General Information

Mission Information

Project name	13284-1804_20181206
Processing date	2018-12-07 14:49:05
Mission date	2018-12-06 16:14:26
Mission duration	02:38:50.130
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9865
IMU type	57
Receiver type	BD982
Antenna type	AV37

Project File List

Rover Data Files

File name	File type
181206_161407_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3400.18g	GLONASS Broadcast Ephemeris
Ephm3400.18n	GPS Broadcast Ephemeris
hnpt3400.18o	GNSS SingleBase
loy83400.18o	GNSS SingleBase
loyc3400.18o	GNSS SingleBase
loyj3400.18o	GNSS SingleBase
loyq3400.18o	GNSS SingleBase
zdc13400.18o	GPS SingleBase
baco3400.18o	GNSS SingleBase
gode3400.18o	GNSS SingleBase
igu20303_00.sp3	GPS Precise Ephemeris
igu20303_06.sp3	GPS Precise Ephemeris
igu20303_12.sp3	GPS Precise Ephemeris
igu20303_18.sp3	GPS Precise Ephemeris
igu20304_00.sp3	GPS Precise Ephemeris
igu20304_06.sp3	GPS Precise Ephemeris
igu20304_12.sp3	GPS Precise Ephemeris
igu20304_18.sp3	GPS Precise Ephemeris
igu20305_00.sp3	GPS Precise Ephemeris
igu20305_06.sp3	GPS Precise Ephemeris
loyy3400.18o	GNSS SingleBase
all_revised.dat	2 Fields (Time, Photo ID) Photo Id File

Output Files

Filename	File type
sbet_Mission 1.out	SBET Trajectory File
photoID_eo_Mission 1.txt	Applanix Standard POSEO Output

Rover Data Summary

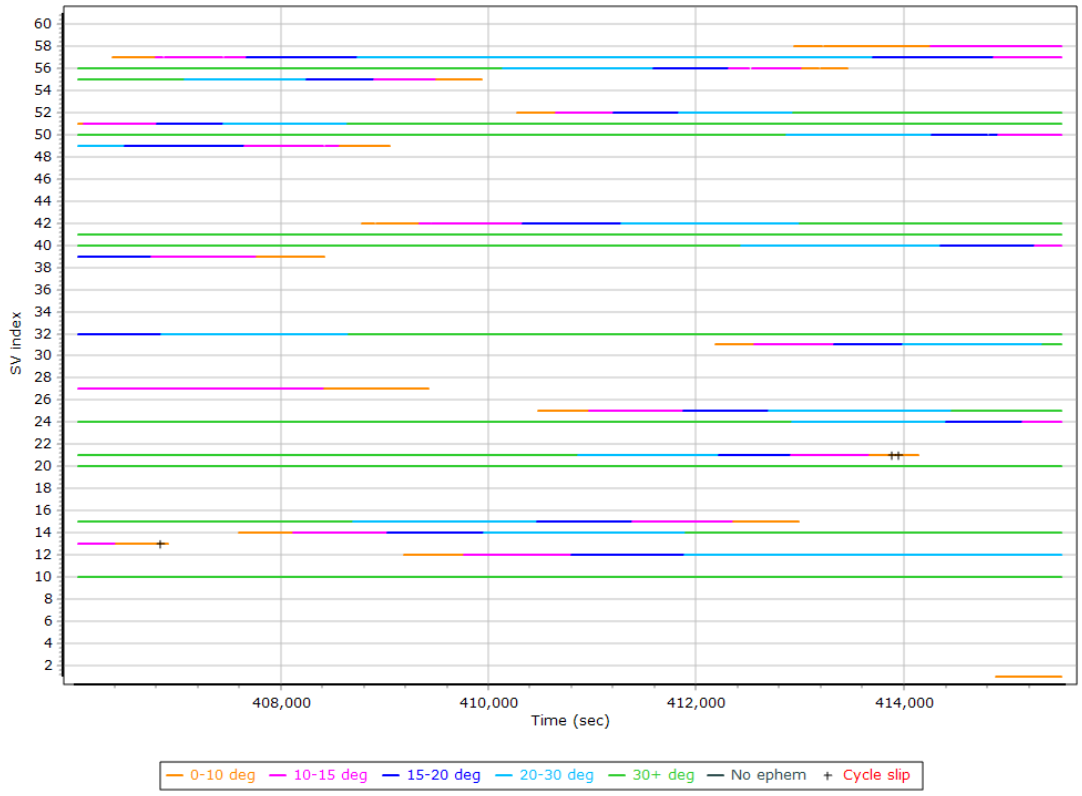
First raw data file	181206_161407_INS-GPS_1.raw		
Last raw data file	181206_161407_INS-GPS_1.raw		
Start GPS week	2030		
Start time	404047.418 (12/6/2018 4:14:07 PM)		
End time	415520.157 (12/6/2018 7:25:20 PM)		
Start of fine alignment	405989.880 (12/6/2018 4:46:29 PM)		
Available subsystems	Primary 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]	0.000	0.000	0.000
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

Raw Data QC

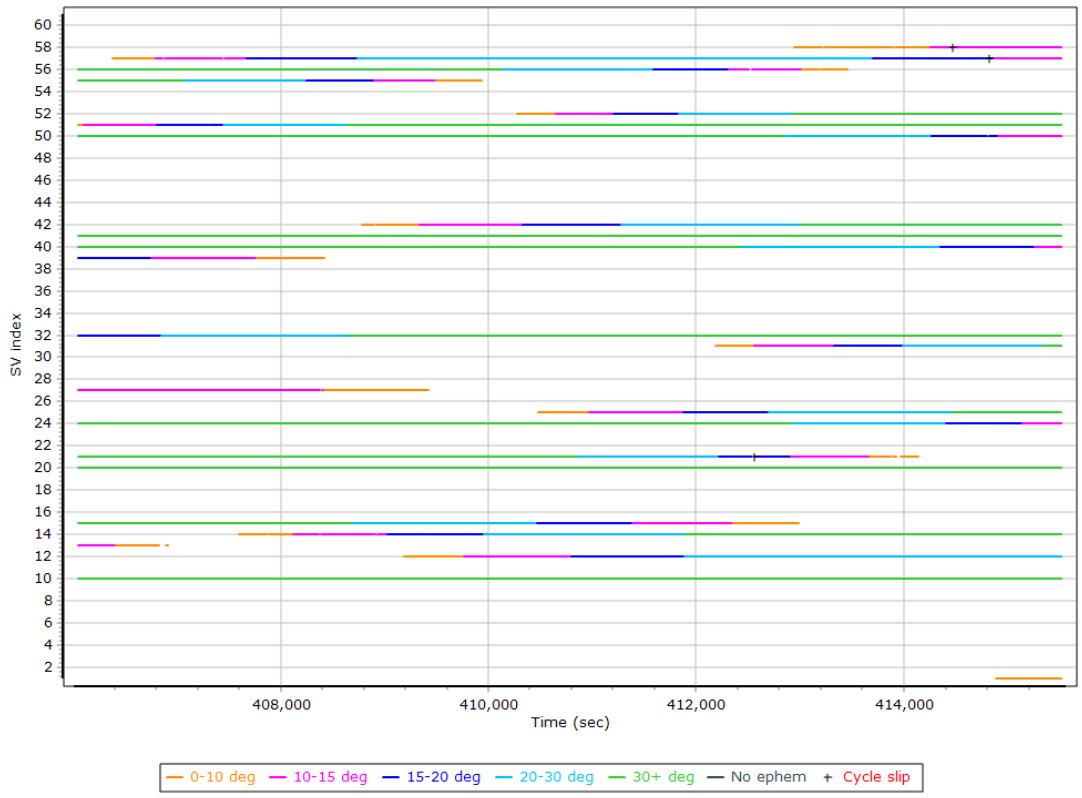
Raw IMU Import QC Summary

IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_Mission 1.log
IMU Records Processed	2294151
Termination Status	Normal
IMU Anomalies	0

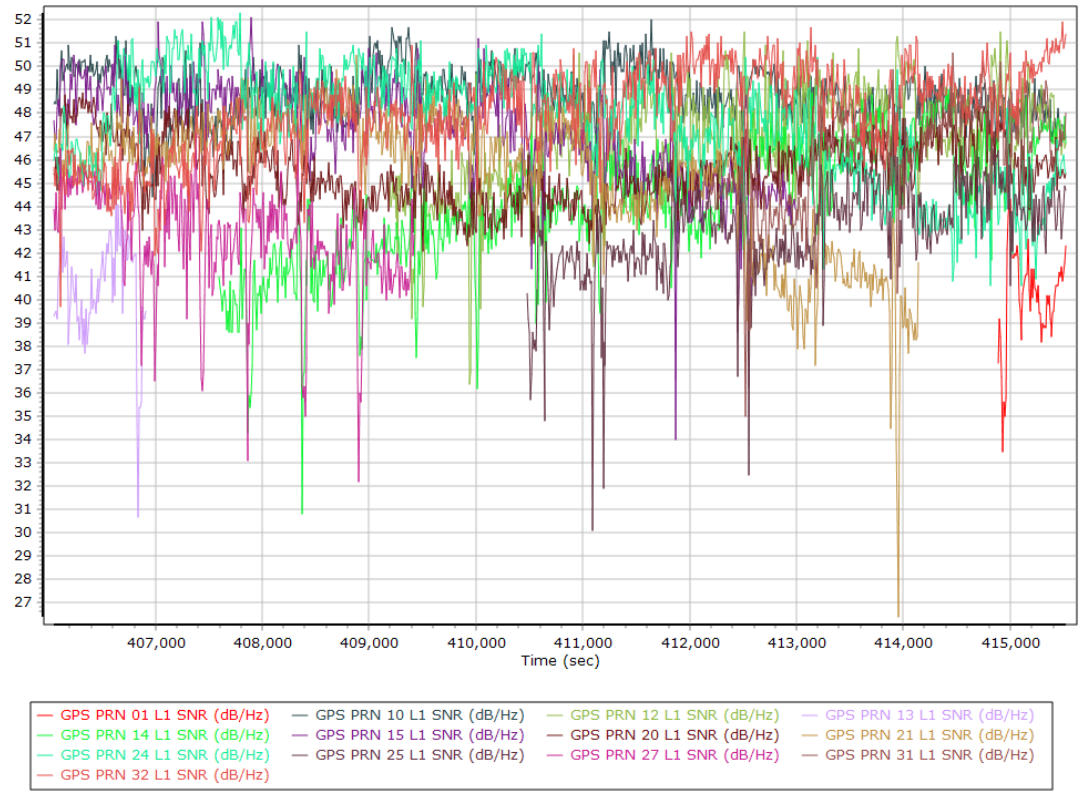
L1 Satellite Lock/Elevation



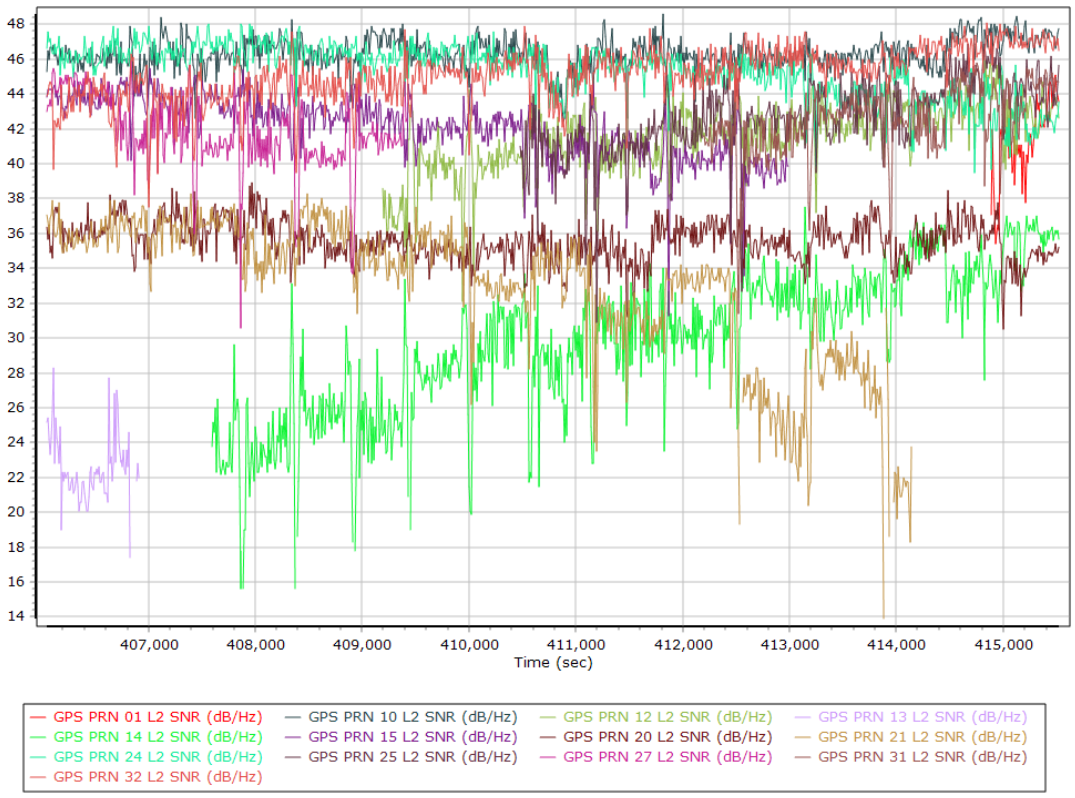
L2 Satellite Lock/Elevation



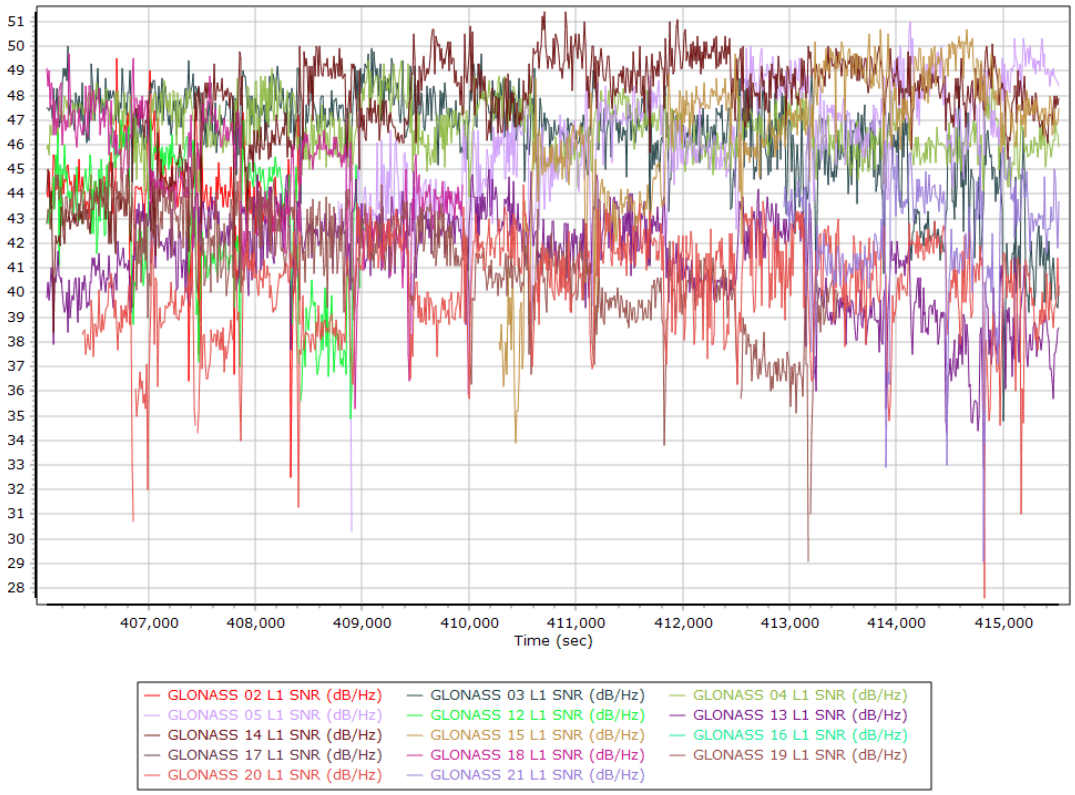
GPS L1 SNR



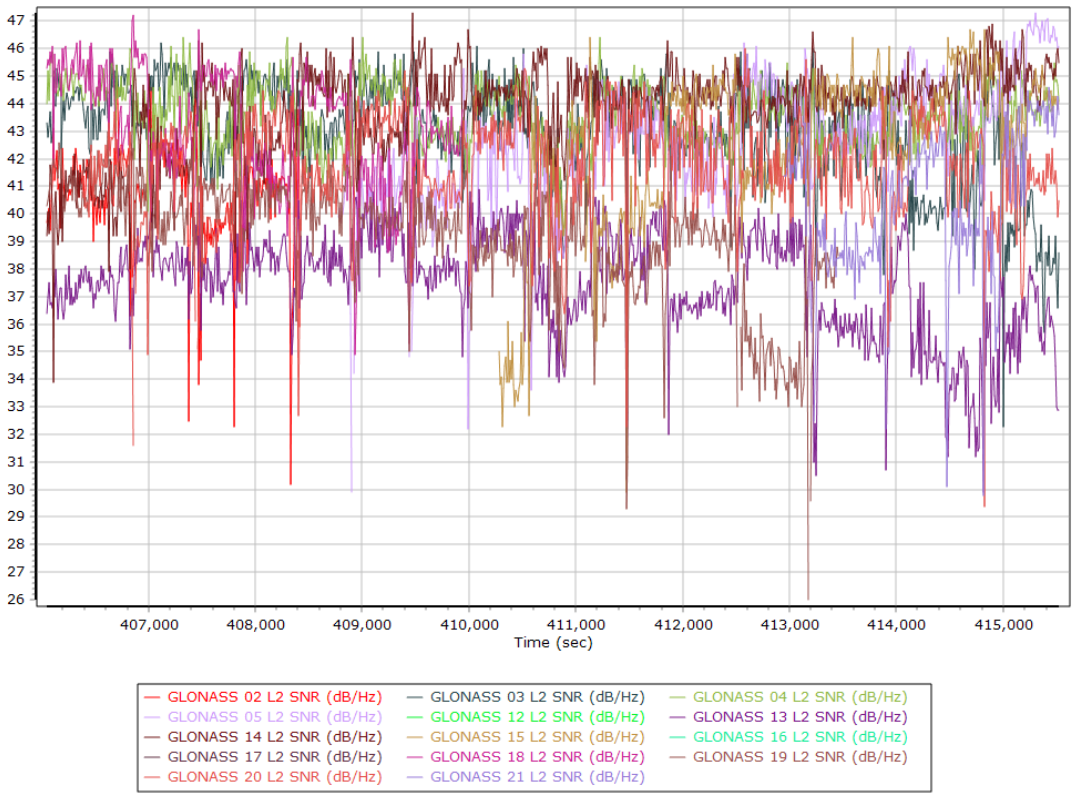
GPS L2 SNR



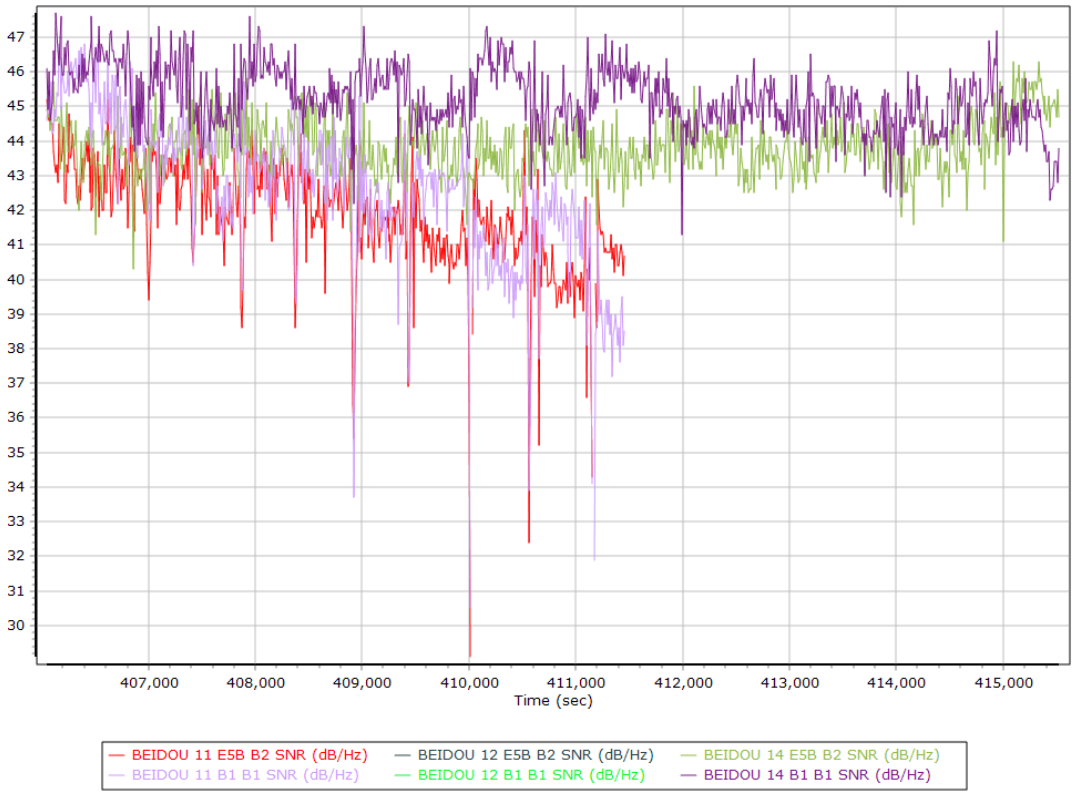
GLONASS L1 SNR



GLONASS L2 SNR

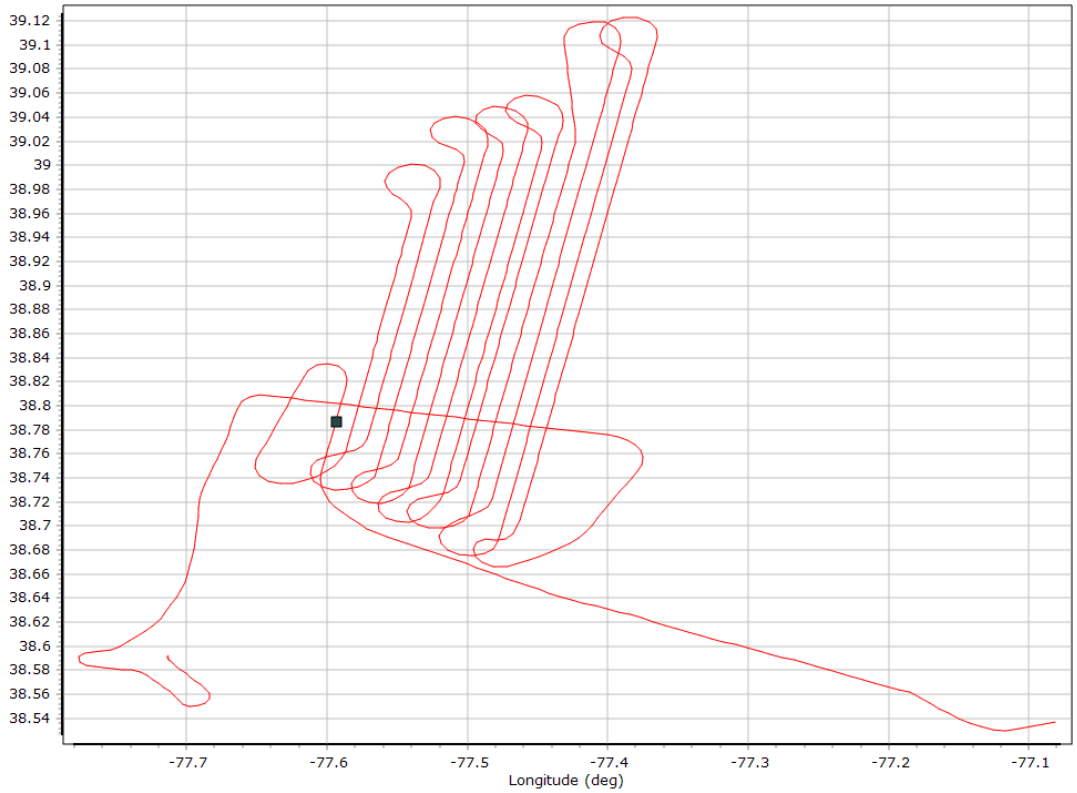


BEIDOU SNR

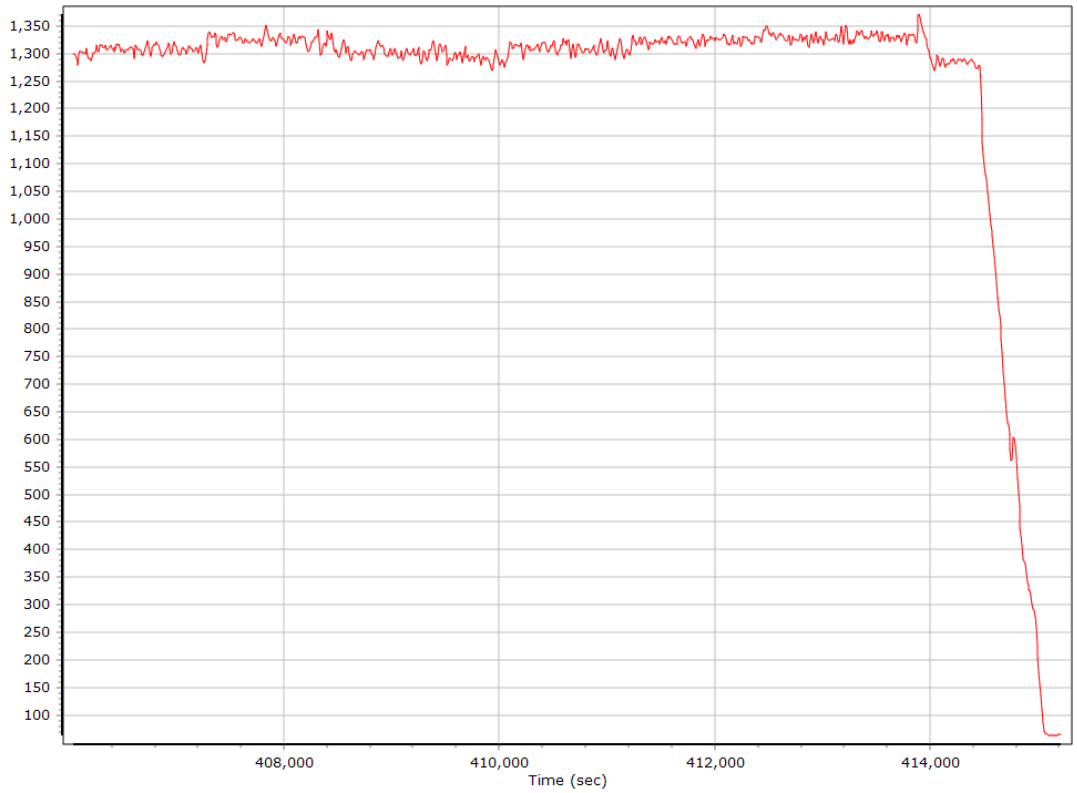


Trajectory Information

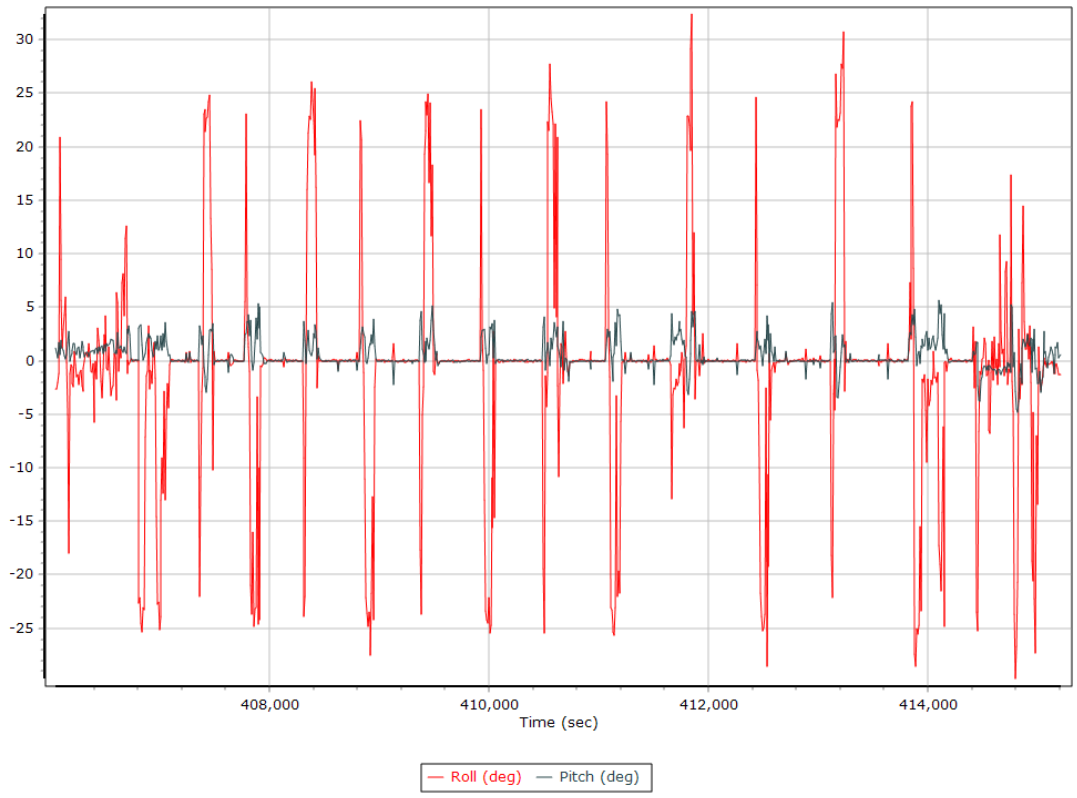
Top View



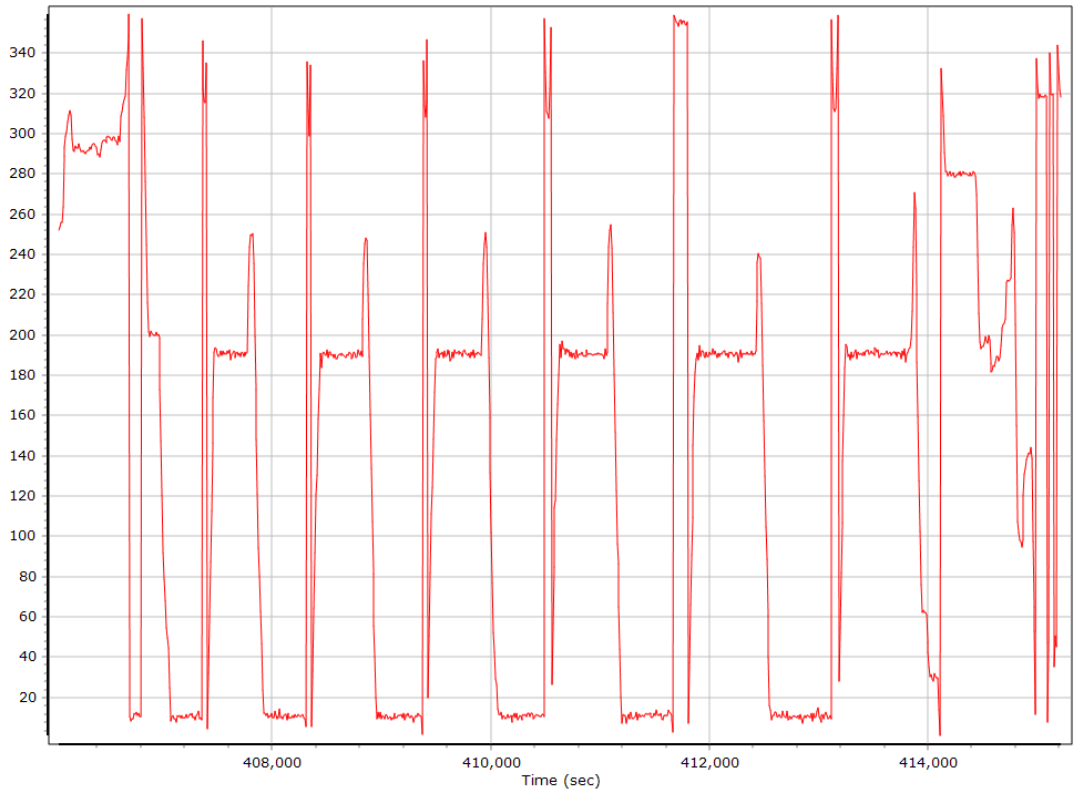
Altitude



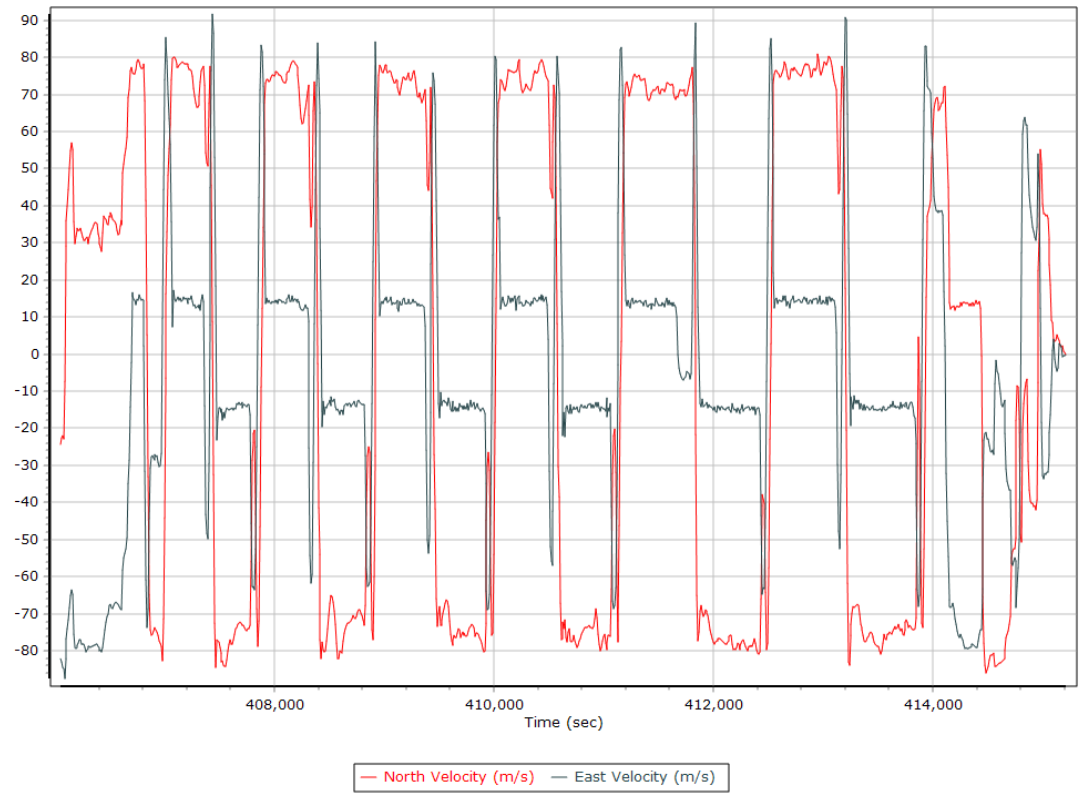
Roll/Pitch



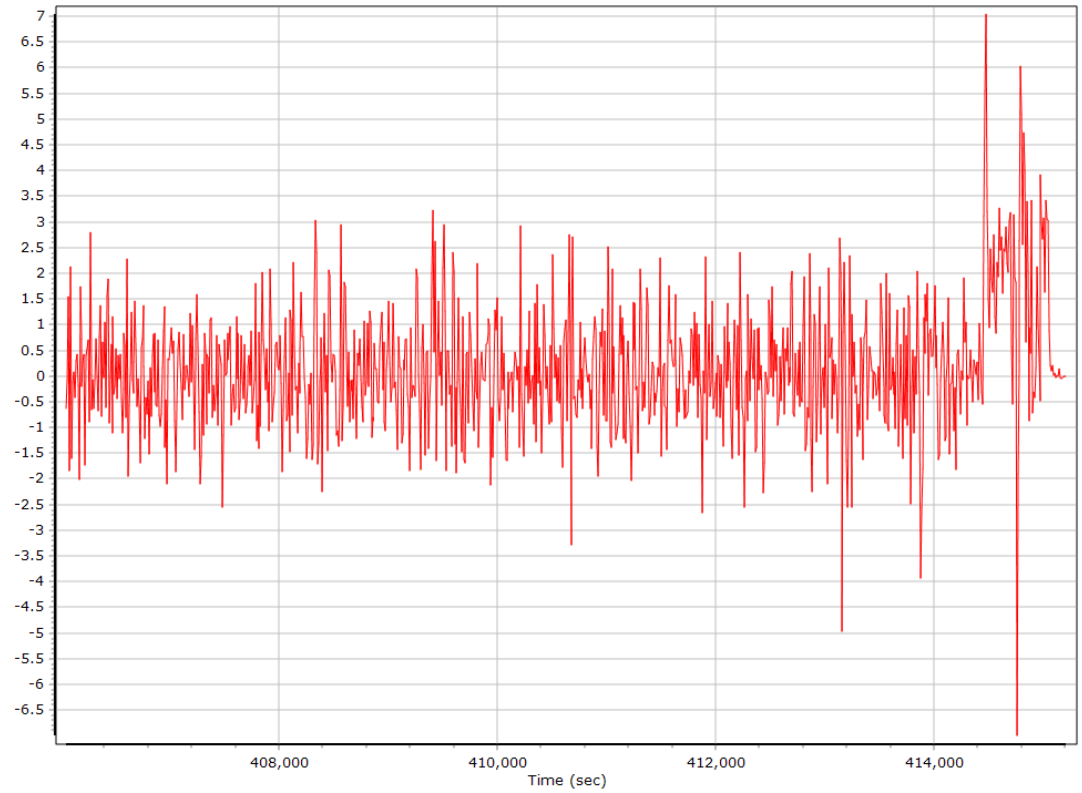
Heading



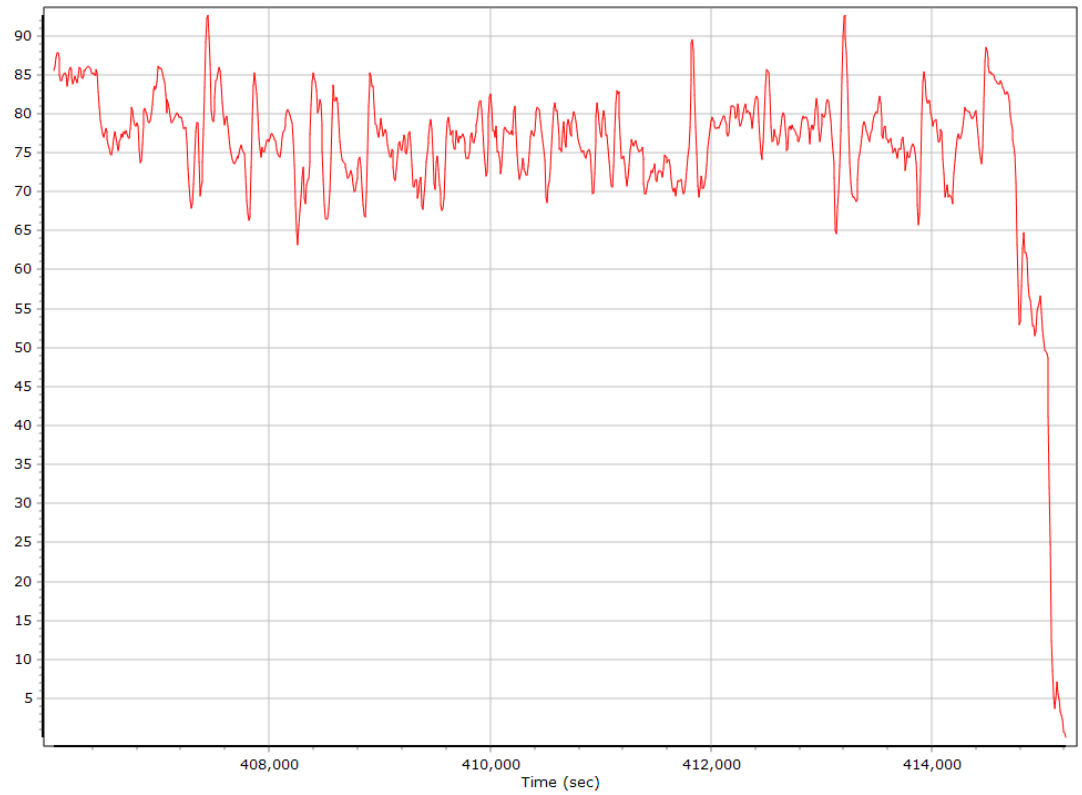
North/East Velocity



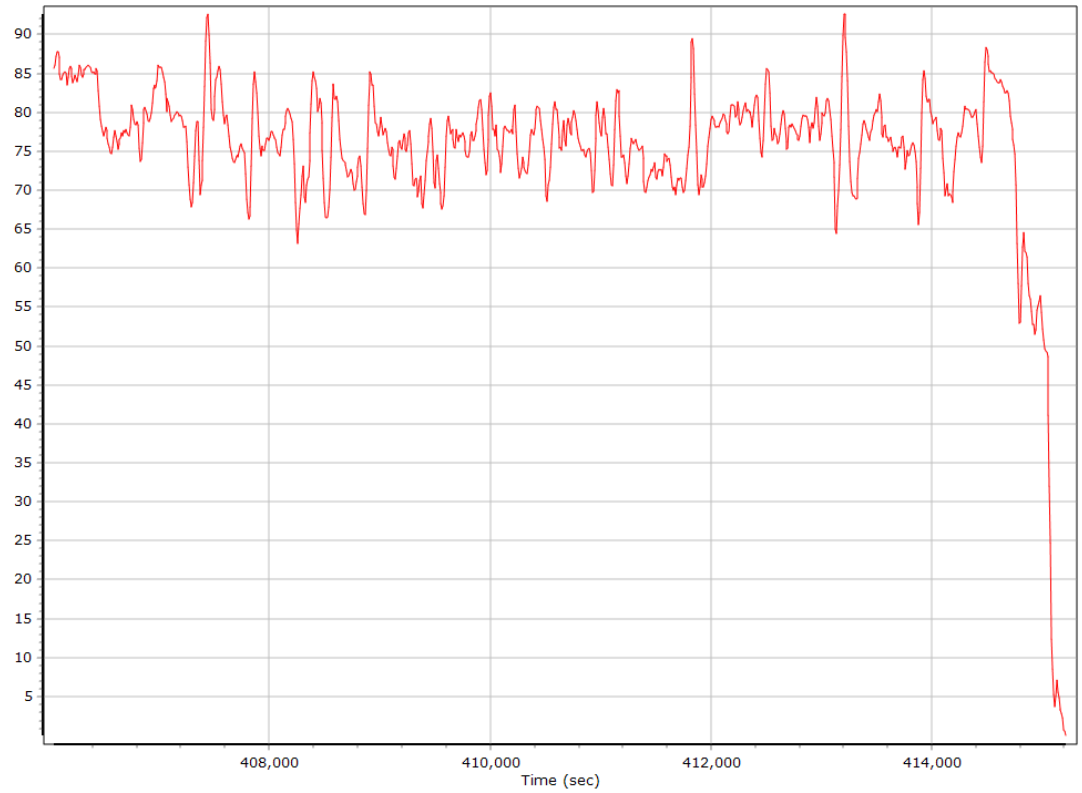
Down Velocity



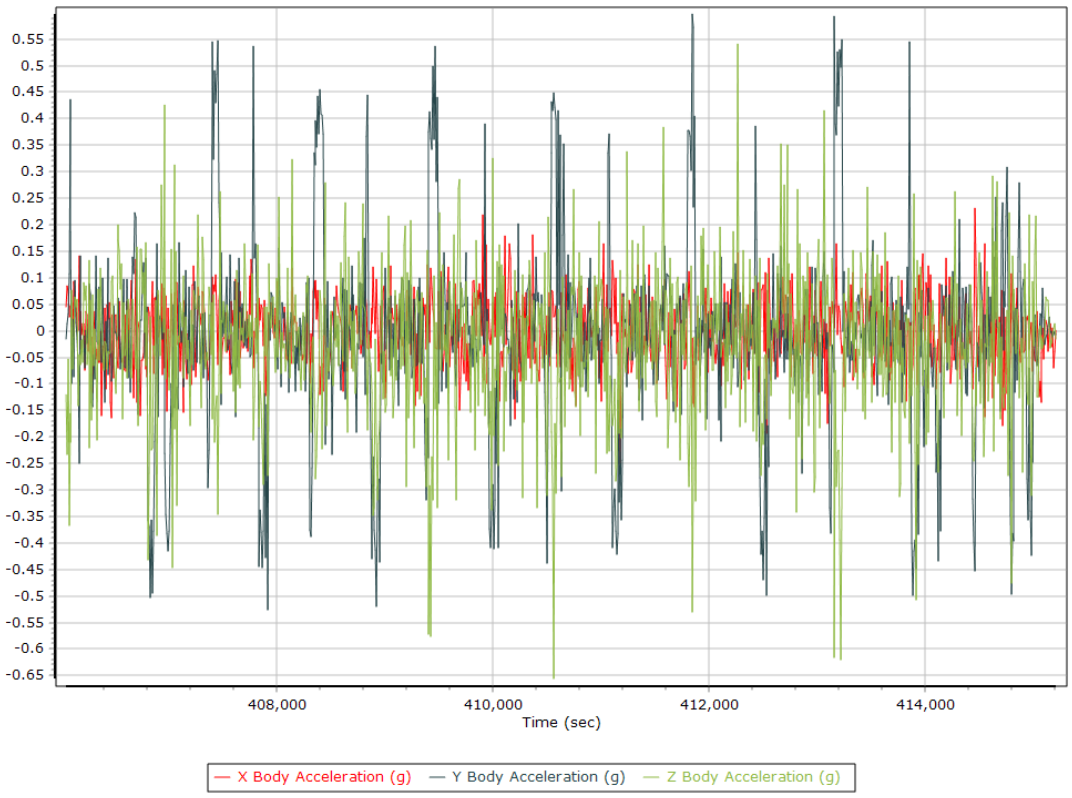
Total Speed



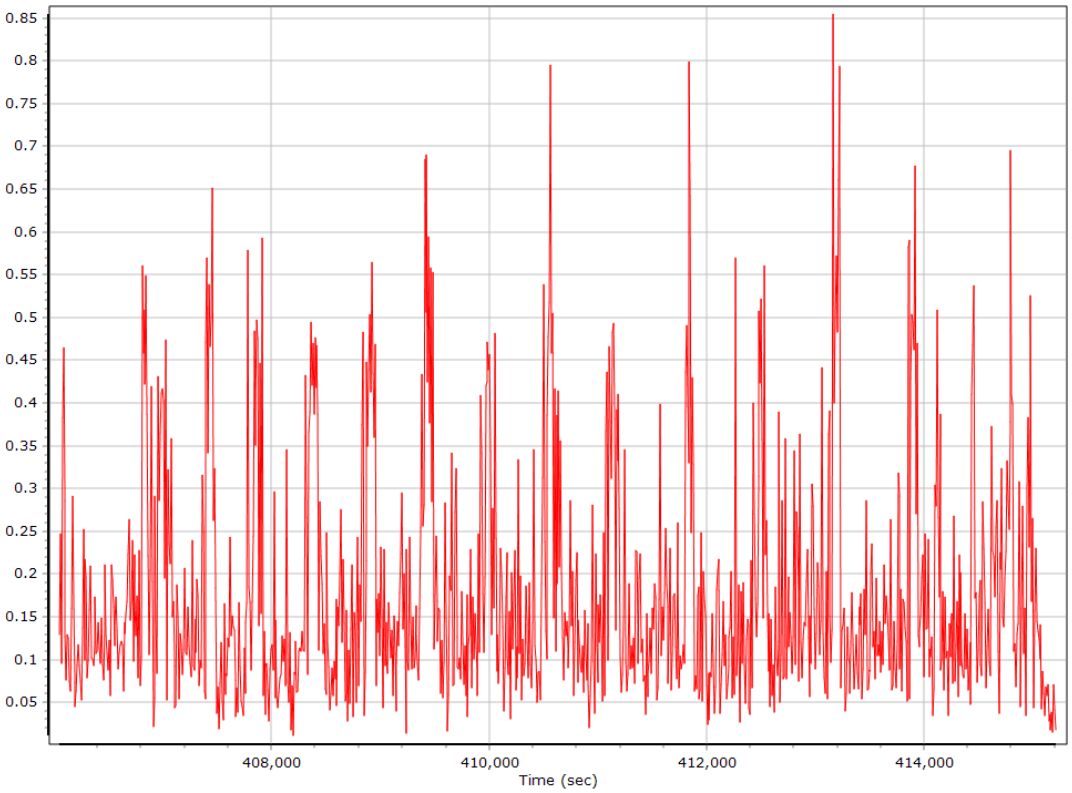
Ground Speed



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	DataType	Rate	Service	Database	Status

SmartBase Results

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

SmartBase Quality Check

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	8.08	107.87	
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	7	16	14
PDOP	1.19	2.63	1.50
QC Solution Gaps	1.00	1.00	
Solution Type	**Fixed**	**Float**	**No solution**
Epoch (s)	11432.00	0.00	1.00
Percentage	99.99	0.00	0.01

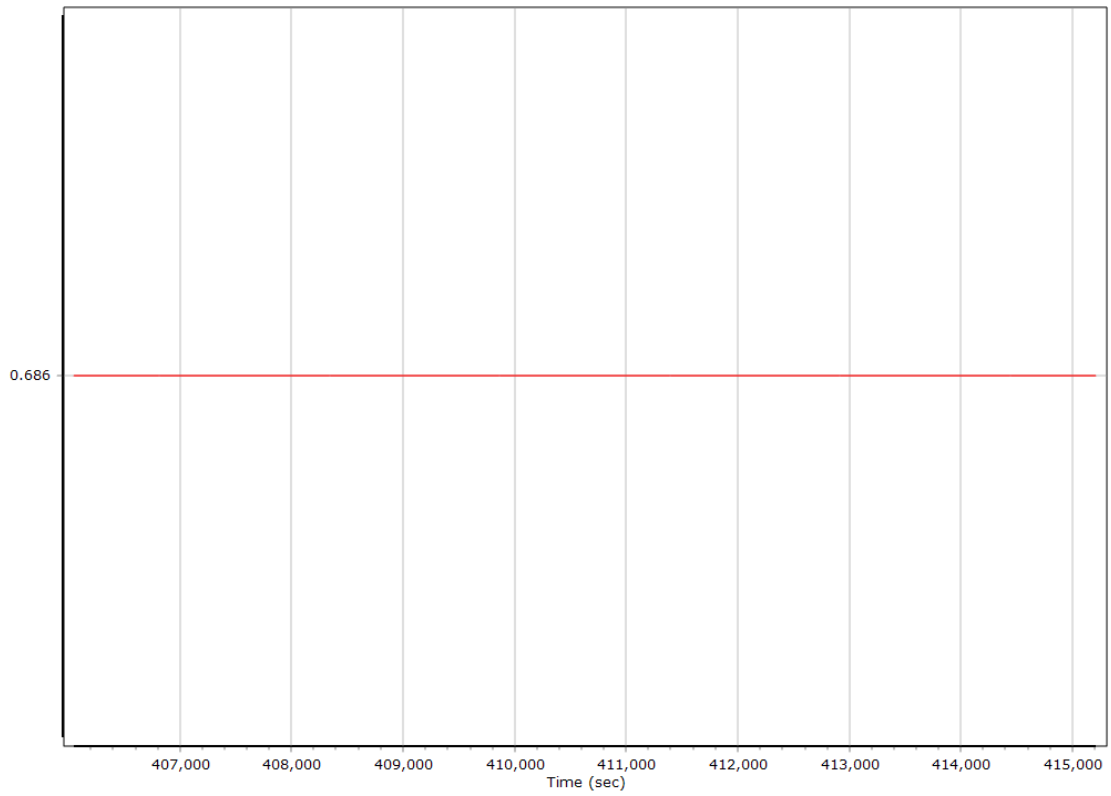
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	405989.870 (12/6/2018 4:46:29 PM)		
Processing end time	415520.000 (12/6/2018 7:25:20 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	0.000	0.000	0.000
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.686	-0.089	-0.956
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

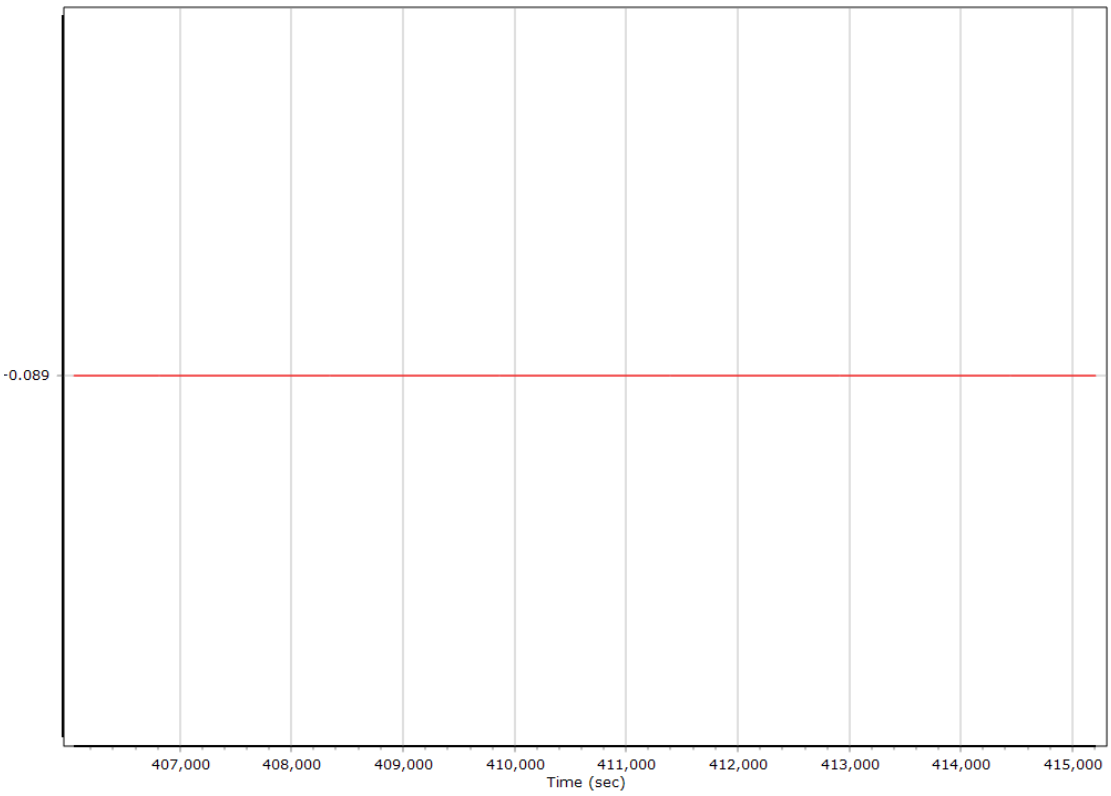
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

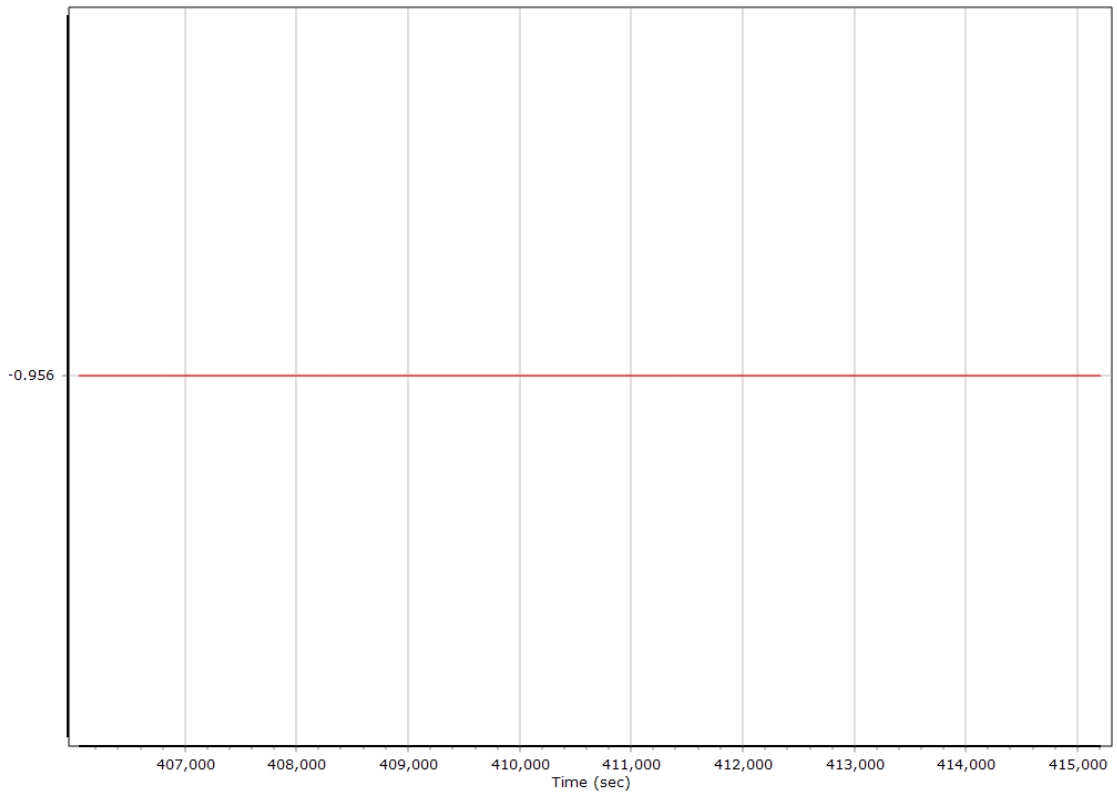
X Reference-Primary GNSS Lever Arm (m)



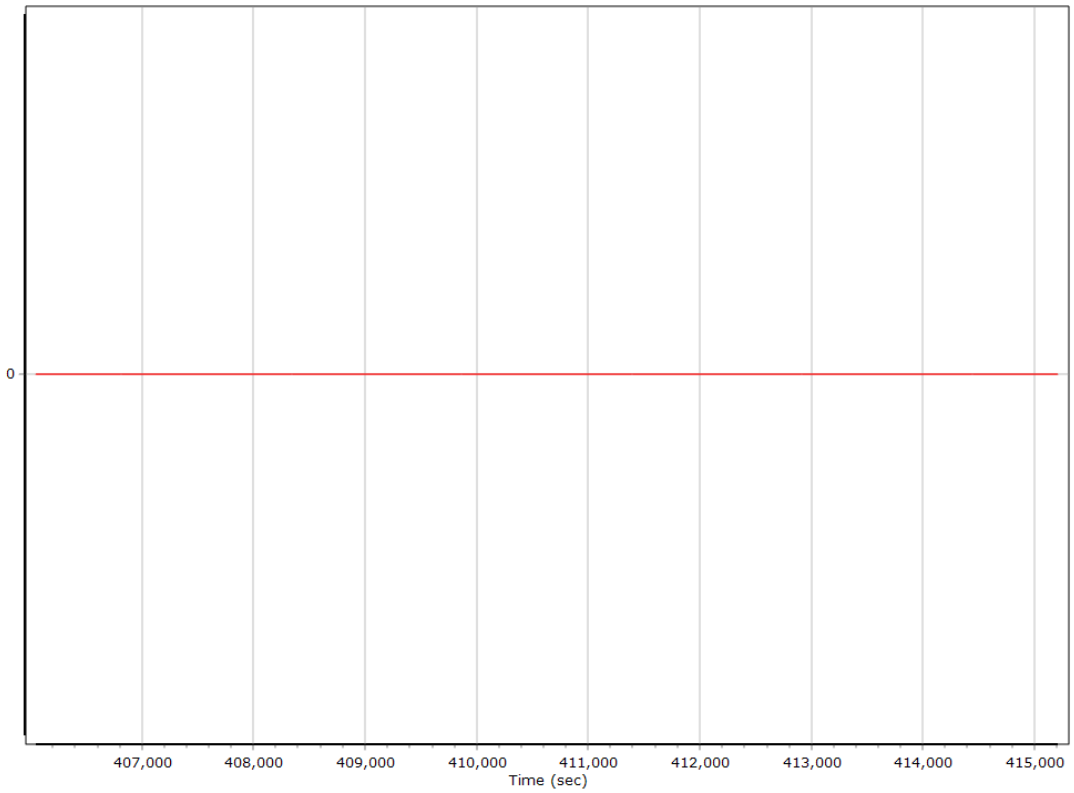
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



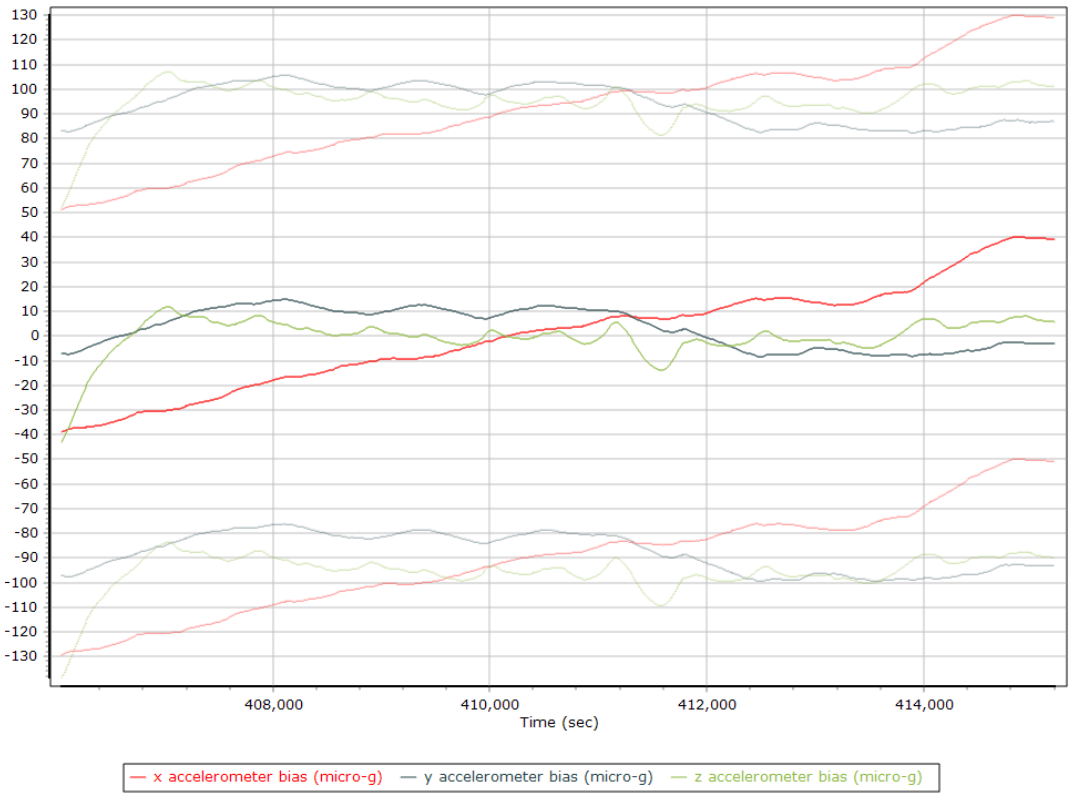
Reference-Primary GNSS Lever Arm Figure of Merit



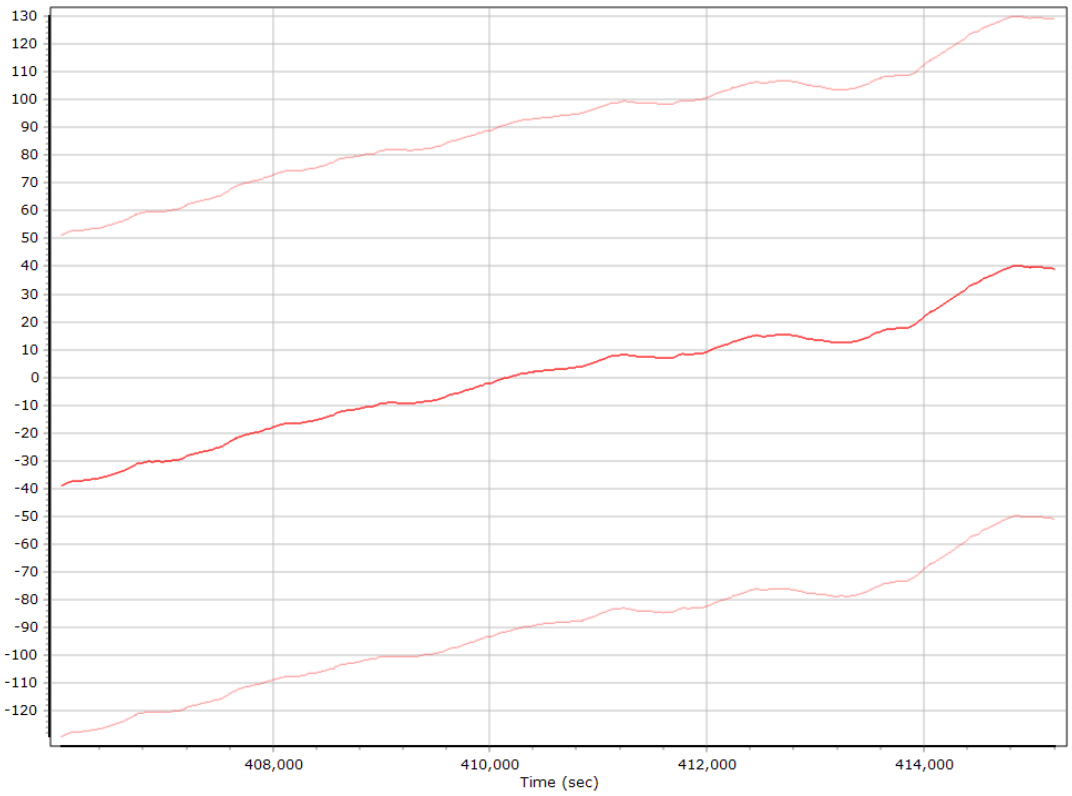
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

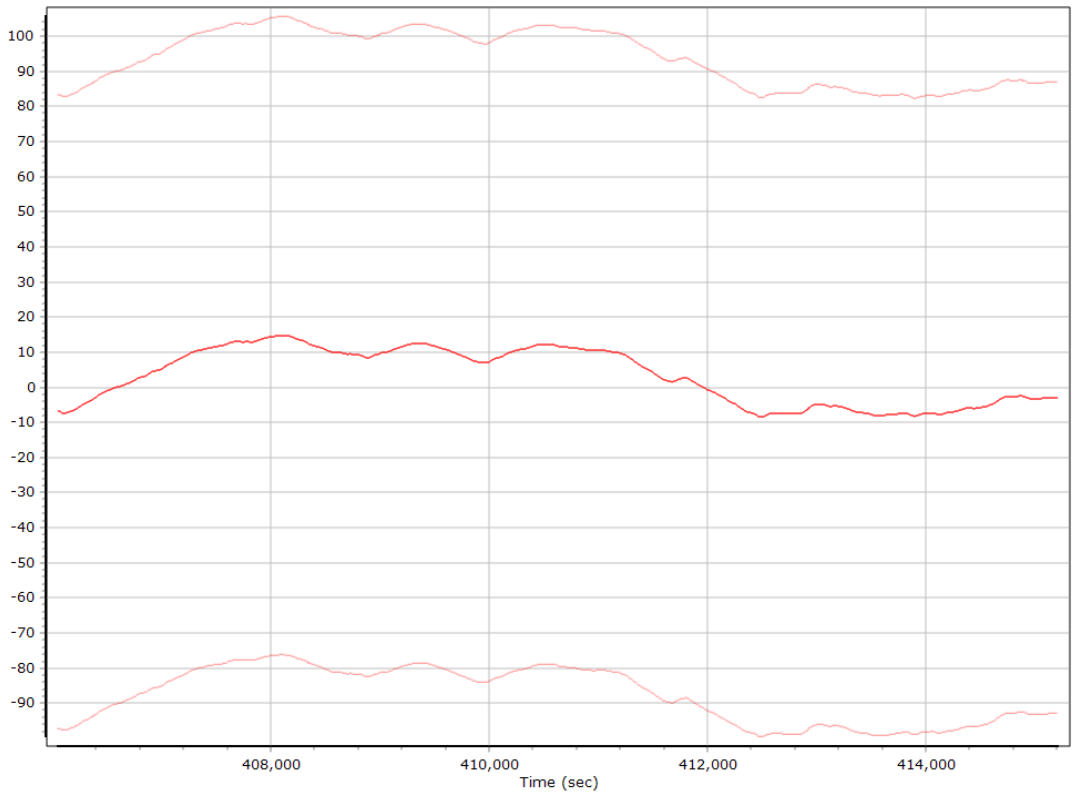
Accelerometer Bias (micro-g)



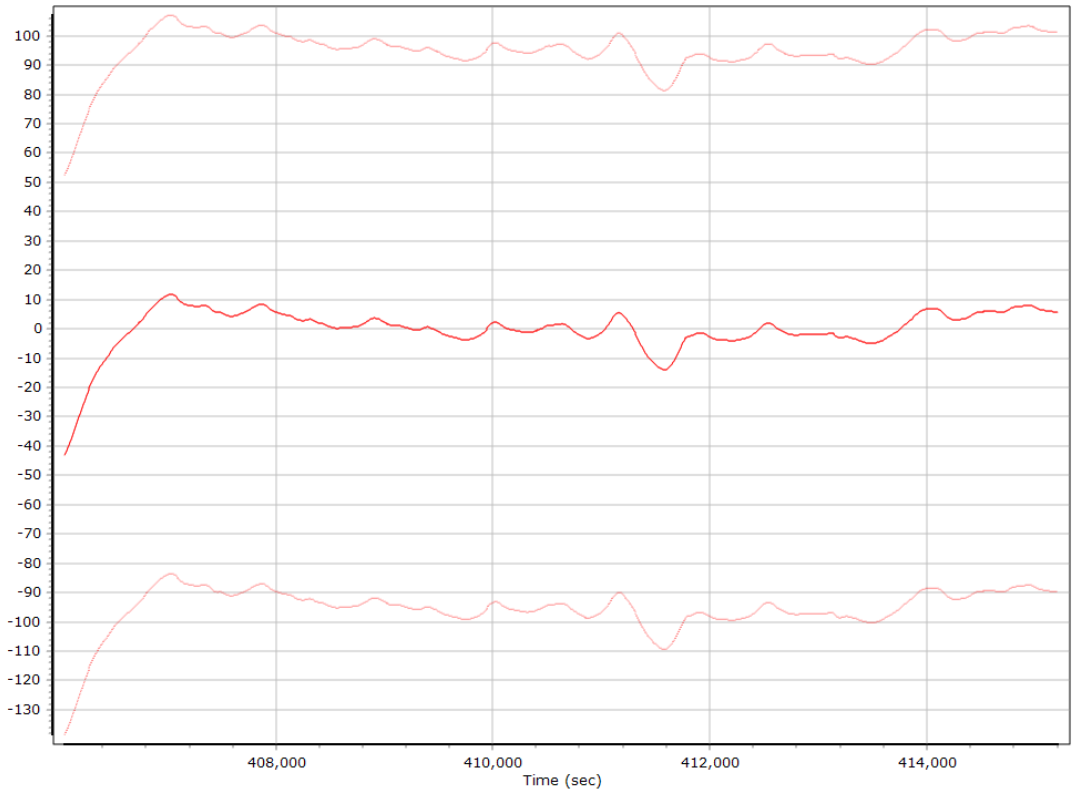
X Accelerometer Bias (micro-g)



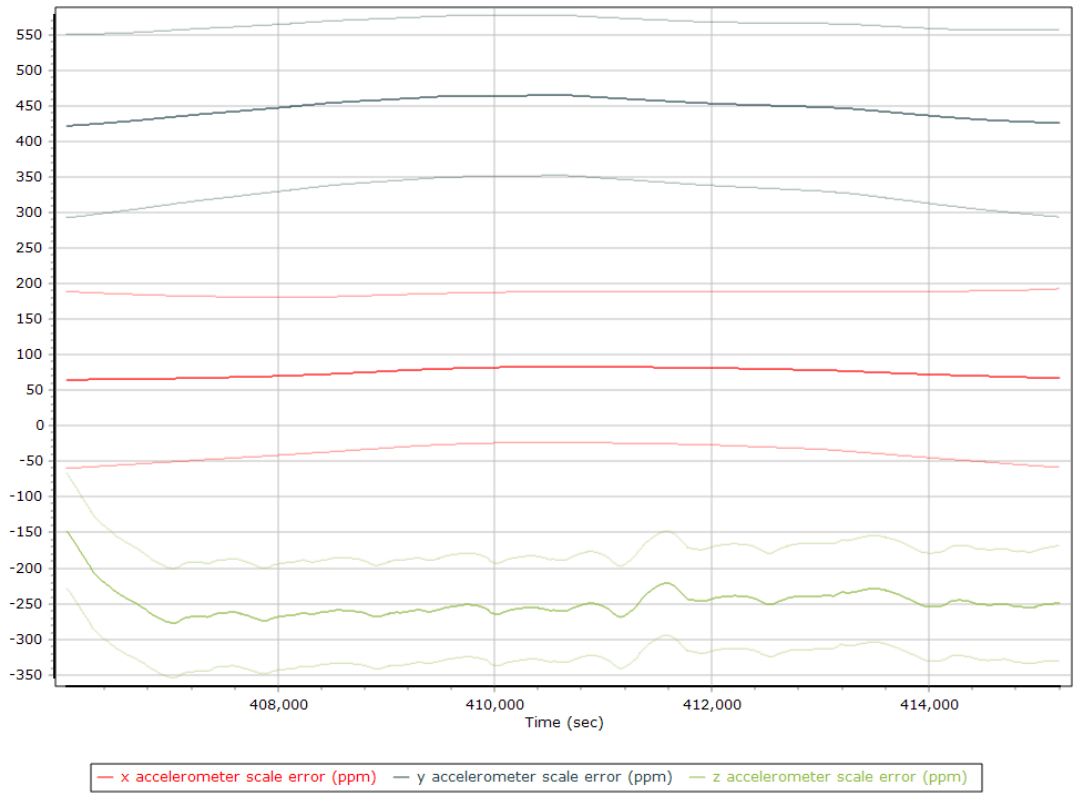
Y Accelerometer Bias (micro-g)



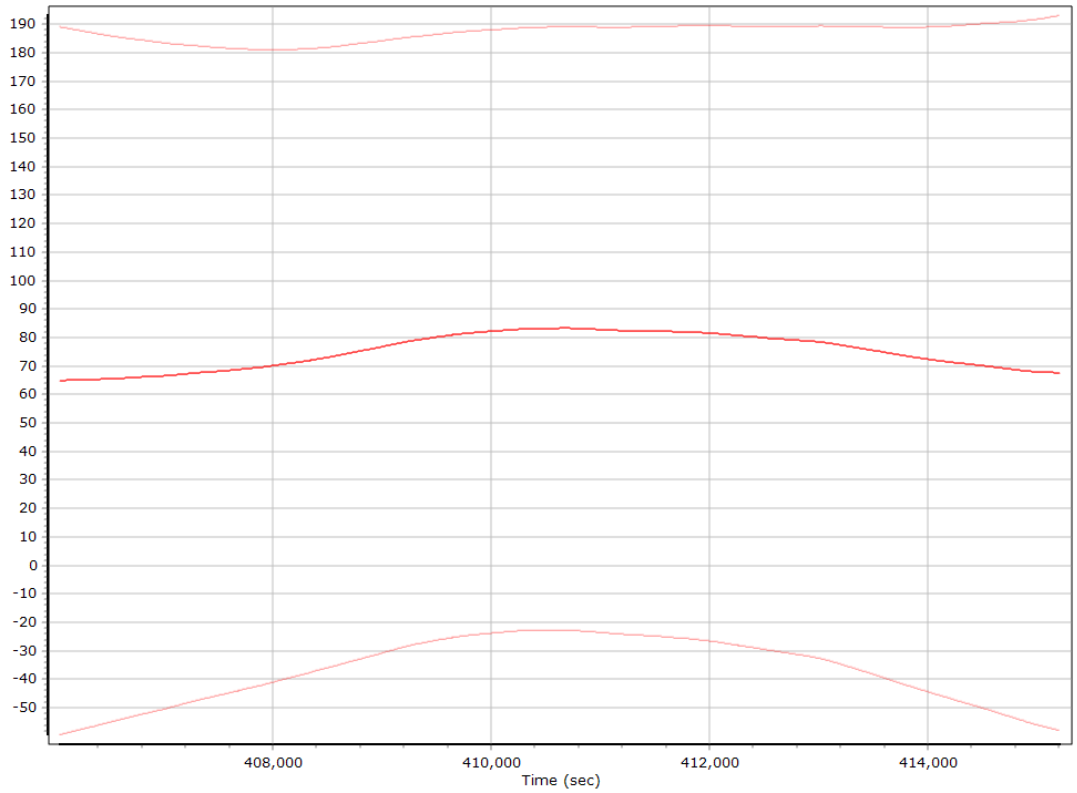
Z Accelerometer Bias (micro-g)



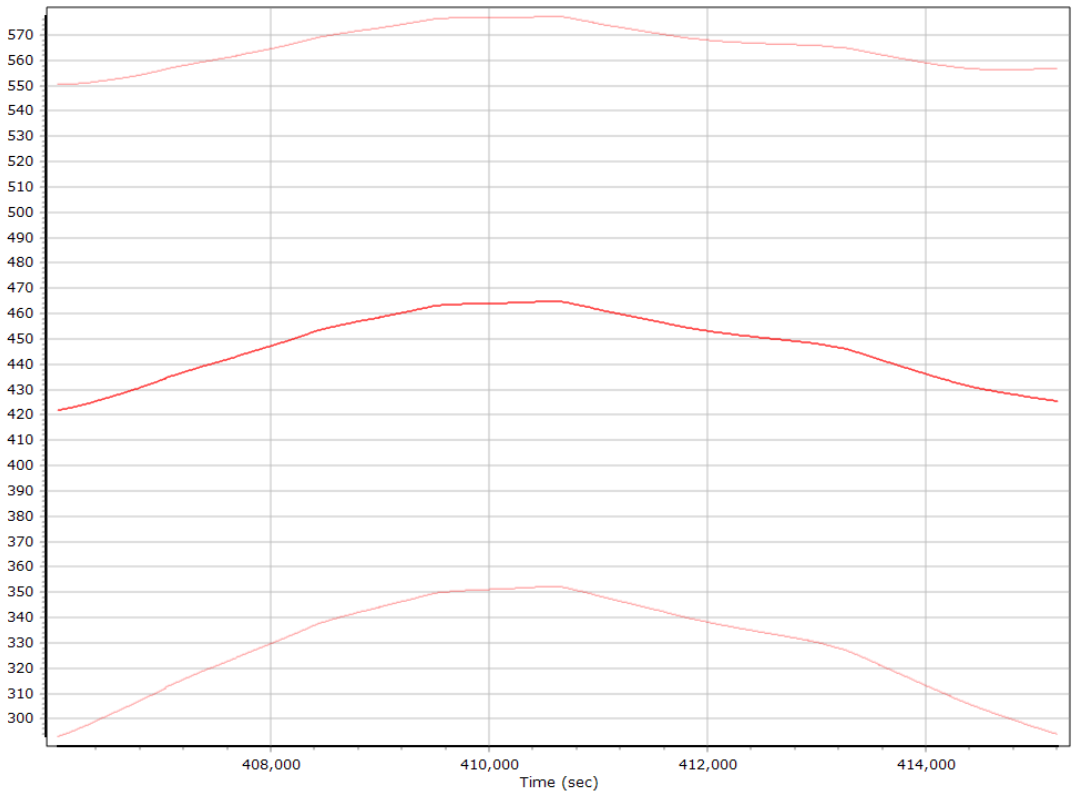
Accelerometer Scale Error (ppm)



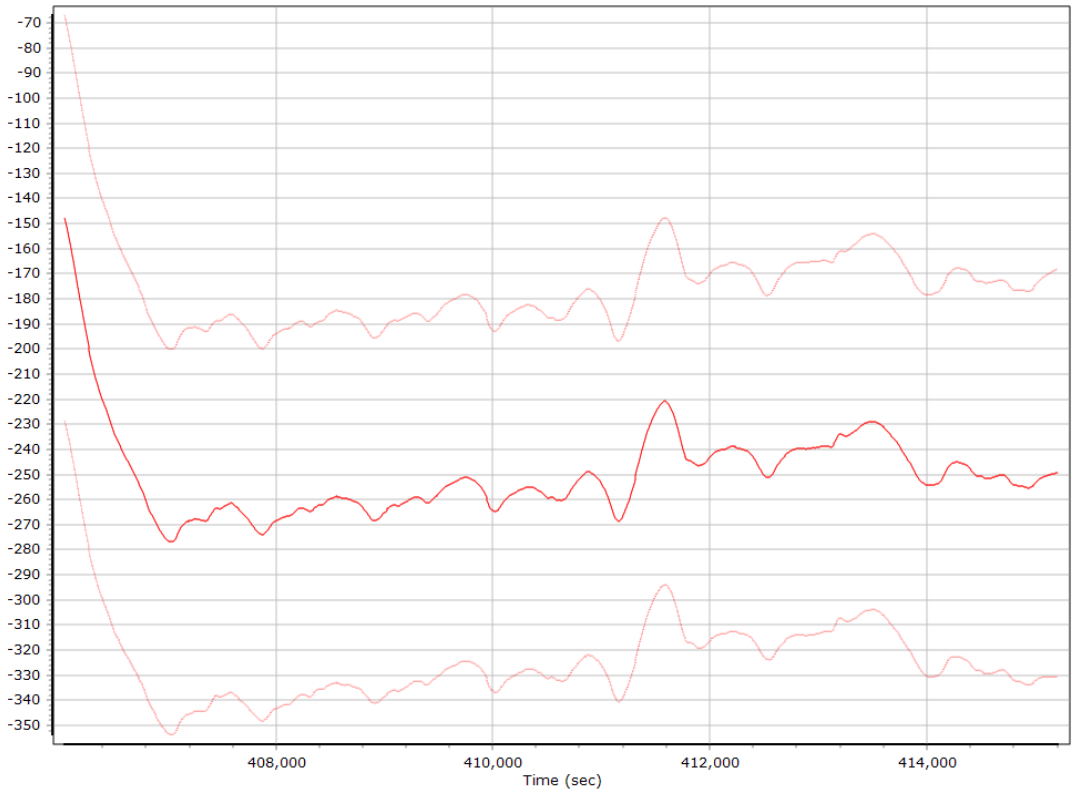
X Accelerometer Scale Error (ppm)



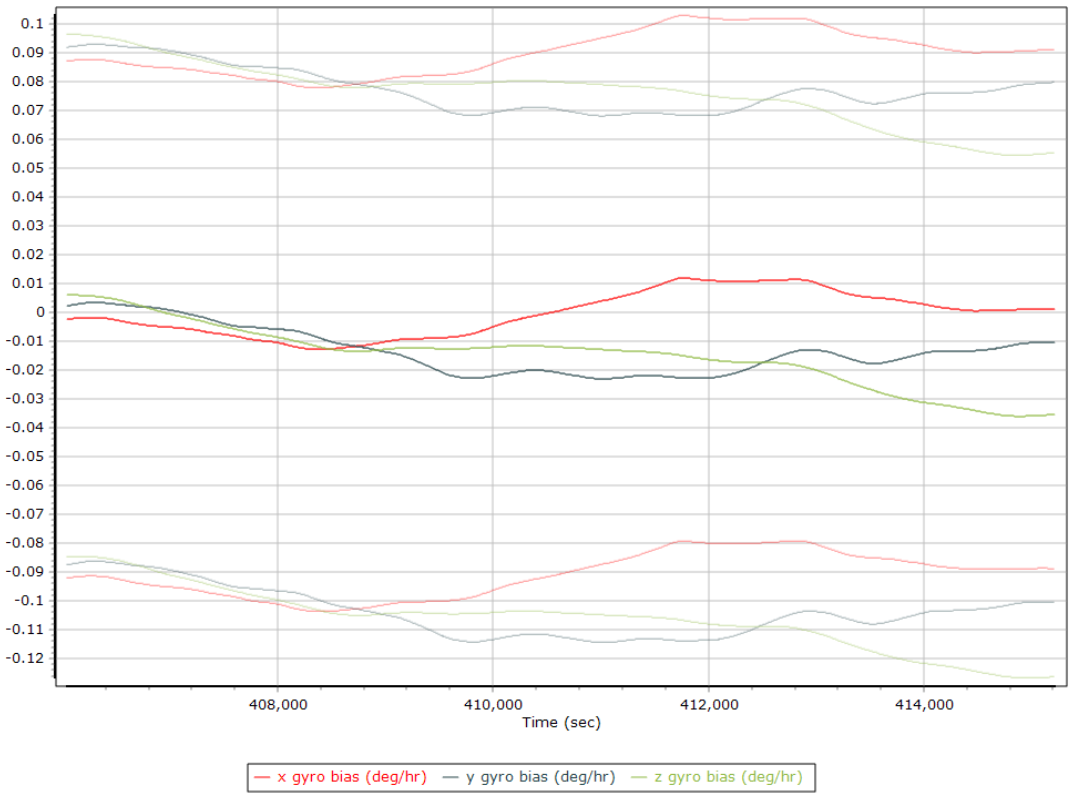
Y Accelerometer Scale Error (ppm)



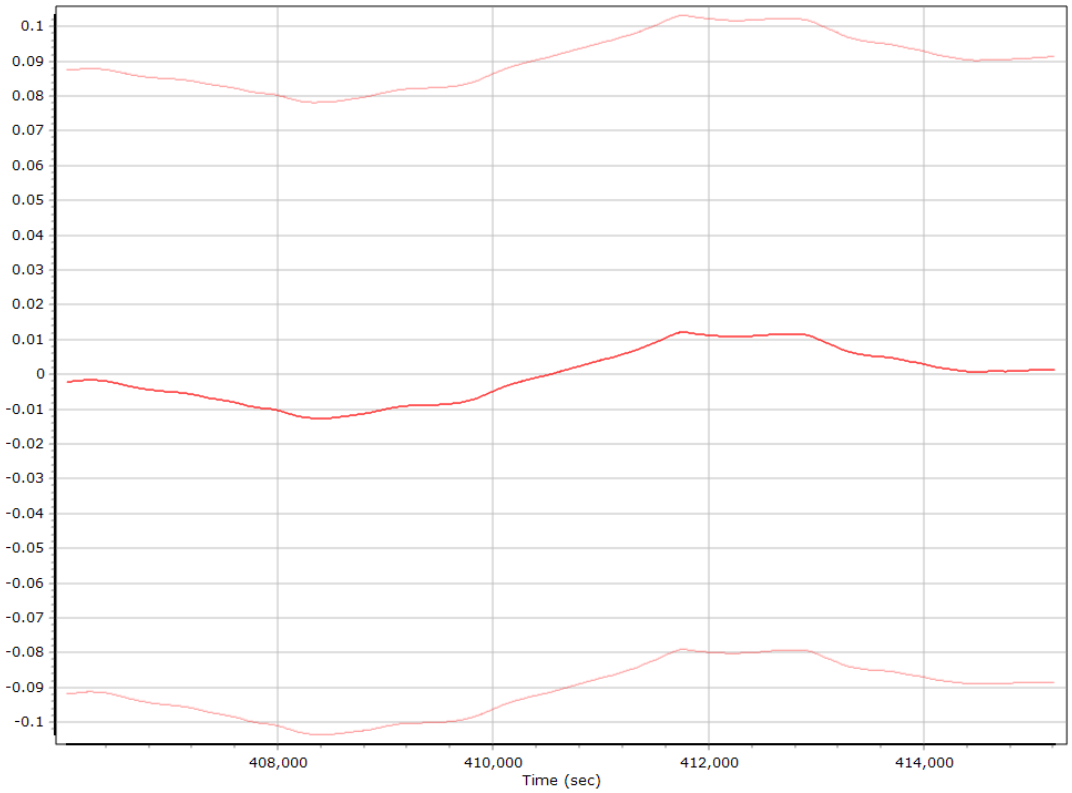
Z Accelerometer Scale Error (ppm)



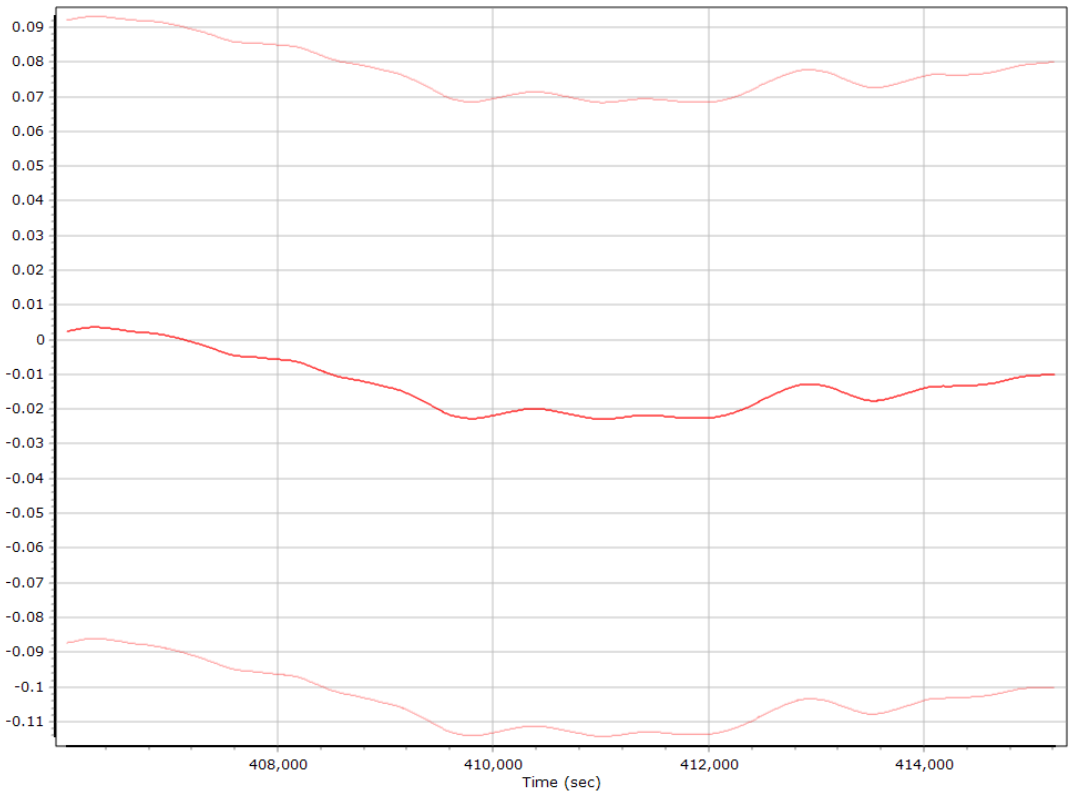
Gyro Bias (deg/h)



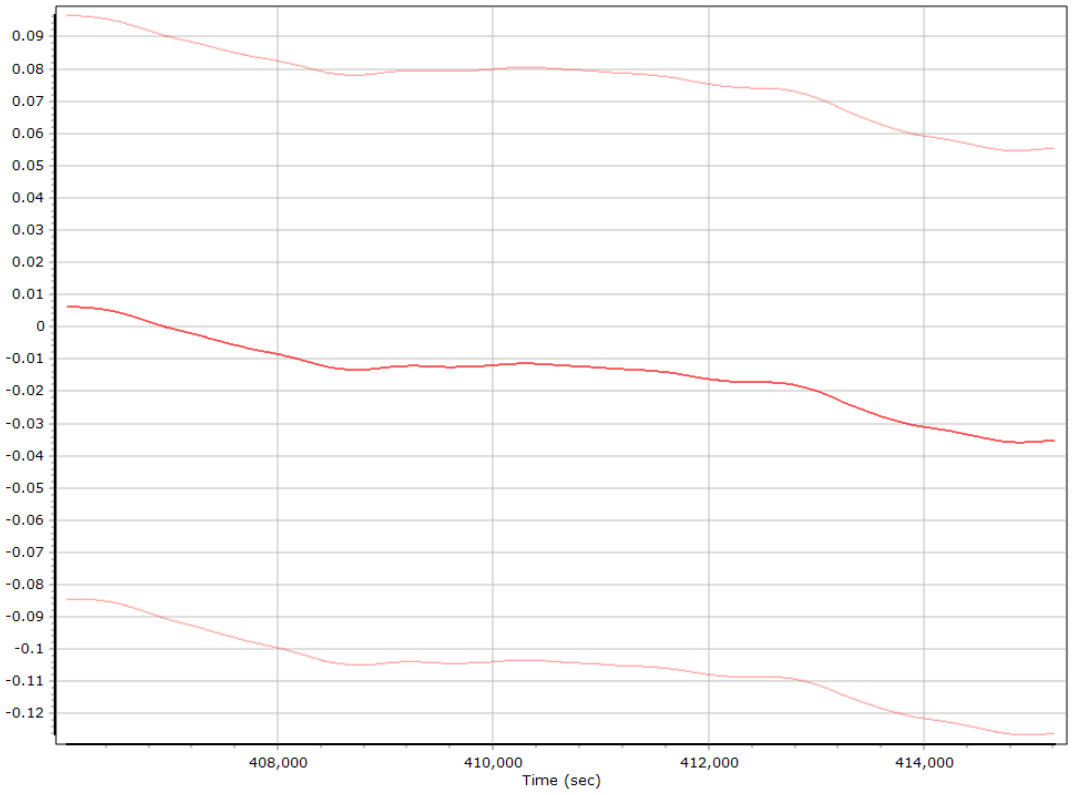
X Gyro Bias (deg/h)



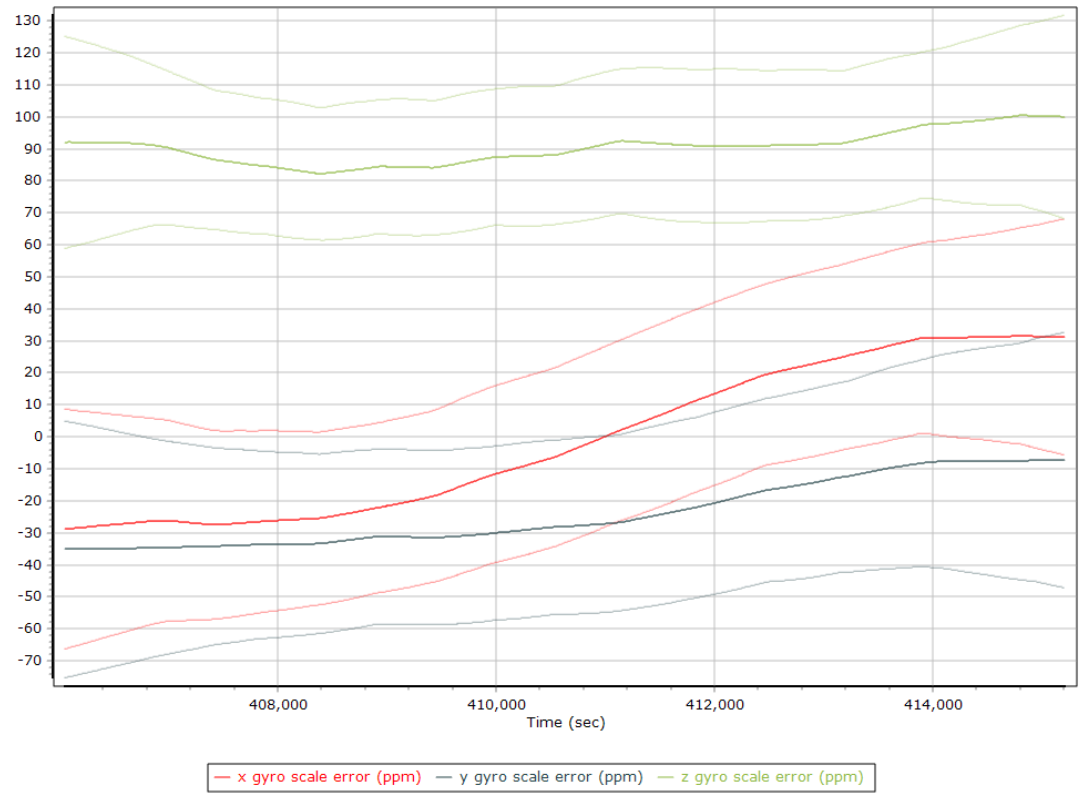
Y Gyro Bias (deg/h)



