

General Information

Mission Information

Project name	20211007_S1_BRGM_Aquitaine
Processing date	2021-12-15 17:01:34
Mission date	2021-10-07 08:08:48
Mission duration	03:51:38.999
Processing mode	IN-Fusion SmartBase
GPS Station	ASB

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N11815
IMU type	57
Receiver type	BD982
Antenna type	AT1675-180

Project File List

Rover Data Files

File name	File type
Aquitaine_20211007_S1.598	POS Data
Aquitaine_20211007_S1.599	POS Data
Aquitaine_20211007_S1.600	POS Data
Aquitaine_20211007_S1.601	POS Data
Aquitaine_20211007_S1.602	POS Data
Aquitaine_20211007_S1.603	POS Data
Aquitaine_20211007_S1.604	POS Data
Aquitaine_20211007_S1.605	POS Data
Aquitaine_20211007_S1.606	POS Data
Aquitaine_20211007_S1.607	POS Data
Aquitaine_20211007_S1.608	POS Data
Aquitaine_20211007_S1.609	POS Data
Aquitaine_20211007_S1.610	POS Data
Aquitaine_20211007_S1.611	POS Data
Aquitaine_20211007_S1.612	POS Data
Aquitaine_20211007_S1.613	POS Data
Aquitaine_20211007_S1.614	POS Data
Aquitaine_20211007_S1.615	POS Data
Aquitaine_20211007_S1.616	POS Data
Aquitaine_20211007_S1.617	POS Data
Aquitaine_20211007_S1.618	POS Data
Aquitaine_20211007_S1.619	POS Data
Aquitaine_20211007_S1.620	POS Data
Aquitaine_20211007_S1.621	POS Data
Aquitaine_20211007_S1.622	POS Data
Aquitaine_20211007_S1.623	POS Data
Aquitaine_20211007_S1.624	POS Data
Aquitaine_20211007_S1.625	POS Data
Aquitaine_20211007_S1.626	POS Data
Aquitaine_20211007_S1.627	POS Data
Aquitaine_20211007_S1.628	POS Data
Aquitaine_20211007_S1.629	POS Data
Aquitaine_20211007_S1.630	POS Data
Aquitaine_20211007_S1.631	POS Data

Input Files

File Name	File Type
Ephm2800.21g	GLONASS Broadcast Ephemeris
Ephm2800.21n	GPS Broadcast Ephemeris
emr21265.sp3	GPS Precise Ephemeris
aici280z.21o	GPS SingleBase
lcan280z.21o	GPS SingleBase
mim2280z.21o	GPS SingleBase
mzan280z.21o	GPS SingleBase
quyc280z.21o	GPS SingleBase
biaz2800.21o	GNSS SingleBase
ildx2800.21o	GNSS SingleBase
roya2800.21o	GNSS SingleBase
scoa2800.21o	GNSS SingleBase

Output Files

Filename	File type
sbet_Mission 1.out	SBET Trajectory File
SBET-20211007-S1-BRGM-Aquitaine.out	Custom Smoothed BET Export Output

Rover Data Summary

First raw data file	Aquitaine_20211007_S1.598		
Last raw data file	Aquitaine_20211007_S1.631		
Start GPS week	2178		
Start time	374928.097 (10/07/2021 08:08:48)		
End time	388827.661 (10/07/2021 12:00:27)		
Start of fine alignment	374929.607 (10/07/2021 08:08:49)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	Event 1 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	180.000
Gimbal to Primary GNSS lever arm (m)	0.694	-0.543	-1.093
Gimbal to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

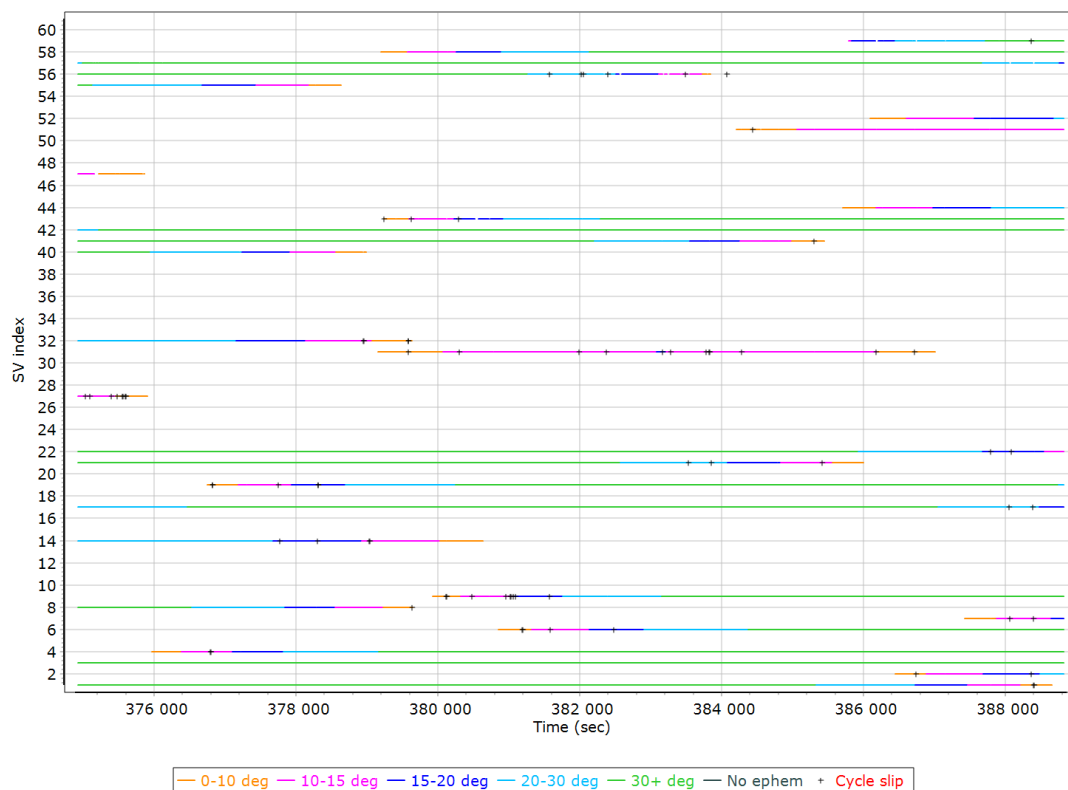
Rover Data QC

Raw IMU Import QC Summary

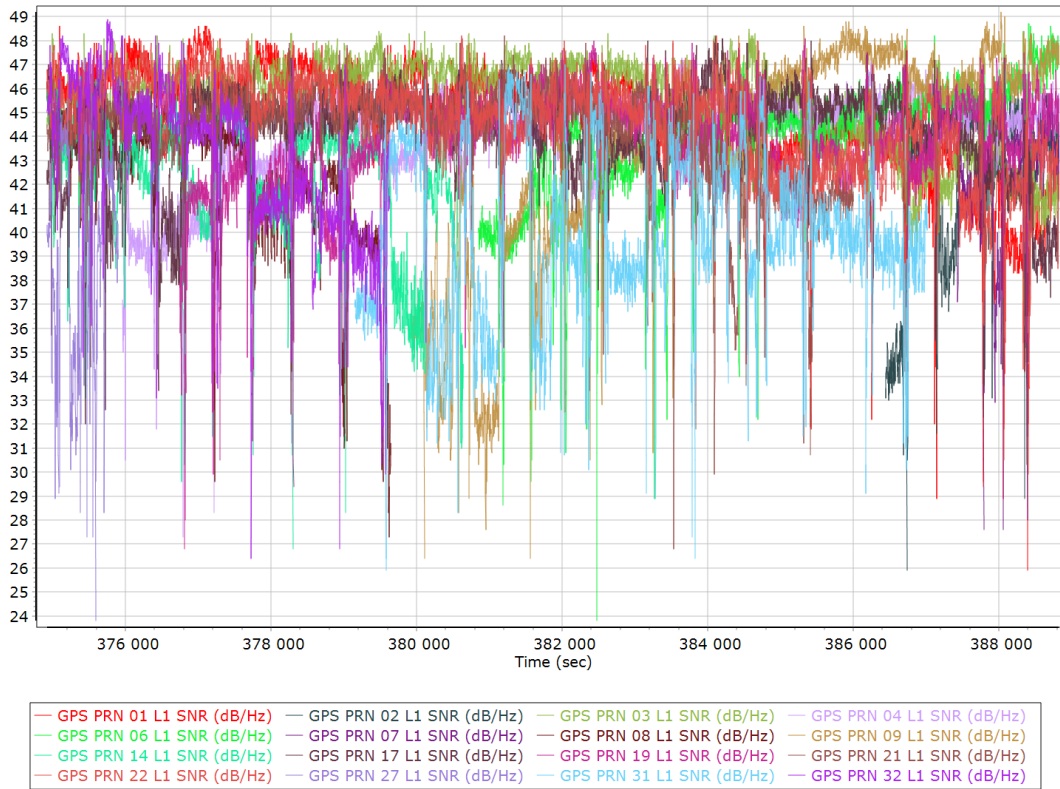
IMU data input file	imu_Mission 1.dat
IMU data check log file	imudt_Mission 1.log
IMU Records Processed	2779453
Termination Status	Normal
IMU Anomalies	0

Primary Observables & Satellite Data

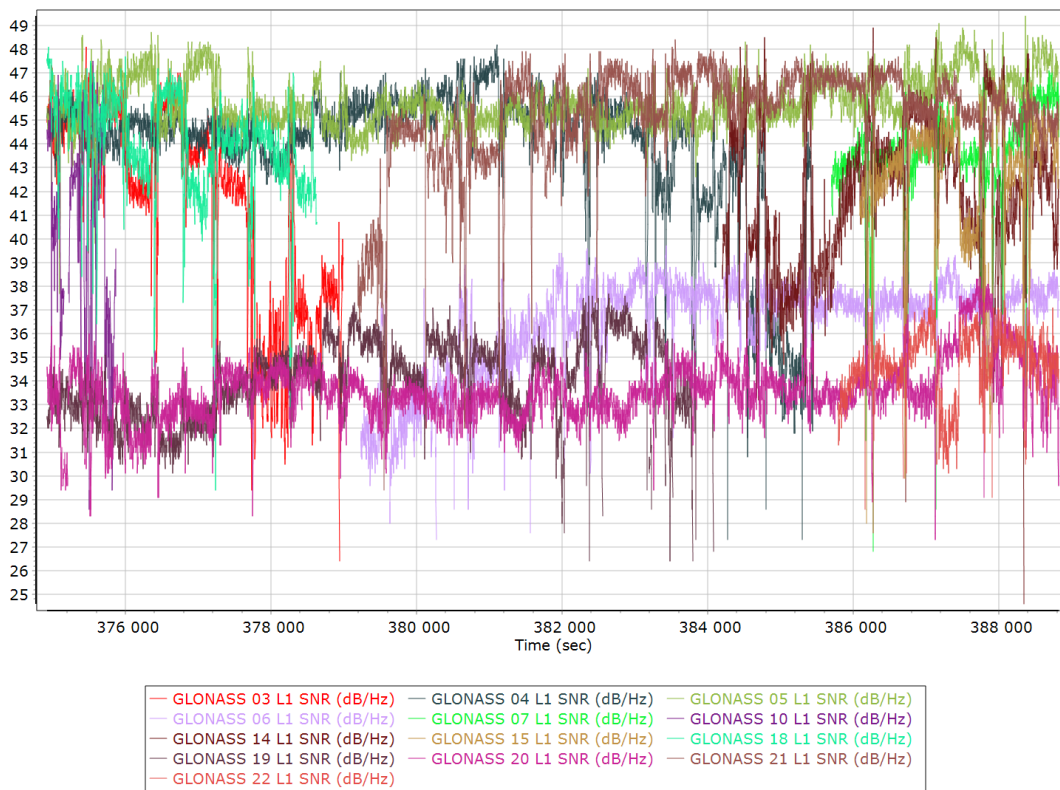
GPS/GLONASS L1 Satellite Lock/Elevation



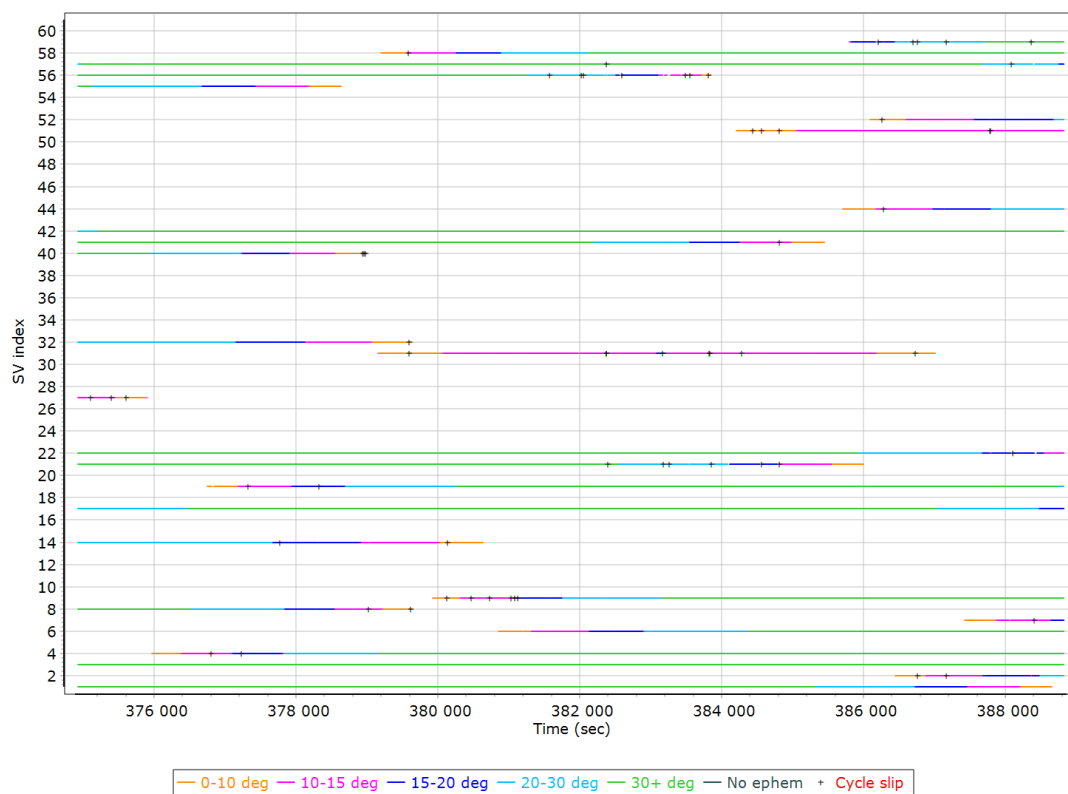
GPS L1 SNR



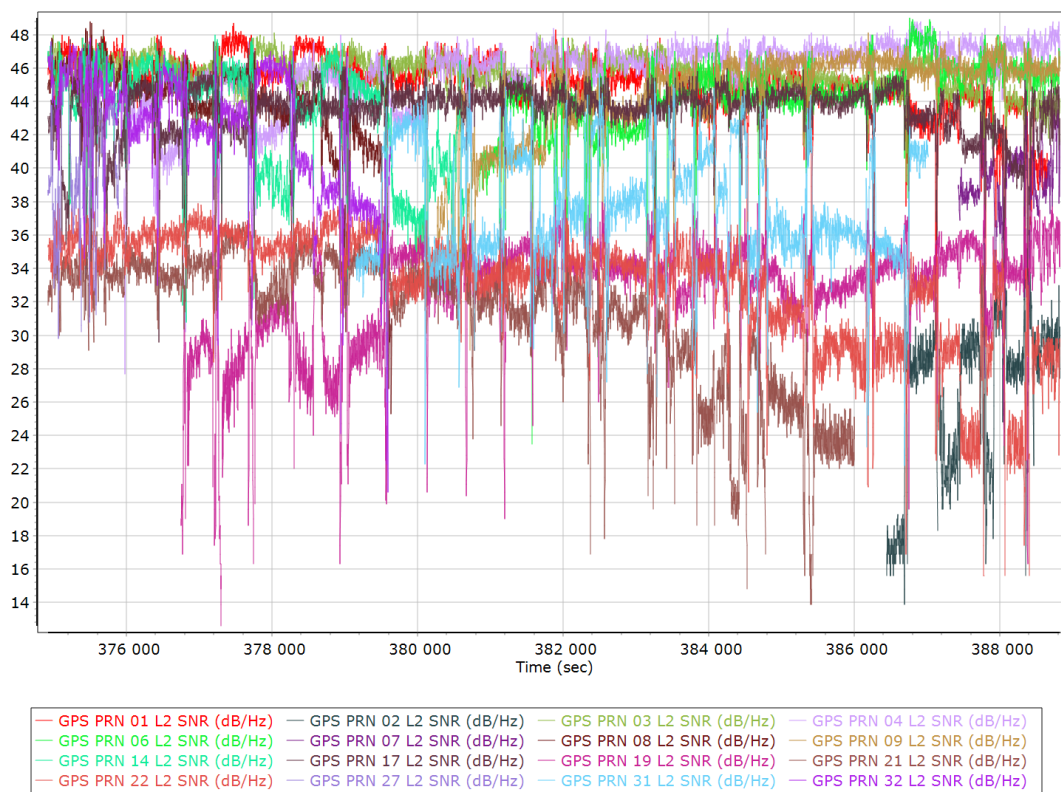
GLONASS L1 SNR



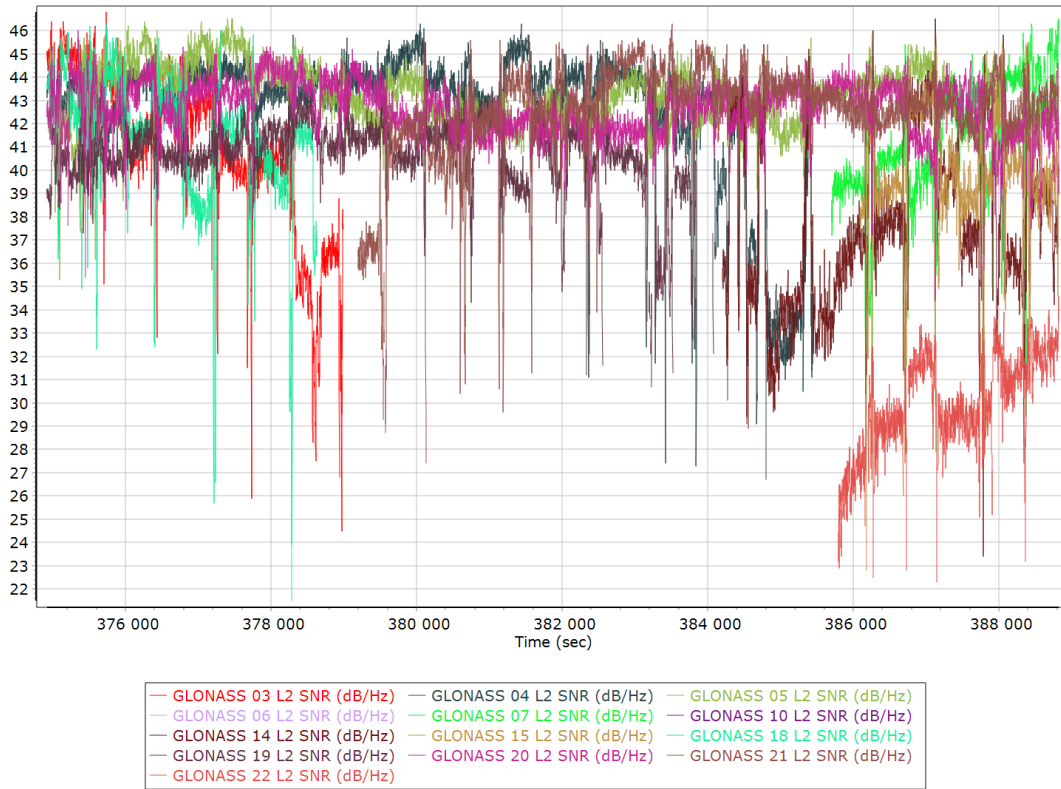
GPS/GLONASS L2 Satellite Lock/Elevation



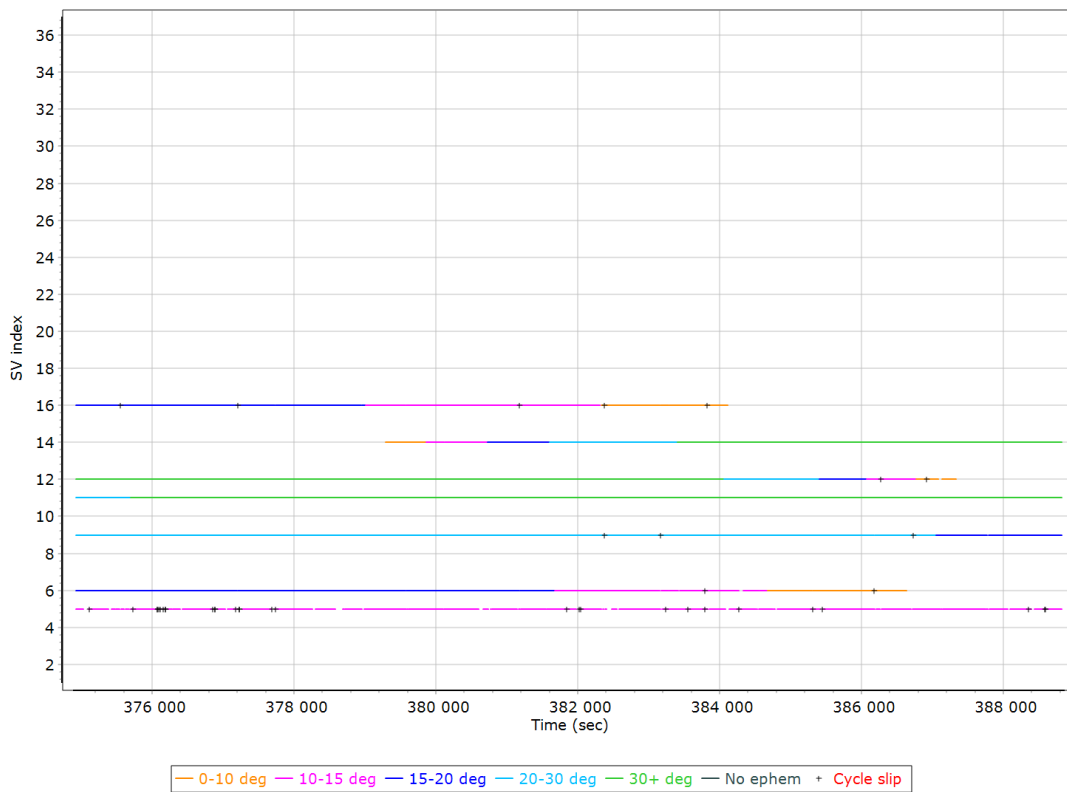
GPS L2 SNR



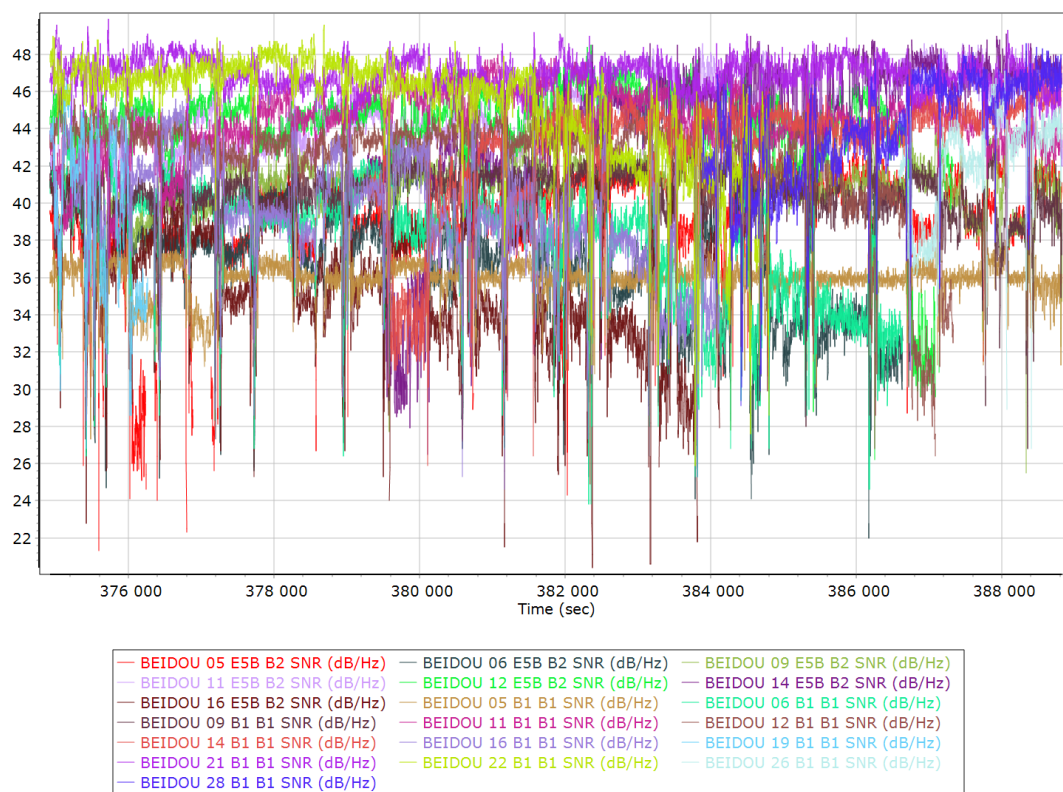
GLONASS L2 SNR



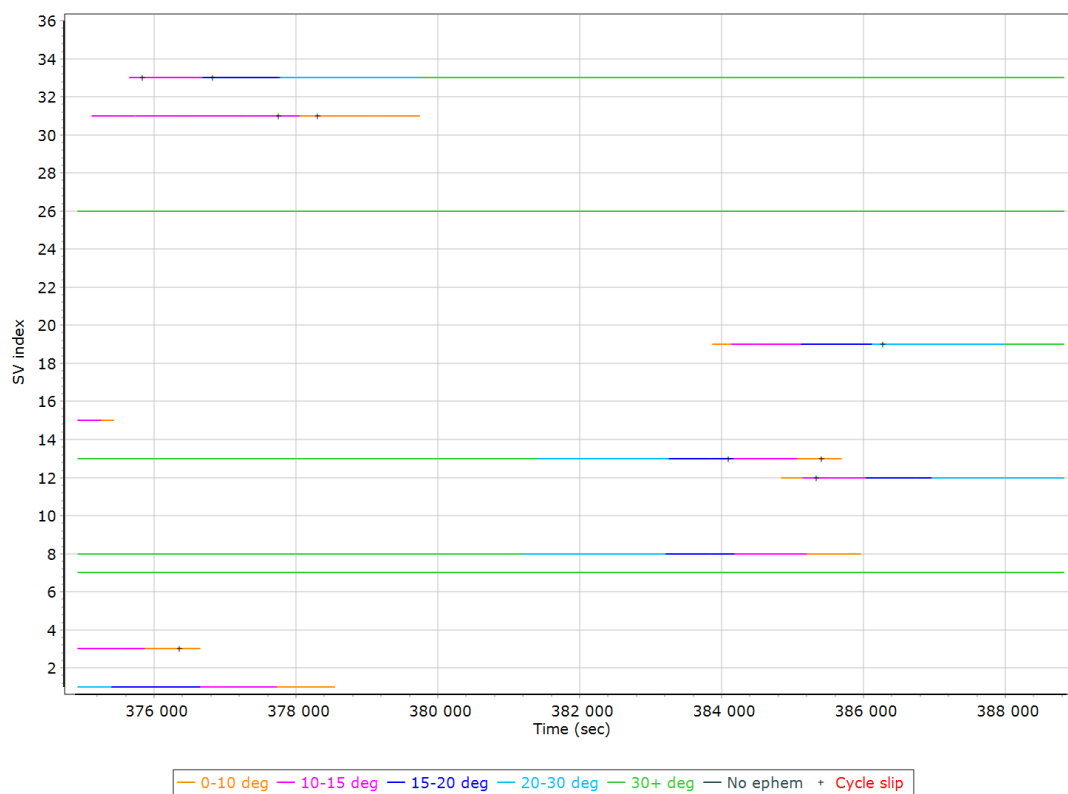
BEIDOU Satellite Lock/Elevation



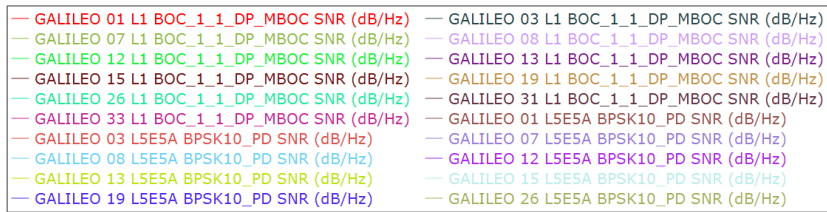
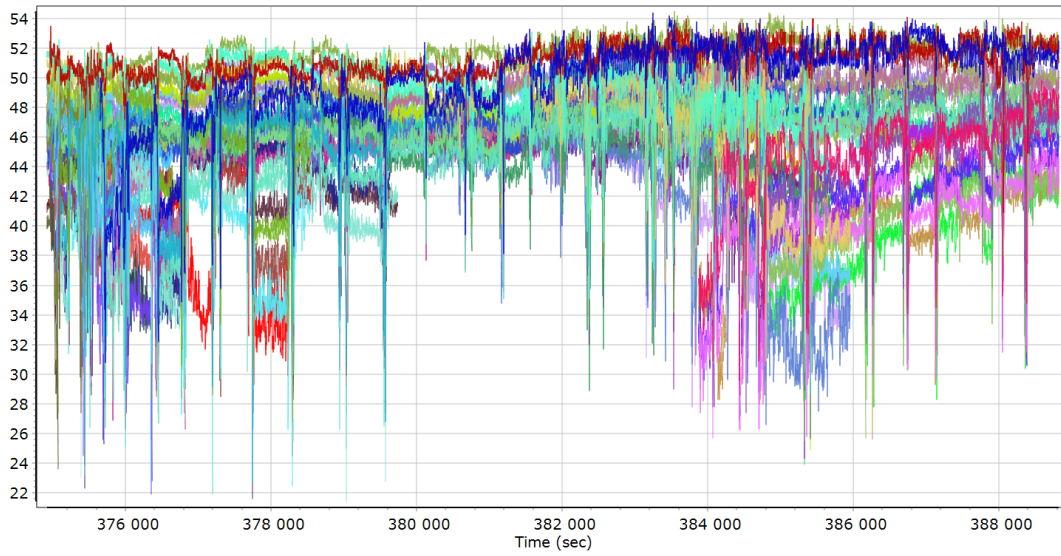
BEIDOU SNR



