

## General Information

### Mission Information

Project name	15317
Processing date	2022-09-19 13:46:10
Mission date	2022-09-18 22:53:22
Mission duration	01:46:52.582
Processing mode	IN-Fusion PP-RTX

### Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N7881
IMU type	57
Receiver type	BD982
Antenna type	AV39

## Project File List

### Rover Data Files

File name	File type
20221809N223SC.017	POS Data
20221809N223SC.018	POS Data
20221809N223SC.019	POS Data
20221809N223SC.020	POS Data
20221809N223SC.021	POS Data
20221809N223SC.022	POS Data
20221809N223SC.023	POS Data
20221809N223SC.024	POS Data
20221809N223SC.025	POS Data
20221809N223SC.026	POS Data
20221809N223SC.027	POS Data
20221809N223SC.028	POS Data
20221809N223SC.029	POS Data
20221809N223SC.030	POS Data
20221809N223SC.031	POS Data
20221809N223SC.032	POS Data

### Input Files

File Name	File Type
Ephm2610.22g	GLONASS Broadcast Ephemeris
Ephm2610.22n	GPS Broadcast Ephemeris
Ephm2620.22g	GLONASS Broadcast Ephemeris
Ephm2620.22n	GPS Broadcast Ephemeris

### Output Files

Filename	File type
sbet_15317.out	SBET Trajectory File
event1_eo_15317.txt	ZI Imaging POSEO Output
sbet_15317_NAD83(2011).out	Custom Smoothed BET Export Output

## Rover Data Summary

First raw data file	20221809N223SC.017		
Last raw data file	20221809N223SC.032		
Start GPS week	2228		
Start time	82401.302 (09/18/2022 22:53:21)		
End time	88813.884 (09/19/2022 00:40:13)		
Start of fine alignment	82686.129 (09/18/2022 22:58:06)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	Event 1 Input		
Correction data	None		
<b>IMU Installation Lever Arms &amp; Mounting Angles</b>			
Gimbal to IMU lever arm (m)	-0.229	-0.010	-0.133
Gimbal to IMU mounting angles (deg)	0.000	0.000	180.000
Gimbal to Primary GNSS lever arm (m)	0.126	-0.066	-1.071
Gimbal to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

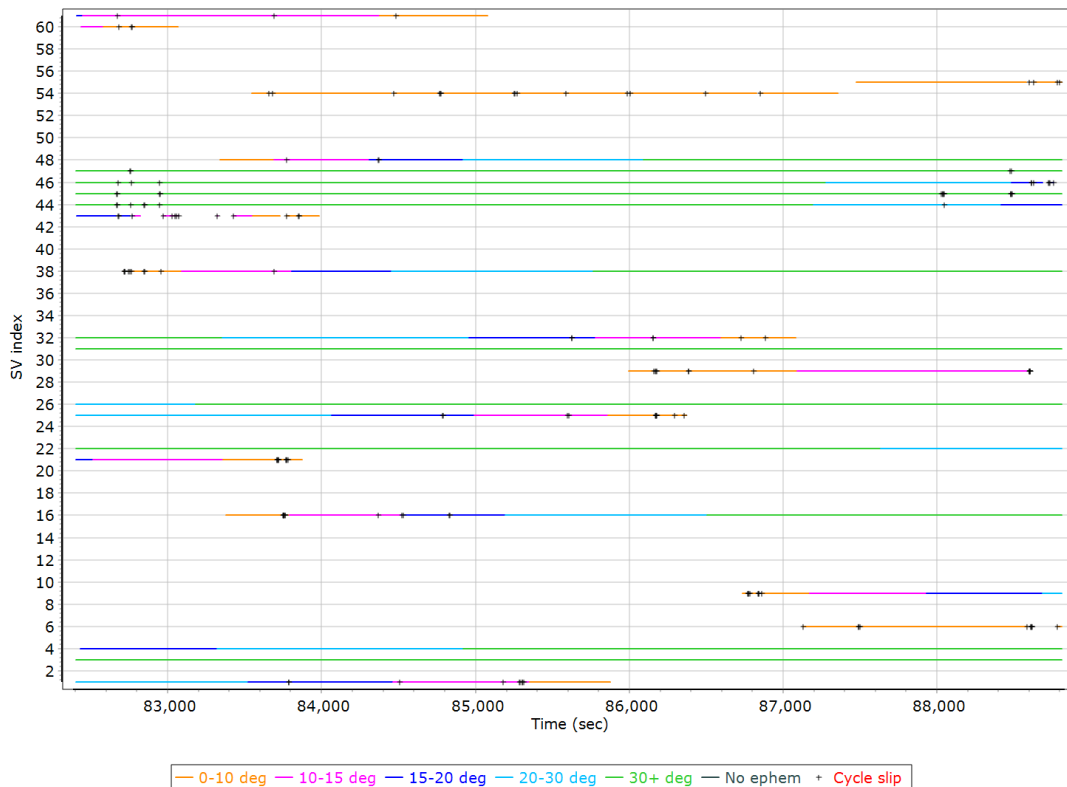
## Rover Data QC

### Raw IMU Import QC Summary

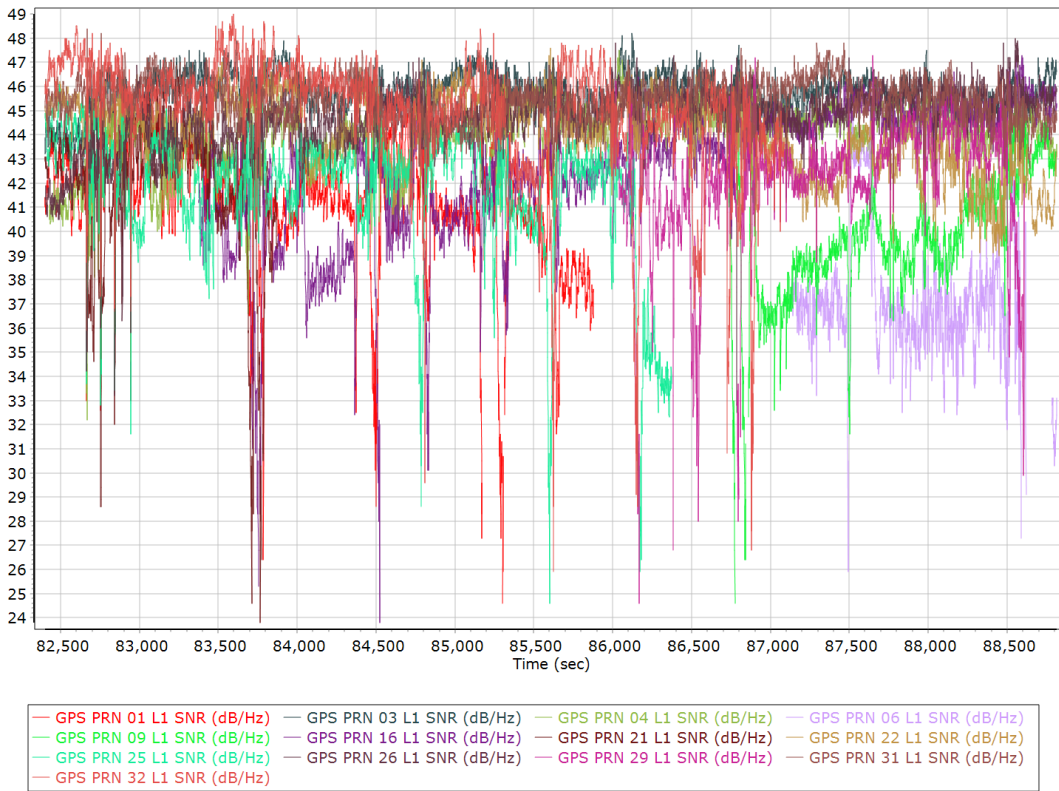
IMU data input file	imu_15317.dat
IMU data check log file	imudt_15317.log
IMU Records Processed	1282414
Termination Status	Normal
IMU Anomalies	0

## Primary Observables & Satellite Data

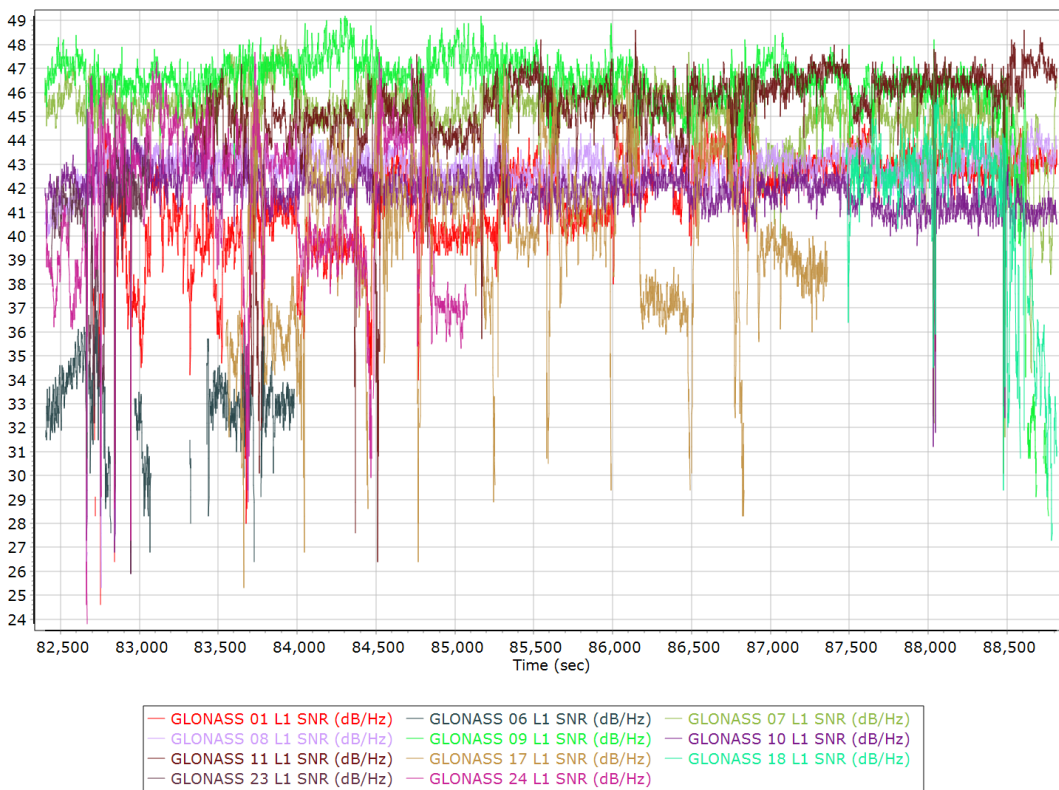
### GPS/GLONASS L1 Satellite Lock/Elevation



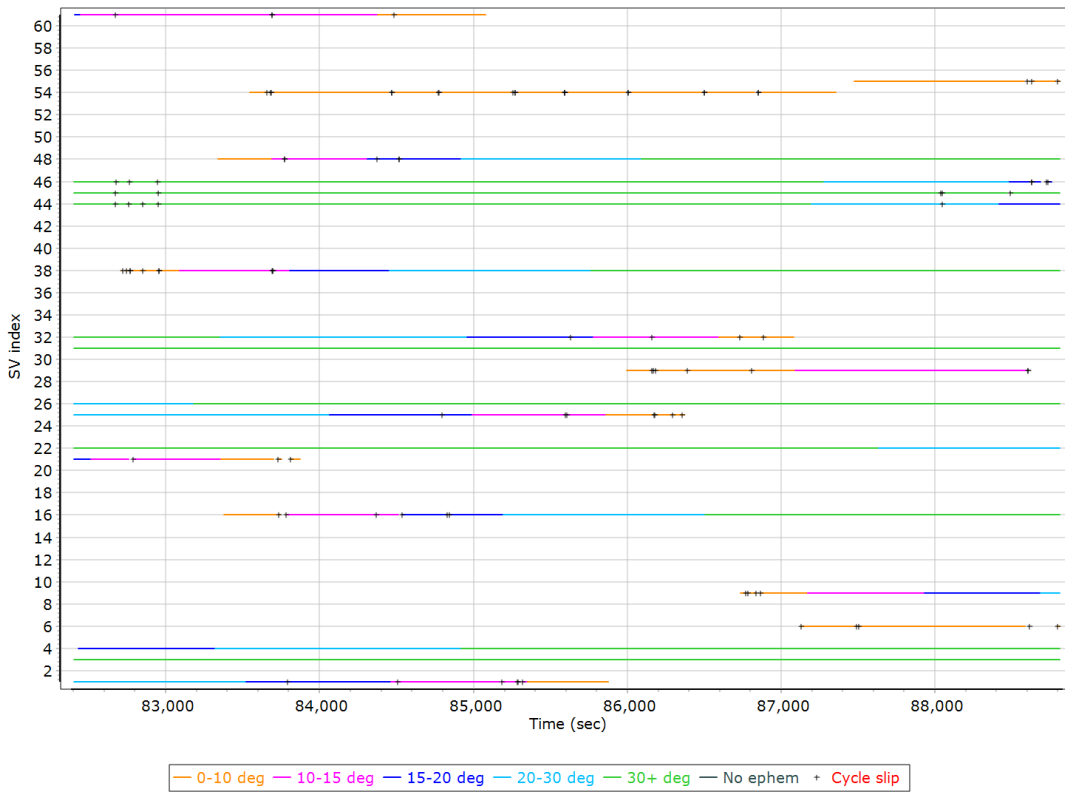
### GPS L1 SNR



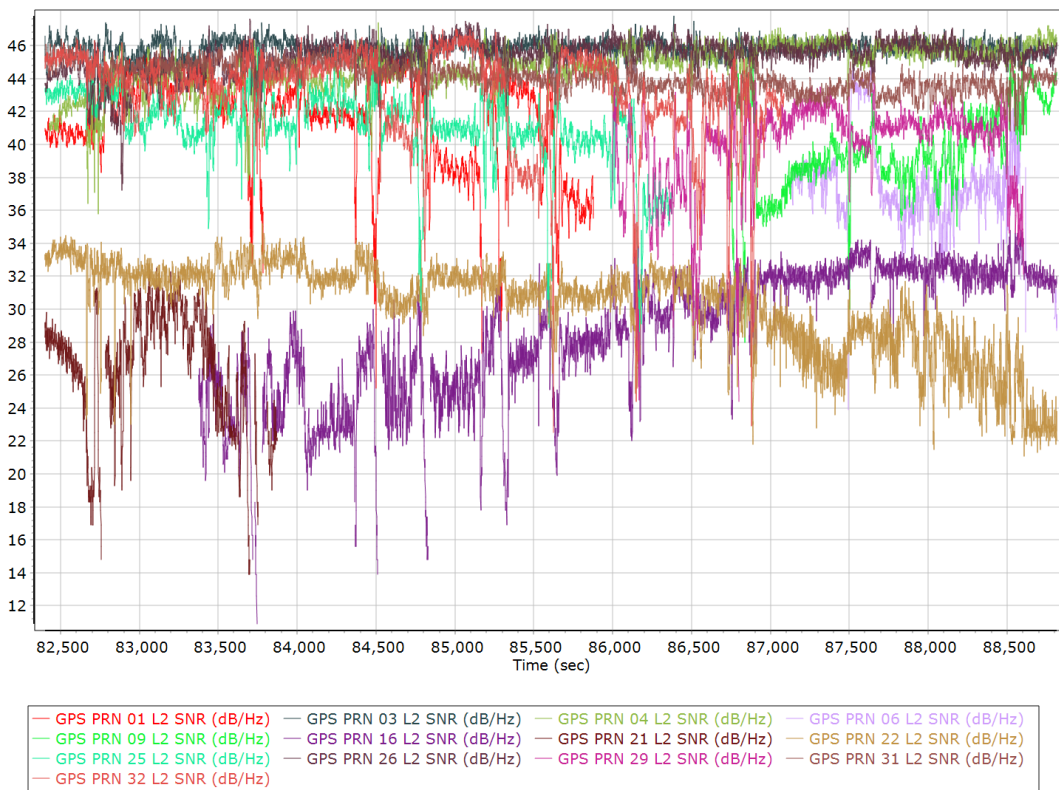
### GLONASS L1 SNR



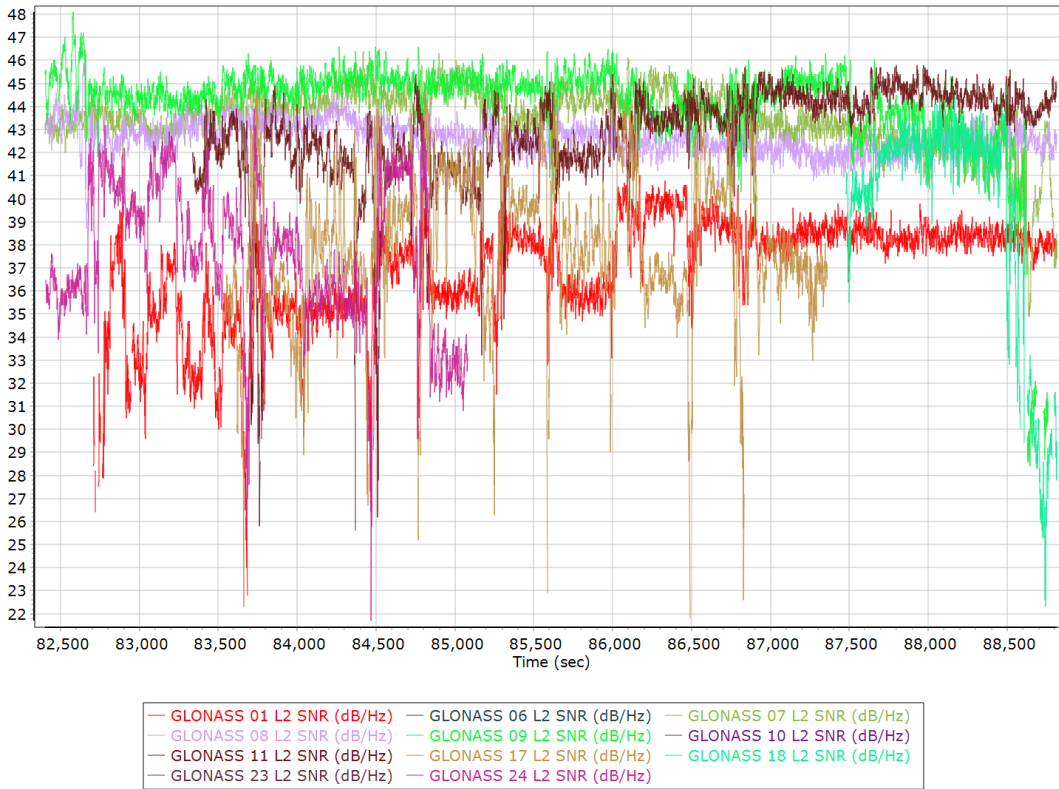
### GPS/GLONASS L2 Satellite Lock/Elevation



