

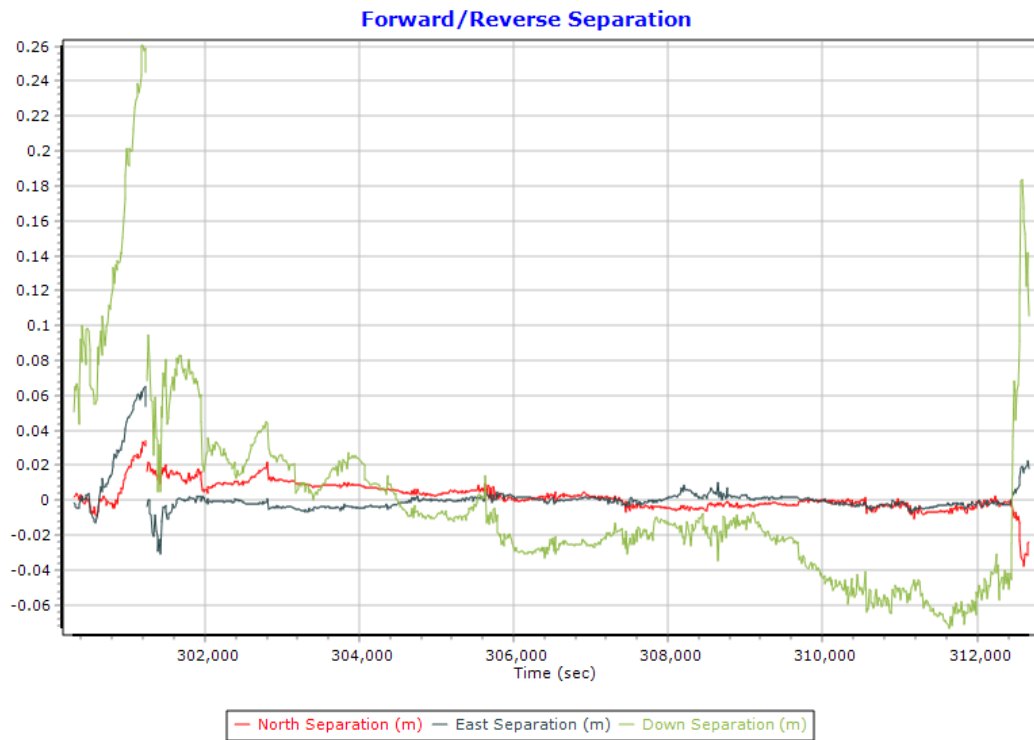
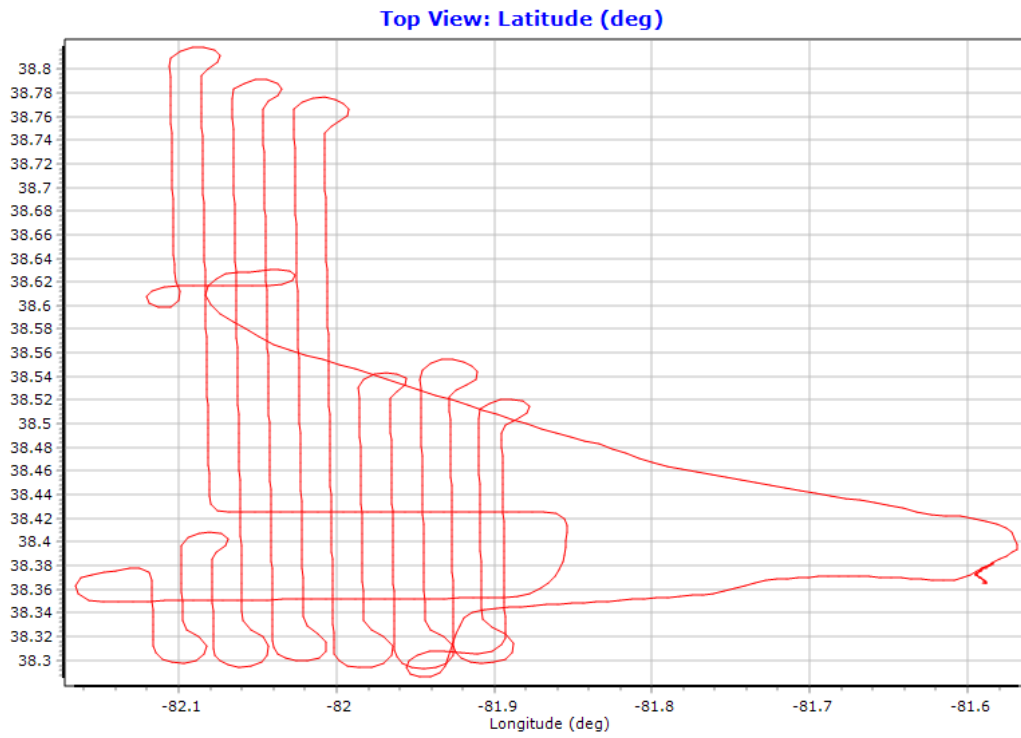
# Appendix B: Axis IMU and GPS Reports

## Table of Contents

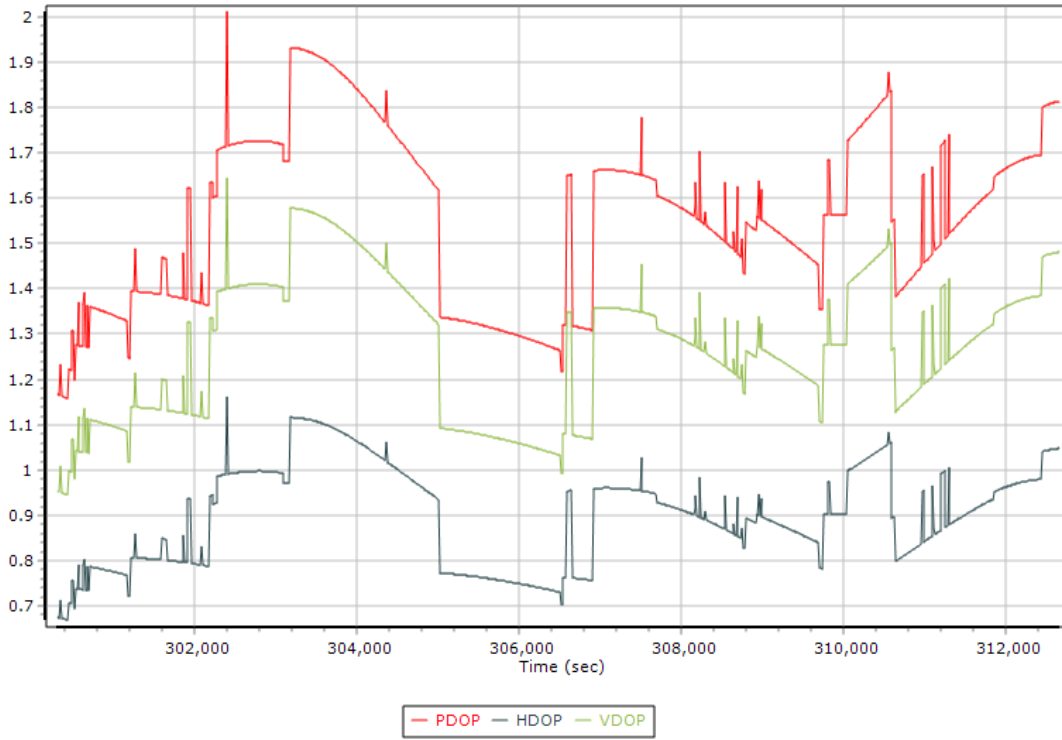
West Virginia West: GPS and IMU Processing Reports for Each Mission.....	3
April 11, 2018 Mission 1.....	3
April 11, 2018 Mission 2 .....	14
April 12, 2018 Mission 1 .....	24
April 12, 2018 Mission 2 .....	34
April 12, 2018 Mission 3.....	44
April 13, 2018 Mission 1 .....	54
April 13, 2018 Mission 2.....	64
May 09, 2018 Mission 2 .....	74
May 24, 2018 .....	84
Mercer: GPS and IMU Processing Reports for Each Mission .....	94
December 4, 2017 .....	94
December 6, 2018 Mission-1 .....	104
December 6, 2017-Mission-2 .....	114
South Central: GPS and IMU Processing Reports for Each Mission .....	126
November 16, 2017 .....	126
November 17, 2017 .....	136
November 21, 2017 .....	146
December 02, 2017.....	156
December 03, 2017 Mission 1.....	166
December 03, 2017 Mission 2 .....	176
December 07, 2017.....	186
December 22, 2017 Mission 1.....	196
December 22, 2017 Mission 2 .....	206
December 28, 2017 Mission 1.....	216
December 28, 2017 Mission 2 .....	226
December 29, 2017 .....	236
January 06, 2018.....	246
January 07, 2018 Mission 1.....	256
January 07, 2018 mission 2.....	266
March 31, 2018 .....	275

## **West Virginia West: GPS and IMU Processing Reports for Each Mission**

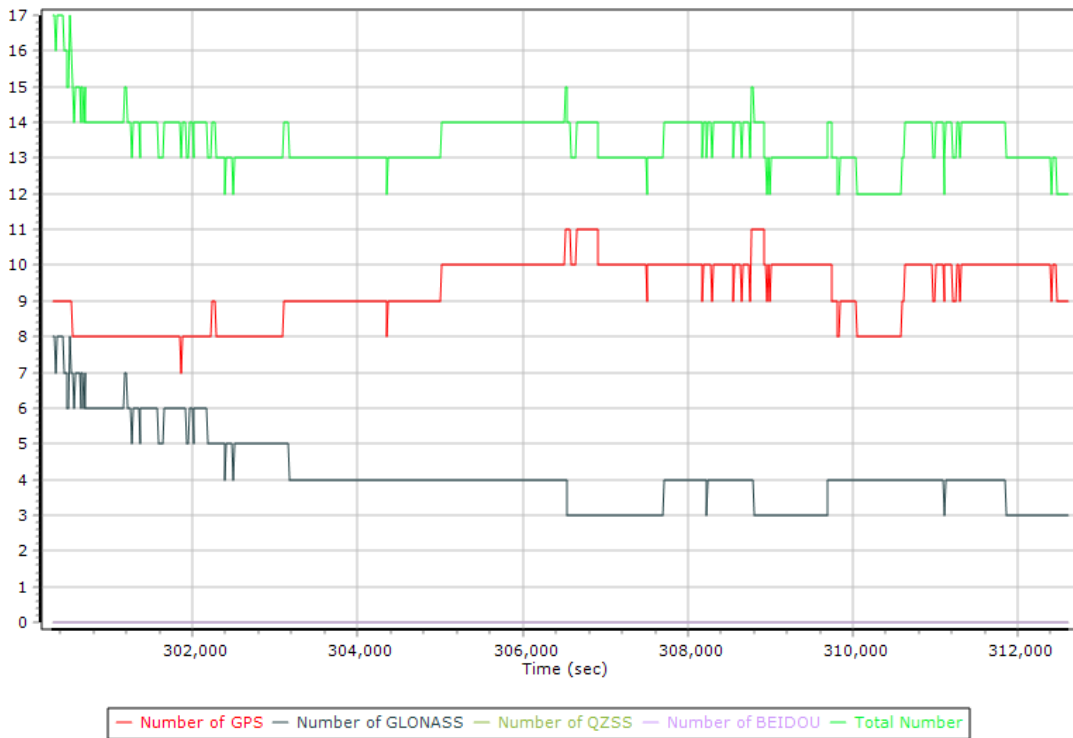
**APRIL 11, 2018 MISSION 1**



### DOP



### Number of SVs in solution



## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\20180411\_WV\_A

Solution Type: IN-Fusion SmartBase

Fixed: 12342	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 12392  
No processed position: 50

Fwd/Rev Separation RMS Values (m):

North: 0.008  
East: 0.010  
Height: 0.055

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 6195 occurrences

North: 0.005  
East: 0.003  
Height: 0.018

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 100

0.10 - 0.30 m: 0  
0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

DOP over Tol: 1.56%

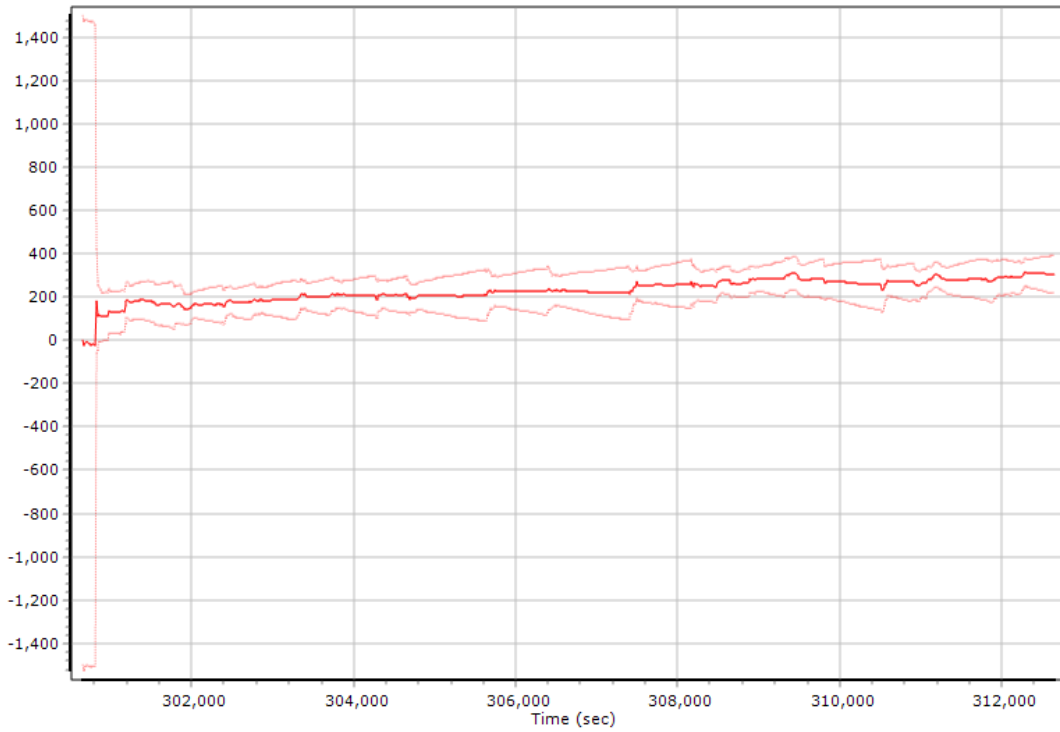
Baseline Distances (km):

Maximum: 41.65  
Minimum: 0.43  
Average: 18.55  
First Epoch: 31.68  
Last Epoch: 31.69

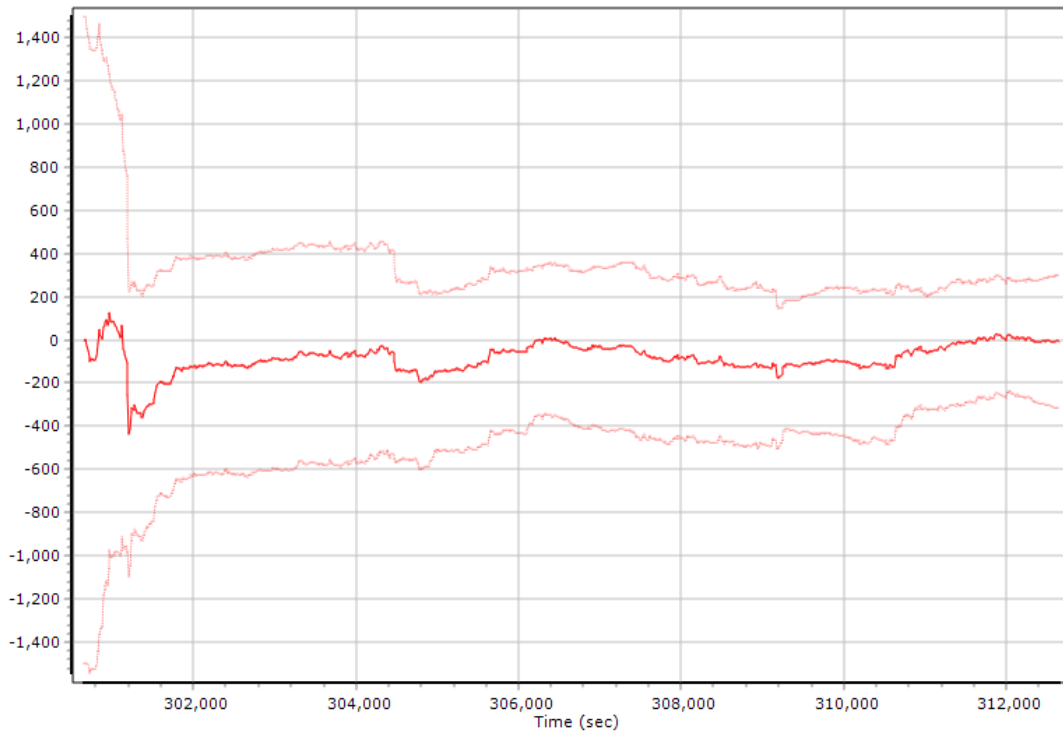
CORS Base Stations

Station	Original			Adjusted		
WVRA	N38°56'28.89180"	W81°45'04.87006"	147.989			
WVNR	N38°53'44.53451"	W79°51'30.29520"	581.500	N38°53'44.53459"	W79°51'30.29525"	581.493
WVLE	N37°49'20.23030"	W80°25'18.58201"	655.200	N37°49'20.23021"	W80°25'18.58214"	655.205
WVBR	N39°18'28.91348"	W80°16'38.64481"	268.985	N39°18'28.91344"	W80°16'38.64494"	268.982
PKTN	N39°02'43.69374"	W83°01'27.86022"	143.193	N39°02'43.69376"	W83°01'27.86078"	143.195
OHMO	N39°46'36.49571"	W81°06'08.50622"	336.610	N39°46'36.49589"	W81°06'08.50634"	336.634
OHHI	N39°12'00.76553"	W83°35'50.52386"	308.547	N39°12'00.76557"	W83°35'50.52418"	308.559
KYMH	N38°11'02.90319"	W83°26'11.51655"	221.538	N38°11'02.90325"	W83°26'11.51675"	221.560
KYGB	N38°28'50.22275"	W82°52'24.00517"	183.039	N38°28'50.22351"	W82°52'24.00663"	183.082
COLB	N39°57'35.14094"	W83°02'44.77661"	185.182	N39°57'35.14094"	W83°02'44.77684"	185.214
BLA1	N37°12'40.85438"	W80°25'13.83289"	605.692	N37°12'40.85434"	W80°25'13.83278"	605.705

**x accelerometer bias (micro-g)**

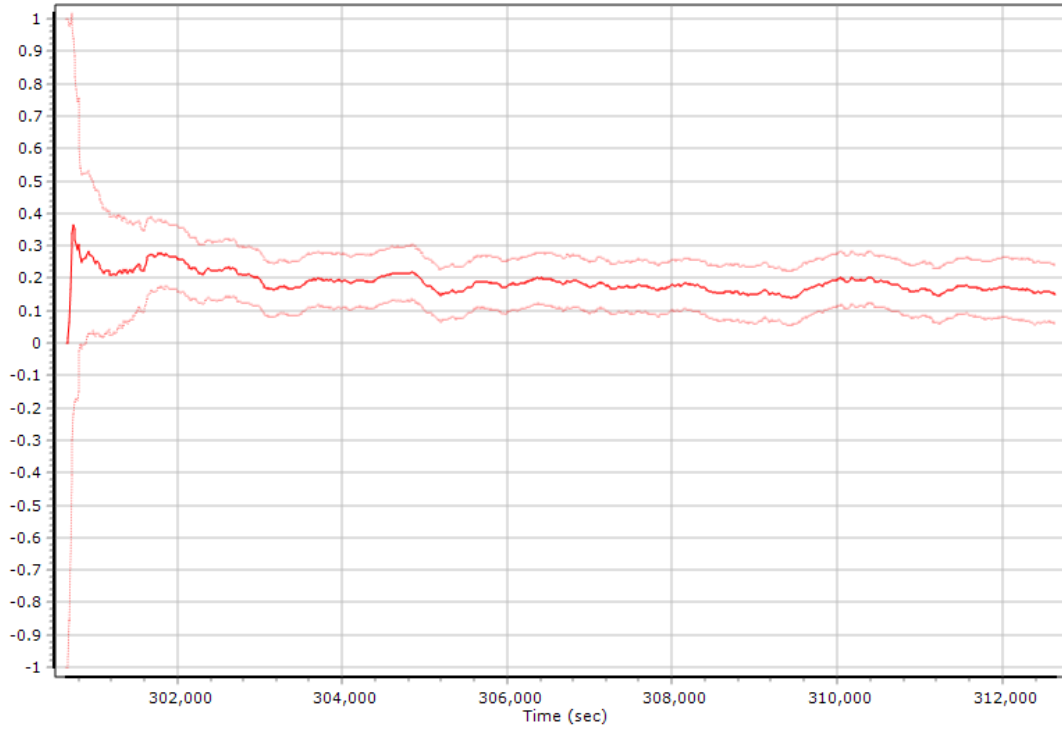


**x accelerometer scale error (ppm)**

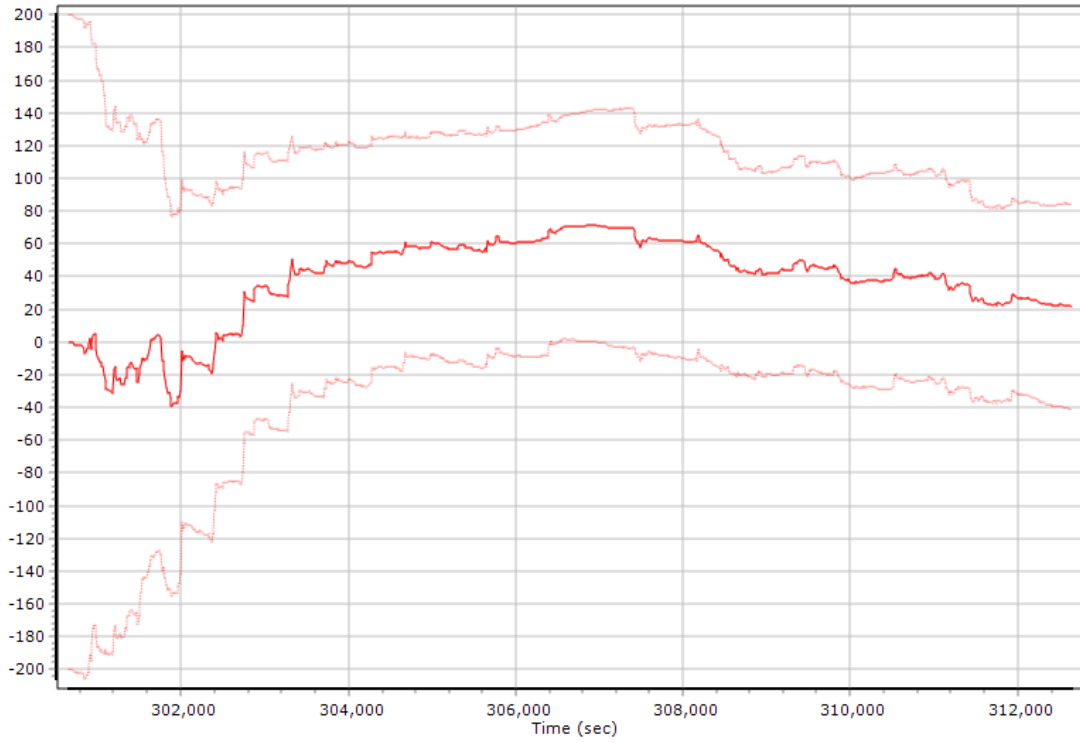




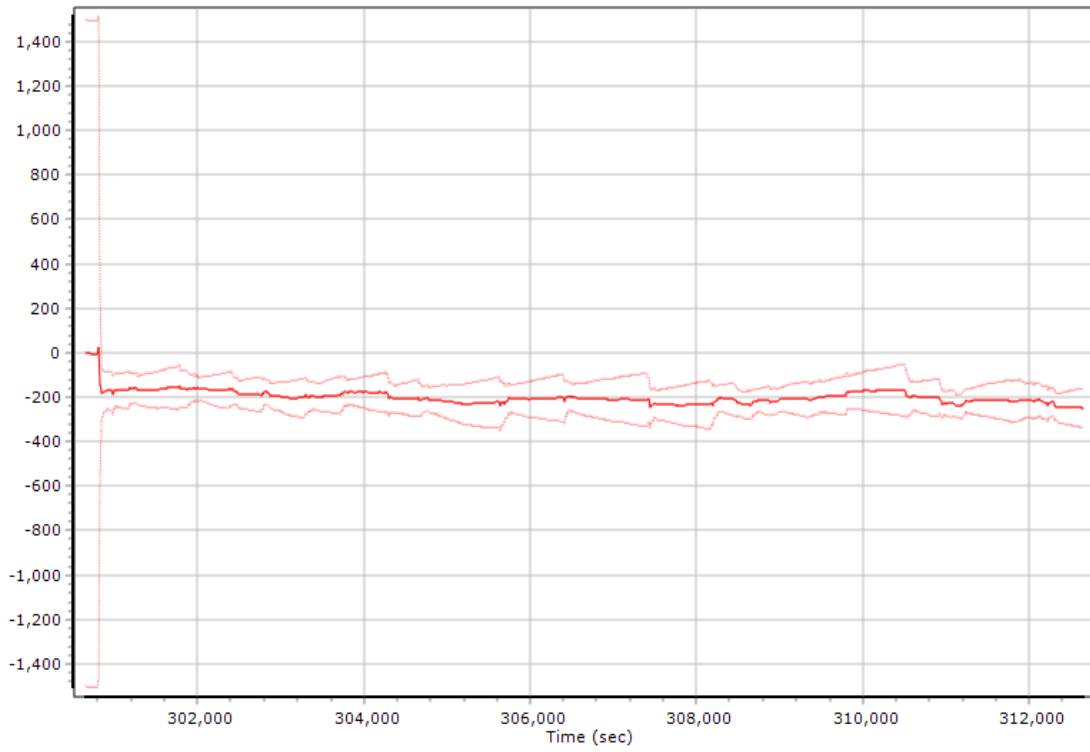
**x gyro bias (deg/hr)**



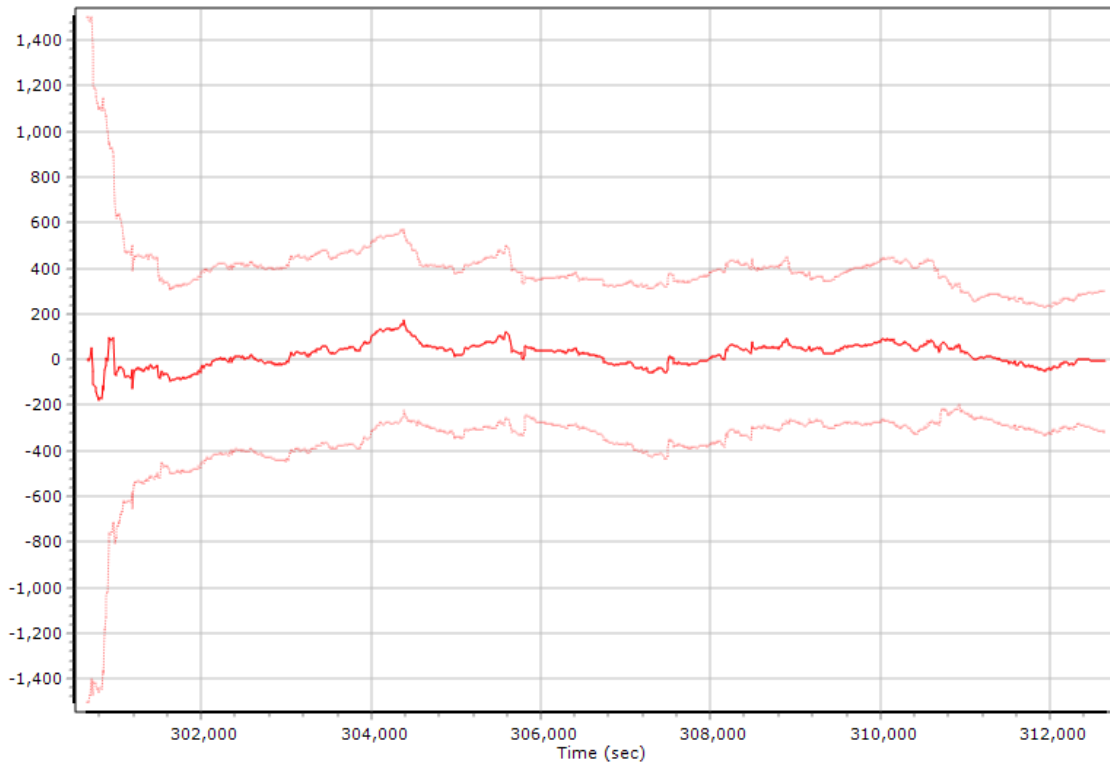
**x gyro scale error (ppm)**



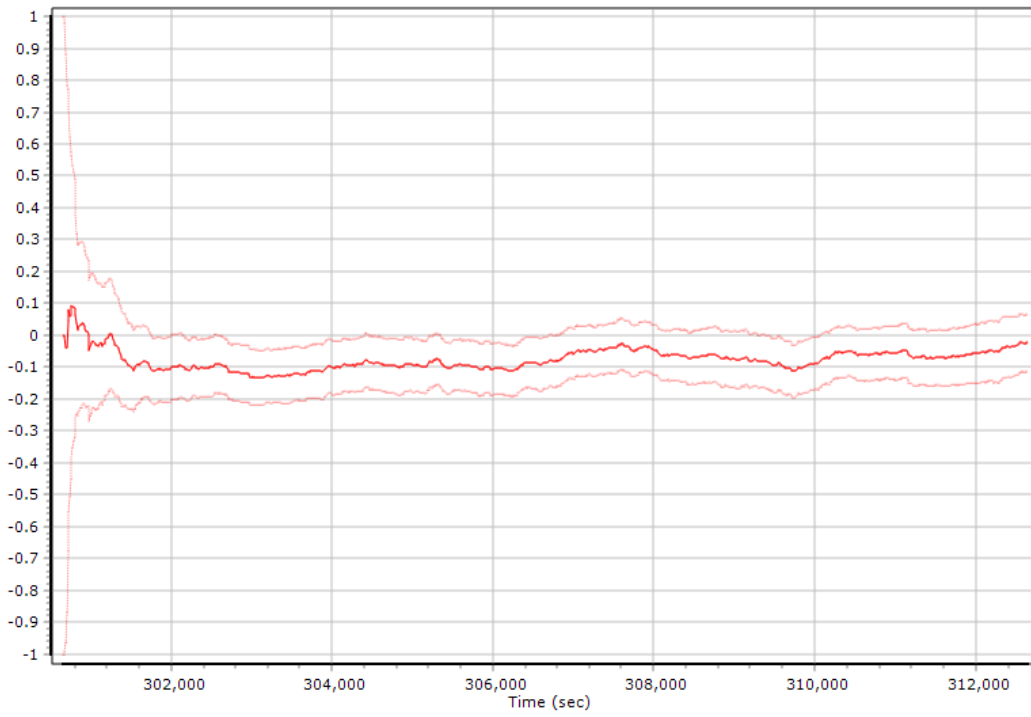
**y accelerometer bias (micro-g)**



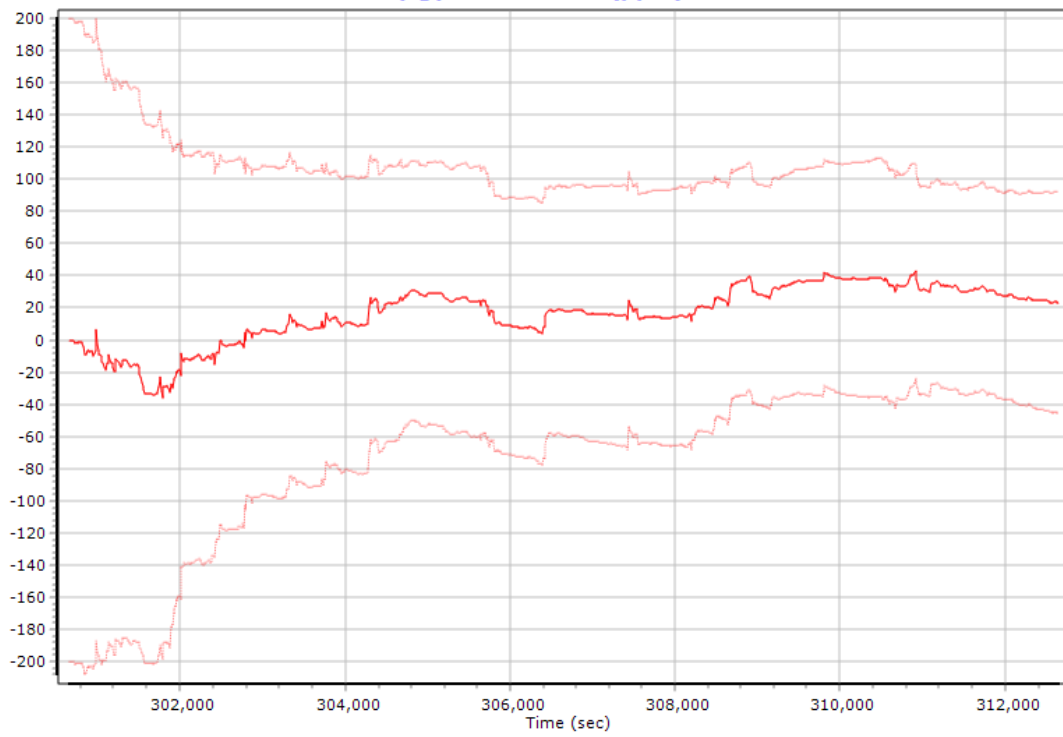
**y accelerometer scale error (ppm)**



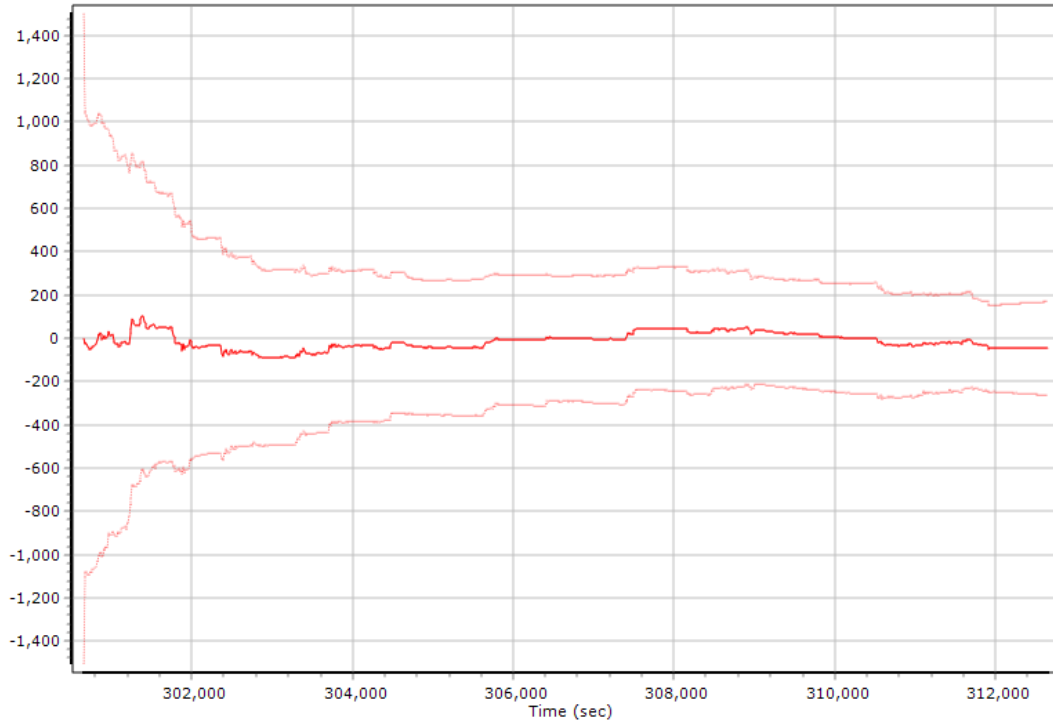
**y gyro bias (deg/hr)**



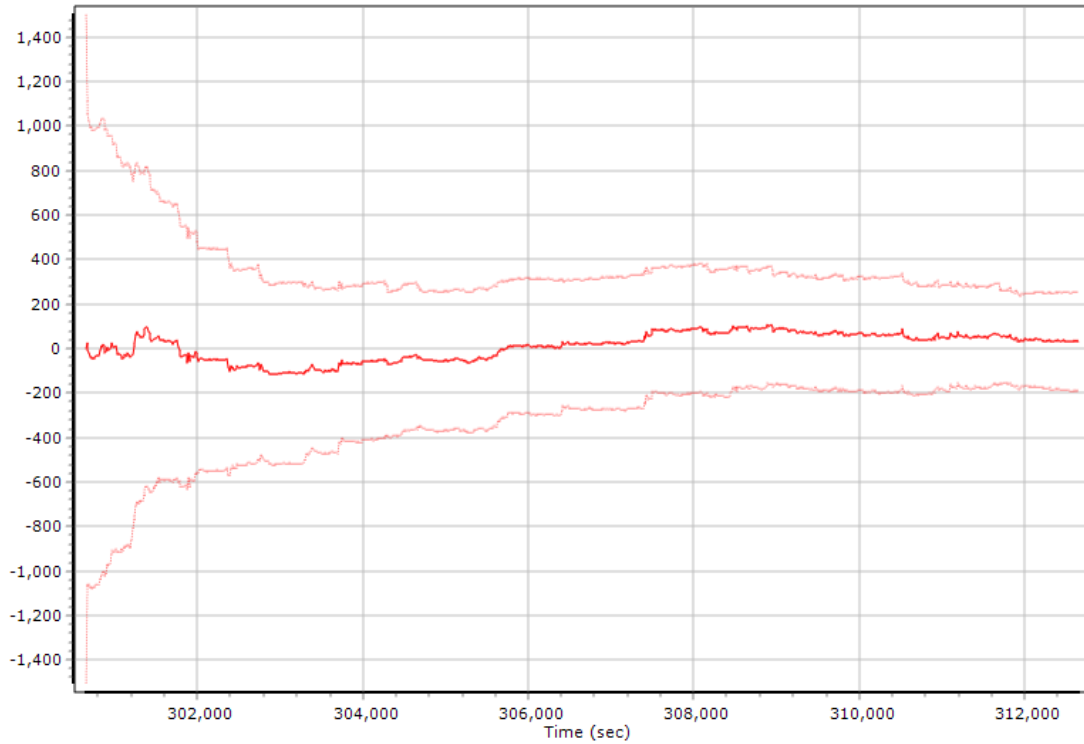
**y gyro scale error (ppm)**



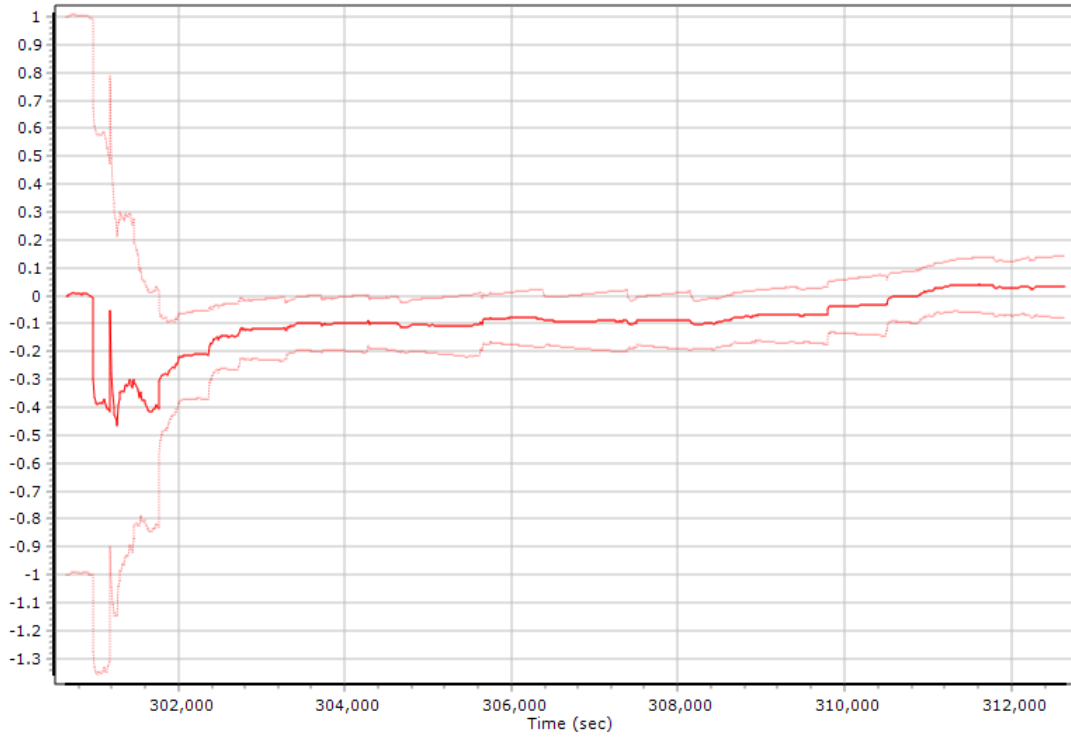
**z accelerometer bias (micro-g)**



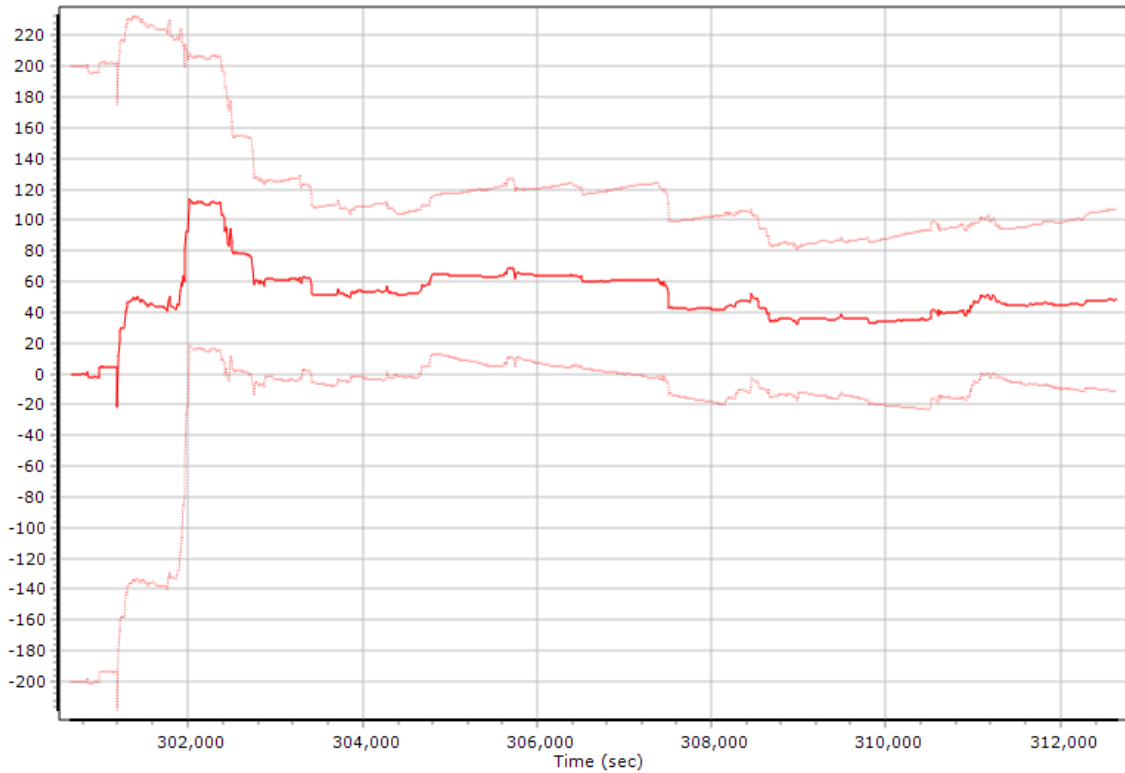
**z accelerometer scale error (ppm)**



**z gyro bias (deg/hr)**

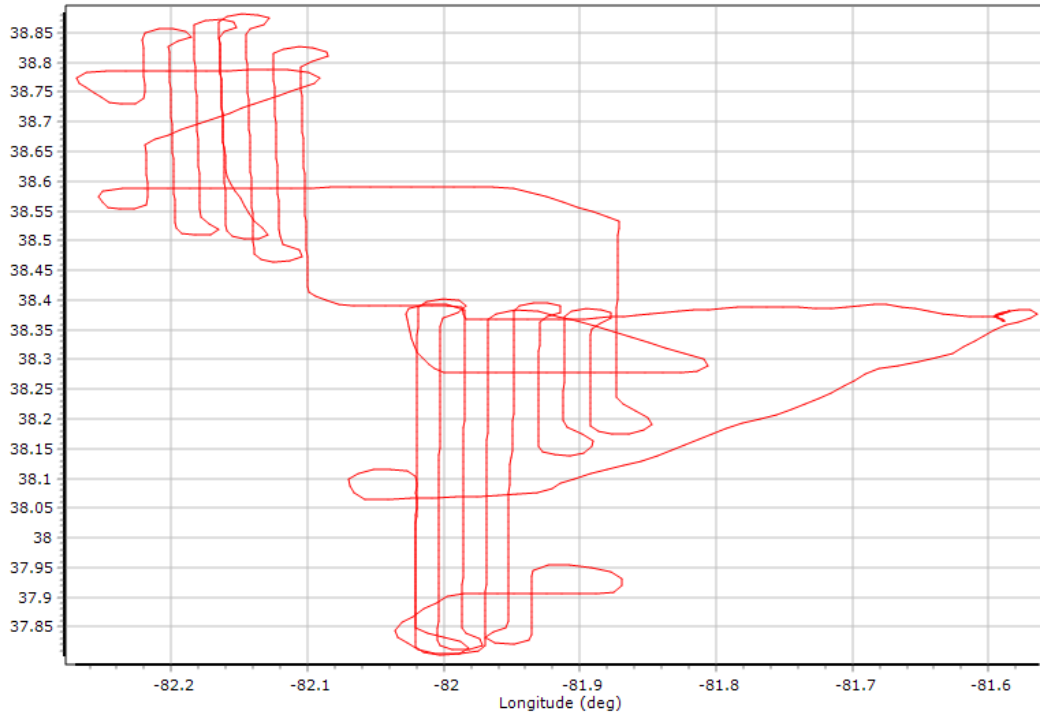


**z gyro scale error (ppm)**

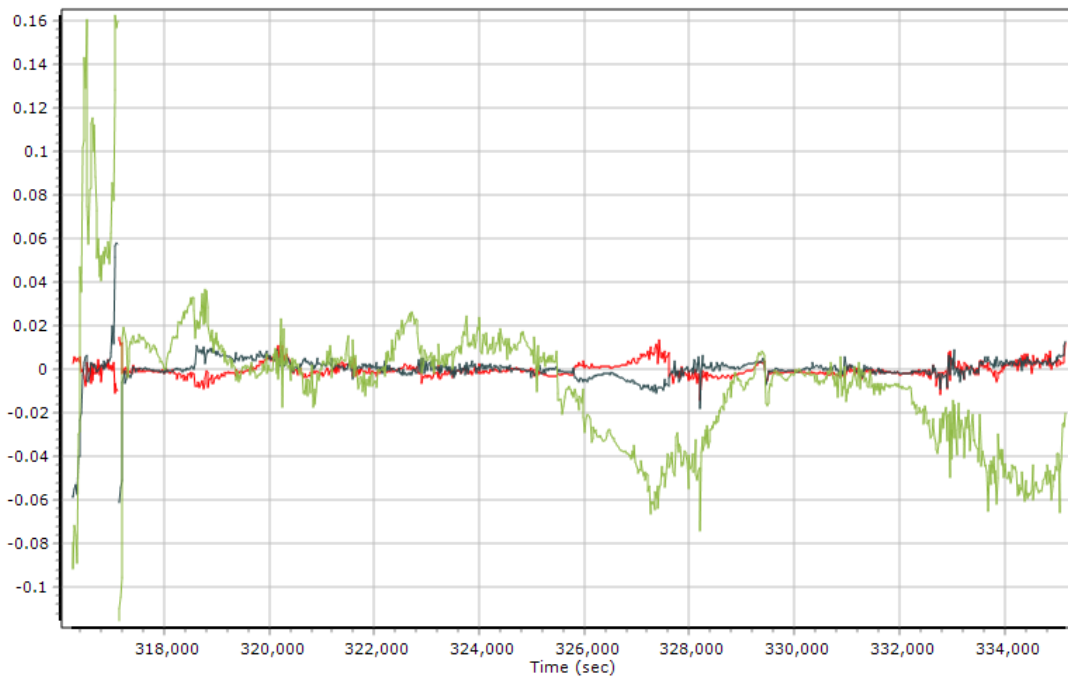


### APRIL 11, 2018 MISSION 2

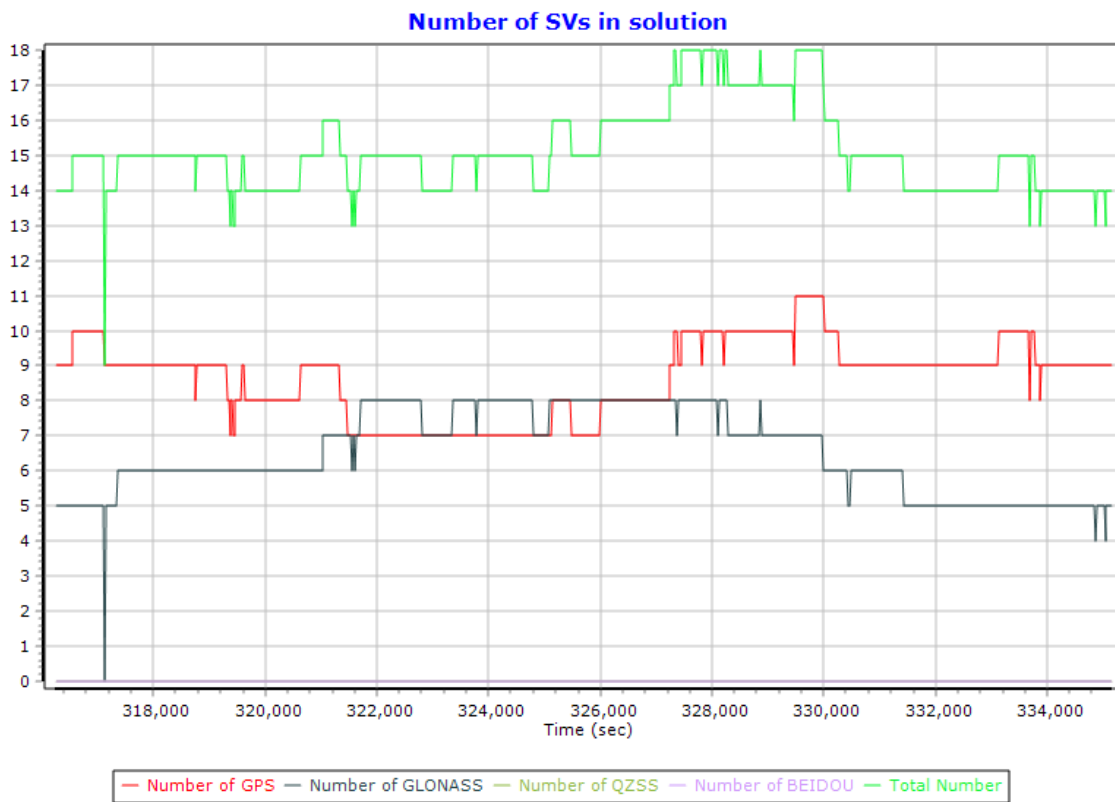
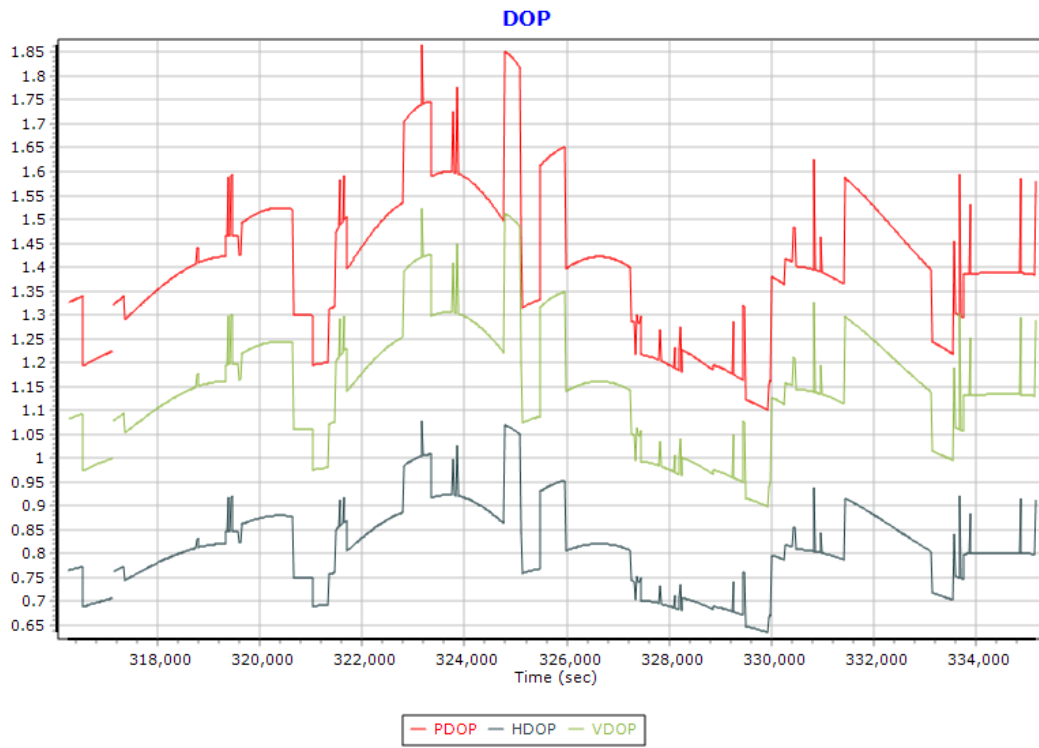
Top View: Latitude (deg)



Forward/Reverse Separation



— North Separation (m) — East Separation (m) — Down Separation (m)



## Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\20180411\_WV\_B

Solution Type: IN-Fusion SmartBase

Fixed: 18942 (99.99%)  
Float: 0 (0.00%)  
No Solution: 1 (0.01%)

Number of Epochs:

Total in RAW file: 18963  
No processed position: 21

Fwd/Rev Separation RMS Values (m):

North: 0.003  
East: 0.008  
Height: 0.032

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 9481 occurrences

North: 0.003  
East: 0.003  
Height: 0.023

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 100  
0.10 - 0.30 m: 0  
0.30 - 1.00 m: 0



1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

DOP over Tol: 1.40%

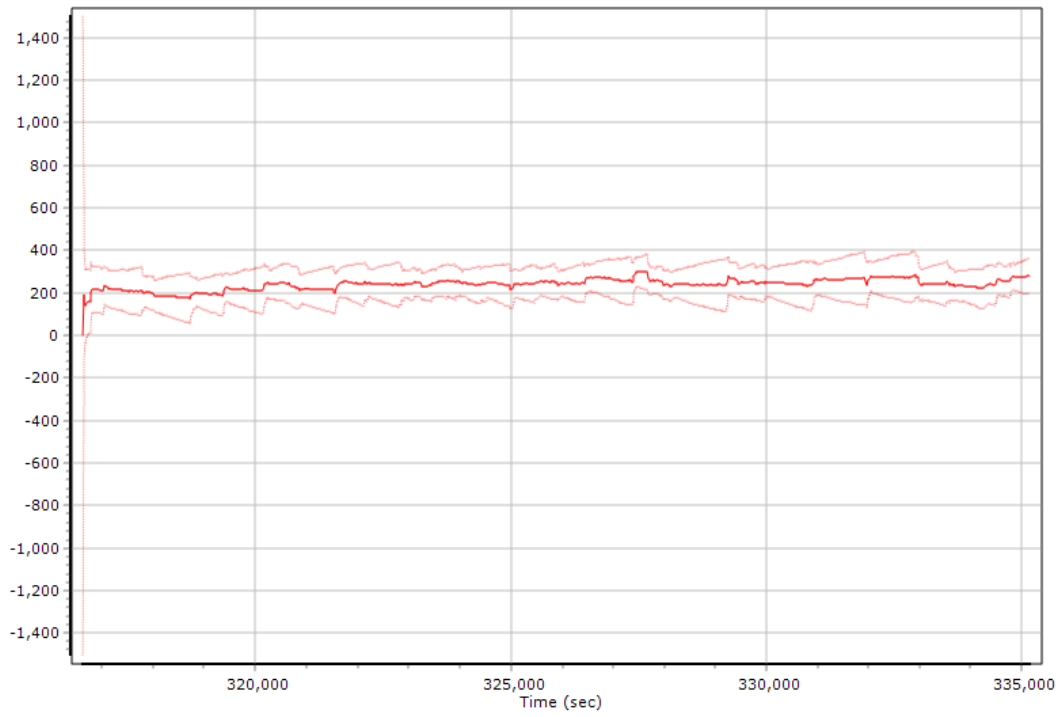
Baseline Distances (km):

Maximum: 61.12  
Minimum: 0.24  
Average: 31.02  
First Epoch: 34.46  
Last Epoch: 34.45

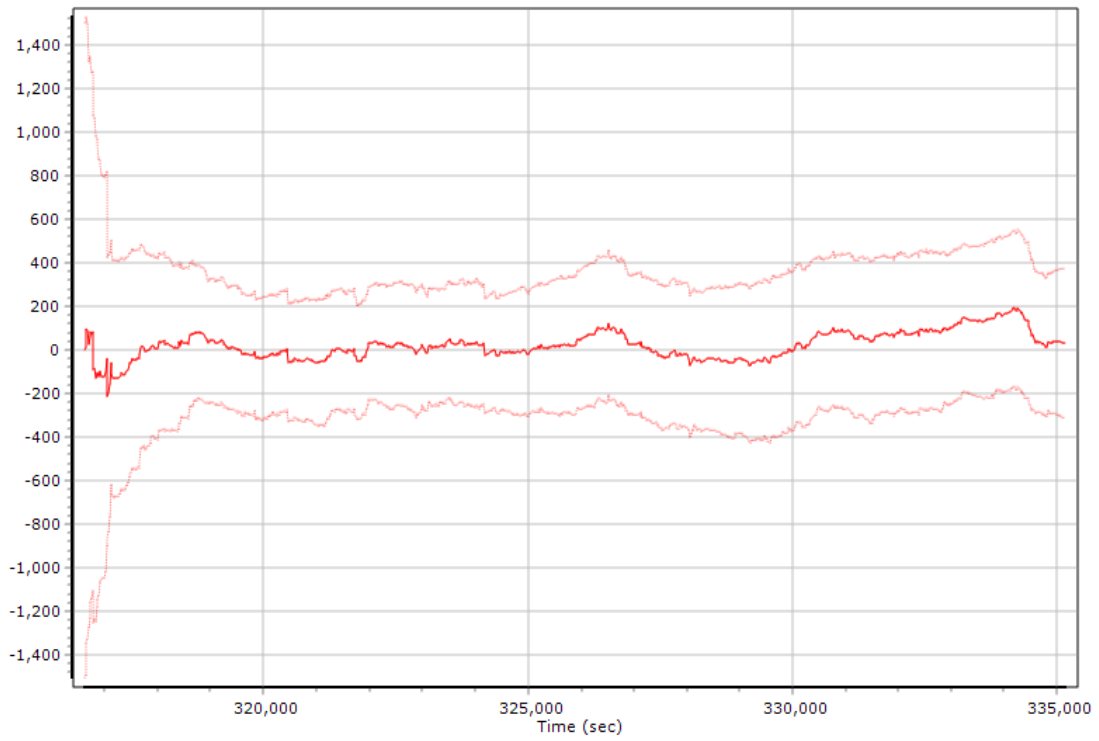
CORS Base Stations

Station	Original			Adjusted		
WVHU	N38°25'22.64487"	W82°25'28.94622"	186.420			
WVRA	N38°56'28.89163"	W81°45'04.86938"	147.975	N38°56'28.89153"	W81°45'04.86992"	147.991
WVOH	N37°59'53.75060"	W81°07'55.81223"	596.194	N37°59'53.75040"	W81°07'55.81230"	596.207
WVNR	N38°53'44.53451"	W79°51'30.29520"	581.500	N38°53'44.53439"	W79°51'30.29523"	581.507
WVLE	N37°49'20.23030"	W80°25'18.58201"	655.200	N37°49'20.22998"	W80°25'18.58206"	655.214
WVHA	N39°14'52.29167"	W81°02'37.87166"	288.887	N39°14'52.29102"	W81°02'37.87182"	288.906
WVAT	N37°25'42.67847"	W81°04'04.40395"	704.674	N37°25'42.67829"	W81°04'04.40402"	704.692
STKR	N39°19'33.85352"	W82°06'25.65784"	176.782	N39°19'33.85295"	W82°06'25.65704"	176.762
PKTN	N39°02'43.69374"	W83°01'27.86022"	143.193	N39°02'43.69362"	W83°01'27.86075"	143.190
KYTL	N37°29'00.20373"	W82°32'07.72255"	185.679	N37°29'00.20349"	W82°32'07.72276"	185.710
KYMH	N38°11'02.90319"	W83°26'11.51655"	221.538	N38°11'02.90305"	W83°26'11.51654"	221.567
KYGB	N38°28'50.22275"	W82°52'24.00517"	183.039	N38°28'50.22334"	W82°52'24.00656"	183.084
GALP	N38°50'39.17675"	W82°16'40.11957"	168.232	N38°50'39.17666"	W82°16'40.11961"	168.241