GALILEO Satellite Lock/Elevation

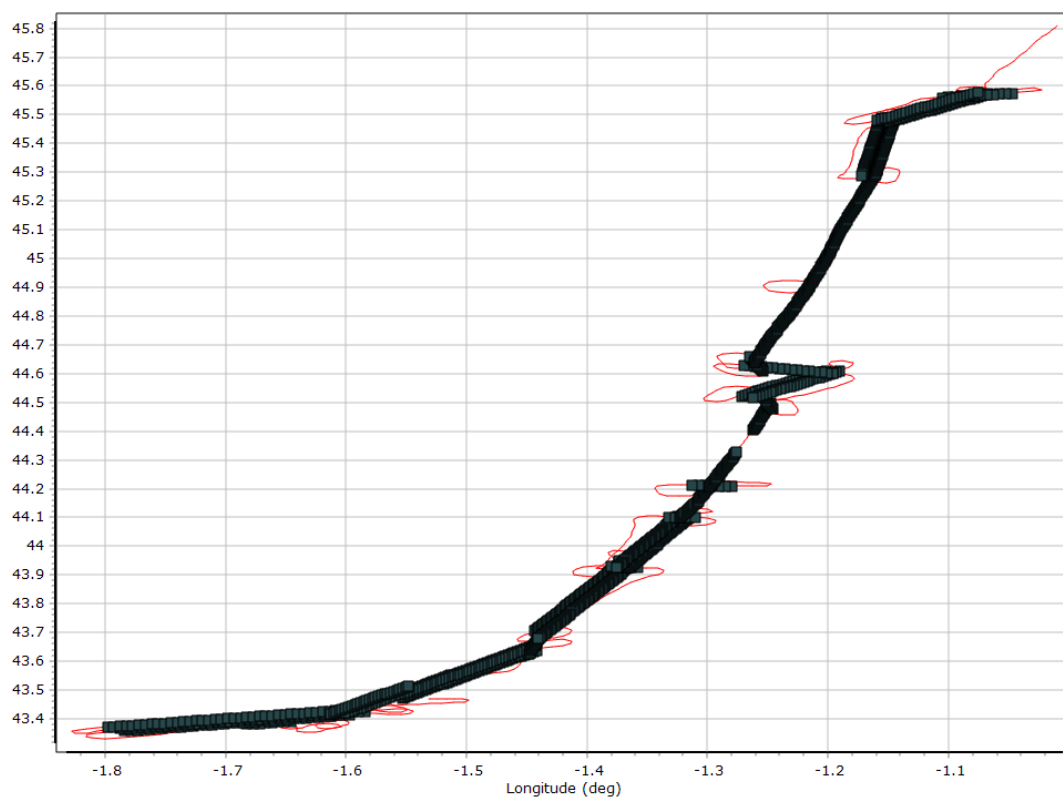


GALILEO SNR

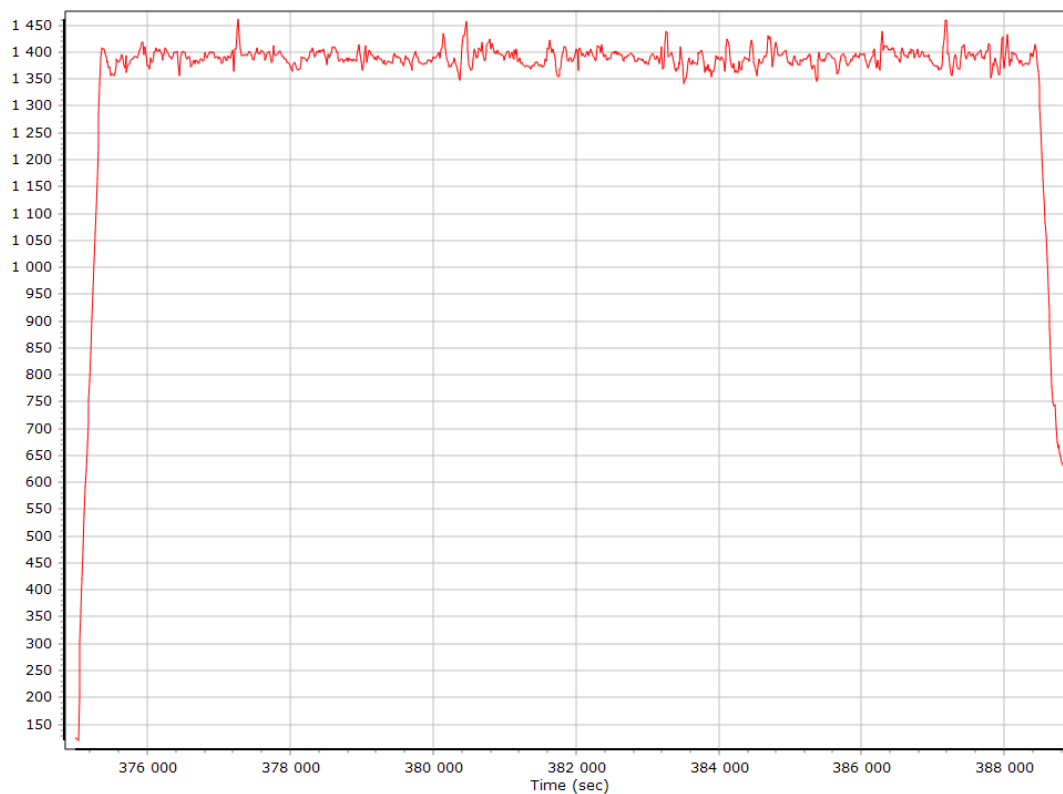


Smoothed Trajectory Information

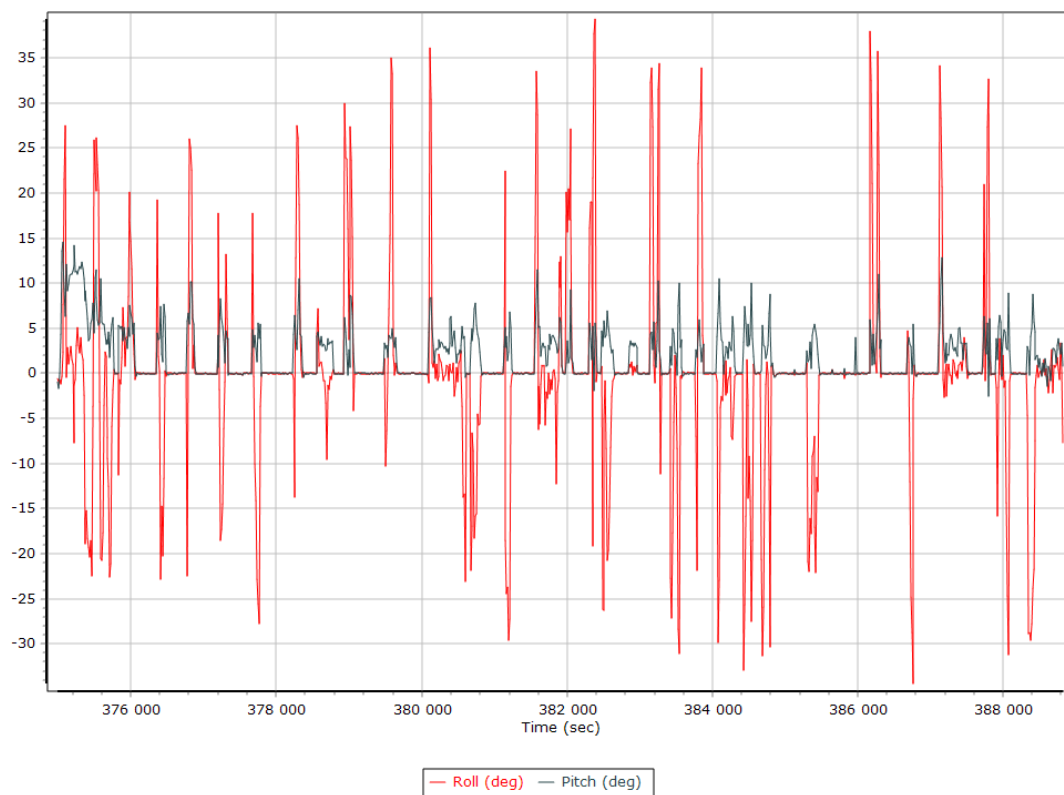
Top View



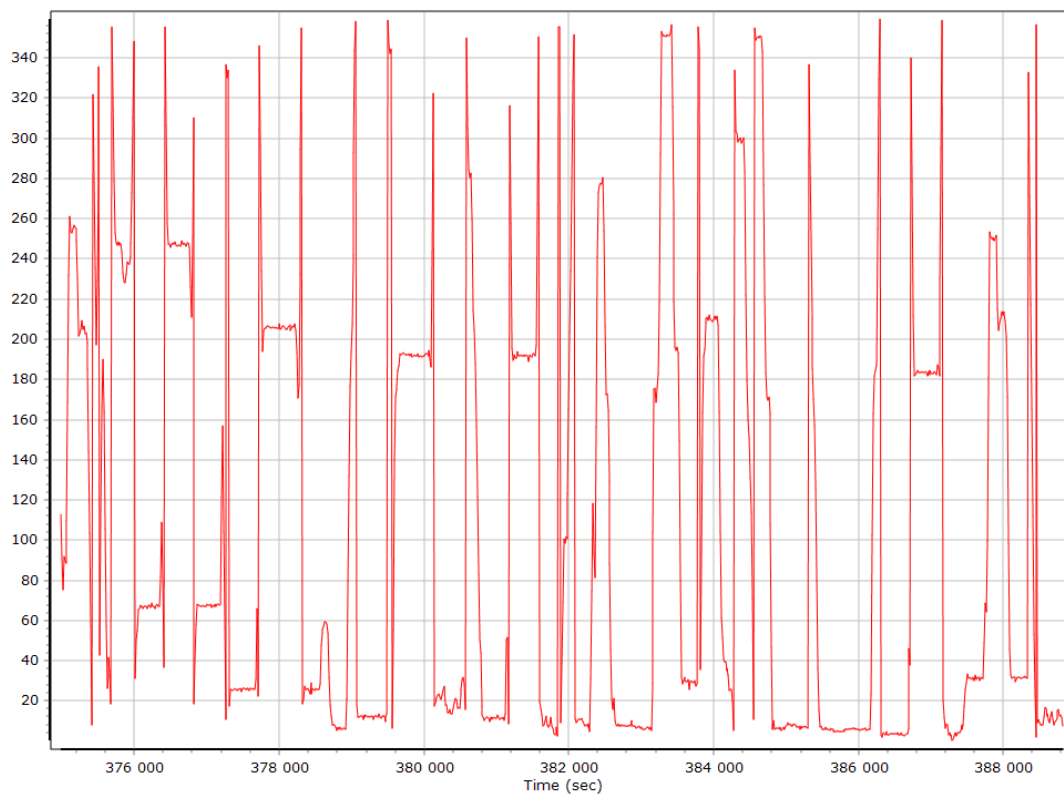
Altitude



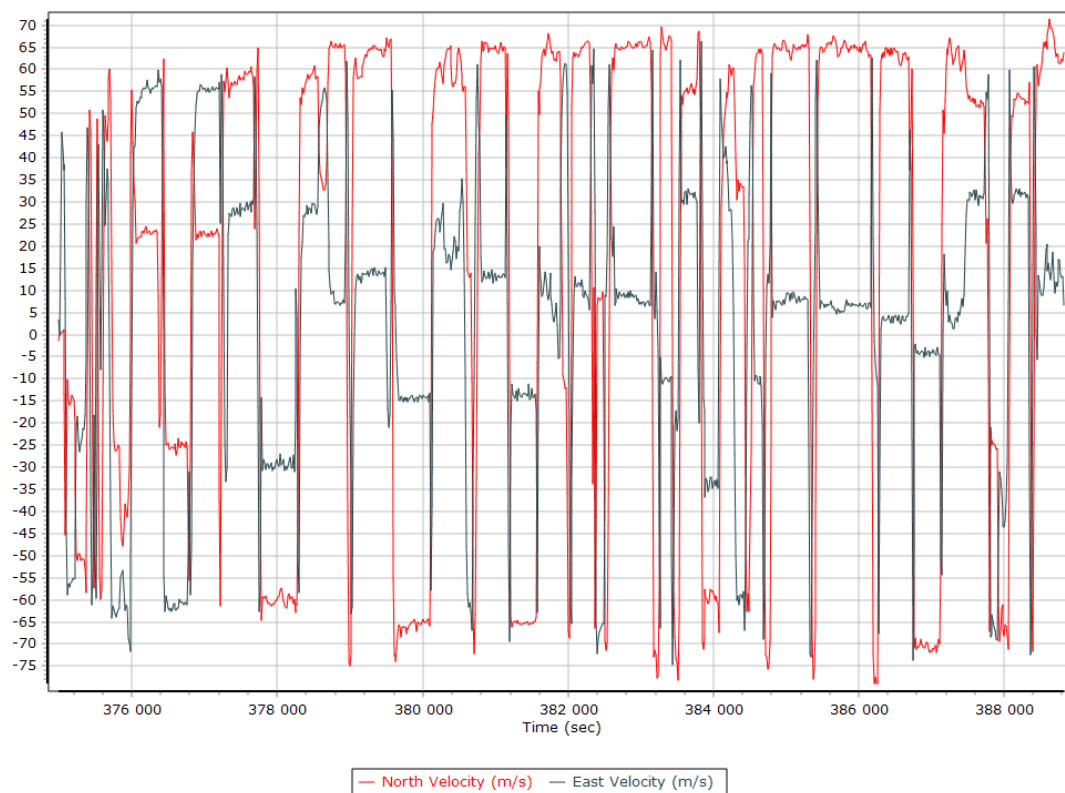
Roll/Pitch



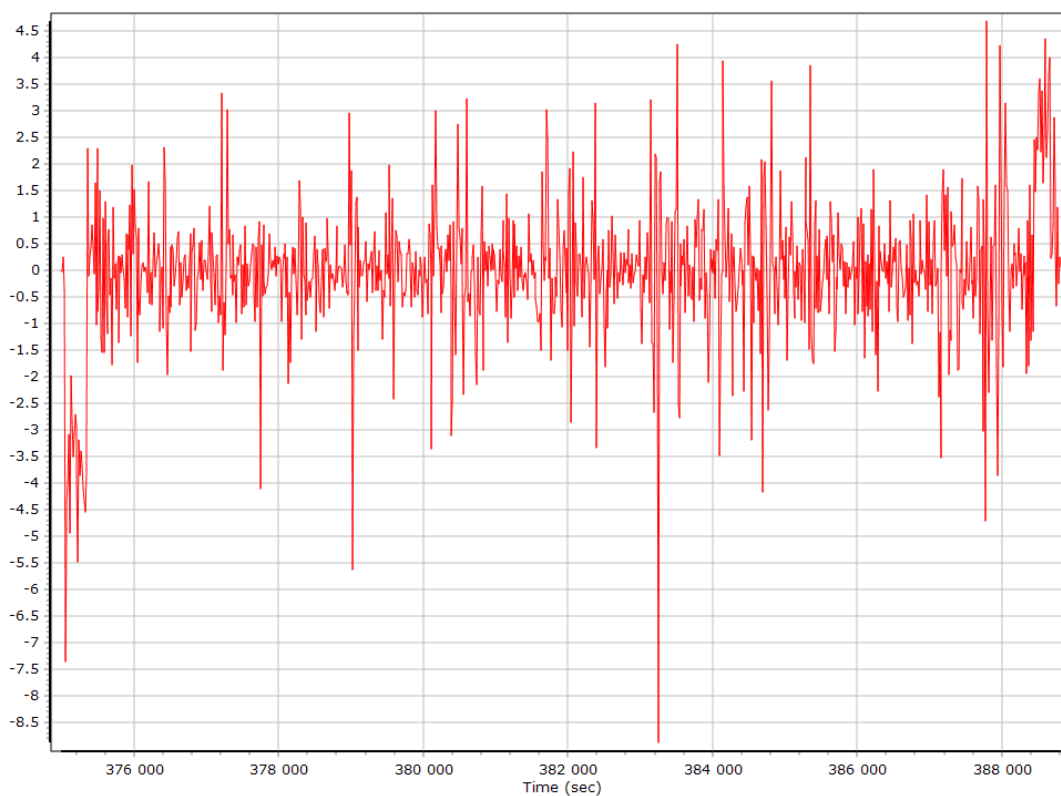
Heading



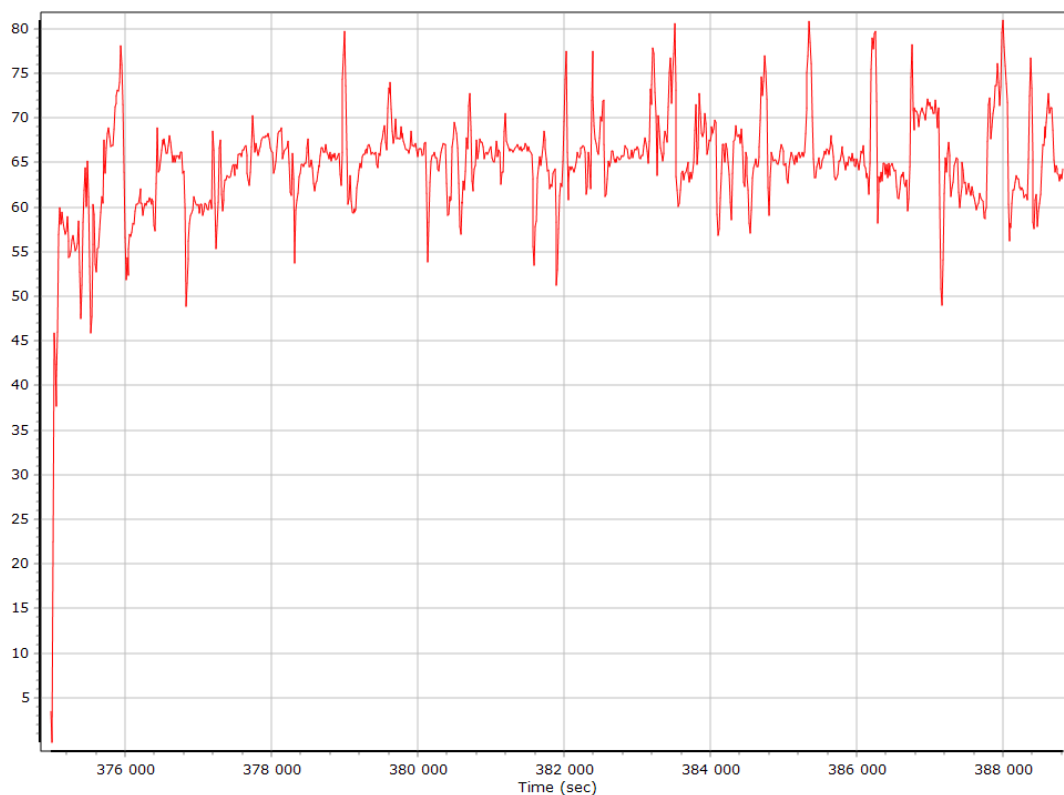
North/East Velocity



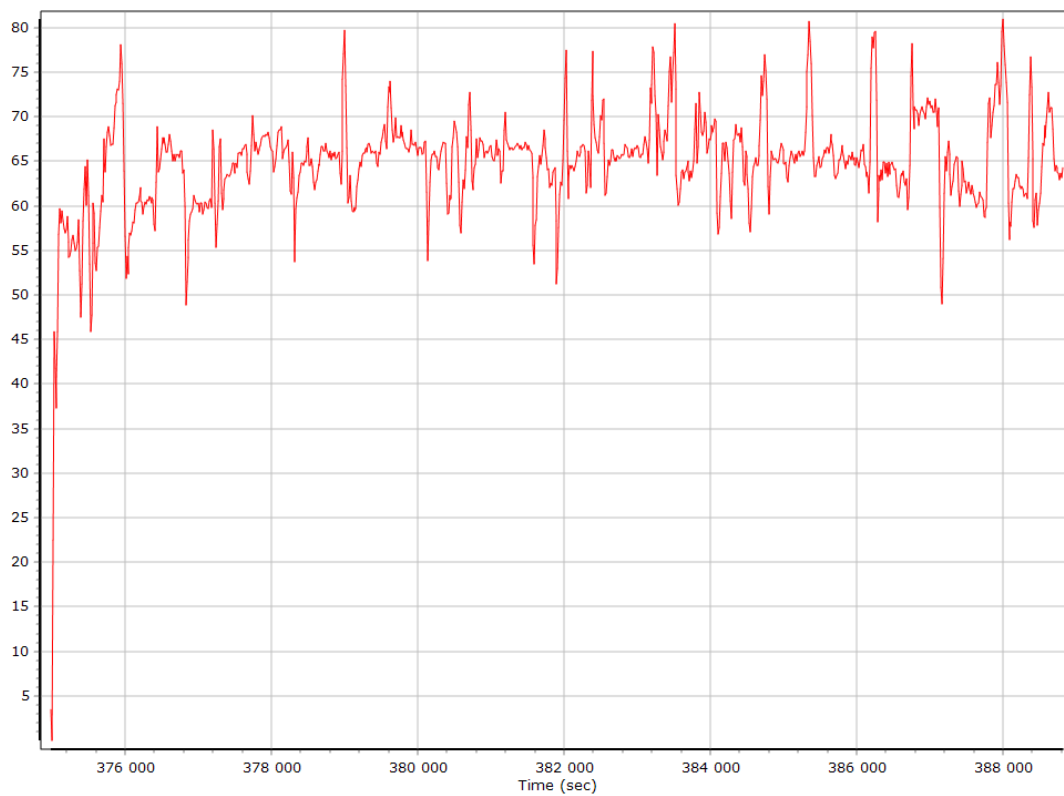
Down Velocity



Total Speed



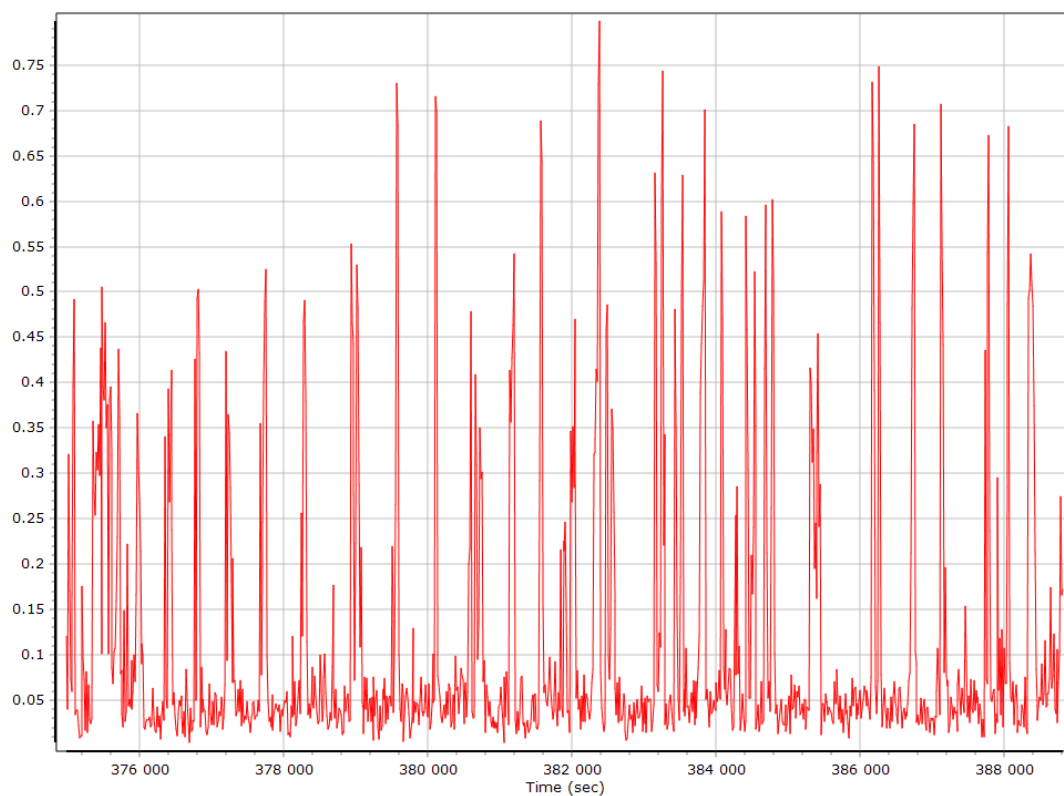
Ground Speed



Body Acceleration



Total Body Acceleration

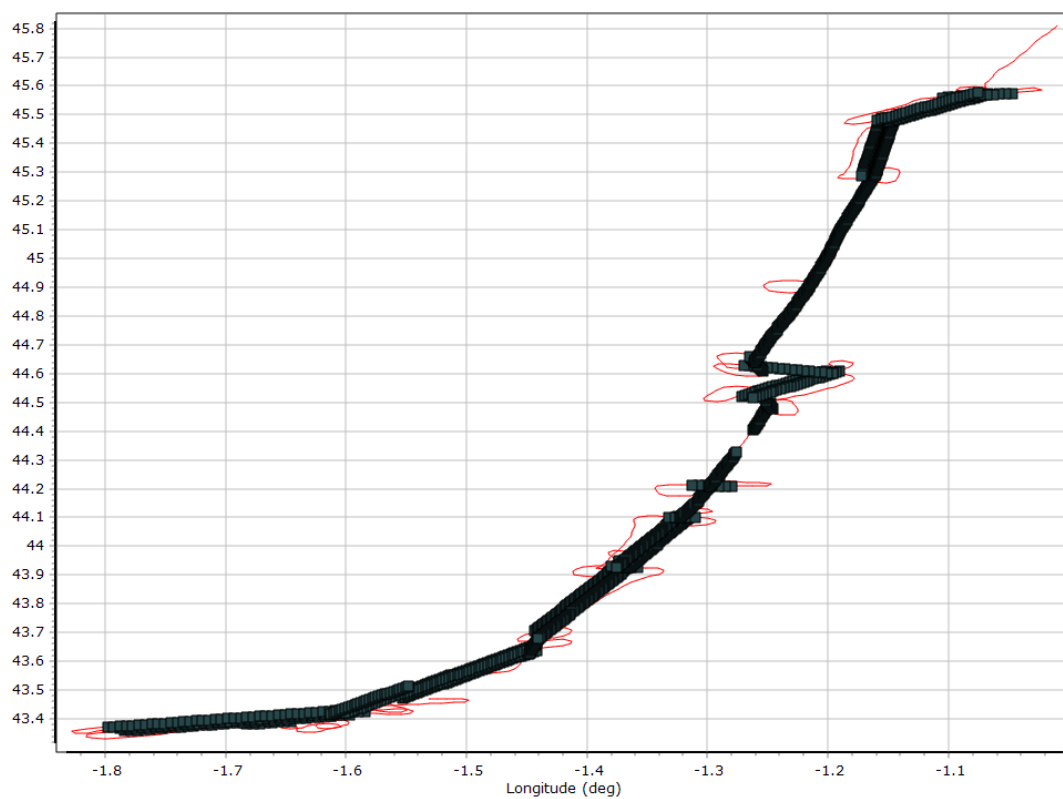


Body Angular Rate

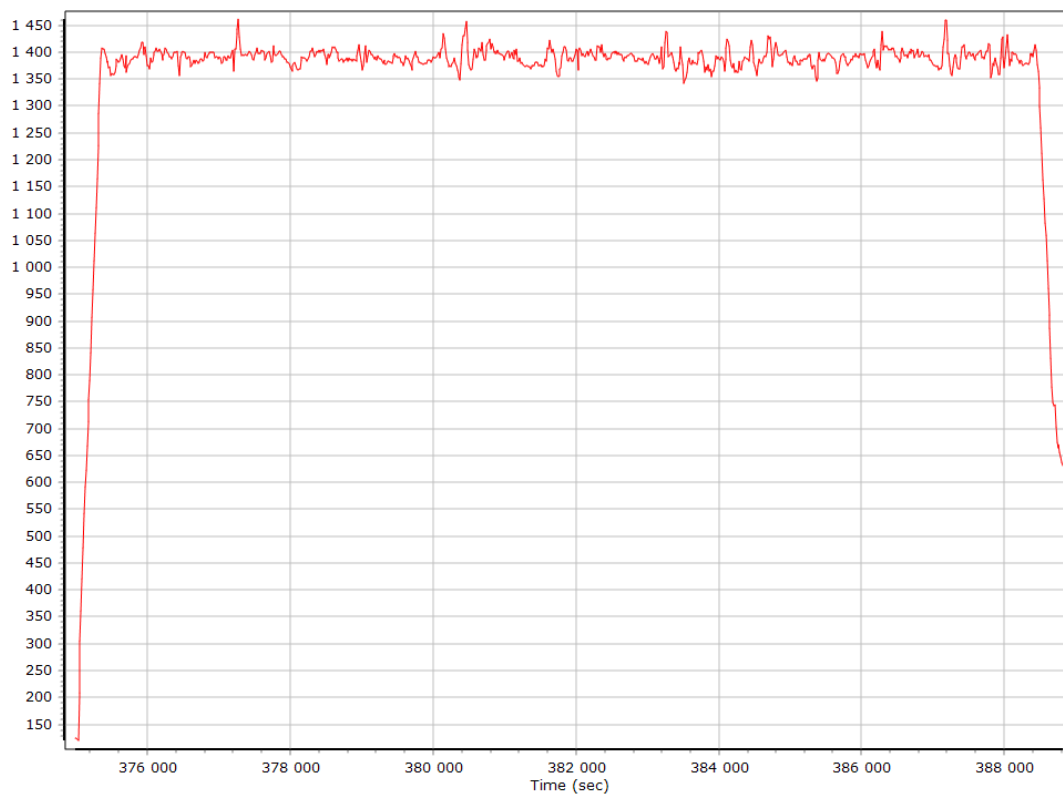


Forward Processed Trajectory Information

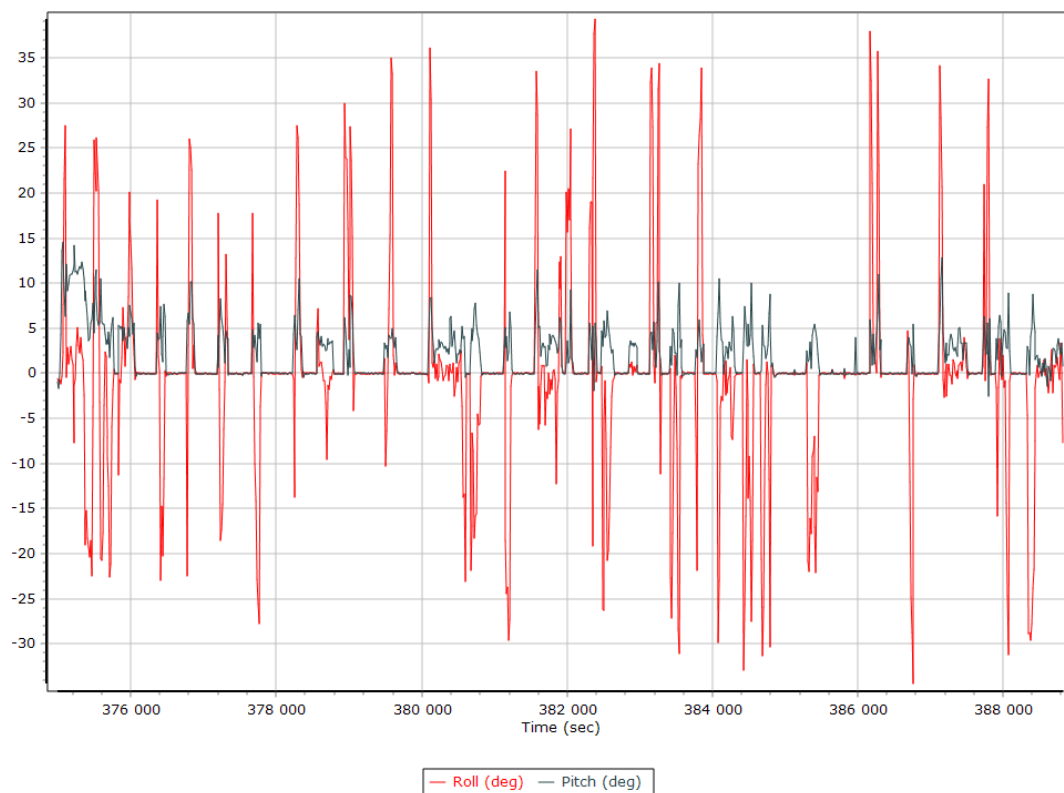
Top View



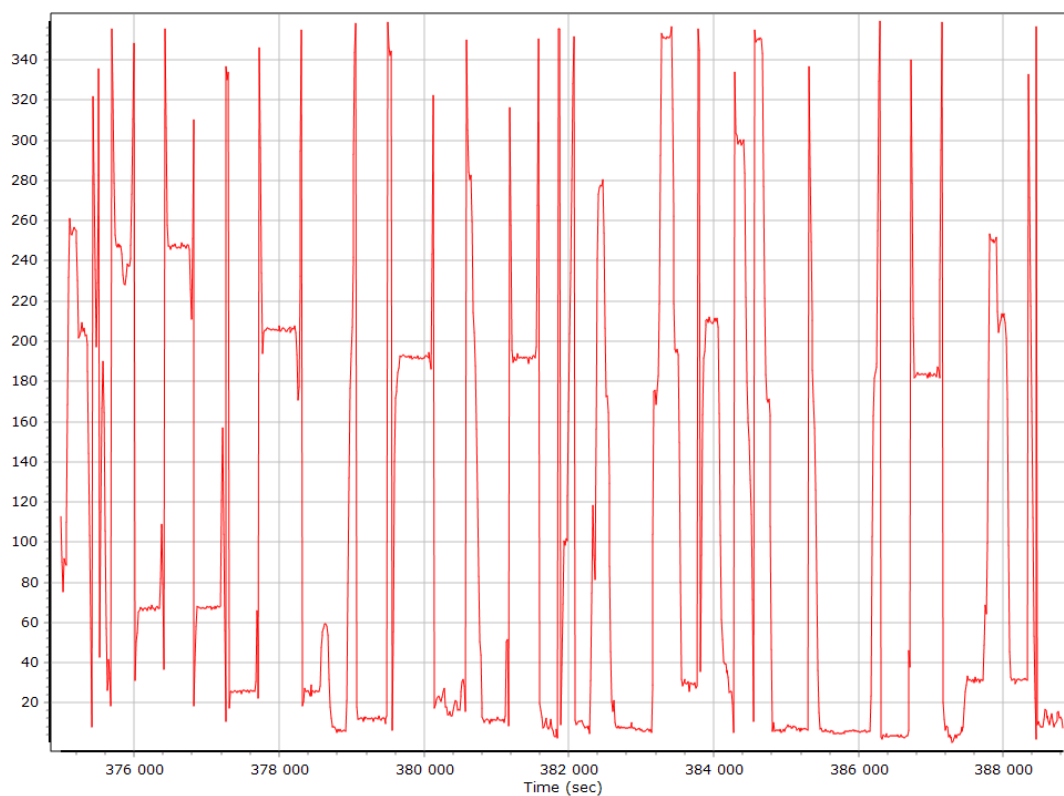
Altitude



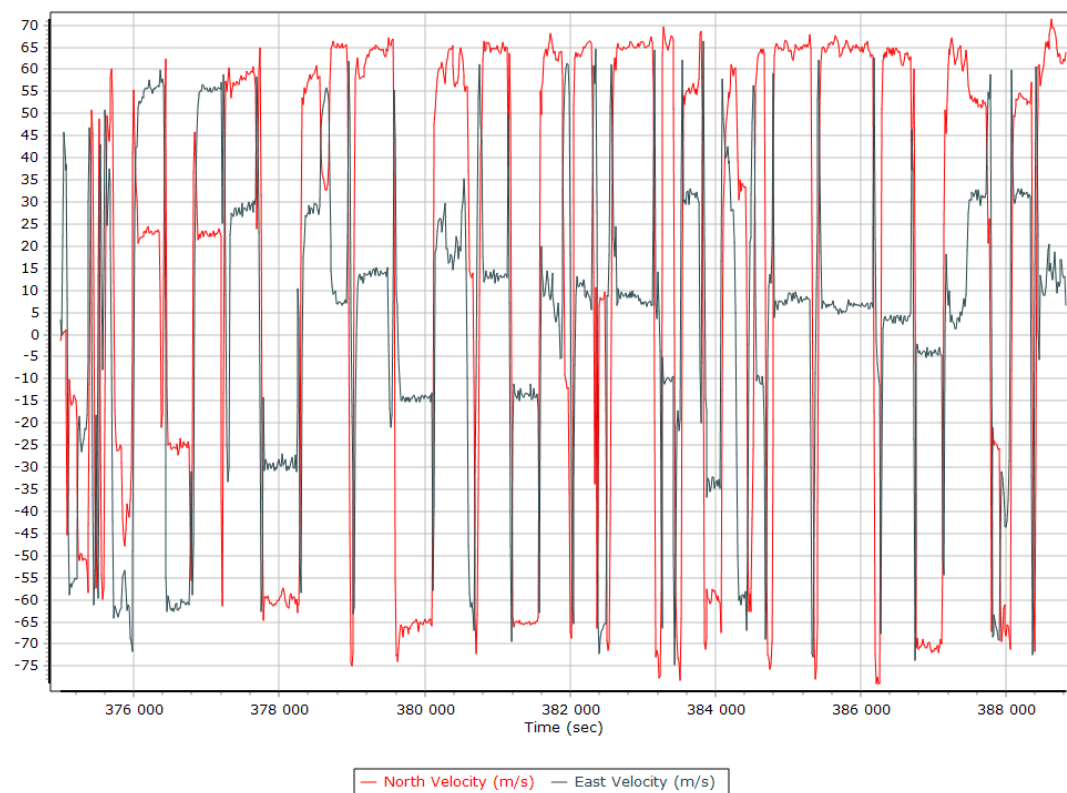
Roll/Pitch



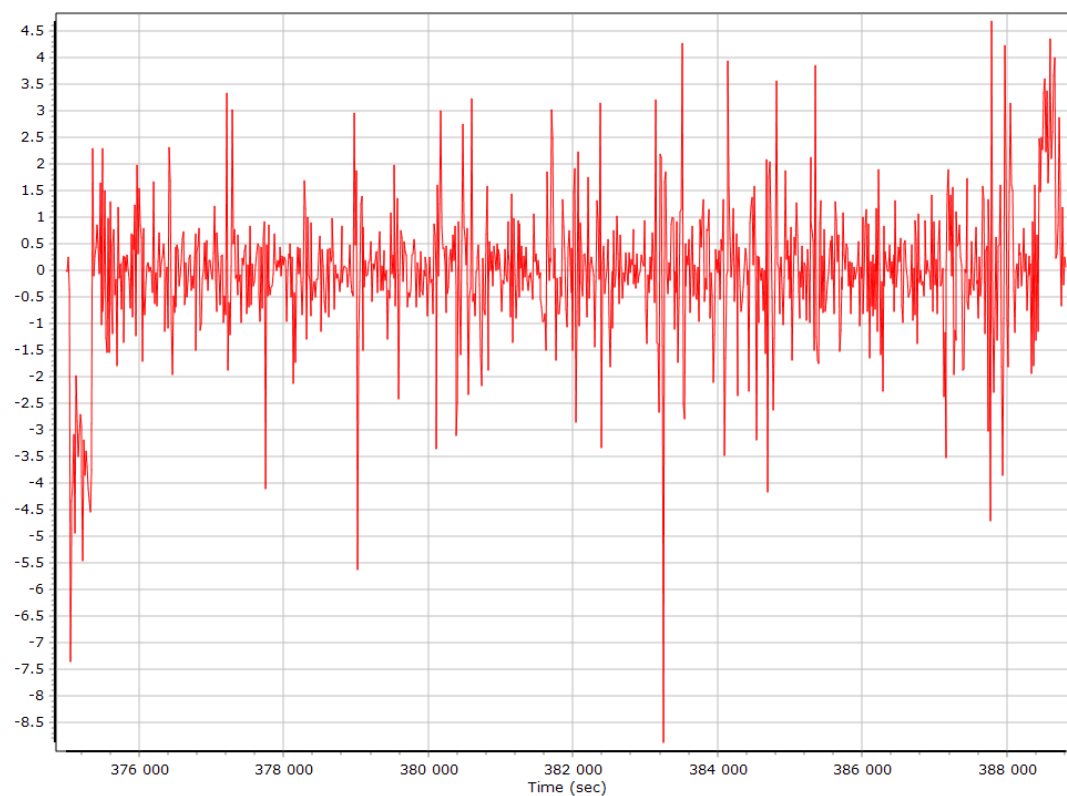
Heading



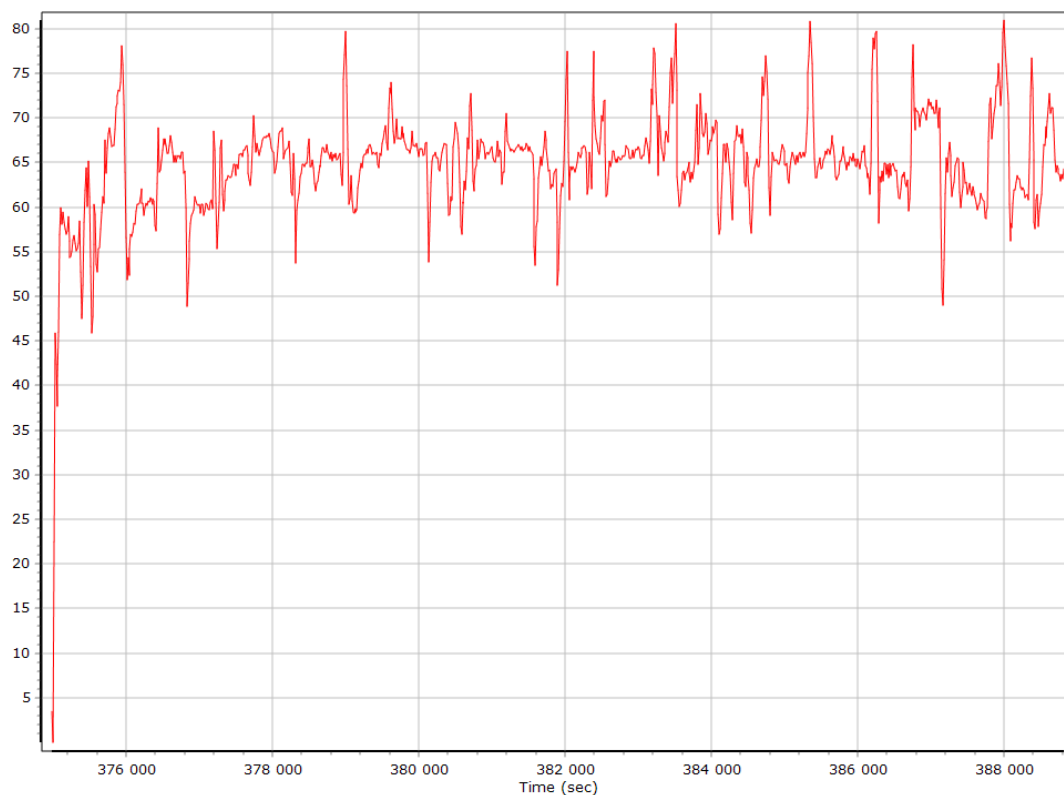
North/East Velocity



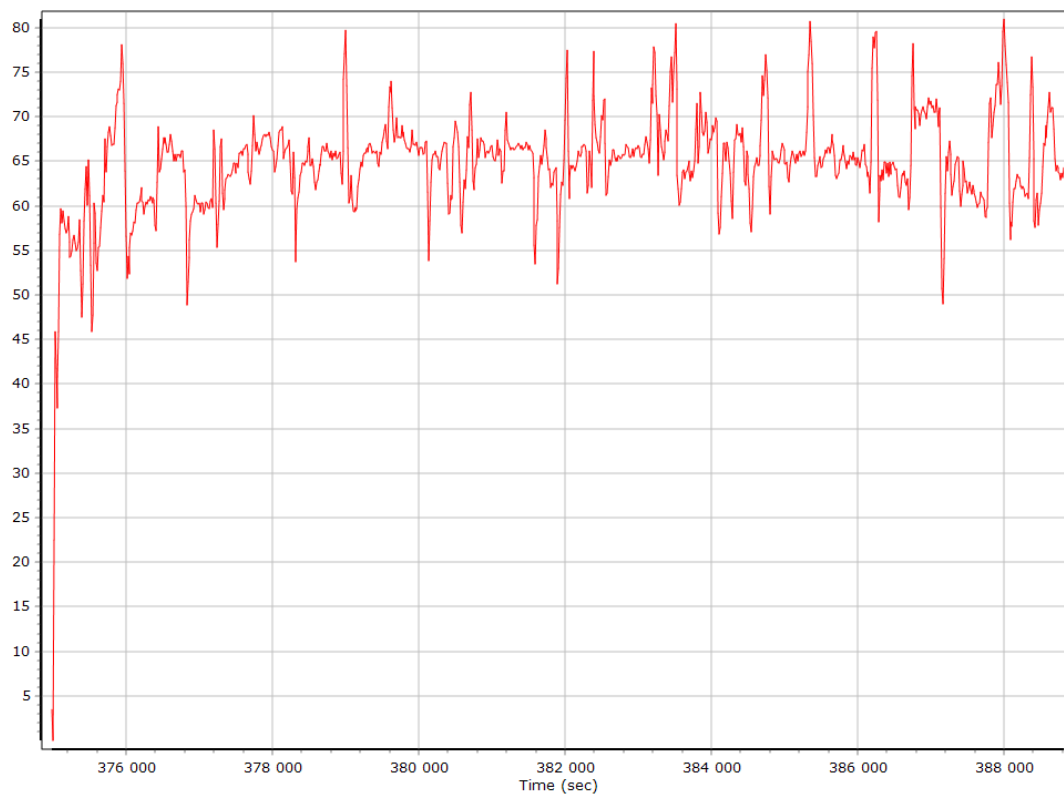
Down Velocity



Total Speed



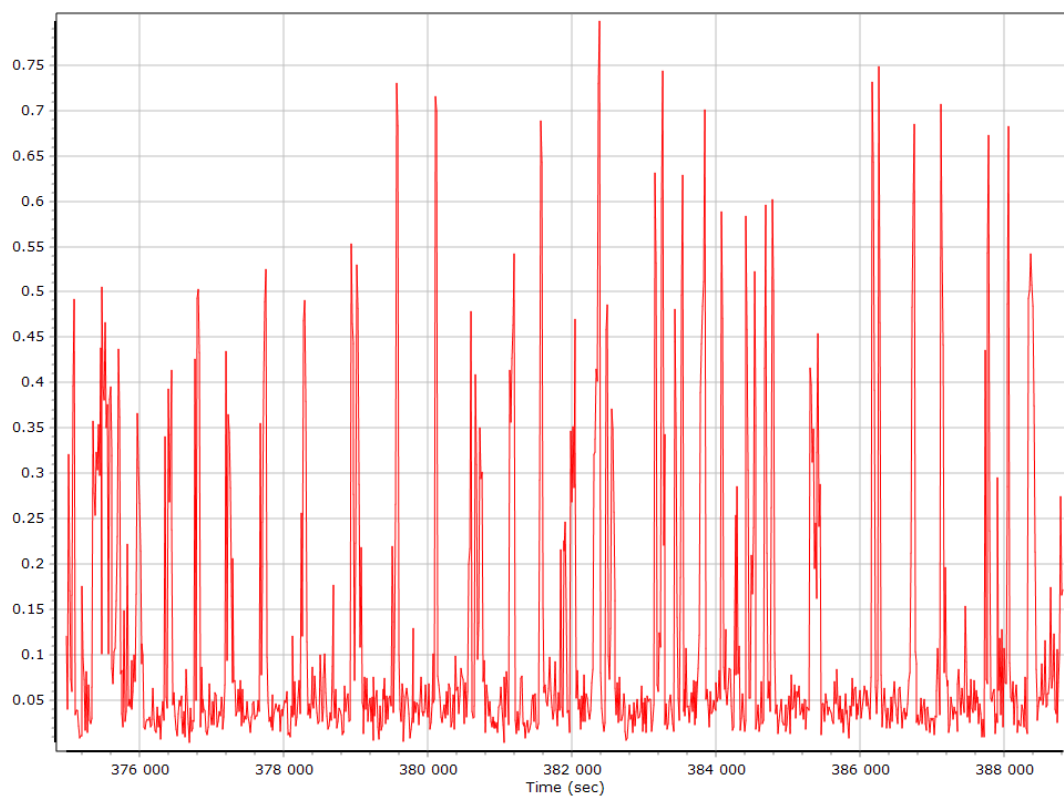
Ground Speed



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	System	Rate	Service	Database	Status
10/07/2021	BIAZ	92.01	GNSS	30	IGNE (daily)	Smart Base	Imported
10/07/2021	SCOA	102.79	GNSS	30	IGNE (daily)	Smart Base	Imported
10/07/2021	ROYA	152.21	GNSS	30	IGNE (daily)	Smart Base	Imported
10/07/2021	ILDX	191.69	GNSS	30	IGNE (daily)	Smart Base	Imported

SmartBase Results

SmartBase status	PROC_STATUS_OK
Primary station Id	BIAZ
Primary station data rate (sec)	30.0
VRS/ASB generation rate (sec)	1.0
VRS/ASB timespan	13899 s (2178 374928 - 2178 388827)
