

Appendix A: GPS and IMU Processing Reports for Each Mission

General Information

Mission Information

Project name	4319359a
Processing date	2019-12-31 23:46:36
Mission date	2019-12-25 13:35:40
Mission duration	03:44:04.976
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9683
IMU type	57
Receiver type	BD982
Antenna type	Unknown External

Project File List

Rover Data Files

File name	File type
191225_133522_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
flcb3590.19o	GNSS SingleBase
fljl3590.19o	GNSS SingleBase
fljo3590.19o	GNSS SingleBase
pnma3590.19o	GNSS SingleBase
prry3590.19o	GNSS SingleBase
talh3590.19o	GNSS SingleBase
xcty3590.19o	GNSS SingleBase
esr20853.sp3	GPS, GLONASS Precise Ephemeris
igr20853.sp3	GPS Precise Ephemeris
igr20854.sp3	GPS Precise Ephemeris
brdc3590.19n	GPS Broadcast Ephemeris
sned3590.19o	GNSS SingleBase
flmr3590.19o	GNSS SingleBase

Output Files

Filename	File type
sbet_4319359a.out	SBET Trajectory File

Rover Data Summary

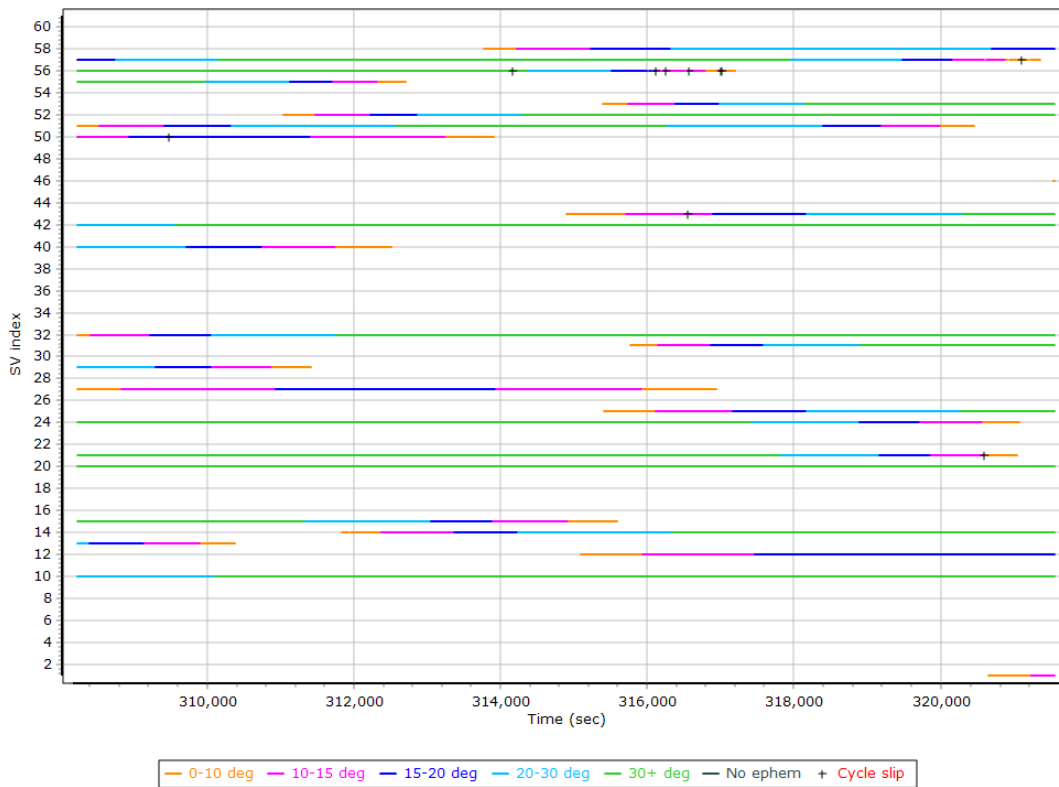
First raw data file	191225_133522_INS-GPS_1.raw		
Last raw data file	191225_133522_INS-GPS_1.raw		
Start GPS week	2085		
Start time	308122.049 (12/25/2019 1:35:22 PM)		
End time	321567.256 (12/25/2019 5:19:27 PM)		
Start of fine alignment	308166.029 (12/25/2019 1:36:06 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	Event 1 Input, Event 2 Input, Event 3 Input, Event 4 Input, Event 5 Input, Event 6 Input		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.704	-0.207	-1.249
Gimbal 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

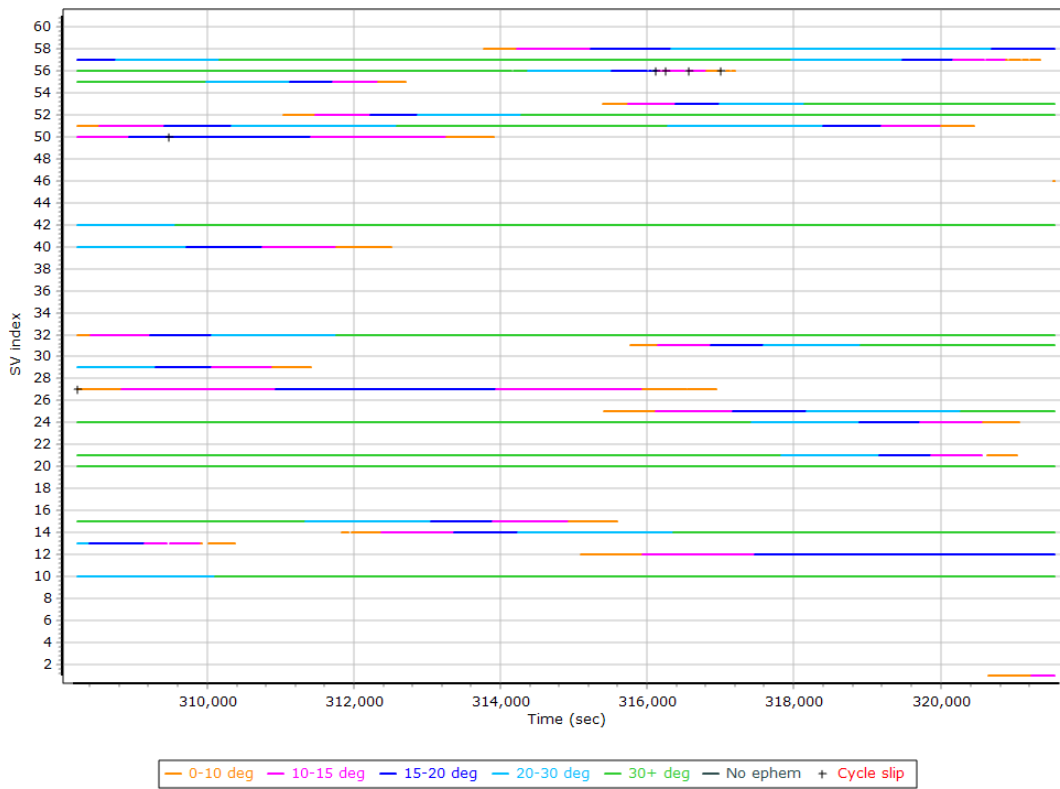
Raw IMU Import QC Summary

IMU data input file	imu_4319359a.dat
IMU data check log file	imudt_4319359a.log
IMU Records Processed	2688574
Termination Status	Normal
IMU Anomalies	0

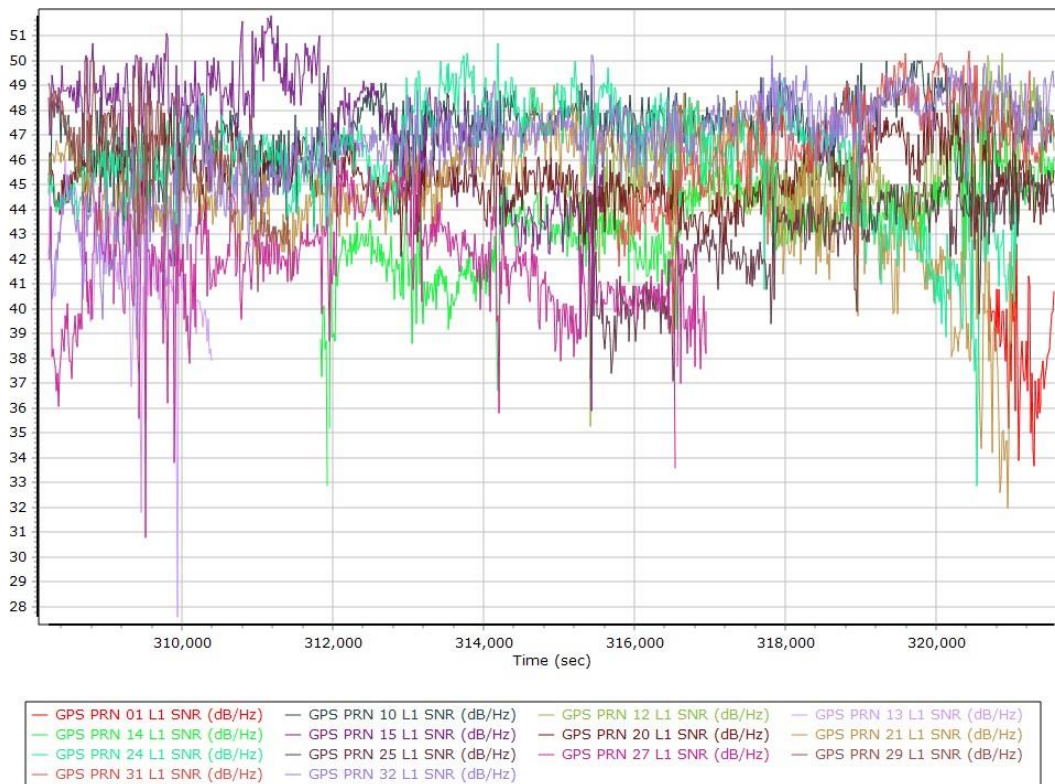
L1 Satellite Lock/Elevation



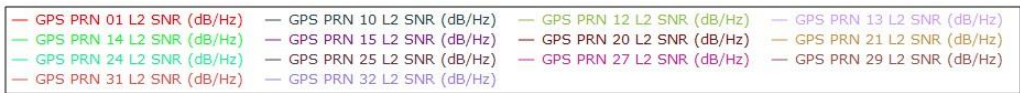
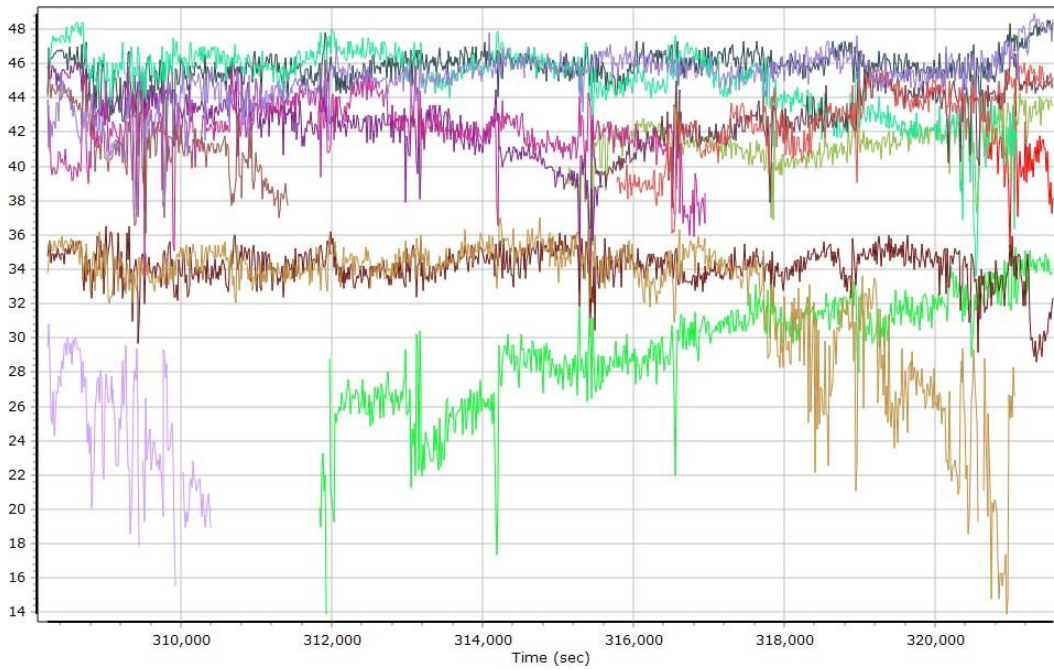
L2 Satellite Lock/Elevation



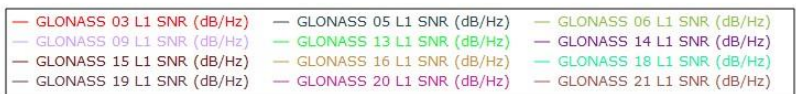
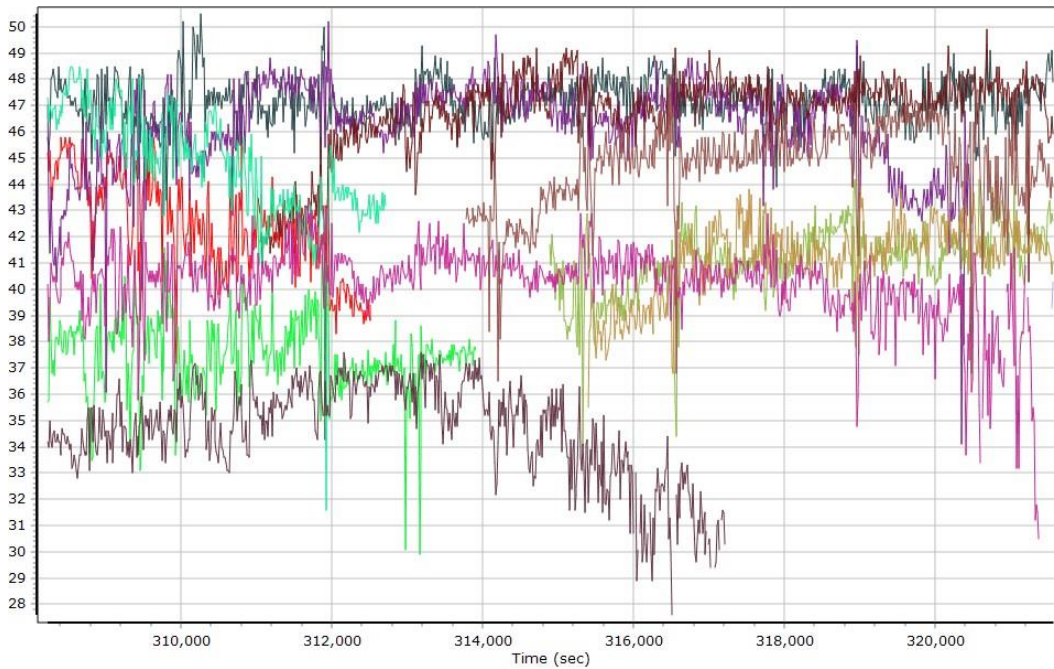
GPS L1 SNR



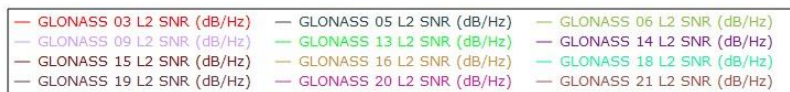
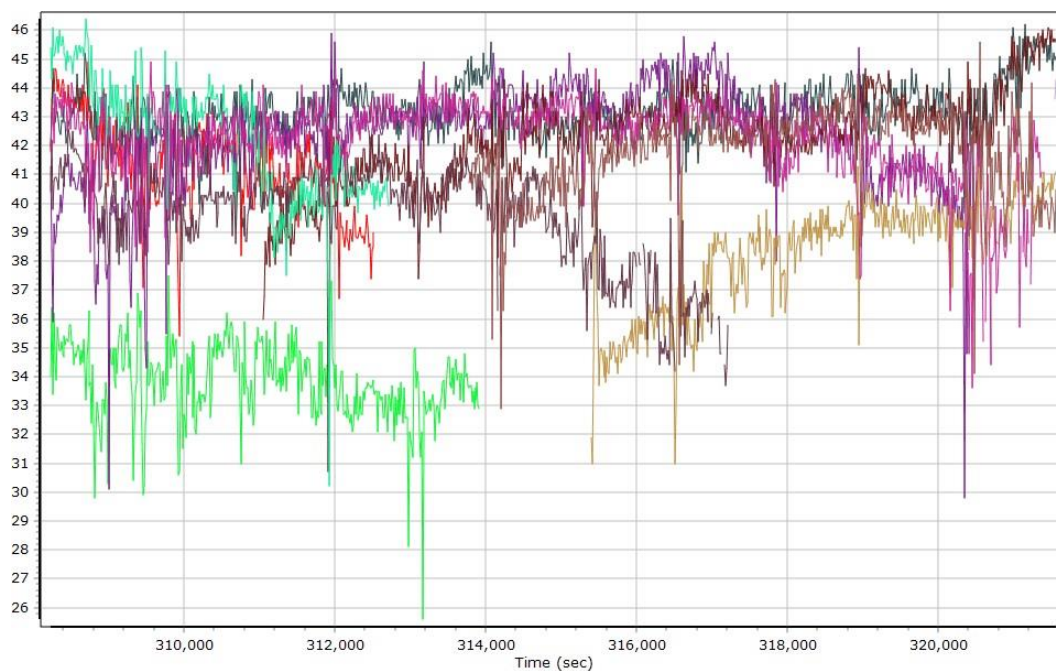
GPS L2 SNR



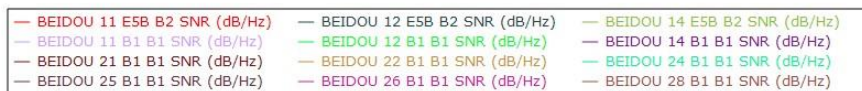
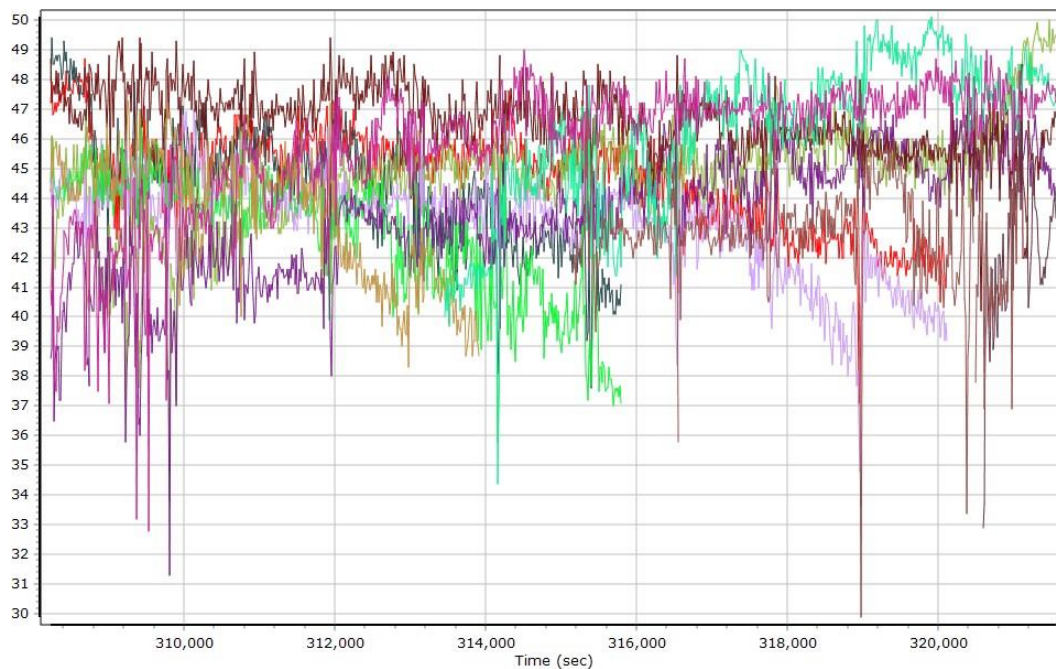
GLONASS L1 SNR



GLONASS L2 SNR

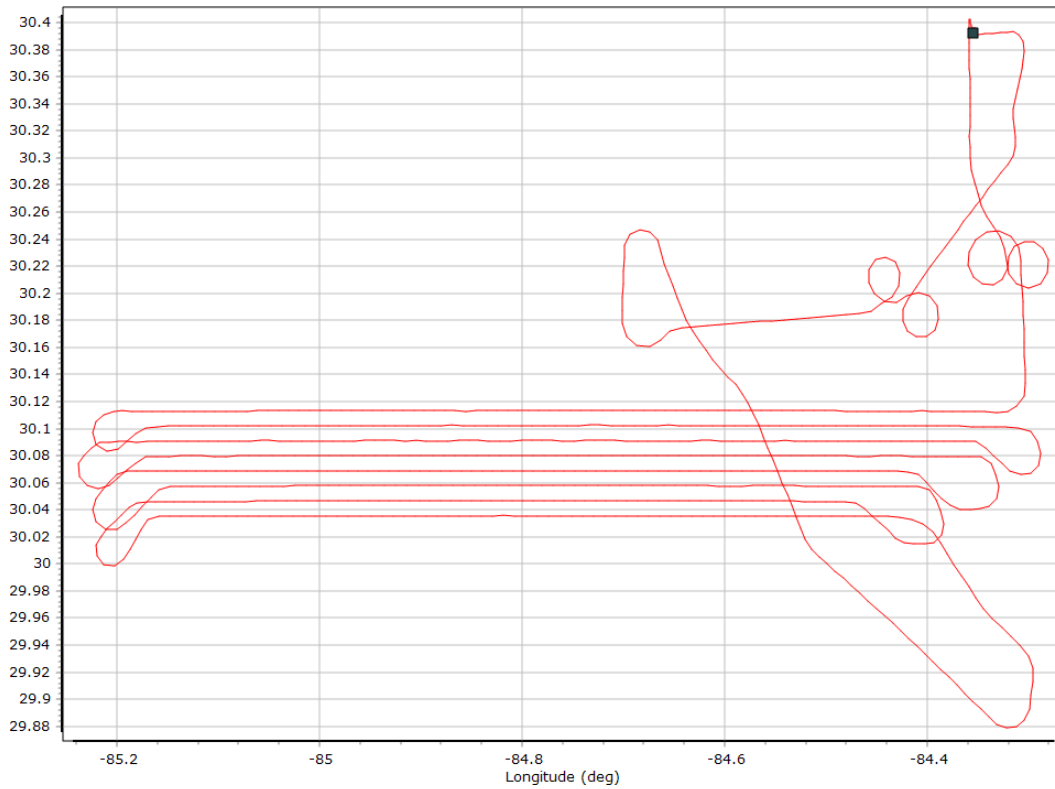


BEIDOU SNR

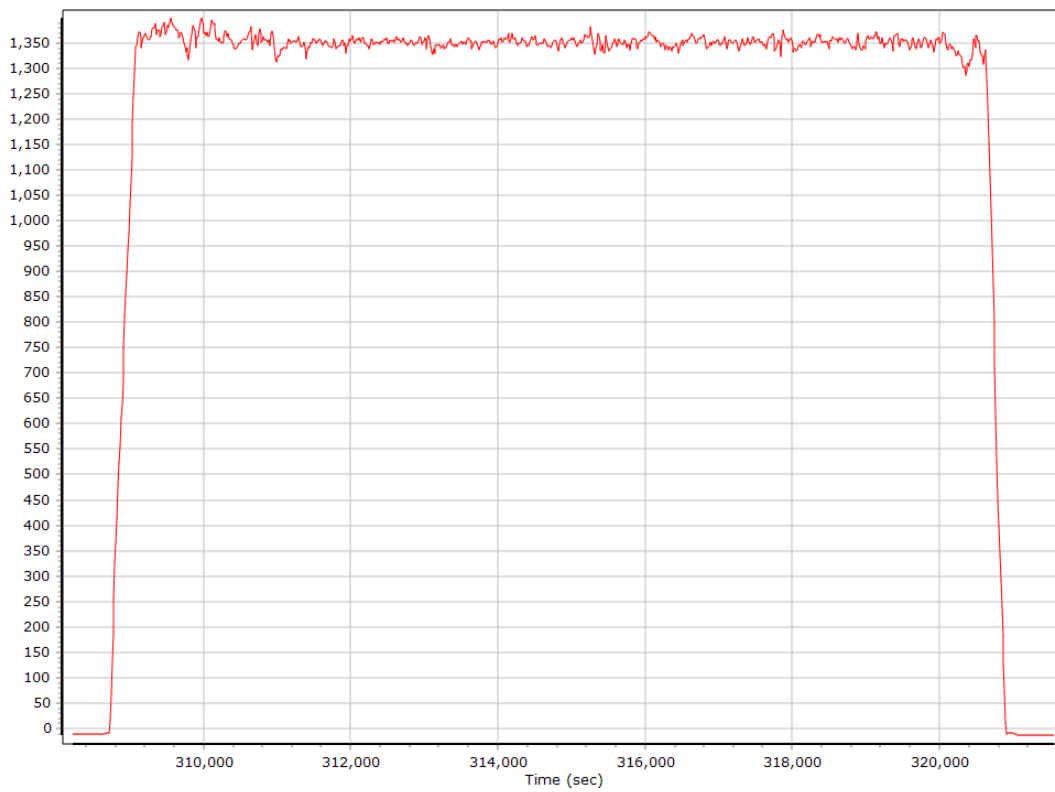


Trajectory Information

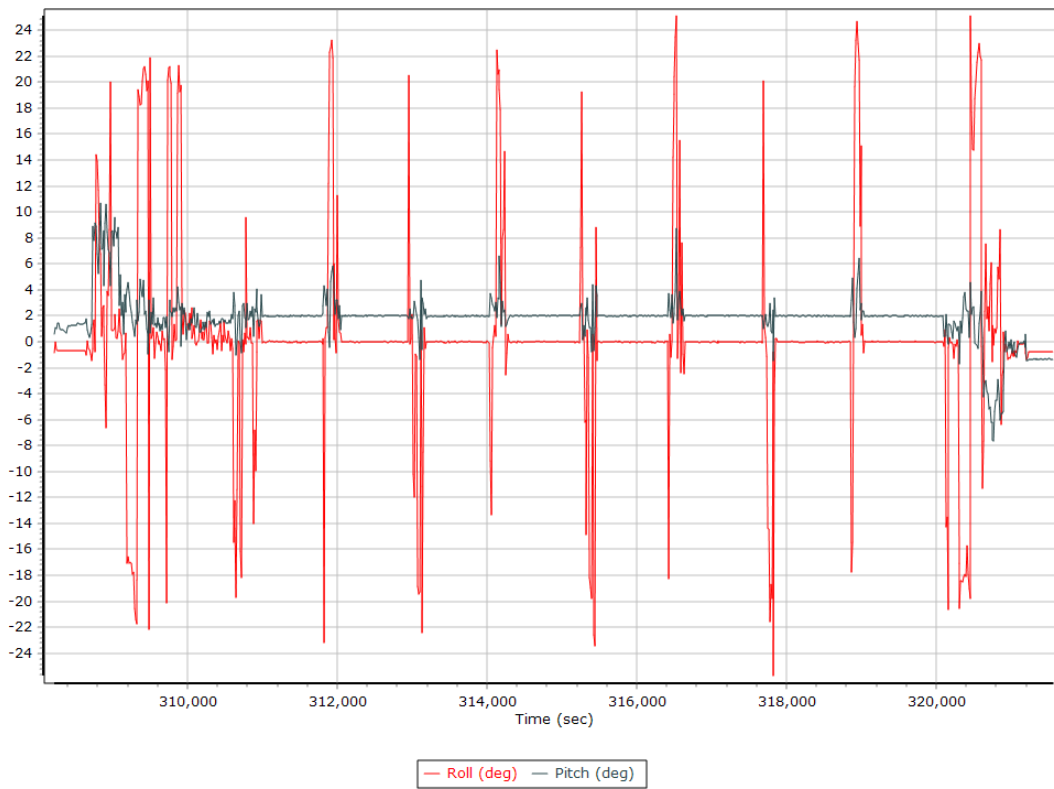
Top View



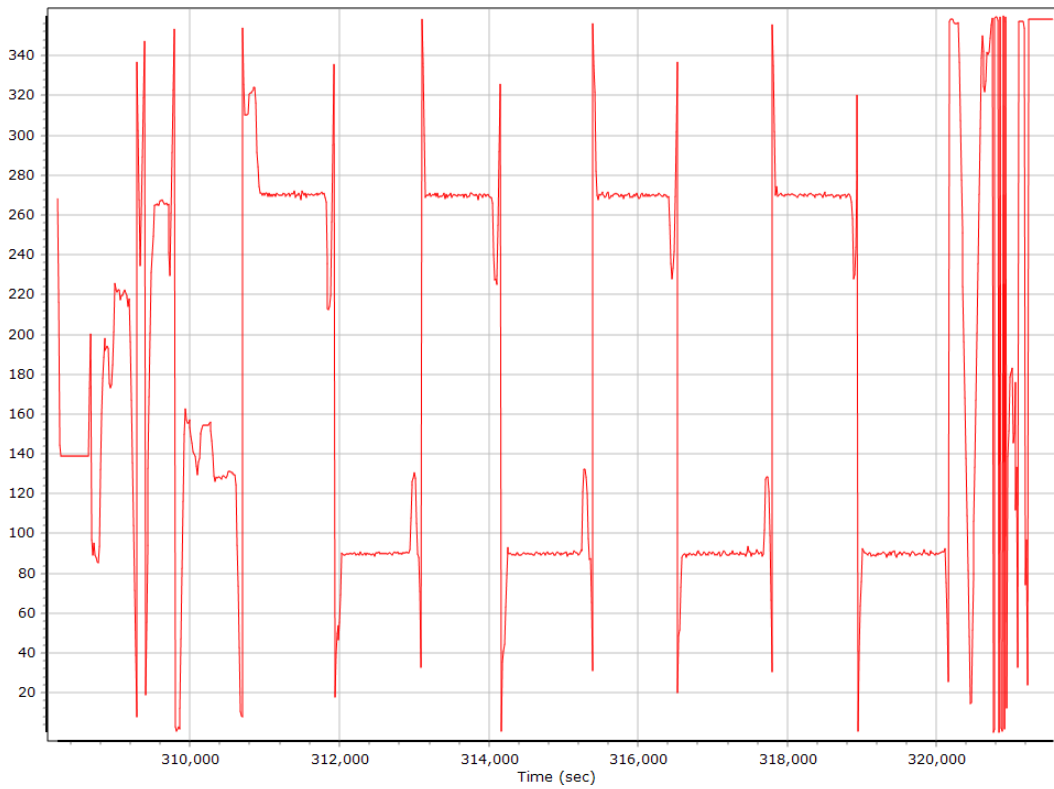
Altitude



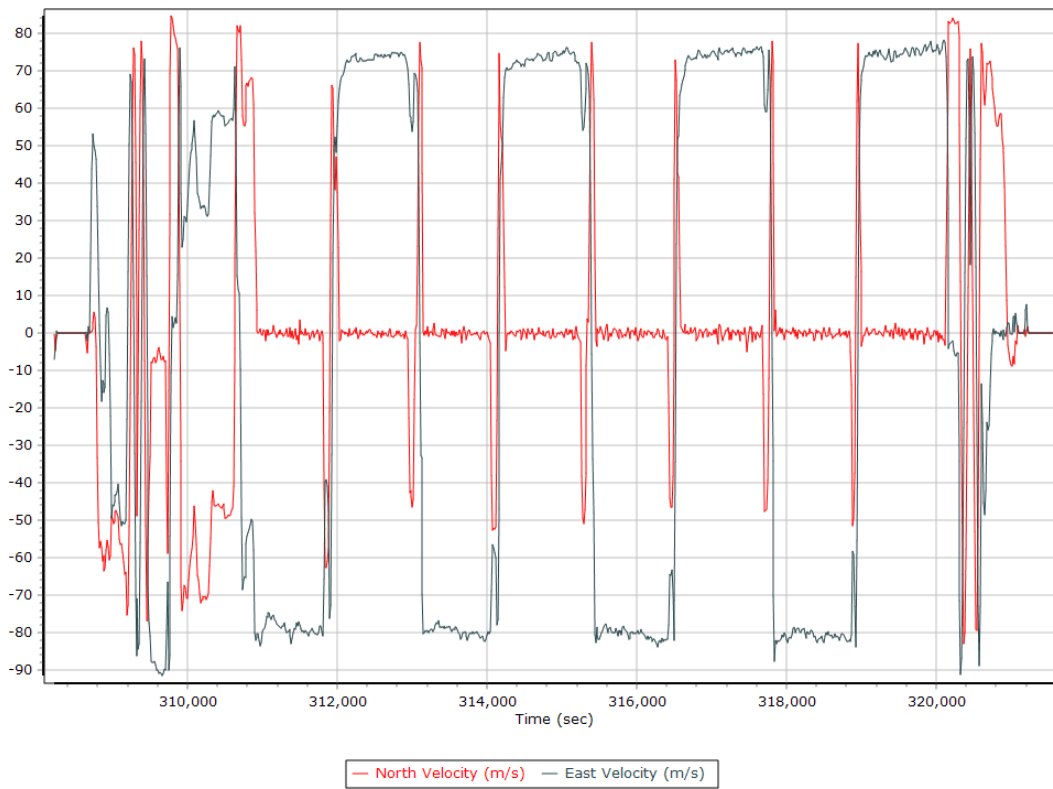
Roll/Pitch



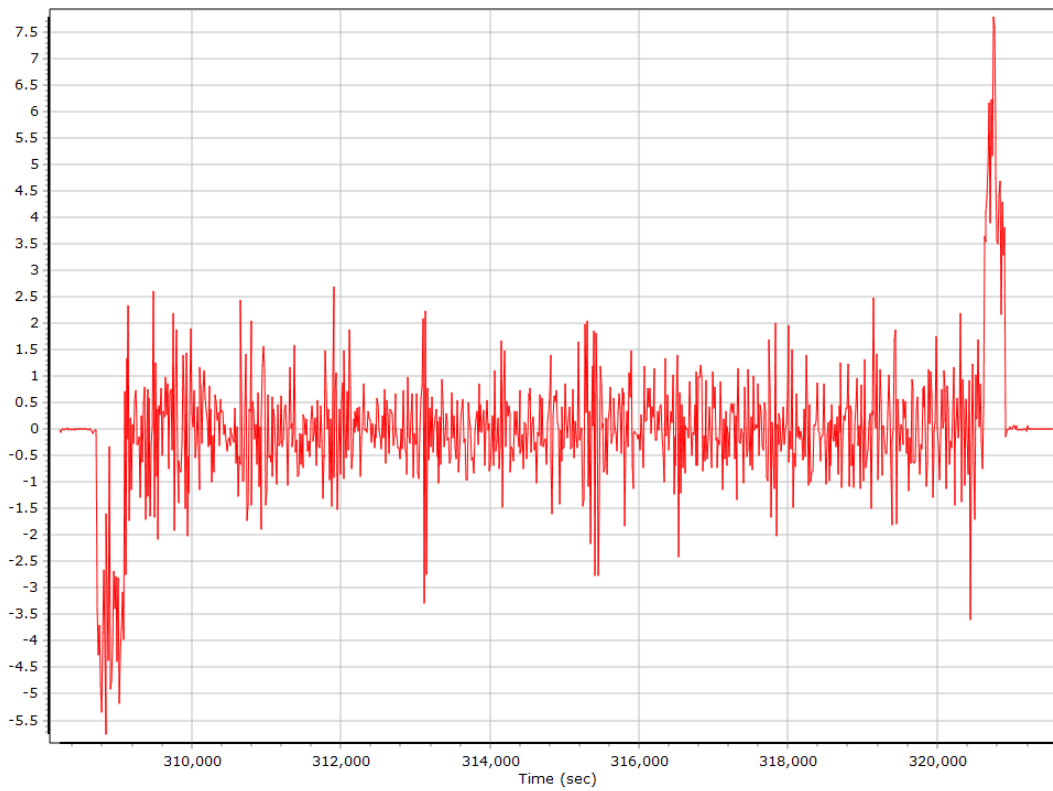
Heading



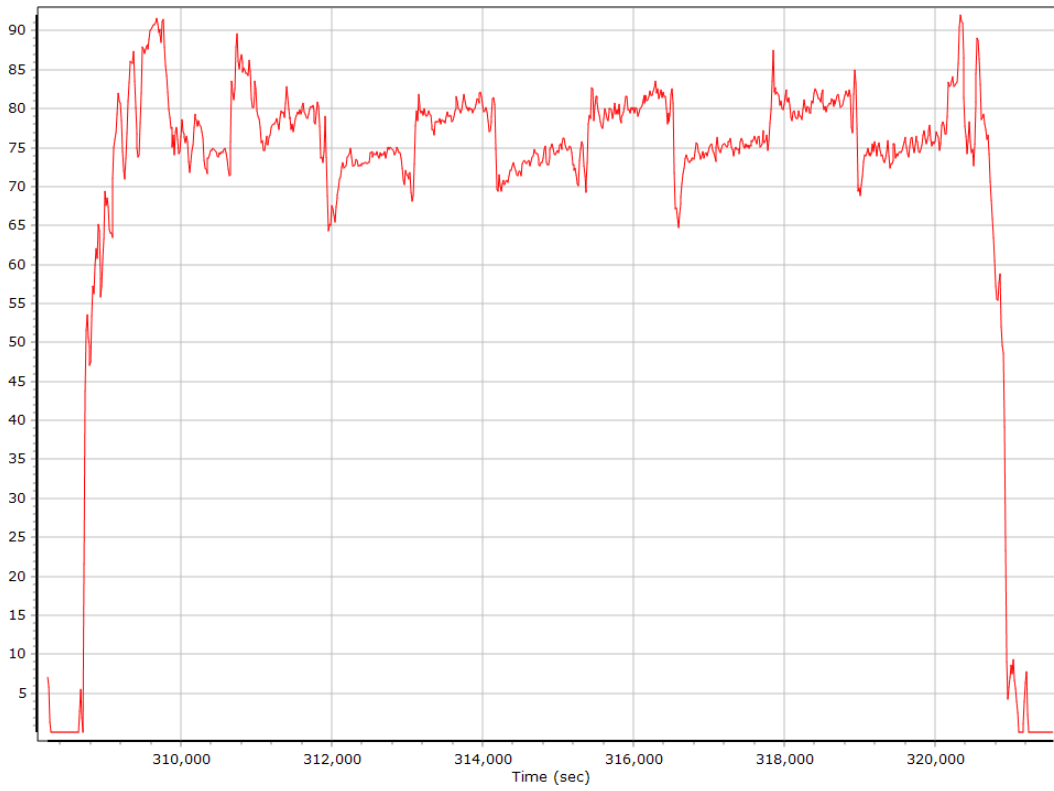
North/East Velocity



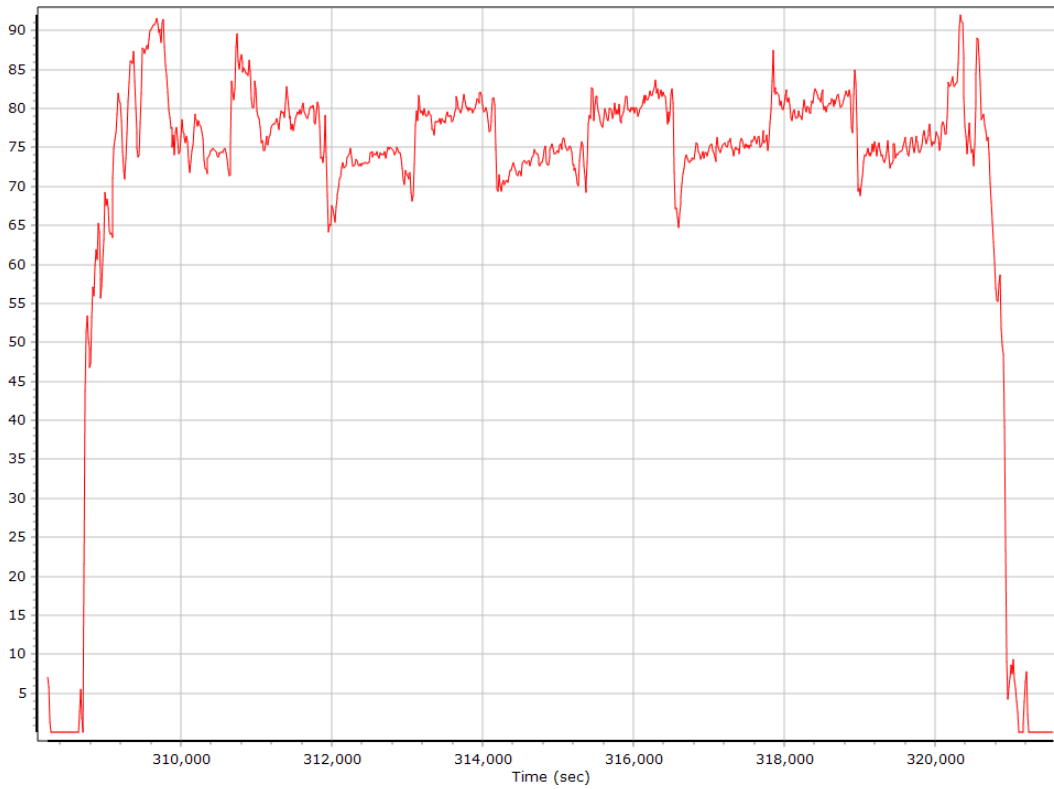
Down Velocity



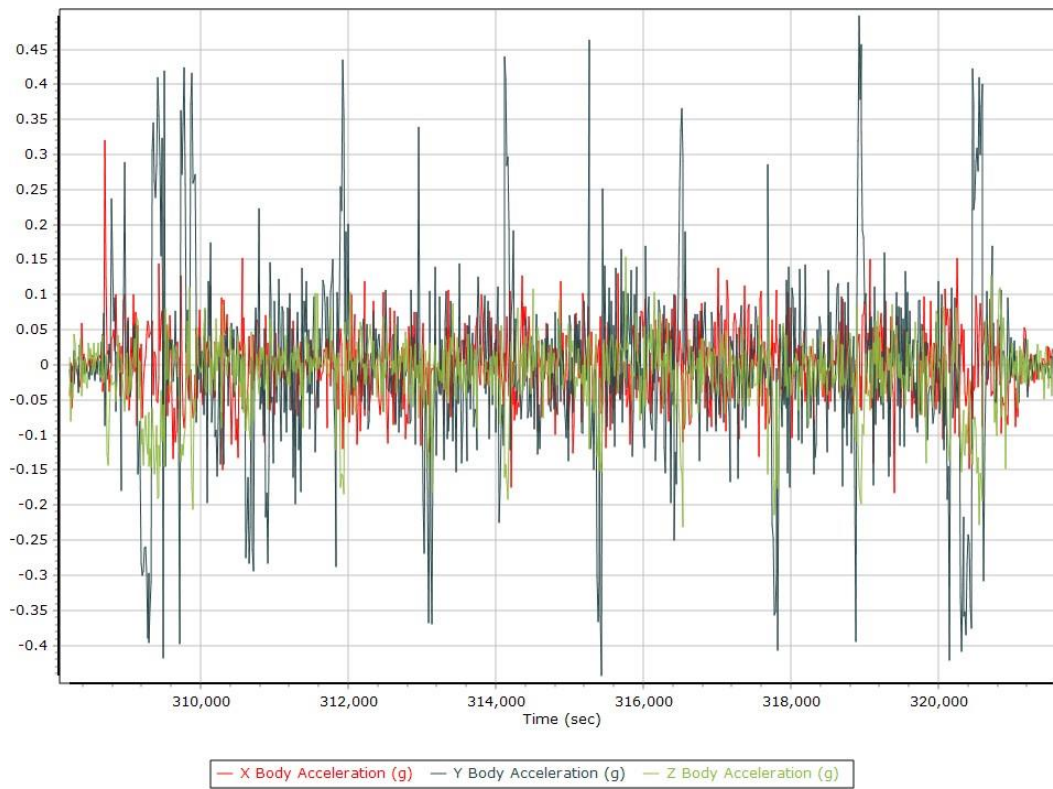
Total Speed



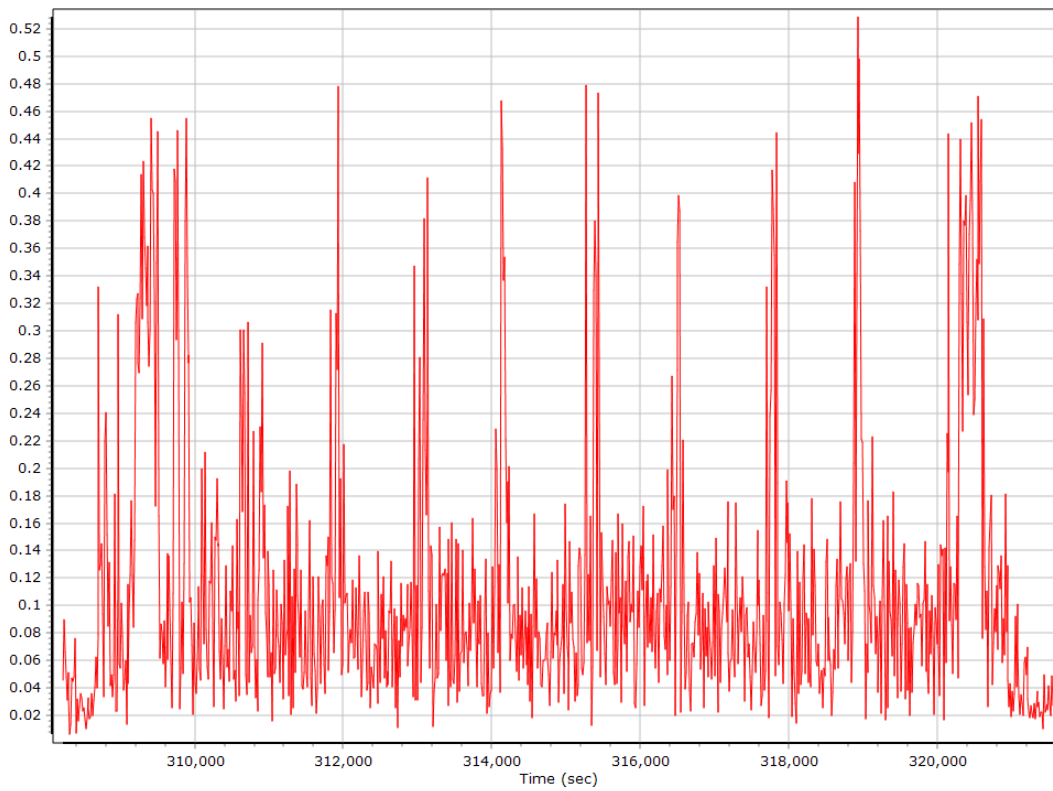
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate



SmartBase Processing Summary

Smart Select Options

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

Basestation Selection

Date	ID	Dist	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	

SmartBase Quality Check

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	1.16	55.39	
Number of GPS SV	6	9	8
Number of GLONASS SV	0	0	0
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	6	9	8
PDOP	1.53	3.40	2.14
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	13423.00	0.00	19.00
Percentage	99.86	0.00	0.14

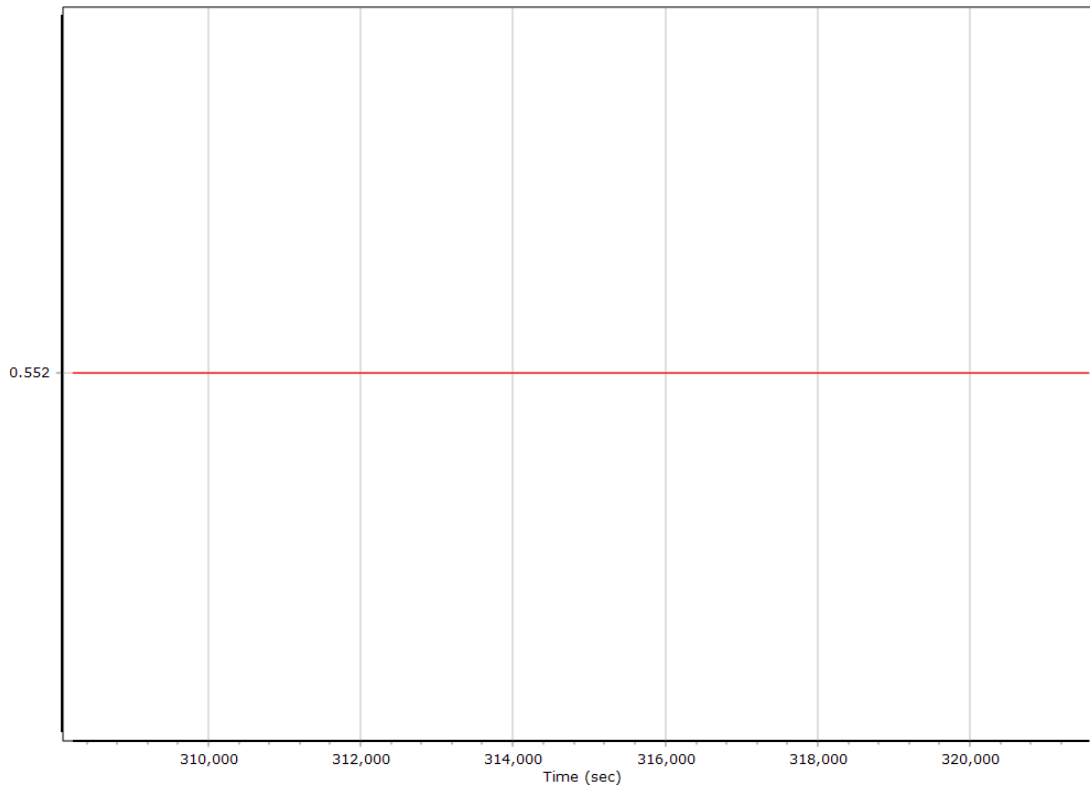
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	308122.024 (12/25/2019 1:35:22 PM)		
Processing end time	321567.000 (12/25/2019 5:19:27 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.552	-0.094	-1.271
Gimbal to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

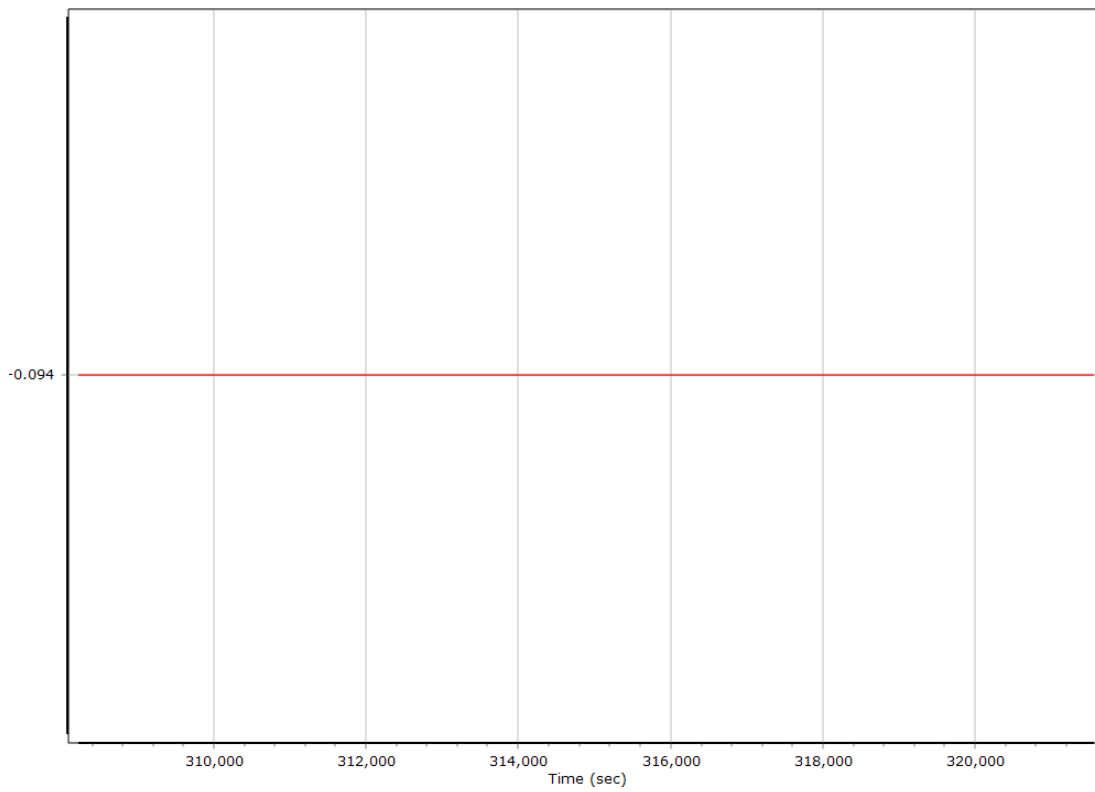
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

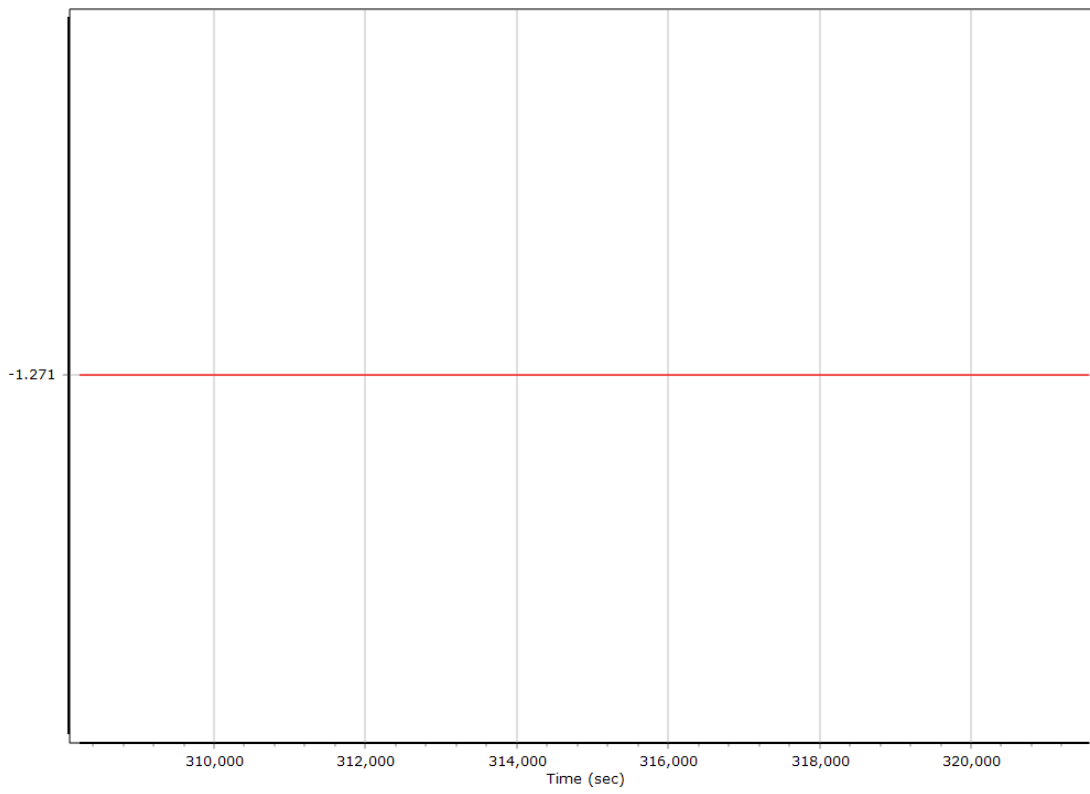
X Reference-Primary GNSS Lever Arm (m)



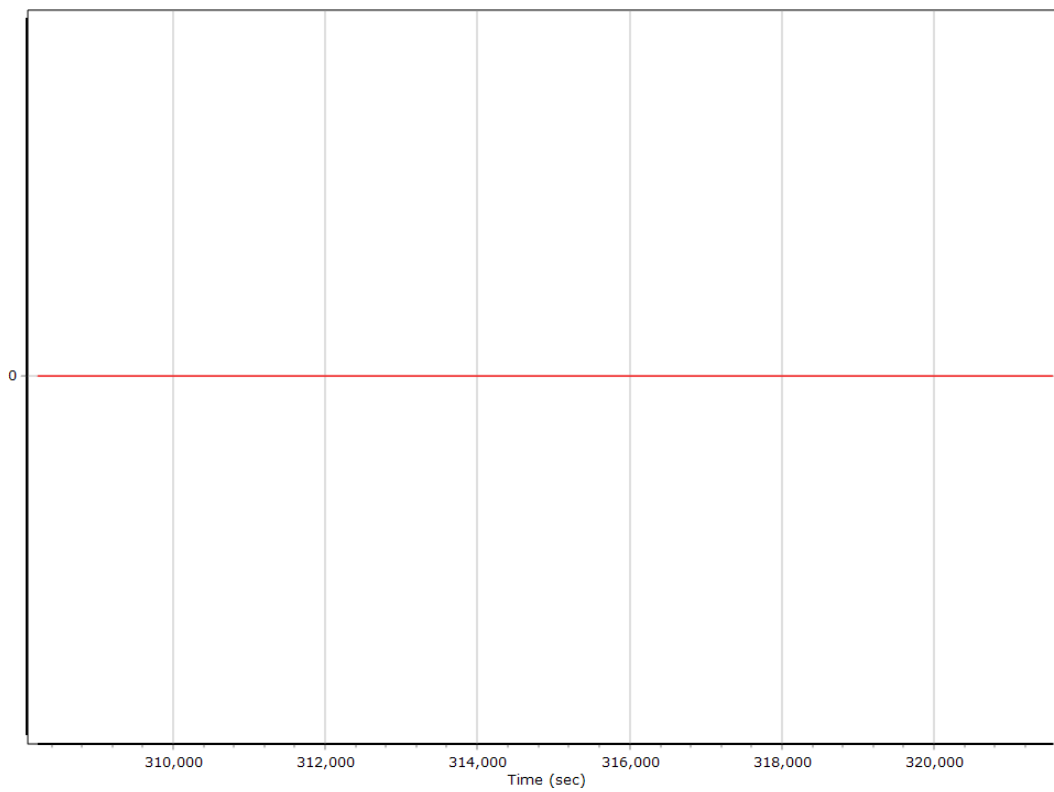
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



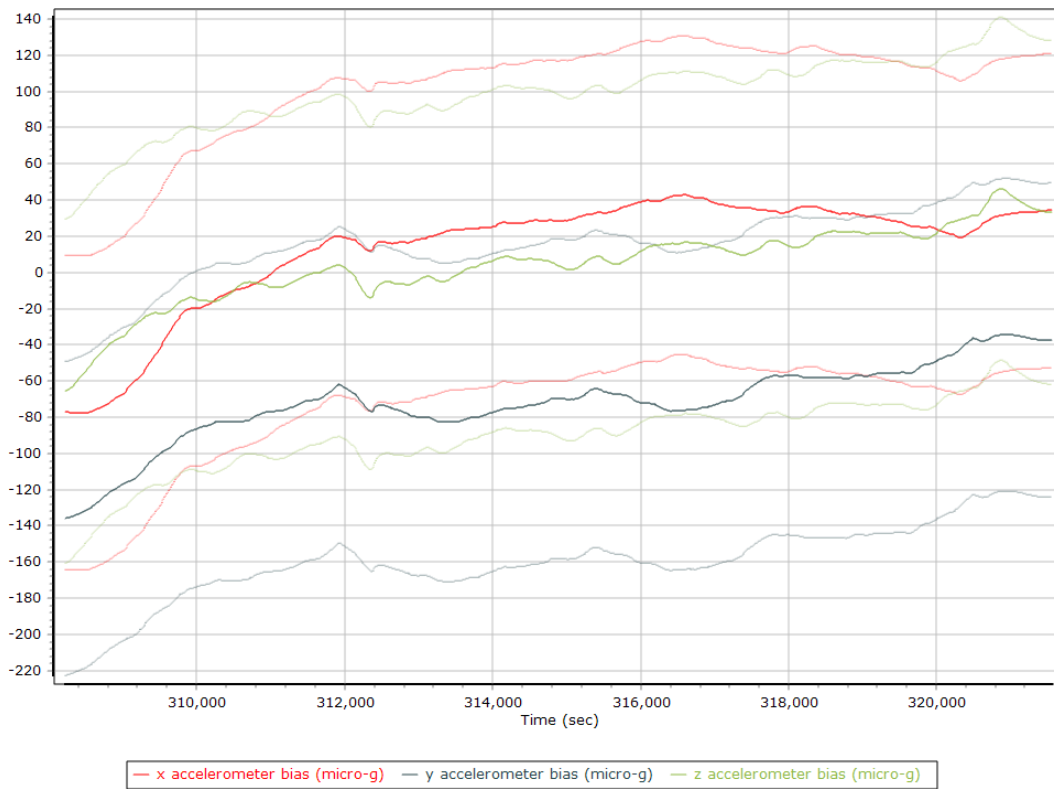
Reference-Primary GNSS Lever Arm Figure of Merit



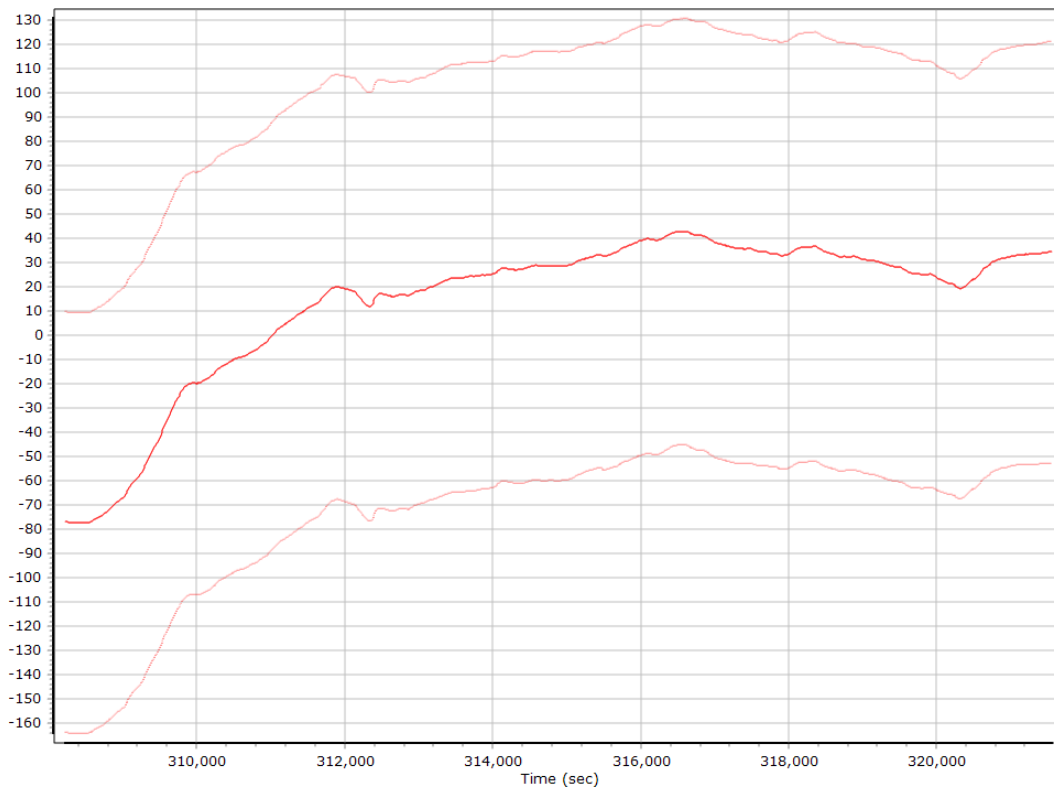
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

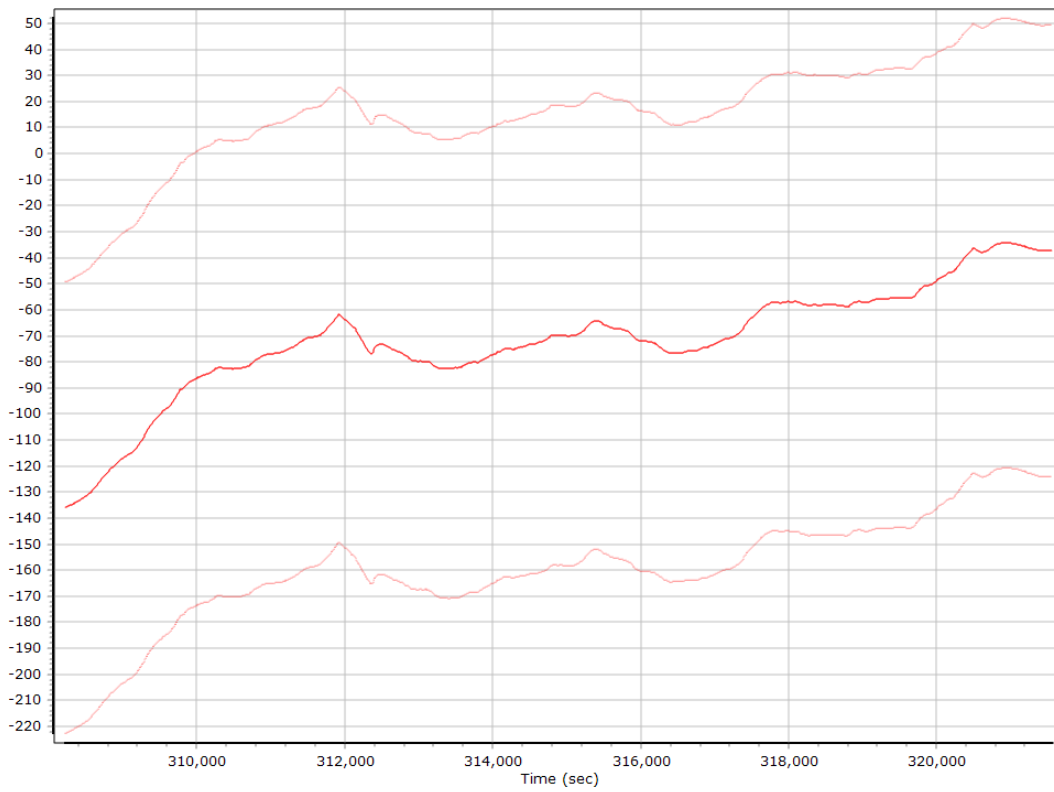
Accelerometer Bias (micro-g)



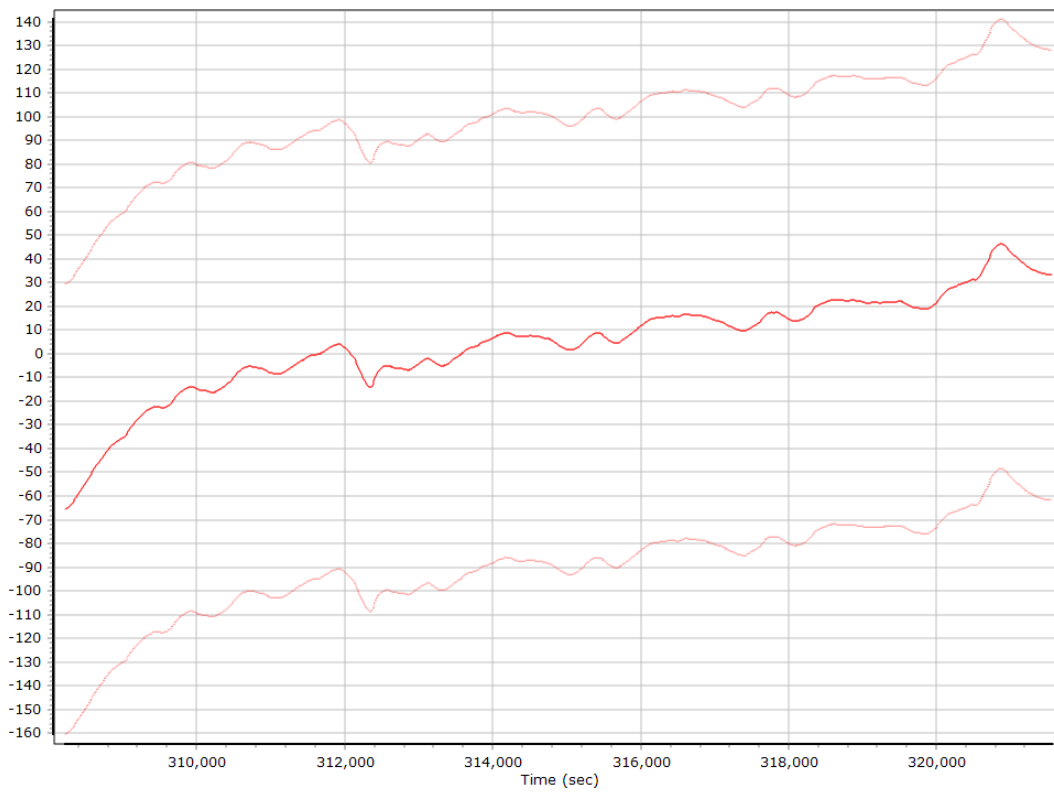
X Accelerometer Bias (micro-g)



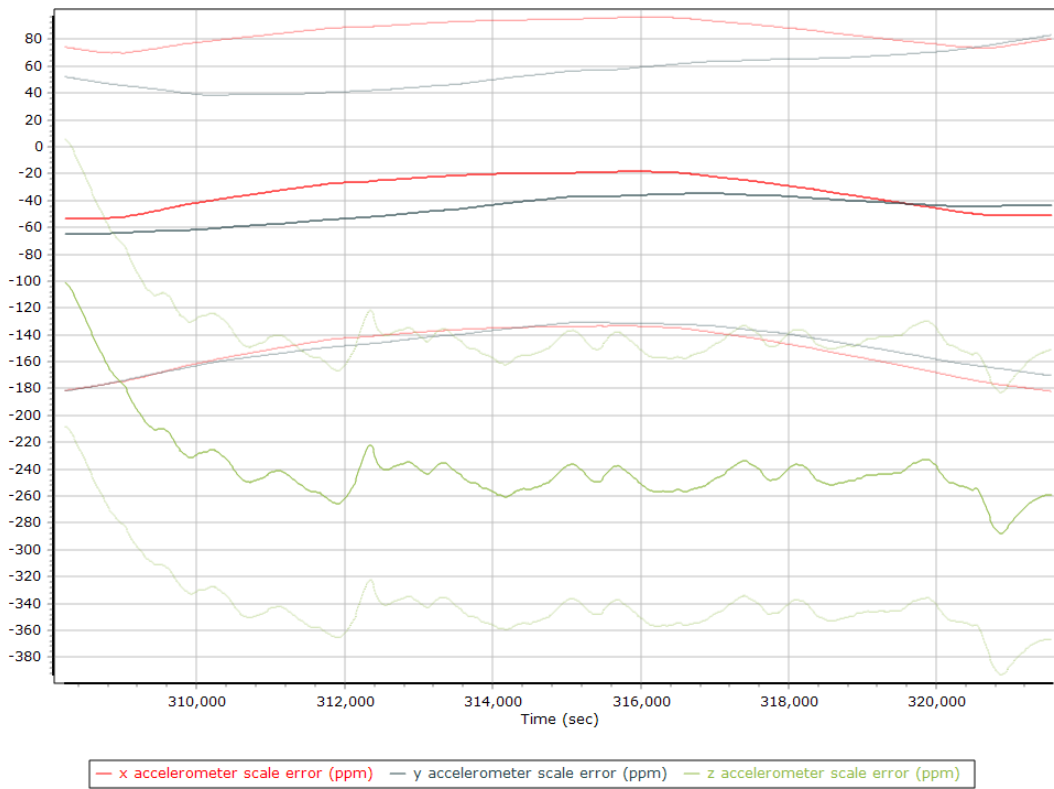
Y Accelerometer Bias (micro-g)



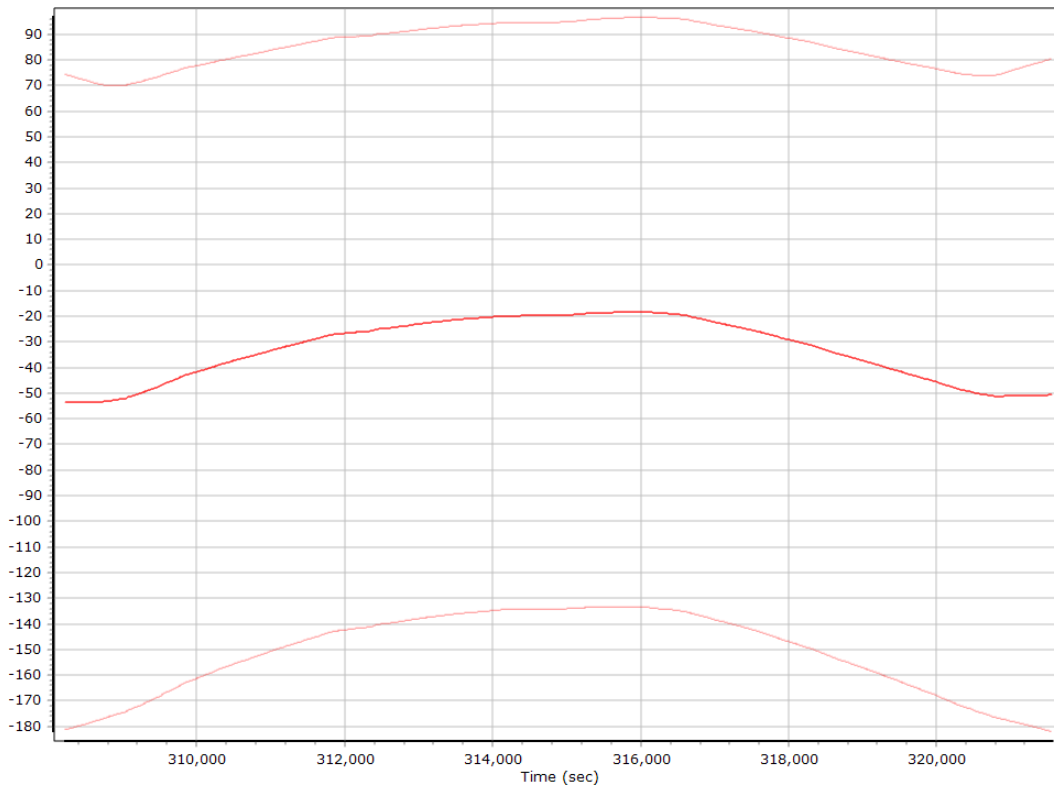
Z Accelerometer Bias (micro-g)



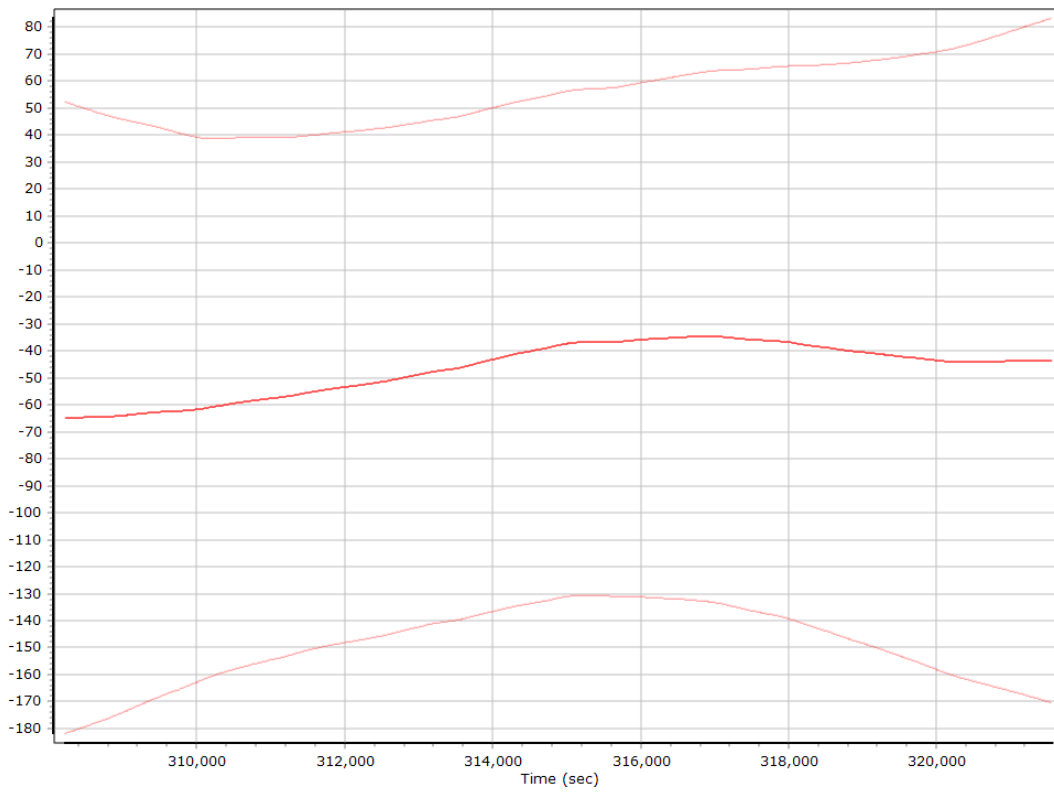
Accelerometer Scale Error (ppm)



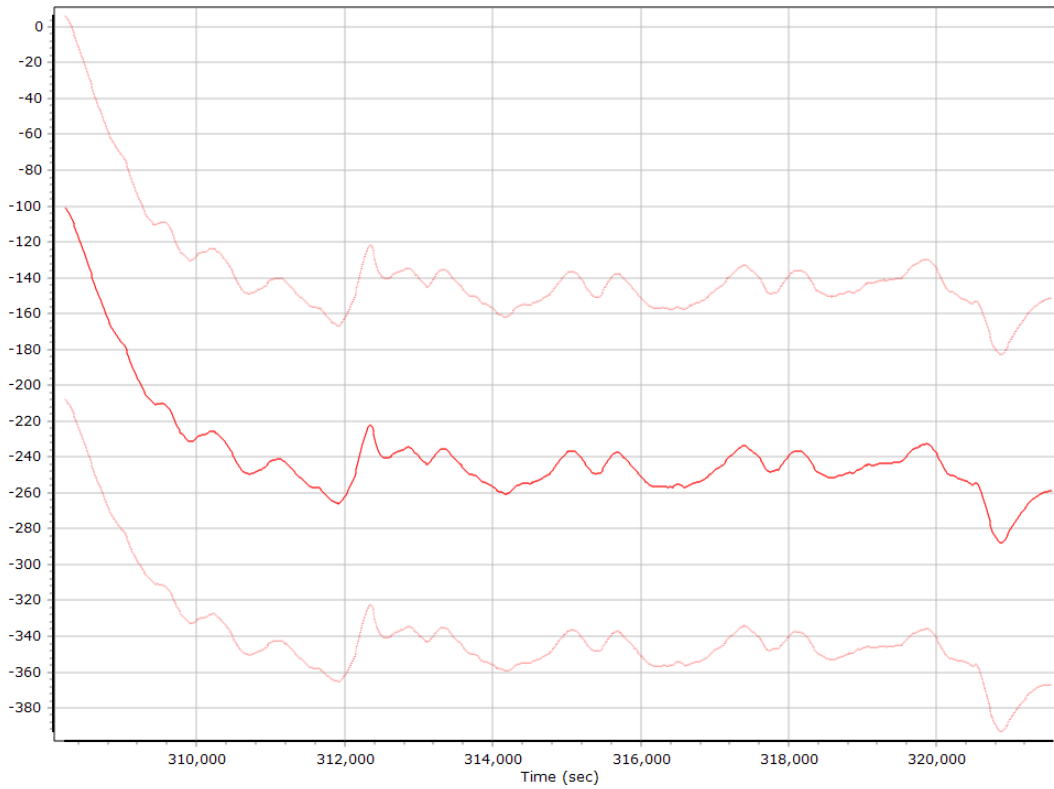
X Accelerometer Scale Error (ppm)



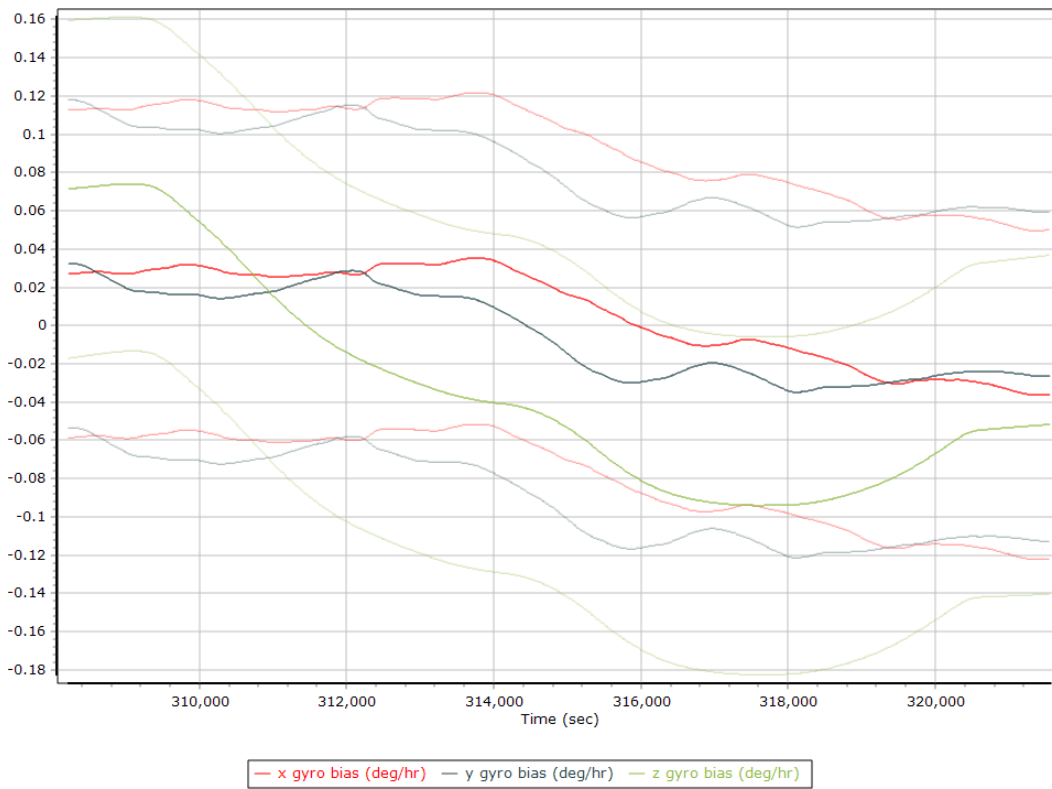
Y Accelerometer Scale Error (ppm)



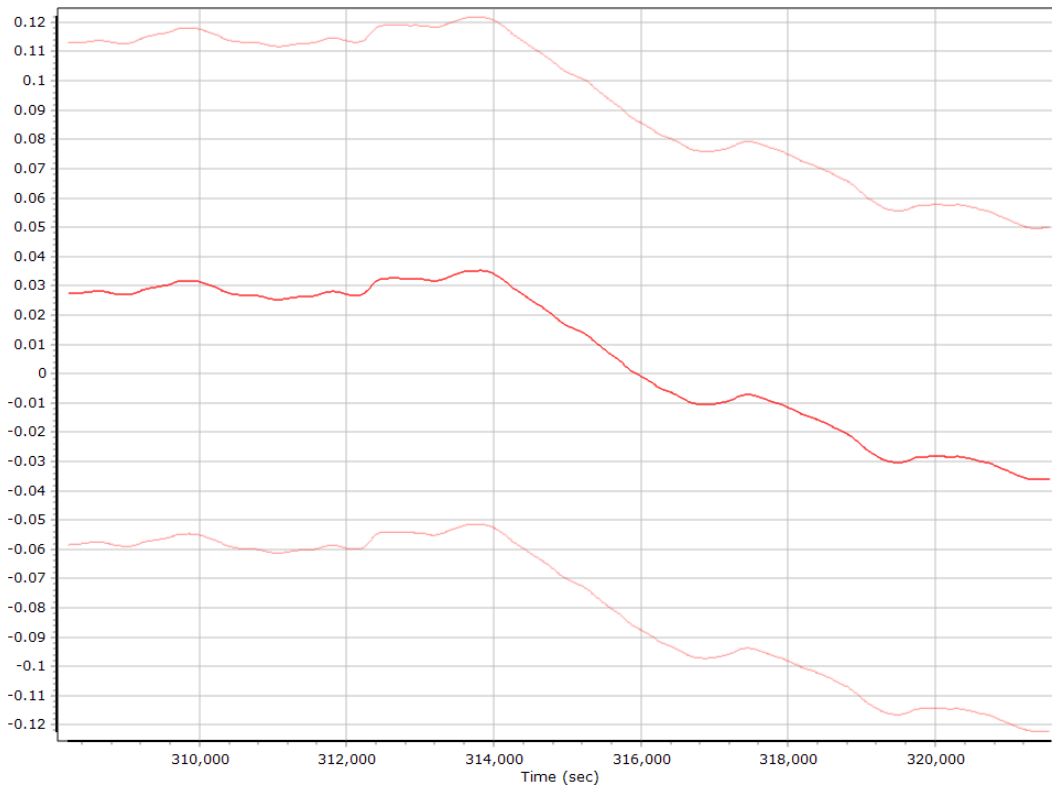
Z Accelerometer Scale Error (ppm)



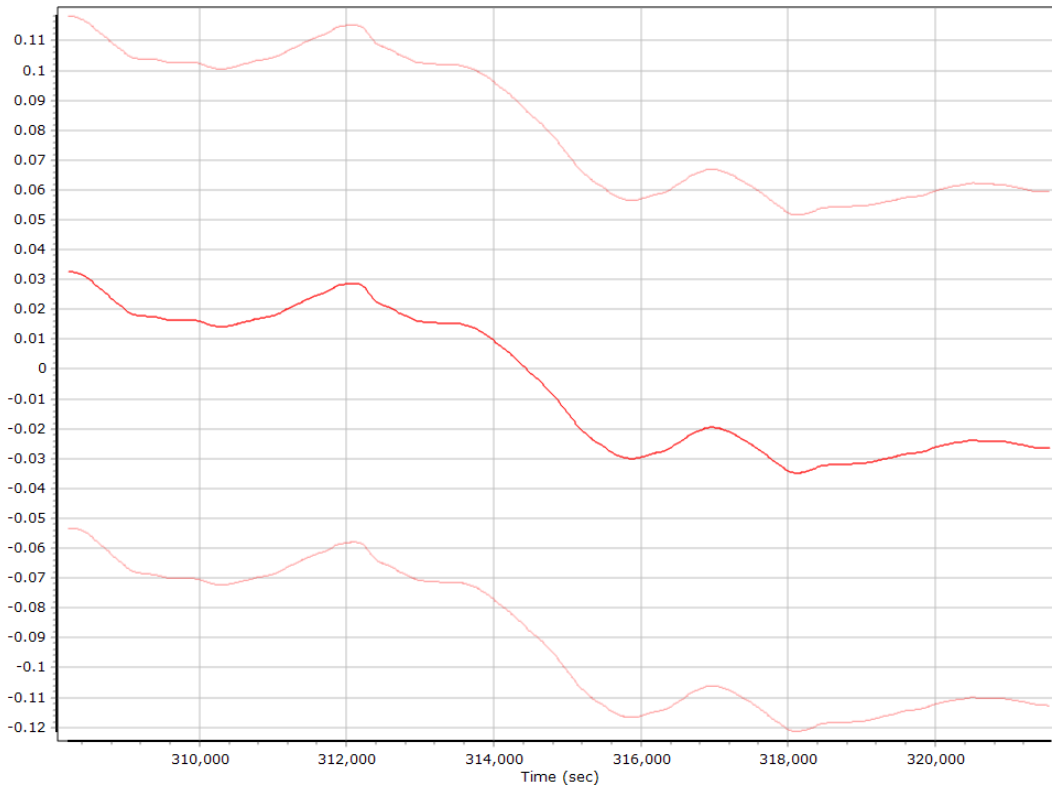
Gyro Bias (deg/h)



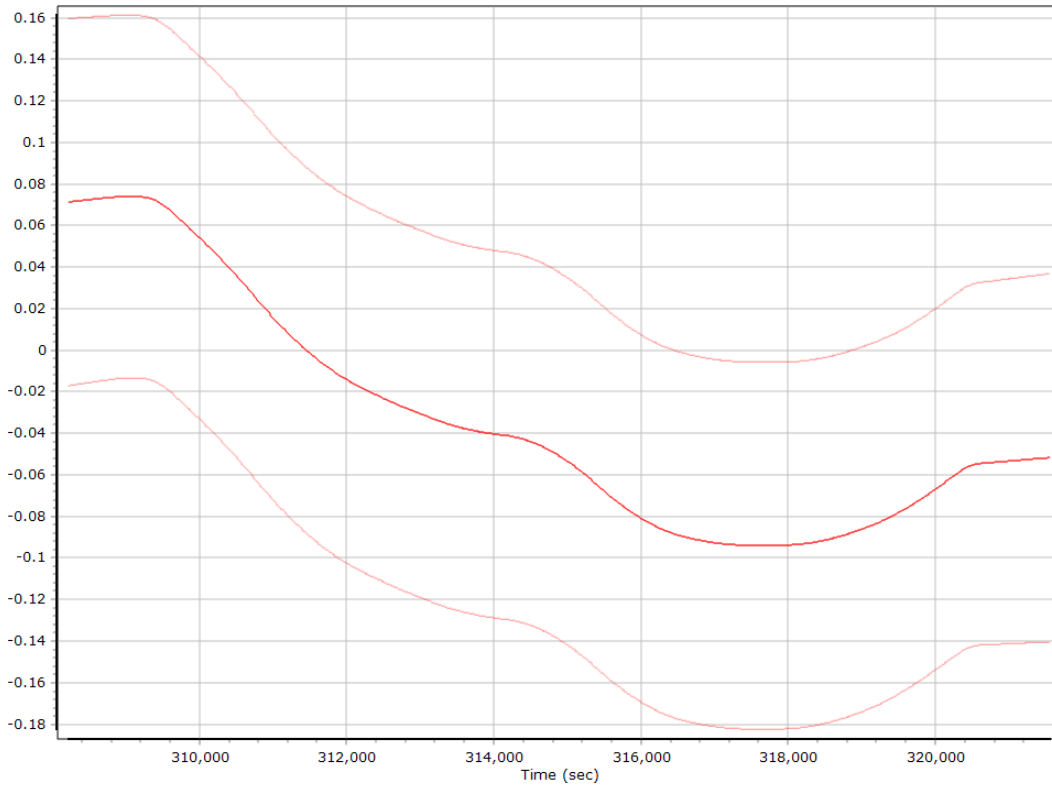
X Gyro Bias (deg/h)



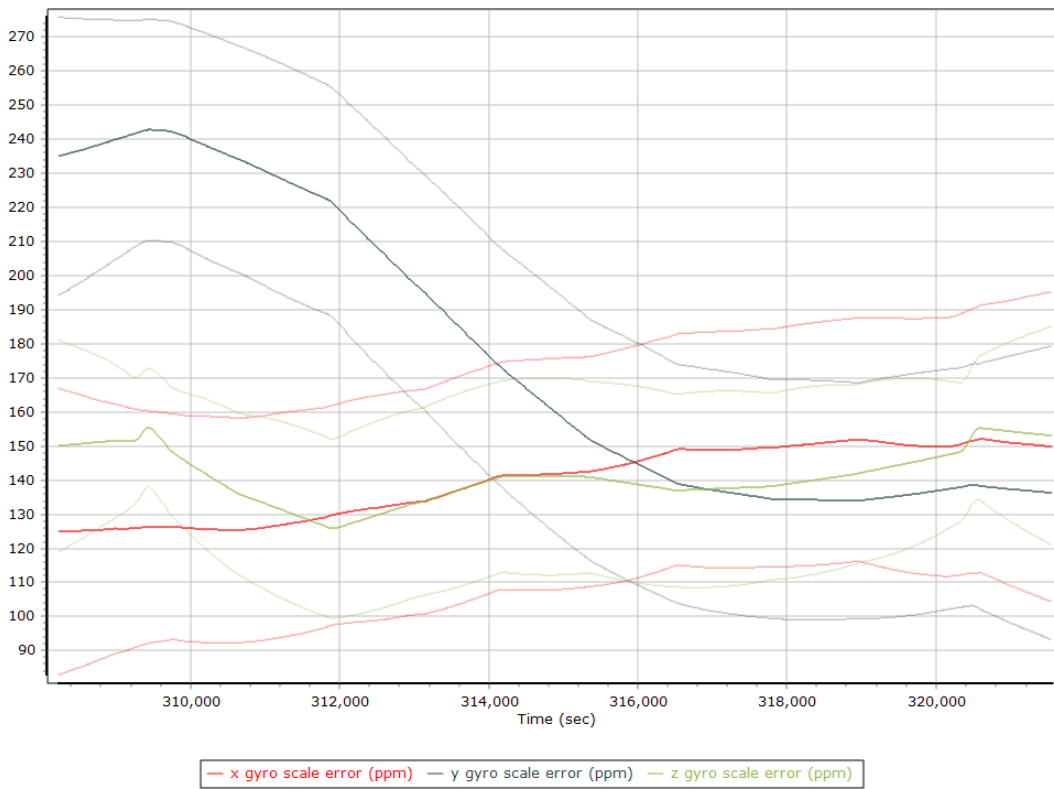
Y Gyro Bias (deg/h)



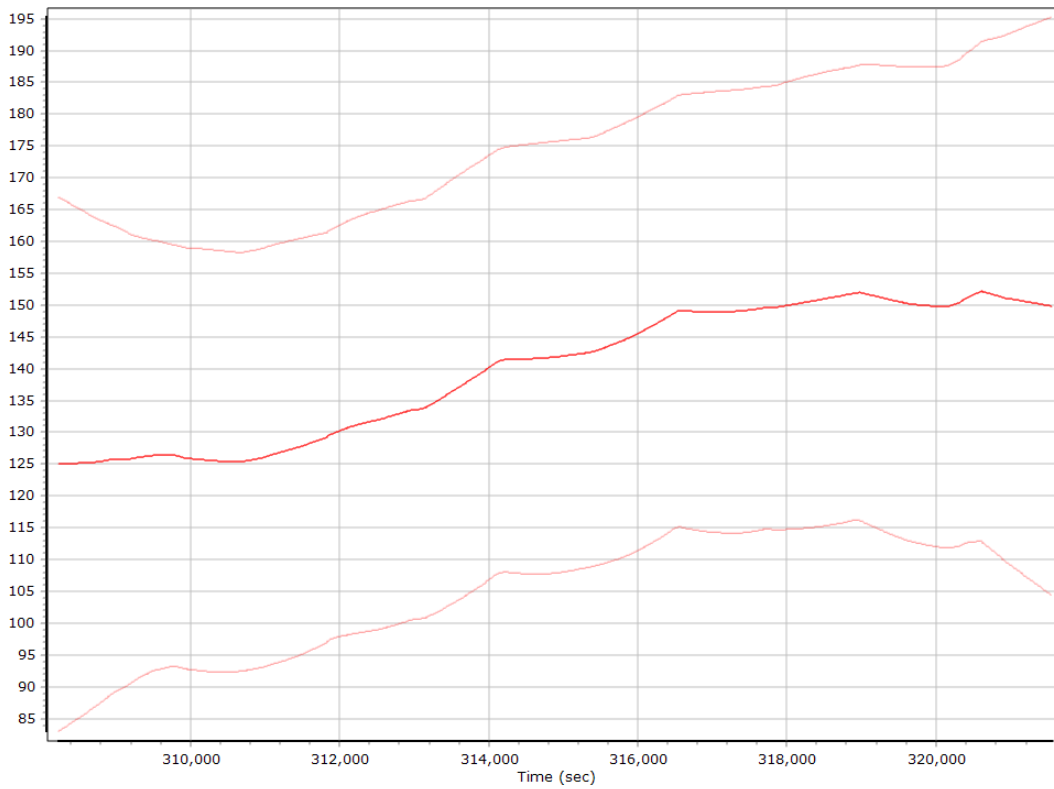
Z Gyro Bias (deg/h)



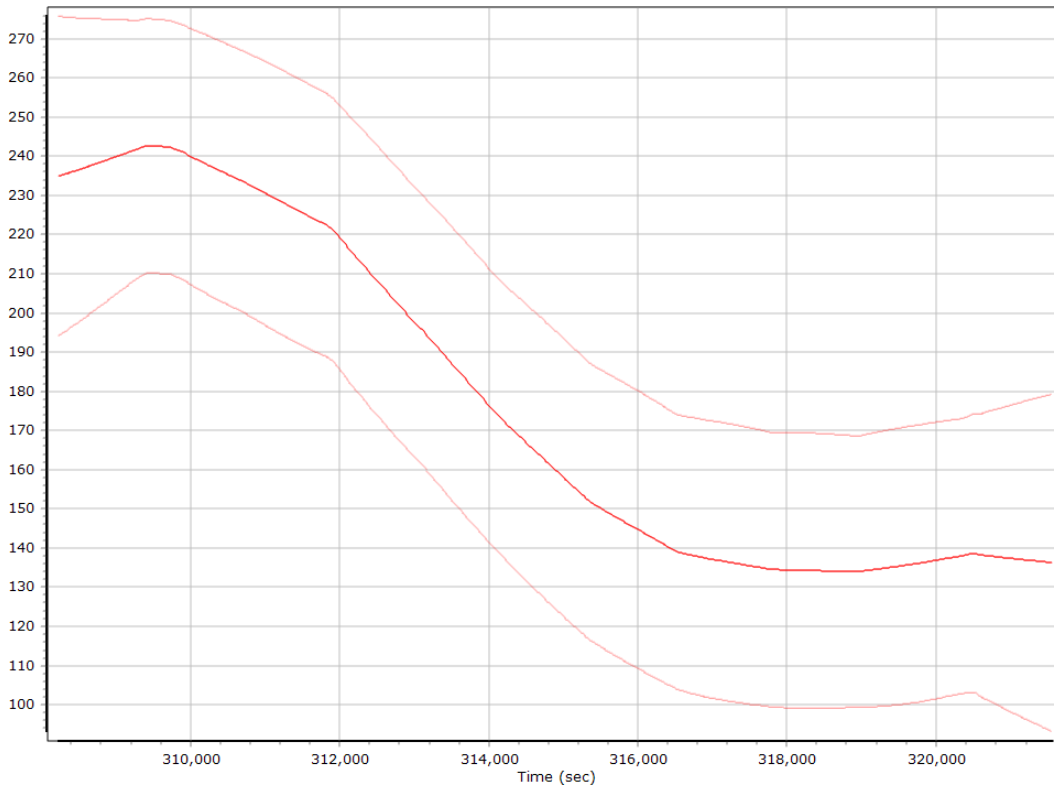
Gyro Scale Error (ppm)



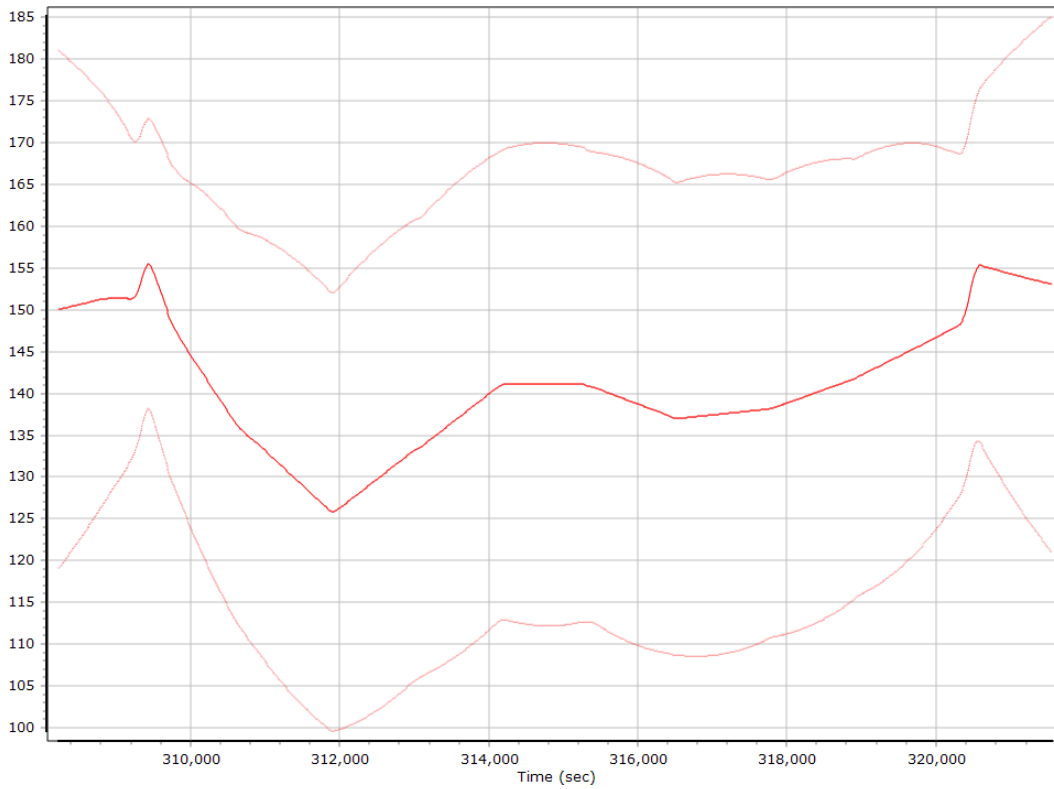
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

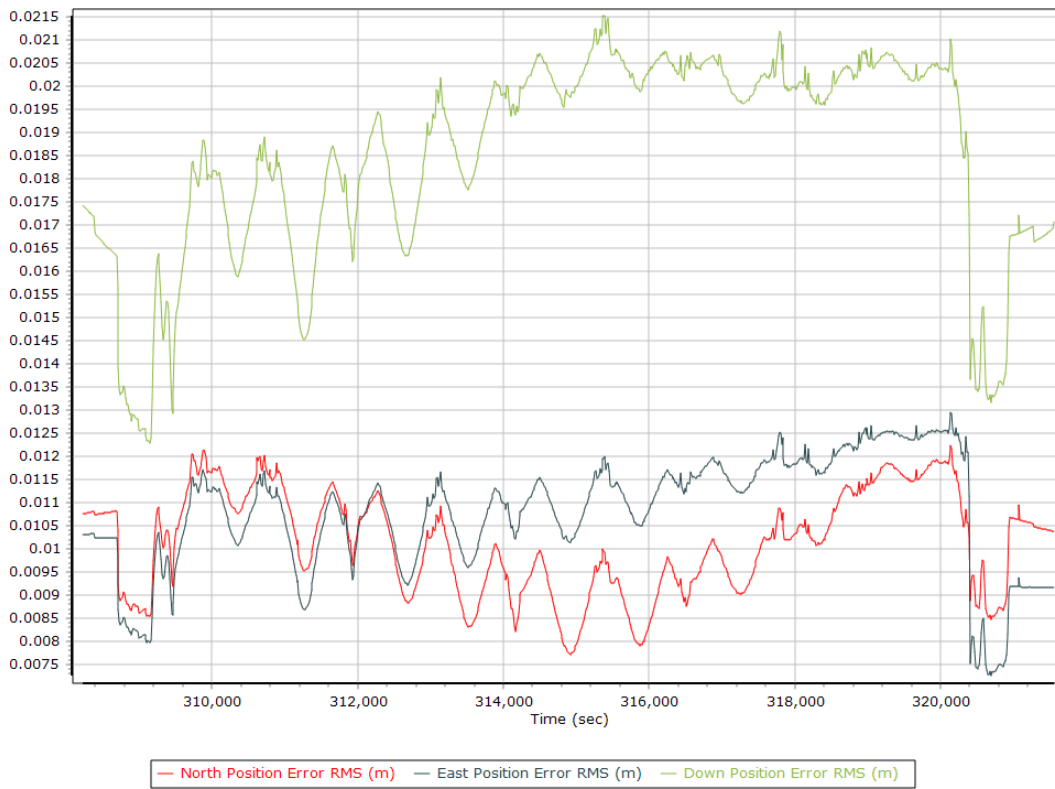


Z Gyro Scale Error (ppm)

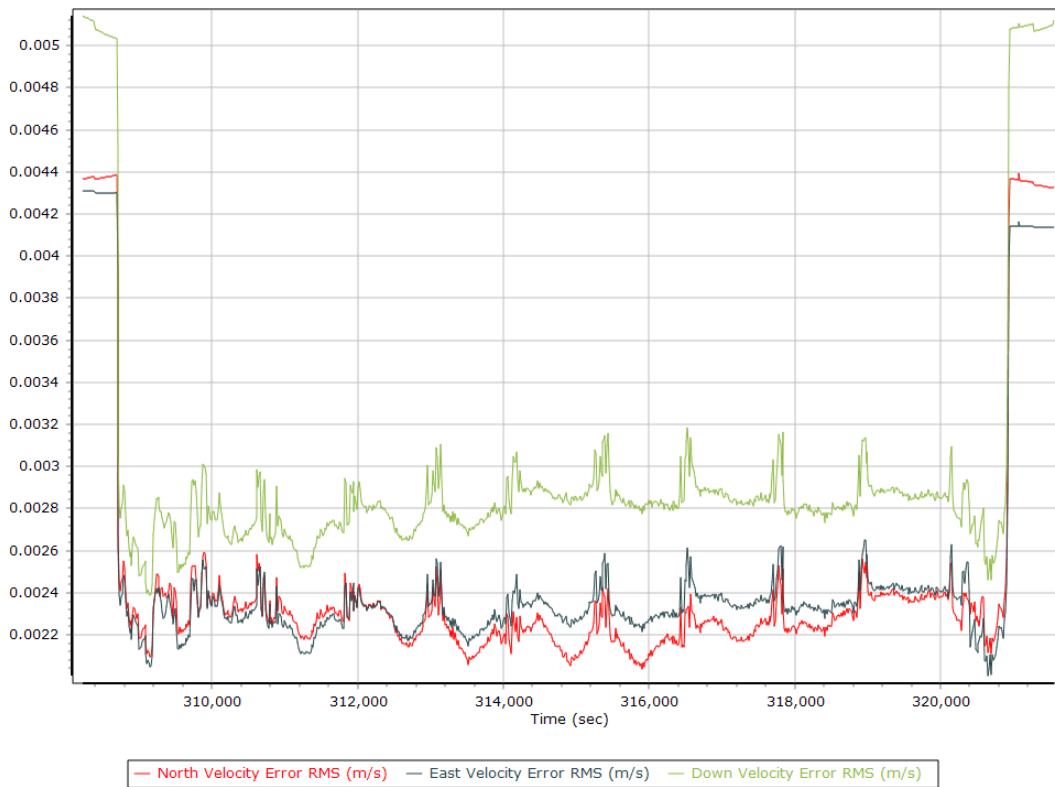


Smoothed Performance Metrics

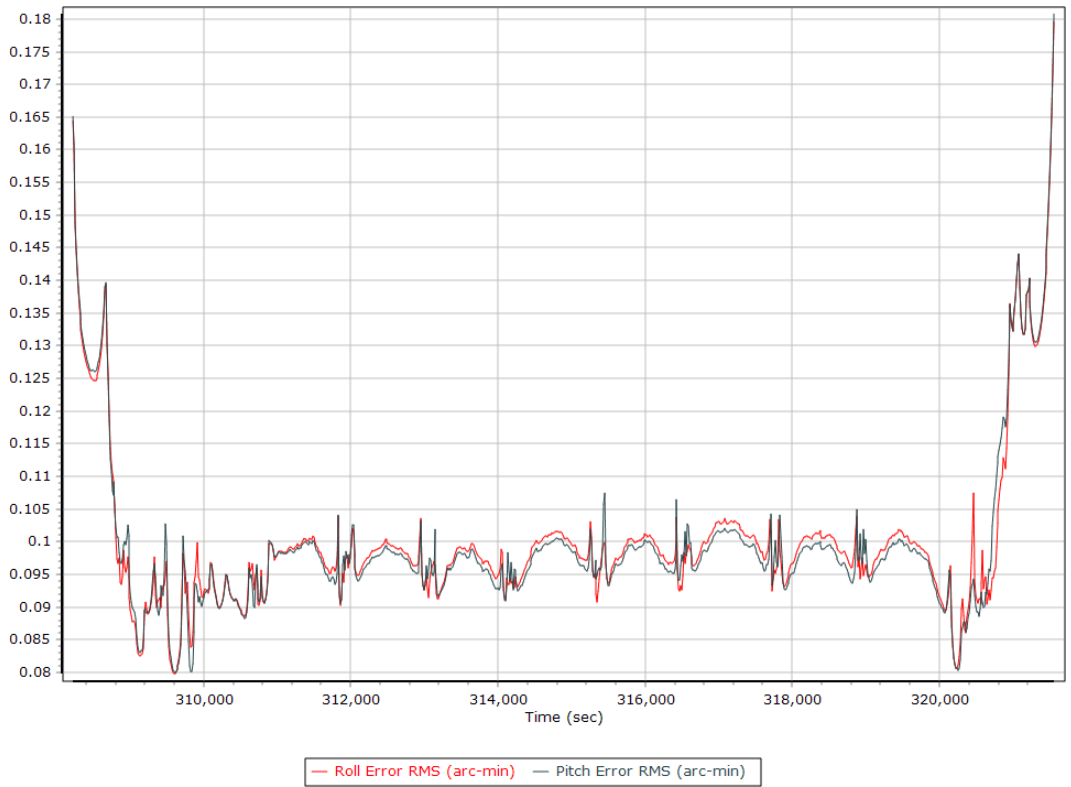
Position Error RMS (m)



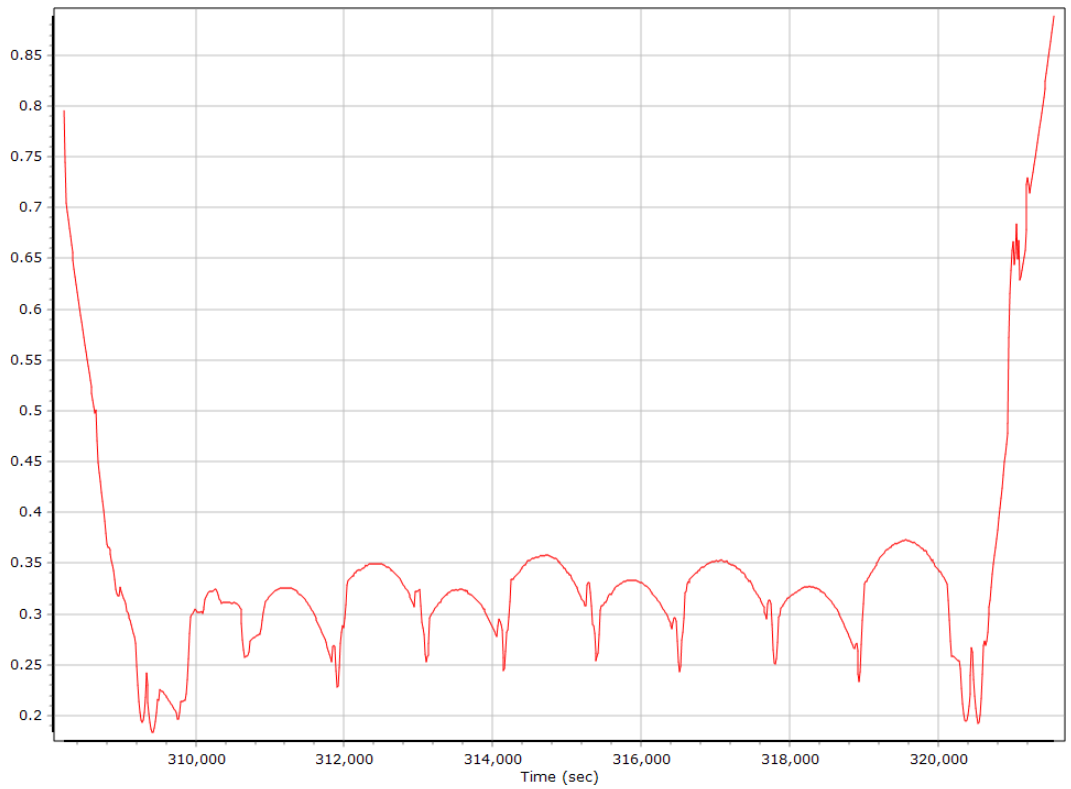
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

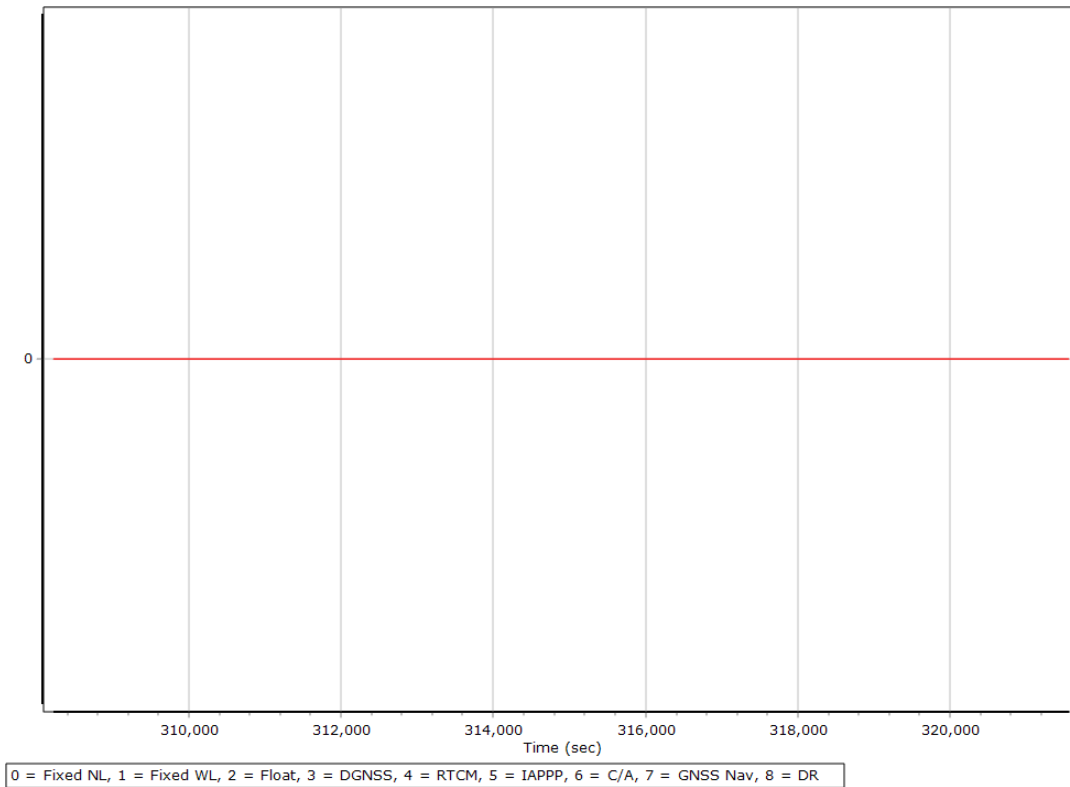


Heading Error RMS (arc-min)

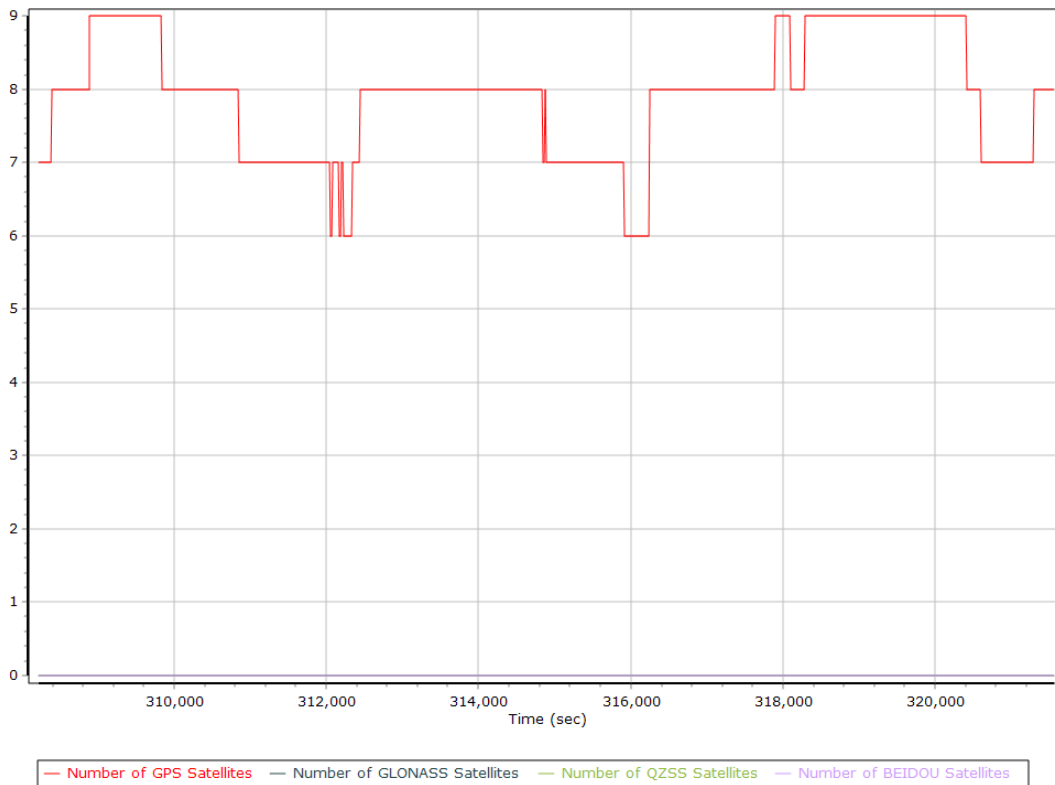


Smoothed Solution Status

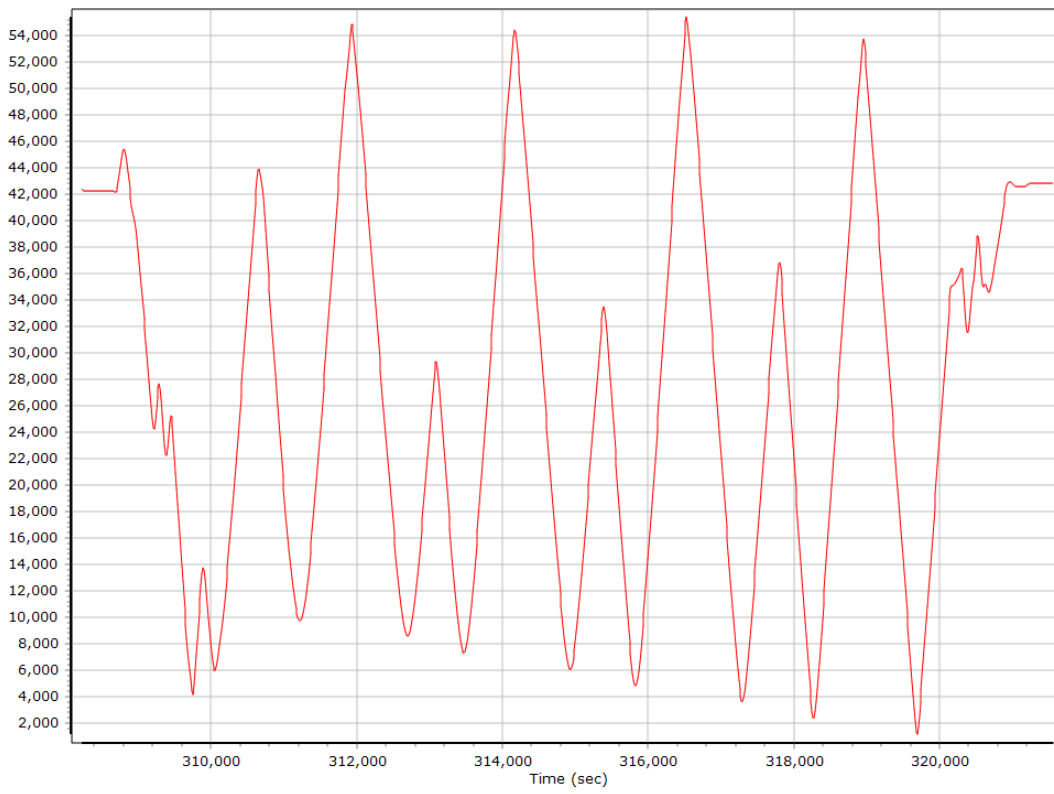
Processing Mode



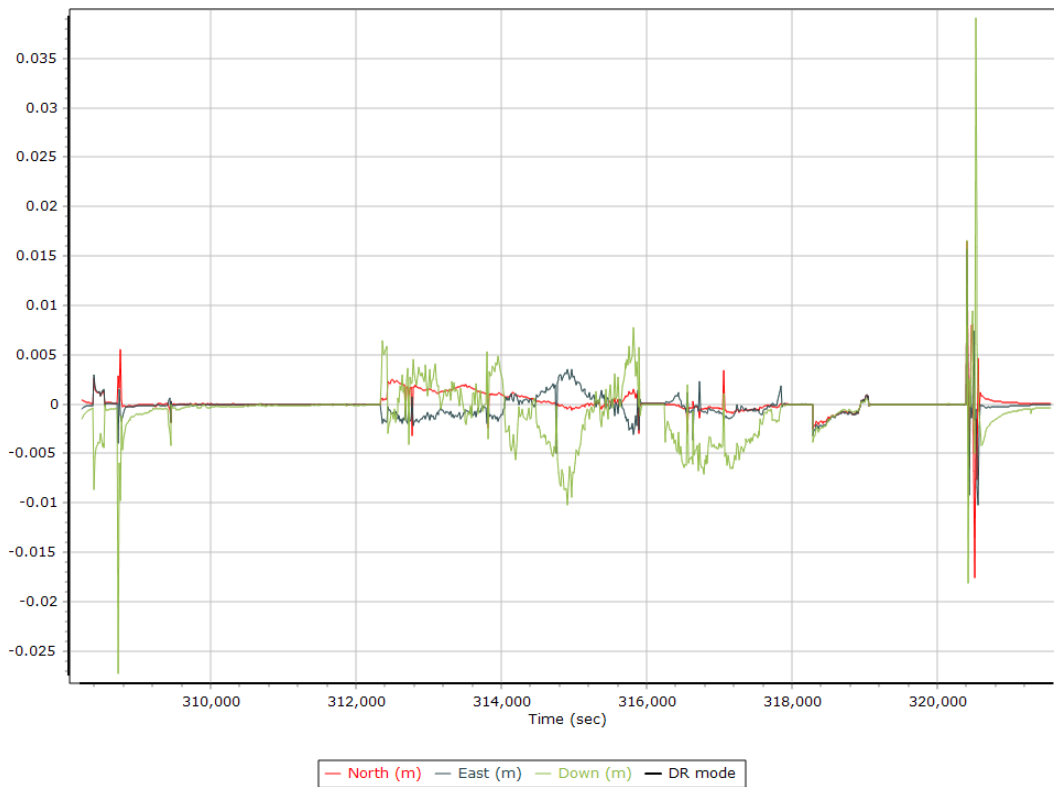
Number of Satellites



Baseline Length



SBET IAKAR Separation



General Information

Mission Information

Project name	4319365a
Processing date	2020-01-03 20:13:59
Mission date	2019-12-31 17:30:54
Mission duration	05:33:31.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9683
IMU type	57
Receiver type	BD982
Antenna type	Unknown External

Project File List

Rover Data Files

File name	File type
191231_173035_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3650.19g	GLONASS Broadcast Ephemeris
Ephm3650.19n	GPS Broadcast Ephemeris
flcb3650.19o	GNSS SingleBase
fljl3650.19o	GNSS SingleBase
fljo3650.19o	GNSS SingleBase
flmr3650.19o	GNSS SingleBase
gatv3650.19o	GNSS SingleBase
prry3650.19o	GNSS SingleBase
sned3650.19o	GNSS SingleBase
talh3650.19o	GNSS SingleBase
igr20862.sp3	GPS Precise Ephemeris
igr20863.sp3	GPS Precise Ephemeris
flmd3650.19o	GNSS SingleBase
aldo3650.19o	GNSS SingleBase

Output Files

Filename	File type
sbet_4319365a.out	SBET Trajectory File
export_4319365a.kml	Google KML Export Output

Rover Data Summary

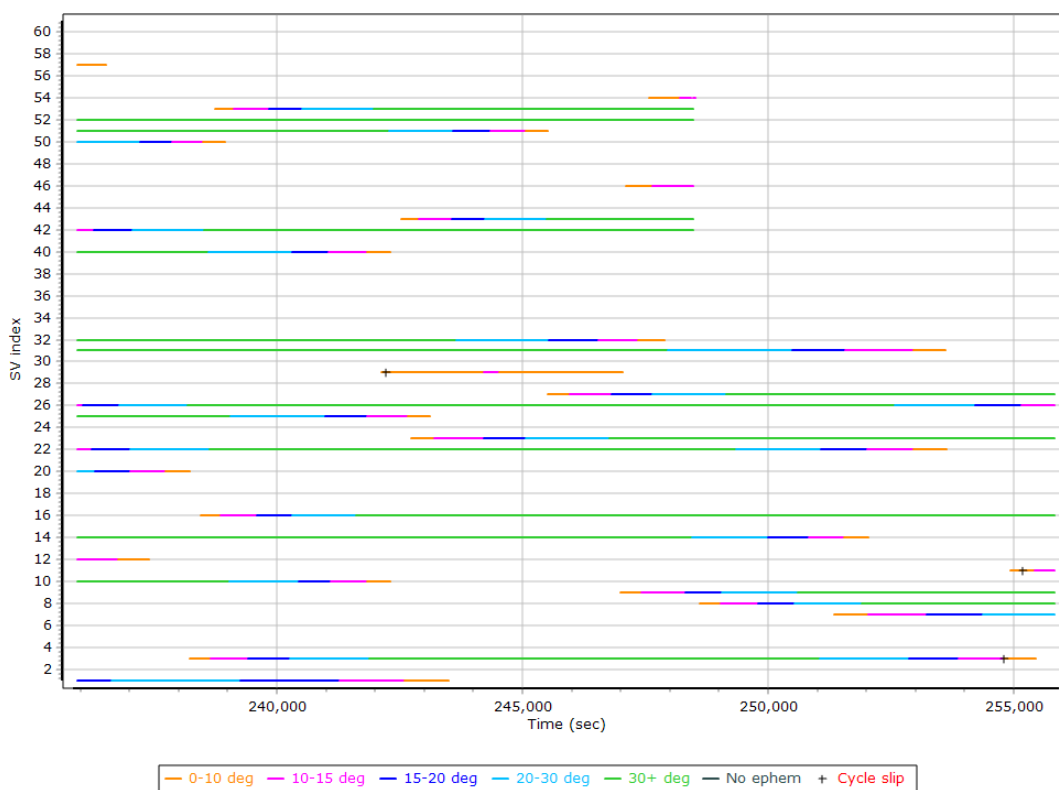
First raw data file	191231_173035_INS-GPS_1.raw		
Last raw data file	191231_173035_INS-GPS_1.raw		
Start GPS week	2086		
Start time	235835.181 (12/31/2019 5:30:35 PM)		
End time	255839.993 (12/31/2019 11:03:59 PM)		
Start of fine alignment	235890.159 (12/31/2019 5:31:30 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	Event 1 Input, Event 2 Input, Event 3 Input, Event 4 Input, Event 5 Input, Event 6 Input		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.704	-0.207	-1.249
Gimbal 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

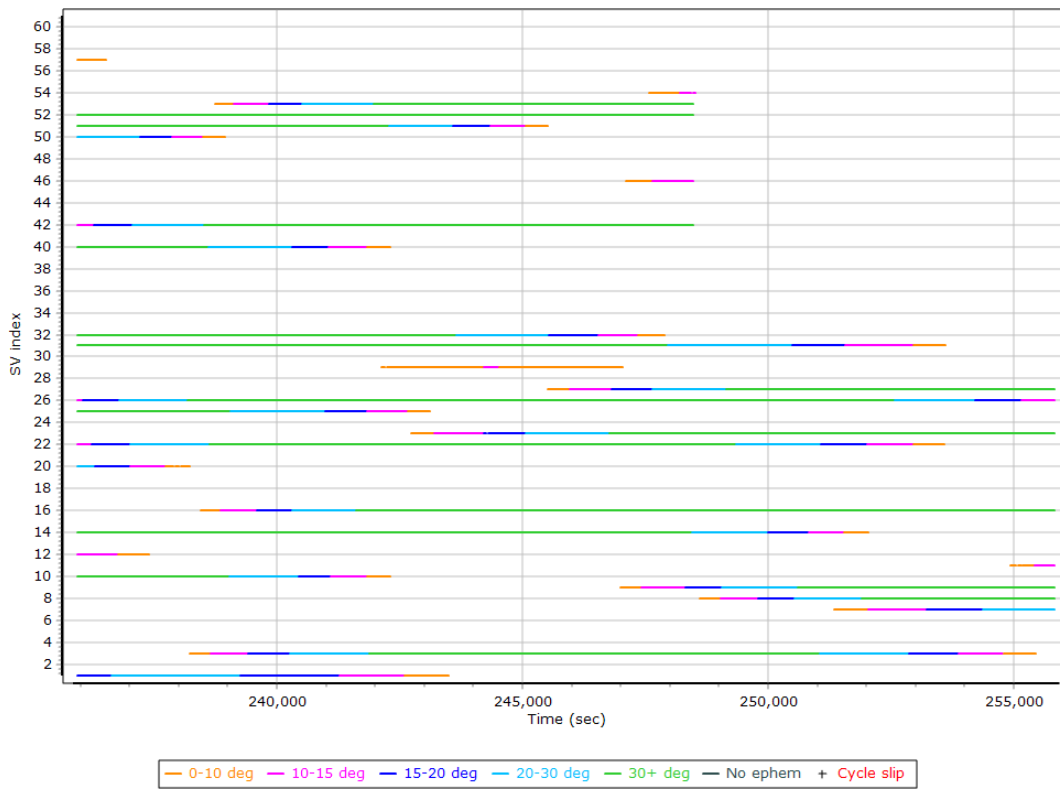
Raw IMU Import QC Summary

IMU data input file	imu_4319365a.dat
IMU data check log file	imudt_4319365a.log
IMU Records Processed	4001595
Termination Status	Normal
IMU Anomalies	0

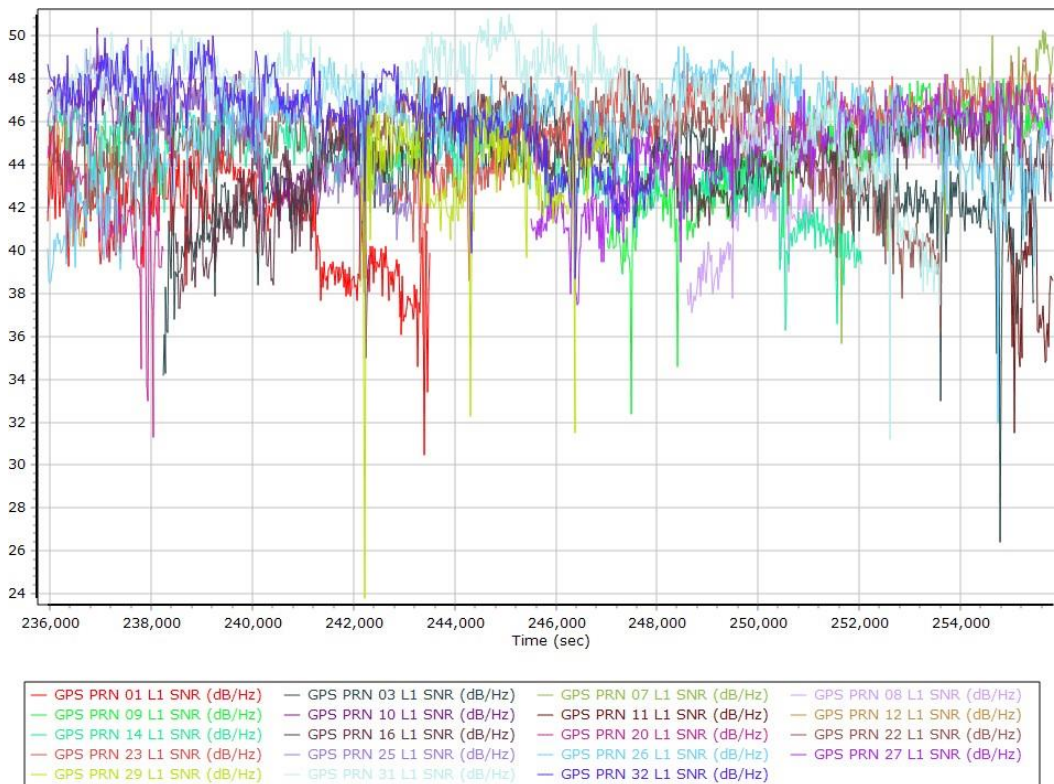
L1 Satellite Lock/Elevation



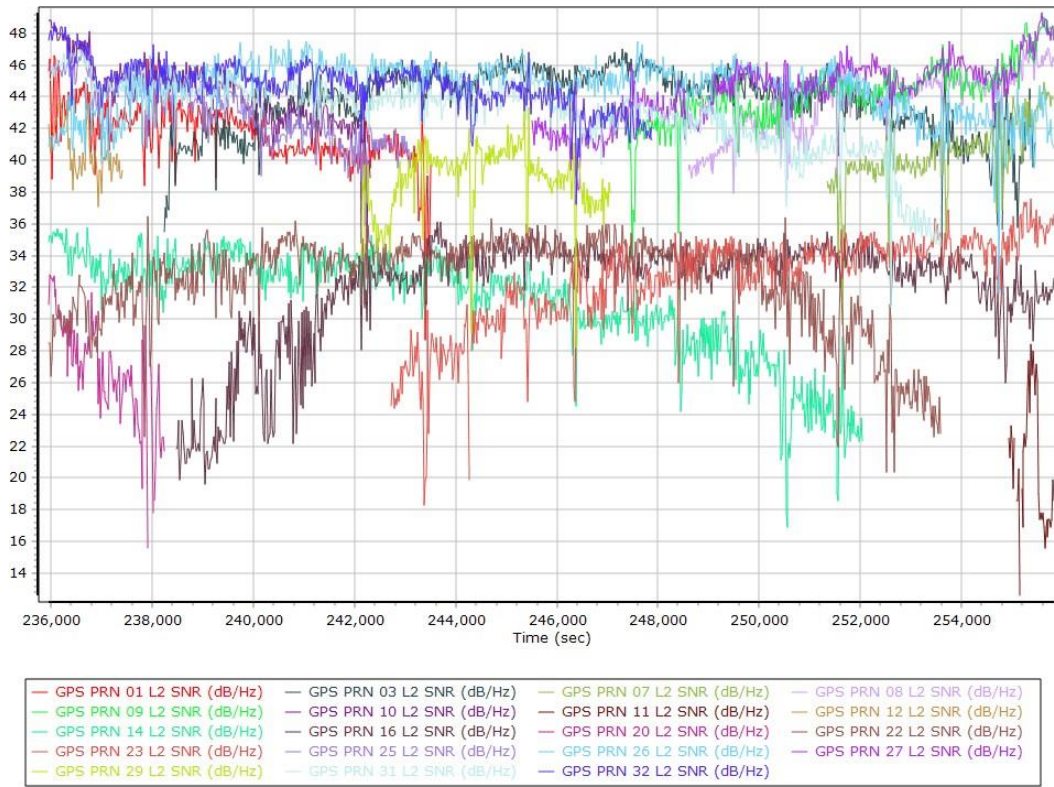
L2 Satellite Lock/Elevation



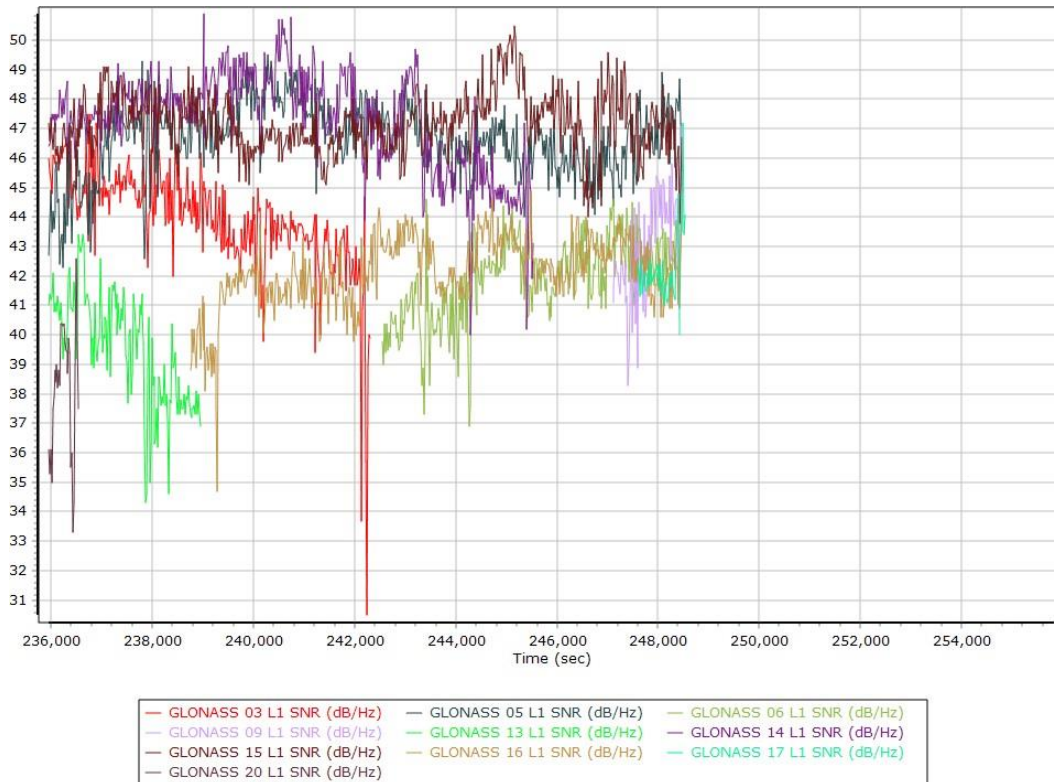
GPS L1 SNR



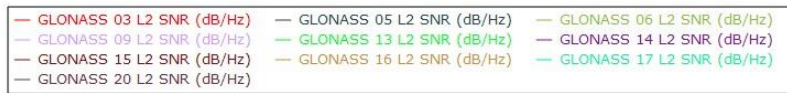
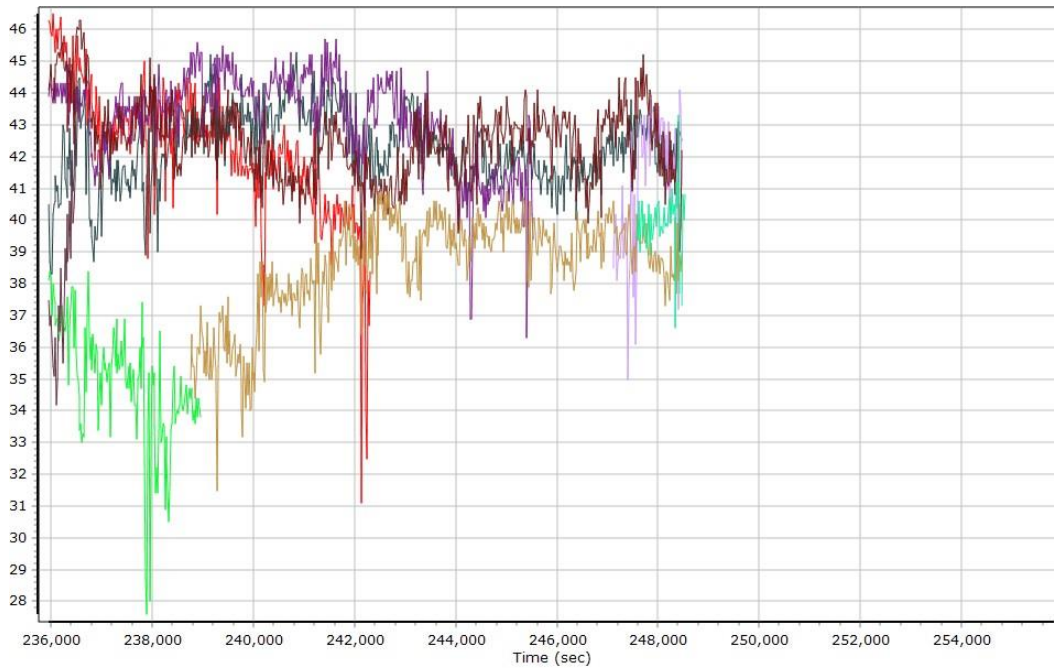
GPS L2 SNR



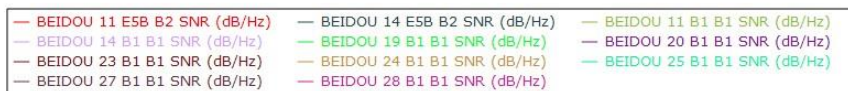
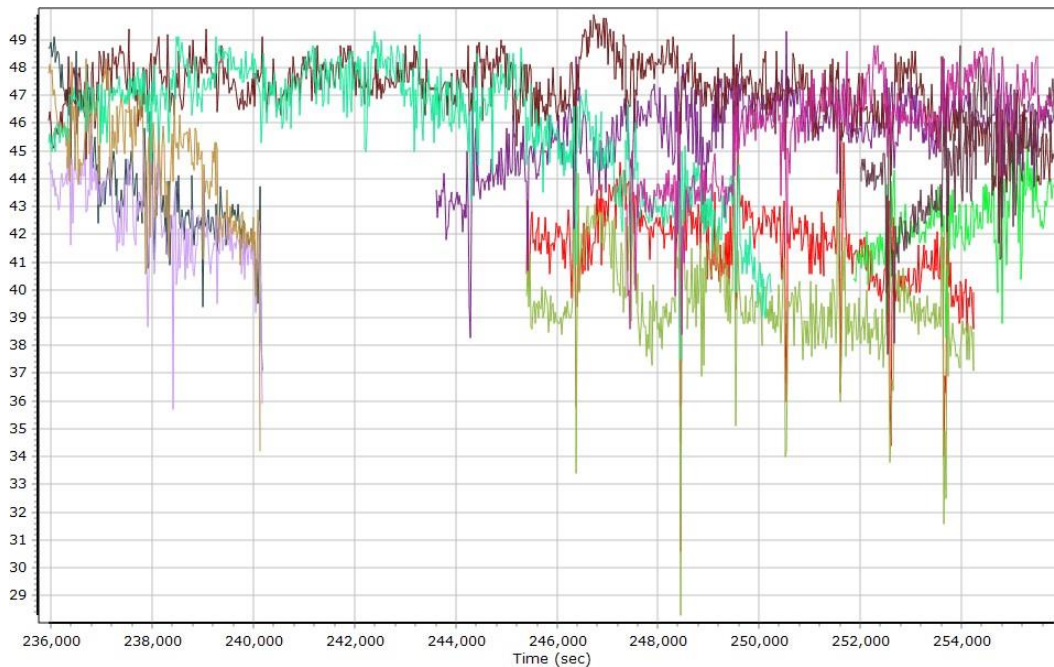
GLONASS L1 SNR



GLONASS L2 SNR

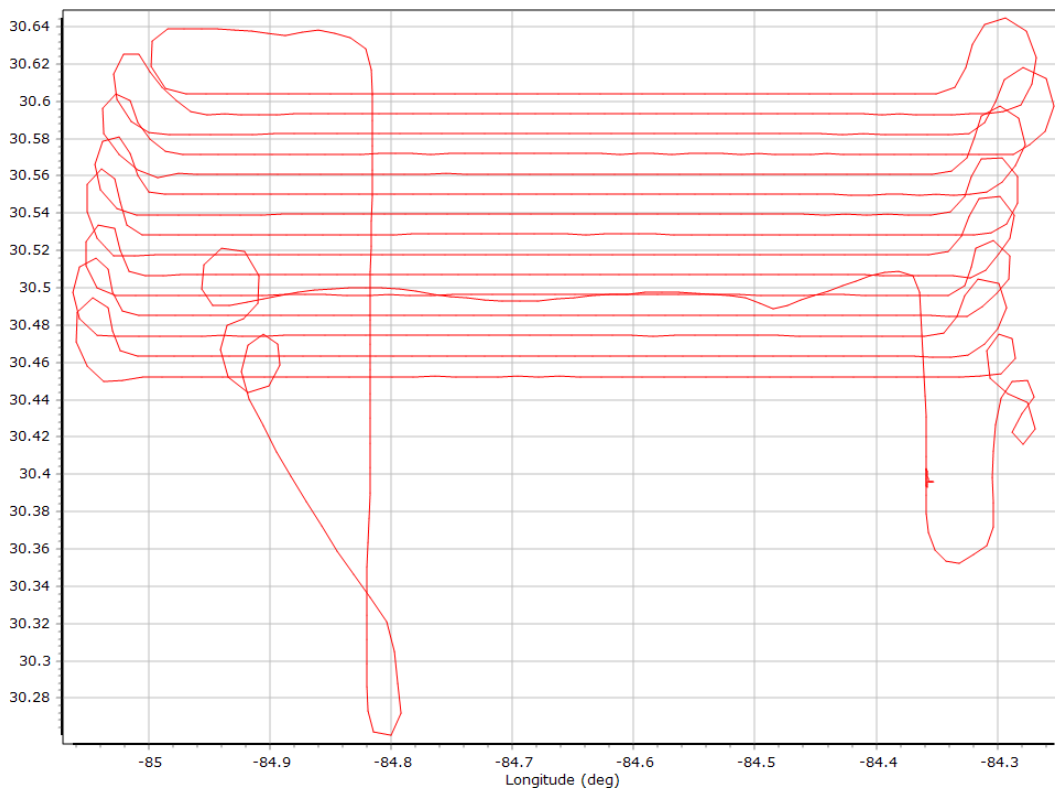


BEIDOU SNR

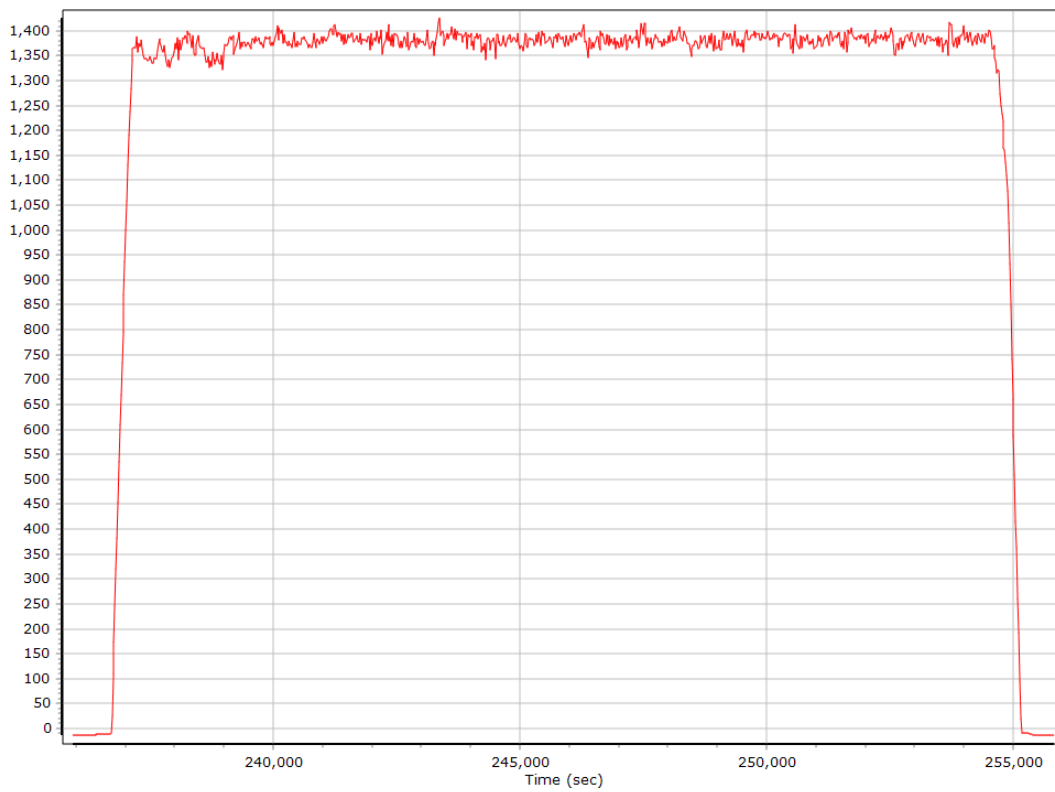


Trajectory Information

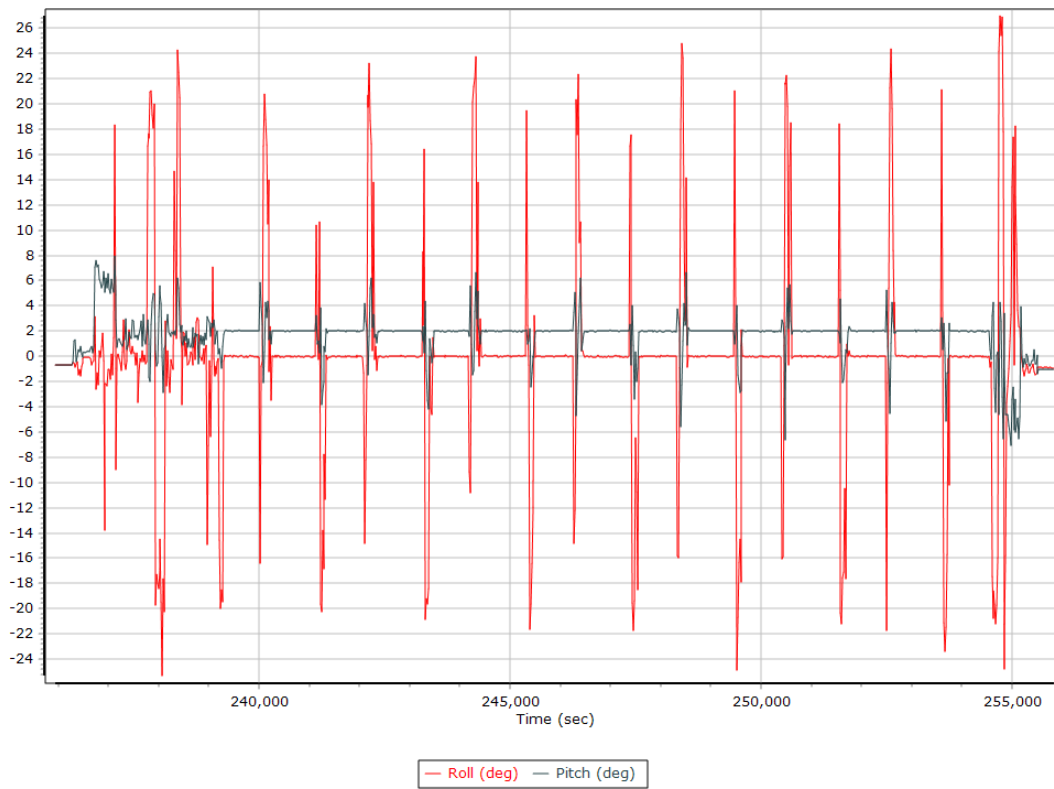
Top View



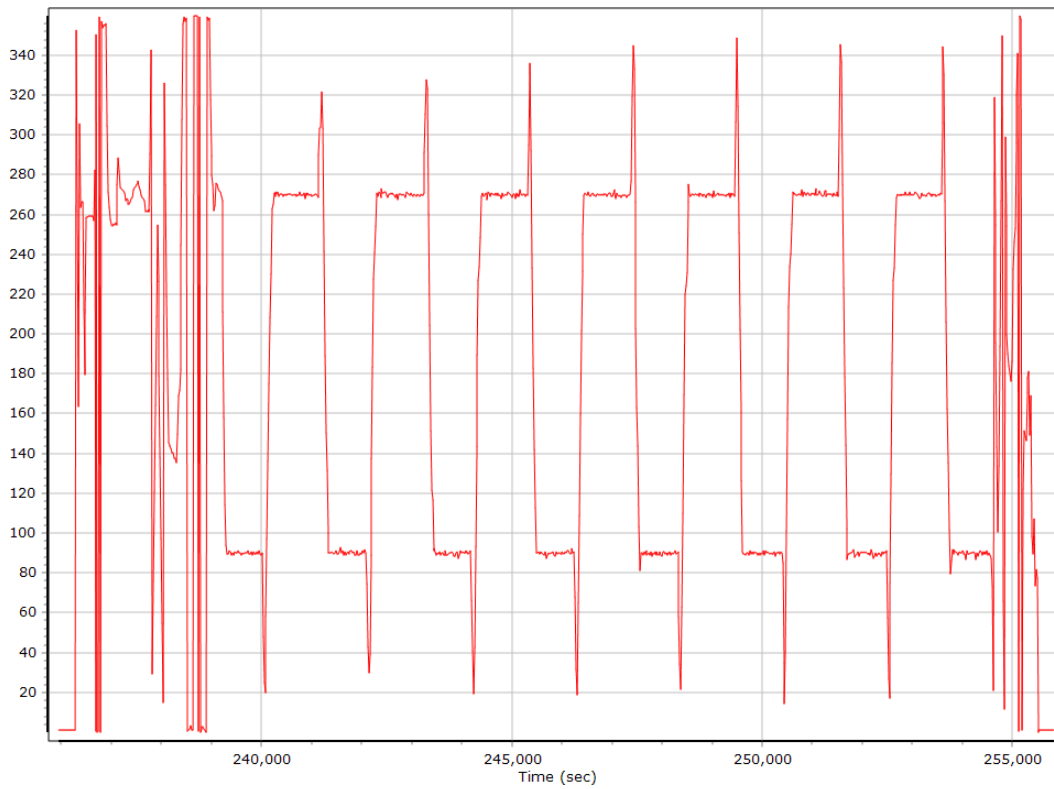
Altitude



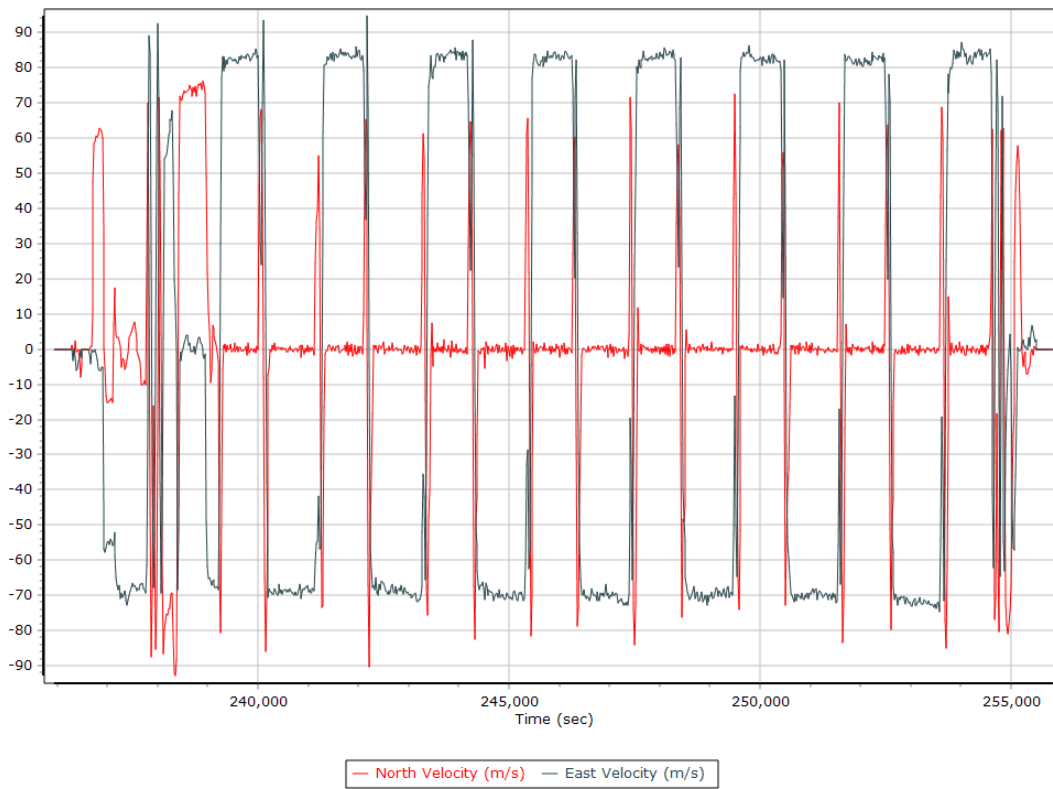
Roll/Pitch



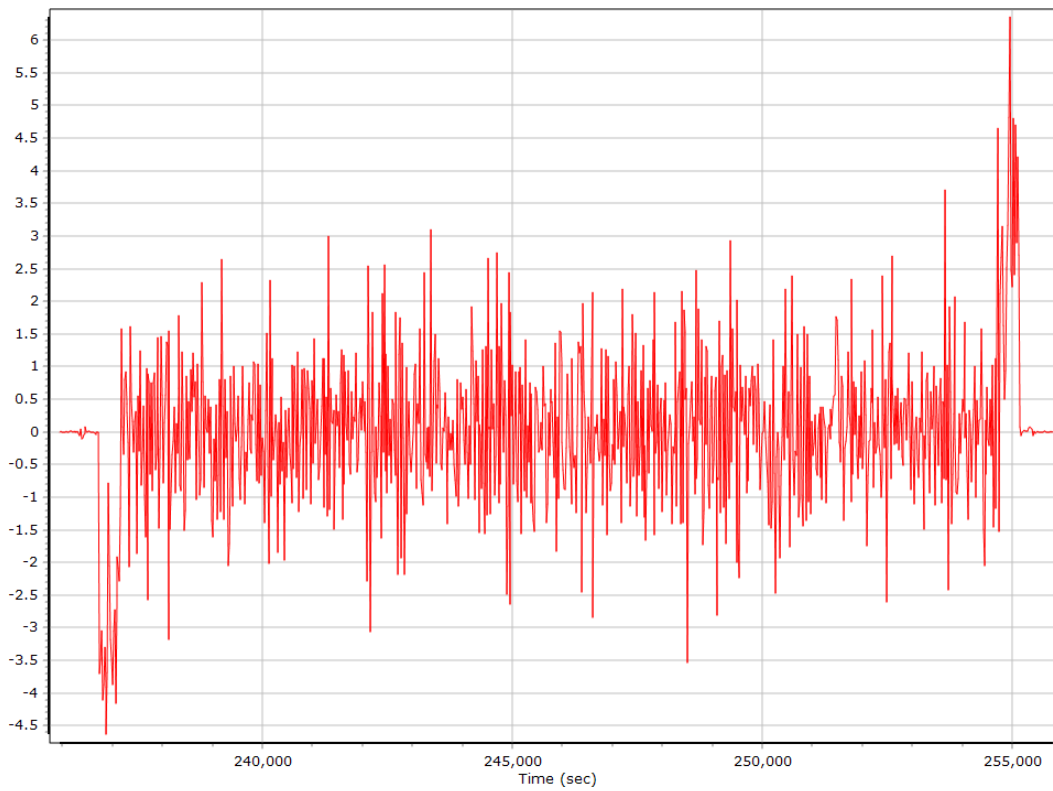
Heading



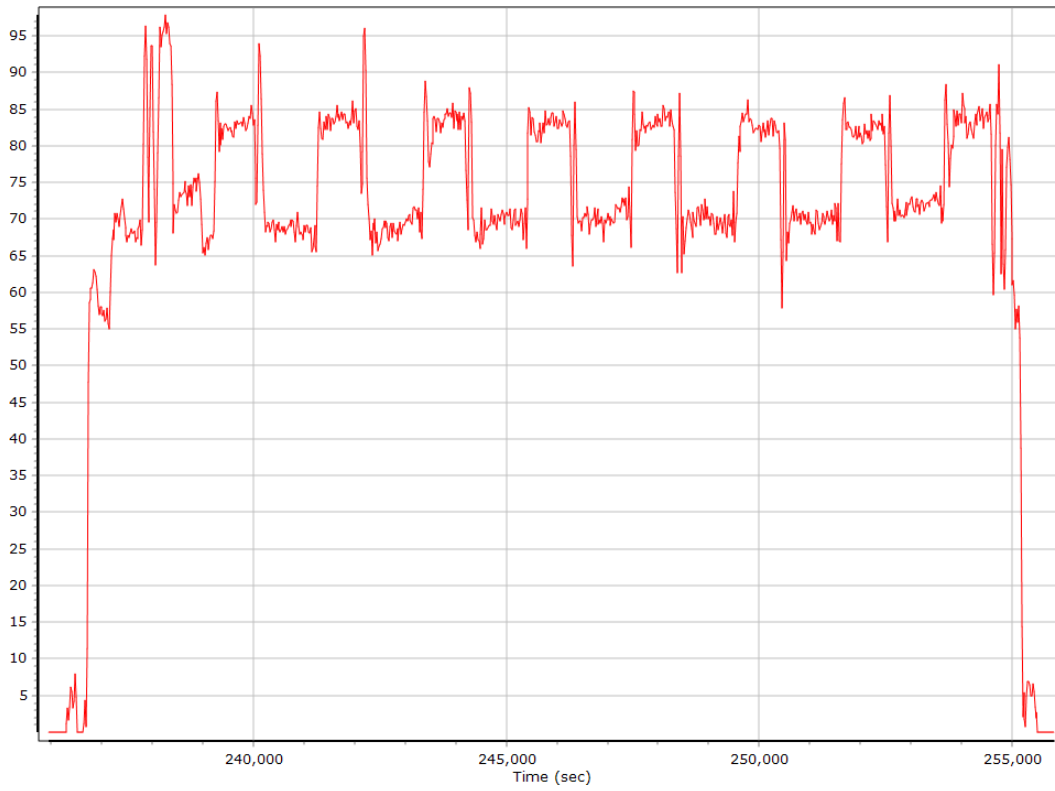
North/East Velocity



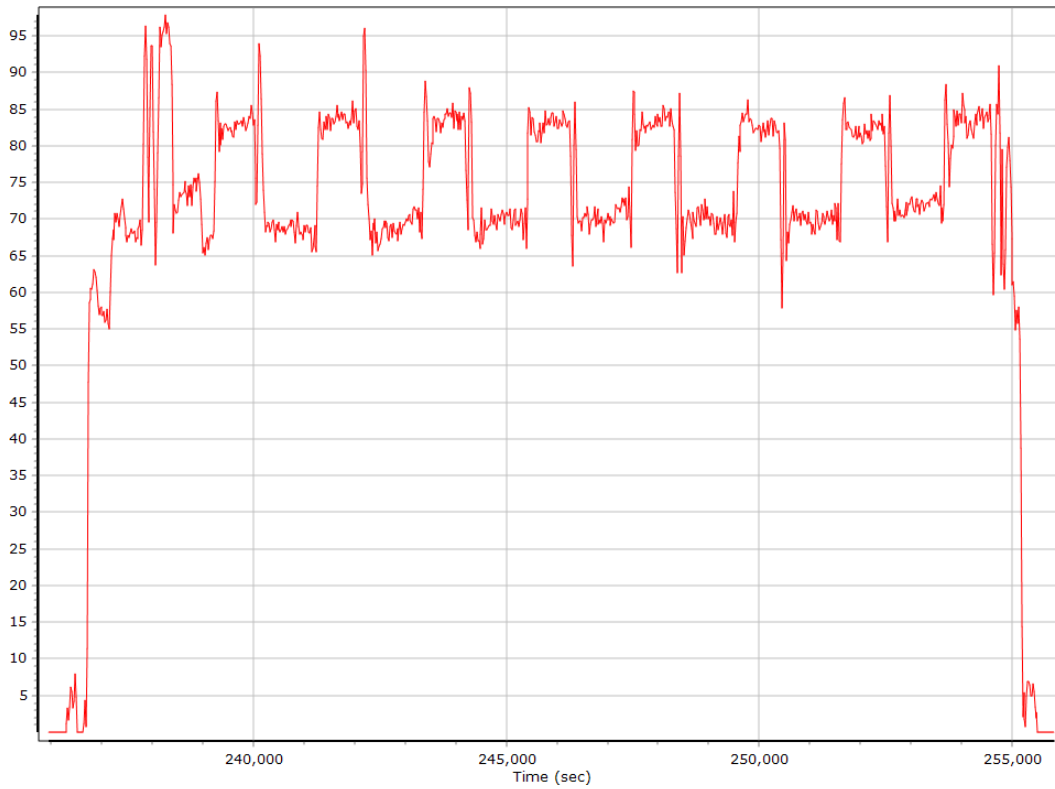
Down Velocity



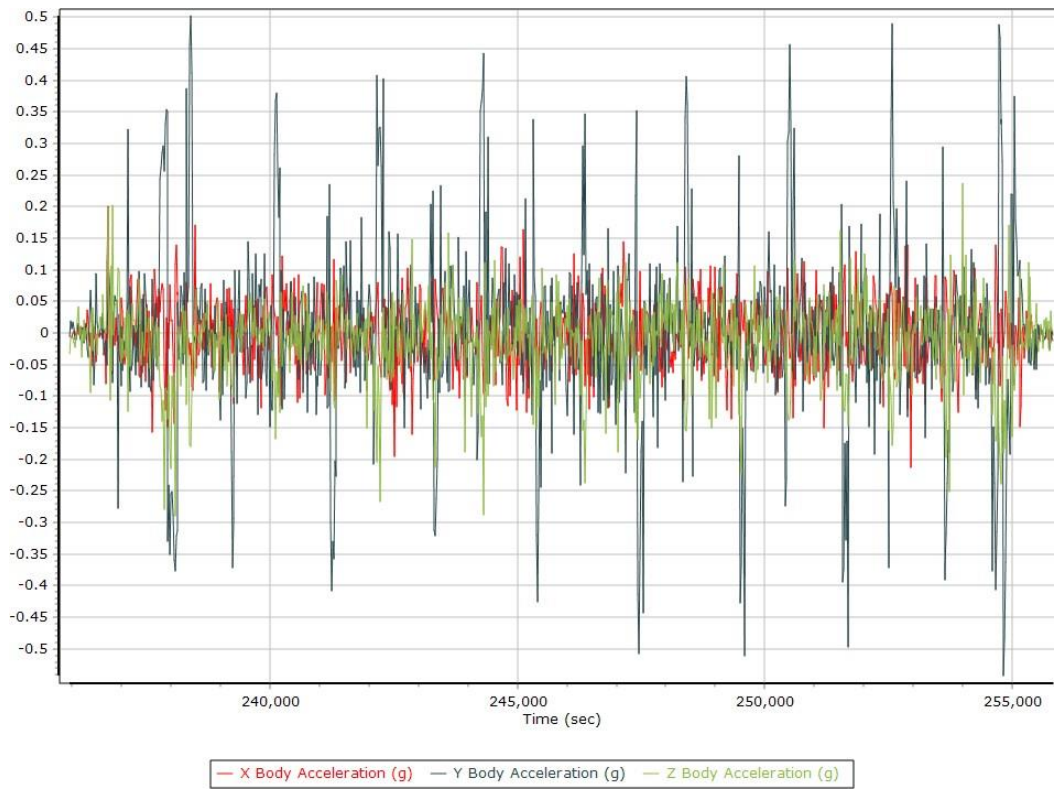
Total Speed



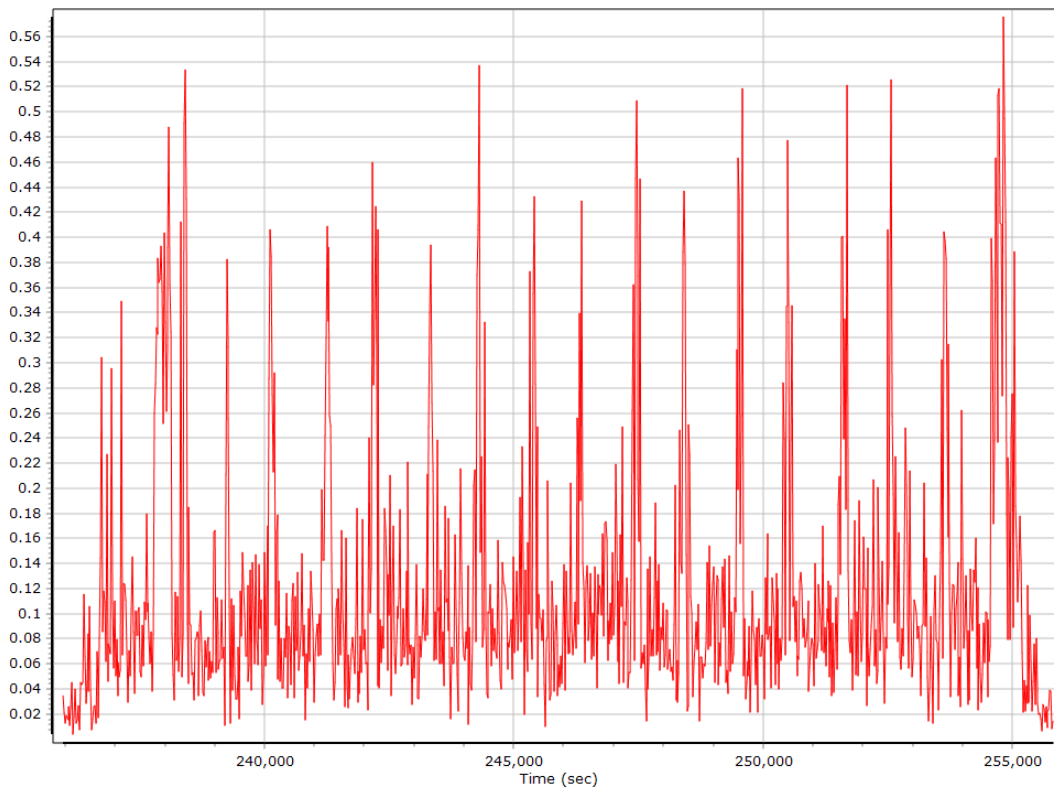
Ground Speed



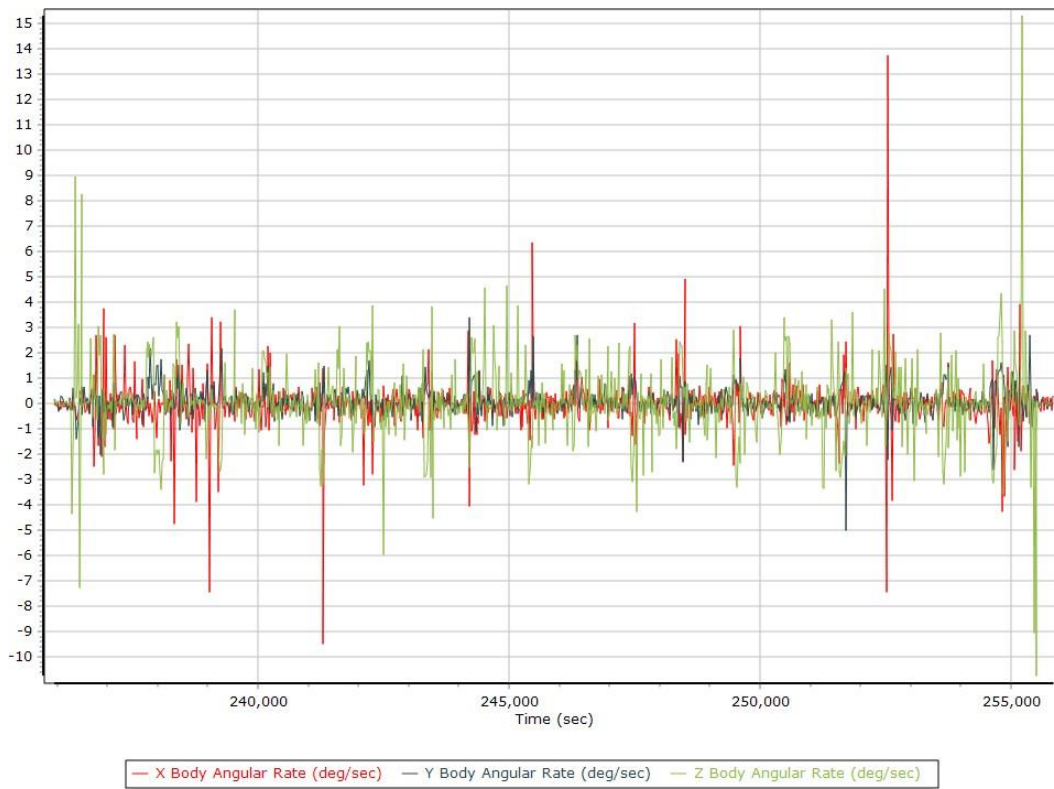
Body Acceleration



Total Body Acceleration



Body Angular Rate



SmartBase Processing Summary

Smart Select Options

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

Basestation Selection

Date	ID	Dist	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	

SmartBase Quality Check

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	0.41	40.63	
Number of GPS SV	7	10	9
Number of GLONASS SV	0	5	2
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	7	15	11
PDOP	1.23	3.16	1.76
QC Solution Gaps	1.00	525.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	19453.00	0.00	526.00
Percentage	97.37	0.00	2.63

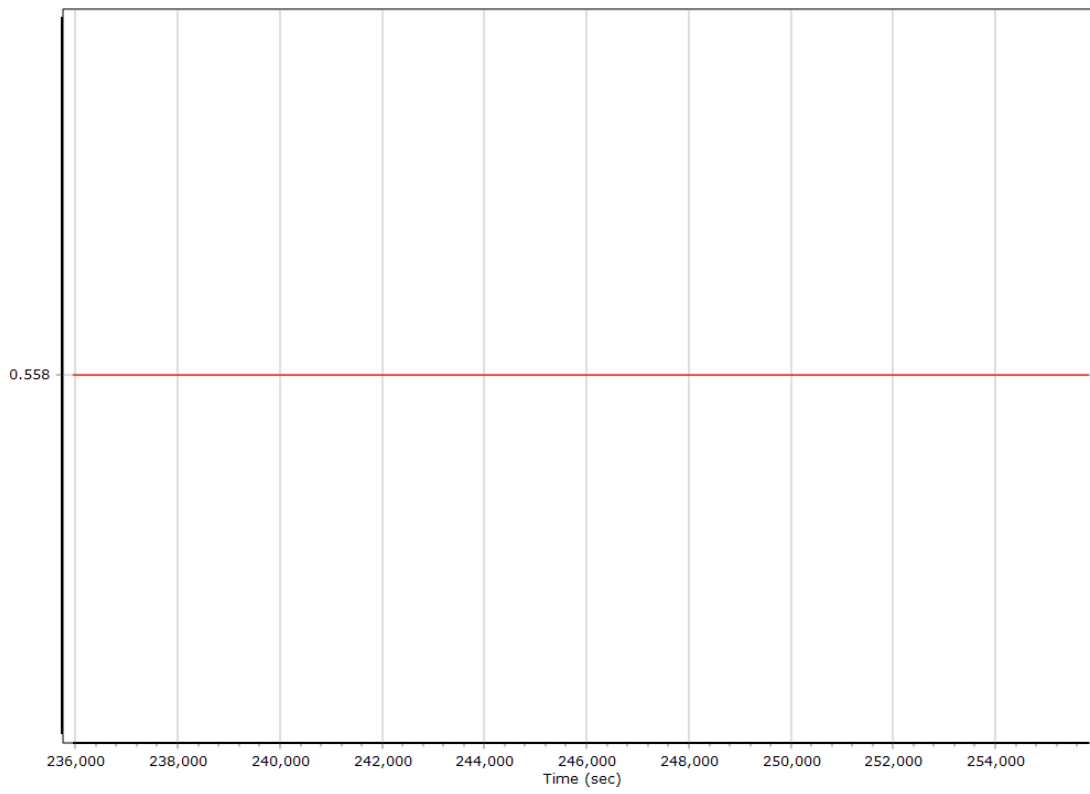
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	235836.000 (12/31/2019 5:30:36 PM)		
Processing end time	255847.000 (12/31/2019 11:04:07 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.558	-0.085	-1.279
Gimbal to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

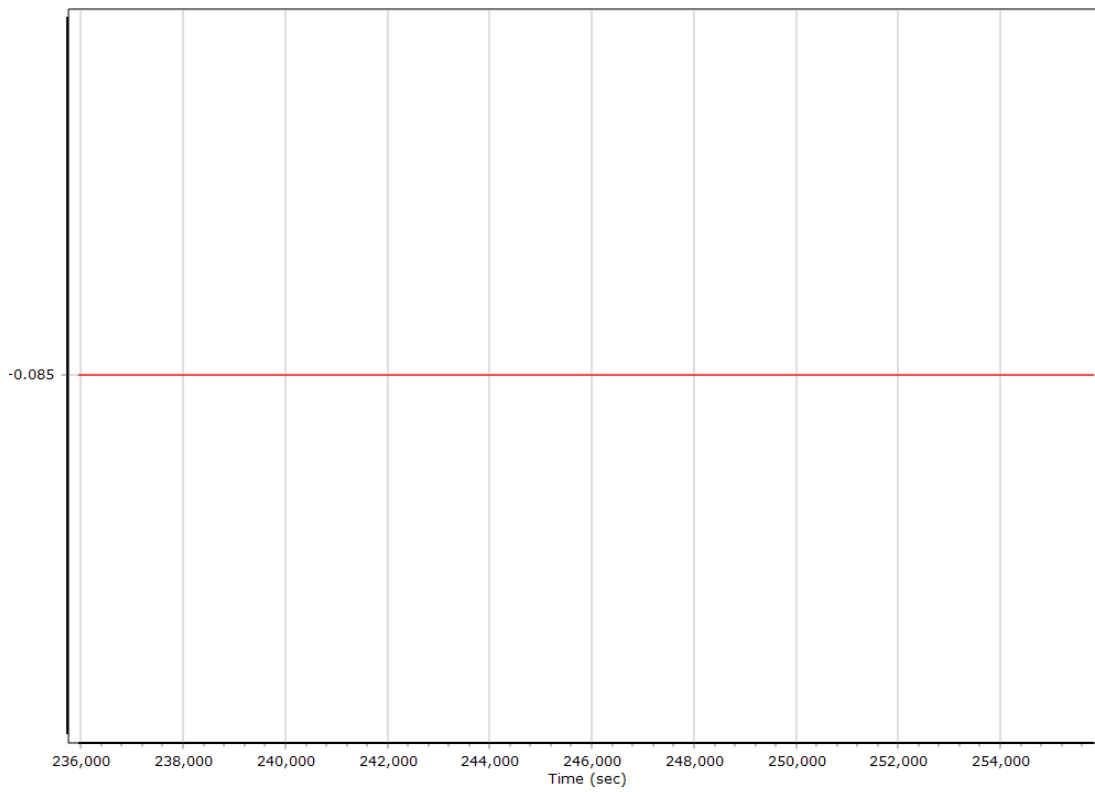
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

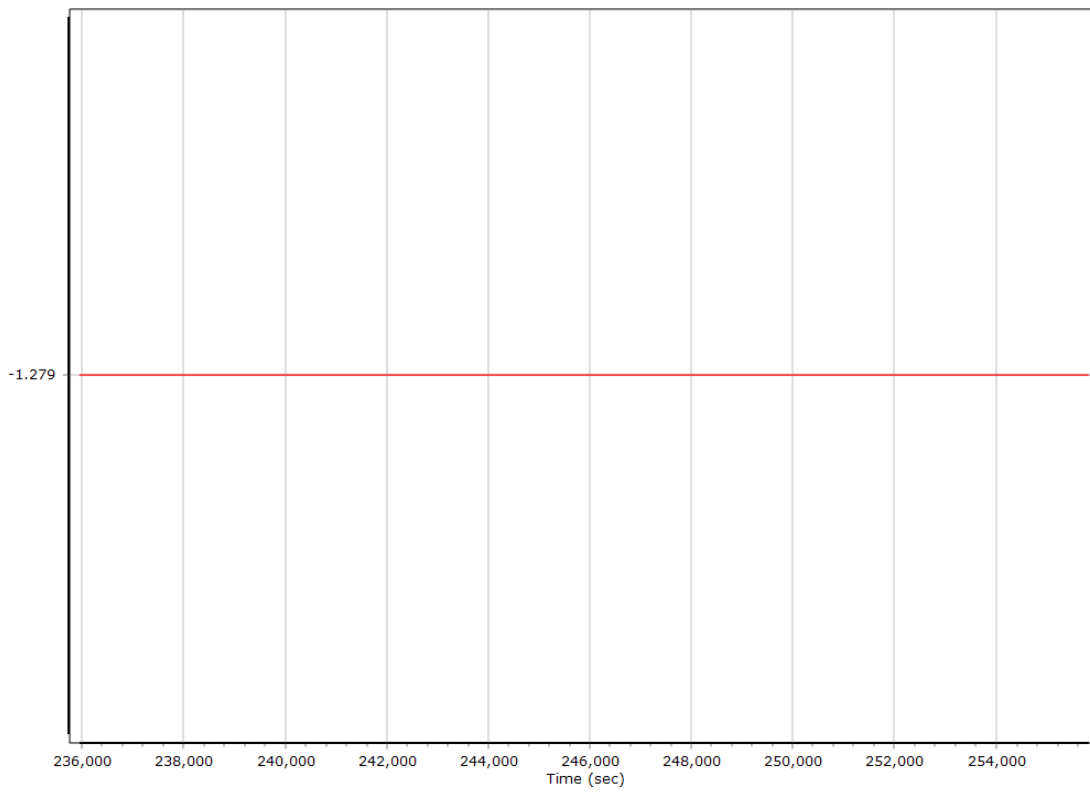
X Reference-Primary GNSS Lever Arm (m)



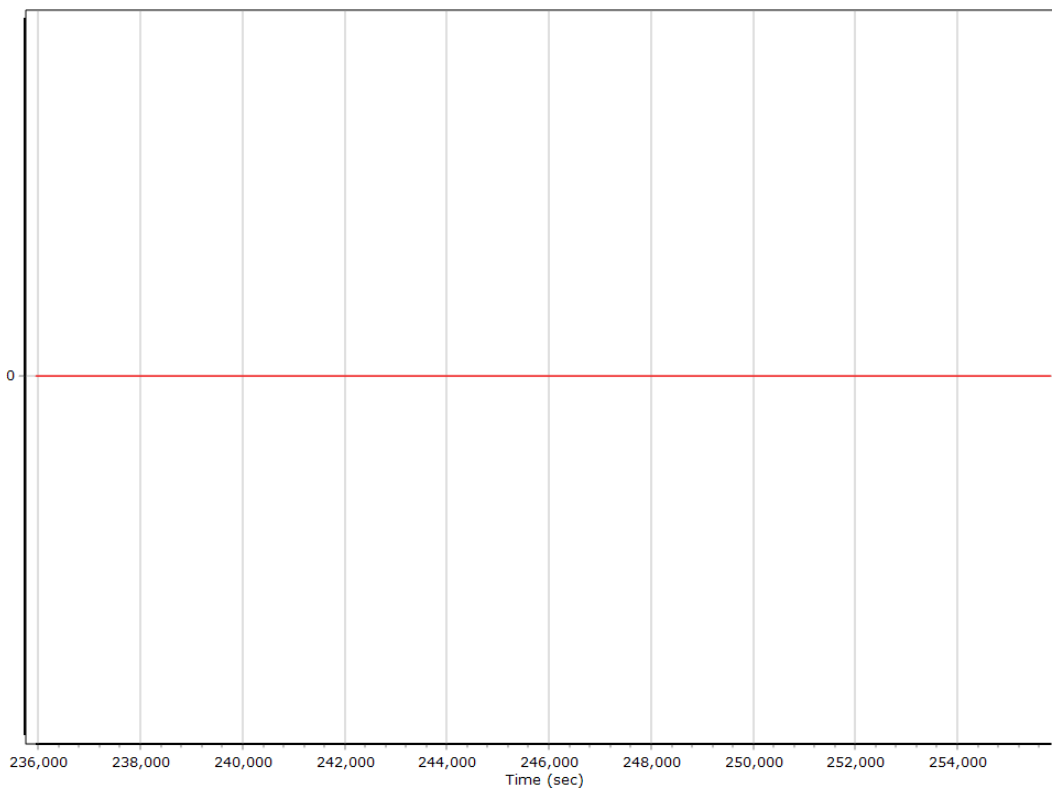
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



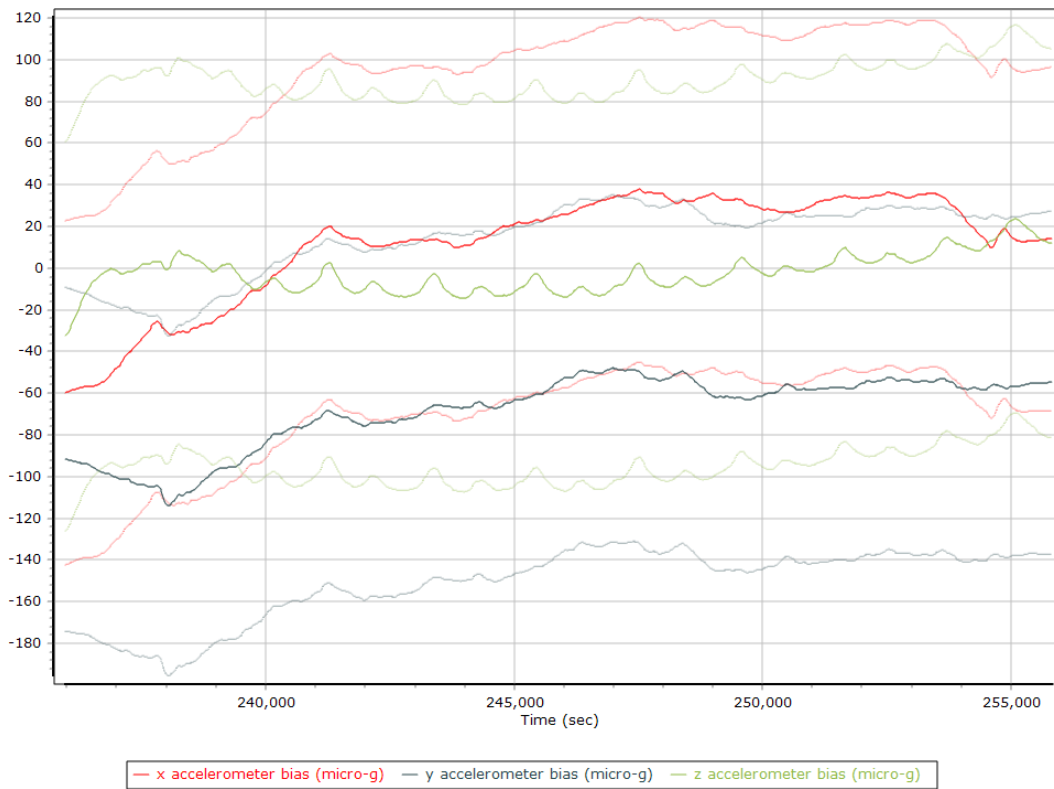
Reference-Primary GNSS Lever Arm Figure of Merit



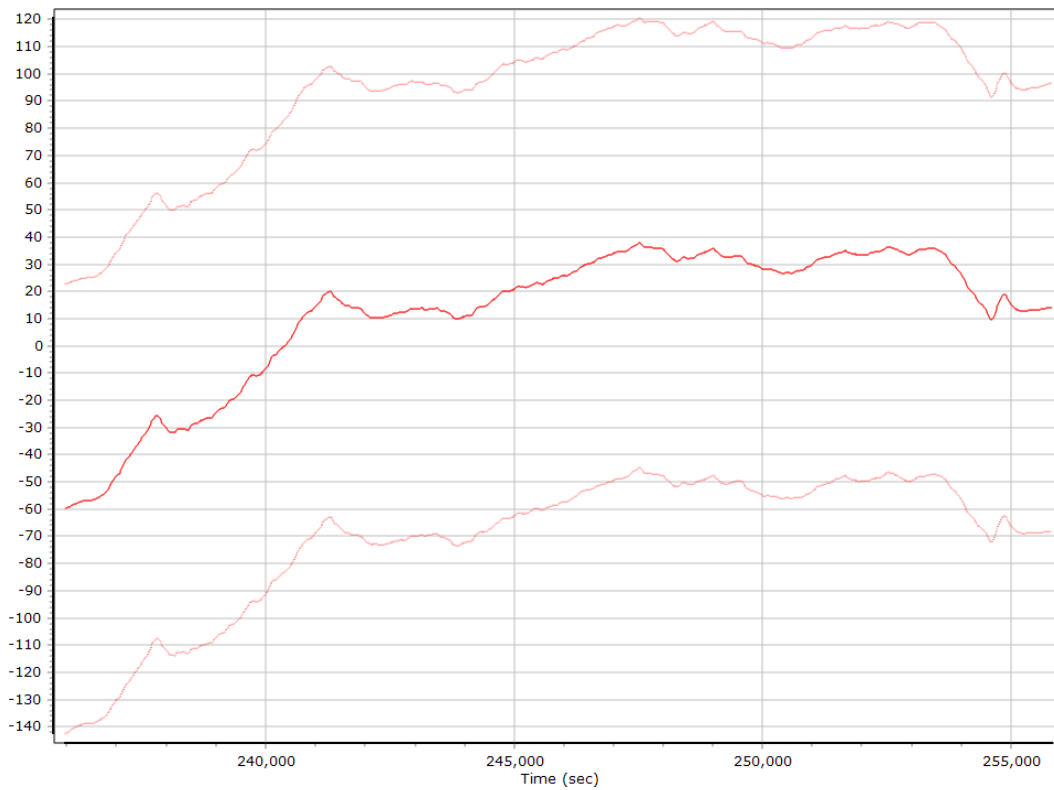
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

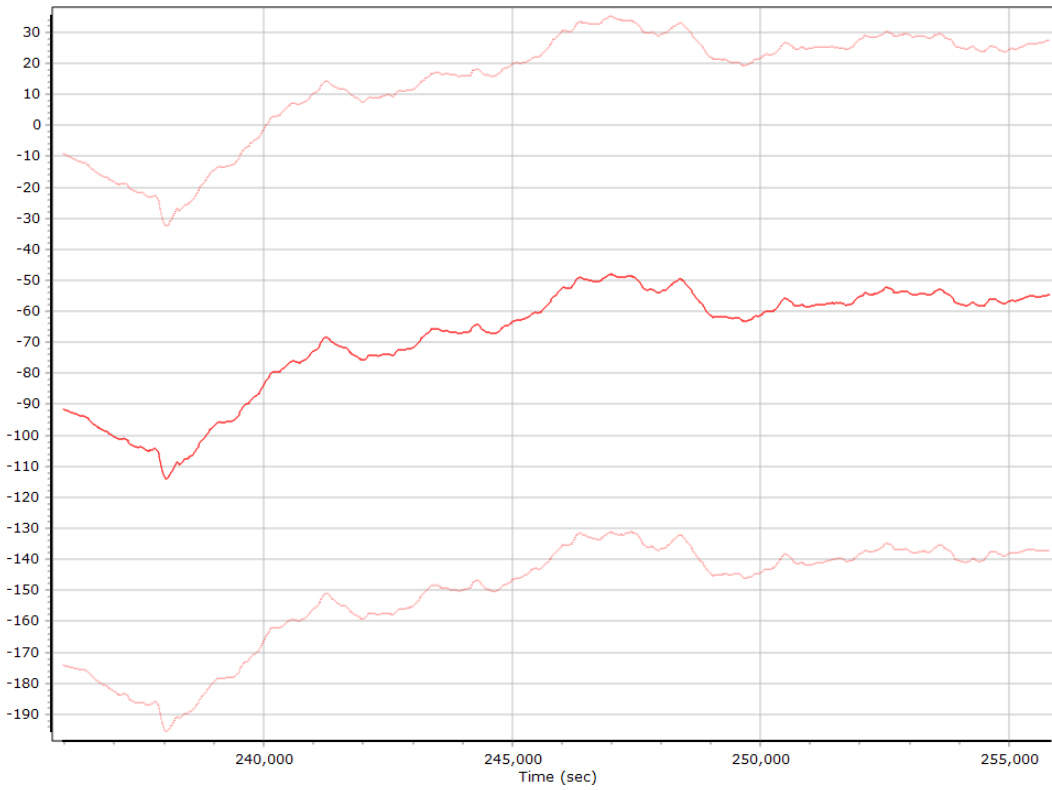
Accelerometer Bias (micro-g)



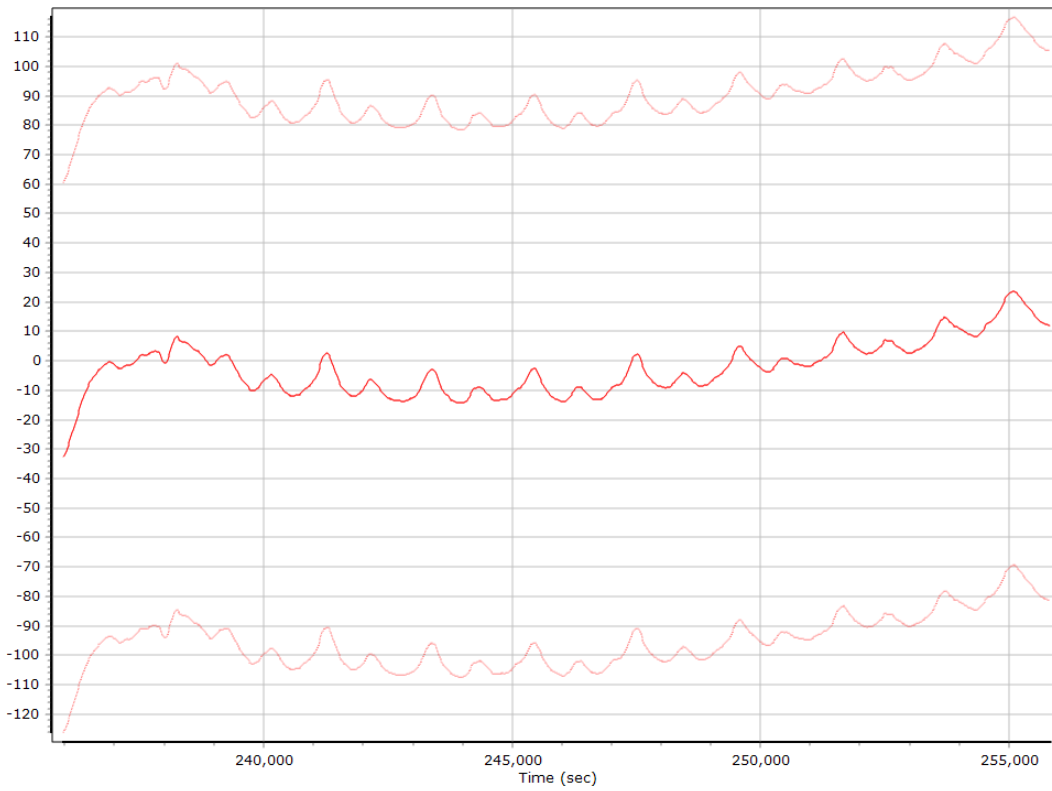
X Accelerometer Bias (micro-g)



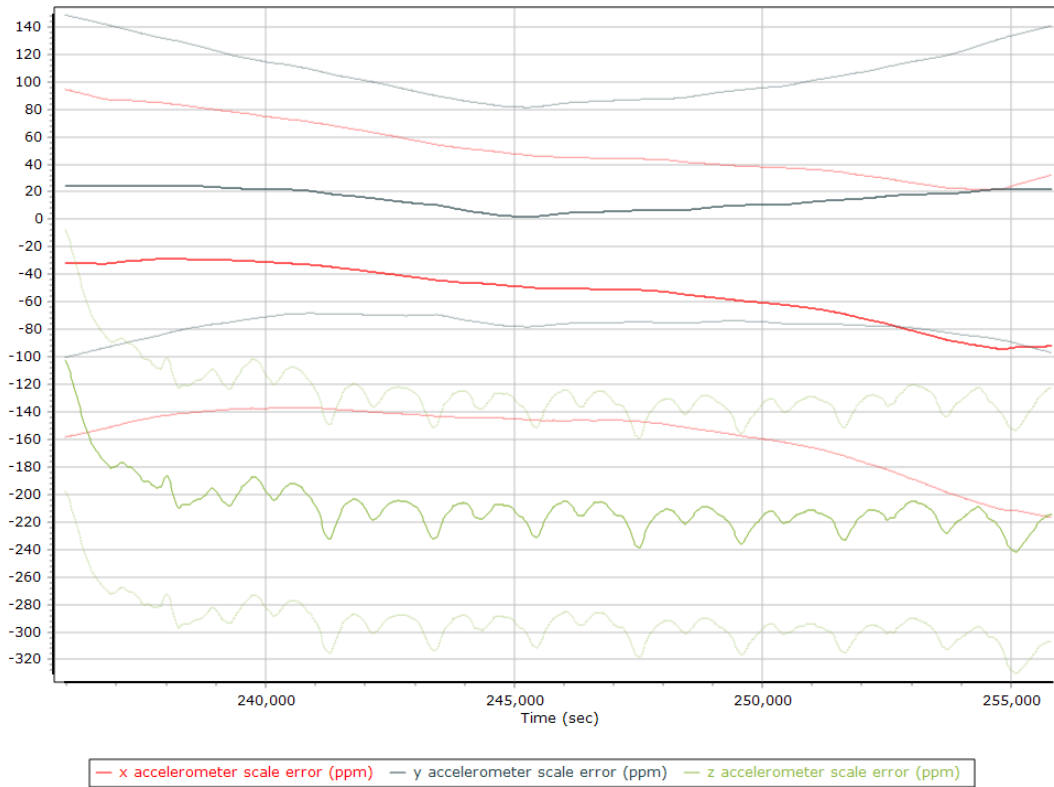
Y Accelerometer Bias (micro-g)



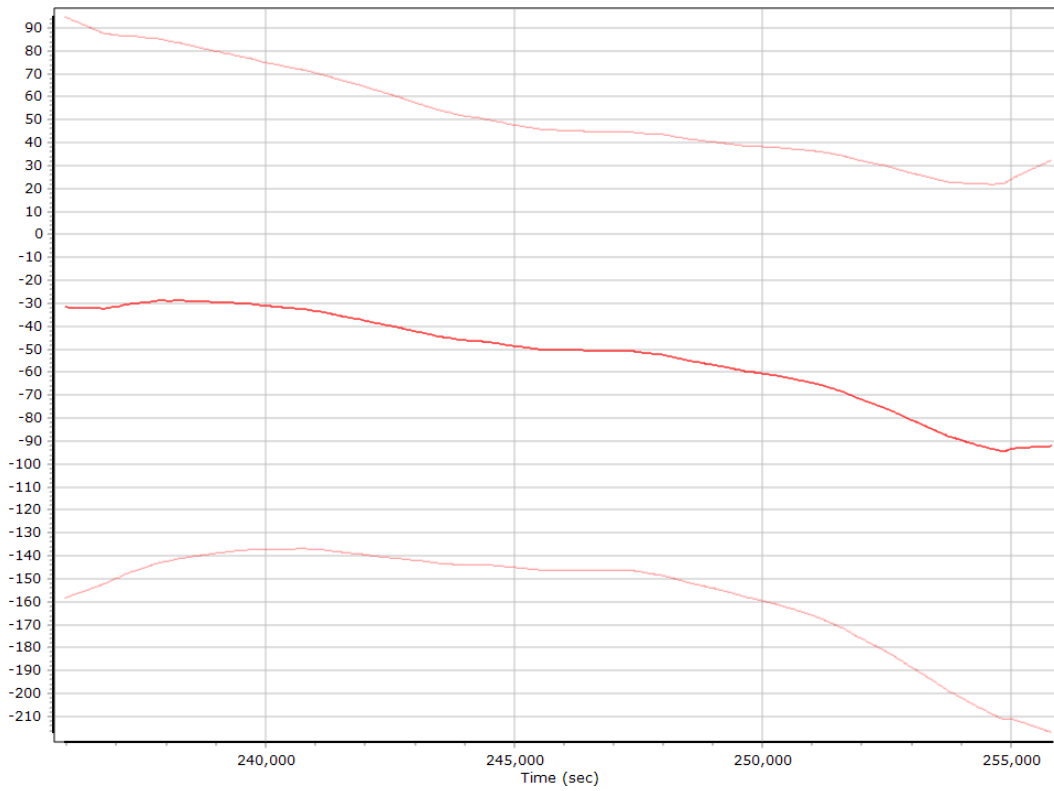
Z Accelerometer Bias (micro-g)



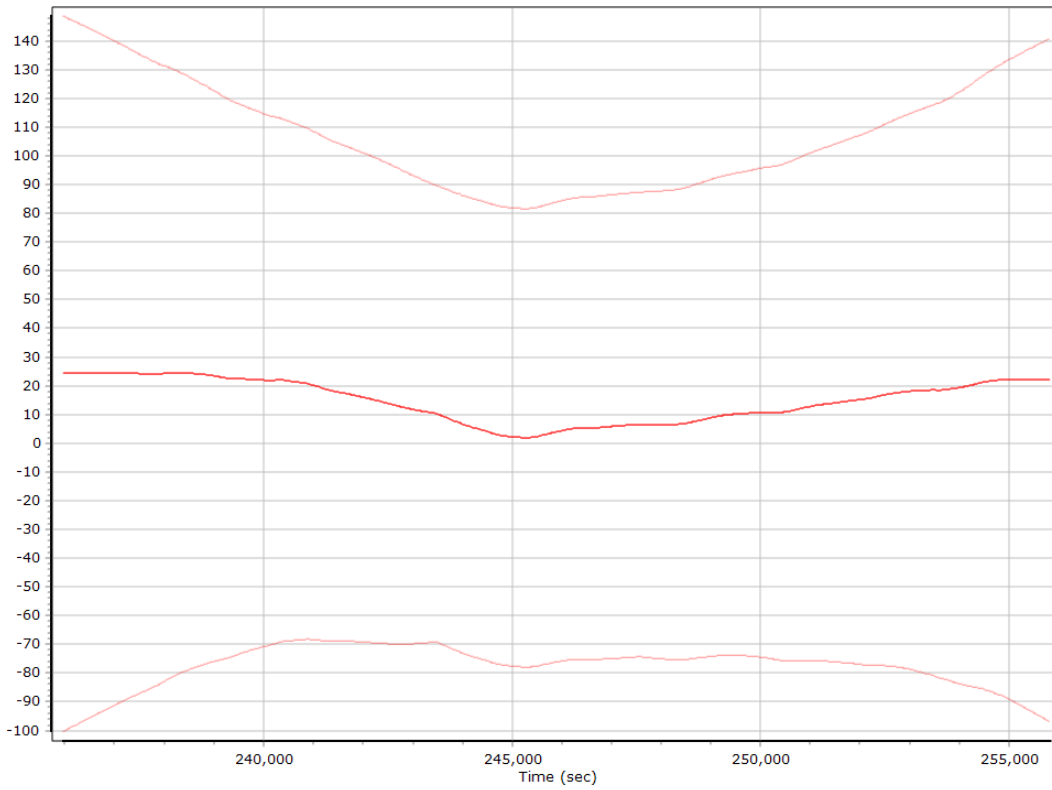
Accelerometer Scale Error (ppm)



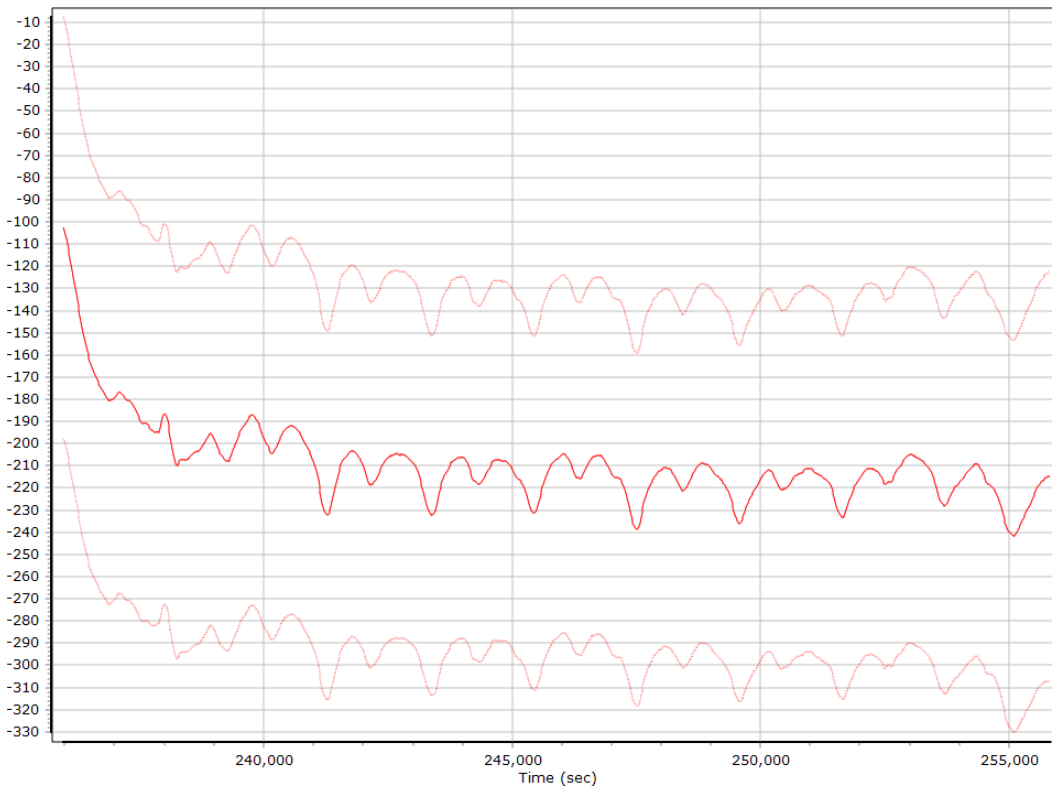
X Accelerometer Scale Error (ppm)



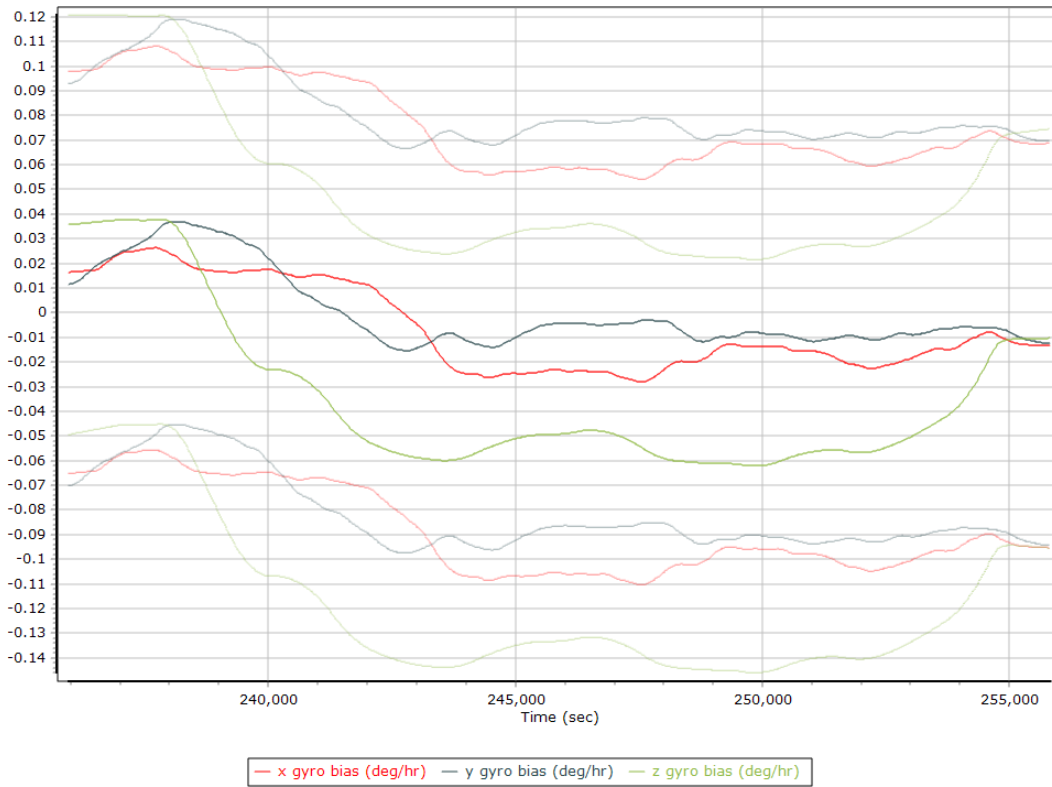
Y Accelerometer Scale Error (ppm)



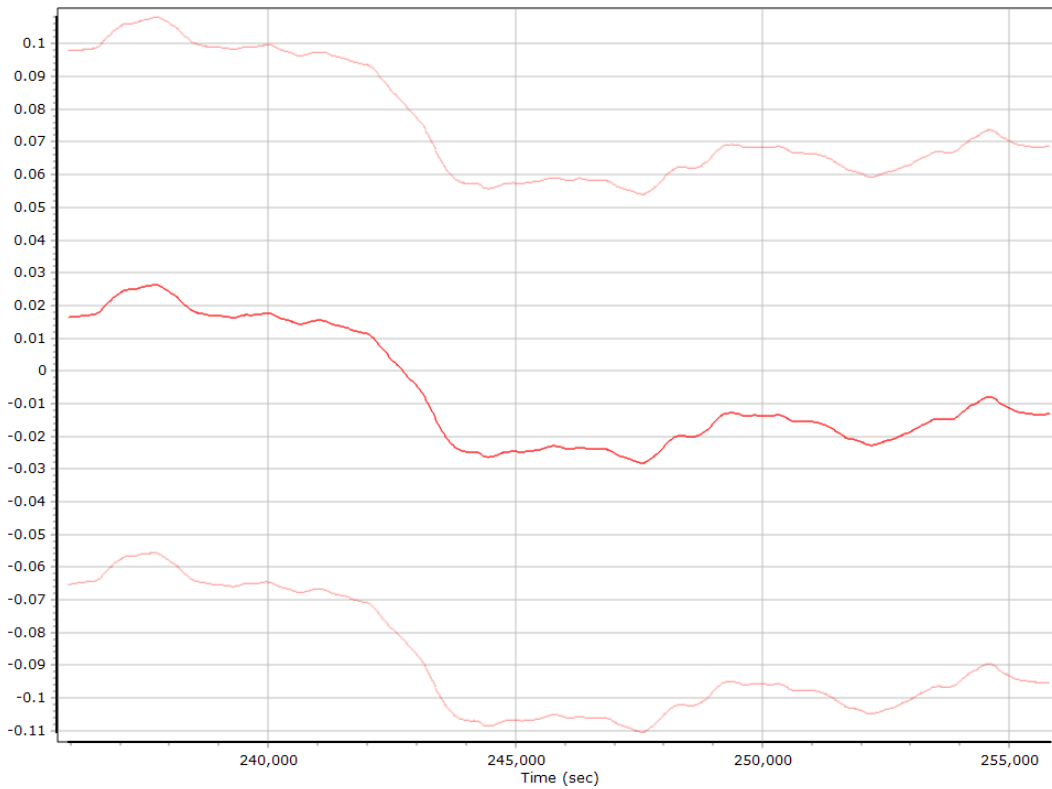
Z Accelerometer Scale Error (ppm)



