

General Information

Mission Information

Project name	2021114_Basestation
Processing date	2021-11-30 15:08:31
Mission date	2021-11-04 06:32:51
Mission duration	04:51:07.000
Processing mode	IN-Fusion Single Base
GPS Station	DHLG Durmid Hill

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N12299
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
VQ1560.366	POS Data
VQ1560.367	POS Data
VQ1560.368	POS Data
VQ1560.369	POS Data
VQ1560.370	POS Data
VQ1560.371	POS Data
VQ1560.372	POS Data
VQ1560.373	POS Data
VQ1560.374	POS Data
VQ1560.375	POS Data
VQ1560.376	POS Data
VQ1560.377	POS Data
VQ1560.378	POS Data
VQ1560.379	POS Data
VQ1560.380	POS Data
VQ1560.381	POS Data
VQ1560.382	POS Data
VQ1560.383	POS Data
VQ1560.384	POS Data
VQ1560.385	POS Data
VQ1560.386	POS Data
VQ1560.387	POS Data
VQ1560.388	POS Data
VQ1560.389	POS Data
VQ1560.390	POS Data
VQ1560.391	POS Data
VQ1560.392	POS Data
VQ1560.393	POS Data
VQ1560.394	POS Data
VQ1560.395	POS Data
VQ1560.396	POS Data
VQ1560.397	POS Data
VQ1560.398	POS Data
VQ1560.399	POS Data
VQ1560.400	POS Data
VQ1560.401	POS Data
VQ1560.402	POS Data
VQ1560.403	POS Data
VQ1560.404	POS Data

Input Files

File Name	File type
Ephm3080.21g	GLONASS Broadcast Ephemeris
Ephm3080.21n	GPS Broadcast Ephemeris
dhlg3080.21o	GNSS SingleBase

Output Files

Filename	File type
sbet_2021114_F1_Basestation.out	SBET Trajectory File
export_2021114_F1_Basestation_NAD832011.out	Custom Smoothed BET Export Output

Rover Data Summary

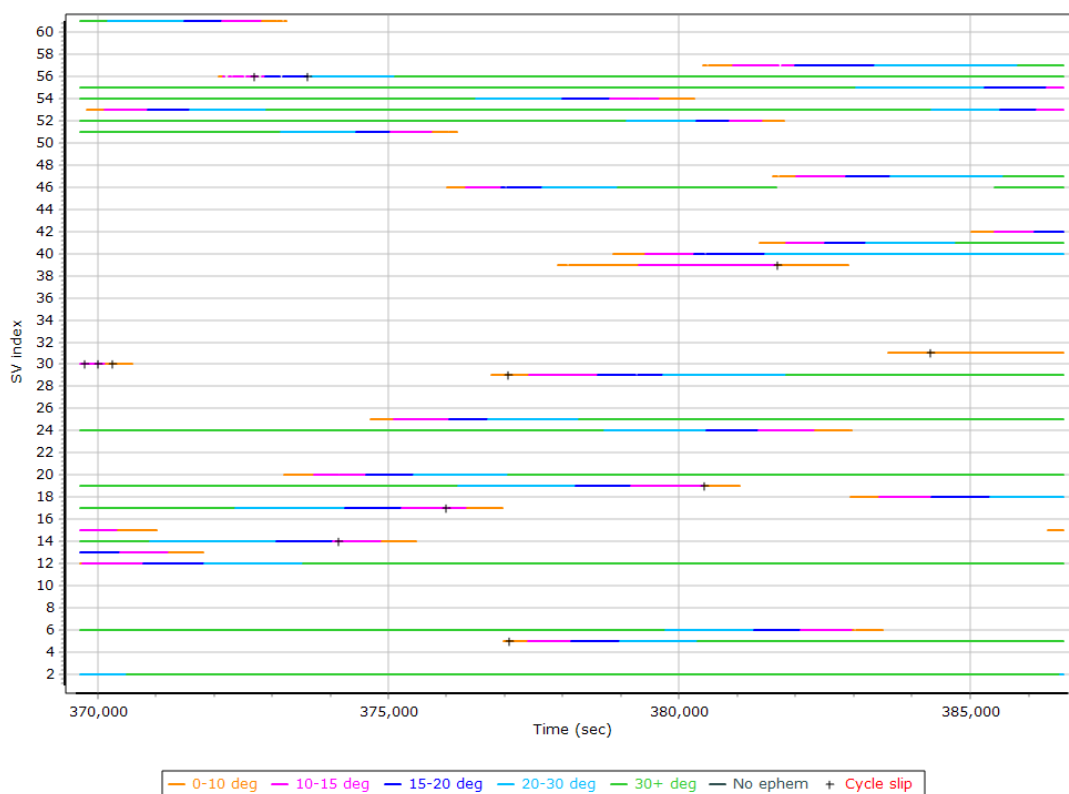
First raw data file	VQ1560.366		
Last raw data file	VQ1560.404		
Start GPS week	2182		
Start time	369172.146 (11/04/2021 06:32:52)		
End time	386620.435 (11/04/2021 11:23:40)		
Start of fine alignment	369634.111 (11/04/2021 06:40:34)		
Available subsystems	Primary GNSS, IMU		
POS Event Input	None		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Reference to IMU lever arm [m]	0.018	-0.010	-0.464
Reference to IMU mounting angles [deg]	0.000	0.000	0.000
Reference to Primary GNSS lever arm [m]	0.000	0.000	-1.000
Reference to Primary GNSS lever arm std dev [m]	-1.000		
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

Raw Data QC

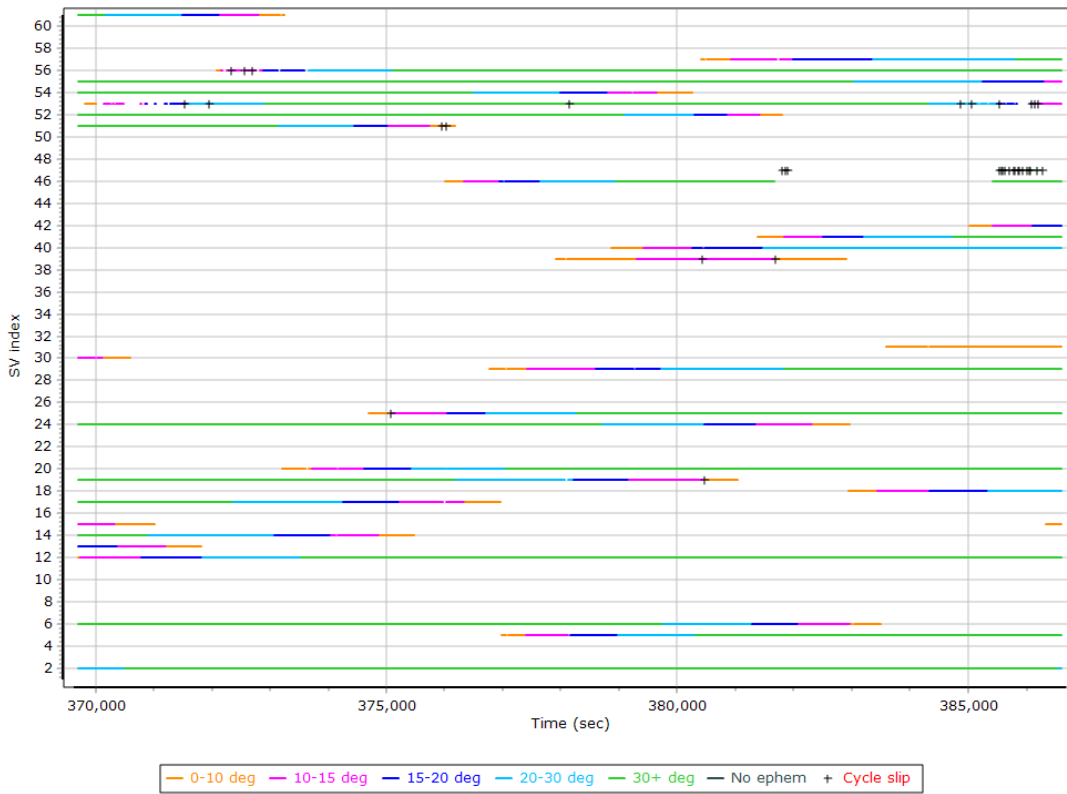
Raw IMU Import QC Summary

IMU data input file	imu_2021114_F1_Basestation.dat
IMU data check log file	imudt_2021114_F1_Basestation.log
IMU Records Processed	3492802
Termination Status	Warnings
IMU Anomalies	1
IMU Failure Messages	
369171.956 : WARNING : Gap of 369151.9975 seconds in CHECKDT input data	

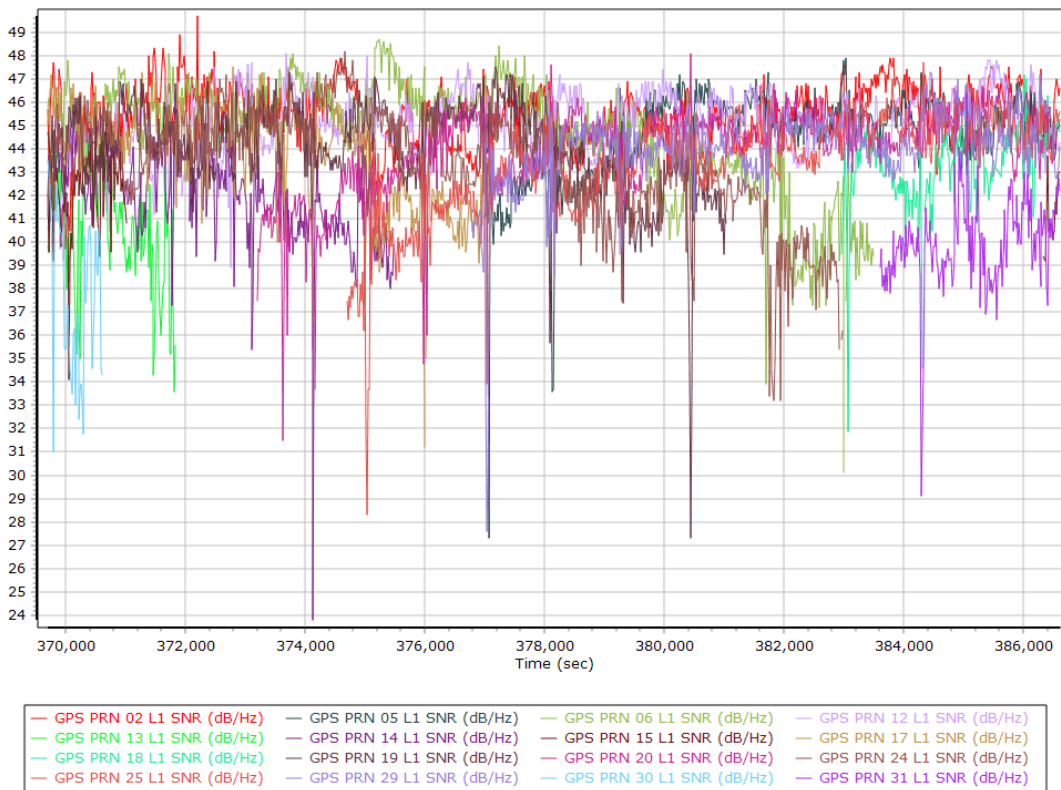
L1 Satellite Lock/Elevation



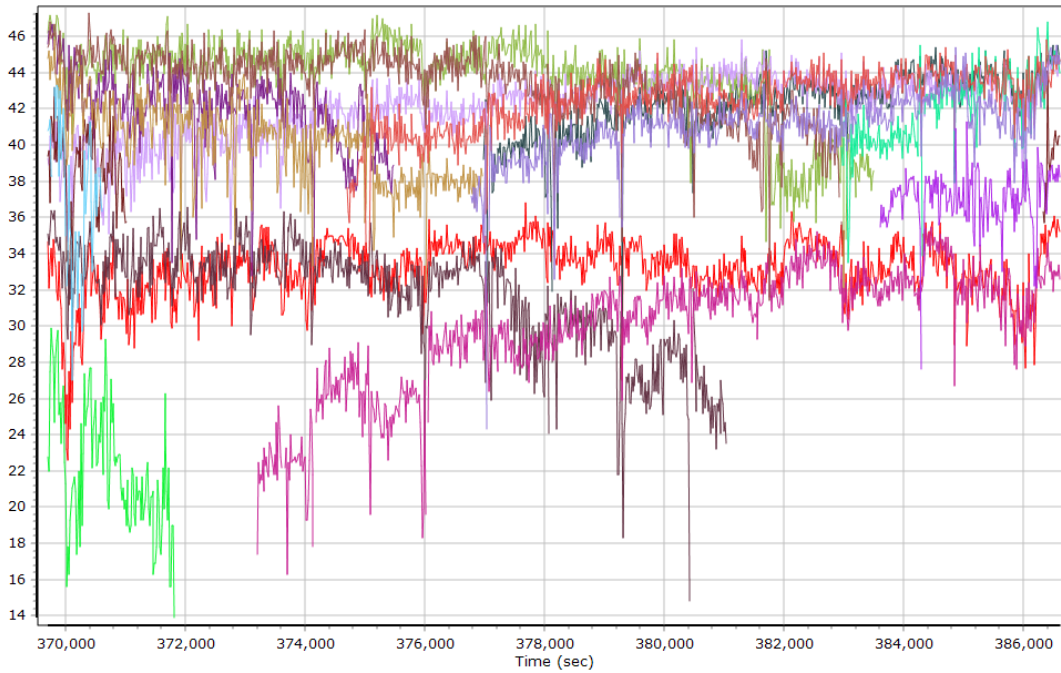
L2 Satellite Lock/Elevation



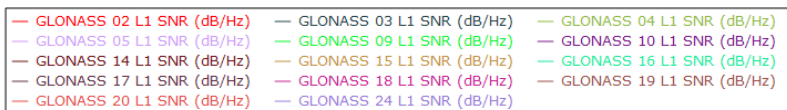
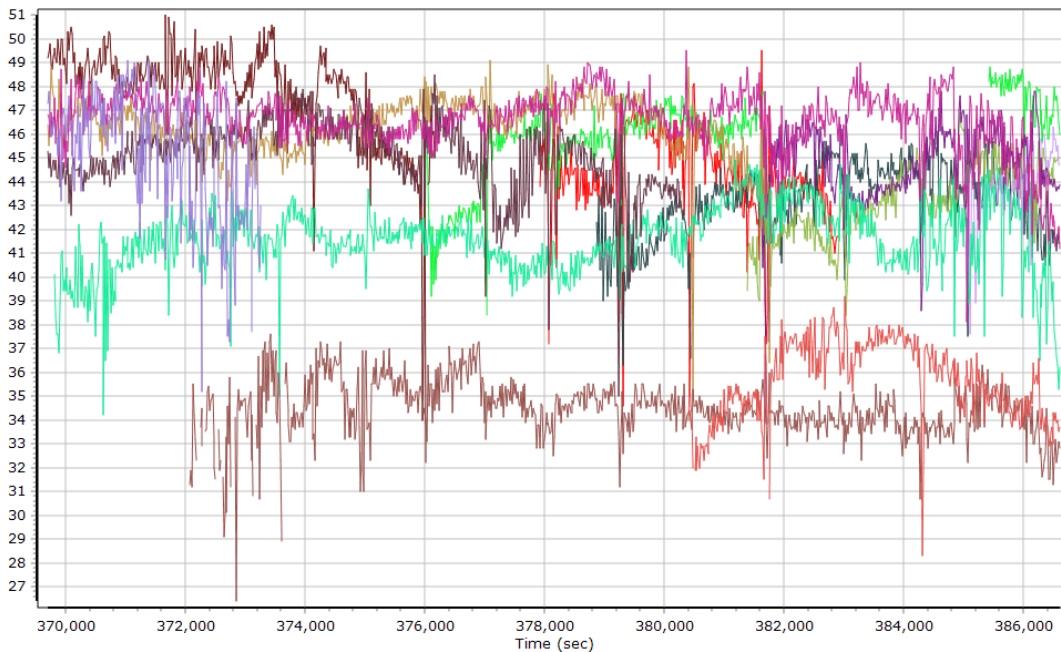
GPS L1 SNR