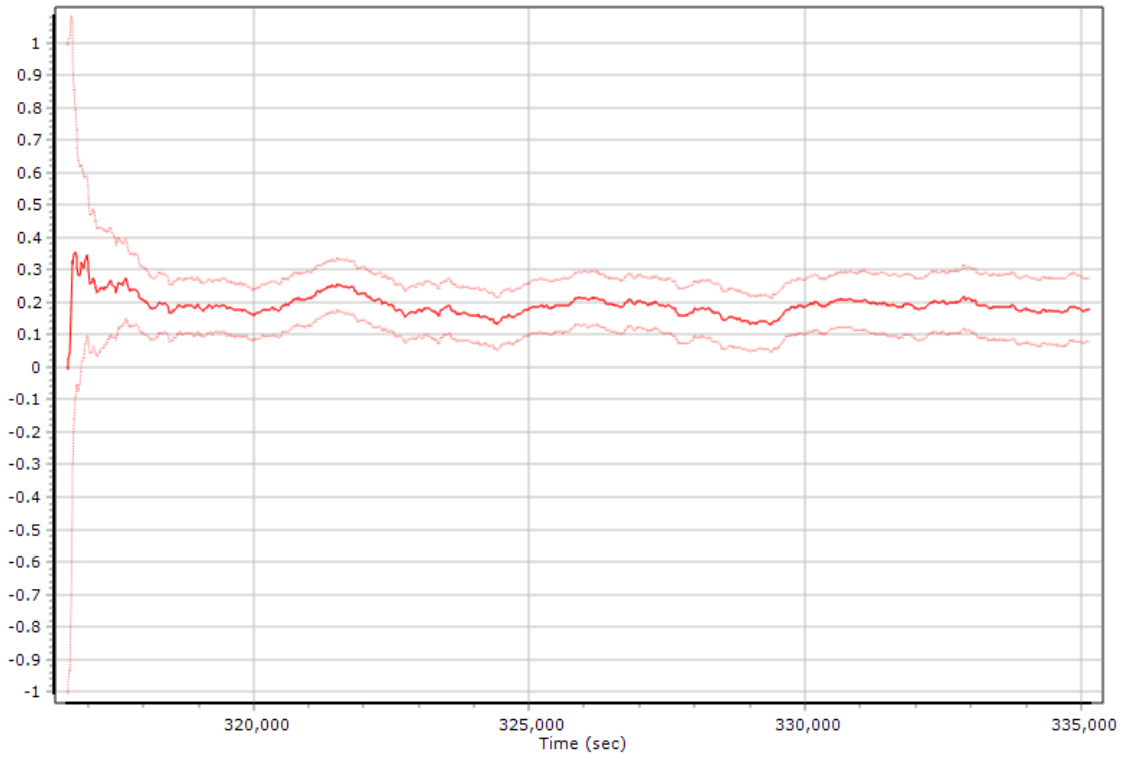
**x accelerometer bias (micro-g)**



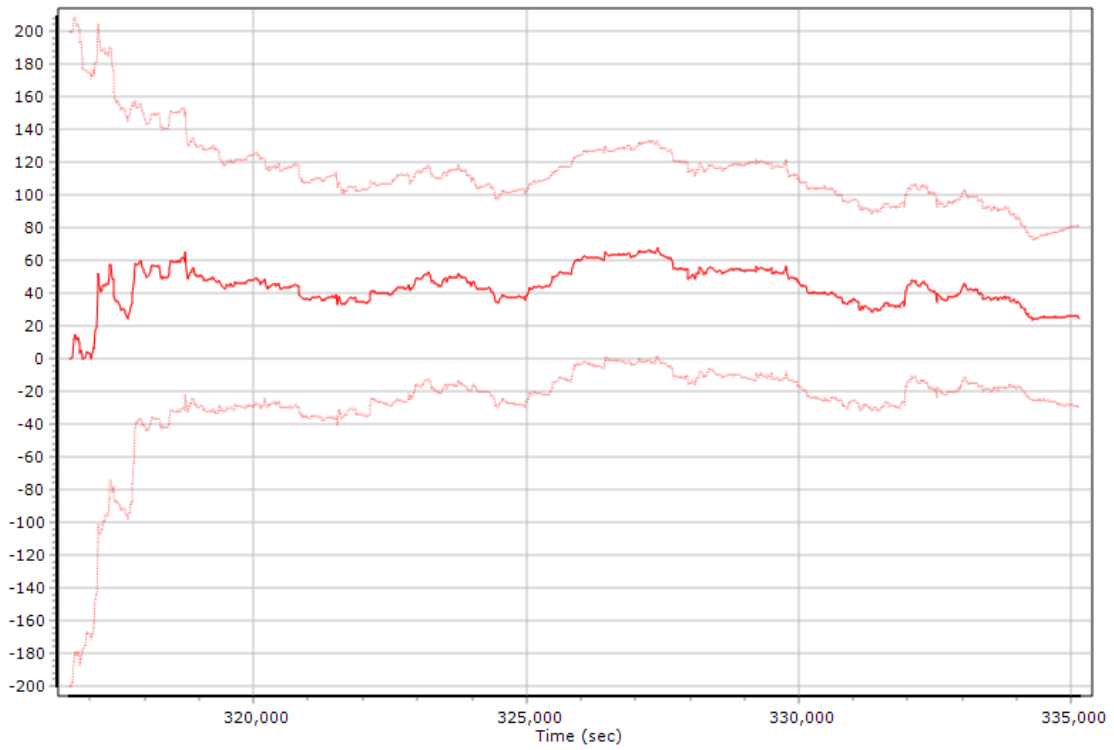
**x accelerometer scale error (ppm)**



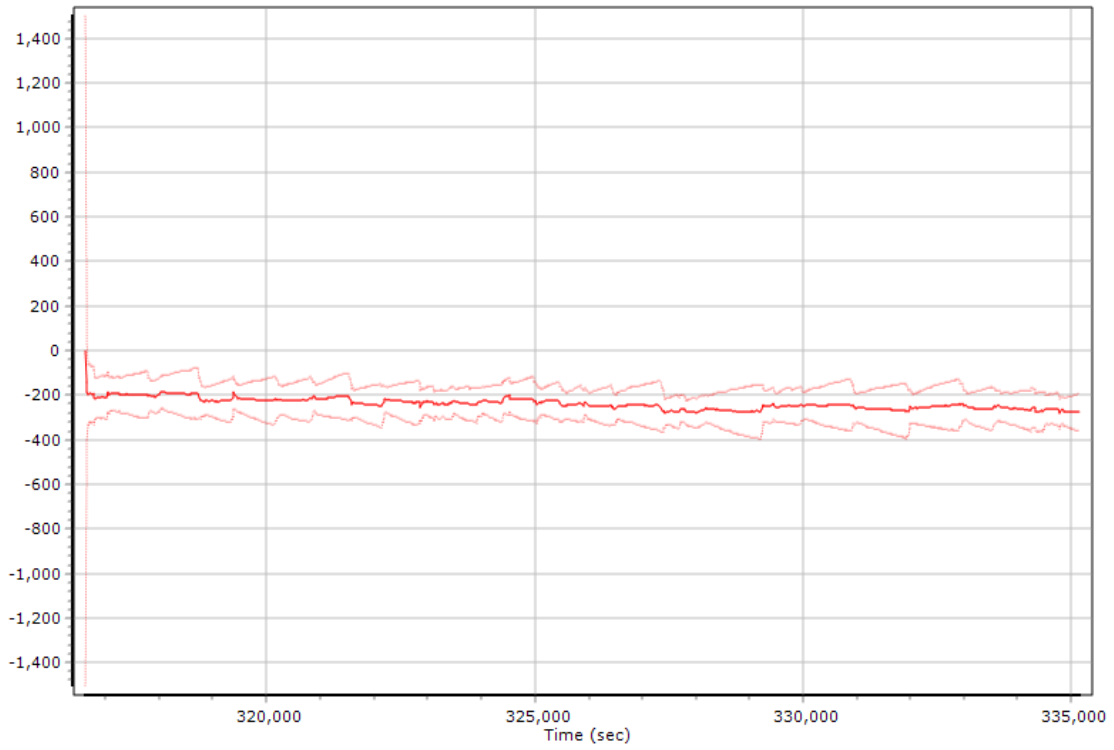
**x gyro bias (deg/hr)**



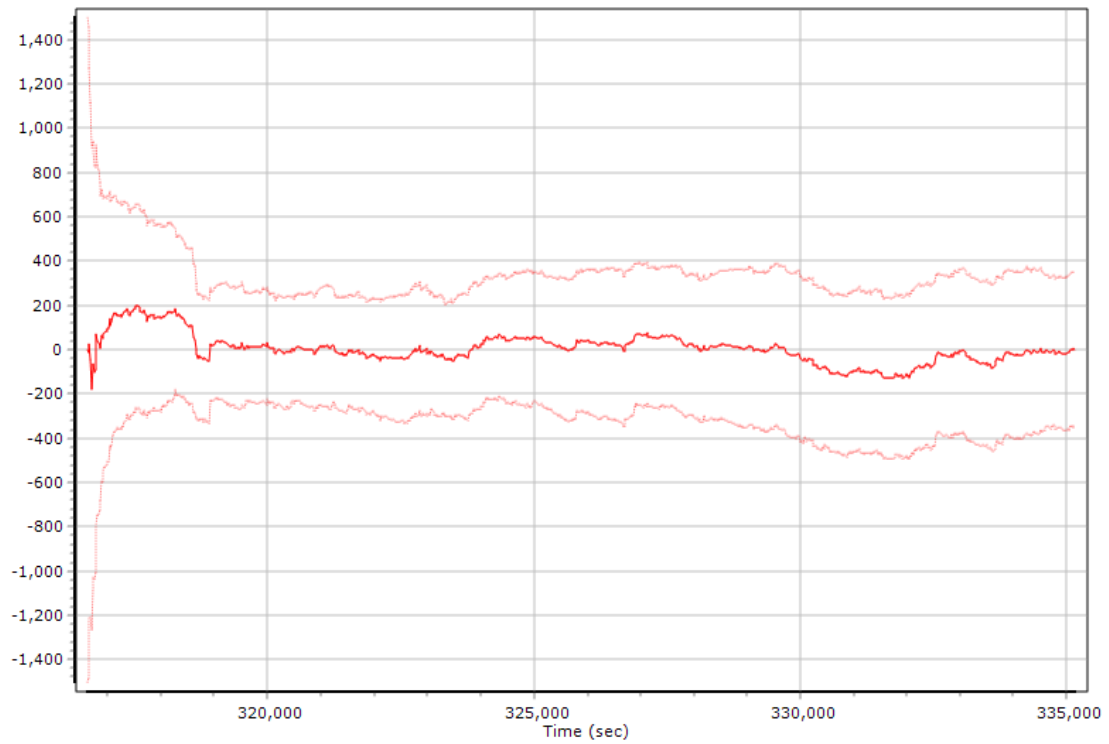
**x gyro scale error (ppm)**



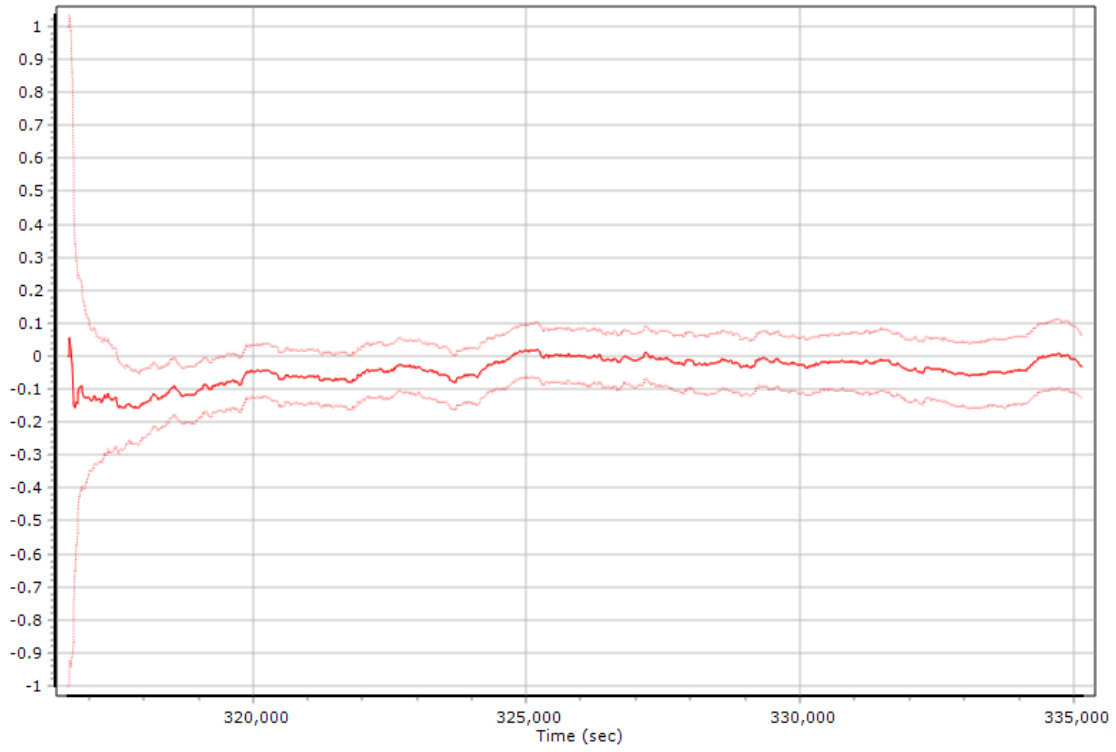
**y accelerometer bias (micro-g)**



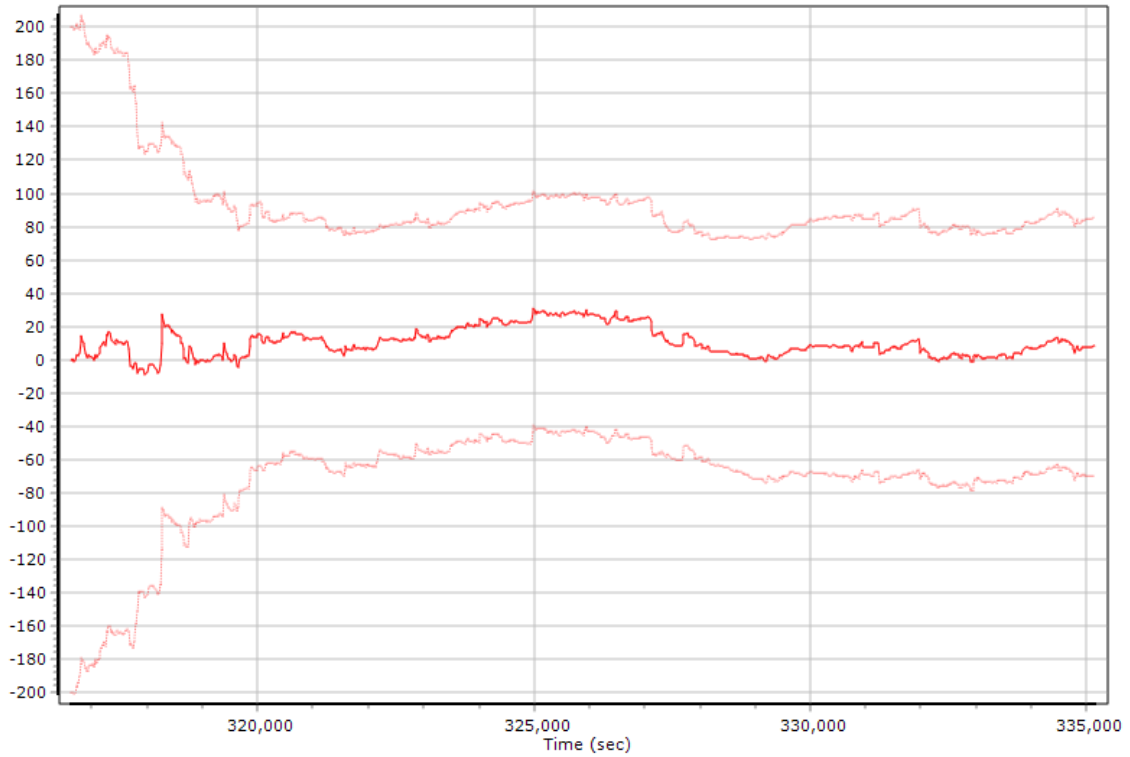
**y accelerometer scale error (ppm)**



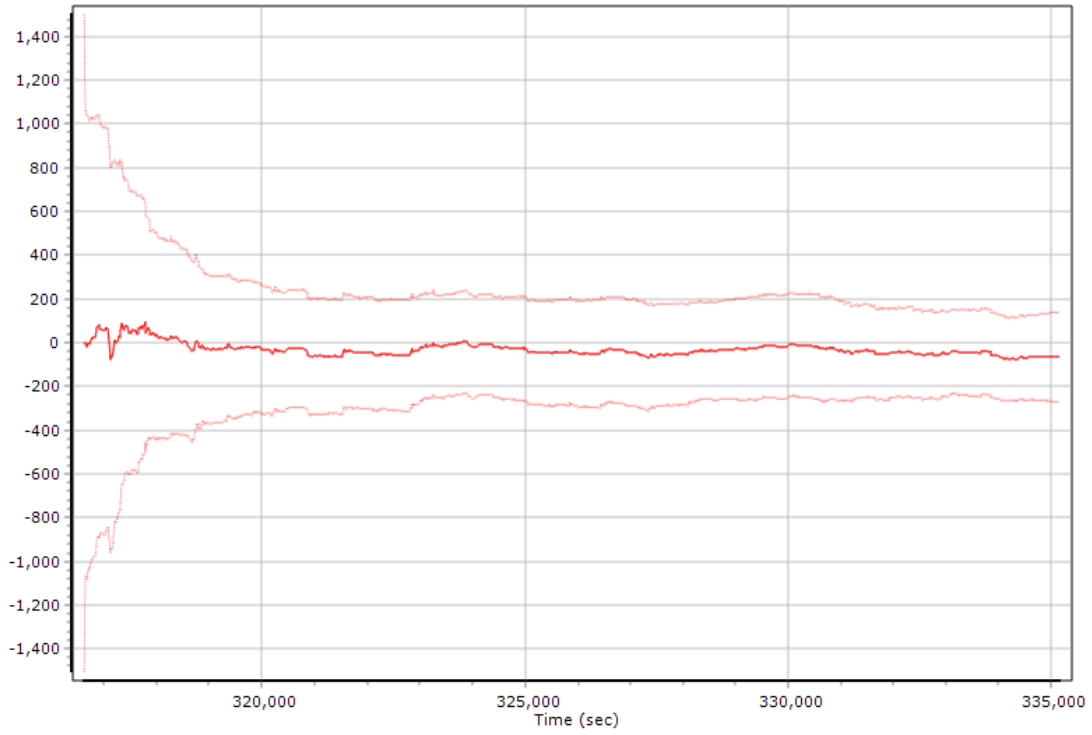
**y gyro bias (deg/hr)**



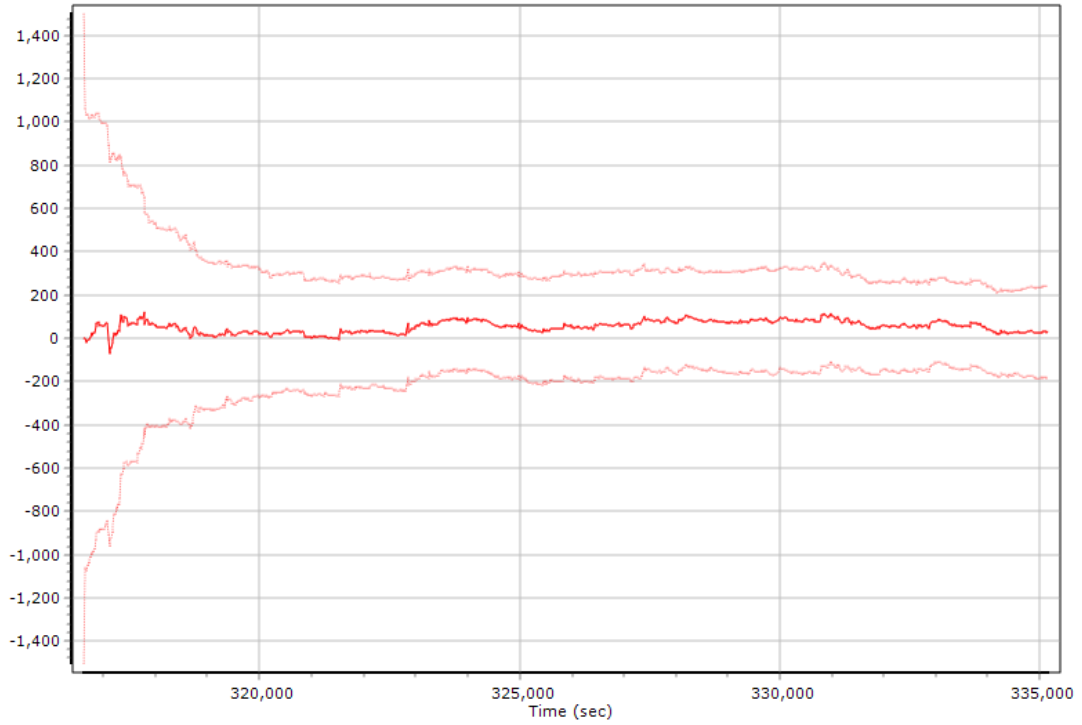
**y gyro scale error (ppm)**



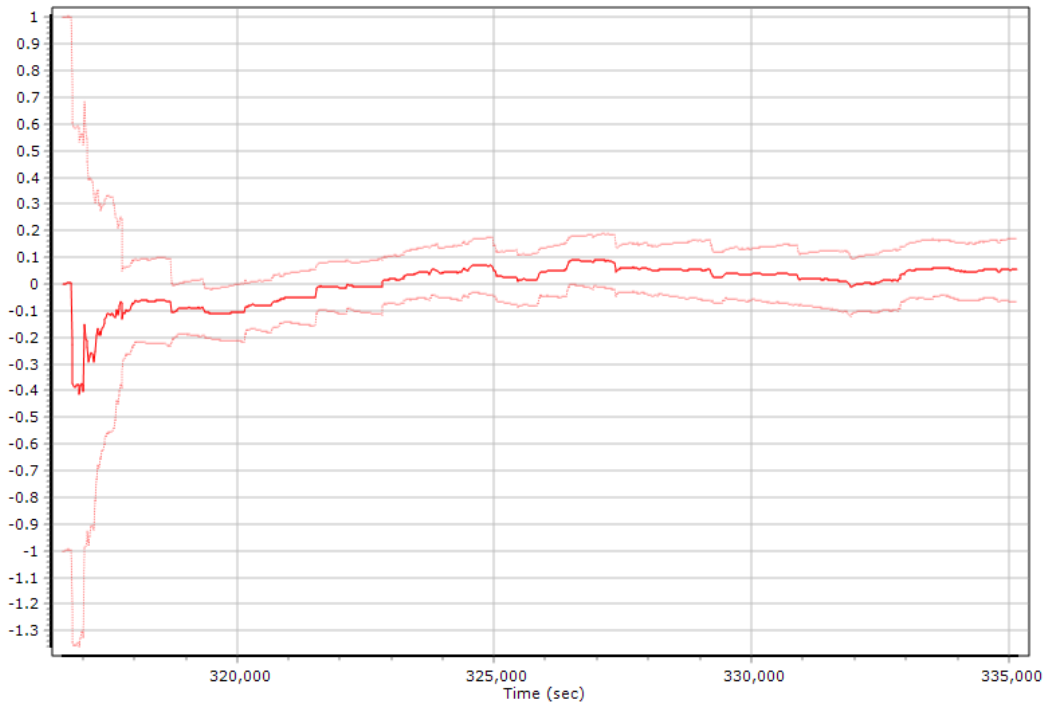
**z accelerometer bias (micro-g)**



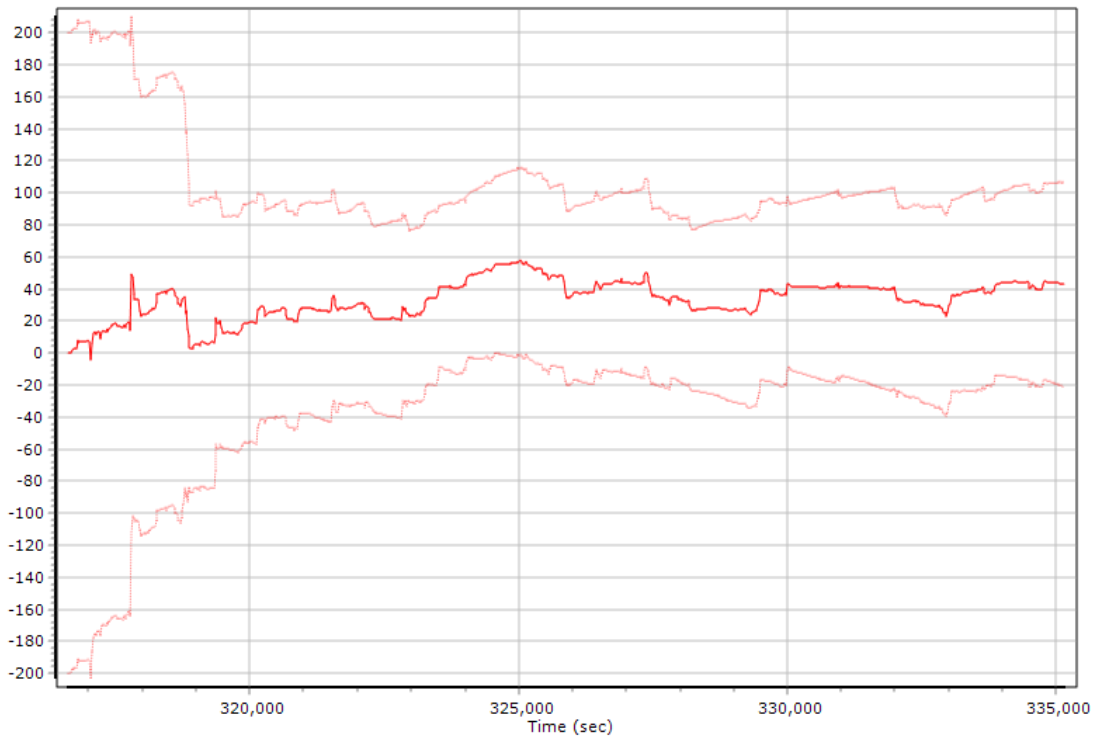
**z accelerometer scale error (ppm)**



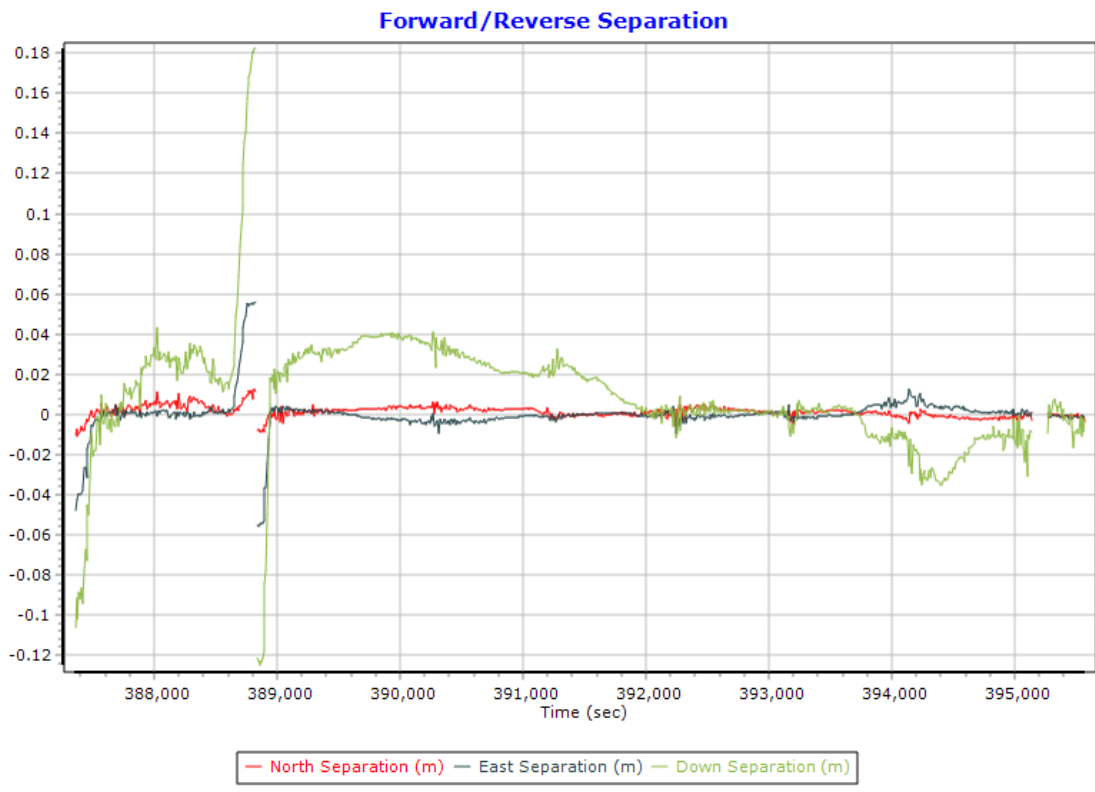
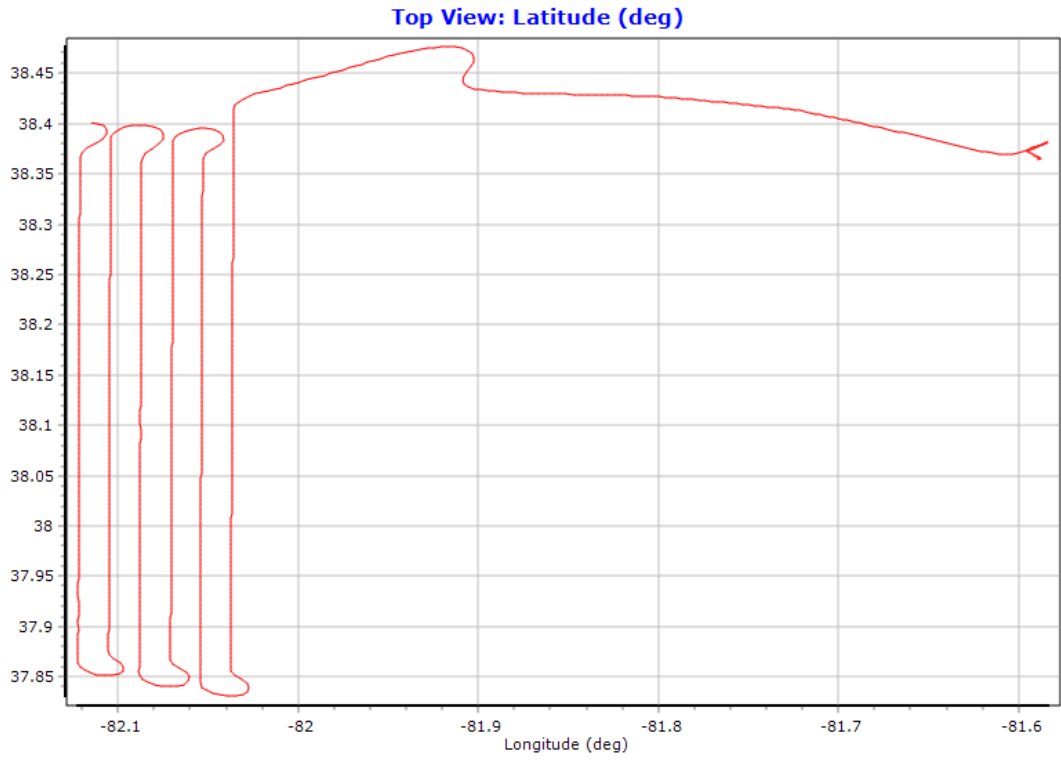
**z gyro bias (deg/hr)**



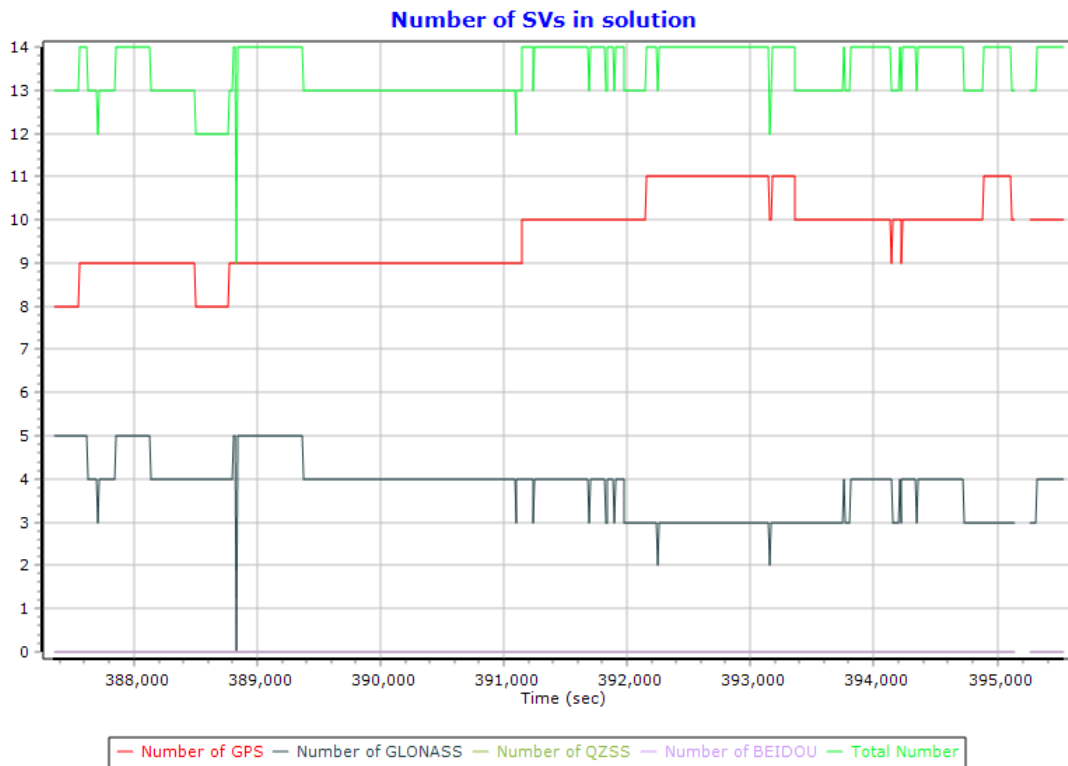
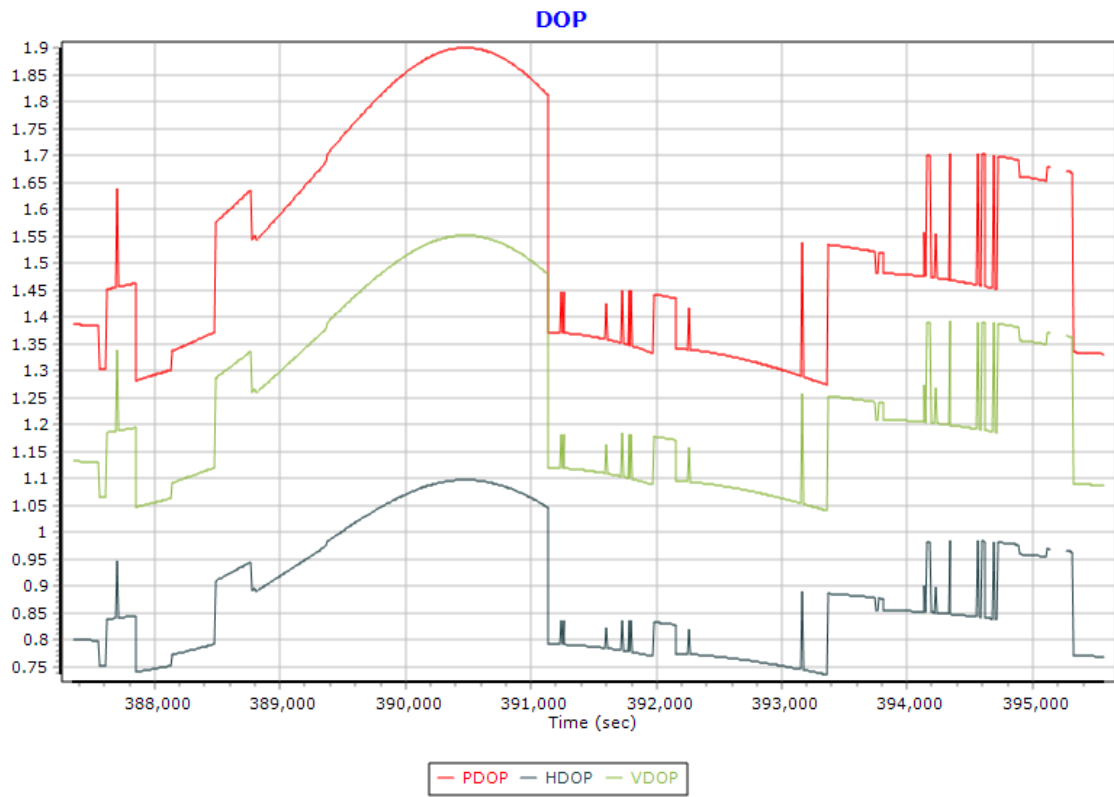
**z gyro scale error (ppm)**



### APRIL 12, 2018 MISSION 1







## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\20180412\_WV\_A

Solution Type: IN-Fusion SmartBase

Fixed: 8057	(98.46%)
Float: 0	(0.00%)
No Solution: 126	(1.54%)

Number of Epochs:

Total in RAW file: 8230  
No processed position: 173

Fwd/Rev Separation RMS Values (m):

North: 0.003  
East: 0.010  
Height: 0.033

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 4101 occurrences

North: 0.002  
East: 0.002  
Height: 0.022

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 100

0.10 - 0.30 m: 0  
0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

DOP over Tol: 1.53%

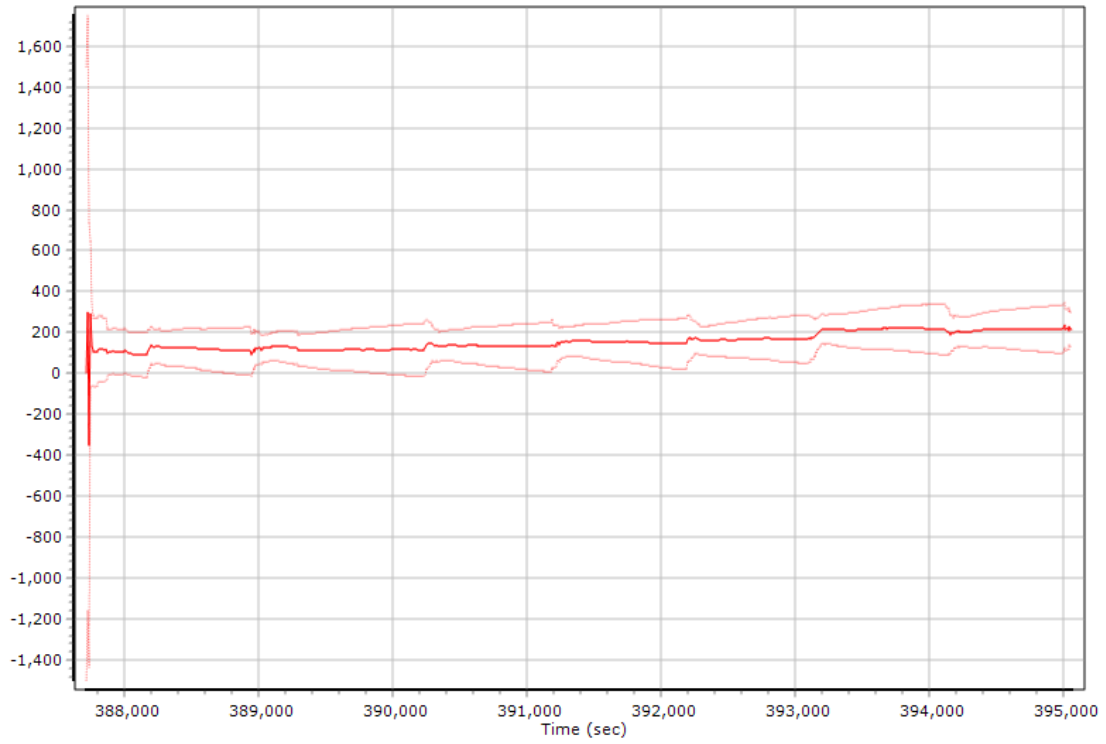
Baseline Distances (km):

Maximum: 41  
Minimum: 4.54  
Average: 23.63  
First Epoch: 39.6  
Last Epoch: 25.61

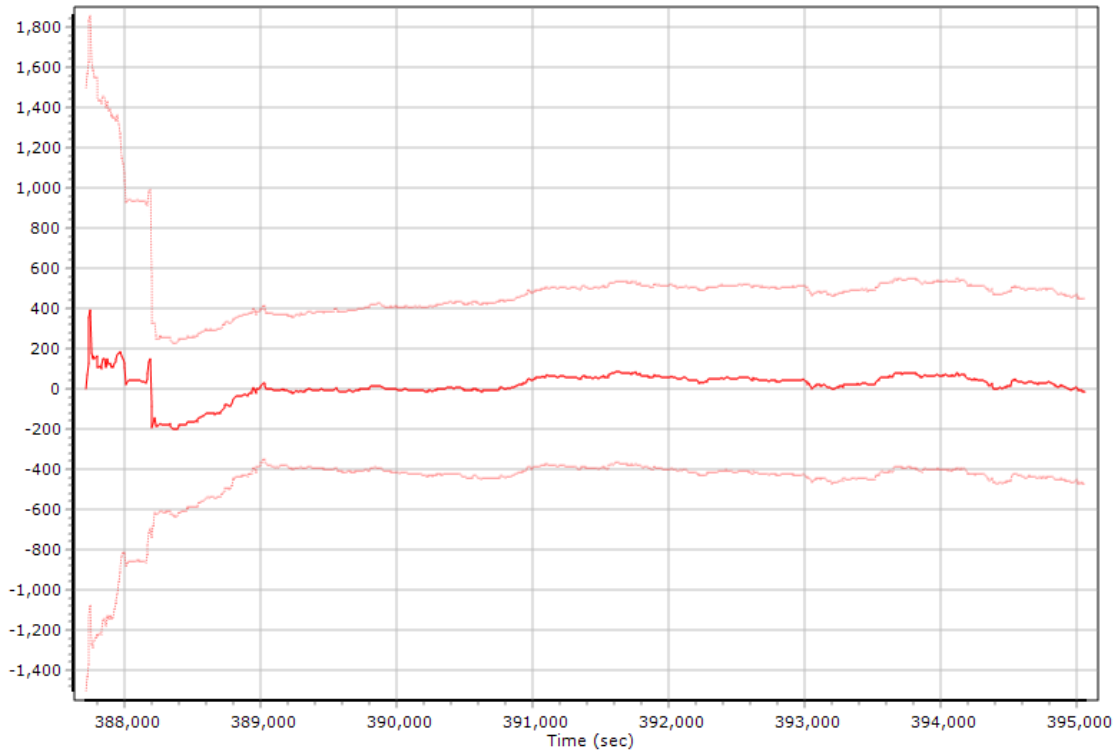
CORS Base Stations

Station	Original			Adjusted		
WVHU	N38°25'22.64487"	W82°25'28.94622"	186.420			
WVRA	N38°56'28.89163"	W81°45'04.86938"	147.975	N38°56'28.89158"	W81°45'04.86992"	147.990
WVOH	N37°59'53.75060"	W81°07'55.81223"	596.194	N37°59'53.75039"	W81°07'55.81228"	596.199
WVMZ	N38°50'20.07187"	W81°06'31.60939"	295.568	N38°50'20.07170"	W81°06'31.60944"	295.561
WVLE	N37°49'20.23030"	W80°25'18.58201"	655.200	N37°49'20.23002"	W80°25'18.58197"	655.208
WVHA	N39°14'52.29167"	W81°02'37.87167"	288.887	N39°14'52.29103"	W81°02'37.87142"	288.925
STKR	N39°19'33.85352"	W82°06'25.65784"	176.782	N39°19'33.85288"	W82°06'25.65704"	176.761
PKTN	N39°02'43.69374"	W83°01'27.86022"	143.193	N39°02'43.69356"	W83°01'27.86051"	143.195
KYTK	N37°09'05.23880"	W83°45'34.53508"	243.801	N37°09'05.23960"	W83°45'34.53347"	243.821
KYMH	N38°11'02.90319"	W83°26'11.51655"	221.538	N38°11'02.90305"	W83°26'11.51659"	221.560
GALP	N38°50'39.17675"	W82°16'40.11957"	168.232	N38°50'39.17655"	W82°16'40.11950"	168.234
BLA1	N37°12'40.85438"	W80°25'13.83290"	605.692	N37°12'40.85422"	W80°25'13.83265"	605.709

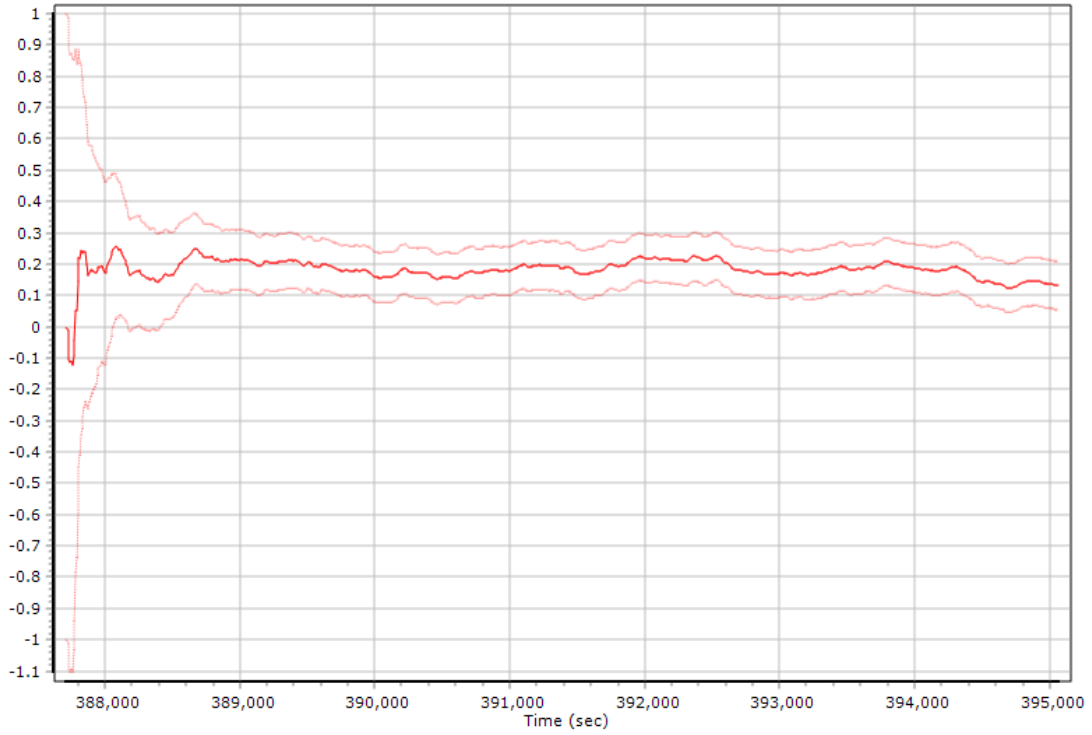
**x accelerometer bias (micro-g)**



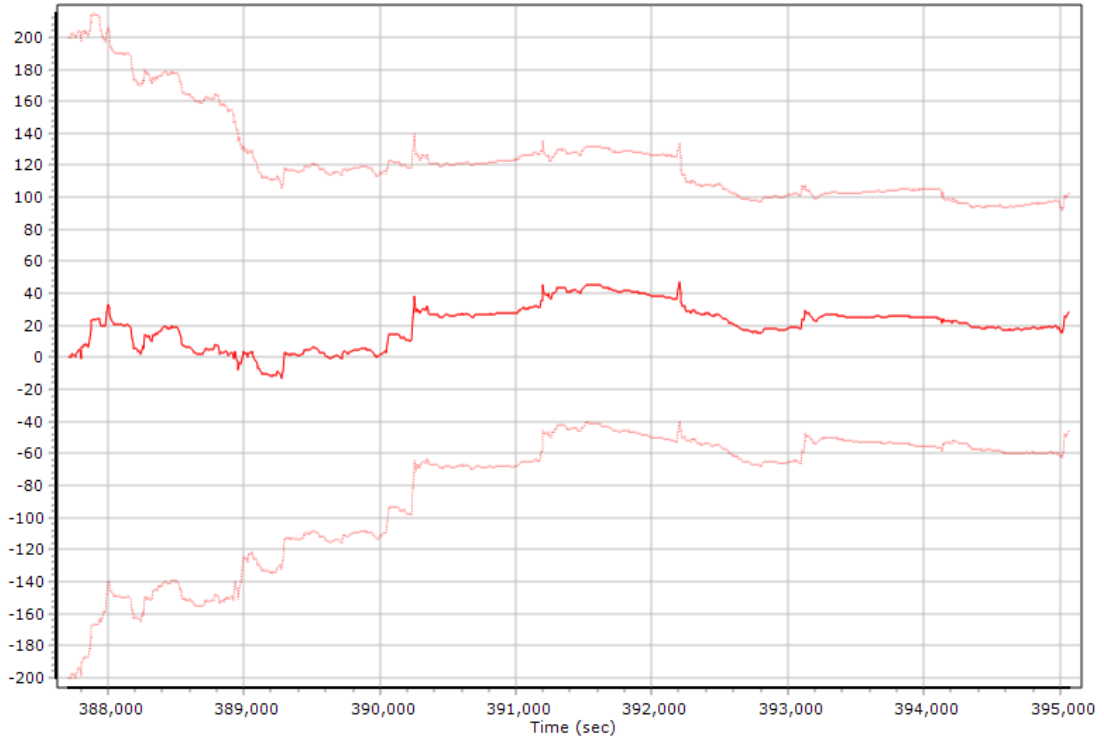
**x accelerometer scale error (ppm)**



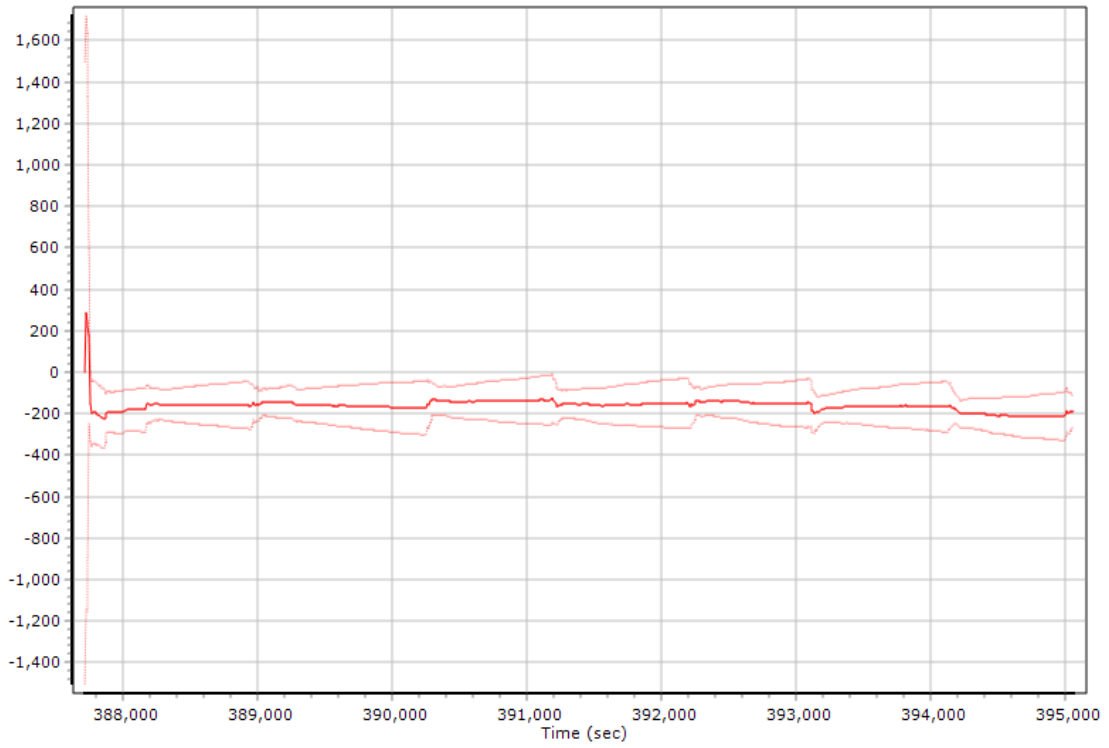
**x gyro bias (deg/hr)**



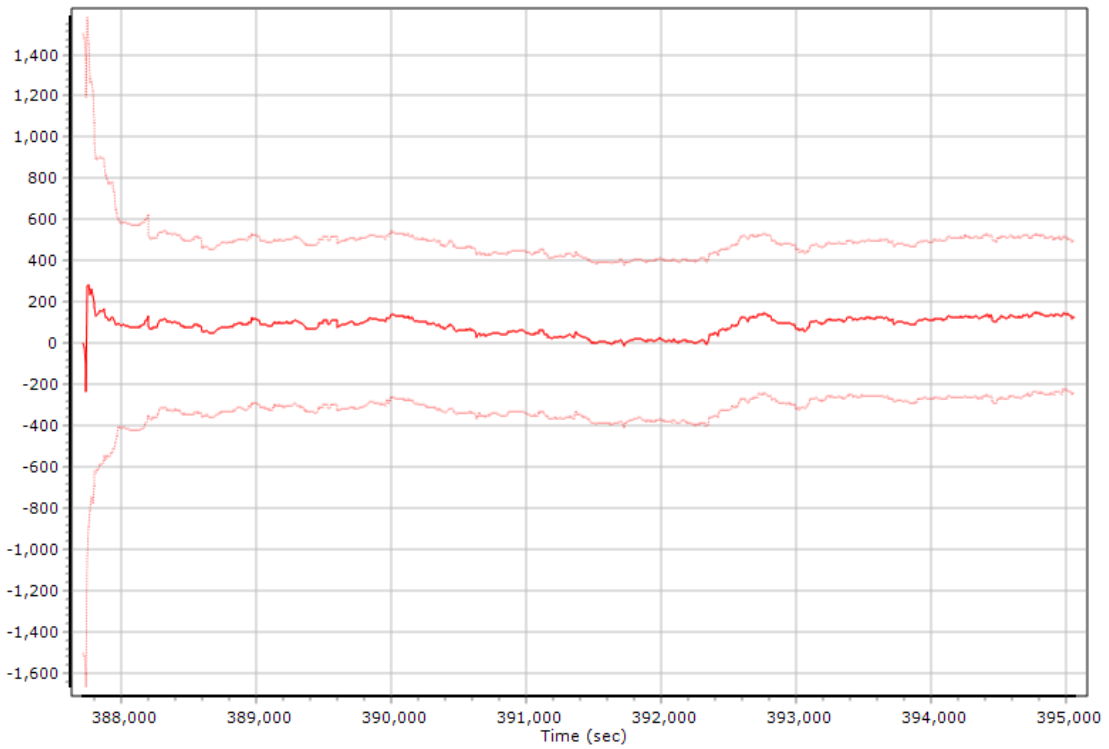
**x gyro scale error (ppm)**



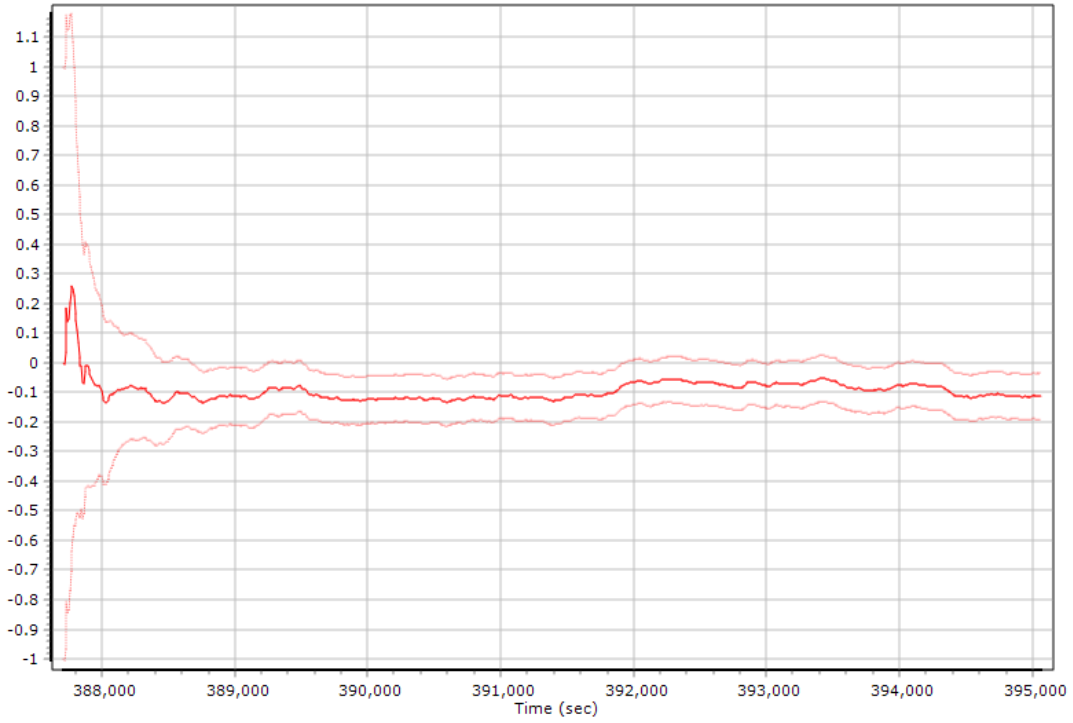
**y accelerometer bias (micro-g)**



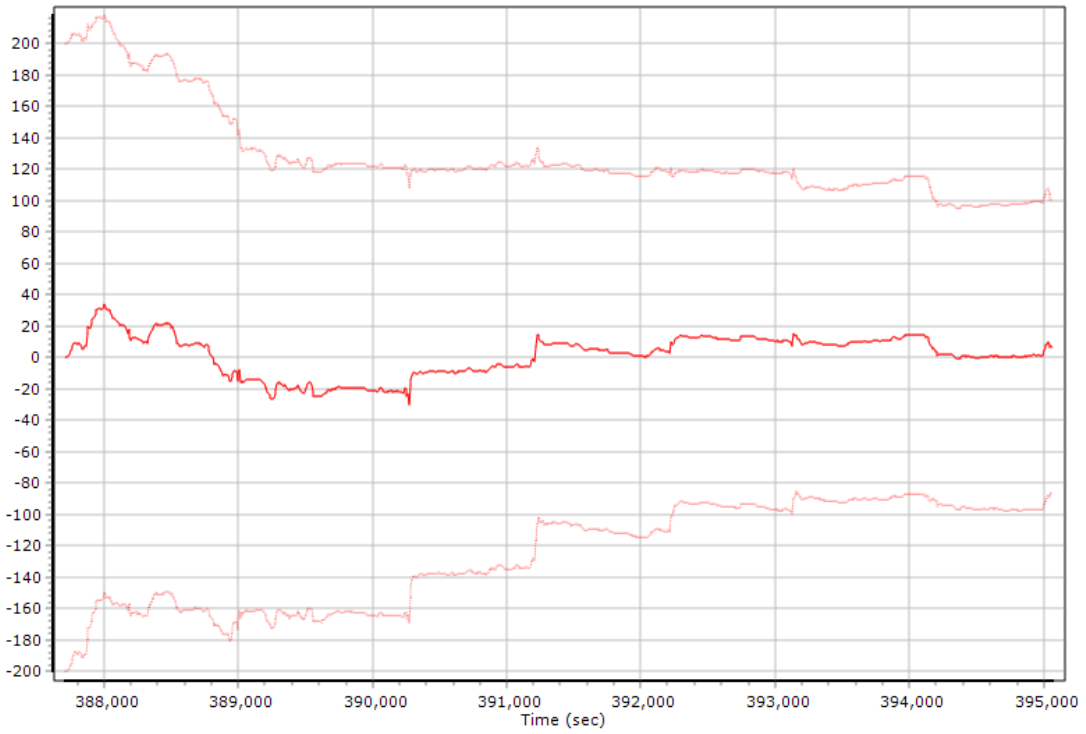
**y accelerometer scale error (ppm)**



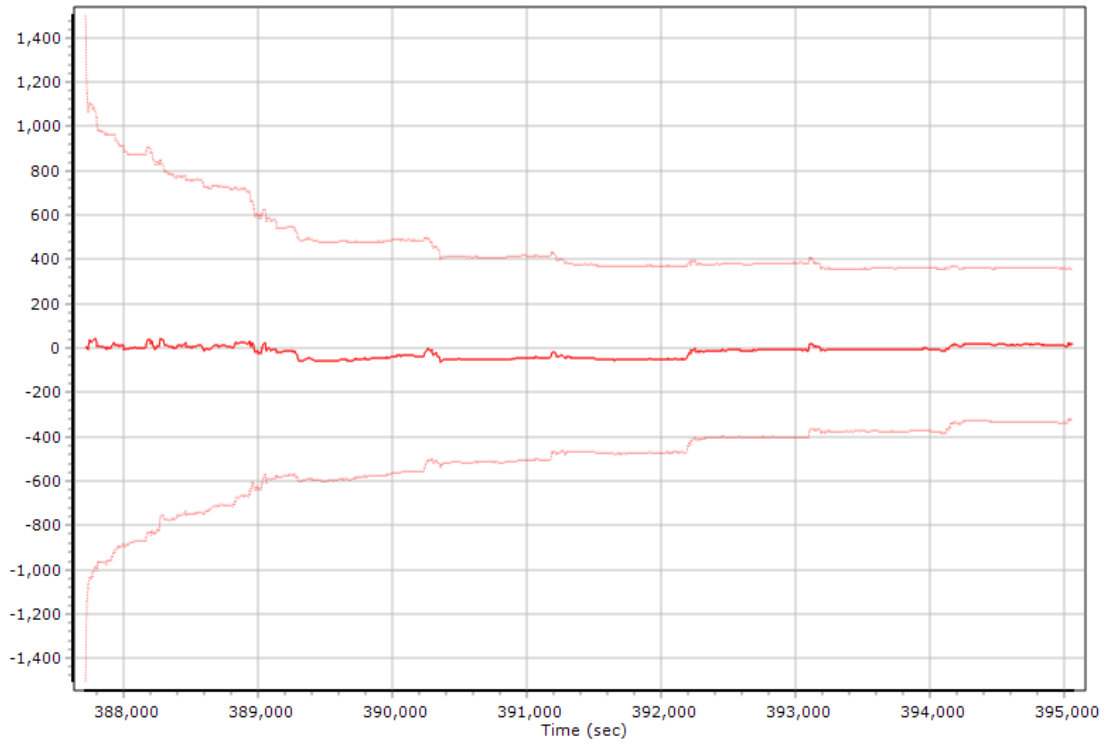
**y gyro bias (deg/hr)**



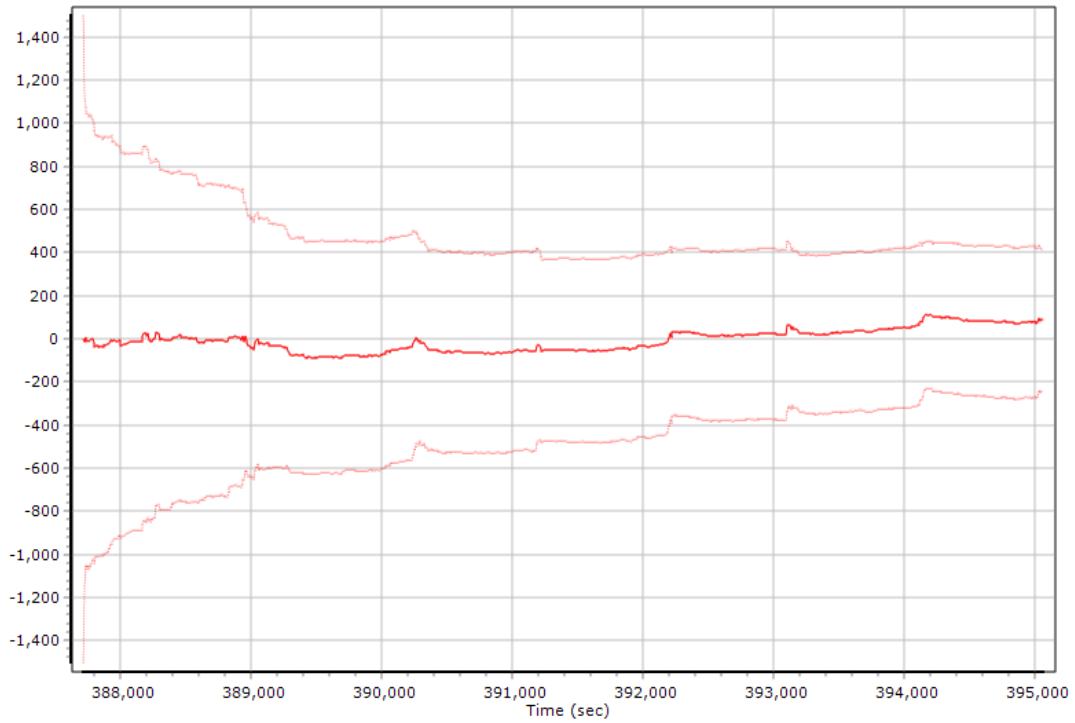
**y gyro scale error (ppm)**



**z accelerometer bias (micro-g)**

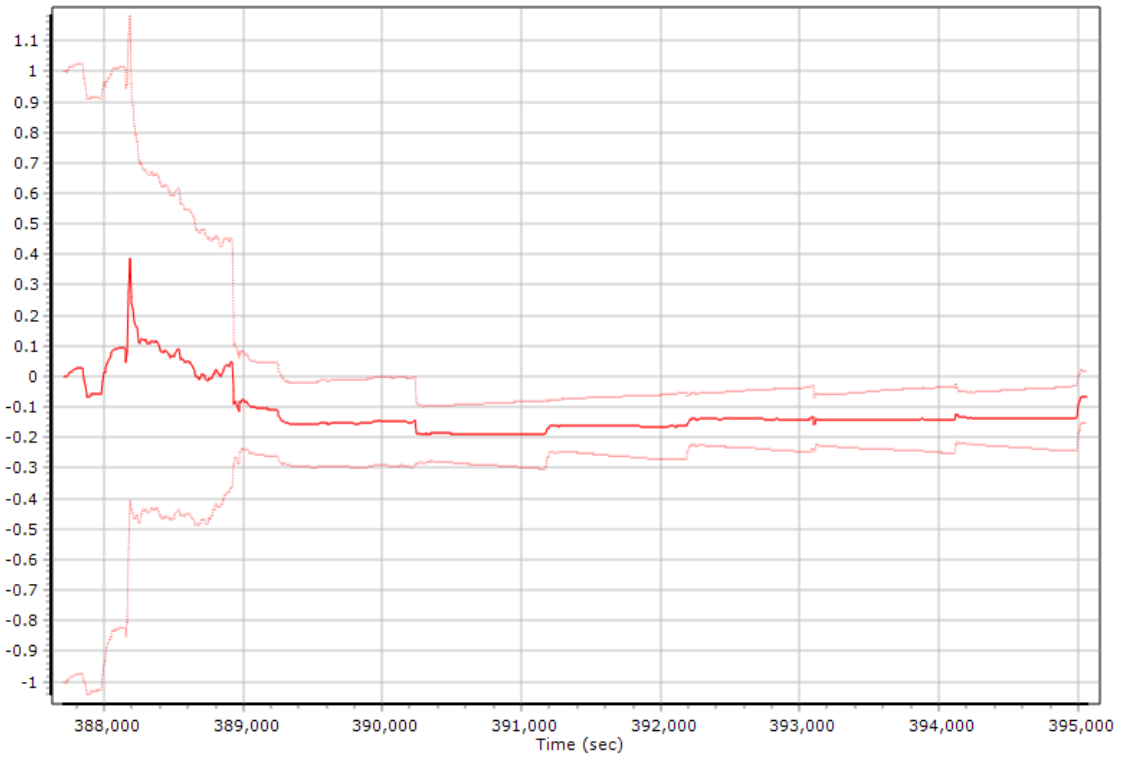


**z accelerometer scale error (ppm)**

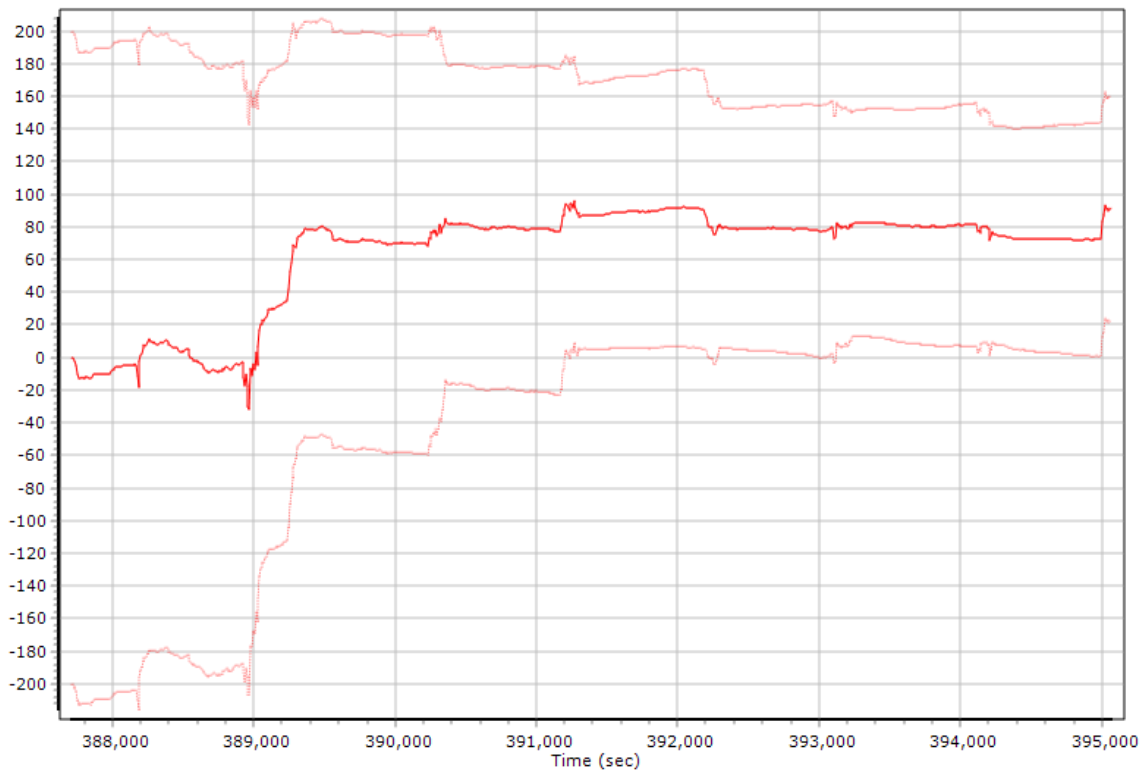




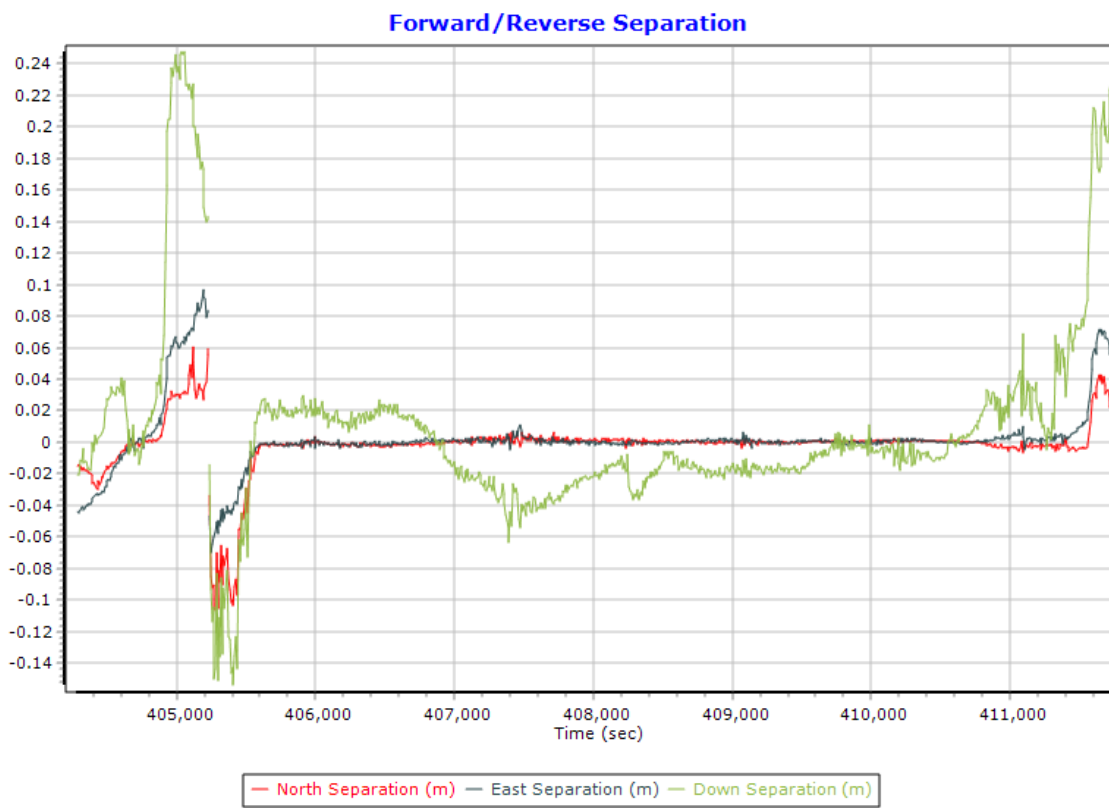
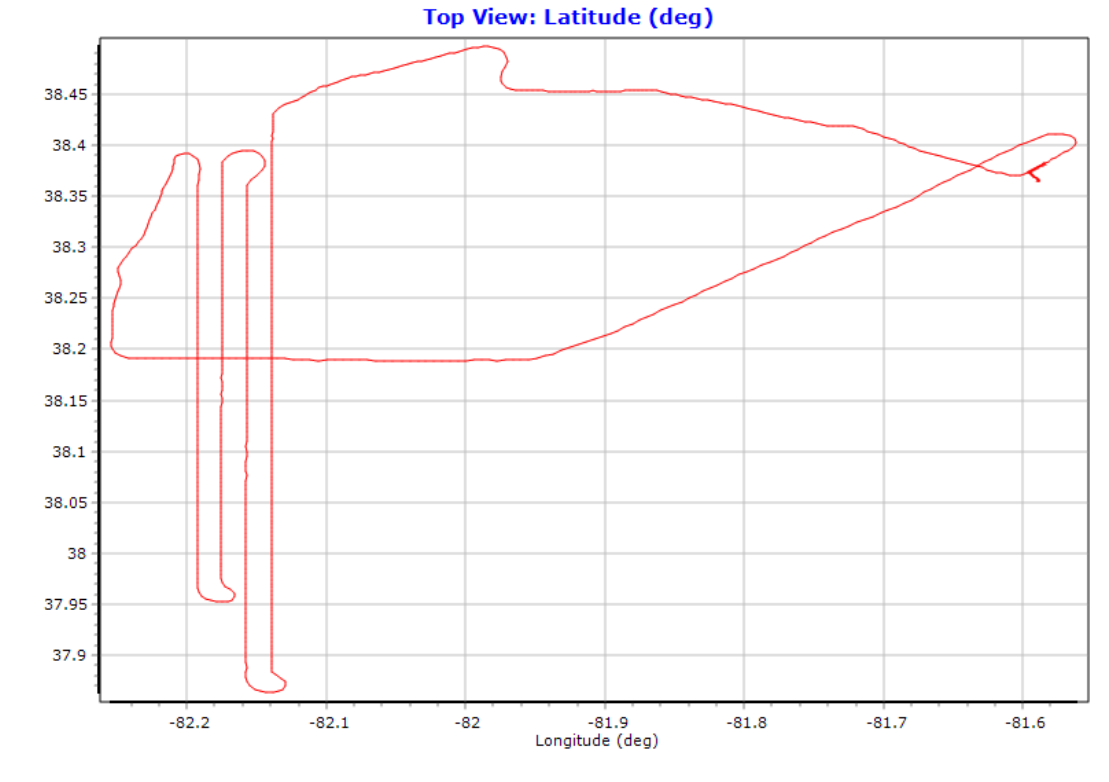
**z gyro bias (deg/hr)**