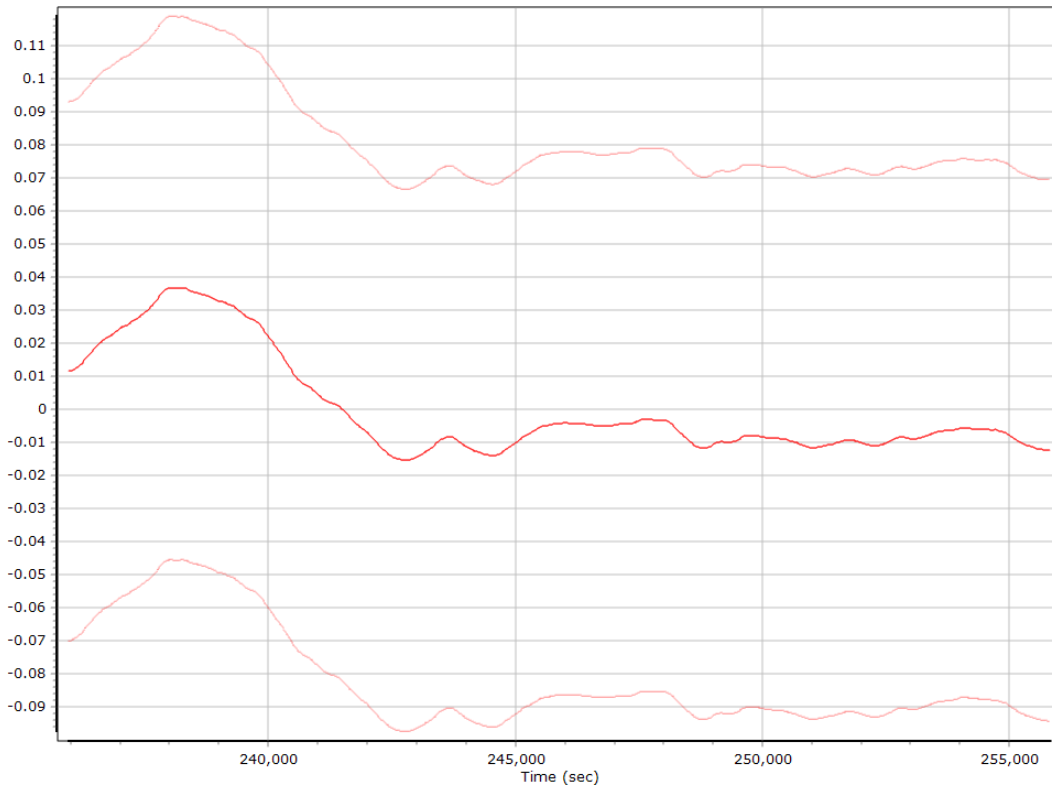
Gyro Bias (deg/h)



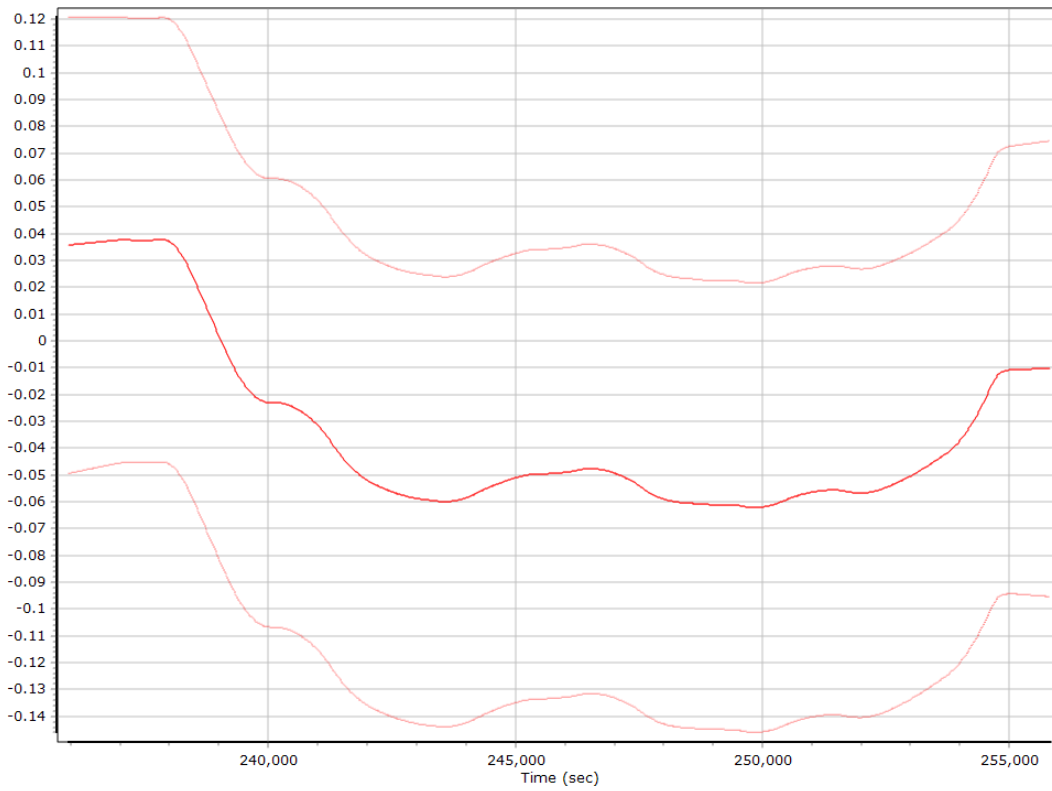
X Gyro Bias (deg/h)



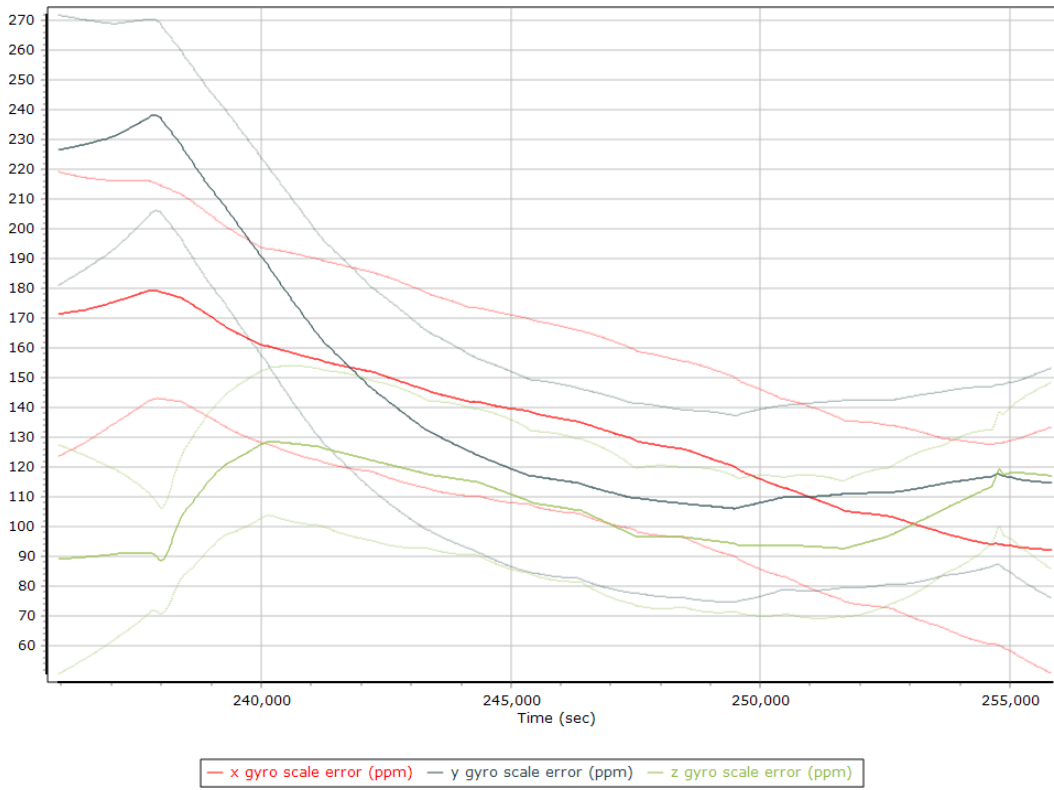
Y Gyro Bias (deg/h)



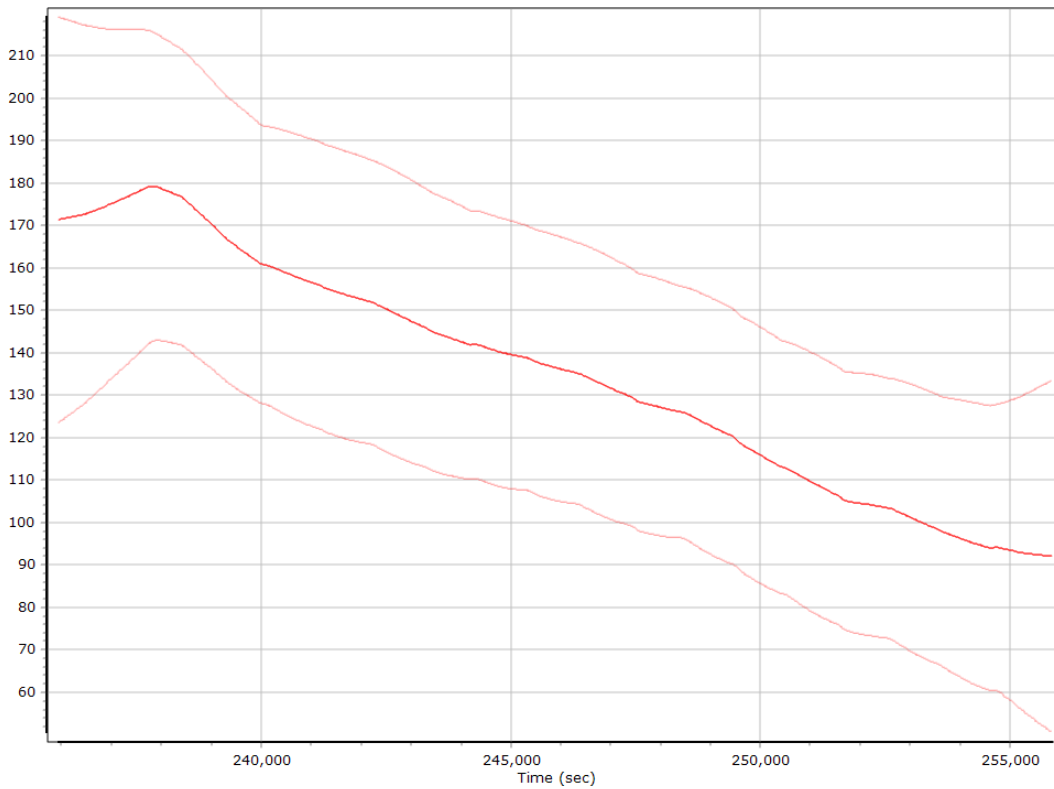
Z Gyro Bias (deg/h)



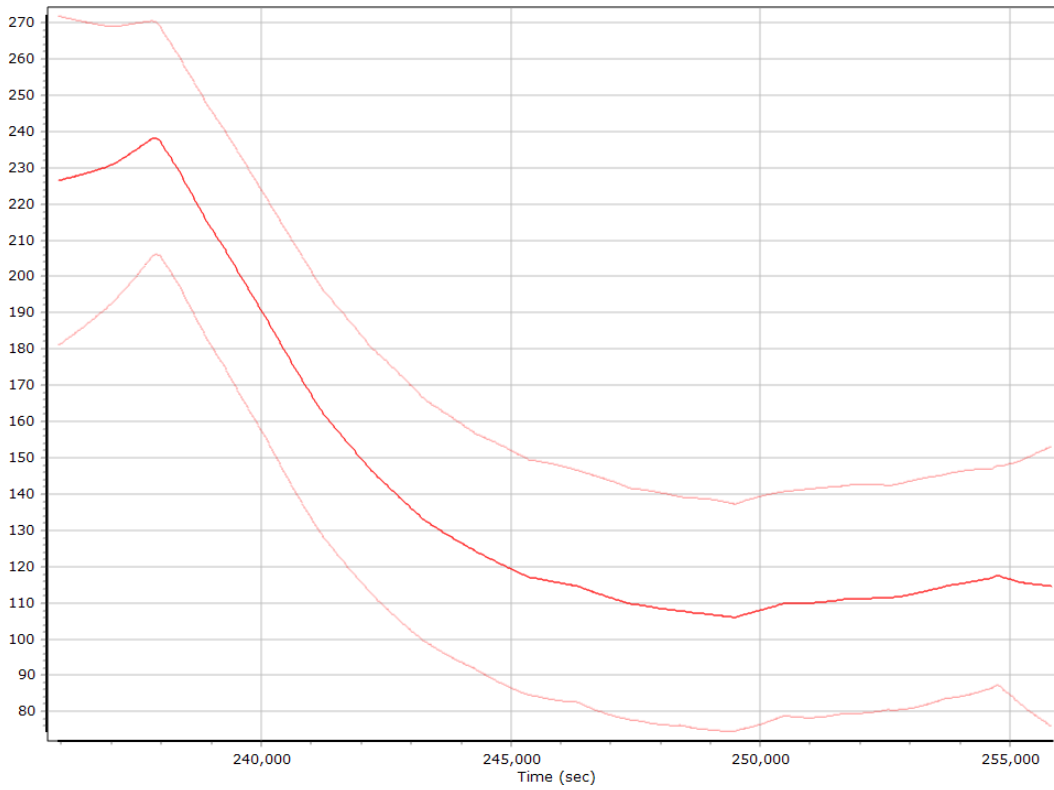
Gyro Scale Error (ppm)



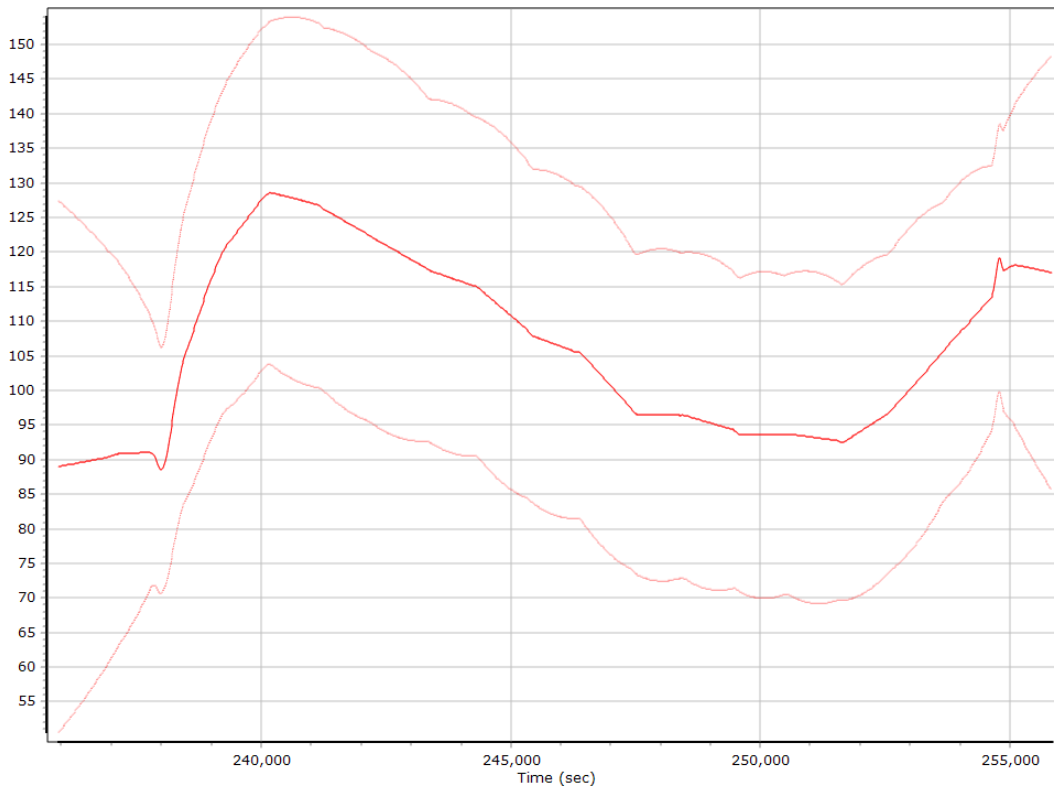
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

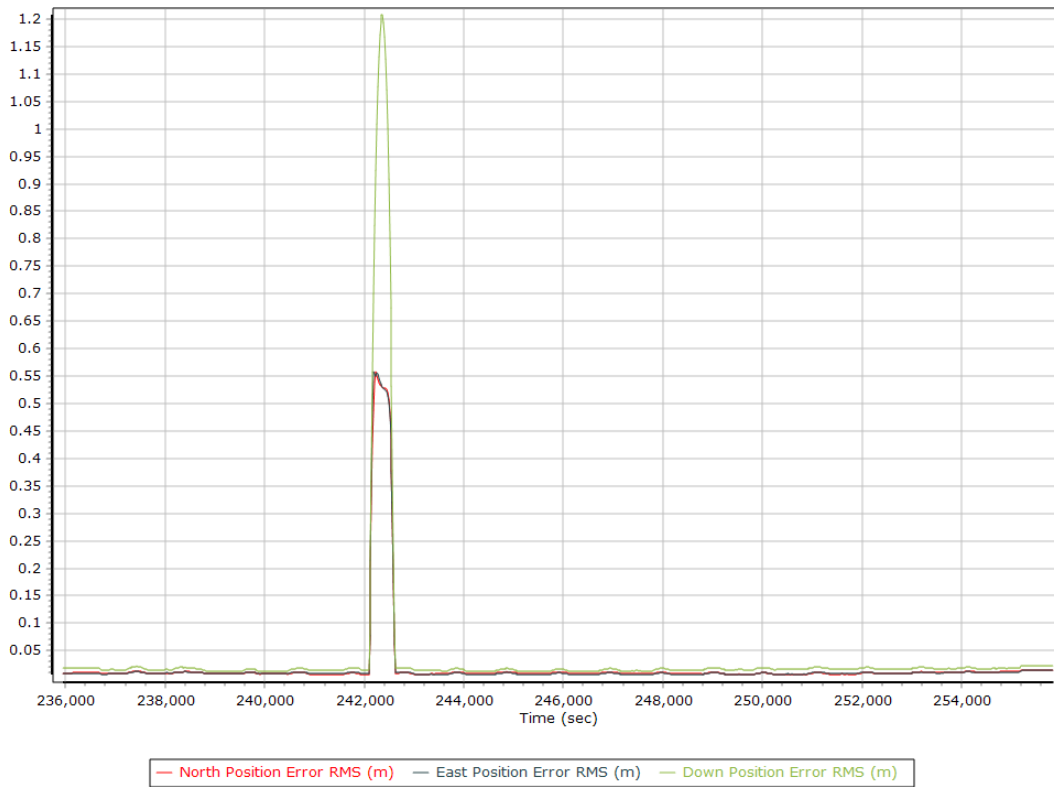


Z Gyro Scale Error (ppm)

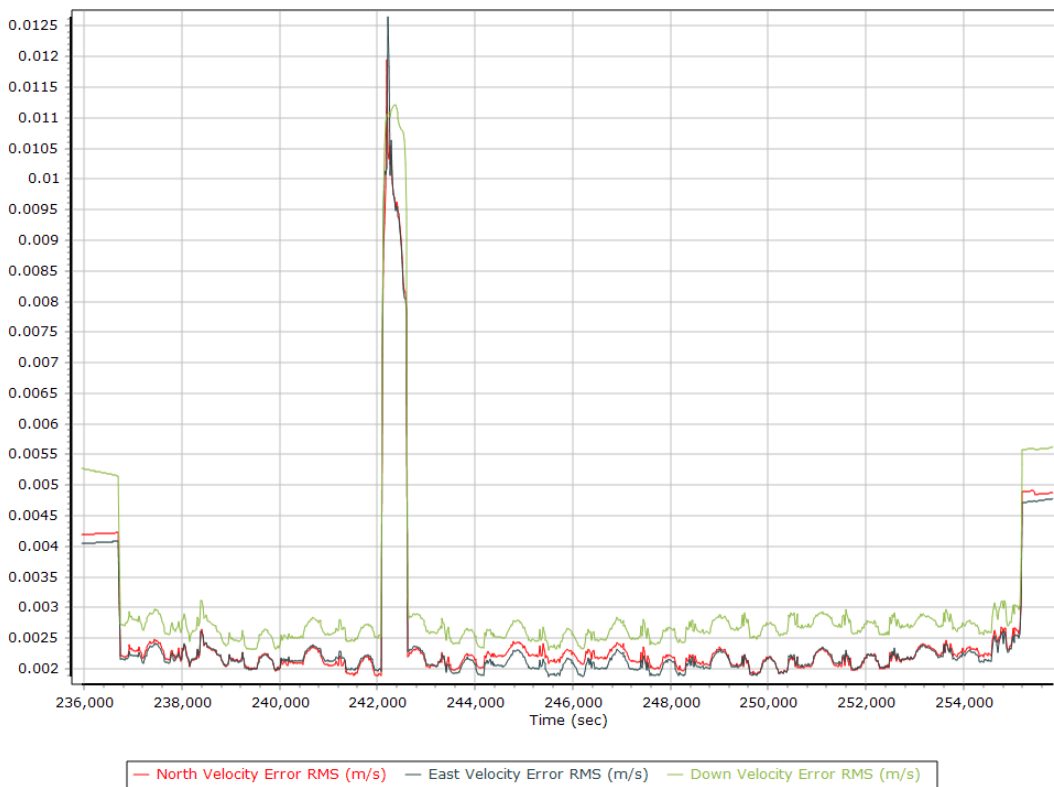


Smoothed Performance Metrics

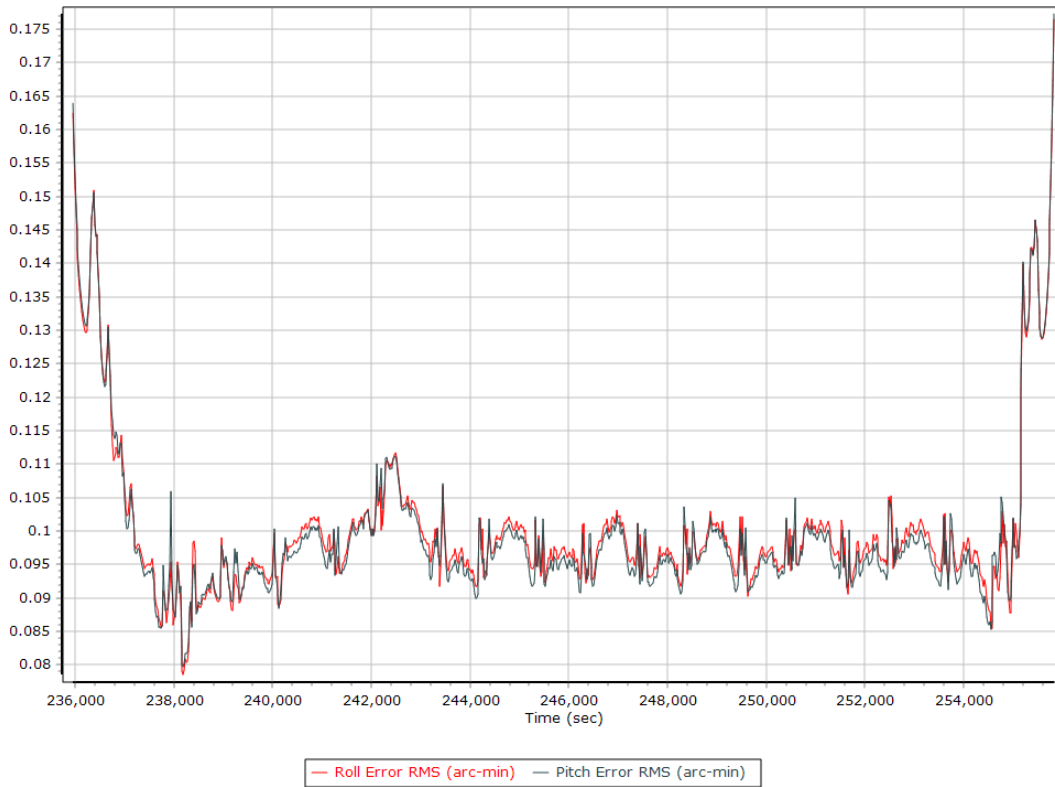
Position Error RMS (m)



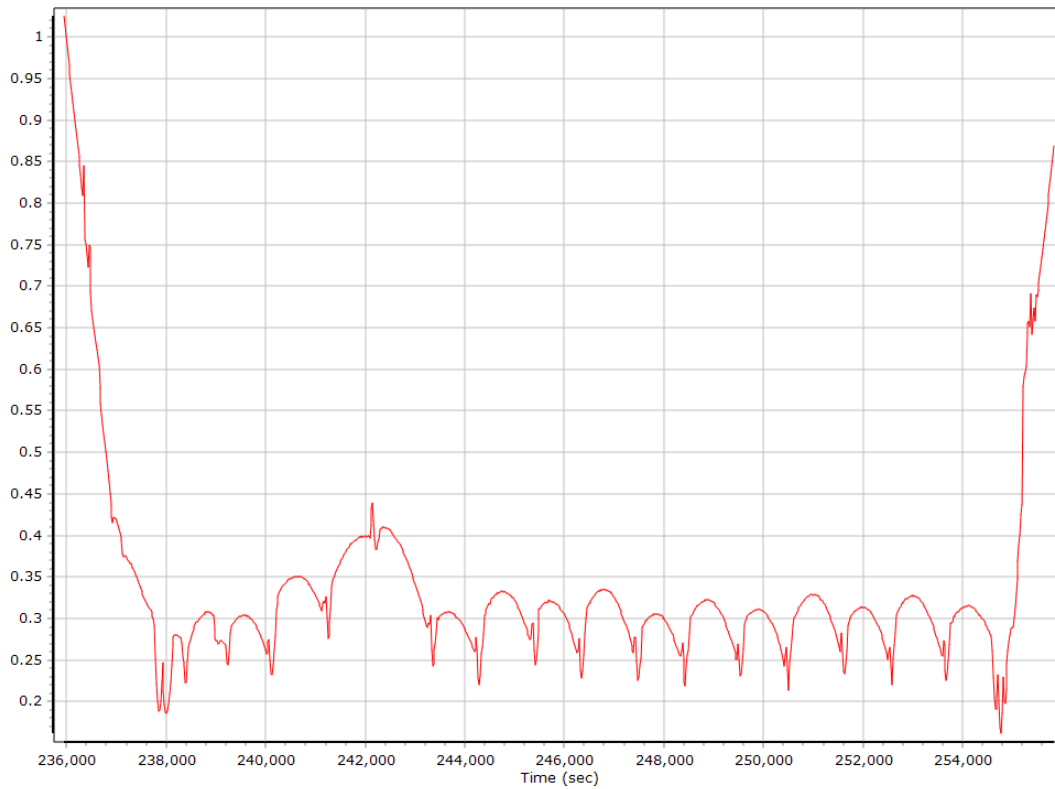
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

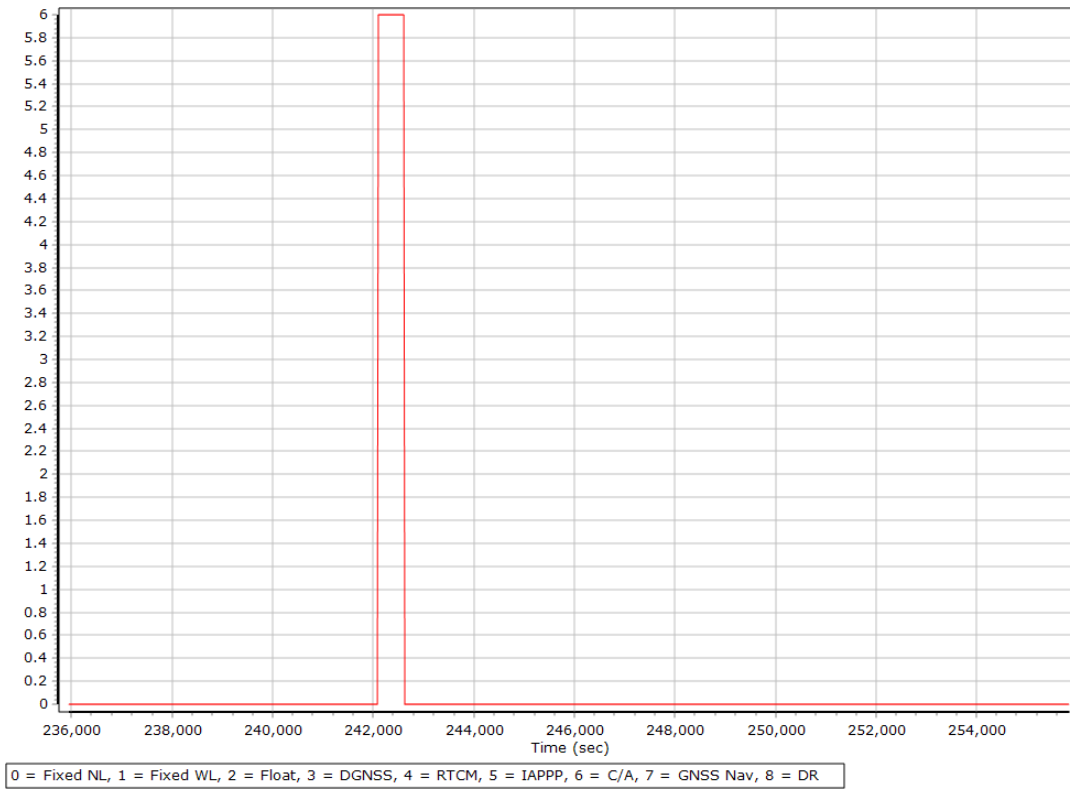


Heading Error RMS (arc-min)

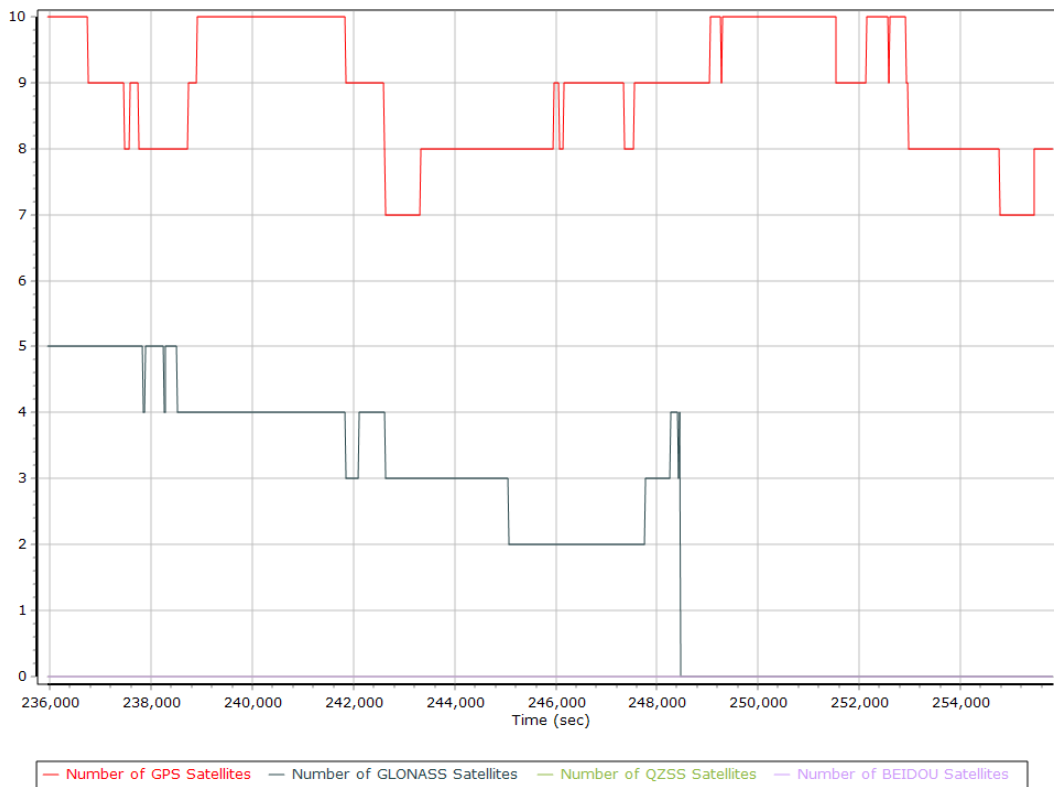


Smoothed Solution Status

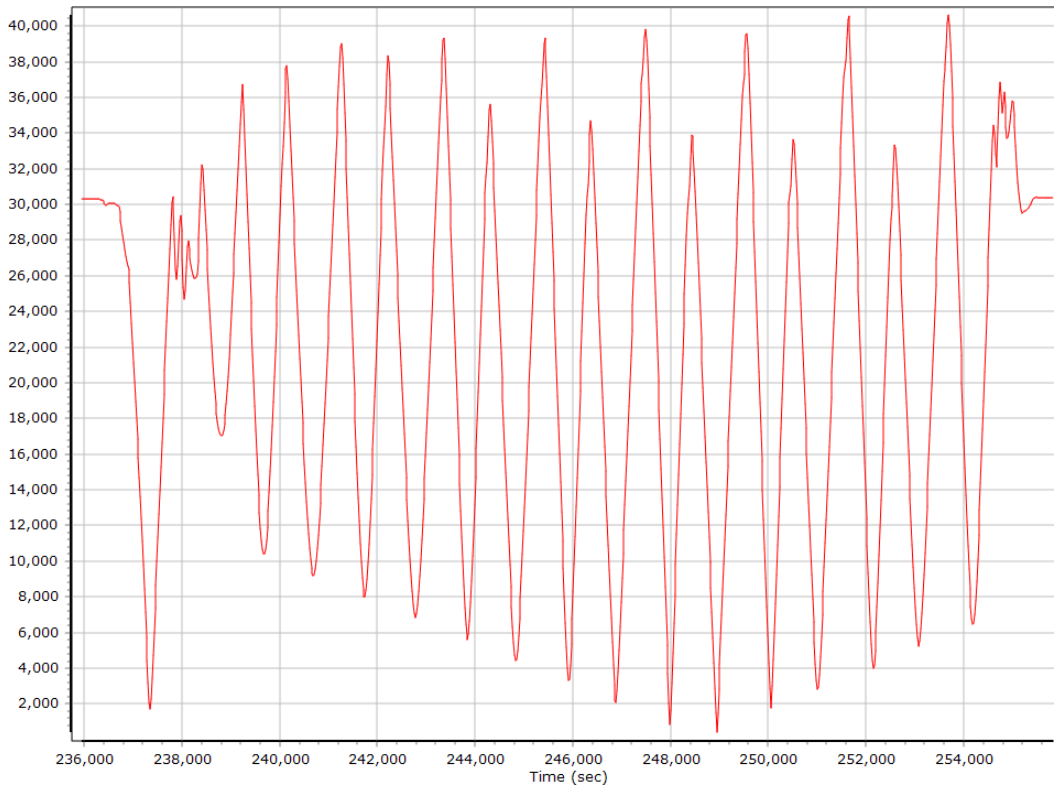
Processing Mode



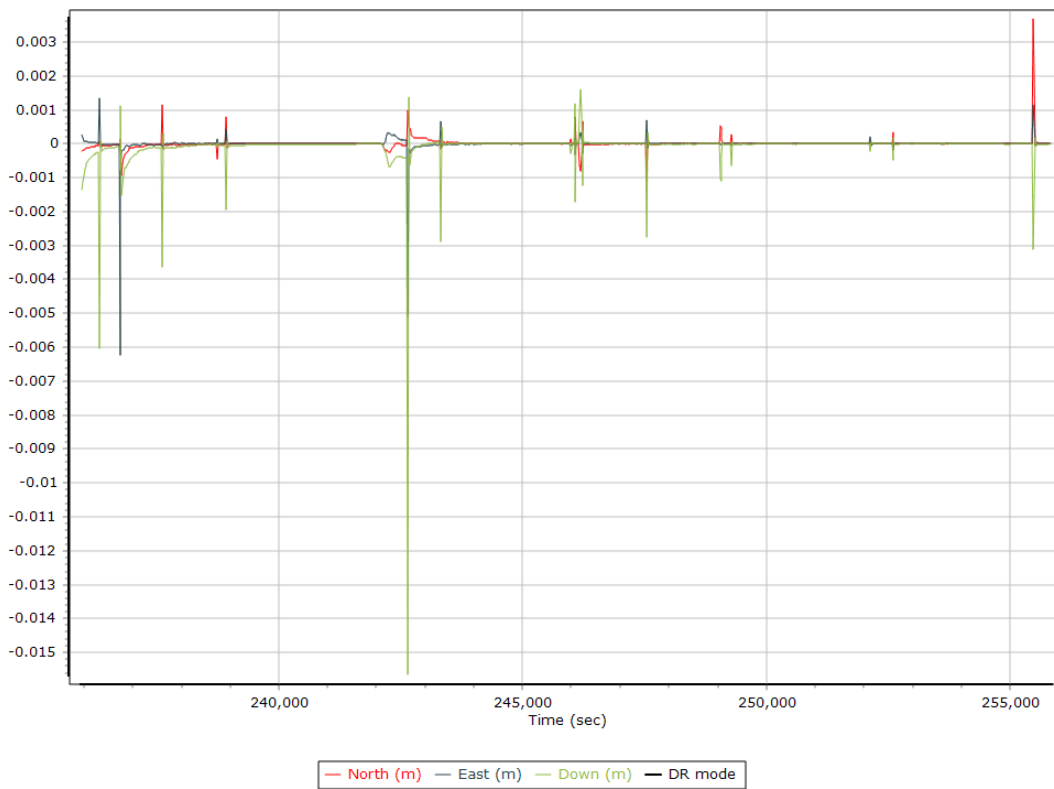
Number of Satellites



Baseline Length



SBET IAKAR Separation



Export Summary

Export file	export_4319365a.kml		
Export format	Google KML		
Solution in use	Post-processed		
Output rate	Specified Distance Interval		
Distance Interval (m)	10.000		
Reference to Output lever arm [m]	0.000	0.000	0.000
Reference mounting angles [deg]	0.000	0.000	0.000
Output units (Coordinate / Lat & Lon)	Meter	Deg Decimal	
Export start time	235892.004 (12/31/2019 5:31:32 PM)		
Export end time	255847.005 (12/31/2019 11:04:07 PM)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 16 (90W to 84W)		
Datum	WGS84		
Ellipsoid	WGS84		
Local Transformation	NONE		
Target Epoch	2019.99726		

EO Summary

EO file			
EO format			
Lever arm [m]	0.000	0.000	0.000
Boresight angles [arcmin]	0.000	0.000	0.000
Output rate	Event 1 Time		
Rotation sequence	x omega	y phi	z kappa
Local shift [m]	0.000	0.000	0.000
Output units (coordinate / angle / lat & lon)	Meter	Degree	Deg Decimal
Height option	Ellipsoid Height		
WGS84 height flag	False		
Scale height option	False		
Kappa cardinal rotation [deg]	0		
Solution in use	Post-processed		
EO start time	235892.004 (12/31/2019 5:31:32 PM)		
EO end time	255847.005 (12/31/2019 11:04:07 PM)		
Grid	Universal Transverse Mercator		
Zone	UTM North 16 (90W to 84W)		
Datum	WGS84		
Ellipsoid	WGS84		
Local Transformation	NONE		
Target Epoch	2019.99726		

General Information

Mission Information

Project name	4320001a
Processing date	2020-01-03 23:42:18
Mission date	2020-01-01 15:48:11
Mission duration	05:24:21.000
Processing mode	IN-Fusion GNSS Nav

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9683
IMU type	57
Receiver type	BD982
Antenna type	Unknown External

Project File List

Rover Data Files

File name	File type
ALS.000	POS Data
ALS.001	POS Data
ALS.002	POS Data
ALS.003	POS Data
ALS.004	POS Data
ALS.005	POS Data
ALS.006	POS Data
ALS.007	POS Data
ALS.008	POS Data
ALS.009	POS Data
ALS.010	POS Data
ALS.011	POS Data
ALS.012	POS Data
ALS.013	POS Data
ALS.014	POS Data
ALS.015	POS Data
ALS.016	POS Data
ALS.017	POS Data
ALS.018	POS Data
ALS.019	POS Data
ALS.020	POS Data
ALS.021	POS Data
ALS.022	POS Data
ALS.023	POS Data
ALS.024	POS Data
ALS.025	POS Data
ALS.026	POS Data
ALS.027	POS Data
ALS.028	POS Data
ALS.029	POS Data
ALS.030	POS Data
ALS.031	POS Data
ALS.032	POS Data
ALS.033	POS Data
ALS.034	POS Data
ALS.035	POS Data
ALS.036	POS Data
ALS.037	POS Data
ALS.038	POS Data
ALS.039	POS Data
ALS.040	POS Data

Input Files

File Name	File type
Ephm0010.20g	GLONASS Broadcast Ephemeris
Ephm0010.20n	GPS Broadcast Ephemeris
bkv10010.20o	GNSS SingleBase
flcb0010.20o	GNSS SingleBase
flck0010.20o	GNSS SingleBase
fljl0010.20o	GNSS SingleBase
fljo0010.20o	GNSS SingleBase
pnma0010.20o	GNSS SingleBase
talh0010.20o	GNSS SingleBase
igr20862.sp3	GPS Precise Ephemeris
igr20863.sp3	GPS Precise Ephemeris
igr20864.sp3	GPS Precise Ephemeris

Output Files

Filename	File type
sbet_4320001a.out	SBET Trajectory File
export_4320001a.kml	Google KML Export Output

Rover Data Summary

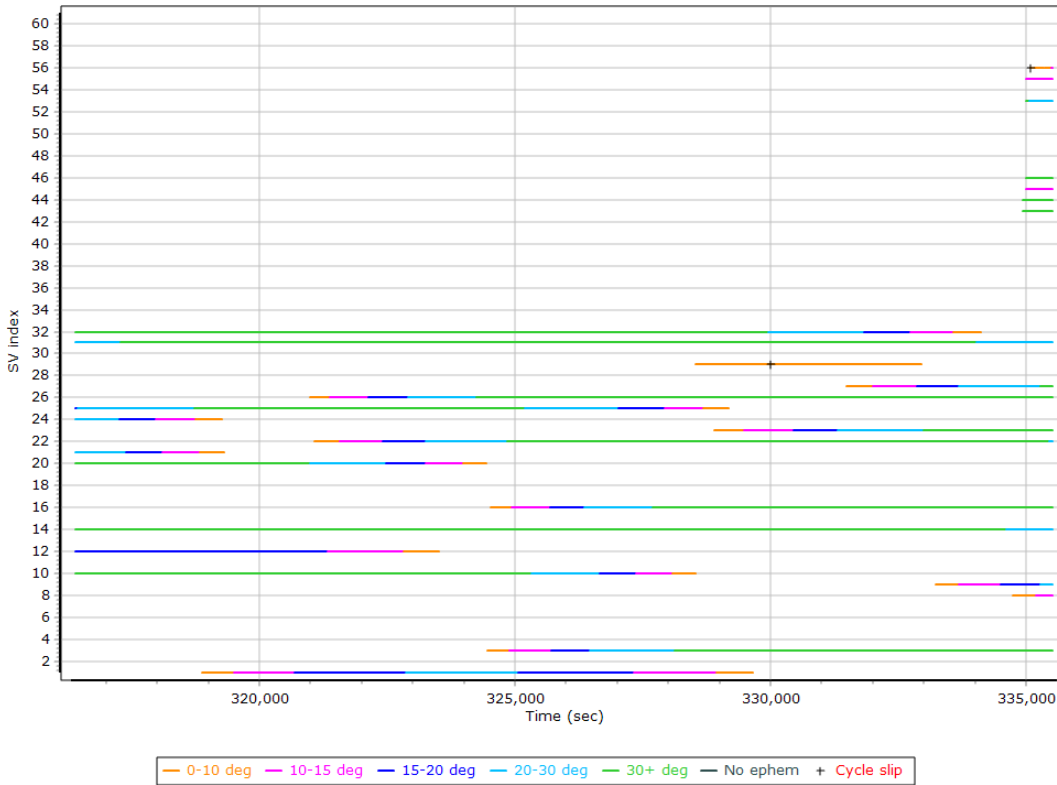
First raw data file	ALS.000		
Last raw data file	ALS.040		
Start GPS week	2086		
Start time	316072.692 (1/1/2020 3:47:52 PM)		
End time	335527.467 (1/1/2020 9:12:07 PM)		
Start of fine alignment	316350.714 (1/1/2020 3:52:30 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	Event 1 Input, Event 2 Input, Event 3 Input, Event 4 Input, Event 5 Input, Event 6 Input		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.704	-0.207	-1.249
Gimbal 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

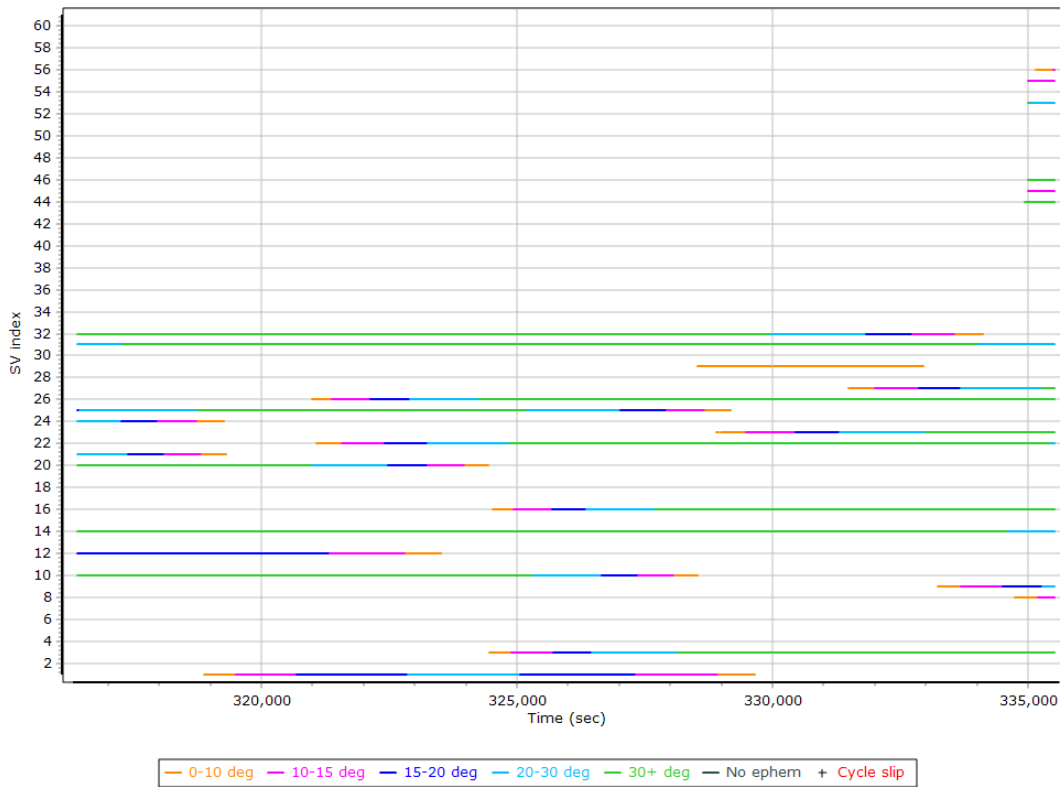
Raw IMU Import QC Summary

IMU data input file	imu_4320001a.dat
IMU data check log file	imudt_4320001a.log
IMU Records Processed	3891455
Termination Status	Normal
IMU Anomalies	0

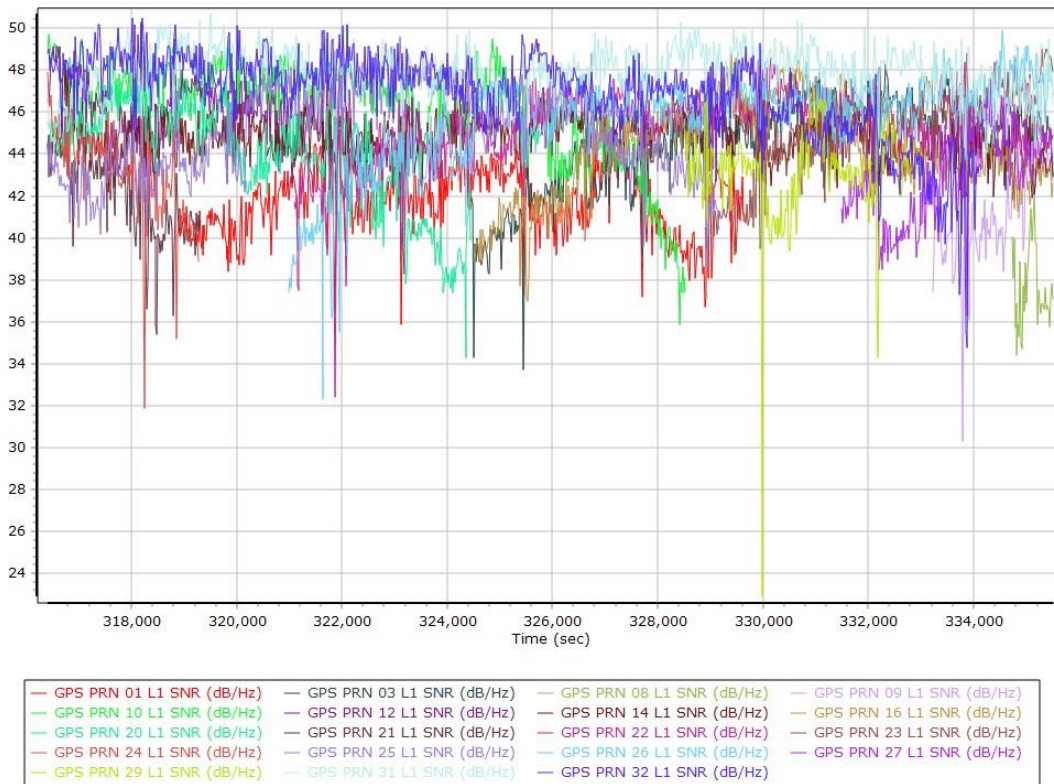
L1 Satellite Lock/Elevation



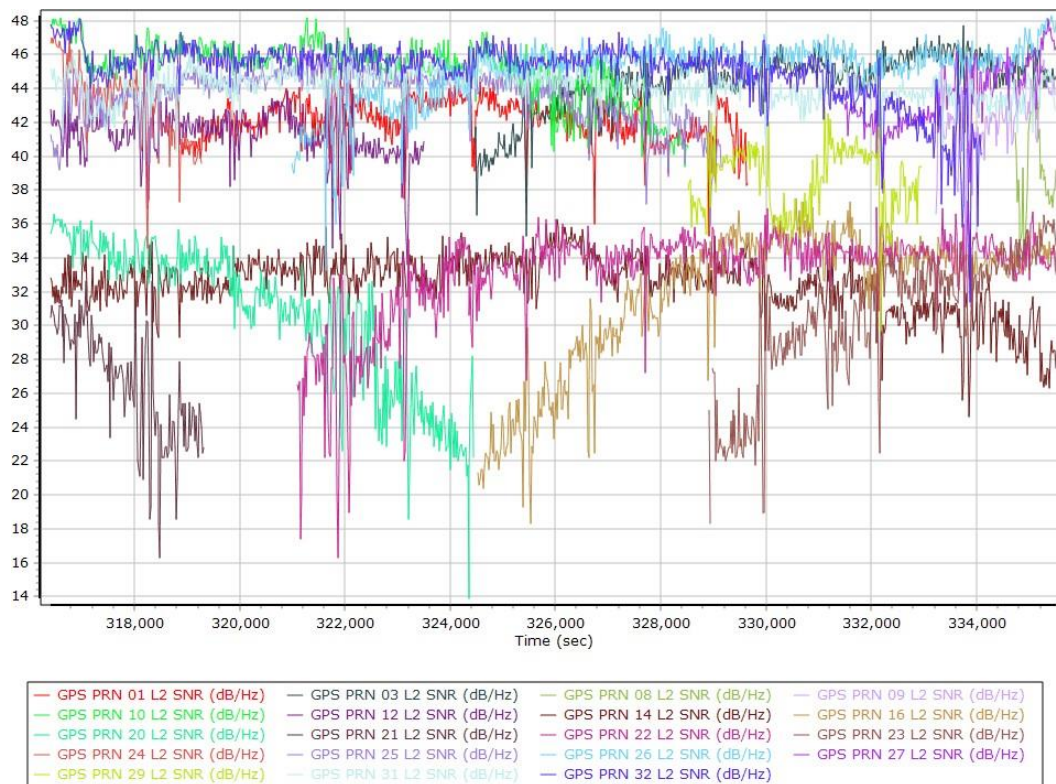
L2 Satellite Lock/Elevation



GPS L1 SNR



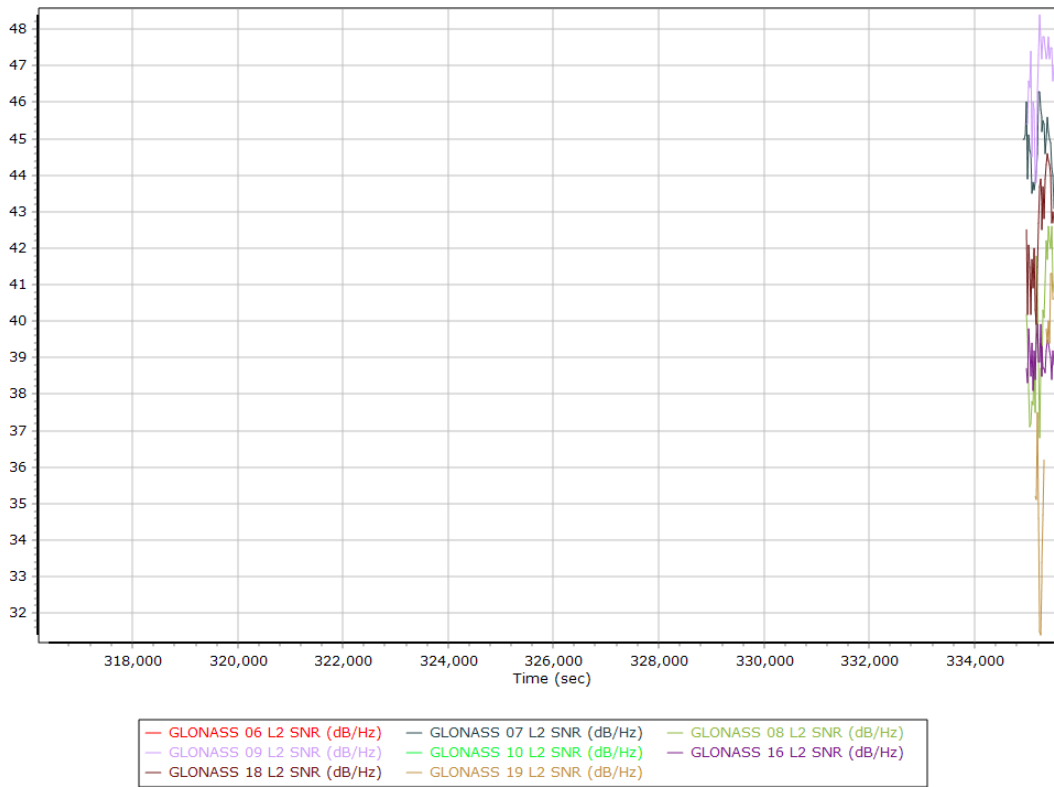
GPS L2 SNR



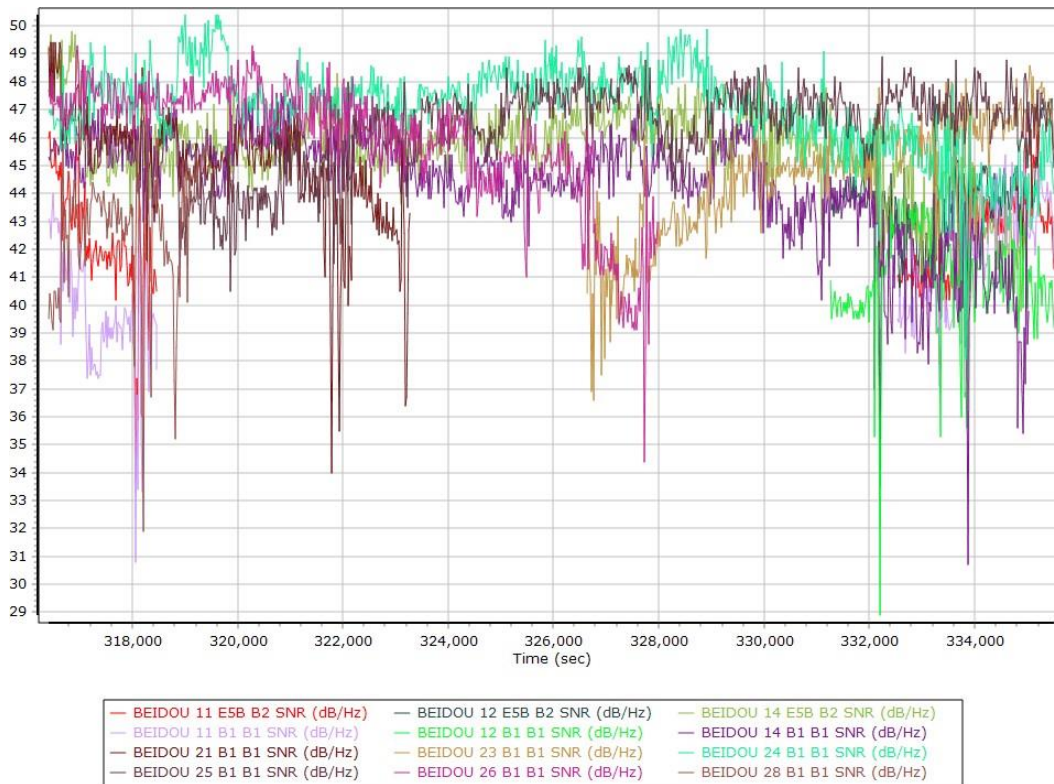
GLONASS L1 SNR



GLONASS L2 SNR

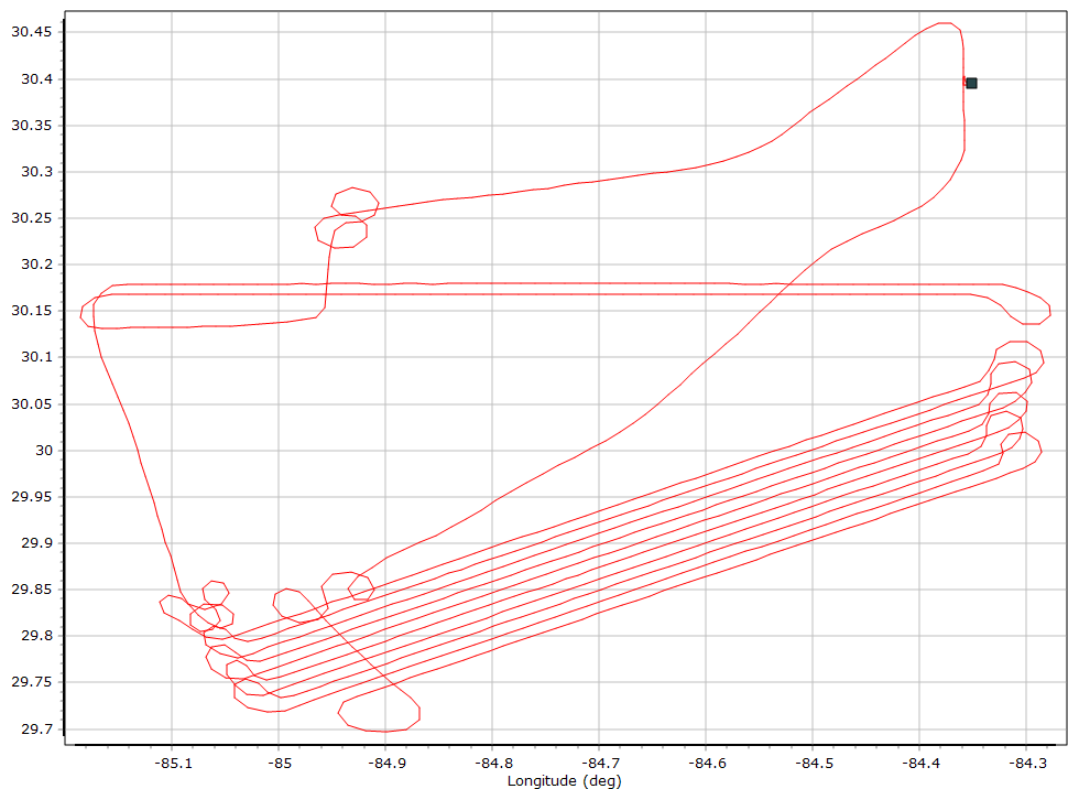


BEIDOU SNR

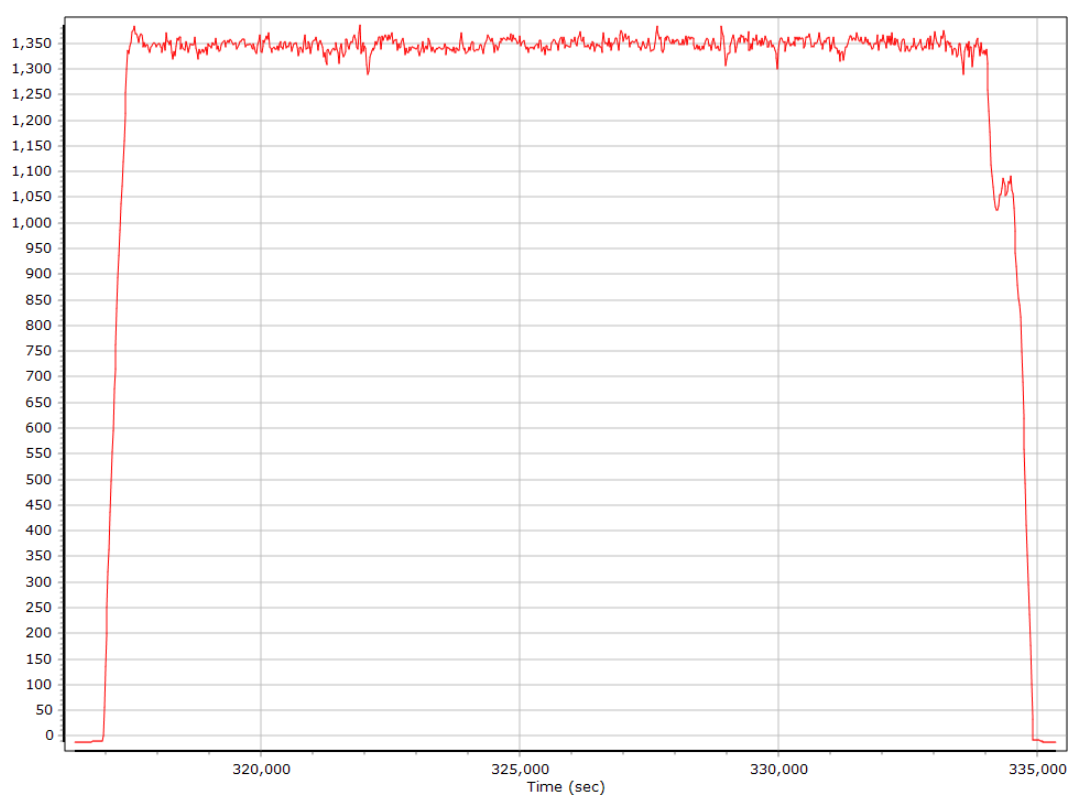


Trajectory Information

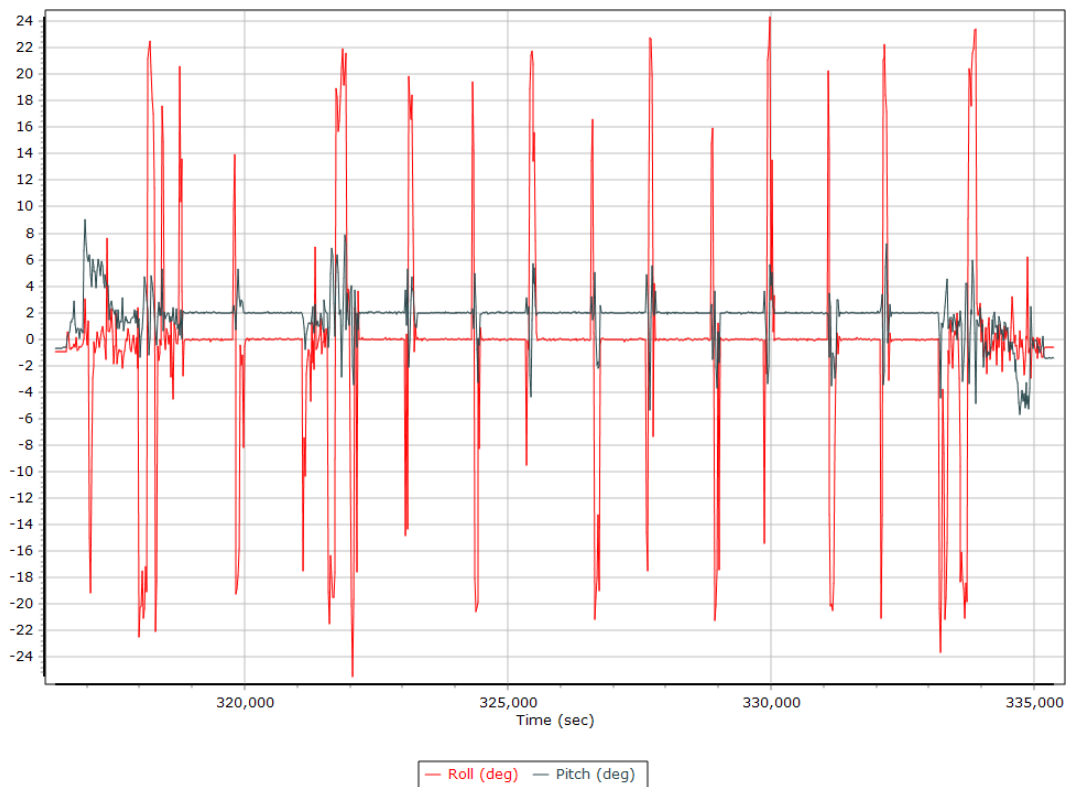
Top View



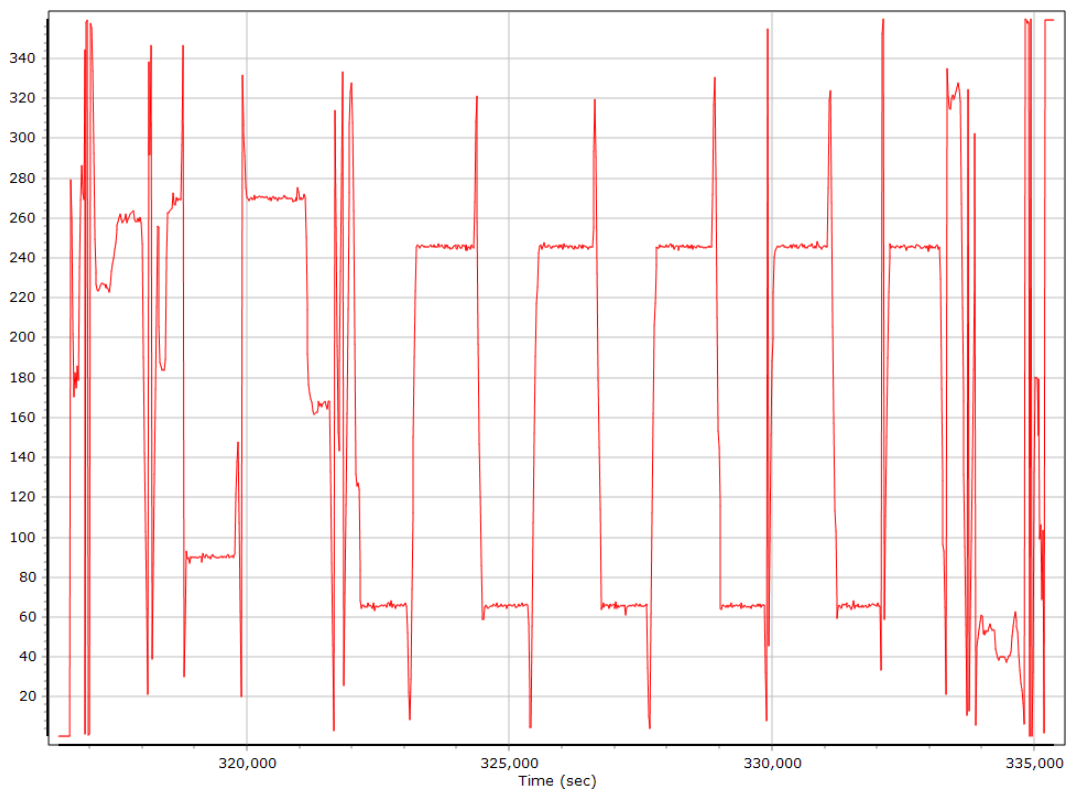
Altitude



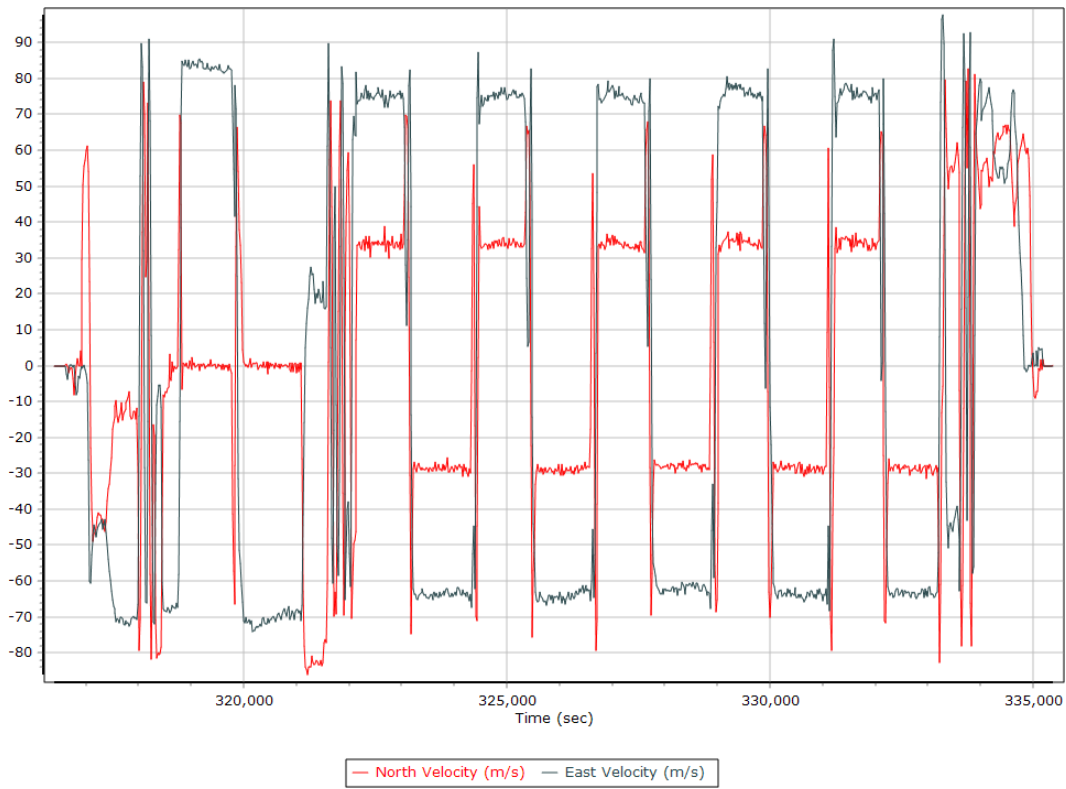
Roll/Pitch



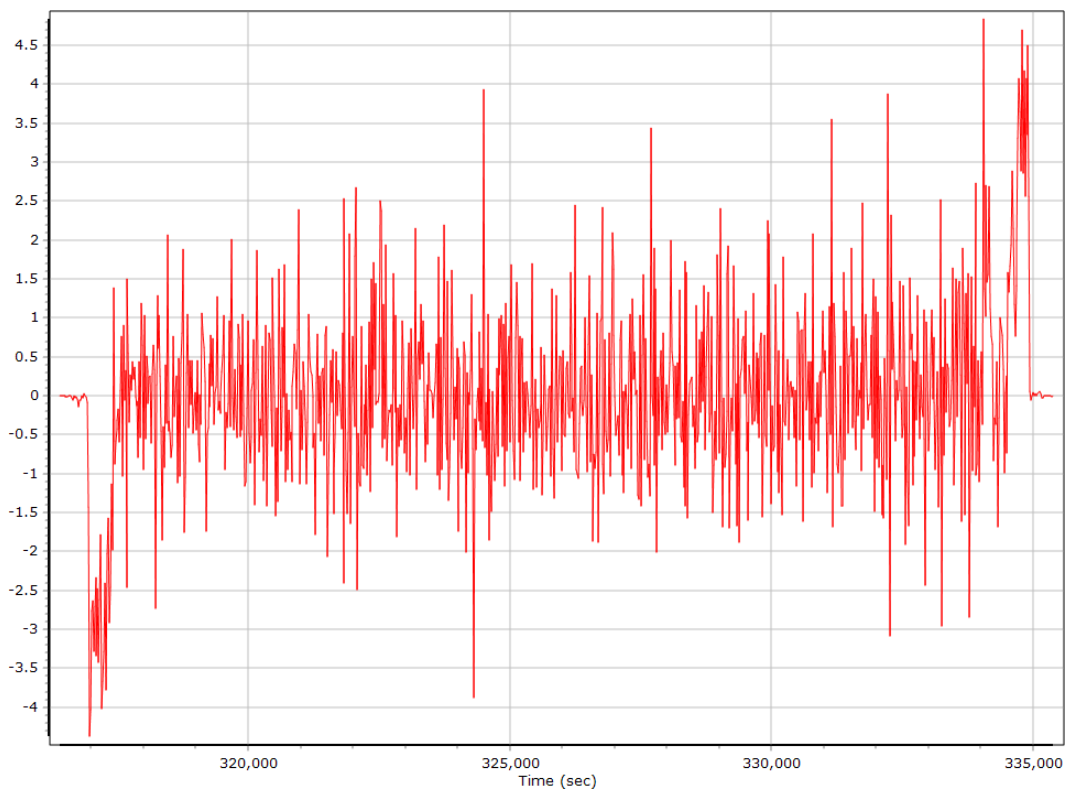
Heading



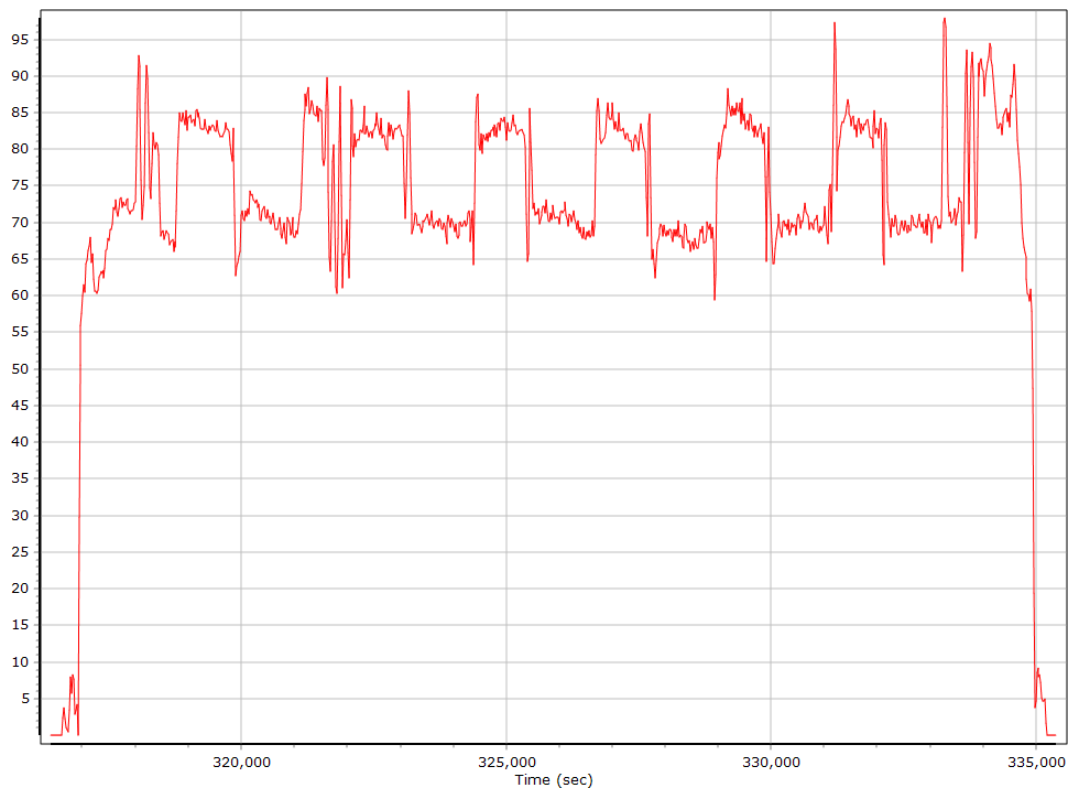
North/East Velocity



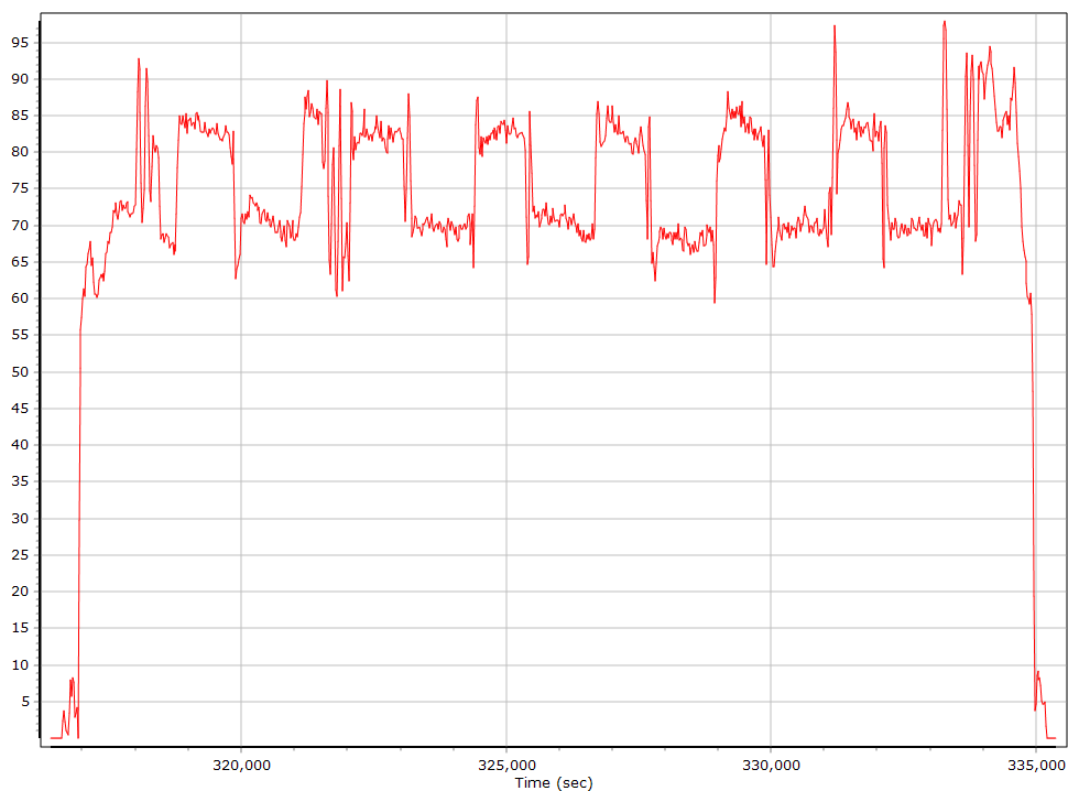
Down Velocity



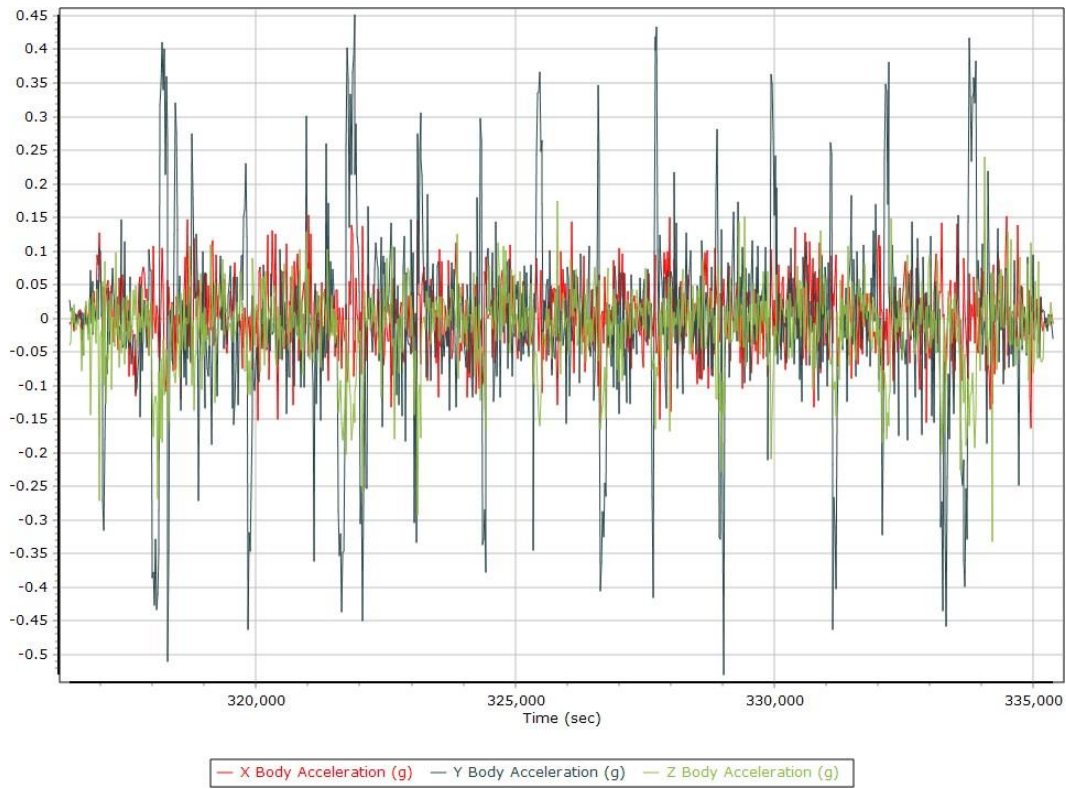
Total Speed



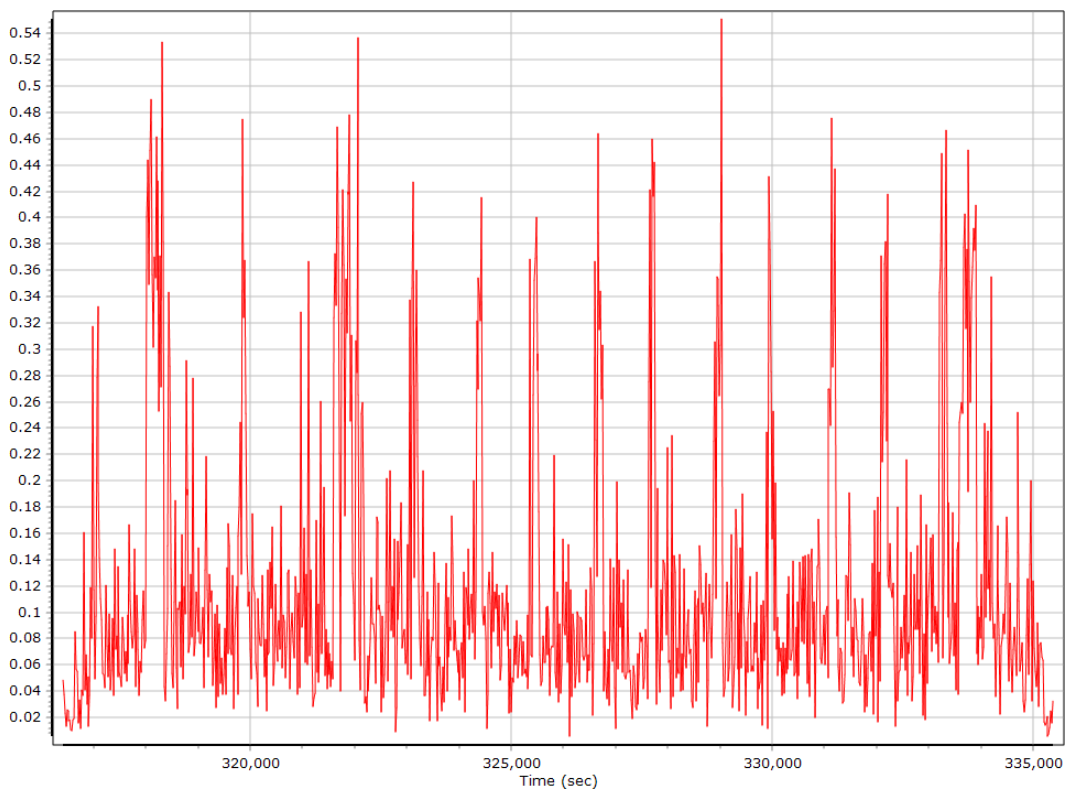
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate



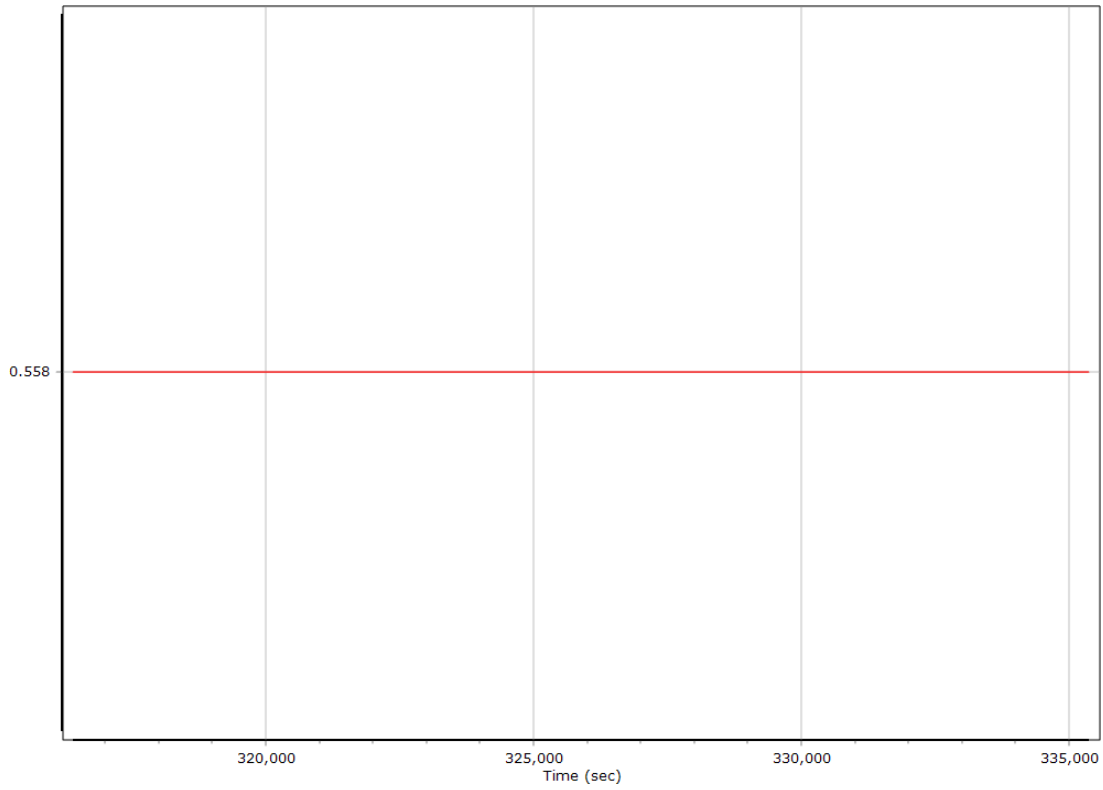
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion GNSS Nav		
Stabilized mount	True		
Processing start time	316073.000 (1/1/2020 3:47:53 PM)		
Processing end time	335534.000 (1/1/2020 9:12:14 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.558	-0.085	-1.279
Gimbal to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

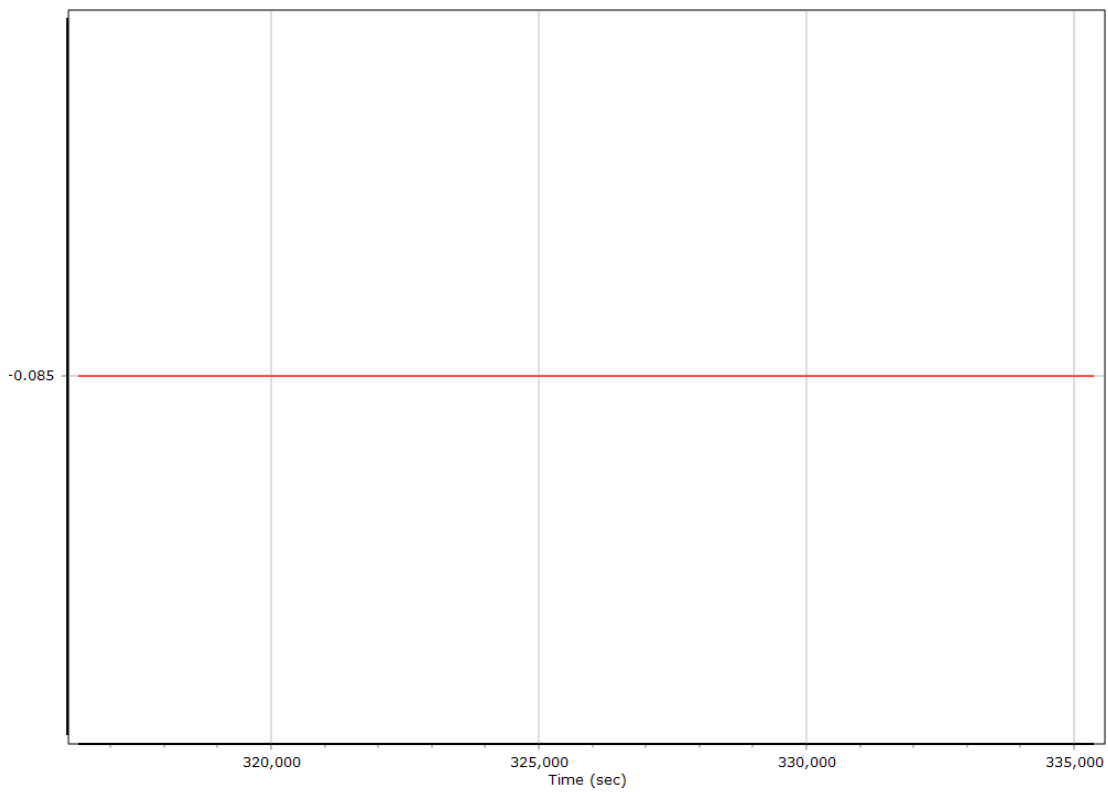
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

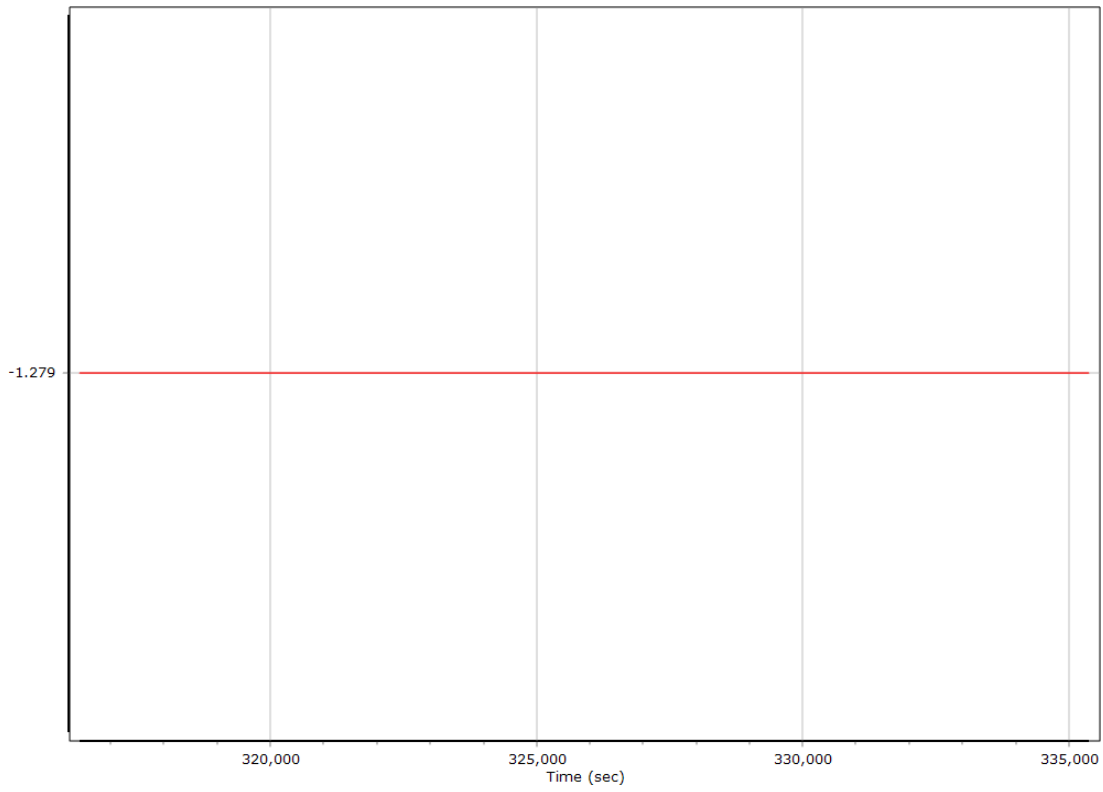
X Reference-Primary GNSS Lever Arm (m)



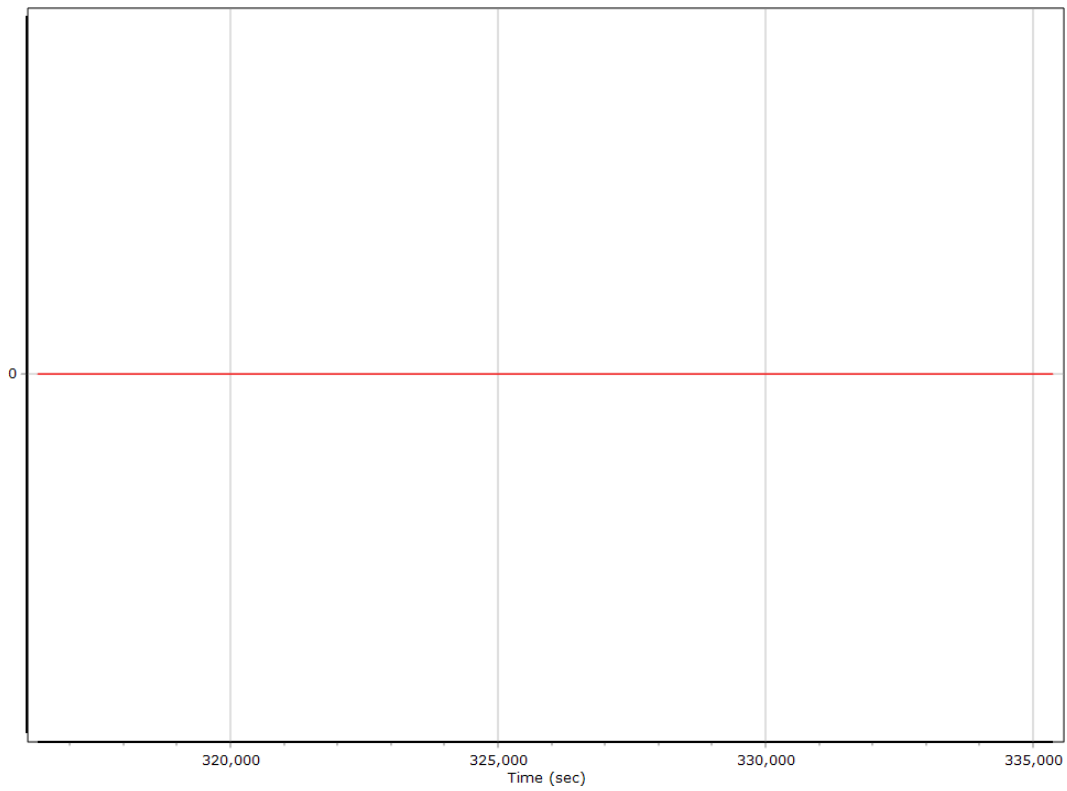
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



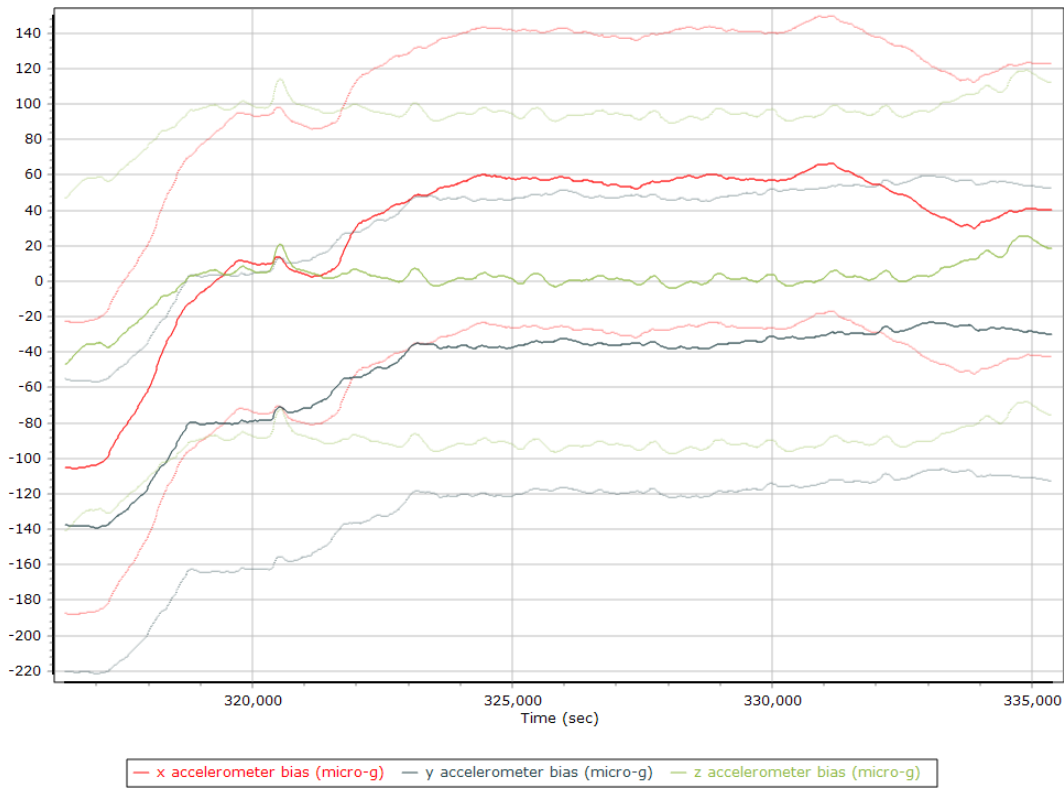
Reference-Primary GNSS Lever Arm Figure of Merit



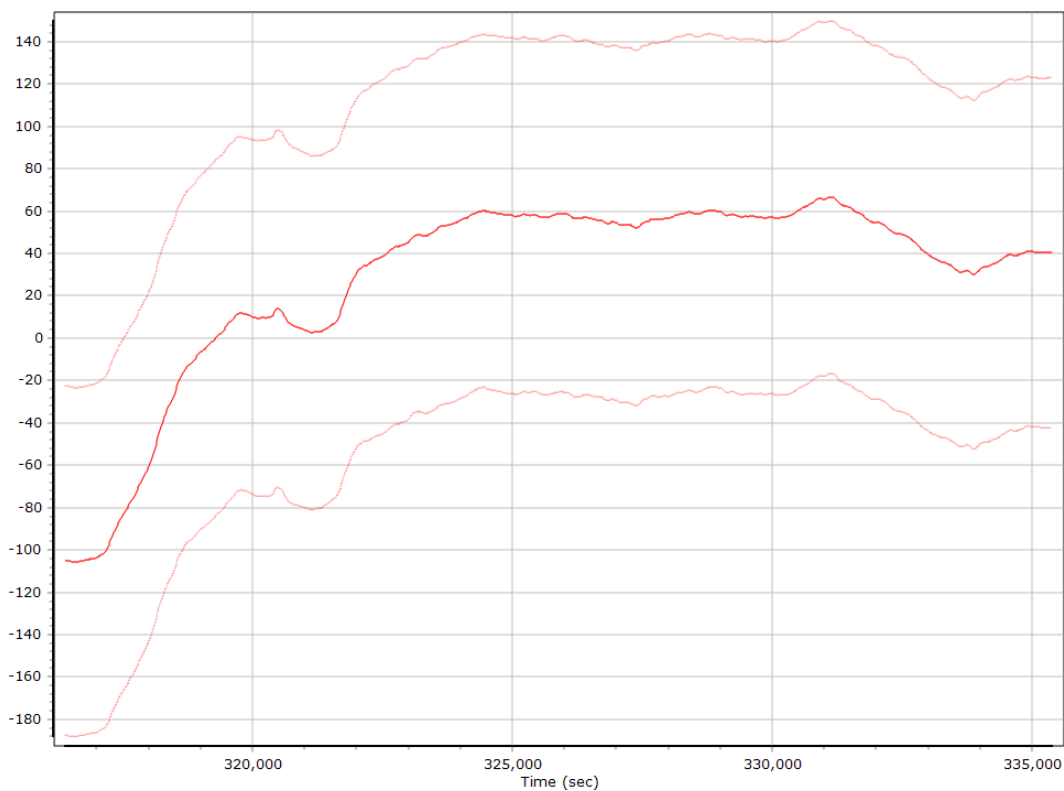
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

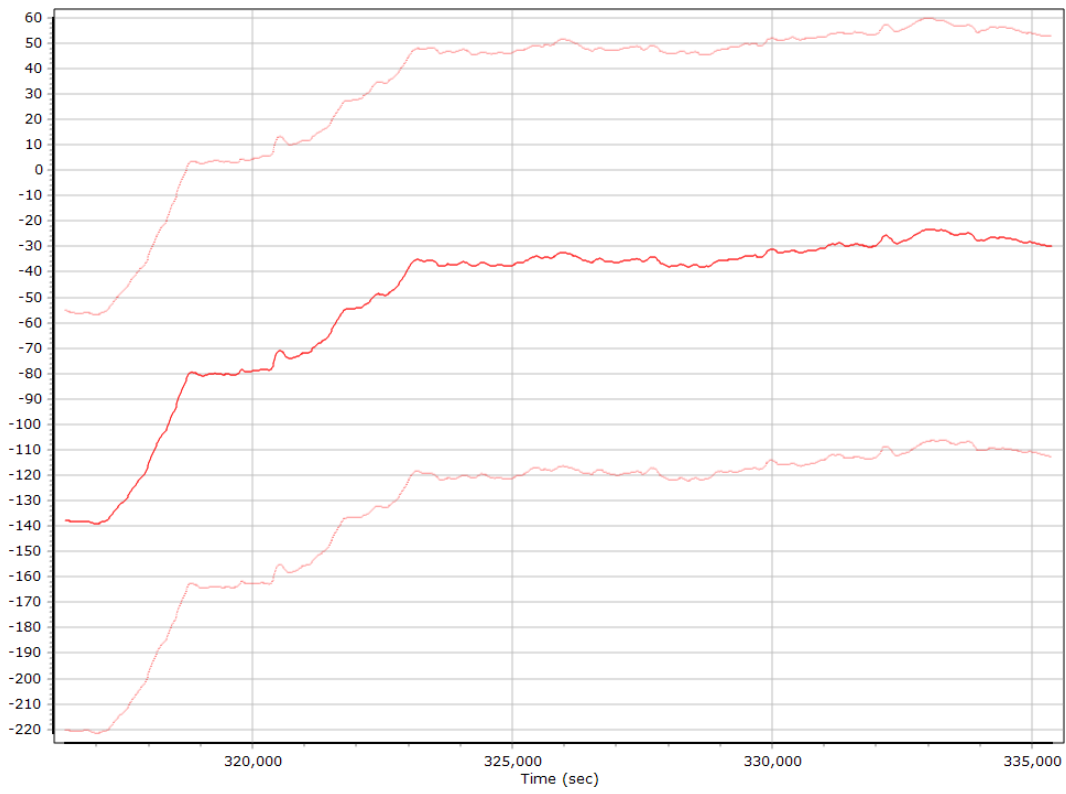
Accelerometer Bias (micro-g)



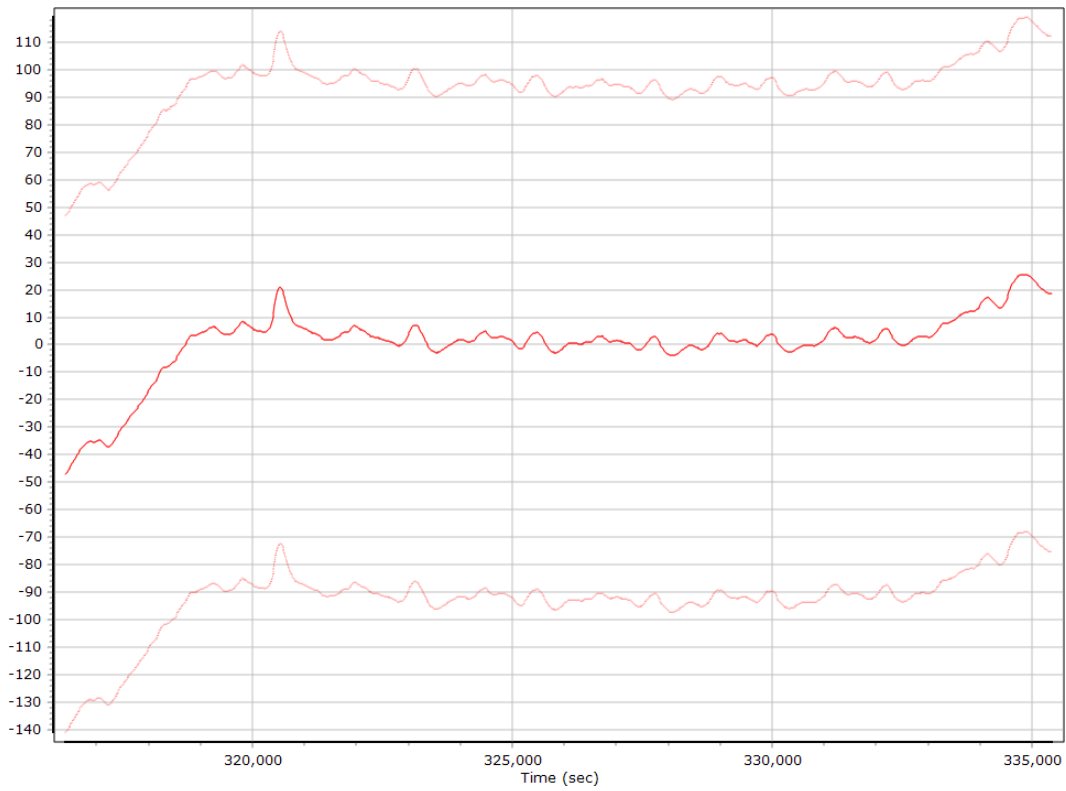
X Accelerometer Bias (micro-g)



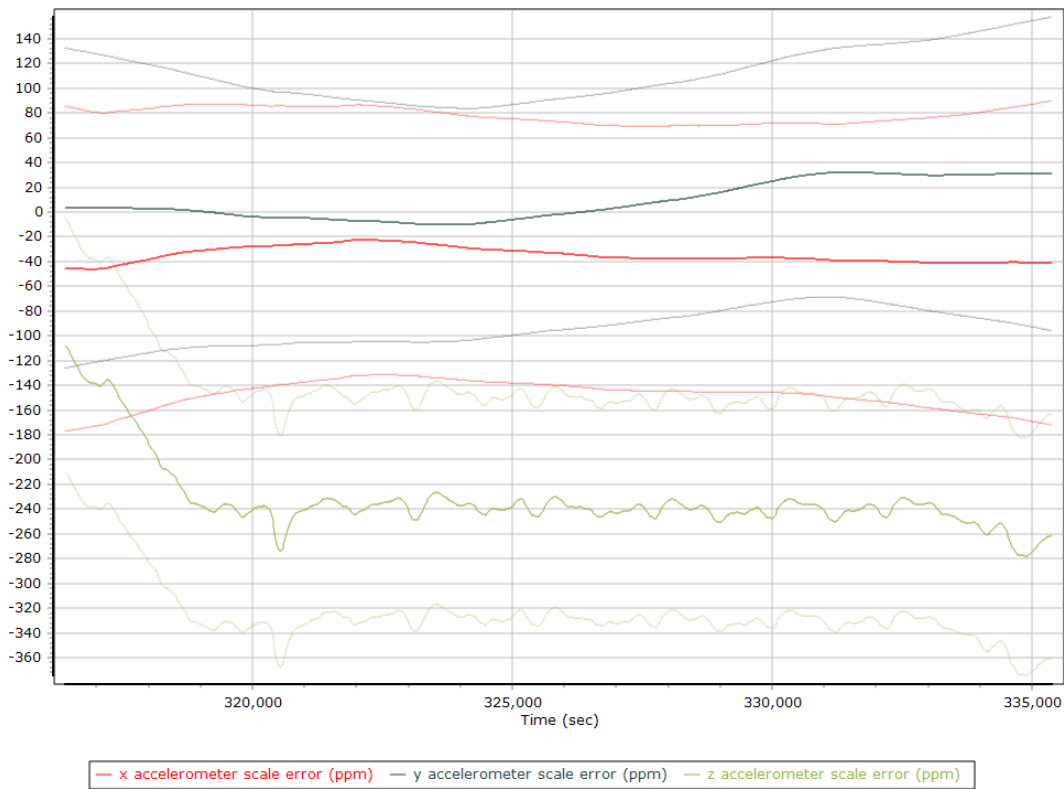
Y Accelerometer Bias (micro-g)



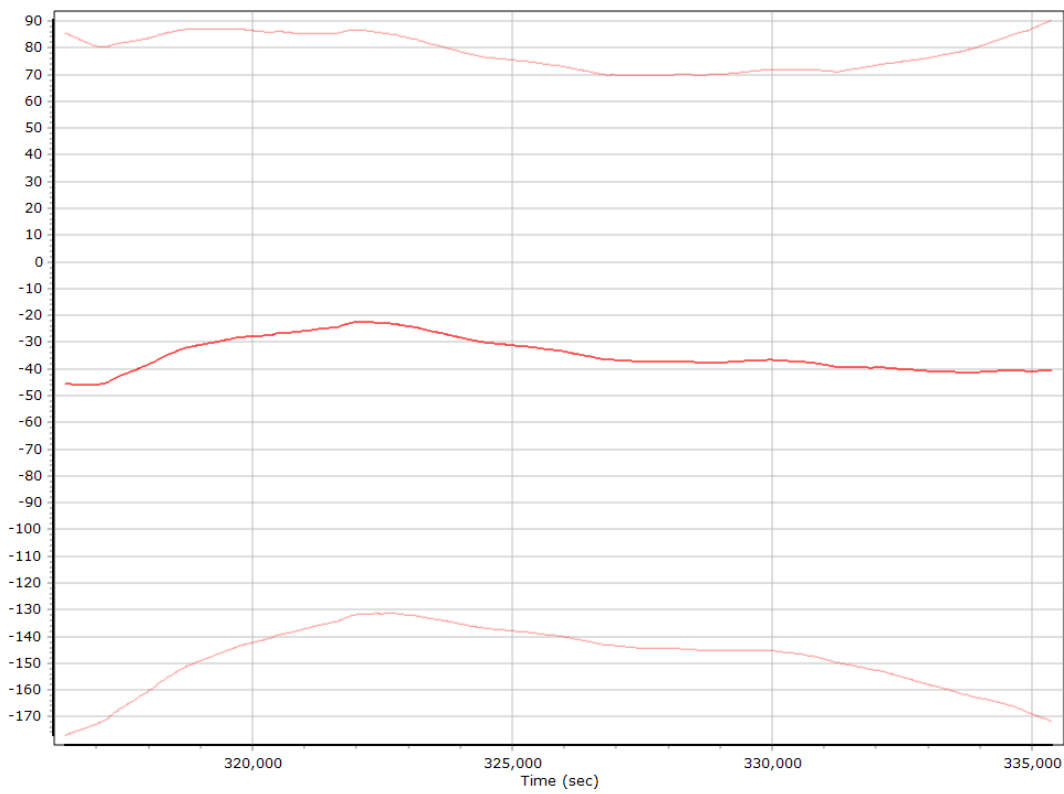
Z Accelerometer Bias (micro-g)



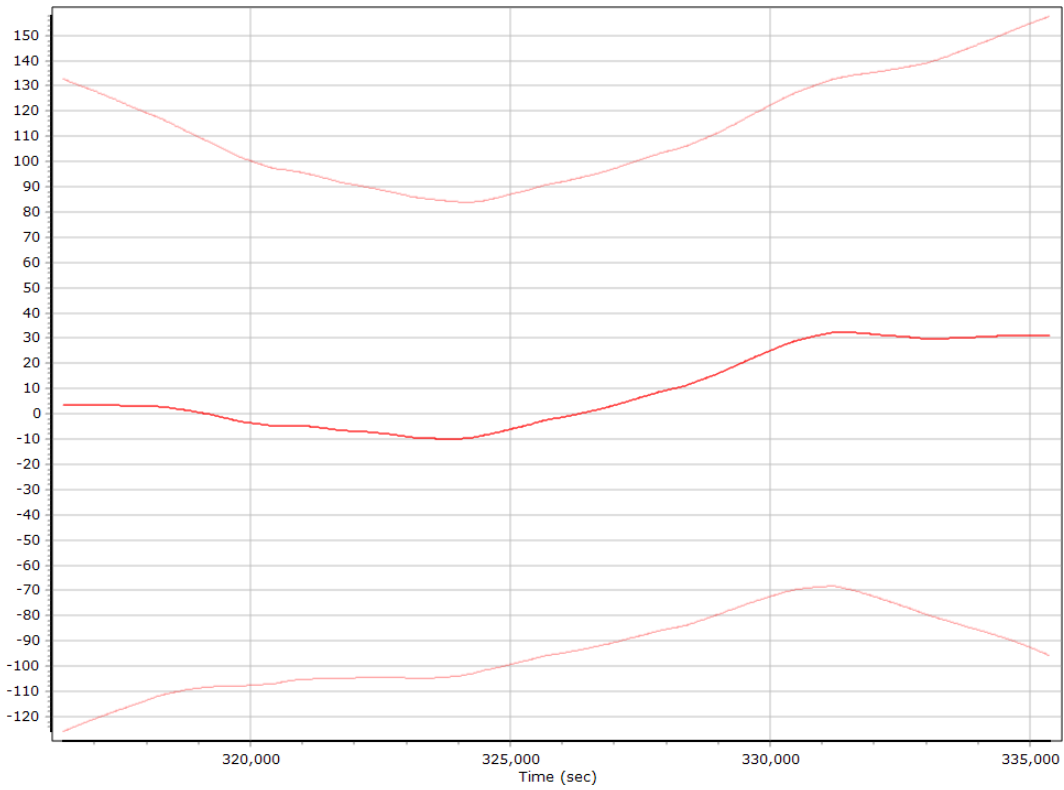
Accelerometer Scale Error (ppm)



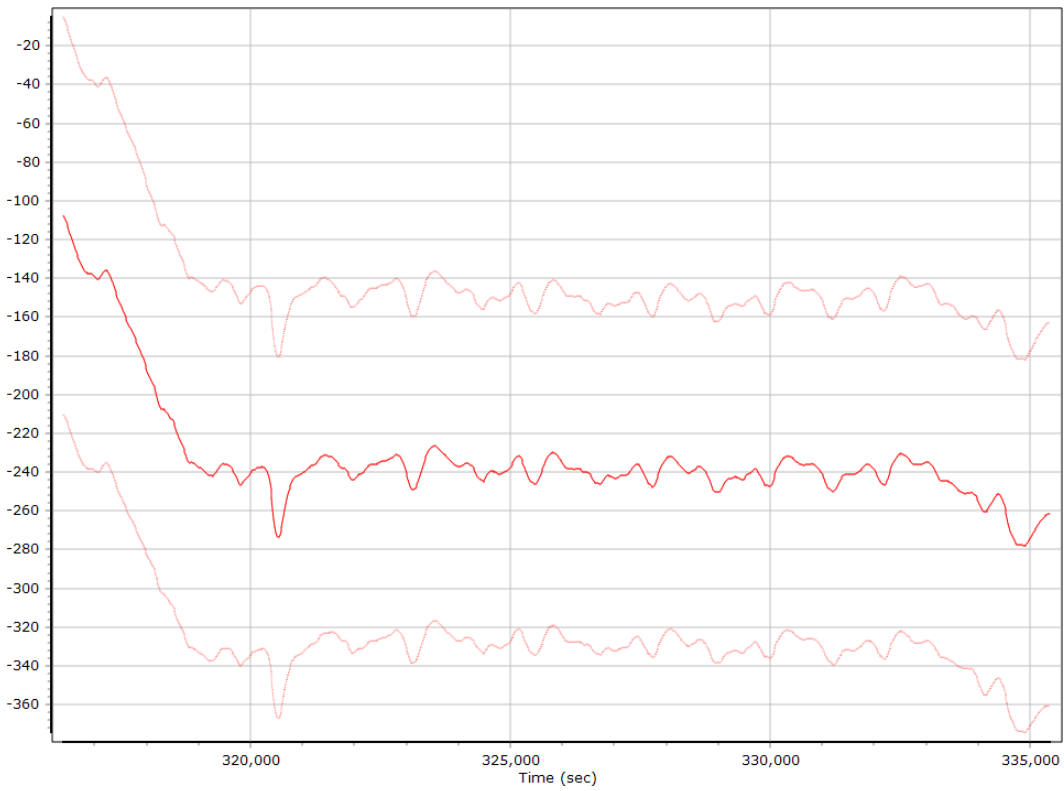
X Accelerometer Scale Error (ppm)



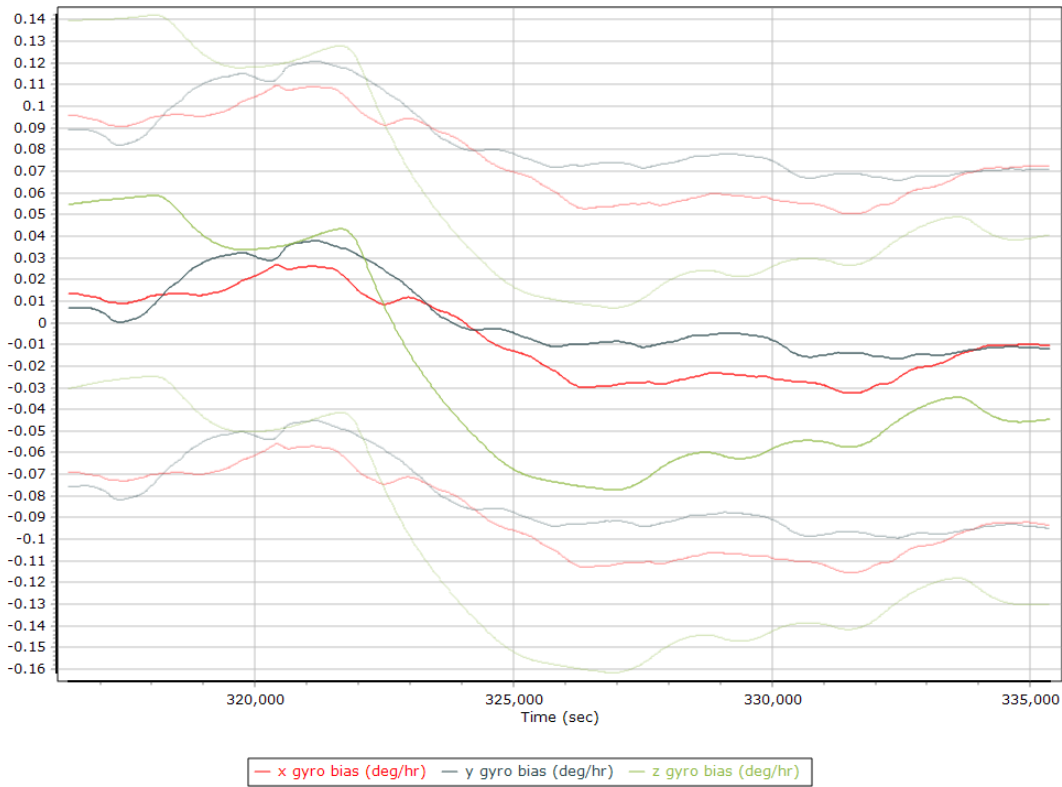
Y Accelerometer Scale Error (ppm)



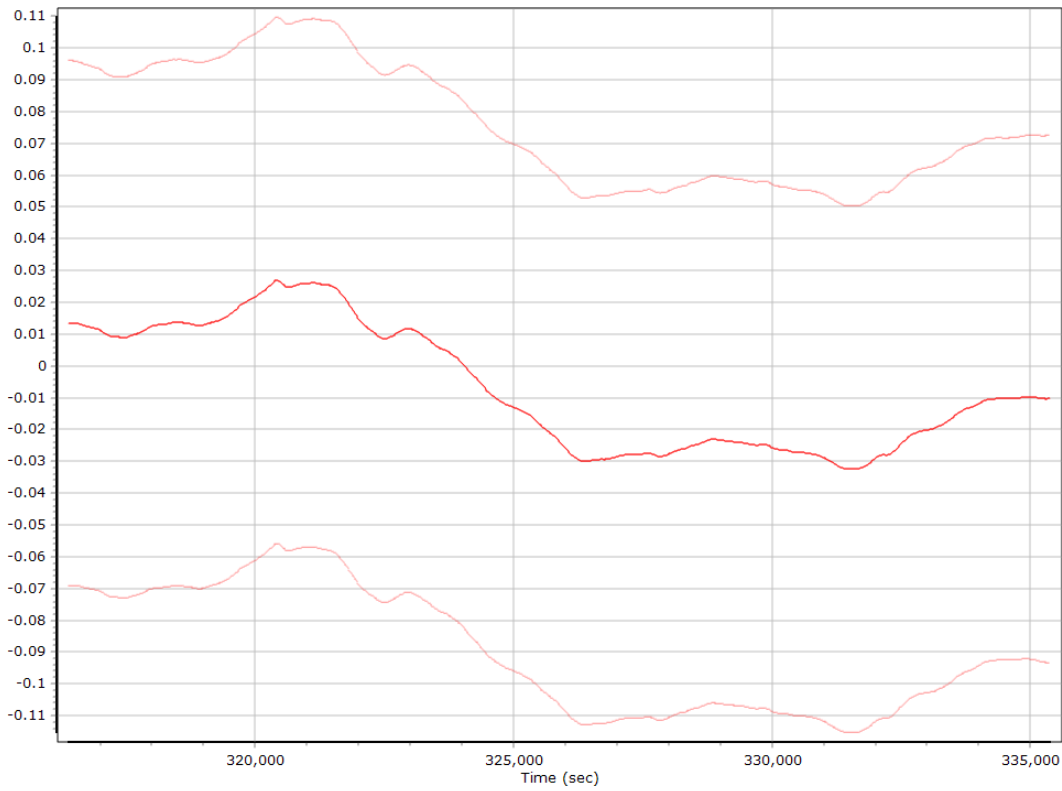
Z Accelerometer Scale Error (ppm)



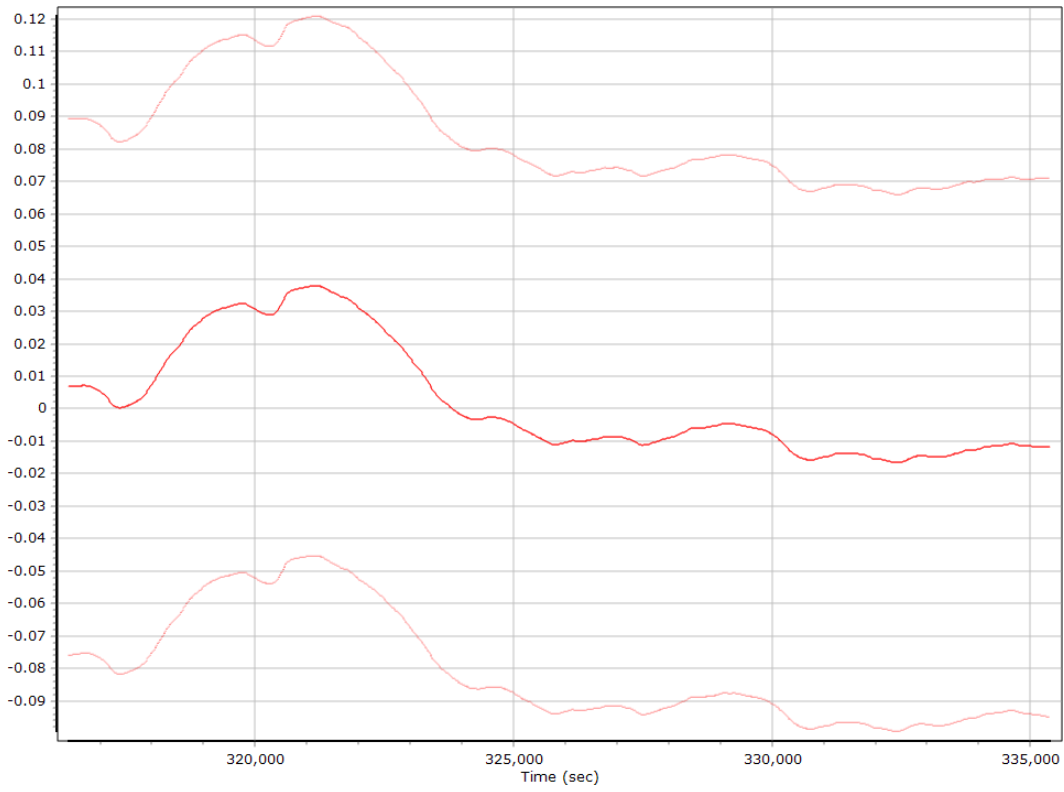
Gyro Bias (deg/h)



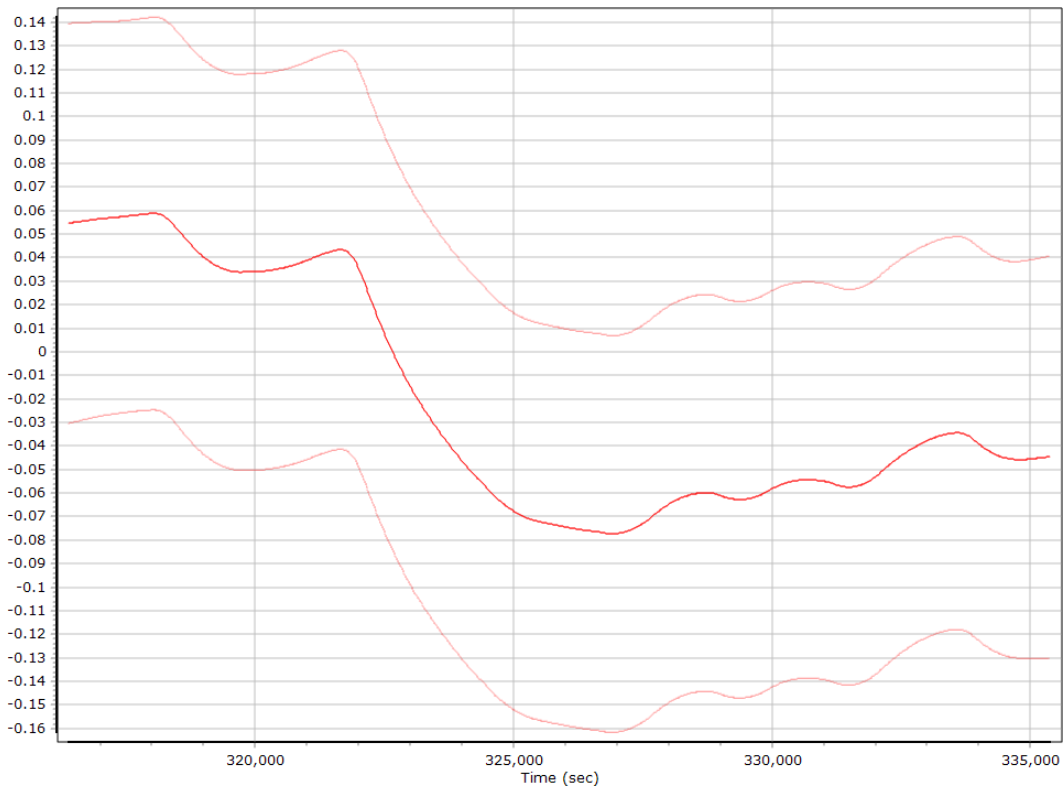
X Gyro Bias (deg/h)



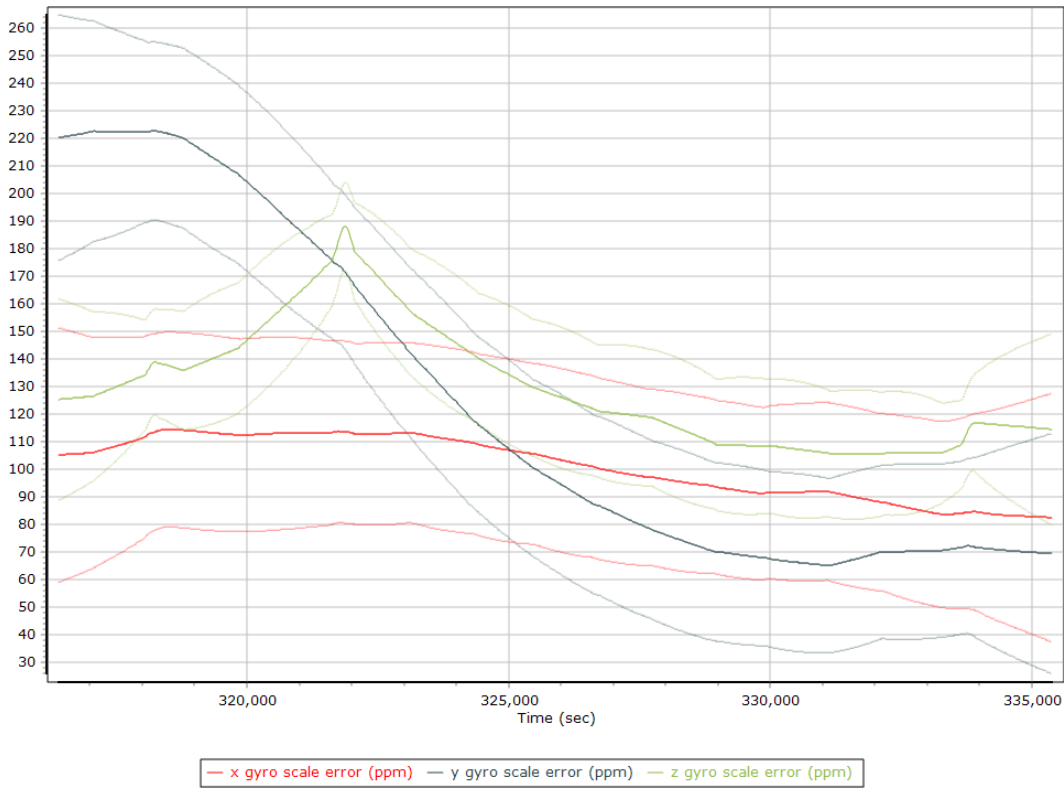
Y Gyro Bias (deg/h)



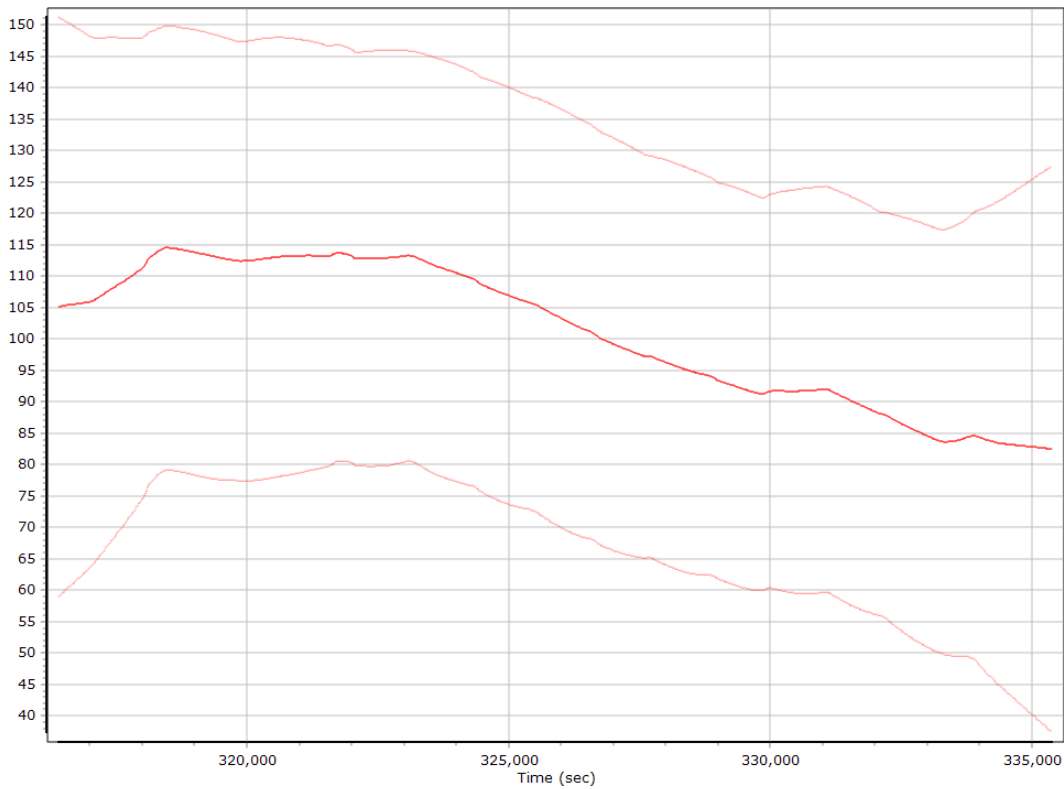
Z Gyro Bias (deg/h)



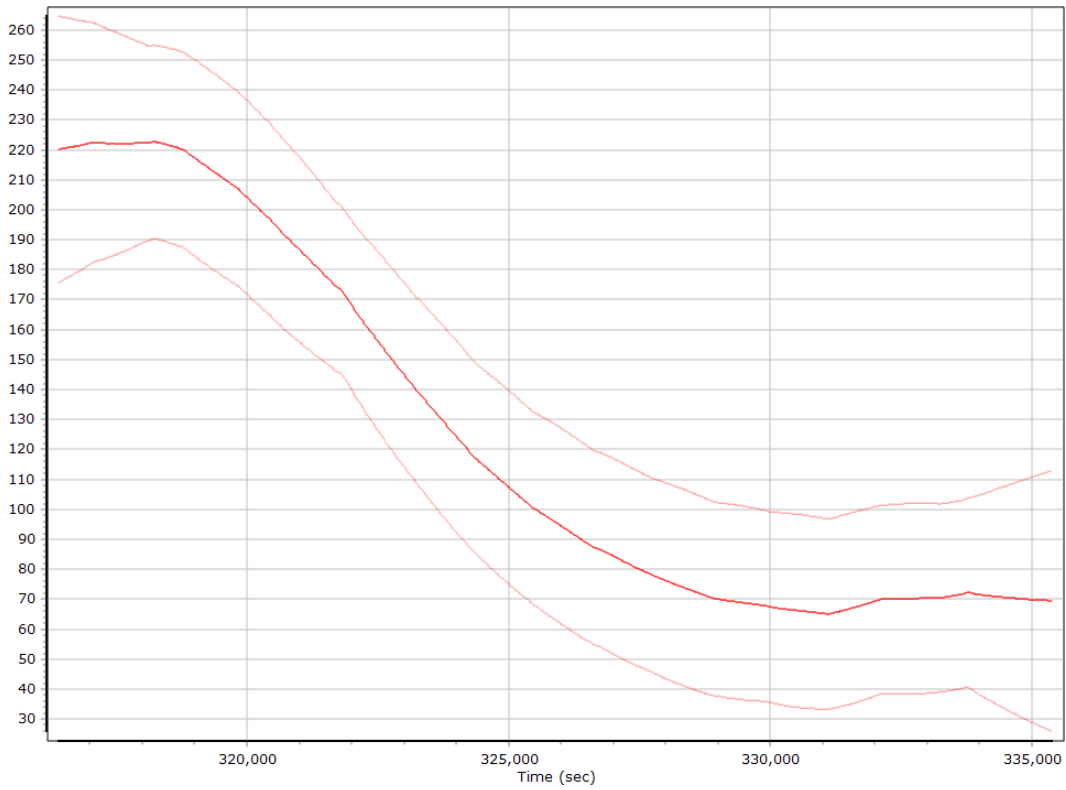
Gyro Scale Error (ppm)



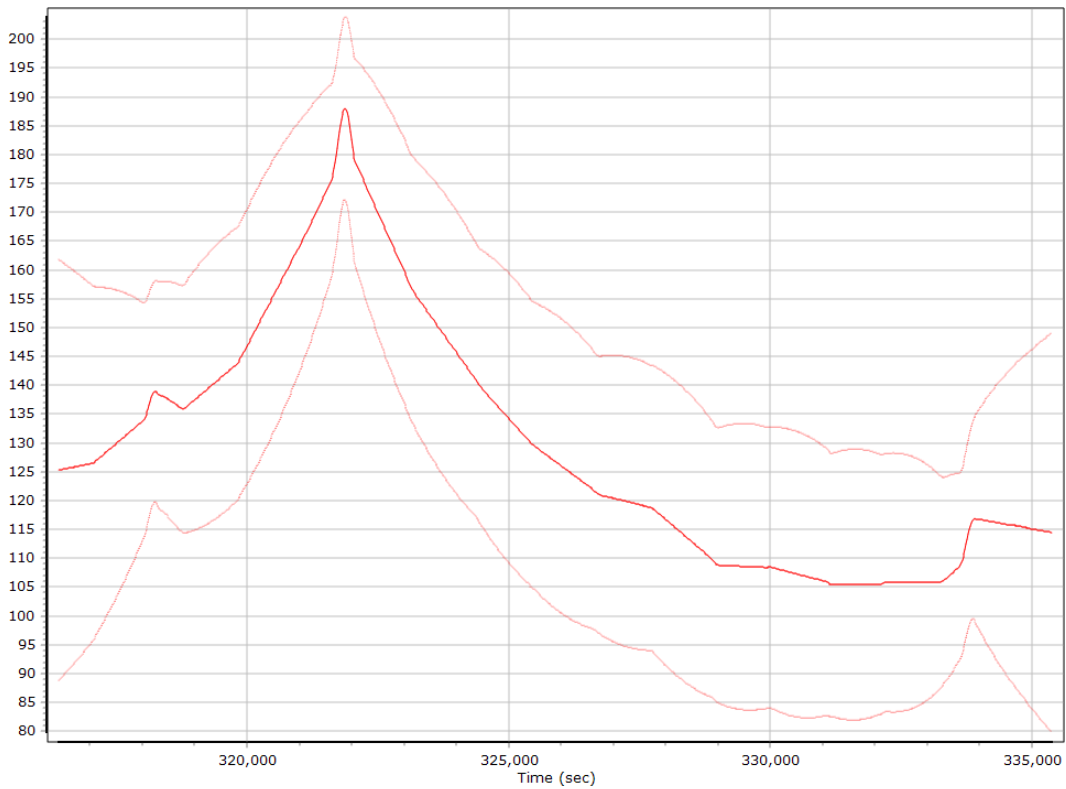
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

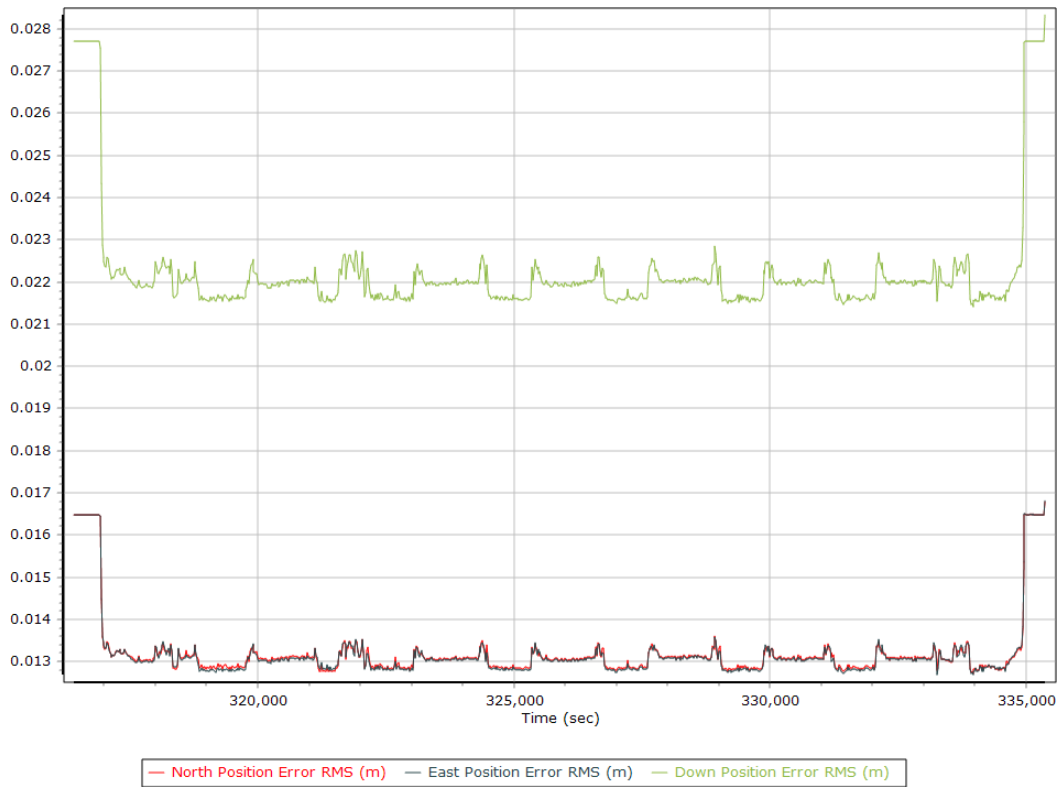


Z Gyro Scale Error (ppm)

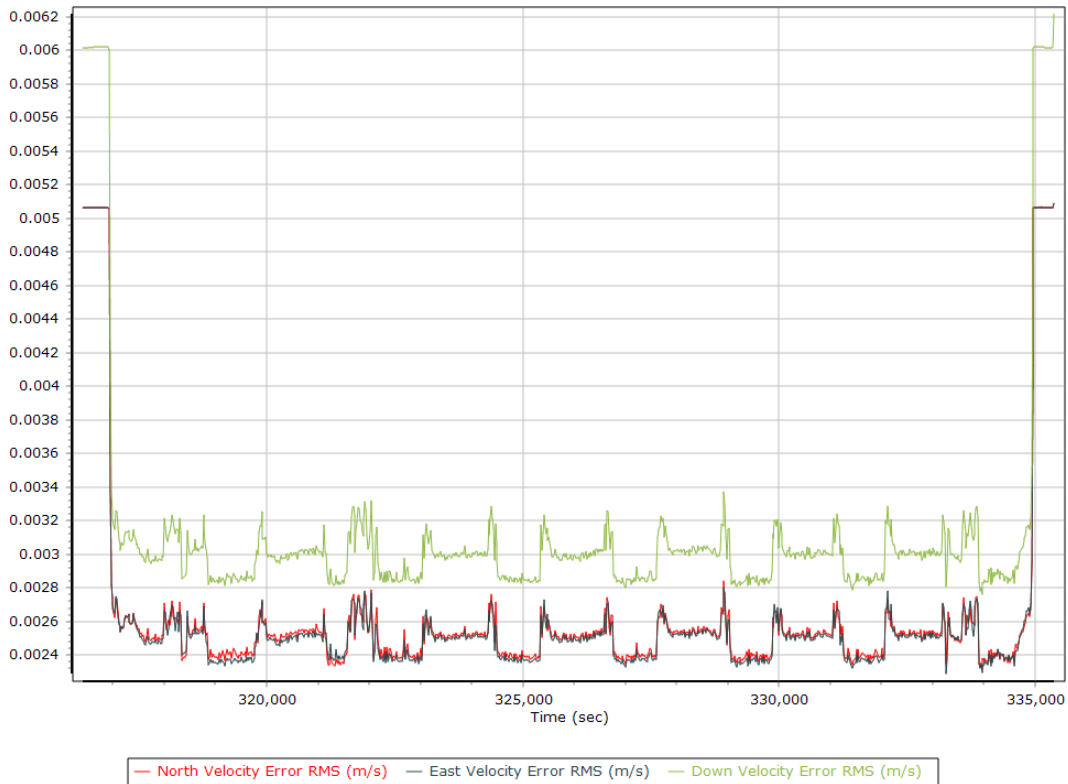


Smoothed Performance Metrics

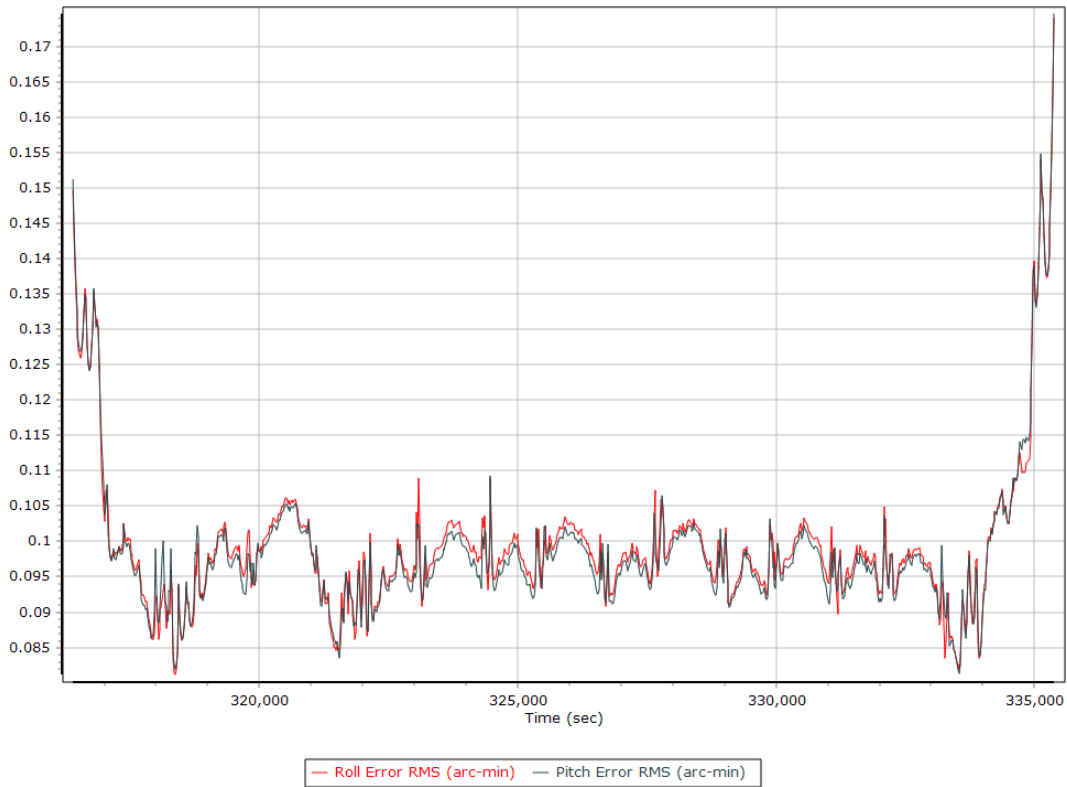
Position Error RMS (m)



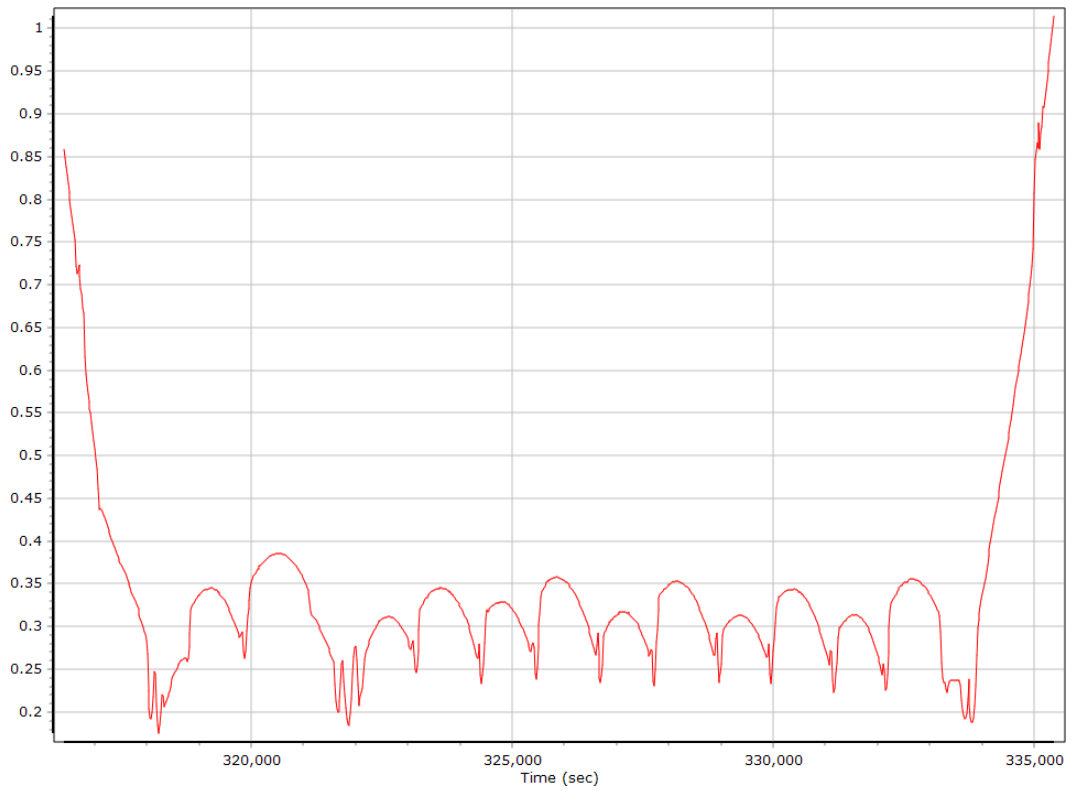
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)



Heading Error RMS (arc-min)



Export Summary

Export file	export_4320001a.kml		
Export format	Google KML		
Solution in use	Post-processed		
Output rate	Specified Distance Interval		
Distance Interval (m)	10.000		
Reference to Output lever arm [m]	0.000	0.000	0.000
Reference mounting angles [deg]	0.000	0.000	0.000
Output units (Coordinate / Lat & Lon)	Meter	Deg Decimal	
Export start time	316072.692 (1/1/2020 3:47:52 PM)		
Export end time	335382.002 (1/1/2020 9:09:42 PM)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 16 (90W to 84W)		
Datum	WGS84		
Ellipsoid	WGS84		
Local Transformation	NONE		
Target Epoch	2020		

EO Summary

EO file			
EO format			
Lever arm [m]	0.000	0.000	0.000
Boresight angles [arcmin]	0.000	0.000	0.000
Output rate	Event 1 Time		
Rotation sequence	x omega	y phi	z kappa
Local shift [m]	0.000	0.000	0.000
Output units (coordinate / angle / lat & lon)	Meter	Degree	Deg Decimal
Height option	Ellipsoid Height		
WGS84 height flag	False		
Scale height option	False		
Kappa cardinal rotation [deg]	0		
Solution in use	Post-processed		
EO start time	316352.005 (1/1/2020 3:52:32 PM)		
EO end time	335382.002 (1/1/2020 9:09:42 PM)		
Grid	Universal Transverse Mercator		
Zone	UTM North 16 (90W to 84W)		
Datum	WGS84		
Ellipsoid	WGS84		
Local Transformation	NONE		
Target Epoch	2020		

General Information

Mission Information

Project name	6219350a
Processing date	2019-12-19 16:49:44
Mission date	2019-12-16 14:03:22
Mission duration	02:46:10.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N8708
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
ALS.000	POS Data
ALS.001	POS Data
ALS.002	POS Data
ALS.003	POS Data
ALS.004	POS Data
ALS.005	POS Data
ALS.006	POS Data
ALS.007	POS Data
ALS.008	POS Data
ALS.009	POS Data
ALS.010	POS Data
ALS.011	POS Data
ALS.012	POS Data
ALS.013	POS Data
ALS.014	POS Data
ALS.015	POS Data
ALS.016	POS Data
ALS.017	POS Data
ALS.018	POS Data
ALS.019	POS Data
ALS.020	POS Data
ALS.021	POS Data
ALS.022	POS Data

Input Files

File Name	File type
Ephm3500.19g	GLONASS Broadcast Ephemeris
Ephm3500.19n	GPS Broadcast Ephemeris
flcb3500.19o	GNSS SingleBase
fljl3500.19o	GNSS SingleBase
flmd3500.19o	GNSS SingleBase
flmr3500.19o	GNSS SingleBase
gatv3500.19o	GNSS SingleBase
sned3500.19o	GNSS SingleBase
talh3500.19o	GNSS SingleBase
xcty3500.19o	GNSS SingleBase
igr20840.sp3	GPS Precise Ephemeris
igr20841.sp3	GPS Precise Ephemeris
igr20842.sp3	GPS Precise Ephemeris

Output Files

Filename	File type
sbt_6219350a.out	SBET Trajectory File

Rover Data Summary

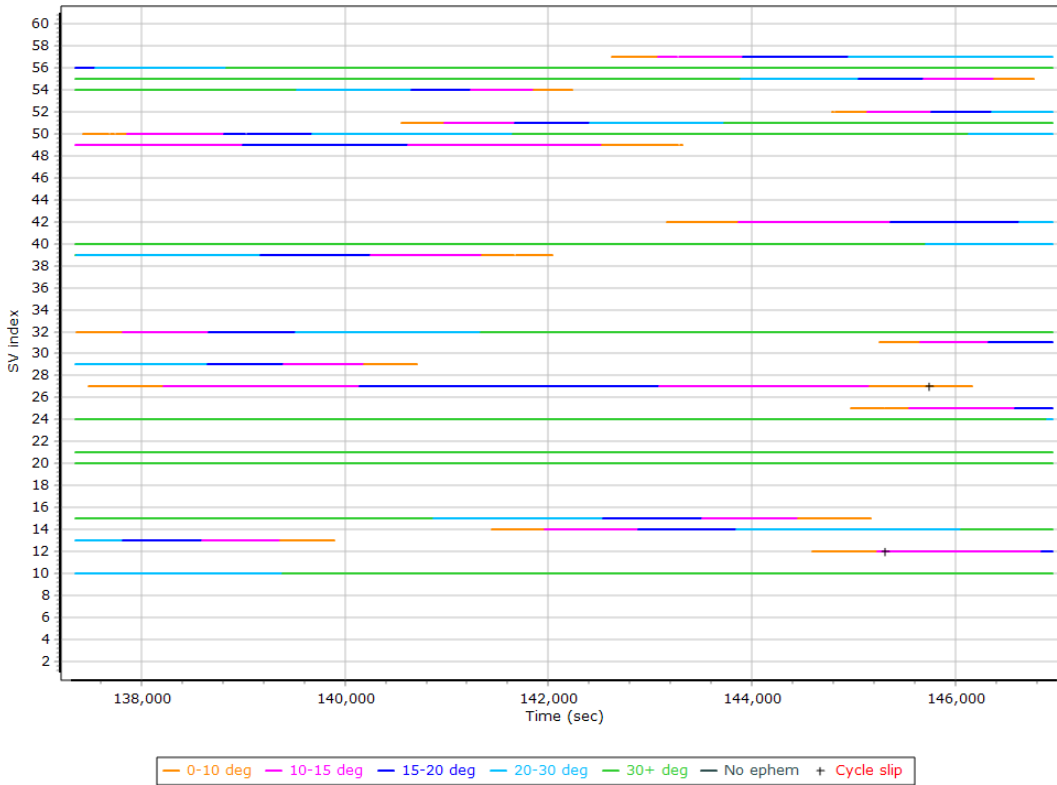
First raw data file	ALS.000		
Last raw data file	ALS.022		
Start GPS week	2084		
Start time	136983.646 (12/16/2019 2:03:03 PM)		
End time	146954.122 (12/16/2019 4:49:14 PM)		
Start of fine alignment	137291.829 (12/16/2019 2:08:11 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.046	-0.192	-1.285
Gimbal 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

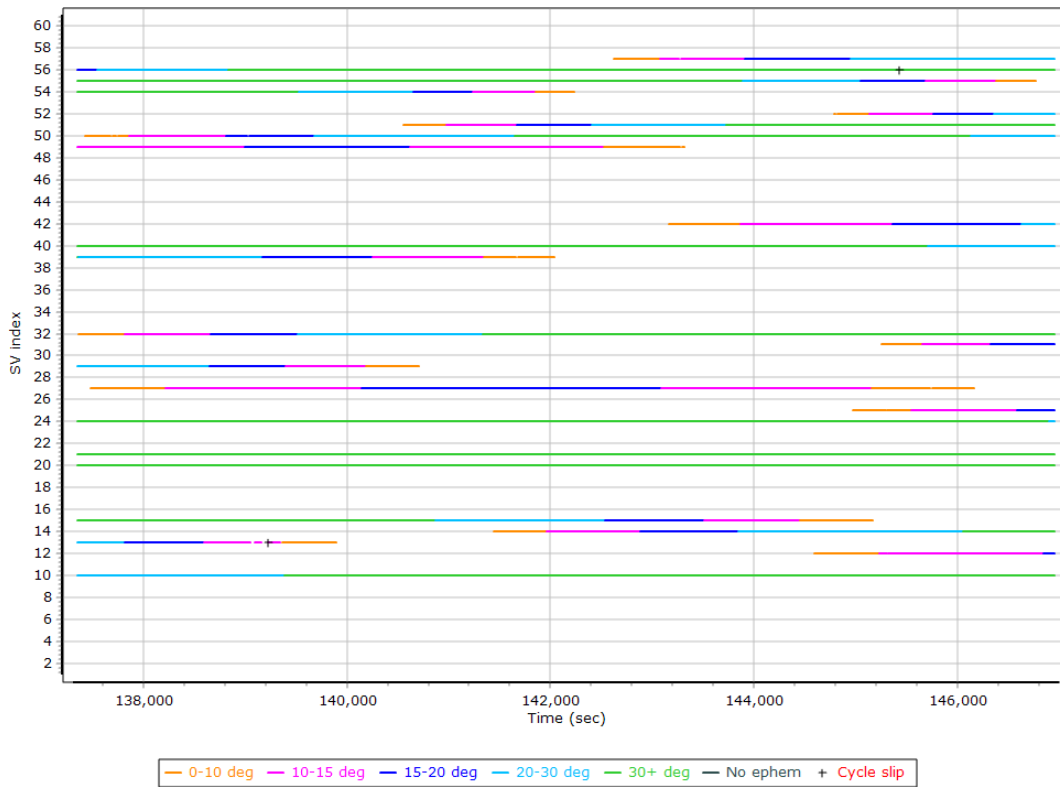
Raw IMU Import QC Summary

IMU data input file	imu_6219350a.dat
IMU data check log file	imudt_6219350a.log
IMU Records Processed	1993703
Termination Status	Normal
IMU Anomalies	0

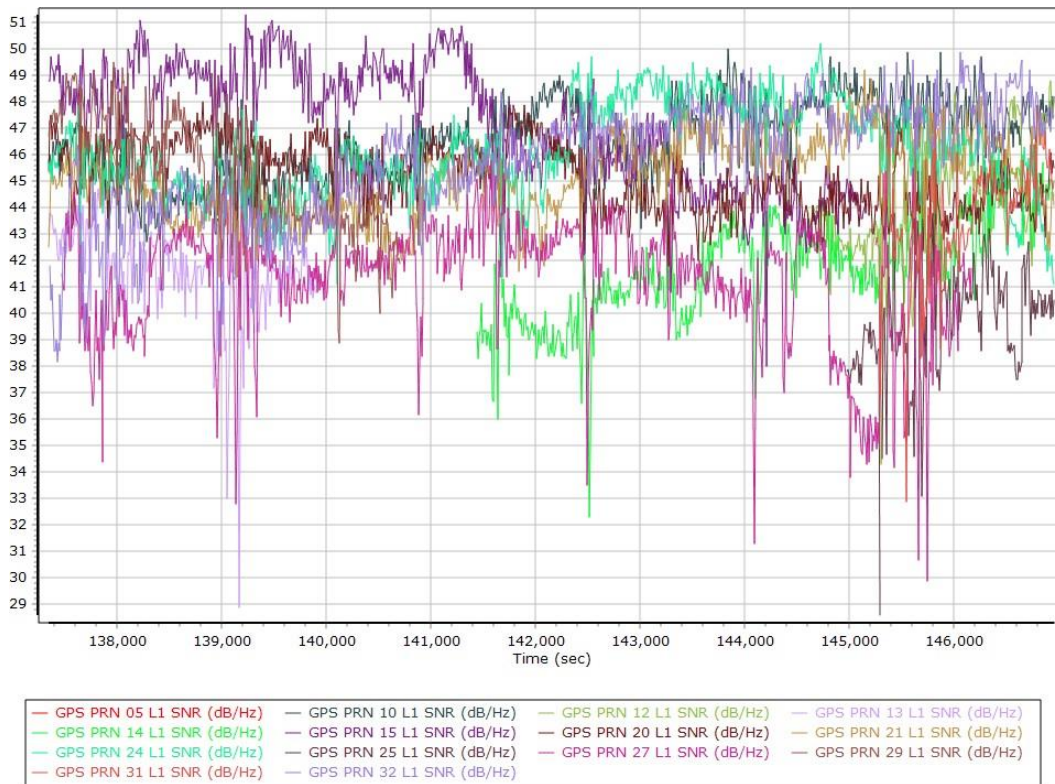
L1 Satellite Lock/Elevation



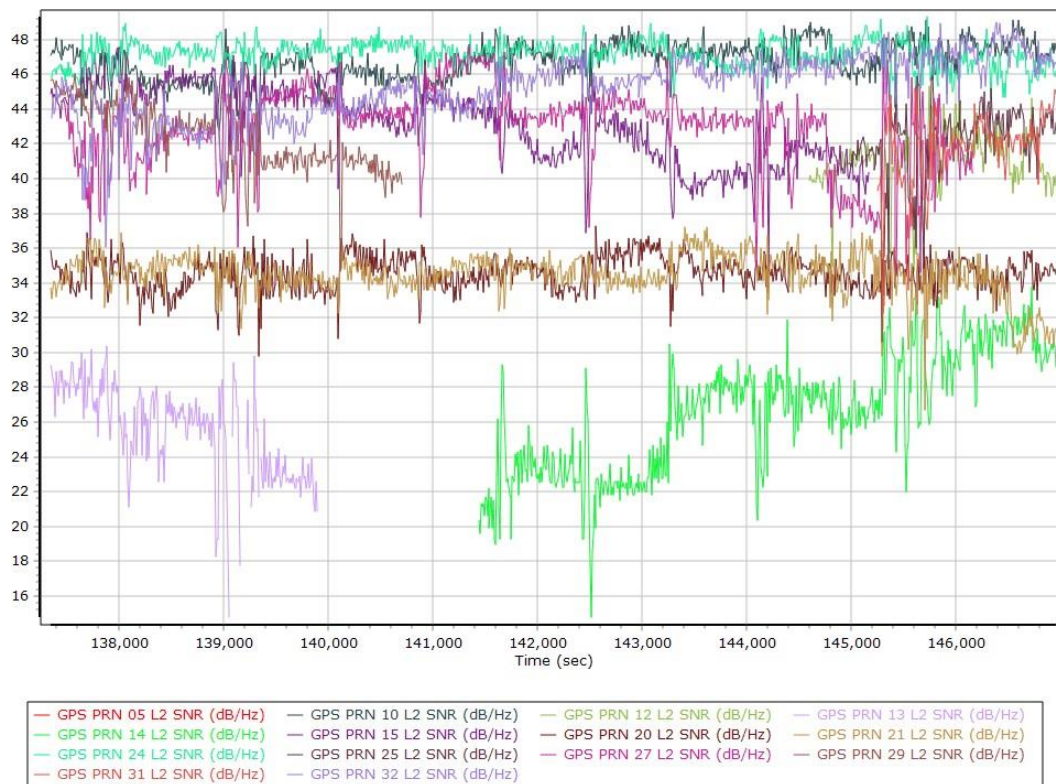
L2 Satellite Lock/Elevation



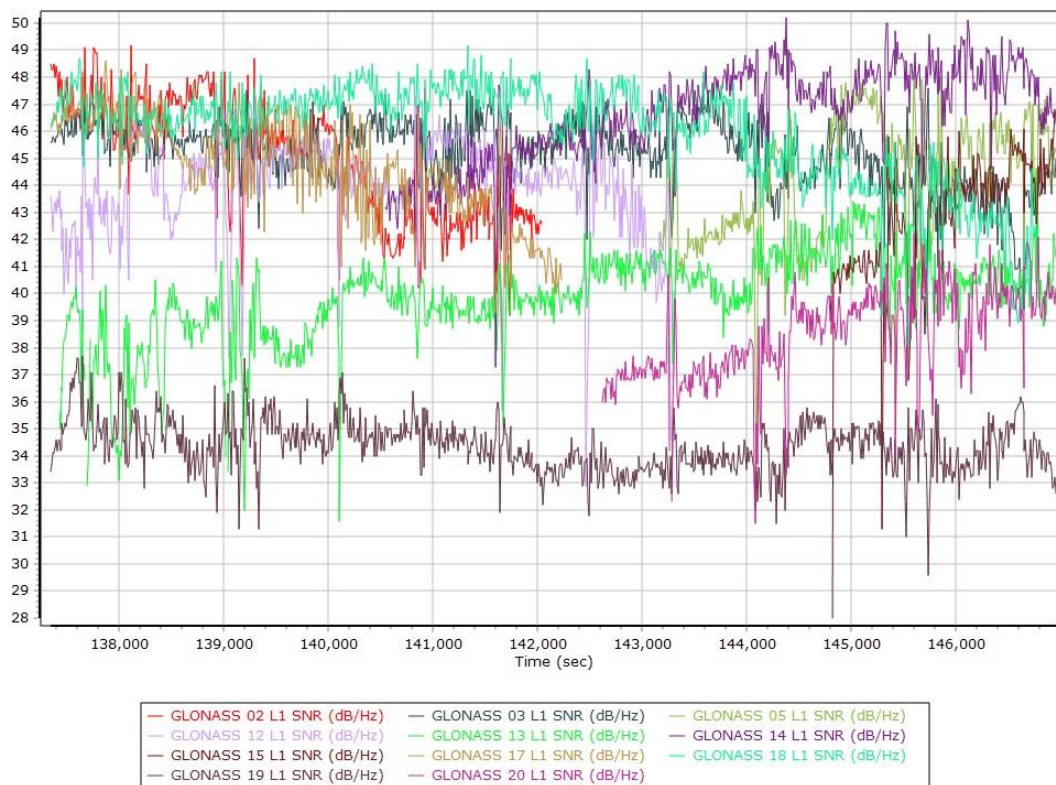
GPS L1 SNR



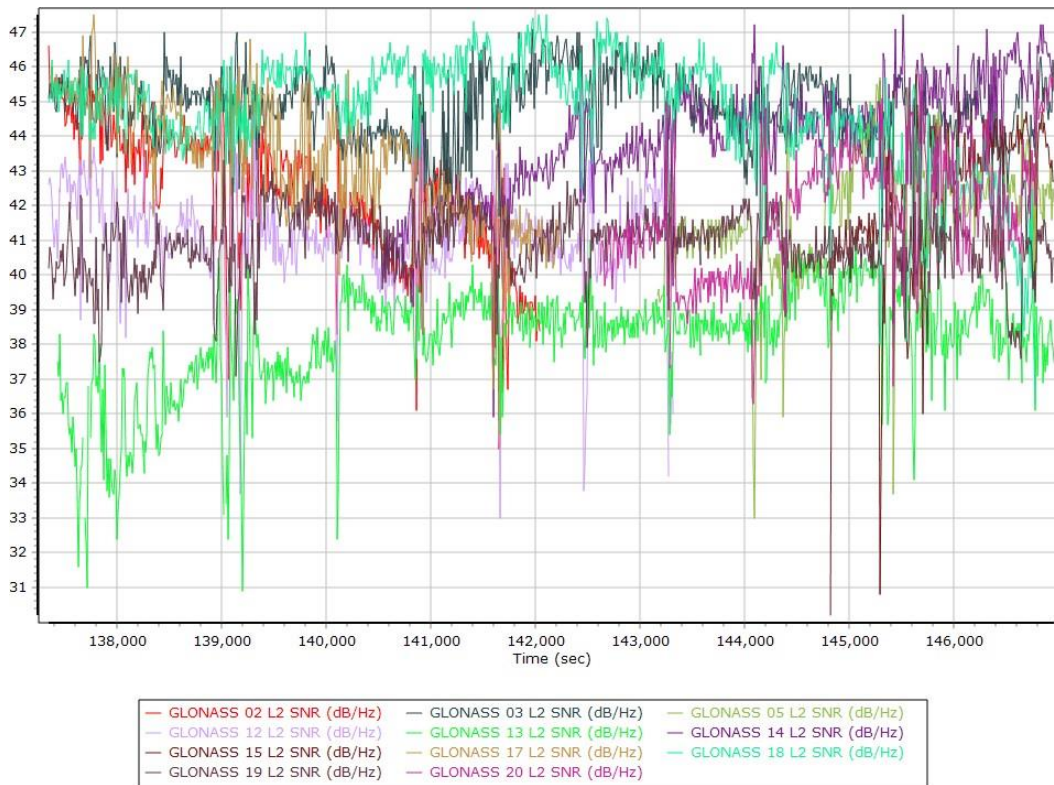
GPS L2 SNR



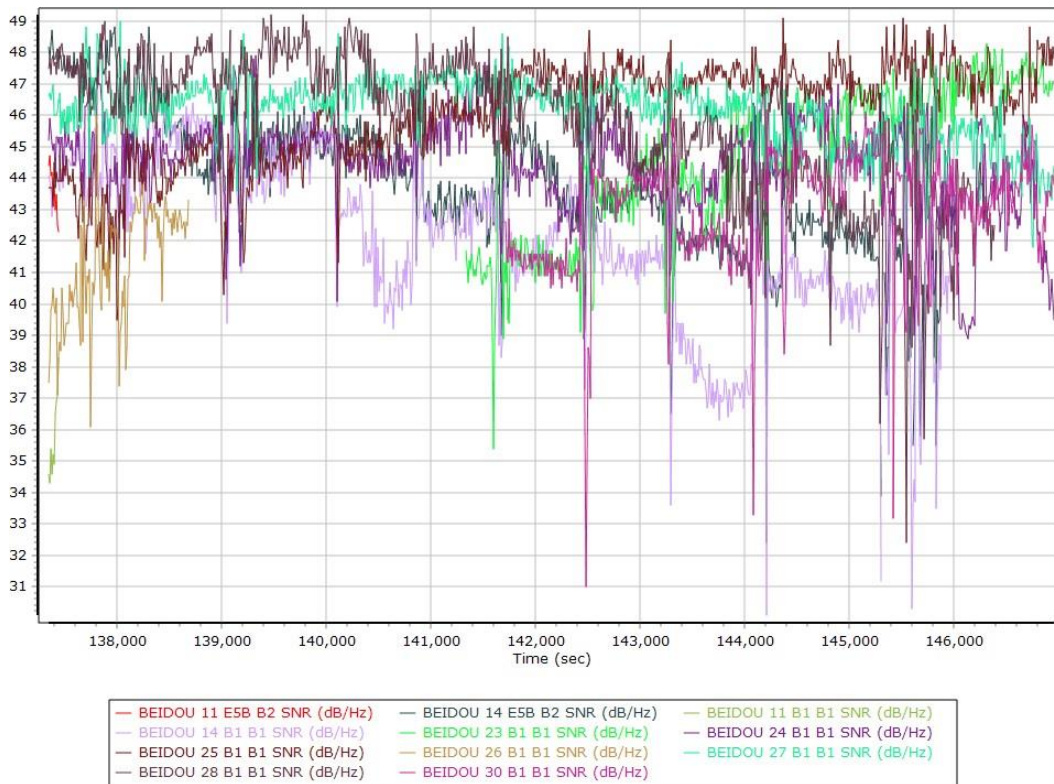
GLONASS L1 SNR



GLONASS L2 SNR

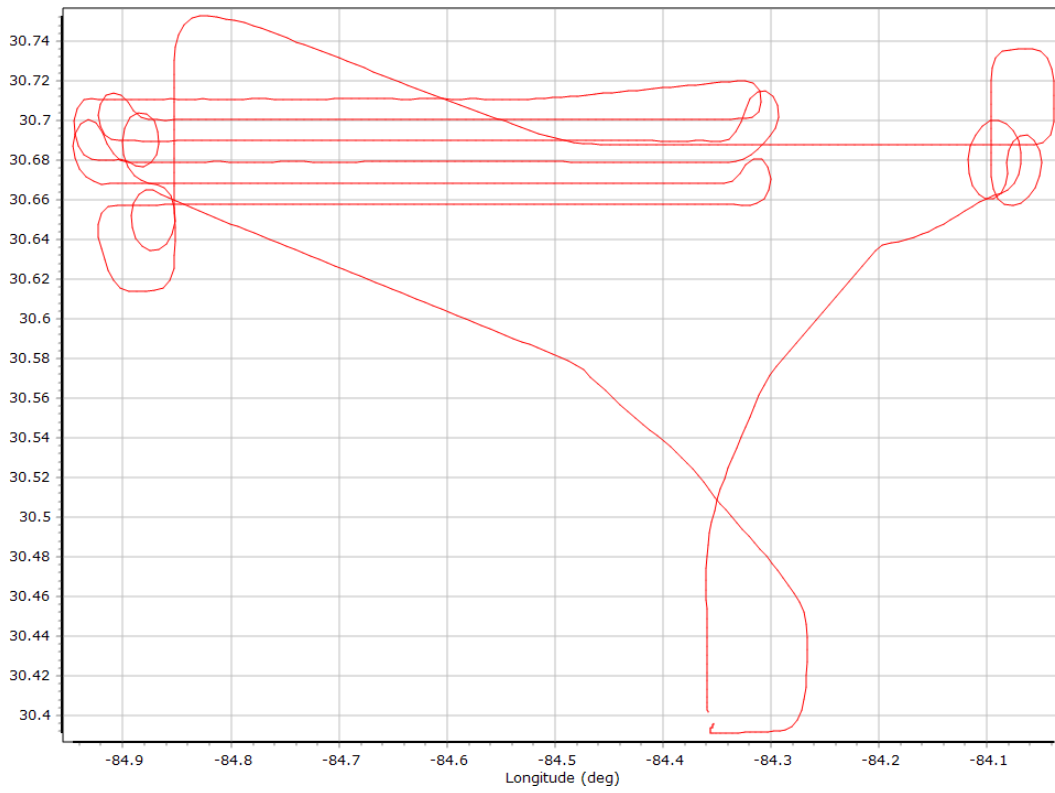


BEIDOU SNR

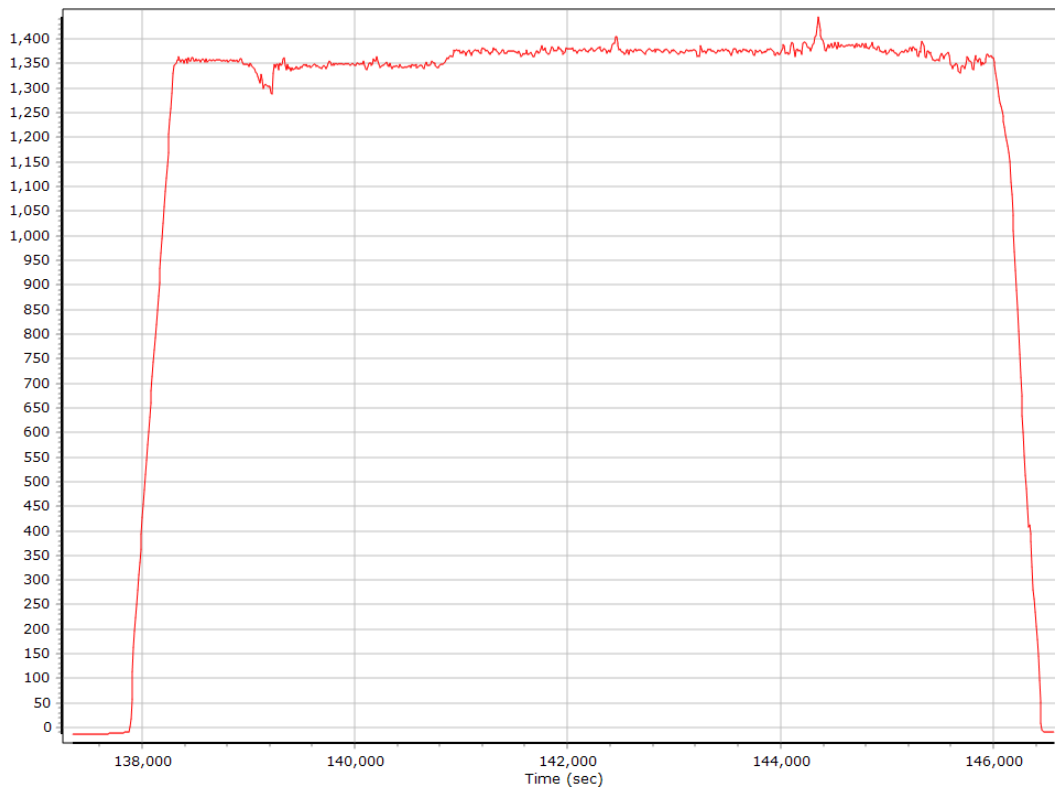


Trajectory Information

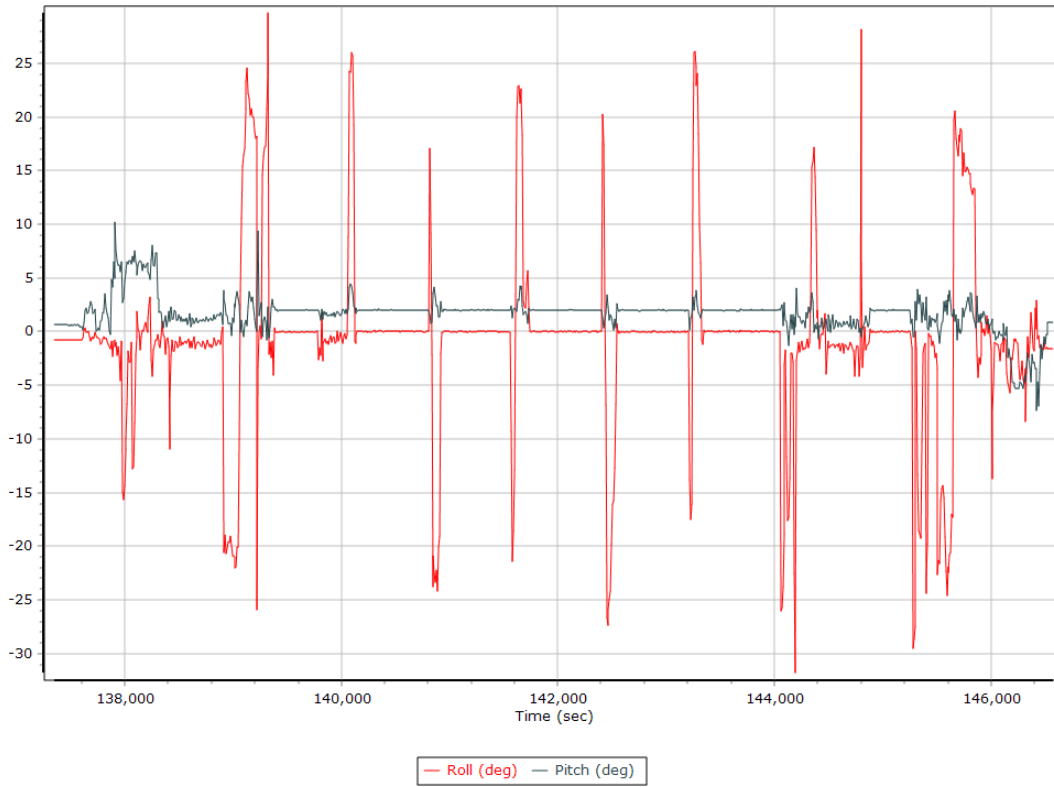
Top View



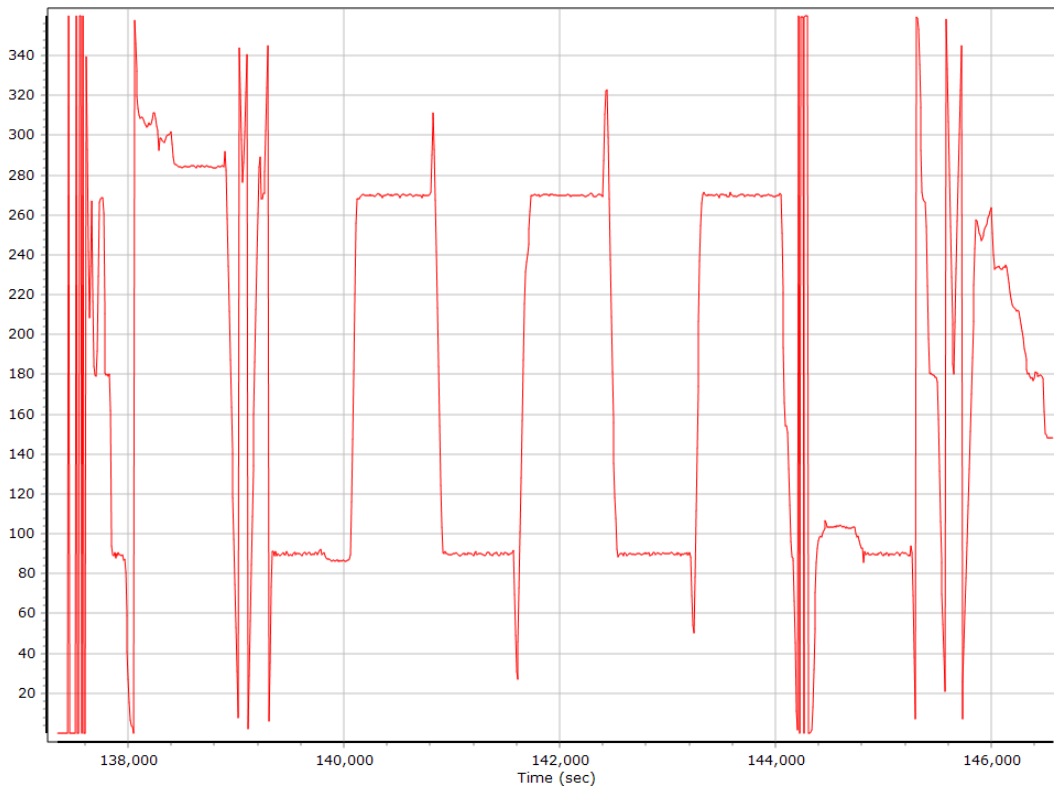
Altitude



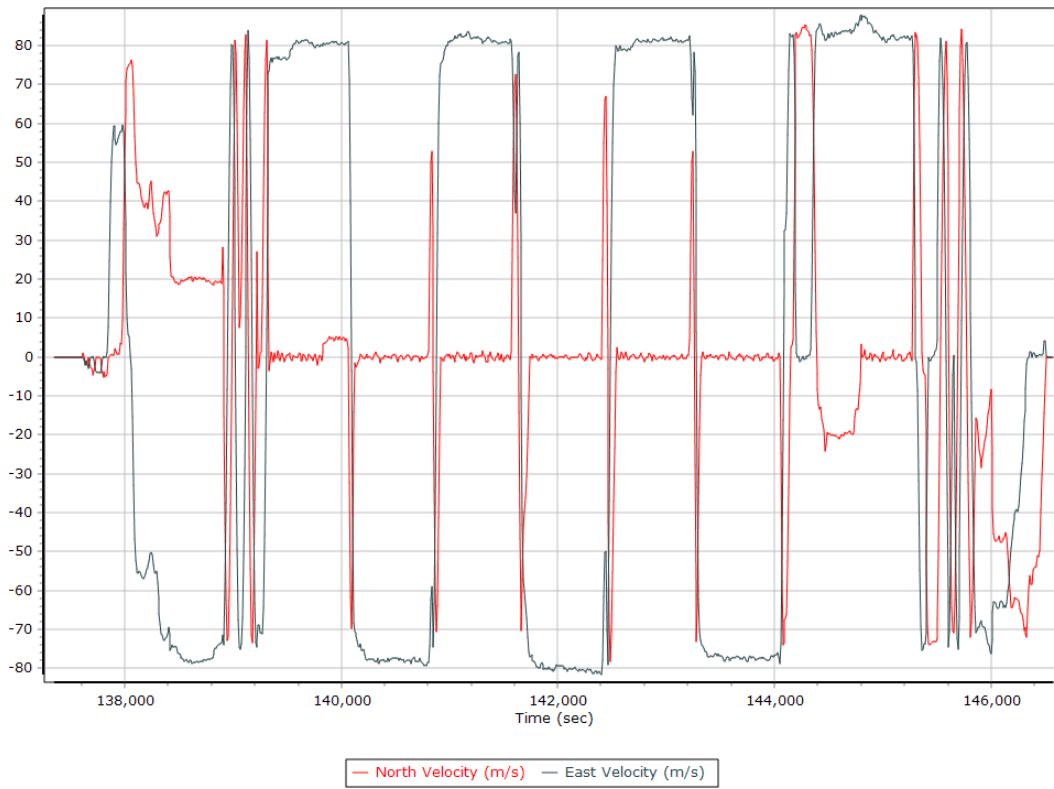
Roll/Pitch



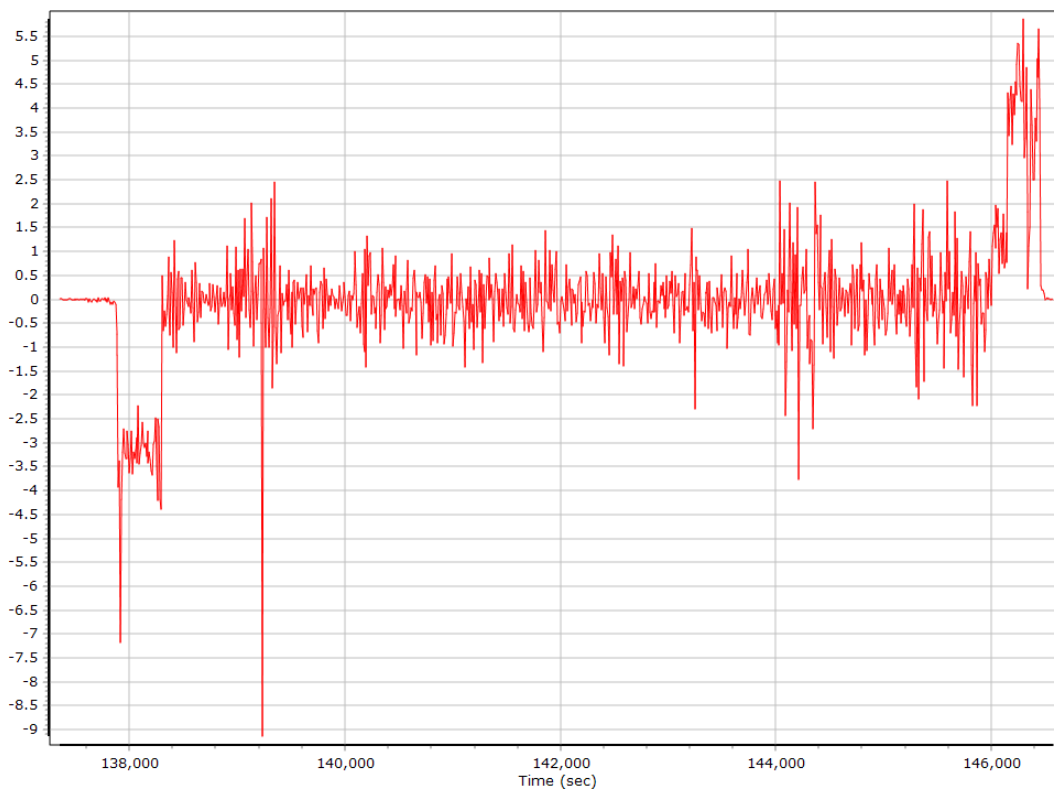
Heading



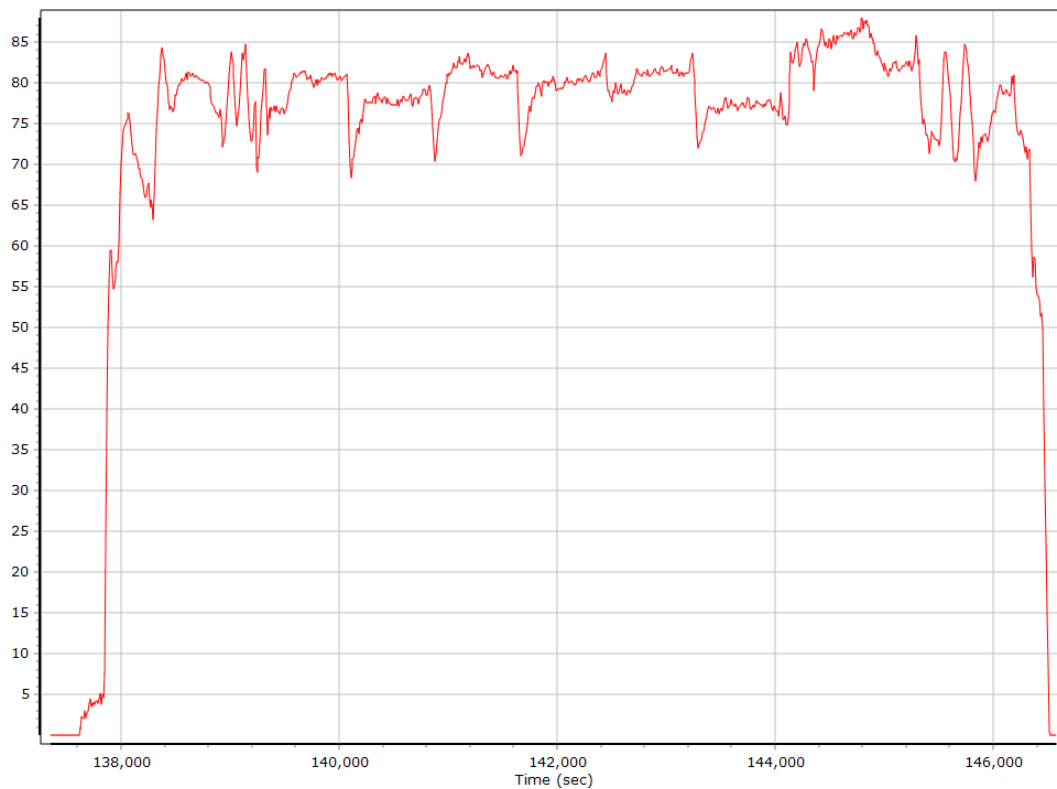
North/East Velocity



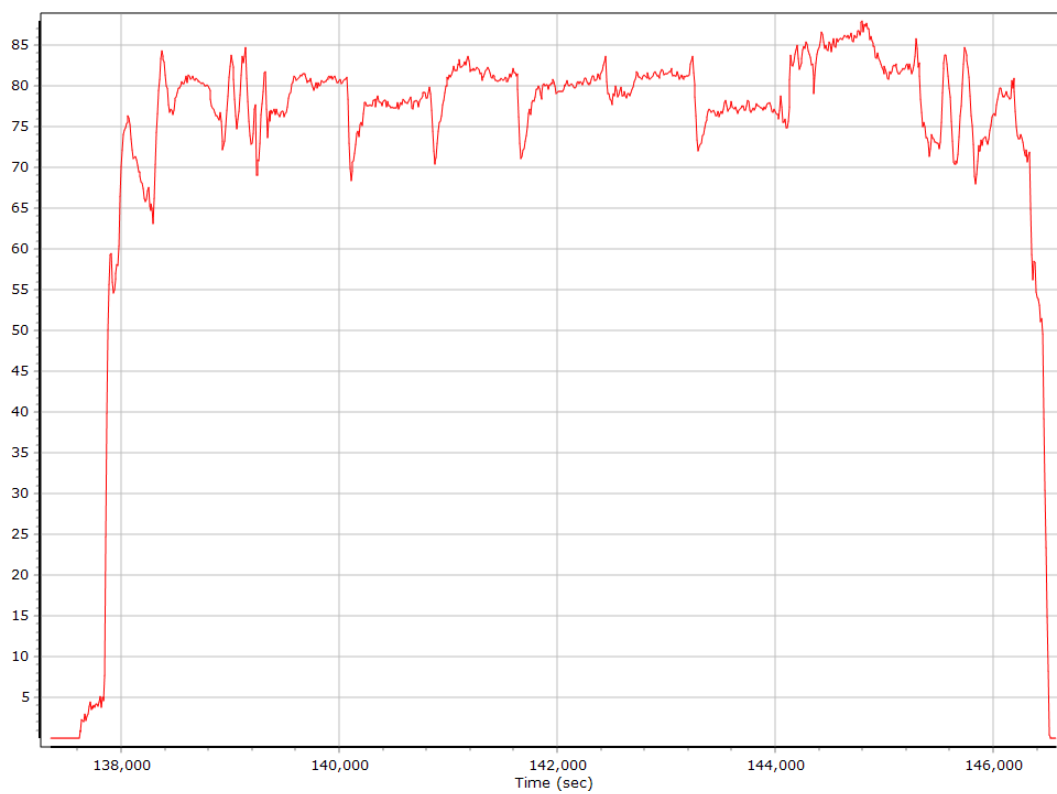
Down Velocity



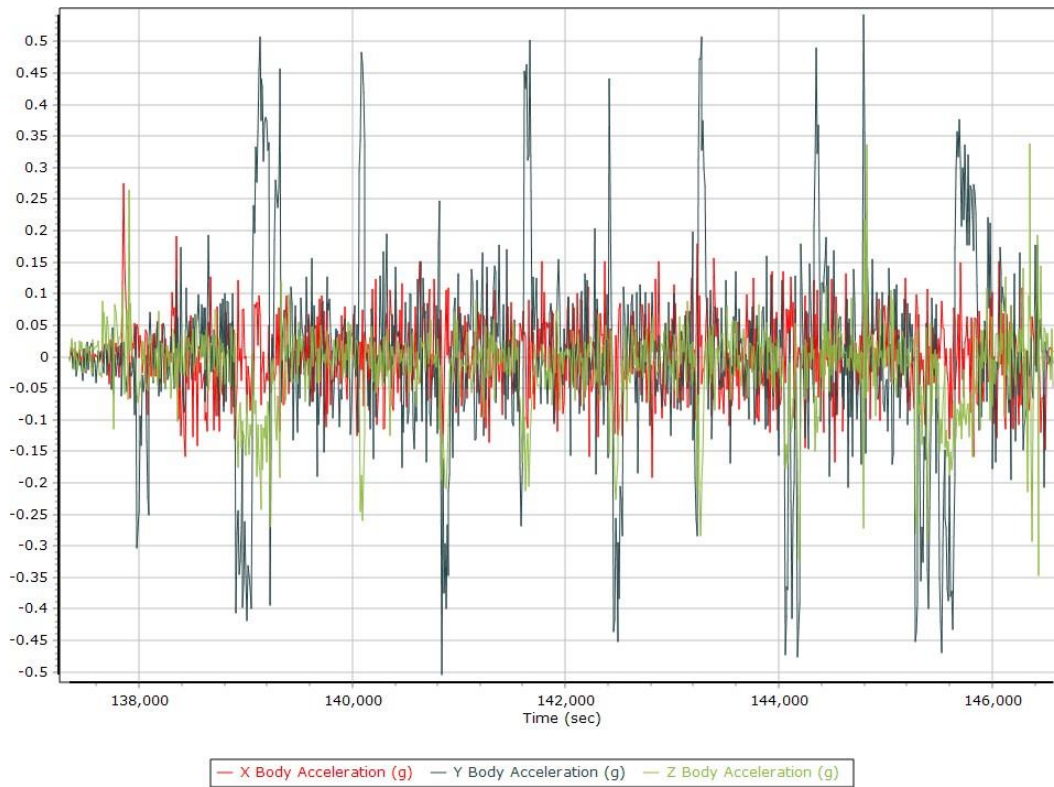
Total Speed



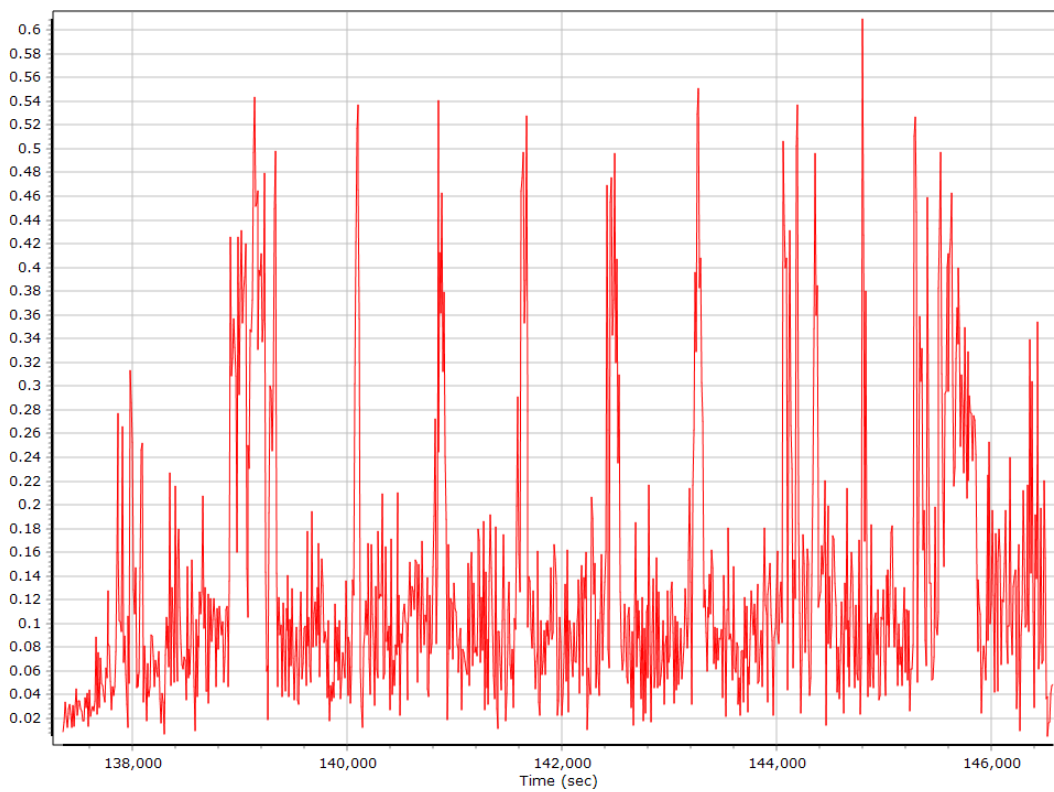
Ground Speed



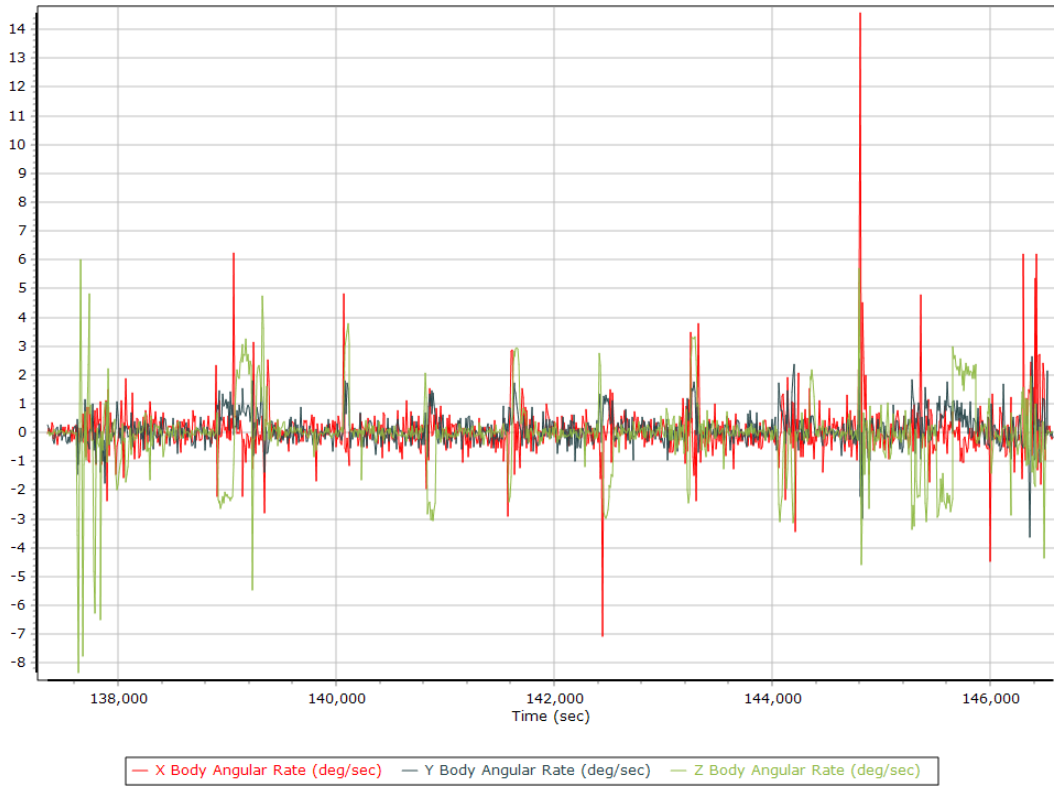
Body Acceleration



Total Body Acceleration



Body Angular Rate



SmartBase Processing Summary

Smart Select Options

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

Basestation Selection

Date	ID	Dist	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	

SmartBase Quality Check

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	3.73	47.26	
Number of GPS SV	6	9	8
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	8	17	14
PDOP	1.22	2.26	1.47
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	9953.00	0.00	1.00
Percentage	99.99	0.00	0.01

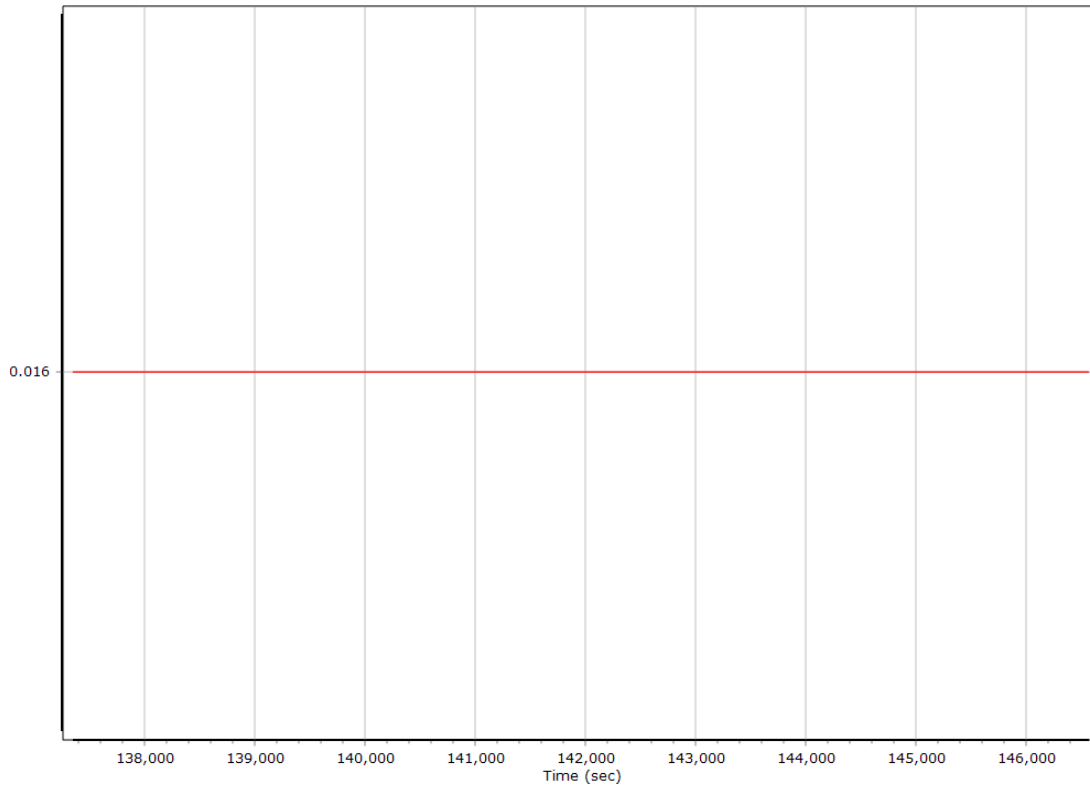
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	136984.000 (12/16/2019 2:03:04 PM)		
Processing end time	146954.000 (12/16/2019 4:49:14 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.016	-0.183	-1.291
Gimbal to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

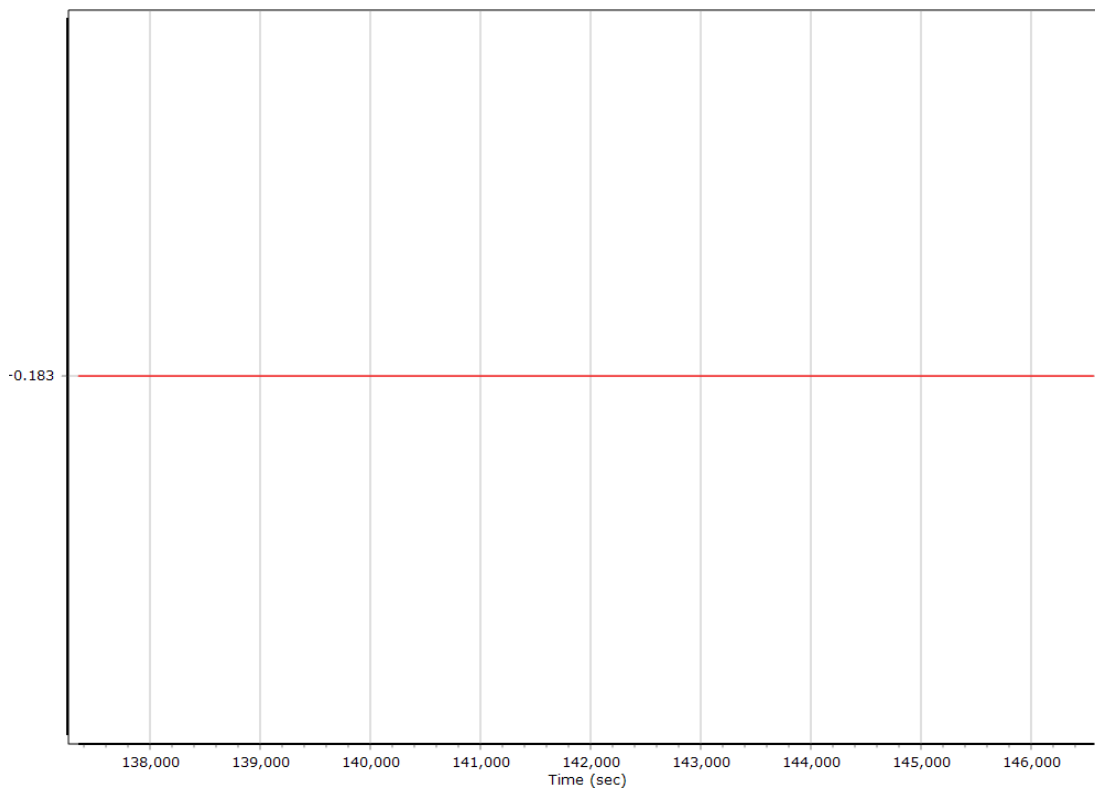
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

