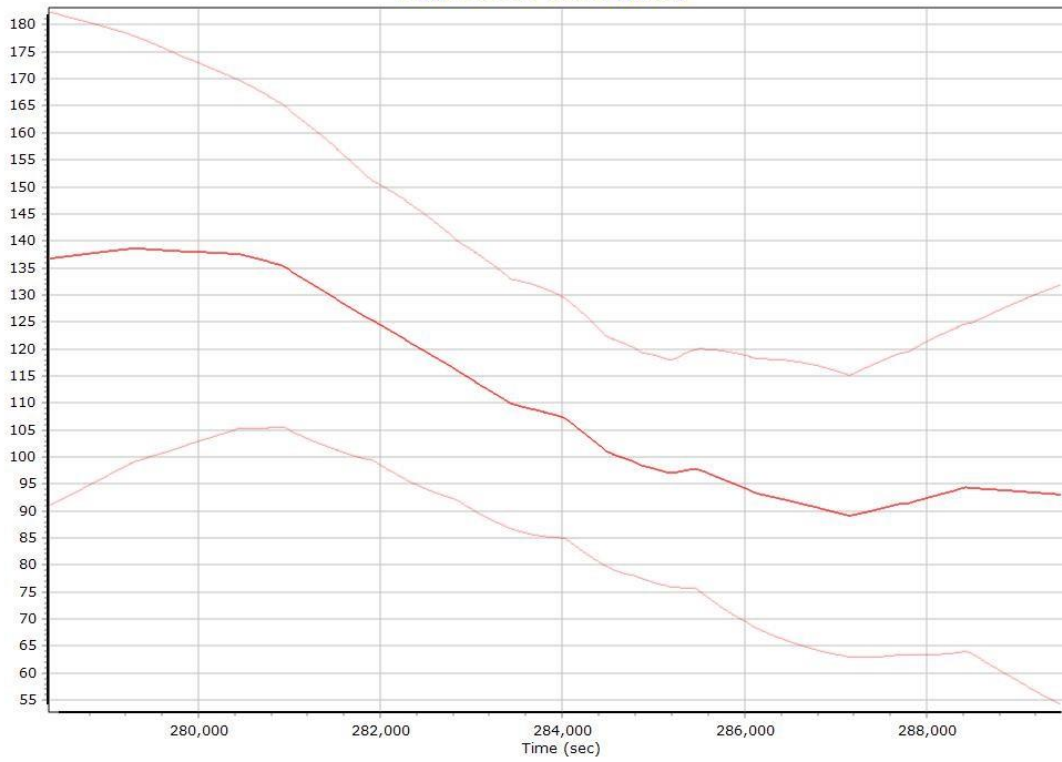
Y Gyro Scale Error (ppm)

y gyro scale error (ppm)



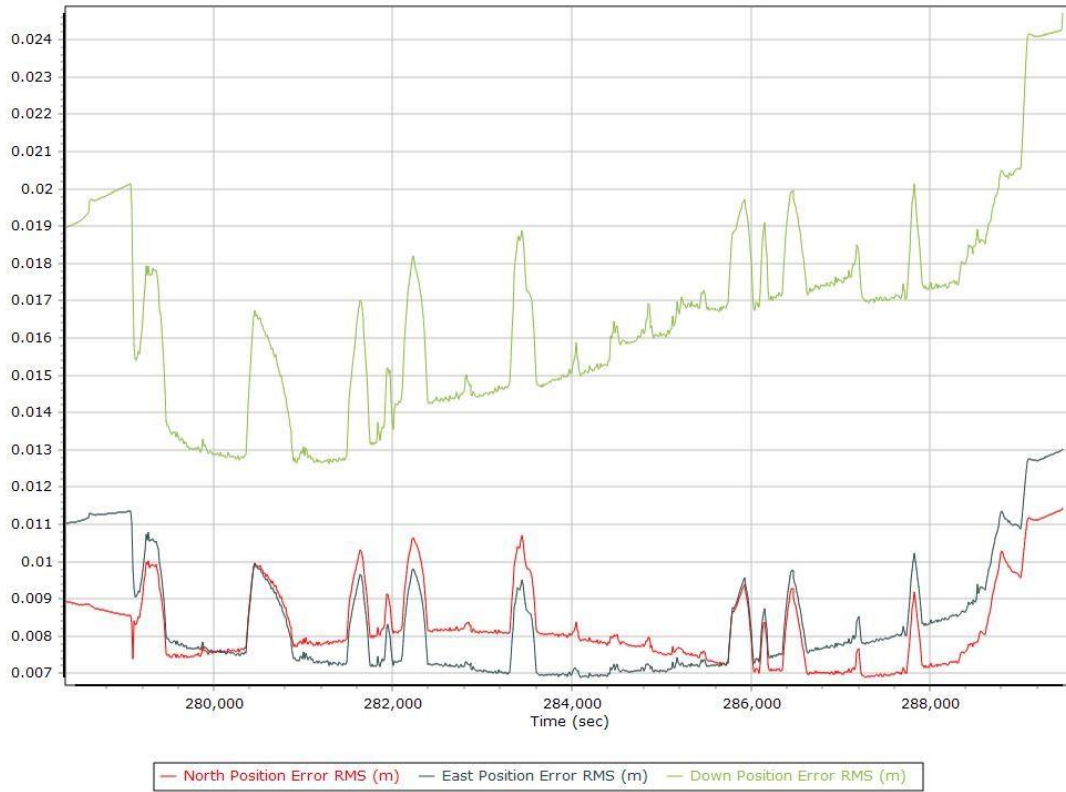
Z Gyro Scale Error (ppm)