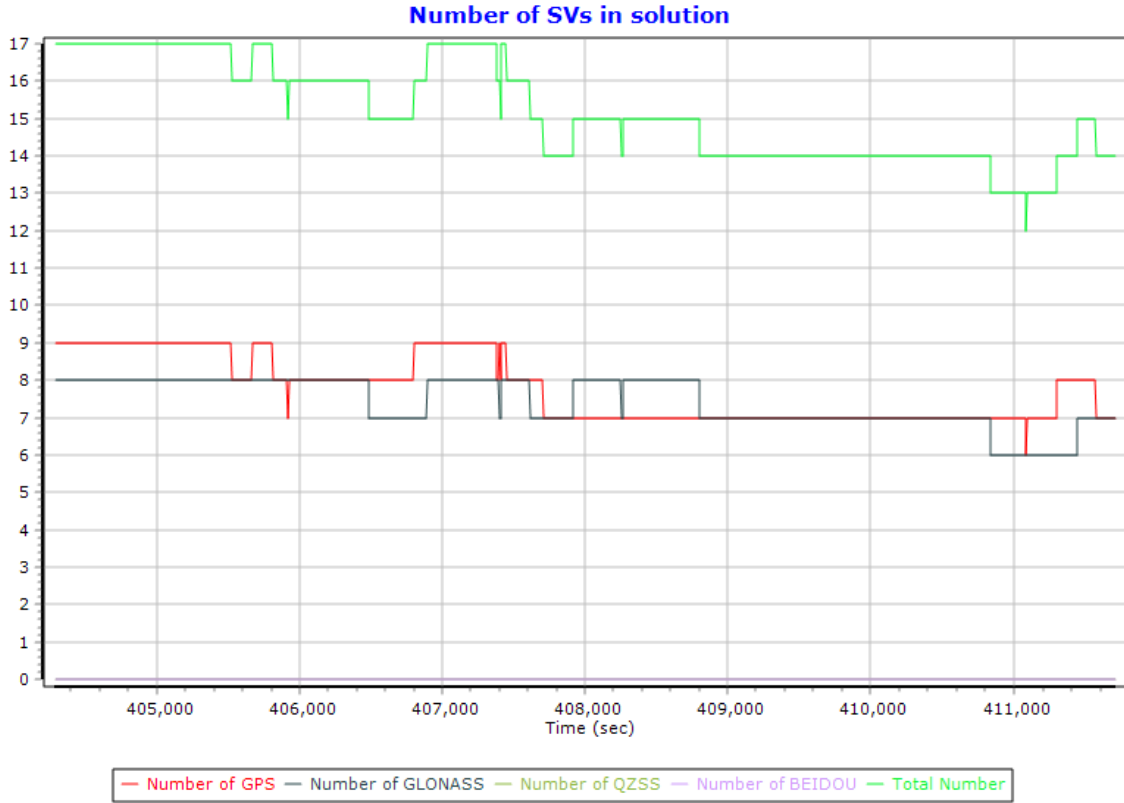
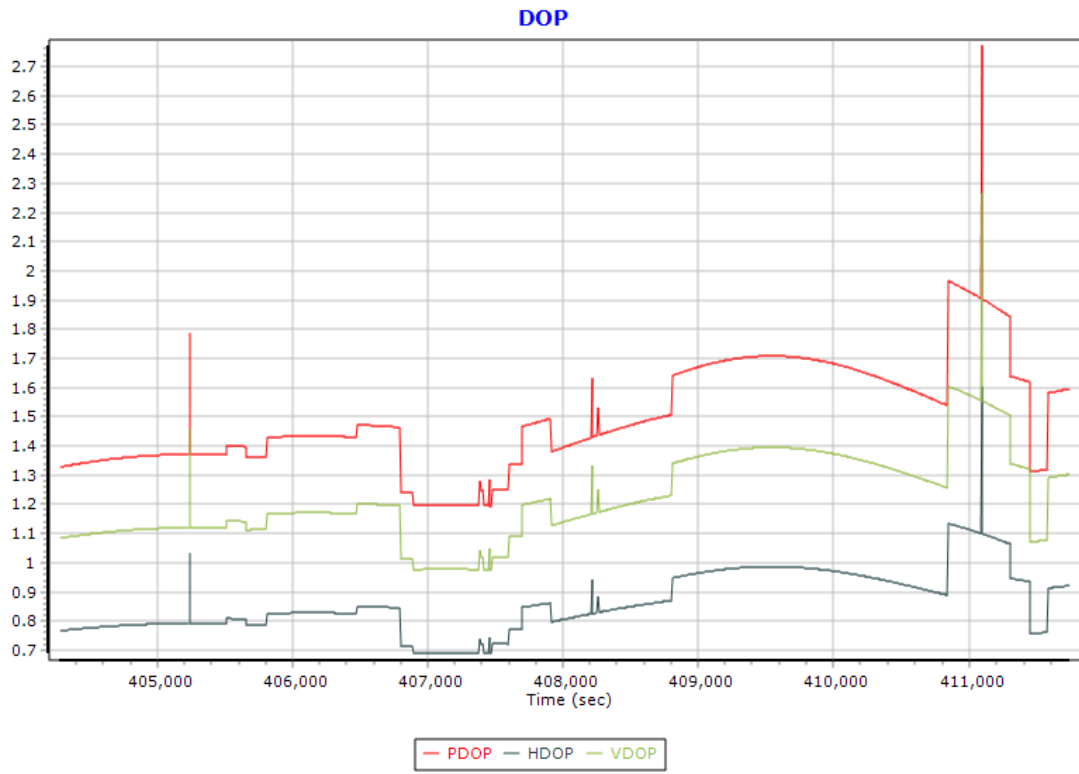


**z gyro scale error (ppm)**



## APRIL 12, 2018 MISSION 2





## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\20180412\_WV\_B

Solution Type: IN-Fusion SmartBase

Fixed: 7450	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 7472  
No processed position: 22

Fwd/Rev Separation RMS Values (m):

North: 0.018  
East: 0.021  
Height: 0.061

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 3735 occurrences

North: 0.002  
East: 0.002  
Height: 0.021

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 100

0.10 - 0.30 m: 0  
0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

DOP over Tol: 1.50%

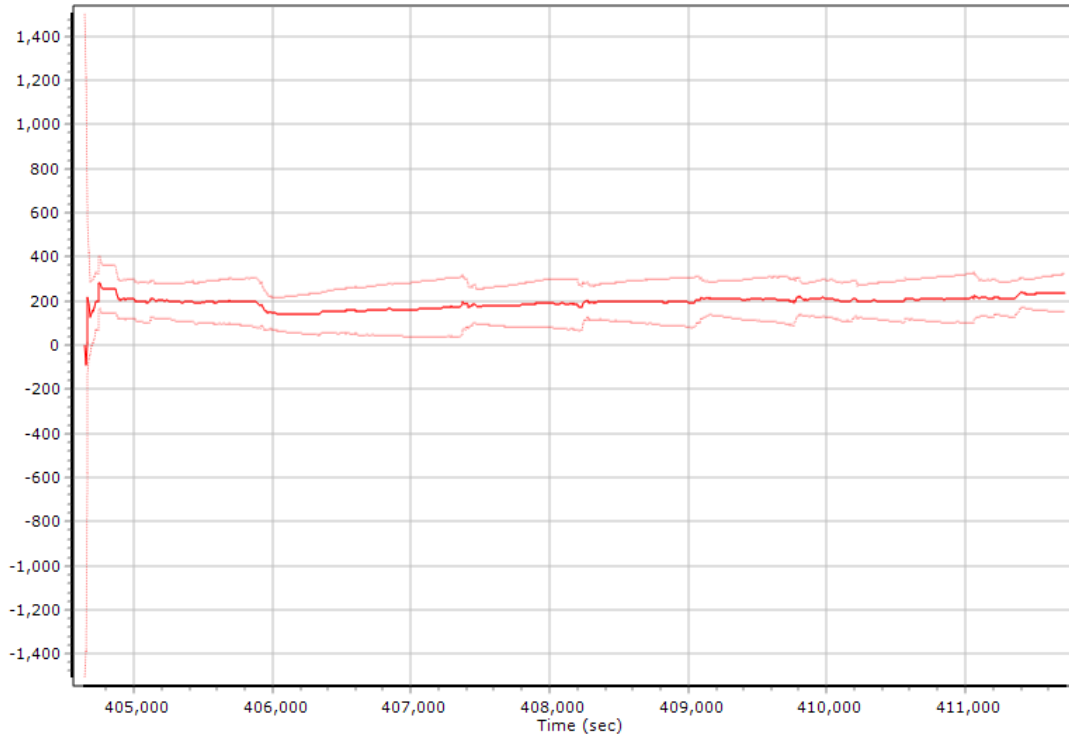
Baseline Distances (km):

Maximum: 46.9  
Minimum: 8.06  
Average: 26.58  
First Epoch: 35.26  
Last Epoch: 35.24

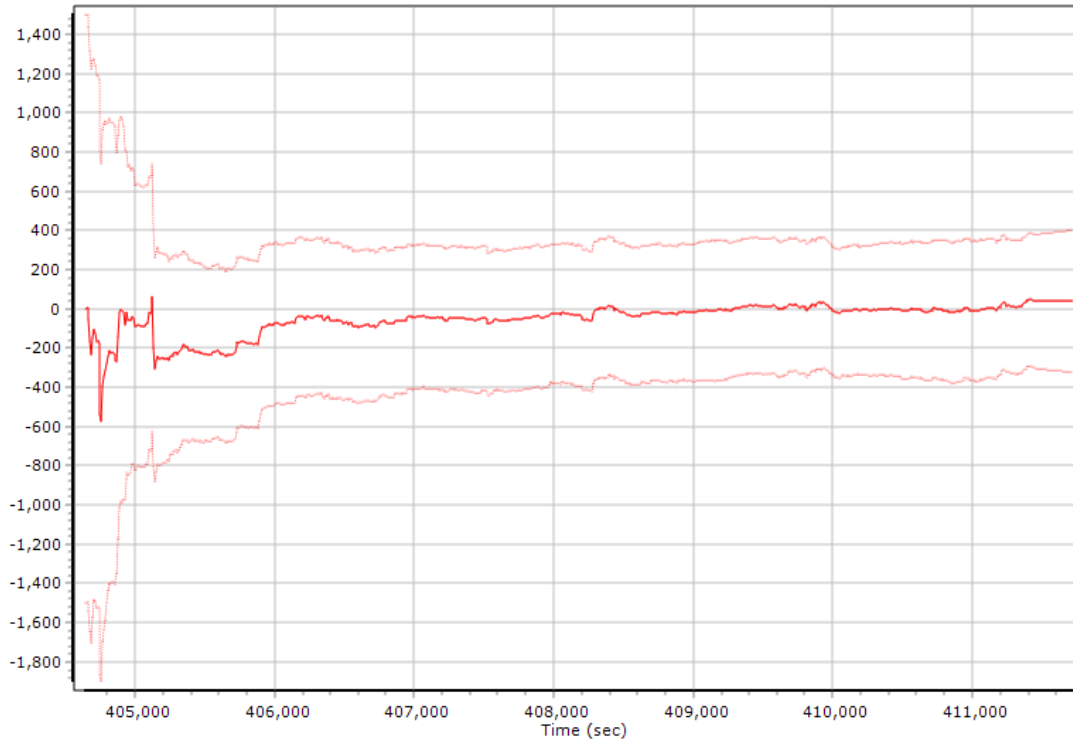
CORS Base Stations

Station	Original			Adjusted		
WVHU	N38°25'22.64487"	W82°25'28.94622"	186.420			
WVRA	N38°56'28.89163"	W81°45'04.86938"	147.975	N38°56'28.89160"	W81°45'04.86985"	147.989
WVOH	N37°59'53.75060"	W81°07'55.81223"	596.194	N37°59'53.75037"	W81°07'55.81222"	596.198
WVLE	N37°49'20.23030"	W80°25'18.58201"	655.200	N37°49'20.23000"	W80°25'18.58193"	655.207
WVHA	N39°14'52.29167"	W81°02'37.87167"	288.887	N39°14'52.29108"	W81°02'37.87166"	288.905
WVAT	N37°25'42.67847"	W81°04'04.40395"	704.674	N37°25'42.67826"	W81°04'04.40378"	704.687
PKTN	N39°02'43.69374"	W83°01'27.86022"	143.193	N39°02'43.69364"	W83°01'27.86049"	143.191
KYTL	N37°29'00.20373"	W82°32'07.72256"	185.678	N37°29'00.20342"	W82°32'07.72274"	185.717
KYMH	N38°11'02.90319"	W83°26'11.51655"	221.538	N38°11'02.90303"	W83°26'11.51662"	221.557
KYGB	N38°28'50.22275"	W82°52'24.00517"	183.039	N38°28'50.22336"	W82°52'24.00658"	183.084
GALP	N38°50'39.17675"	W82°16'40.11957"	168.232	N38°50'39.17659"	W82°16'40.11947"	168.231

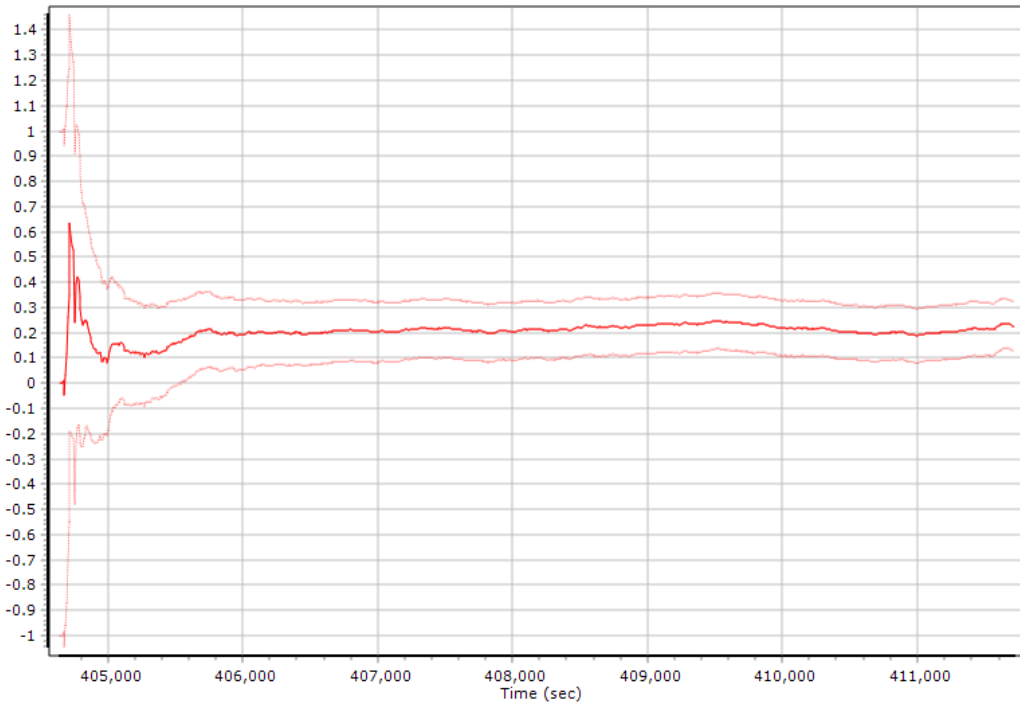
**x accelerometer bias (micro-g)**



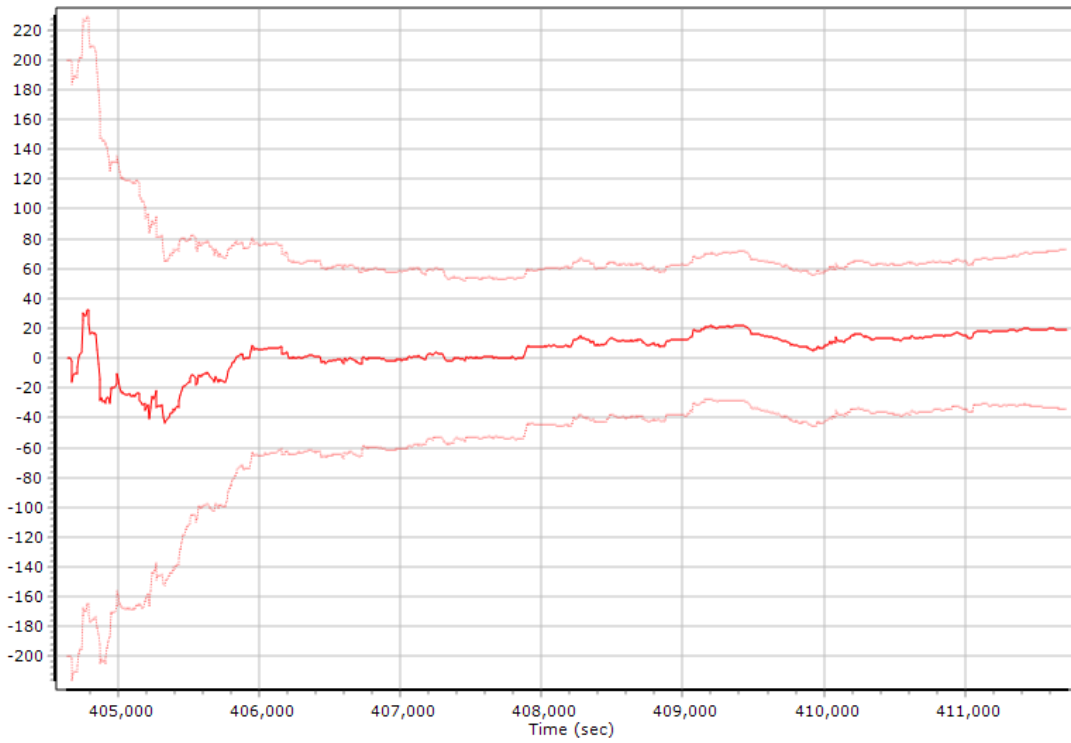
**x accelerometer scale error (ppm)**



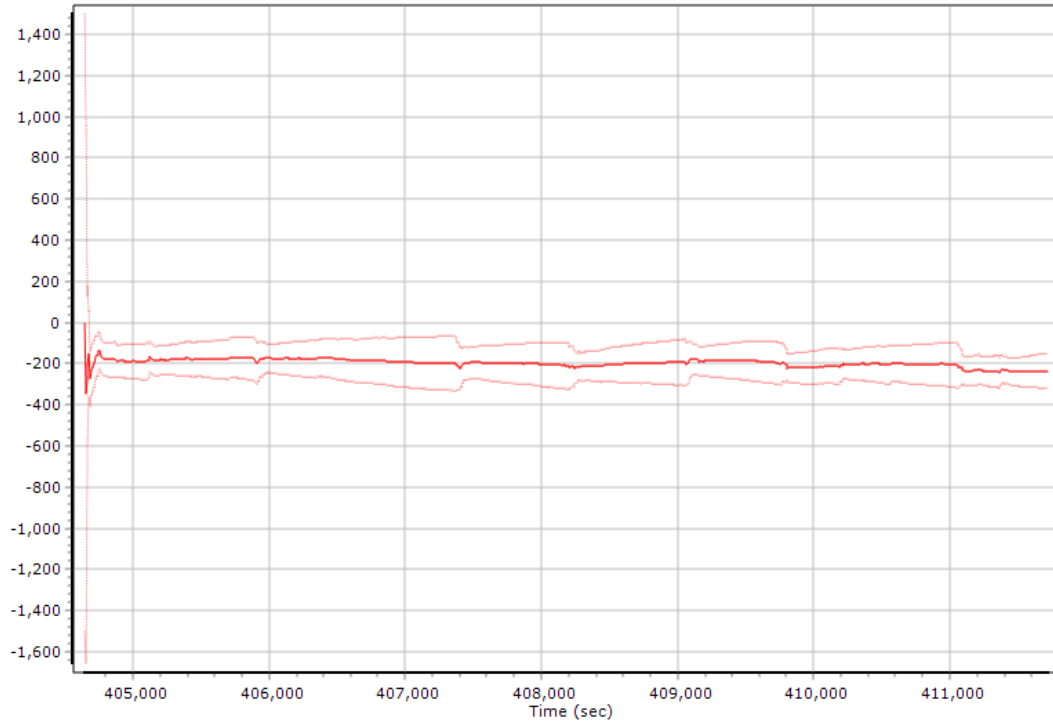
**x gyro bias (deg/hr)**



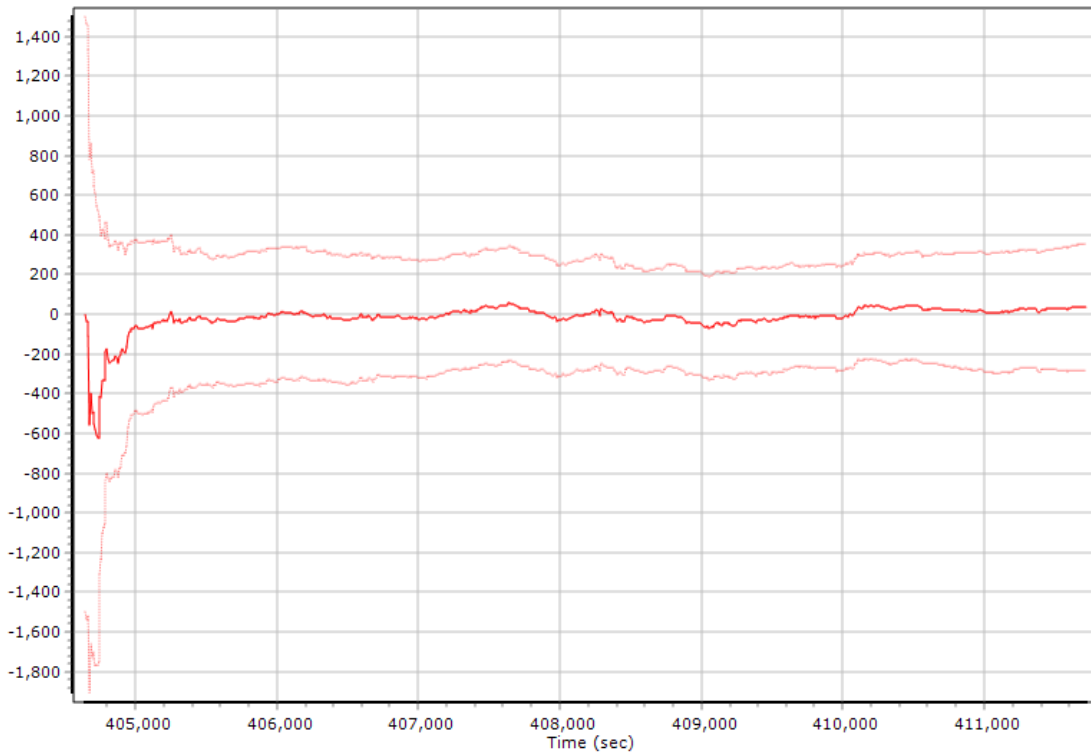
**x gyro scale error (ppm)**



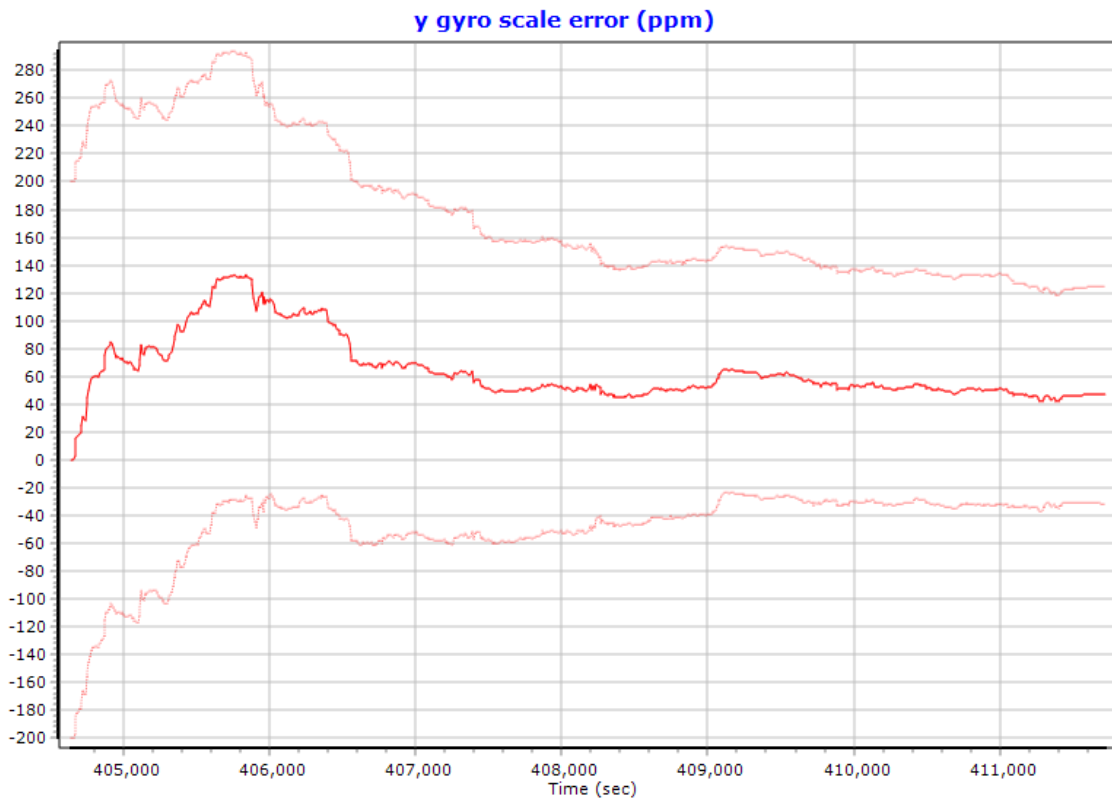
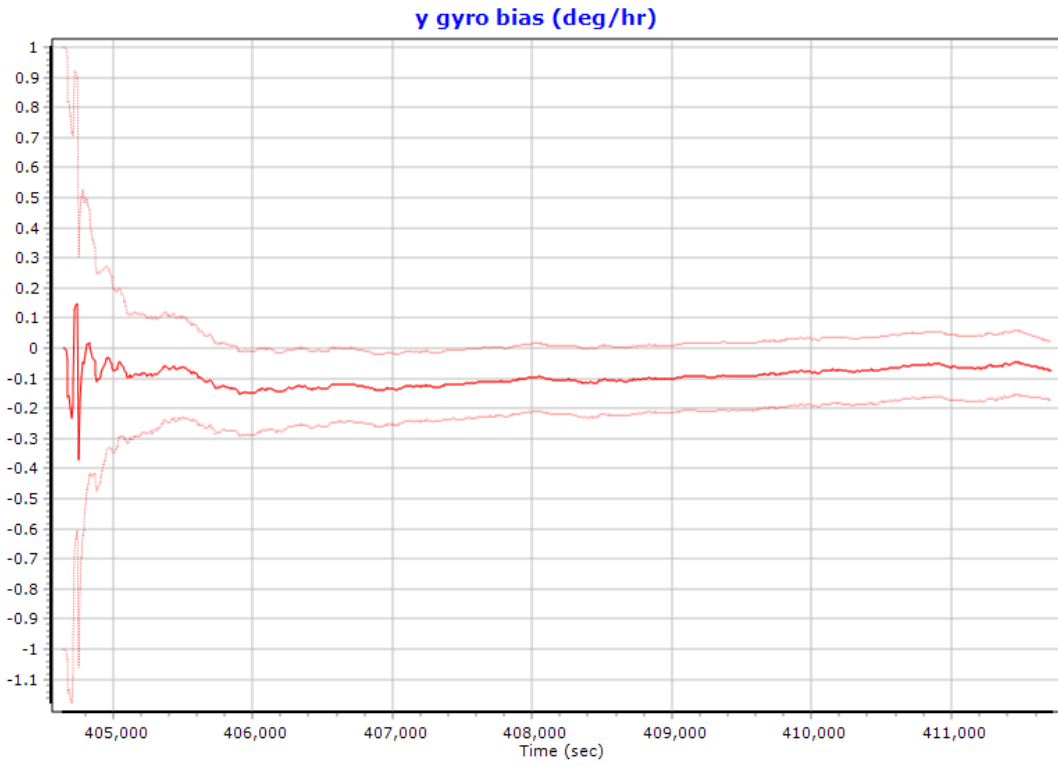
**y accelerometer bias (micro-g)**



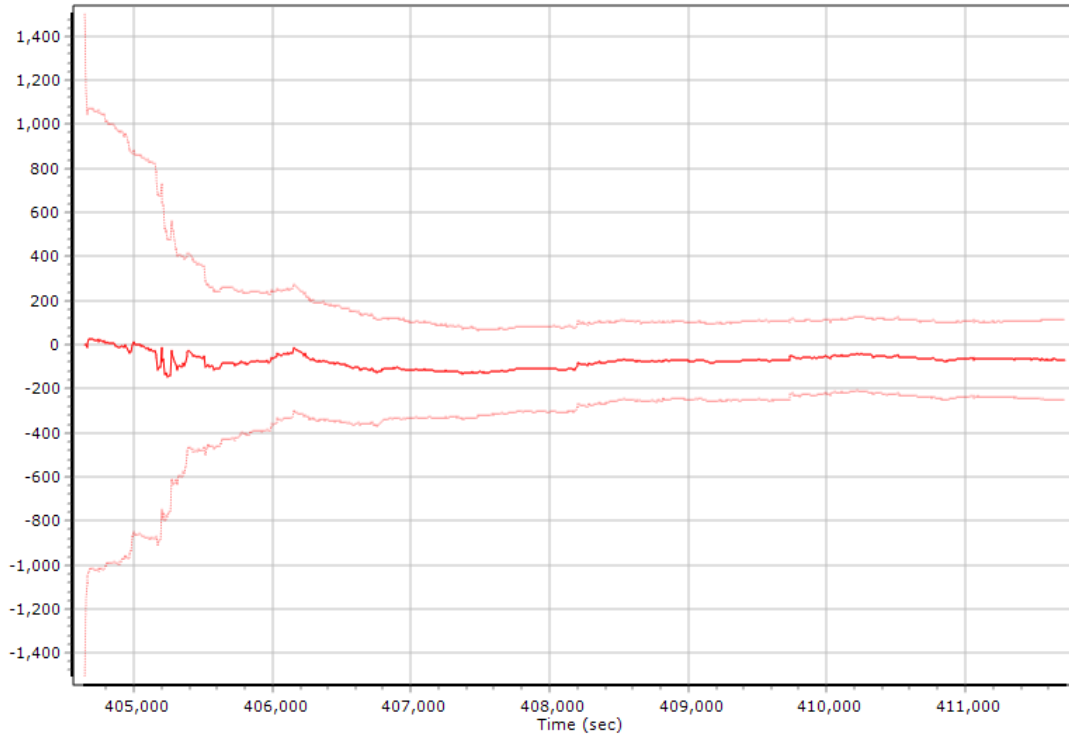
**y accelerometer scale error (ppm)**



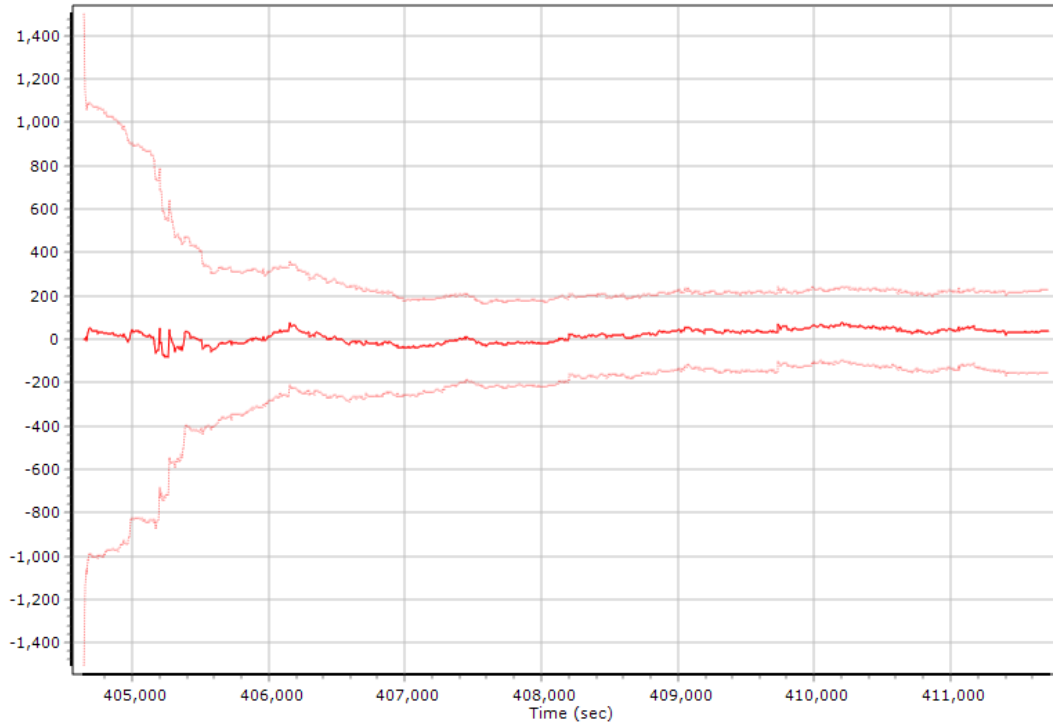




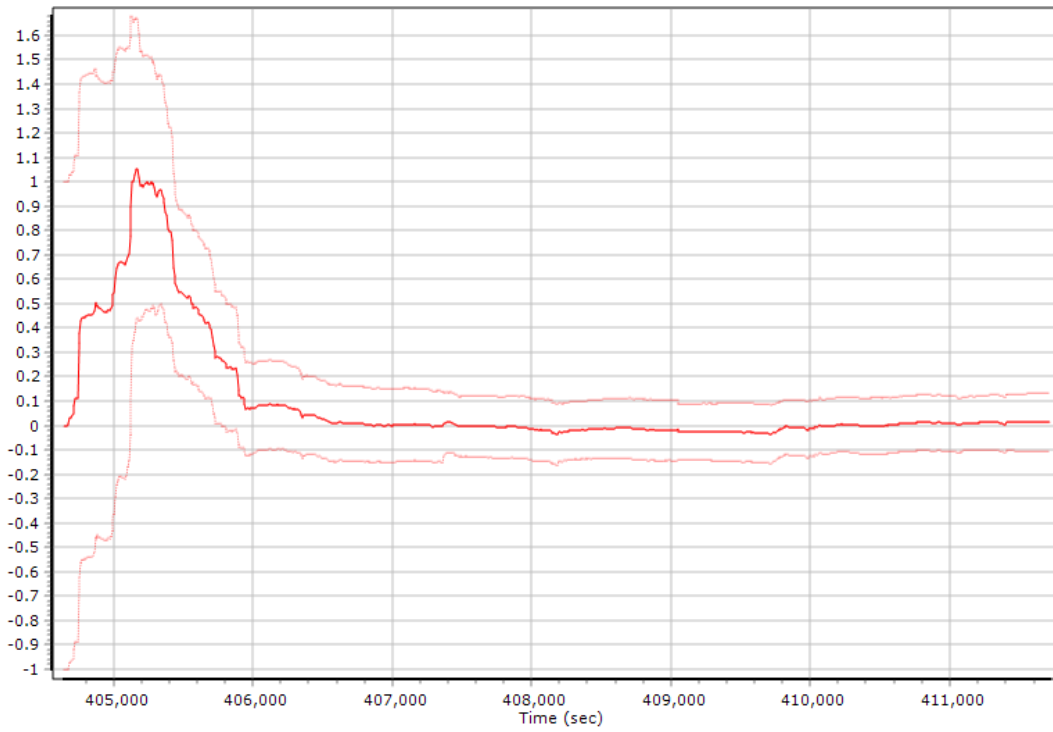
**z accelerometer bias (micro-g)**



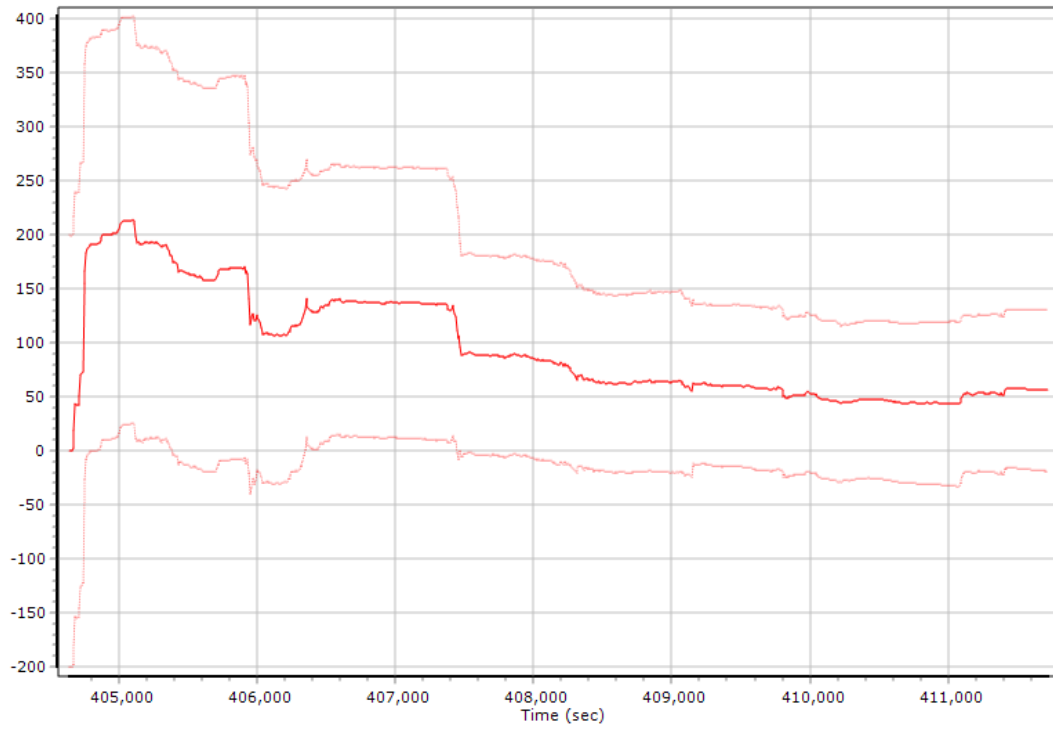
**z accelerometer scale error (ppm)**



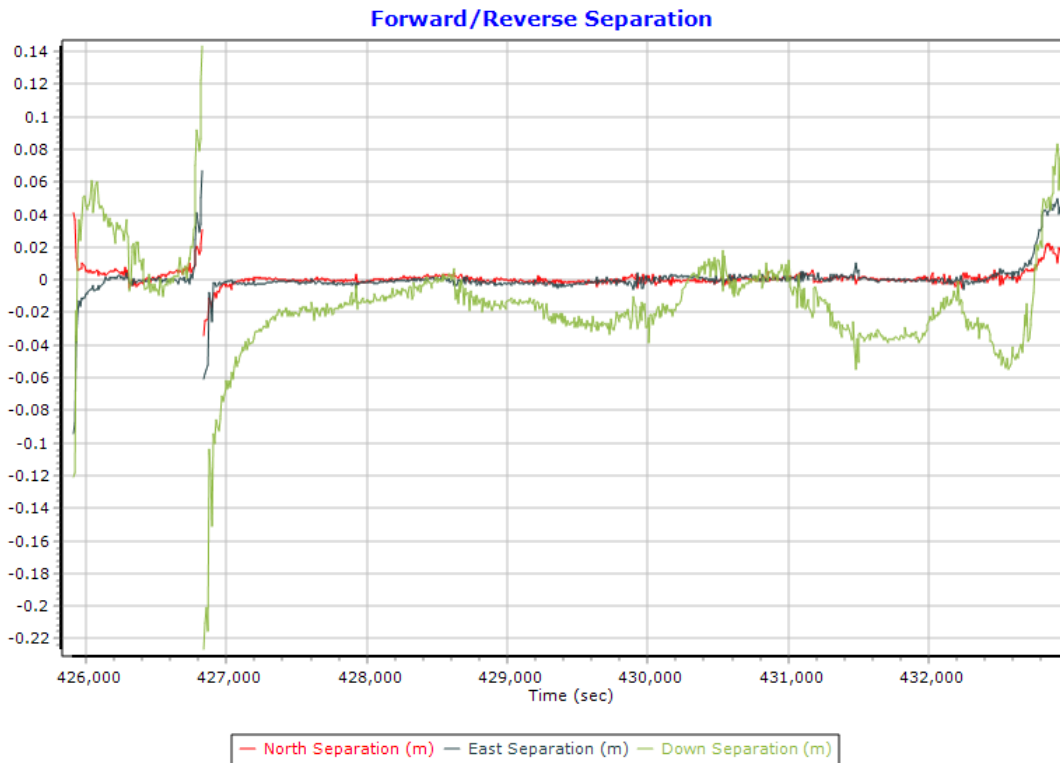
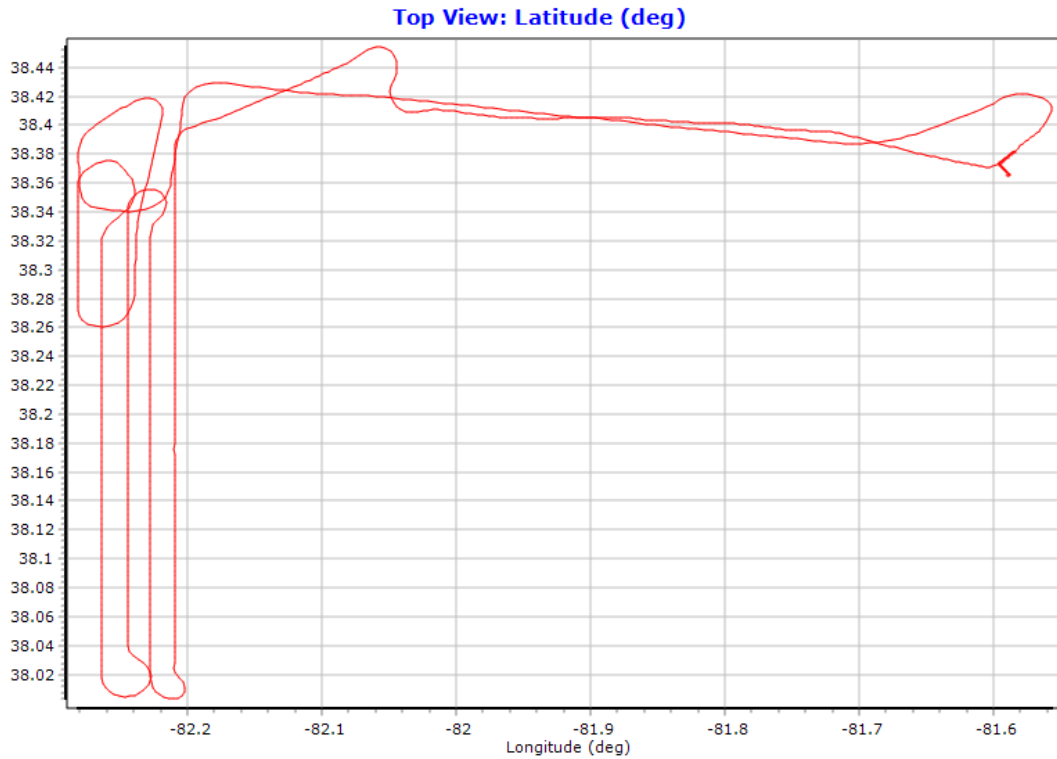
**z gyro bias (deg/hr)**

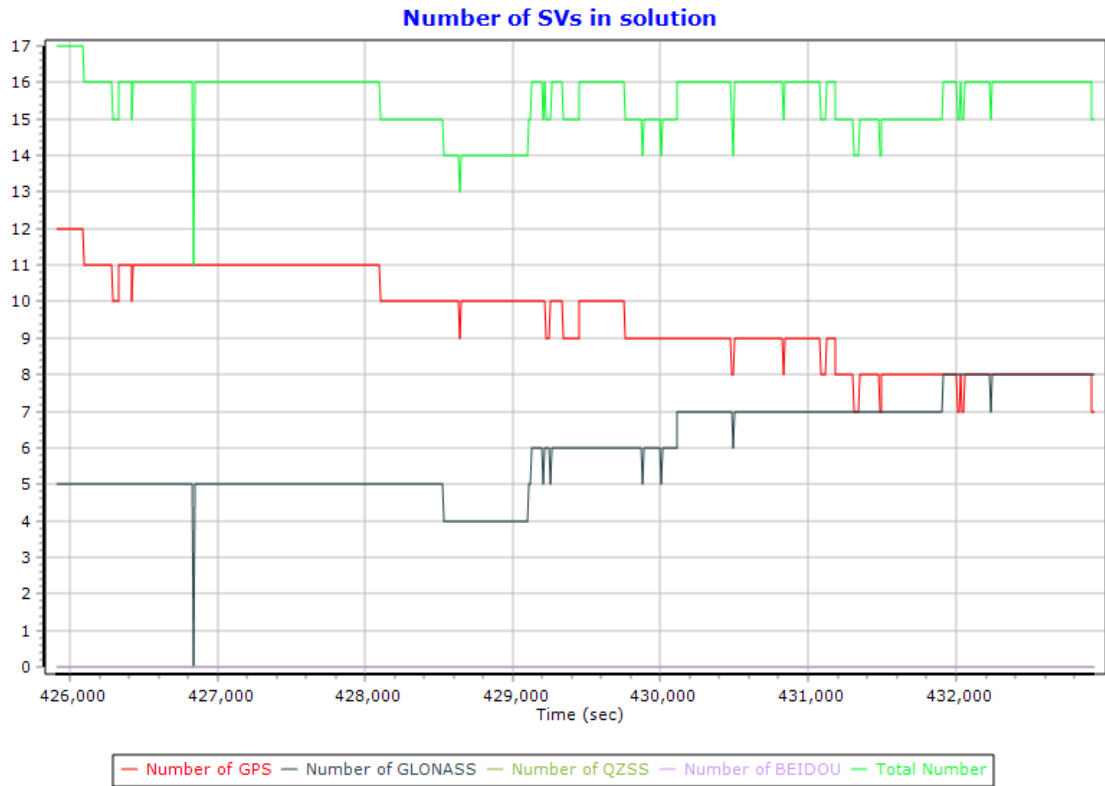
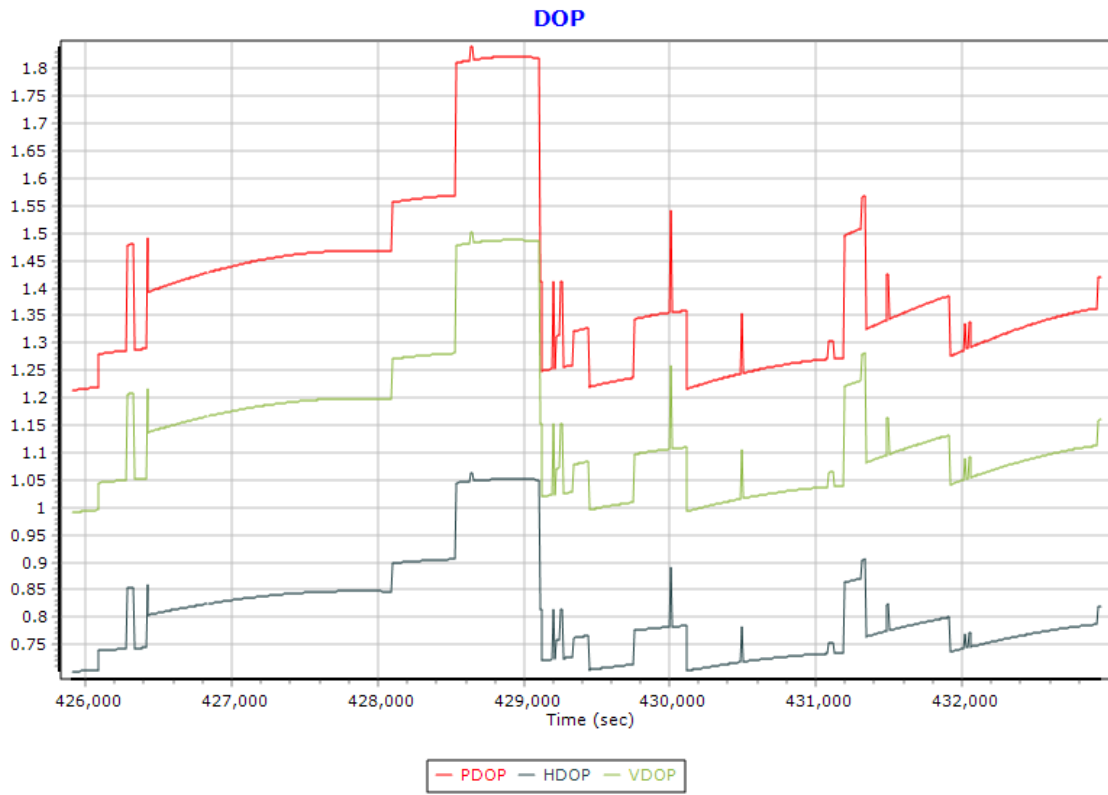


**z gyro scale error (ppm)**



### APRIL 12, 2018 MISSION 3





## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\20180412\_WV\_C

Solution Type: IN-Fusion SmartBase

Fixed: 7052	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 7057  
No processed position:5

Fwd/Rev Separation RMS Values (m):

North: 0.005  
East: 0.010  
Height: 0.033

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 3528 occurrences

North: 0.002  
East: 0.002  
Height: 0.016

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 100  
0.10 - 0.30 m: 0  
0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

DOP over Tol: 1.40%

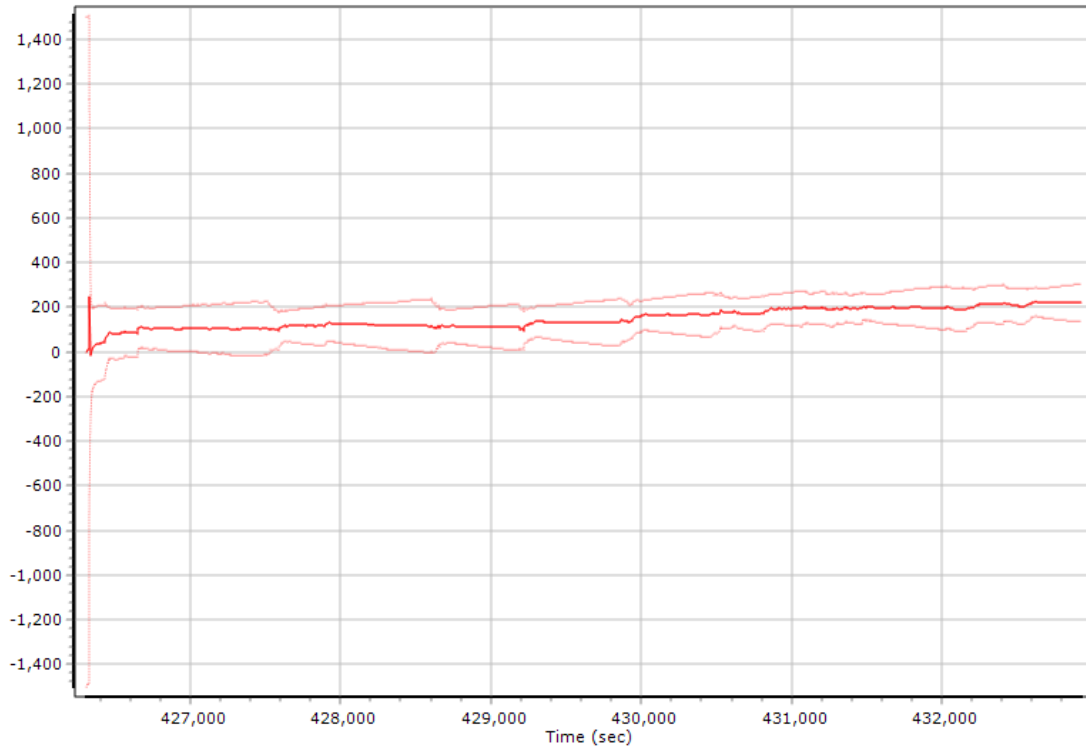
Baseline Distances (km):

Maximum: 40.47  
Minimum: 11.14  
Average: 26.84  
First Epoch: 36.4  
Last Epoch: 36.39

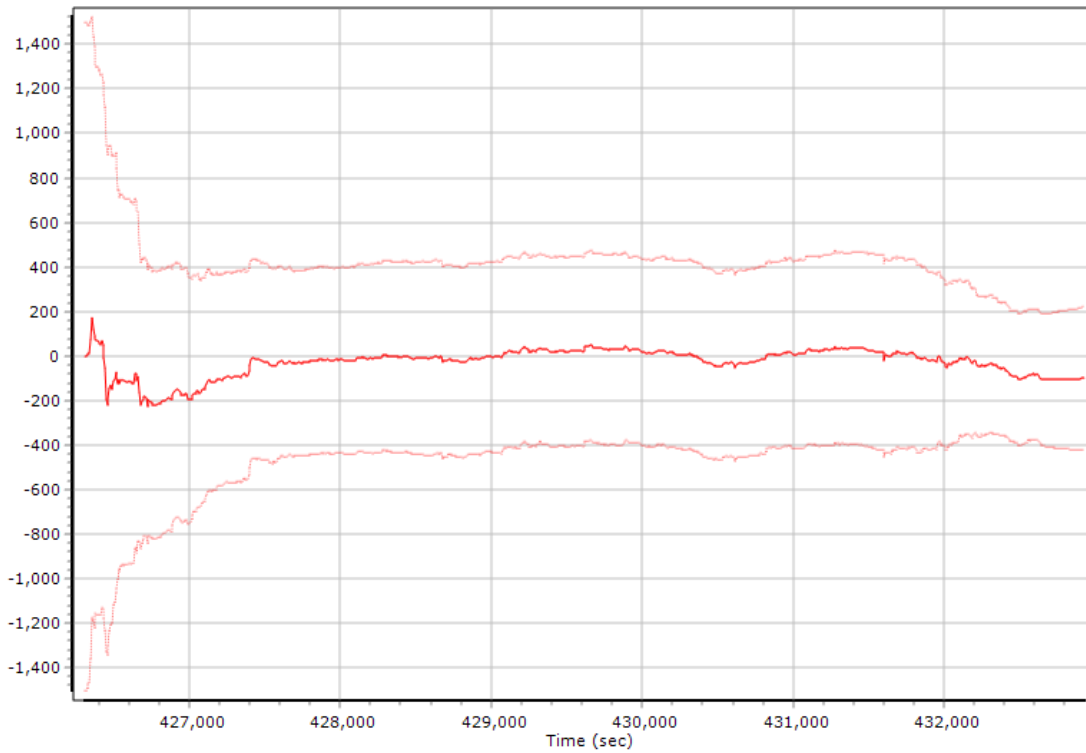
CORS Base Stations

Station	Original			Adjusted		
WVHU	N38°25'22.64487"	W82°25'28.94622"	186.420			
WVRA	N38°56'28.89163"	W81°45'04.86938"	147.975	N38°56'28.89162"	W81°45'04.86987"	147.994
WVOH	N37°59'53.75060"	W81°07'55.81223"	596.194	N37°59'53.75034"	W81°07'55.81212"	596.204
WVMZ	N38°50'20.07187"	W81°06'31.60939"	295.568	N38°50'20.07174"	W81°06'31.60930"	295.563
WVLE	N37°49'20.23030"	W80°25'18.58201"	655.200	N37°49'20.22996"	W80°25'18.58175"	655.215
WVAT	N37°25'42.67847"	W81°04'04.40395"	704.674	N37°25'42.67823"	W81°04'04.40372"	704.690
STKR	N39°19'33.85352"	W82°06'25.65784"	176.782	N39°19'33.85297"	W82°06'25.65701"	176.767
OHAD	N38°47'09.37477"	W83°33'22.67628"	241.222	N38°47'09.37452"	W83°33'22.67645"	241.323
KYMH	N38°11'02.90319"	W83°26'11.51655"	221.538	N38°11'02.90306"	W83°26'11.51658"	221.563
GALP	N38°50'39.17675"	W82°16'40.11957"	168.232	N38°50'39.17660"	W82°16'40.11946"	168.236