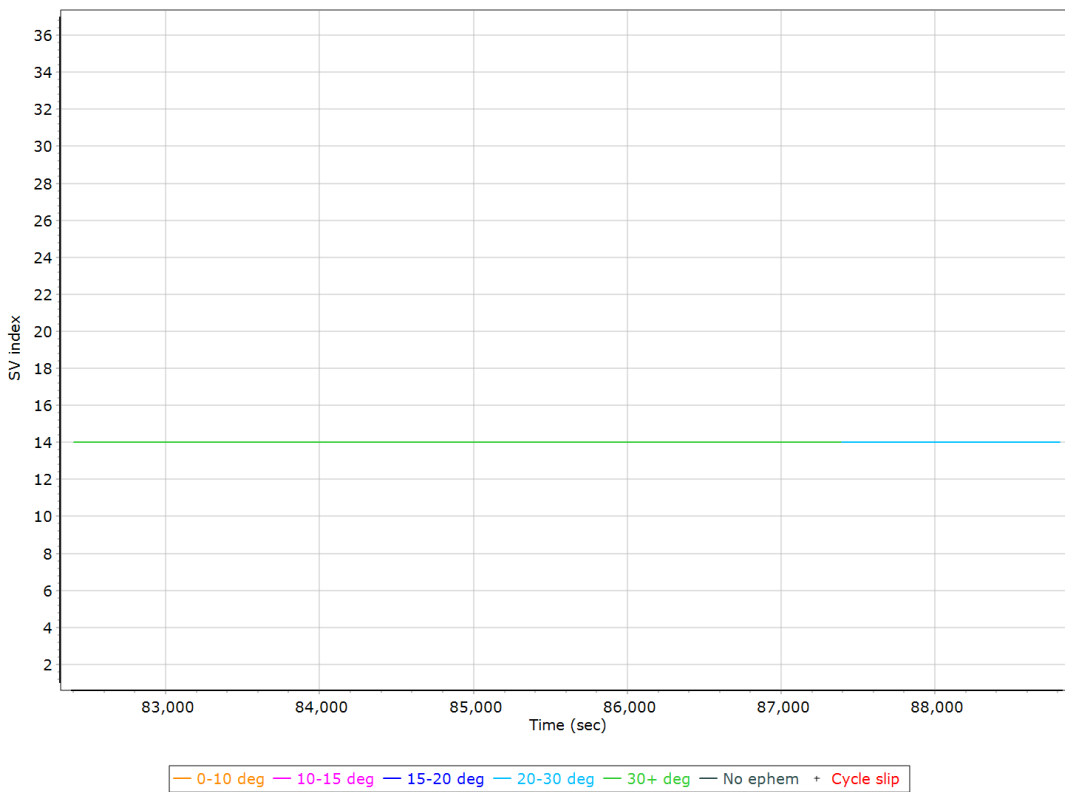
### GPS L2 SNR



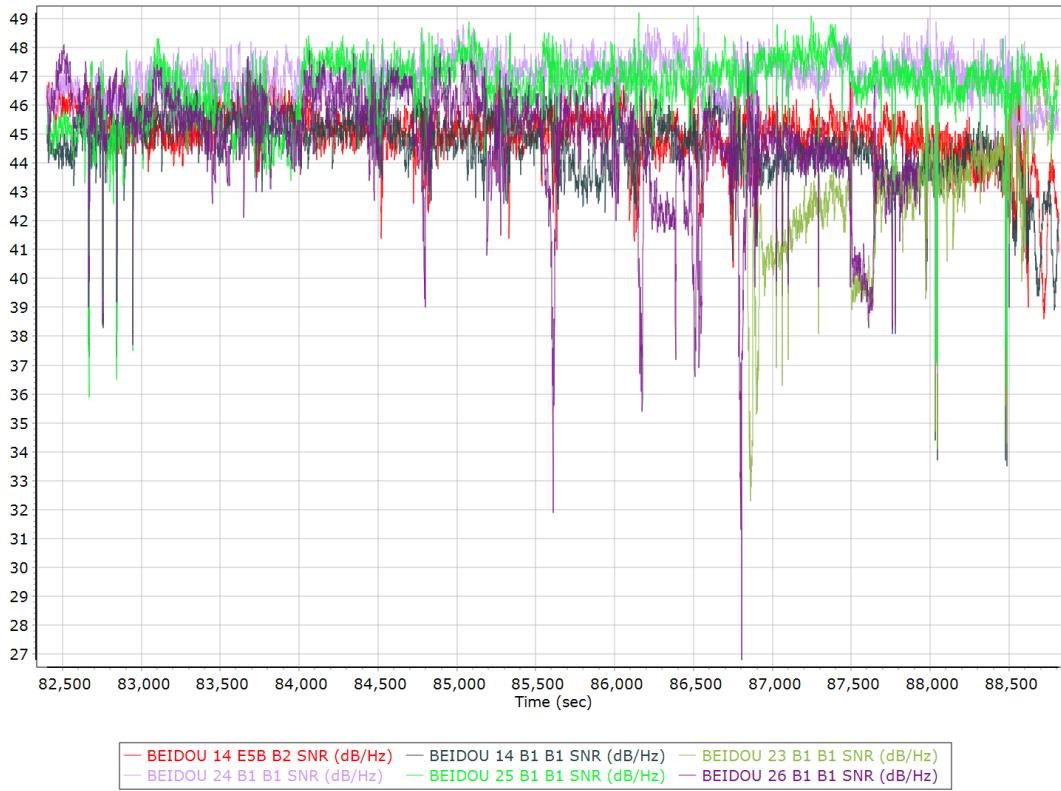
### GLONASS L2 SNR



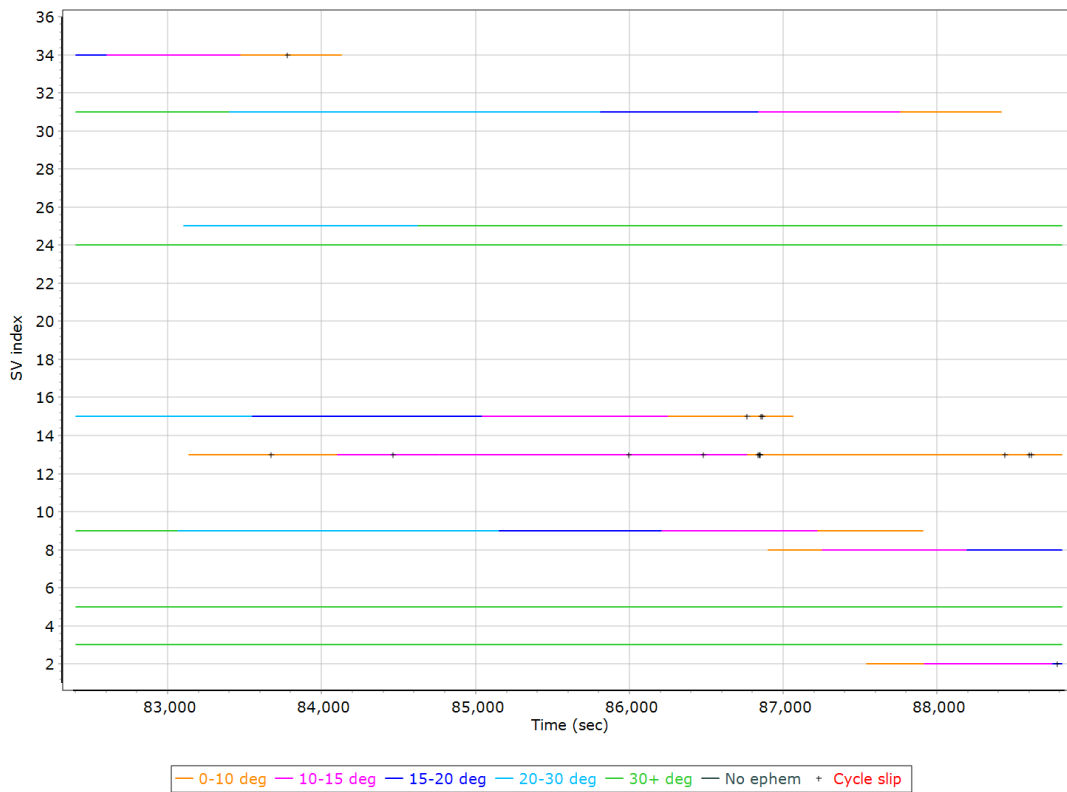
### BEIDOU Satellite Lock/Elevation



### BEIDOU SNR

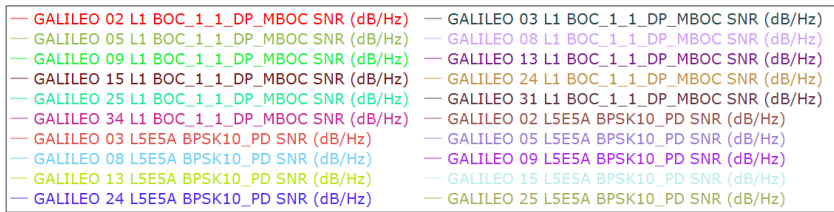
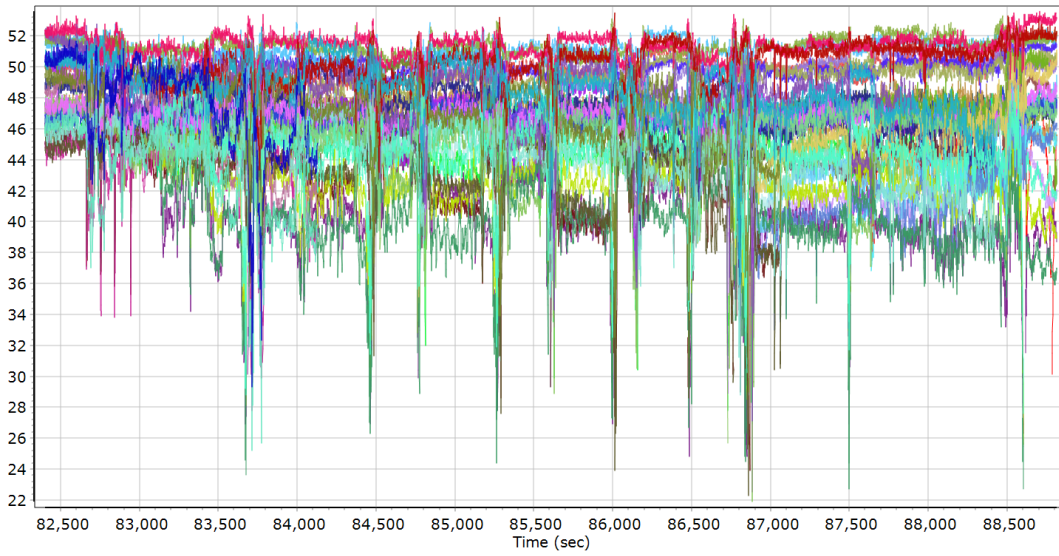