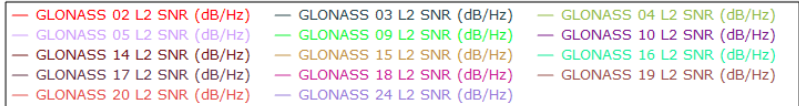
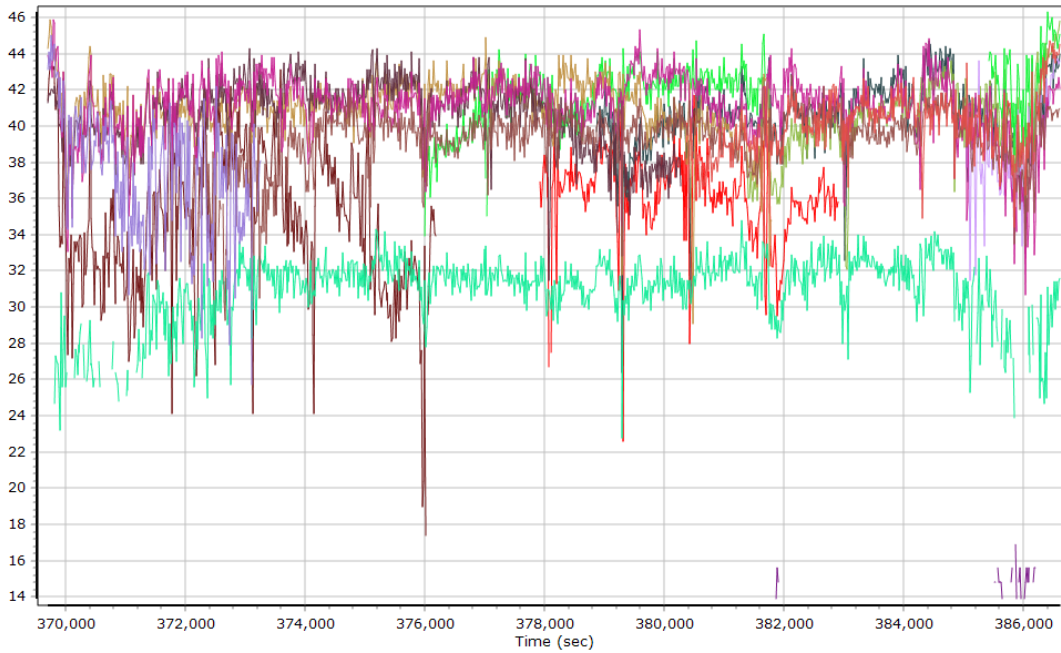
GPS L2 SNR



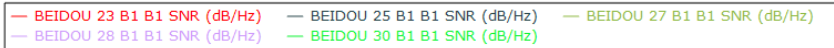
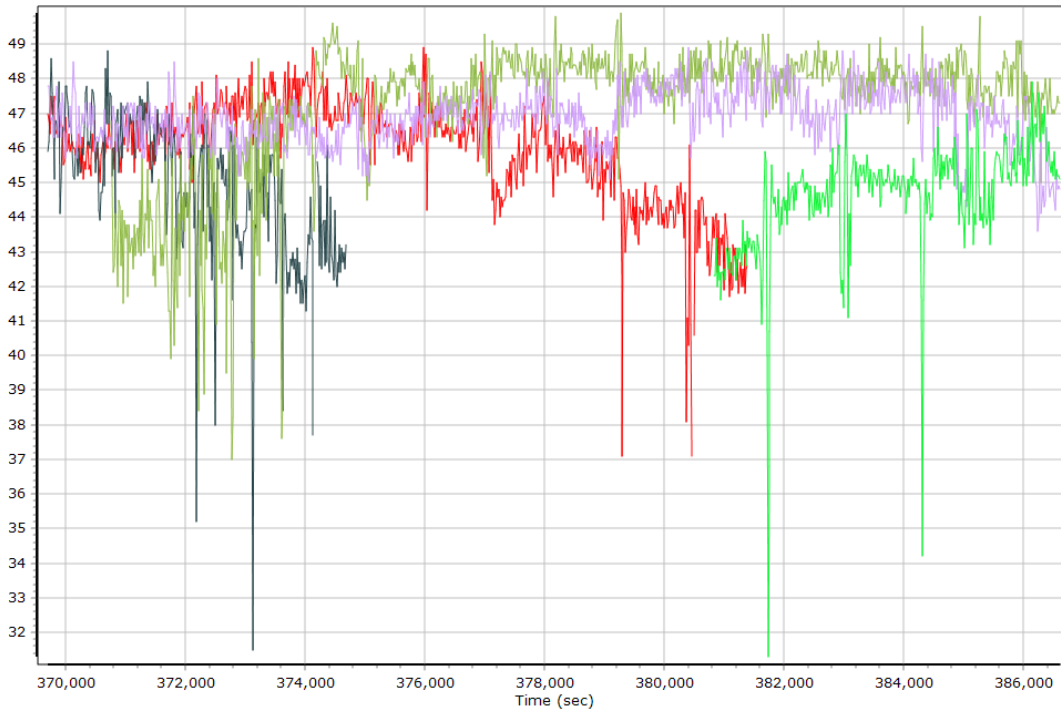
GLONASS L1 SNR