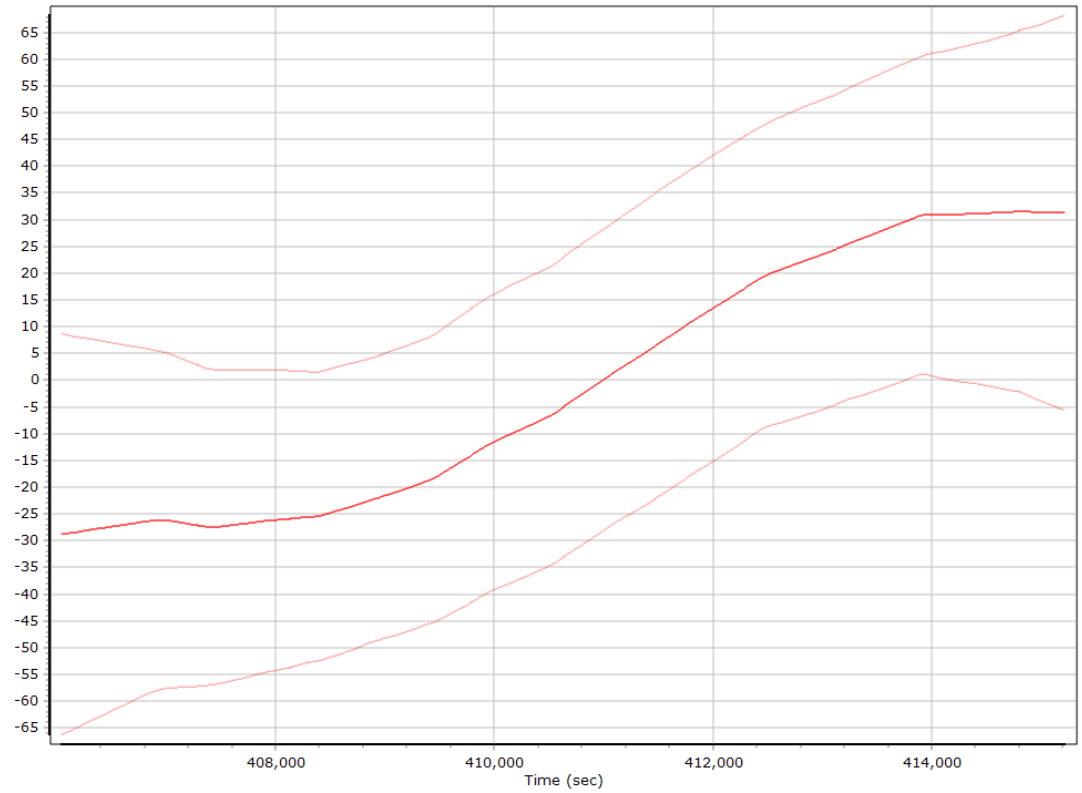
Z Gyro Bias (deg/h)



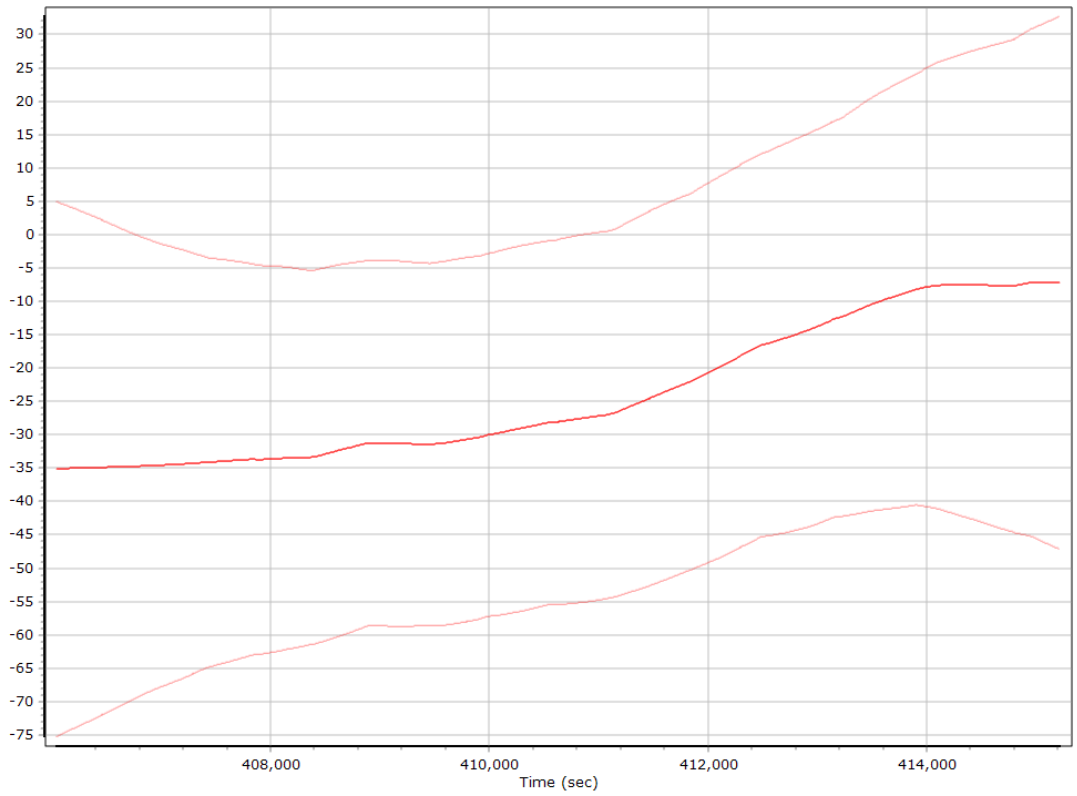
Gyro Scale Error (ppm)



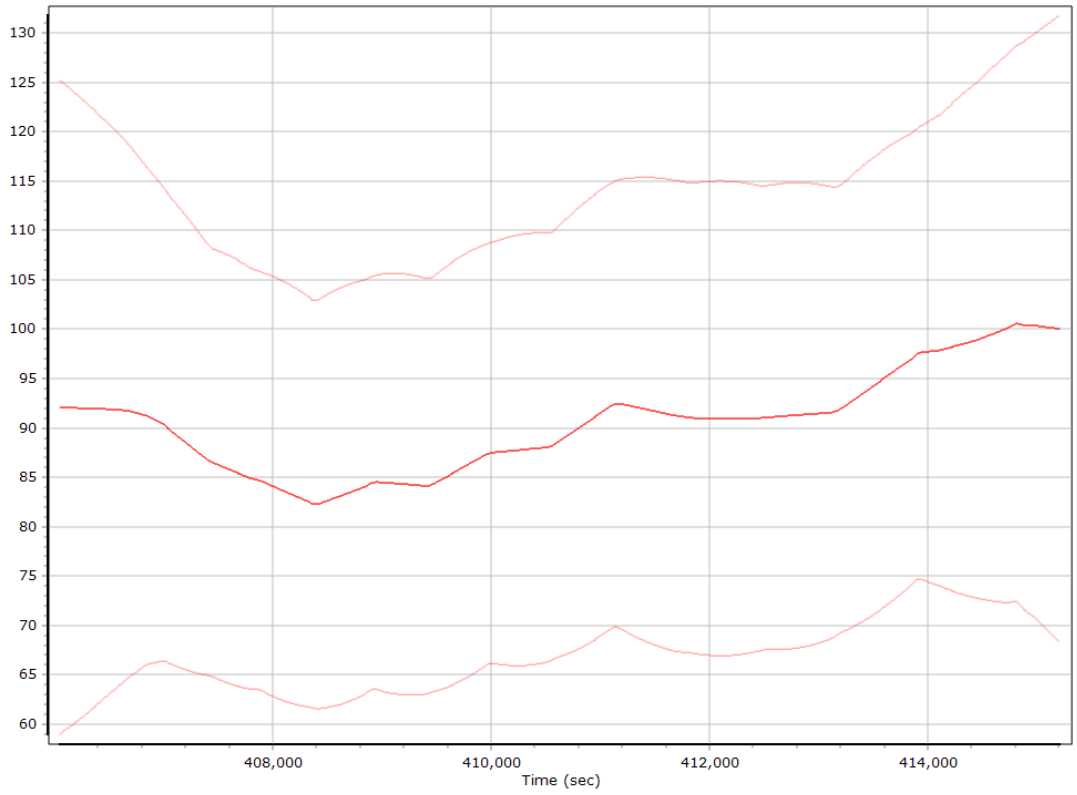
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

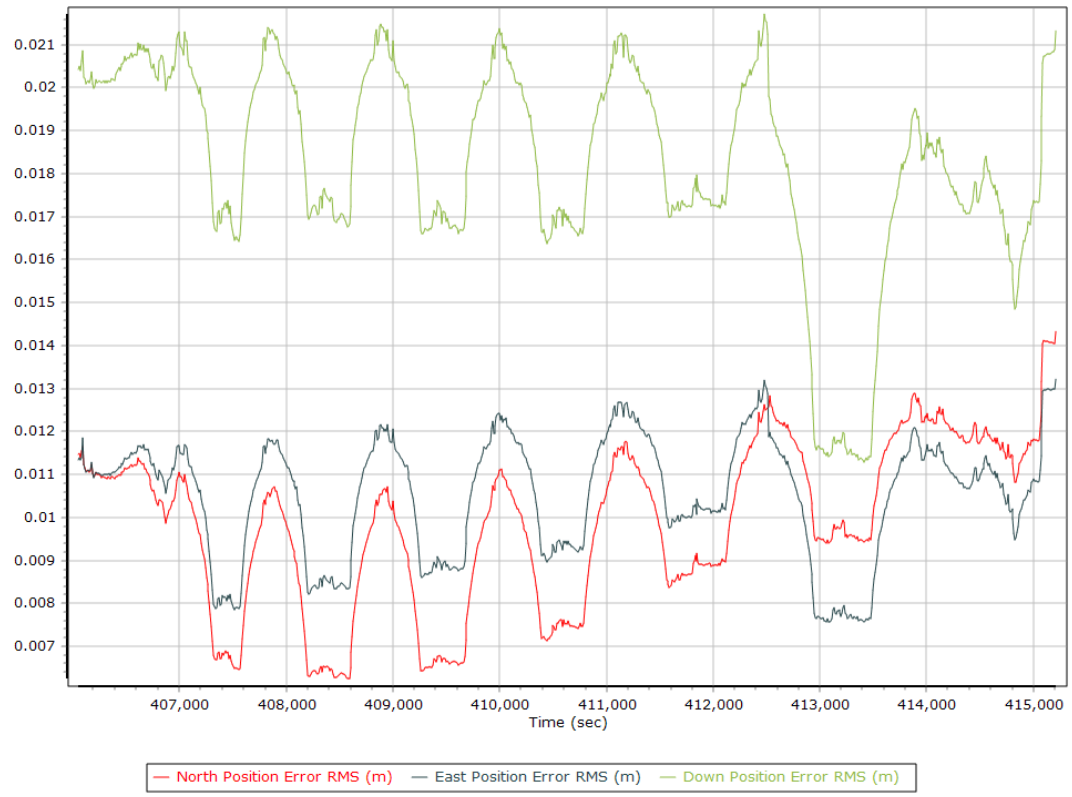


Z Gyro Scale Error (ppm)

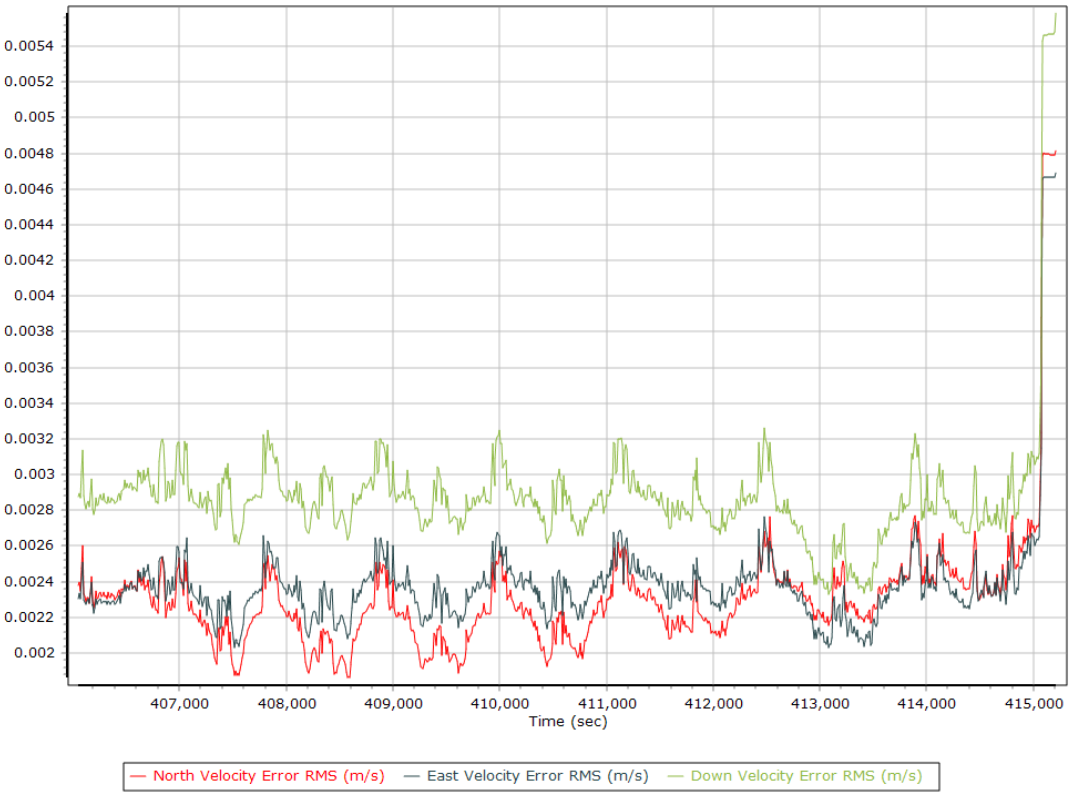


Smoothed Performance Metrics

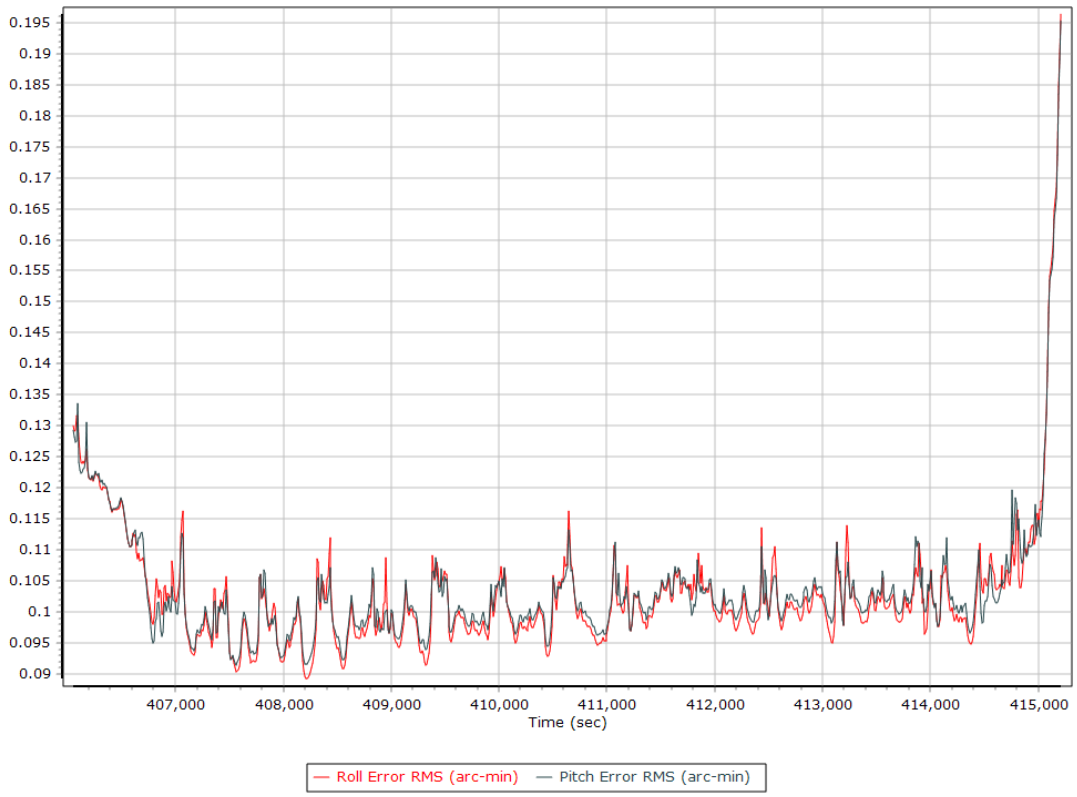
Position Error RMS (m)



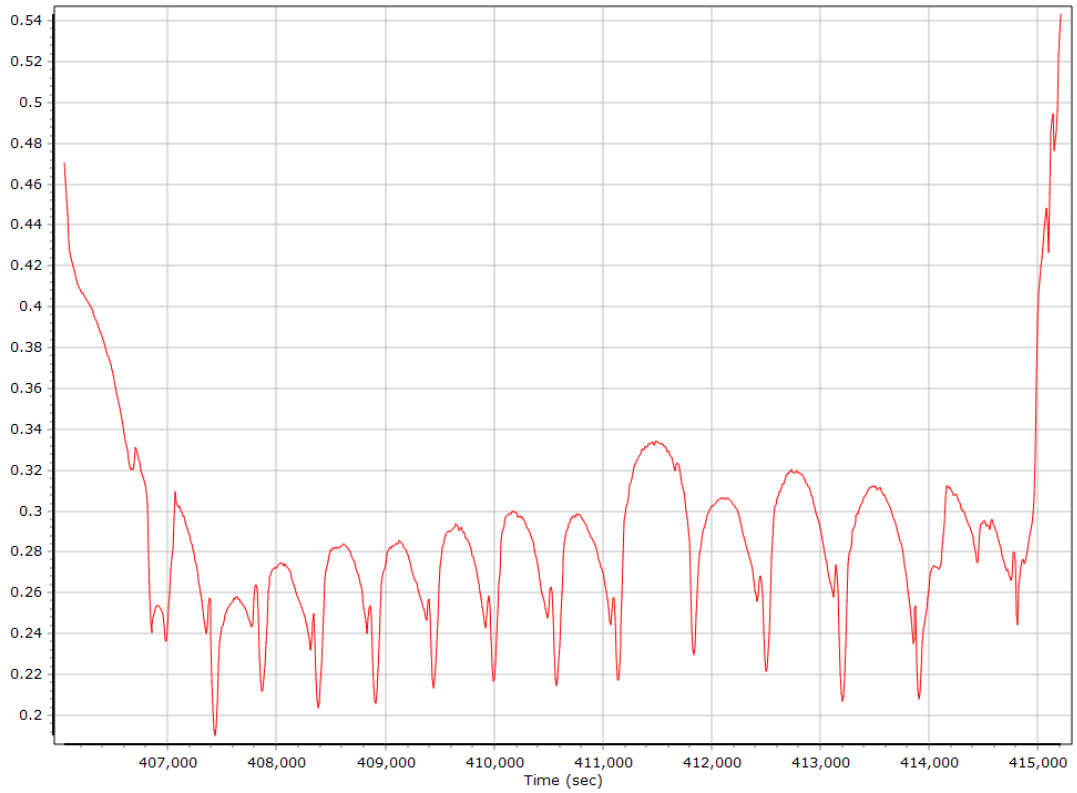
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

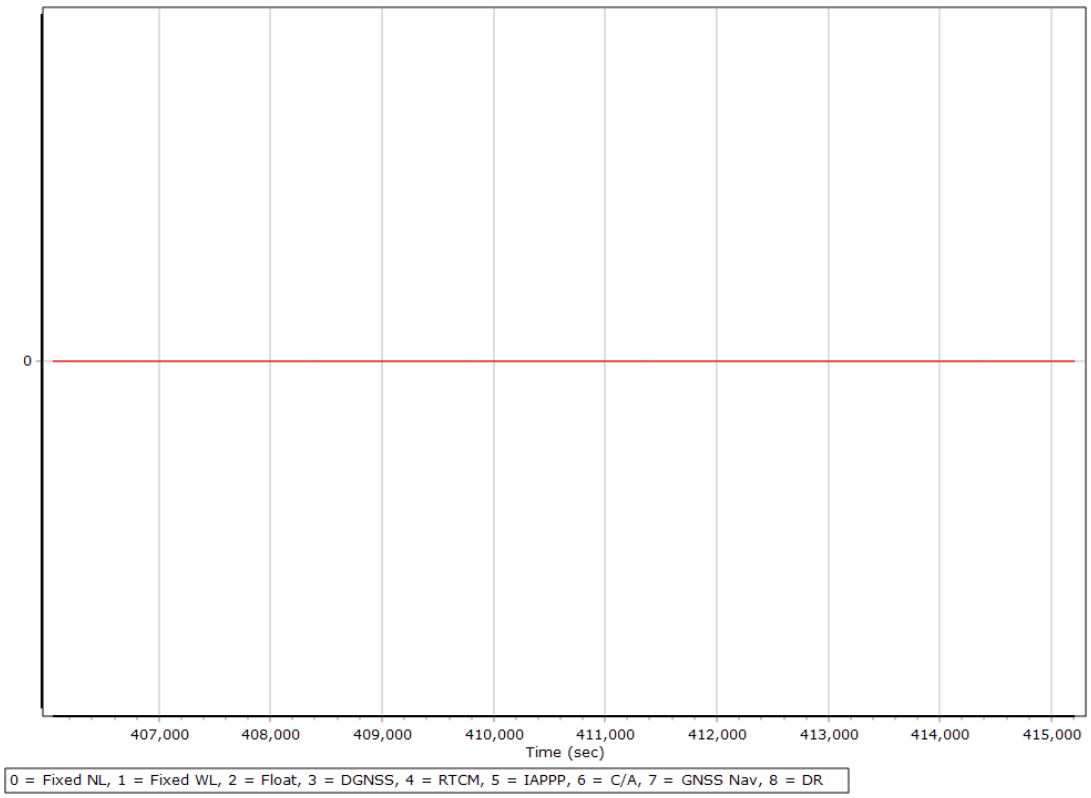


Heading Error RMS (arc-min)

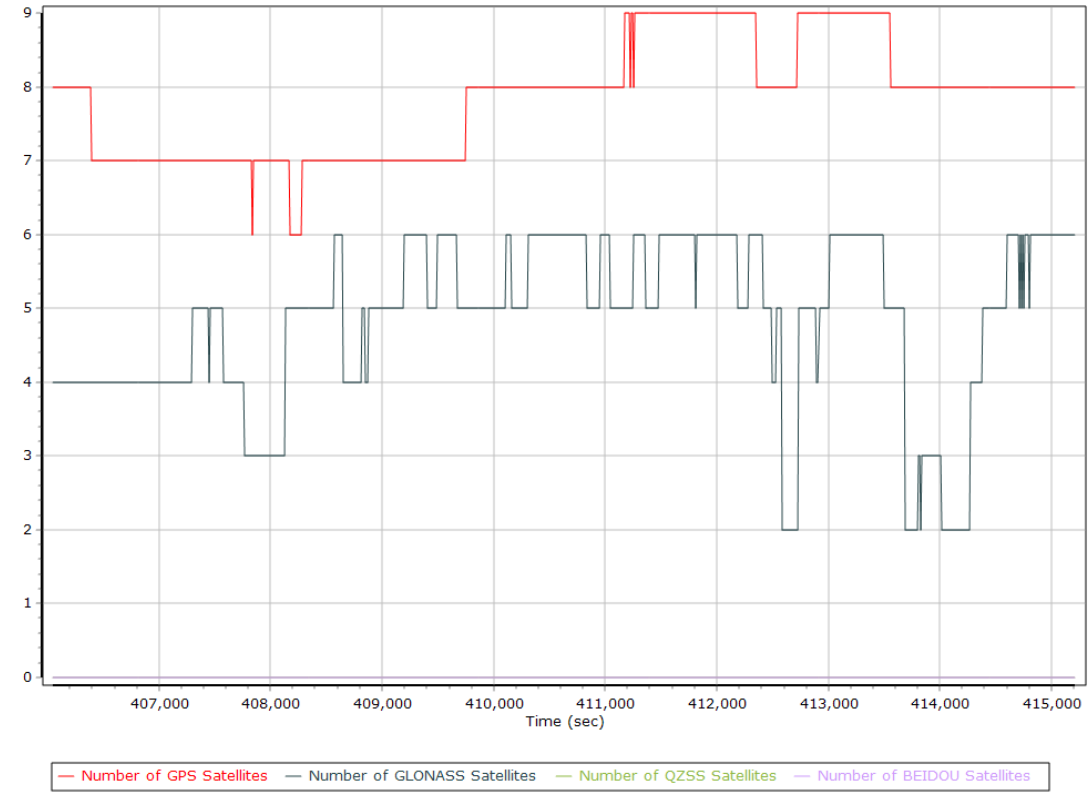


Smoothed Solution Status

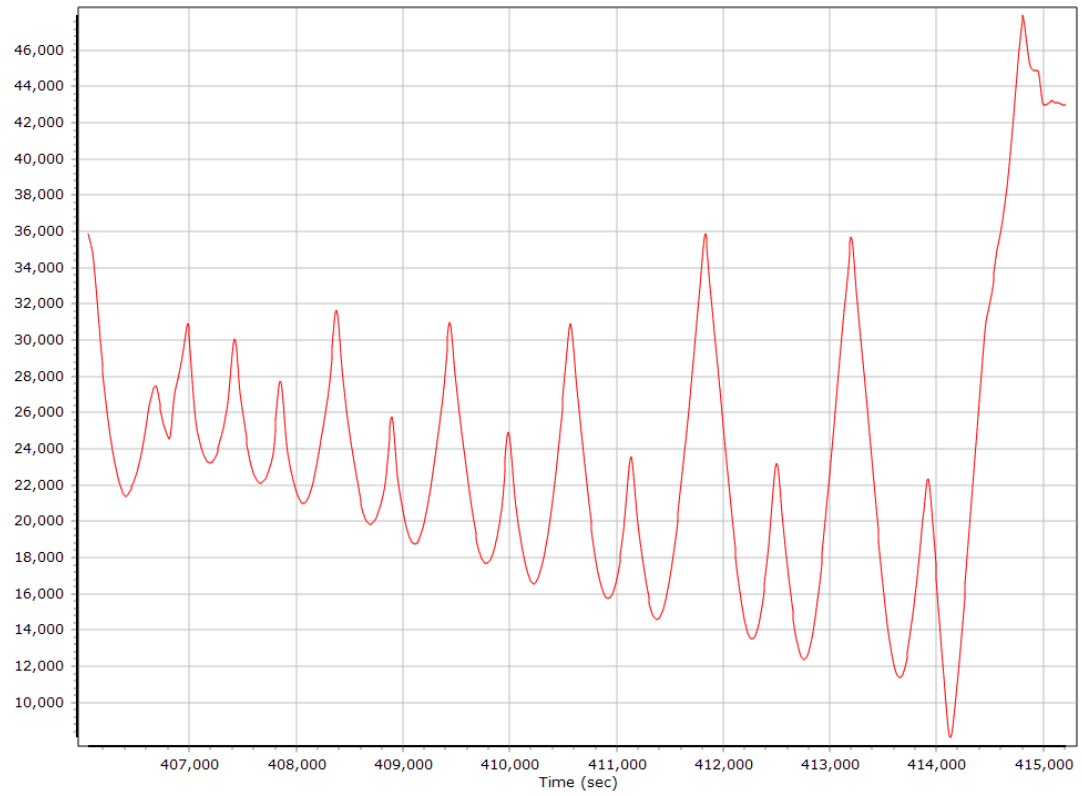
Processing Mode



Number of Satellites



Baseline Length



SBET IAKAR Separation

General Information

Mission Information

Project name	13284-1804_20181213
Processing date	2018-12-14 13:55:33
Mission date	2018-12-13 17:12:39
Mission duration	03:01:00.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9865
IMU type	57
Receiver type	BD982
Antenna type	AV37

Project File List

Rover Data Files

File name	File type
181213_171220_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3470.18g	GLONASS Broadcast Ephemeris
Ephm3470.18n	GPS Broadcast Ephemeris
baco3470.18o	GNSS SingleBase
gode3470.18o	GNSS SingleBase
hnpt3470.18o	GNSS SingleBase
loy83470.18o	GNSS SingleBase
loyc3470.18o	GNSS SingleBase
loyj3470.18o	GNSS SingleBase
loyk3470.18o	GNSS SingleBase
loyq3470.18o	GNSS SingleBase
loyy3470.18o	GNSS SingleBase
zdc13470.18o	GPS SingleBase
igr20313.sp3	GPS Precise Ephemeris
igu20314_00.sp3	GPS Precise Ephemeris
igu20314_06.sp3	GPS Precise Ephemeris
igu20314_12.sp3	GPS Precise Ephemeris
igu20314_18.sp3	GPS Precise Ephemeris
igu20315_00.sp3	GPS Precise Ephemeris
igu20315_06.sp3	GPS Precise Ephemeris
all_imagenames.dat	2 Fields (Time, Photo ID) Photo Id File

Output Files

Filename	File type
sbet_Mission 1.out	SBET Trajectory File
photoID_eo_Mission 1.txt	Applanix Standard POSEO Output

Rover Data Summary

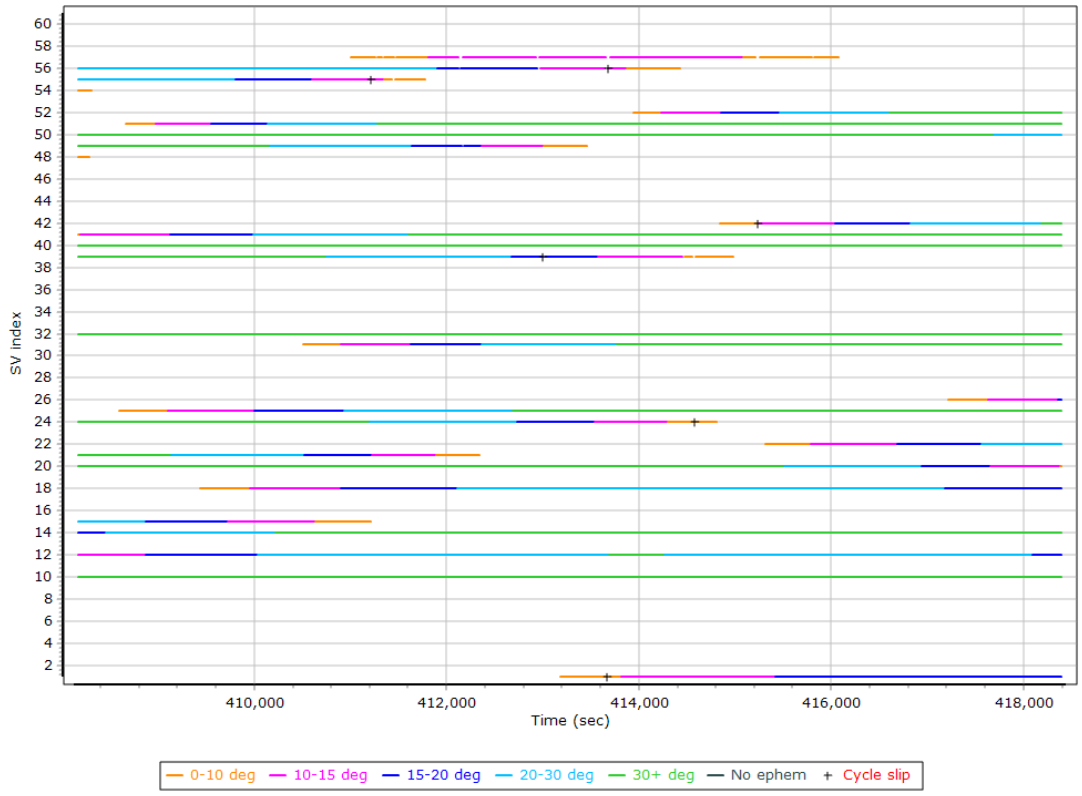
First raw data file	181213_171220_INS-GPS_1.raw		
Last raw data file	181213_171220_INS-GPS_1.raw		
Start GPS week	2031		
Start time	407540.487 (12/13/2018 5:12:20 PM)		
End time	418401.101 (12/13/2018 8:13:21 PM)		
Start of fine alignment	408105.427 (12/13/2018 5:21:45 PM)		
Available subsystems	Primary 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]	0.000	0.000	0.000
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

Raw Data QC

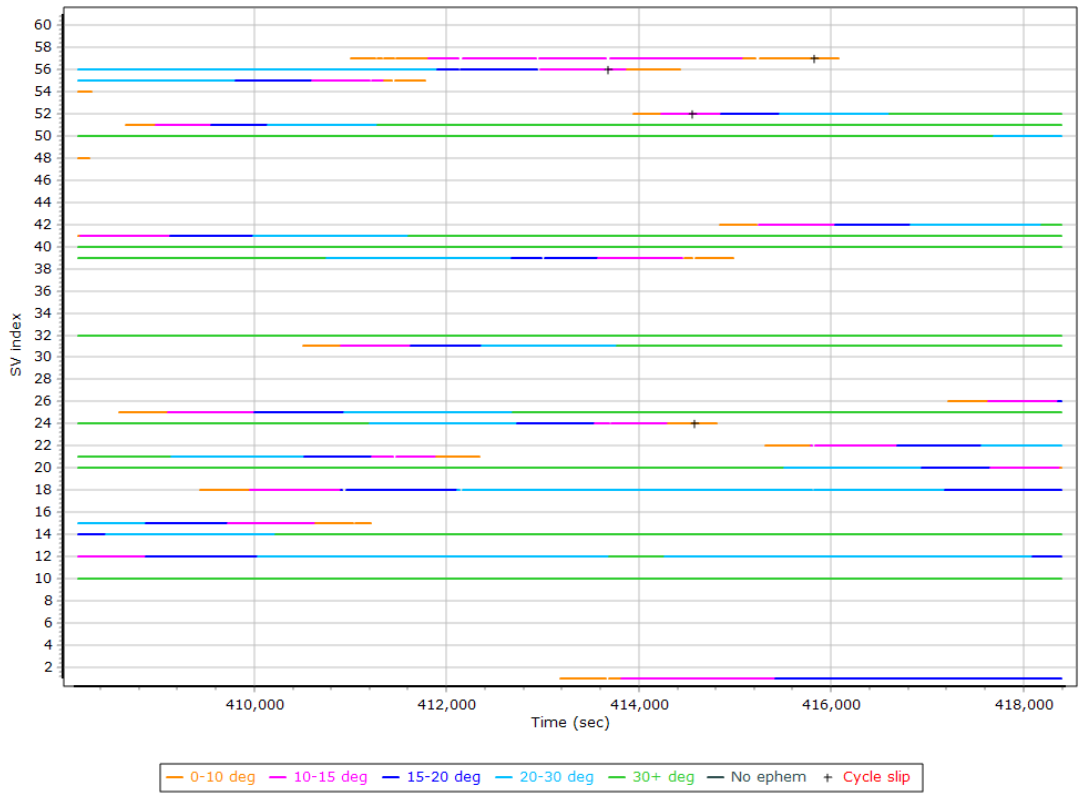
Raw IMU Import QC Summary

IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_Mission 1.log
IMU Records Processed	2171681
Termination Status	Normal
IMU Anomalies	0

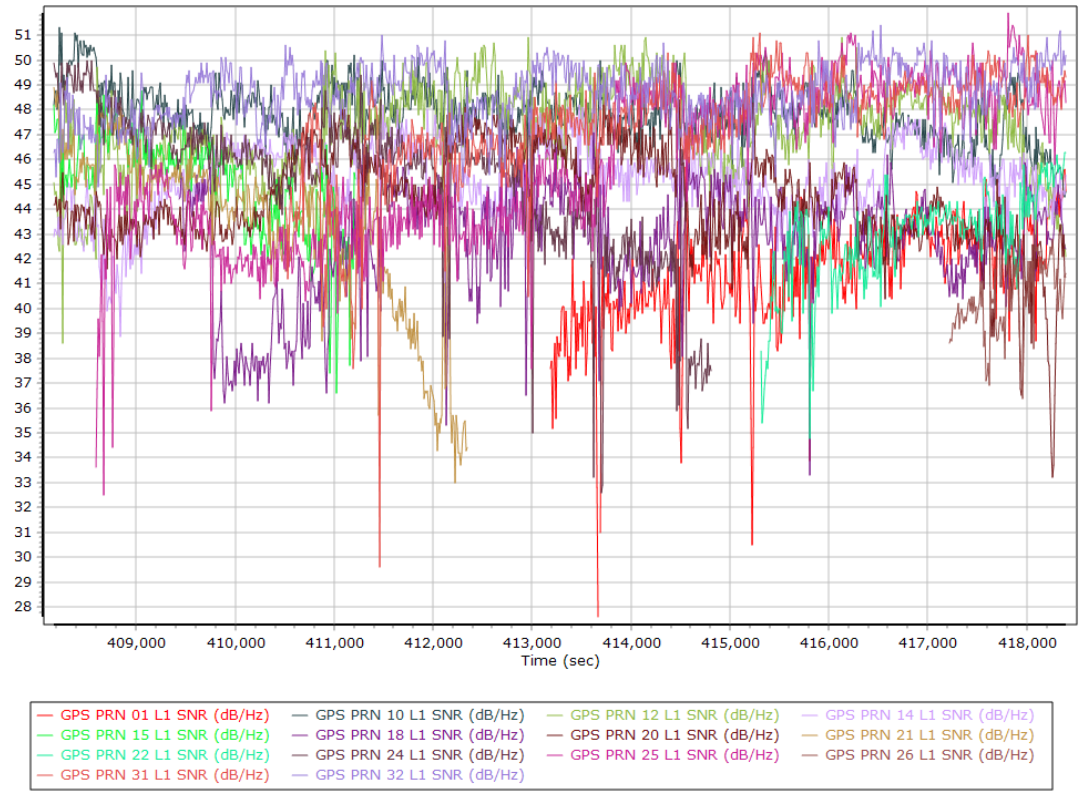
L1 Satellite Lock/Elevation



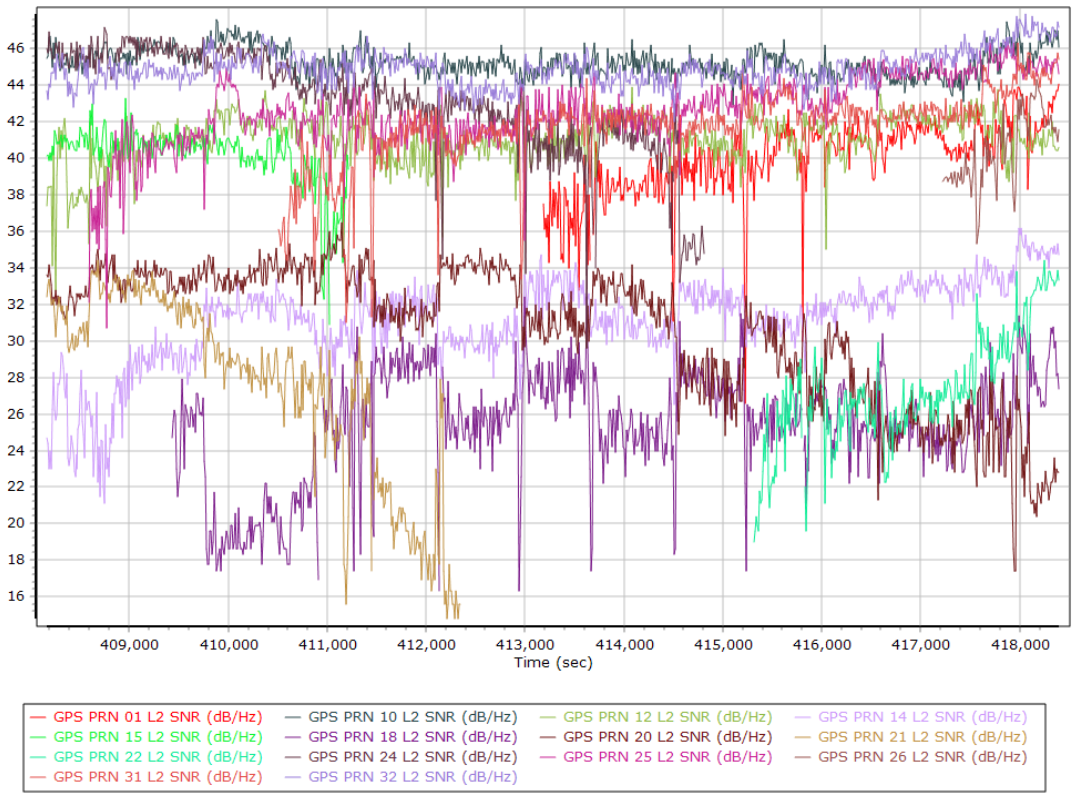
L2 Satellite Lock/Elevation



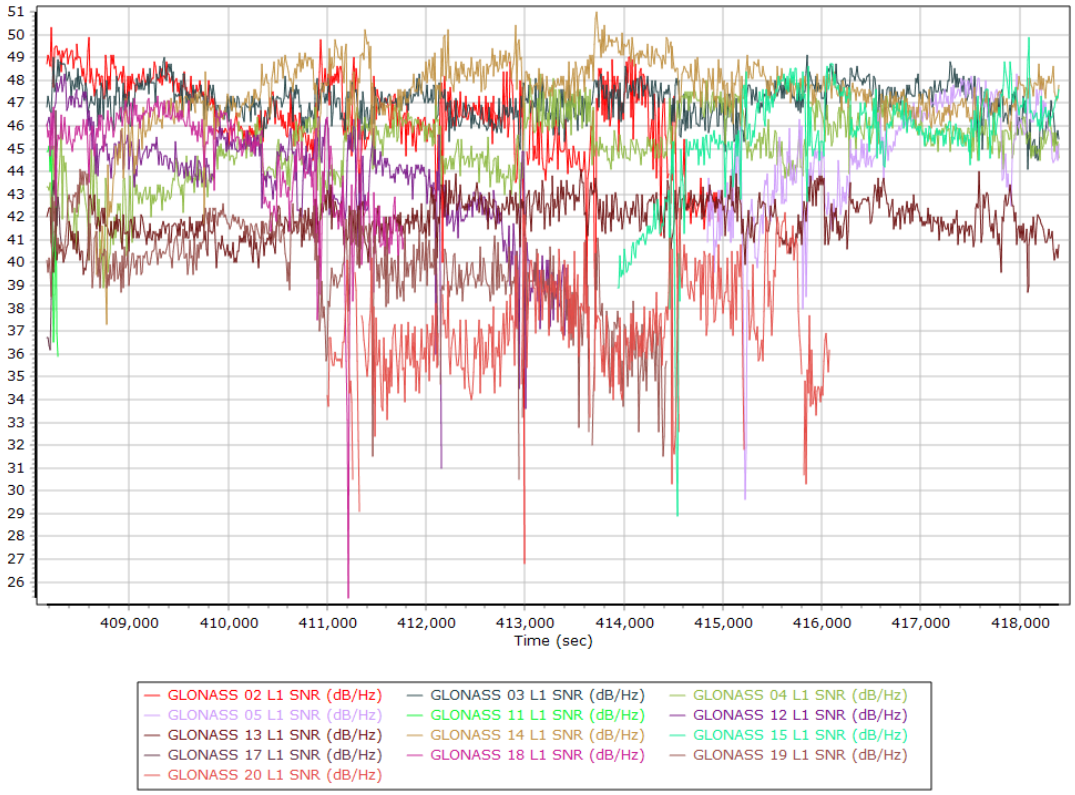
GPS L1 SNR



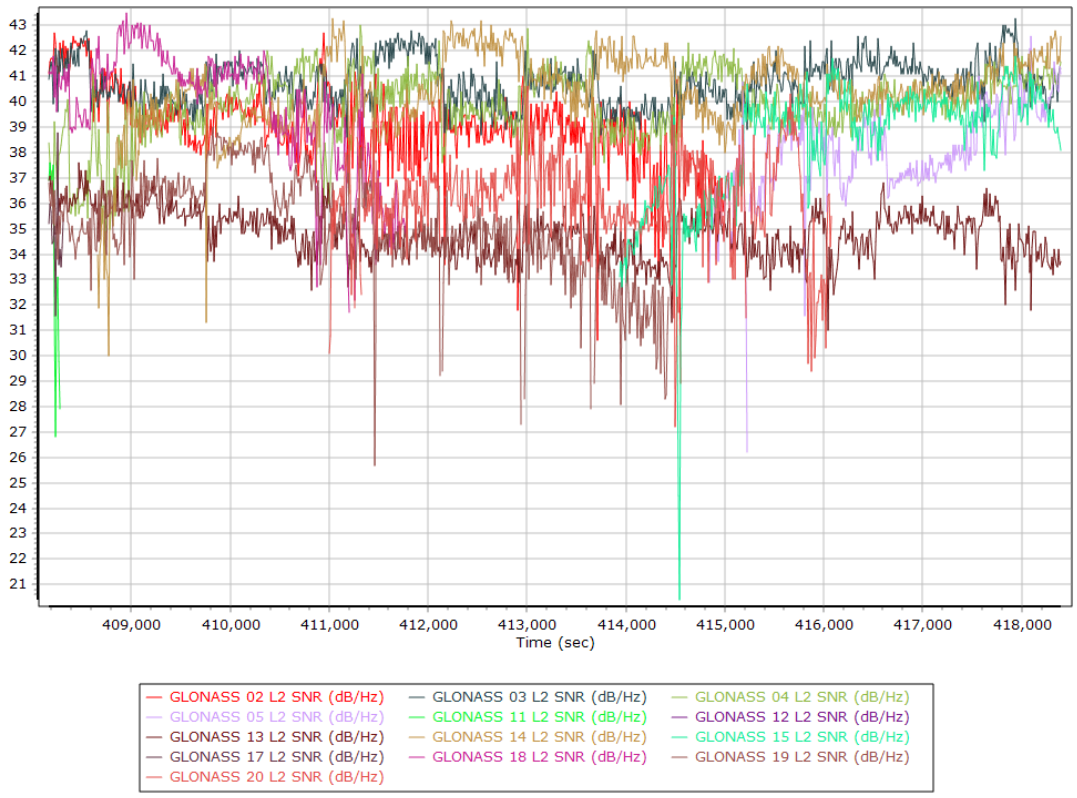
GPS L2 SNR



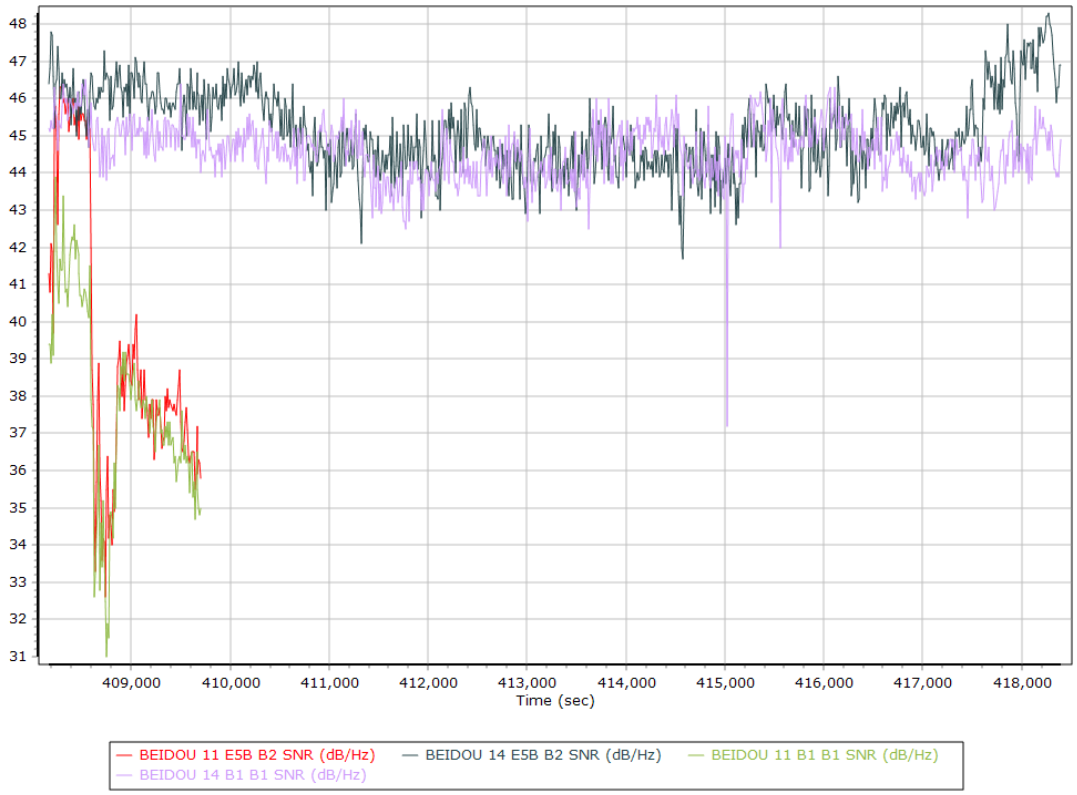
GLONASS L1 SNR



GLONASS L2 SNR

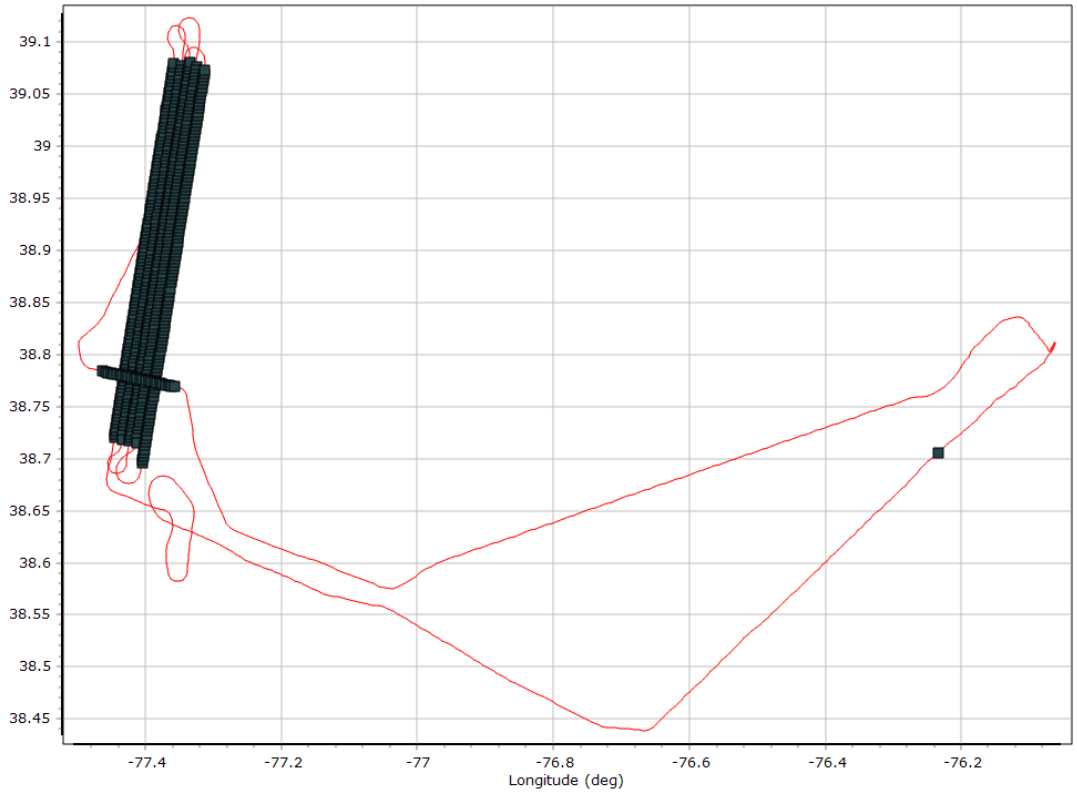


BEIDOU SNR

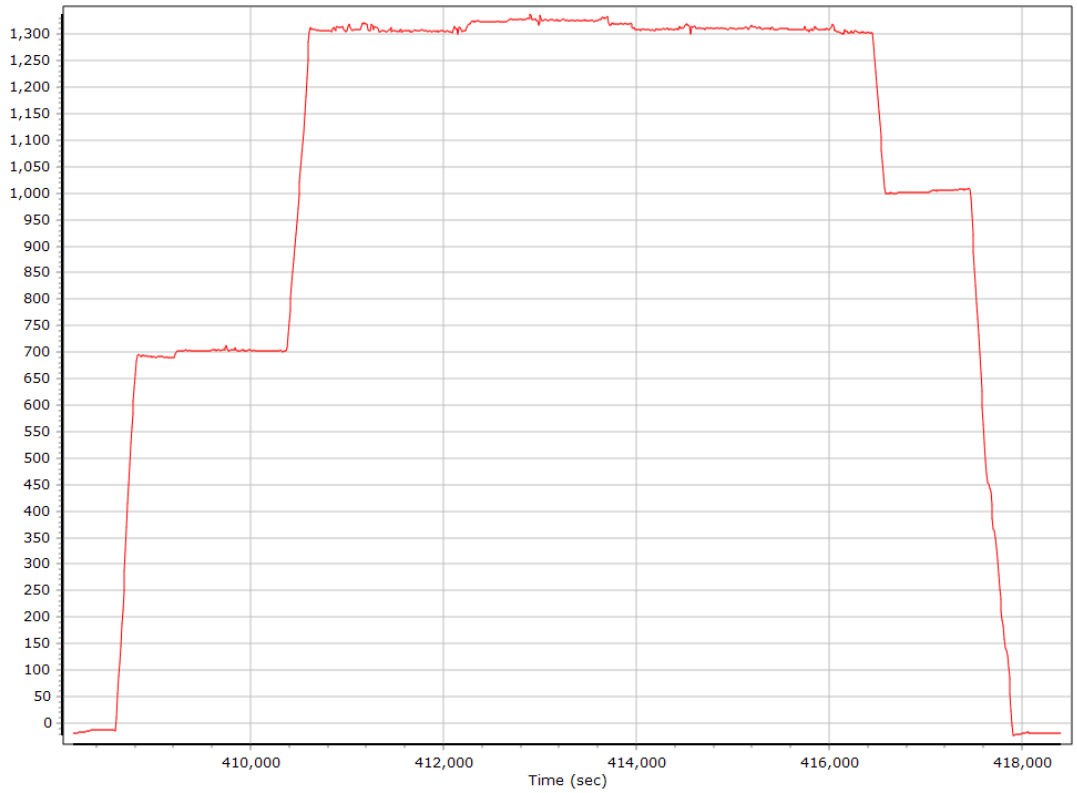


Trajectory Information

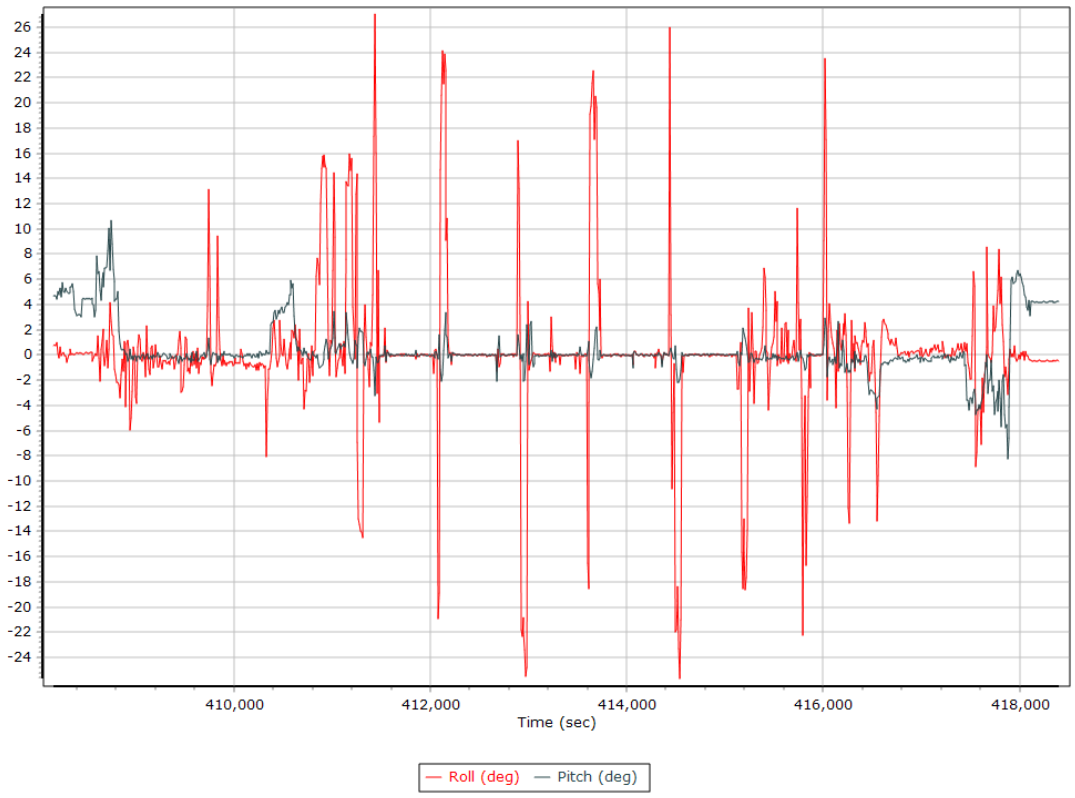
Top View



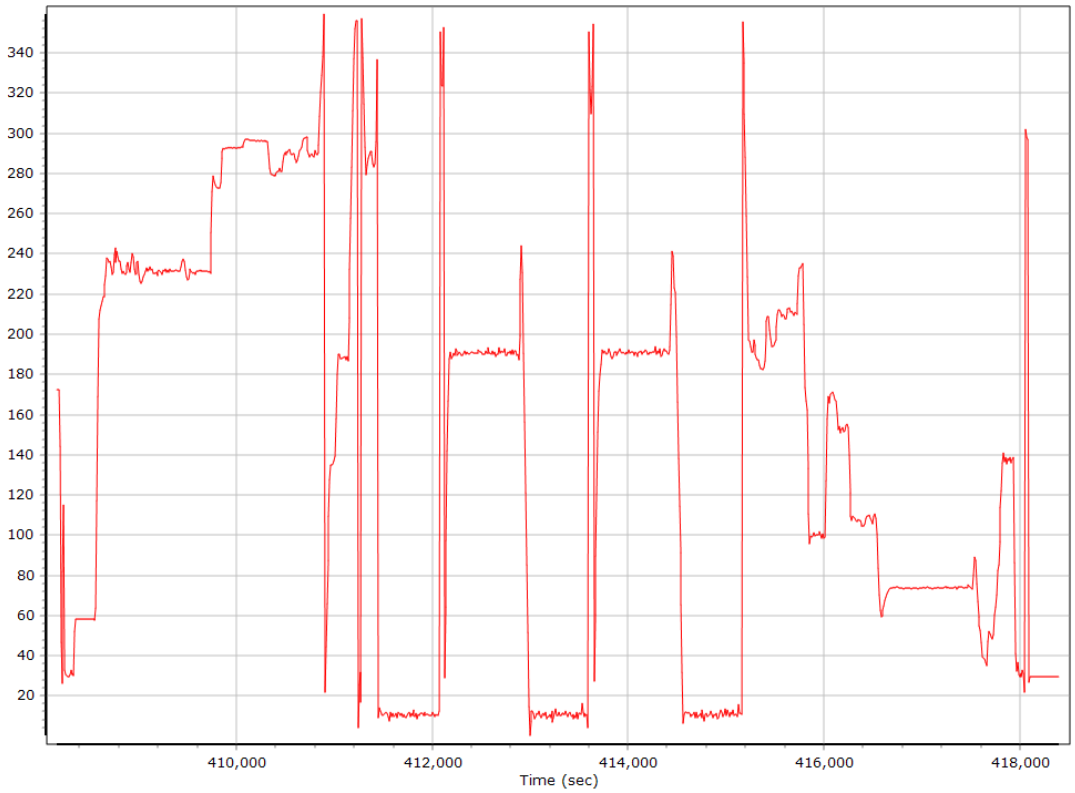
Altitude



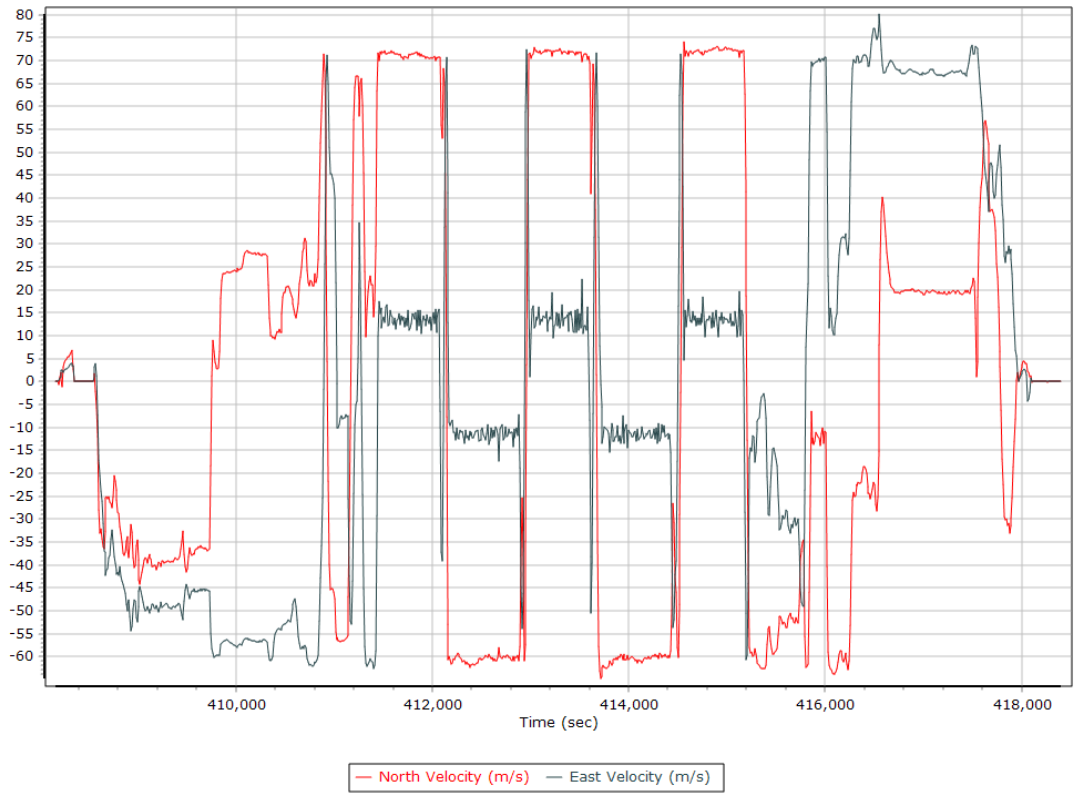
Roll/Pitch



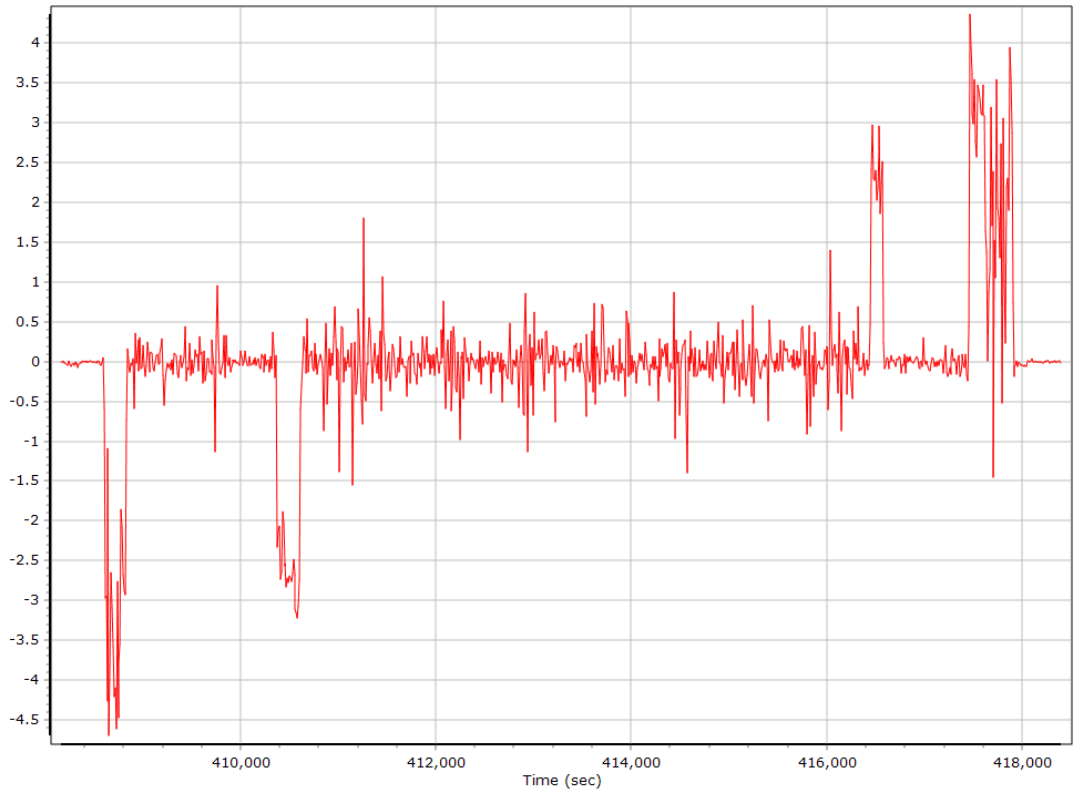
Heading



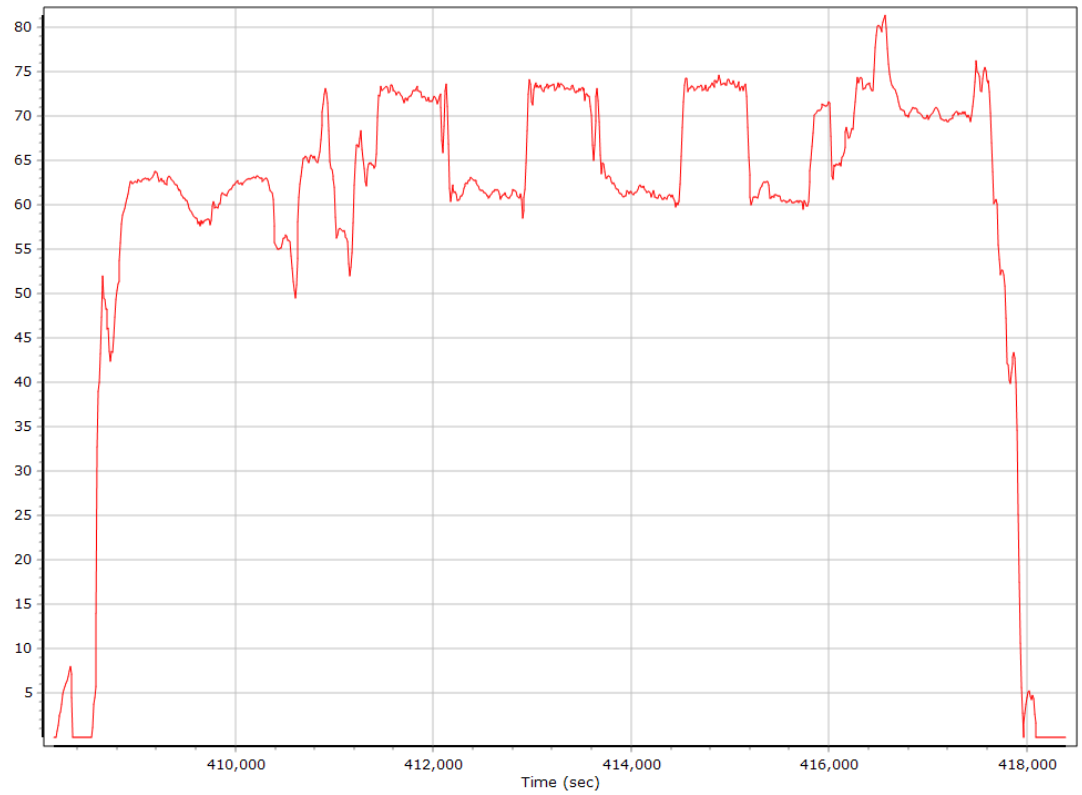
North/East Velocity



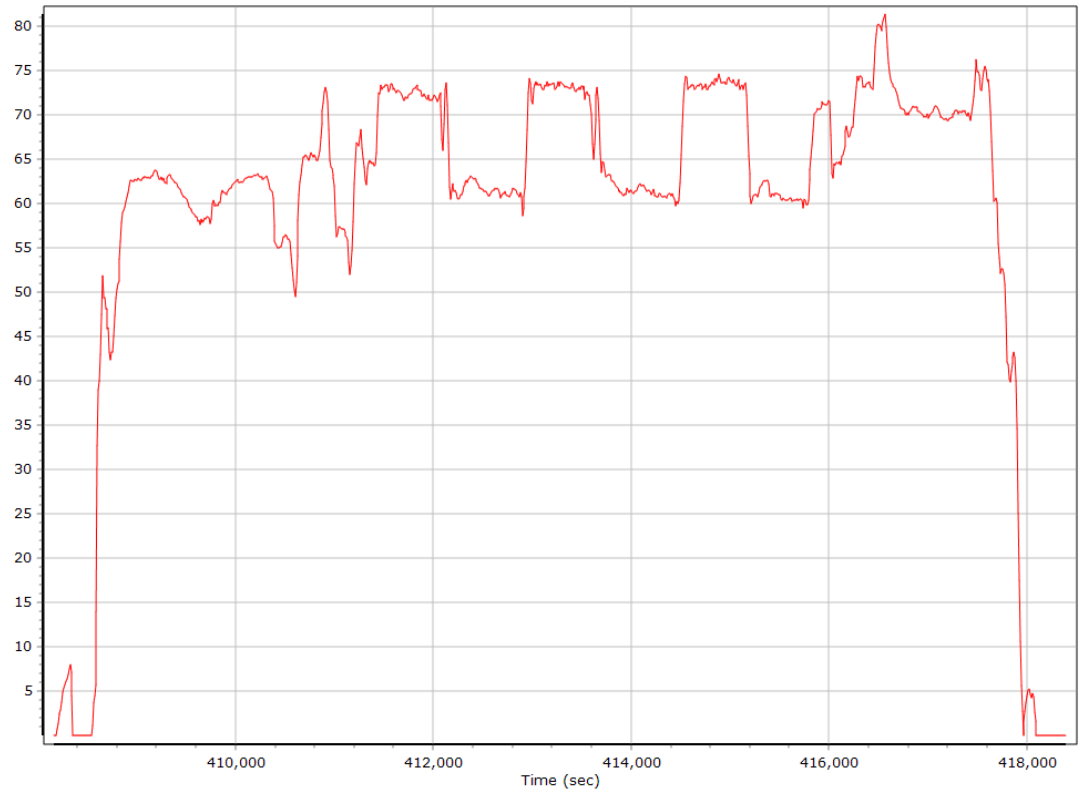
Down Velocity



Total Speed

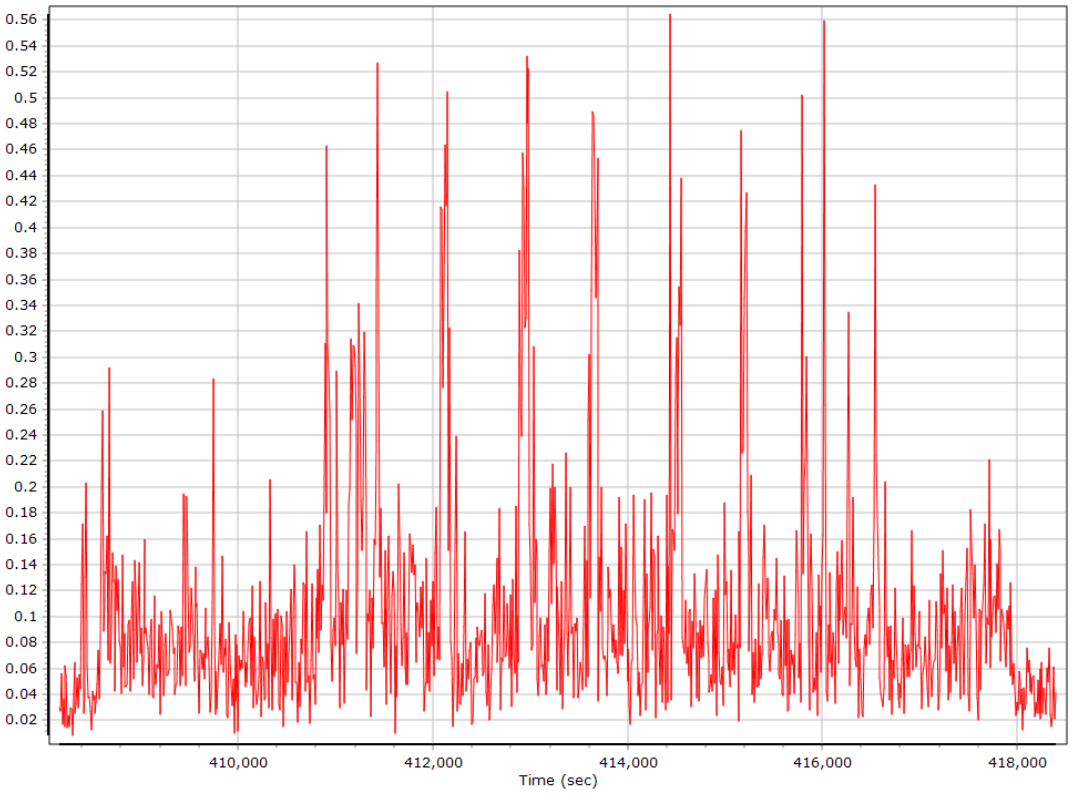


Ground Speed



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	DataType	Rate	Service	Database	Status

SmartBase Results

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

SmartBase Quality Check

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	17.30	76.00	
Number of GPS SV	7	11	9
Number of GLONASS SV	0	7	6
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	8	17	15
PDOP	1.17	1.98	1.35
QC Solution Gaps	1.00	1.00	
Solution Type	**Fixed**	**Float**	**No solution**
Epoch (s)	10806.00	0.00	1.00
Percentage	99.99	0.00	0.01

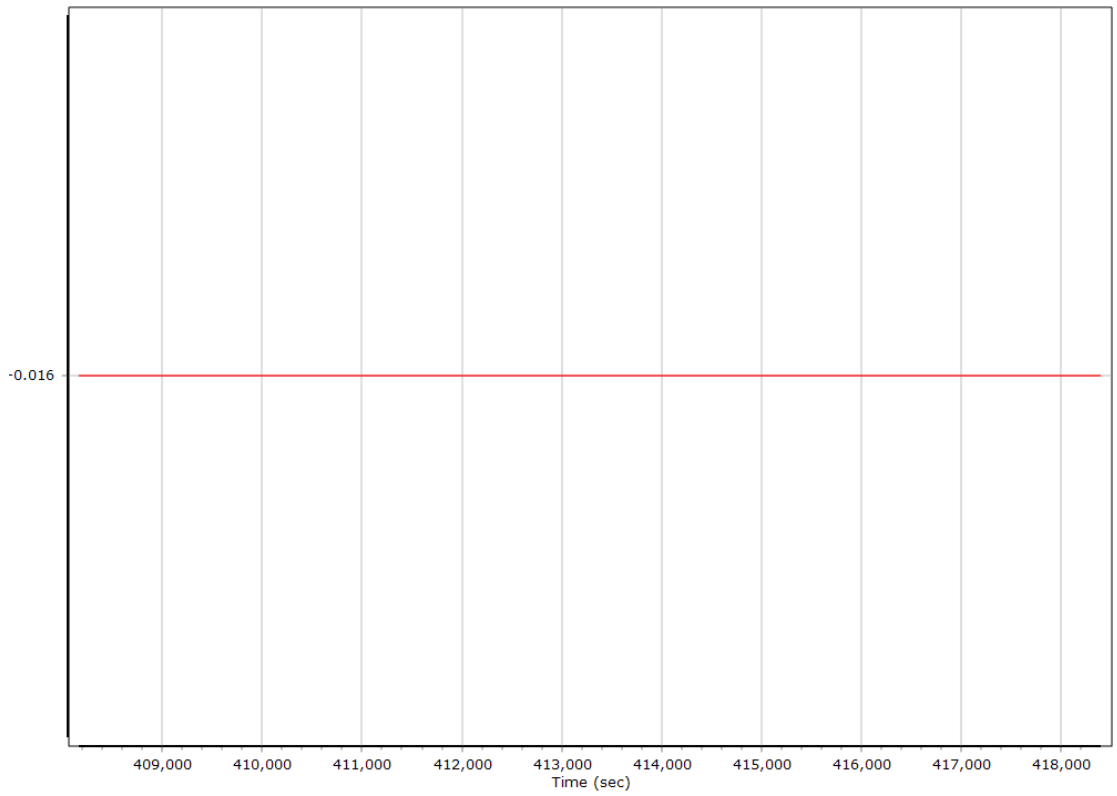
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	407541.000 (12/13/2018 5:12:21 PM)		
Processing end time	418401.000 (12/13/2018 8:13:21 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	0.000	0.000	0.000
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	-0.016	0.008	-0.680
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

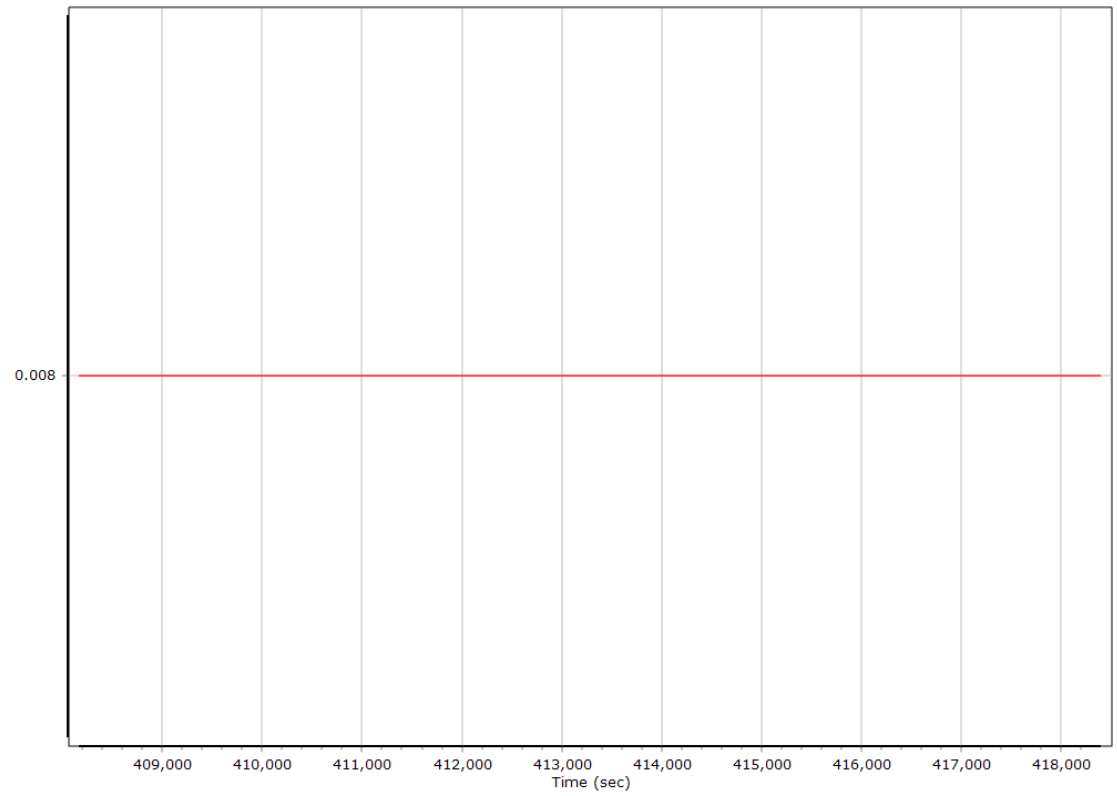
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

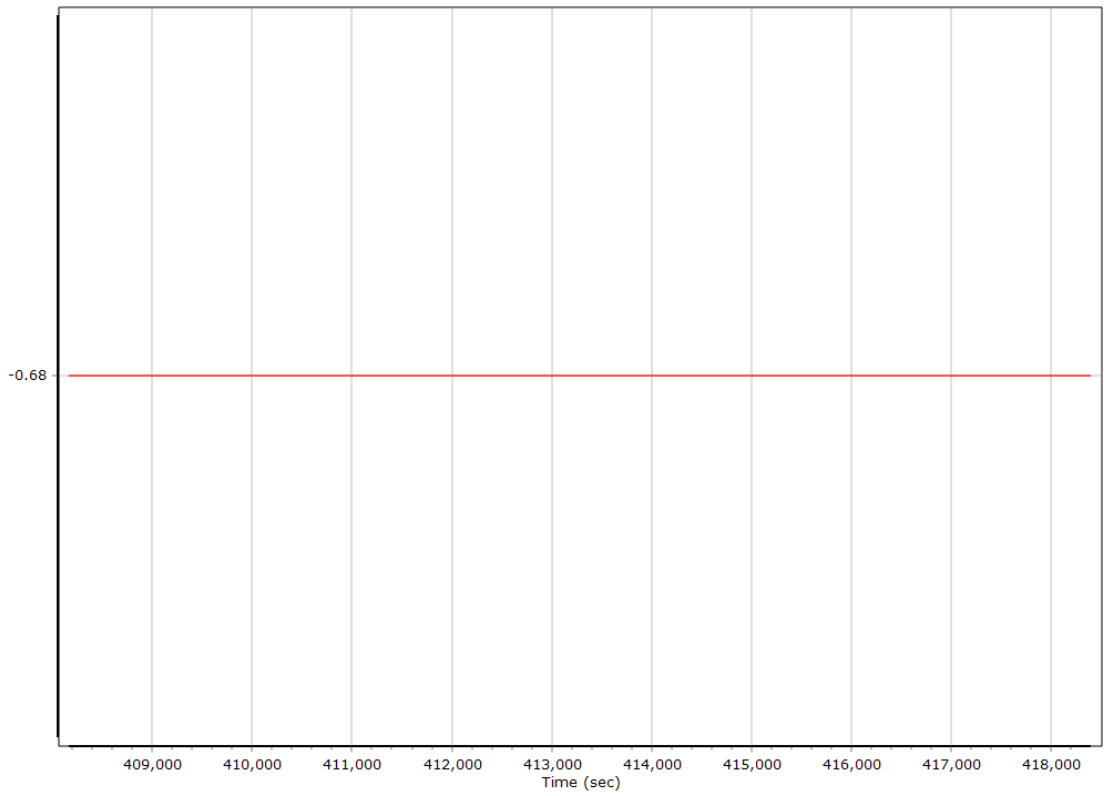
X Reference-Primary GNSS Lever Arm (m)



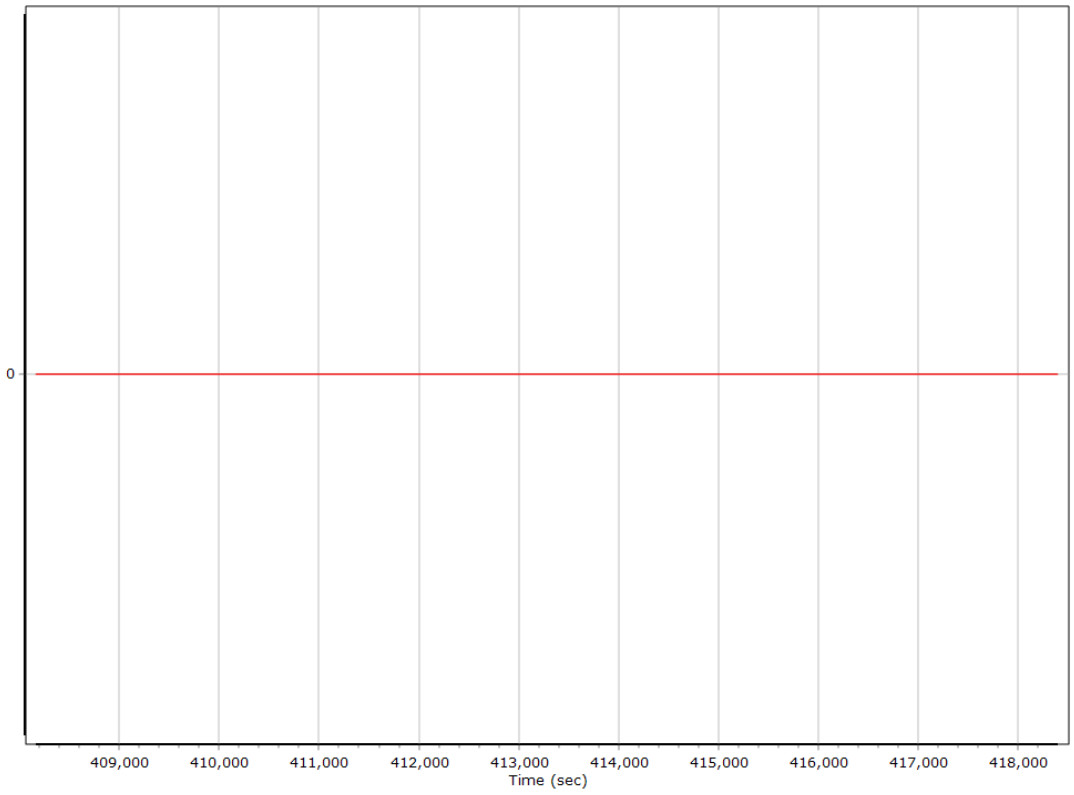
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



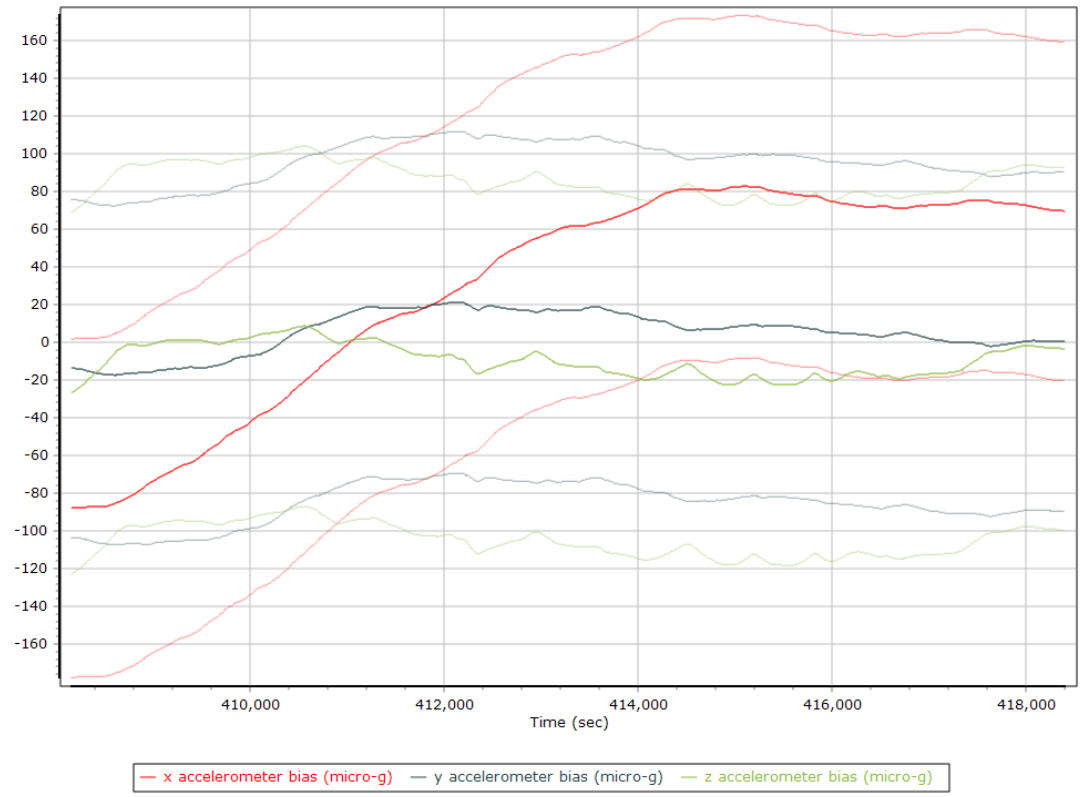
Reference-Primary GNSS Lever Arm Figure of Merit



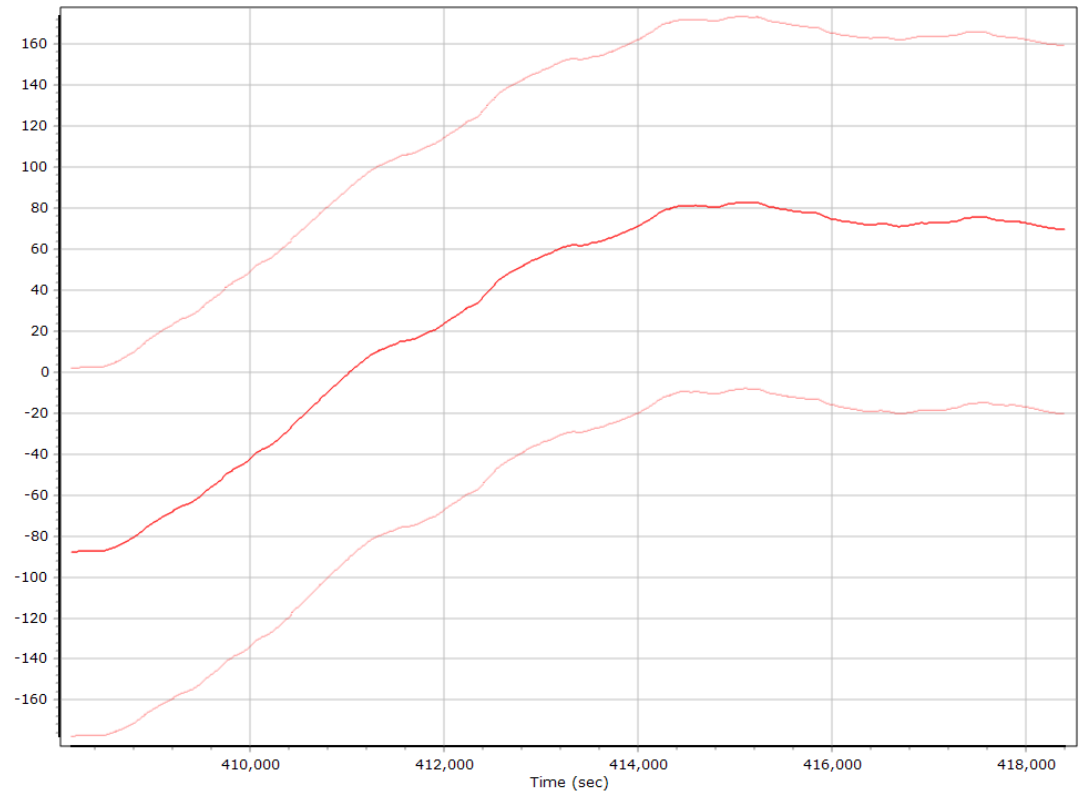
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

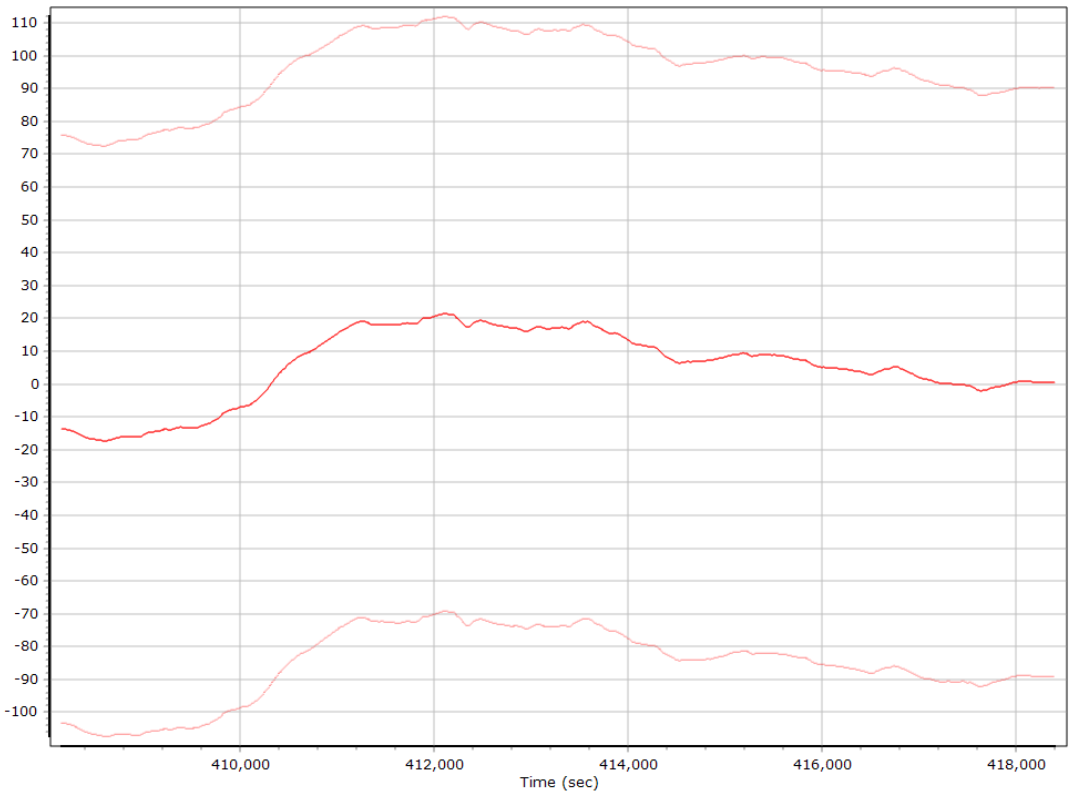
Accelerometer Bias (micro-g)



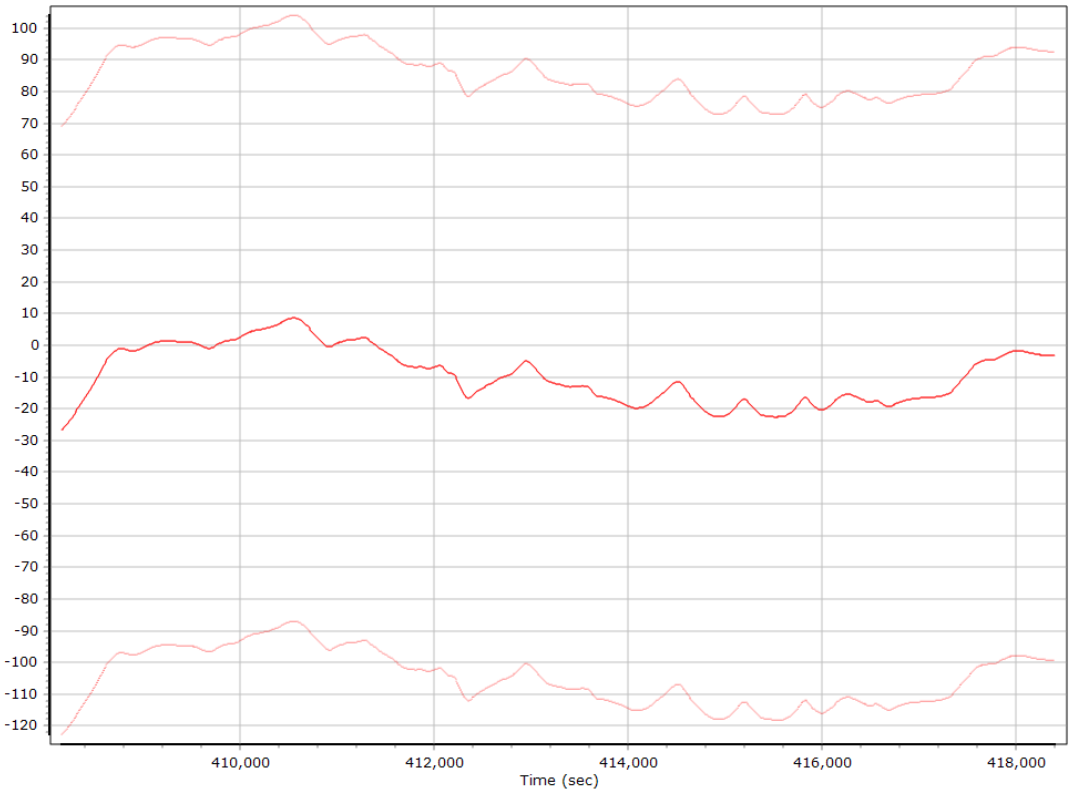
X Accelerometer Bias (micro-g)