### GALILEO Satellite Lock/Elevation



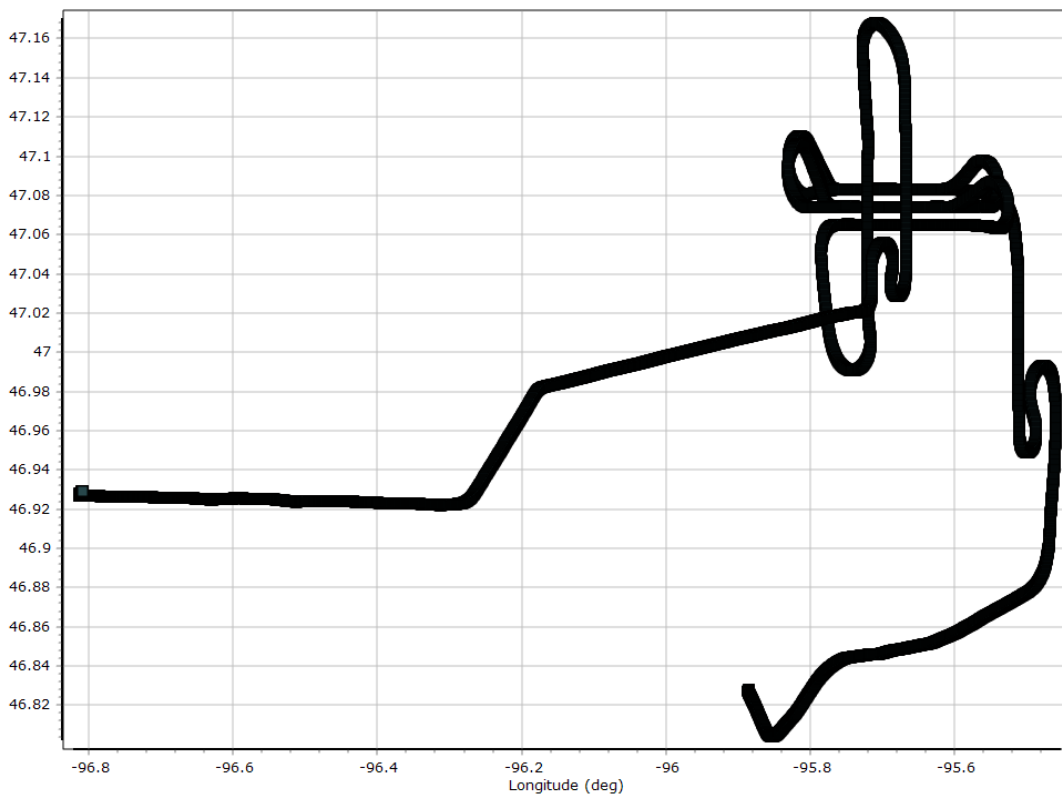


## GALILEO SNR

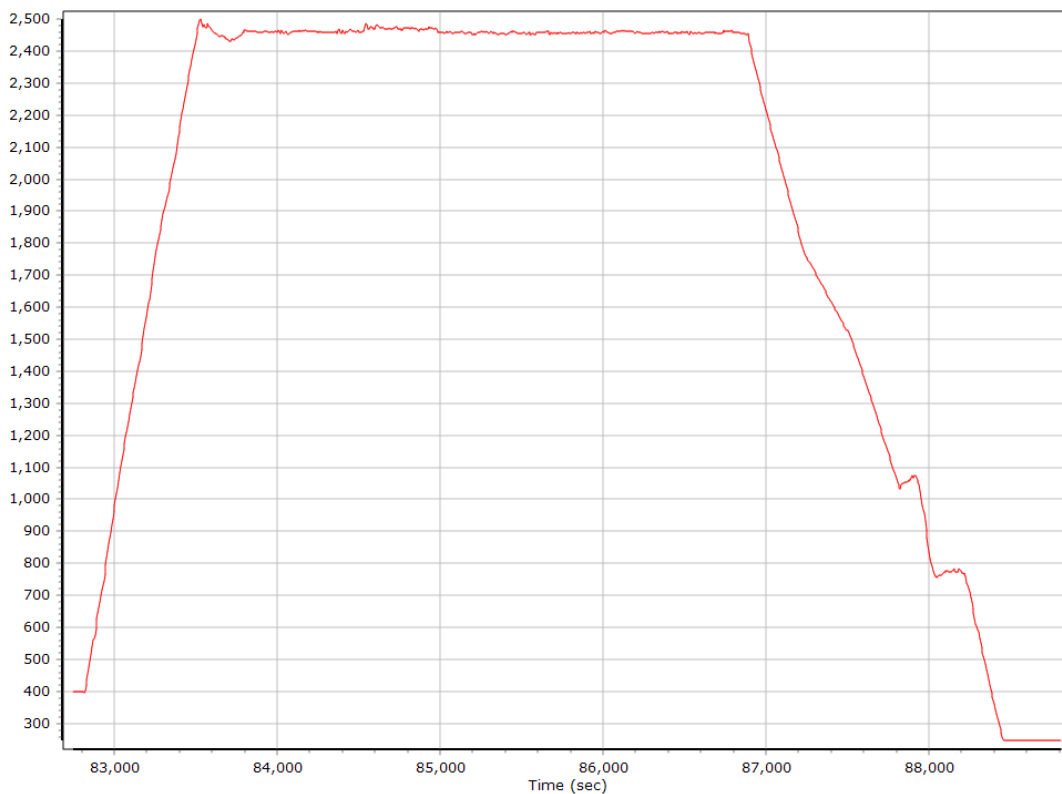


## Smoothed Trajectory Information

### Top View

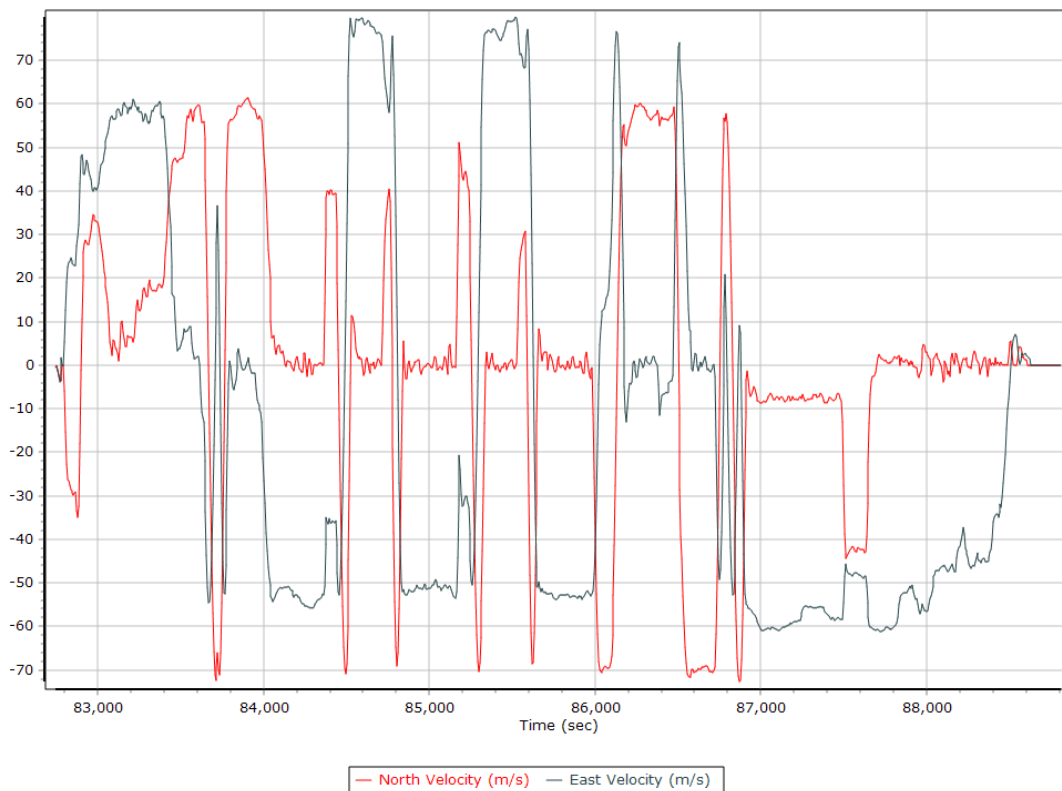


### Altitude

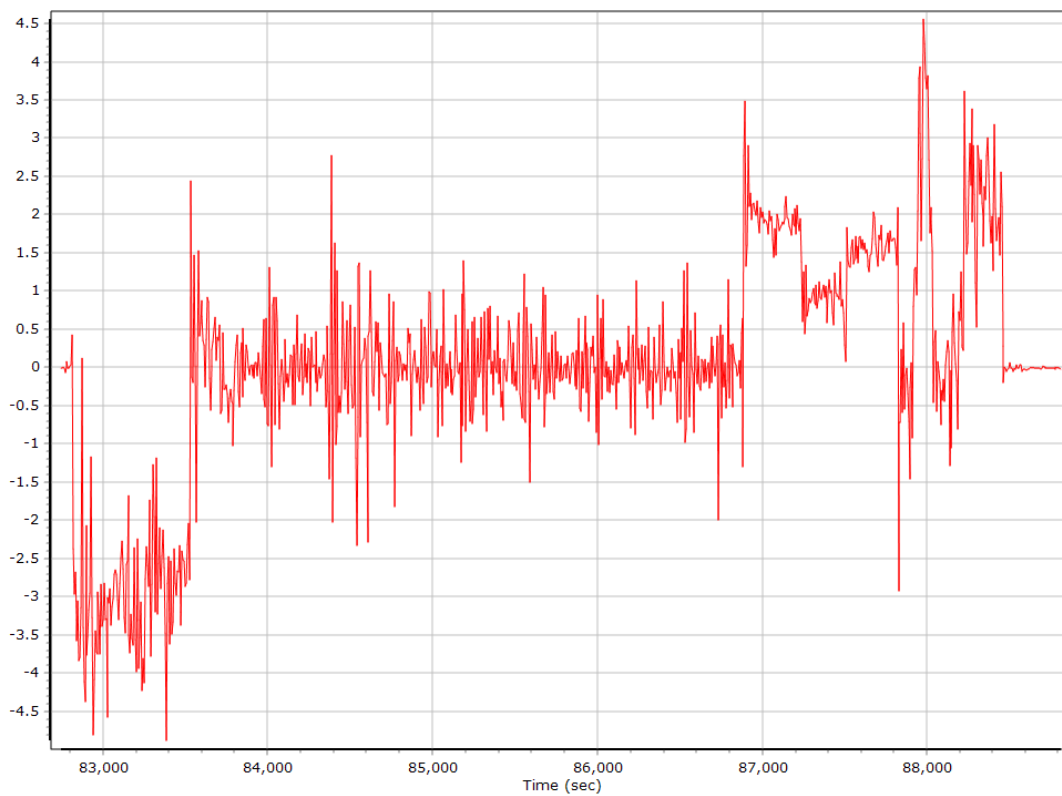




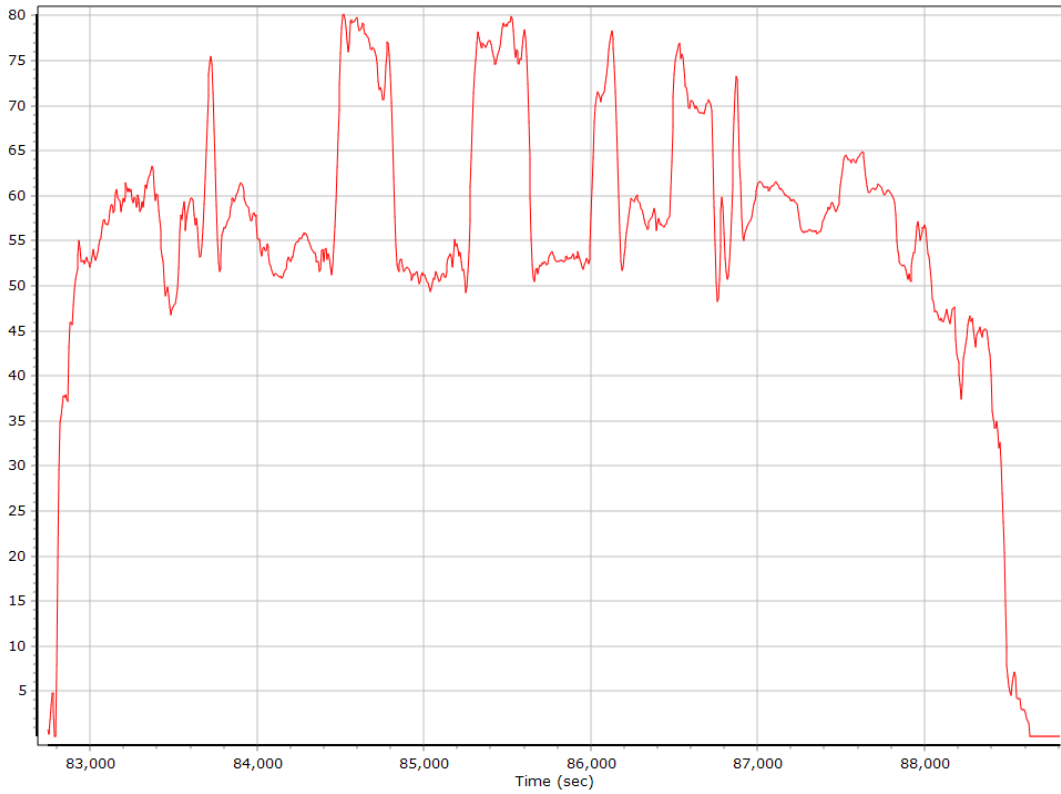
### North/East Velocity



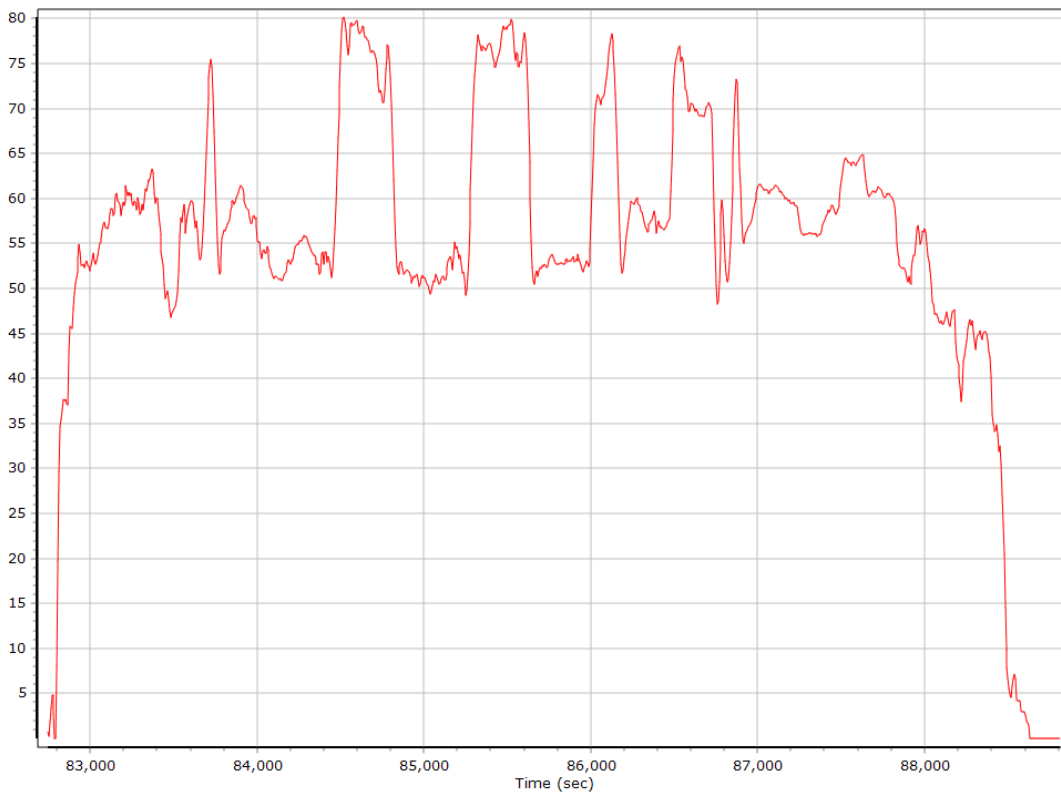
### Down Velocity



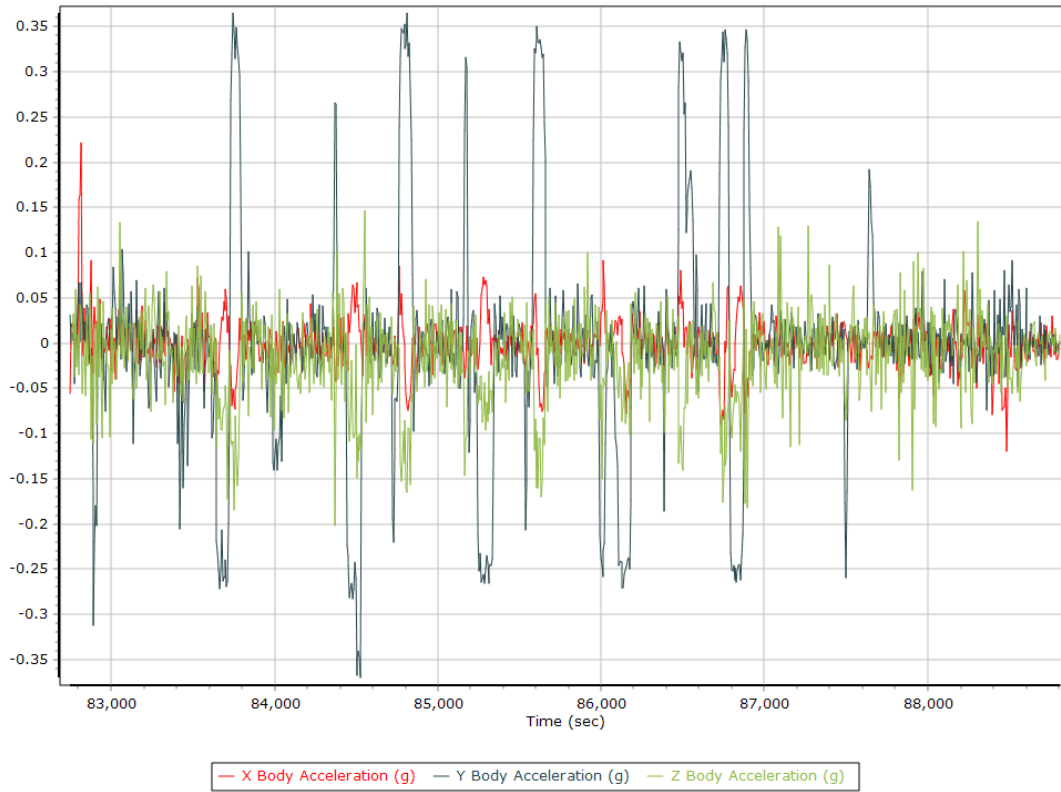
## Total Speed



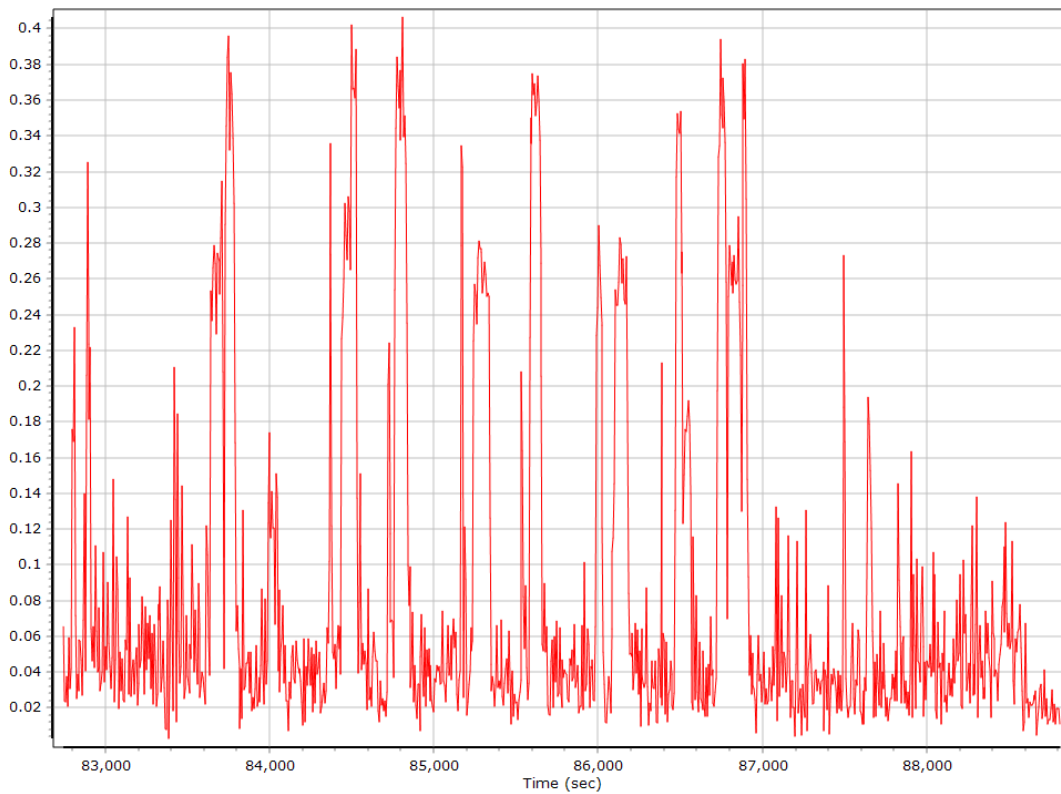
## Ground Speed



## Body Acceleration



## Total Body Acceleration

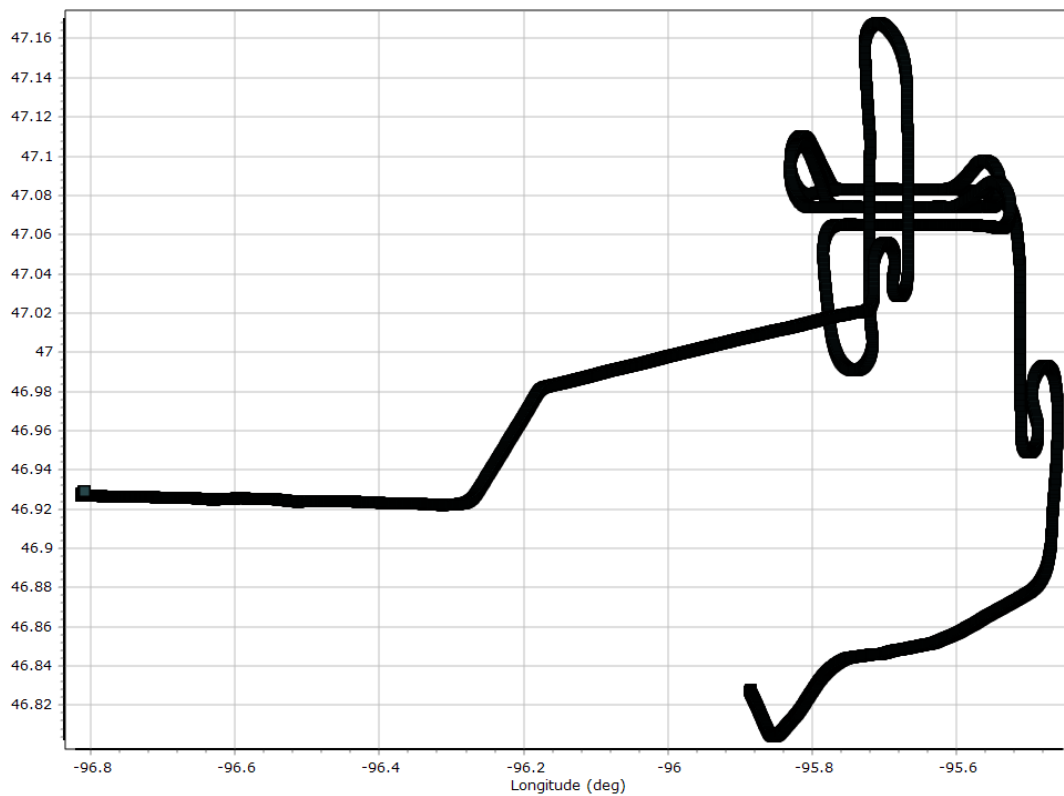


## Body Angular Rate

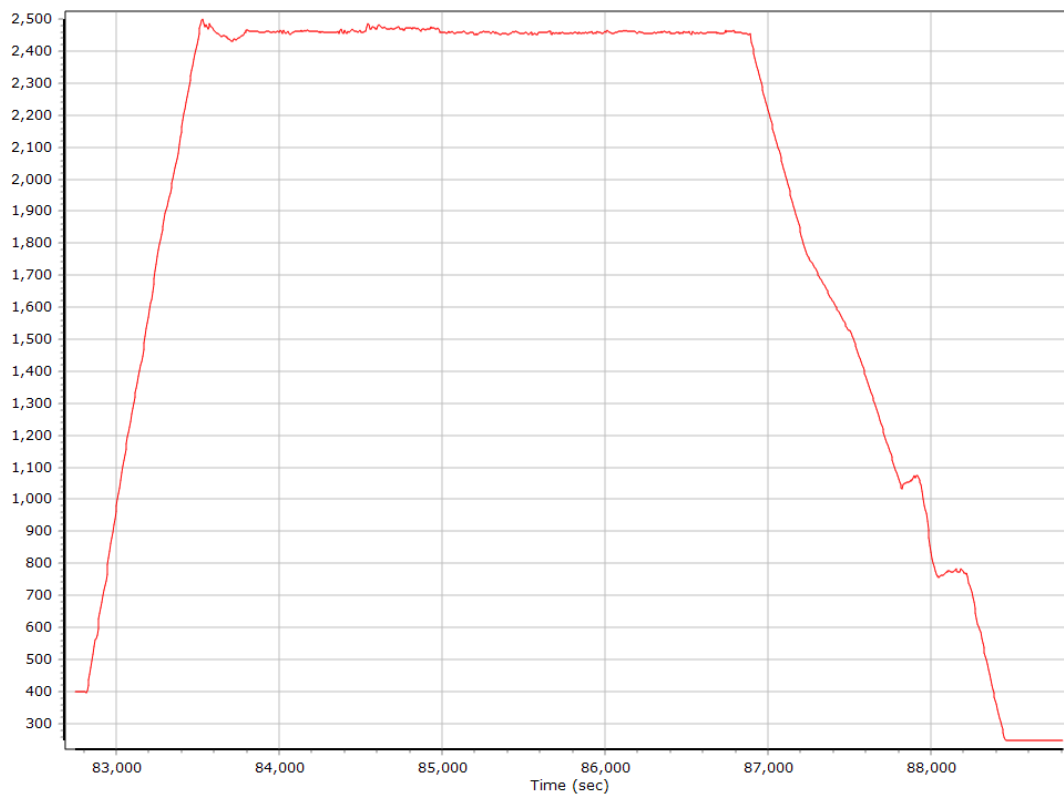


## Forward Processed Trajectory Information

### Top View

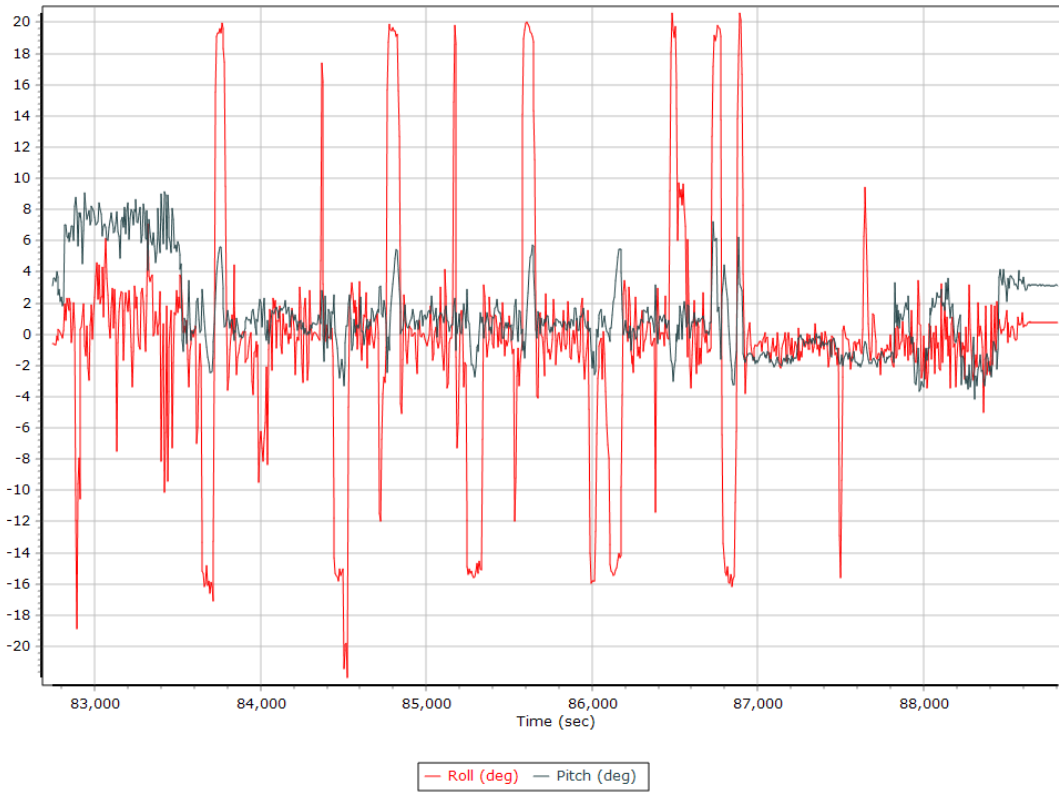


### Altitude

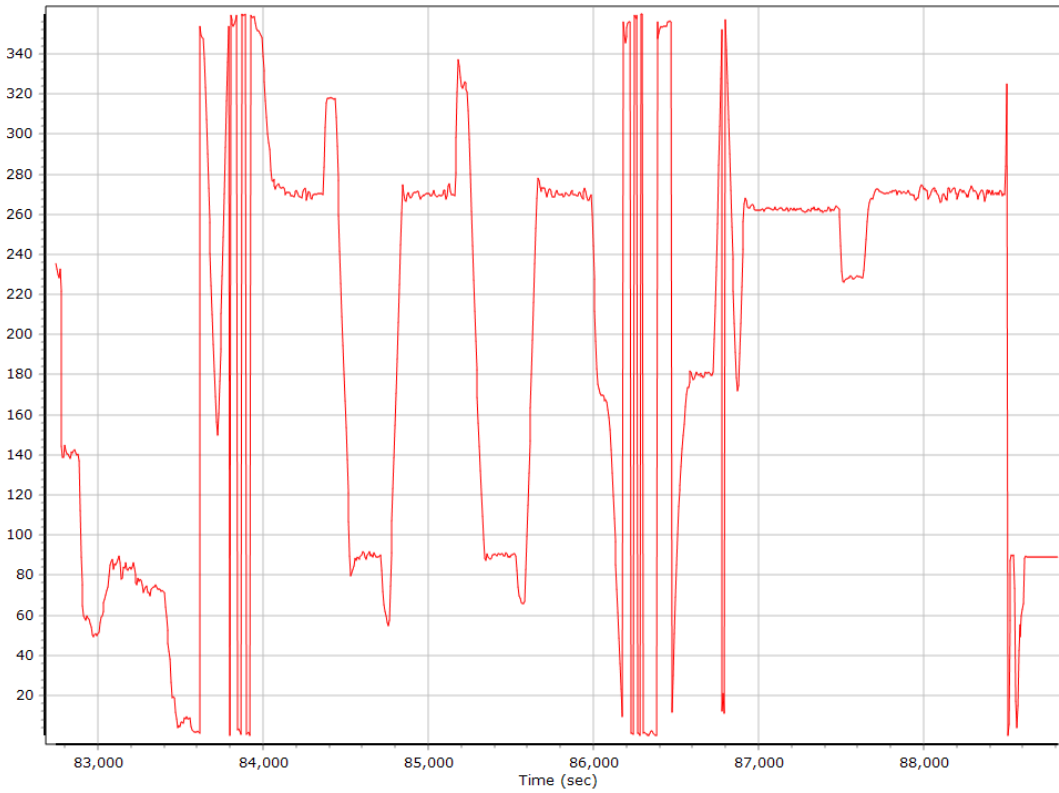