**x accelerometer bias (micro-g)**

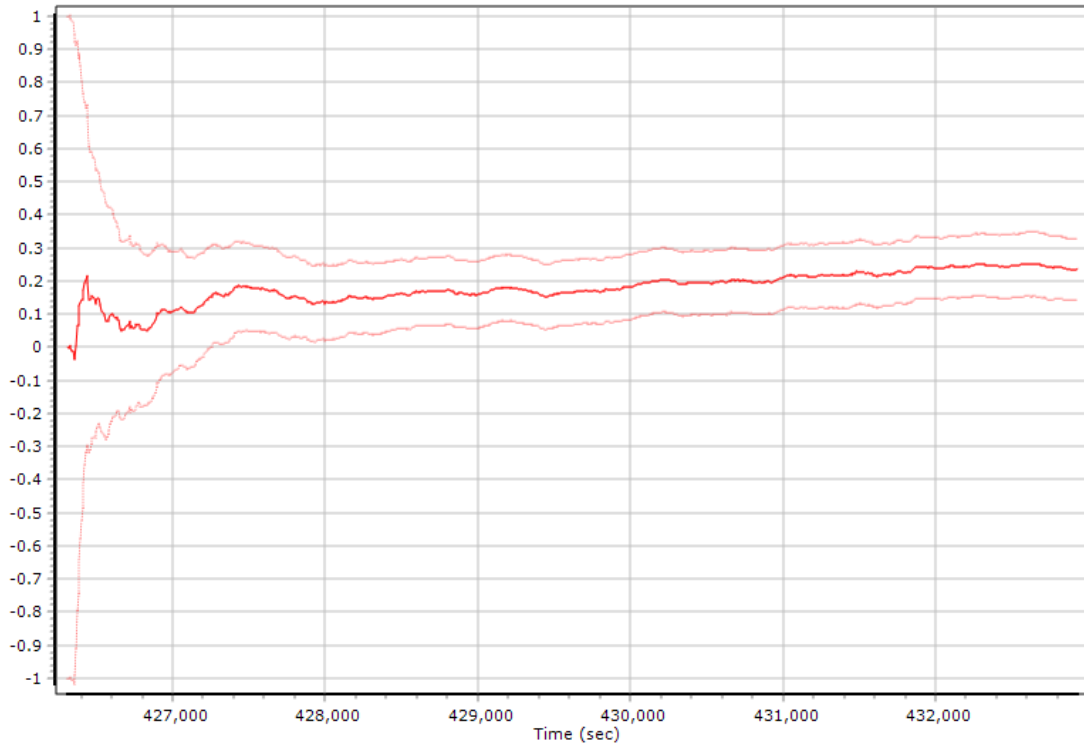


**x accelerometer scale error (ppm)**

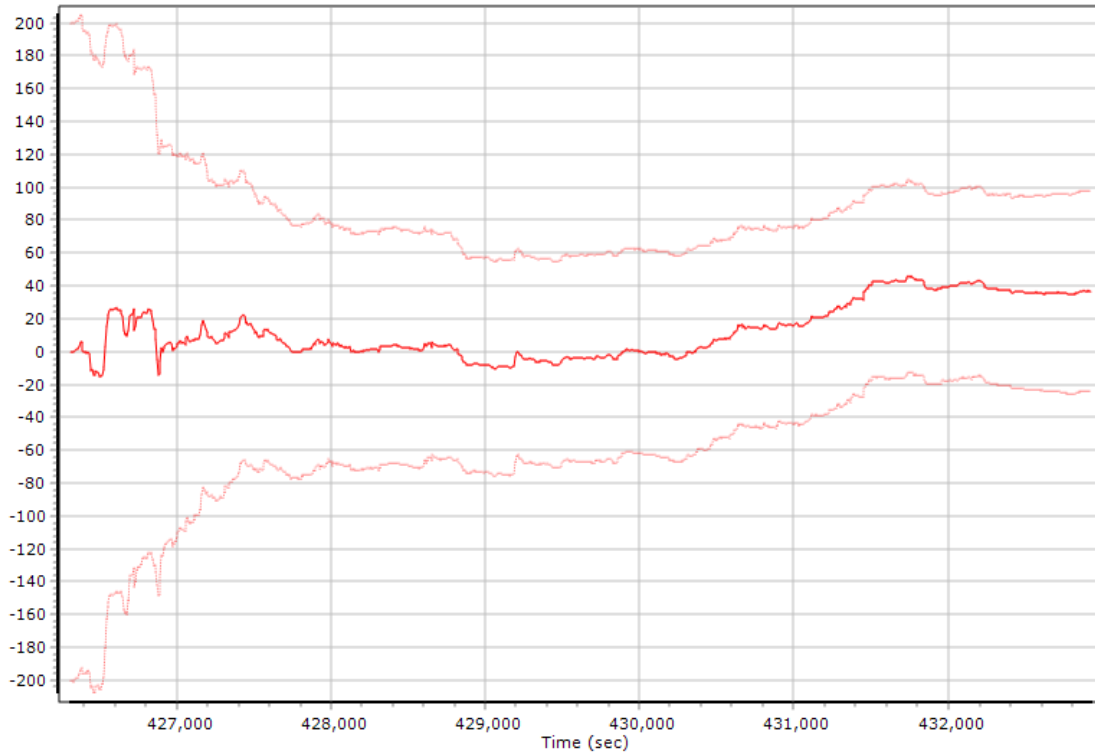




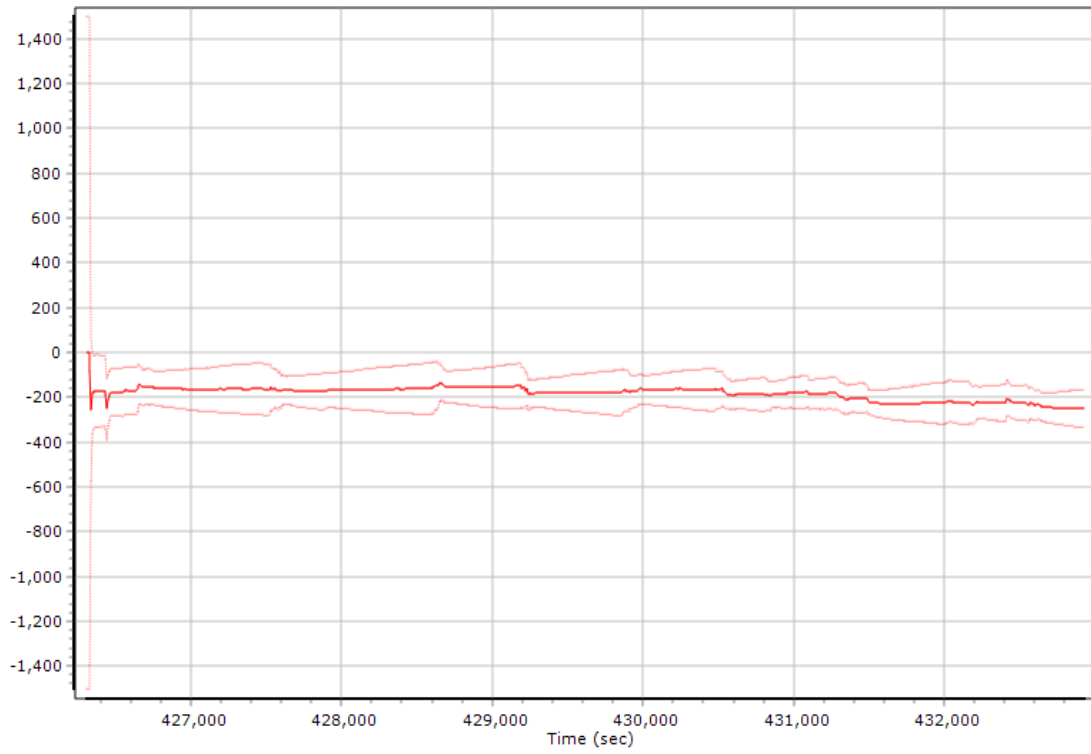
**x gyro bias (deg/hr)**



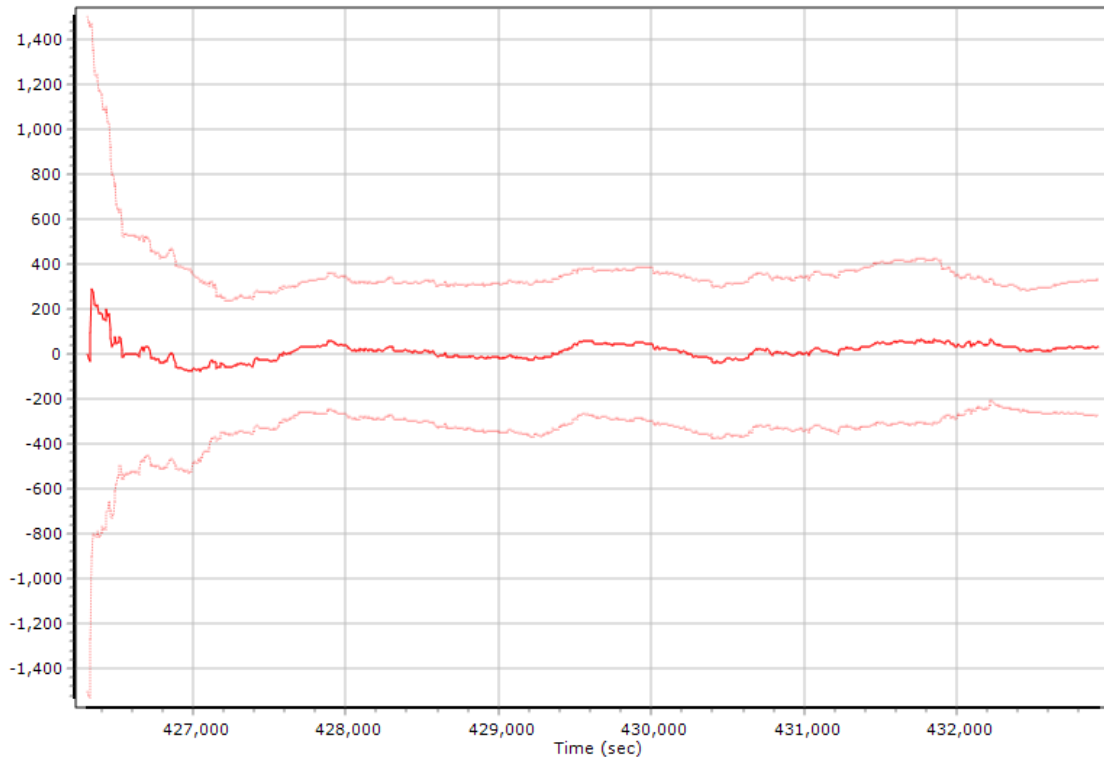
**x gyro scale error (ppm)**



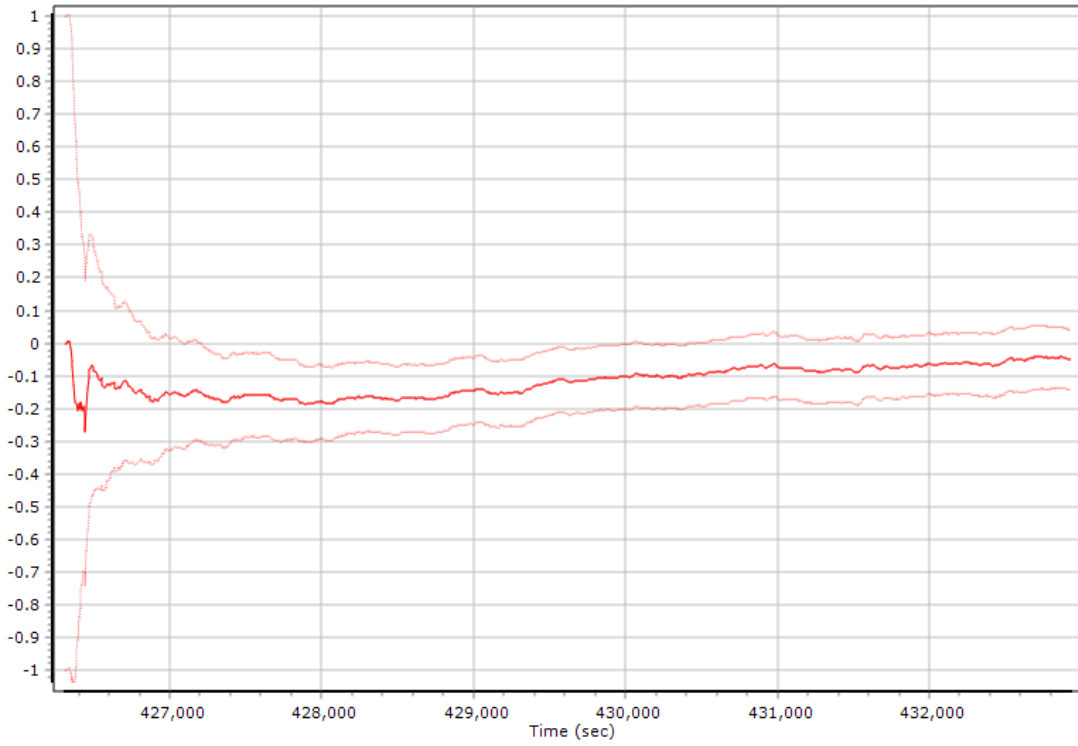
**y accelerometer bias (micro-g)**



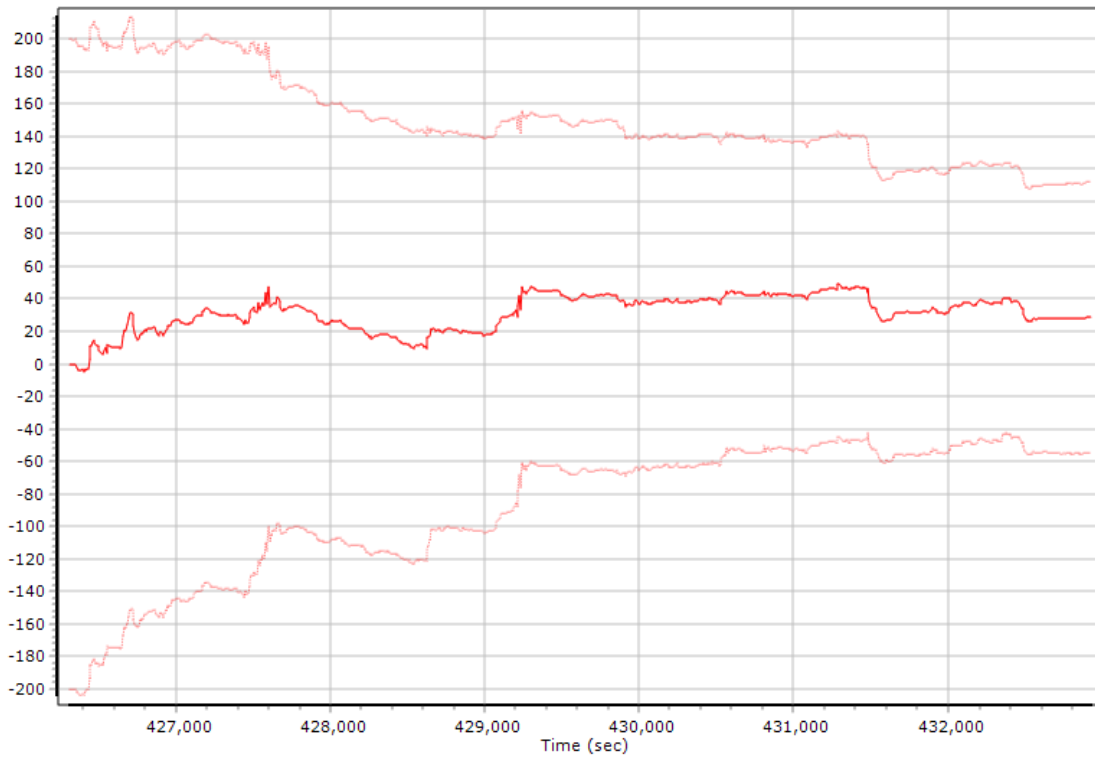
**y accelerometer scale error (ppm)**



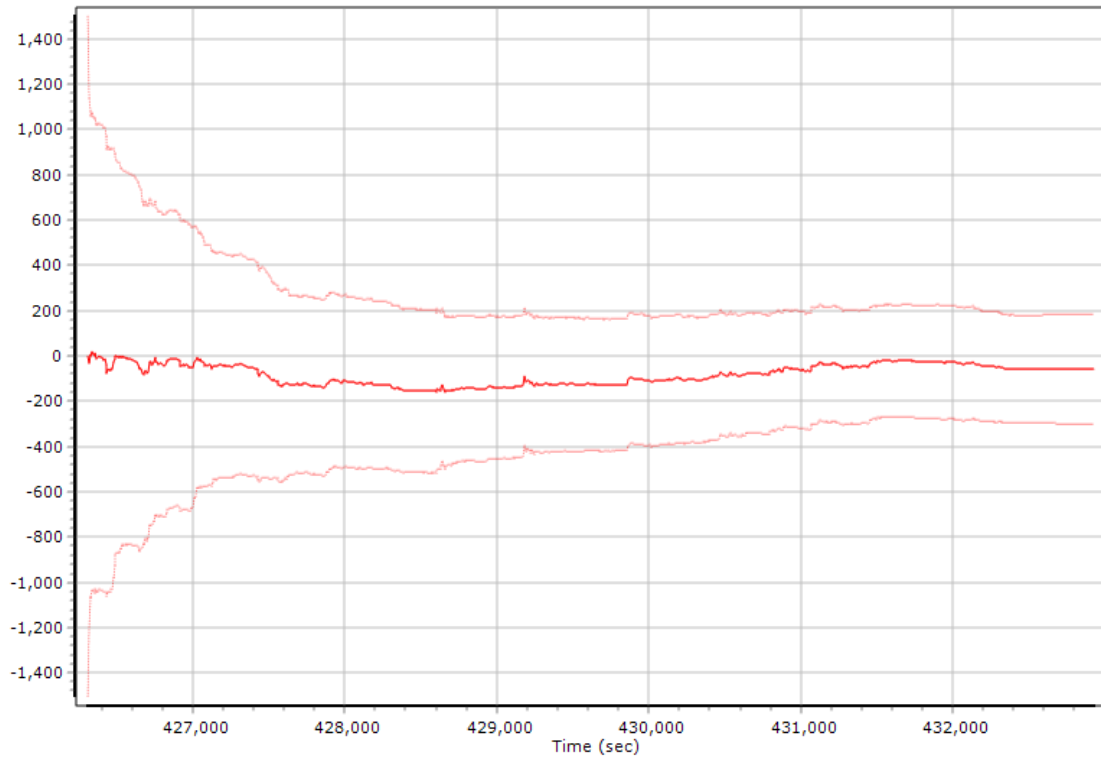
**y gyro bias (deg/hr)**



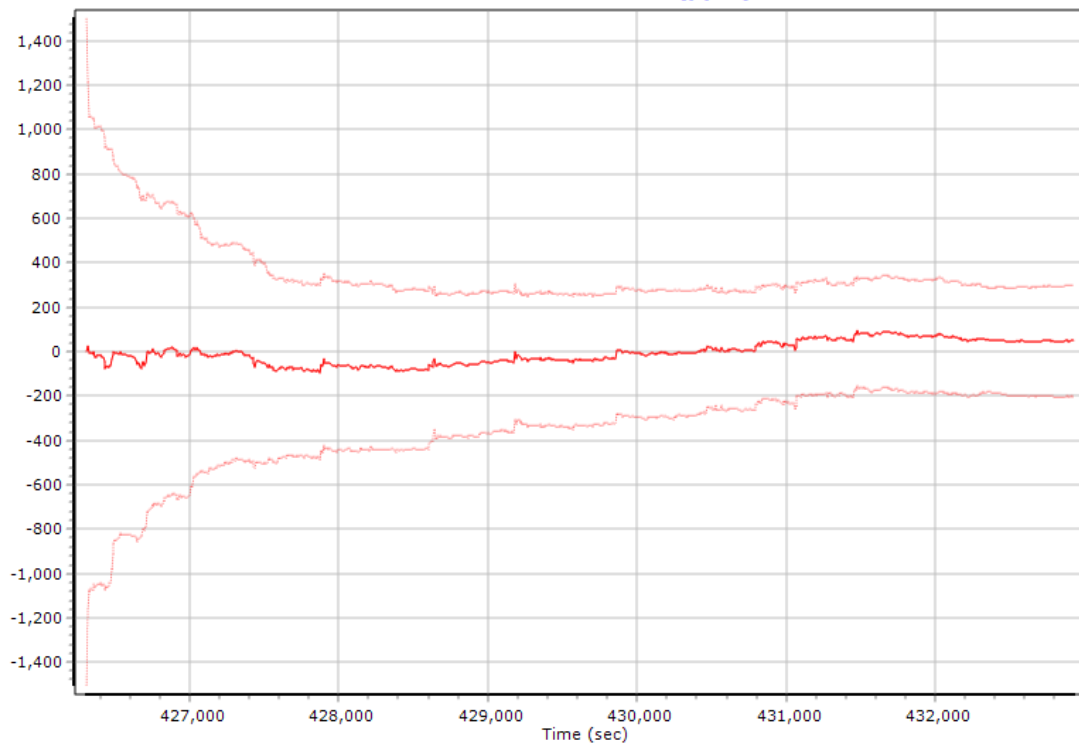
**y gyro scale error (ppm)**



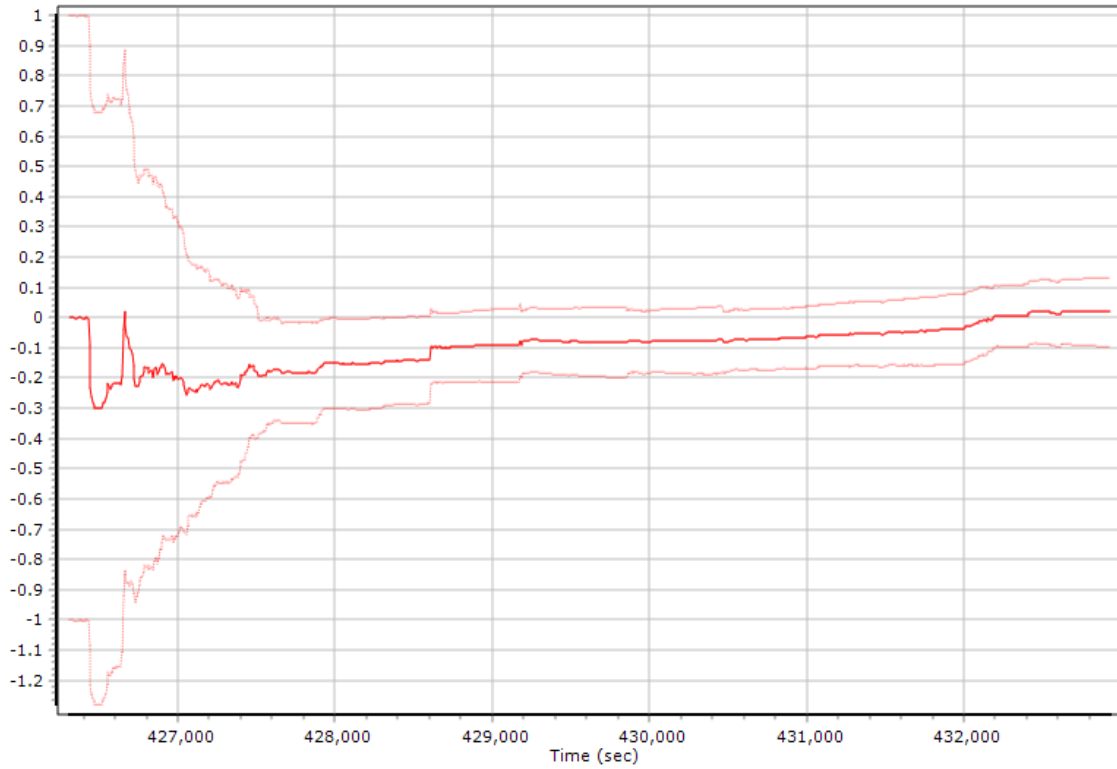
**z accelerometer bias (micro-g)**



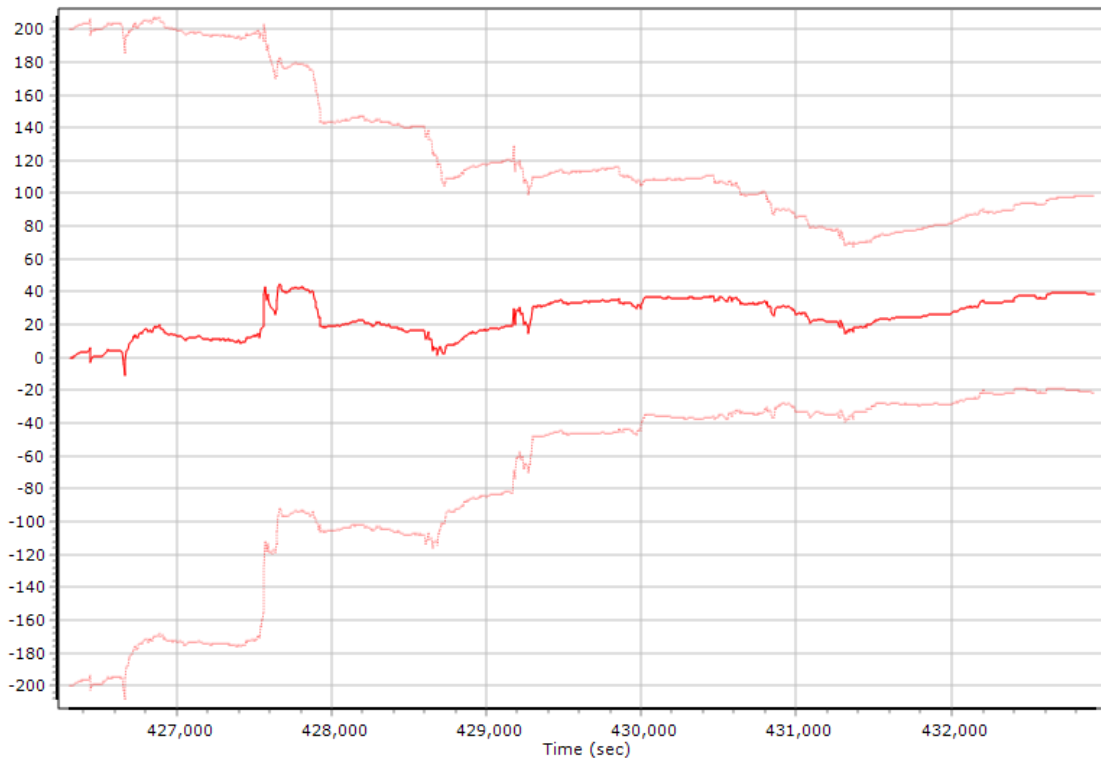
**z accelerometer scale error (ppm)**



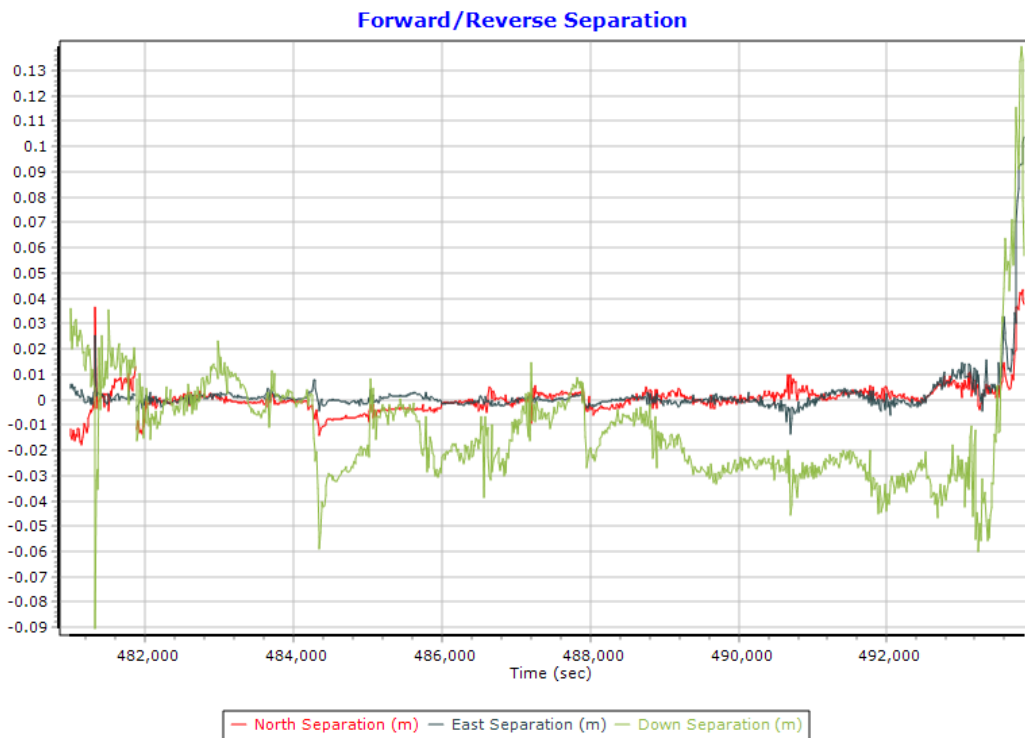
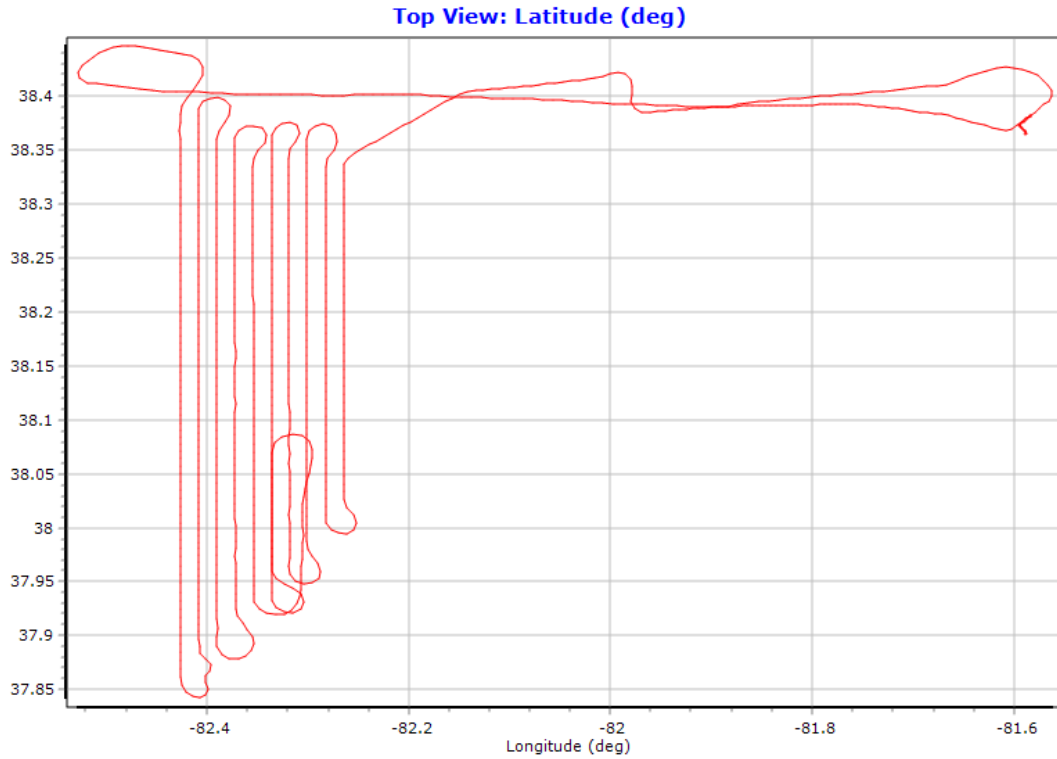
**z gyro bias (deg/hr)**

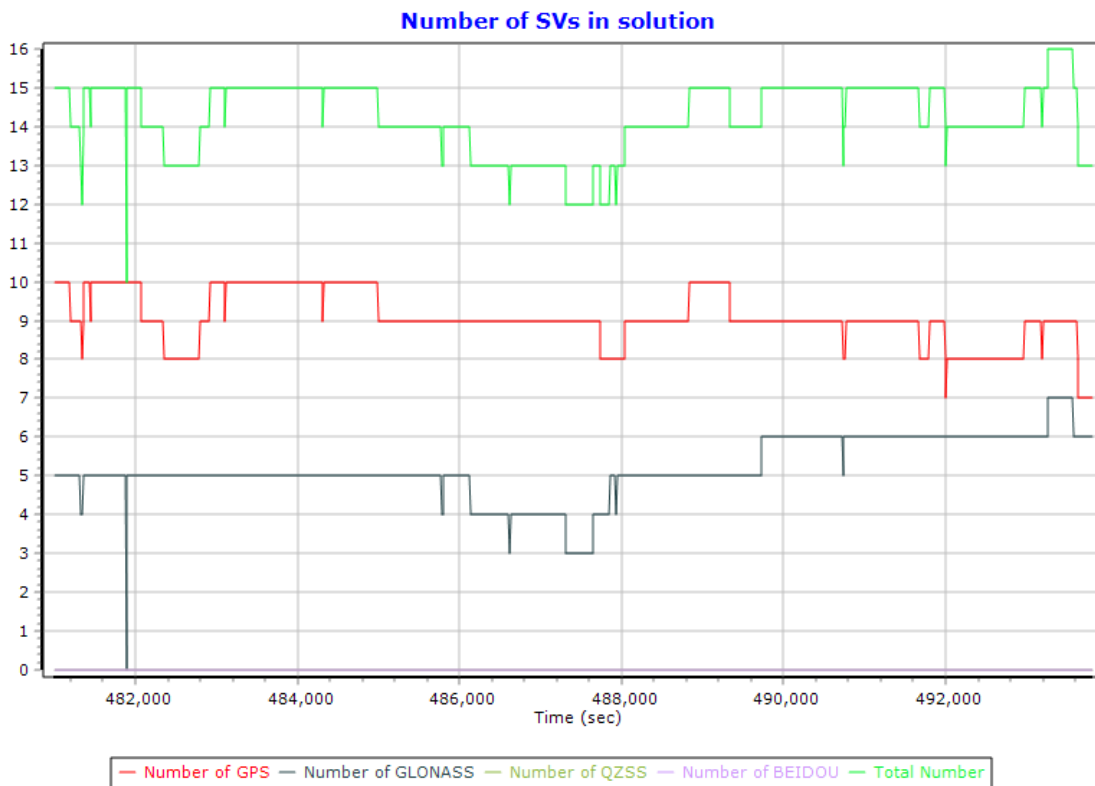
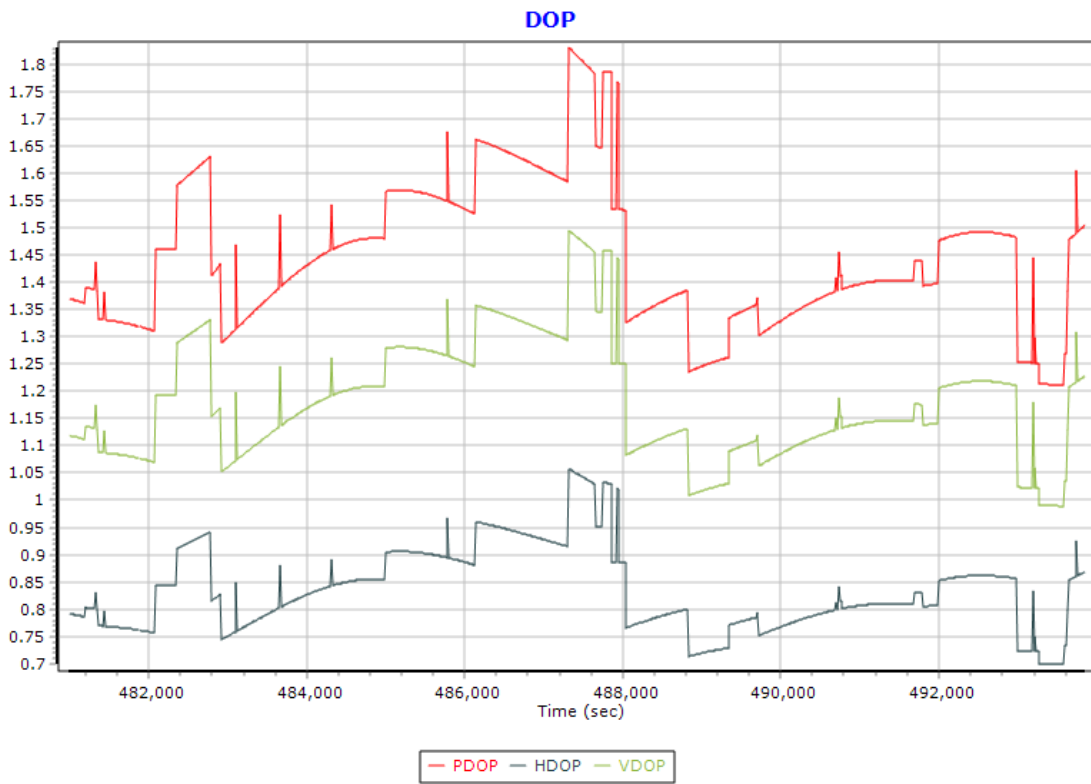


**z gyro scale error (ppm)**



### APRIL 13, 2018 MISSION 1





## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\20180413\_WV\_A

Solution Type: IN-Fusion SmartBase

Fixed: 12854	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 12876  
No processed position: 22

Fwd/Rev Separation RMS Values (m):

North: 0.006  
East: 0.010  
Height: 0.025

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 6437 occurrences

North: 0.004  
East: 0.002  
Height: 0.020

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 100  
0.10 - 0.30 m: 0



0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

DOP over Tol: 1.45%

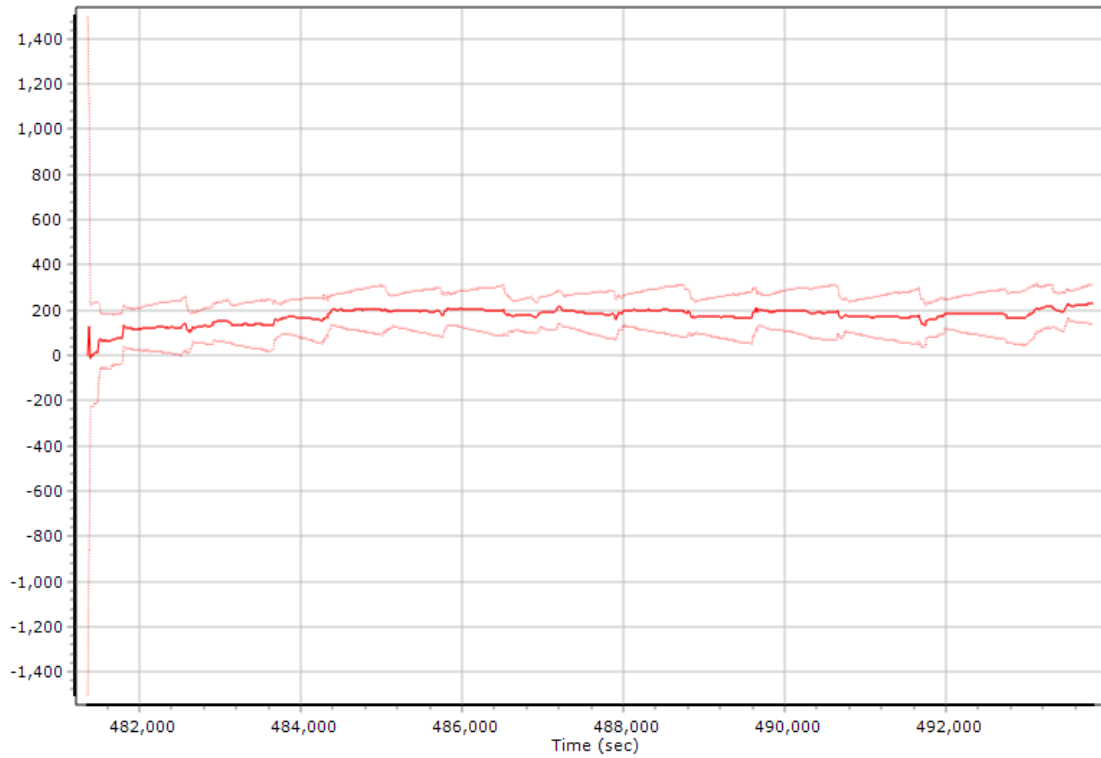
Baseline Distances (km):

Maximum: 58.6  
Minimum: 6.52  
Average: 28.35  
First Epoch: 54.99  
Last Epoch: 54.97

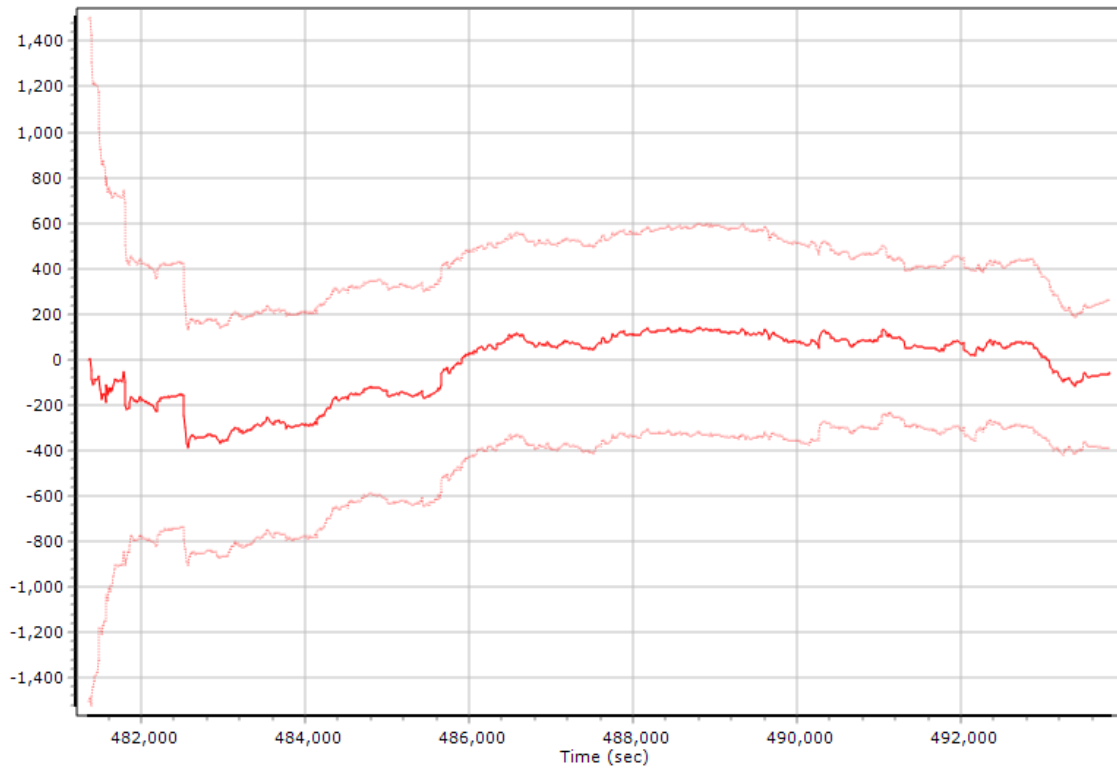
CORS Base Stations

Station	Original			Adjusted		
WVHU	N38°25'22.64487"	W82°25'28.94622"	186.420			
WVRA	N38°56'28.89163"	W81°45'04.86938"	147.975	N38°56'28.89164"	W81°45'04.86985"	147.998
WVOH	N37°59'53.75060"	W81°07'55.81223"	596.194	N37°59'53.75039"	W81°07'55.81193"	596.201
WVMZ	N38°50'20.07187"	W81°06'31.60939"	295.568	N38°50'20.07176"	W81°06'31.60948"	295.564
STKR	N39°19'33.85352"	W82°06'25.65785"	176.782	N39°19'33.85307"	W82°06'25.65724"	176.775
KYTL	N37°29'00.20373"	W82°32'07.72256"	185.678	N37°29'00.20353"	W82°32'07.72256"	185.712
KYTI	N38°25'20.03882"	W83°44'58.06220"	258.543	N38°25'20.03848"	W83°44'58.06203"	258.540
KYMH	N38°11'02.90319"	W83°26'11.51655"	221.538	N38°11'02.90316"	W83°26'11.51643"	221.560
KYGB	N38°28'50.22275"	W82°52'24.00517"	183.039	N38°28'50.22339"	W82°52'24.00660"	183.088