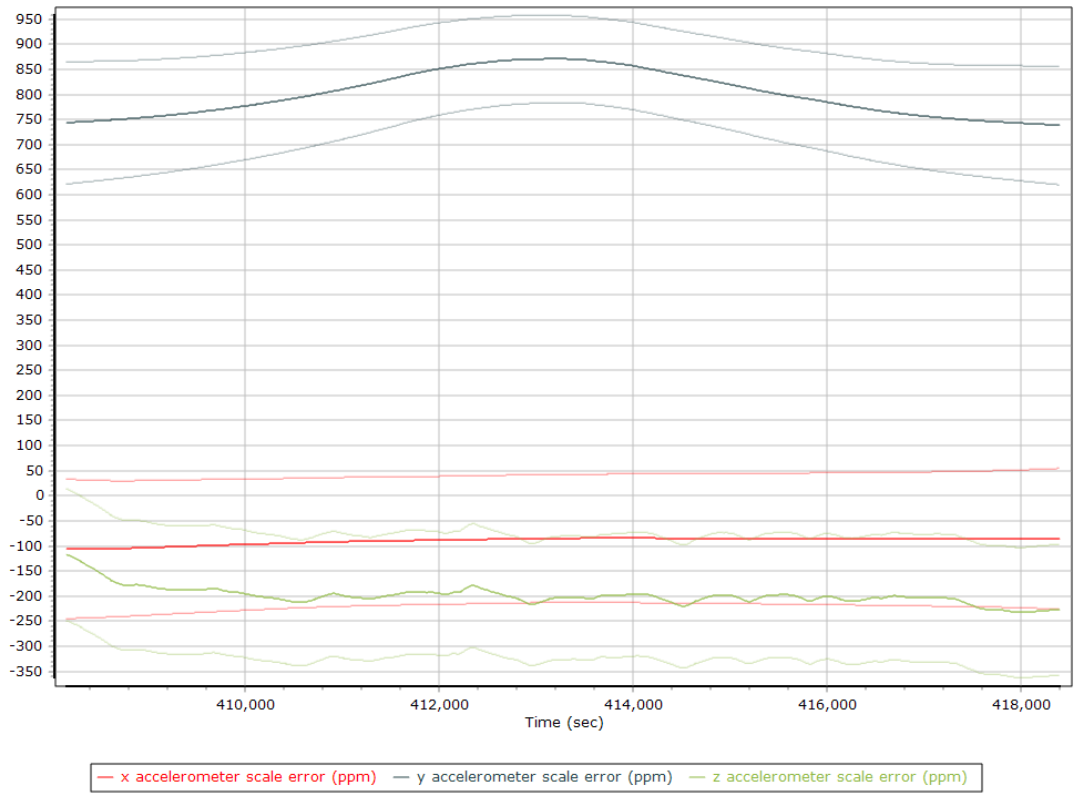
Y Accelerometer Bias (micro-g)



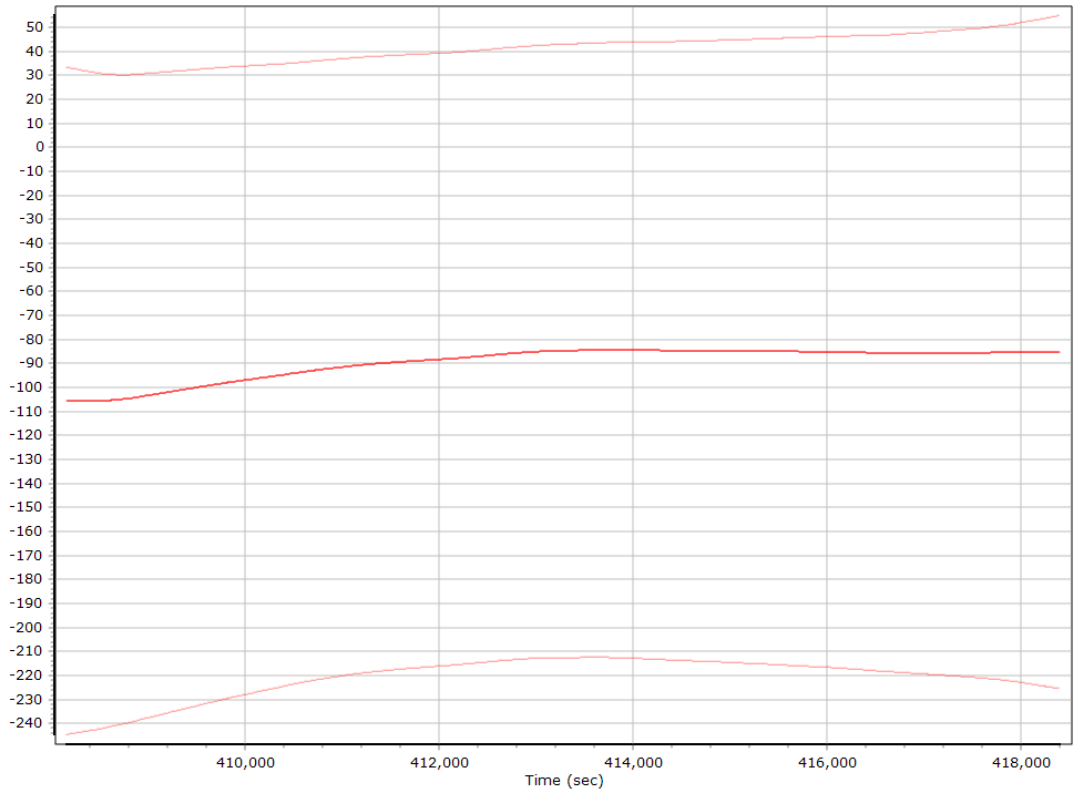
Z Accelerometer Bias (micro-g)



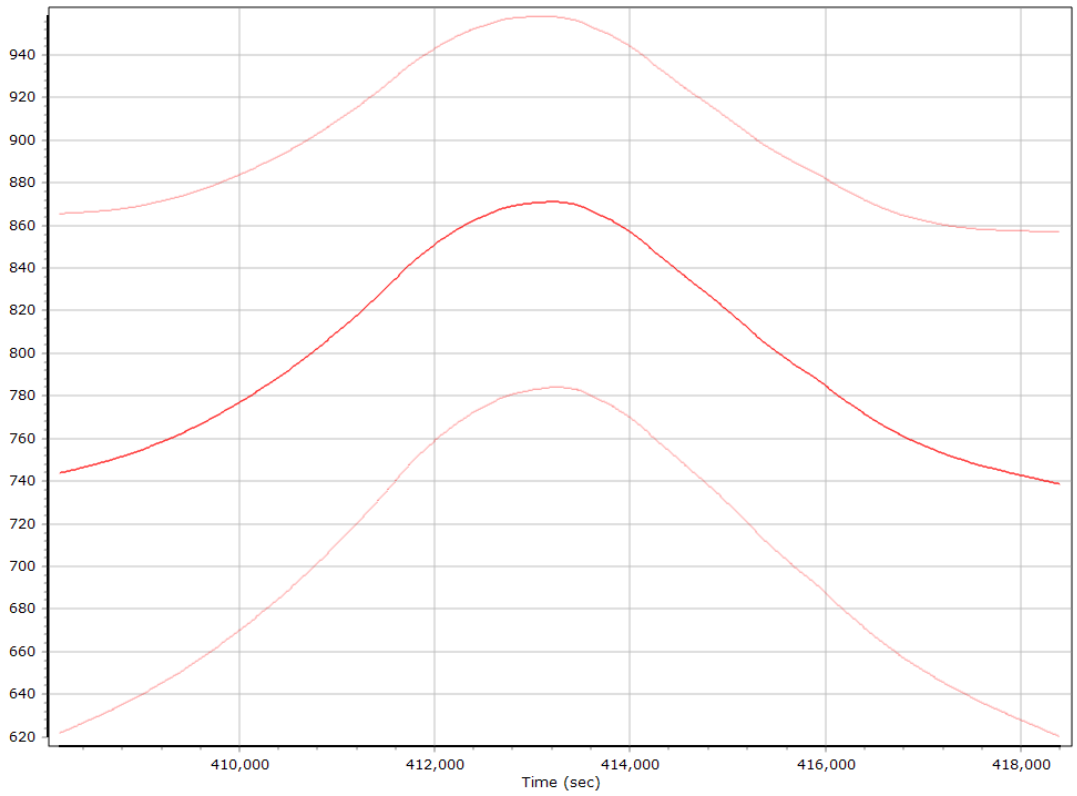
Accelerometer Scale Error (ppm)



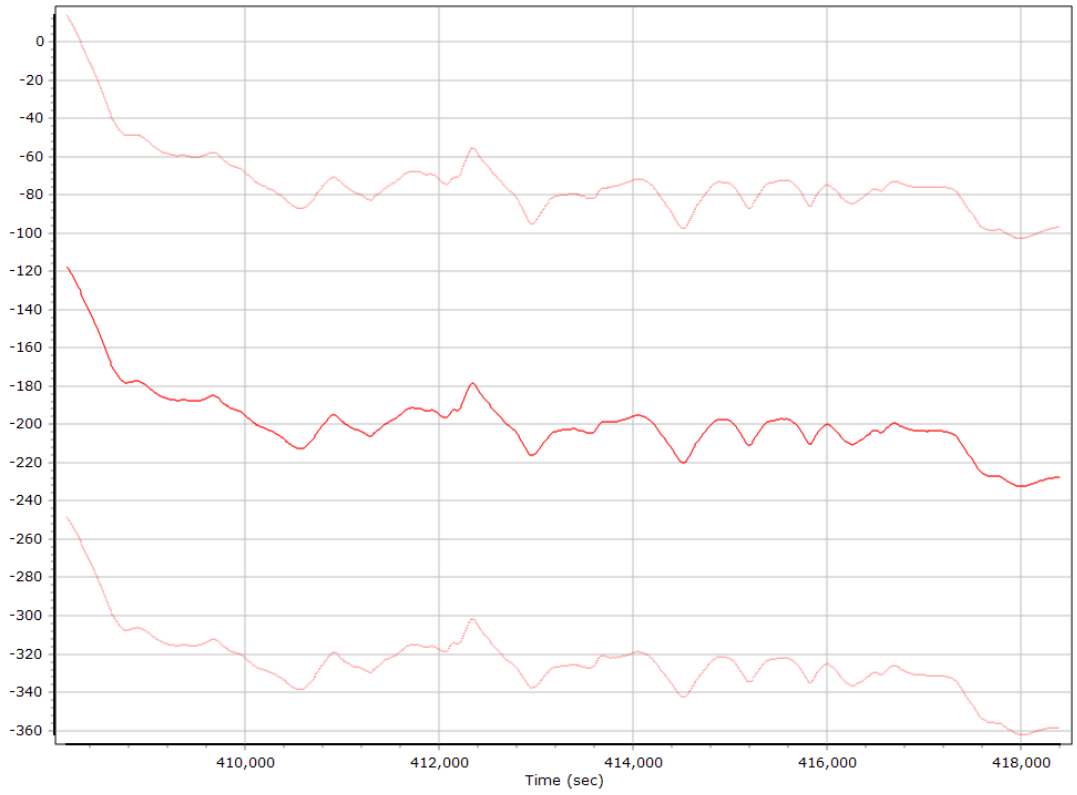
X Accelerometer Scale Error (ppm)



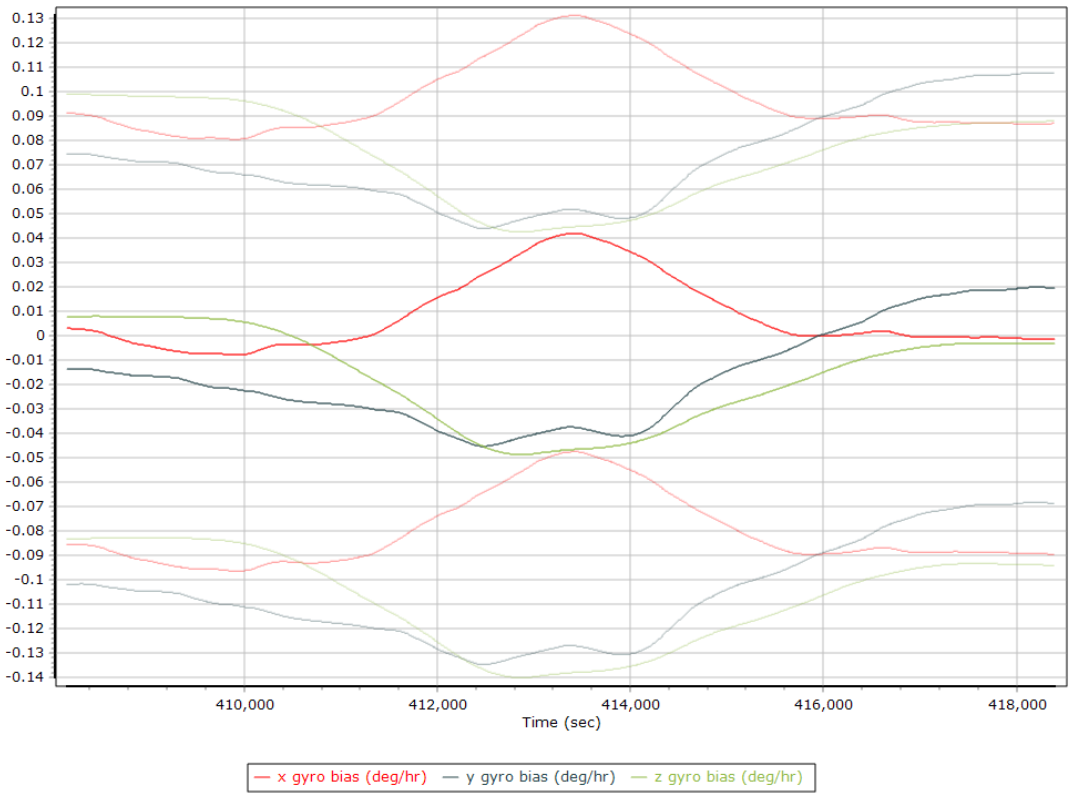
Y Accelerometer Scale Error (ppm)



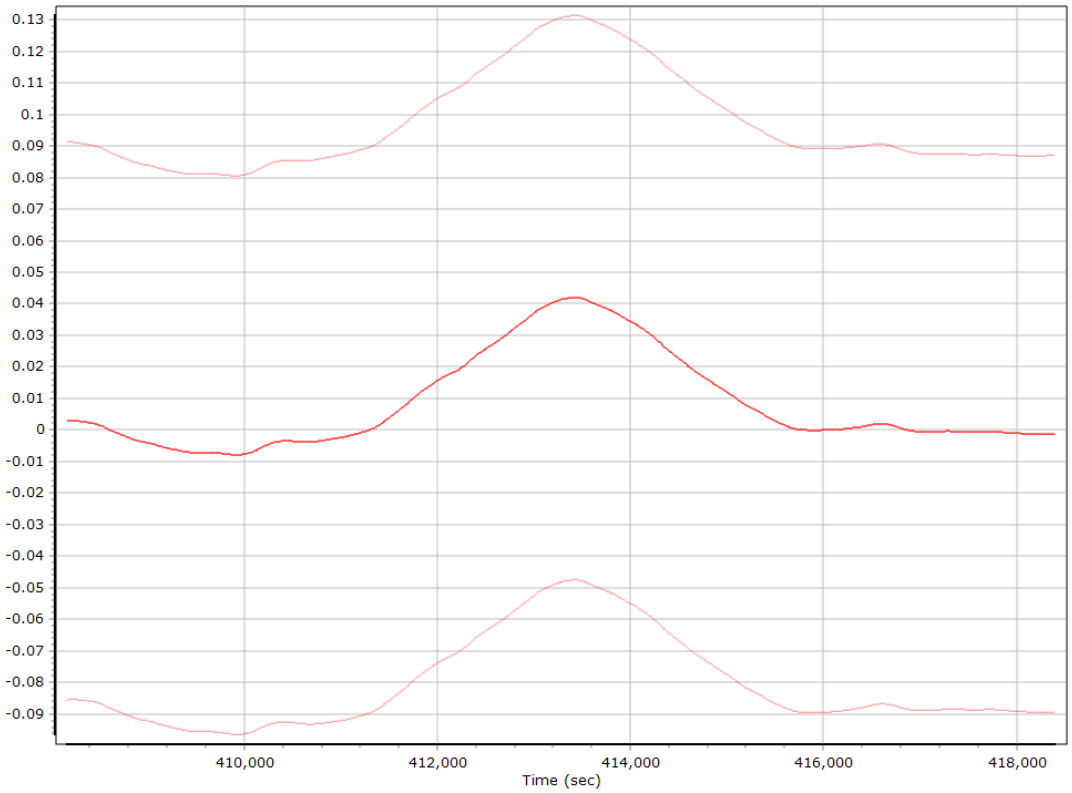
Z Accelerometer Scale Error (ppm)



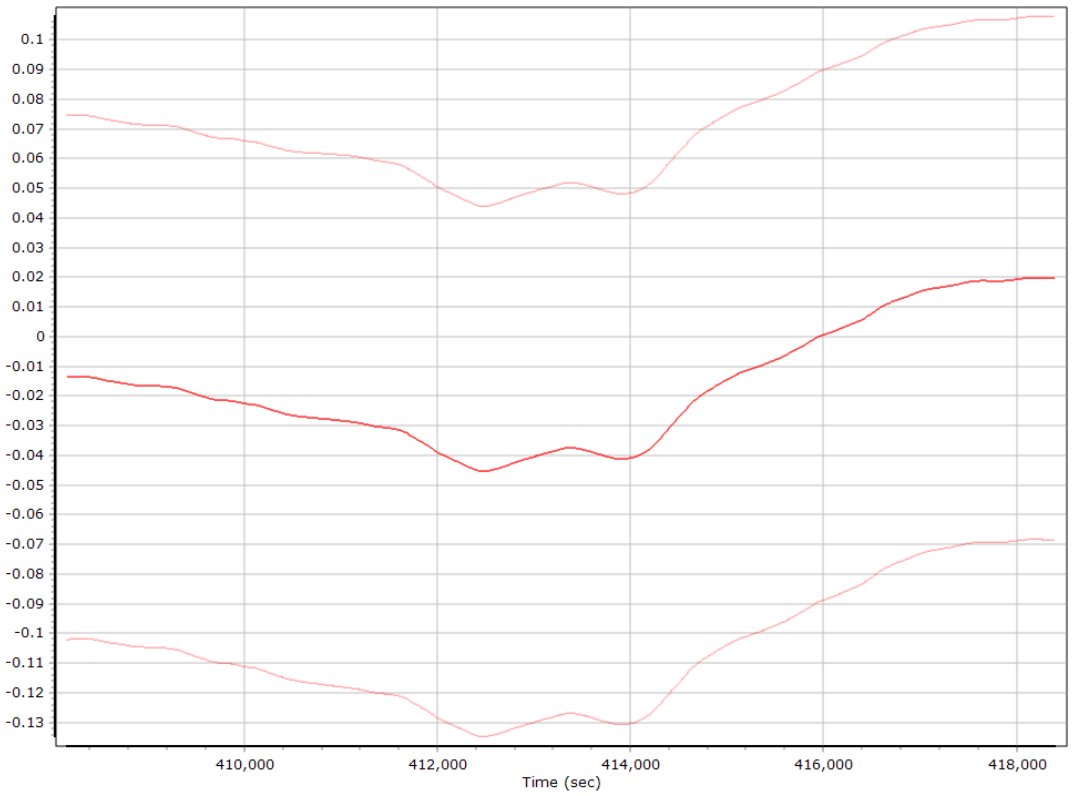
Gyro Bias (deg/h)



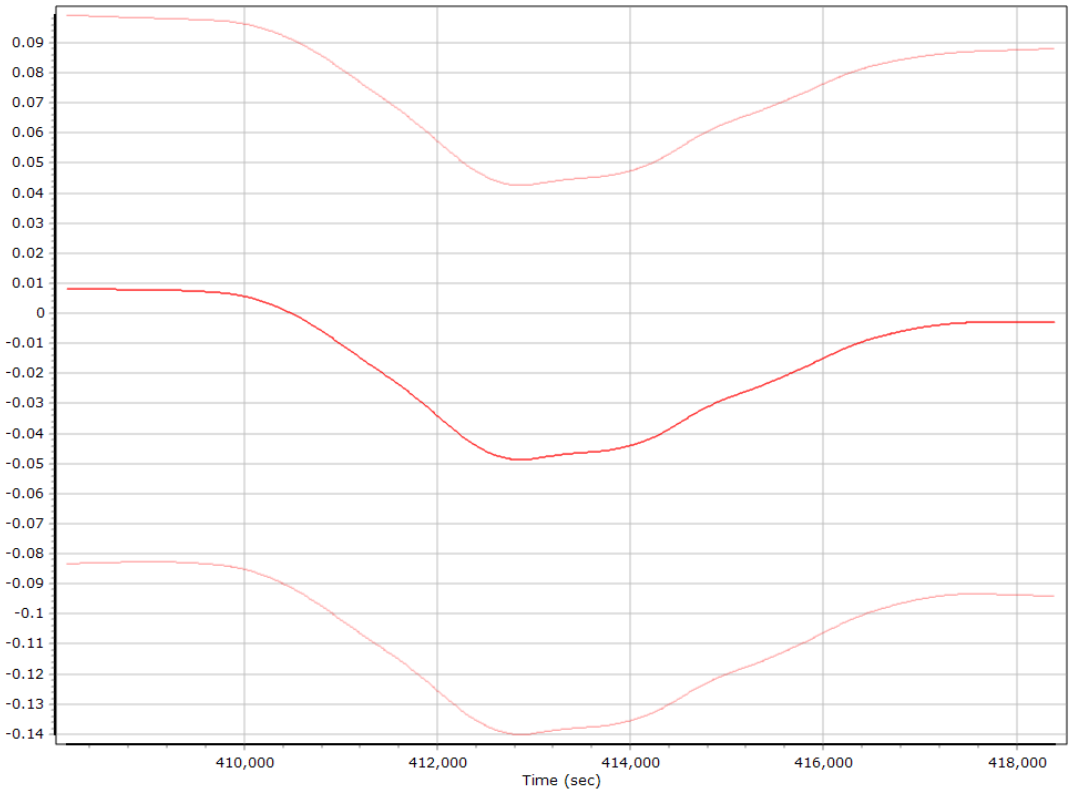
X Gyro Bias (deg/h)



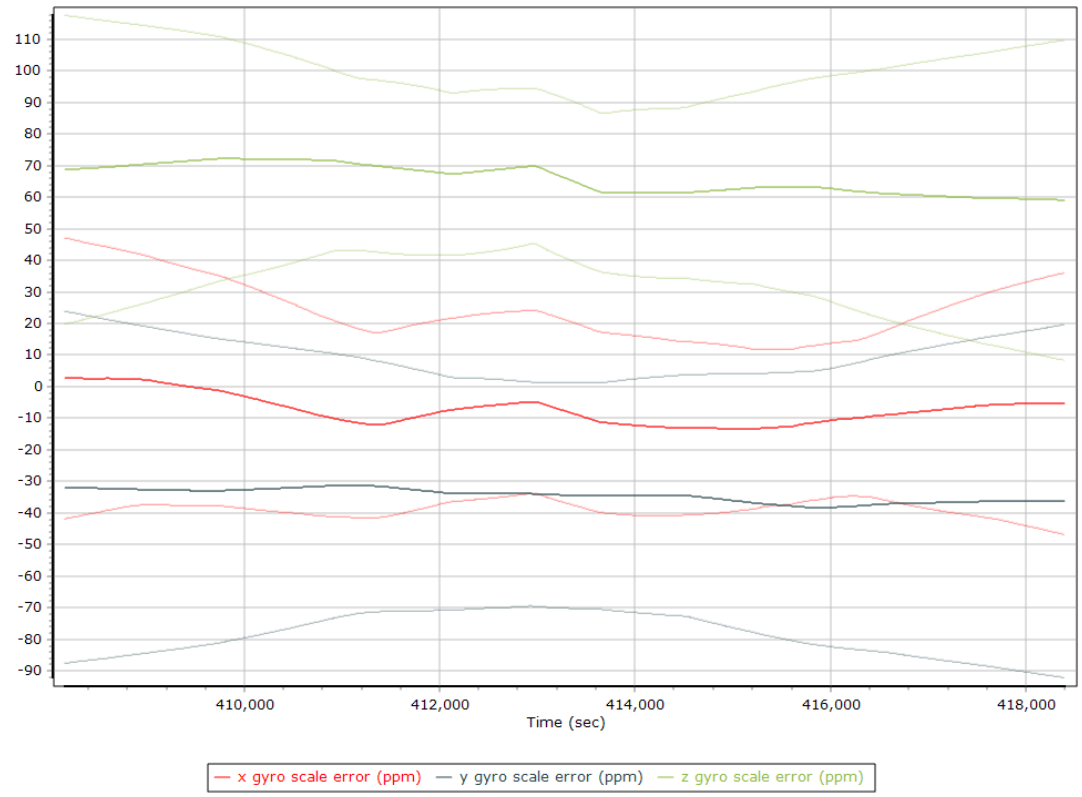
Y Gyro Bias (deg/h)



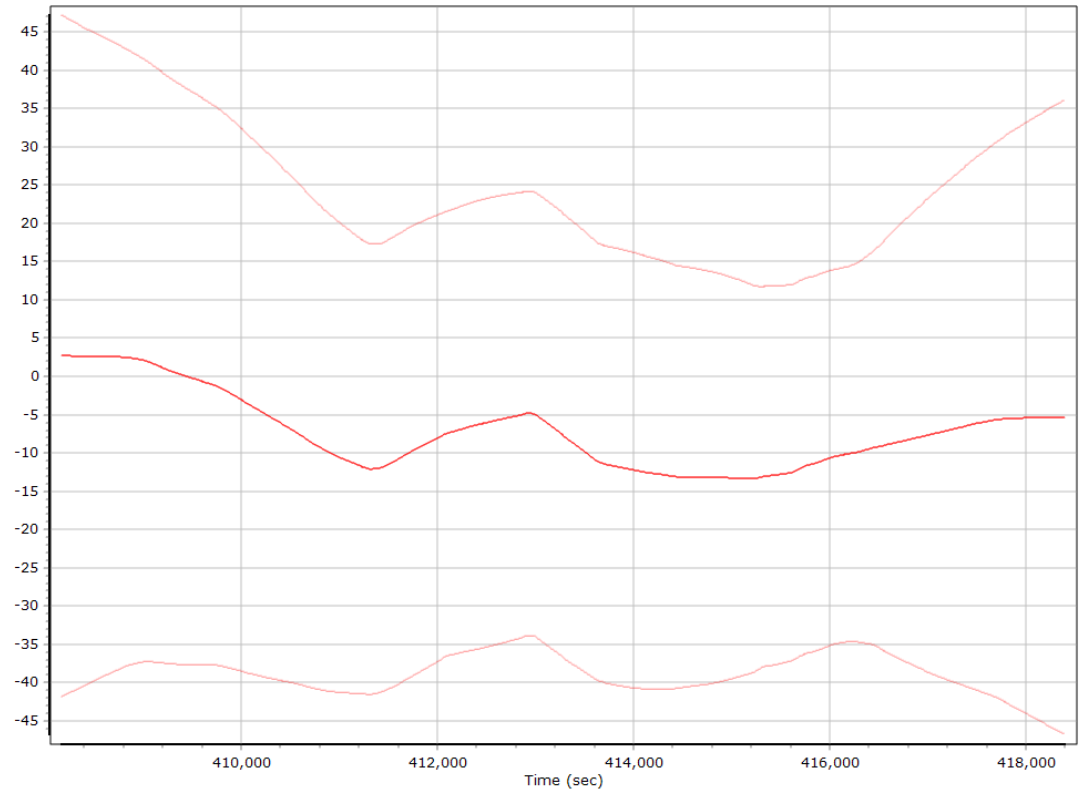
Z Gyro Bias (deg/h)



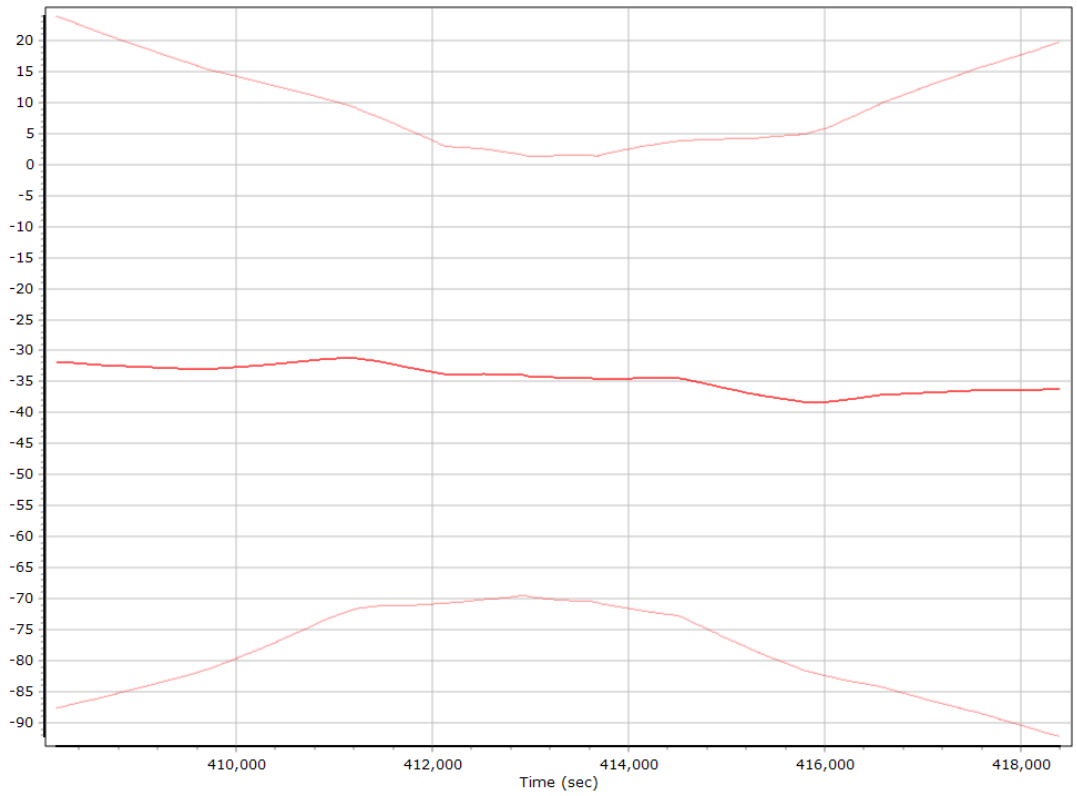
Gyro Scale Error (ppm)



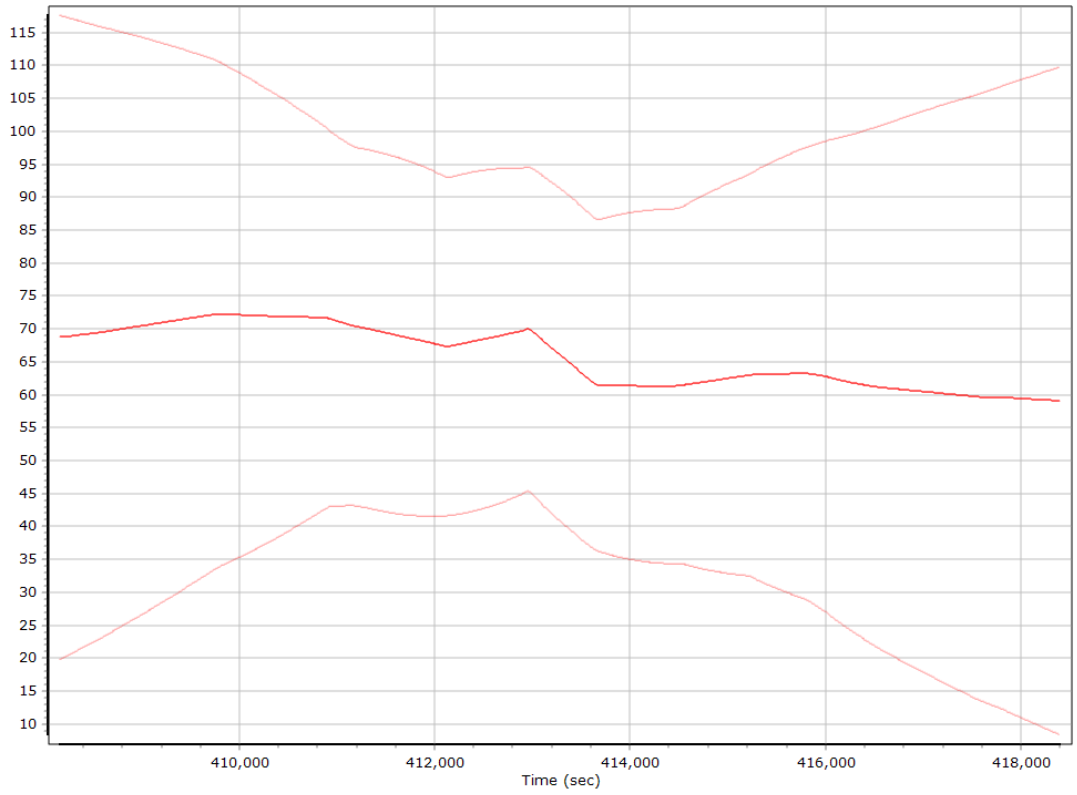
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

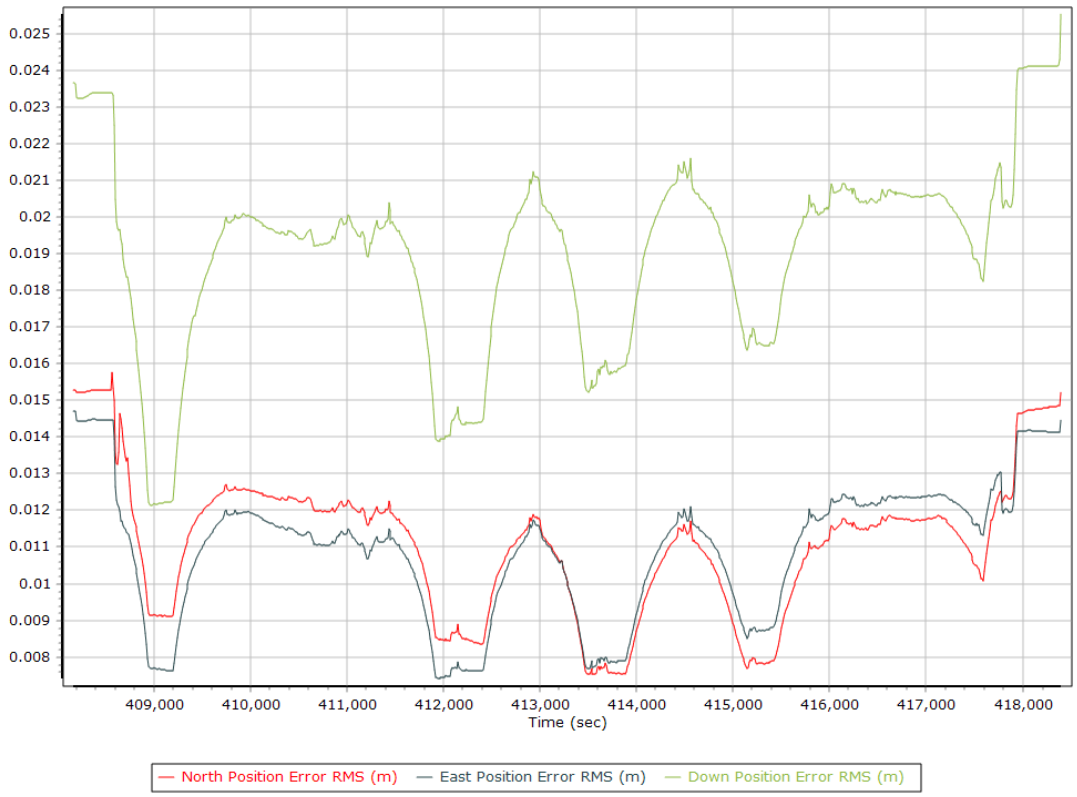


Z Gyro Scale Error (ppm)

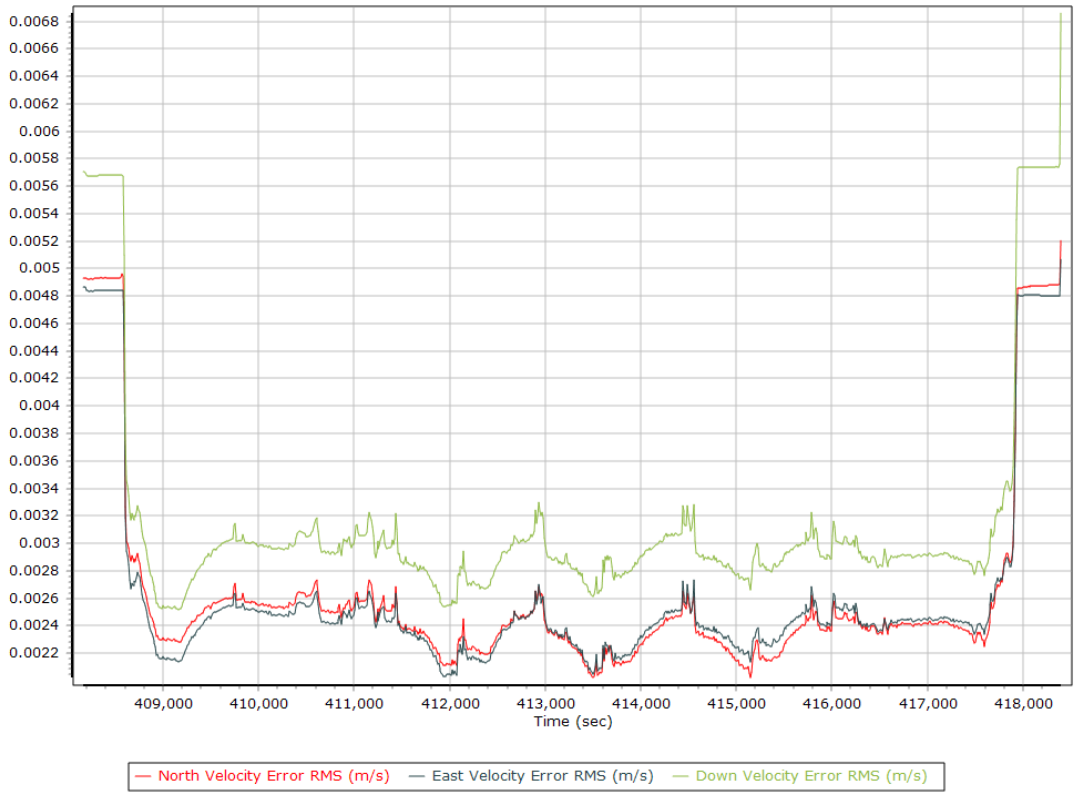


Smoothed Performance Metrics

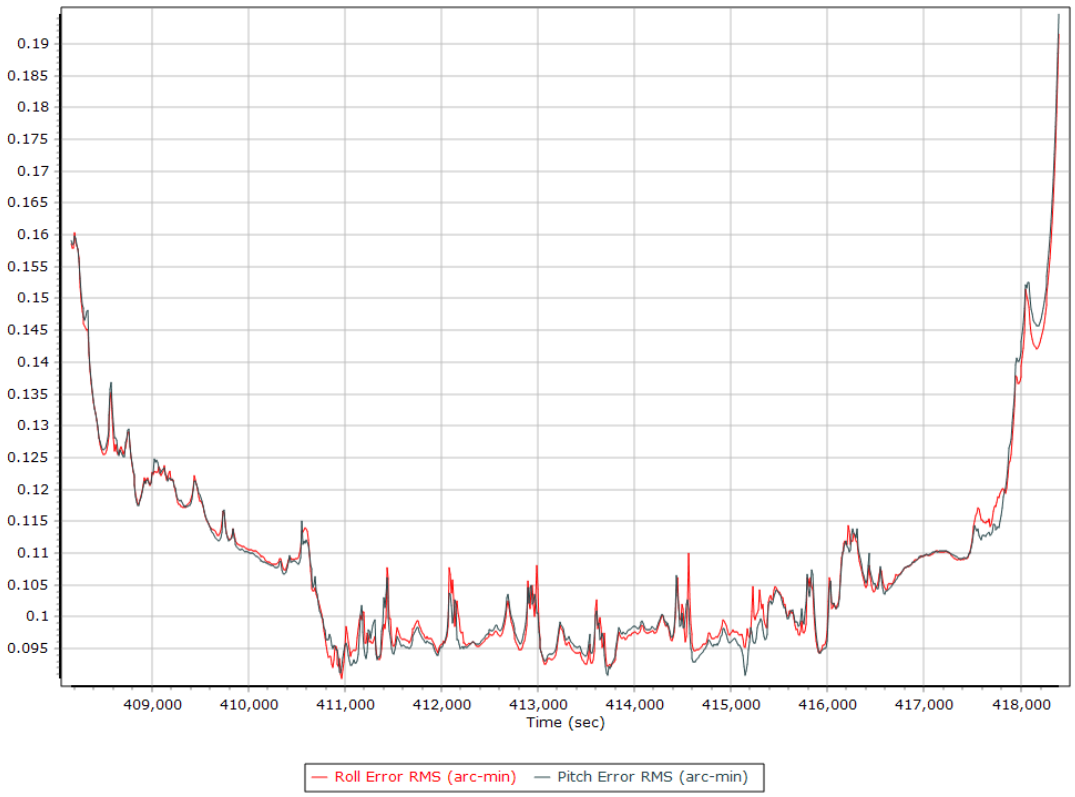
Position Error RMS (m)



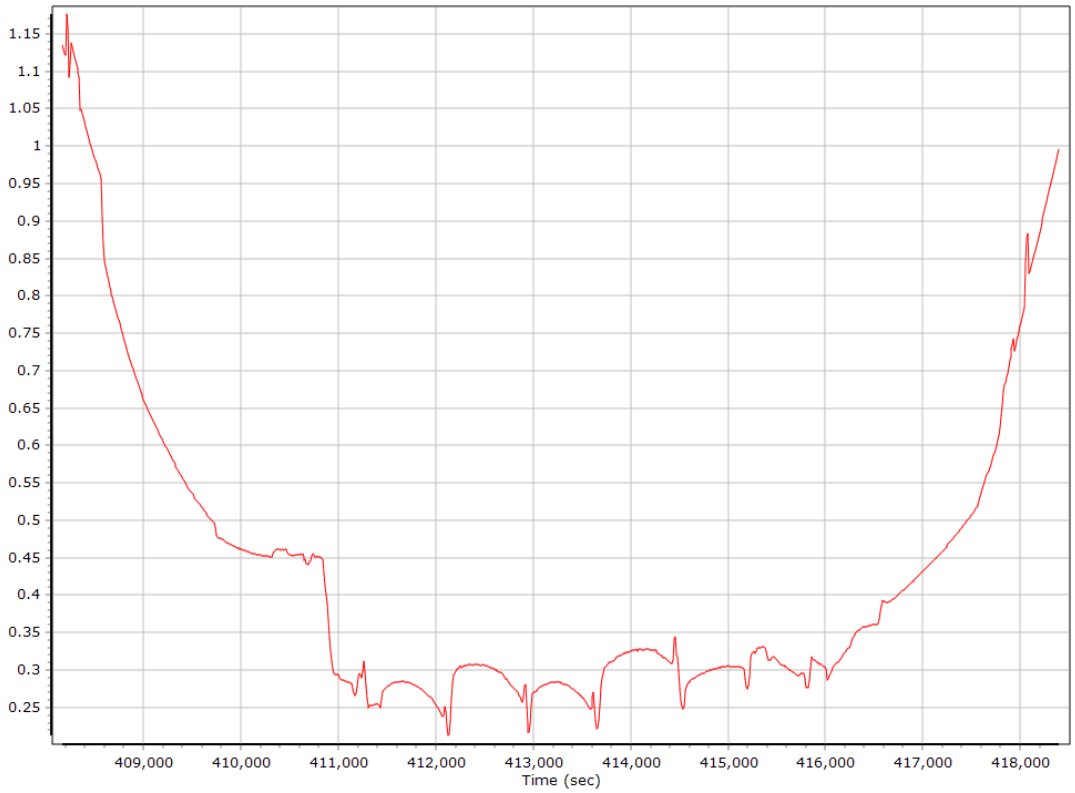
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

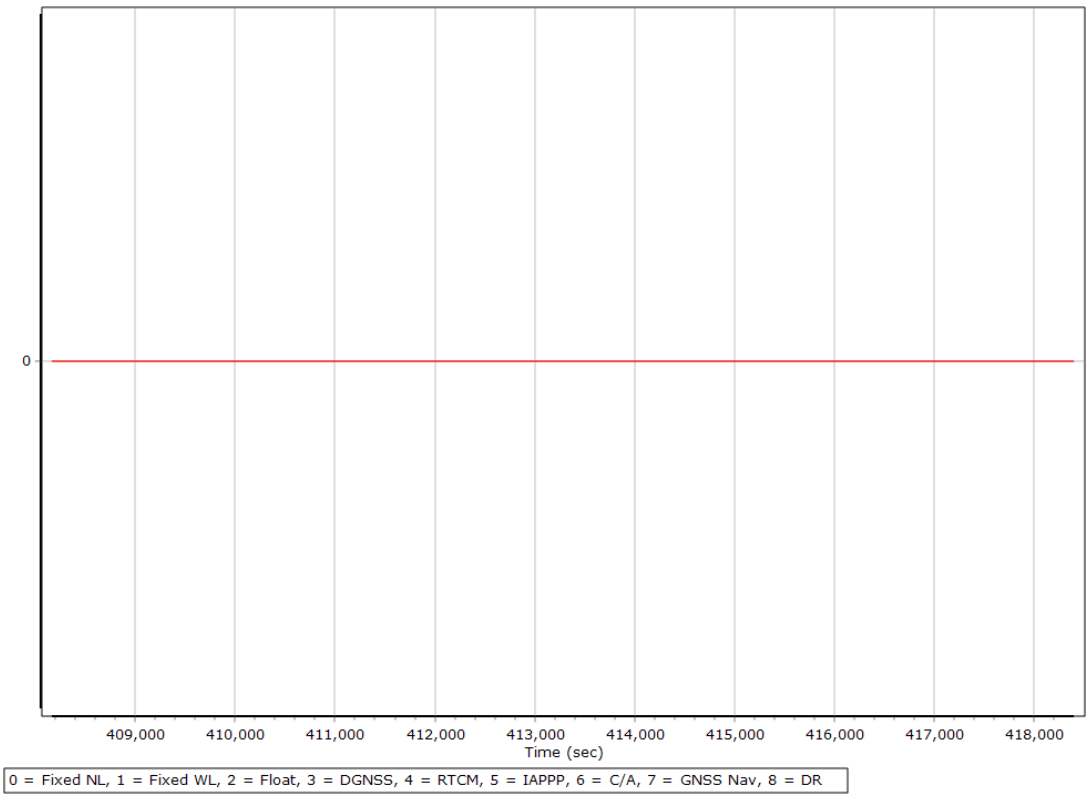


Heading Error RMS (arc-min)

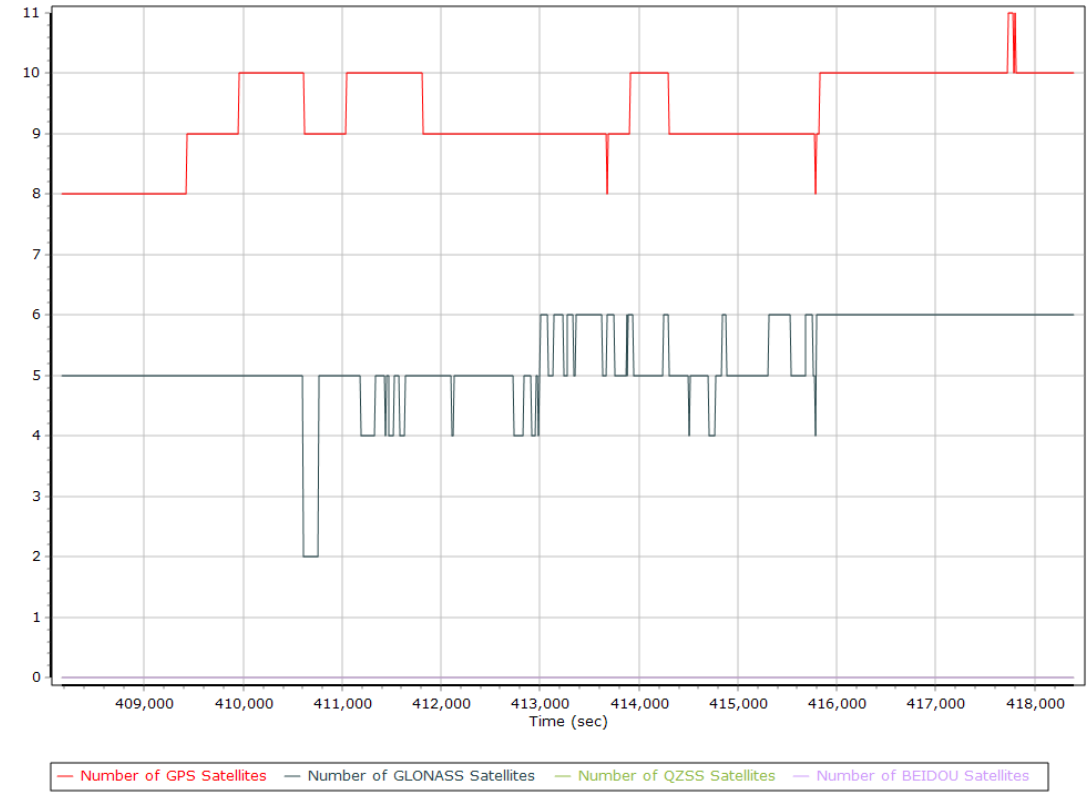


Smoothed Solution Status

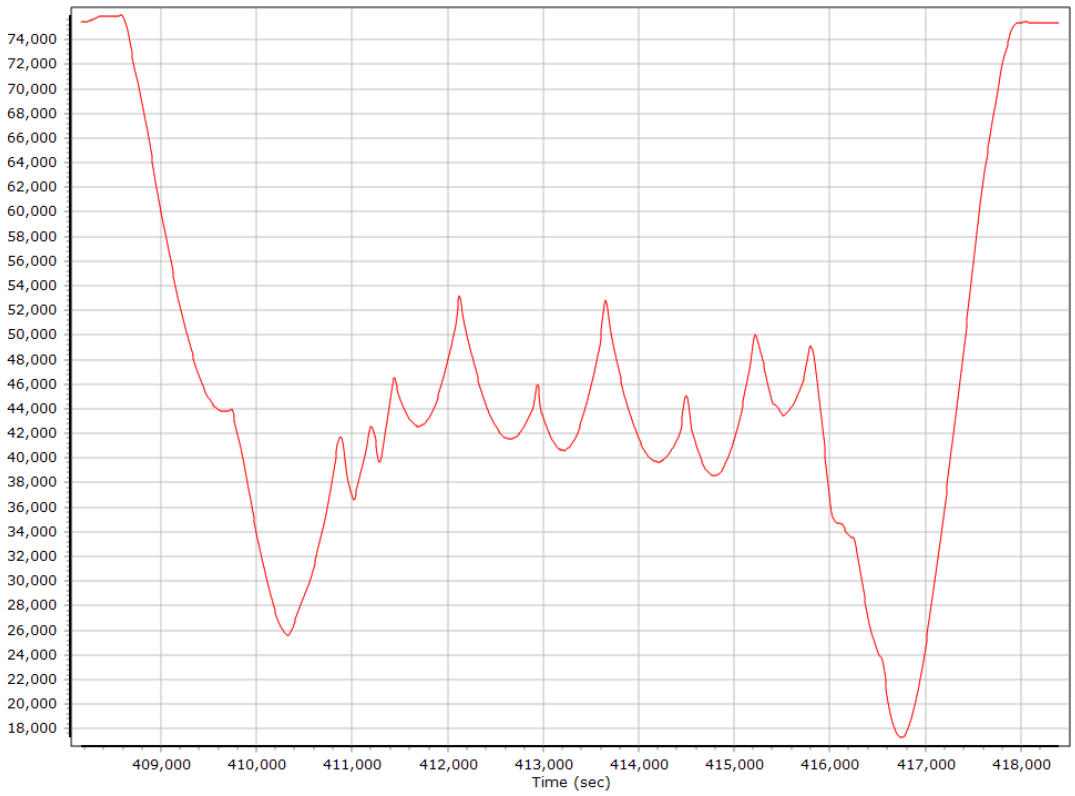
Processing Mode



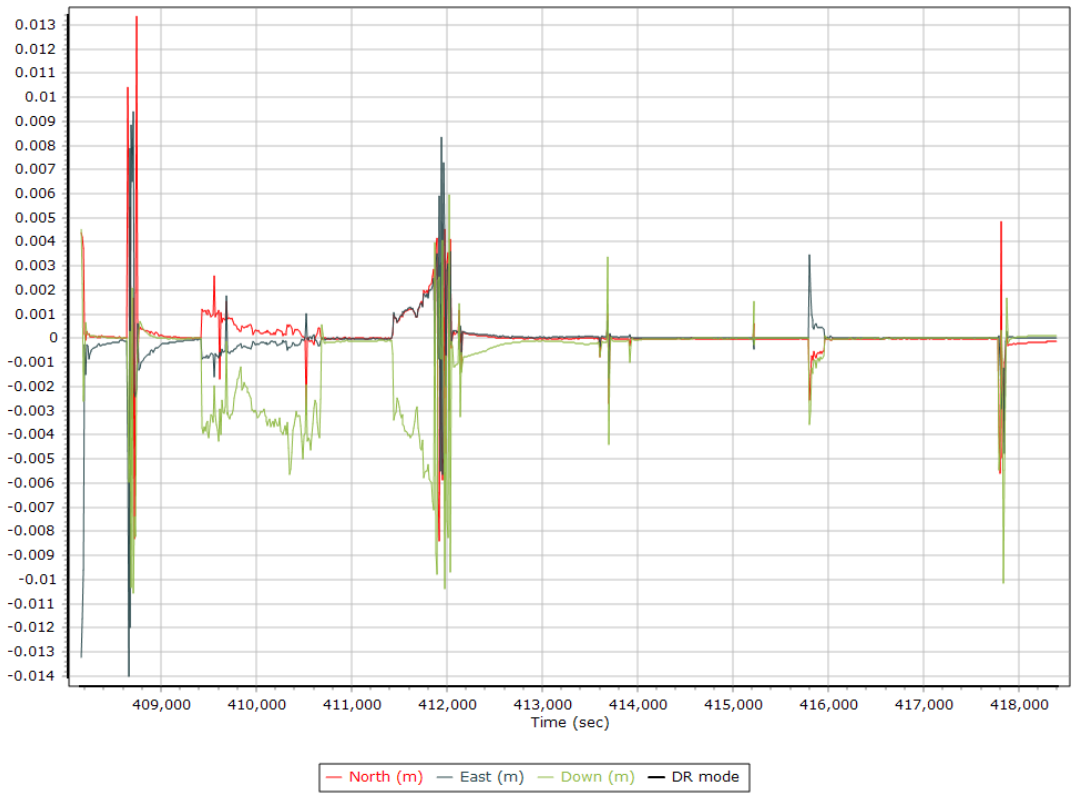
Number of Satellites



Baseline Length



SBET IAKAR Separation



General Information

Mission Information

Project name	20181219_Lift_1
Processing date	2018-12-21 16:33:11
Mission date	2018-12-19 16:31:18
Mission duration	03:28:37.378
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9865
IMU type	57
Receiver type	BD982
Antenna type	AV37

Project File List

Rover Data Files

File name	File type
181219_163059_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3530.18g	GLONASS Broadcast Ephemeris
Ephm3530.18n	GPS Broadcast Ephemeris
baco3530.18o	GNSS SingleBase
corb3530.18o	GNSS SingleBase
gode3530.18o	GNSS SingleBase
godn353a00-x45.18o	GNSS SingleBase
gods353a00-x45.18o	GNSS SingleBase
godz353a00-x45.18o	GNSS SingleBase
loy83530.18o	GNSS SingleBase
loyj3530.18o	GNSS SingleBase
loyk3530.18o	GNSS SingleBase
loyo3530.18o	GNSS SingleBase
umbc3530.18o	GPS SingleBase
usn73530.18o	GNSS SingleBase
zdc13530.18o	GPS SingleBase
igu20322_18.sp3	GPS Precise Ephemeris
igu20323_18.sp3	GPS Precise Ephemeris
igu20324_18.sp3	GPS Precise Ephemeris
hnpt3530.18o	GNSS SingleBase
igu20323_00.sp3	GPS Precise Ephemeris
igu20323_06.sp3	GPS Precise Ephemeris
igu20323_12.sp3	GPS Precise Ephemeris
igu20323_18.sp3	GPS Precise Ephemeris
igu20324_00.sp3	GPS Precise Ephemeris
igu20324_06.sp3	GPS Precise Ephemeris
igu20324_12.sp3	GPS Precise Ephemeris
igu20324_18.sp3	GPS Precise Ephemeris
igu20325_00.sp3	GPS Precise Ephemeris
igu20325_06.sp3	GPS Precise Ephemeris
accepted.txt	2 Fields (Time, Photo ID) Photo Id File

Output Files

Filename	File type
sbet_20181219.out	SBET Trajectory File

Rover Data Summary

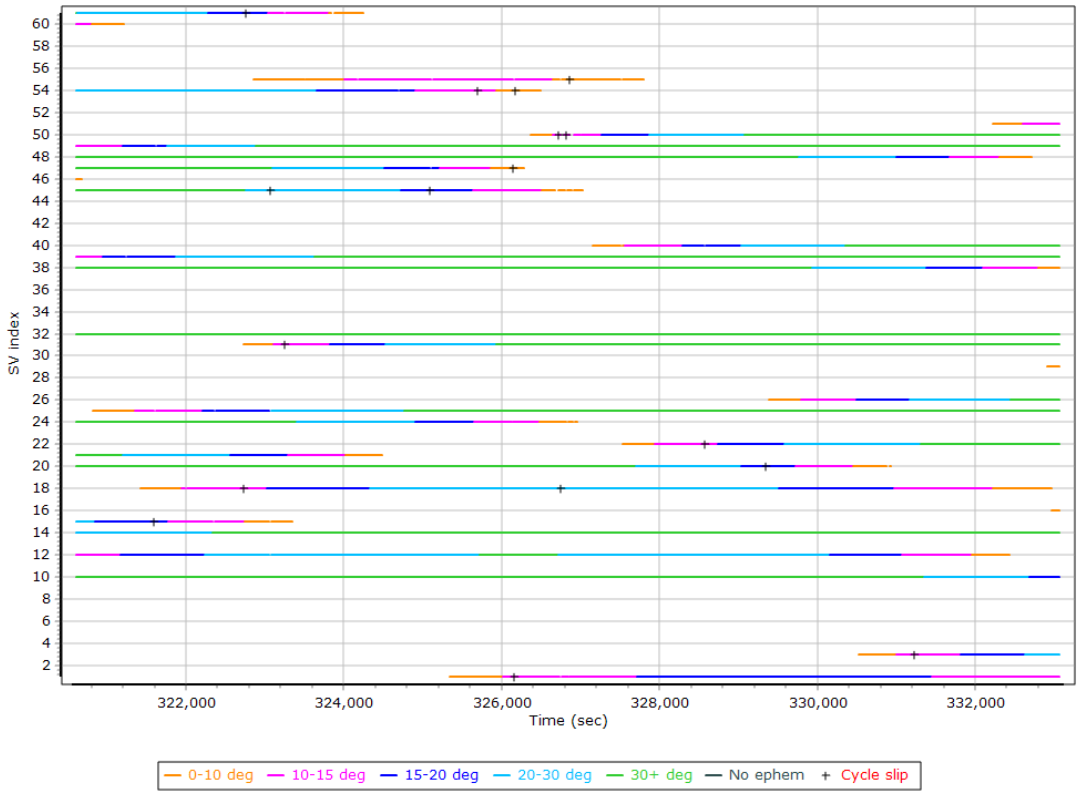
First raw data file	181219_163059_INS-GPS_1.raw		
Last raw data file	181219_163059_INS-GPS_1.raw		
Start GPS week	2032		
Start time	318659.175 (12/19/2018 4:30:59 PM)		
End time	333067.685 (12/19/2018 8:31:07 PM)		
Start of fine alignment	320551.237 (12/19/2018 5:02:31 PM)		
Available subsystems	Primary 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]	0.000	0.000	0.000
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

Raw Data QC

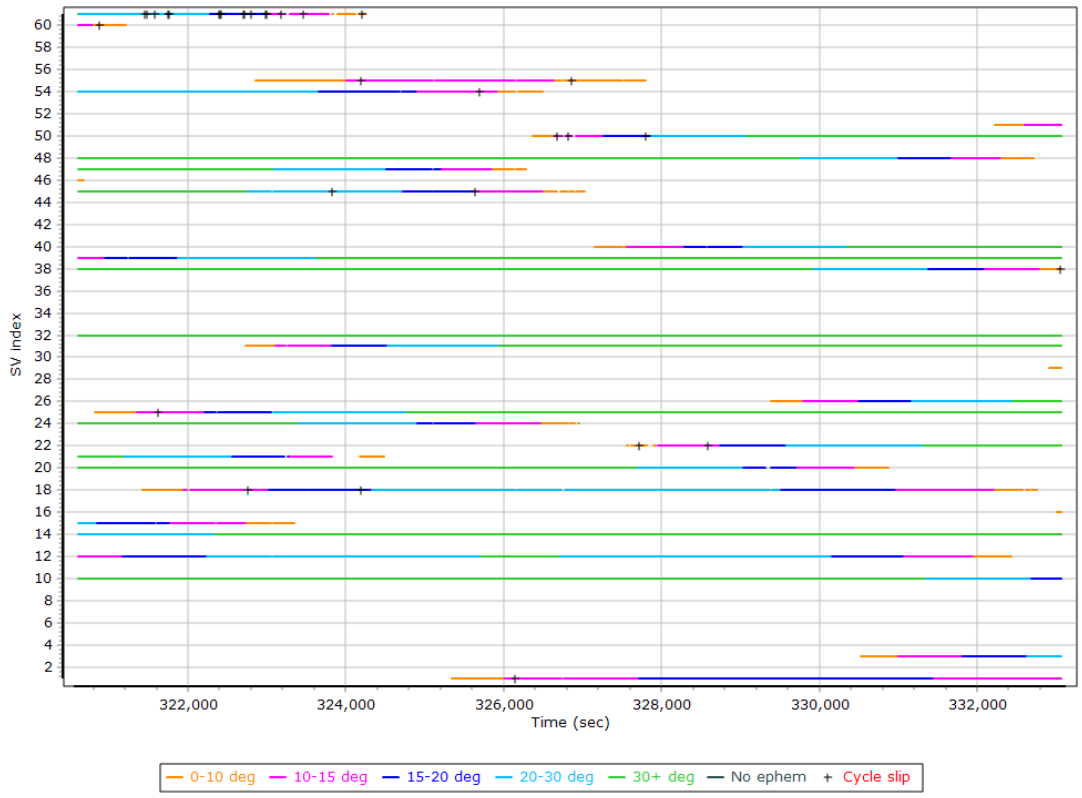
Raw IMU Import QC Summary

IMU data input file	imu_20181219.dat
IMU data check log file	imudt_20181219.log
IMU Records Processed	2881161
Termination Status	Normal
IMU Anomalies	0

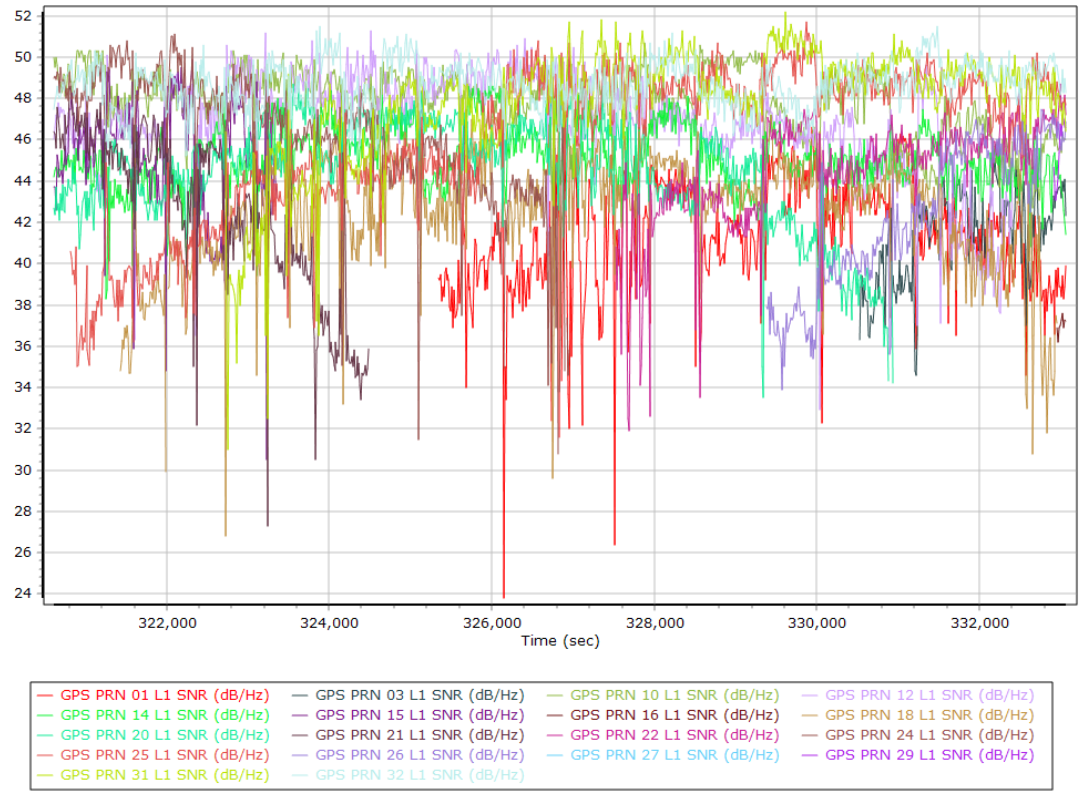
L1 Satellite Lock/Elevation



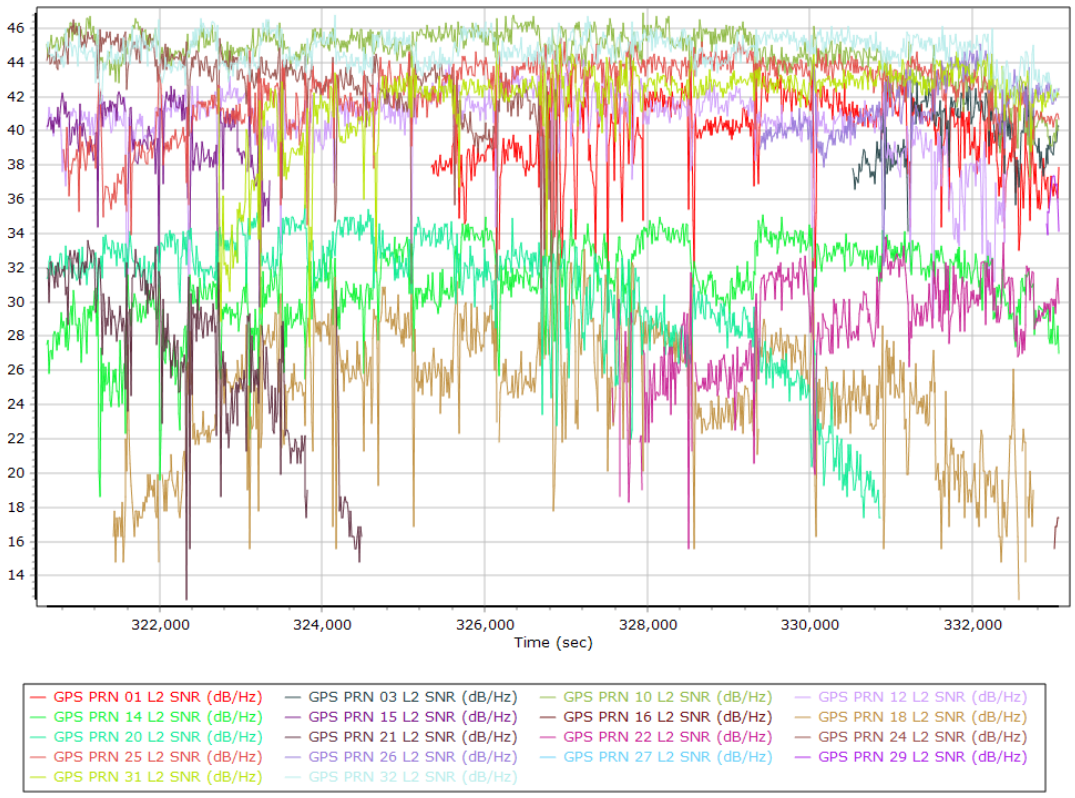
L2 Satellite Lock/Elevation



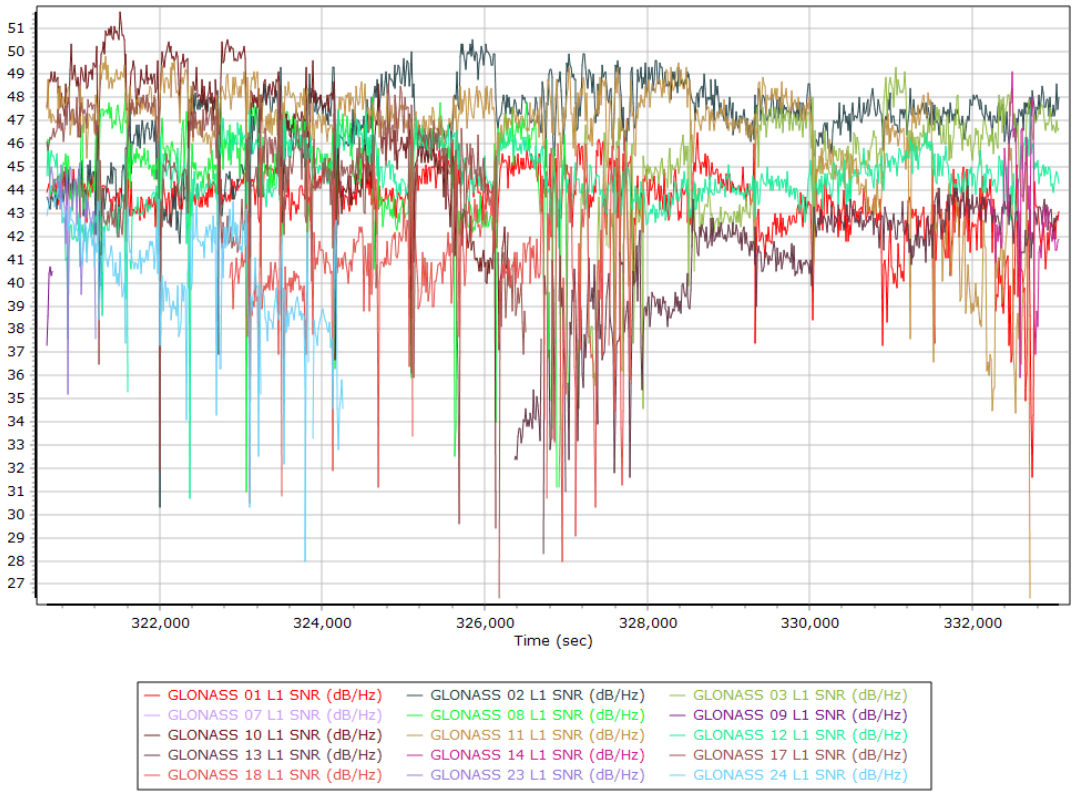
GPS L1 SNR



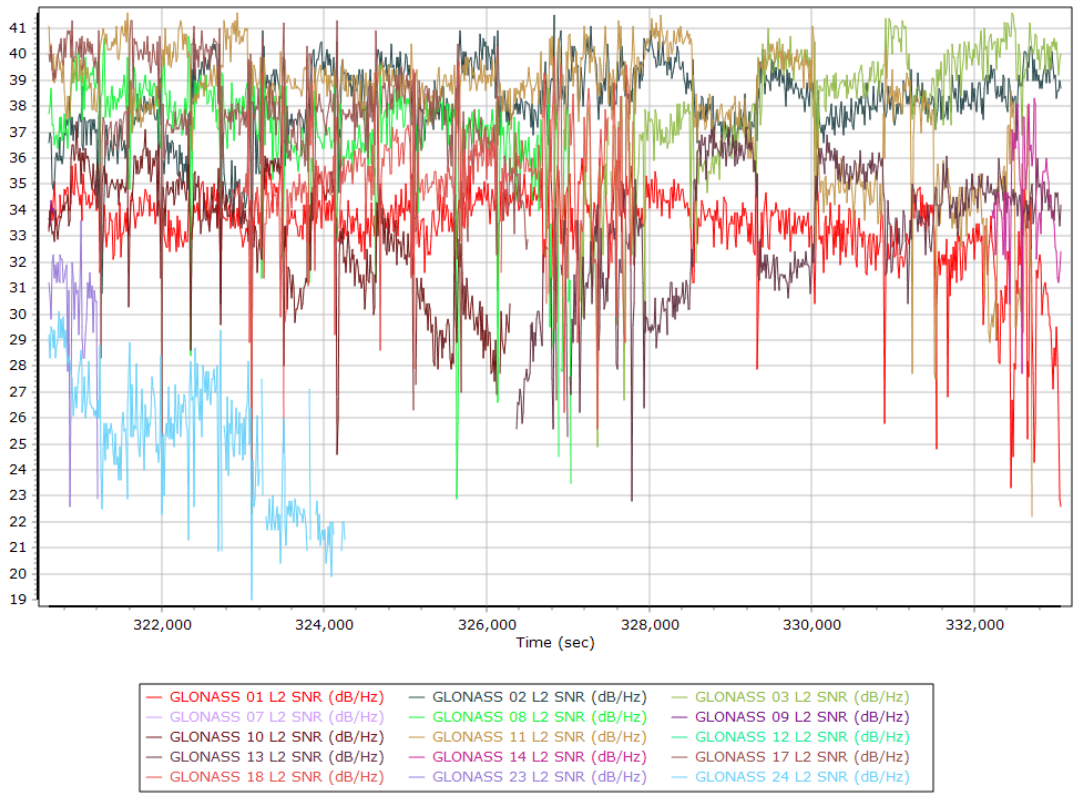
GPS L2 SNR



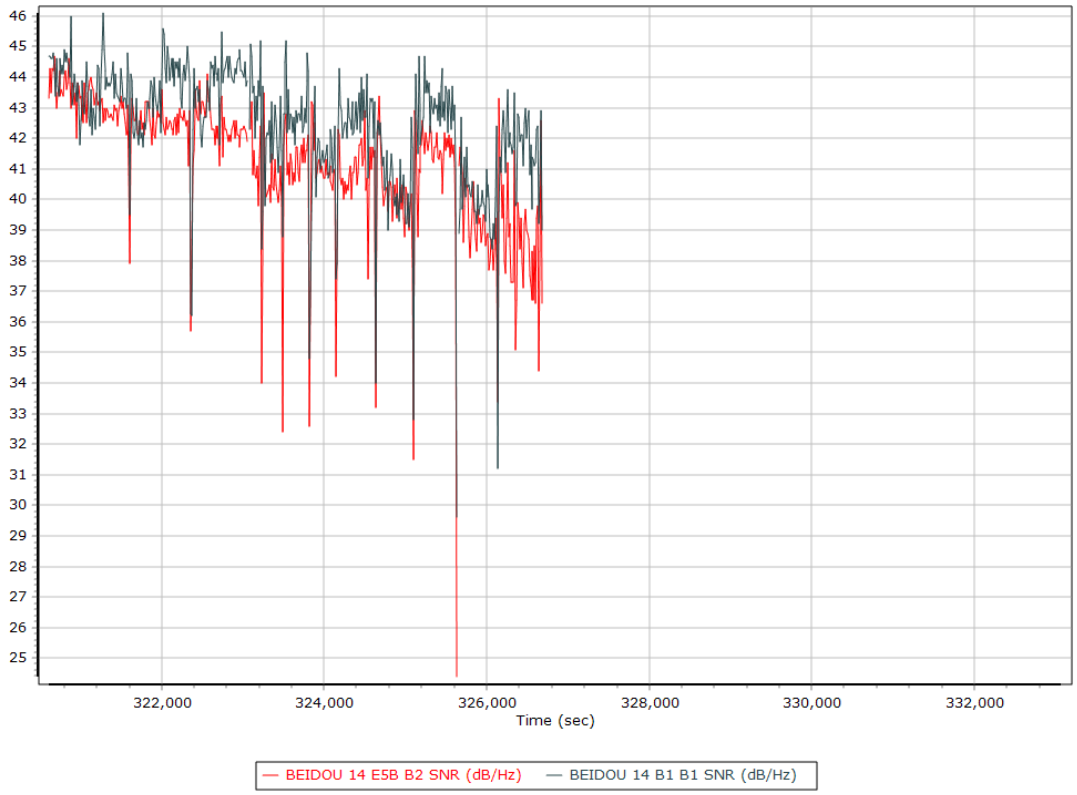
GLONASS L1 SNR



GLONASS L2 SNR



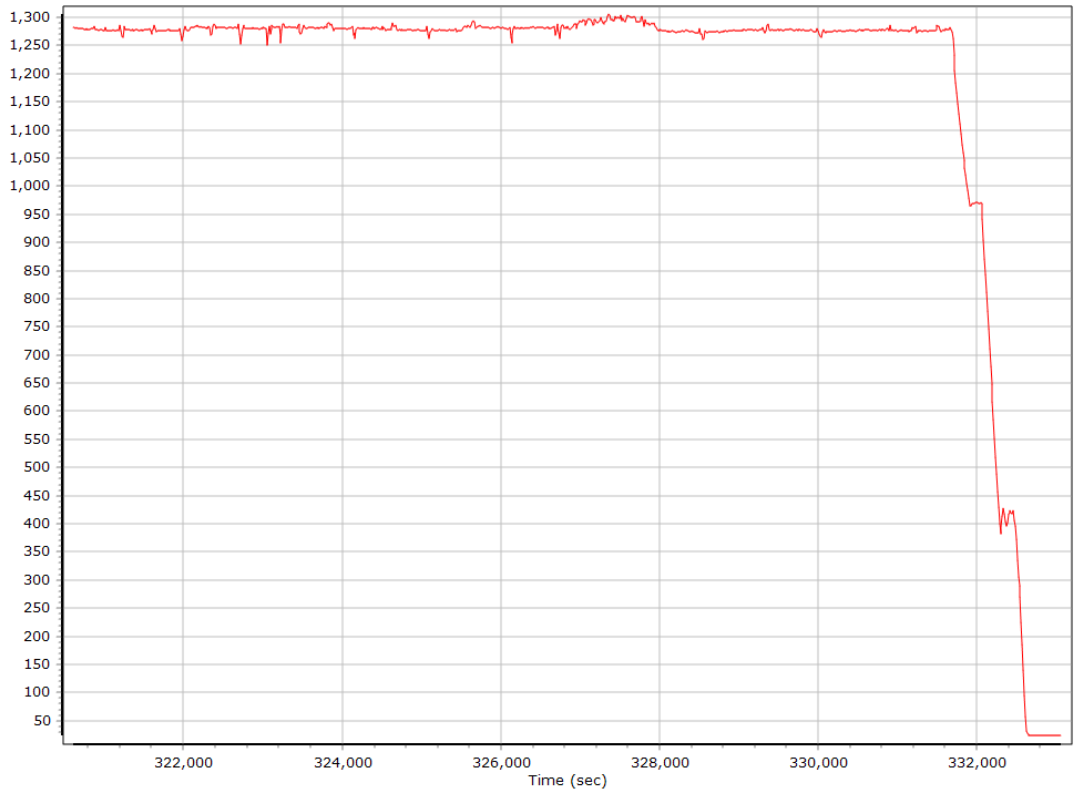
BEIDOU SNR



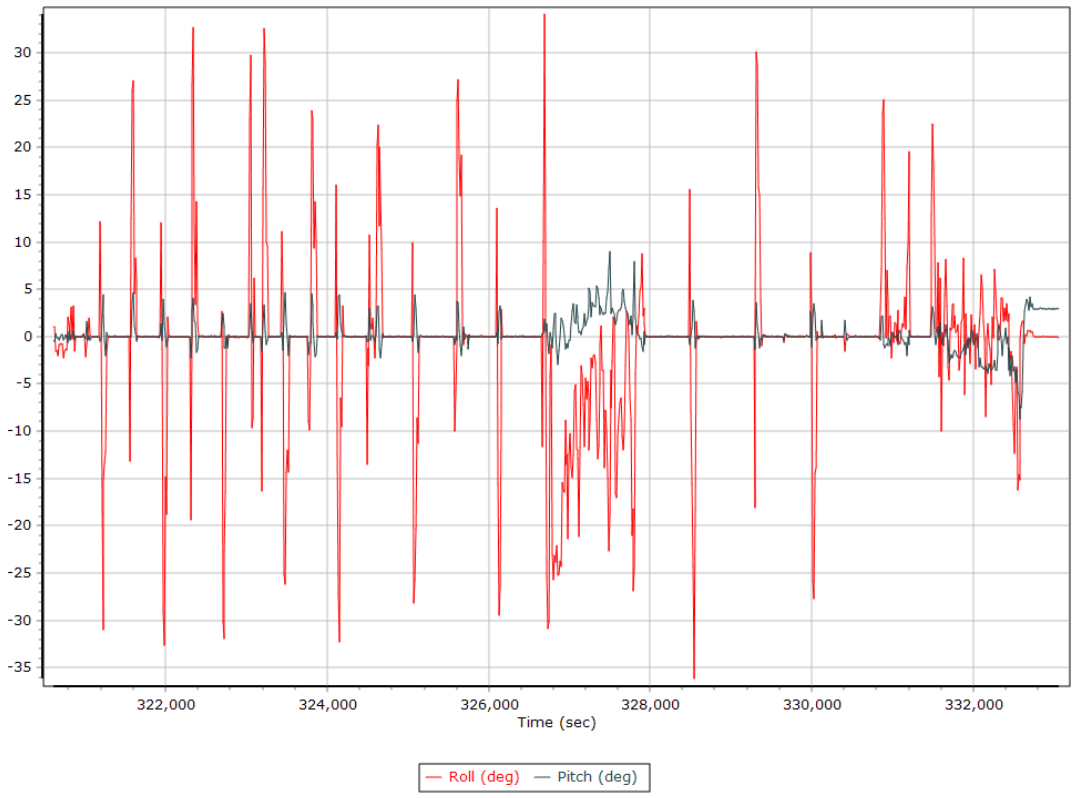
Trajectory Information

Top View

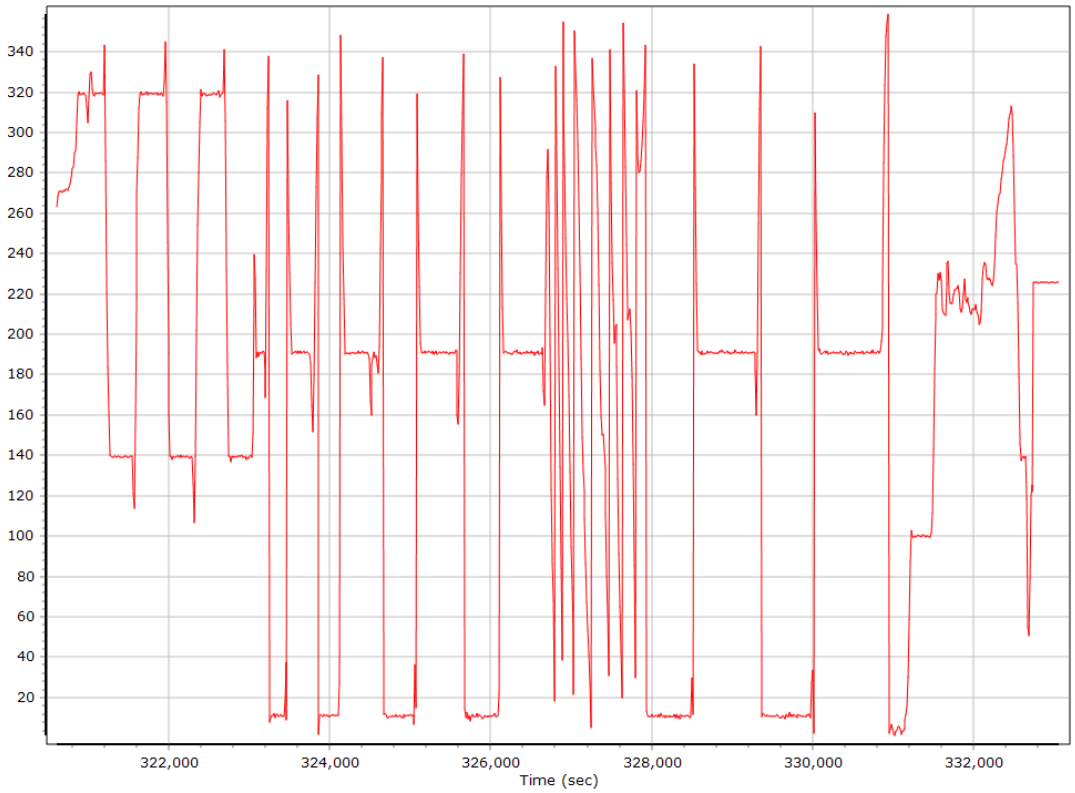
Altitude



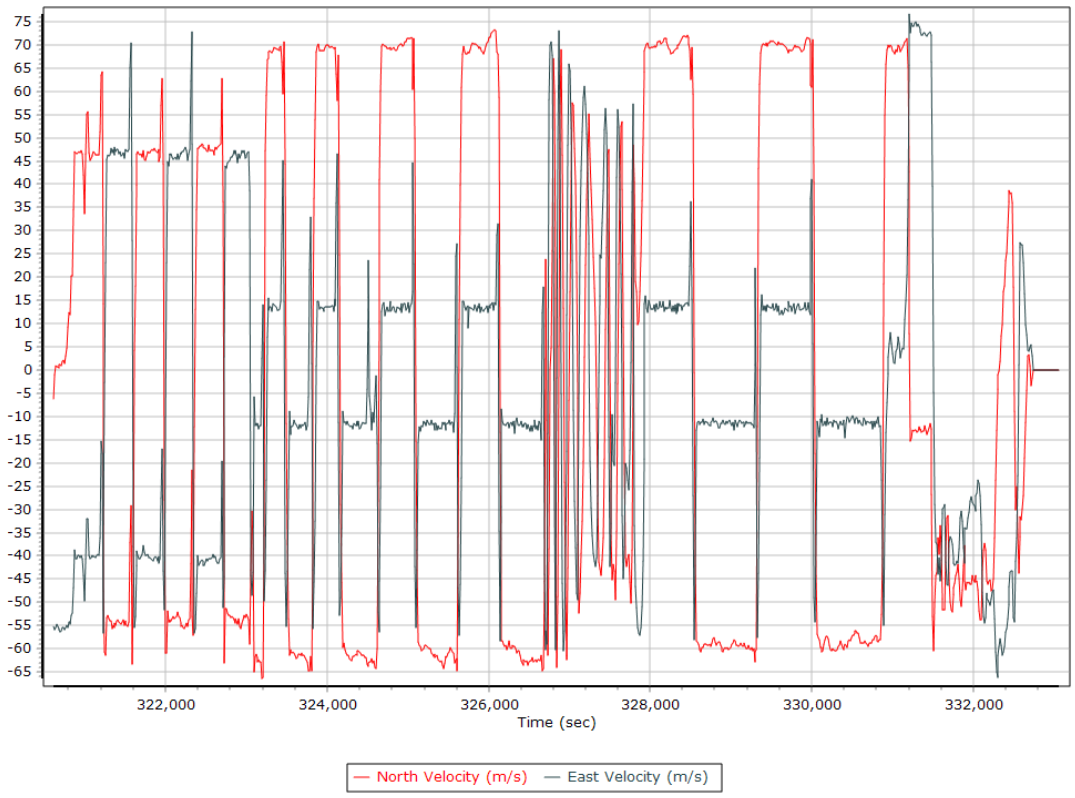
Roll/Pitch



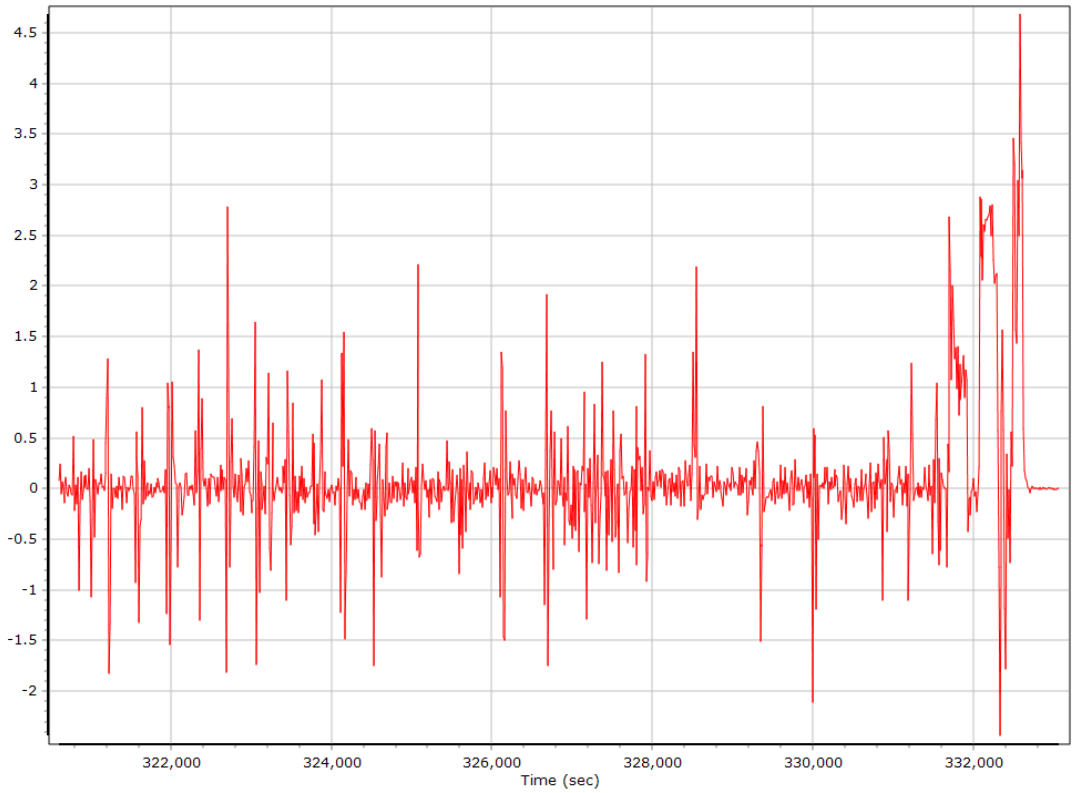
Heading



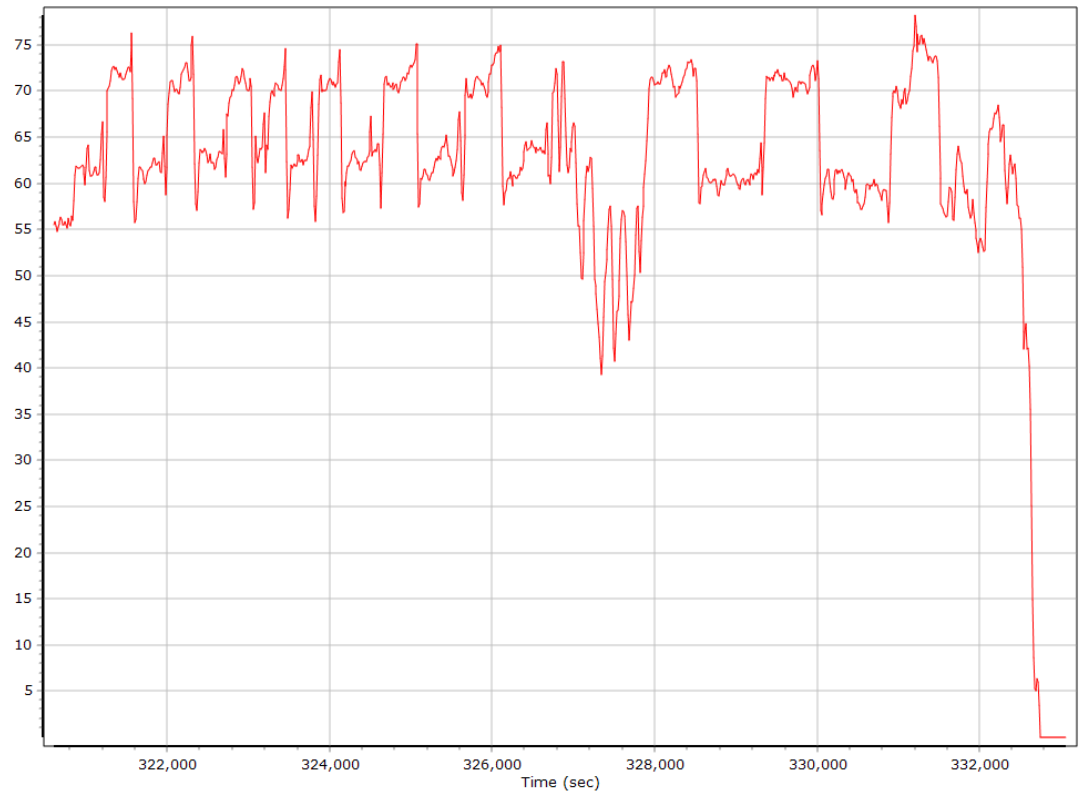
North/East Velocity



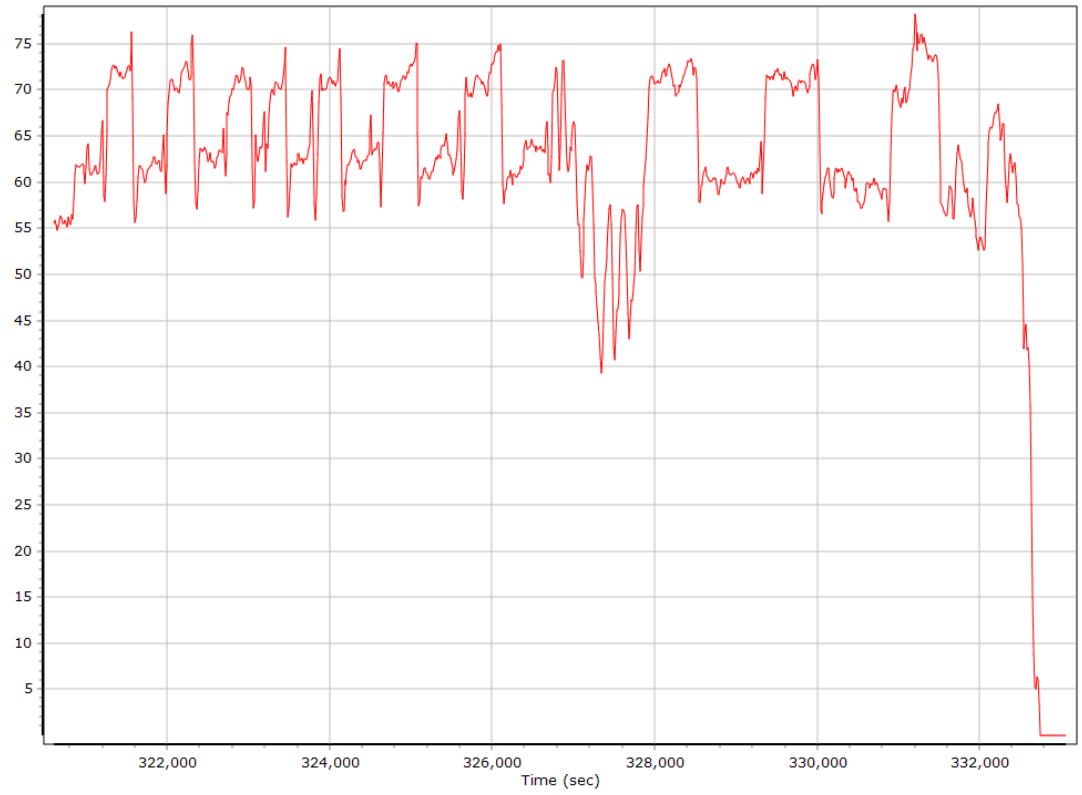
Down Velocity



Total Speed

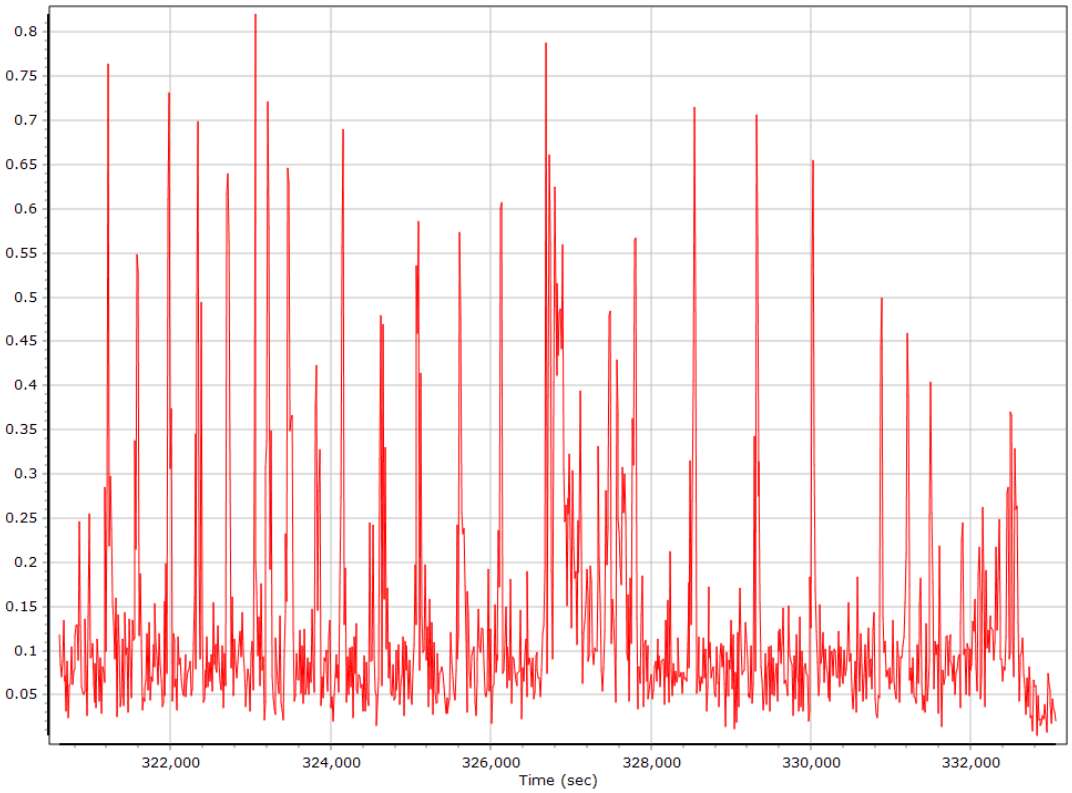


Ground Speed



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	True
Target GNSS Selection	GNSS