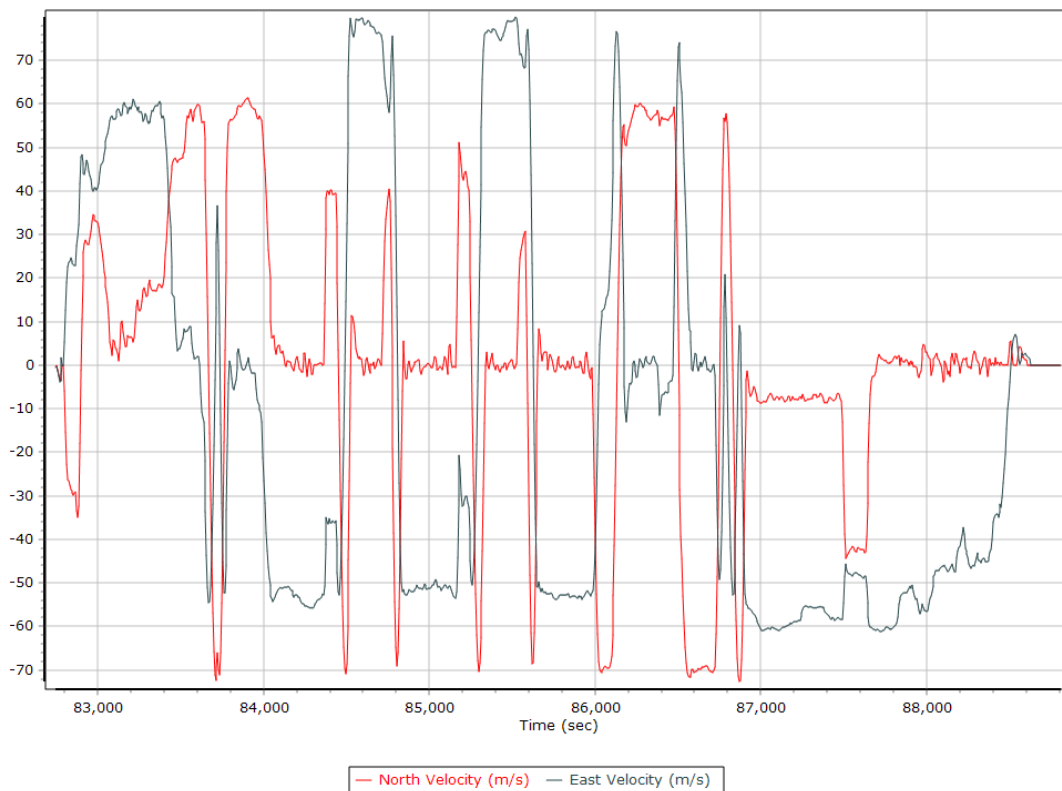
## Roll/Pitch



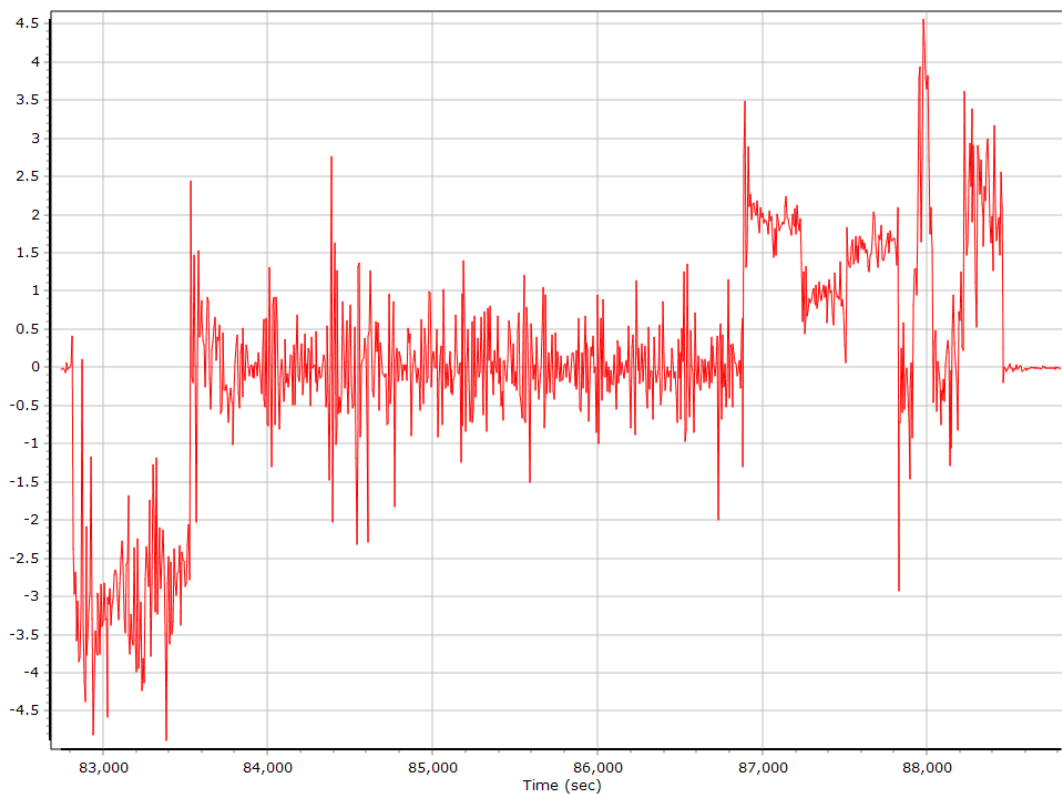
## Heading



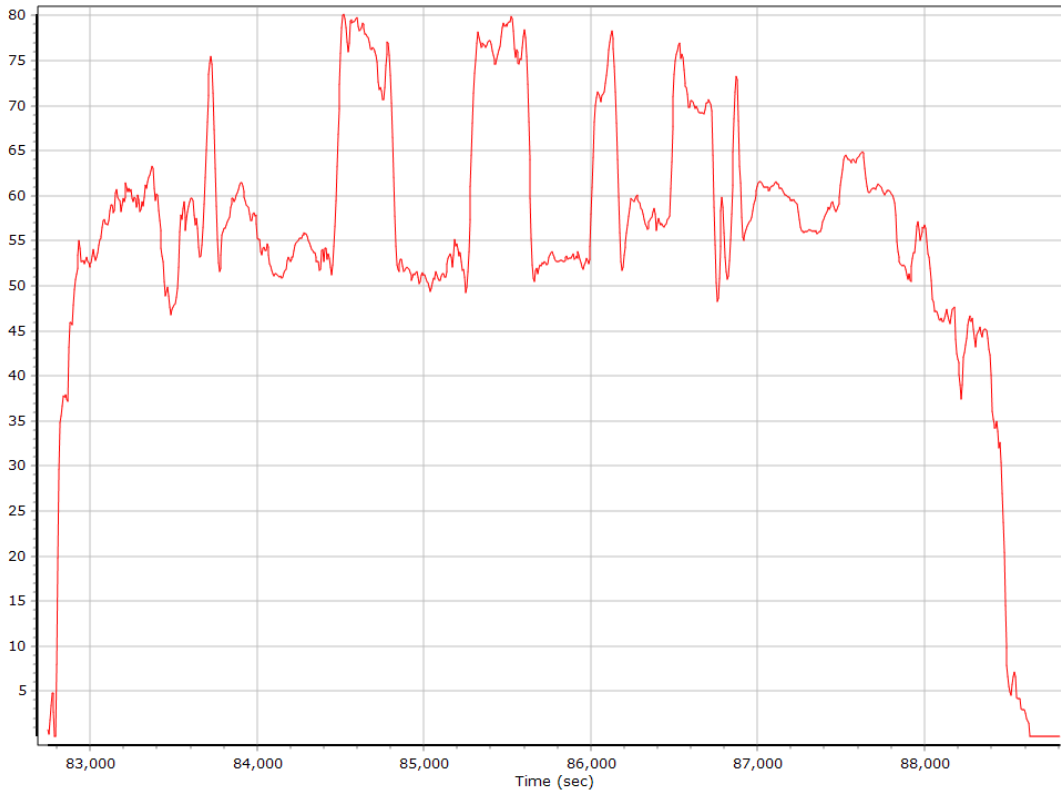
### North/East Velocity



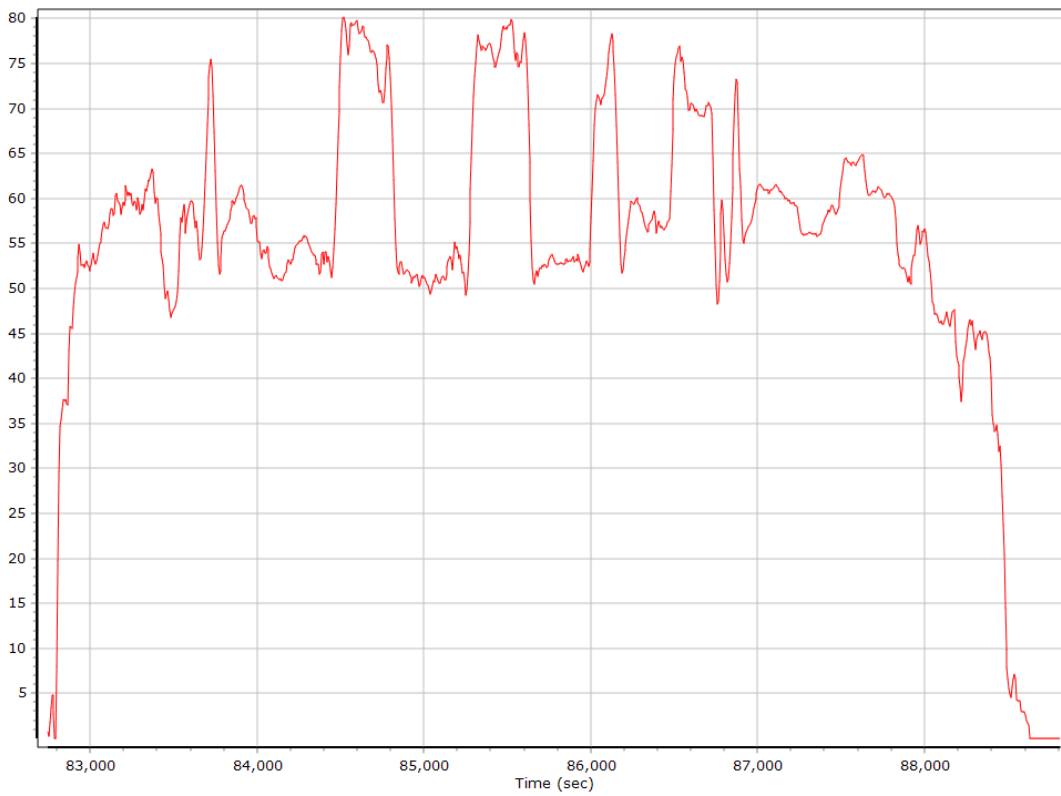
### Down Velocity



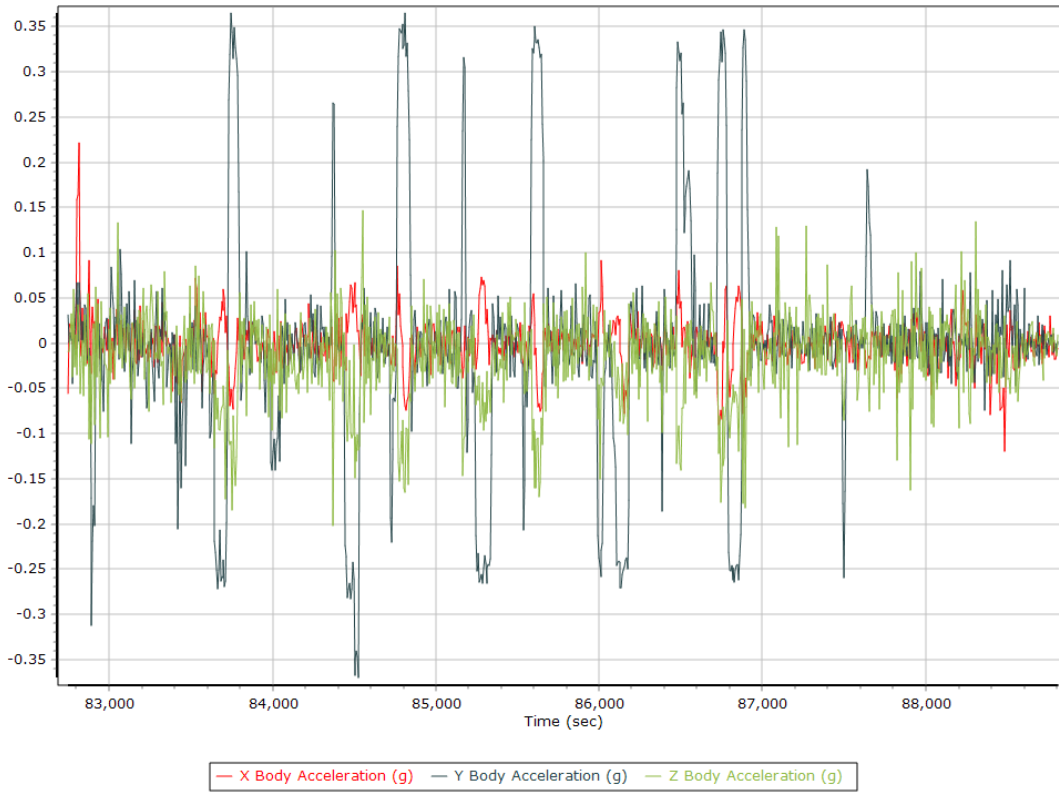
## Total Speed



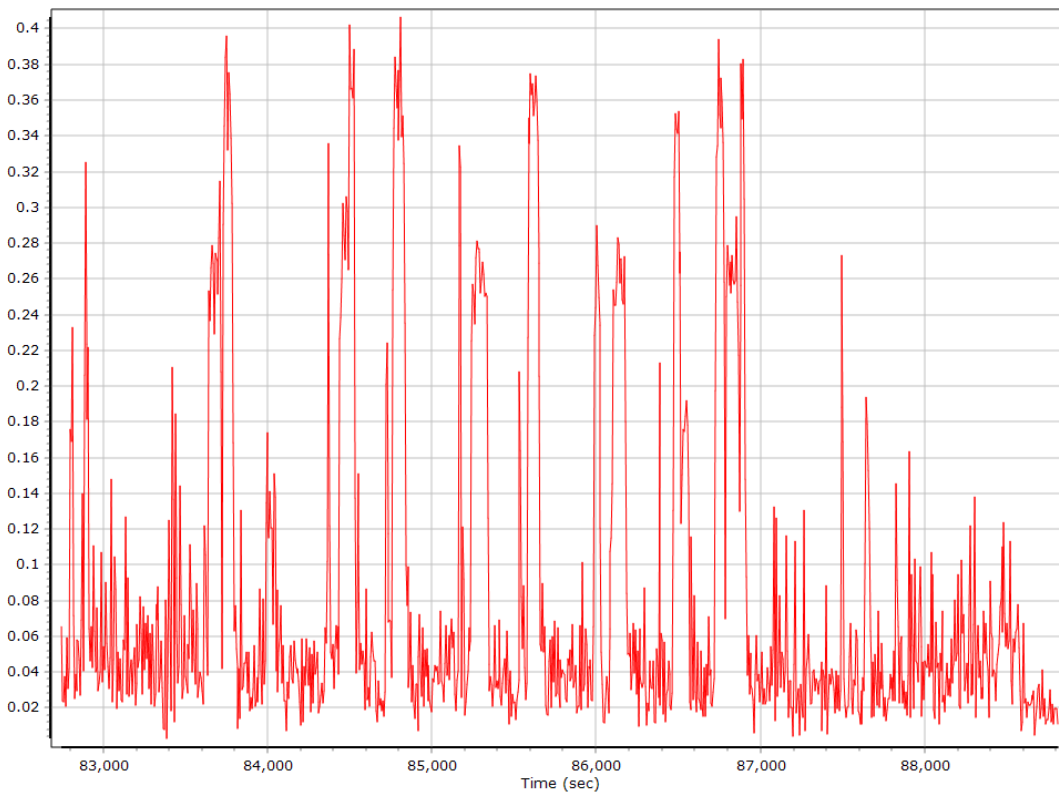
## Ground Speed



## Body Acceleration



## Total Body Acceleration



## Body Angular Rate

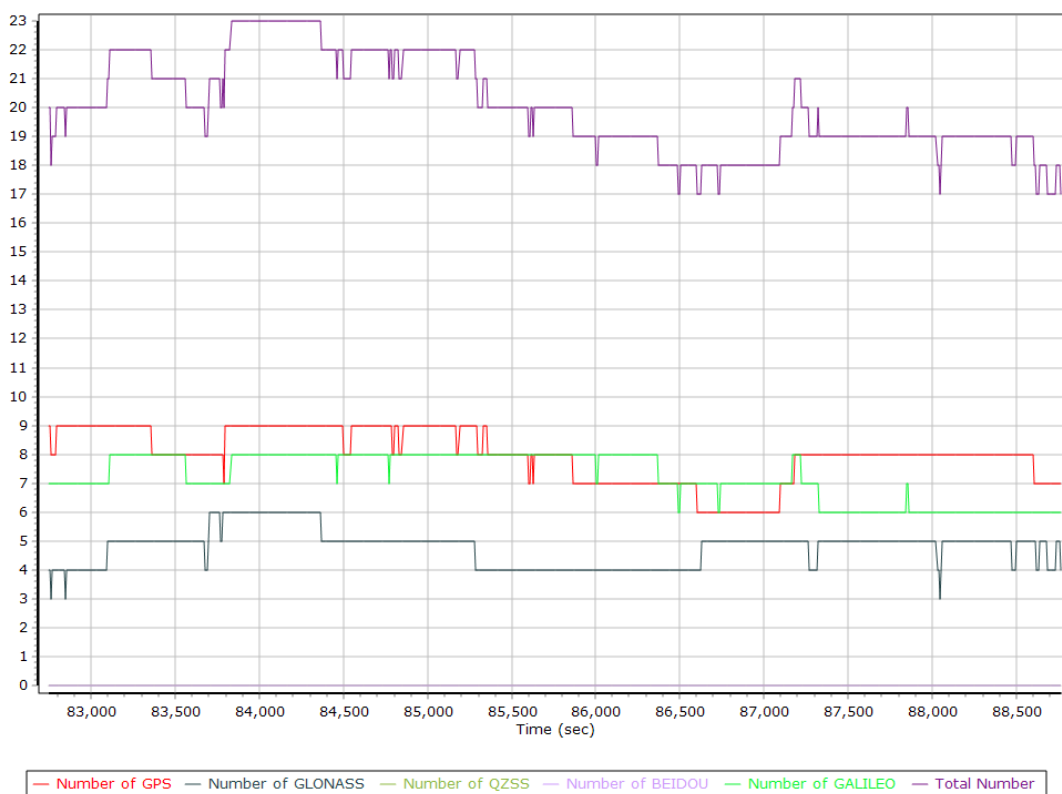


## GNSS QC

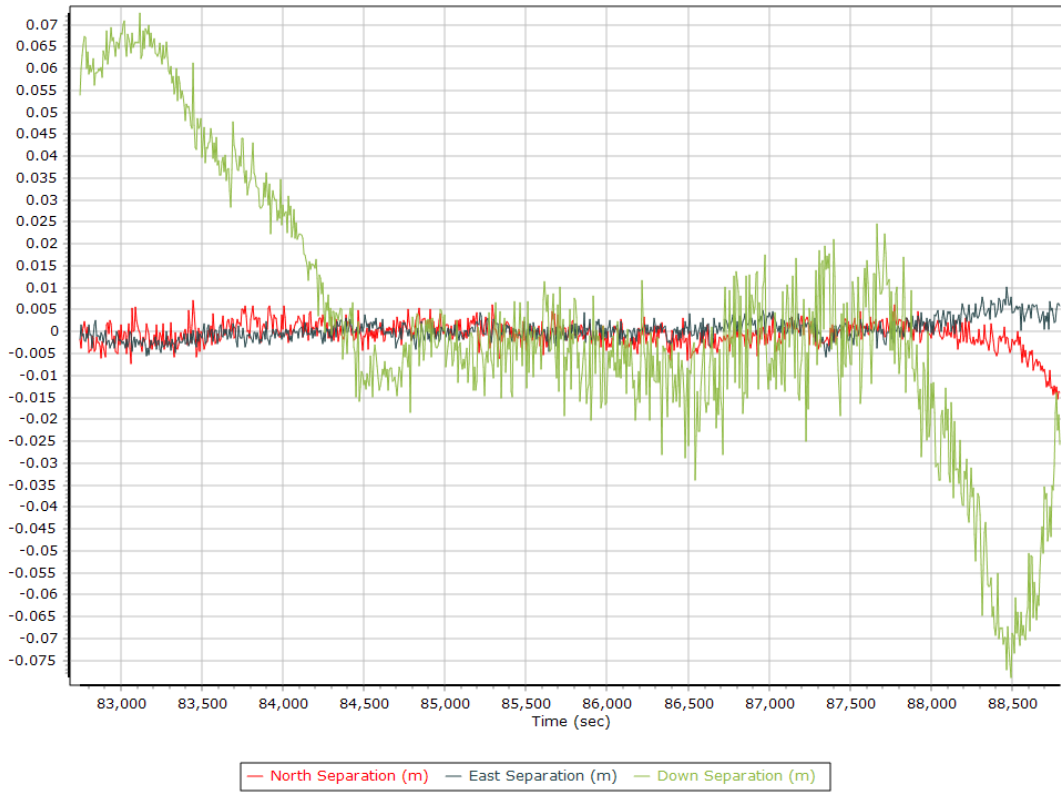
### GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	4	9	8
Number of GLONASS SV	0	6	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Number of GALILEO SV	5	8	7
Total number of SV	14	23	20
PDOP	1.02	2.82	1.16
QC Solution Gaps	0.00	0.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	6366.00	0.00	0.00
Percentage	100.00	0.00	0.00