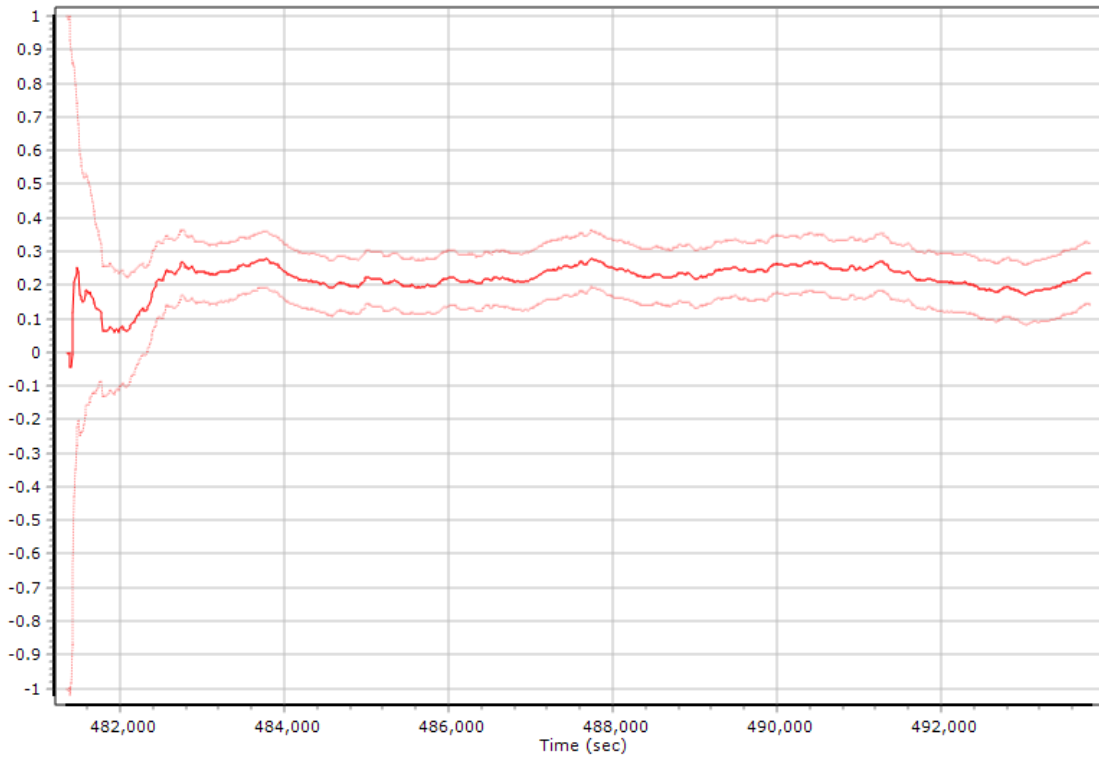
**x accelerometer bias (micro-g)**



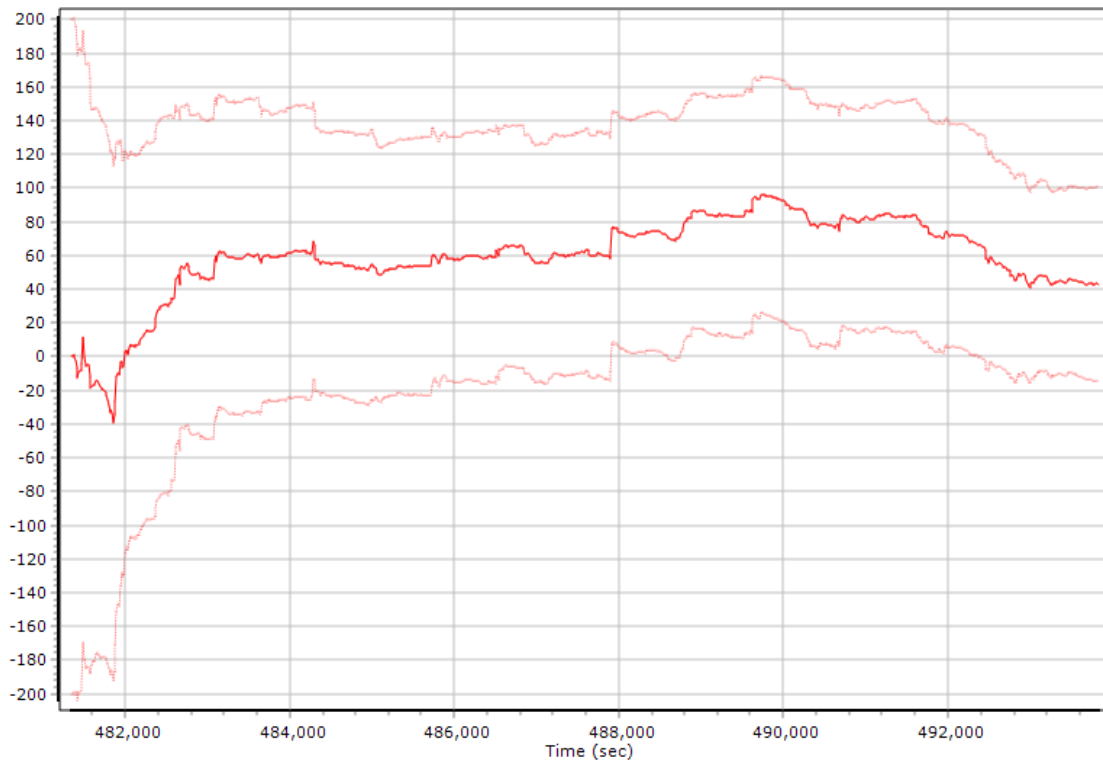
**x accelerometer scale error (ppm)**



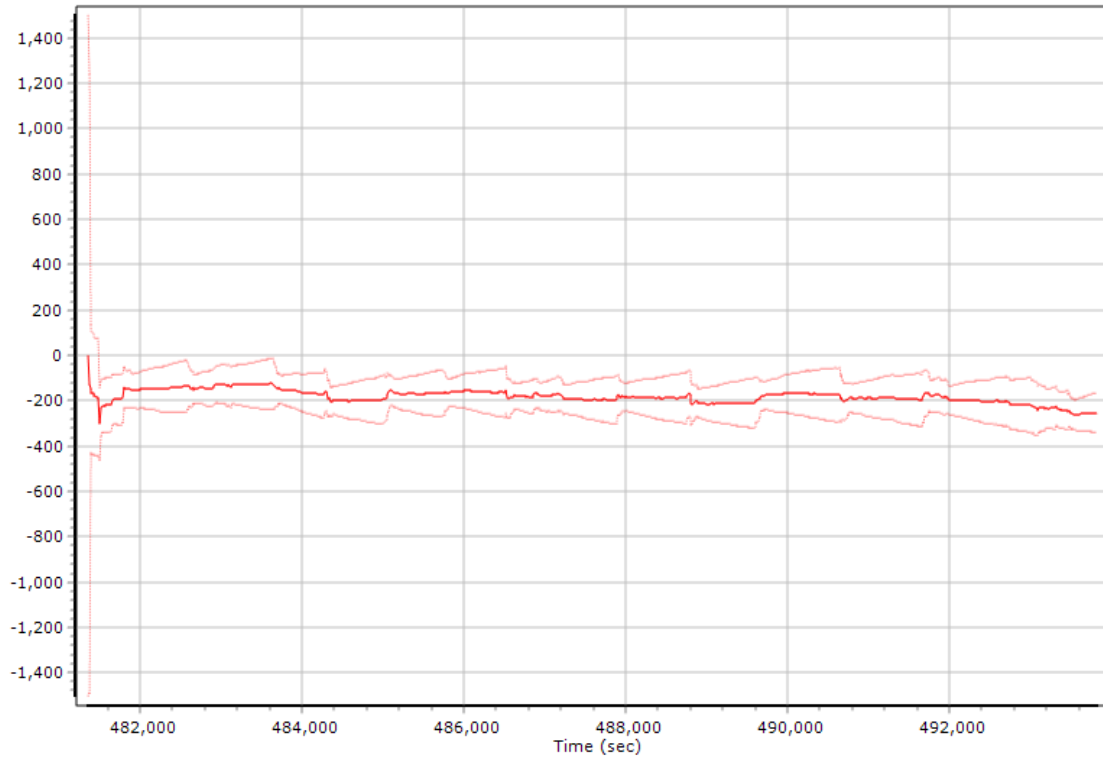
**x gyro bias (deg/hr)**



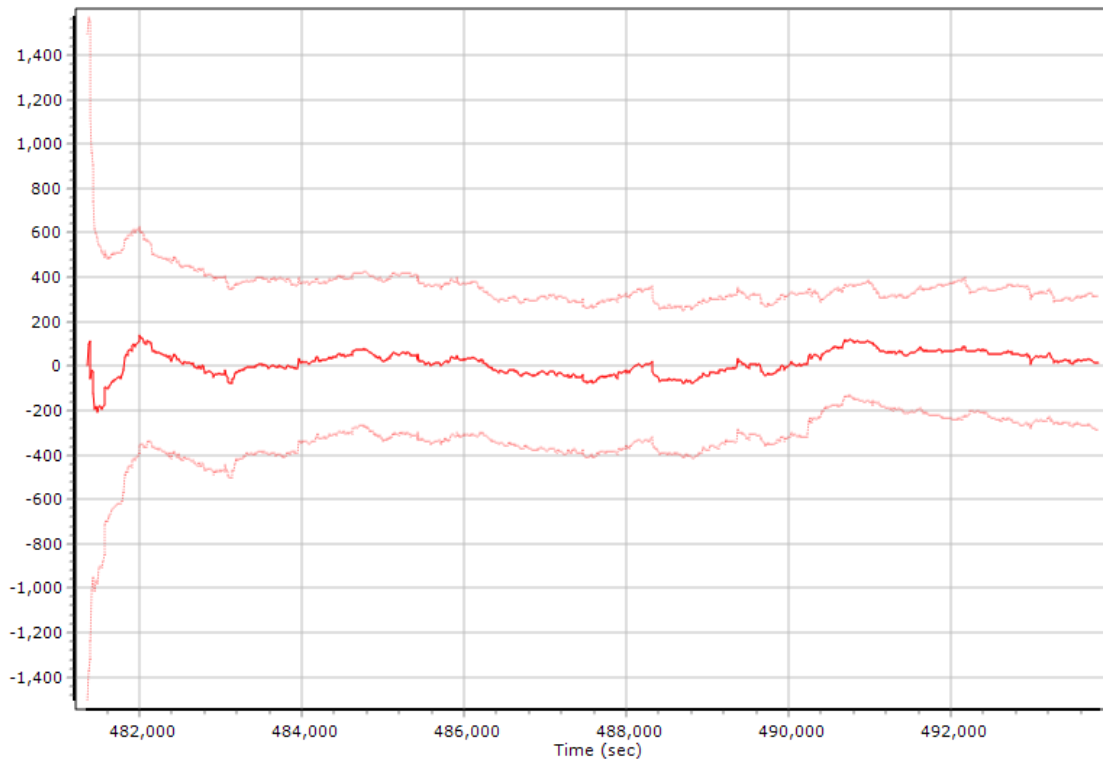
**x gyro scale error (ppm)**



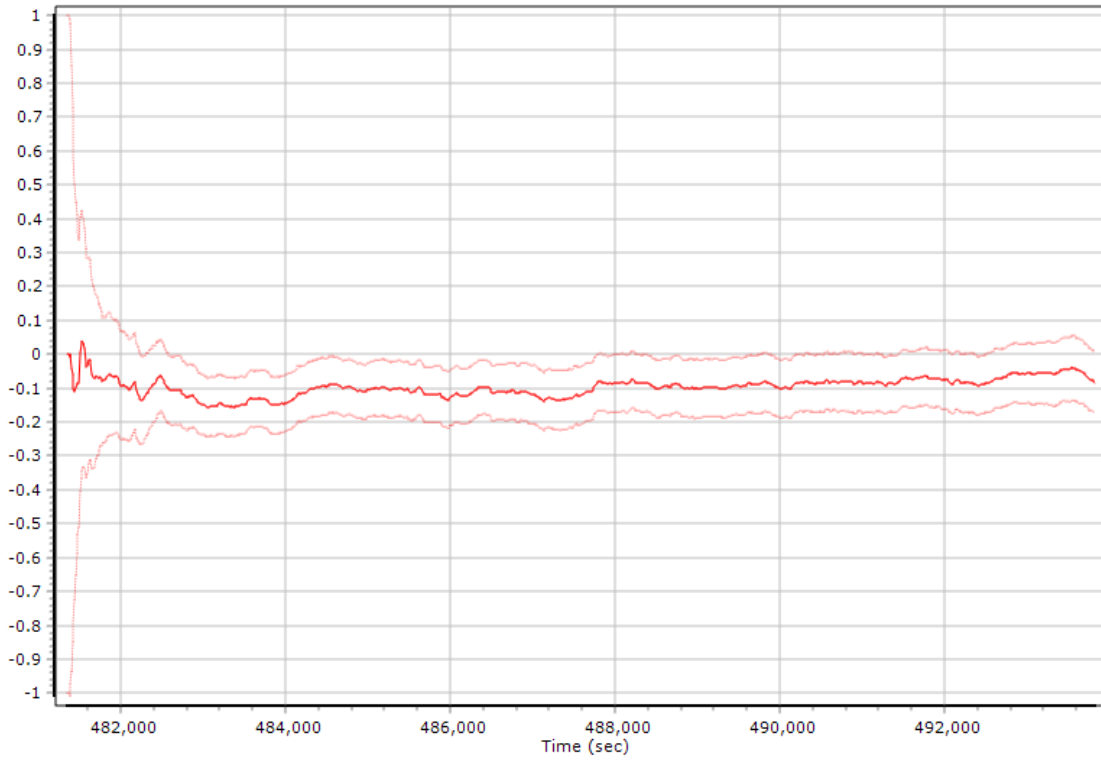
**y accelerometer bias (micro-g)**



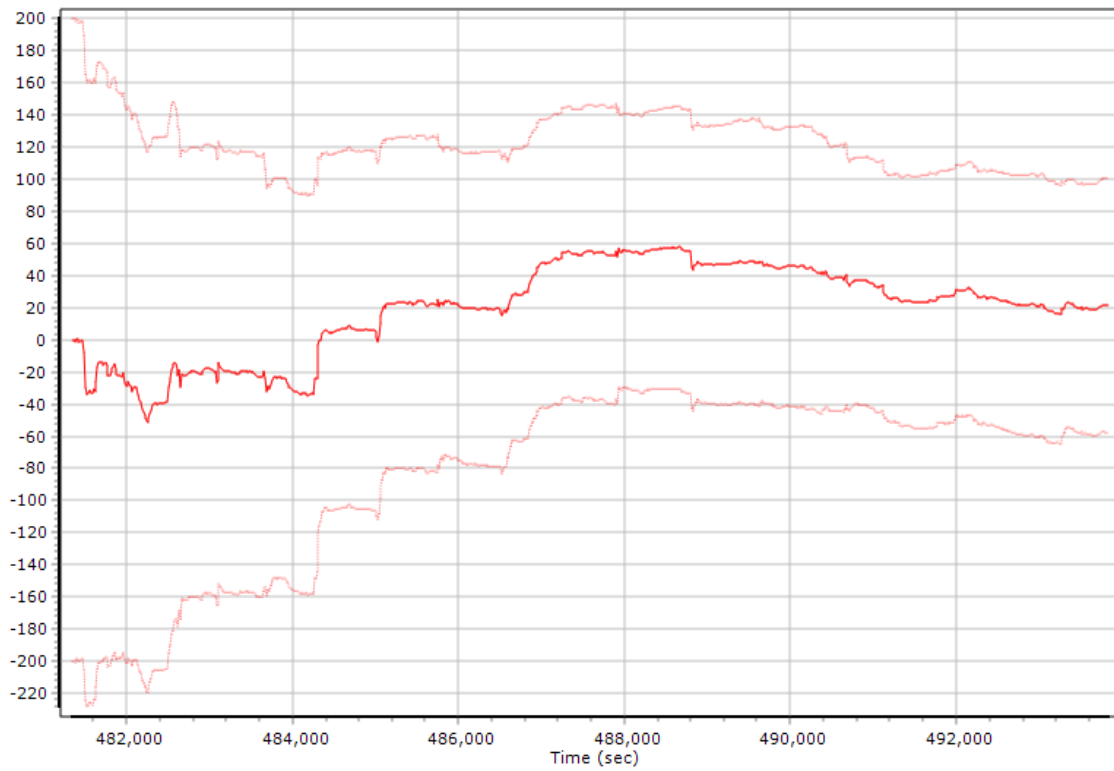
**y accelerometer scale error (ppm)**



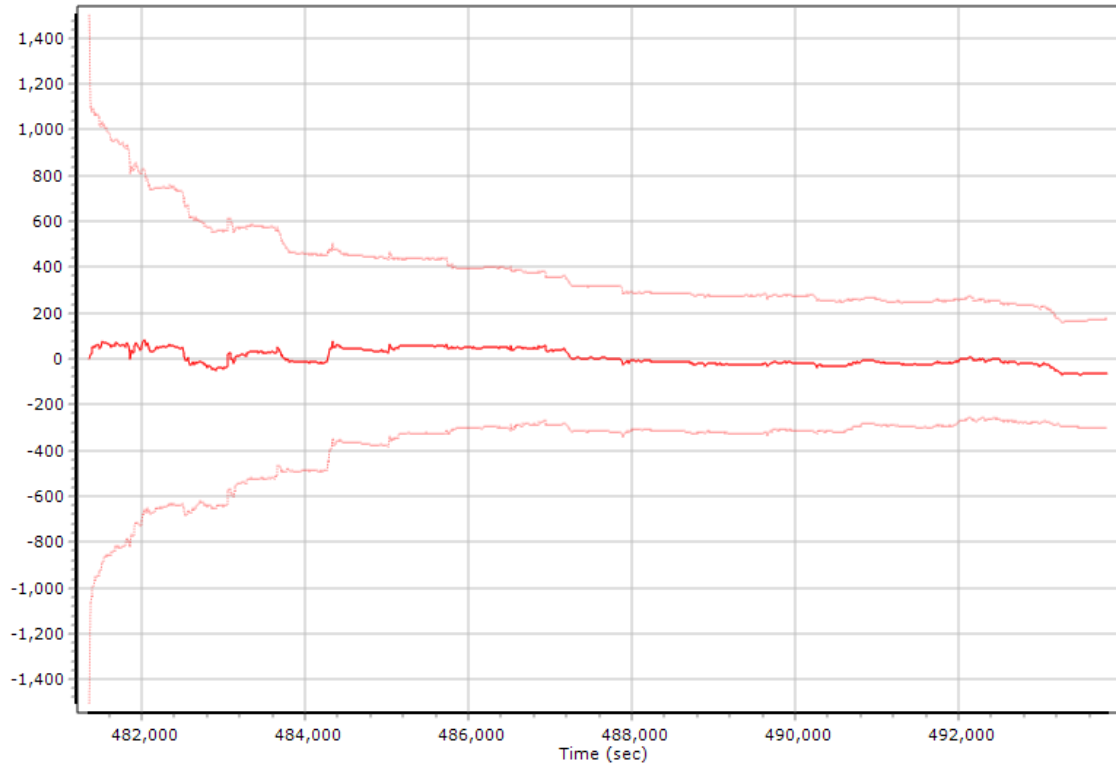
**y gyro bias (deg/hr)**



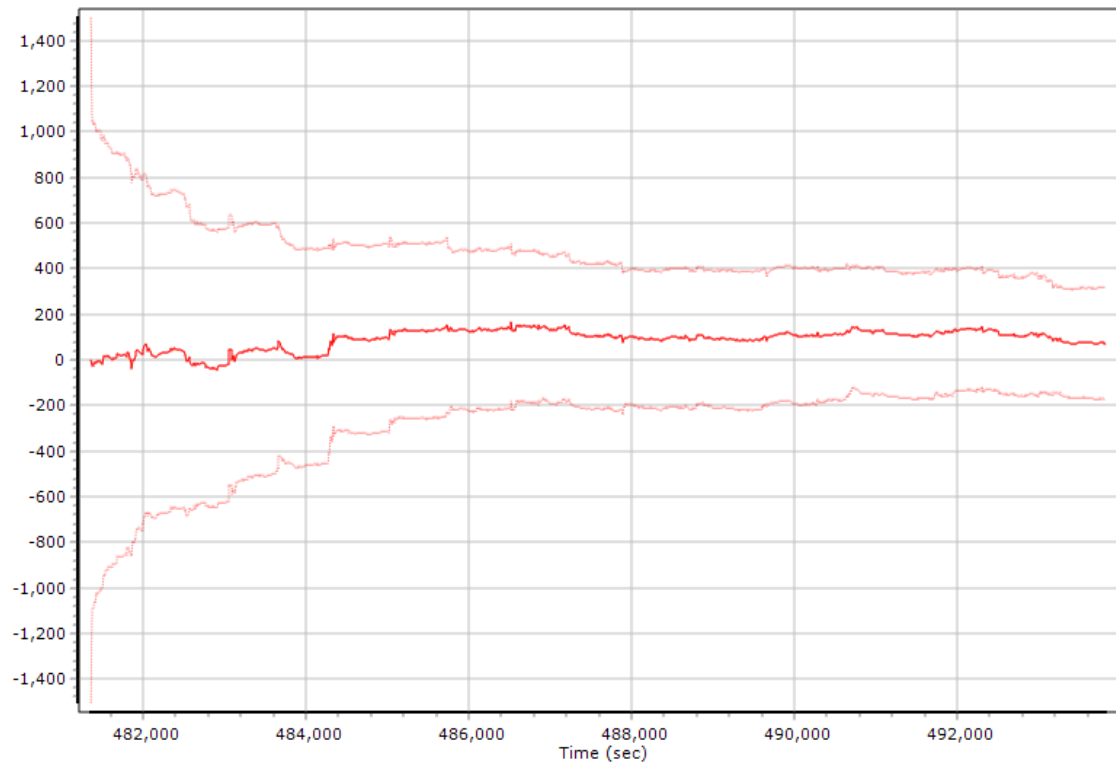
**y gyro scale error (ppm)**



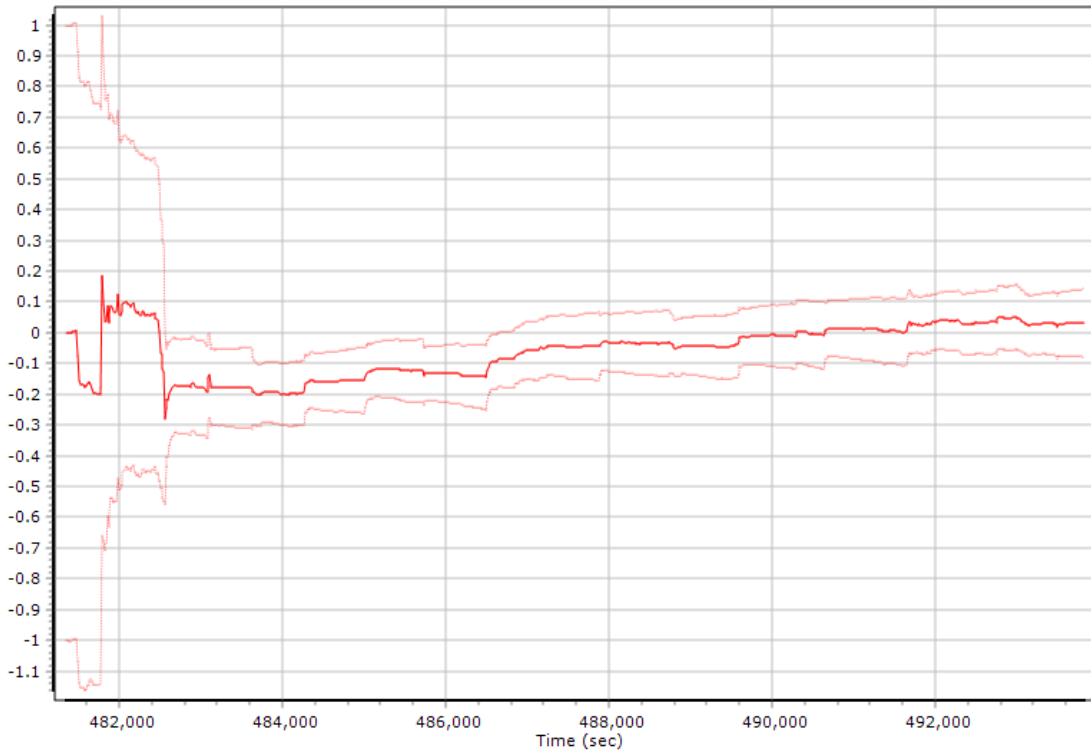
**z accelerometer bias (micro-g)**



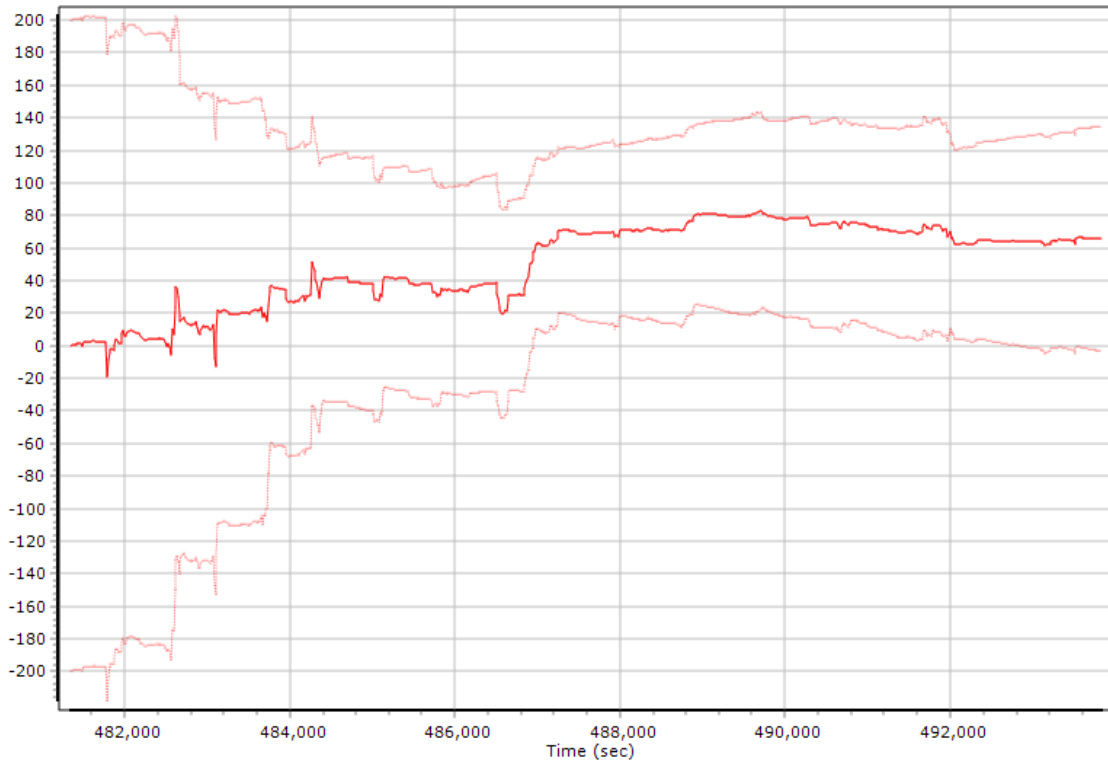
**z accelerometer scale error (ppm)**



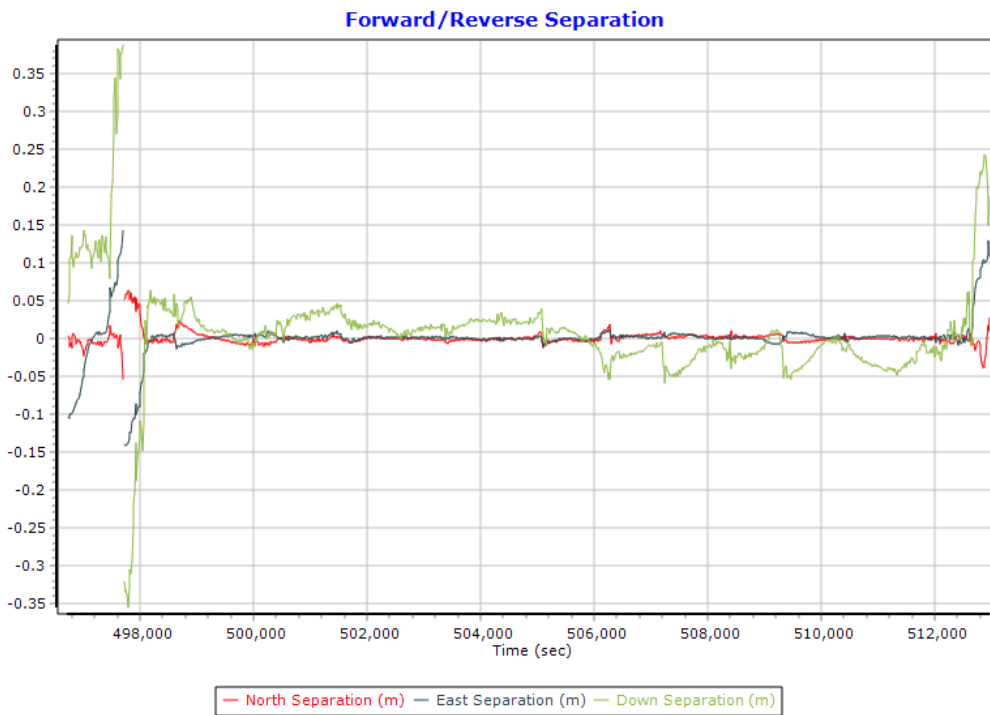
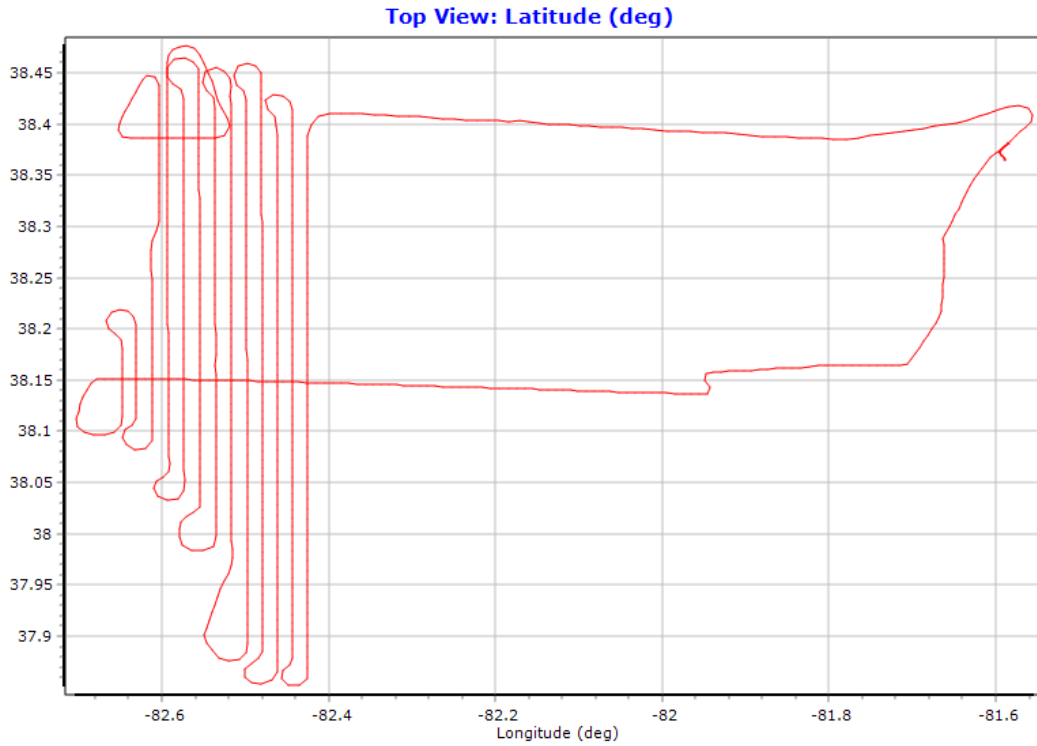
**z gyro bias (deg/hr)**



**z gyro scale error (ppm)**

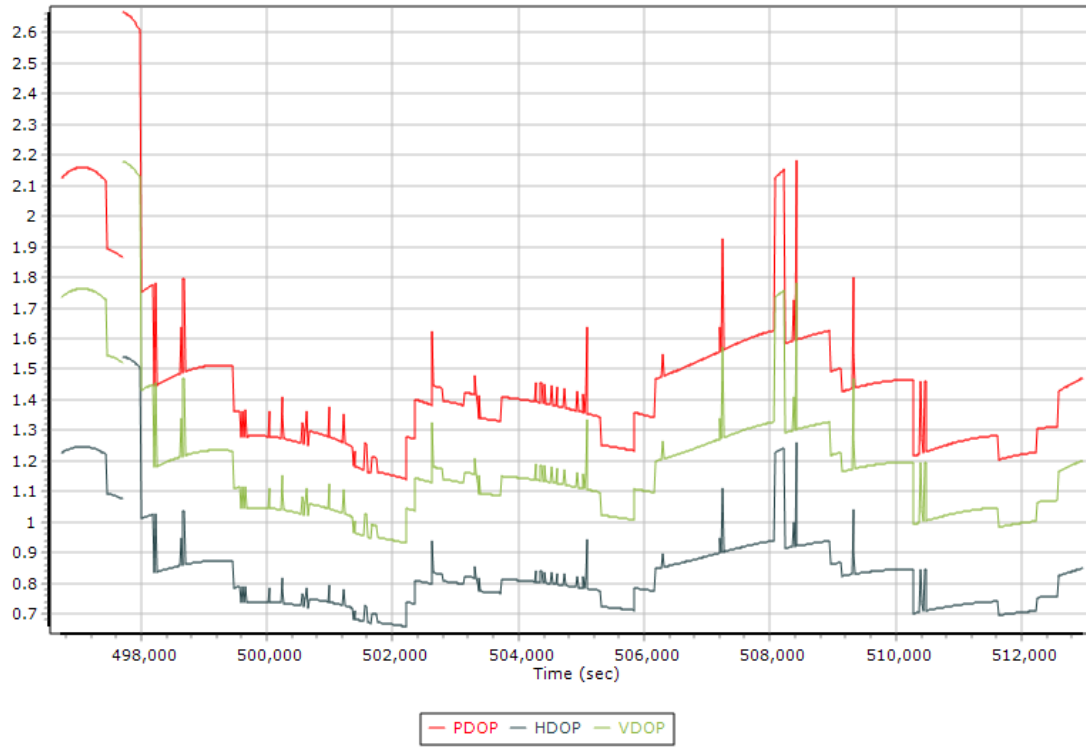


## APRIL 13, 2018 MISSION 2

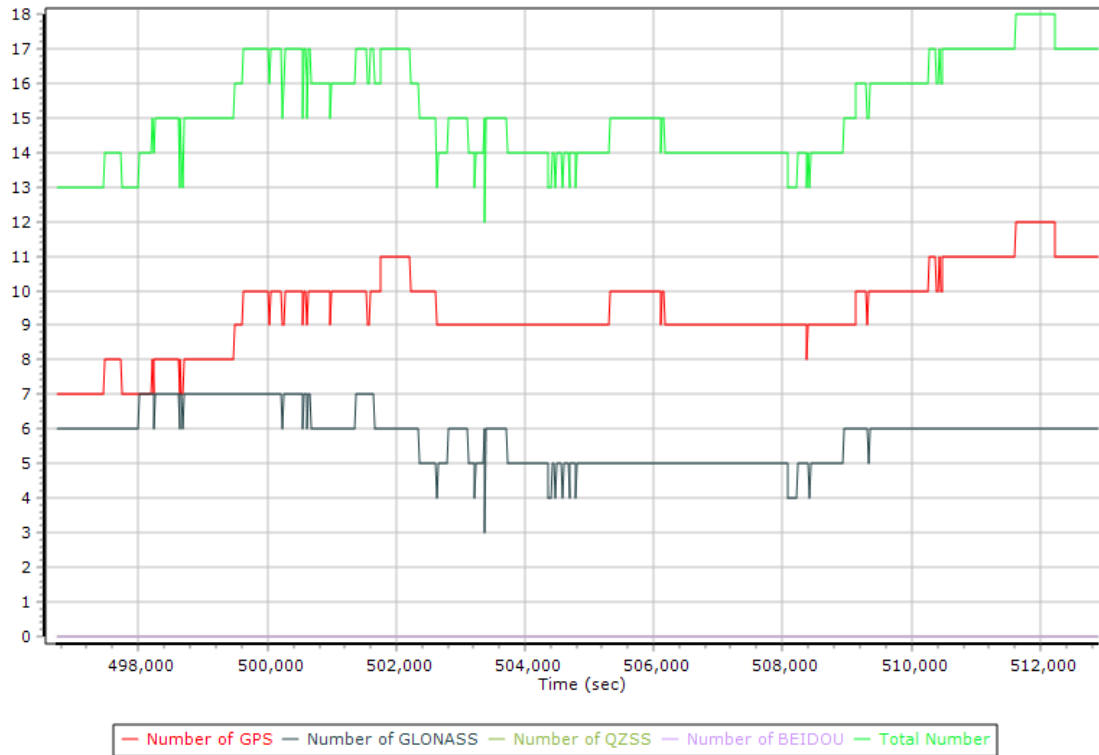




### DOP



### Number of SVs in solution



## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\20180413\_WV\_B

Solution Type: IN-Fusion SmartBase

Fixed: 16268 (99.99%)  
Float: 0 (0.00%)  
No Solution: 1 (0.01%)

Number of Epochs:

Total in RAW file: 16269  
No processed position: 1

Fwd/Rev Separation RMS Values (m):

North: 0.009  
East: 0.027  
Height: 0.069

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 8134 occurrences

North: 0.003  
East: 0.003  
Height: 0.023

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 98.672

0.10 - 0.30 m: 1.328  
0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

DOP over Tol: 1.46%

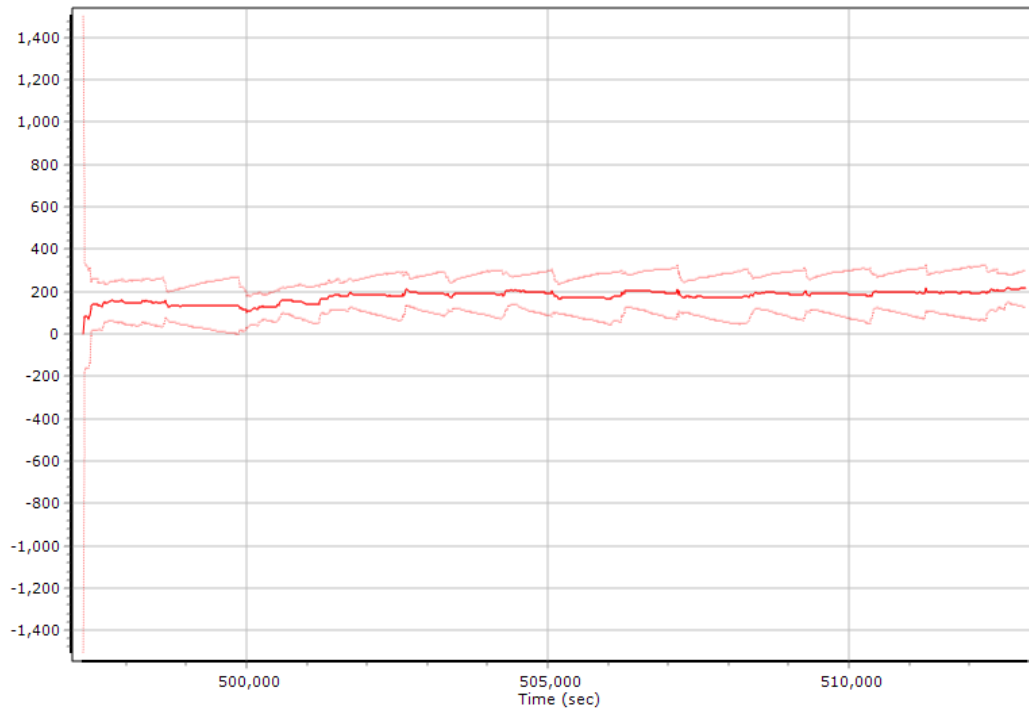
Baseline Distances (km):

Maximum: 71.3  
Minimum: 8  
Average: 30.93  
First Epoch: 67.1  
Last Epoch: 67.07

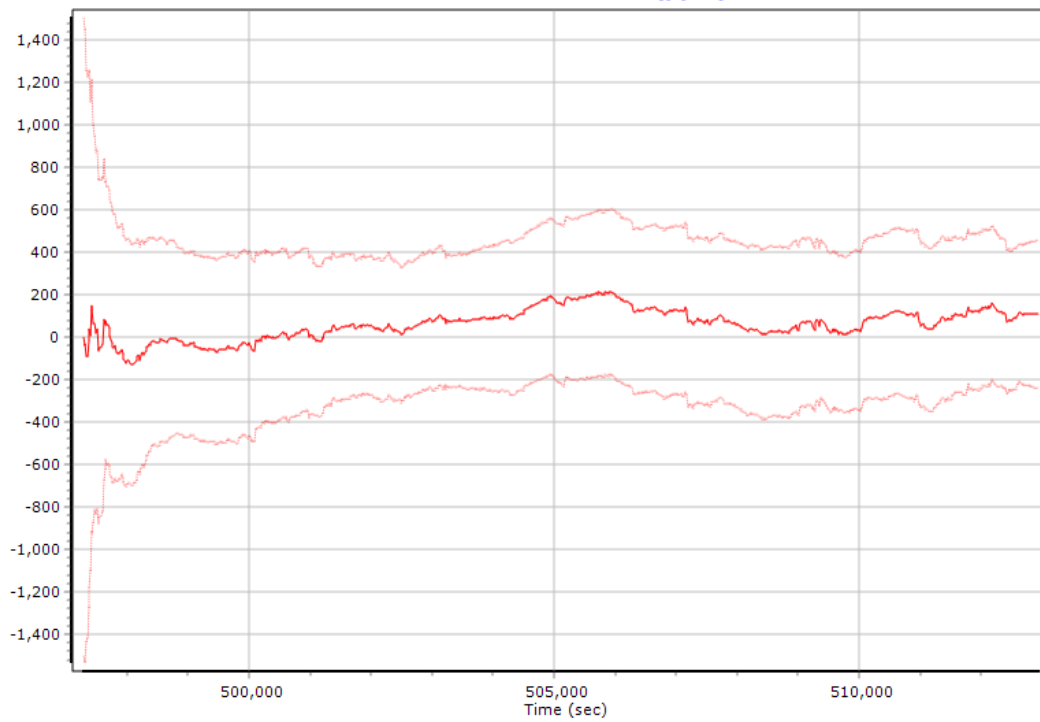
CORS Base Stations

Station	Original			Adjusted		
WVHU	N38°25'22.64487"	W82°25'28.94622"	186.420			
WVOH	N37°59'53.75060"	W81°07'55.81223"	596.194	N37°59'53.75039"	W81°07'55.81195"	596.200
WVMZ	N38°50'20.07187"	W81°06'31.60939"	295.568	N38°50'20.07174"	W81°06'31.60950"	295.565
WVAT	N37°25'42.67847"	W81°04'04.40395"	704.674	N37°25'42.67842"	W81°04'04.40391"	704.684
STKR	N39°19'33.85352"	W82°06'25.65785"	176.782	N39°19'33.85303"	W82°06'25.65727"	176.774
PKTN	N39°02'43.69374"	W83°01'27.86022"	143.193	N39°02'43.69361"	W83°01'27.86032"	143.202
KYTL	N37°29'00.20373"	W82°32'07.72256"	185.678	N37°29'00.20355"	W82°32'07.72253"	185.709
KYTI	N38°25'20.03882"	W83°44'58.06220"	258.543	N38°25'20.03848"	W83°44'58.06199"	258.541
GALP	N38°50'39.17675"	W82°16'40.11957"	168.232	N38°50'39.17663"	W82°16'40.11941"	168.241

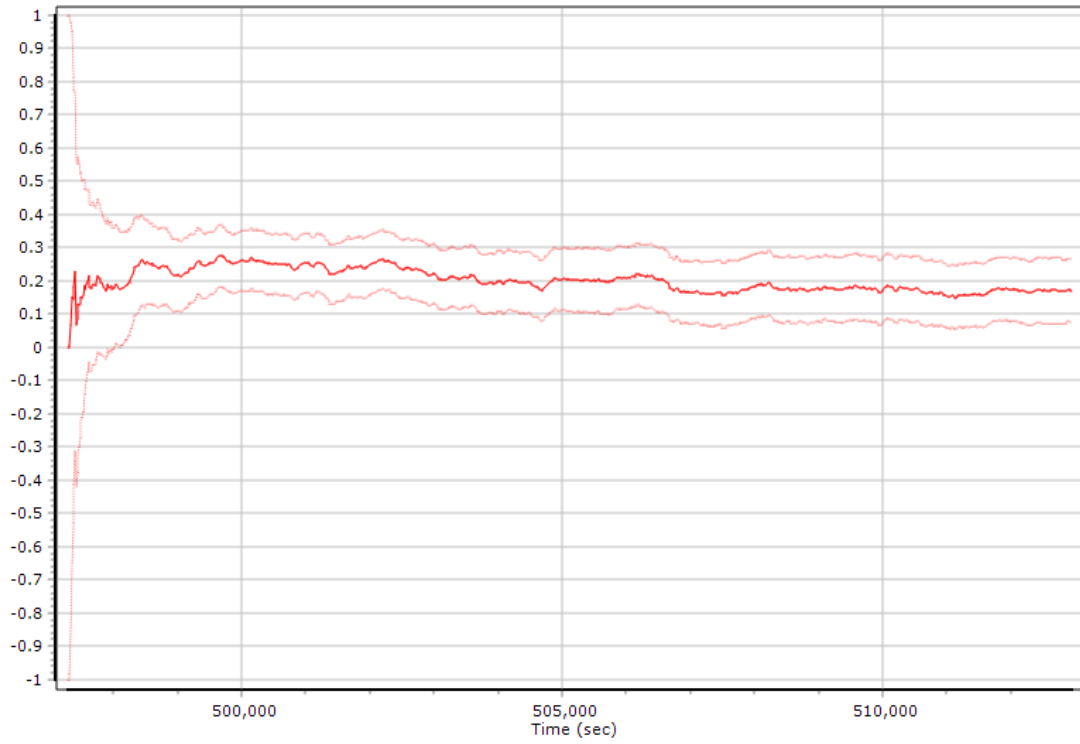
**x accelerometer bias (micro-g)**



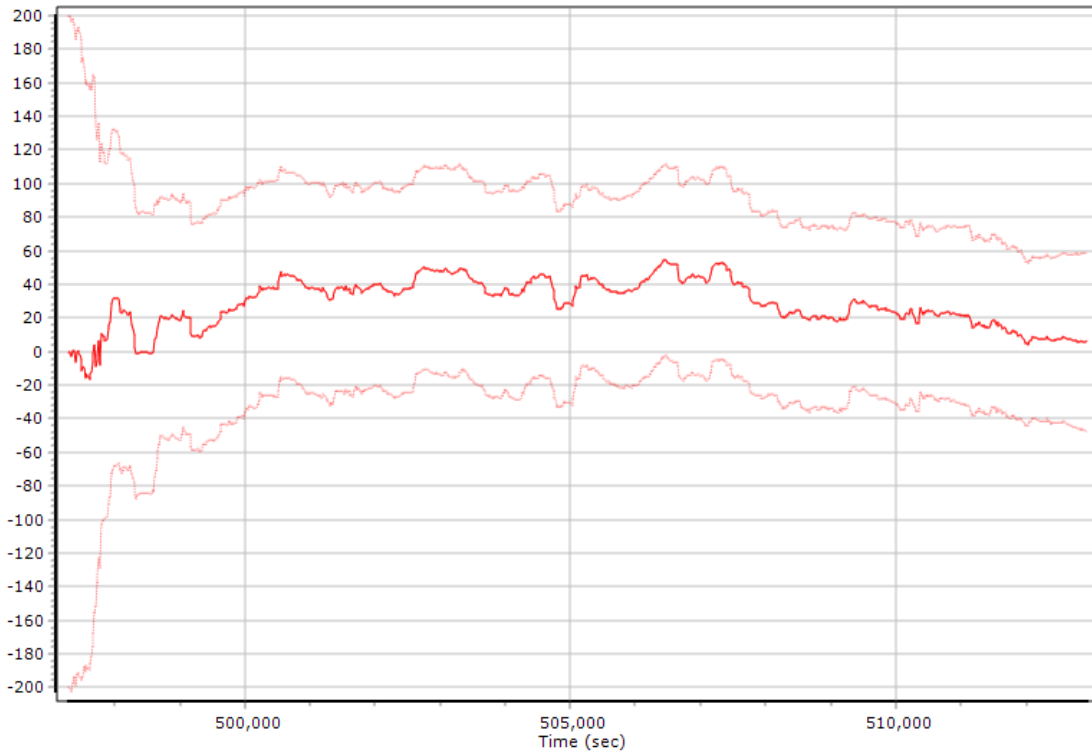
**x accelerometer scale error (ppm)**



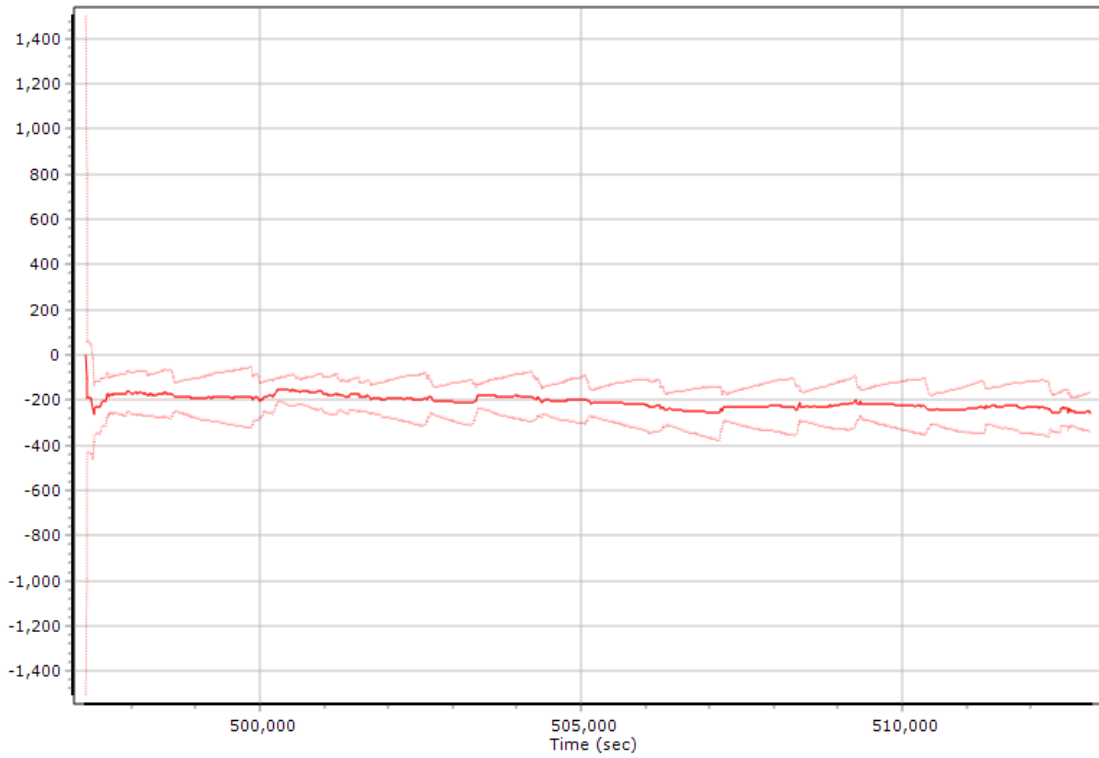
**x gyro bias (deg/hr)**



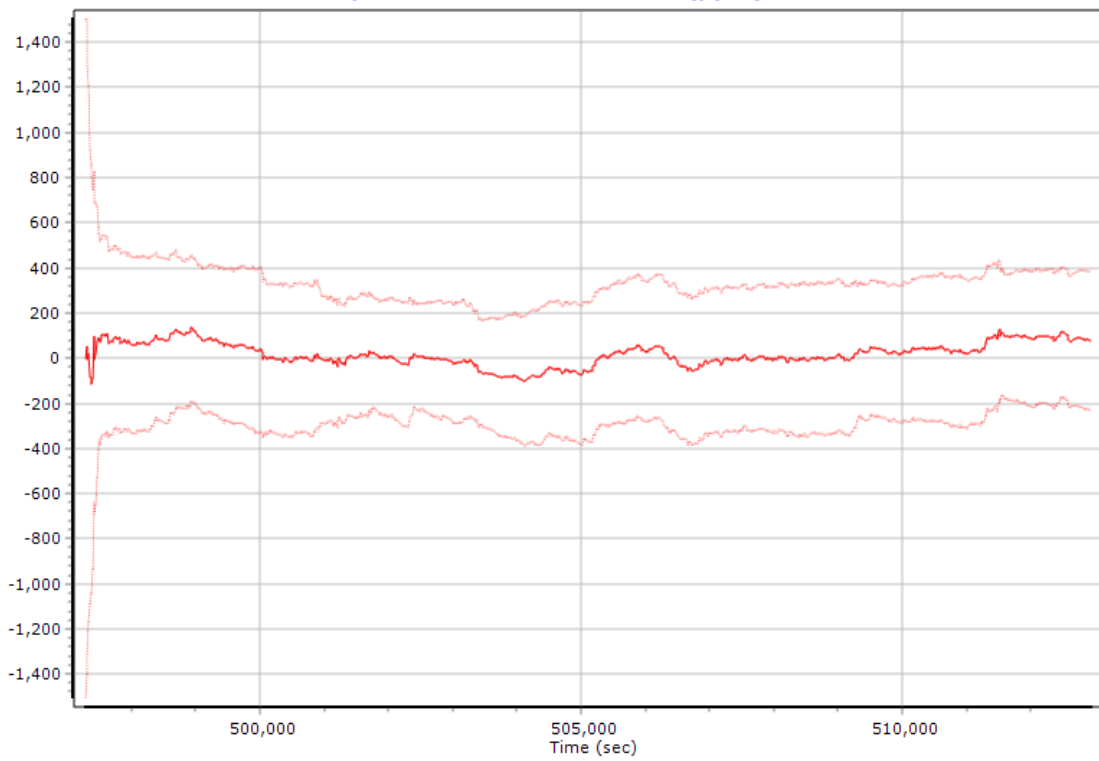
**x gyro scale error (ppm)**



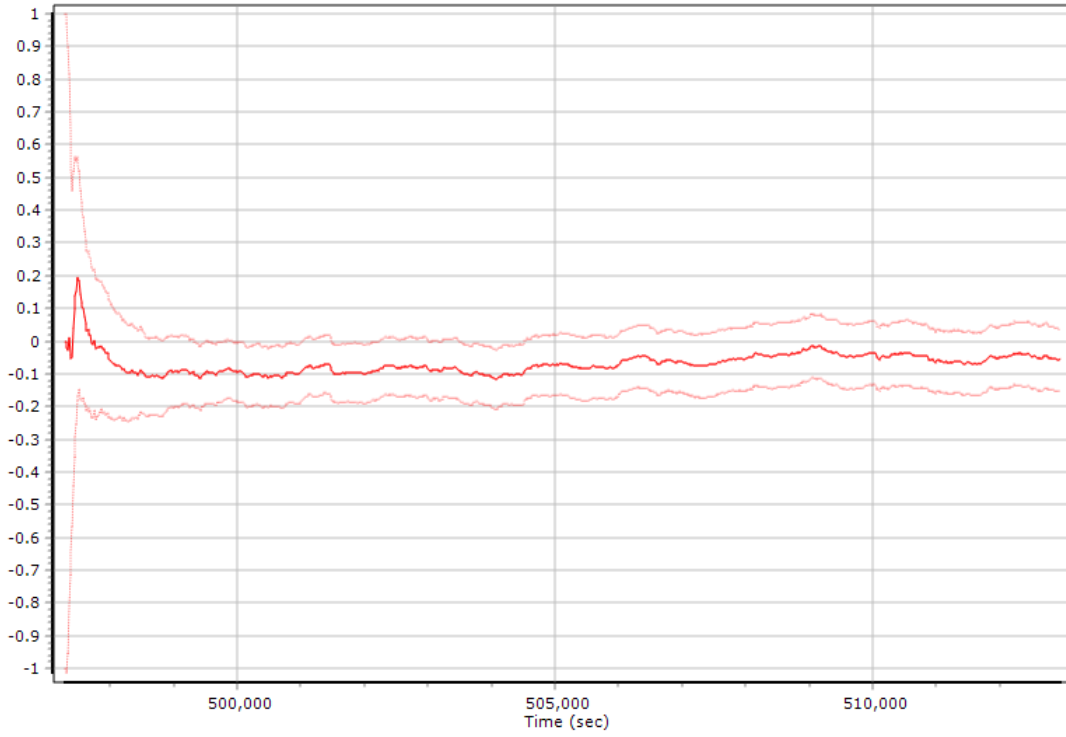
**y accelerometer bias (micro-g)**



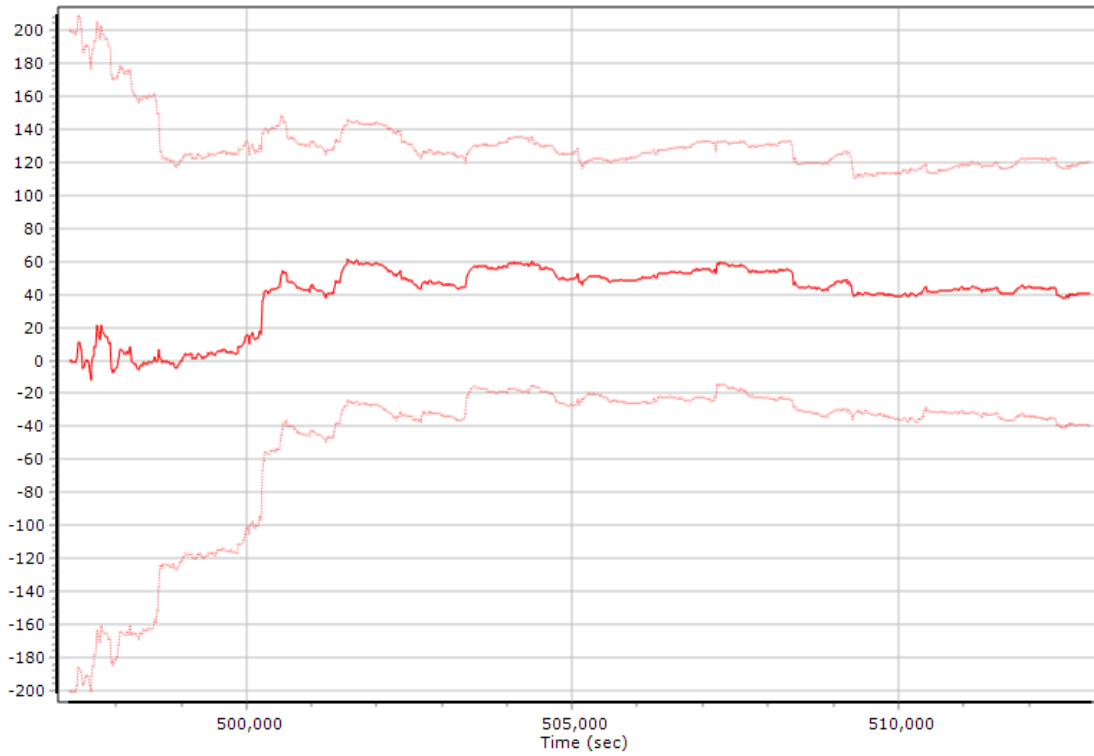
**y accelerometer scale error (ppm)**



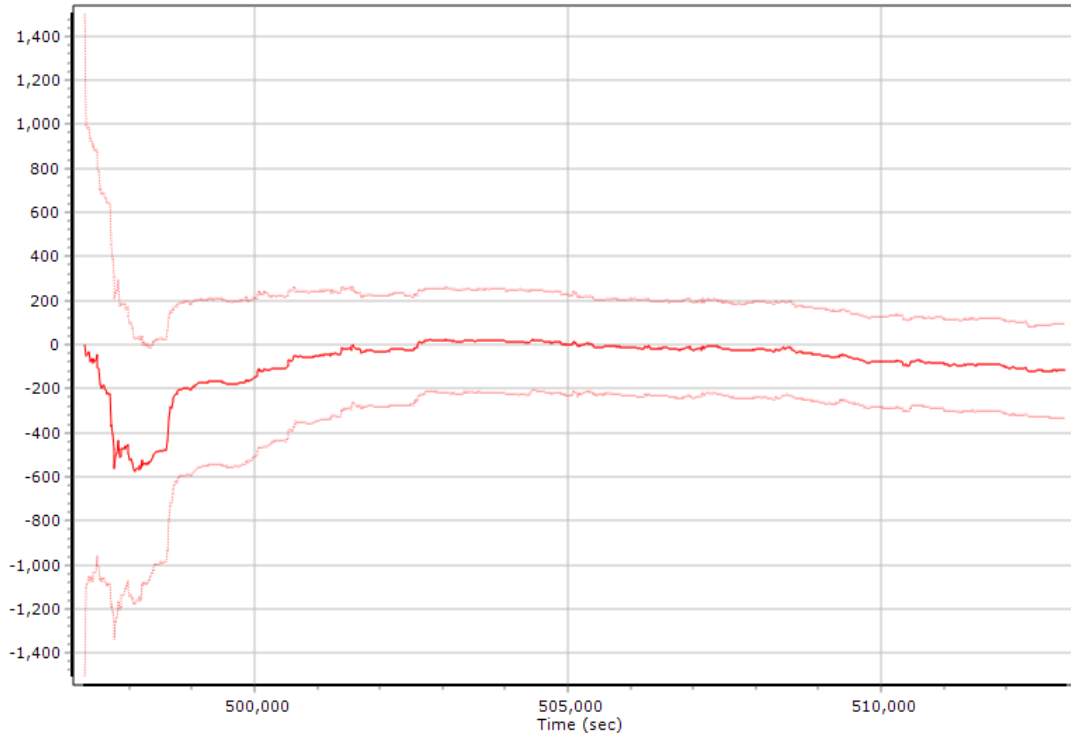
**y gyro bias (deg/hr)**



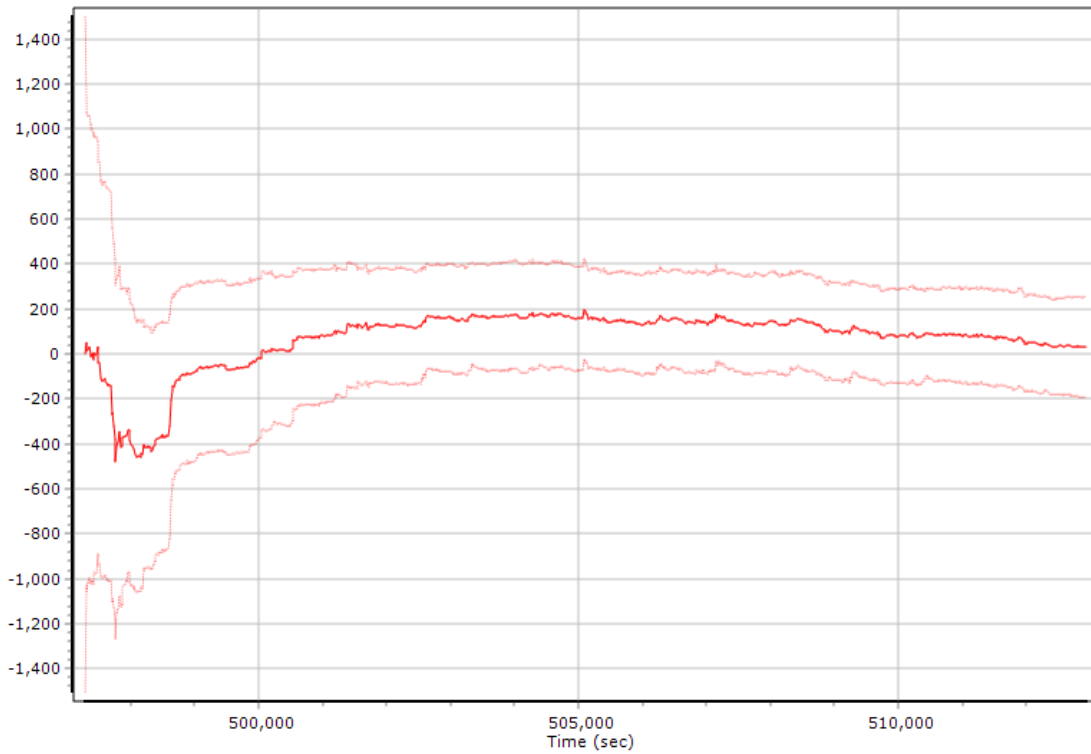
**y gyro scale error (ppm)**



**z accelerometer bias (micro-g)**

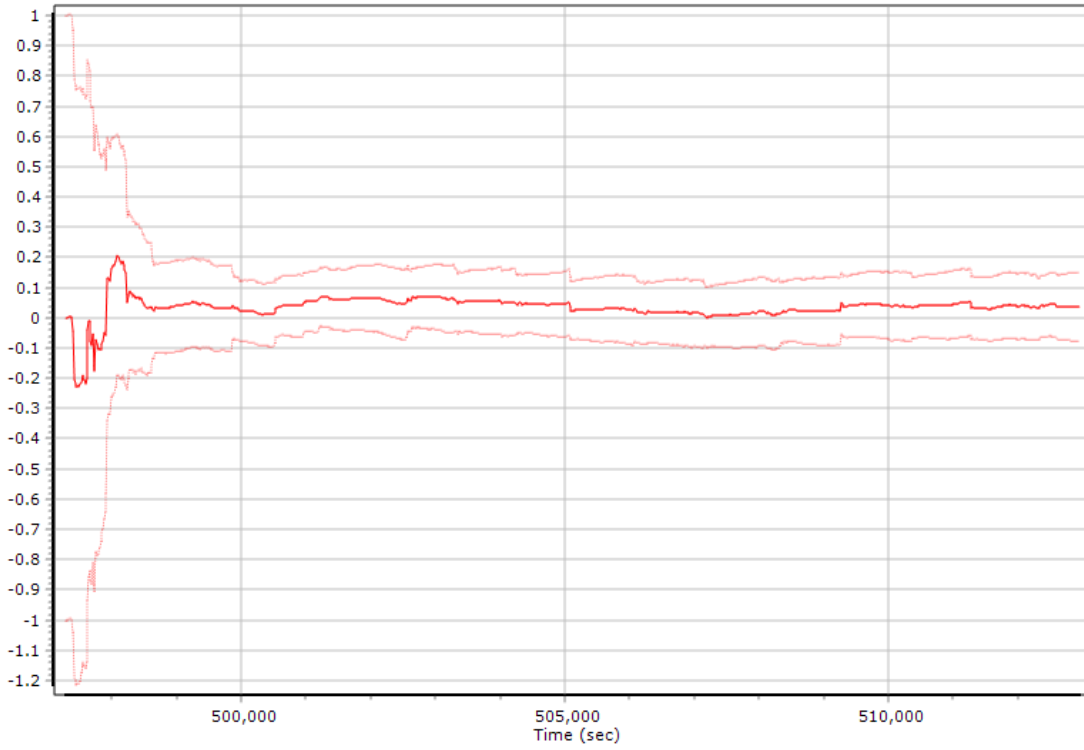


**z accelerometer scale error (ppm)**

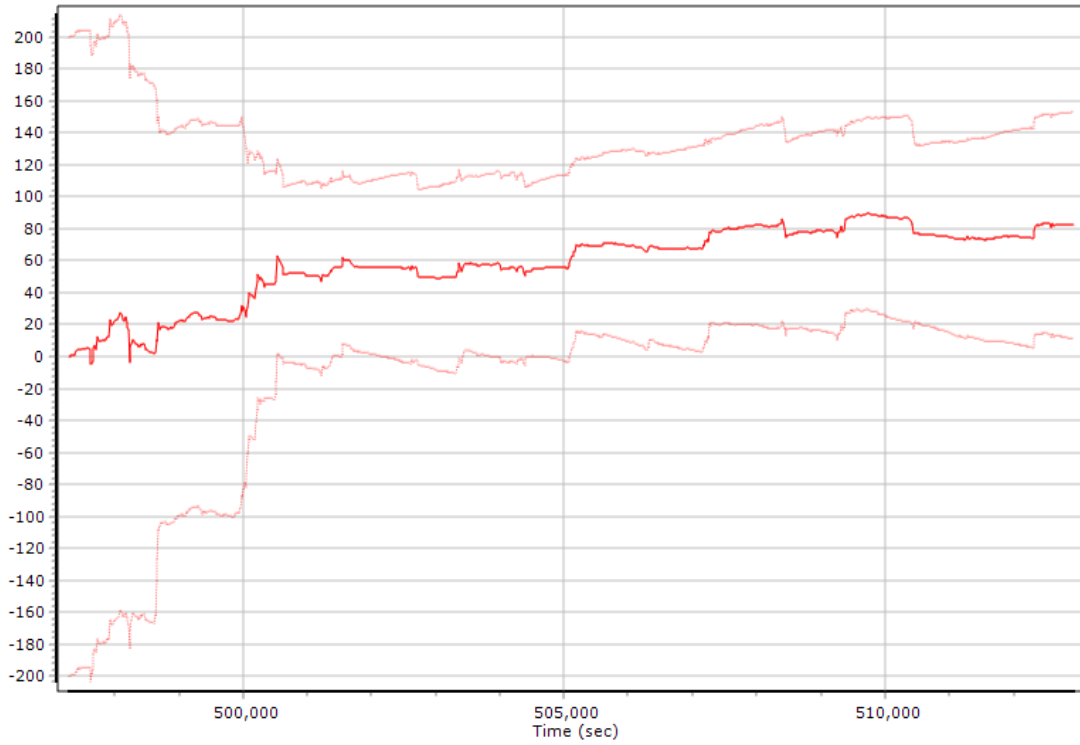




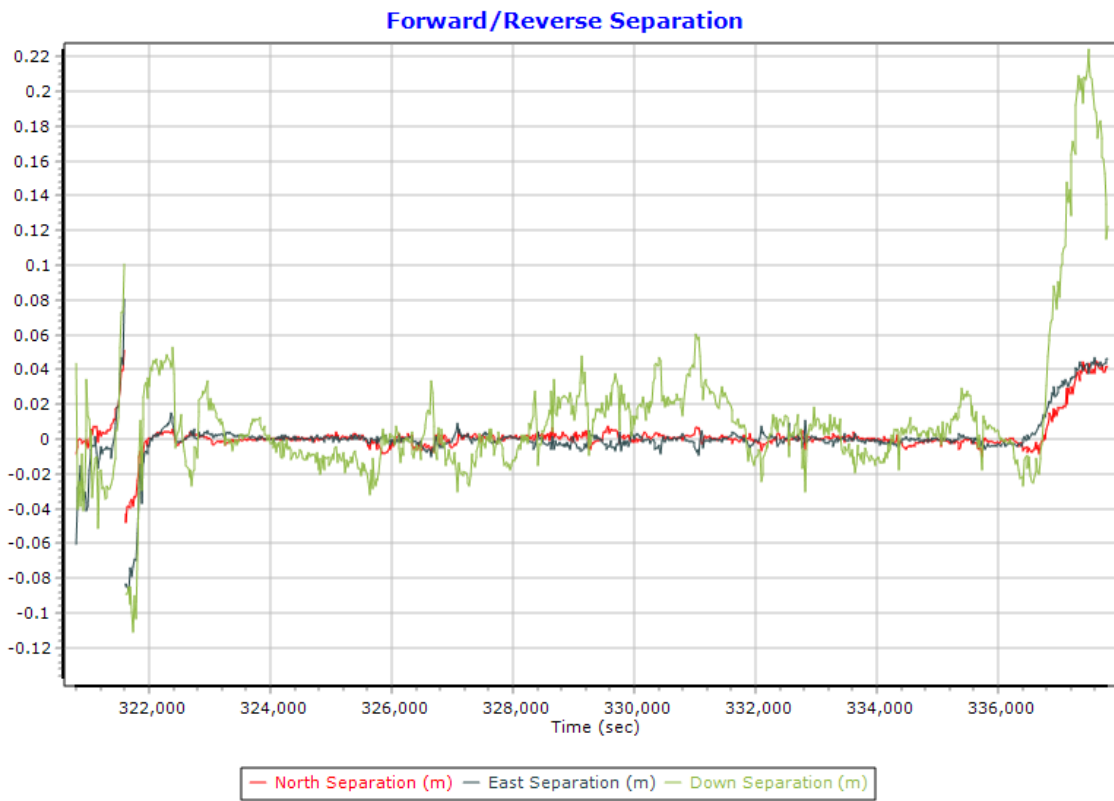
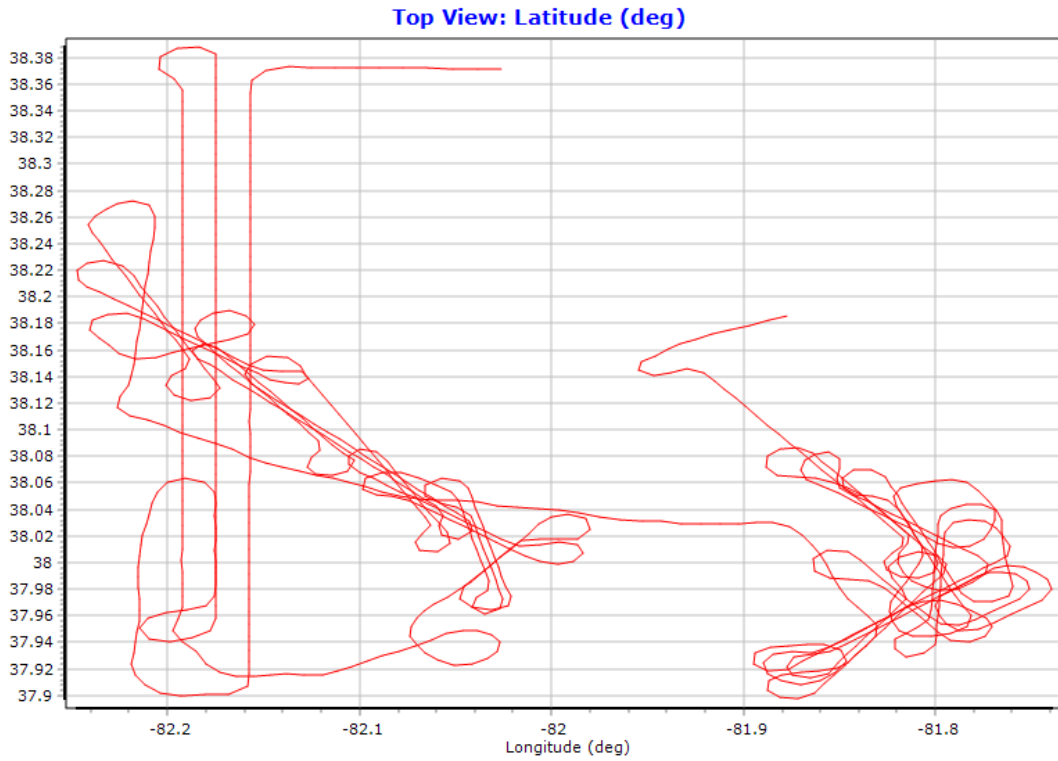
**z gyro bias (deg/hr)**



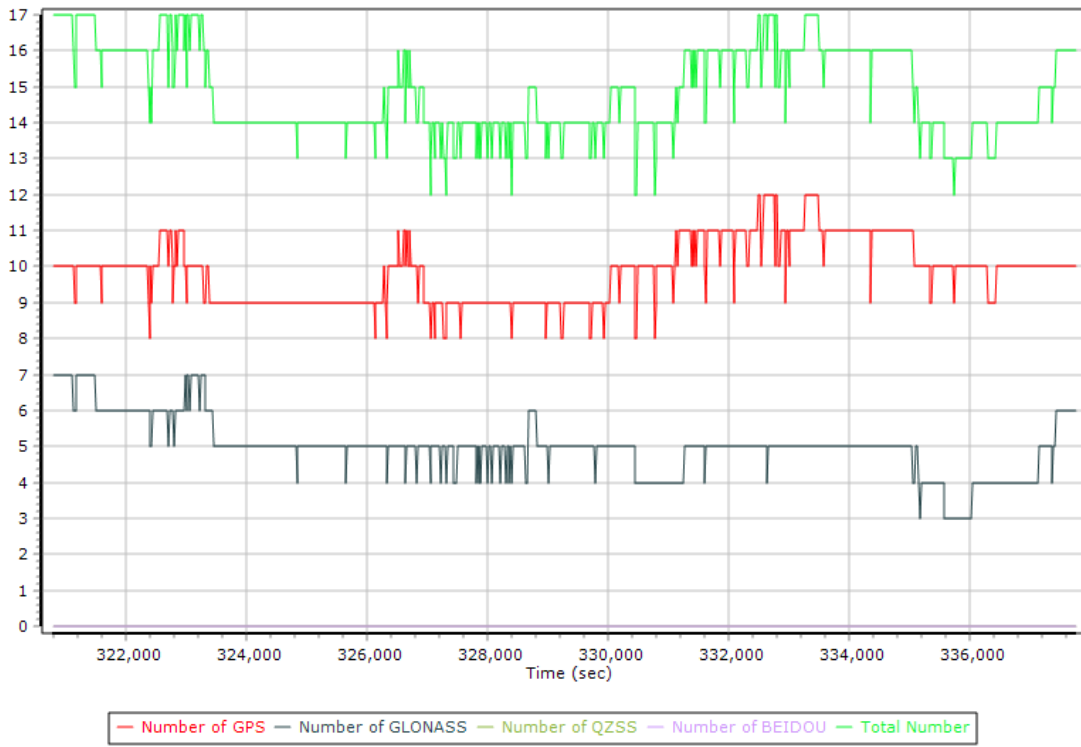
**z gyro scale error (ppm)**



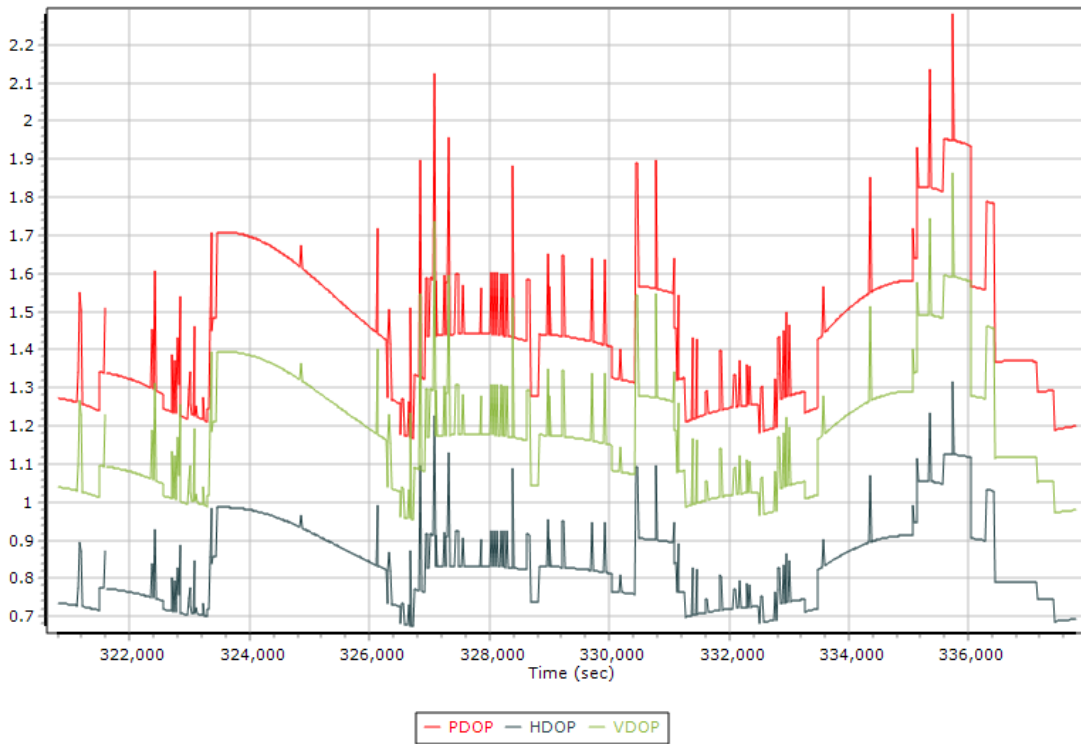
## MAY 09, 2018 MISSION 2



Number of SVs in solution



DOP



## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\20180509\_WV

Solution Type: IN-Fusion SmartBase

Fixed: 17077 (99.99%)  
Float: 0 (0.00%)  
No Solution: 1 (0.01%)

Number of Epochs:

Total in RAW file: 17042  
No processed position: 35

Fwd/Rev Separation RMS Values (m):

North: 0.010  
East: 0.009  
Height: 0.025

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 8521 occurrences

North: 0.008  
East: 0.007  
Height: 0.020

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 100

0.10 - 0.30 m: 0  
0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

DOP over Tol: 1.45%

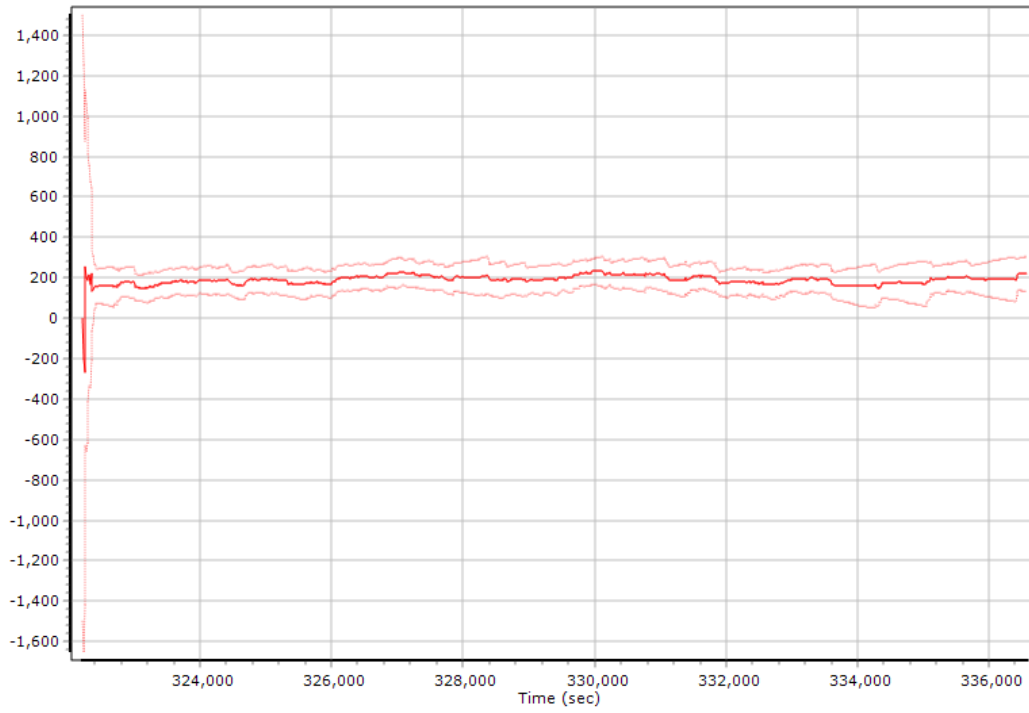
Baseline Distances (km):

Maximum: 47.95  
Minimum: 4.02  
Average: 21.83  
First Epoch: 43.14  
Last Epoch: 43.14

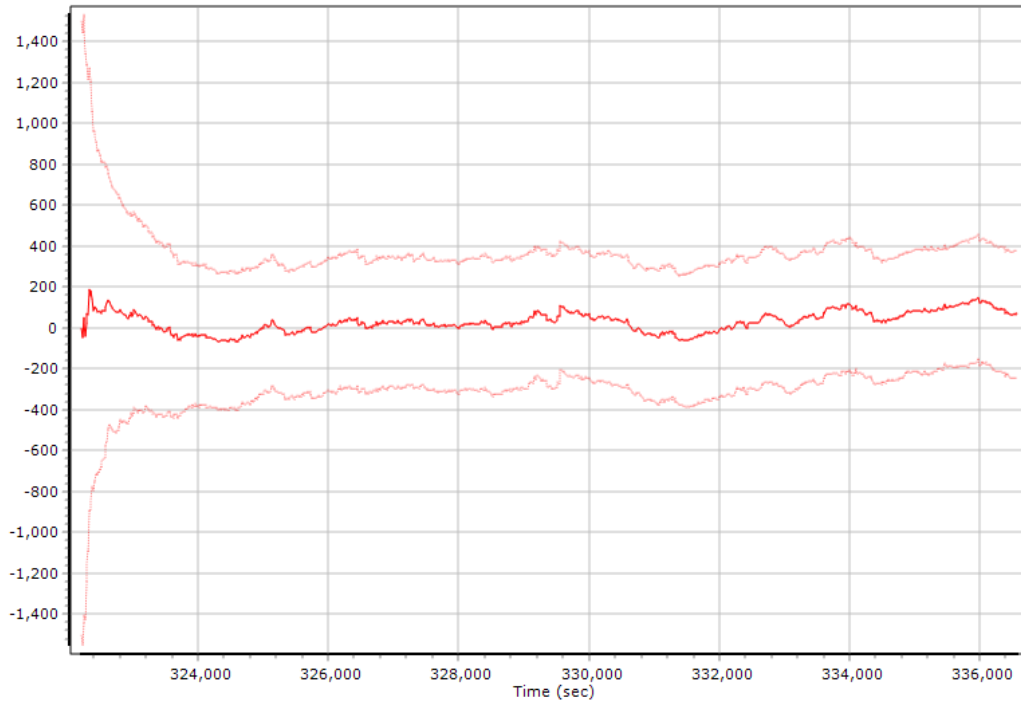
CORS Base Stations

Station	Original			Adjusted		
WVRA	N38°56'28.89163"	W81°45'04.86942"	147.975			
WVOH	N37°59'53.75060"	W81°07'55.81227"	596.194	N37°59'53.75064"	W81°07'55.81222"	596.168
WVLE	N37°49'20.23030"	W80°25'18.58206"	655.200	N37°49'20.23030"	W80°25'18.58207"	655.177
WVHU	N38°25'22.64515"	W82°25'28.94596"	186.395	N38°25'22.64515"	W82°25'28.94596"	186.395
WVAT	N37°25'42.67847"	W81°04'04.40399"	704.674	N37°25'42.67857"	W81°04'04.40395"	704.651
STKR	N39°19'33.85352"	W82°06'25.65789"	176.782	N39°19'33.85351"	W82°06'25.65741"	176.751
PKTN	N39°02'43.69375"	W83°01'27.86027"	143.193	N39°02'43.69392"	W83°01'27.86050"	143.165
KYTL	N37°29'00.20374"	W82°32'07.72260"	185.678	N37°29'00.20379"	W82°32'07.72250"	185.677
KYMH	N38°11'02.90319"	W83°26'11.51659"	221.538	N38°11'02.90306"	W83°26'11.51618"	221.509