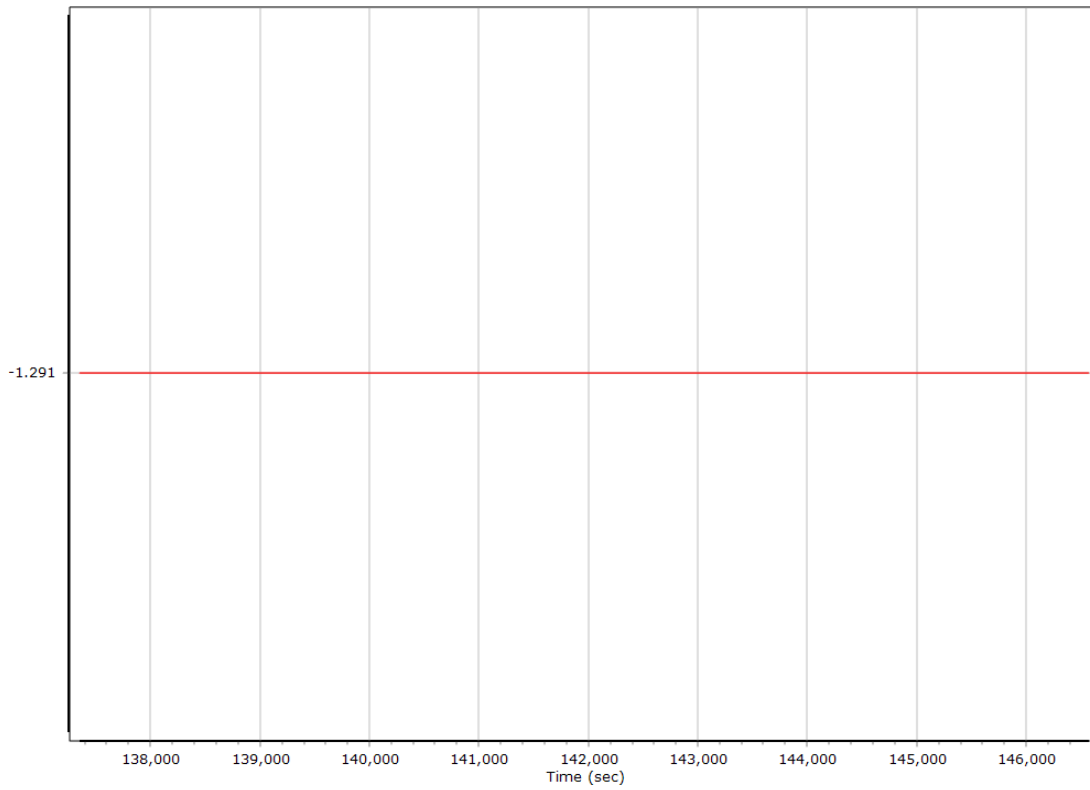
X Reference-Primary GNSS Lever Arm (m)



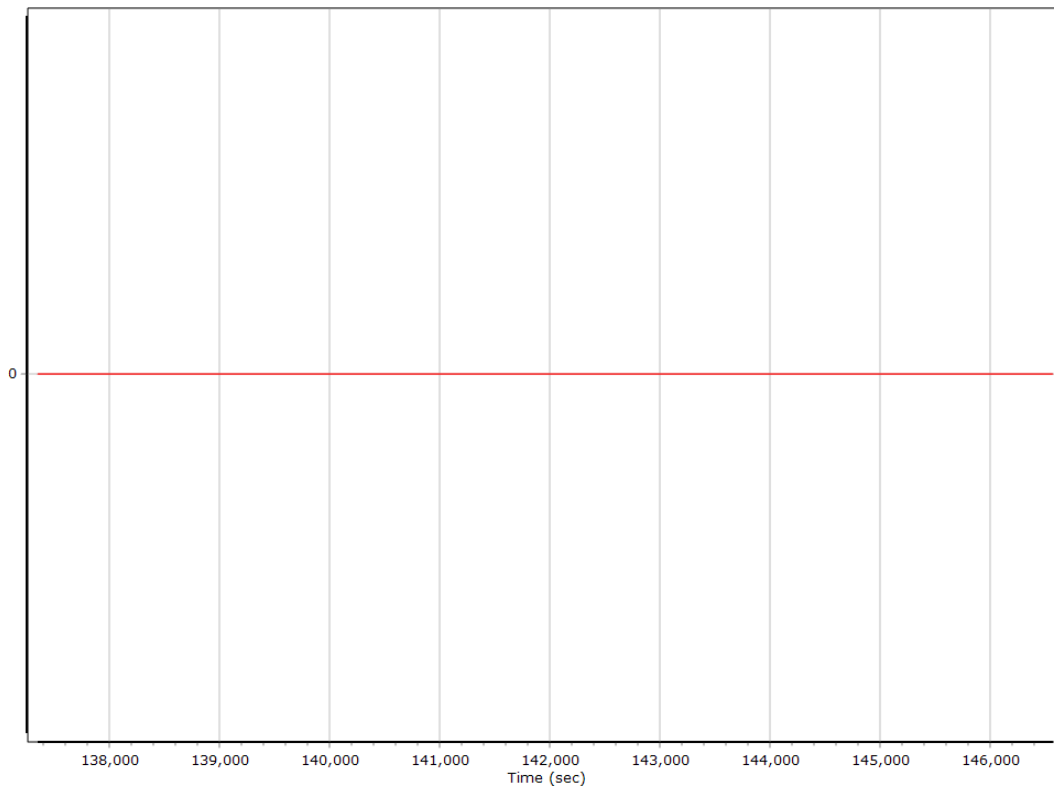
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



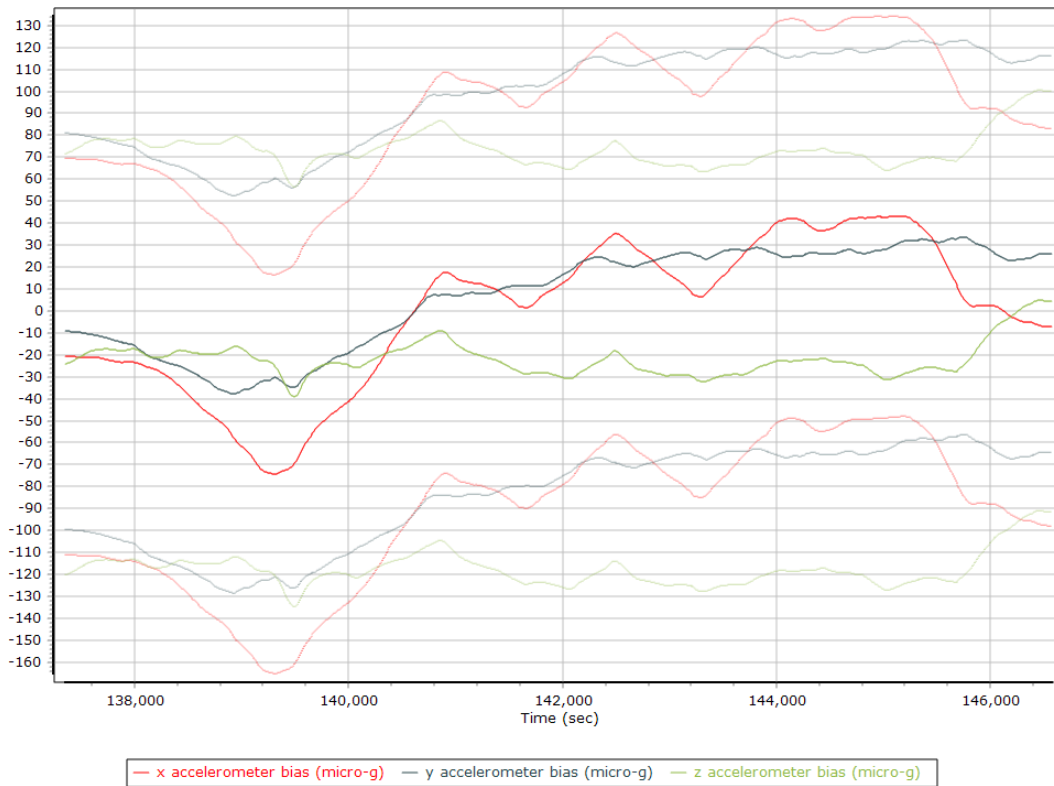
Reference-Primary GNSS Lever Arm Figure of Merit



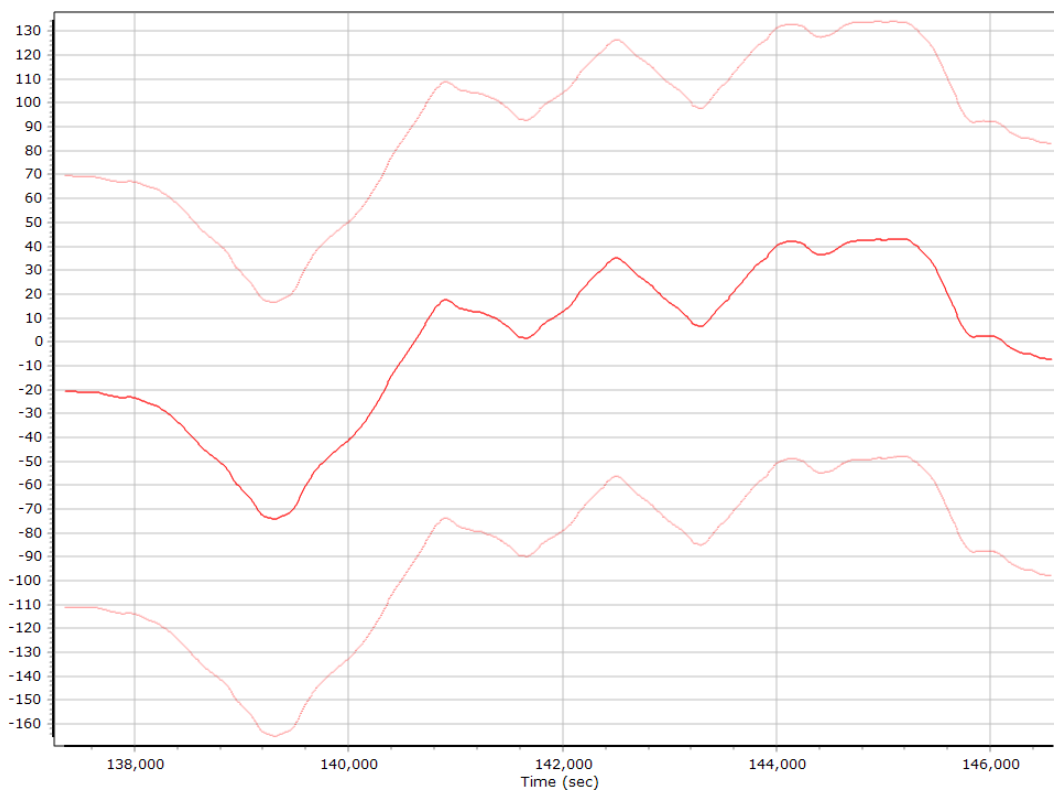
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

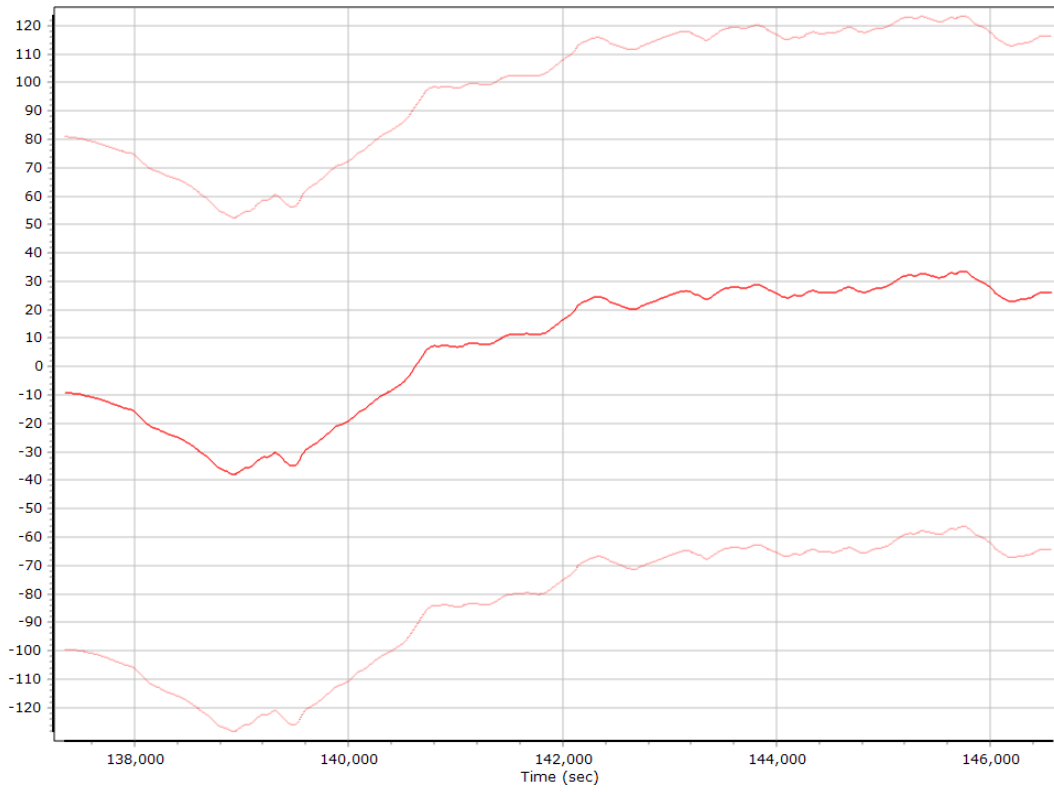
Accelerometer Bias (micro-g)



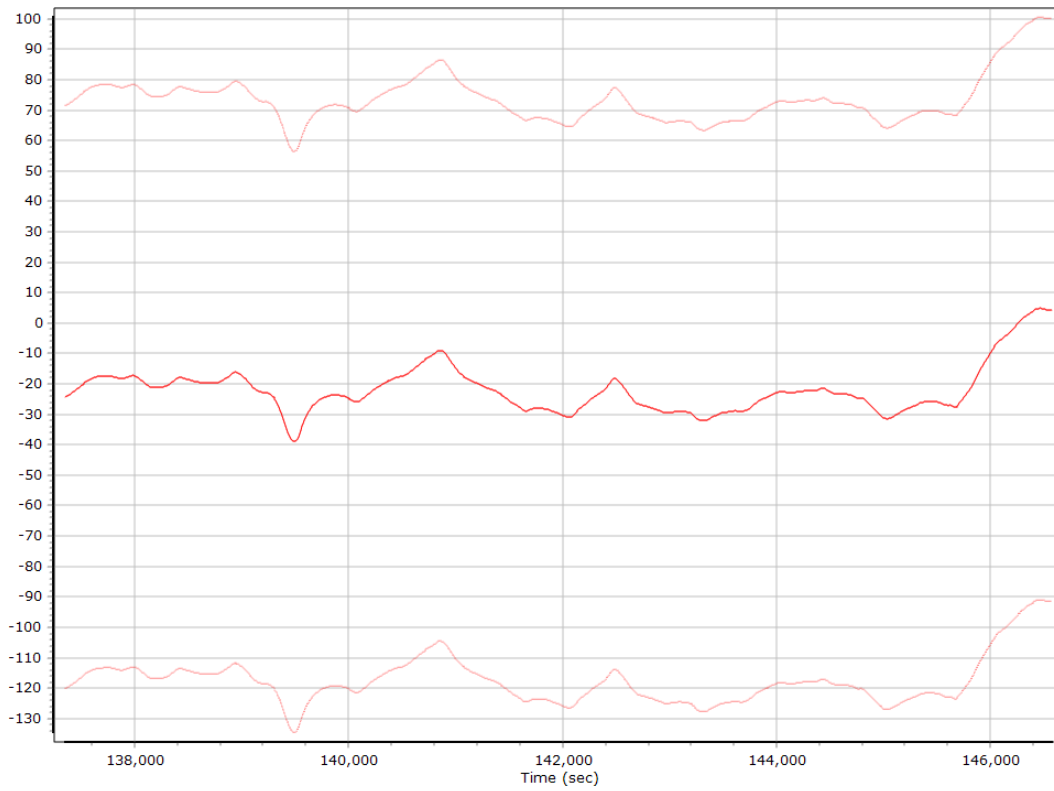
X Accelerometer Bias (micro-g)



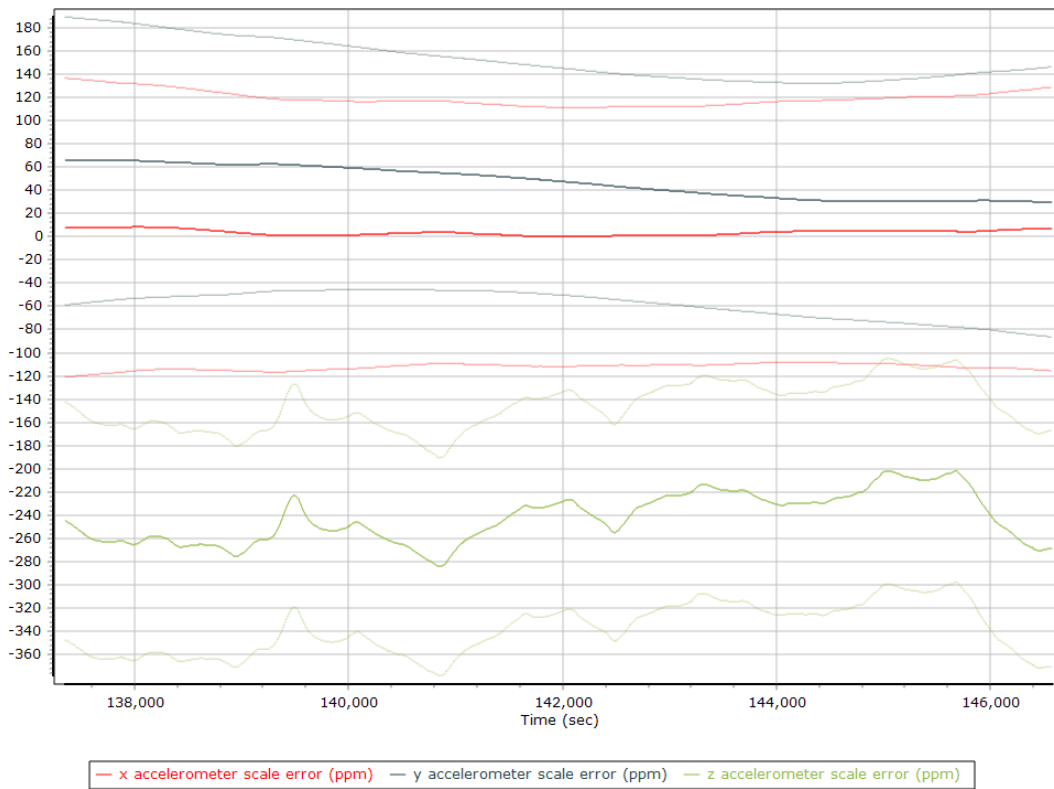
Y Accelerometer Bias (micro-g)



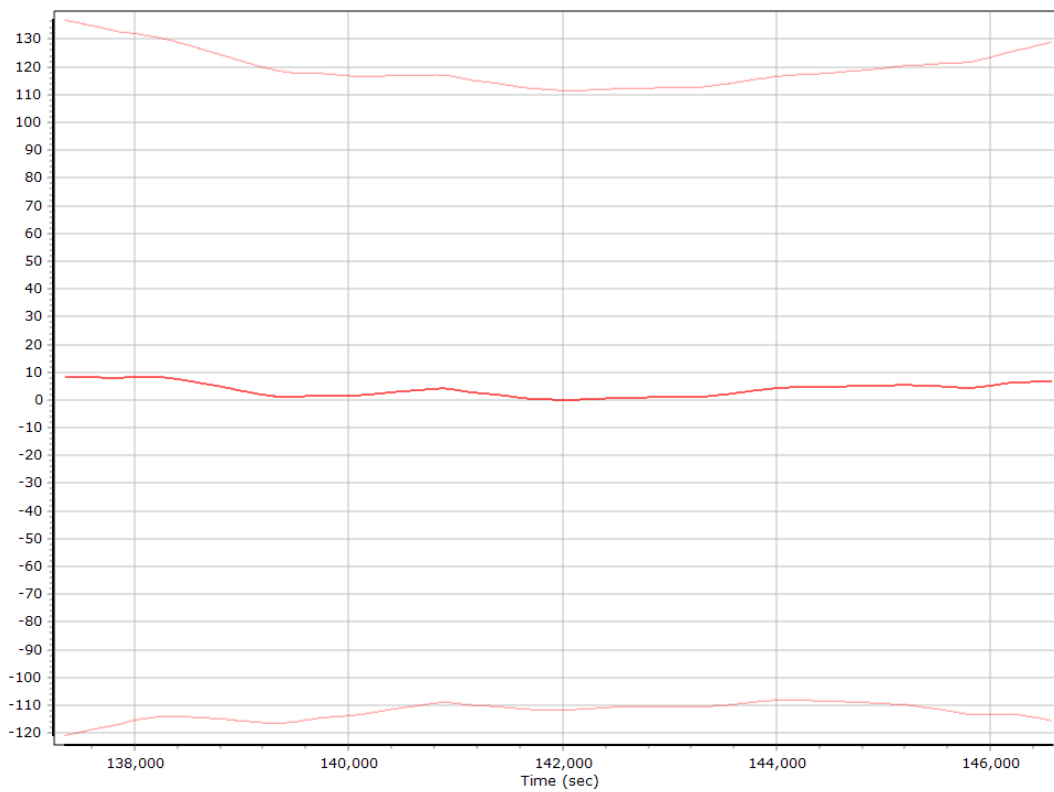
Z Accelerometer Bias (micro-g)



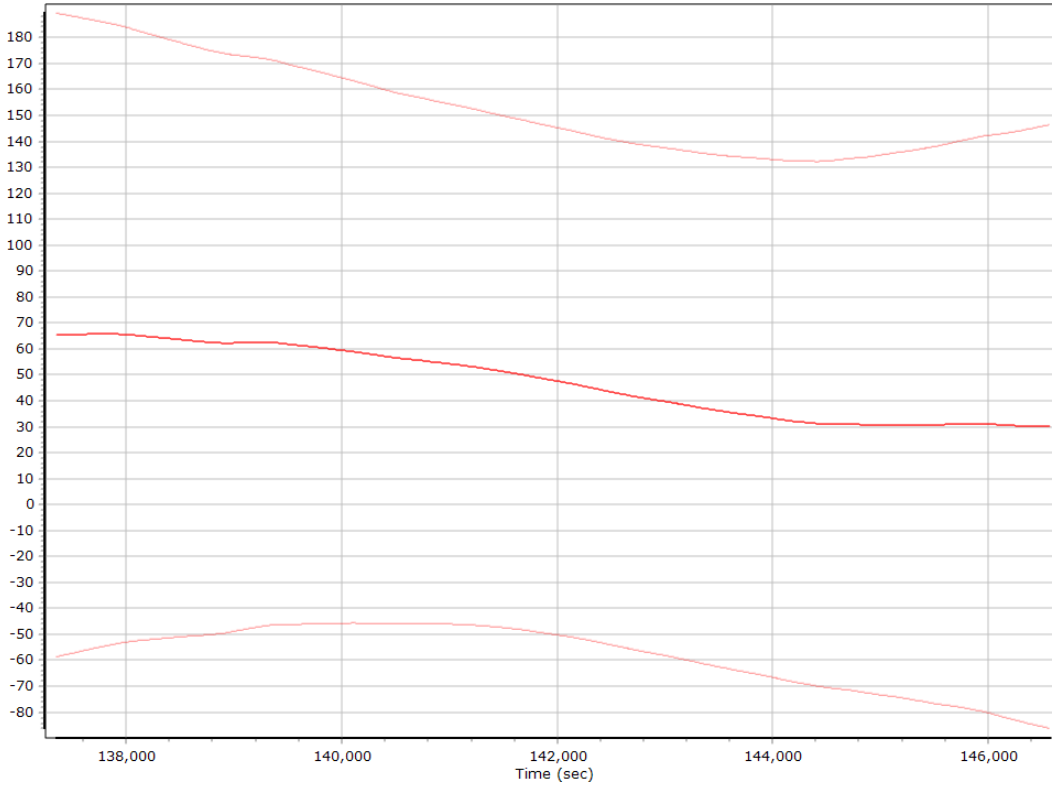
Accelerometer Scale Error (ppm)



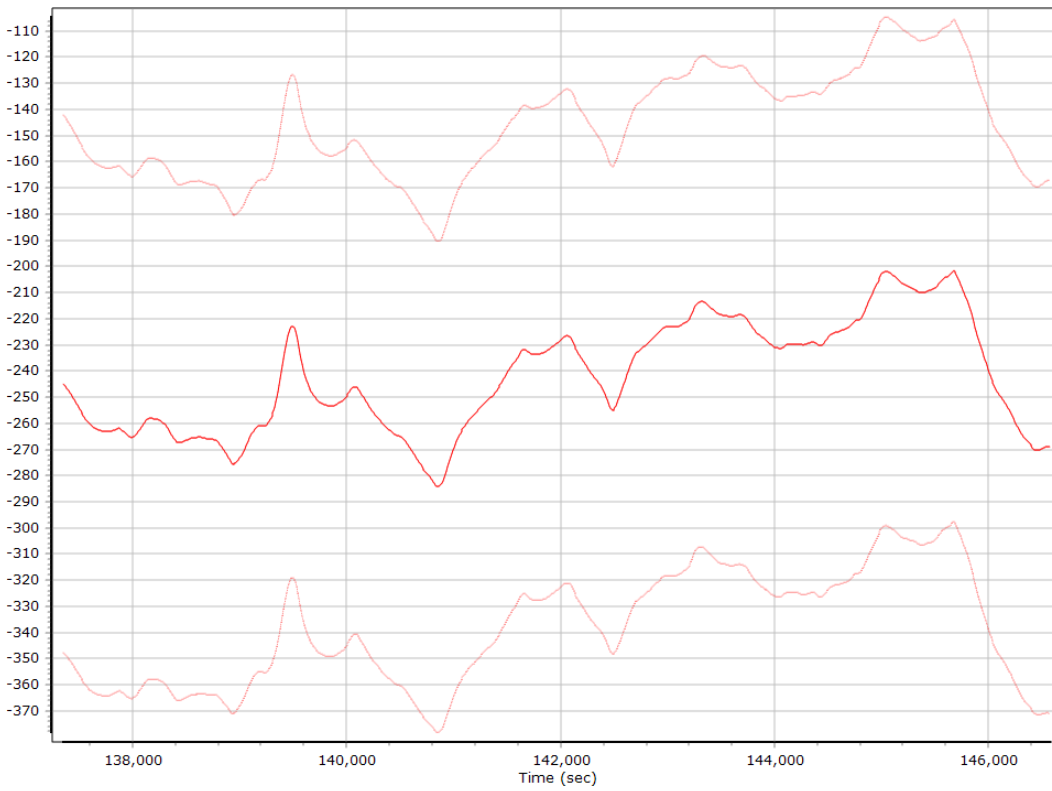
X Accelerometer Scale Error (ppm)



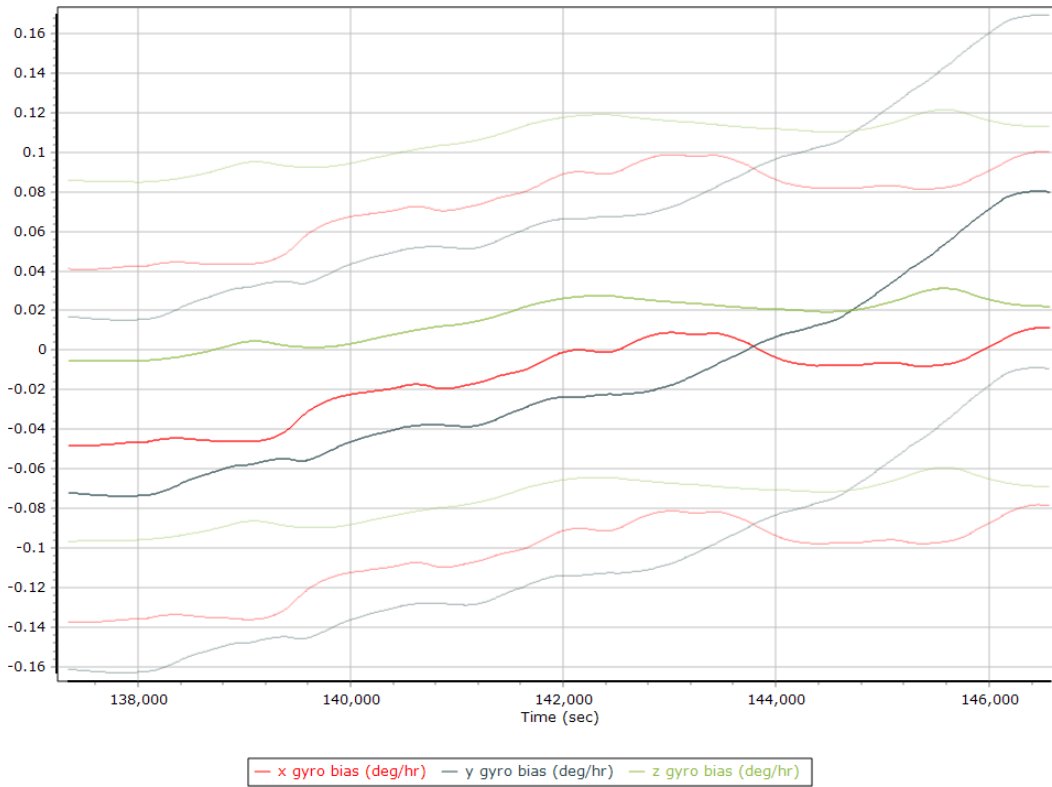
Y Accelerometer Scale Error (ppm)



Z Accelerometer Scale Error (ppm)



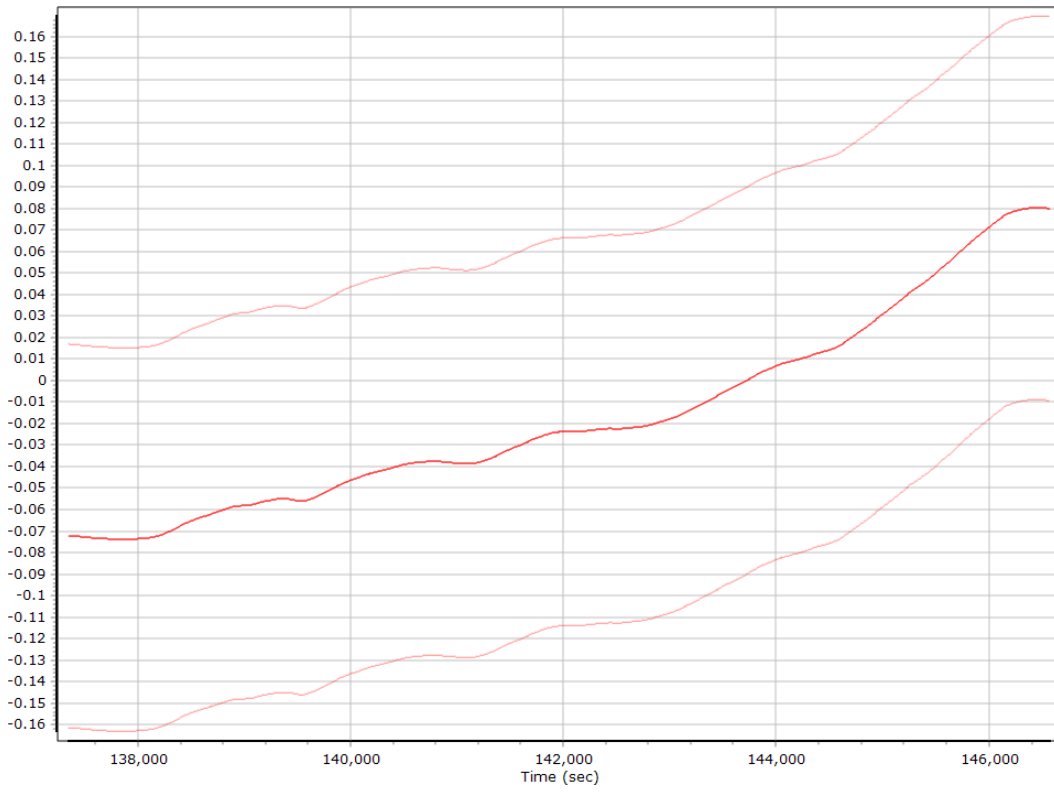
Gyro Bias (deg/h)



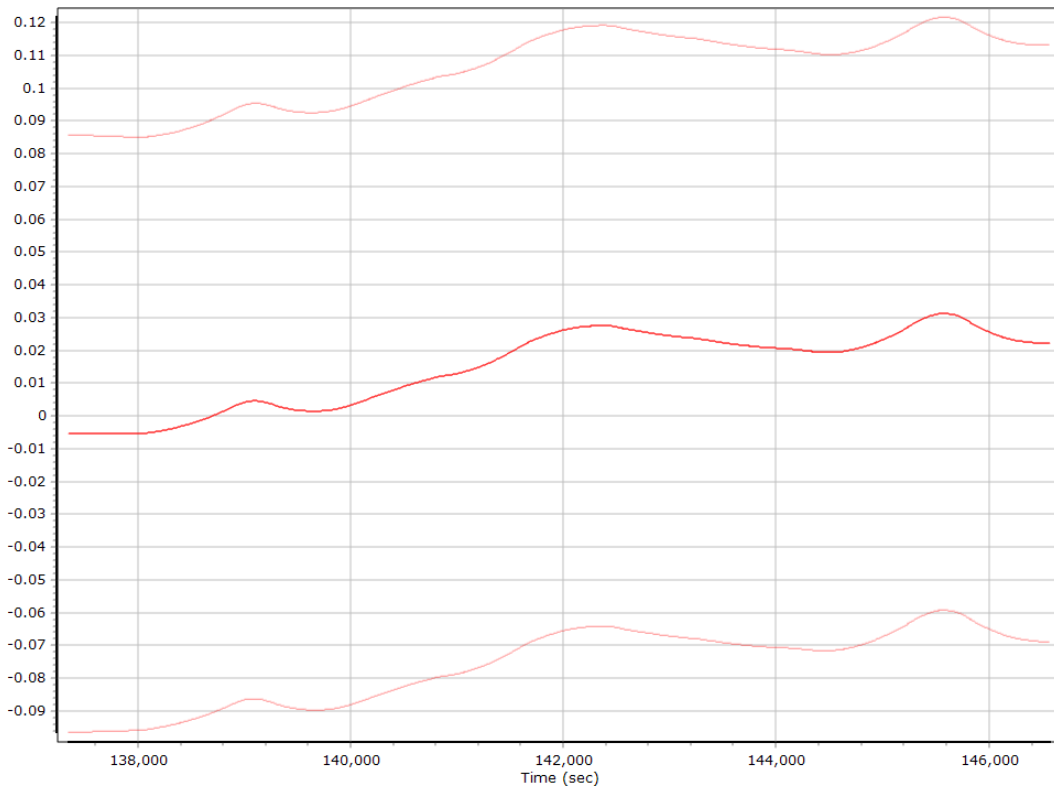
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)



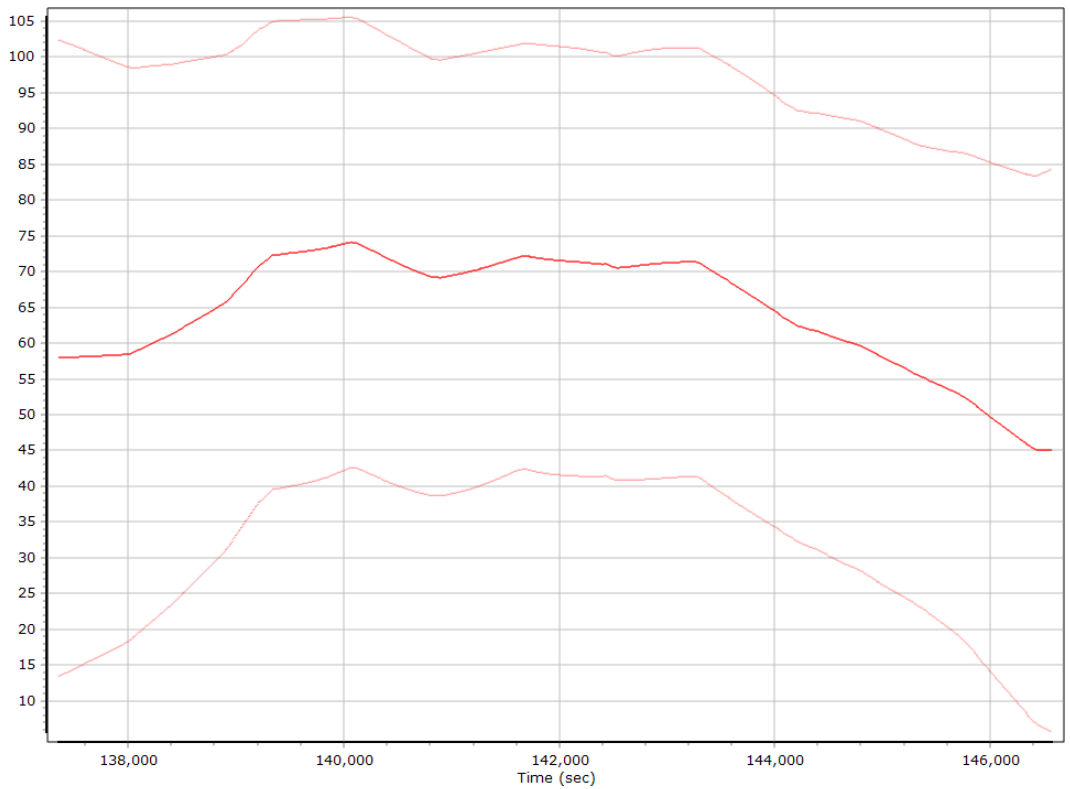
Z Gyro Bias (deg/h)



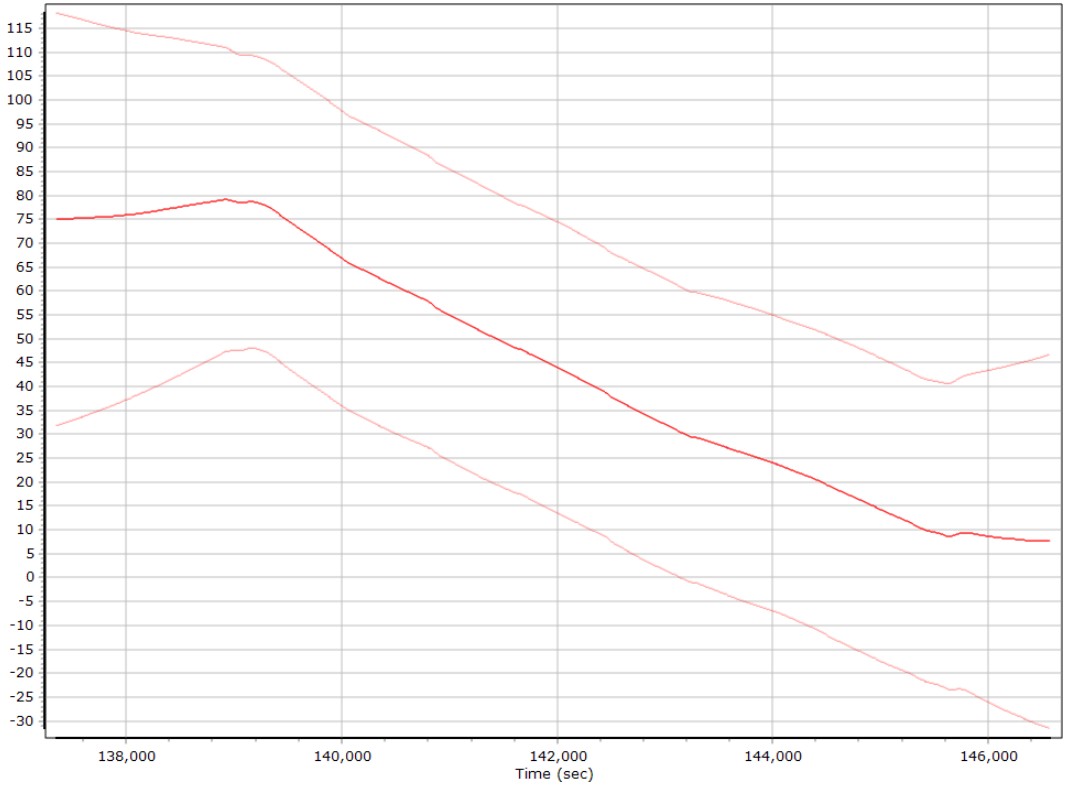
Gyro Scale Error (ppm)



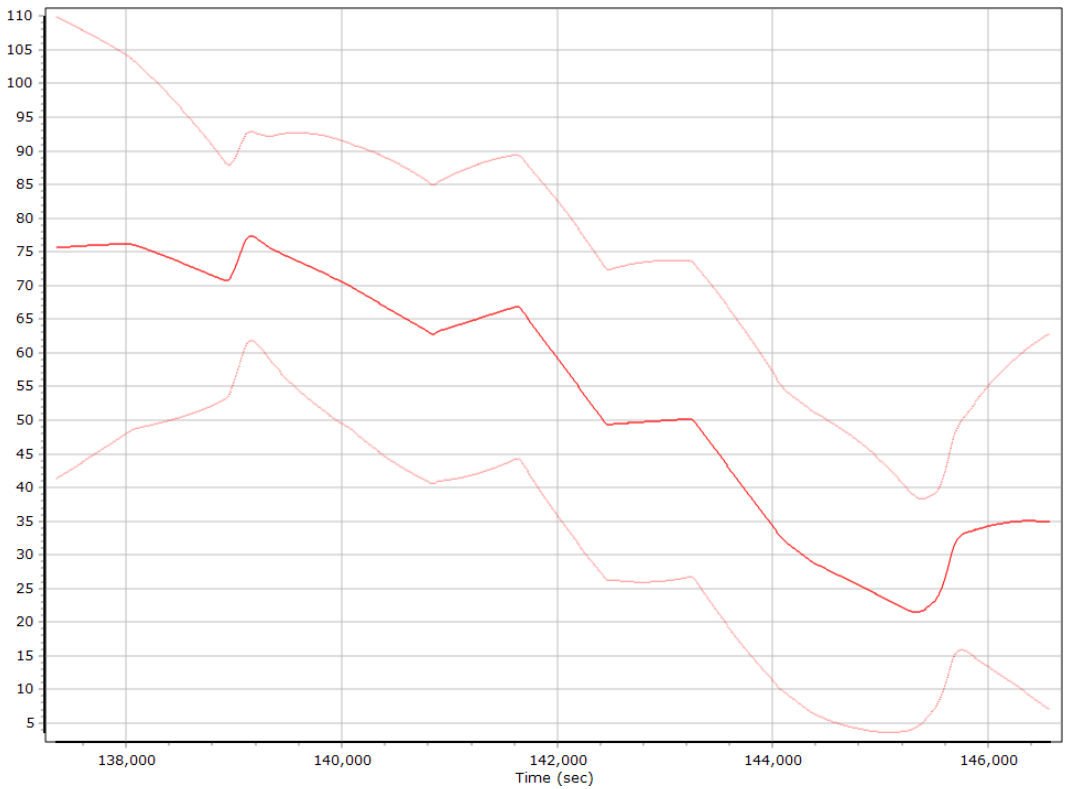
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

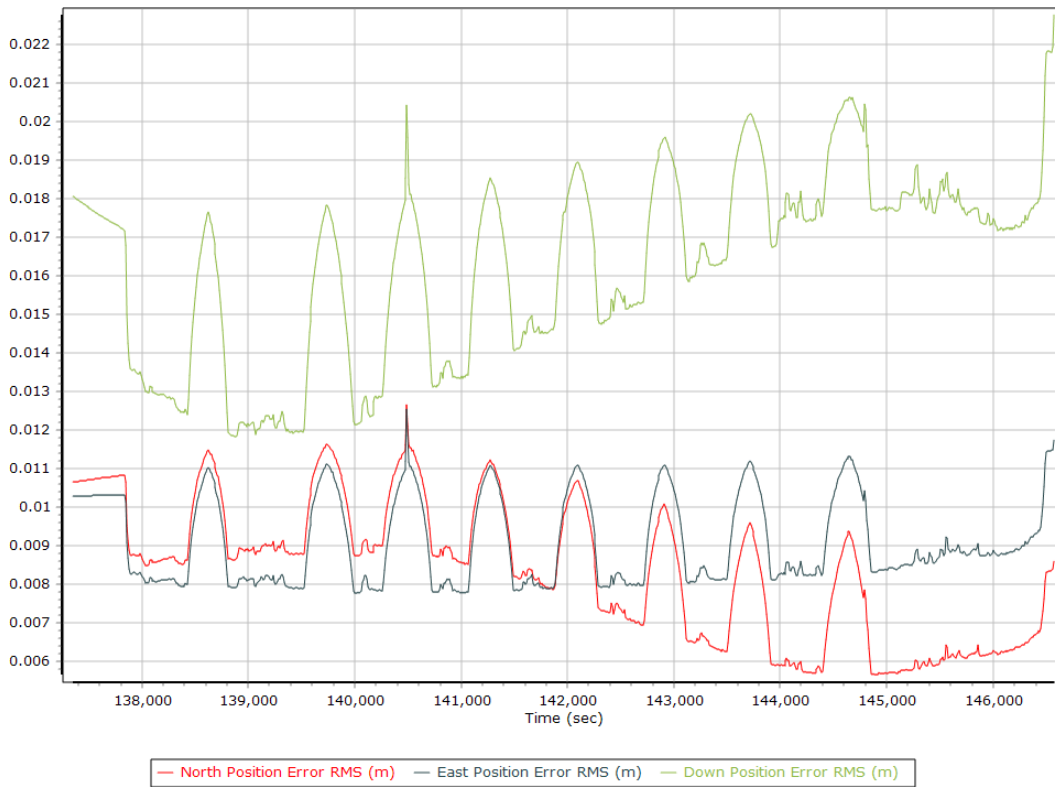


Z Gyro Scale Error (ppm)

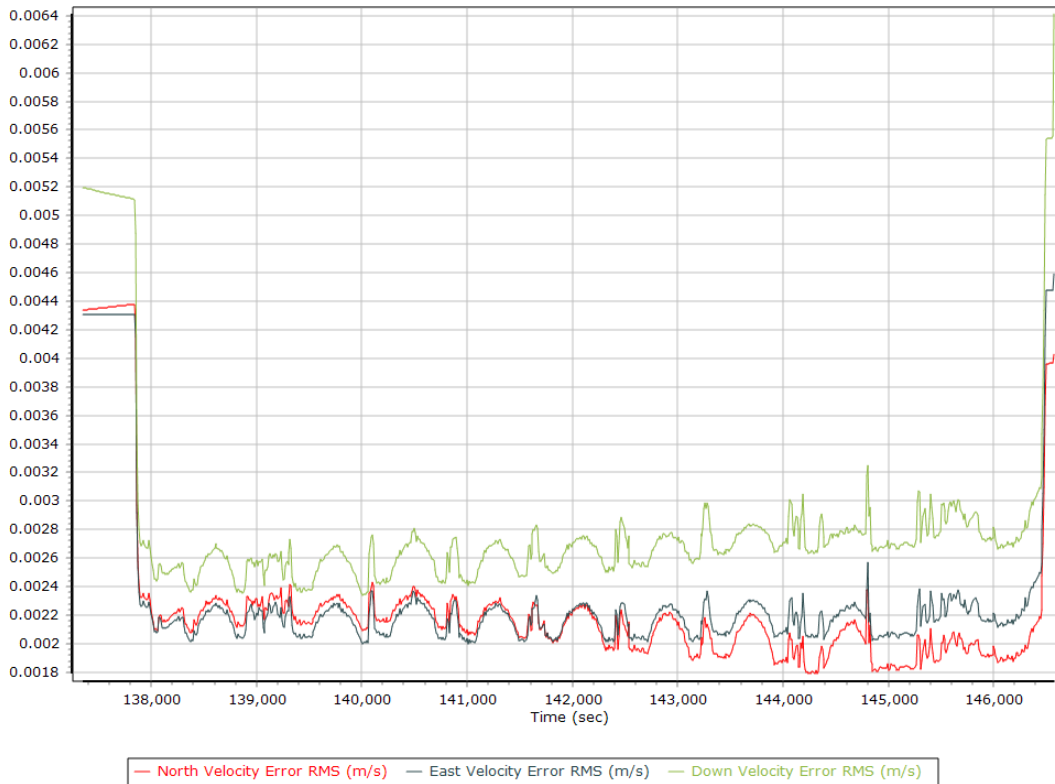


Smoothed Performance Metrics

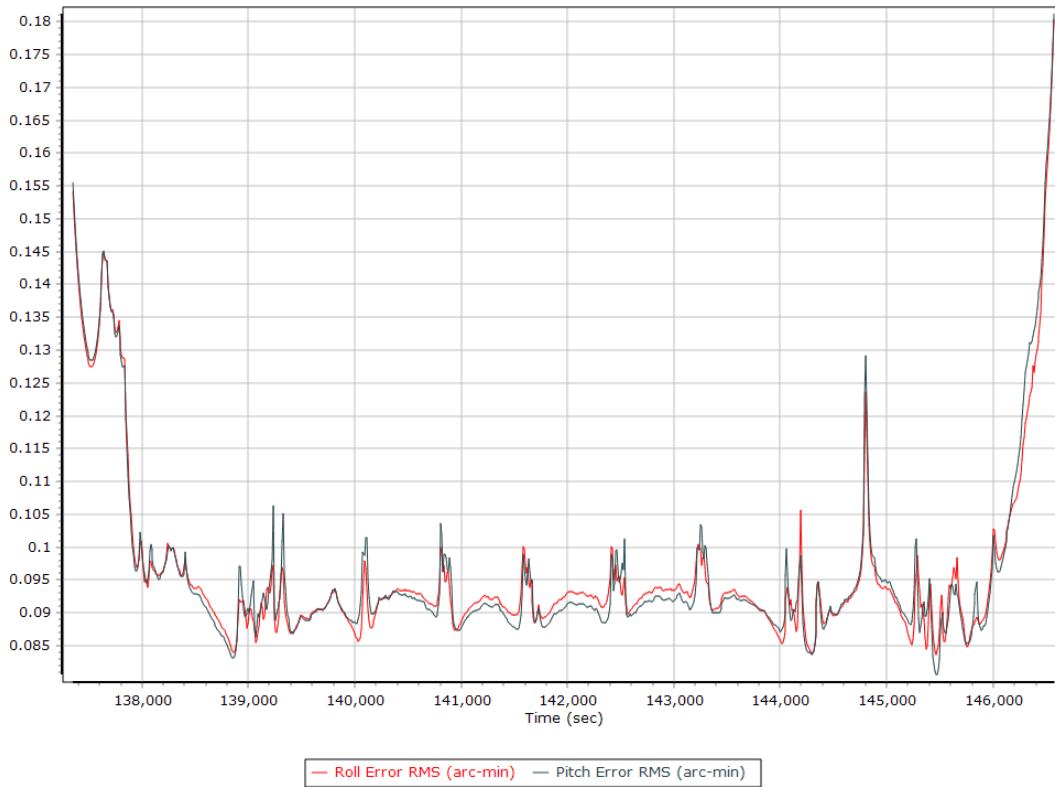
Position Error RMS (m)



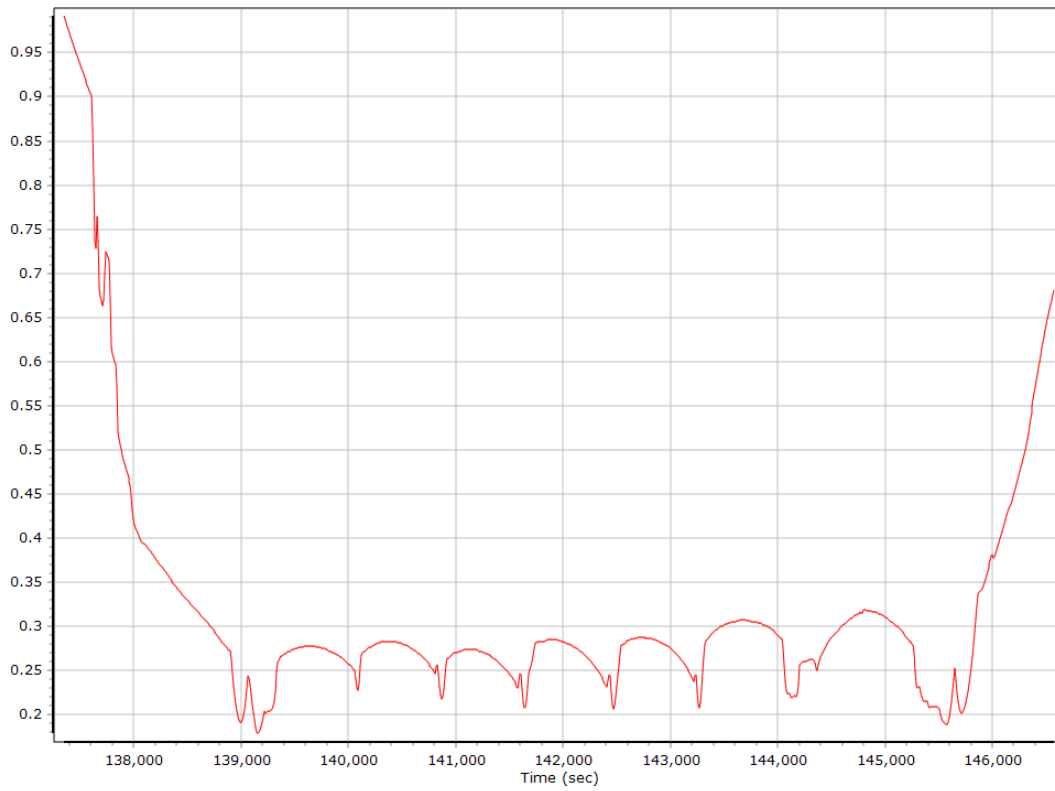
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

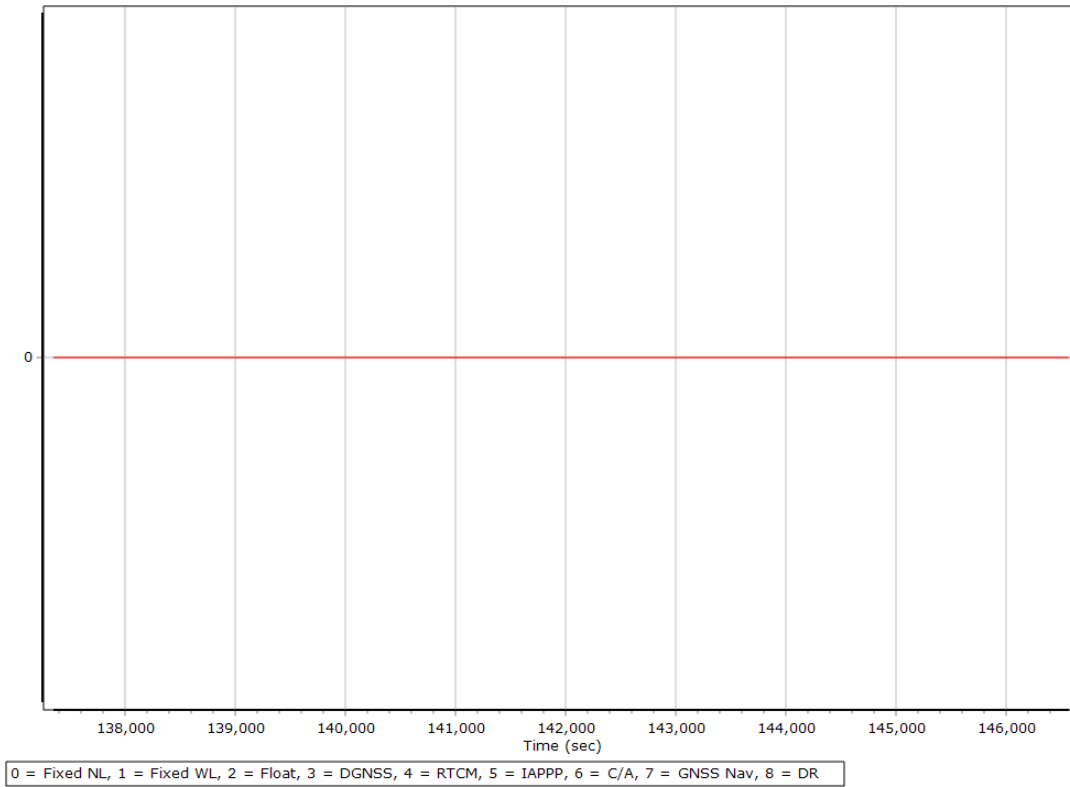


Heading Error RMS (arc-min)

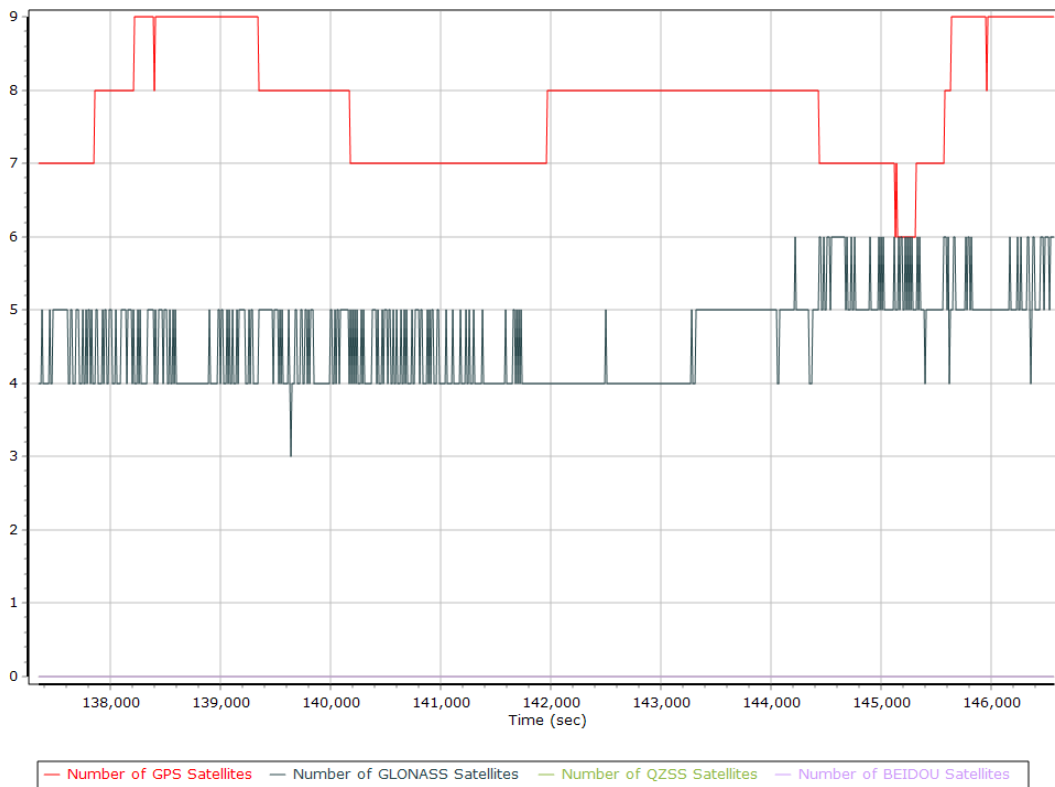


Smoothed Solution Status

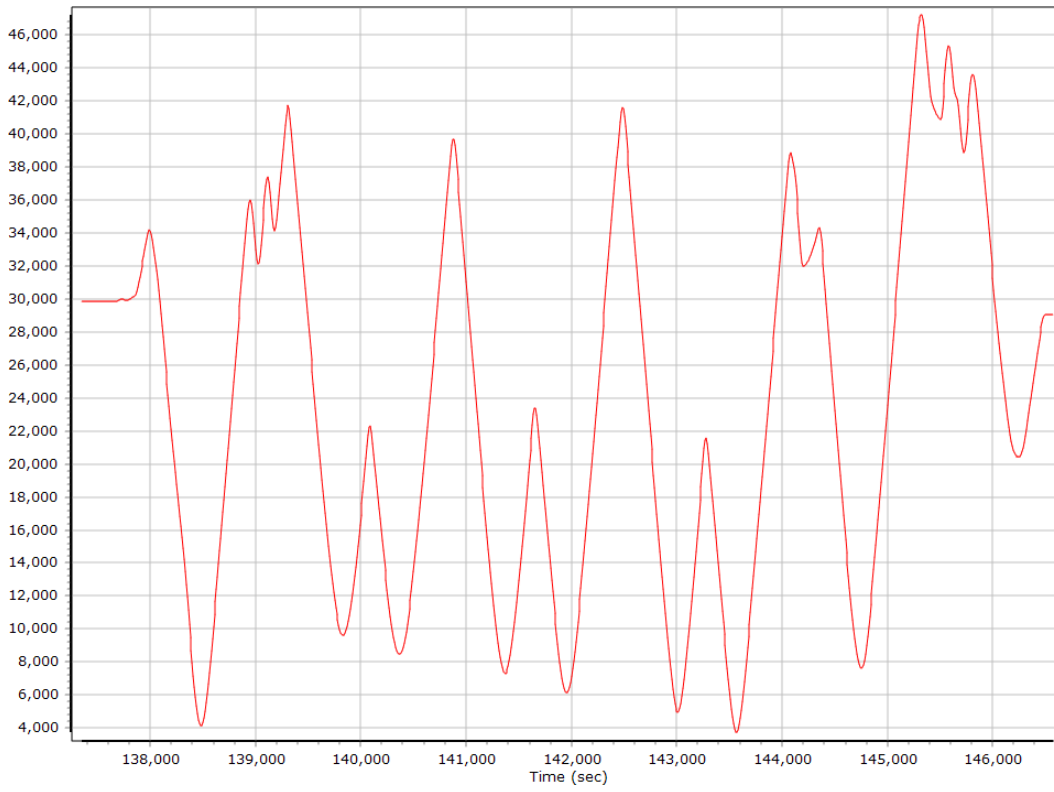
Processing Mode



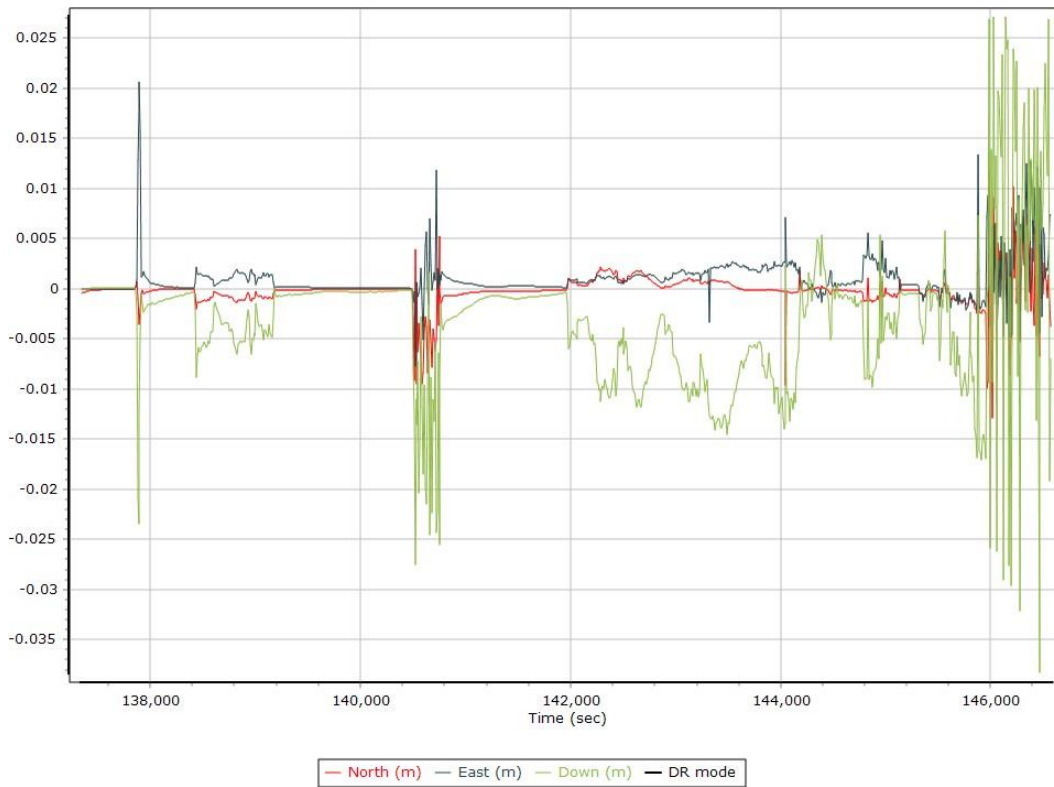
Number of Satellites



Baseline Length



SBET IAKAR Separation



General Information

Mission Information

Project name	6219352a
Processing date	2019-12-20 19:27:09
Mission date	2019-12-18 13:42:18
Mission duration	04:45:34.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N8708
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
ALS.000	POS Data
ALS.001	POS Data
ALS.002	POS Data
ALS.003	POS Data
ALS.004	POS Data
ALS.005	POS Data
ALS.006	POS Data
ALS.007	POS Data
ALS.008	POS Data
ALS.009	POS Data
ALS.010	POS Data
ALS.011	POS Data
ALS.012	POS Data
ALS.013	POS Data
ALS.014	POS Data
ALS.015	POS Data
ALS.016	POS Data
ALS.017	POS Data
ALS.018	POS Data
ALS.019	POS Data
ALS.020	POS Data
ALS.021	POS Data
ALS.022	POS Data
ALS.023	POS Data
ALS.024	POS Data
ALS.025	POS Data
ALS.026	POS Data
ALS.027	POS Data
ALS.028	POS Data
ALS.029	POS Data
ALS.030	POS Data
ALS.031	POS Data
ALS.032	POS Data
ALS.033	POS Data
ALS.034	POS Data
ALS.035	POS Data
ALS.036	POS Data
ALS.037	POS Data
ALS.038	POS Data

Input Files

File Name	File type
Ephm3520.19g	GLONASS Broadcast Ephemeris
Ephm3520.19n	GPS Broadcast Ephemeris
flcb3520.19o	GNSS SingleBase
fljl3520.19o	GNSS SingleBase
flmd3520.19o	GNSS SingleBase
flmr3520.19o	GNSS SingleBase
gatv3520.19o	GNSS SingleBase
prry3520.19o	GNSS SingleBase
sned3520.19o	GNSS SingleBase
talh3520.19o	GNSS SingleBase
xcty3520.19o	GNSS SingleBase
esr20843.sp3	GPS, GLONASS Precise Ephemeris

Output Files

Filename	File type
sbet_6219352a.out	SBET Trajectory File

Rover Data Summary

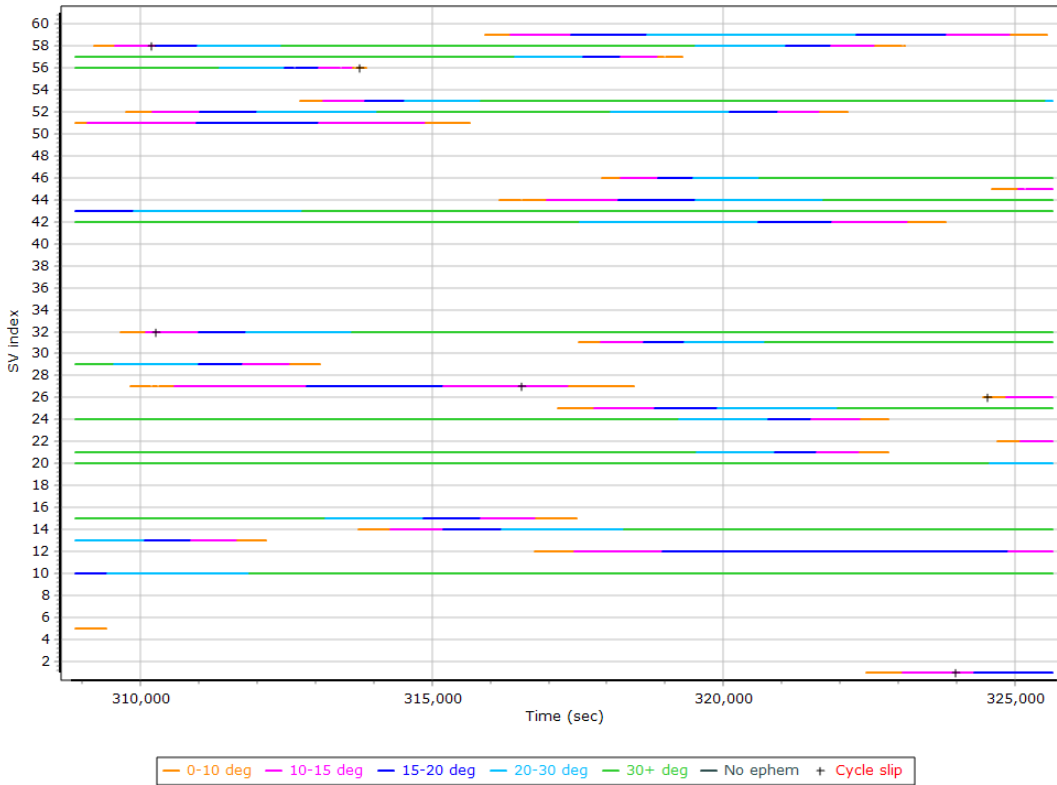
First raw data file	ALS.000		
Last raw data file	ALS.038		
Start GPS week	2084		
Start time	308519.553 (12/18/2019 1:41:59 PM)		
End time	325653.704 (12/18/2019 6:27:33 PM)		
Start of fine alignment	308831.136 (12/18/2019 1:47:11 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.046	-0.192	-1.285
Gimbal 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

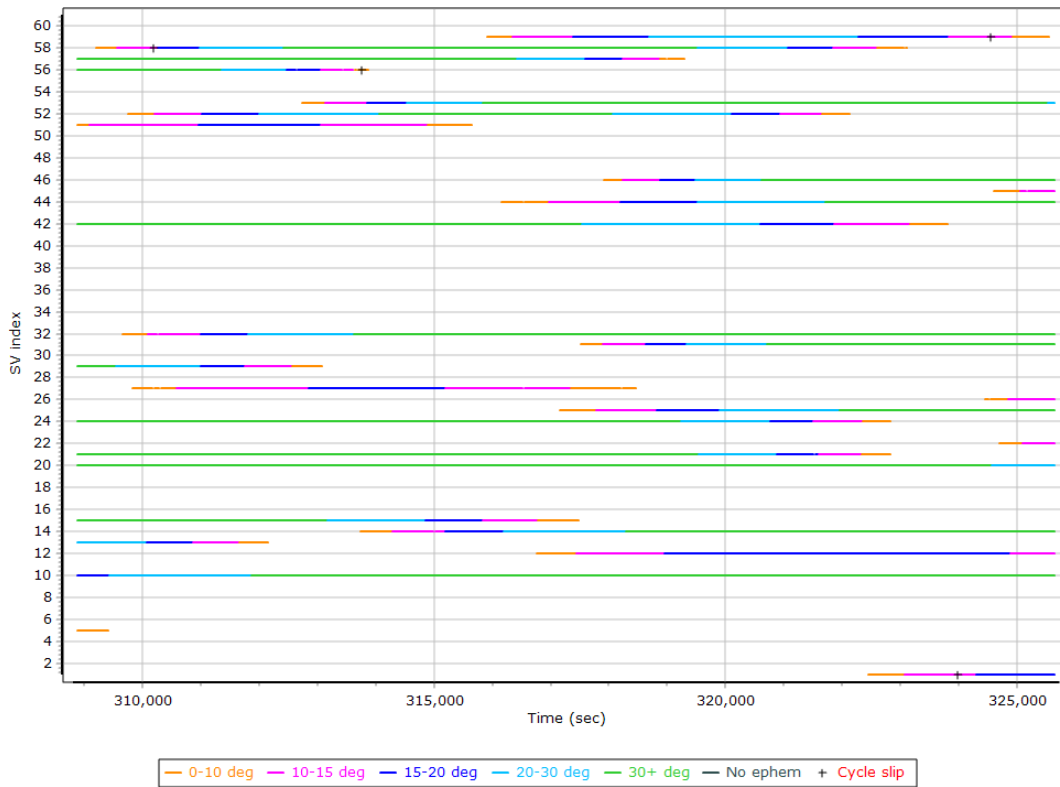
Raw IMU Import QC Summary

IMU data input file	imu_6219352a.dat
IMU data check log file	imudt_6219352a.log
IMU Records Processed	3426141
Termination Status	Normal
IMU Anomalies	0

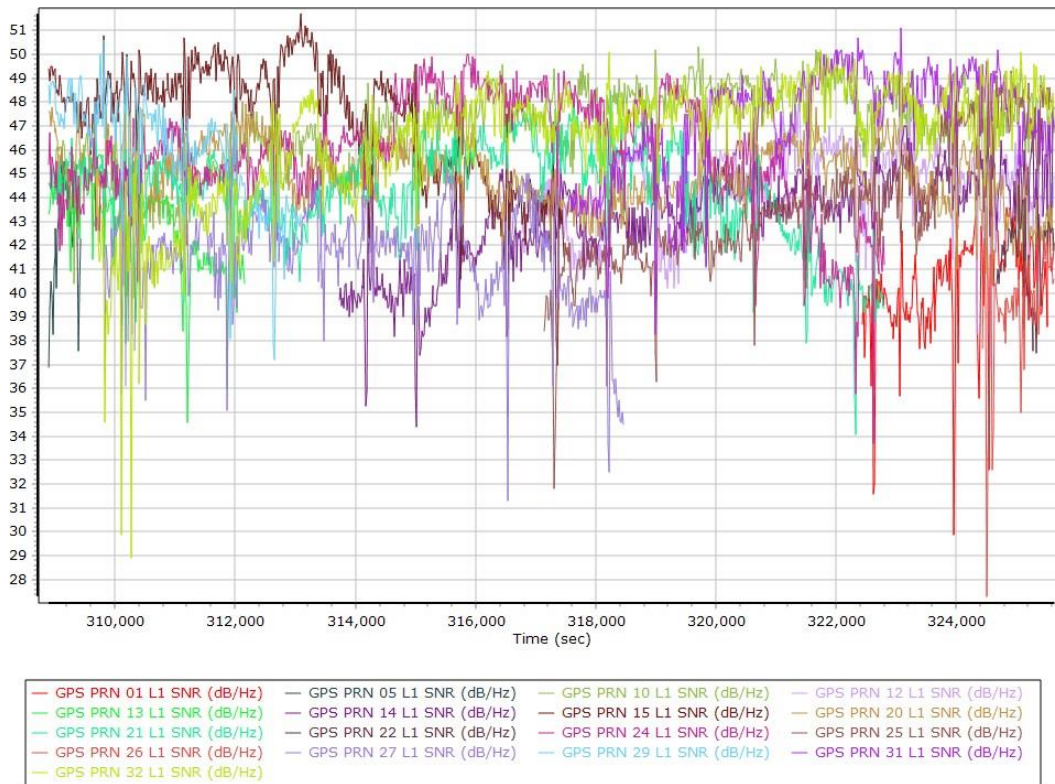
L1 Satellite Lock/Elevation



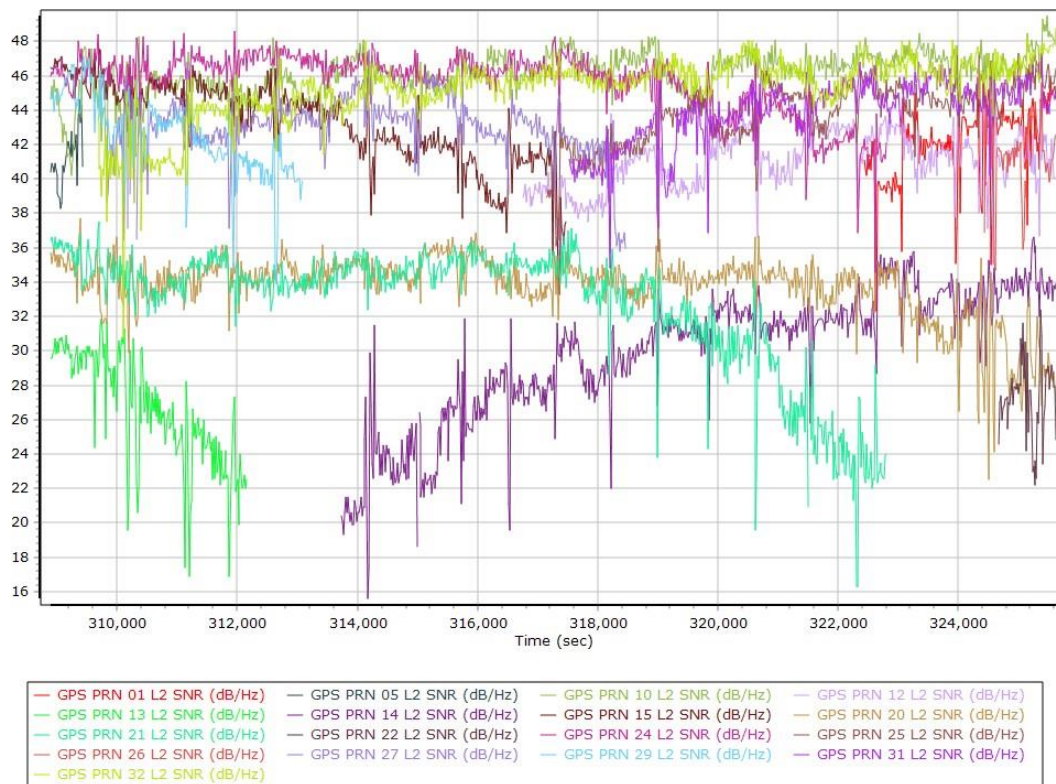
L2 Satellite Lock/Elevation



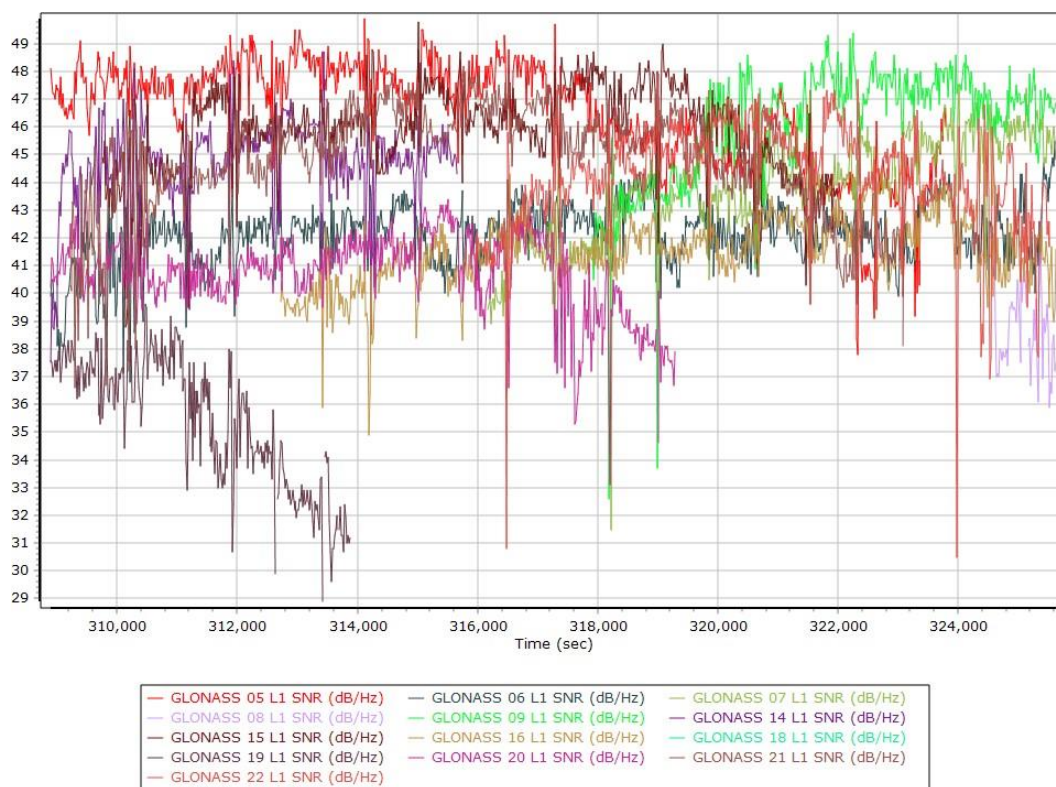
GPS L1 SNR



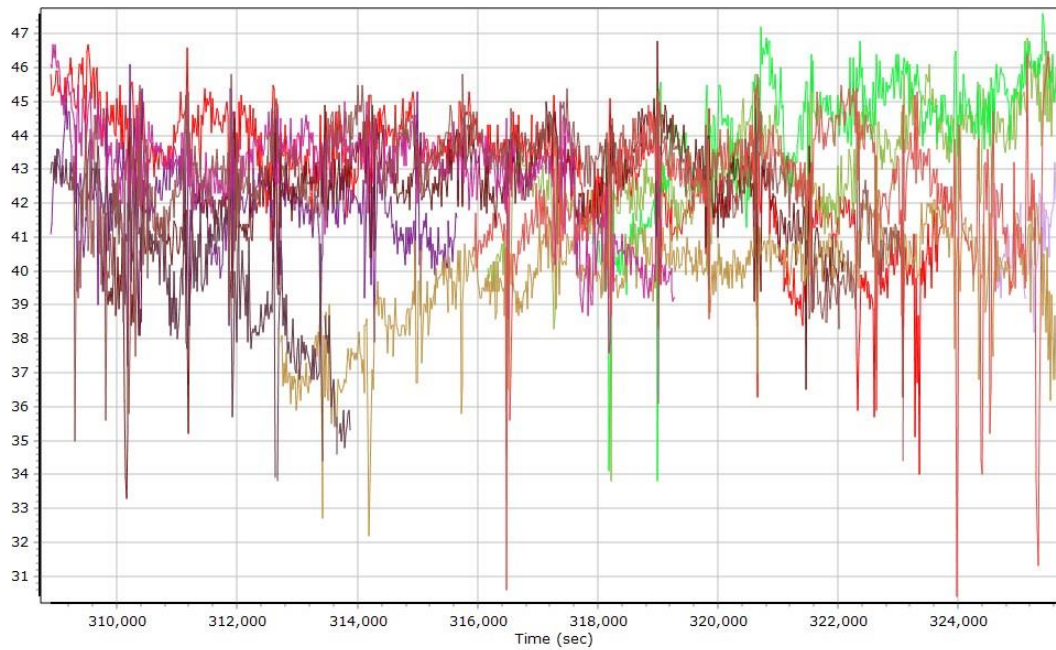
GPS L2 SNR



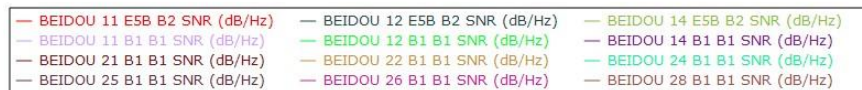
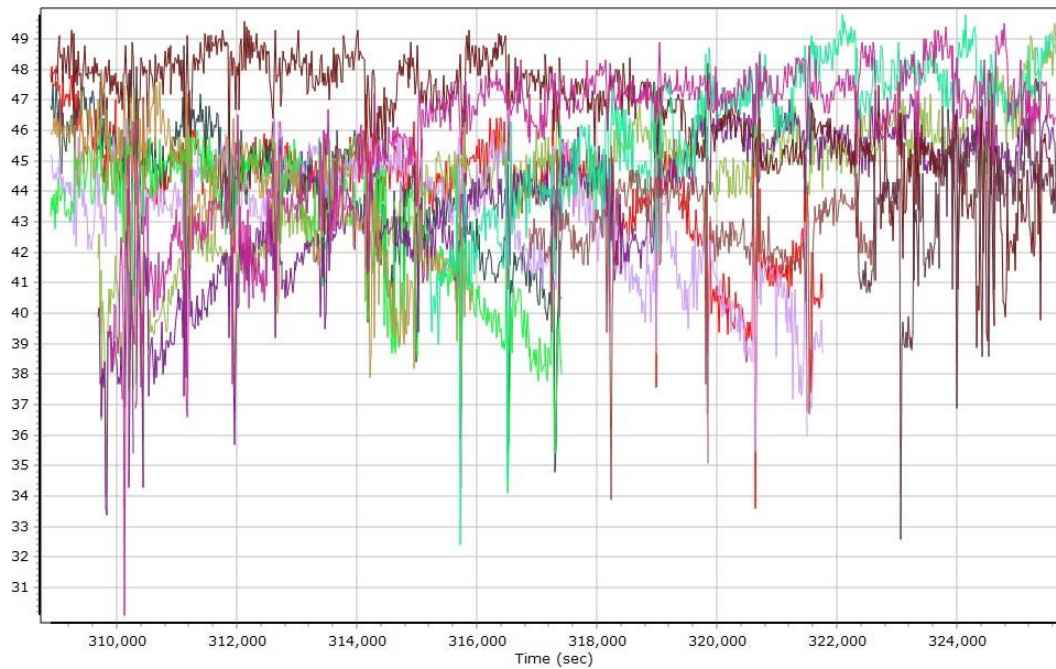
GLONASS L1 SNR



GLONASS L2 SNR

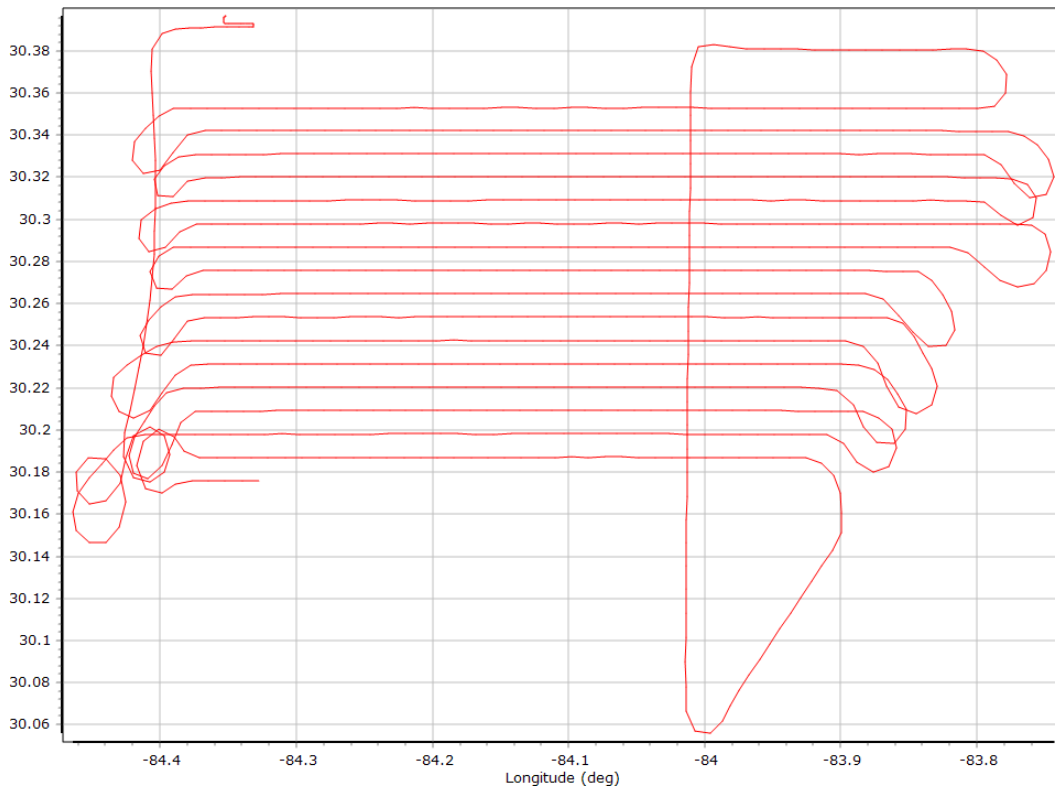


BEIDOU SNR

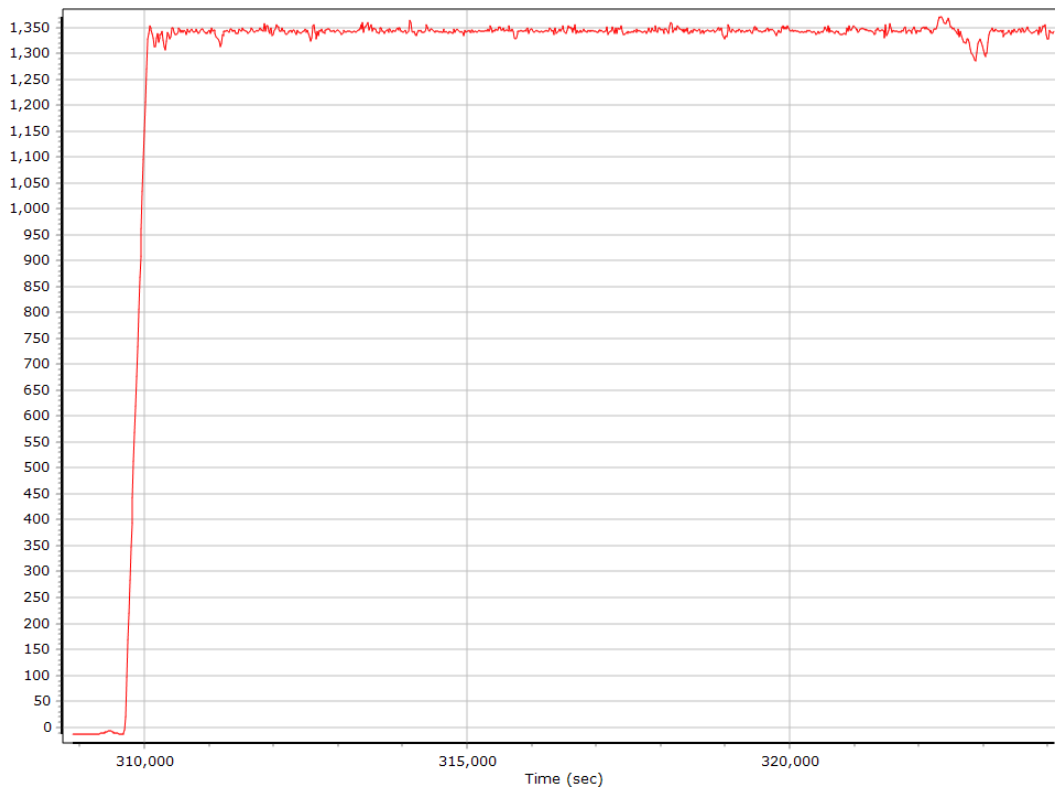


Trajectory Information

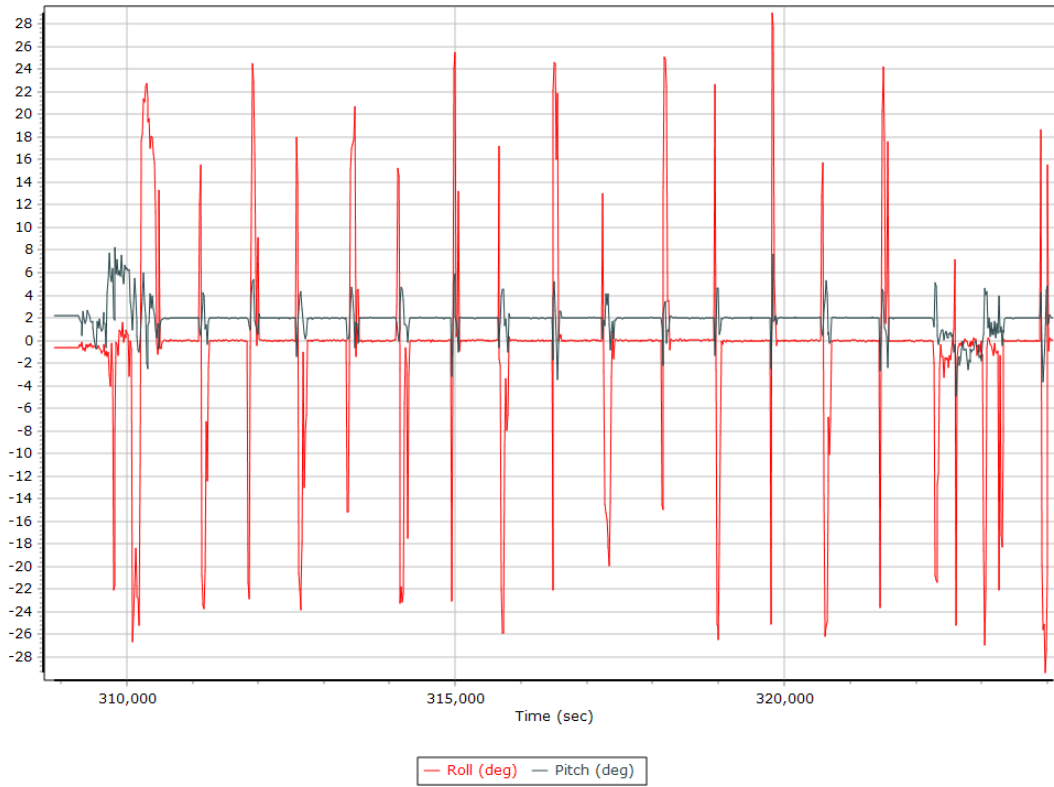
Top View



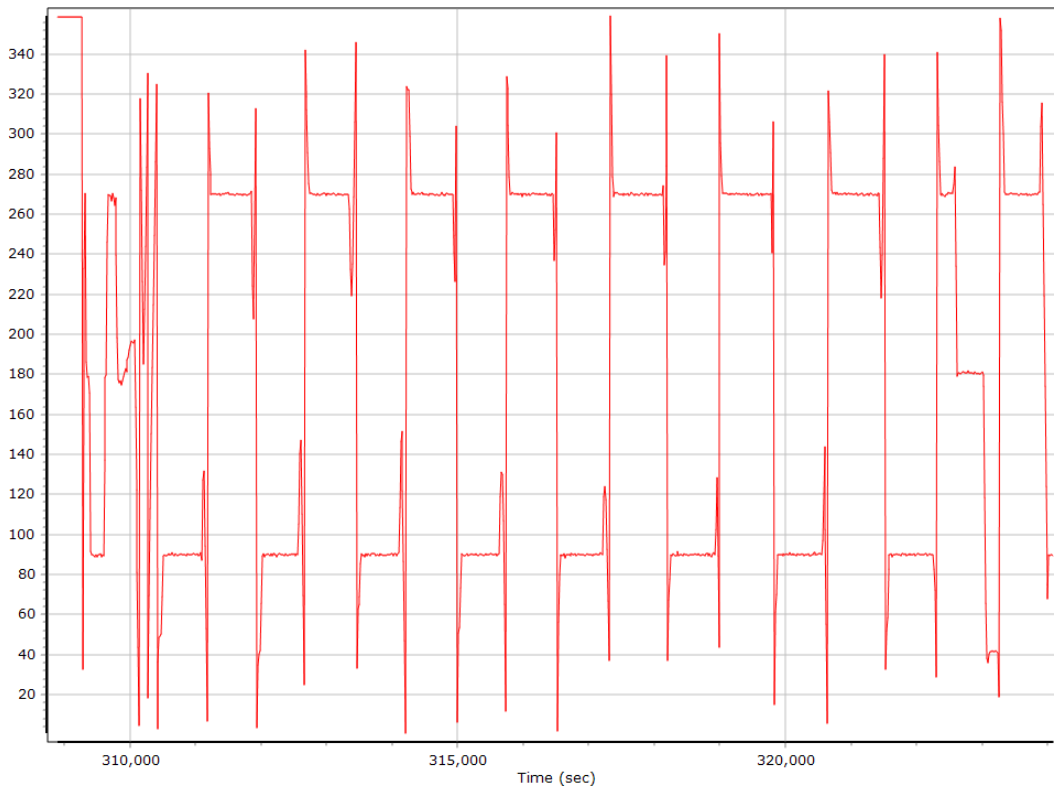
Altitude



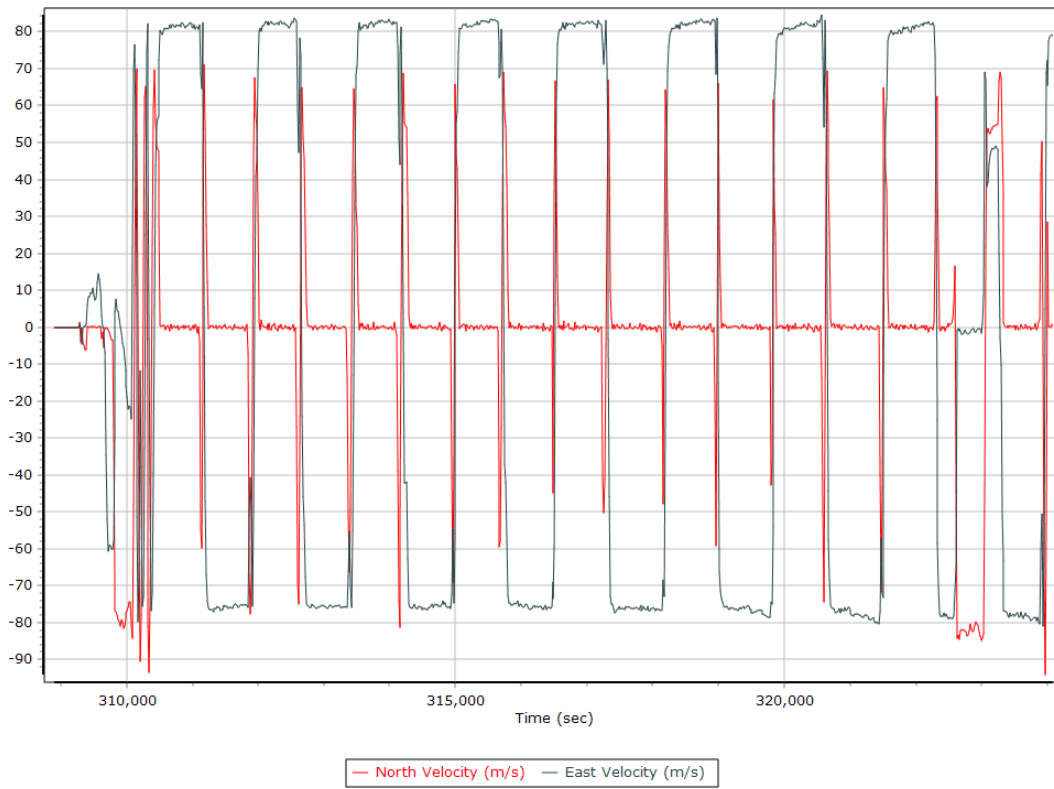
Roll/Pitch



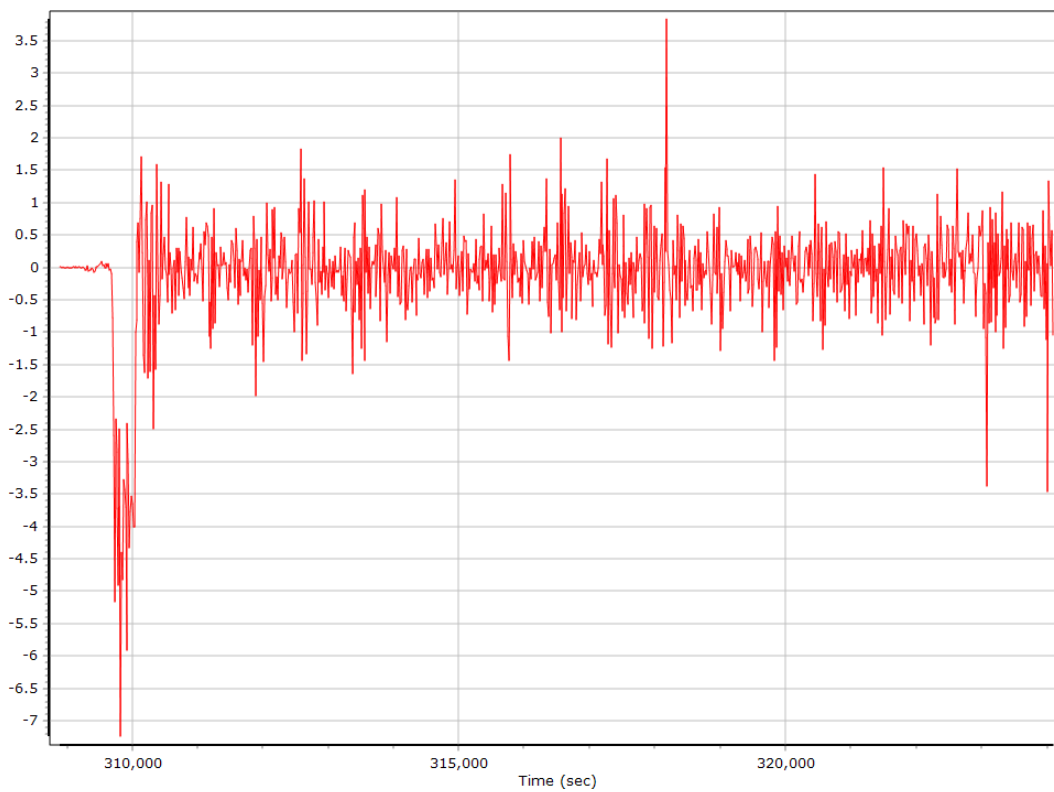
Heading



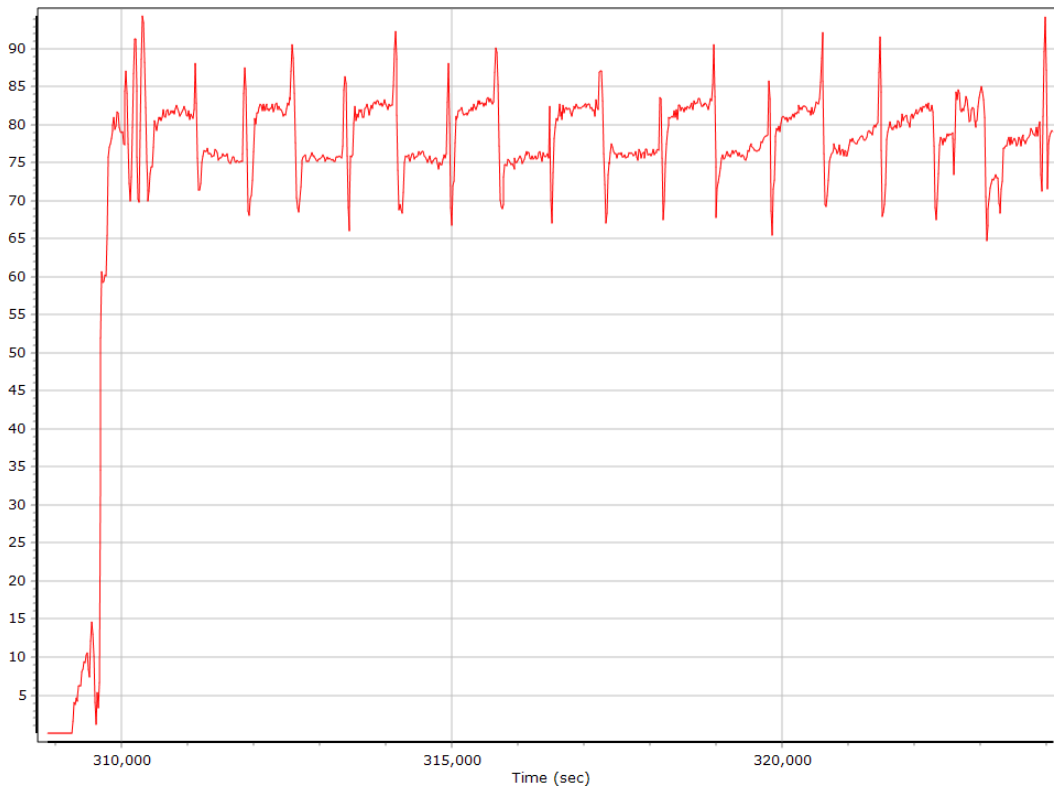
North/East Velocity



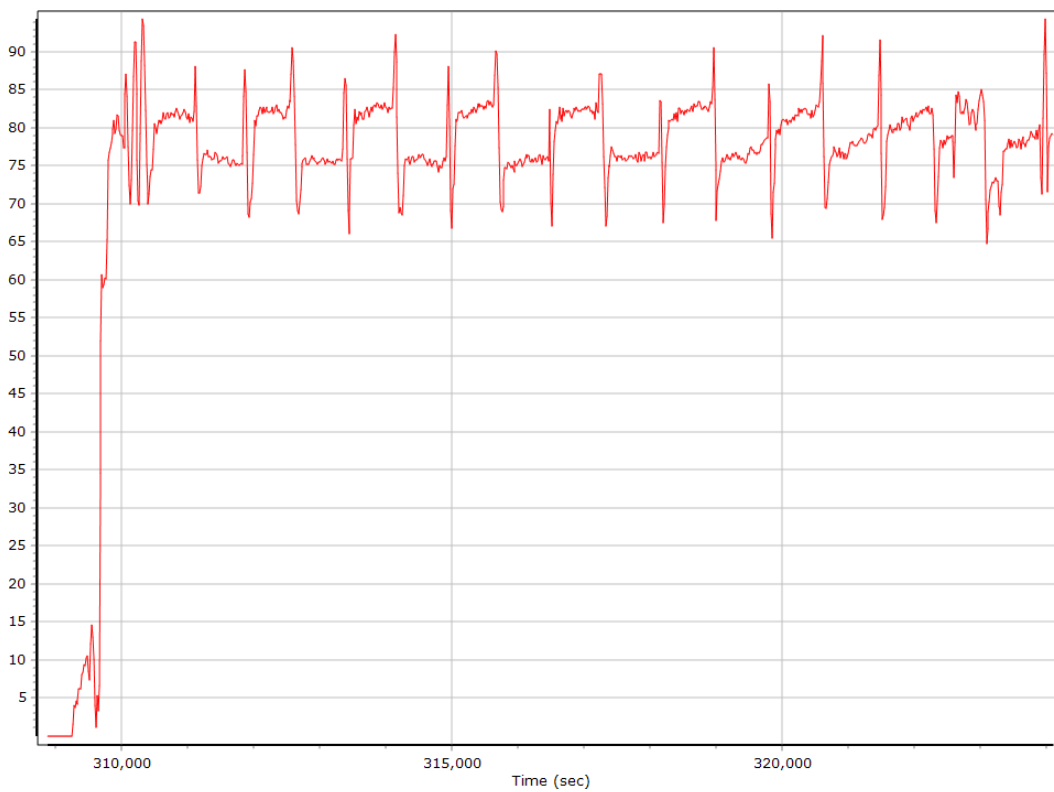
Down Velocity



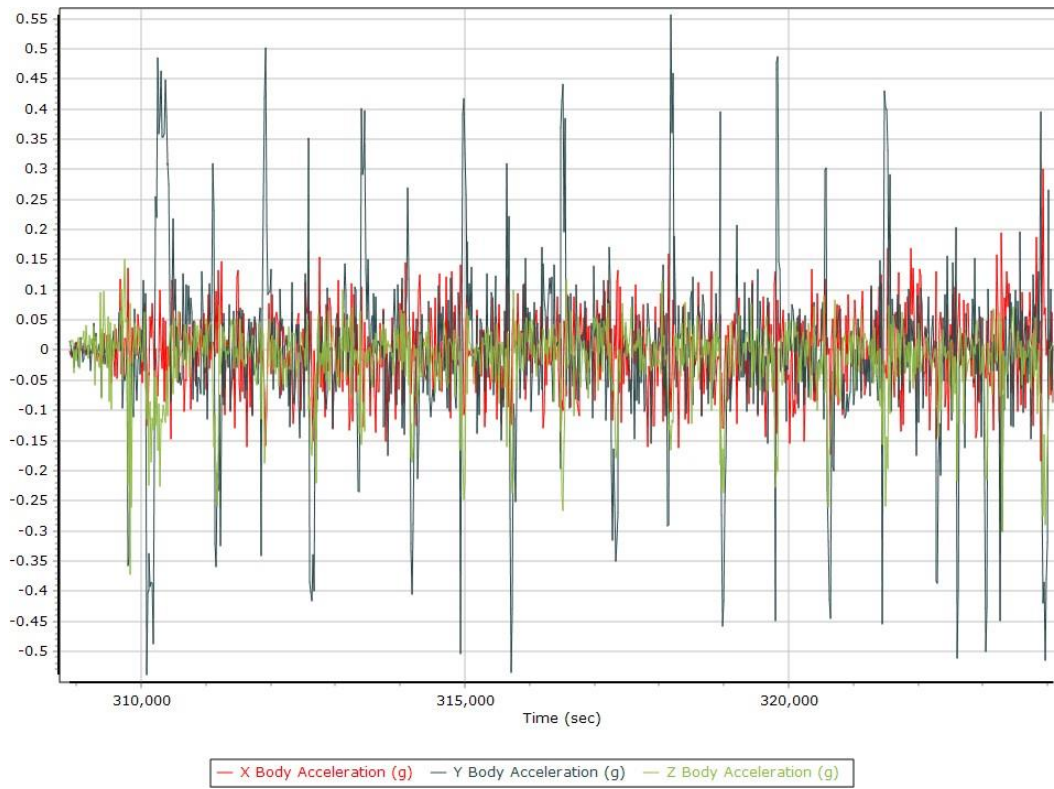
Total Speed



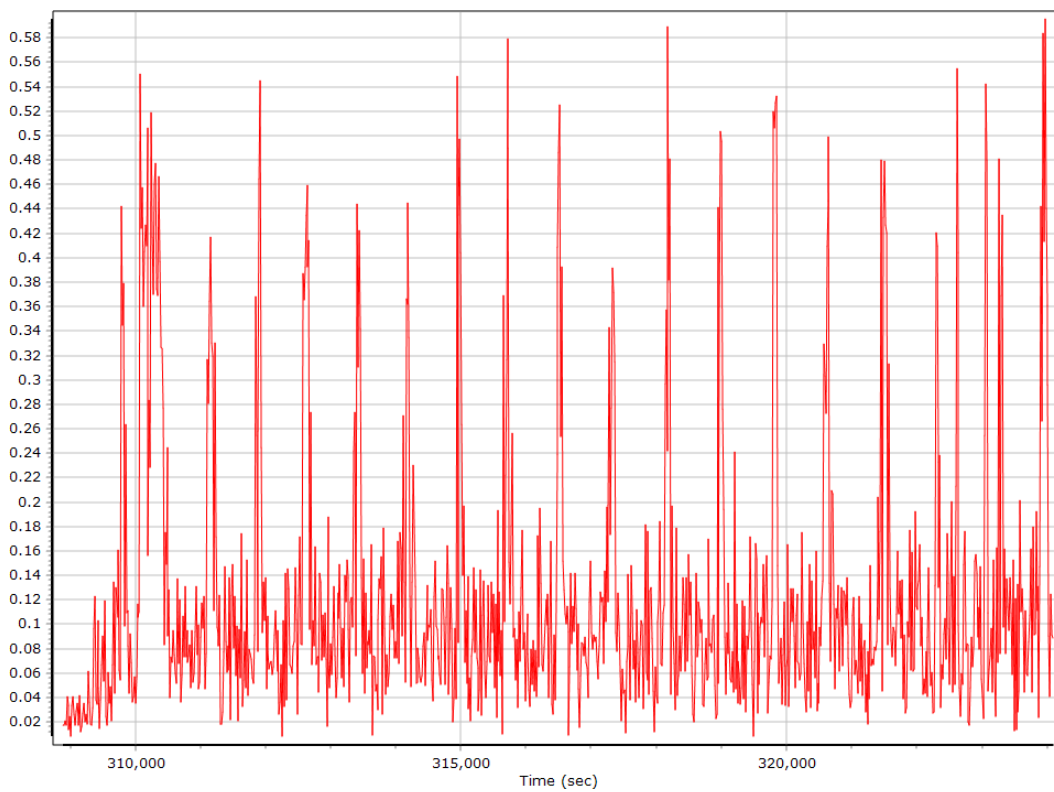
Ground Speed



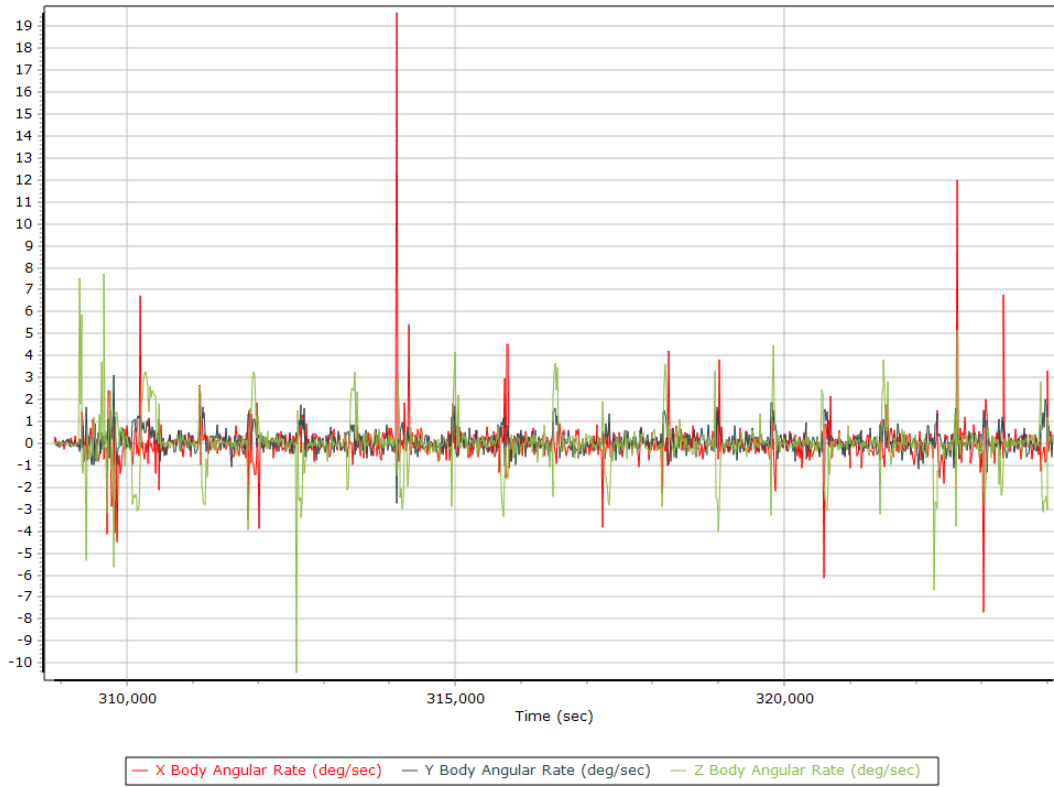
Body Acceleration



Total Body Acceleration



Body Angular Rate



SmartBase Processing Summary

Smart Select Options

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

Basestation Selection

Date	ID	Dist	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	

SmartBase Quality Check

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	0.17	39.21	
Number of GPS SV	6	10	8
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	7	16	13
PDOP	1.18	3.43	1.59
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	17064.00	0.00	34.00
Percentage	99.80	0.00	0.20

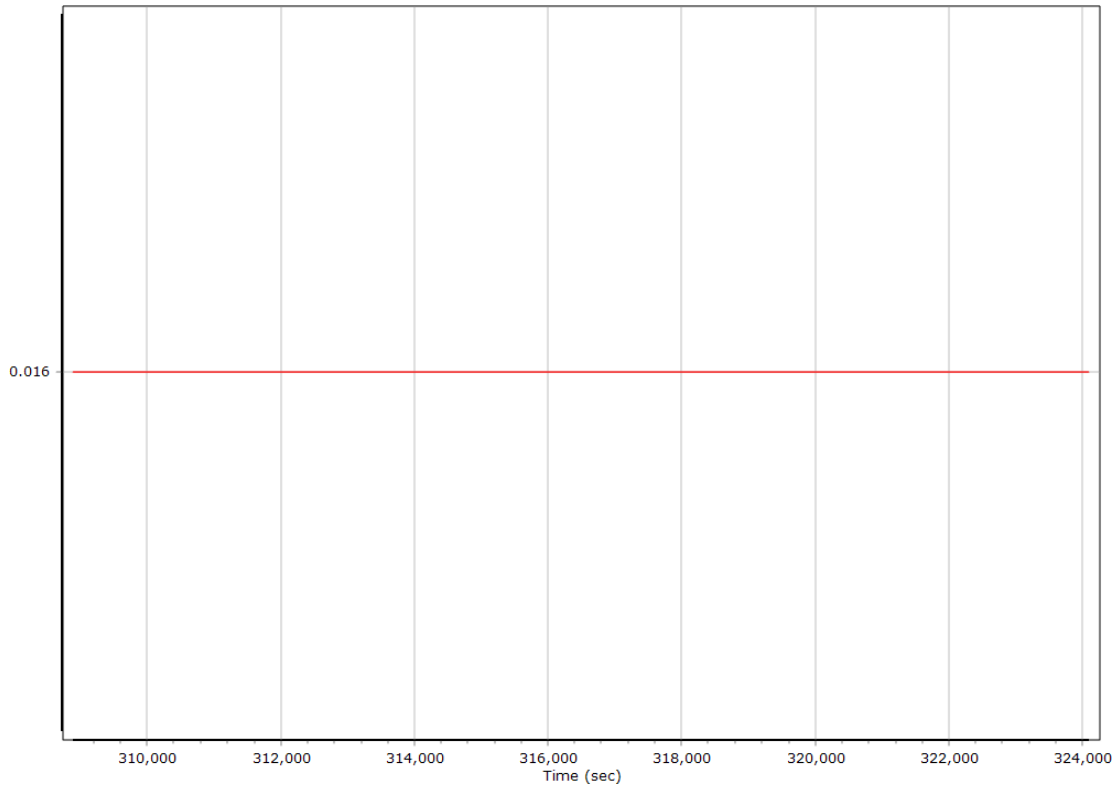
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	308520.000 (12/18/2019 1:42:00 PM)		
Processing end time	325654.000 (12/18/2019 6:27:34 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.016	-0.197	-1.290
Gimbal to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

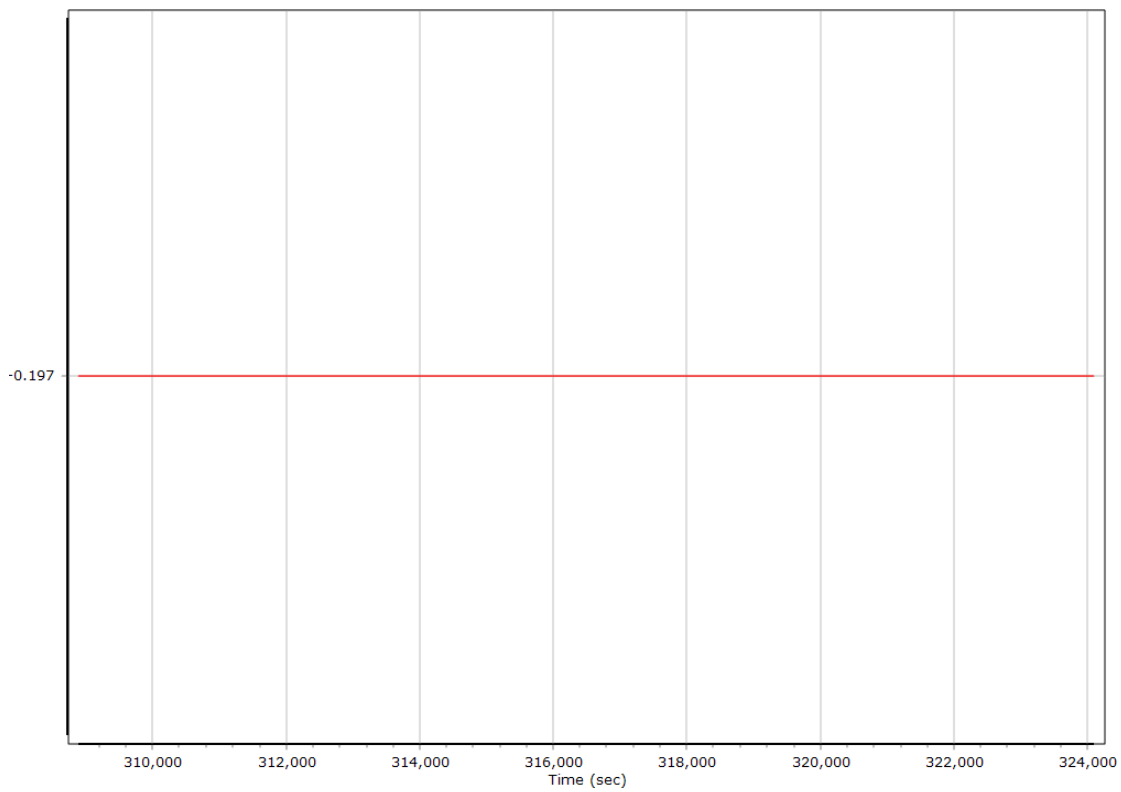
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

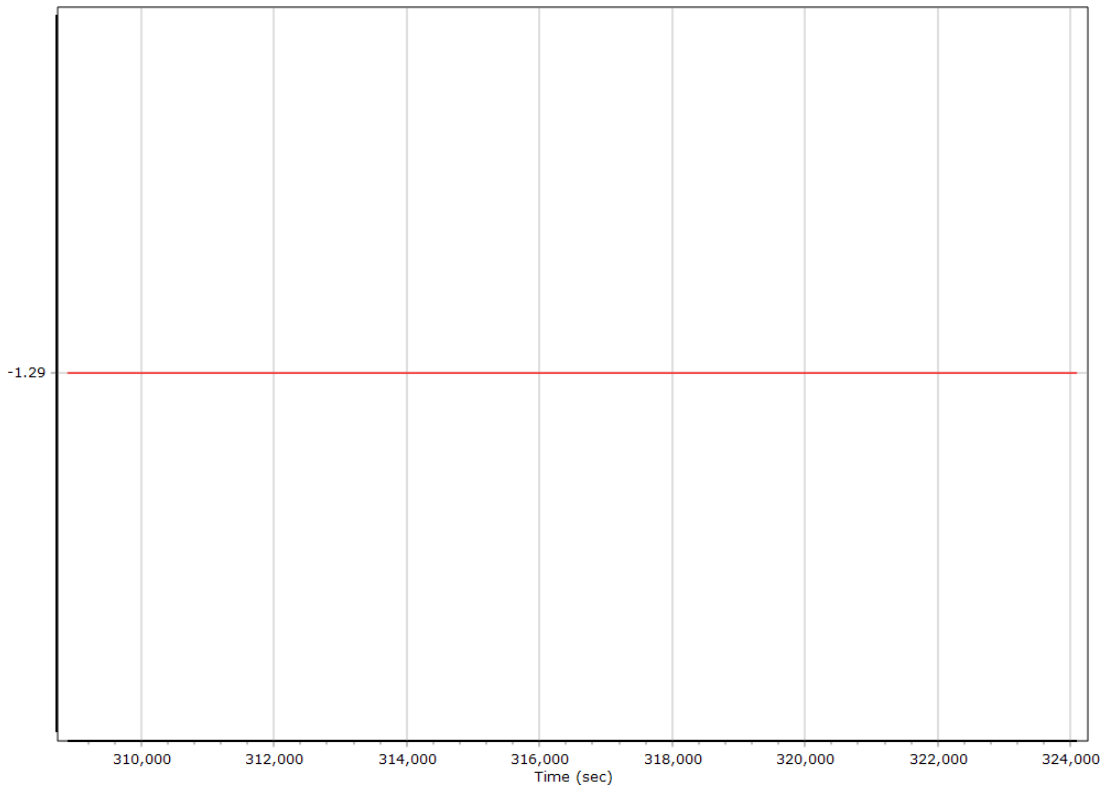
X Reference-Primary GNSS Lever Arm (m)



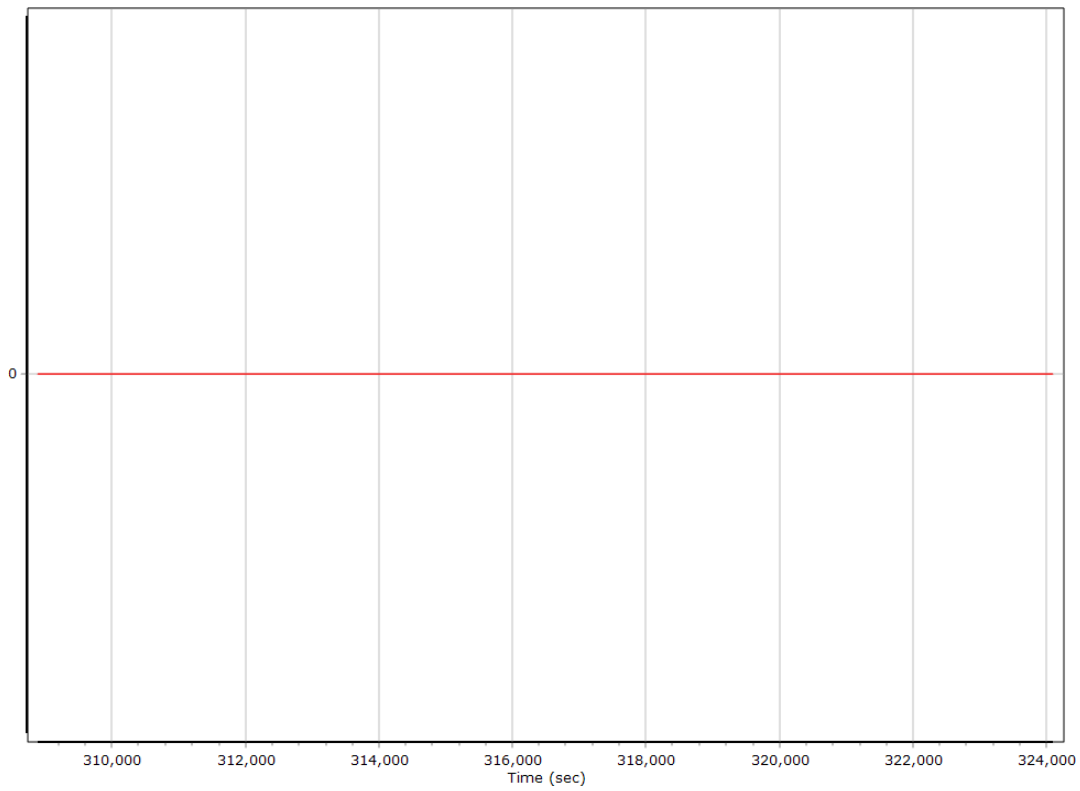
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



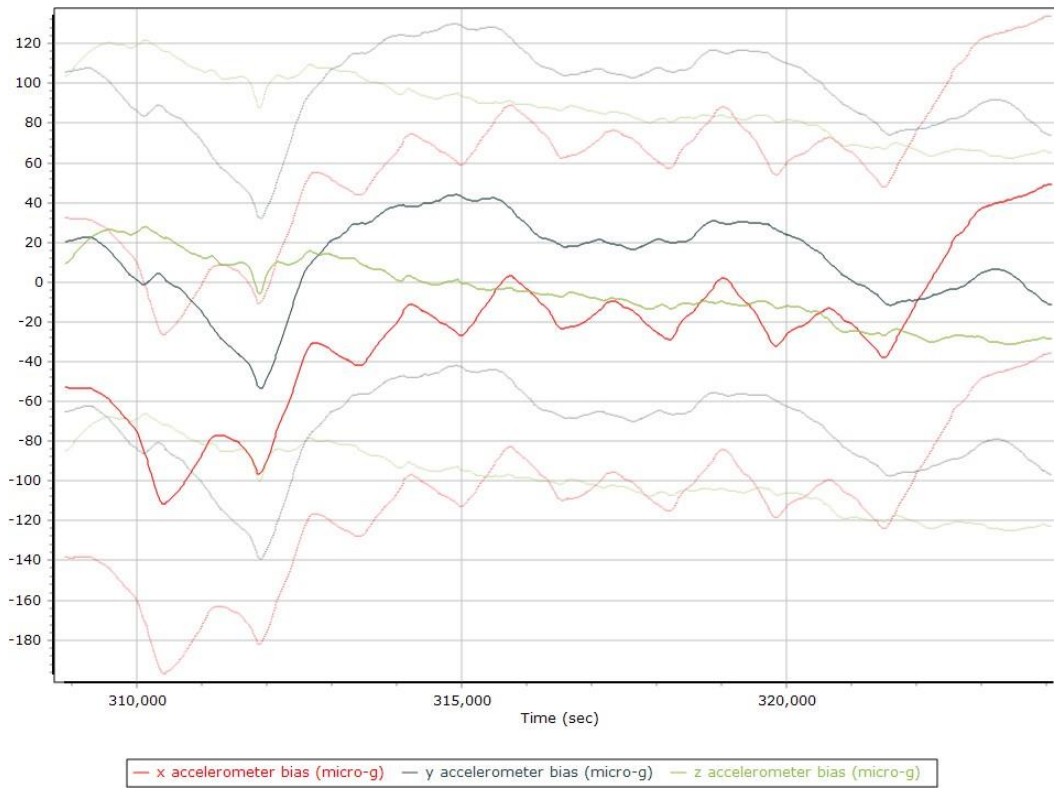
Reference-Primary GNSS Lever Arm Figure of Merit



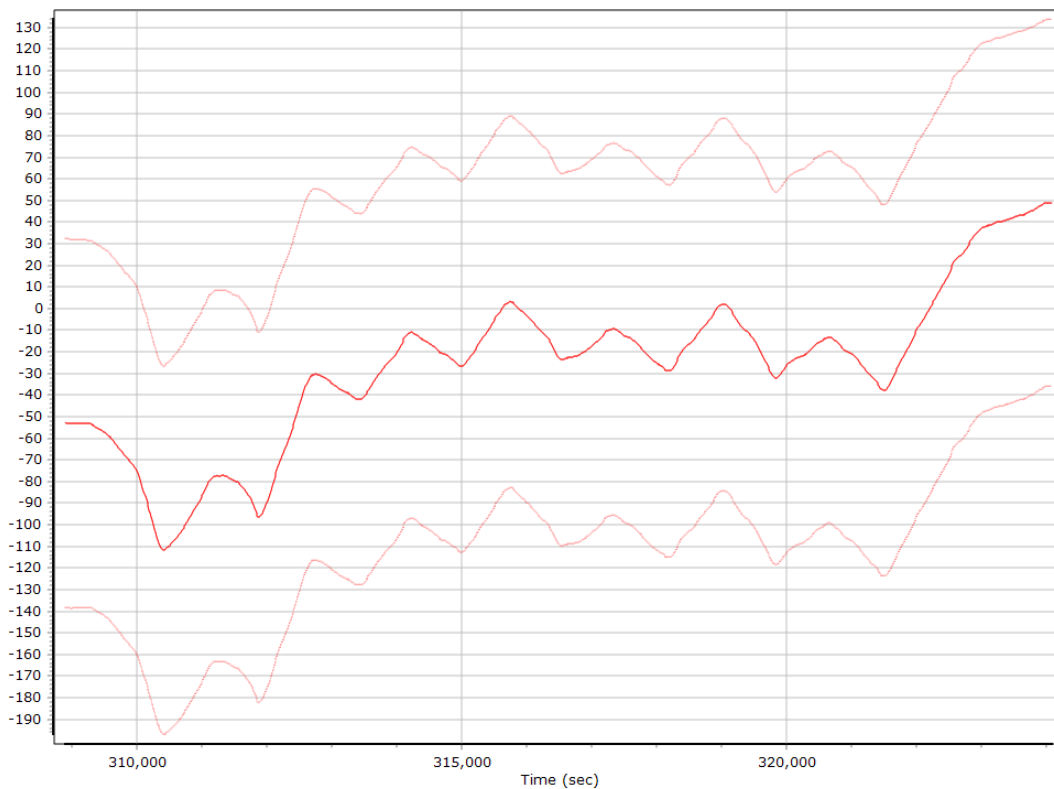
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

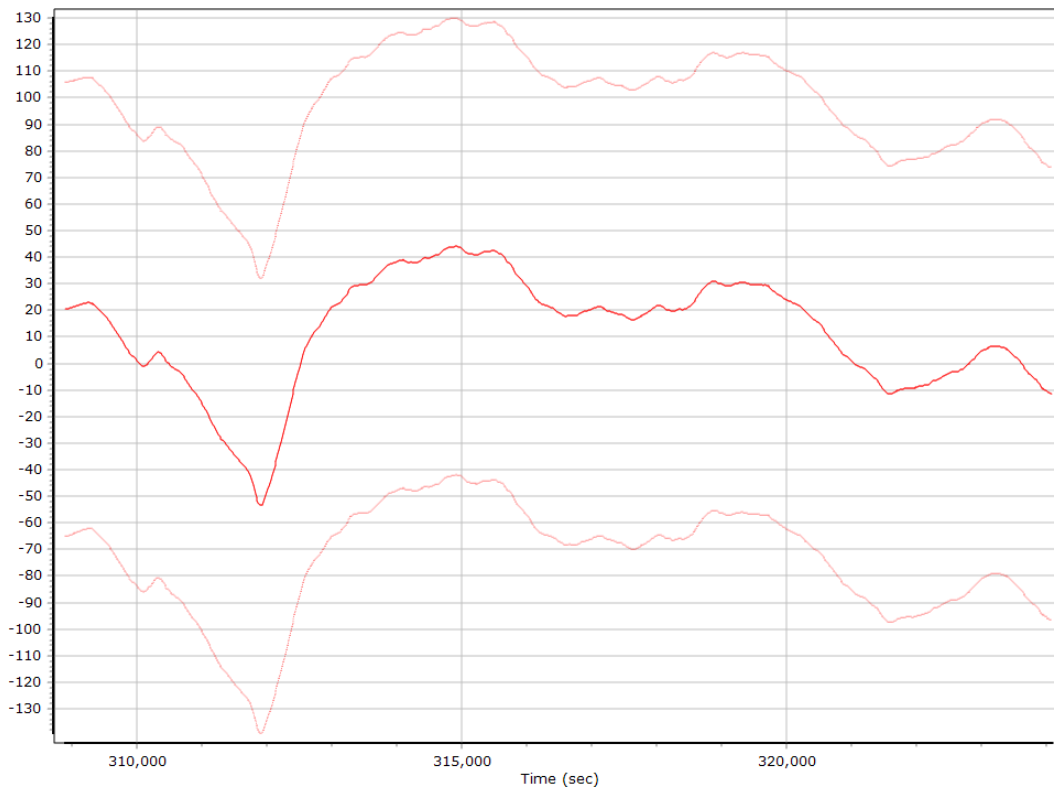
Accelerometer Bias (micro-g)



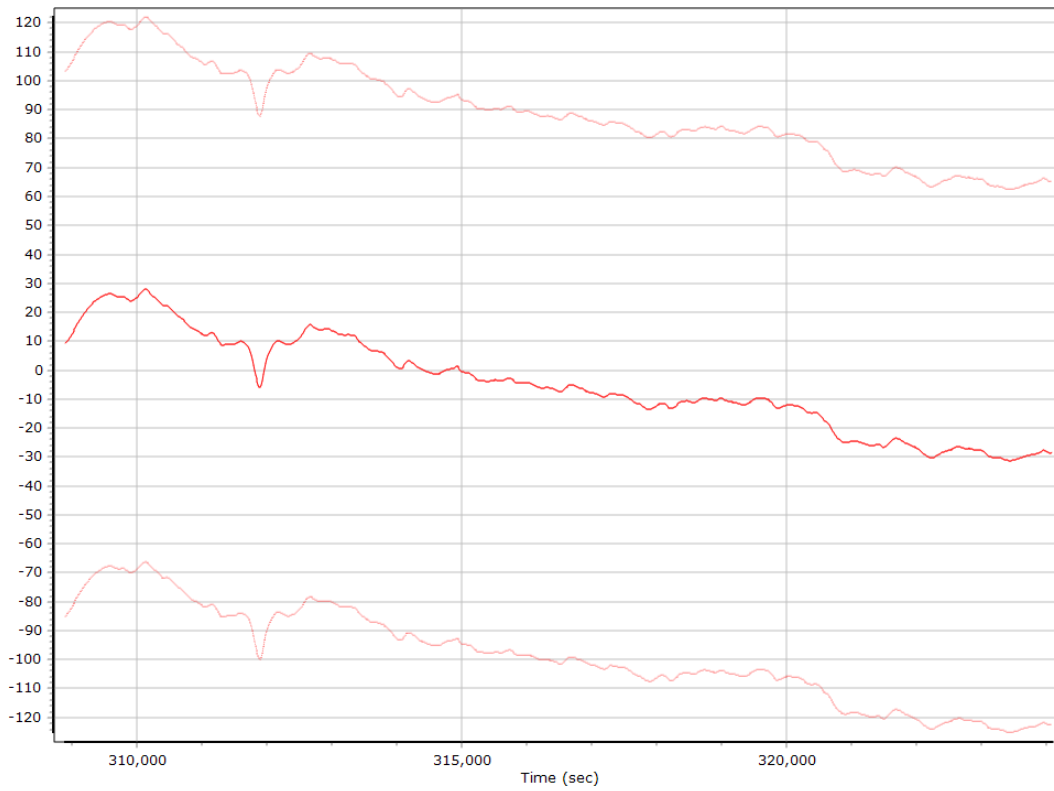
X Accelerometer Bias (micro-g)



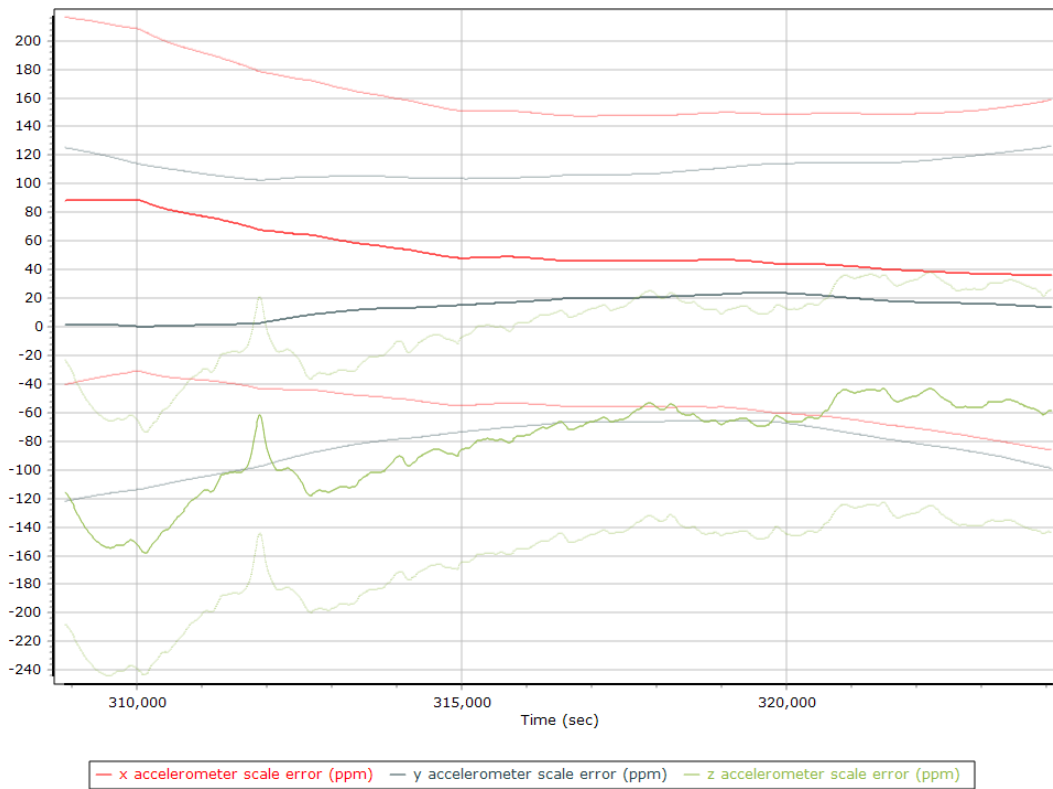
Y Accelerometer Bias (micro-g)



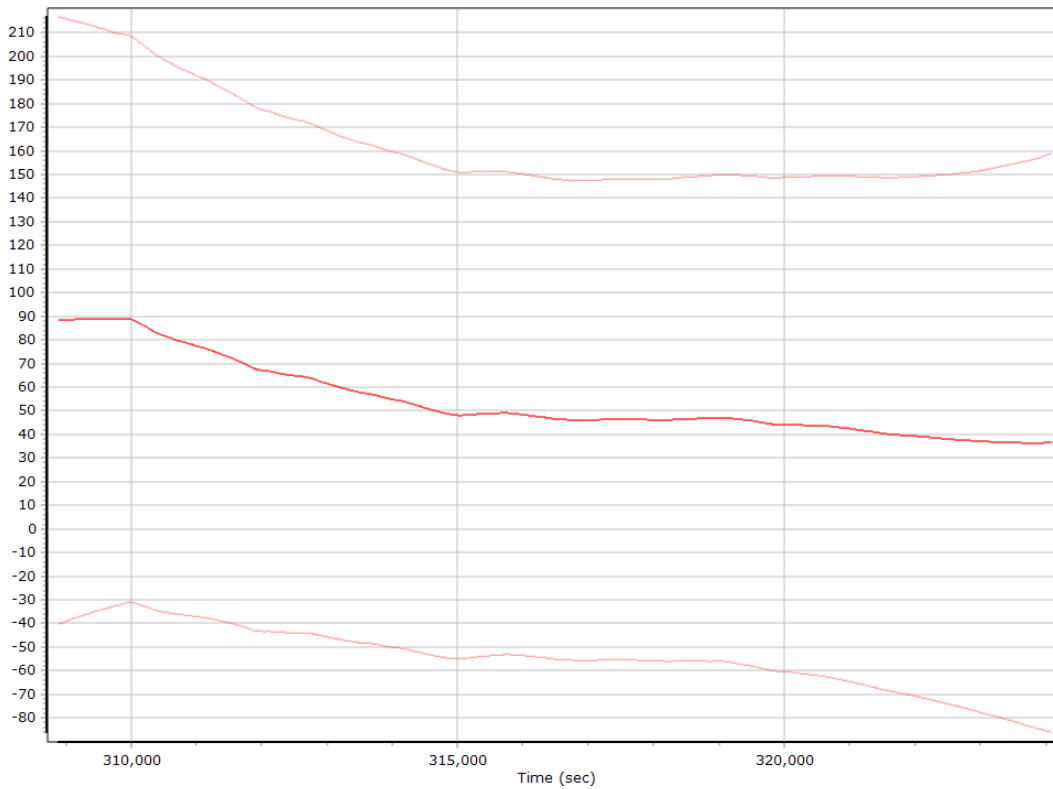
Z Accelerometer Bias (micro-g)



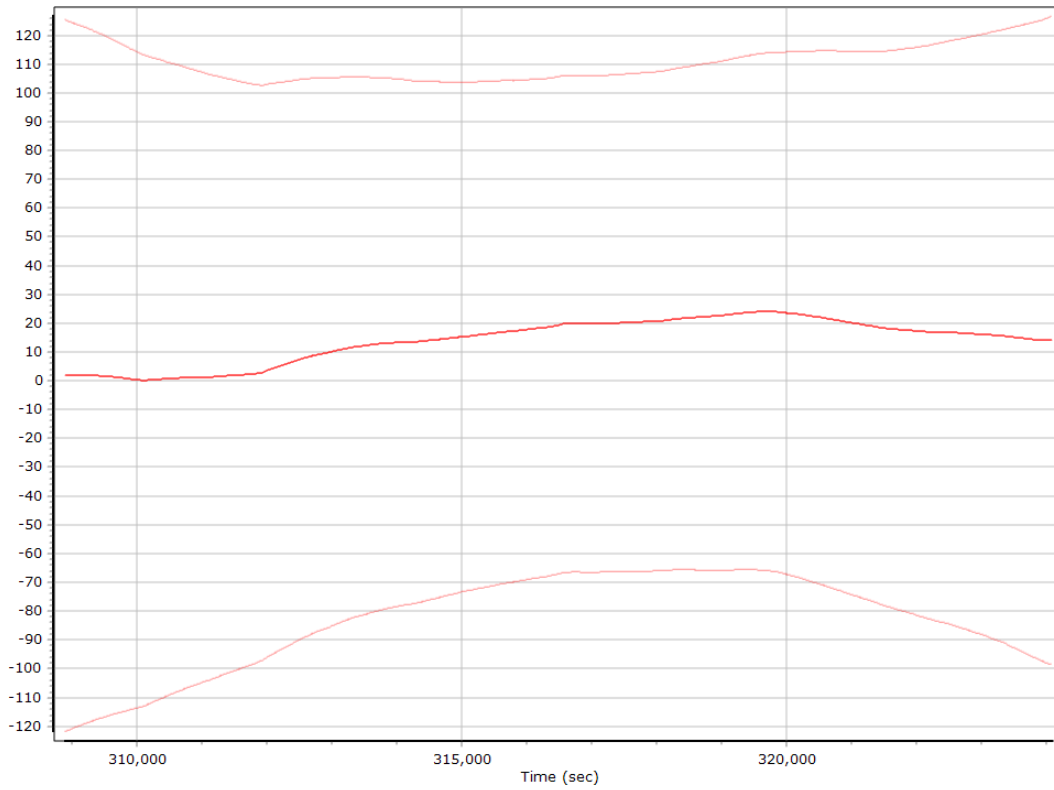
Accelerometer Scale Error (ppm)



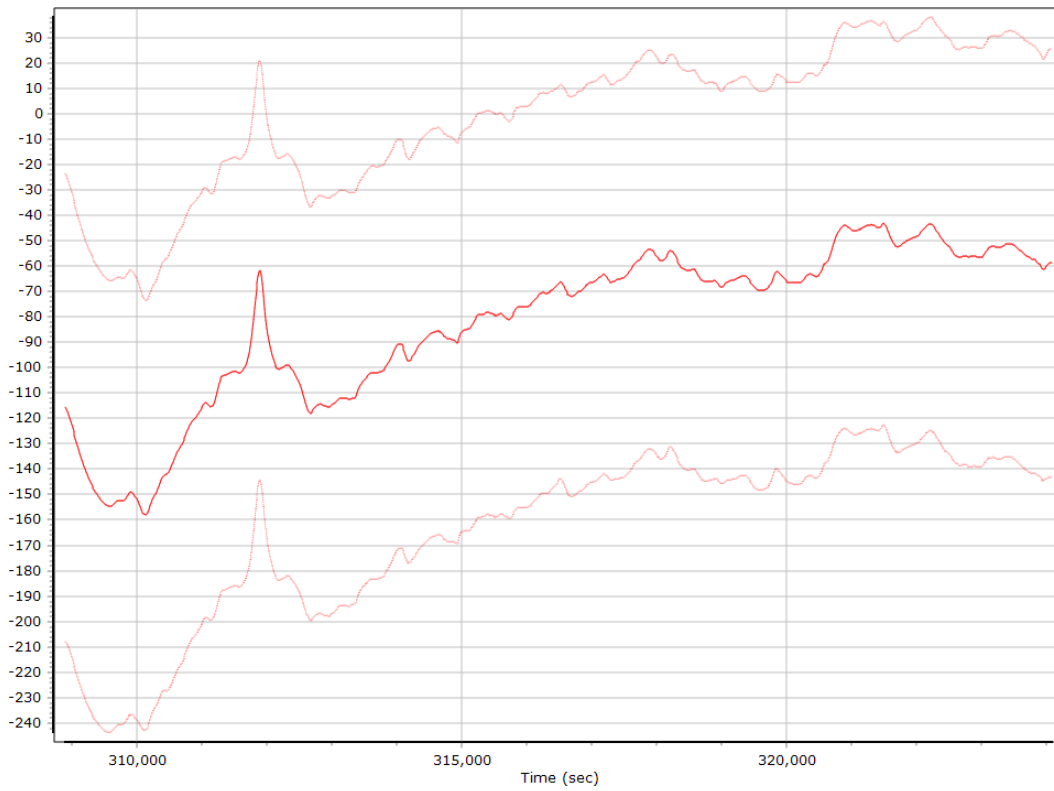
X Accelerometer Scale Error (ppm)



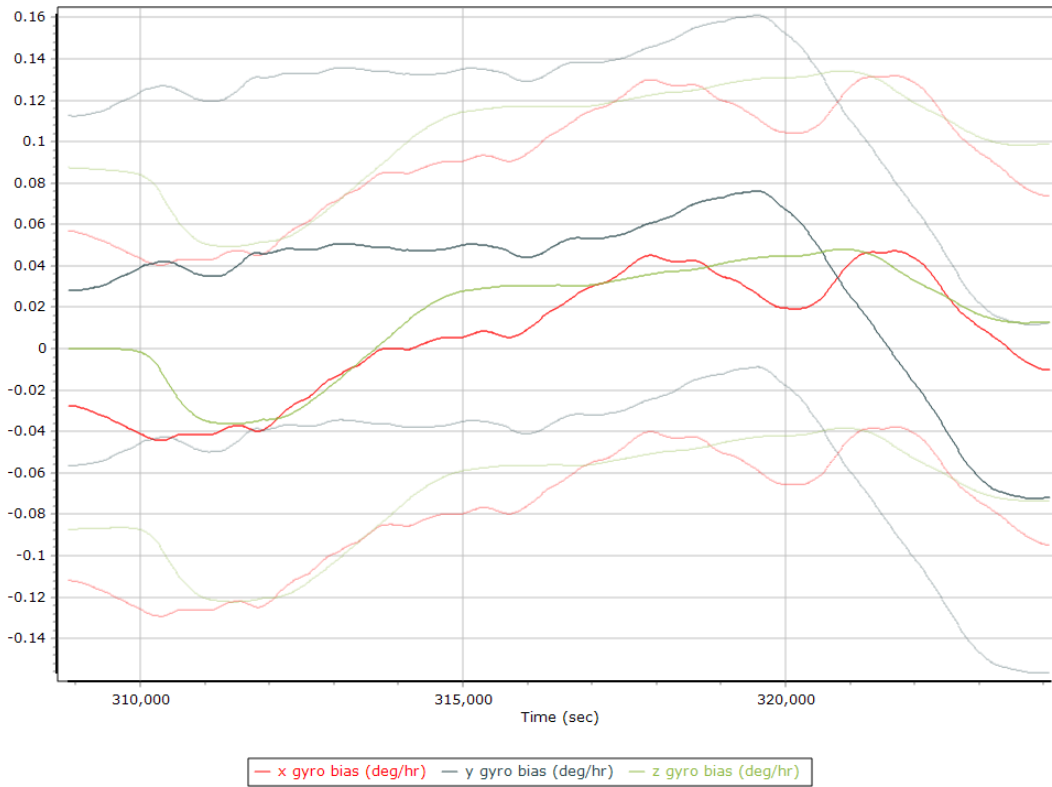
Y Accelerometer Scale Error (ppm)



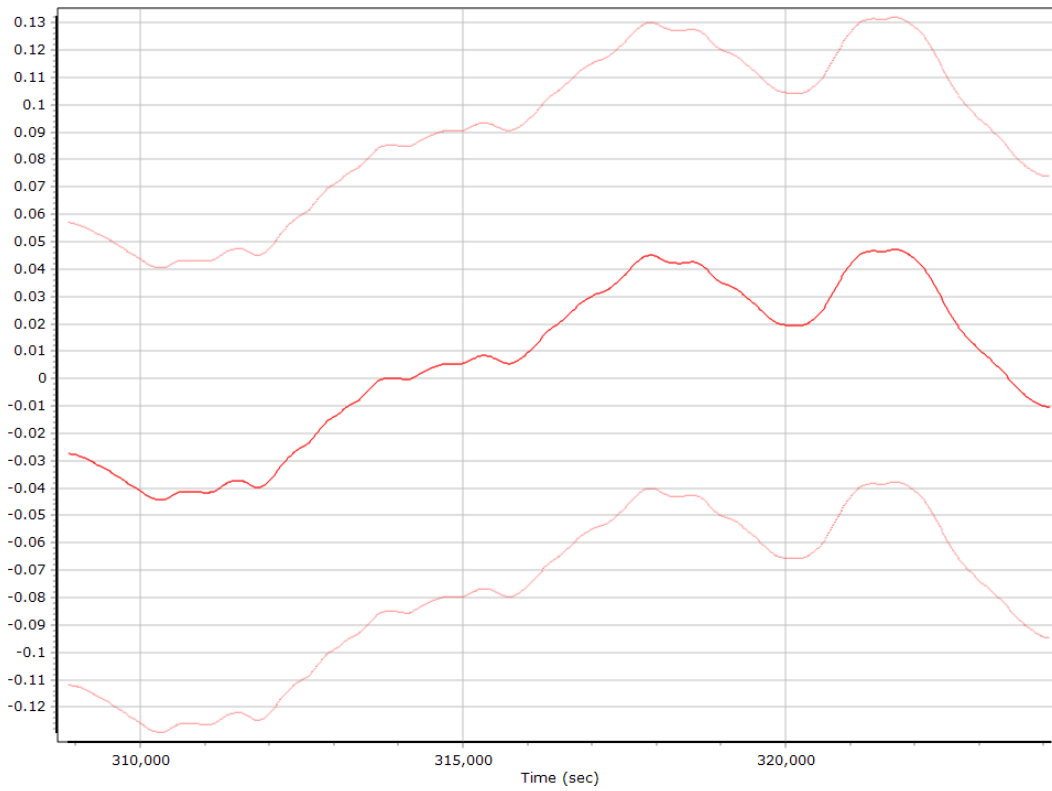
Z Accelerometer Scale Error (ppm)



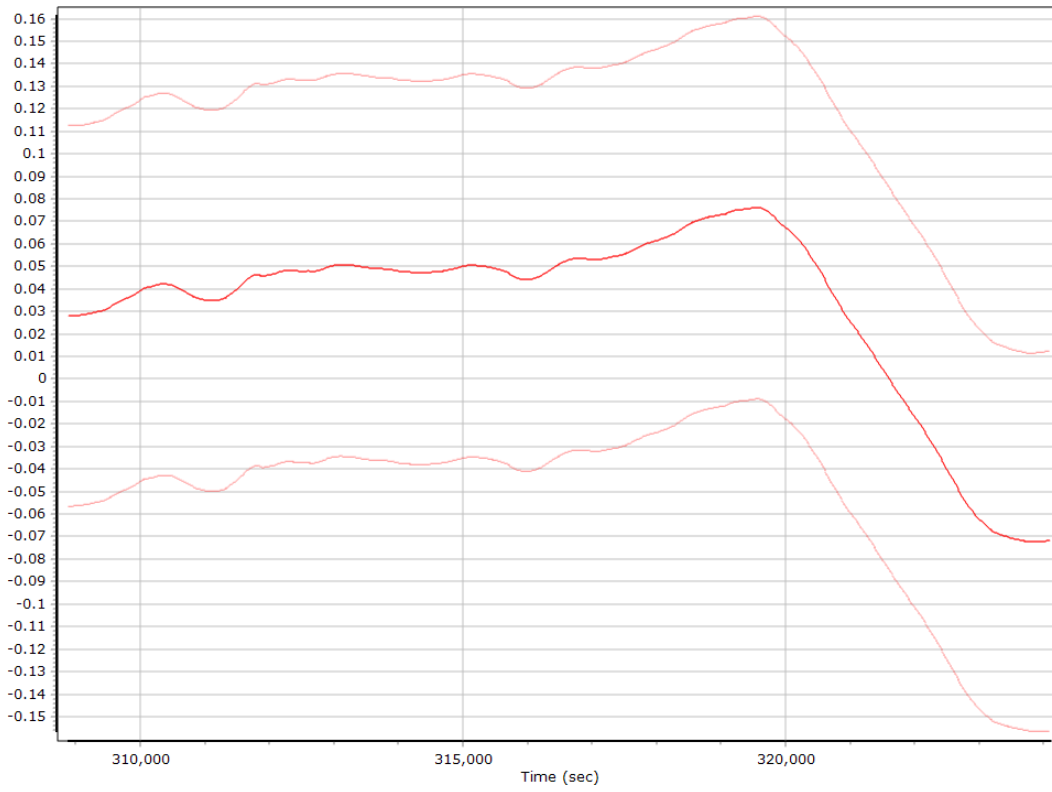
Gyro Bias (deg/h)



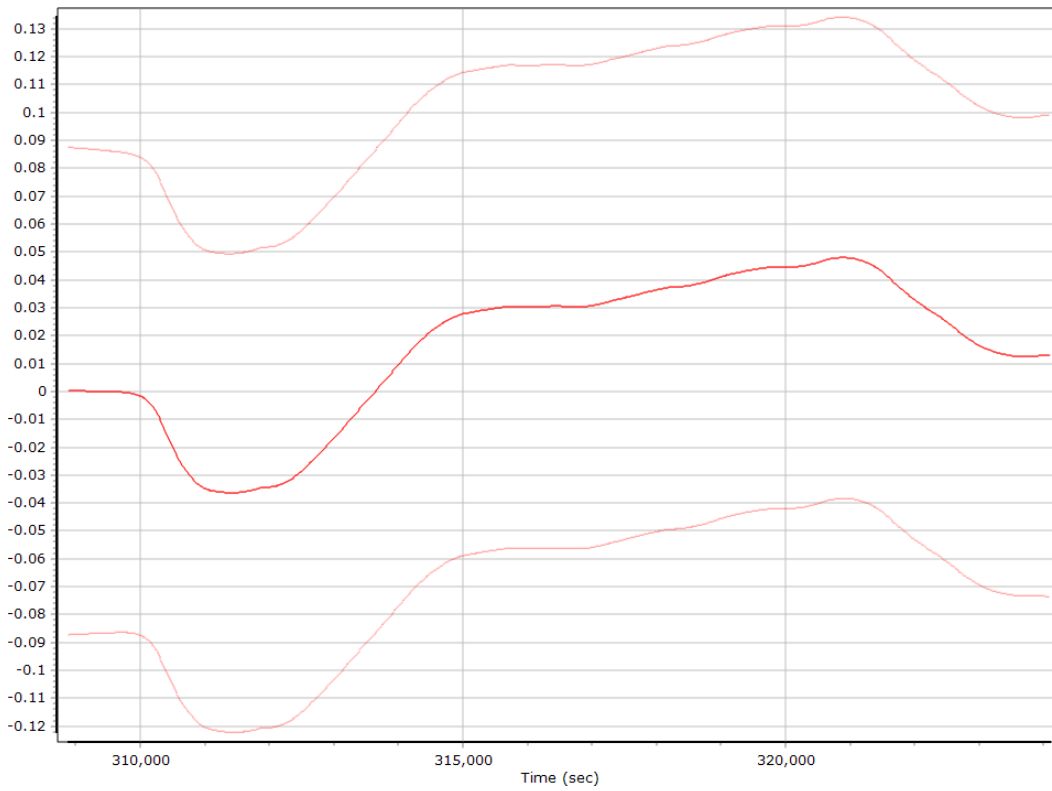
X Gyro Bias (deg/h)



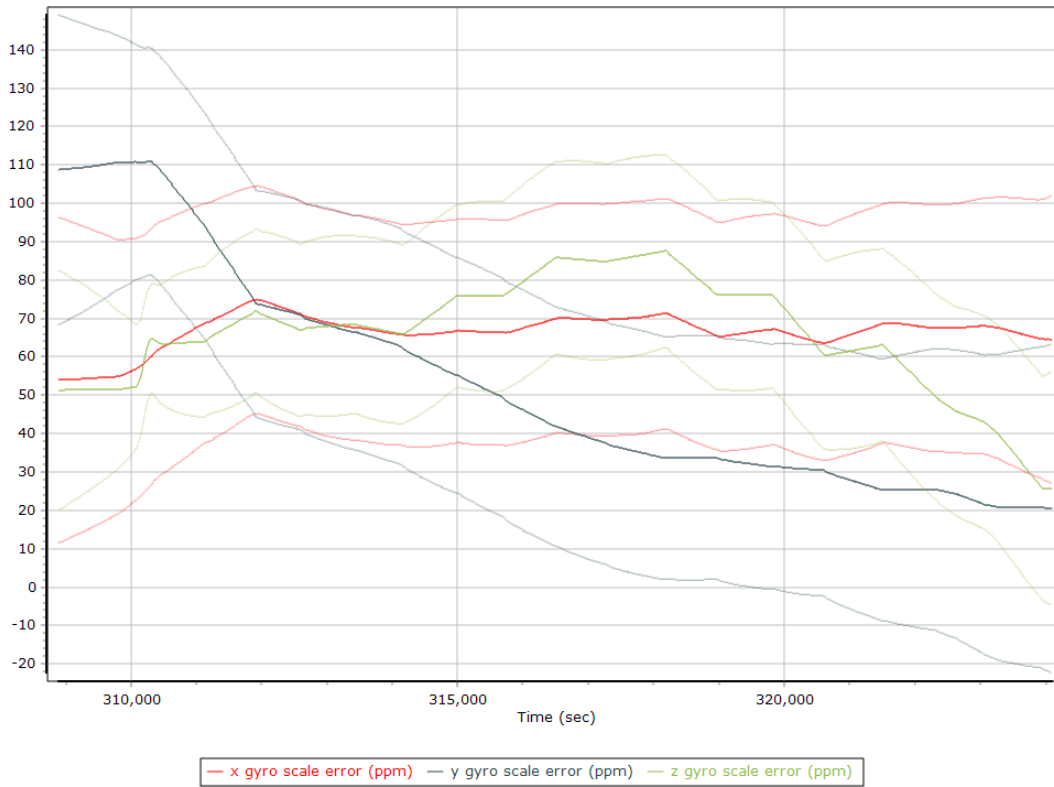
Y Gyro Bias (deg/h)



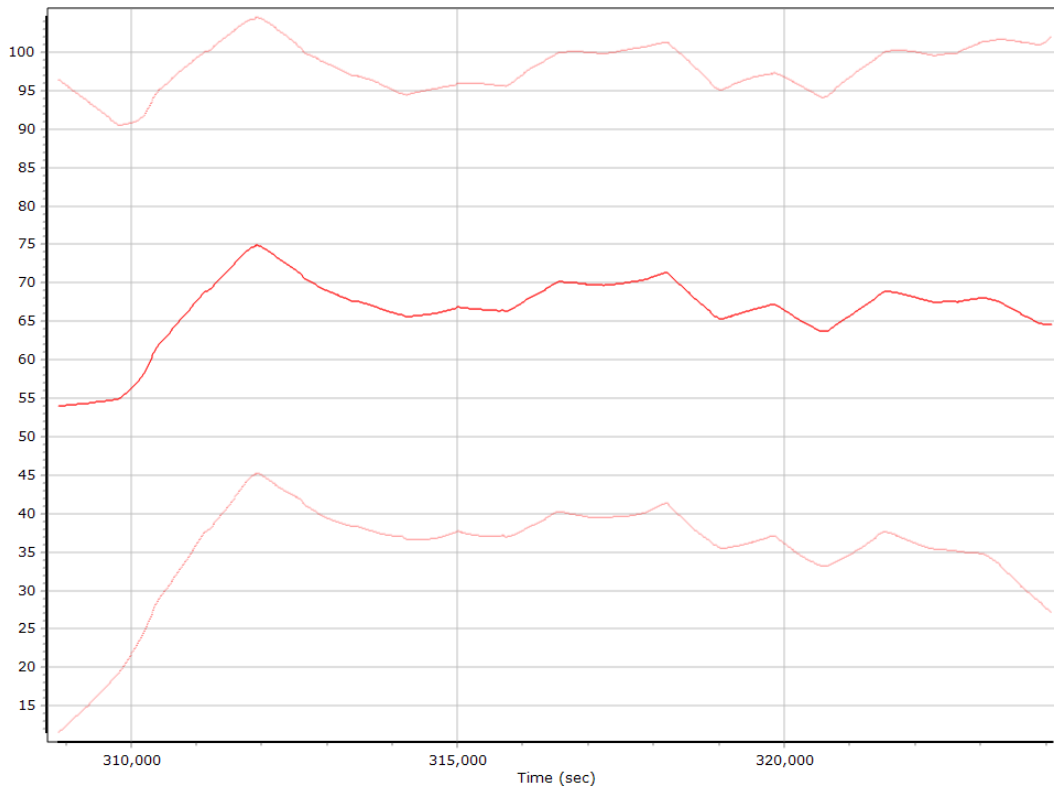
Z Gyro Bias (deg/h)



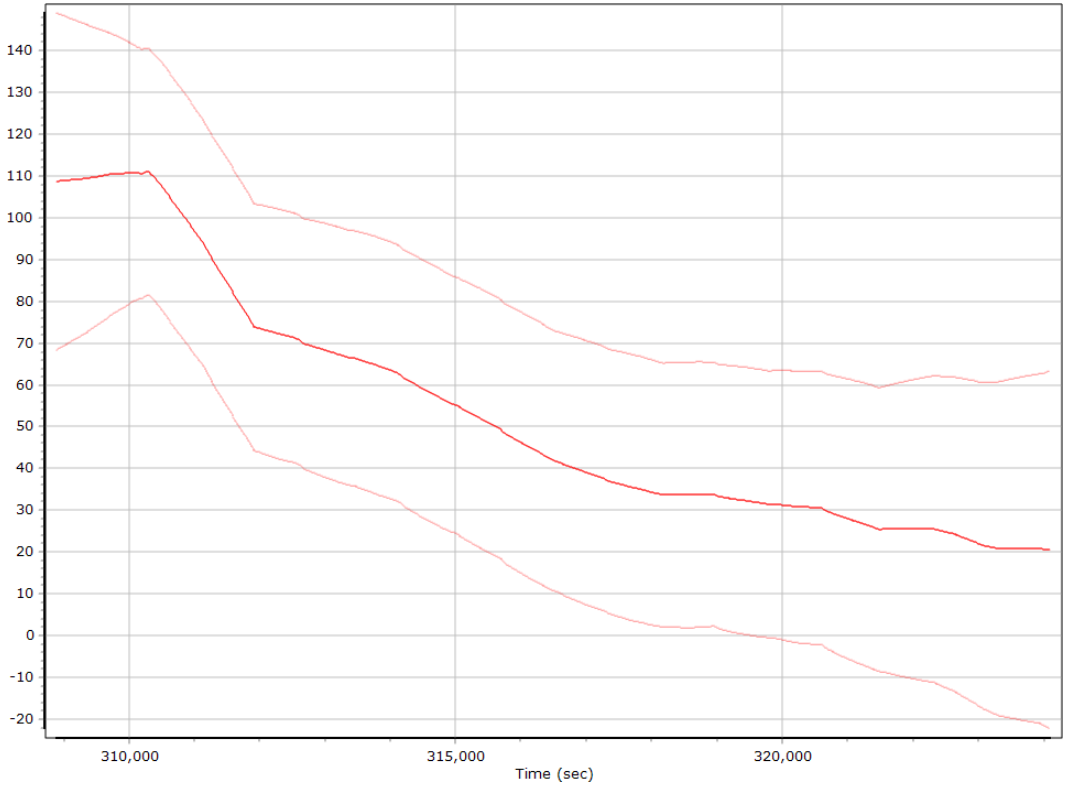
Gyro Scale Error (ppm)



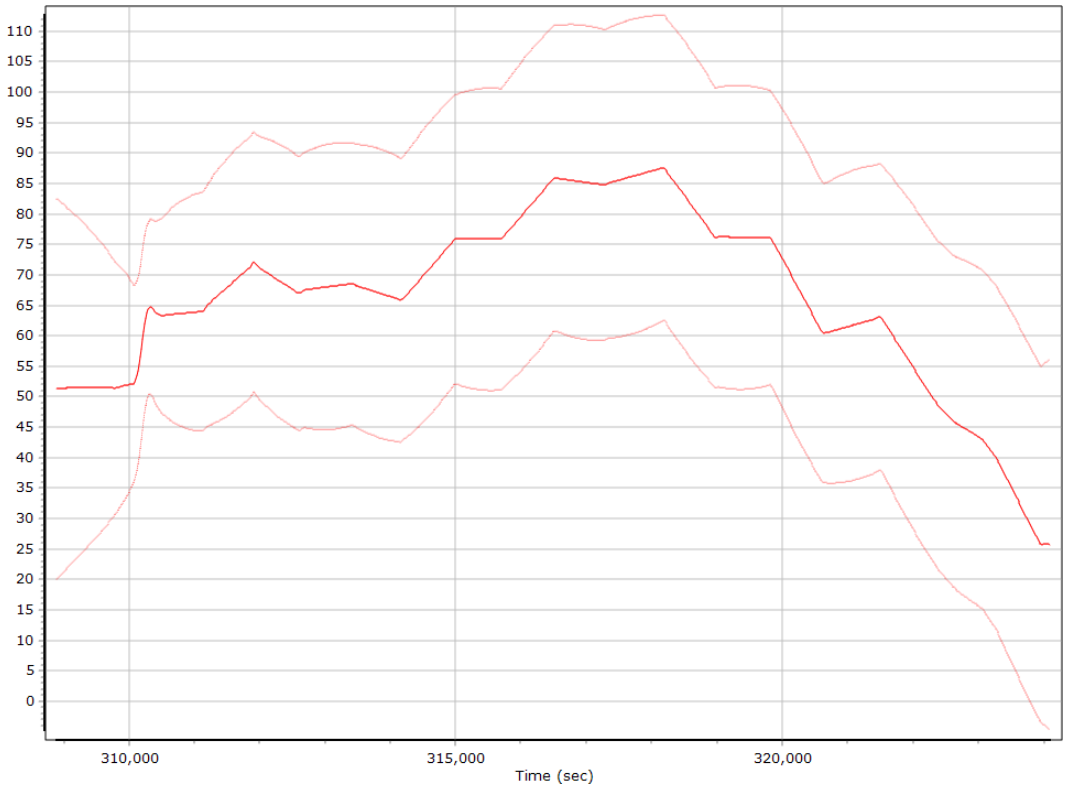
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

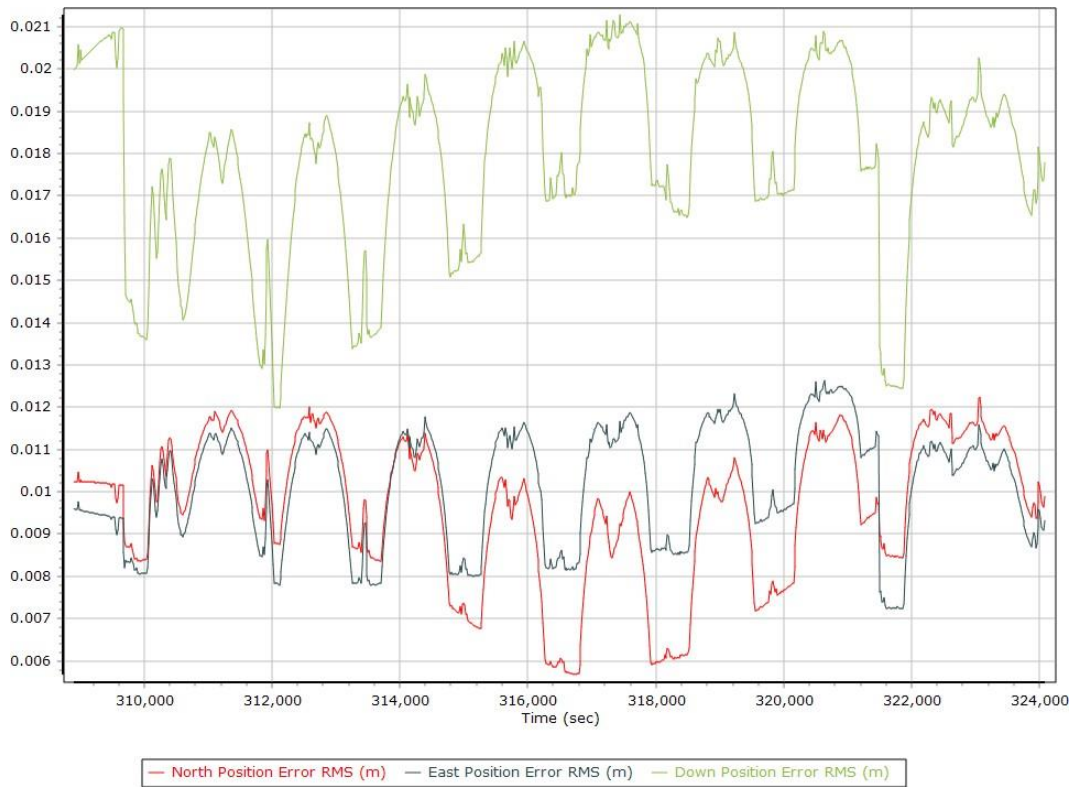


Z Gyro Scale Error (ppm)

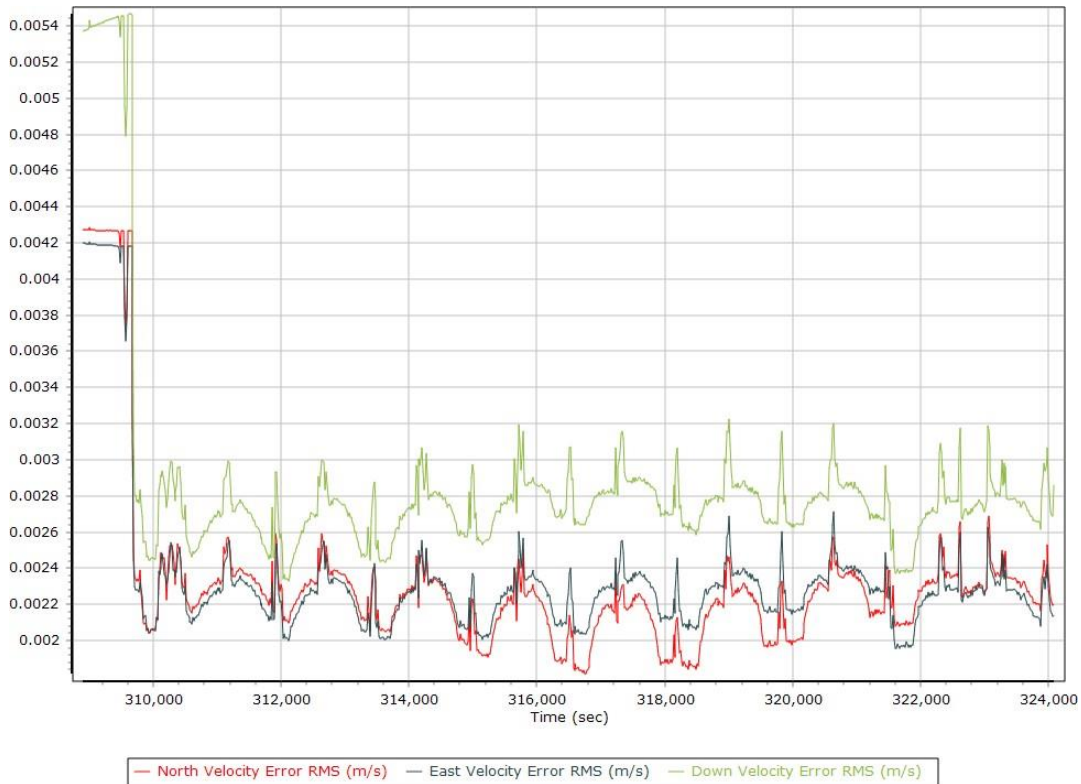


Smoothed Performance Metrics

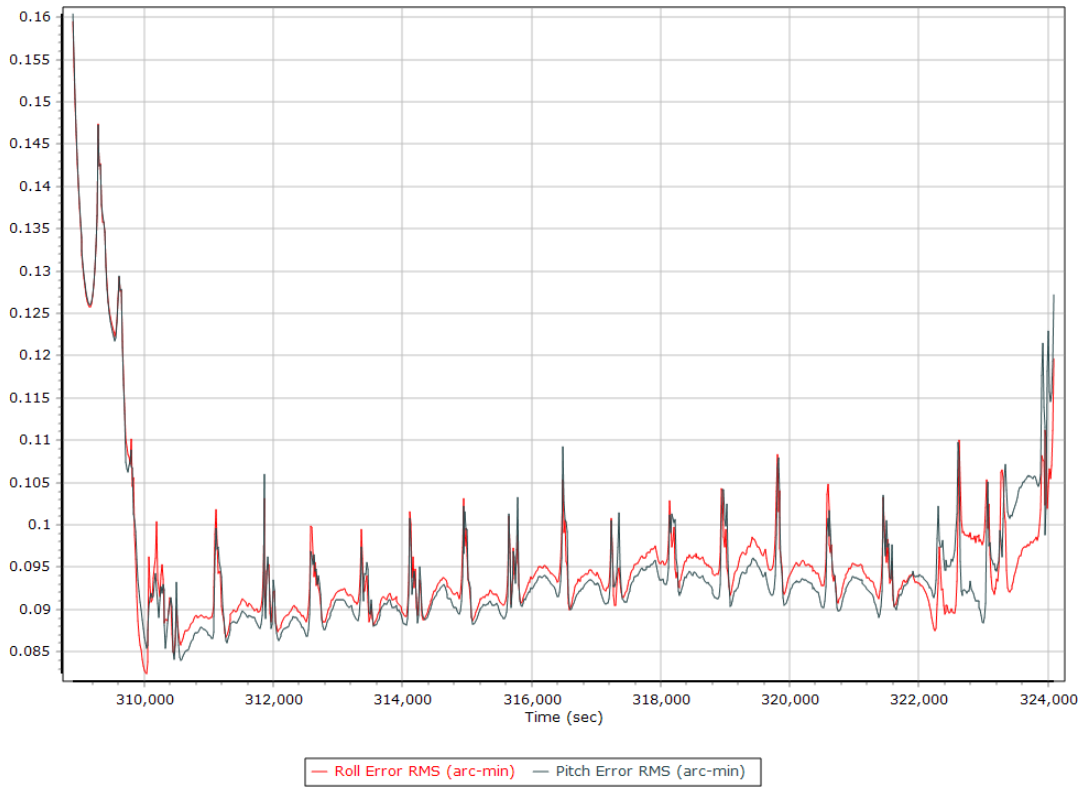
Position Error RMS (m)



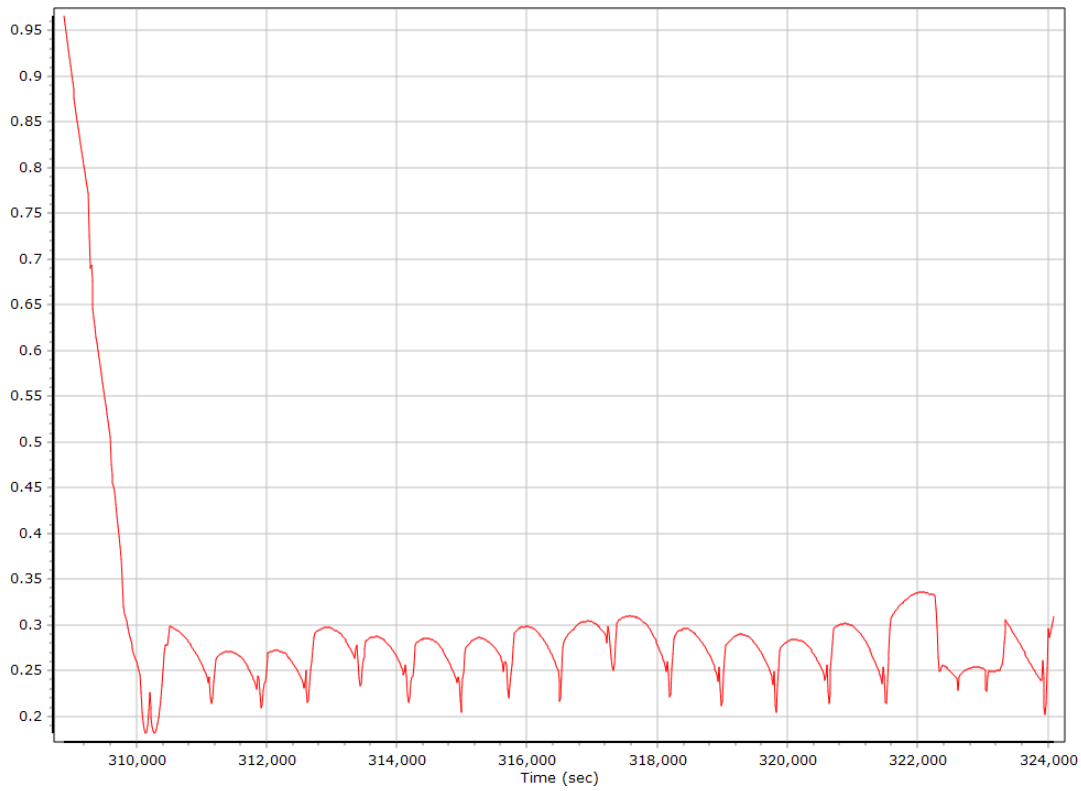
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

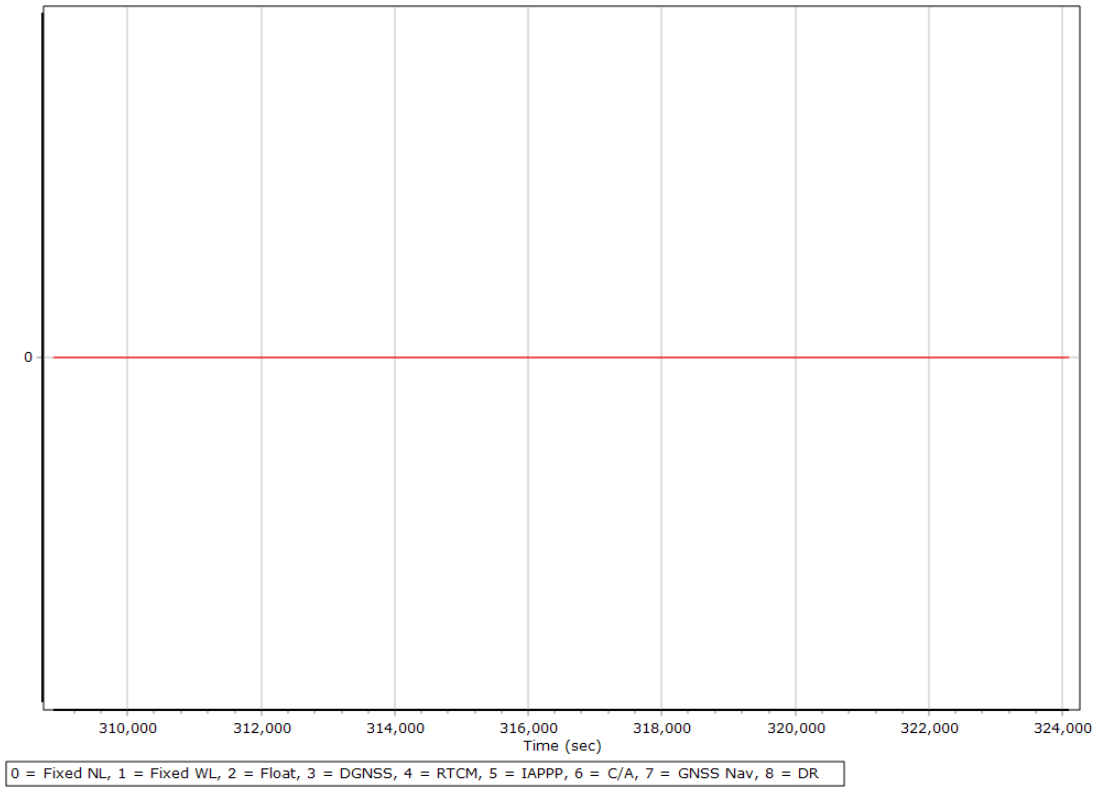


Heading Error RMS (arc-min)

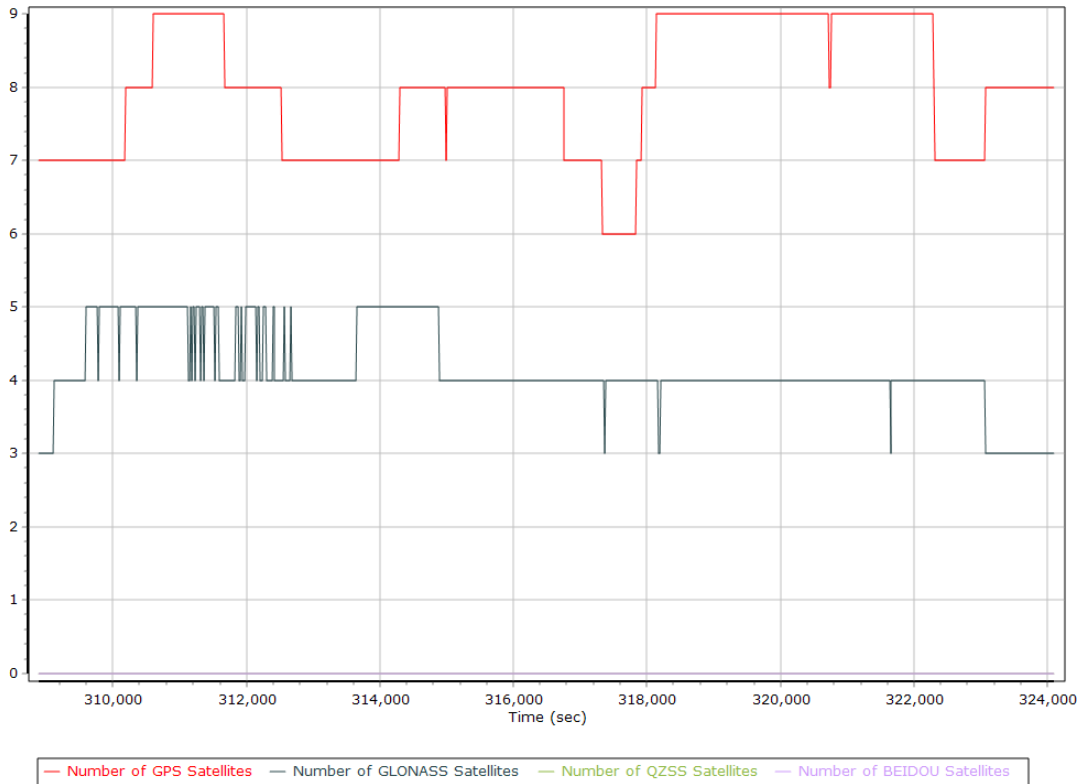


Smoothed Solution Status

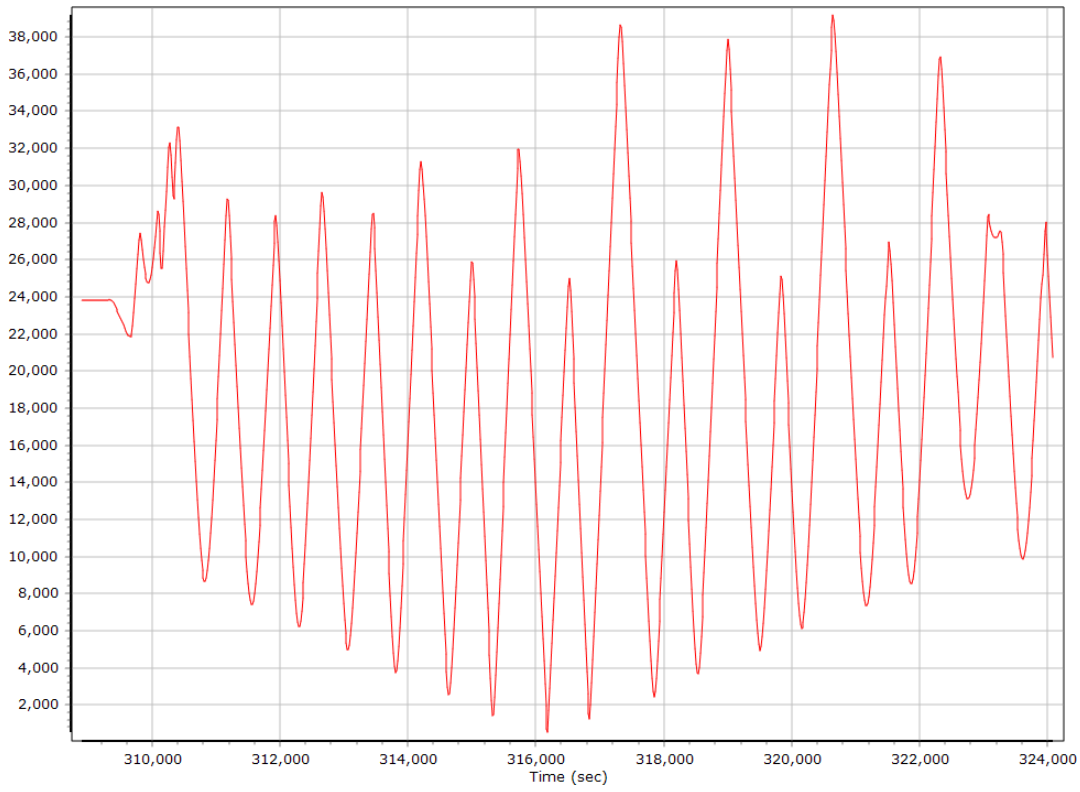
Processing Mode



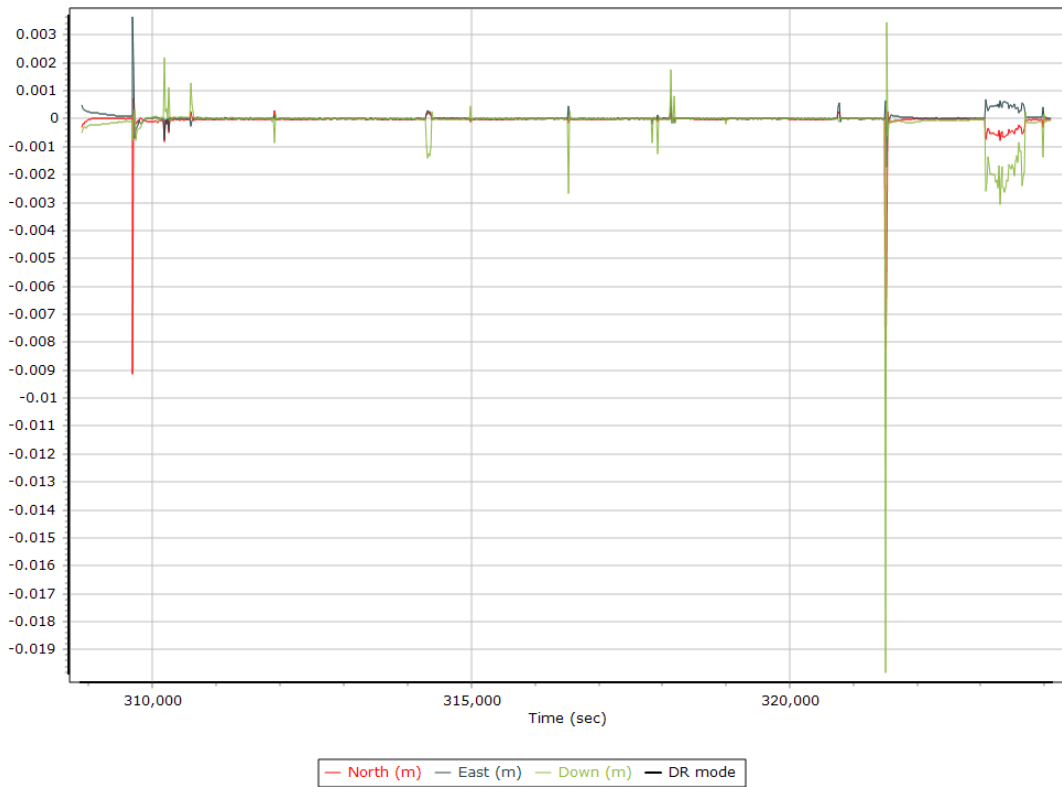
Number of Satellites



Baseline Length



SBET IAKAR Separation



General Information

Mission Information

Project name	6219352B
Processing date	2019-12-20 21:15:03
Mission date	2019-12-18 19:10:38
Mission duration	03:54:28.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N8708
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
ALS.000	POS Data
ALS.001	POS Data
ALS.002	POS Data
ALS.003	POS Data
ALS.004	POS Data
ALS.005	POS Data
ALS.006	POS Data
ALS.007	POS Data
ALS.008	POS Data
ALS.009	POS Data
ALS.010	POS Data
ALS.011	POS Data
ALS.012	POS Data
ALS.013	POS Data
ALS.014	POS Data
ALS.015	POS Data
ALS.016	POS Data
ALS.017	POS Data
ALS.018	POS Data
ALS.019	POS Data
ALS.020	POS Data
ALS.021	POS Data
ALS.022	POS Data
ALS.023	POS Data
ALS.024	POS Data
ALS.025	POS Data
ALS.026	POS Data
ALS.027	POS Data
ALS.028	POS Data
ALS.029	POS Data
ALS.030	POS Data

Input Files

File Name	File type
Ephm3520.19g	GLONASS Broadcast Ephemeris
Ephm3520.19n	GPS Broadcast Ephemeris
flcb3520.19o	GNSS SingleBase
fljl3520.19o	GNSS SingleBase
flmd3520.19o	GNSS SingleBase
flmr3520.19o	GNSS SingleBase
gatv3520.19o	GNSS SingleBase
prry3520.19o	GNSS SingleBase
sned3520.19o	GNSS SingleBase
talh3520.19o	GNSS SingleBase
xcty3520.19o	GNSS SingleBase
esr20843.sp3	GPS, GLONASS Precise Ephemeris

Output Files

Filename	File type
sbet_6219352B.out	SBET Trajectory File

Rover Data Summary

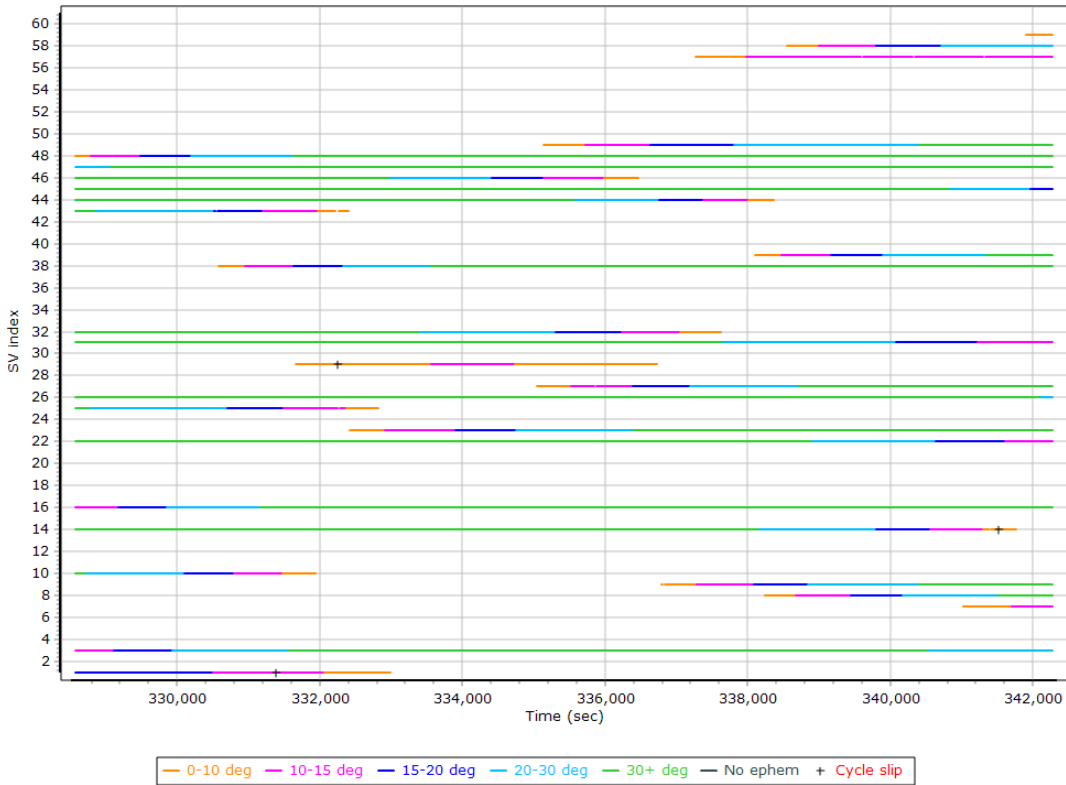
First raw data file	ALS.000		
Last raw data file	ALS.030		
Start GPS week	2084		
Start time	328219.429 (12/18/2019 19:10:19)		
End time	342288.951 (12/18/2019 23:04:48)		
Start of fine alignment	328511.201 (12/18/2019 19:15:11)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.046	-0.192	-1.285
Gimbal 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

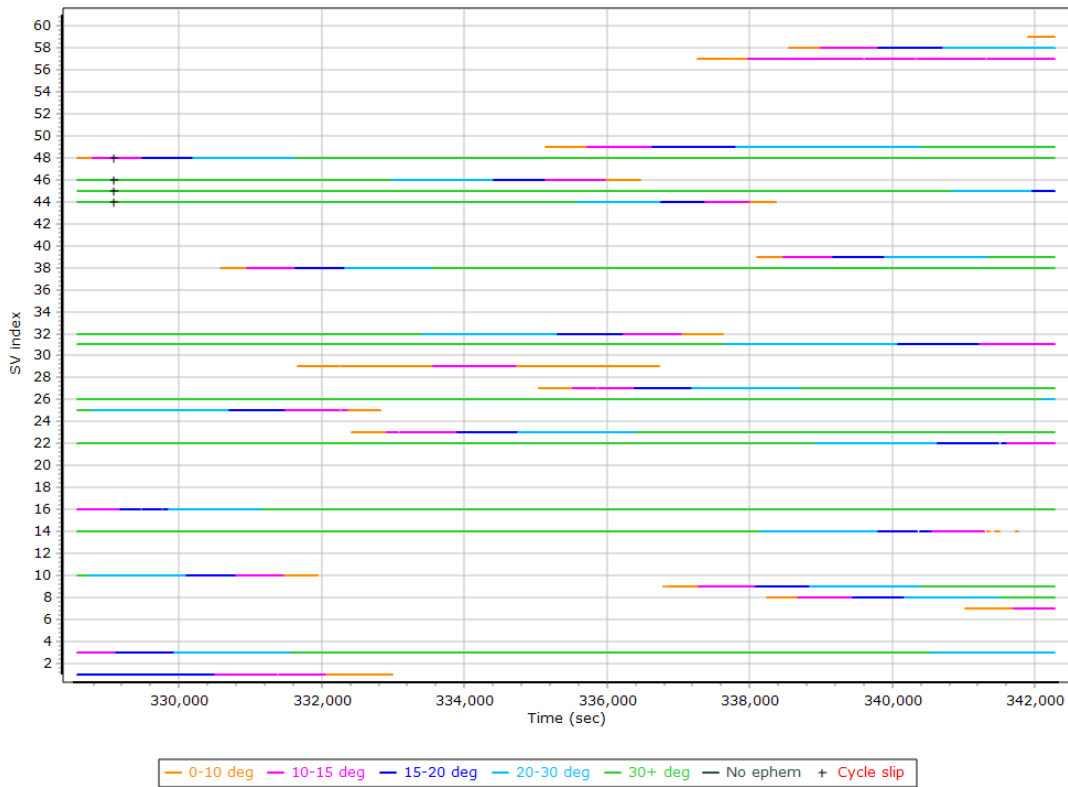
Raw IMU Import QC Summary

IMU data input file	imu_6219352B.dat
IMU data check log file	imudt_6219352B.log
IMU Records Processed	2813309
Termination Status	Normal
IMU Anomalies	0