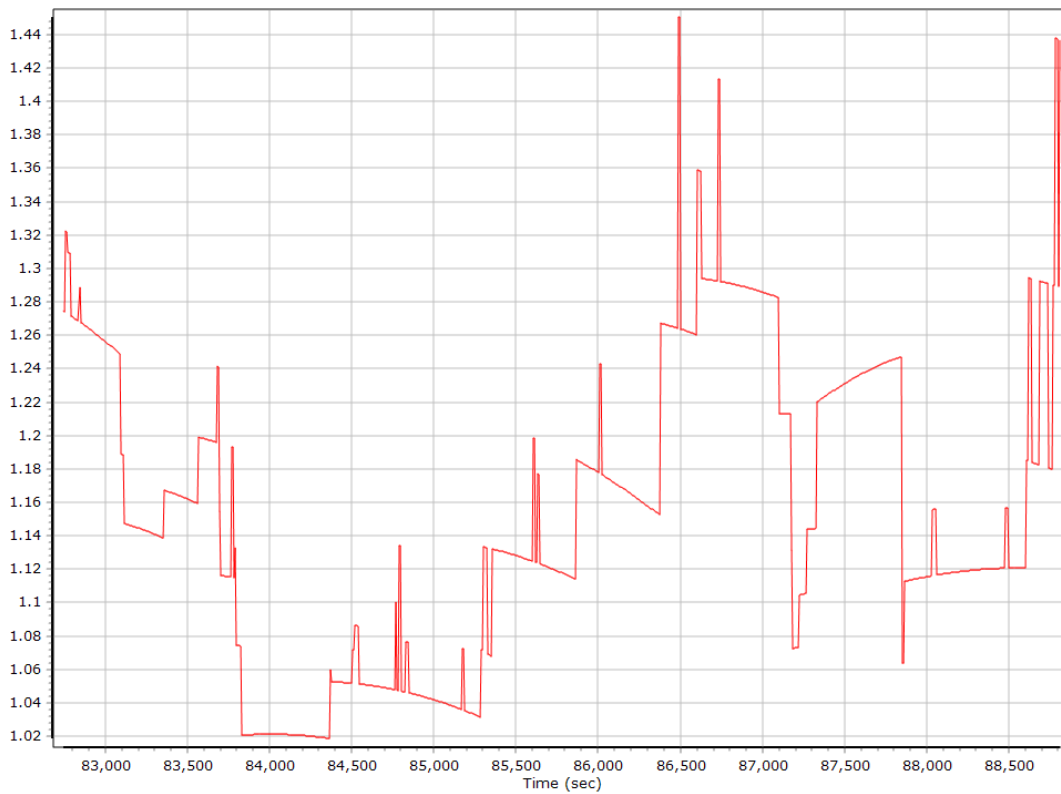
### Num SVs in solution



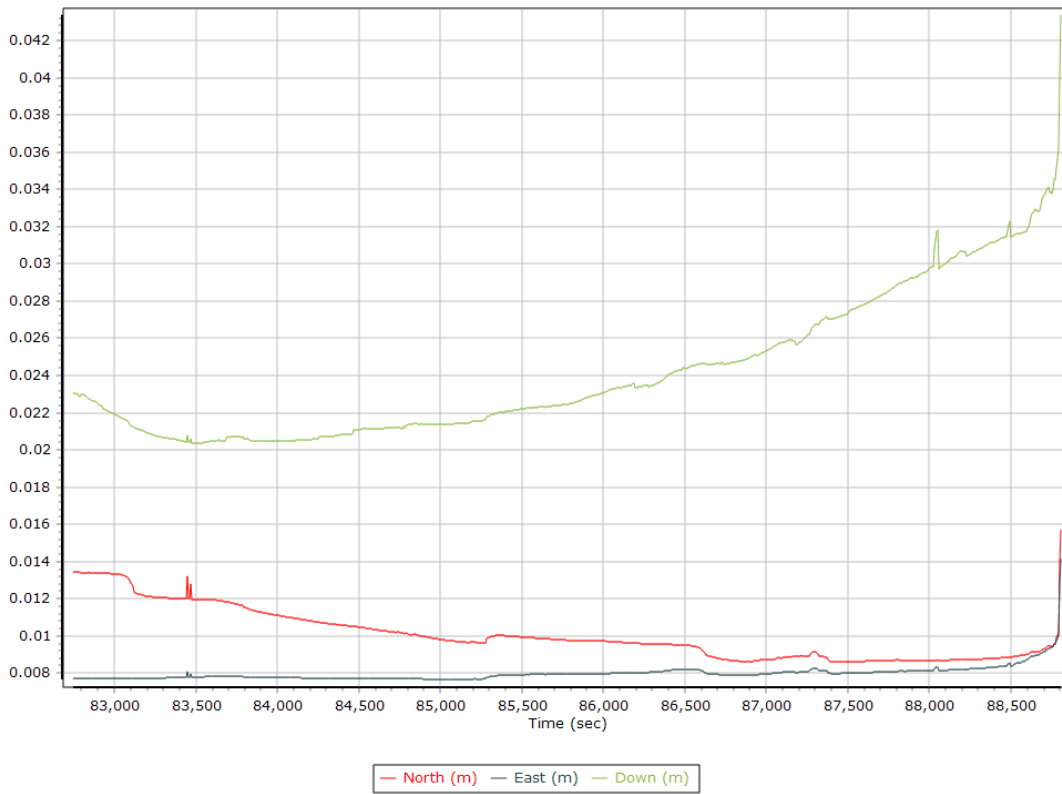
## Forward/Reverse Separation



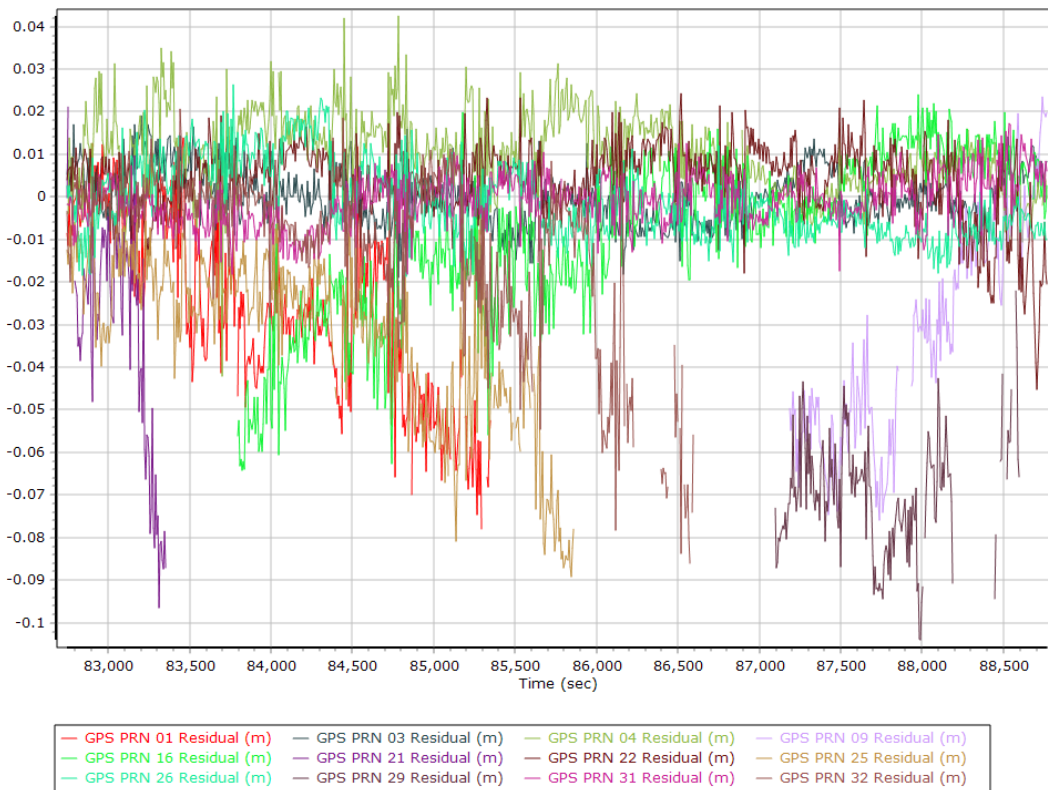
## PDOP



## Estimated Position Accuracy

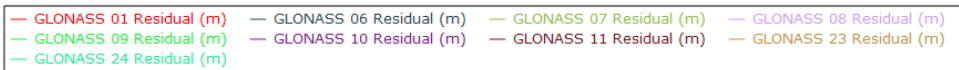
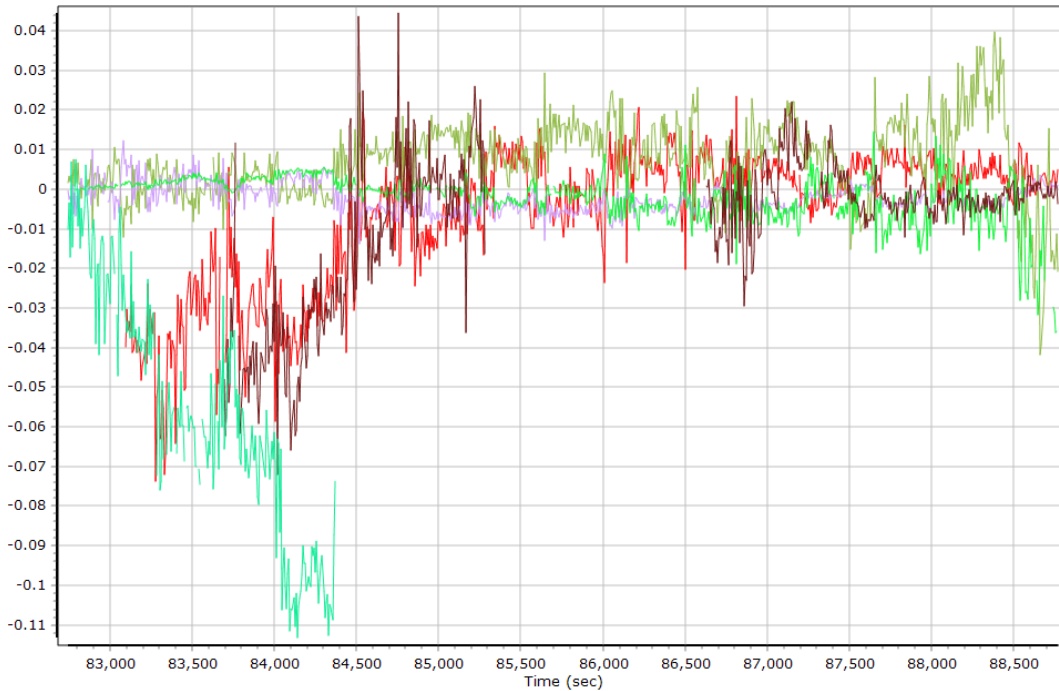


## GPS Residuals

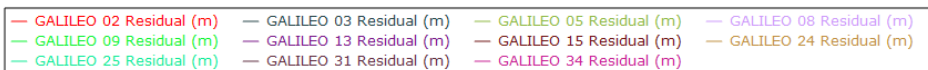




## GLONASS Residuals



## GALILEO Residuals



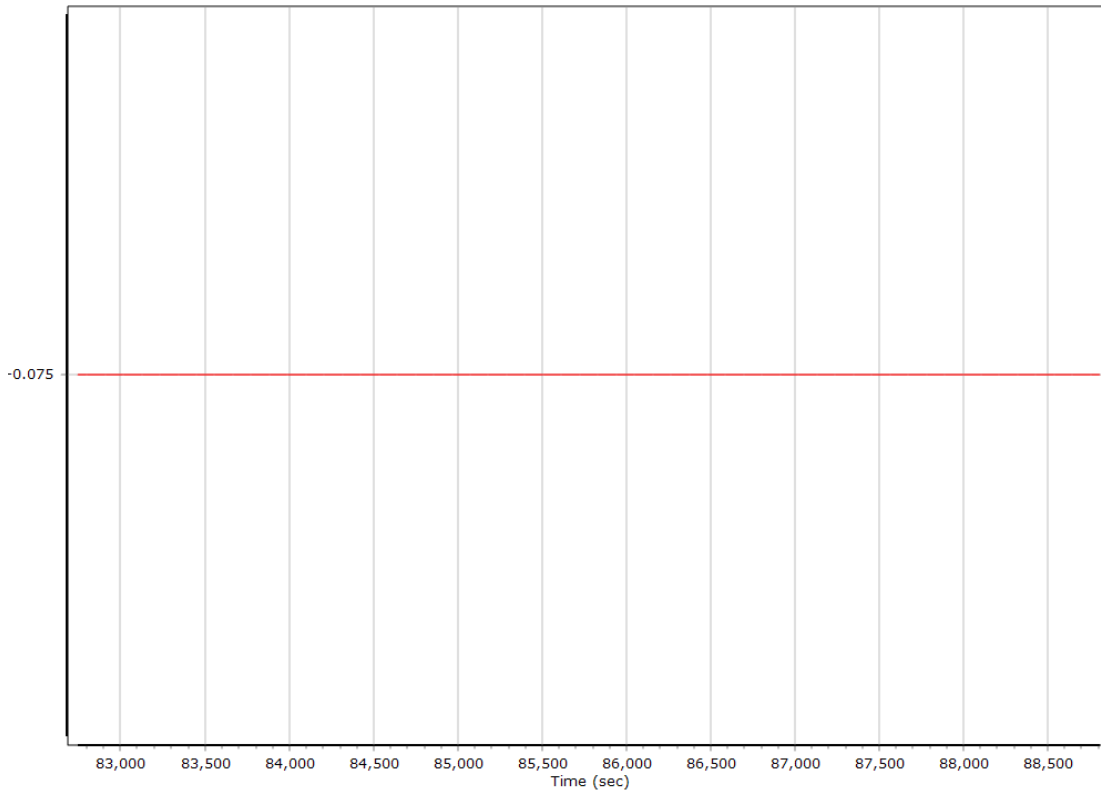
## GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	True		
Processing start time	82402.000 (09/18/2022 22:53:22)		
Processing end time	88814.000 (09/19/2022 00:40:14)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm (m)	-0.229	-0.010	-0.133
Gimbal to IMU mounting angles (deg)	0.000	0.000	180.000
Gimbal to Primary GNSS lever arm (m)	-0.075	0.084	-1.028
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

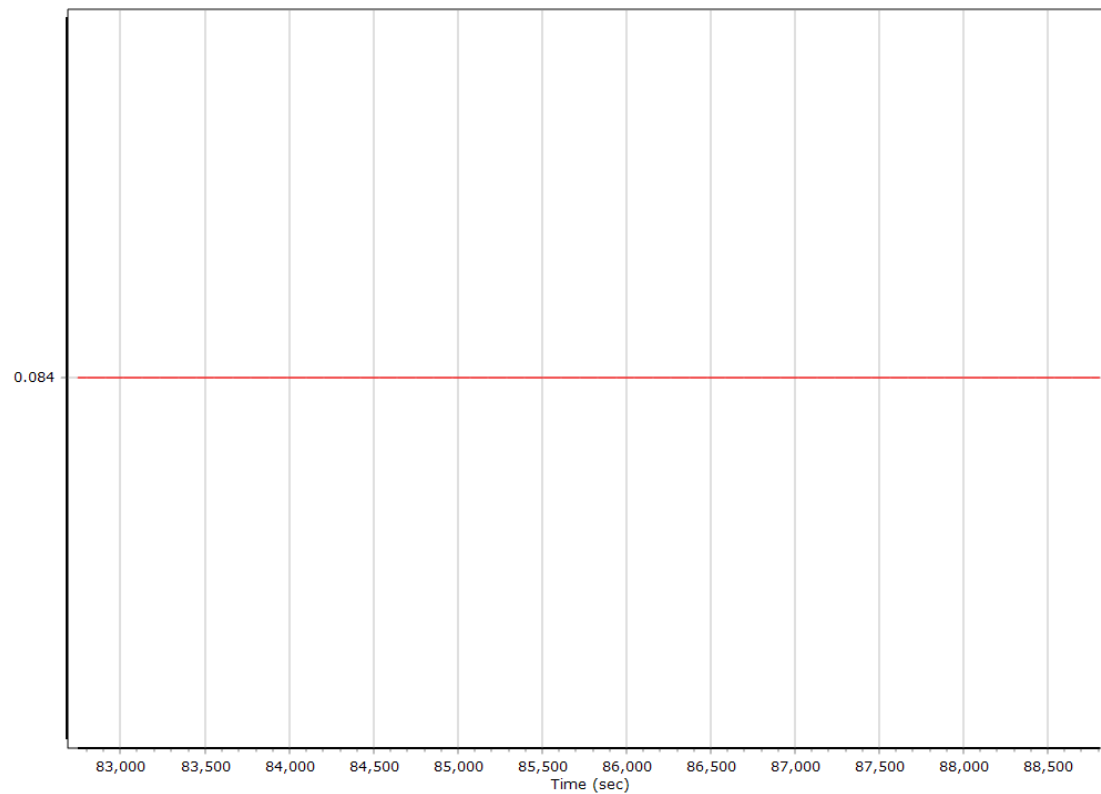
## Calibrated Installation Parameters

### Reference-Primary GNSS Lever Arm (m)

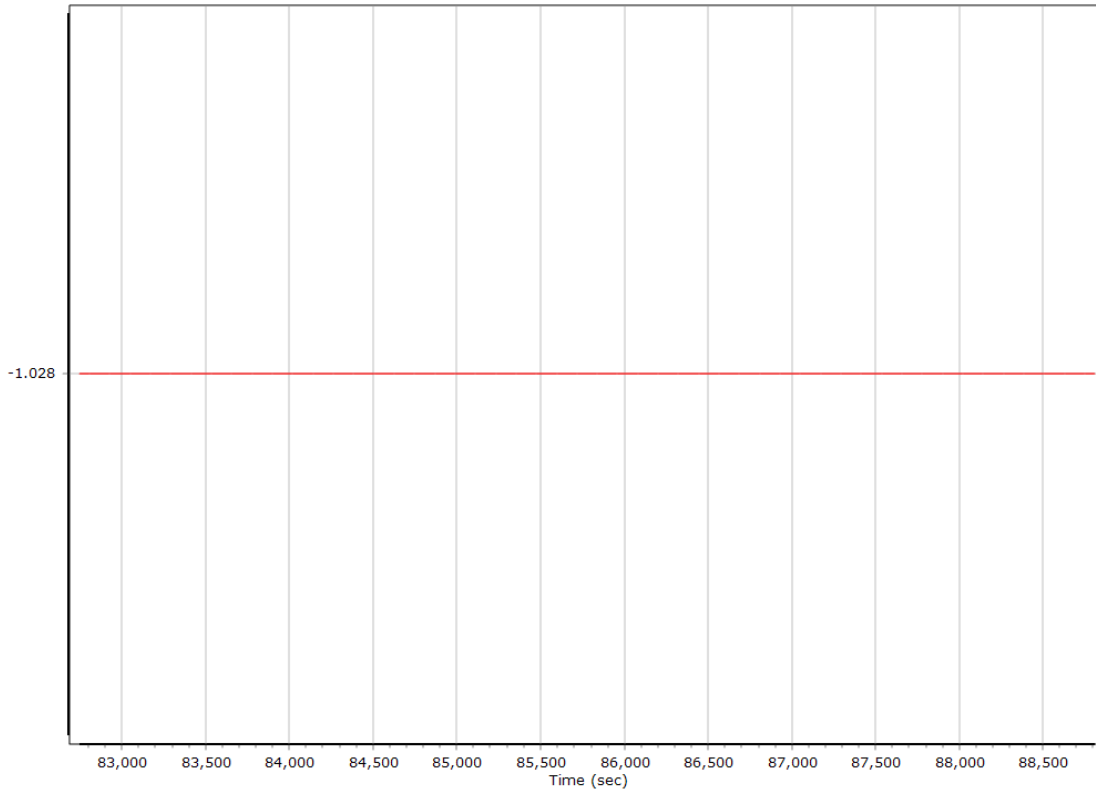
#### X Reference-Primary GNSS Lever Arm (m)



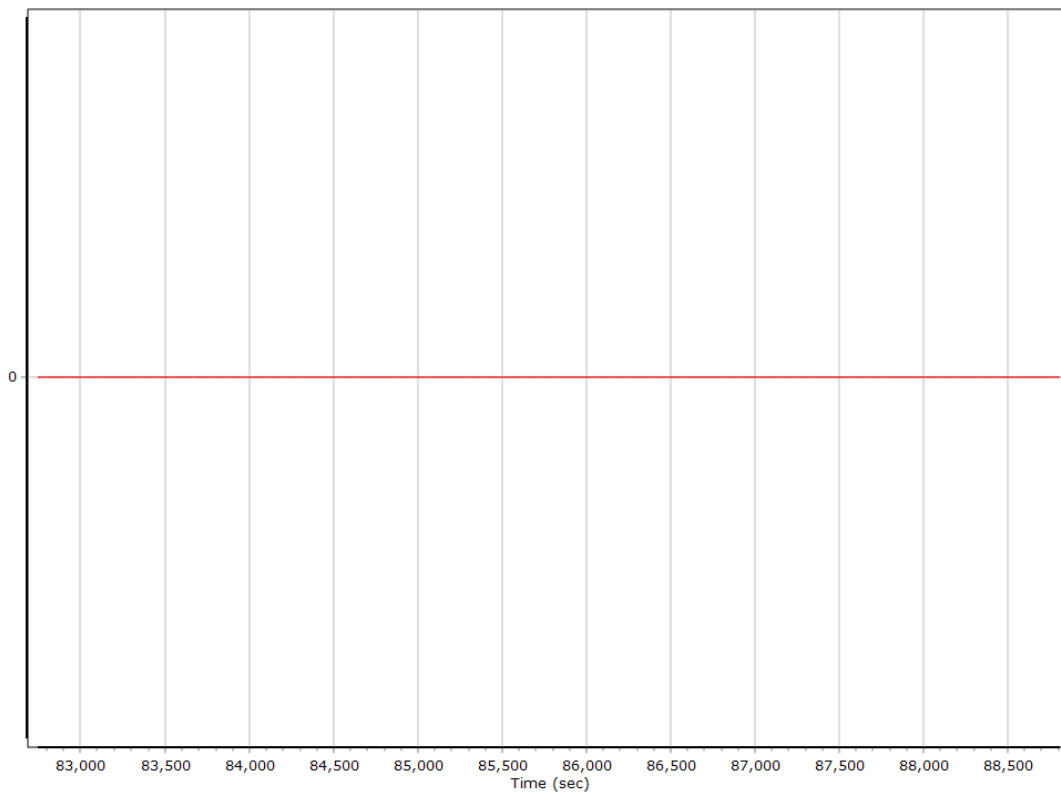
#### Y Reference-Primary GNSS Lever Arm (m)



### Z Reference-Primary GNSS Lever Arm (m)



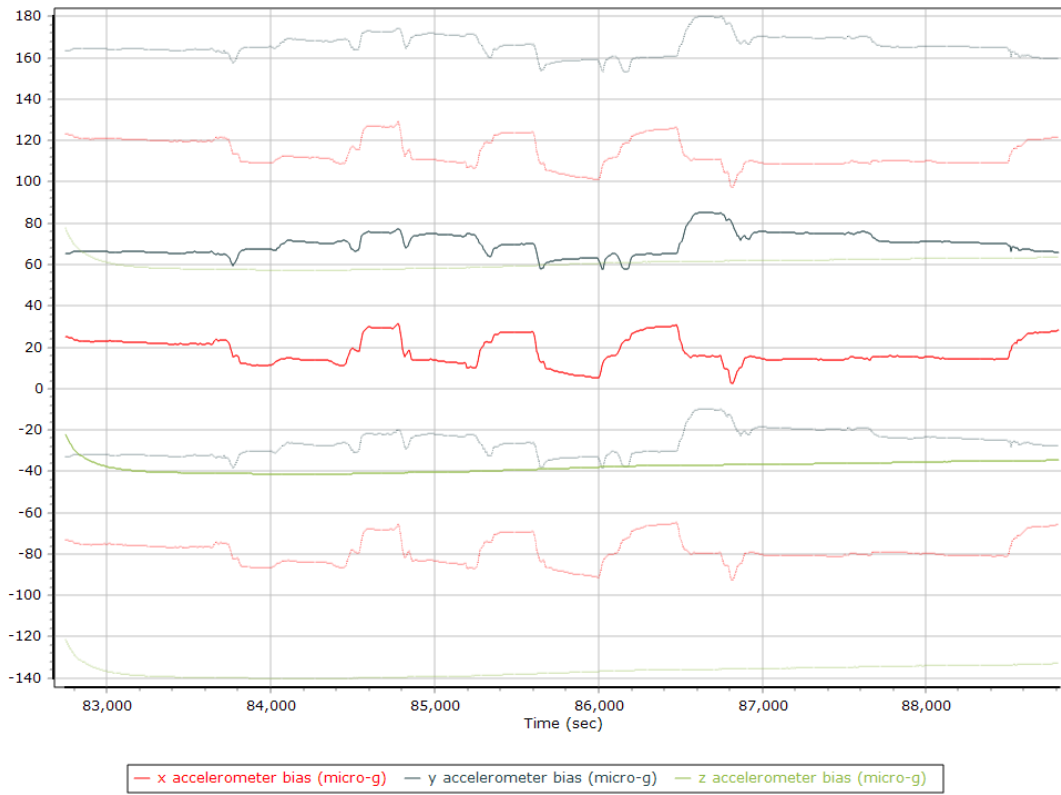
### Reference-Primary GNSS Lever Arm Figure of Merit