Number of reference stations	9
Primary station GPS measurement usage (%)	99.3
Primary station GLONASS measurement usage (%)	78.0
Average number of satellites per epoch	13.9
Max number of GPS stations used	6
Min number of GPS stations used	3
Max number of GLONASS stations used	4
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)	19359
GPS precise vs. broadcast ephemeris used	0.0 % / 100.0 %
GLONASS precise vs. broadcast ephemeris used	0.0 % / 100.0 %
Termination Status	Normal

Base Station Information - ILDX

Station ID	ILDX		
Filename	ildx2800.21o		
Start date	10/07/2021 00:00:00		
End date	10/07/2021 23:59:30		
Duration	23:59:30.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Leica	GR50	1834195
Antenna manufacturer, model	Trimble	Zephyr Geodetic 2 RoHS	
Antenna height [m]	0.135		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC (m)	0.08546		
Latitude	N46°00'33.93886"		
Longitude	W1°10'36.50859"		
Ellipsoidal height (m)	59.01800		
Frame	ETRF00		
Epoch	2019		
Ellipsoid	GRS_1980		
Velocity North (mm/y)	0		
Velocity East (mm/y)	-0.74		
Velocity Up (mm/y)	-0.66		

Base Station Information - ROYA

Station ID	ROYA		
Filename	roya2800.21o		
Start date	10/07/2021 00:00:00		
End date	10/07/2021 23:59:30		
Duration	23:59:30.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Trimble	NetR9	5640R50264
Antenna manufacturer, model	AeroAntenna	AT1675-120 w/SPKE Dome	
Antenna height [m]	0.072		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC (m)	0.08085		
Latitude	N45°38'19.05691"		
Longitude	W1°01'27.75895"		
Ellipsoidal height (m)	69.04500		
Frame	ETRF00		
Epoch	2019		
Ellipsoid	GRS_1980		
Velocity North (mm/y)	0		
Velocity East (mm/y)	-0.74		
Velocity Up (mm/y)	-0.66		