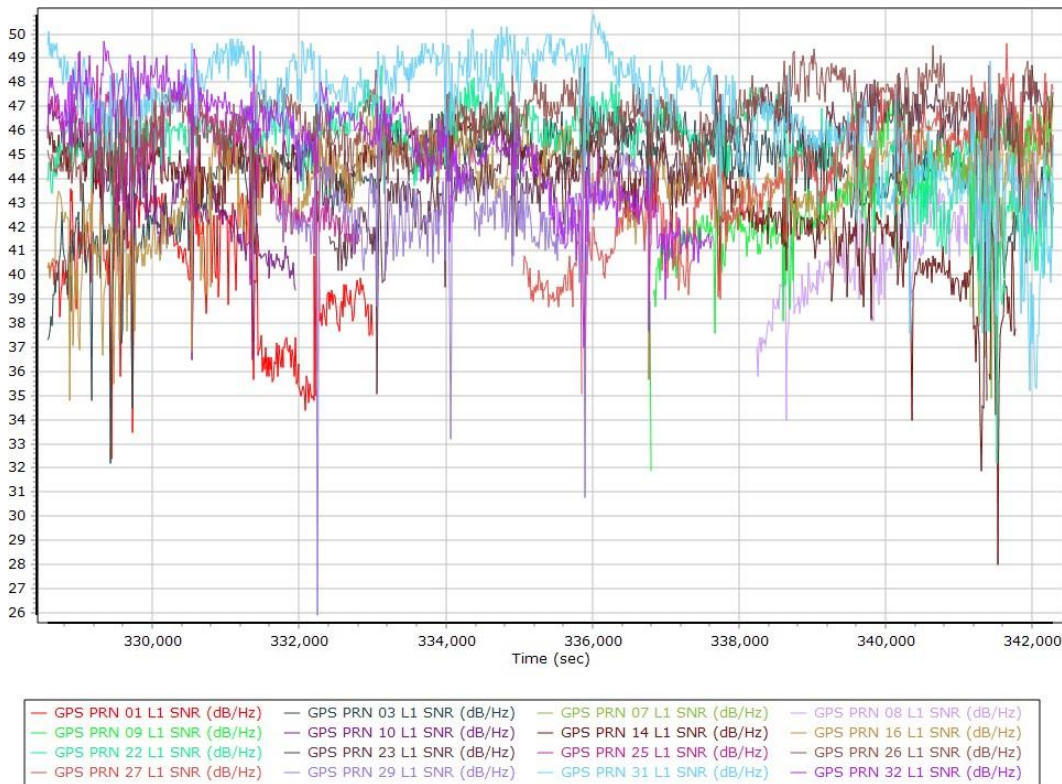
L1 Satellite Lock/Elevation



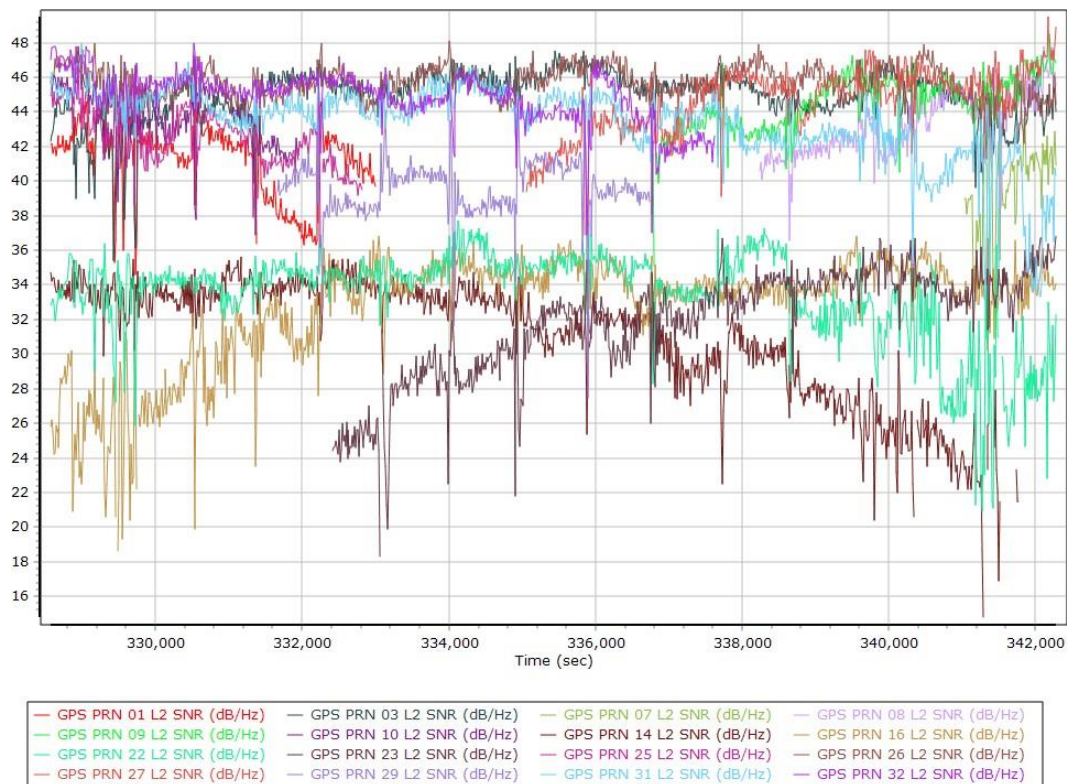
L2 Satellite Lock/Elevation



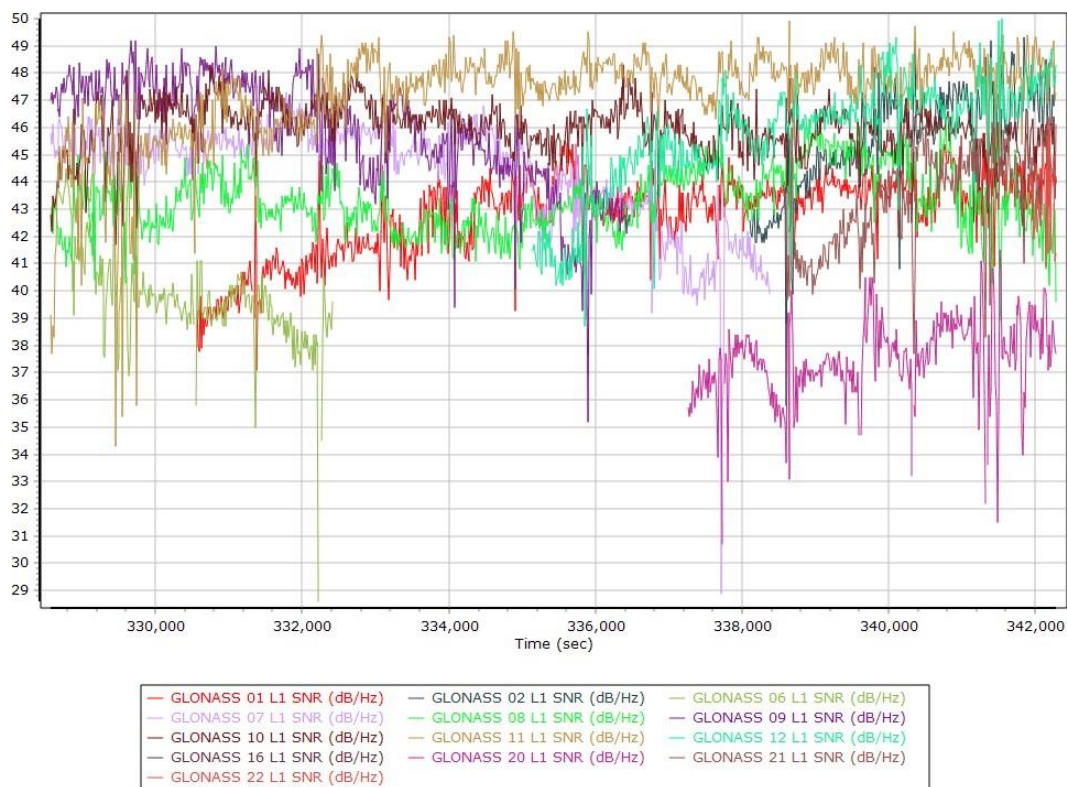
GPS L1 SNR



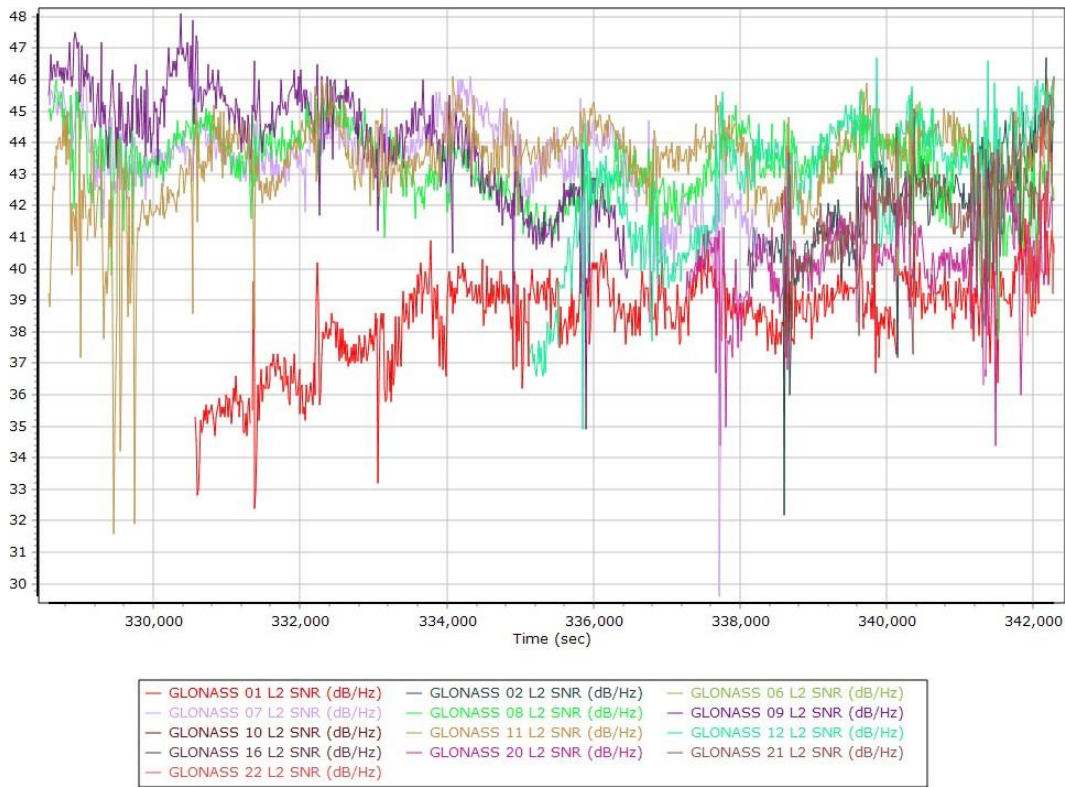
GPS L2 SNR



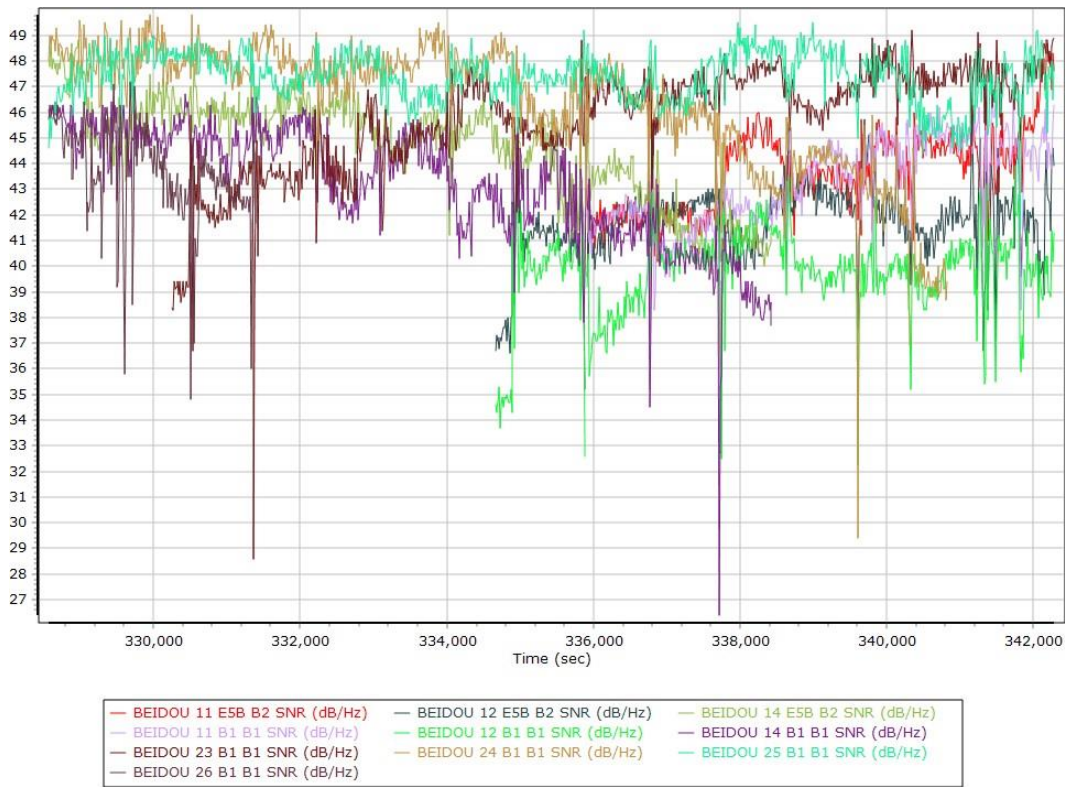
GLONASS L1 SNR



GLONASS L2 SNR

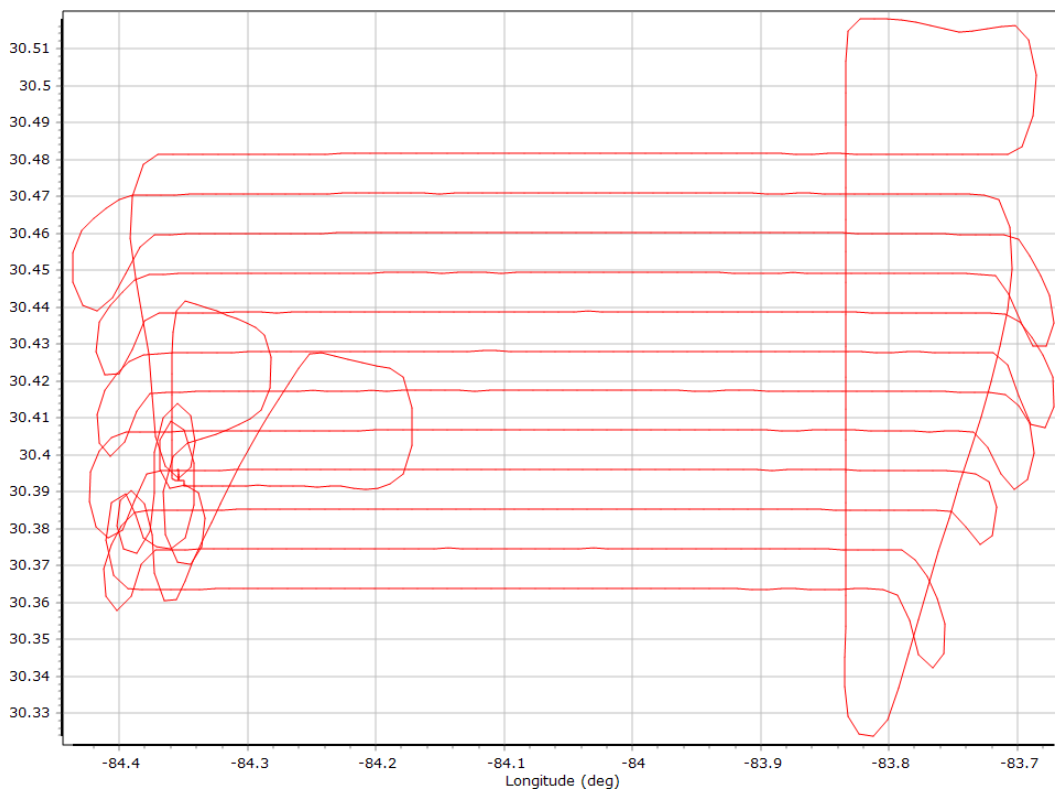


BEIDOU SNR

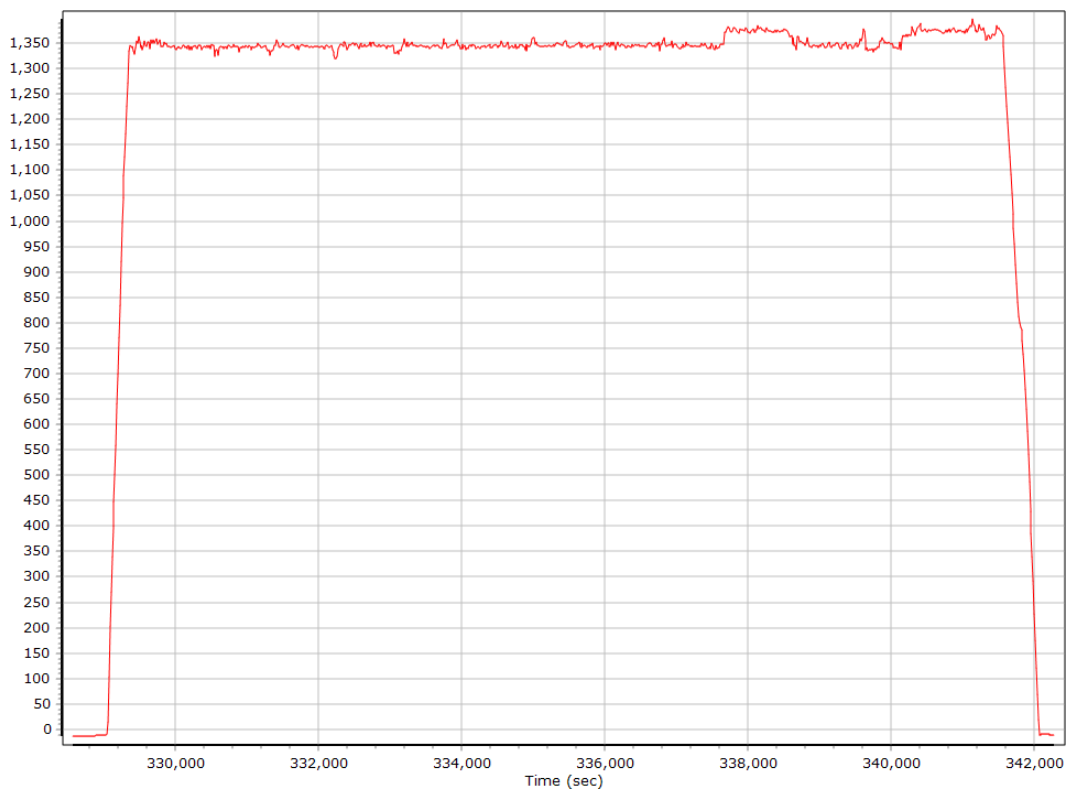


Trajectory Information

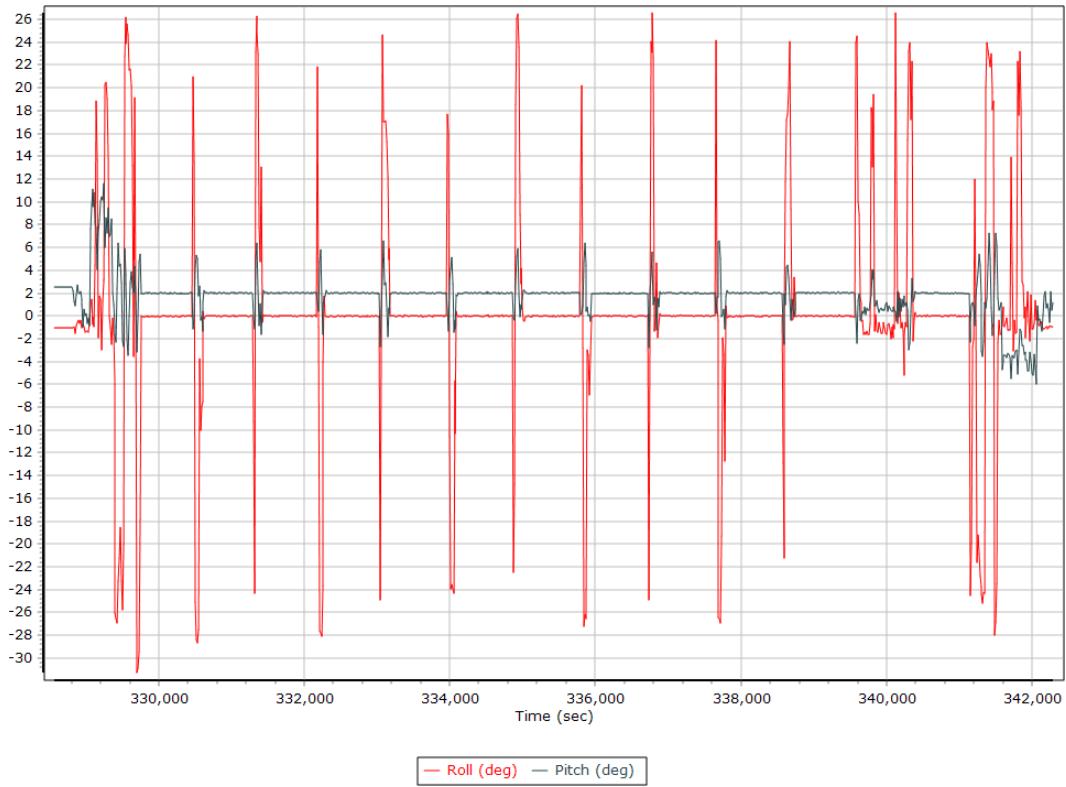
Top View



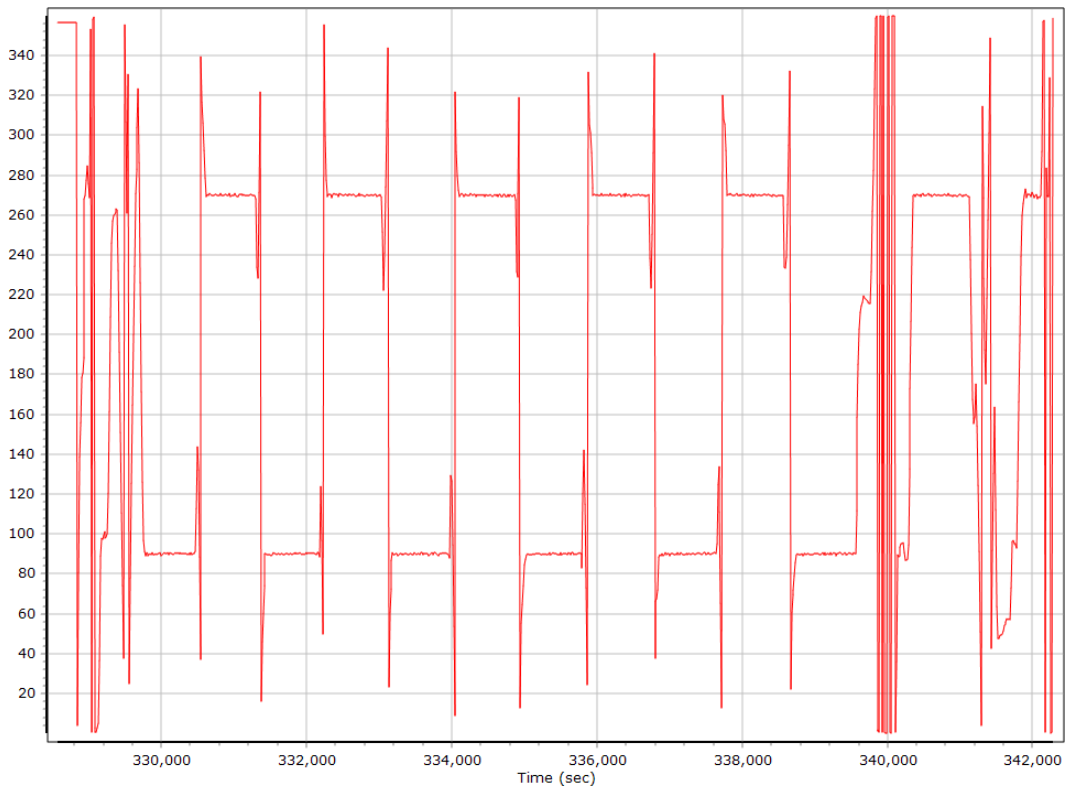
Altitude



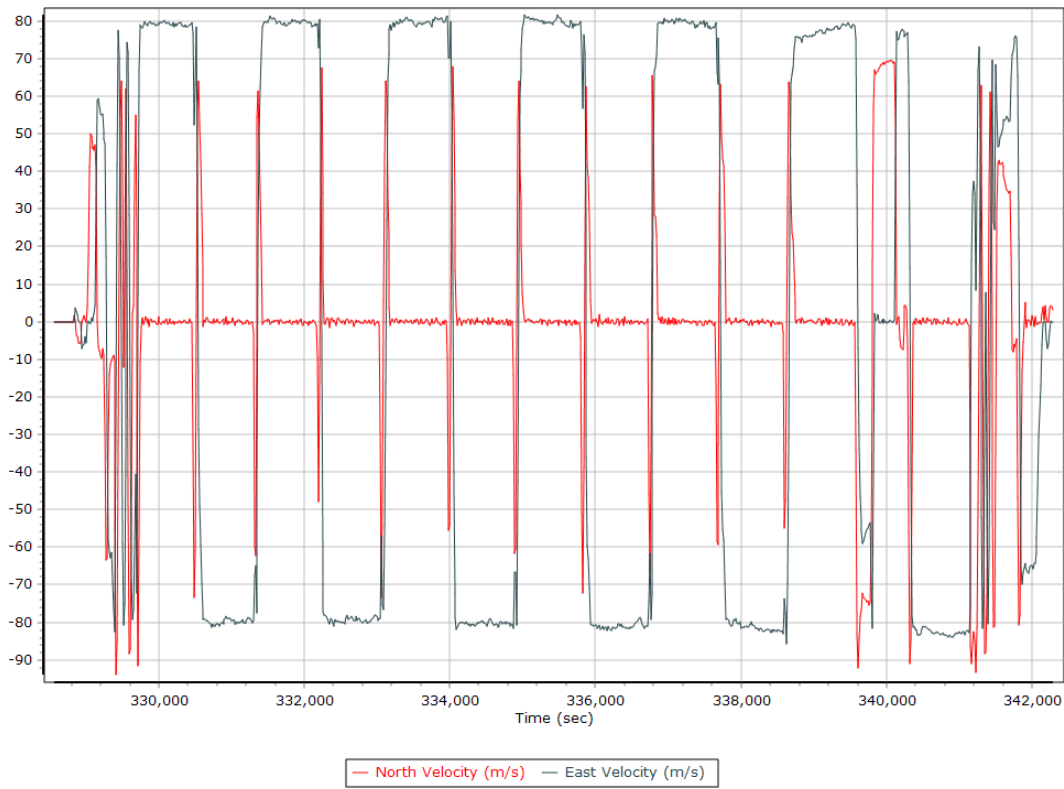
Roll/Pitch



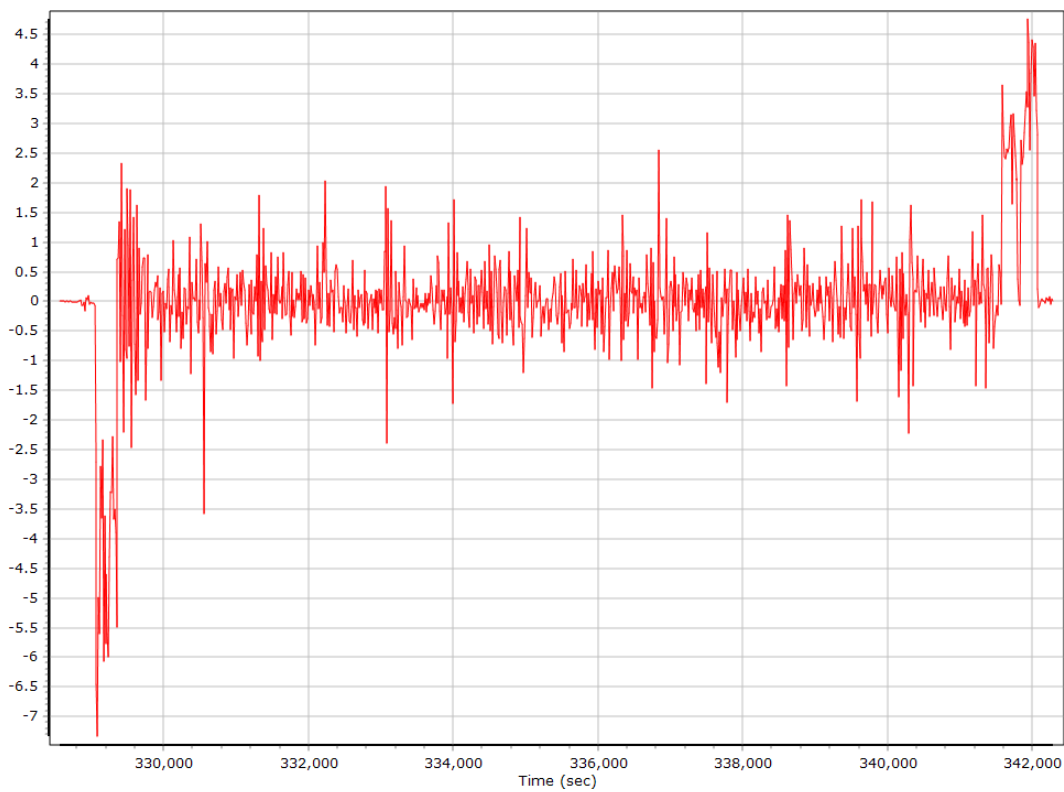
Heading



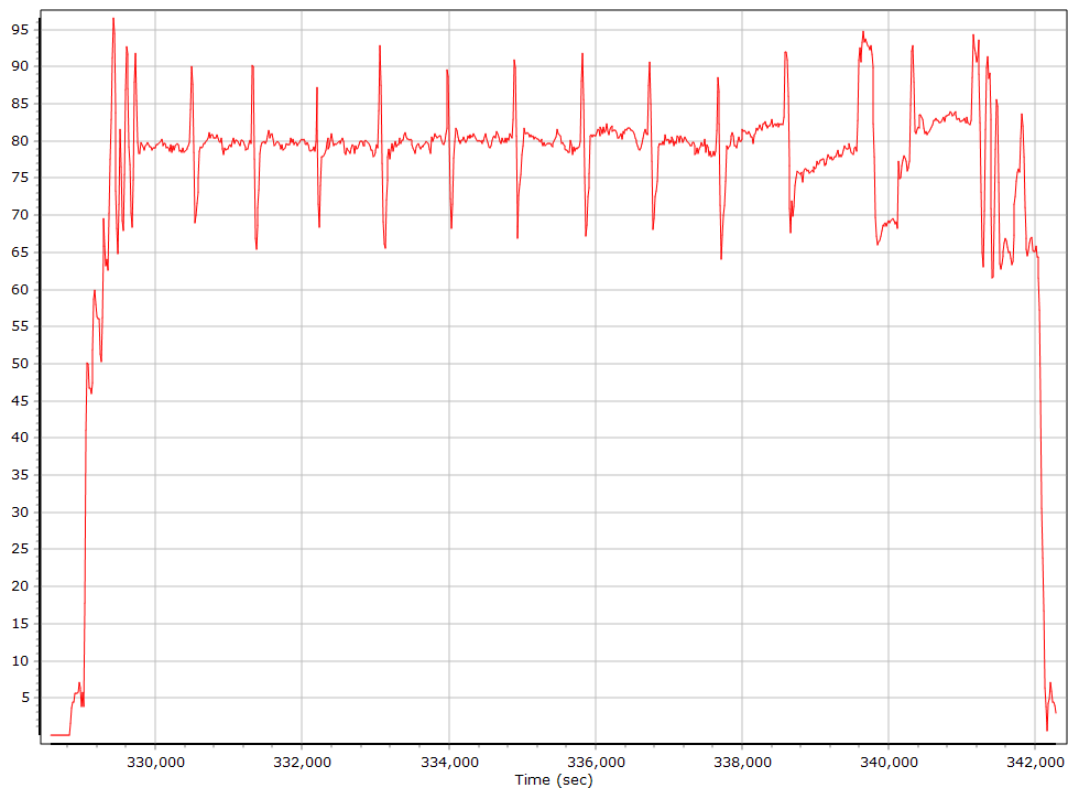
North/East Velocity



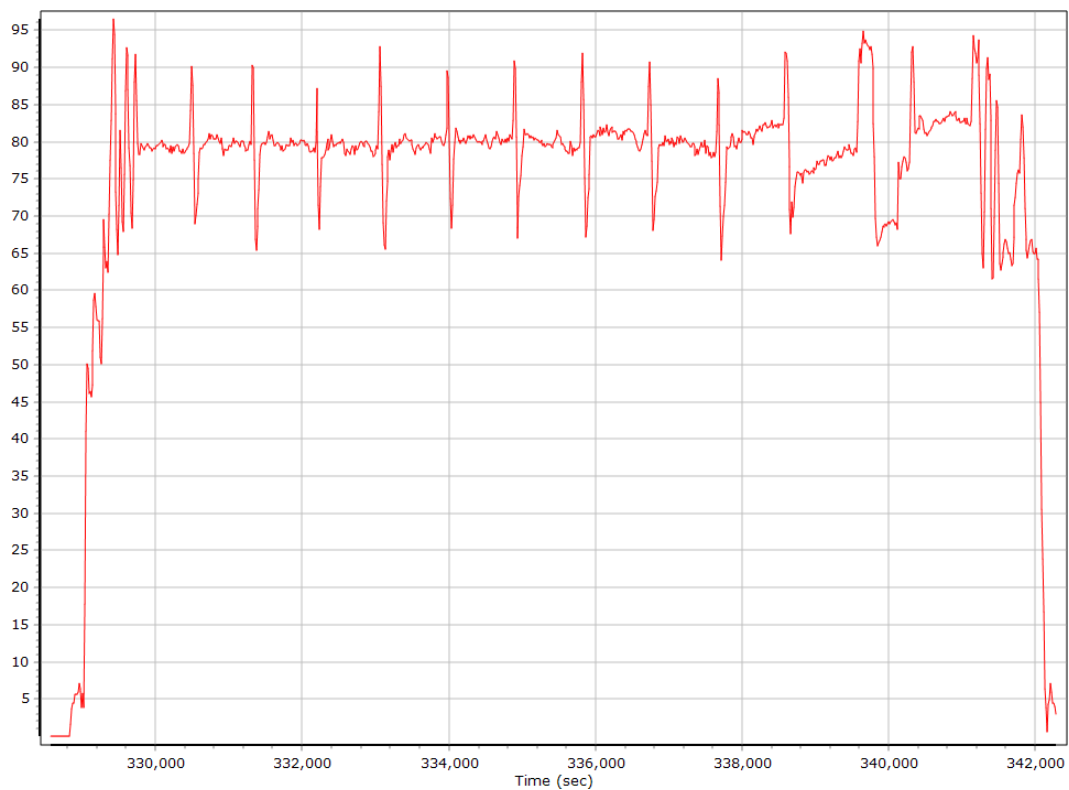
Down Velocity



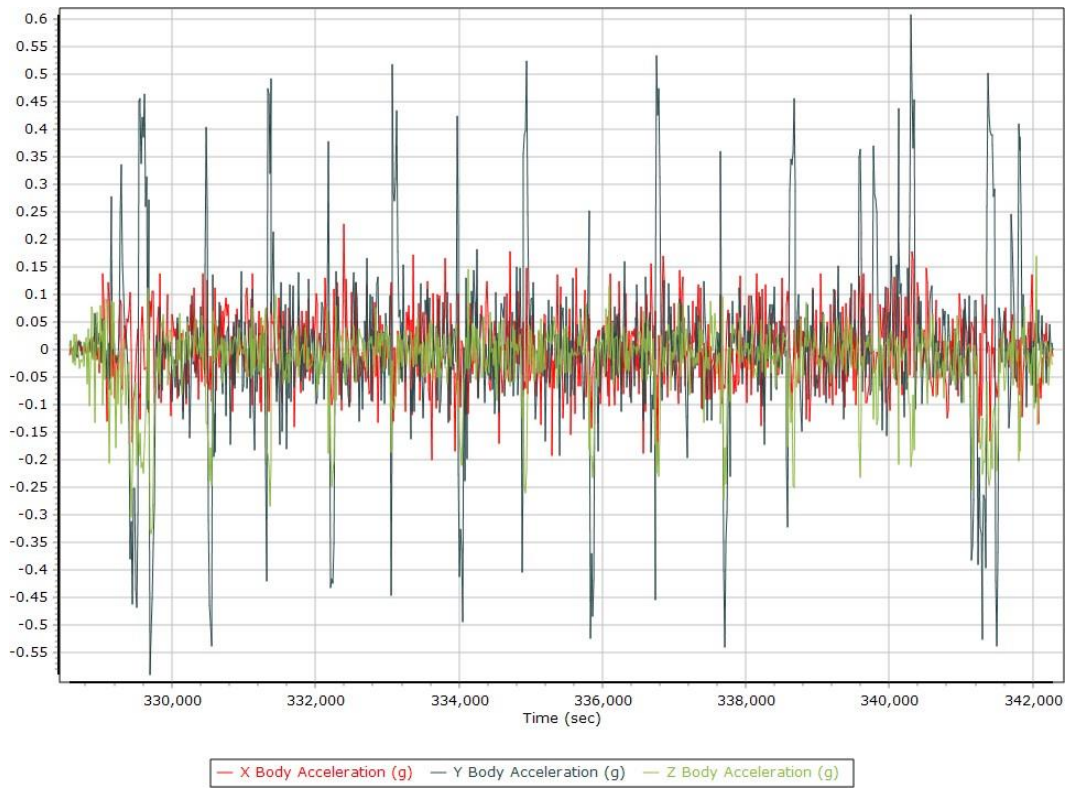
Total Speed



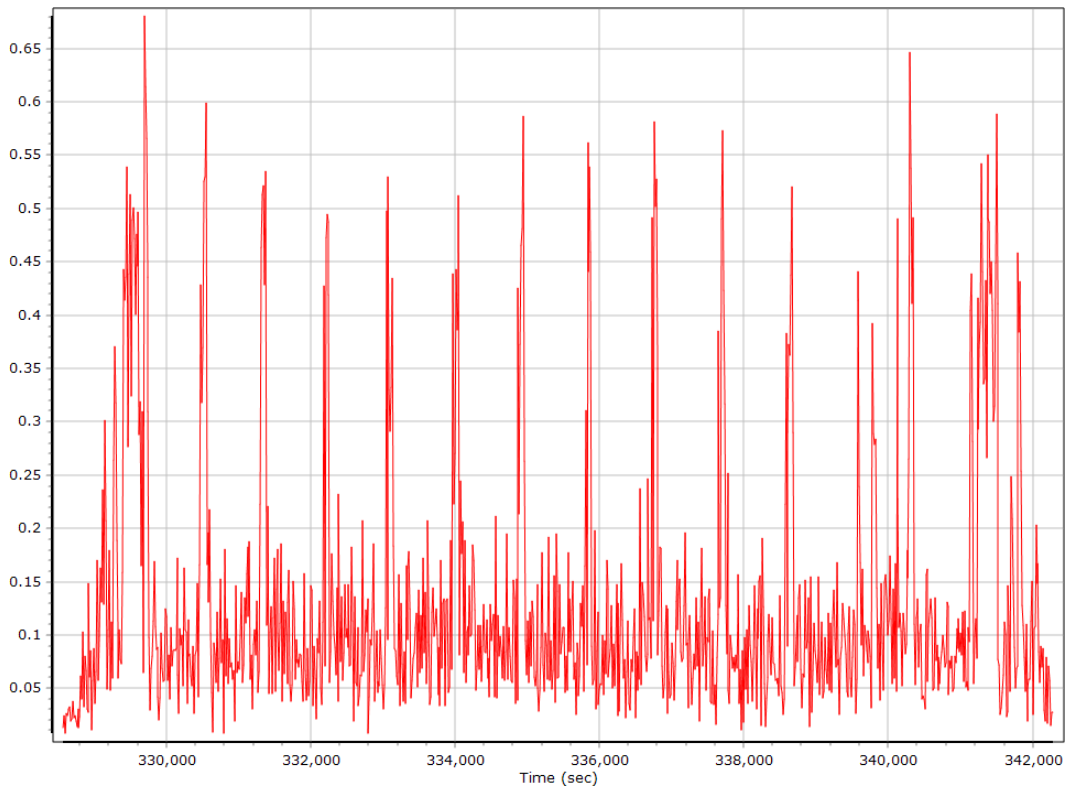
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate



SmartBase Processing Summary

Smart Select Options

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

Basestation Selection

Date	ID	Dist	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	

SmartBase Quality Check

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	0.19	40.82	
Number of GPS SV	7	10	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	8	16	14
PDOP	1.23	2.43	1.56
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	14049.00	0.00	3.00
Percentage	99.98	0.00	0.02

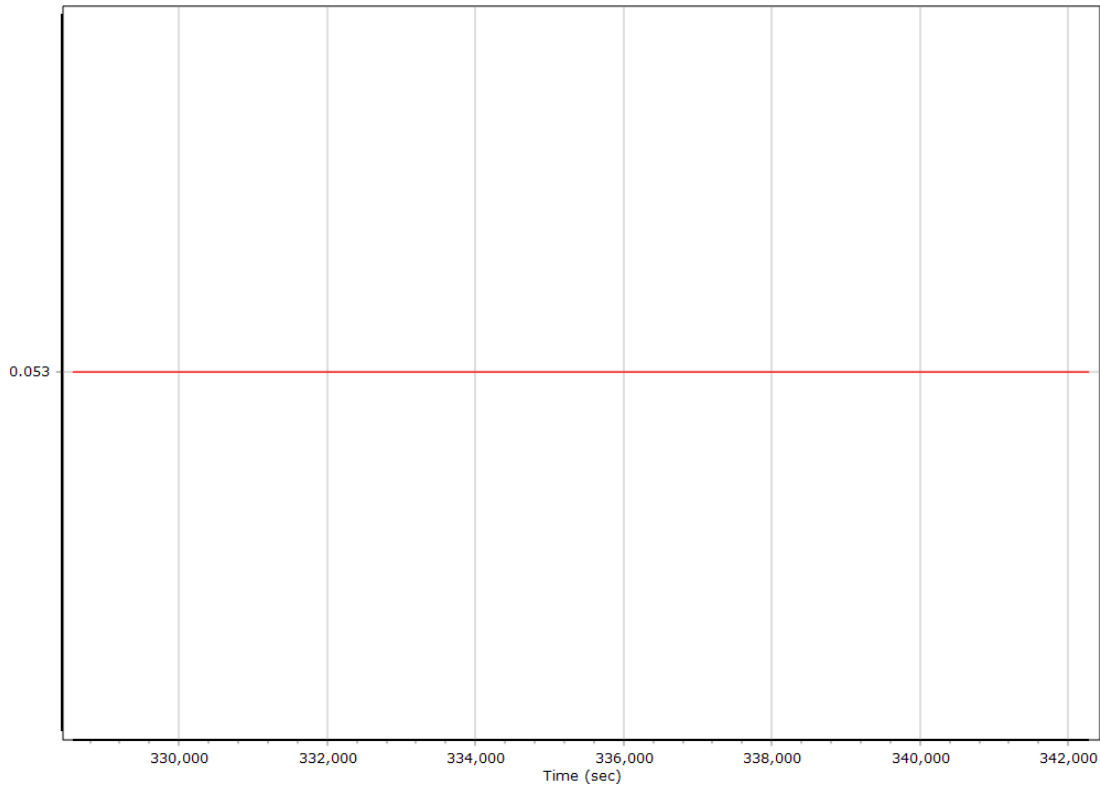
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	328220.000 (12/18/2019 19:10:20)		
Processing end time	342288.000 (12/18/2019 23:04:48)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.053	-0.199	-1.279
Gimbal to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

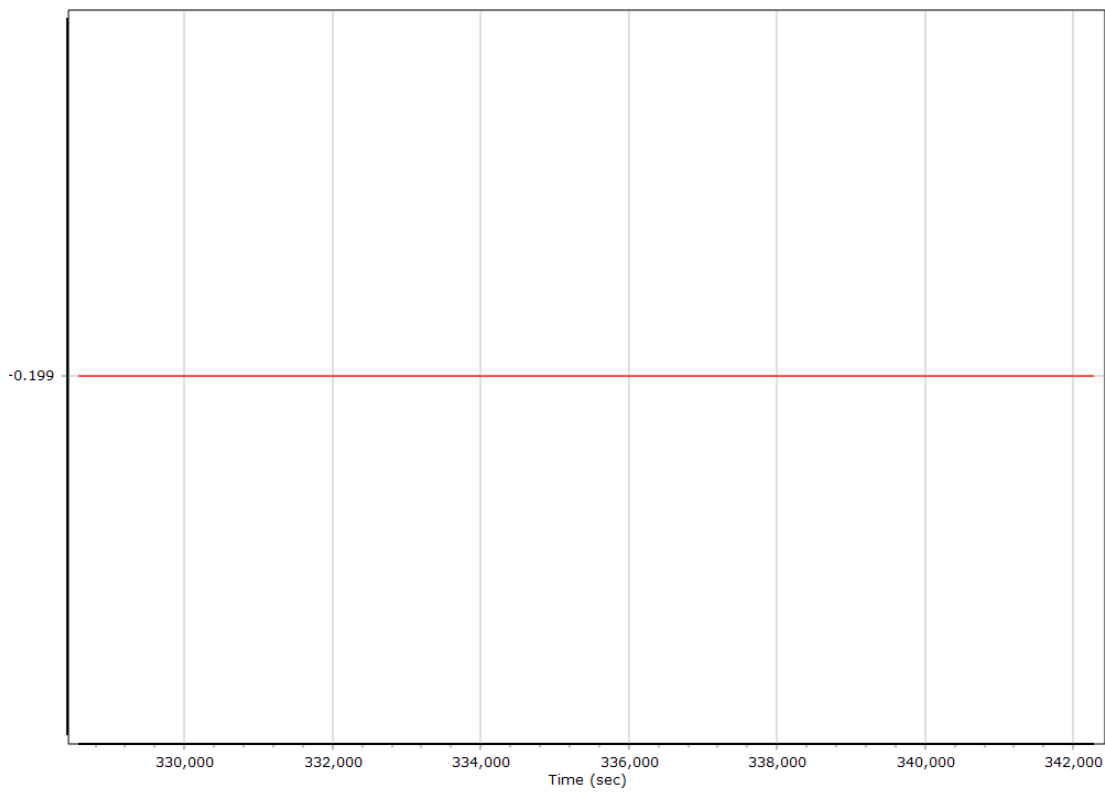
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

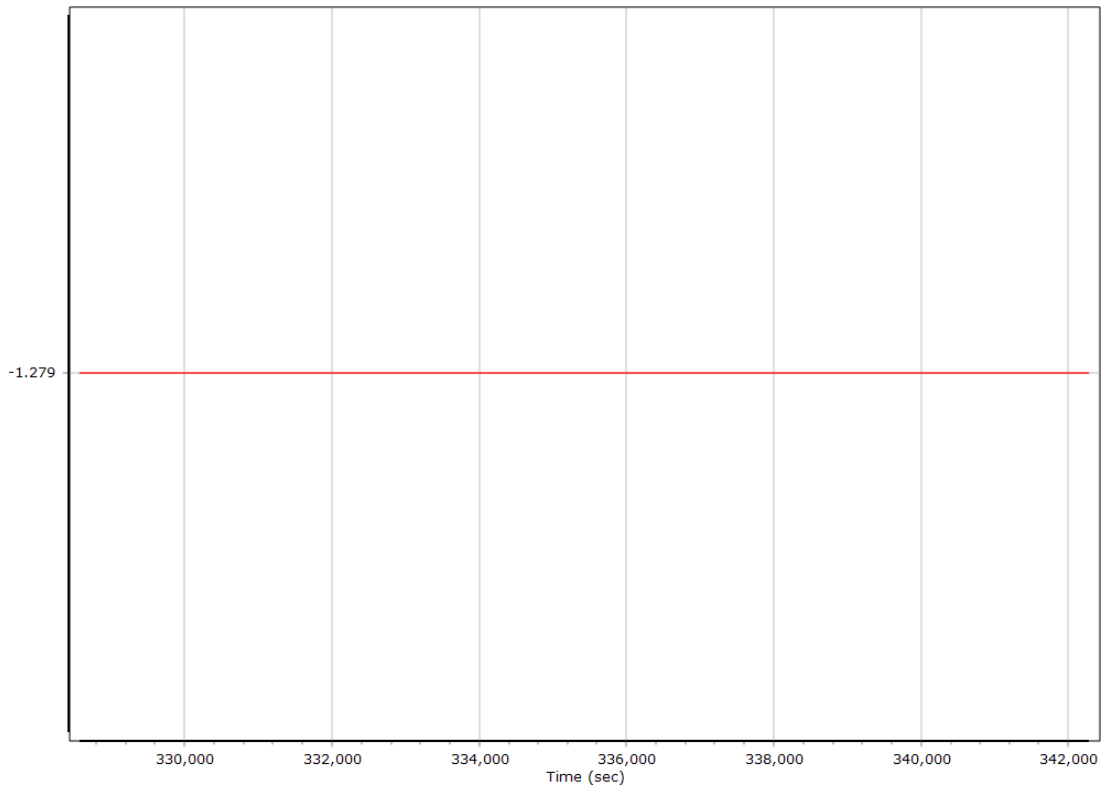
X Reference-Primary GNSS Lever Arm (m)



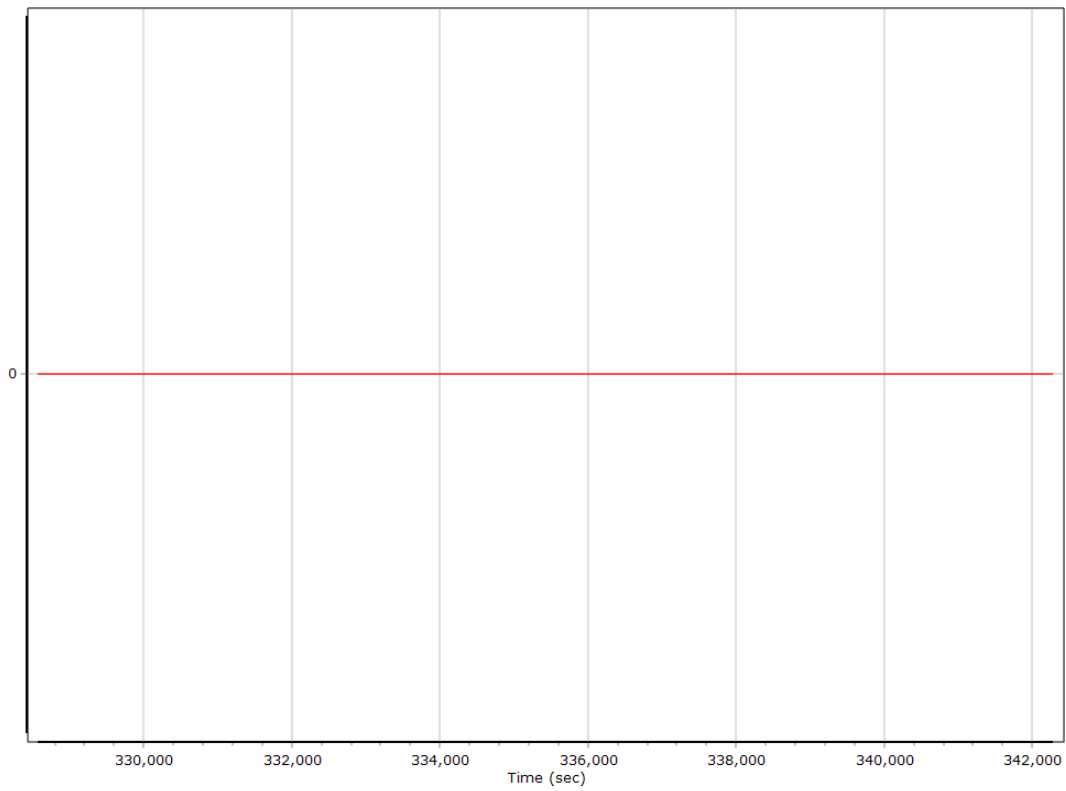
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



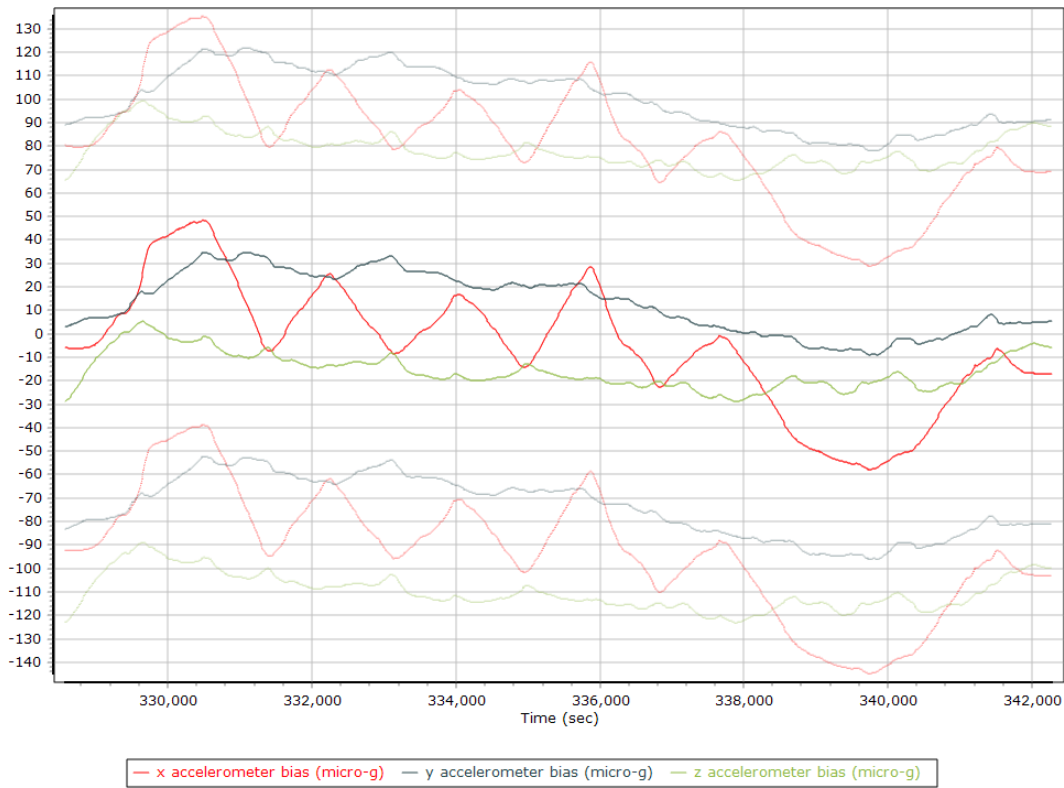
Reference-Primary GNSS Lever Arm Figure of Merit



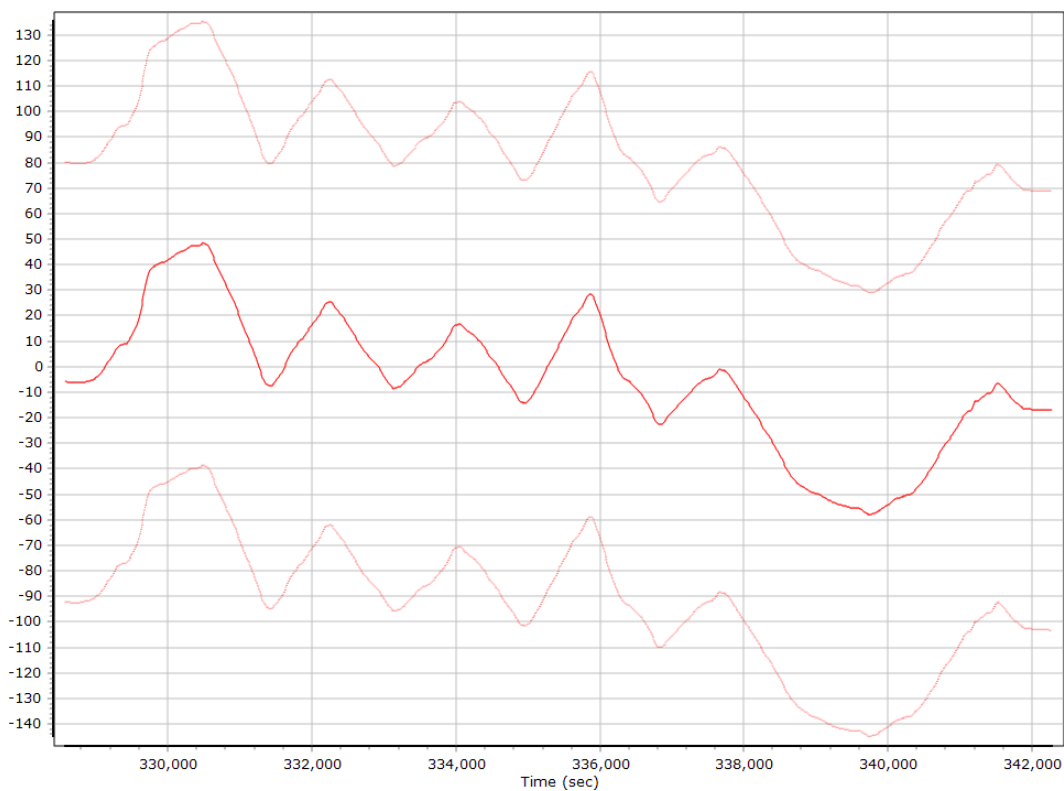
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

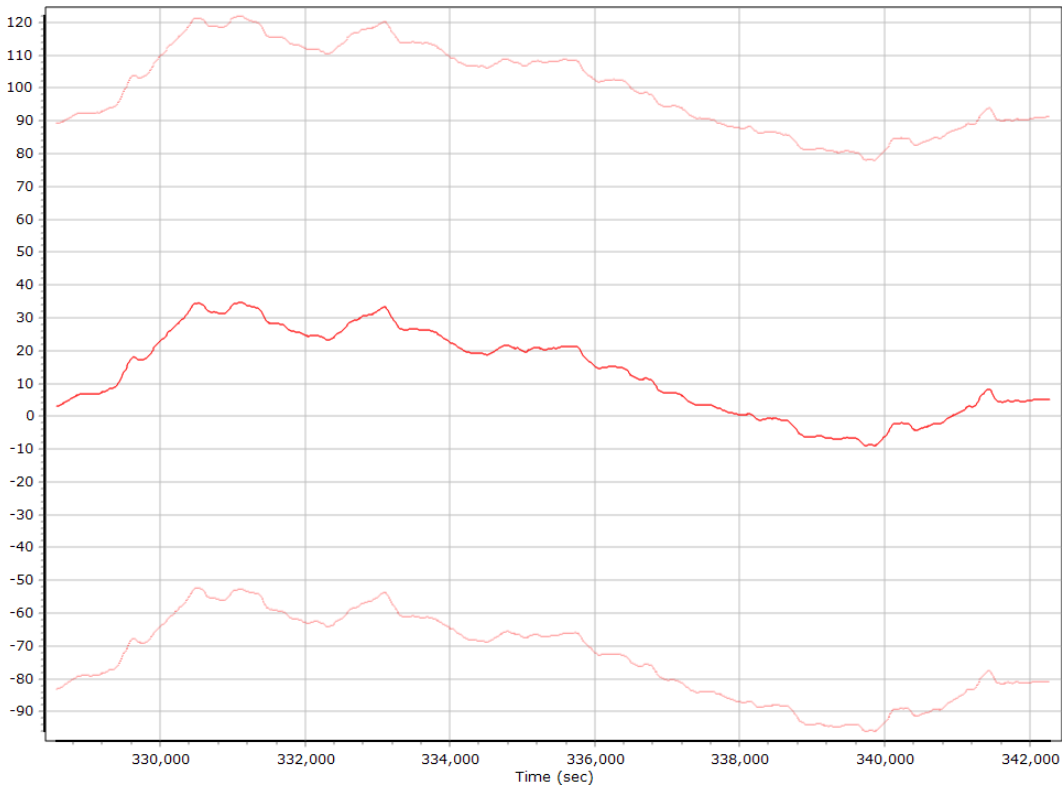
Accelerometer Bias (micro-g)



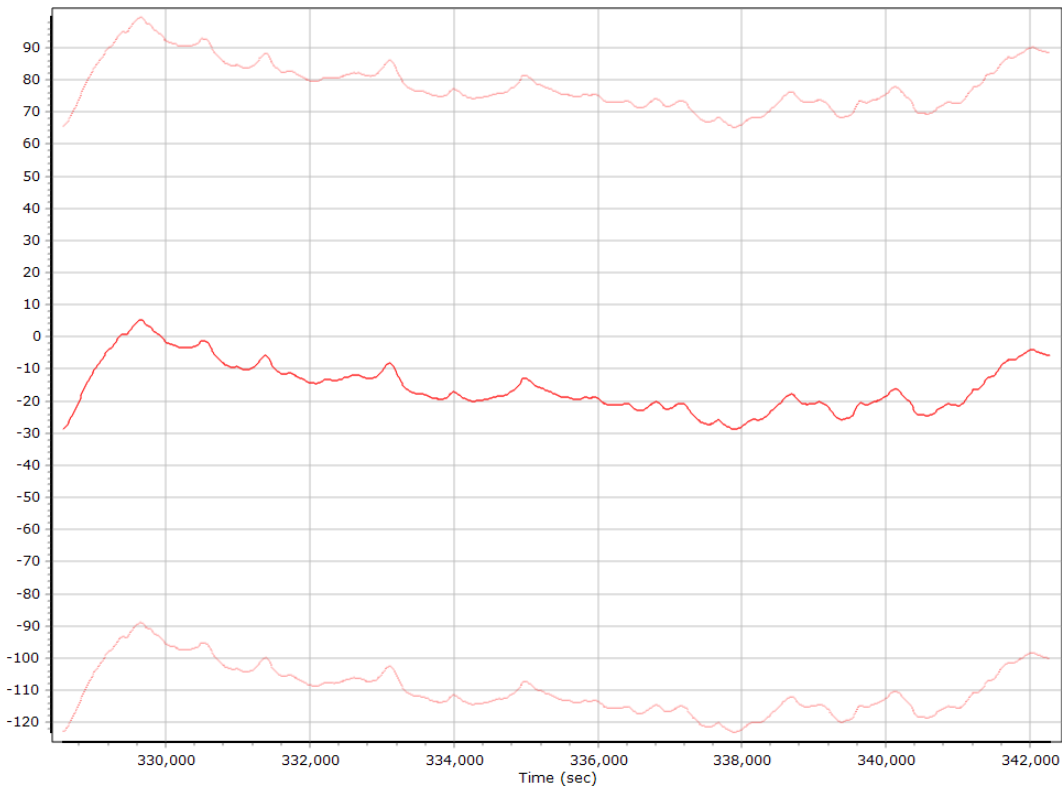
X Accelerometer Bias (micro-g)



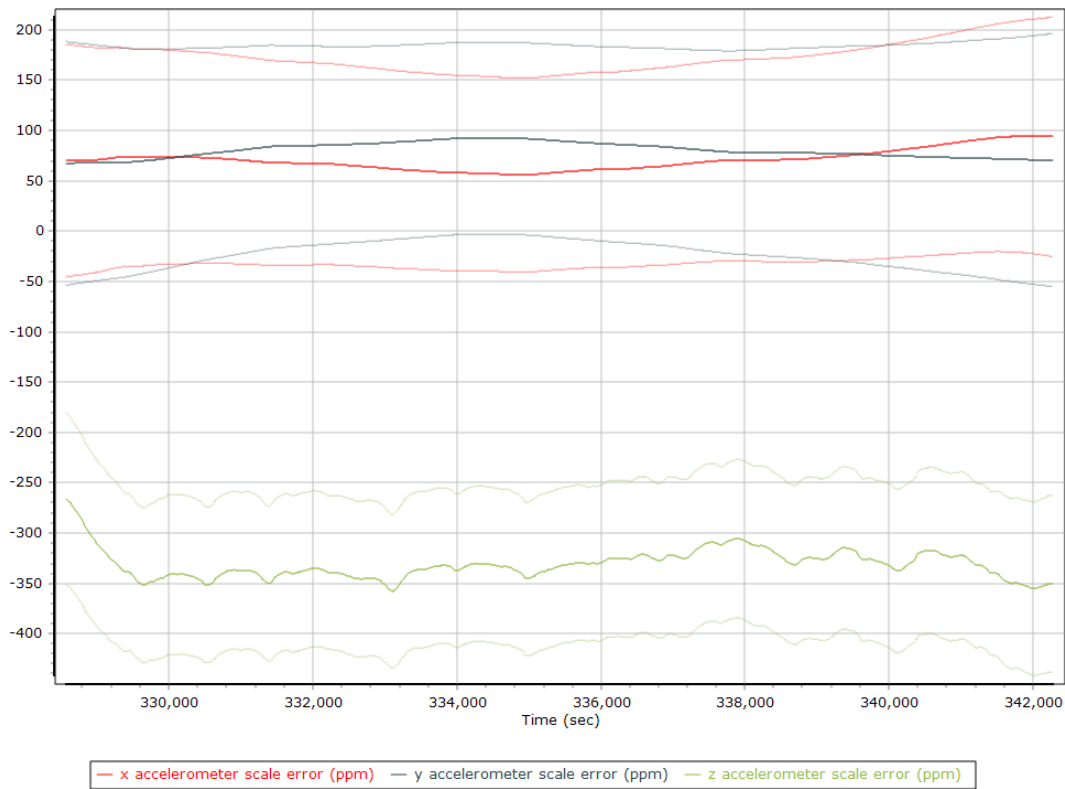
Y Accelerometer Bias (micro-g)



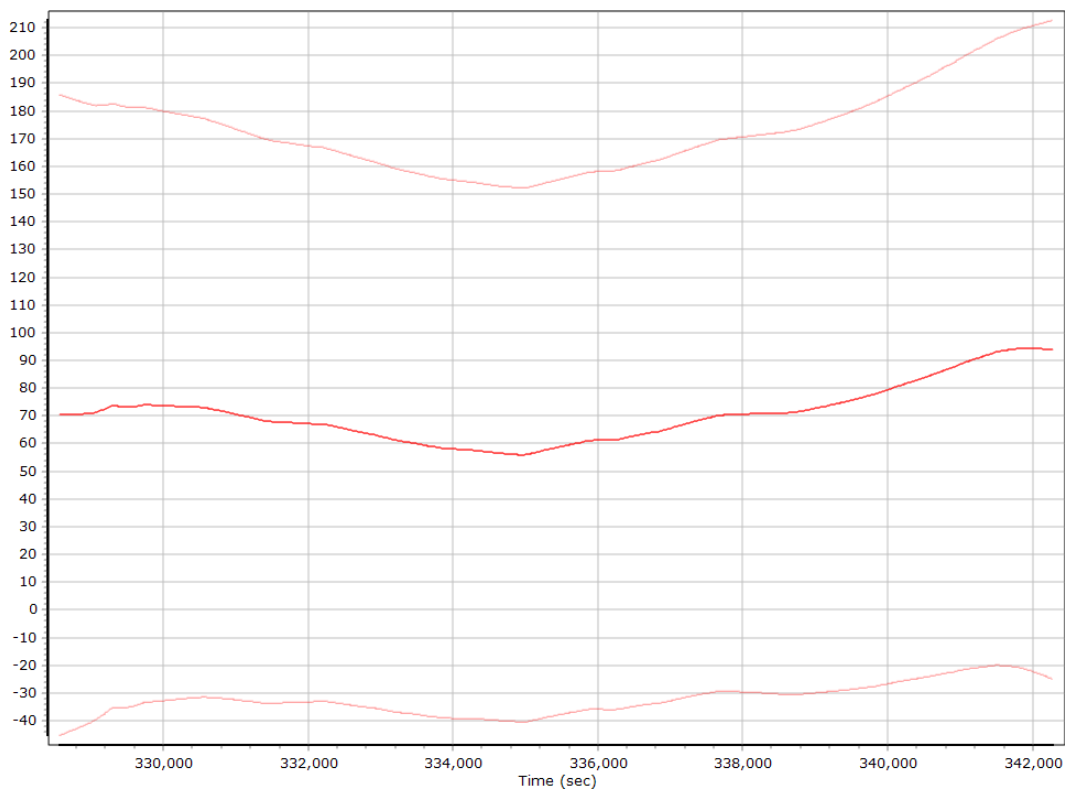
Z Accelerometer Bias (micro-g)



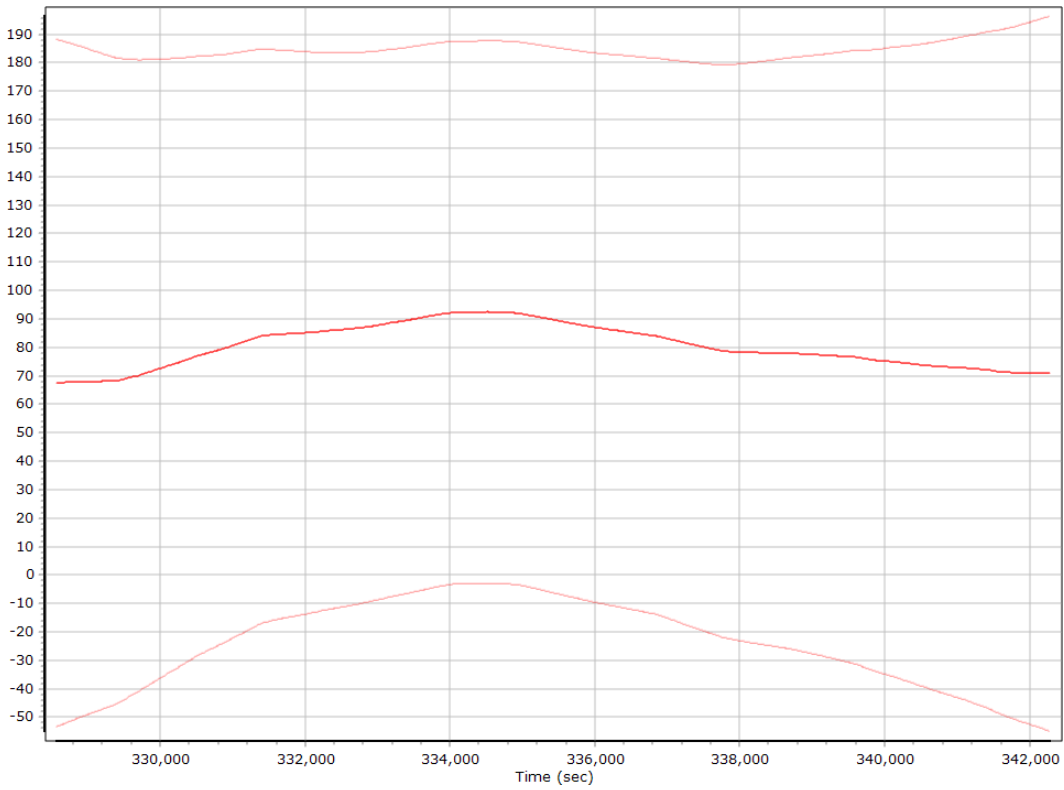
Accelerometer Scale Error (ppm)



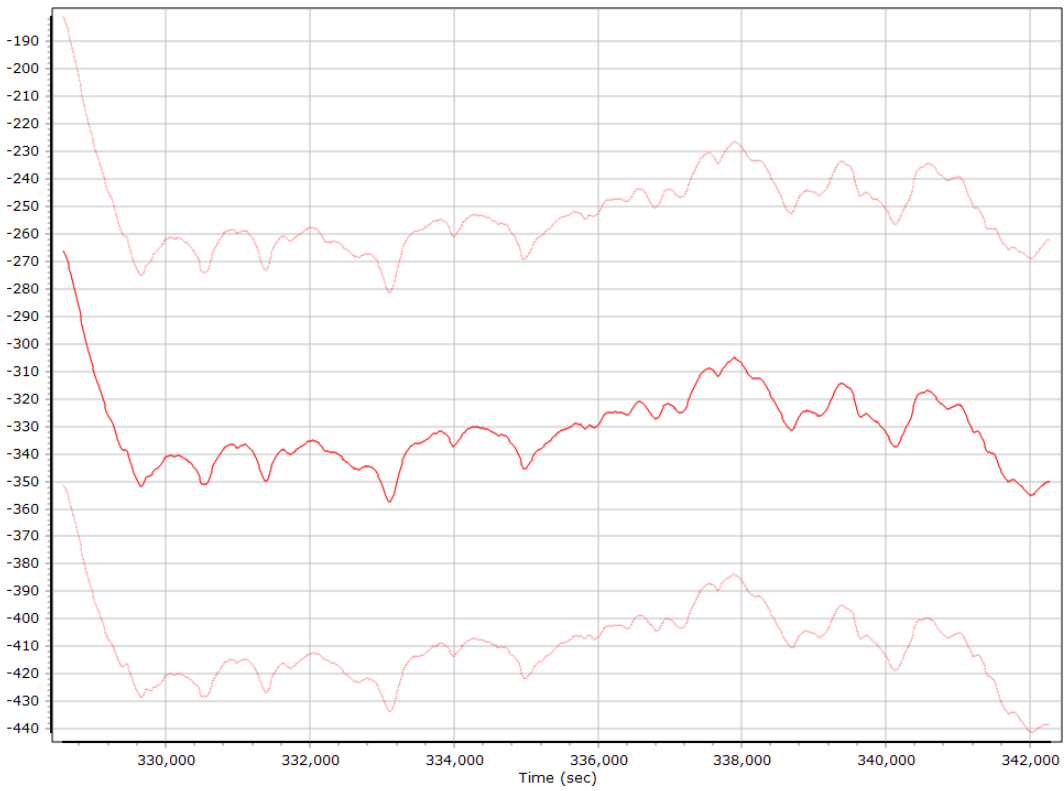
X Accelerometer Scale Error (ppm)



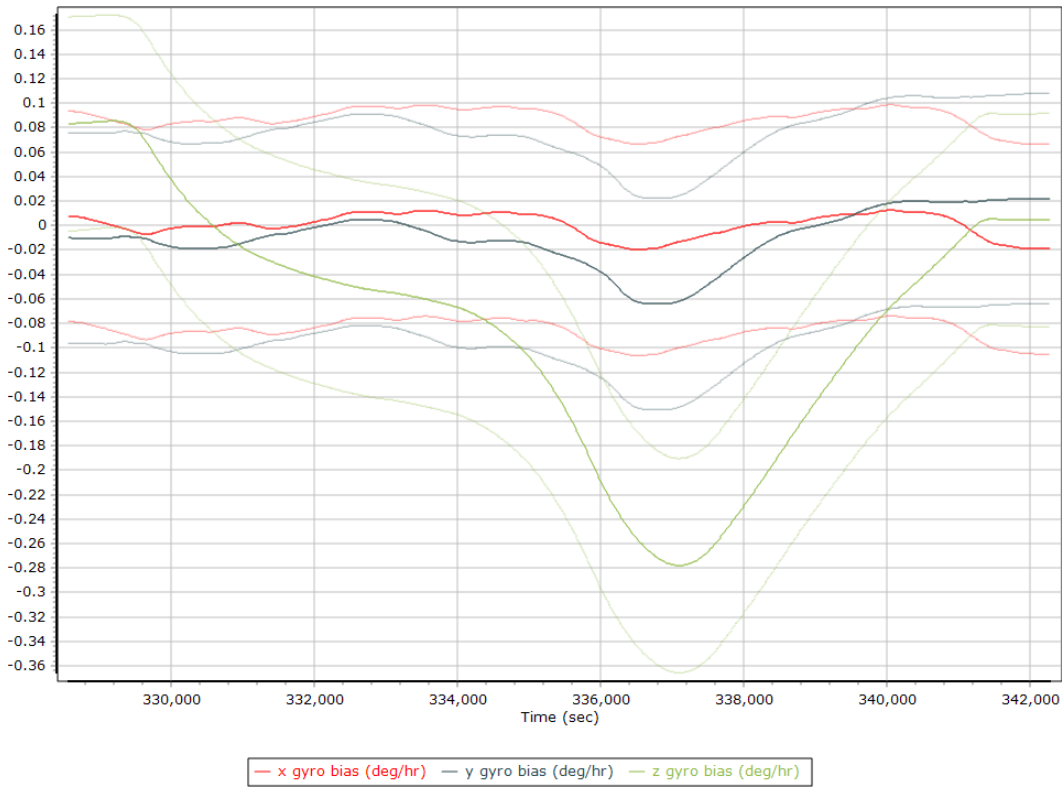
Y Accelerometer Scale Error (ppm)



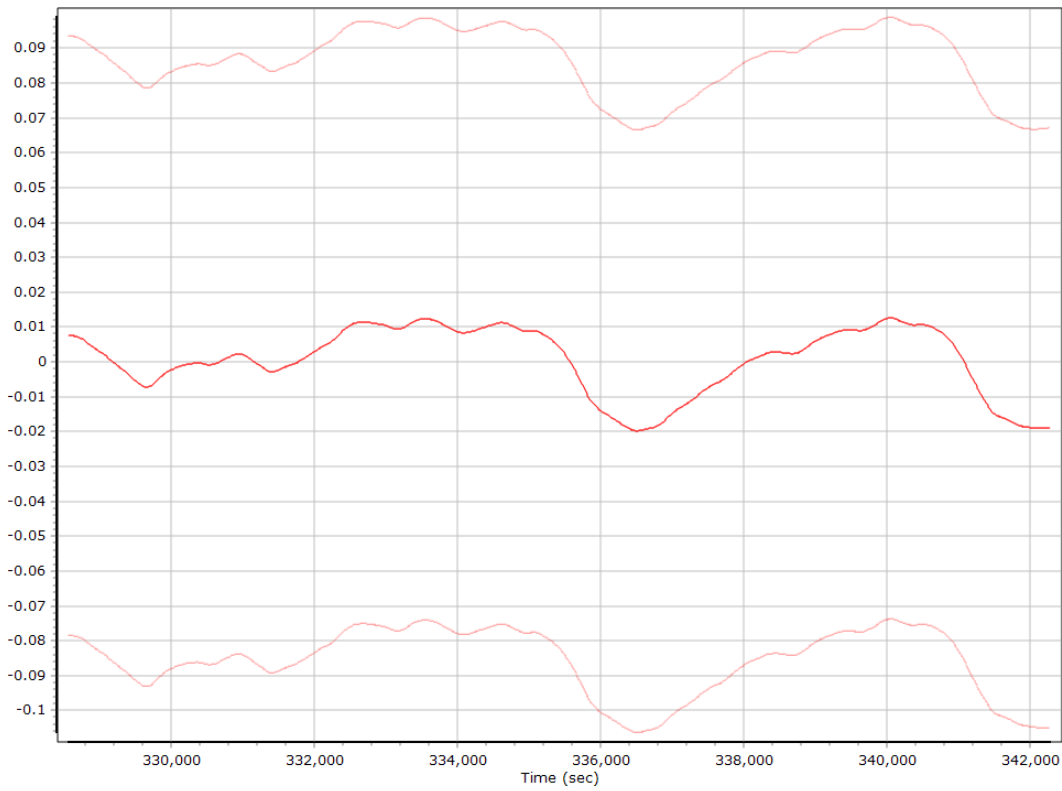
Z Accelerometer Scale Error (ppm)



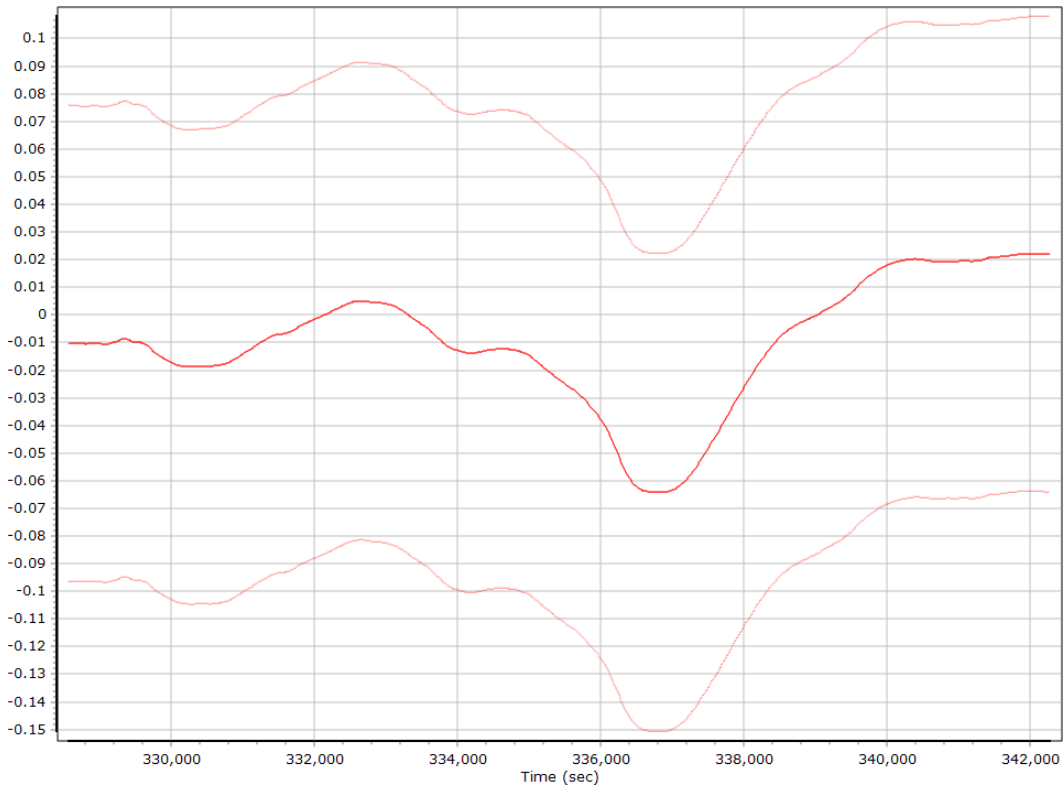
Gyro Bias (deg/h)



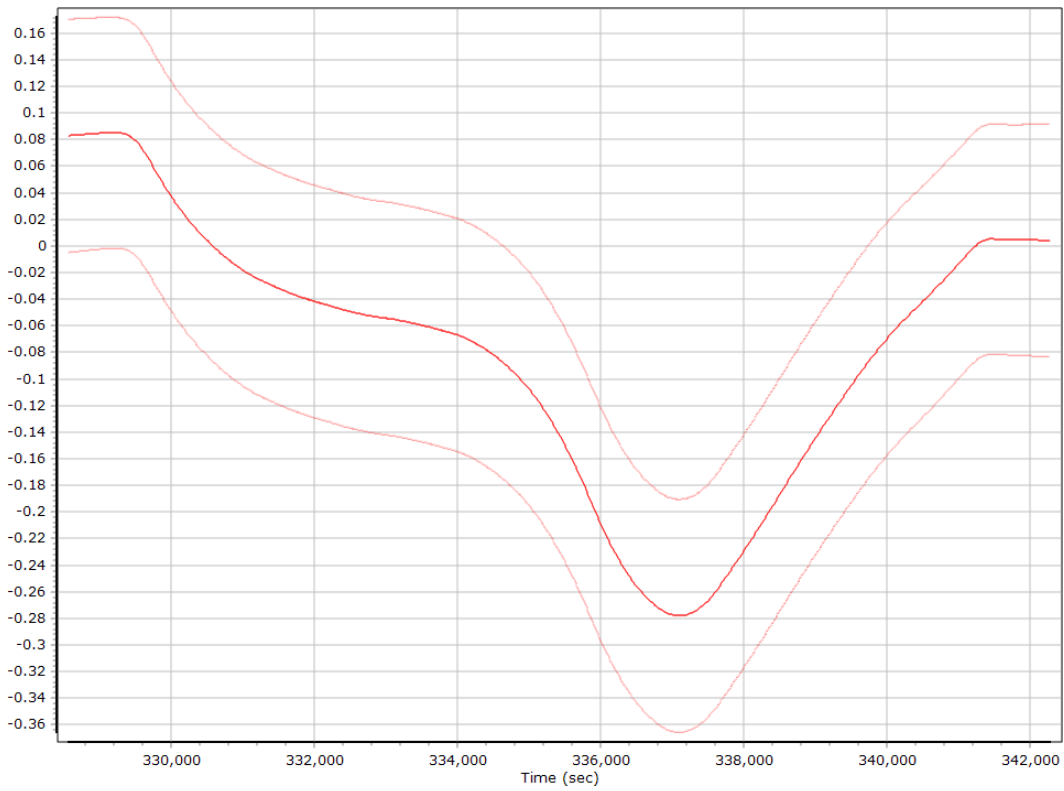
X Gyro Bias (deg/h)



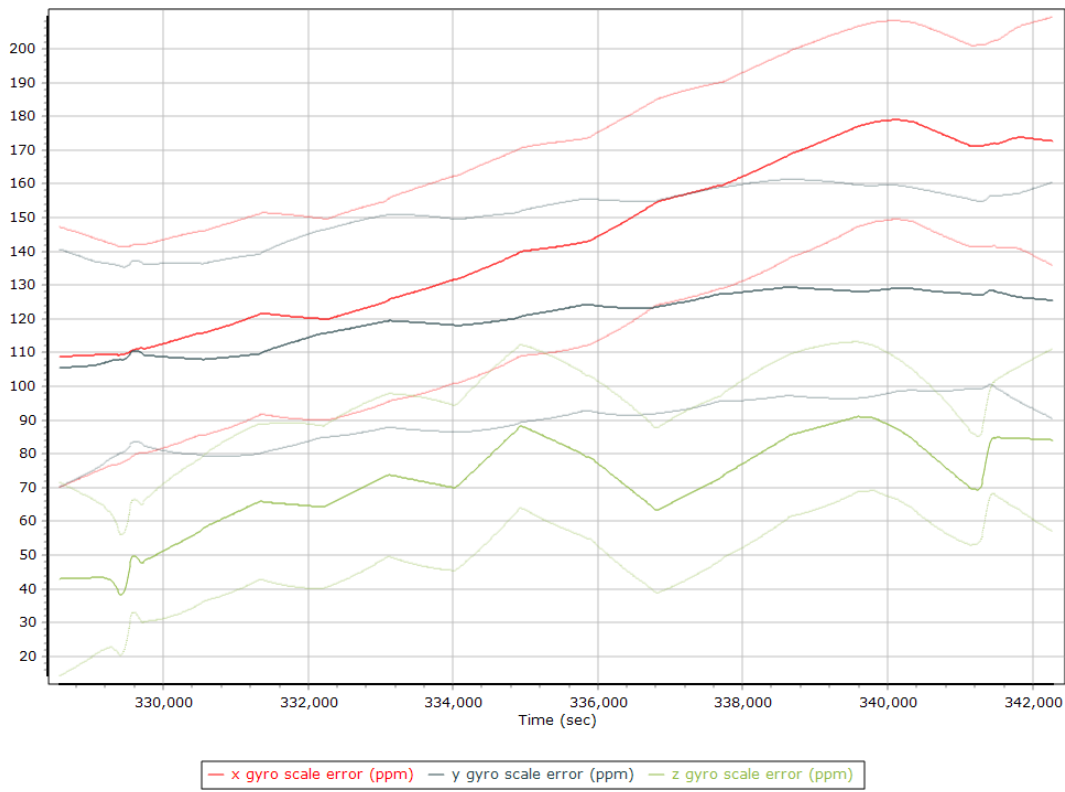
Y Gyro Bias (deg/h)



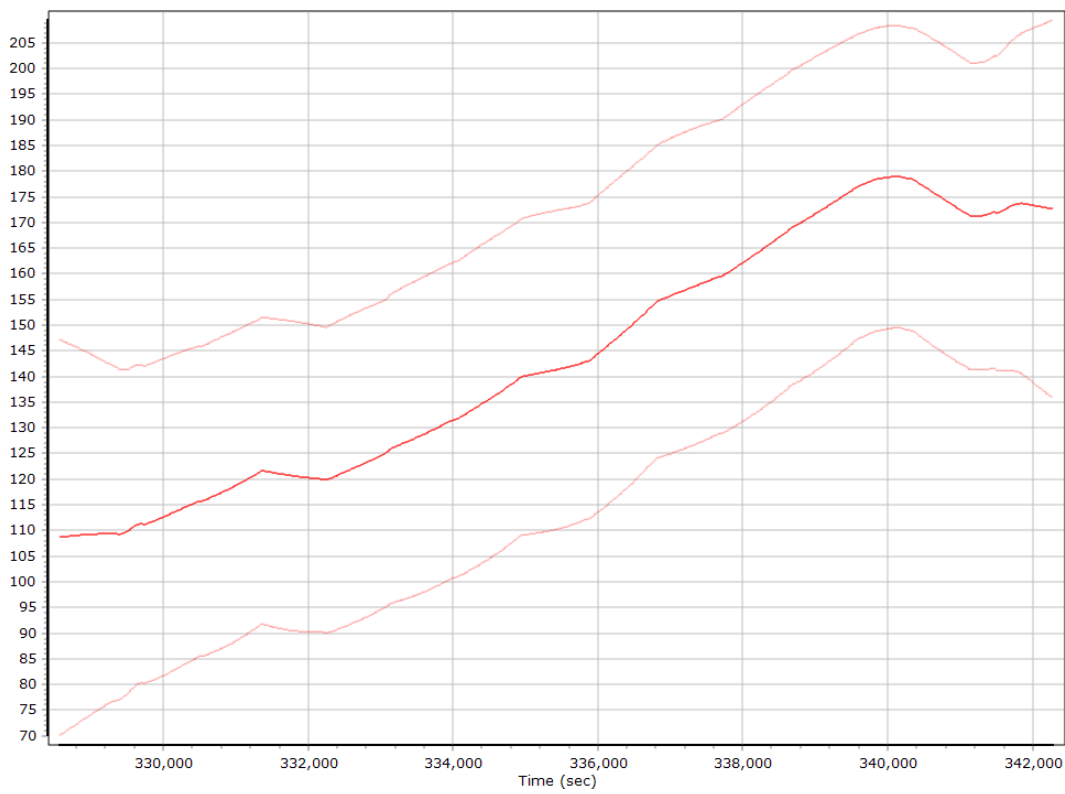
Z Gyro Bias (deg/h)



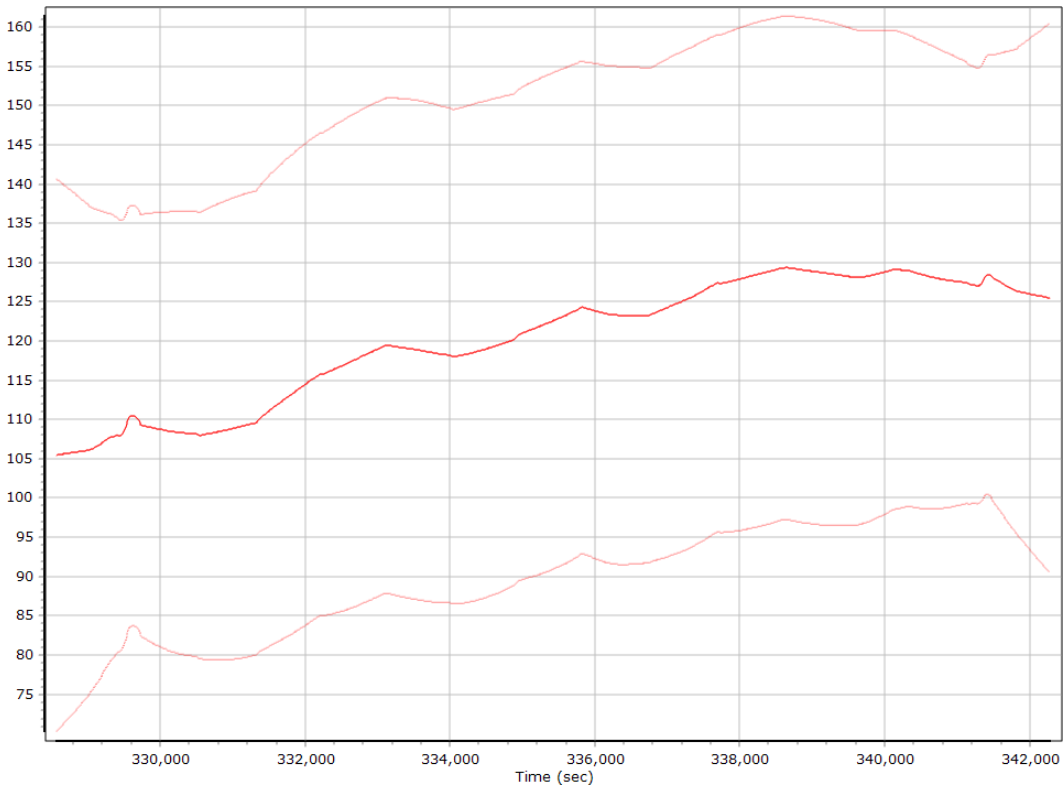
Gyro Scale Error (ppm)



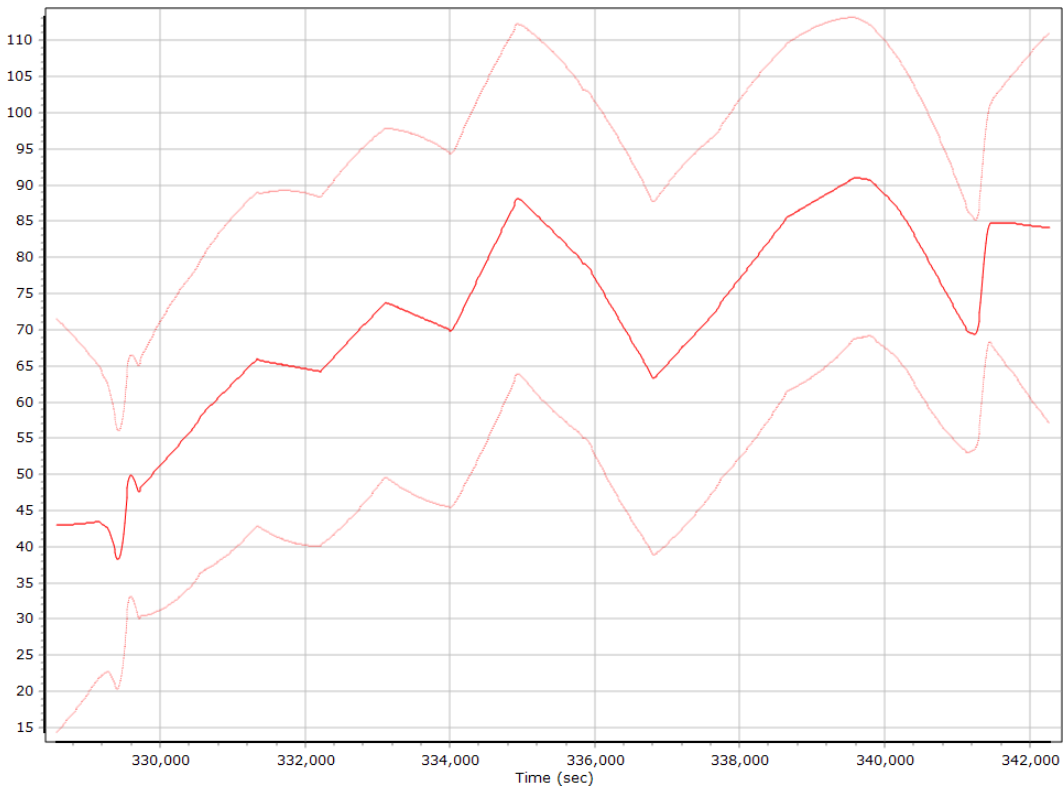
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

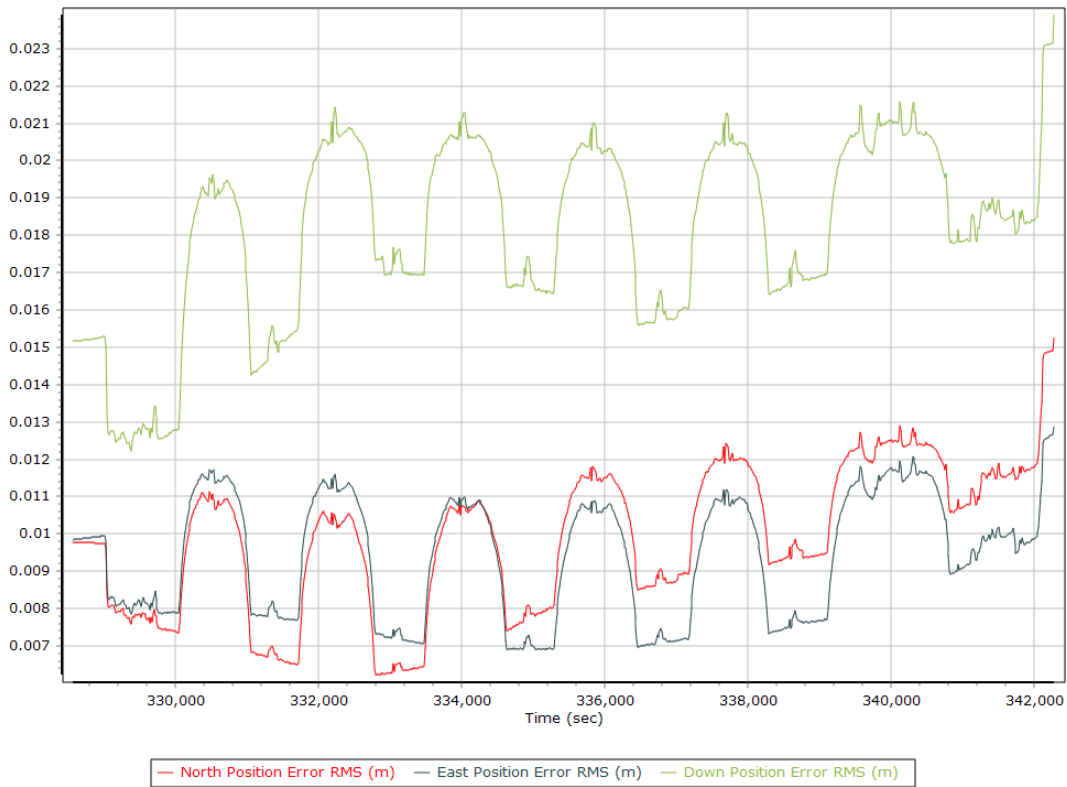


Z Gyro Scale Error (ppm)

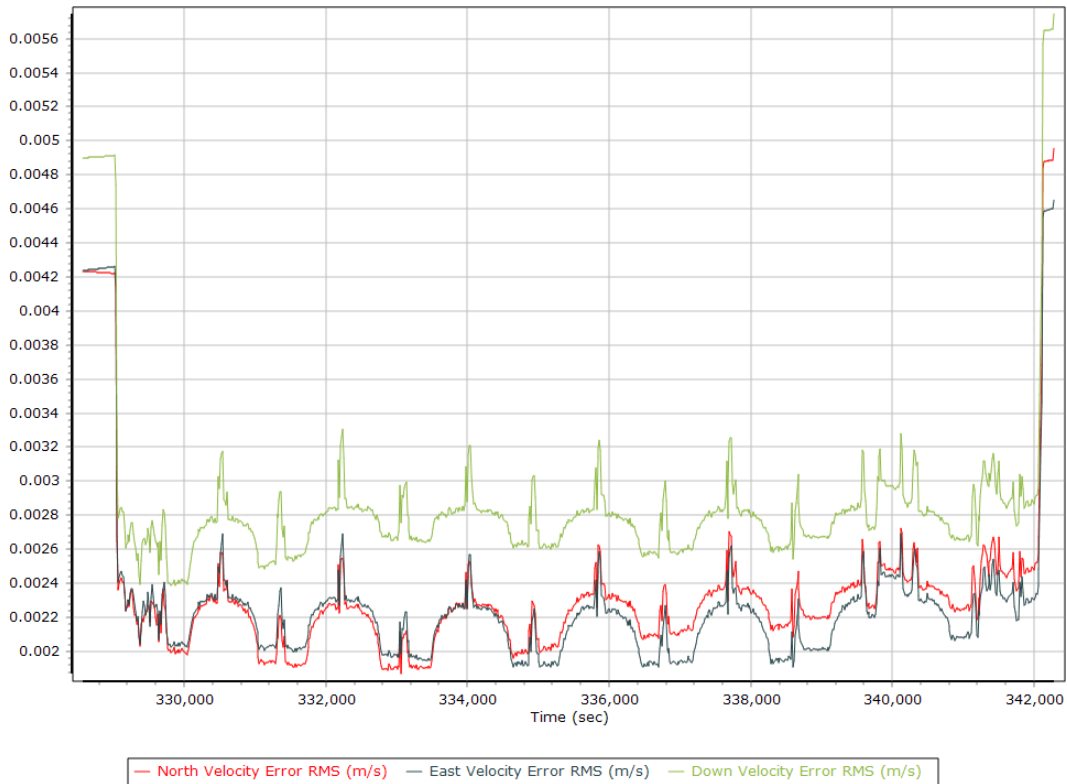


Smoothed Performance Metrics

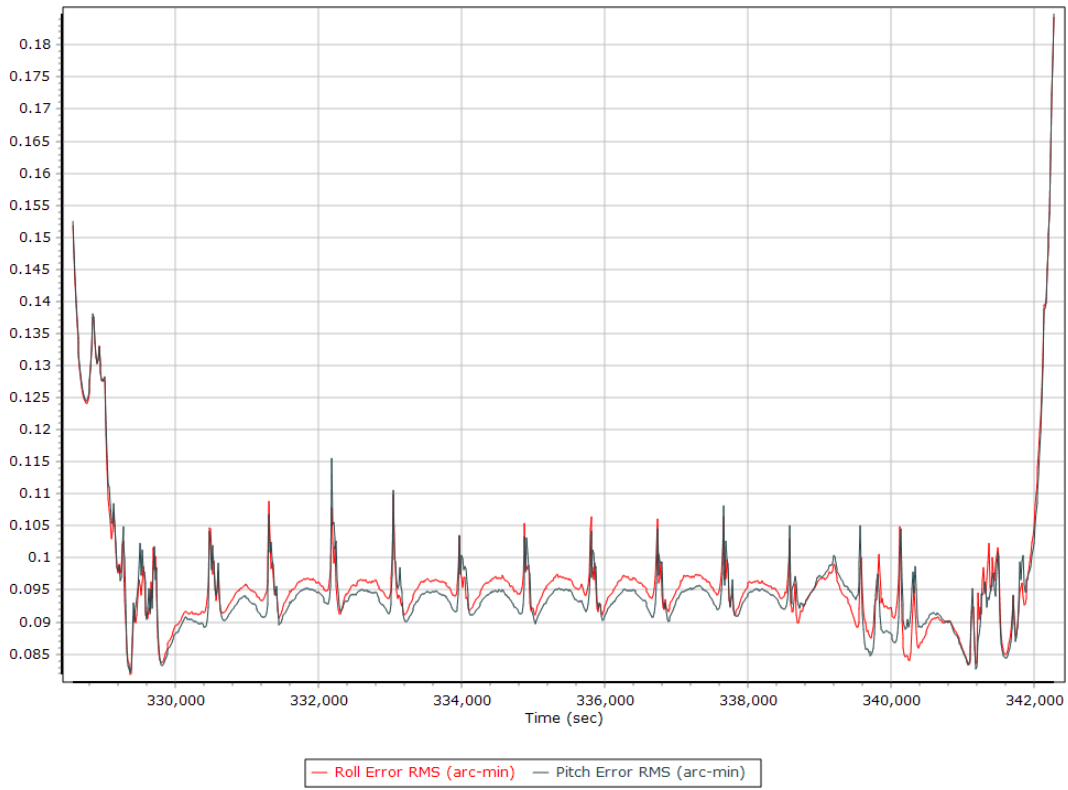
Position Error RMS (m)



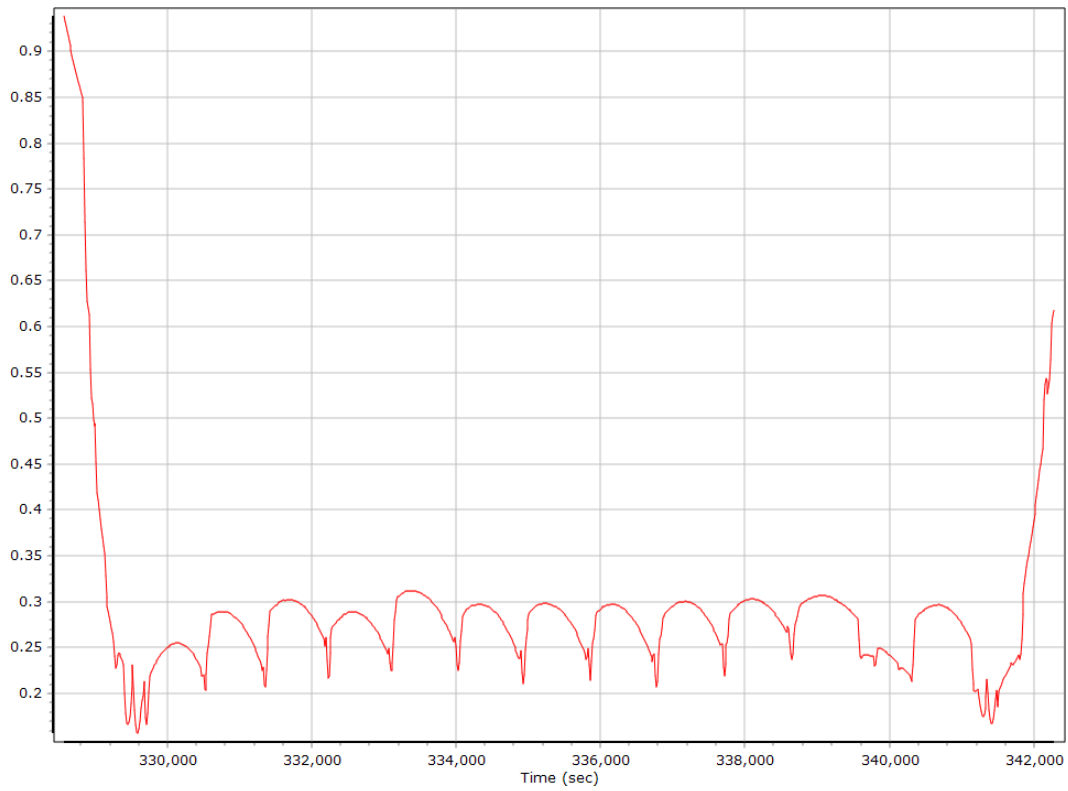
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

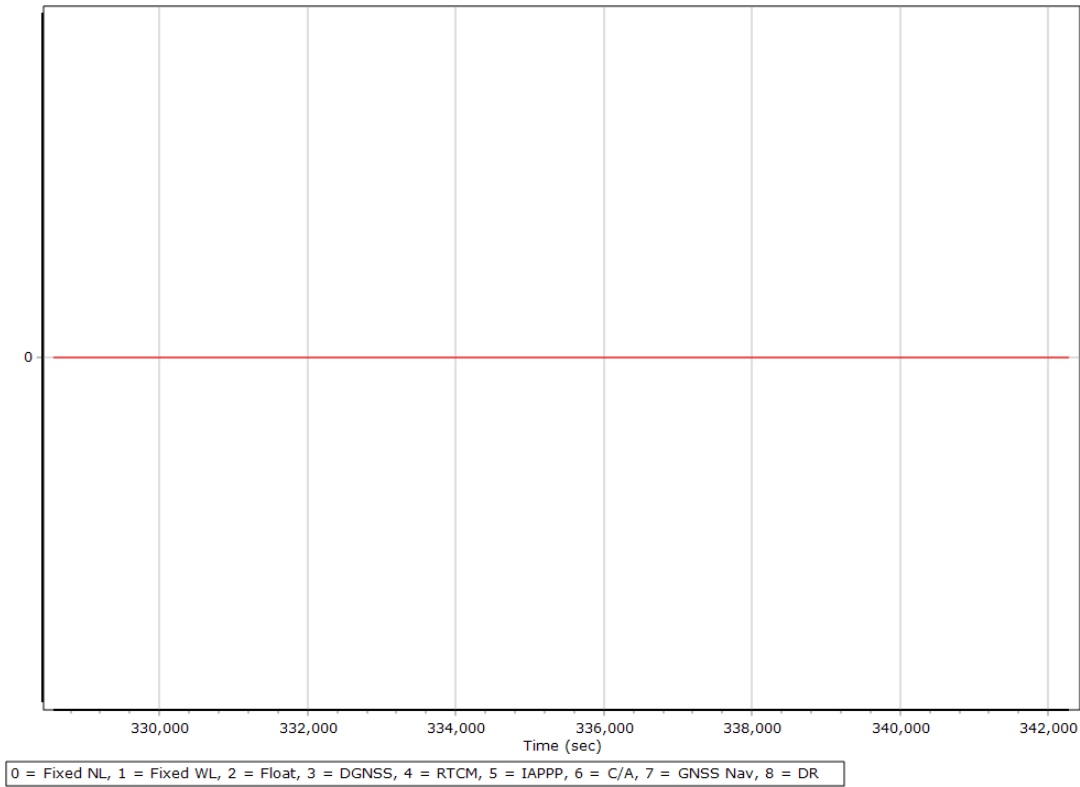


Heading Error RMS (arc-min)

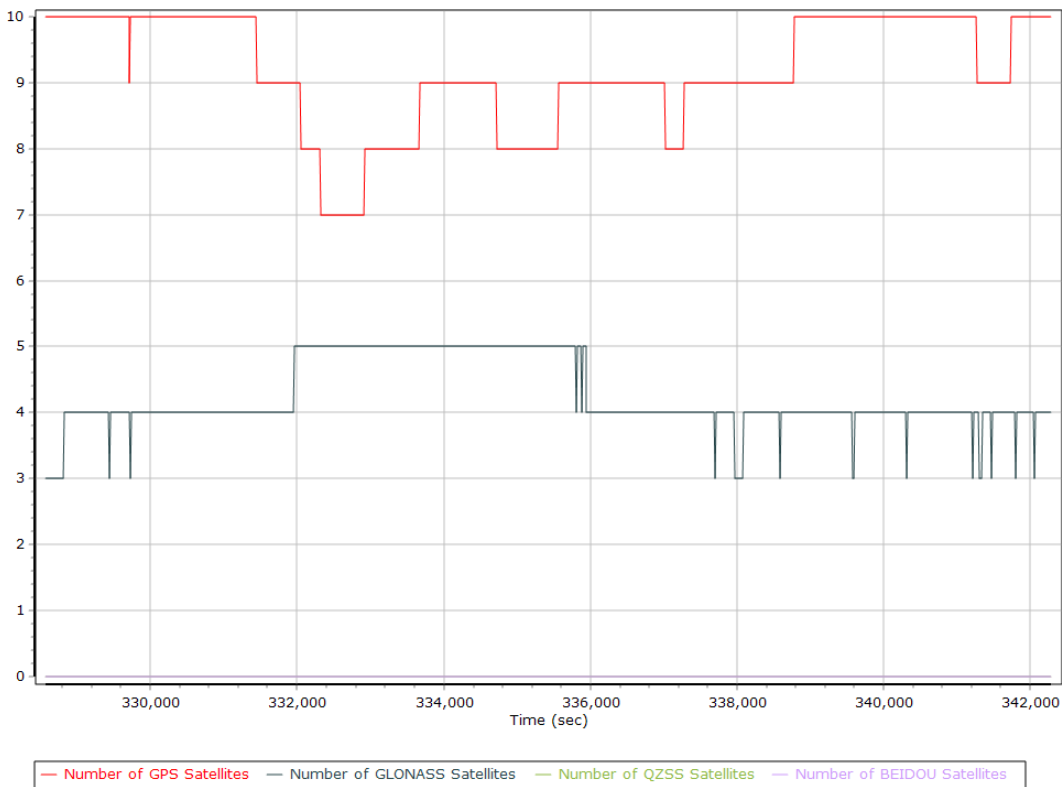


Smoothed Solution Status

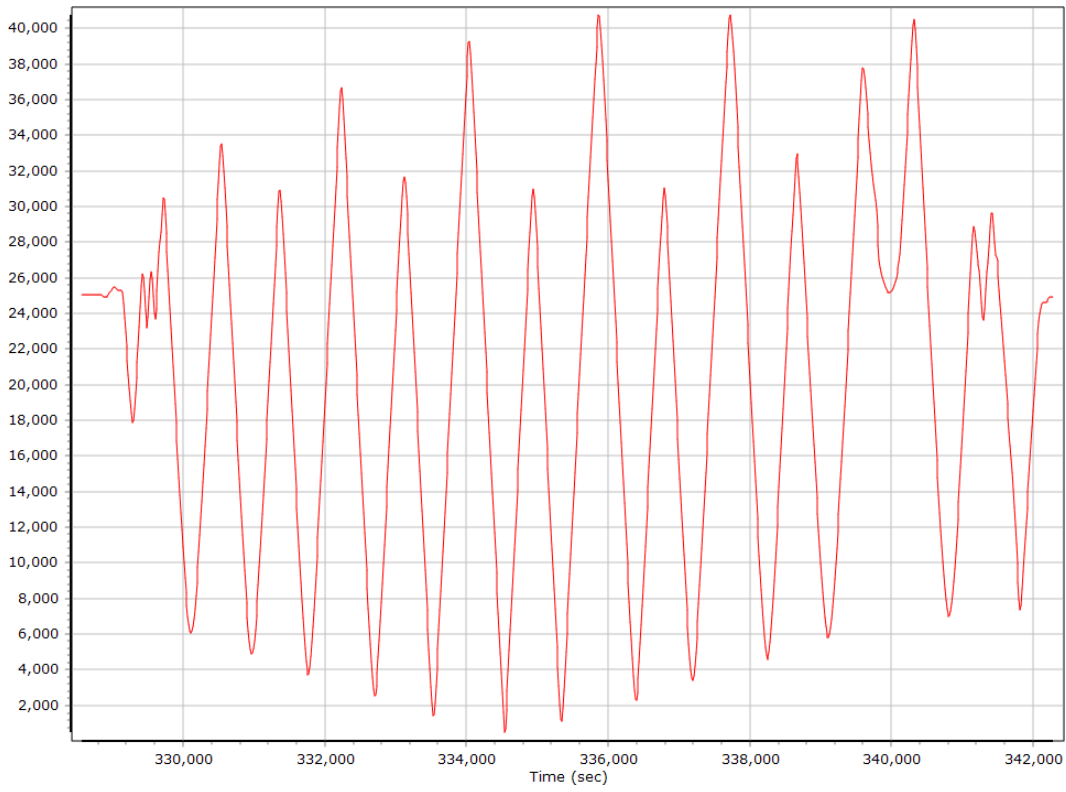
Processing Mode



Number of Satellites



Baseline Length



SBET IAKAR Separation



General Information

Mission Information

Project name	6219353a
Processing date	2019-12-24 19:59:41
Mission date	2019-12-19 16:31:35
Mission duration	05:52:28.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N8708
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
ALS.000	POS Data
ALS.001	POS Data
ALS.002	POS Data
ALS.003	POS Data
ALS.004	POS Data
ALS.005	POS Data
ALS.006	POS Data
ALS.007	POS Data
ALS.008	POS Data
ALS.009	POS Data
ALS.010	POS Data
ALS.011	POS Data
ALS.012	POS Data
ALS.013	POS Data
ALS.014	POS Data
ALS.015	POS Data
ALS.016	POS Data
ALS.017	POS Data
ALS.018	POS Data
ALS.019	POS Data
ALS.020	POS Data
ALS.021	POS Data
ALS.022	POS Data
ALS.023	POS Data
ALS.024	POS Data
ALS.025	POS Data
ALS.026	POS Data
ALS.027	POS Data
ALS.028	POS Data
ALS.029	POS Data
ALS.030	POS Data
ALS.031	POS Data
ALS.032	POS Data
ALS.033	POS Data
ALS.034	POS Data
ALS.035	POS Data
ALS.036	POS Data
ALS.037	POS Data
ALS.038	POS Data
ALS.039	POS Data
ALS.040	POS Data
ALS.041	POS Data
ALS.042	POS Data
ALS.043	POS Data
ALS.044	POS Data
ALS.045	POS Data
ALS.046	POS Data
ALS.047	POS Data

Input Files

File Name	File type
Ephm3530.19g	GLONASS Broadcast Ephemeris
Ephm3530.19n	GPS Broadcast Ephemeris
flcb3530.19o	GNSS SingleBase
fljl3530.19o	GNSS SingleBase
flmd3530.19o	GNSS SingleBase
flmr3530.19o	GNSS SingleBase
gatv3530.19o	GNSS SingleBase
prry3530.19o	GNSS SingleBase

File Name	File type
sned3530.19o	GNSS SingleBase
talh3530.19o	GNSS SingleBase
xcty3530.19o	GNSS SingleBase
f1753530.19o	GNSS SingleBase
esr20844.sp3	GPS, GLONASS Precise Ephemeris

Output Files

Filename	File type
sbet_6219353a.out	SBET Trajectory File

Rover Data Summary

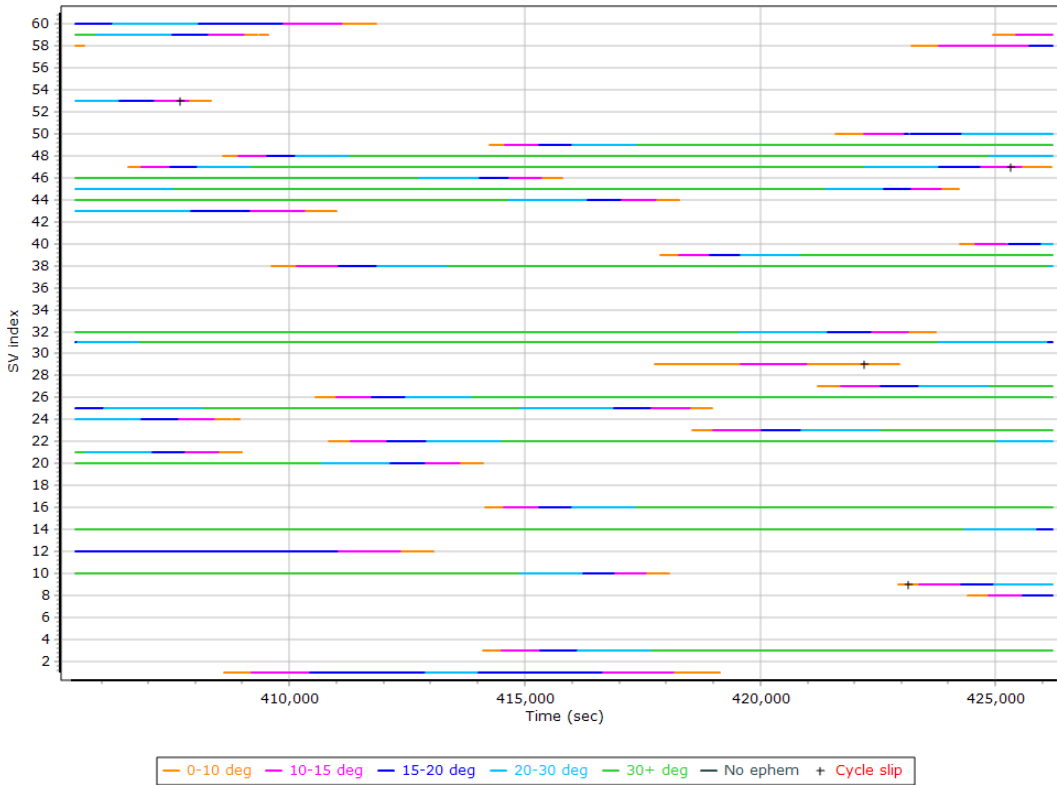
First raw data file	ALS.000		
Last raw data file	ALS.047		
Start GPS week	2084		
Start time	405076.248 (12/19/2019 4:31:16 PM)		
End time	426221.426 (12/19/2019 10:23:41 PM)		
Start of fine alignment	405386.926 (12/19/2019 4:36:26 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.046	-0.192	-1.285
Gimbal 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

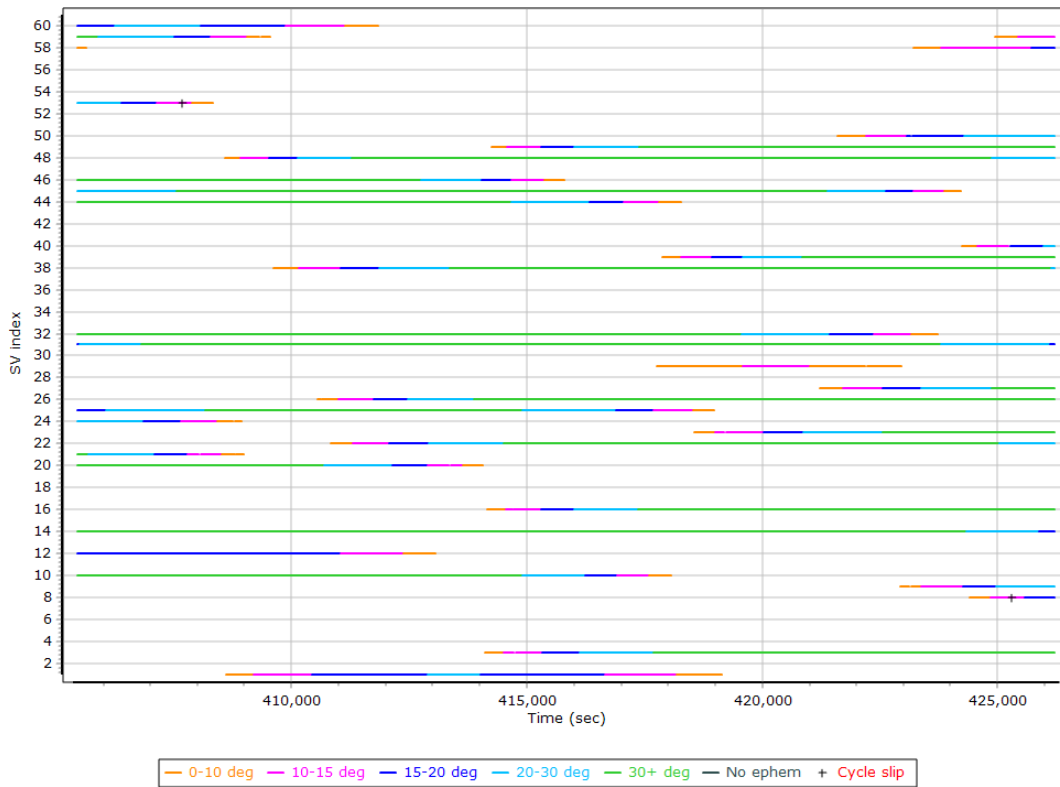
Raw IMU Import QC Summary

IMU data input file	imu_6219353a.dat
IMU data check log file	imudt_6219353a.log
IMU Records Processed	4228967
Termination Status	Normal
IMU Anomalies	0

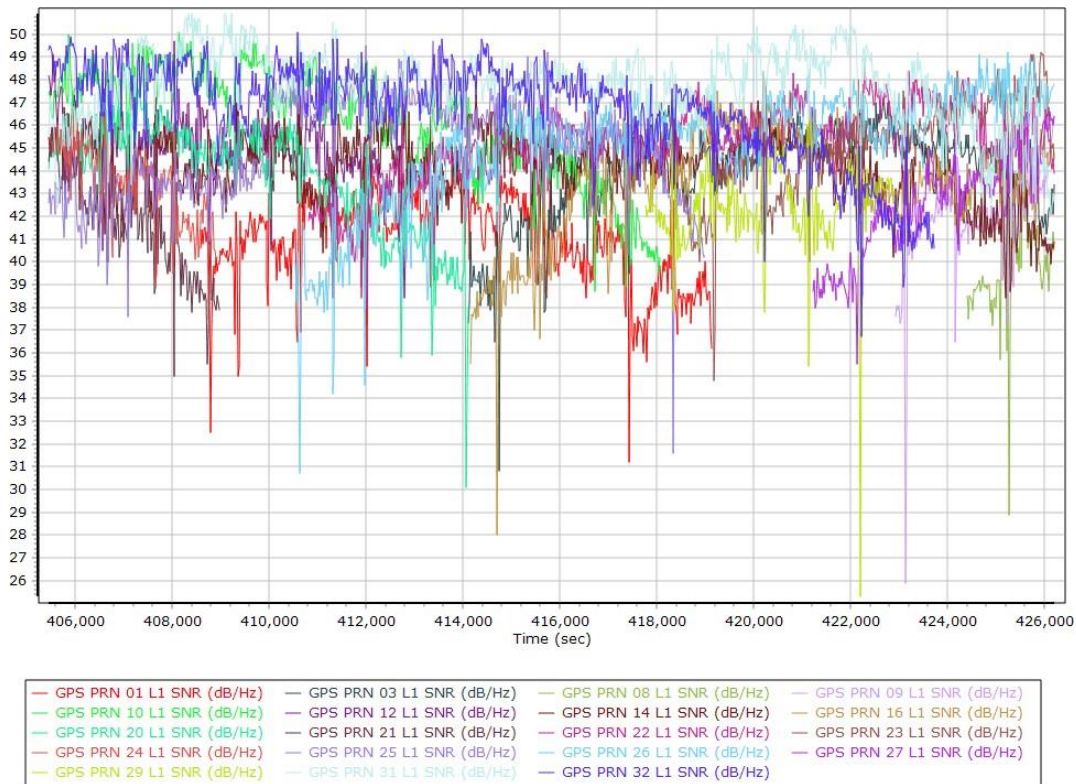
L1 Satellite Lock/Elevation



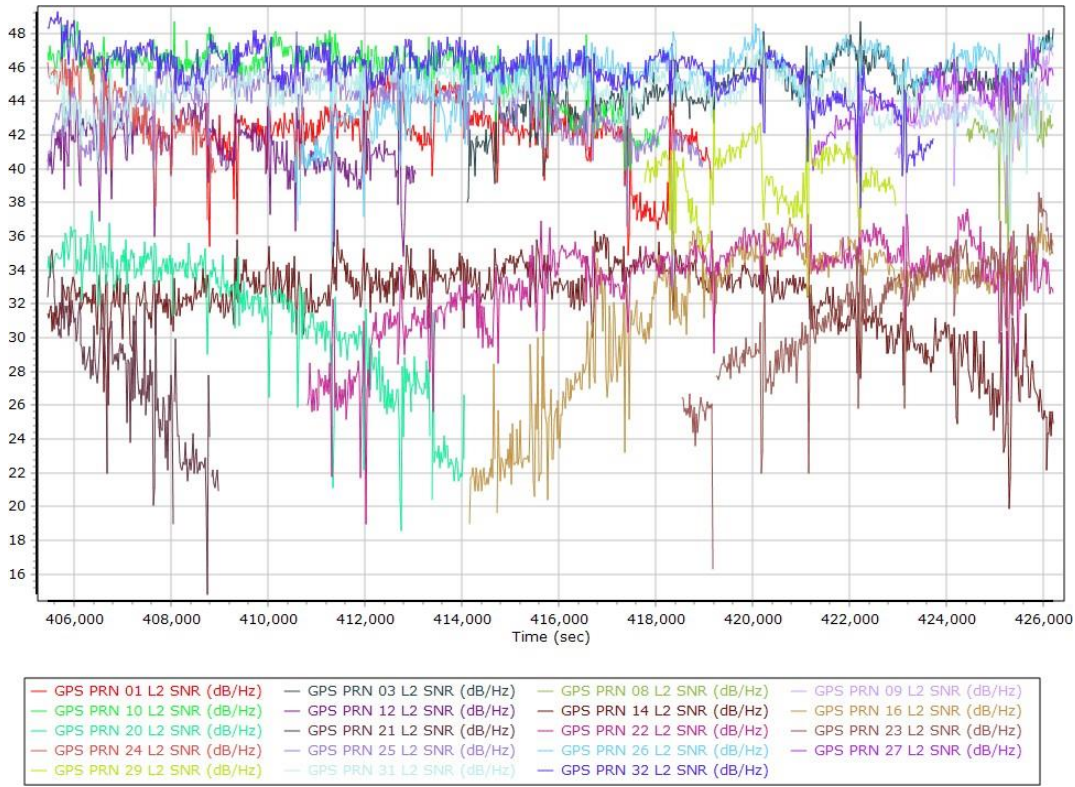
L2 Satellite Lock/Elevation



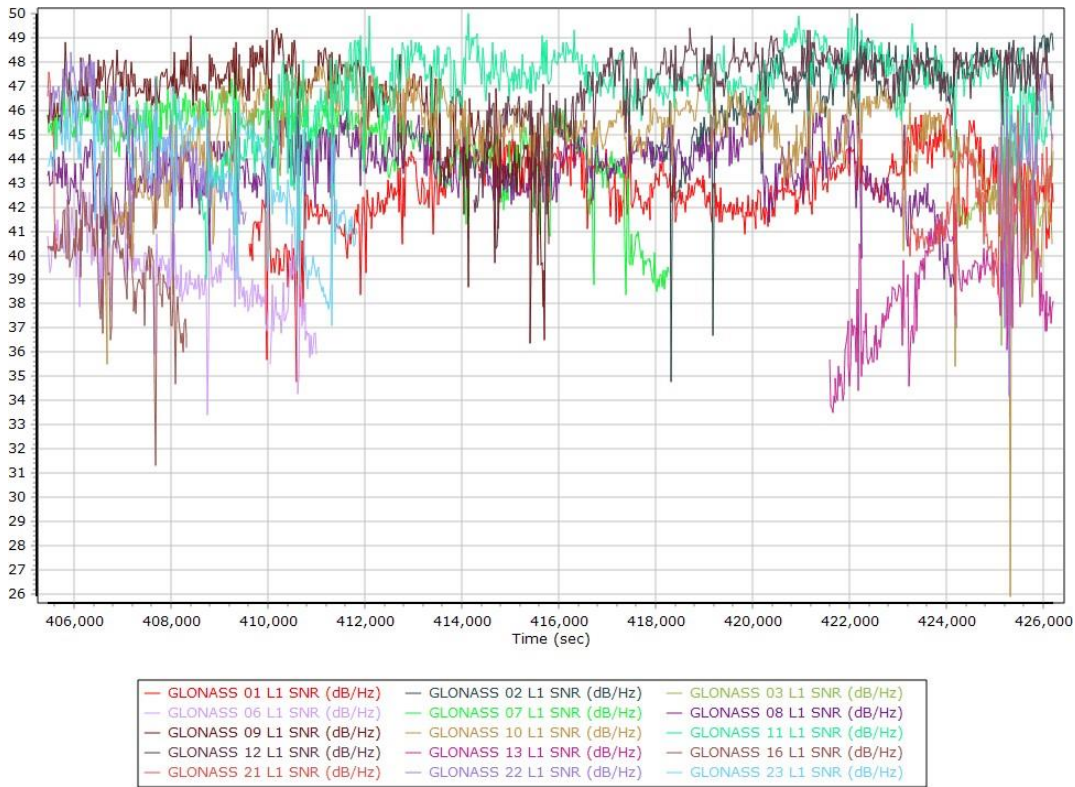
GPS L1 SNR



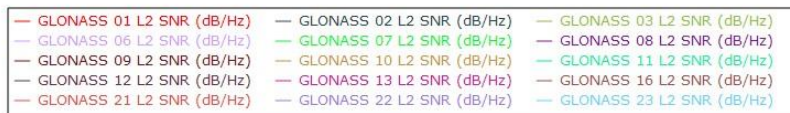
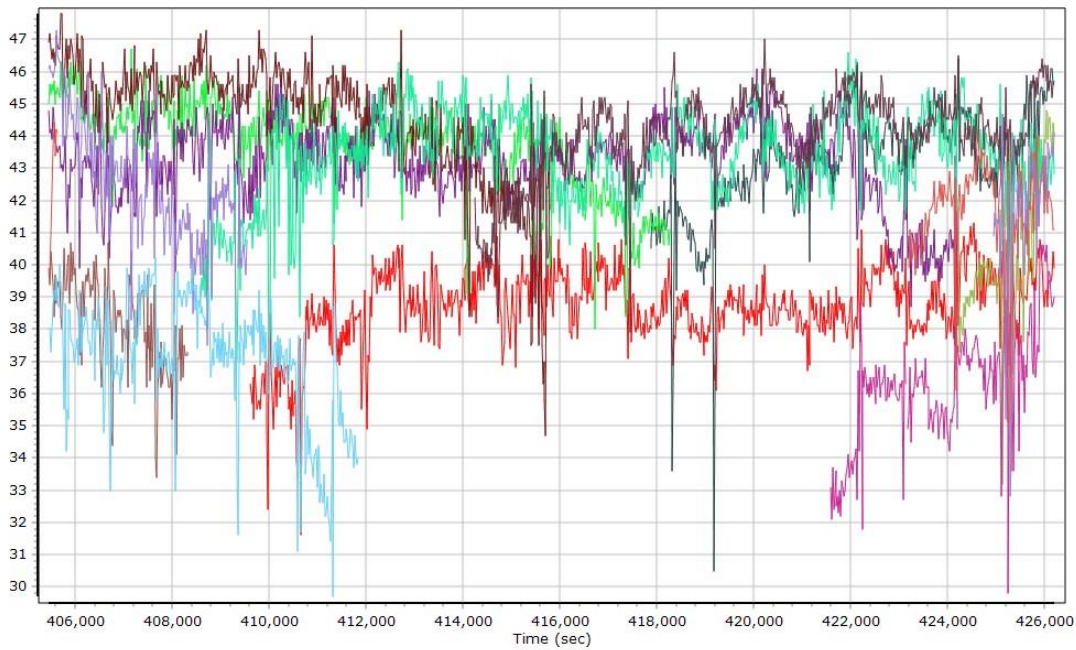
GPS L2 SNR



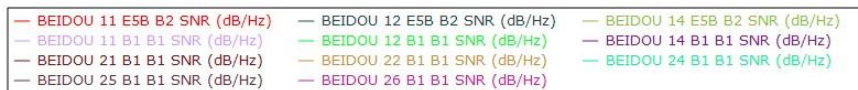
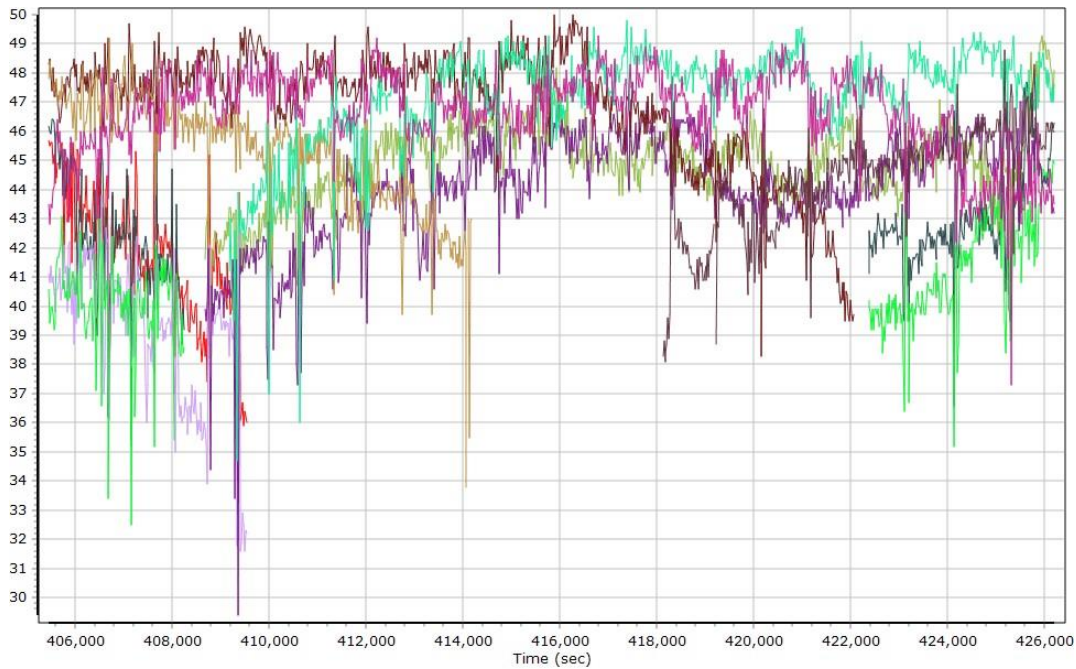
GLONASS L1 SNR



GLONASS L2 SNR

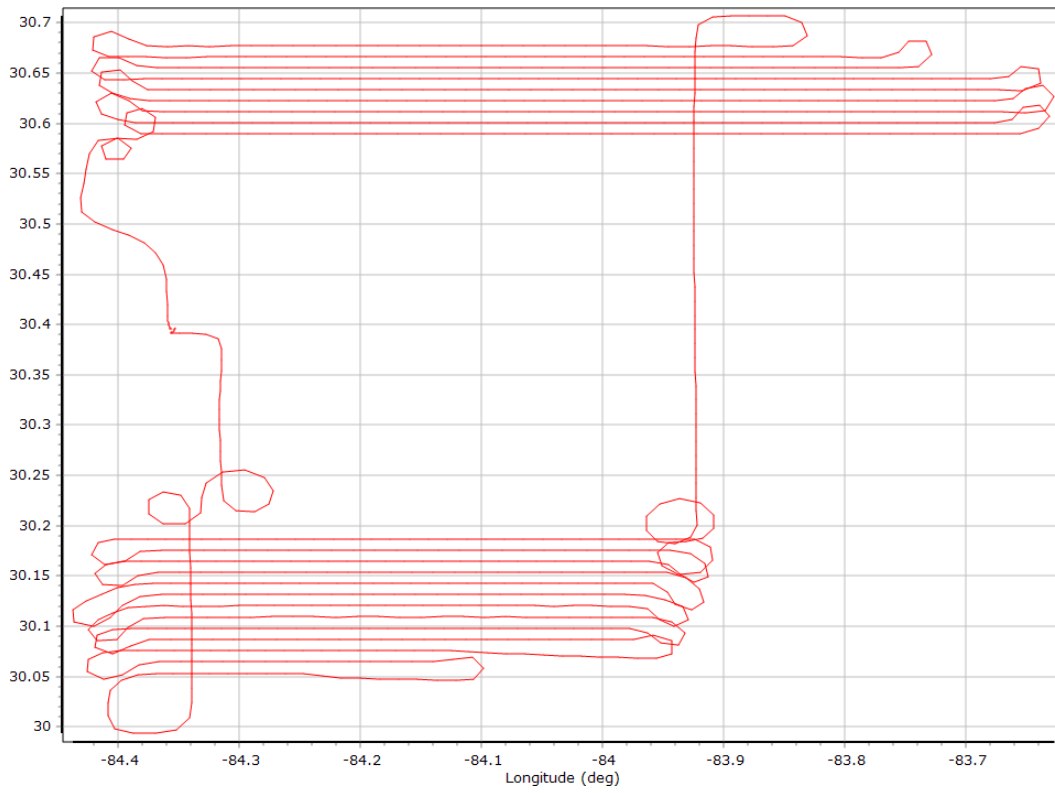


BEIDOU SNR

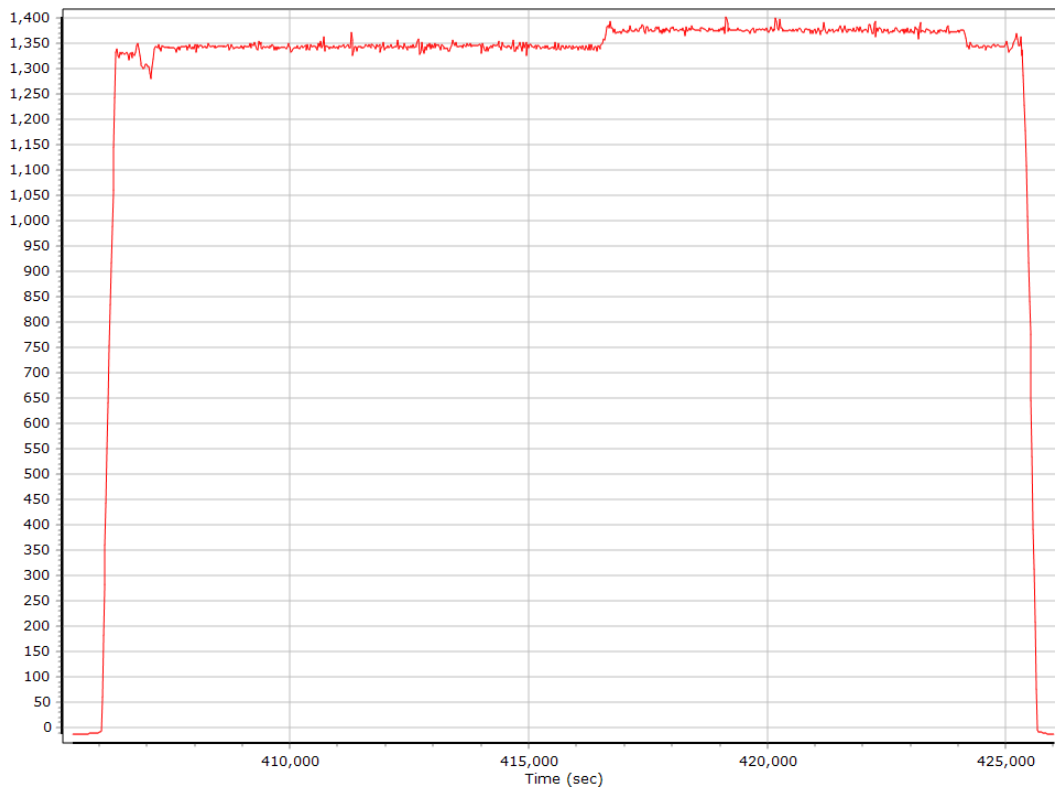


Trajectory Information

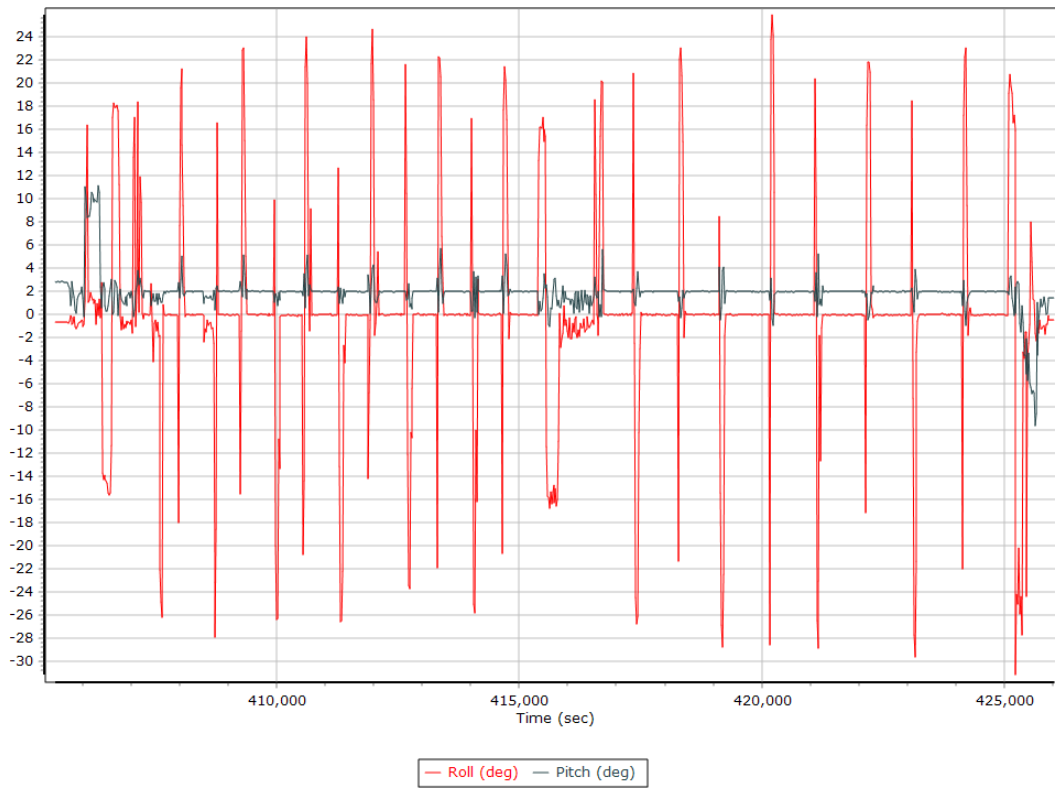
Top View



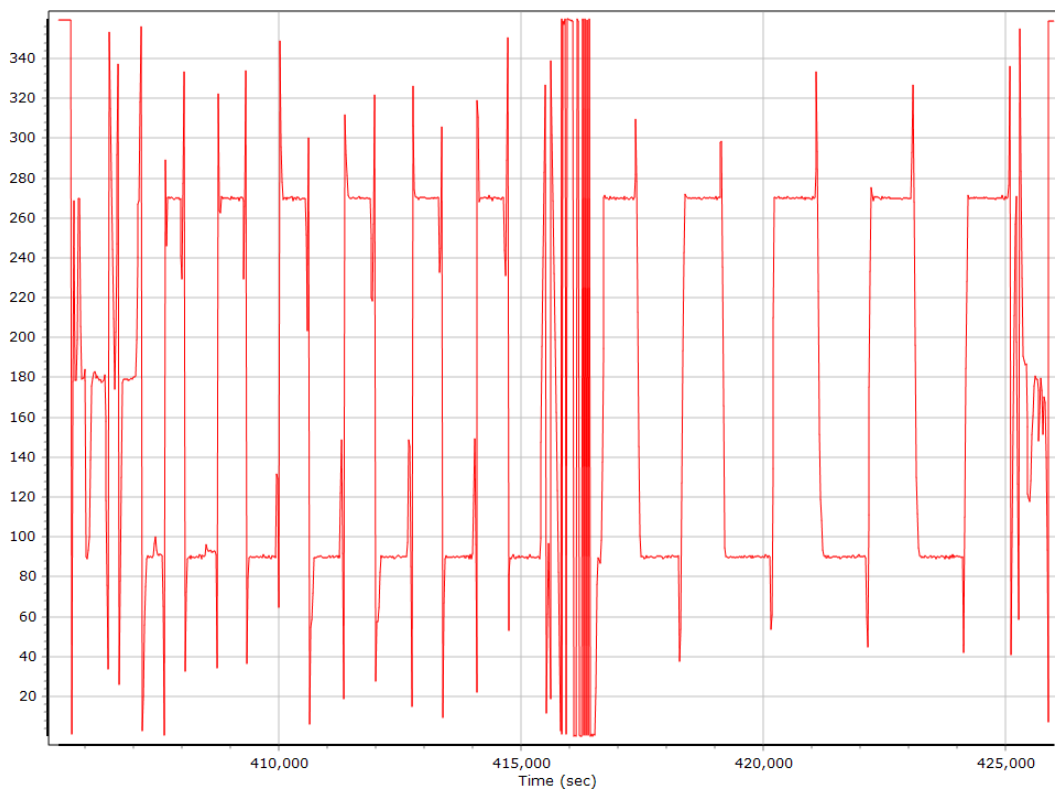
Altitude



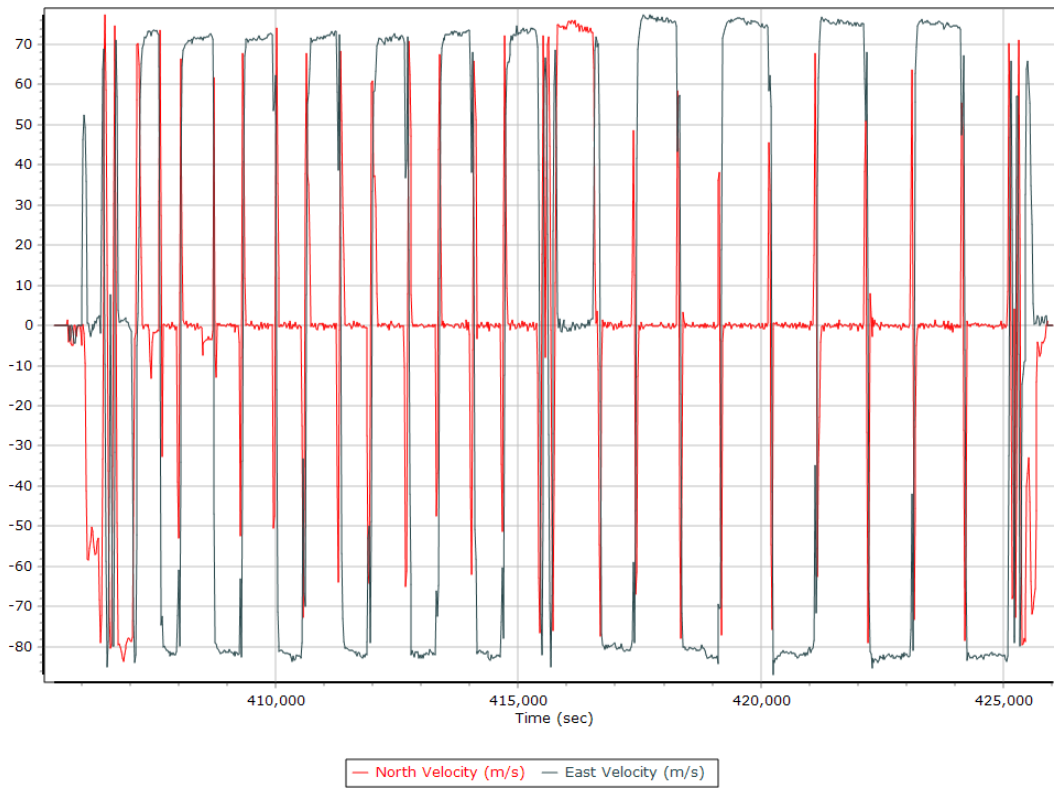
Roll/Pitch



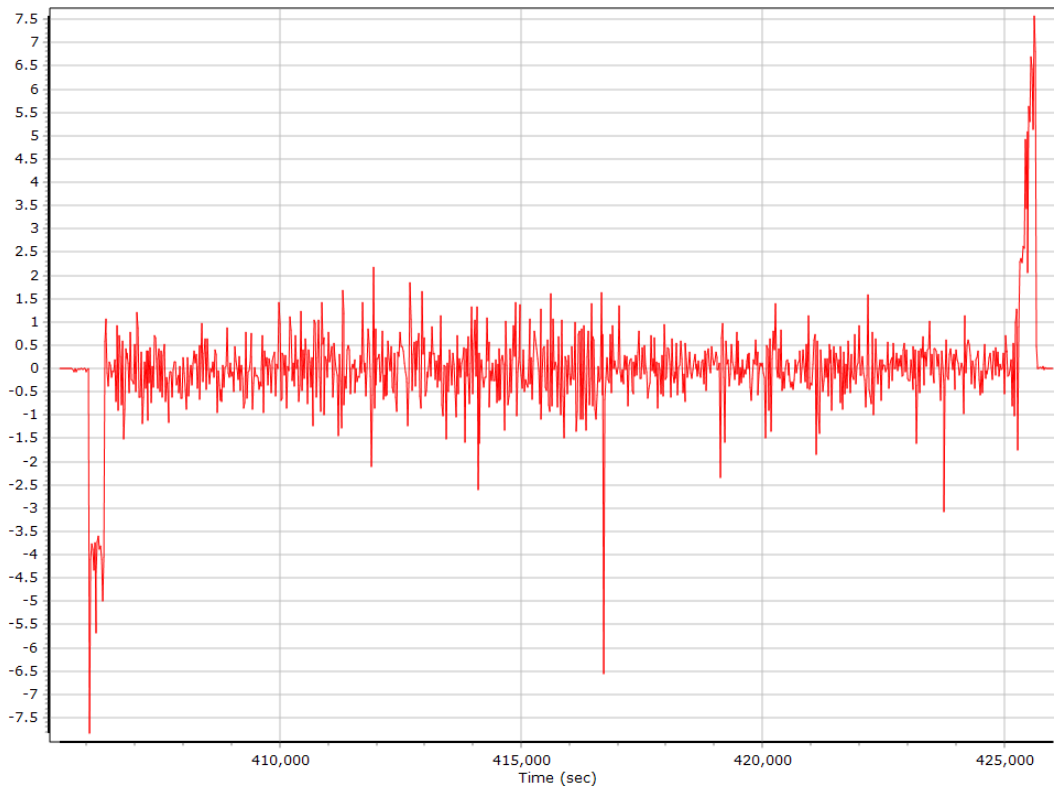
Heading



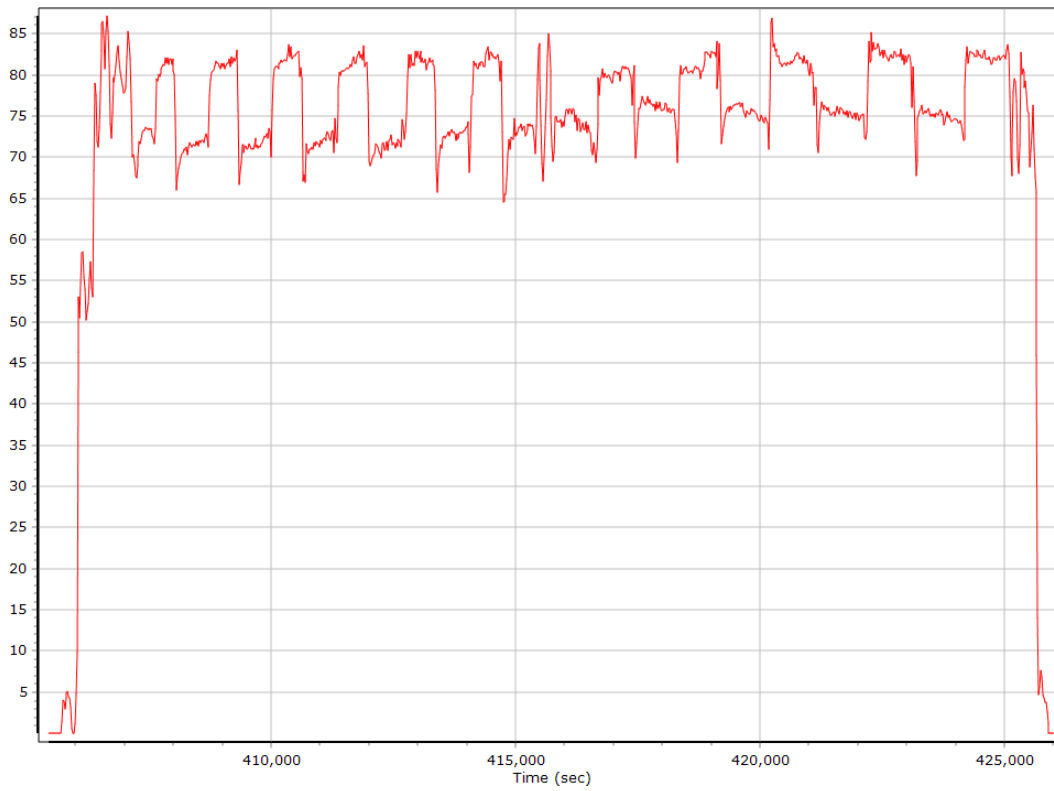
North/East Velocity



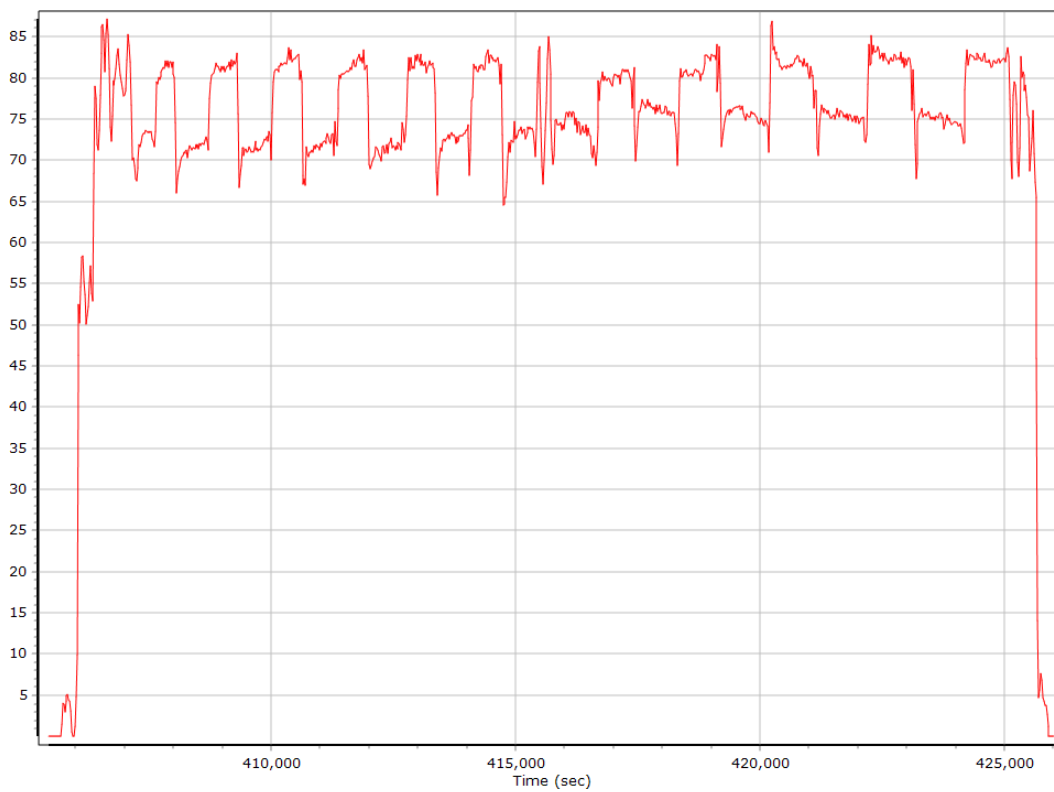
Down Velocity



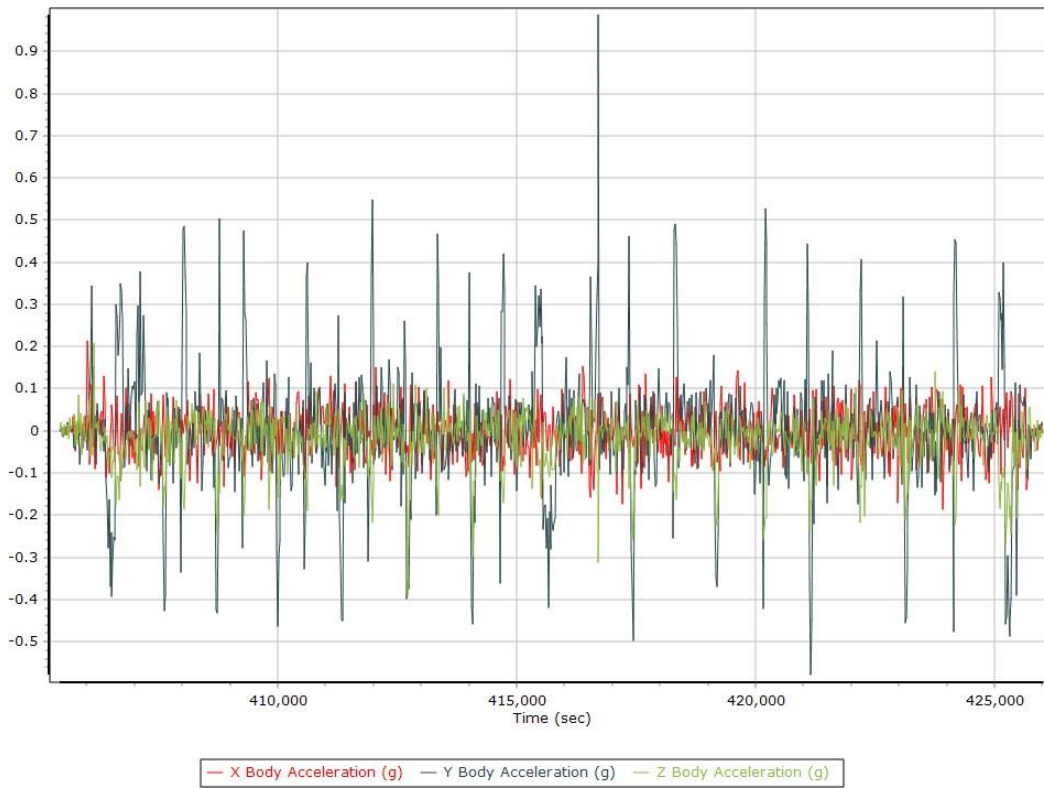
Total Speed



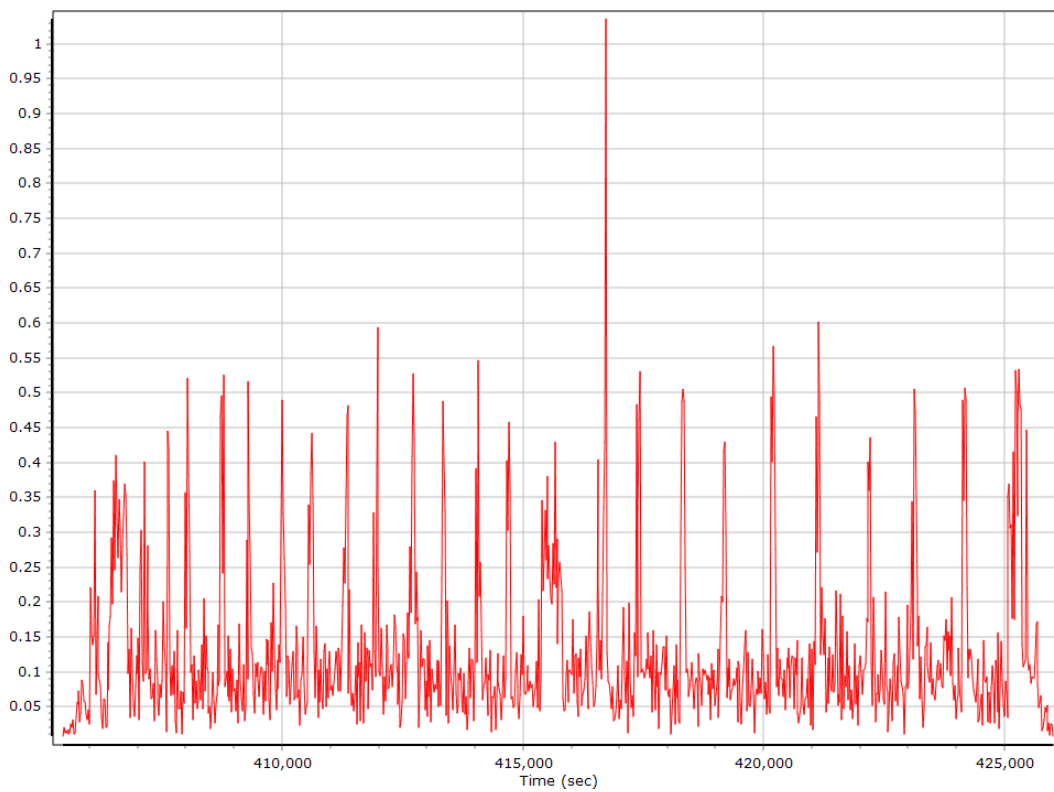
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate



SmartBase Processing Summary

Smart Select Options

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

Basestation Selection

Date	ID	Dist	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	

SmartBase Quality Check

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	17.01	56.84	
Number of GPS SV	7	10	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	7	17	13
PDOP	1.24	2.77	1.53
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	21103.00	0.00	20.00
Percentage	99.91	0.00	0.09

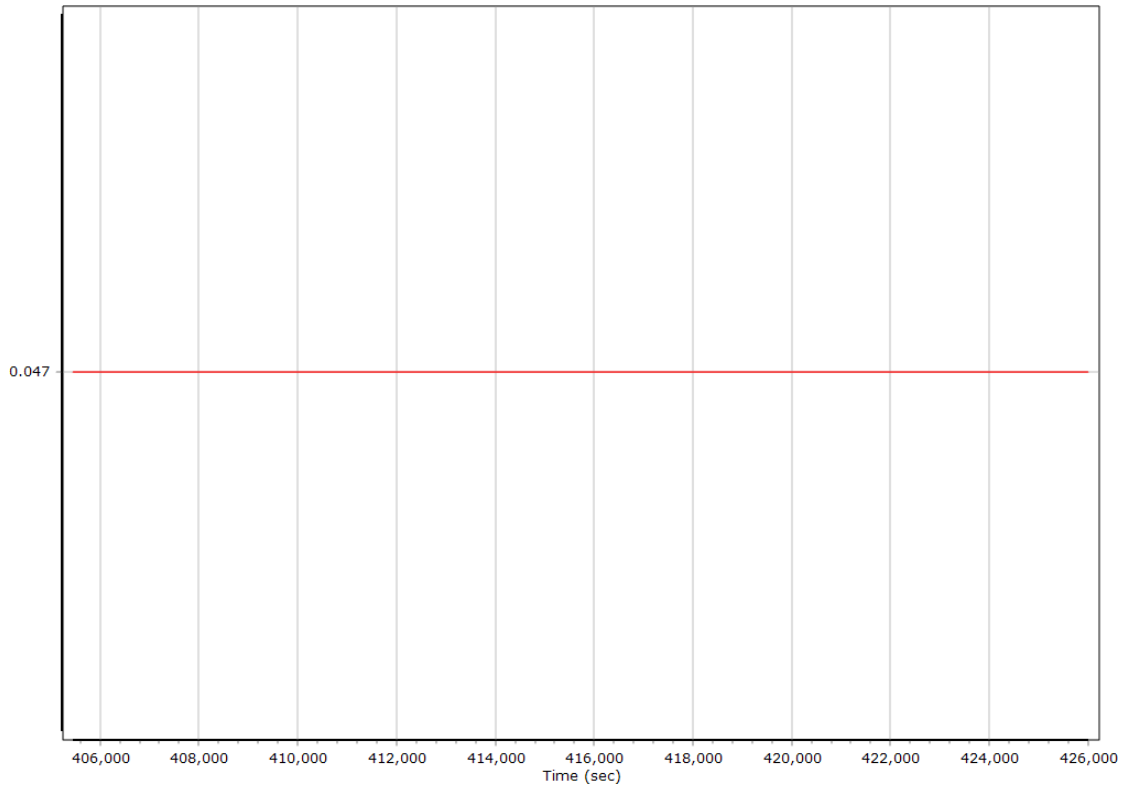
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	405077.000 (12/19/2019 4:31:17 PM)		
Processing end time	426225.000 (12/19/2019 10:23:45 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.047	-0.185	-1.290
Gimbal to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

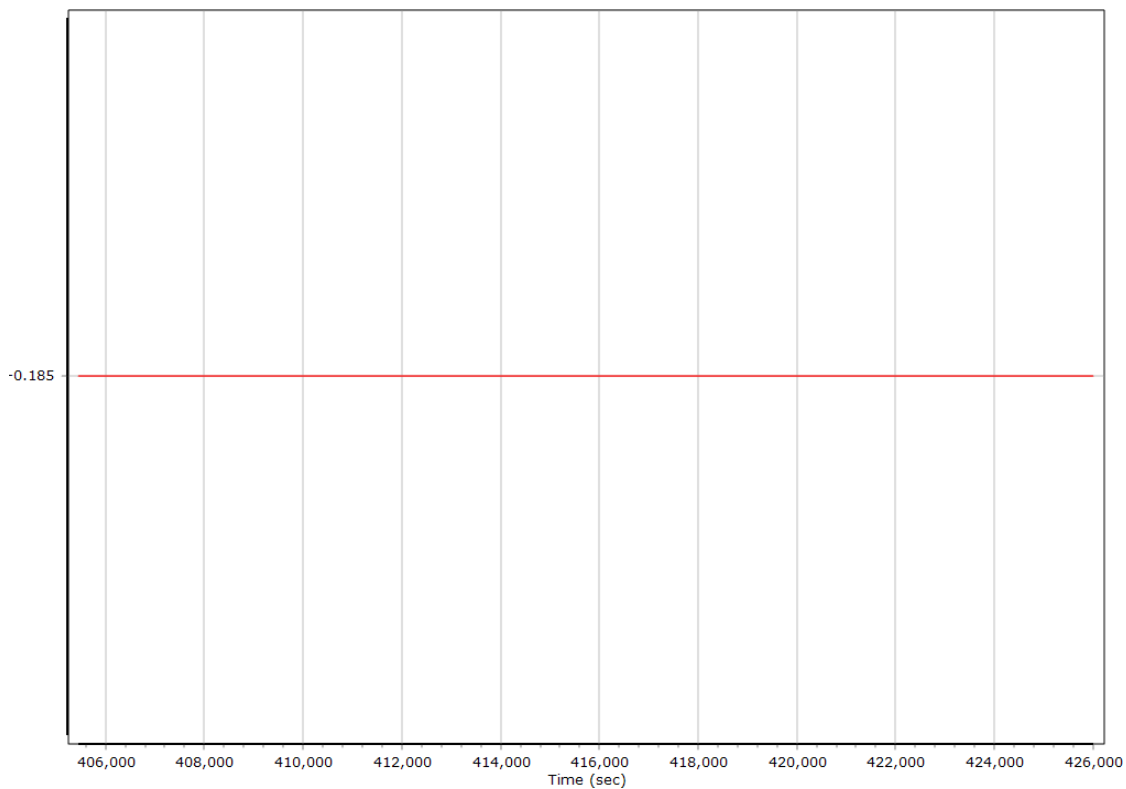
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

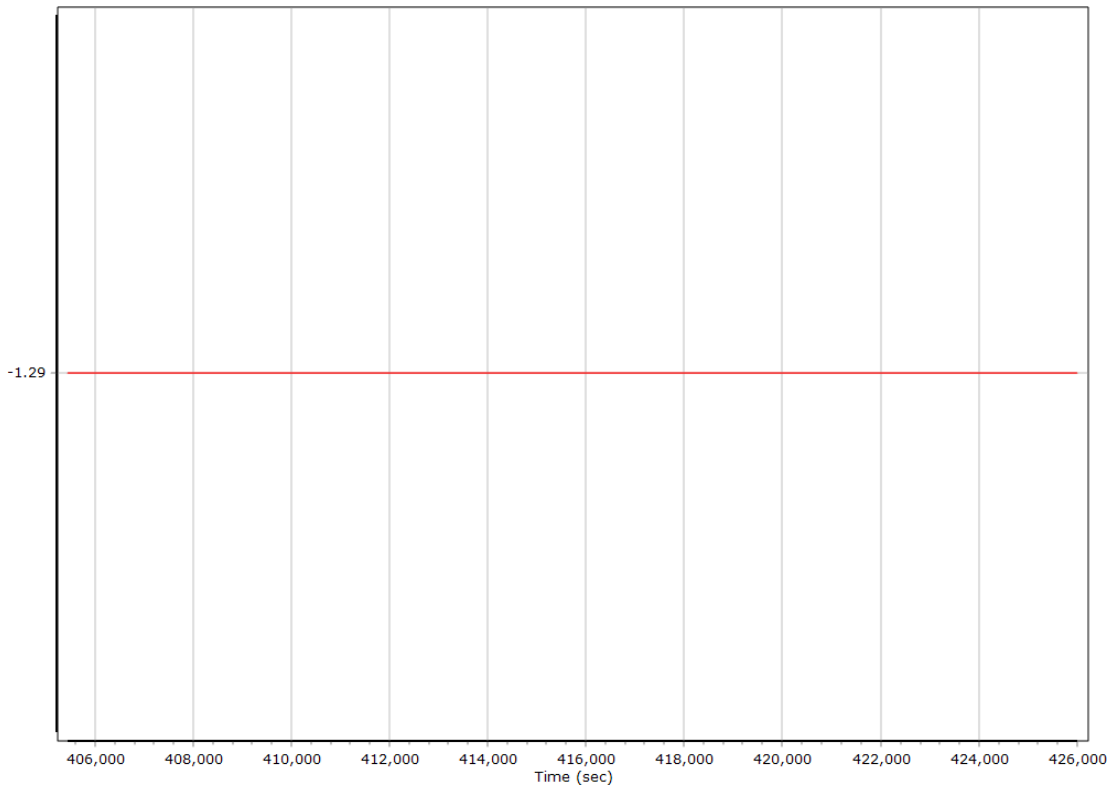
X Reference-Primary GNSS Lever Arm (m)



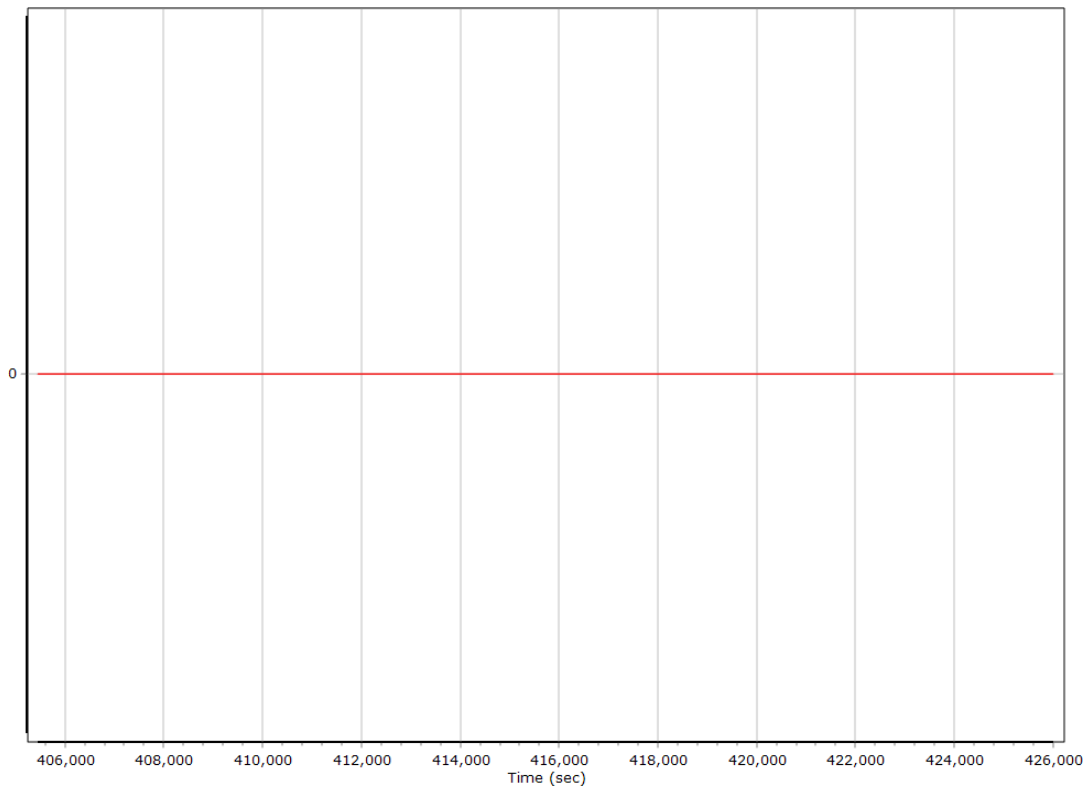
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



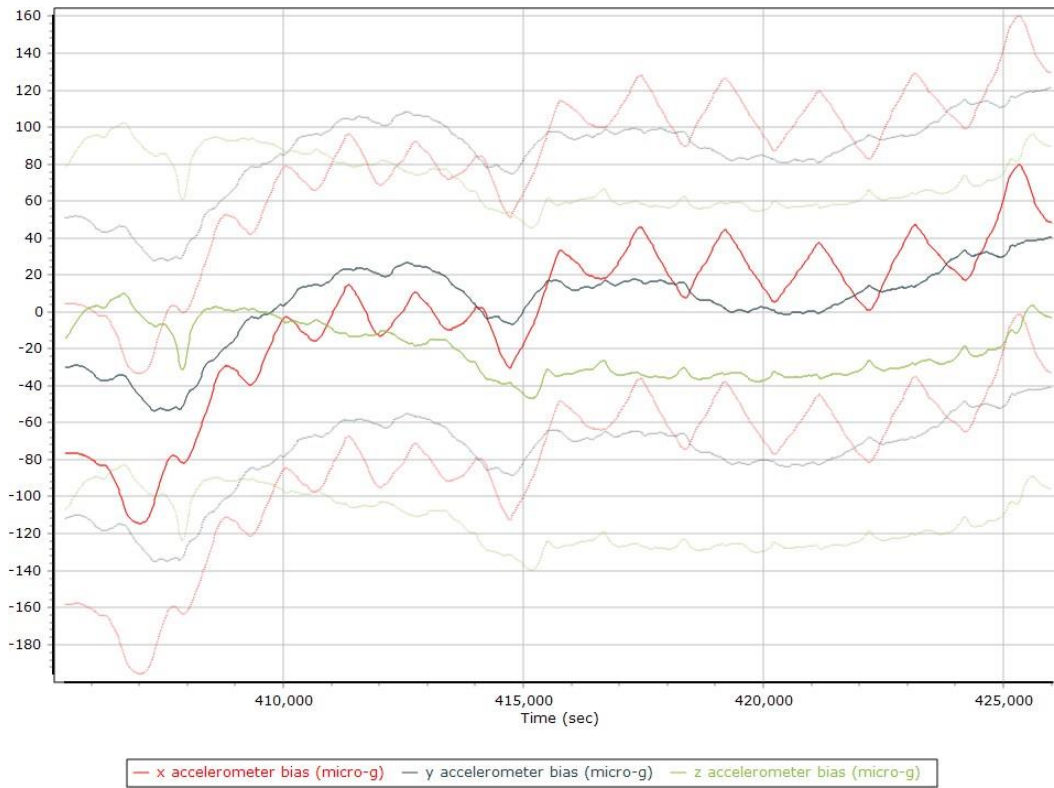
Reference-Primary GNSS Lever Arm Figure of Merit



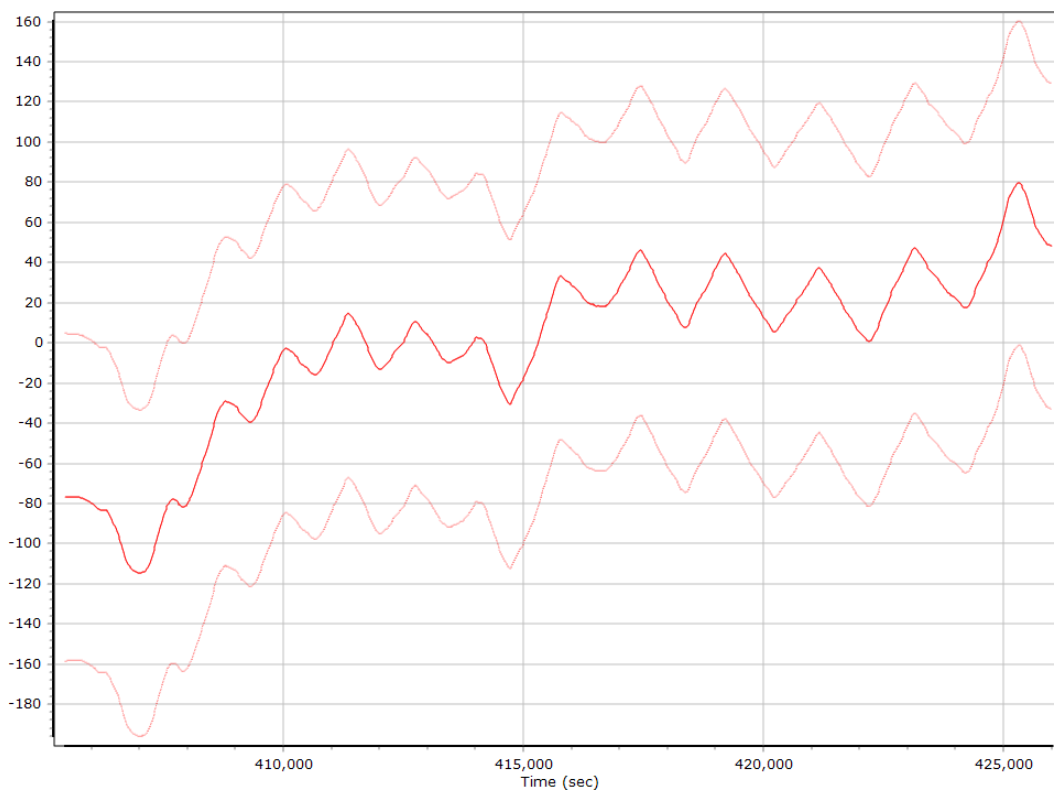
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

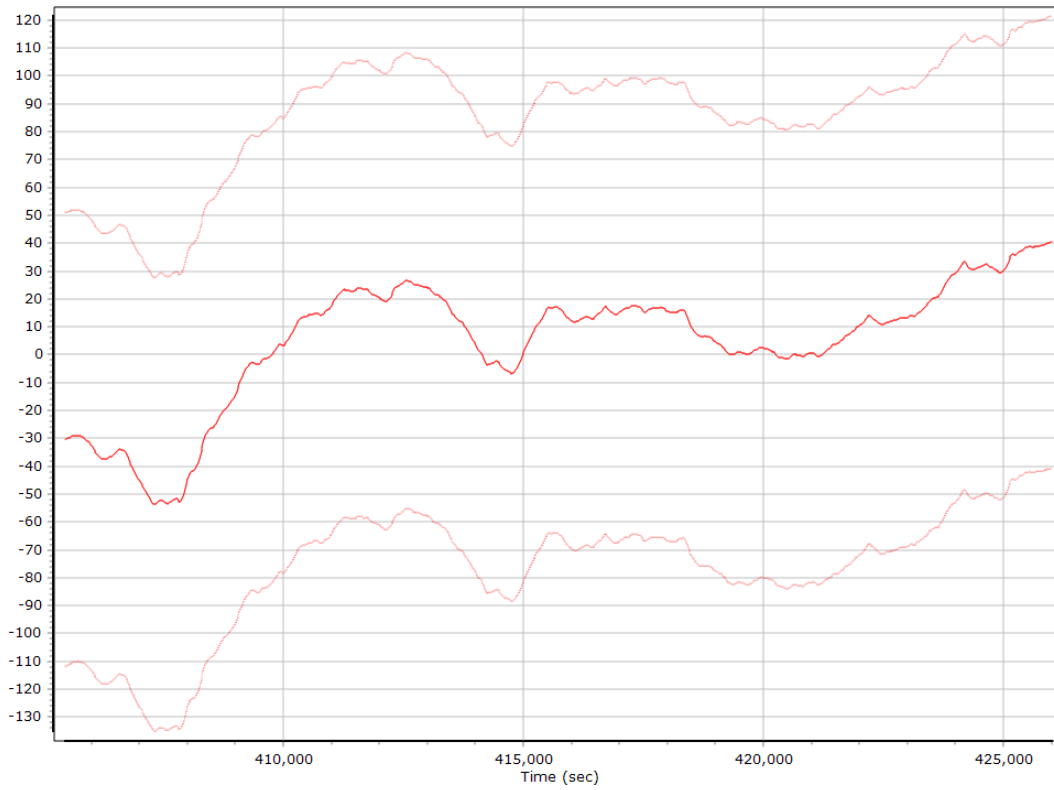
Accelerometer Bias (micro-g)



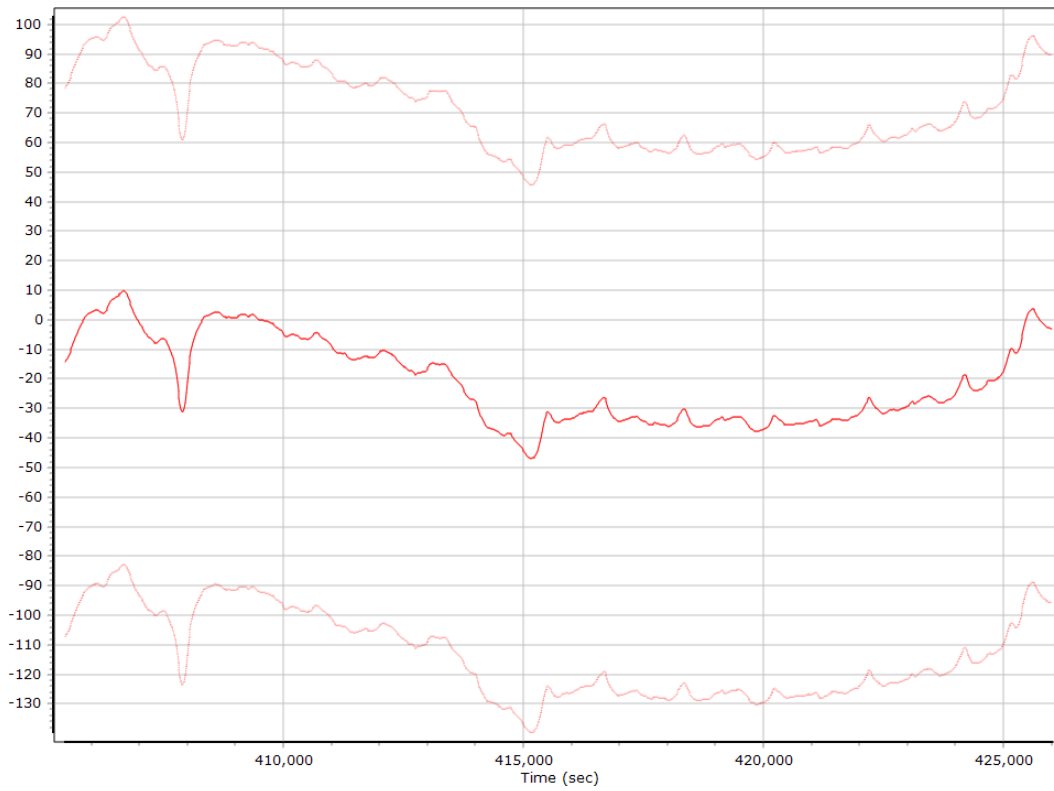
X Accelerometer Bias (micro-g)



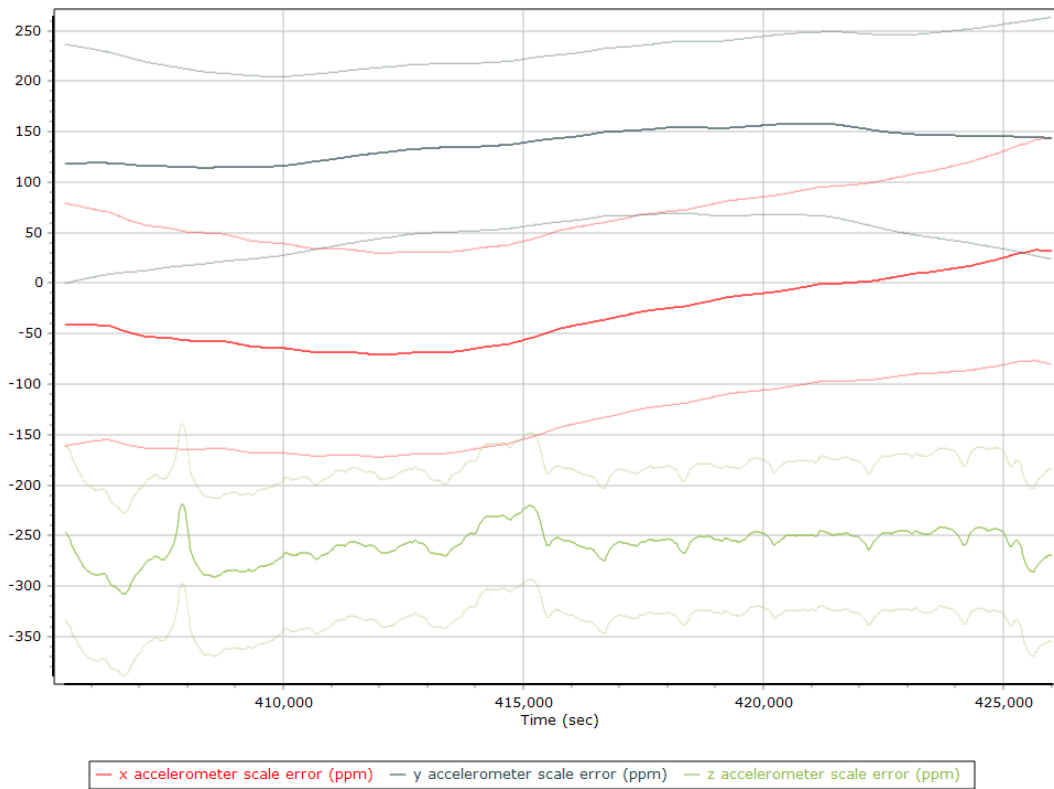
Y Accelerometer Bias (micro-g)



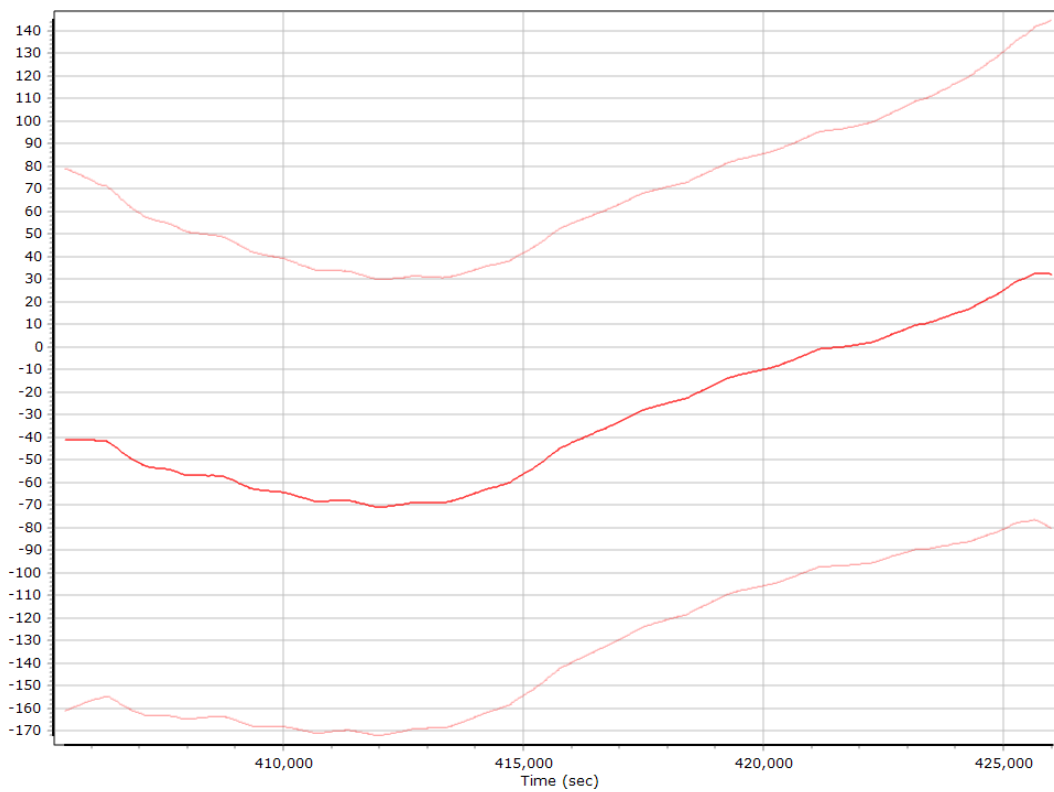
Z Accelerometer Bias (micro-g)



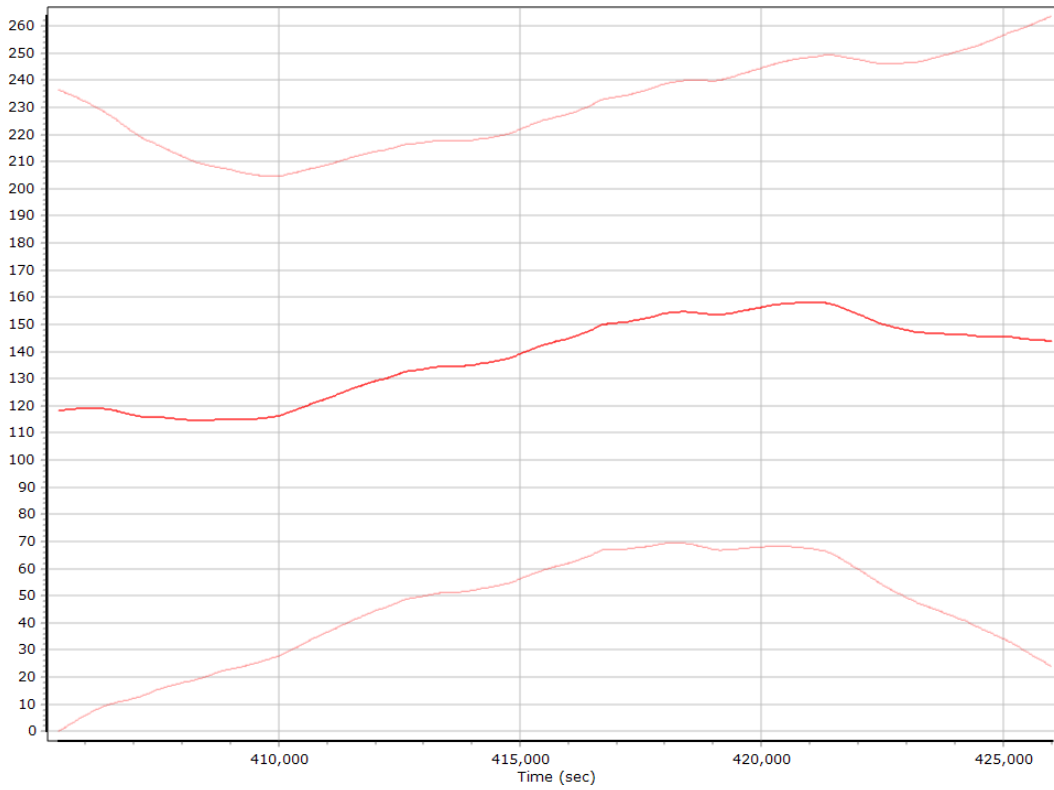
Accelerometer Scale Error (ppm)



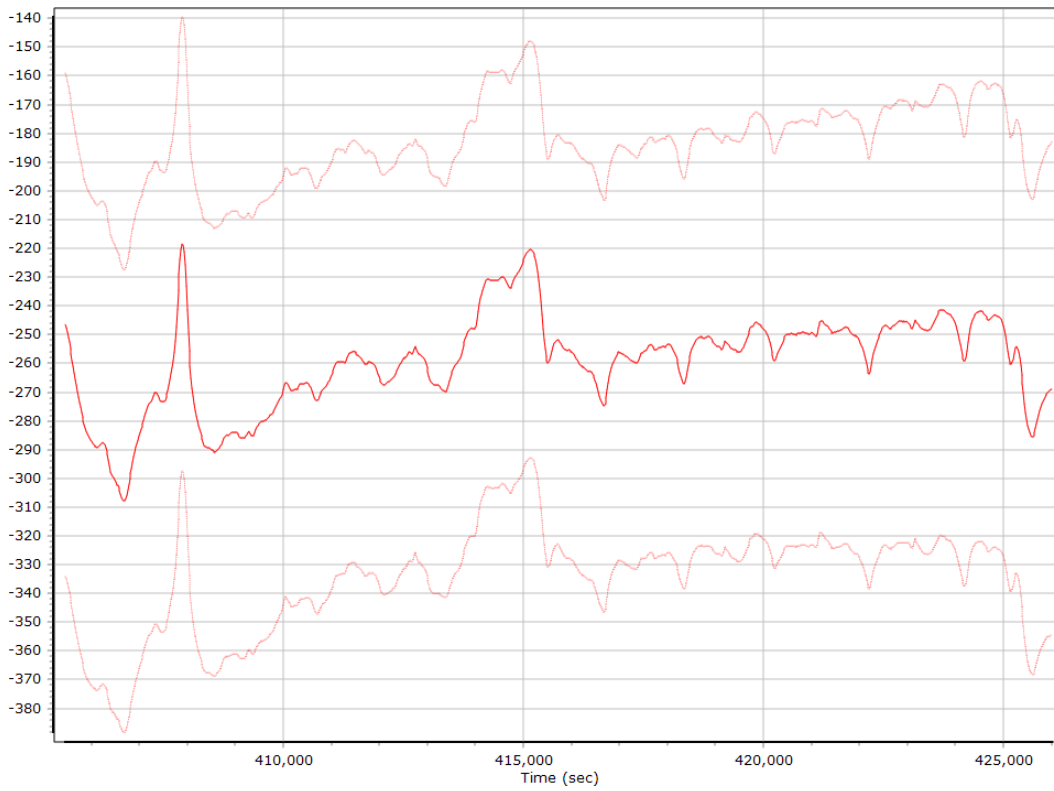
X Accelerometer Scale Error (ppm)



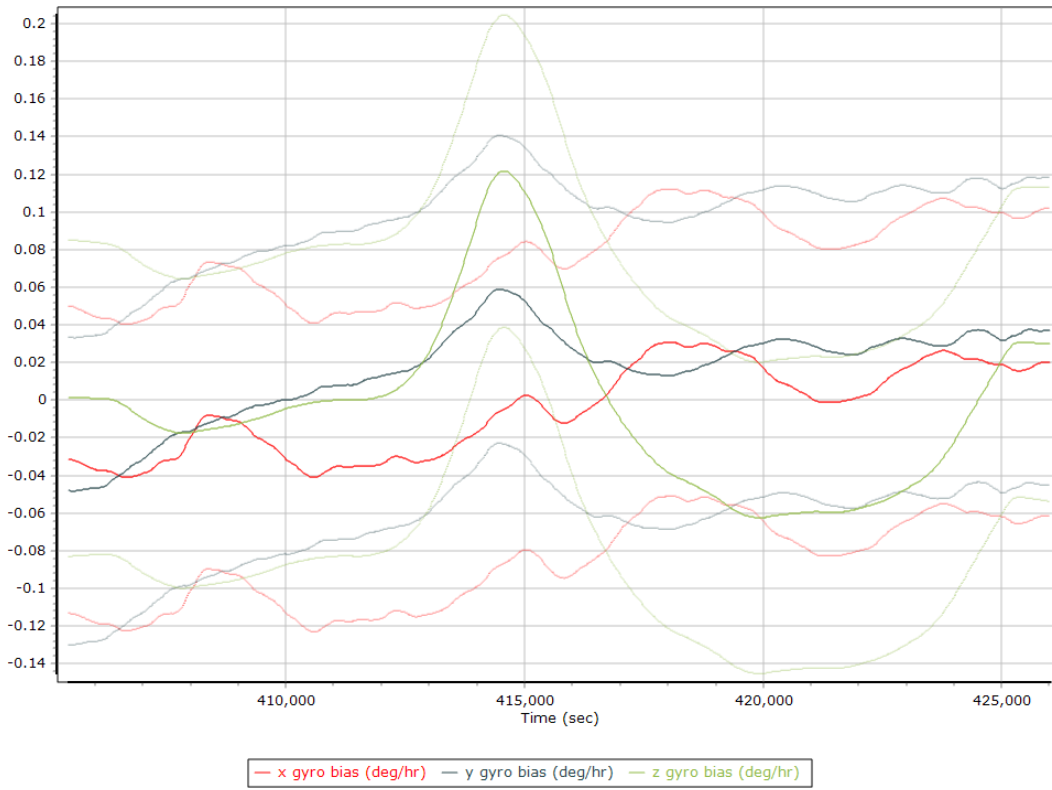
Y Accelerometer Scale Error (ppm)



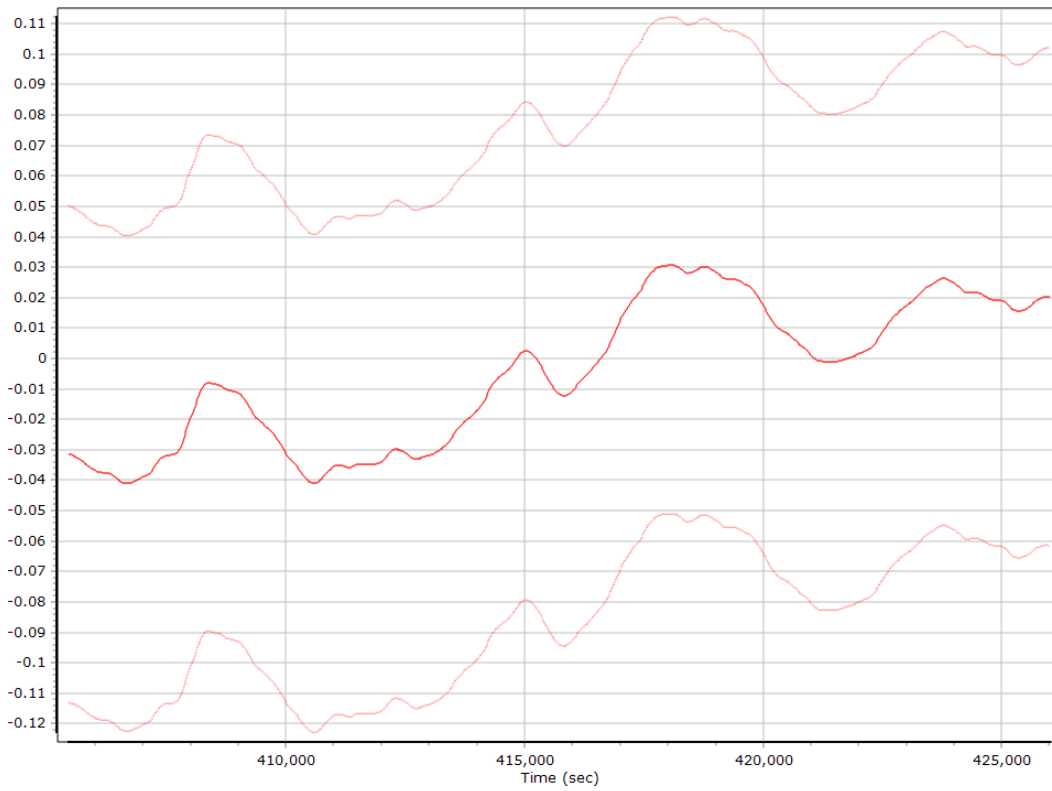
Z Accelerometer Scale Error (ppm)



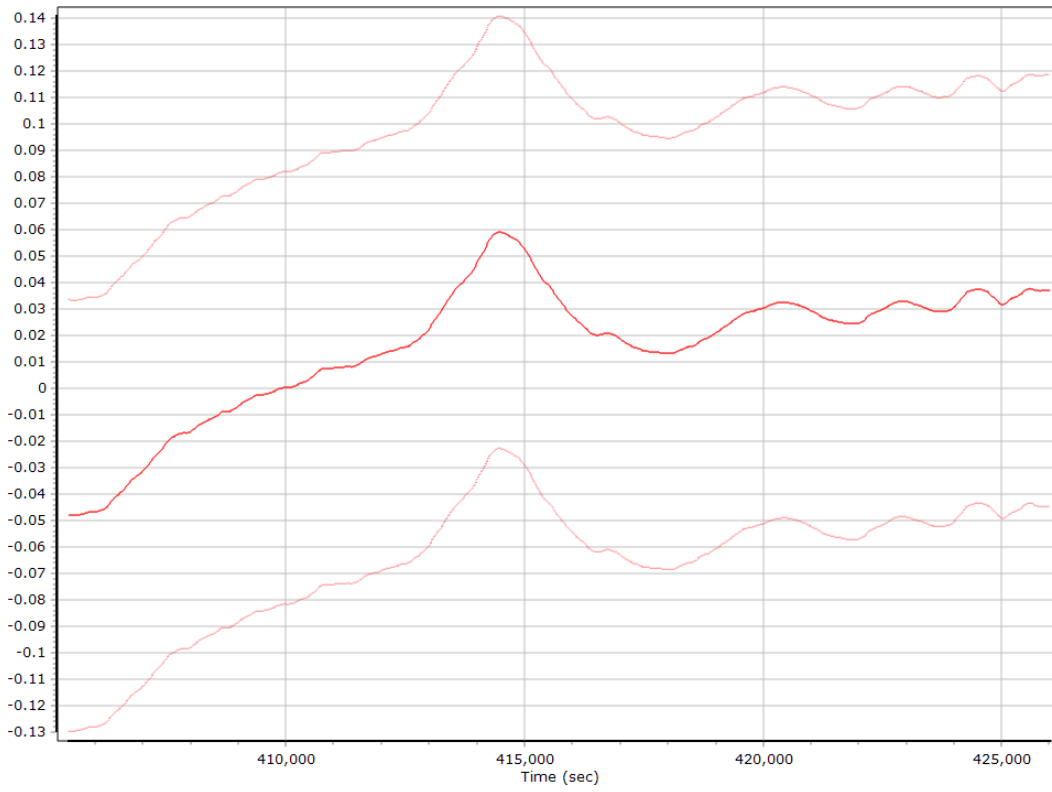
Gyro Bias (deg/h)



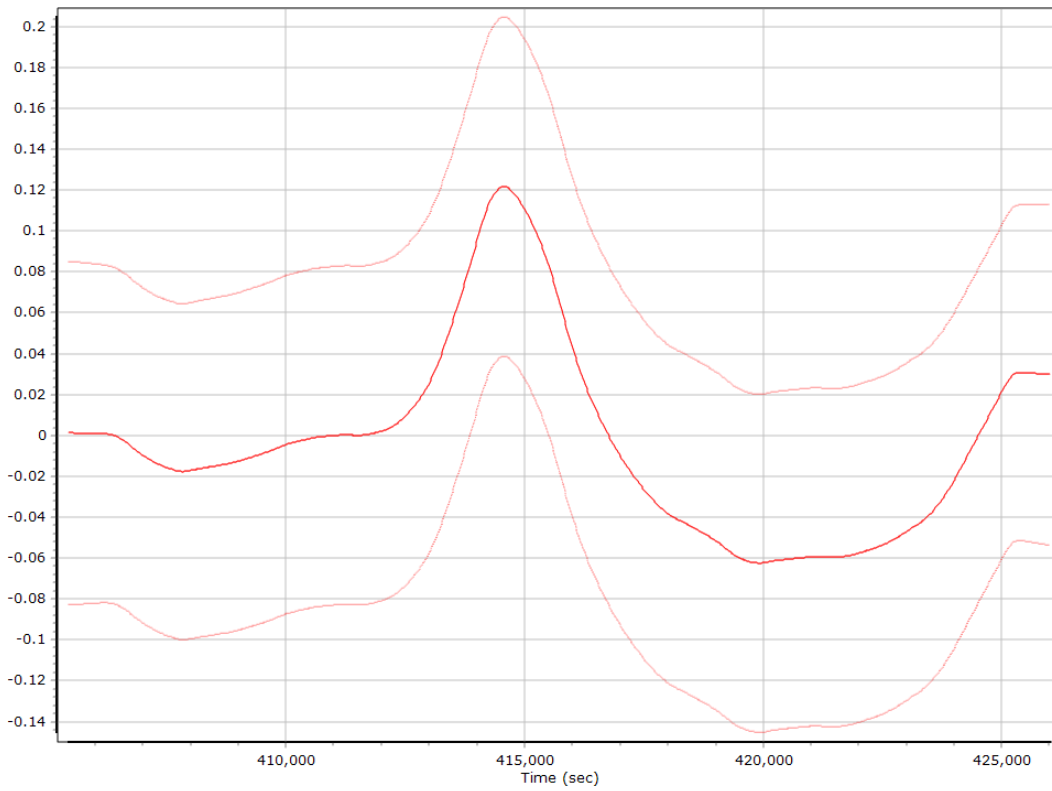
X Gyro Bias (deg/h)



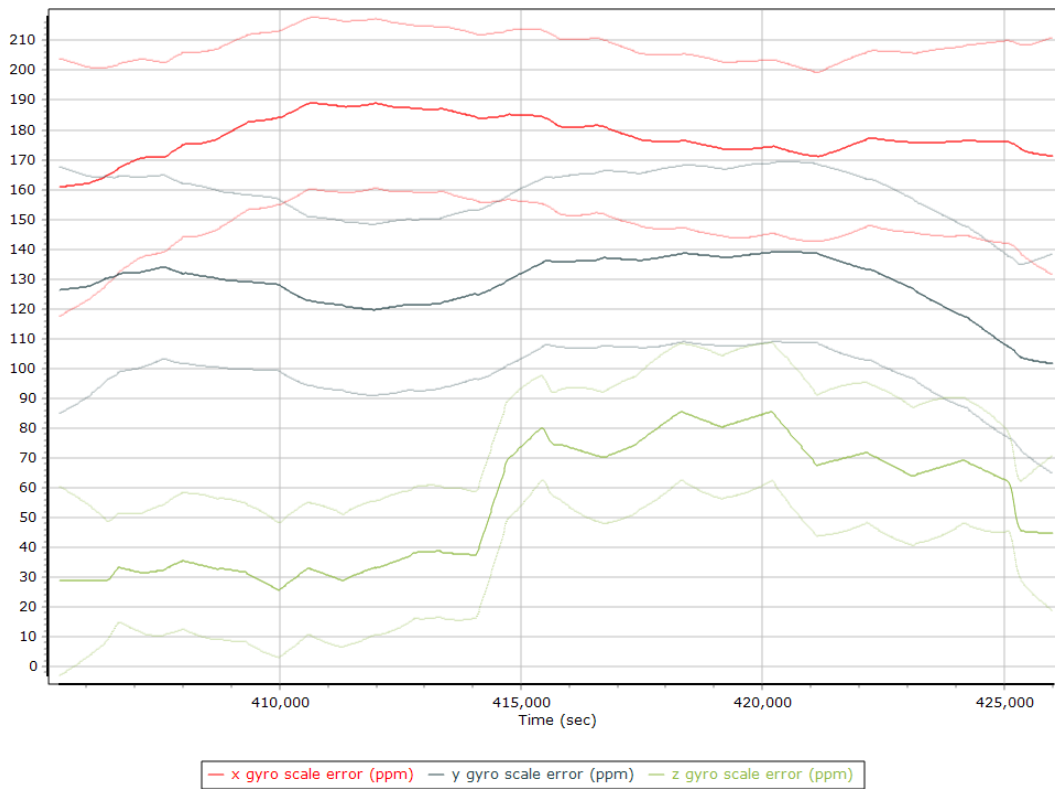
Y Gyro Bias (deg/h)



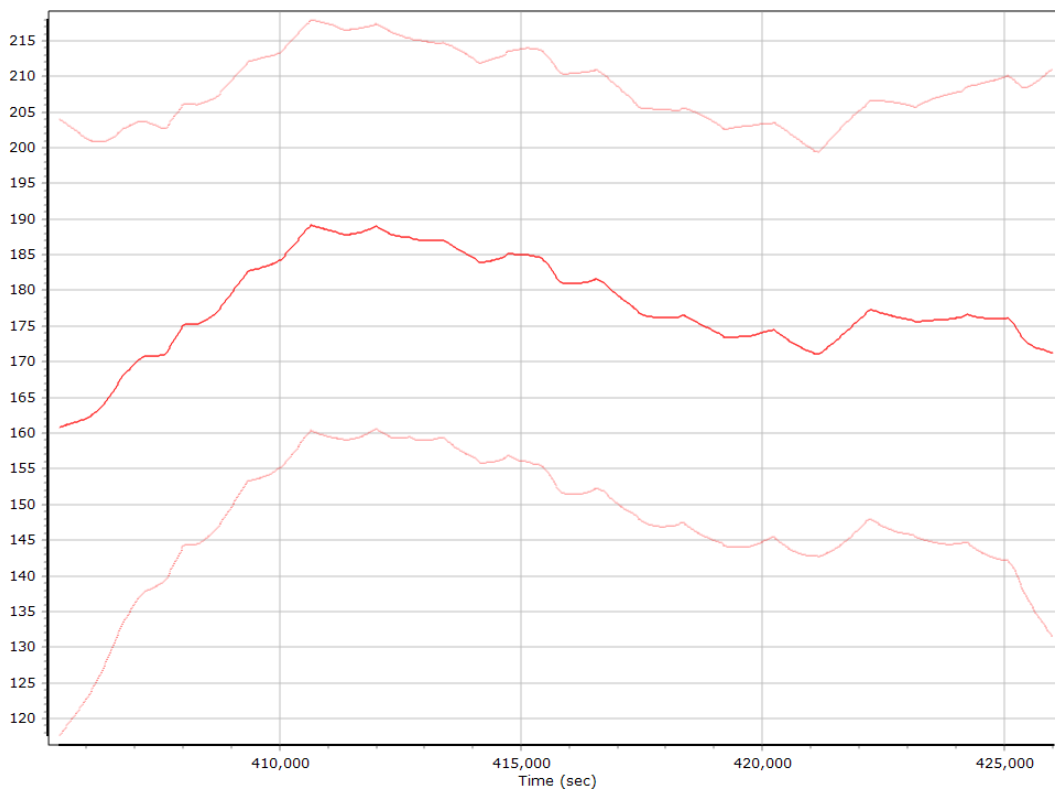
Z Gyro Bias (deg/h)



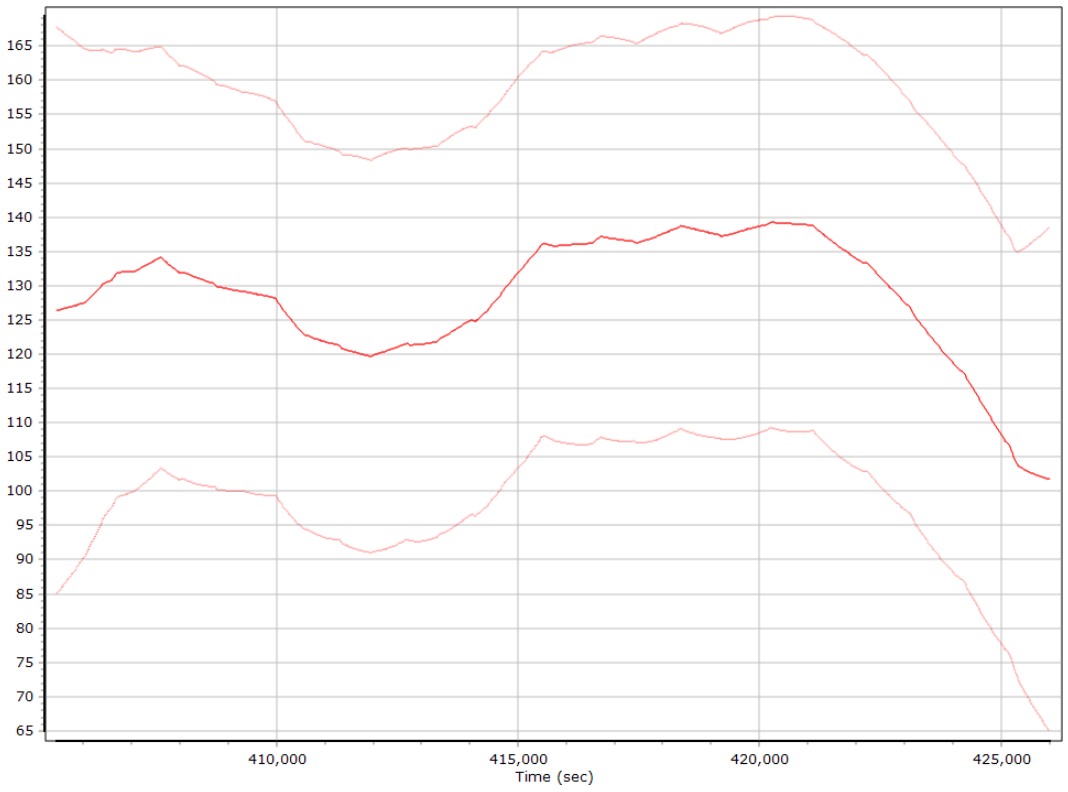
Gyro Scale Error (ppm)



X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

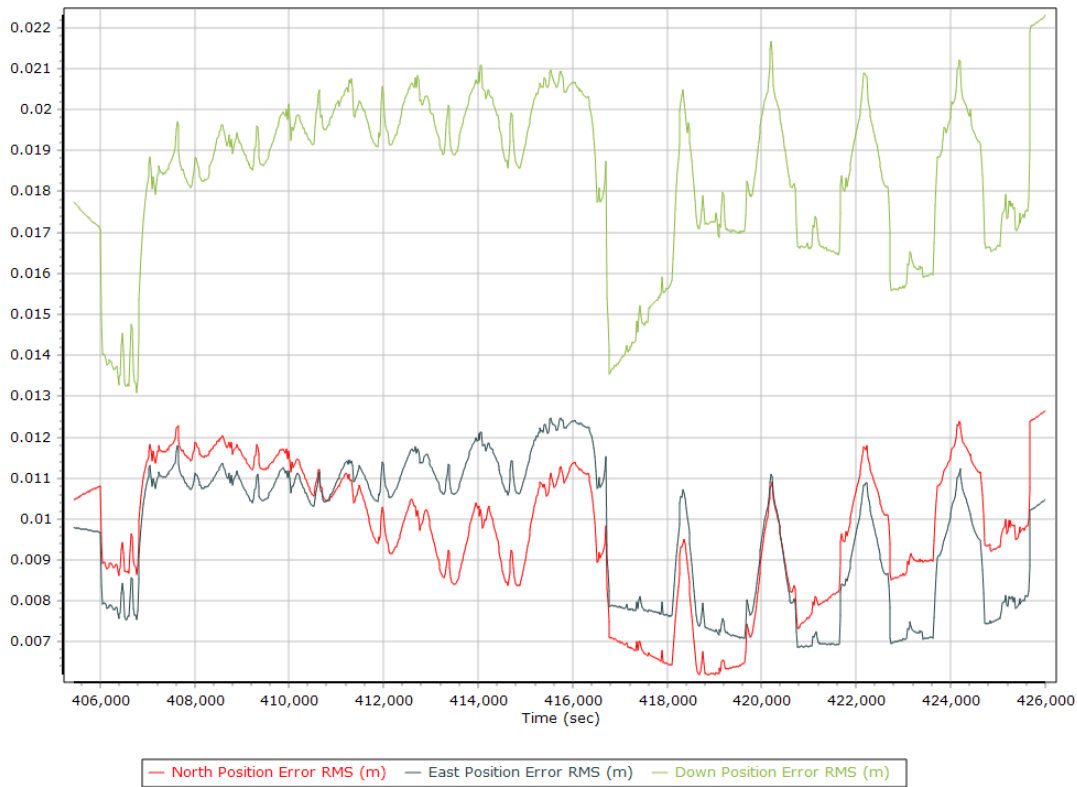


Z Gyro Scale Error (ppm)

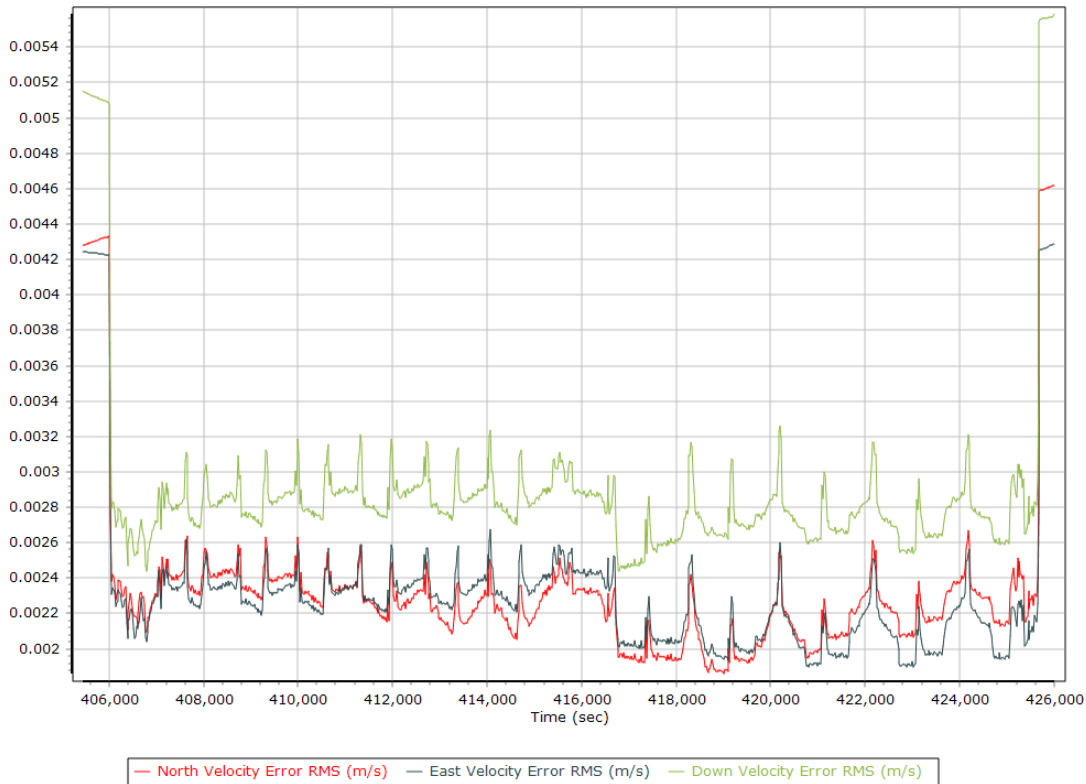


Smoothed Performance Metrics

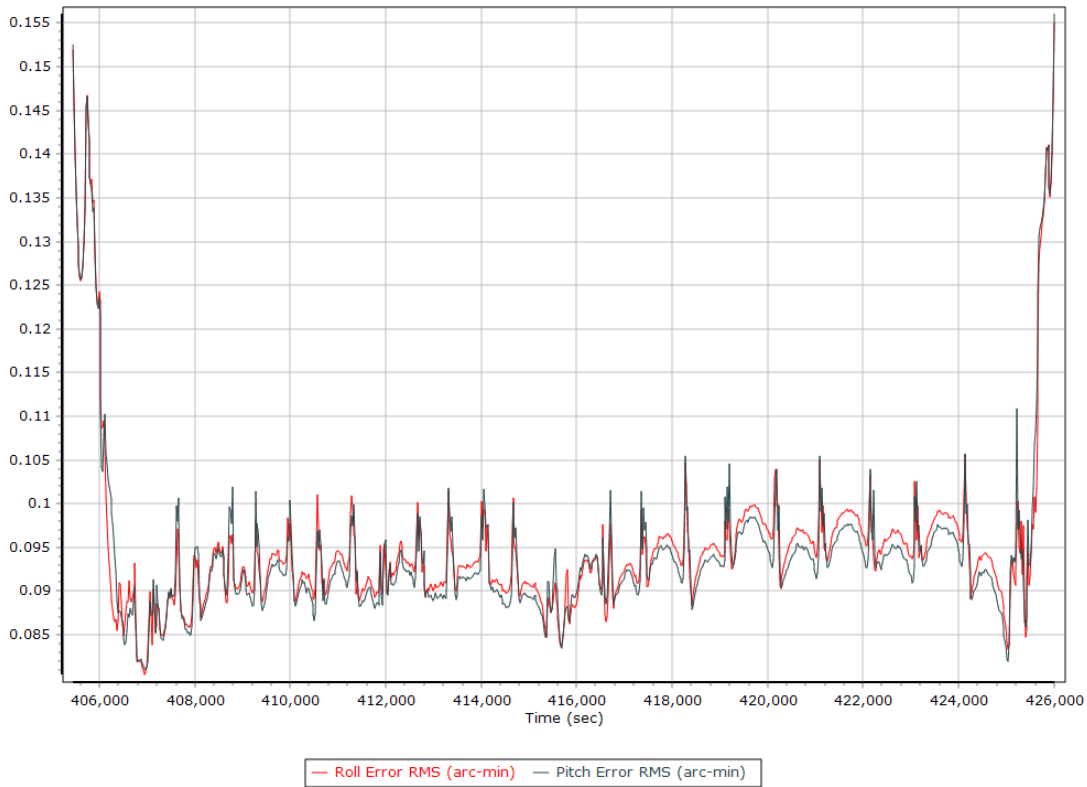
Position Error RMS (m)