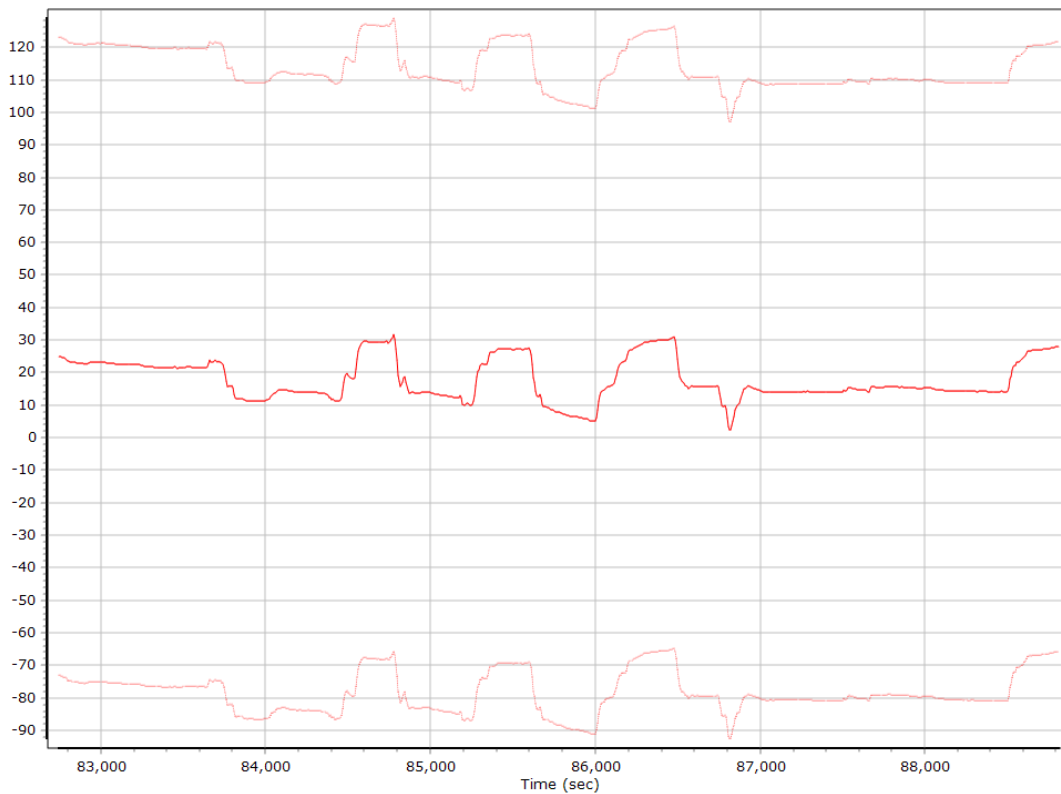
## IN-Fusion QC

### Forward Processed Estimated Errors, Reference Frame

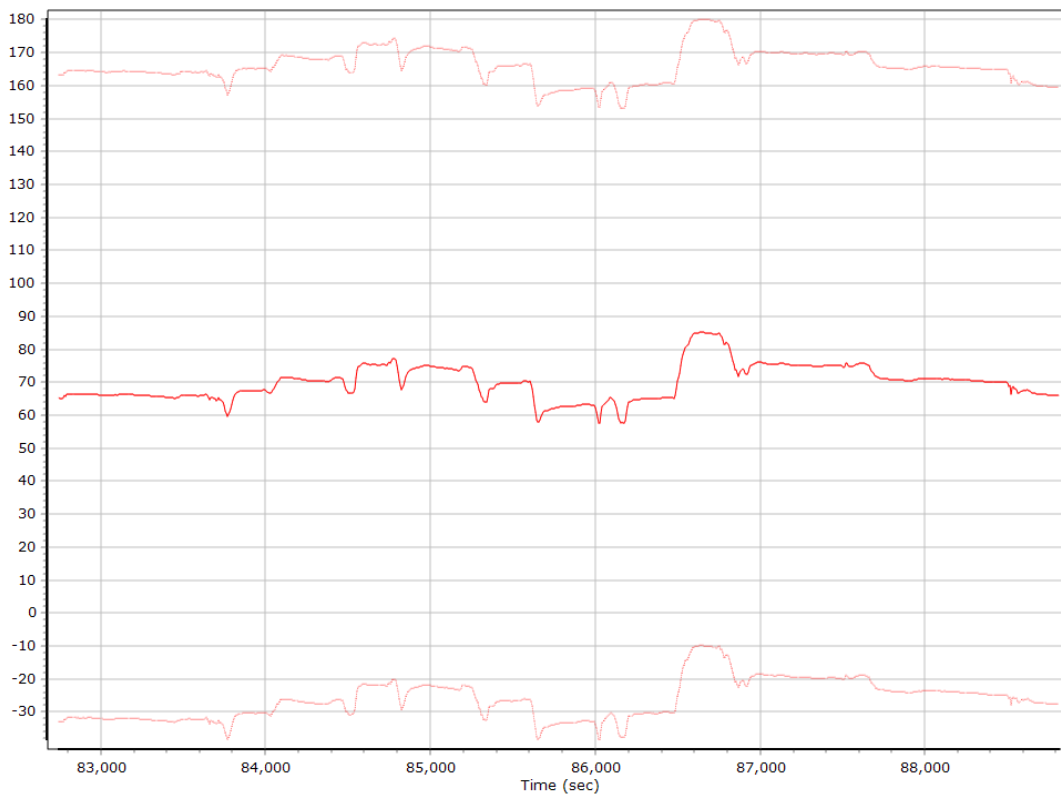
#### Accelerometer Bias (micro-g)



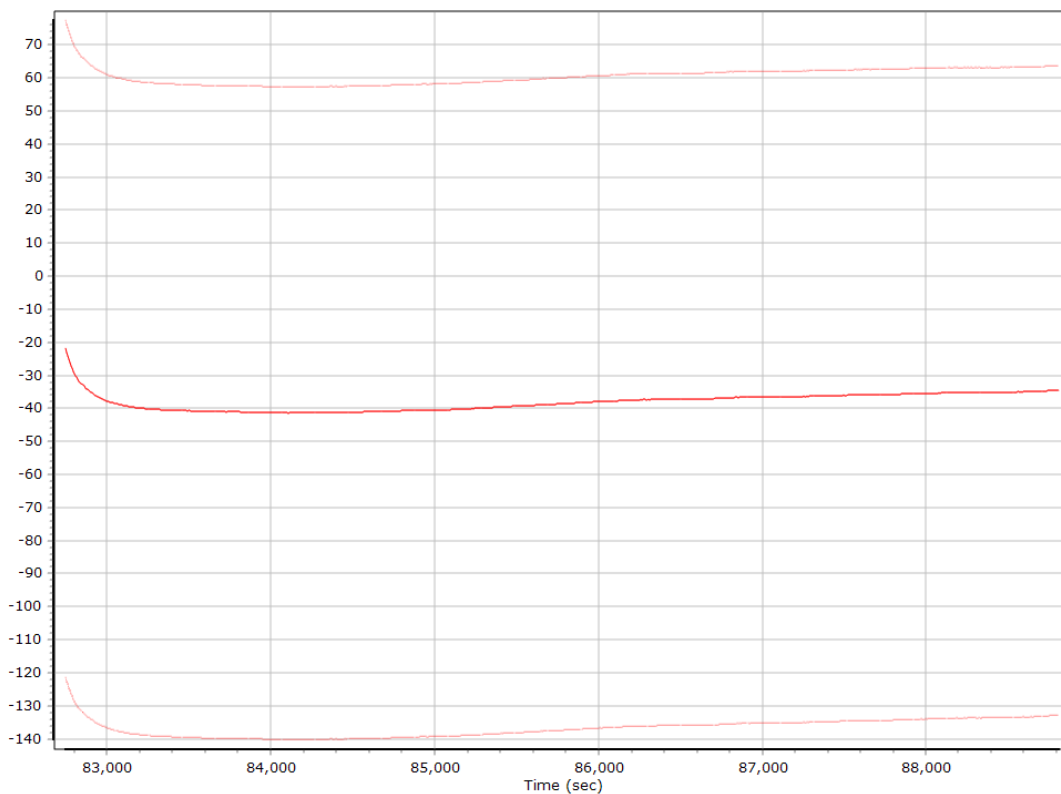
#### X Accelerometer Bias (micro-g)



### Y Accelerometer Bias (micro-g)



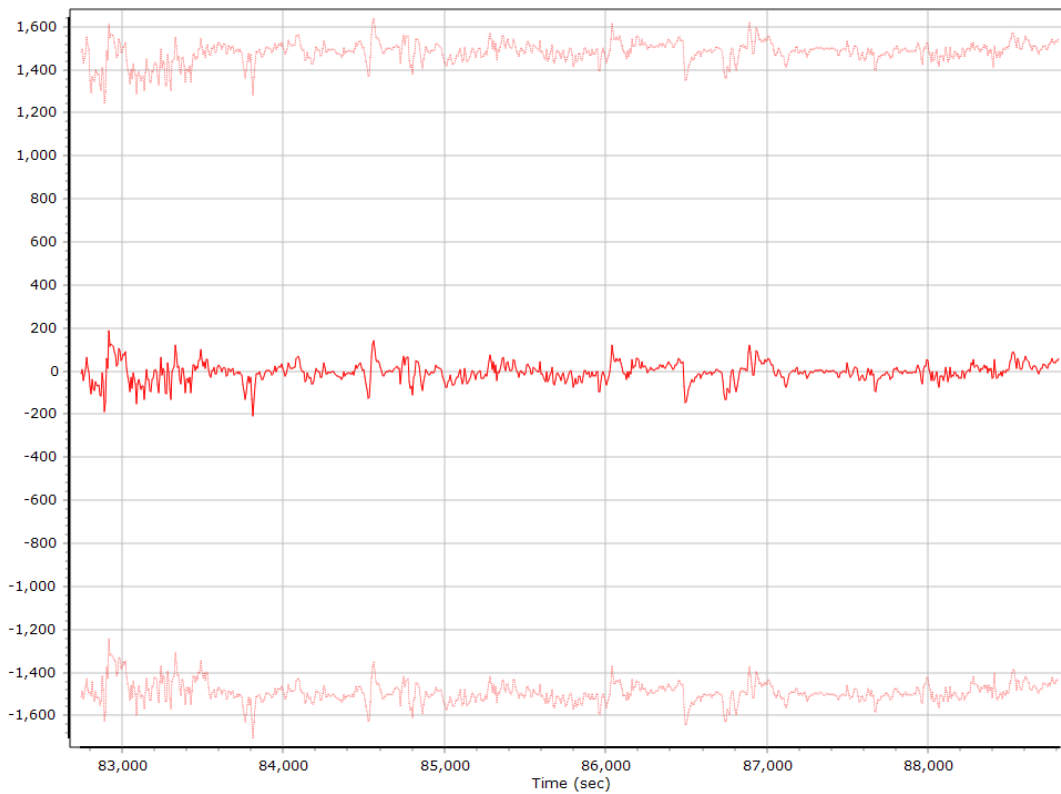
### Z Accelerometer Bias (micro-g)



### Accelerometer Scale Error (ppm)



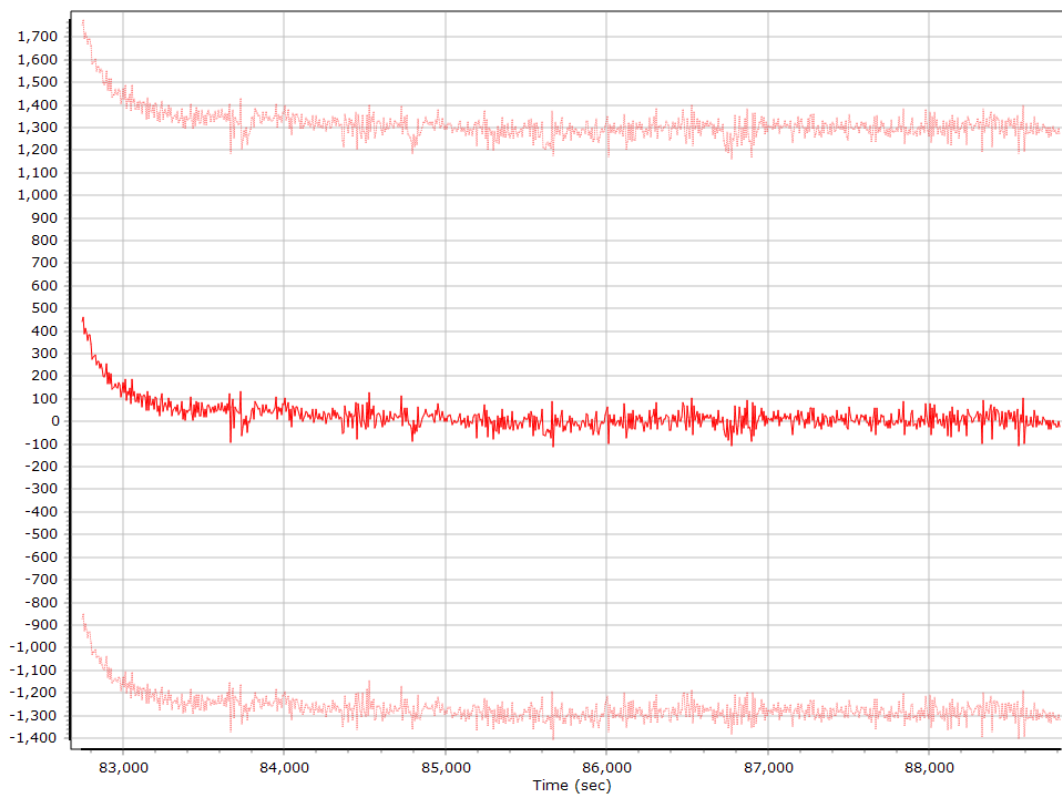
### X Accelerometer Scale Error (ppm)



### Y Accelerometer Scale Error (ppm)

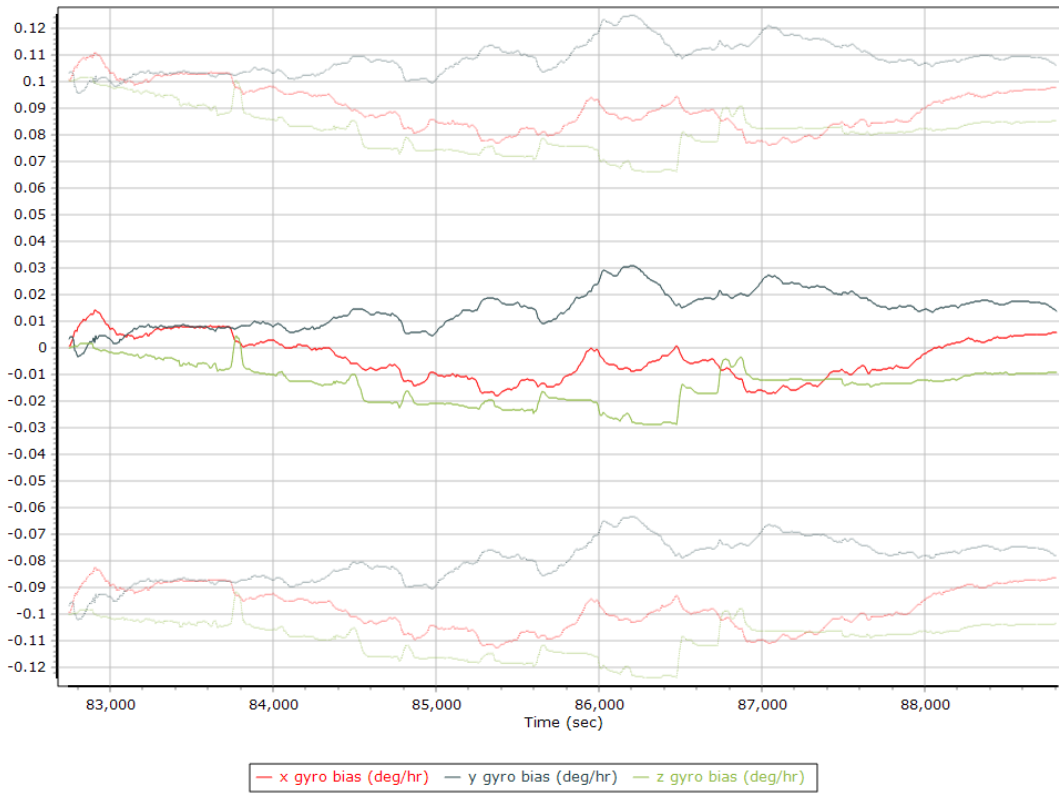


### Z Accelerometer Scale Error (ppm)

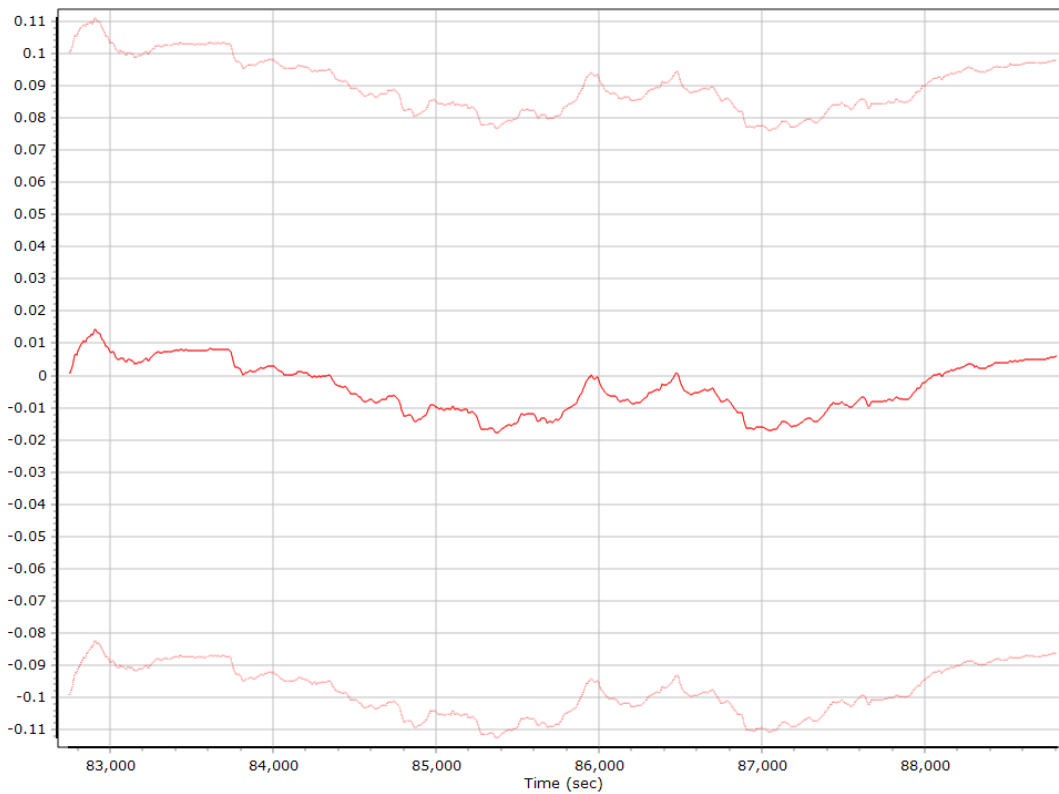




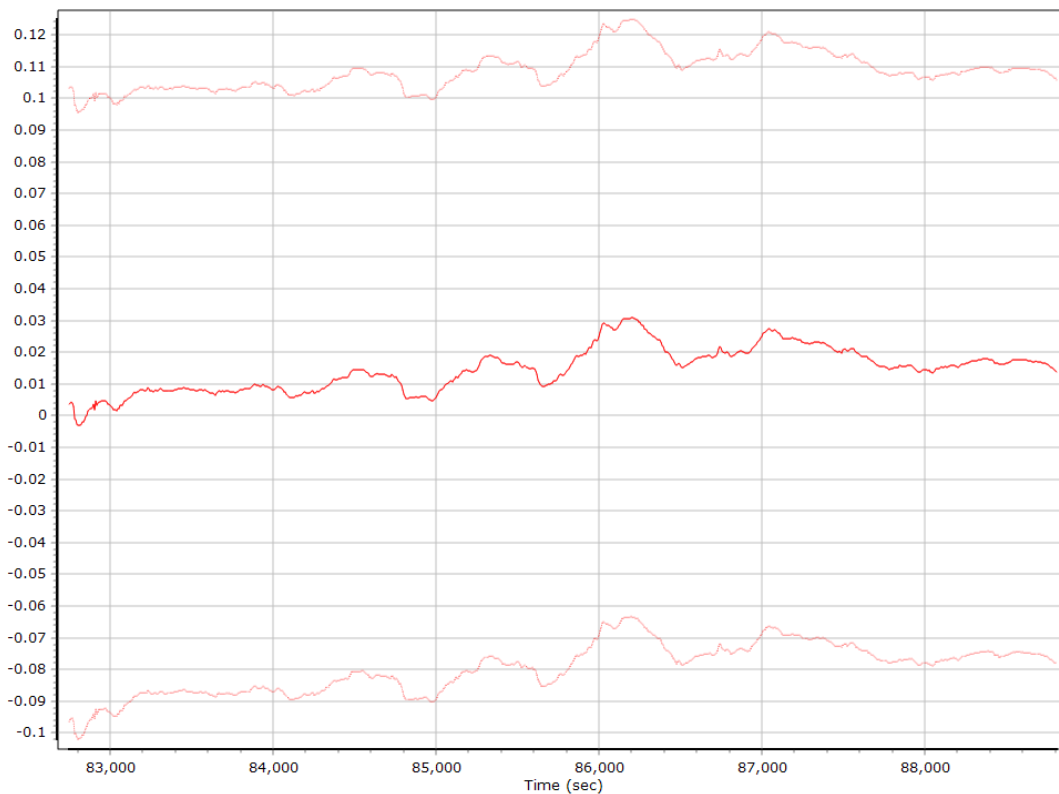
### Gyro Bias (deg/h)