GLONASS L2 SNR

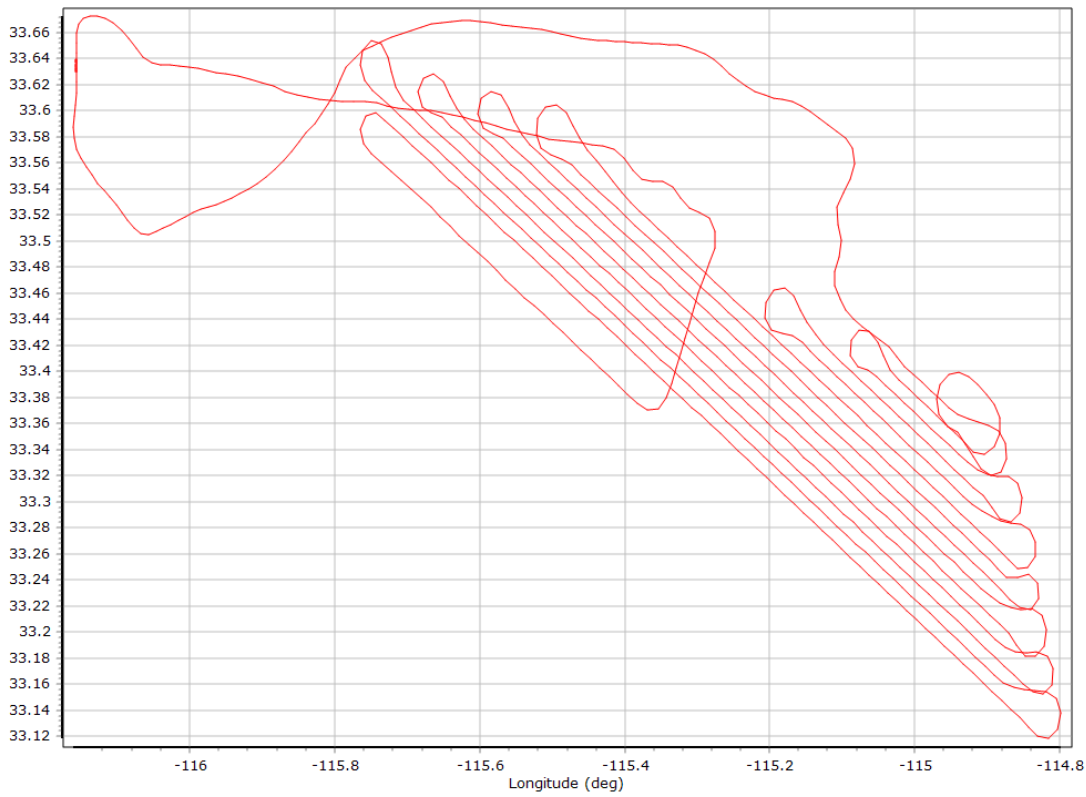


BEIDOU SNR

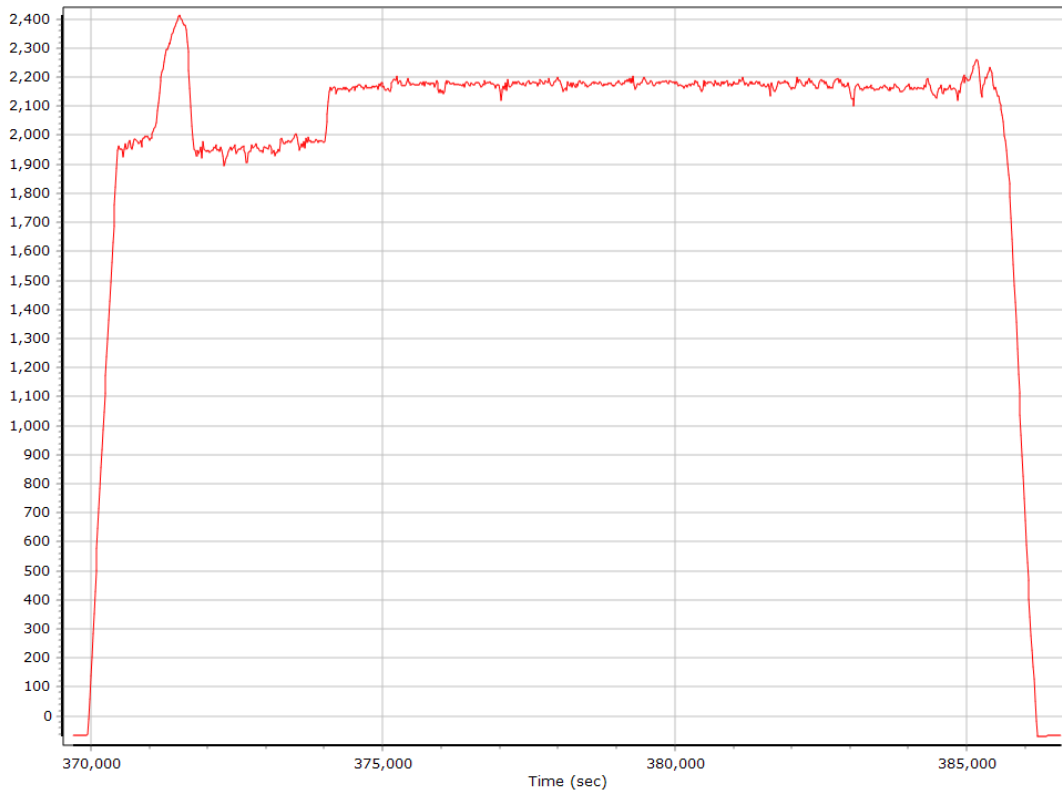


Trajectory Information

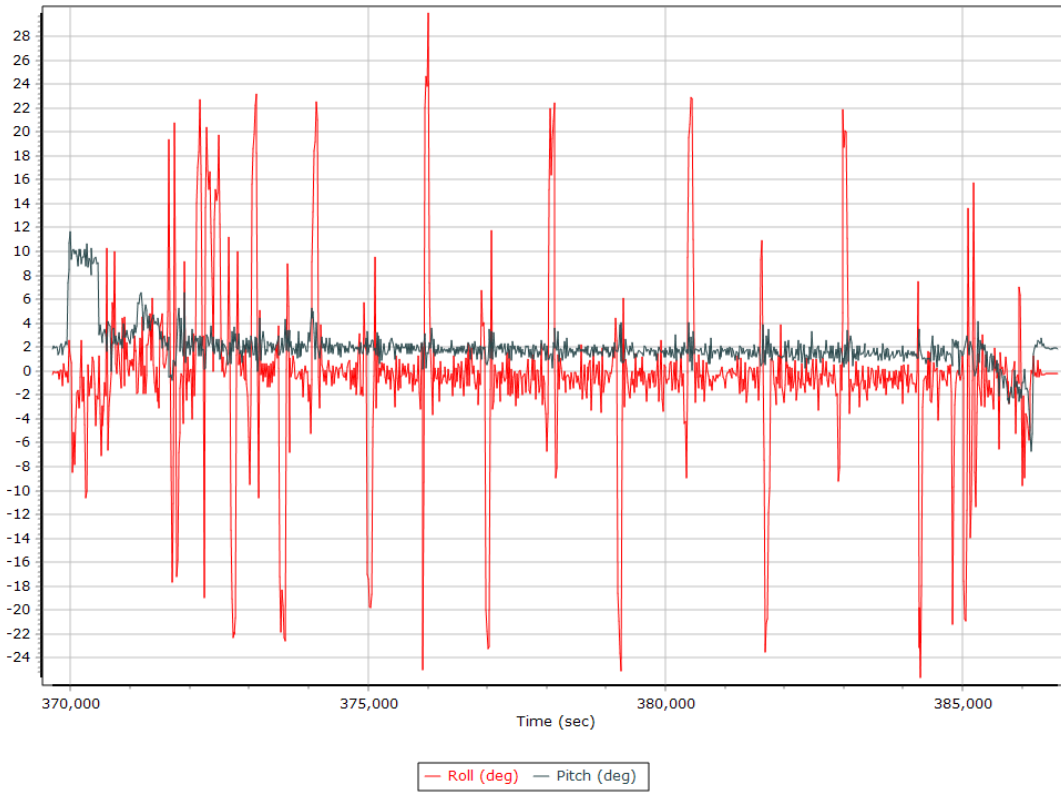
Top View



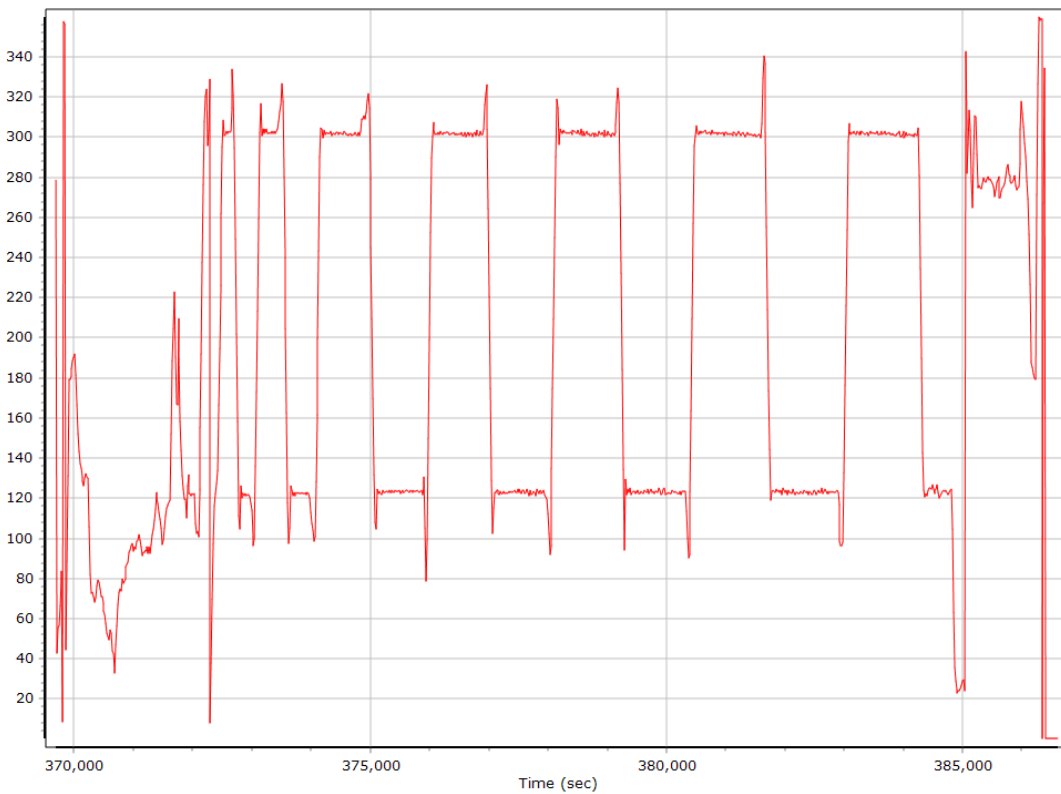
Altitude



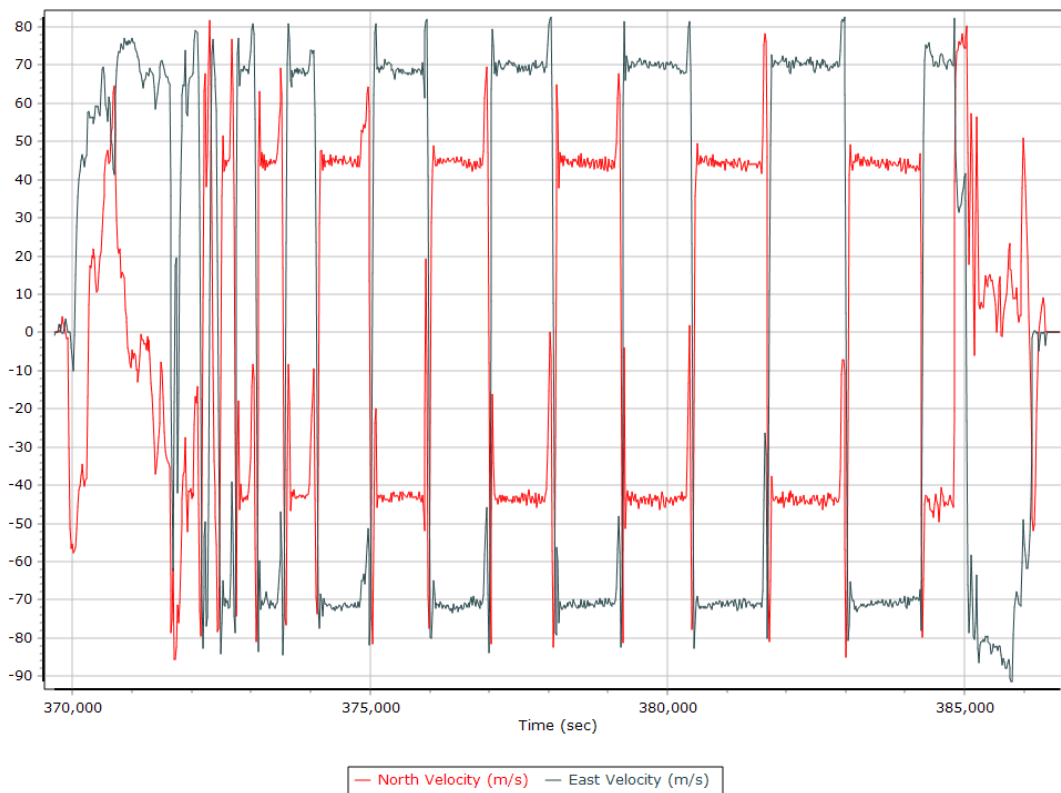
Roll/Pitch



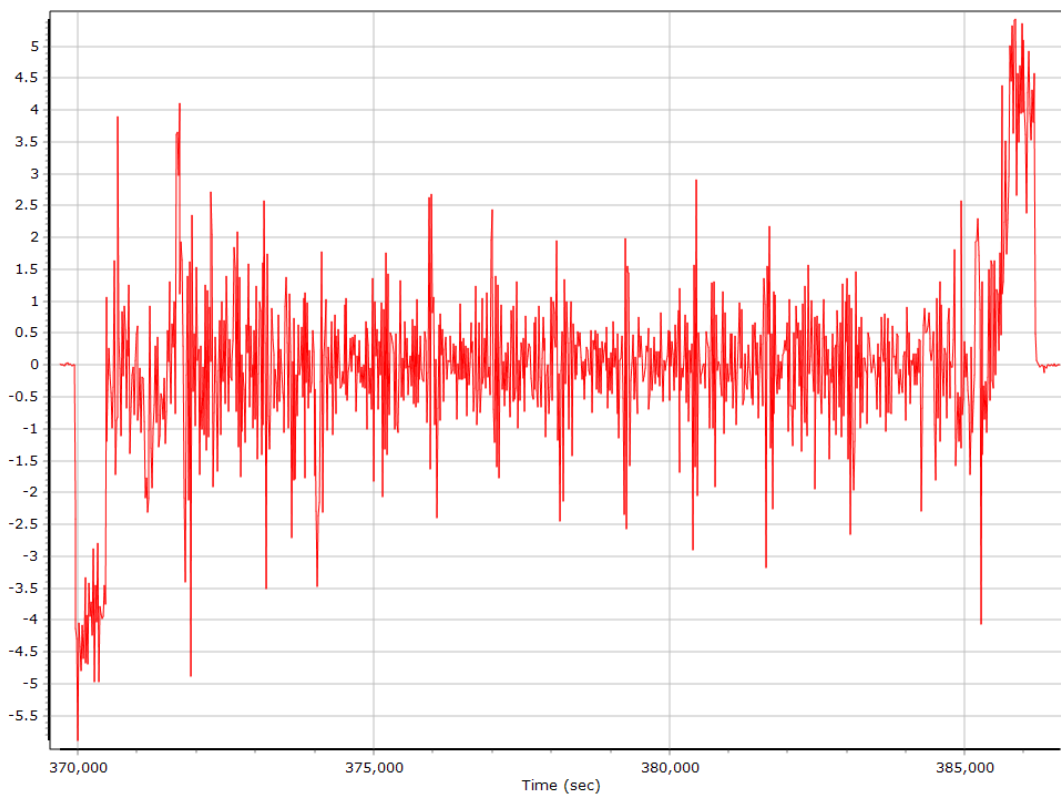
Heading



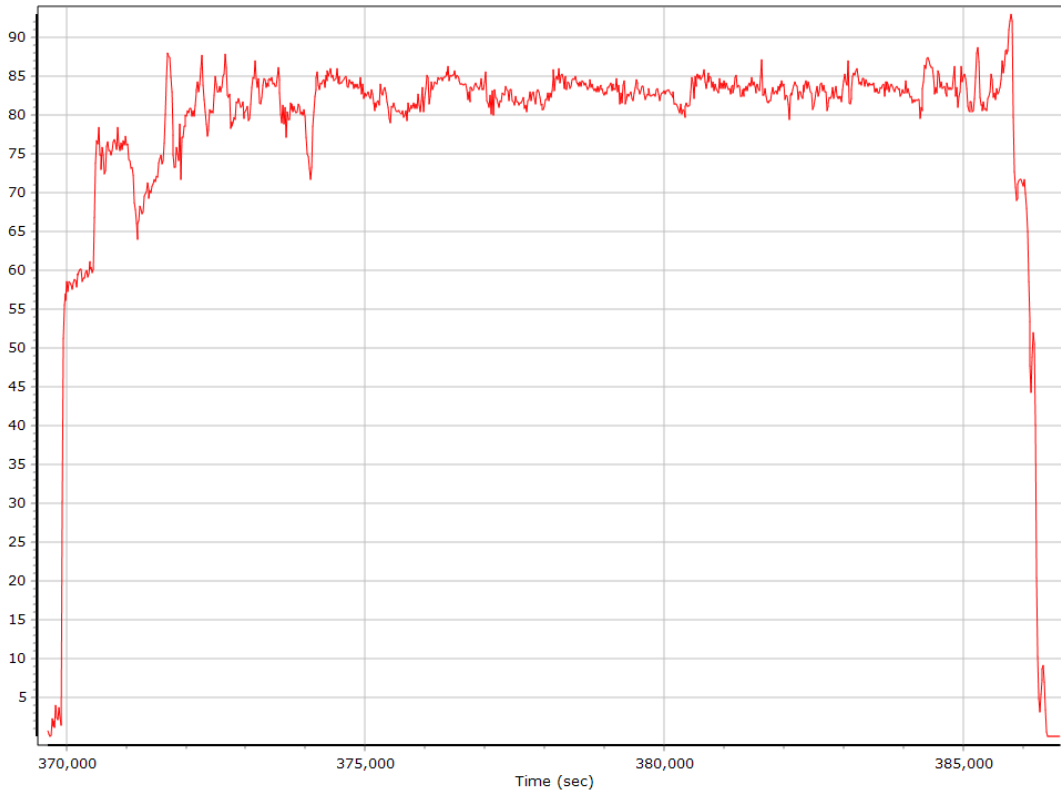
North/East Velocity



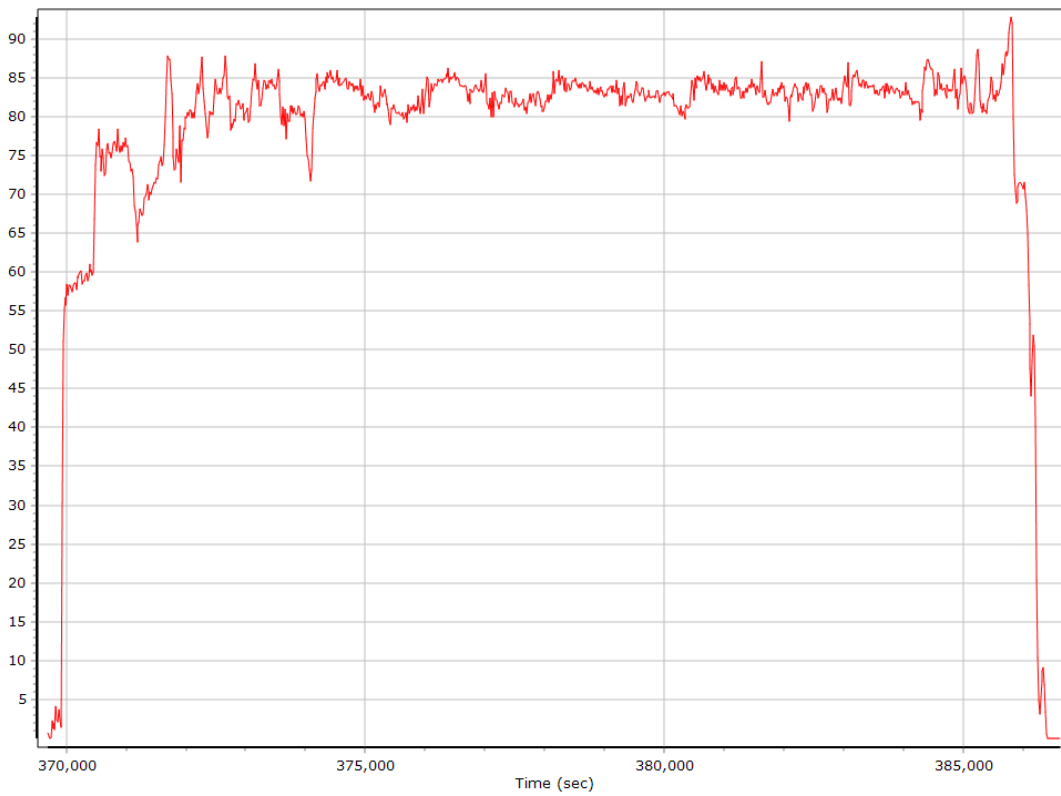
Down Velocity



Total Speed



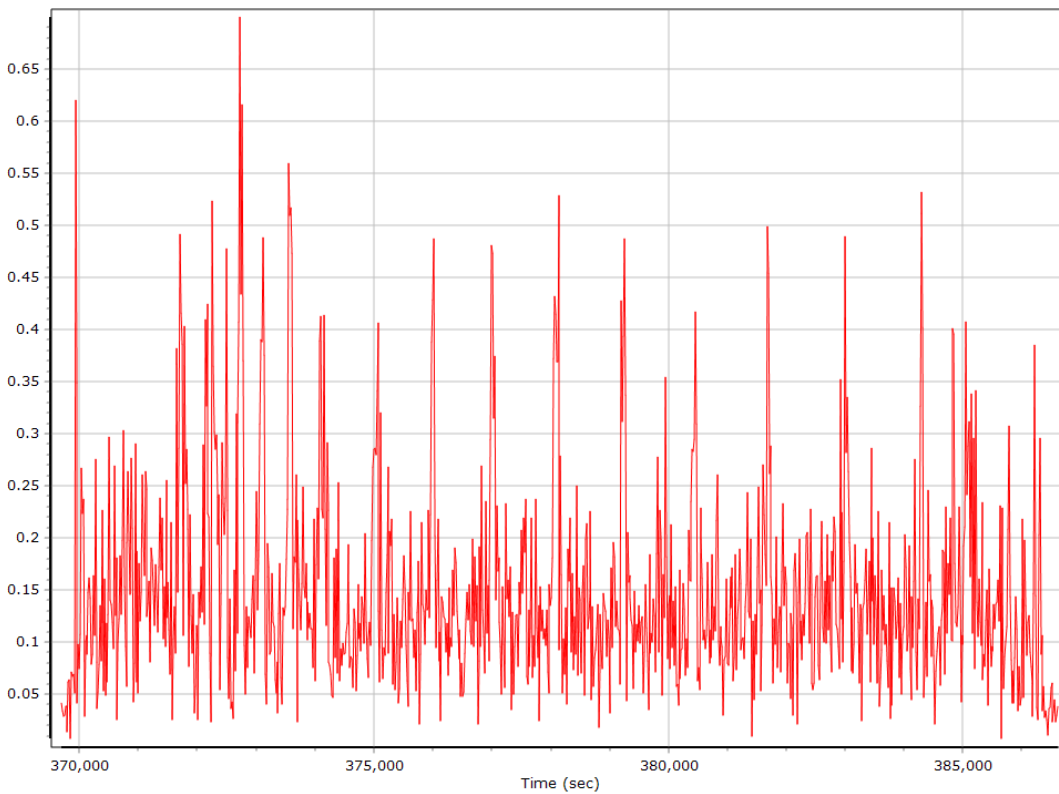
Ground Speed



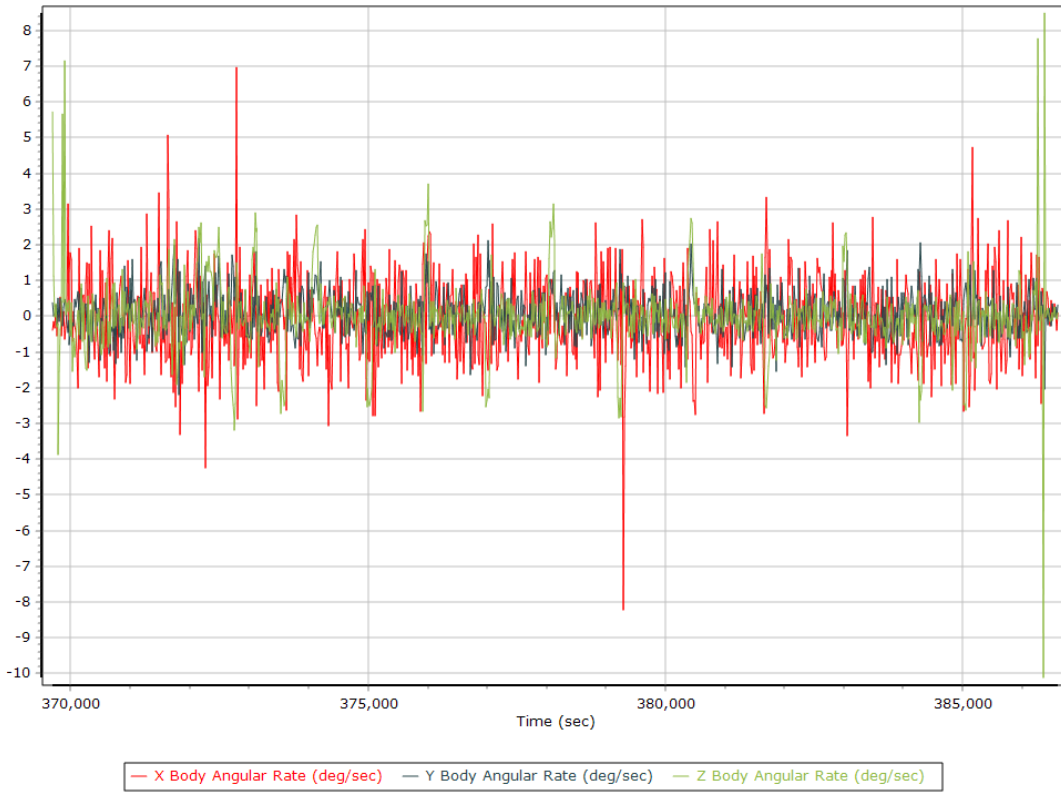
Body Acceleration



Total Body Acceleration



Body Angular Rate



Base Station Information

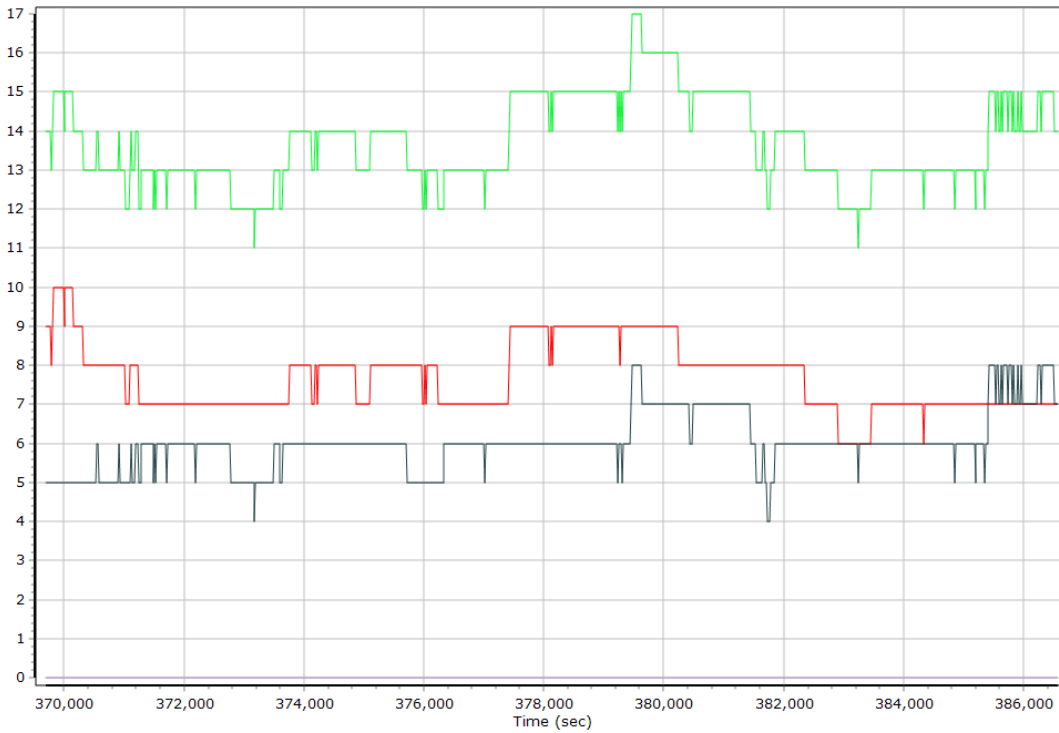
Station ID	DHLG Durmid Hill		
Filename	dhl3080.21o		
Start date	11/04/2021 00:00:00		
End date	11/04/2021 23:59:59		
Duration	23:59:59.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Topcon	NET-G3A	618-01037
Antenna manufacturer, model	Topcon	TPS CR.G3 w/SCIS	
Antenna height [m]	0.122		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC [m]	0.08417		
Latitude	N33°23'23.28790"		
Longitude	W115°47'16.85576"		
Ellipsoidal height [m]	-82.15100		
Frame	NAD83_2011		
Epoch	2010		
Ellipsoid	GRS_1980		
Velocity North [mm/y]	36.2045548796944		
Velocity East [mm/y]	-29.8799272009713		
Velocity Up [mm/y]	-1.07684379260183		