Basestation Selection

Date	ID	Dist	DataType	Rate	Service	Database	Status
12/19/2018	USN7	22.90	GNSS	30	UNAVCO (daily)	Smart Base	Imported
12/19/2018	GODS	42.56	GNSS	1	IGS (high-rate)	Smart Base	Imported
12/19/2018	GODN	42.63	GNSS	1	IGS (high-rate)	Smart Base	Imported
12/19/2018	GODE	42.69	GNSS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	GODZ	42.69	GNSS	1	IGS (high-rate)	Smart Base	Imported
12/19/2018	LOYK	54.36	GNSS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	ZDC1	55.16	GPS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	LOY8	56.08	GNSS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	CORB	61.33	GNSS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	UMBC	69.80	GPS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	LOYO	76.83	GNSS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	LOYJ	81.21	GNSS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	BACO	88.03	GNSS	5	CORS (high-rate)	Smart Base	Imported
12/19/2018	HNPT	88.58	GNSS	1	IGS (daily)	Smart Base	Imported

SmartBase Results

SmartBase status	PROC_STATUS_OK
Primary station Id	GODZ
Primary station data rate [sec]	1.0
VRS/ASB generation rate [sec]	1.0
VRS/ASB timespan	14408 s (2032 318678 - 2032 333086)
Number of reference stations	9
Primary station GPS measurement usage [%]	98.7
Primary station GLONASS measurement usage [%]	53.2
Average number of satellites per epoch	12.6
Max number of GPS stations used	6
Min number of GPS stations used	3
Max number of GLONASS stations used	6
Min number of GLONASS stations used	3
Total full data gap [sec]	0
Total GPS full data gaps	0
Total GLONASS full data gaps	0
Total individual satellite data gap [sec]	46548
GPS precise vs. broadcast ephemeris used	100.0 % / 0.0 %
GLONASS precise vs. broadcast ephemeris used	0.0 % / 100.0 %
Termination Status	Normal

SmartBase Quality Check

Base Station - HNPT

Status	OK	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Original	
Solution Epochs	5736	**Mean Epoch SVs**	8.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N38°35'19.74036"	W76°07'49.35288"	28.012
Adjusted		N38°35'19.74049"	W76°07'49.35321"	28.001
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.009	0.012	0.015

Base Station Information

Station ID	HNPT		
Filename	hnpt3530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Leica	GRX1200GGPRO	351085
Antenna manufacturer, model	Leica	AX1202GG	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.0847		
Latitude	N38°35'19.74036"		
Longitude	W76°07'49.35288"		
Ellipsoidal height [m]	-28.01245		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - LOYJ

Status	OK	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Original	
Solution Epochs	5736	**Mean Epoch SVs**	8.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N38°28'20.92236"	W78°00'36.17012"	103.851
Adjusted		N38°28'20.92255"	W78°00'36.16971"	103.855
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.012	0.004	0.012

Base Station Information

Station ID	LOYJ		
Filename	loyj3530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Leica	GRX1200+GNSS	461533
Antenna manufacturer, model	Leica	AR10	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.1085		
Latitude	N38°28'20.92236"		
Longitude	W78°00'36.17012"		
Ellipsoidal height [m]	103.85144		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - LOYO

Status	OK	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Original	
Solution Epochs	5736	**Mean Epoch SVs**	8.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N38°03'00.65574"	W77°20'51.19551"	41.866
Adjusted		N38°03'00.65571"	W77°20'51.19604"	41.857
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.013	0.009	0.016

Base Station Information

Station ID	LOYO		
Filename	loyo3530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Leica	GRX1200+GNSS	462401
Antenna manufacturer, model	Leica	AR10	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.1085		
Latitude	N38°03'00.65574"		
Longitude	W77°20'51.19551"		
Ellipsoidal height [m]	41.86614		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - CORB

Status	OK	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Original	
Solution Epochs	5736	**Mean Epoch SVs**	8.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N38°12'07.85746"	W77°22'24.59258"	35.909
Adjusted		N38°12'07.85747"	W77°22'24.59259"	35.934
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.001	0.025	0.025

Base Station Information

Station ID	CORB		
Filename	corb3530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Leica	GRX1200GGPRO	351000
Antenna manufacturer, model	Javad GNSS	JAV RINGANT-DM	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.08931		
Latitude	N38°12'07.85746"		
Longitude	W77°22'24.59258"		
Ellipsoidal height [m]	35.90887		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - LOY8

Status	OK	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Original	
Solution Epochs	5736	**Mean Epoch SVs**	8.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N38°16'58.72098"	W77°27'09.49077"	6.207
Adjusted		N38°16'58.72118"	W77°27'09.49116"	6.214
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.011	0.006	0.013

Base Station Information

Station ID	LOY8		
Filename	loy83530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Leica	GR10	1701059
Antenna manufacturer, model	Leica	AR10	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.1085		
Latitude	N38°16'58.72098"		
Longitude	W77°27'09.49077"		
Ellipsoidal height [m]	-6.20698		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - ZDC1

Status	OK	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Original	
Solution Epochs	5736	**Mean Epoch SVs**	8.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N39°06'05.74463"	W77°32'33.89063"	79.591
Adjusted		N39°06'05.74471"	W77°32'33.89047"	79.598
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.005	0.007	0.008

Base Station Information

Station ID	ZDC1		
Filename	zdc13530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GPS		
Receiver manufacturer, model, serial no.	Unknown	Unknown	6FC1
Antenna manufacturer, model	Micro Pulse	MPLWAAS+L5	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.4626		
Latitude	N39°06'05.74463"		
Longitude	W77°32'33.89063"		
Ellipsoidal height [m]	79.59069		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - LOYK

Status	OK	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Original	
Solution Epochs	5736	**Mean Epoch SVs**	8.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N39°07'51.88879"	W76°47'26.28162"	33.998
Adjusted		N39°07'51.88870"	W76°47'26.28159"	34.014
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.003	0.016	0.016

Base Station Information

Station ID	LOYK		
Filename	loyk3530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Leica	GR30	1705762
Antenna manufacturer, model	Leica	AR10	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.1085		
Latitude	N39°07'51.88879"		
Longitude	W76°47'26.28162"		
Ellipsoidal height [m]	33.99841		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - GODE

Status	OK	**SBQI**	9	
Duration (Hours)	23.80	**Output Coordinates**	Original	
Solution Epochs	5712	**Mean Epoch SVs**	7.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N39°01'18.22013"	W76°49'36.59696"	14.477
Adjusted		N39°01'18.22011"	W76°49'36.59701"	14.482
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.001	0.005	0.005

Base Station Information

Station ID	GODE		
Filename	gode3530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Unknown	Unknown	3013928
Antenna manufacturer, model	Dorne Margolin	D/M Model T w/JPLA Dome	
Antenna height [m]	0.061		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.11		
Latitude	N39°01'18.22013"		
Longitude	W76°49'36.59696"		
Ellipsoidal height [m]	14.47706		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - GODZ

Status	CONTROL	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Control	
Solution Epochs	5736	**Mean Epoch SVs**	8.5	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N39°01'18.22011"	W76°49'36.59704"	14.482
Adjusted		N39°01'18.22011"	W76°49'36.59704"	14.482
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.000	0.000	0.000

Base Station Information

Station ID	GODZ		
Filename	godz353a00-x45.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	JPS	EGGDT	LT2078
Antenna manufacturer, model	Dorne Margolin	D/M Model T w/JPLA Dome	
Antenna height [m]	0.061		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.11		
Latitude	N39°01'18.22011"		
Longitude	W76°49'36.59704"		
Ellipsoidal height [m]	14.48164		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	0.51	93.70	
Number of GPS SV	6	11	9
Number of GLONASS SV	0	7	3
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	6	16	13
PDOP	1.21	3.35	1.55
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	14390.00	0.00	1.00
Percentage	99.99	0.00	0.01

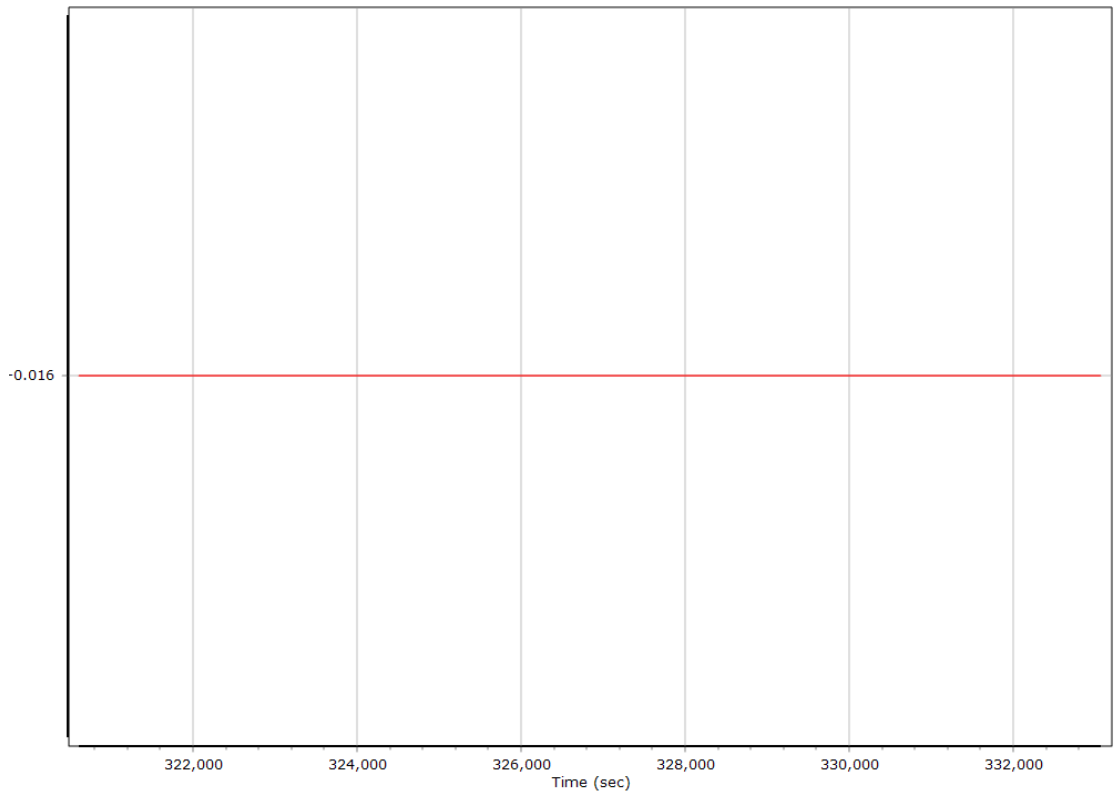
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	320550.622 (12/19/2018 5:02:30 PM)		
Processing end time	333068.000 (12/19/2018 8:31:08 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	0.000	0.000	0.000
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	-0.016	0.008	-0.680
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

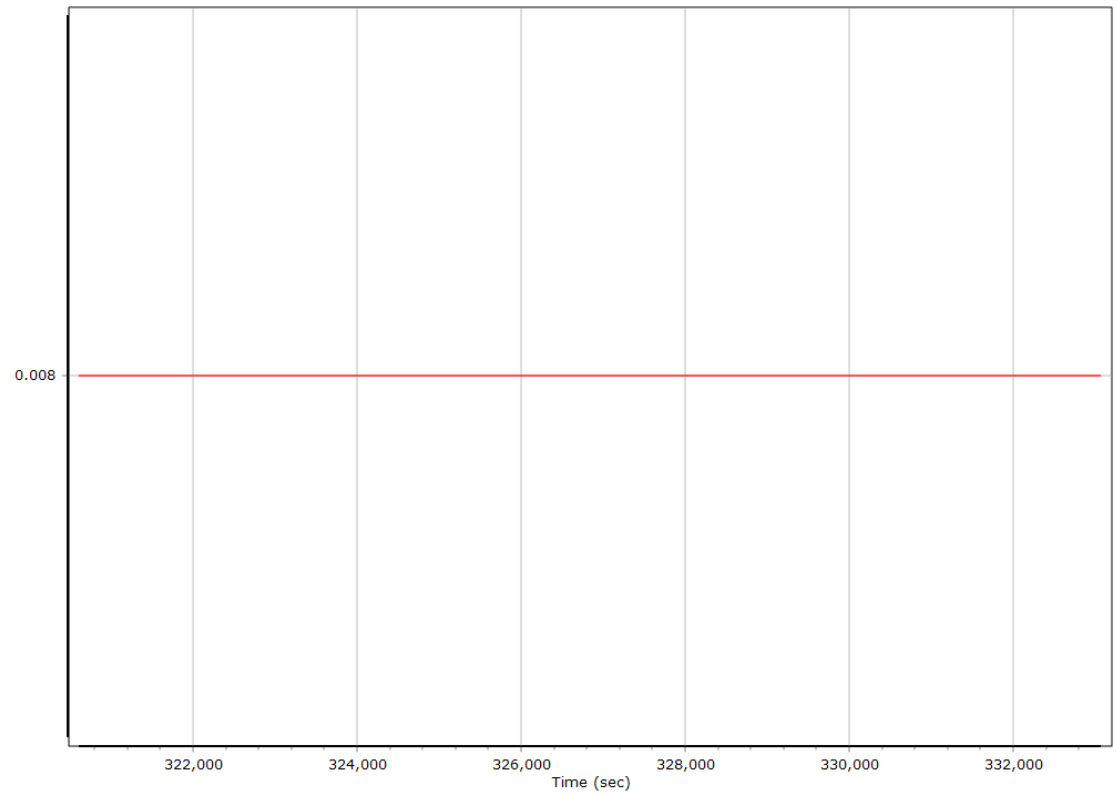
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

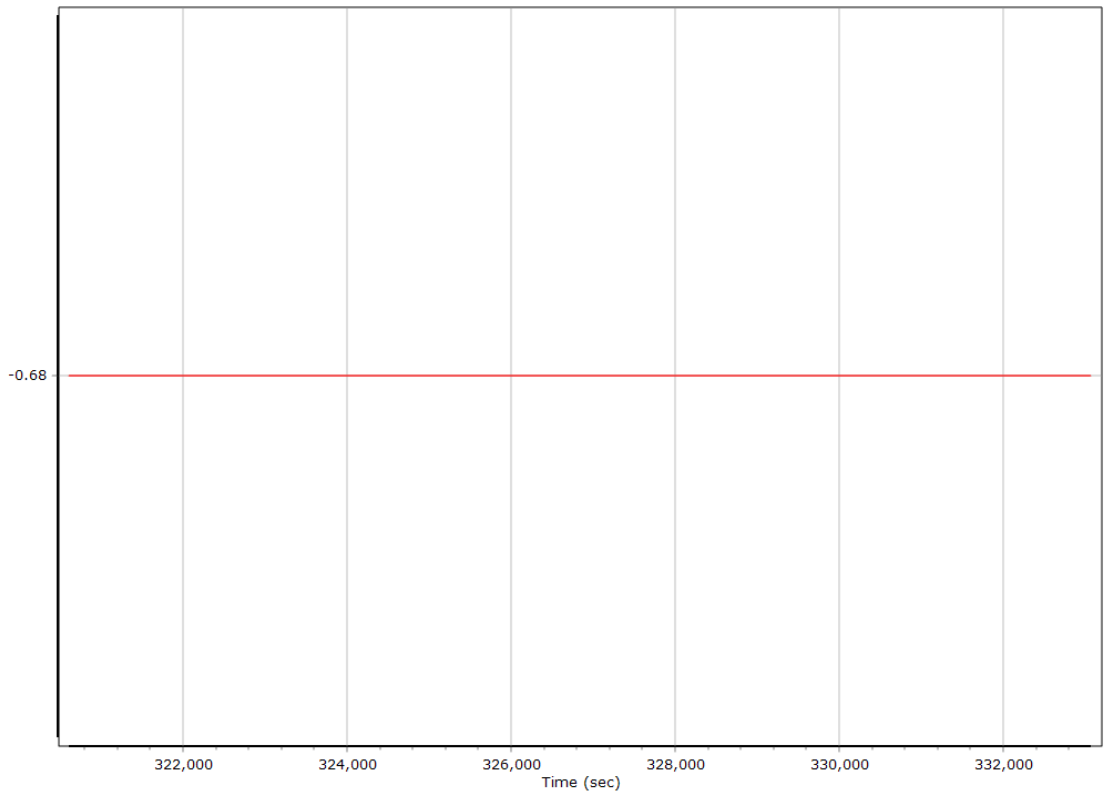
X Reference-Primary GNSS Lever Arm (m)



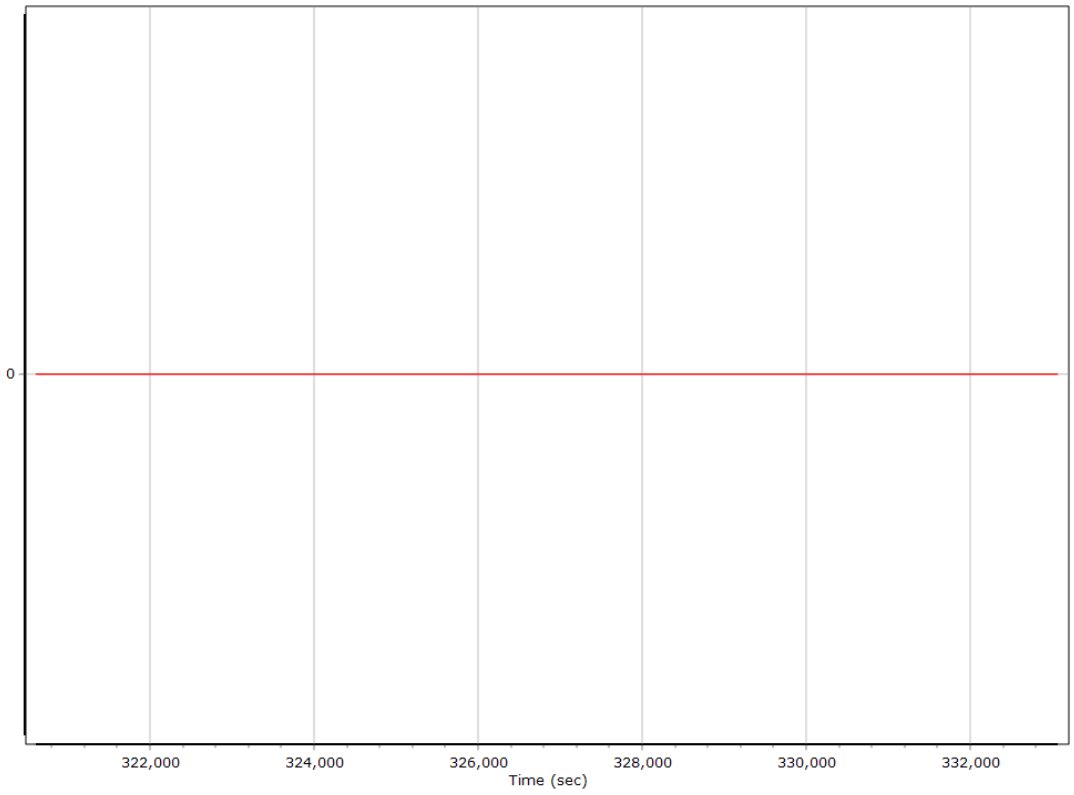
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



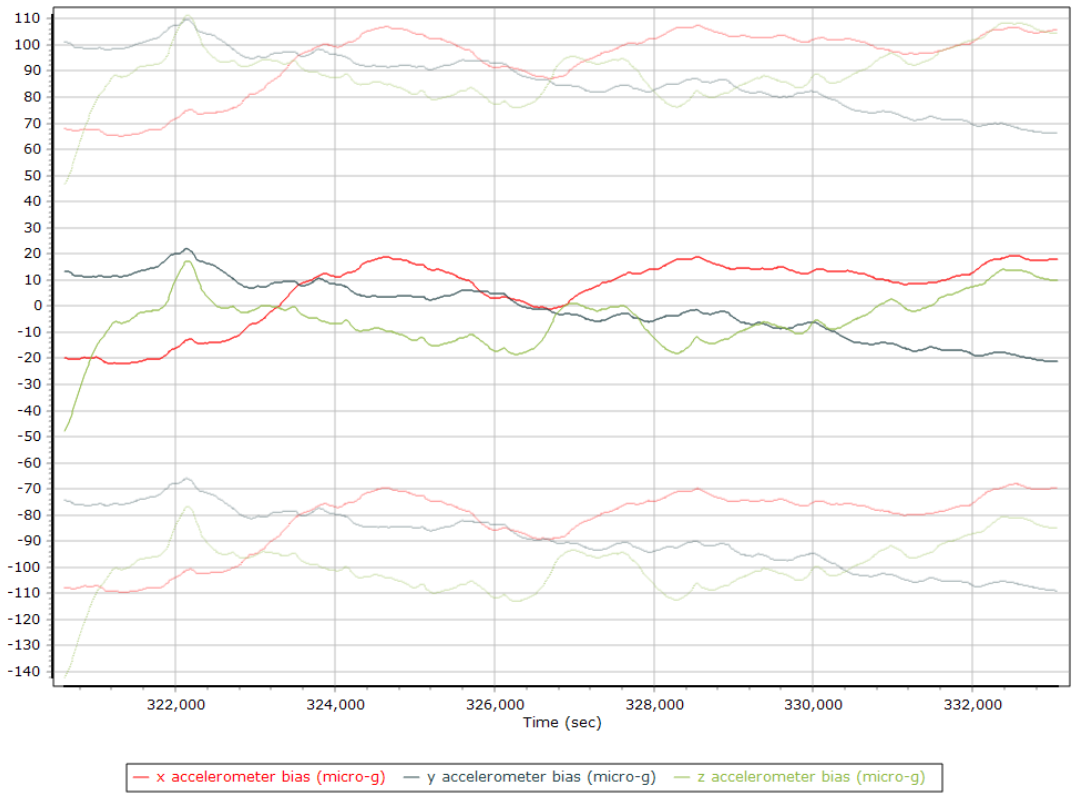
Reference-Primary GNSS Lever Arm Figure of Merit



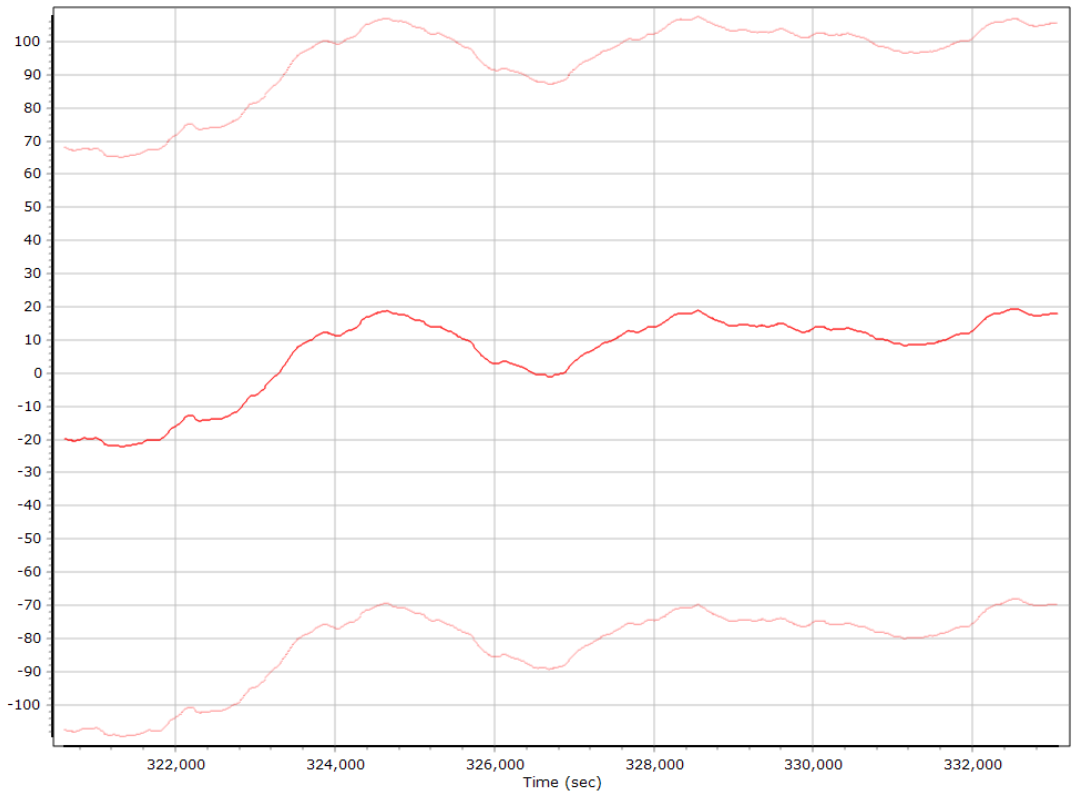
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

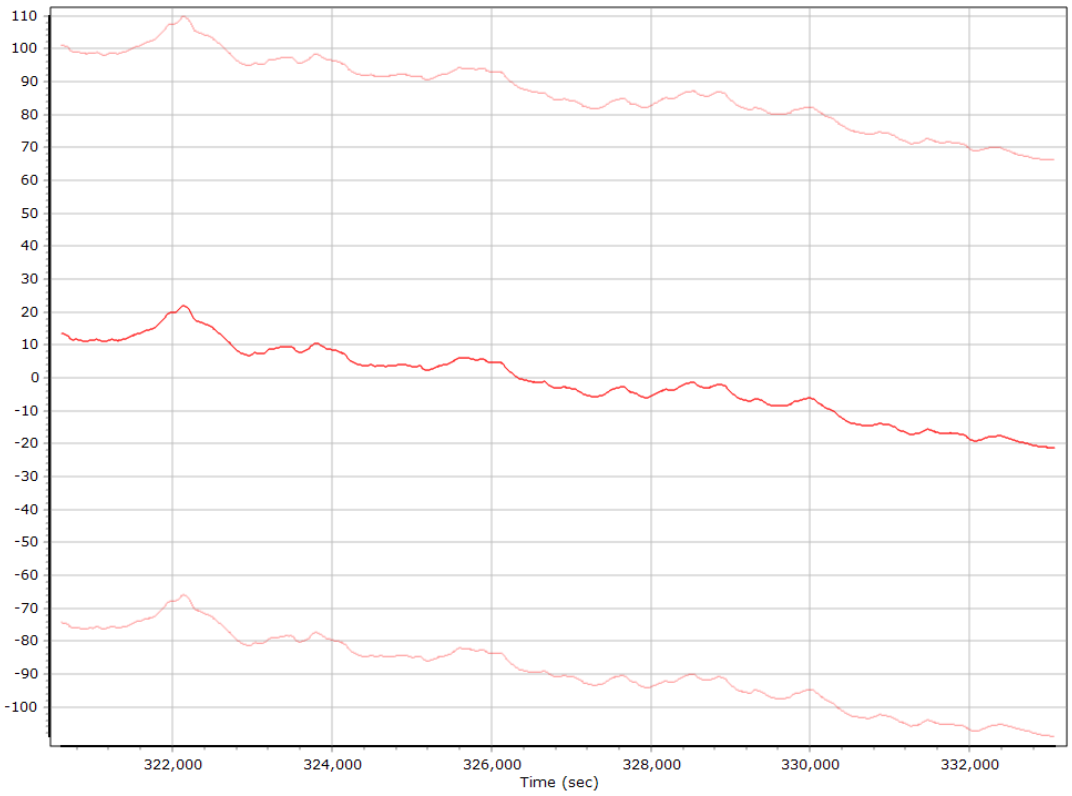
Accelerometer Bias (micro-g)



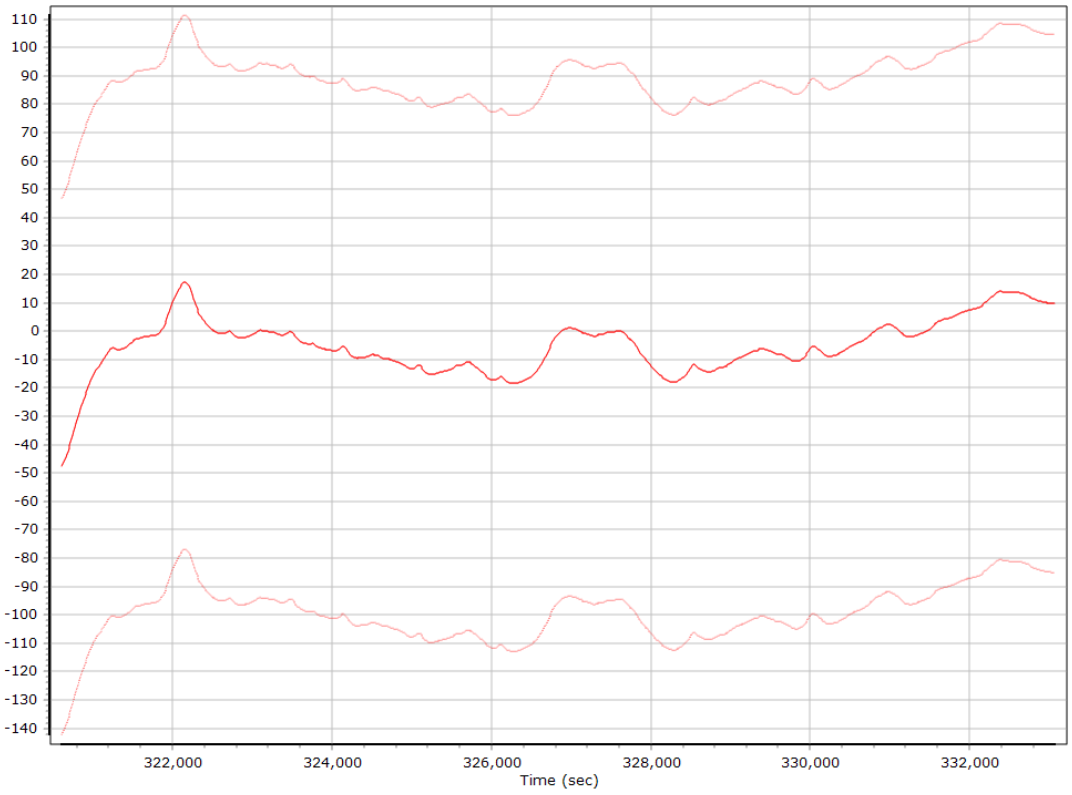
X Accelerometer Bias (micro-g)



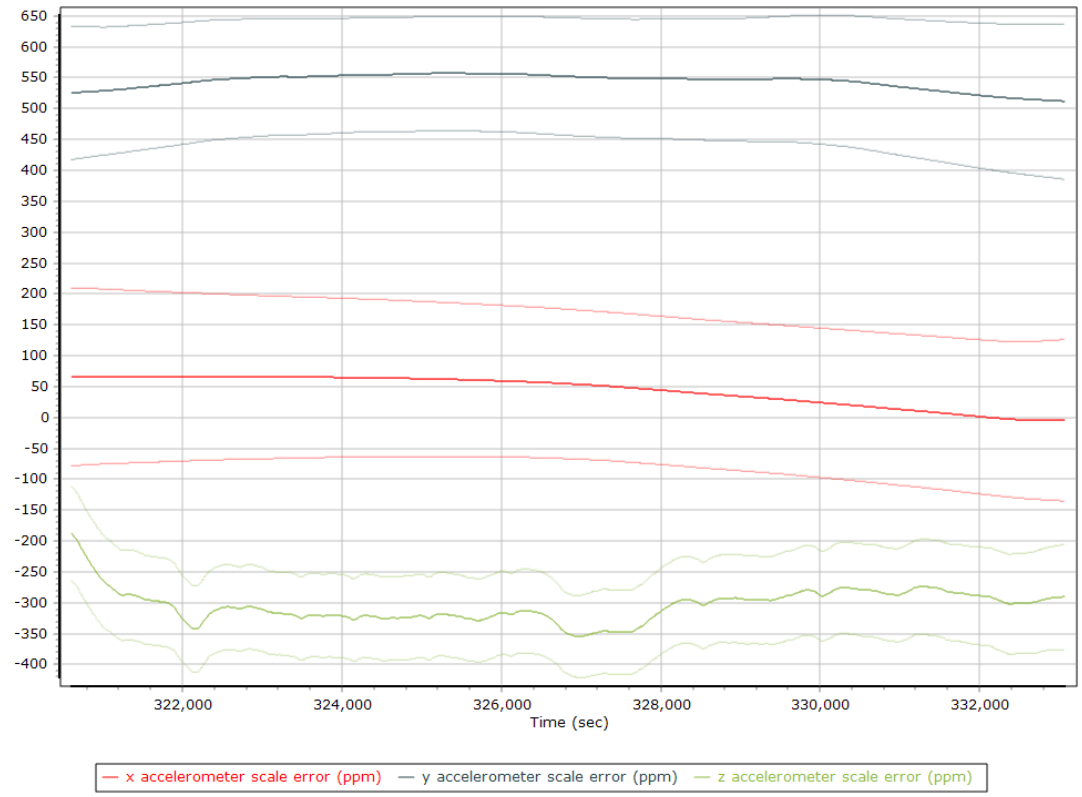
Y Accelerometer Bias (micro-g)



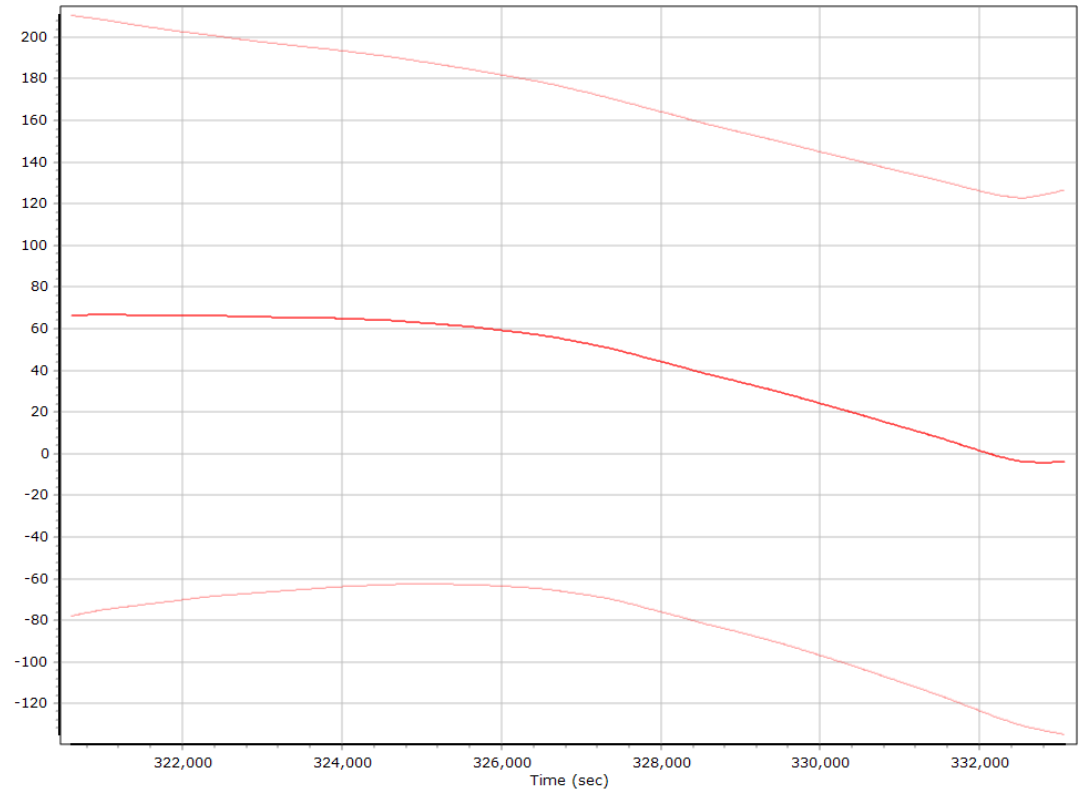
Z Accelerometer Bias (micro-g)



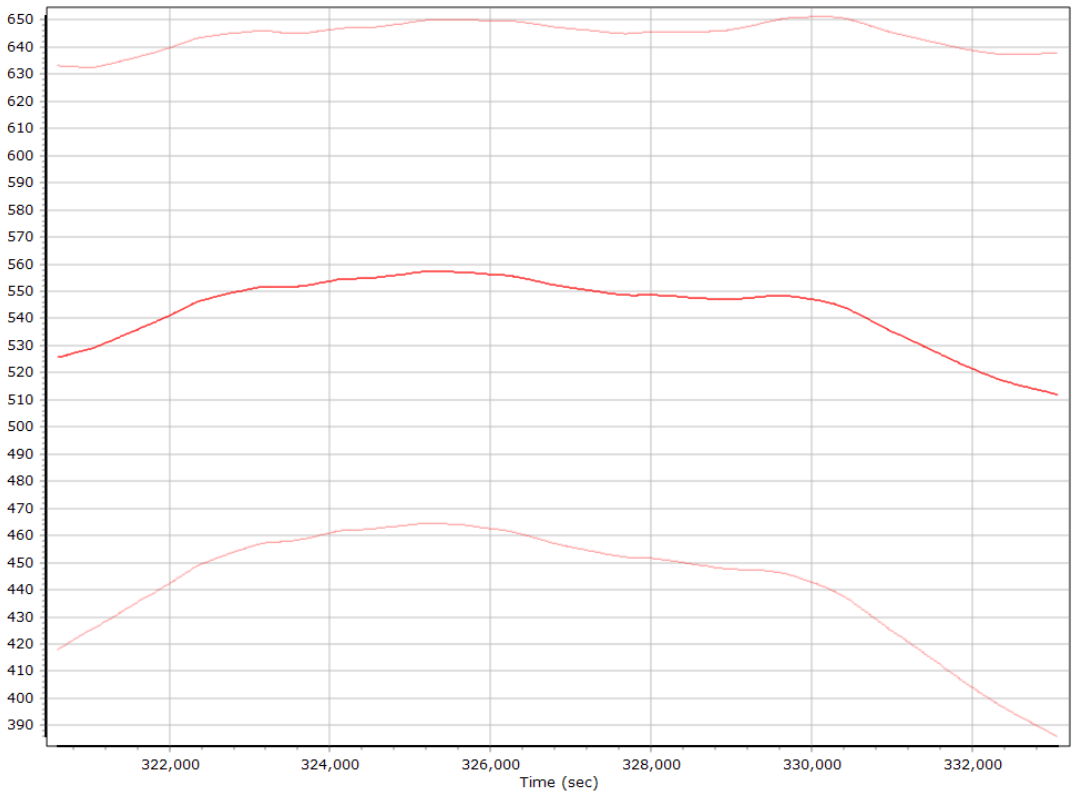
Accelerometer Scale Error (ppm)



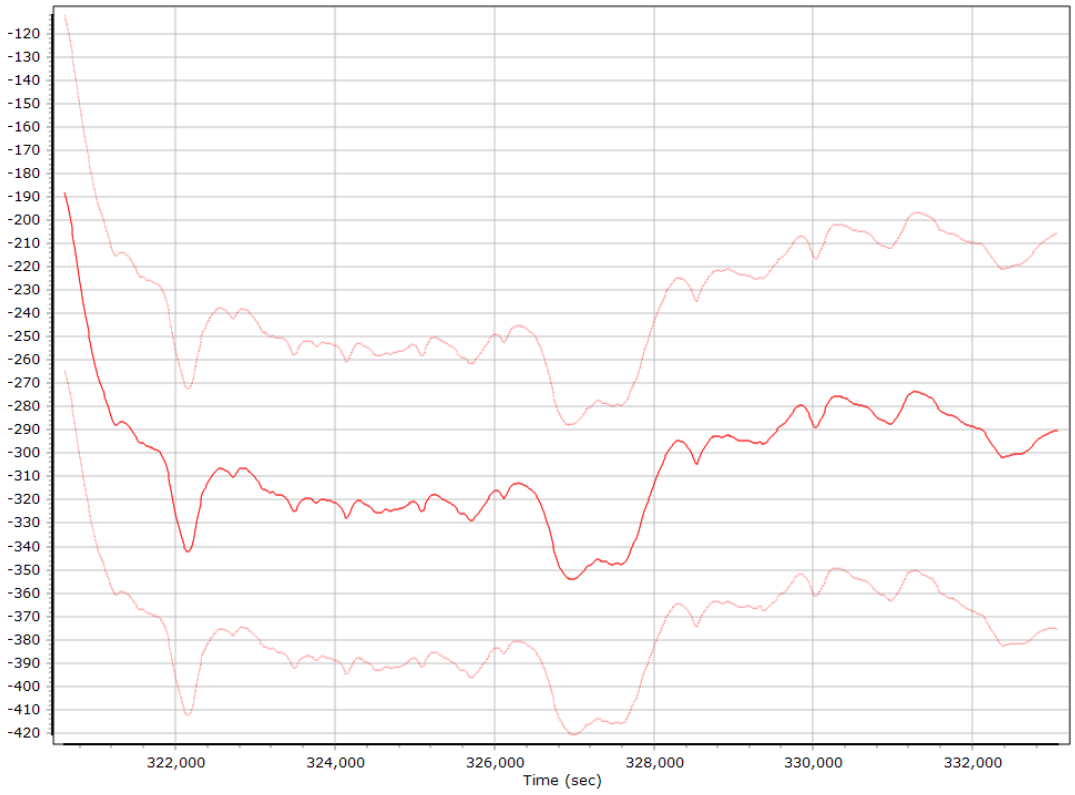
X Accelerometer Scale Error (ppm)



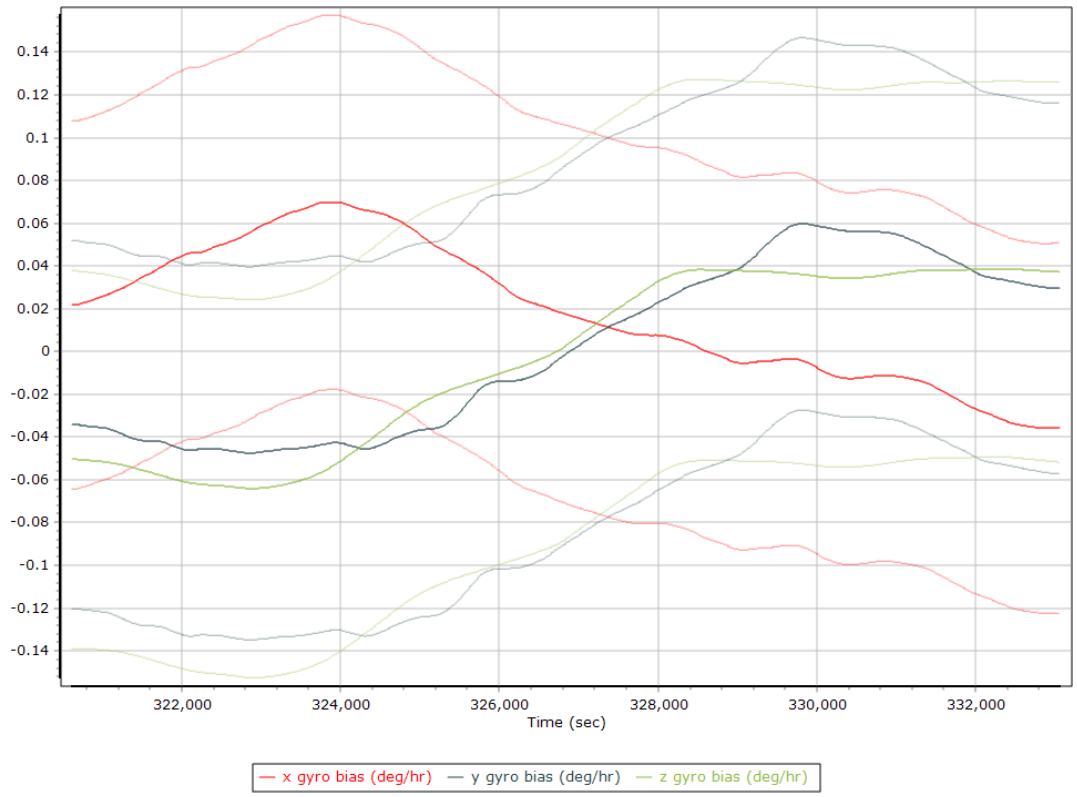
Y Accelerometer Scale Error (ppm)



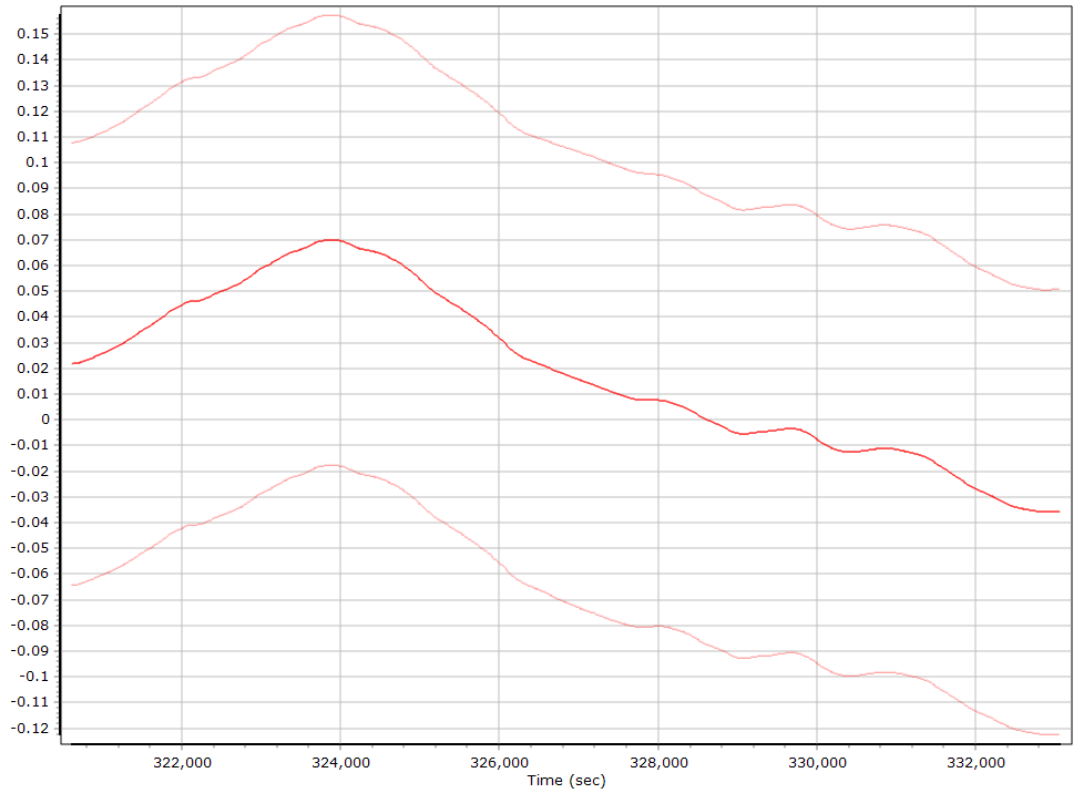
Z Accelerometer Scale Error (ppm)



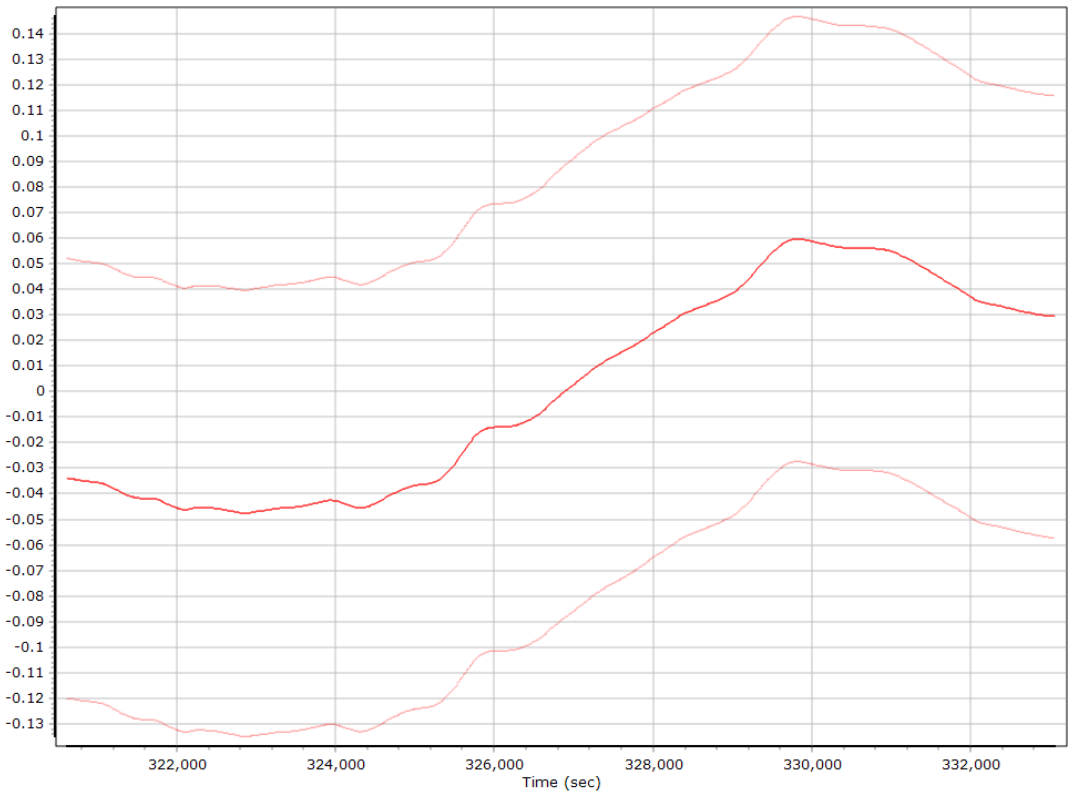
Gyro Bias (deg/h)



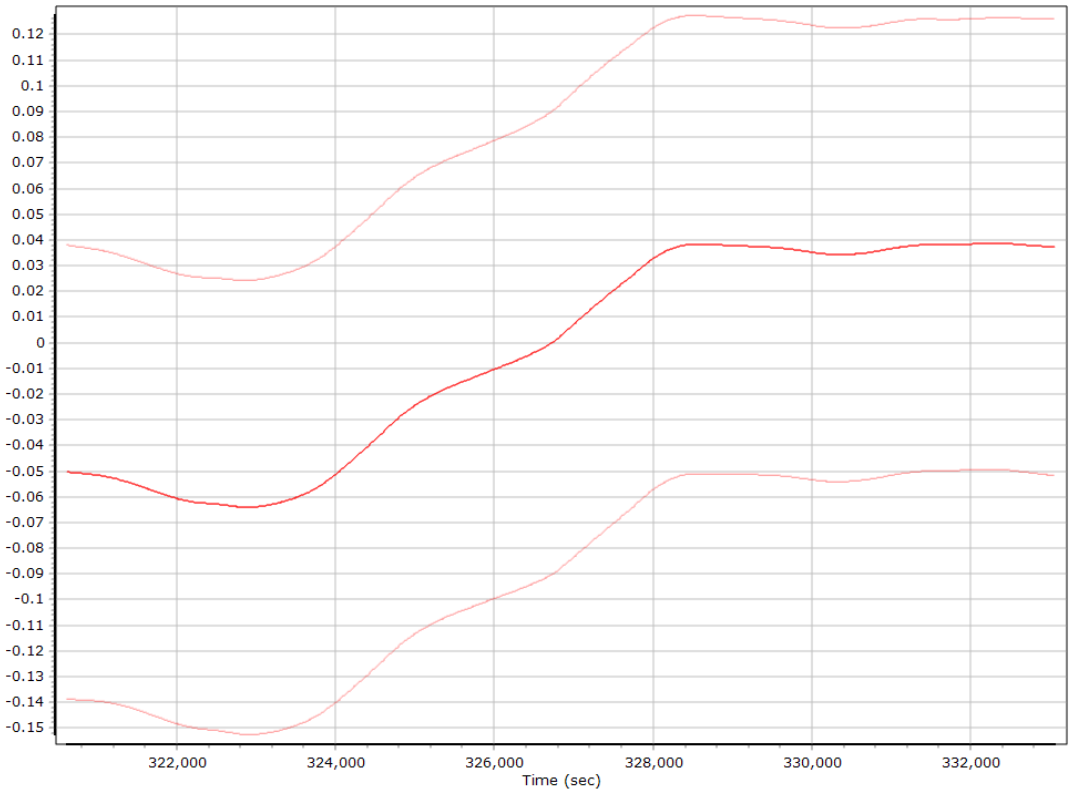
X Gyro Bias (deg/h)



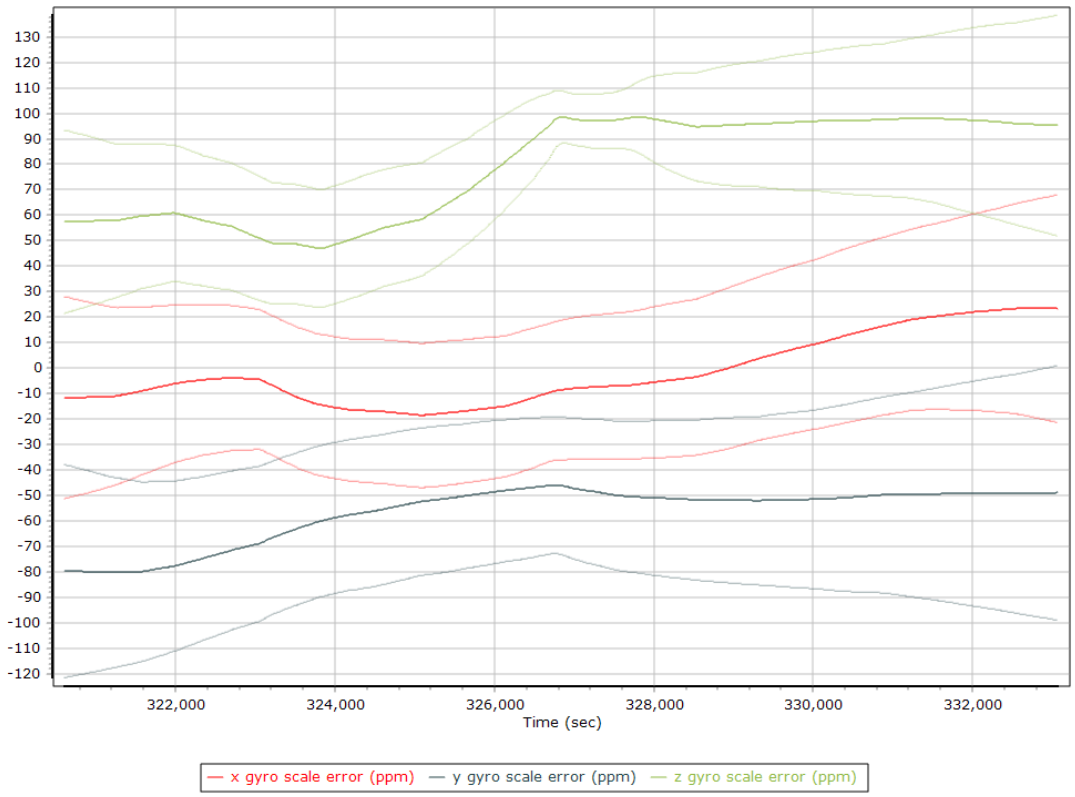
Y Gyro Bias (deg/h)



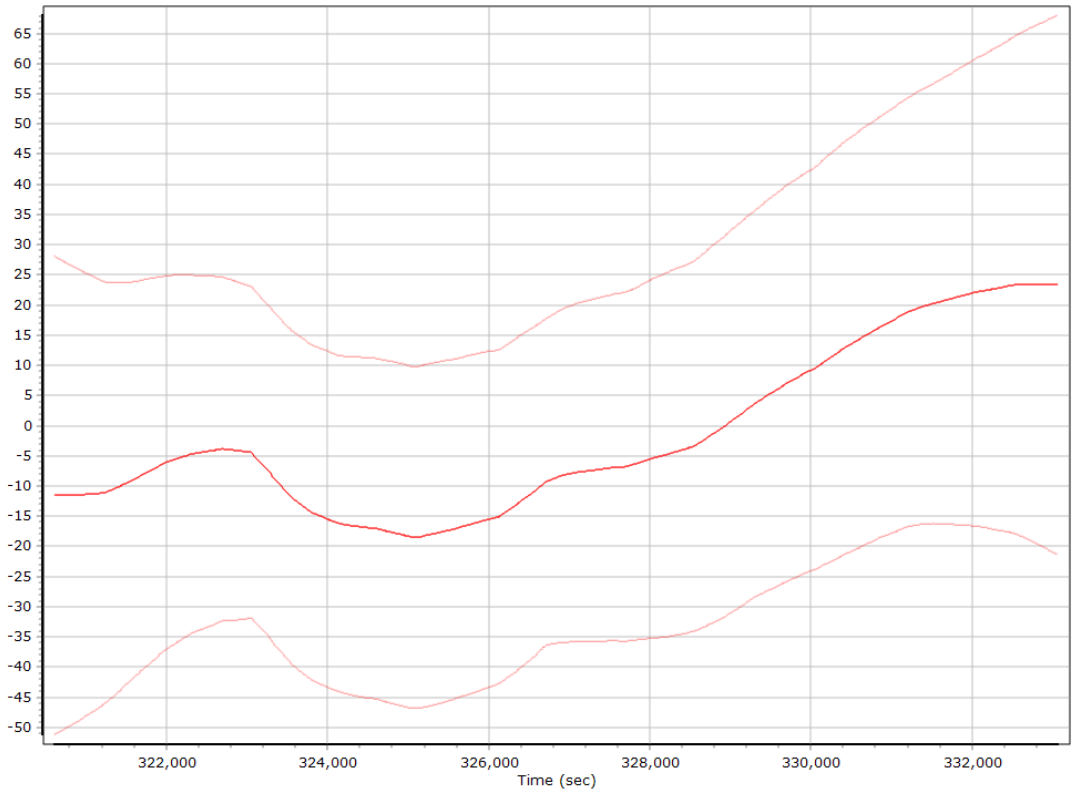
Z Gyro Bias (deg/h)



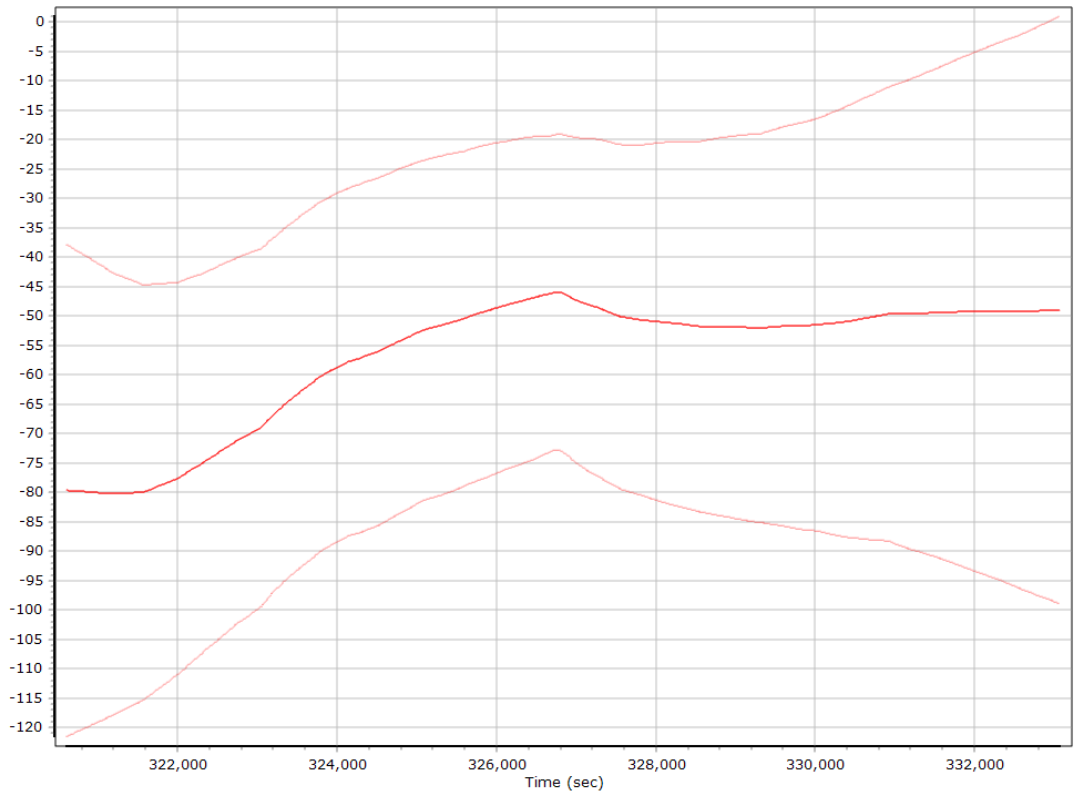
Gyro Scale Error (ppm)



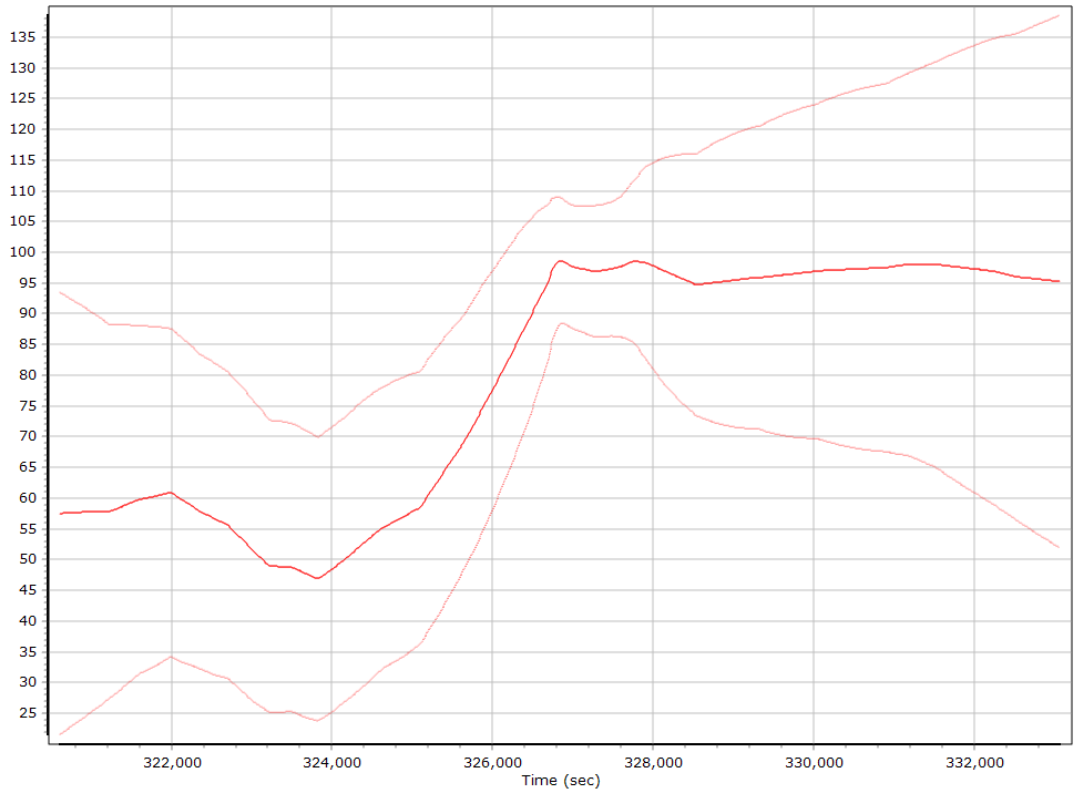
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

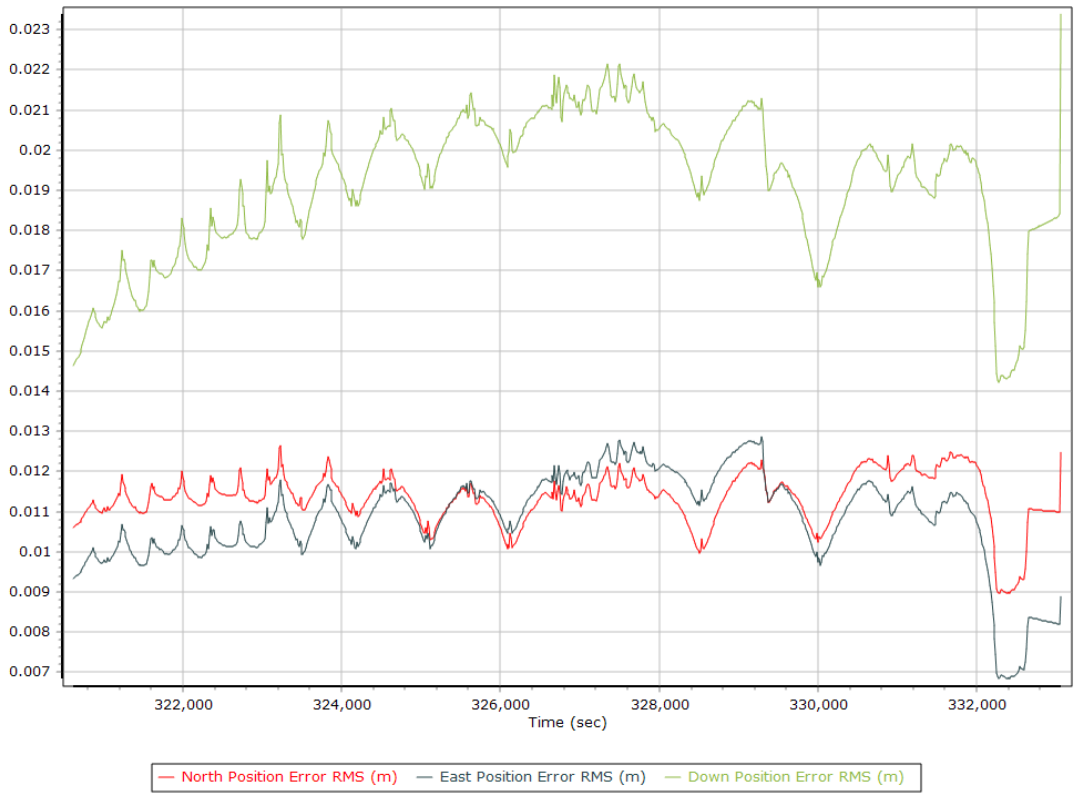


Z Gyro Scale Error (ppm)

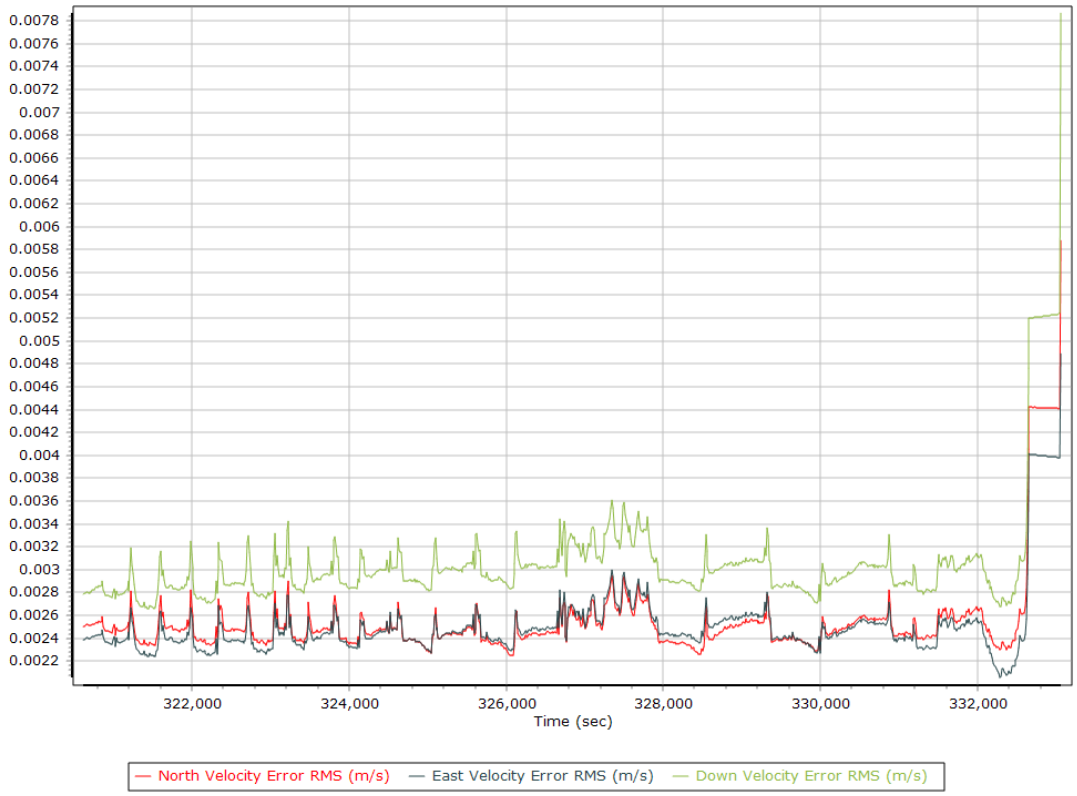


Smoothed Performance Metrics

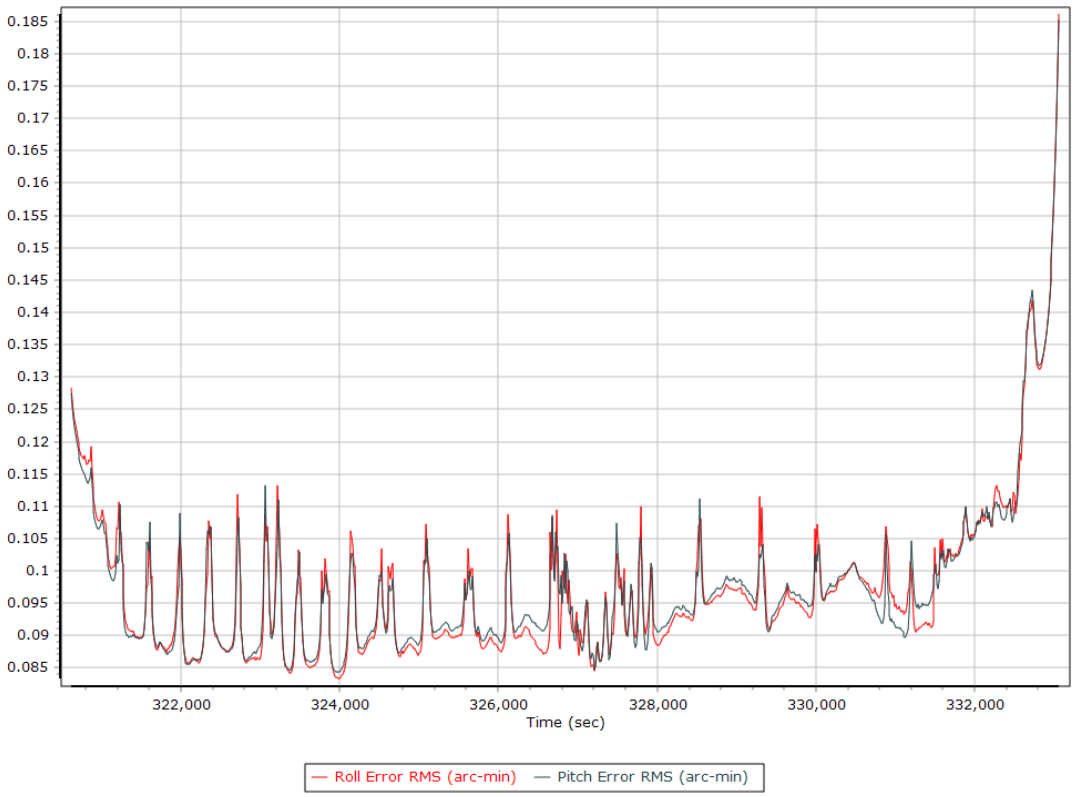
Position Error RMS (m)



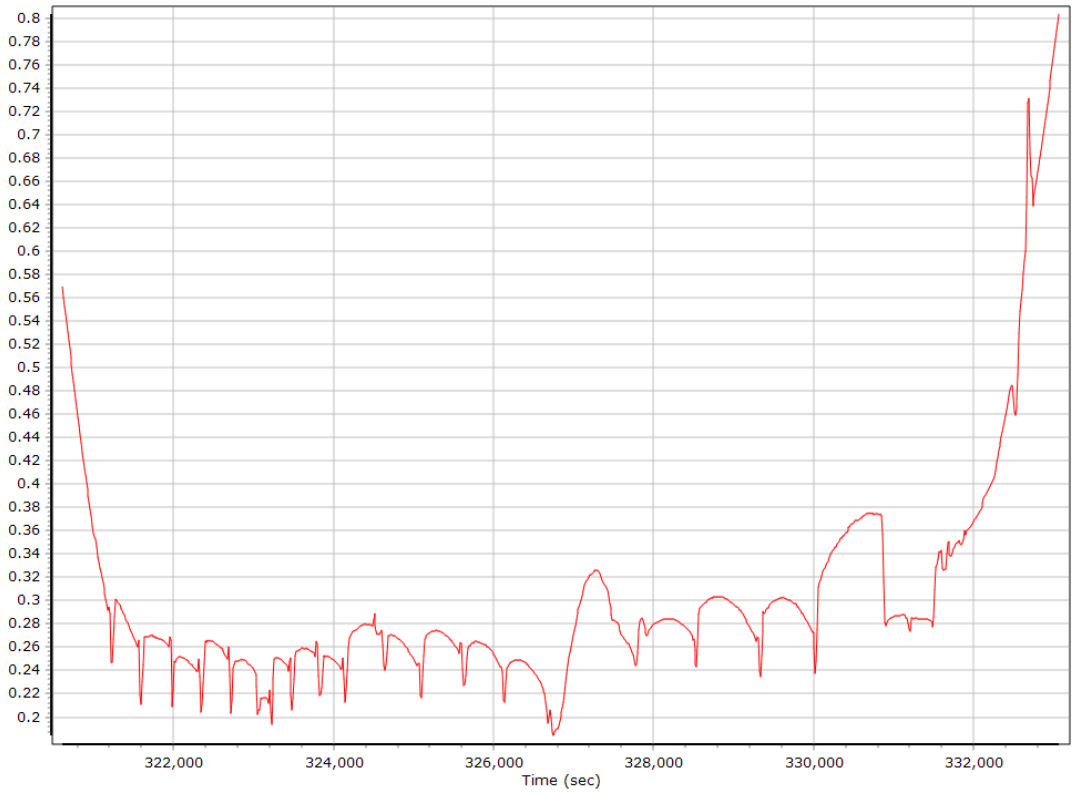
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

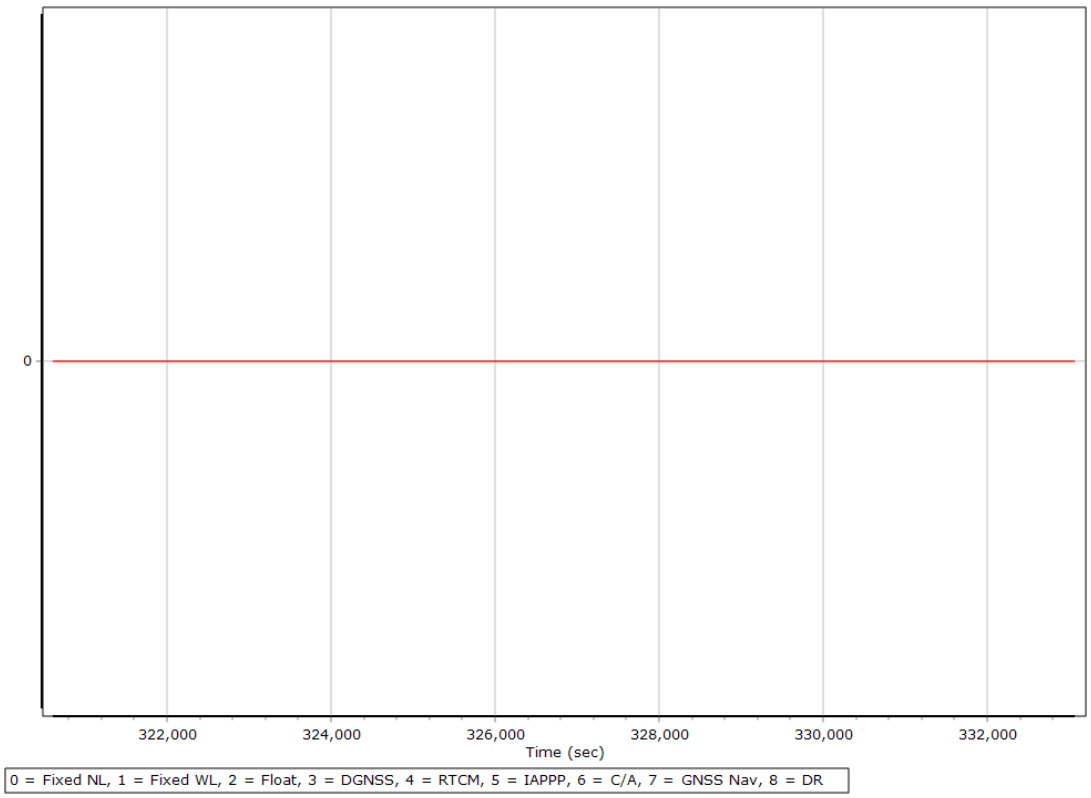


Heading Error RMS (arc-min)

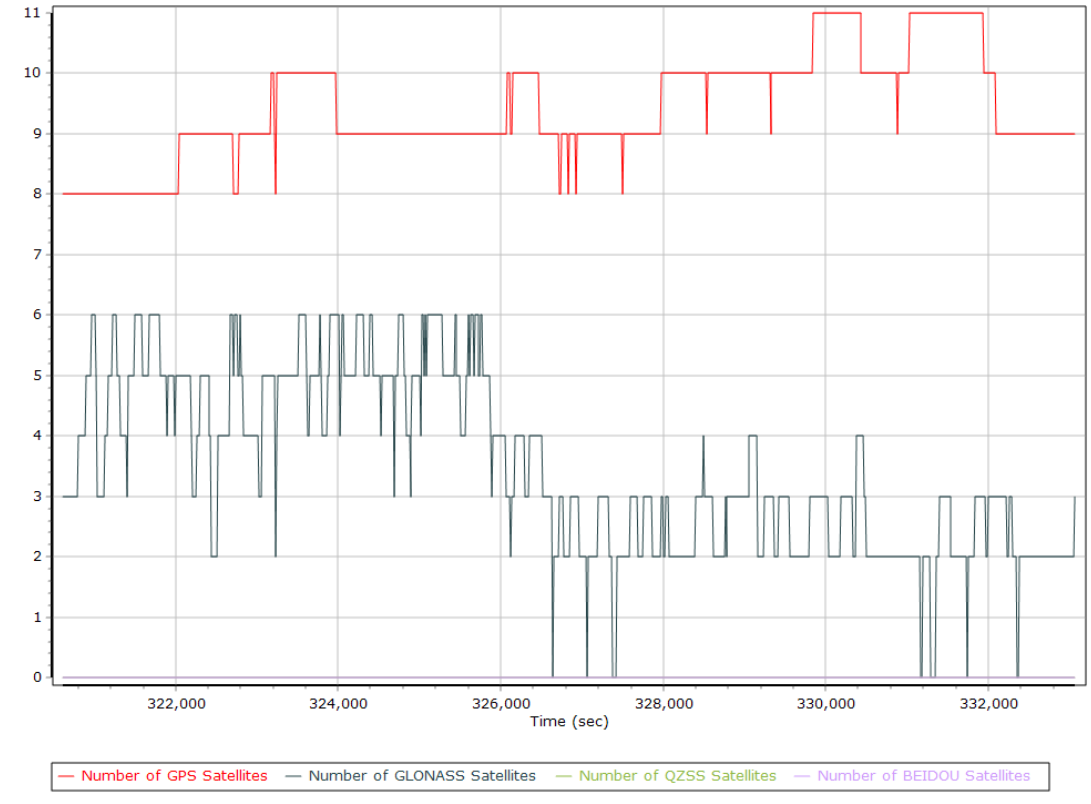


Smoothed Solution Status

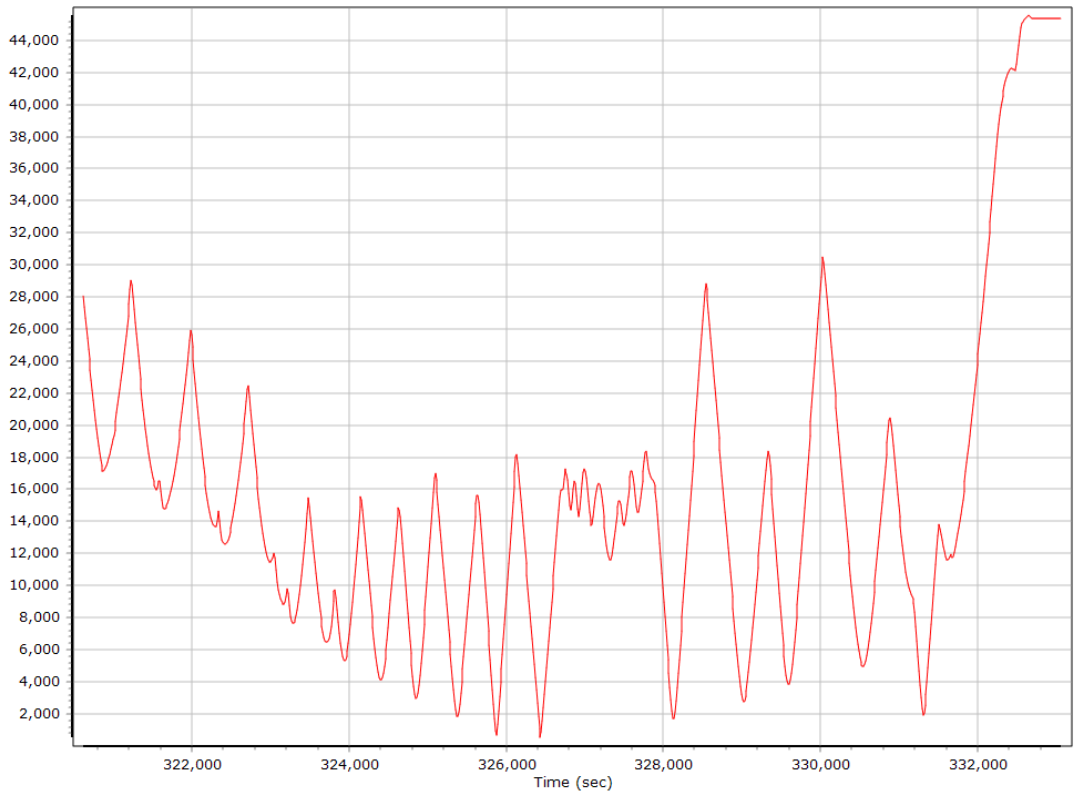
Processing Mode



Number of Satellites



Baseline Length



SBET IAKAR Separation

General Information

Mission Information

Project name	20181219_Lift_2
Processing date	2018-12-21 16:37:38
Mission date	2018-12-19 20:59:27
Mission duration	01:31:45.867
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9865
IMU type	57
Receiver type	BD982
Antenna type	AV37

Project File List

Rover Data Files

File name	File type
181219_205908_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3530.18g	GLONASS Broadcast Ephemeris
Ephm3530.18n	GPS Broadcast Ephemeris
corb3530.18o	GNSS SingleBase
gode3530.18o	GNSS SingleBase
godn353a00-x45.18o	GNSS SingleBase
gods353a00-x45.18o	GNSS SingleBase
godz353a00-x45.18o	GNSS SingleBase
hnpt3530.18o	GNSS SingleBase
loy83530.18o	GNSS SingleBase
loyc3530.18o	GNSS SingleBase
loyj3530.18o	GNSS SingleBase
loyk3530.18o	GNSS SingleBase
loyo3530.18o	GNSS SingleBase
umbc3530.18o	GPS SingleBase
usn73530.18o	GNSS SingleBase
va013530.18o	GPS SingleBase
zdc13530.18o	GPS SingleBase
igu20323_00.sp3	GPS Precise Ephemeris
igu20323_06.sp3	GPS Precise Ephemeris
igu20323_12.sp3	GPS Precise Ephemeris
igu20323_18.sp3	GPS Precise Ephemeris
igu20324_00.sp3	GPS Precise Ephemeris
igu20324_06.sp3	GPS Precise Ephemeris
igu20324_12.sp3	GPS Precise Ephemeris
igu20324_18.sp3	GPS Precise Ephemeris
igu20325_00.sp3	GPS Precise Ephemeris
igu20325_06.sp3	GPS Precise Ephemeris

Output Files

Filename	File type
sbet_20181219_Lift_2.out	SBET Trajectory File

Rover Data Summary

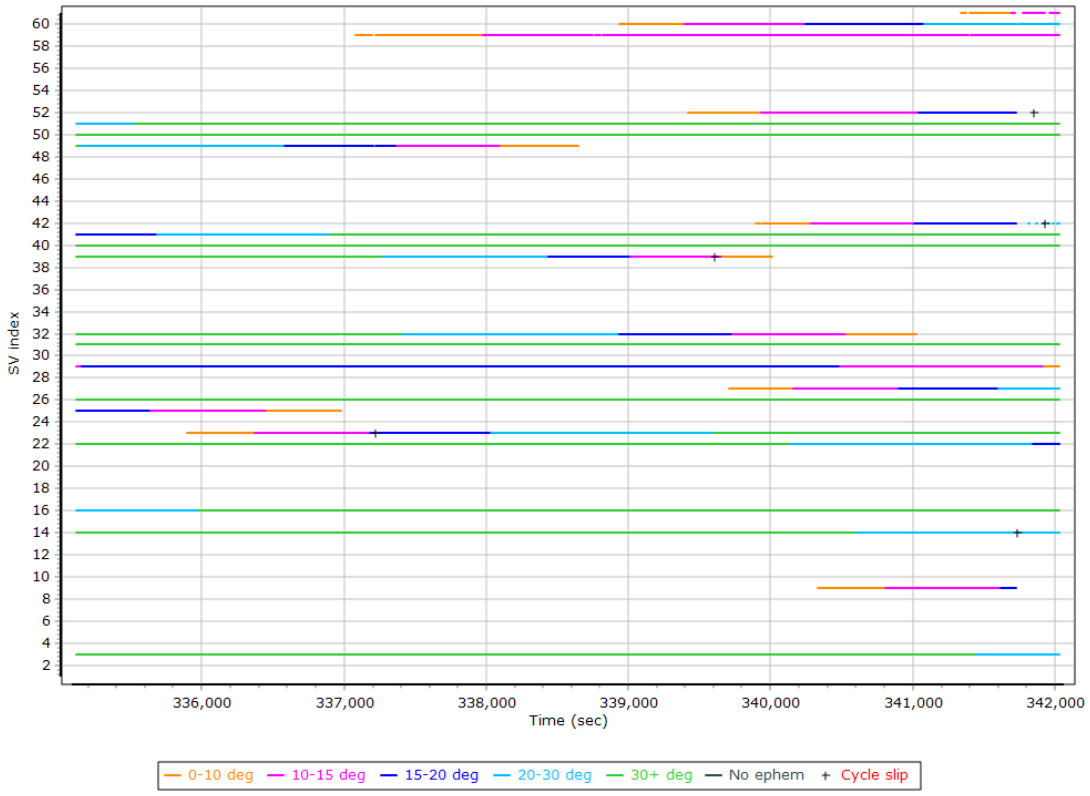
First raw data file	181219_205908_INS-GPS_1.raw		
Last raw data file	181219_205908_INS-GPS_1.raw		
Start GPS week	2032		
Start time	334748.516 (12/19/2018 8:59:08 PM)		
End time	342035.306 (12/19/2018 11:00:35 PM)		
Start of fine alignment	335056.601 (12/19/2018 9:04:16 PM)		
Available subsystems	Primary 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]	0.000	0.000	0.000
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

Raw Data QC

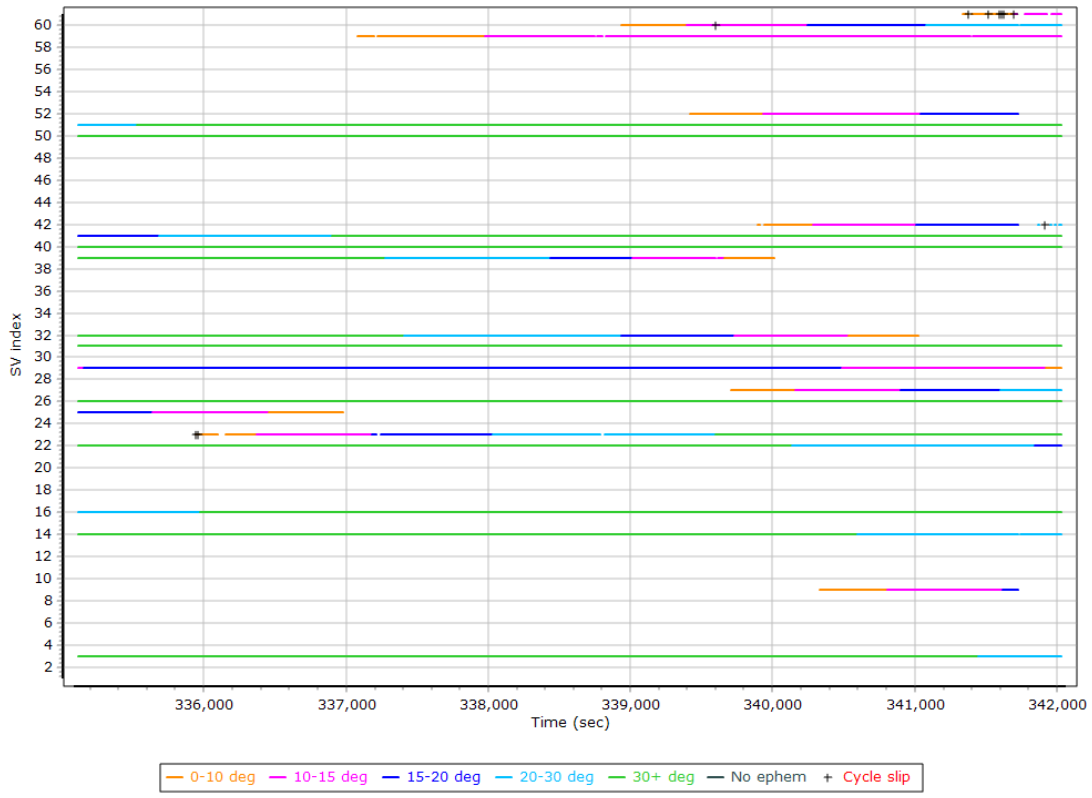
Raw IMU Import QC Summary

IMU data input file	imu_20181219_Lift_2.dat
IMU data check log file	imudt_20181219_Lift_2.log
IMU Records Processed	1457119
Termination Status	Normal
IMU Anomalies	0