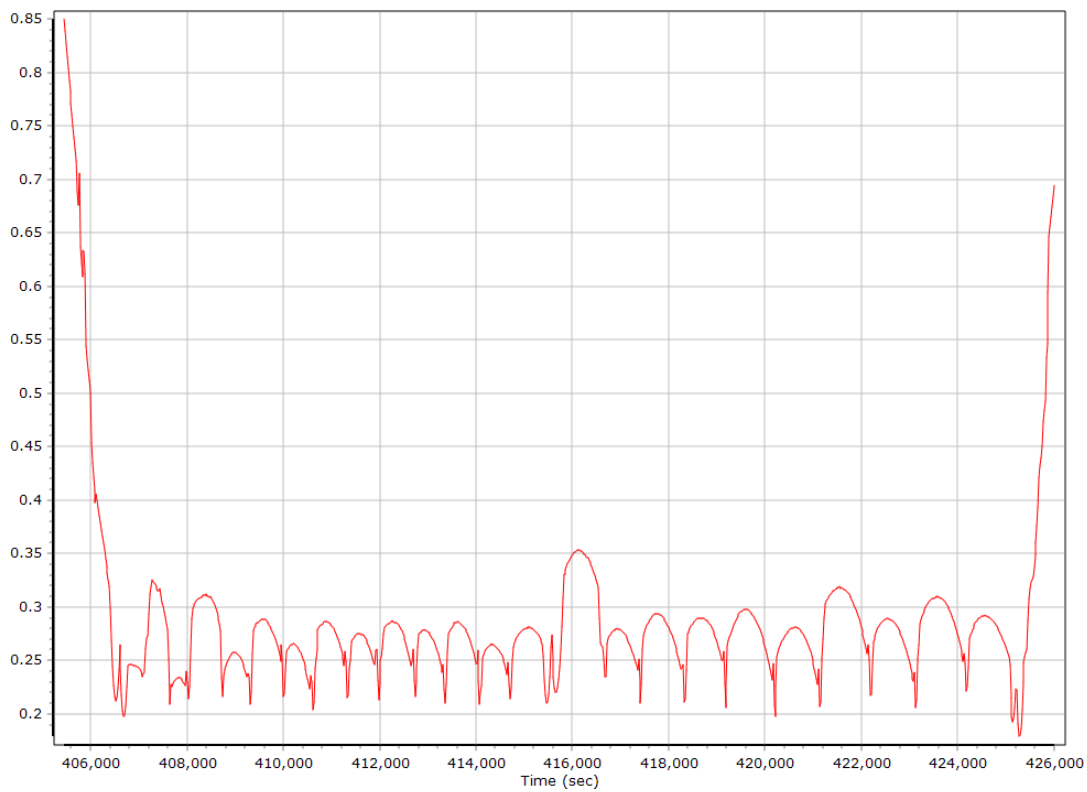
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

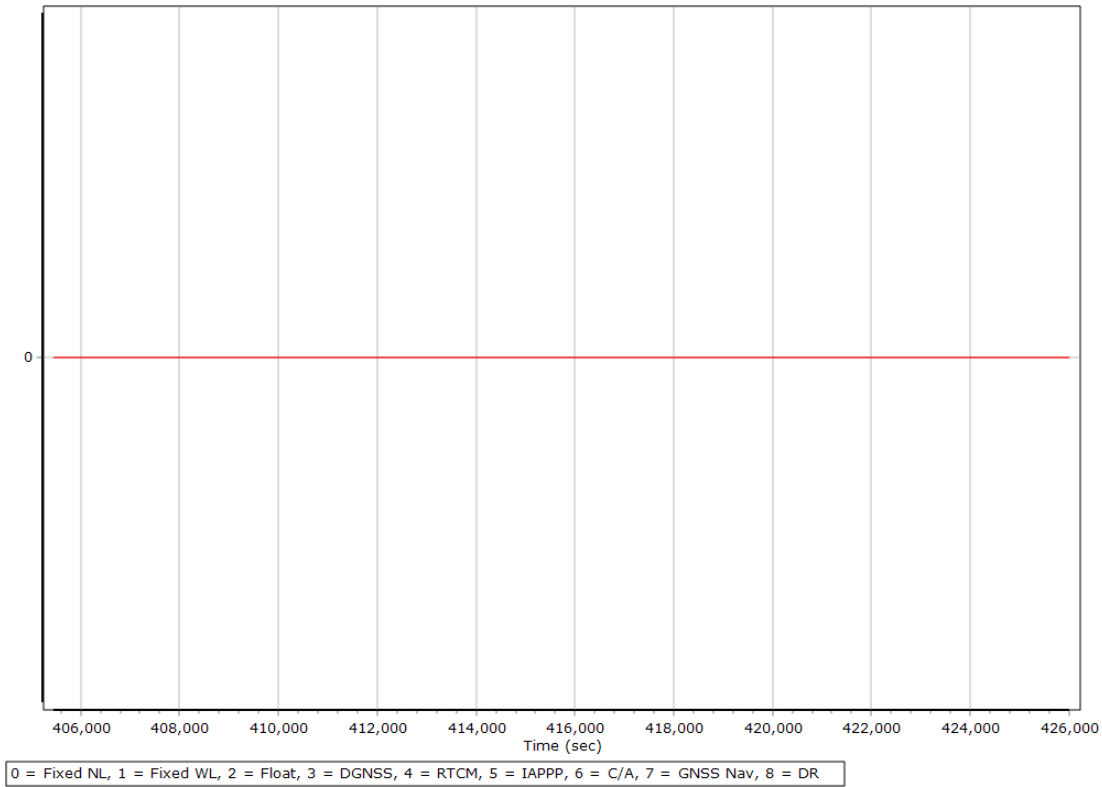


Heading Error RMS (arc-min)

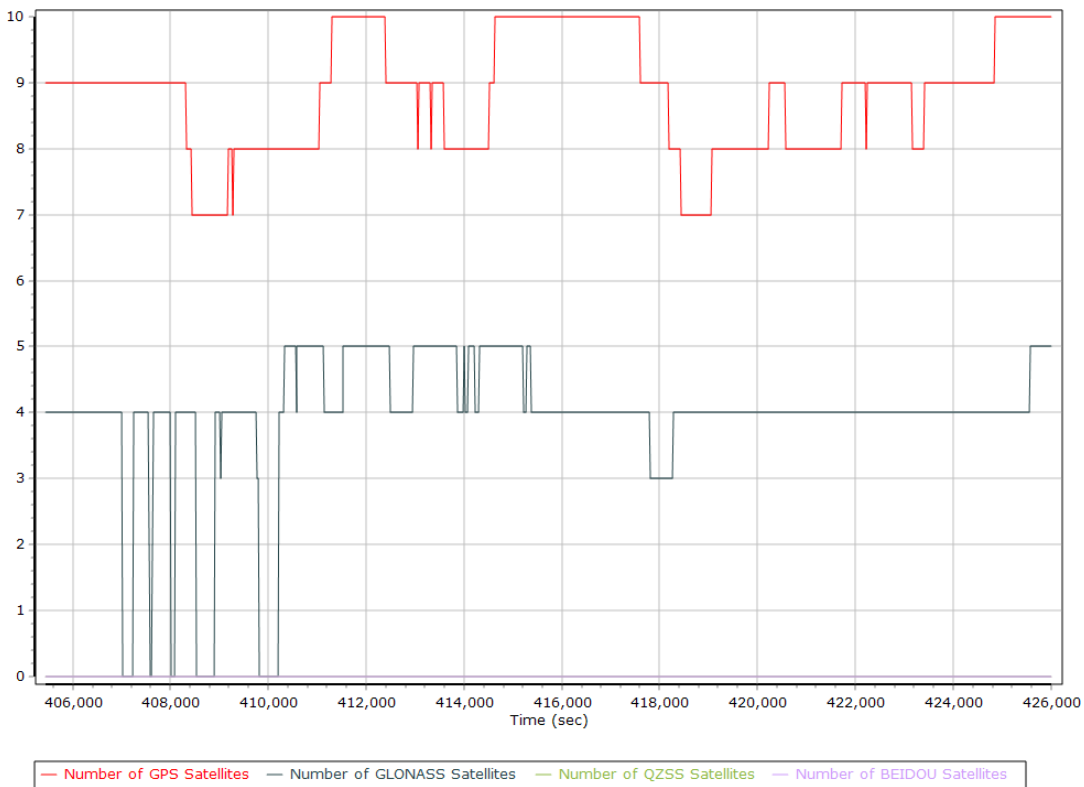


Smoothed Solution Status

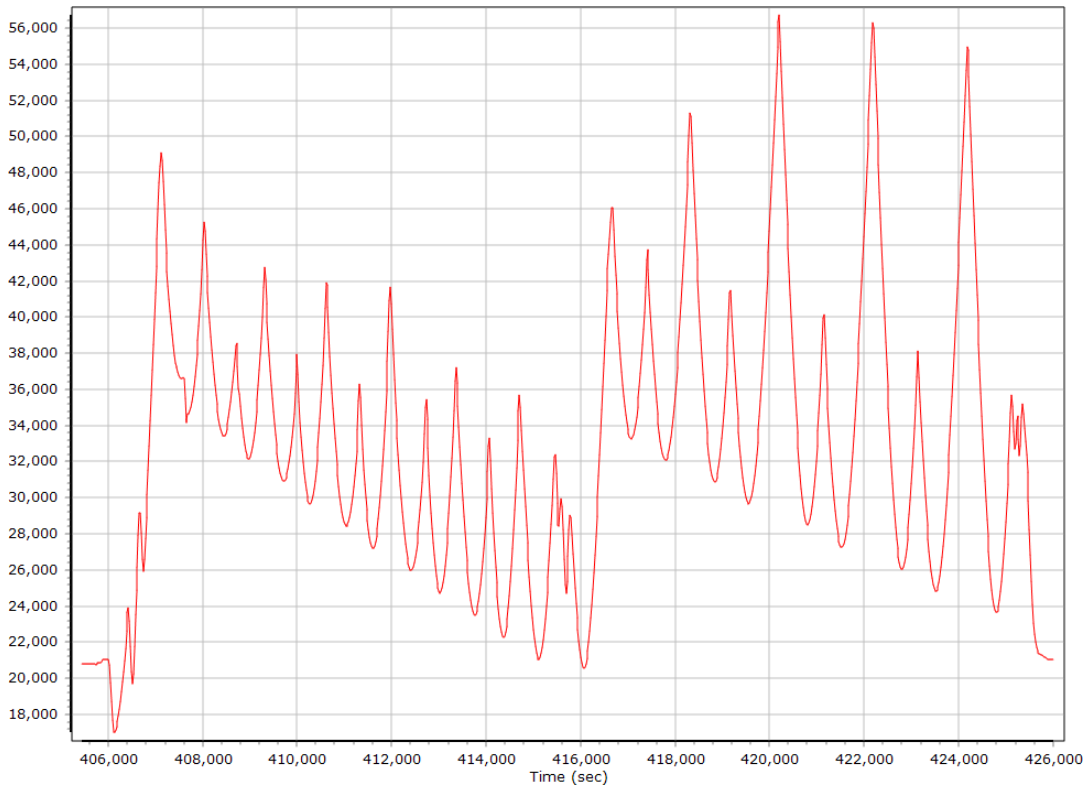
Processing Mode



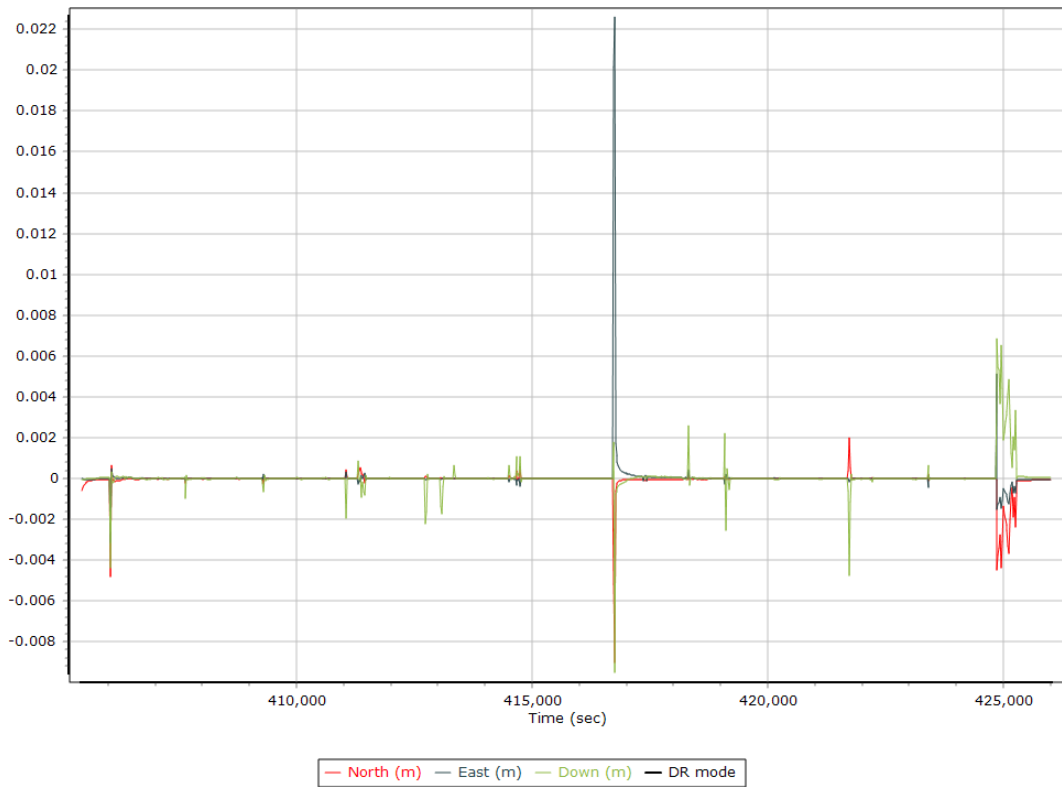
Number of Satellites



Baseline Length



SBET IAKAR Separation



General Information

Mission Information

Project name	6419354a
Processing date	2019-12-31 19:31:17
Mission date	2019-12-20 14:51:37
Mission duration	05:35:47.000
Processing mode	IN-Fusion GNSS Nav

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N8708
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
191220_145118_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3540.19g	GLONASS Broadcast Ephemeris
Ephm3540.19n	GPS Broadcast Ephemeris
Ephm3540.19g	GLONASS Broadcast Ephemeris
Ephm3540.19n	GPS Broadcast Ephemeris
flcb3540_1sec.19o	GNSS SingleBase
talh3540_1sec.19o	GNSS SingleBase

Output Files

Filename	File type
sbet_6219354a.out	SBET Trajectory File

Rover Data Summary

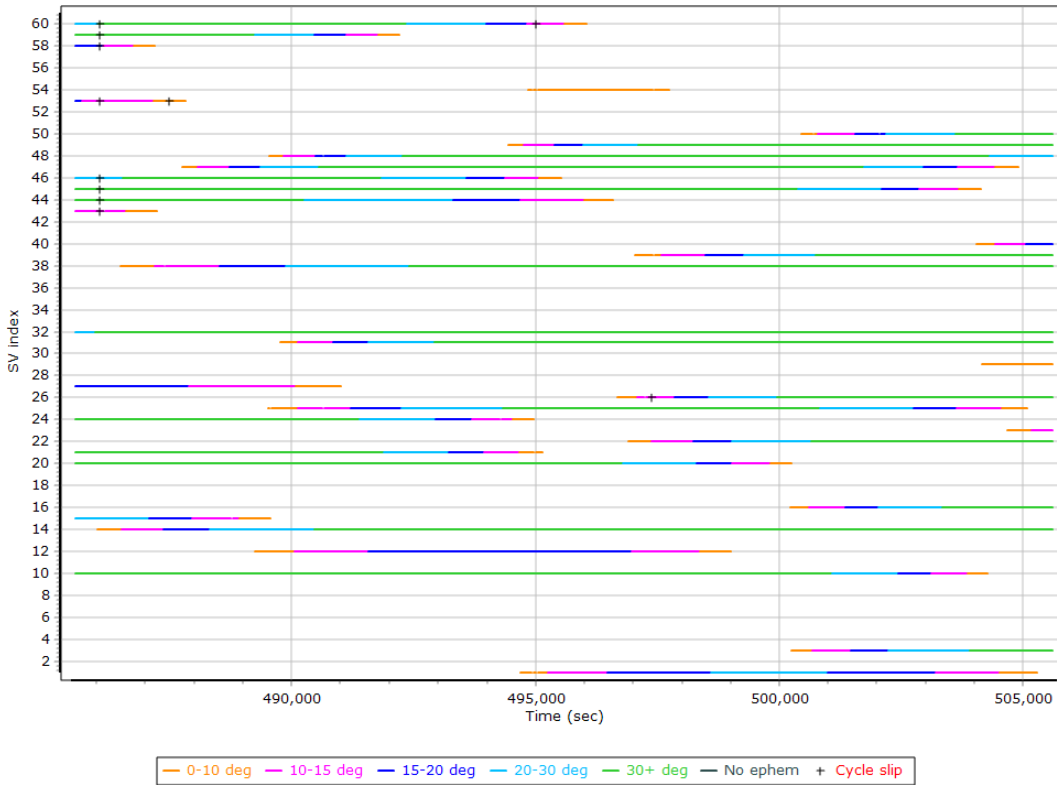
First raw data file	191220_145118_INS-GPS_1.raw		
Last raw data file	191220_145118_INS-GPS_1.raw		
Start GPS week	2084		
Start time	485478.679 (12/20/2019 2:51:18 PM)		
End time	505623.403 (12/20/2019 8:27:03 PM)		
Start of fine alignment	485497.398 (12/20/2019 2:51:37 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.046	-0.192	-1.285
Gimbal 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

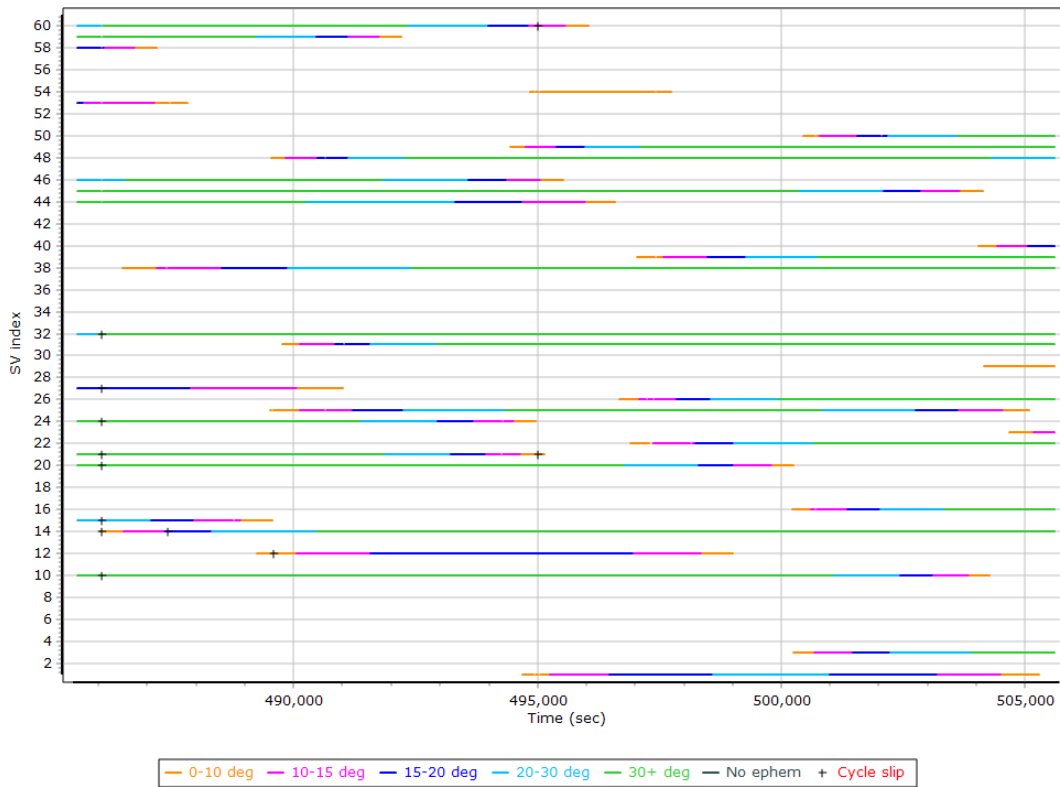
Raw IMU Import QC Summary

IMU data input file	imu_6219354a.dat
IMU data check log file	imudt_6219354a.log
IMU Records Processed	4028576
Termination Status	Normal
IMU Anomalies	0

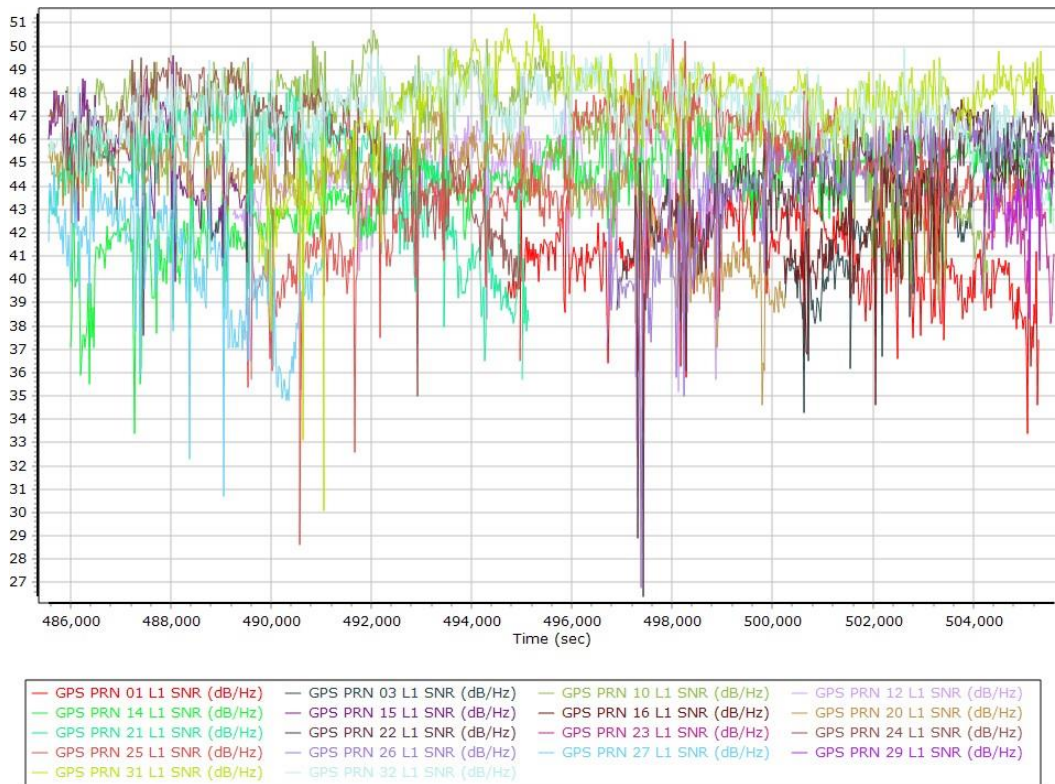
L1 Satellite Lock/Elevation



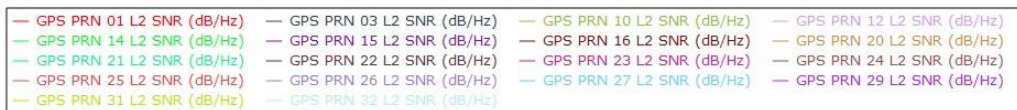
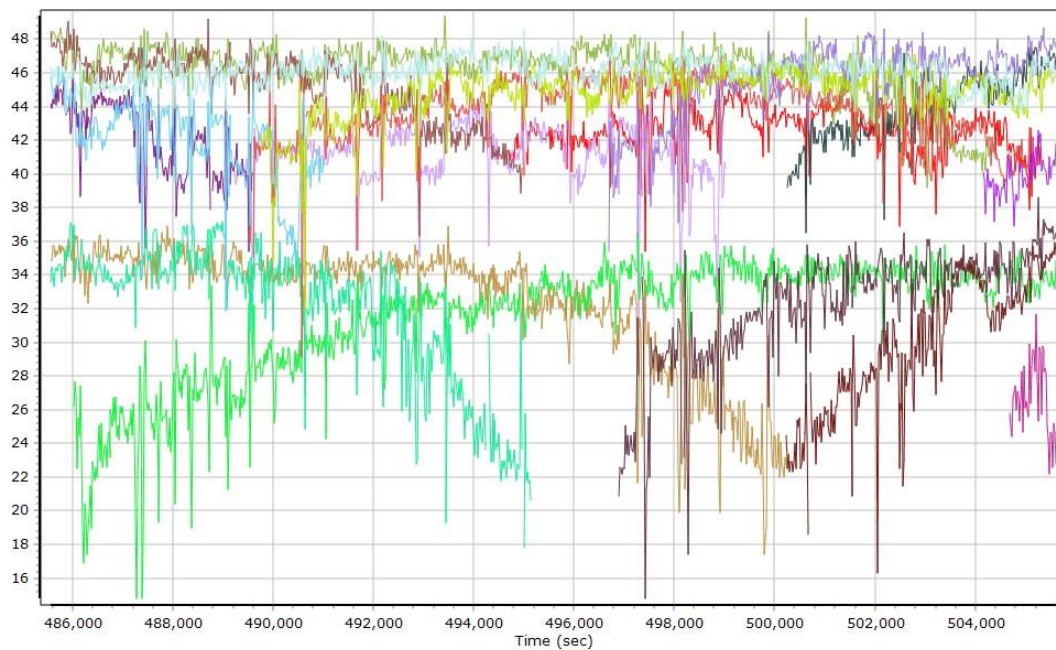
L2 Satellite Lock/Elevation



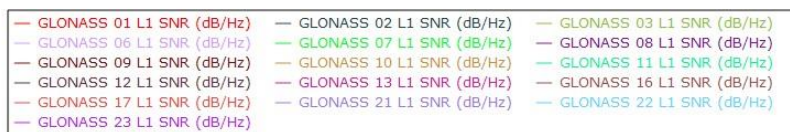
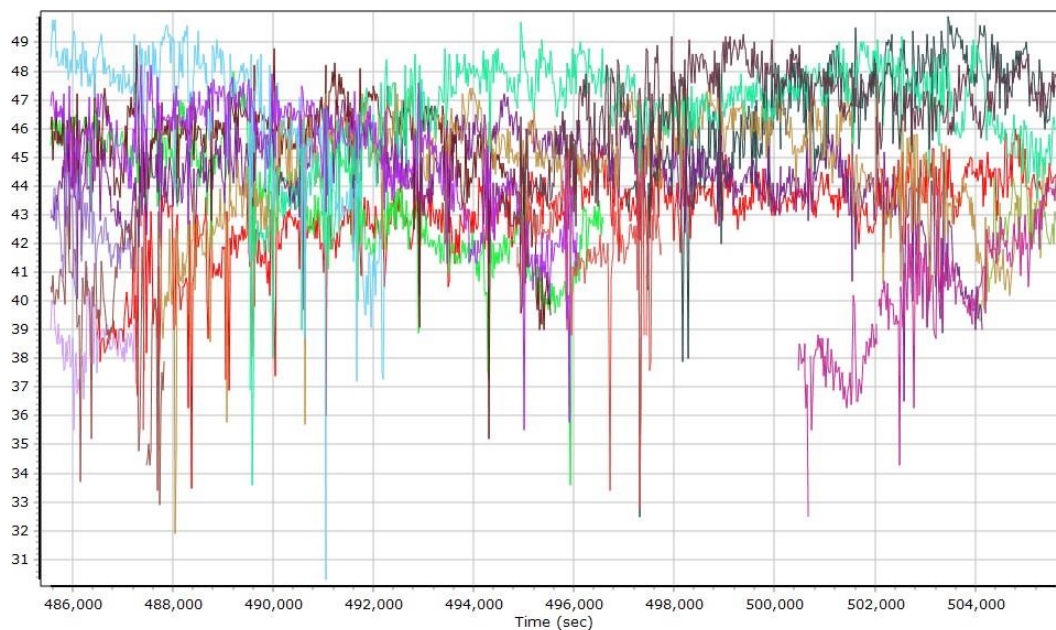
GPS L1 SNR



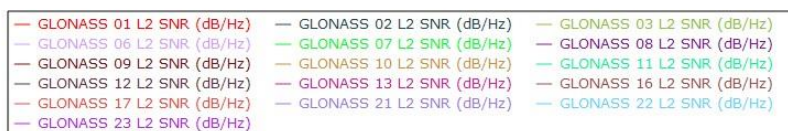
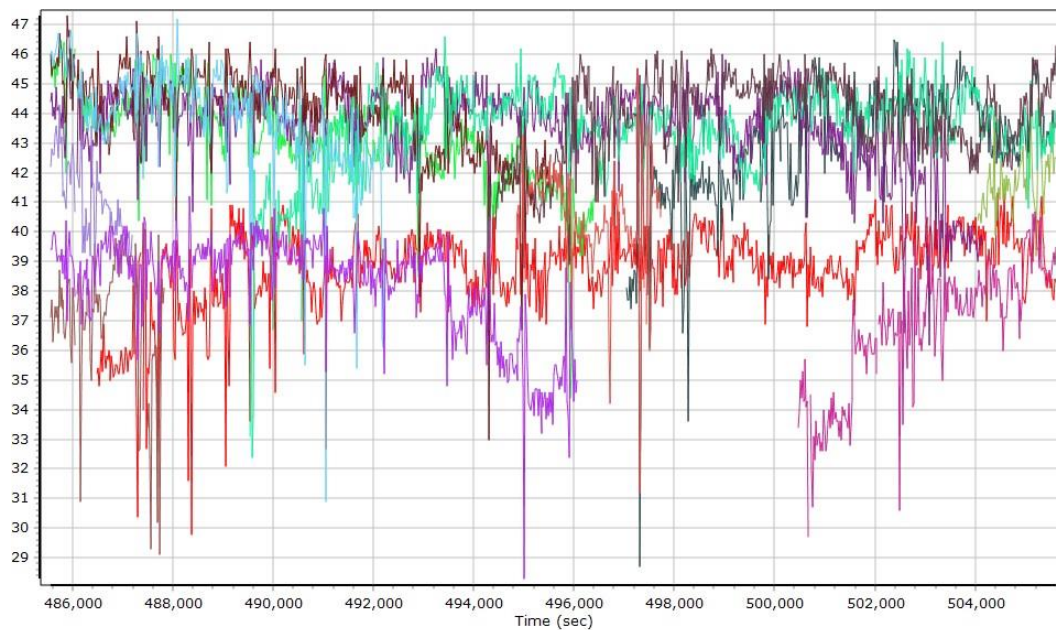
GPS L2 SNR



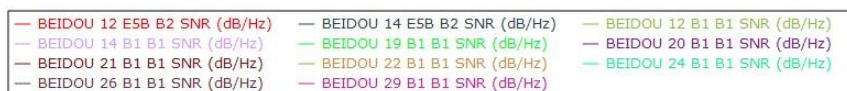
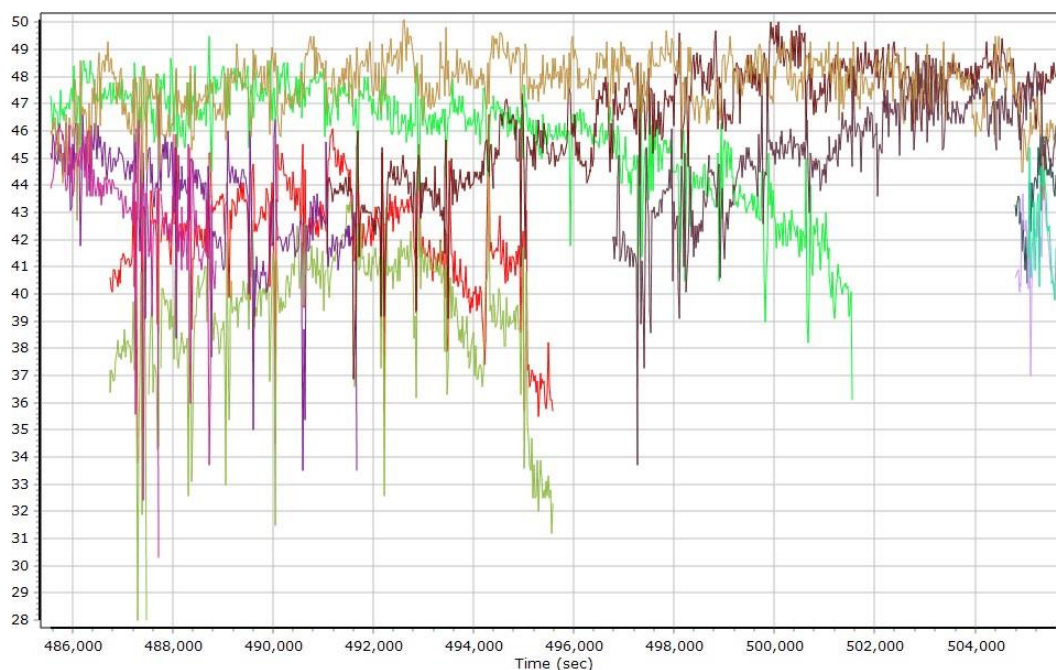
GLONASS L1 SNR



GLONASS L2 SNR

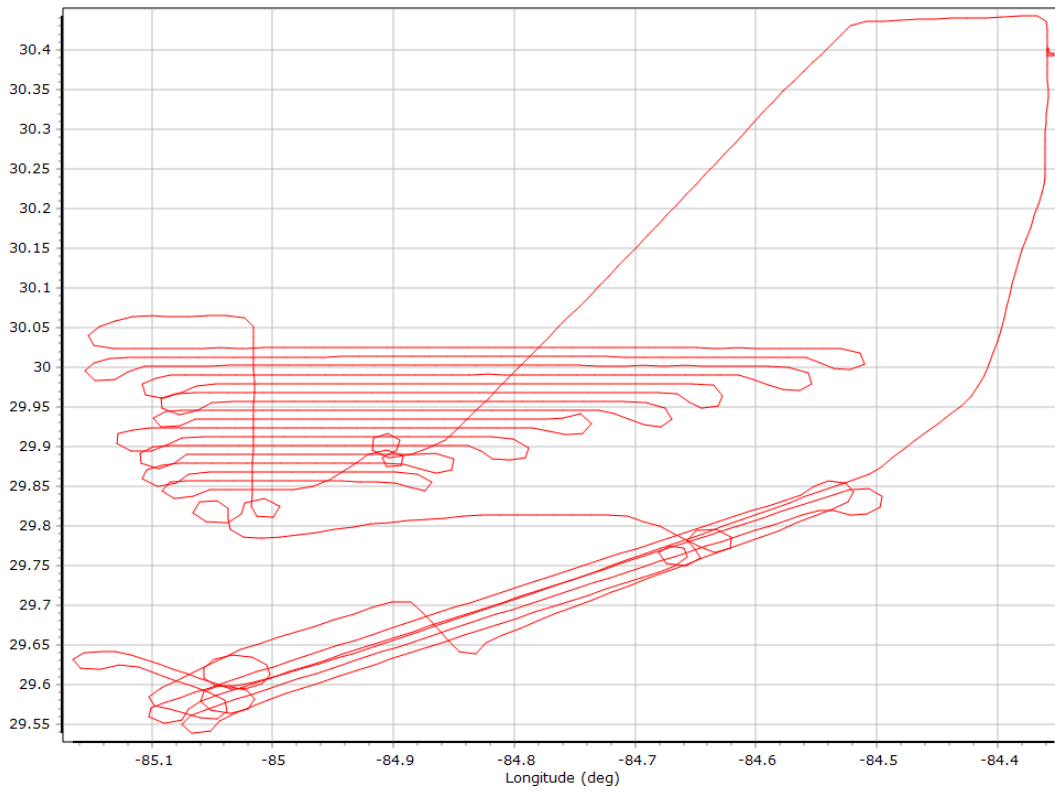


BEIDOU SNR

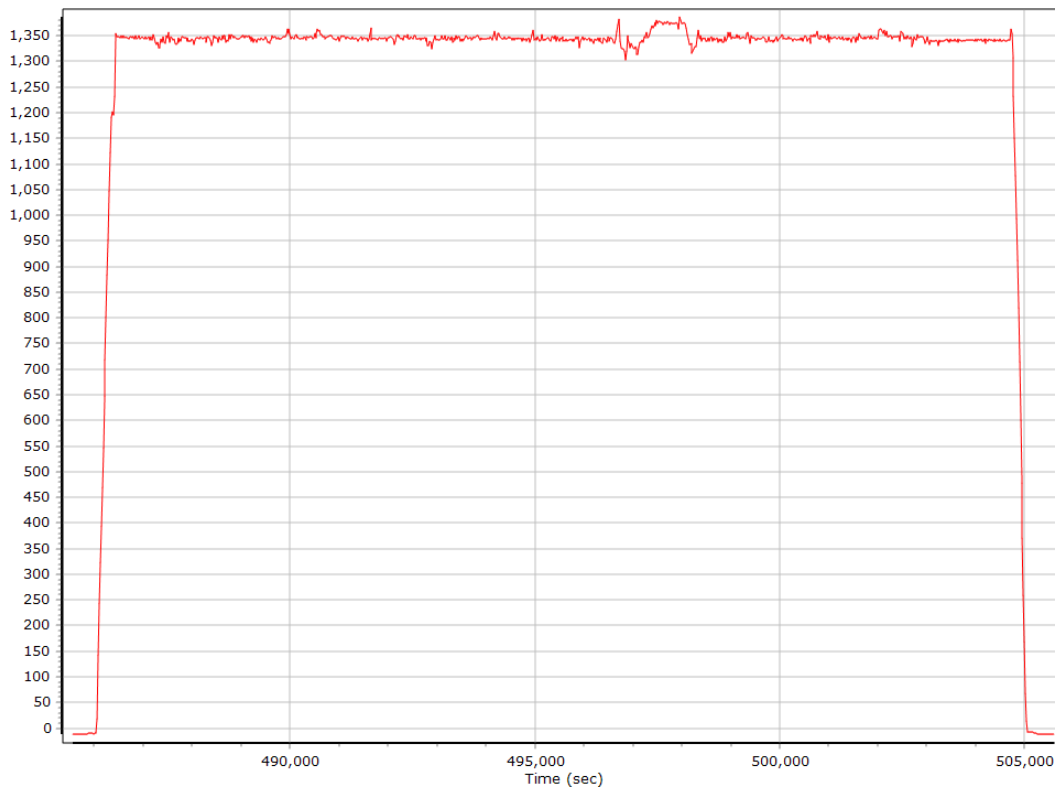


Trajectory Information

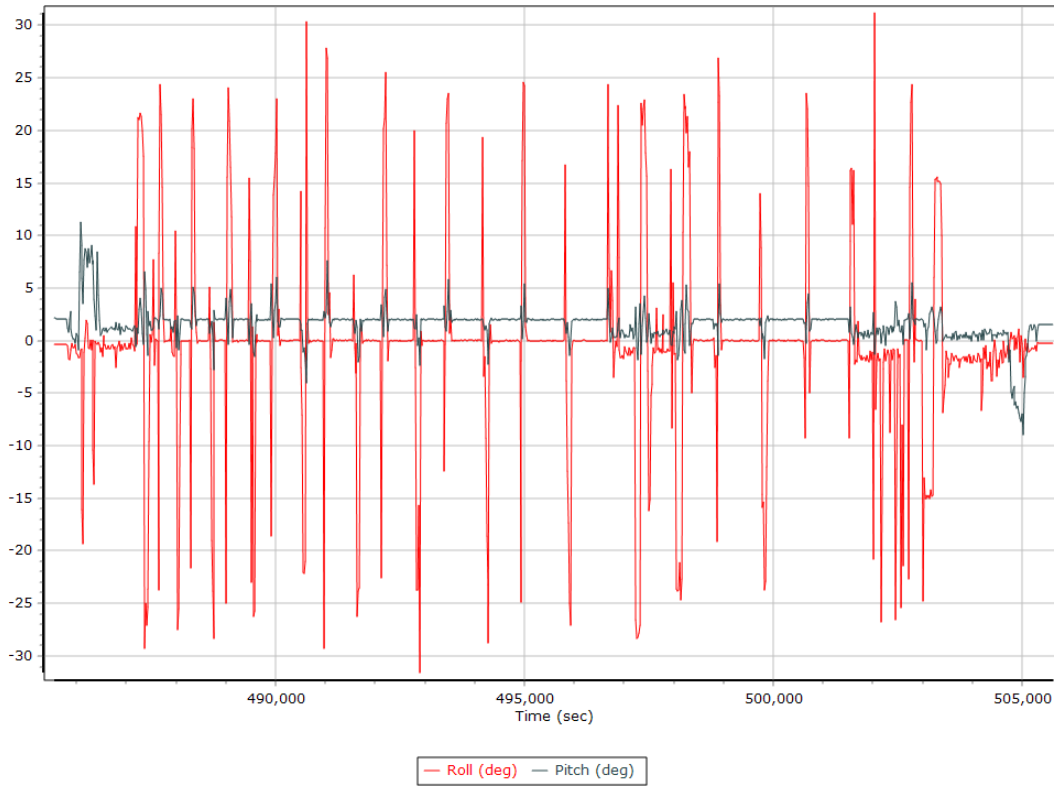
Top View



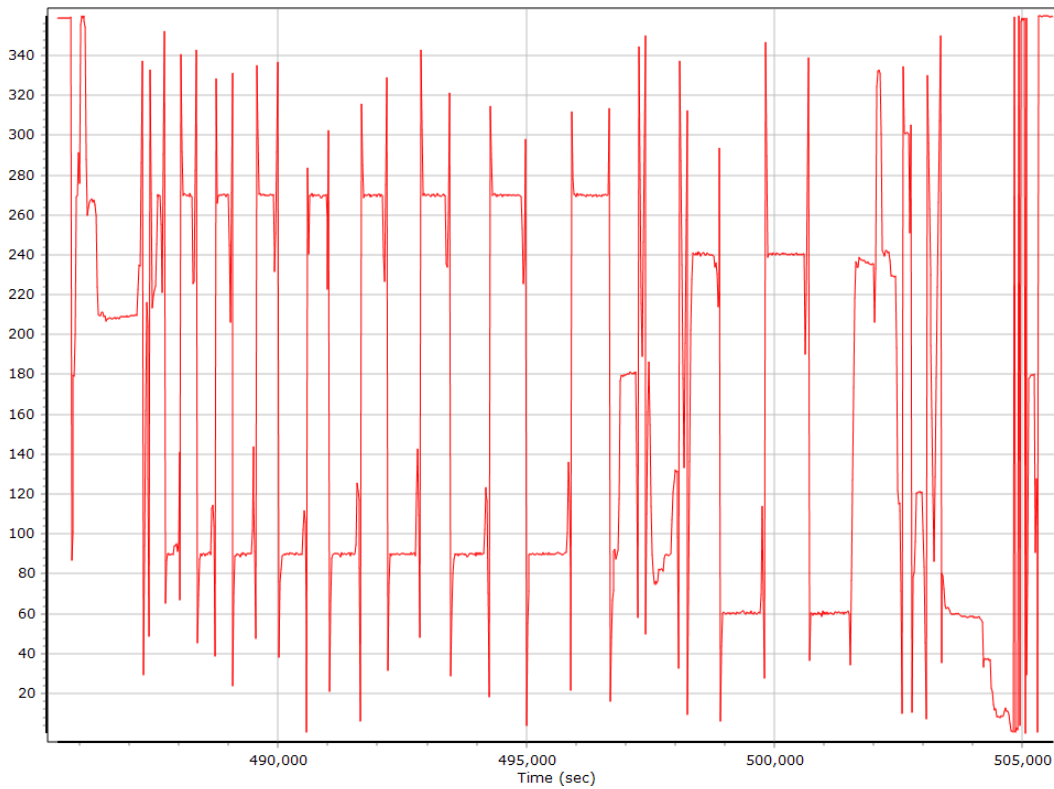
Altitude



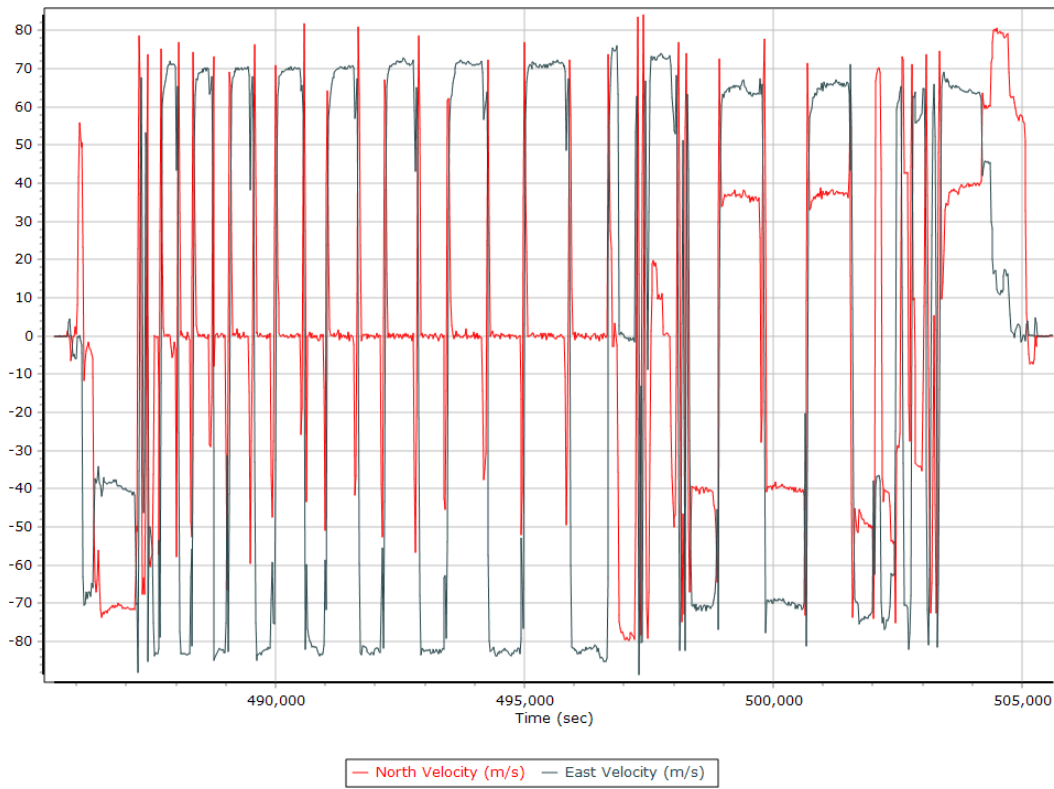
Roll/Pitch



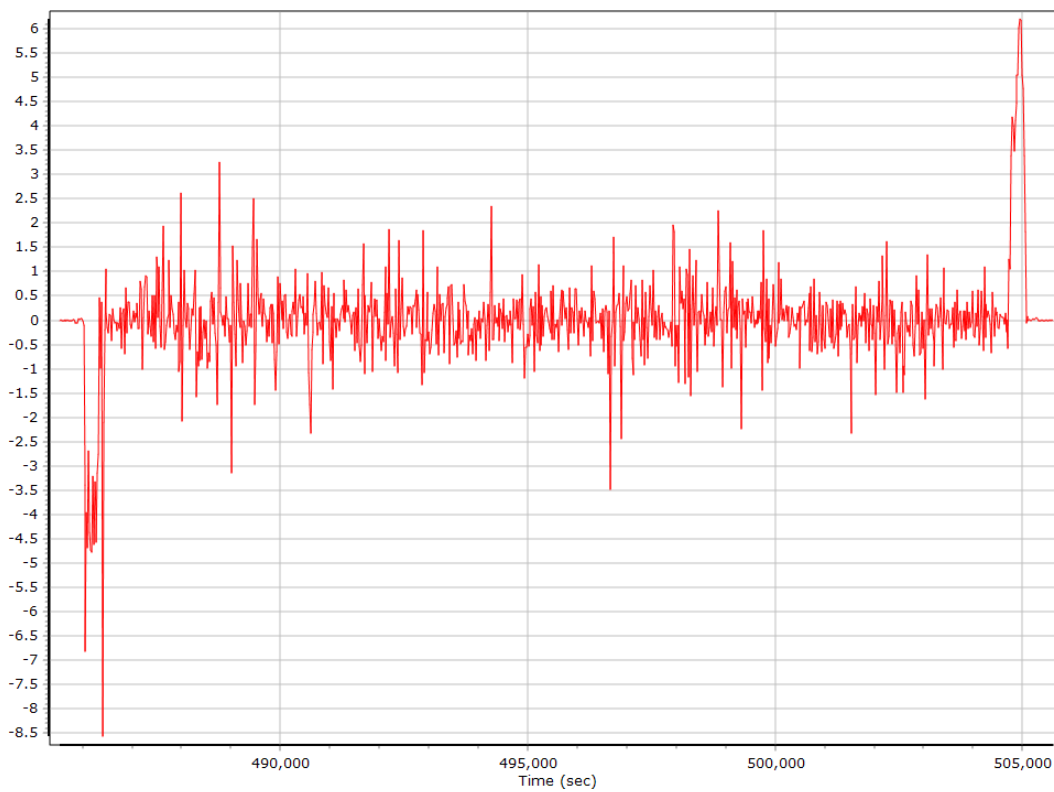
Heading



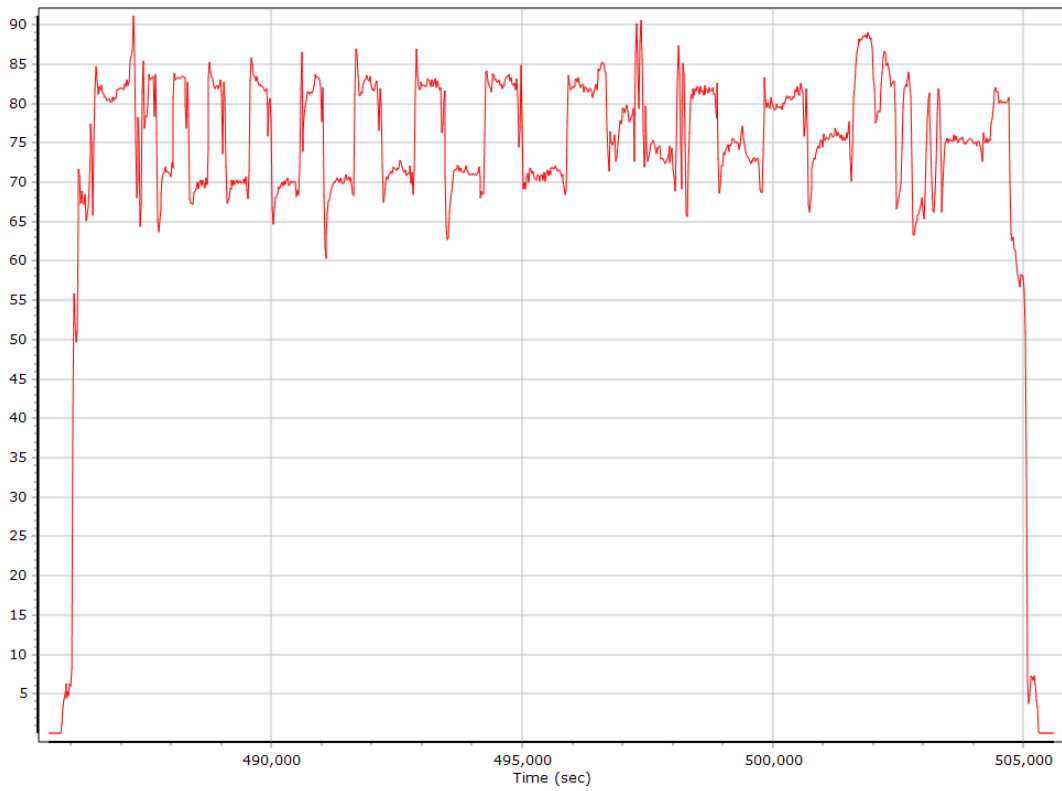
North/East Velocity



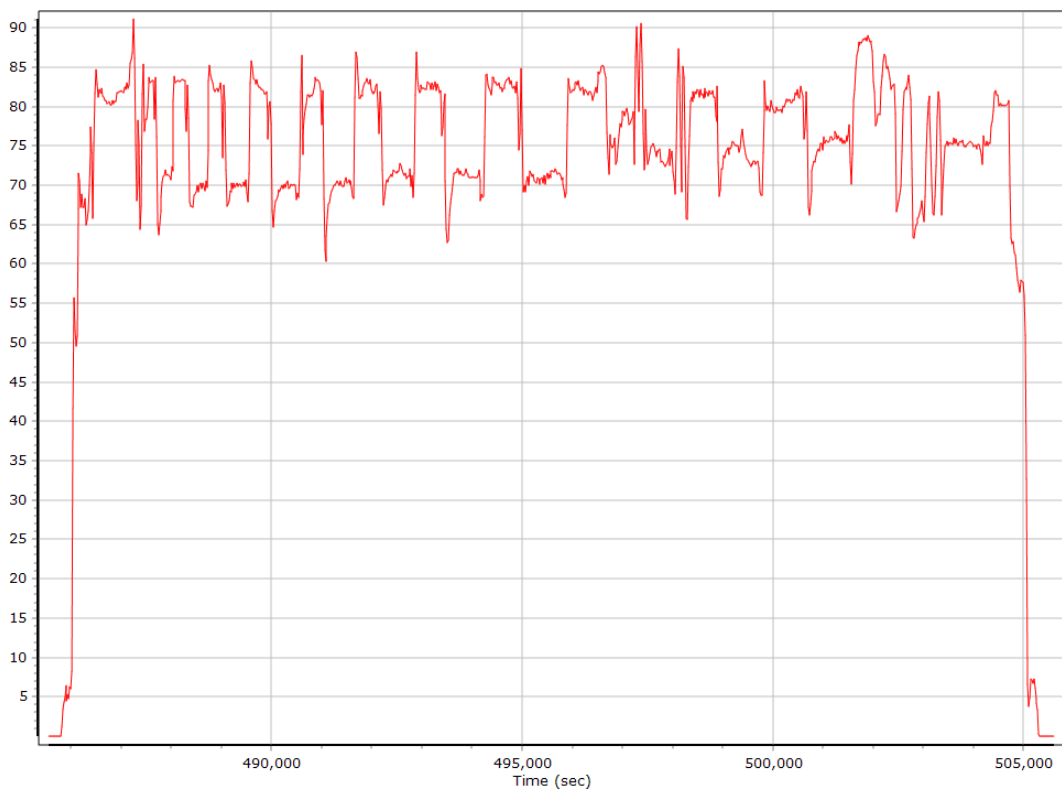
Down Velocity



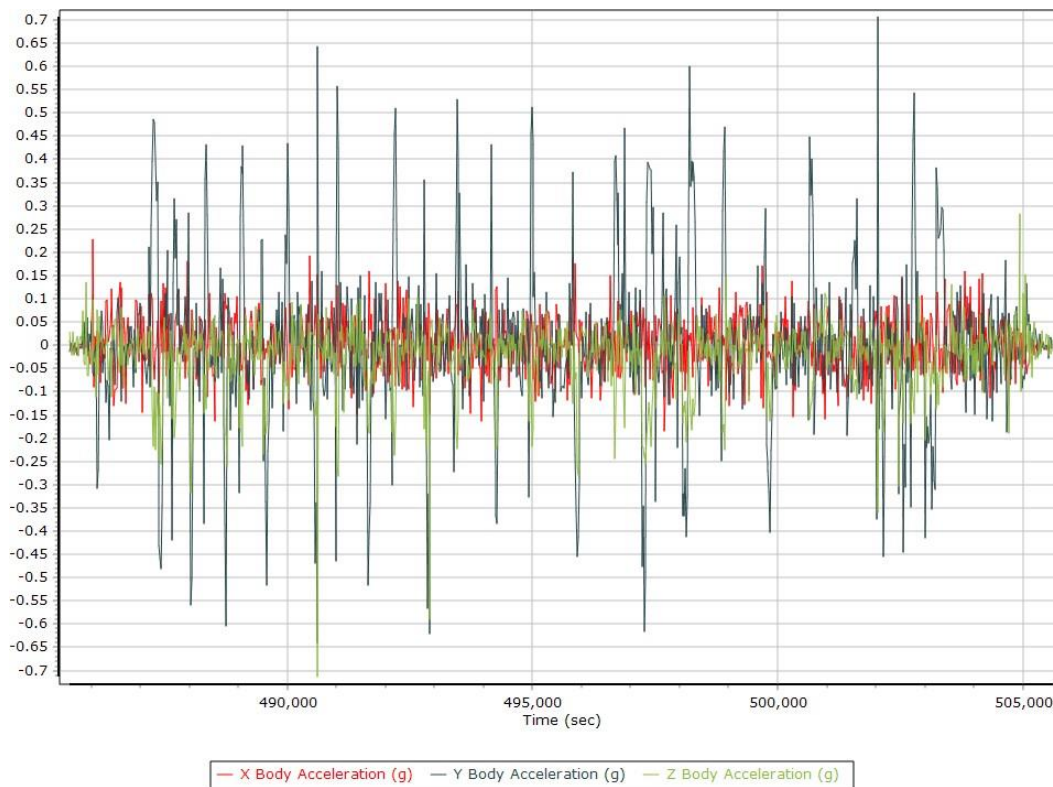
Total Speed



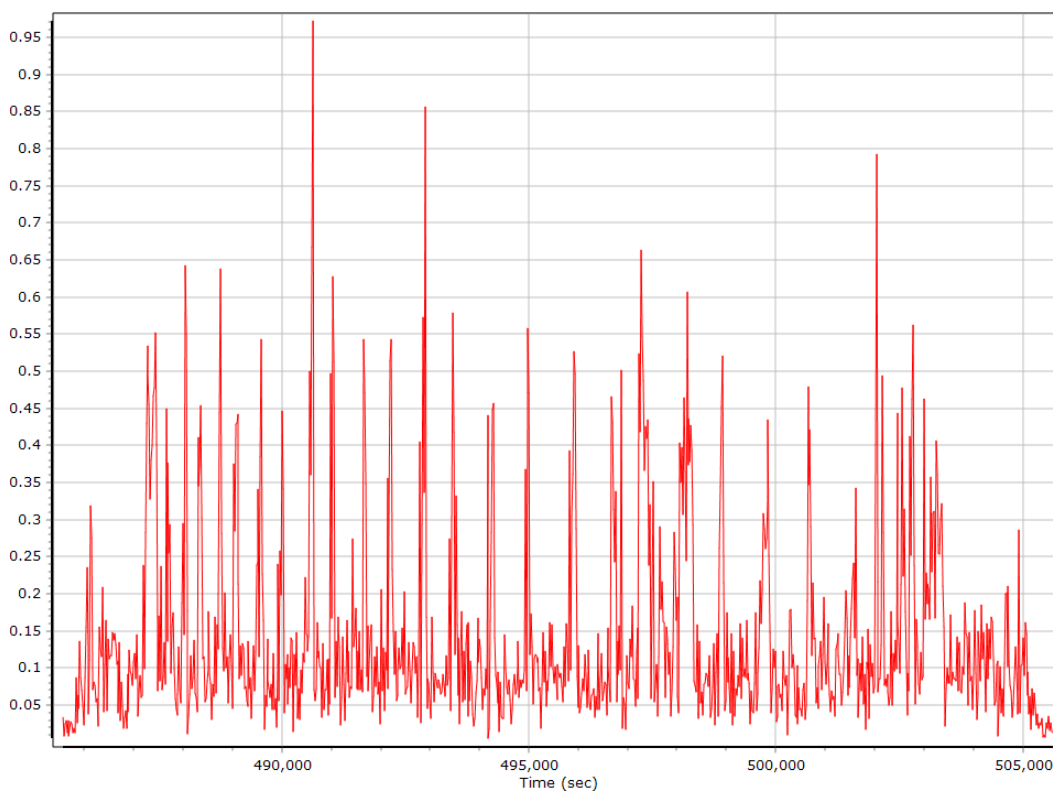
Ground Speed



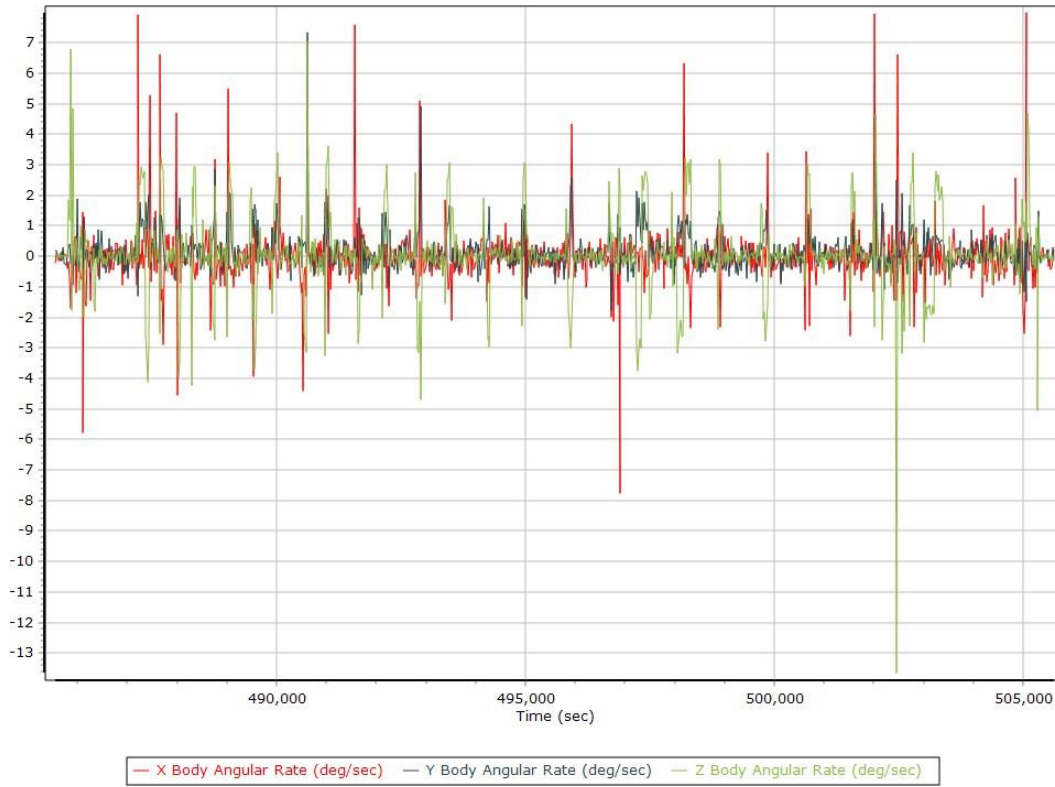
Body Acceleration



Total Body Acceleration



Body Angular Rate



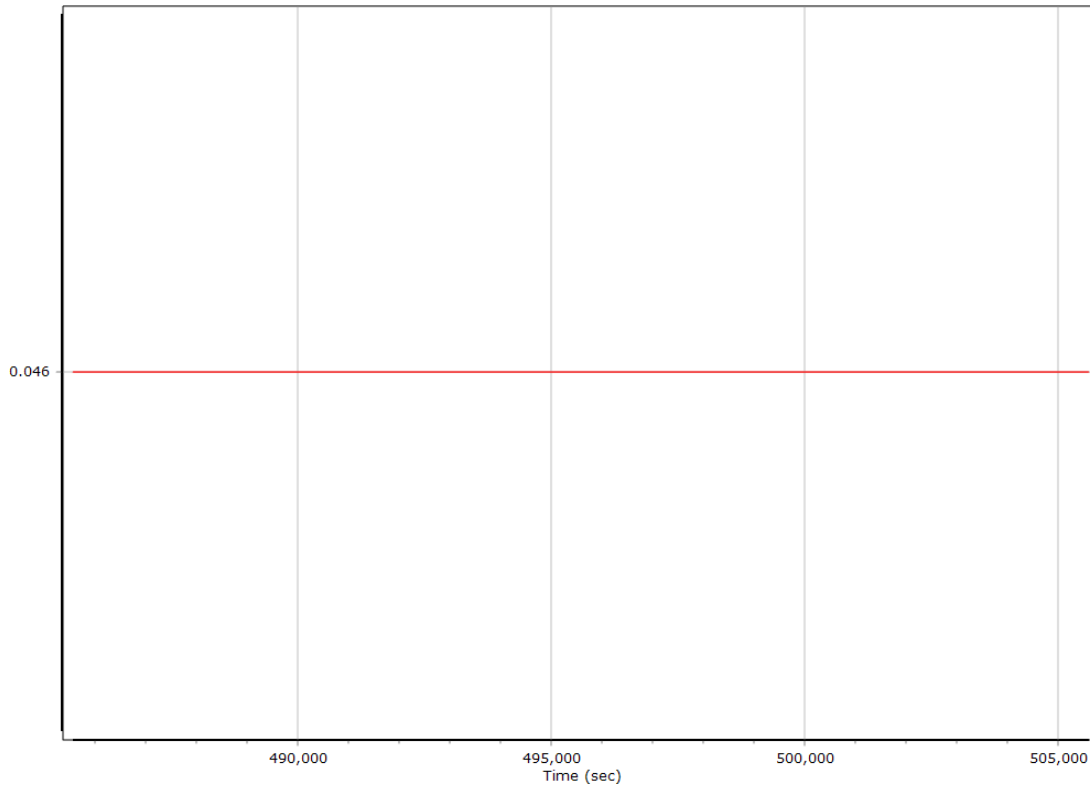
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion GNSS Nav		
Stabilized mount	True		
Processing start time	485479.000 (12/20/2019 2:51:19 PM)		
Processing end time	505626.000 (12/20/2019 8:27:06 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.046	-0.186	-1.294
Gimbal to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

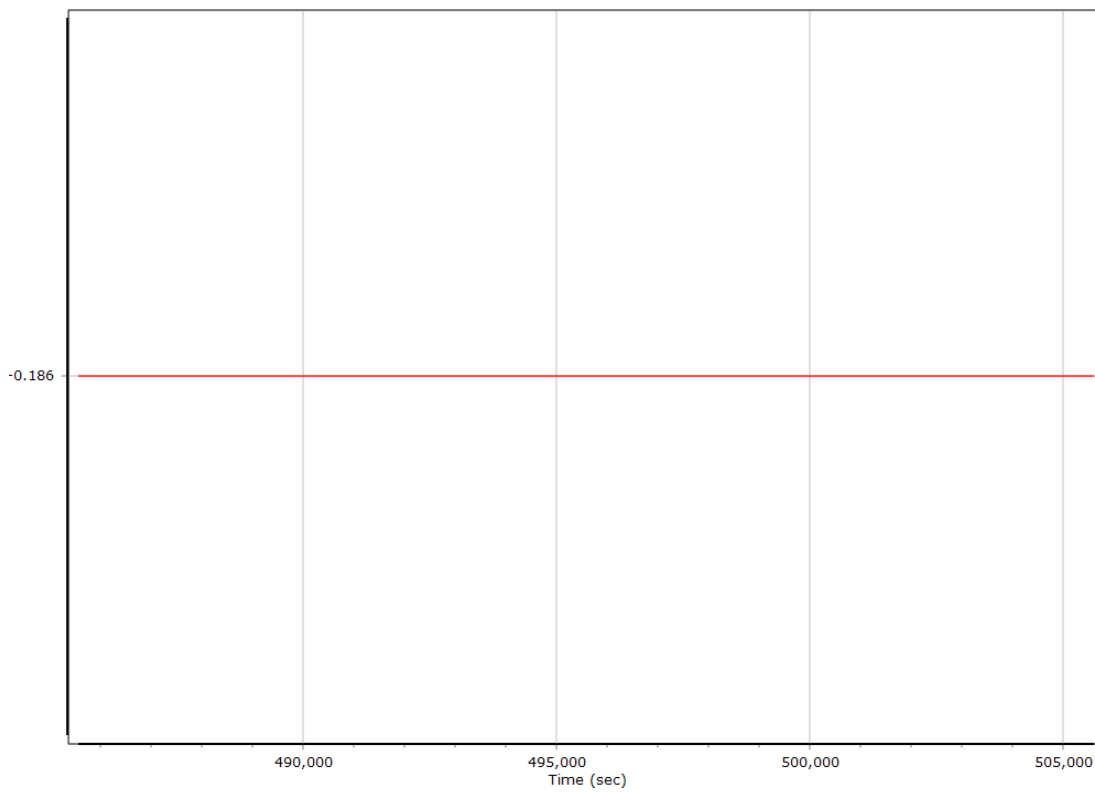
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

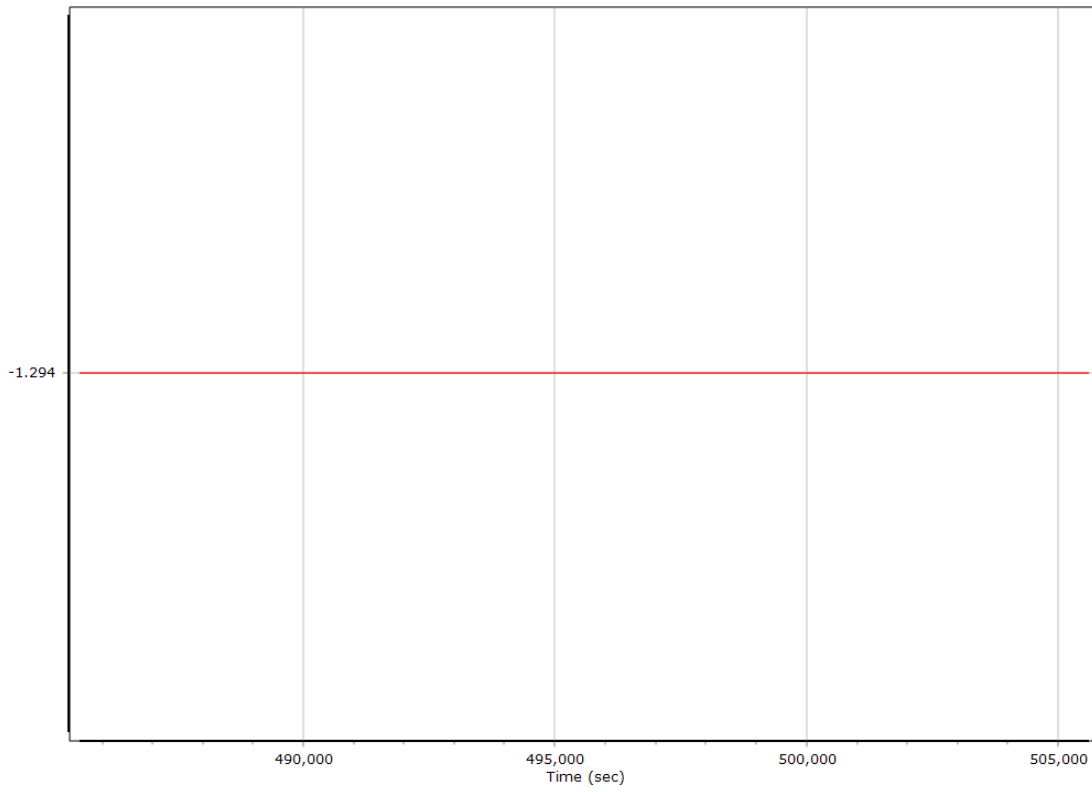
X Reference-Primary GNSS Lever Arm (m)



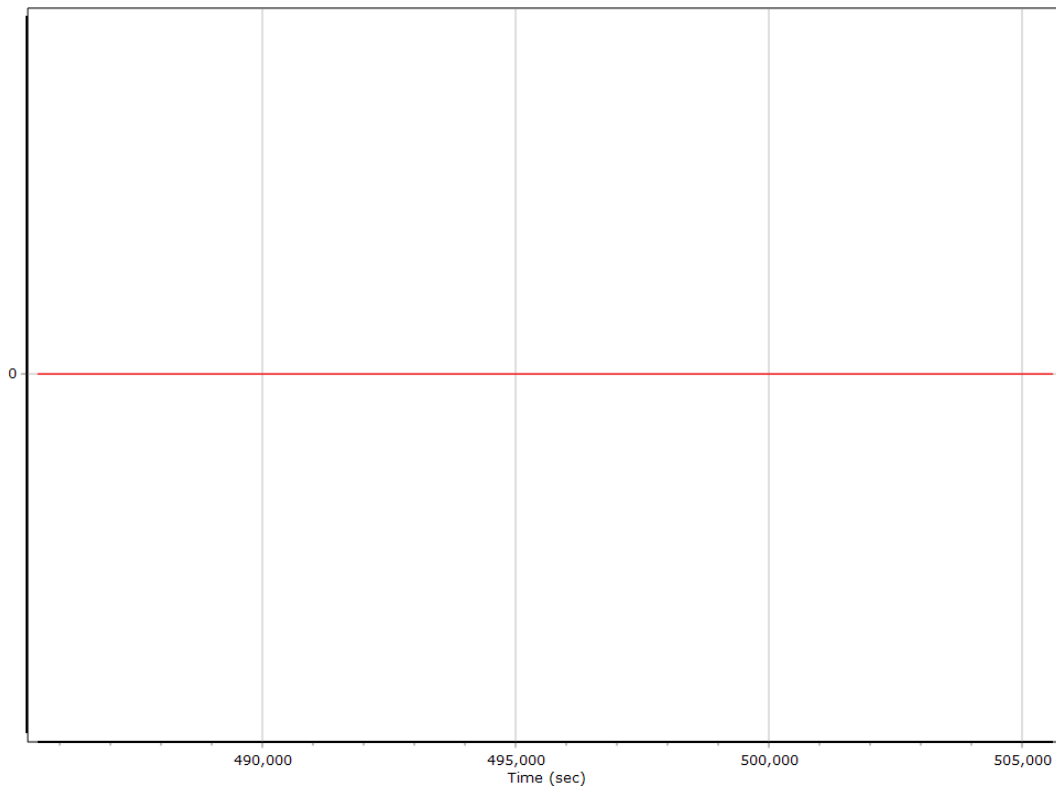
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



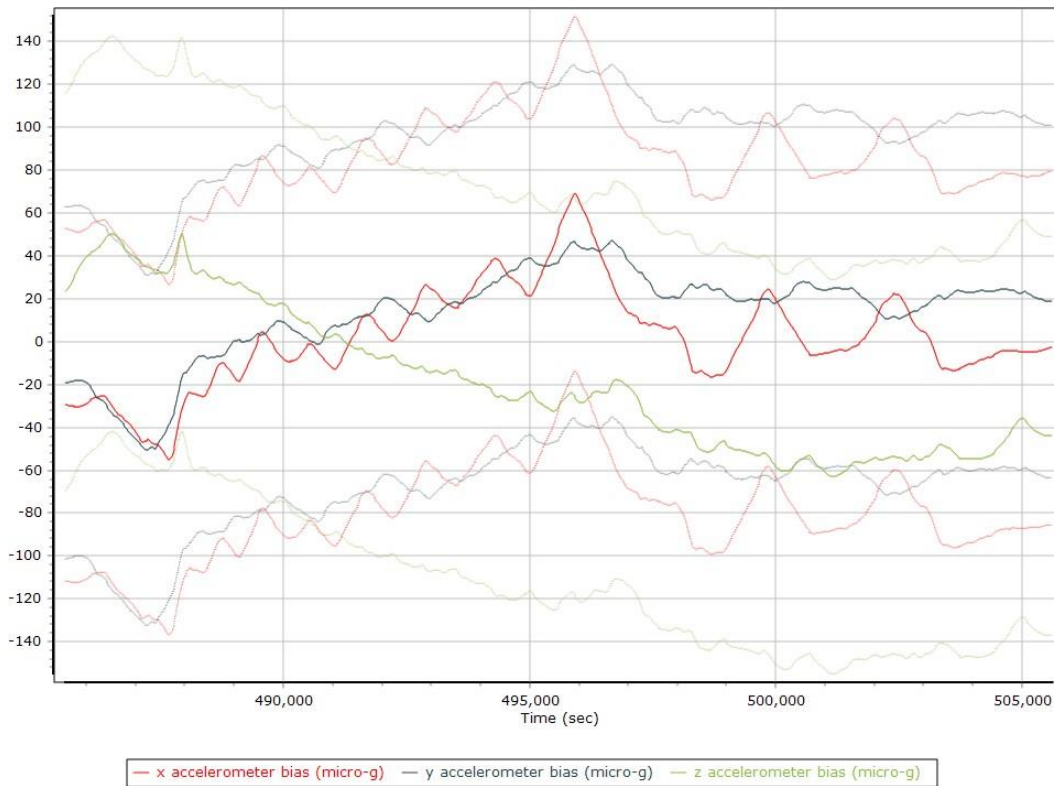
Reference-Primary GNSS Lever Arm Figure of Merit



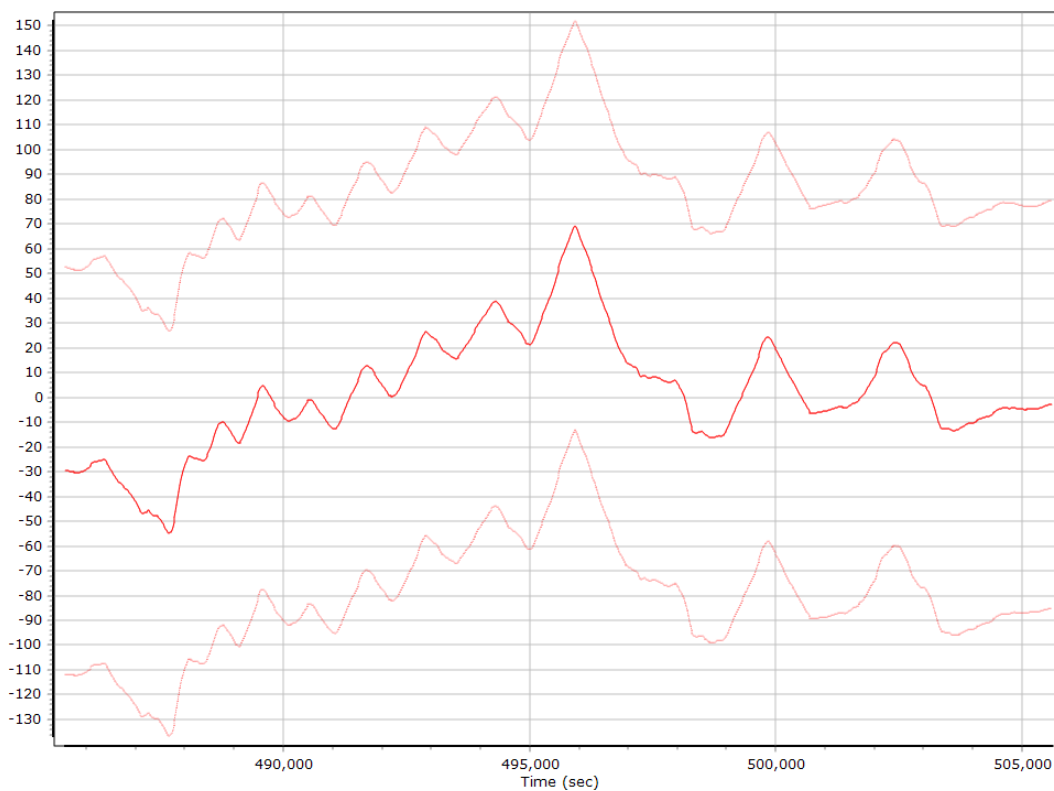
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

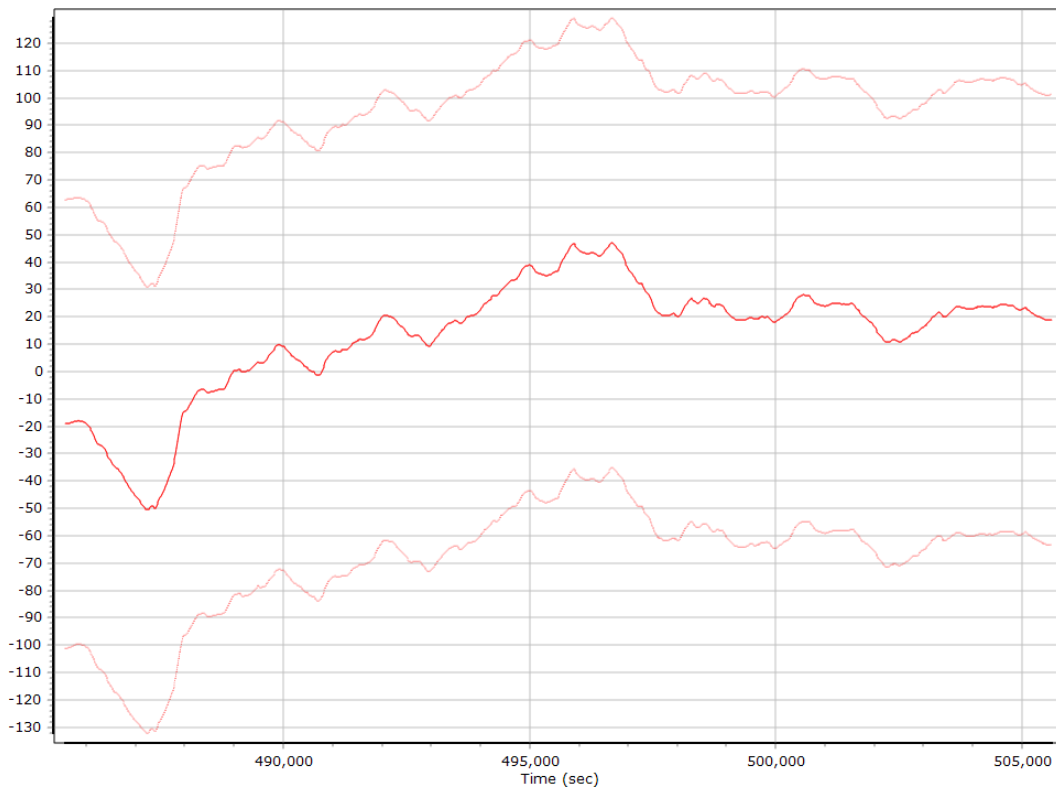
Accelerometer Bias (micro-g)



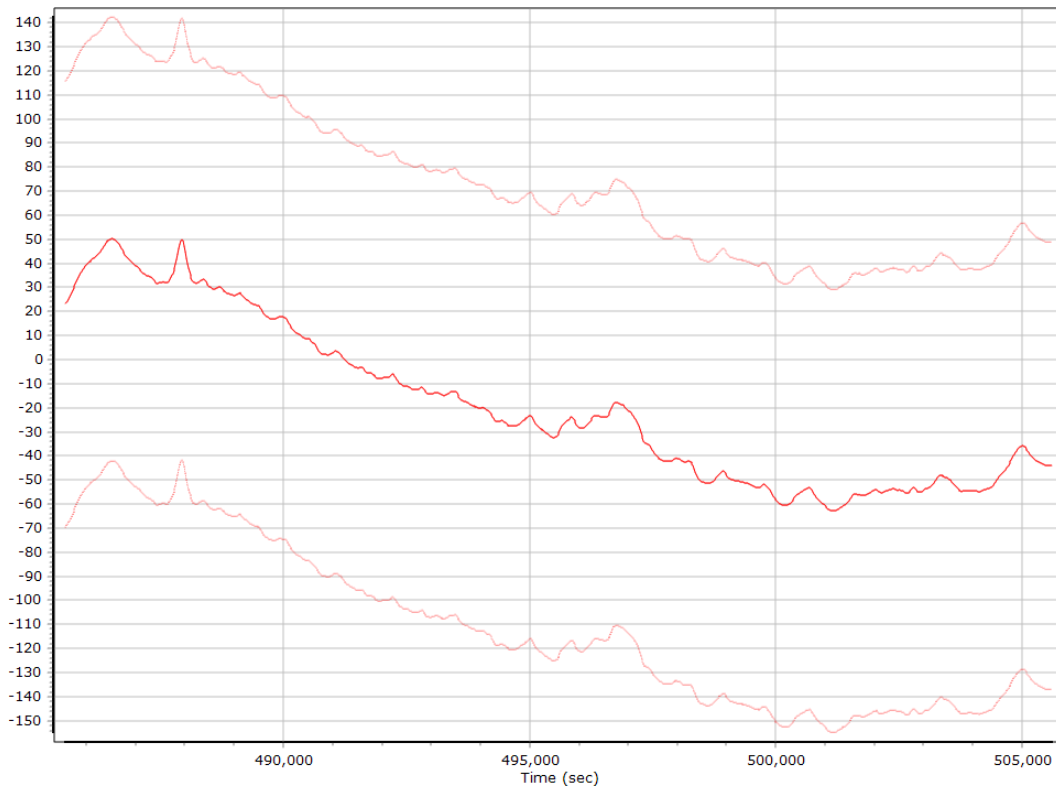
X Accelerometer Bias (micro-g)



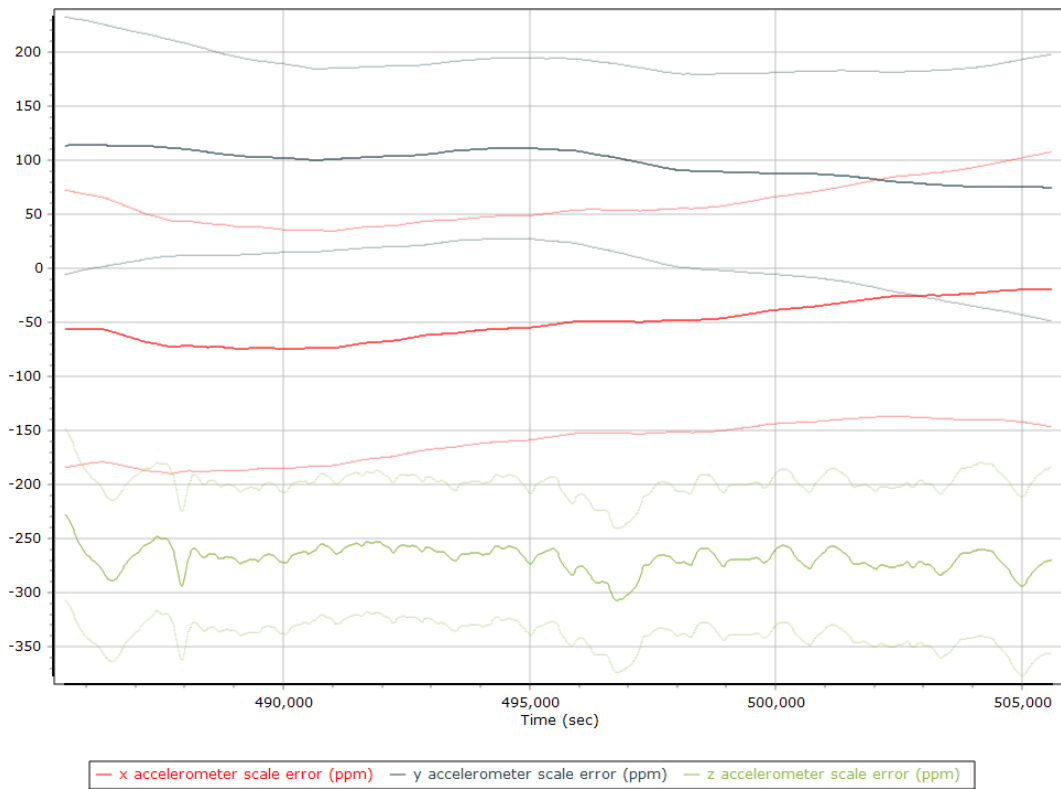
Y Accelerometer Bias (micro-g)



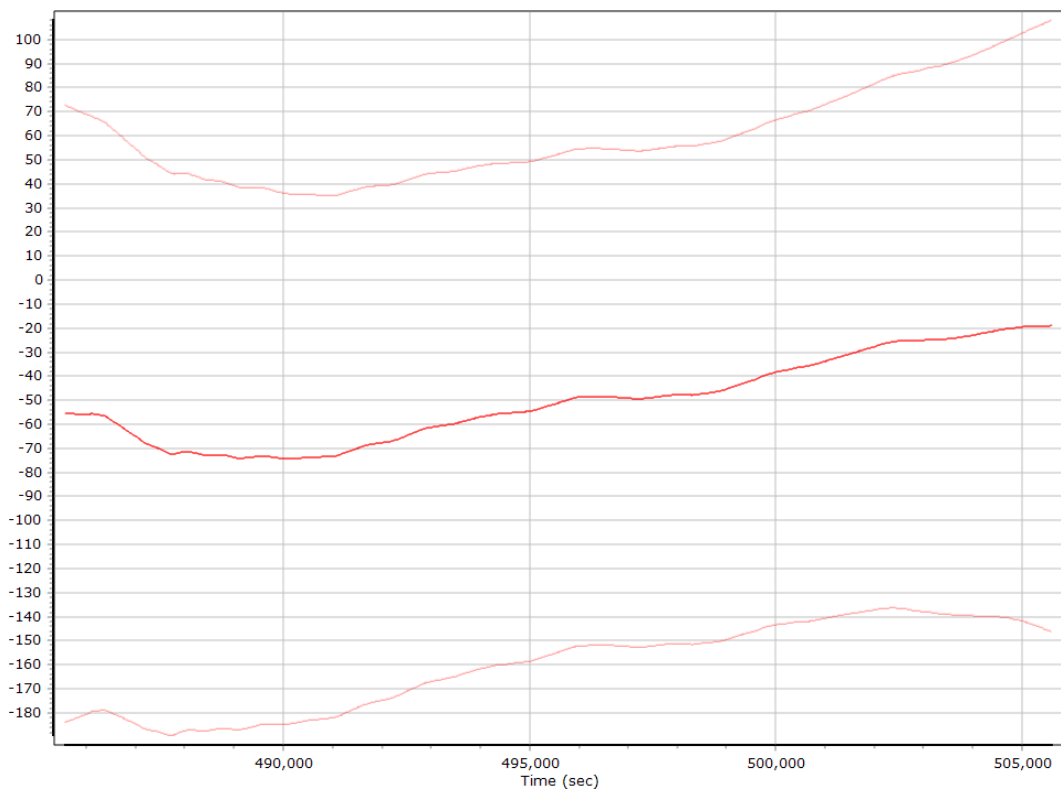
Z Accelerometer Bias (micro-g)



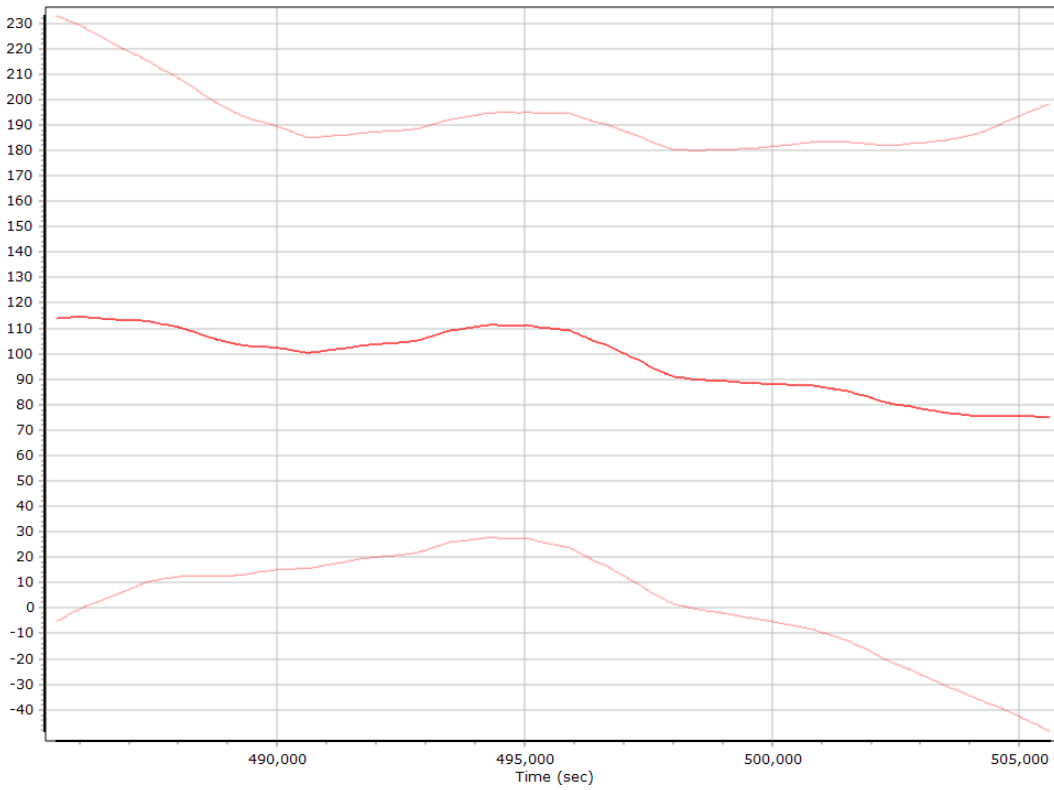
Accelerometer Scale Error (ppm)



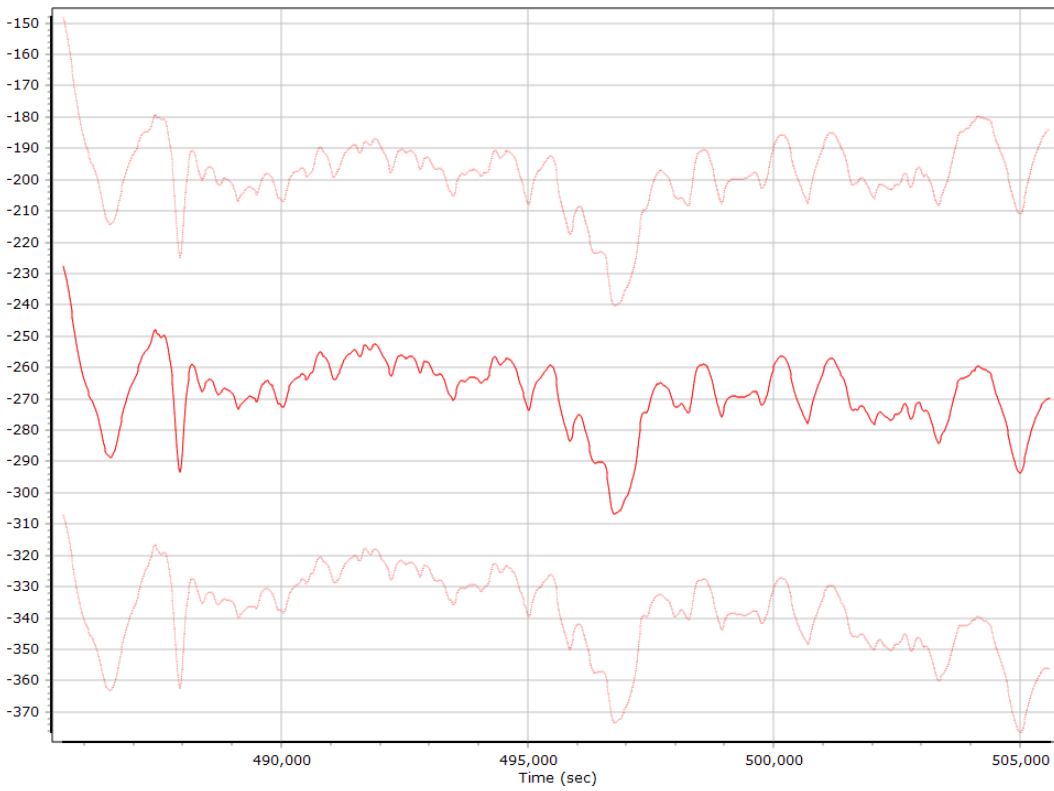
X Accelerometer Scale Error (ppm)



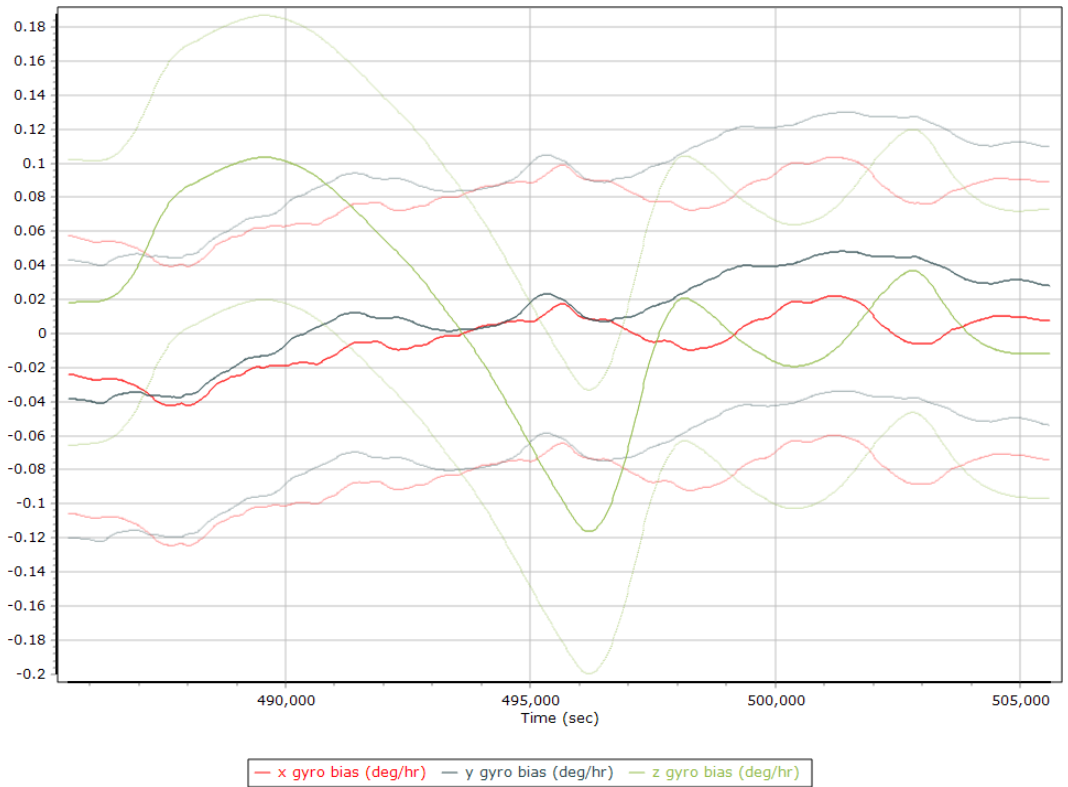
Y Accelerometer Scale Error (ppm)



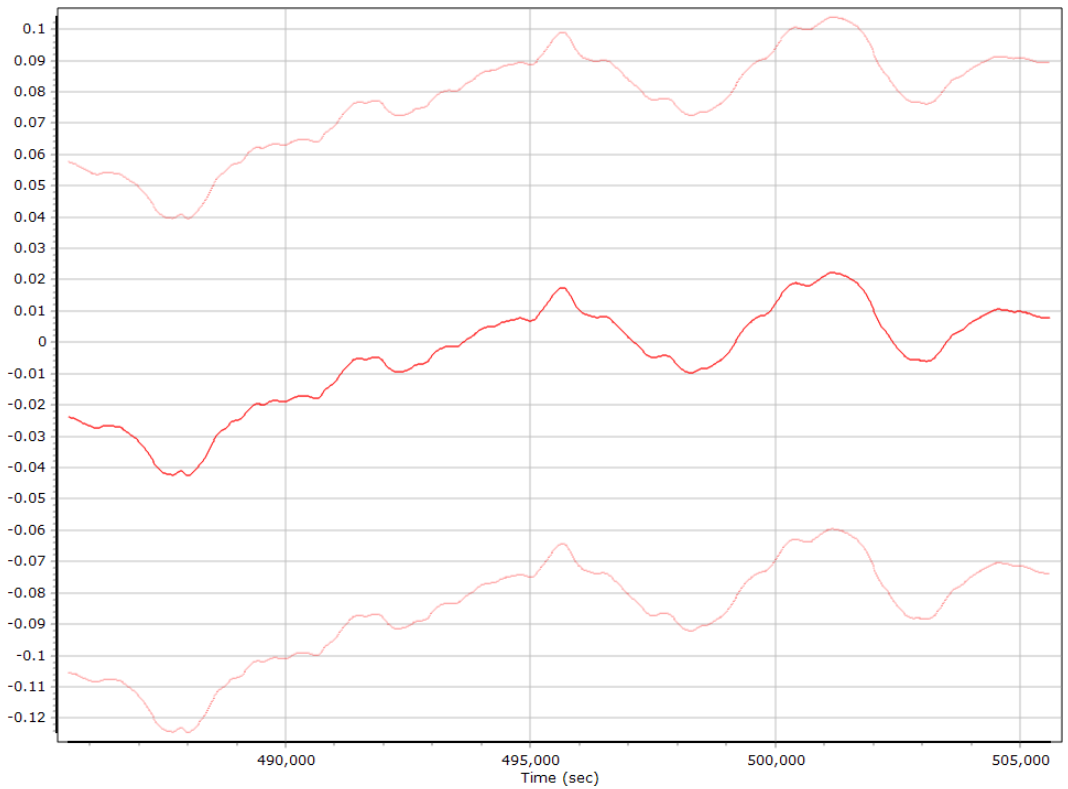
Z Accelerometer Scale Error (ppm)



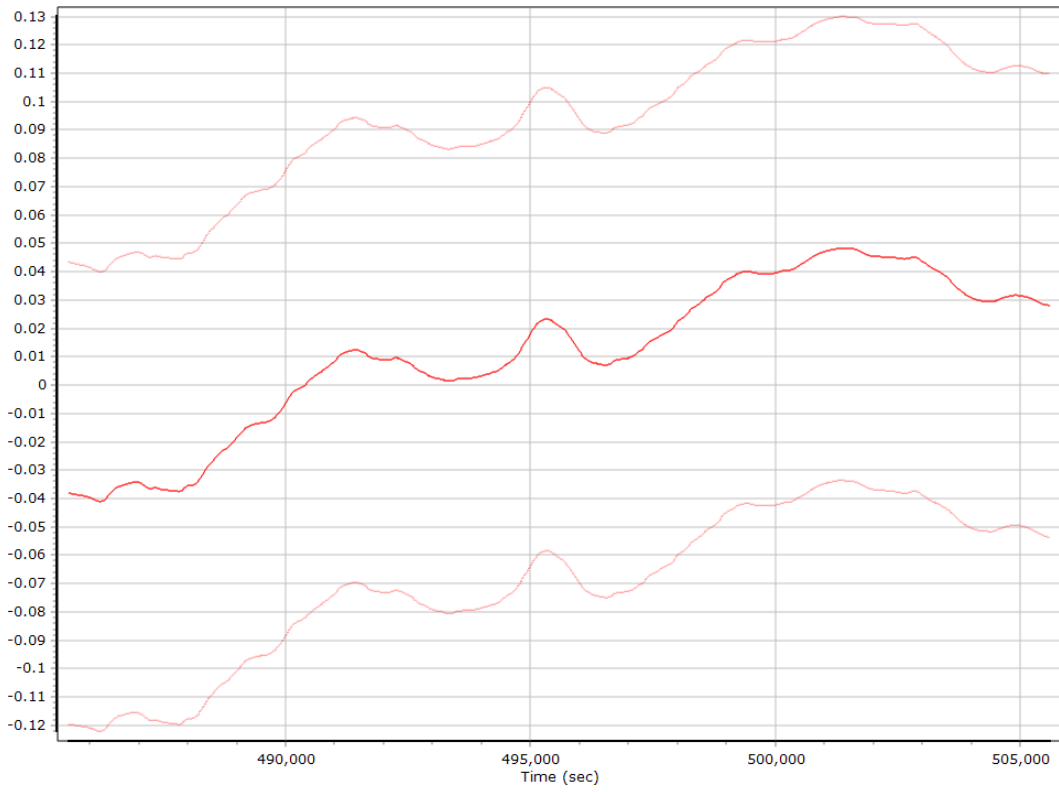
Gyro Bias (deg/h)



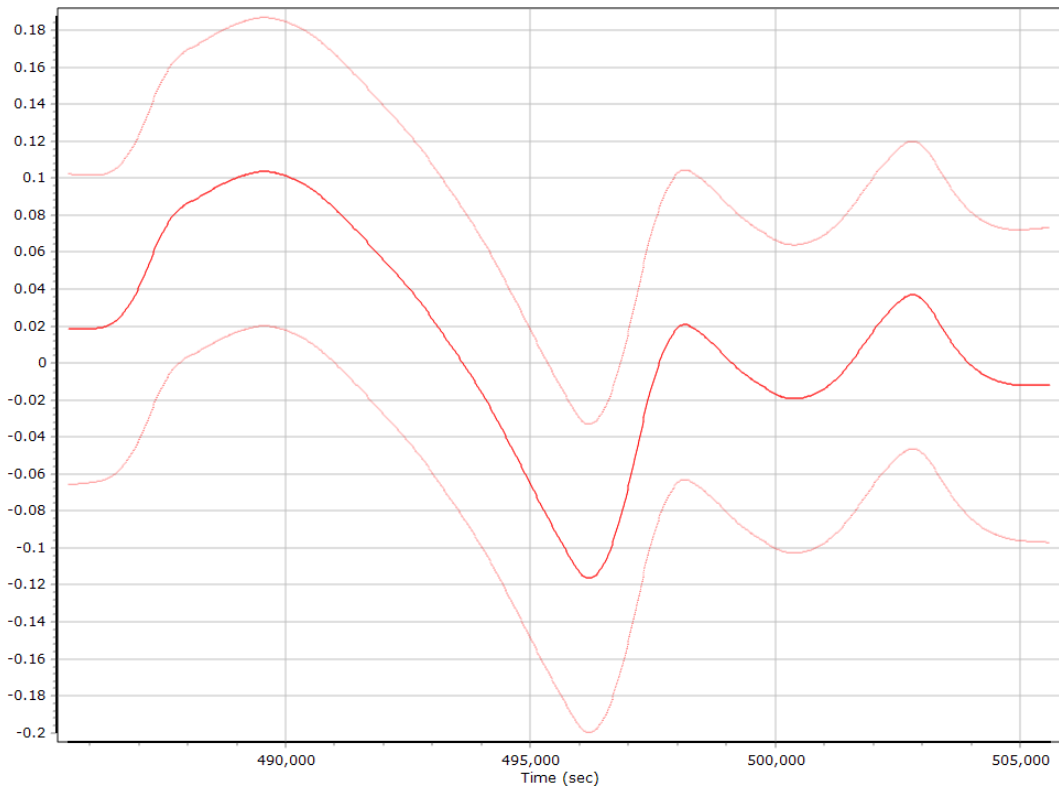
X Gyro Bias (deg/h)



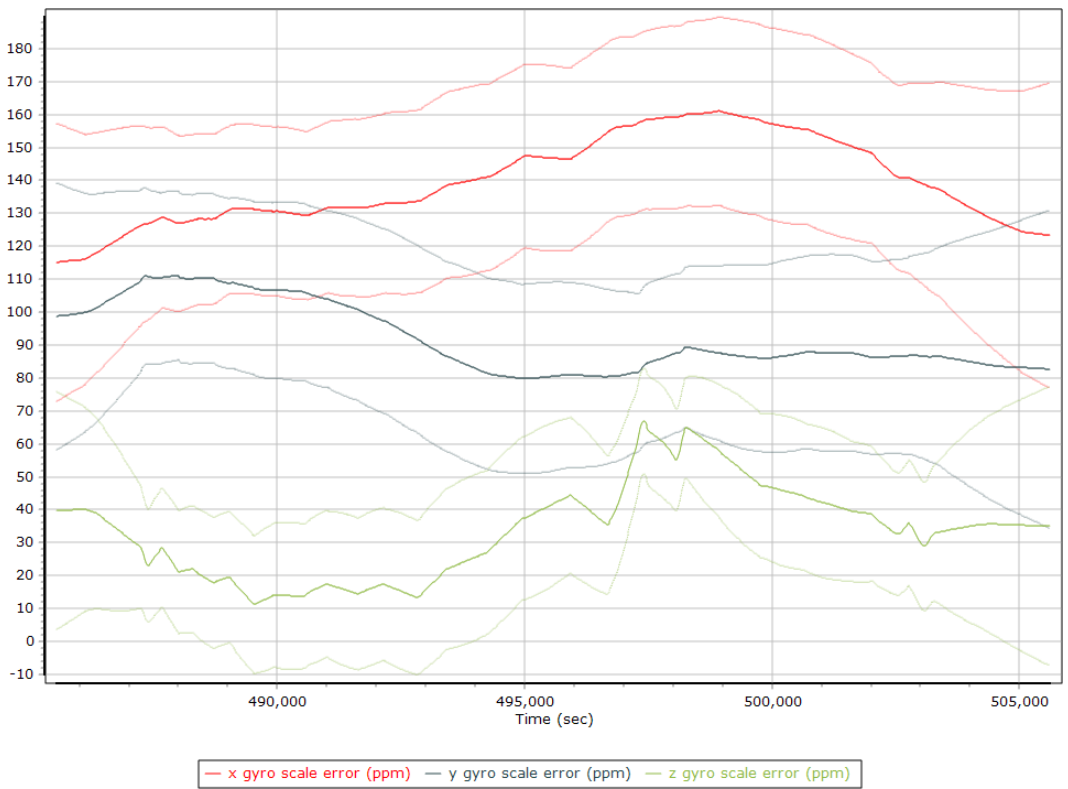
Y Gyro Bias (deg/h)



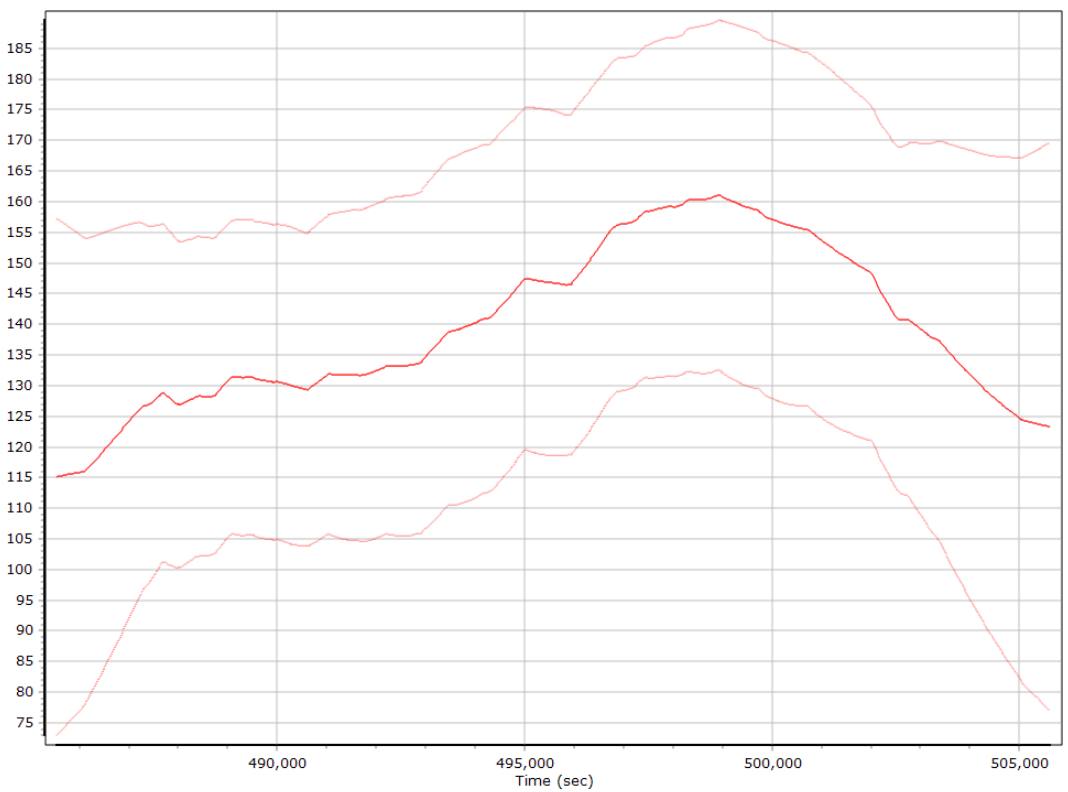
Z Gyro Bias (deg/h)



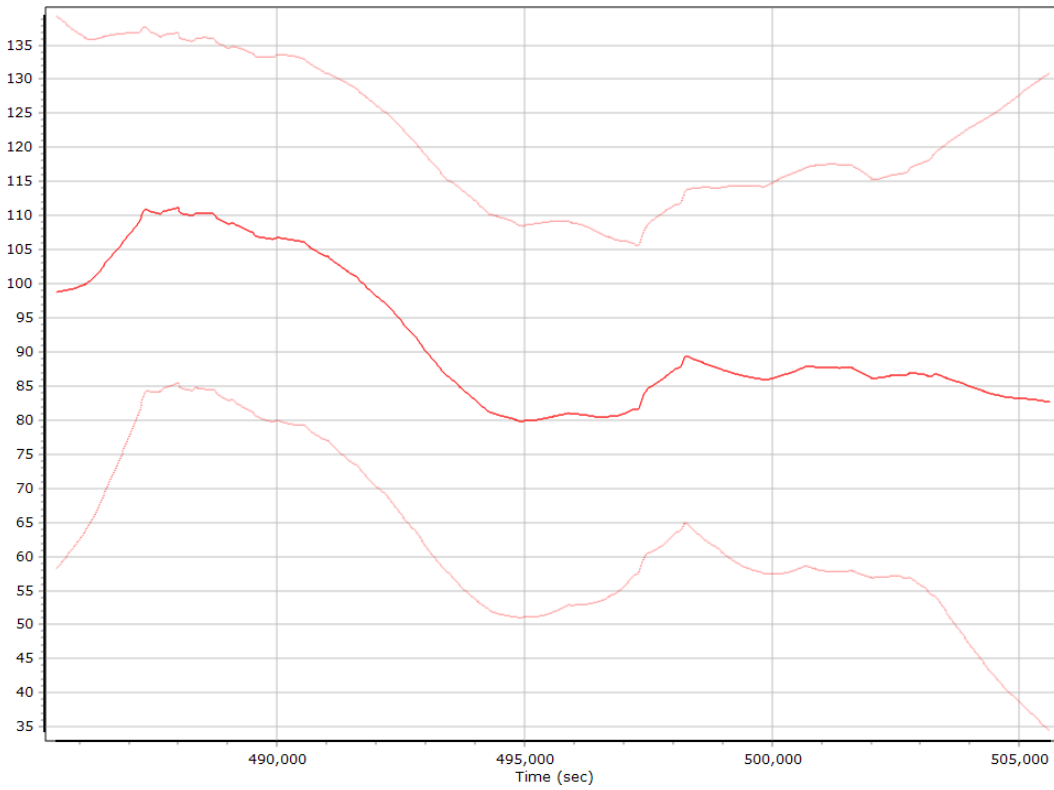
Gyro Scale Error (ppm)



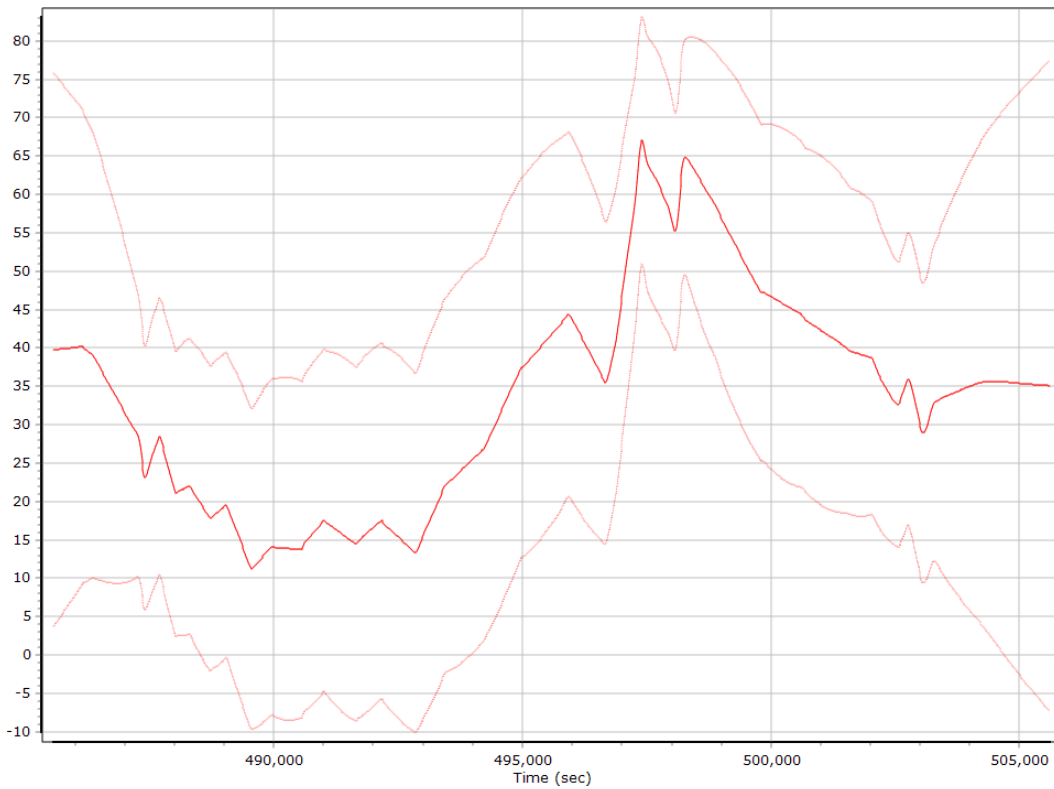
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

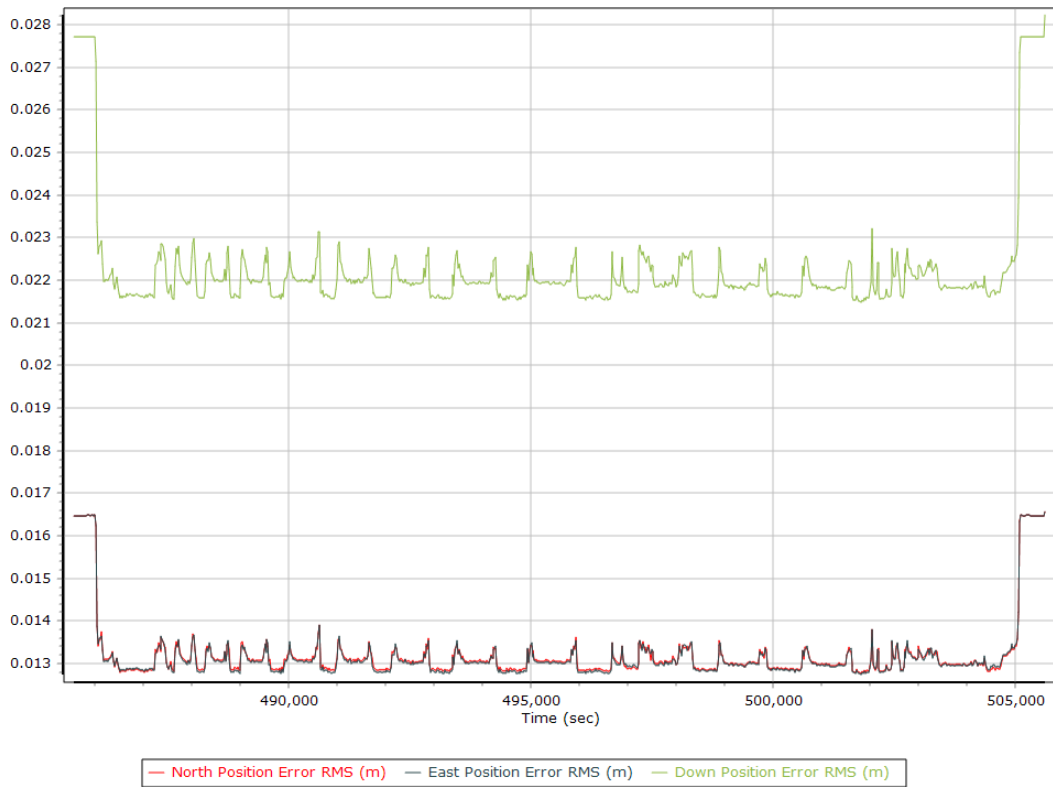


Z Gyro Scale Error (ppm)

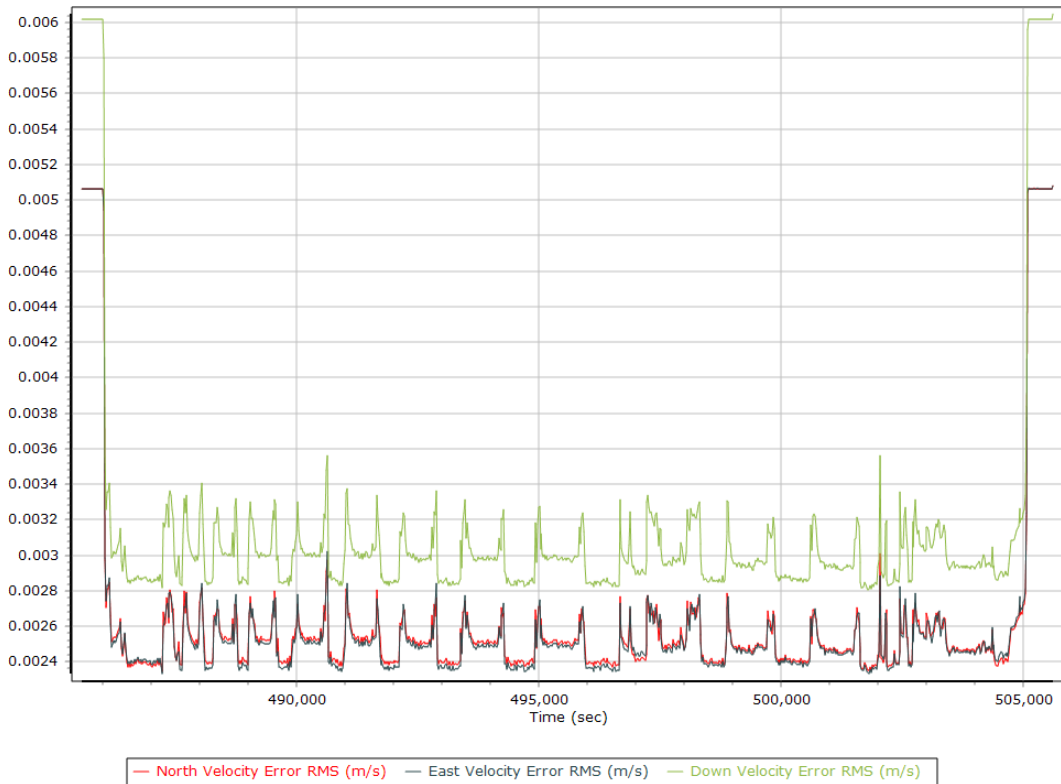


Smoothed Performance Metrics

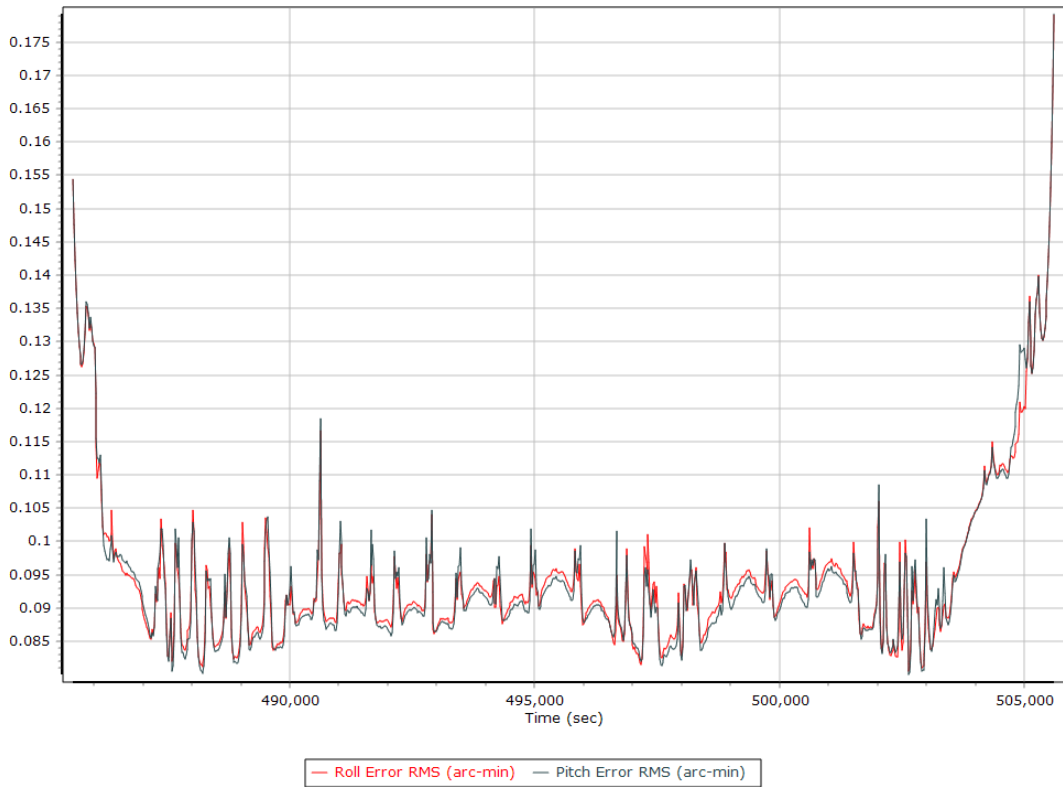
Position Error RMS (m)



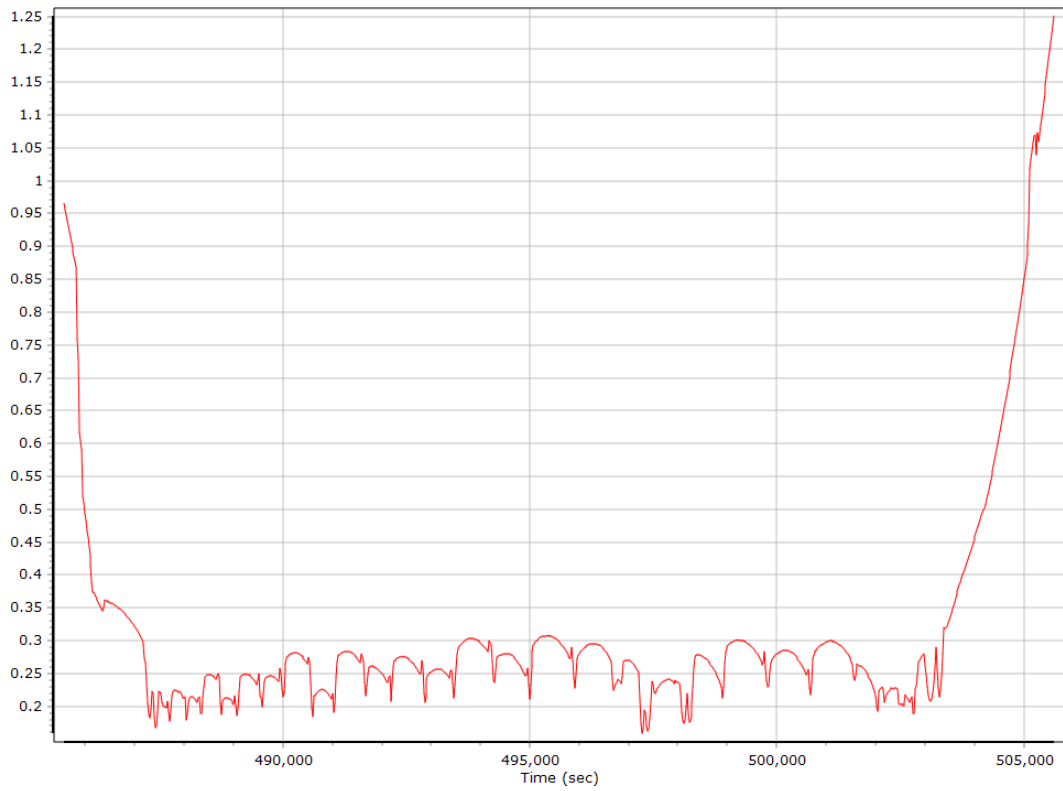
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)



Heading Error RMS (arc-min)



General Information

Mission Information

Project name	6219359A
Processing date	2019-12-31 21:08:04
Mission date	2019-12-25 14:19:10
Mission duration	05:10:07.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N8708
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
ALS.000	POS Data
ALS.001	POS Data
ALS.002	POS Data
ALS.003	POS Data
ALS.004	POS Data
ALS.005	POS Data
ALS.006	POS Data
ALS.007	POS Data
ALS.008	POS Data
ALS.009	POS Data
ALS.010	POS Data
ALS.011	POS Data
ALS.012	POS Data
ALS.013	POS Data
ALS.014	POS Data
ALS.015	POS Data
ALS.016	POS Data
ALS.017	POS Data
ALS.018	POS Data
ALS.019	POS Data
ALS.020	POS Data
ALS.021	POS Data
ALS.022	POS Data
ALS.023	POS Data
ALS.024	POS Data
ALS.025	POS Data
ALS.026	POS Data
ALS.027	POS Data
ALS.028	POS Data
ALS.029	POS Data
ALS.030	POS Data
ALS.031	POS Data
ALS.032	POS Data
ALS.033	POS Data
ALS.034	POS Data
ALS.035	POS Data
ALS.036	POS Data
ALS.037	POS Data
ALS.038	POS Data
ALS.039	POS Data
ALS.040	POS Data
ALS.041	POS Data

Input Files

File Name	File type
f1753590.19o	GNSS SingleBase
f1cb3590.19o	GNSS SingleBase
f1j13590.19o	GNSS SingleBase
f1md3590.19o	GNSS SingleBase
f1mr3590.19o	GNSS SingleBase
gatv3590.19o	GNSS SingleBase
prry3590.19o	GNSS SingleBase
talh3590.19o	GNSS SingleBase
brdc3590.19n	GPS Broadcast Ephemeris
sned3590.19o	GNSS SingleBase
Ephm3590.19g	GLONASS Broadcast Ephemeris
Ephm3590.19n	GPS Broadcast Ephemeris
xcty3590.19o	GNSS SingleBase
igr20853.sp3	GPS Precise Ephemeris

File Name	File type
igr20854.sp3	GPS Precise Ephemeris

Output Files

Filename	File type
sbet_6219359A.out	SBET Trajectory File

Rover Data Summary

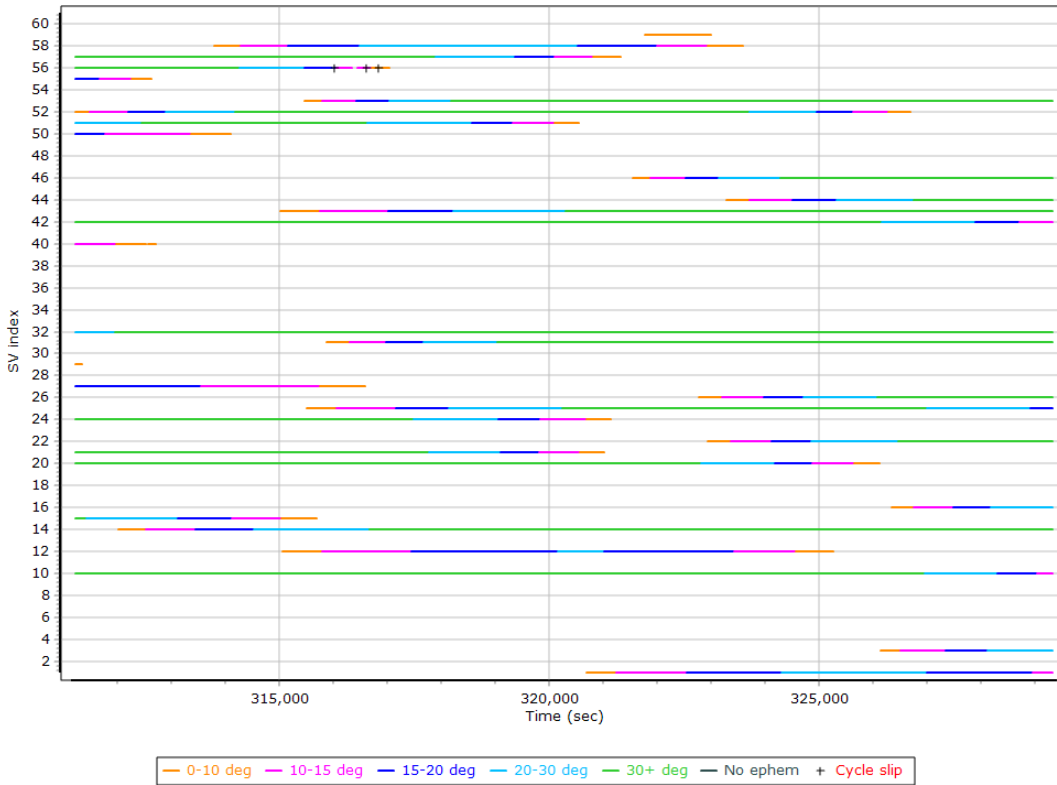
First raw data file	ALS.000		
Last raw data file	ALS.041		
Start GPS week	2085		
Start time	310731.305 (12/25/2019 2:18:51 PM)		
End time	329335.841 (12/25/2019 7:28:55 PM)		
Start of fine alignment	311154.711 (12/25/2019 2:25:54 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.046	-0.192	-1.285
Gimbal 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

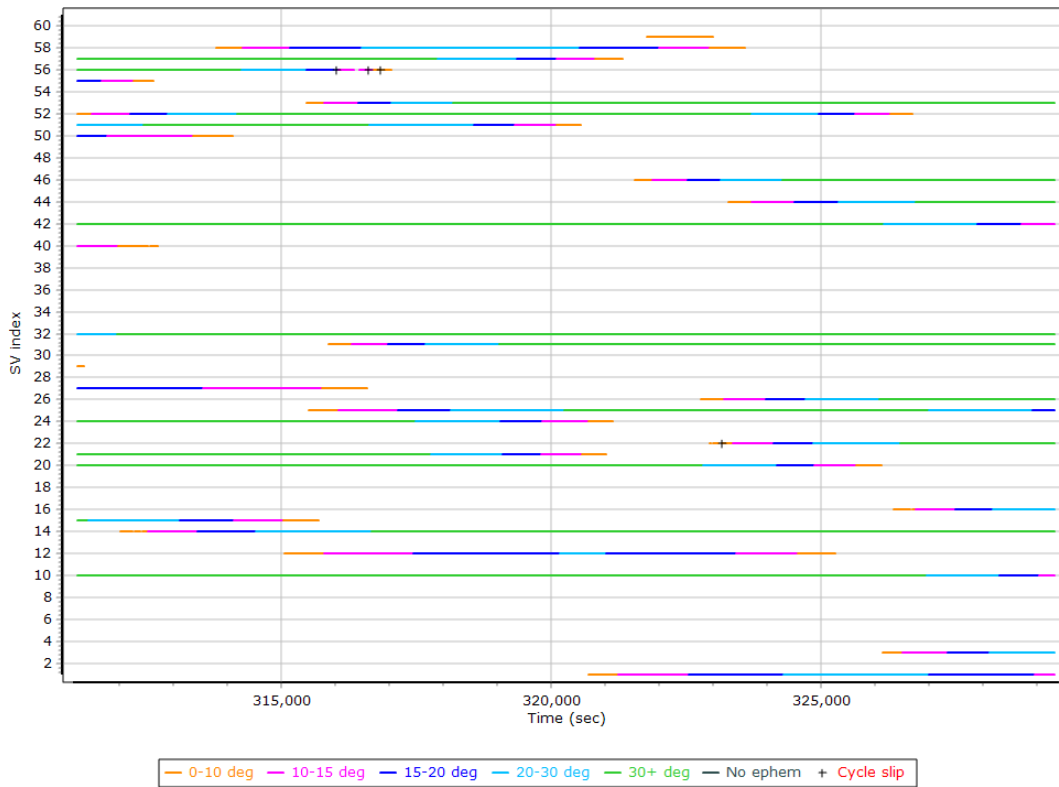
Raw IMU Import QC Summary

IMU data input file	imu_6219359A.dat
IMU data check log file	imudt_6219359A.log
IMU Records Processed	3720865
Termination Status	Normal
IMU Anomalies	0

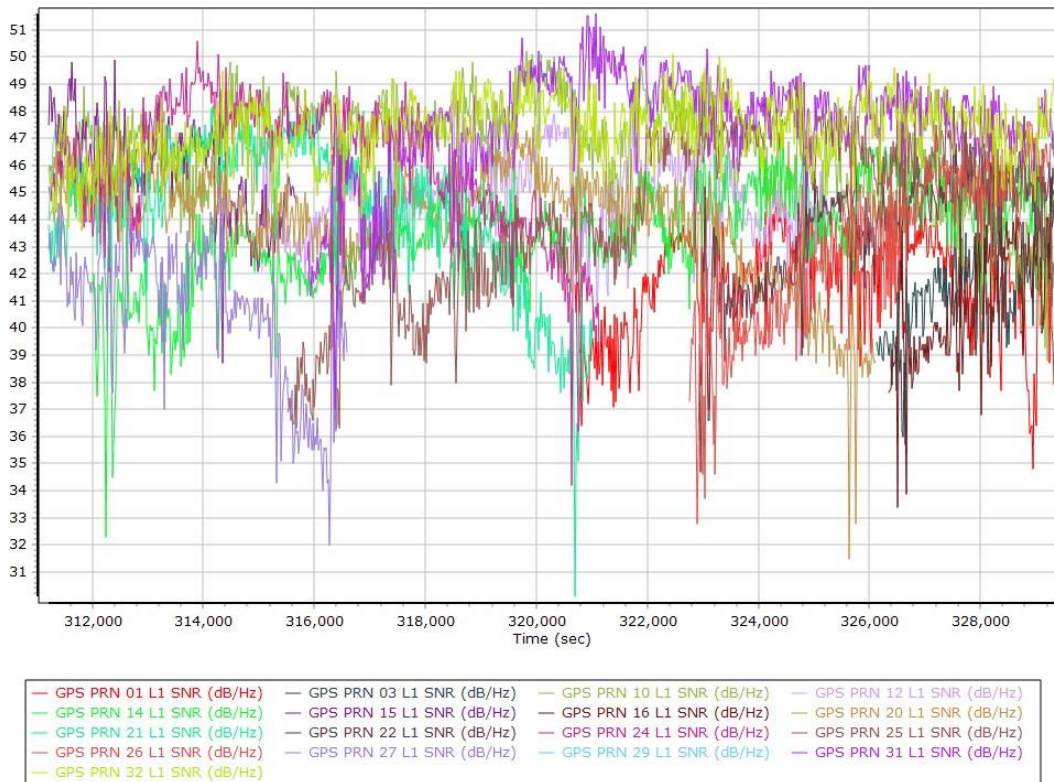
L1 Satellite Lock/Elevation



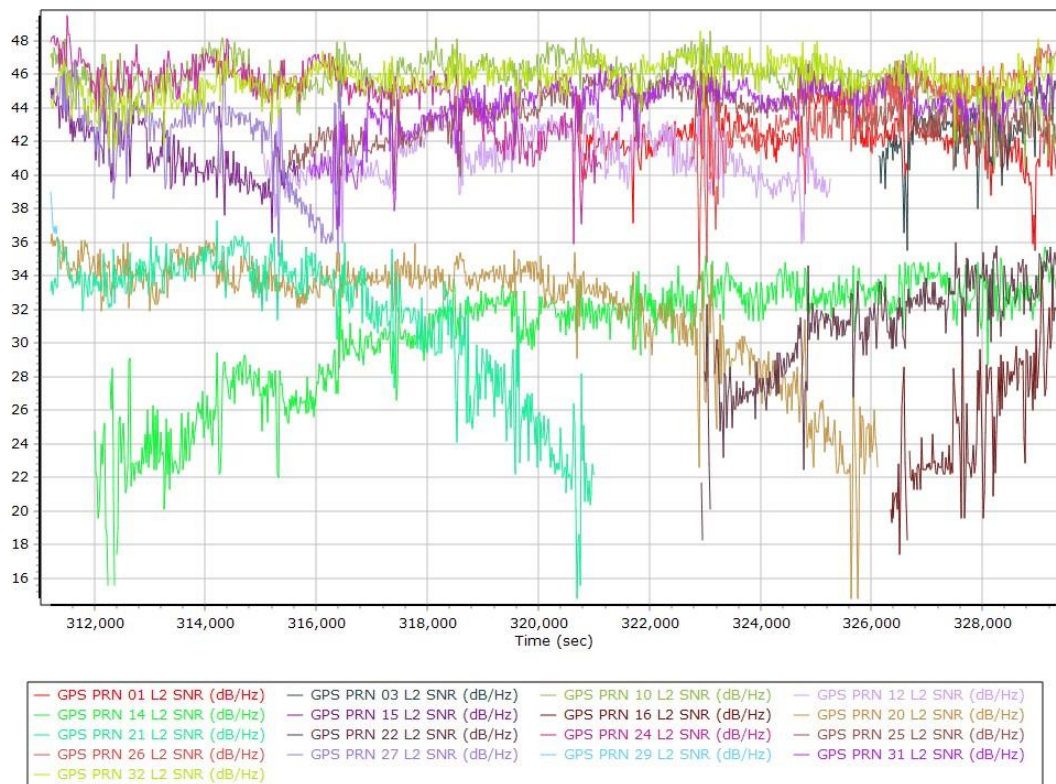
L2 Satellite Lock/Elevation



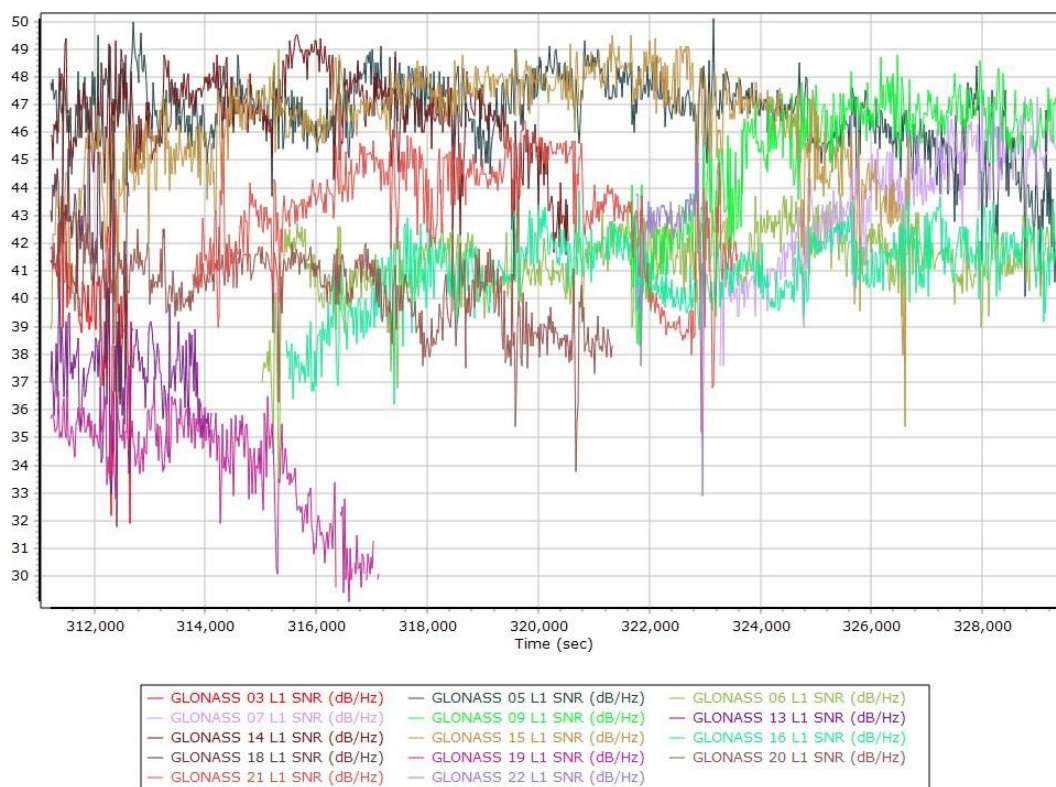
GPS L1 SNR



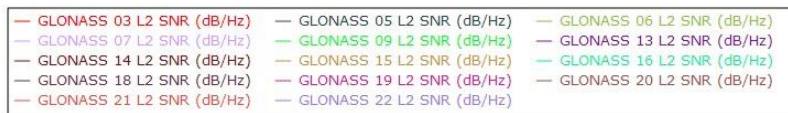
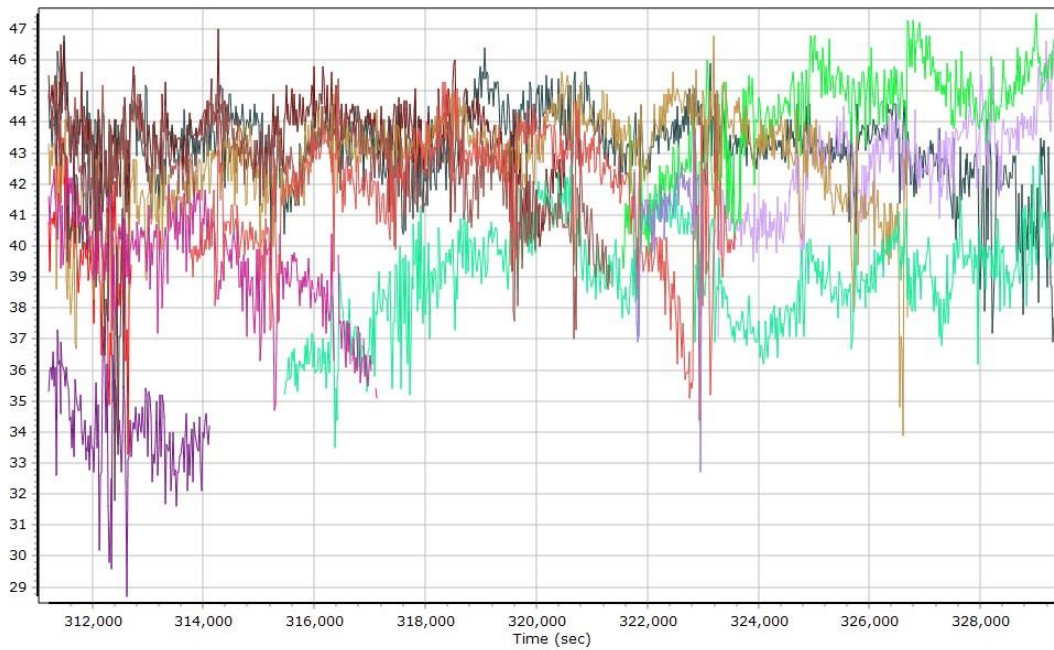
GPS L2 SNR



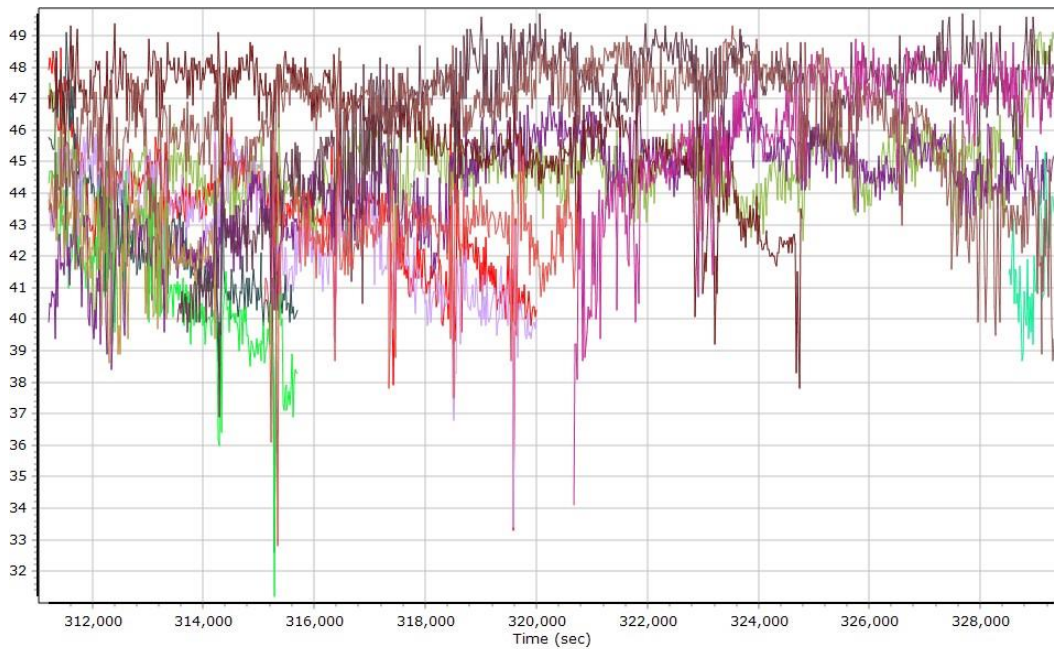
GLONASS L1 SNR



GLONASS L2 SNR

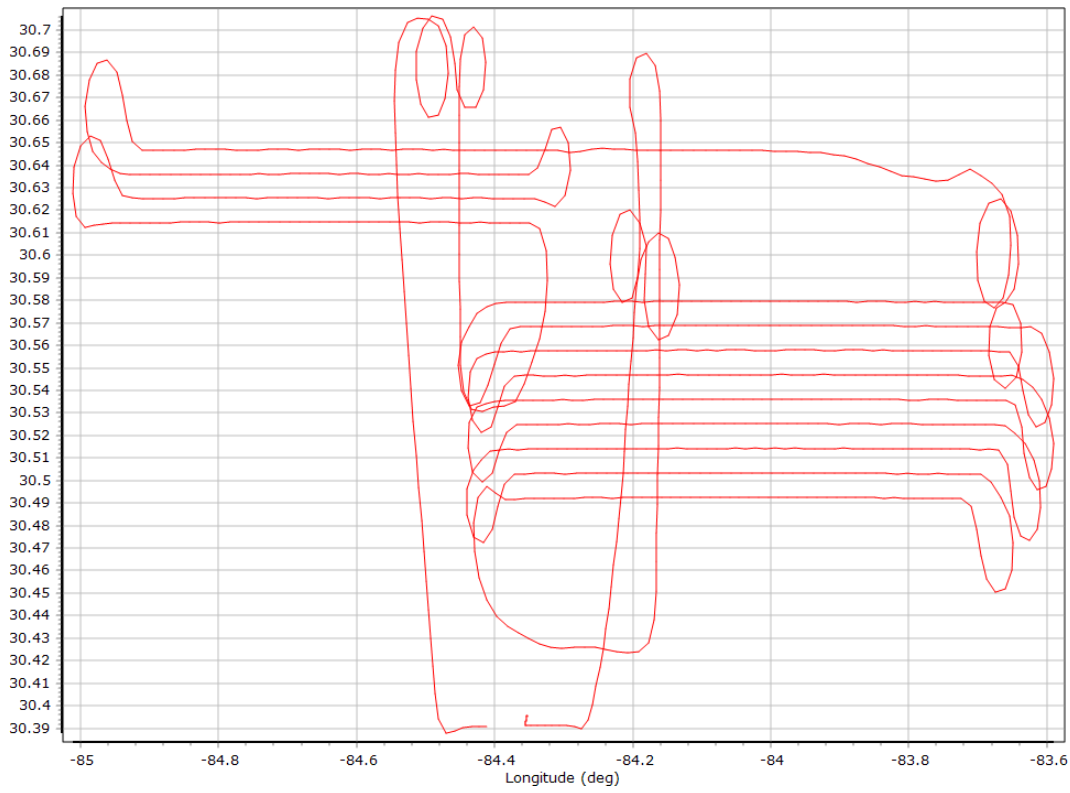


BEIDOU SNR

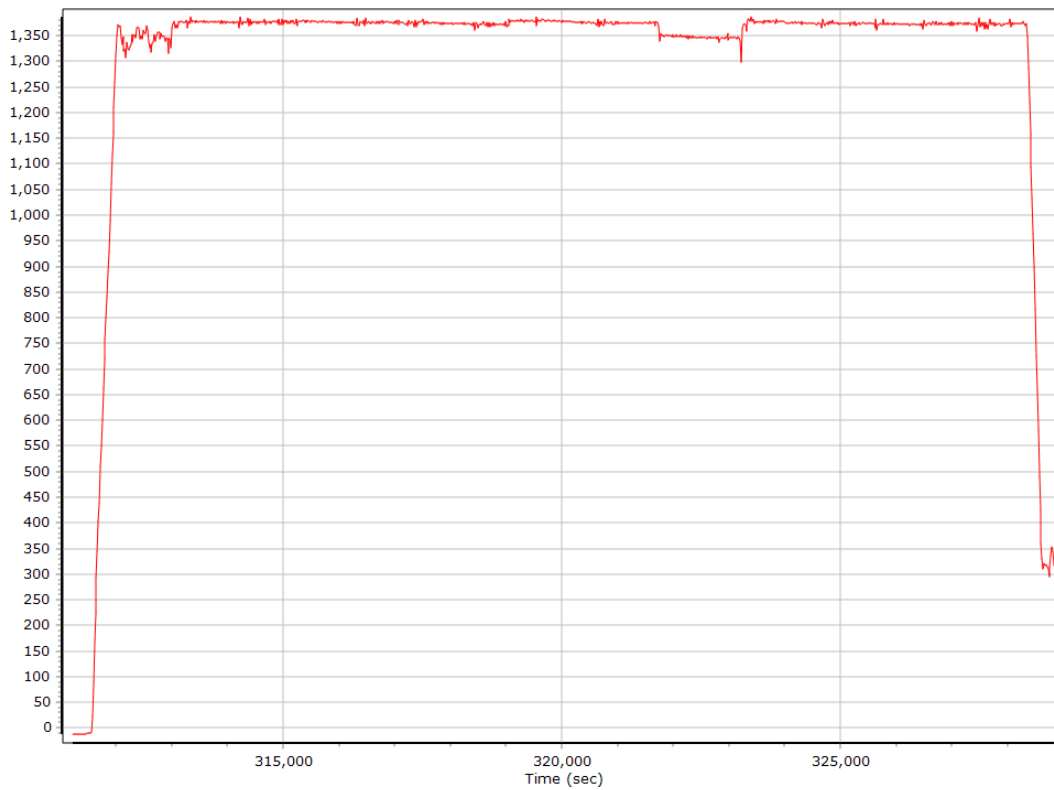


Trajectory Information

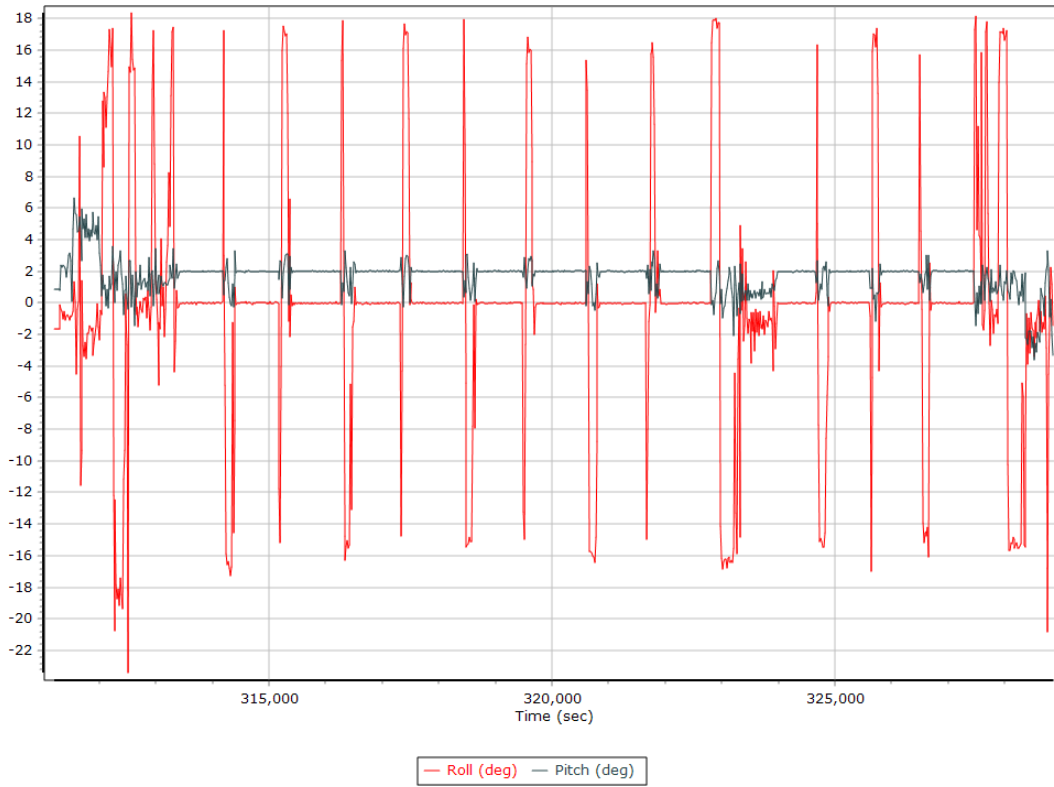
Top View



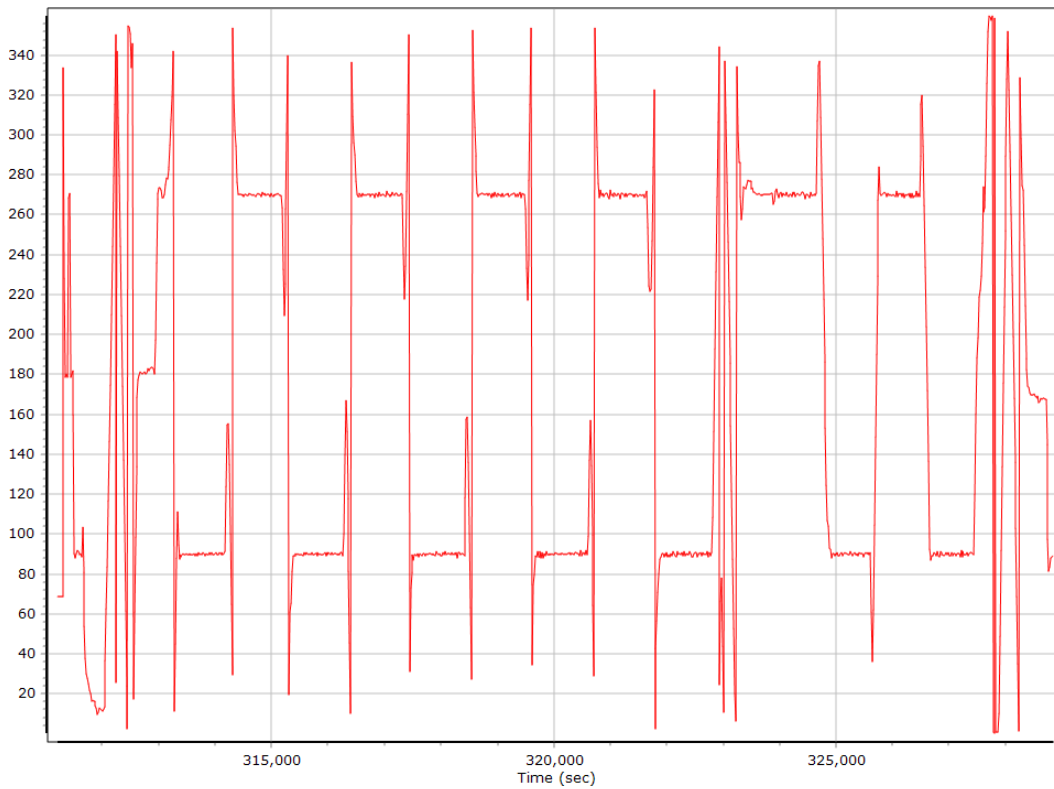
Altitude



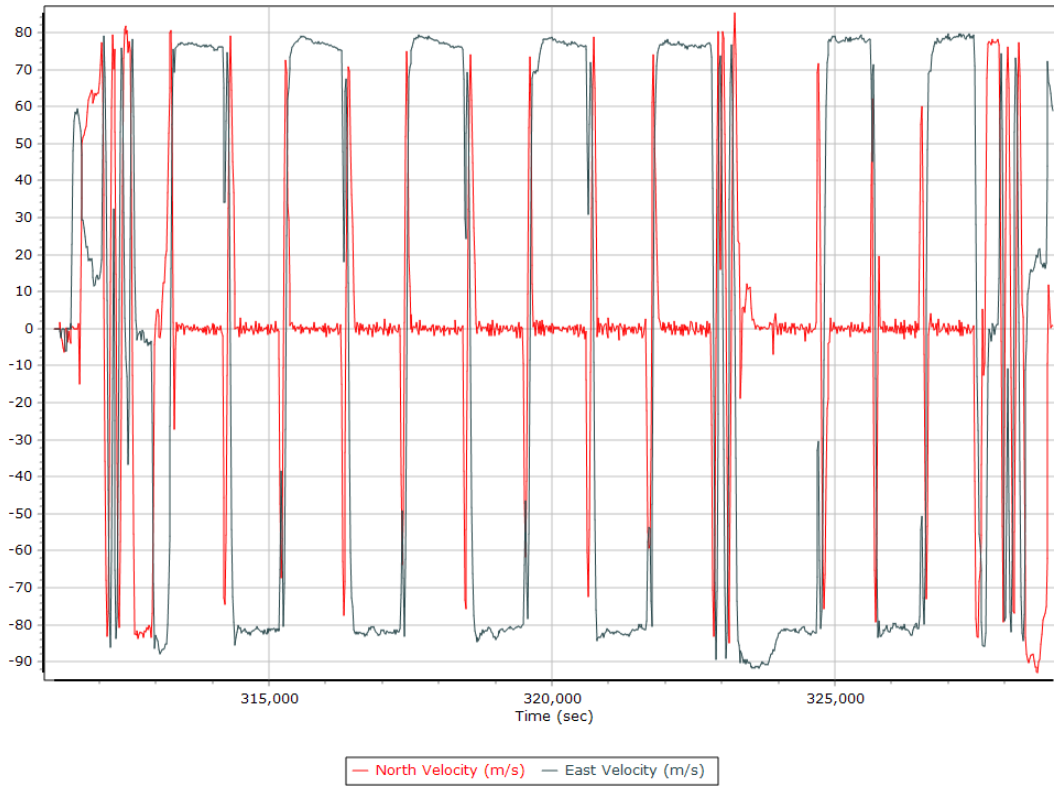
Roll/Pitch



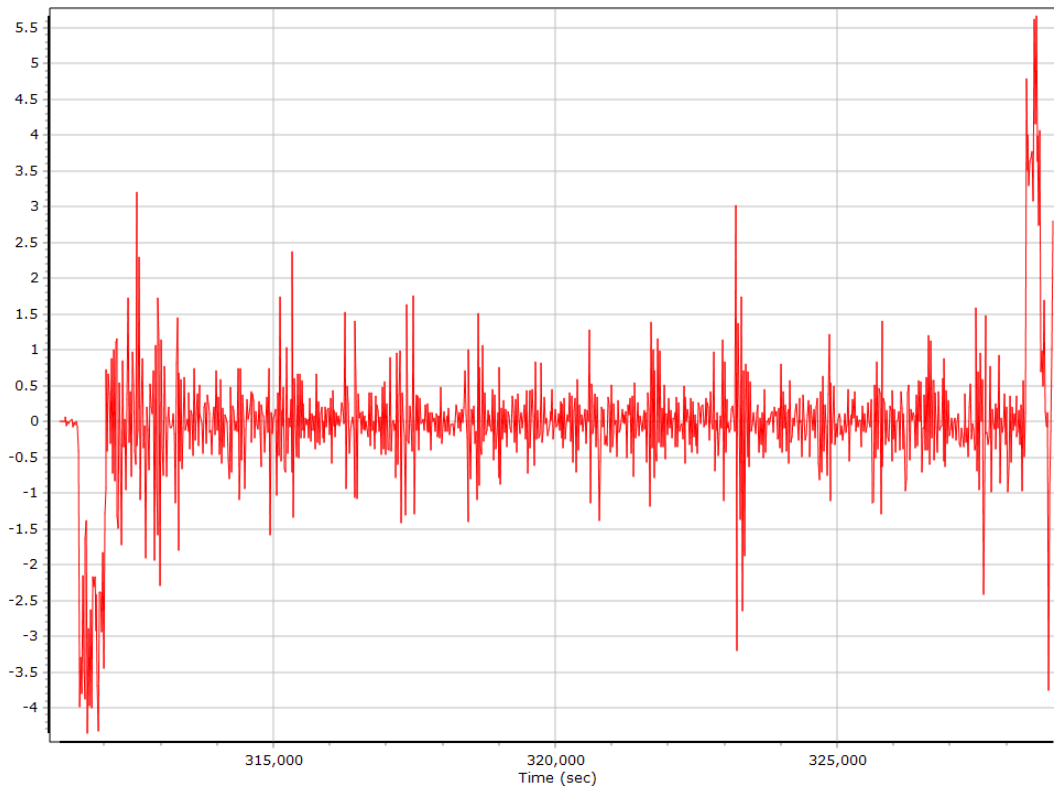
Heading



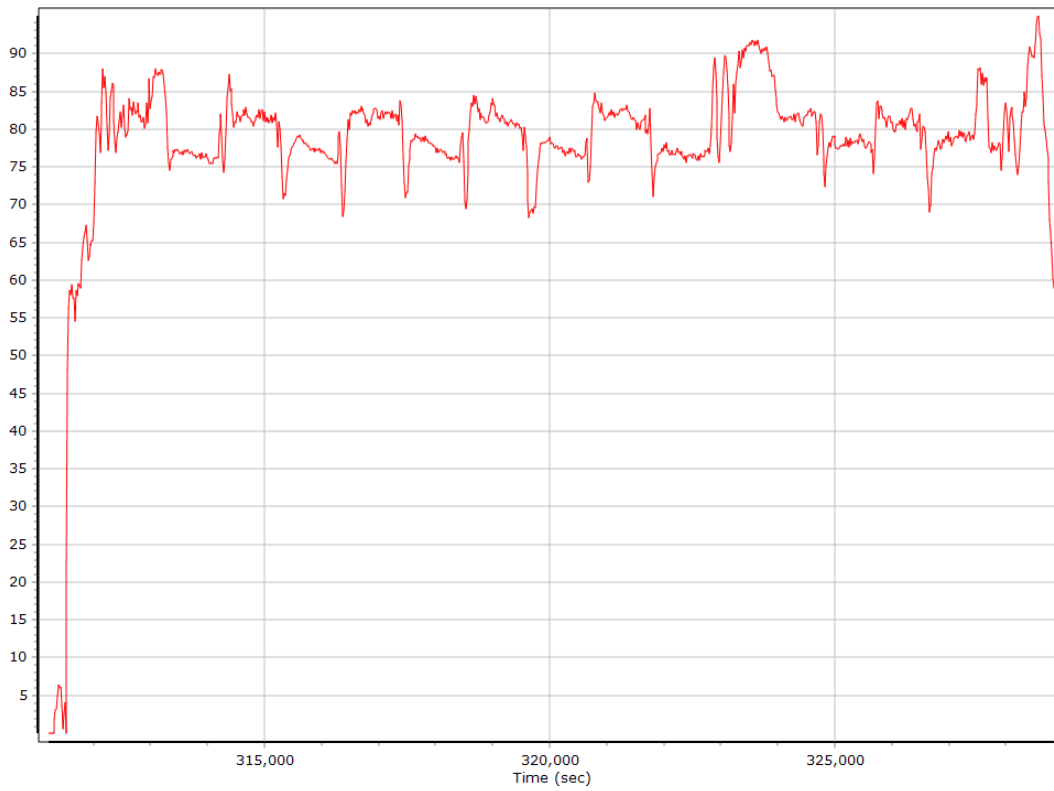
North/East Velocity



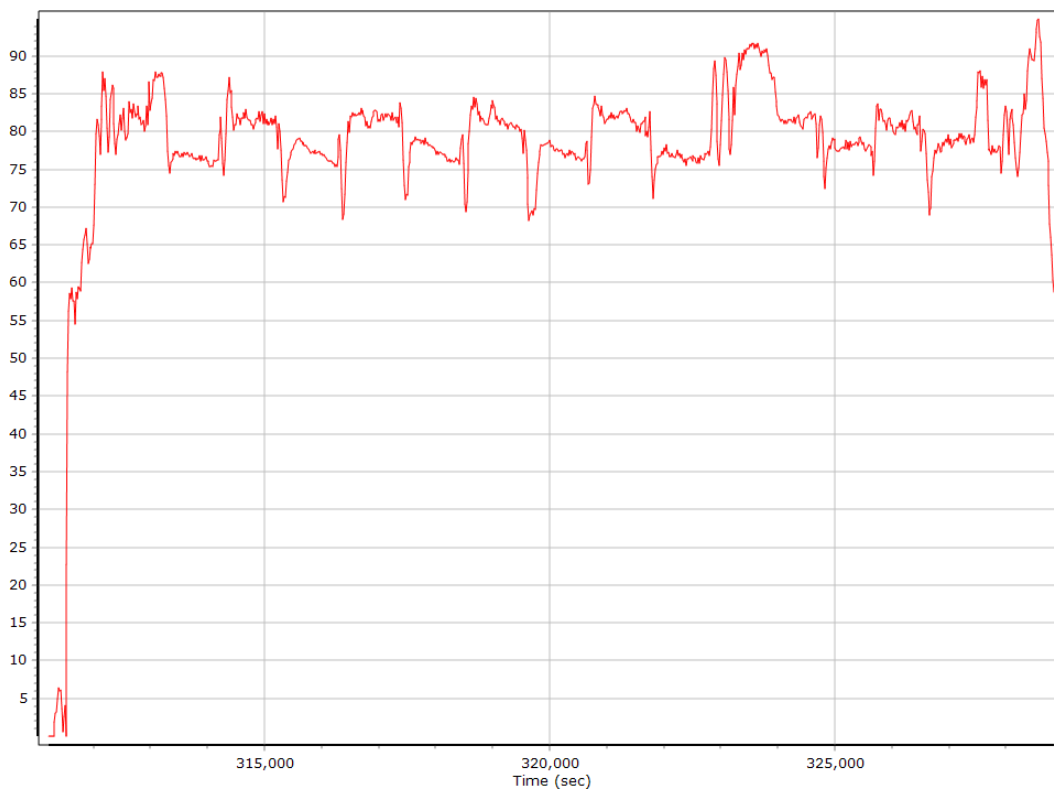
Down Velocity



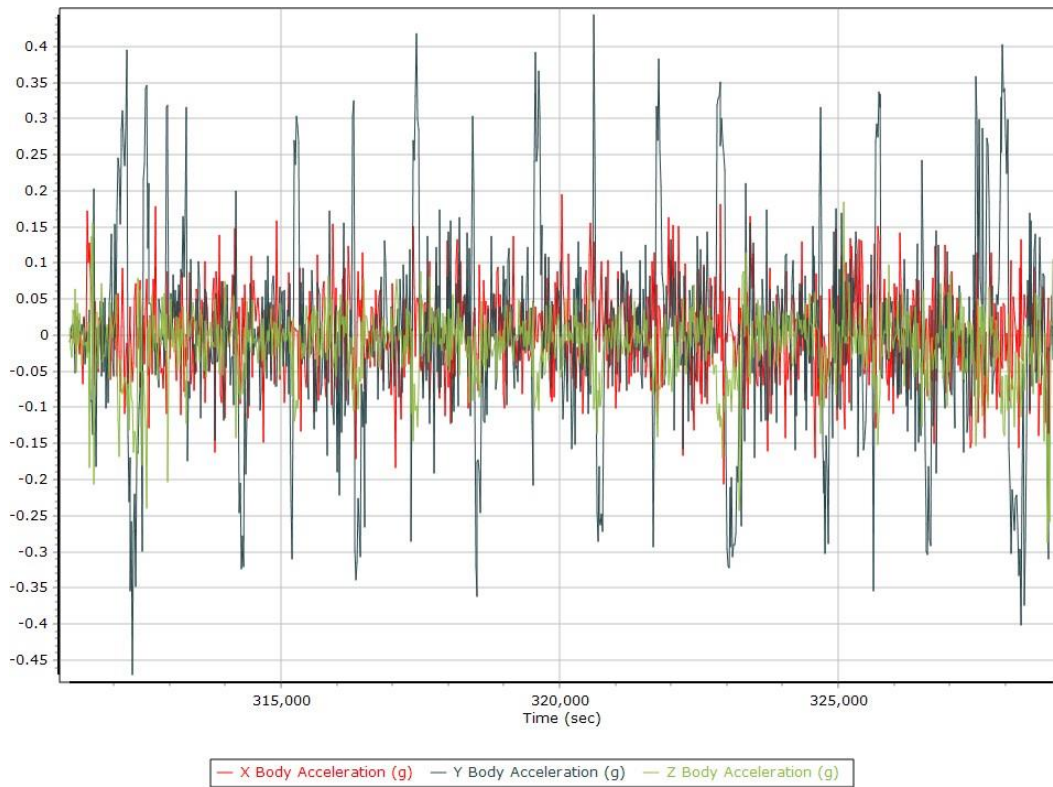
Total Speed



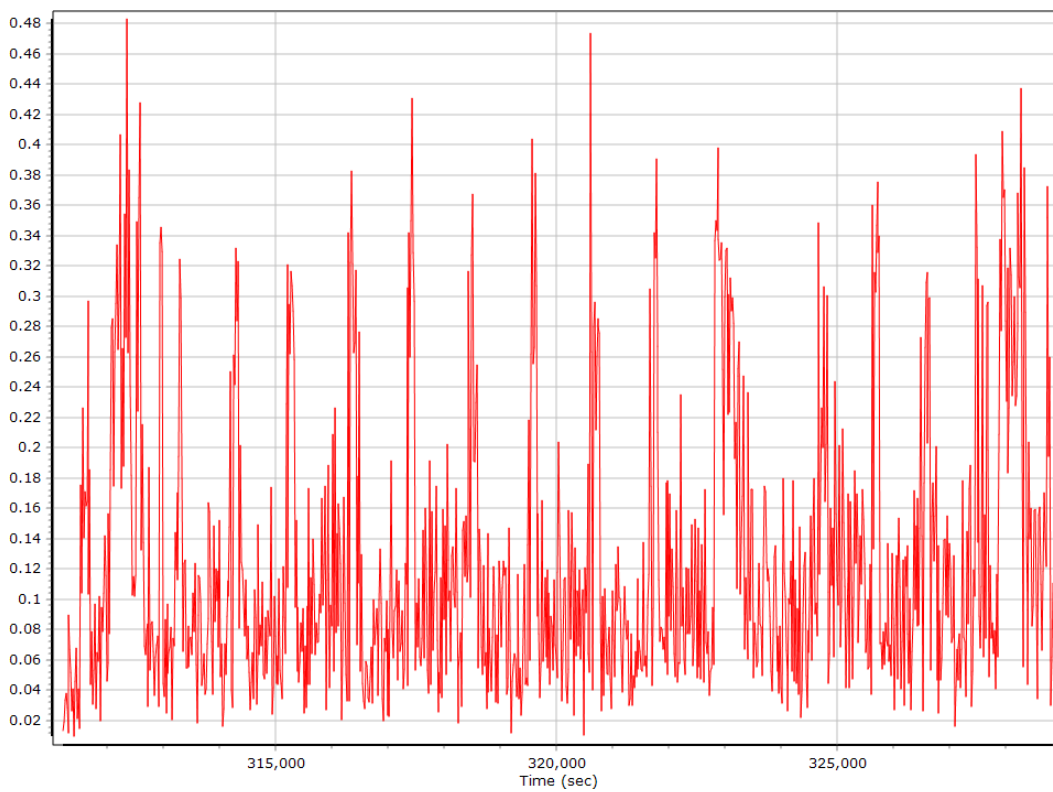
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate



SmartBase Processing Summary

Smart Select Options

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

Basestation Selection

Date	ID	Dist	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	

SmartBase Quality Check

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	0.49	77.40	
Number of GPS SV	6	10	8
Number of GLONASS SV	0	8	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	7	15	13
PDOP	1.28	2.35	1.52
QC Solution Gaps	1.00	59.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	18486.00	0.00	64.00
Percentage	99.65	0.00	0.35

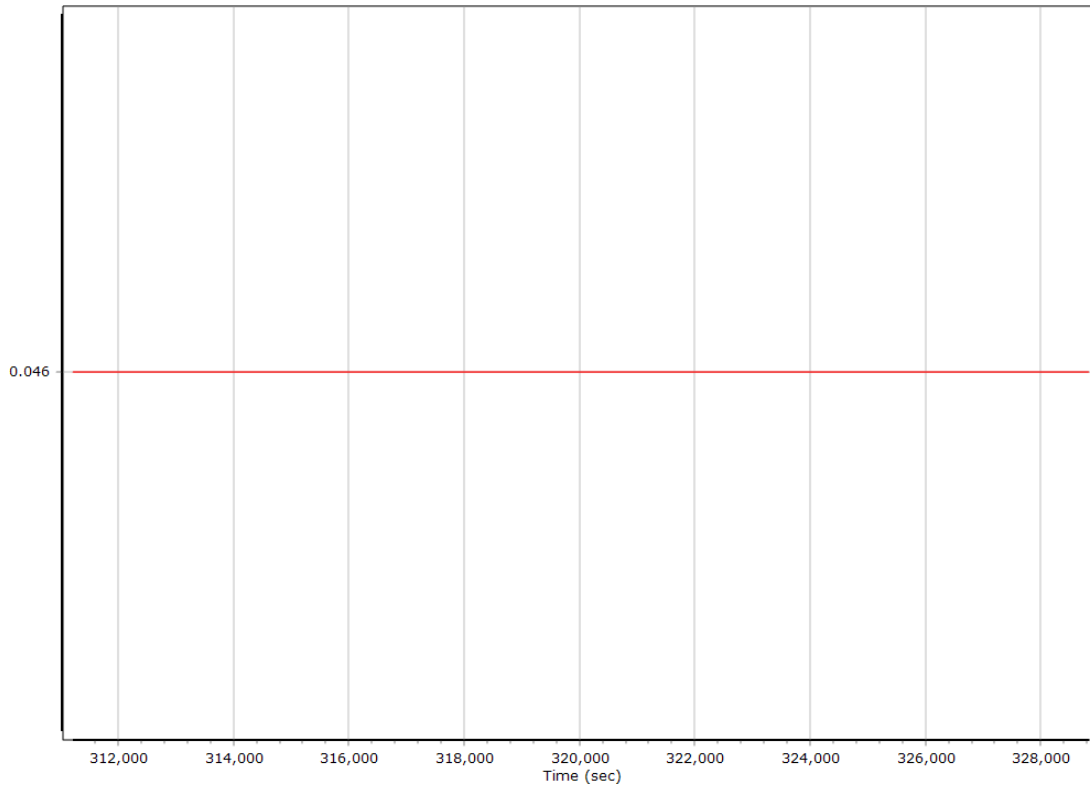
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	310732.000 (12/25/2019 2:18:52 PM)		
Processing end time	329339.000 (12/25/2019 7:28:59 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.046	-0.183	-1.289
Gimbal to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

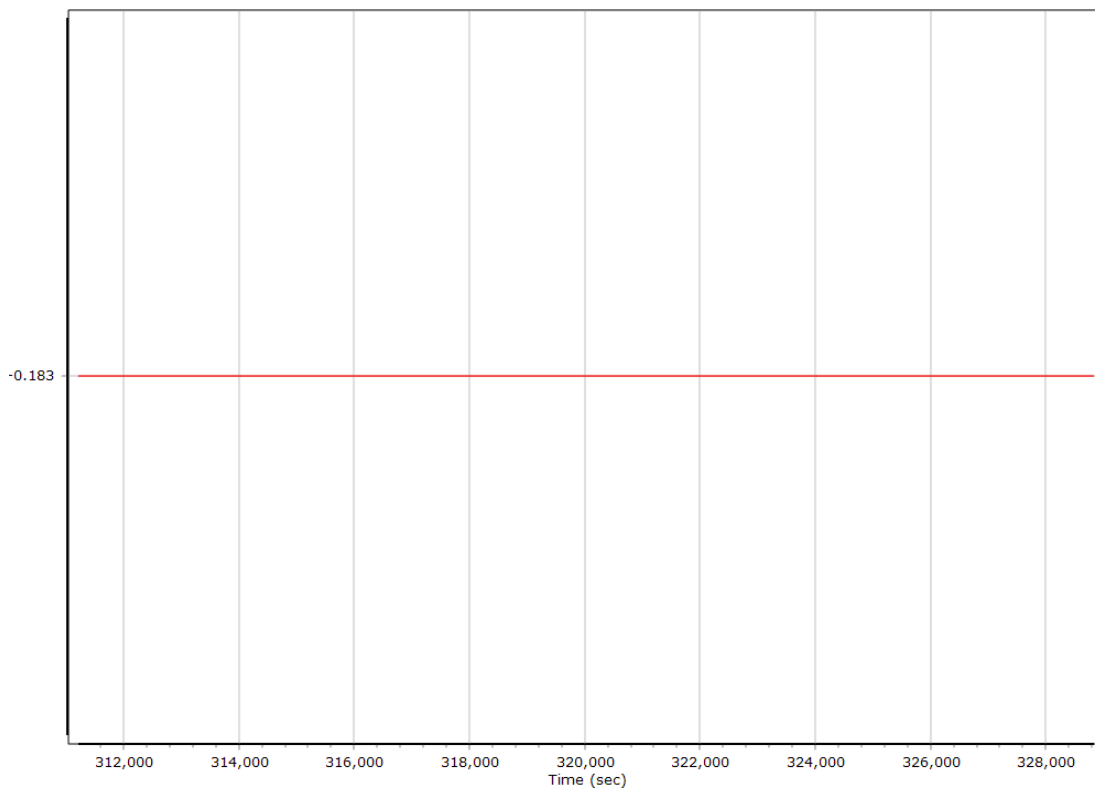
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

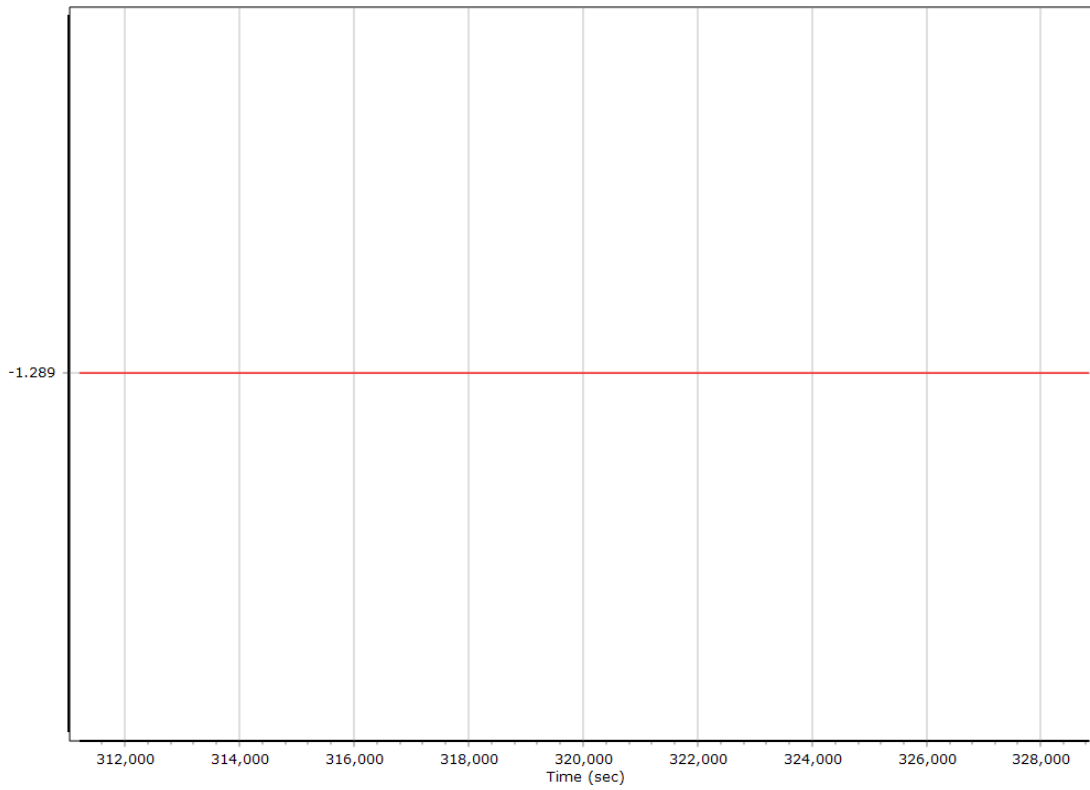
X Reference-Primary GNSS Lever Arm (m)



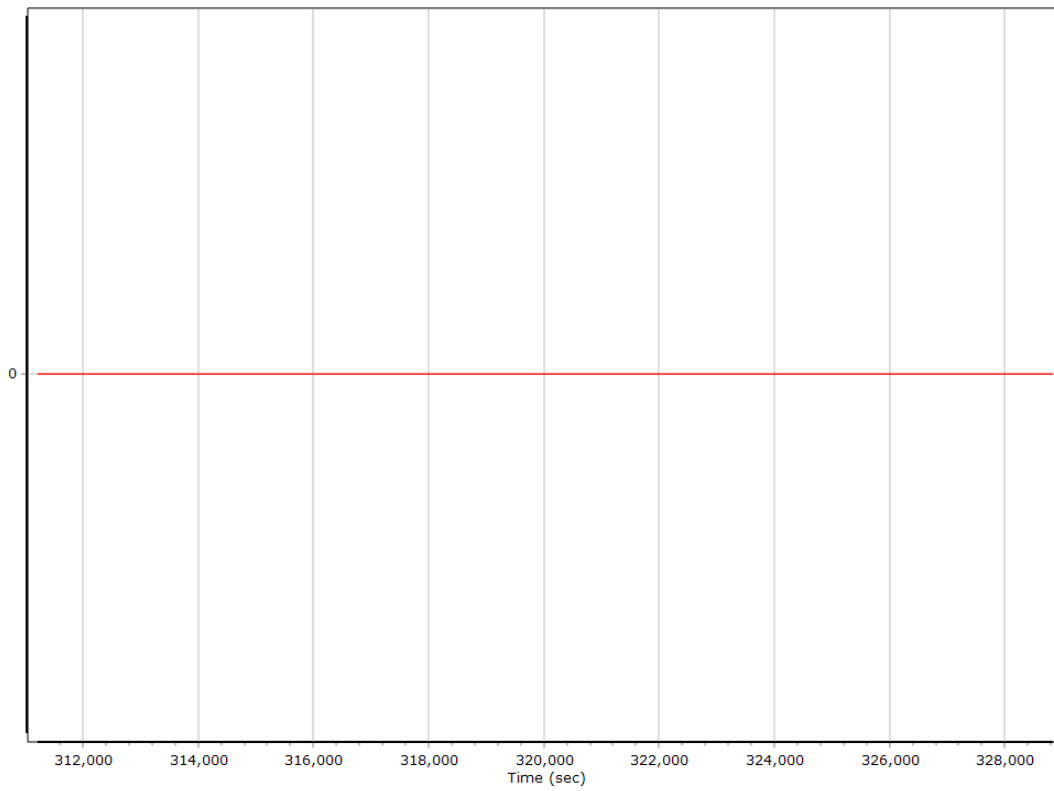
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



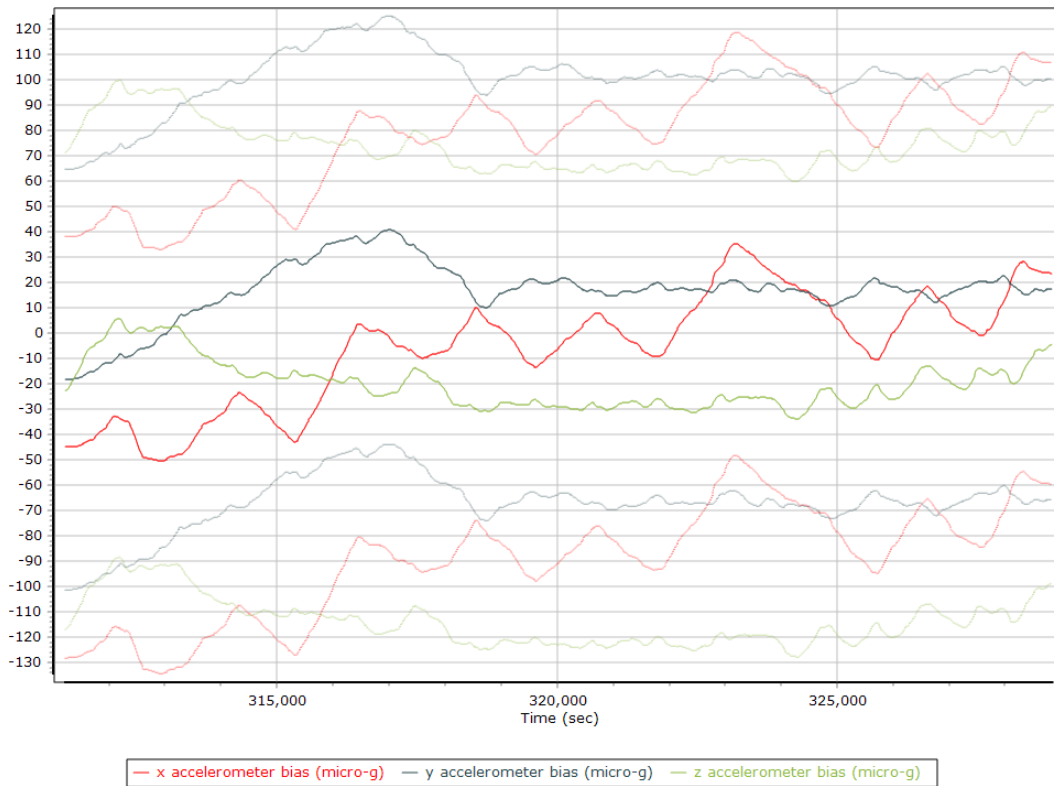
Reference-Primary GNSS Lever Arm Figure of Merit



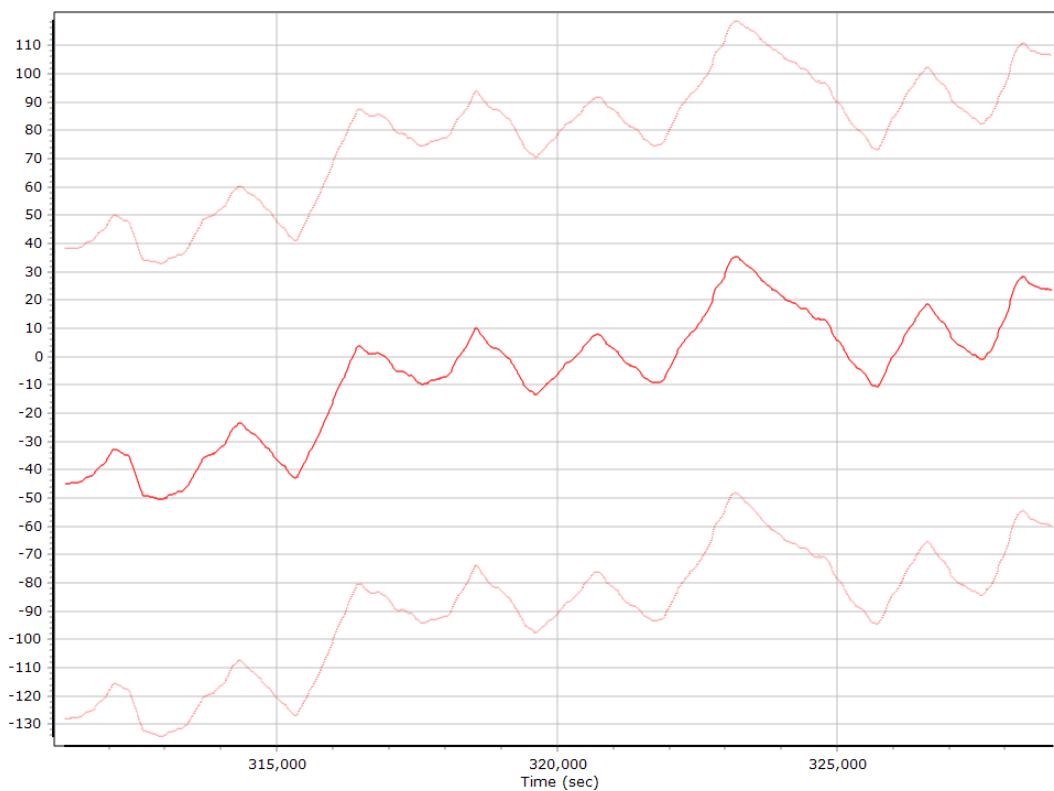
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

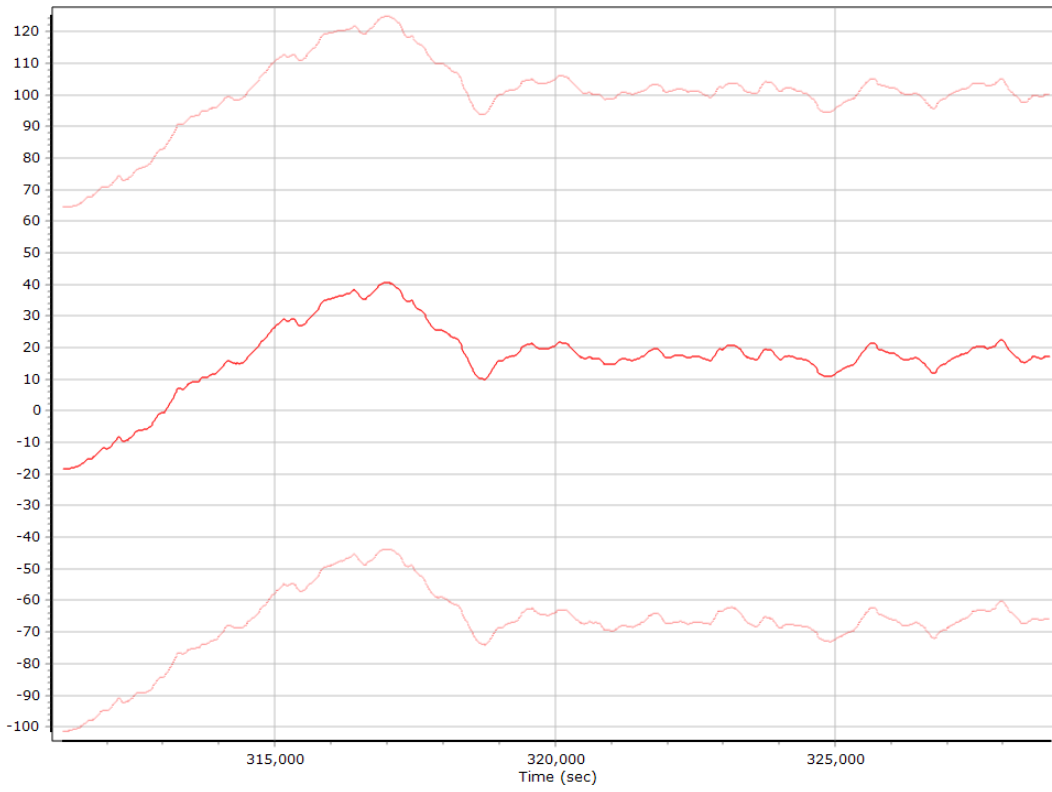
Accelerometer Bias (micro-g)



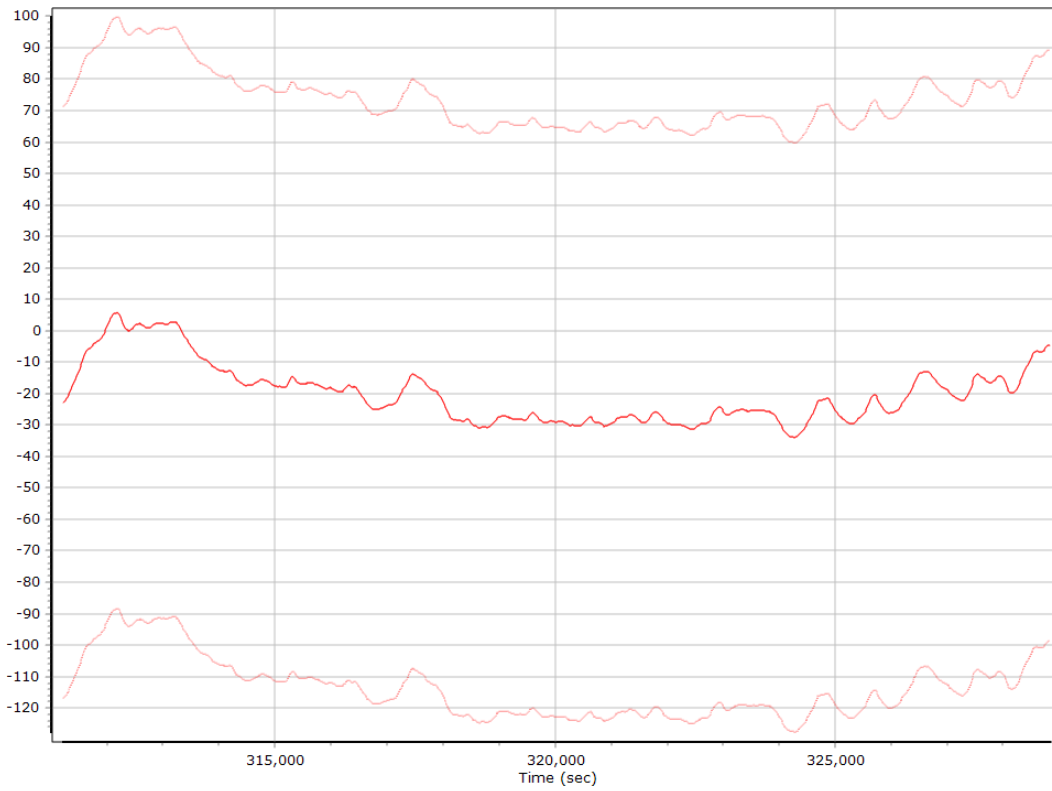
X Accelerometer Bias (micro-g)



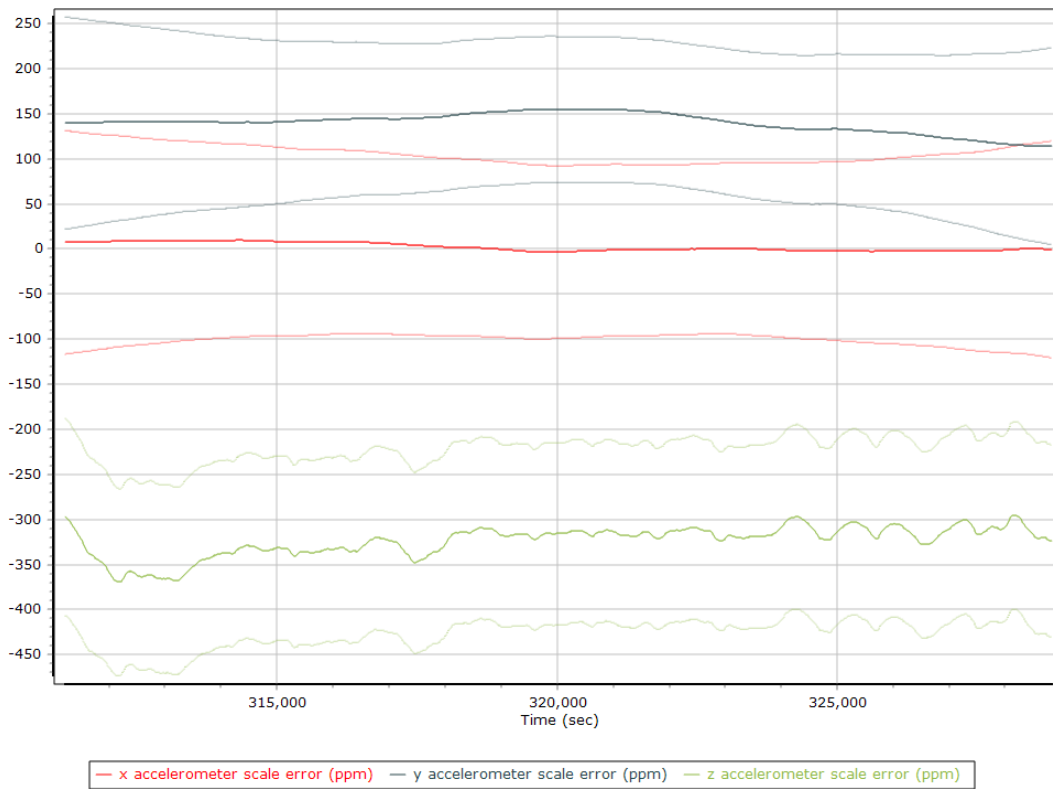
Y Accelerometer Bias (micro-g)



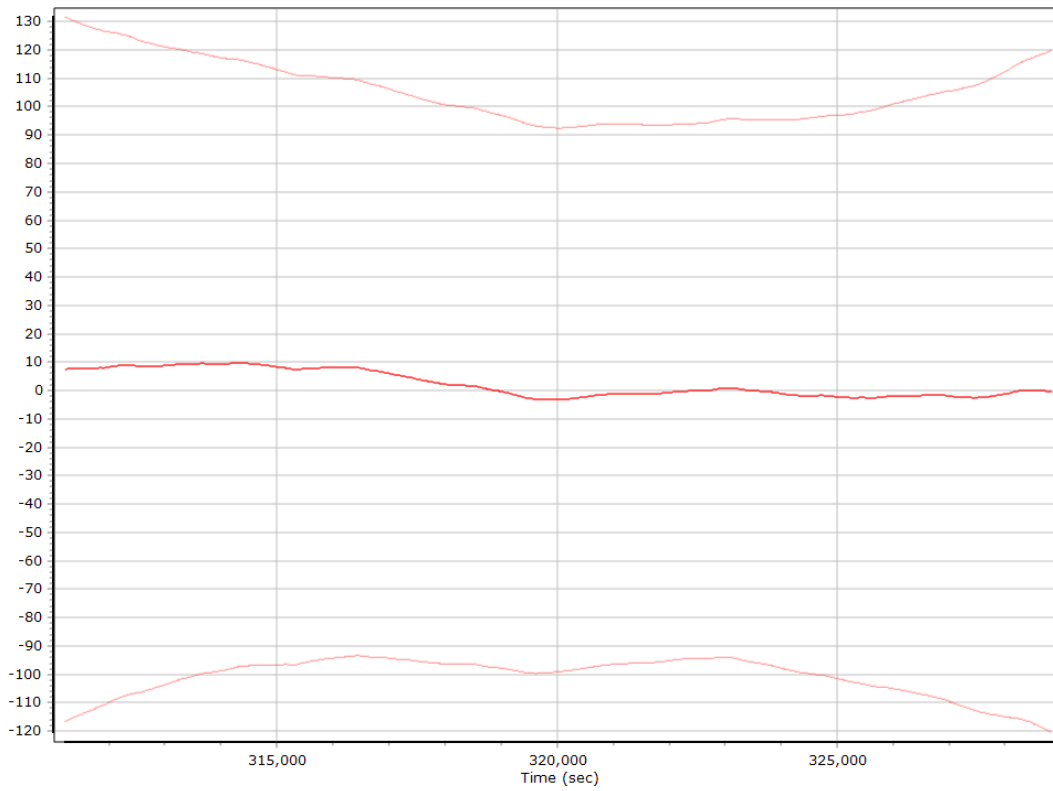
Z Accelerometer Bias (micro-g)



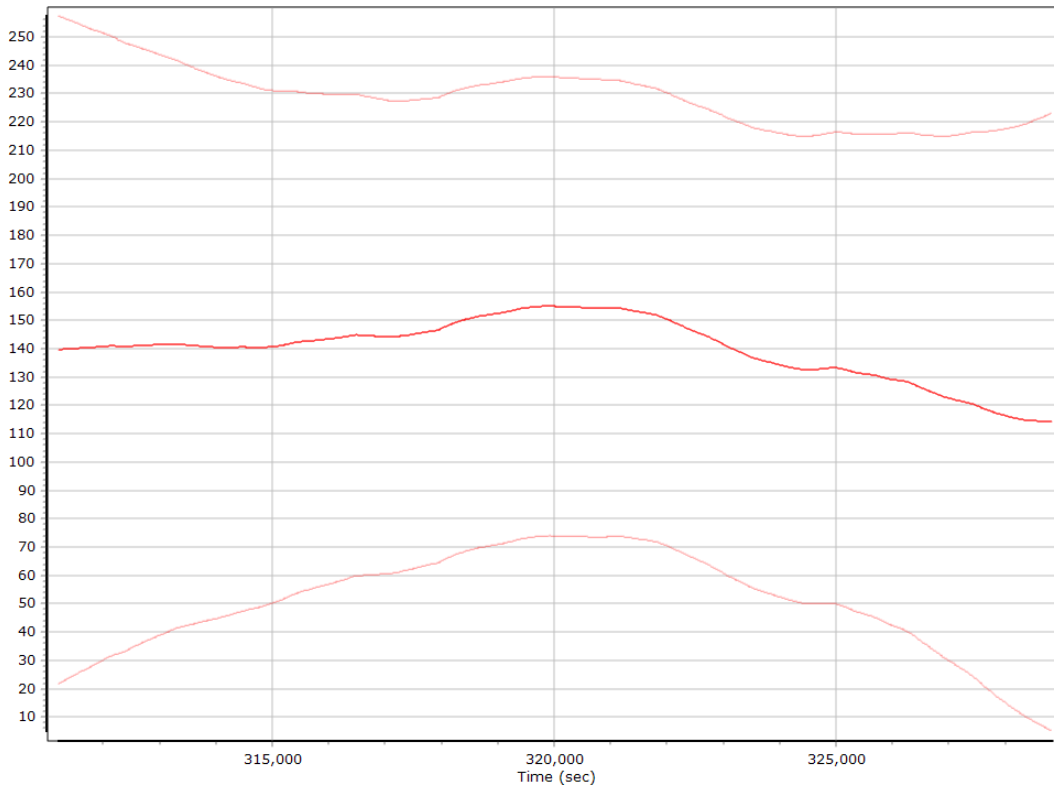
Accelerometer Scale Error (ppm)



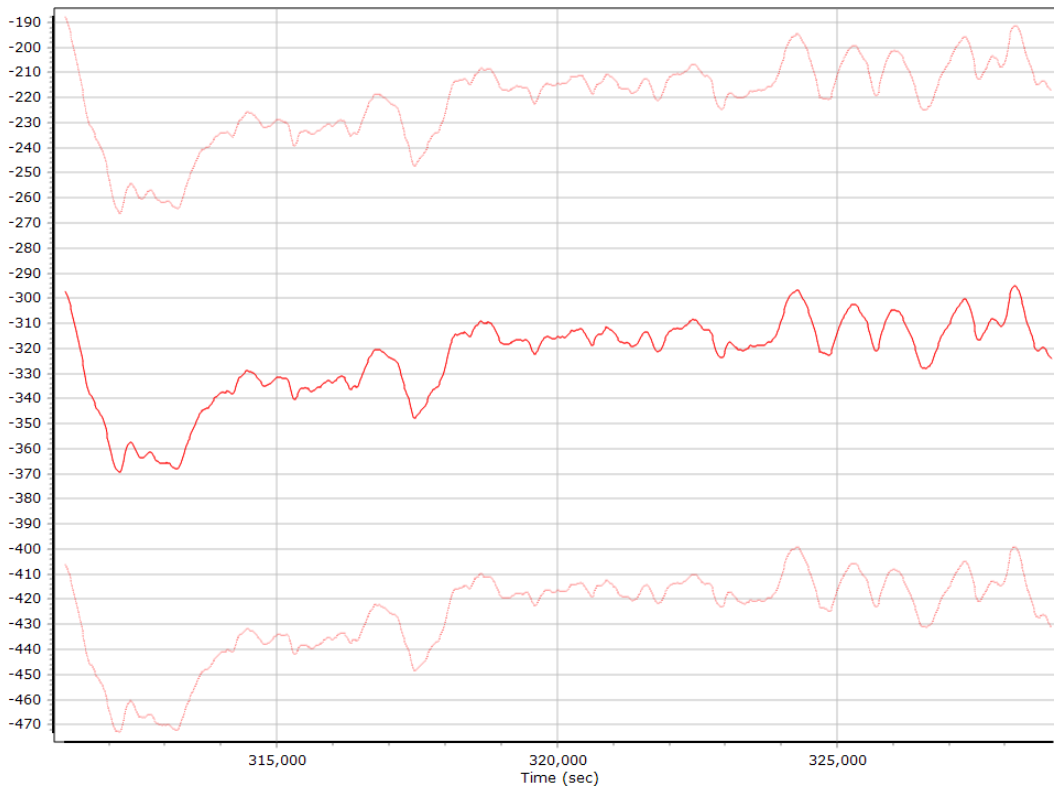
X Accelerometer Scale Error (ppm)