Base Station Information - SCOA

Station ID	SCOA		
Filename	scoa2800.21o		
Start date	10/07/2021 00:00:00		
End date	10/07/2021 23:59:30		
Duration	23:59:30.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Leica	GR25	1830170
Antenna manufacturer, model	Trimble	Zephyr Geodetic 2	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC (m)	0.08546		
Latitude	N43°23'42.83459"		
Longitude	W1°40'54.05429"		
Ellipsoidal height (m)	59.43600		
Frame	ETRF00		
Epoch	2019		
Ellipsoid	GRS_1980		
Velocity North (mm/y)	0		
Velocity East (mm/y)	-0.74		
Velocity Up (mm/y)	-0.66		

Base Station Information - BIAZ

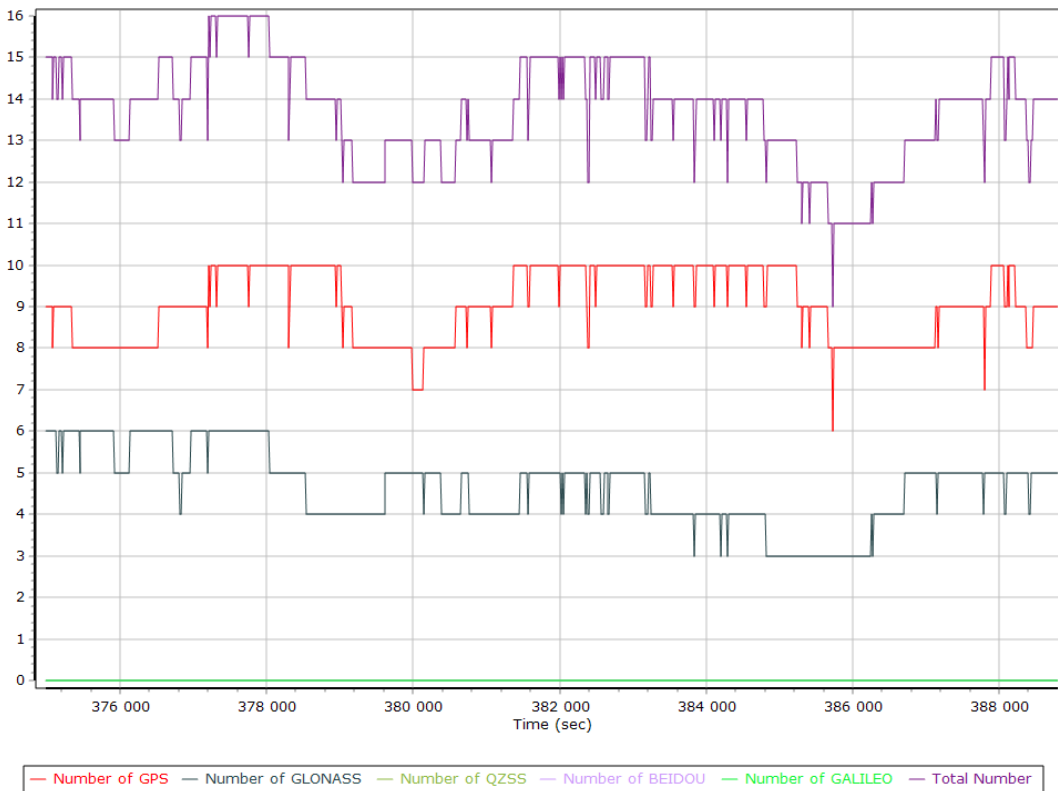
Station ID	BIAZ		
Filename	biaz2800.21o		
Start date	10/07/2021 00:00:00		
End date	10/07/2021 23:59:30		
Duration	23:59:30.000		
Data type	GNSS		
Receiver manufacturer, model, serial no.	Spectra Precision	SP90m	5733R90238
Antenna manufacturer, model	Leica	AR25 w/LEIT Dome	
Antenna height [m]	0.000		
Antenna measurement method	Bottom of antenna mount		
Offset from measured point to APC (m)	0.15508		
Latitude	N43°28'19.05830"		
Longitude	W1°32'12.89321"		
Ellipsoidal height (m)	121.39000		
Frame	ETRF00		
Epoch	2019		
Ellipsoid	GRS_1980		
Velocity North (mm/y)	0		
Velocity East (mm/y)	-0.74		
Velocity Up (mm/y)	-0.66		

GNSS QC

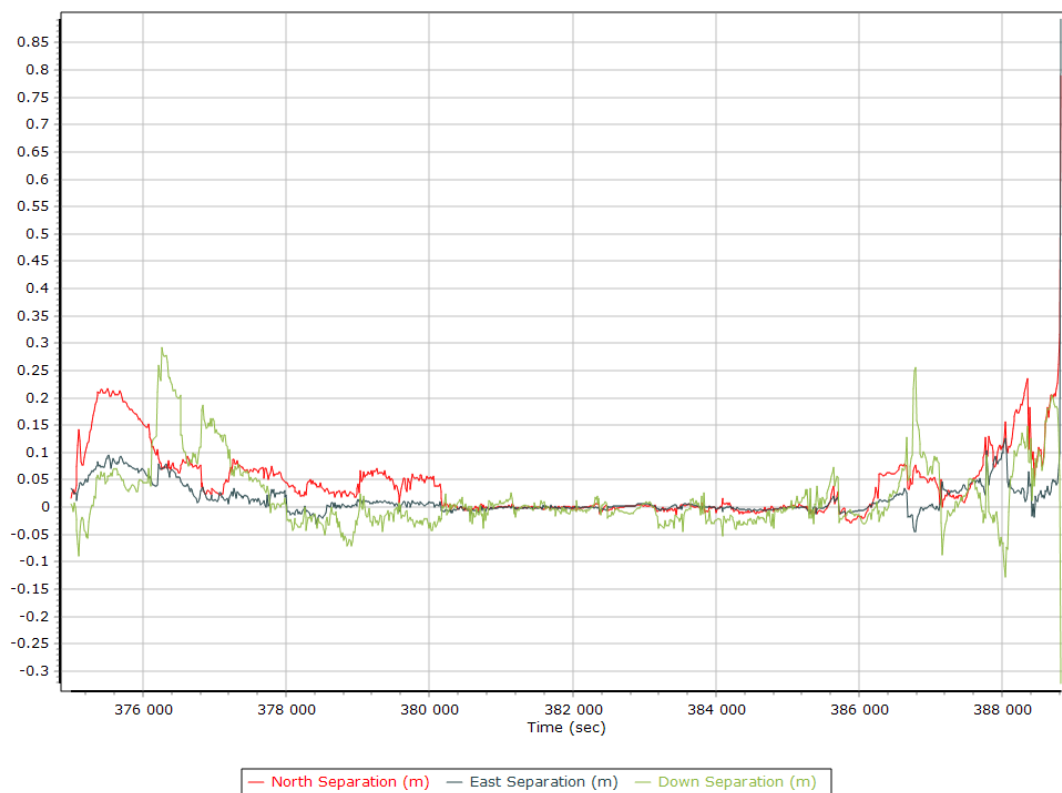
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	5.55	170.41	
Number of GPS SV	6	10	9
Number of GLONASS SV	2	6	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Number of GALILEO SV	0	0	0
Total number of SV	9	16	14
PDOP	1.11	2.85	1.52
QC Solution Gaps	0.00	0.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	13879.00	0.00	0.00
Percentage	100.00	0.00	0.00

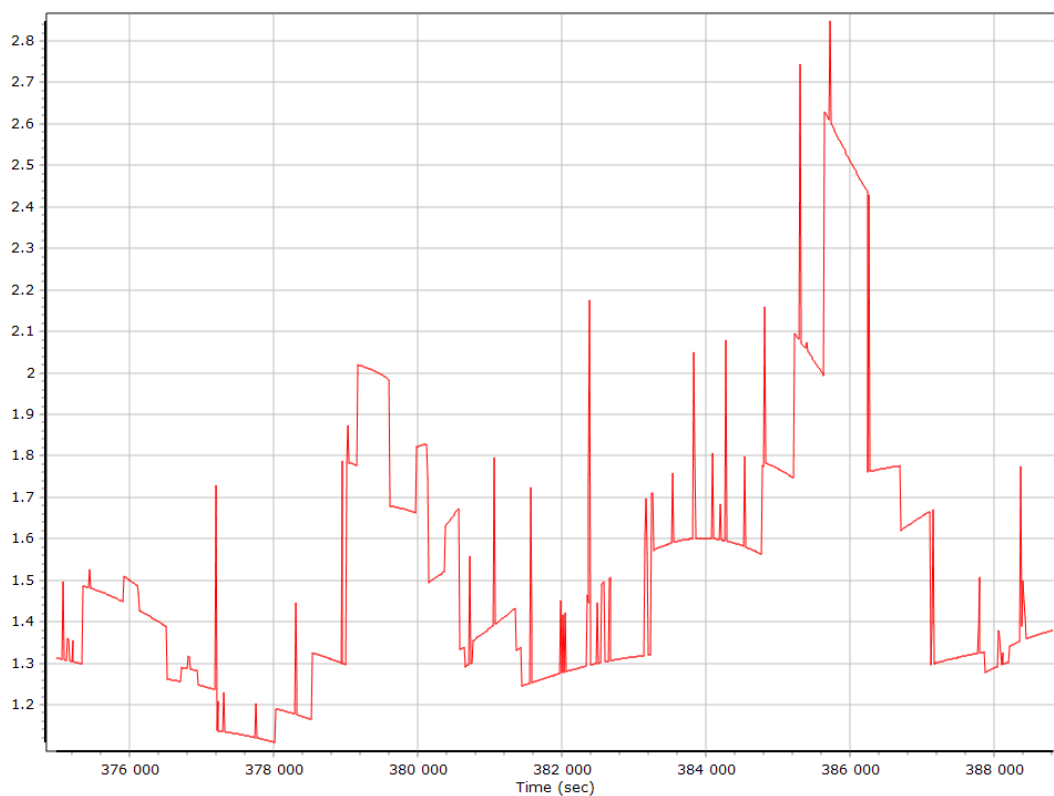
Num SVs in solution



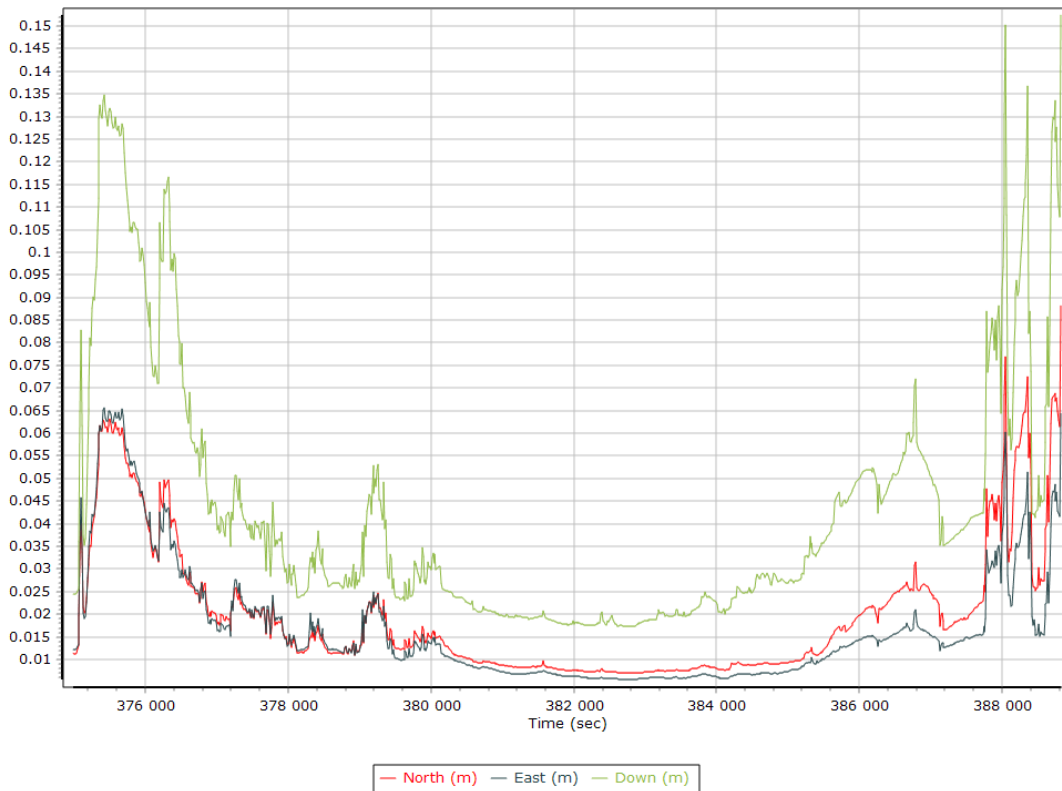
Forward/Reverse Separation



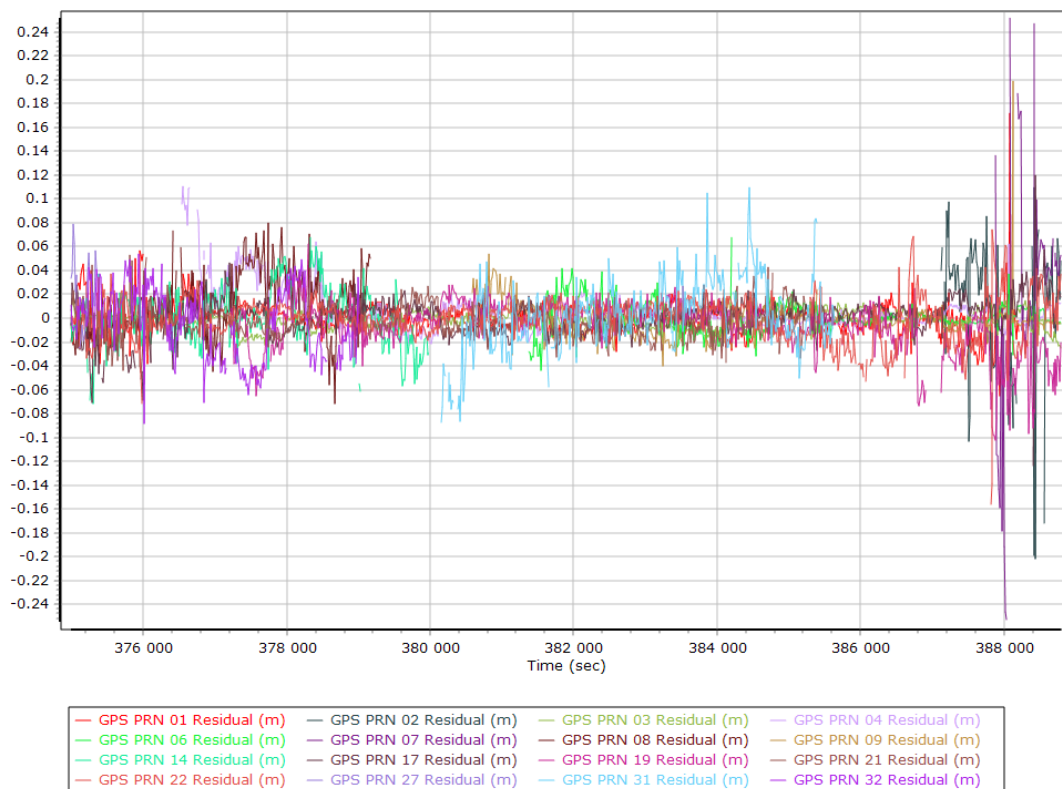
PDOP



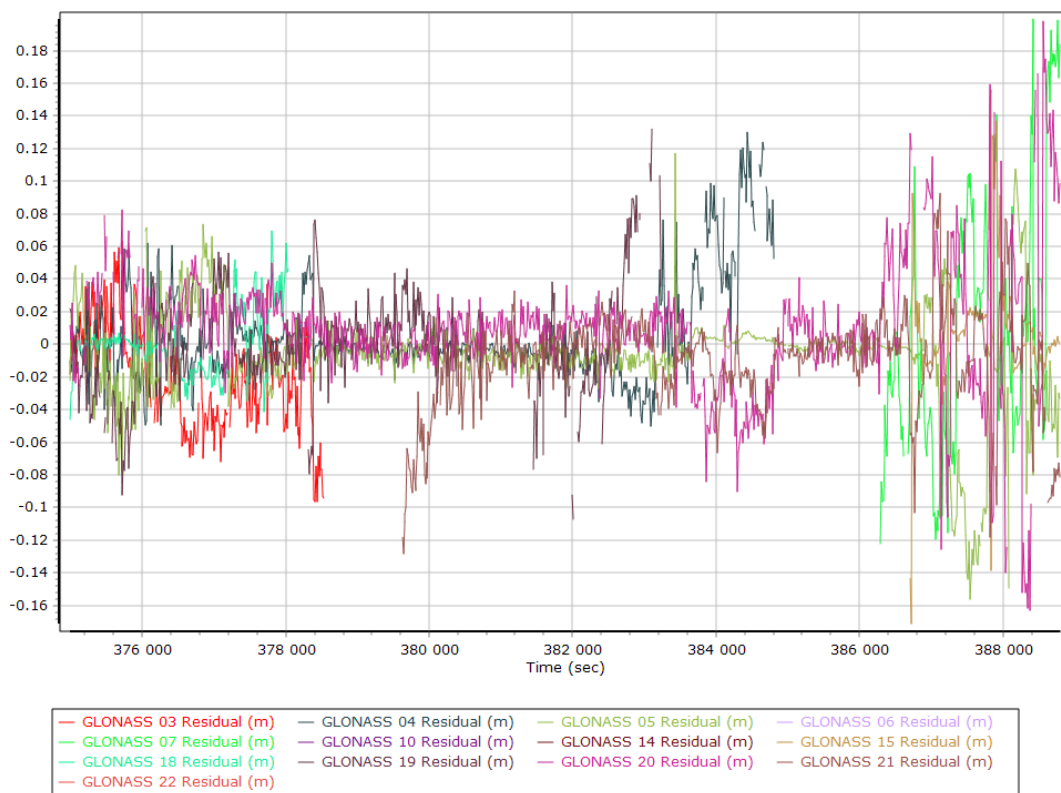
Estimated Position Accuracy



GPS Residuals



GLONASS Residuals



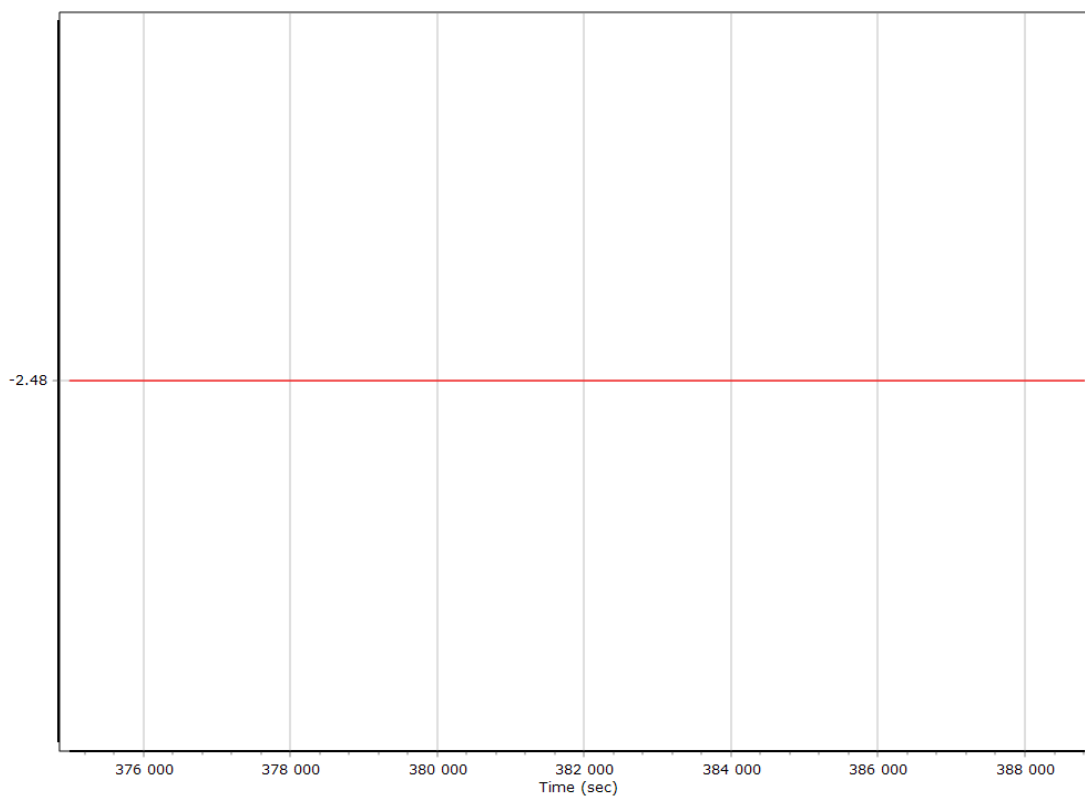
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion SmartBase		
Stabilized mount	True		
Base station	ASB		
Processing start time	374928.001 (10/07/2021 08:08:48)		
Processing end time	388827.000 (10/07/2021 12:00:27)		
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	180.000
Gimbal to Primary GNSS lever arm (m)	-2.480	-0.120	-0.970
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

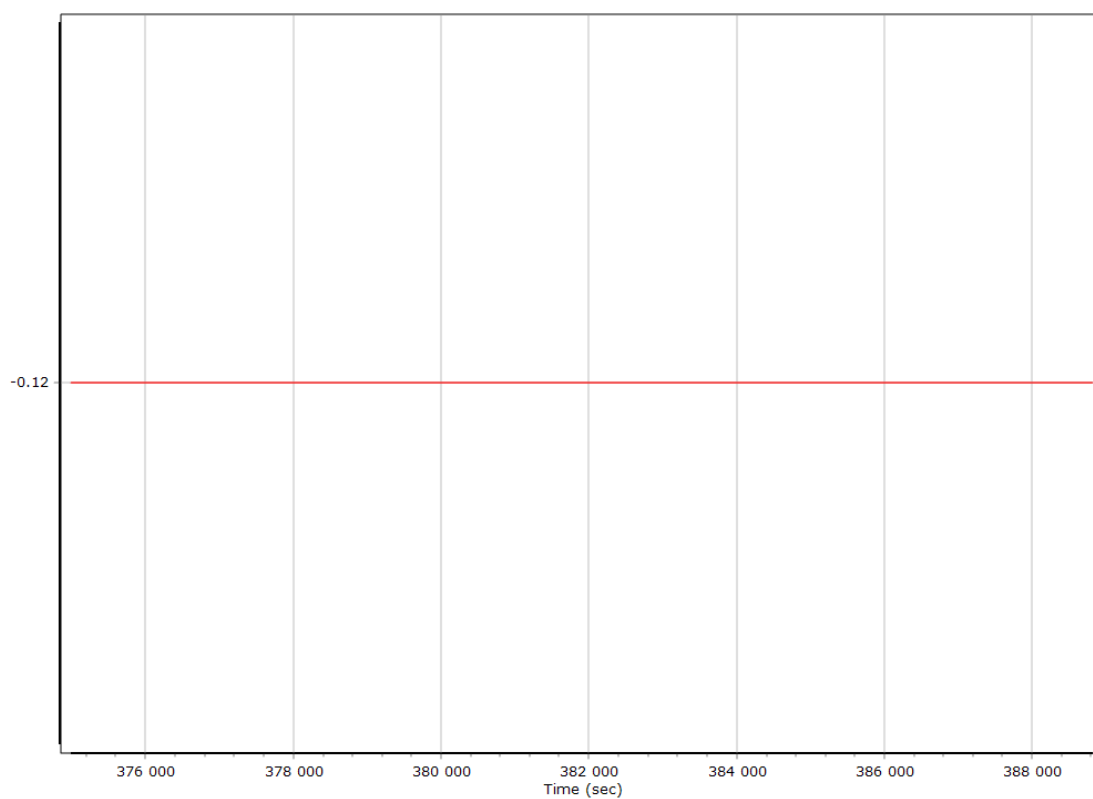
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

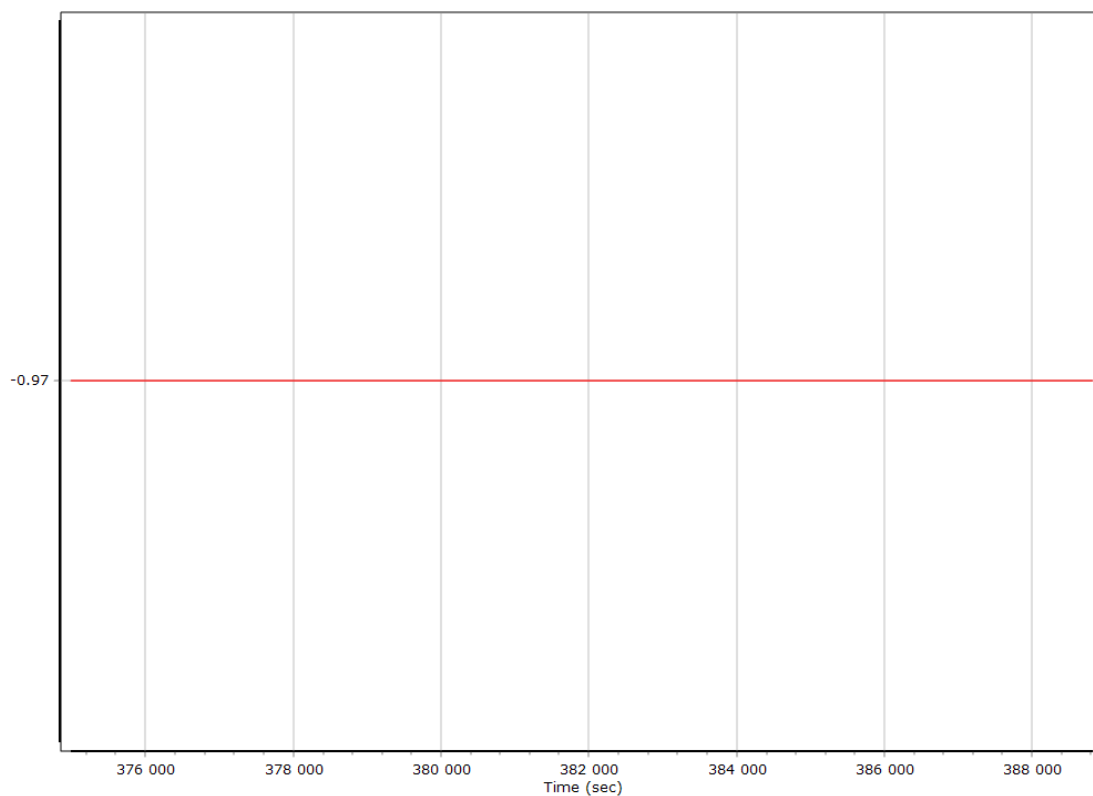
X Reference-Primary GNSS Lever Arm (m)