z gyro scale error (ppm)

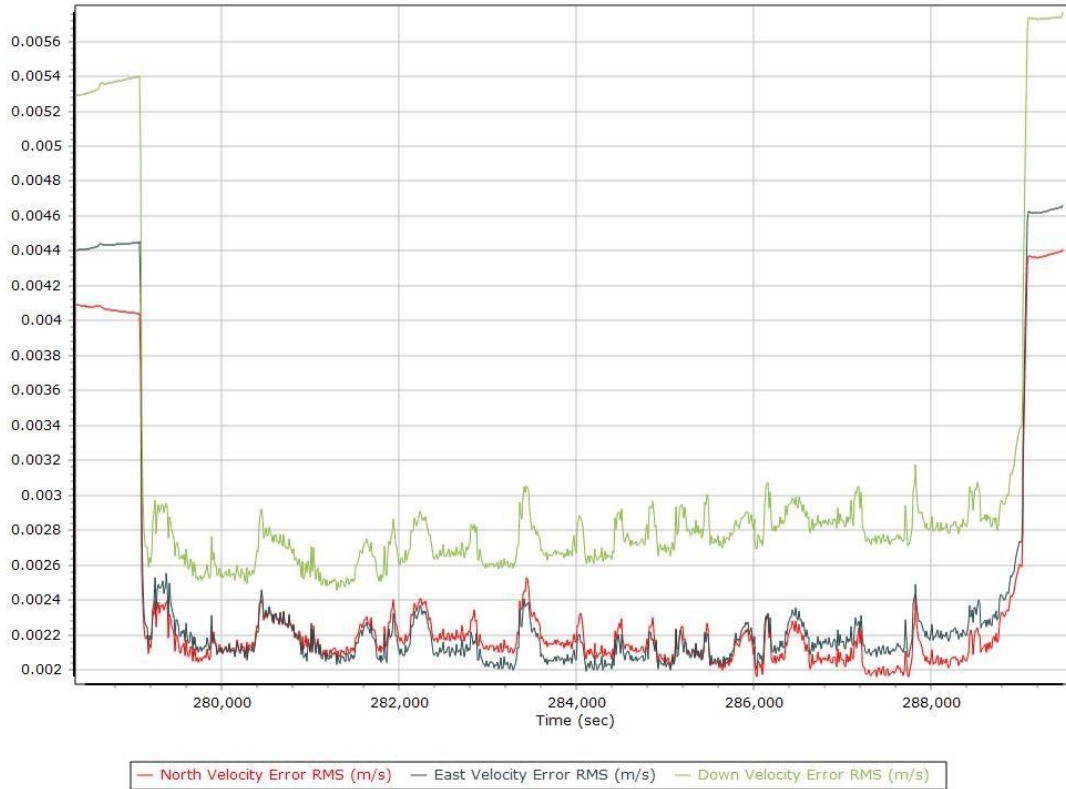


Smoothed Performance Metrics

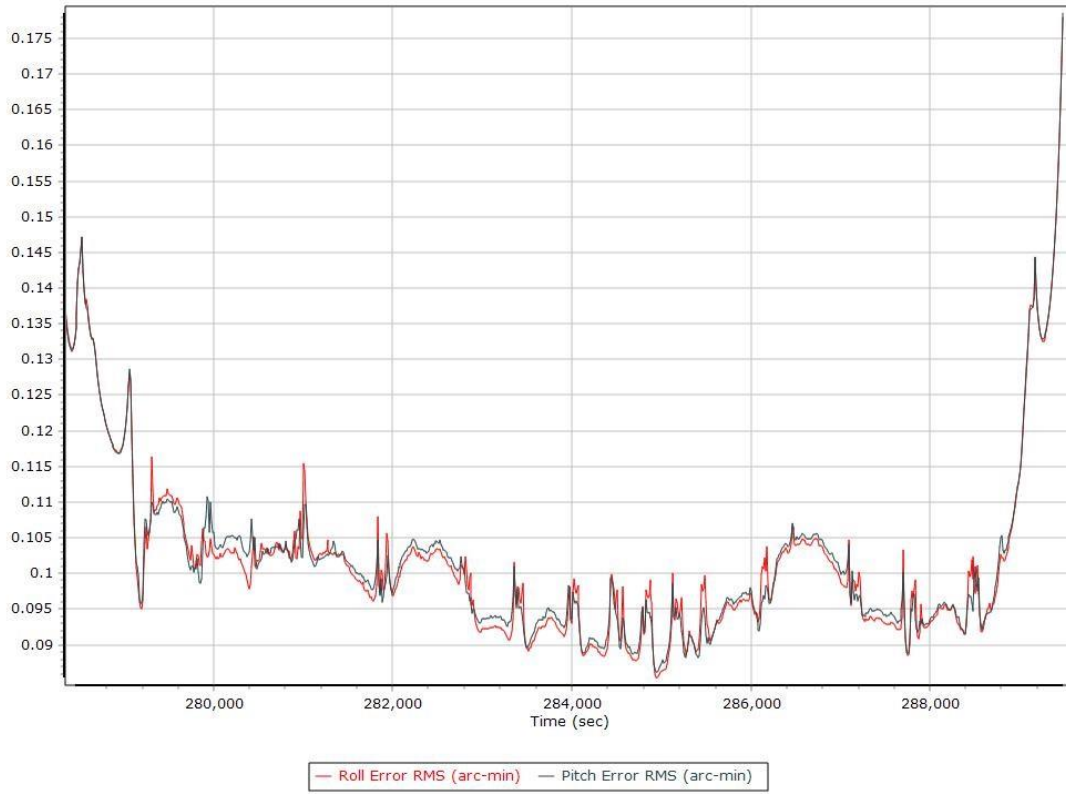