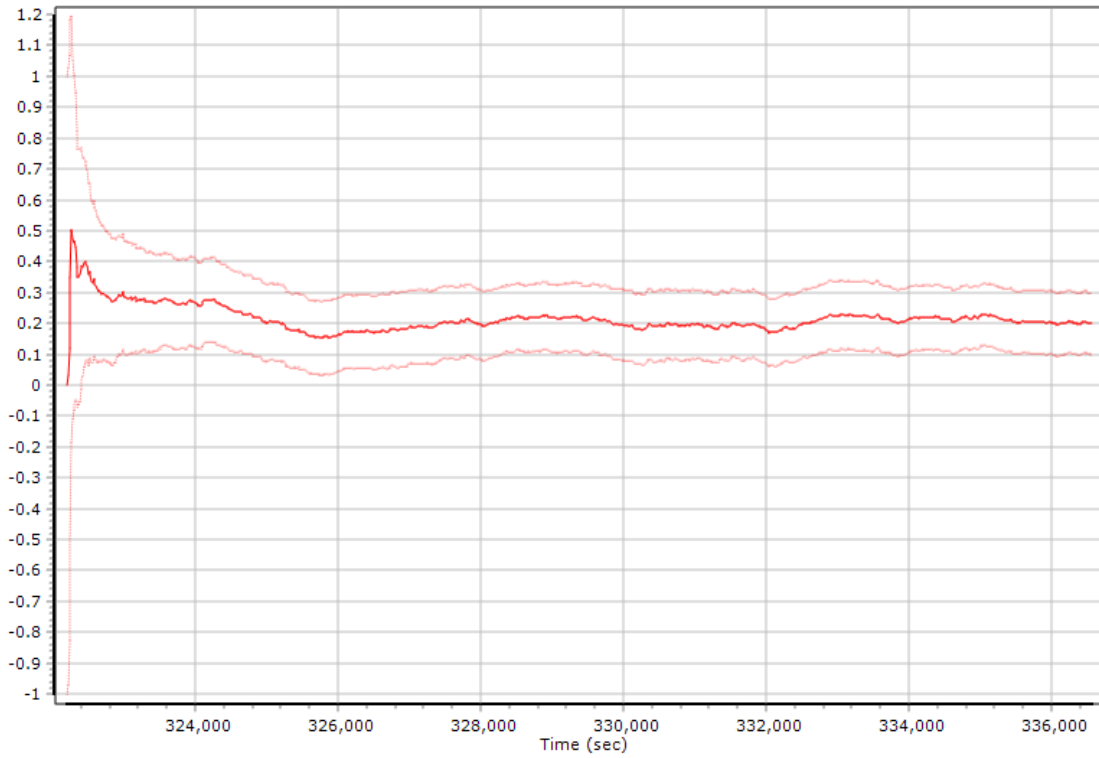
**x accelerometer bias (micro-g)**



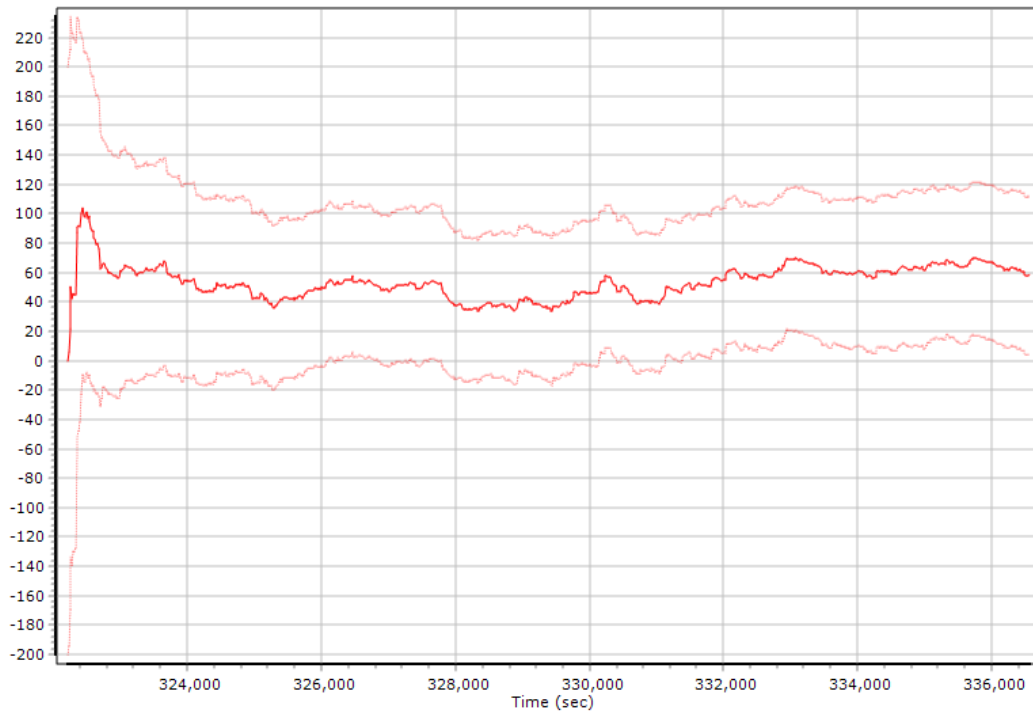
**x accelerometer scale error (ppm)**



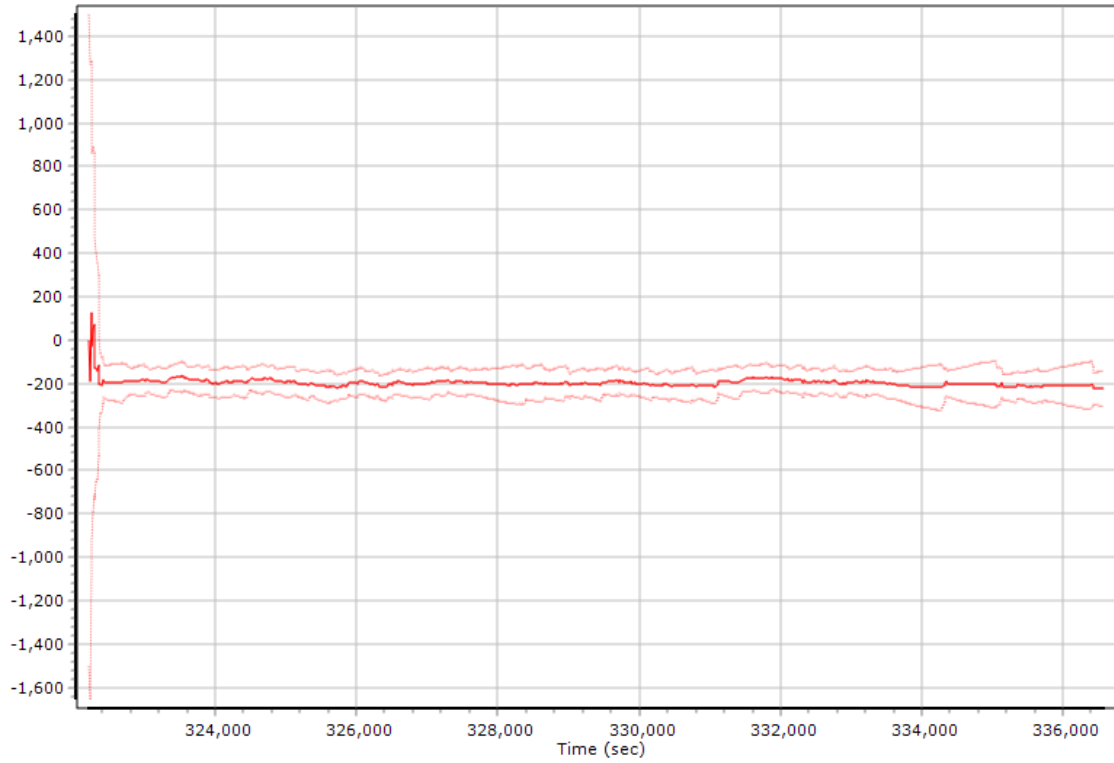
**x gyro bias (deg/hr)**



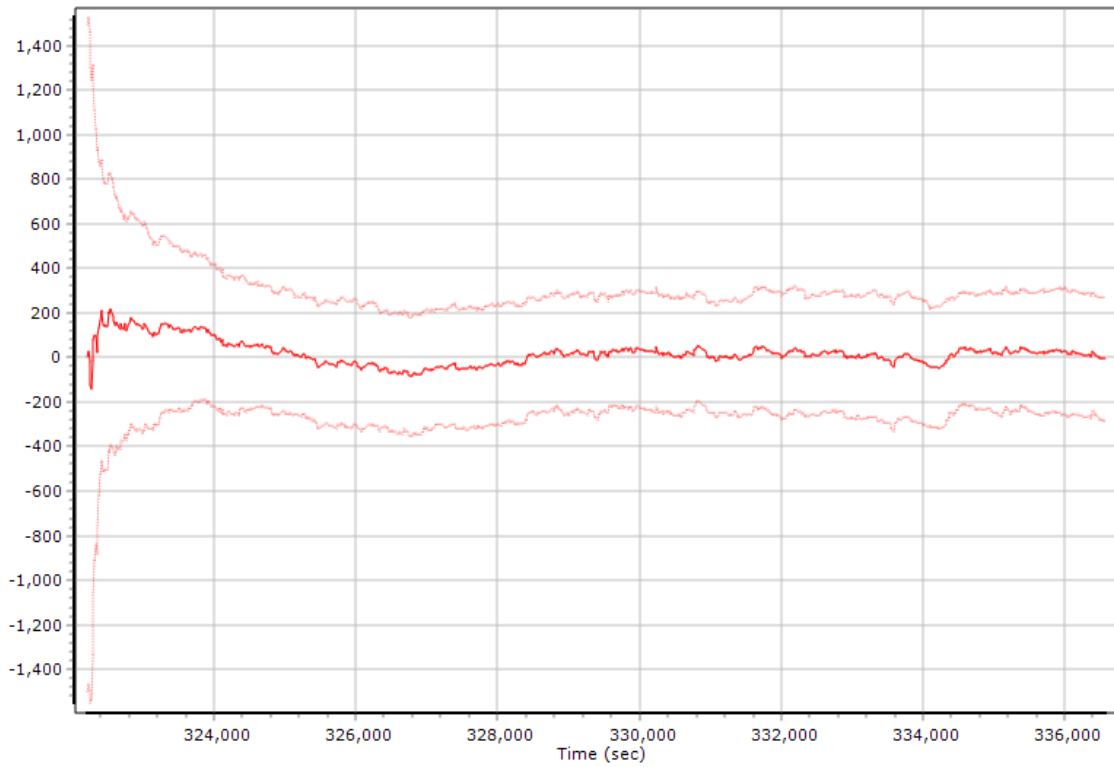
**x gyro scale error (ppm)**



**y accelerometer bias (micro-g)**

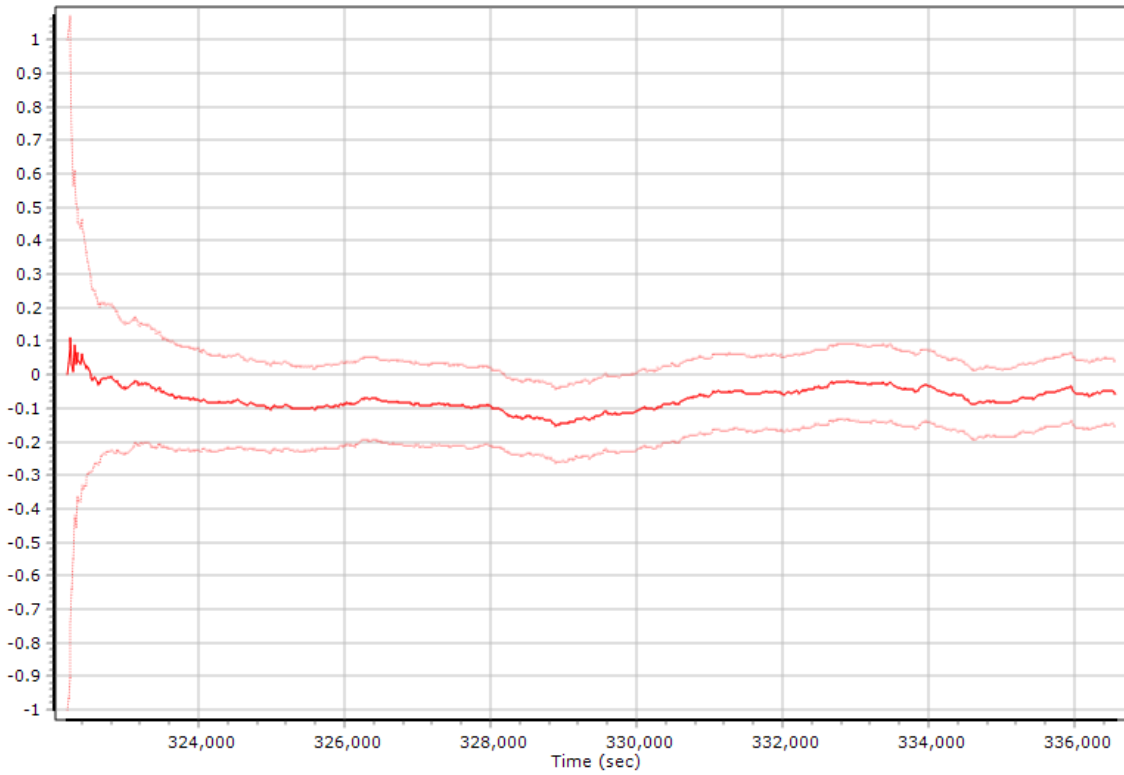


**y accelerometer scale error (ppm)**

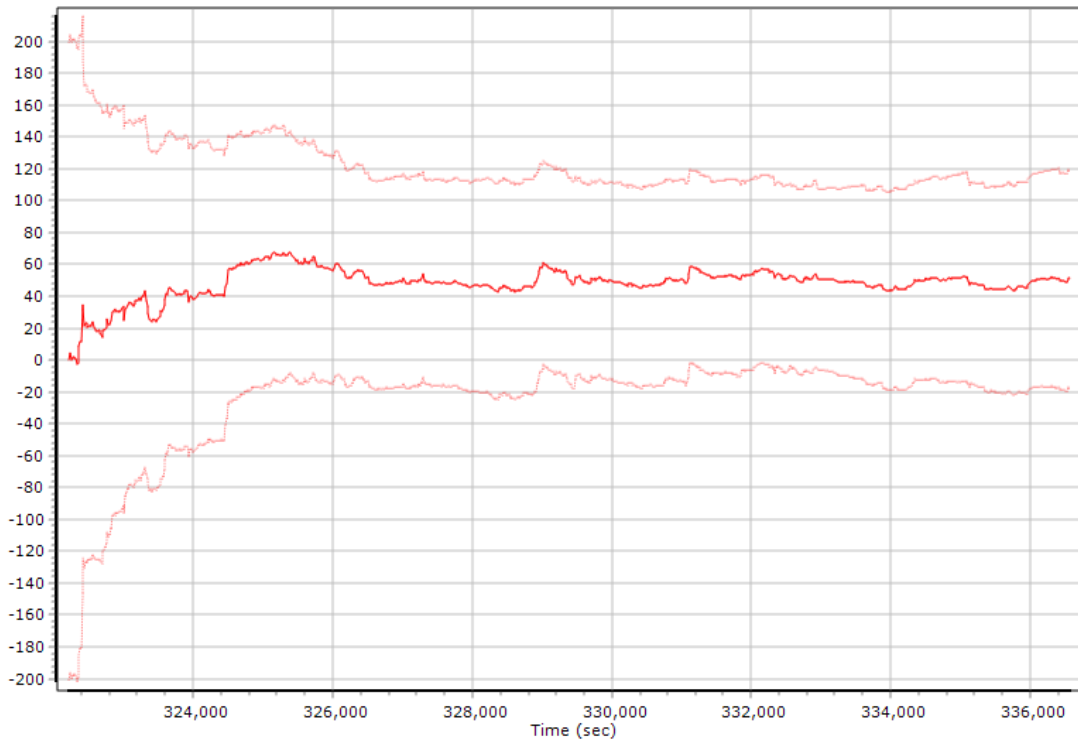




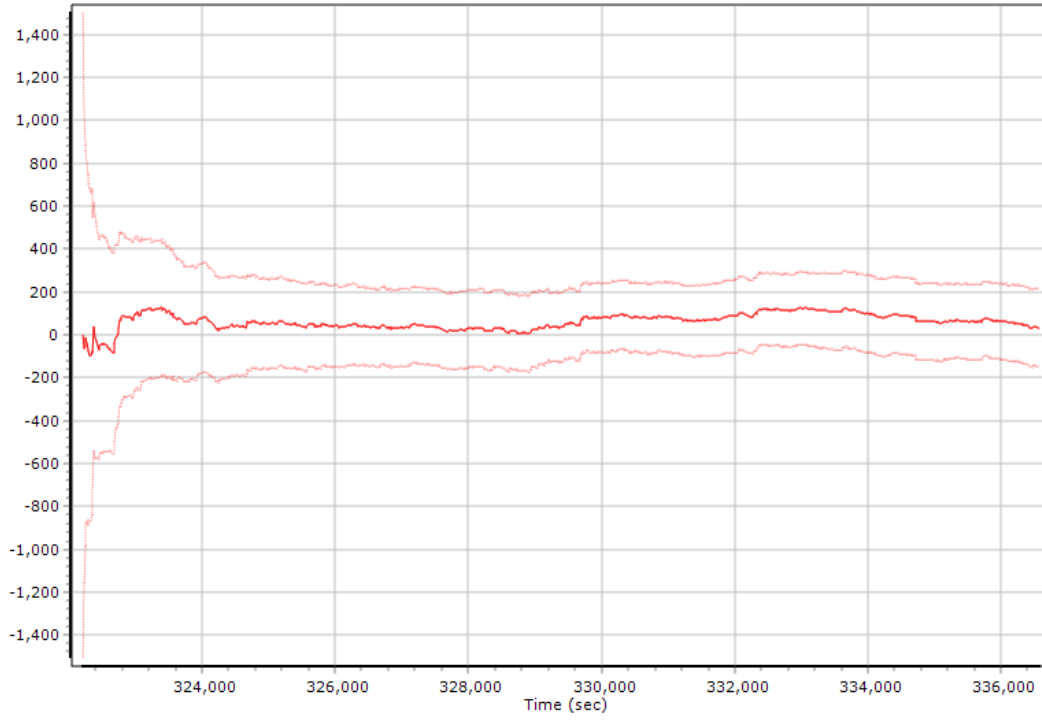
**y gyro bias (deg/hr)**



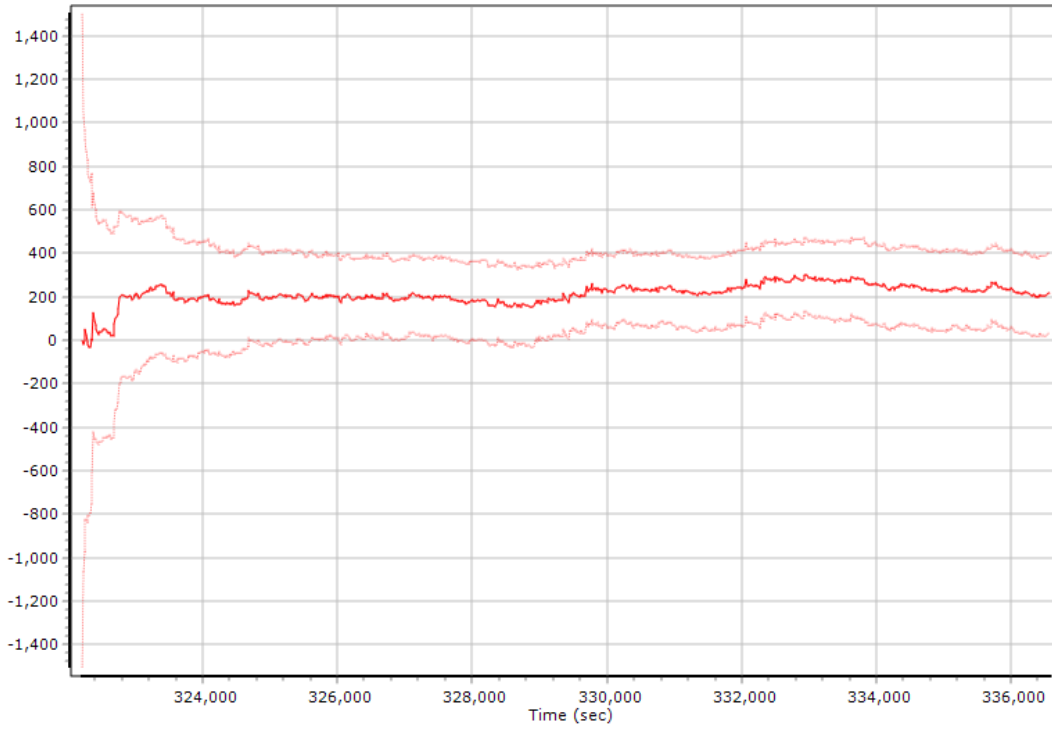
**y gyro scale error (ppm)**



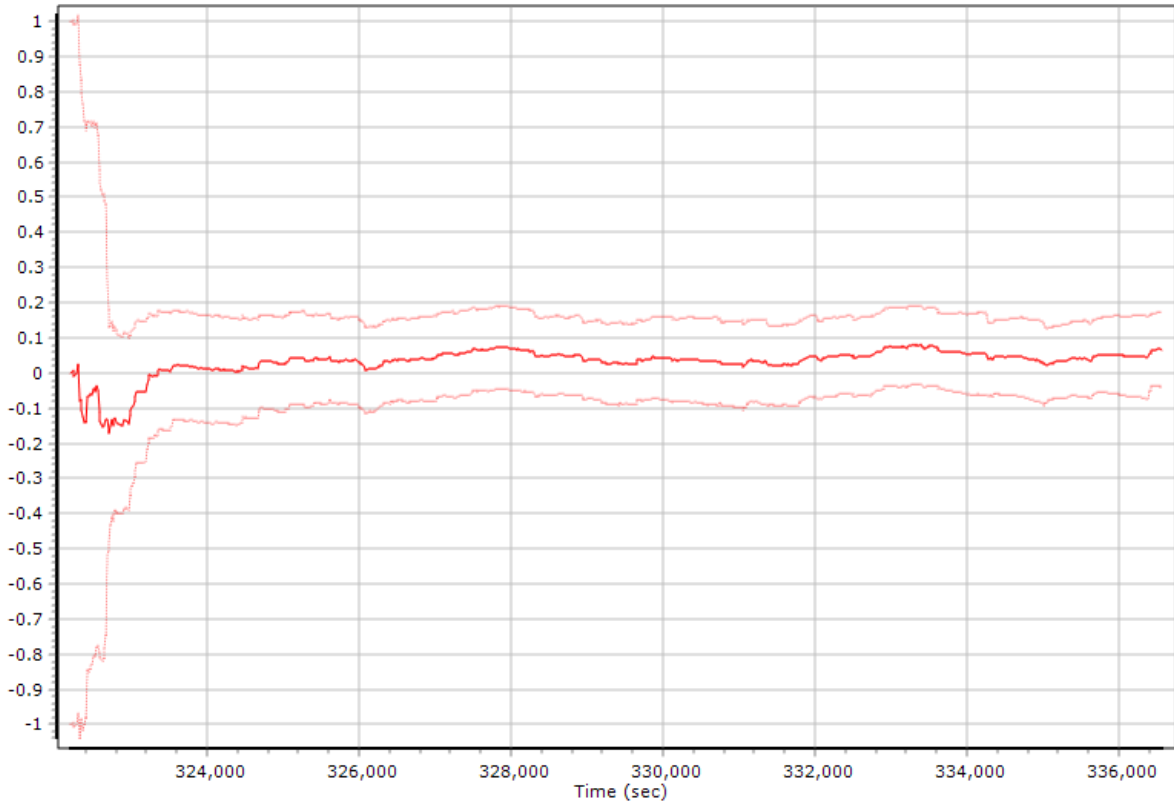
**z accelerometer bias (micro-g)**



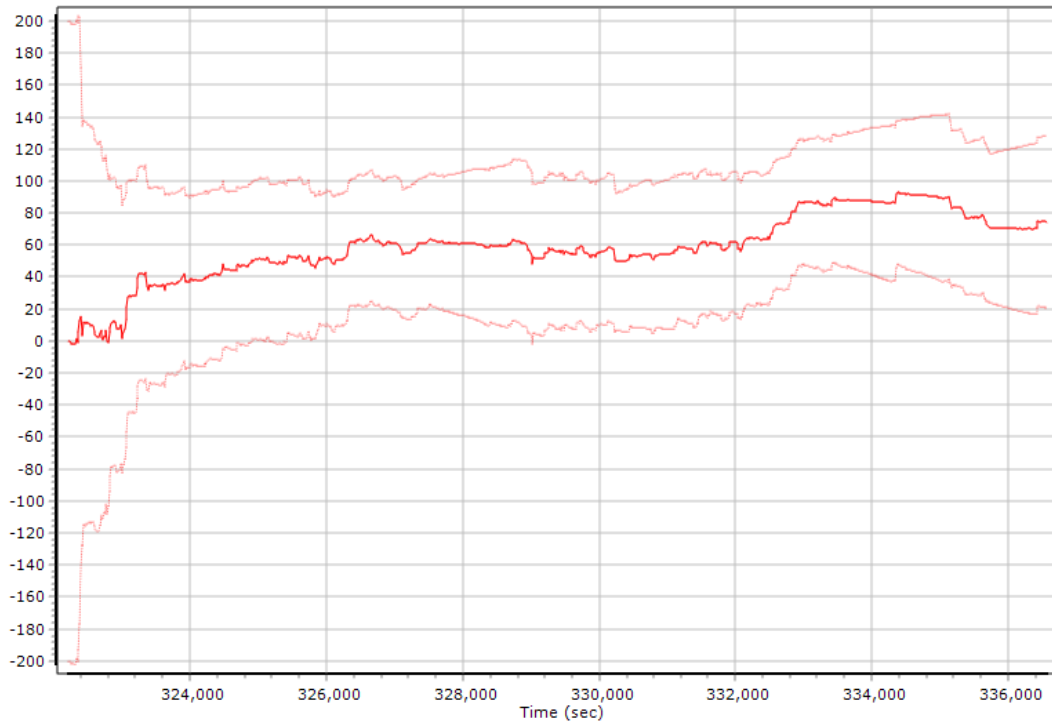
**z accelerometer scale error (ppm)**



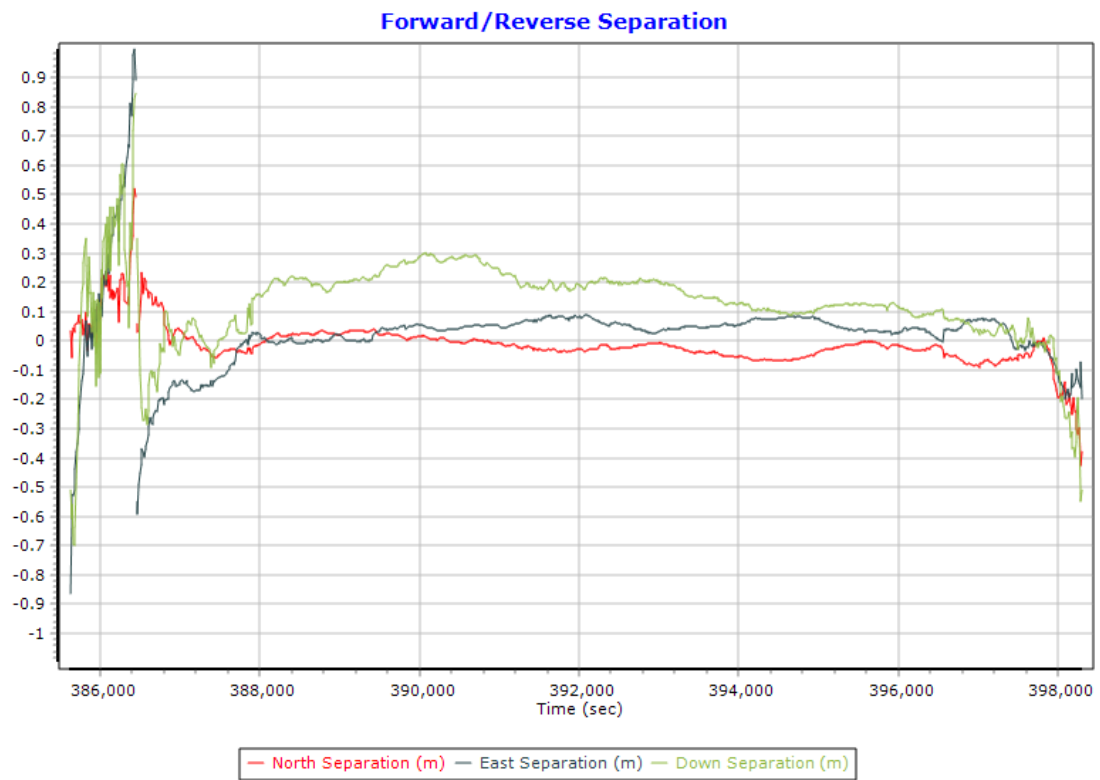
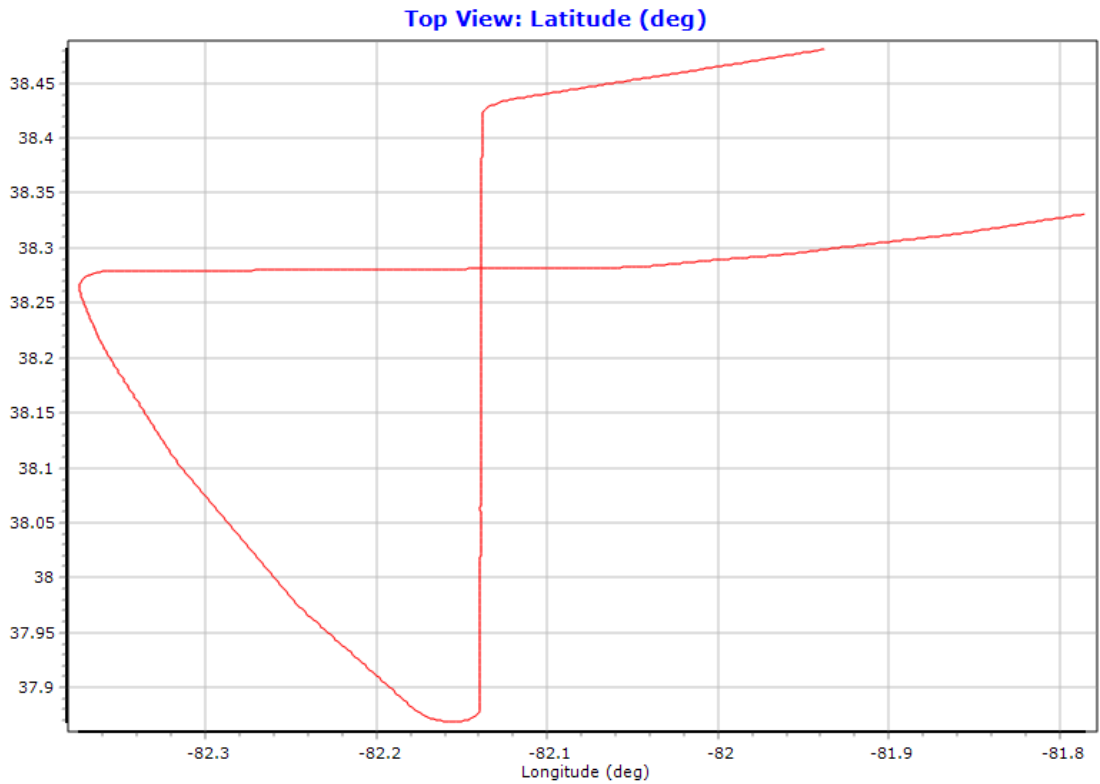
**z gyro bias (deg/hr)**

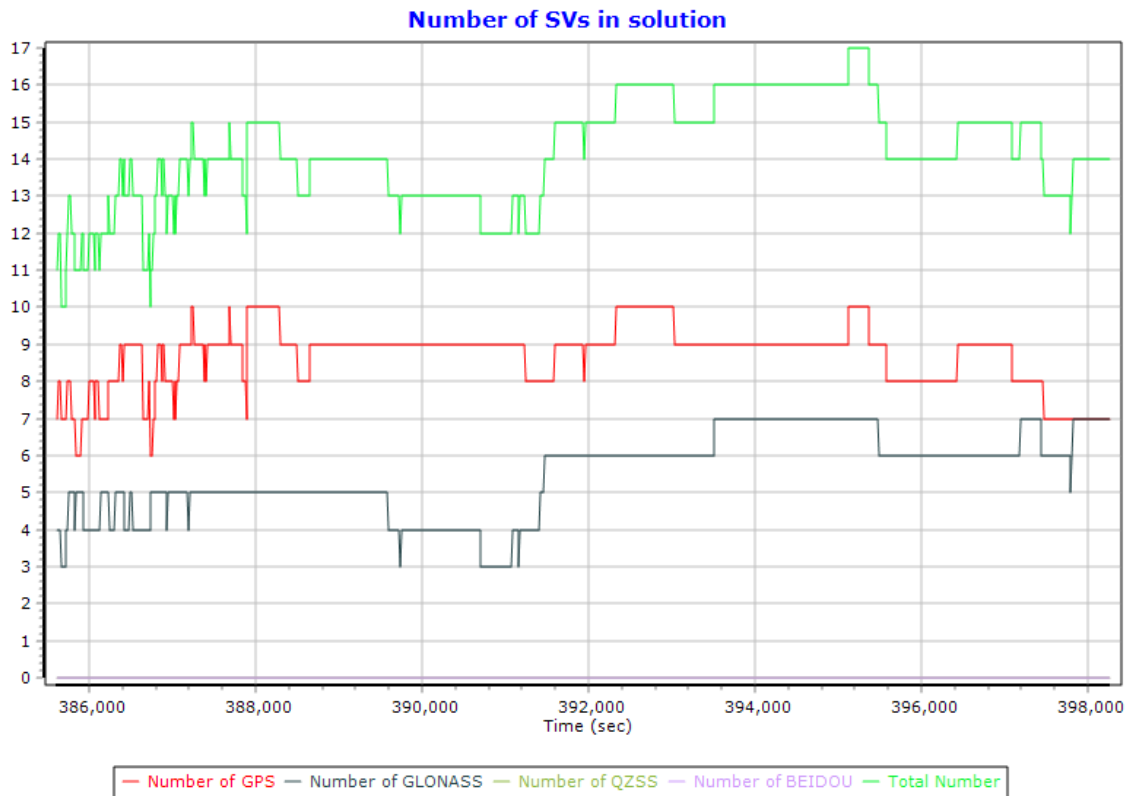
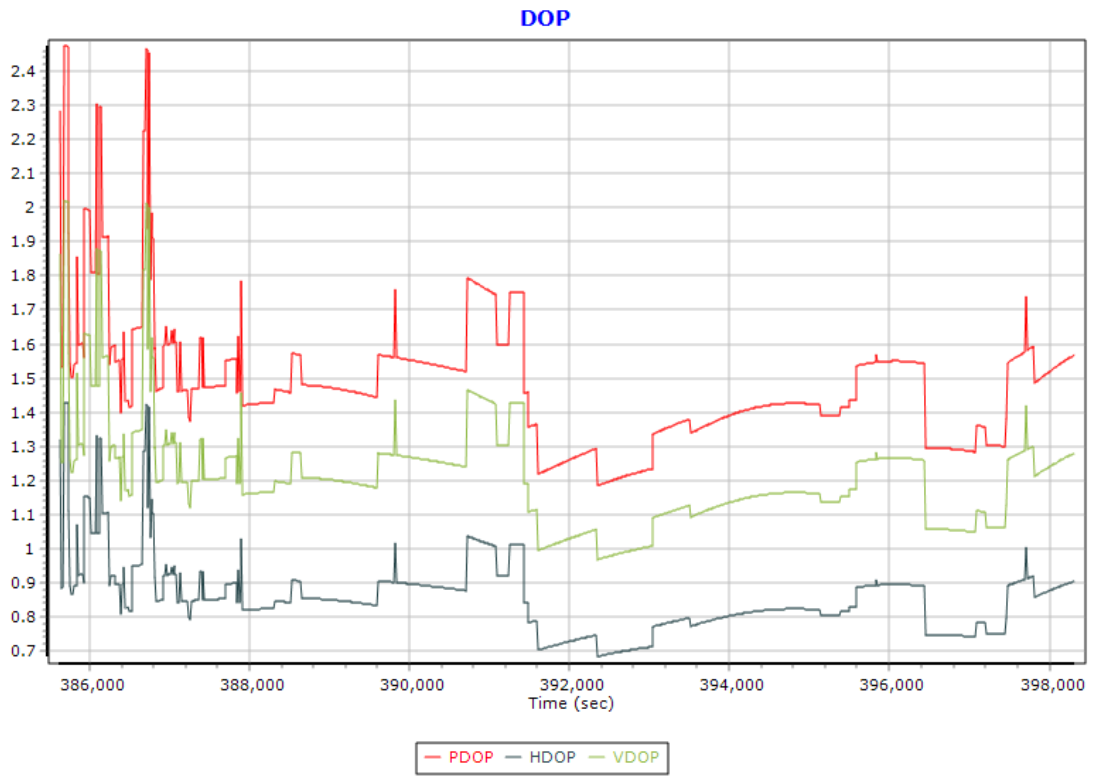


**z gyro scale error (ppm)**



**MAY 24, 2018**





## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\20180524\_WV

Solution Type: IN-Fusion SmartBase

Fixed: 12648	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 12715  
No processed position:67

Fwd/Rev Separation RMS Values (m):

North: 0.073  
East: 0.144  
Height: 0.196

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 6358 occurrences

North: 0.034  
East: 0.057  
Height: 0.202

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 84.909  
0.10 - 0.30 m: 14.247

0.30 - 1.00 m: 0.844  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

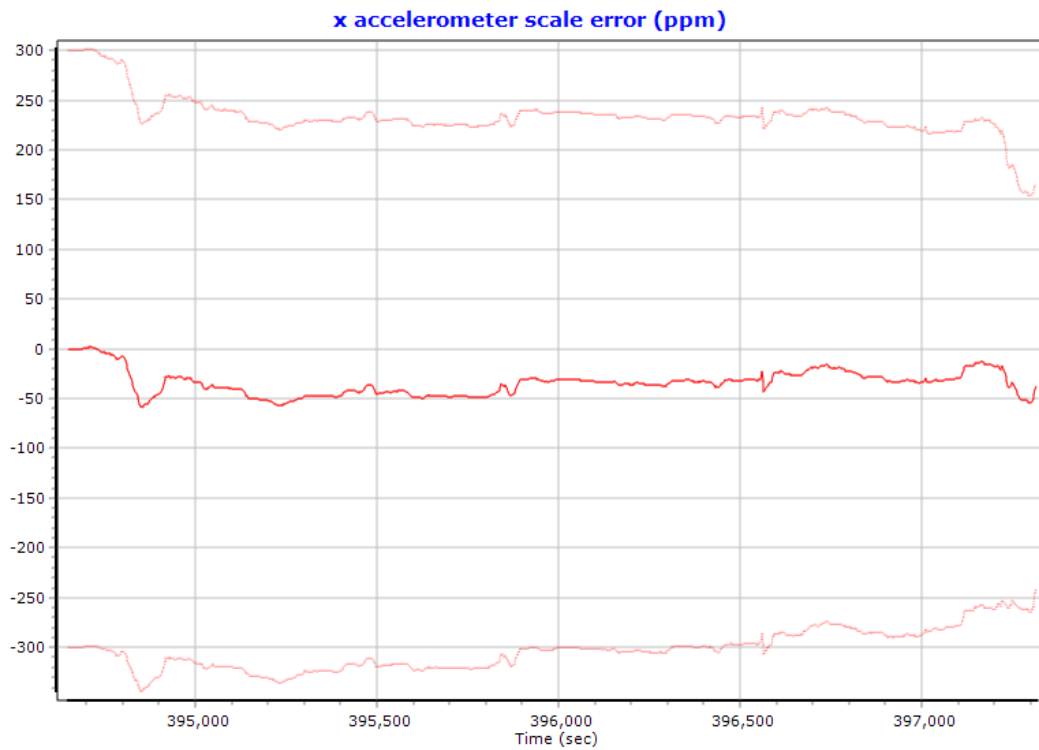
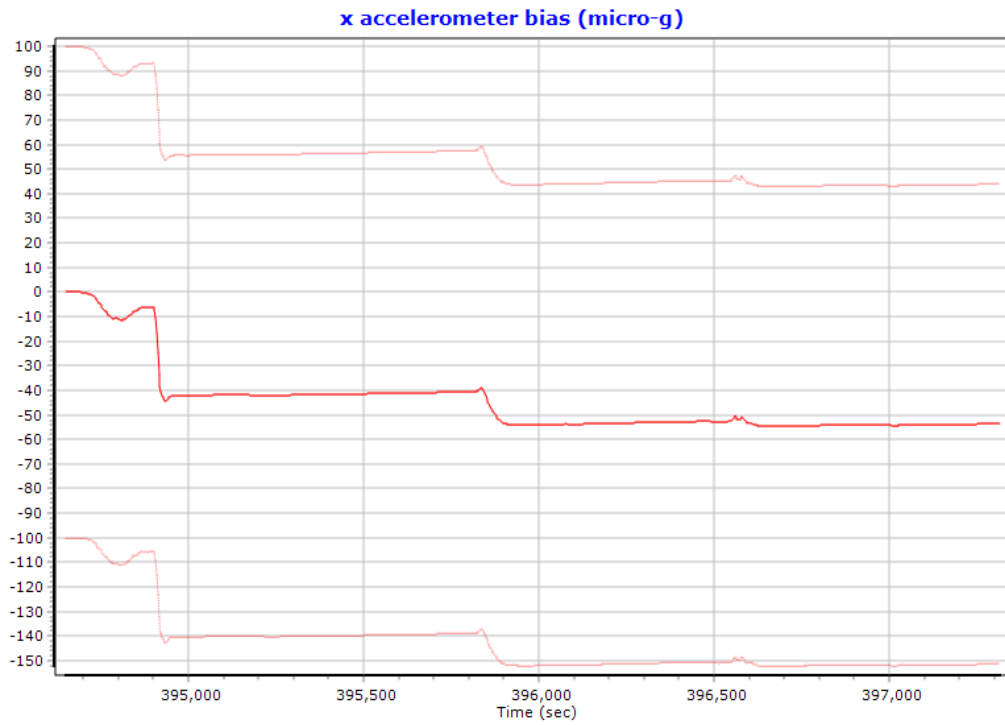
DOP over Tol: 1.48%

Baseline Distances (km):

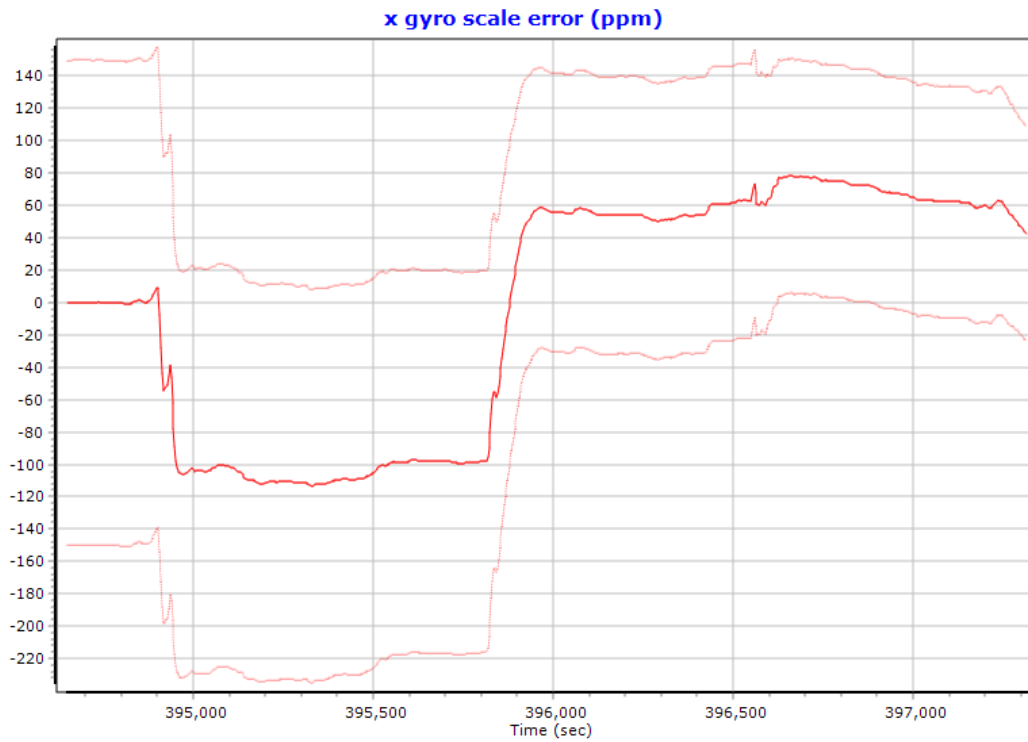
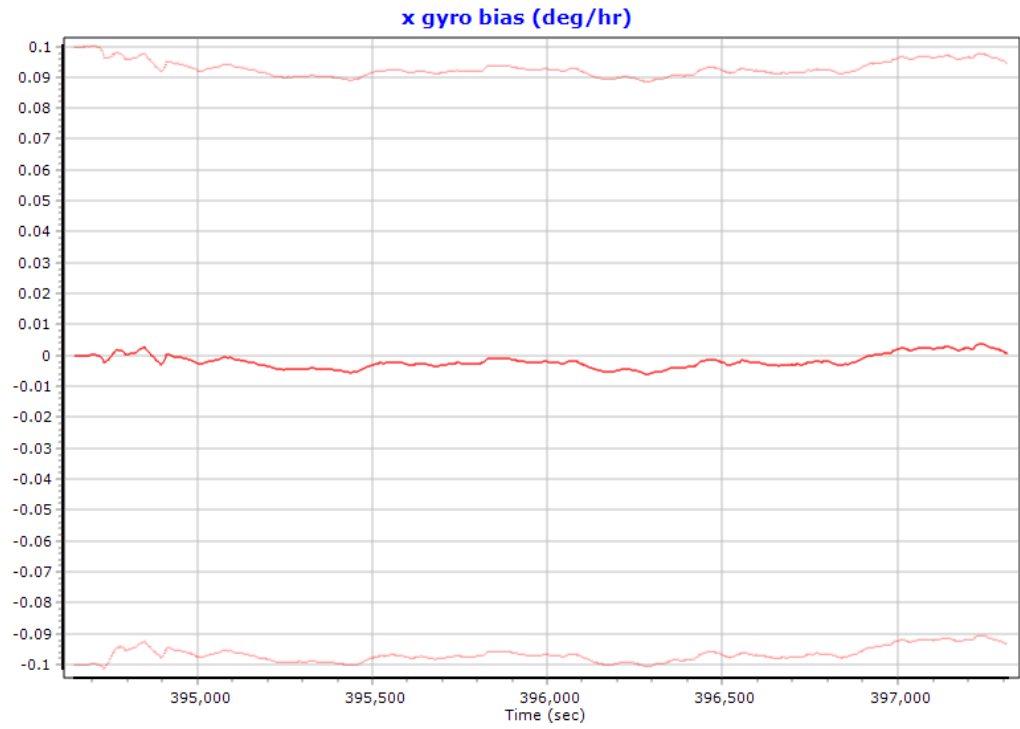
Maximum: 534.98  
Minimum: 1.19  
Average: 241.96  
First Epoch: 534.87  
Last Epoch: 52.67

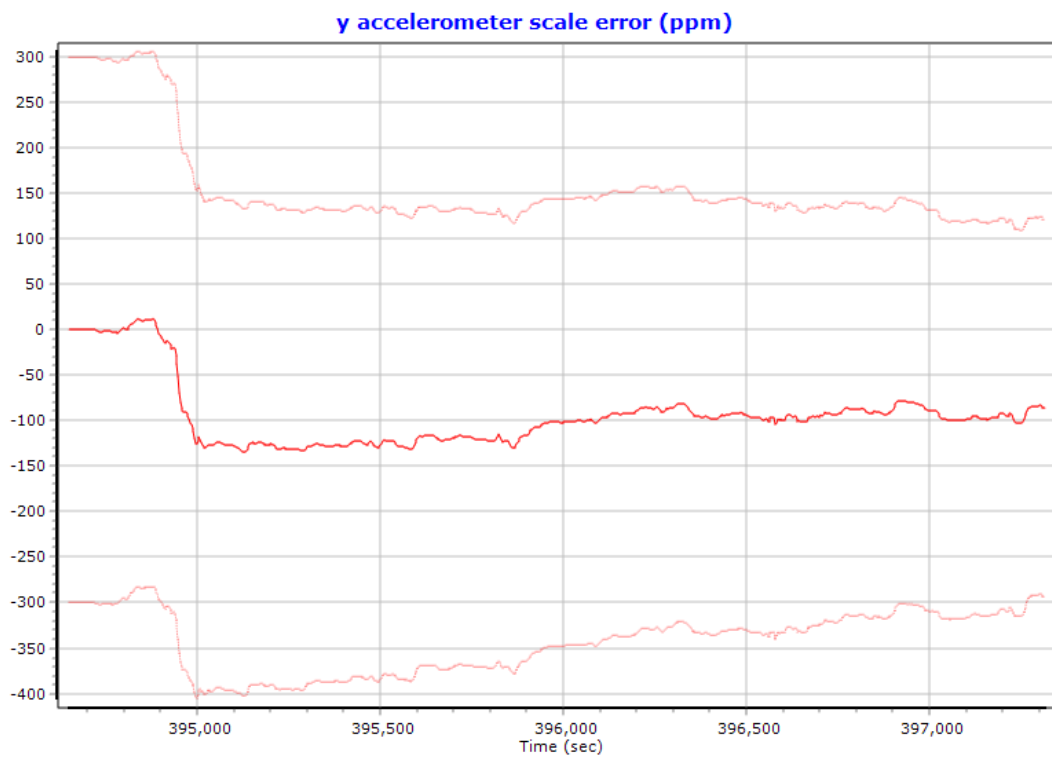
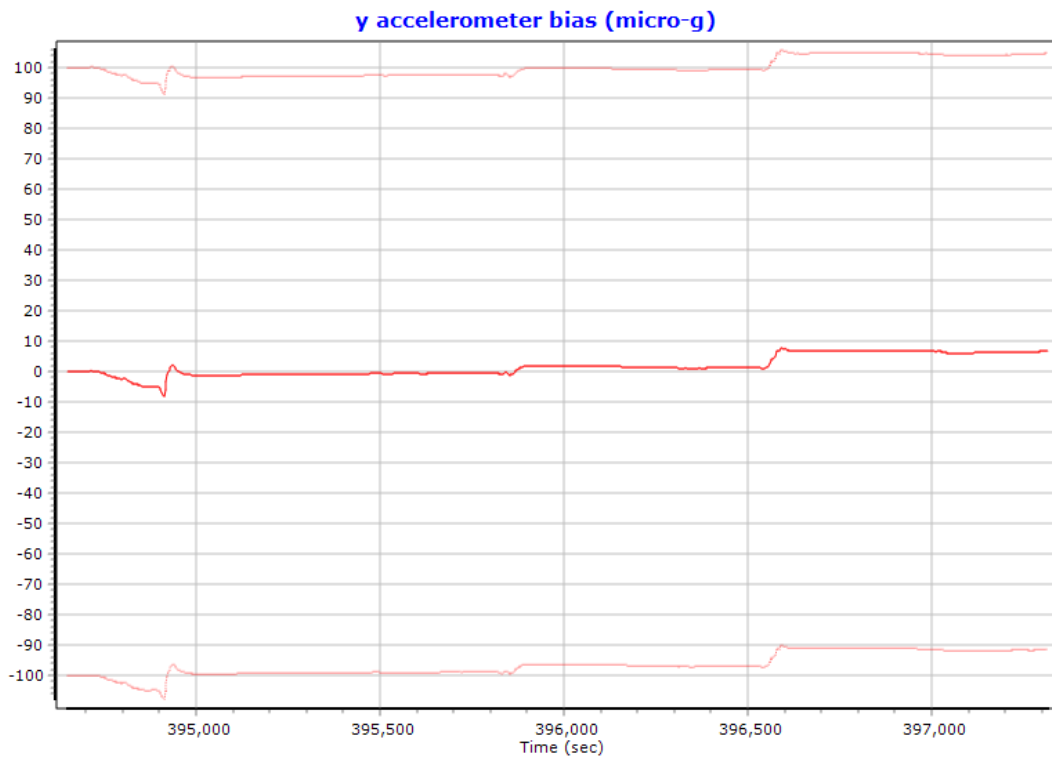
#### CORS Base Stations

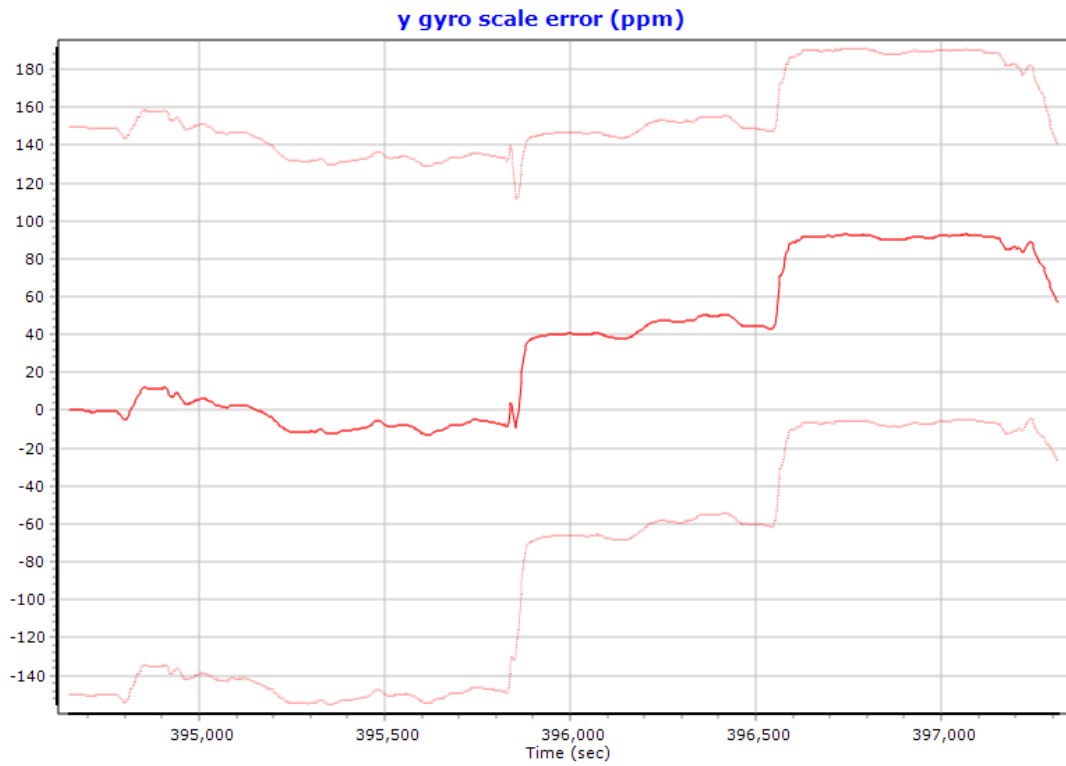
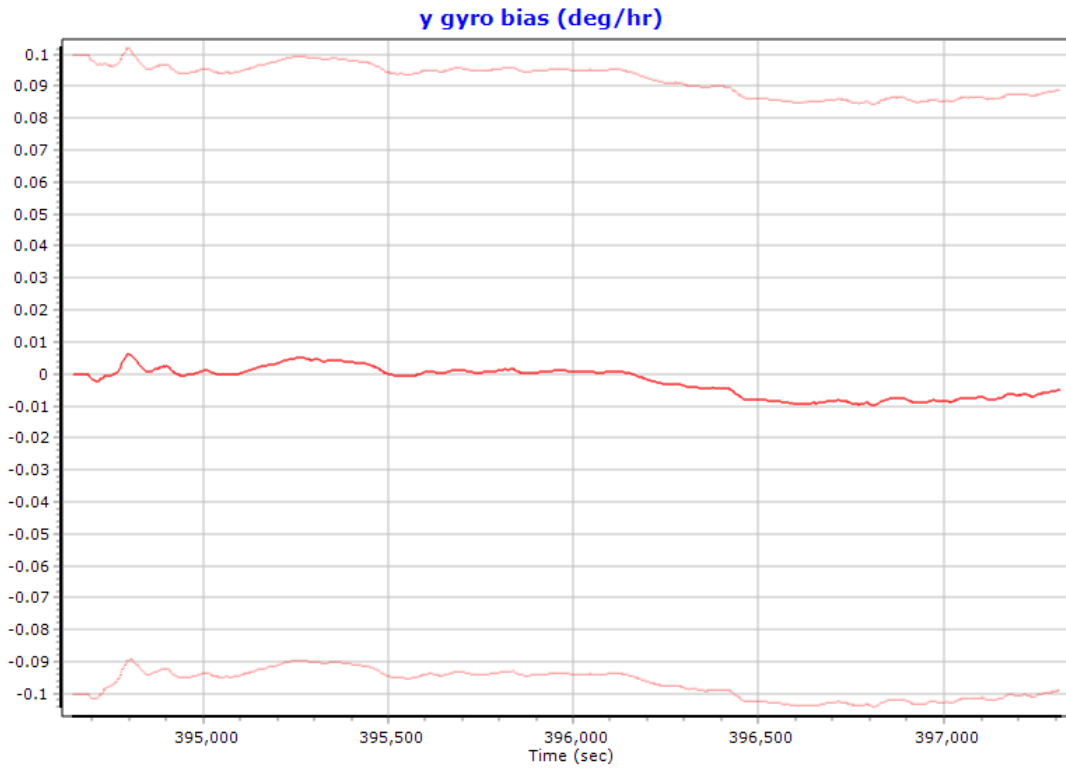
Station	Original			Adjusted		
WVHU	N38°25'22.64487"	W82°25'28.94622"	186.420			
WVOH	N37°59'53.75060"	W81°07'55.81223"	596.194	N37°59'53.75039"	W81°07'55.81195	596.200
WVMZ	N38°50'20.07187"	W81°06'31.60939"	295.568	N38°50'20.07174"	W81°06'31.60950	295.565
WVAT	N37°25'42.67847"	W81°04'04.40395"	704.674	N37°25'42.67842"	W81°04'04.40391	704.684
STKR	N39°19'33.85352"	W82°06'25.65785"	176.782	N39°19'33.85303"	W82°06'25.65727	176.774
PKTN	N39°02'43.69374"	W83°01'27.86022"	143.193	N39°02'43.69361"	W83°01'27.86032	143.202
KYTL	N37°29'00.20373"	W82°32'07.72256"	185.678	N37°29'00.20355"	W82°32'07.72253	185.709
KYTI	N38°25'20.03882"	W83°44'58.06220"	258.543	N38°25'20.03848"	W83°44'58.06199	258.541
GALP	N38°50'39.17675"	W82°16'40.11957"	168.232	N38°50'39.17663"	W82°16'40.11941	168.241

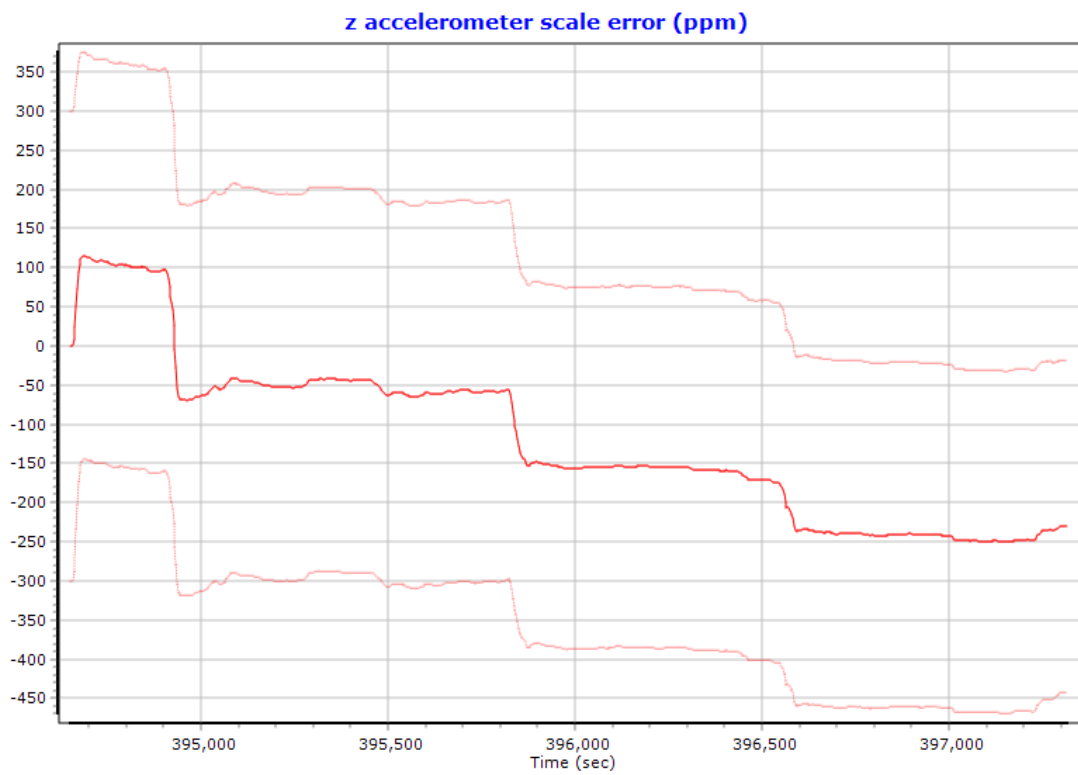
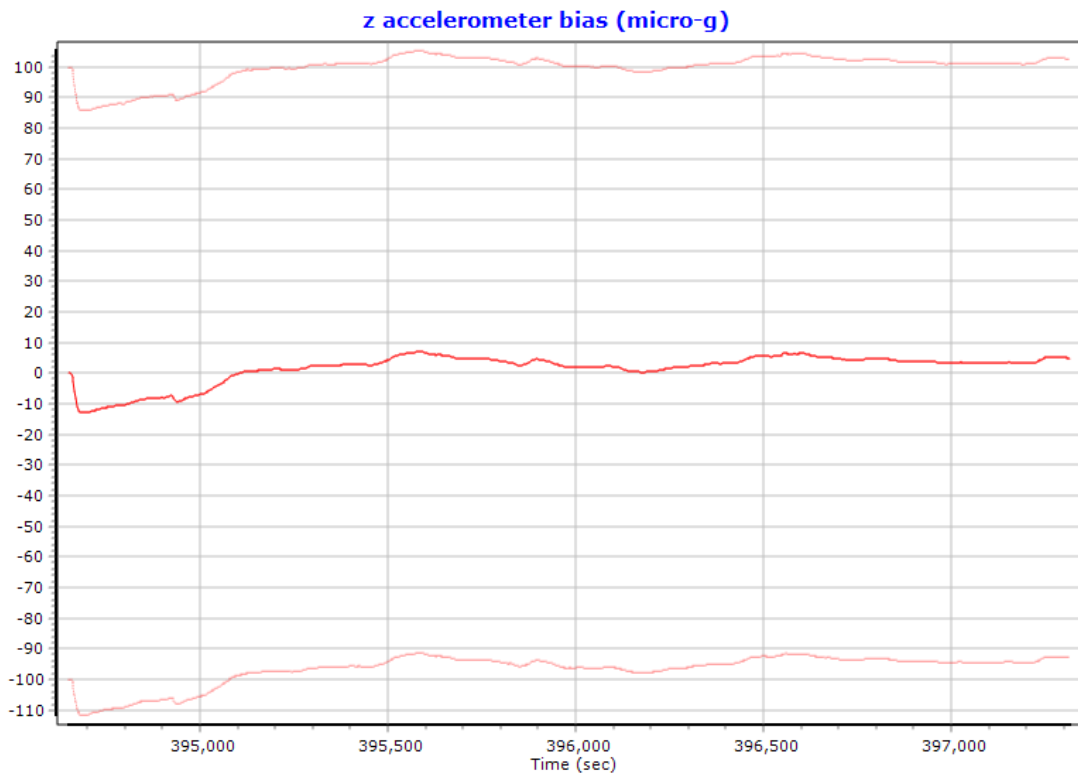