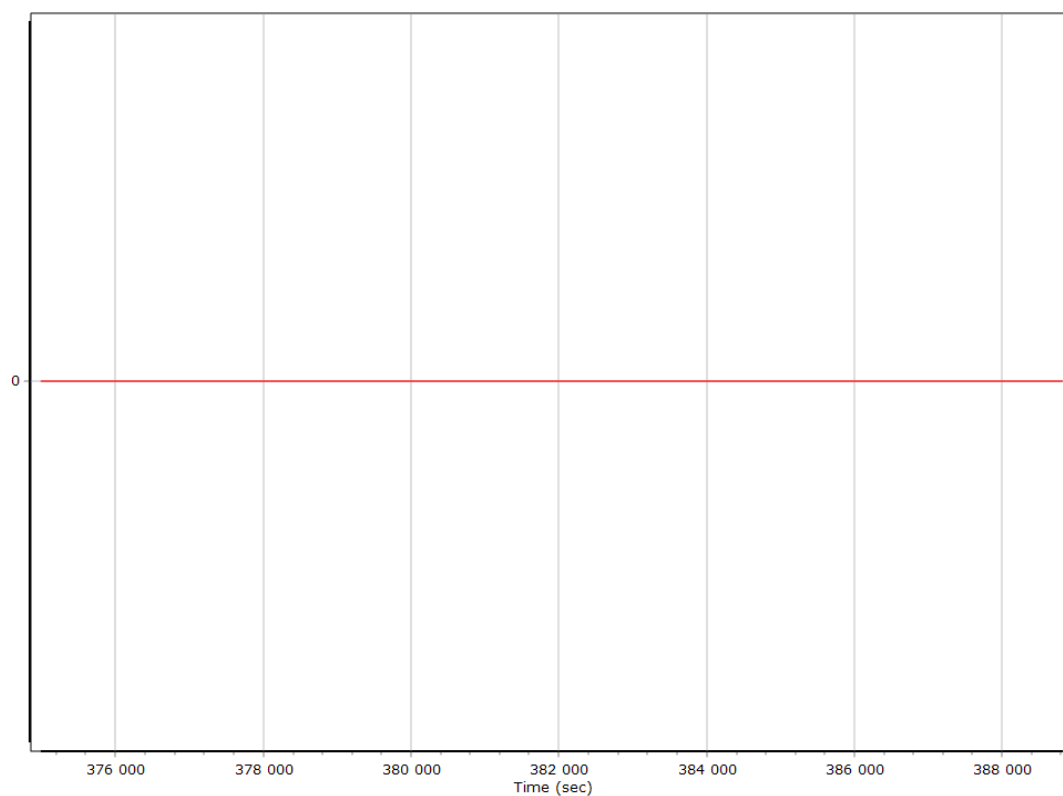
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



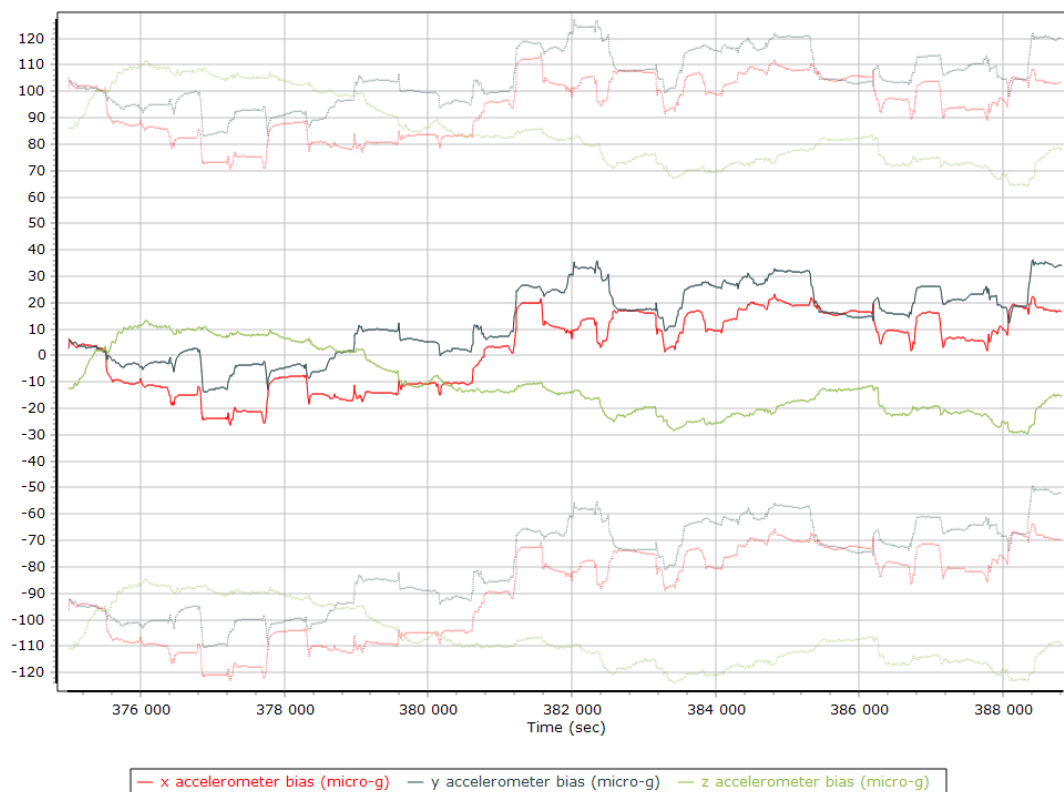
Reference-Primary GNSS Lever Arm Figure of Merit



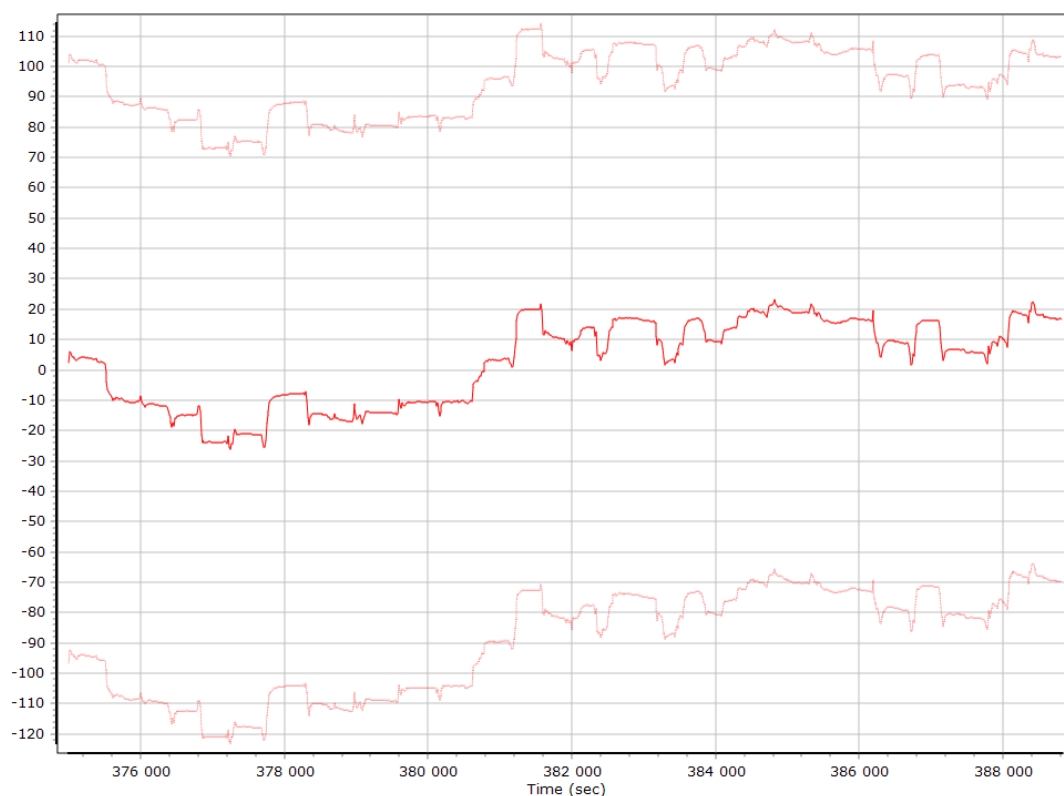
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

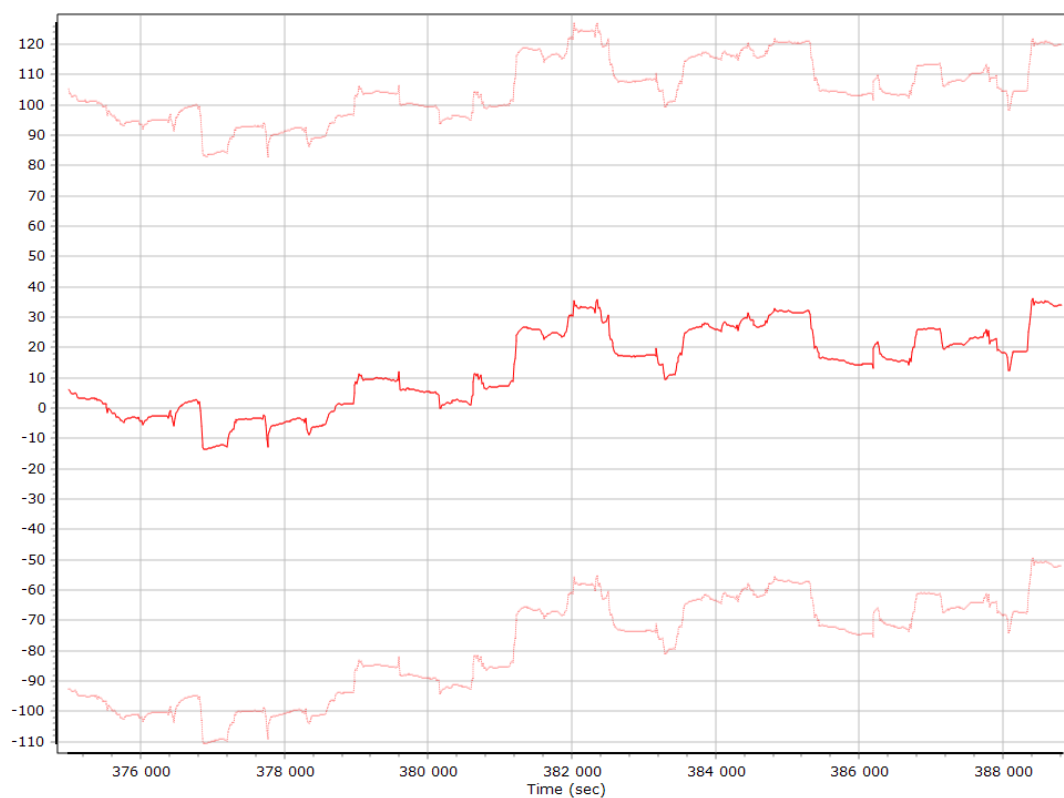
Accelerometer Bias (micro-g)



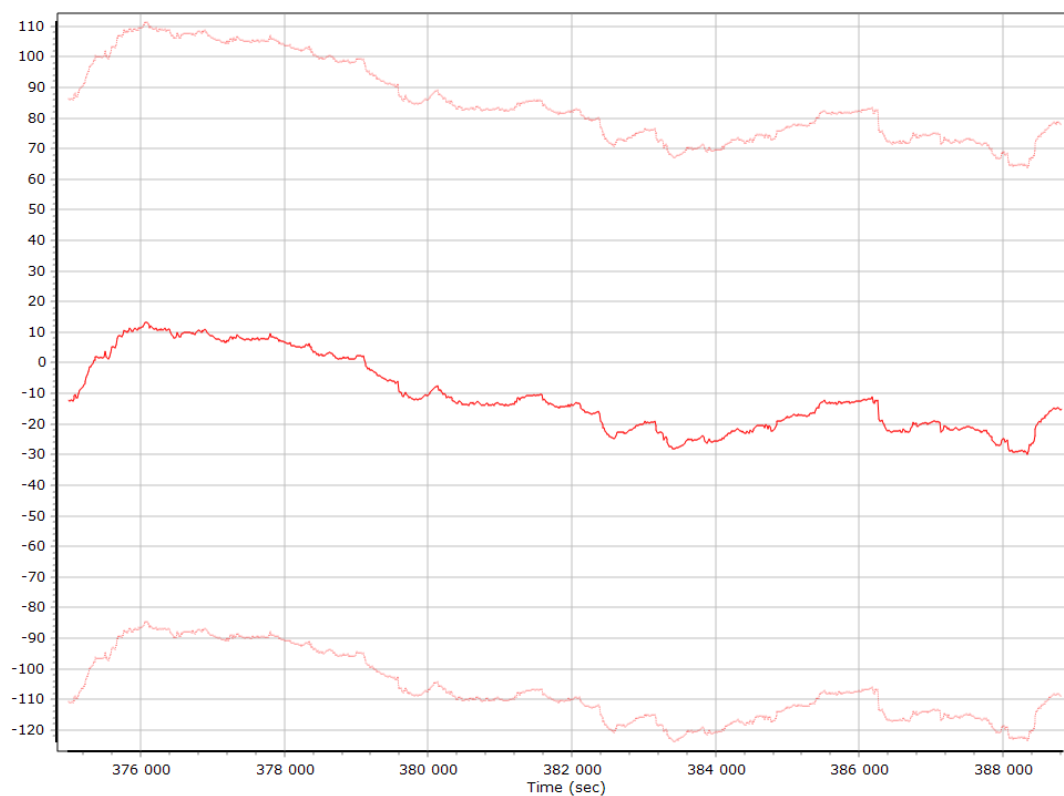
X Accelerometer Bias (micro-g)



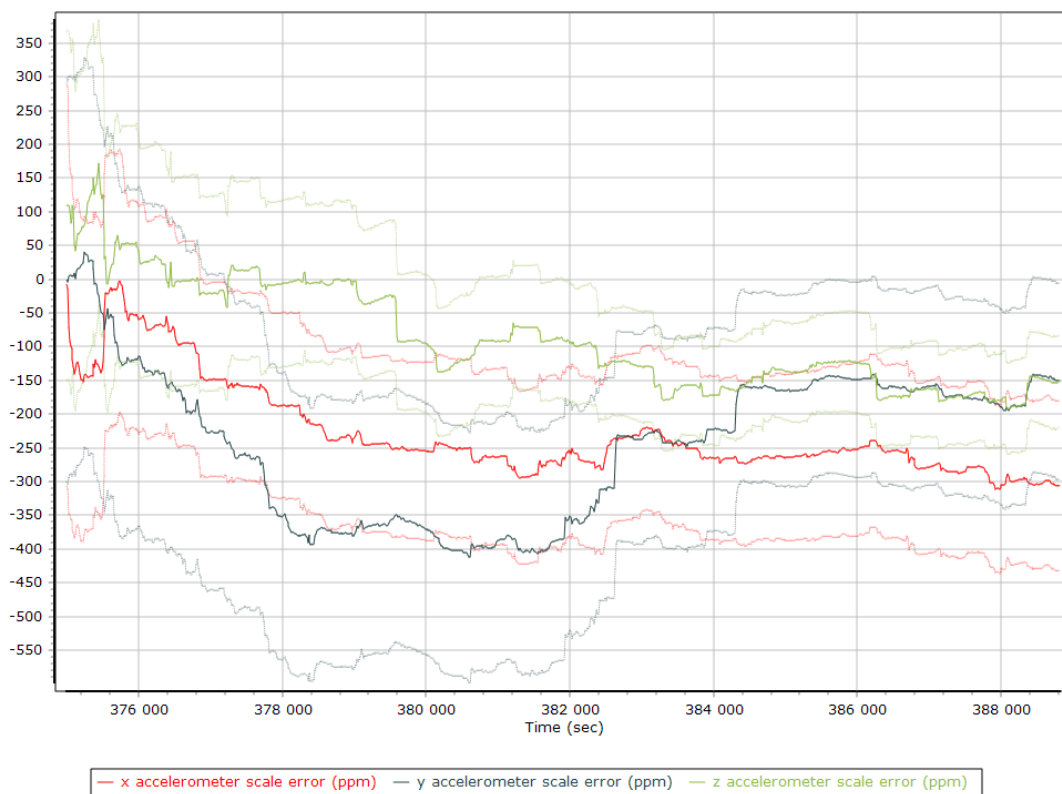
Y Accelerometer Bias (micro-g)



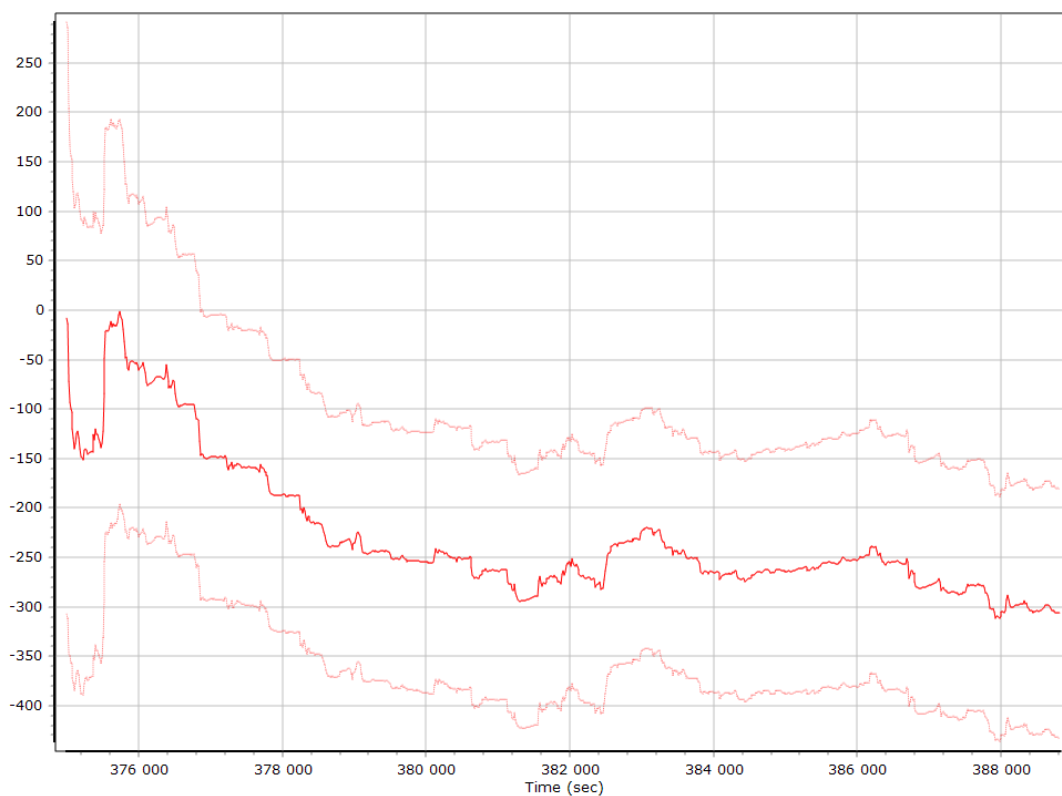
Z Accelerometer Bias (micro-g)



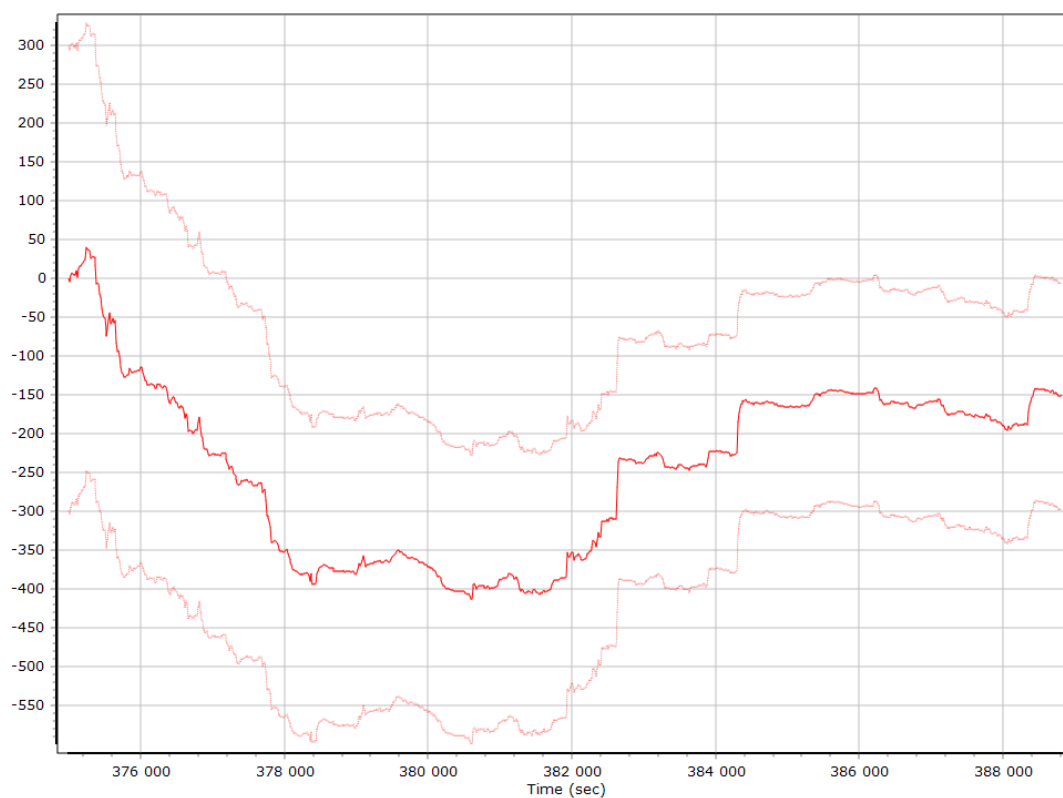
Accelerometer Scale Error (ppm)



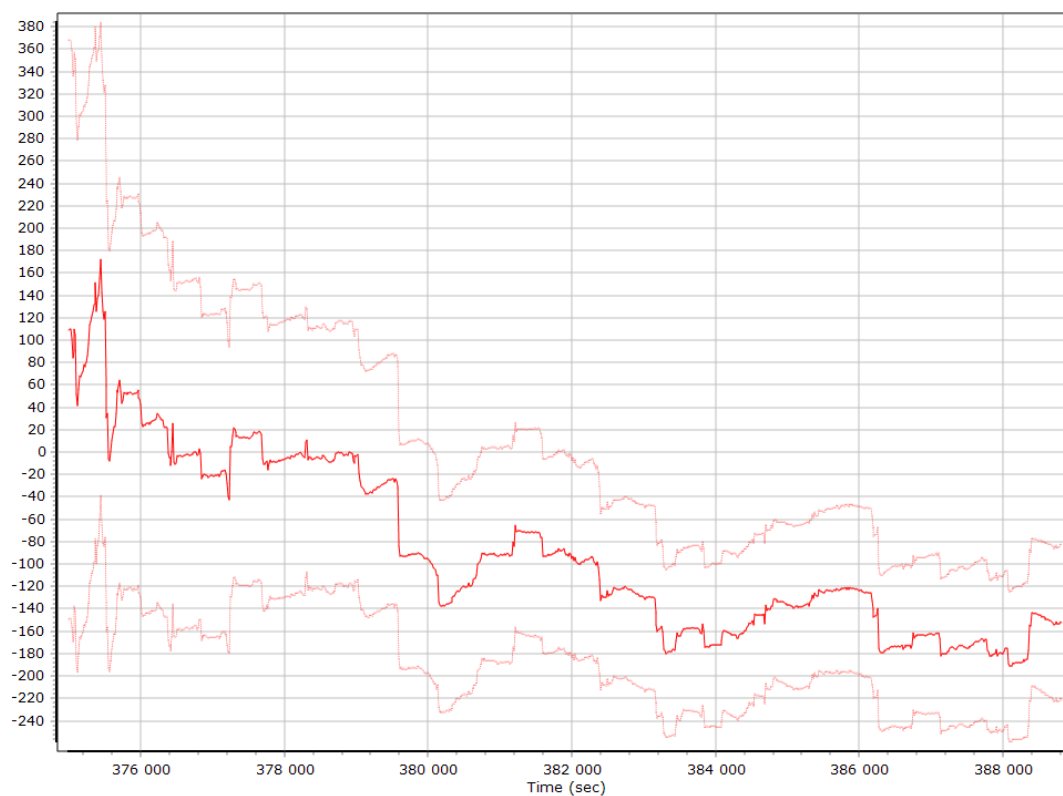
X Accelerometer Scale Error (ppm)



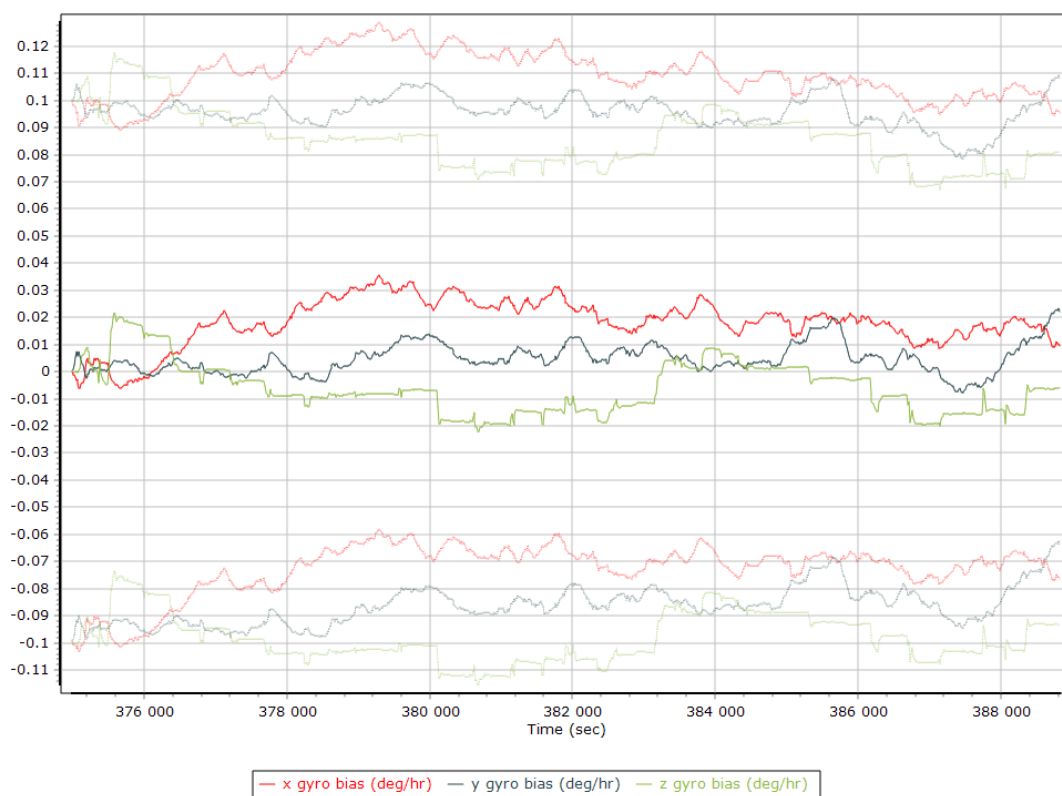
Y Accelerometer Scale Error (ppm)