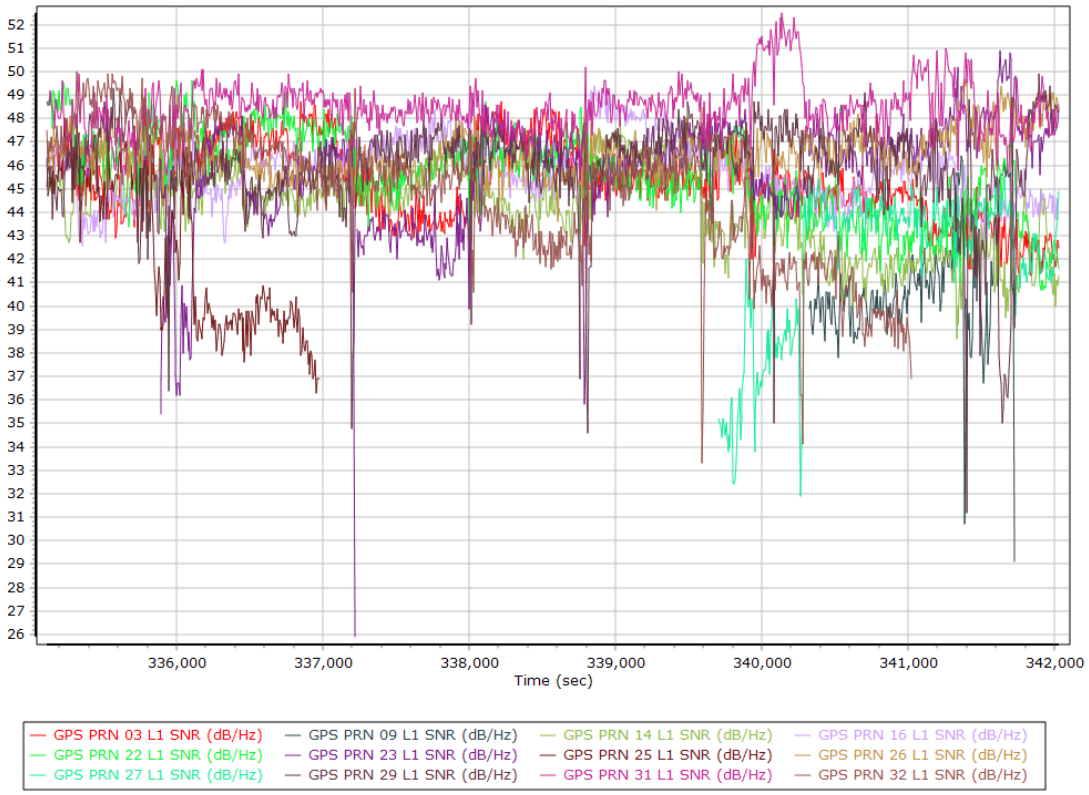
L1 Satellite Lock/Elevation



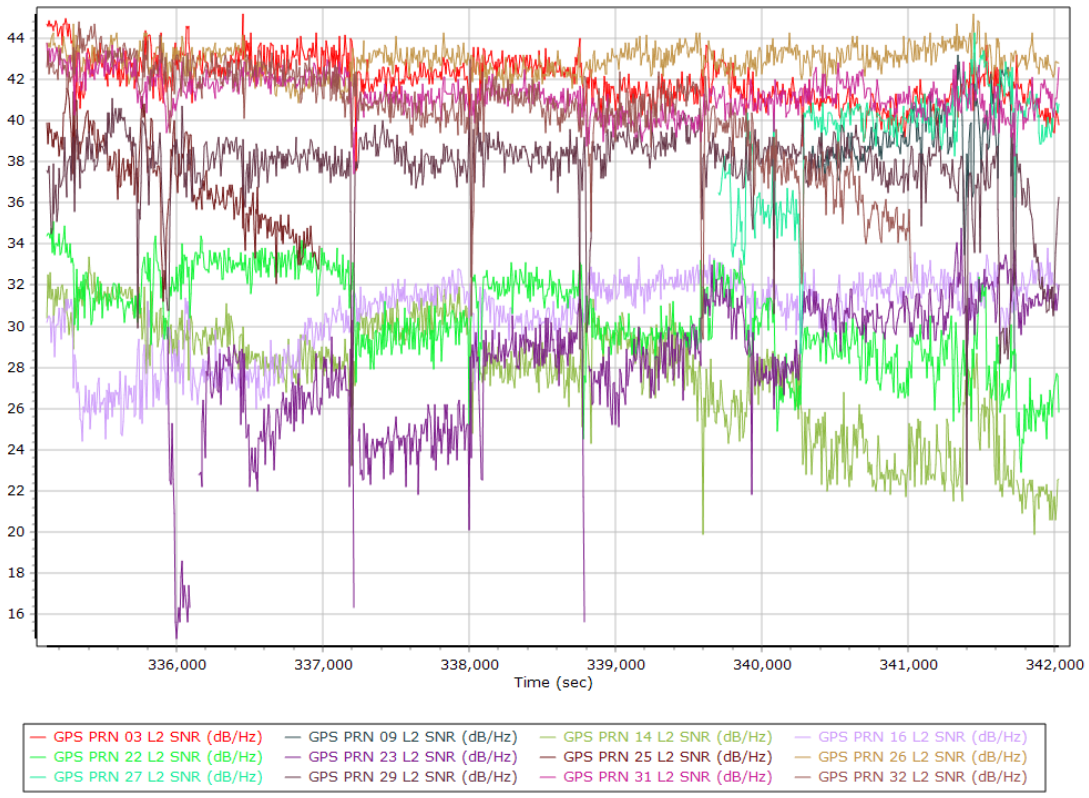
L2 Satellite Lock/Elevation



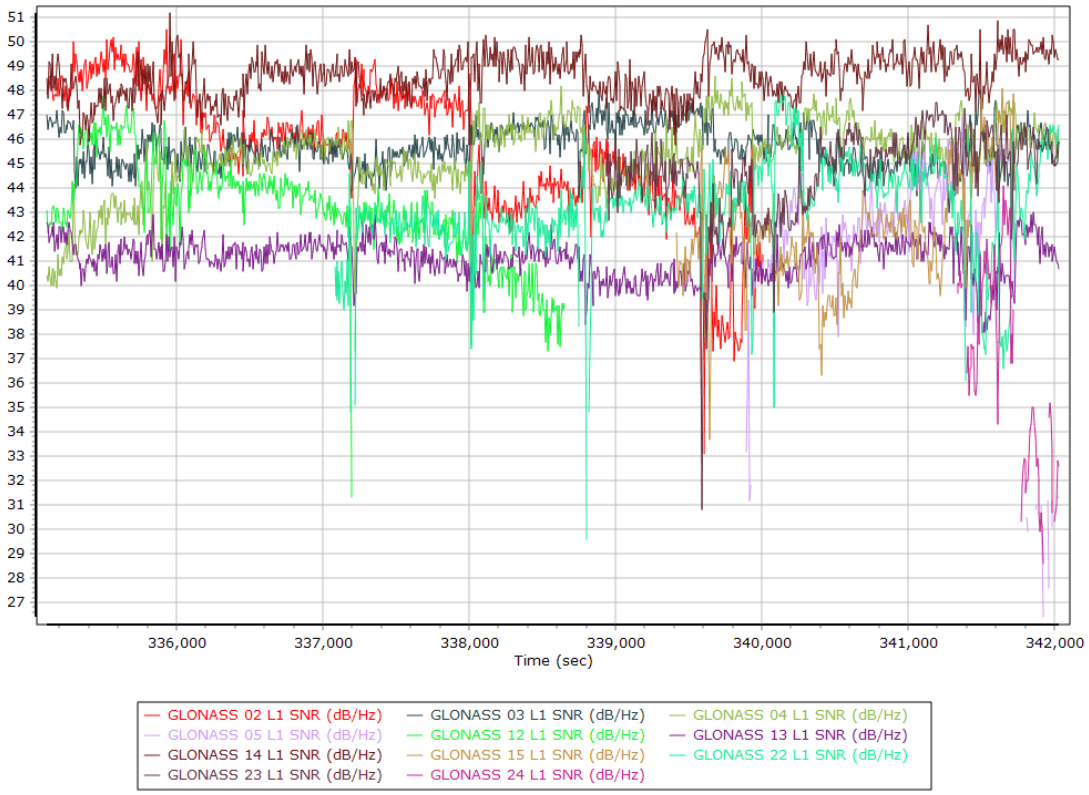
GPS L1 SNR



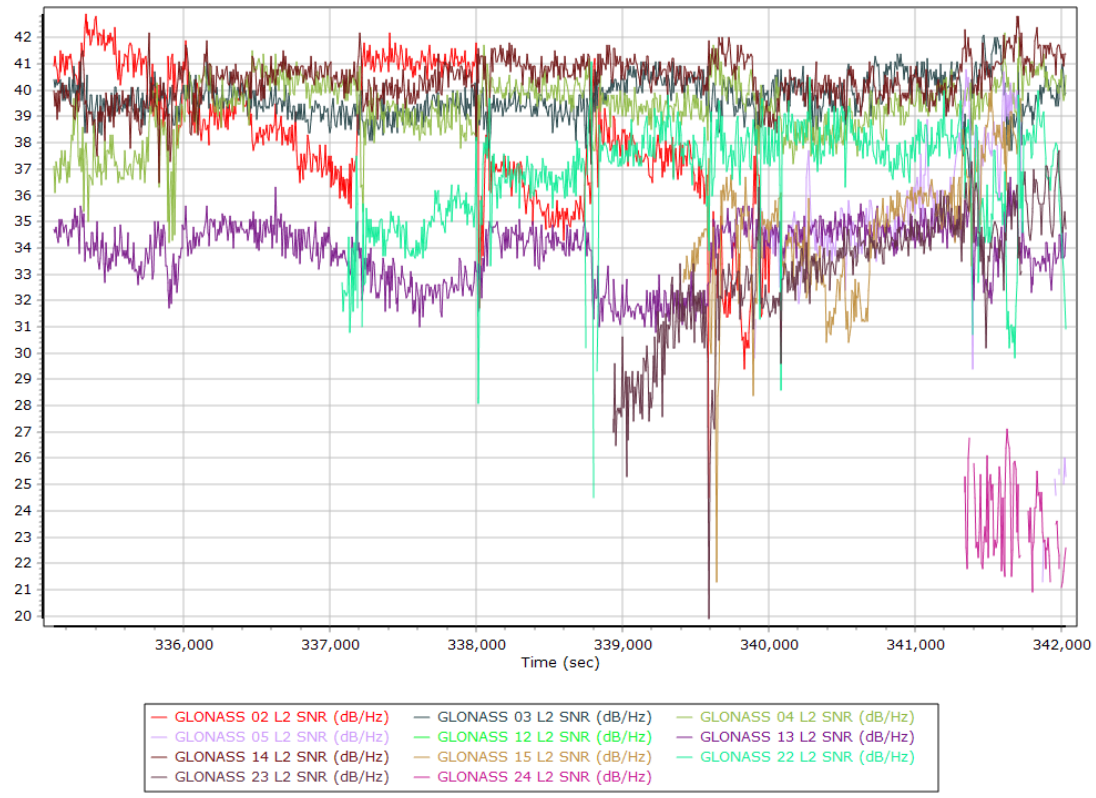
GPS L2 SNR



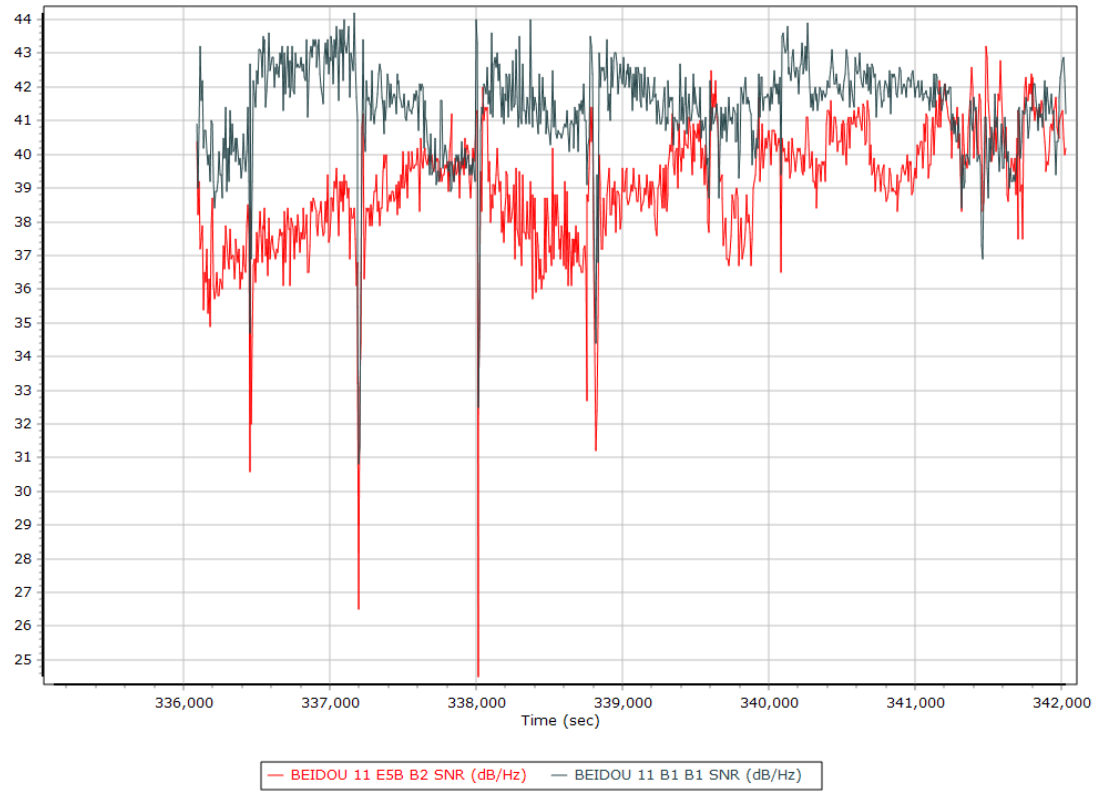
GLONASS L1 SNR



GLONASS L2 SNR

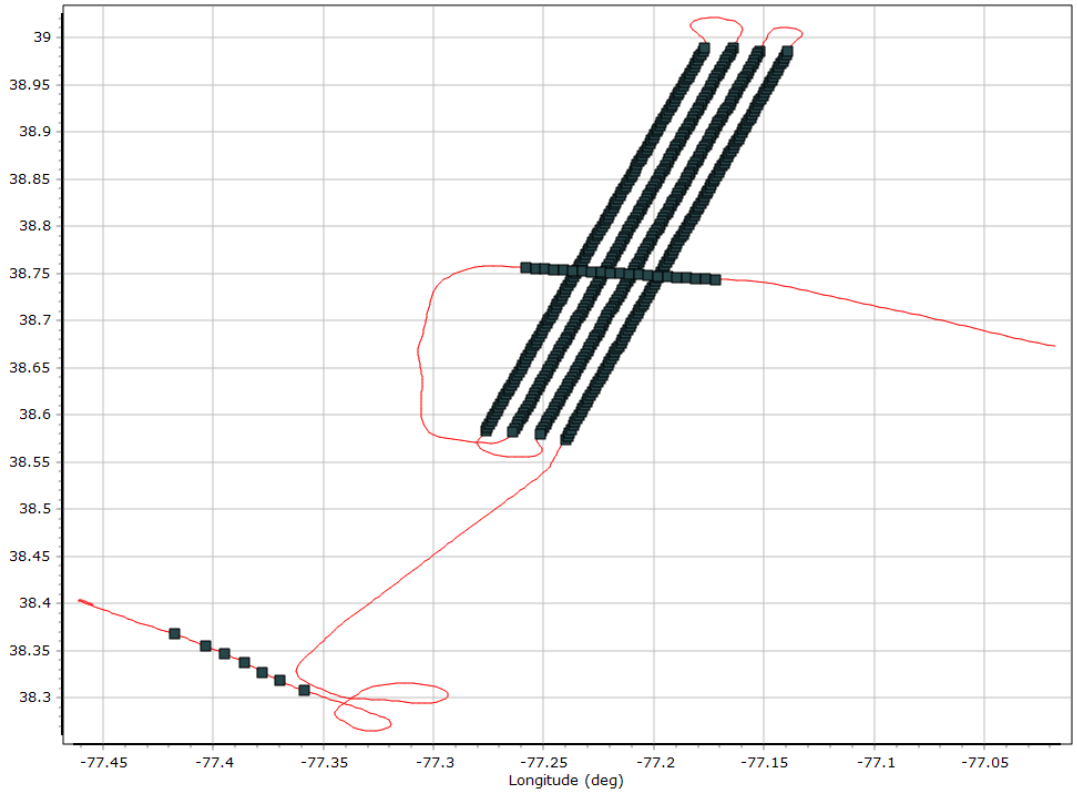


BEIDOU SNR

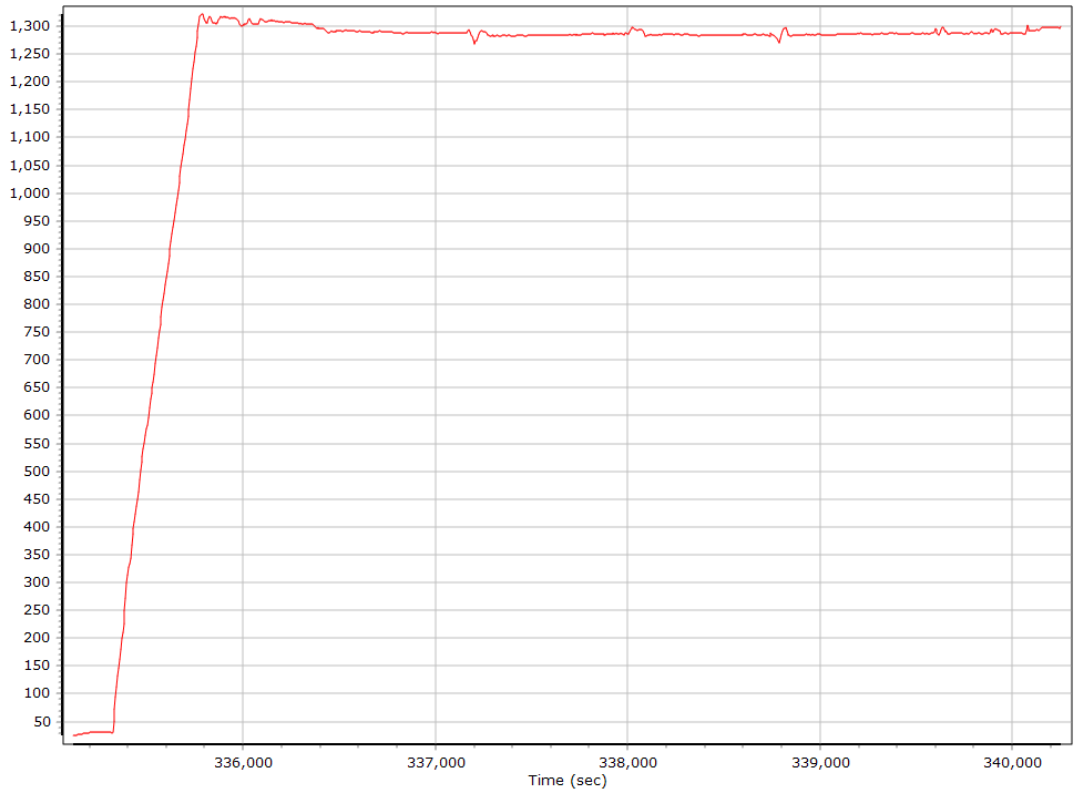


Trajectory Information

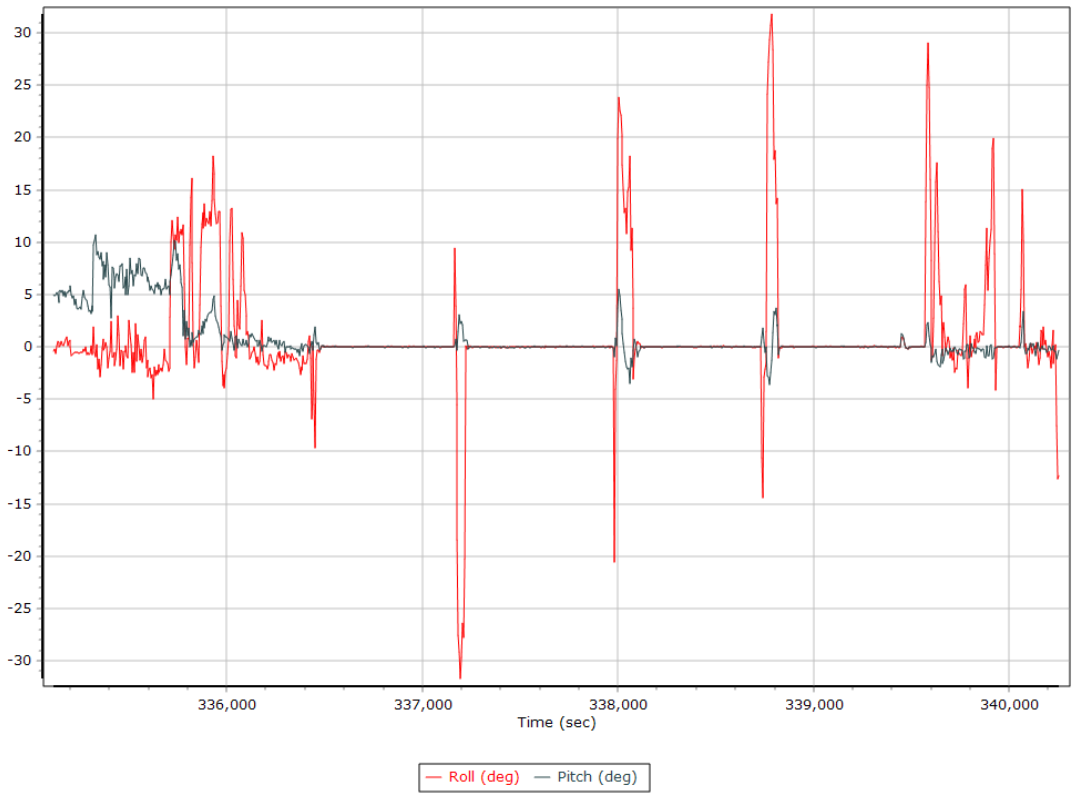
Top View



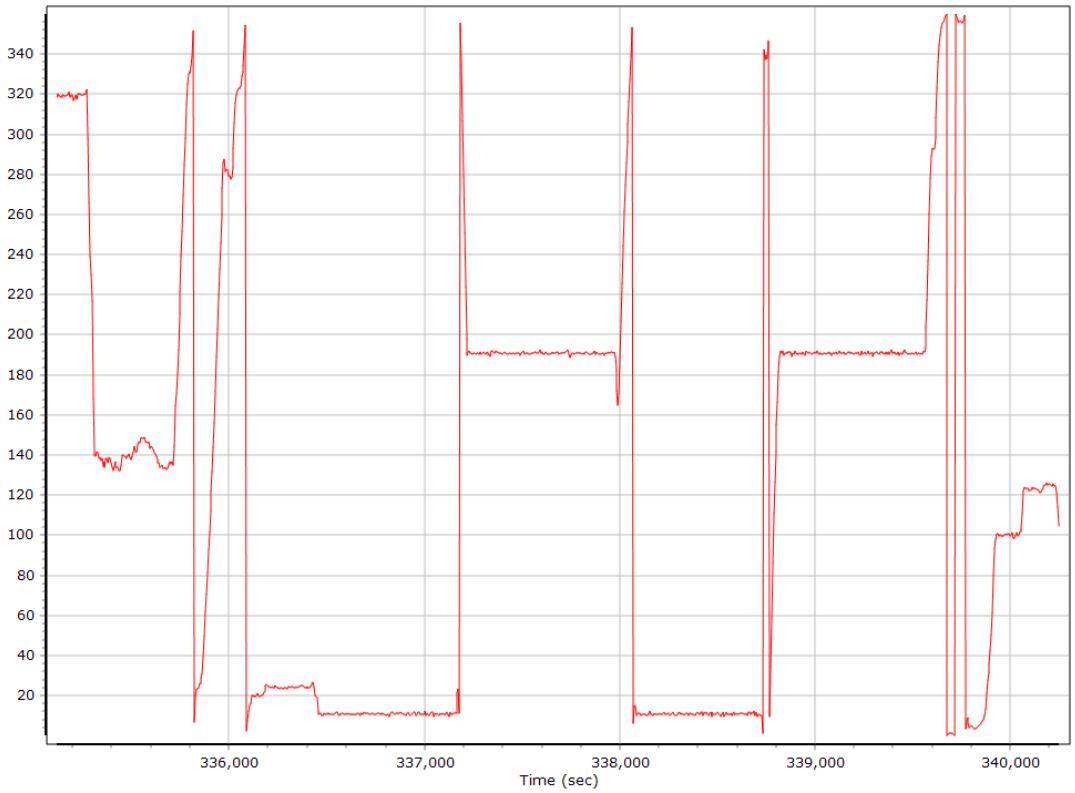
Altitude



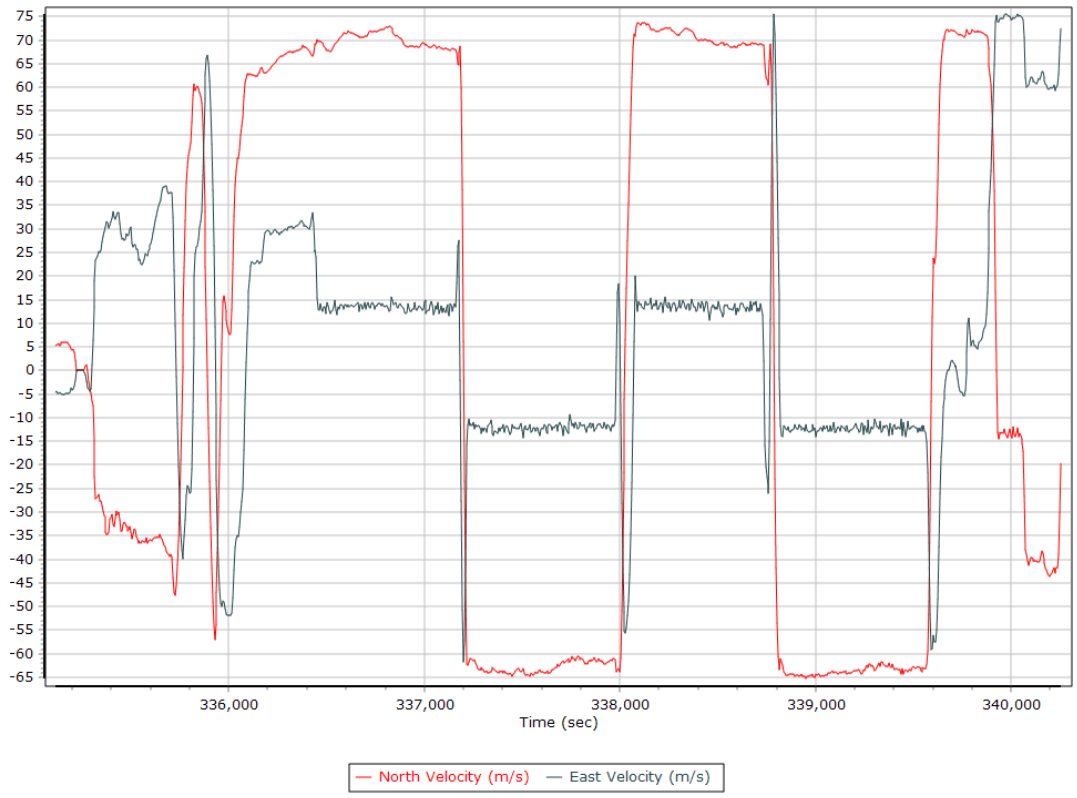
Roll/Pitch



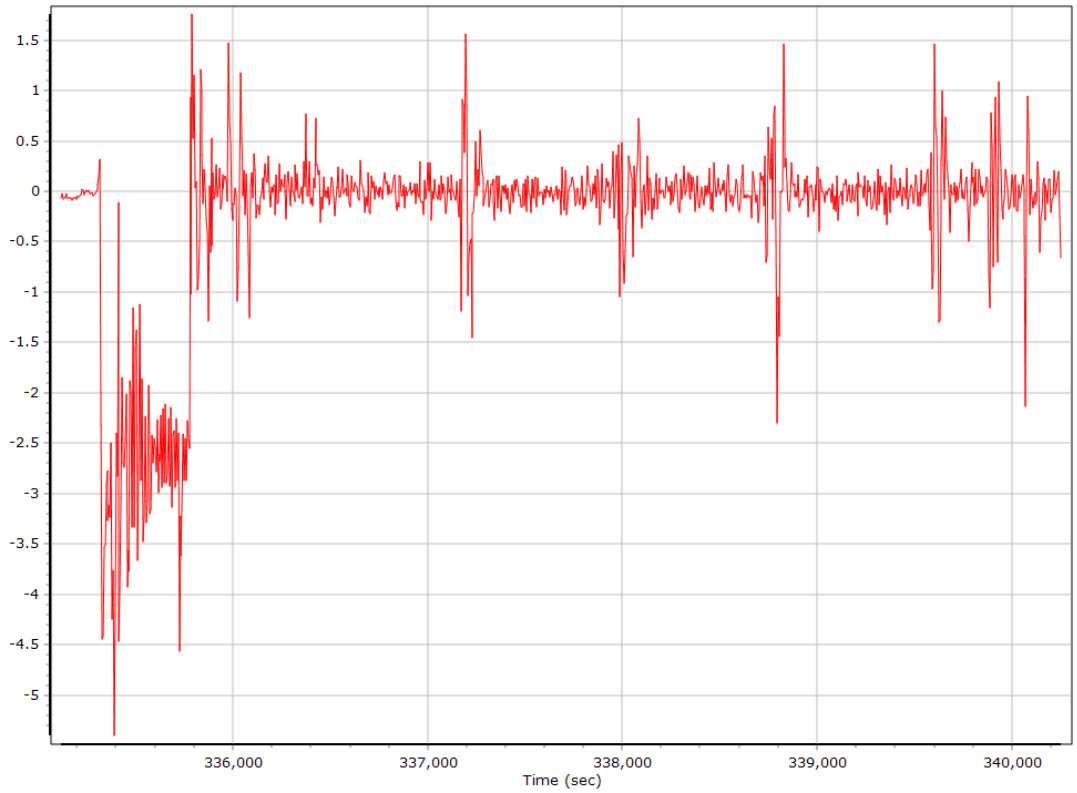
Heading



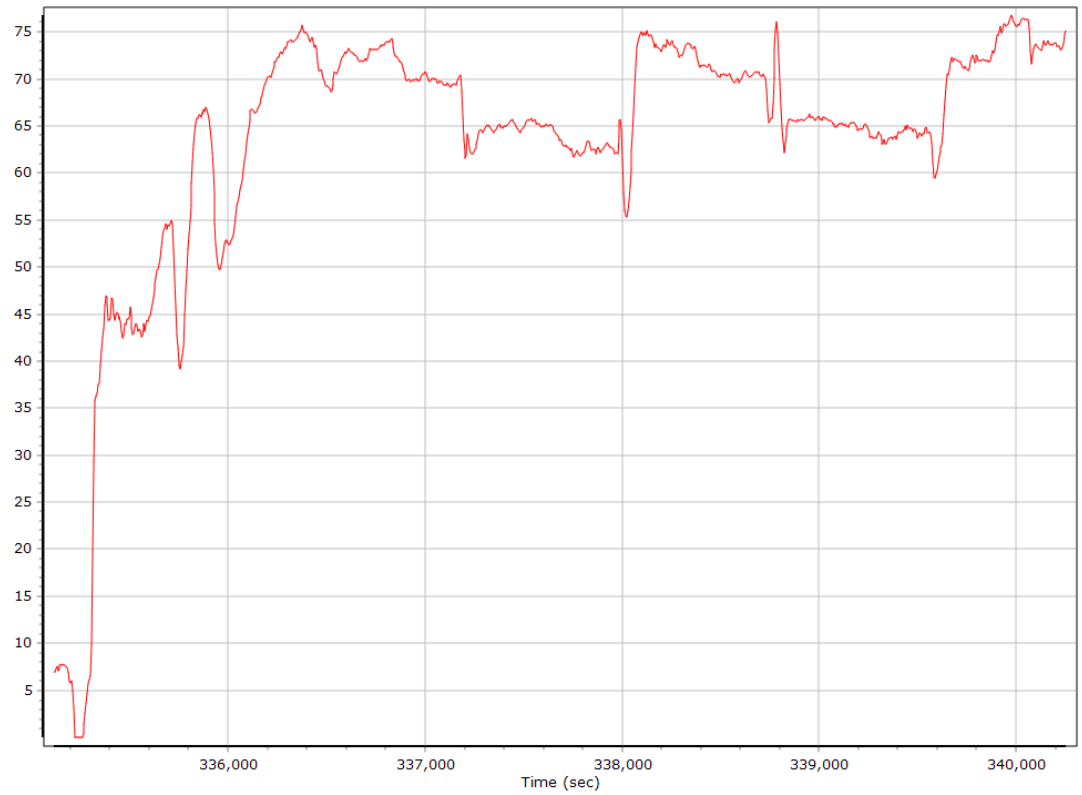
North/East Velocity



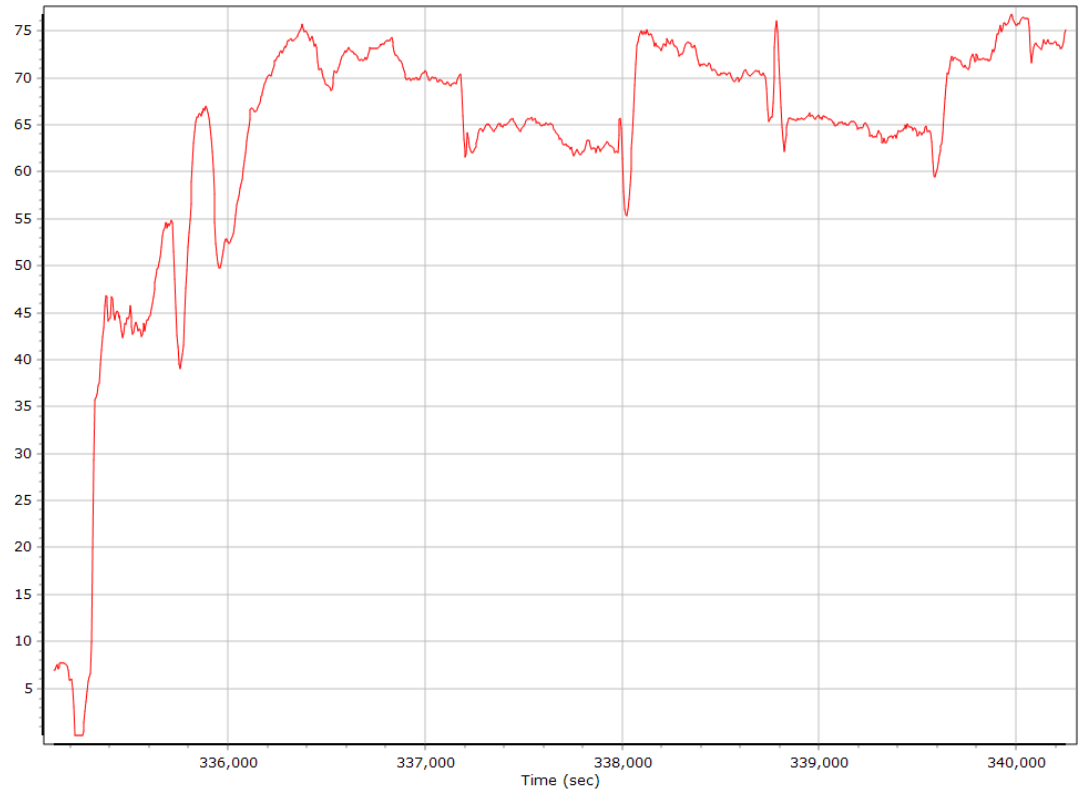
Down Velocity



Total Speed

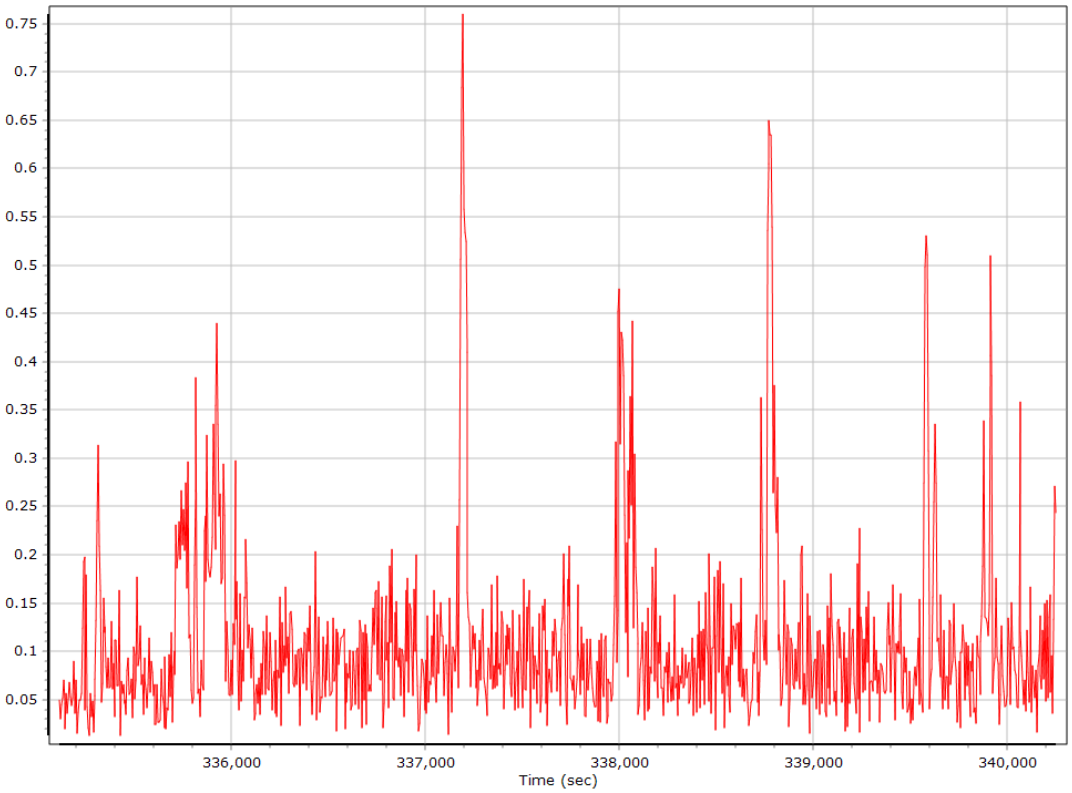


Ground Speed

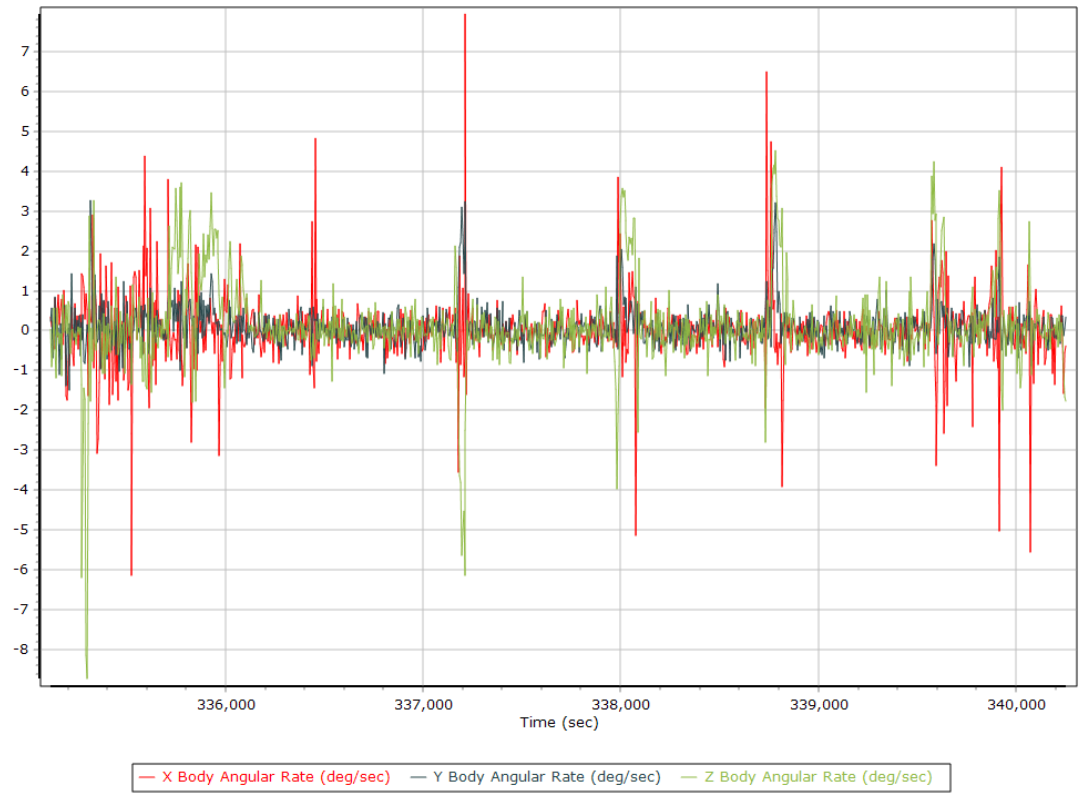


Body Acceleration

Total Body Acceleration



Body Angular Rate



SmartBase Processing Summary

Smart Select Options

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

Basestation Selection

Date	ID	Dist	DataType	Rate	Service	Database	Status
12/19/2018	USN7	34.98	GNSS	30	UNAVCO (daily)	Smart Base	Imported
12/19/2018	LOY8	43.58	GNSS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	CORB	50.23	GNSS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	ZDC1	56.07	GPS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	GODS	56.25	GNSS	1	IGS (high-rate)	Smart Base	Imported
12/19/2018	GODN	56.32	GNSS	1	IGS (high-rate)	Smart Base	Imported
12/19/2018	GODE	56.38	GNSS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	GODZ	56.38	GNSS	1	IGS (high-rate)	Smart Base	Imported
12/19/2018	LOYO	66.58	GNSS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	LOYK	67.71	GNSS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	LOYJ	67.86	GNSS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	UMBC	83.00	GPS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	VA01	95.59	GPS	15	UNAVCO (daily)	Smart Base	Imported
12/19/2018	LOYC	96.85	GNSS	1	CORS (high-rate)	Smart Base	Imported
12/19/2018	HNPT	98.92	GNSS	1	CORS (high-rate)	Smart Base	Imported

SmartBase Results

SmartBase status	PROC_STATUS_OK
Primary station Id	LOY8
Primary station data rate [sec]	1.0
VRS/ASB generation rate [sec]	1.0
VRS/ASB timespan	7286 s (2032 334767 - 2032 342053)
Number of reference stations	8
Primary station GPS measurement usage [%]	99.8
Primary station GLONASS measurement usage [%]	52.2
Average number of satellites per epoch	12.6
Max number of GPS stations used	6
Min number of GPS stations used	3
Max number of GLONASS stations used	6
Min number of GLONASS stations used	3
Total full data gap [sec]	0
Total GPS full data gaps	0
Total GLONASS full data gaps	0
Total individual satellite data gap [sec]	23060
GPS precise vs. broadcast ephemeris used	100.0 % / 0.0 %
GLONASS precise vs. broadcast ephemeris used	0.0 % / 100.0 %
Termination Status	Normal

SmartBase Quality Check

Base Station - HNPT

Status	OK	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Original	
Solution Epochs	5736	**Mean Epoch SVs**	8.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N38°35'19.74036"	W76°07'49.35288"	28.012
Adjusted		N38°35'19.74028"	W76°07'49.35283"	27.994
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.003	0.018	0.019

Base Station Information

Station ID	HNPT		
Filename	hnpt3530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Leica	GRX1200GGPRO	351085
Antenna manufacturer, model	Leica	AX1202GG	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.0847		
Latitude	N38°35'19.74036"		
Longitude	W76°07'49.35288"		
Ellipsoidal height [m]	-28.01245		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - LOYJ

Status	OK	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Original	
Solution Epochs	5736	**Mean Epoch SVs**	8.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N38°28'20.92236"	W78°00'36.17012"	103.851
Adjusted		N38°28'20.92235"	W78°00'36.16930"	103.862
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.020	0.011	0.023

Base Station Information

Station ID	LOYJ		
Filename	loyj3530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Leica	GRX1200+GNSS	461533
Antenna manufacturer, model	Leica	AR10	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.1085		
Latitude	N38°28'20.92236"		
Longitude	W78°00'36.17012"		
Ellipsoidal height [m]	103.85144		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - LOYK

Status	OK	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Original	
Solution Epochs	5736	**Mean Epoch SVs**	8.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N39°07'51.88879"	W76°47'26.28162"	33.998
Adjusted		N39°07'51.88849"	W76°47'26.28120"	34.022
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.014	0.024	0.028

Base Station Information

Station ID	LOYK		
Filename	loyk3530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Leica	GR30	1705762
Antenna manufacturer, model	Leica	AR10	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.1085		
Latitude	N39°07'51.88879"		
Longitude	W76°47'26.28162"		
Ellipsoidal height [m]	33.99841		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - GODE

Status	OK	**SBQI**	9	
Duration (Hours)	23.80	**Output Coordinates**	Original	
Solution Epochs	5712	**Mean Epoch SVs**	7.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N39°01'18.22013"	W76°49'36.59696"	14.477
Adjusted		N39°01'18.21991"	W76°49'36.59663"	14.489
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.010	0.012	0.016

Base Station Information

Station ID	GODE		
Filename	gode3530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Unknown	Unknown	3013928
Antenna manufacturer, model	Dorne Margolin	D/M Model T w/JPLA Dome	
Antenna height [m]	0.061		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.11		
Latitude	N39°01'18.22013"		
Longitude	W76°49'36.59696"		
Ellipsoidal height [m]	14.47706		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - GODZ

Status	OK	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Original	
Solution Epochs	5736	**Mean Epoch SVs**	8.5	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N39°01'18.22011"	W76°49'36.59704"	14.482
Adjusted		N39°01'18.21991"	W76°49'36.59665"	14.489
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.011	0.008	0.014

Base Station Information

Station ID	GODZ		
Filename	godz353a00-x45.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	JPS	EGGDT	LT2078
Antenna manufacturer, model	Dorne Margolin	D/M Model T w/JPLA Dome	
Antenna height [m]	0.061		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.11		
Latitude	N39°01'18.22011"		
Longitude	W76°49'36.59704"		
Ellipsoidal height [m]	14.48164		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - ZDC1

Status	OK	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Original	
Solution Epochs	5736	**Mean Epoch SVs**	8.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N39°06'05.74463"	W77°32'33.89063"	79.591
Adjusted		N39°06'05.74450"	W77°32'33.89007"	79.606
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.014	0.015	0.021

Base Station Information

Station ID	ZDC1		
Filename	zdc13530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GPS		
Receiver manufacturer, model, serial no.	Unknown	Unknown	6FC1
Antenna manufacturer, model	Micro Pulse	MPLWAAS+L5	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.4626		
Latitude	N39°06'05.74463"		
Longitude	W77°32'33.89063"		
Ellipsoidal height [m]	79.59069		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - CORB

Status	OK	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Original	
Solution Epochs	5736	**Mean Epoch SVs**	8.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N38°12'07.85746"	W77°22'24.59258"	35.909
Adjusted		N38°12'07.85727"	W77°22'24.59221"	35.941
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.011	0.032	0.034

Base Station Information

Station ID	CORB		
Filename	corb3530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Leica	GRX1200GGPRO	351000
Antenna manufacturer, model	Javad GNSS	JAV RINGANT-DM	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.08931		
Latitude	N38°12'07.85746"		
Longitude	W77°22'24.59258"		
Ellipsoidal height [m]	35.90887		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

Base Station - LOY8

Status	CONTROL	**SBQI**	9	
Duration (Hours)	23.90	**Output Coordinates**	Control	
Solution Epochs	5736	**Mean Epoch SVs**	8.7	
Base Station Coordinates		**Latitude**	**Longitude**	**Height (m)**
Original		N38°16'58.72098"	W77°27'09.49077"	6.207
Adjusted		N38°16'58.72098"	W77°27'09.49077"	6.207
Coordinate Adjustments		**Horizontal (m)**	**Vertical (m)**	**Total (m)**
Adjustments		0.000	0.000	0.000

Base Station Information

Station ID	LOY8		
Filename	loy83530.18o		
Start date	12/19/2018 12:00:00 AM		
End date	12/19/2018 11:59:59 PM		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Leica	GR10	1701059
Antenna manufacturer, model	Leica	AR10	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.1085		
Latitude	N38°16'58.72098"		
Longitude	W77°27'09.49077"		
Ellipsoidal height [m]	-6.20698		
Frame	ITRF00		
Epoch	2018.964384		
Ellipsoid	WGS84		
Velocity North [mm/y]	0		
Velocity East [mm/y]	0		
Velocity Up [mm/y]	0		

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	0.27	107.34	
Number of GPS SV	6	10	9
Number of GLONASS SV	0	5	3
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	9	15	12
PDOP	1.19	2.26	1.58
QC Solution Gaps	1.00	1.00	
Solution Type	**Fixed**	**Float**	**No solution**
Epoch (s)	7279.00	0.00	1.00
Percentage	99.99	0.00	0.01

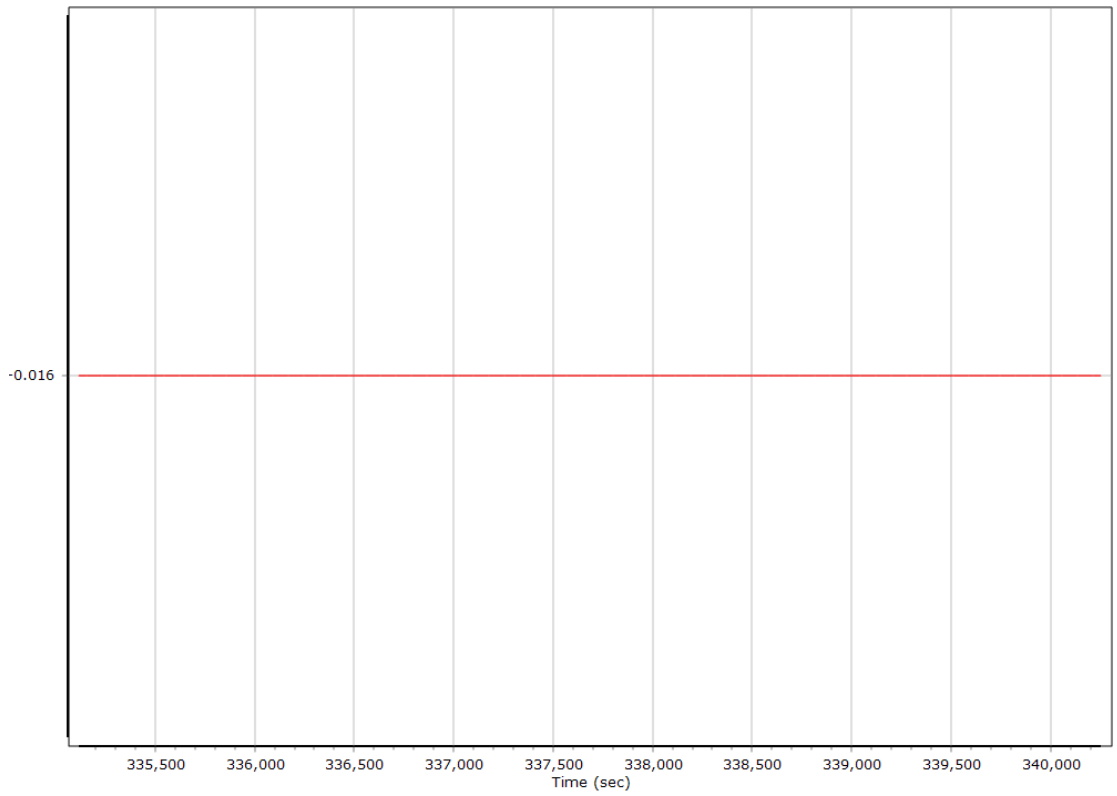
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	334749.000 (12/19/2018 8:59:09 PM)		
Processing end time	340254.867 (12/19/2018 10:30:54 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	0.000	0.000	0.000
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	-0.016	0.008	-0.680
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

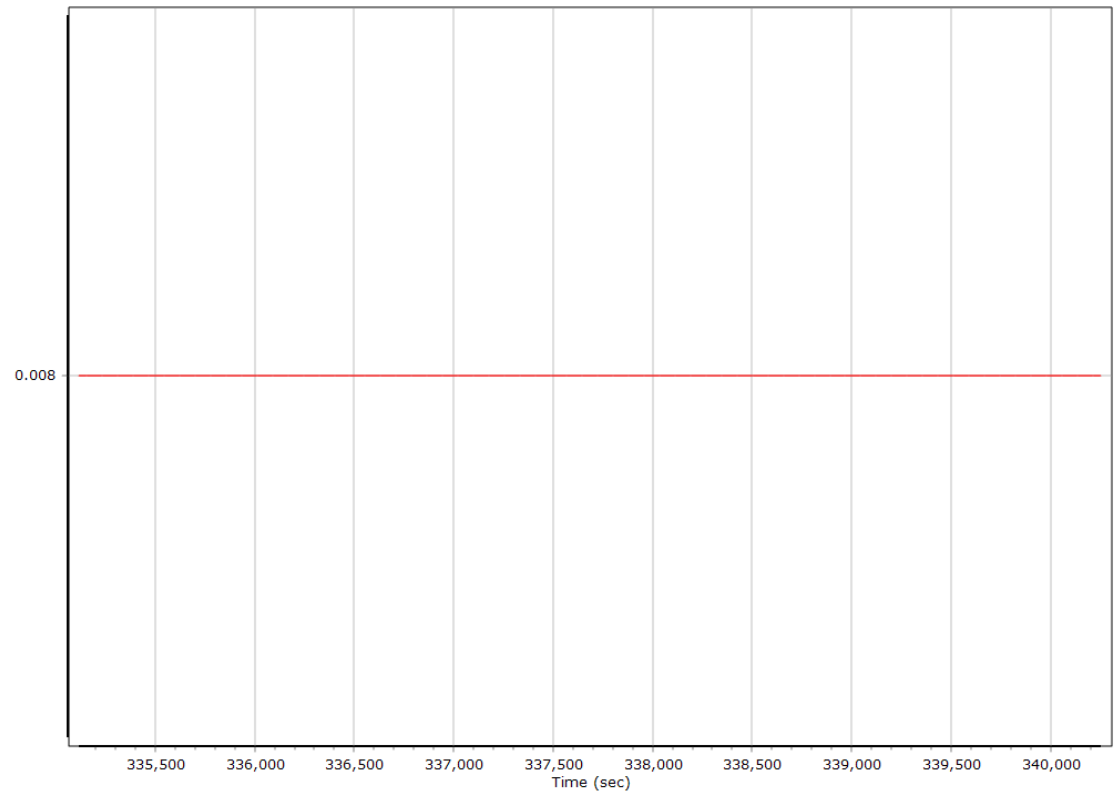
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

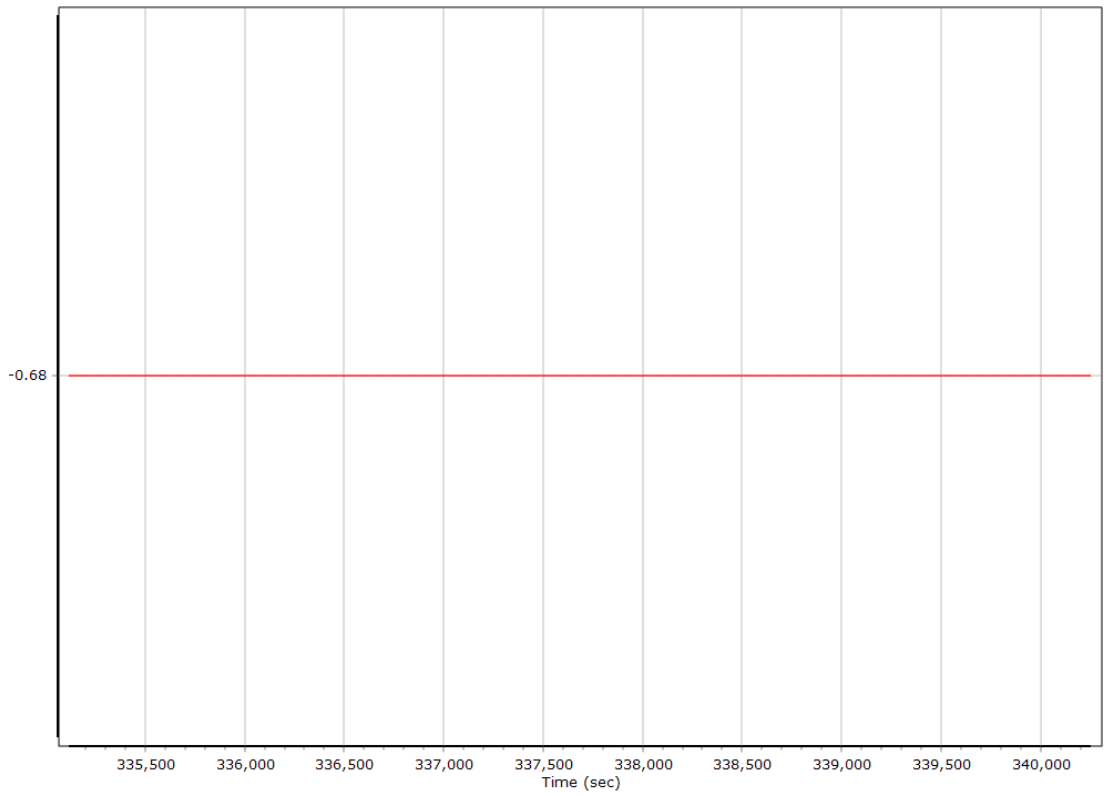
X Reference-Primary GNSS Lever Arm (m)



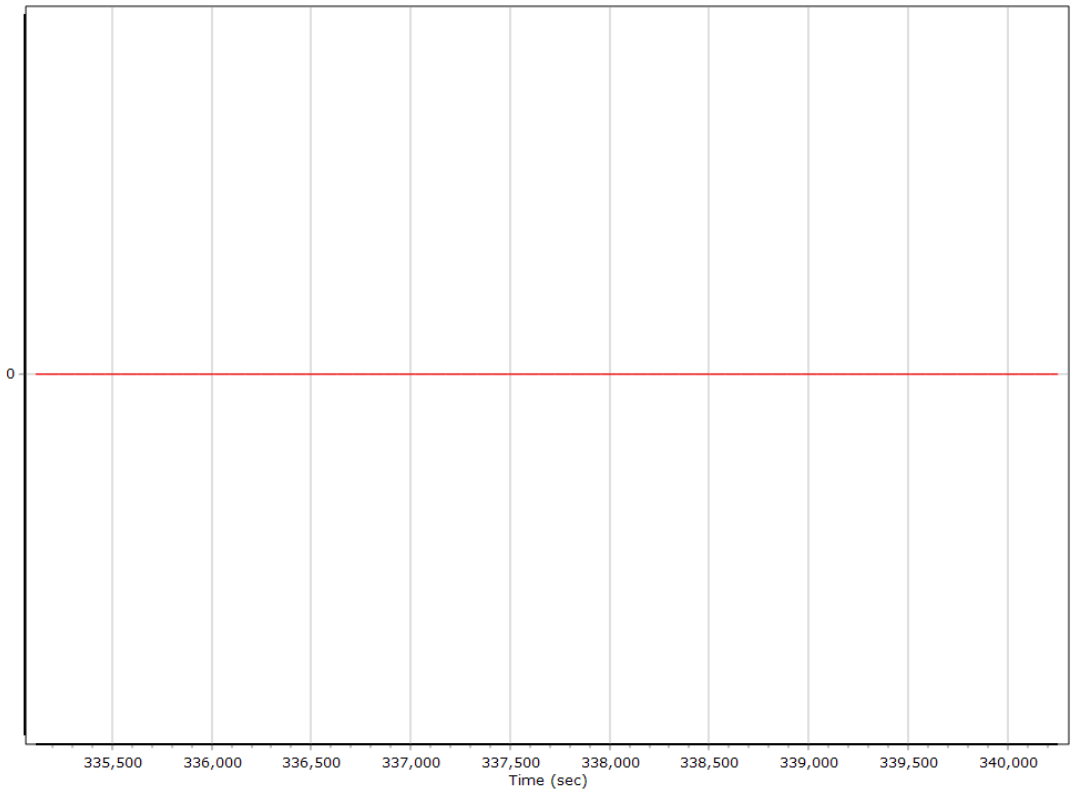
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



Reference-Primary GNSS Lever Arm Figure of Merit

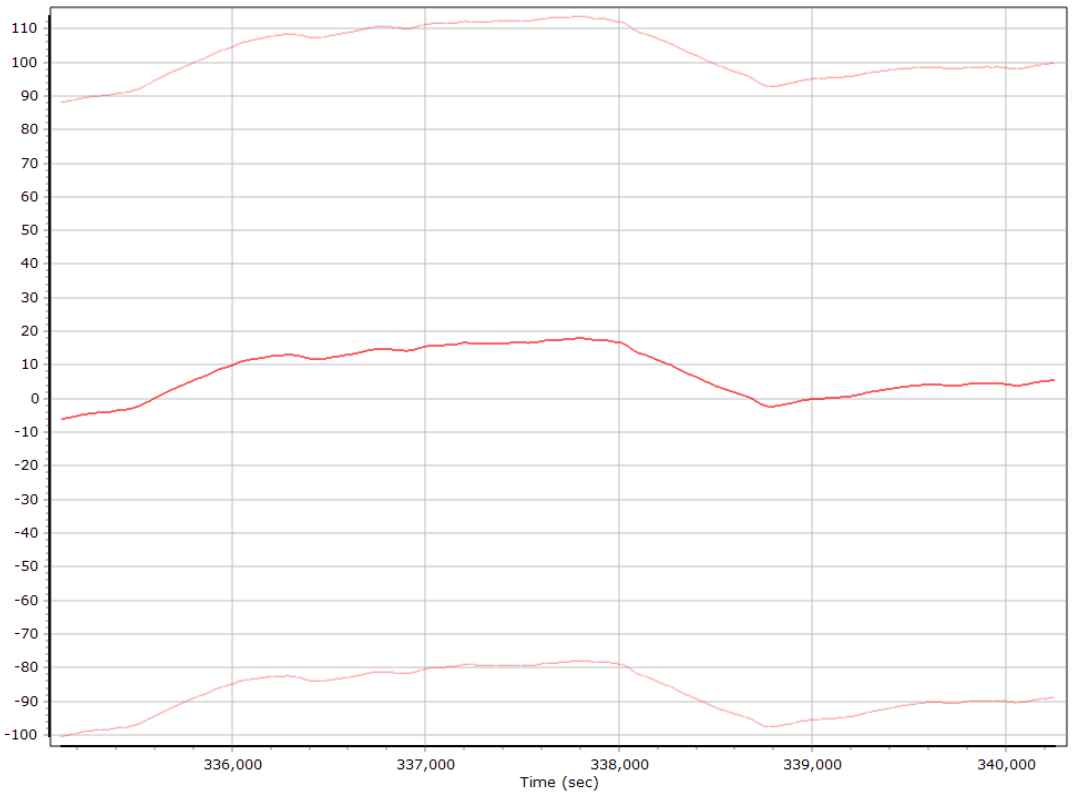


Smoothed IN-Fusion QC

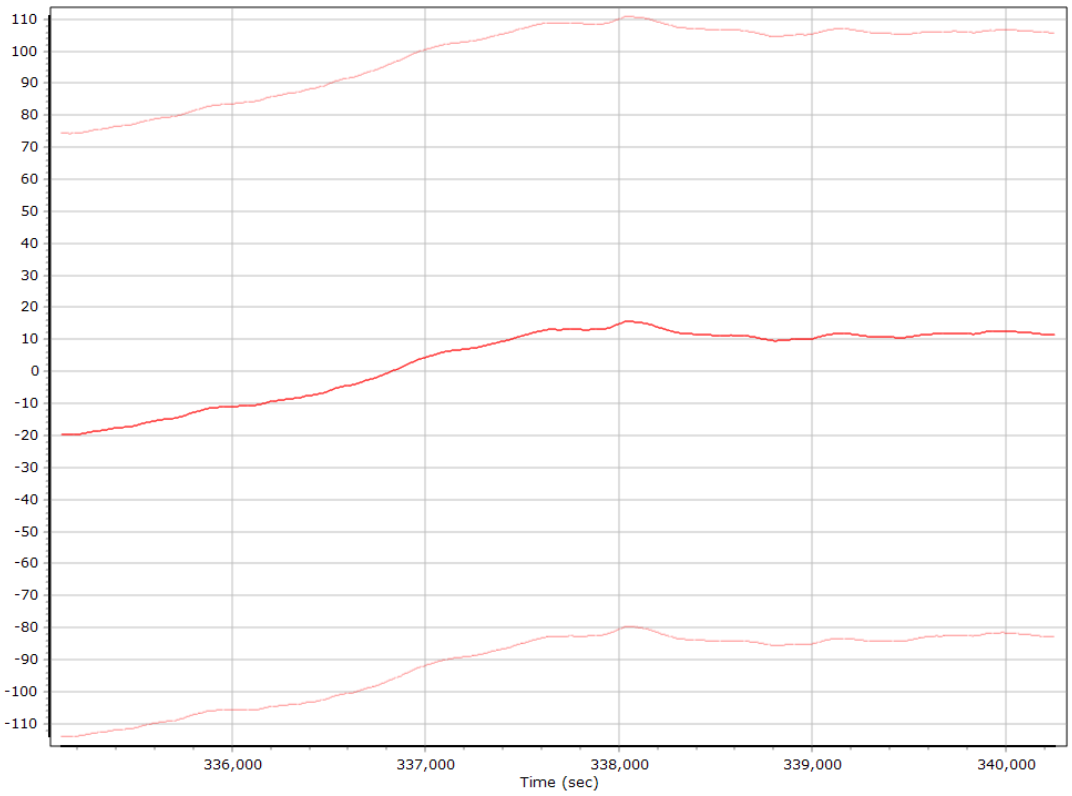
Smoothed Estimated Errors, Reference Frame

Accelerometer Bias (micro-g)

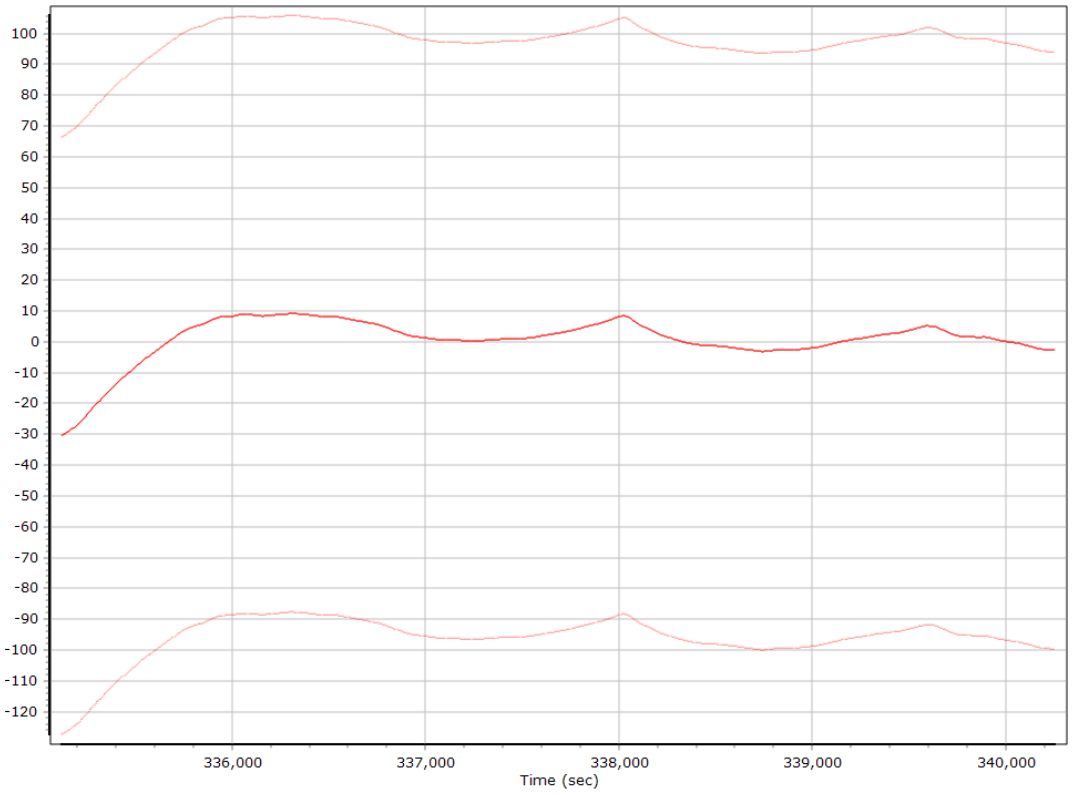
X Accelerometer Bias (micro-g)



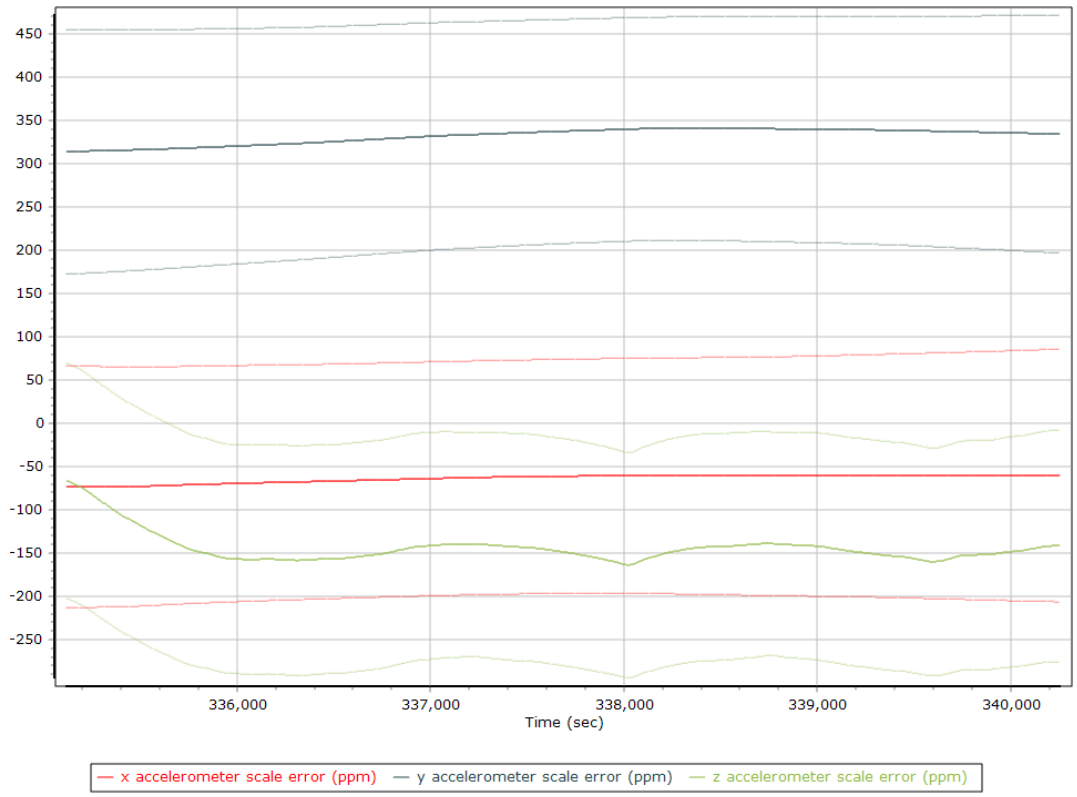
Y Accelerometer Bias (micro-g)



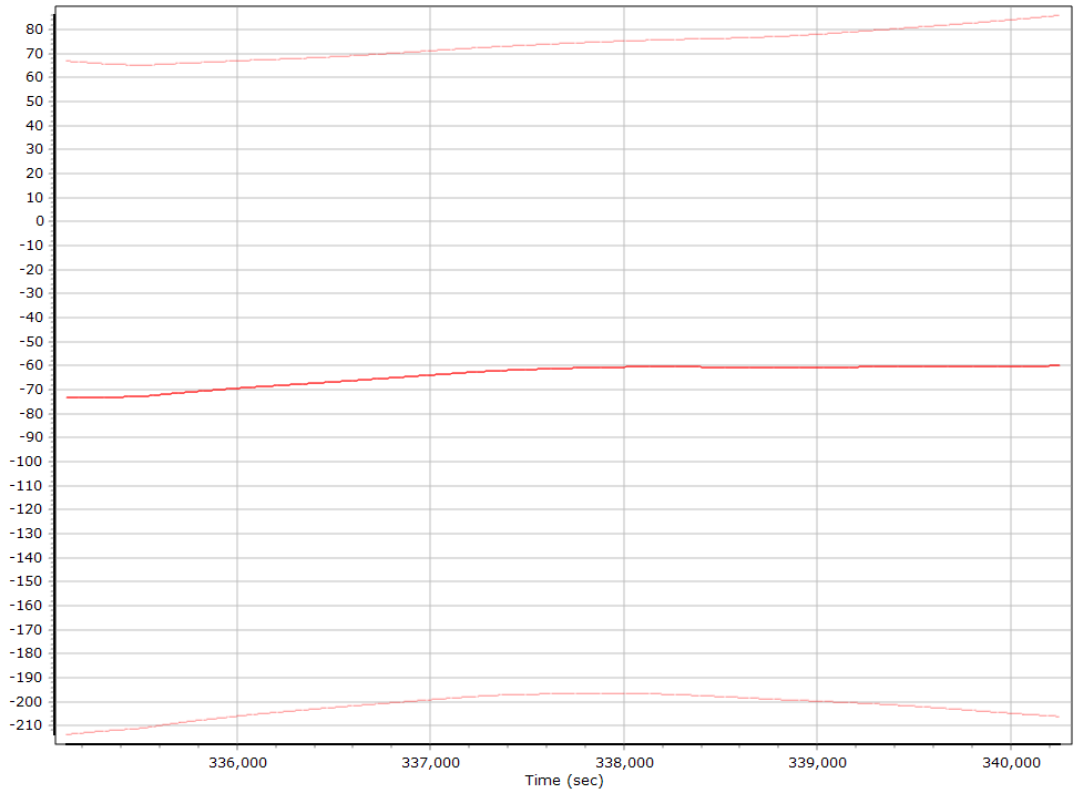
Z Accelerometer Bias (micro-g)



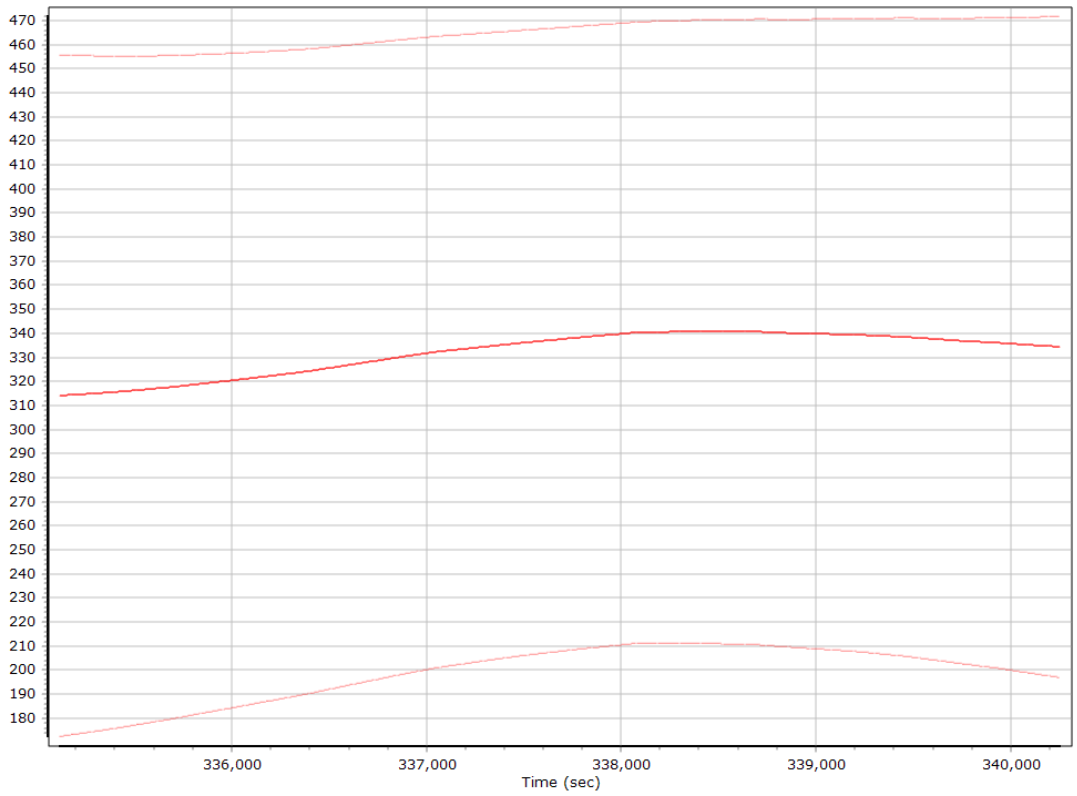
Accelerometer Scale Error (ppm)



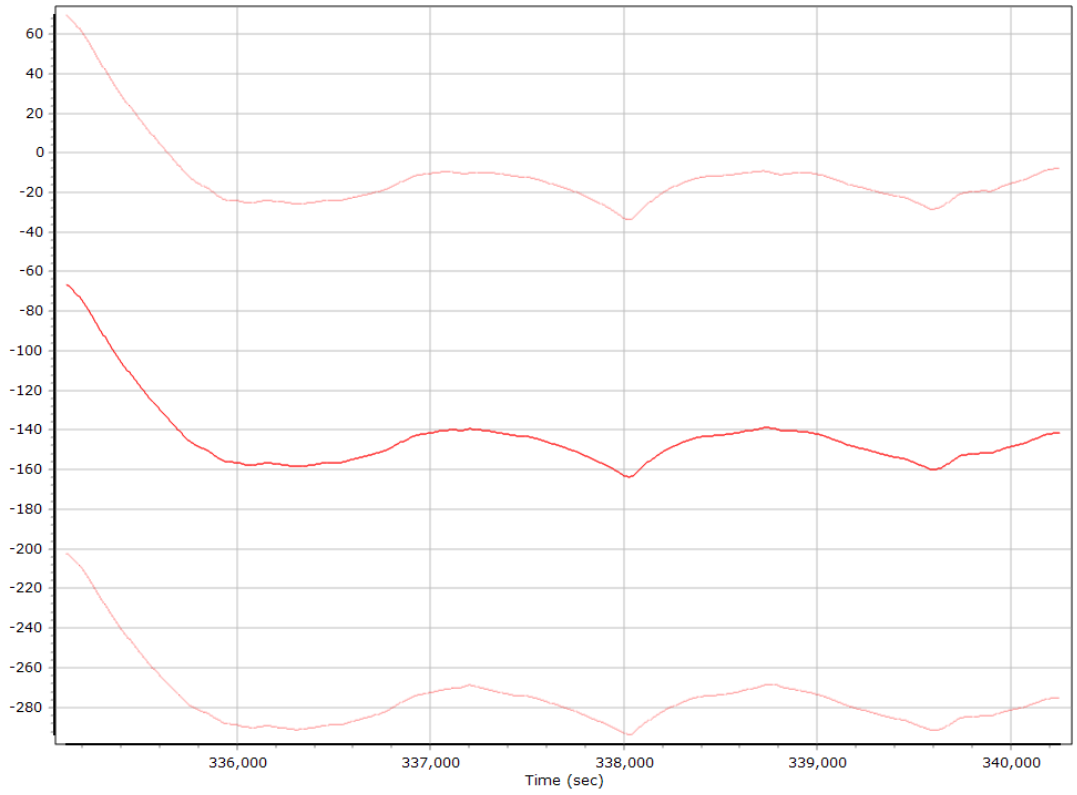
X Accelerometer Scale Error (ppm)



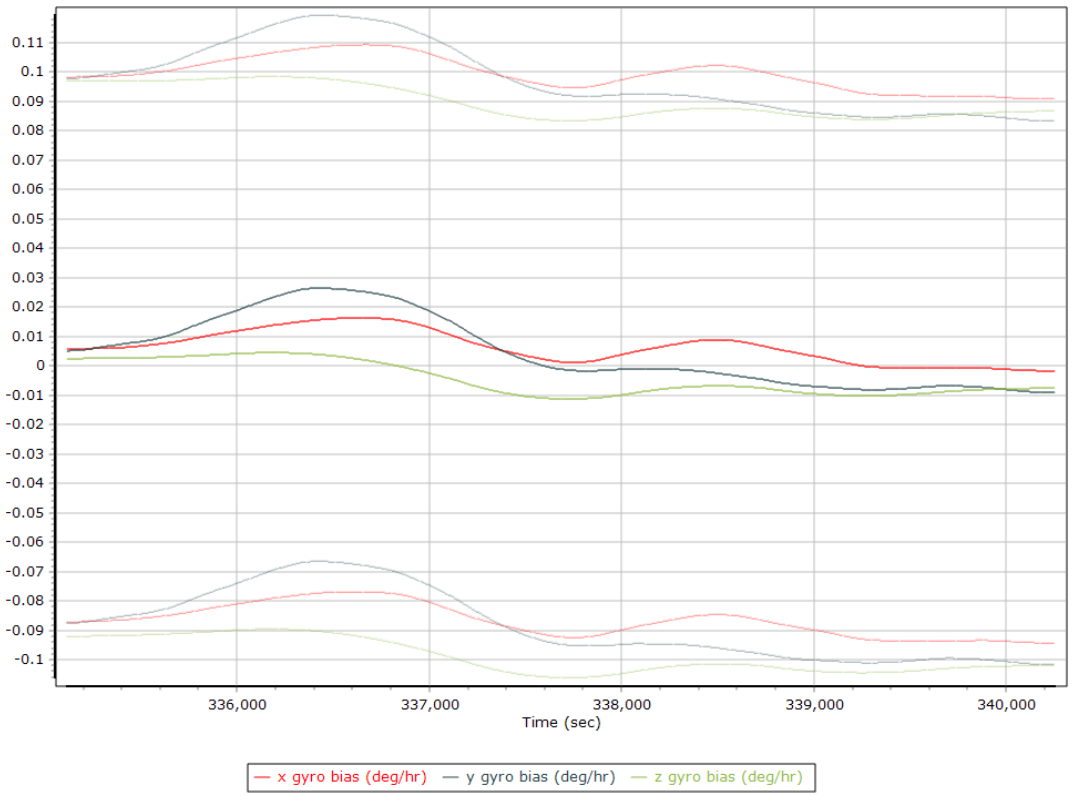
Y Accelerometer Scale Error (ppm)



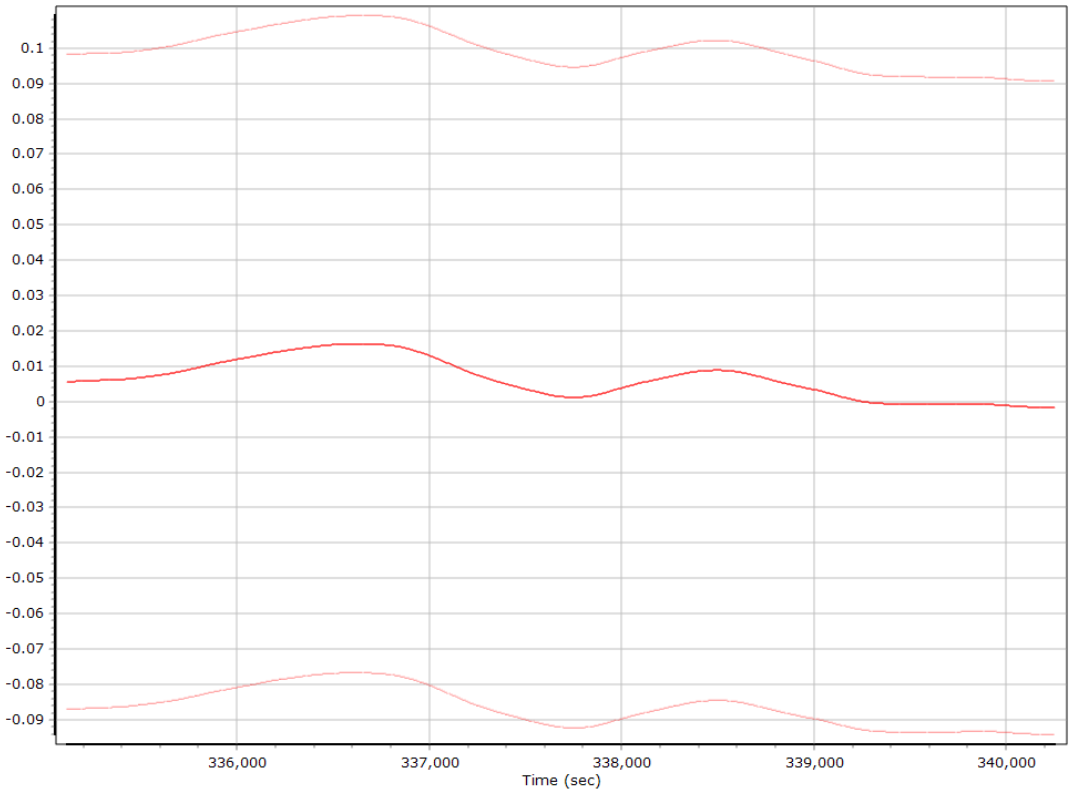
Z Accelerometer Scale Error (ppm)



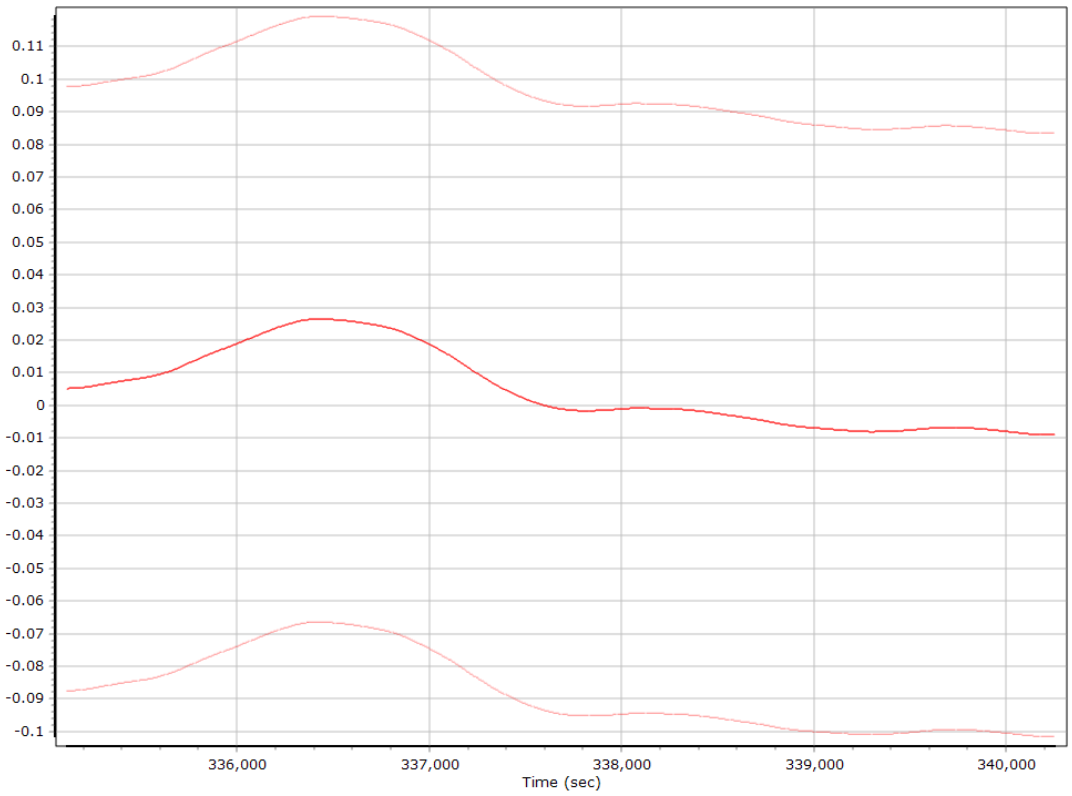
Gyro Bias (deg/h)



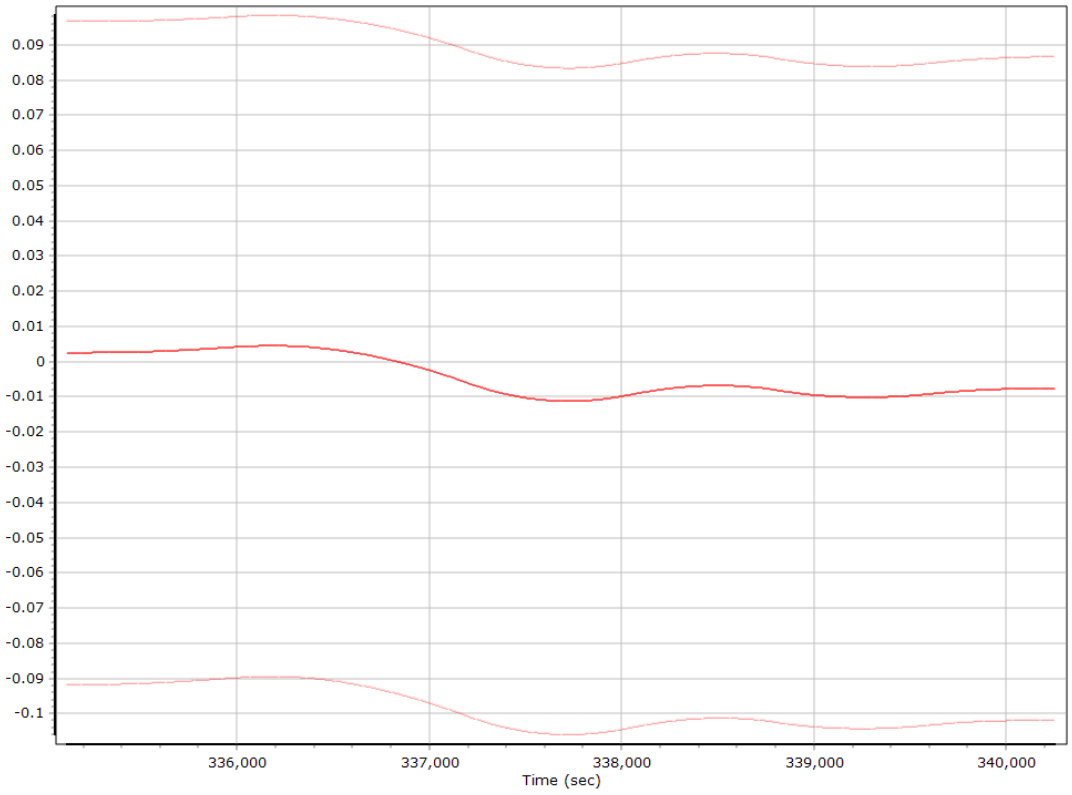
X Gyro Bias (deg/h)



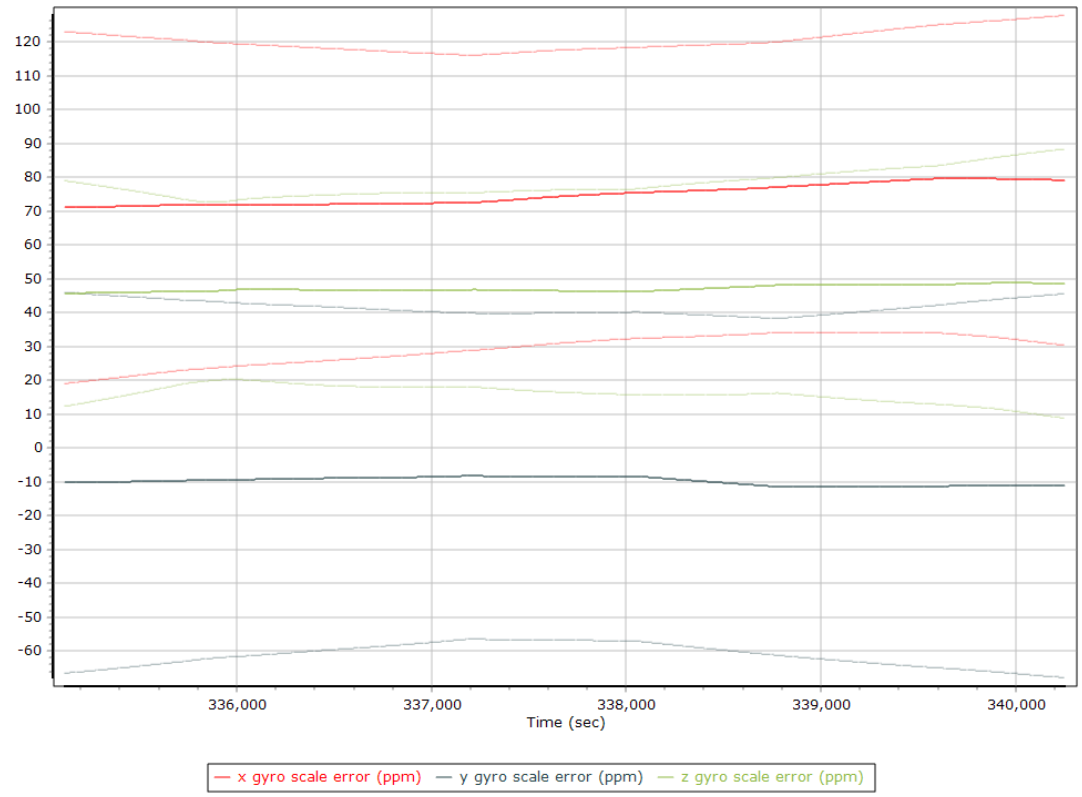
Y Gyro Bias (deg/h)



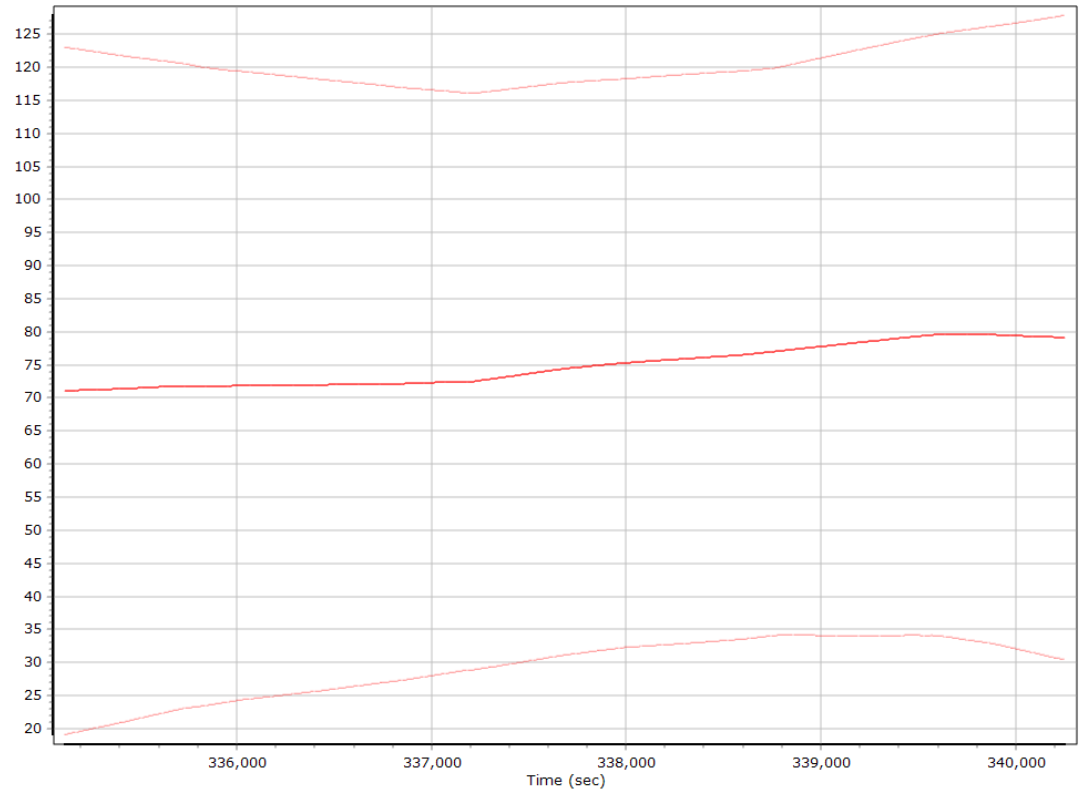
Z Gyro Bias (deg/h)