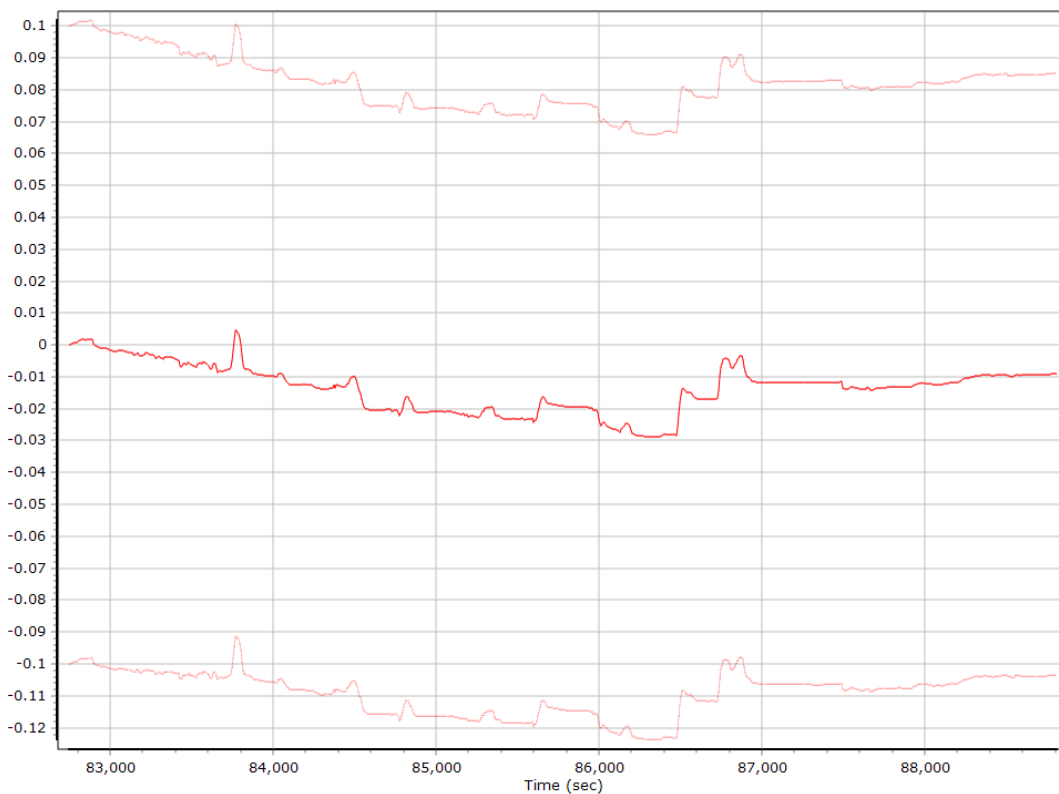
### X Gyro Bias (deg/h)



### Y Gyro Bias (deg/h)



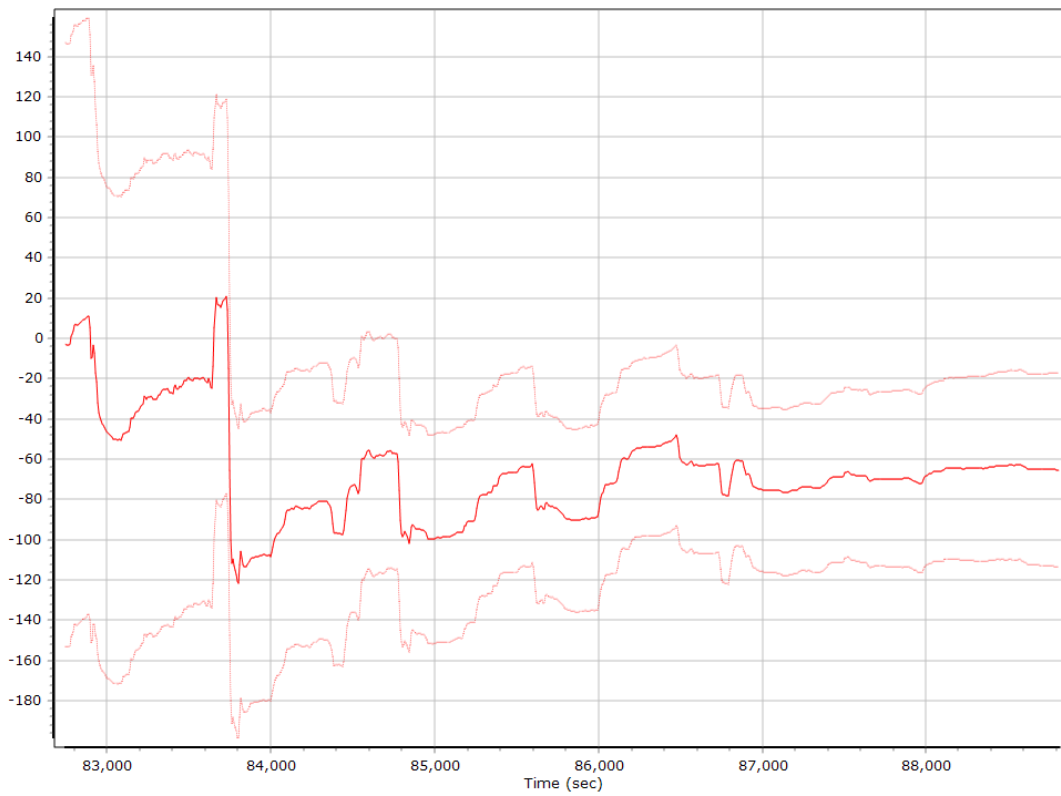
### Z Gyro Bias (deg/h)



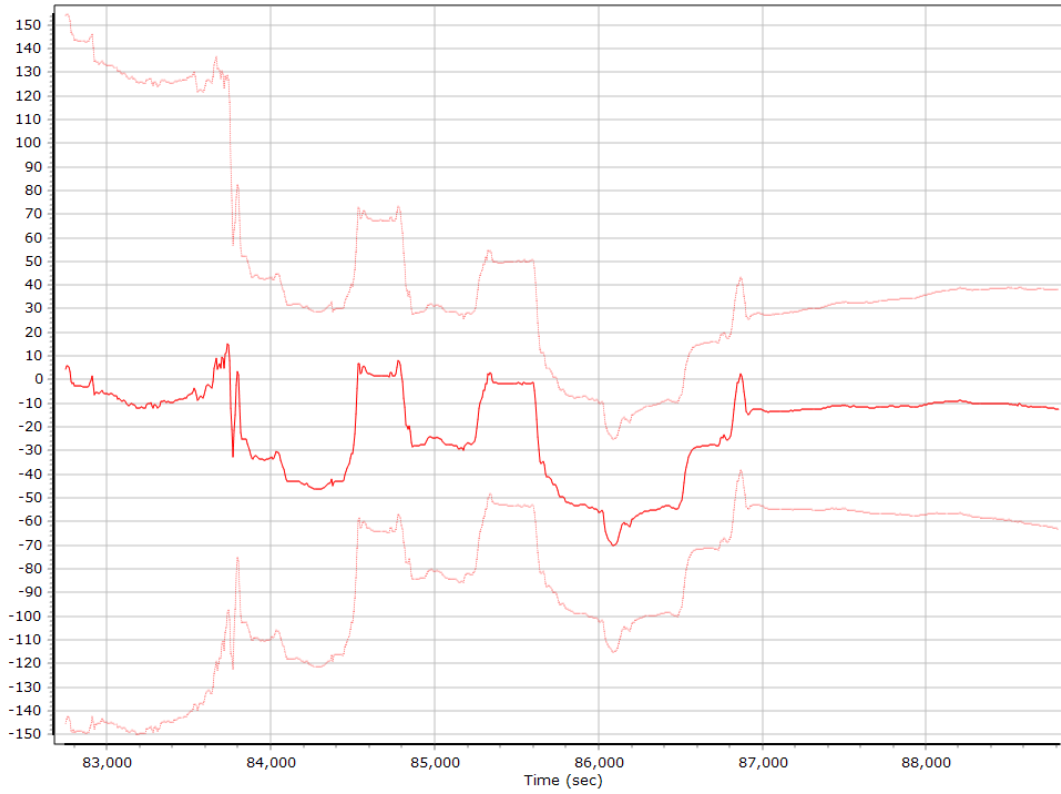
### Gyro Scale Error (ppm)



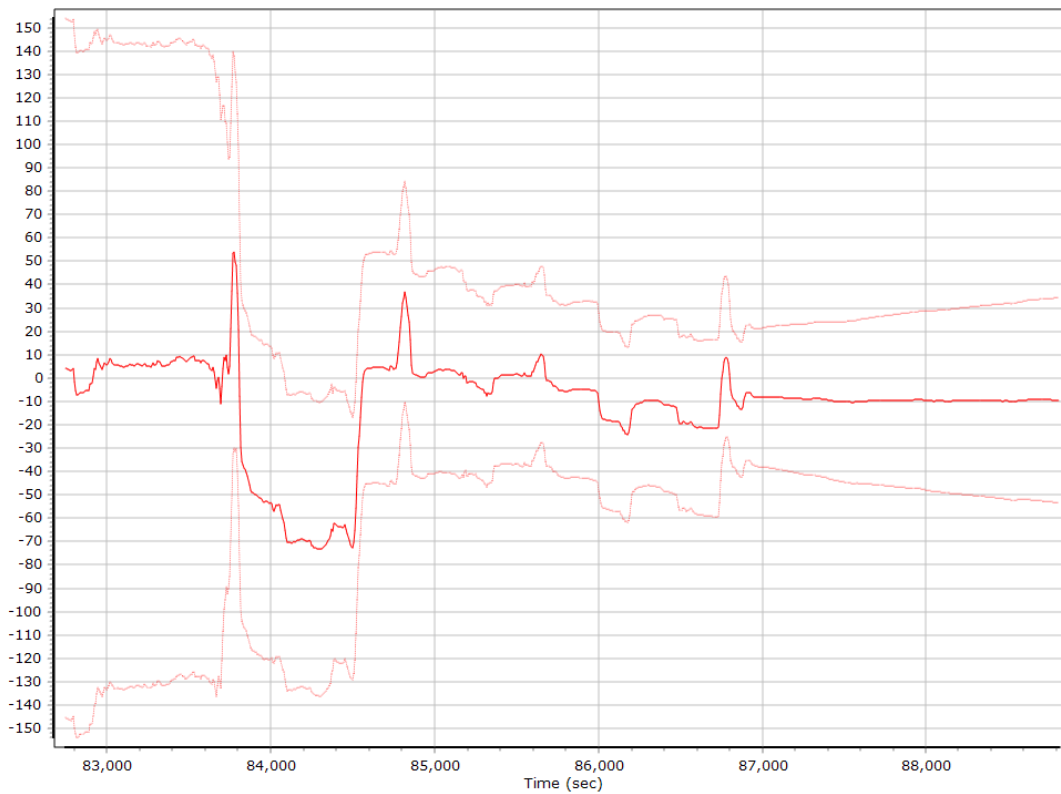
### X Gyro Scale Error (ppm)



### Y Gyro Scale Error (ppm)

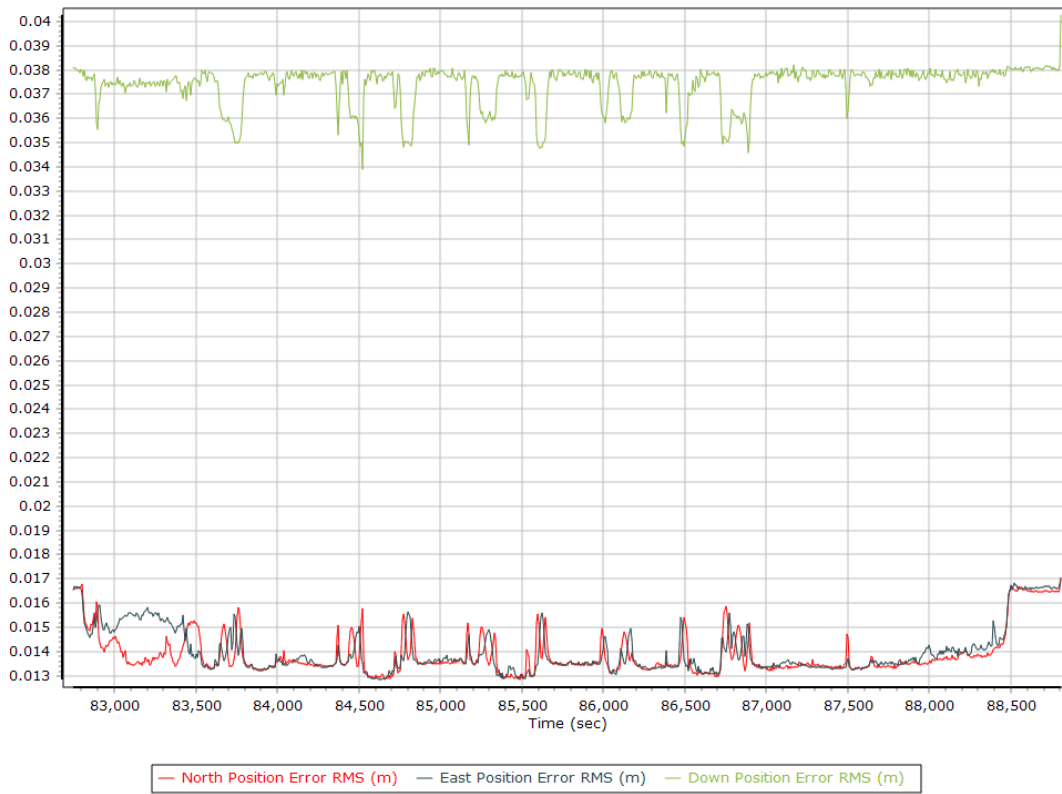


### Z Gyro Scale Error (ppm)

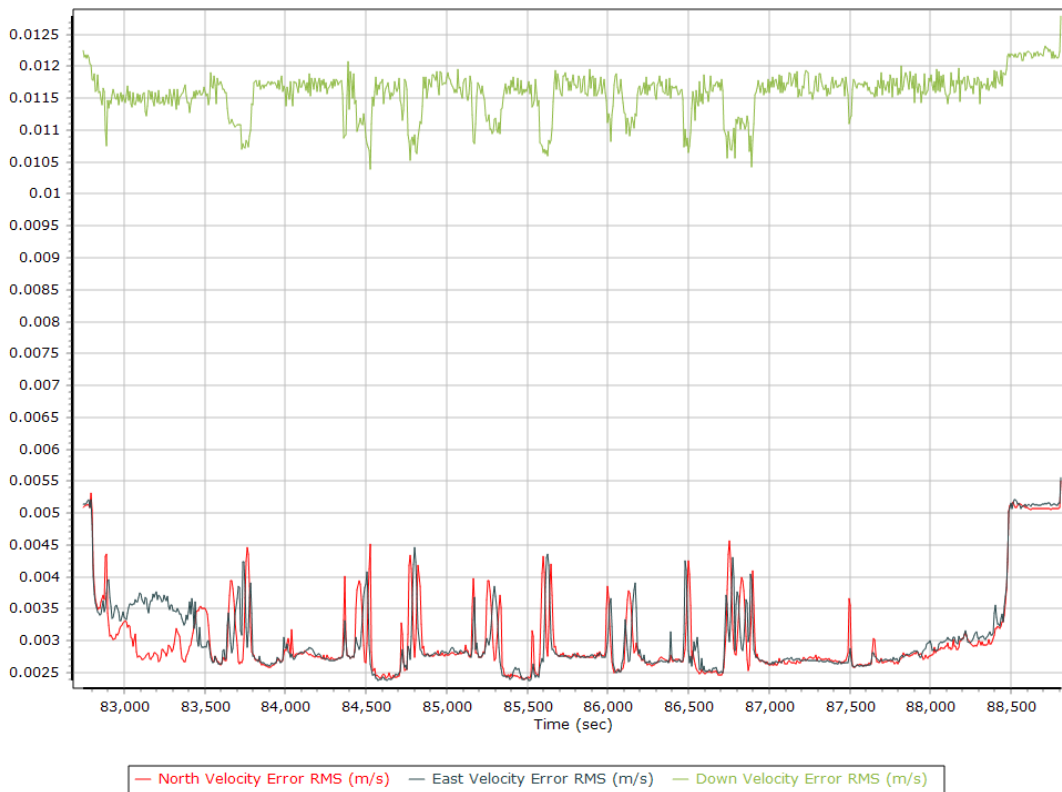


## Smoothed Performance Metrics

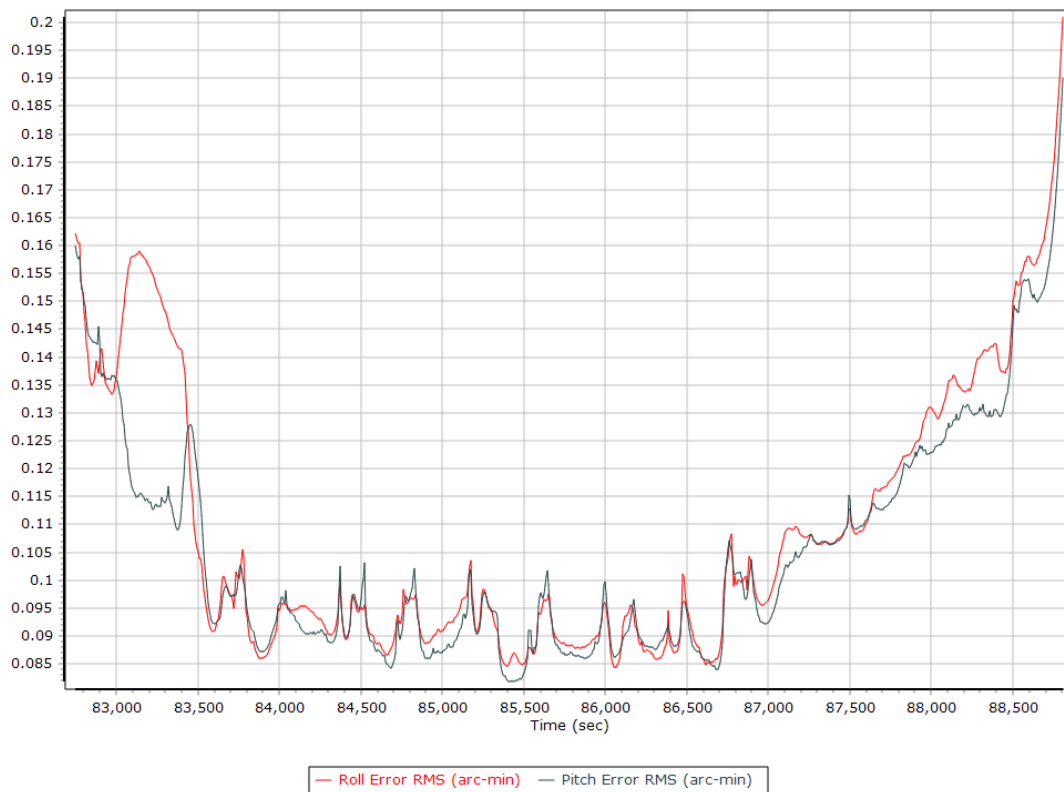
### Position Error RMS (m)