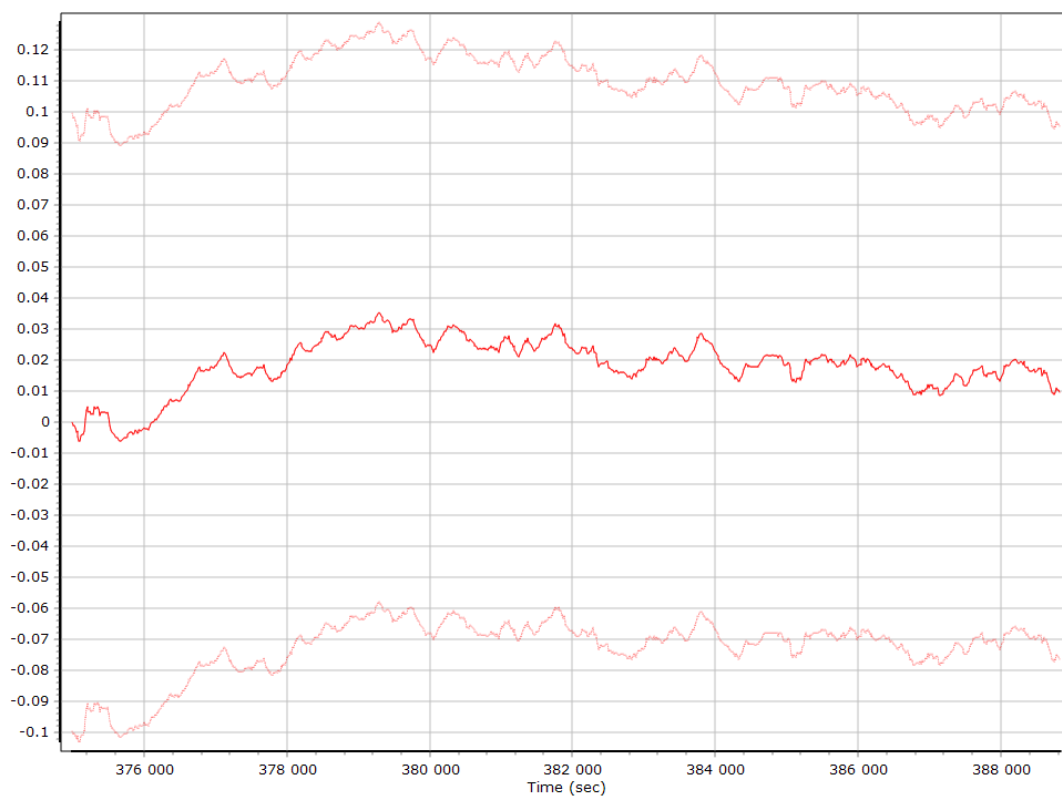
Z Accelerometer Scale Error (ppm)



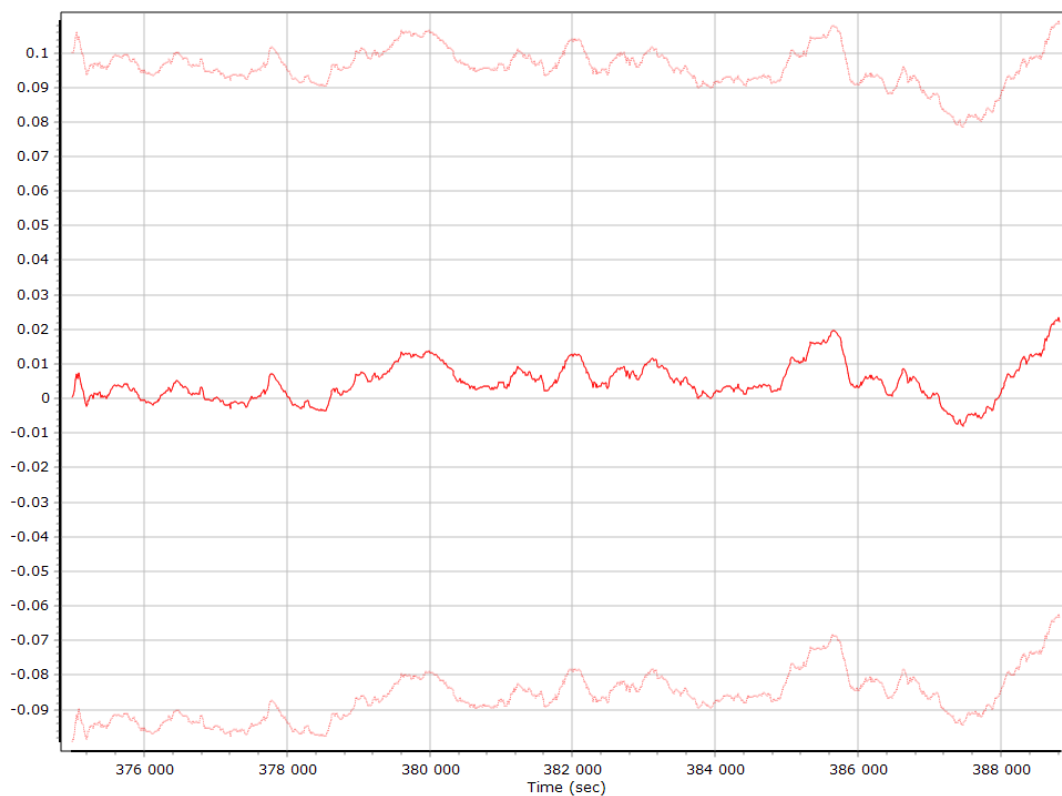
Gyro Bias (deg/h)



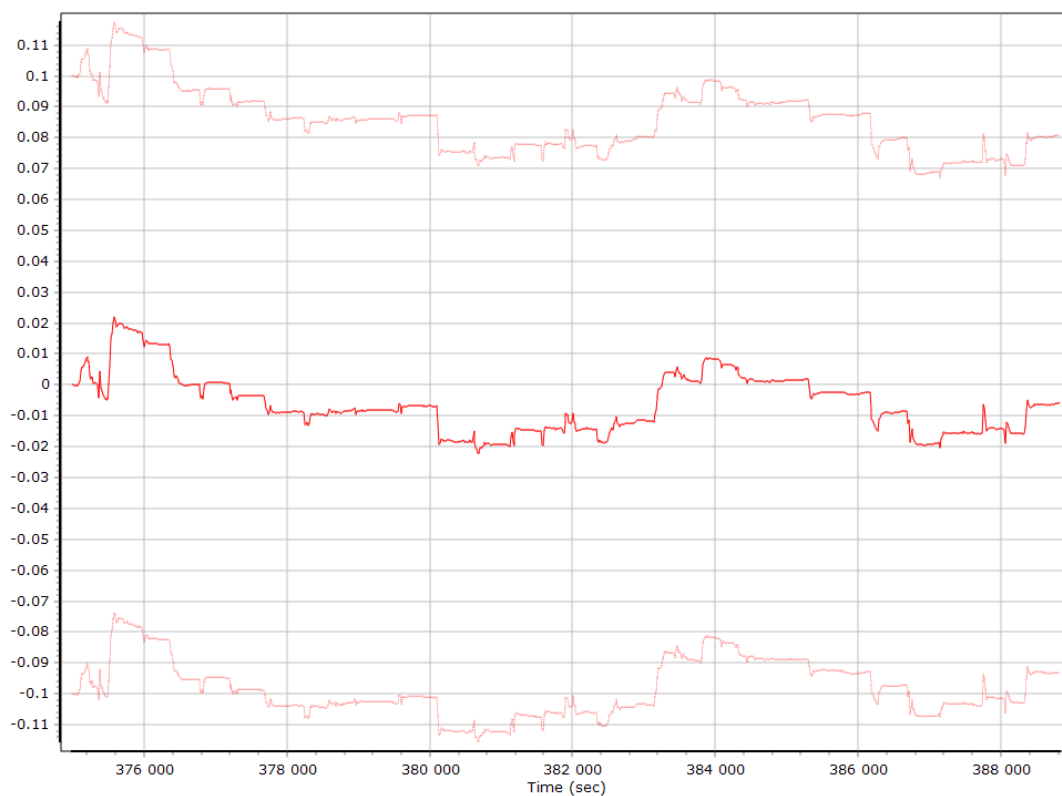
X Gyro Bias (deg/h)



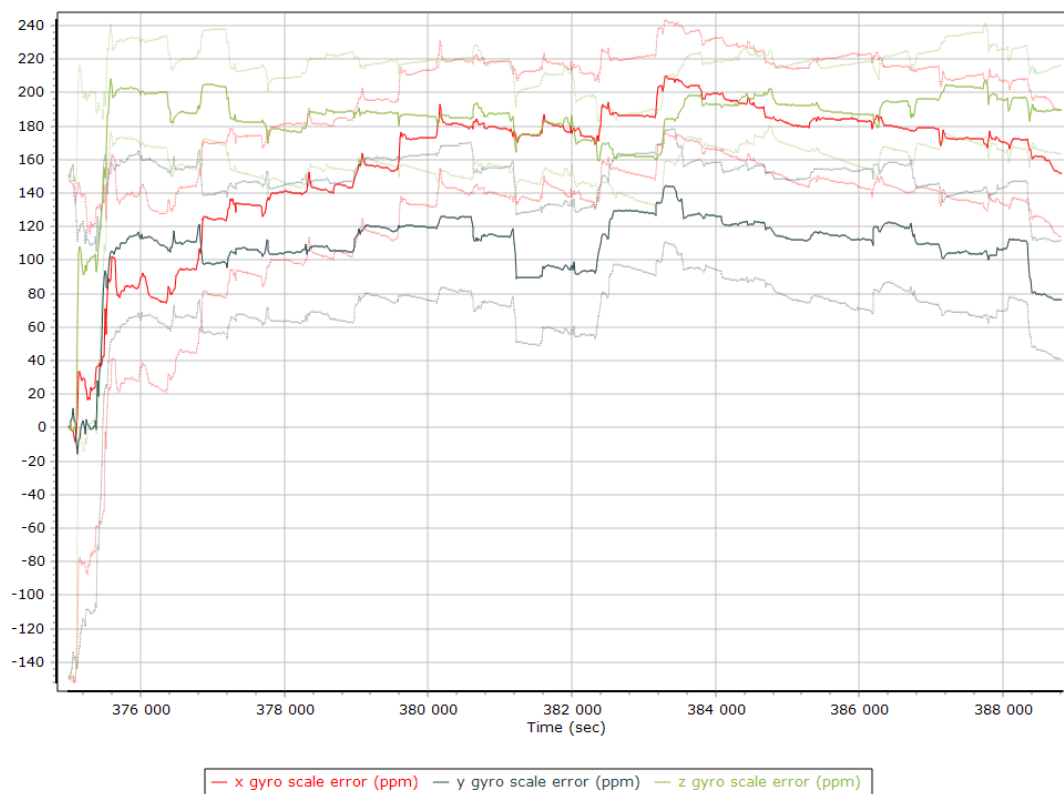
Y Gyro Bias (deg/h)



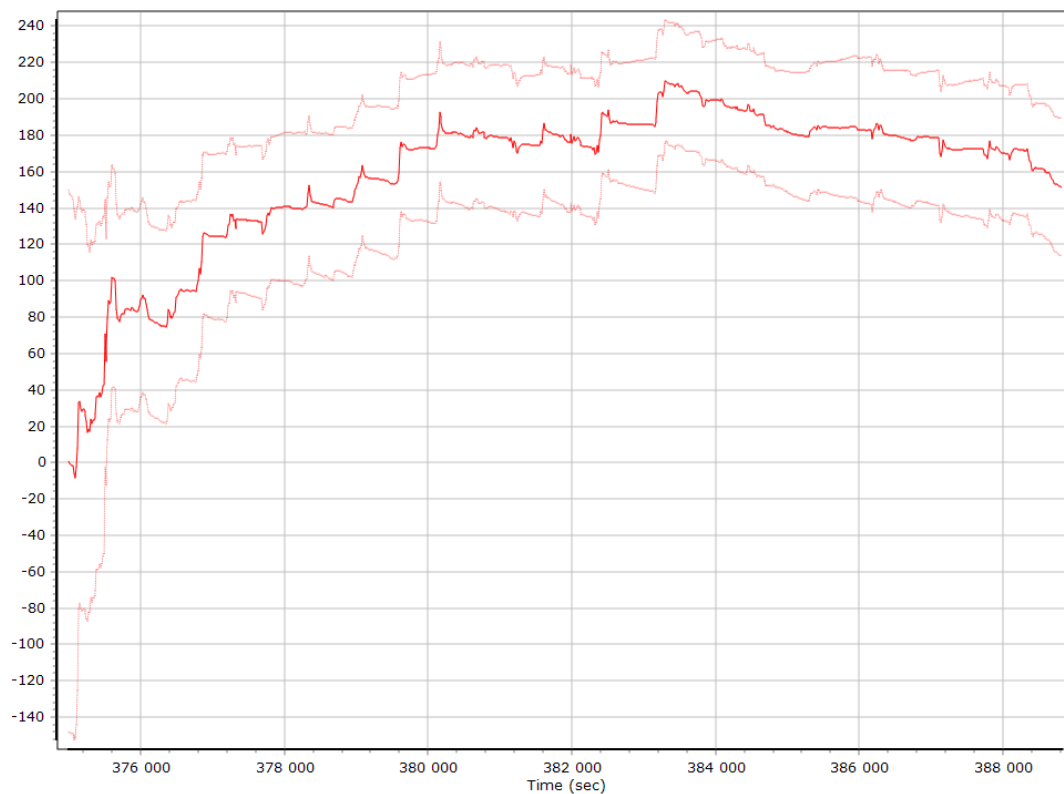
Z Gyro Bias (deg/h)



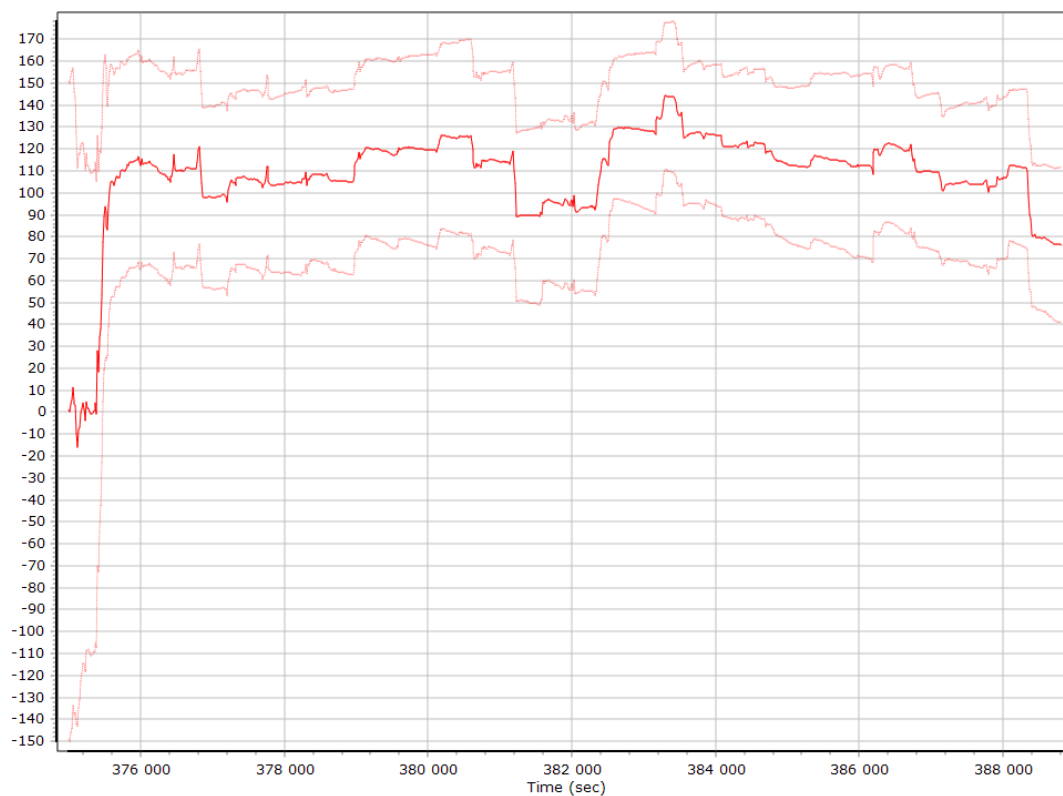
Gyro Scale Error (ppm)



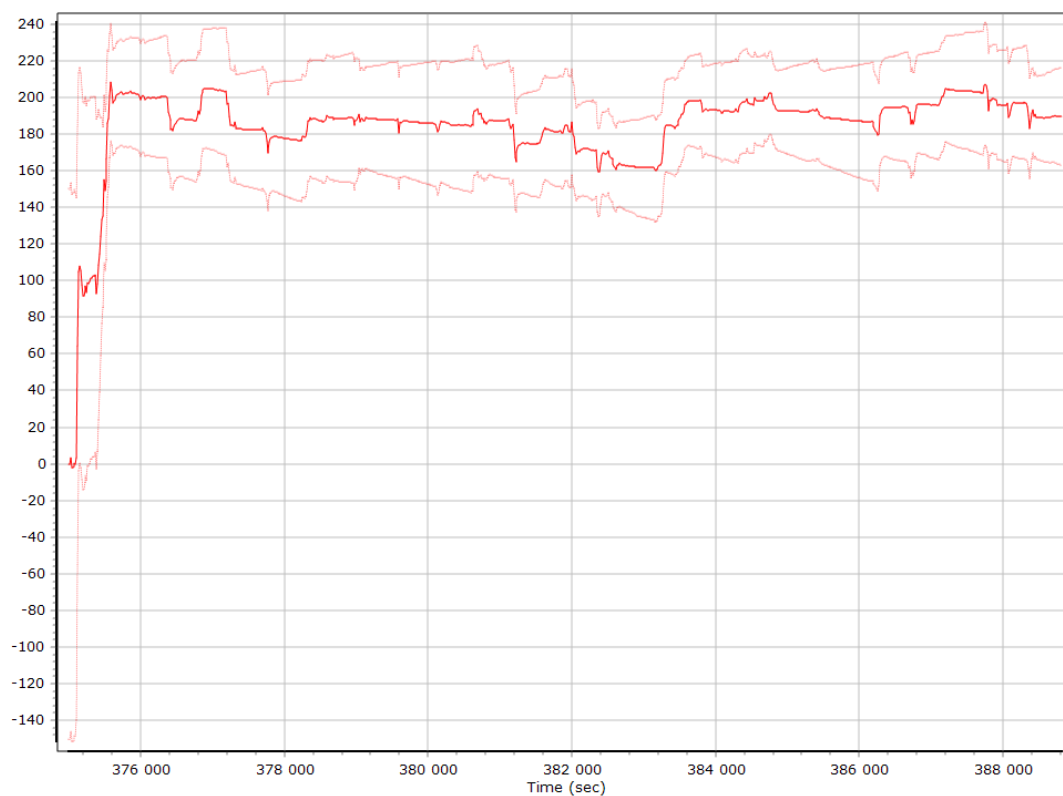
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

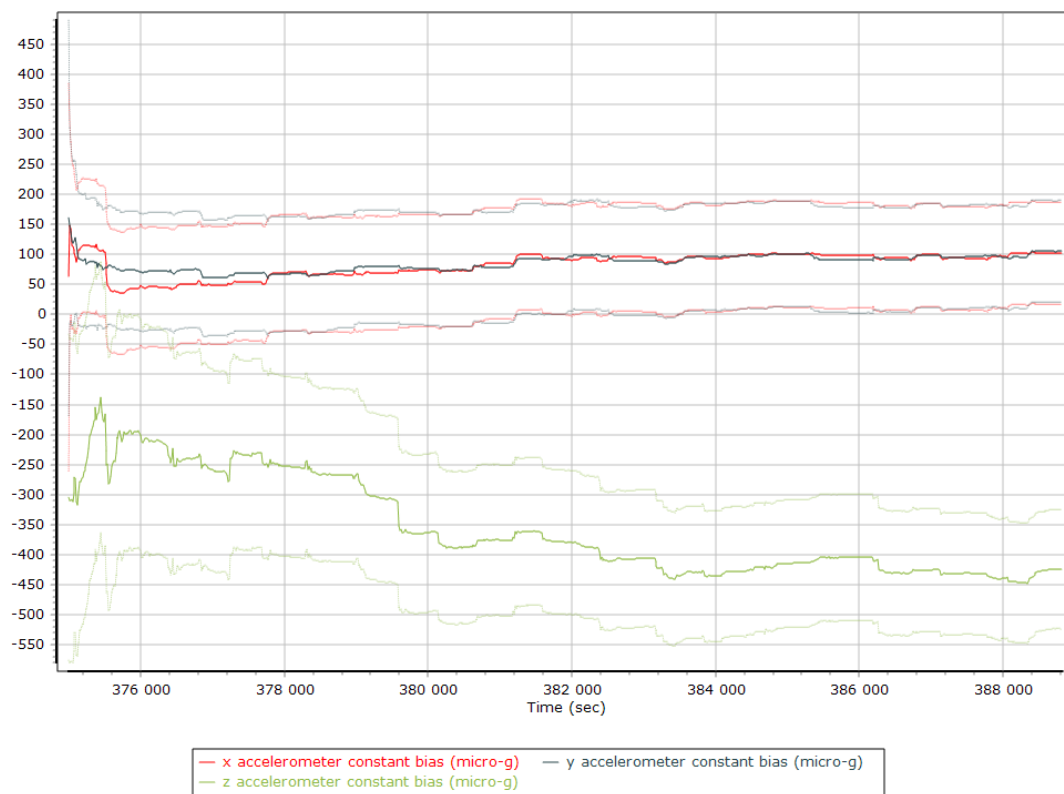


Z Gyro Scale Error (ppm)

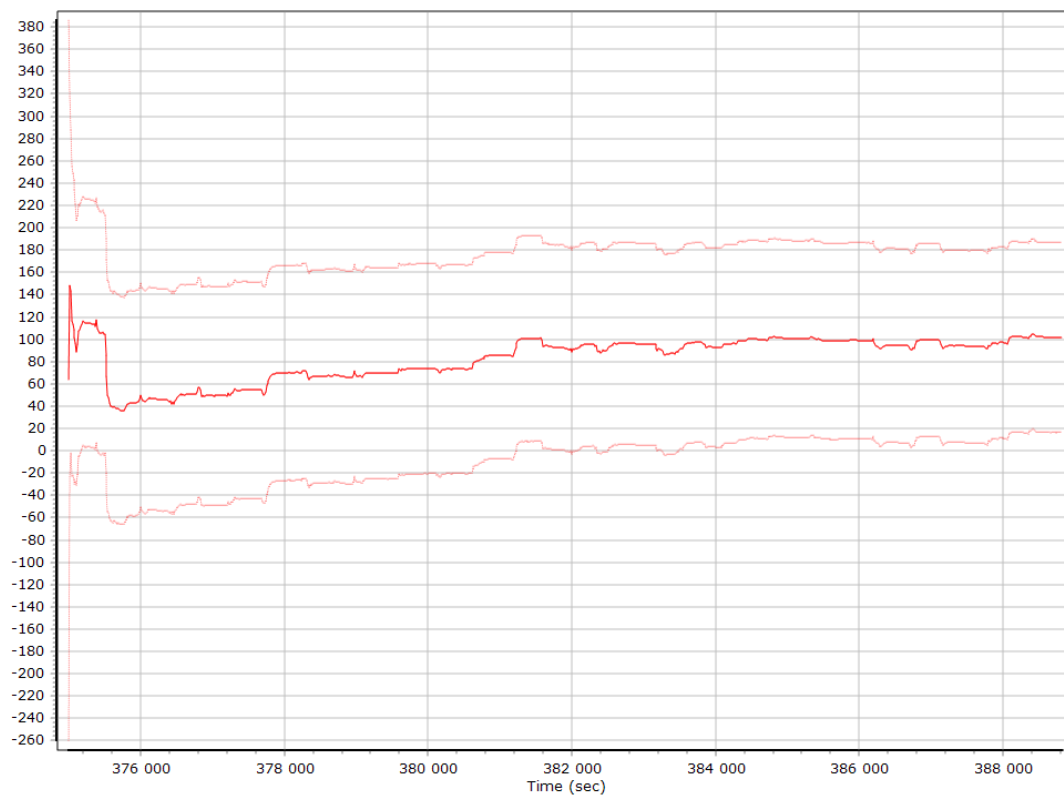


Forward Processed Estimated Constant Errors, Reference Frame

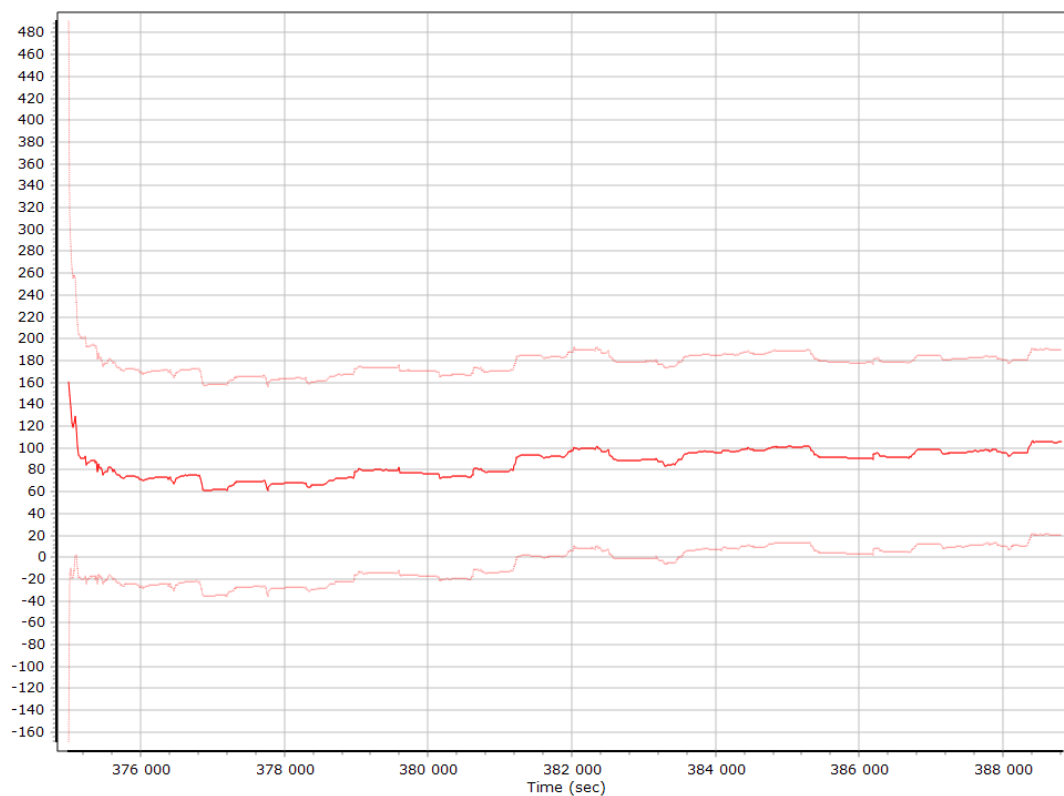
Accelerometer Bias (micro-g)