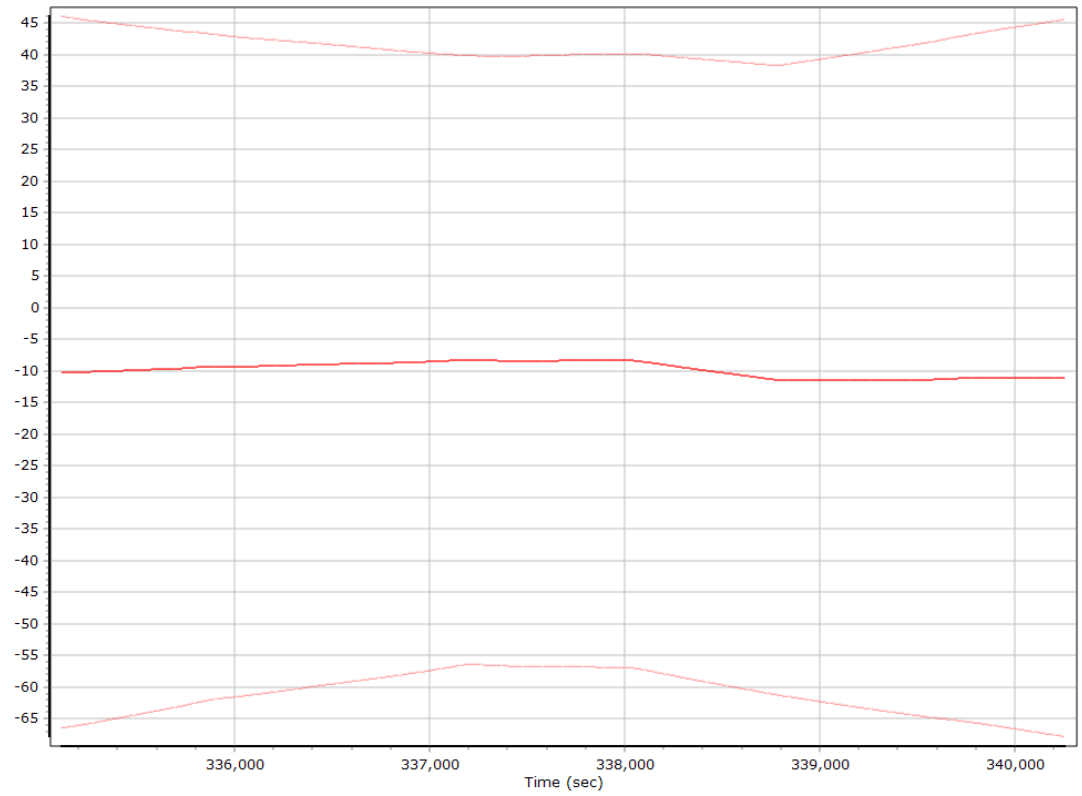
Gyro Scale Error (ppm)



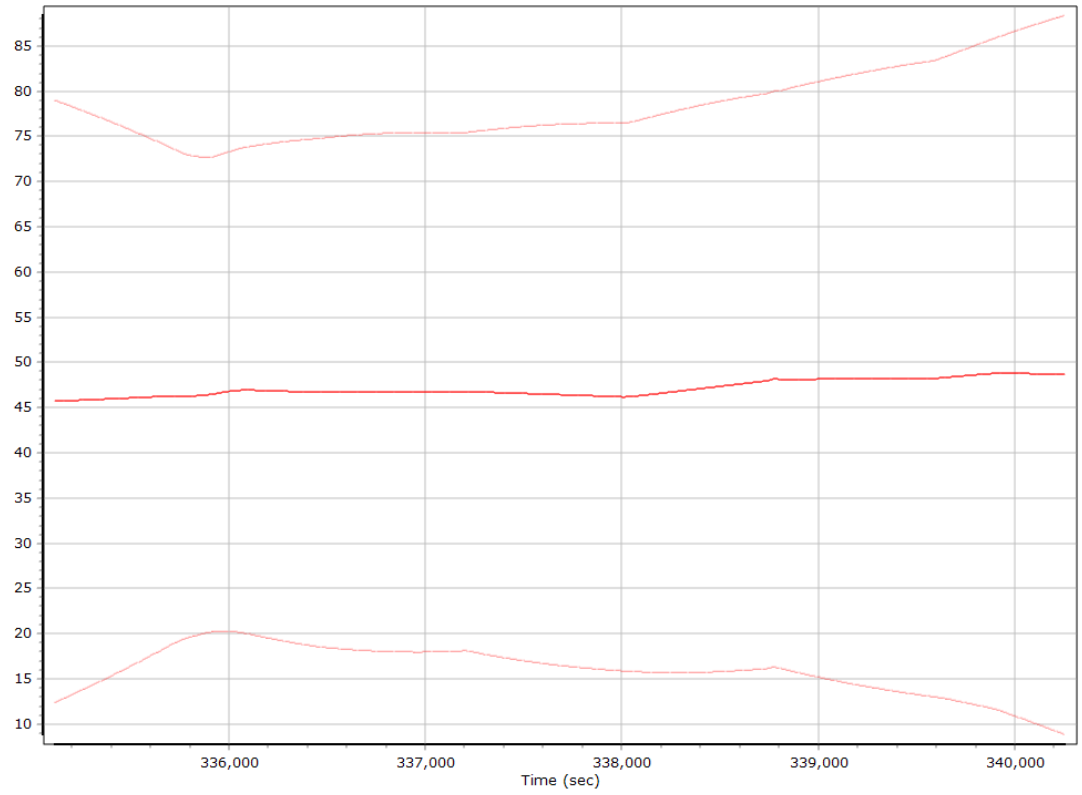
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

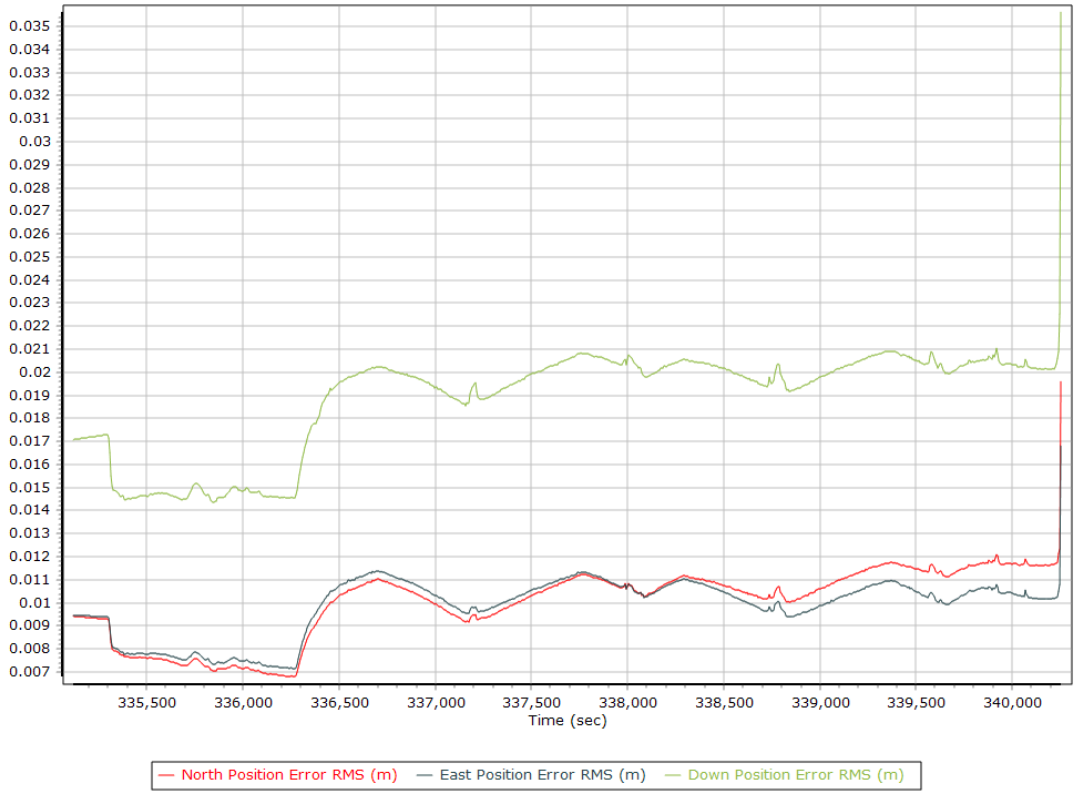


Z Gyro Scale Error (ppm)

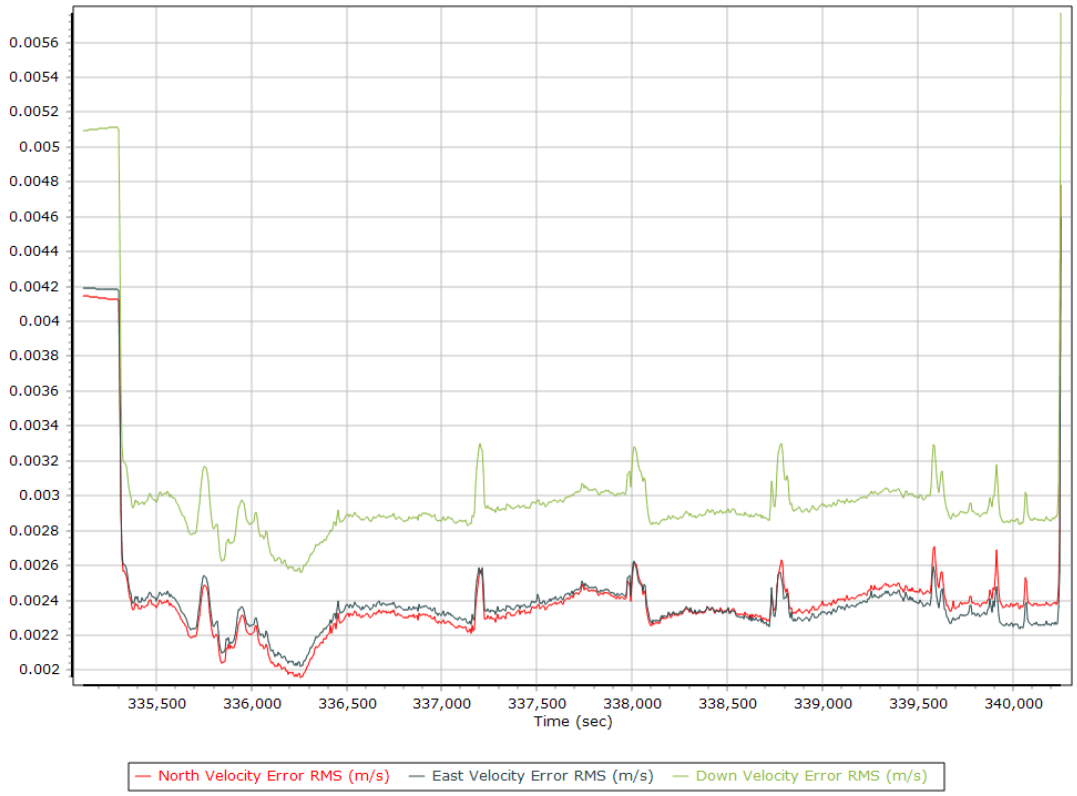


Smoothed Performance Metrics

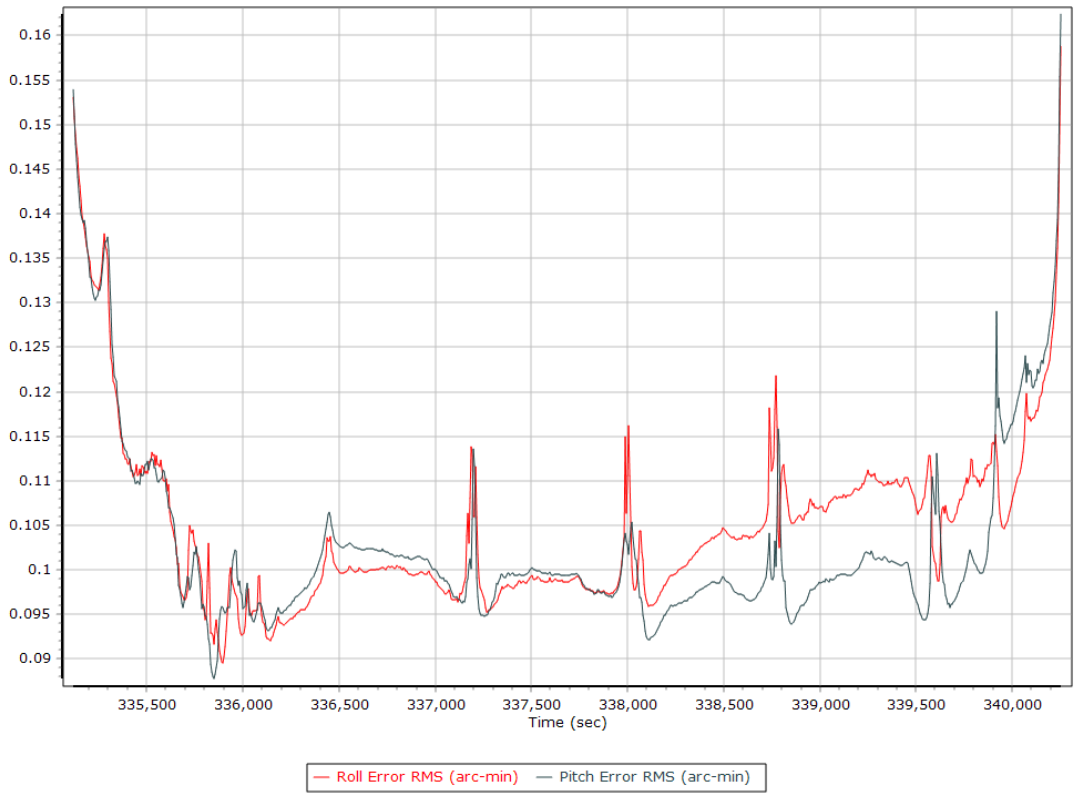
Position Error RMS (m)



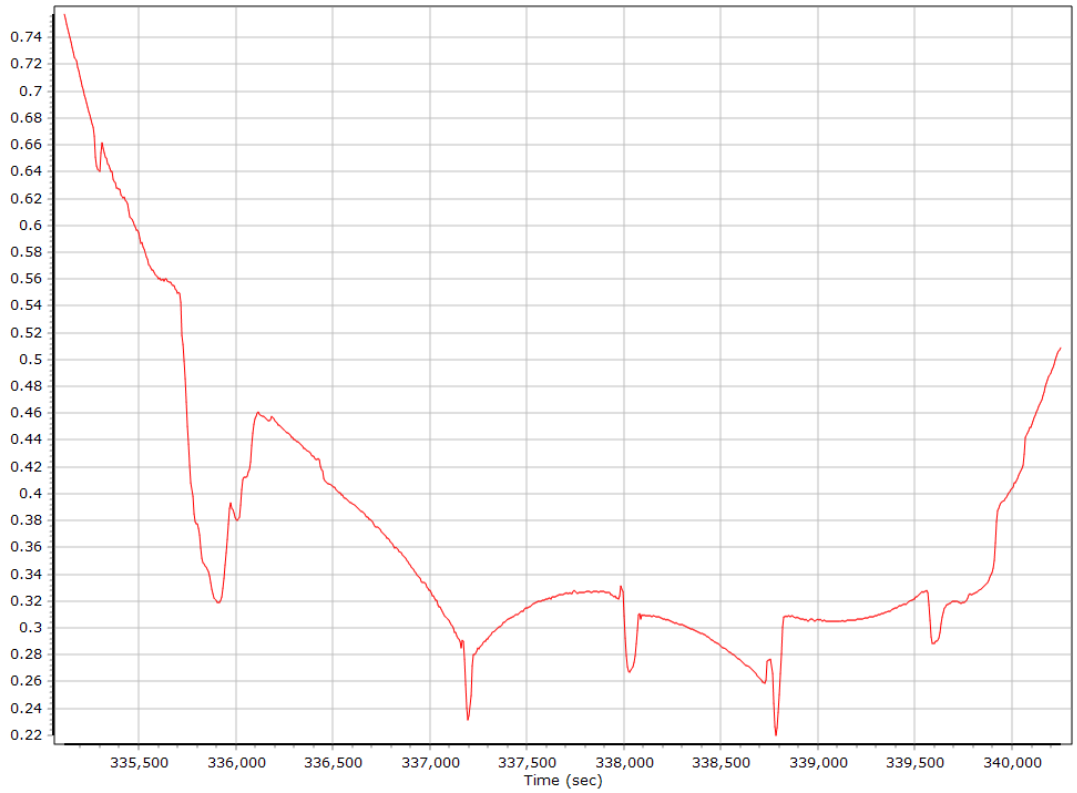
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

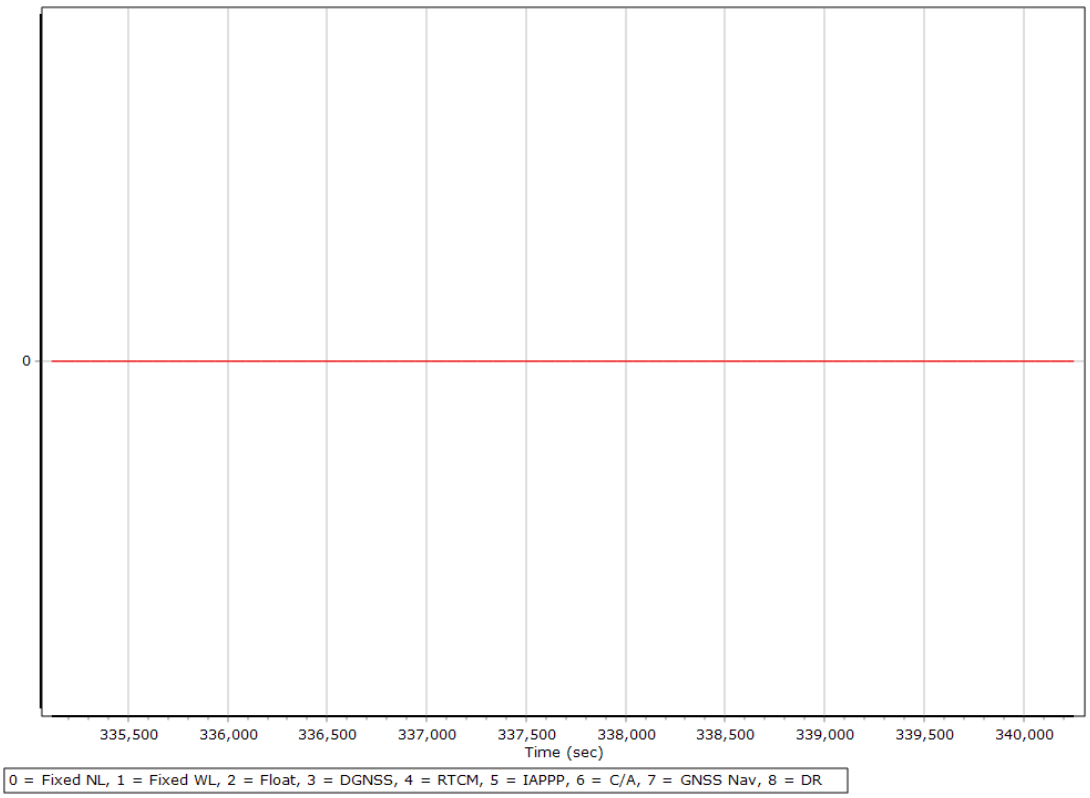


Heading Error RMS (arc-min)

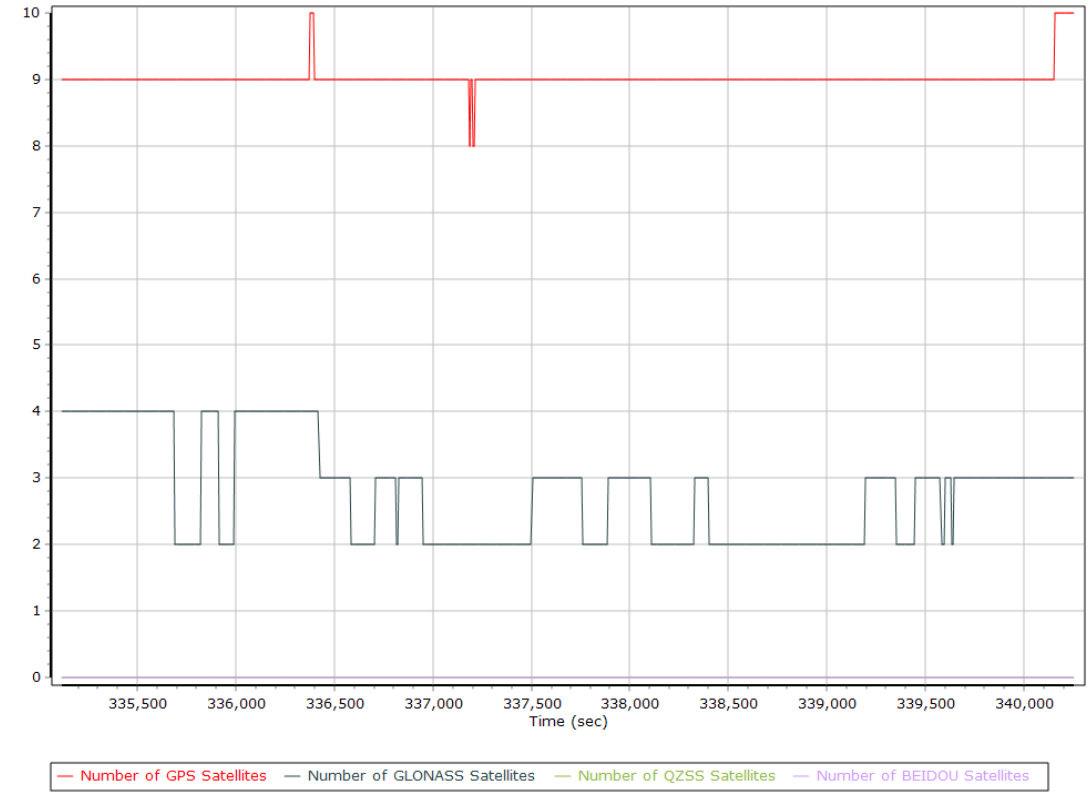


Smoothed Solution Status

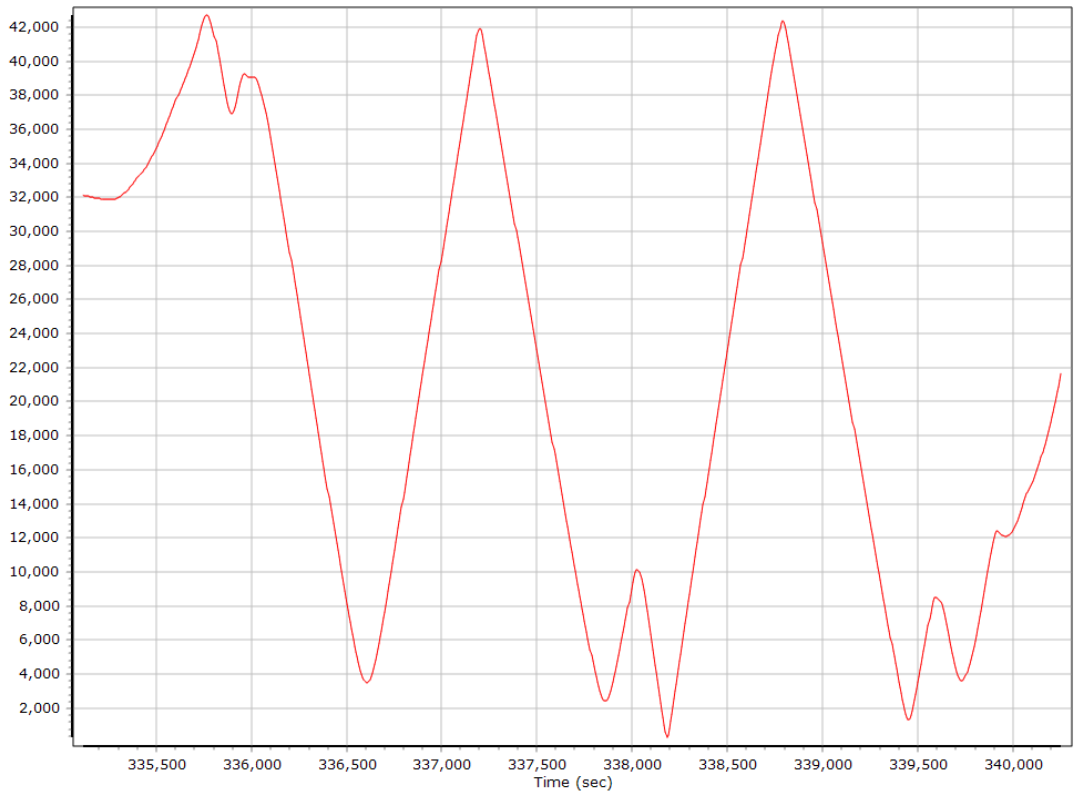
Processing Mode



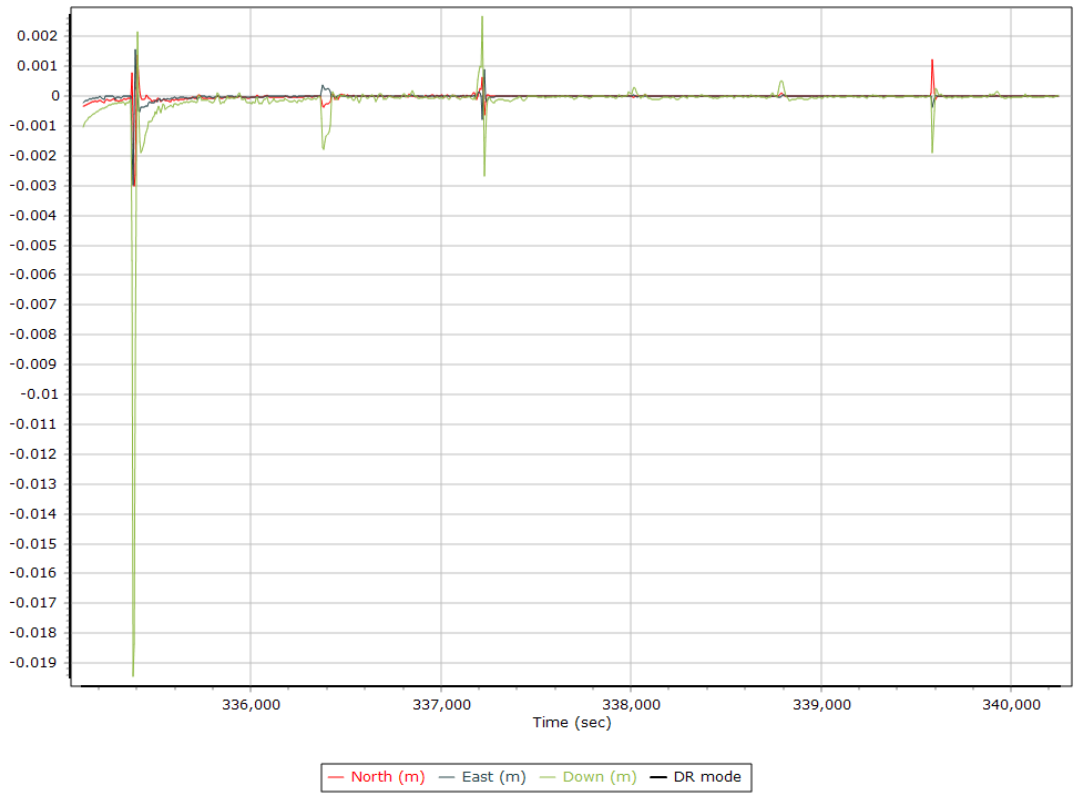
Number of Satellites



Baseline Length



SBET IAKAR Separation



General Information

Mission Information

Project name	13284-1804_20181226a_smartnet_nad83_frame
Processing date	2019-01-22 20:20:00
Mission date	2018-12-26 16:11:32
Mission duration	03:13:06.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9865
IMU type	57
Receiver type	BD982
Antenna type	AV37

Project File List

Rover Data Files

File name	File type
181226_161115_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3600.18g	GLONASS Broadcast Ephemeris
Ephm3600.18n	GPS Broadcast Ephemeris
igl20332.sp3	GLONASS Precise Ephemeris
igl20333.sp3	GLONASS Precise Ephemeris
igl20334.sp3	GLONASS Precise Ephemeris
igs20332.sp3	GPS Precise Ephemeris
igs20333.sp3	GPS Precise Ephemeris
igs20334.sp3	GPS Precise Ephemeris
loyk360q.18o	GNSS SingleBase
loyk360q.18n	GPS Broadcast Ephemeris
loyk360q.18g	GLONASS Broadcast Ephemeris
valn360r.18o	GNSS SingleBase
valn360r.18n	GPS Broadcast Ephemeris
valn360r.18g	GLONASS Broadcast Ephemeris
valn360q.18o	GNSS SingleBase
valn360q.18n	GPS Broadcast Ephemeris
valn360q.18g	GLONASS Broadcast Ephemeris
dcdc360t.18o	GNSS SingleBase
dcdc360t.18n	GPS Broadcast Ephemeris
dcdc360t.18g	GLONASS Broadcast Ephemeris
dcdc360s.18o	GNSS SingleBase
dcdc360s.18n	GPS Broadcast Ephemeris
dcdc360s.18g	GLONASS Broadcast Ephemeris
dcdc360r.18o	GNSS SingleBase
dcdc360r.18n	GPS Broadcast Ephemeris
dcdc360r.18g	GLONASS Broadcast Ephemeris
dcdc360q.18o	GNSS SingleBase
dcdc360q.18n	GPS Broadcast Ephemeris
dcdc360q.18g	GLONASS Broadcast Ephemeris
vaah360t.18o	GNSS SingleBase
vaah360t.18n	GPS Broadcast Ephemeris
vaah360t.18g	GLONASS Broadcast Ephemeris
vaah360s.18o	GNSS SingleBase
vaah360s.18n	GPS Broadcast Ephemeris
vaah360s.18g	GLONASS Broadcast Ephemeris
vaah360r.18o	GNSS SingleBase
vaah360r.18n	GPS Broadcast Ephemeris
vaah360r.18g	GLONASS Broadcast Ephemeris
vaah360q.18o	GNSS SingleBase
vaah360q.18n	GPS Broadcast Ephemeris
vaah360q.18g	GLONASS Broadcast Ephemeris
mddm360t.18o	GNSS SingleBase
mddm360t.18n	GPS Broadcast Ephemeris
mddm360t.18g	GLONASS Broadcast Ephemeris
mddm360s.18o	GNSS SingleBase
mddm360s.18n	GPS Broadcast Ephemeris
mddm360s.18g	GLONASS Broadcast Ephemeris
mddm360r.18o	GNSS SingleBase
mddm360r.18n	GPS Broadcast Ephemeris
mddm360r.18g	GLONASS Broadcast Ephemeris
mddm360q.18o	GNSS SingleBase
mddm360q.18n	GPS Broadcast Ephemeris
mddm360q.18g	GLONASS Broadcast Ephemeris
vagv360t.18o	GNSS SingleBase
vagv360t.18n	GPS Broadcast Ephemeris

File Name	File type
vagv360t.18g	GLONASS Broadcast Ephemeris
vagv360s.18o	GNSS SingleBase
vagv360s.18n	GPS Broadcast Ephemeris
vagv360s.18g	GLONASS Broadcast Ephemeris
vagv360r.18o	GNSS SingleBase
vagv360r.18n	GPS Broadcast Ephemeris
vagv360r.18g	GLONASS Broadcast Ephemeris
vagv360q.18o	GNSS SingleBase
vagv360q.18n	GPS Broadcast Ephemeris
vagv360q.18g	GLONASS Broadcast Ephemeris
mdhg360t.18o	GNSS SingleBase
mdhg360t.18n	GPS Broadcast Ephemeris
mdhg360t.18g	GLONASS Broadcast Ephemeris
mdhg360s.18o	GNSS SingleBase
mdhg360s.18n	GPS Broadcast Ephemeris
mdhg360s.18g	GLONASS Broadcast Ephemeris
mdhg360r.18o	GNSS SingleBase
mdhg360r.18n	GPS Broadcast Ephemeris
mdhg360r.18g	GLONASS Broadcast Ephemeris
mdhg360q.18o	GNSS SingleBase
mdhg360q.18n	GPS Broadcast Ephemeris
mdhg360q.18g	GLONASS Broadcast Ephemeris
loy8360t.18o	GNSS SingleBase
loy8360t.18n	GPS Broadcast Ephemeris
loy8360t.18g	GLONASS Broadcast Ephemeris
loy8360s.18o	GNSS SingleBase
loy8360s.18n	GPS Broadcast Ephemeris
loy8360s.18g	GLONASS Broadcast Ephemeris
loy8360r.18o	GNSS SingleBase
loy8360r.18n	GPS Broadcast Ephemeris
loy8360r.18g	GLONASS Broadcast Ephemeris
loy8360q.18o	GNSS SingleBase
loy8360q.18n	GPS Broadcast Ephemeris
loy8360q.18g	GLONASS Broadcast Ephemeris
loyk360t.18o	GNSS SingleBase
loyk360t.18n	GPS Broadcast Ephemeris
loyk360t.18g	GLONASS Broadcast Ephemeris
loyk360s.18o	GNSS SingleBase
loyk360s.18n	GPS Broadcast Ephemeris
loyk360s.18g	GLONASS Broadcast Ephemeris
loyk360r.18o	GNSS SingleBase
loyk360r.18n	GPS Broadcast Ephemeris
loyk360r.18g	GLONASS Broadcast Ephemeris
valn360s.18o	GNSS SingleBase
valn360s.18n	GPS Broadcast Ephemeris
valn360s.18g	GLONASS Broadcast Ephemeris
valn360t.18o	GNSS SingleBase
valn360t.18n	GPS Broadcast Ephemeris
valn360t.18g	GLONASS Broadcast Ephemeris
igr20332.sp3	GPS Precise Ephemeris
igr20333.sp3	GPS Precise Ephemeris
igr20334.sp3	GPS Precise Ephemeris

Output Files

Filename	File type
sbet_Mission 1.out	SBET Trajectory File

Rover Data Summary

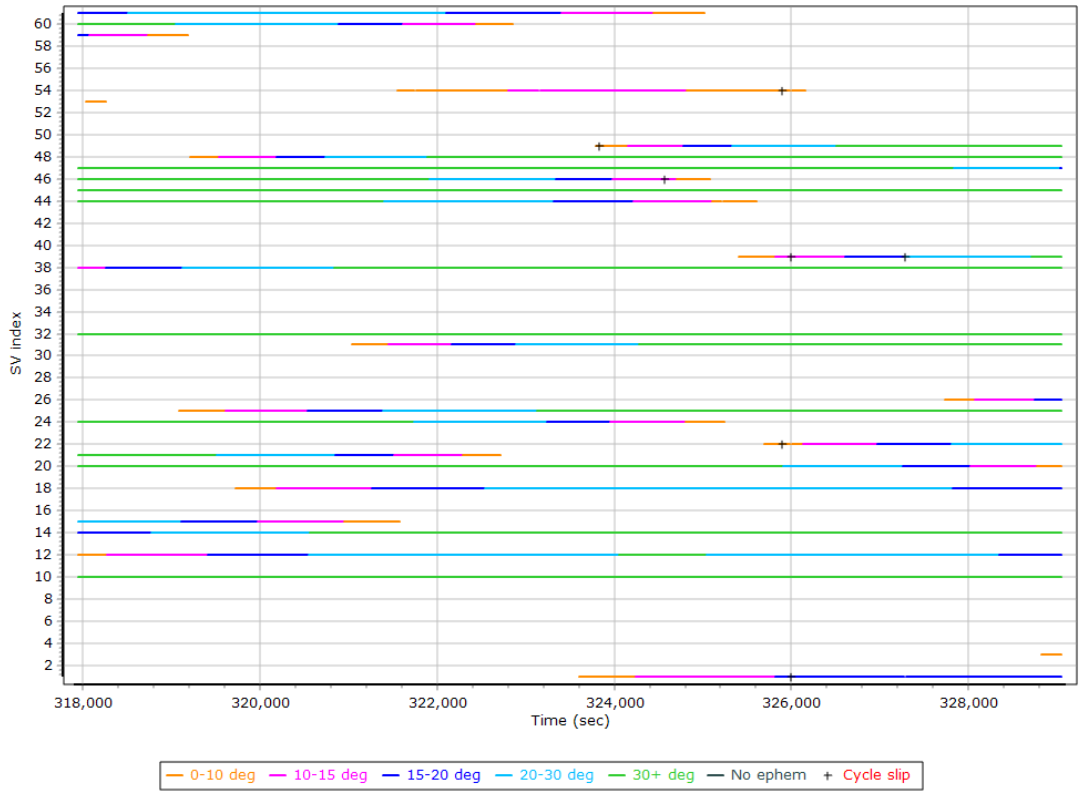
First raw data file	181226_161115_INS-GPS_1.raw		
Last raw data file	181226_161115_INS-GPS_1.raw		
Start GPS week	2033		
Start time	317473.690 (12/26/2018 4:11:13 PM)		
End time	329060.458 (12/26/2018 7:24:20 PM)		
Start of fine alignment	317888.495 (12/26/2018 4:18:08 PM)		
Available subsystems	Primary 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]	0.000	0.000	0.000
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

Raw Data QC

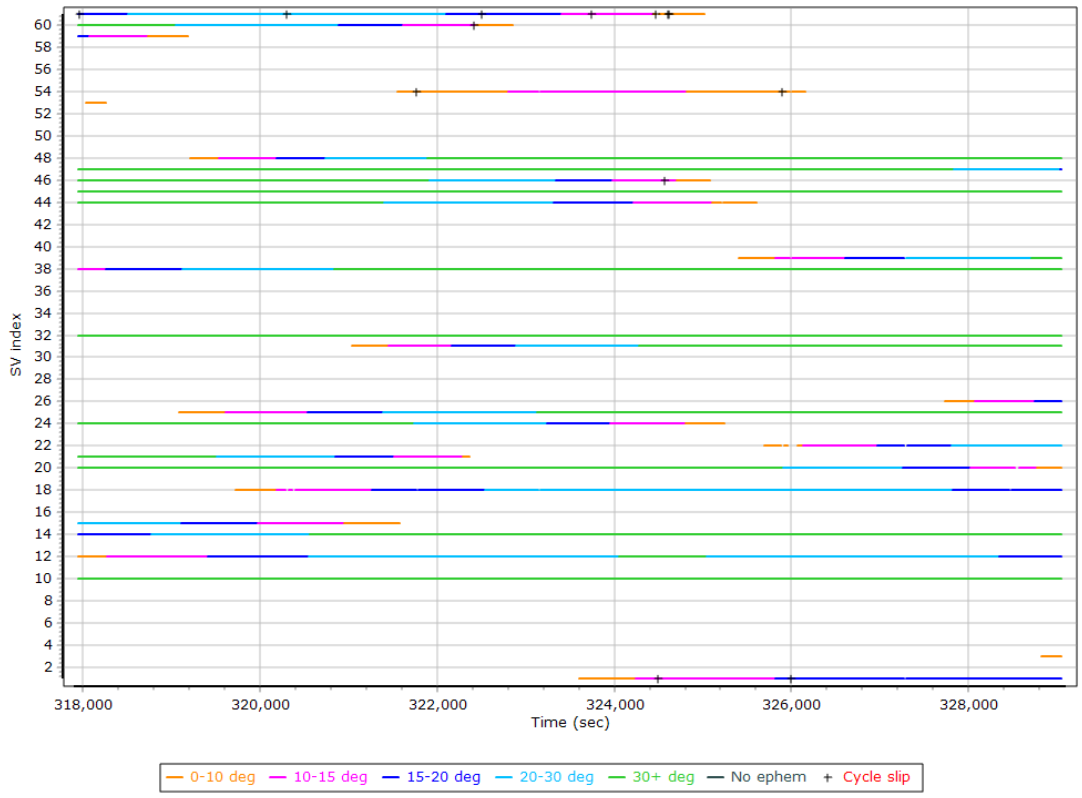
Raw IMU Import QC Summary

IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_Mission 1.log
IMU Records Processed	2316882
Termination Status	Normal
IMU Anomalies	0

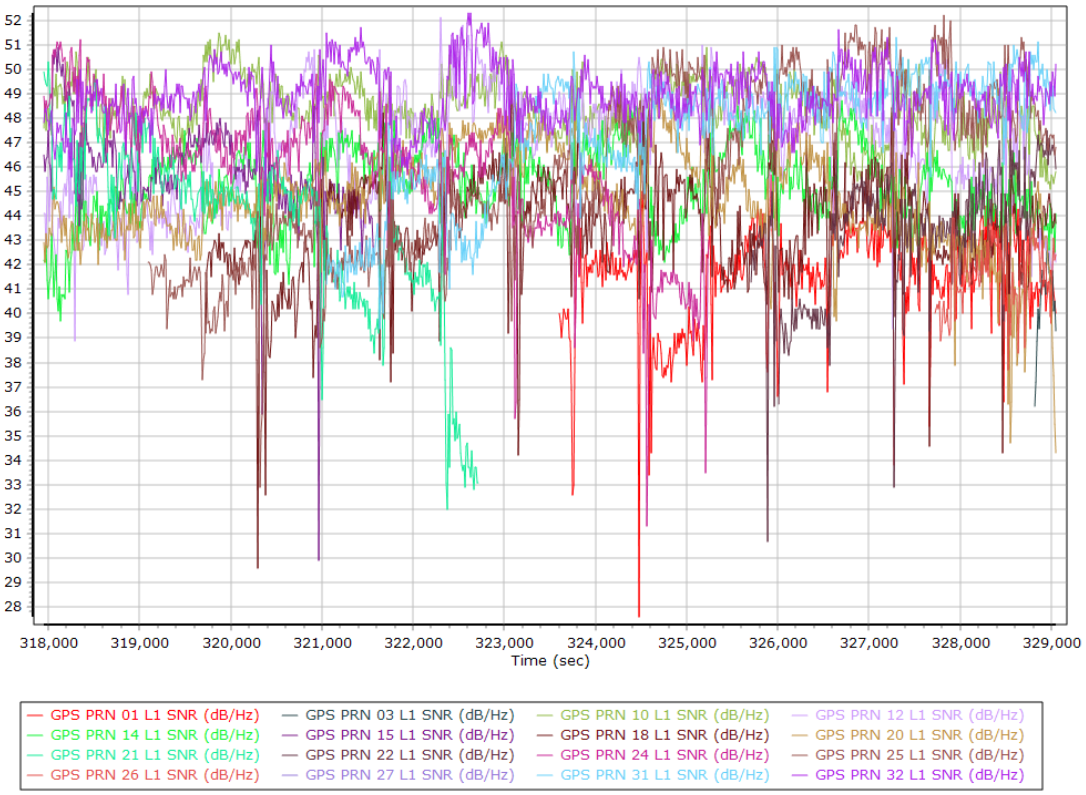
L1 Satellite Lock/Elevation



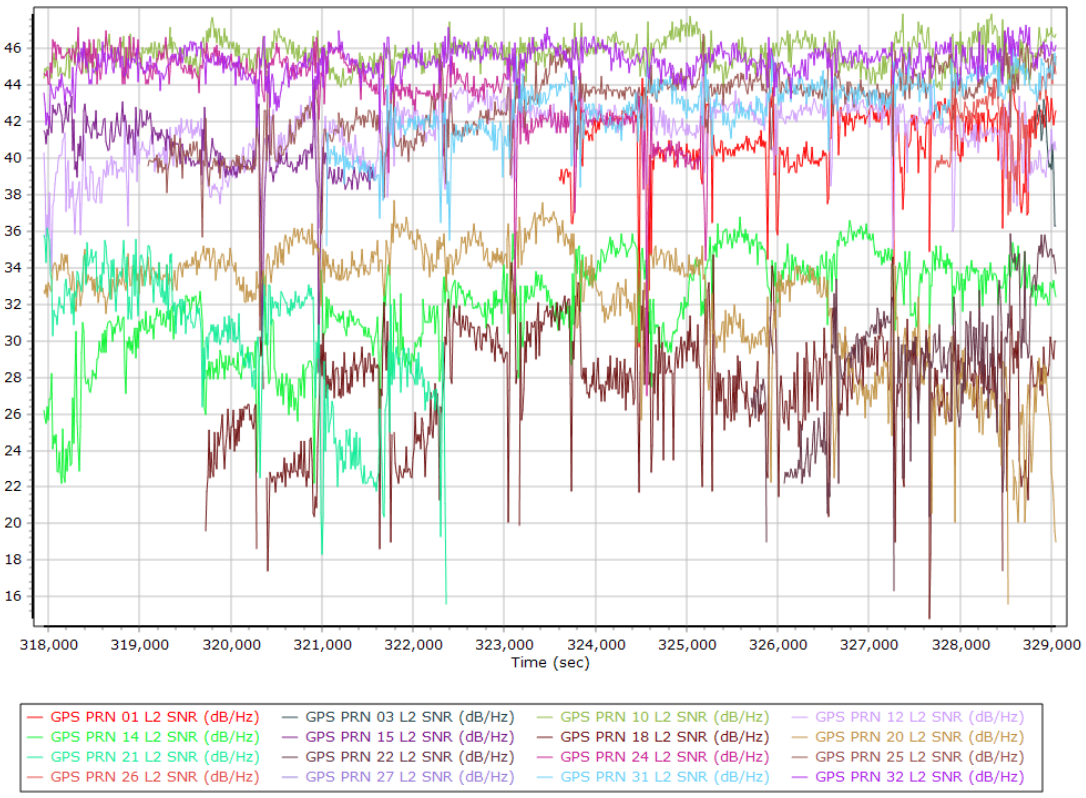
L2 Satellite Lock/Elevation



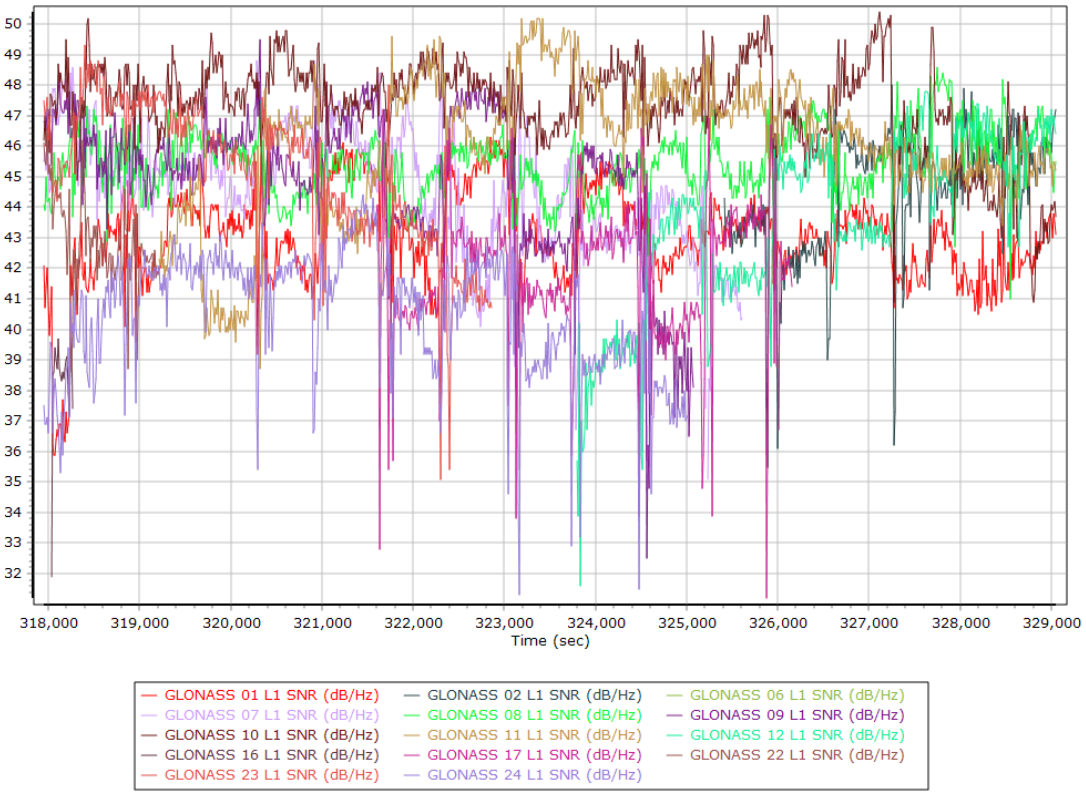
GPS L1 SNR



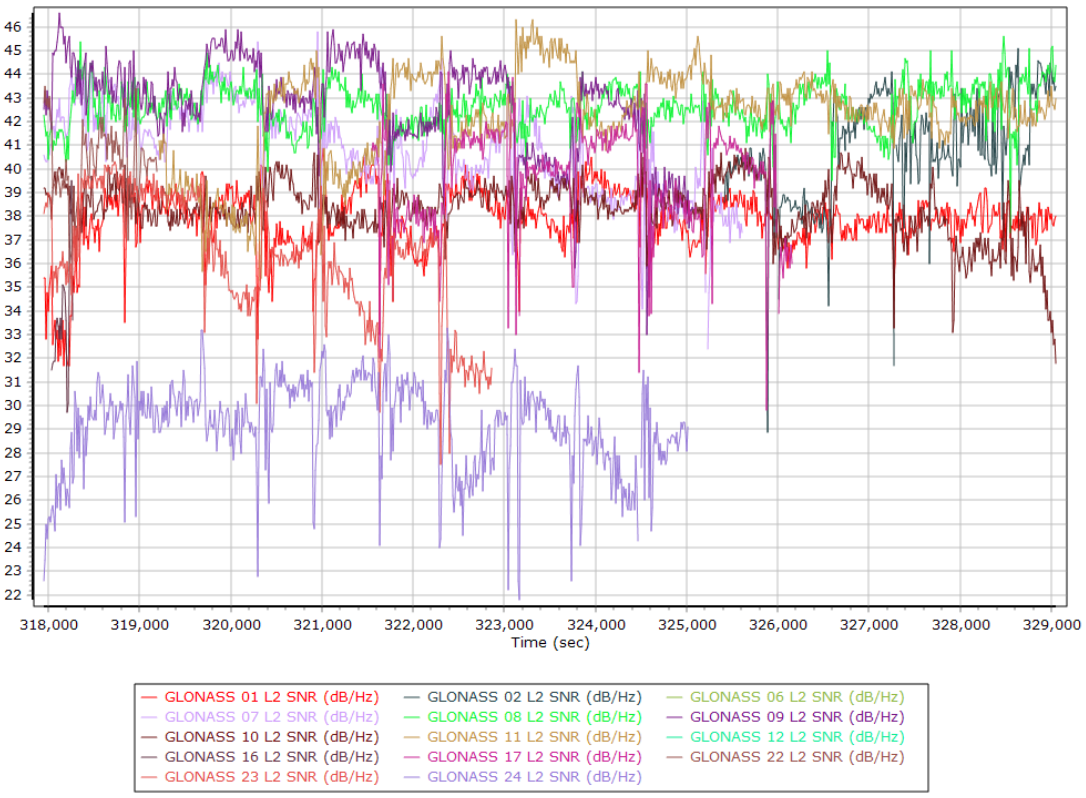
GPS L2 SNR



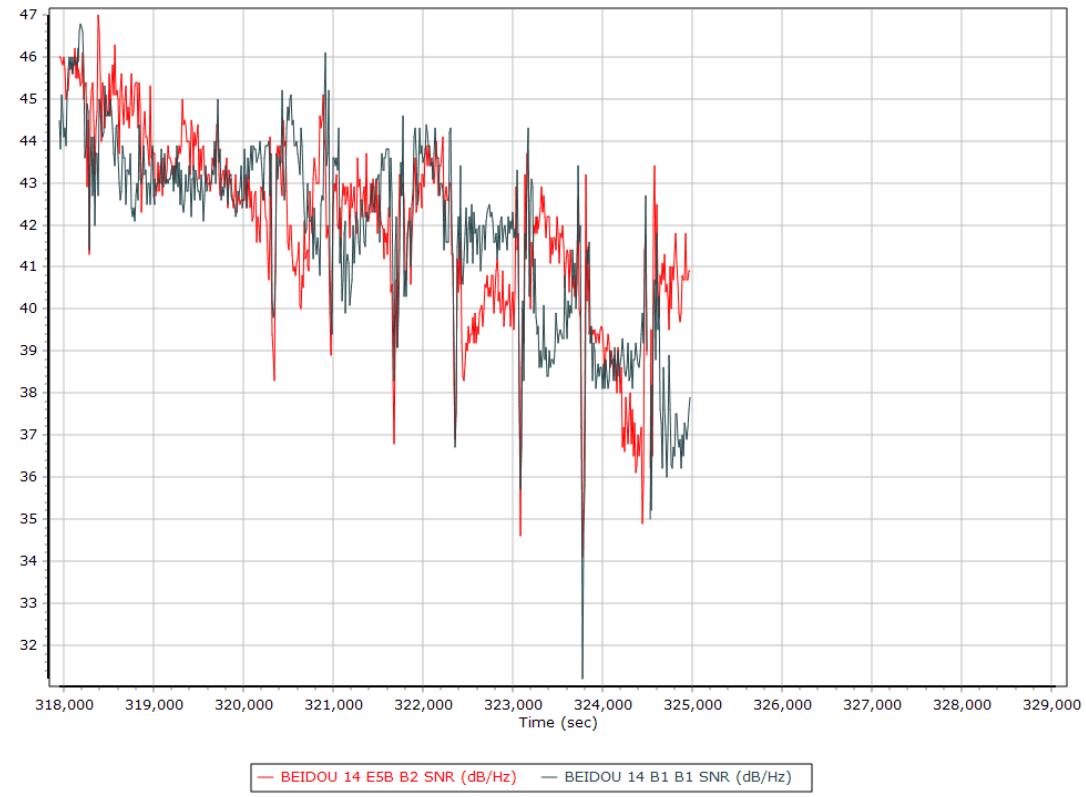
GLONASS L1 SNR



GLONASS L2 SNR

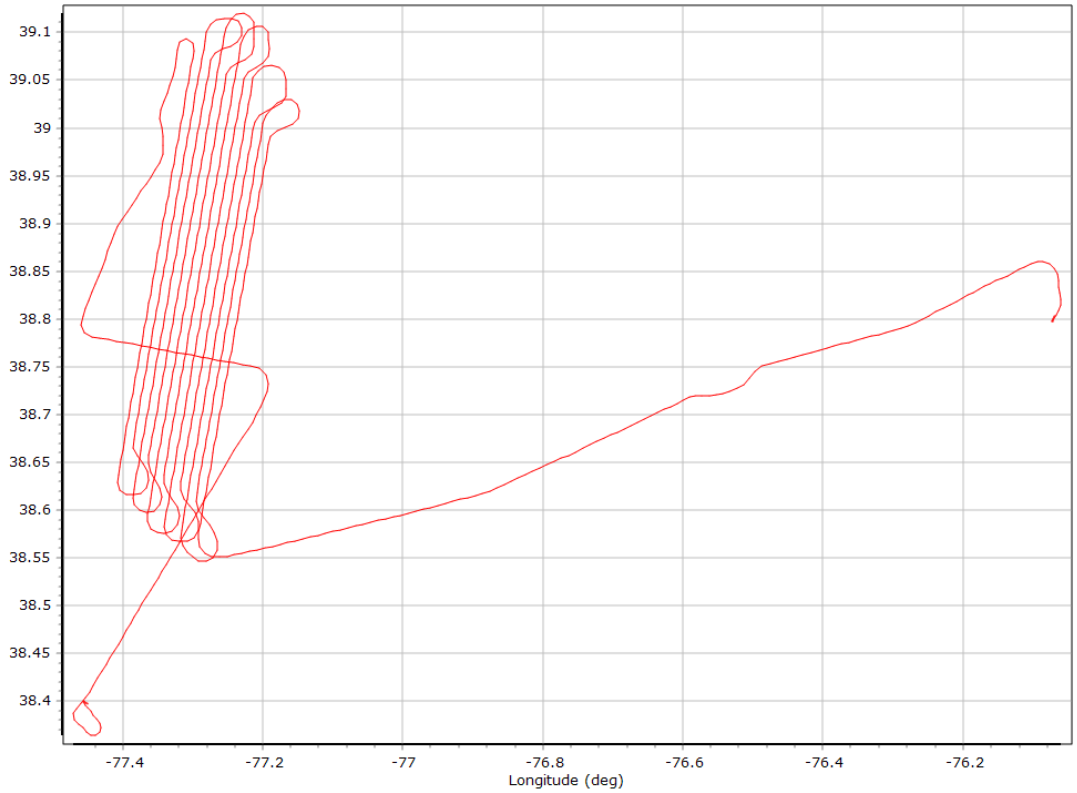


BEIDOU SNR

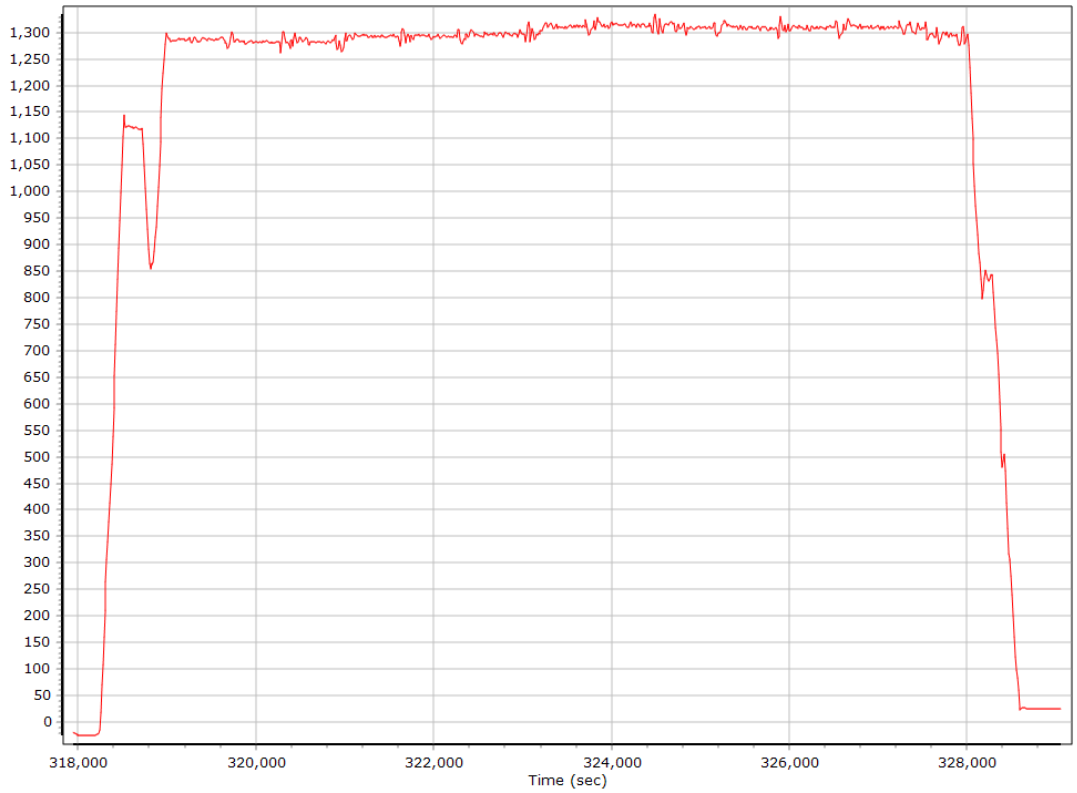


Trajectory Information

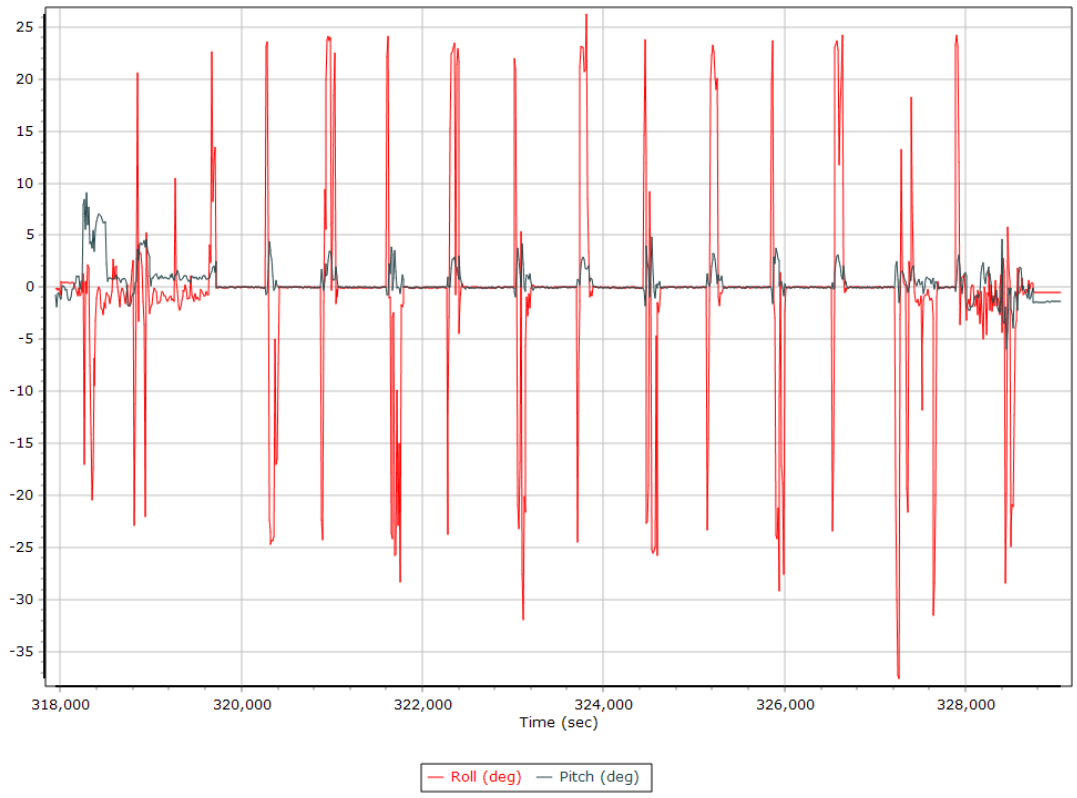
Top View



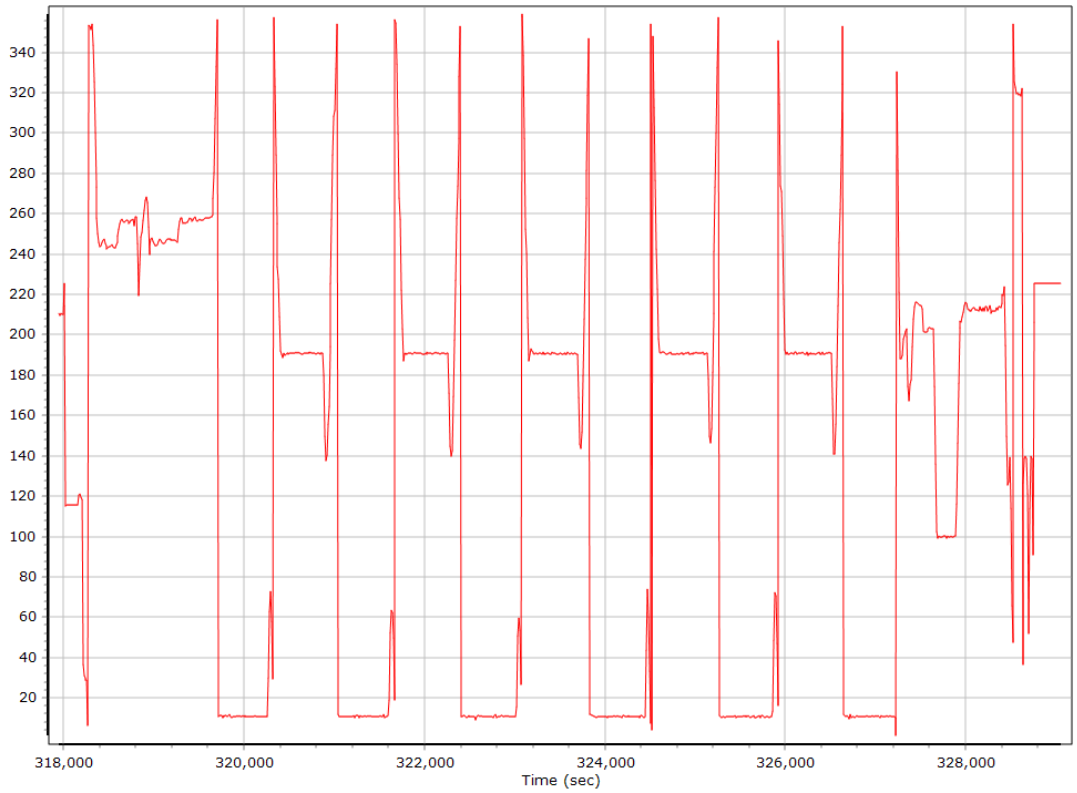
Altitude



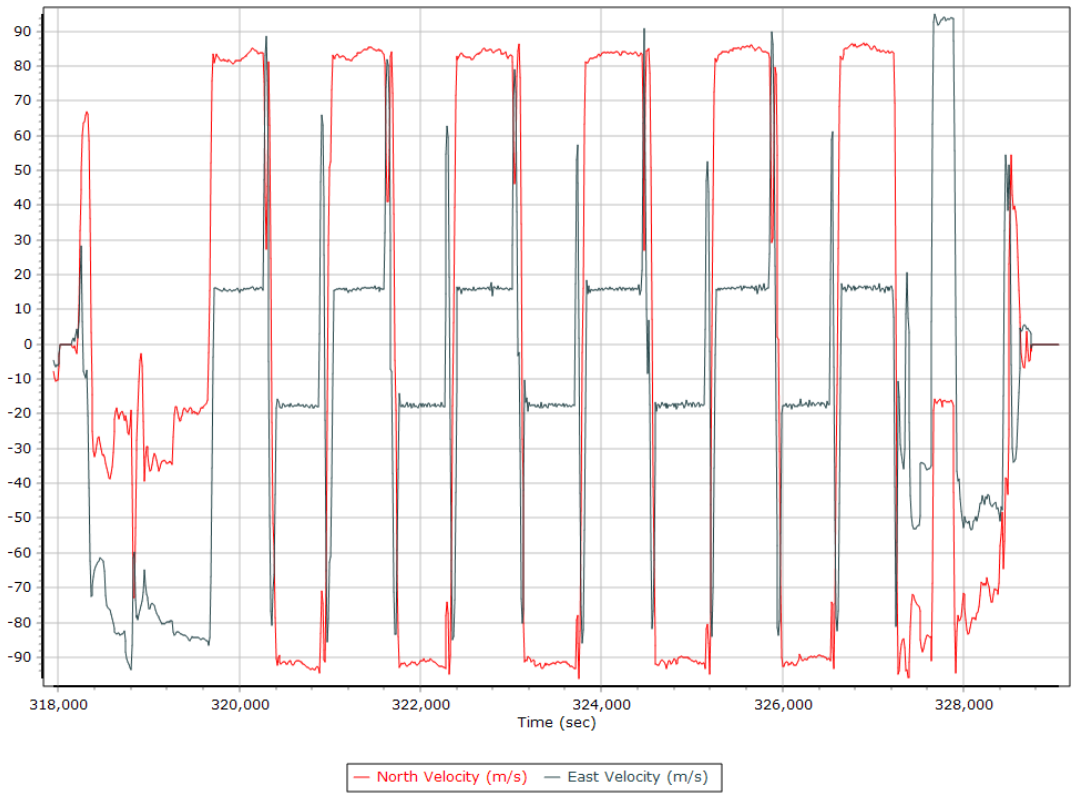
Roll/Pitch



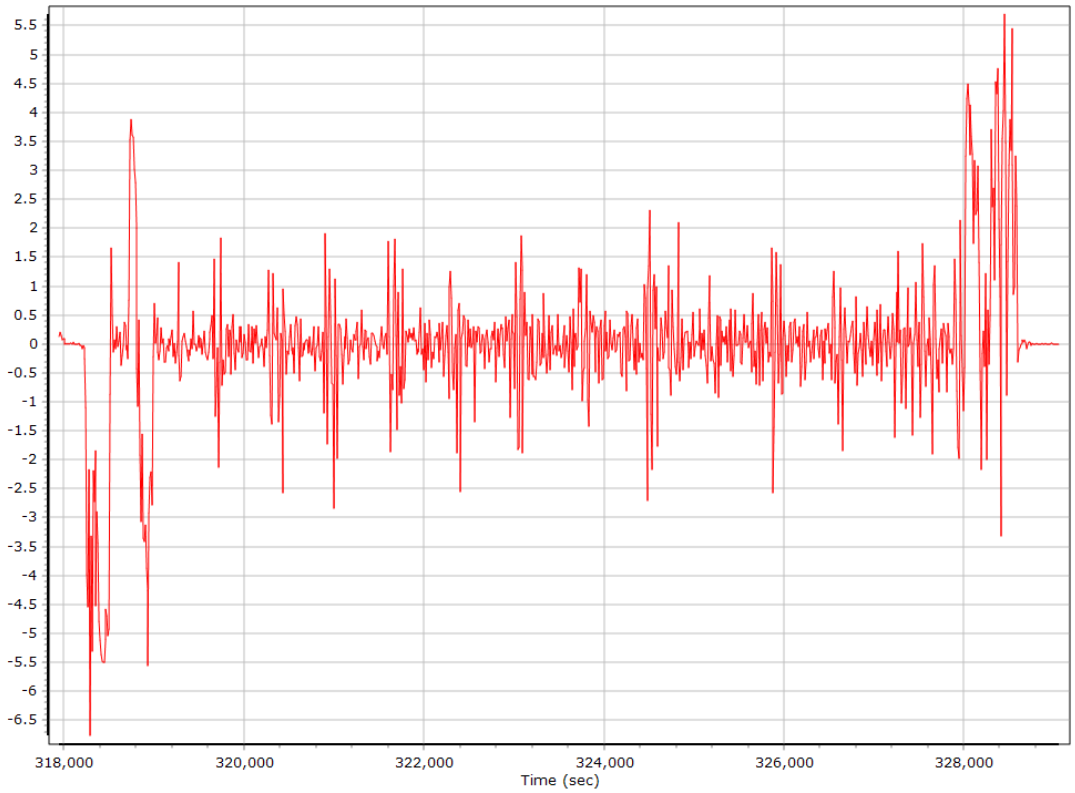
Heading



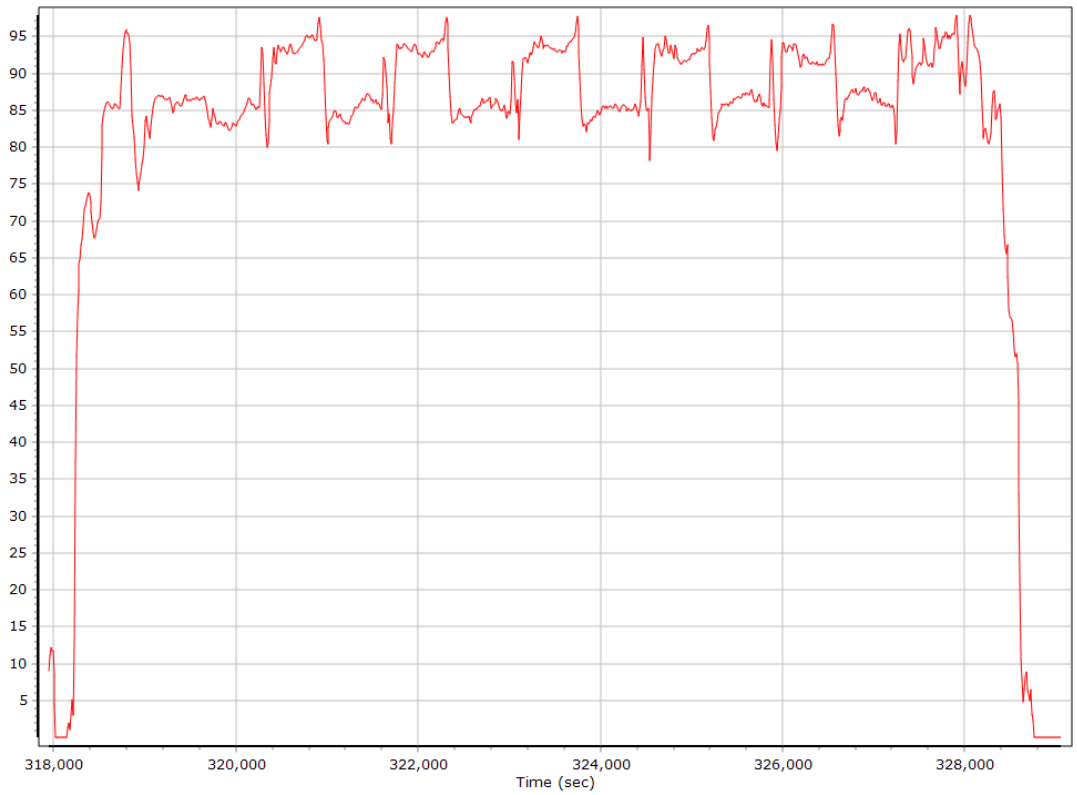
North/East Velocity



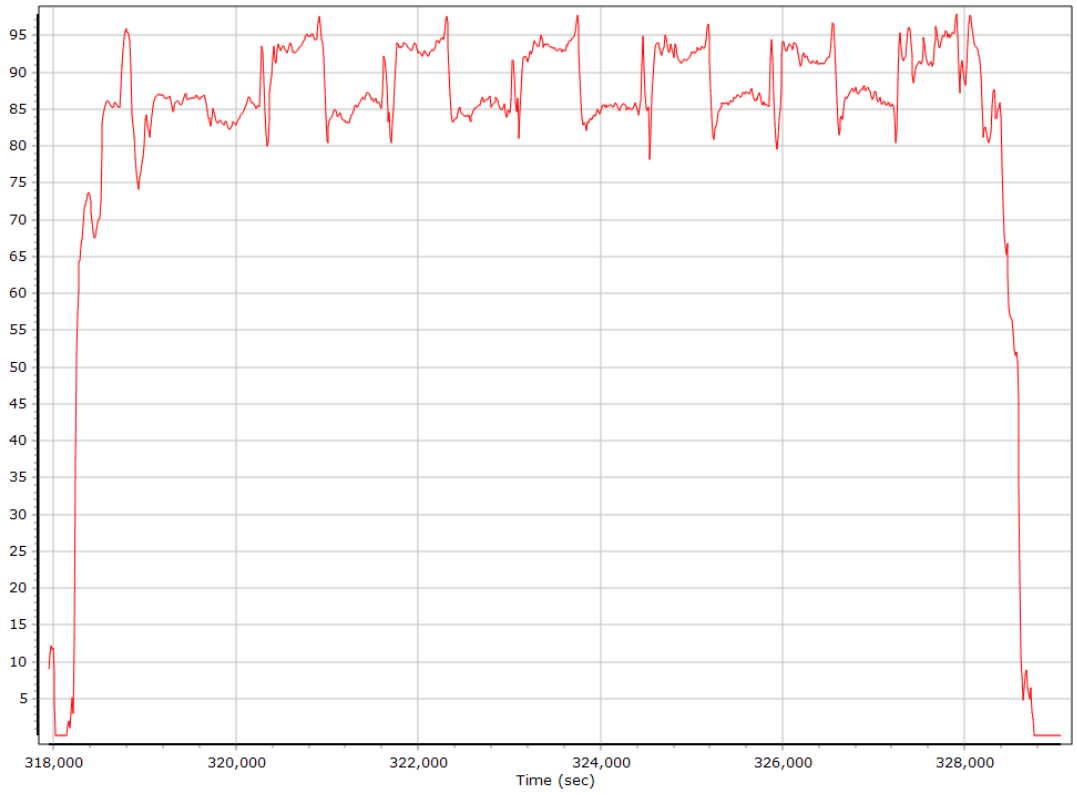
Down Velocity



Total Speed

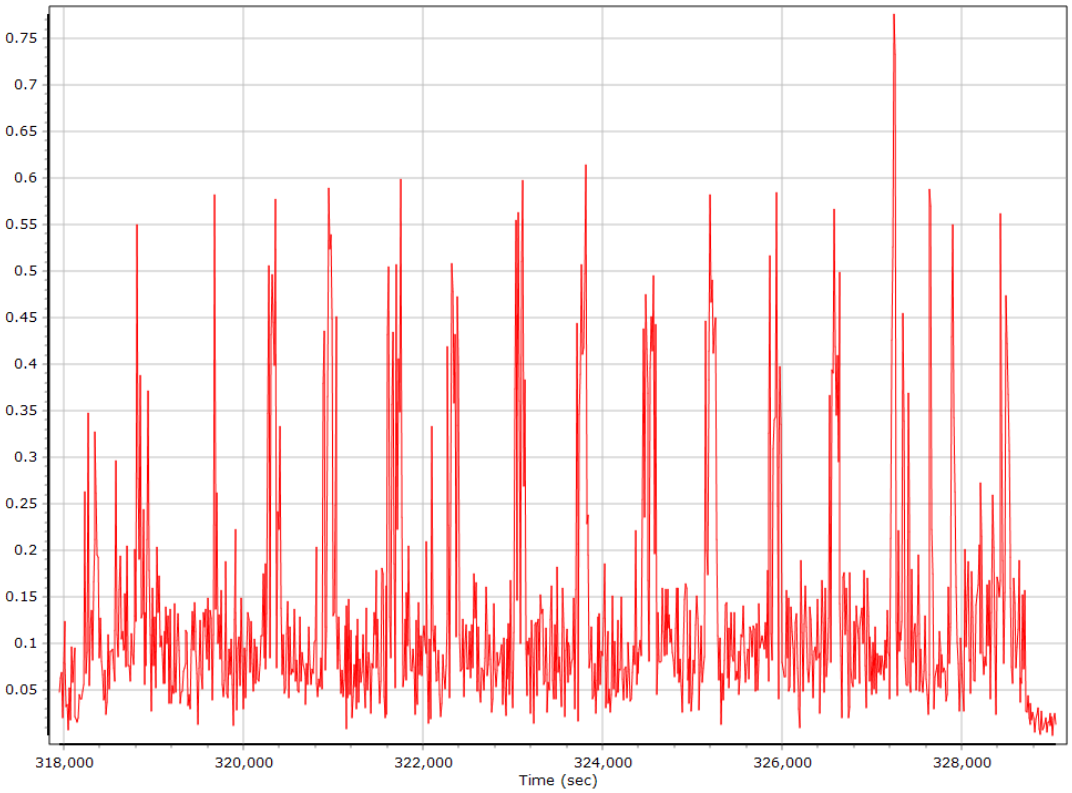


Ground Speed

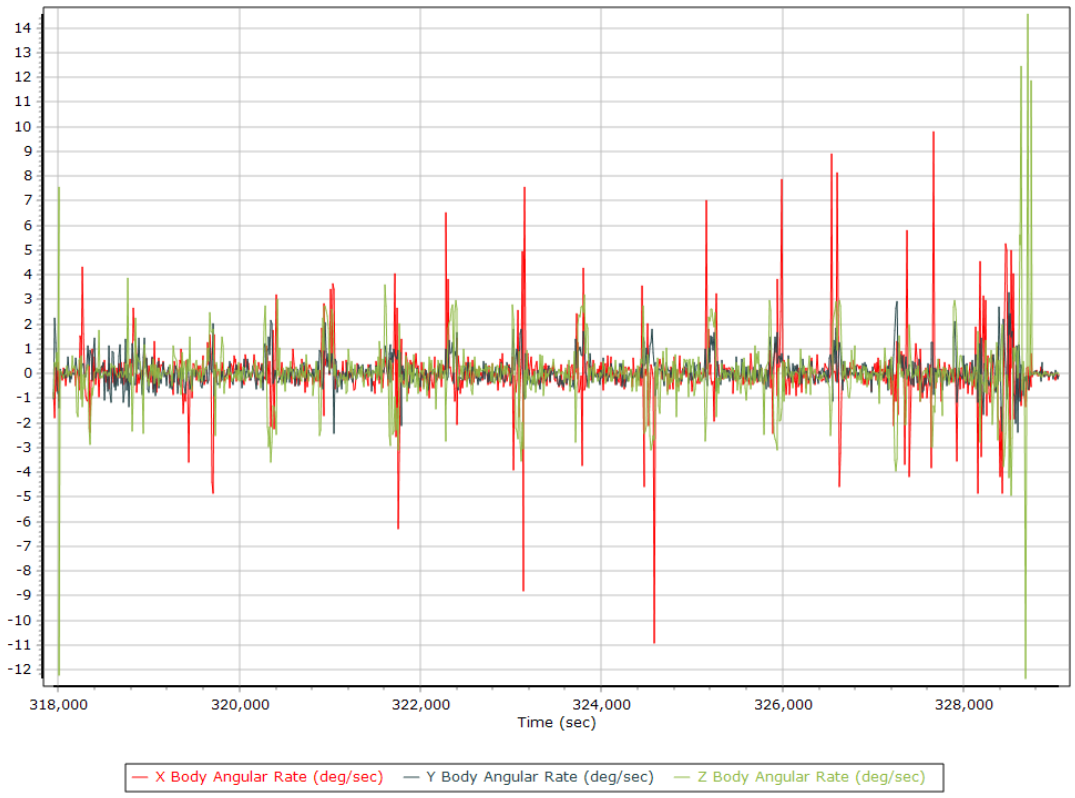


Body Acceleration

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	DataType	Rate	Service	Database	Status

SmartBase Results

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

SmartBase Quality Check

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	6.75	93.76	
Number of GPS SV	7	11	9
Number of GLONASS SV	0	8	7
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	7	18	16
PDOP	1.17	2.22	1.37
QC Solution Gaps	1.00	1.00	
Solution Type	**Fixed**	**Float**	**No solution**
Epoch (s)	11546.00	0.00	2.00
Percentage	99.98	0.00	0.02

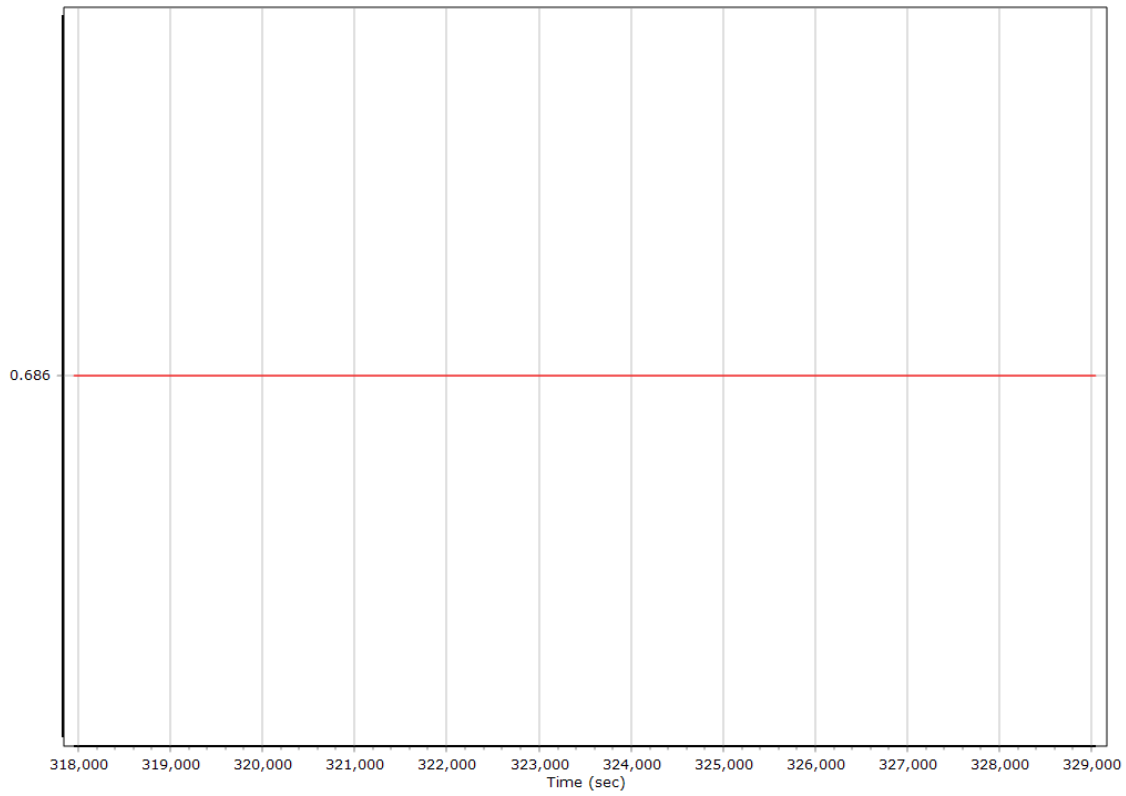
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	317474.000 (12/26/2018 4:11:14 PM)		
Processing end time	329060.000 (12/26/2018 7:24:20 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	0.000	0.000	0.000
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.686	-0.089	-0.956
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

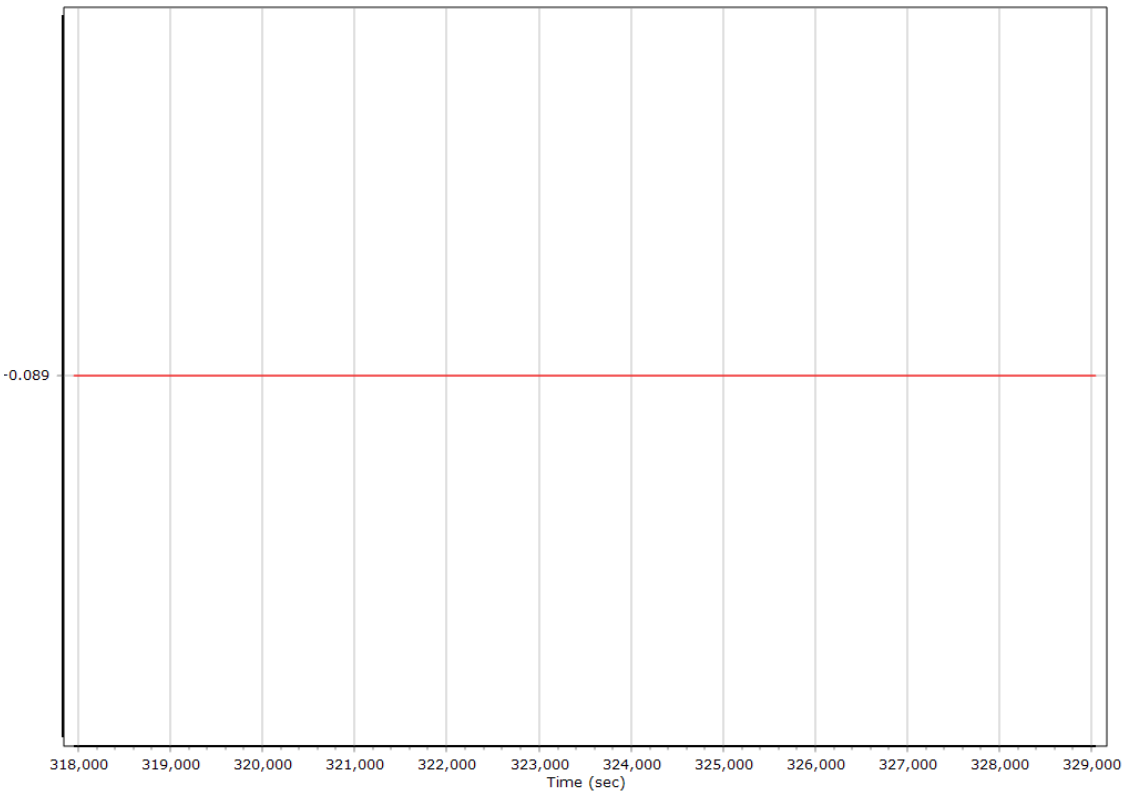
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

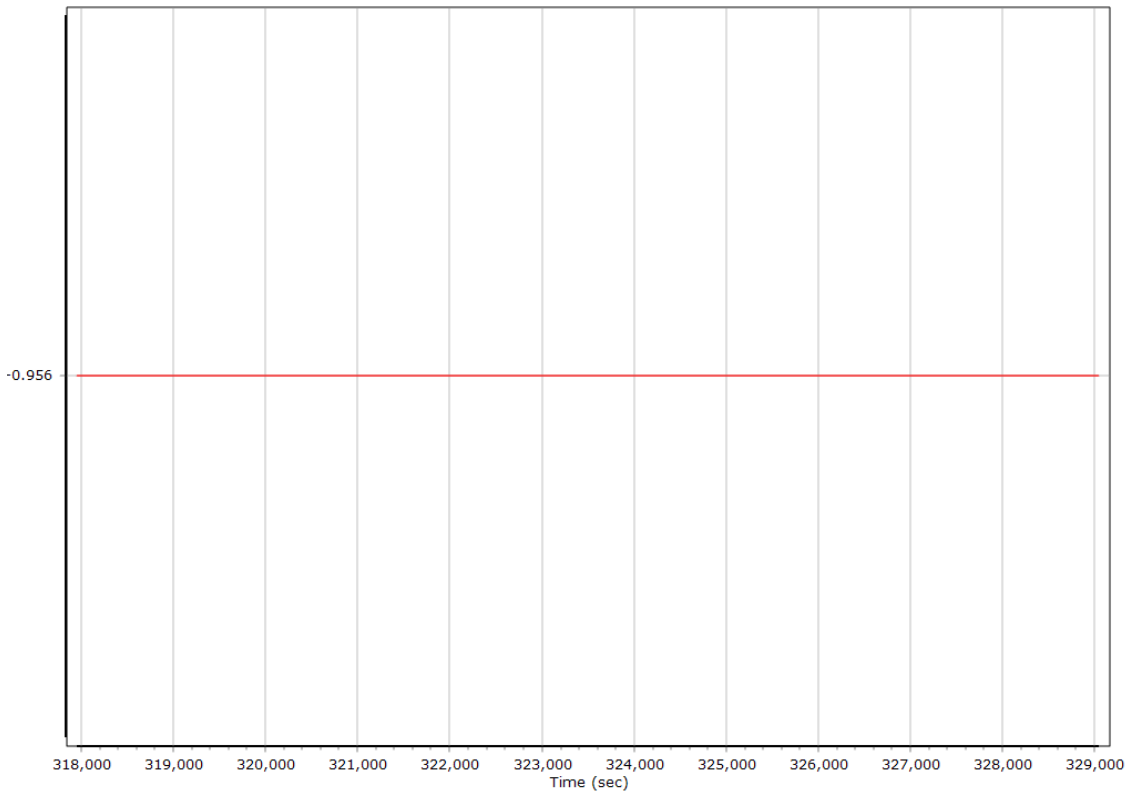
X Reference-Primary GNSS Lever Arm (m)



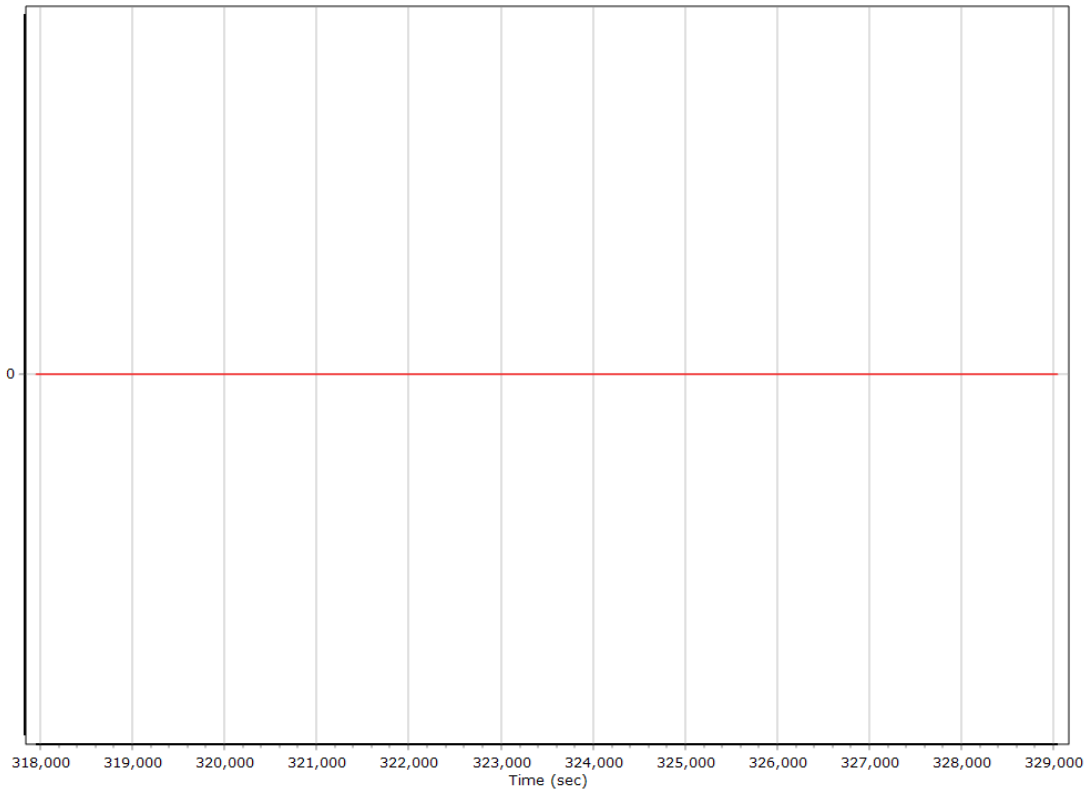
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



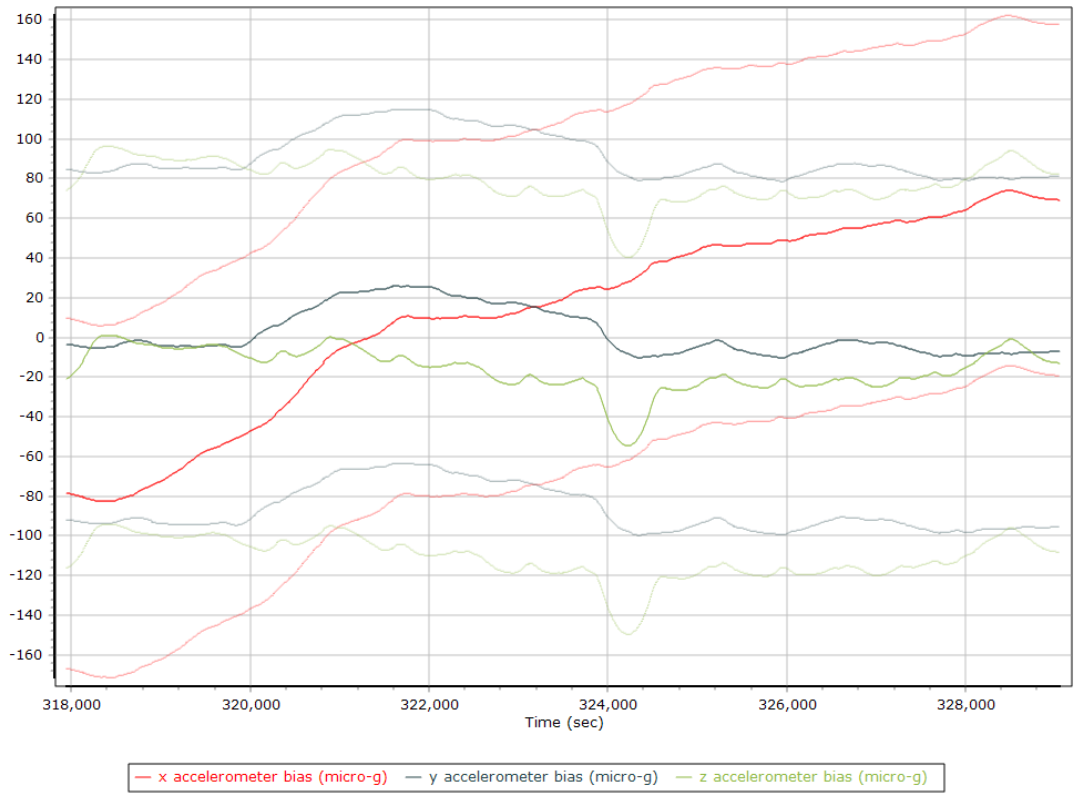
Reference-Primary GNSS Lever Arm Figure of Merit