Position Error RMS (m)



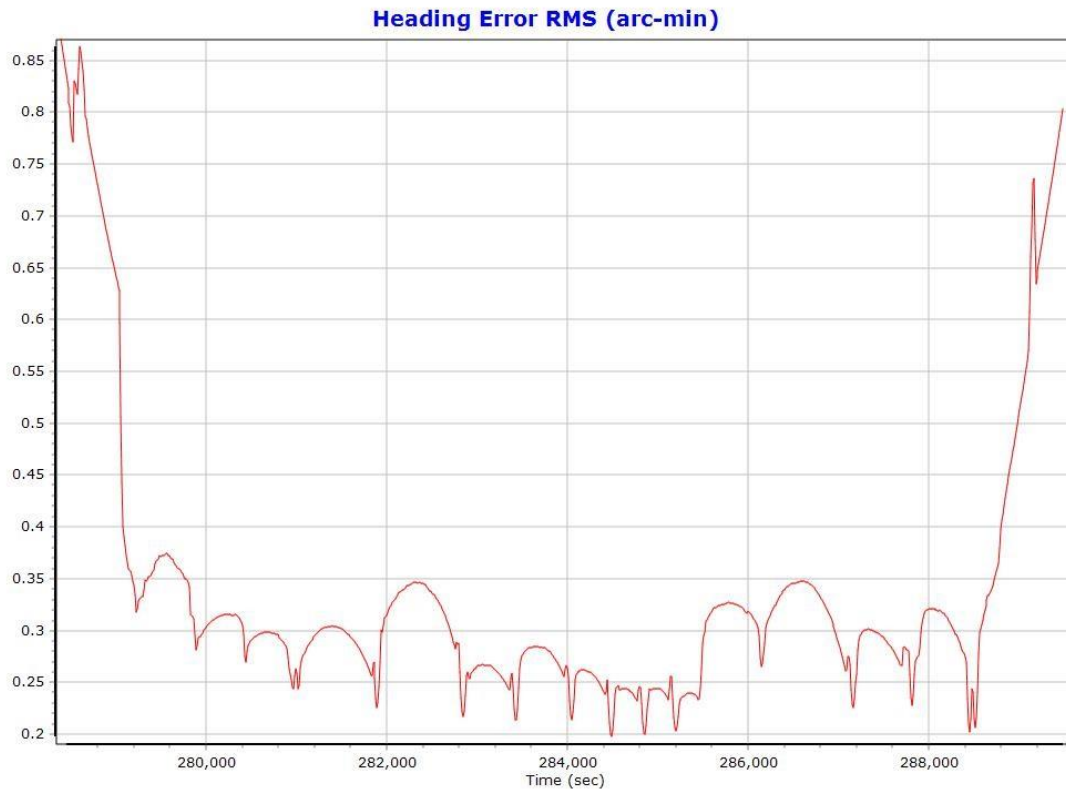
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc -min)