GNSS QC

GNSS QC Statistics

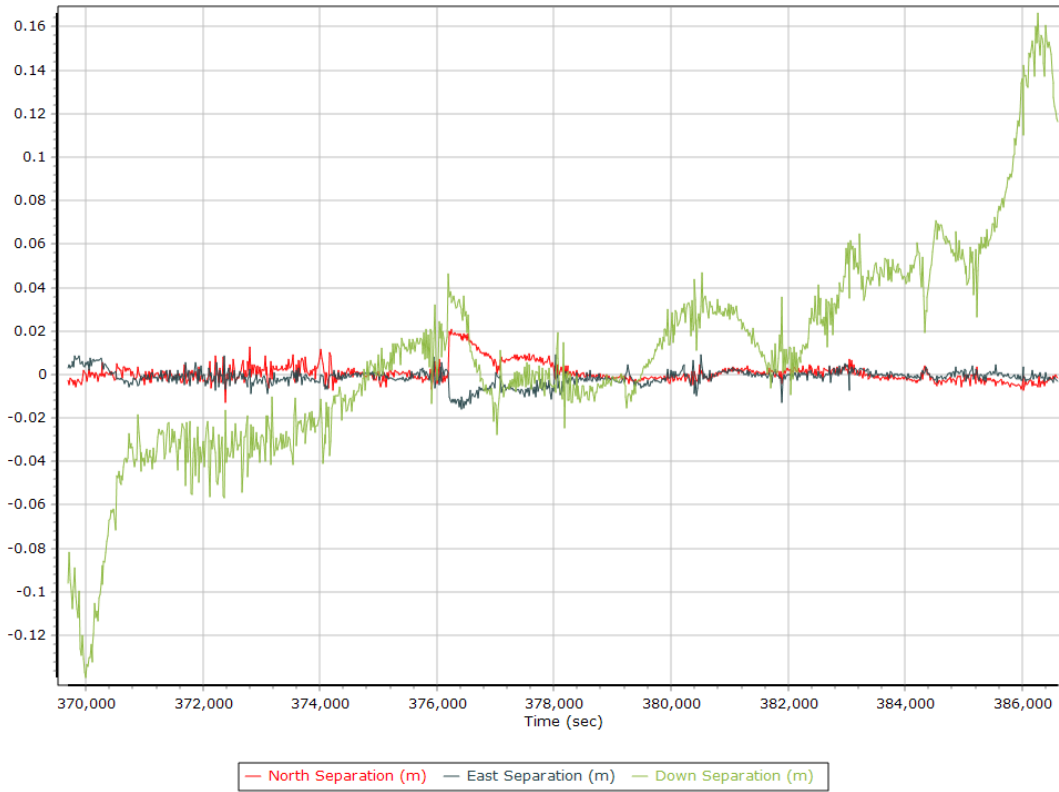
Statistics	Min	Max	Mean
Baseline length [km]	18.91	96.52	
Number of GPS SV	4	10	8
Number of GLONASS SV	3	8	6
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Total number of SV	8	17	14
PDOP	1.22	2.97	1.54
QC Solution Gaps	0.00	0.00	
Solution Type	Fixed	Float	No solution
Epoch (s)	17398.00	0.00	0.00
Percentage	100.00	0.00	0.00

Num SVs in solution

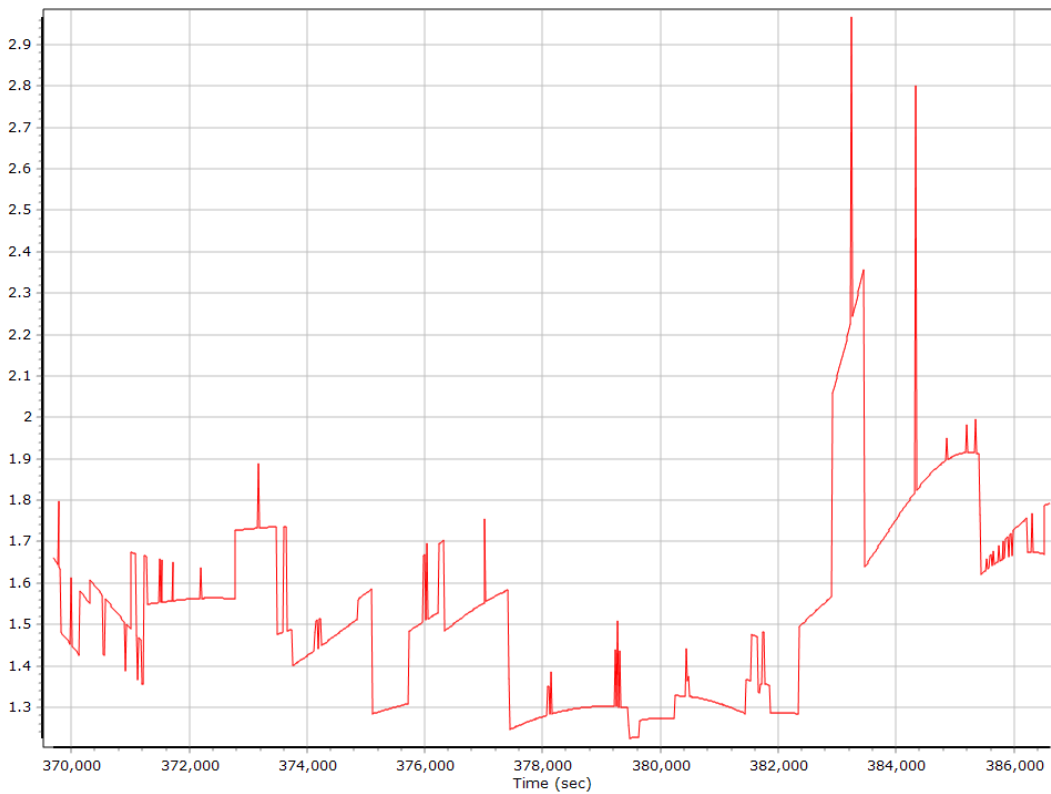


— Number of GPS — Number of GLONASS — Number of QZSS — Number of BEIDOU — Total Number

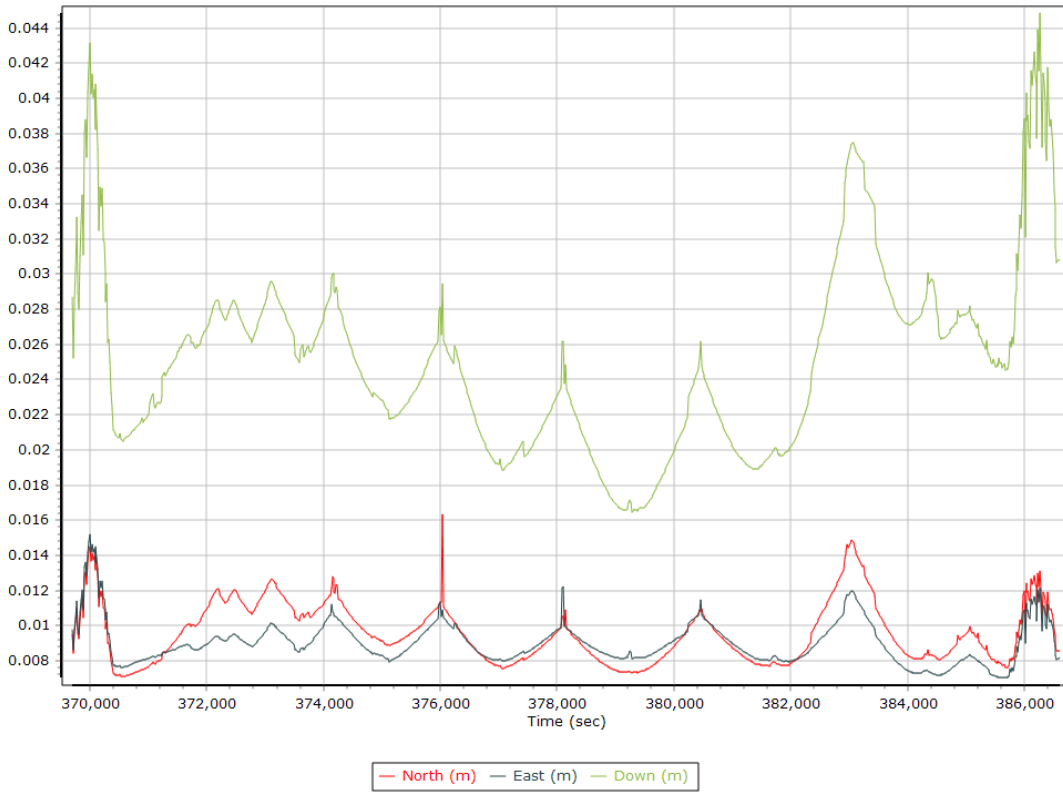
Forward/Reverse Separation



PDOP



Estimated Position Accuracy



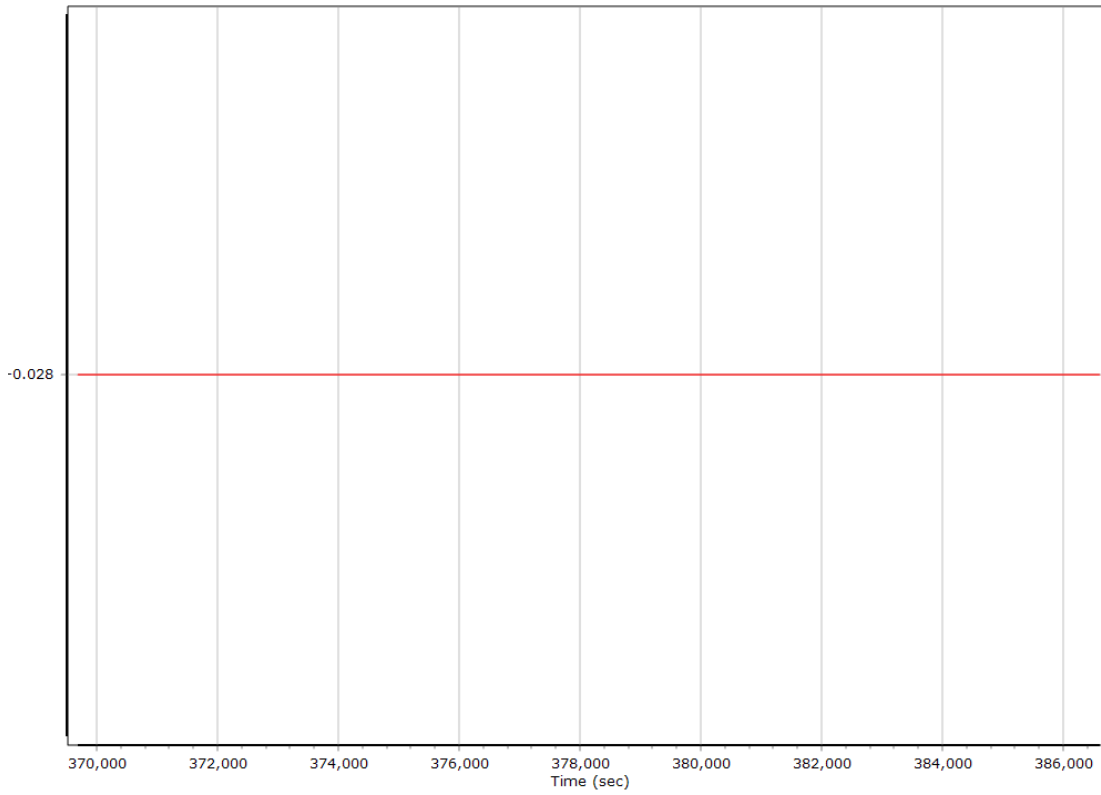
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion Single Base		
Stabilized mount	False		
Base station	DHLG Durmid Hill		
Processing start time	369153.000 (11/04/2021 06:32:33)		
Processing end time	386620.000 (11/04/2021 11:23:40)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Reference to IMU lever arm [m]	0.000	0.000	0.000
Reference to IMU mounting angles [deg]	0.000	0.000	0.000
Reference to Primary GNSS lever arm [m]	-0.028	-0.054	-0.948
Reference to Primary GNSS lever arm std dev [m]	0.030	0.030	0.030
Aircraft to Reference mounting angles [deg]	0.000	0.000	0.000

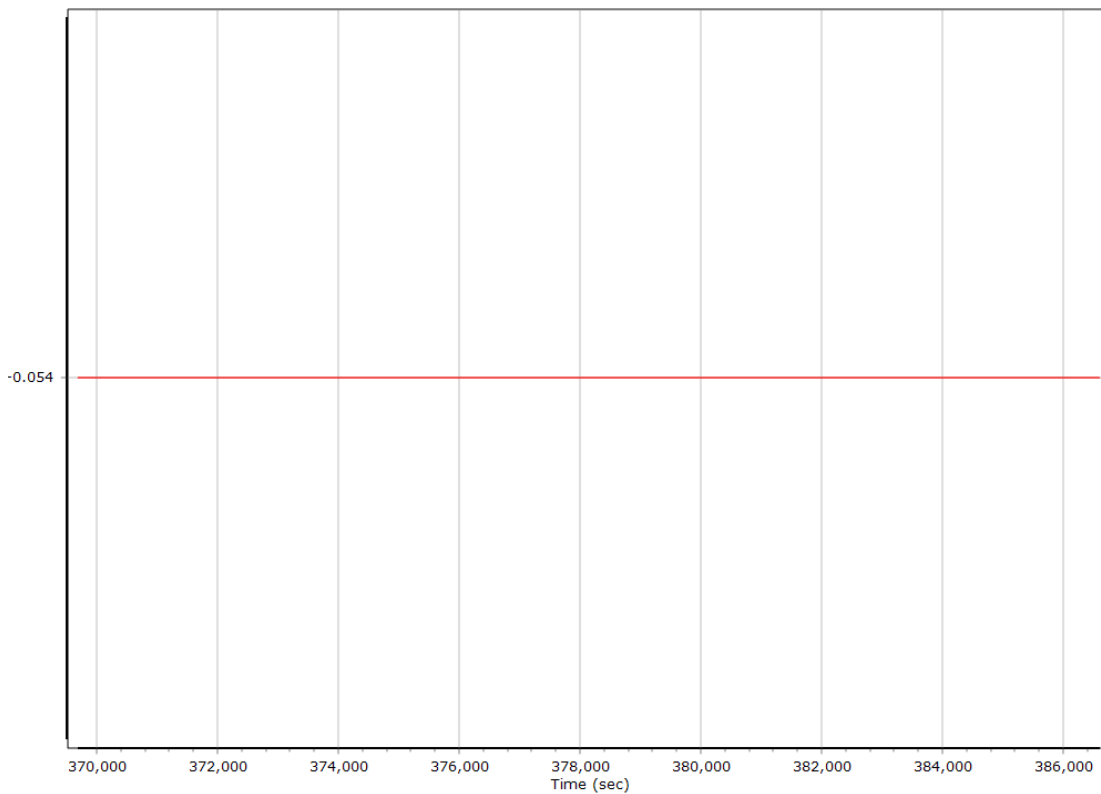
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm