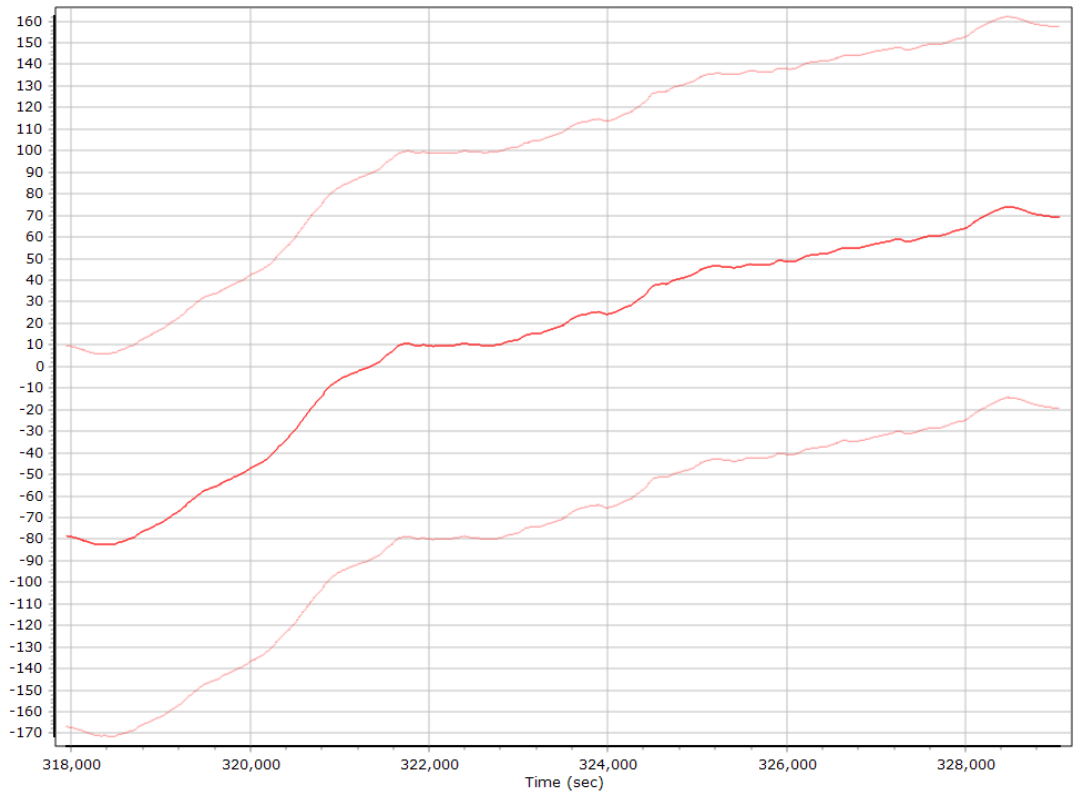
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

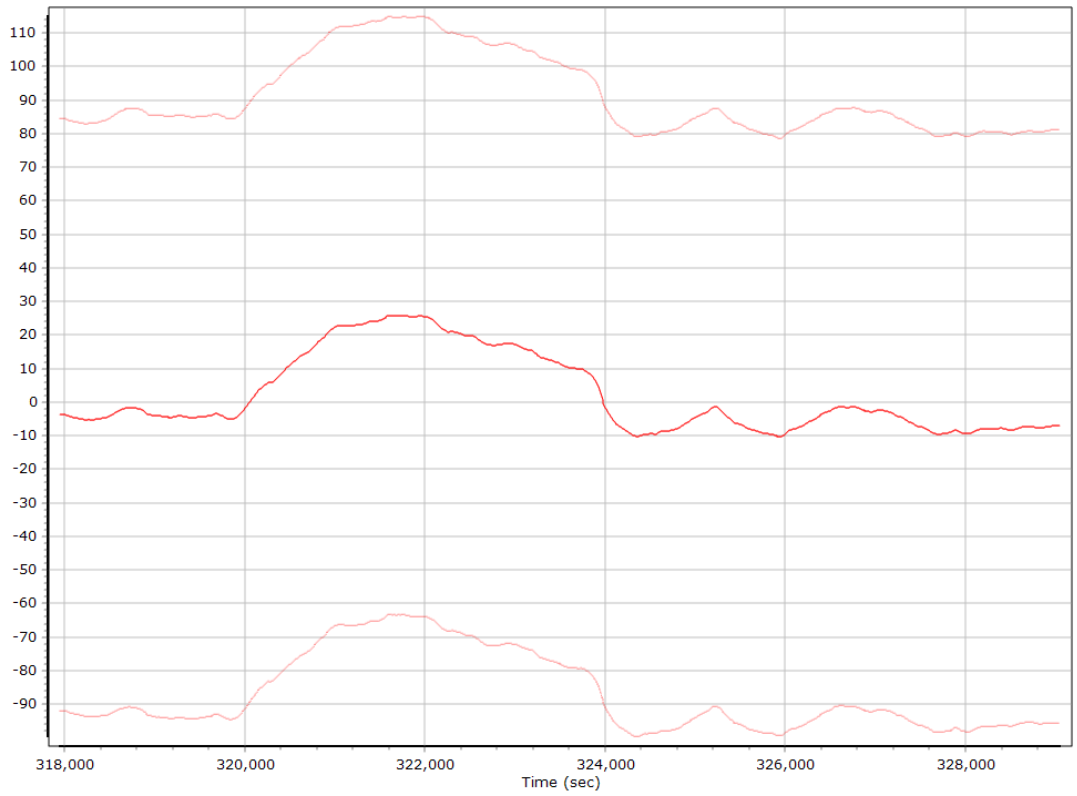
Accelerometer Bias (micro-g)



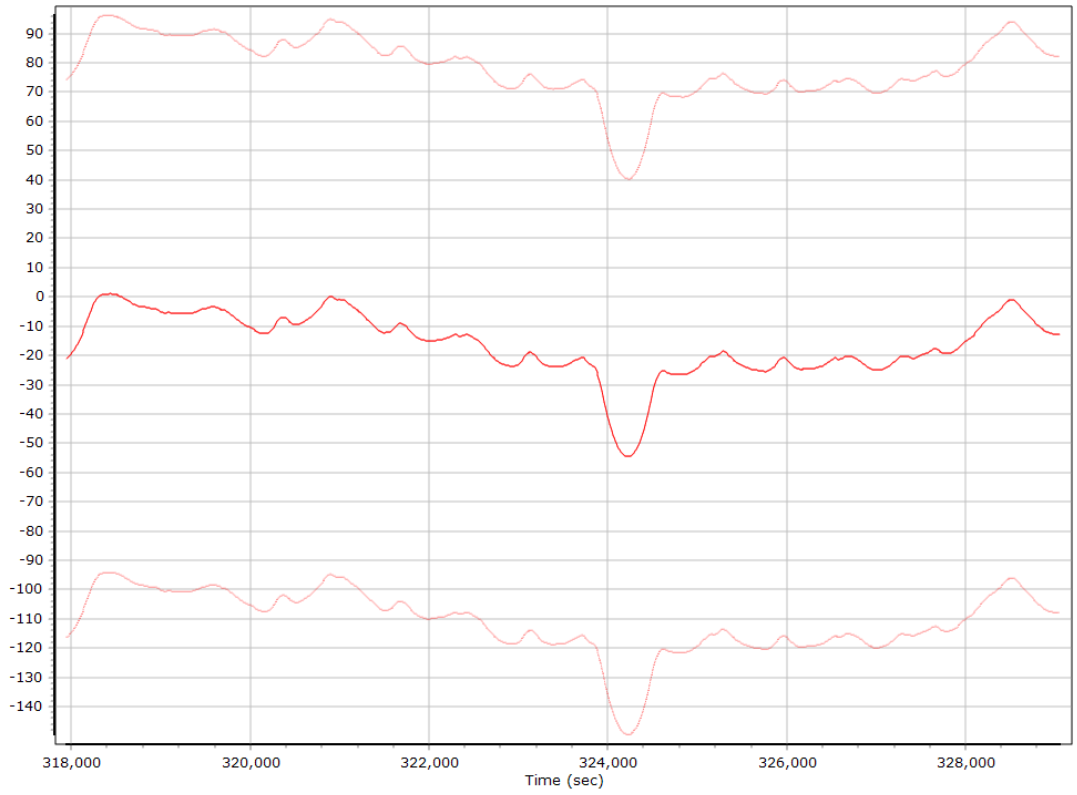
X Accelerometer Bias (micro-g)



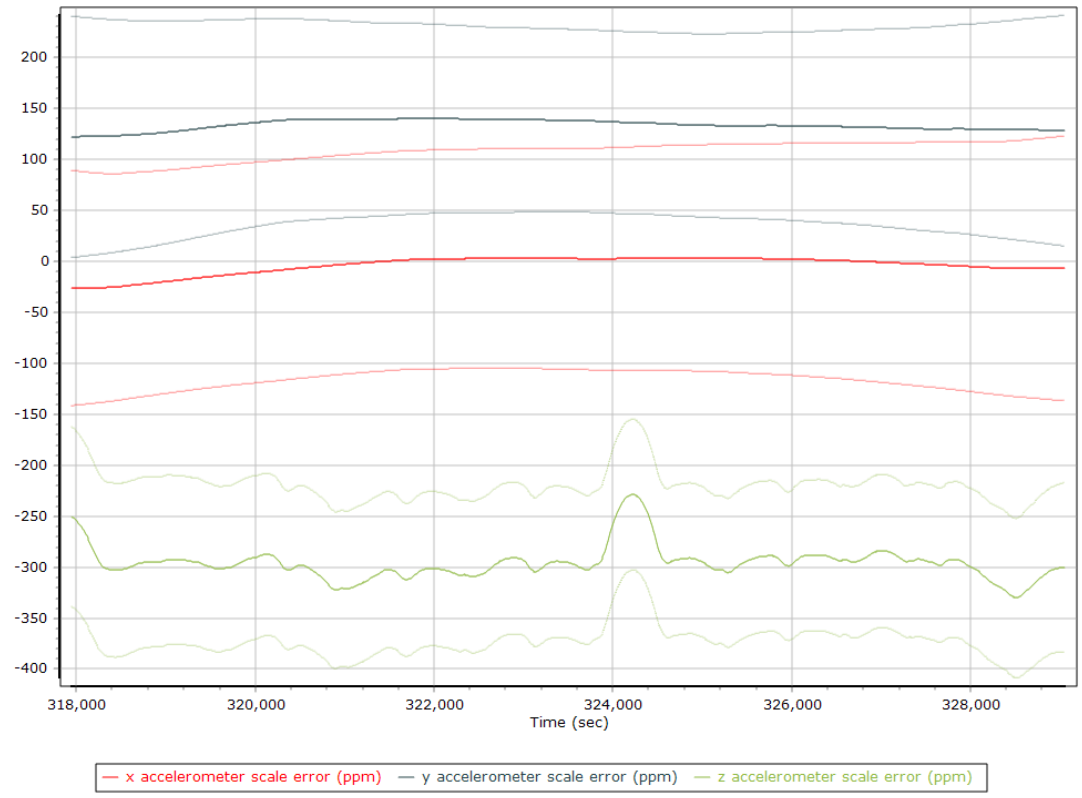
Y Accelerometer Bias (micro-g)



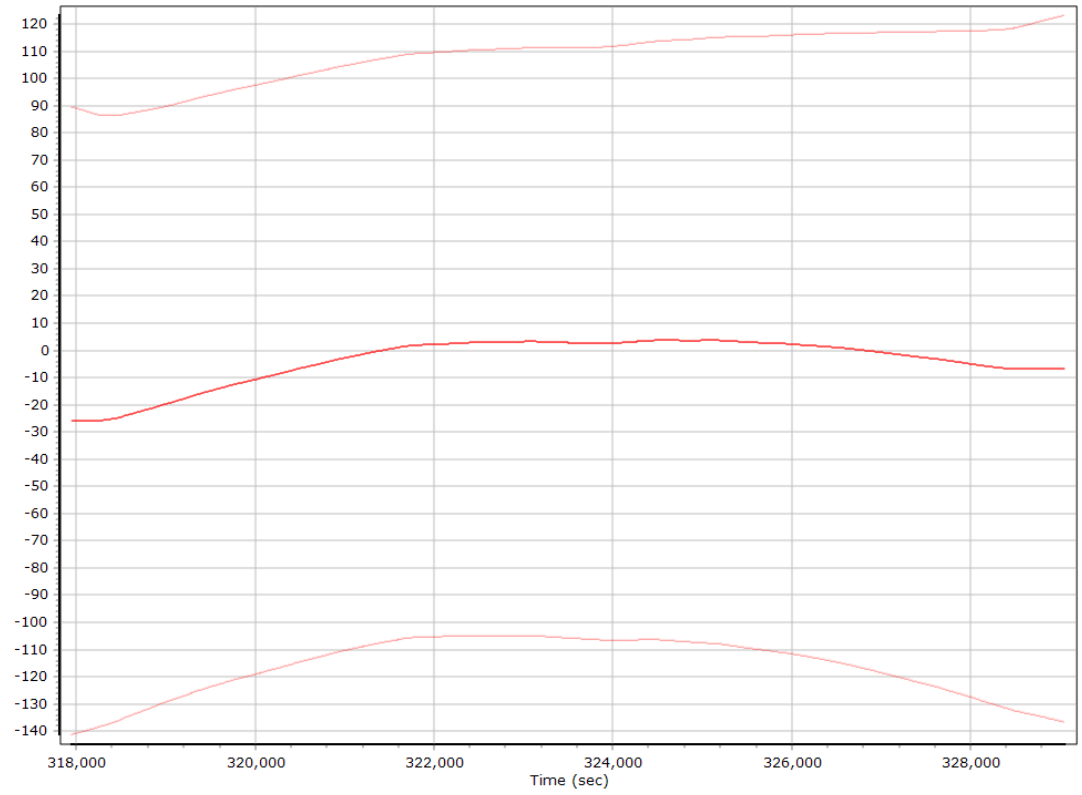
Z Accelerometer Bias (micro-g)



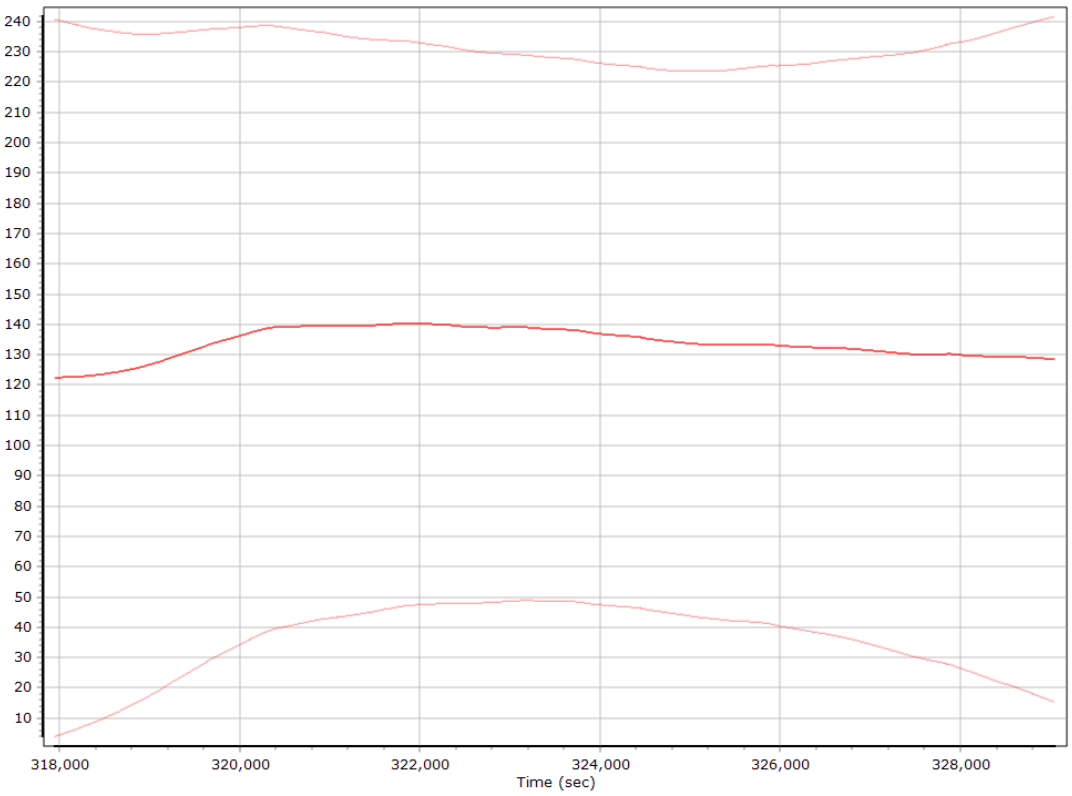
Accelerometer Scale Error (ppm)



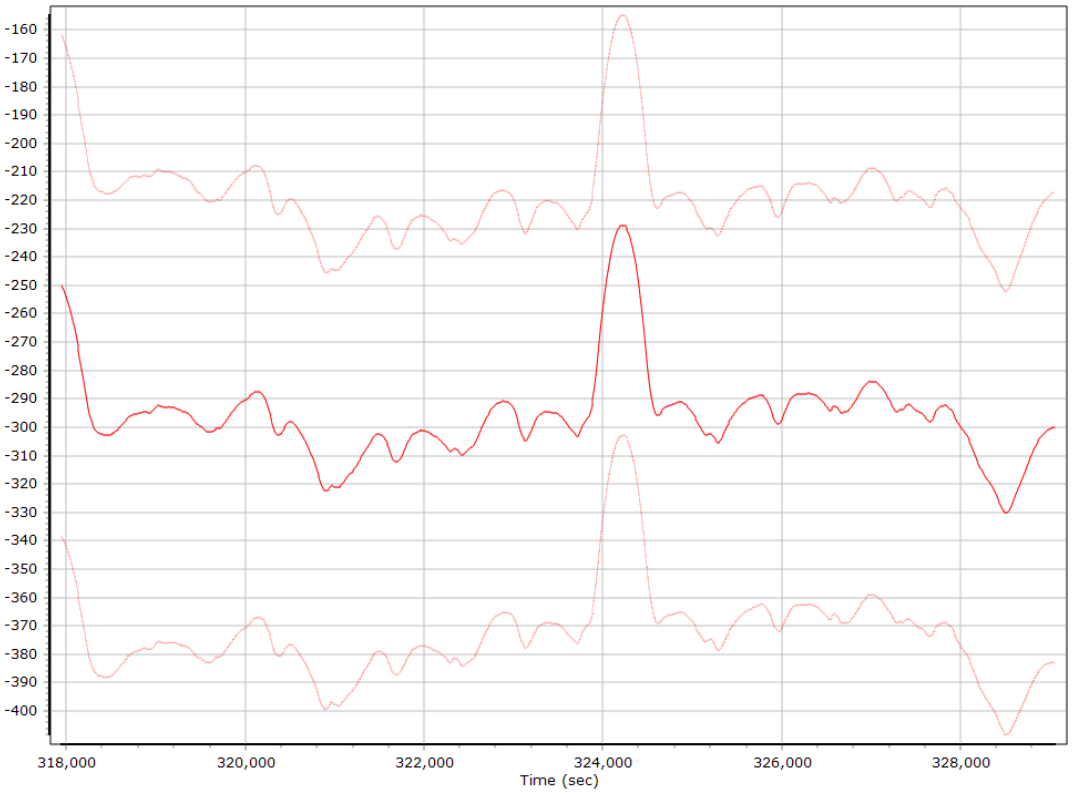
X Accelerometer Scale Error (ppm)



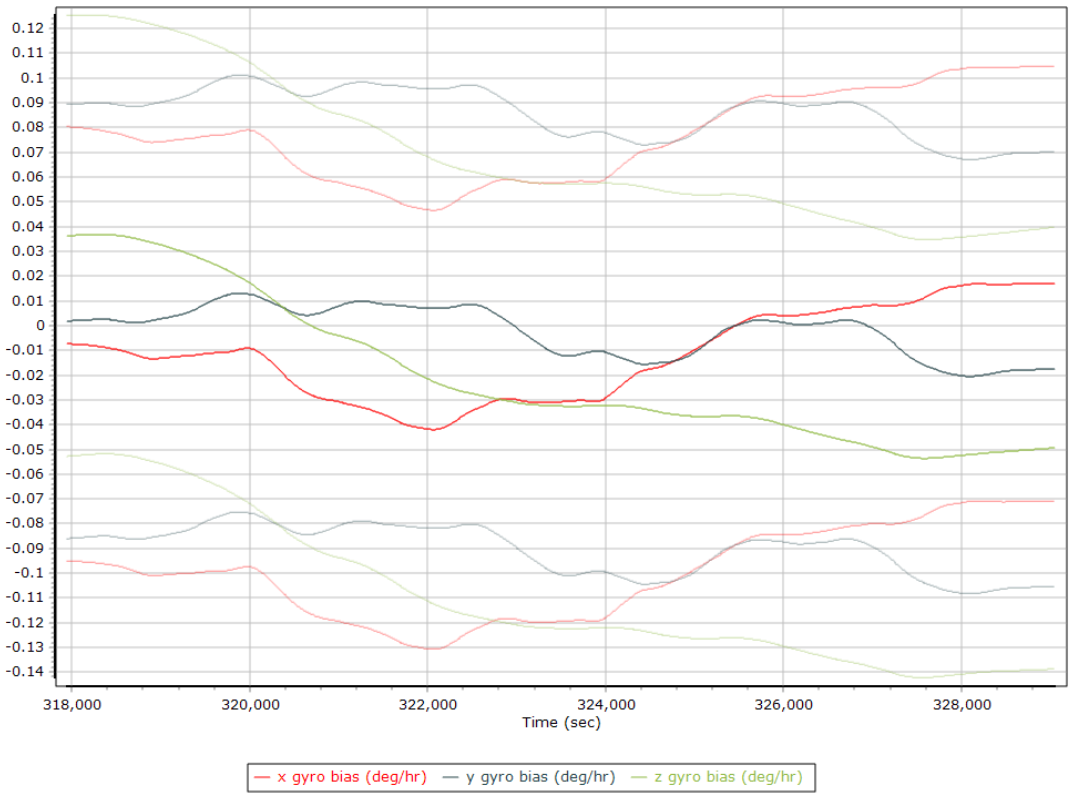
Y Accelerometer Scale Error (ppm)



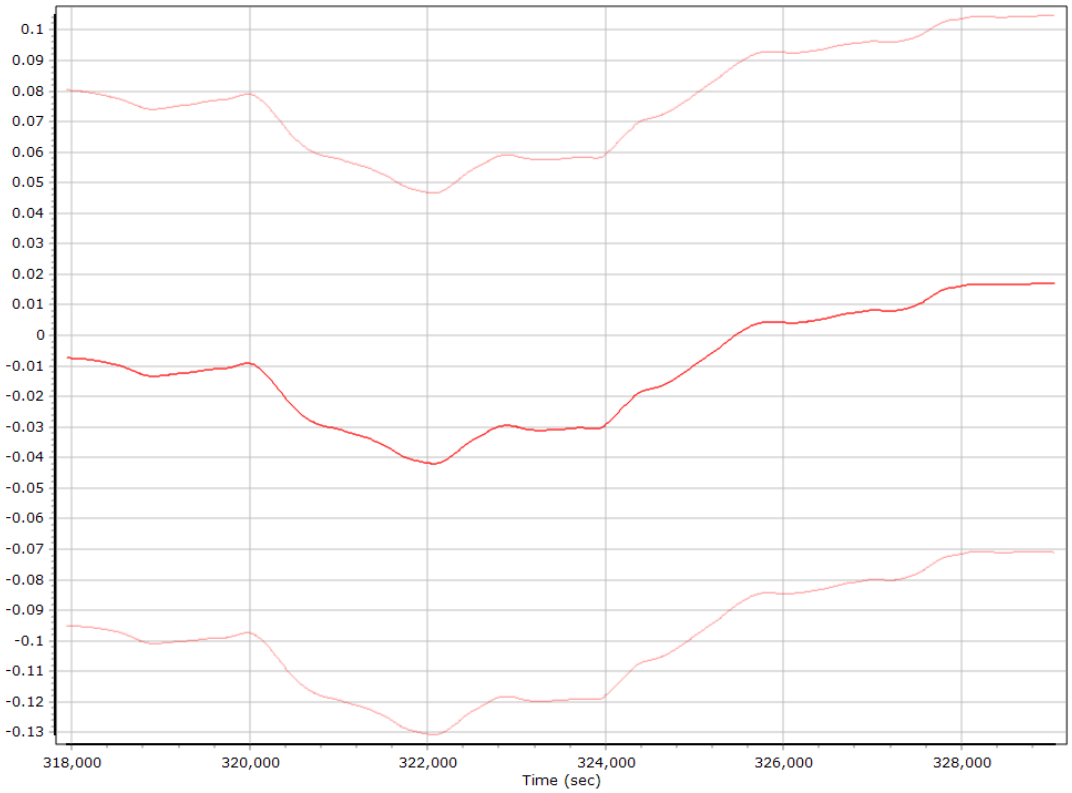
Z Accelerometer Scale Error (ppm)



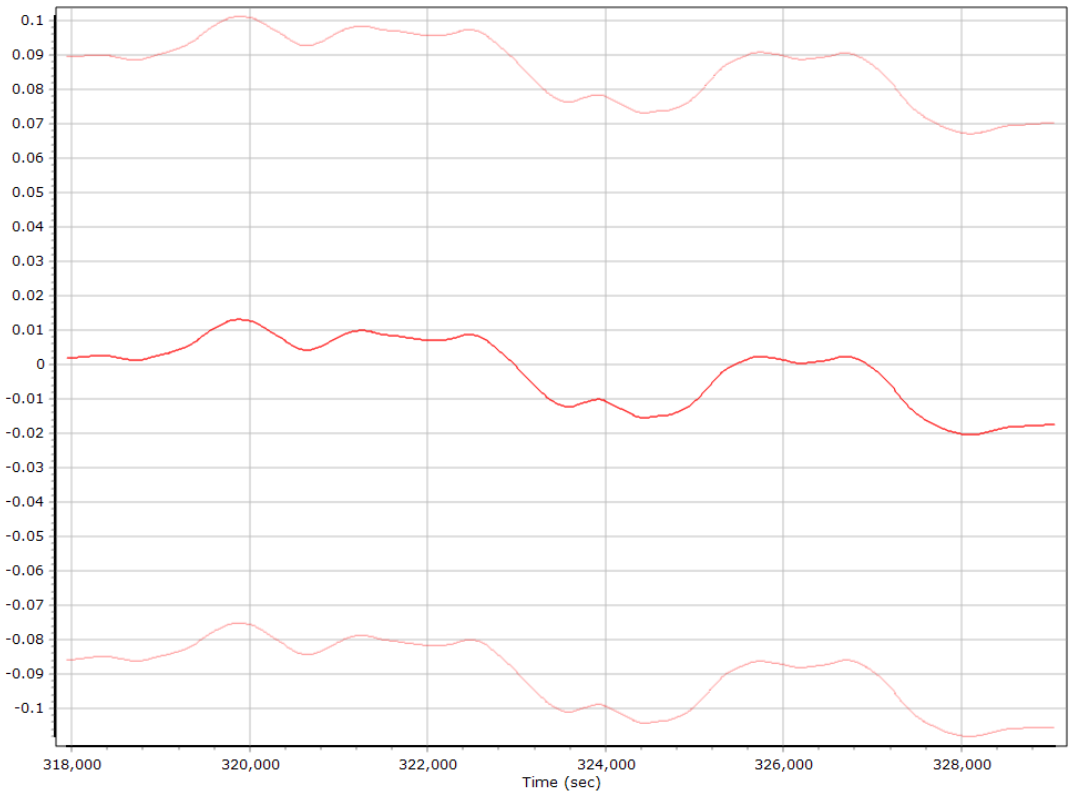
Gyro Bias (deg/h)



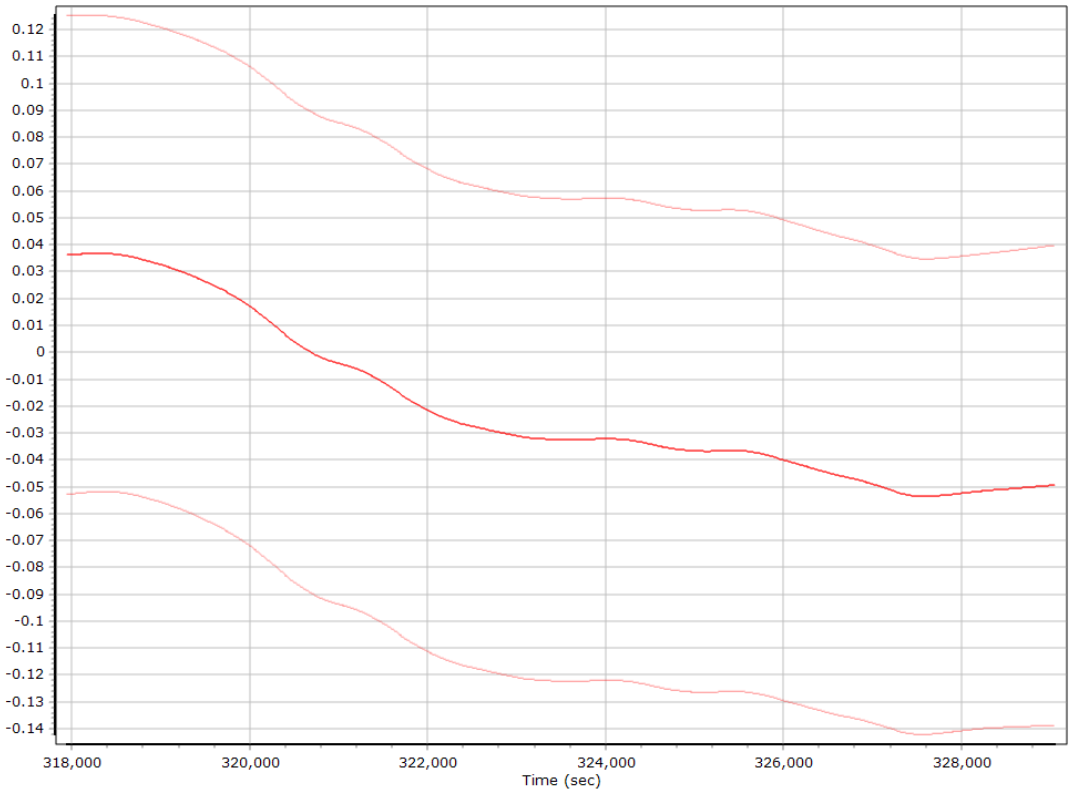
X Gyro Bias (deg/h)



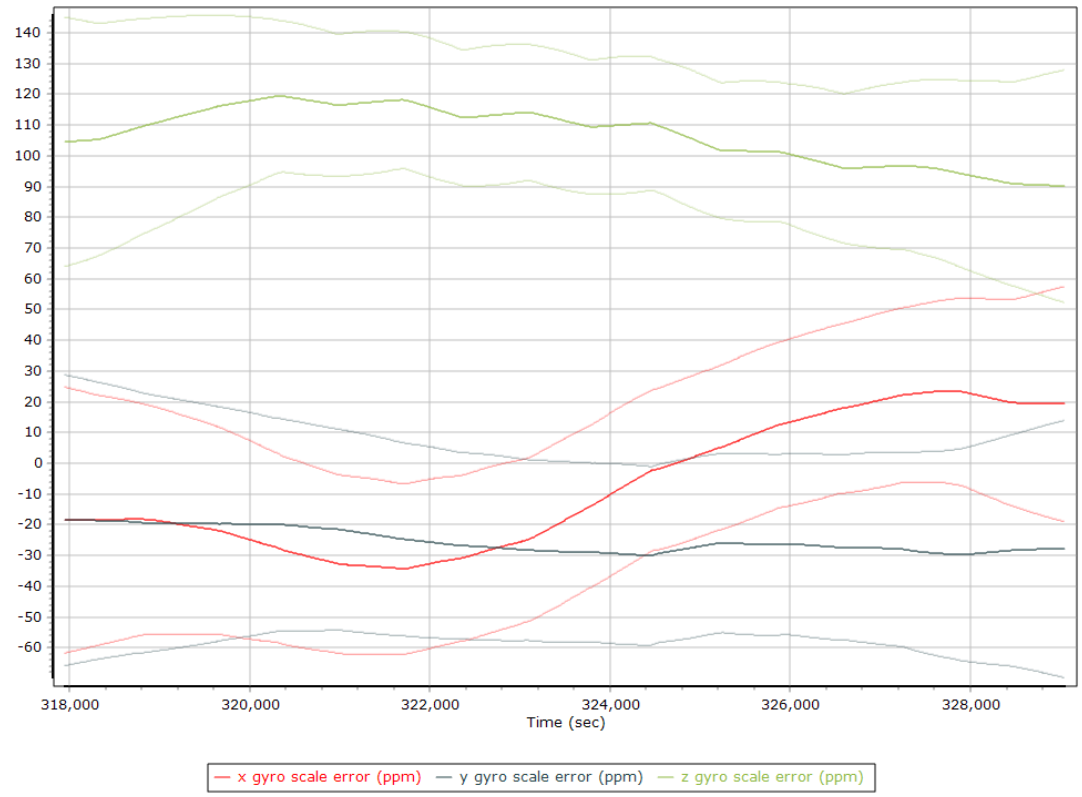
Y Gyro Bias (deg/h)



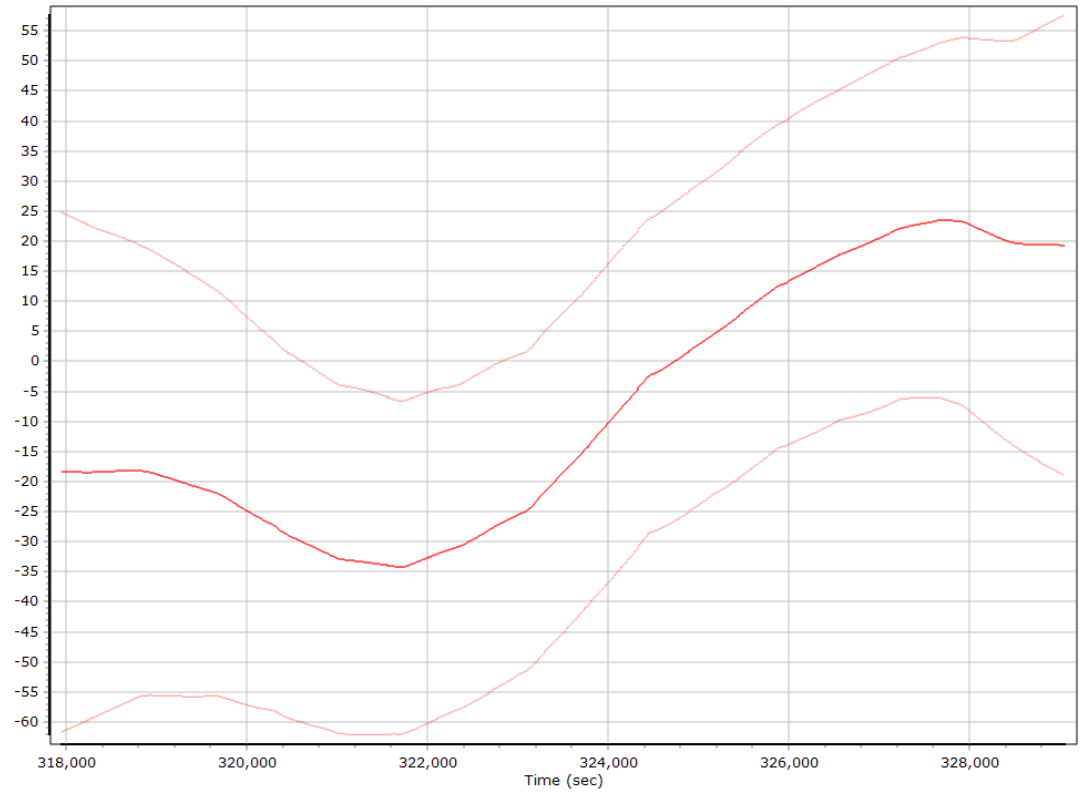
Z Gyro Bias (deg/h)



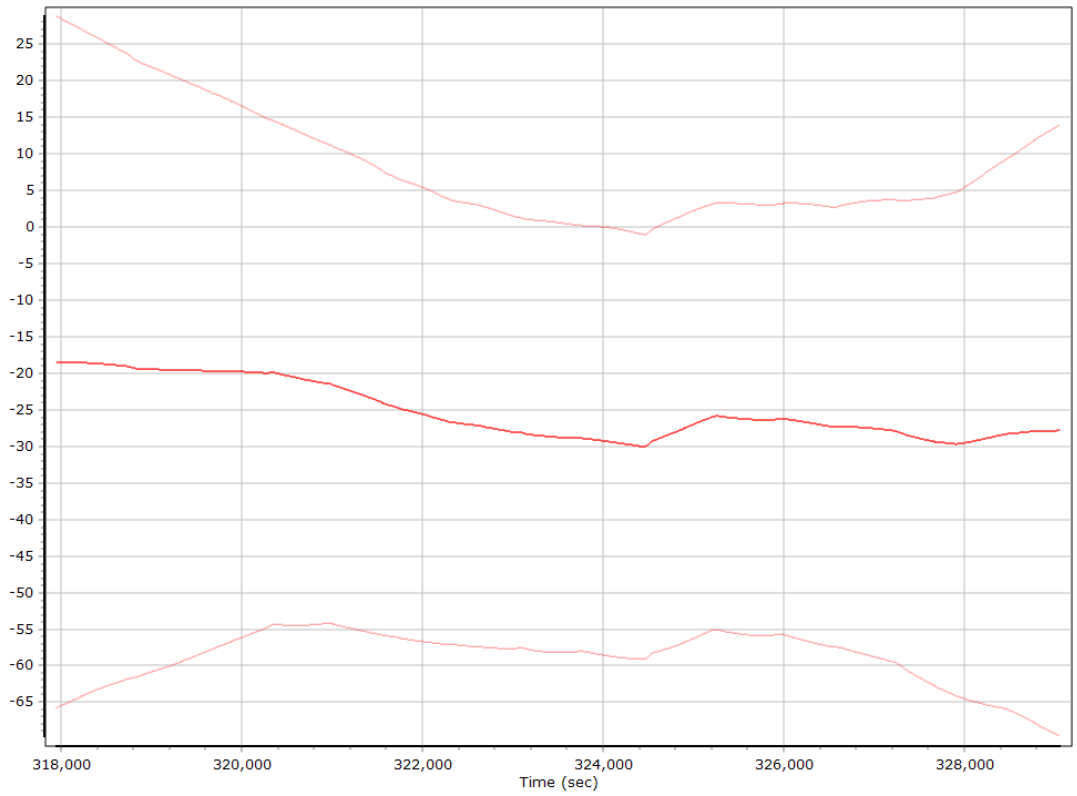
Gyro Scale Error (ppm)



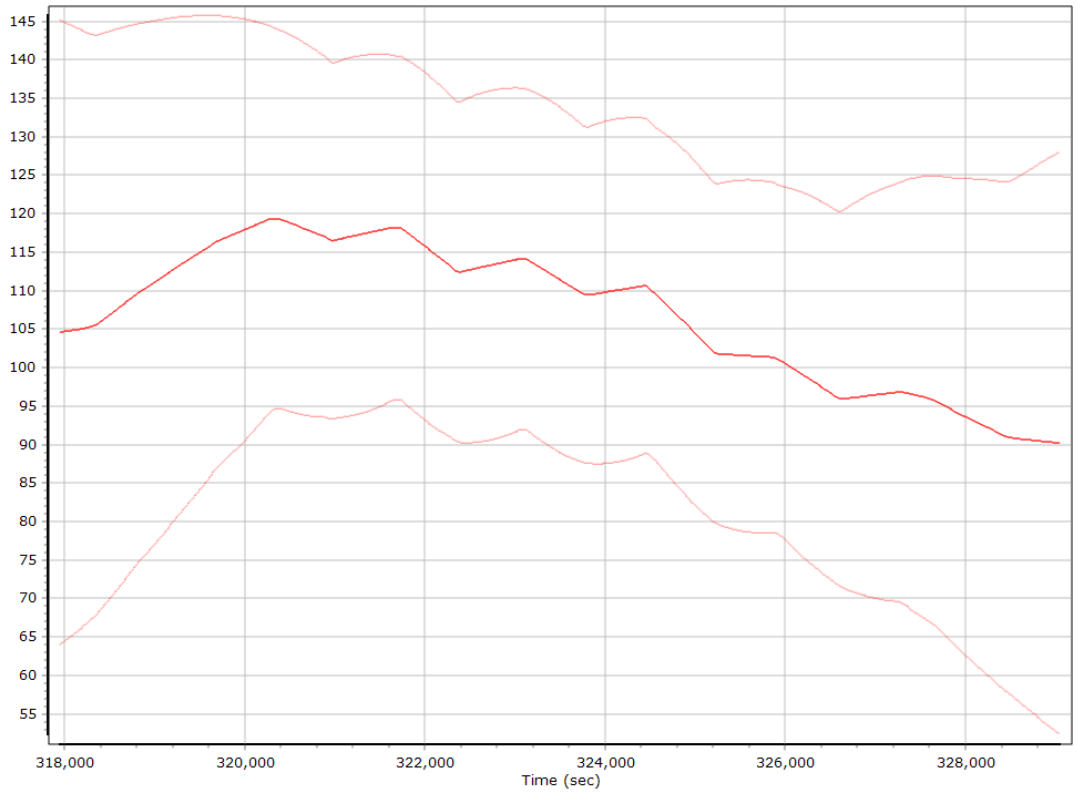
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

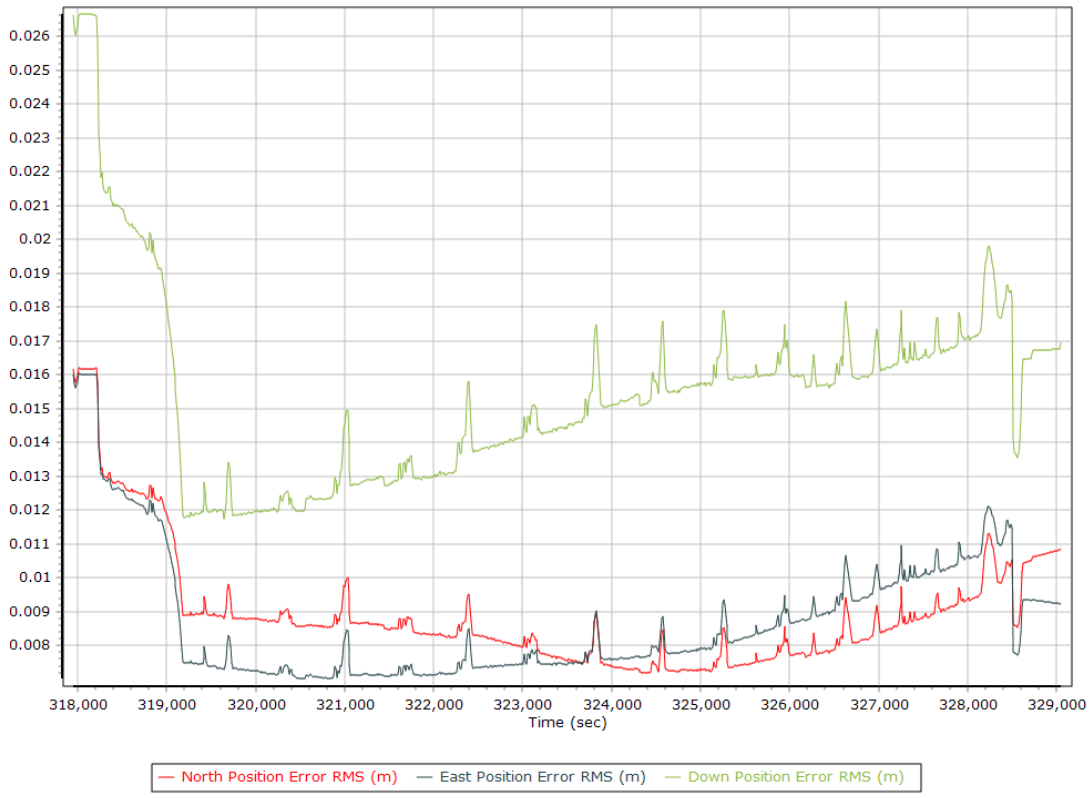


Z Gyro Scale Error (ppm)

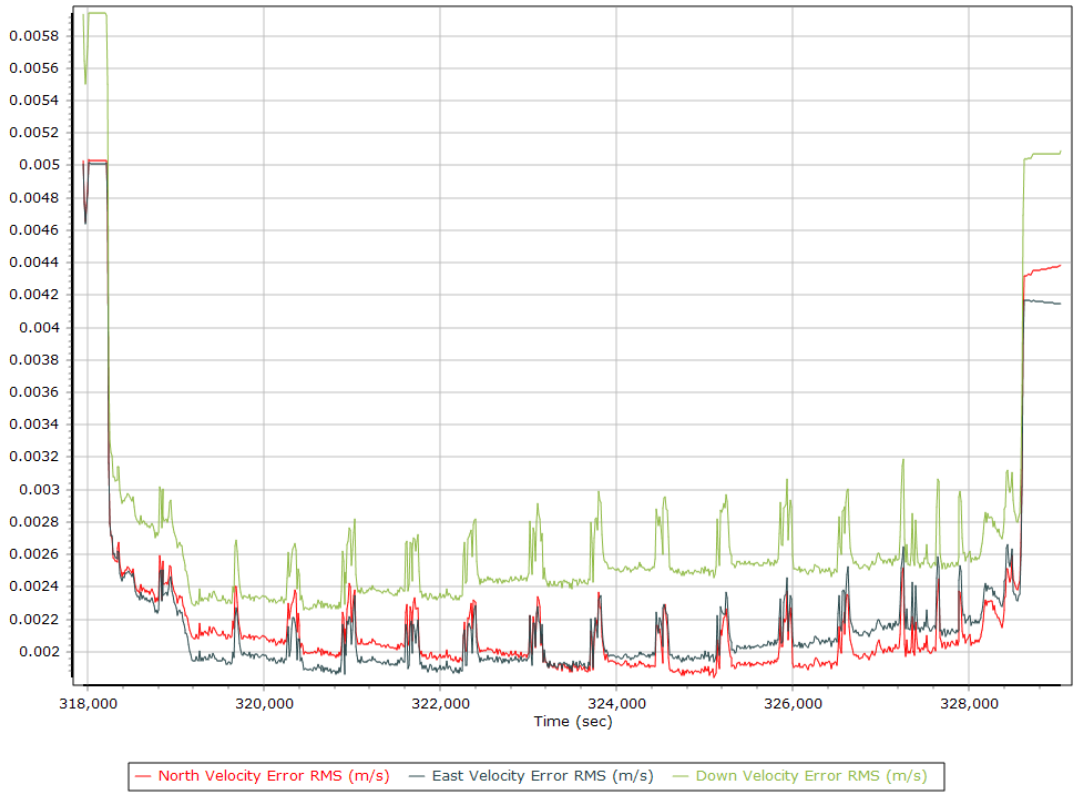


Smoothed Performance Metrics

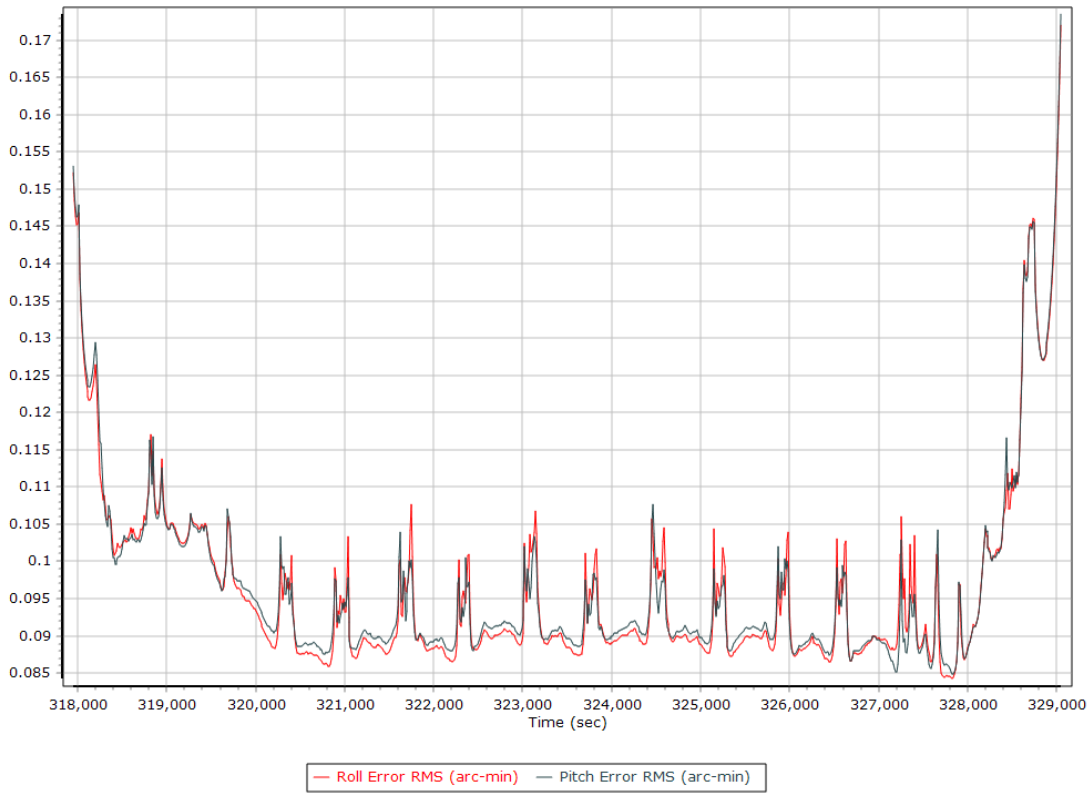
Position Error RMS (m)



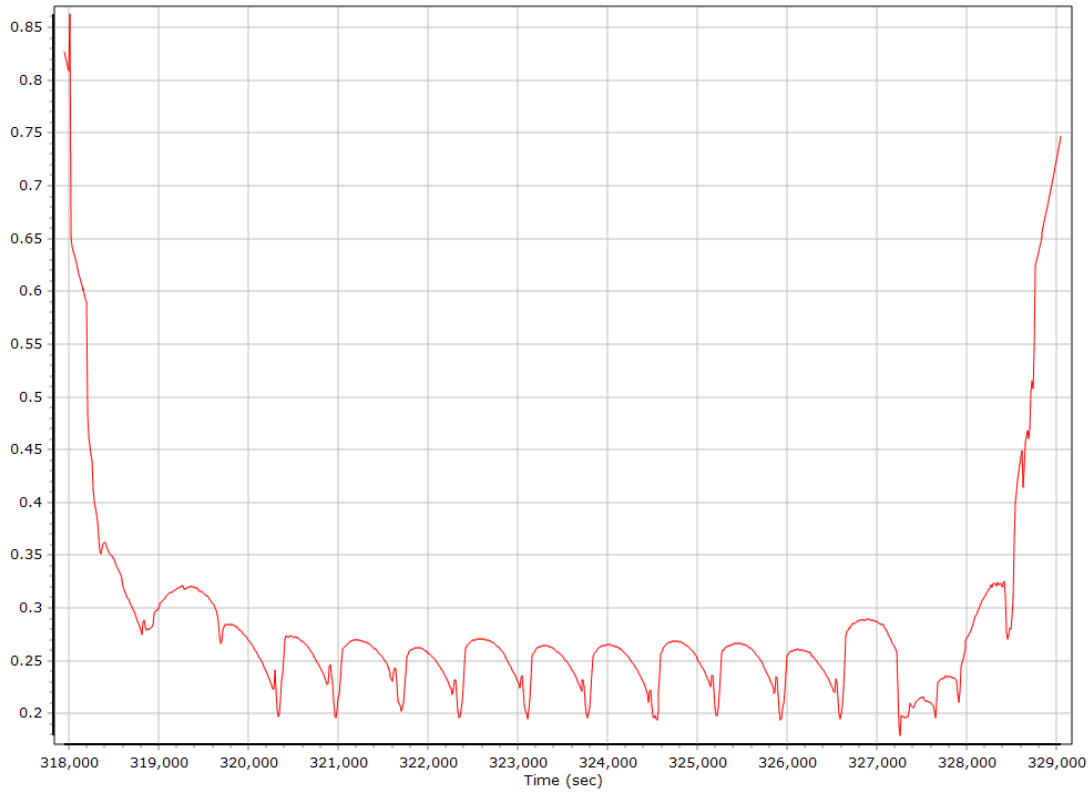
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

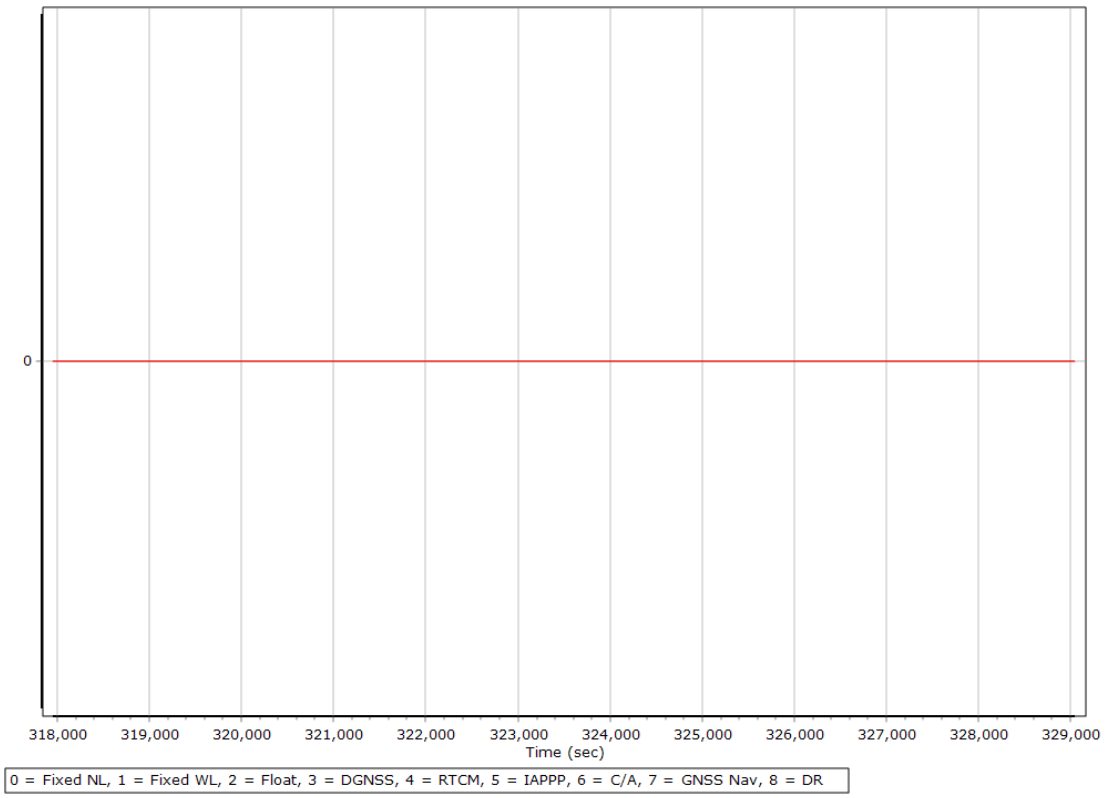


Heading Error RMS (arc-min)

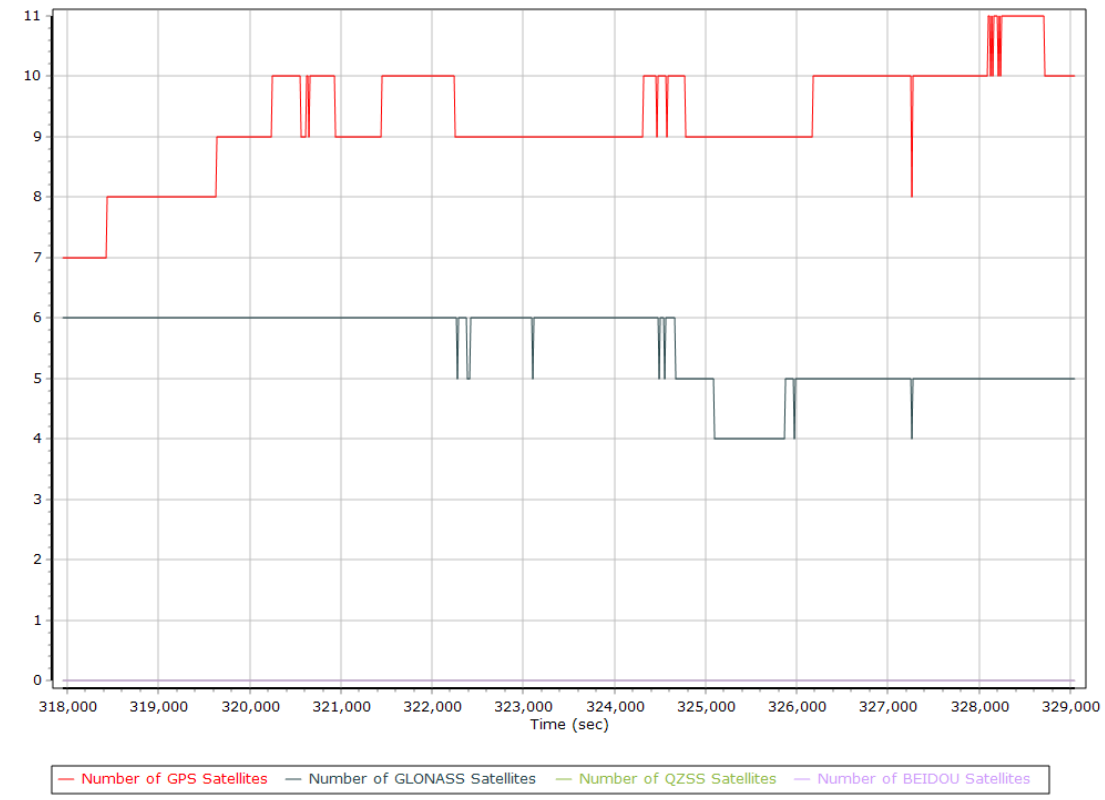


Smoothed Solution Status

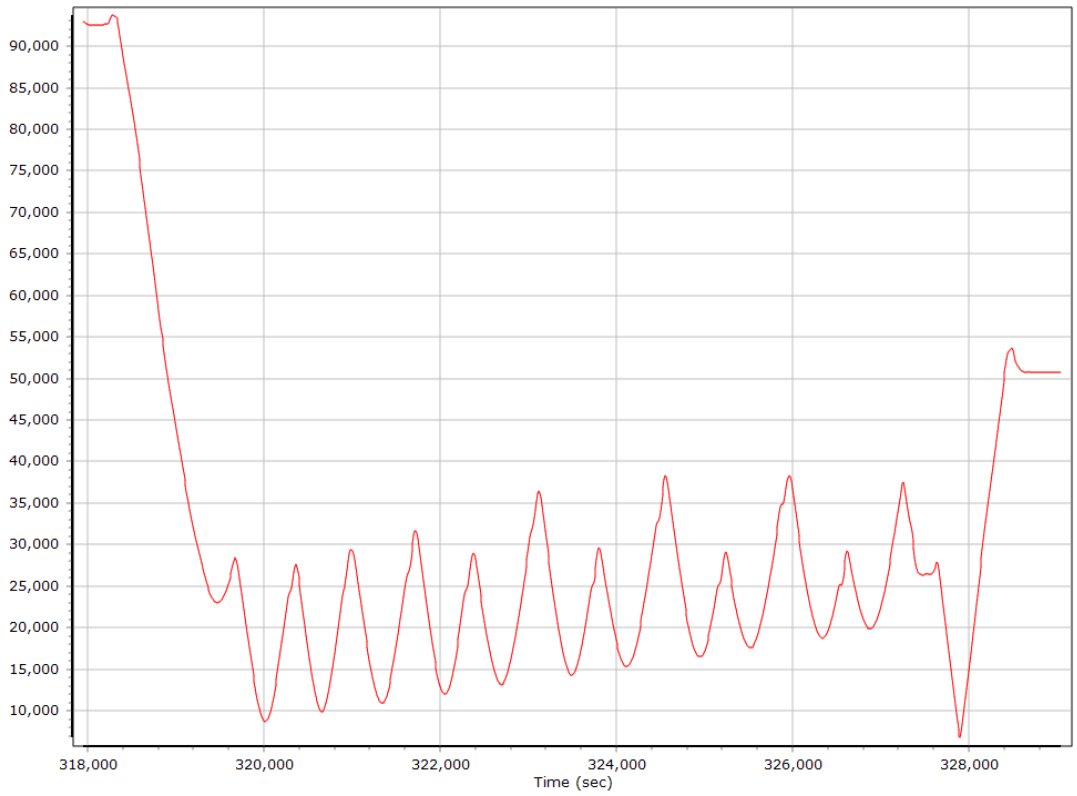
Processing Mode



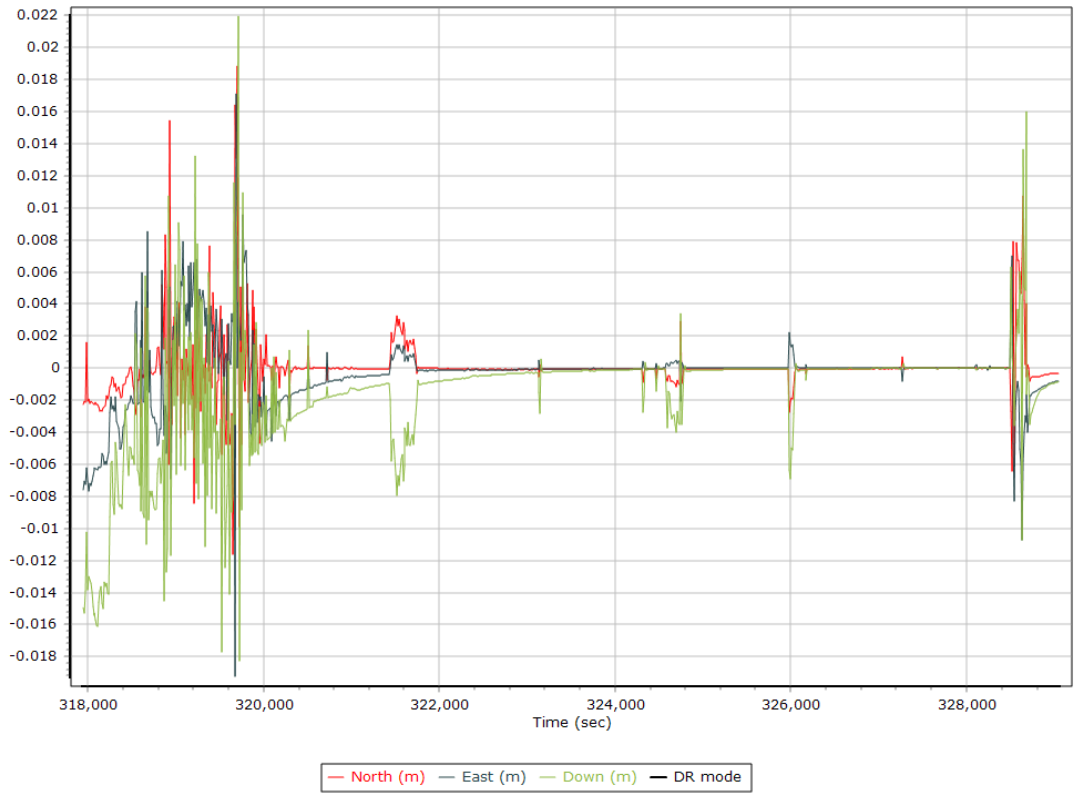
Number of Satellites



Baseline Length



SBET IAKAR Separation



General Information

Mission Information

Project name	13284-1804_20181226b_smartnet_nad83_frame
Processing date	2019-01-22 21:05:05
Mission date	2018-12-26 20:45:28
Mission duration	02:23:37.000
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N9865
IMU type	57
Receiver type	BD982
Antenna type	AV37

Project File List

Rover Data Files

File name	File type
181226_204515_INS-GPS_1.raw	POS Data

Input Files

File Name	File type
Ephm3600.18g	GLONASS Broadcast Ephemeris
Ephm3600.18n	GPS Broadcast Ephemeris
igl20332.sp3	GLONASS Precise Ephemeris
igl20333.sp3	GLONASS Precise Ephemeris
igl20334.sp3	GLONASS Precise Ephemeris
igs20332.sp3	GPS Precise Ephemeris
igs20333.sp3	GPS Precise Ephemeris
igs20334.sp3	GPS Precise Ephemeris
loy8360u.18o	GNSS SingleBase
loy8360u.18n	GPS Broadcast Ephemeris
loy8360u.18g	GLONASS Broadcast Ephemeris
valn360v.18o	GNSS SingleBase
valn360v.18n	GPS Broadcast Ephemeris
valn360v.18g	GLONASS Broadcast Ephemeris
valn360u.18o	GNSS SingleBase
valn360u.18n	GPS Broadcast Ephemeris
valn360u.18g	GLONASS Broadcast Ephemeris
dcdc360x.18o	GNSS SingleBase
dcdc360x.18n	GPS Broadcast Ephemeris
dcdc360x.18g	GLONASS Broadcast Ephemeris
dcdc360w.18o	GNSS SingleBase
dcdc360w.18n	GPS Broadcast Ephemeris
dcdc360w.18g	GLONASS Broadcast Ephemeris
dcdc360v.18o	GNSS SingleBase
dcdc360v.18n	GPS Broadcast Ephemeris
dcdc360v.18g	GLONASS Broadcast Ephemeris
dcdc360u.18o	GNSS SingleBase
dcdc360u.18n	GPS Broadcast Ephemeris
dcdc360u.18g	GLONASS Broadcast Ephemeris
vaah360x.18o	GNSS SingleBase
vaah360x.18n	GPS Broadcast Ephemeris
vaah360x.18g	GLONASS Broadcast Ephemeris
vaah360w.18o	GNSS SingleBase
vaah360w.18n	GPS Broadcast Ephemeris
vaah360w.18g	GLONASS Broadcast Ephemeris
vaah360v.18o	GNSS SingleBase
vaah360v.18n	GPS Broadcast Ephemeris
vaah360v.18g	GLONASS Broadcast Ephemeris
vaah360u.18o	GNSS SingleBase
vaah360u.18n	GPS Broadcast Ephemeris
vaah360u.18g	GLONASS Broadcast Ephemeris
mddm360x.18o	GNSS SingleBase
mddm360x.18n	GPS Broadcast Ephemeris
mddm360x.18g	GLONASS Broadcast Ephemeris
mddm360w.18o	GNSS SingleBase
mddm360w.18n	GPS Broadcast Ephemeris
mddm360w.18g	GLONASS Broadcast Ephemeris
mddm360v.18o	GNSS SingleBase
mddm360v.18n	GPS Broadcast Ephemeris
mddm360v.18g	GLONASS Broadcast Ephemeris
mddm360u.18o	GNSS SingleBase
mddm360u.18n	GPS Broadcast Ephemeris
mddm360u.18g	GLONASS Broadcast Ephemeris
vagv360x.18o	GNSS SingleBase
vagv360x.18n	GPS Broadcast Ephemeris

File Name	File type
vagv360x.18g	GLONASS Broadcast Ephemeris
vagv360w.18o	GNSS SingleBase
vagv360w.18n	GPS Broadcast Ephemeris
vagv360w.18g	GLONASS Broadcast Ephemeris
vagv360v.18o	GNSS SingleBase
vagv360v.18n	GPS Broadcast Ephemeris
vagv360v.18g	GLONASS Broadcast Ephemeris
vagv360u.18o	GNSS SingleBase
vagv360u.18n	GPS Broadcast Ephemeris
vagv360u.18g	GLONASS Broadcast Ephemeris
loyj360x.18o	GNSS SingleBase
loyj360x.18n	GPS Broadcast Ephemeris
loyj360x.18g	GLONASS Broadcast Ephemeris
loyj360w.18o	GNSS SingleBase
loyj360w.18n	GPS Broadcast Ephemeris
loyj360w.18g	GLONASS Broadcast Ephemeris
loyj360v.18o	GNSS SingleBase
loyj360v.18n	GPS Broadcast Ephemeris
loyj360v.18g	GLONASS Broadcast Ephemeris
loyj360u.18o	GNSS SingleBase
loyj360u.18n	GPS Broadcast Ephemeris
loyj360u.18g	GLONASS Broadcast Ephemeris
loyc360x.18o	GNSS SingleBase
loyc360x.18n	GPS Broadcast Ephemeris
loyc360x.18g	GLONASS Broadcast Ephemeris
loyc360w.18o	GNSS SingleBase
loyc360w.18n	GPS Broadcast Ephemeris
loyc360w.18g	GLONASS Broadcast Ephemeris
loyc360v.18o	GNSS SingleBase
loyc360v.18n	GPS Broadcast Ephemeris
loyc360v.18g	GLONASS Broadcast Ephemeris
loyc360u.18o	GNSS SingleBase
loyc360u.18n	GPS Broadcast Ephemeris
loyc360u.18g	GLONASS Broadcast Ephemeris
loy8360x.18o	GNSS SingleBase
loy8360x.18n	GPS Broadcast Ephemeris
loy8360x.18g	GLONASS Broadcast Ephemeris
loy8360w.18o	GNSS SingleBase
loy8360w.18n	GPS Broadcast Ephemeris
loy8360w.18g	GLONASS Broadcast Ephemeris
loy8360v.18o	GNSS SingleBase
loy8360v.18n	GPS Broadcast Ephemeris
loy8360v.18g	GLONASS Broadcast Ephemeris
valn360w.18o	GNSS SingleBase
valn360w.18n	GPS Broadcast Ephemeris
valn360w.18g	GLONASS Broadcast Ephemeris
valn360x.18o	GNSS SingleBase
valn360x.18n	GPS Broadcast Ephemeris
valn360x.18g	GLONASS Broadcast Ephemeris
igr20332.sp3	GPS Precise Ephemeris
igr20333.sp3	GPS Precise Ephemeris
igr20334.sp3	GPS Precise Ephemeris

Output Files

Filename	File type
sbet_Mission 1.out	SBET Trajectory File

Rover Data Summary

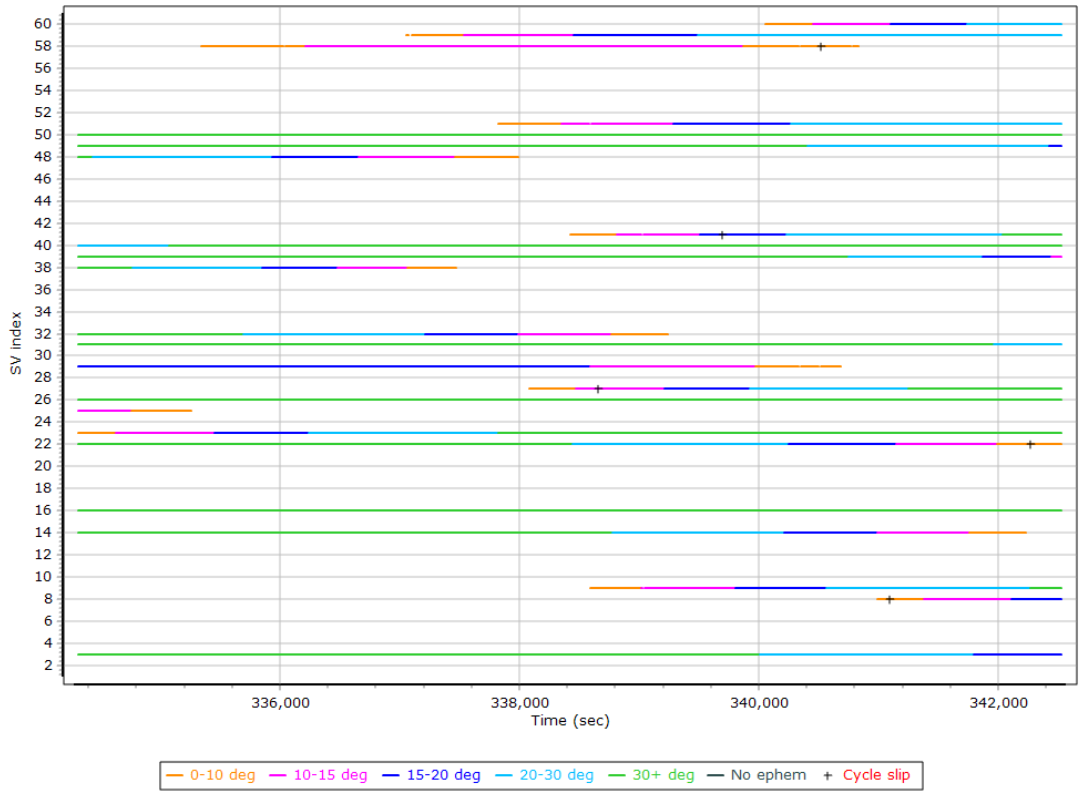
First raw data file	181226_204515_INS-GPS_1.raw		
Last raw data file	181226_204515_INS-GPS_1.raw		
Start GPS week	2033		
Start time	333909.456 (12/26/2018 8:45:09 PM)		
End time	342526.542 (12/26/2018 11:08:46 PM)		
Start of fine alignment	334257.349 (12/26/2018 8:50:57 PM)		
Available subsystems	Primary 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]	0.000	0.000	0.000
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

Raw Data QC

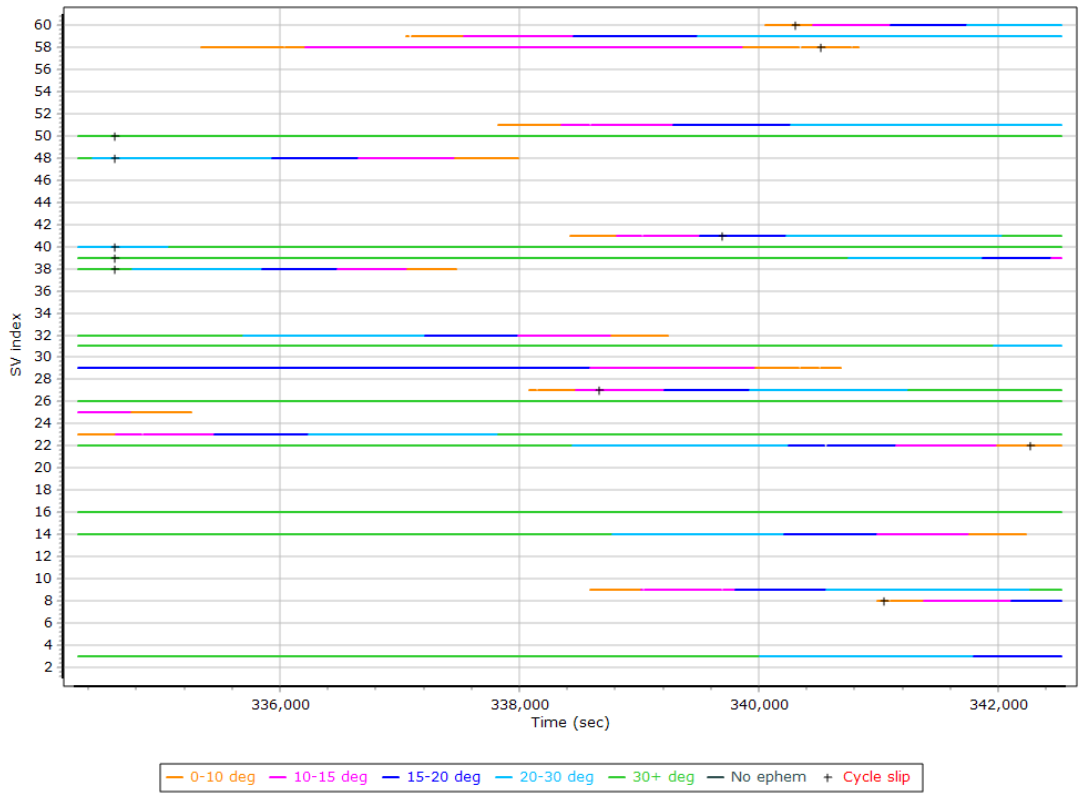
Raw IMU Import QC Summary

IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_Mission 1.log
IMU Records Processed	1723138
Termination Status	Normal
IMU Anomalies	0