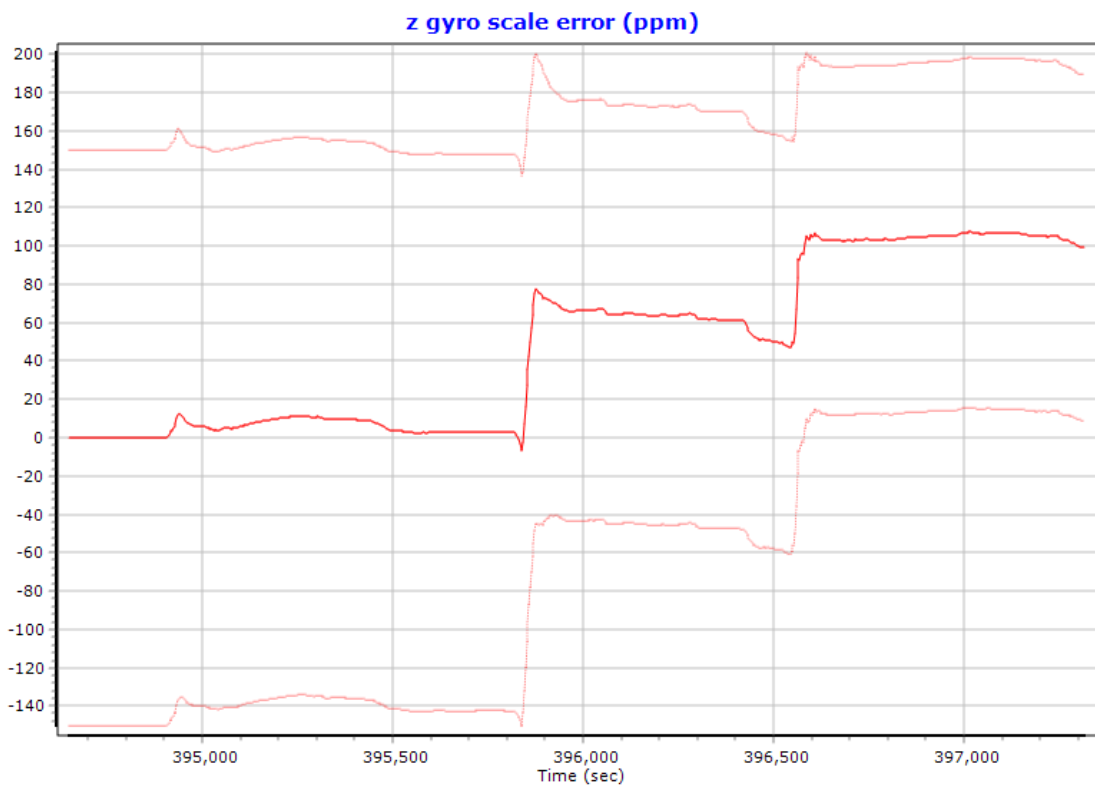
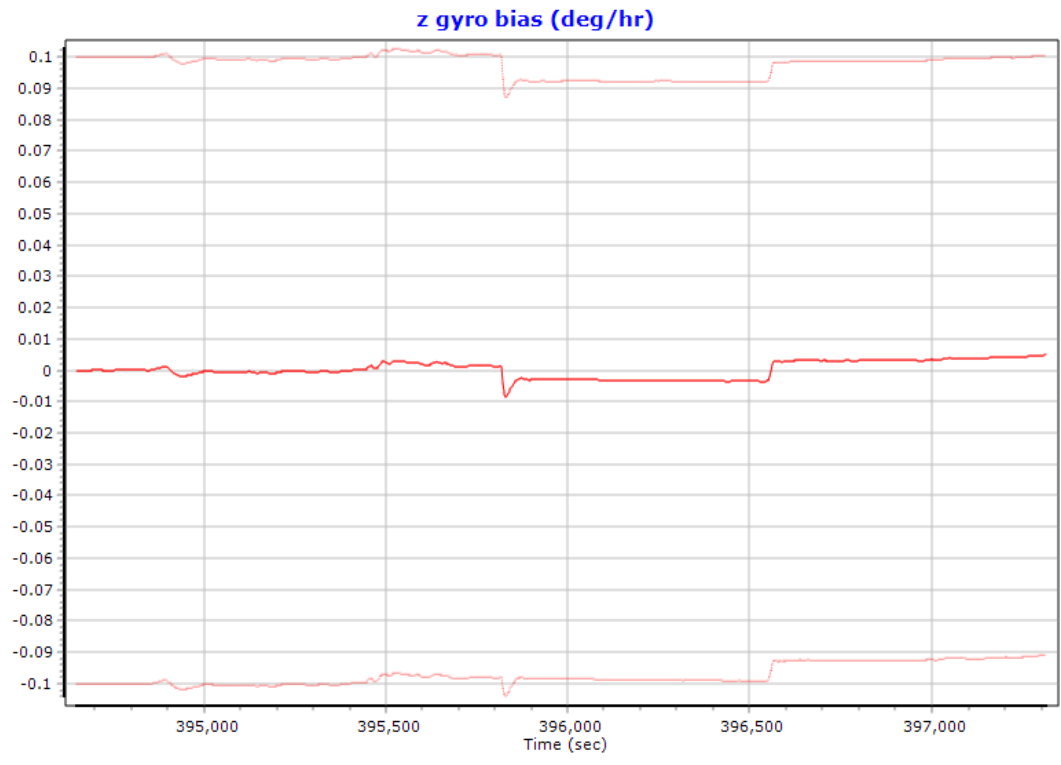






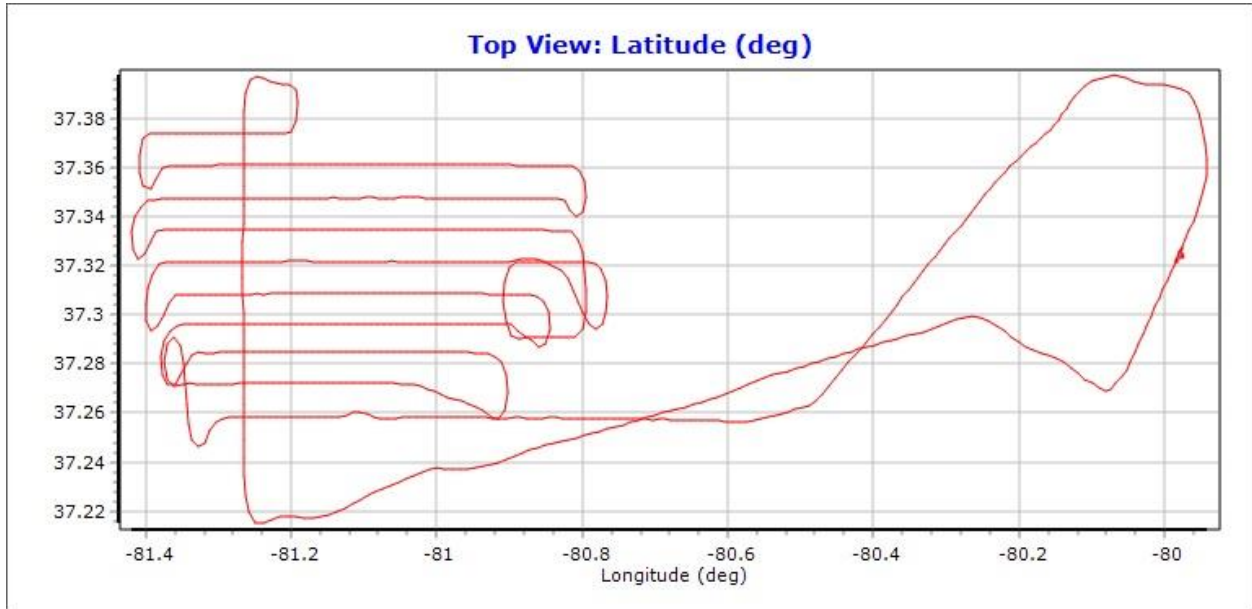


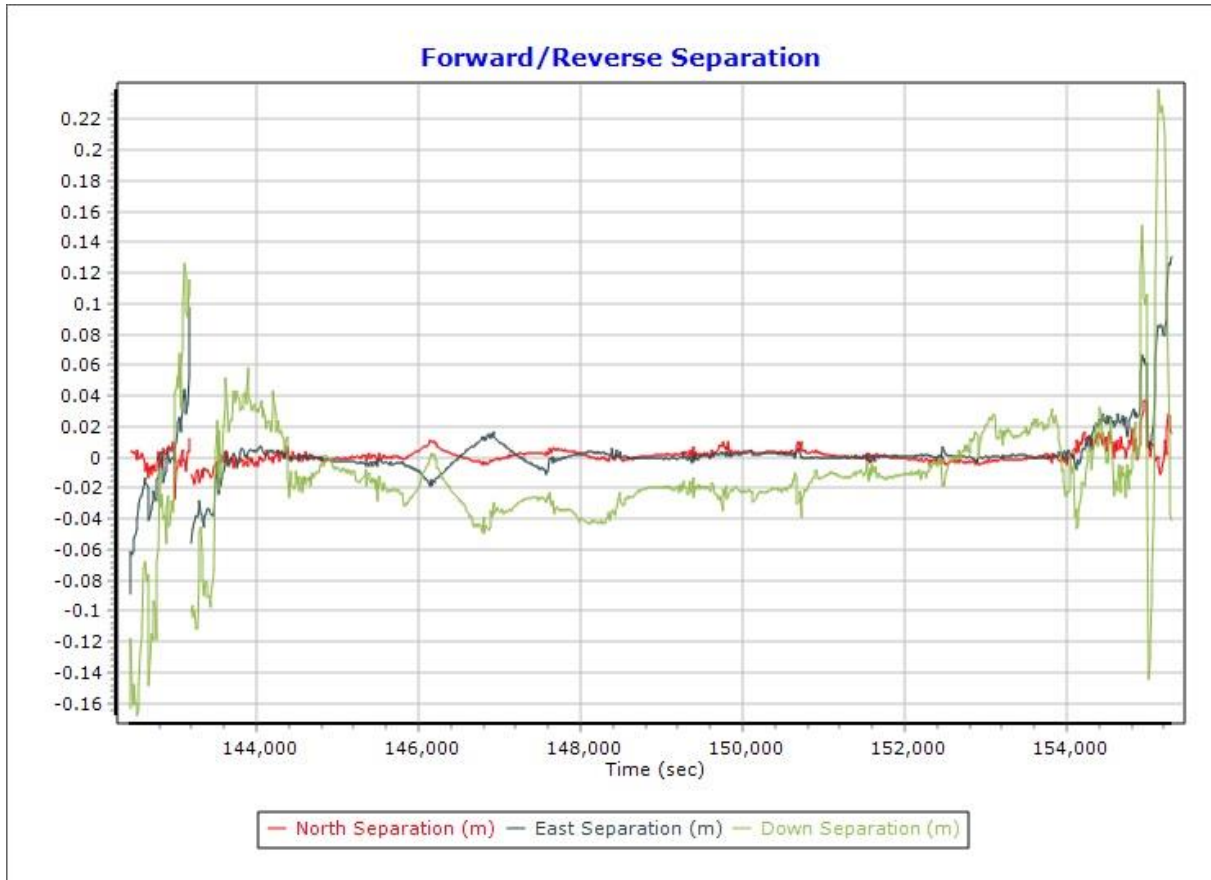


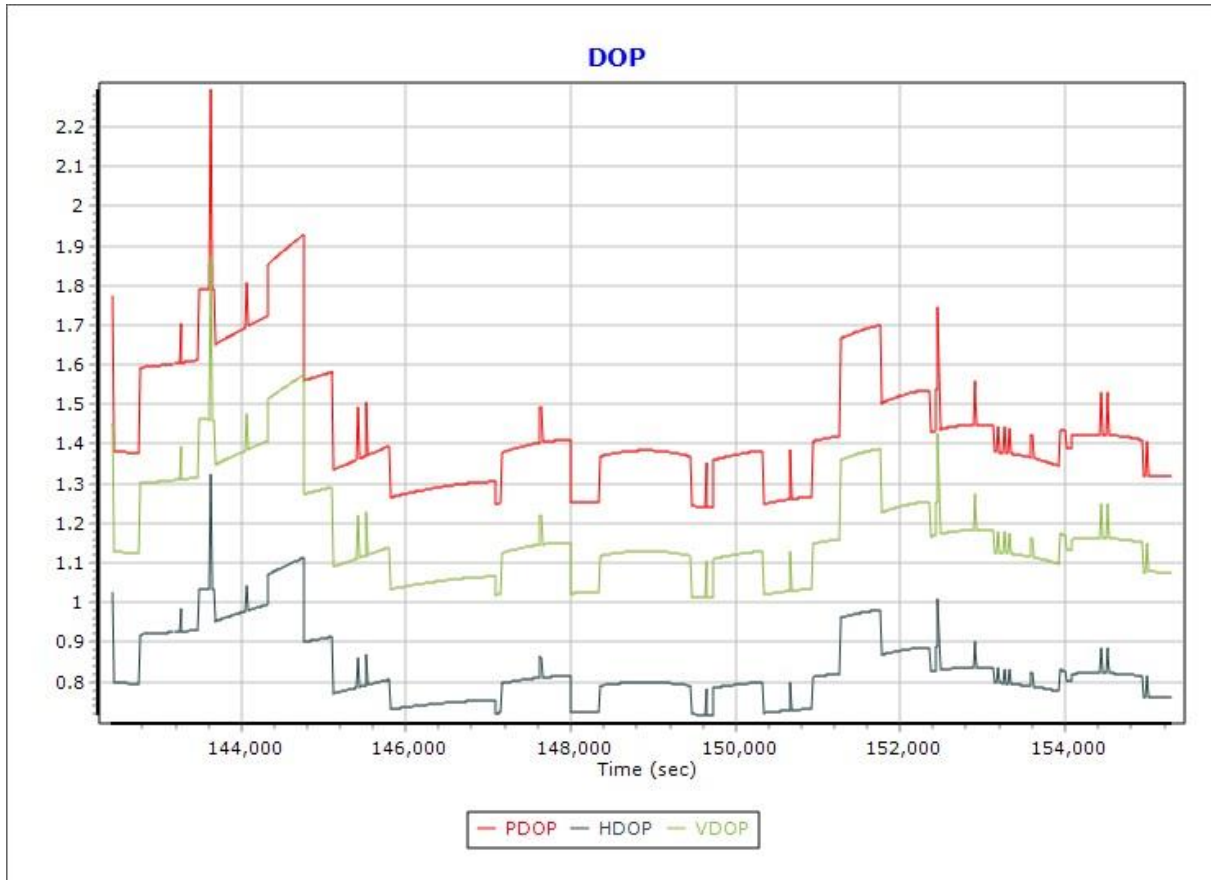


## Mercer: GPS and IMU Processing Reports for Each Mission

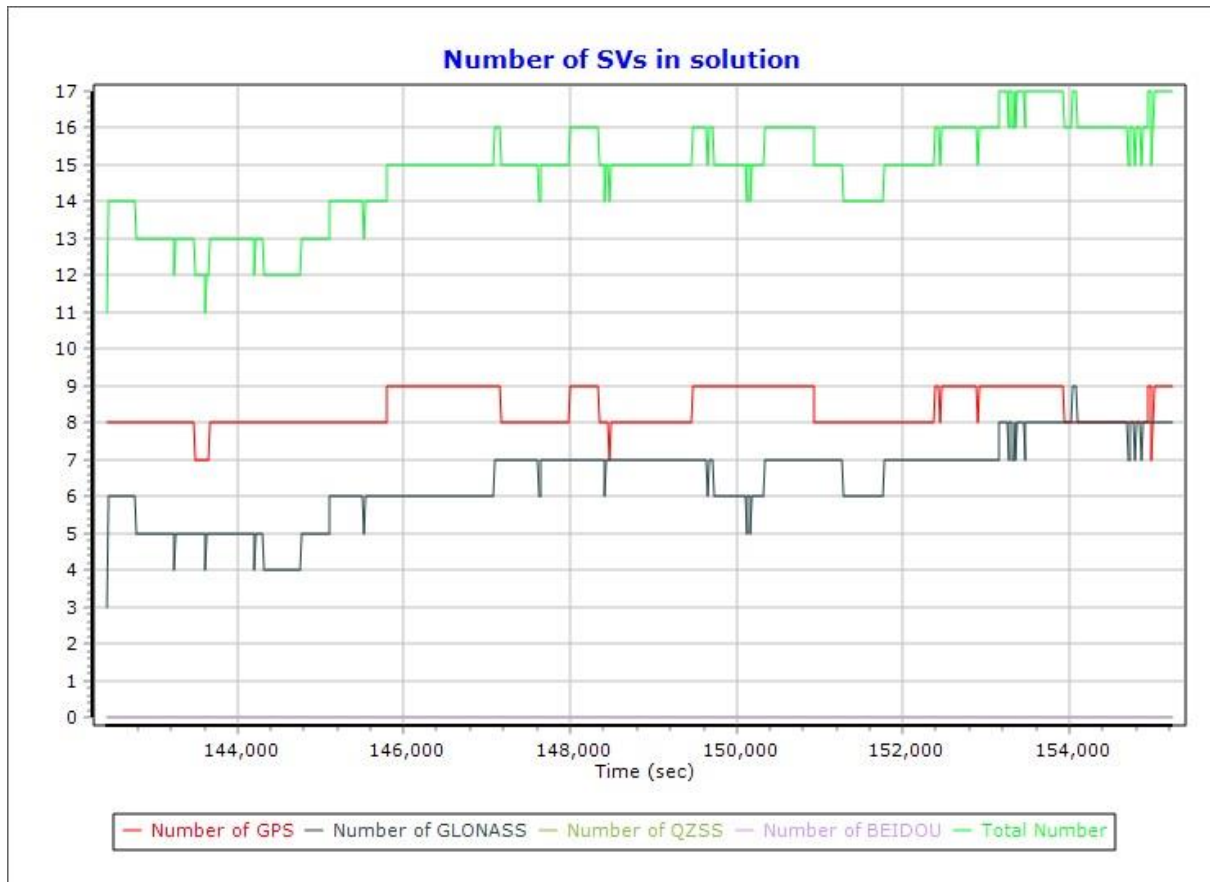
**DECEMBER 4, 2017**











### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\20171204\_VA\_A

Solution Type: IN-Fusion SmartBase

Fixed: 12854 (99.99%)  
Float: 0 (0.00%)  
No Solution: 1 (0.01%)

Number of Epochs:

Total in RAW file: 12902  
No processed position: 48

Fwd/Rev Separation RMS Values (m):

North: 0.005  
East: 0.018  
Height: 0.043

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 6451 occurrences

East: 0.003  
North: 0.005  
Height: 0.025

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 99.561  
0.10 - 0.30 m: 0.439  
0.30 - 1.00 m: 0.000  
1.00 - 5.00 m: 0.000  
5.00 m + over: 0.000

Percentages of epochs with DD\_DOP over 10.00: 0 %

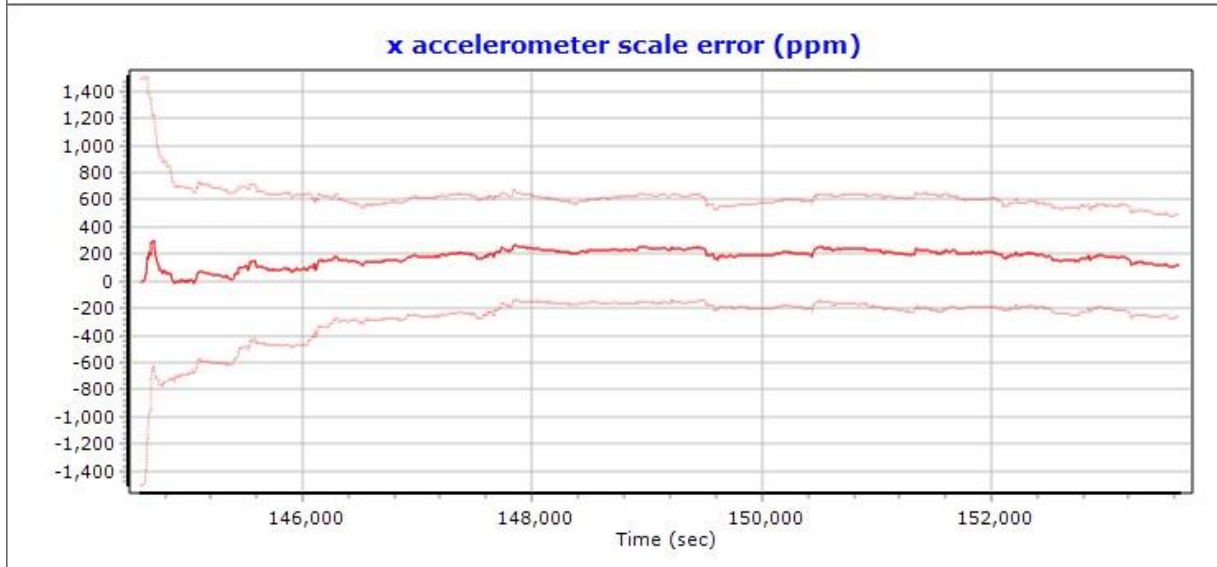
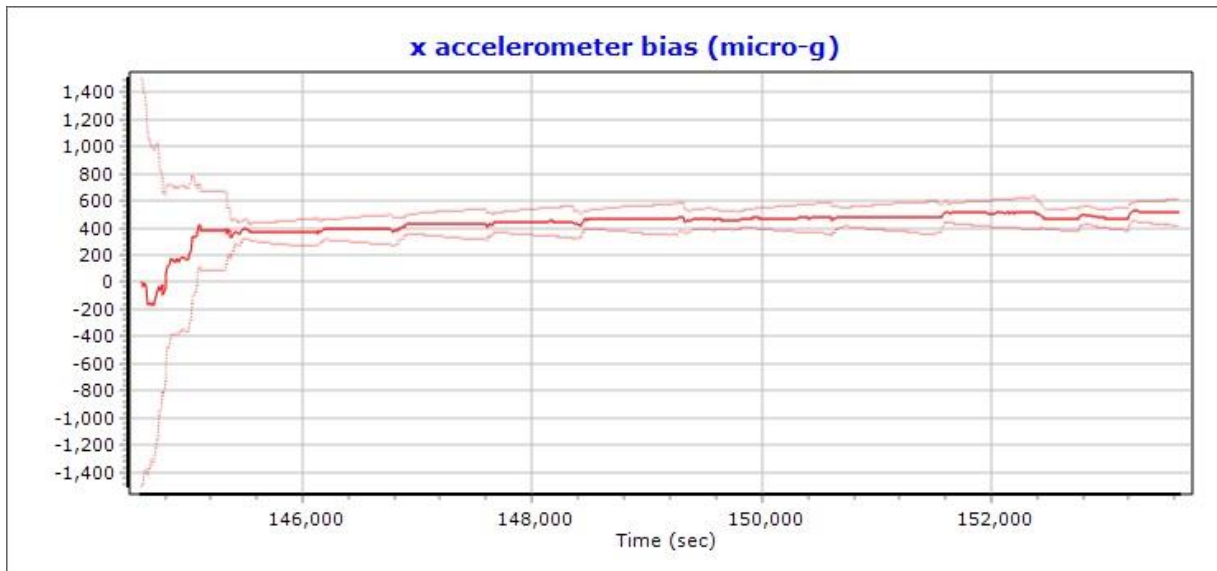
DOP over Tol: 1.44 %

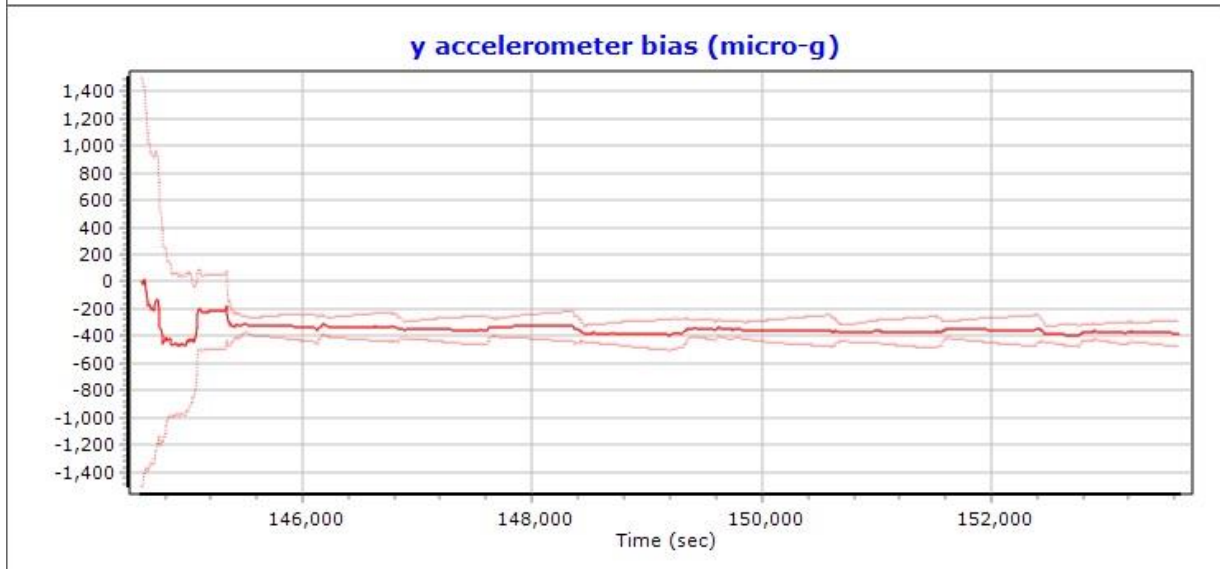
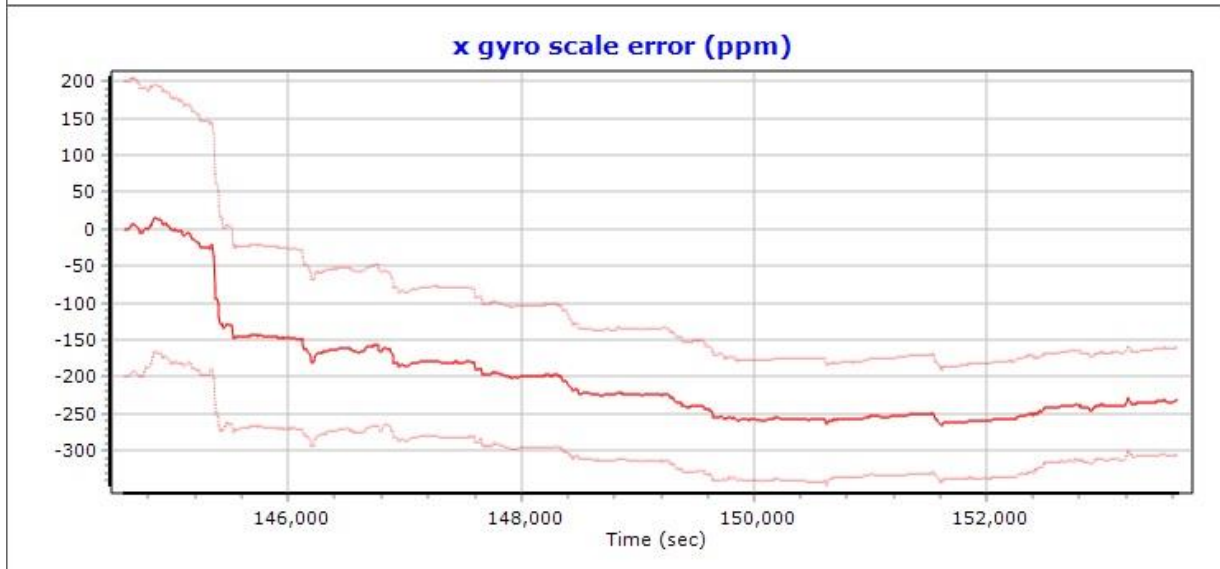
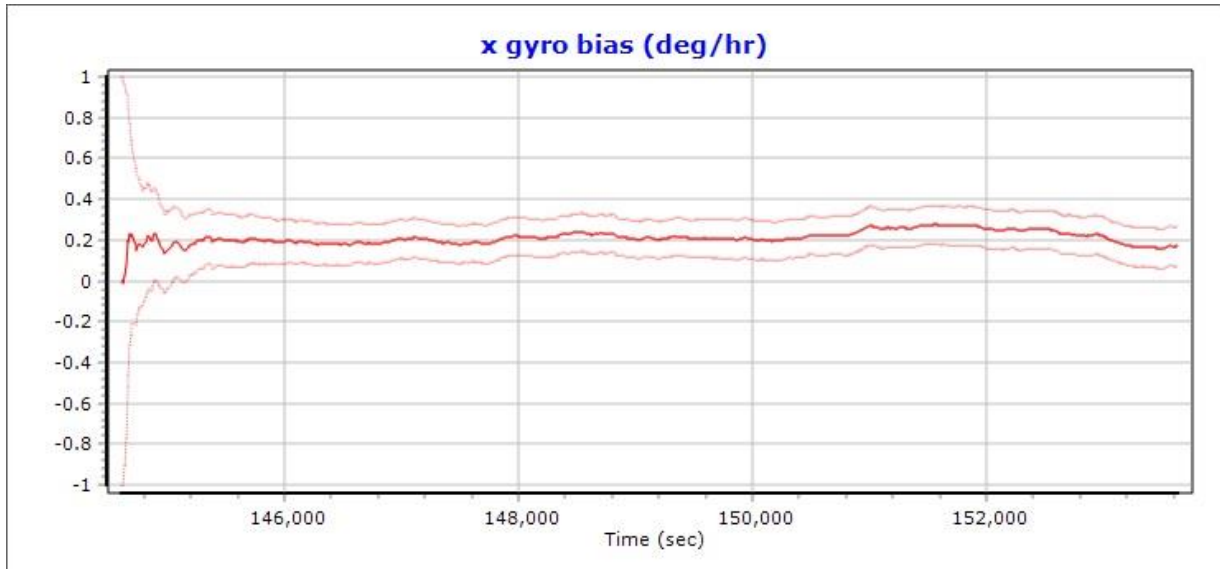
Baseline Distances (km):

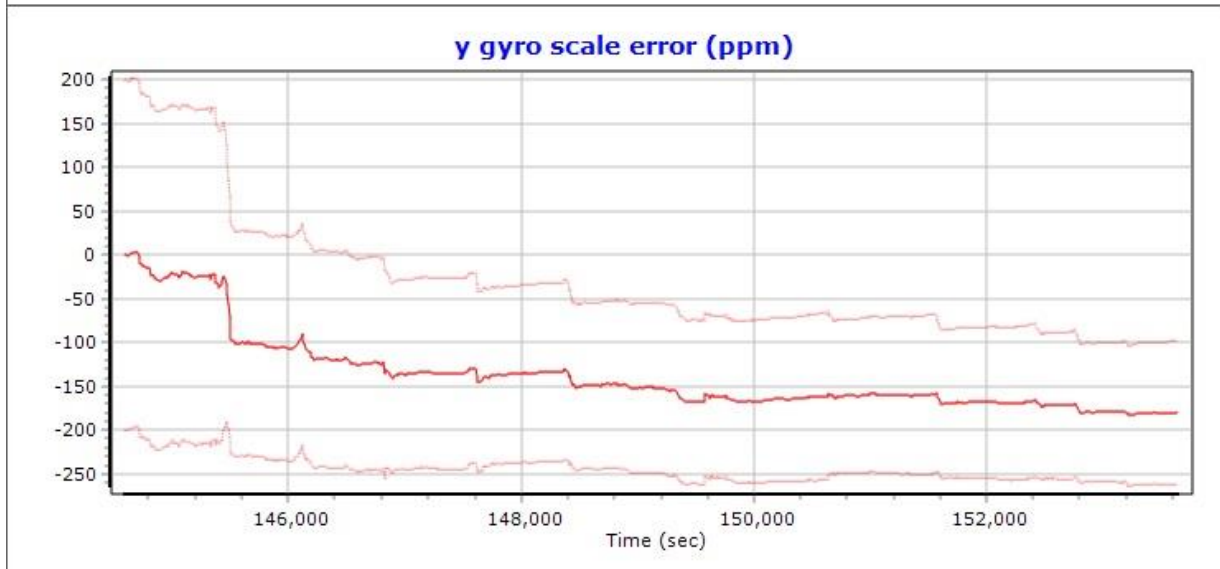
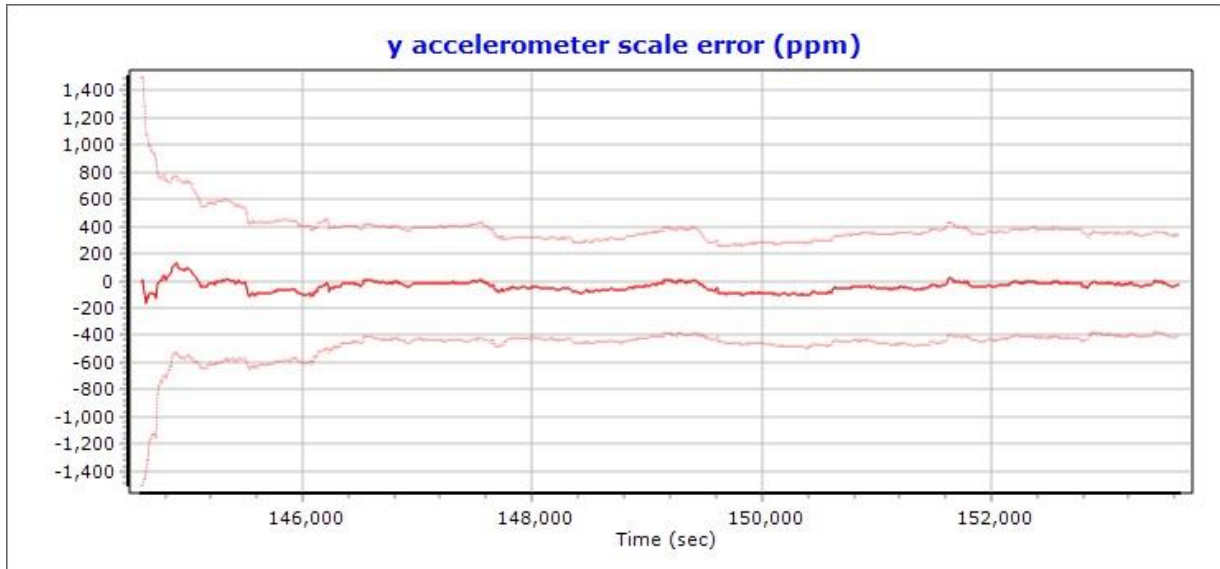
Maximum: 103.65  
Minimum: 0.10  
Average: 33.41  
First Epoch: 103.65  
Last Epoch: 100.70

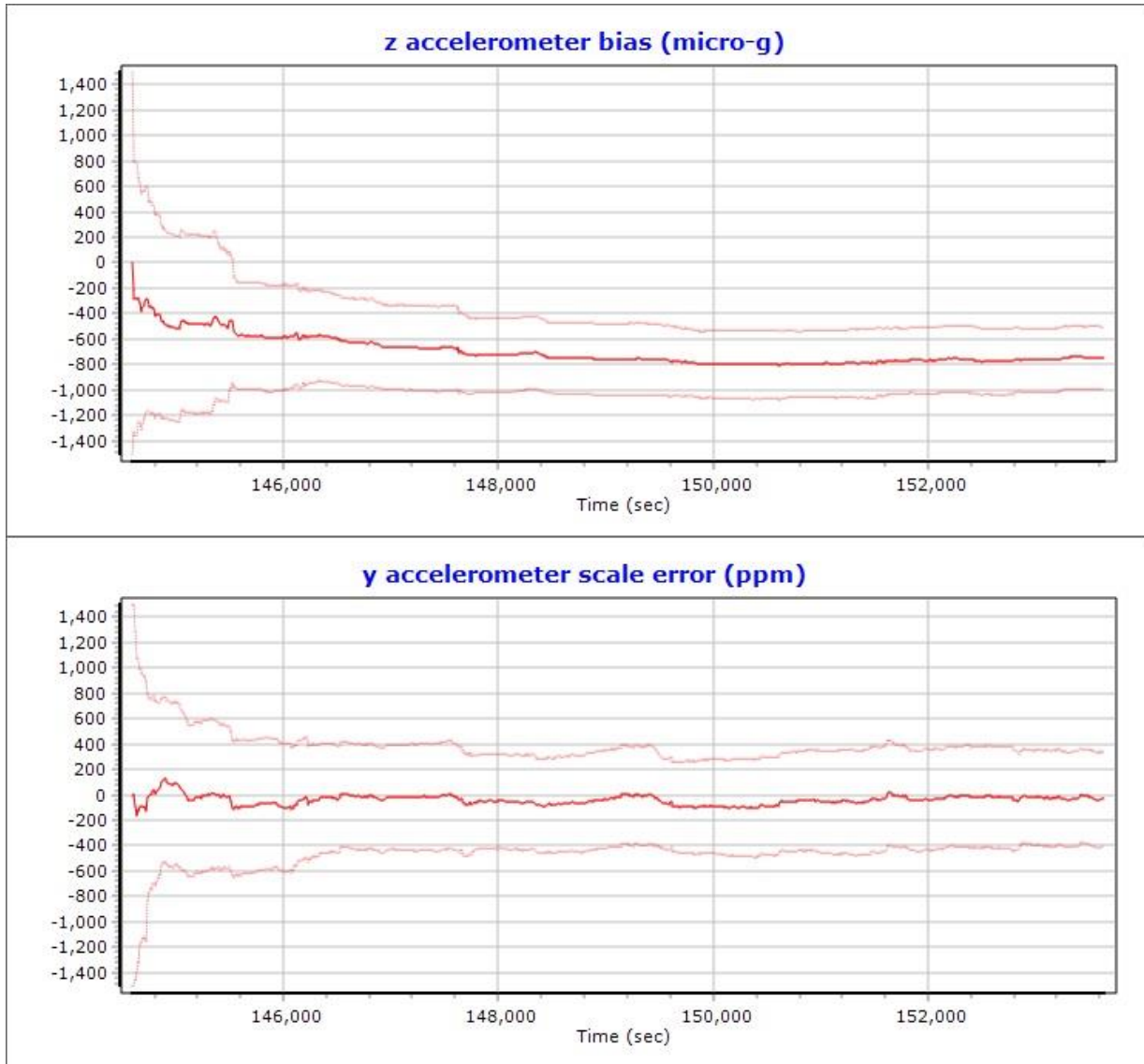
### CORS Base Stations

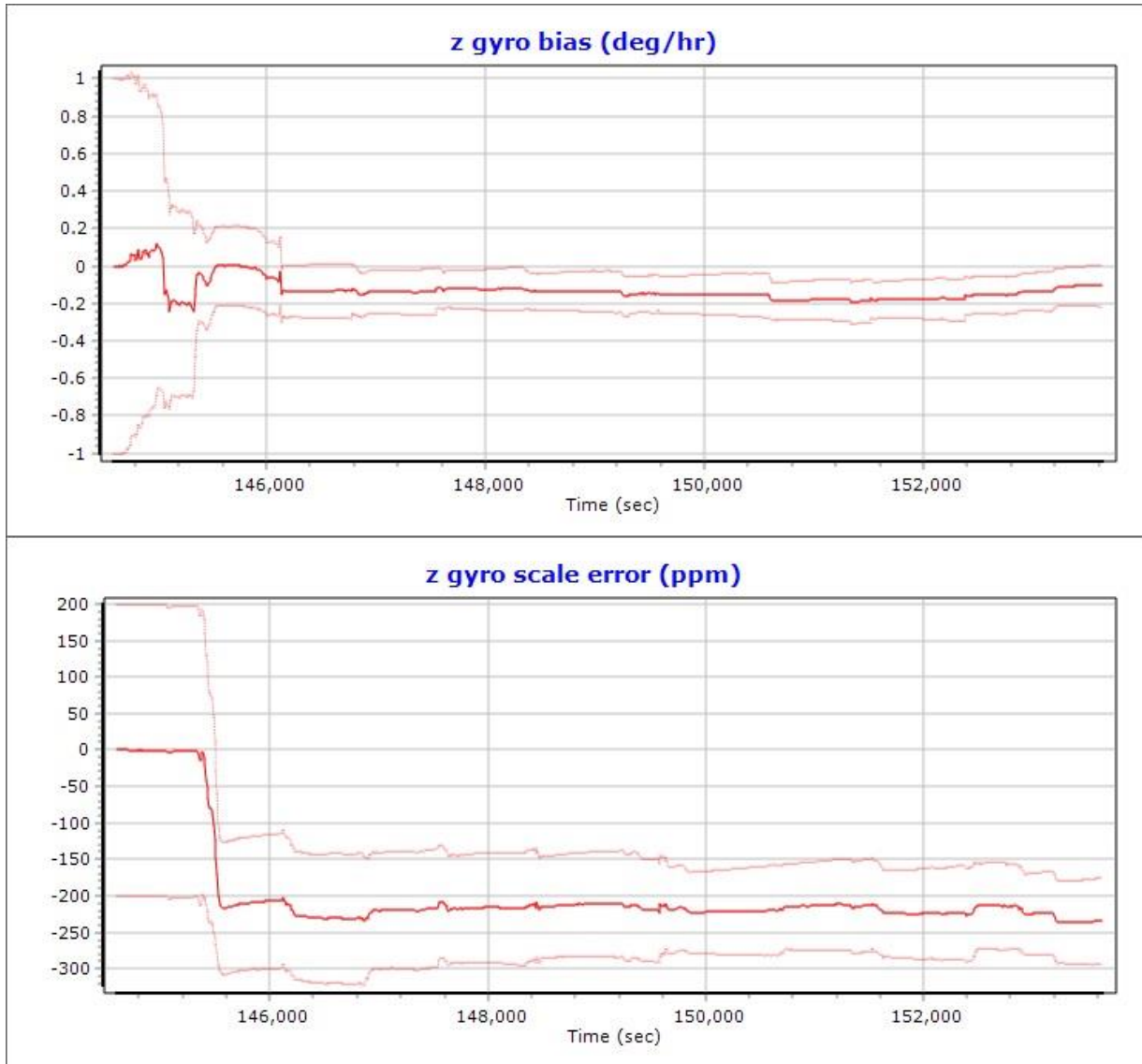
Station	Original			Adjusted		
	N	E	Height	N	E	Height
WVOH	N37°59'53.75059"	W81°07'55.81202"	596.194	N37°59'53.75059"	W81°07'55.81193"	596.192
WVAT	N37°25'42.67846"	W81°04'04.40374"	704.674			
TN18	N36°21'57.03029"	W82°10'42.27478"	444.597	N36°21'57.03027"	W82°10'42.27470"	444.581
NCWC	N36°22'19.71501"	W80°11'05.64893"	274.975	N36°22'19.71492"	W80°11'05.64884"	275.087
LS04	N37°21'47.16704"	W79°57'26.99401"	324.137	N37°21'47.16713"	W79°57'26.99373"	324.14
KYTL	N37°29'00.20373"	W82°32'07.72236"	185.679	N37°29'00.20372"	W82°32'07.72263"	185.702
WVOH	N37°59'53.75059"	W81°07'55.81202"	596.194	N37°59'53.75059"	W81°07'55.81193"	596.192



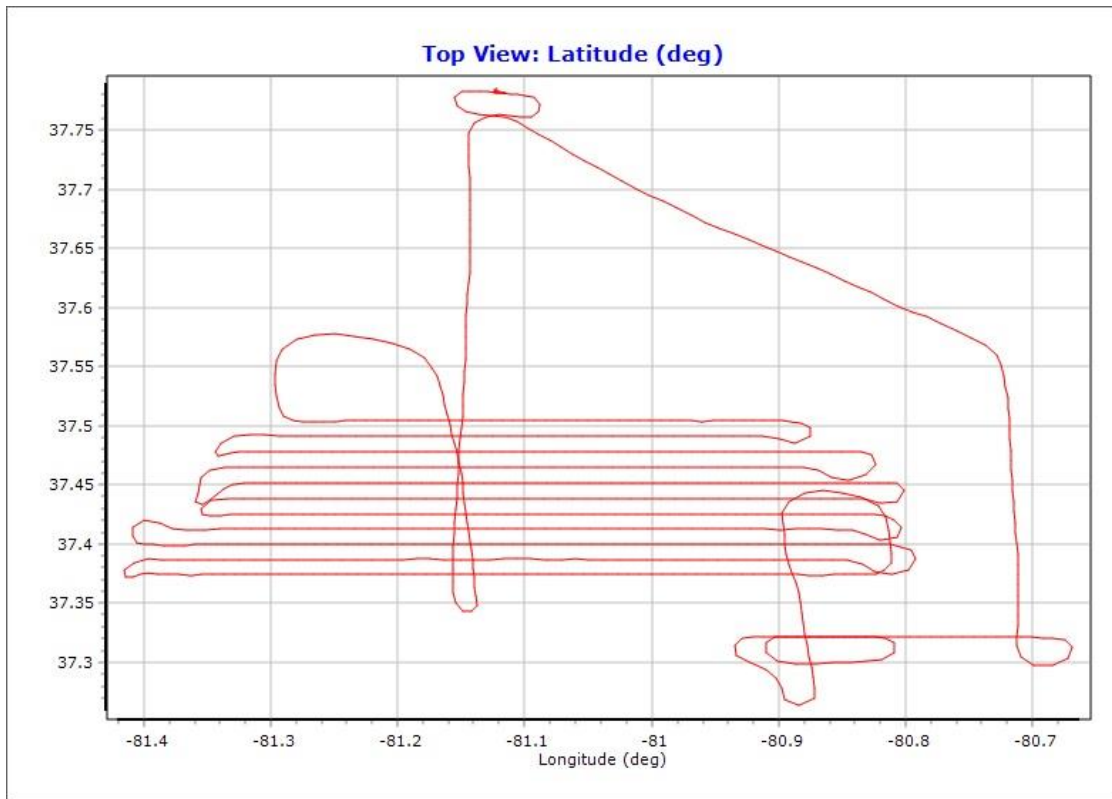




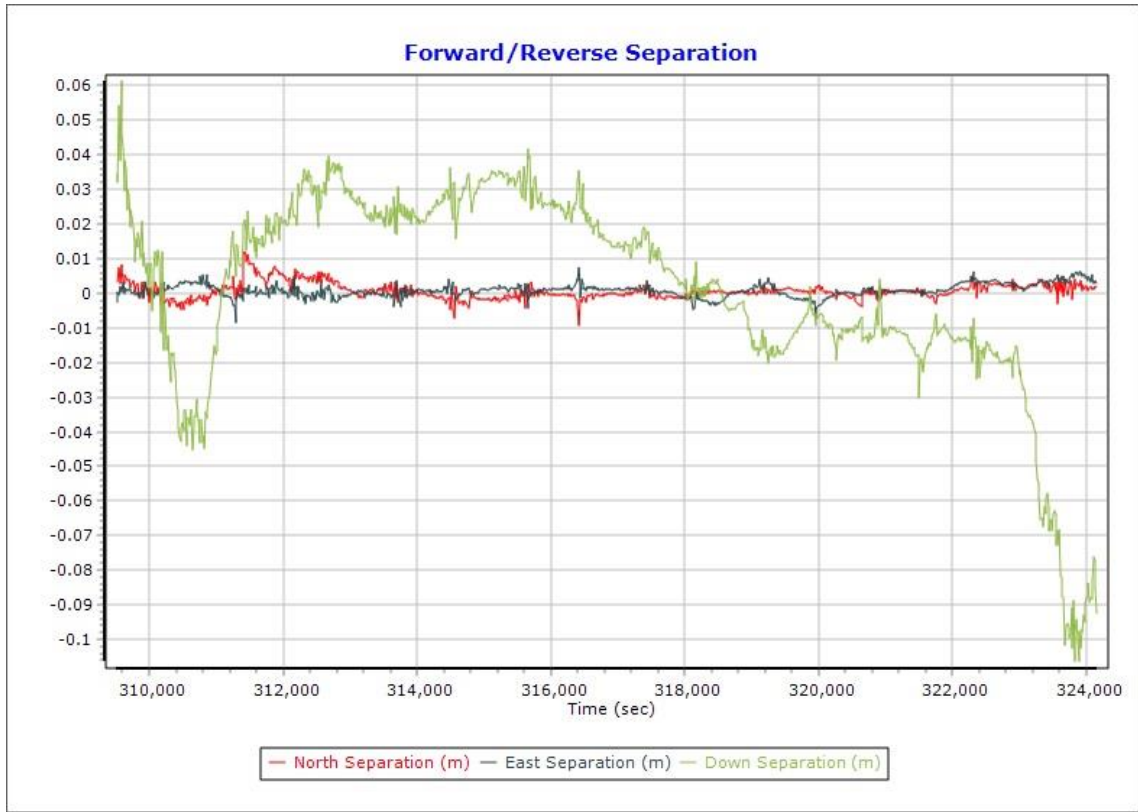


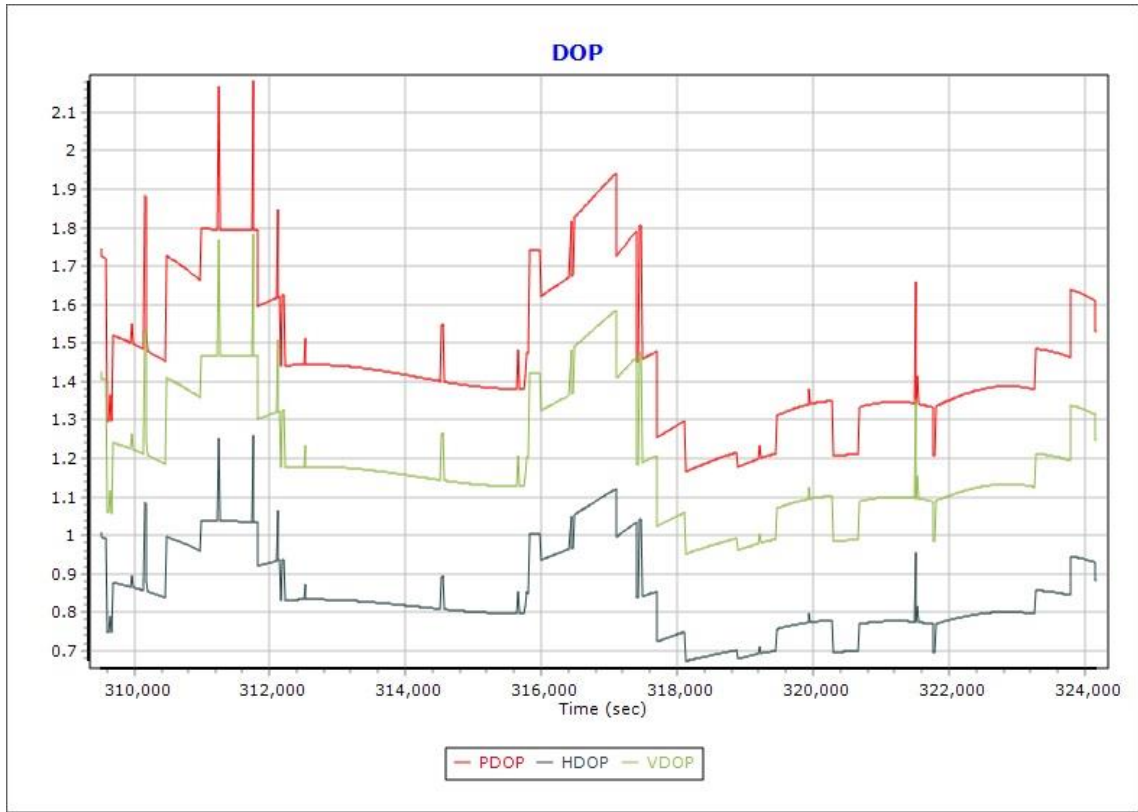


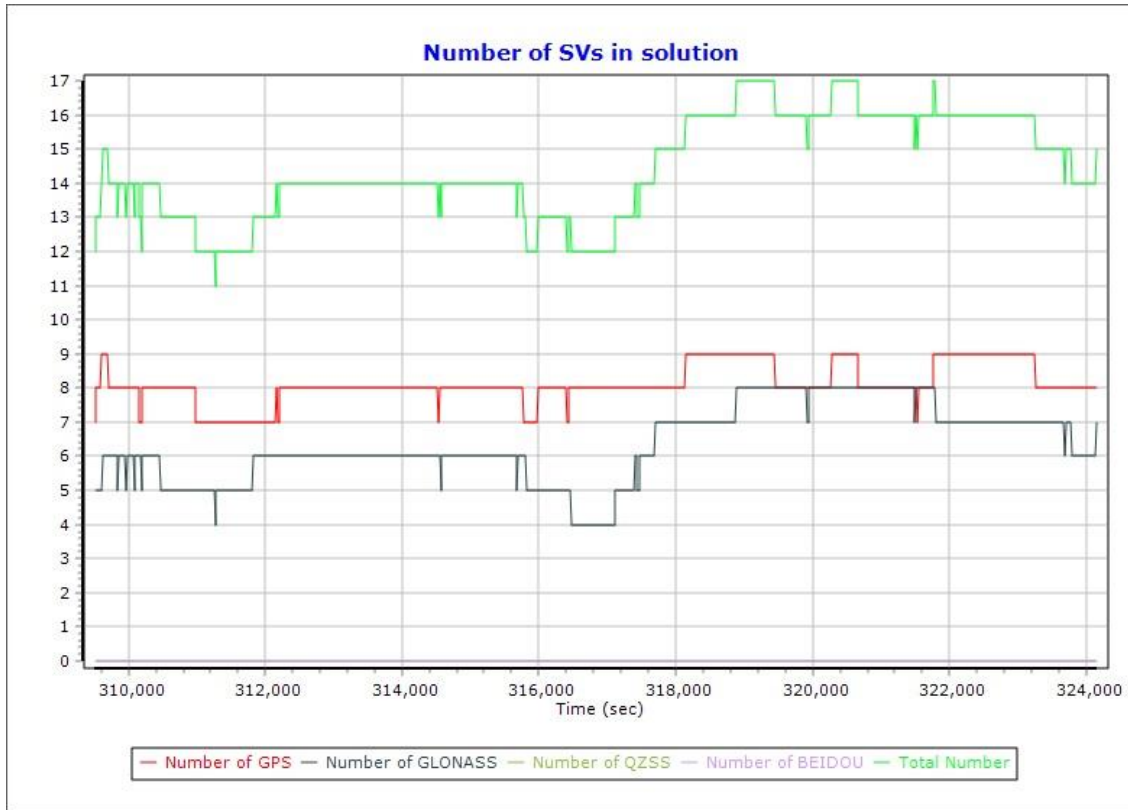
### DECEMBER 6, 2018 MISSION-1











### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\20171206\_VA\_A

Solution Type: IN-Fusion SmartBase

Fixed: 12854 (99.99%)  
Float: 0 (0.00%)  
No Solution: 1 (0.01%)

Number of Epochs:

Total in RAW file: 12902  
No processed position: 48

Fwd/Rev Separation RMS Values (m):

North: 0.005  
East: 0.018

Height: 0.043

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 6451 occurrences

East: 0.003  
North: 0.005  
Height: 0.025

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 99.561  
0.10 - 0.30 m: 0.439  
0.30 - 1.00 m: 0.000  
1.00 - 5.00 m: 0.000  
5.00 m + over: 0.000

Percentages of epochs with DD\_DOP over 10.00: 0 %

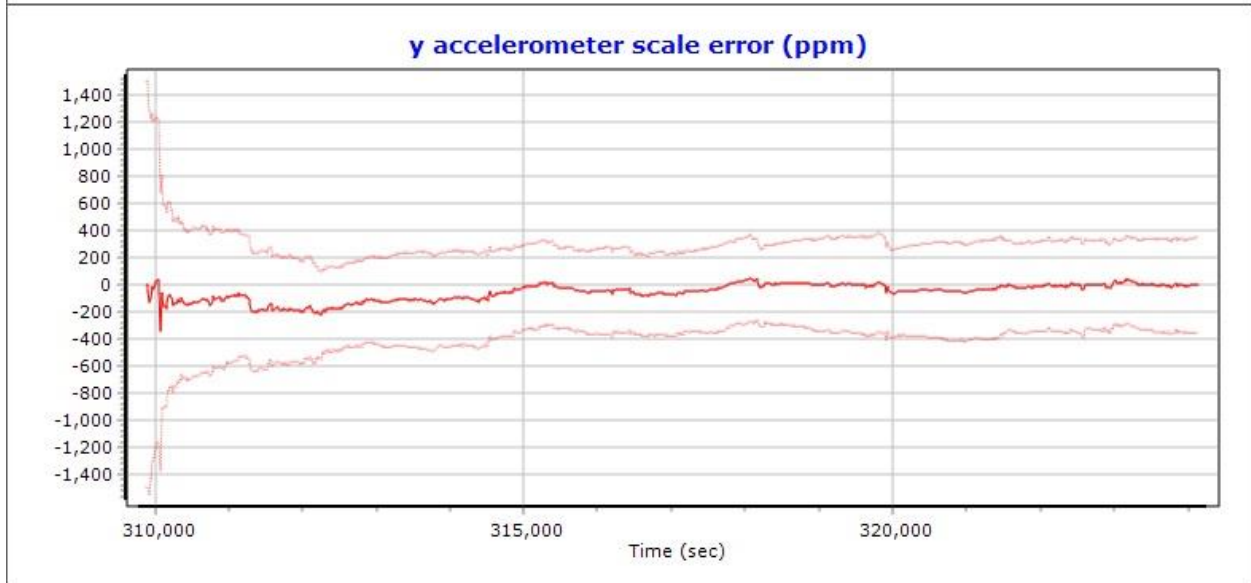
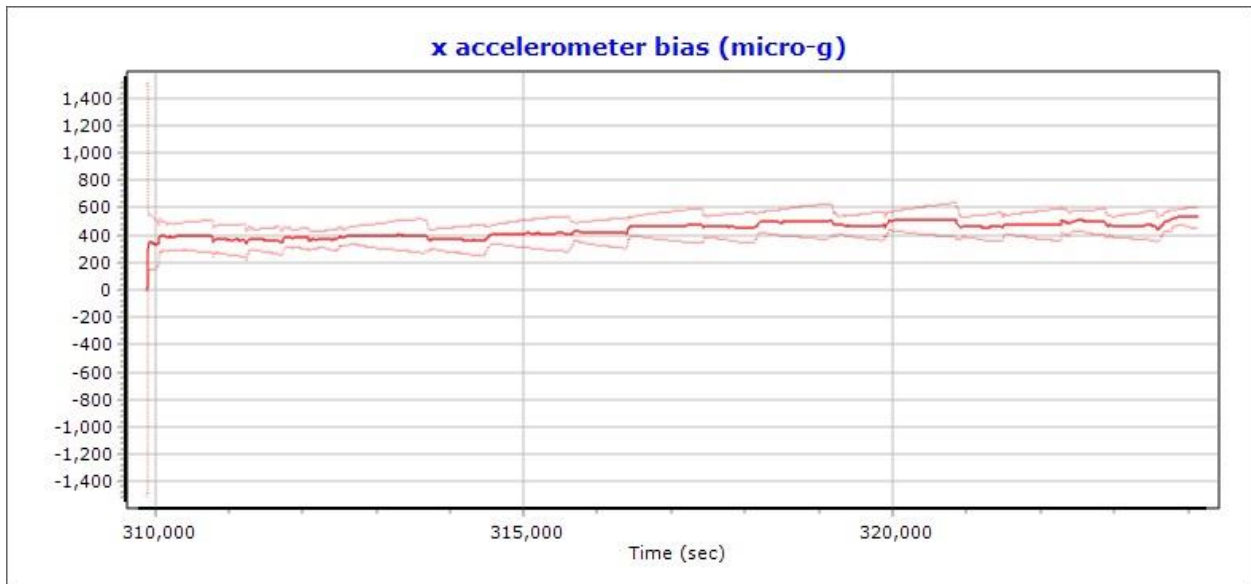
DOP over Tol: 1.44 %

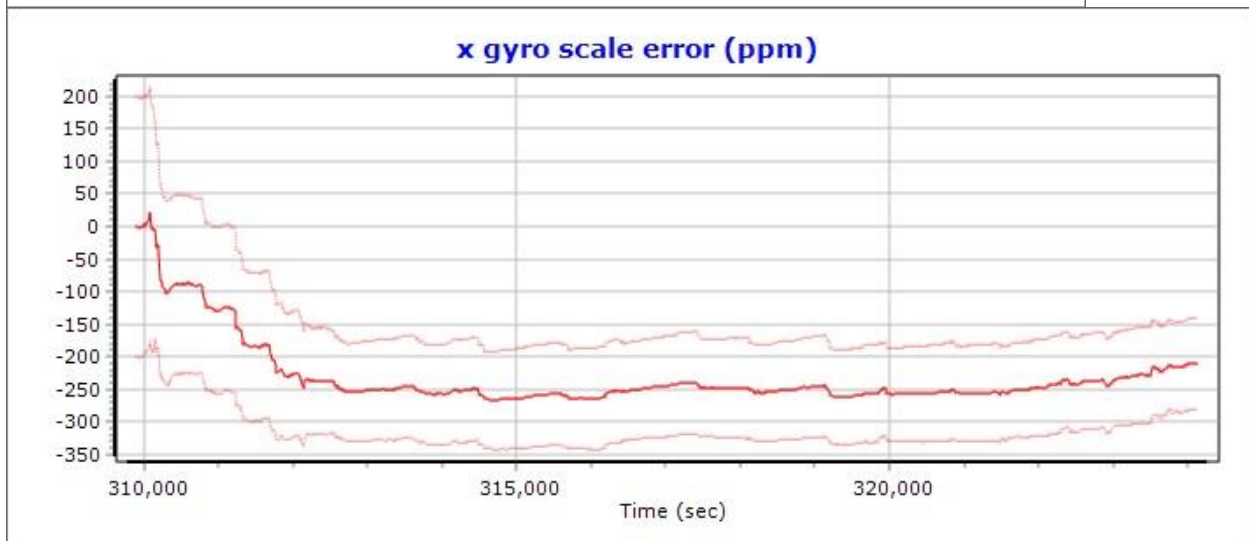
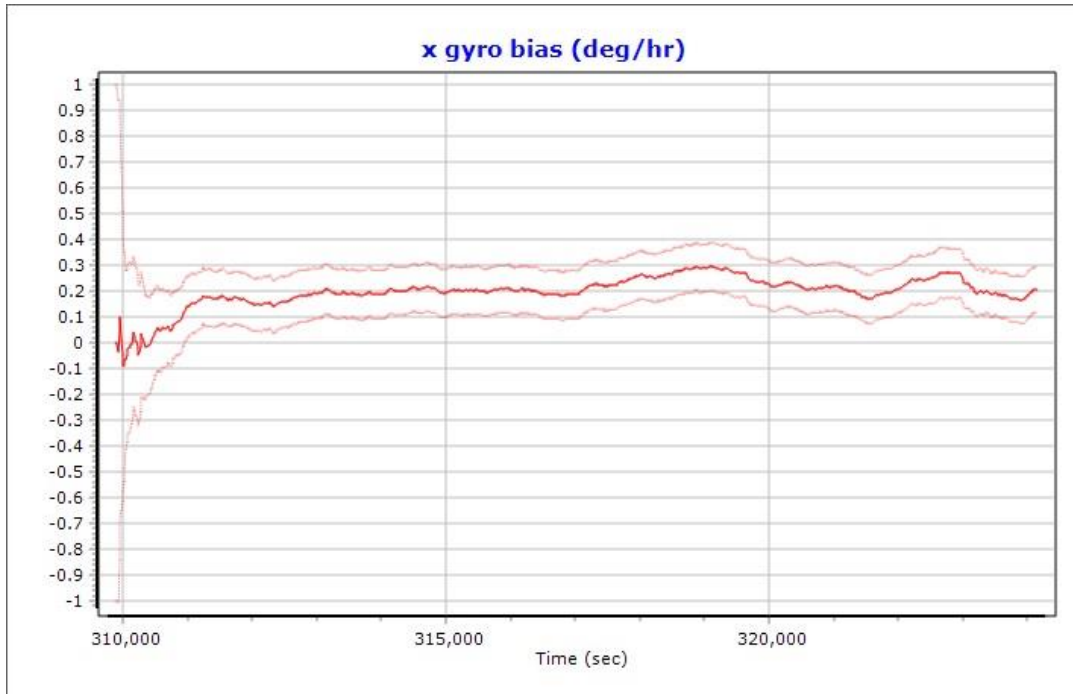
Baseline Distances (km):