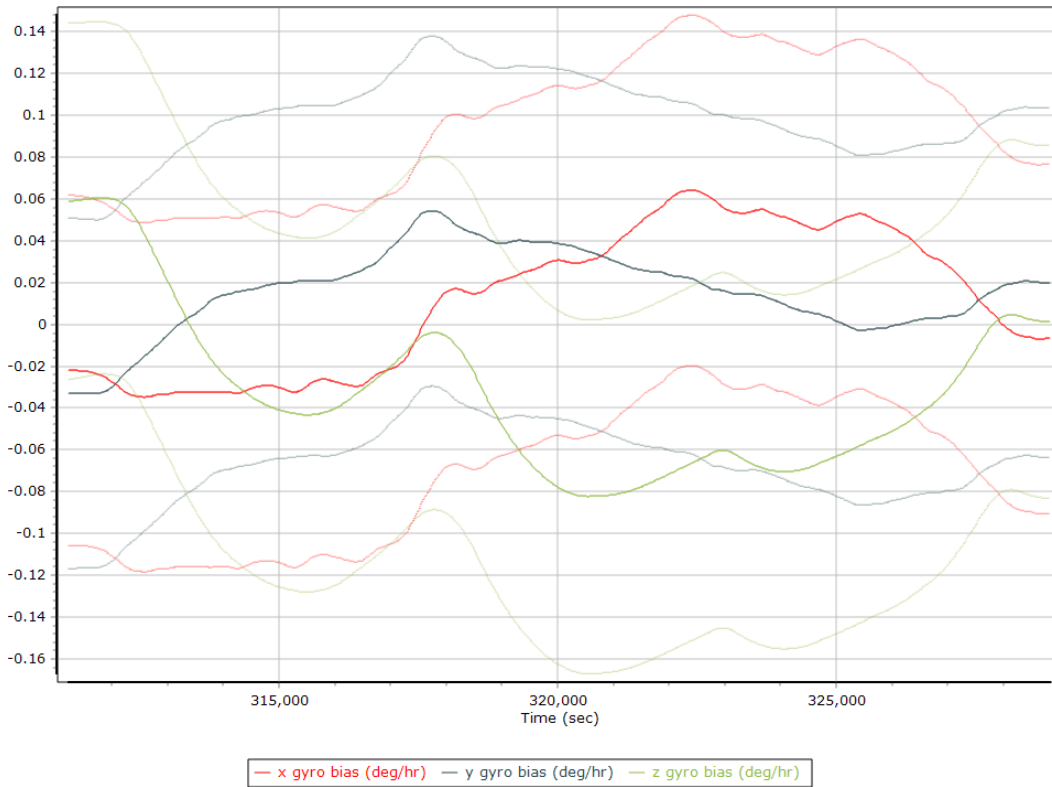
Y Accelerometer Scale Error (ppm)



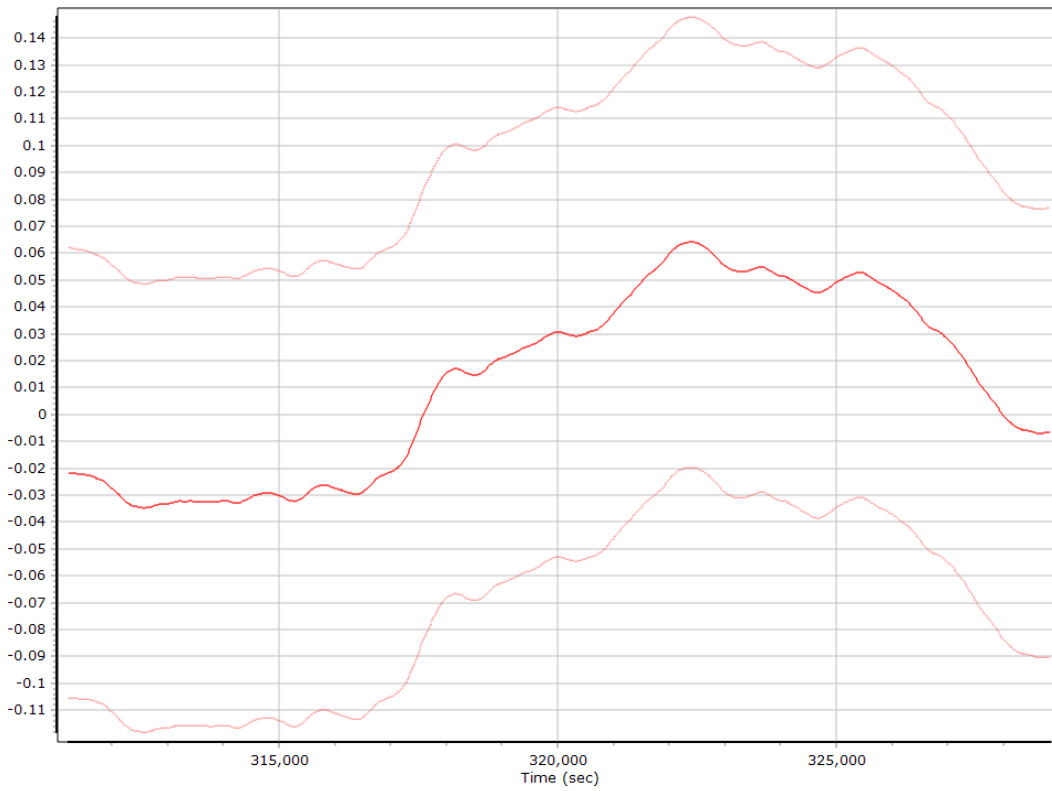
Z Accelerometer Scale Error (ppm)



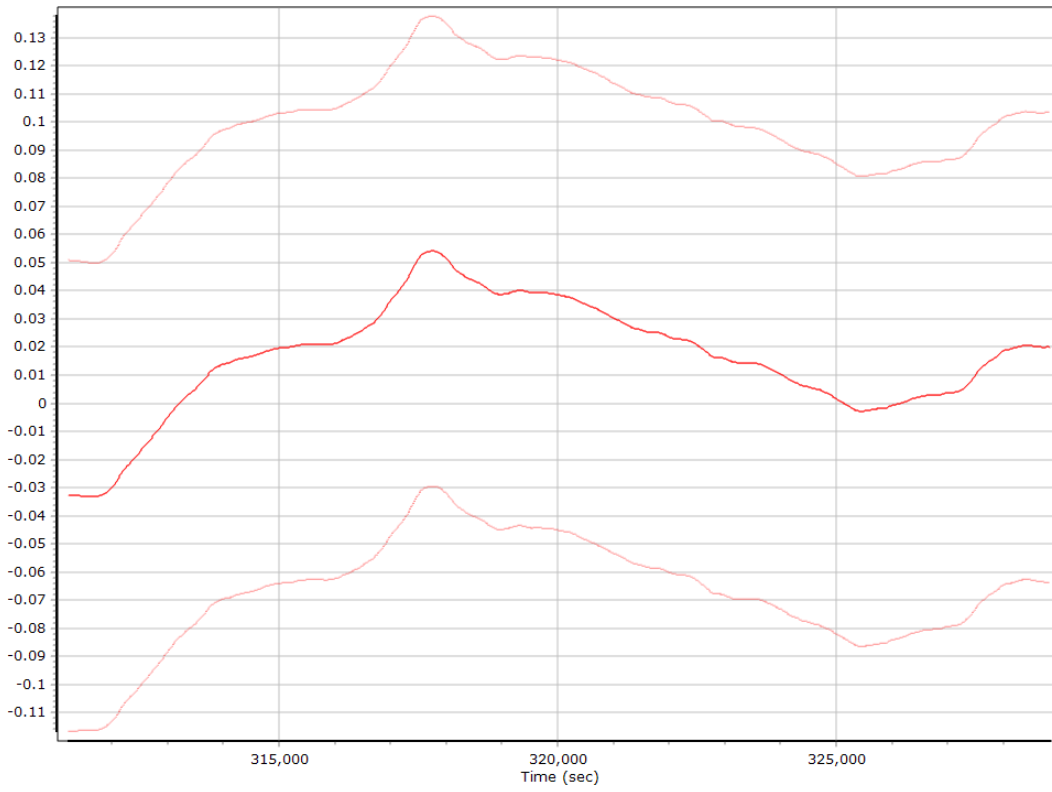
Gyro Bias (deg/h)



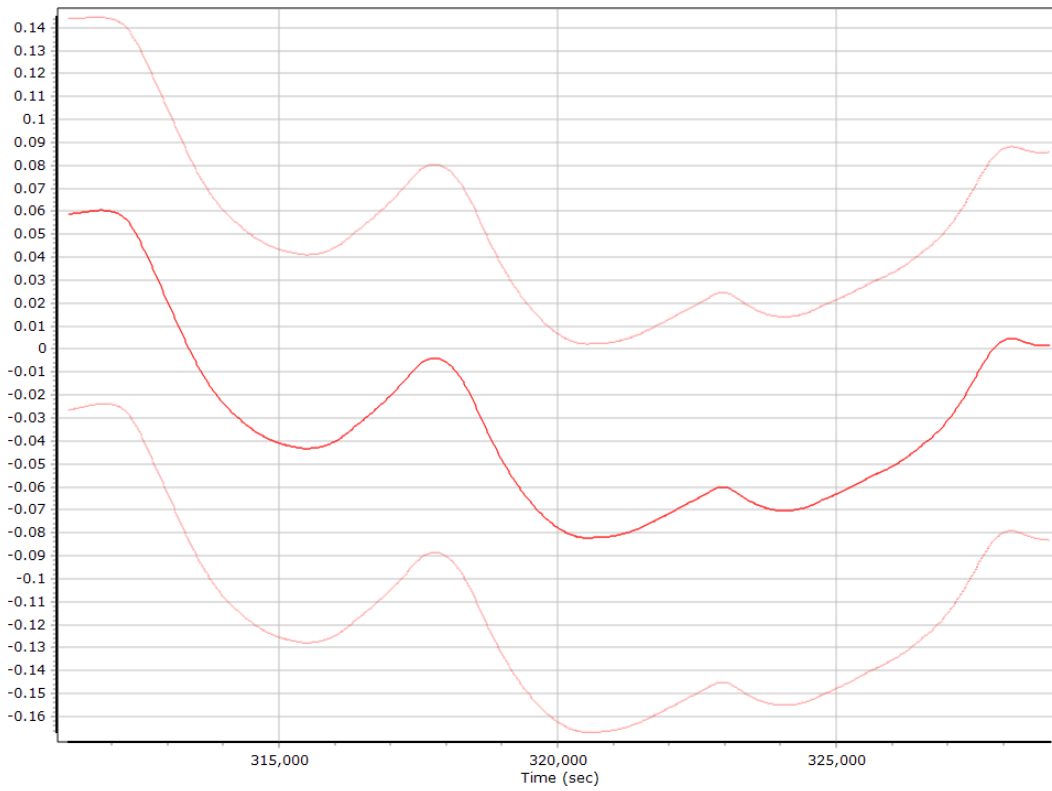
X Gyro Bias (deg/h)



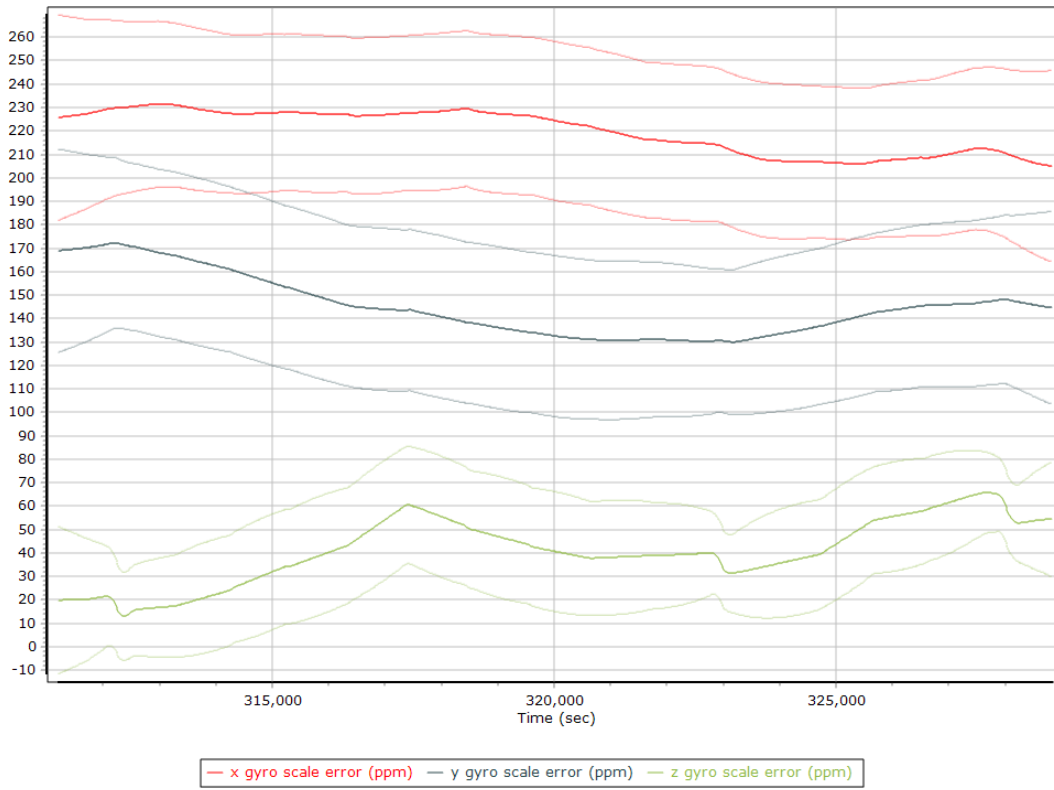
Y Gyro Bias (deg/h)



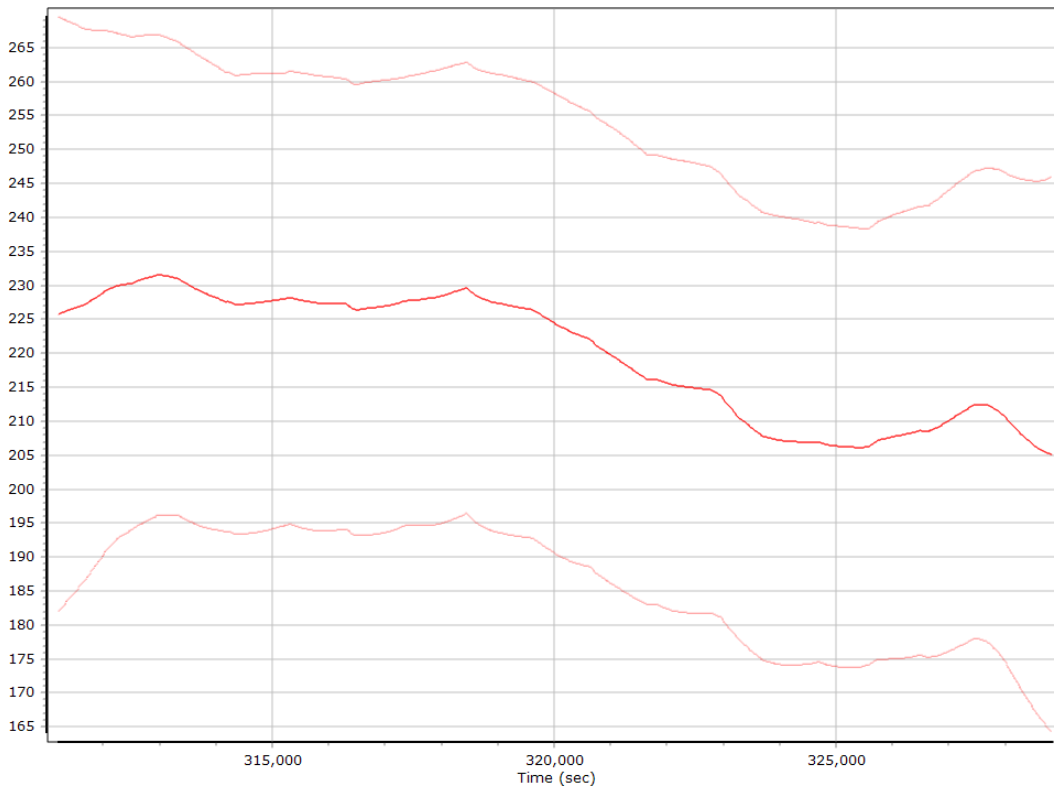
Z Gyro Bias (deg/h)



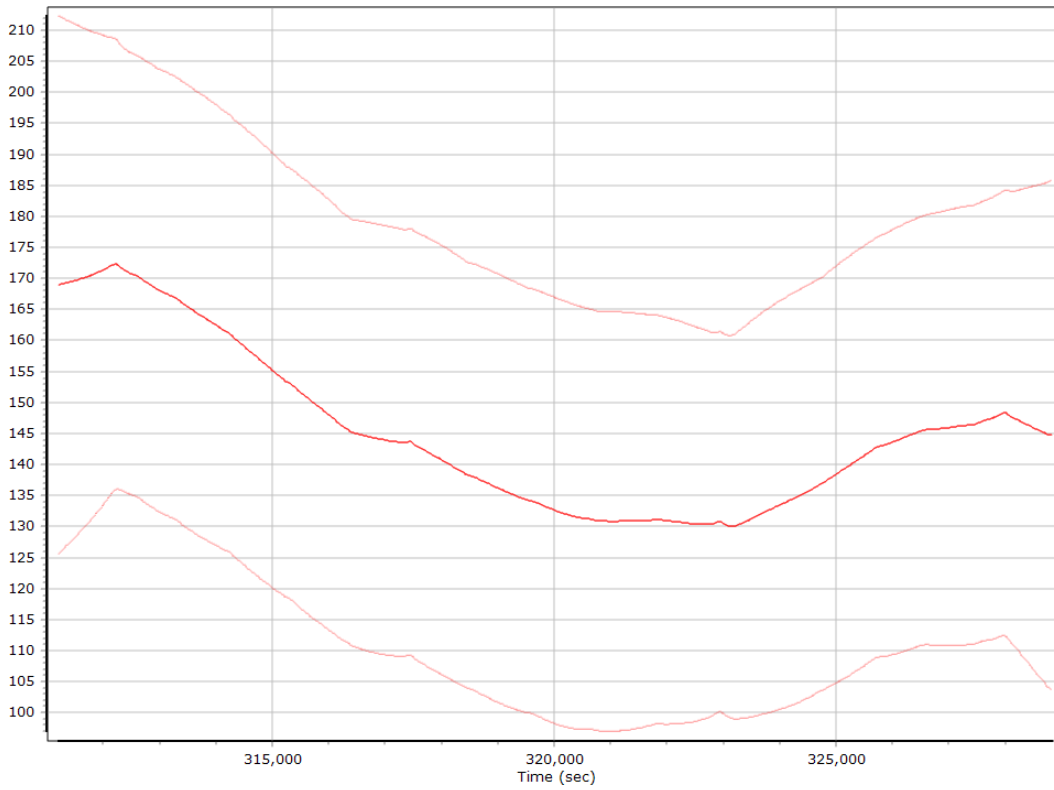
Gyro Scale Error (ppm)



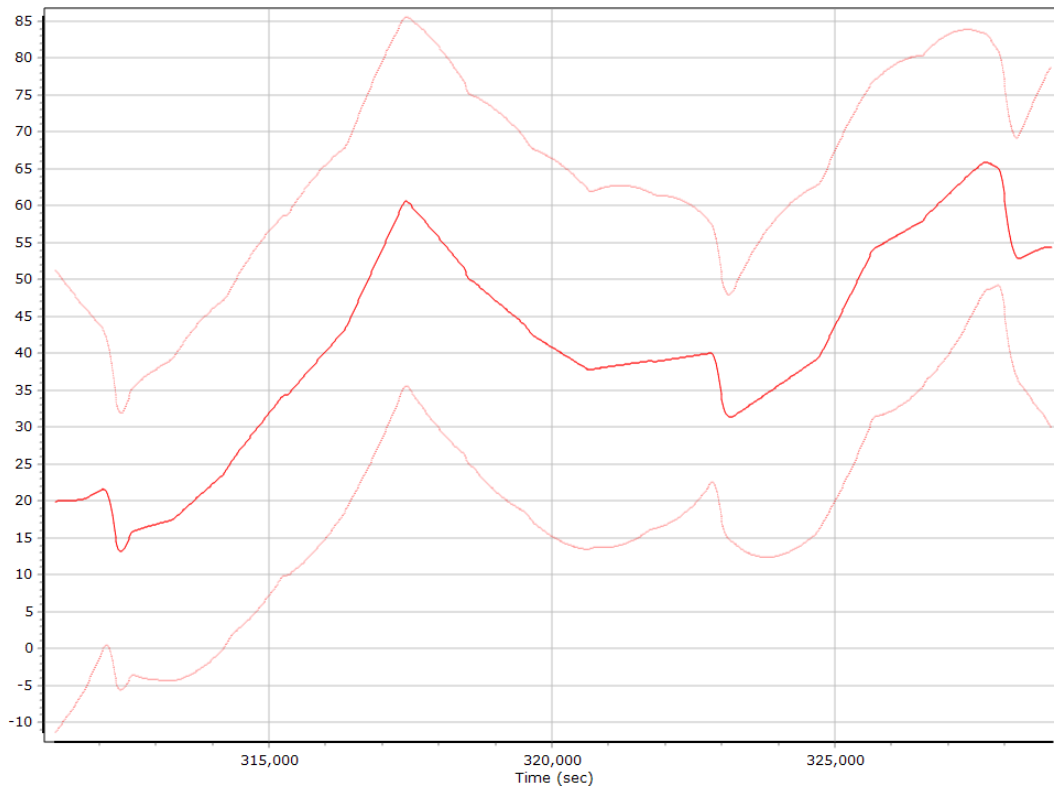
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

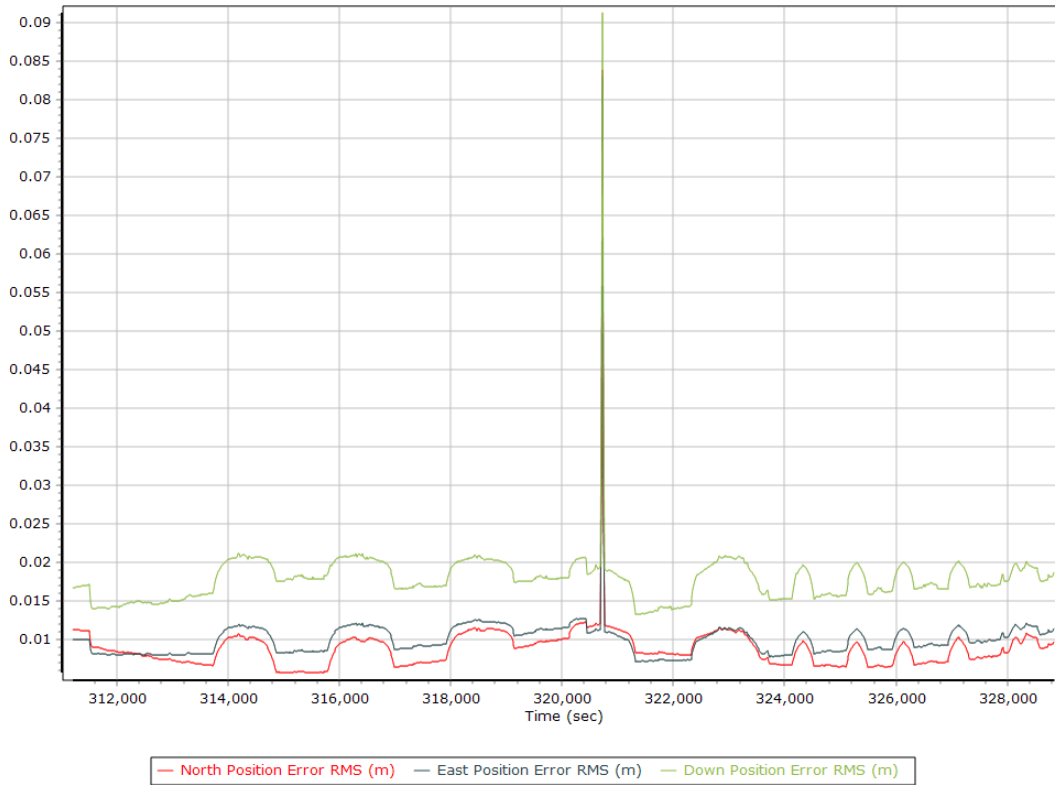


Z Gyro Scale Error (ppm)

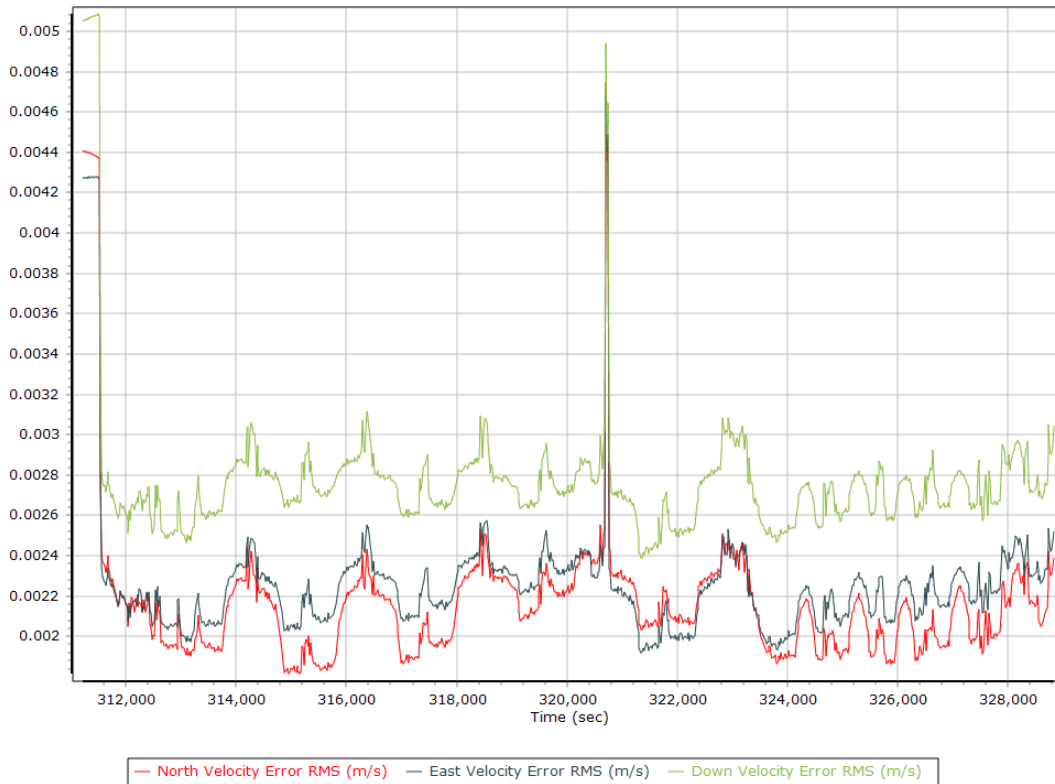


Smoothed Performance Metrics

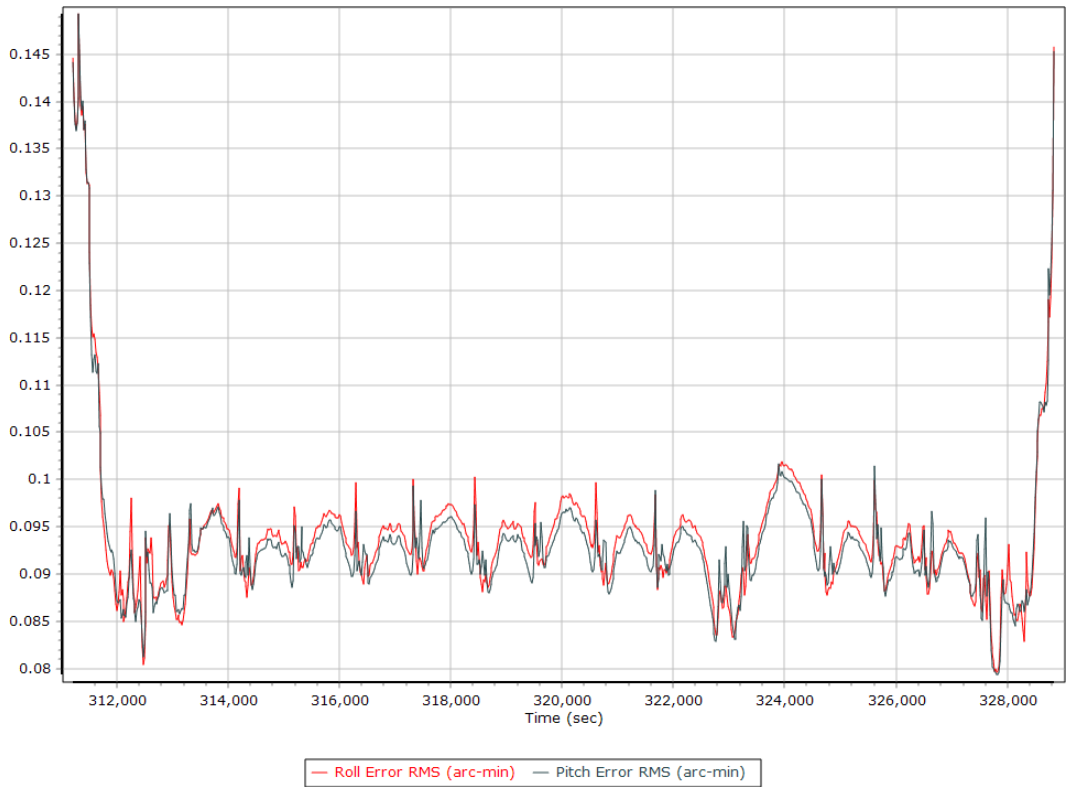
Position Error RMS (m)



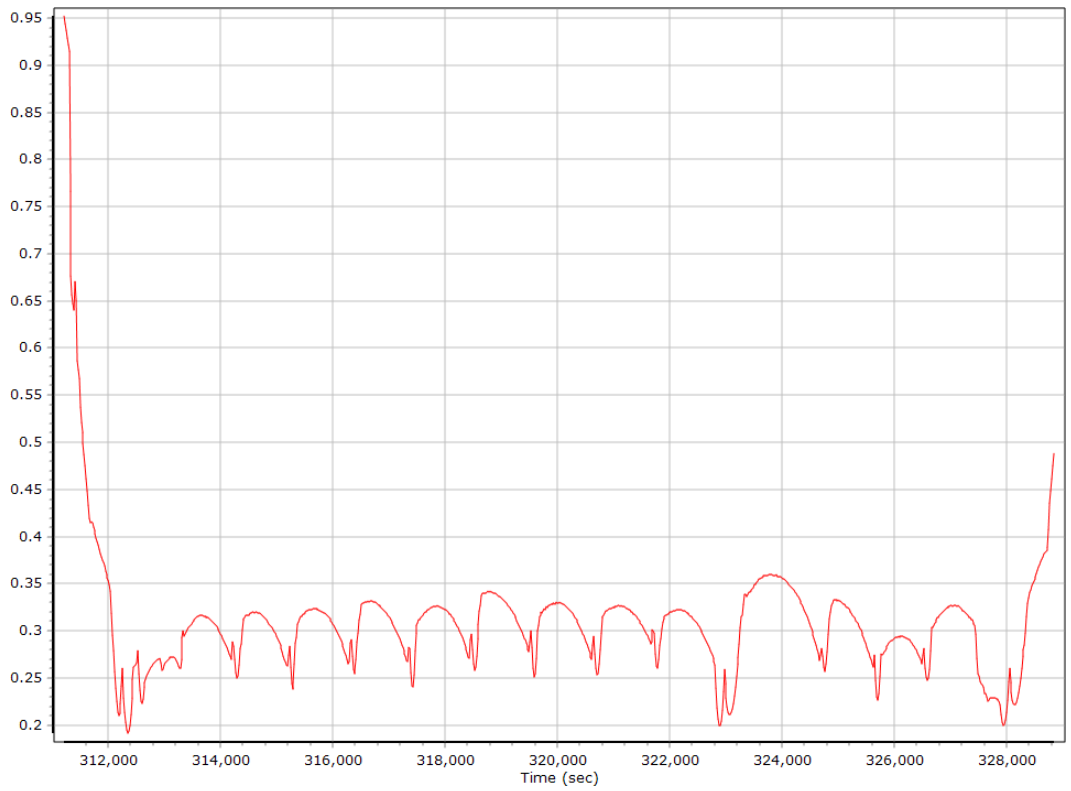
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

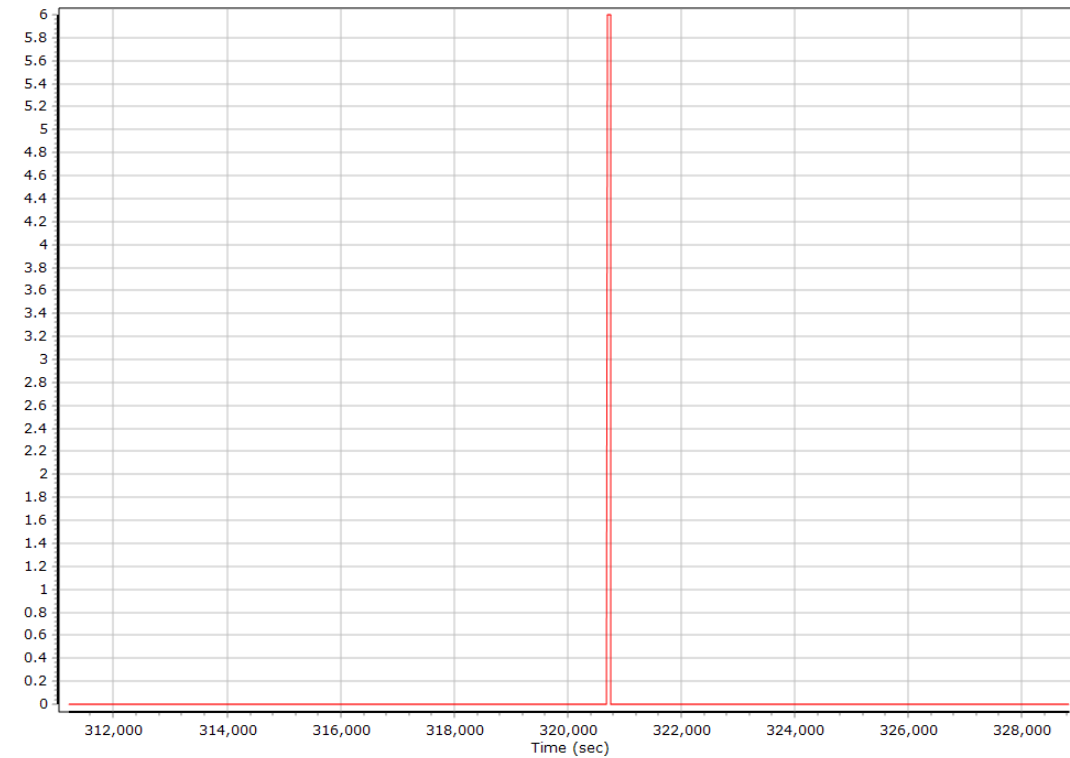


Heading Error RMS (arc-min)



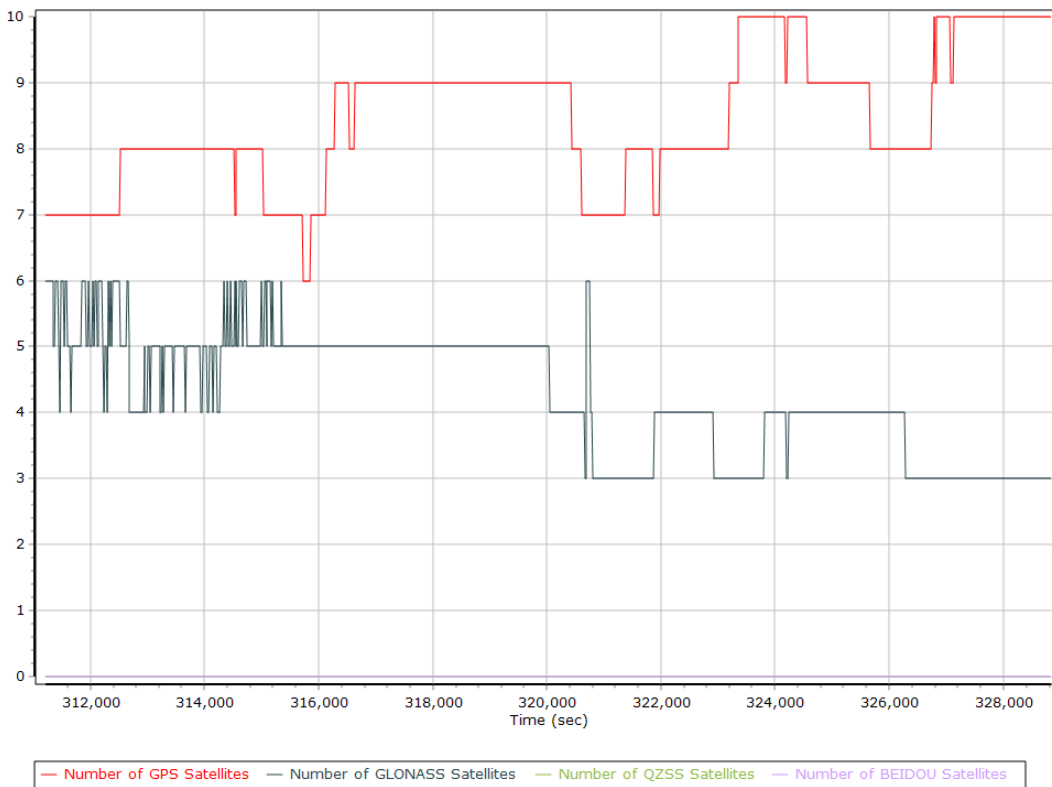
Smoothed Solution Status

Processing Mode



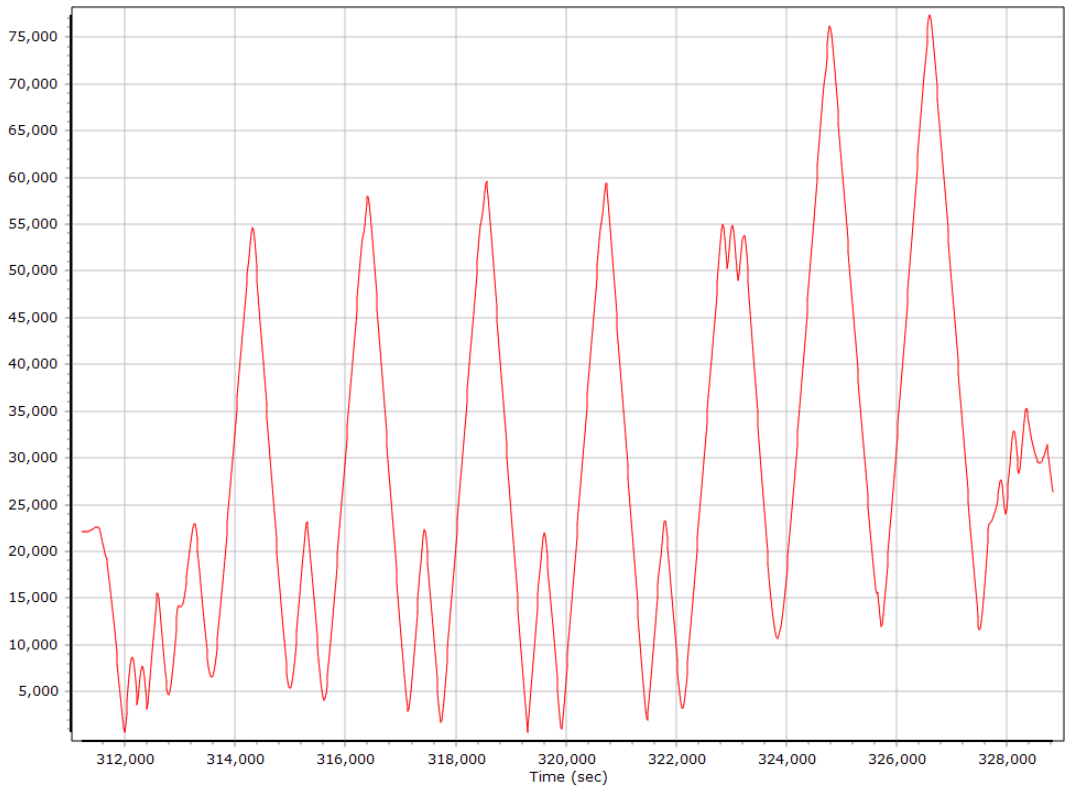
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR

Number of Satellites

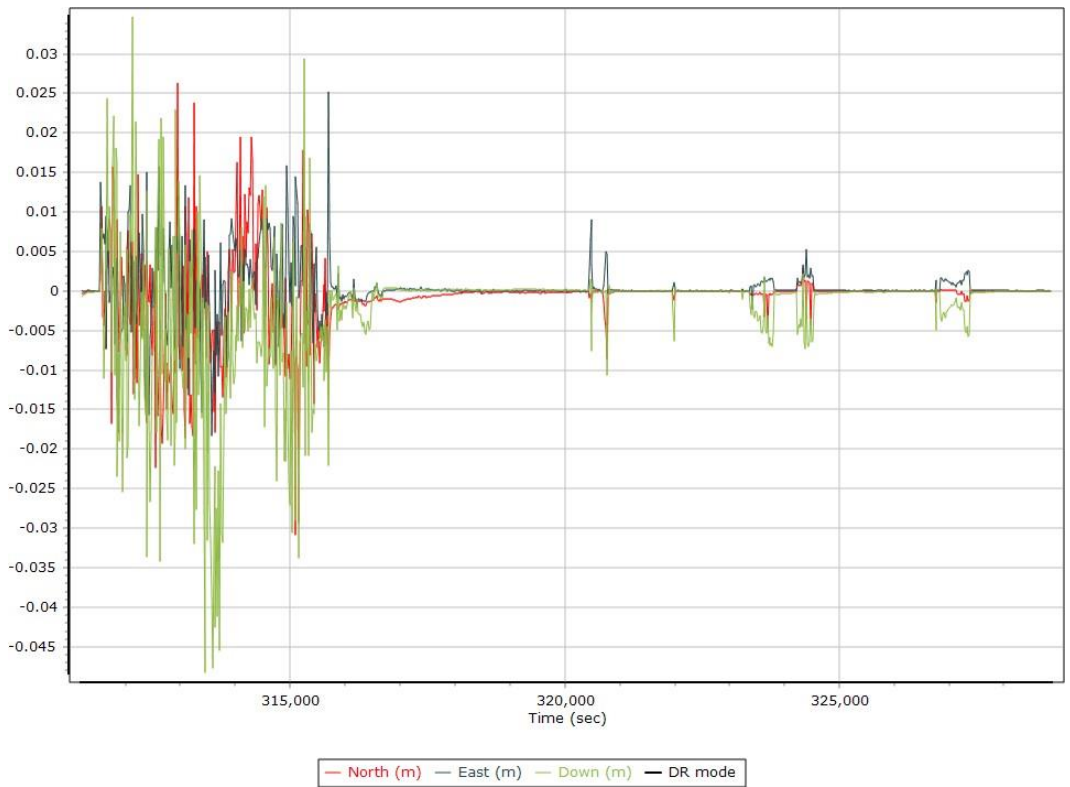


— Number of GPS Satellites — Number of GLONASS Satellites — Number of QZSS Satellites — Number of BEIDOU Satellites

Baseline Length



SBET IAKAR Separation



General Information

Mission Information

Project name	6219365a
Processing date	2020-01-03 16:18:53
Mission date	2019-12-31 14:34:42
Mission duration	05:31:11.000
Processing mode	IN-Fusion GNSS Nav

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N8708
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
191231_143423_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3650.19g	GLONASS Broadcast Ephemeris
Ephm3650.19n	GPS Broadcast Ephemeris
Ephm3650.19g	GLONASS Broadcast Ephemeris
Ephm3650.19n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_6219365a.out	SBET Trajectory File
export_6219365a.kml	Google KML Export Output

Rover Data Summary

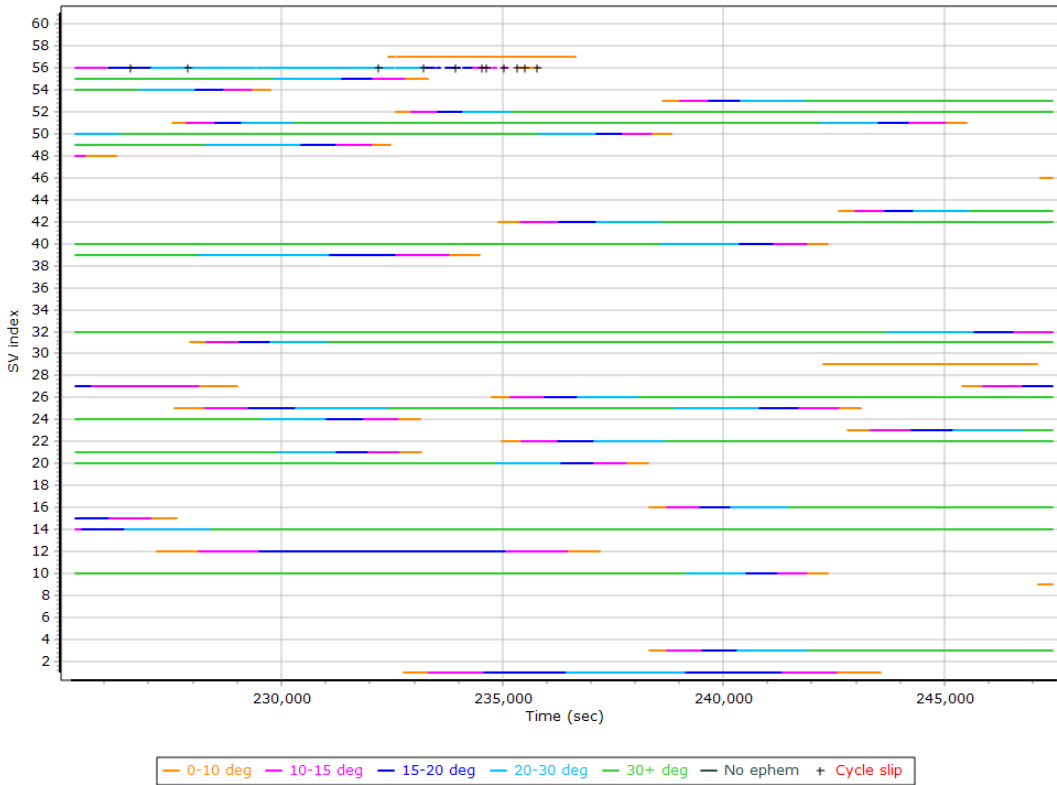
First raw data file	191231_143423_INS-GPS_1.raw		
Last raw data file	191231_143423_INS-GPS_1.raw		
Start GPS week	2086		
Start time	225263.182 (12/31/2019 2:34:23 PM)		
End time	247468.393 (12/31/2019 8:44:28 PM)		
Start of fine alignment	225282.196 (12/31/2019 2:34:42 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.046	-0.192	-1.285
Gimbal 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

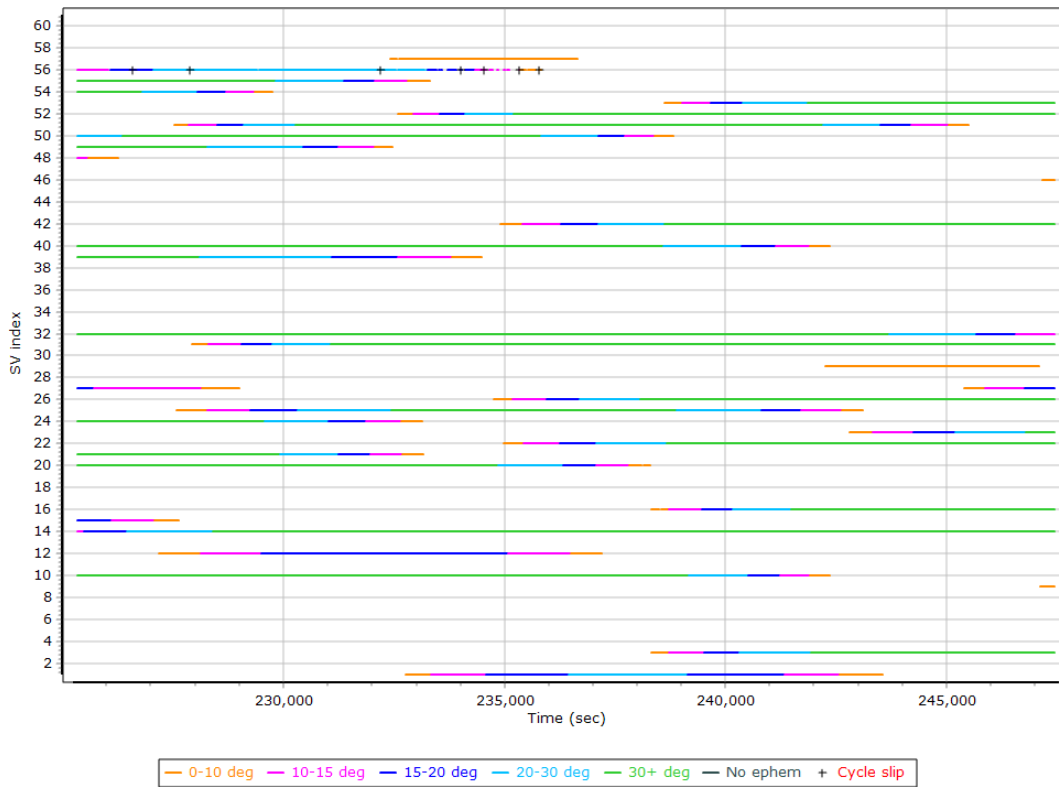
Raw IMU Import QC Summary

IMU data input file	imu_6219365a.dat
IMU data check log file	imudt_6219365a.log
IMU Records Processed	4440707
Termination Status	Normal
IMU Anomalies	0

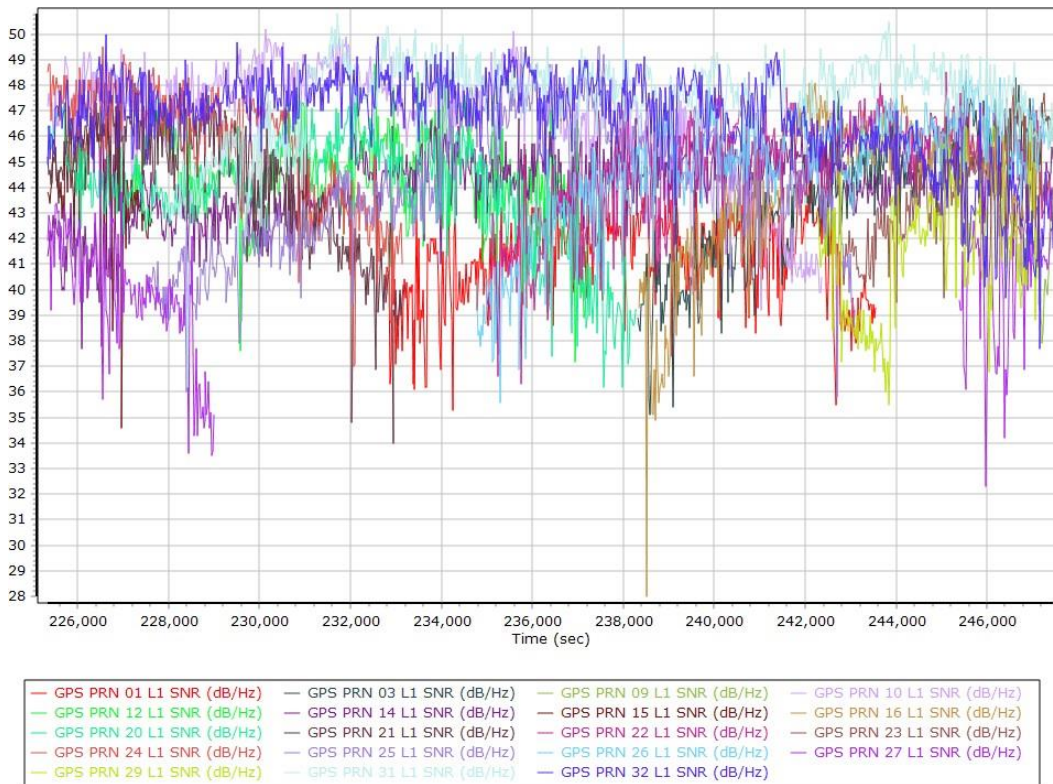
L1 Satellite Lock/Elevation



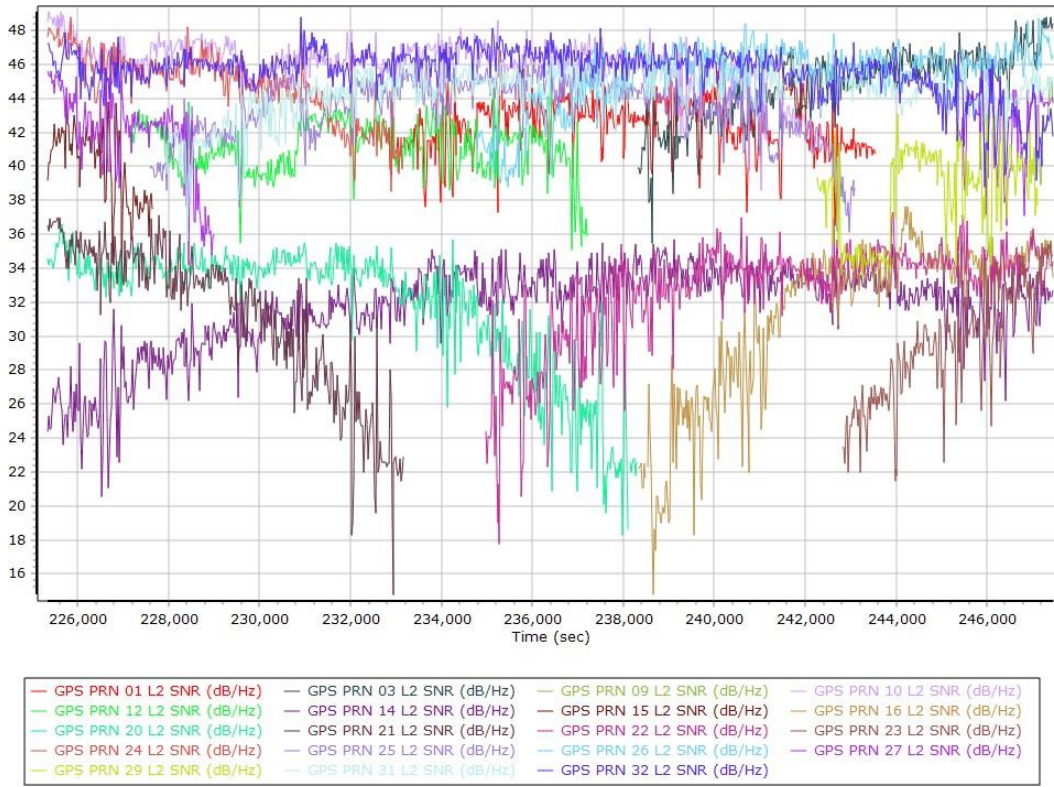
L2 Satellite Lock/Elevation



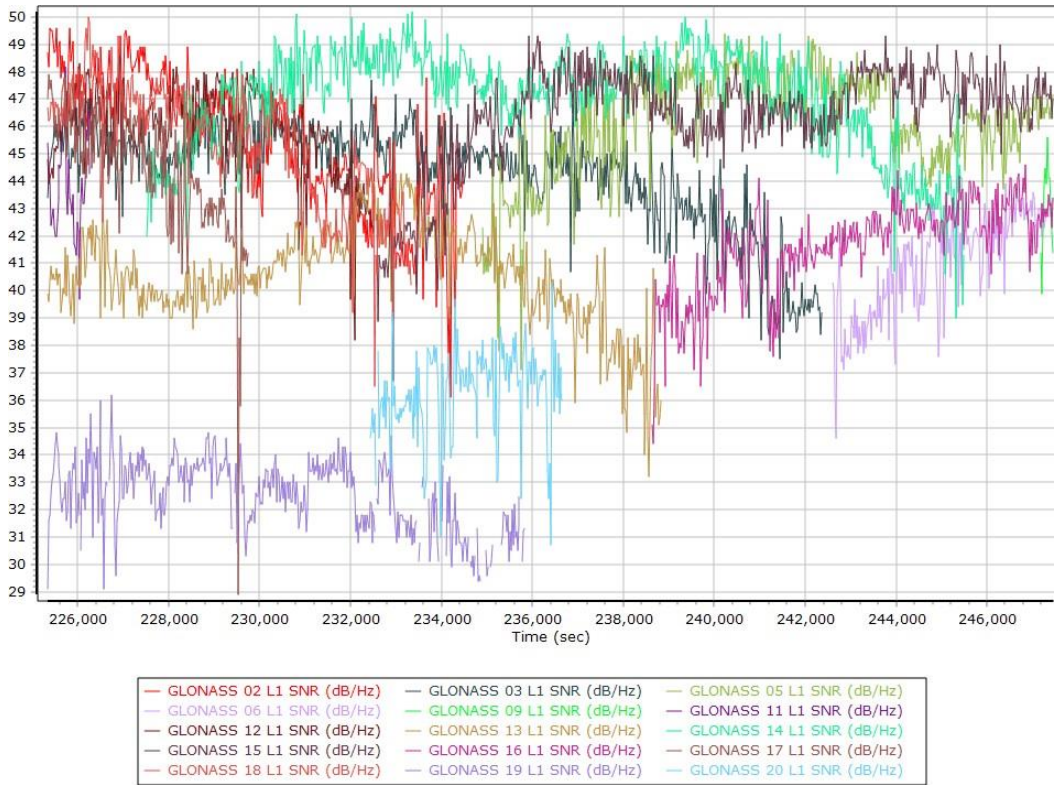
GPS L1 SNR



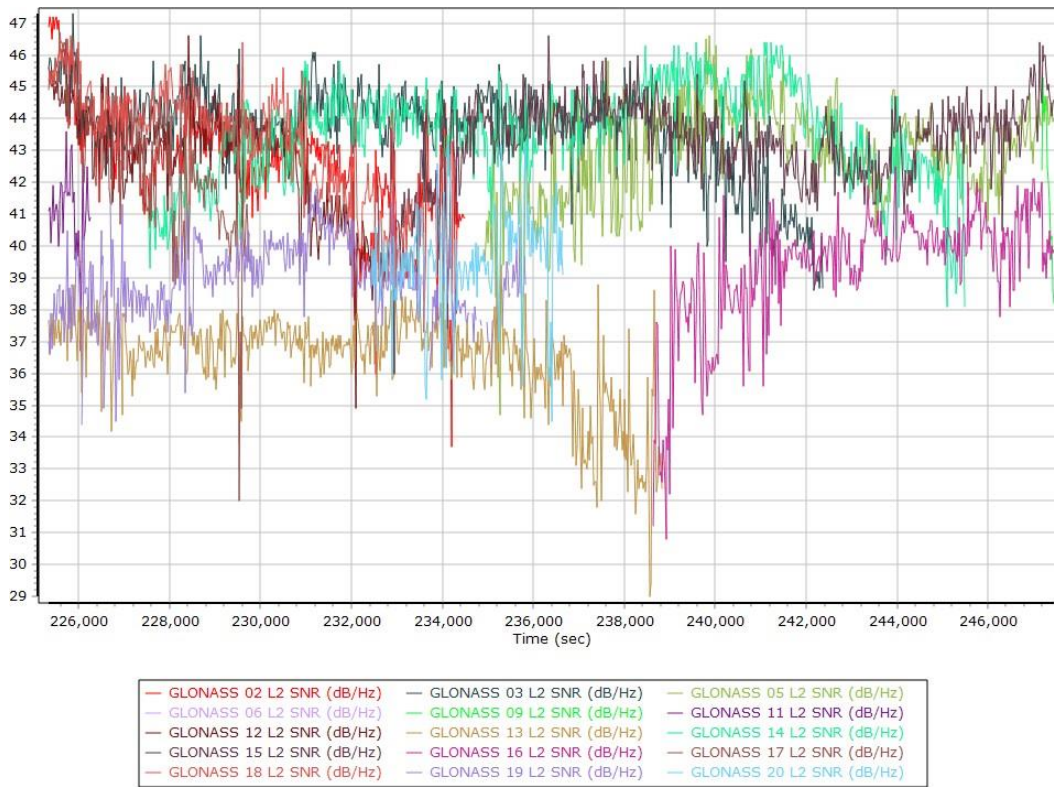
GPS L2 SNR



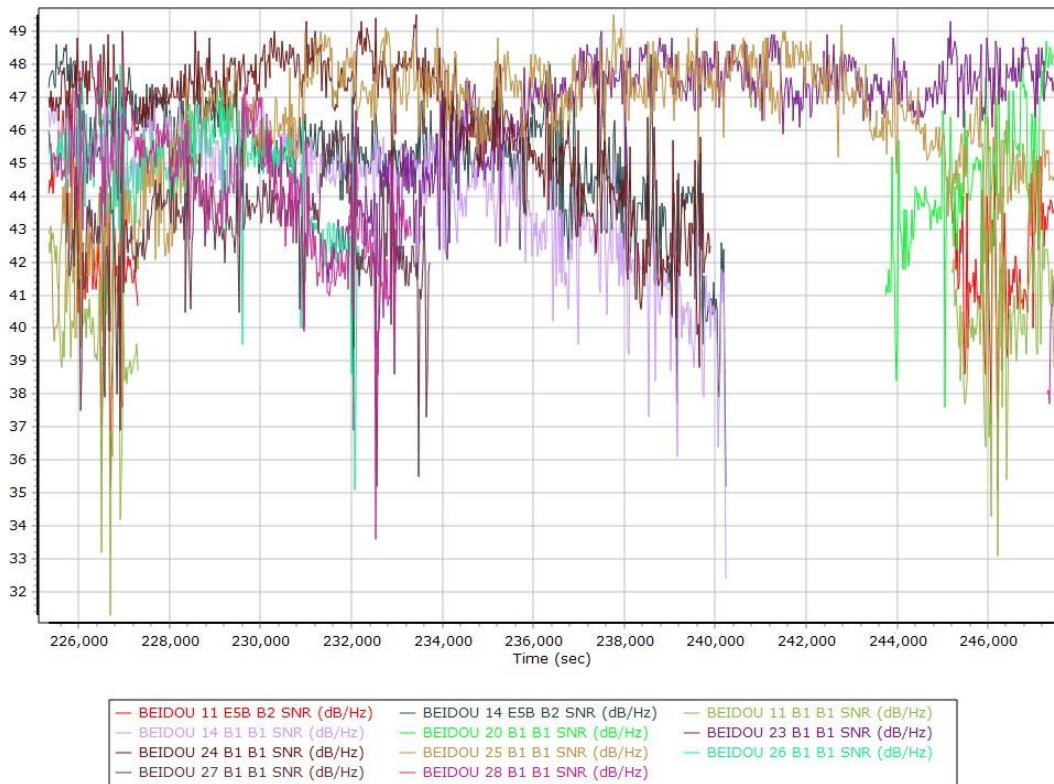
GLONASS L1 SNR



GLONASS L2 SNR

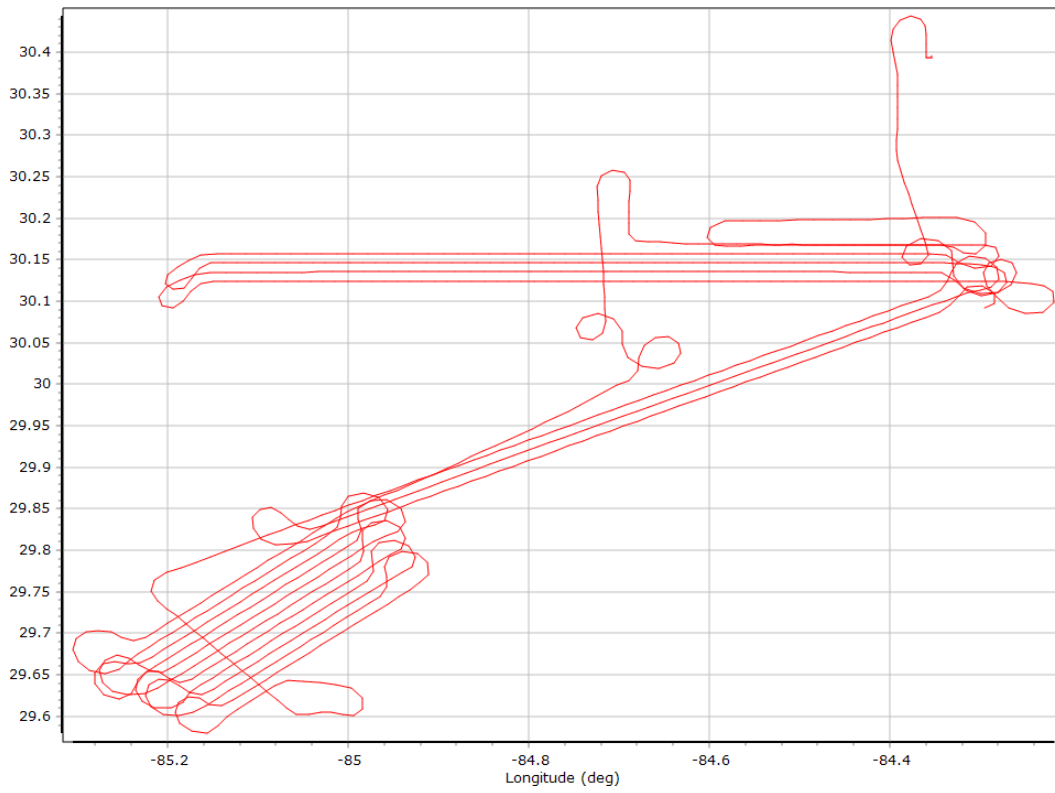


BEIDOU SNR

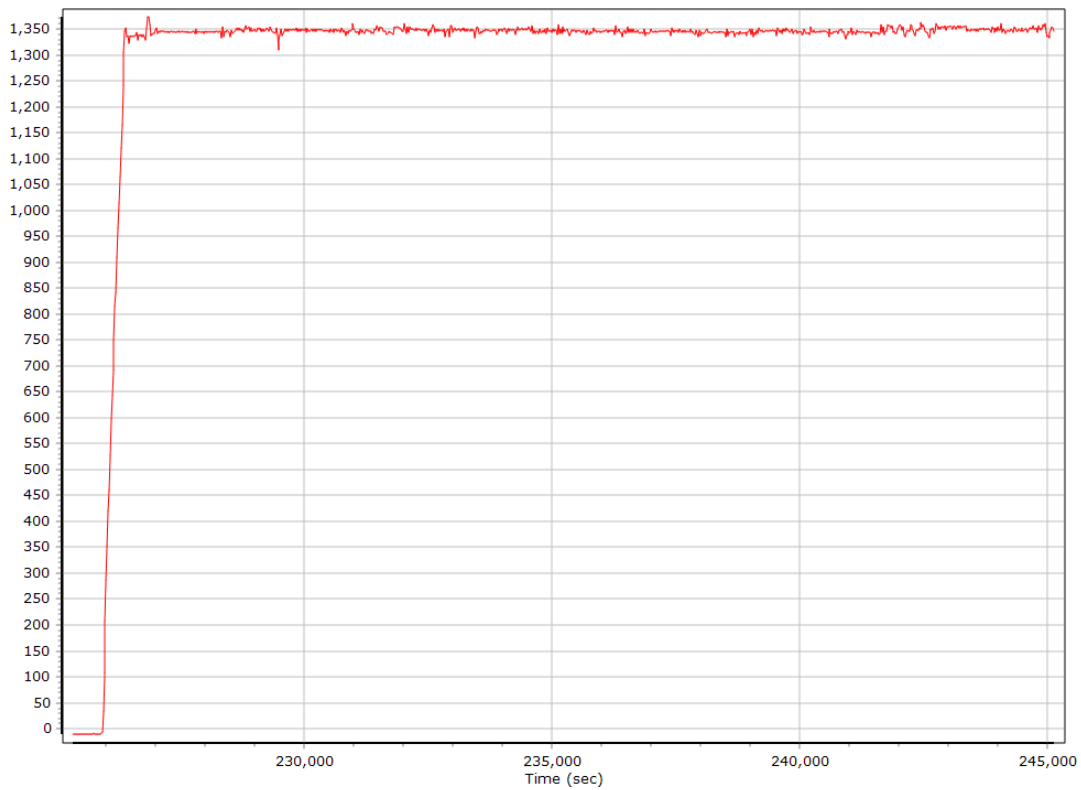


Trajectory Information

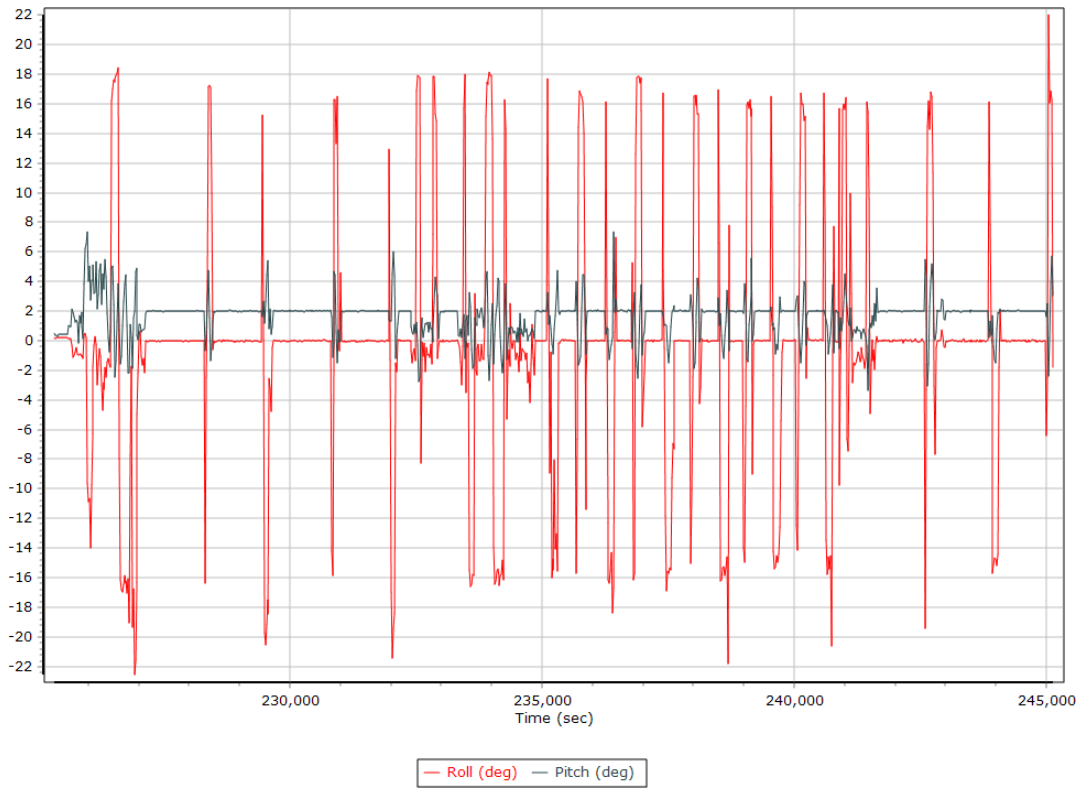
Top View



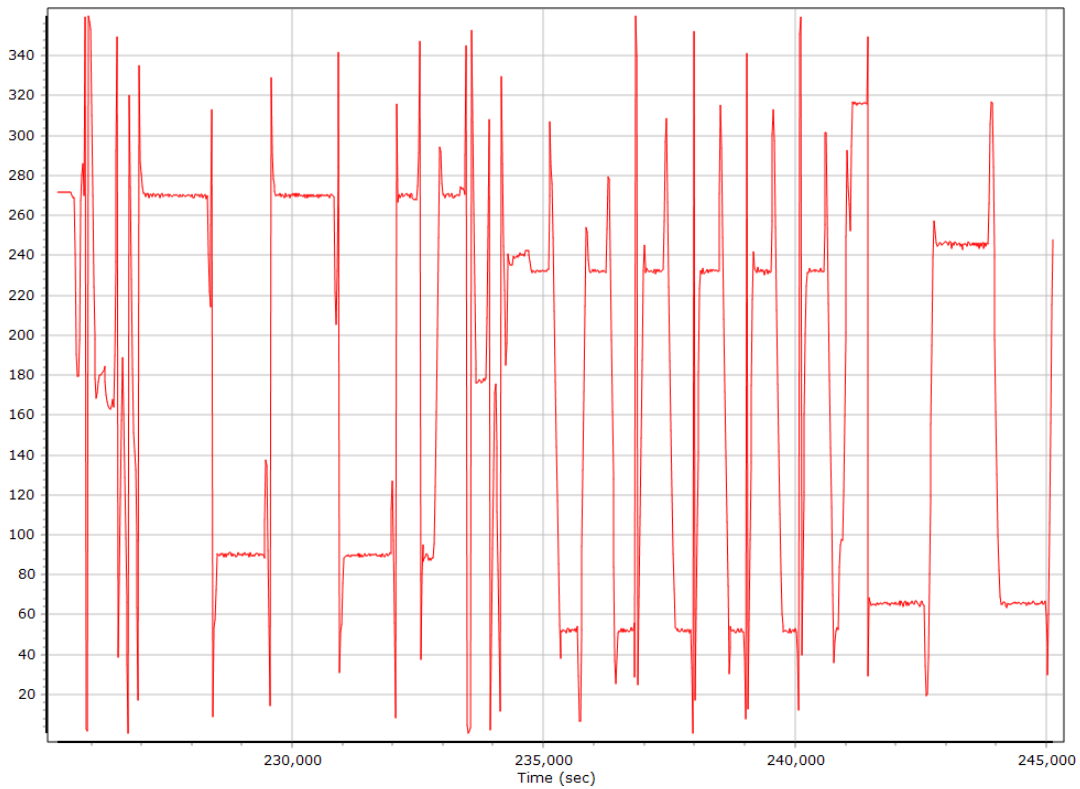
Altitude



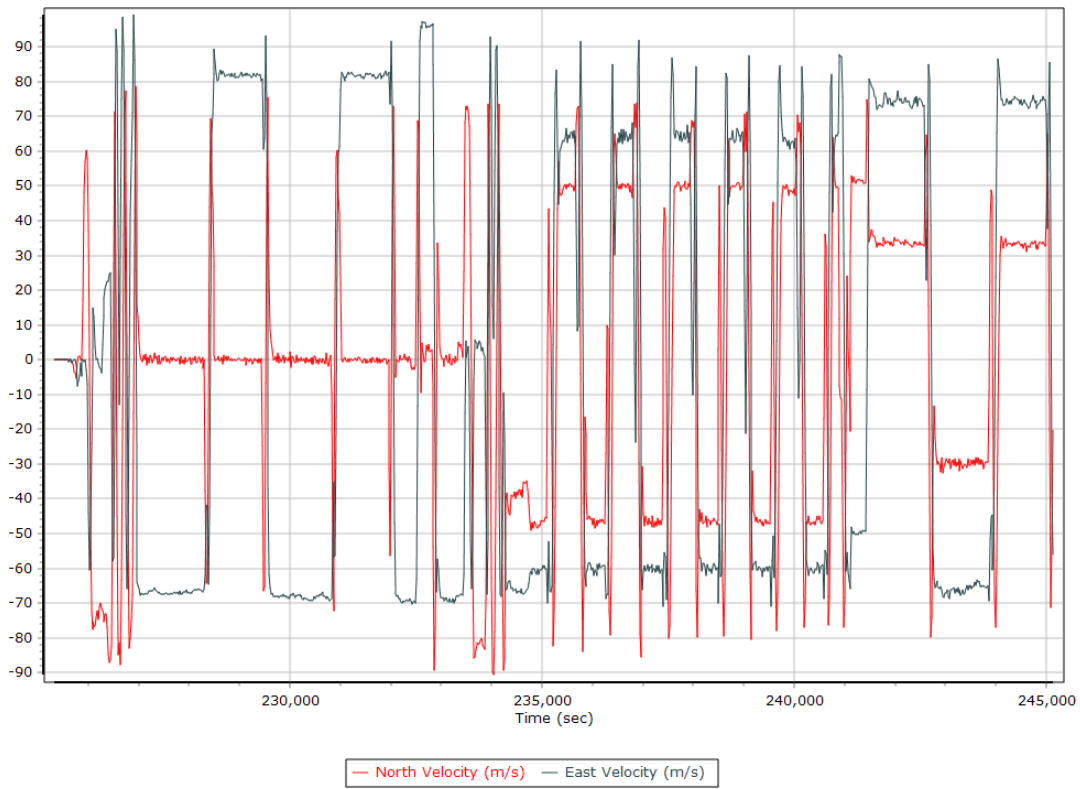
Roll/Pitch



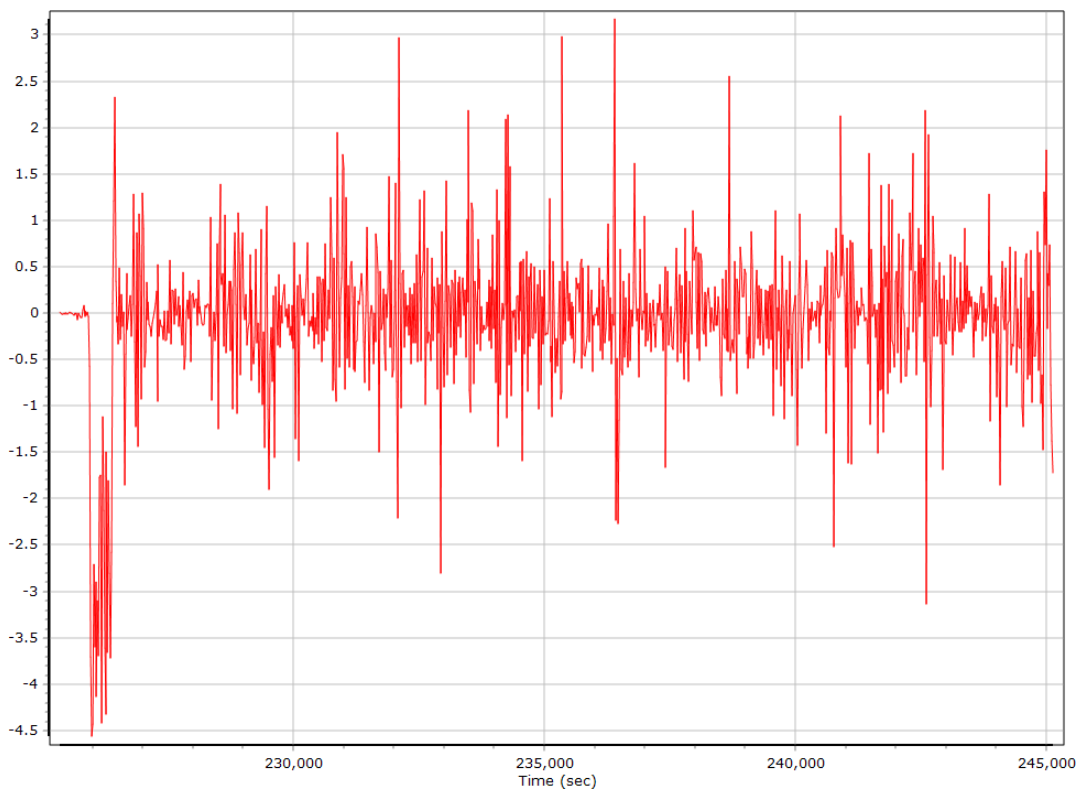
Heading



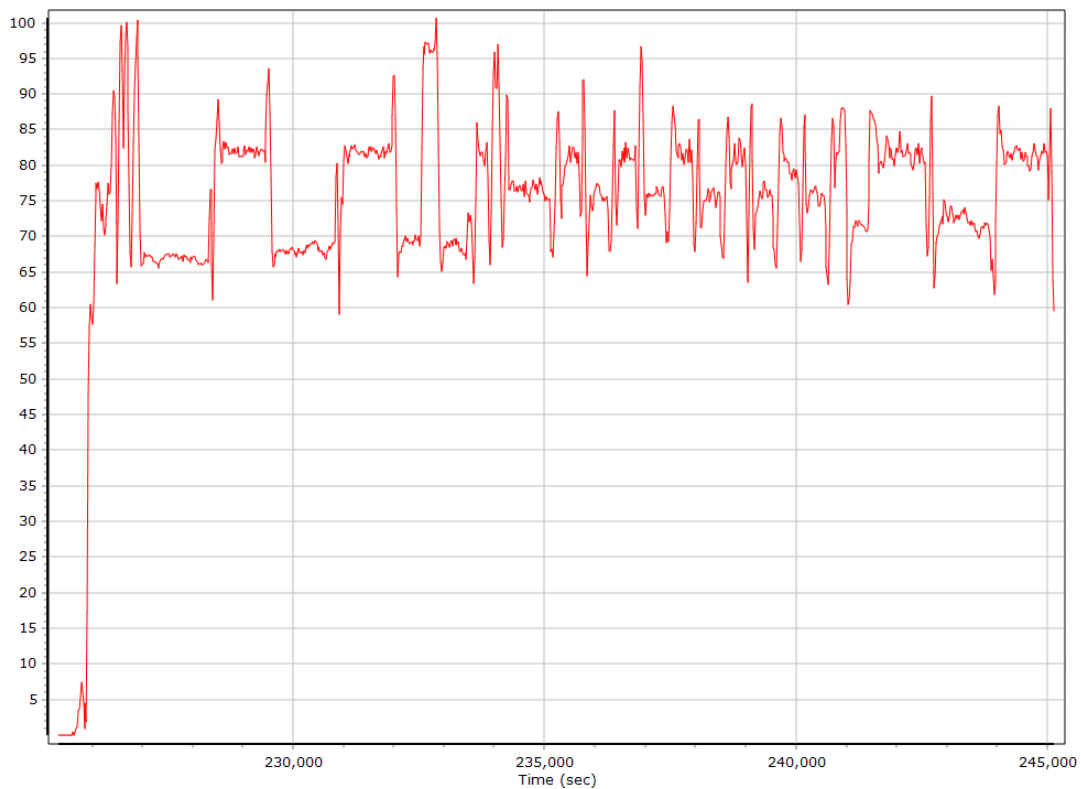
North/East Velocity



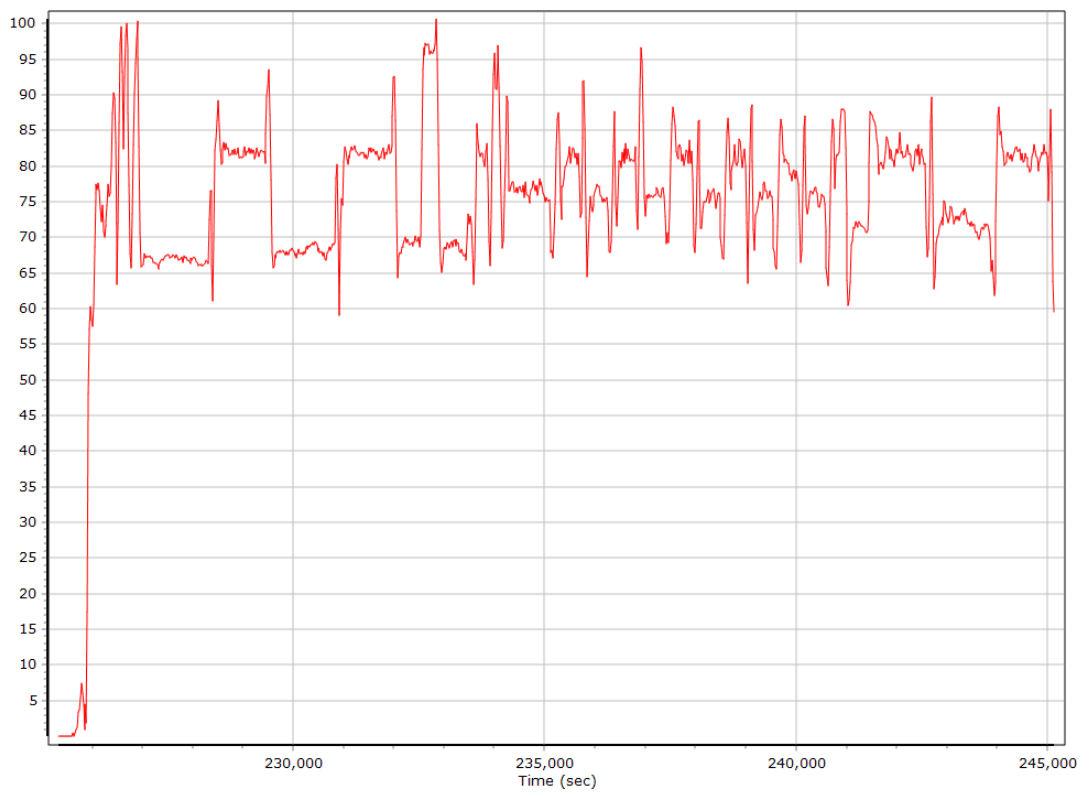
Down Velocity



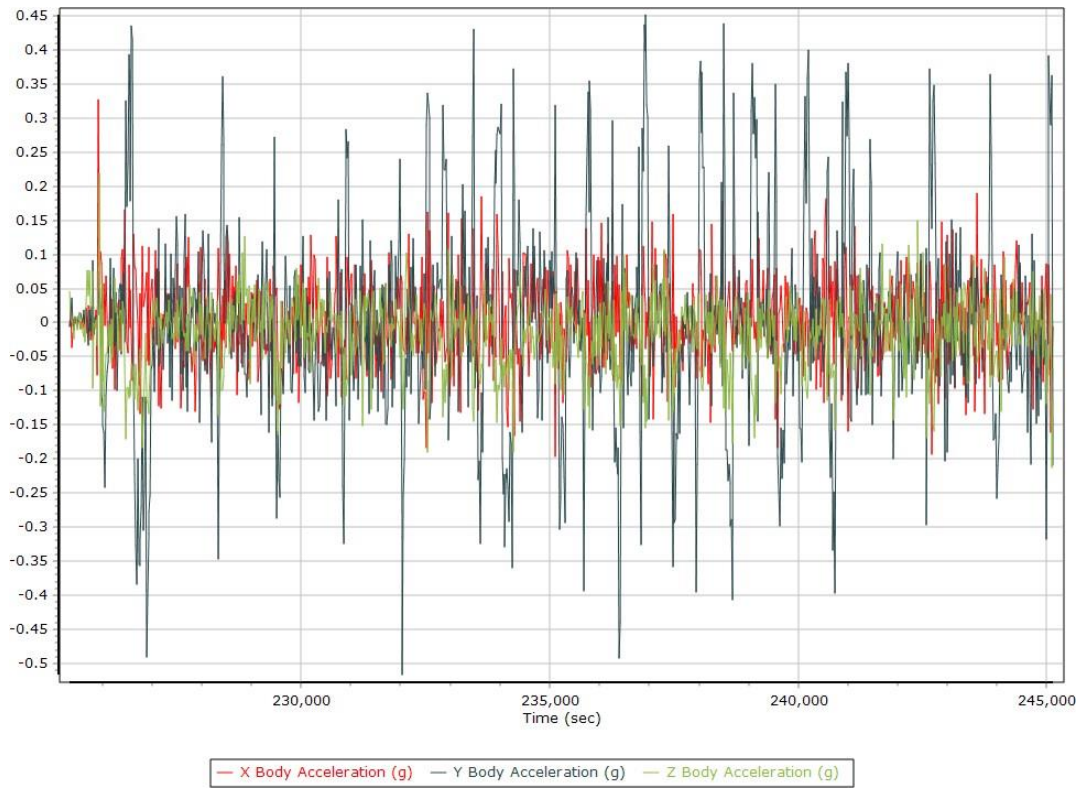
Total Speed



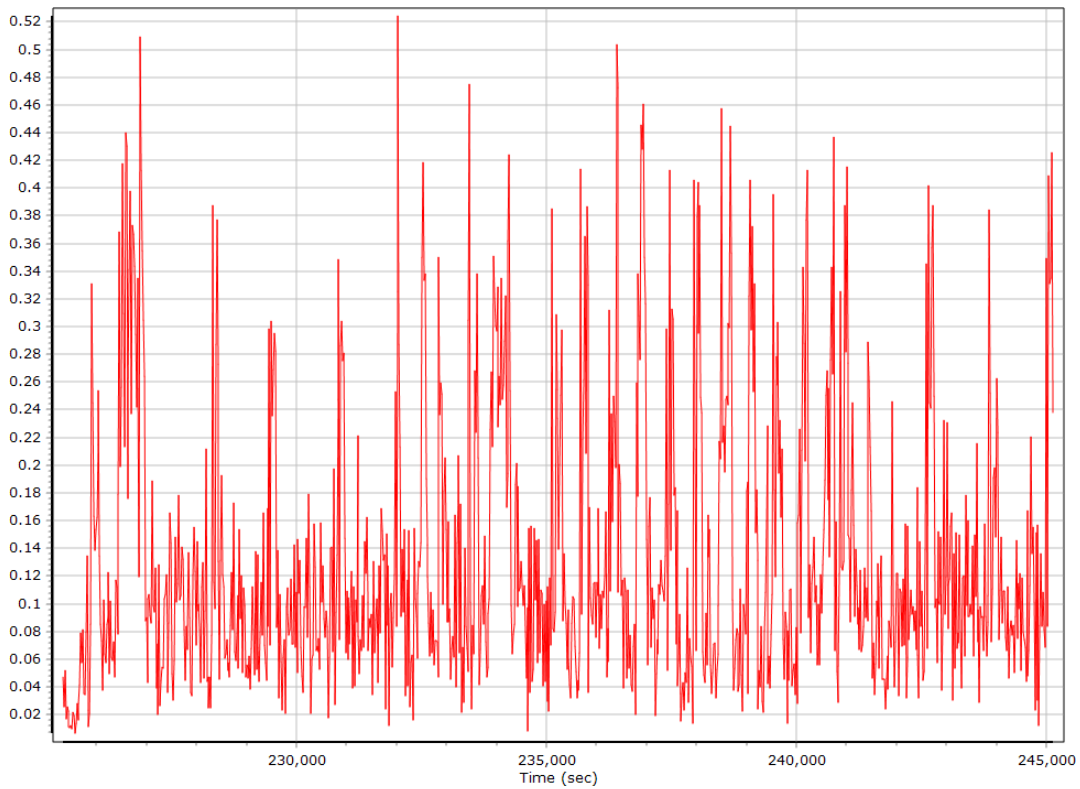
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate



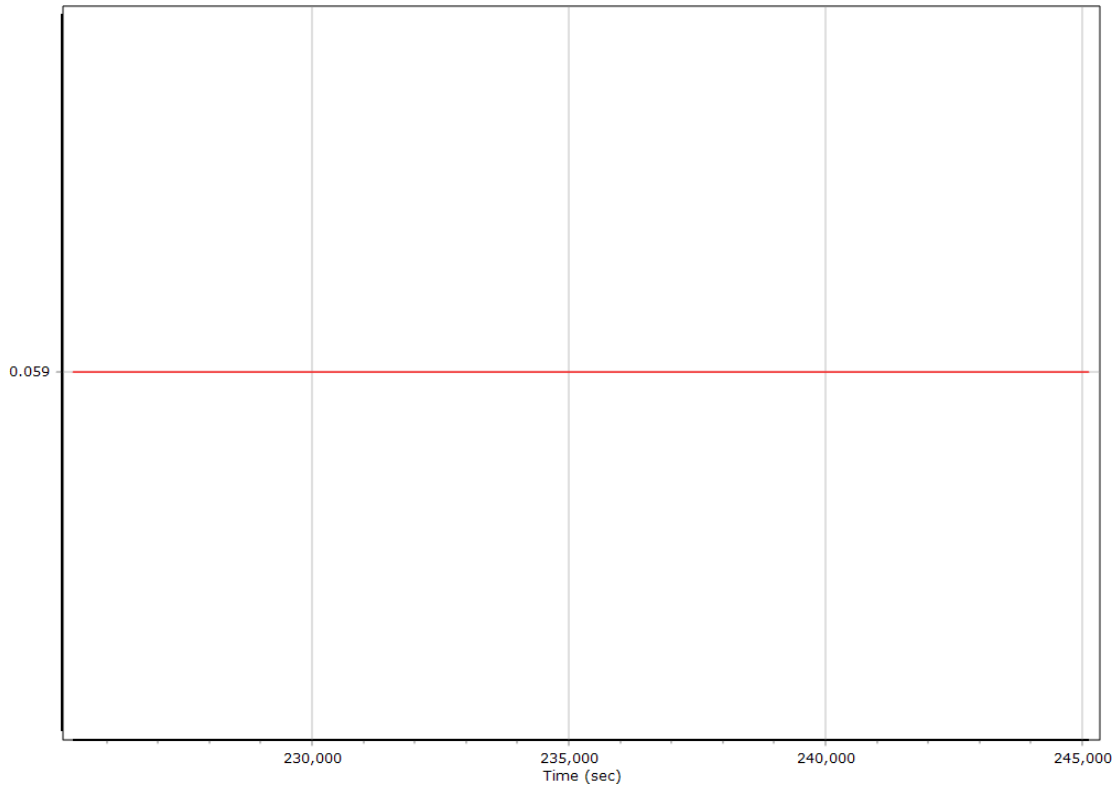
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion GNSS Nav		
Stabilized mount	True		
Processing start time	225264.000 (12/31/2019 2:34:24 PM)		
Processing end time	245135.000 (12/31/2019 8:05:35 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.059	-0.180	-1.295
Gimbal to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

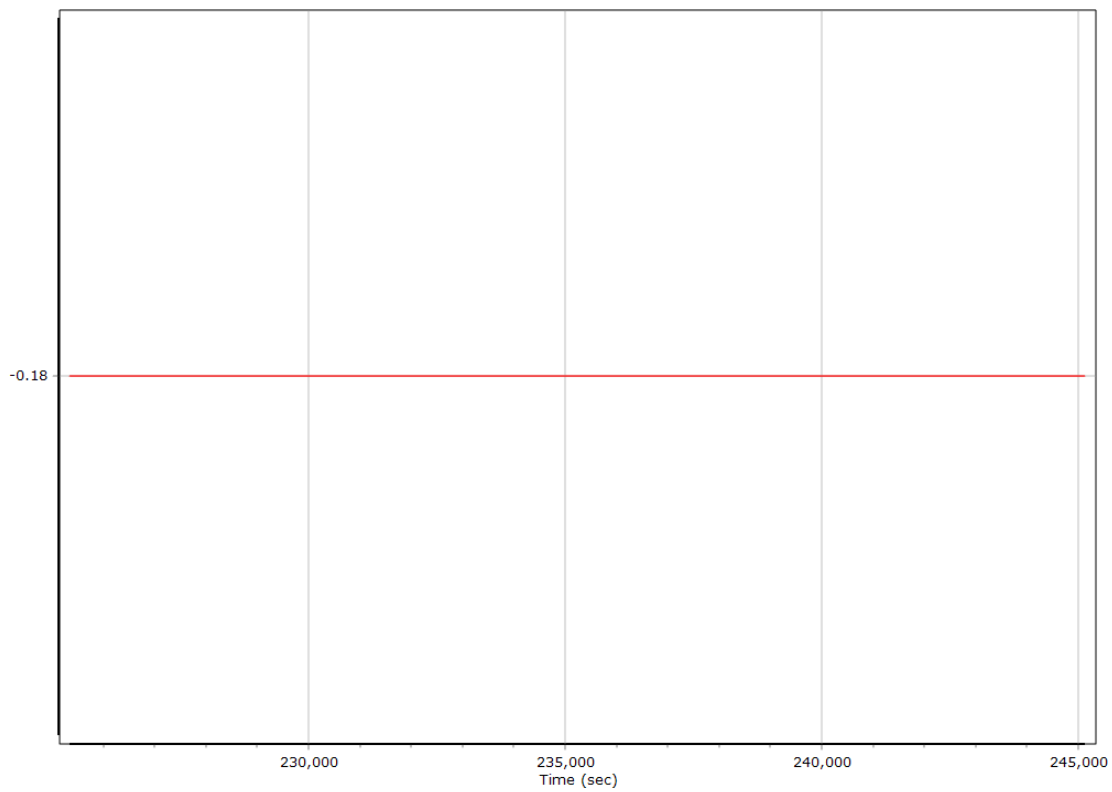
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

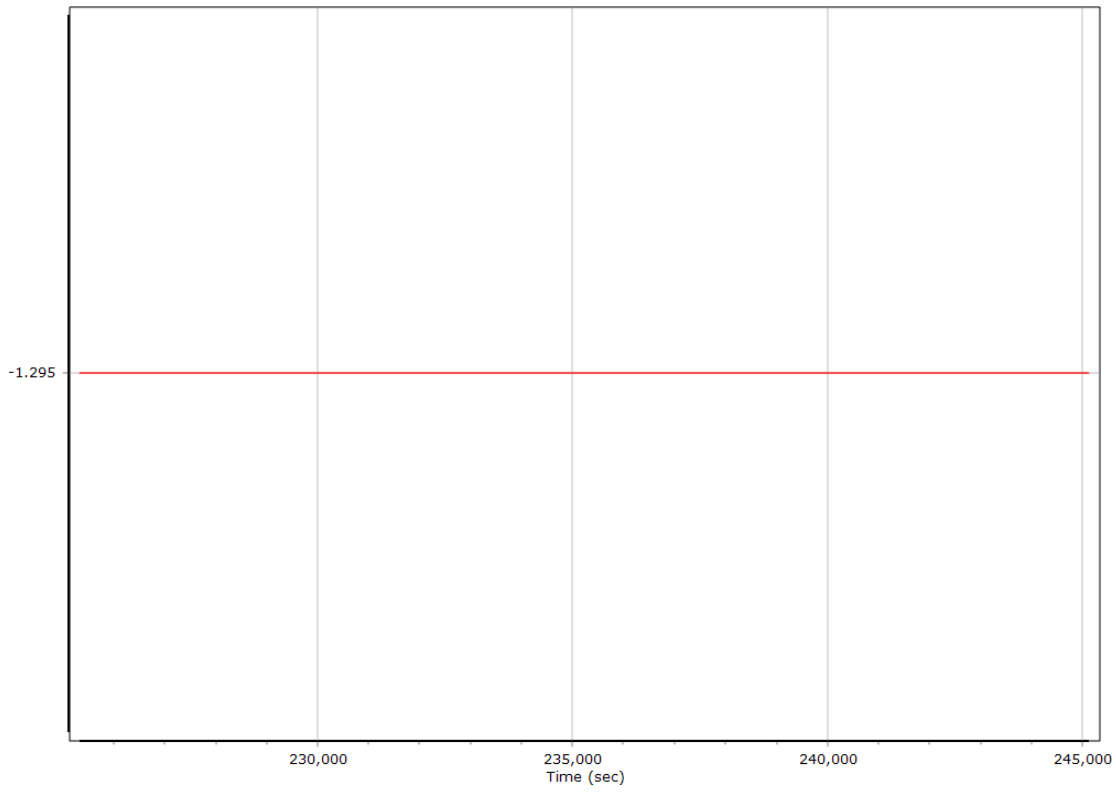
X Reference-Primary GNSS Lever Arm (m)



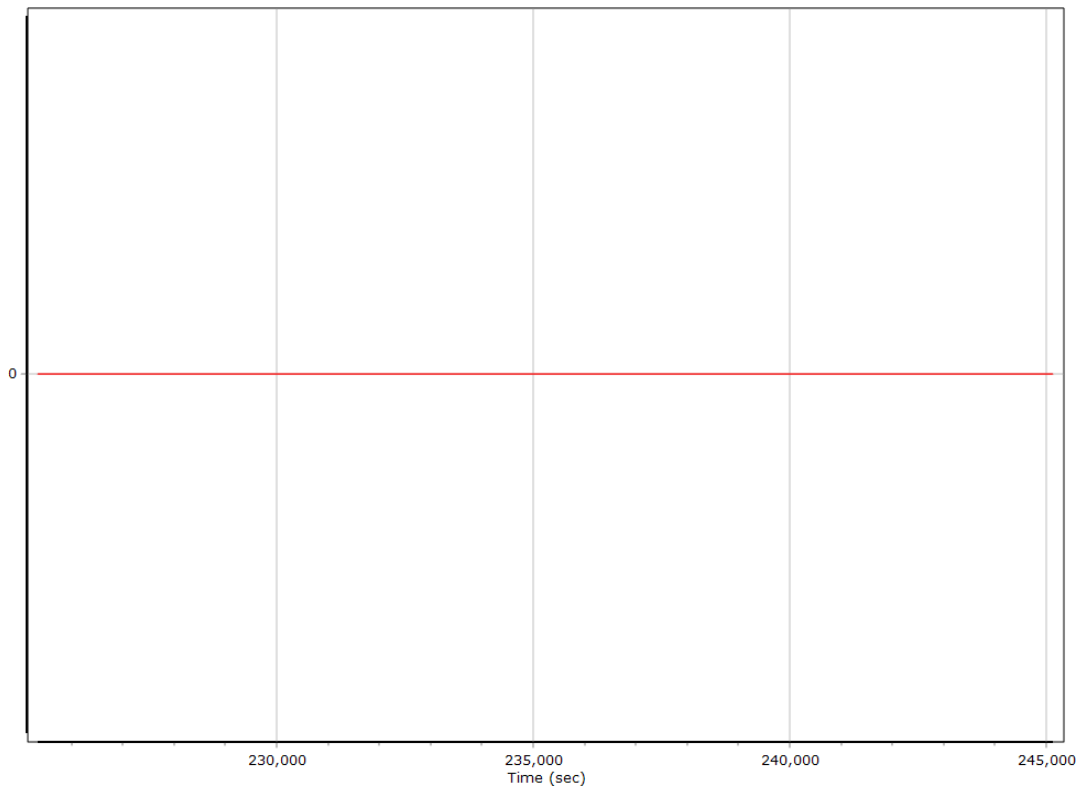
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



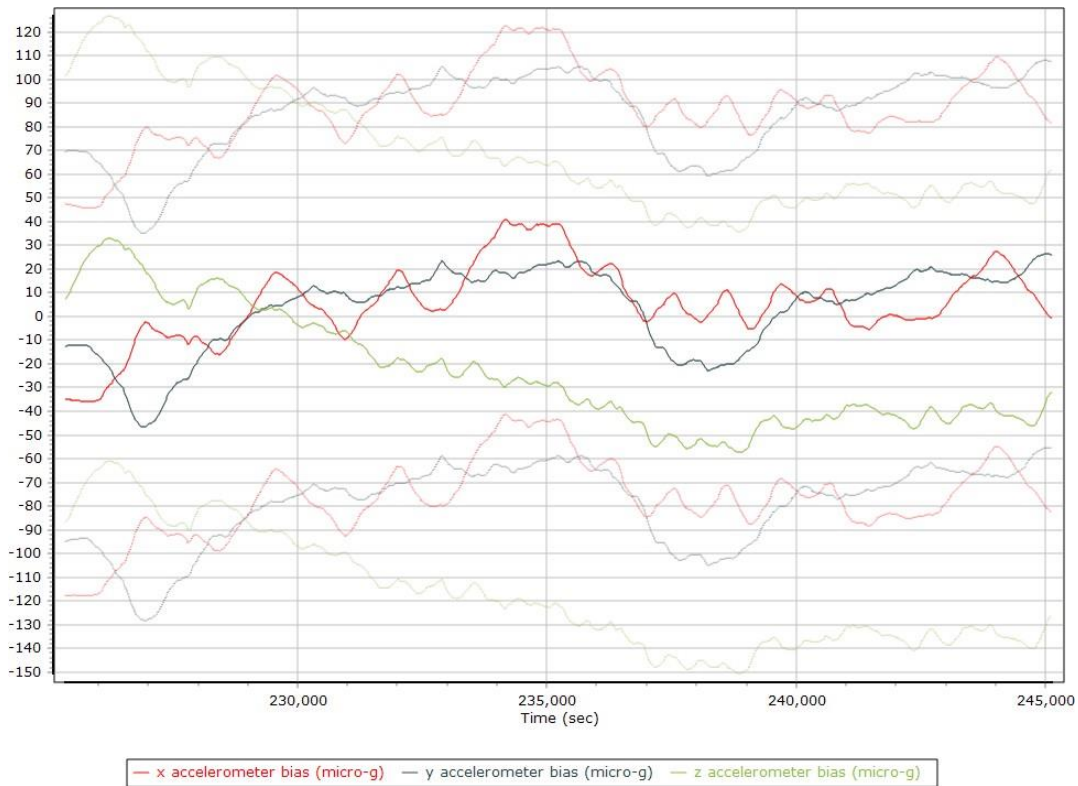
Reference-Primary GNSS Lever Arm Figure of Merit



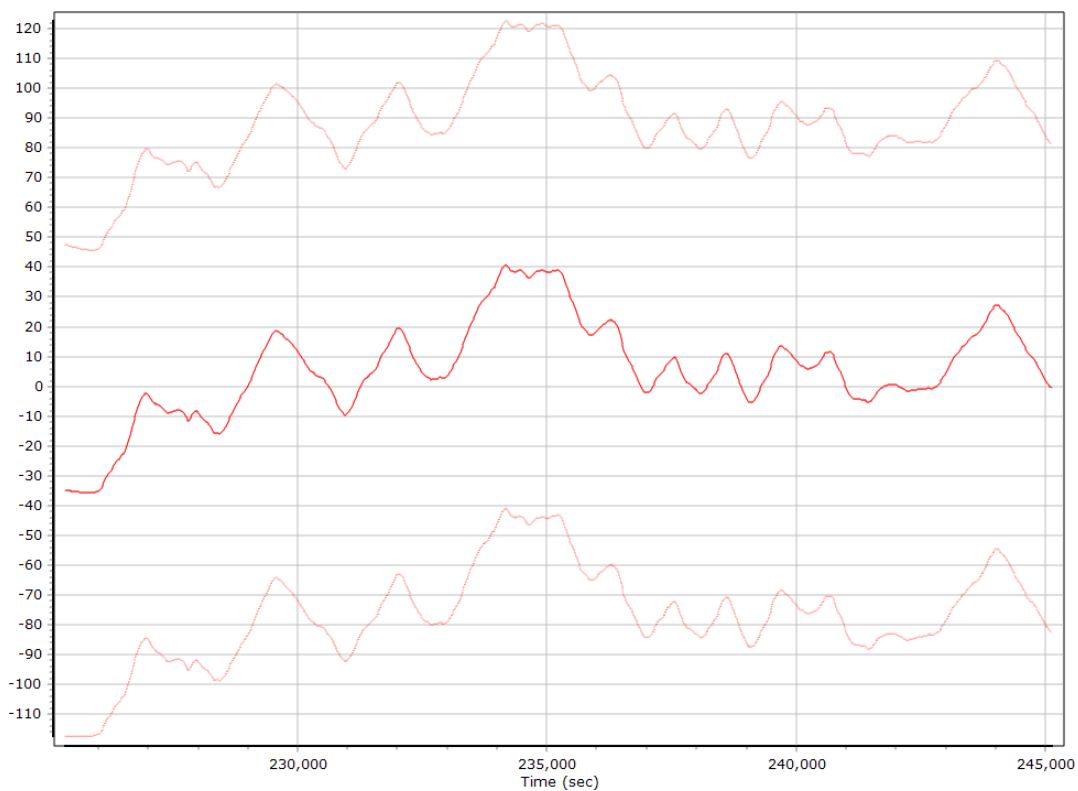
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

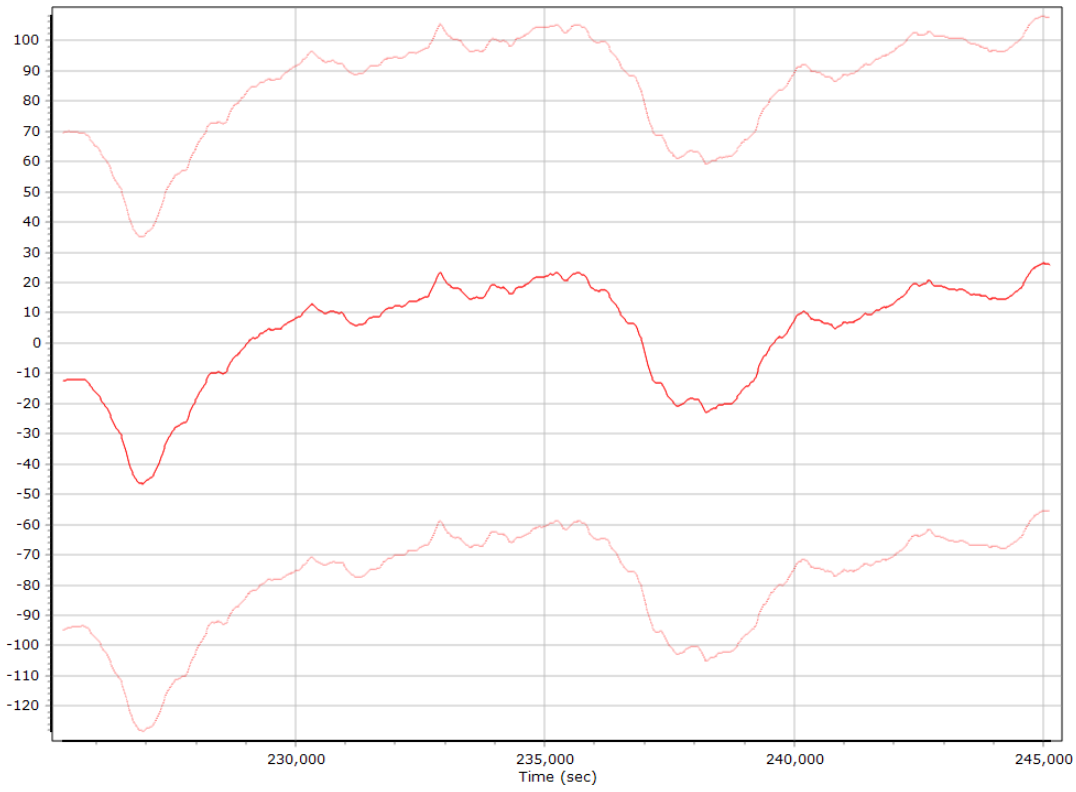
Accelerometer Bias (micro-g)



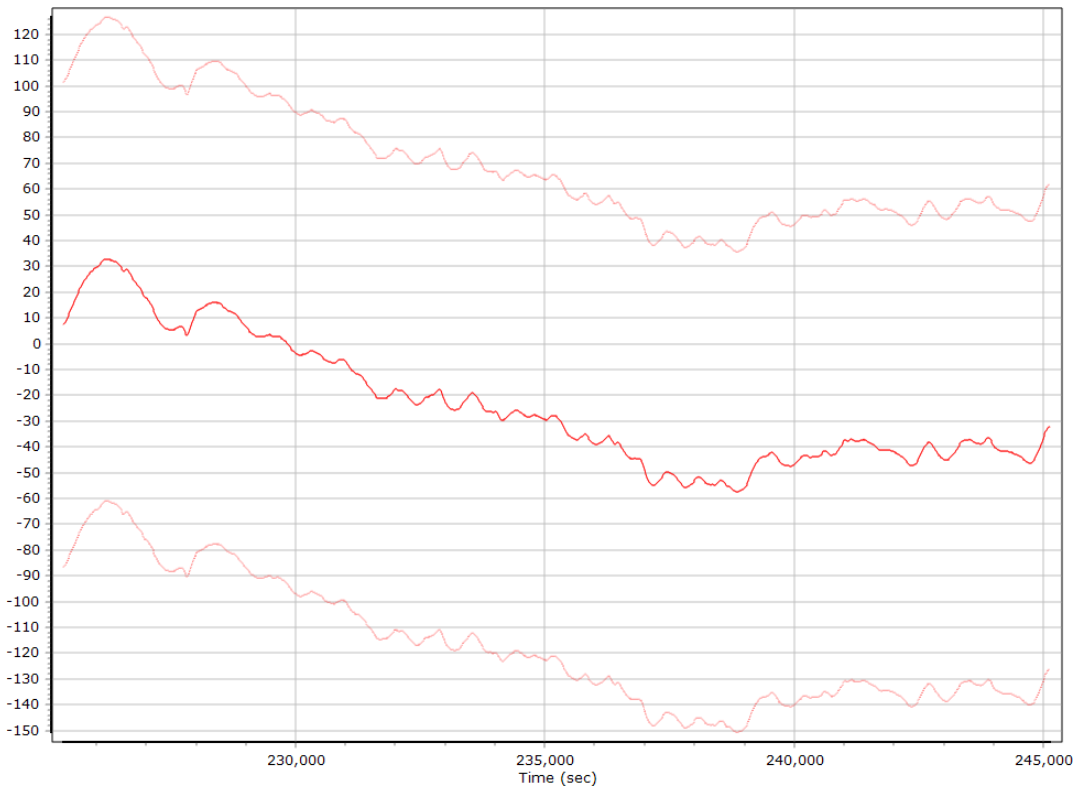
X Accelerometer Bias (micro-g)



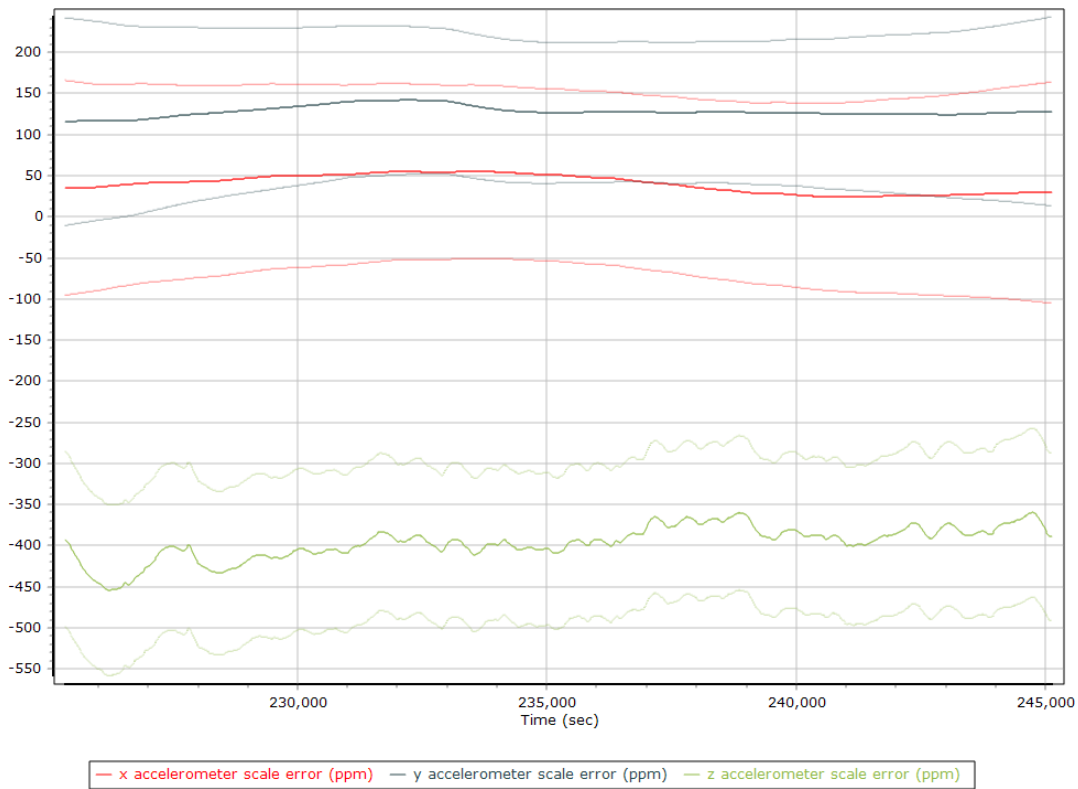
Y Accelerometer Bias (micro-g)



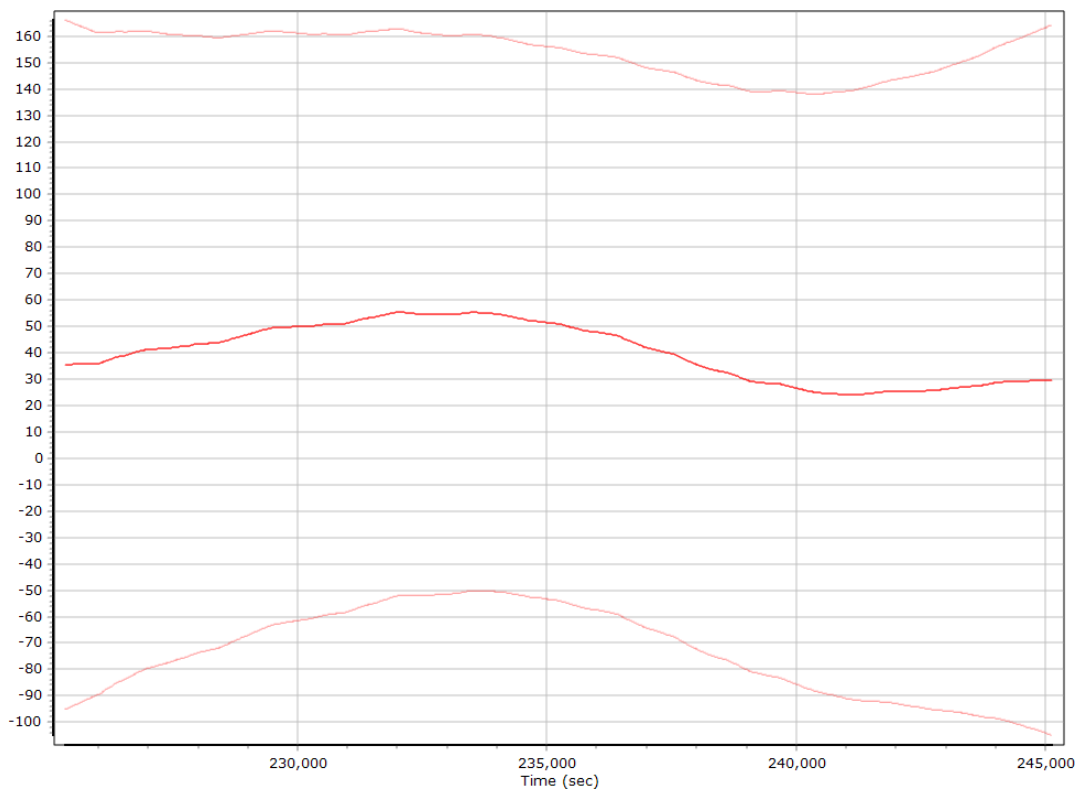
Z Accelerometer Bias (micro-g)



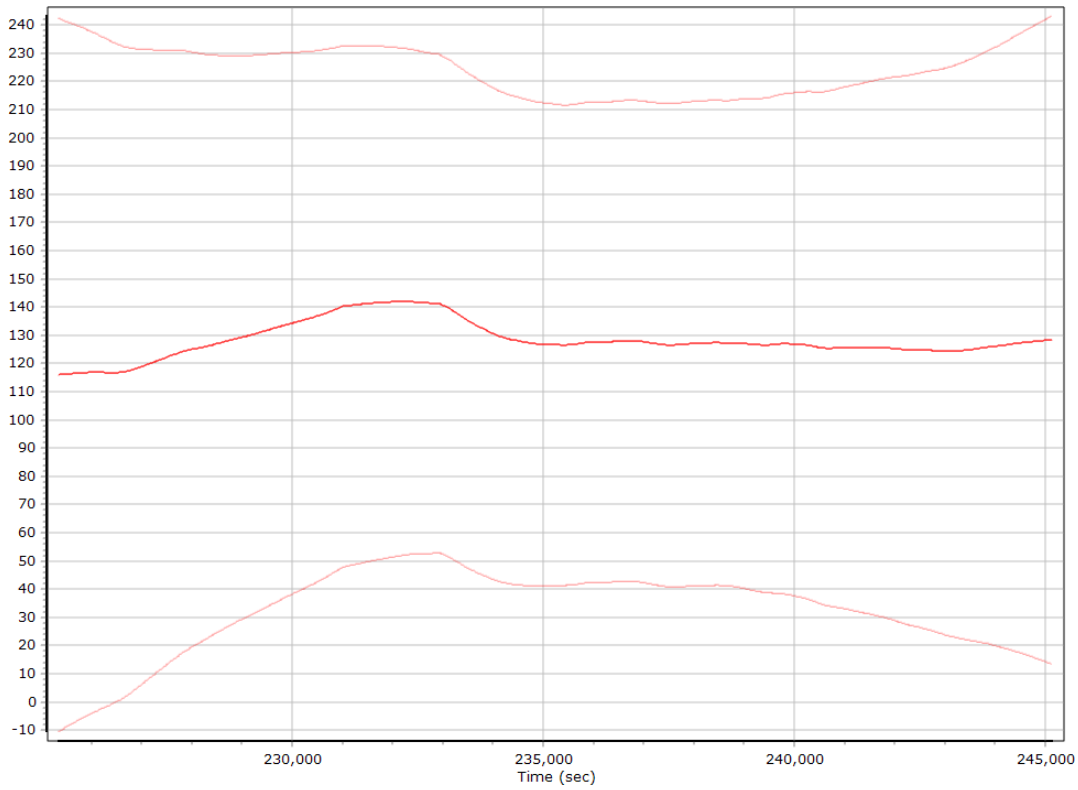
Accelerometer Scale Error (ppm)



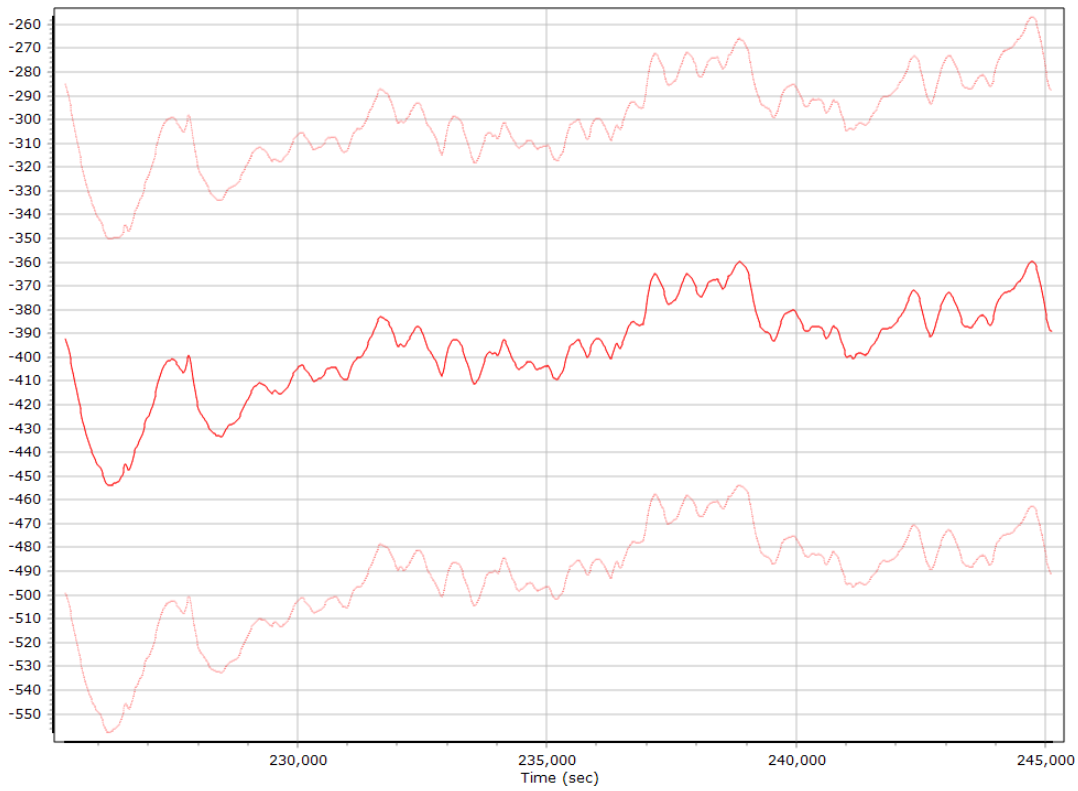
X Accelerometer Scale Error (ppm)



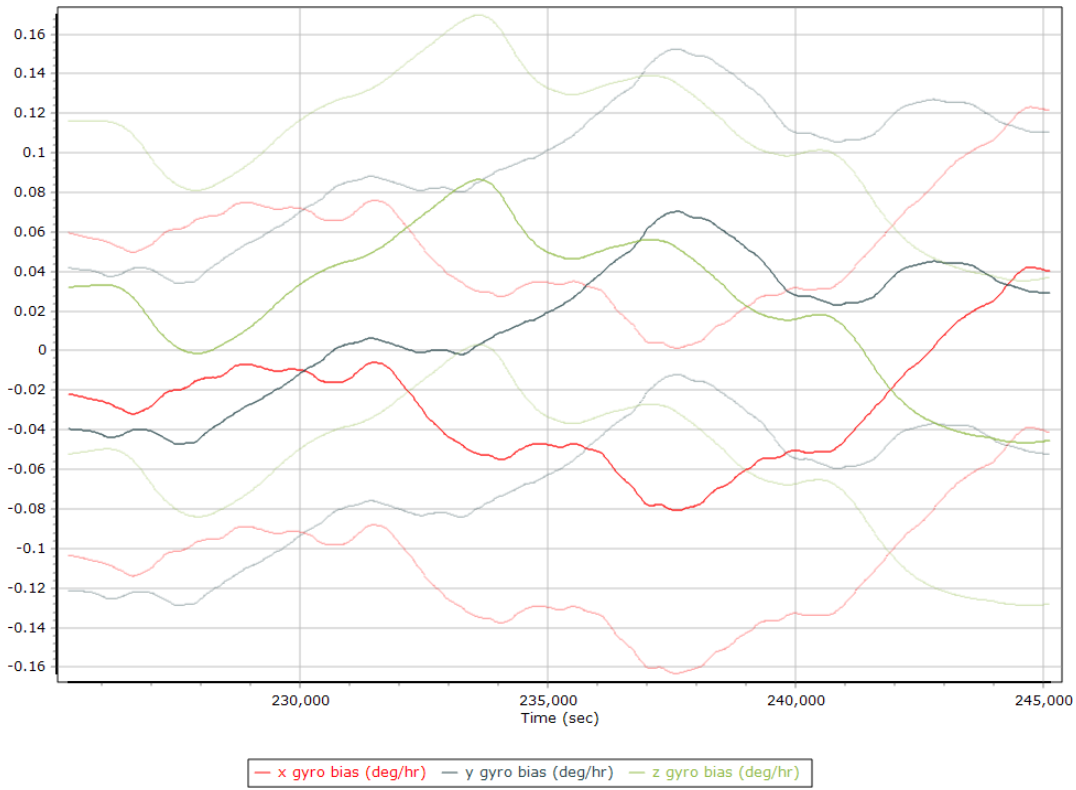
Y Accelerometer Scale Error (ppm)



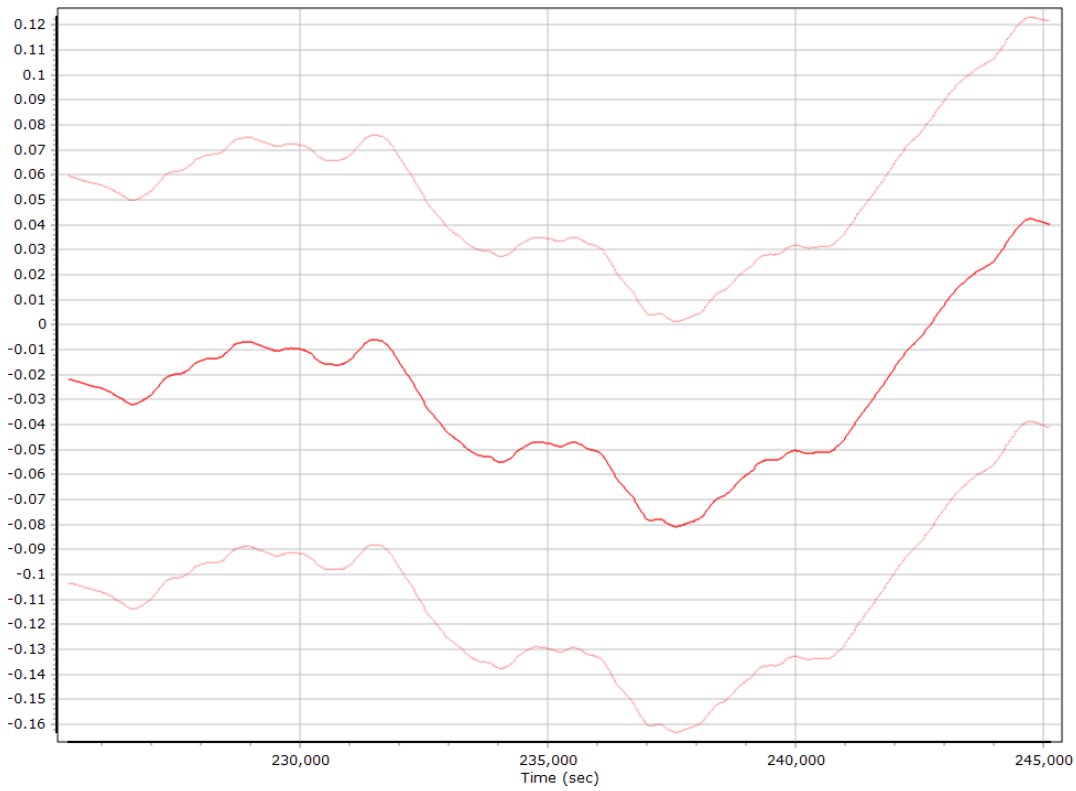
Z Accelerometer Scale Error (ppm)



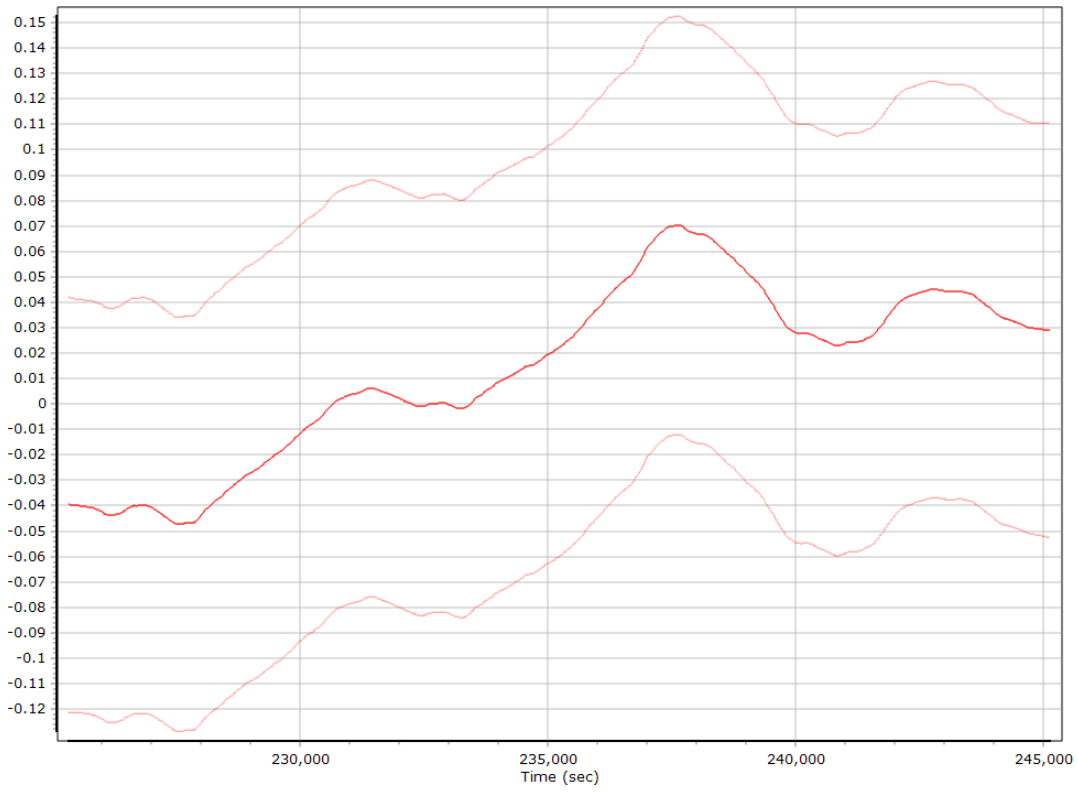
Gyro Bias (deg/h)



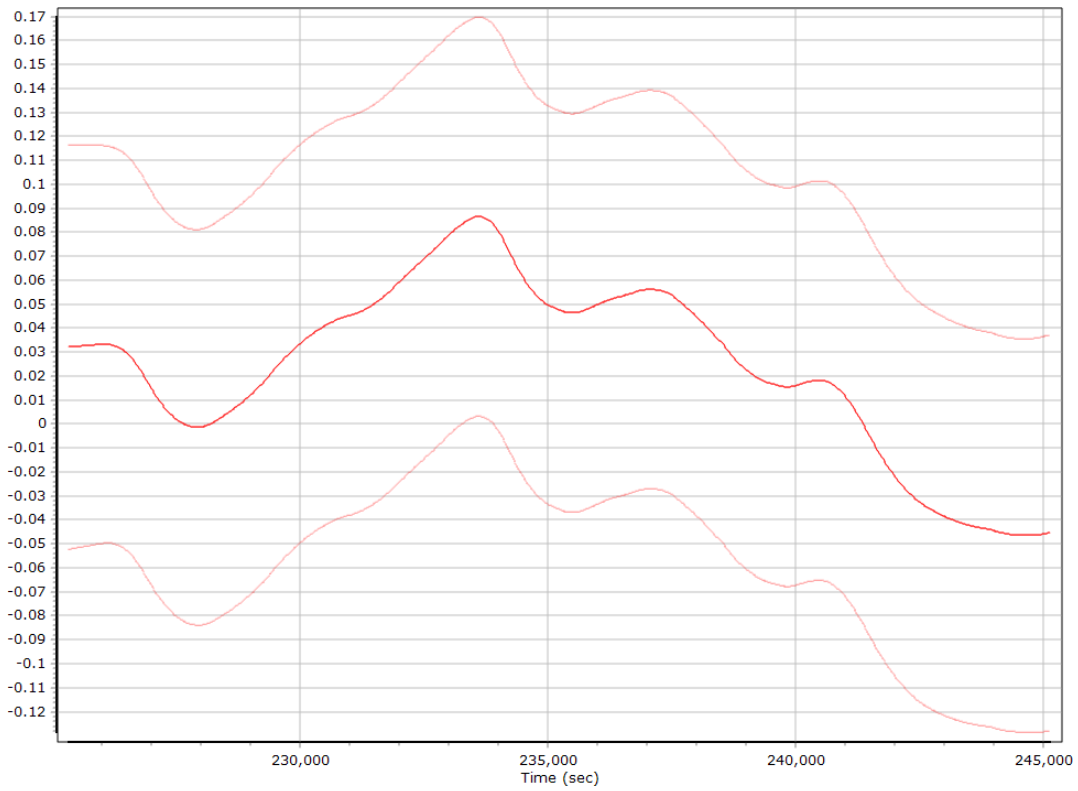
X Gyro Bias (deg/h)



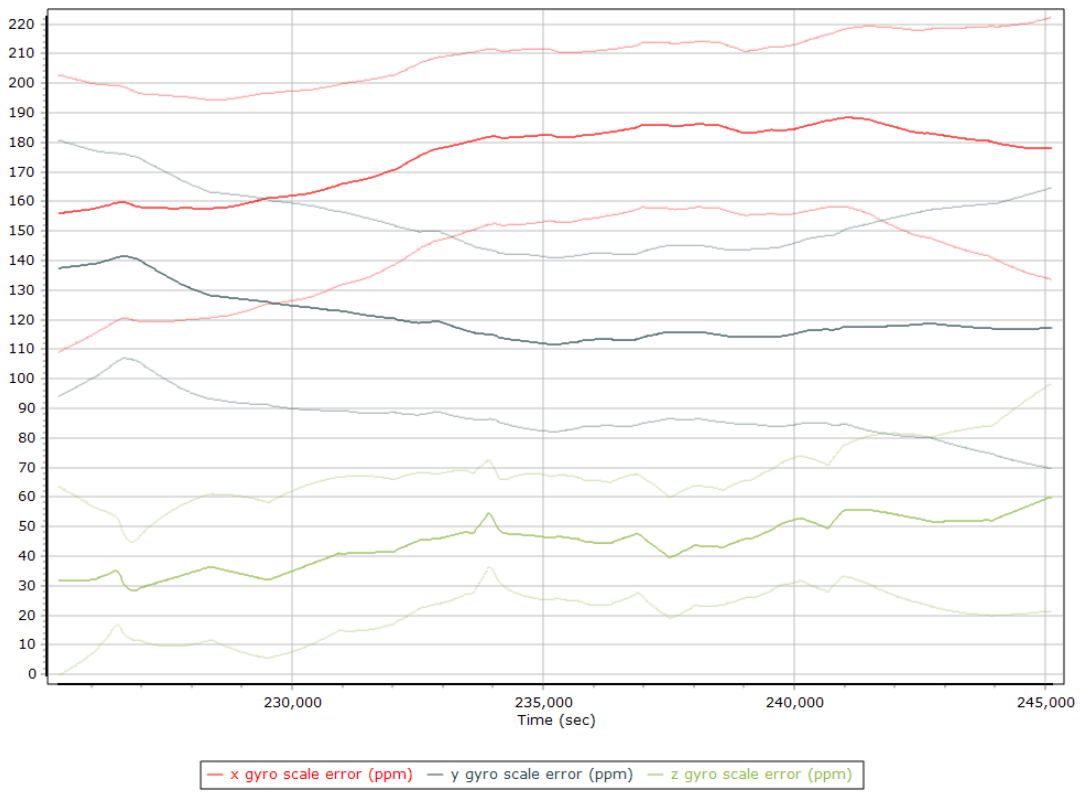
Y Gyro Bias (deg/h)



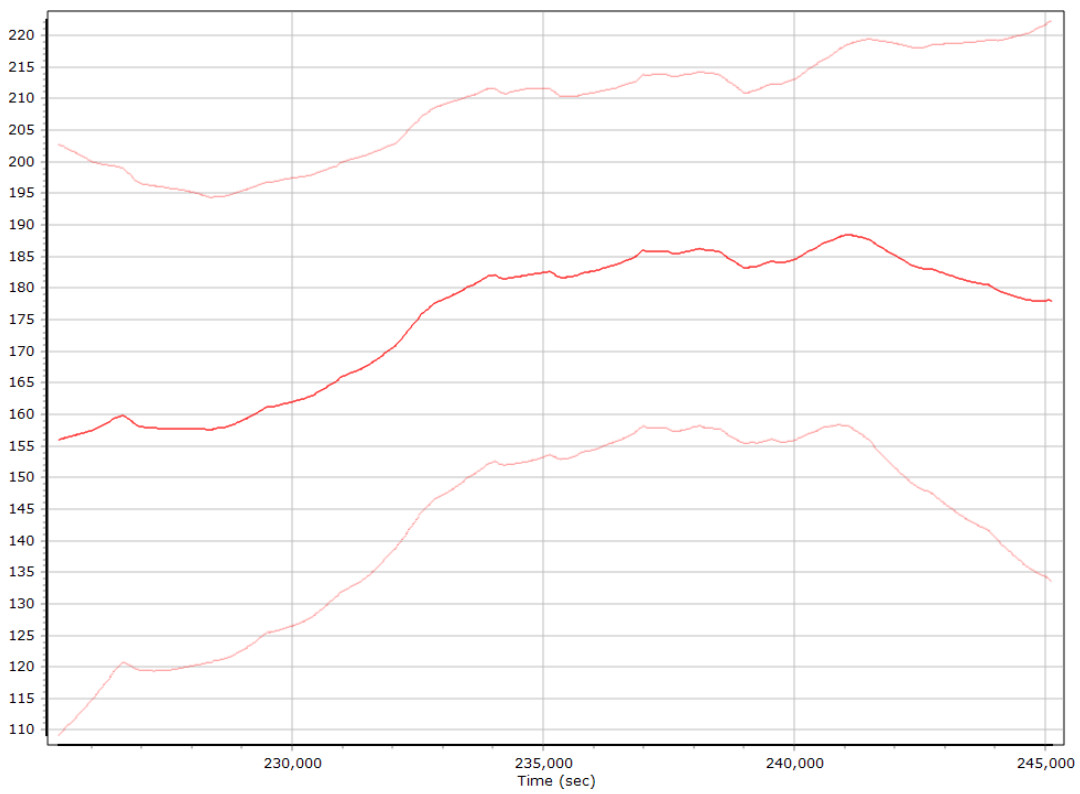
Z Gyro Bias (deg/h)



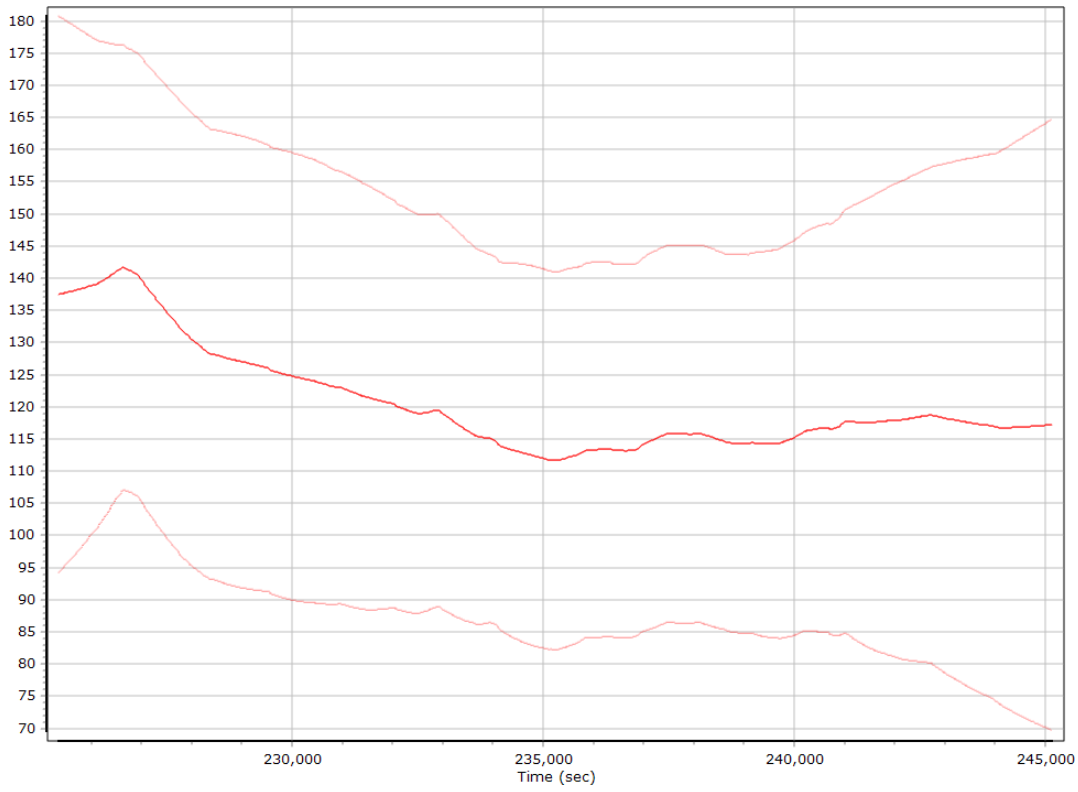
Gyro Scale Error (ppm)



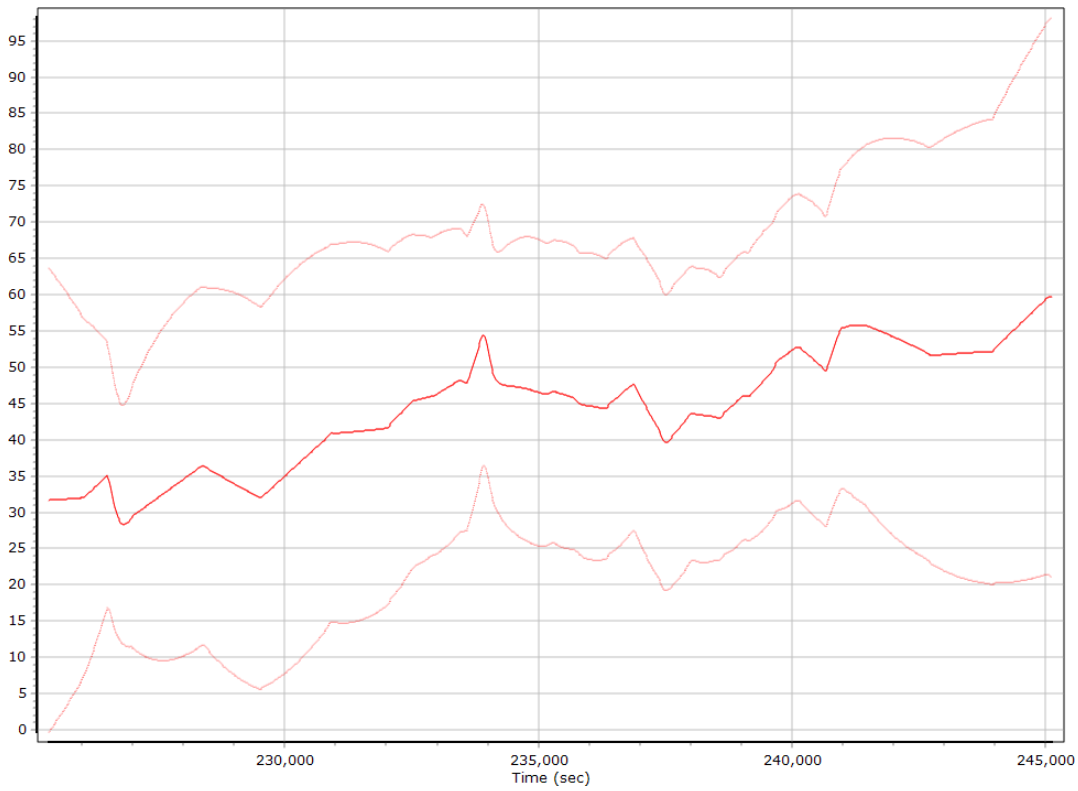
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

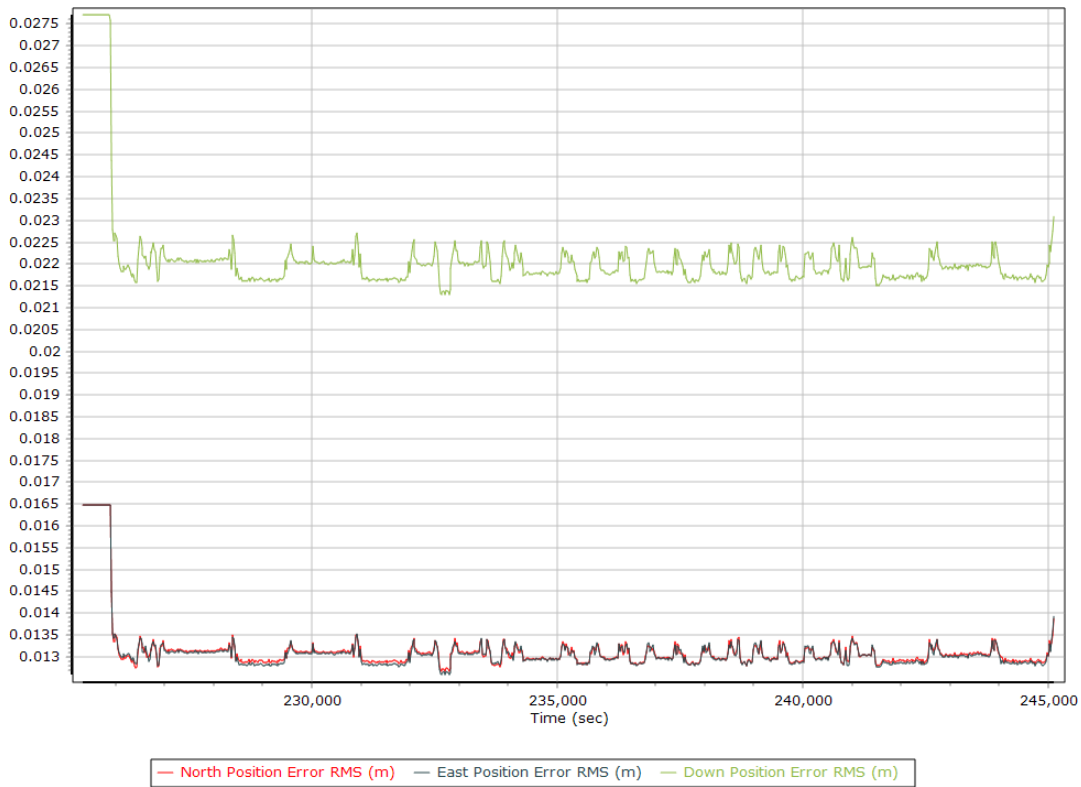


Z Gyro Scale Error (ppm)

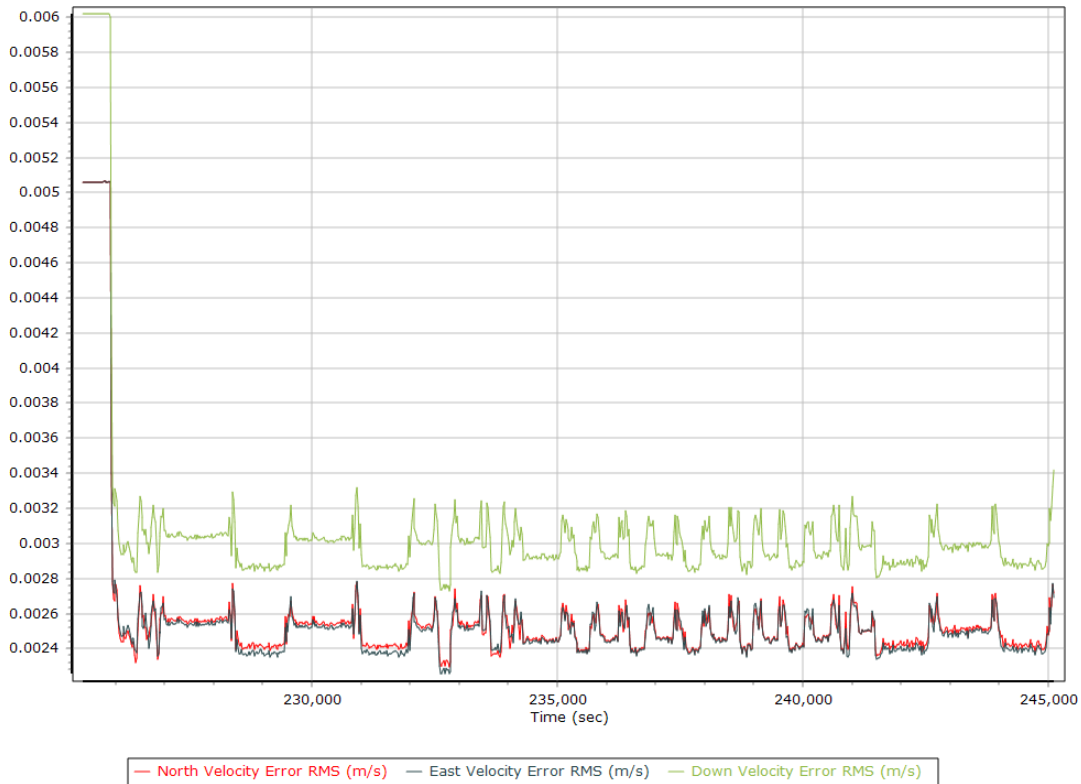


Smoothed Performance Metrics

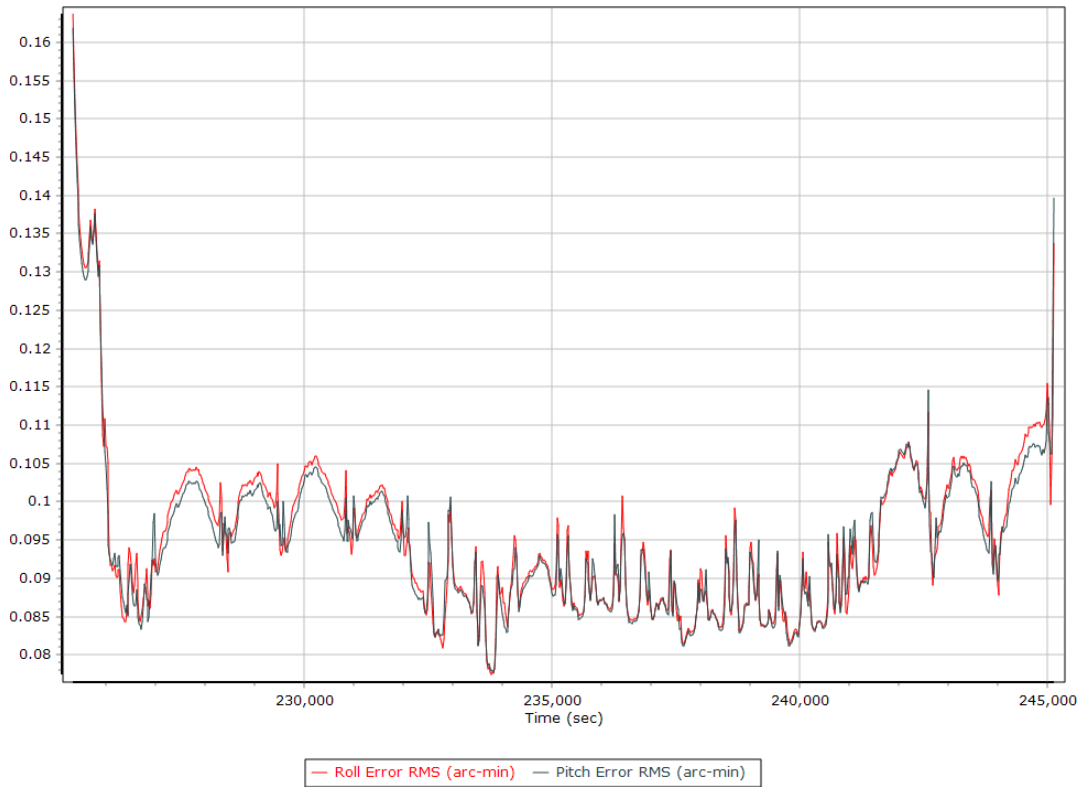
Position Error RMS (m)



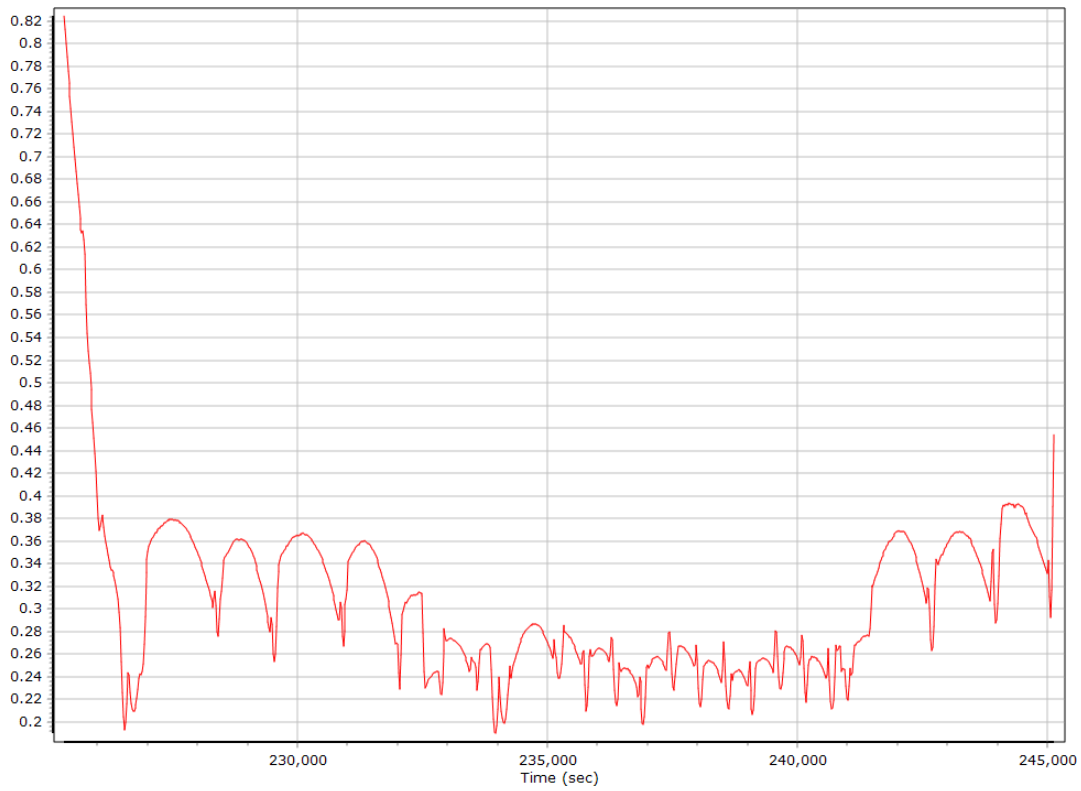
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)



Heading Error RMS (arc-min)



Export Summary

Export file	export_6219365a.kml		
Export format	Google KML		
Solution in use	Post-processed		
Output rate	Specified Distance Interval		
Distance Interval (m)	10.000		
Reference to Output lever arm [m]	0.000	0.000	0.000
Reference mounting angles [deg]	0.000	0.000	0.000
Output units (Coordinate / Lat & Lon)	Meter	Deg Decimal	
Export start time	225263.183 (12/31/2019 2:34:23 PM)		
Export end time	245135.002 (12/31/2019 8:05:35 PM)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 16 (90W to 84W)		
Datum	WGS84		
Ellipsoid	WGS84		
Local Transformation	NONE		
Target Epoch	2019.99726		

EO Summary

EO file			
EO format			
Lever arm [m]	0.000	0.000	0.000
Boresight angles [arcmin]	0.000	0.000	0.000
Output rate	All Records		
Rotation sequence	x omega	y phi	z kappa
Local shift [m]	0.000	0.000	0.000
Output units (coordinate / angle / lat & lon)	Meter	Degree	Deg Decimal
Height option	Ellipsoid Height		
WGS84 height flag	False		
Scale height option	False		
Kappa cardinal rotation [deg]	0		
Solution in use	Post-processed		
EO start time	225284.002 (12/31/2019 2:34:44 PM)		
EO end time	245135.002 (12/31/2019 8:05:35 PM)		
Grid	Universal Transverse Mercator		
Zone	UTM North 16 (90W to 84W)		
Datum	WGS84		
Ellipsoid	WGS84		
Local Transformation	NONE		
Target Epoch	2019.99726		

General Information

Mission Information

Project name	6220001a
Processing date	2020-01-03 16:12:19
Mission date	2020-01-01 15:21:37
Mission duration	06:18:09.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N8708
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
ALS.000	POS Data
ALS.001	POS Data
ALS.002	POS Data
ALS.003	POS Data
ALS.004	POS Data
ALS.005	POS Data
ALS.006	POS Data
ALS.007	POS Data
ALS.008	POS Data
ALS.009	POS Data
ALS.010	POS Data
ALS.011	POS Data
ALS.012	POS Data
ALS.013	POS Data
ALS.014	POS Data
ALS.015	POS Data
ALS.016	POS Data
ALS.017	POS Data
ALS.018	POS Data
ALS.019	POS Data
ALS.020	POS Data
ALS.021	POS Data
ALS.022	POS Data
ALS.023	POS Data
ALS.024	POS Data
ALS.025	POS Data
ALS.026	POS Data
ALS.027	POS Data
ALS.028	POS Data
ALS.029	POS Data
ALS.030	POS Data
ALS.031	POS Data
ALS.032	POS Data
ALS.033	POS Data
ALS.034	POS Data
ALS.035	POS Data
ALS.036	POS Data
ALS.037	POS Data
ALS.038	POS Data
ALS.039	POS Data
ALS.040	POS Data
ALS.041	POS Data
ALS.042	POS Data
ALS.043	POS Data
ALS.044	POS Data
ALS.045	POS Data
ALS.046	POS Data

Input Files

File Name	File type
Ephm0010.20g	GLONASS Broadcast Ephemeris
Ephm0010.20n	GPS Broadcast Ephemeris
flcb0010.20o	GNSS SingleBase
fljl0010.20o	GNSS SingleBase
fljo0010.20o	GNSS SingleBase
flmr0010.20o	GNSS SingleBase
gatv0010.20o	GNSS SingleBase
prry0010.20o	GNSS SingleBase
sned0010.20o	GNSS SingleBase

File Name	File type
talh0010.20o	GNSS SingleBase
igu20862_18.sp3	GPS Precise Ephemeris
igu20863_18.sp3	GPS Precise Ephemeris
igu20864_18.sp3	GPS Precise Ephemeris
flmd0010.20o	GNSS SingleBase

Output Files

Filename	File type
sbet_6220001a.out	SBET Trajectory File
export_6220001a.out	Custom Smoothed BET Export Output

Rover Data Summary

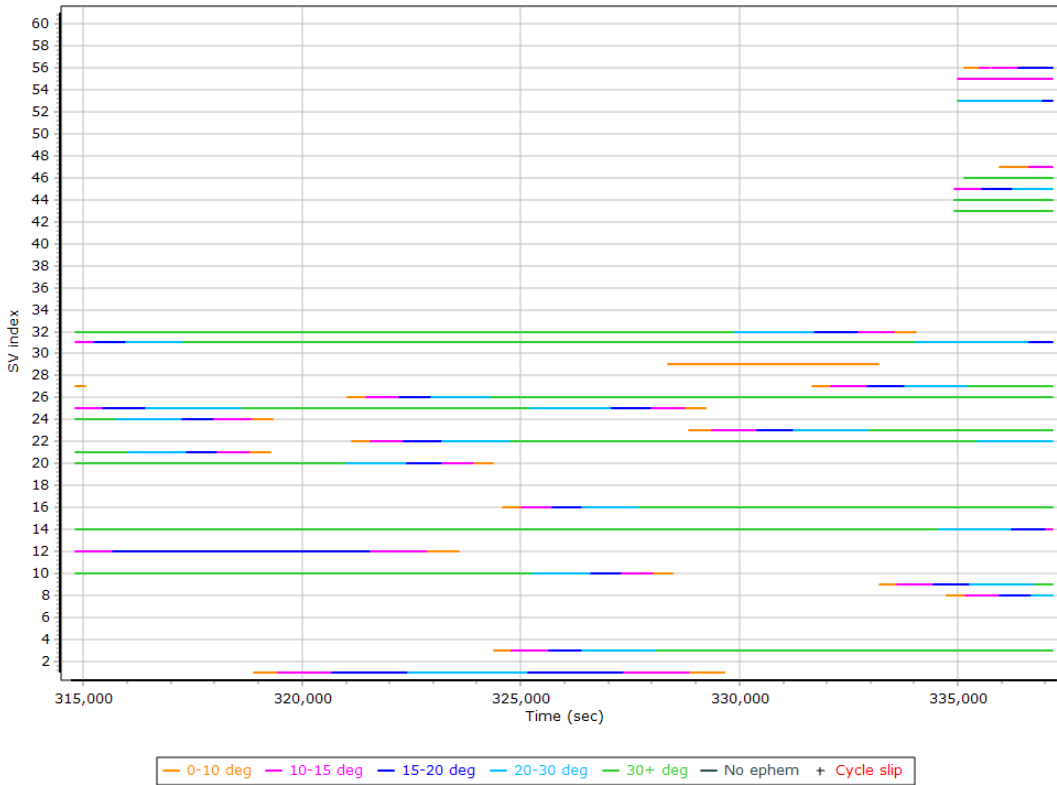
First raw data file	ALS.000		
Last raw data file	ALS.046		
Start GPS week	2086		
Start time	314478.130 (01/01/2020 15:21:18)		
End time	337163.611 (01/01/2020 21:39:23)		
Start of fine alignment	314763.817 (01/01/2020 15:26:03)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.046	-0.192	-1.285
Gimbal 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

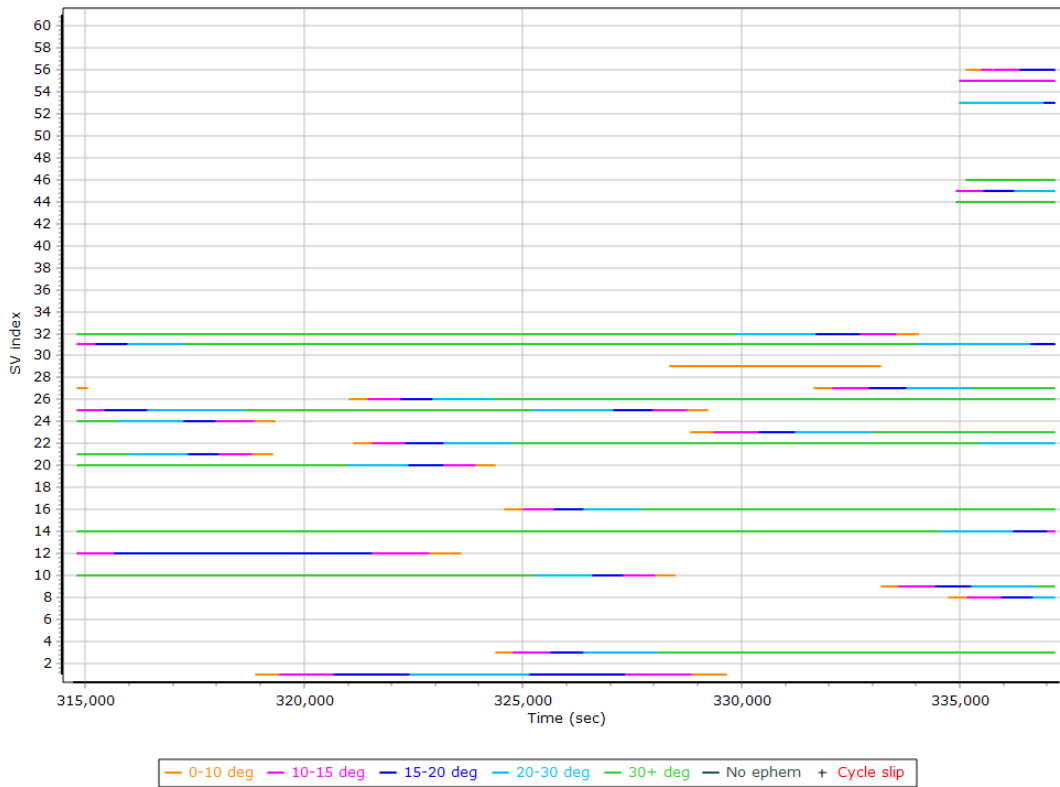
Raw IMU Import QC Summary

IMU data input file	imu_6220001a.dat
IMU data check log file	imudt_6220001a.log
IMU Records Processed	4537073
Termination Status	Normal
IMU Anomalies	0

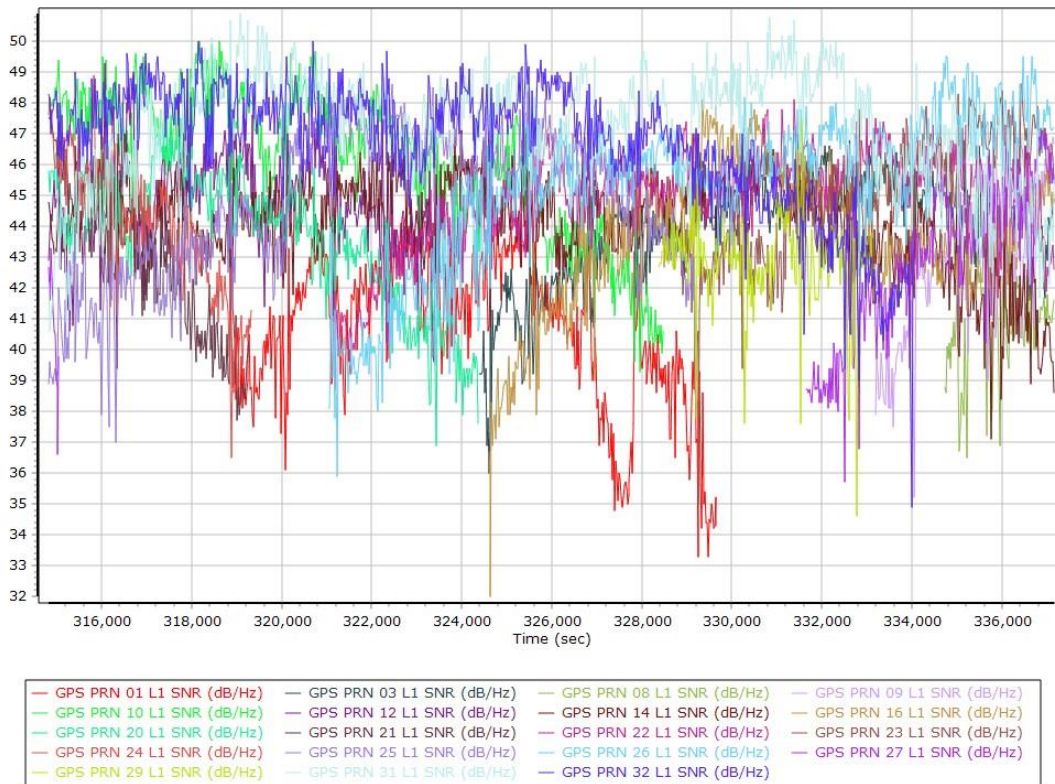
L1 Satellite Lock/Elevation



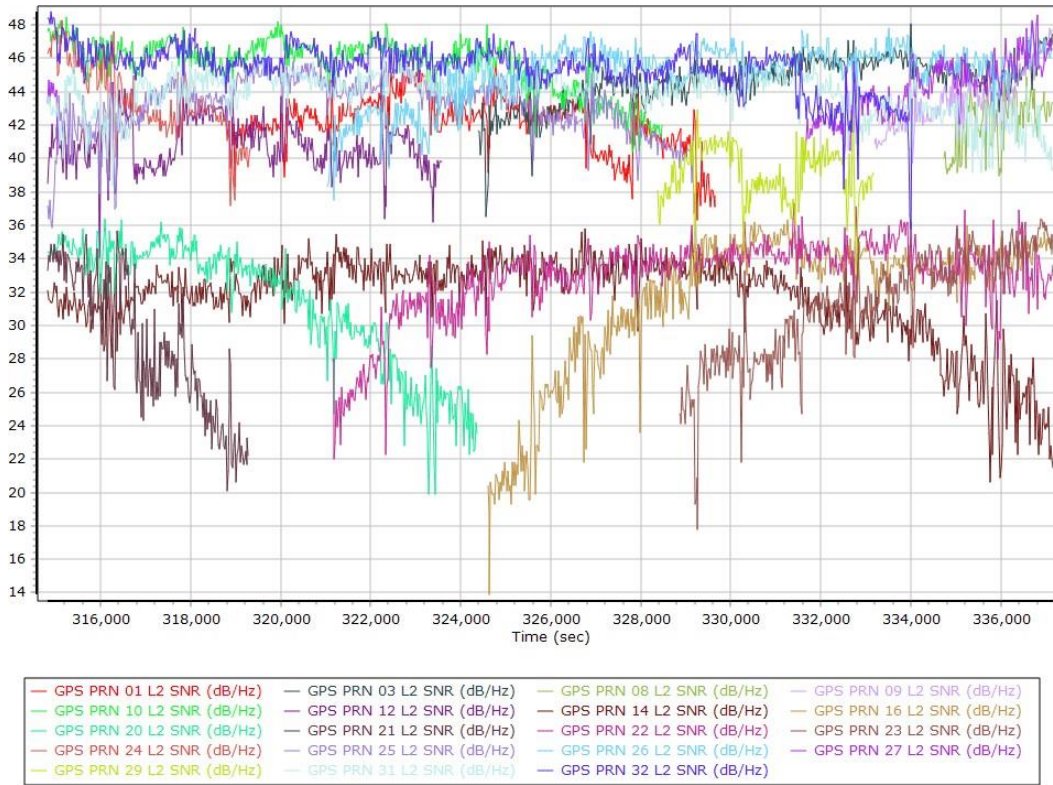
L2 Satellite Lock/Elevation



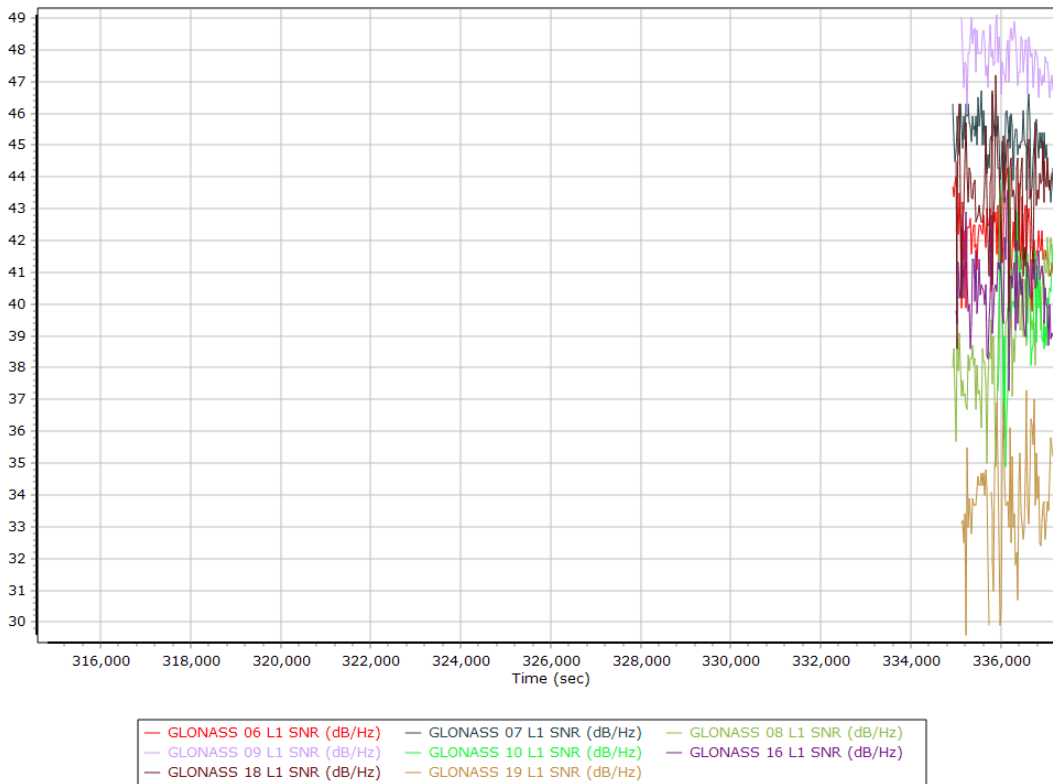
GPS L1 SNR



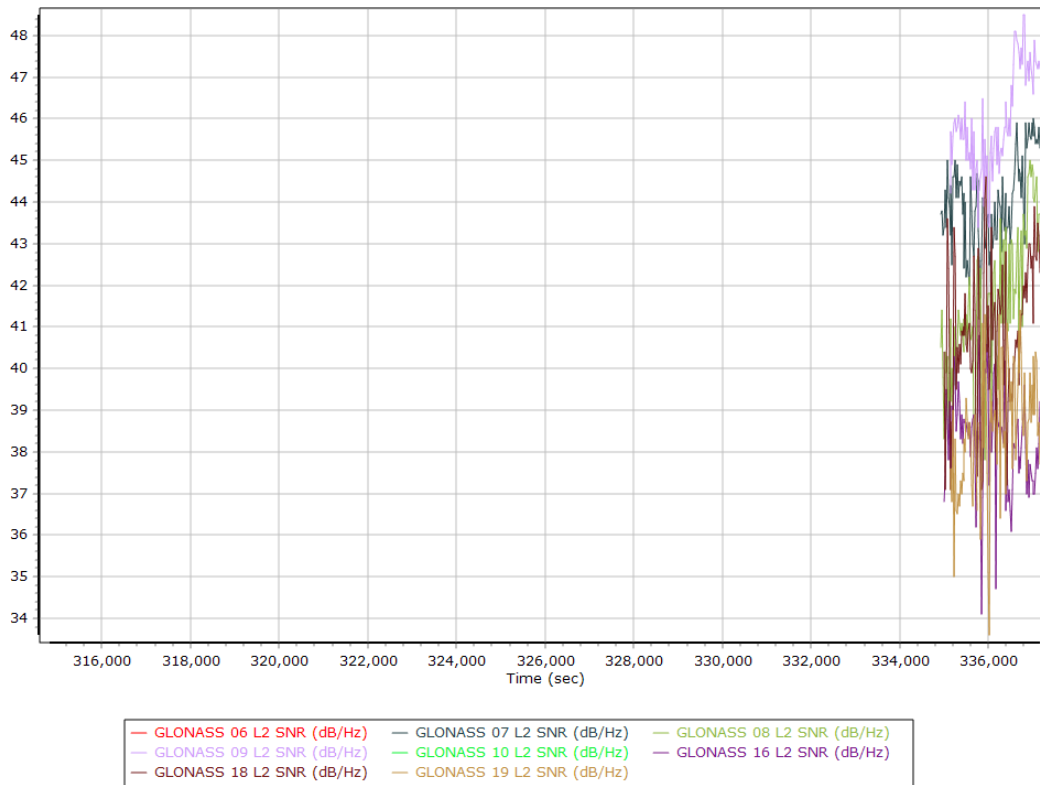
GPS L2 SNR



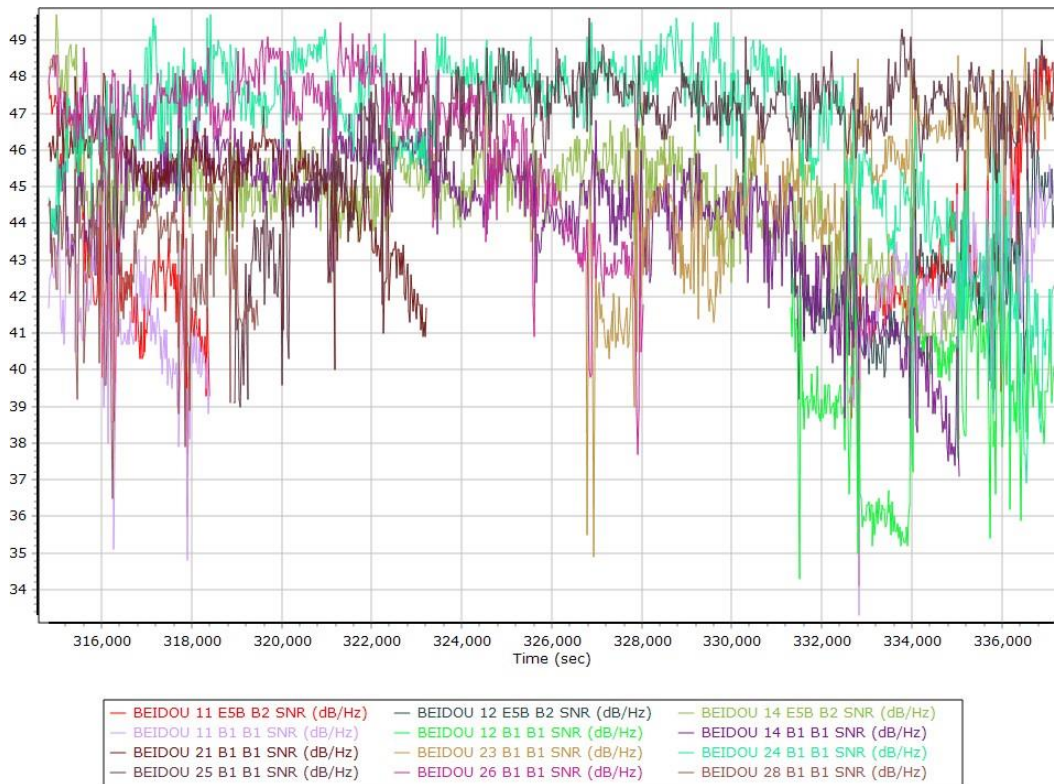
GLONASS L1 SNR



GLONASS L2 SNR

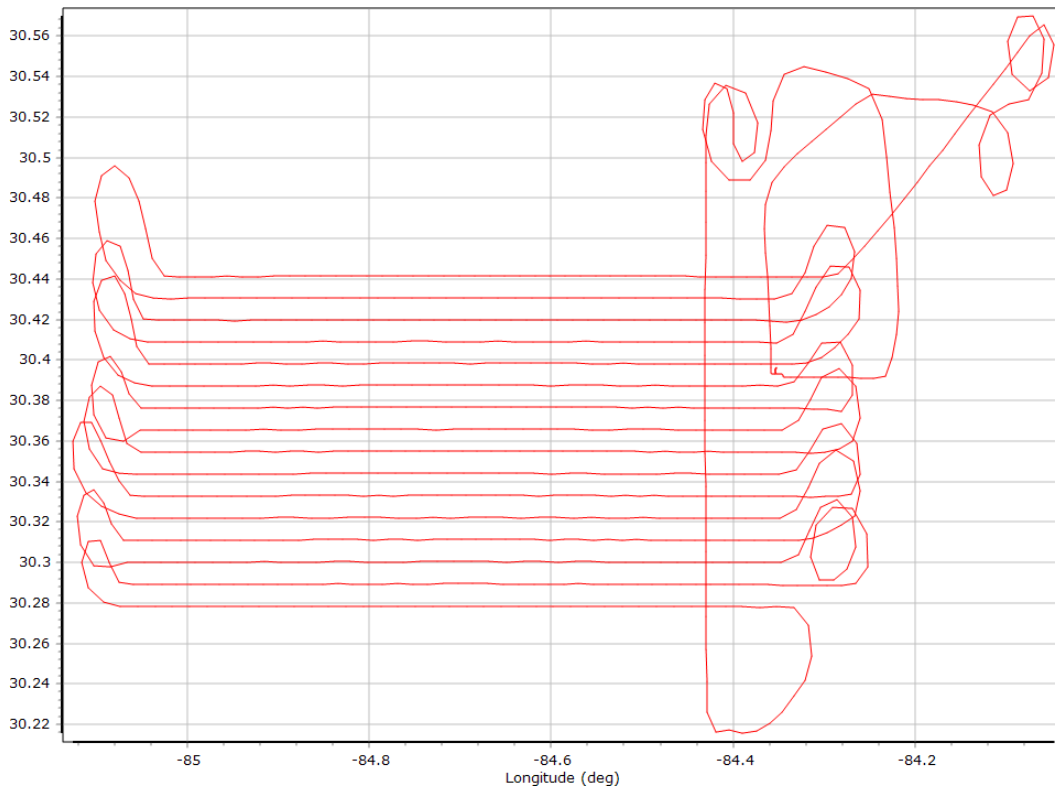


BEIDOU SNR

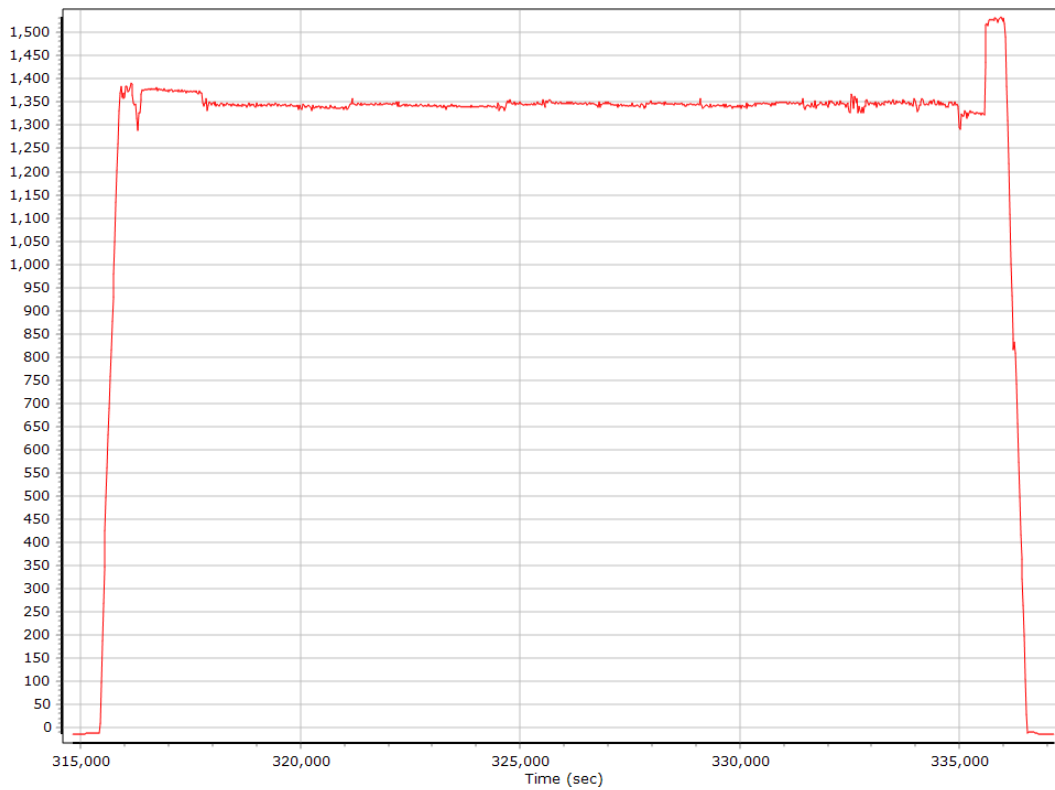


Trajectory Information

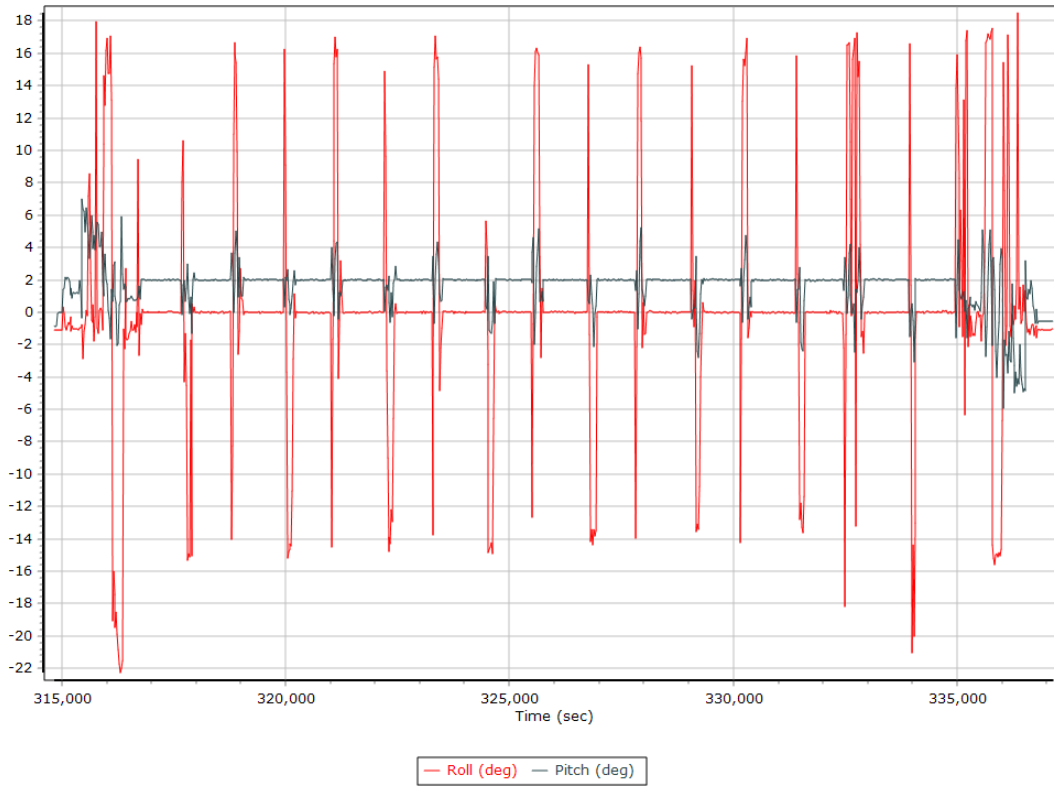
Top View



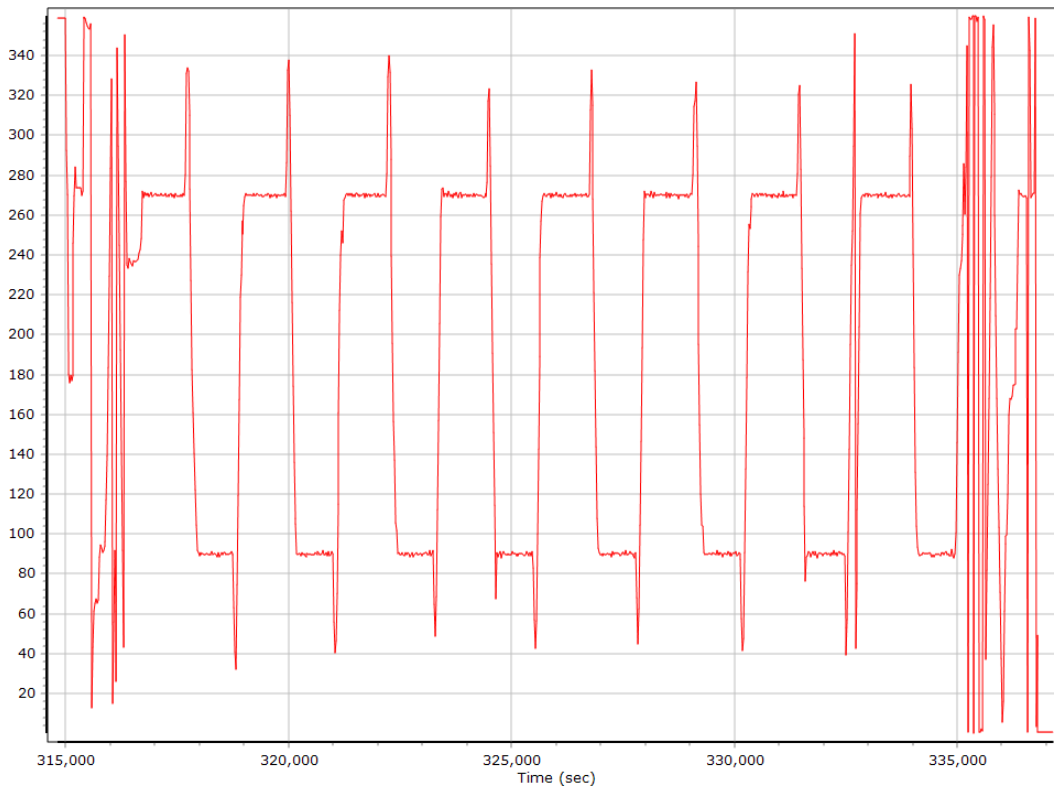
Altitude



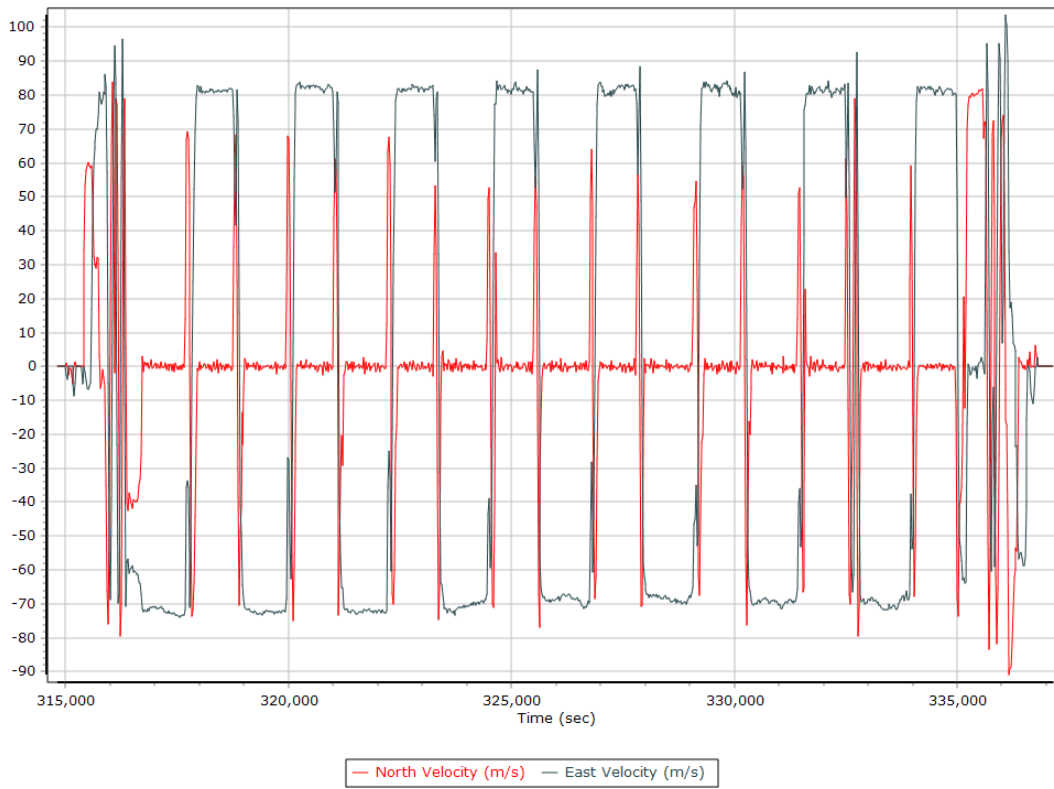
Roll/Pitch



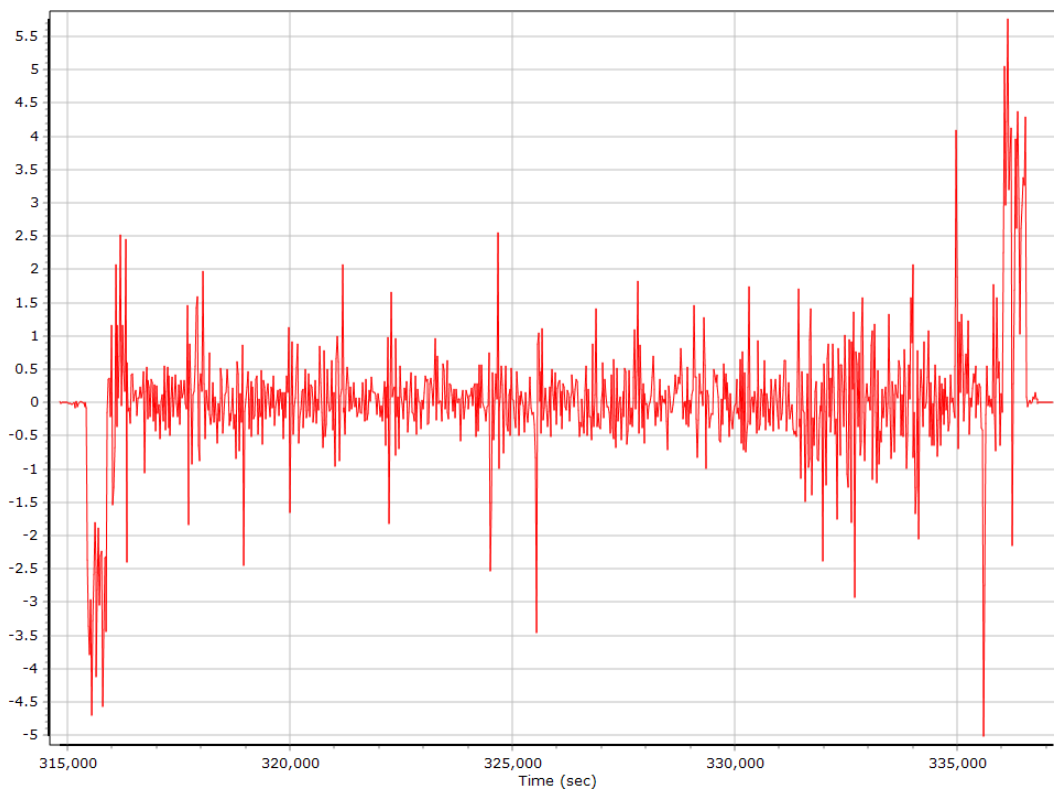
Heading



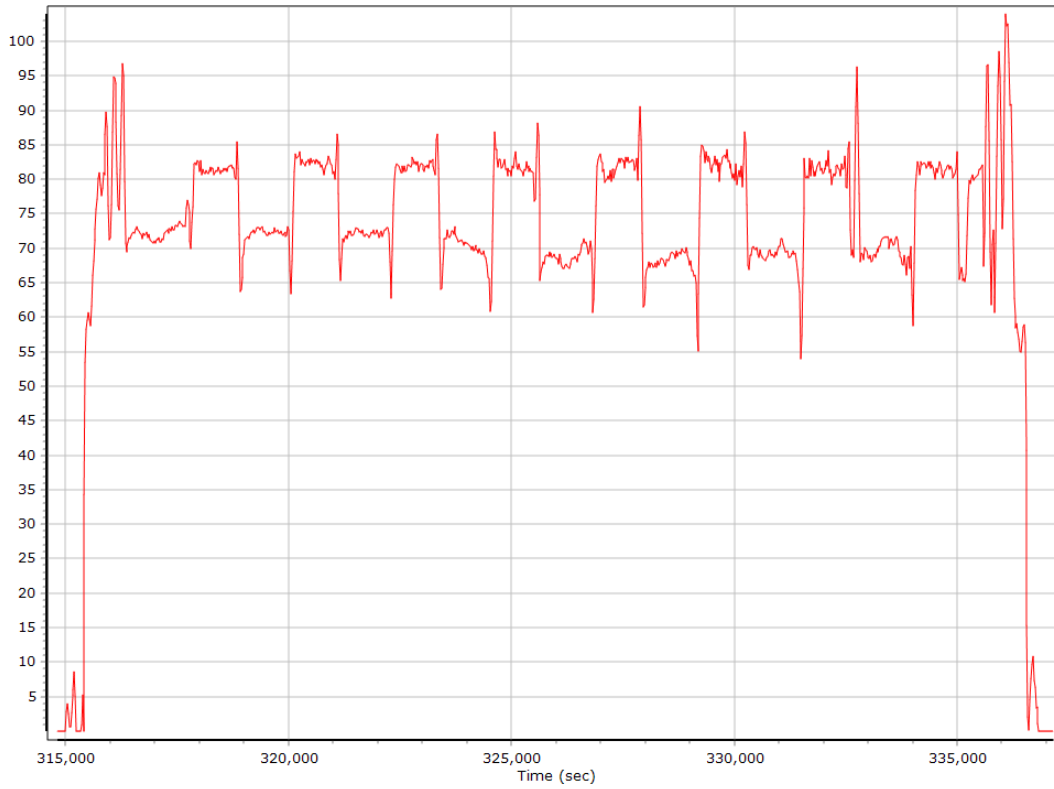
North/East Velocity



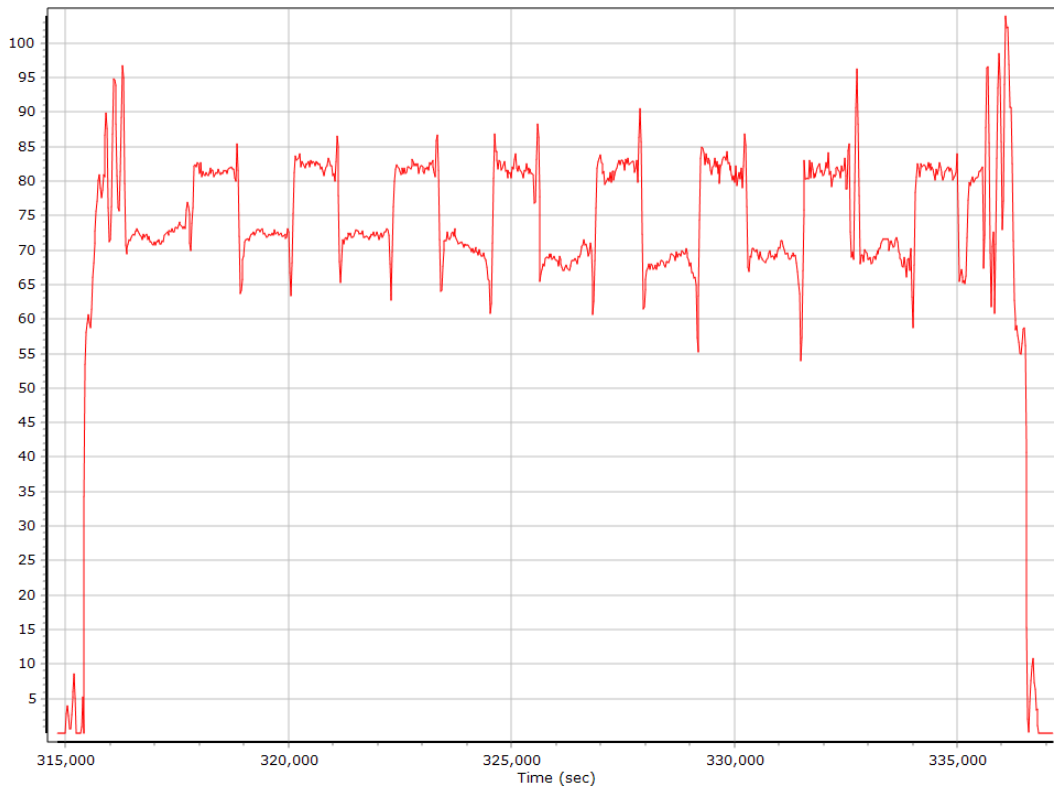
Down Velocity



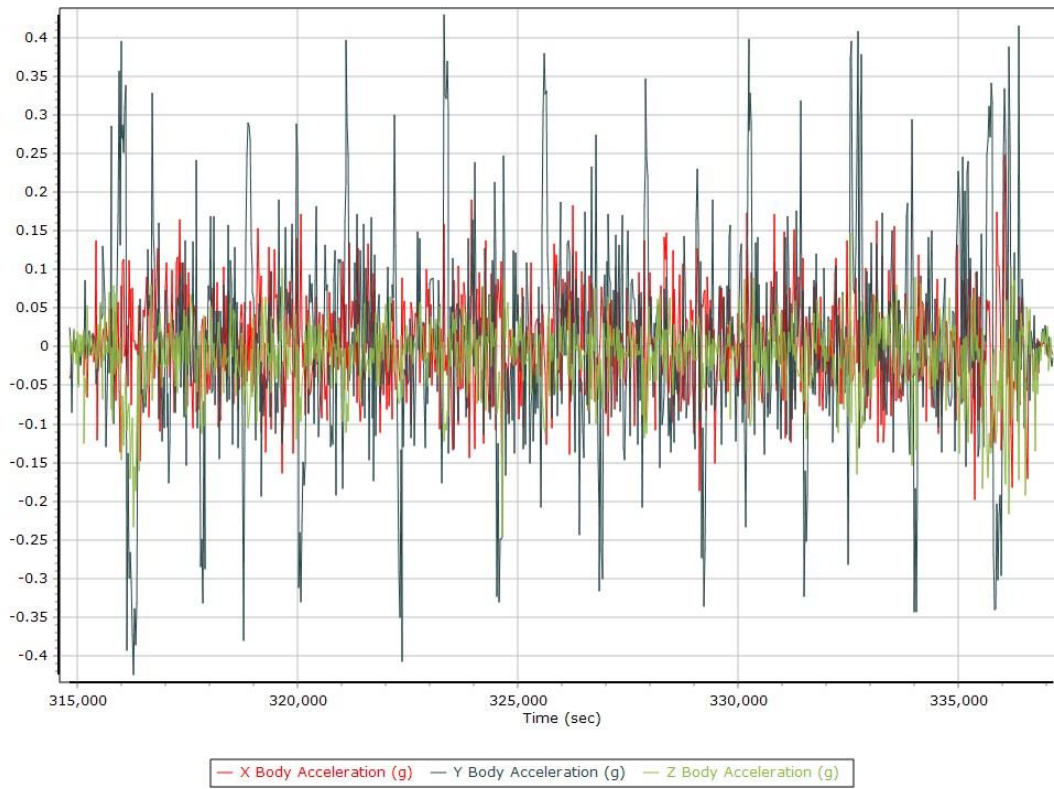
Total Speed



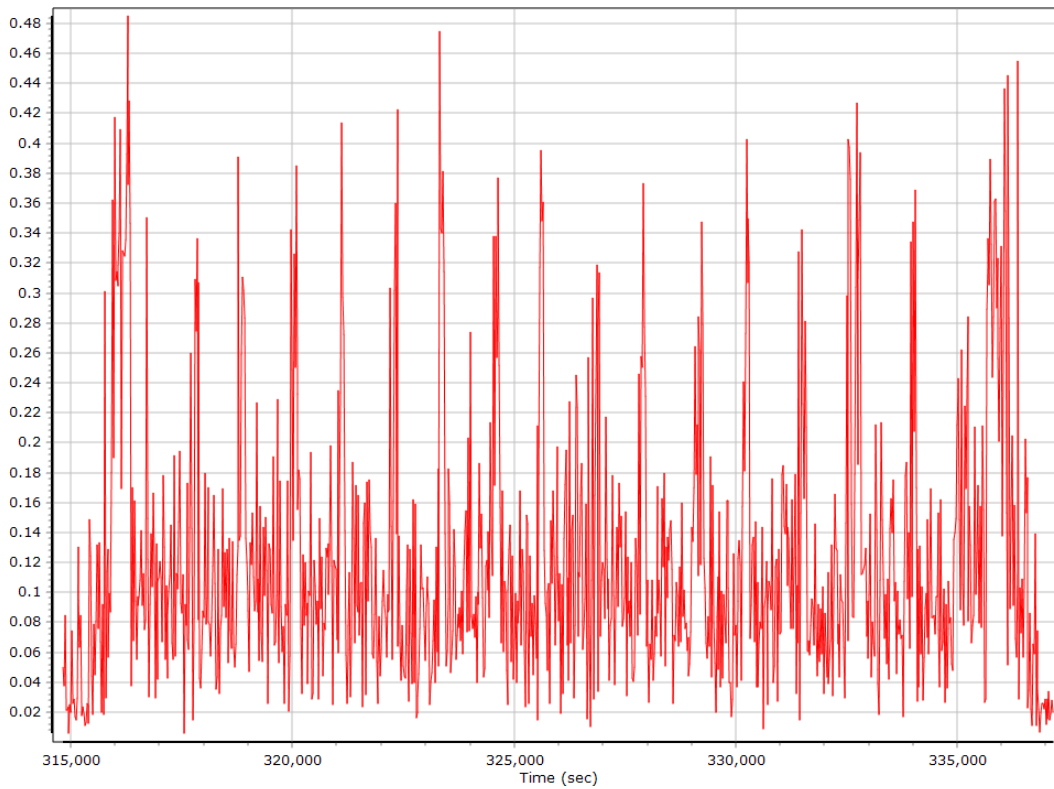
Ground Speed



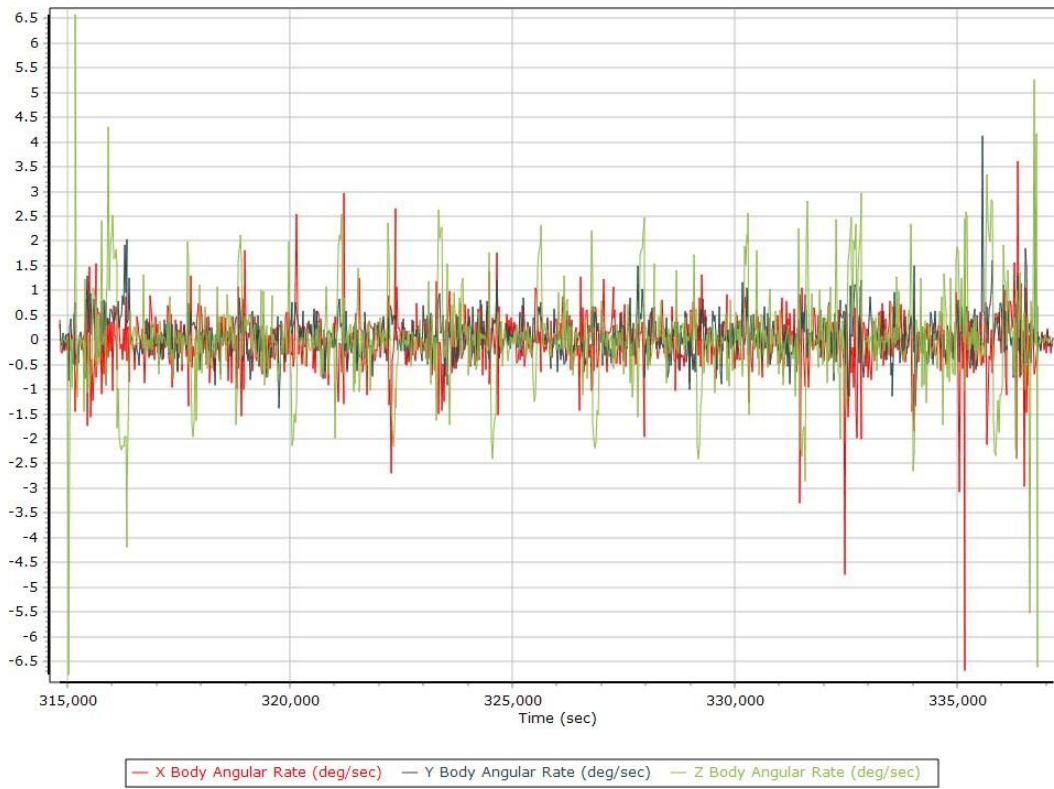
Body Acceleration



Total Body Acceleration



Body Angular Rate



SmartBase Processing Summary

Smart Select Options

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

Basestation Selection

Date	ID	Dist	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	

SmartBase Quality Check

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	0.13	58.07	
Number of GPS SV	7	10	9
Number of GLONASS SV	0	4	0
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	7	14	9
PDOP	1.34	3.18	1.92
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	22639.00	0.00	1.00
Percentage	100.00	0.00	0.00