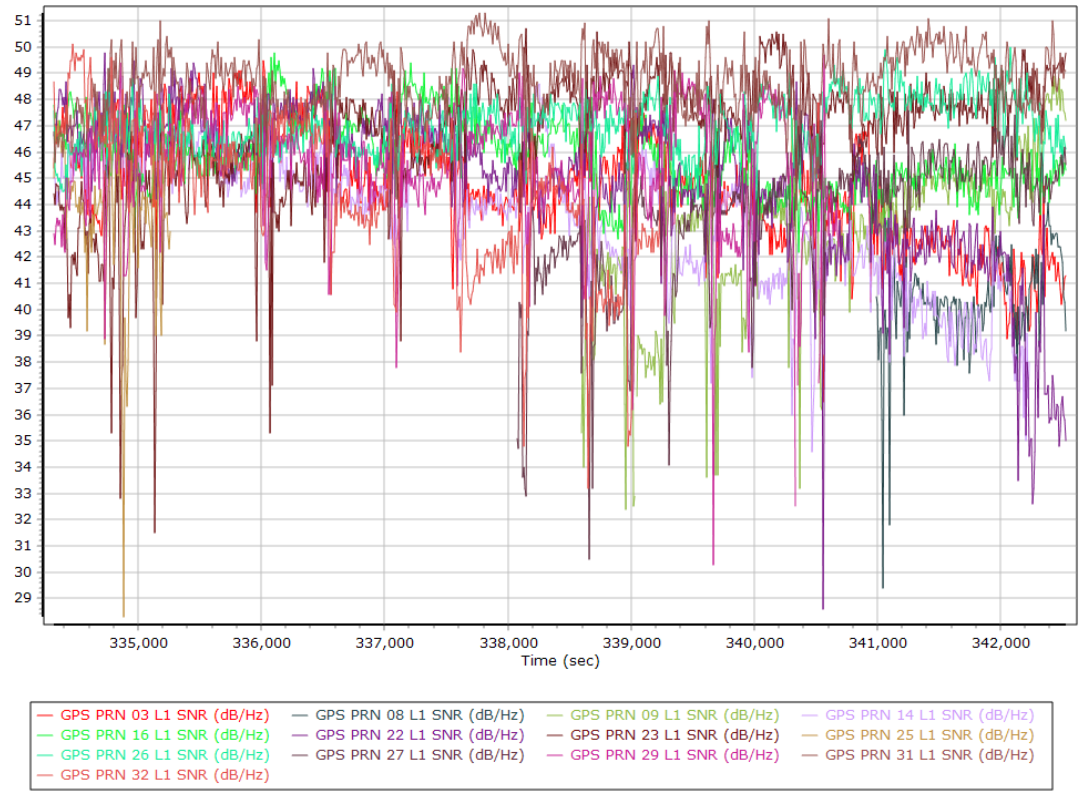
L1 Satellite Lock/Elevation



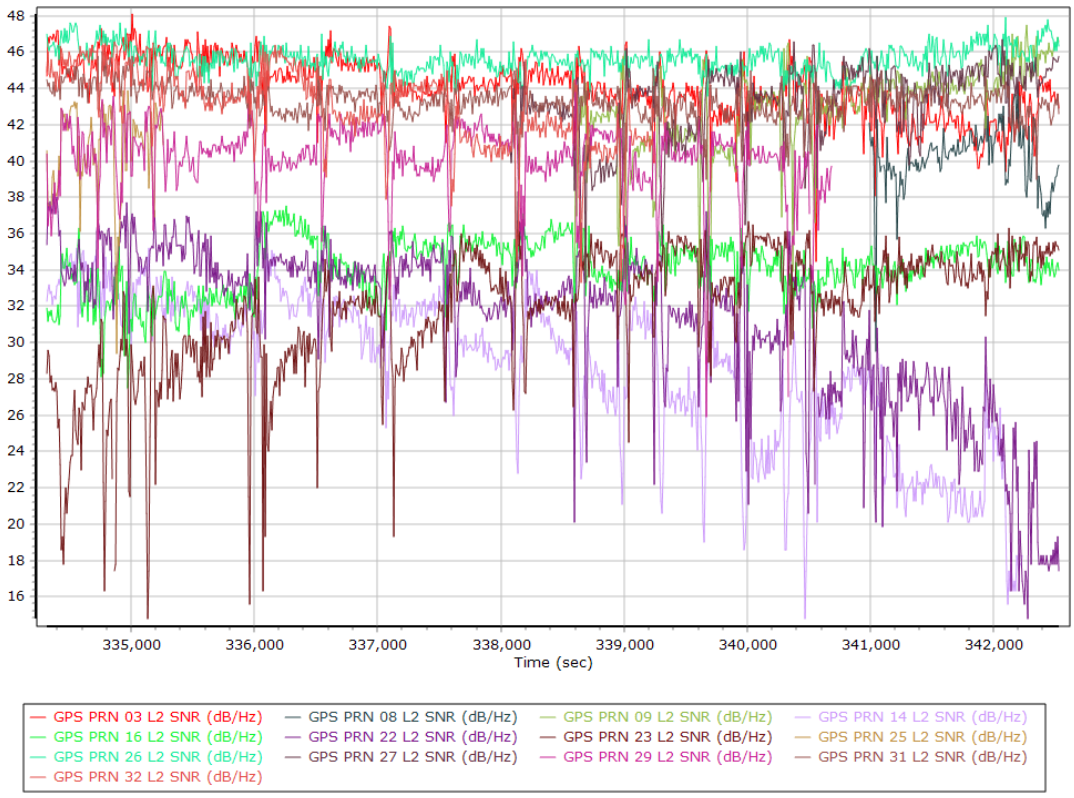
L2 Satellite Lock/Elevation



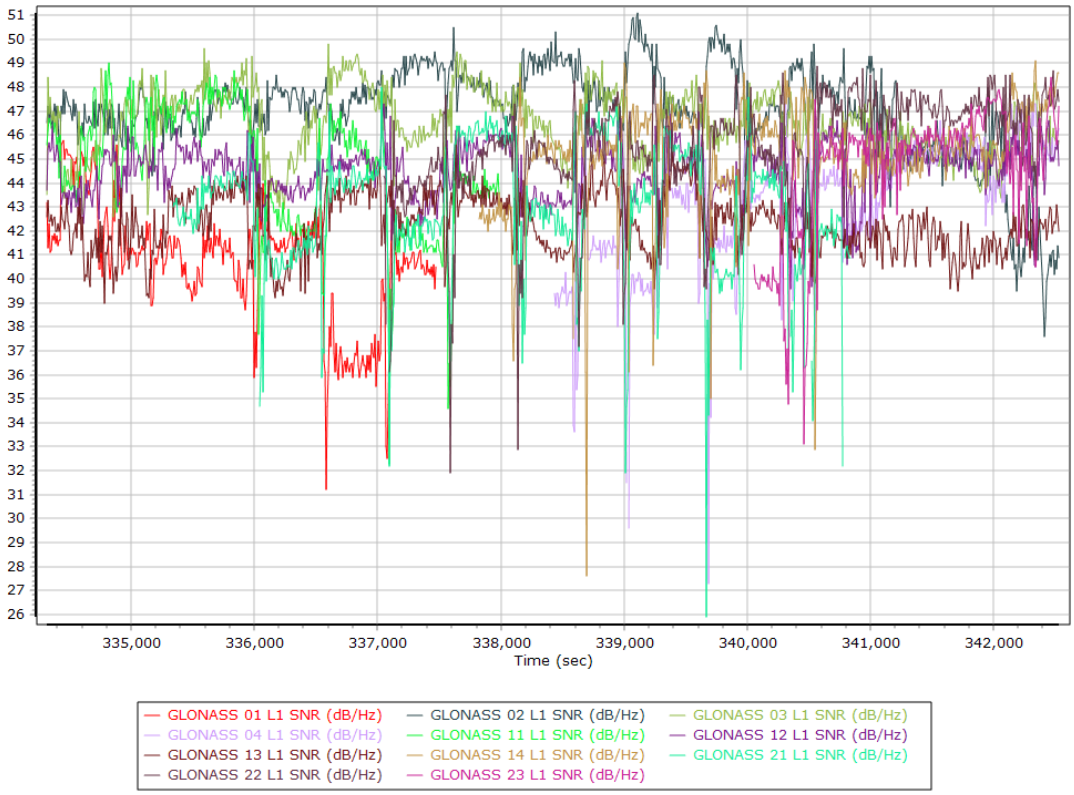
GPS L1 SNR



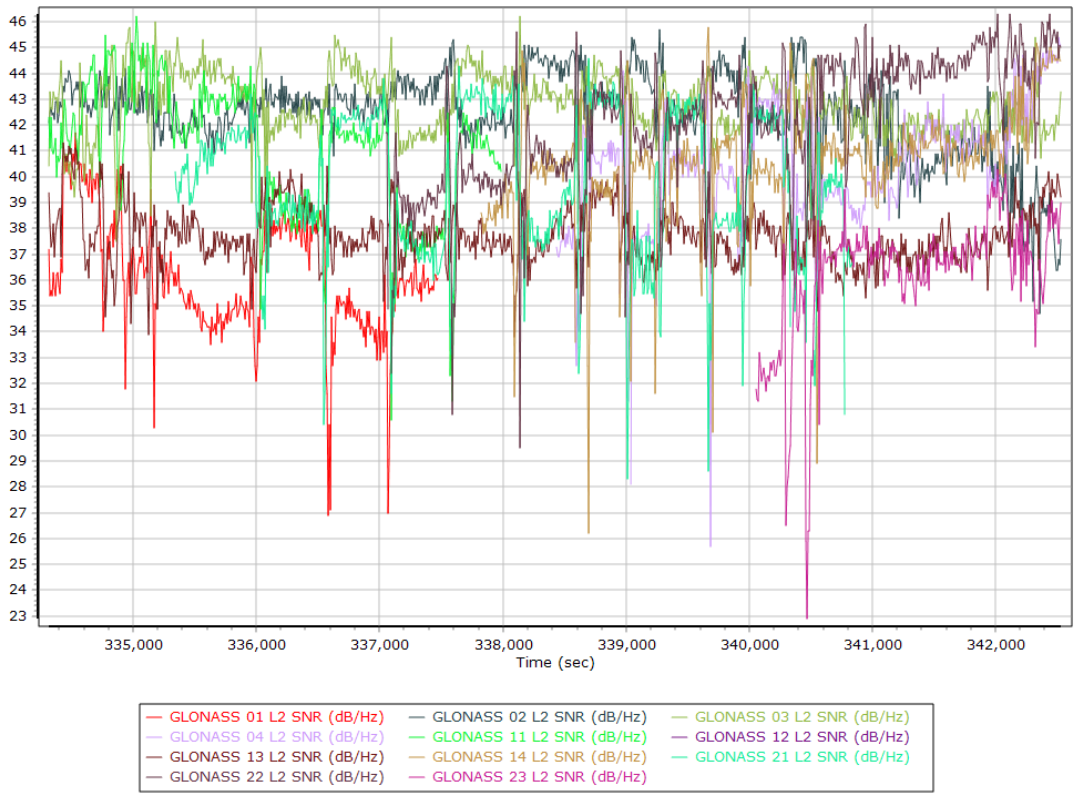
GPS L2 SNR



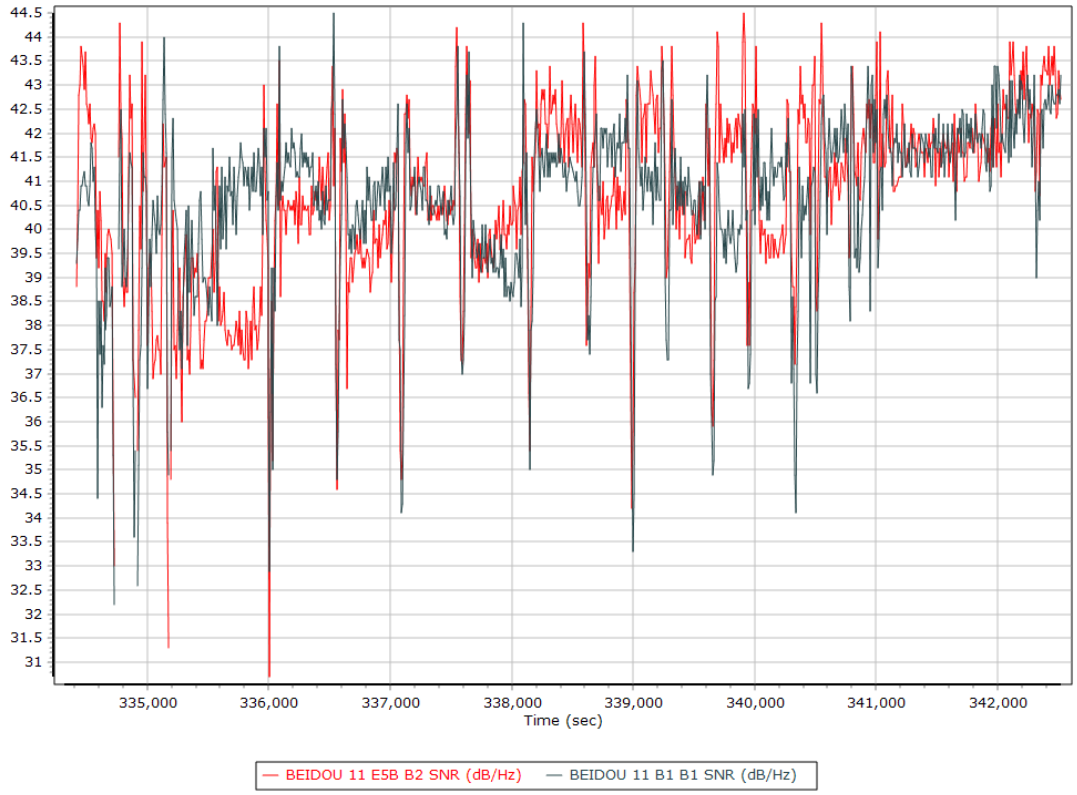
GLONASS L1 SNR



GLONASS L2 SNR

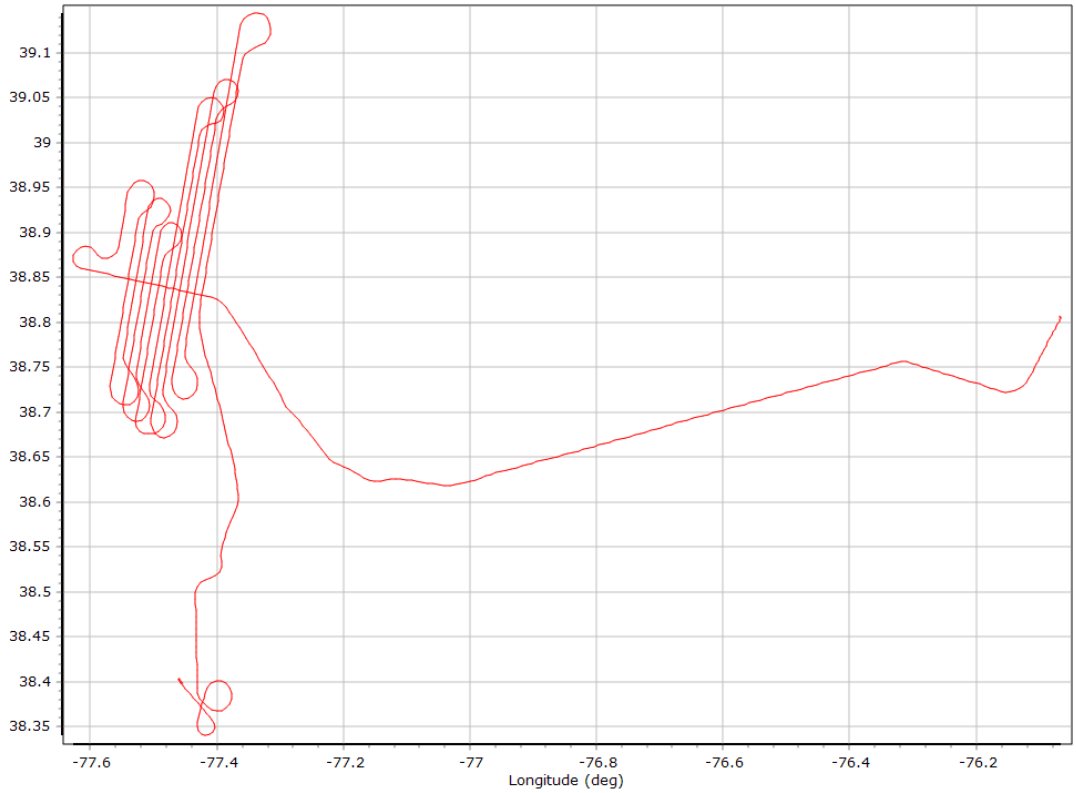


BEIDOU SNR

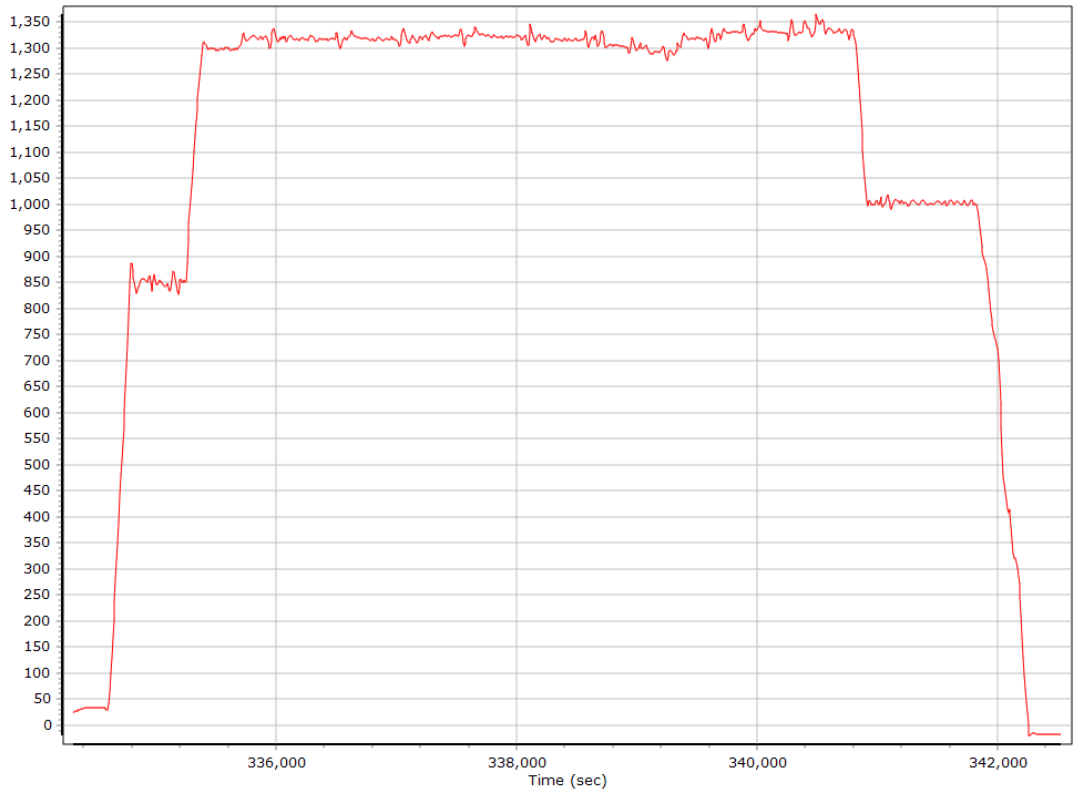


Trajectory Information

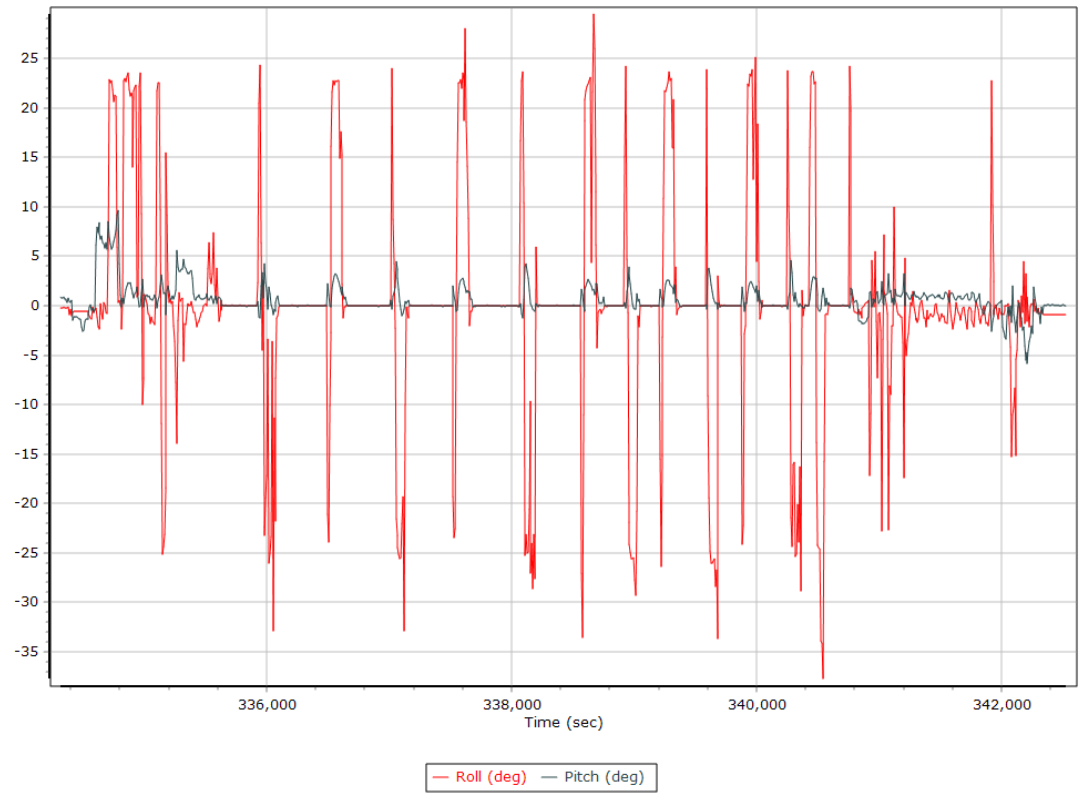
Top View



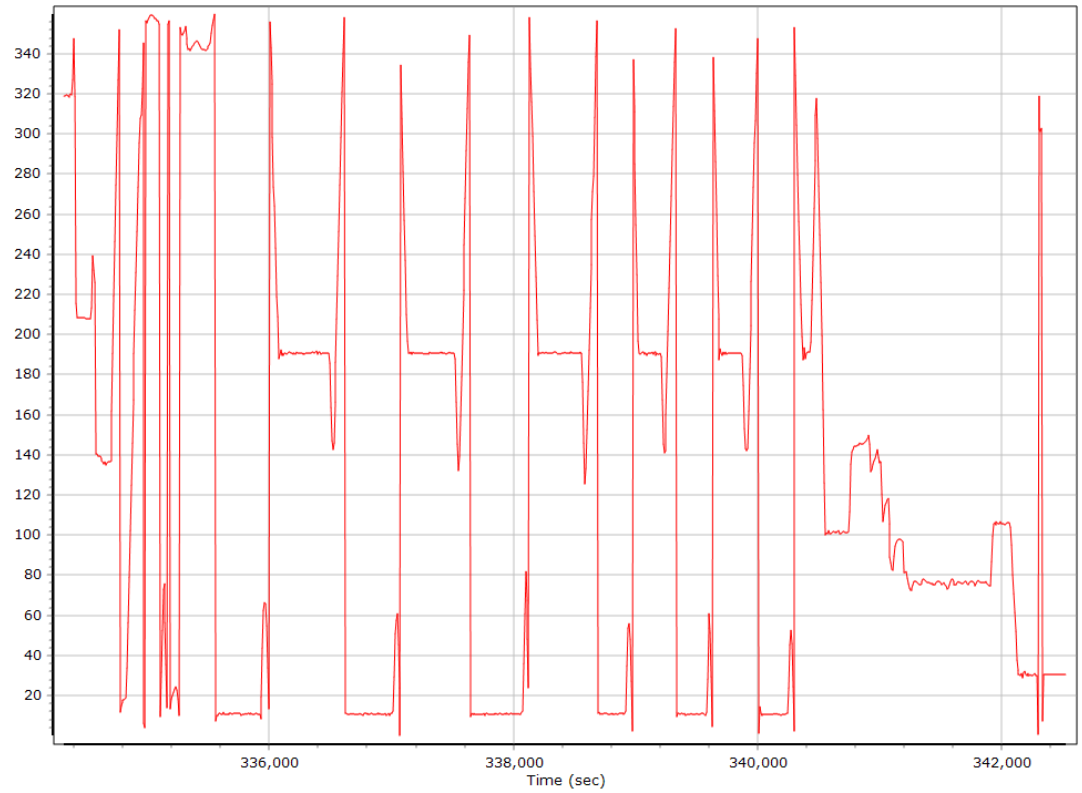
Altitude



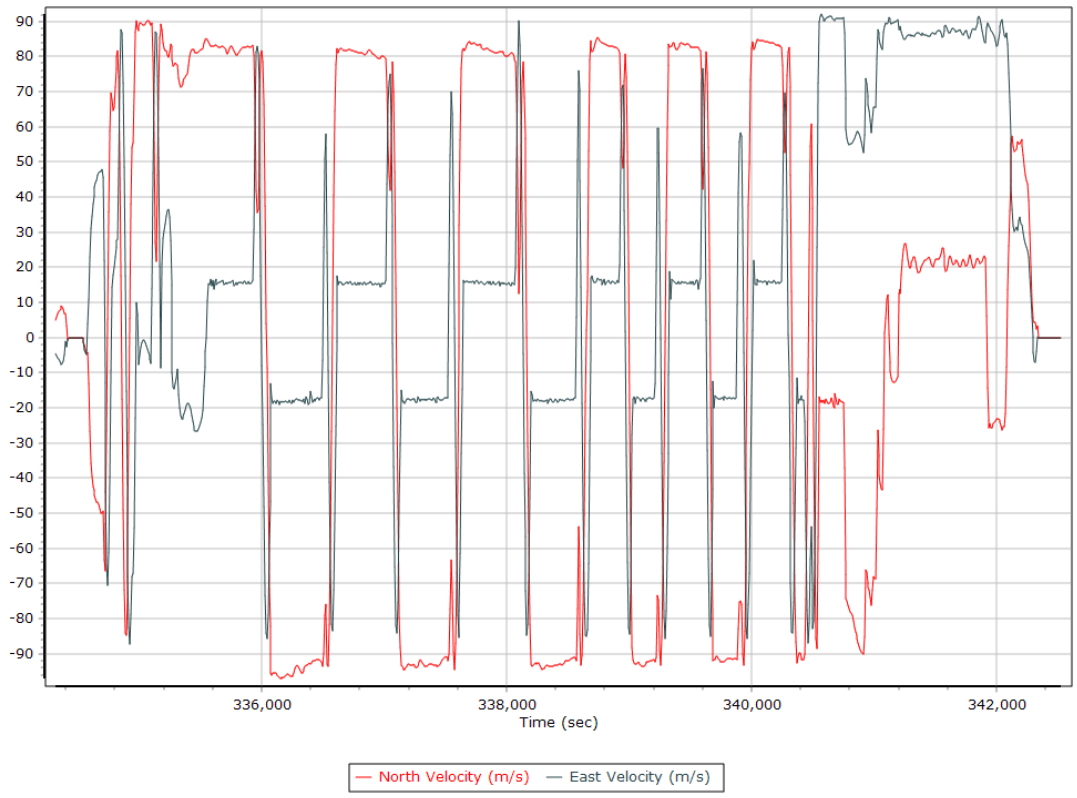
Roll/Pitch



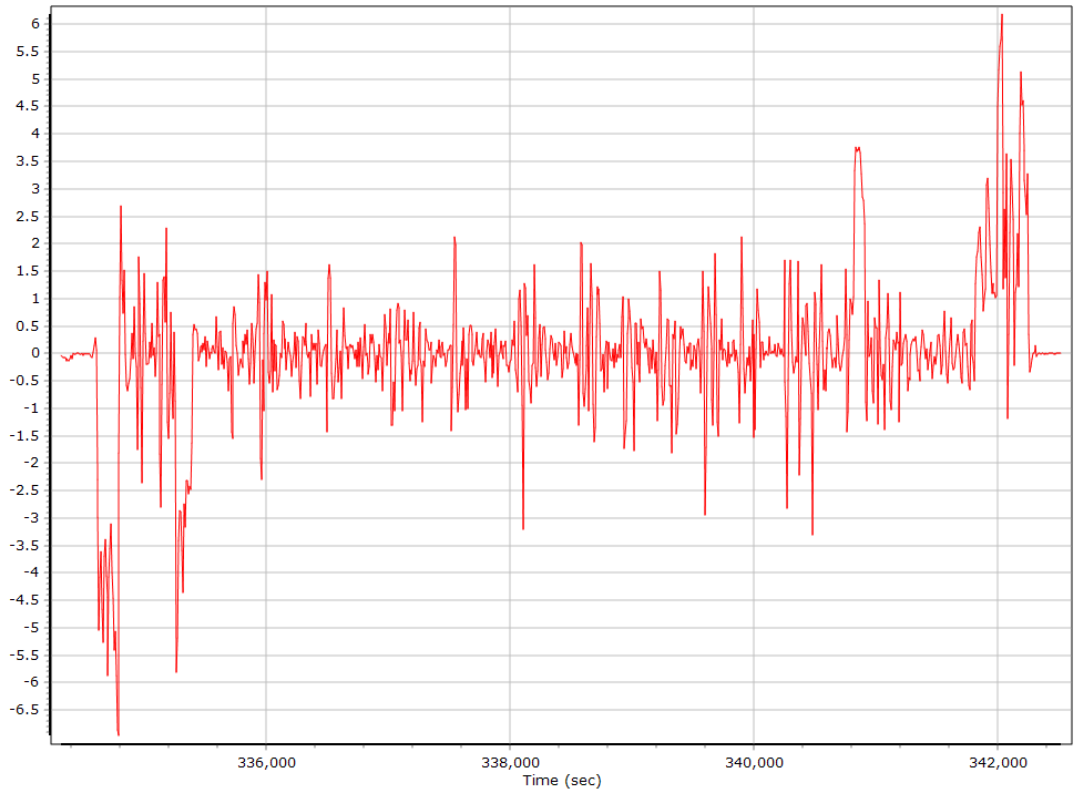
Heading



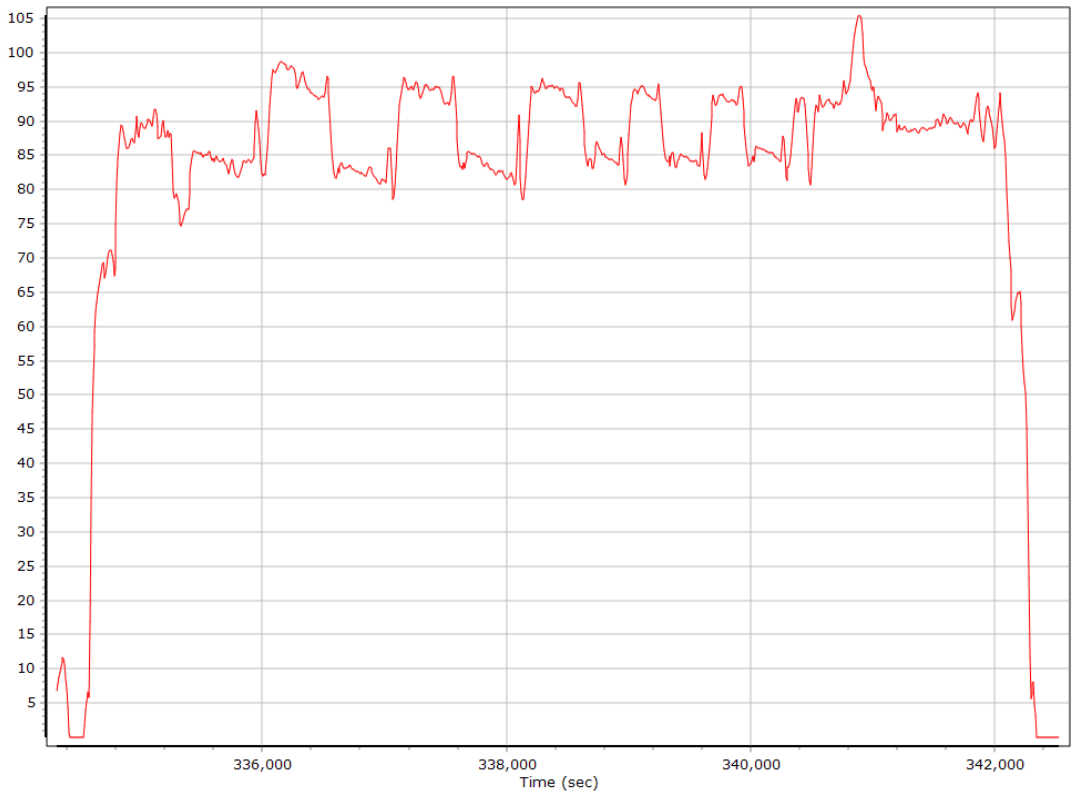
North/East Velocity



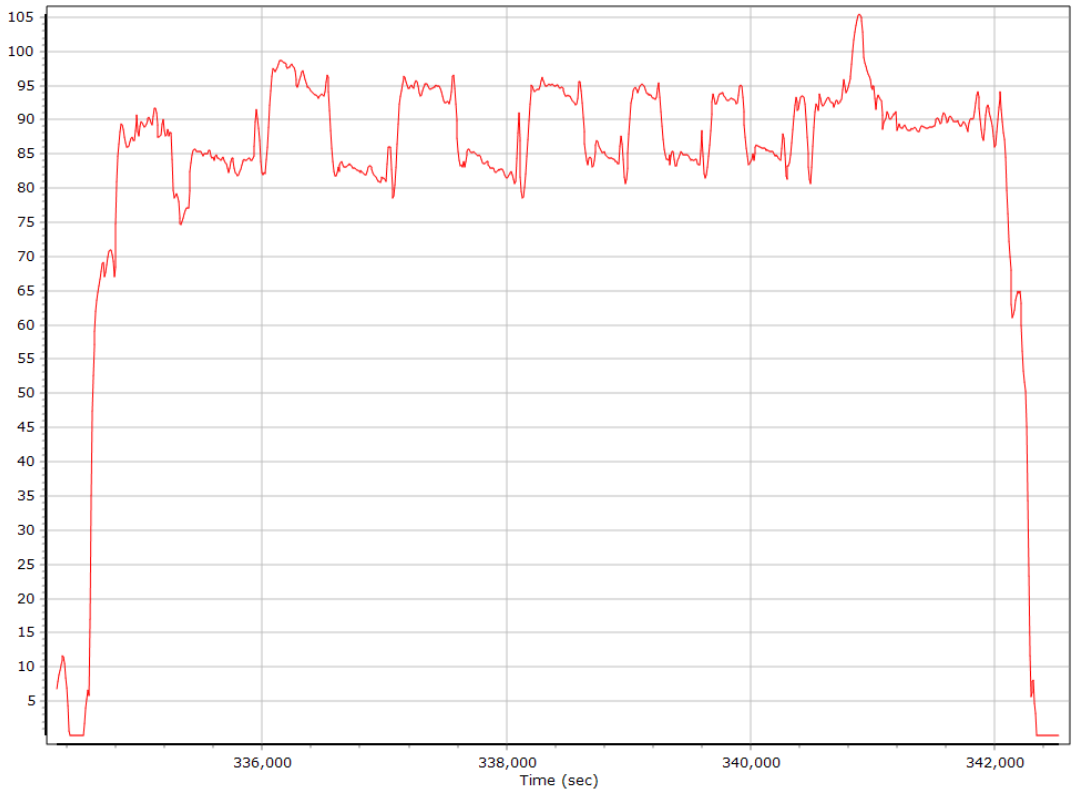
Down Velocity



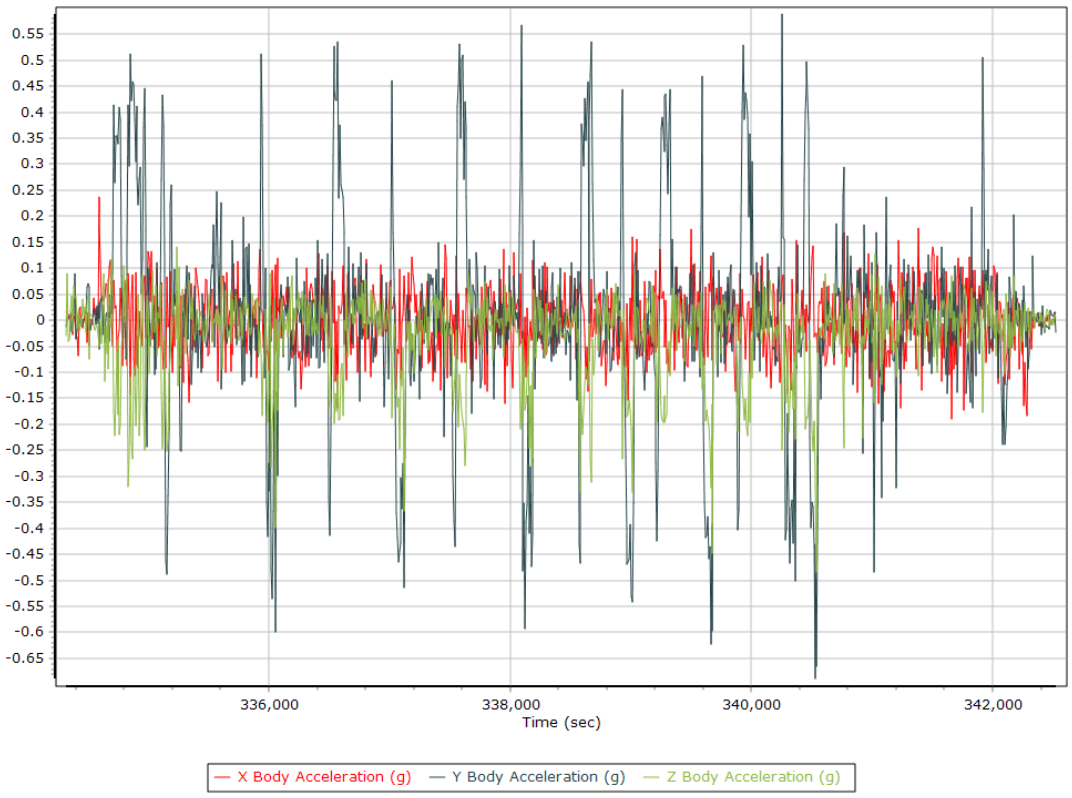
Total Speed



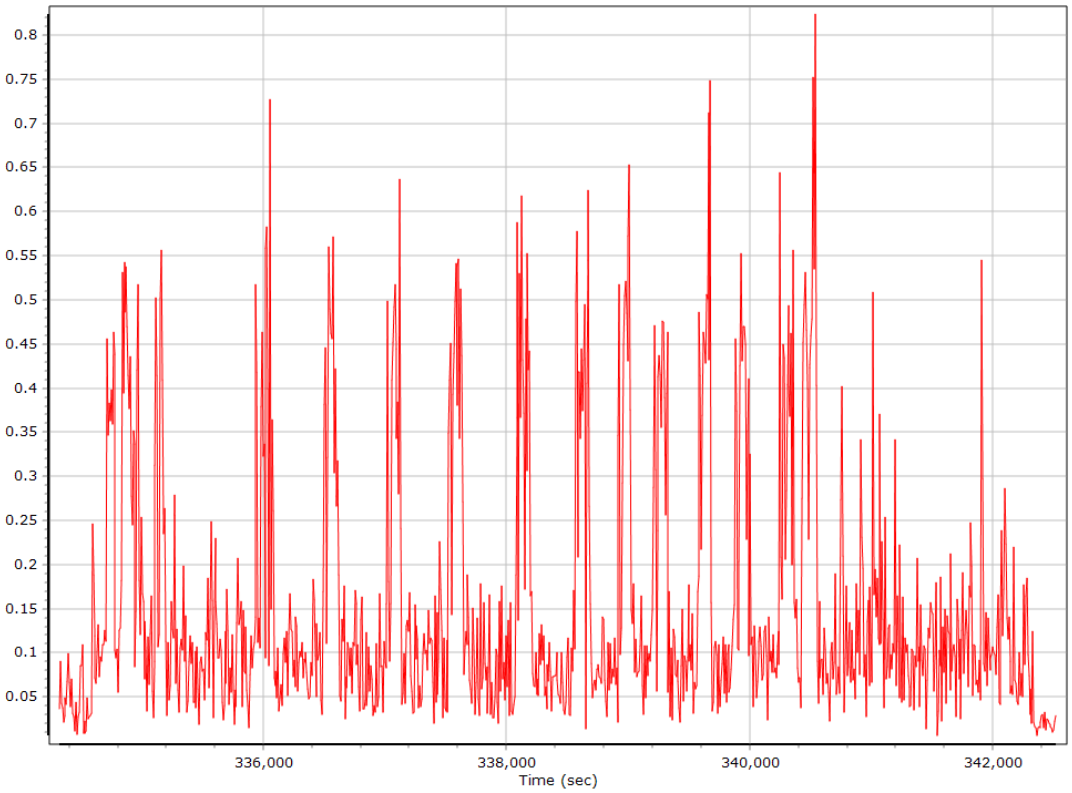
Ground Speed



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	DataType	Rate	Service	Database	Status

SmartBase Results

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

SmartBase Quality Check

GNSS QC

GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length [km]	3.26	106.46	
Number of GPS SV	3	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	6	17	14
PDOP	1.11	6.16	1.72
QC Solution Gaps	1.00	1.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	5232.00	3355.00	4.00
Percentage	60.90	39.05	0.05

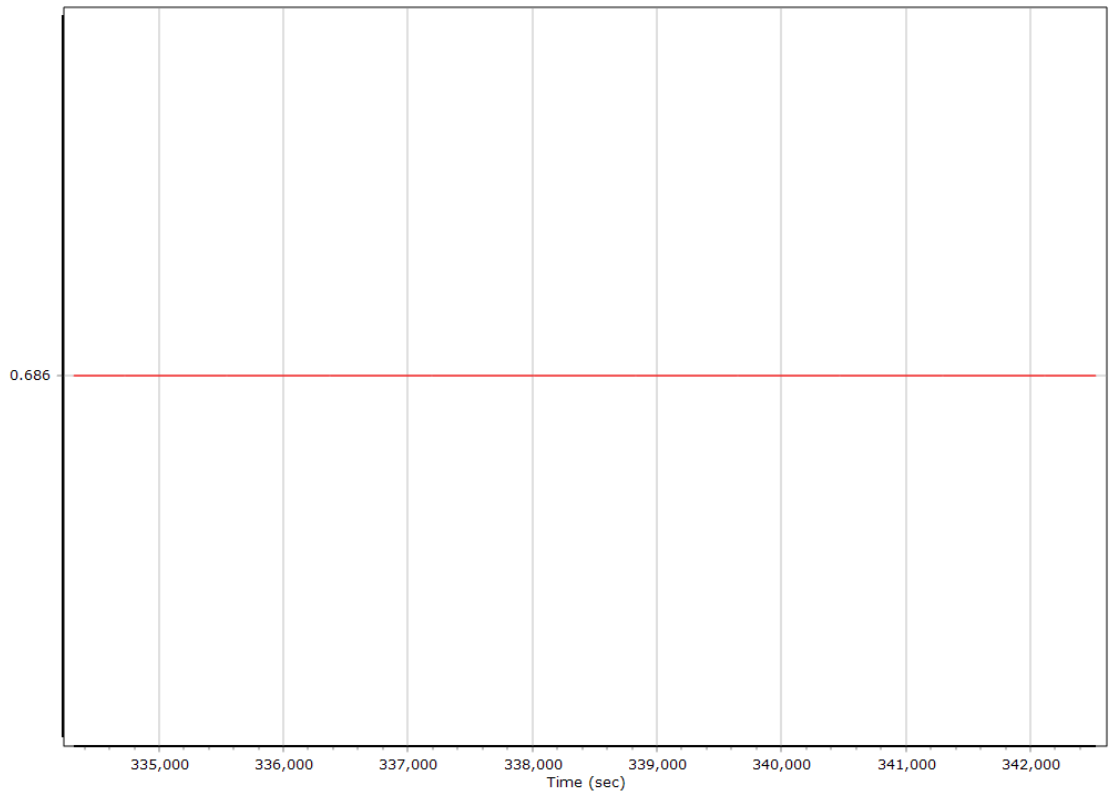
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	333910.000 (12/26/2018 8:45:10 PM)		
Processing end time	342527.000 (12/26/2018 11:08:47 PM)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm [m]	0.000	0.000	0.000
Gimbal to IMU mounting angles [deg]	0.000	0.000	0.000
Gimbal to Primary GNSS lever arm [m]	0.686	-0.089	-0.956
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

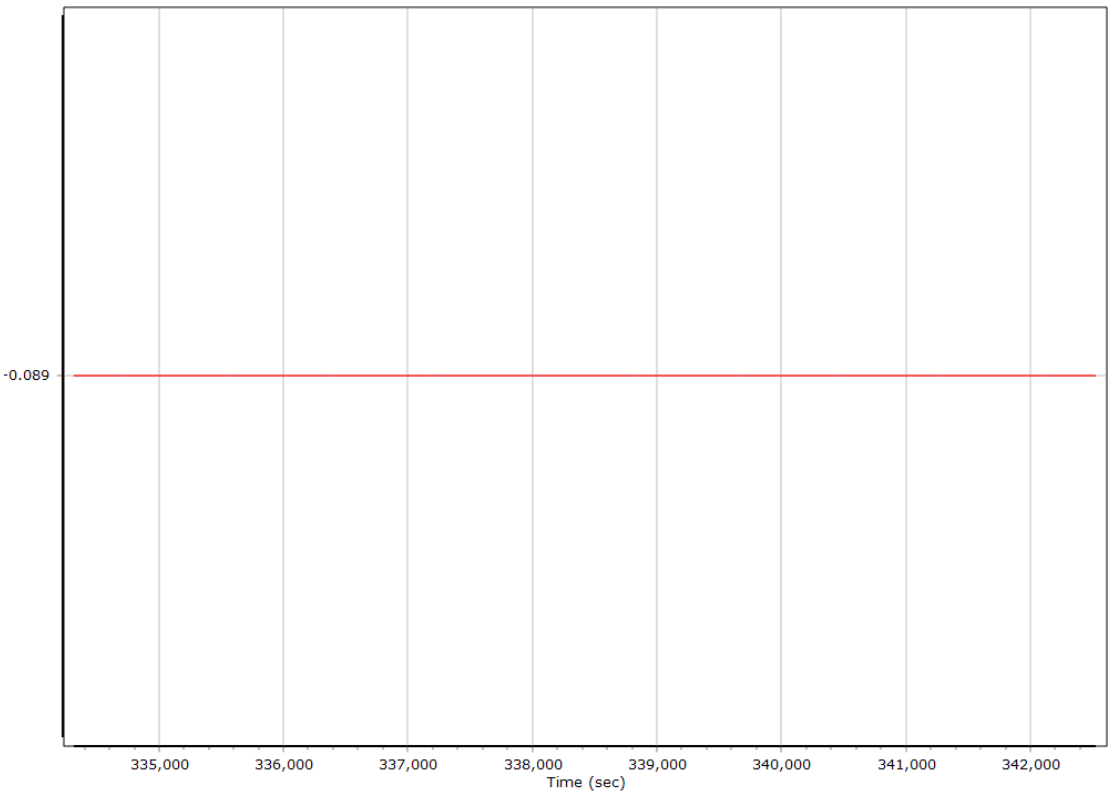
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

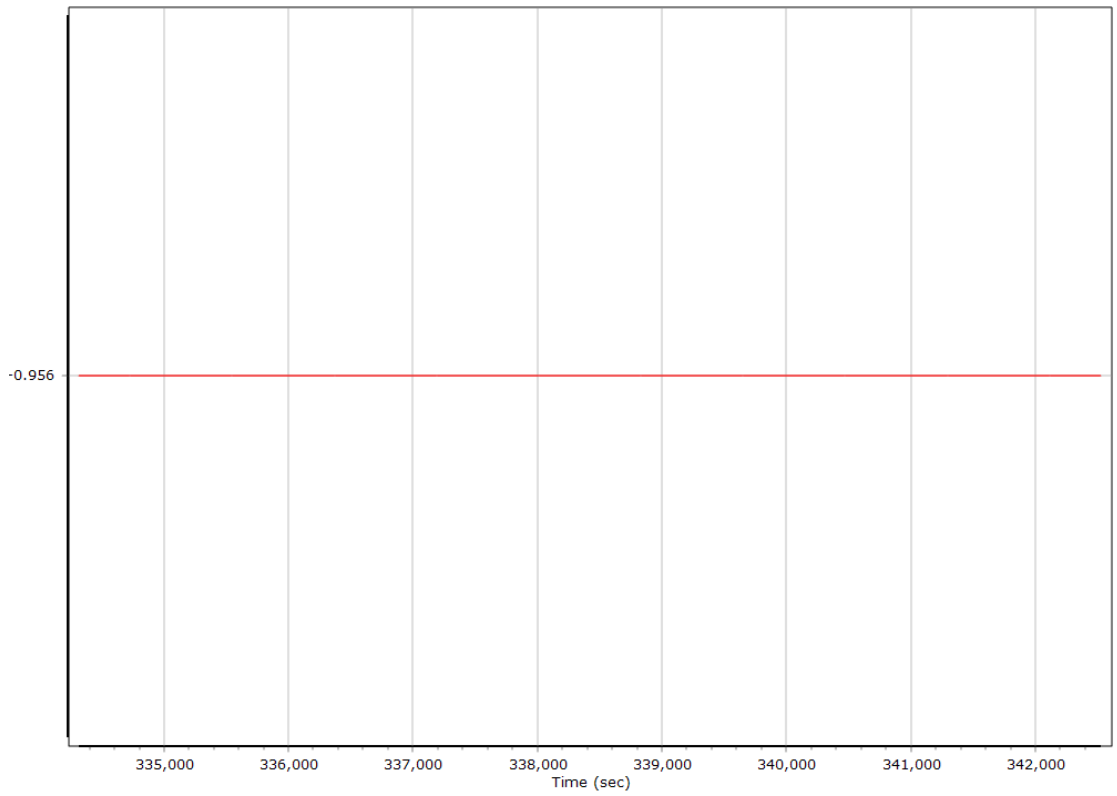
X Reference-Primary GNSS Lever Arm (m)



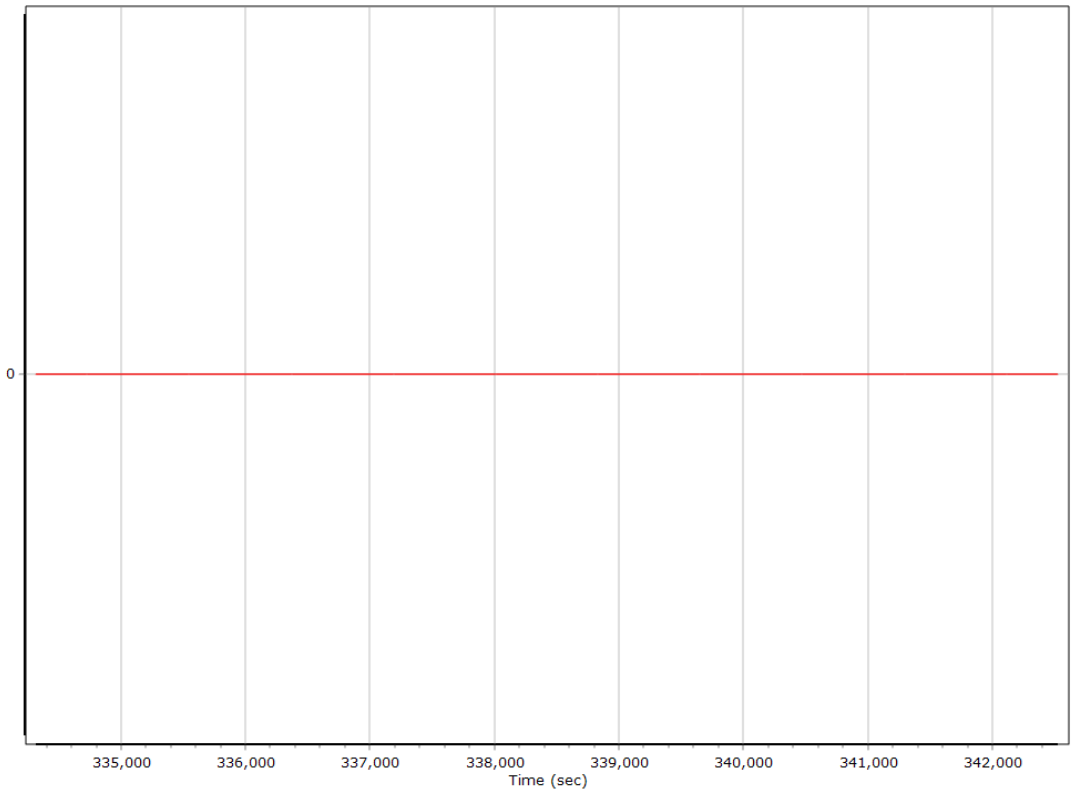
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



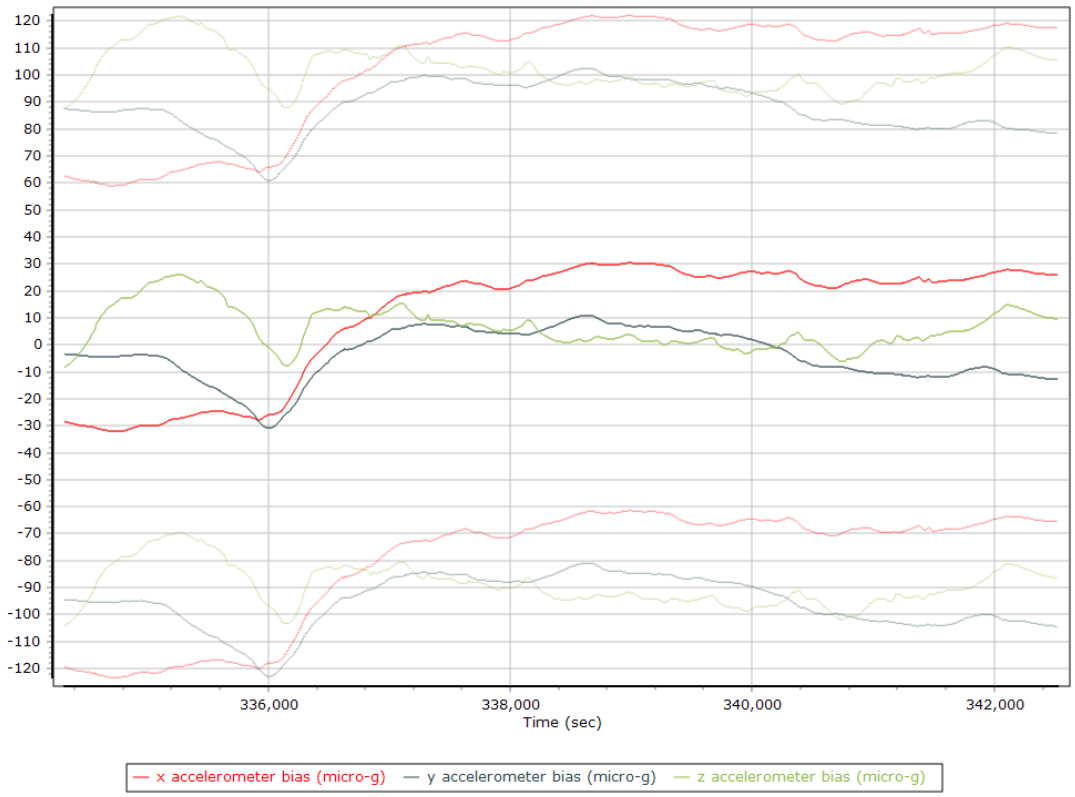
Reference-Primary GNSS Lever Arm Figure of Merit



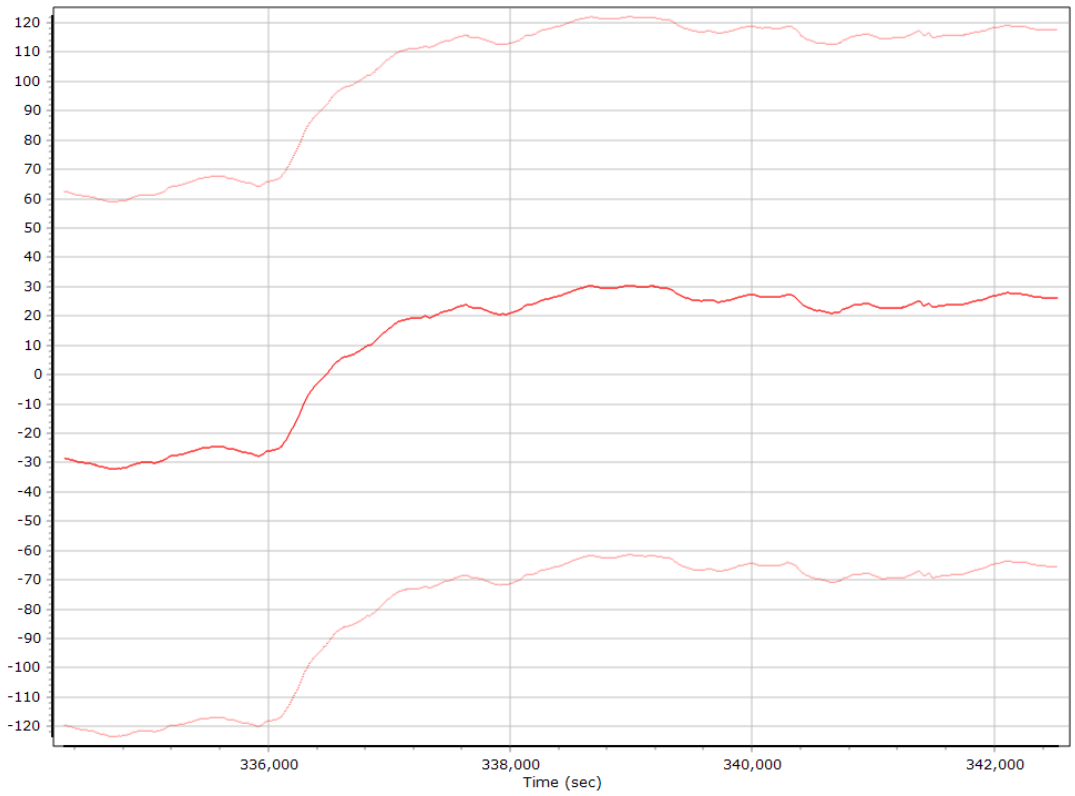
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

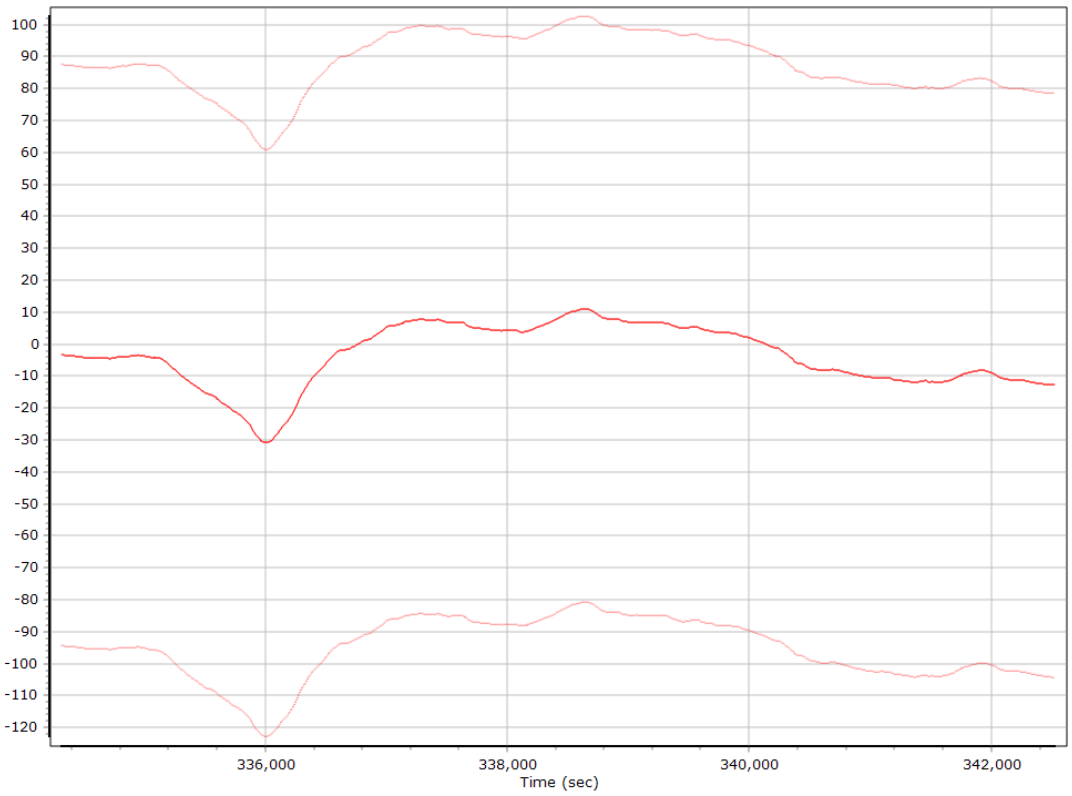
Accelerometer Bias (micro-g)



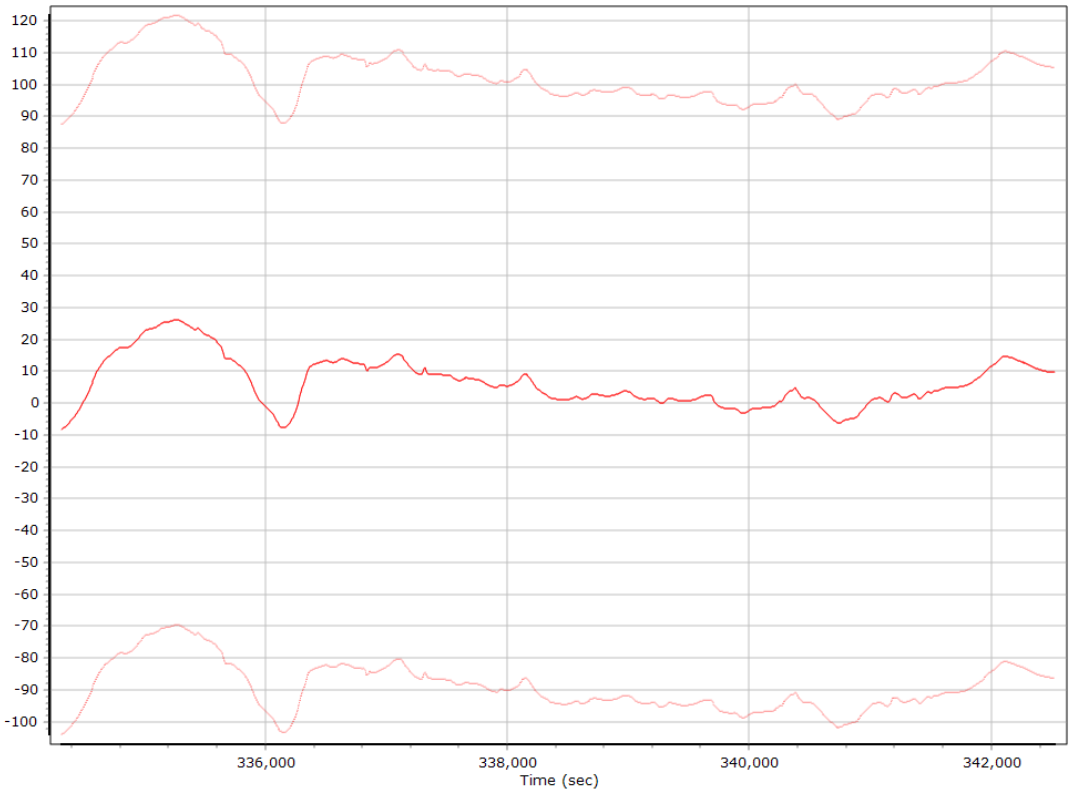
X Accelerometer Bias (micro-g)



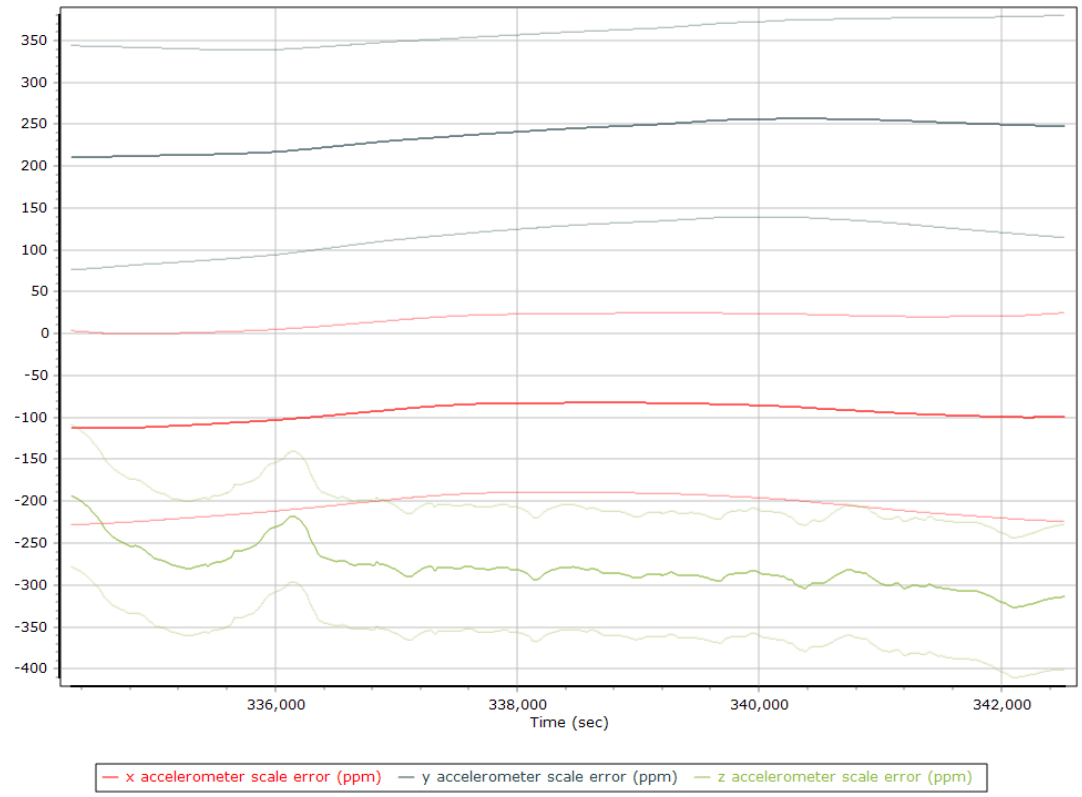
Y Accelerometer Bias (micro-g)



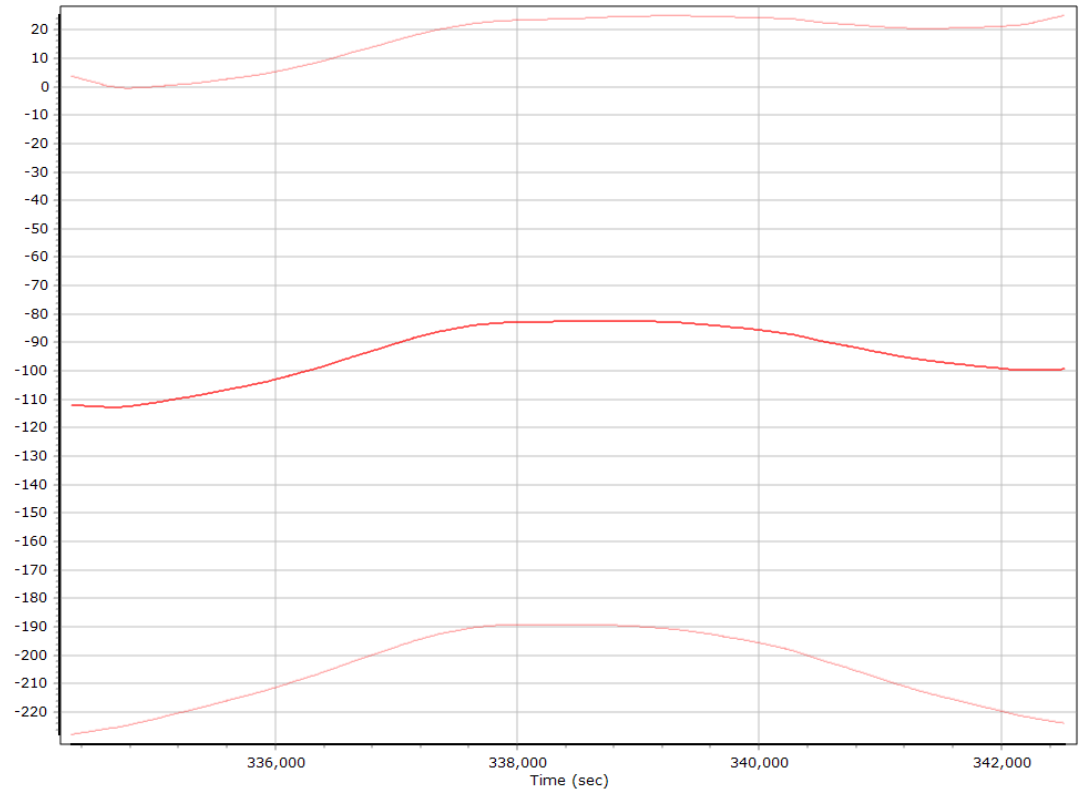
Z Accelerometer Bias (micro-g)



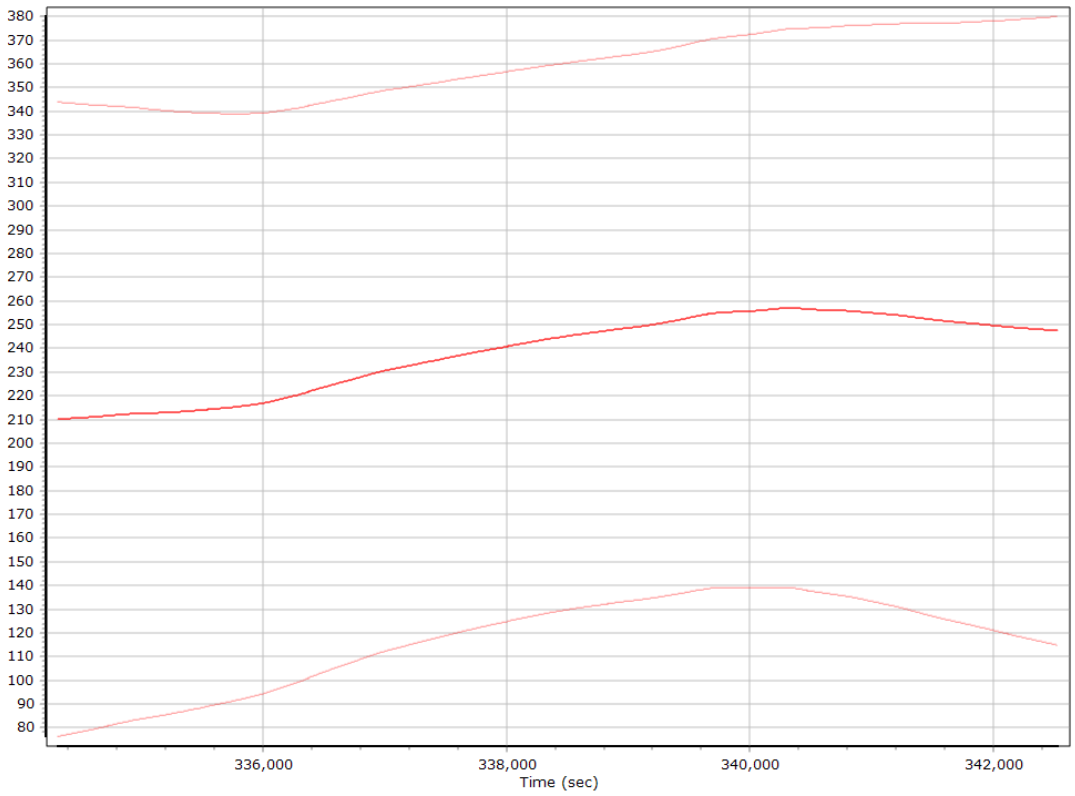
Accelerometer Scale Error (ppm)



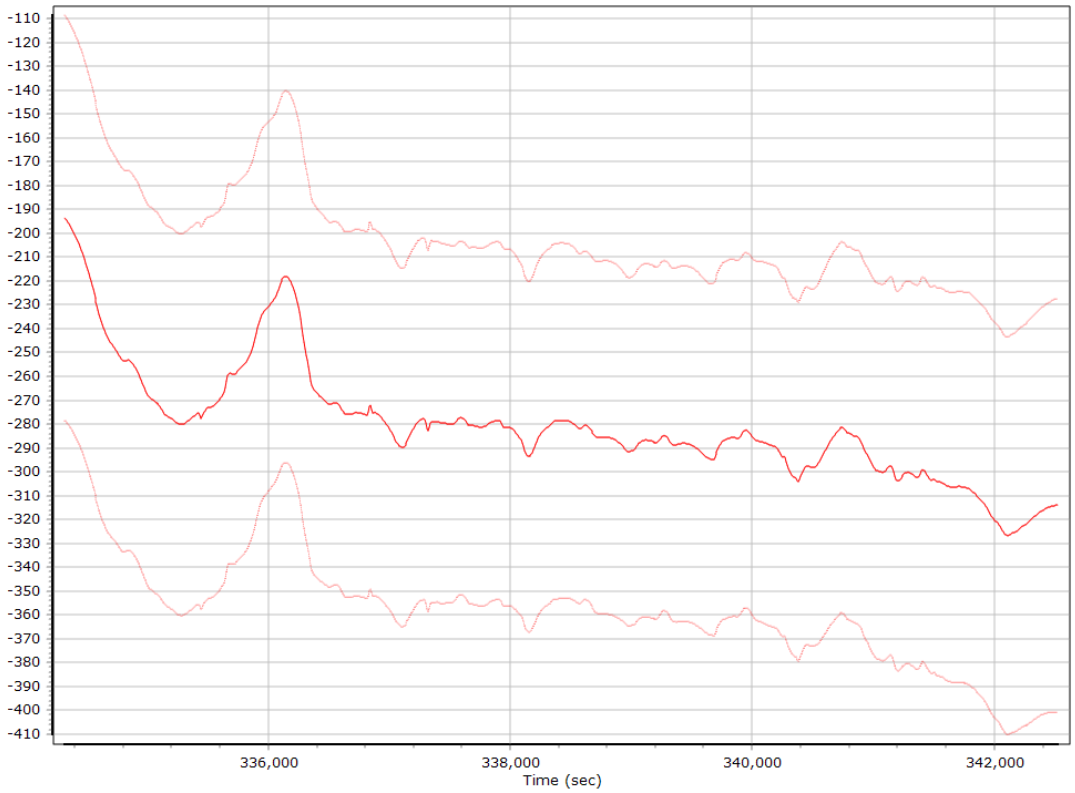
X Accelerometer Scale Error (ppm)



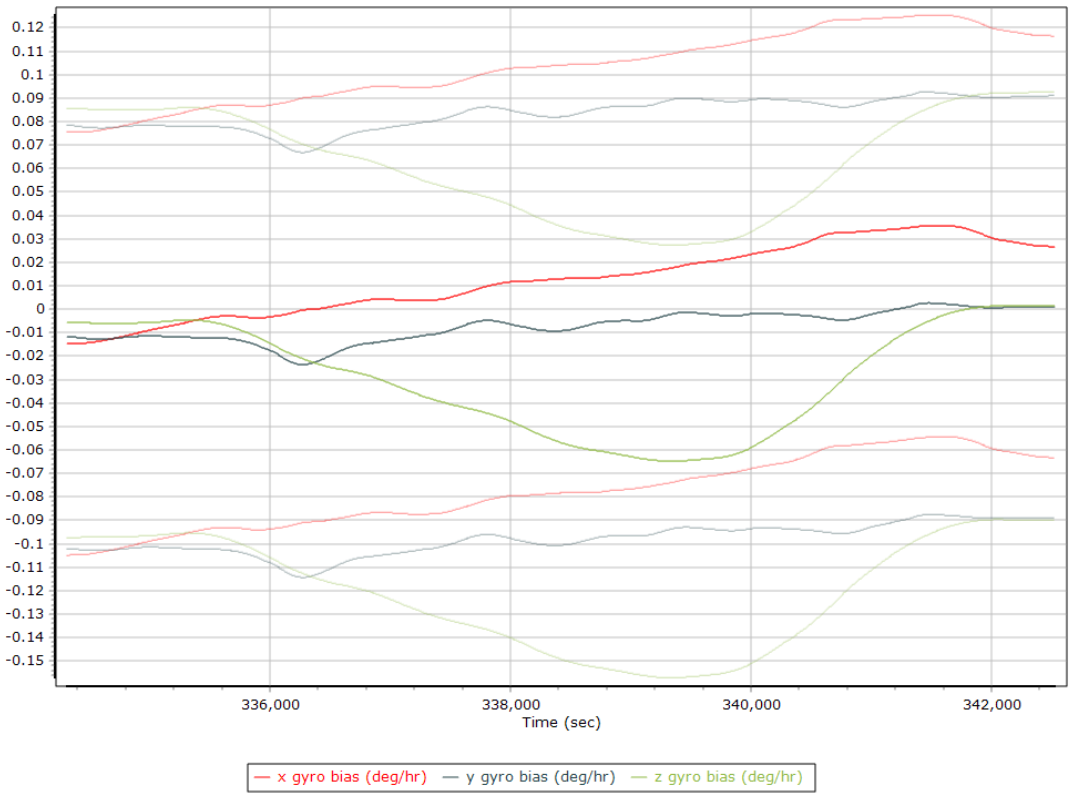
Y Accelerometer Scale Error (ppm)



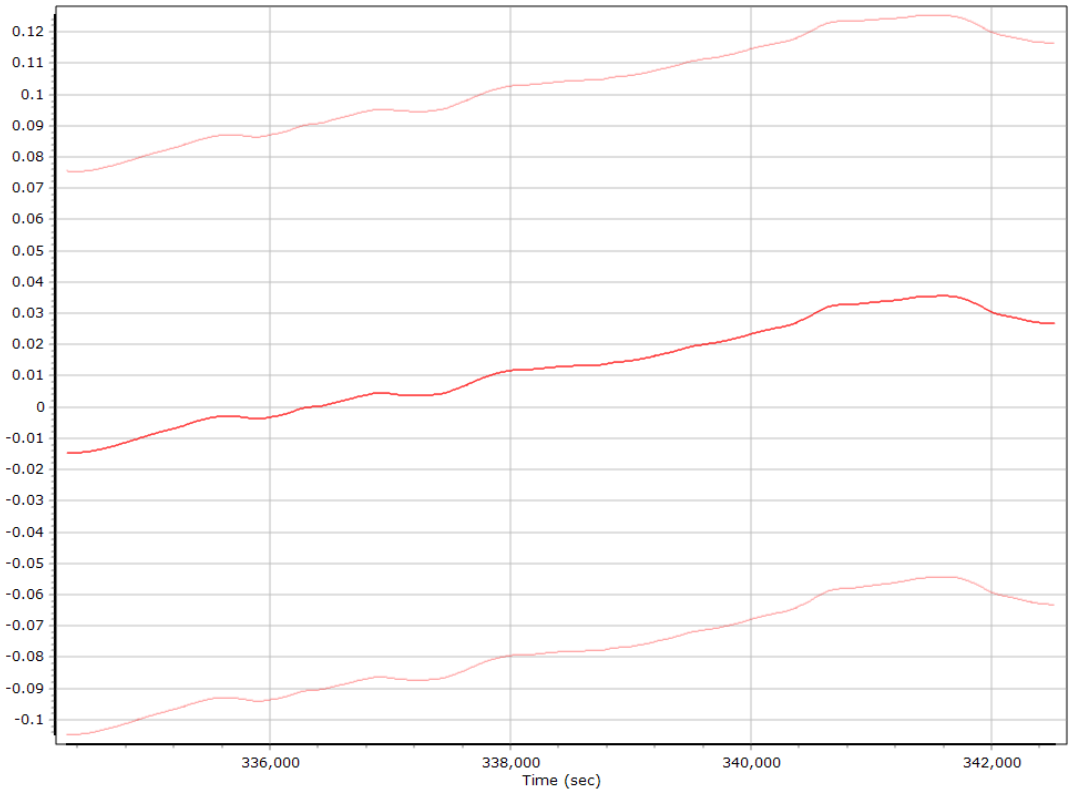
Z Accelerometer Scale Error (ppm)



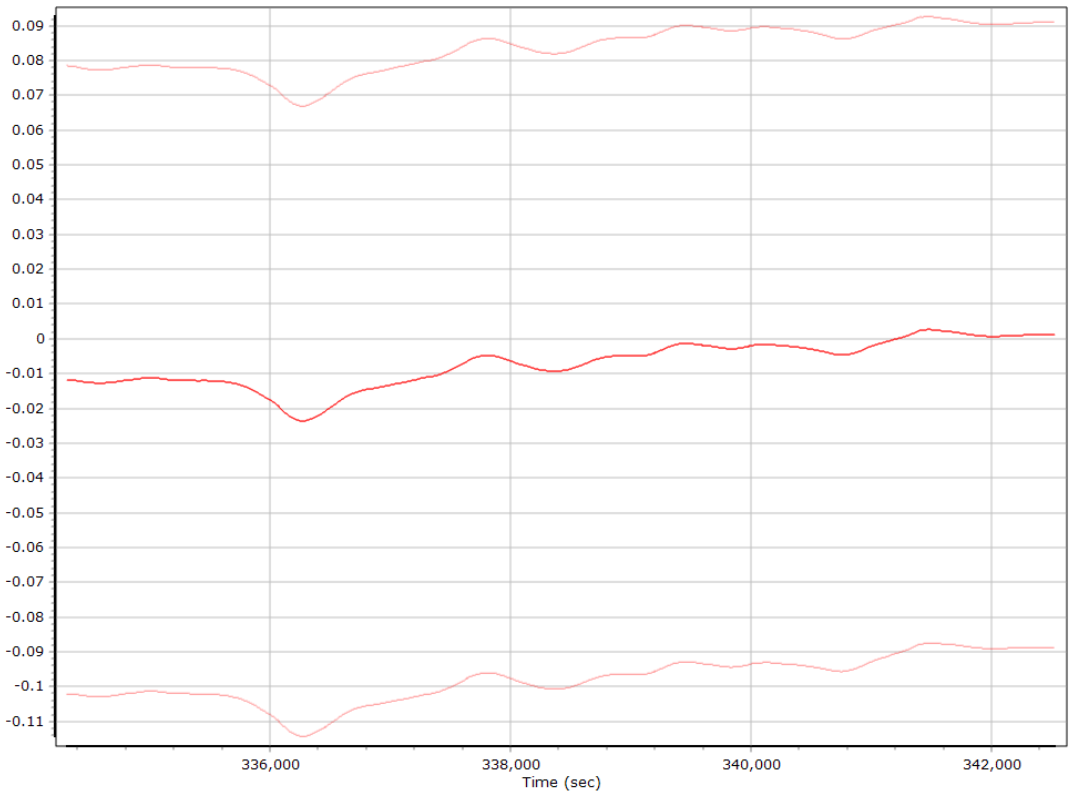
Gyro Bias (deg/h)



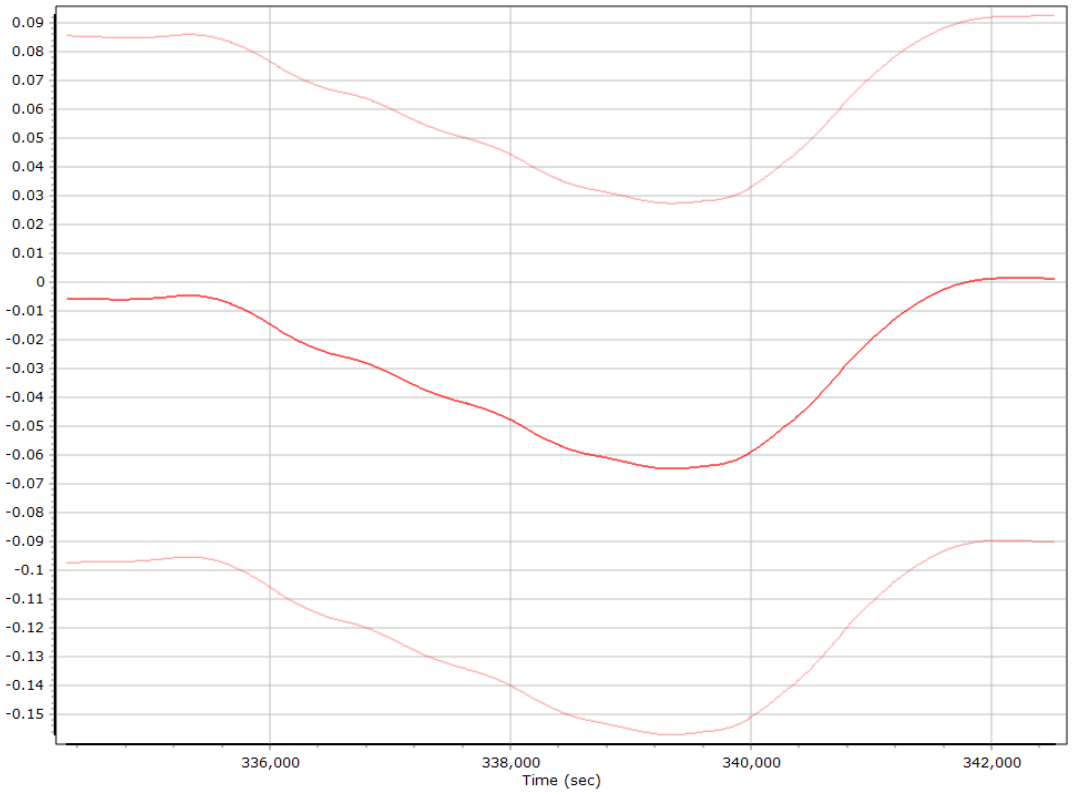
X Gyro Bias (deg/h)



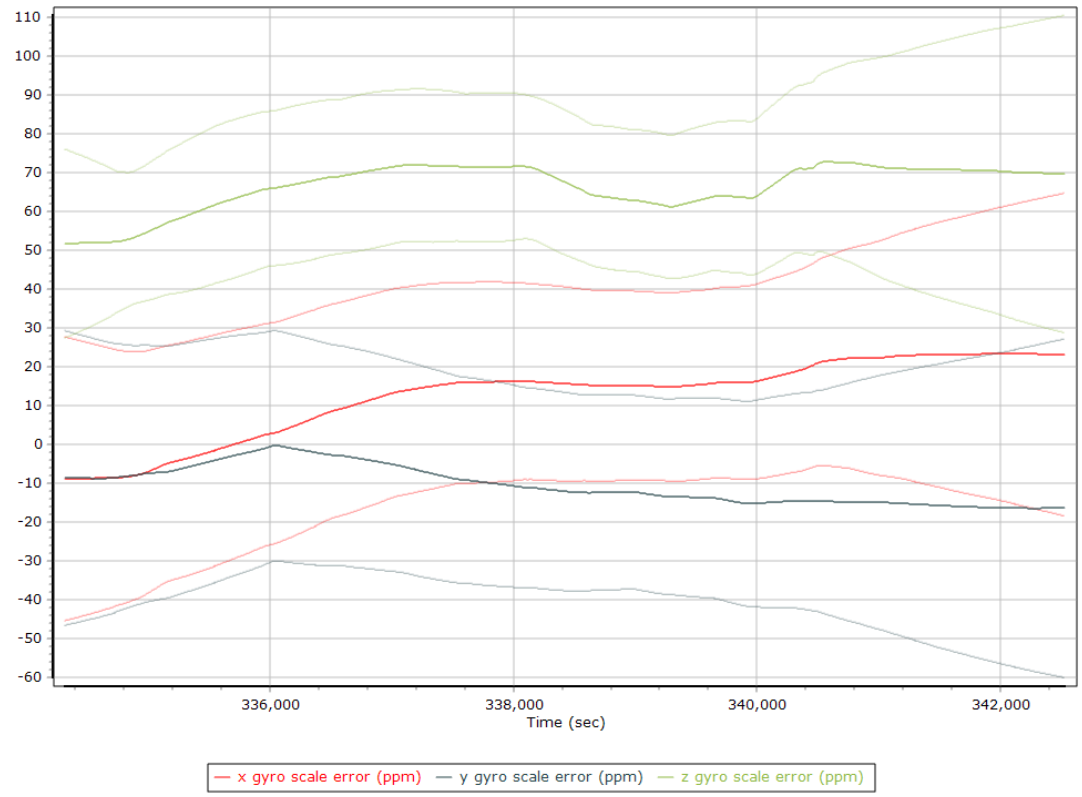
Y Gyro Bias (deg/h)



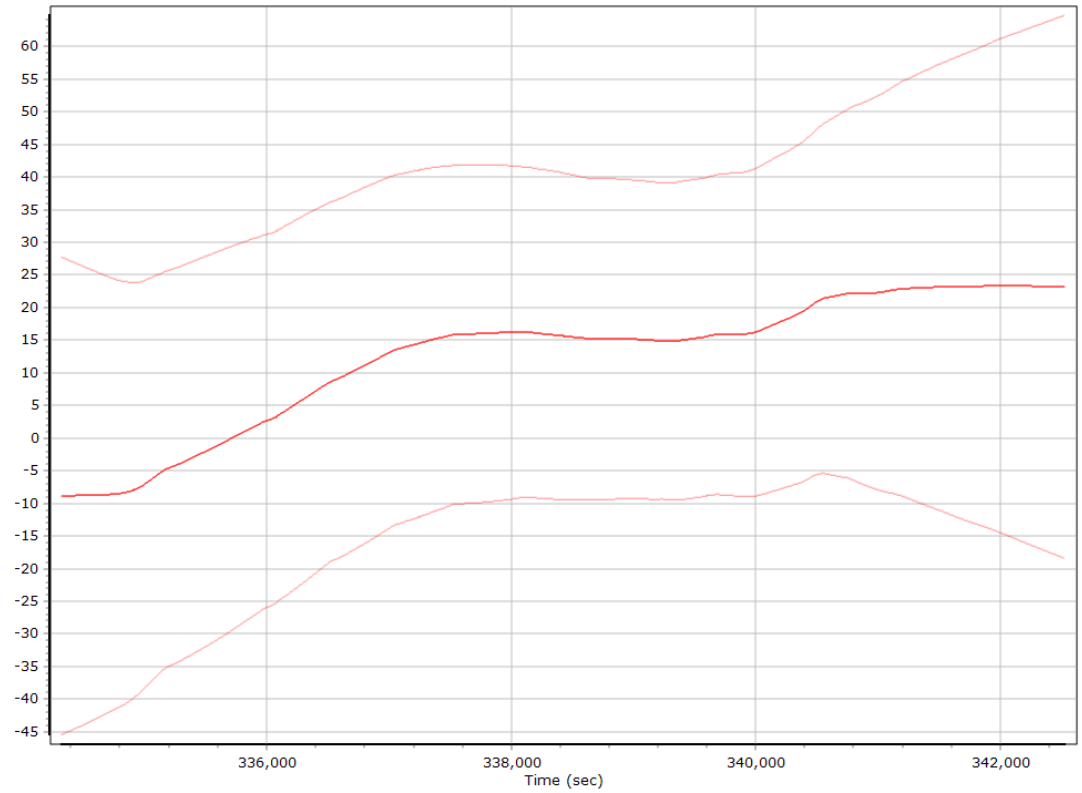
Z Gyro Bias (deg/h)



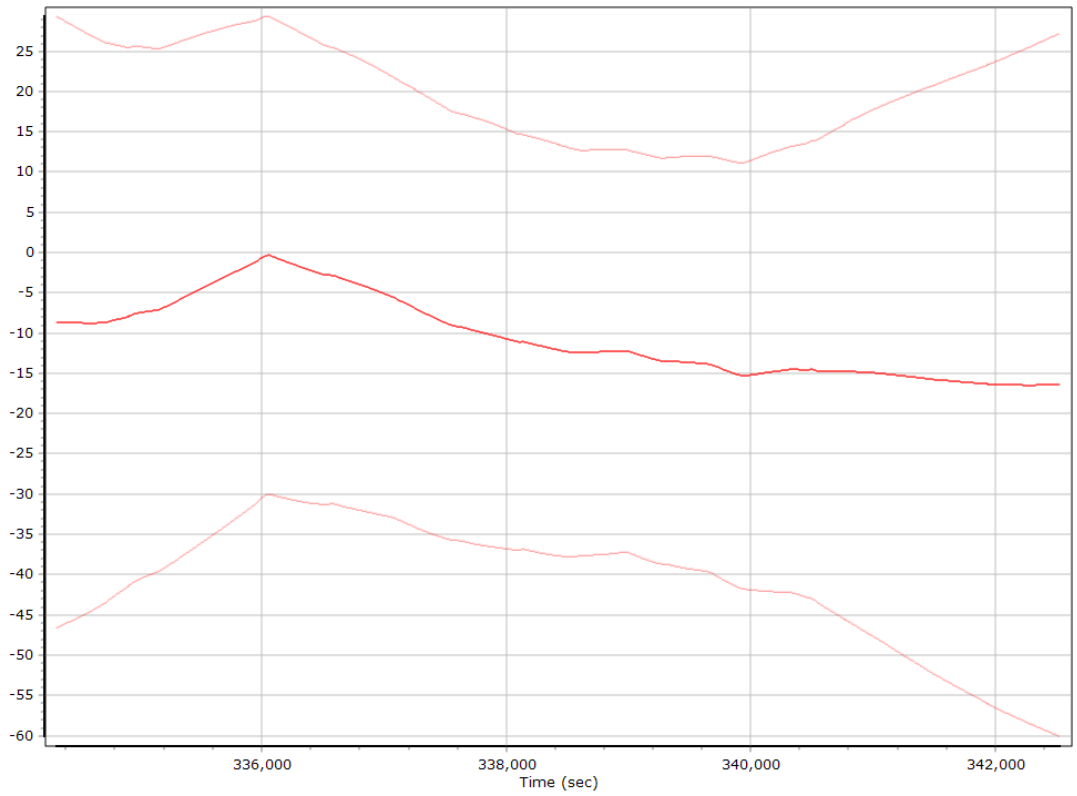
Gyro Scale Error (ppm)



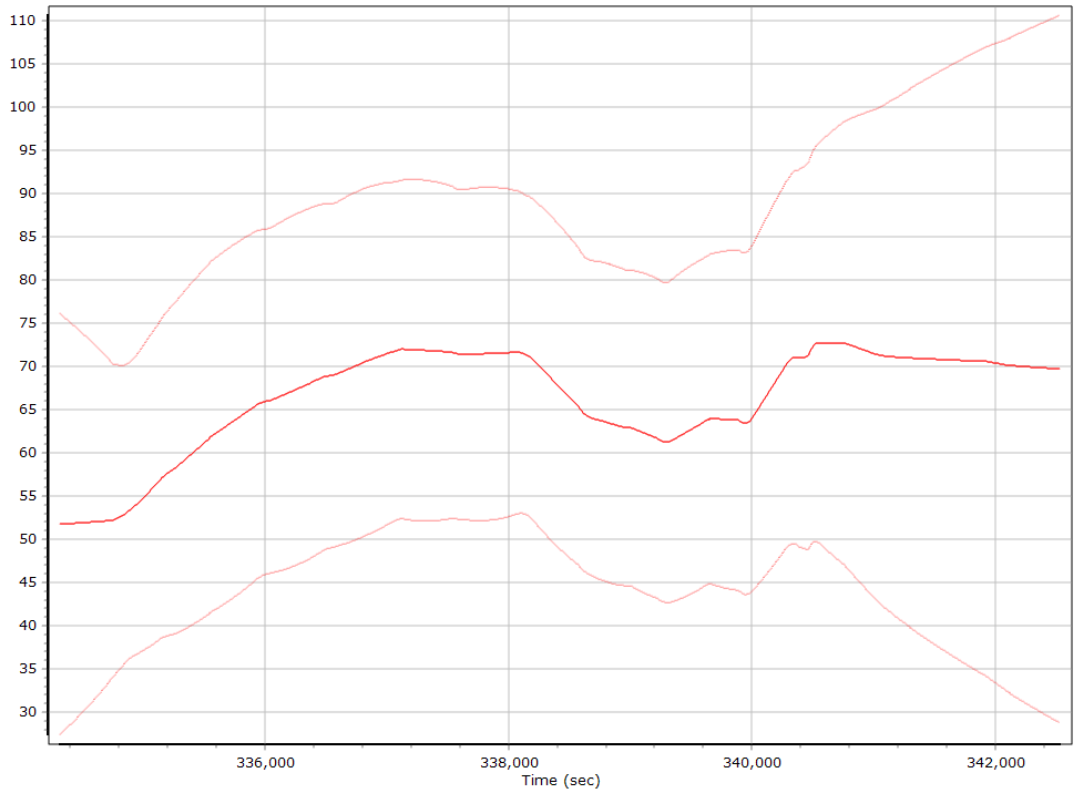
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

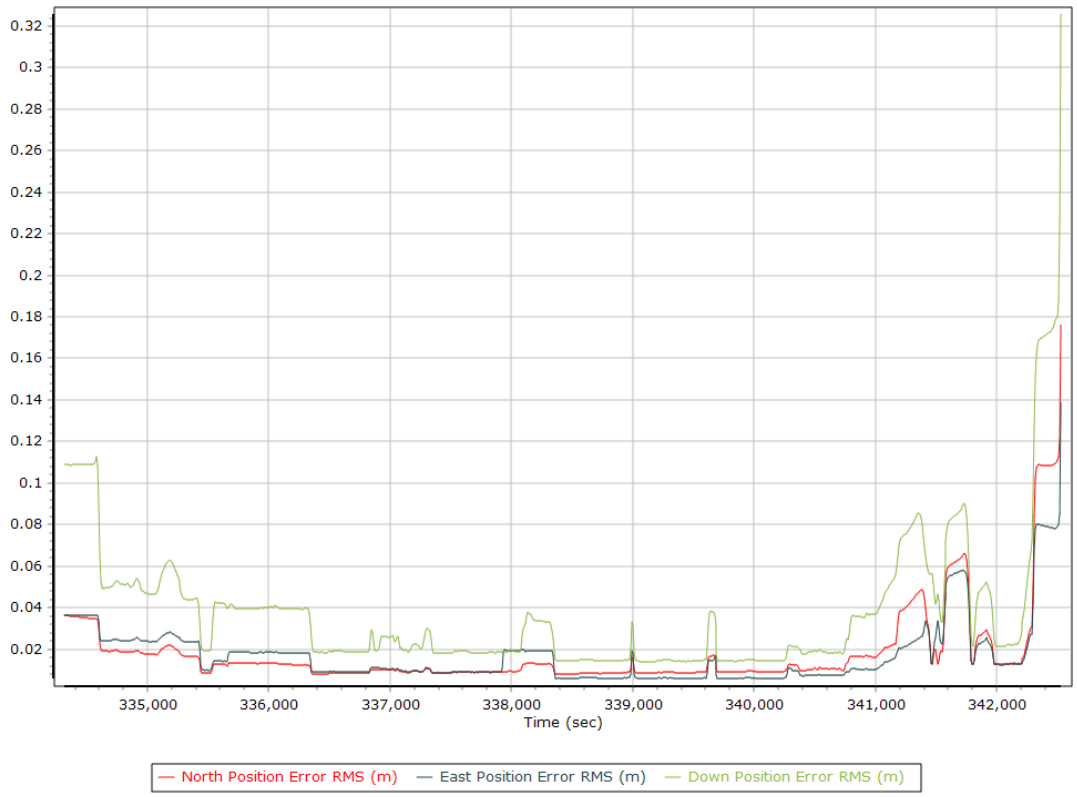


Z Gyro Scale Error (ppm)

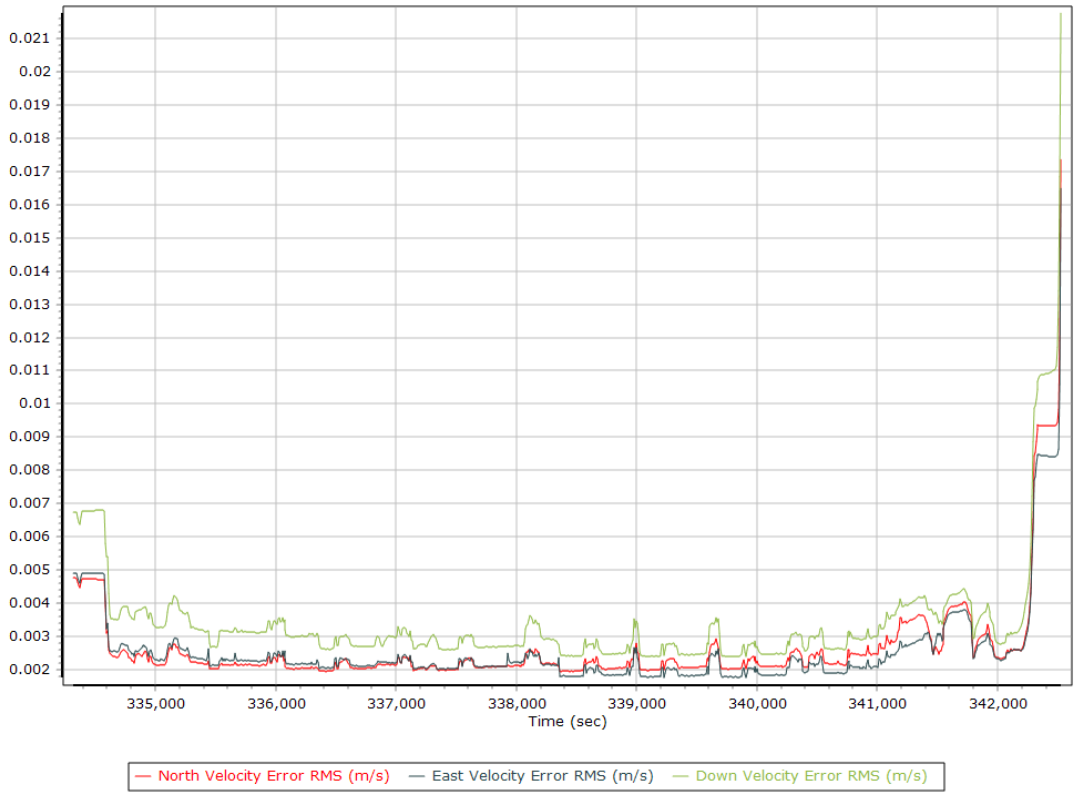


Smoothed Performance Metrics

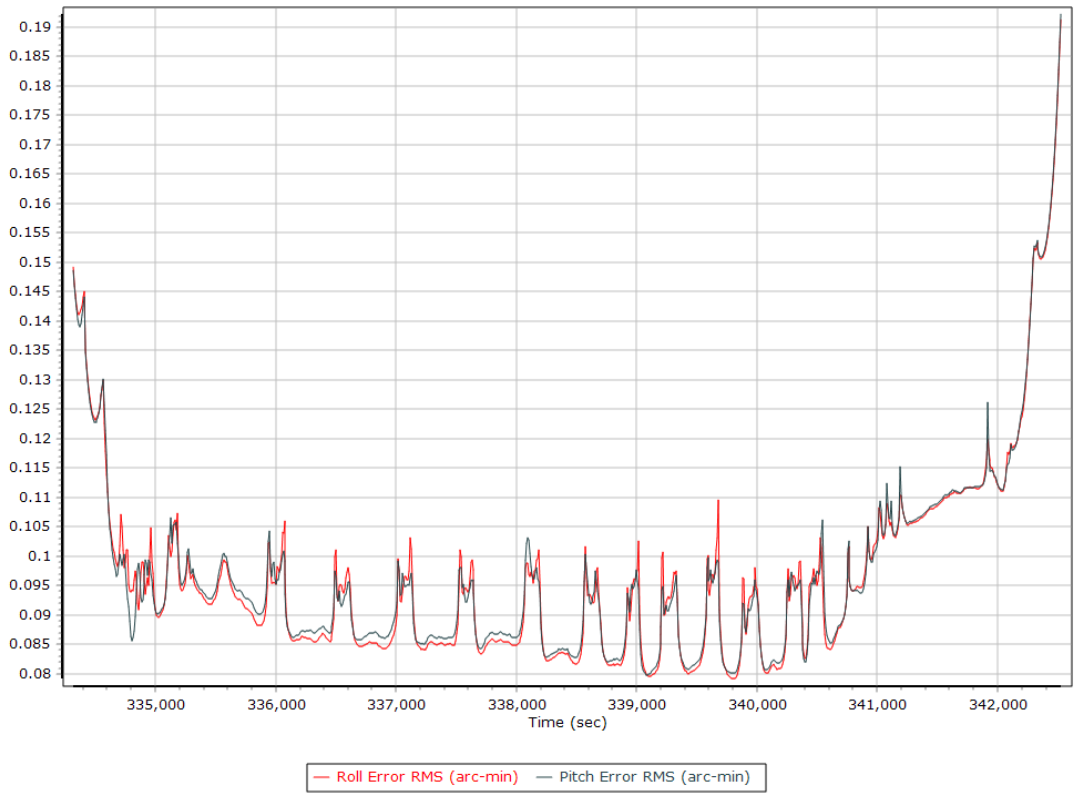
Position Error RMS (m)



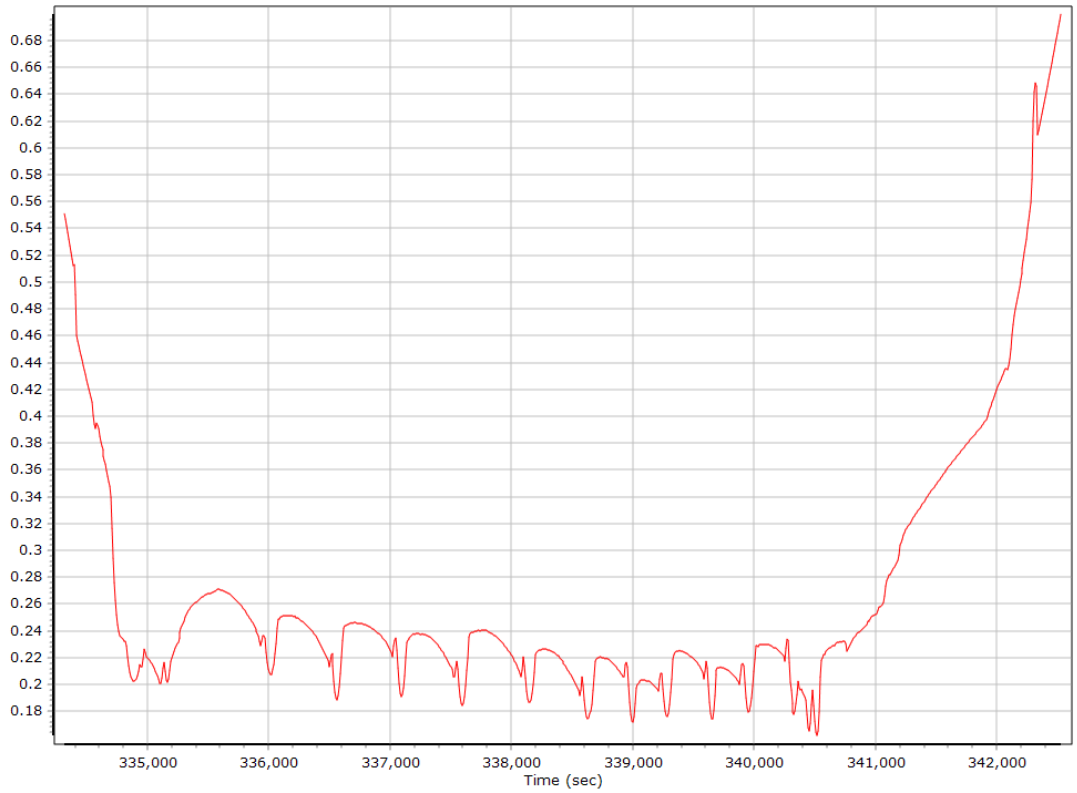
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

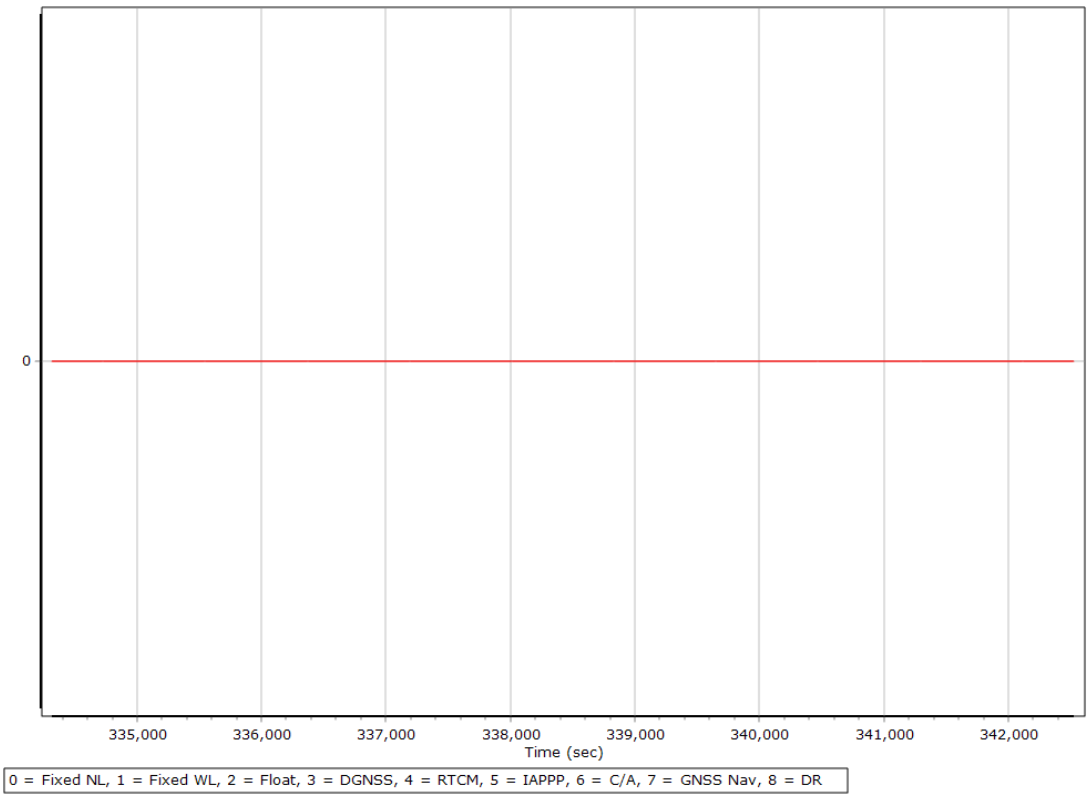


Heading Error RMS (arc-min)

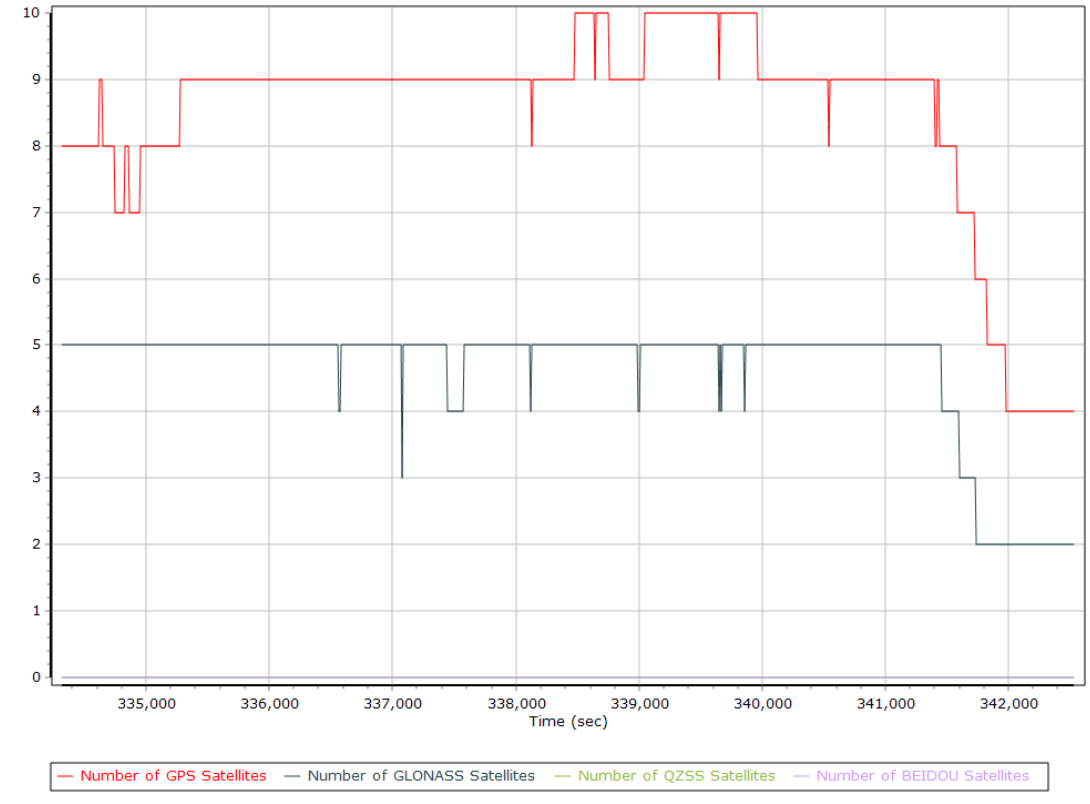


Smoothed Solution Status

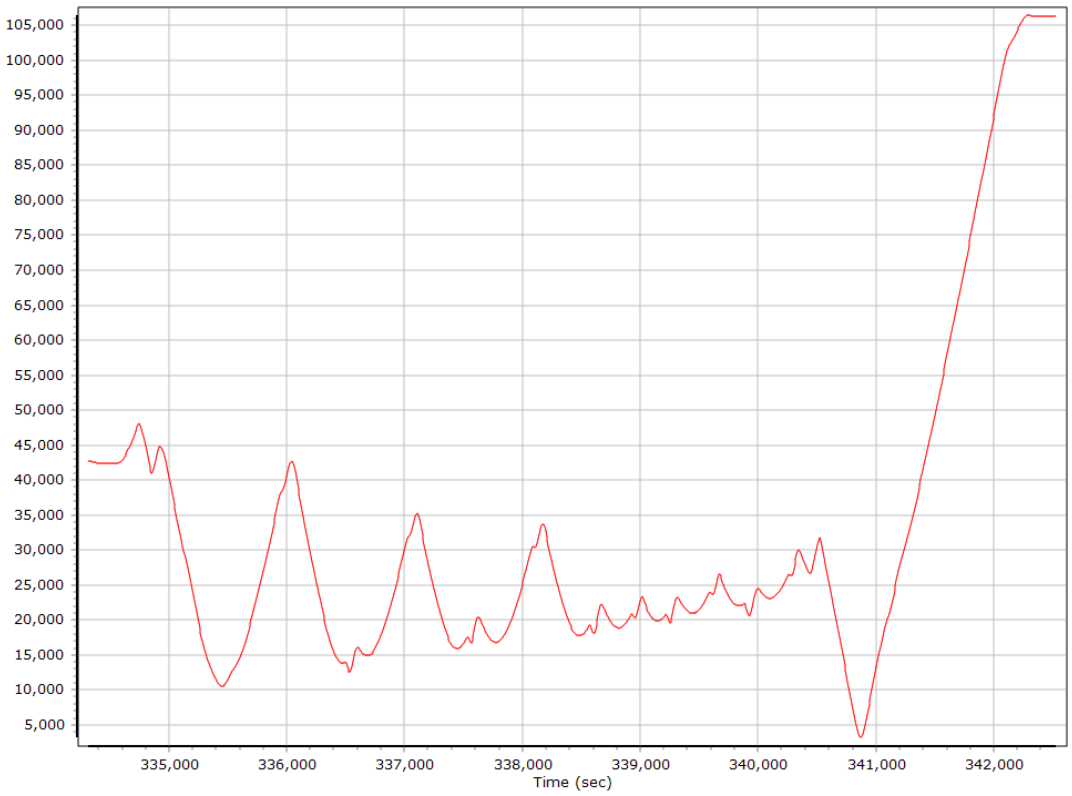
Processing Mode



Number of Satellites



Baseline Length



SBET IAKAR Separation