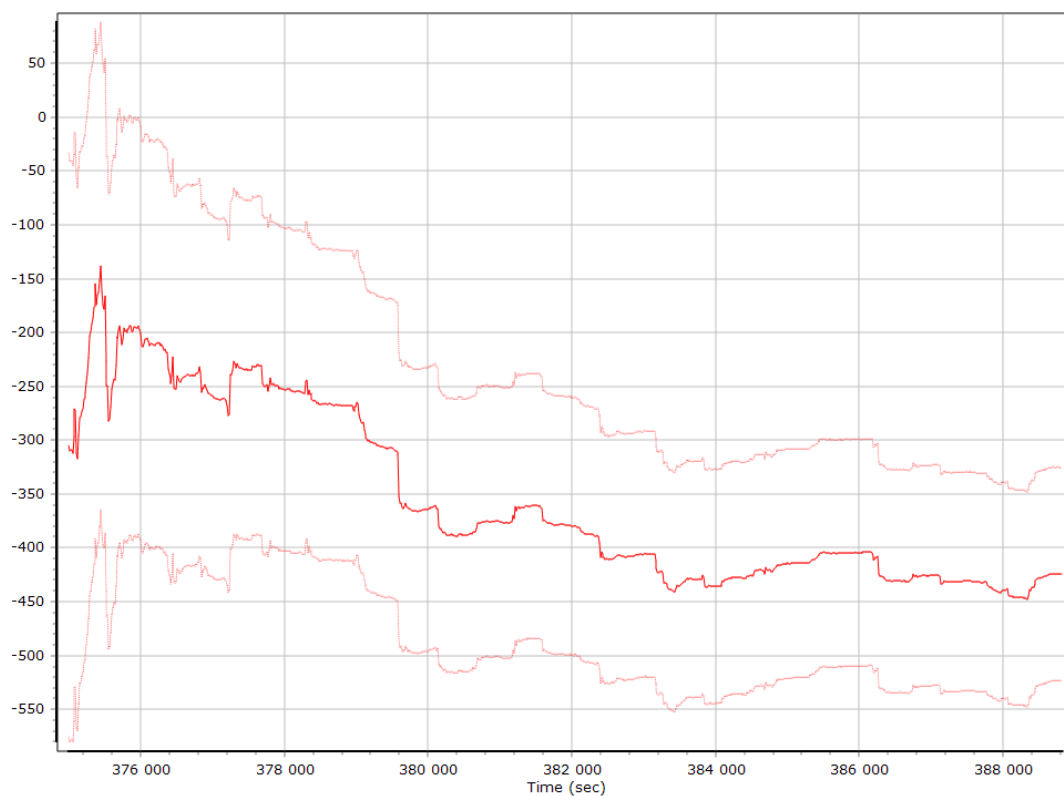
X Accelerometer Bias (micro-g)



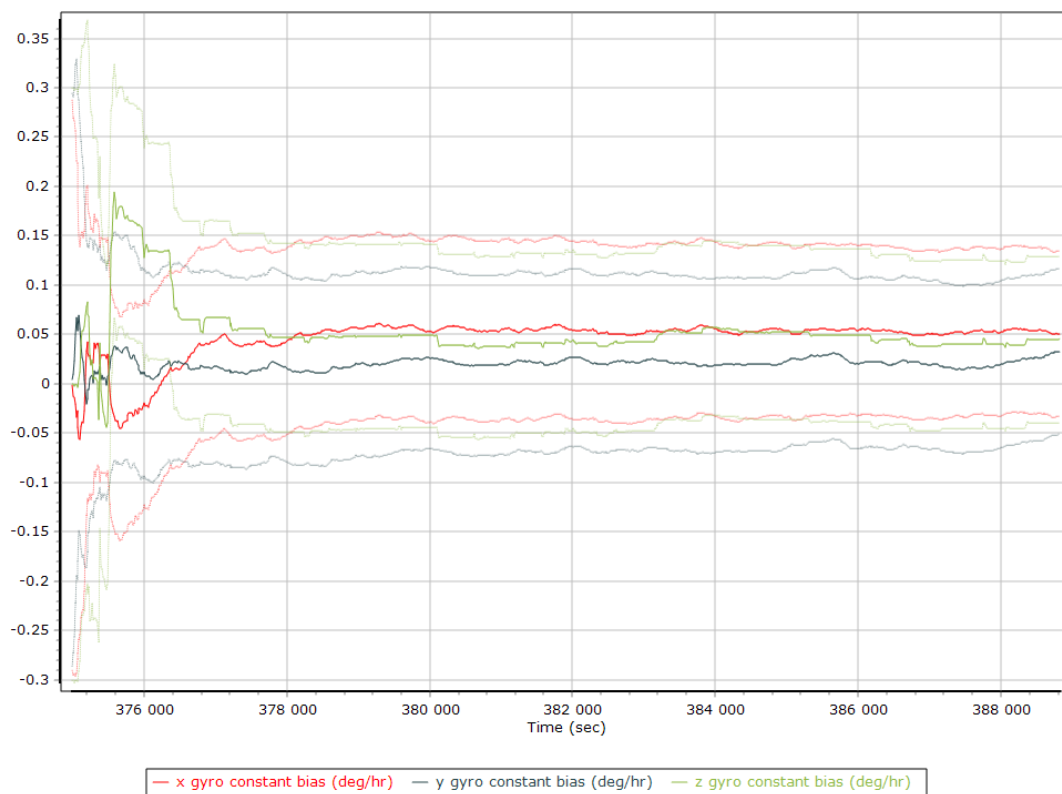
Y Accelerometer Bias (micro-g)



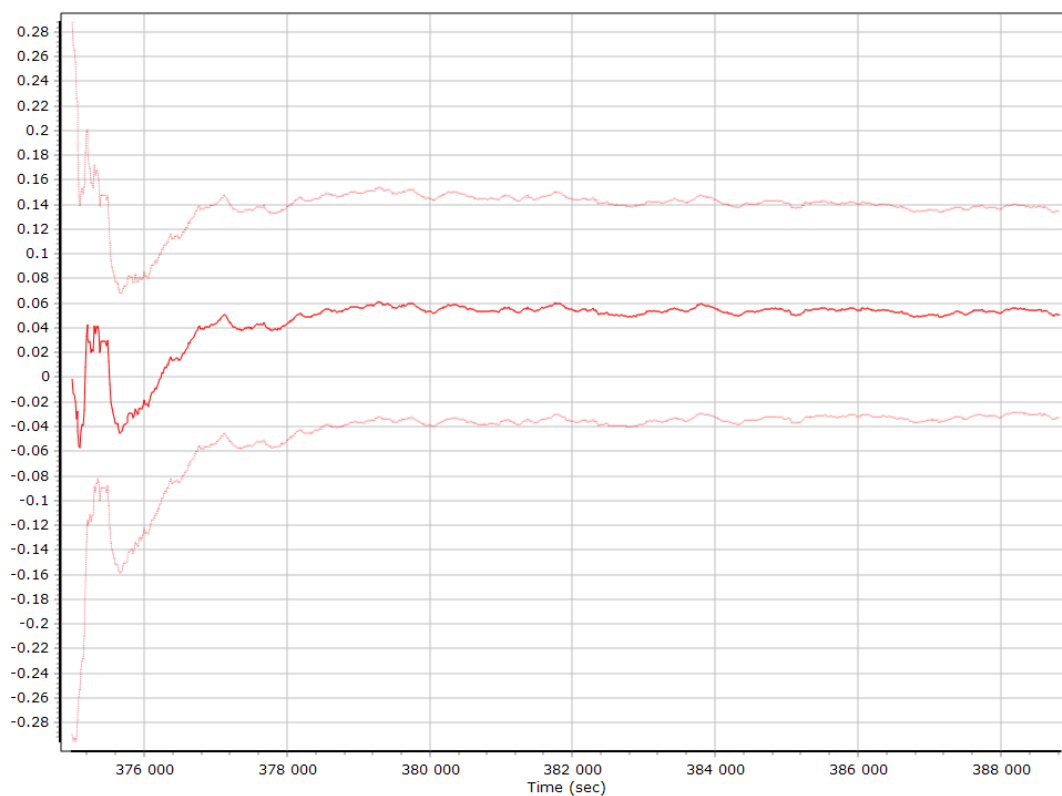
Z Accelerometer Bias (micro-g)



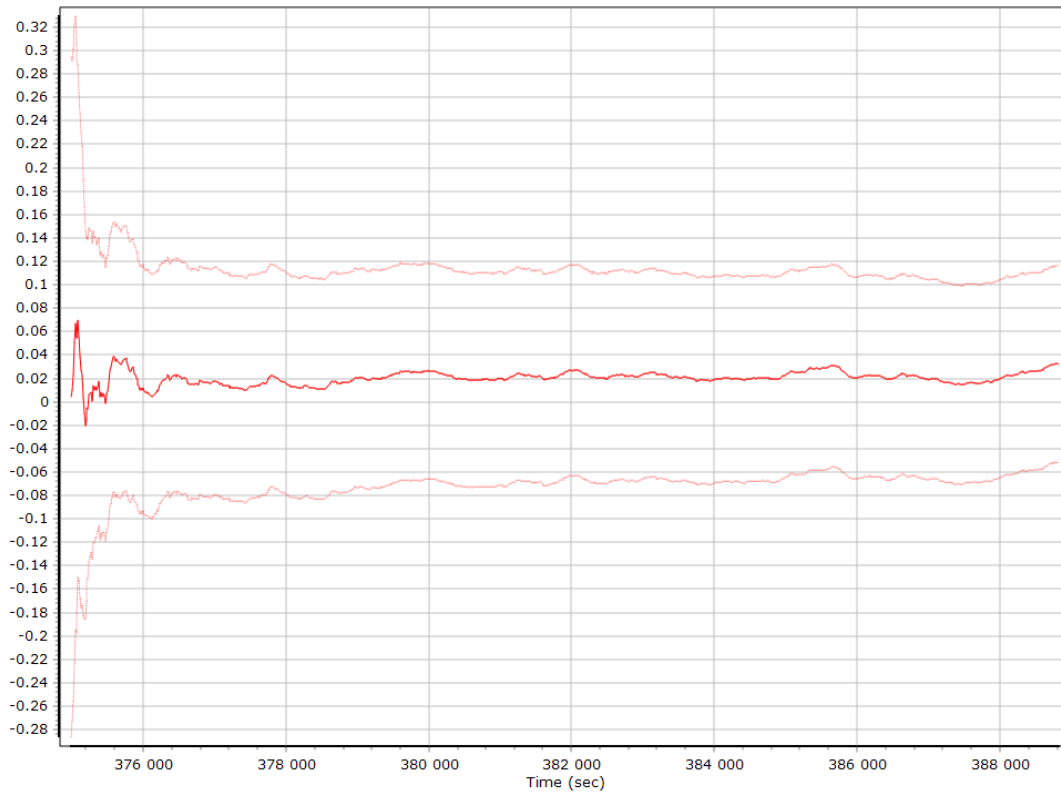
Gyro Bias (deg/h)



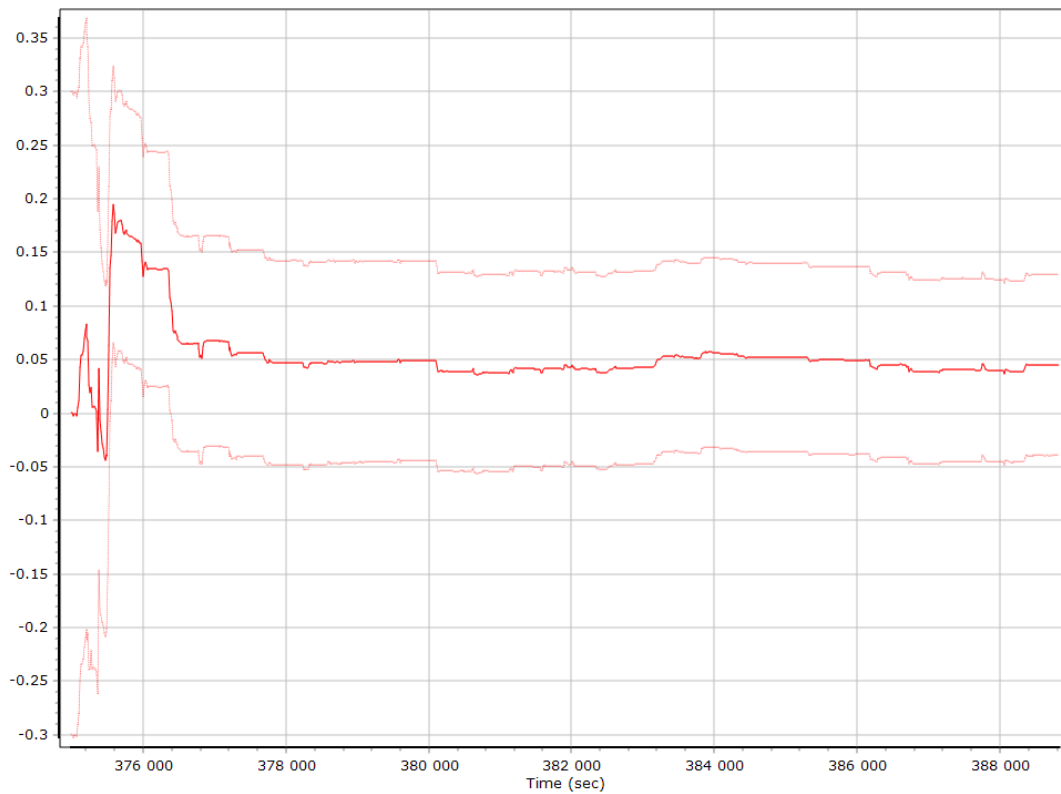
X Gyro Bias (deg/h)



Y Gyro Bias (deg/h)

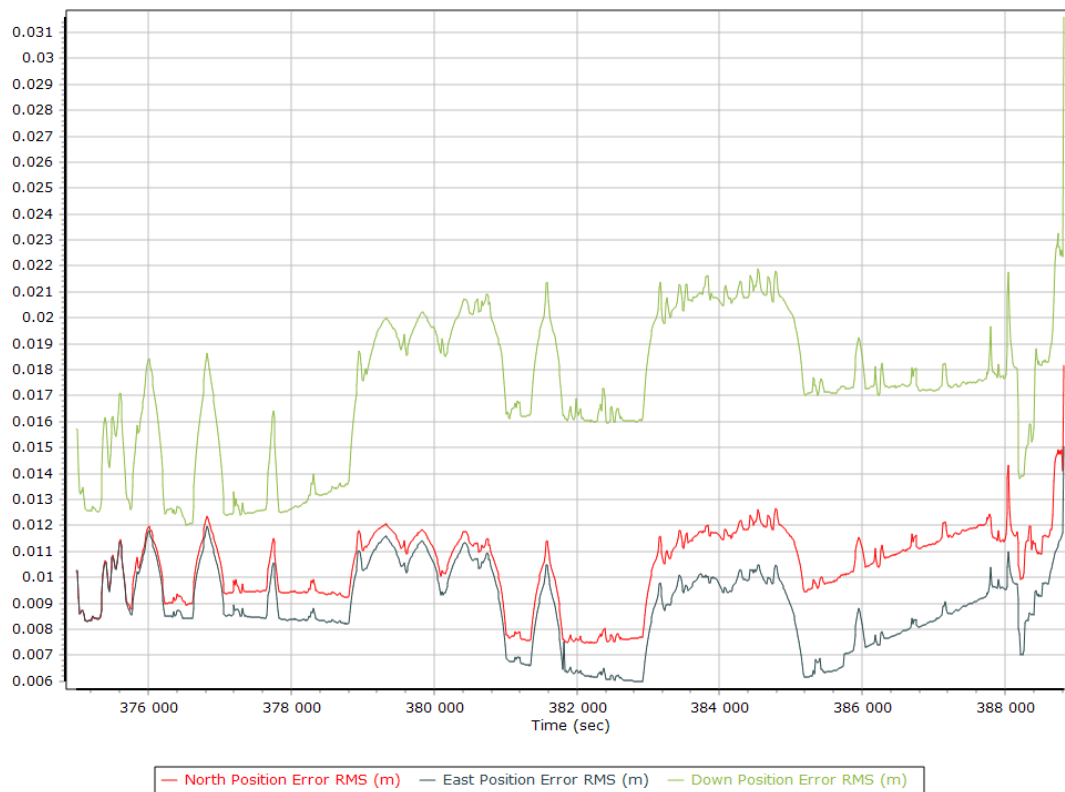


Z Gyro Bias (deg/h)

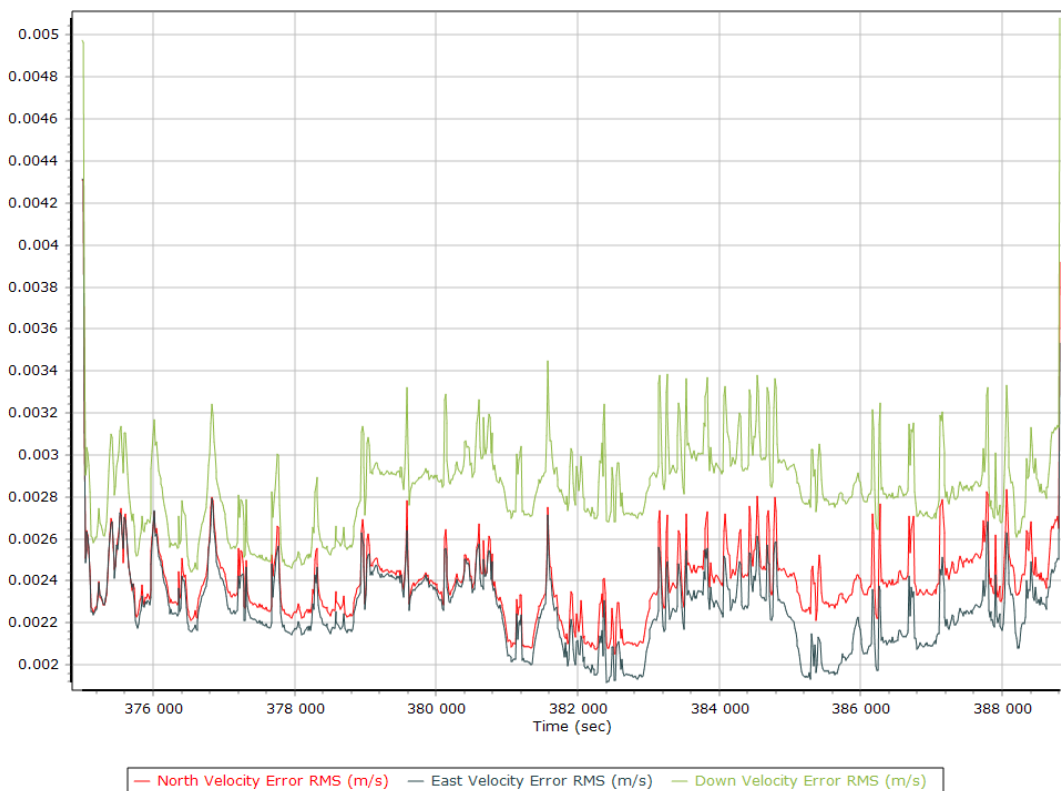


Smoothed Performance Metrics

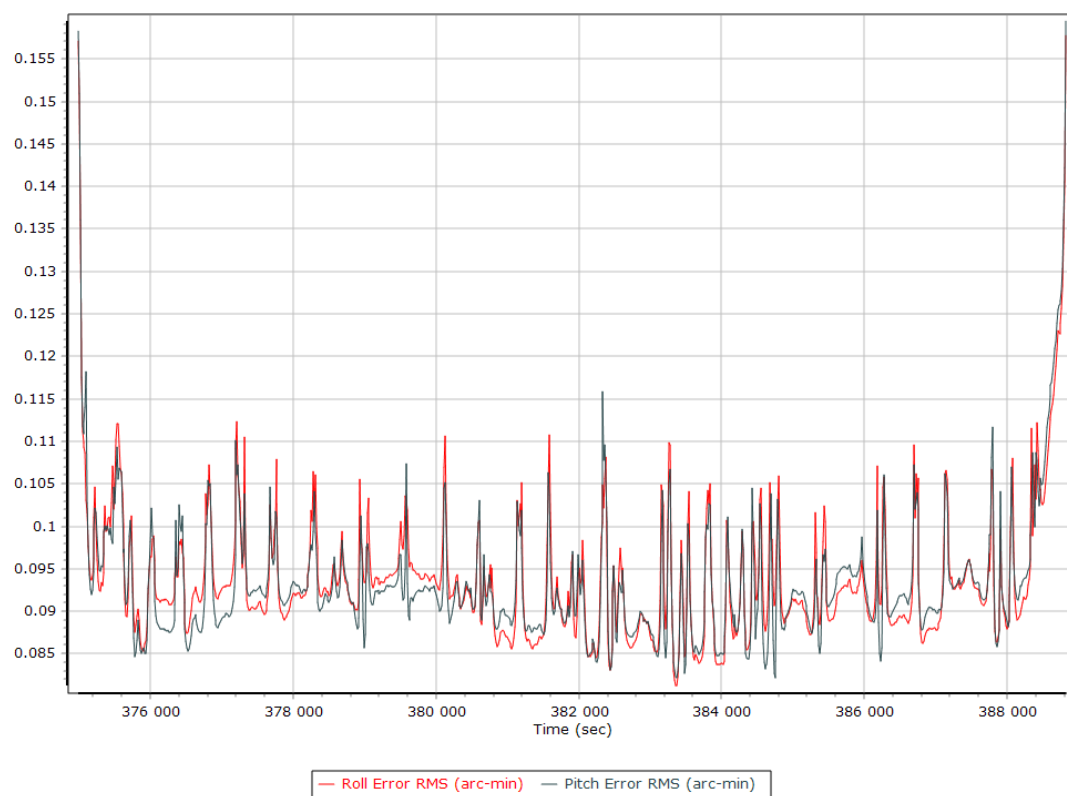
Position Error RMS (m)



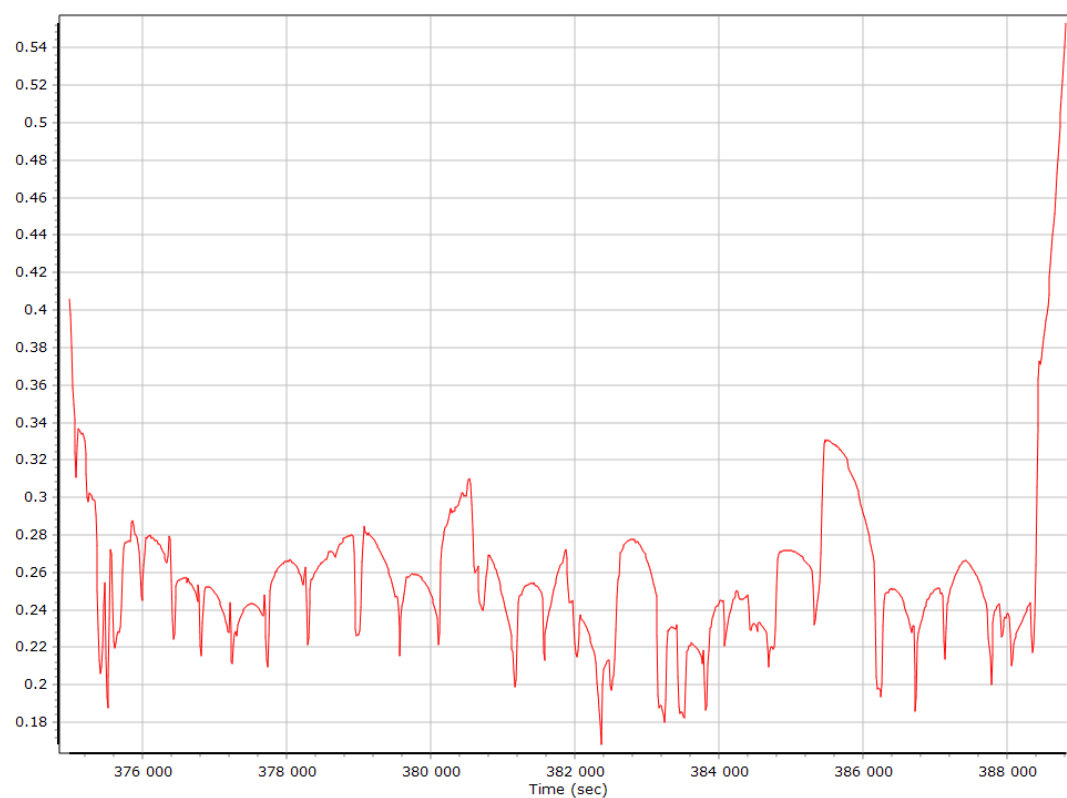
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

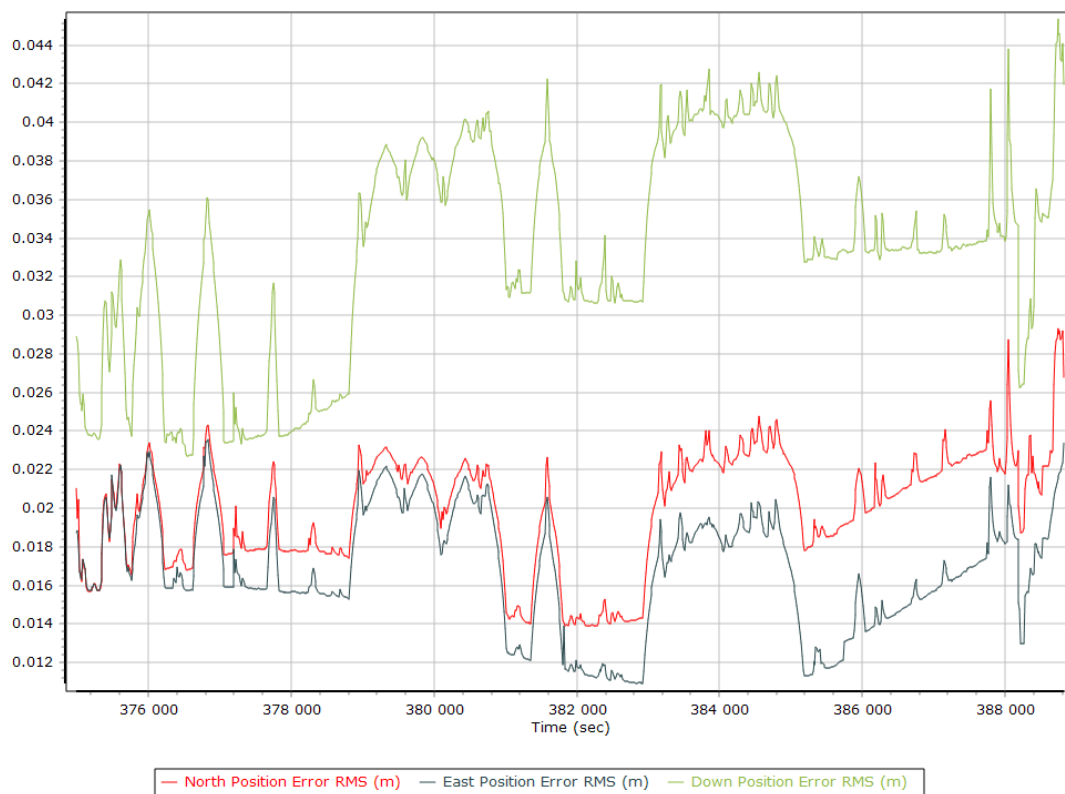


Heading Error RMS (arc-min)