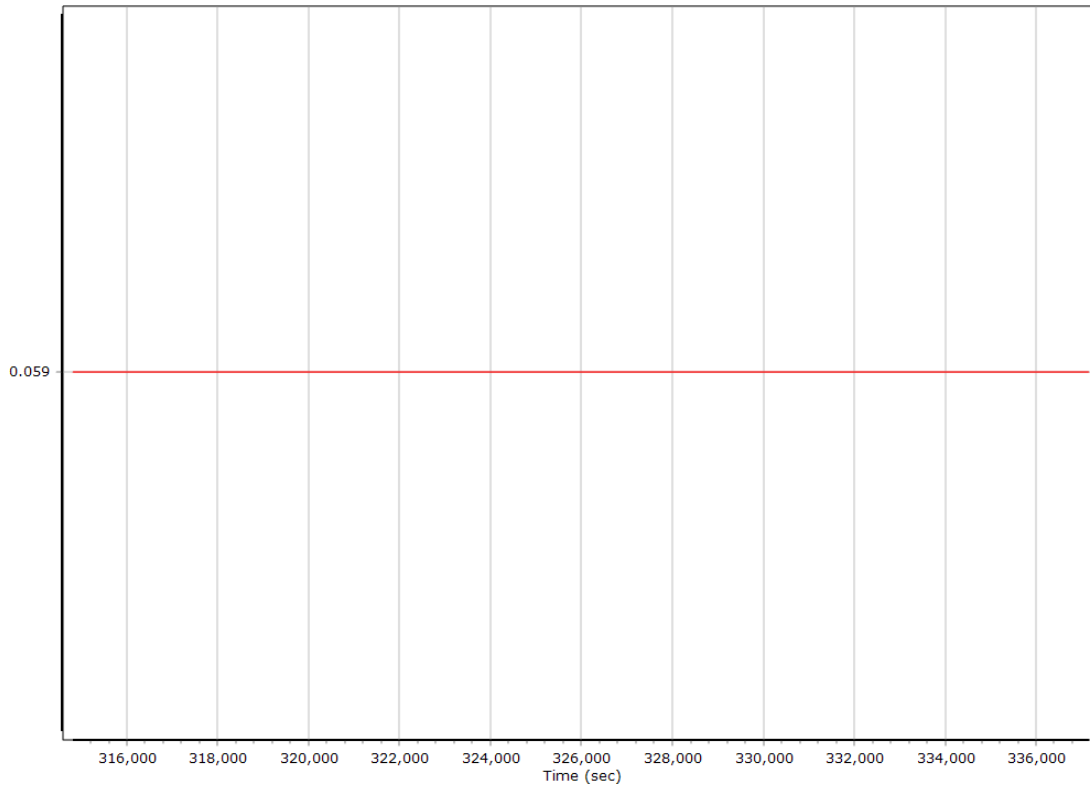
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	314479.000 (01/01/2020 15:21:19)		
Processing end time	337168.000 (01/01/2020 21:39:28)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.059	-0.191	-1.282
Gimbal to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

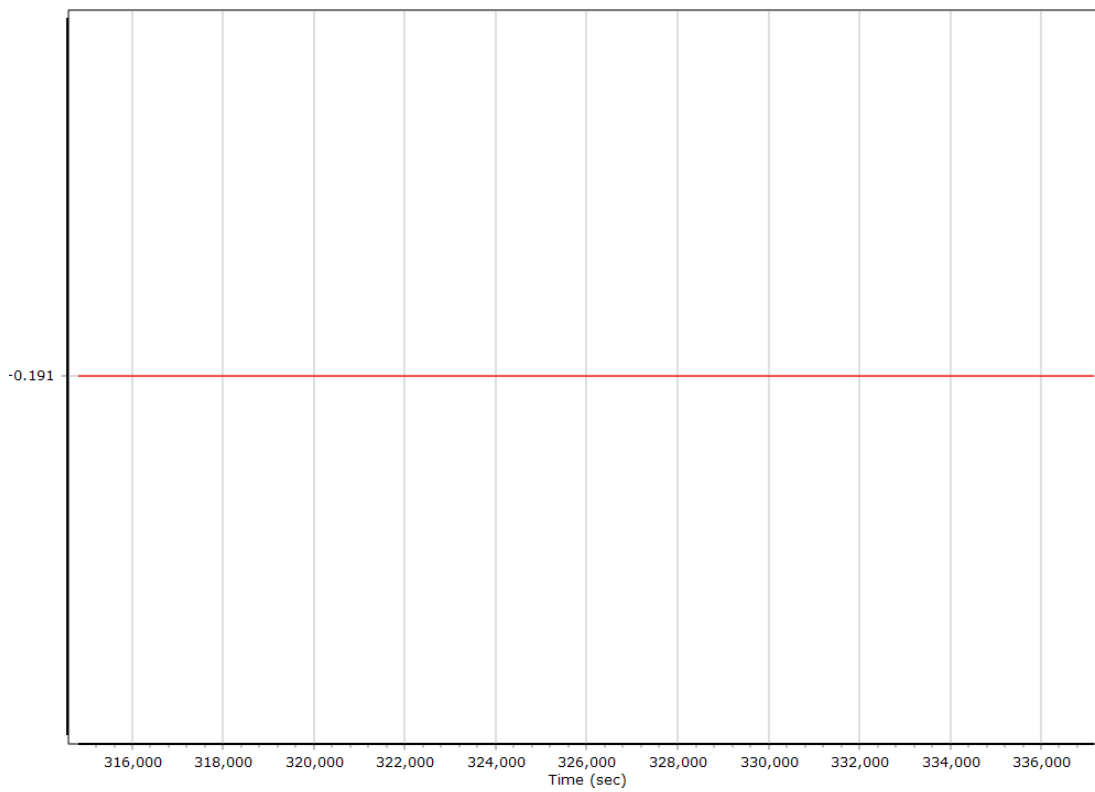
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

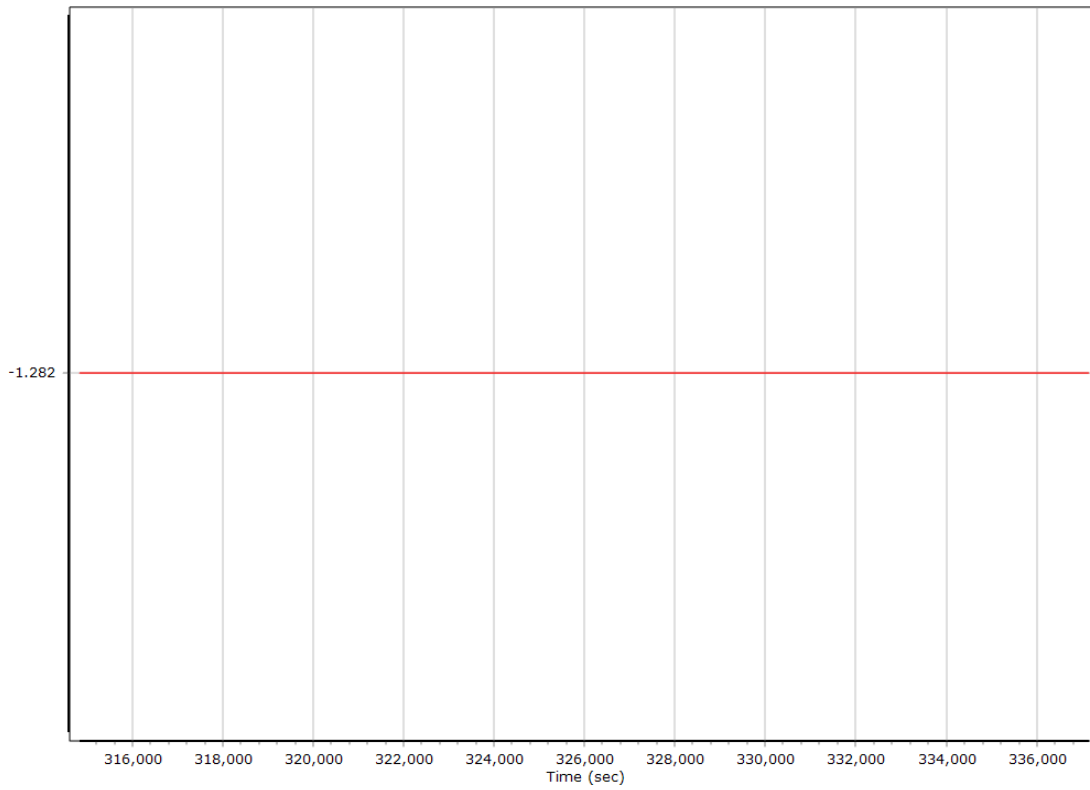
X Reference-Primary GNSS Lever Arm (m)



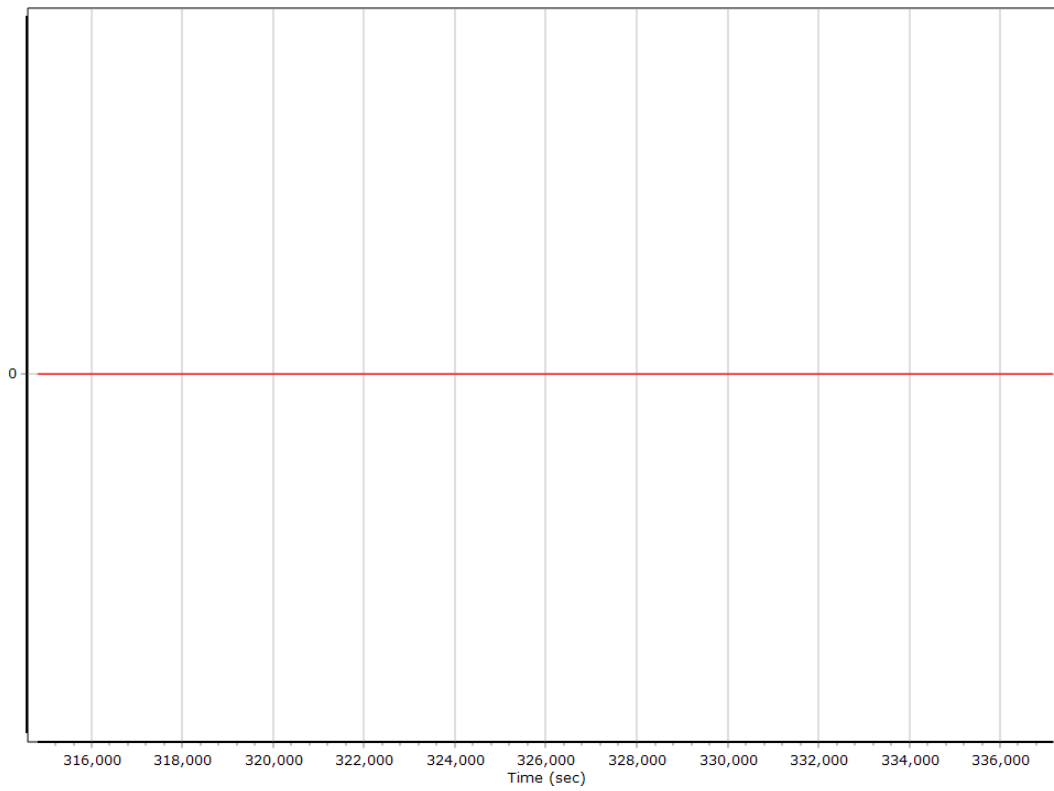
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



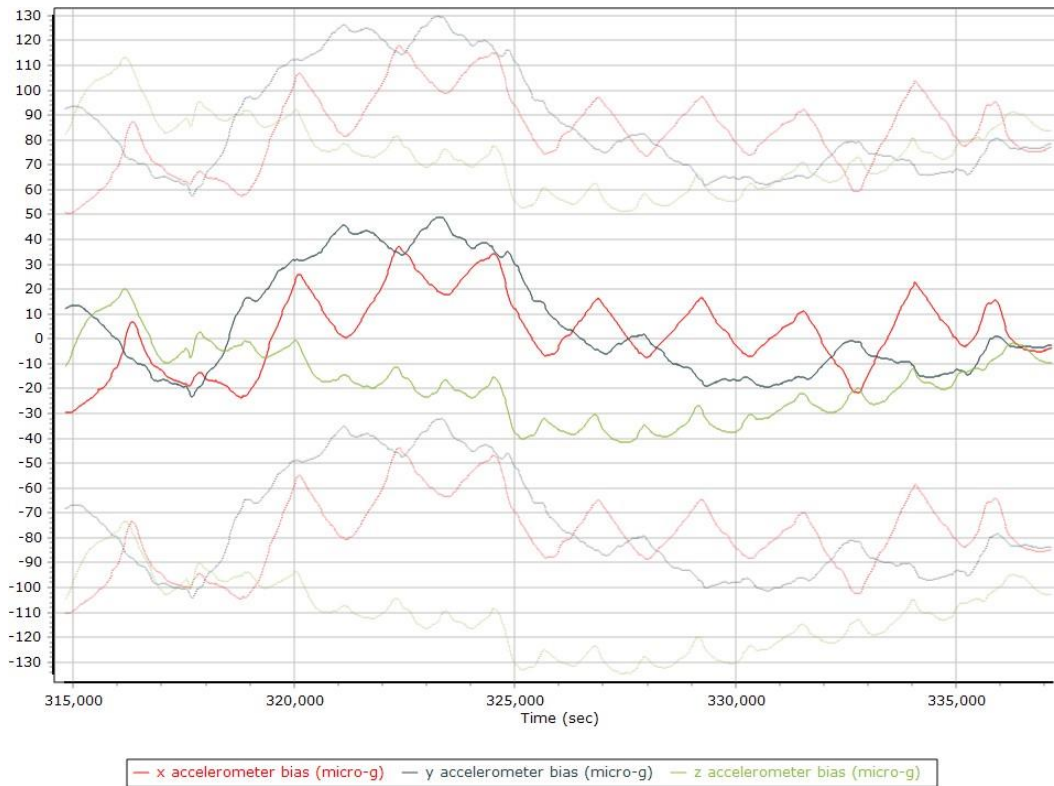
Reference-Primary GNSS Lever Arm Figure of Merit



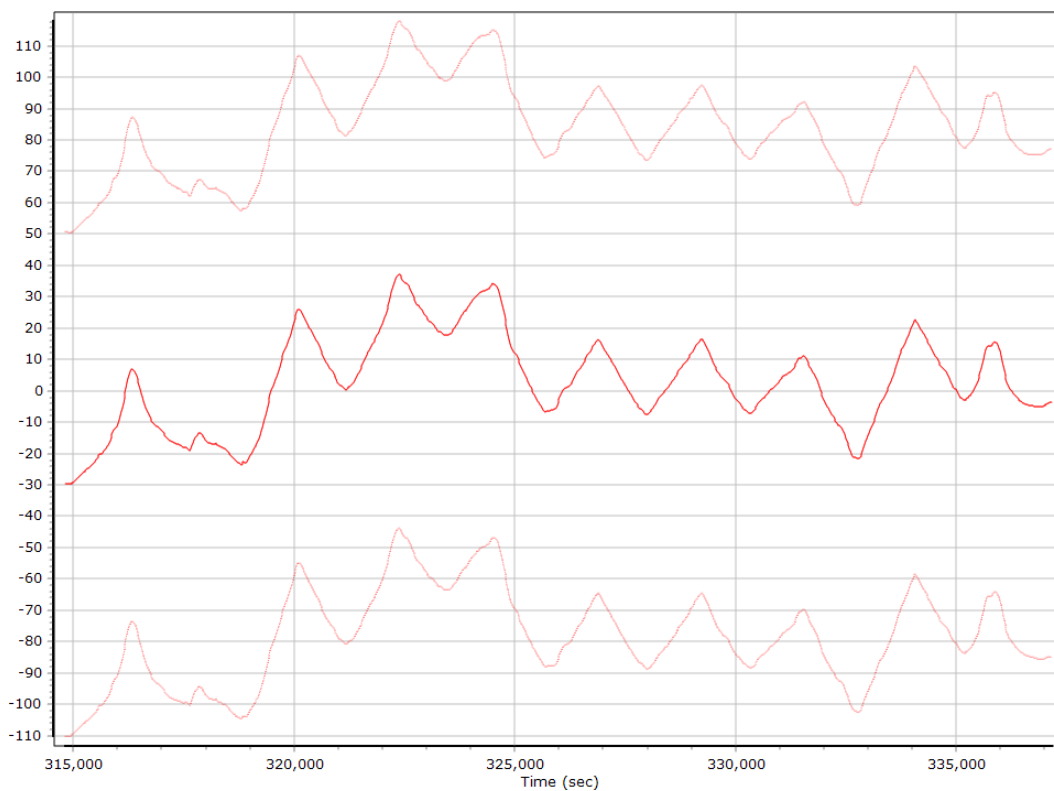
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

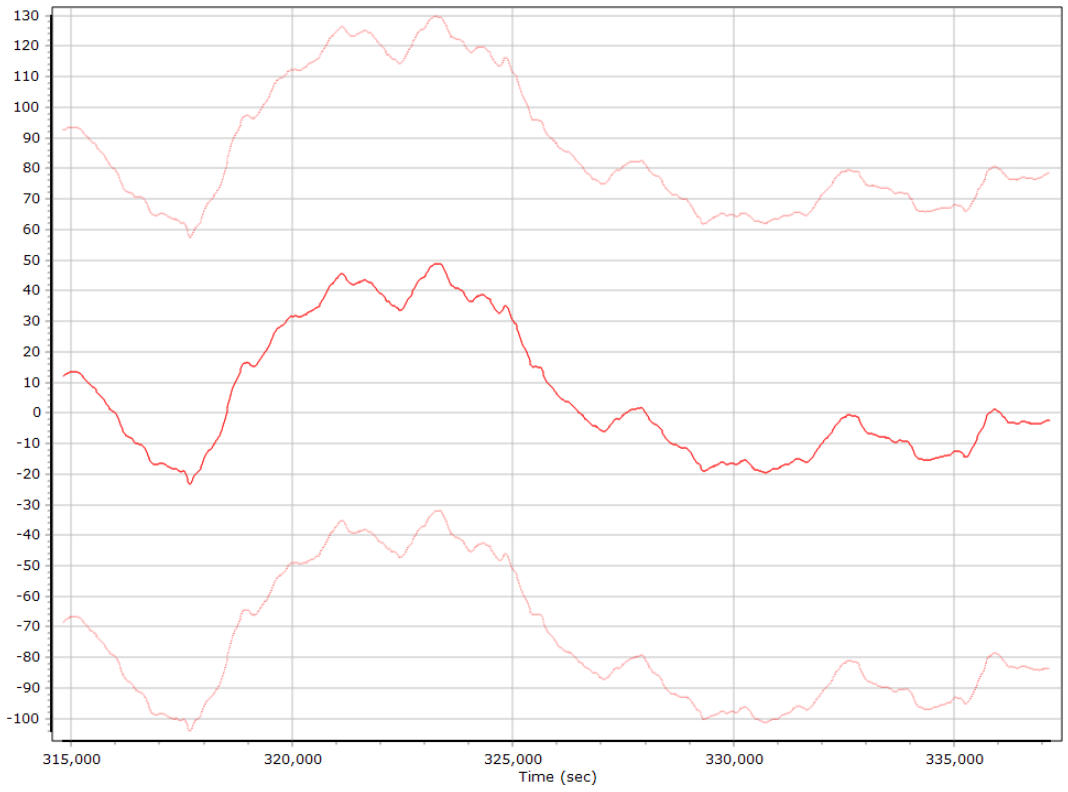
Accelerometer Bias (micro-g)



X Accelerometer Bias (micro-g)



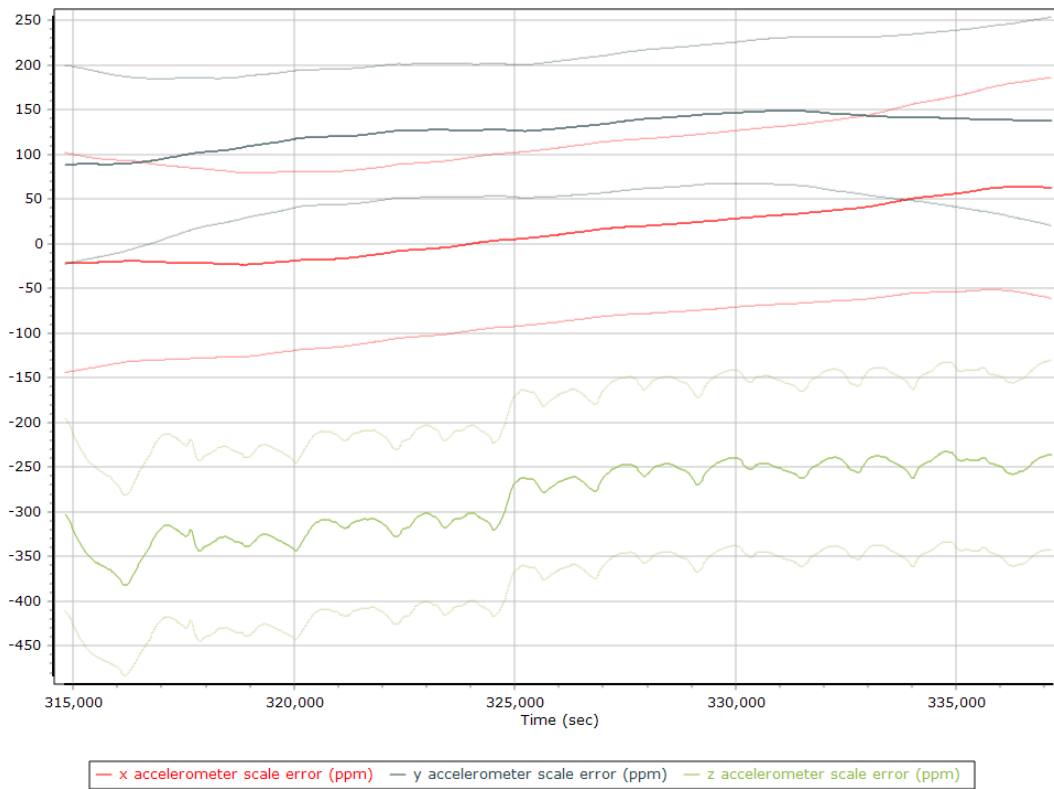
Y Accelerometer Bias (micro-g)



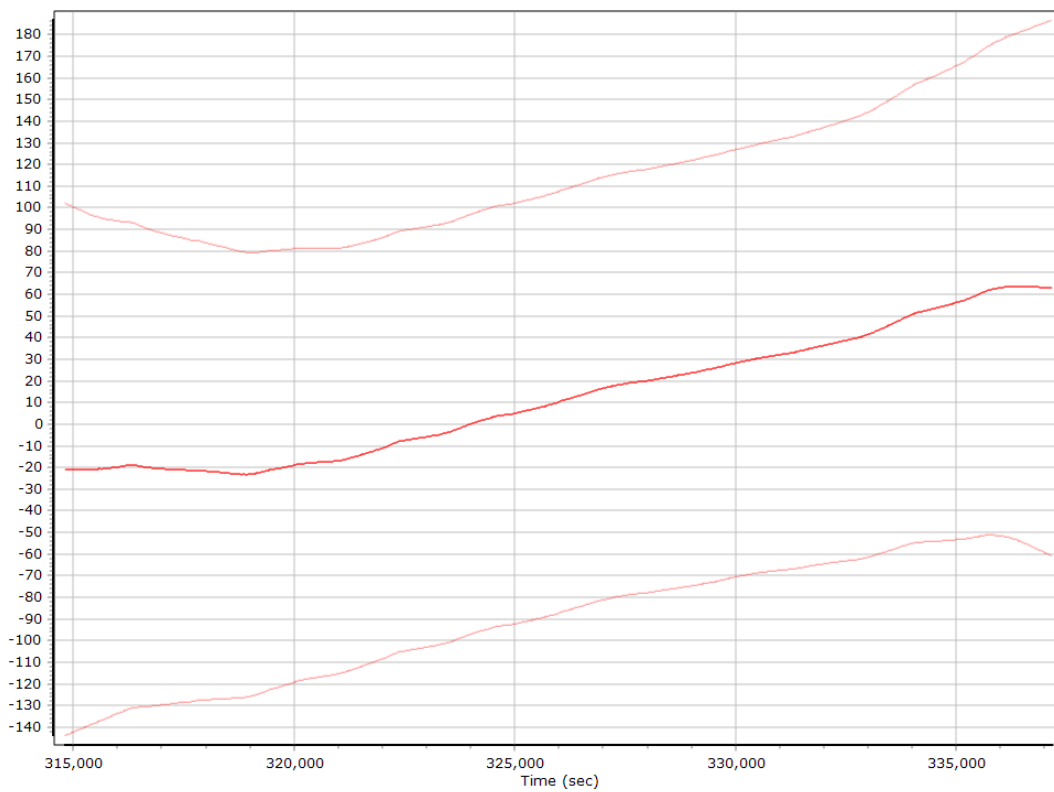
Z Accelerometer Bias (micro-g)



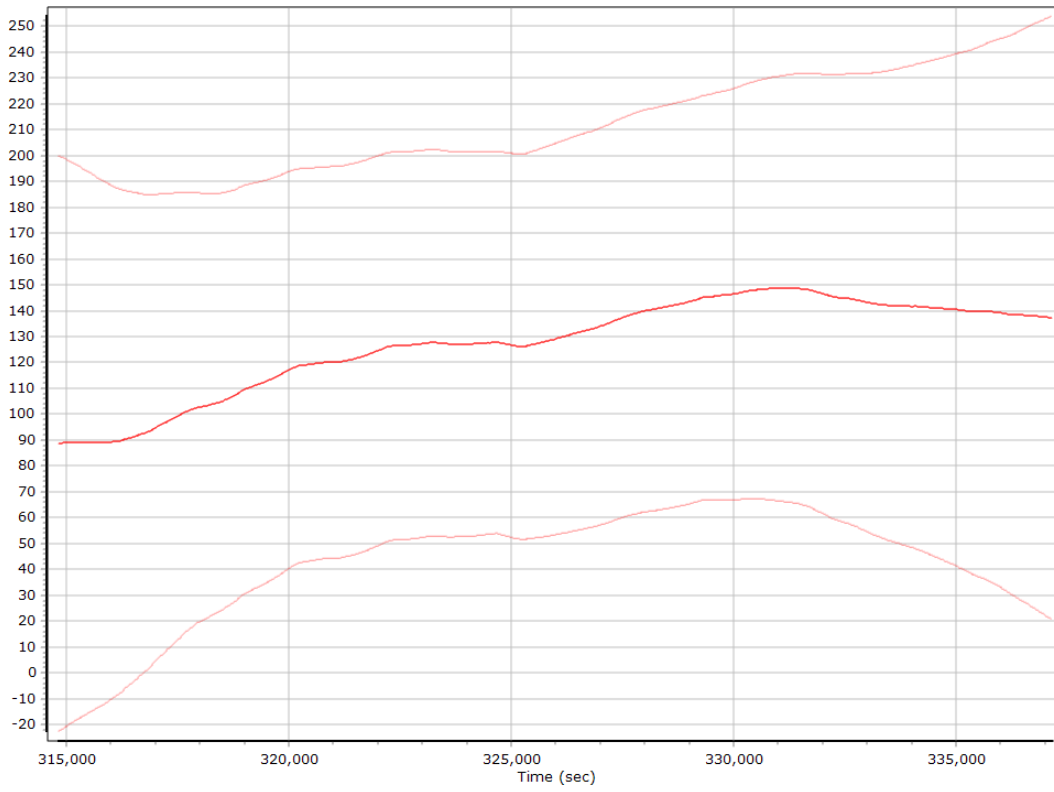
Accelerometer Scale Error (ppm)



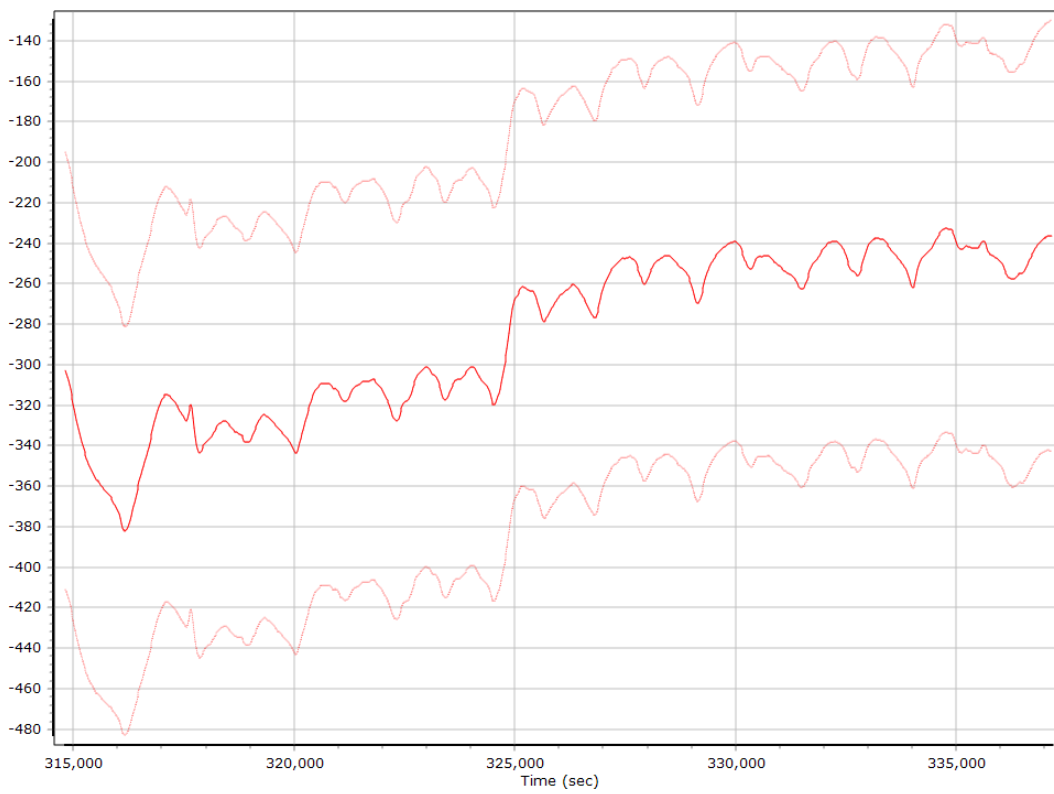
X Accelerometer Scale Error (ppm)



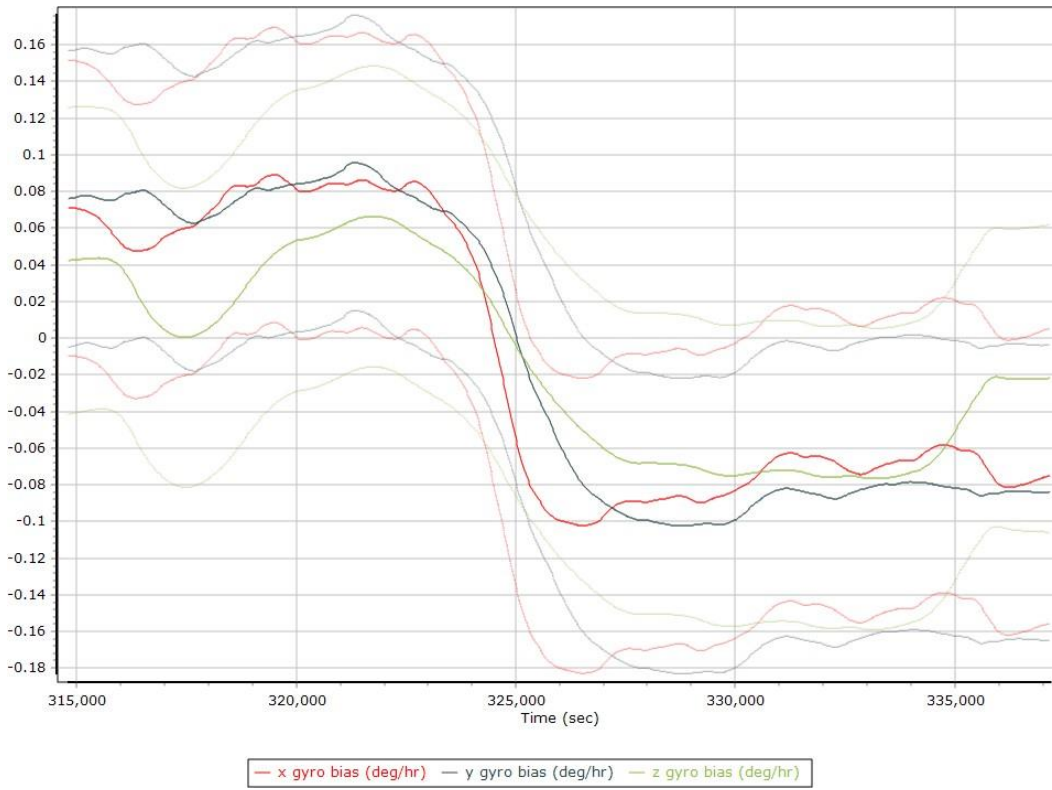
Y Accelerometer Scale Error (ppm)



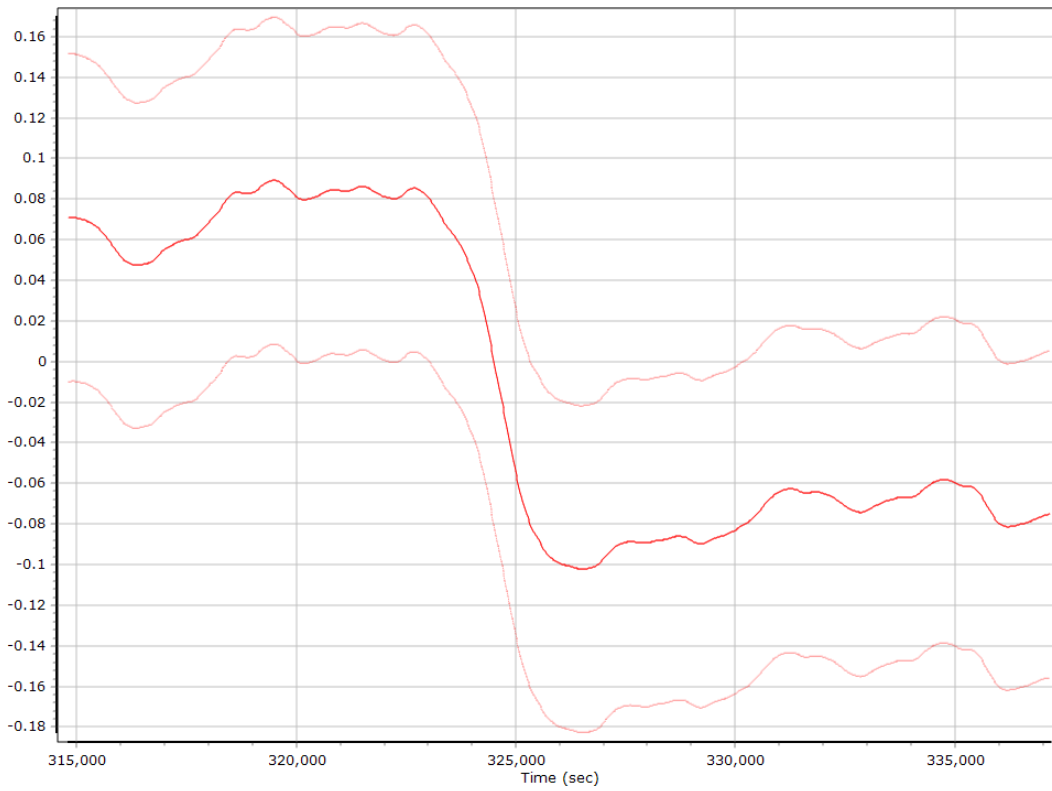
Z Accelerometer Scale Error (ppm)



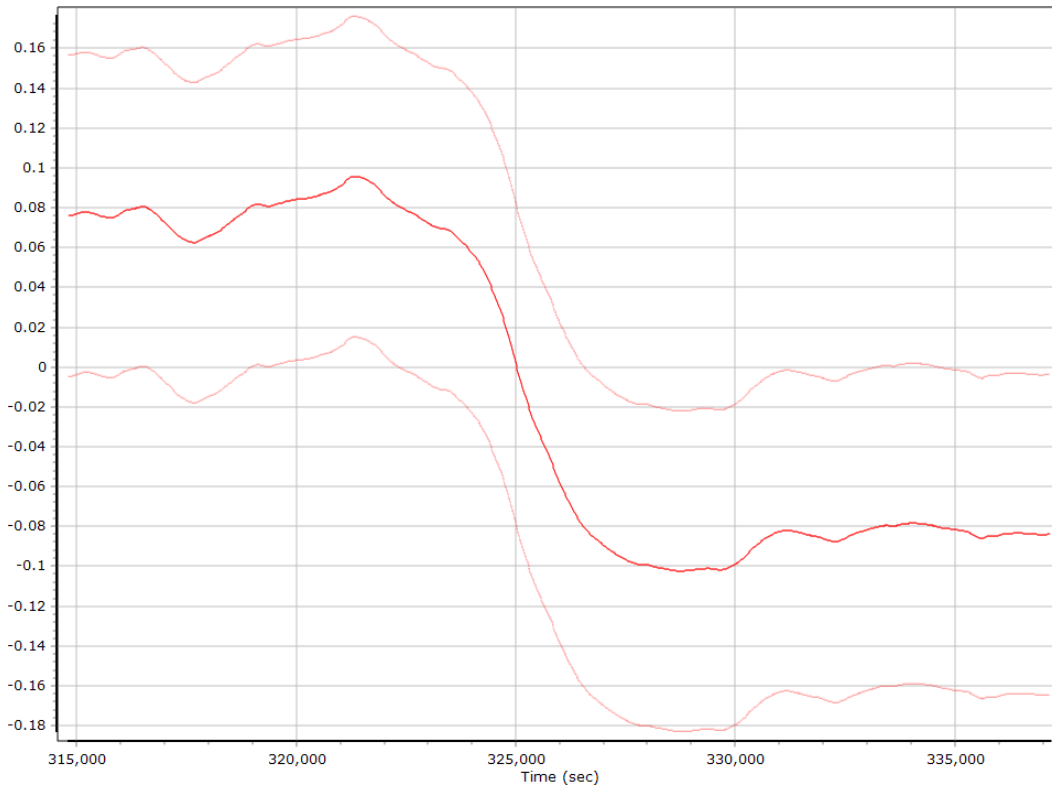
Gyro Bias (deg/h)



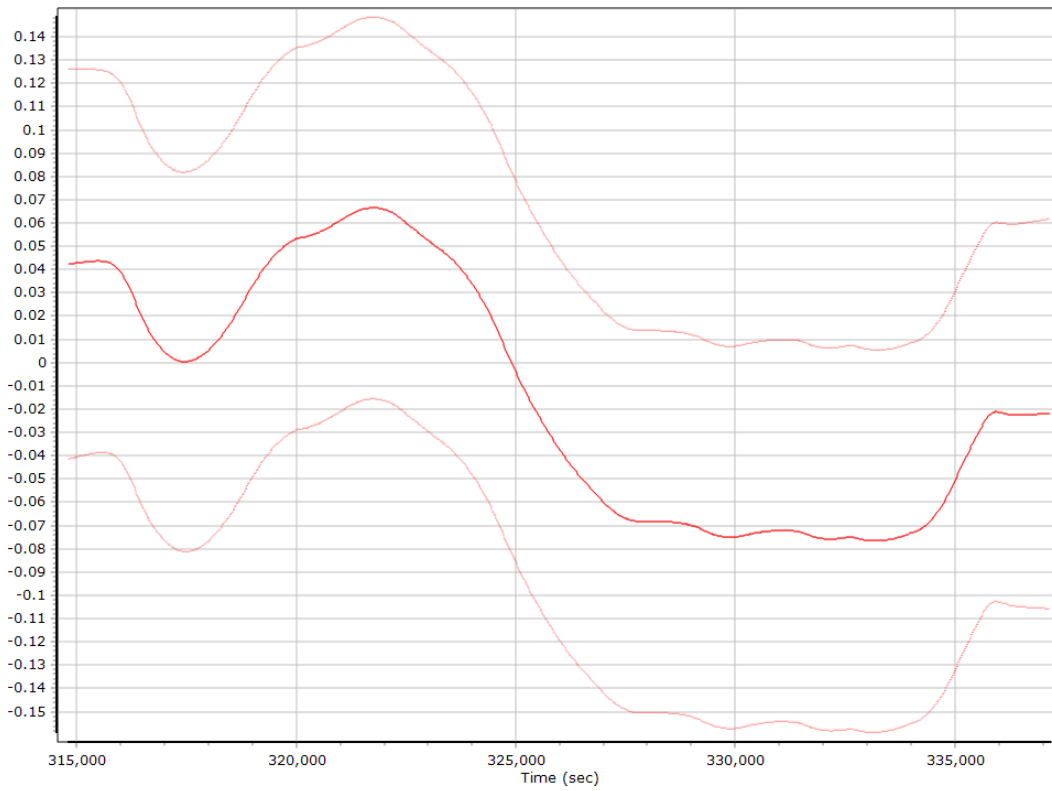
X Gyro Bias (deg/h)



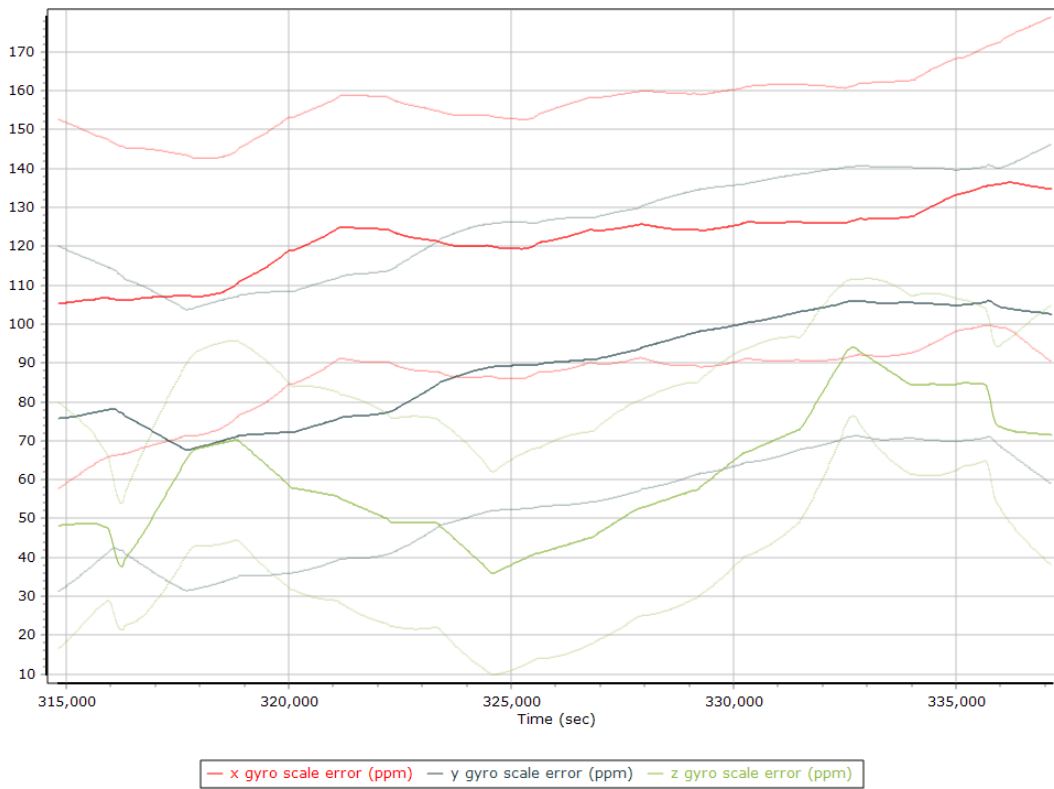
Y Gyro Bias (deg/h)



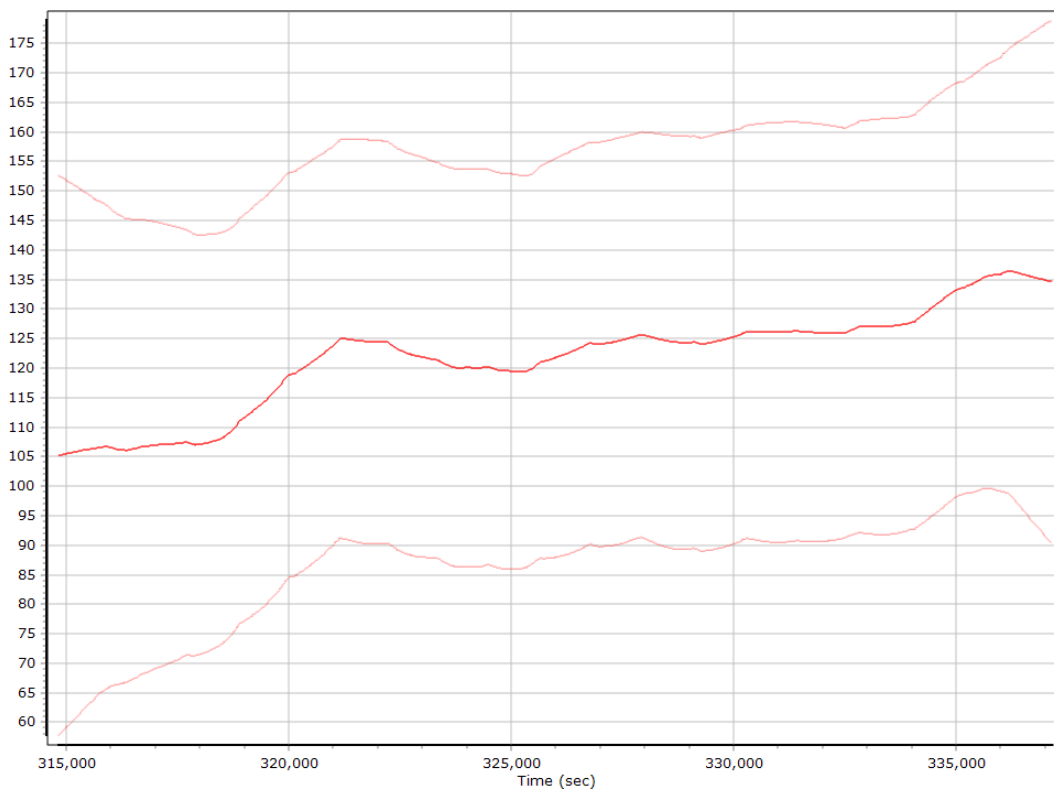
Z Gyro Bias (deg/h)



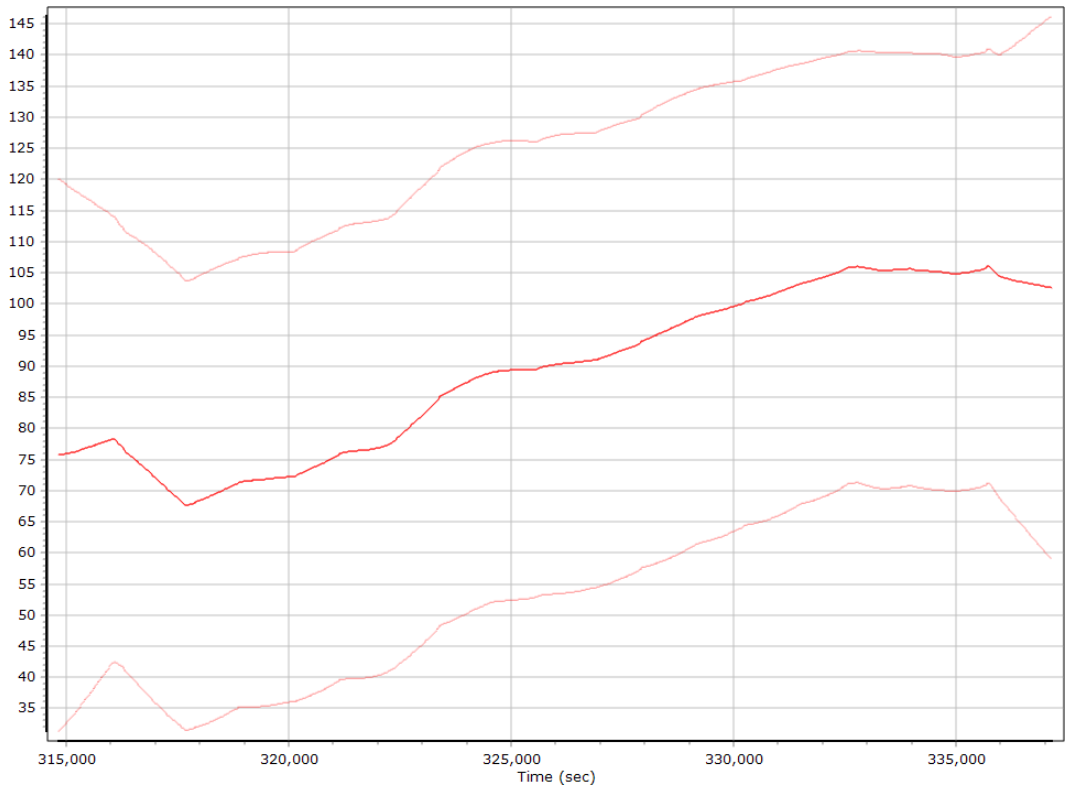
Gyro Scale Error (ppm)



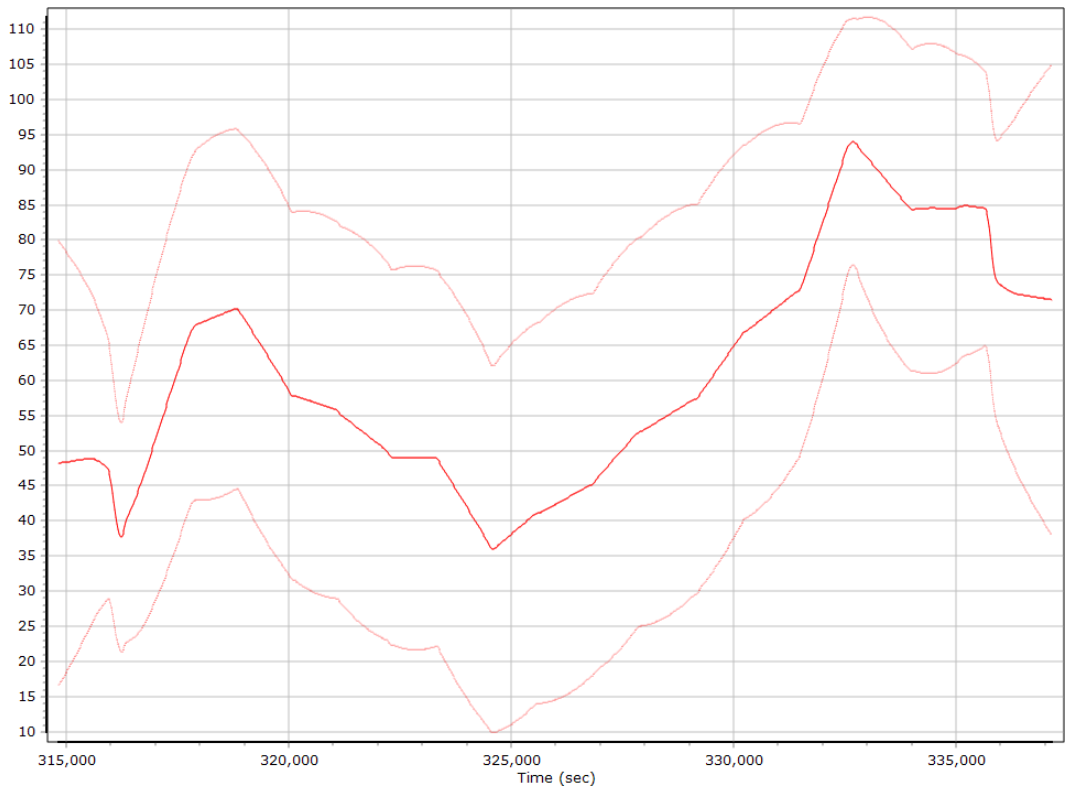
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

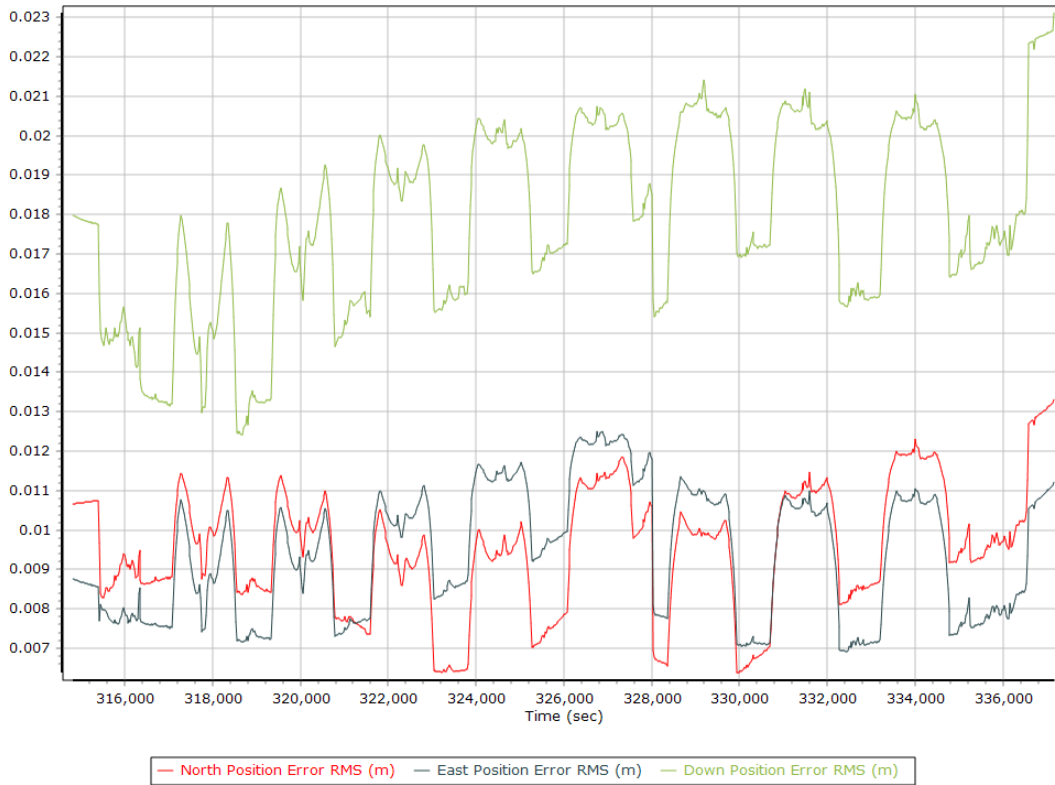


Z Gyro Scale Error (ppm)

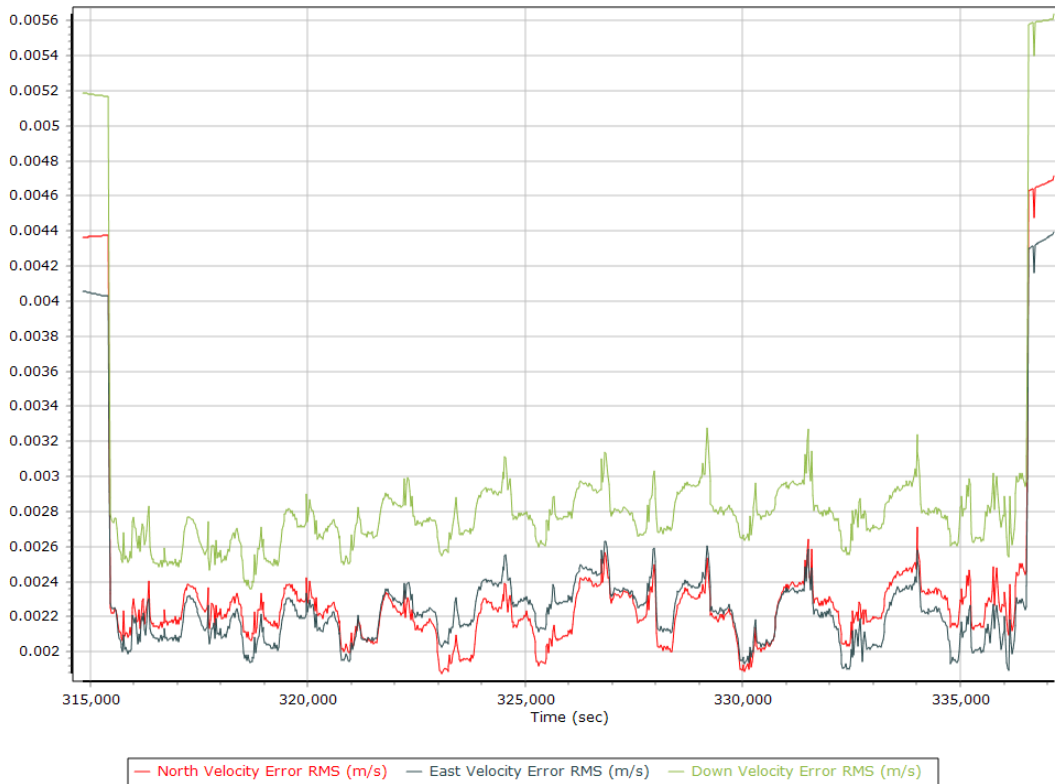


Smoothed Performance Metrics

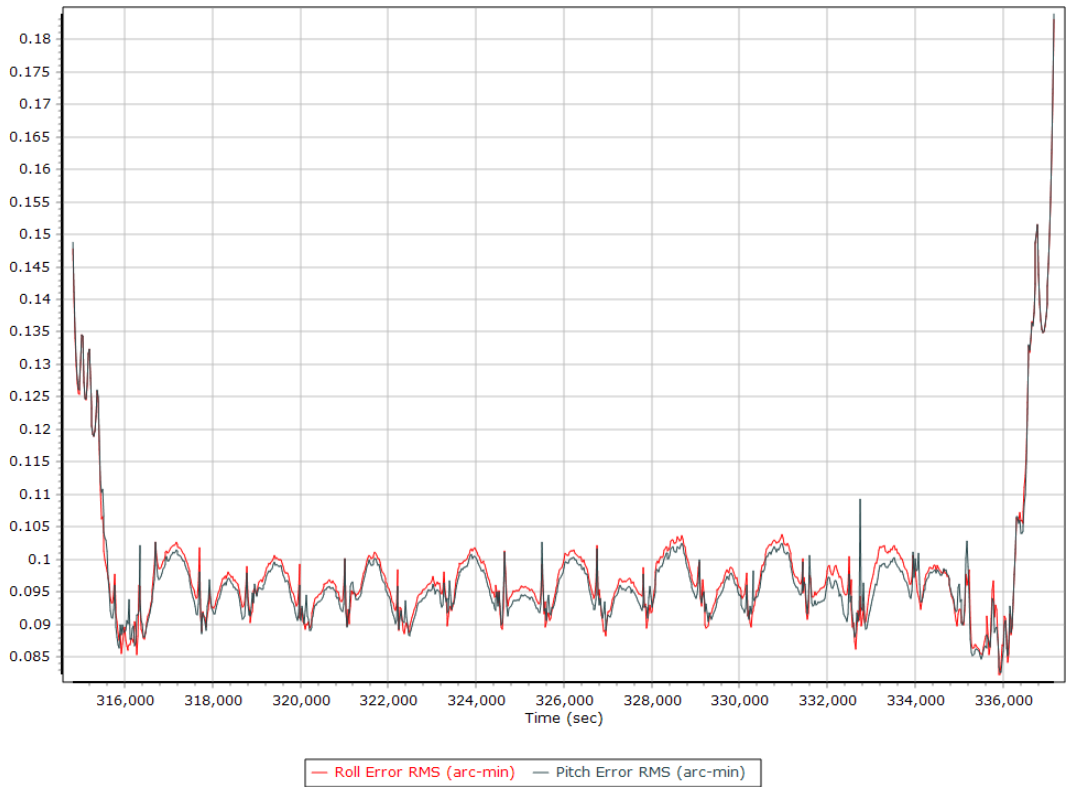
Position Error RMS (m)



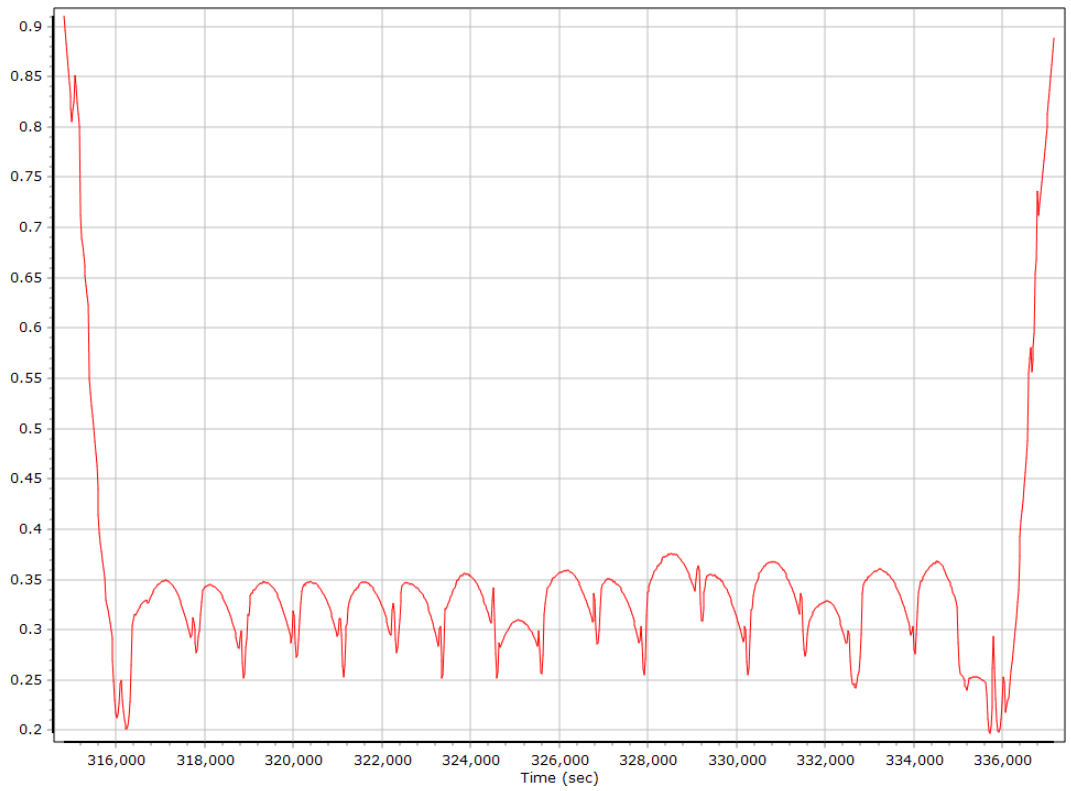
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

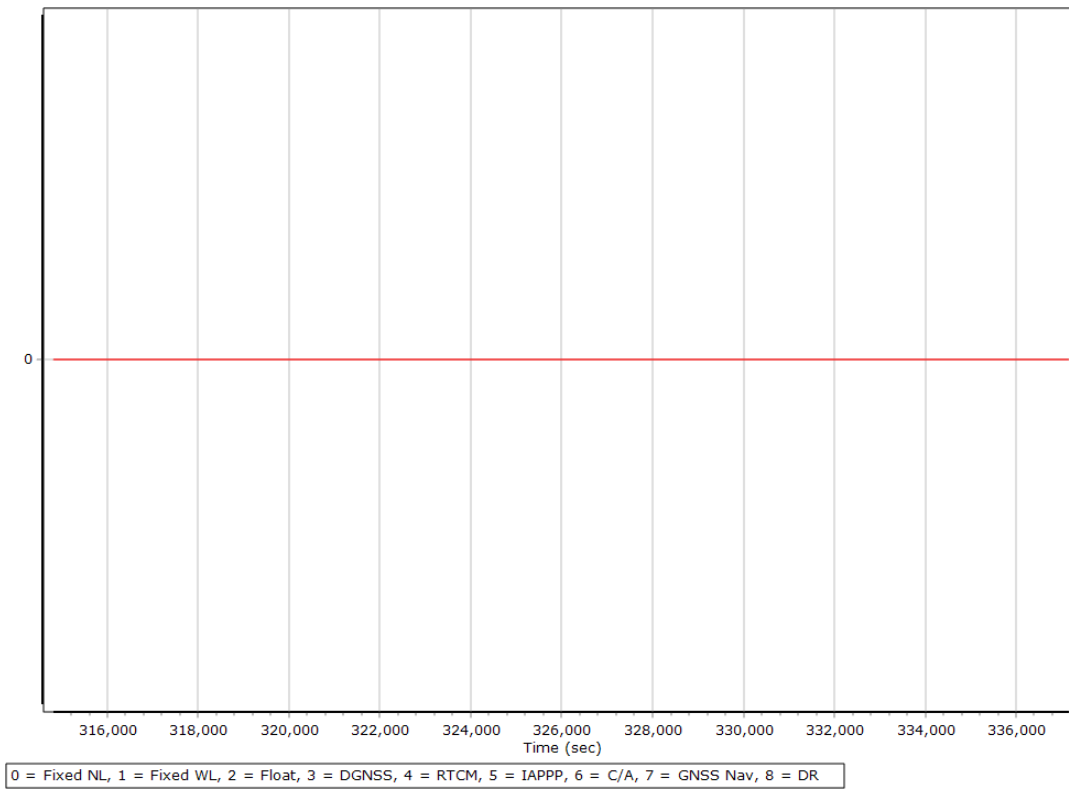


Heading Error RMS (arc-min)

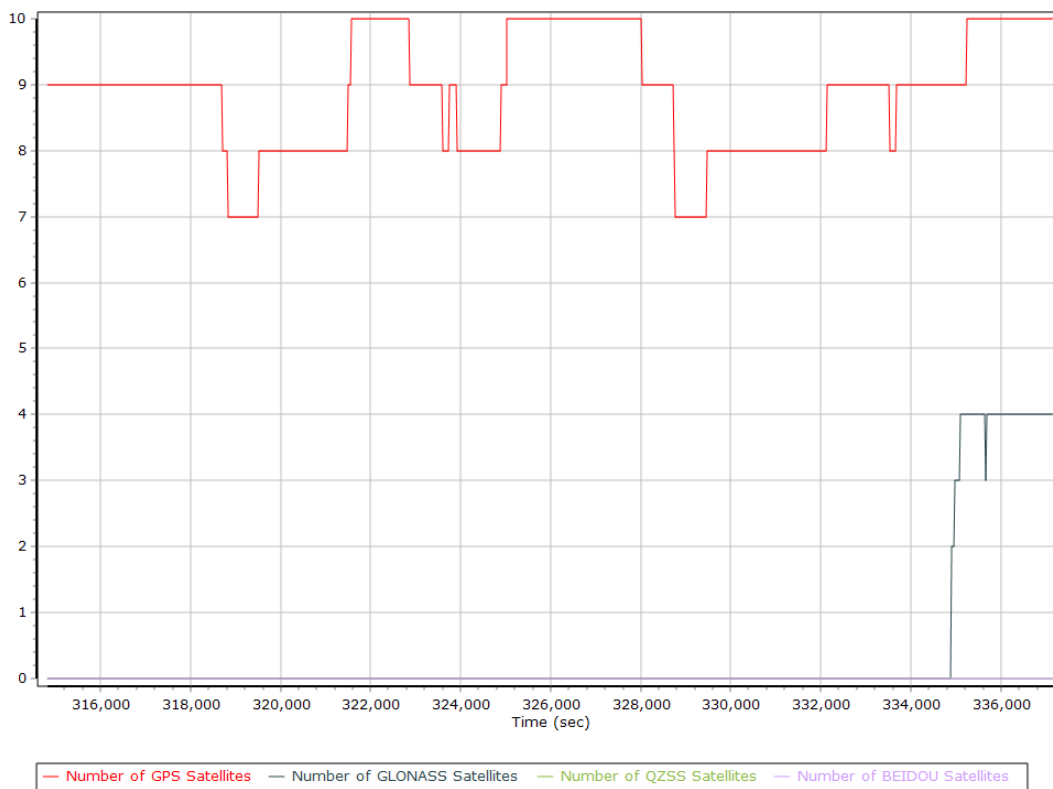


Smoothed Solution Status

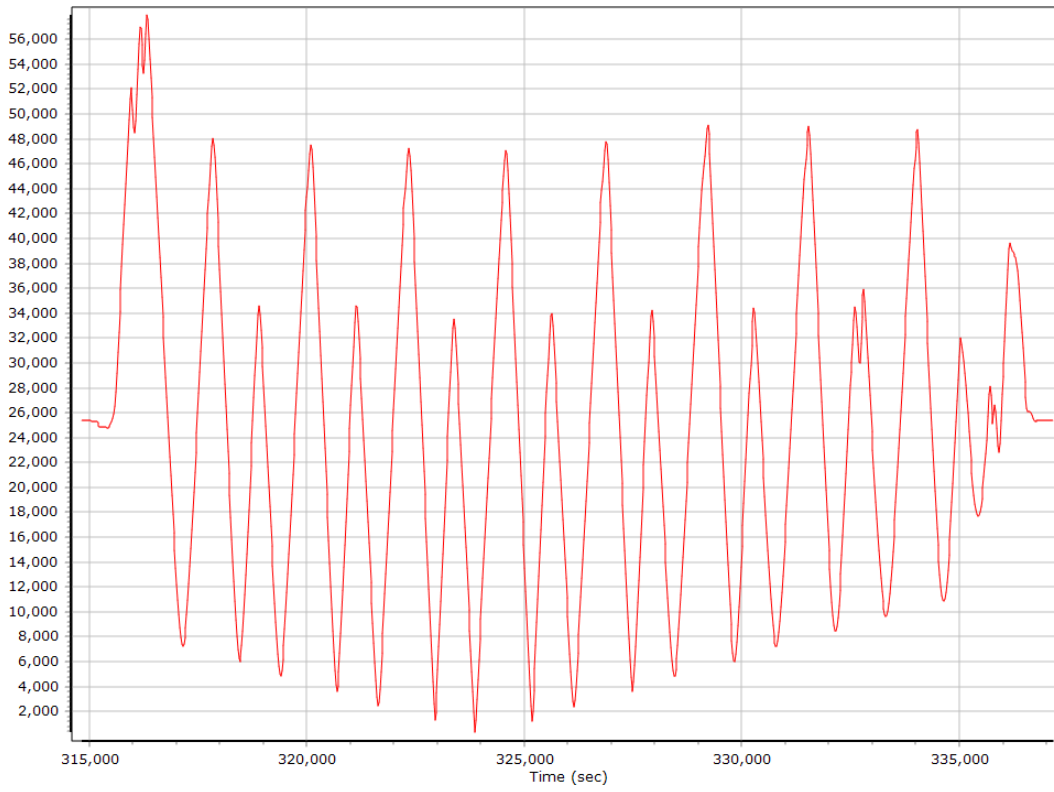
Processing Mode



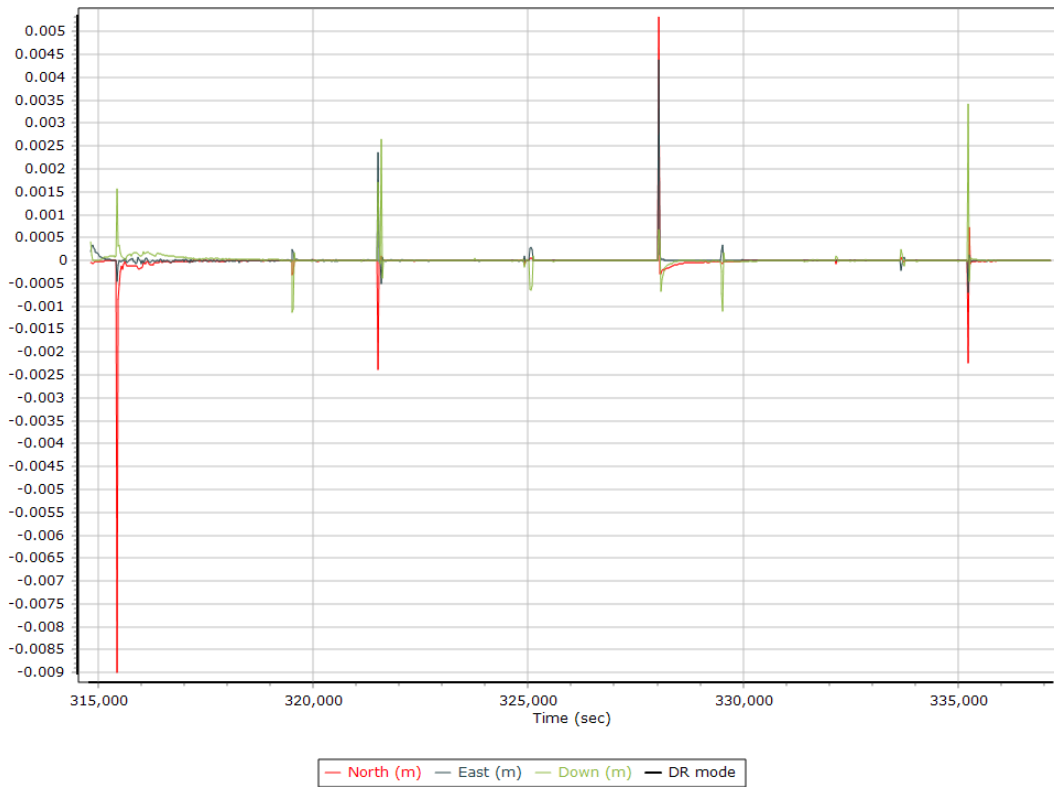
Number of Satellites



Baseline Length



SBET IAKAR Separation



Export Summary

Export file	export_6220001a.out		
Export format	Custom Smoothed BET		
Solution in use	Post-processed		
Output rate	All Records		
Reference to Output lever arm [m]	0.000	0.000	0.000
Reference mounting angles [deg]	0.000	0.000	0.000
Output units (Coordinate / Lat & Lon)	Meter	Deg Decimal	
Export start time	314765.003 (01/01/2020 15:26:05)		
Export end time	337168.002 (01/01/2020 21:39:28)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 16 (90W to 84W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2010		

EO Summary

EO file			
EO format			
Lever arm [m]	0.000	0.000	0.000
Boresight angles [arcmin]	0.000	0.000	0.000
Output rate	All Records		
Rotation sequence	x omega	y phi	z kappa
Local shift [m]	0.000	0.000	0.000
Output units (coordinate / angle / lat & lon)	Meter	Degree	Deg Decimal
Height option	Ellipsoid Height		
WGS84 height flag	False		
Scale height option	False		
Kappa cardinal rotation [deg]	0		
Solution in use	Post-processed		
EO start time	314765.003 (01/01/2020 15:26:05)		
EO end time	337168.002 (01/01/2020 21:39:28)		
Grid	Universal Transverse Mercator		
Zone	UTM North 16 (90W to 84W)		
Datum	WGS84		
Ellipsoid	WGS84		
Local Transformation	NONE		
Target Epoch	2020		

General Information

Mission Information

Project name	6220005a
Processing date	2020-01-07 02:14:13
Mission date	2020-01-05 17:36:26
Mission duration	03:24:30.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N8708
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
ALS.000	POS Data
ALS.001	POS Data
ALS.002	POS Data
ALS.003	POS Data
ALS.004	POS Data
ALS.005	POS Data
ALS.006	POS Data
ALS.007	POS Data
ALS.008	POS Data
ALS.009	POS Data
ALS.010	POS Data
ALS.011	POS Data
ALS.012	POS Data
ALS.013	POS Data
ALS.014	POS Data
ALS.015	POS Data
ALS.016	POS Data
ALS.017	POS Data
ALS.018	POS Data
ALS.019	POS Data
ALS.020	POS Data
ALS.021	POS Data
ALS.022	POS Data
ALS.023	POS Data
ALS.024	POS Data
ALS.025	POS Data
ALS.026	POS Data
ALS.027	POS Data
ALS.028	POS Data
ALS.029	POS Data
ALS.030	POS Data
ALS.031	POS Data
ALS.032	POS Data
ALS.033	POS Data
ALS.034	POS Data
ALS.035	POS Data
ALS.036	POS Data
ALS.037	POS Data
ALS.038	POS Data
ALS.039	POS Data
ALS.040	POS Data
ALS.041	POS Data
ALS.042	POS Data
ALS.043	POS Data
ALS.044	POS Data
ALS.045	POS Data
ALS.046	POS Data

Input Files

File Name	File type
Ephm0050.20g	GLONASS Broadcast Ephemeris
Ephm0050.20n	GPS Broadcast Ephemeris
Ephm0050.20g	GLONASS Broadcast Ephemeris
Ephm0050.20n	GPS Broadcast Ephemeris
flcb0050.20o	GNSS SingleBase
fljl0050.20o	GNSS SingleBase
fljo0050.20o	GNSS SingleBase
pnma0050.20o	GNSS SingleBase
prry0050.20o	GNSS SingleBase

File Name	File type
sned0050.20o	GNSS SingleBase
talh0050.20o	GNSS SingleBase
gatv0050.20o	GNSS SingleBase
igu20866_18.sp3	GPS Precise Ephemeris
igu20870_18.sp3	GPS Precise Ephemeris
igu20871_00.sp3	GPS Precise Ephemeris
flmd0050.20o	GNSS SingleBase

Output Files

Filename	File type
sbet_6220005a.out	SBET Trajectory File

Rover Data Summary

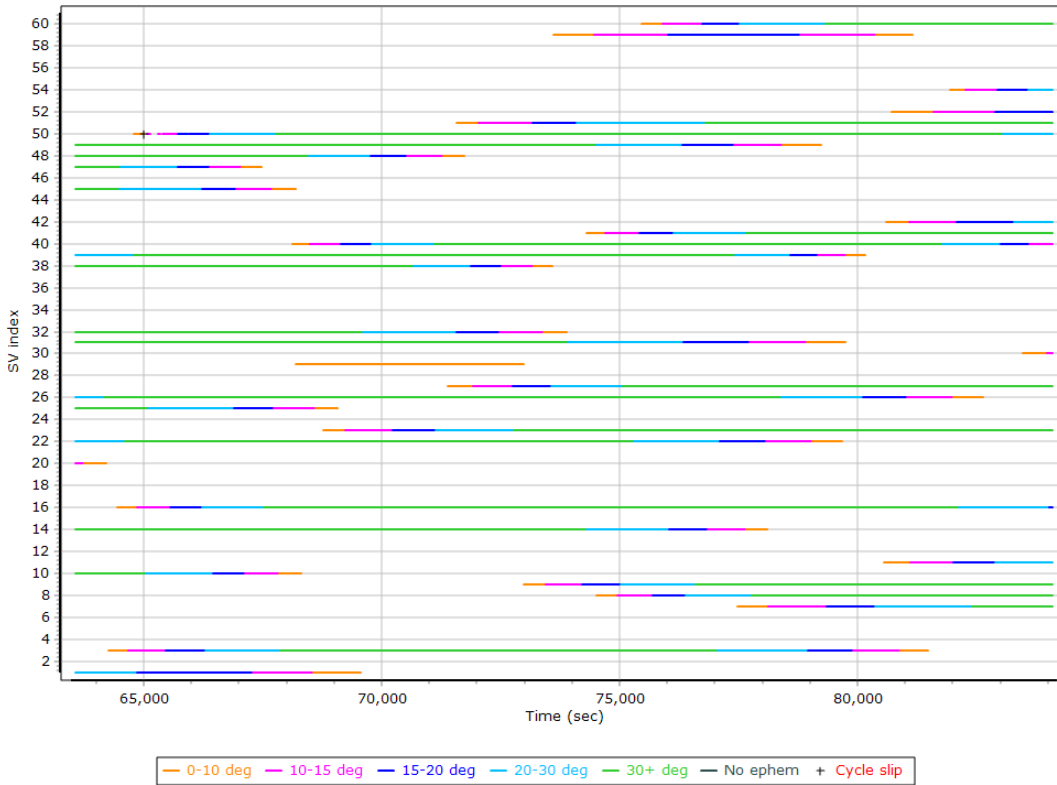
First raw data file	ALS.000		
Last raw data file	ALS.046		
Start GPS week	2087		
Start time	63367.625 (1/5/2020 5:36:07 PM)		
End time	84102.595 (1/5/2020 11:21:42 PM)		
Start of fine alignment	63500.019 (1/5/2020 5:38:20 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.046	-0.192	-1.285
Gimbal 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

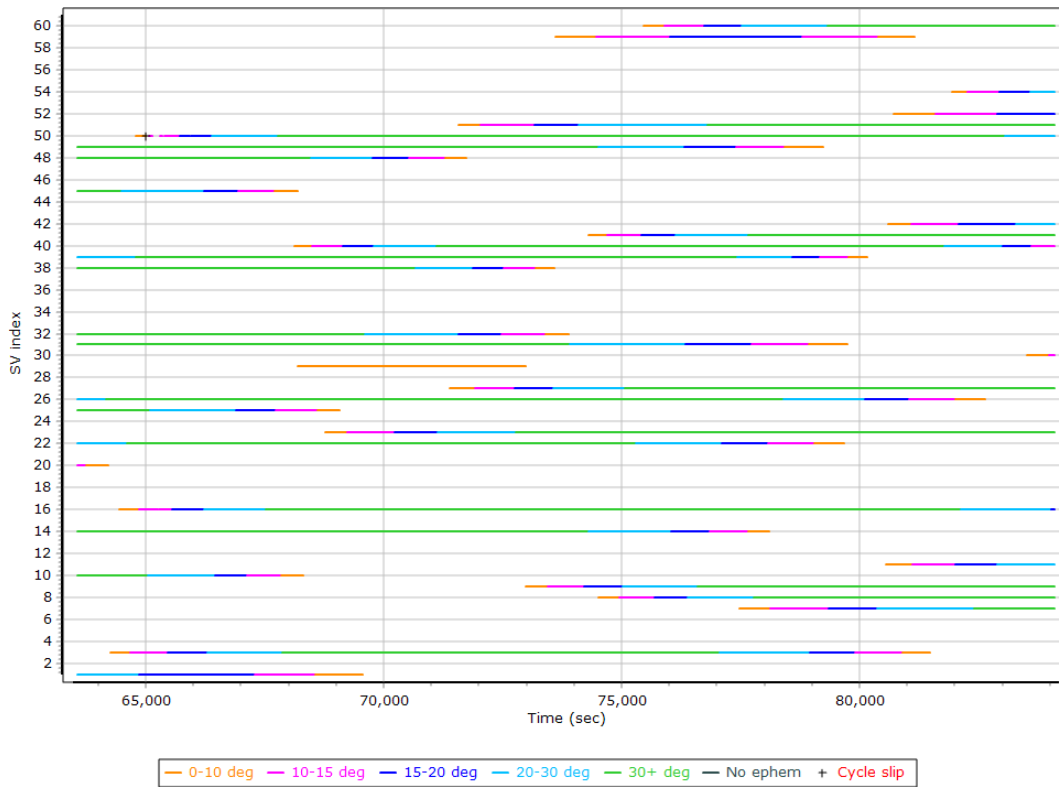
Raw IMU Import QC Summary

IMU data input file	imu_6220005a.dat
IMU data check log file	imudt_6220005a.log
IMU Records Processed	4147956
Termination Status	Normal
IMU Anomalies	0

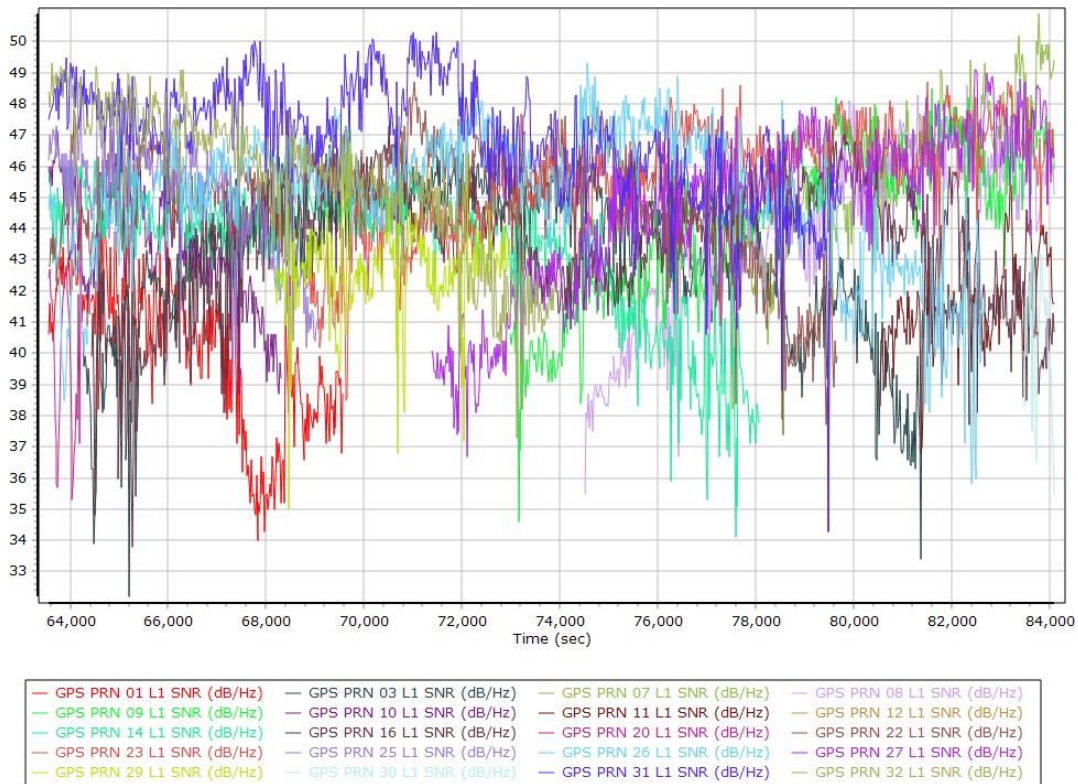
L1 Satellite Lock/Elevation



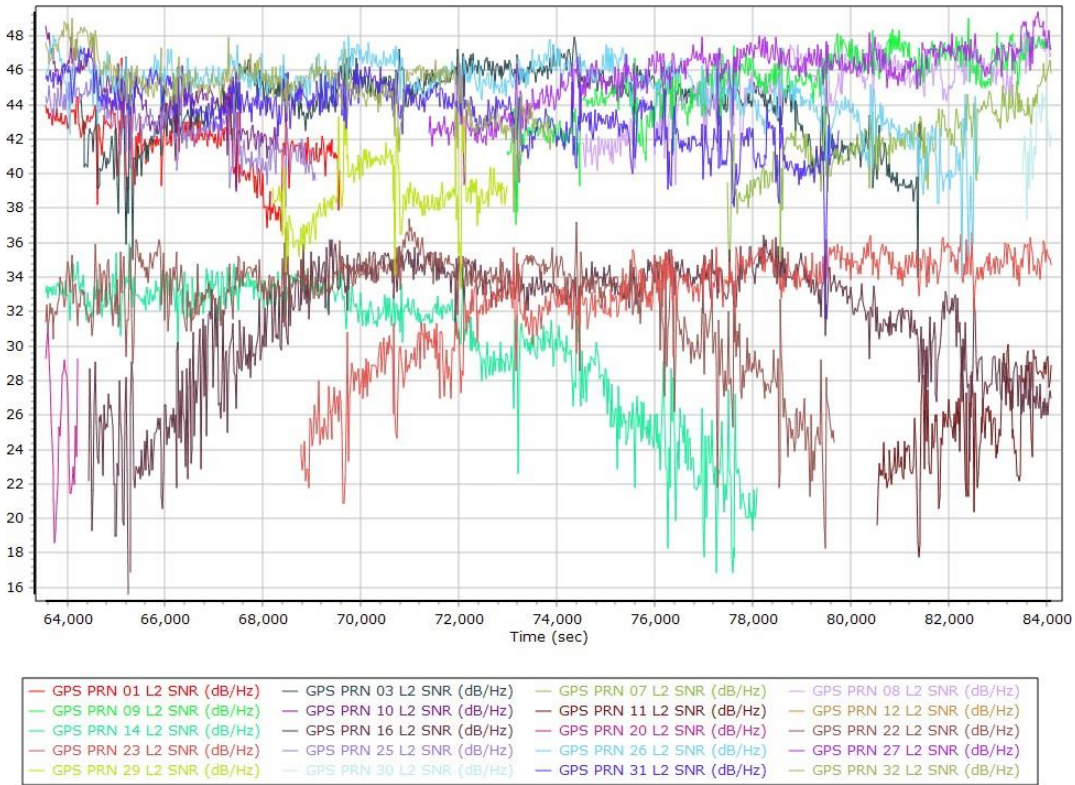
L2 Satellite Lock/Elevation



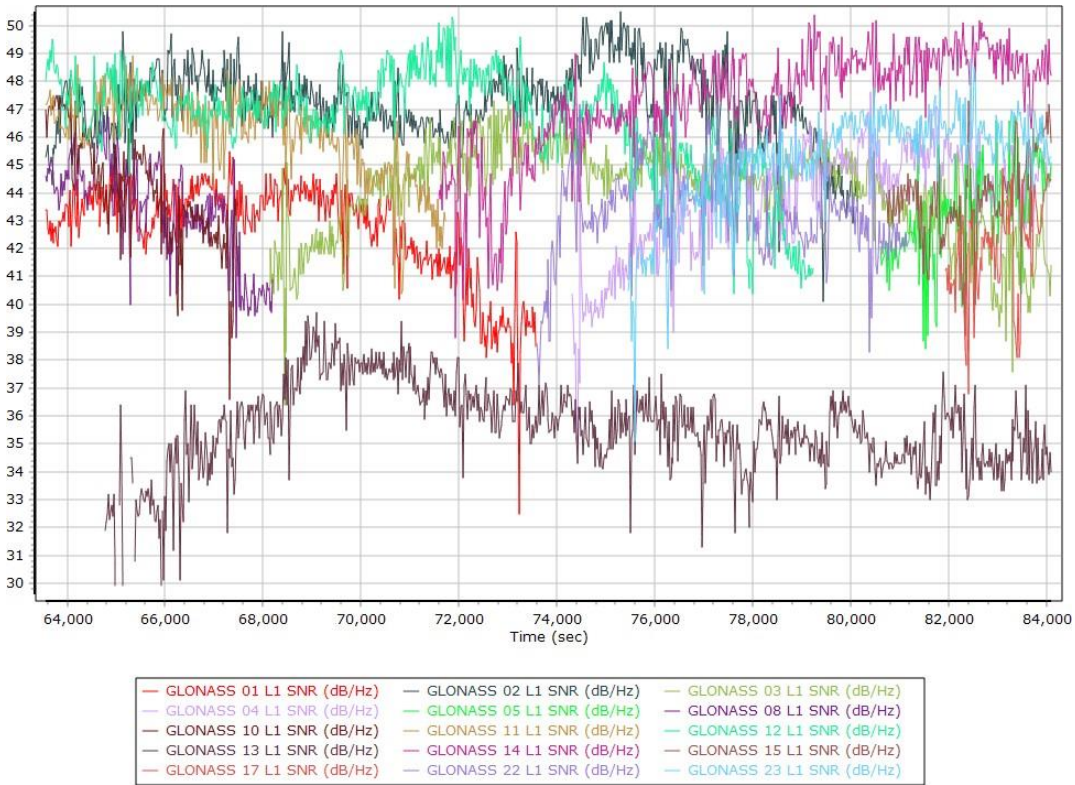
GPS L1 SNR



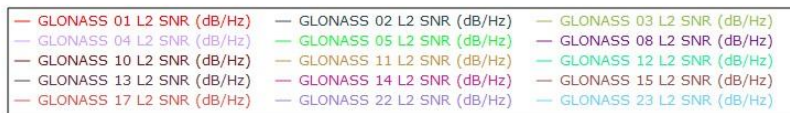
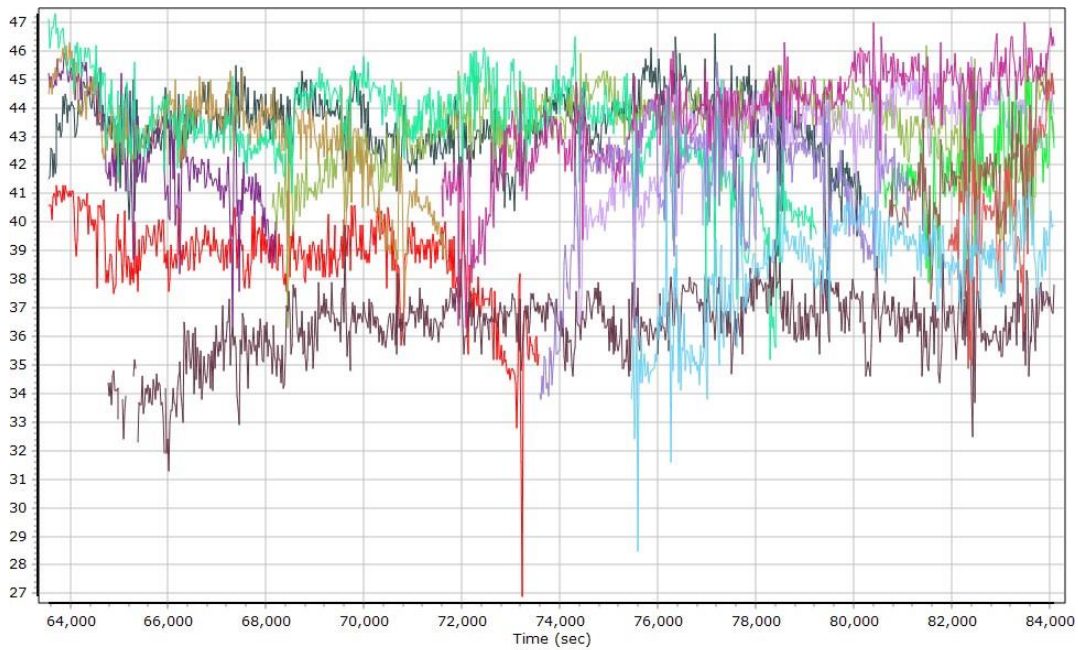
GPS L2 SNR



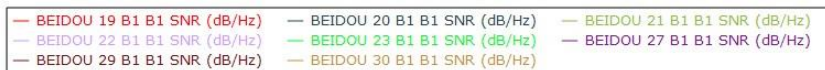
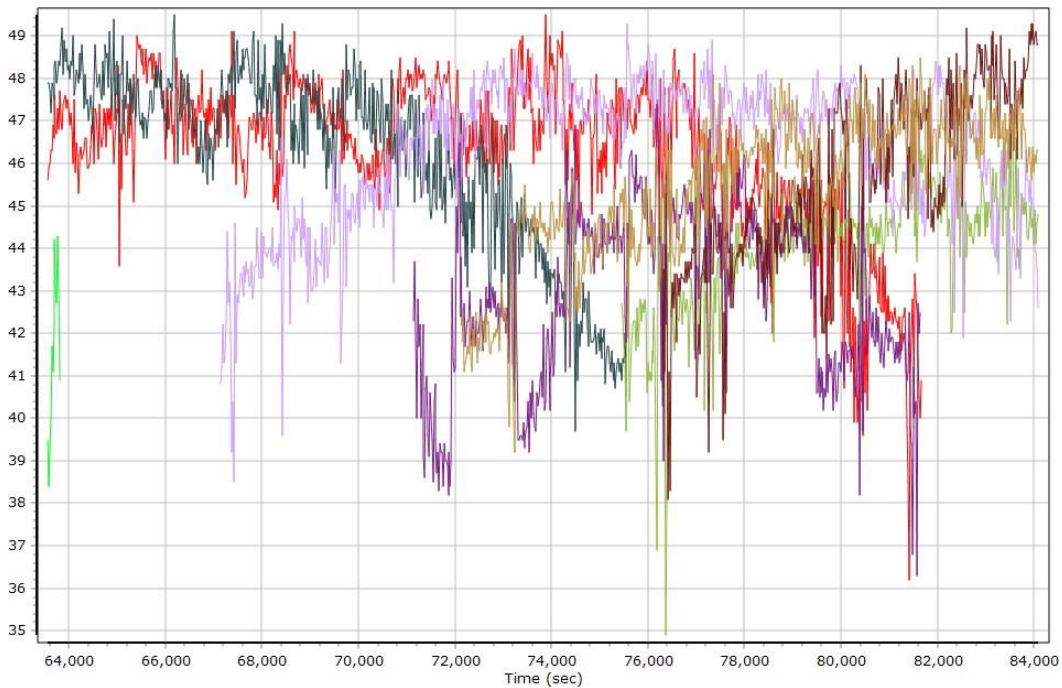
GLONASS L1 SNR



GLONASS L2 SNR

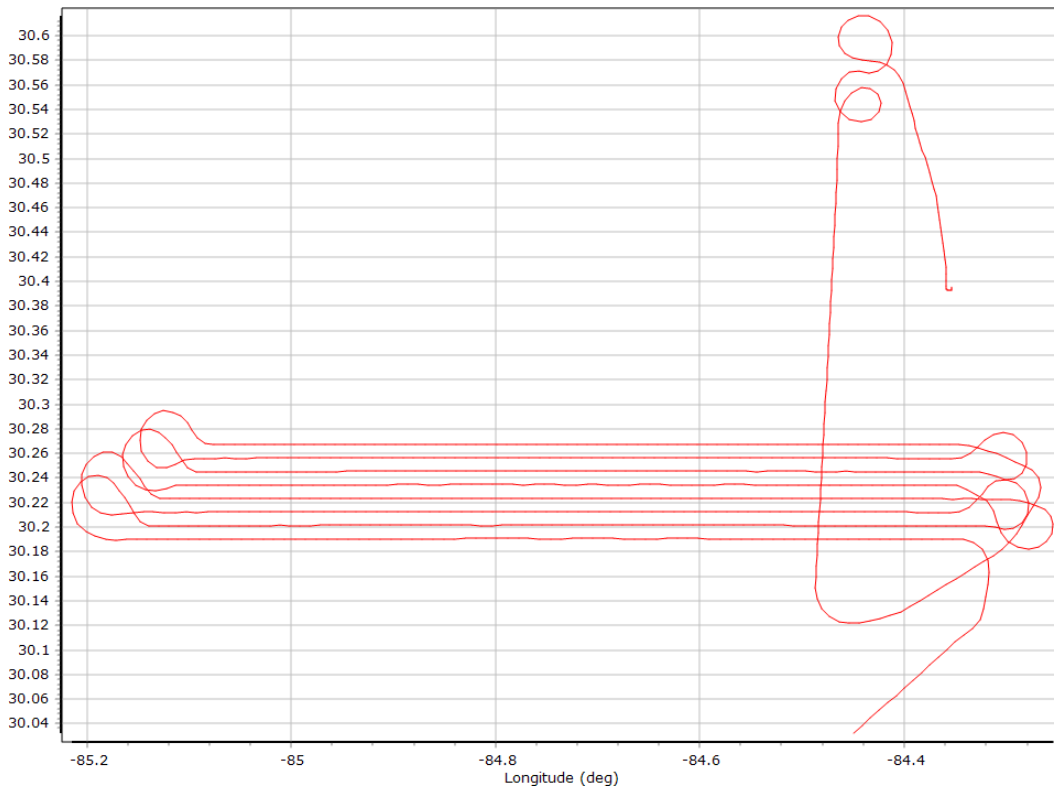


BEIDOU SNR

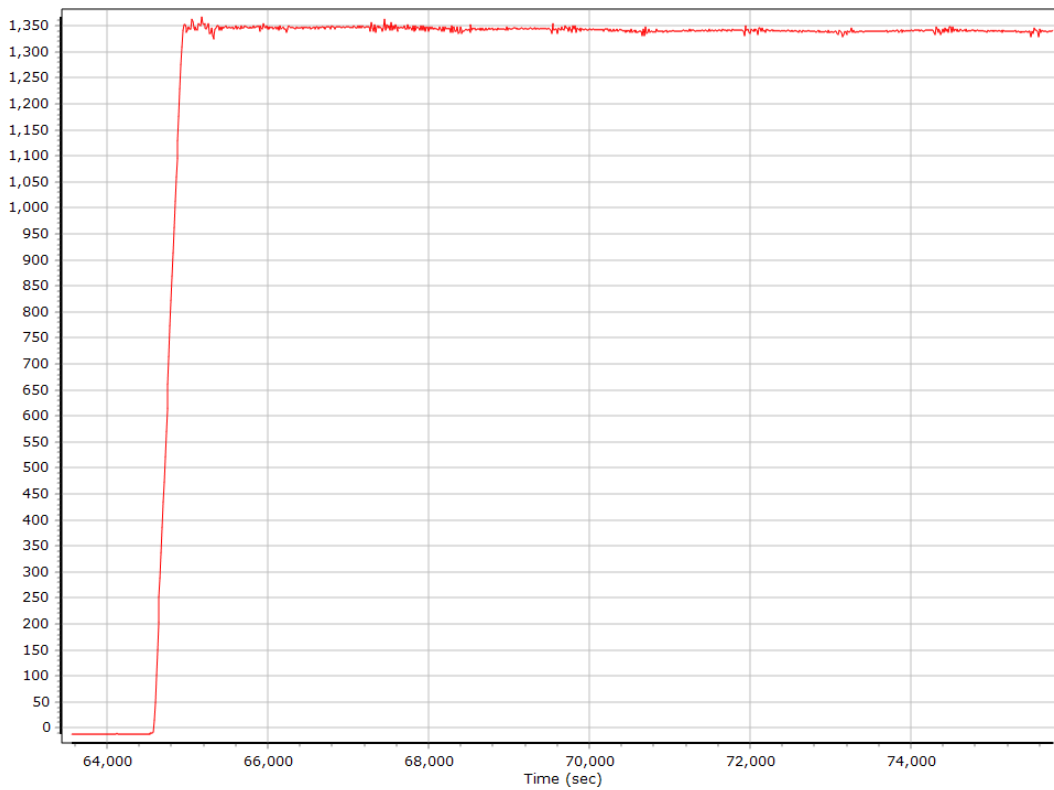


Trajectory Information

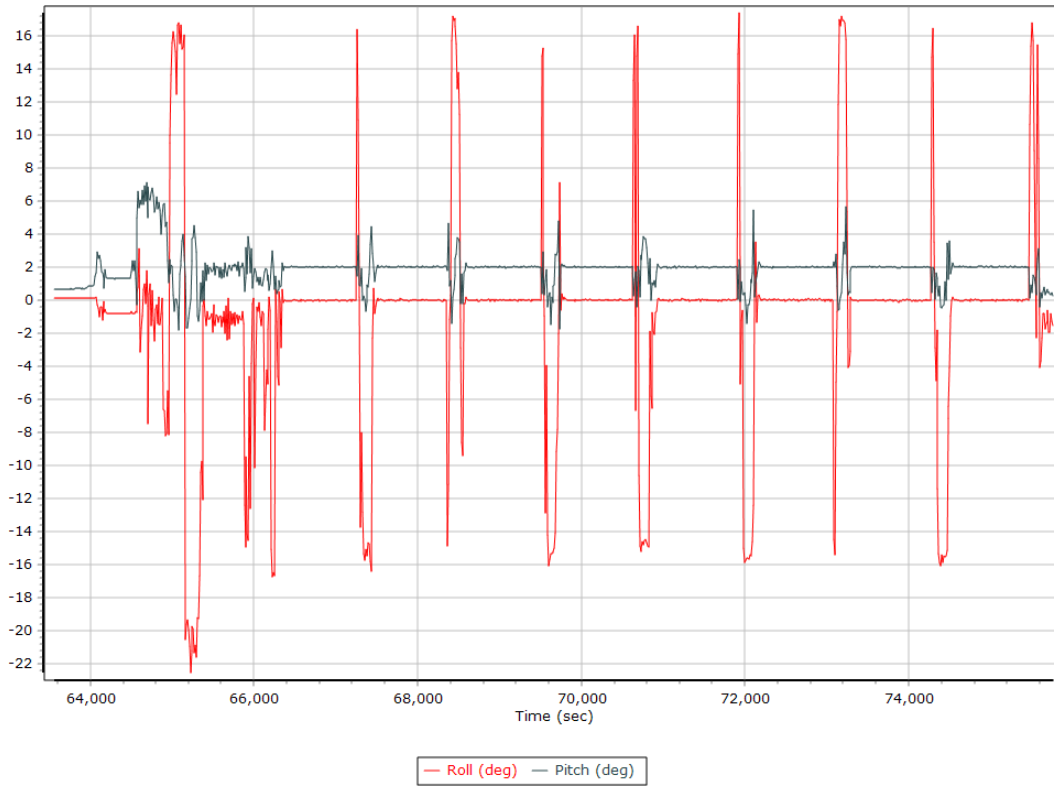
Top View



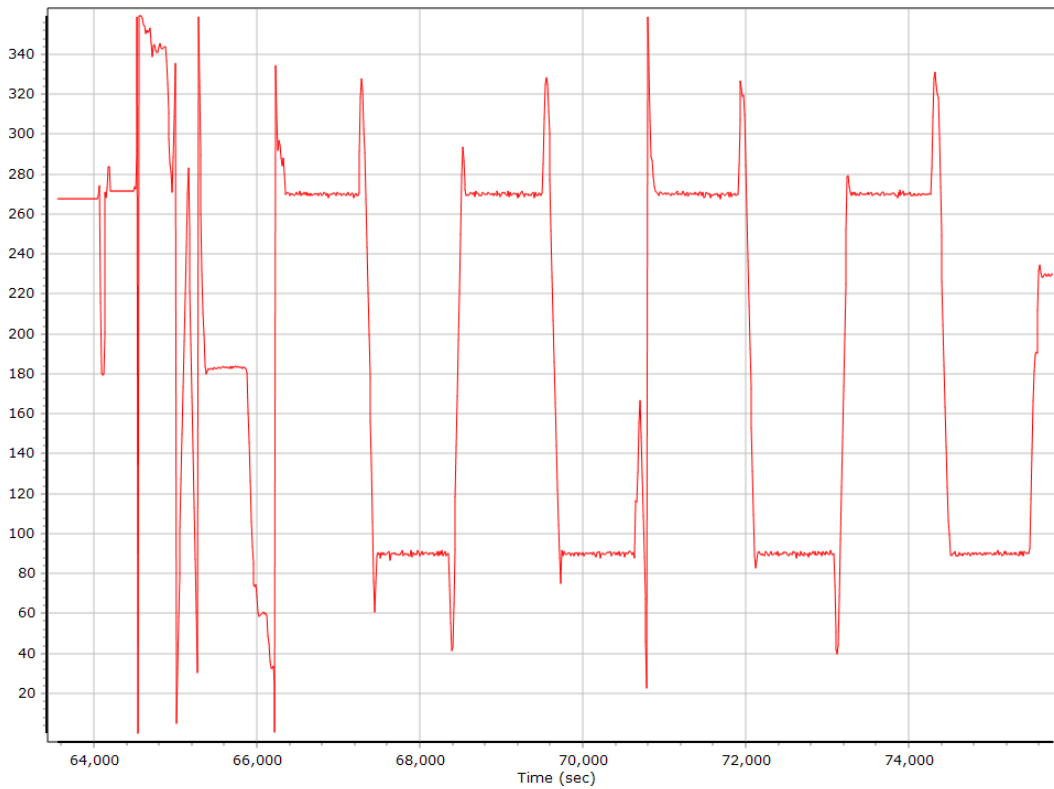
Altitude



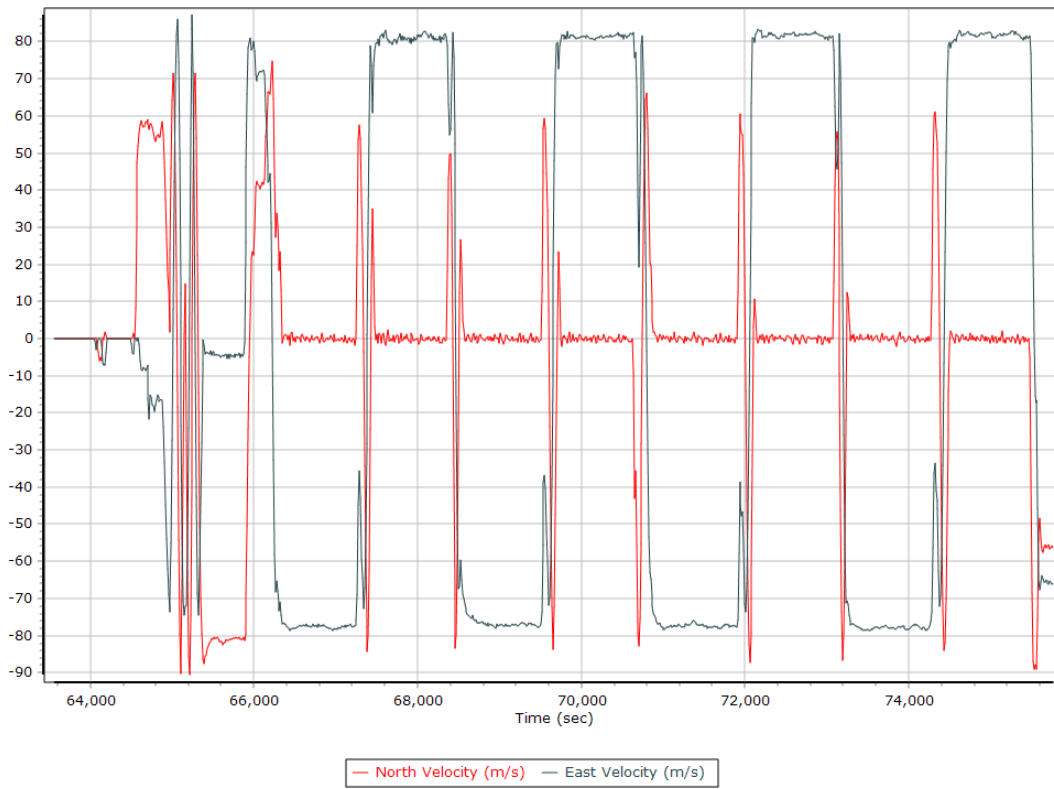
Roll/Pitch



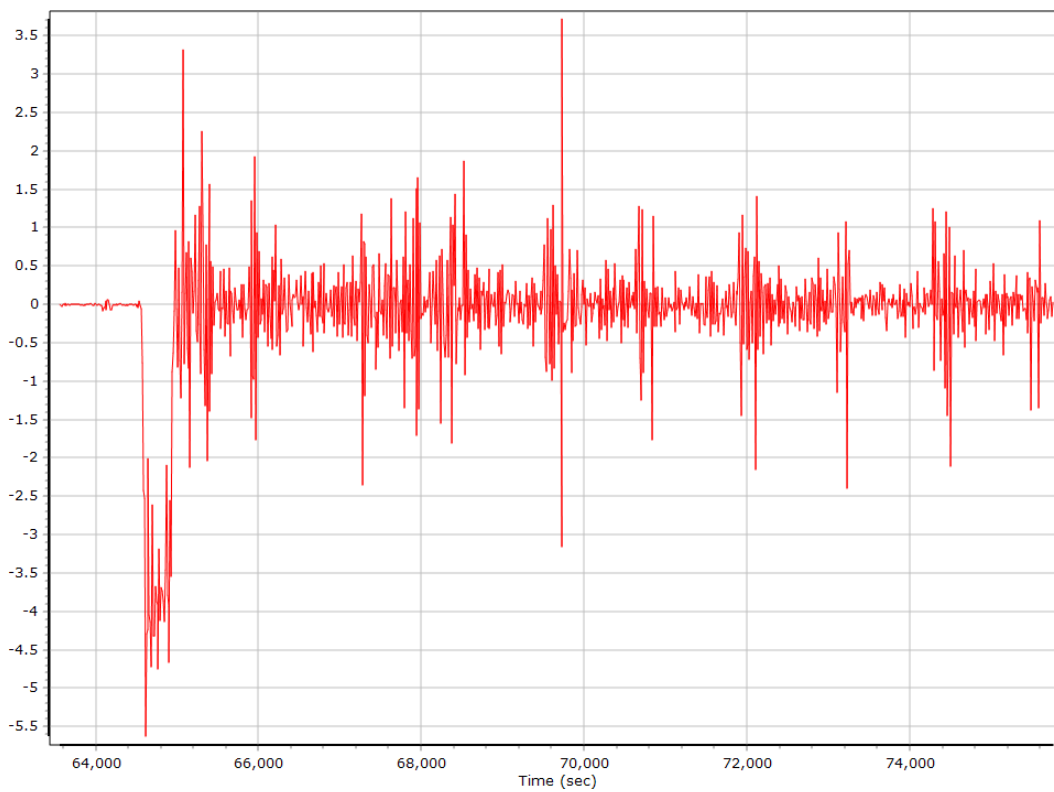
Heading



North/East Velocity



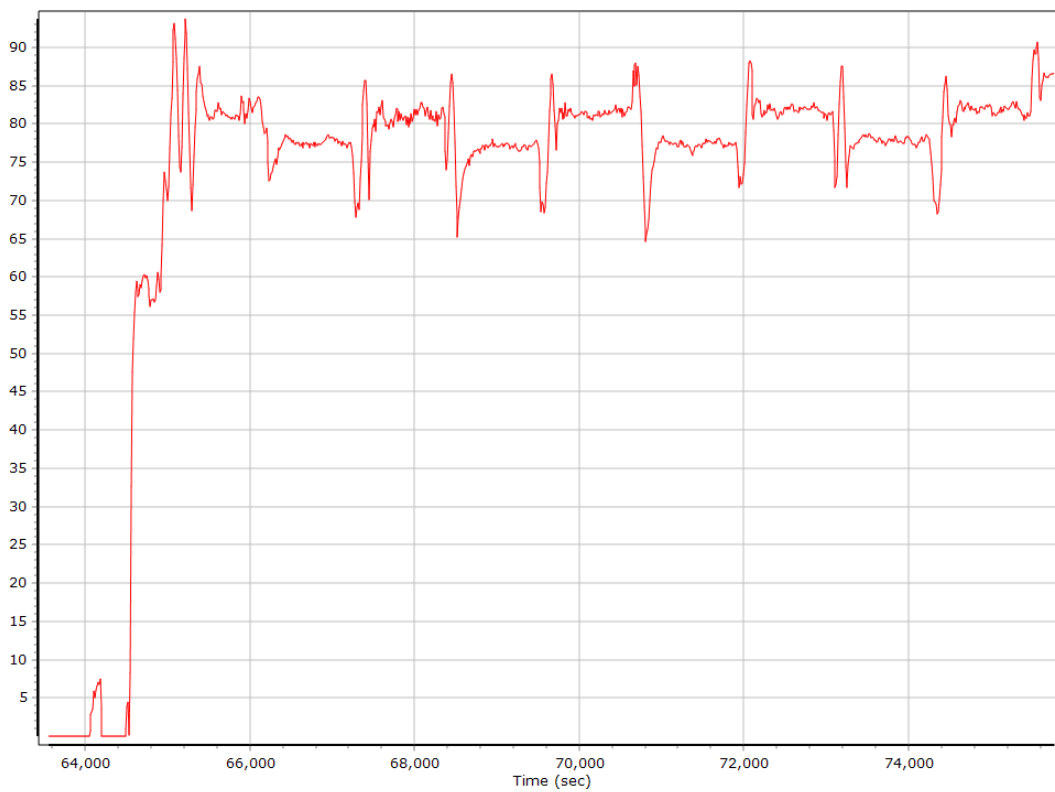
Down Velocity



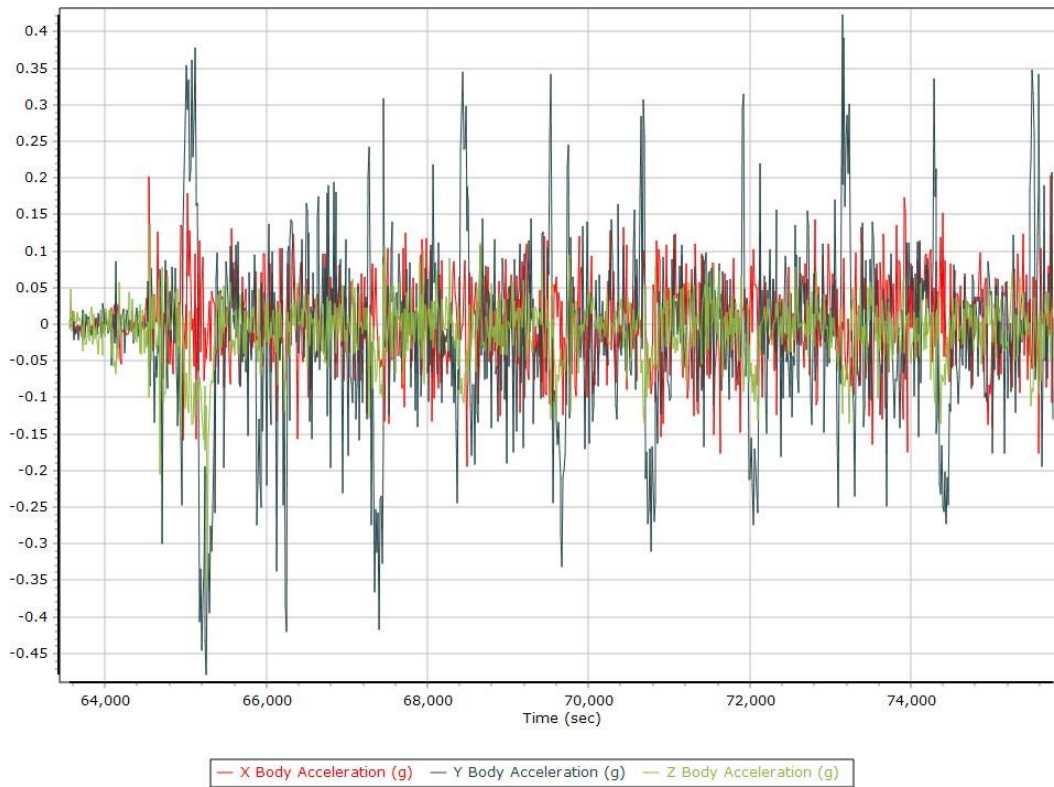
Total Speed



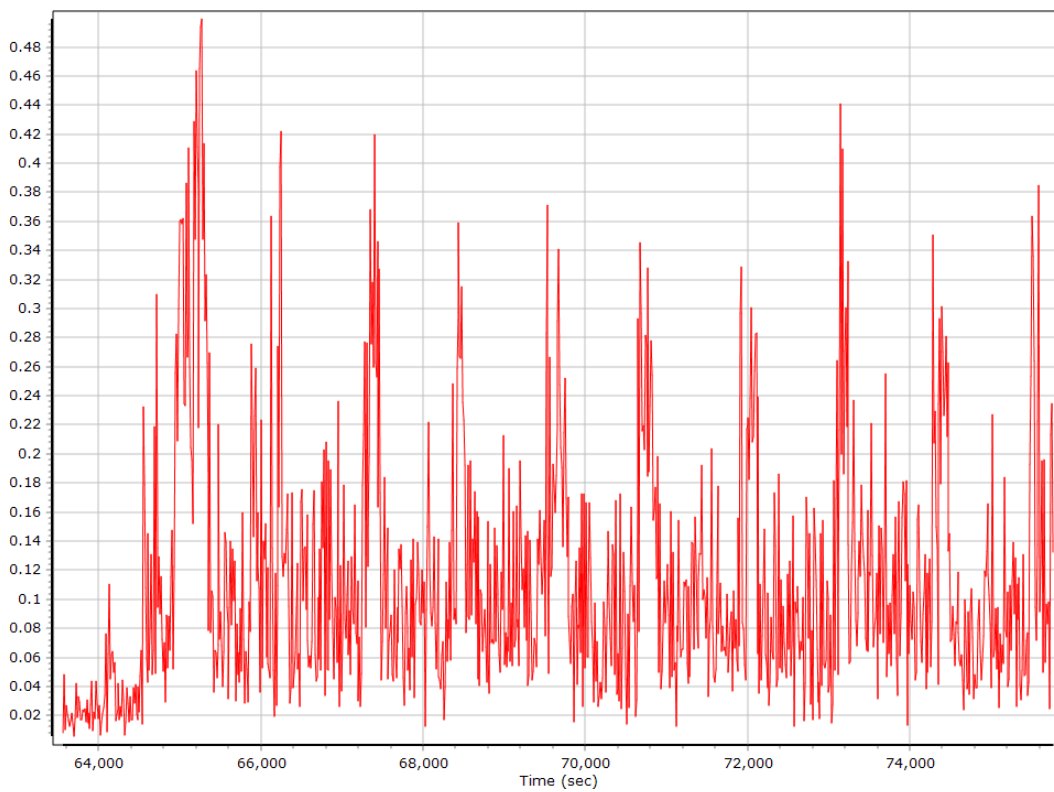
Ground Speed



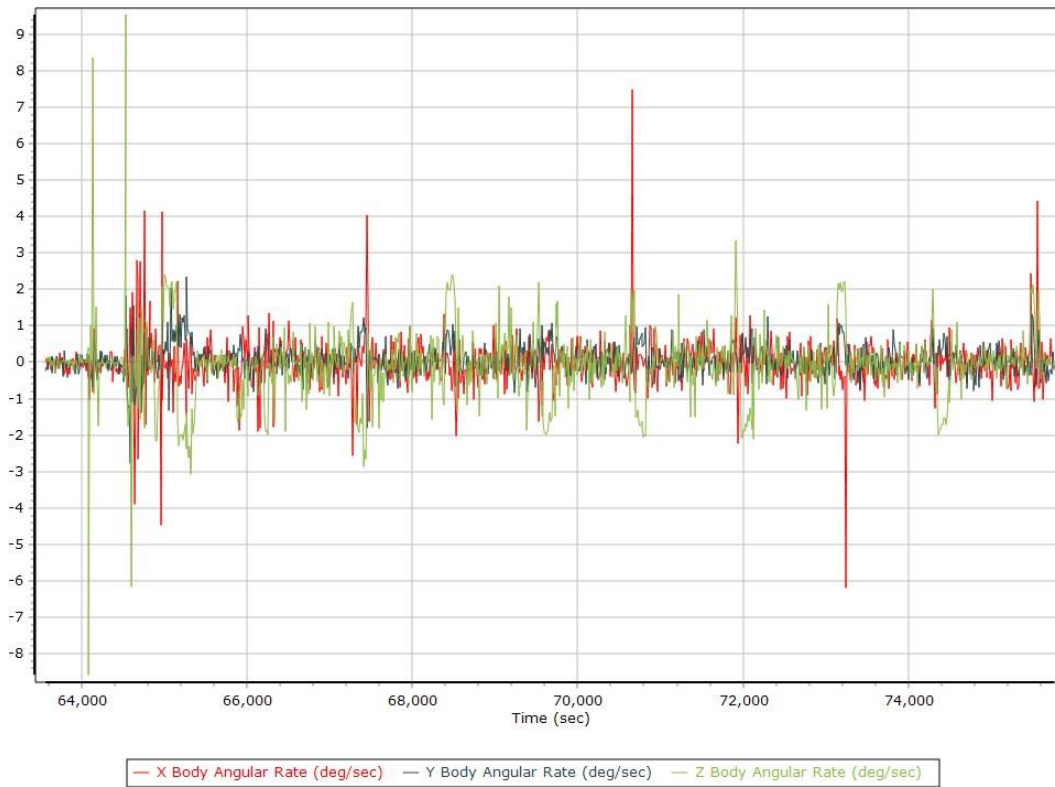
Body Acceleration



Total Body Acceleration



Body Angular Rate



SmartBase Processing Summary

Smart Select Options

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

Basestation Selection

Date	ID	Dist	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	

SmartBase Quality Check

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	0.38	72.79	
Number of GPS SV	7	10	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	8	16	14
PDOP	1.22	2.23	1.54
QC Solution Gaps	1.00	2.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	20705.00	0.00	33.00
Percentage	99.84	0.00	0.16

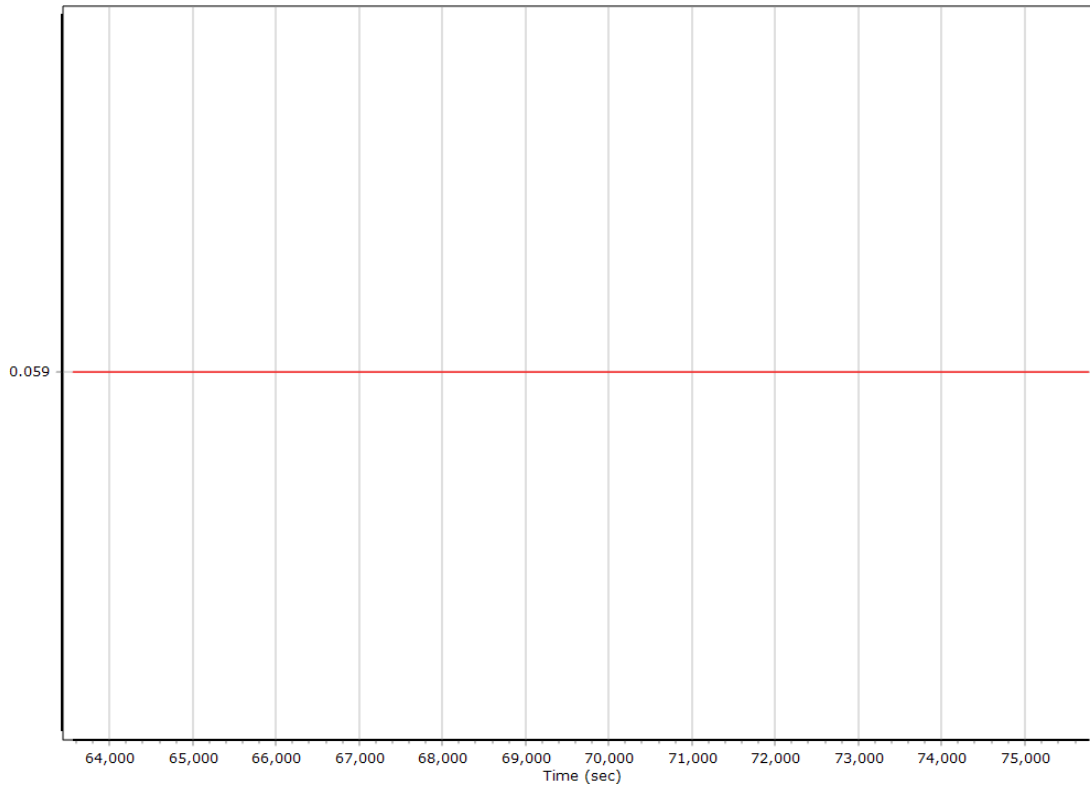
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	63500.000 (1/5/2020 5:38:20 PM)		
Processing end time	75770.000 (1/5/2020 9:02:50 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.059	-0.191	-1.282
Gimbal to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

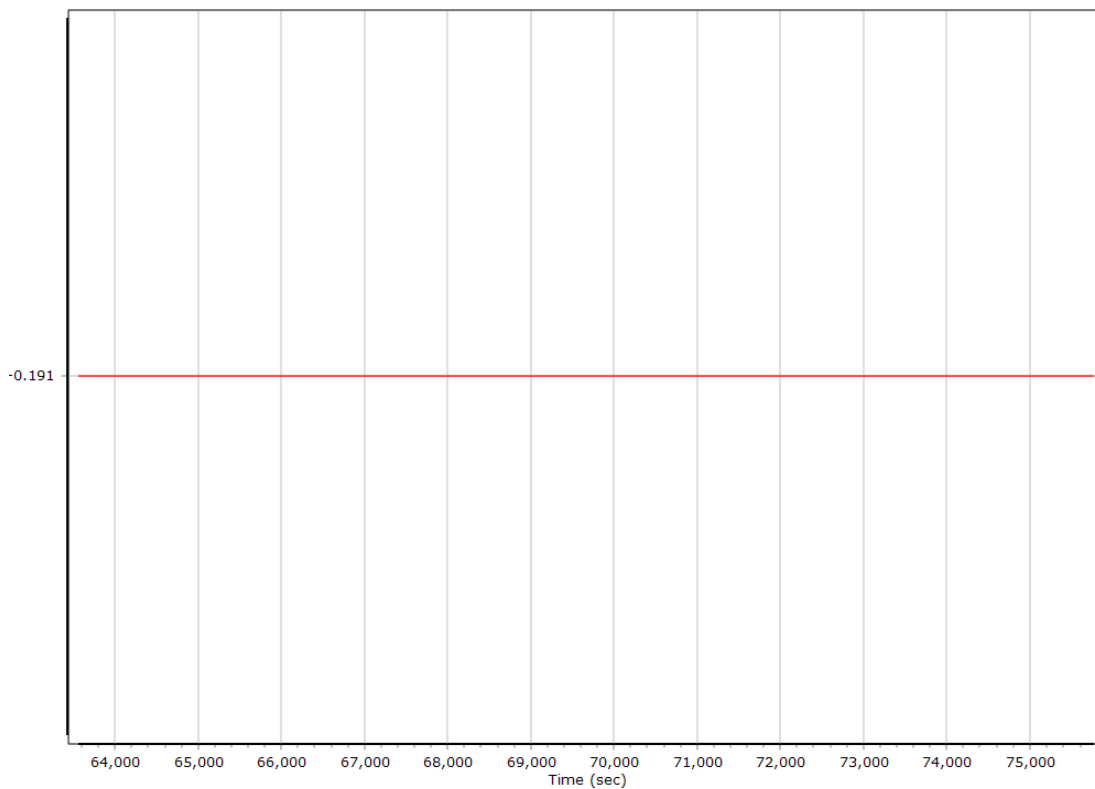
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

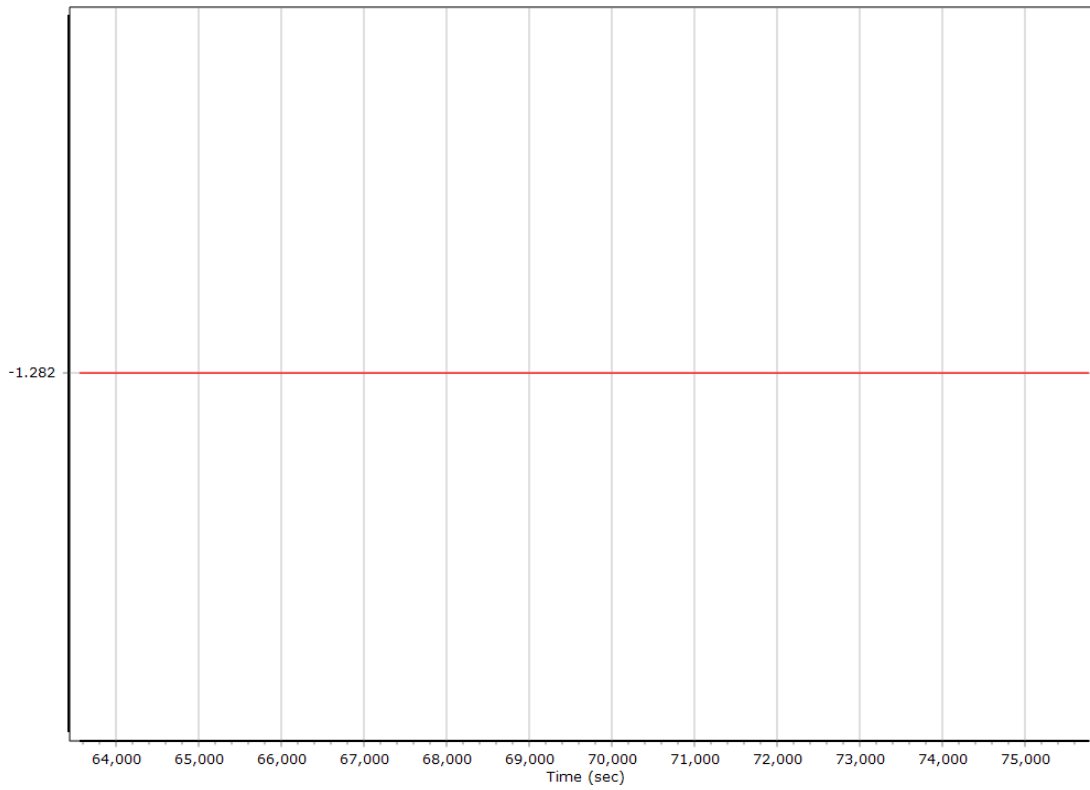
X Reference-Primary GNSS Lever Arm (m)



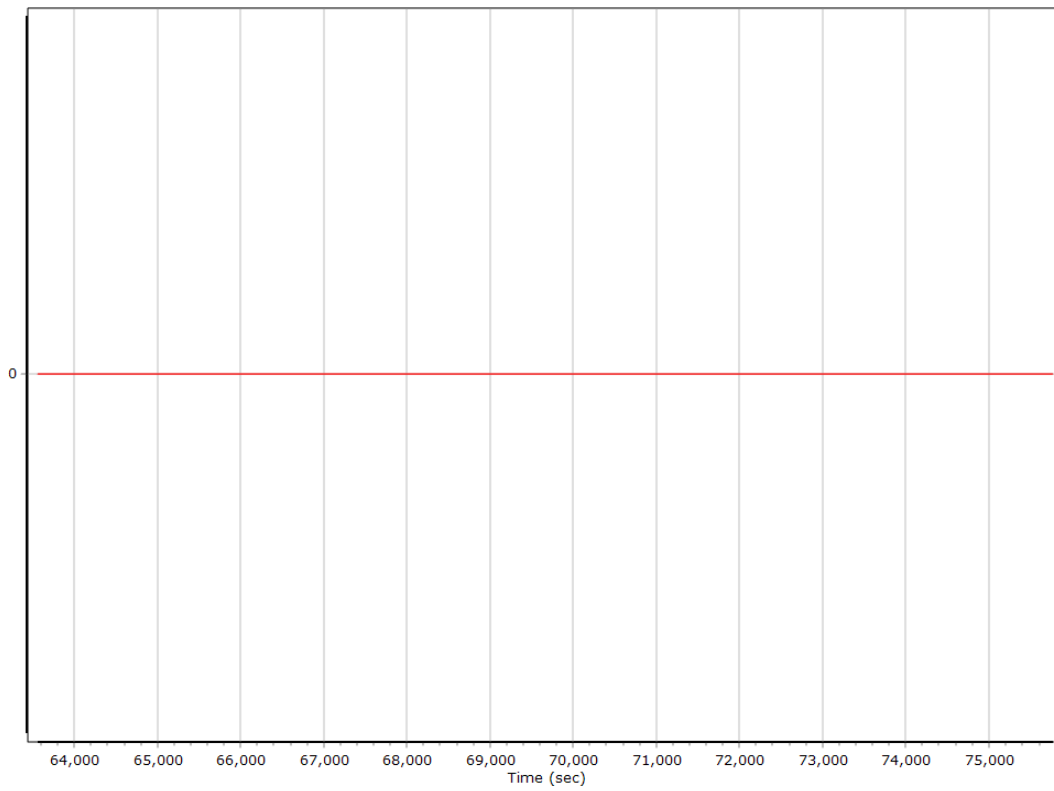
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



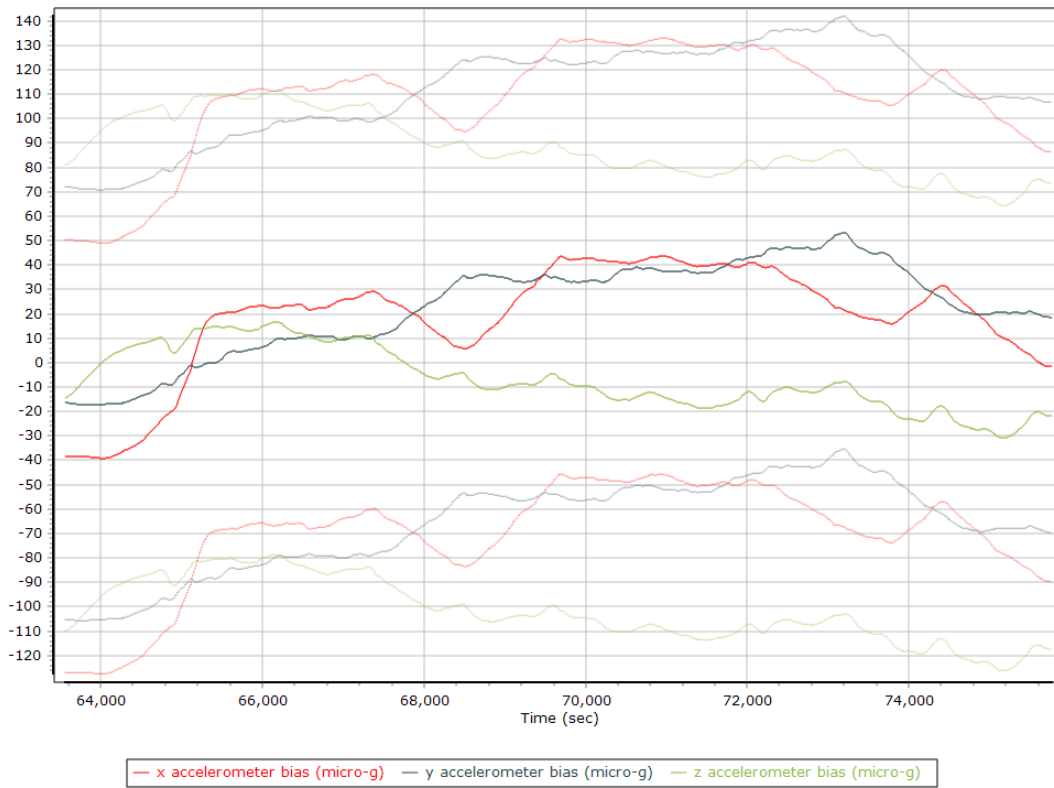
Reference-Primary GNSS Lever Arm Figure of Merit



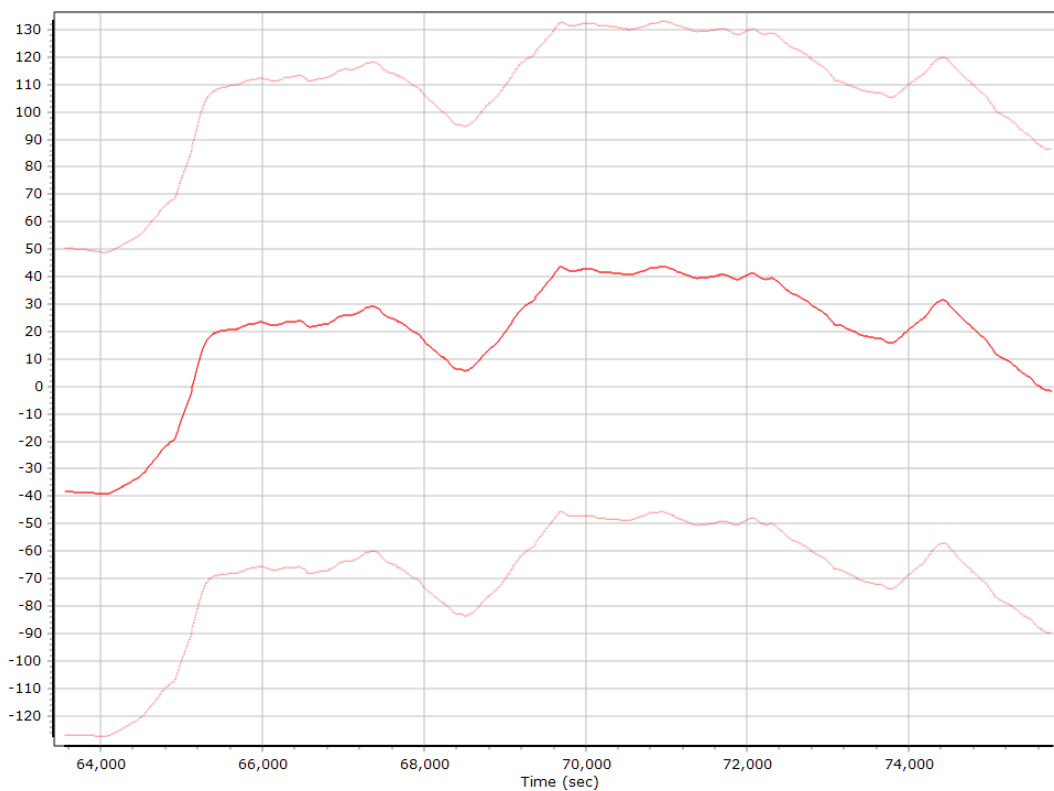
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

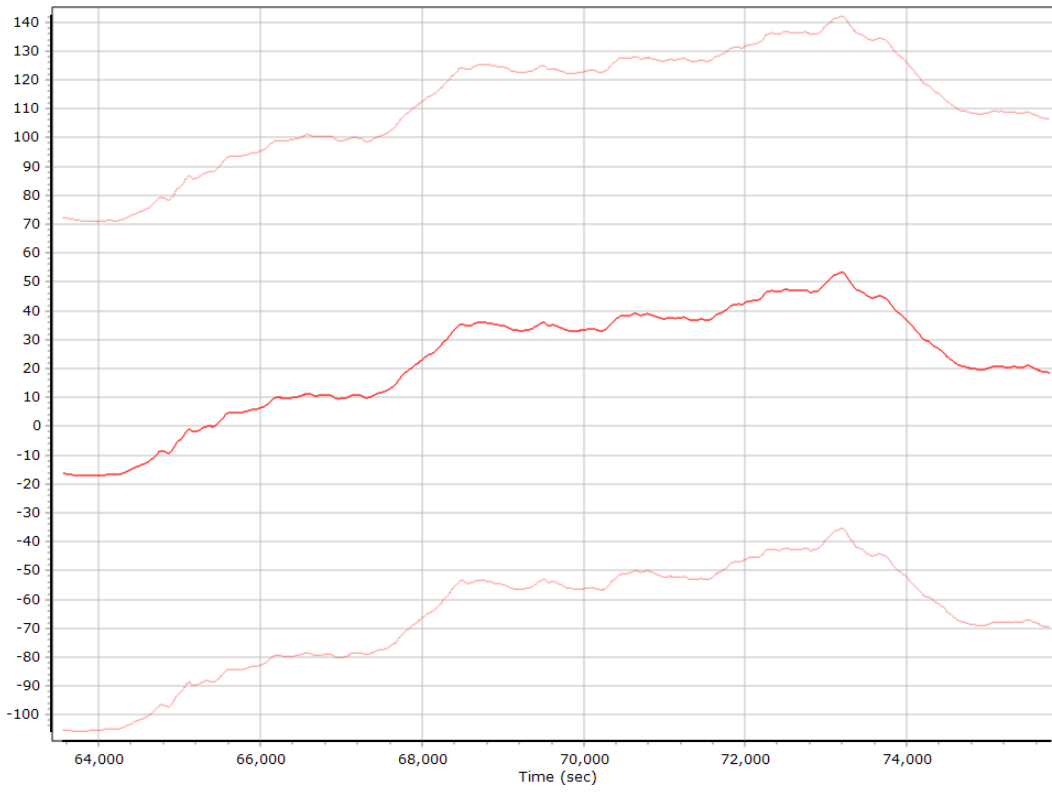
Accelerometer Bias (micro-g)



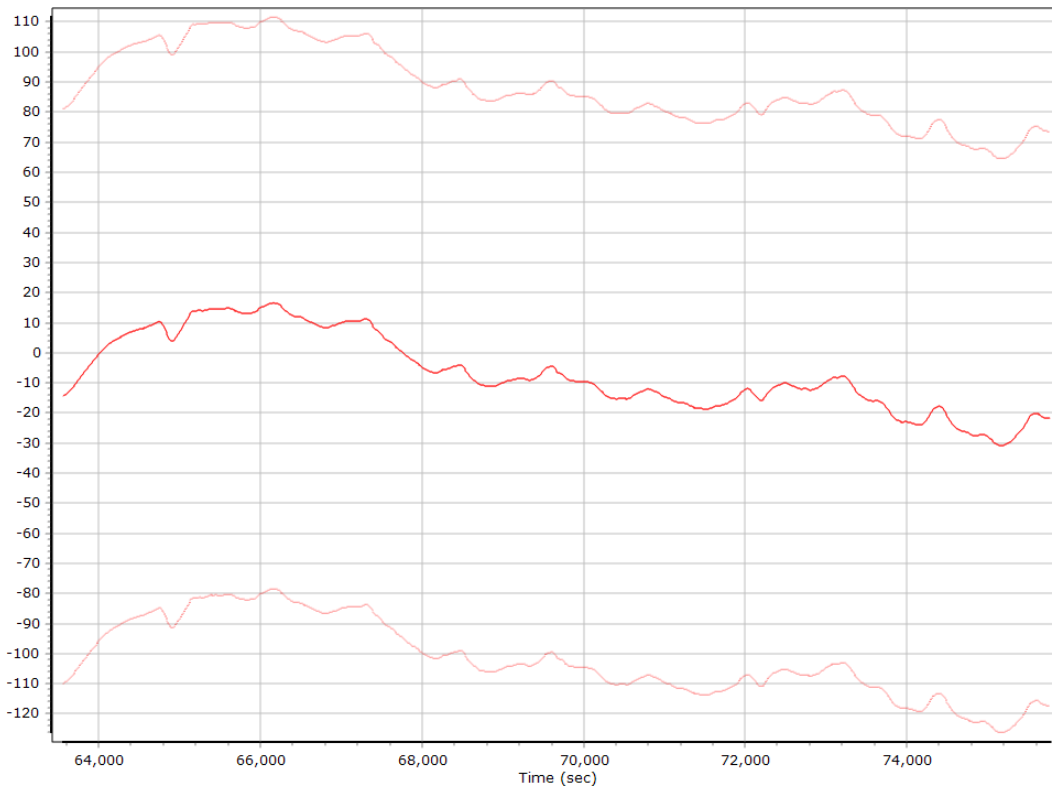
X Accelerometer Bias (micro-g)



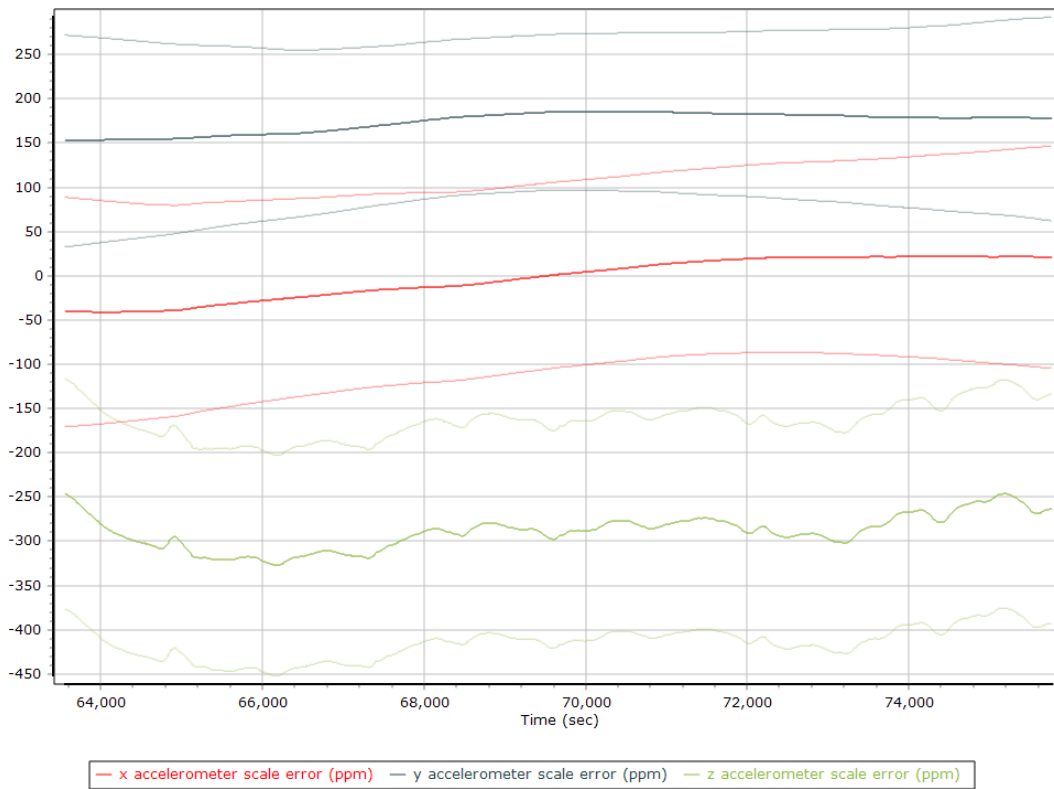
Y Accelerometer Bias (micro-g)



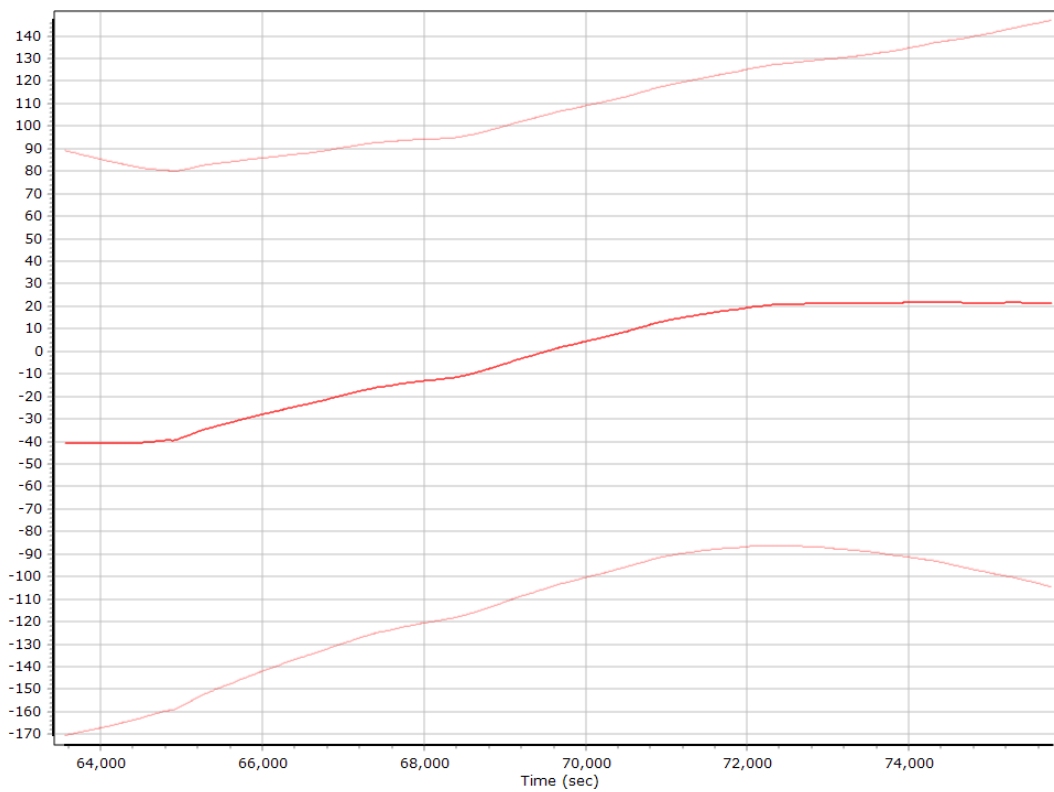
Z Accelerometer Bias (micro-g)



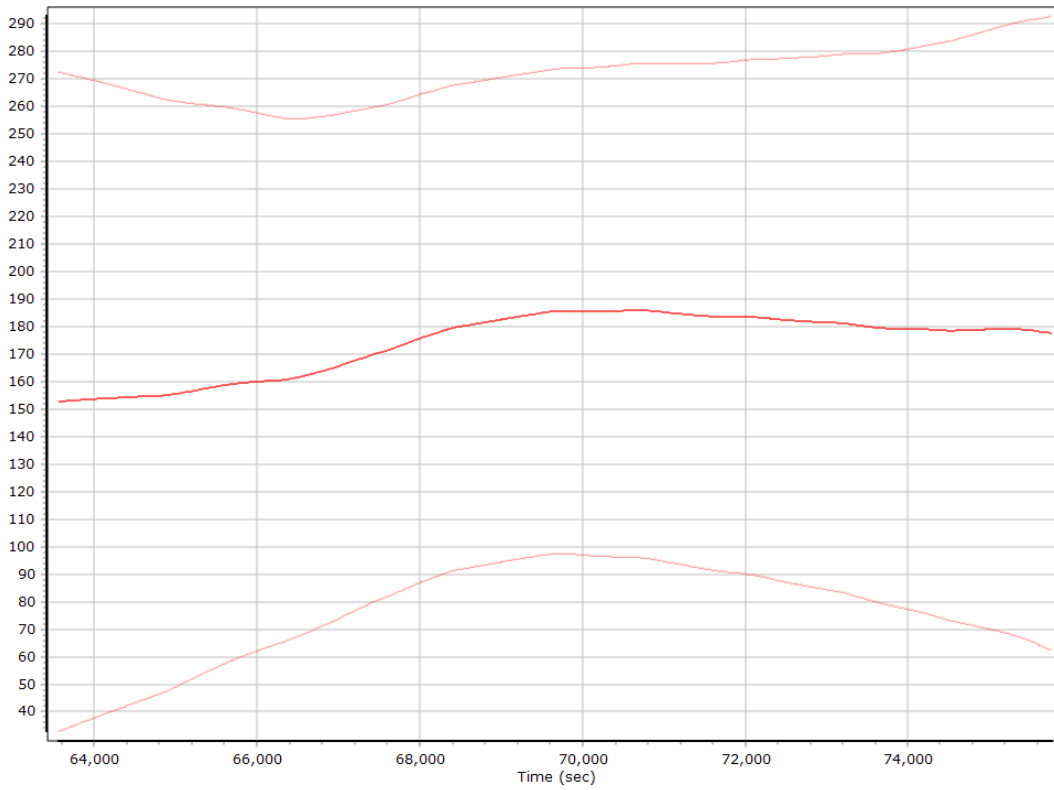
Accelerometer Scale Error (ppm)



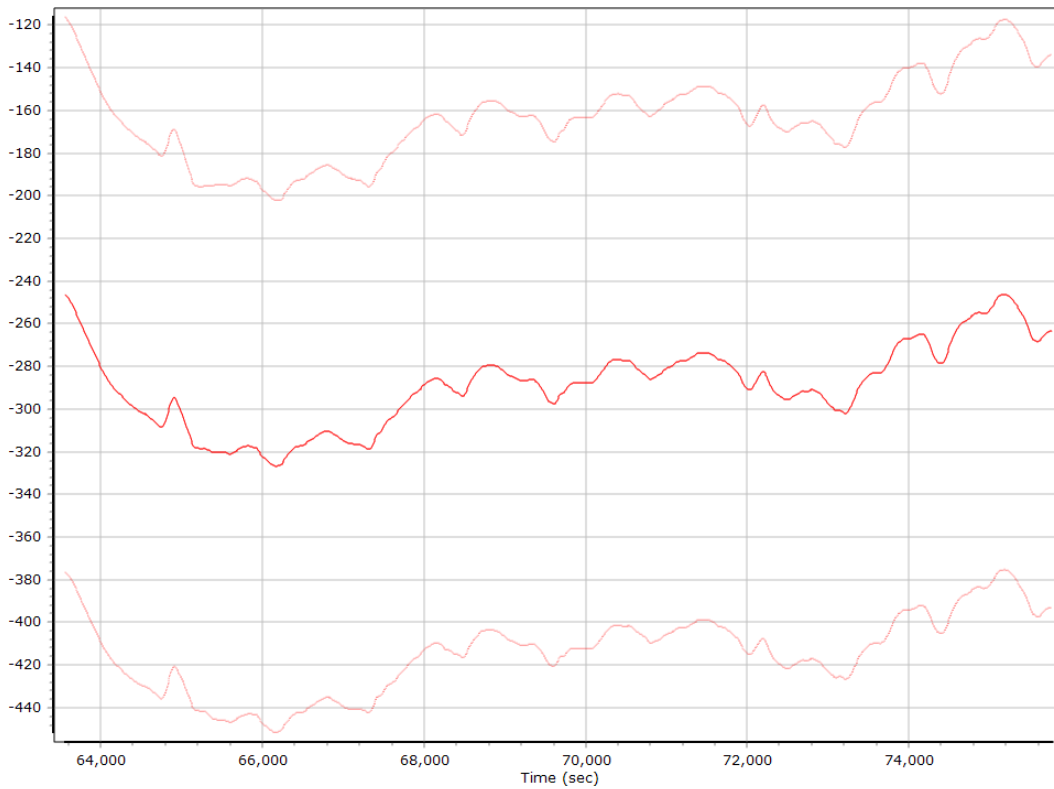
X Accelerometer Scale Error (ppm)



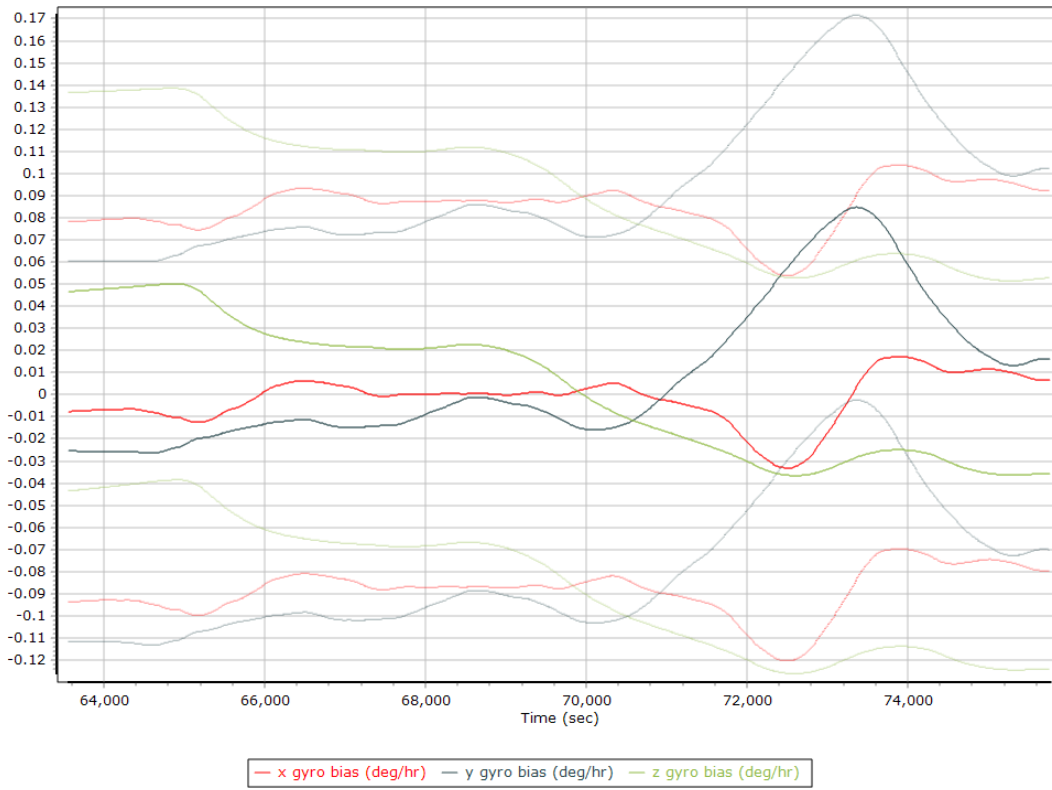
Y Accelerometer Scale Error (ppm)



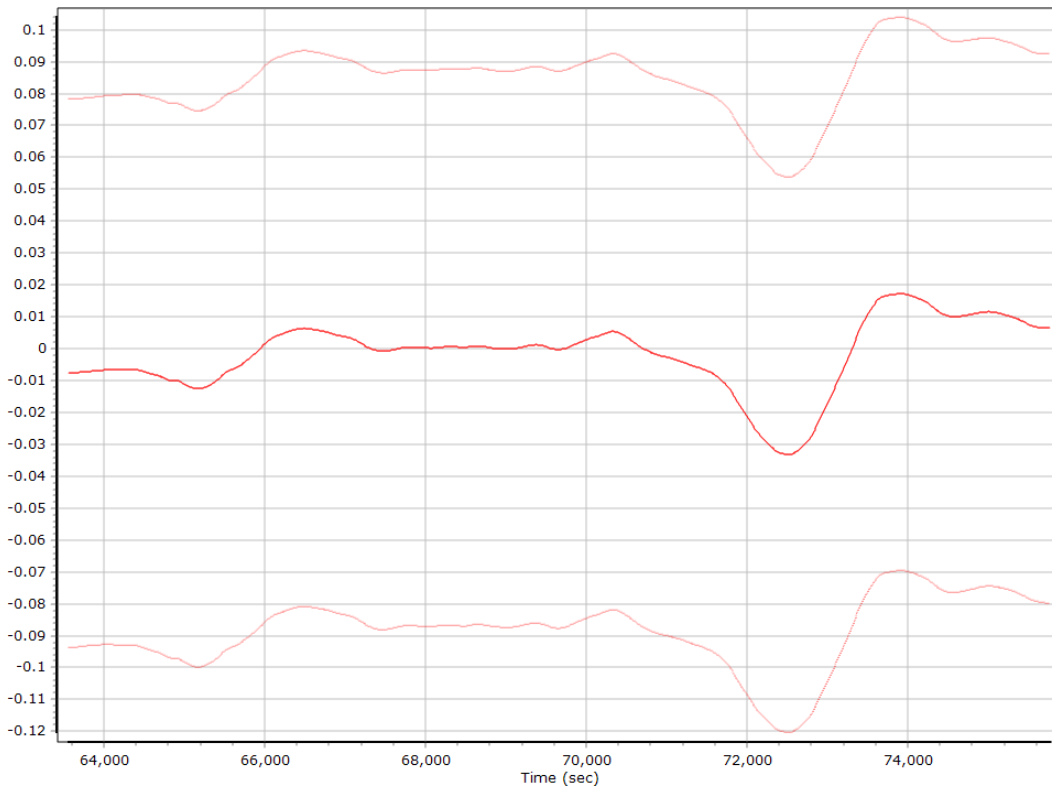
Z Accelerometer Scale Error (ppm)



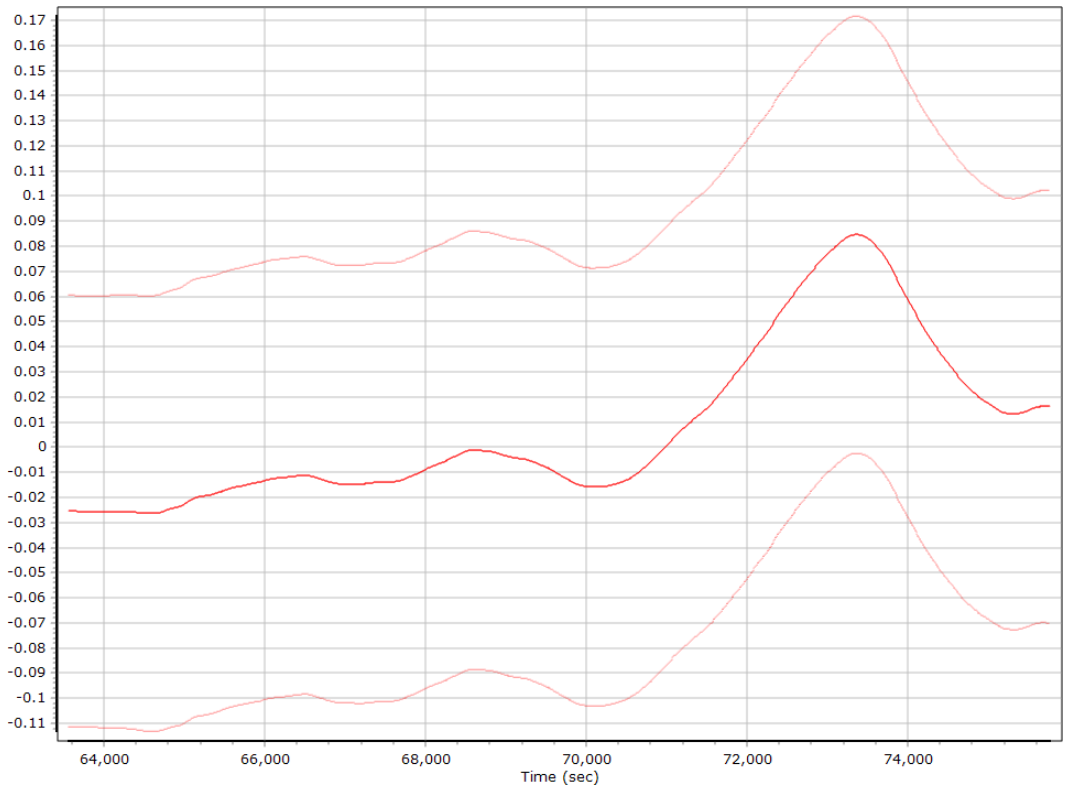
Gyro Bias (deg/h)



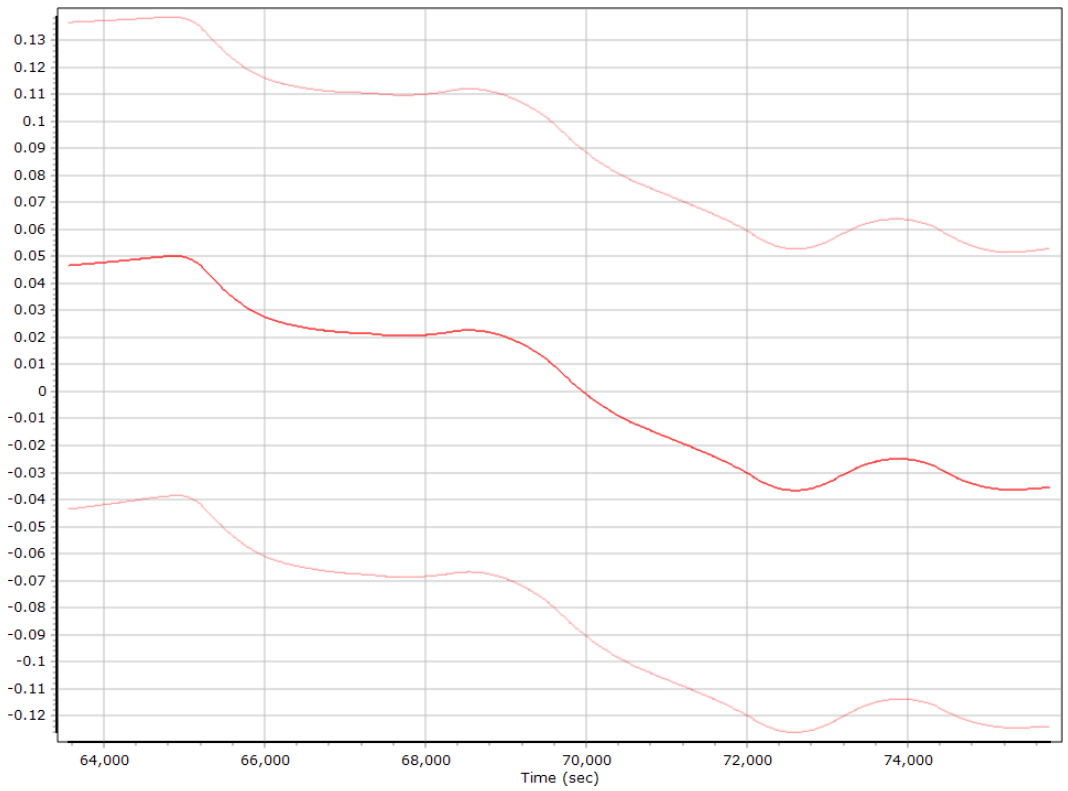
X Gyro Bias (deg/h)



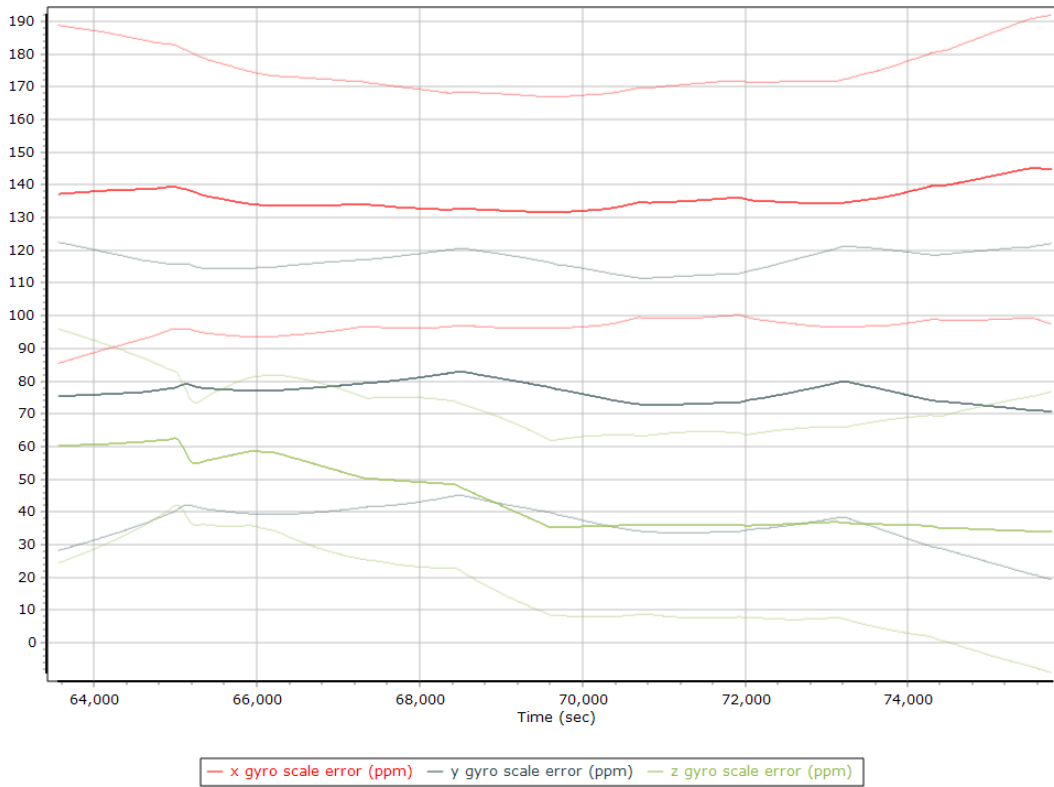
Y Gyro Bias (deg/h)



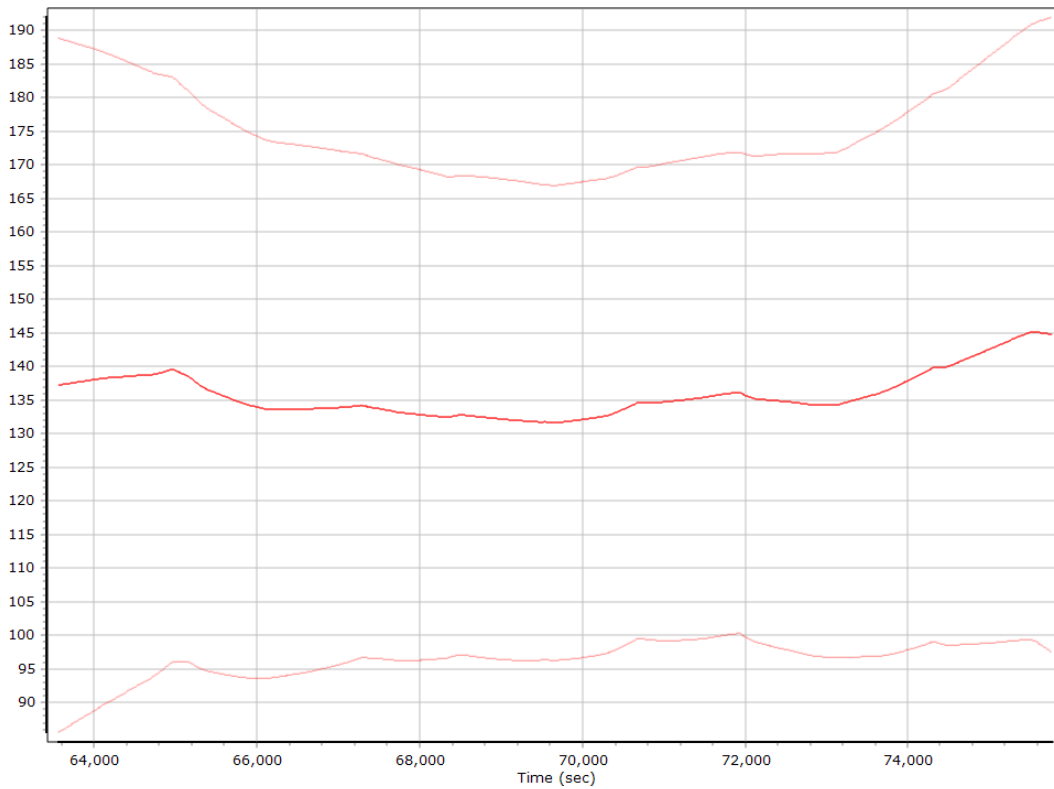
Z Gyro Bias (deg/h)



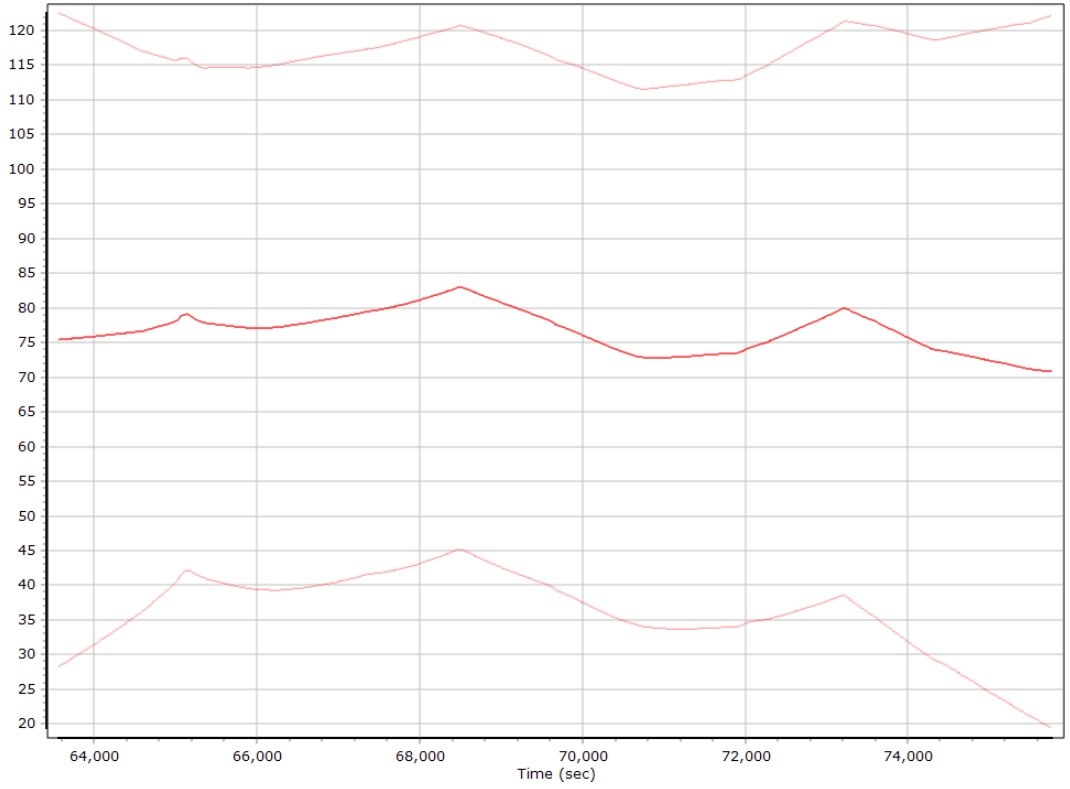
Gyro Scale Error (ppm)



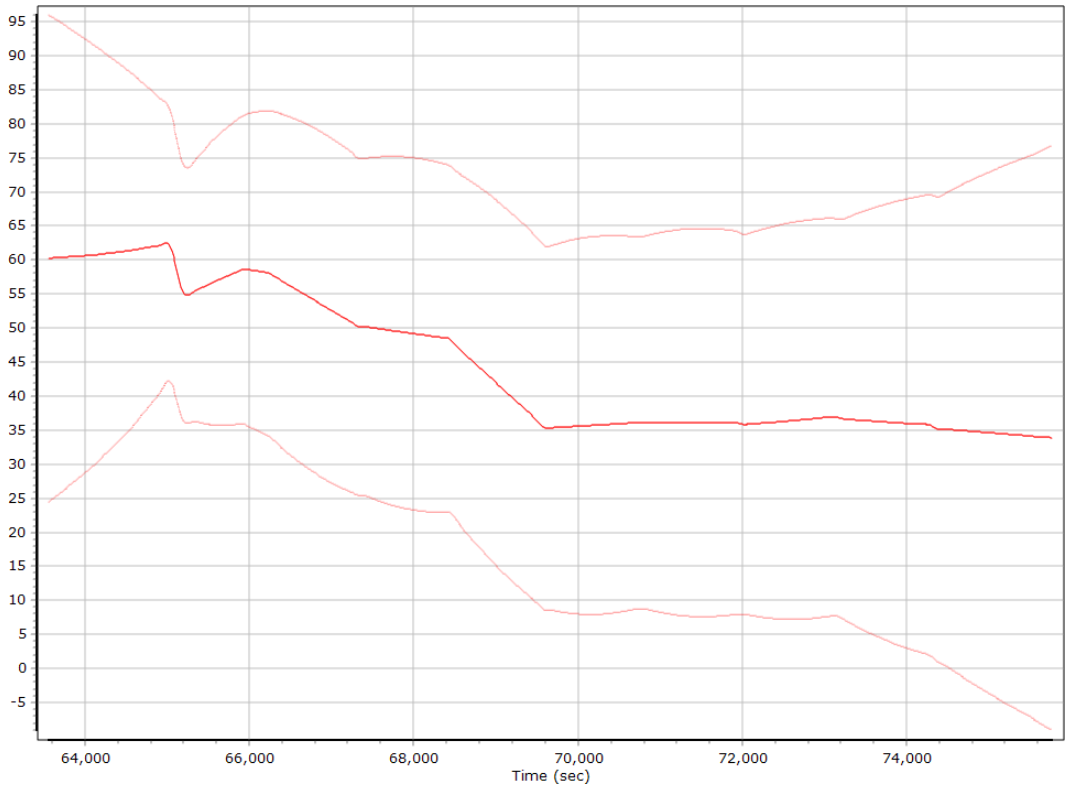
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

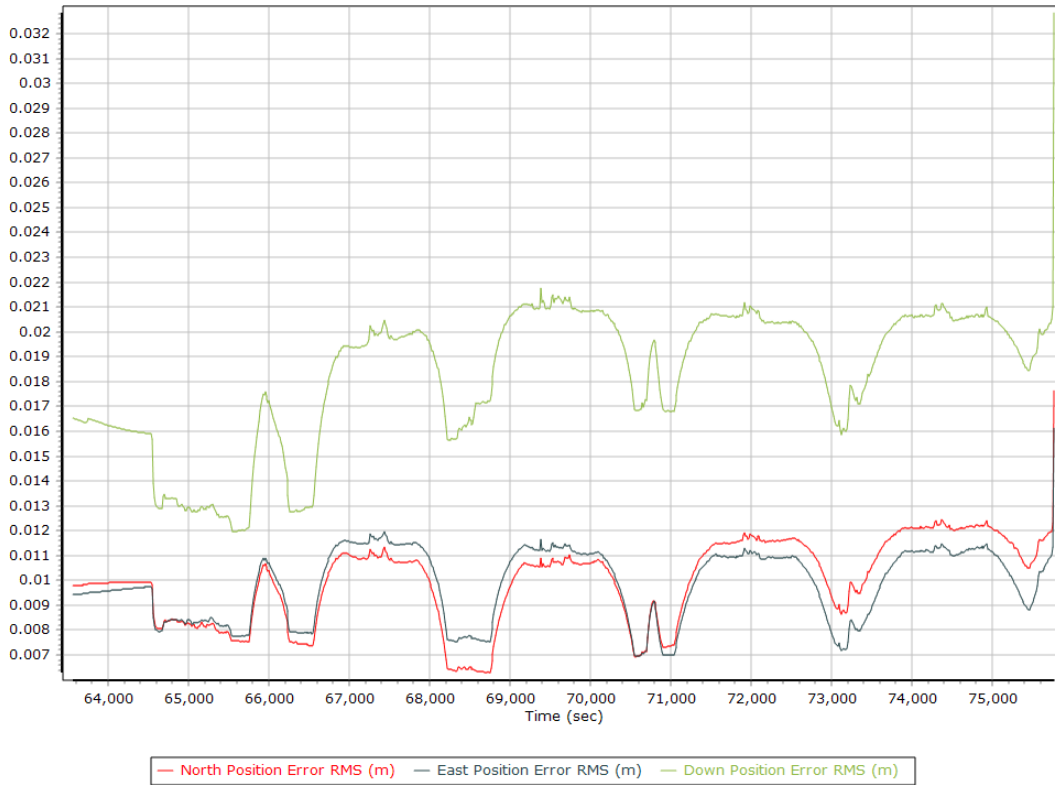


Z Gyro Scale Error (ppm)

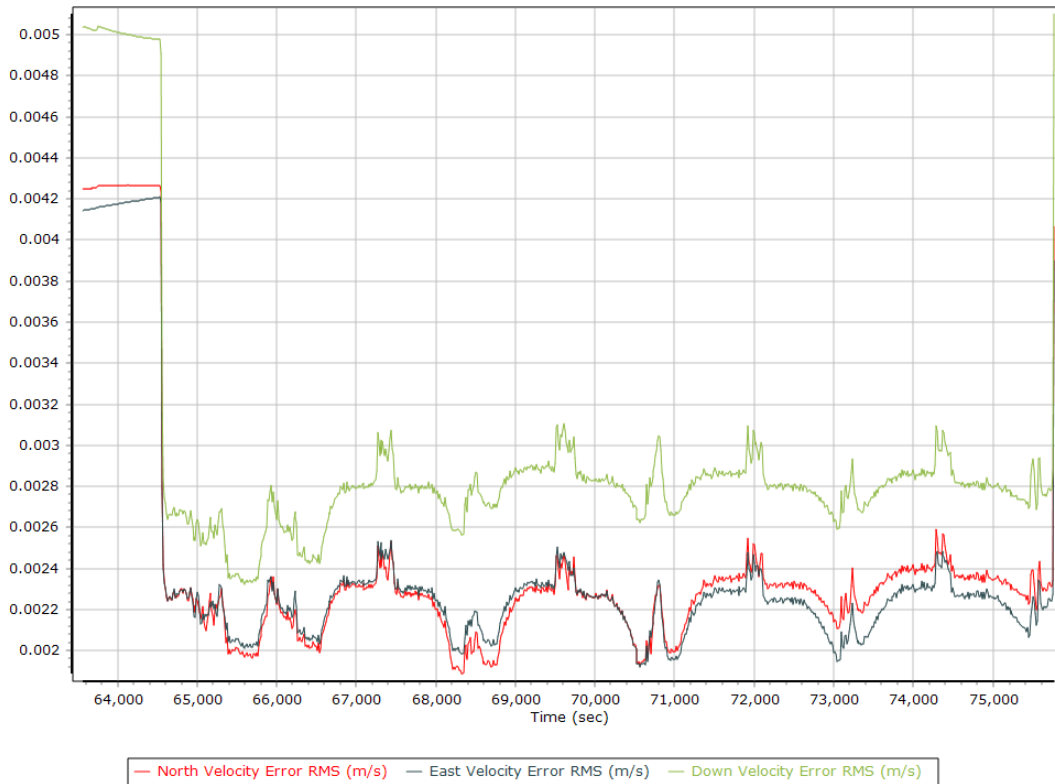


Smoothed Performance Metrics

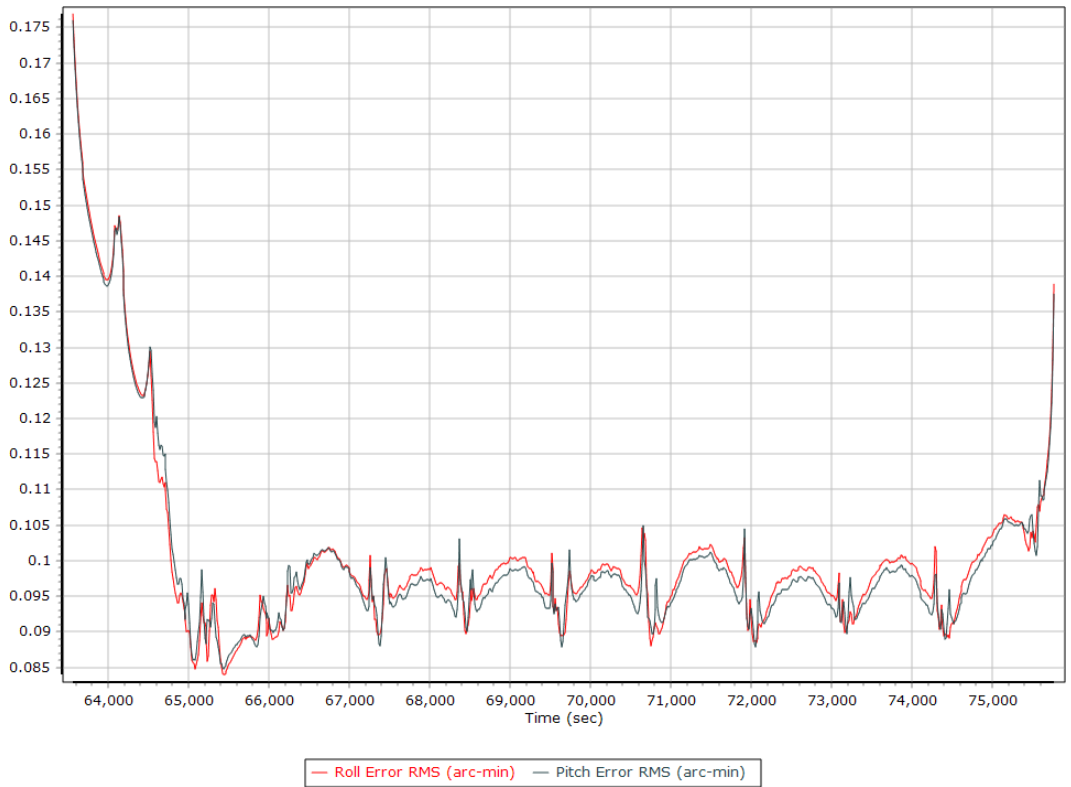
Position Error RMS (m)



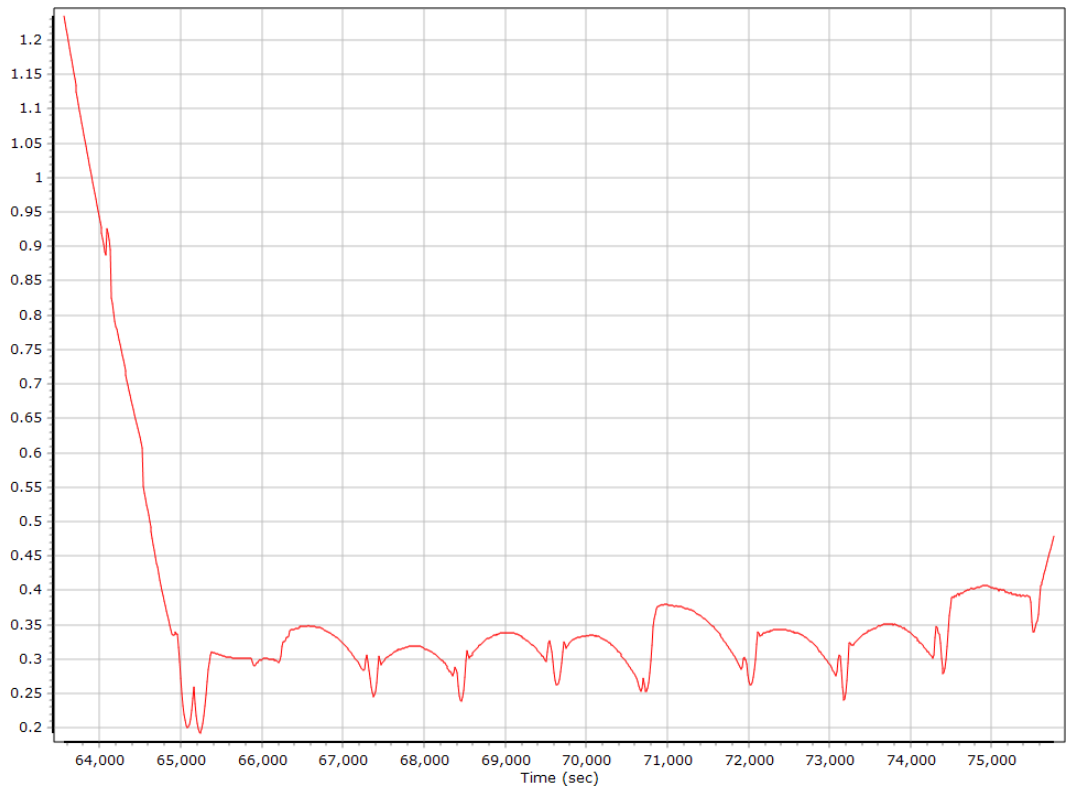
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

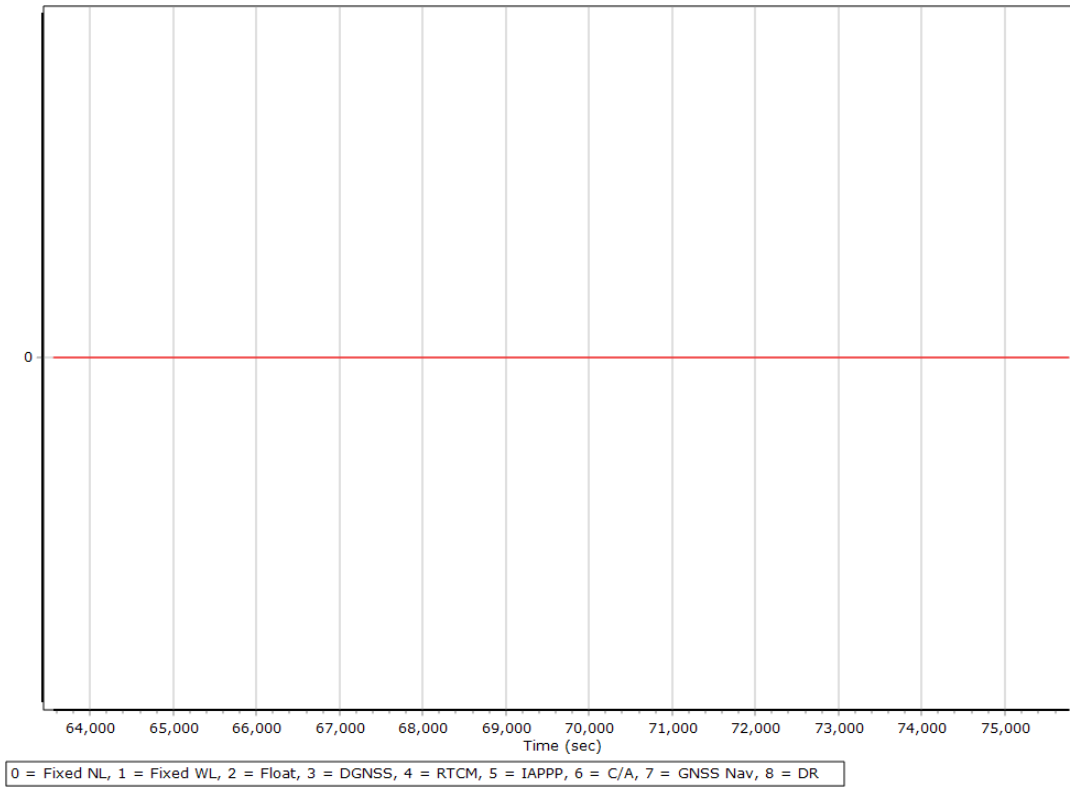


Heading Error RMS (arc-min)

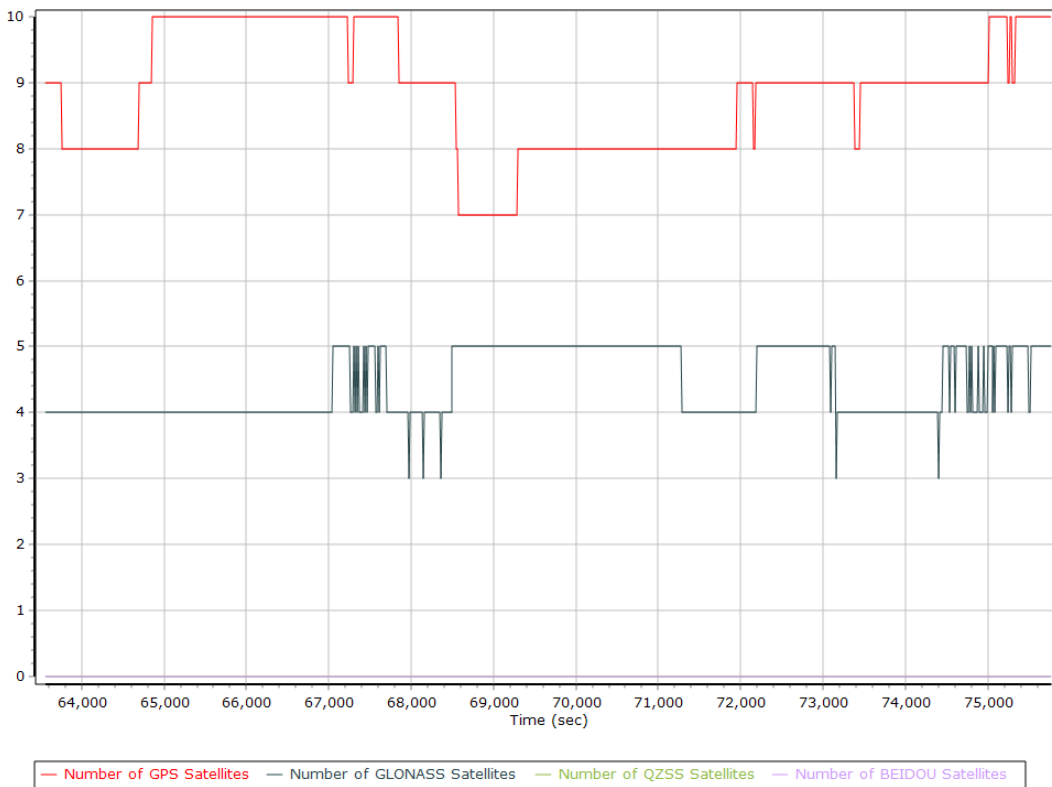


Smoothed Solution Status

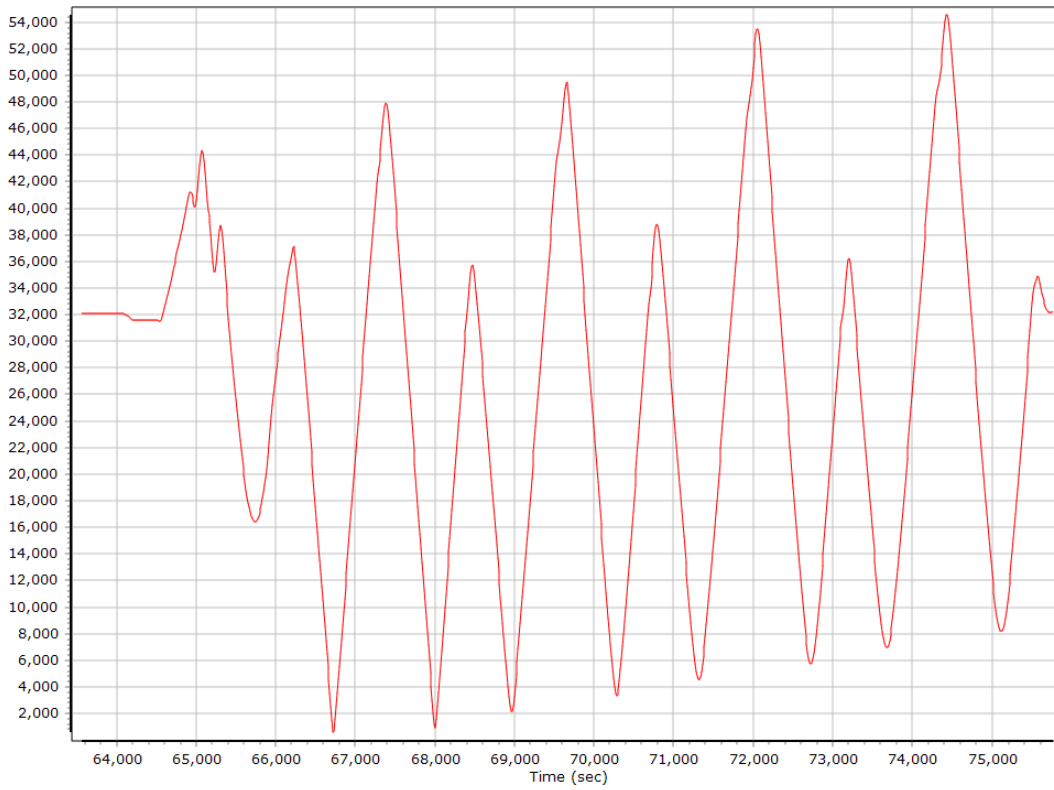
Processing Mode



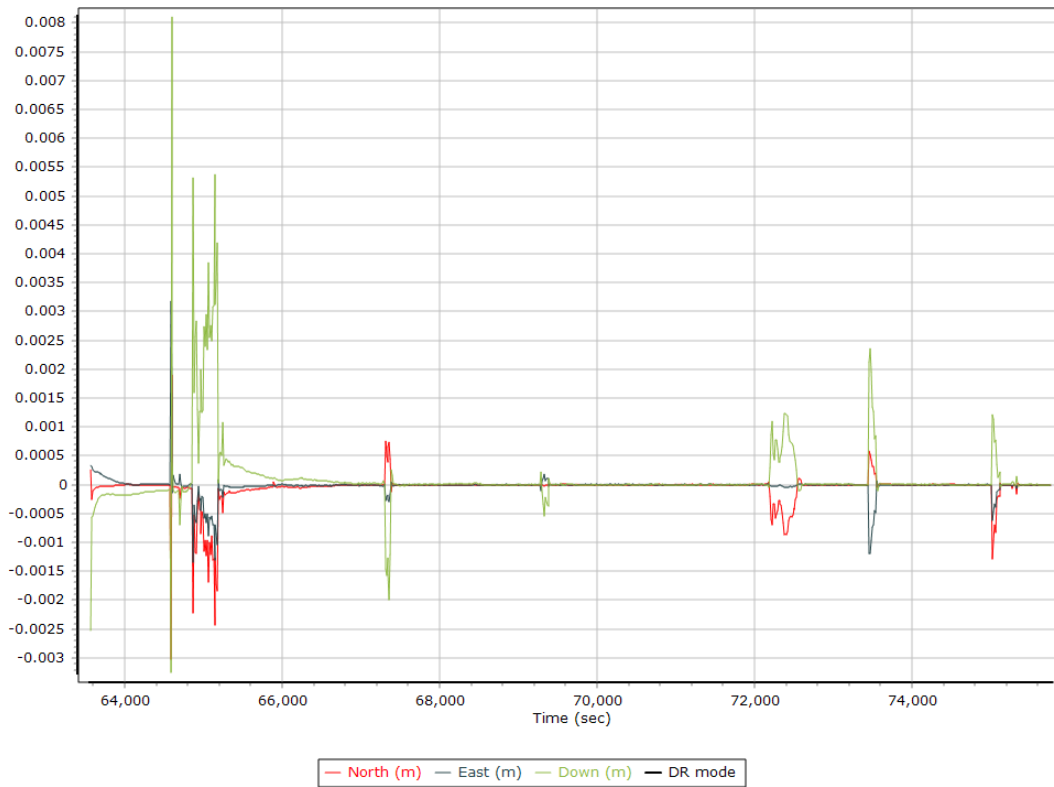
Number of Satellites



Baseline Length



SBET IAKAR Separation



General Information

Mission Information

Project name	6220005b
Processing date	2020-01-07 03:42:48
Mission date	2020-01-05 17:36:26
Mission duration	01:55:50.000
Processing mode	IN-Fusion GNSS Nav

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N8708
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
ALS.000	POS Data
ALS.001	POS Data
ALS.002	POS Data
ALS.003	POS Data
ALS.004	POS Data
ALS.005	POS Data
ALS.006	POS Data
ALS.007	POS Data
ALS.008	POS Data
ALS.009	POS Data
ALS.010	POS Data
ALS.011	POS Data
ALS.012	POS Data
ALS.013	POS Data
ALS.014	POS Data
ALS.015	POS Data
ALS.016	POS Data
ALS.017	POS Data
ALS.018	POS Data
ALS.019	POS Data
ALS.020	POS Data
ALS.021	POS Data
ALS.022	POS Data
ALS.023	POS Data
ALS.024	POS Data
ALS.025	POS Data
ALS.026	POS Data
ALS.027	POS Data
ALS.028	POS Data
ALS.029	POS Data
ALS.030	POS Data
ALS.031	POS Data
ALS.032	POS Data
ALS.033	POS Data
ALS.034	POS Data
ALS.035	POS Data
ALS.036	POS Data
ALS.037	POS Data
ALS.038	POS Data
ALS.039	POS Data
ALS.040	POS Data
ALS.041	POS Data
ALS.042	POS Data
ALS.043	POS Data
ALS.044	POS Data
ALS.045	POS Data
ALS.046	POS Data

Input Files

File Name	File type
Ephm0050.20g	GLONASS Broadcast Ephemeris
Ephm0050.20n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_6220005b.out	SBET Trajectory File

Rover Data Summary

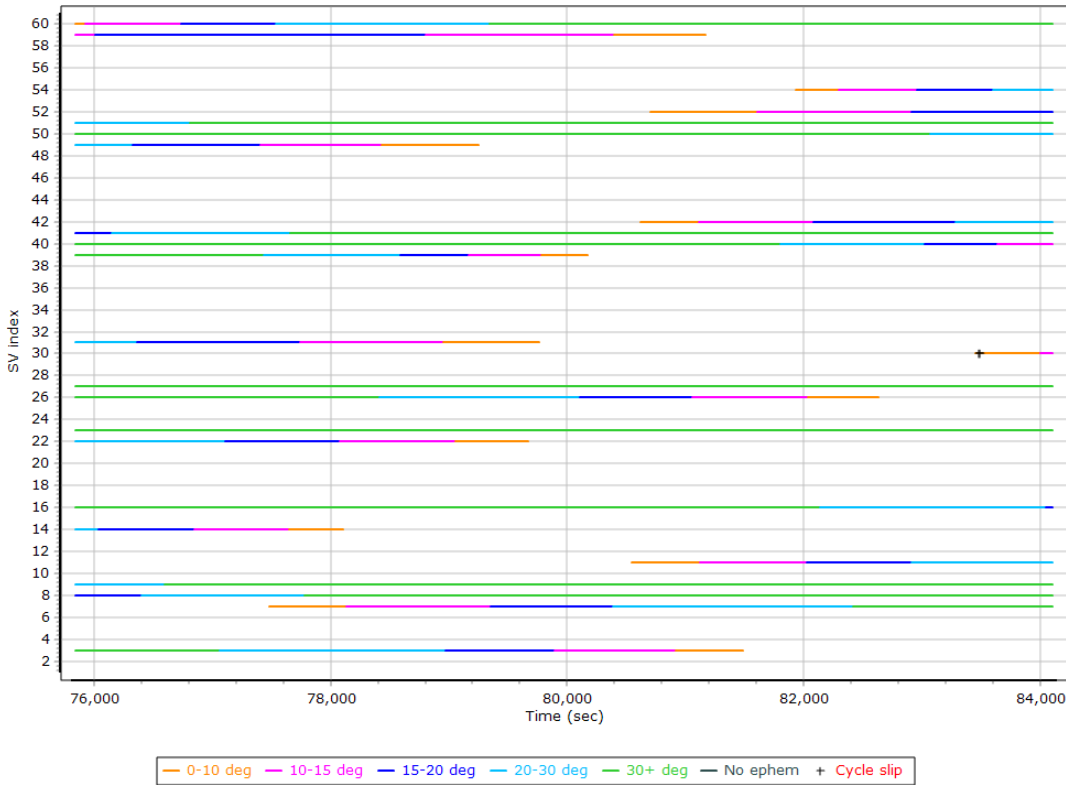
First raw data file	ALS.000		
Last raw data file	ALS.046		
Start GPS week	2087		
Start time	63367.625 (1/5/2020 5:36:07 PM)		
End time	84102.595 (1/5/2020 11:21:42 PM)		
Start of fine alignment	75785.889 (1/5/2020 9:03:05 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.046	-0.192	-1.285
Gimbal 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

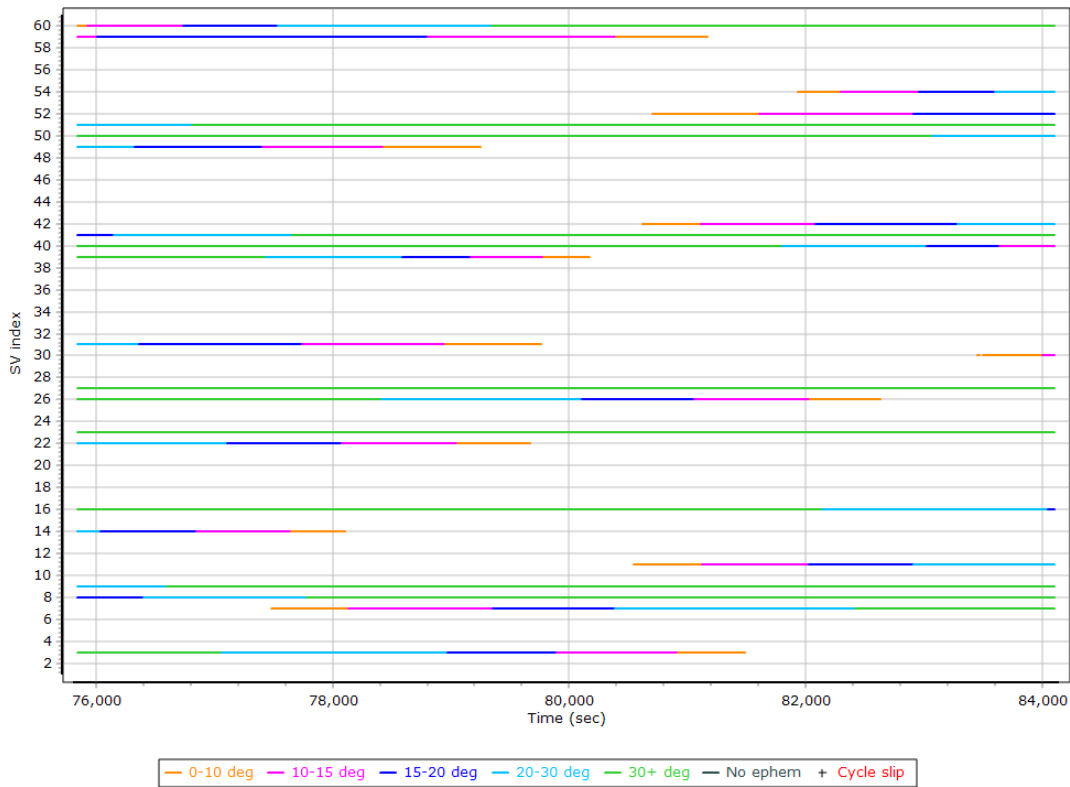
Raw IMU Import QC Summary

IMU data input file	imu_6220005b.dat
IMU data check log file	imudt_6220005b.log
IMU Records Processed	4147956
Termination Status	Normal
IMU Anomalies	0