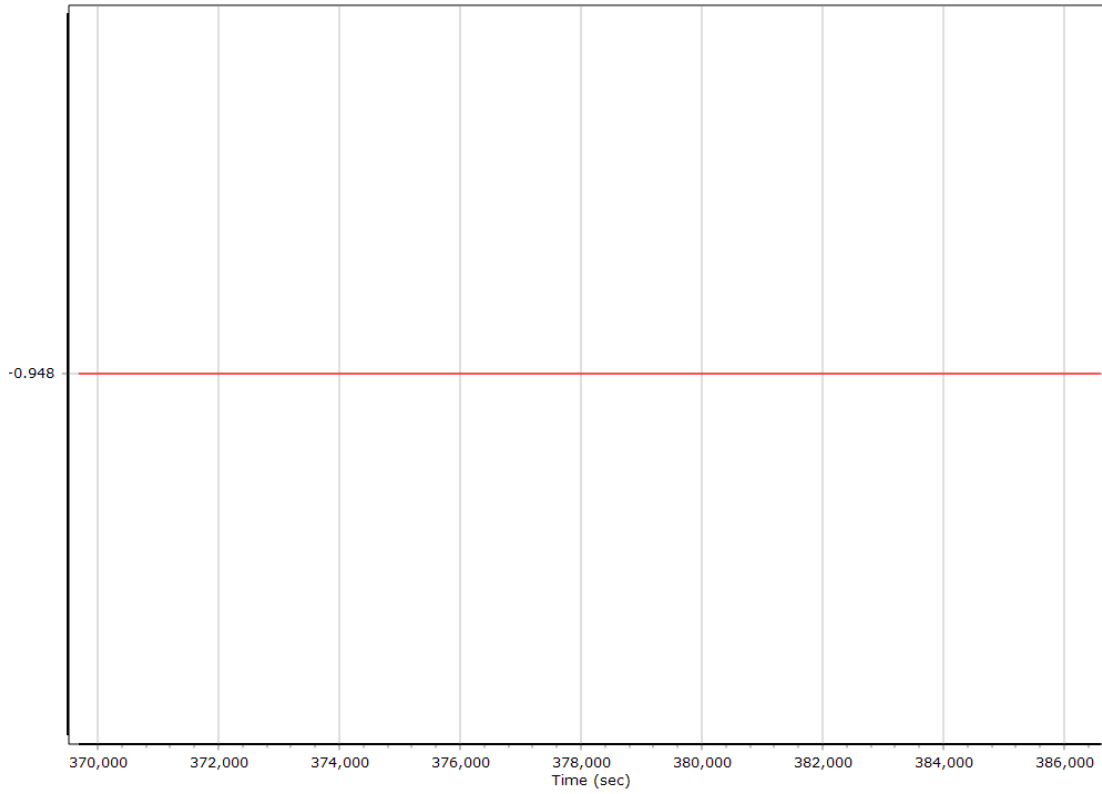
X Reference-Primary GNSS Lever Arm (m)



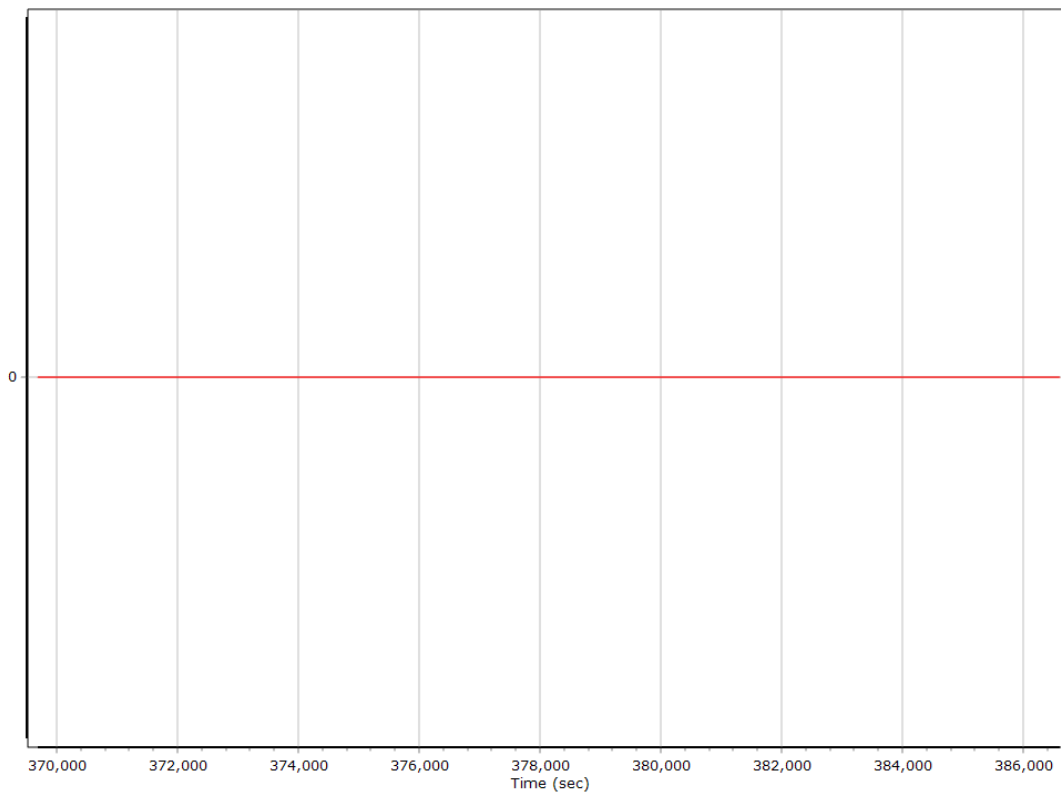
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



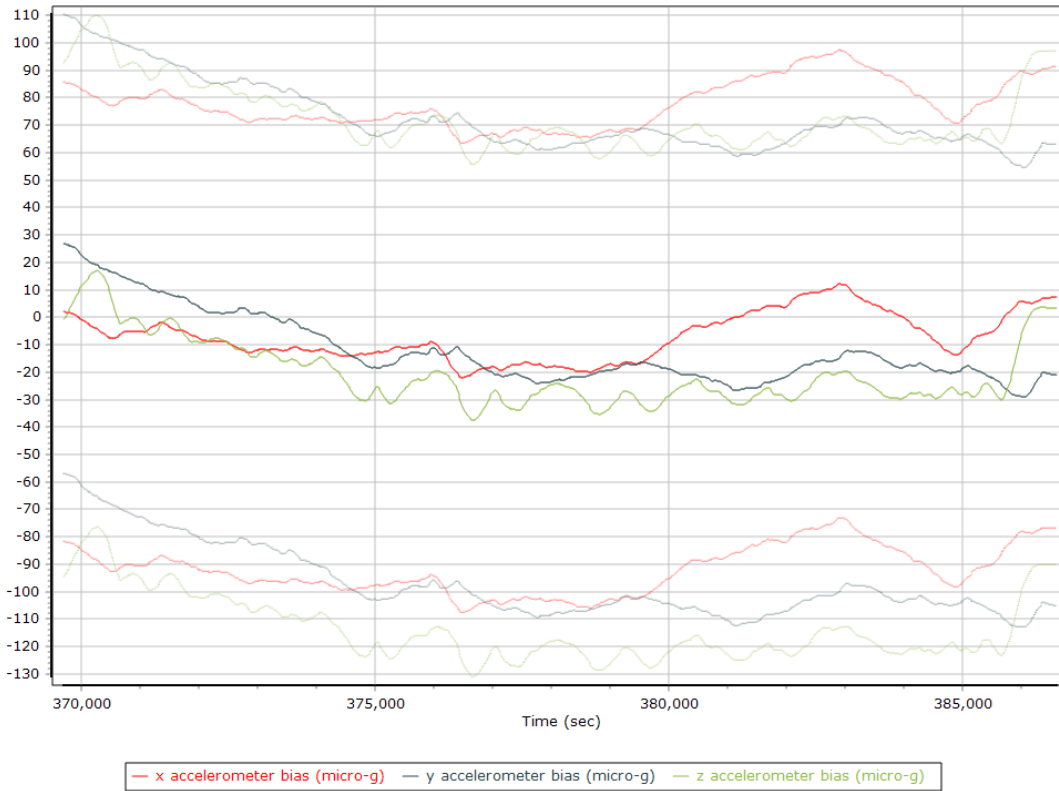
Reference-Primary GNSS Lever Arm Figure of Merit



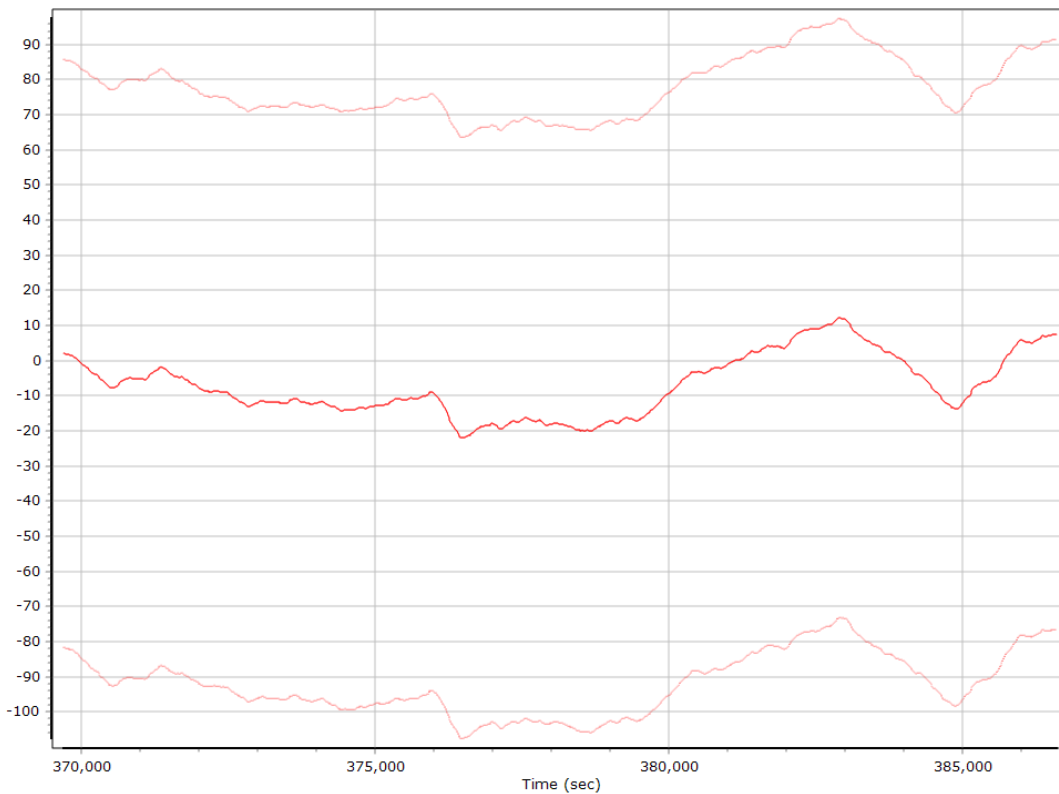
Smoothed IN-Fusion QC

Smoothed Estimated Errors, Reference Frame

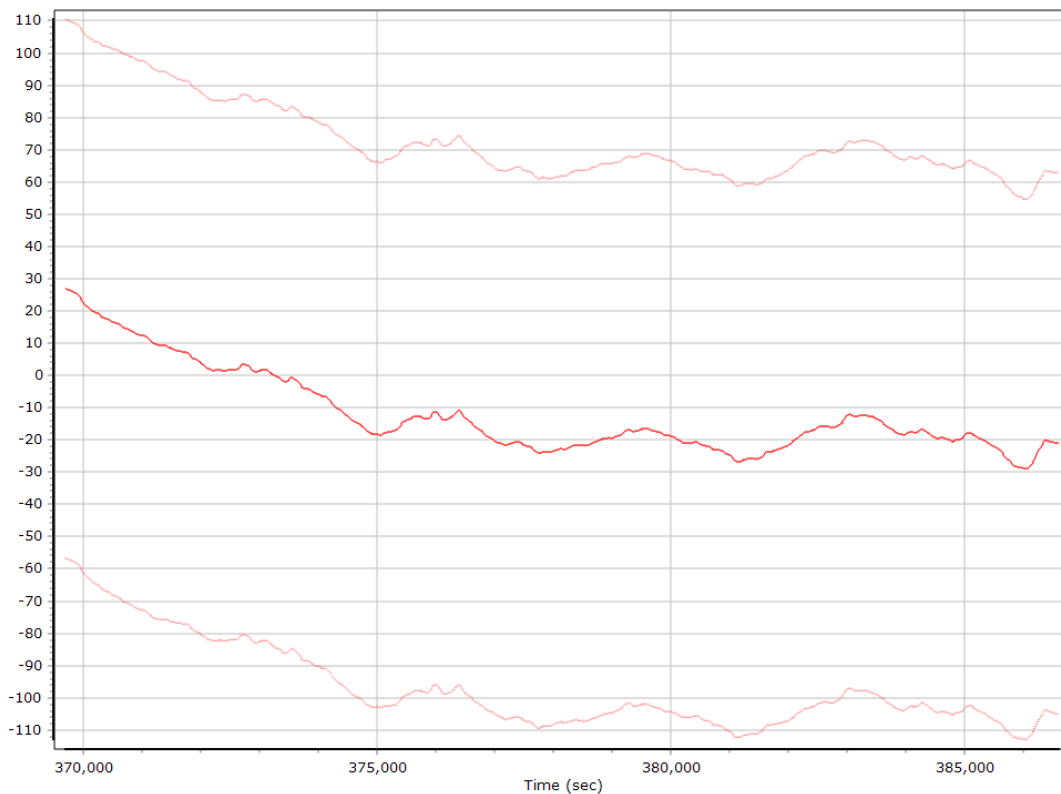
Accelerometer Bias (micro-g)



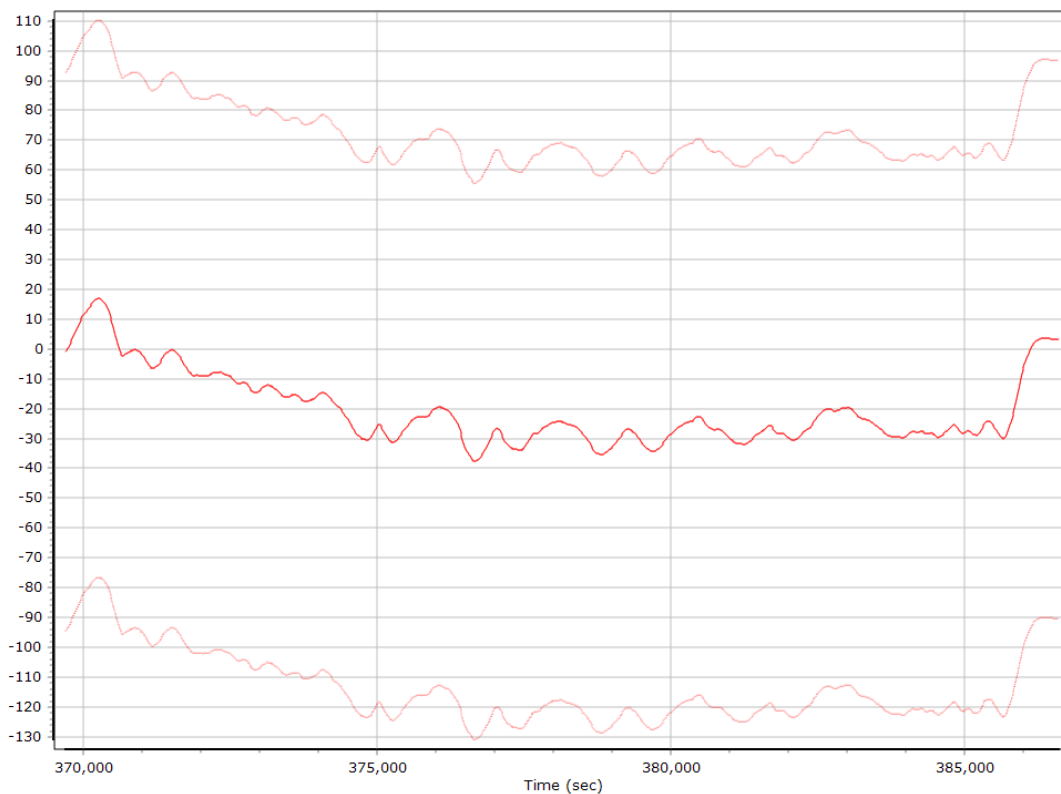
X Accelerometer Bias (micro-g)



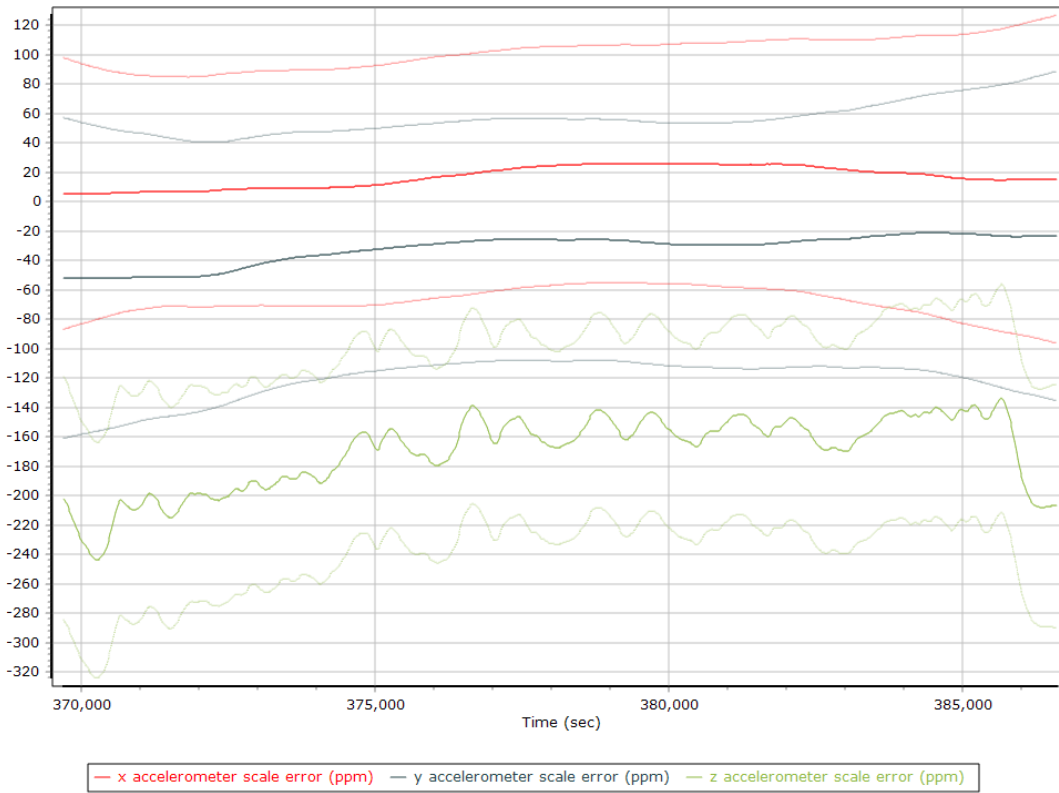
Y Accelerometer Bias (micro-g)