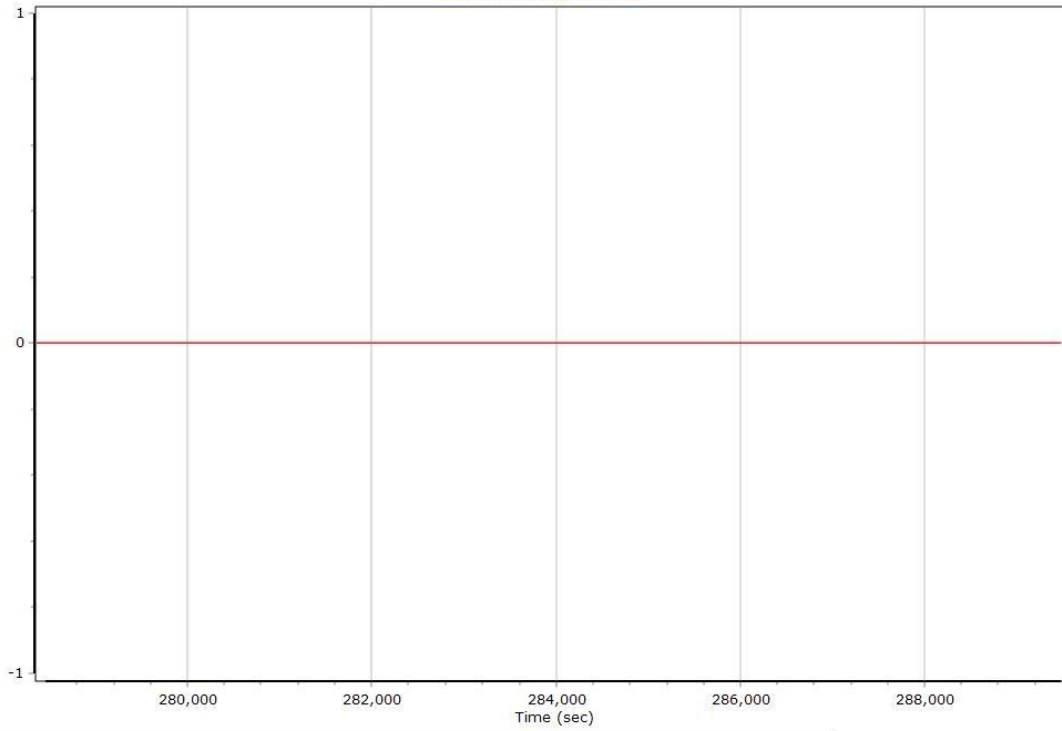
Heading Error RMS (arc -min)