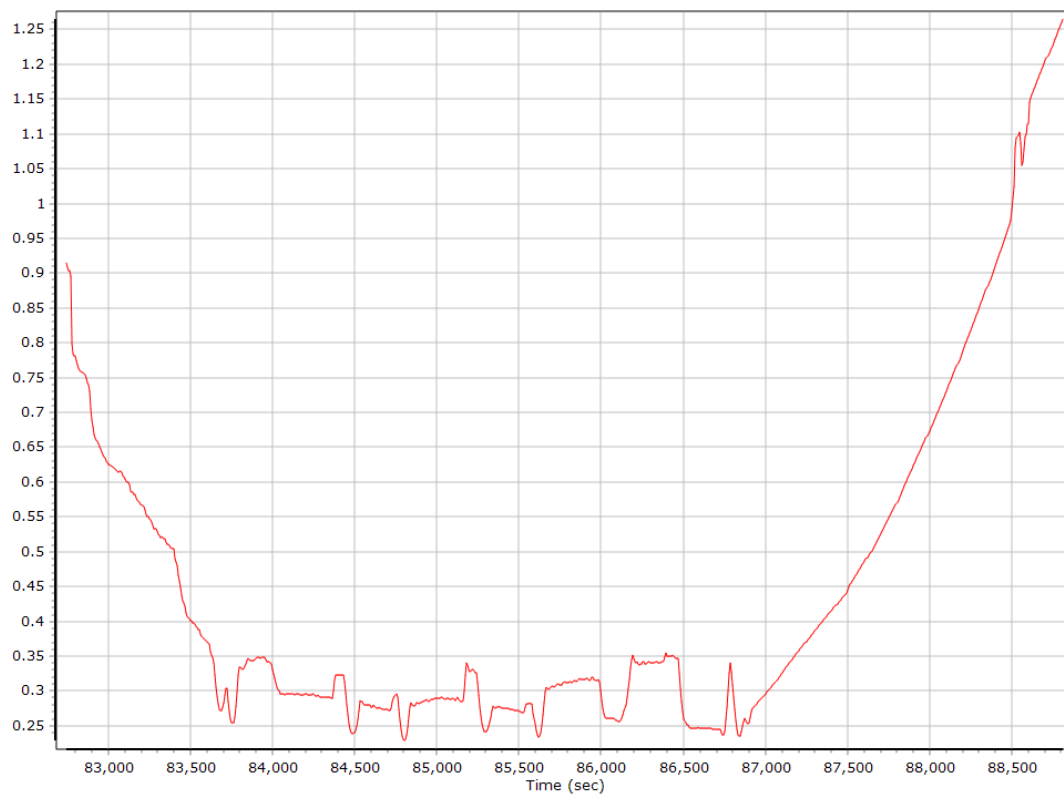
### Velocity Error RMS (m/s)



### Roll/Pitch Error RMS (arc-min)

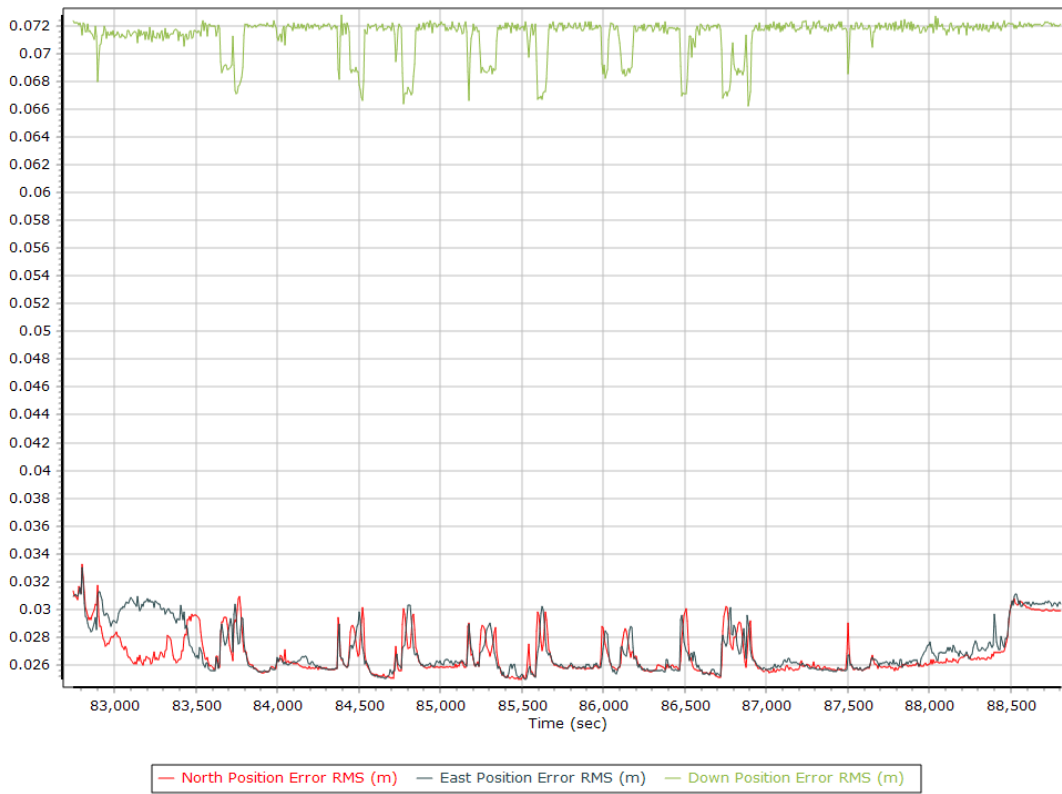


### Heading Error RMS (arc-min)

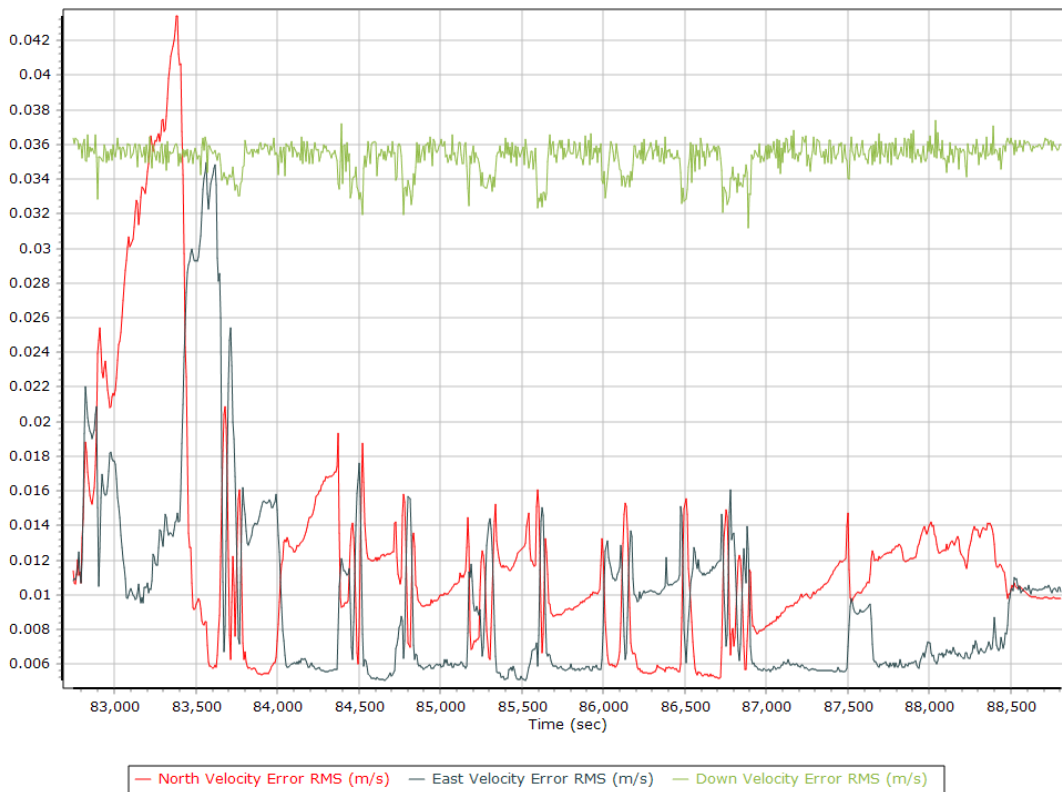


## Forward Processed Performance Metrics

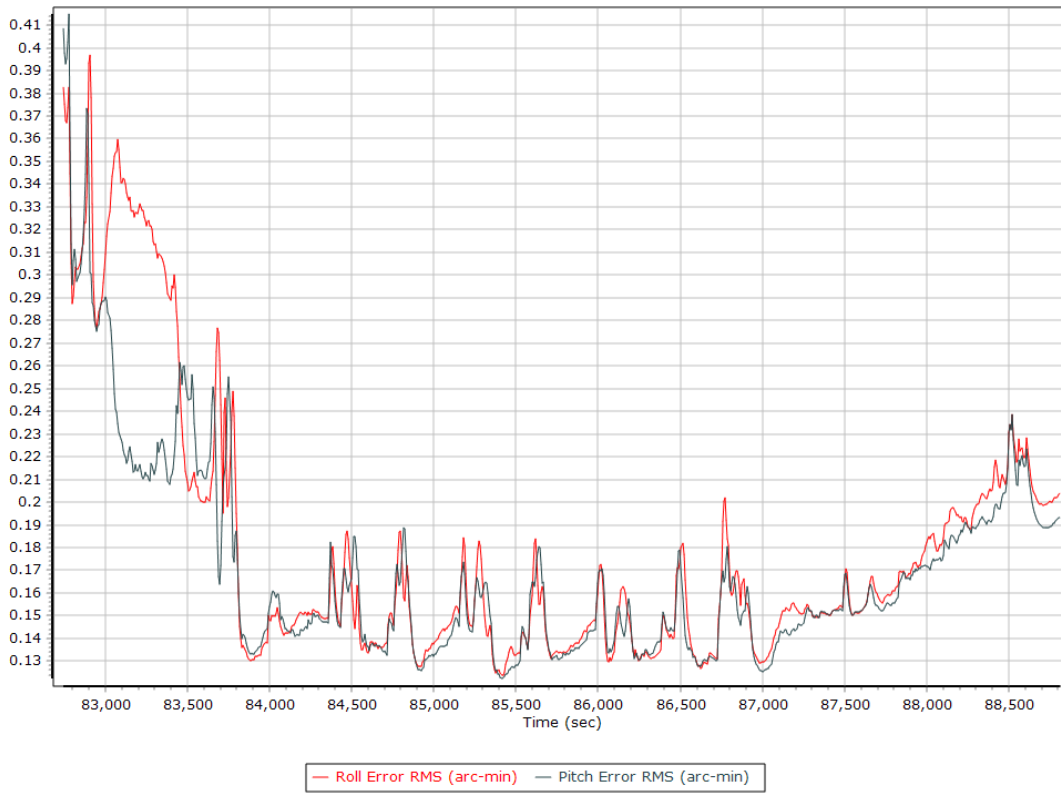
### Position Error RMS (m)



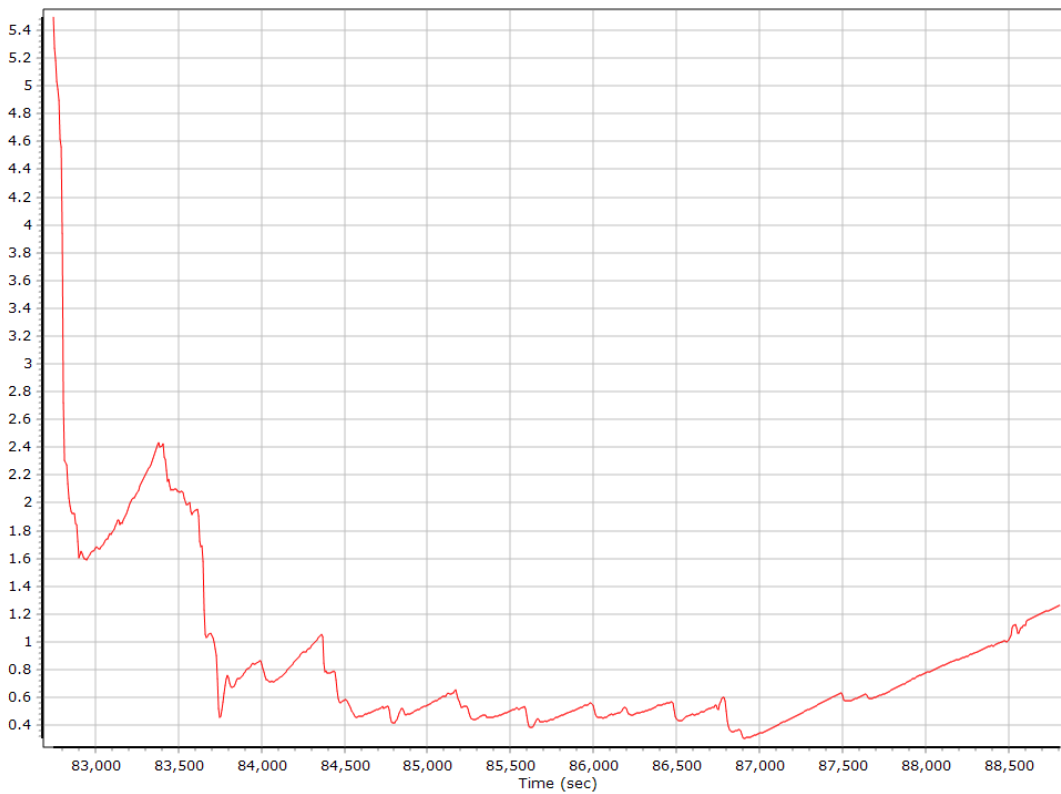
### Velocity Error RMS (m/s)



### Roll/Pitch Error RMS (arc-min)



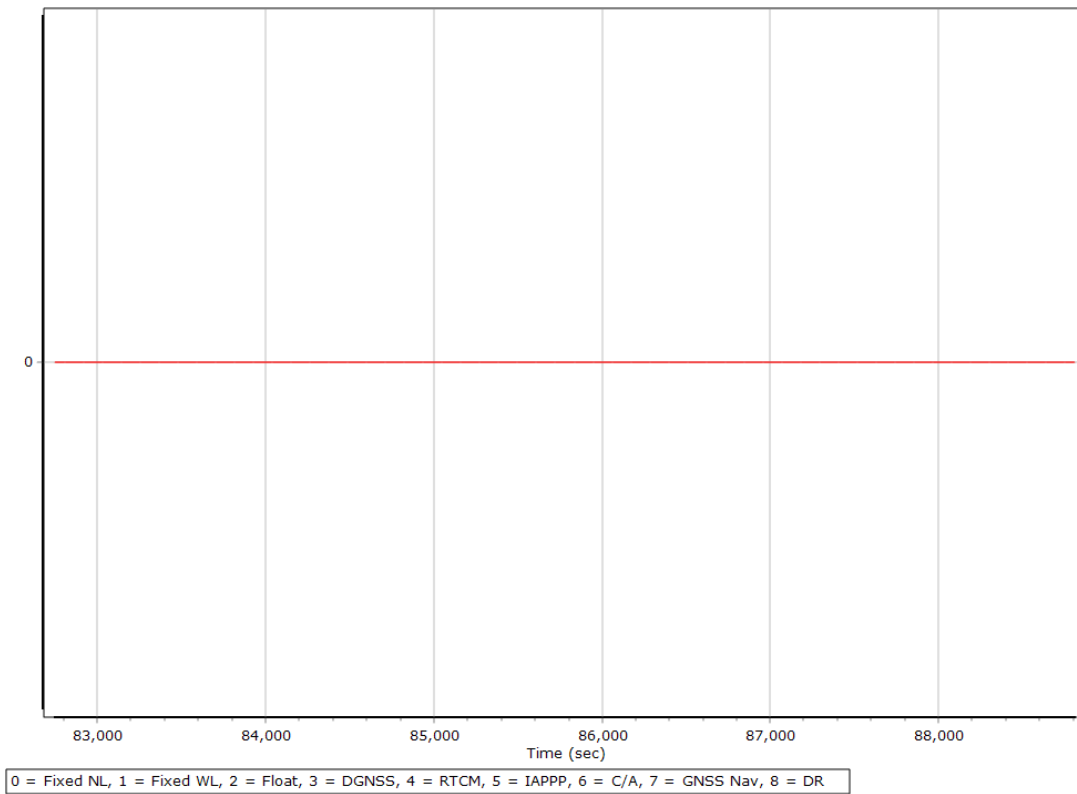
### Heading Error RMS (arc-min)



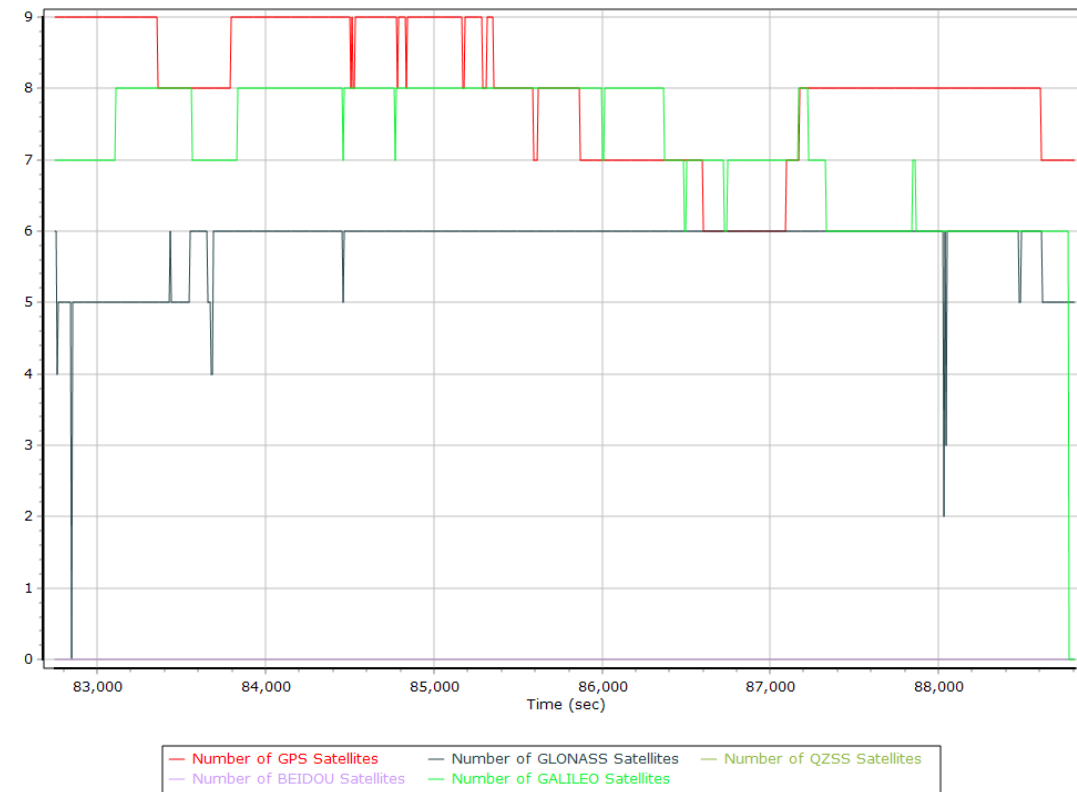


## Forward Processed Solution Status

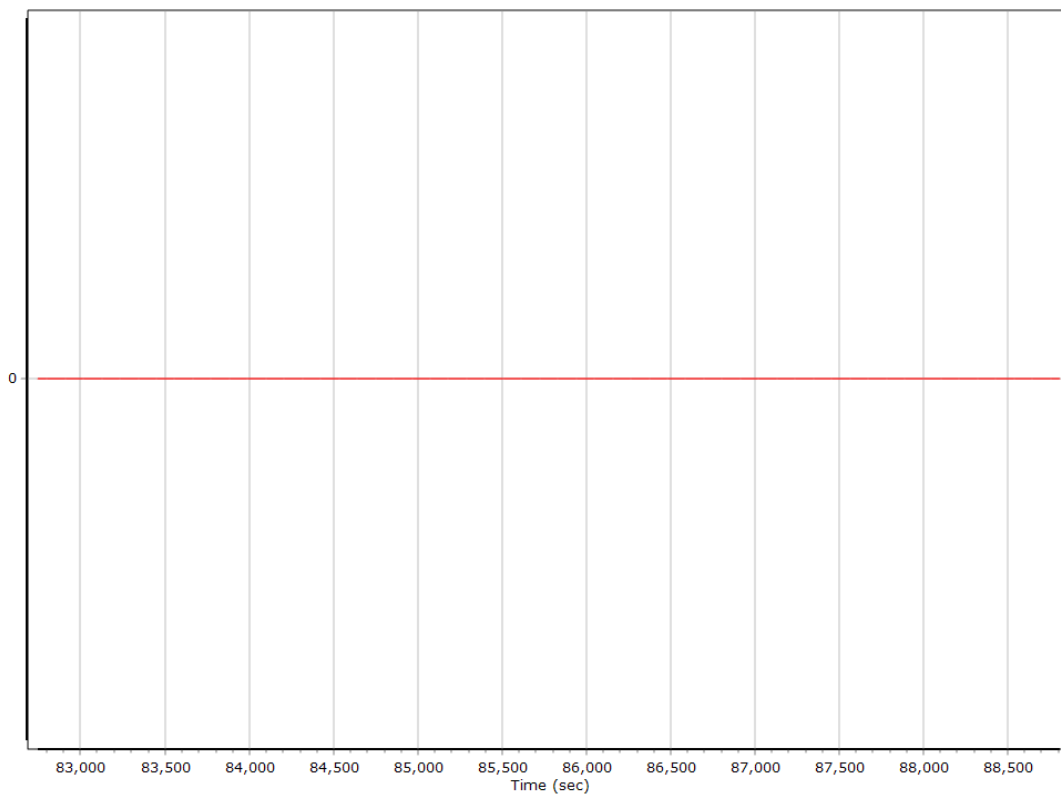
### Processing Mode



### Number of Satellites



### Baseline Length



## Export Summary Section 1

Export file	sbet_15317_NAD83(2011).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	Meter	
Export start time	82688.005 (09/18/2022 22:58:08)		
Export end time	88814.004 (09/19/2022 00:40:14)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid			
Zone			
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation			
Target Epoch	2010		

## EO Summary Section 1

EO file			
EO format	ZI Imaging		
Lever arm (m)	0.000	0.000	0.000
Boresight angles (arcmin)	0.0000	0.0000	0.0000
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	82688.005 (09/18/2022 22:58:08)		
EO end time	88814.004 (09/19/2022 00:40:14)		
Grid	Universal Transverse Mercator		
Zone	UTM North 15 (96W to 90W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2010		