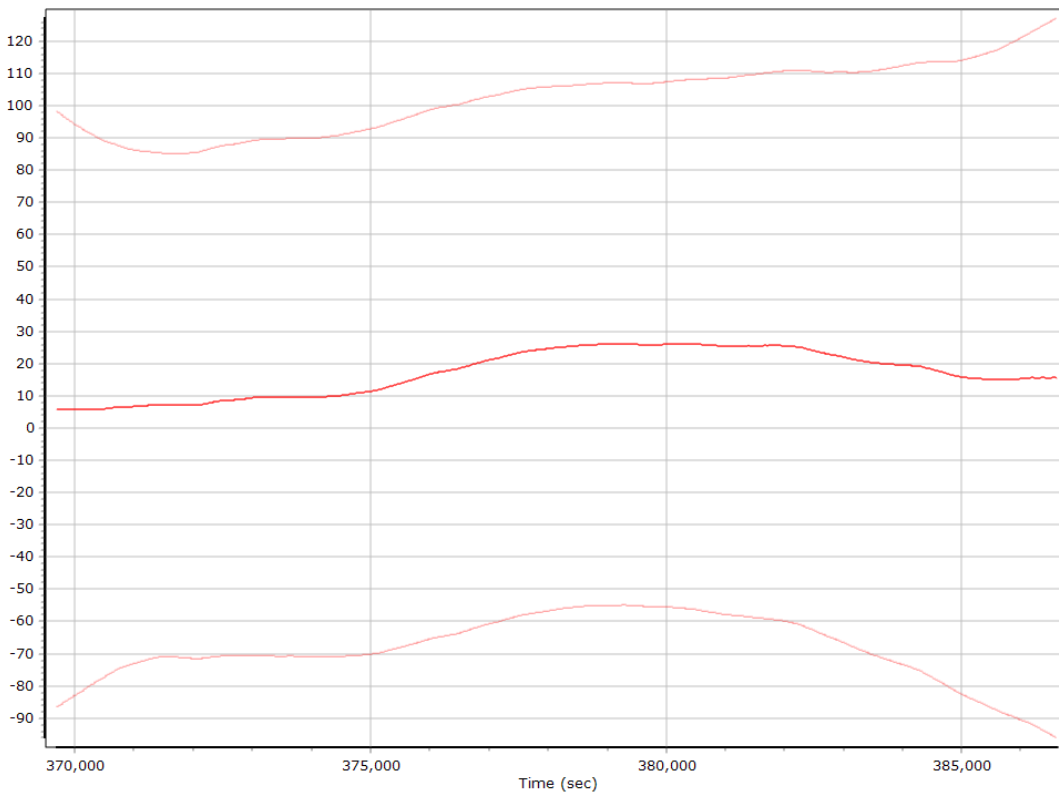
Z Accelerometer Bias (micro-g)



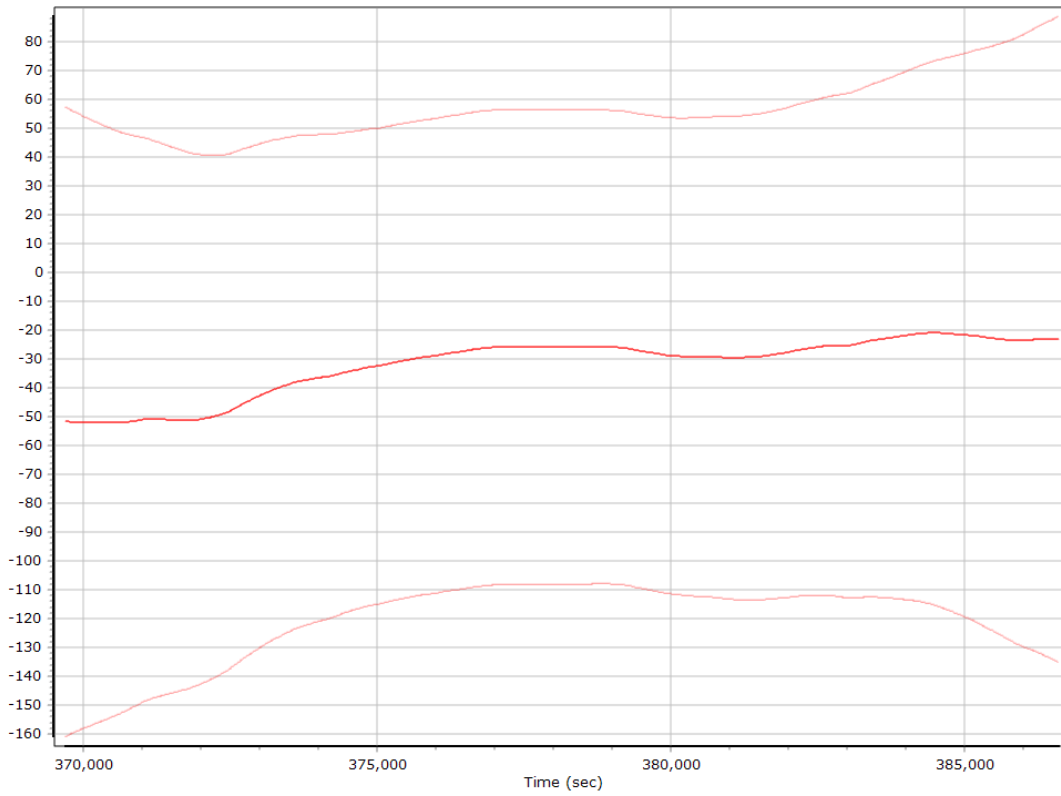
Accelerometer Scale Error (ppm)



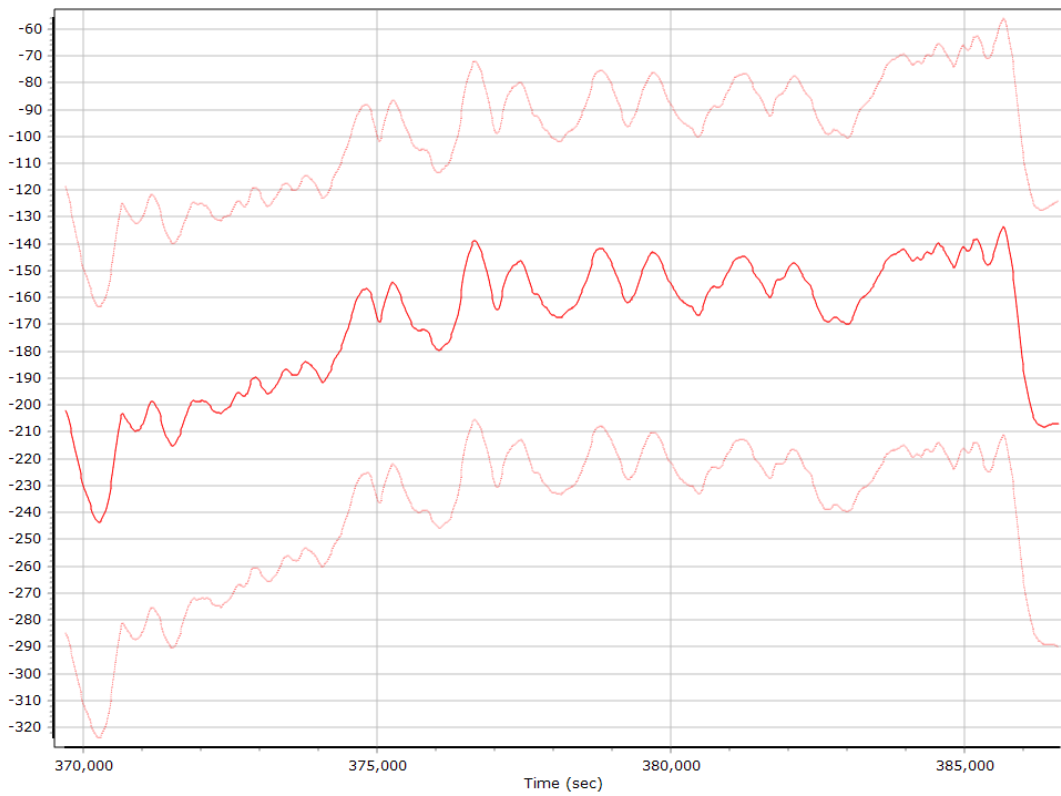
X Accelerometer Scale Error (ppm)



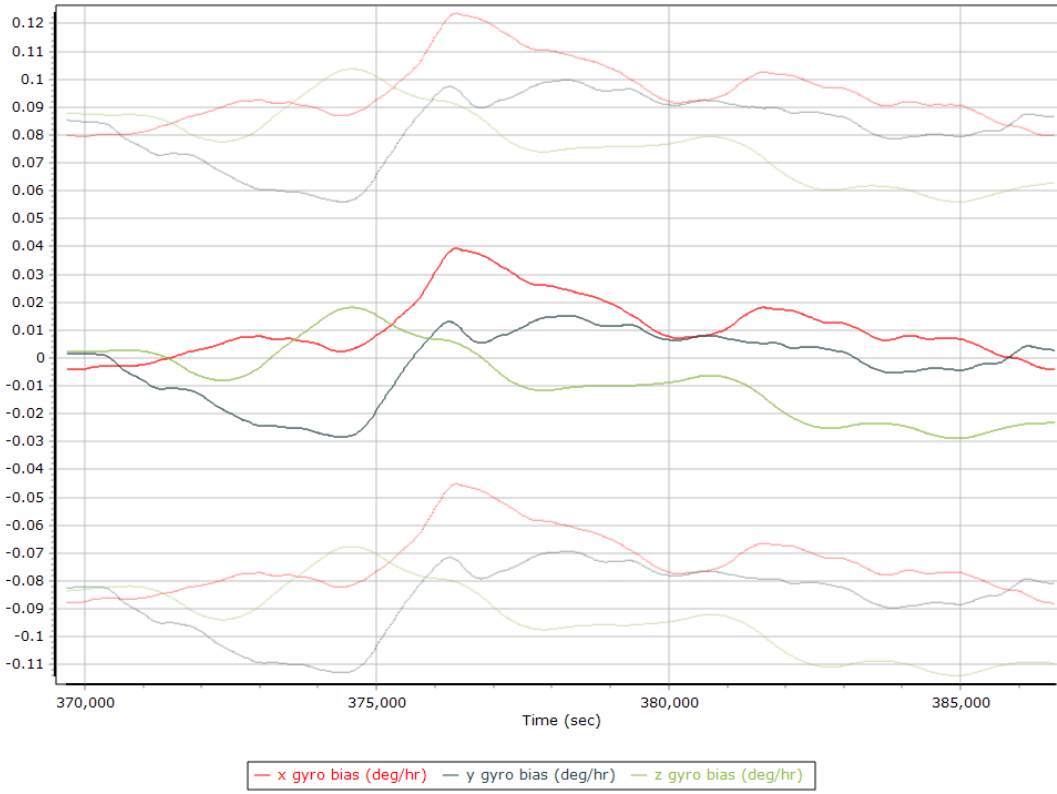
Y Accelerometer Scale Error (ppm)



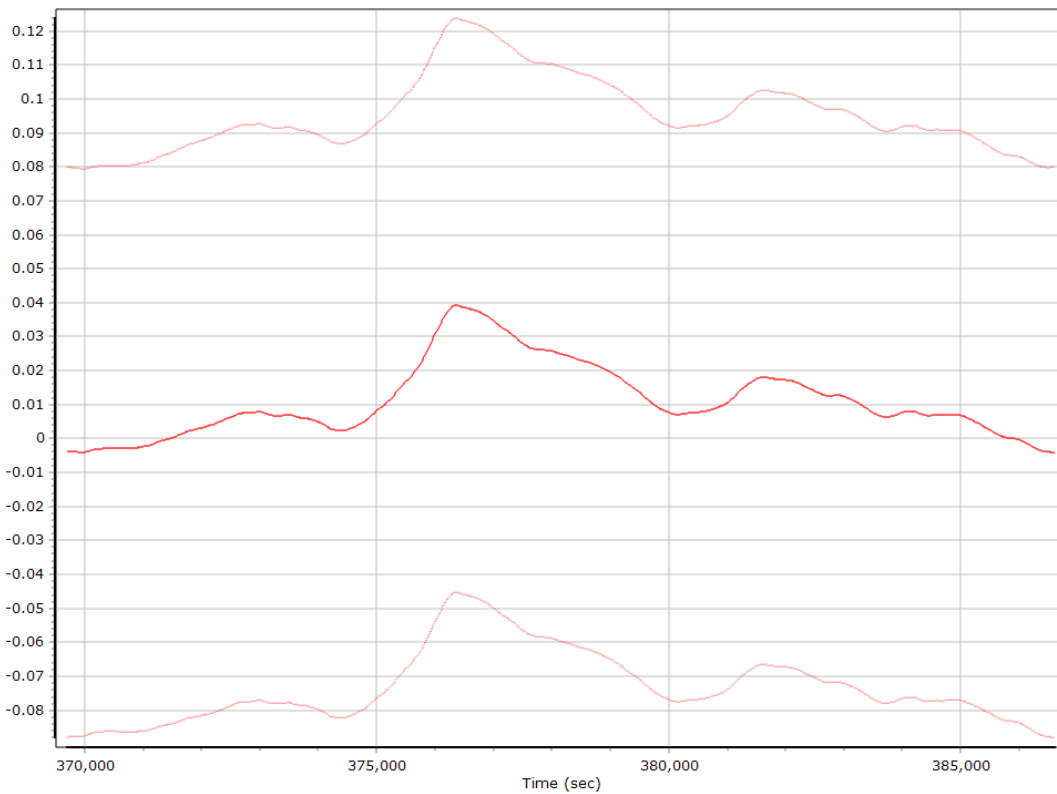
Z Accelerometer Scale Error (ppm)



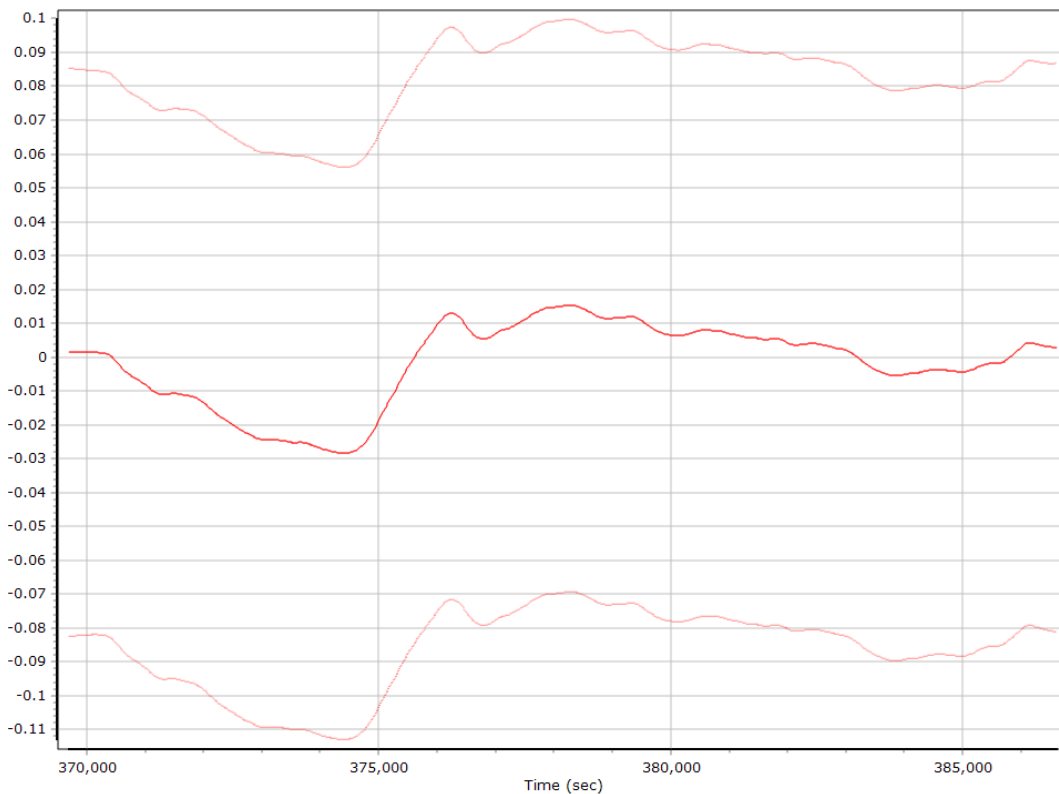
Gyro Bias (deg/h)