Smoothed Solution Status

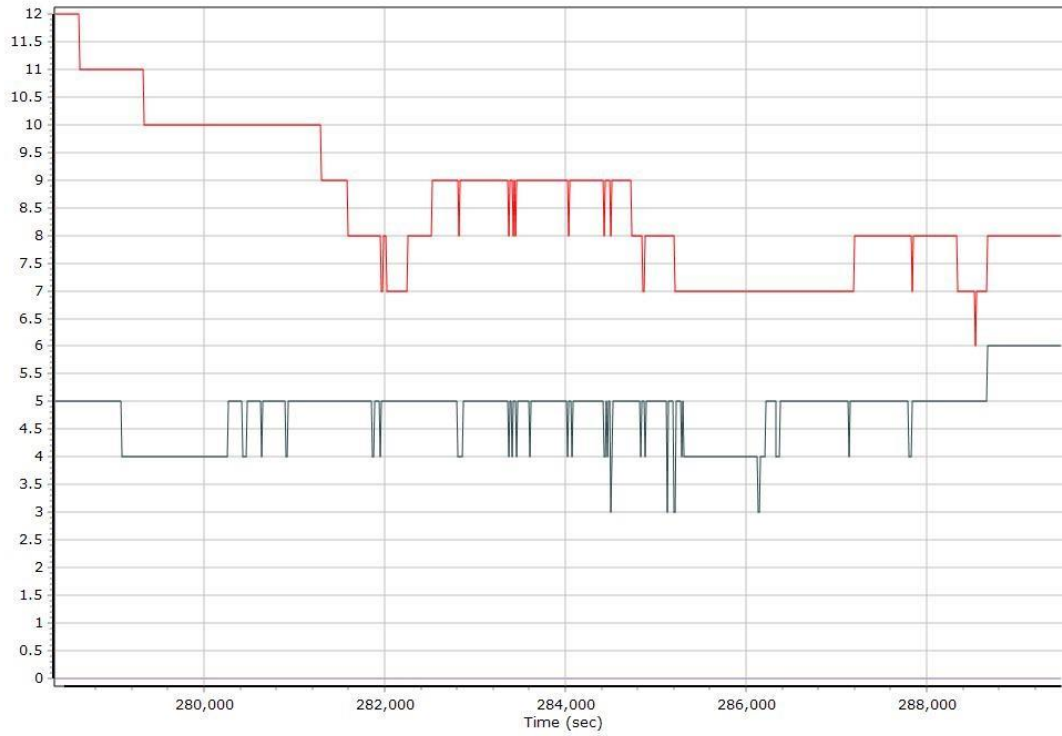
Processing Mode

Processing mode



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

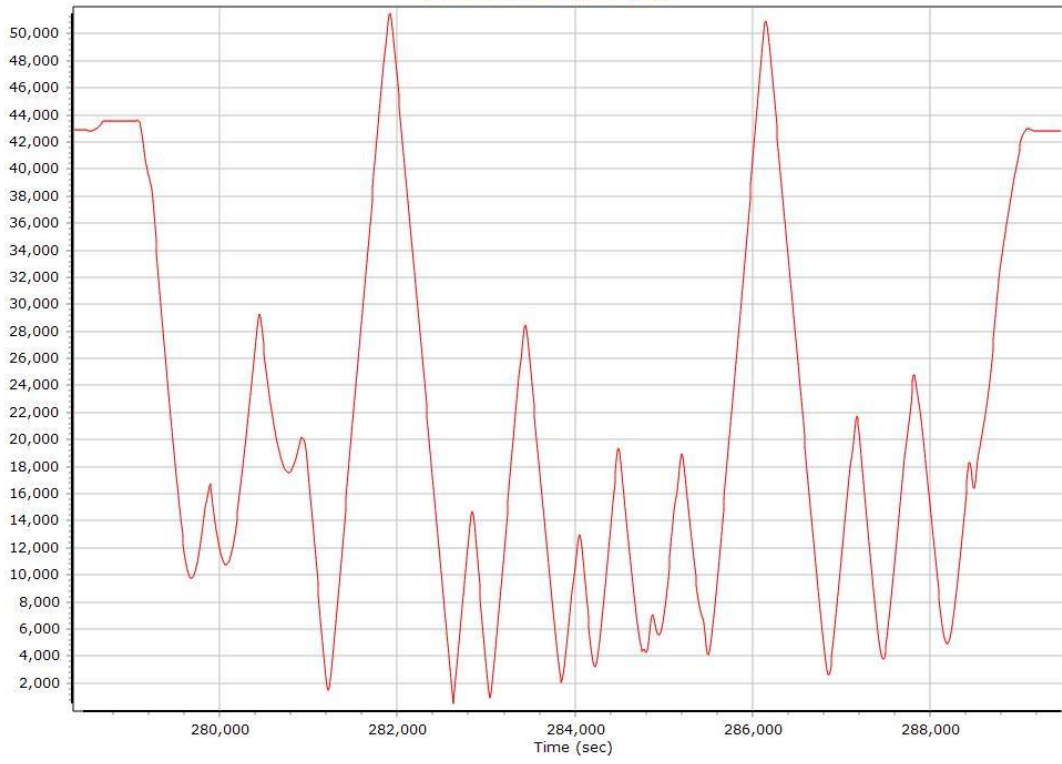
Number of Satellites



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

Baseline Length

Baseline Length (m)



SBET IAKAR Separation