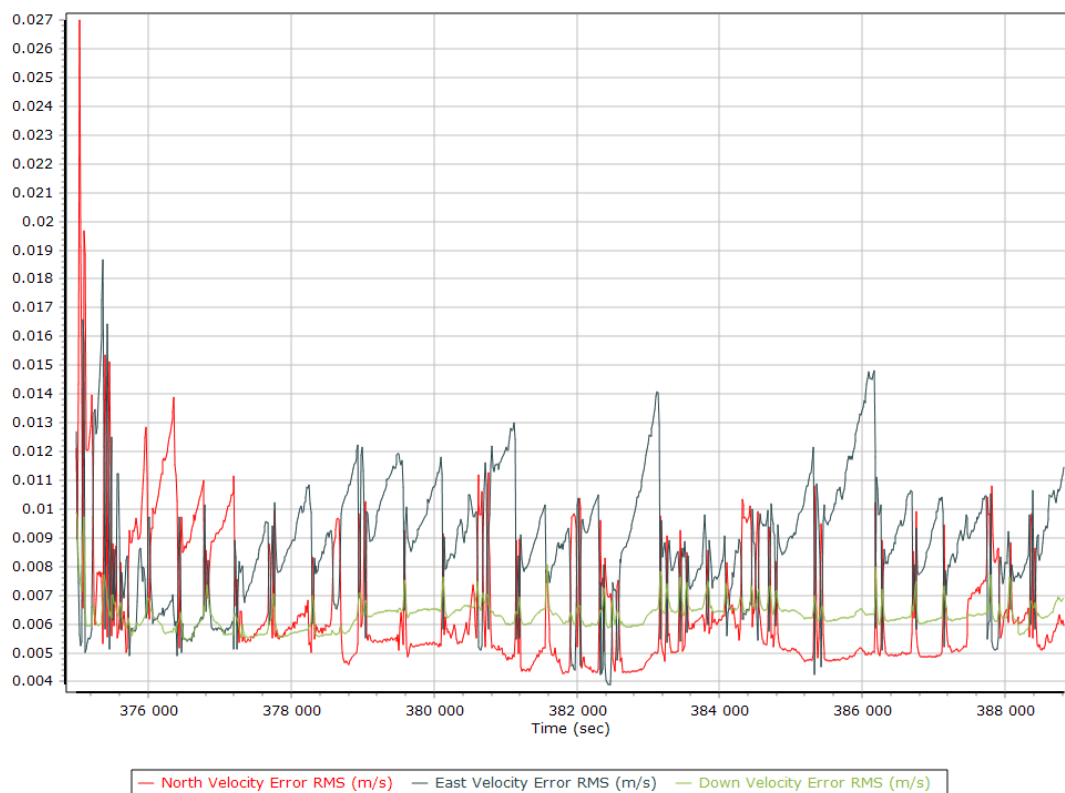


Forward Processed Performance Metrics

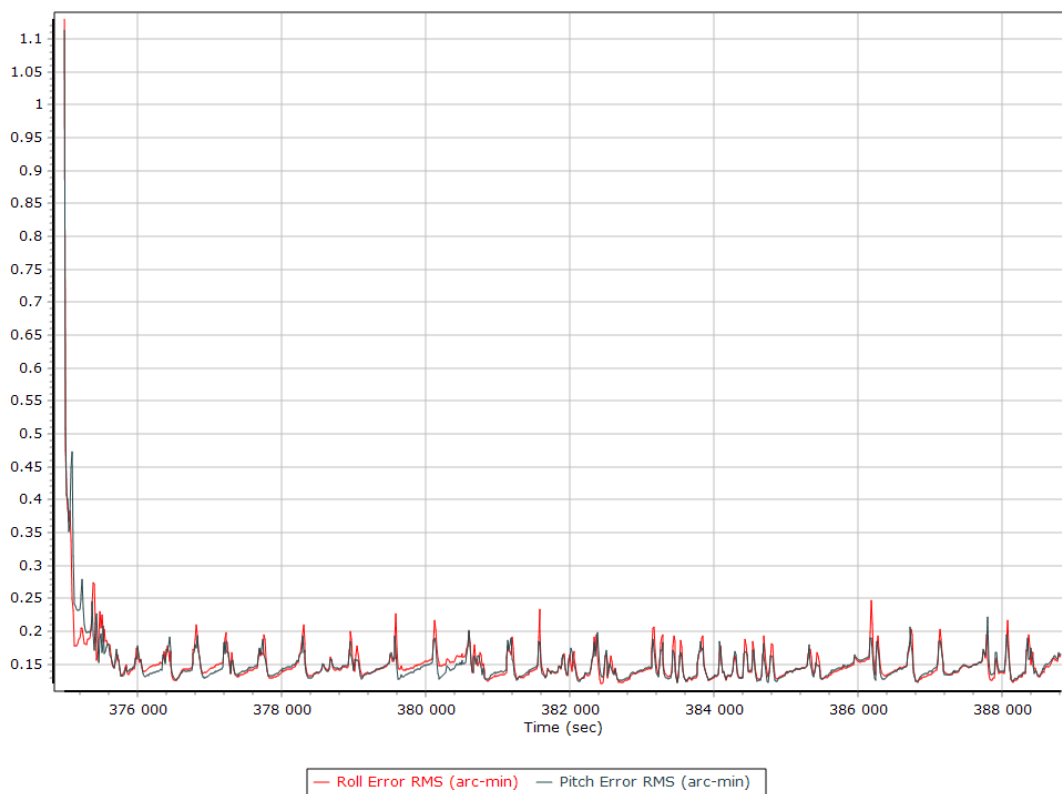
Position Error RMS (m)



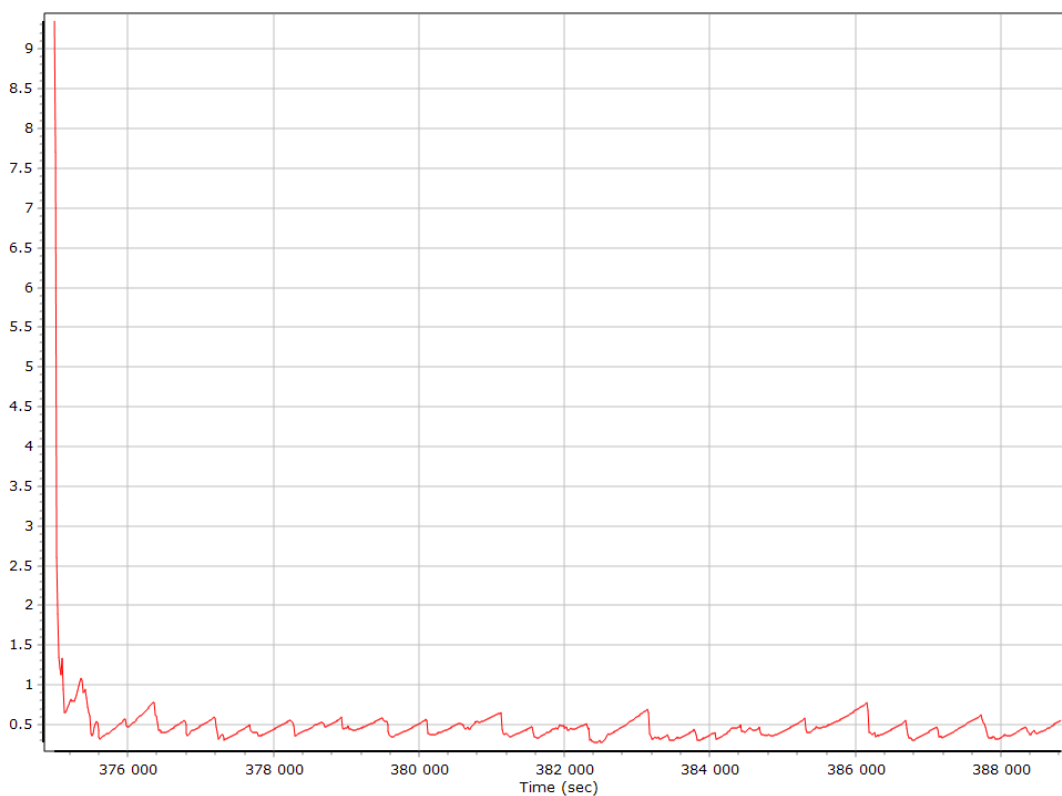
Velocity Error RMS (m/s)



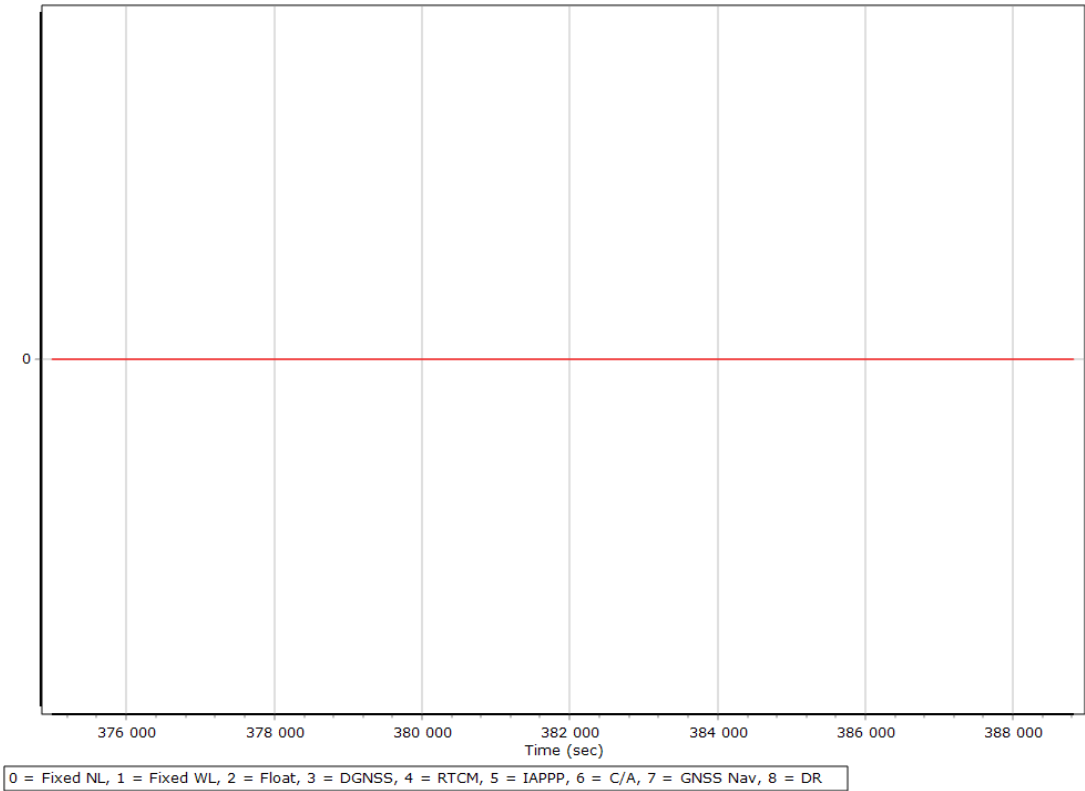
Roll/Pitch Error RMS (arc-min)



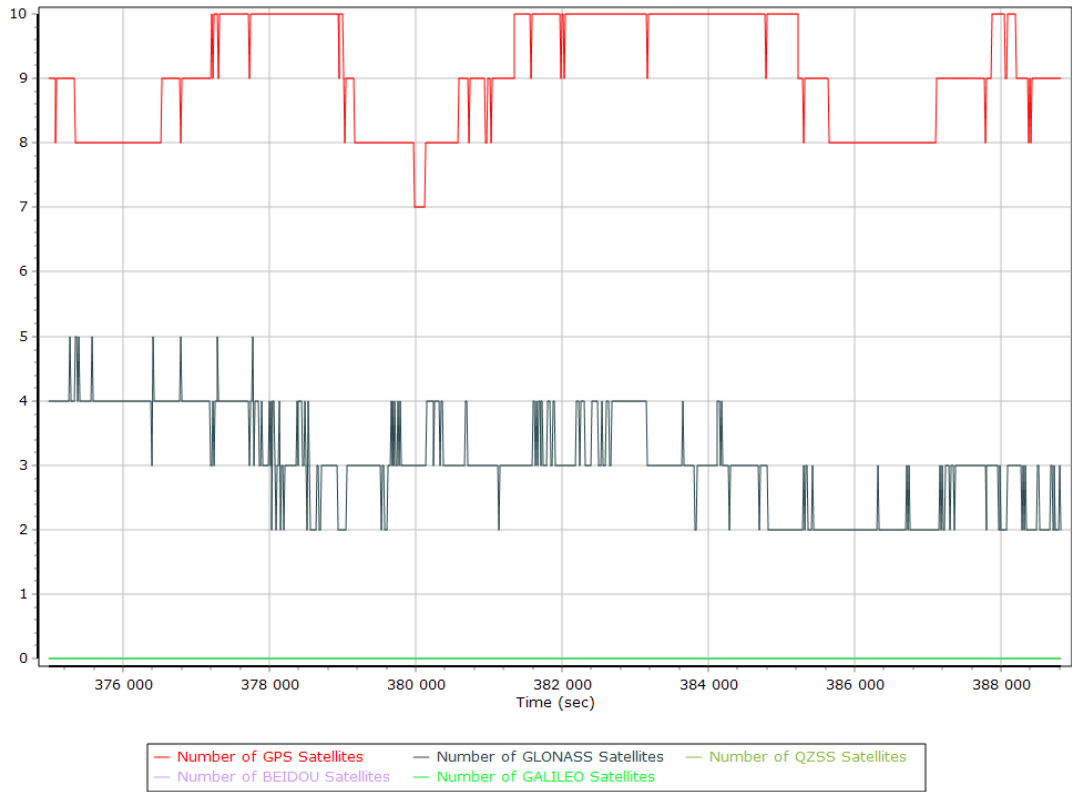
Heading Error RMS (arc-min)



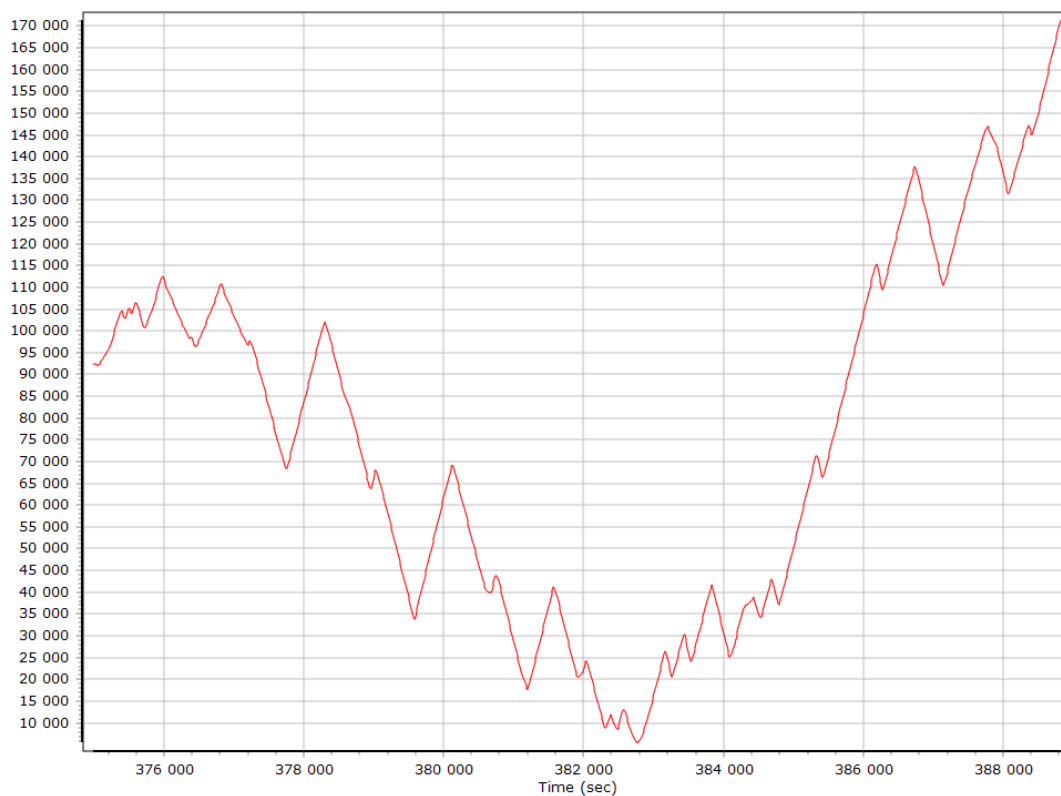
Smoothed Solution Status
Processing Mode



Number of Satellites

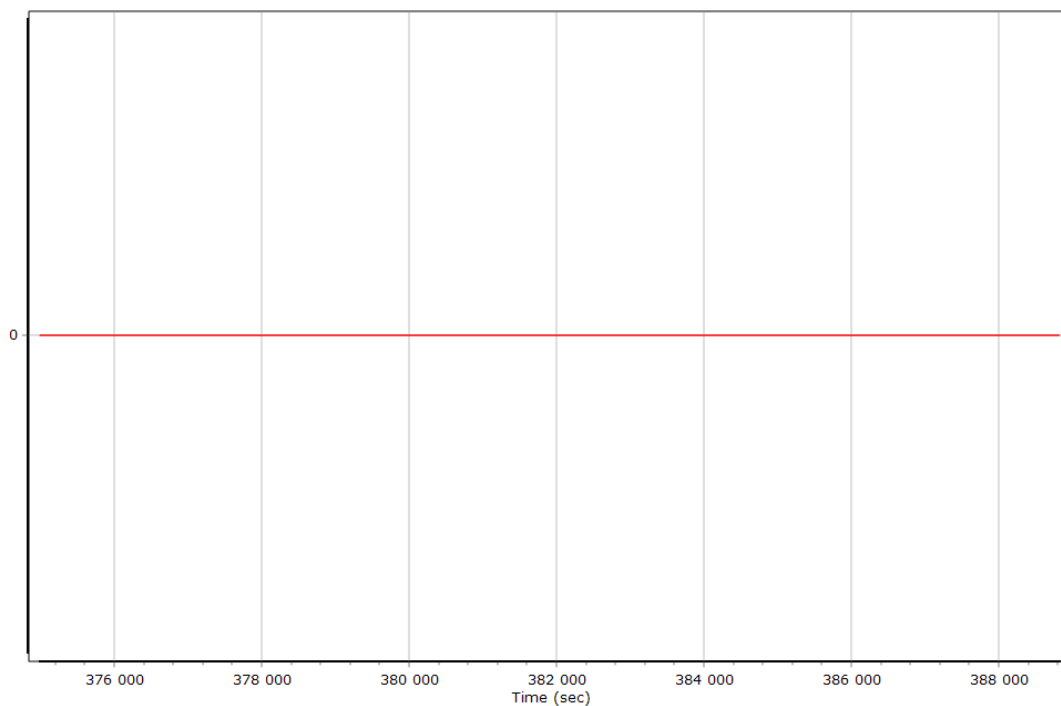


Baseline Length



Forward Processed Solution Status

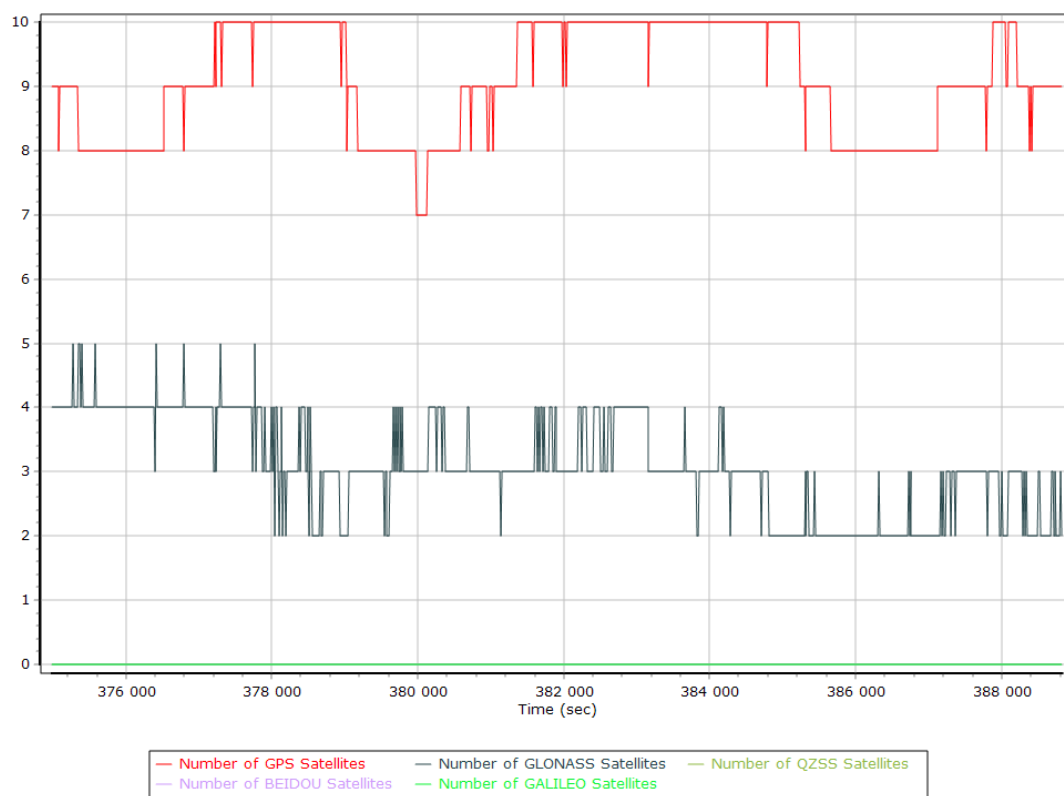
Processing Mode



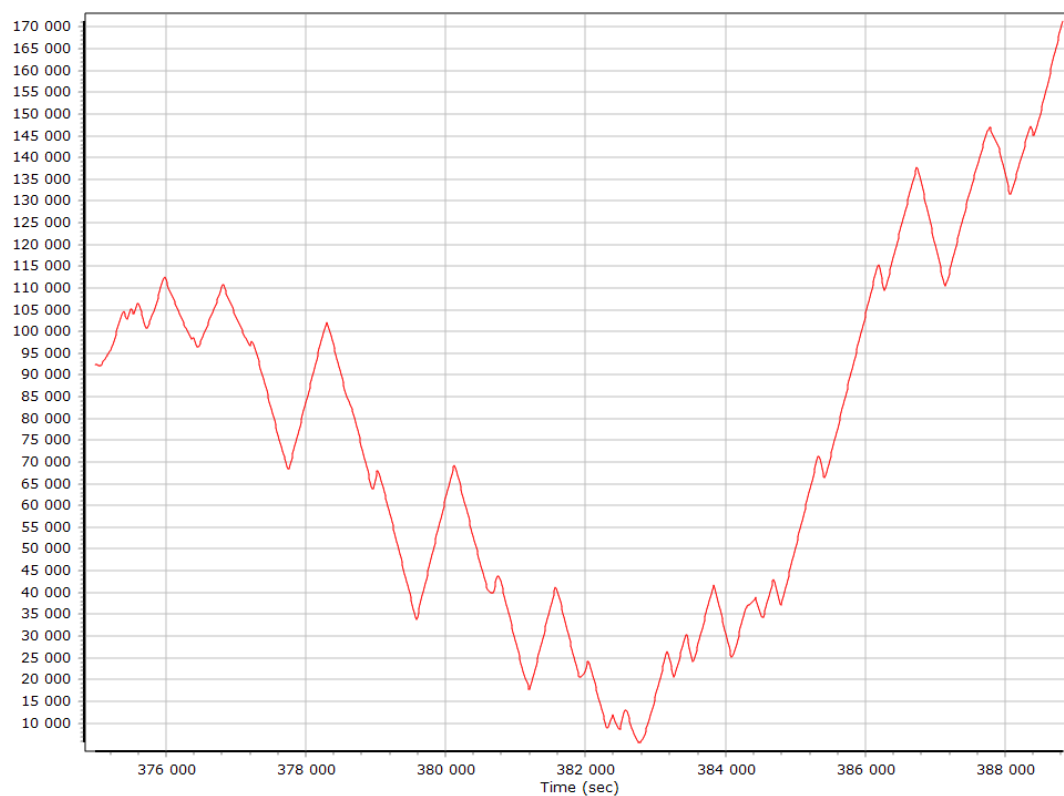
☒ Forward ☒ Reverse

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

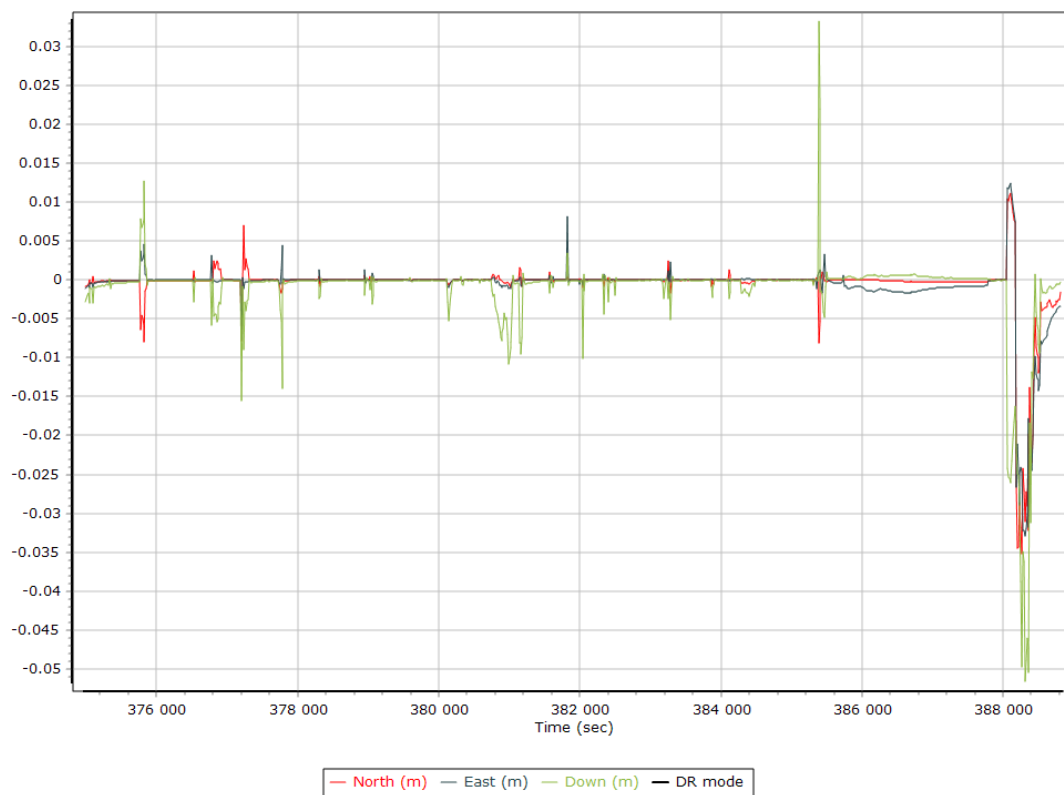
Number of Satellites



Baseline Length



SBET IAKAR Separation



Export Summary

Export file	SBET-20211007-S1-BRGM-Aquitaine.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	374931.003 (10/07/2021 08:08:51)		
Export end time	388827.001 (10/07/2021 12:00:27)		
Height option	Applanix Orthometric Height		
Geoid model	RAF20		
WGS84 height flag	False		
Grid	Universal Transverse Mercator		
Zone	UTM North 30 (6W to 0W)		
Datum	ETRF00		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2019		