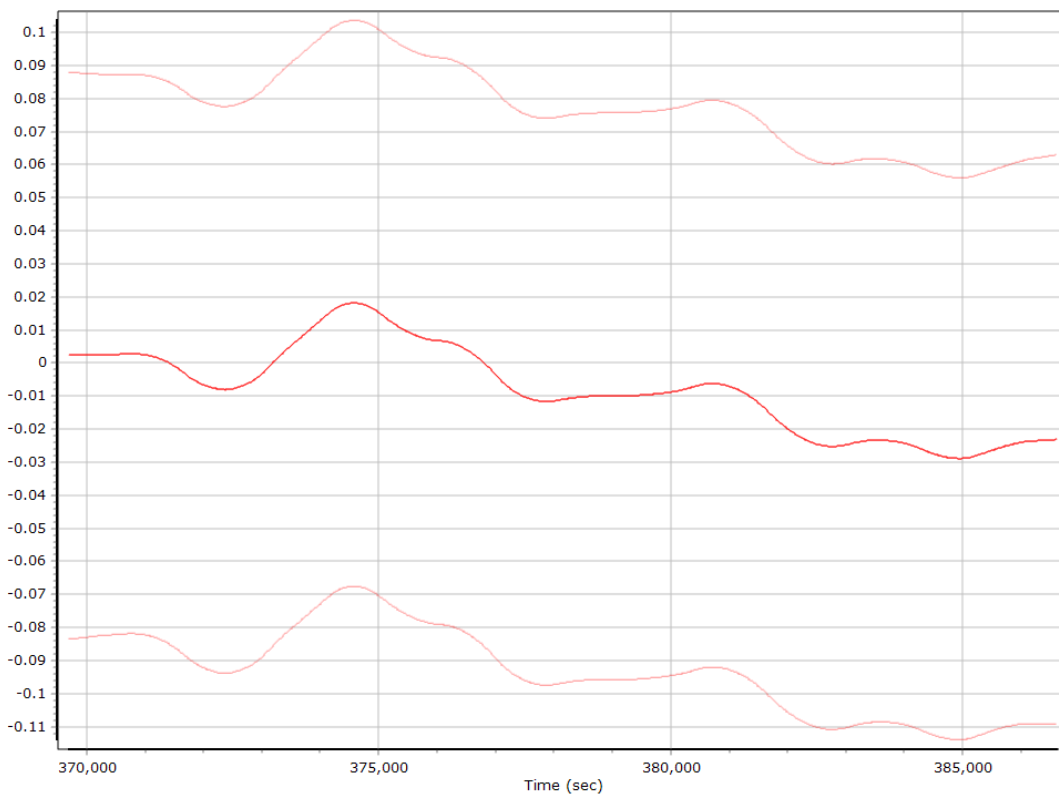
X Gyro Bias (deg/h)



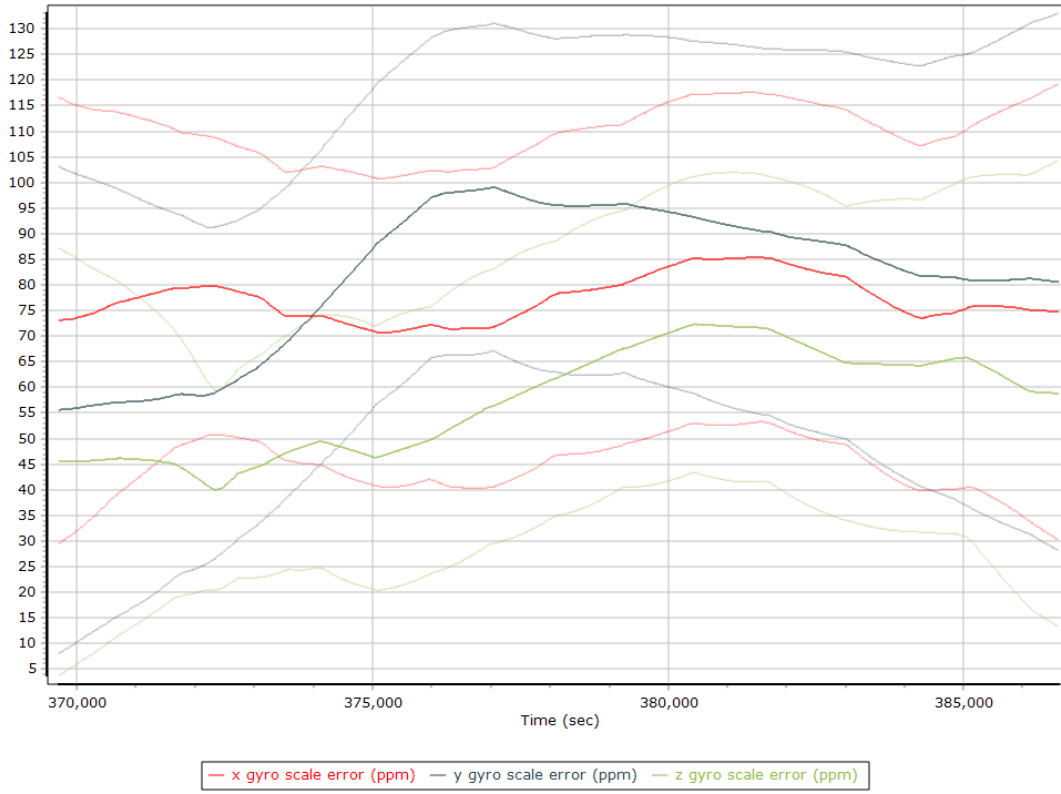
Y Gyro Bias (deg/h)



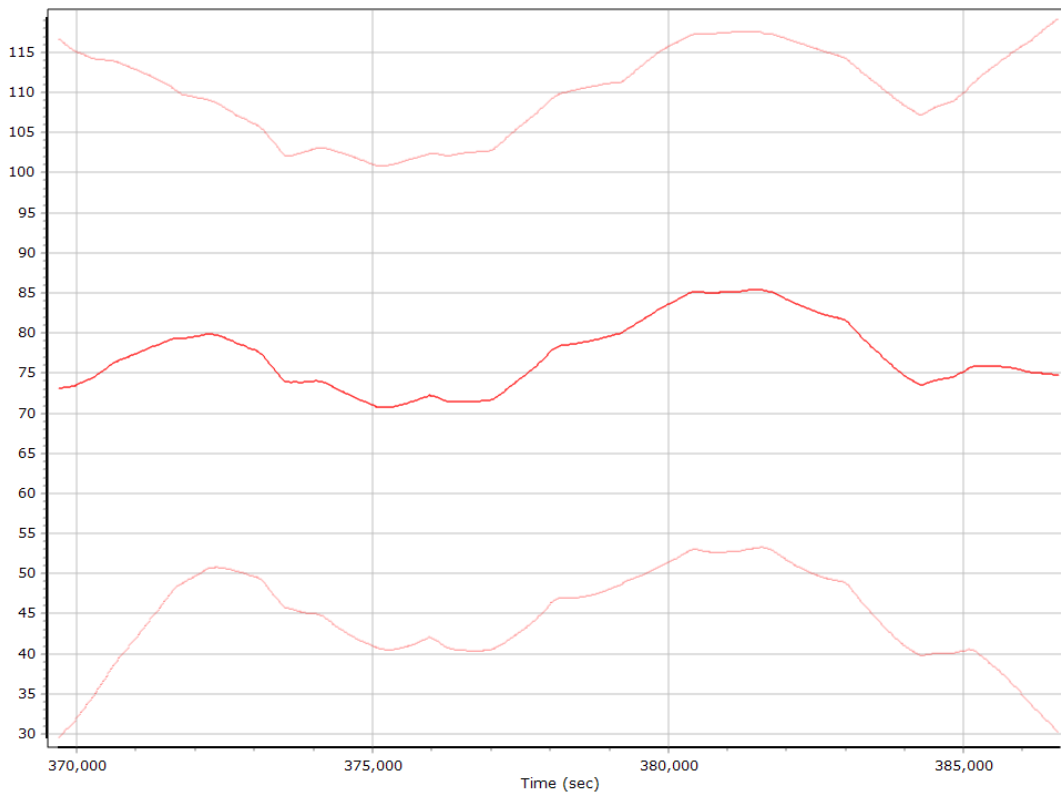
Z Gyro Bias (deg/h)



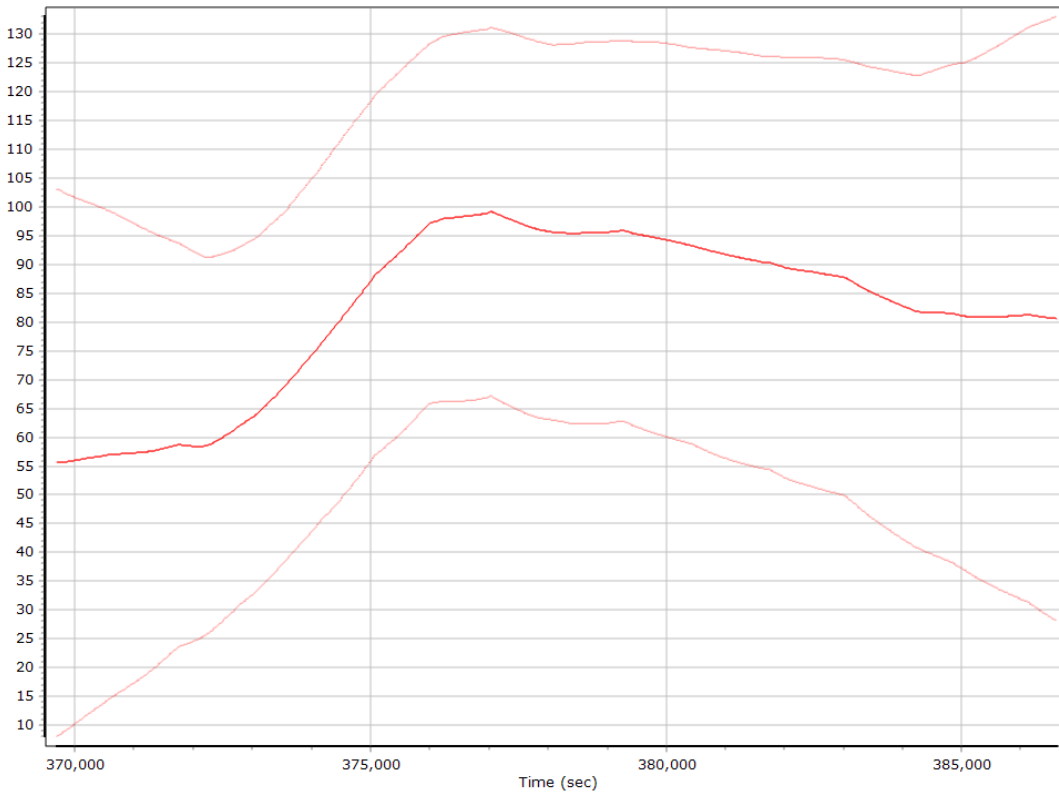
Gyro Scale Error (ppm)



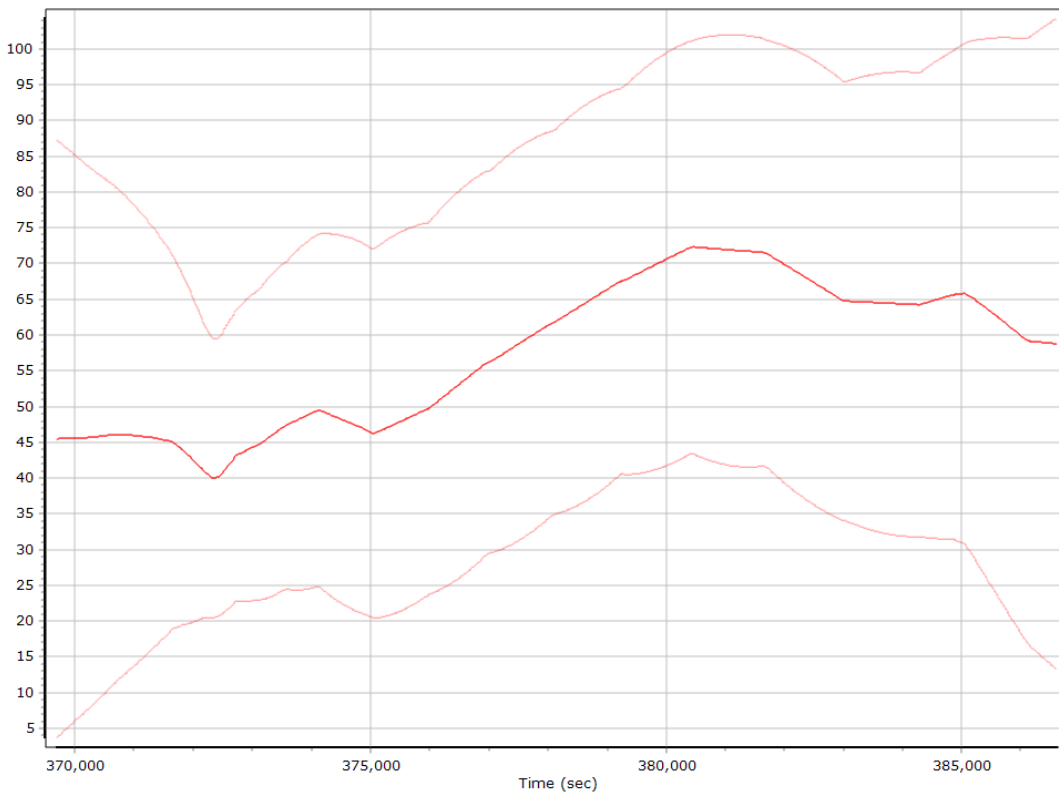
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

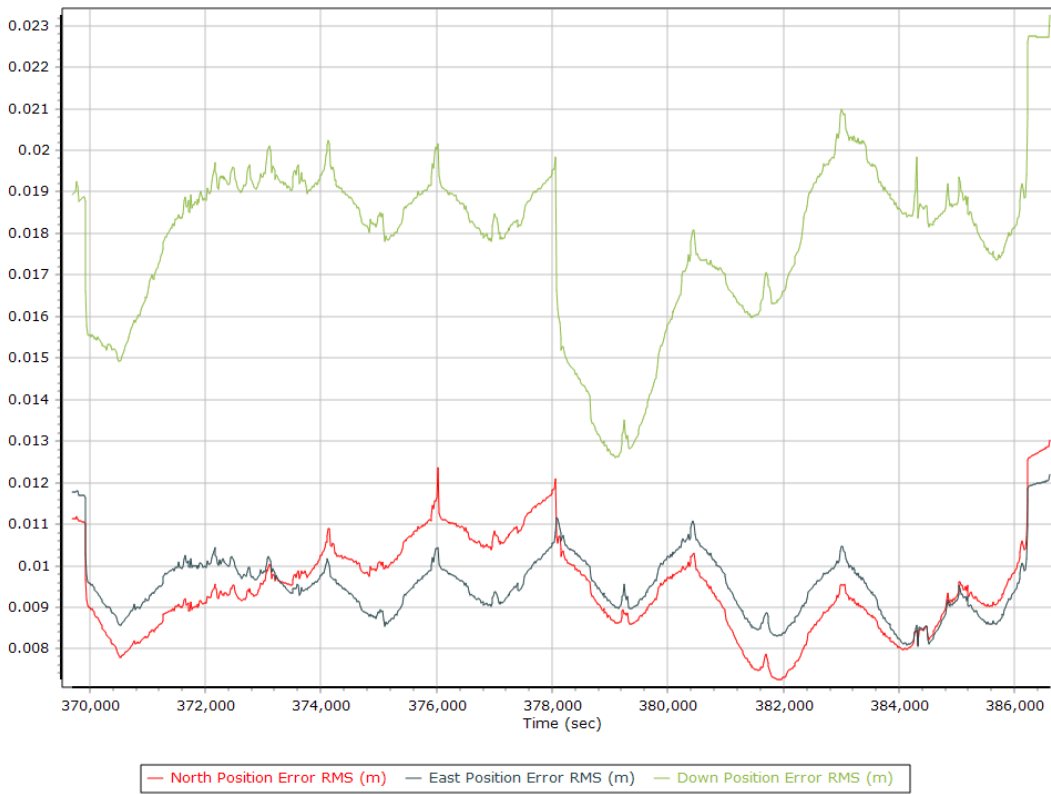


Z Gyro Scale Error (ppm)