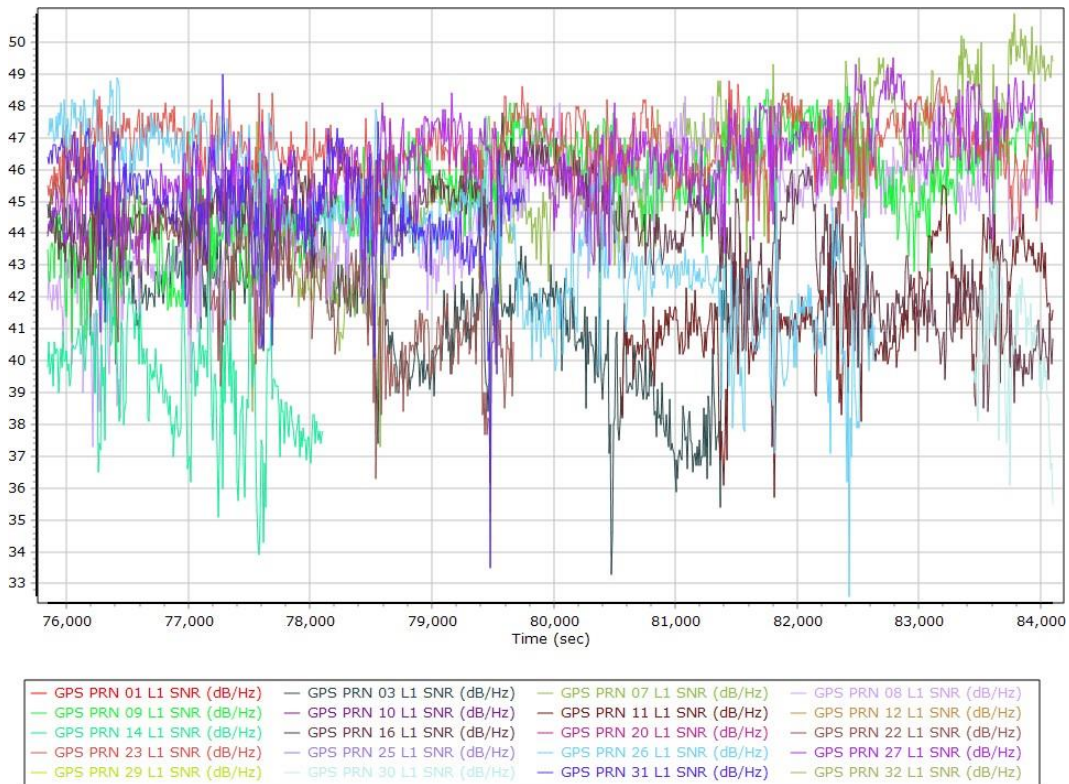
L1 Satellite Lock/Elevation



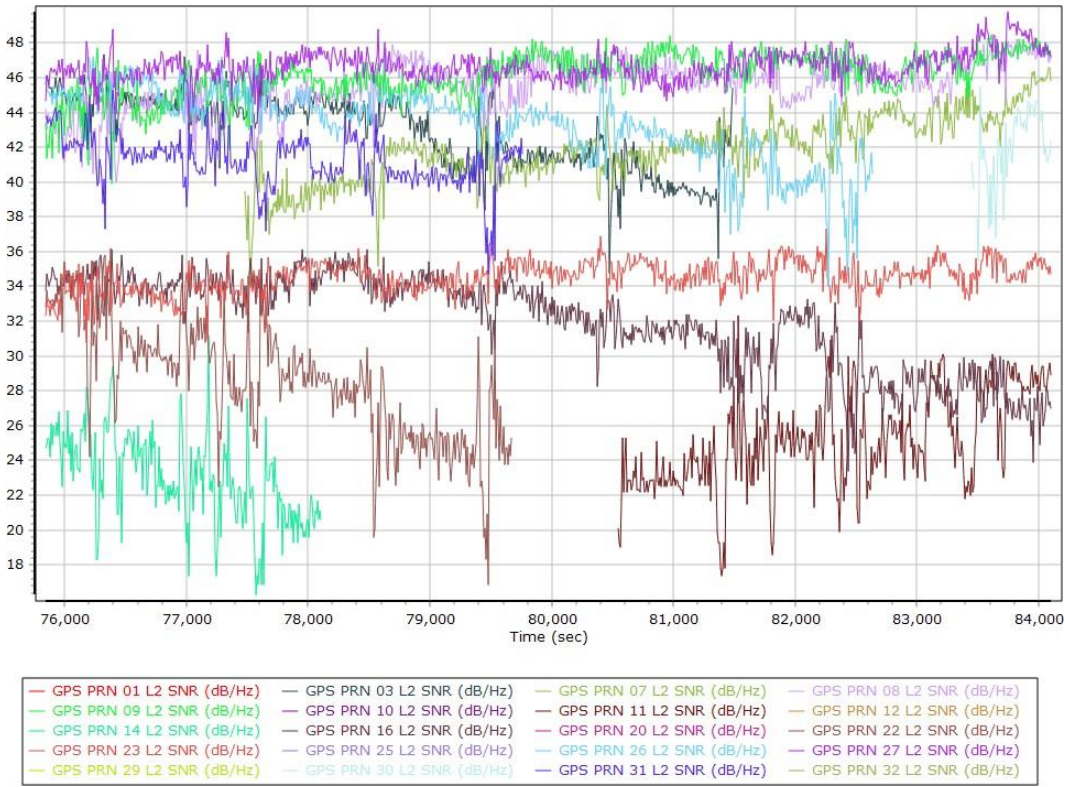
L2 Satellite Lock/Elevation



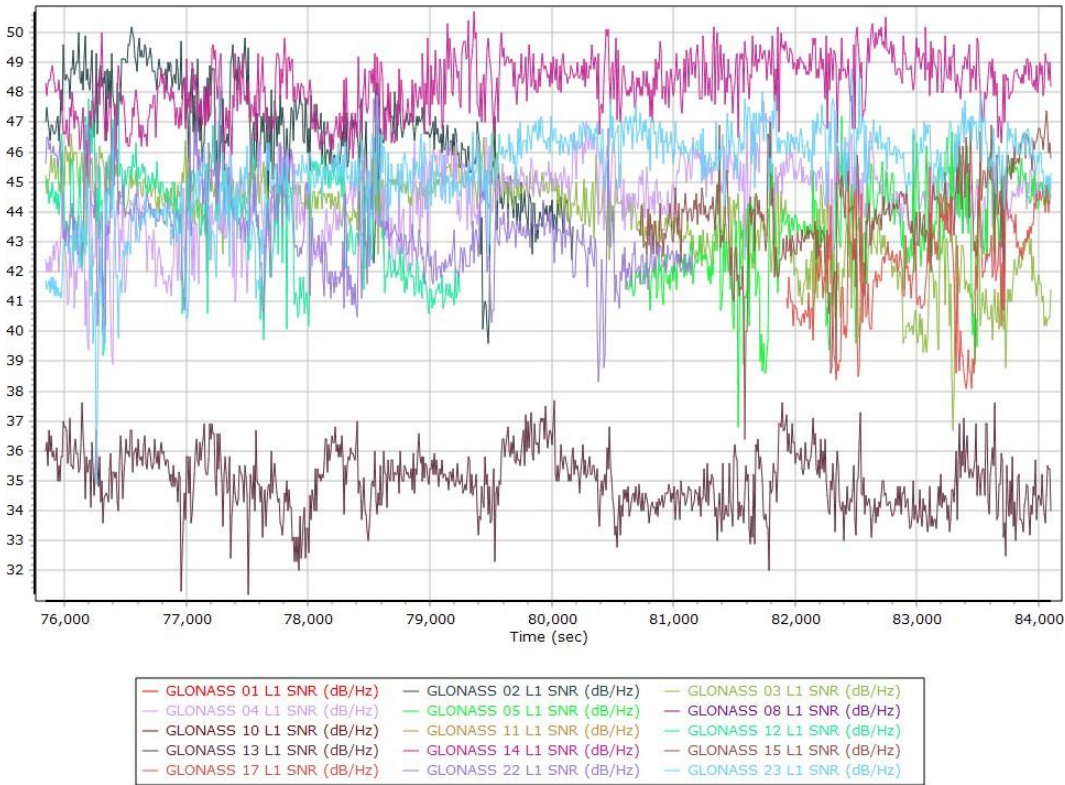
GPS L1 SNR



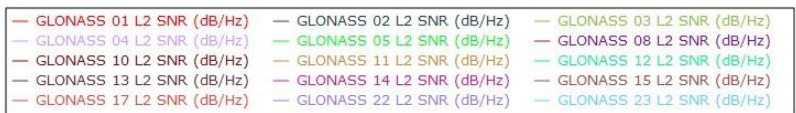
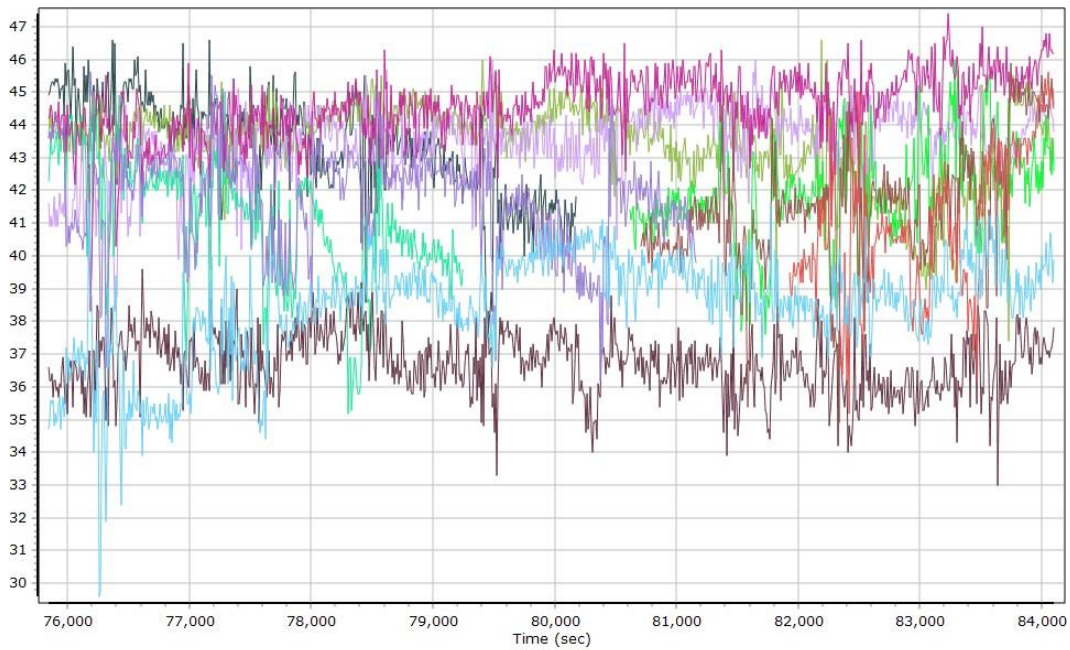
GPS L2 SNR



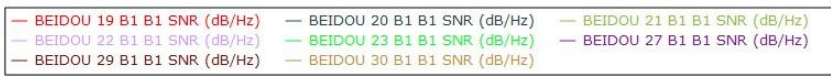
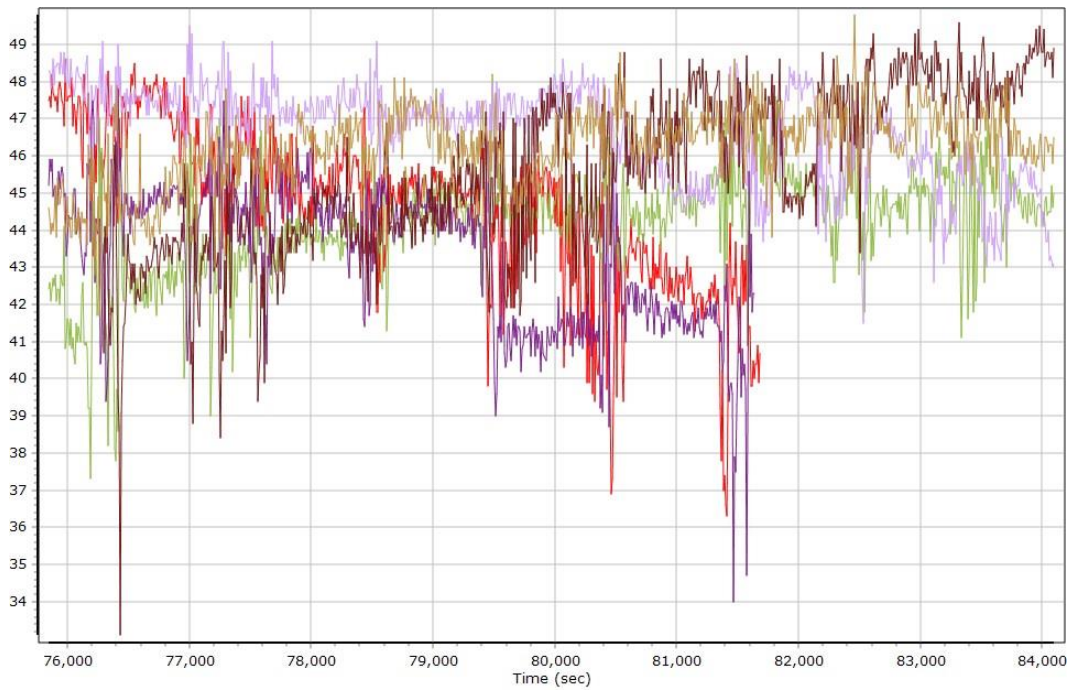
GLONASS L1 SNR



GLONASS L2 SNR

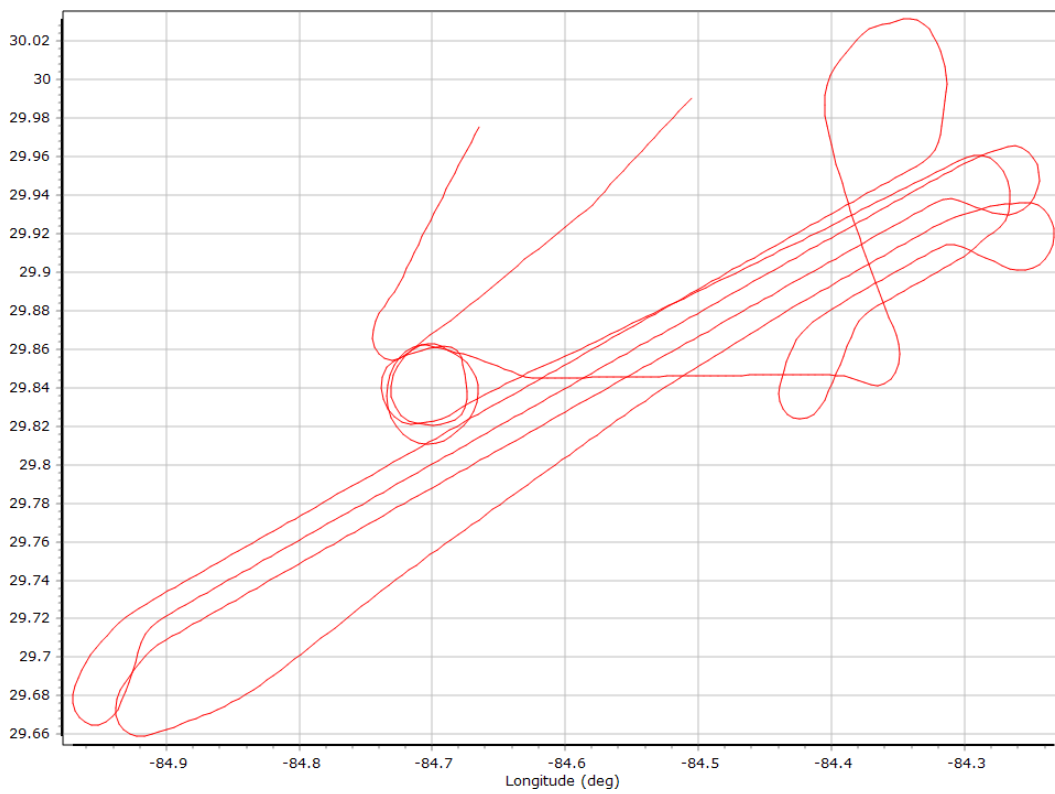


BEIDOU SNR

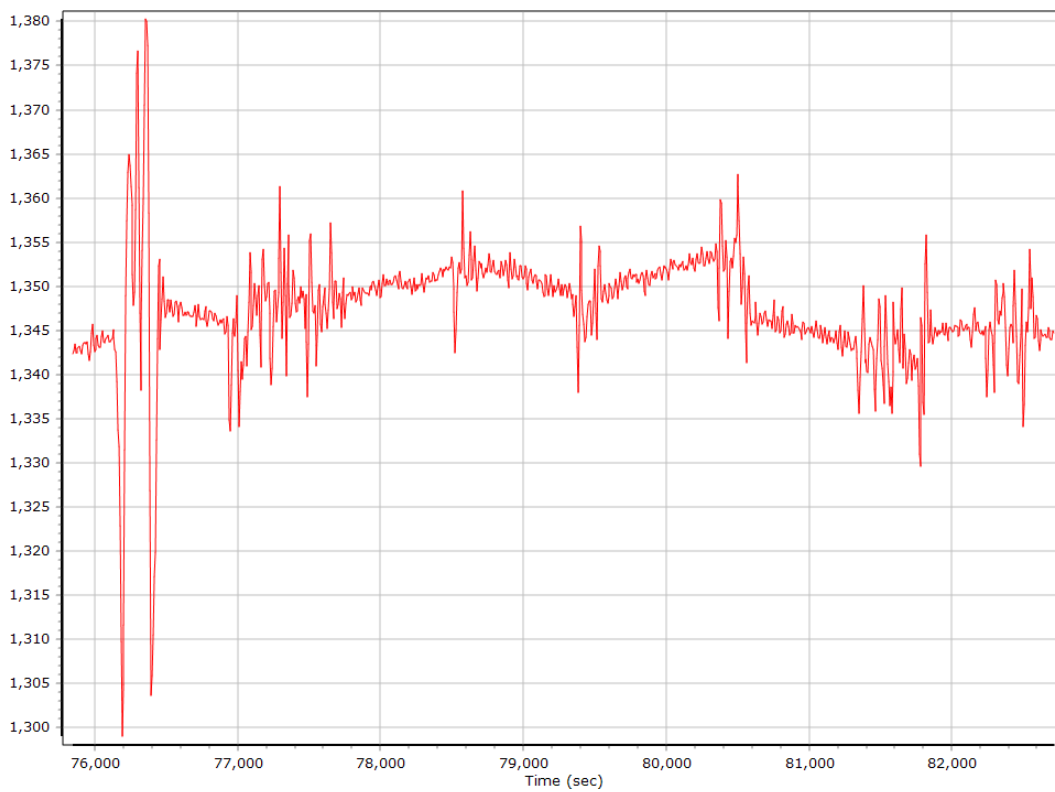


Trajectory Information

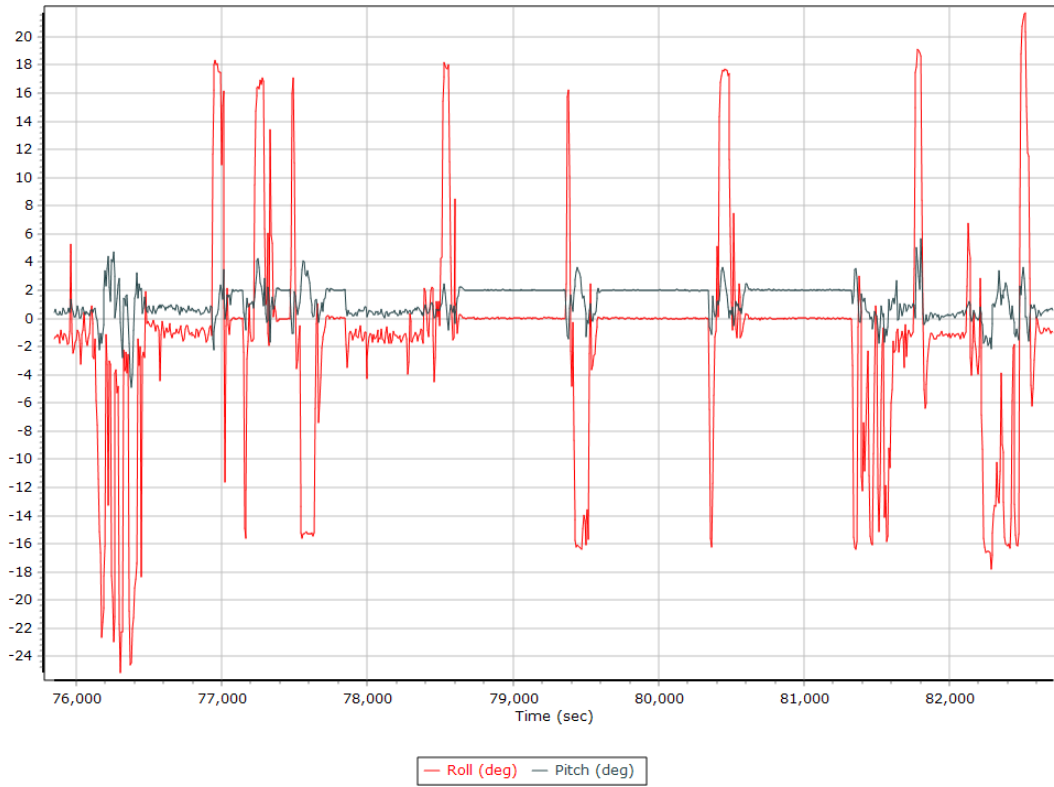
Top View



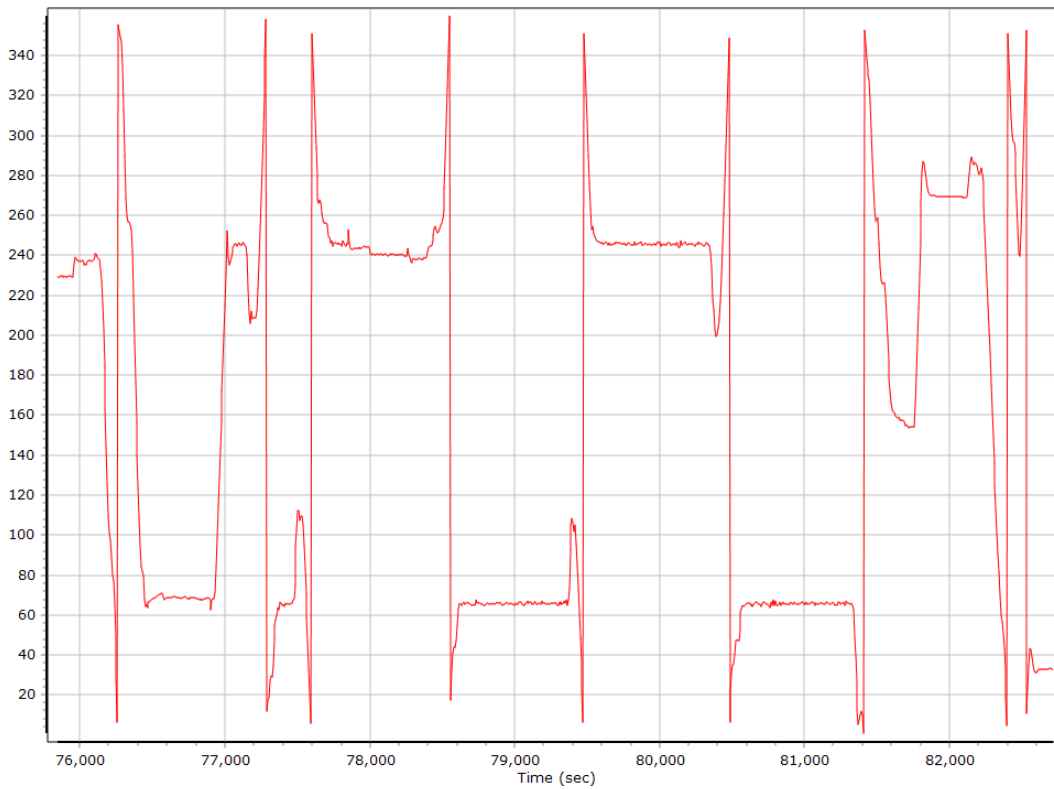
Altitude



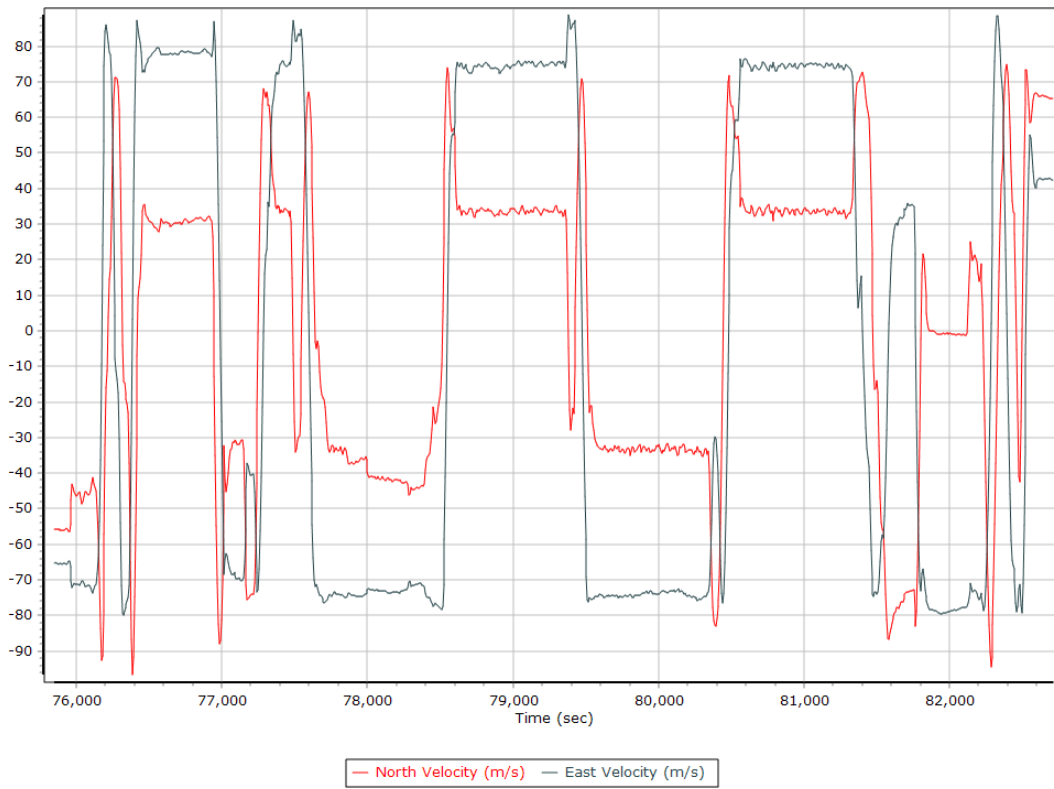
Roll/Pitch



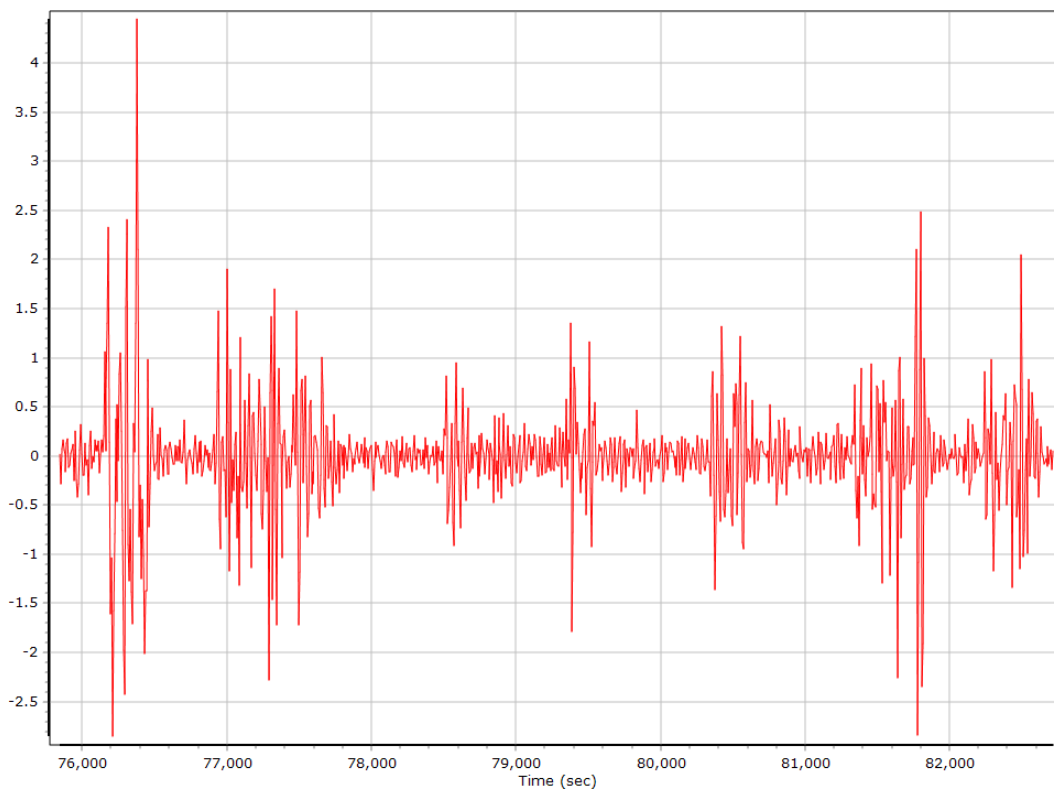
Heading



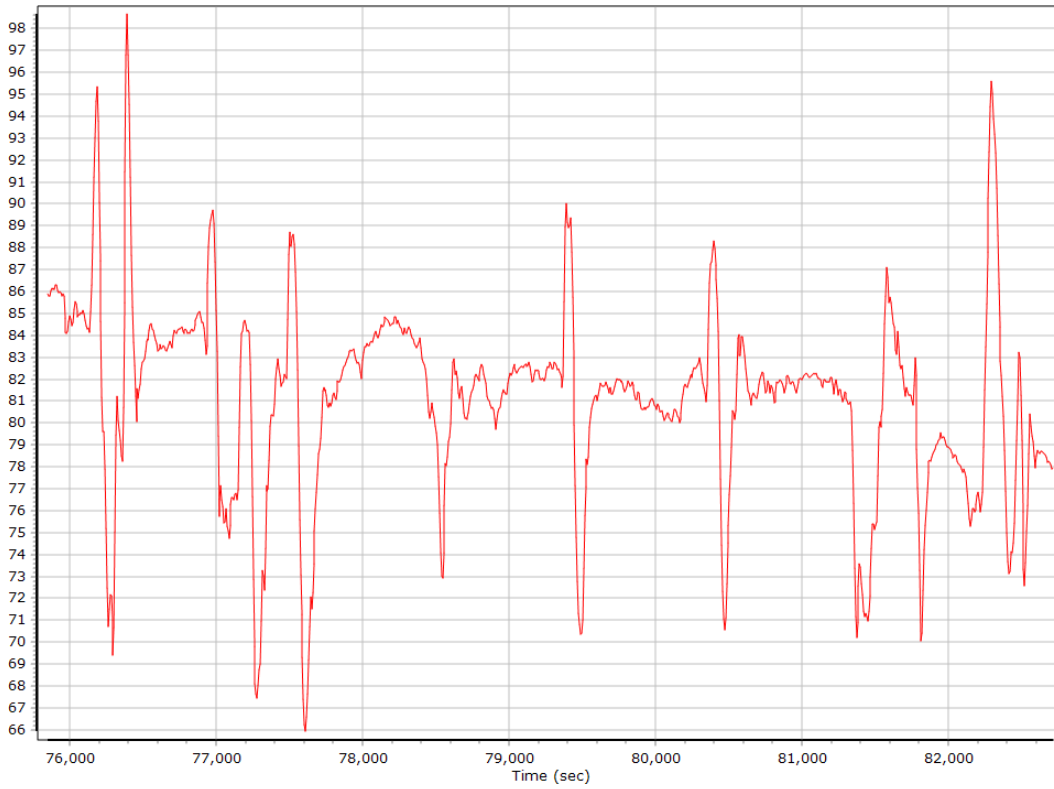
North/East Velocity



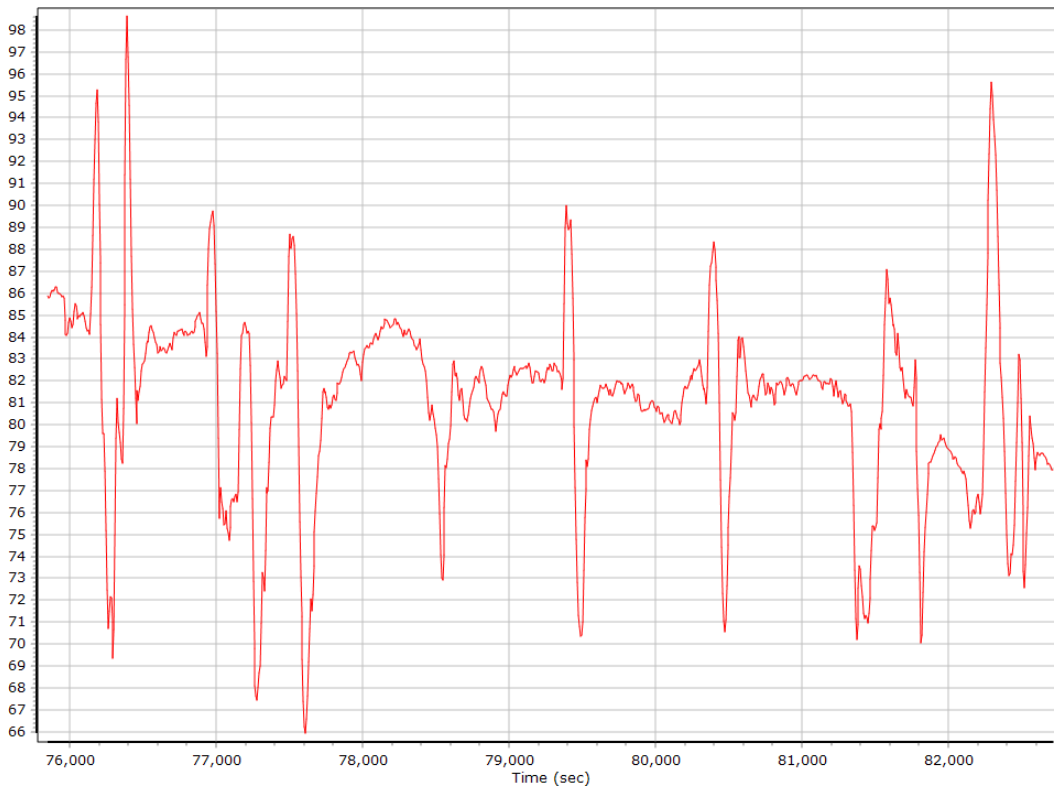
Down Velocity



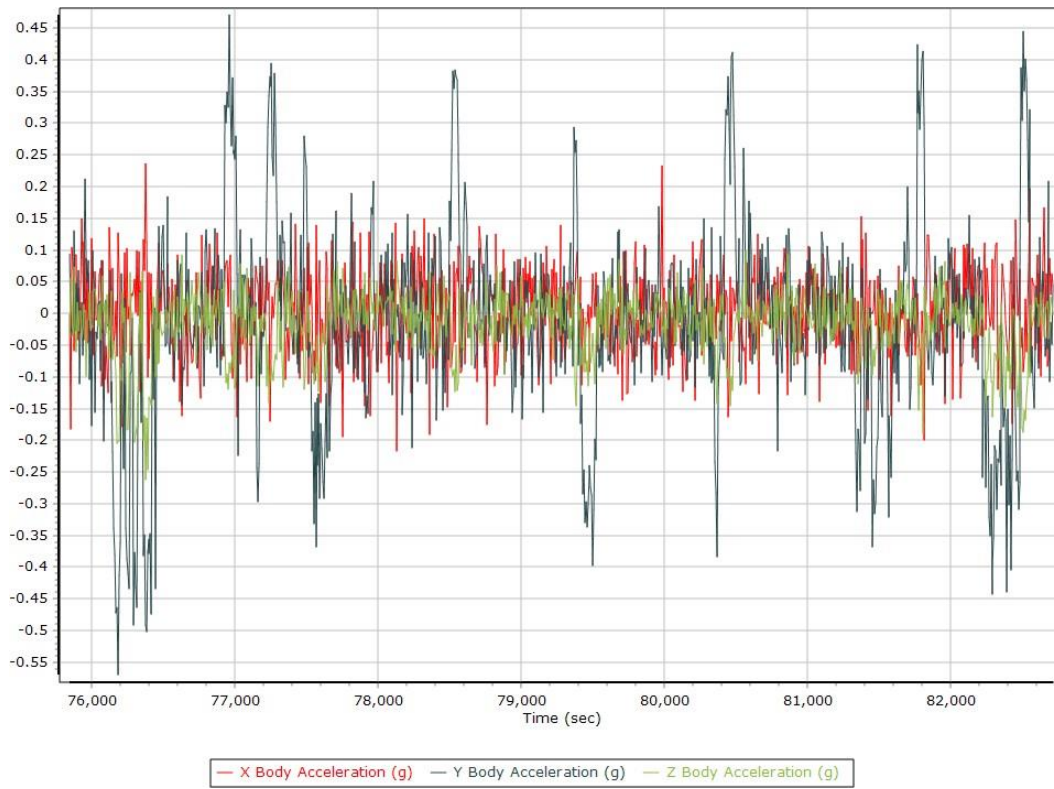
Total Speed



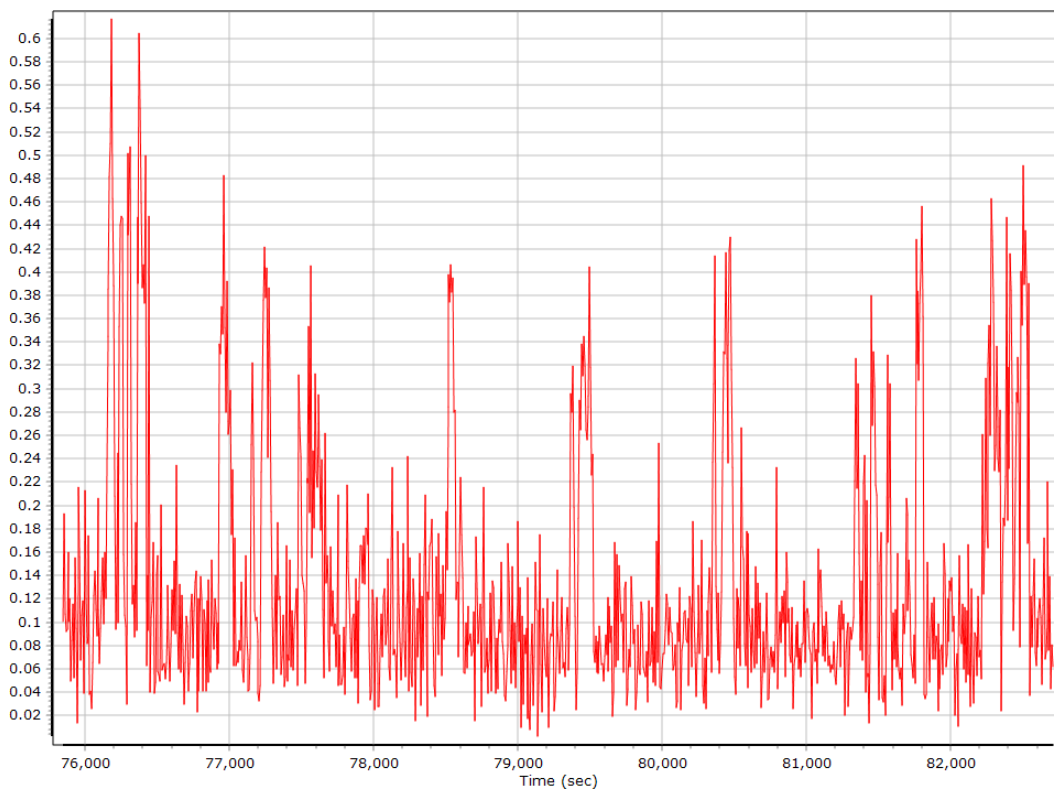
Ground Speed



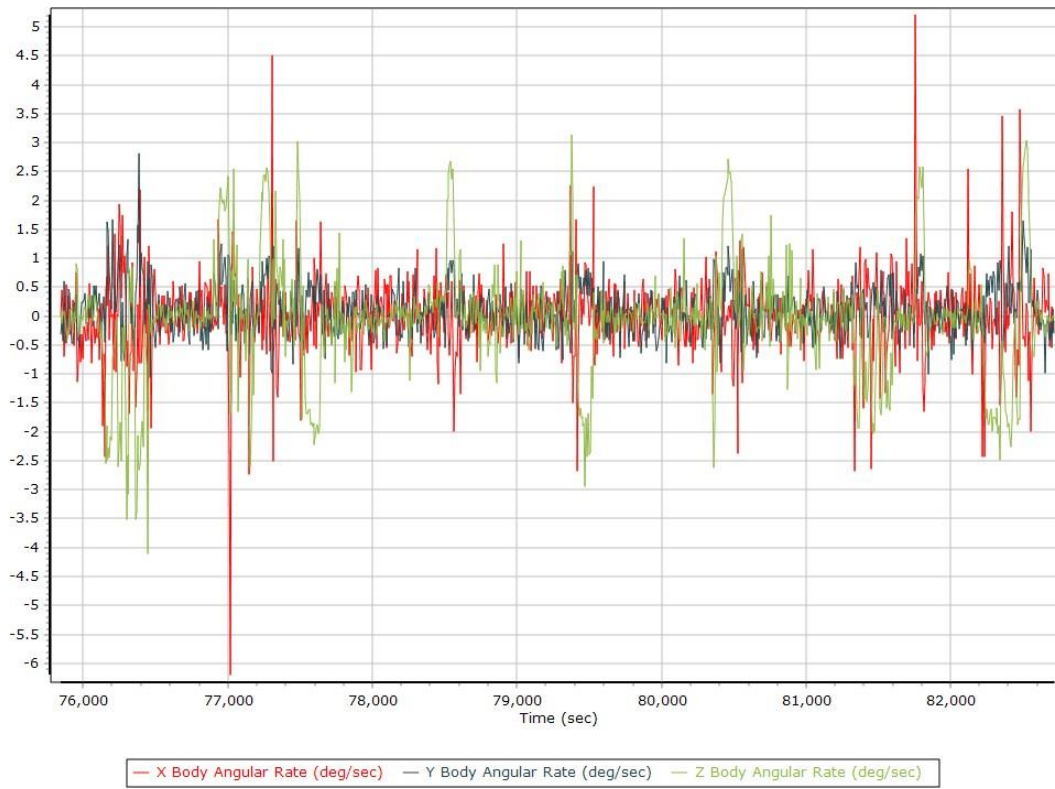
Body Acceleration



Total Body Acceleration



Body Angular Rate



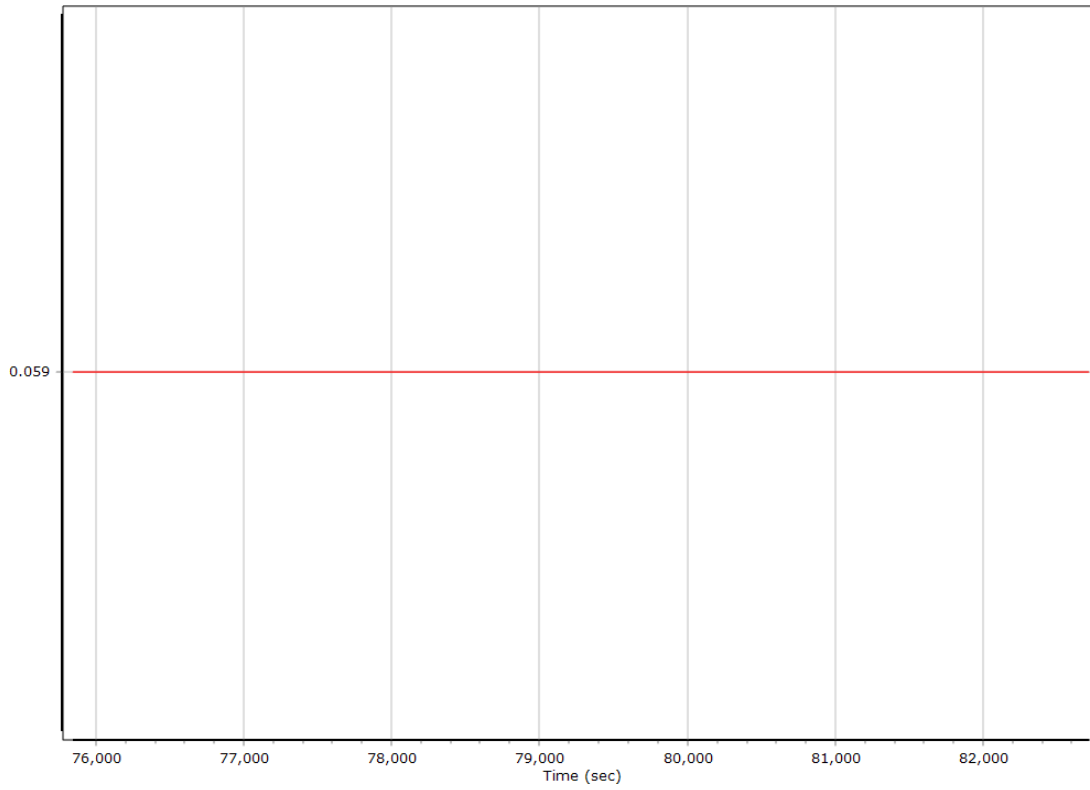
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion GNSS Nav		
Stabilized mount	True		
Processing start time	75785.000 (1/5/2020 9:03:05 PM)		
Processing end time	82735.000 (1/5/2020 10:58:55 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.059	-0.191	-1.282
Gimbal to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

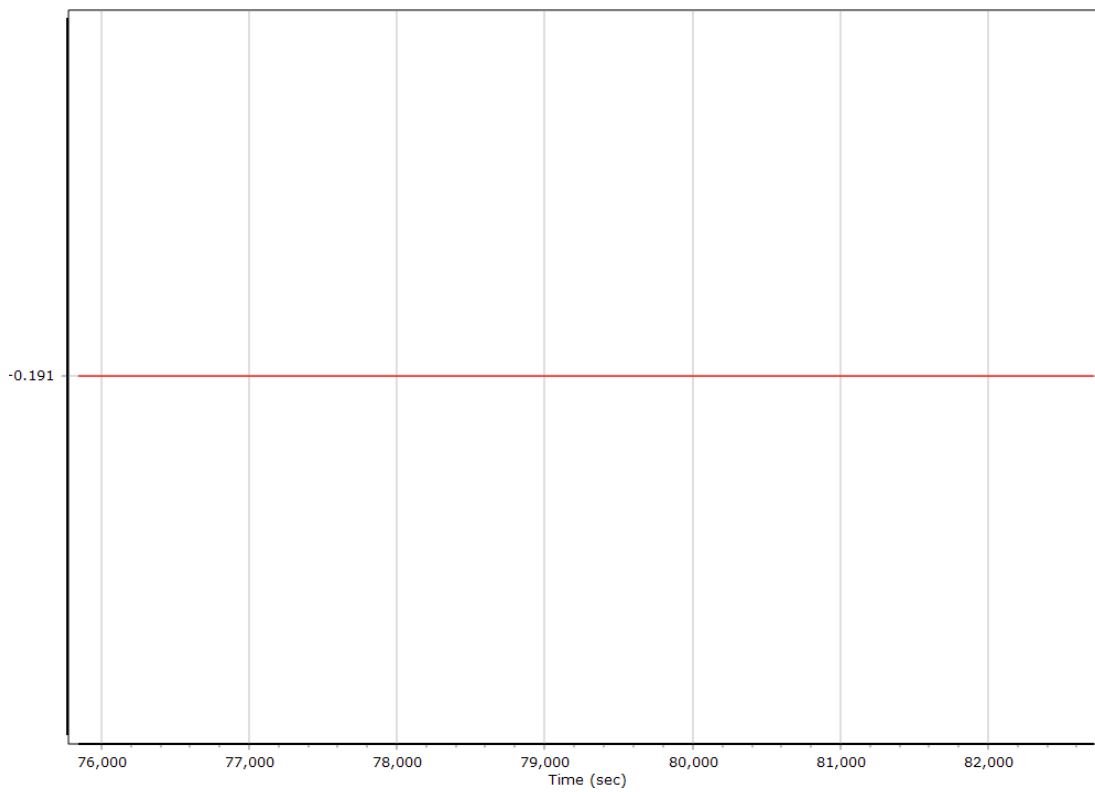
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

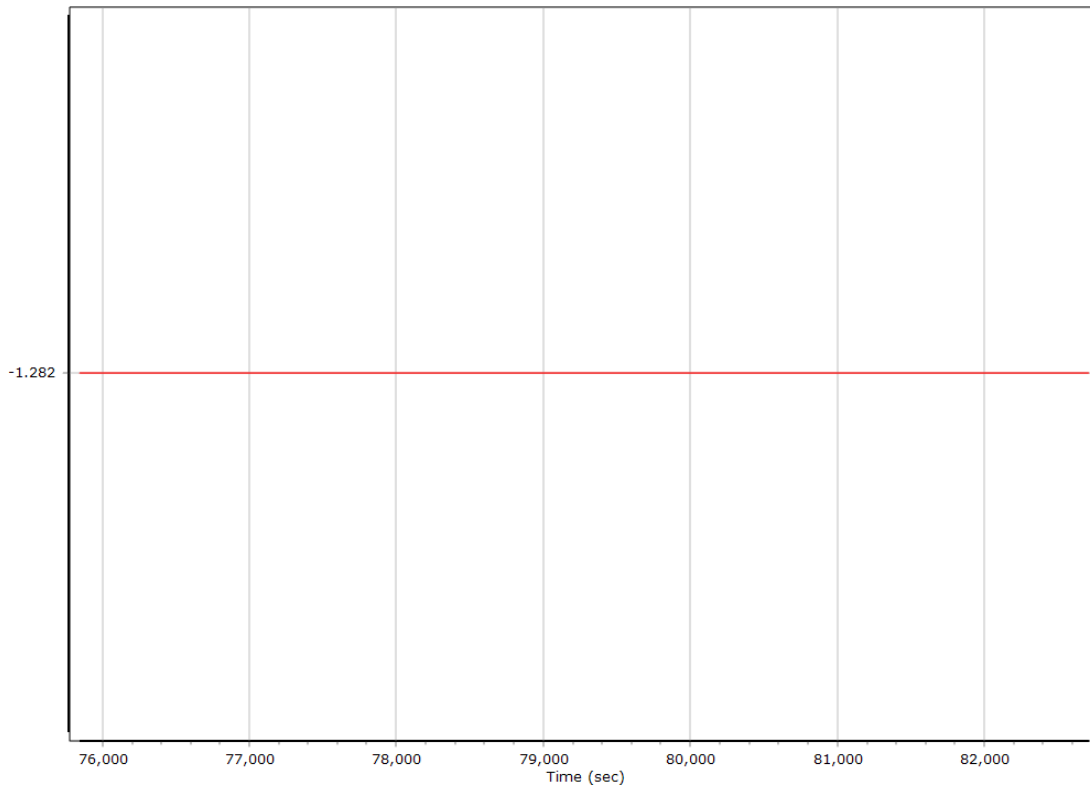
X Reference-Primary GNSS Lever Arm (m)



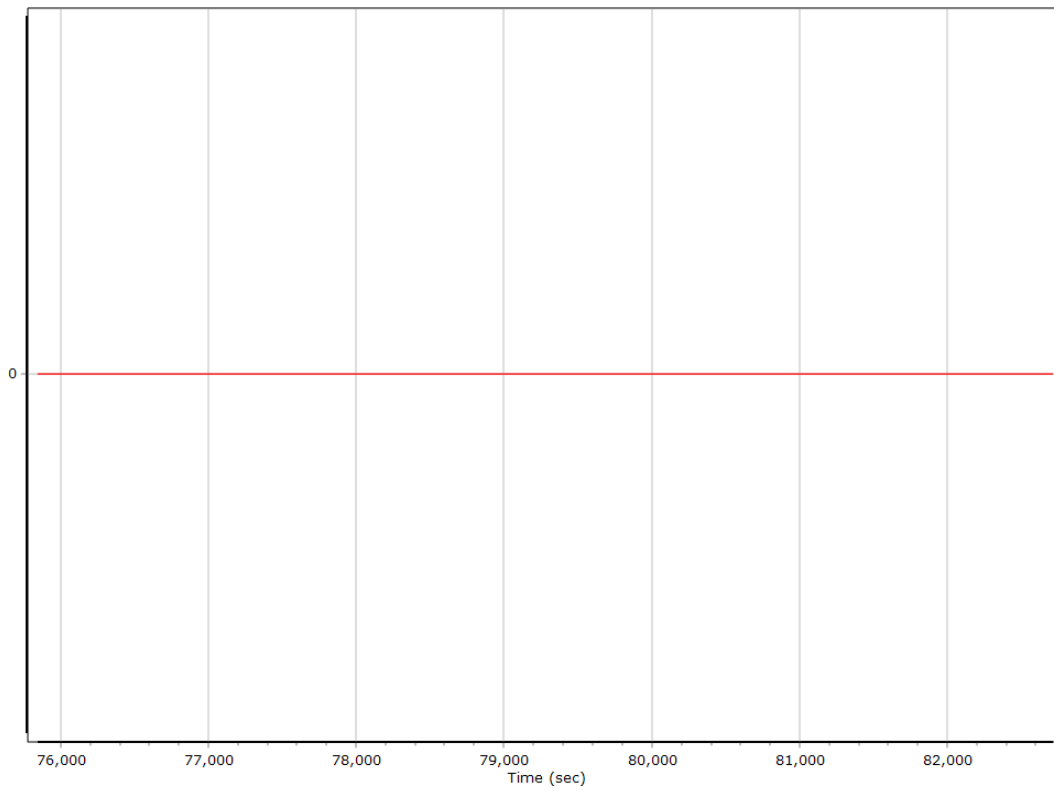
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



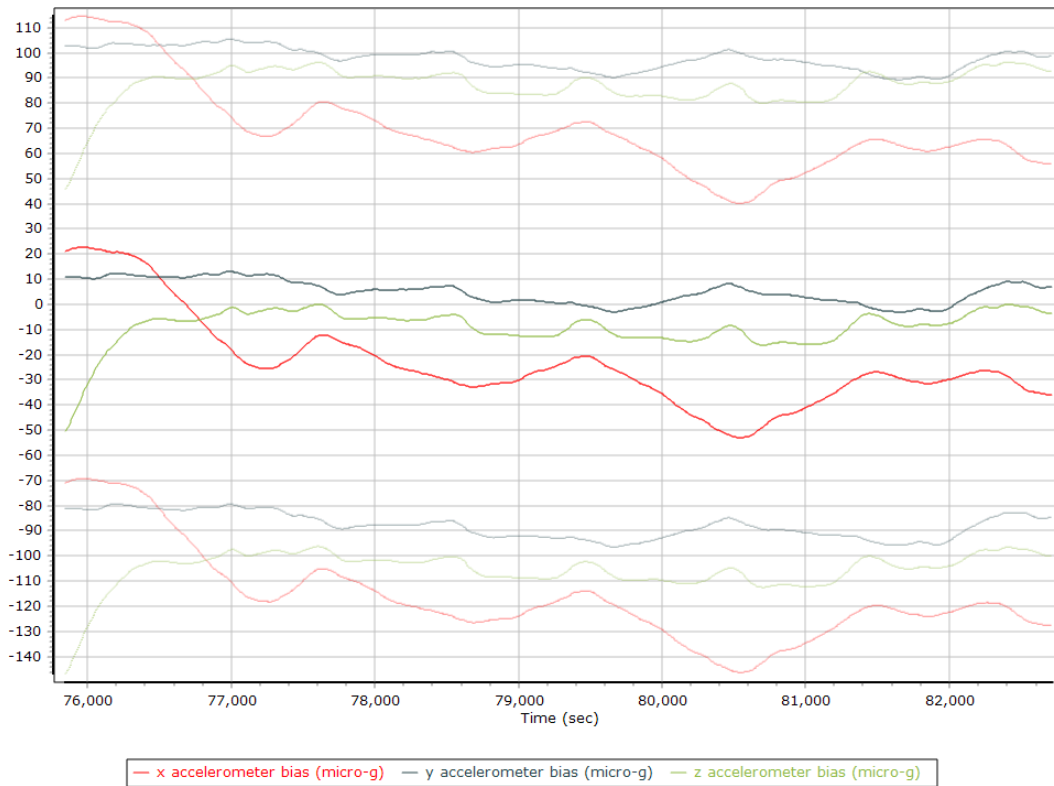
Reference-Primary GNSS Lever Arm Figure of Merit



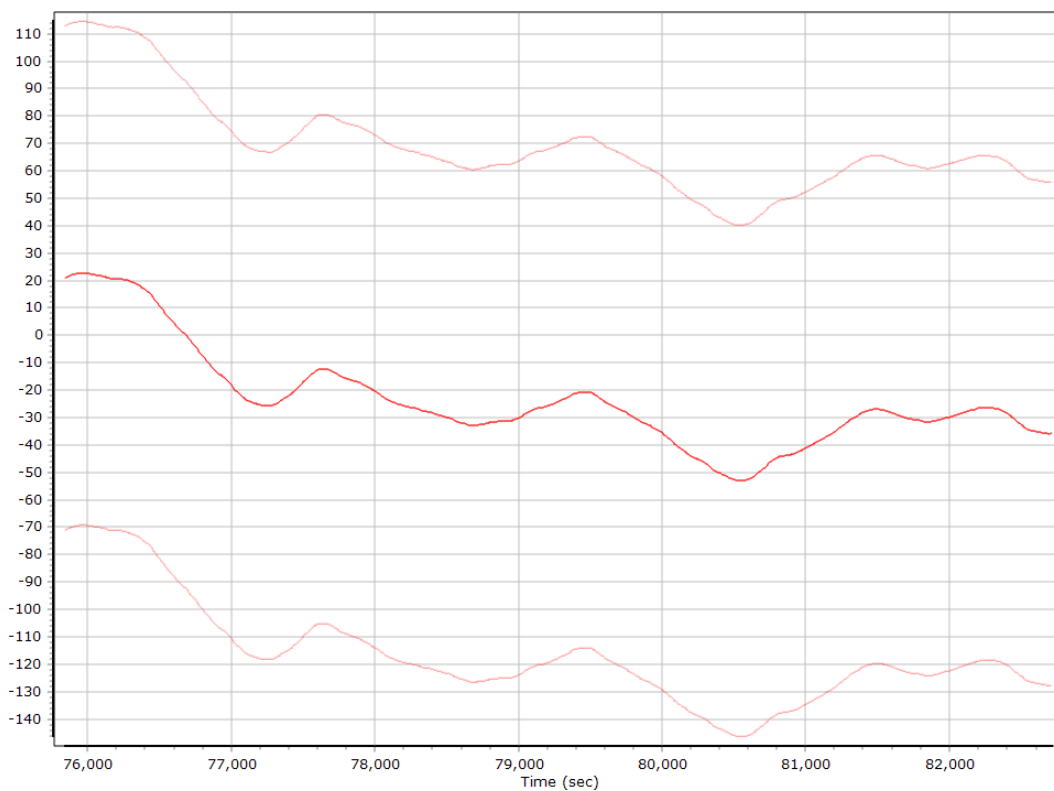
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

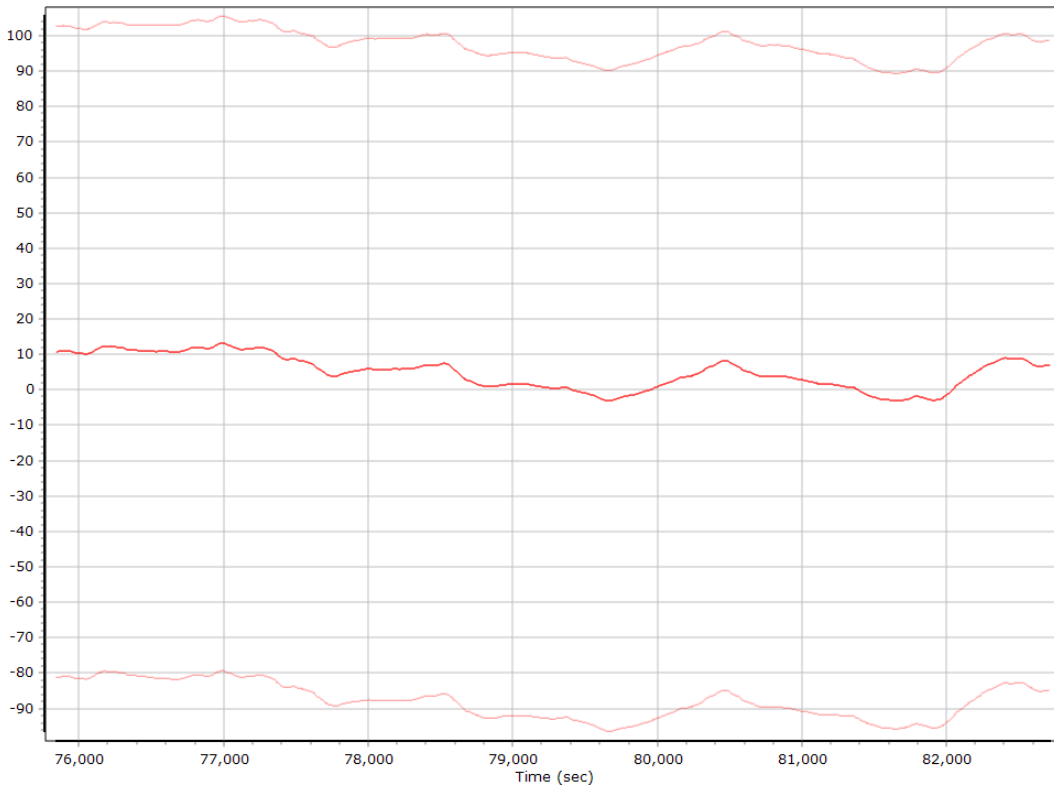
Accelerometer Bias (micro-g)



X Accelerometer Bias (micro-g)



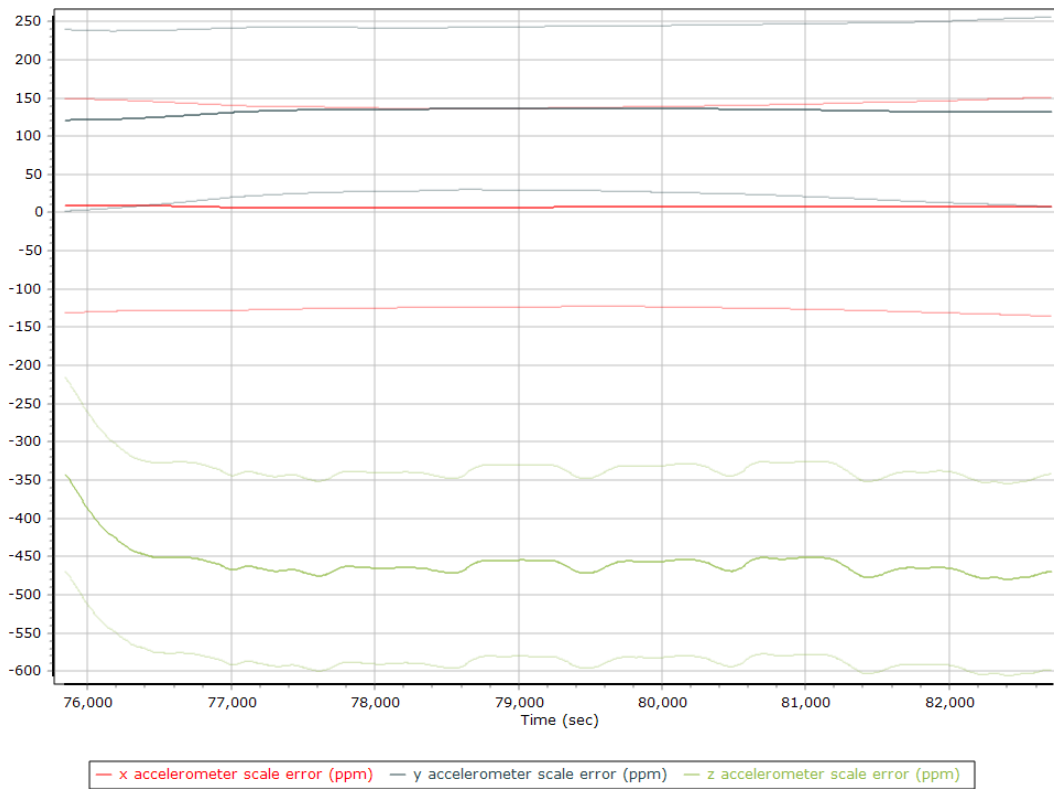
Y Accelerometer Bias (micro-g)



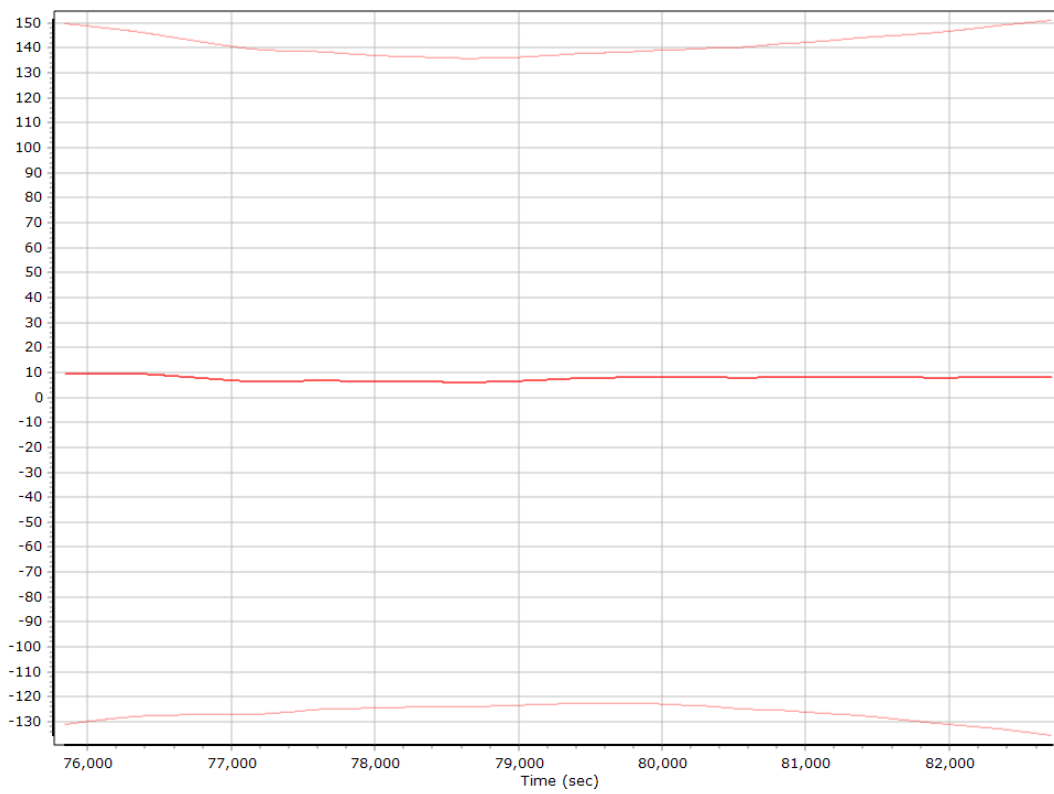
Z Accelerometer Bias (micro-g)



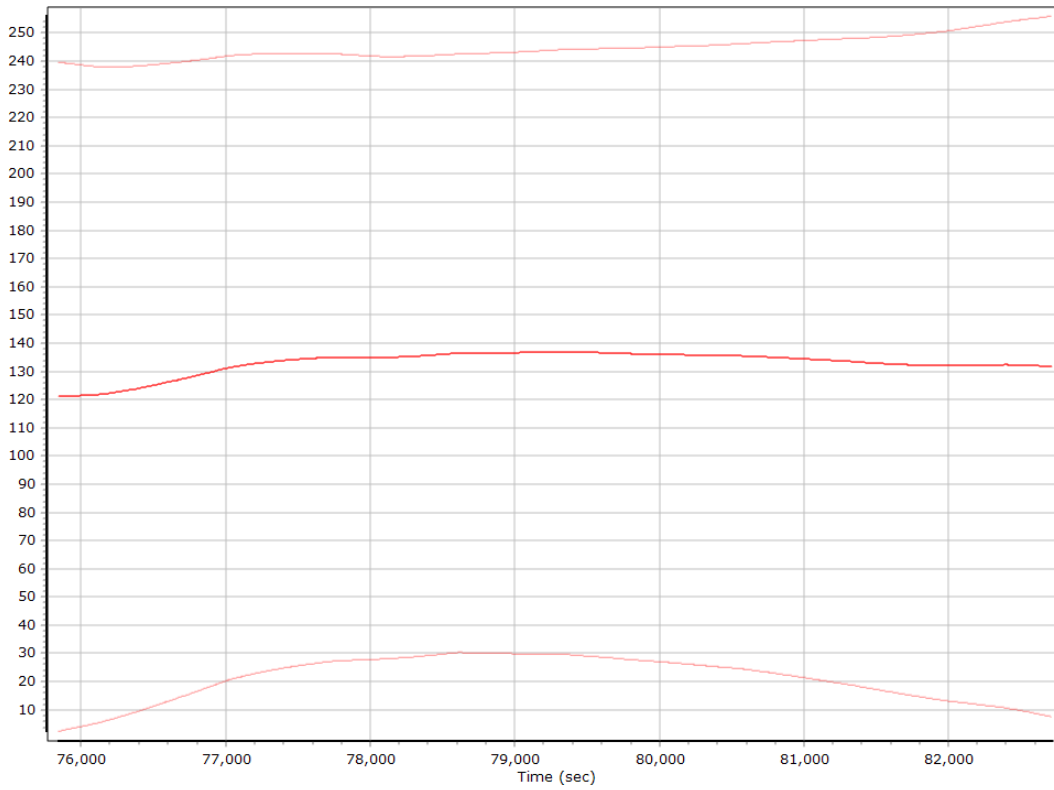
Accelerometer Scale Error (ppm)



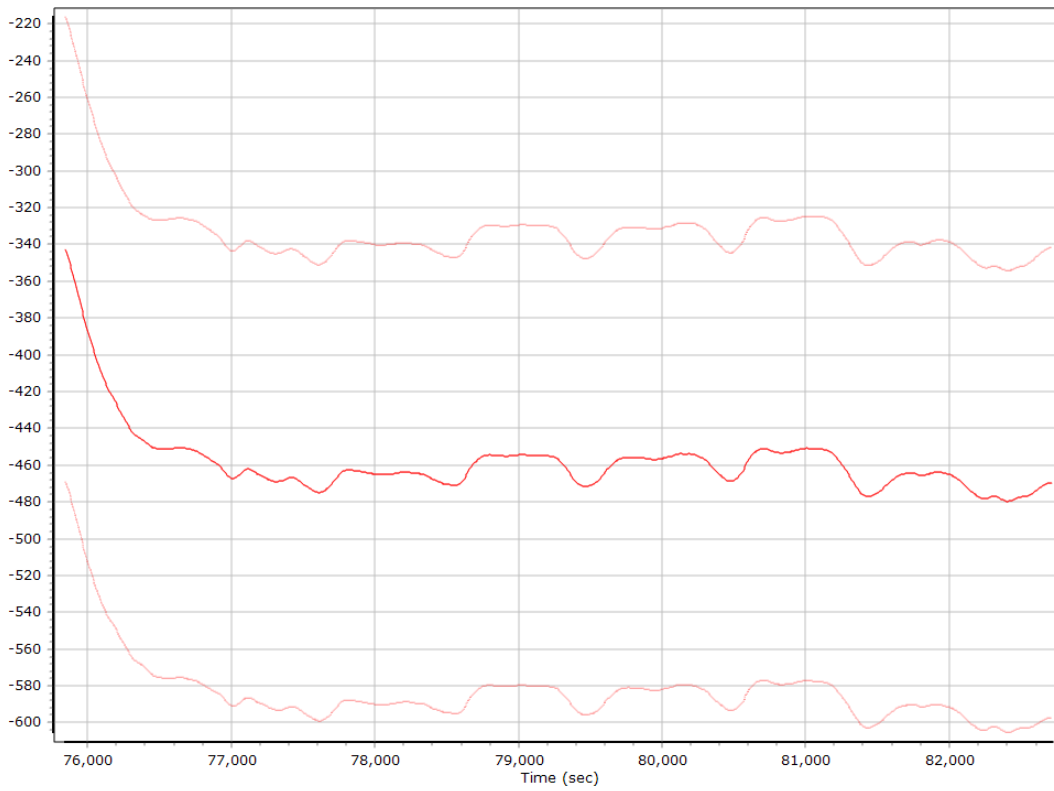
X Accelerometer Scale Error (ppm)



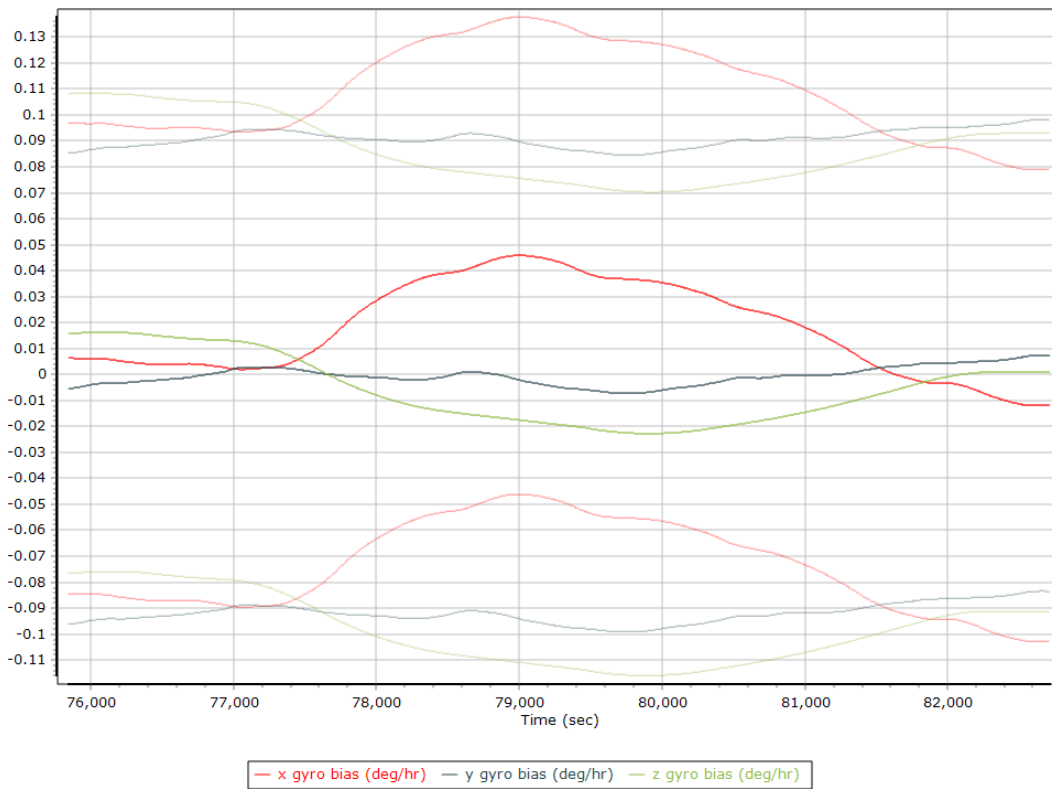
Y Accelerometer Scale Error (ppm)



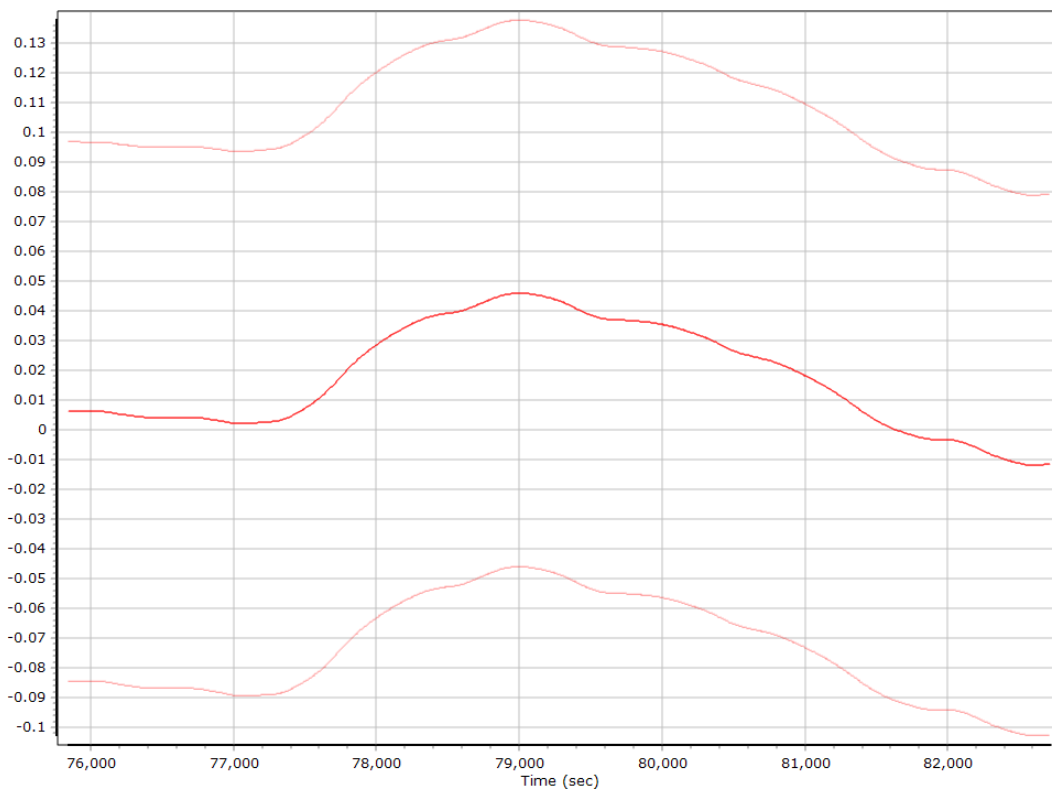
Z Accelerometer Scale Error (ppm)



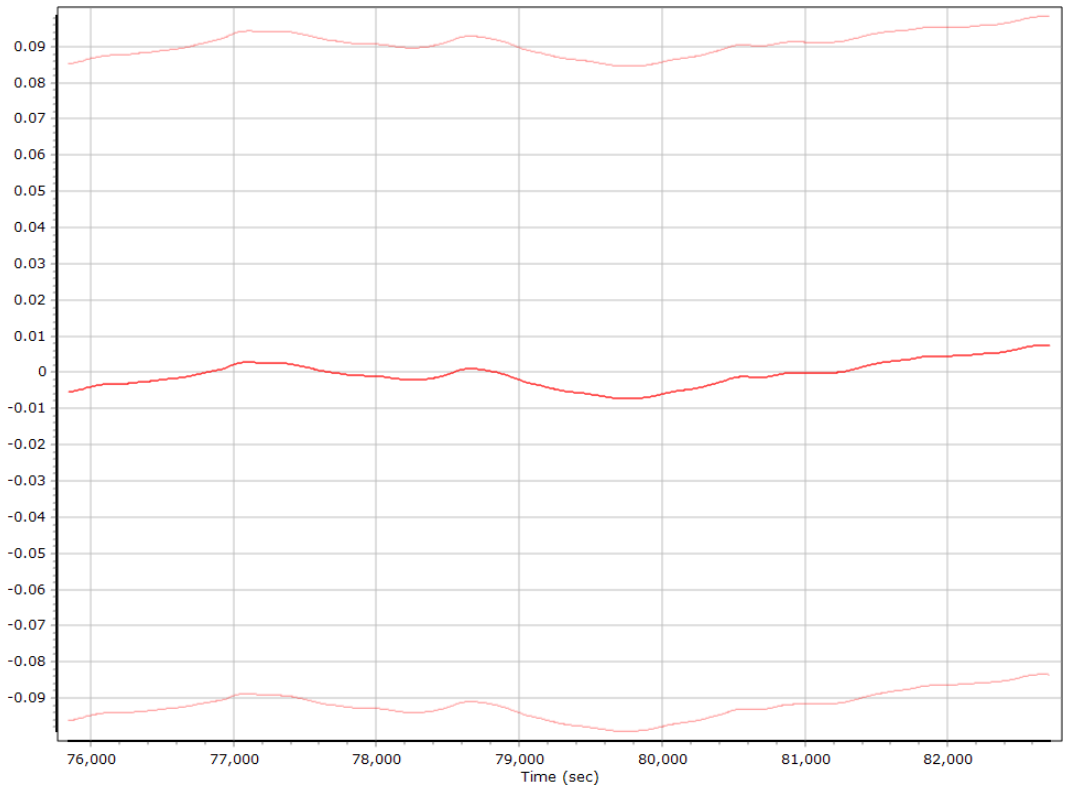
Gyro Bias (deg/h)



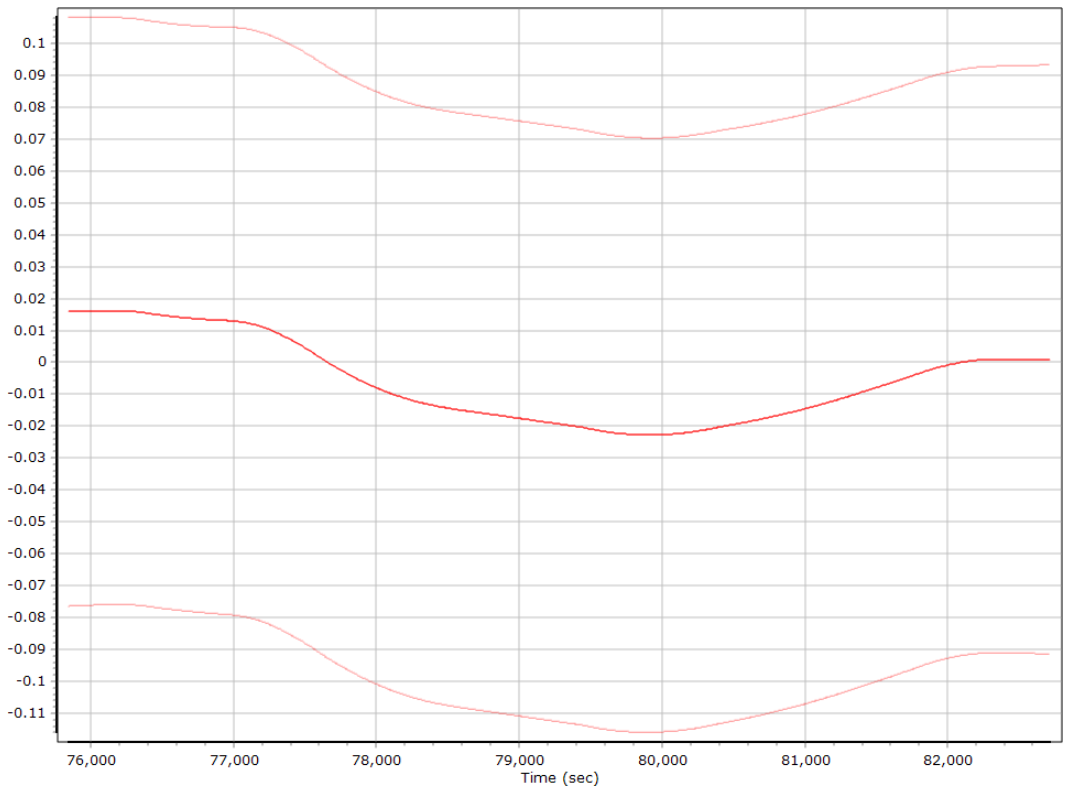
X Gyro Bias (deg/h)



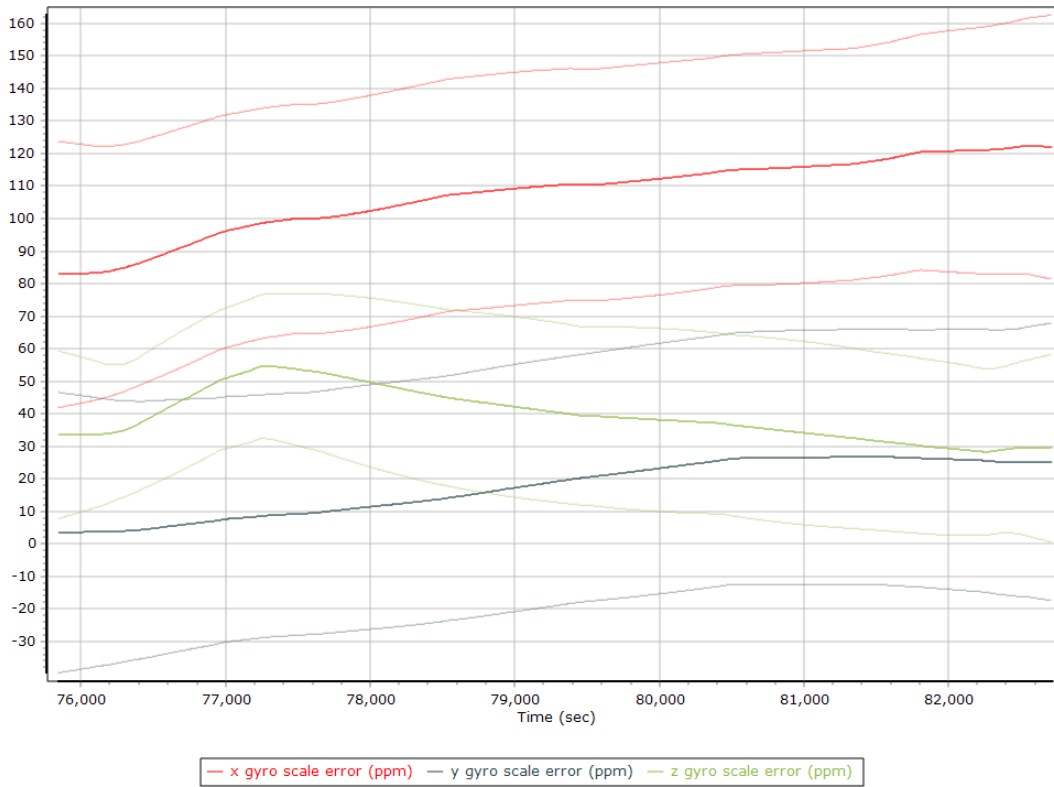
Y Gyro Bias (deg/h)



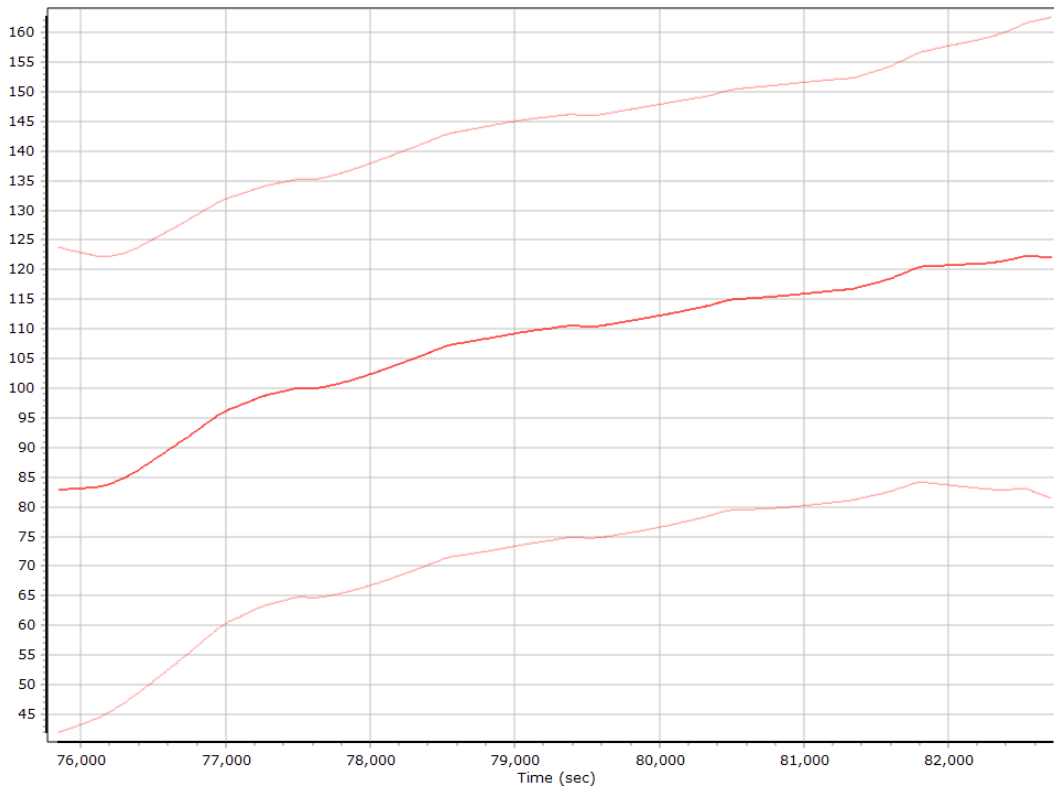
Z Gyro Bias (deg/h)



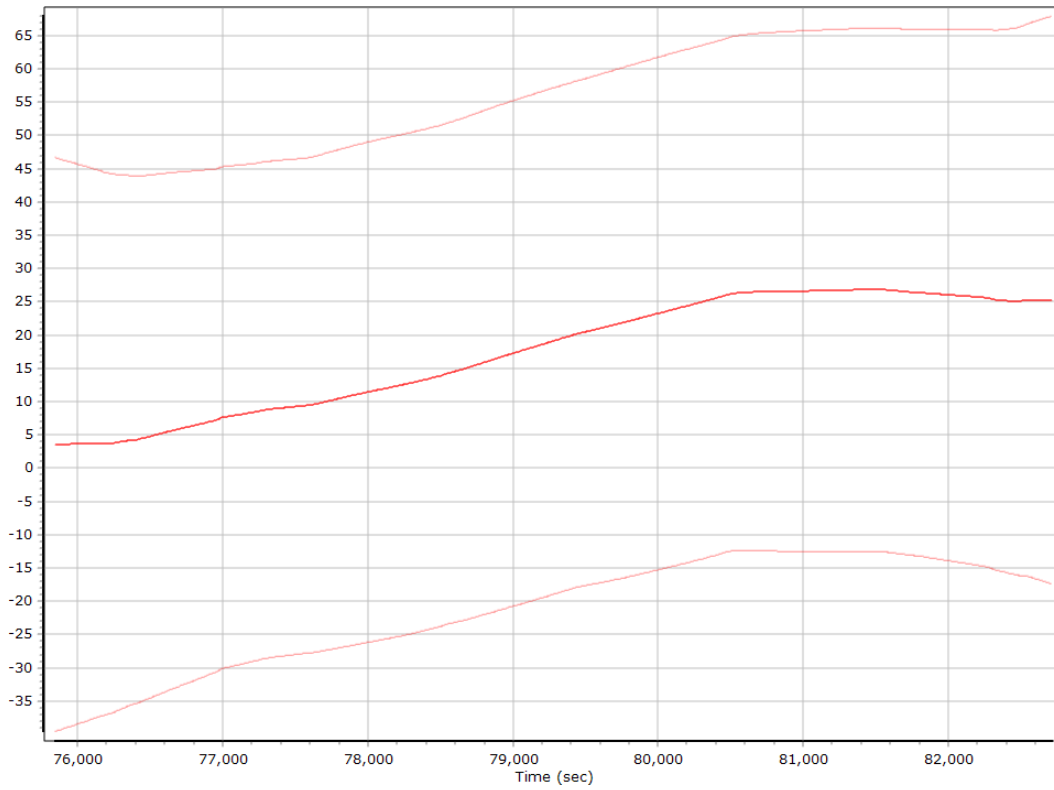
Gyro Scale Error (ppm)



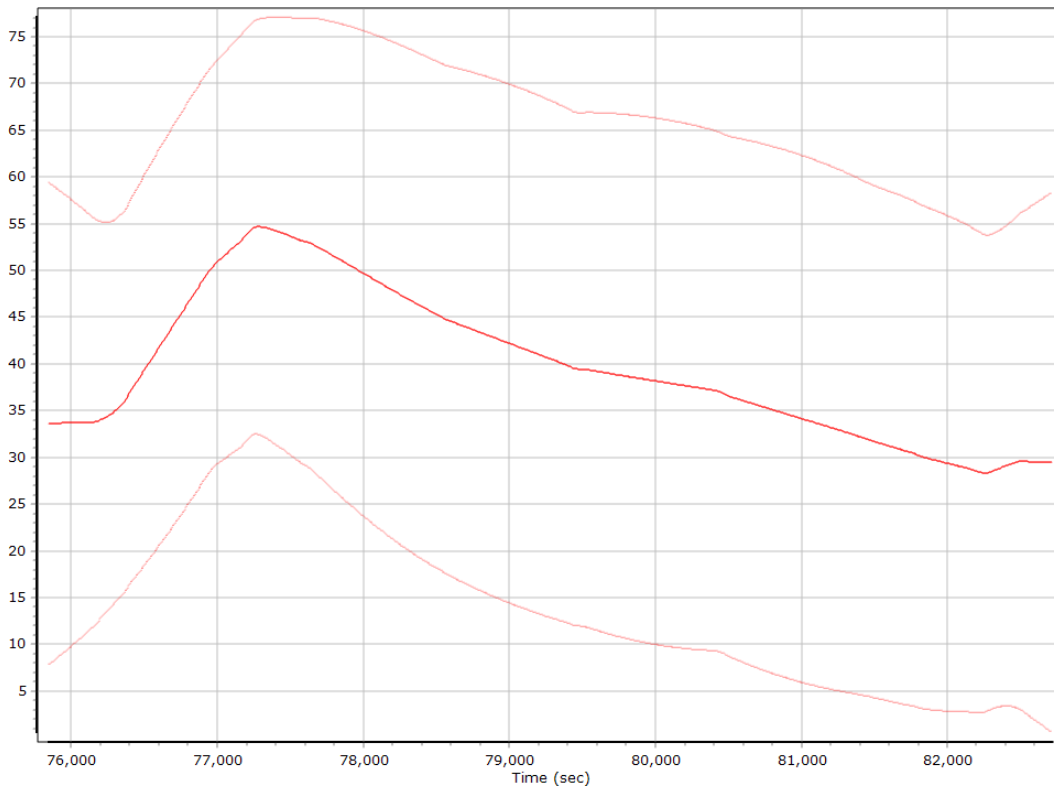
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)



Z Gyro Scale Error (ppm)

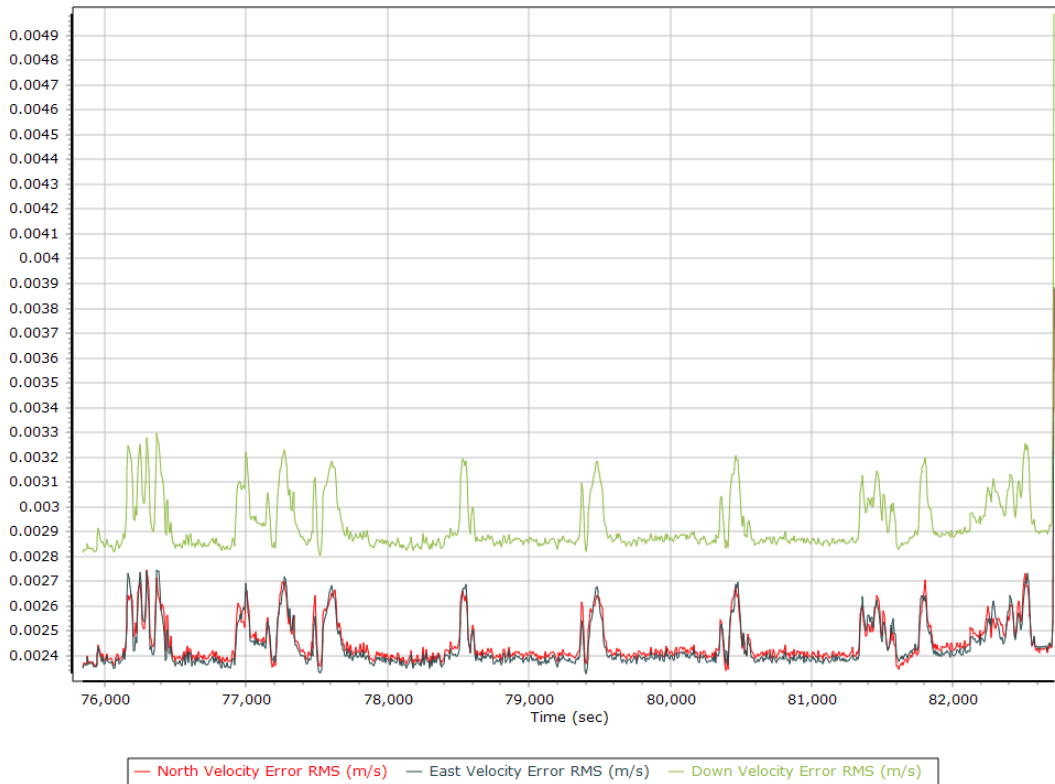


Smoothed Performance Metrics

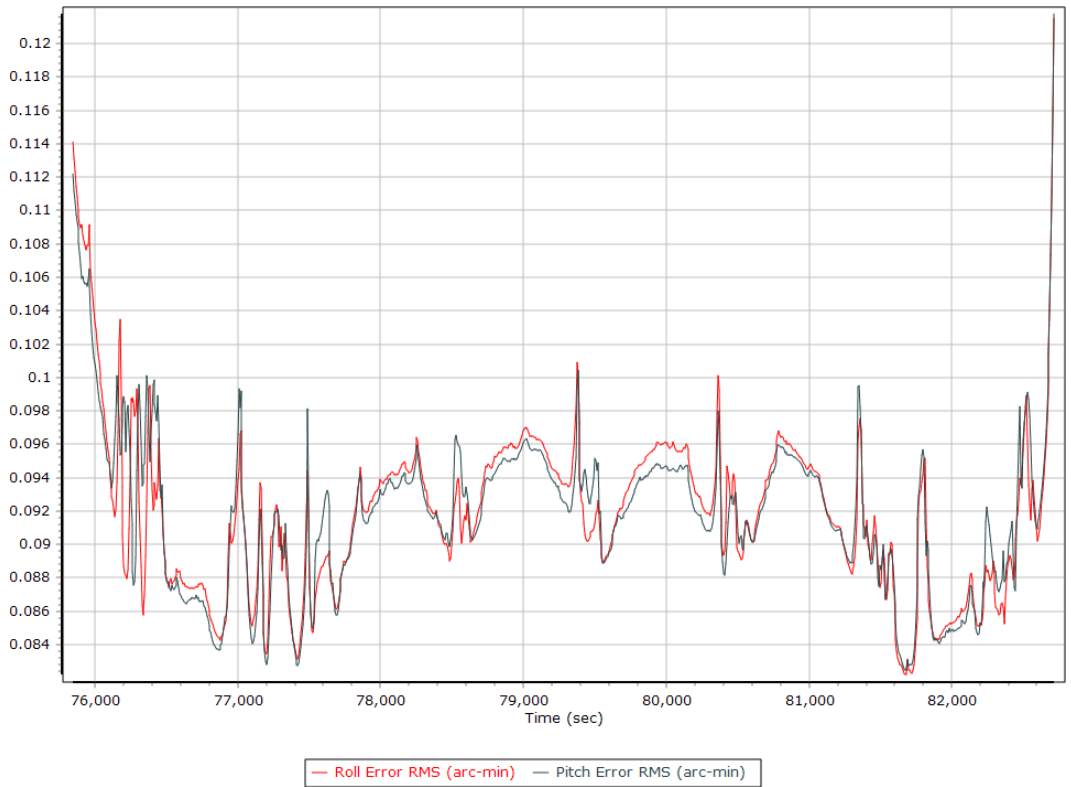
Position Error RMS (m)



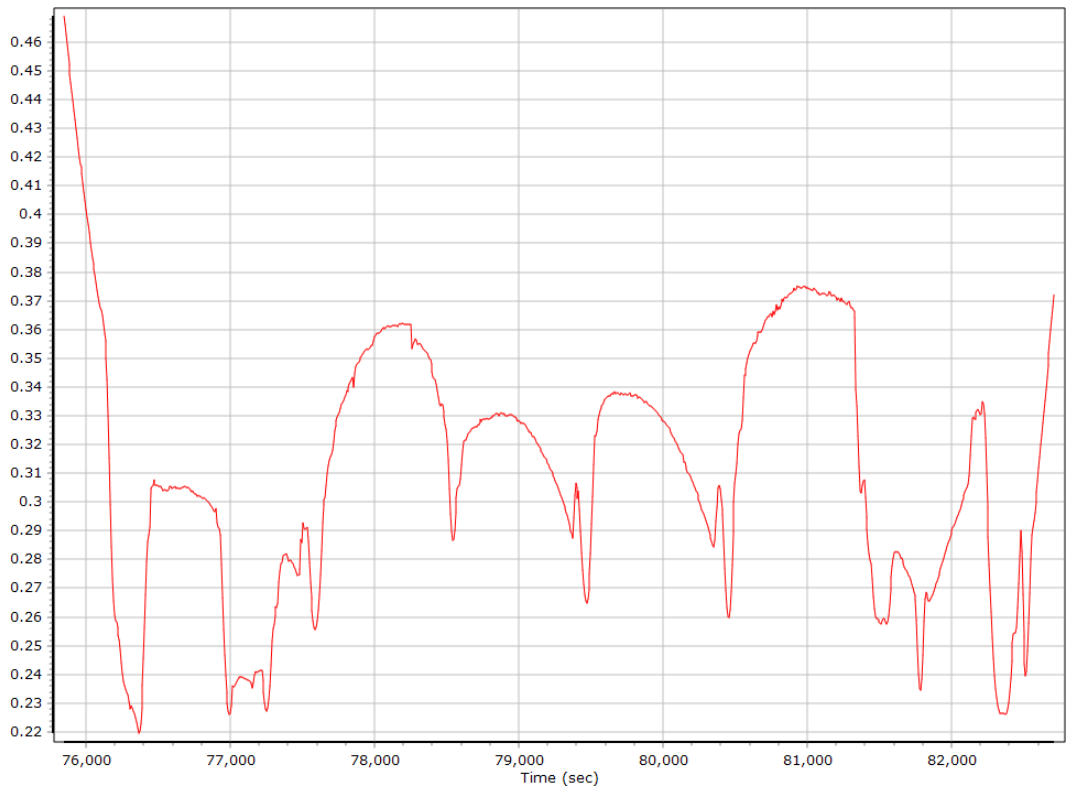
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)



Heading Error RMS (arc-min)



General Information

Mission Information

Project name	6220007a
Processing date	2020-01-08 20:09:16
Mission date	2020-01-07 20:34:30
Mission duration	02:08:40.000
Processing mode	IN-Fusion GNSS Nav

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N8708
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
ALS.000	POS Data
ALS.001	POS Data
ALS.002	POS Data
ALS.003	POS Data
ALS.004	POS Data
ALS.005	POS Data
ALS.006	POS Data
ALS.007	POS Data
ALS.008	POS Data
ALS.009	POS Data
ALS.010	POS Data
ALS.011	POS Data
ALS.012	POS Data
ALS.013	POS Data
ALS.014	POS Data
ALS.015	POS Data
ALS.016	POS Data
ALS.017	POS Data
ALS.018	POS Data
ALS.019	POS Data
ALS.020	POS Data
ALS.021	POS Data
ALS.022	POS Data
ALS.023	POS Data
ALS.024	POS Data
ALS.025	POS Data

Input Files

File Name	File type
Ephm0070.20g	GLONASS Broadcast Ephemeris
Ephm0070.20n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_6220007a.out	SBET Trajectory File

Rover Data Summary

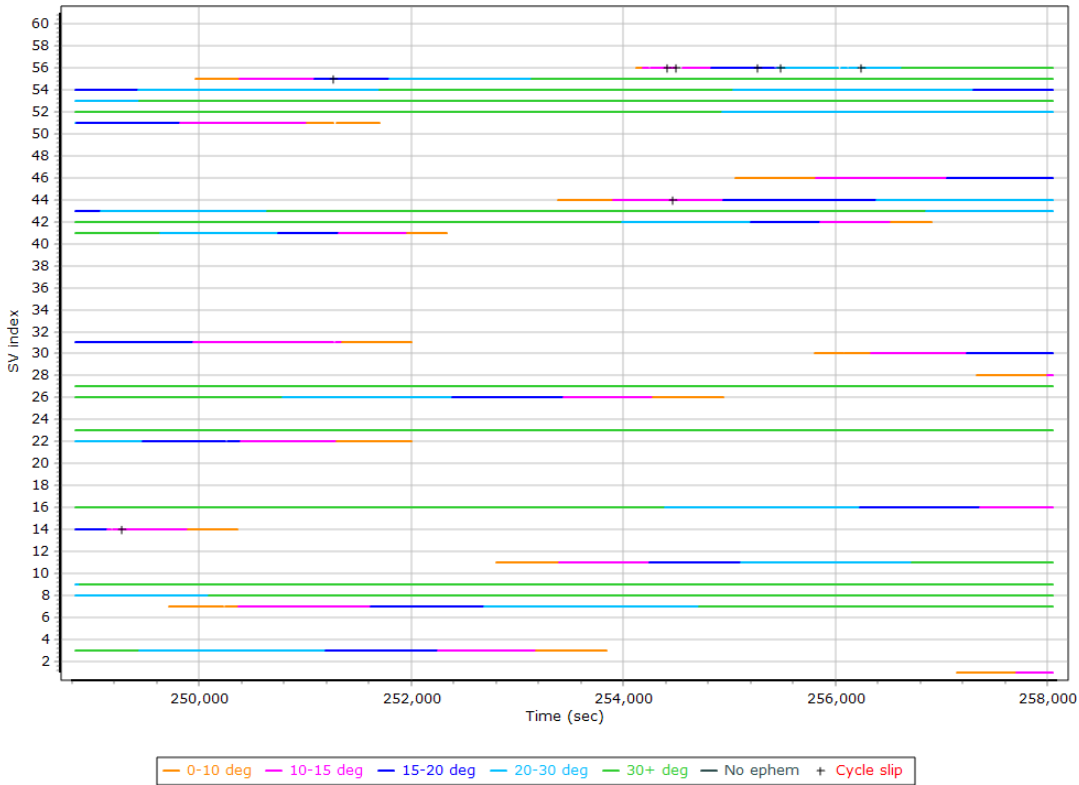
First raw data file	ALS.000		
Last raw data file	ALS.025		
Start GPS week	2087		
Start time	246851.442 (1/7/2020 8:34:11 PM)		
End time	258056.088 (1/7/2020 11:40:56 PM)		
Start of fine alignment	248770.996 (1/7/2020 9:06:10 PM)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.046	-0.192	-1.285
Gimbal 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

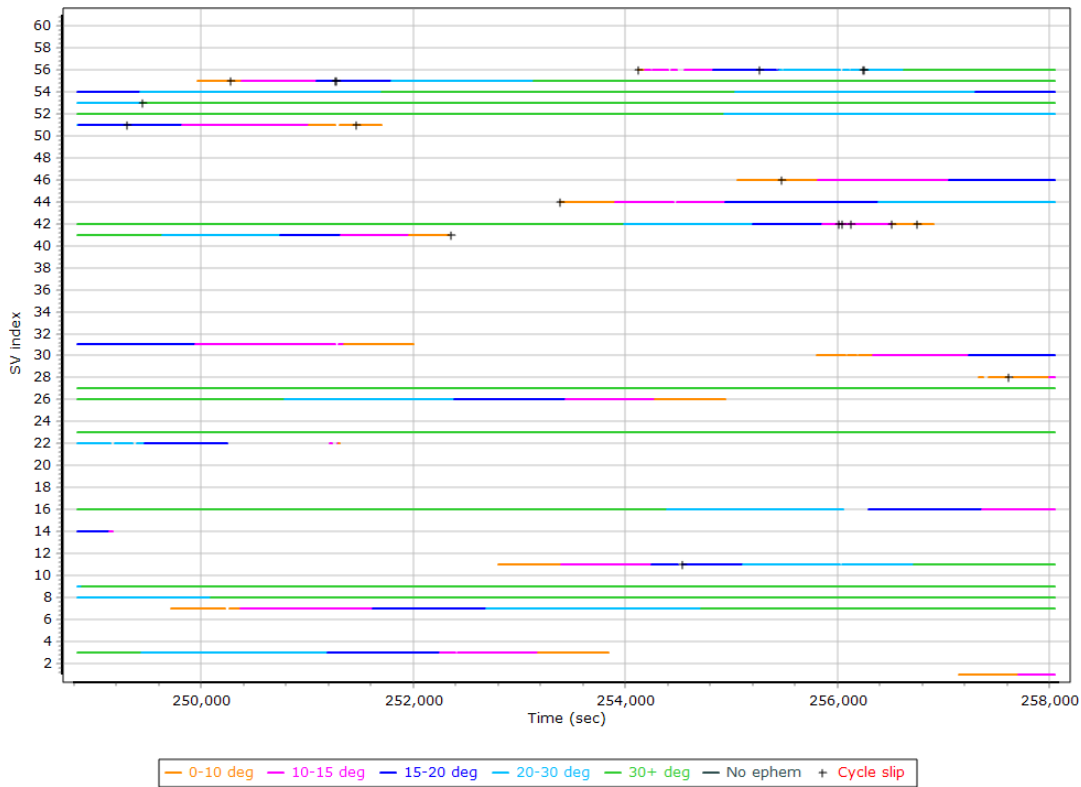
Raw IMU Import QC Summary

IMU data input file	imu_622007a.dat
IMU data check log file	imudt_622007a.log
IMU Records Processed	2240512
Termination Status	Normal
IMU Anomalies	0

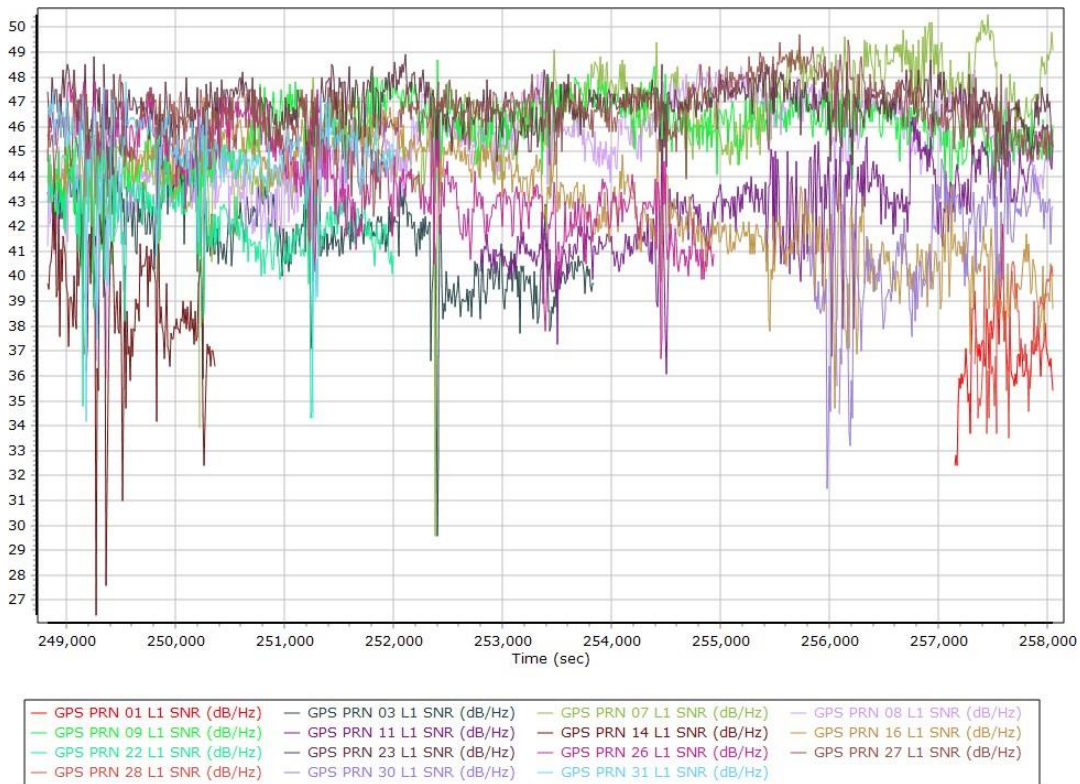
L1 Satellite Lock/Elevation



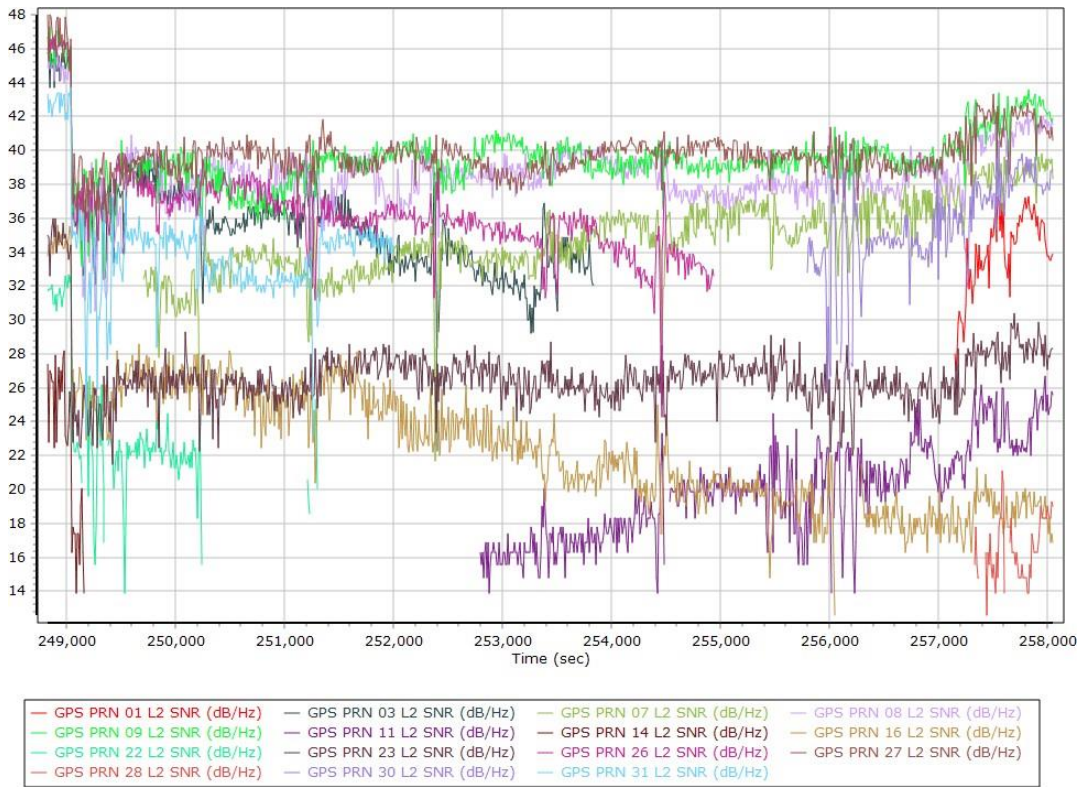
L2 Satellite Lock/Elevation



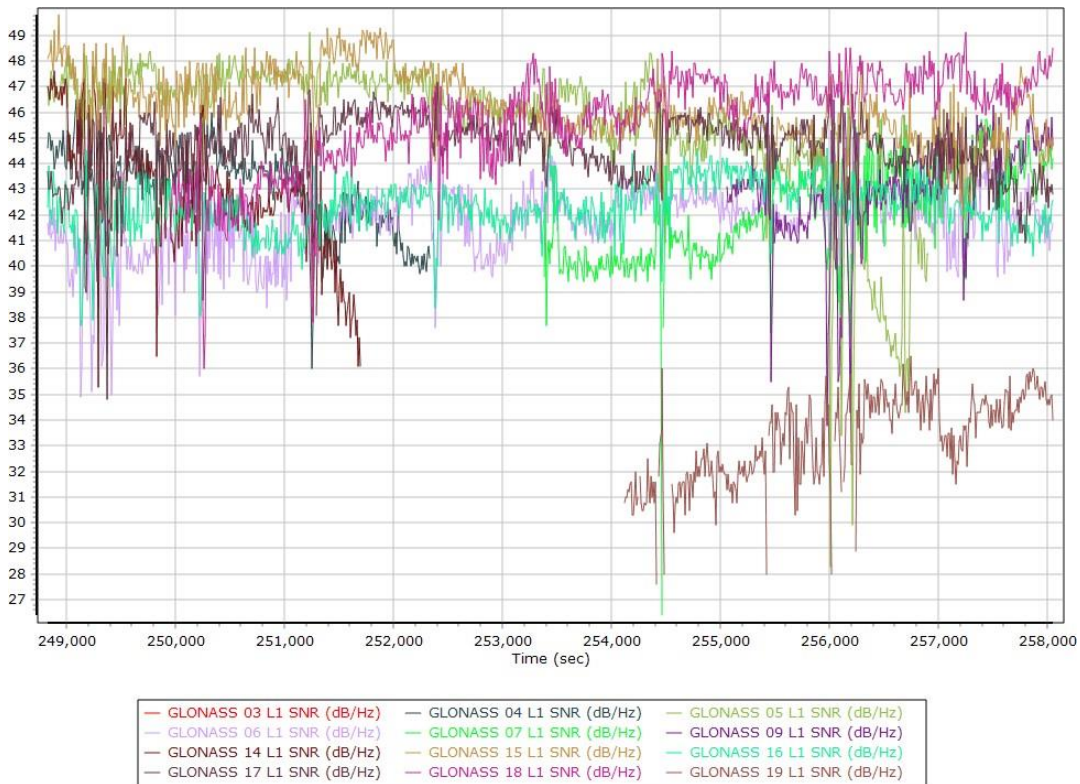
GPS L1 SNR



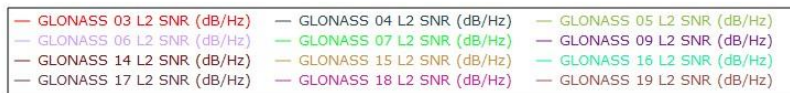
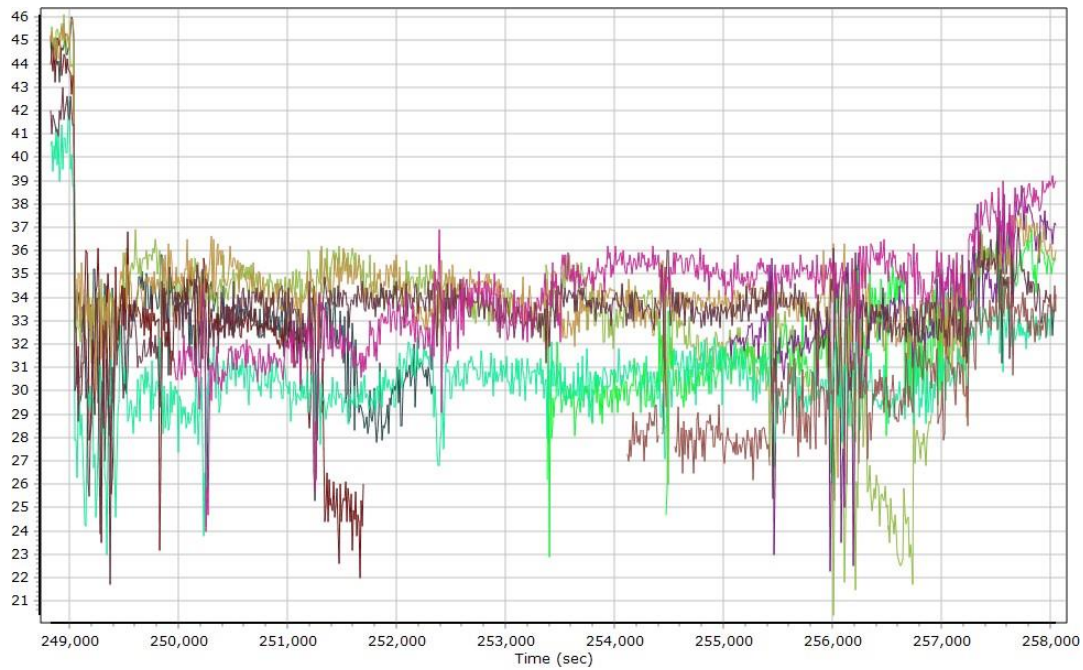
GPS L2 SNR



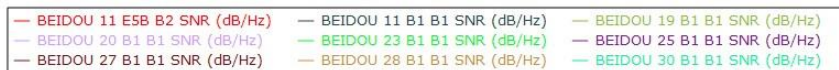
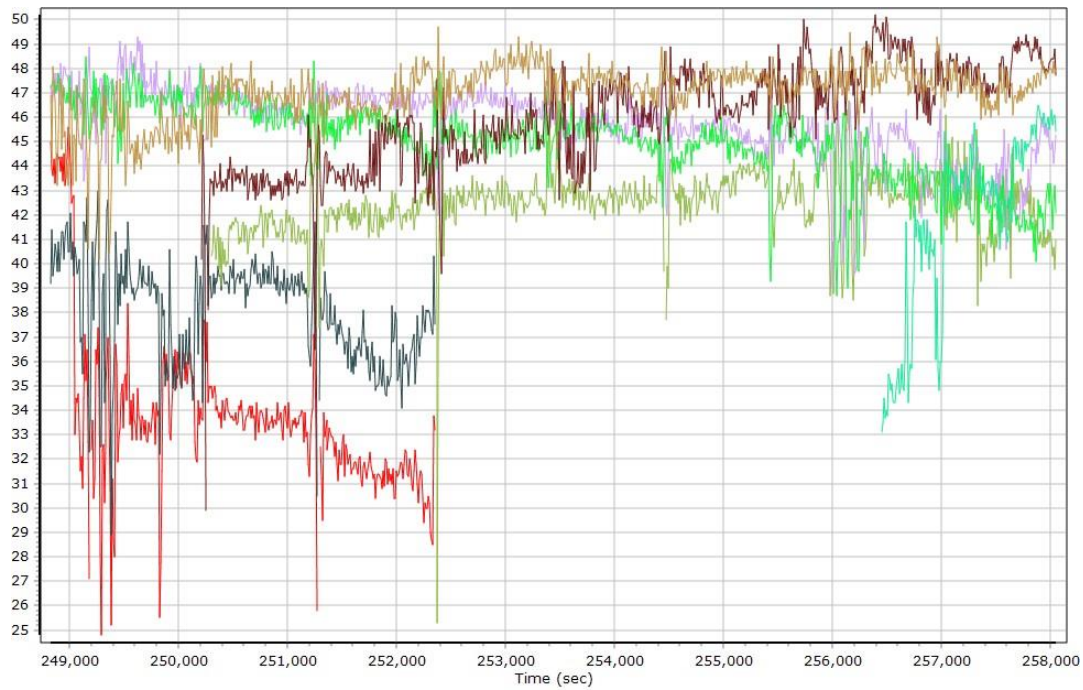
GLONASS L1 SNR



GLONASS L2 SNR

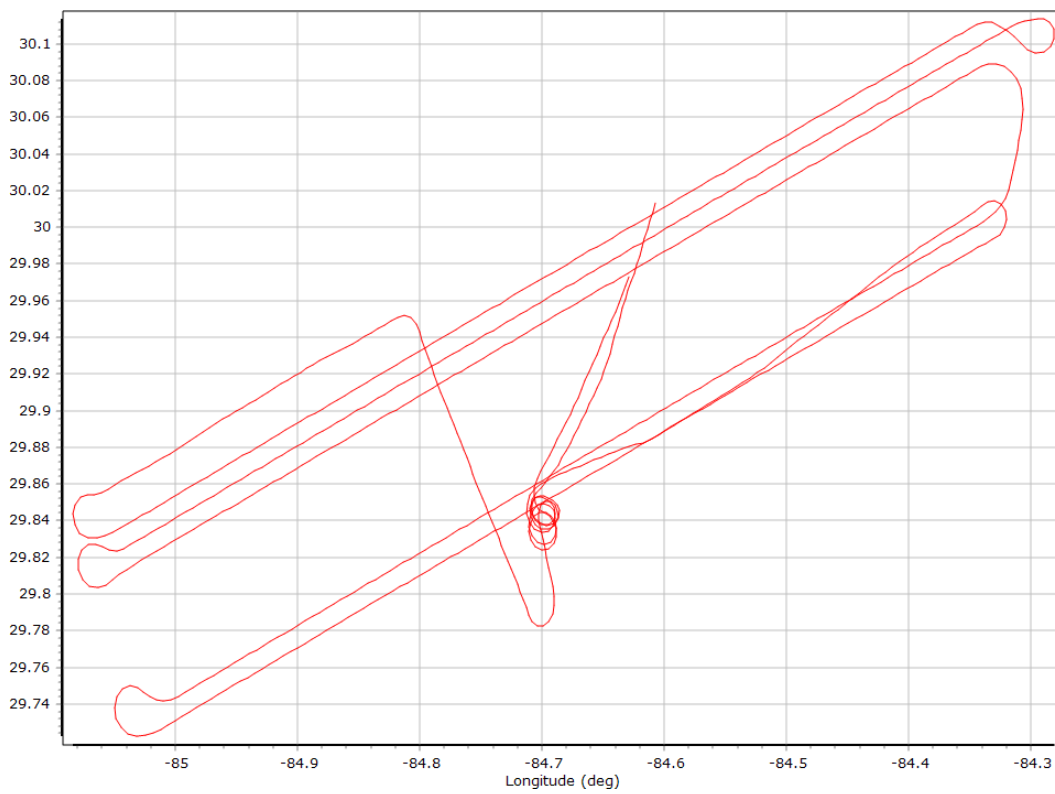


BEIDOU SNR

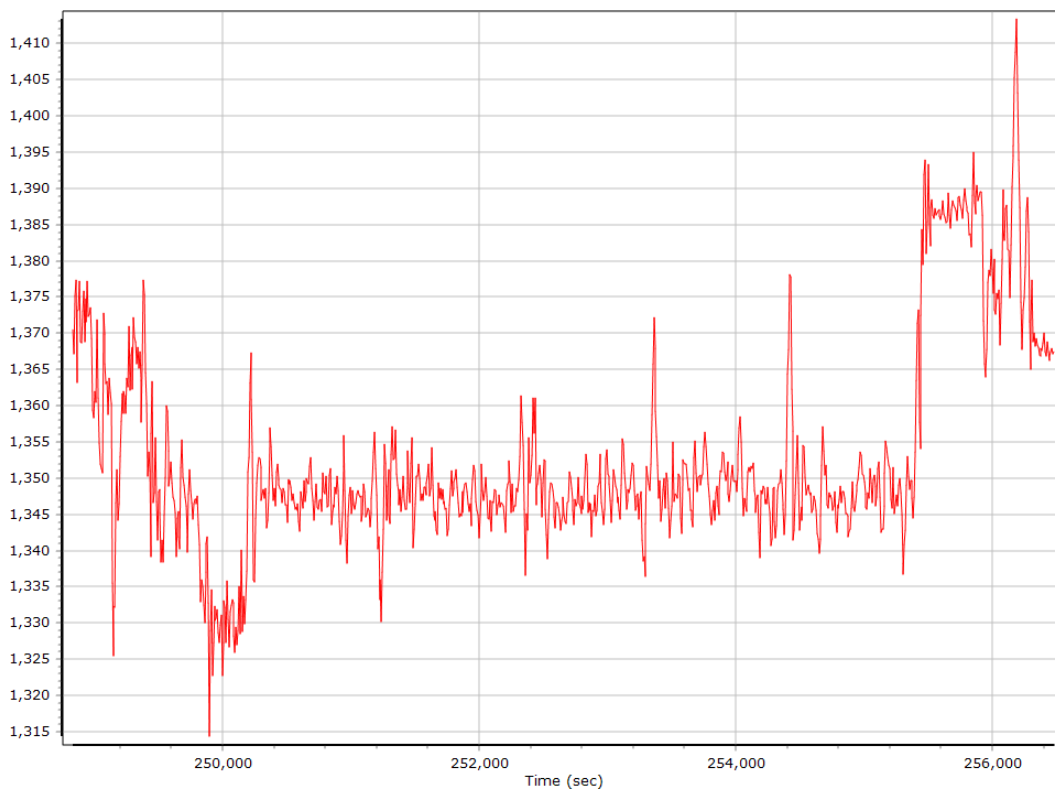


Trajectory Information

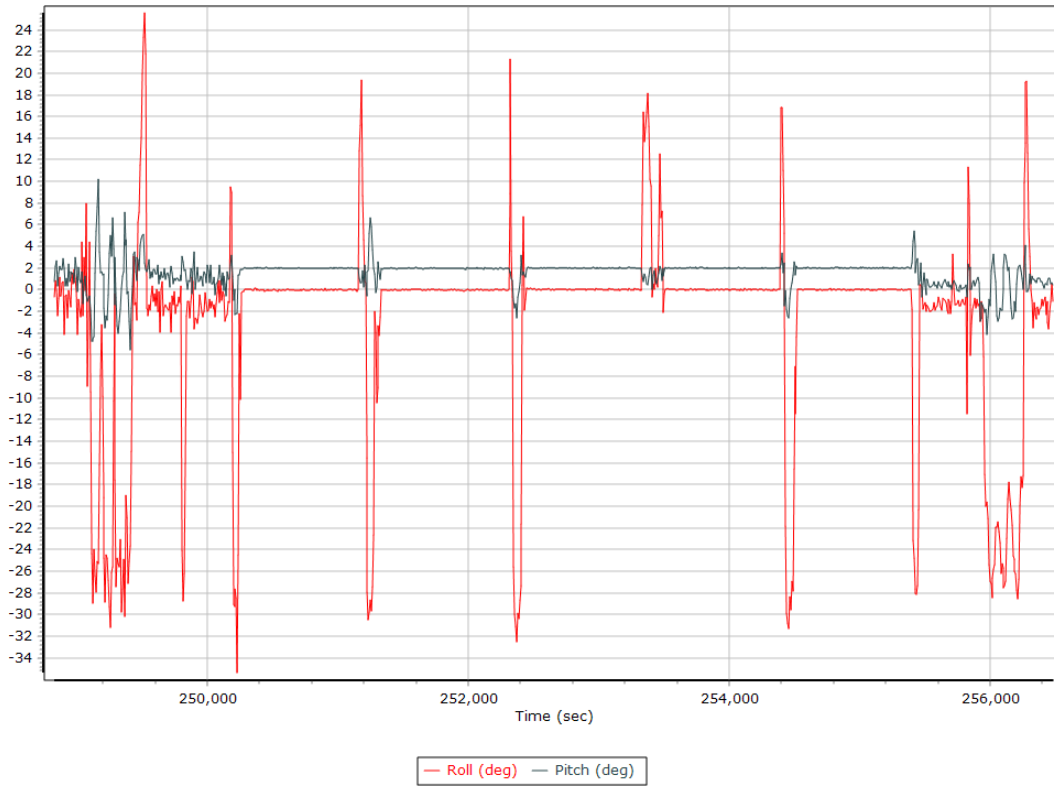
Top View



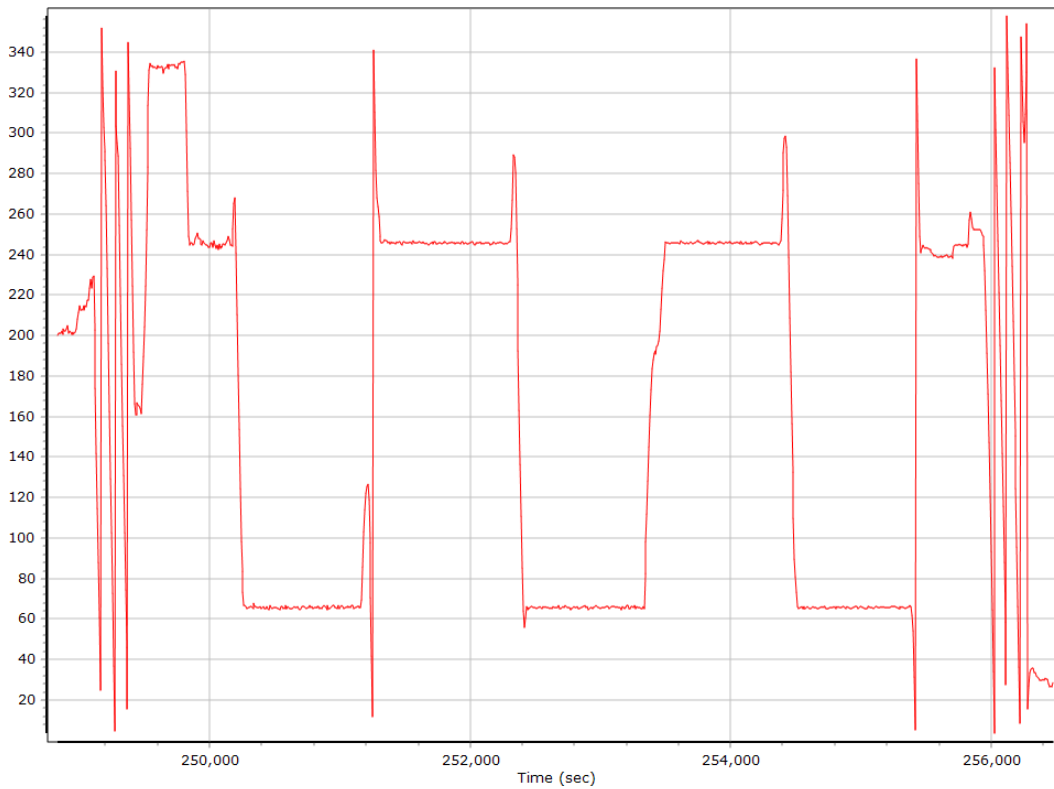
Altitude



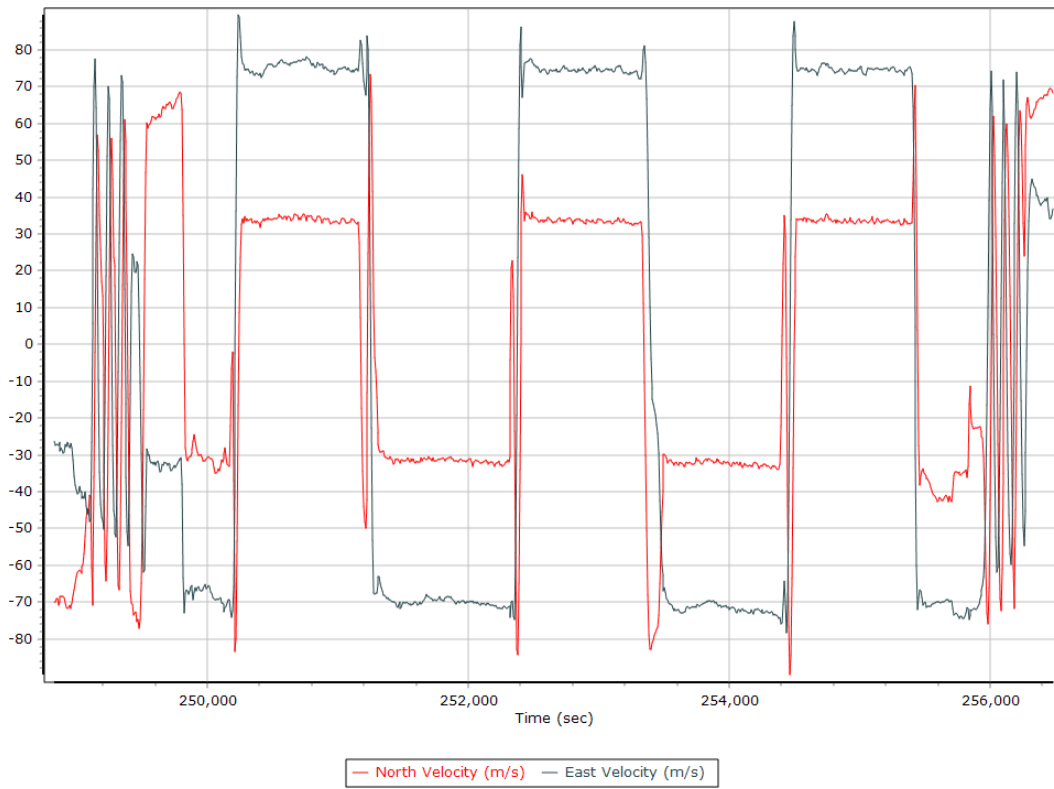
Roll/Pitch



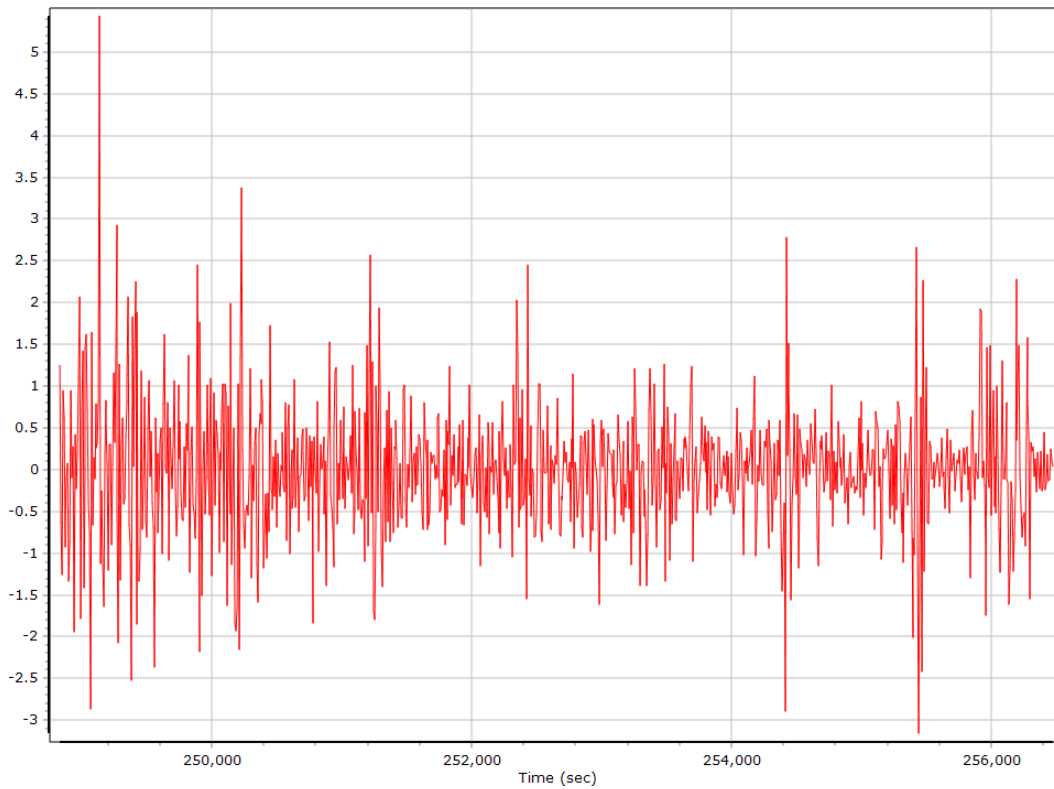
Heading



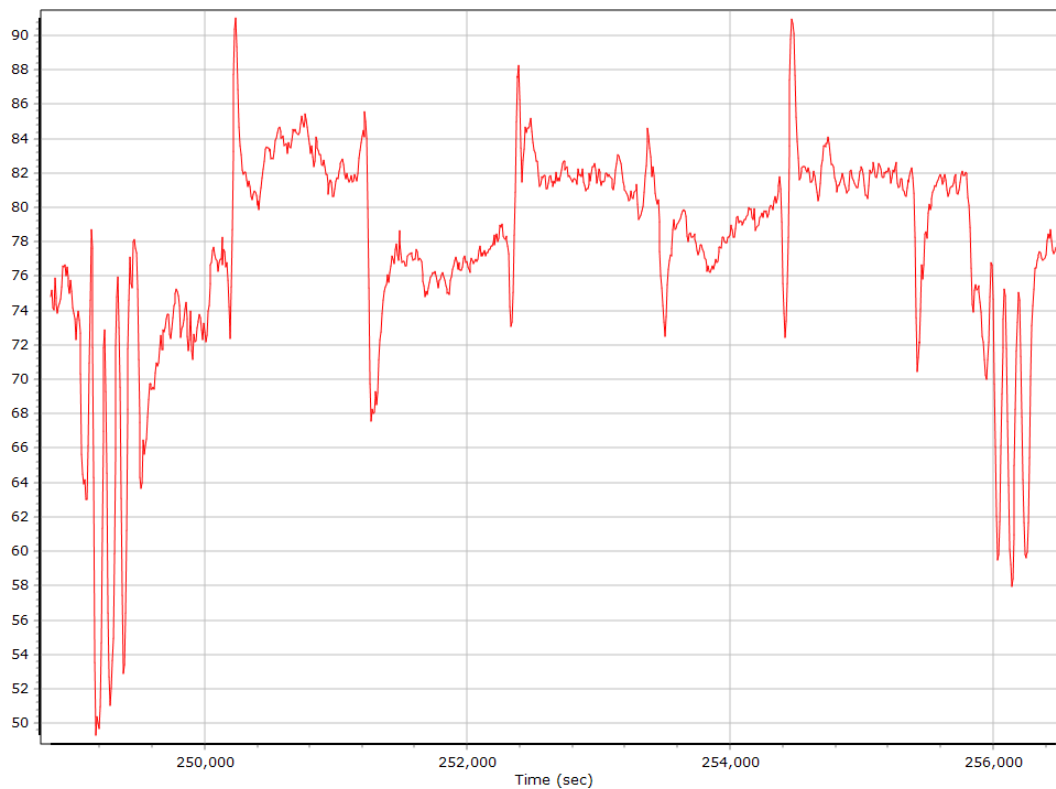
North/East Velocity



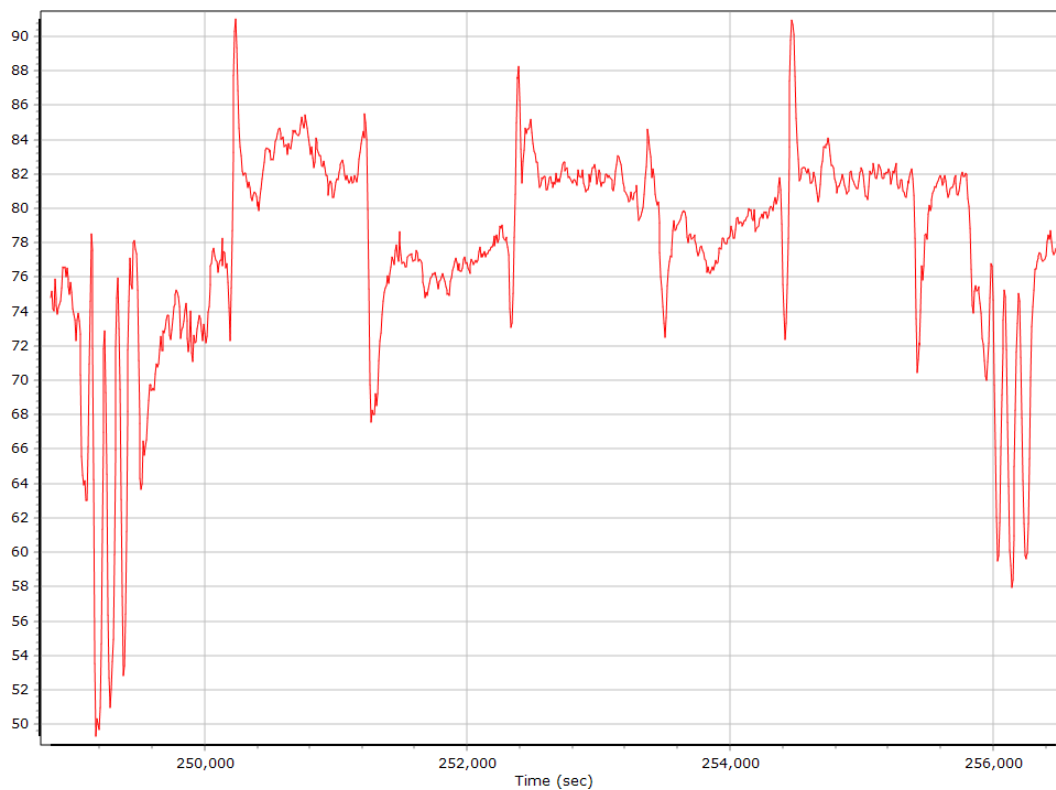
Down Velocity



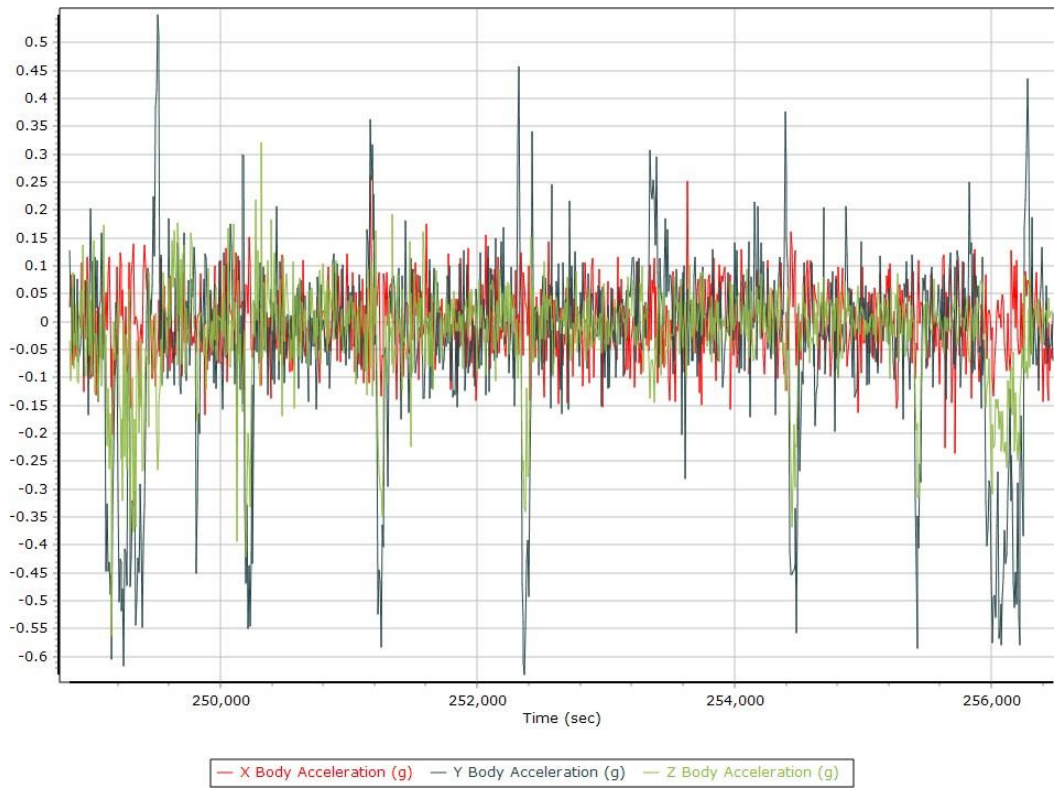
Total Speed



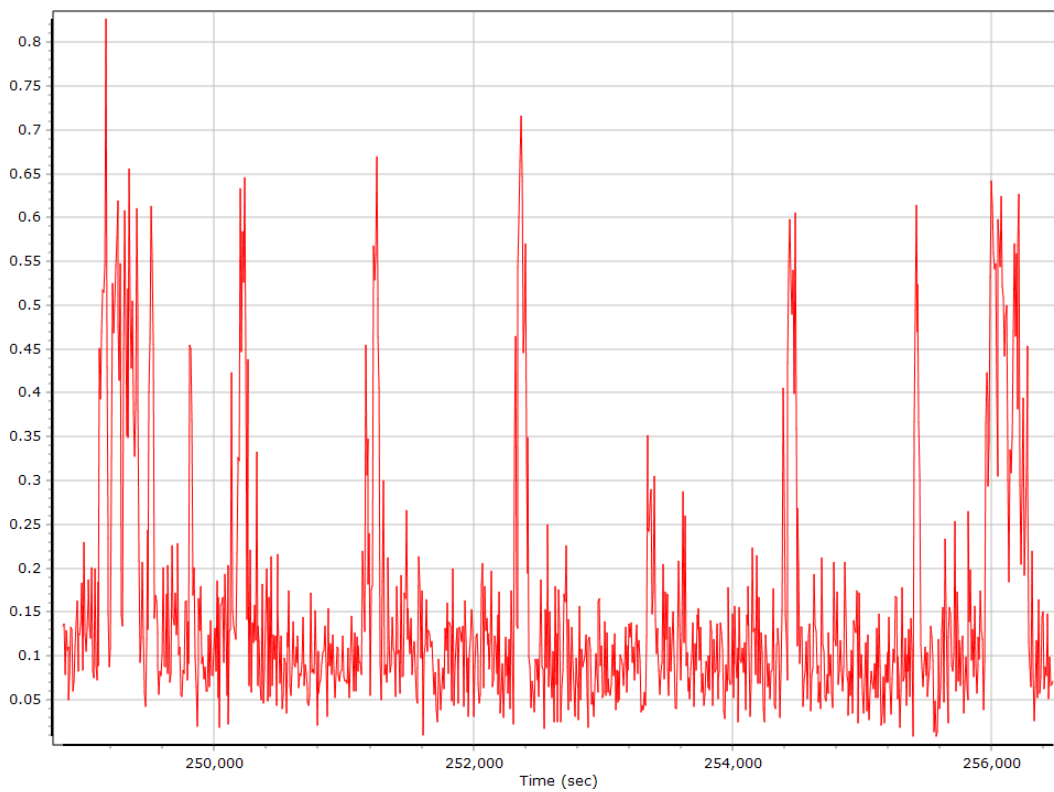
Ground Speed



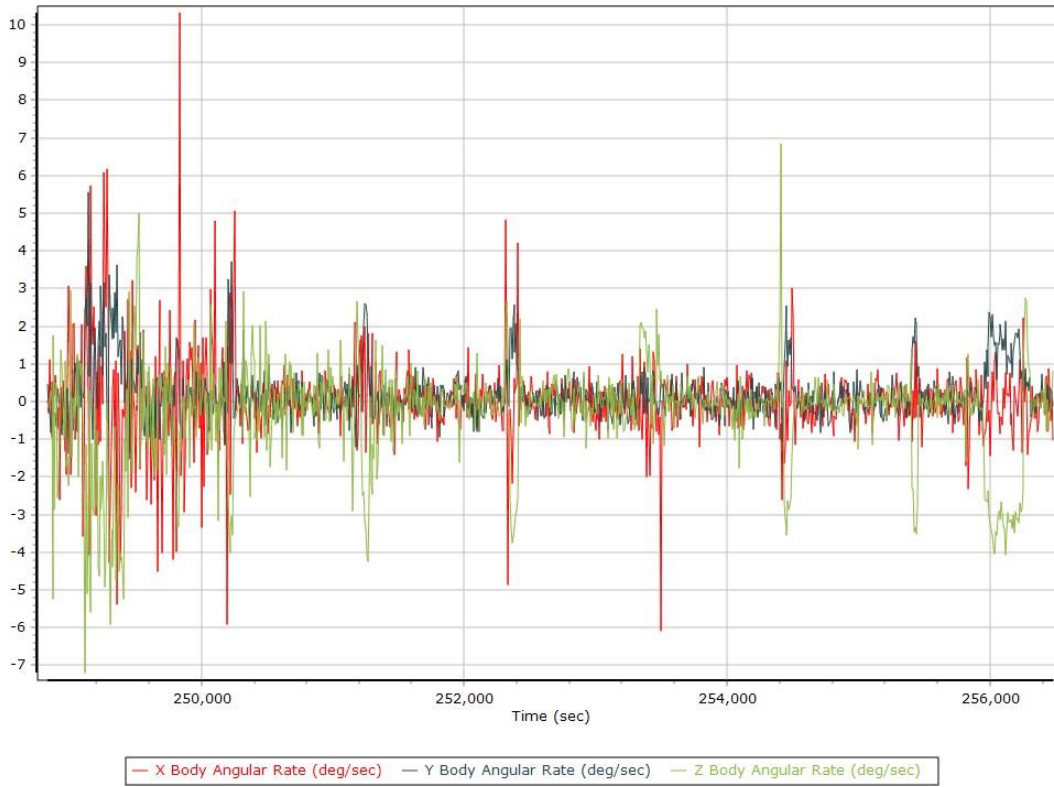
Body Acceleration



Total Body Acceleration



Body Angular Rate



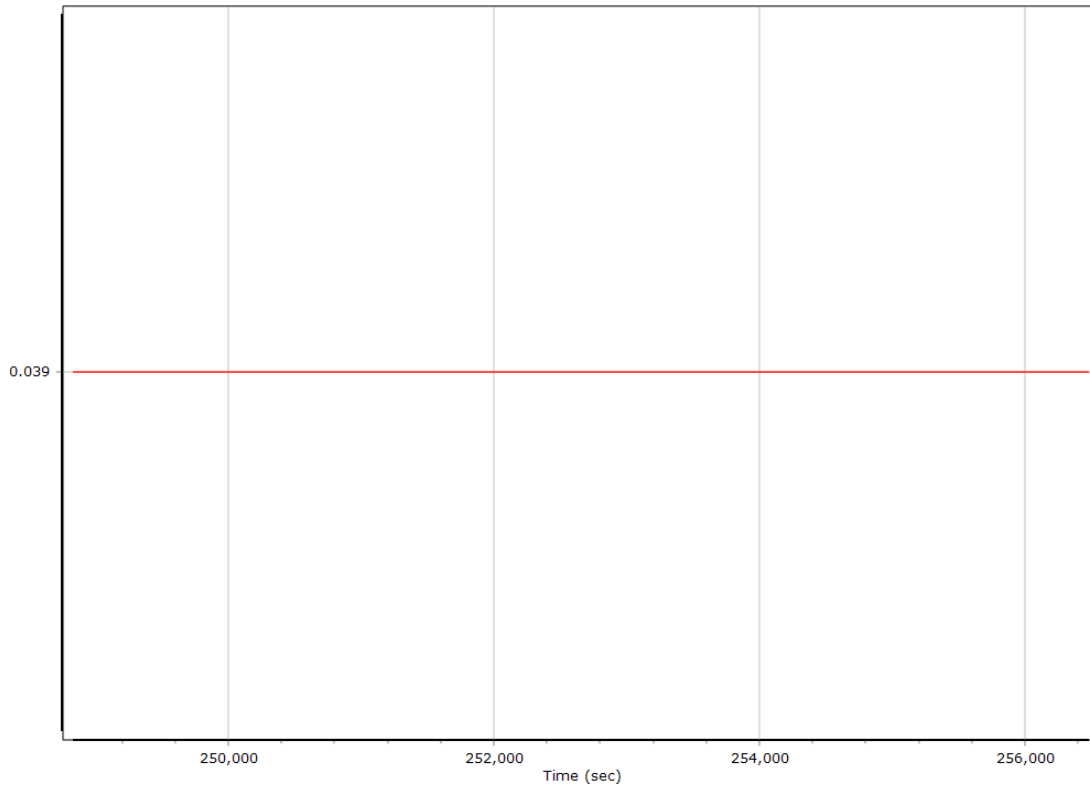
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion GNSS Nav		
Stabilized mount	True		
Processing start time	248770.000 (1/7/2020 9:06:10 PM)		
Processing end time	256490.000 (1/7/2020 11:14:50 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	-0.034	-0.010	-0.374
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.039	-0.190	-1.285
Gimbal to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

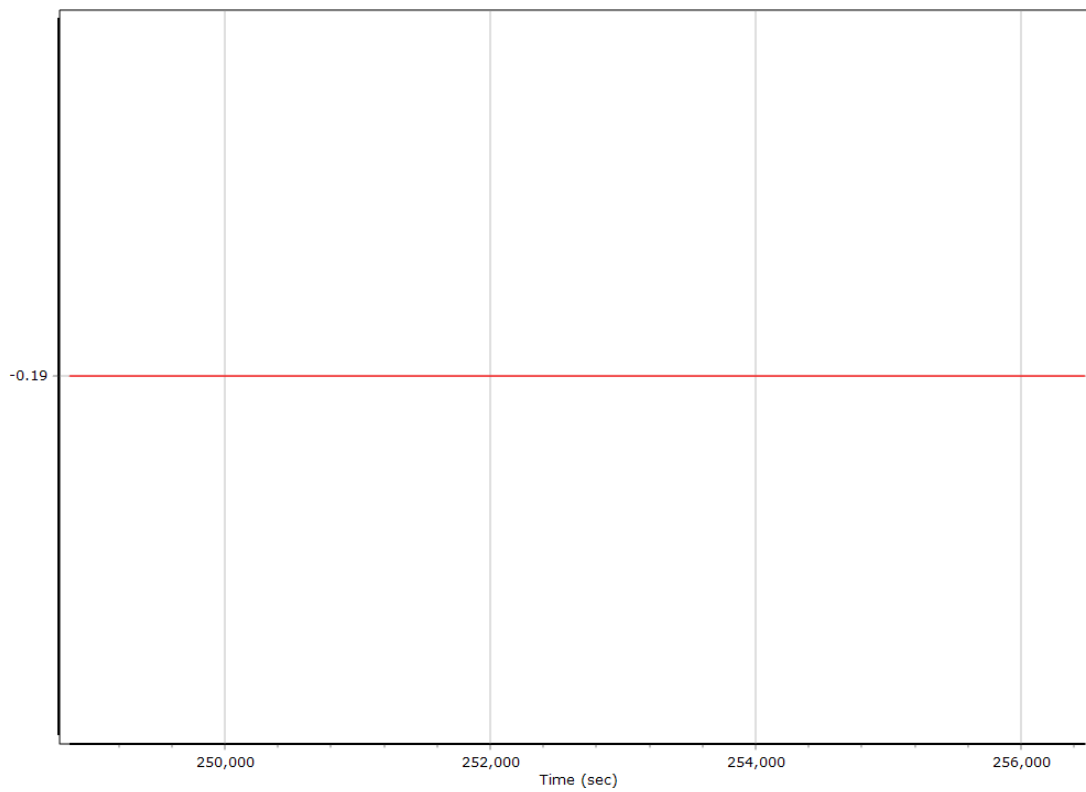
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

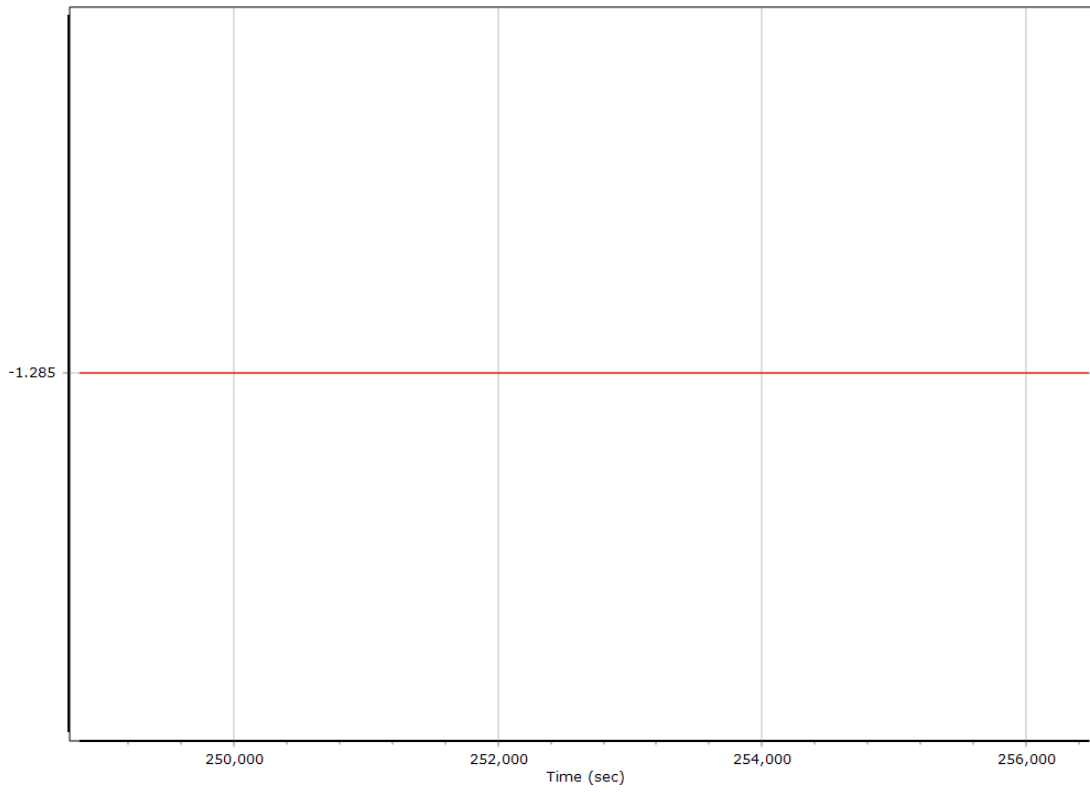
X Reference-Primary GNSS Lever Arm (m)



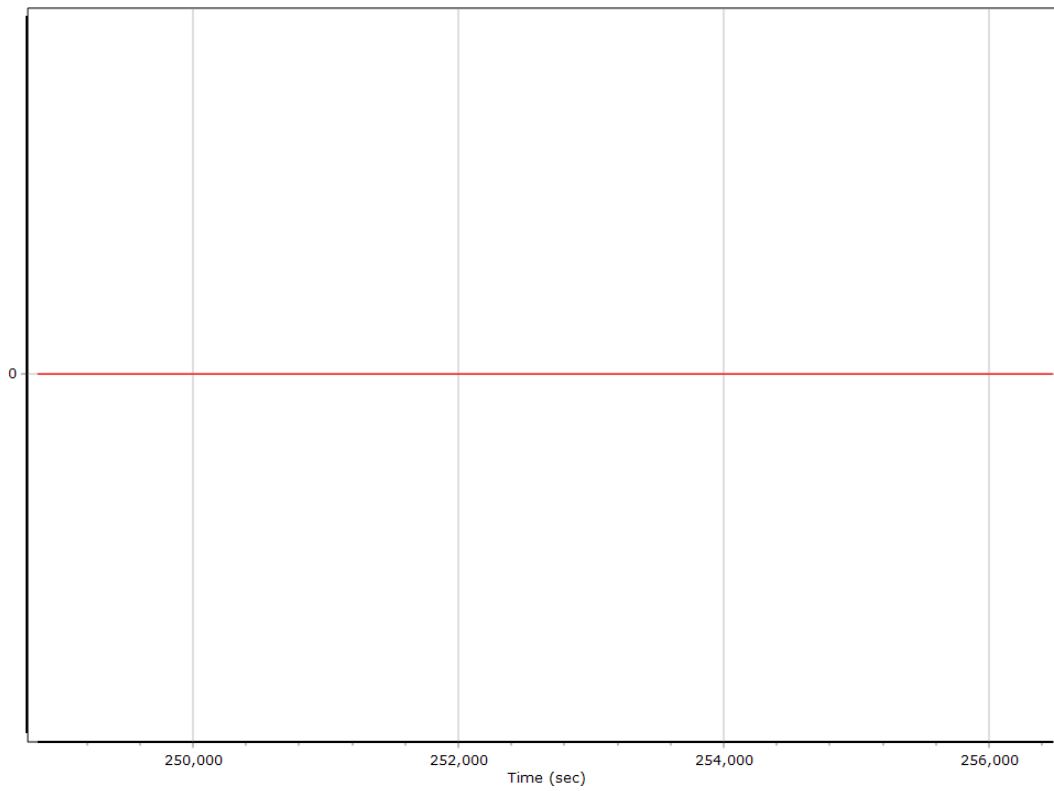
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



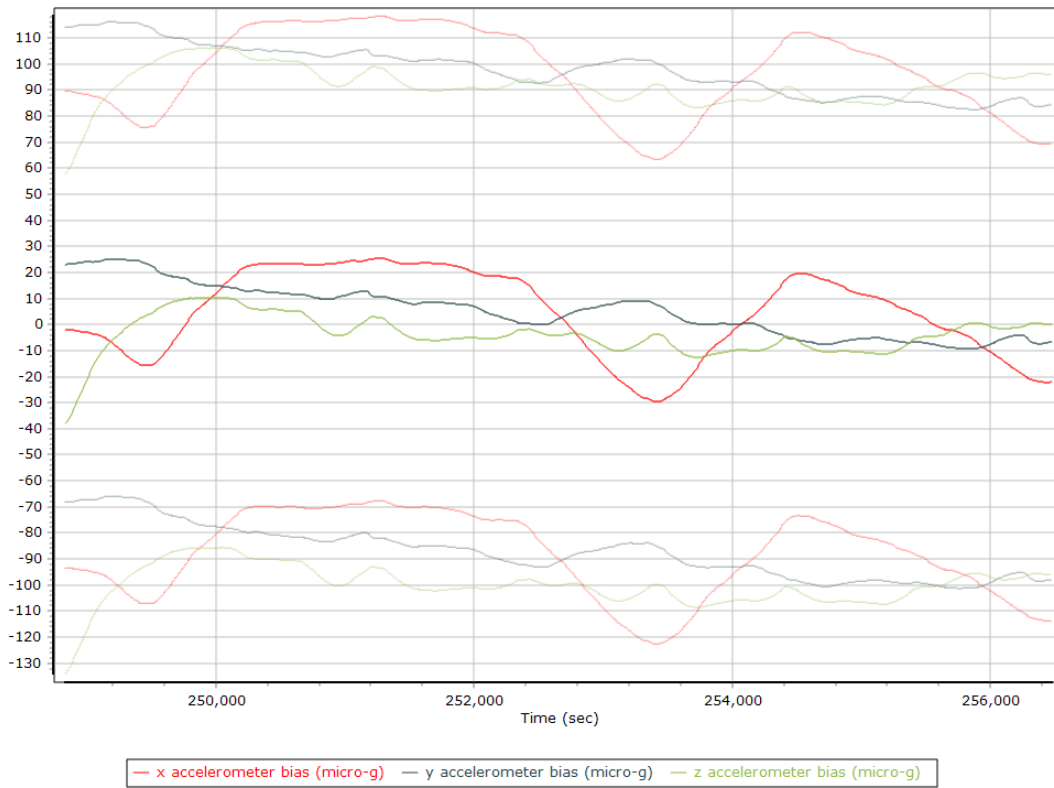
Reference-Primary GNSS Lever Arm Figure of Merit



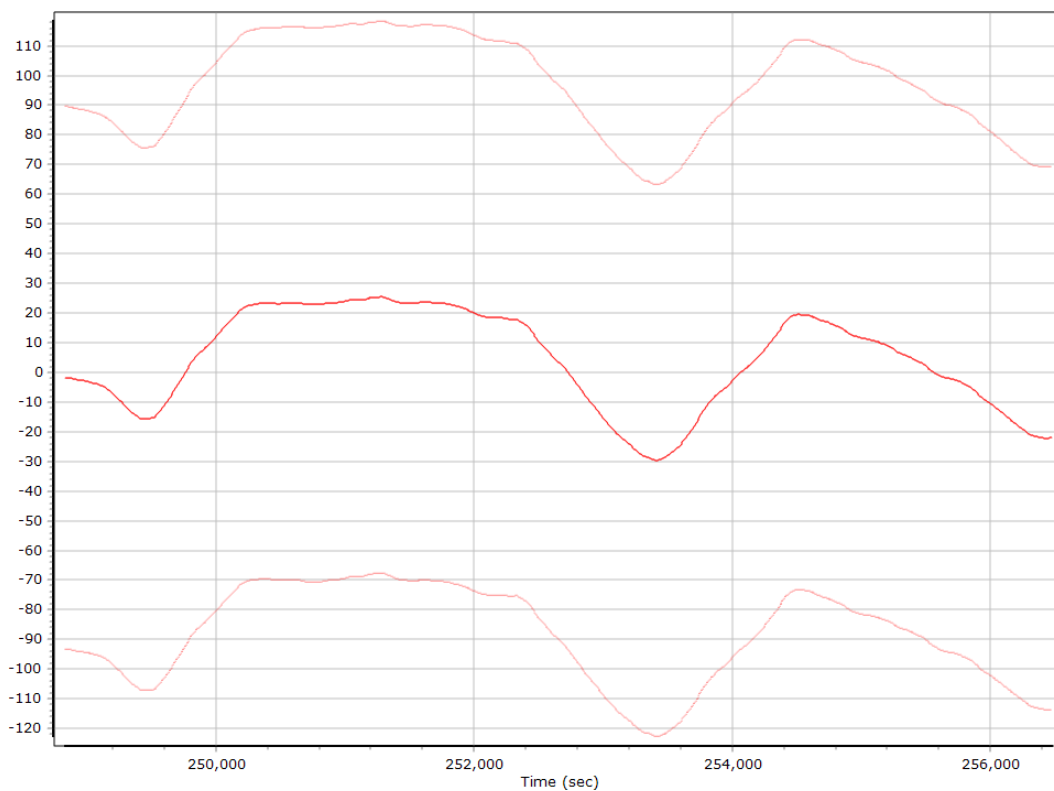
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

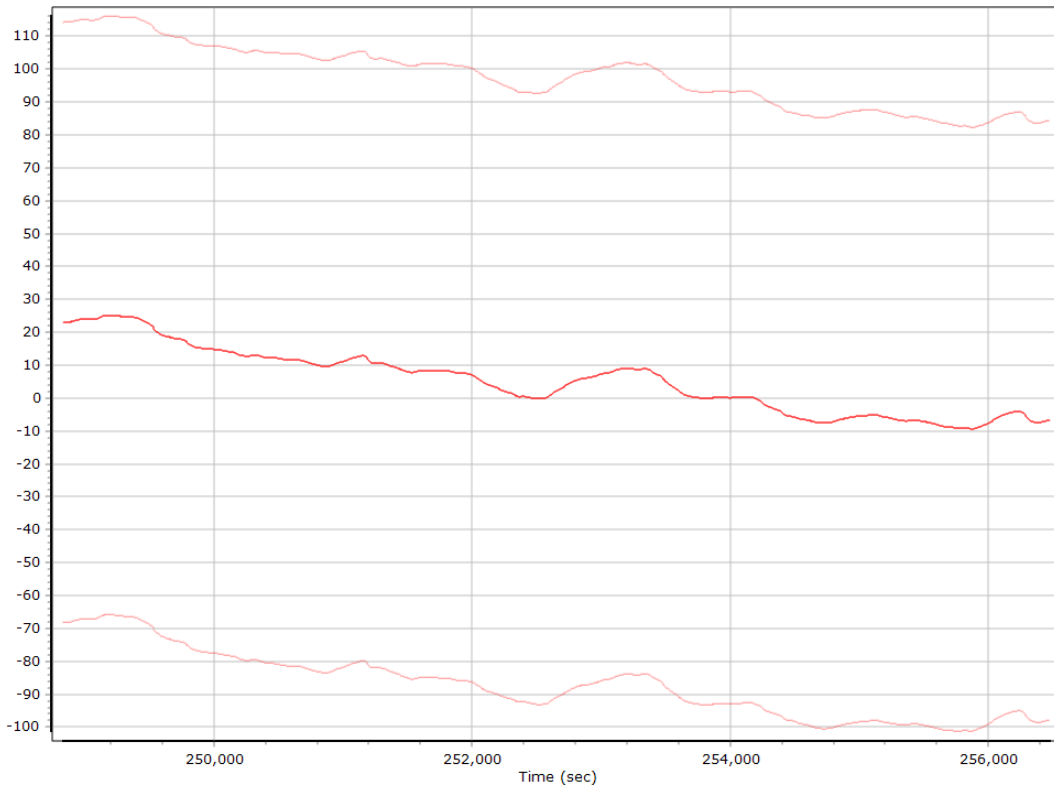
Accelerometer Bias (micro-g)



X Accelerometer Bias (micro-g)



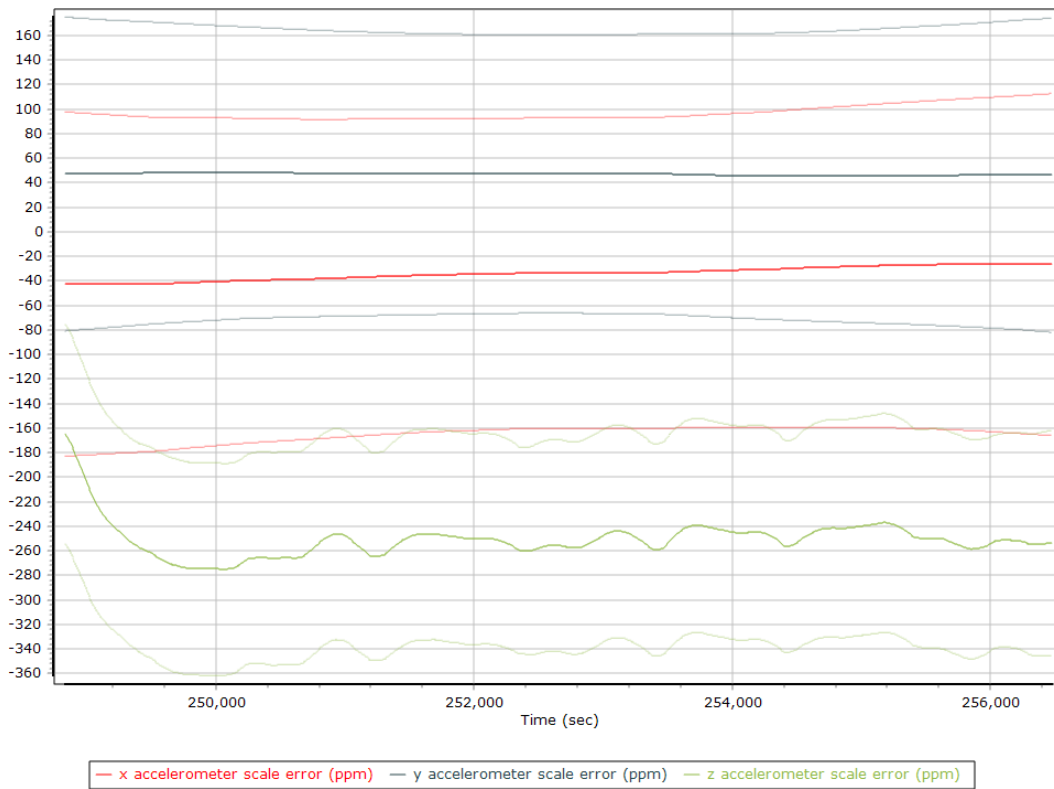
Y Accelerometer Bias (micro-g)



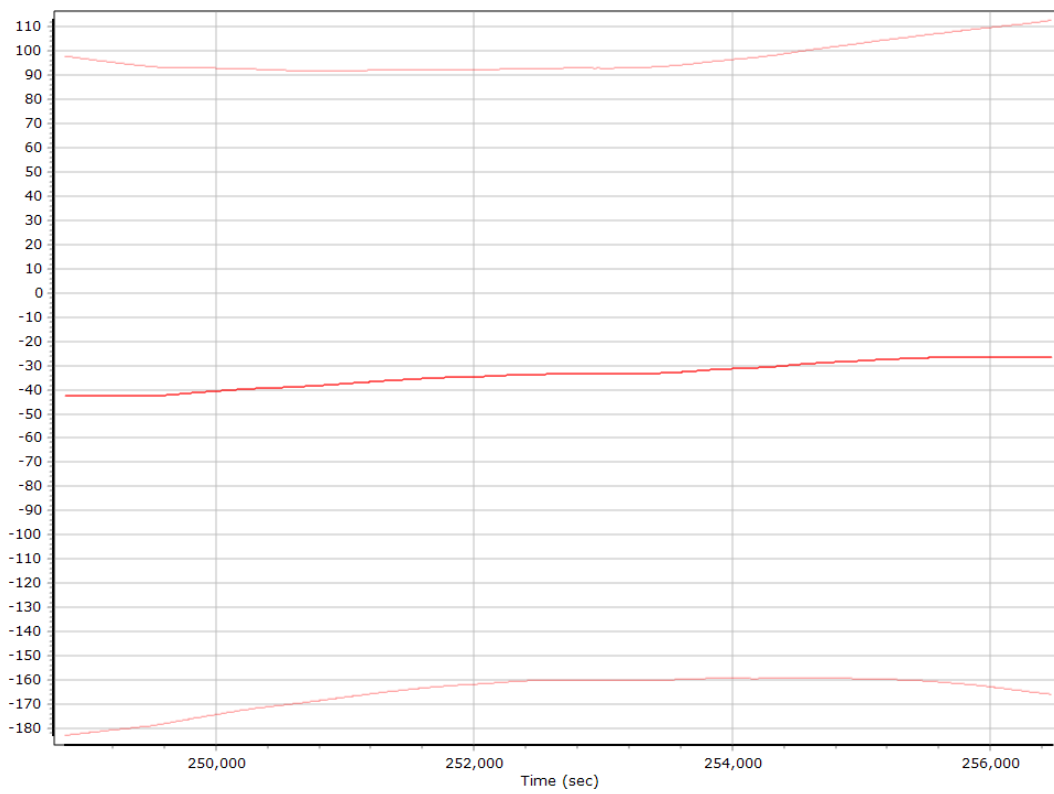
Z Accelerometer Bias (micro-g)



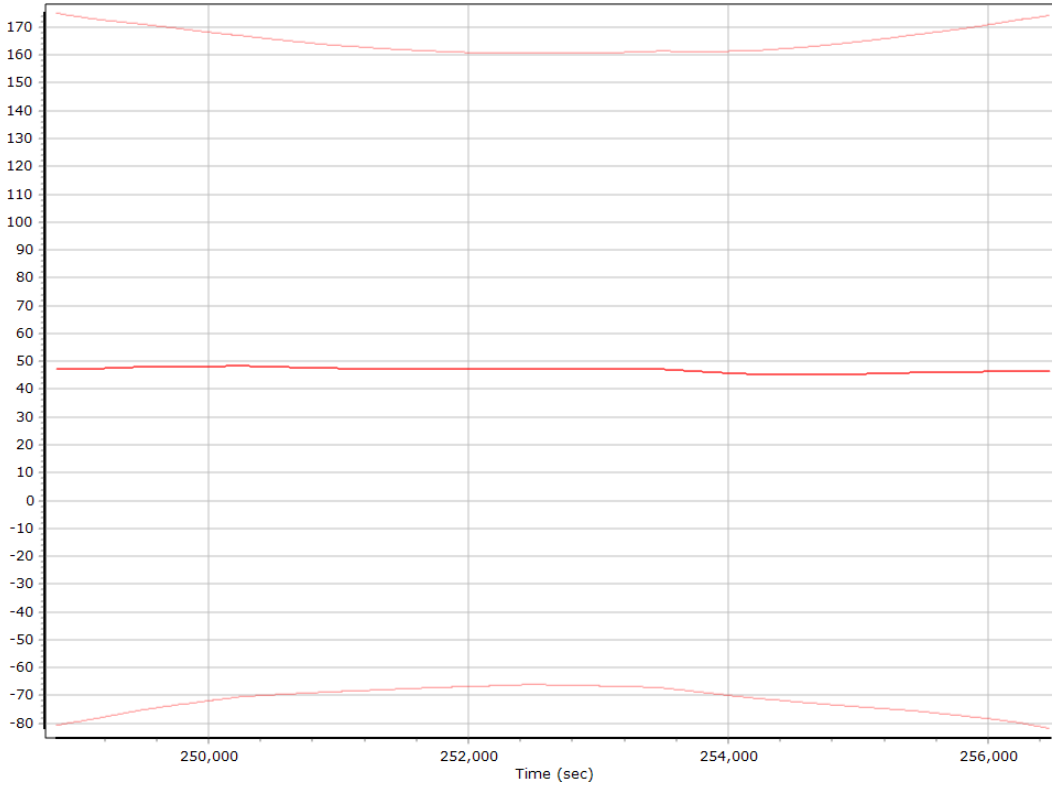
Accelerometer Scale Error (ppm)



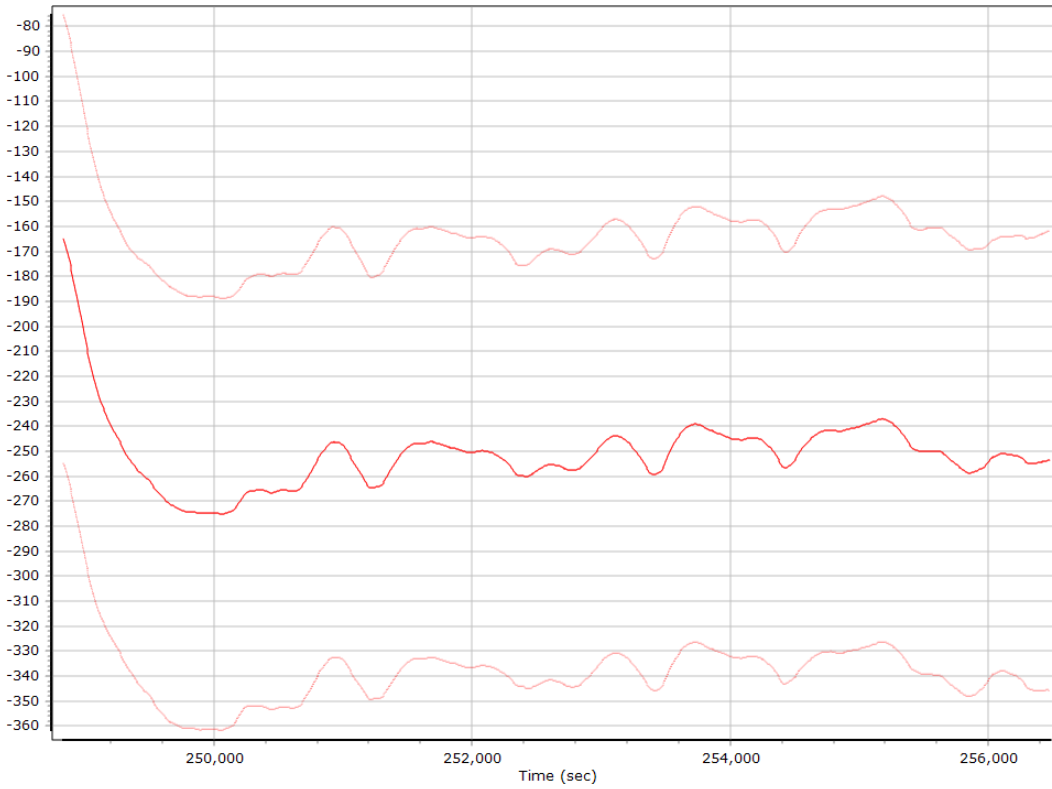
X Accelerometer Scale Error (ppm)



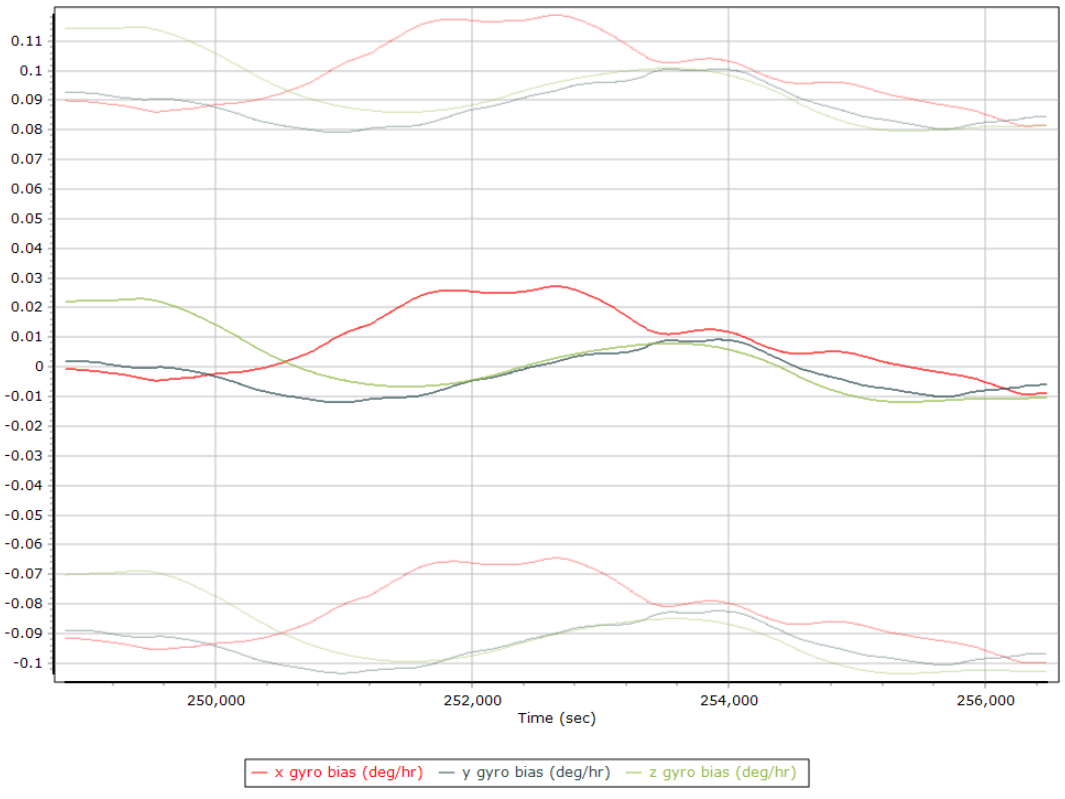
Y Accelerometer Scale Error (ppm)



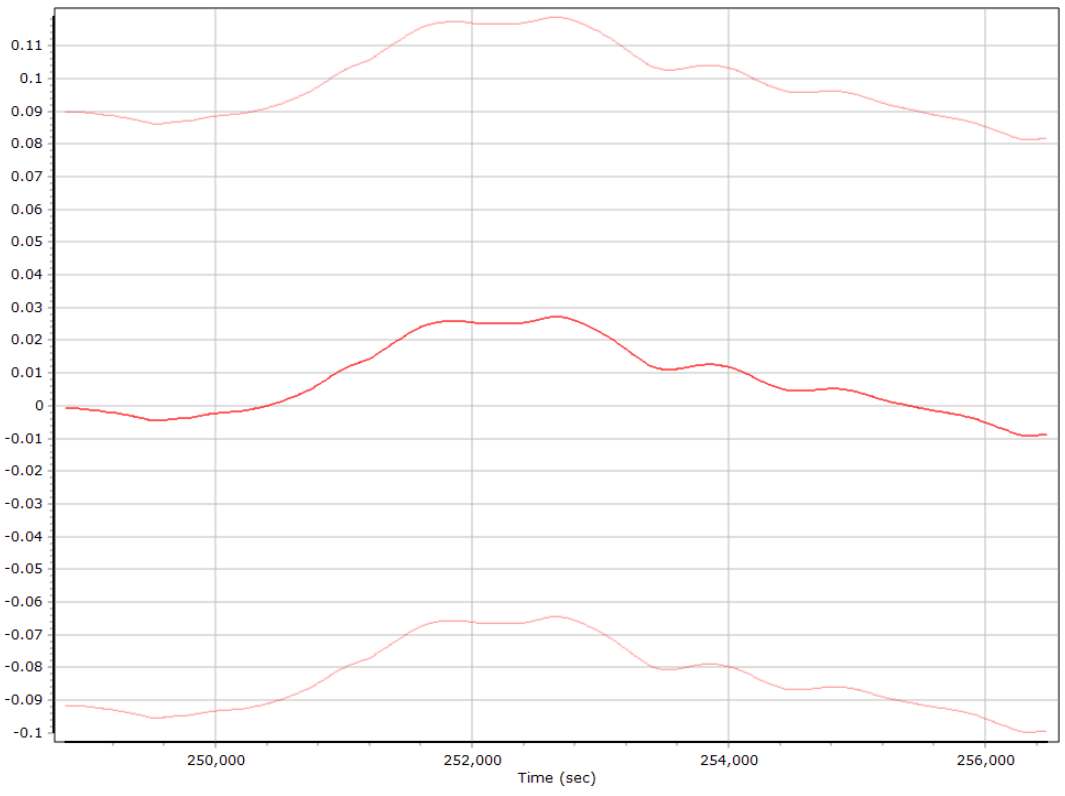
Z Accelerometer Scale Error (ppm)



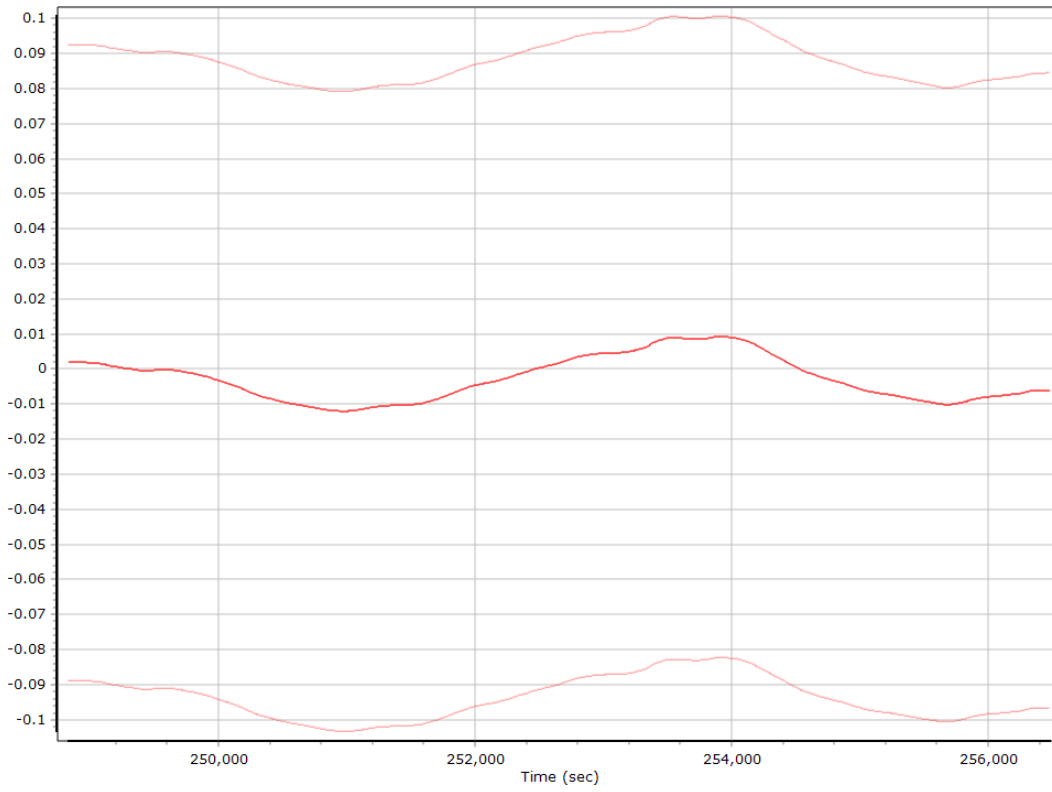
Gyro Bias (deg/h)



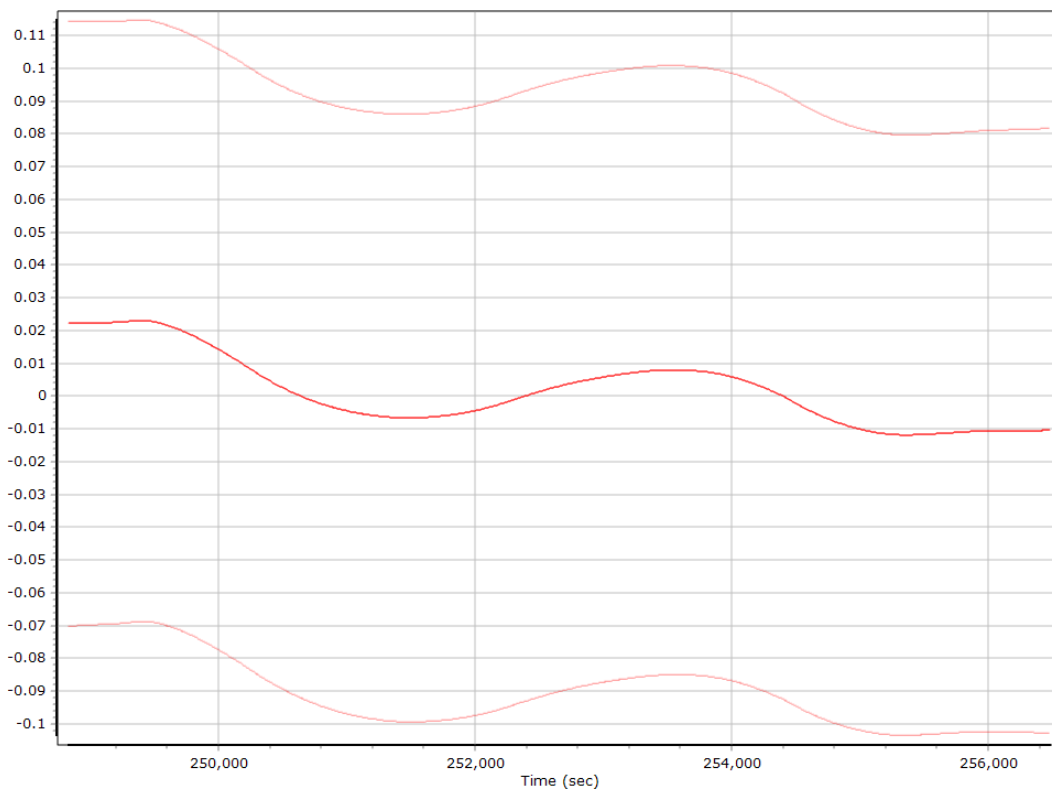
X Gyro Bias (deg/h)



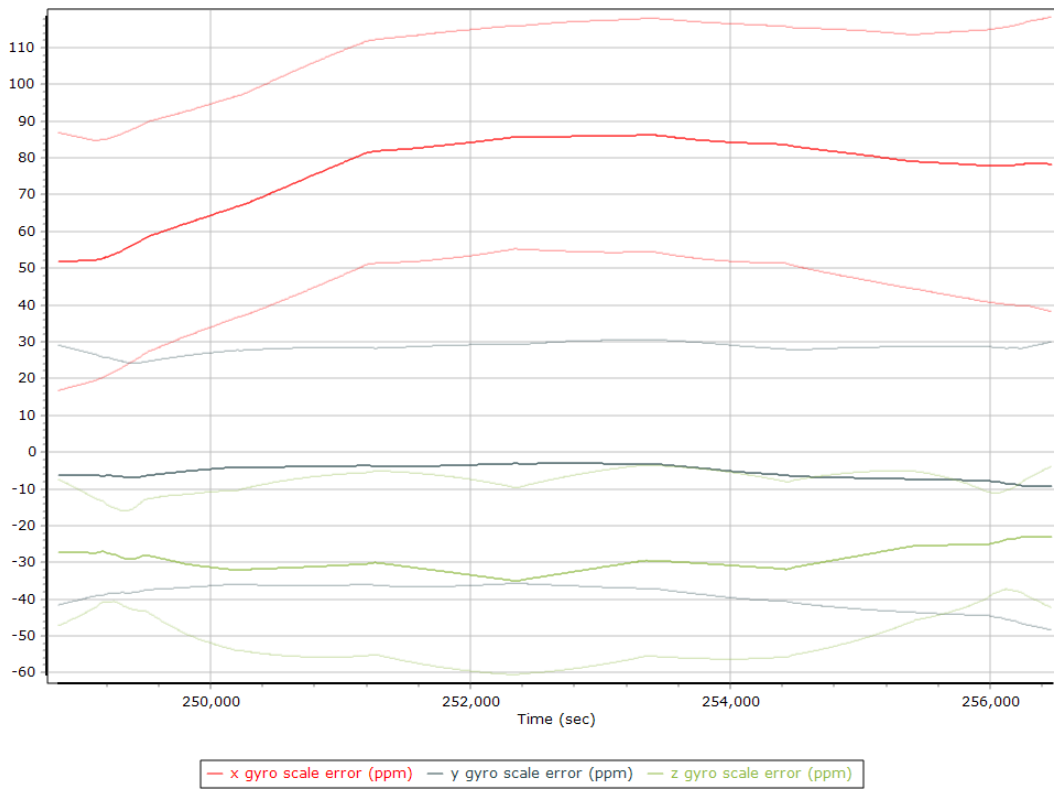
Y Gyro Bias (deg/h)



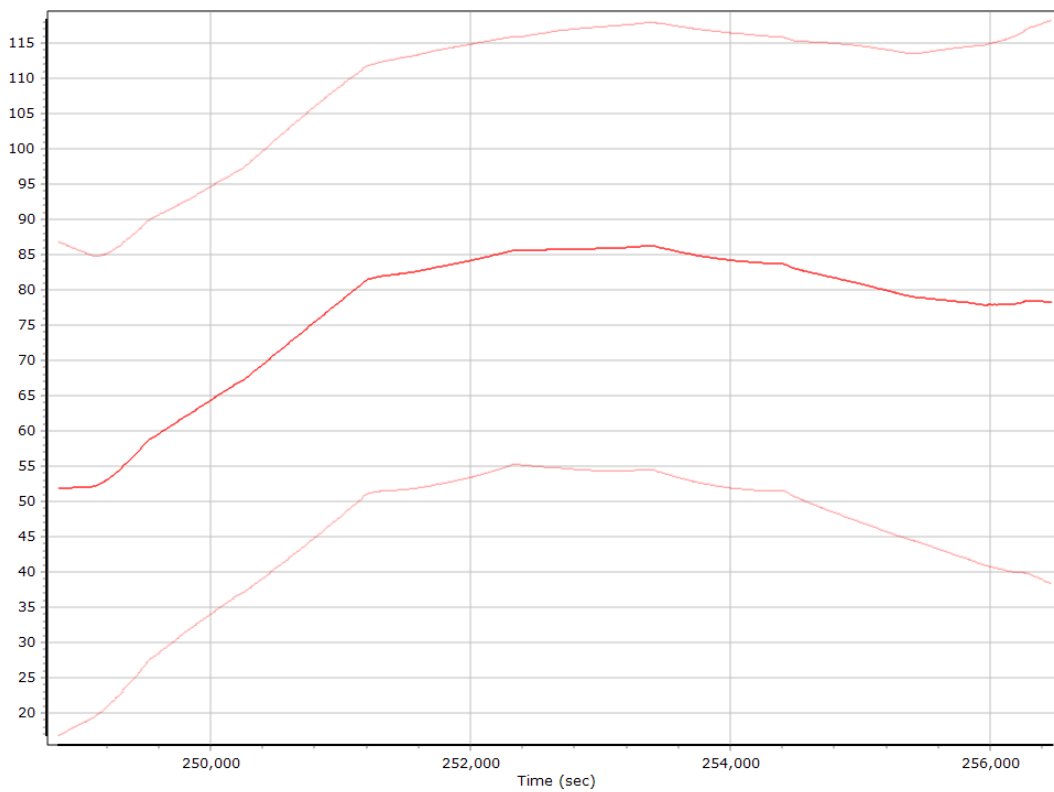
Z Gyro Bias (deg/h)



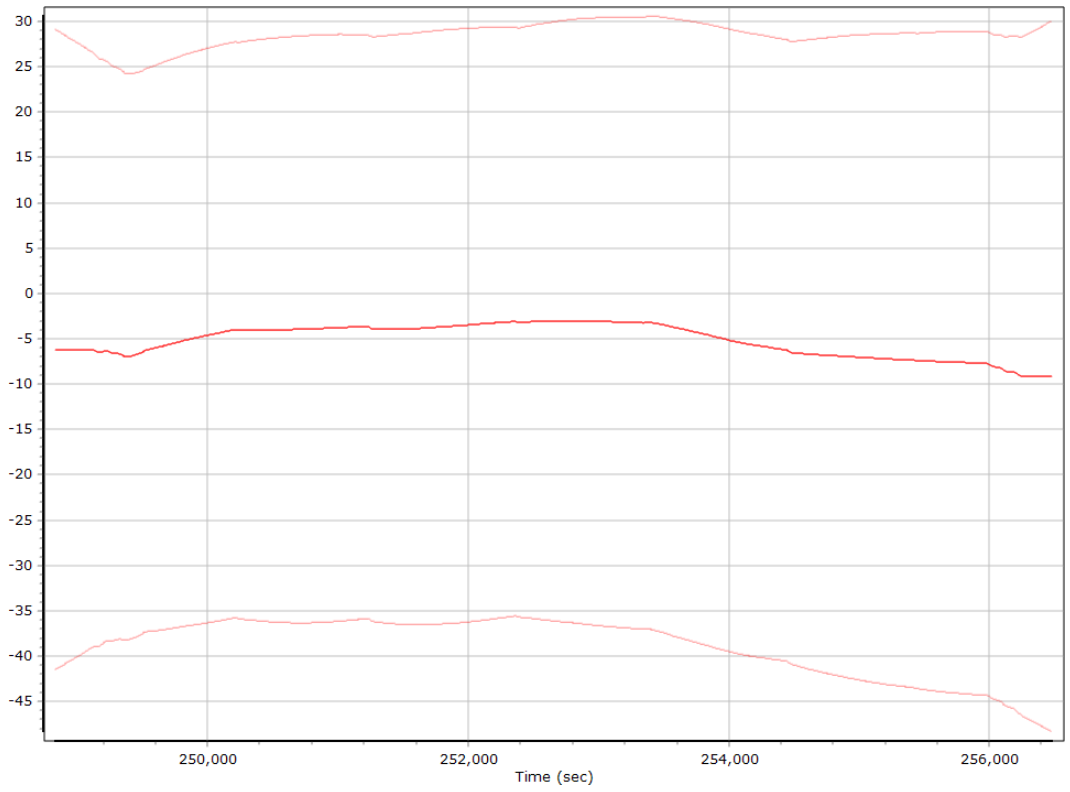
Gyro Scale Error (ppm)



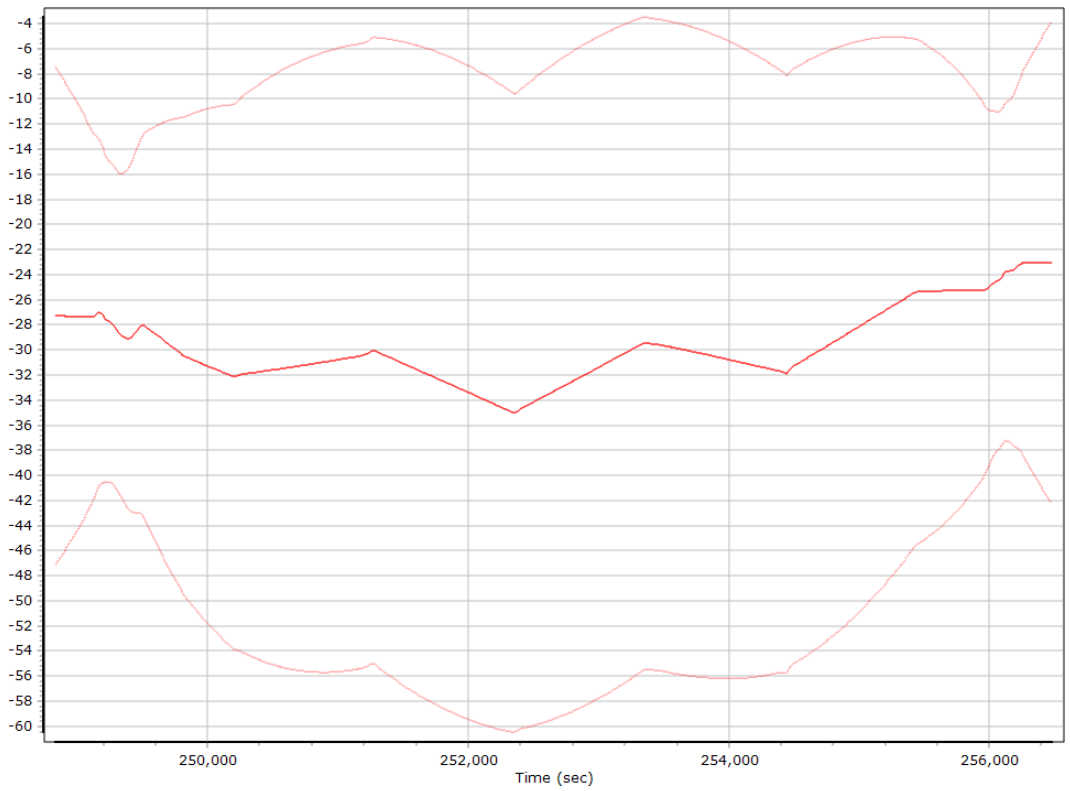
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

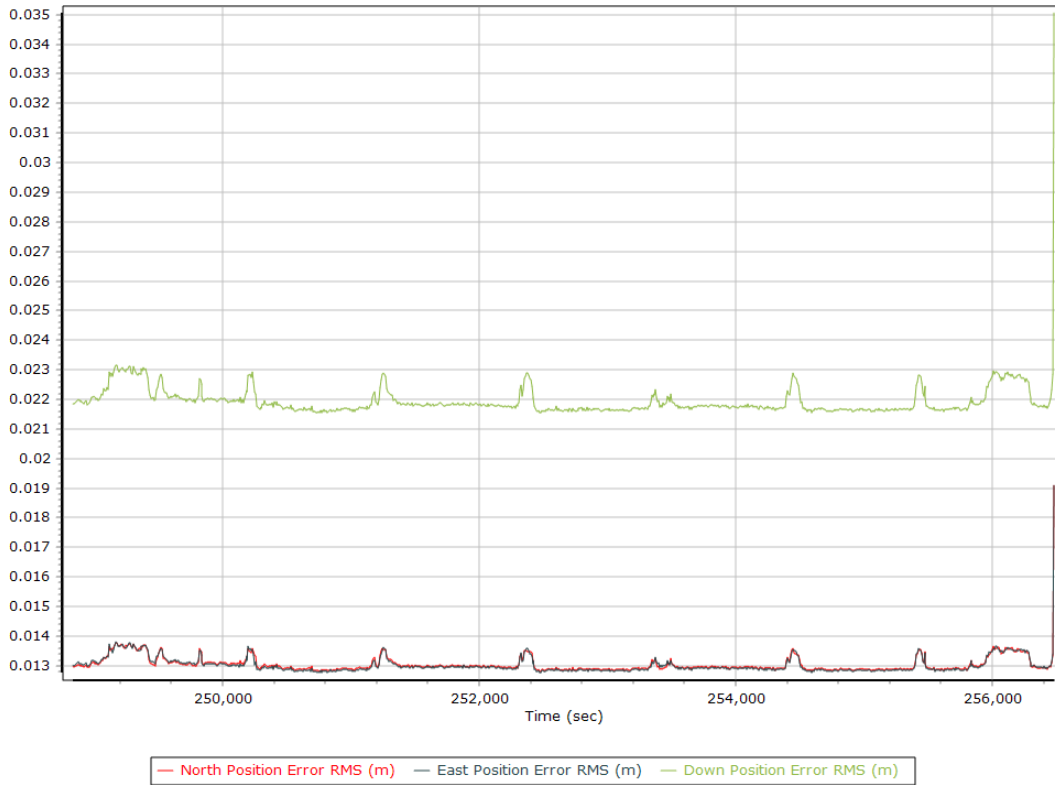


Z Gyro Scale Error (ppm)

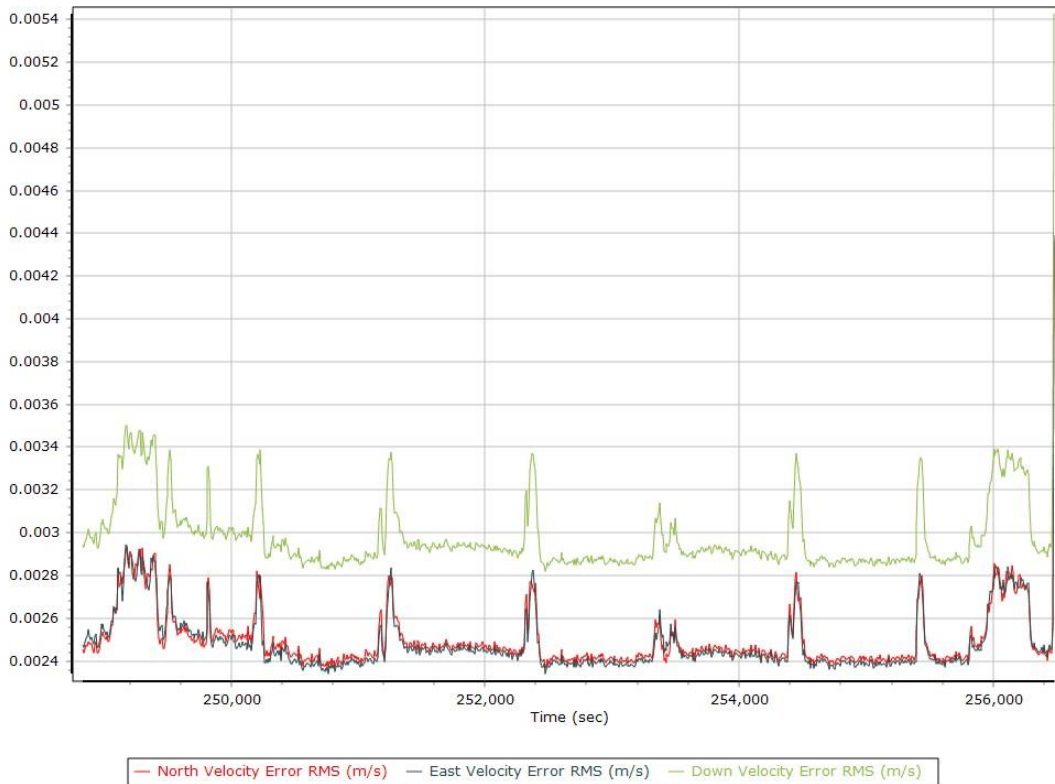


Smoothed Performance Metrics

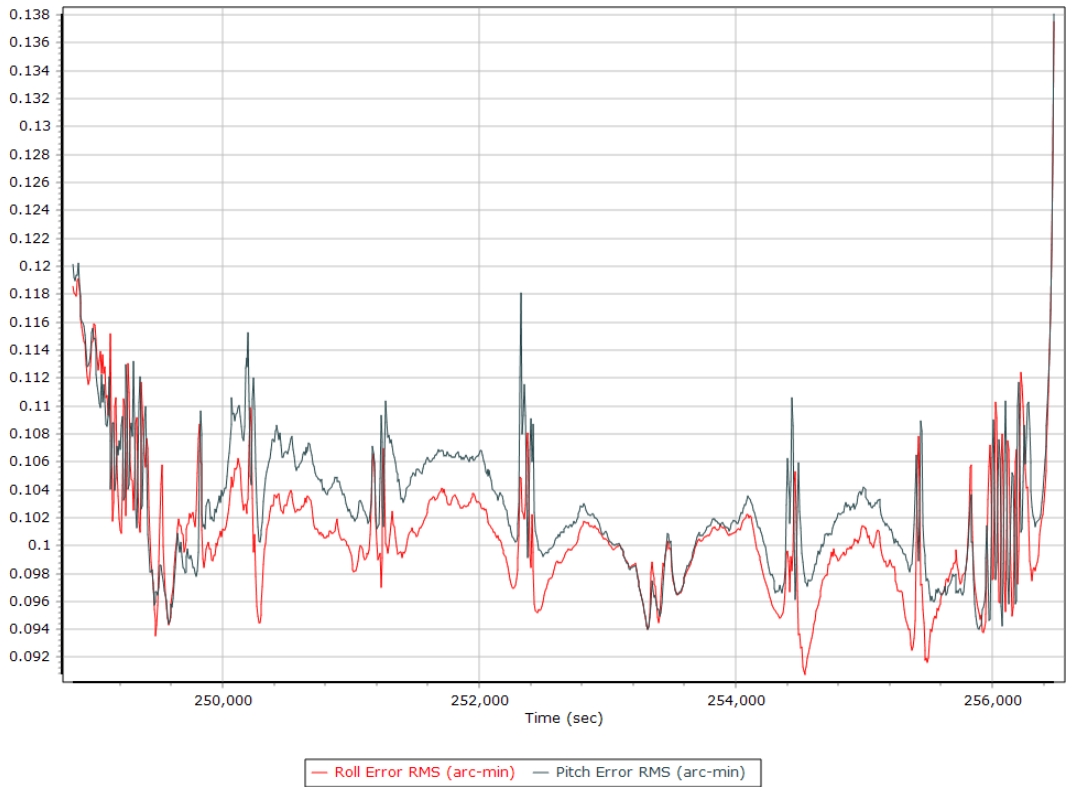
Position Error RMS (m)



Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)



Heading Error RMS (arc-min)