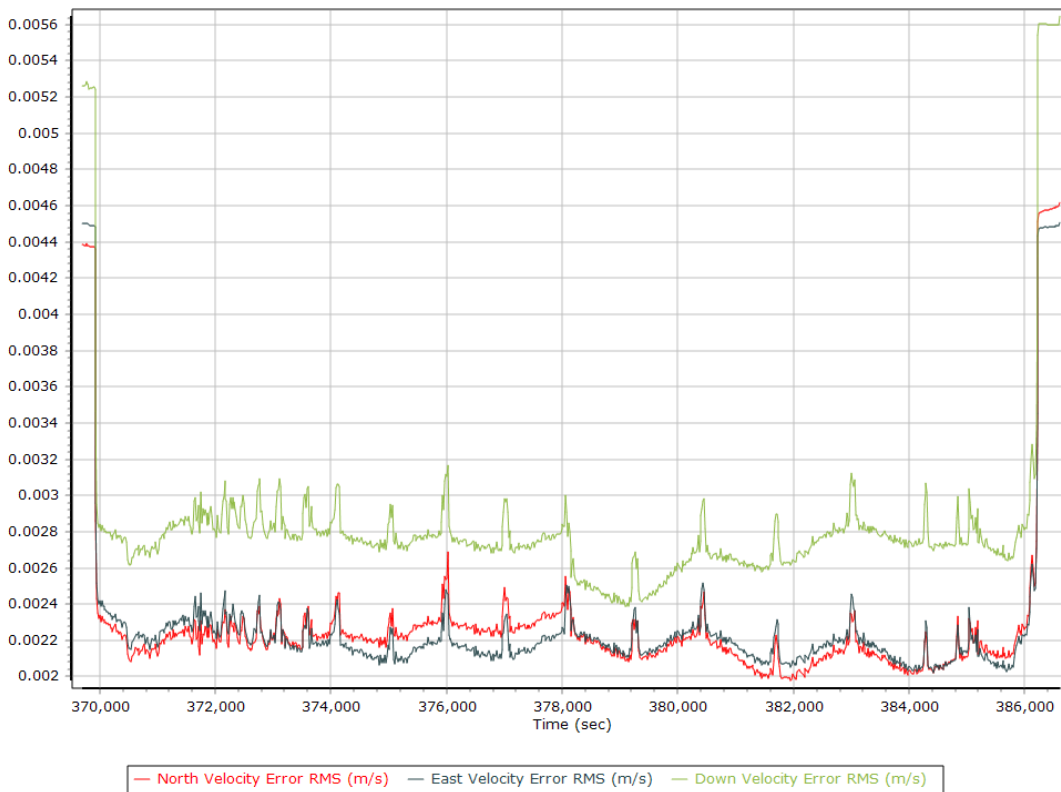


Smoothed Performance Metrics

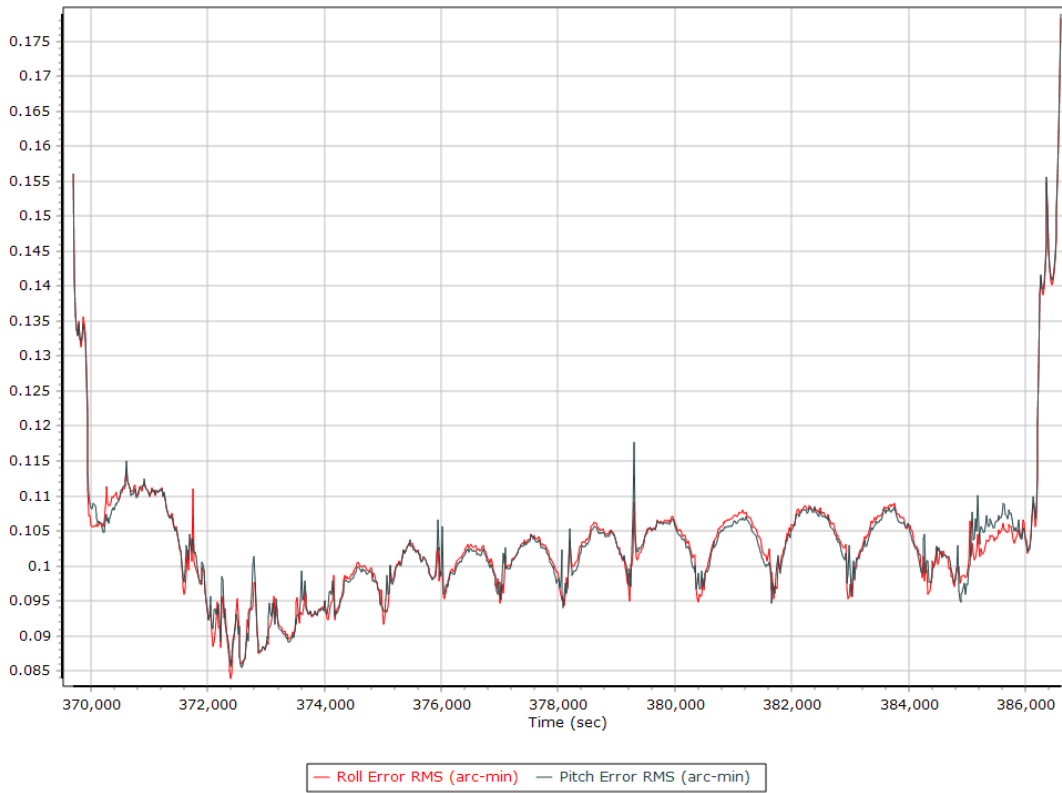
Position Error RMS (m)



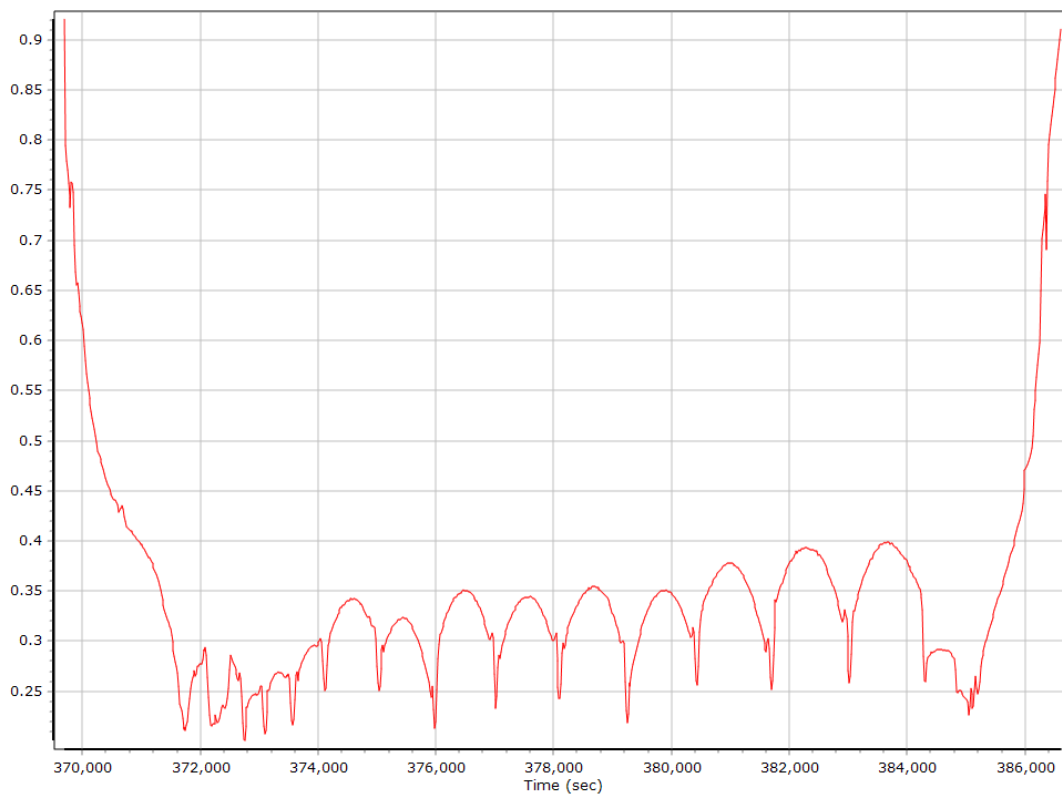
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

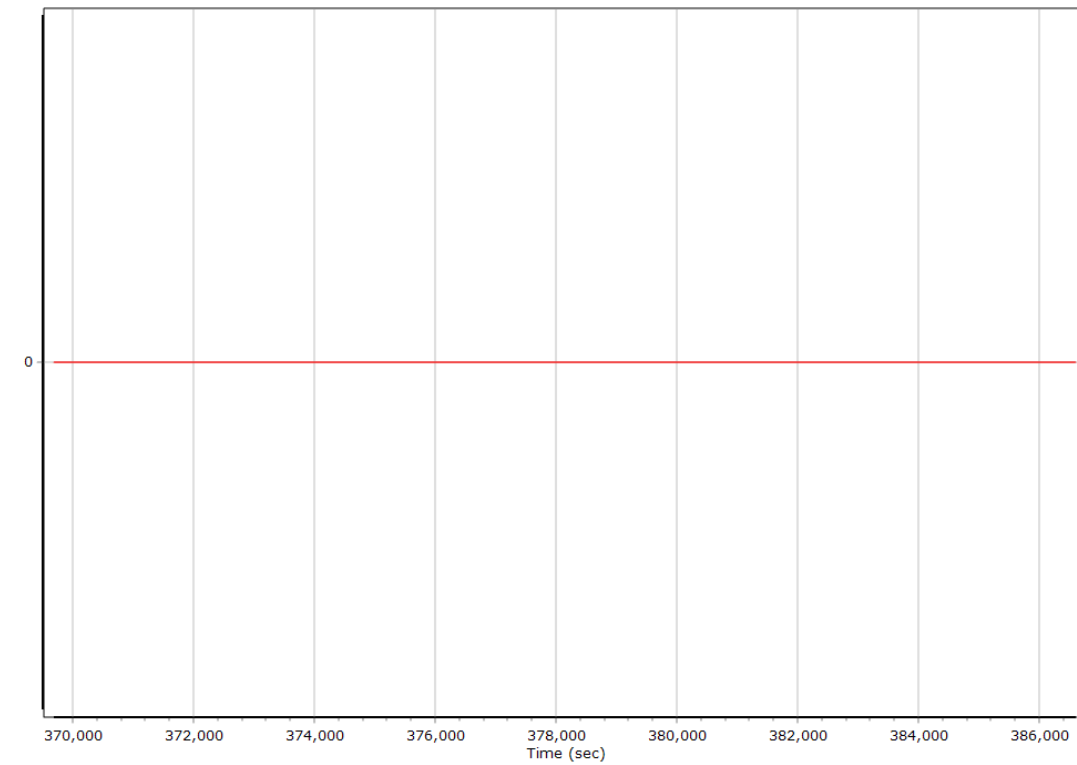


Heading Error RMS (arc-min)



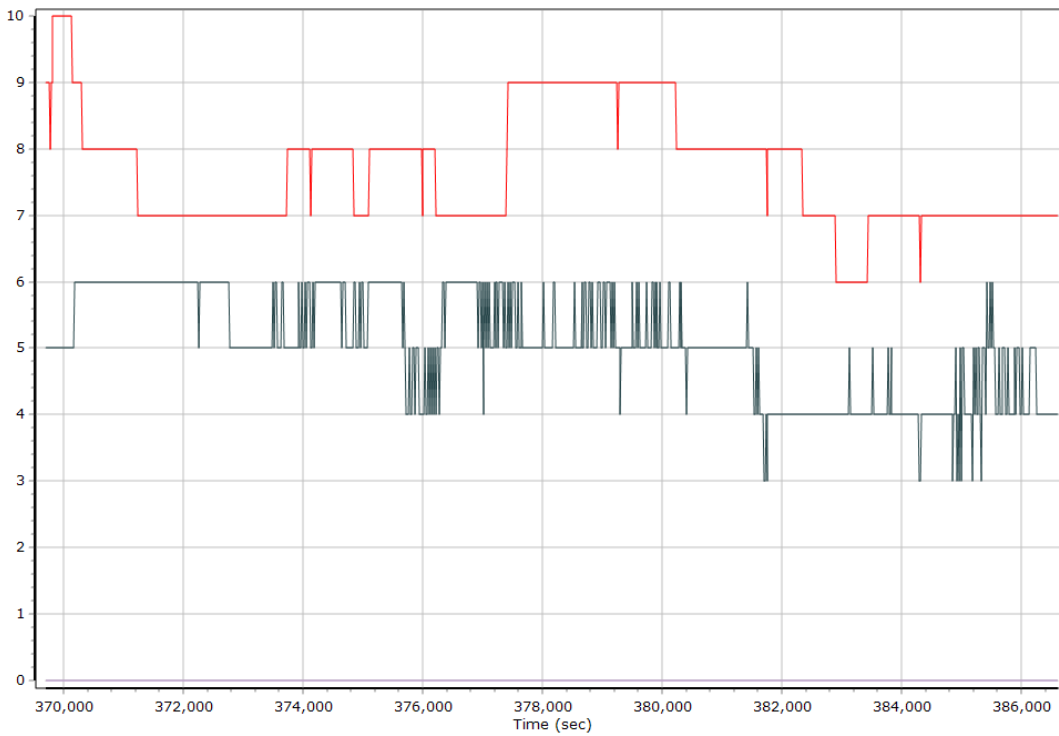
Smoothed Solution Status

Processing Mode



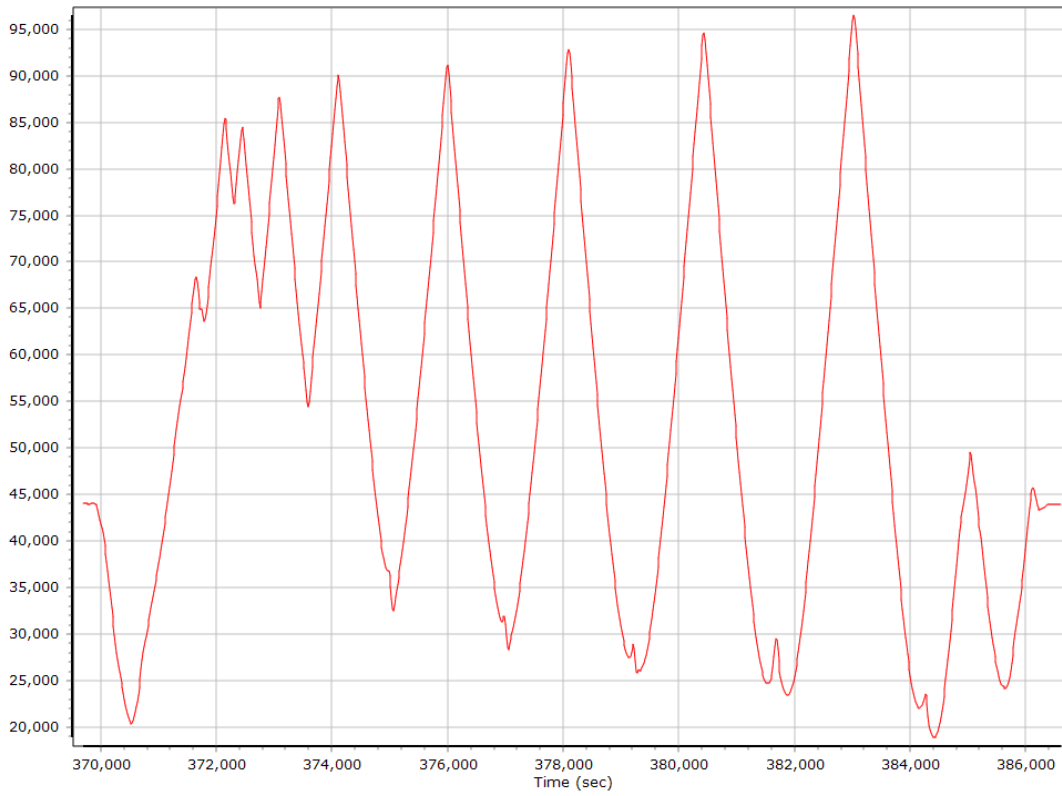
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR

Number of Satellites



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

Baseline Length



SBET IAKAR Separation



Export Summary

Export file	export_2021114_F1_Basestation_NAD832011.out		
Export format	Custom Smoothed BET		
Solution in use	Post-processed		
Output rate	All Records		
Reference to Output lever arm [m]	0.000	0.000	0.000
Reference mounting angles [deg]	0.000	0.000	0.000
Output units (Coordinate / Lat & Lon)	Meter	Deg Decimal	
Export start time	369636.002 (11/04/2021 06:40:36)		
Export end time	386620.005 (11/04/2021 11:23:40)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 11 (120W to 114W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2010		

EO Summary

EO file			
EO format			
Lever arm [m]	0.000	0.000	0.000
Boresight angles [arcmin]	0.000	0.000	0.000
Output rate	All Records		
Rotation sequence	x omega	y phi	z kappa
Local shift [m]	0.000	0.000	0.000
Output units (coordinate / angle / lat & lon)	Meter	Degree	Deg Decimal
Height option	Ellipsoid Height		
WGS84 height flag	False		
Scale height option	False		
Kappa cardinal rotation [deg]	0		
Solution in use	Post-processed		
EO start time	369636.002 (11/04/2021 06:40:36)		
EO end time	386620.005 (11/04/2021 11:23:40)		
Grid	Universal Transverse Mercator		
Zone	UTM North 11 (120W to 114W)		
Datum	WGS84		
Ellipsoid	WGS84		
Local Transformation	NONE		
Target Epoch	2021.841096		