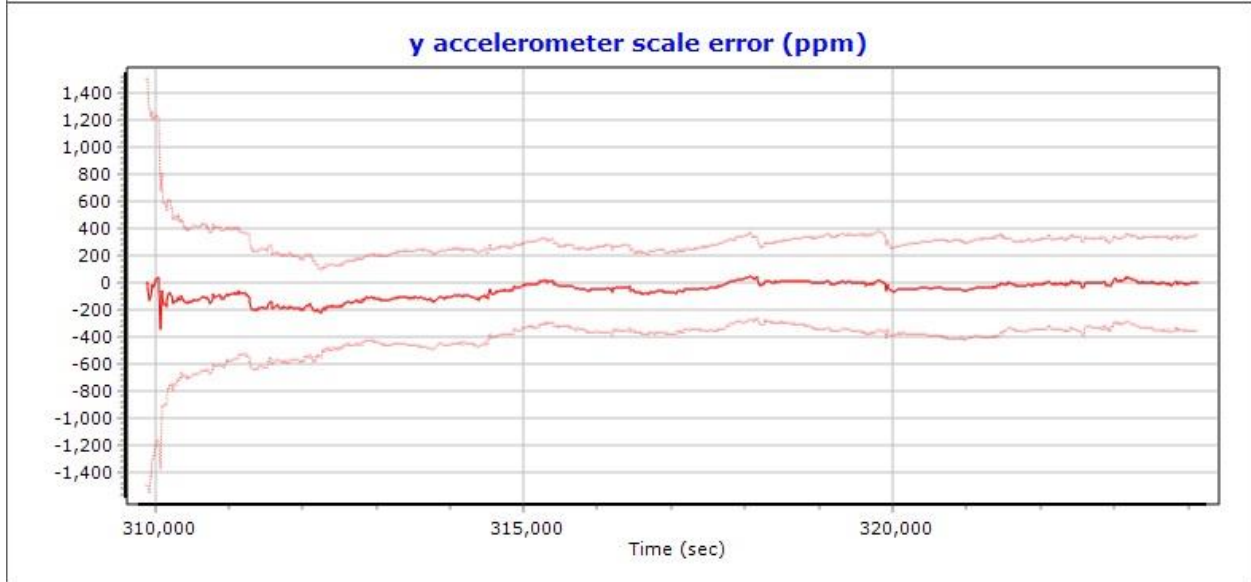
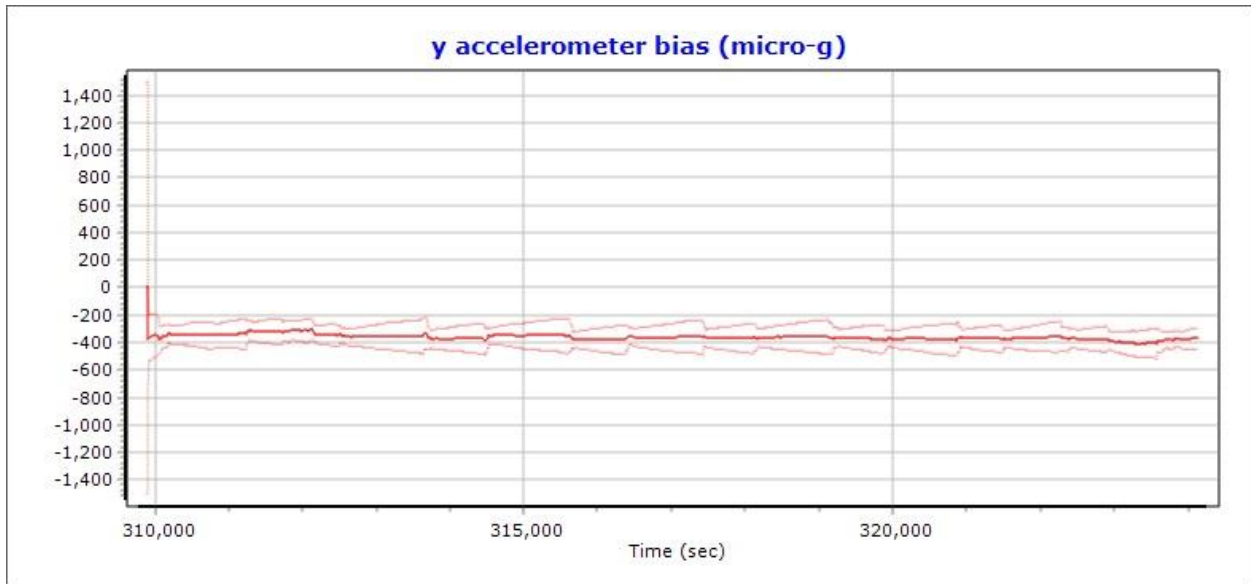
Maximum: 103.65  
Minimum: 0.10  
Average: 33.41  
First Epoch: 103.65  
Last Epoch: 100.70

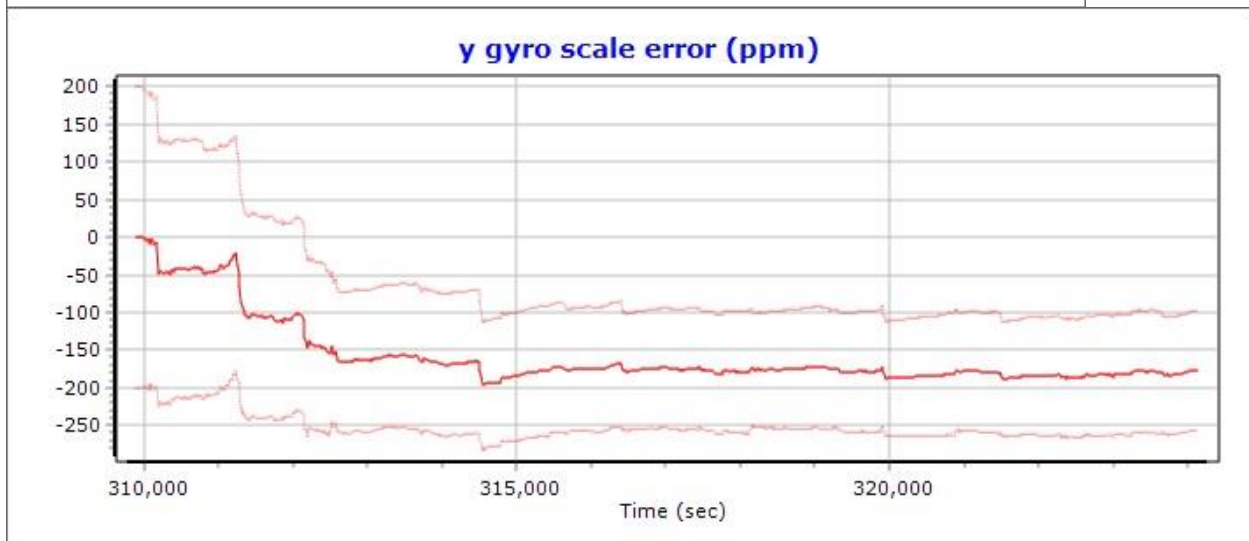
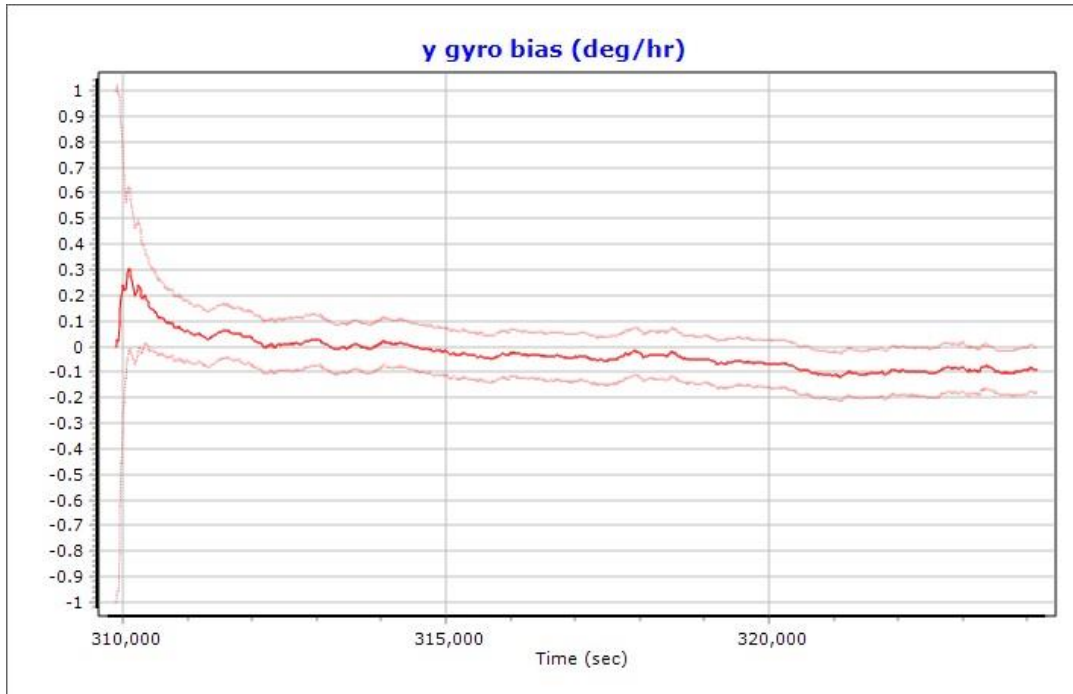
### CORS Base Stations

Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
WVOH	N37°59'53.75051"	W81°07'55.81215"	596.195	N37°59'53.75053"	W81°07'55.81210"	596.187
WVAT	N37°25'42.67838"	W81°04'04.40388"	704.674			
NCWJ	N36°23'34.97454"	W81°28'42.29380"	933.47	N36°23'34.97432"	W81°28'42.29378"	933.48
NCWC	N36°22'19.71490"	W80°11'05.64907"	274.974	N36°22'19.71473"	W80°11'05.64889"	275.08
LS04	N37°21'47.16695"	W79°57'26.99410"	324.139	N37°21'47.16704"	W79°57'26.99397"	324.141
KYTL	N37°29'00.20362"	W82°32'07.72261"	185.687	N37°29'00.20356"	W82°32'07.72262"	185.703

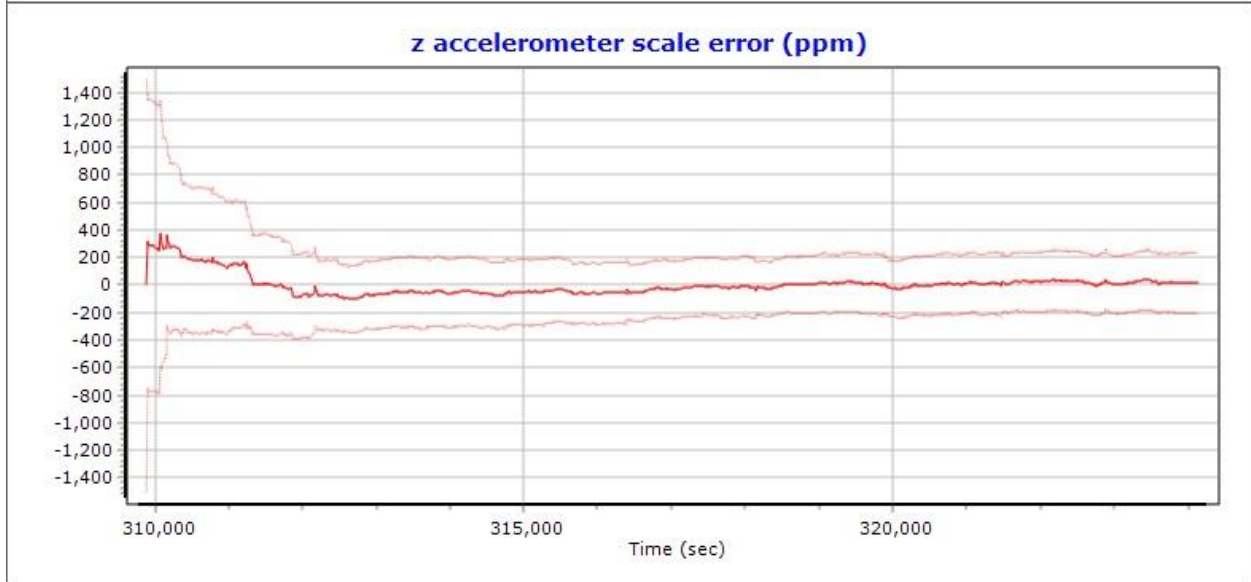
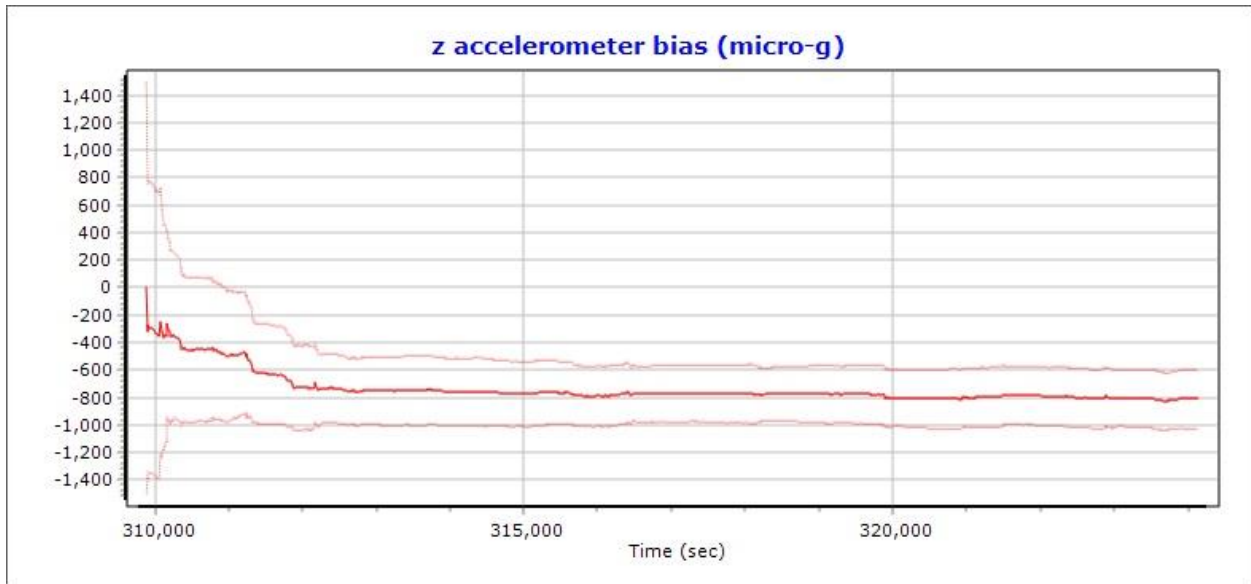


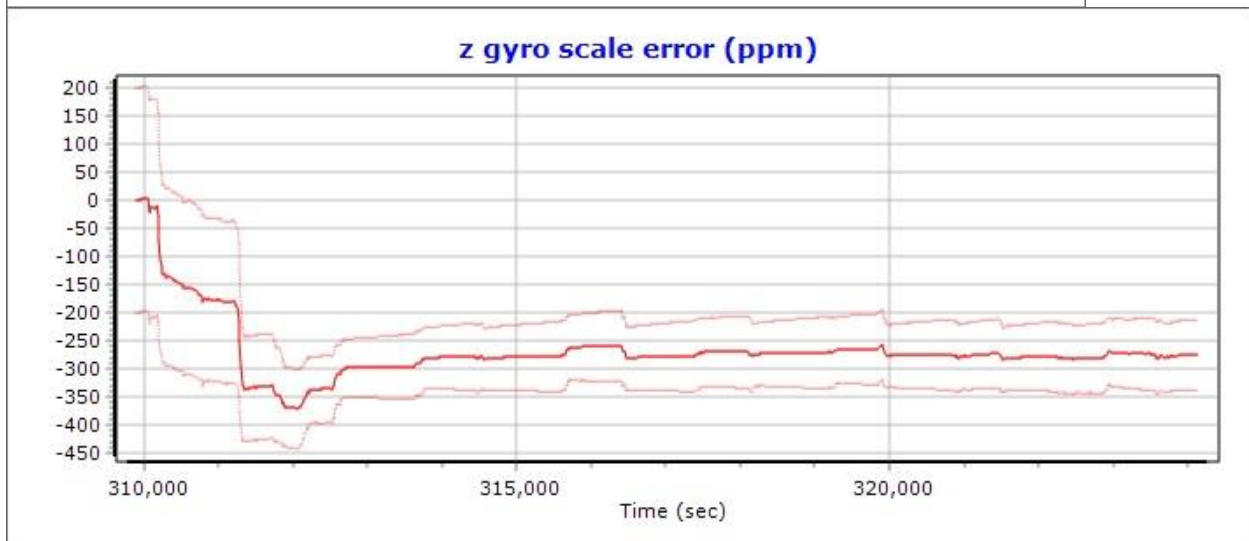
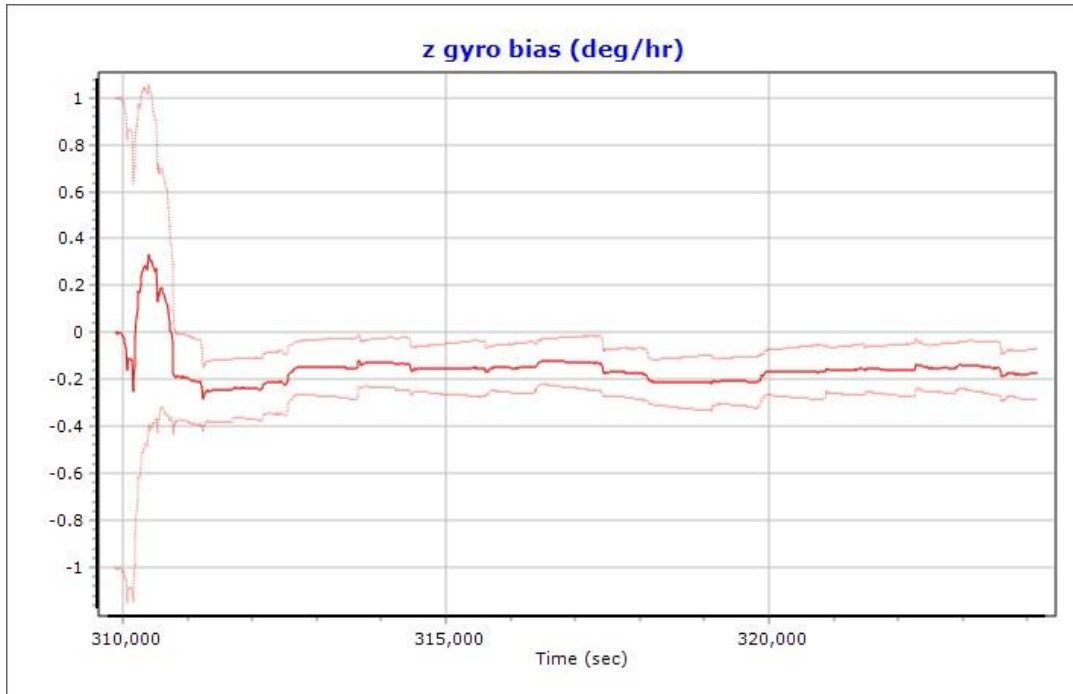




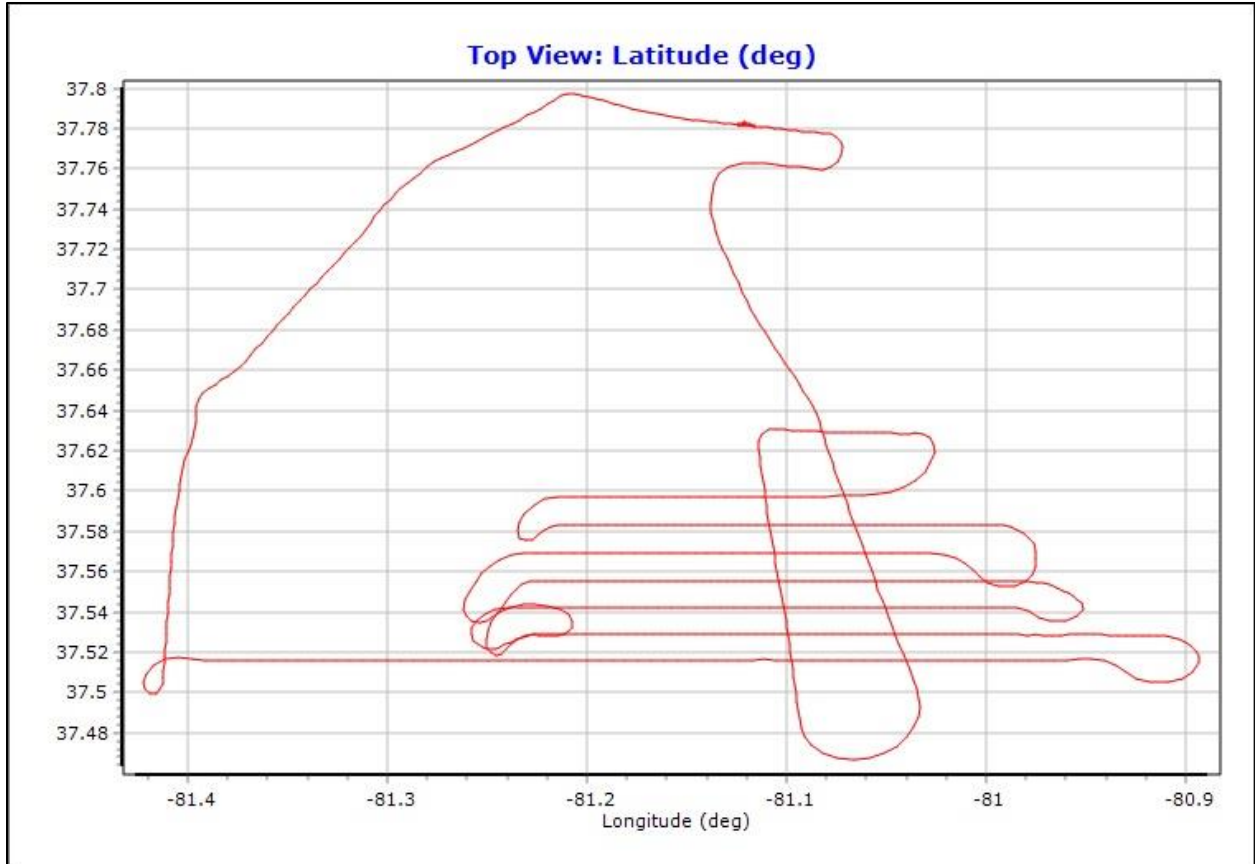


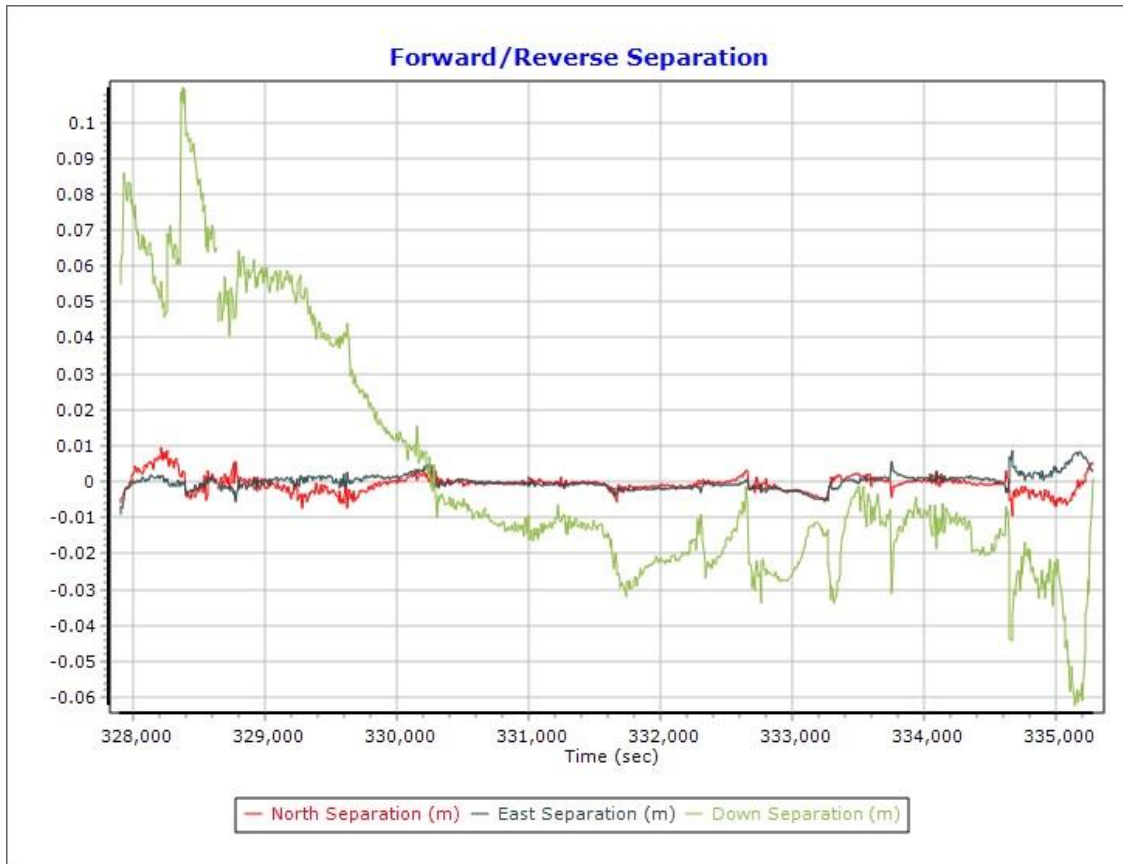


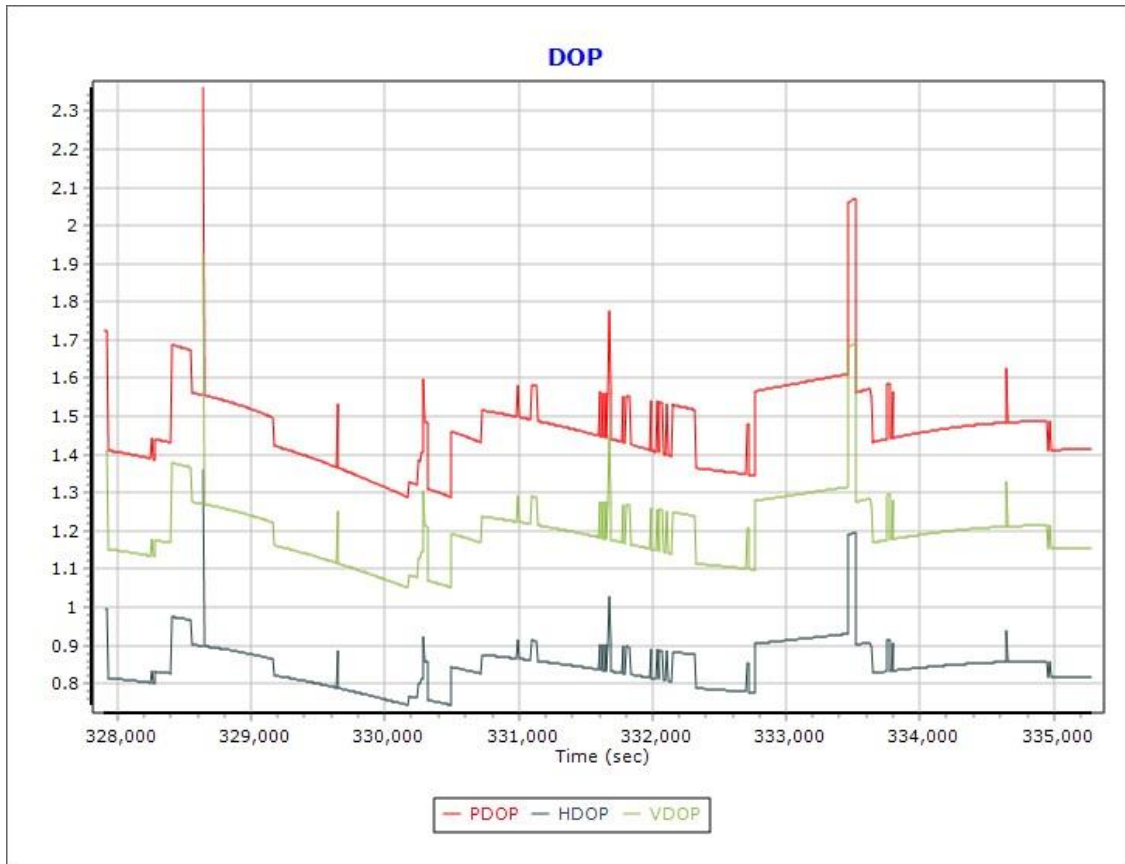


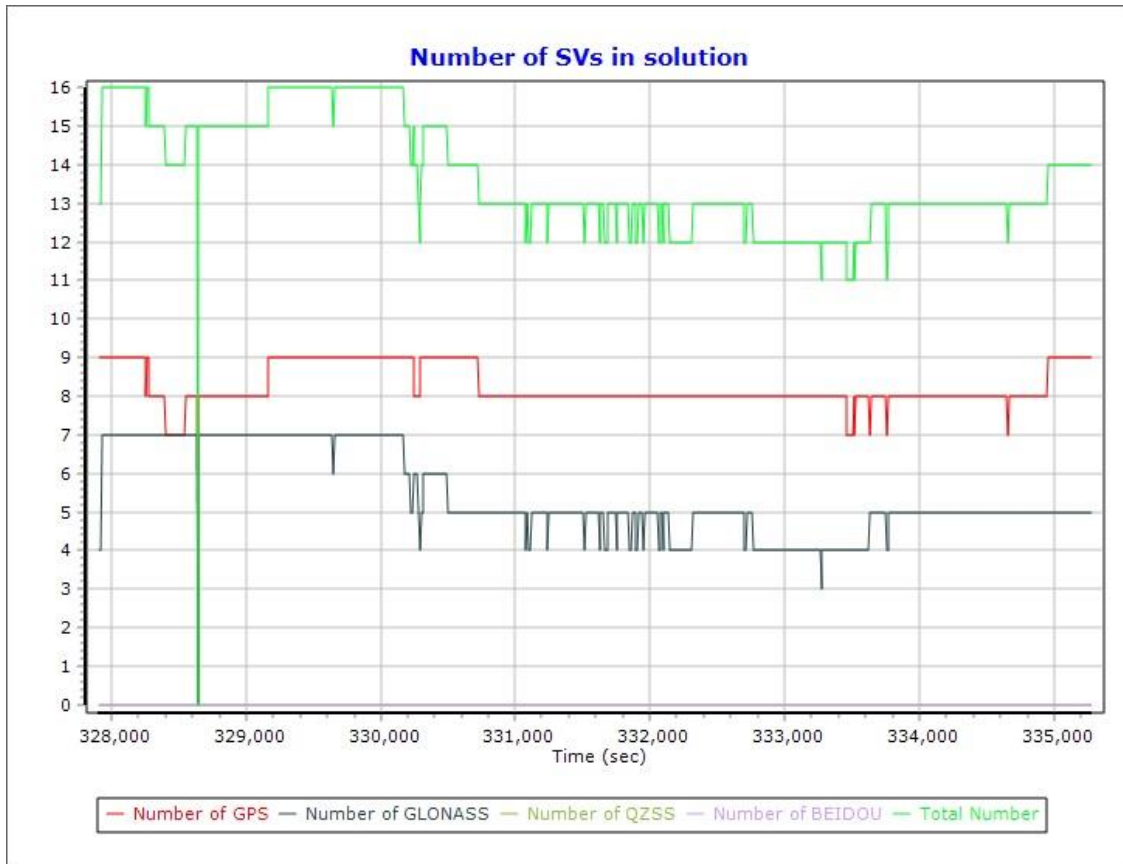


**DECEMBER 6, 2017-MISSION-2**









### Processing Summary Information

#### Processing Summary Information

Program: POSpac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\20171206\_VA\_B

Solution Type: IN-Fusion SmartBase

Fixed: 7393 (99.99%)  
Float: 0 (0.00%)  
No Solution: 1 (0.01%)

Number of Epochs:

Total in RAW file: 7398  
No processed position: 4

Fwd/Rev Separation RMS Values (m):

North: 0.003  
East: 0.002  
Height: 0.035

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 3698 occurrences

East: 0.002  
North: 0.002  
Height: 0.018

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 97.481  
0.10 - 0.30 m: 0.865  
0.30 - 1.00 m: 0.982  
1.00 - 5.00 m: 0.671  
5.00 m + over: 0.000

Percentages of epochs with DD\_DOP over 10.00: 0 %

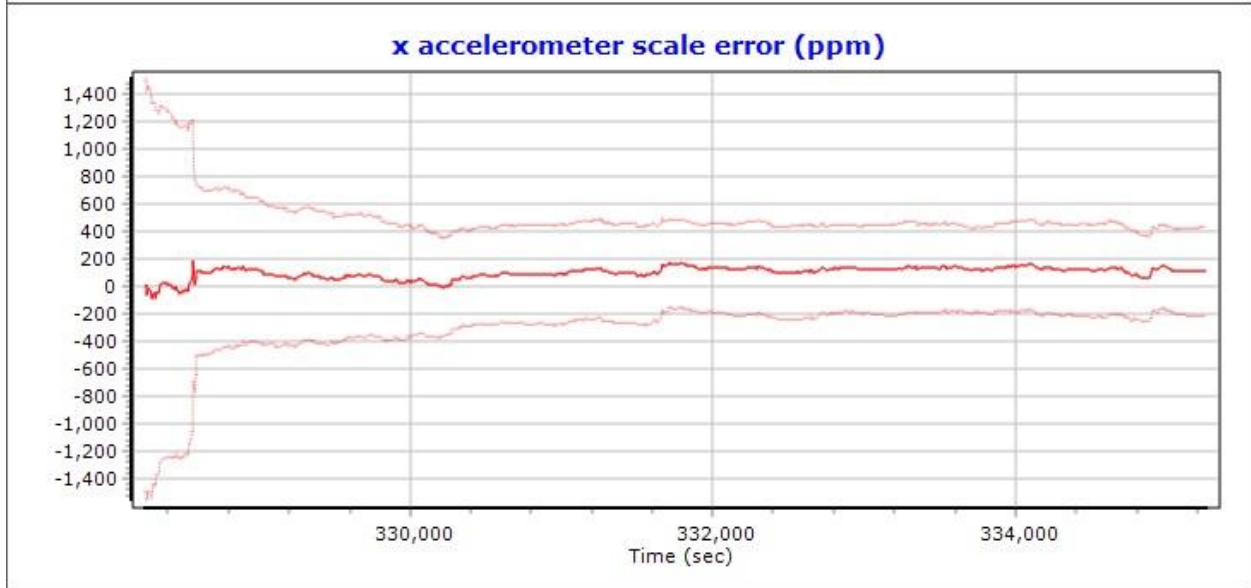
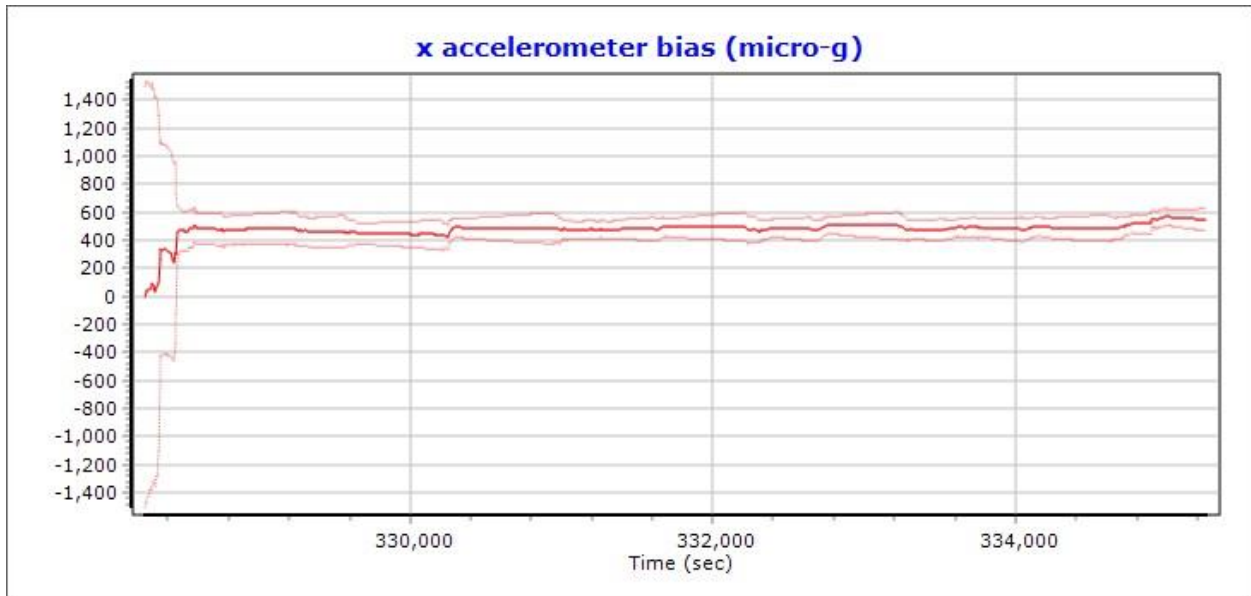
DOP over Tol: 1.47 %

Baseline Distances (km):

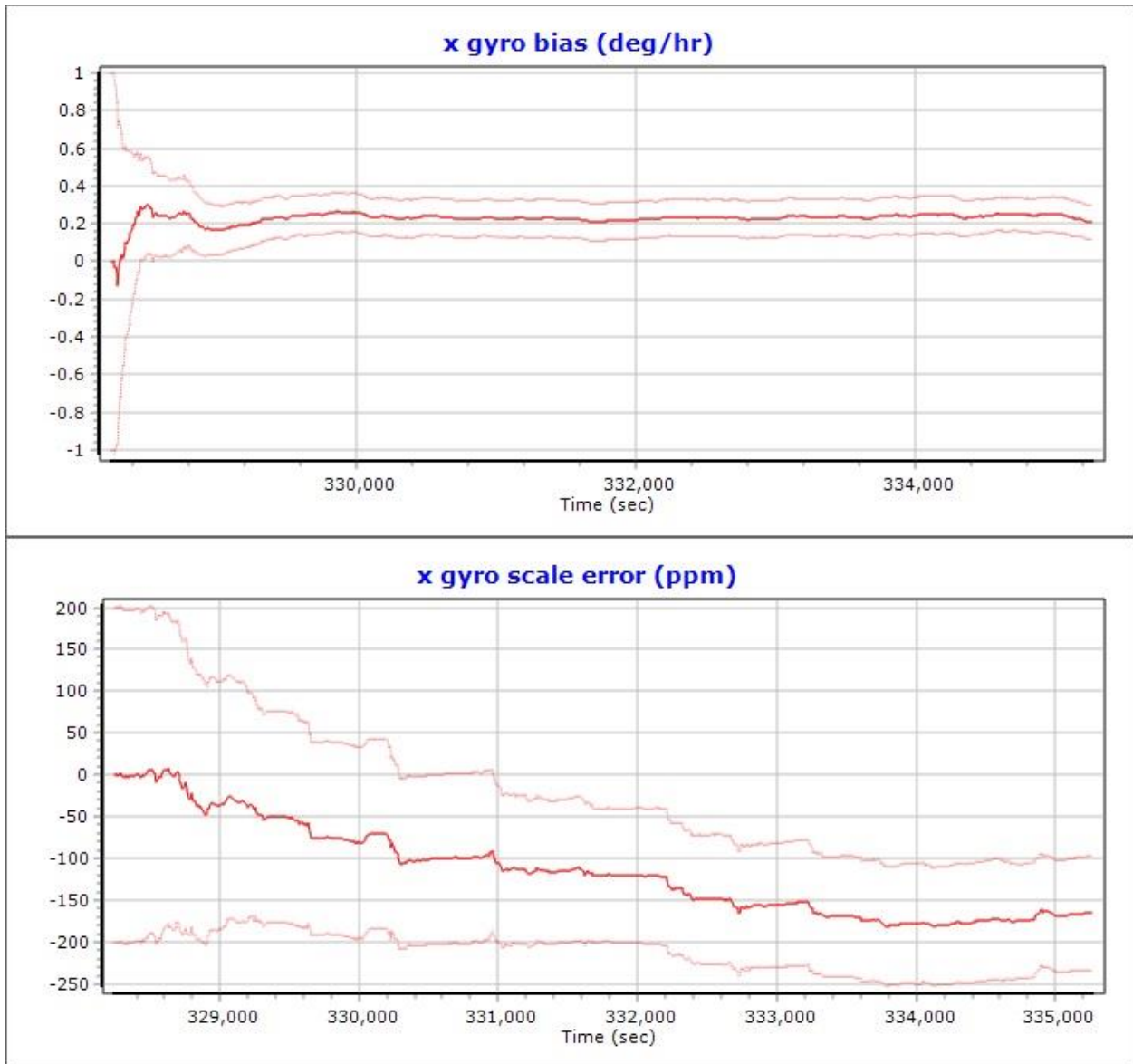
Maximum: 27.80  
Minimum: 2.05  
Average: 14.02  
First Epoch: 18.80  
Last Epoch: 18.80

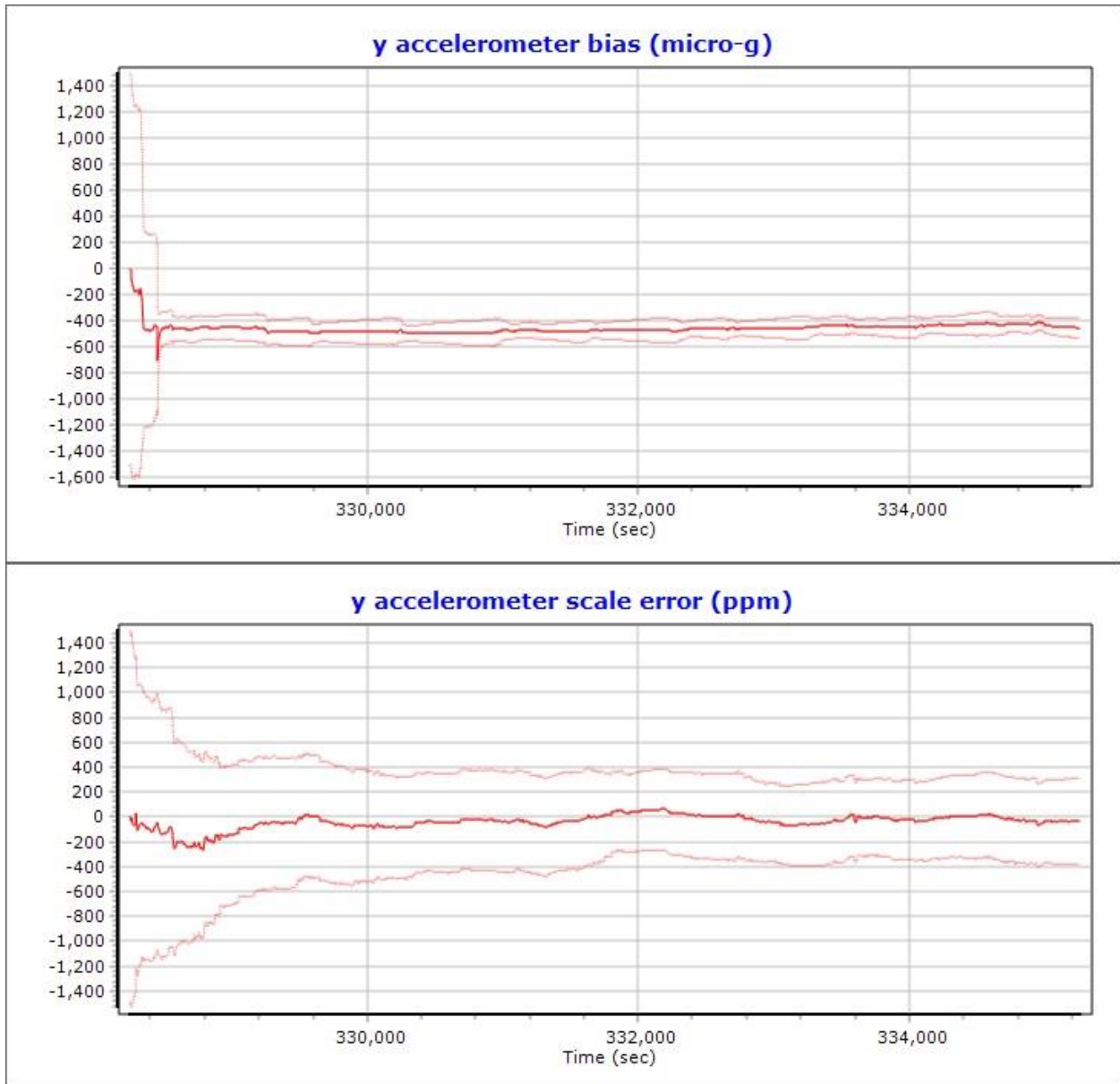
### CORS Base Stations

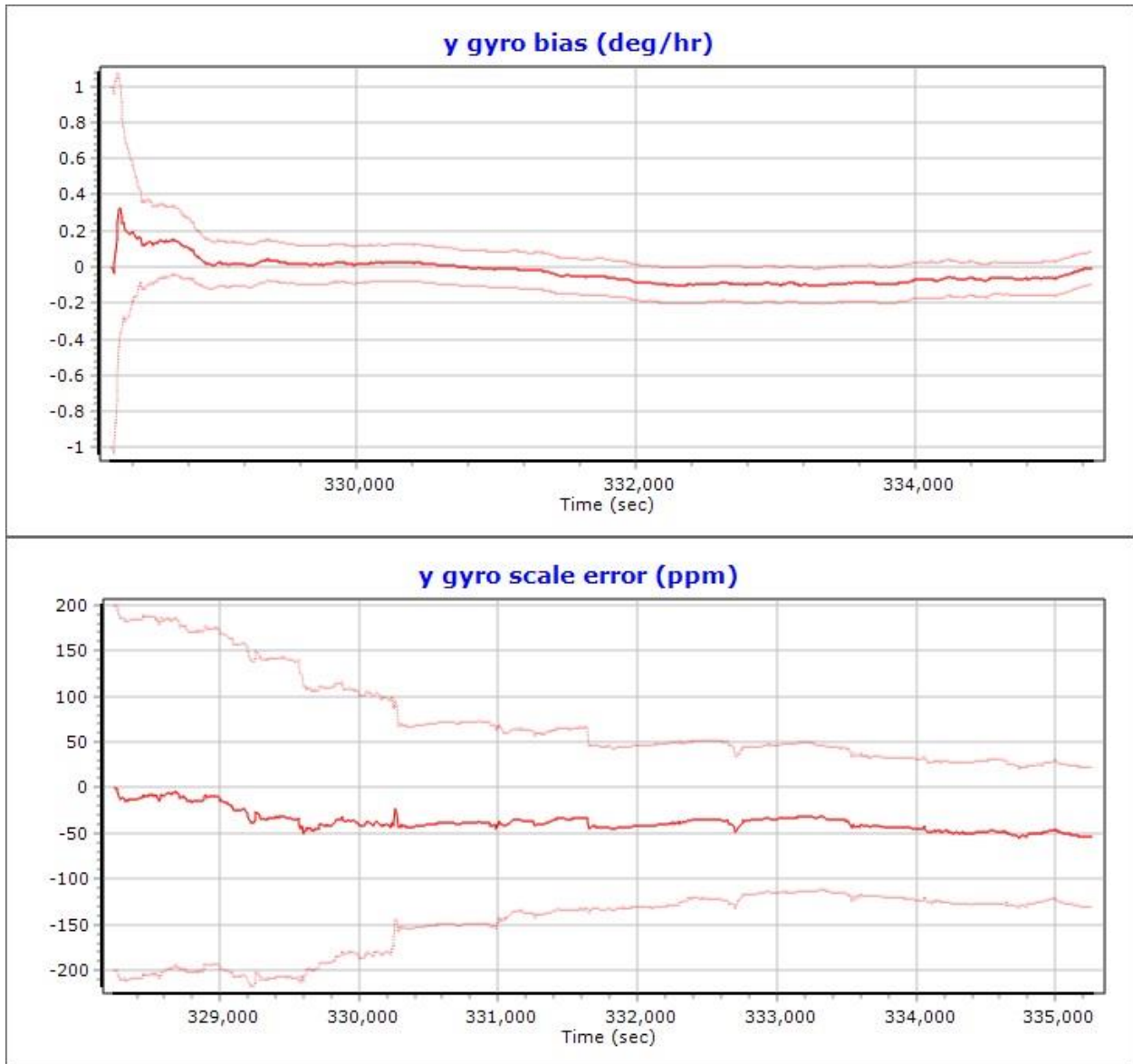
Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
WVOH	N37°59'53.75051"	W81°07'55.81215"	596.195	N37°59'53.75046"	W81°07'55.81206"	596.191
WVLE	N37°49'20.23017"	W80°25'18.58194"	655.2	N37°49'20.23011"	W80°25'18.58183"	655.2
WVAT	N37°25'42.67838"	W81°04'04.40388"	704.674			
NCSR	N36°29'51.93288"	W81°06'52.95773"	838.659	N36°29'51.93281"	W81°06'52.95772"	838.64
KYTL	N37°29'00.20362"	W82°32'07.72261"	185.687	N37°29'00.20354"	W82°32'07.72259"	185.698

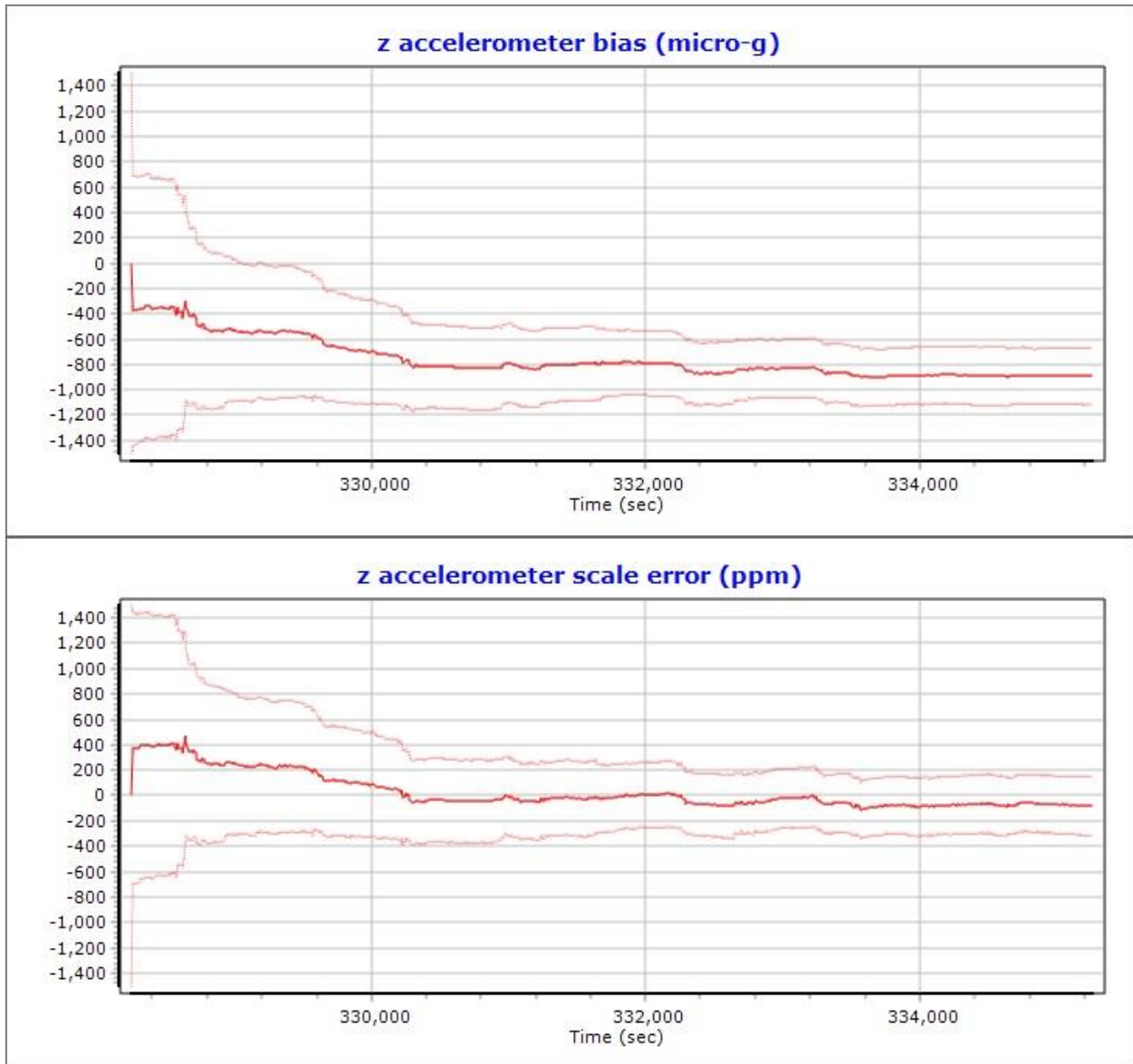


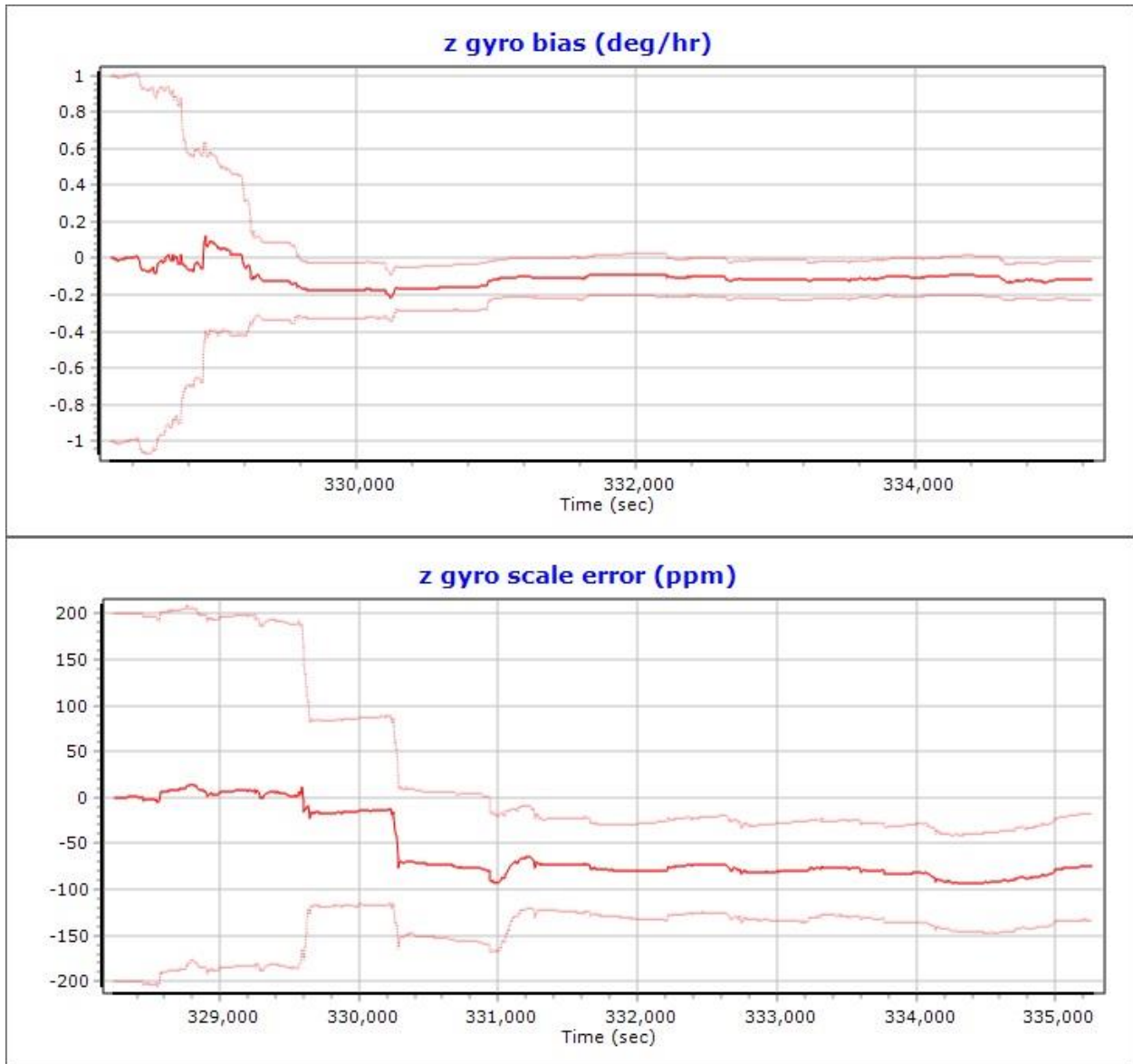






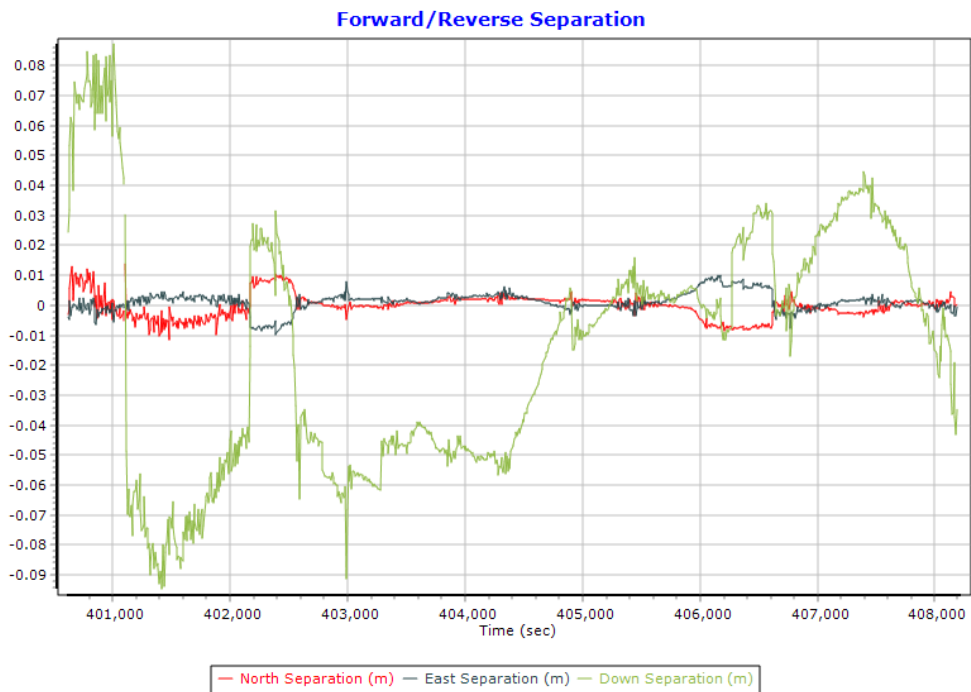
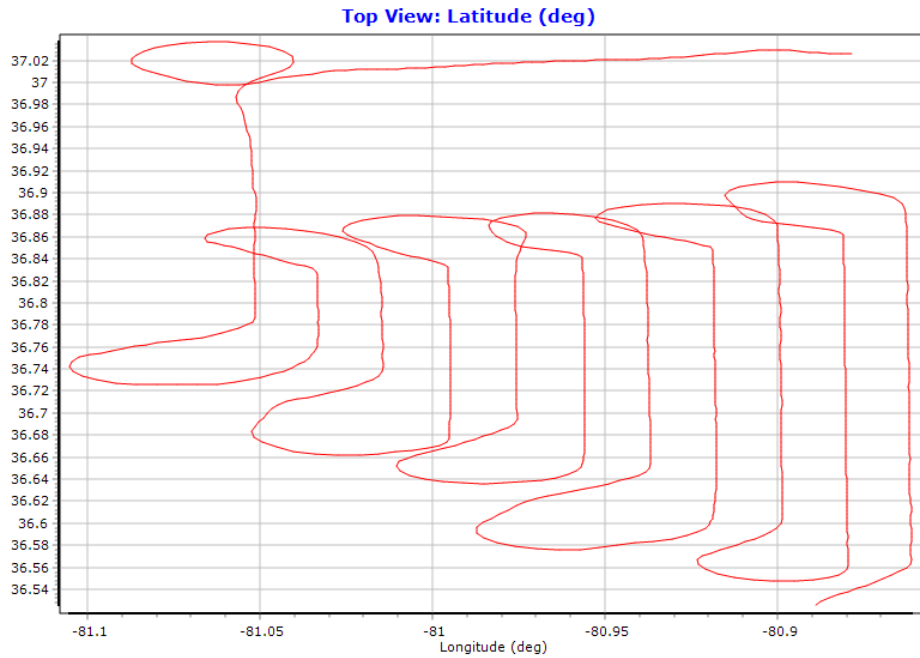




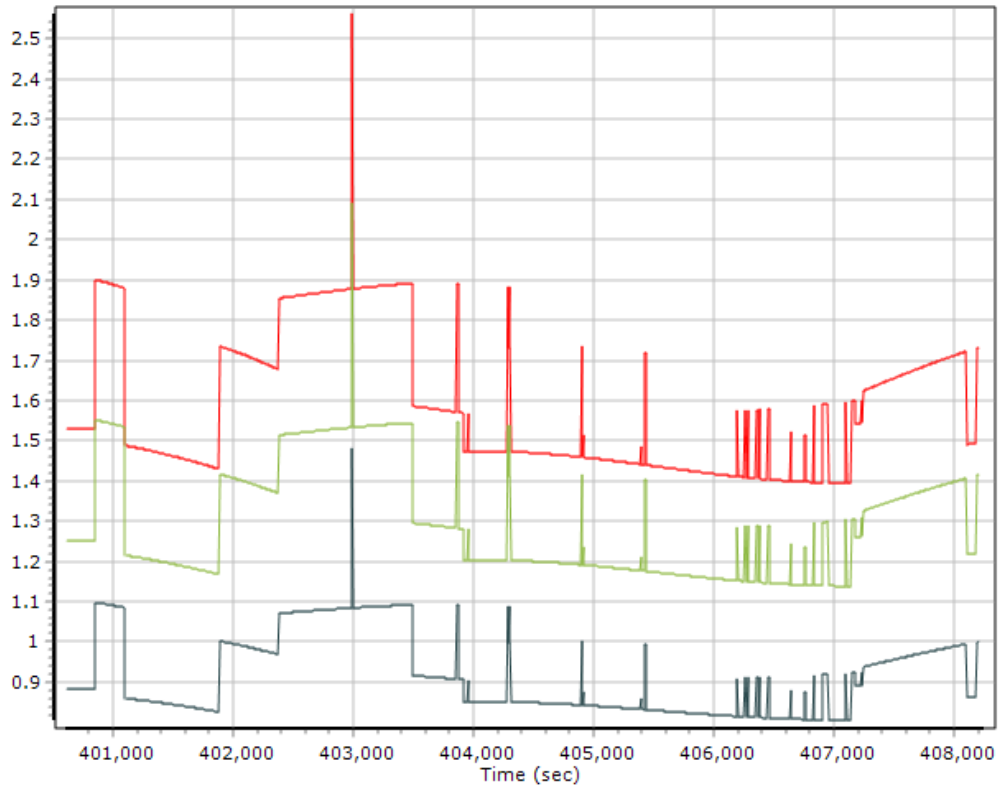


# South Central: GPS and IMU Processing Reports for Each Mission

**NOVEMBER 16, 2017**

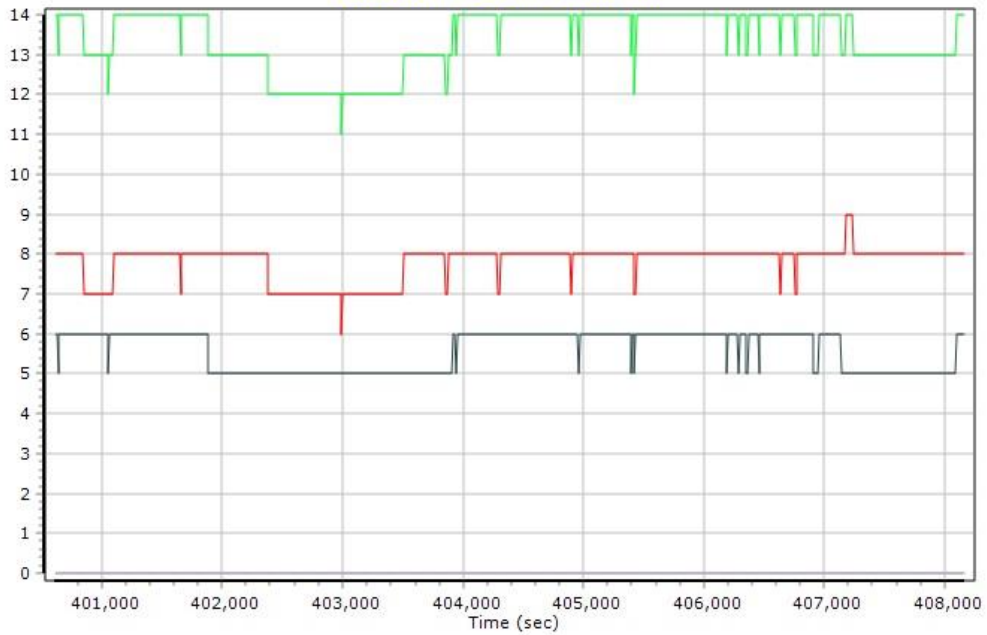


### DOP



— PDOP — HDOP — VDOP

### Number of SVs in solution



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

## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20171116\_VA

Solution Type: IN-Fusion SmartBase

Fixed: 7564	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 7637  
No processed position: 73

Fwd/Rev Separation RMS Values (m):

North: 0.004  
East: 0.003  
Height: 0.043

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 3824 occurrences

North: 0.003  
East: 0.003  
Height: 0.037

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 99.996



0.10 - 0.30 m: 0.004  
0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

DOP over Tol: 1.58%

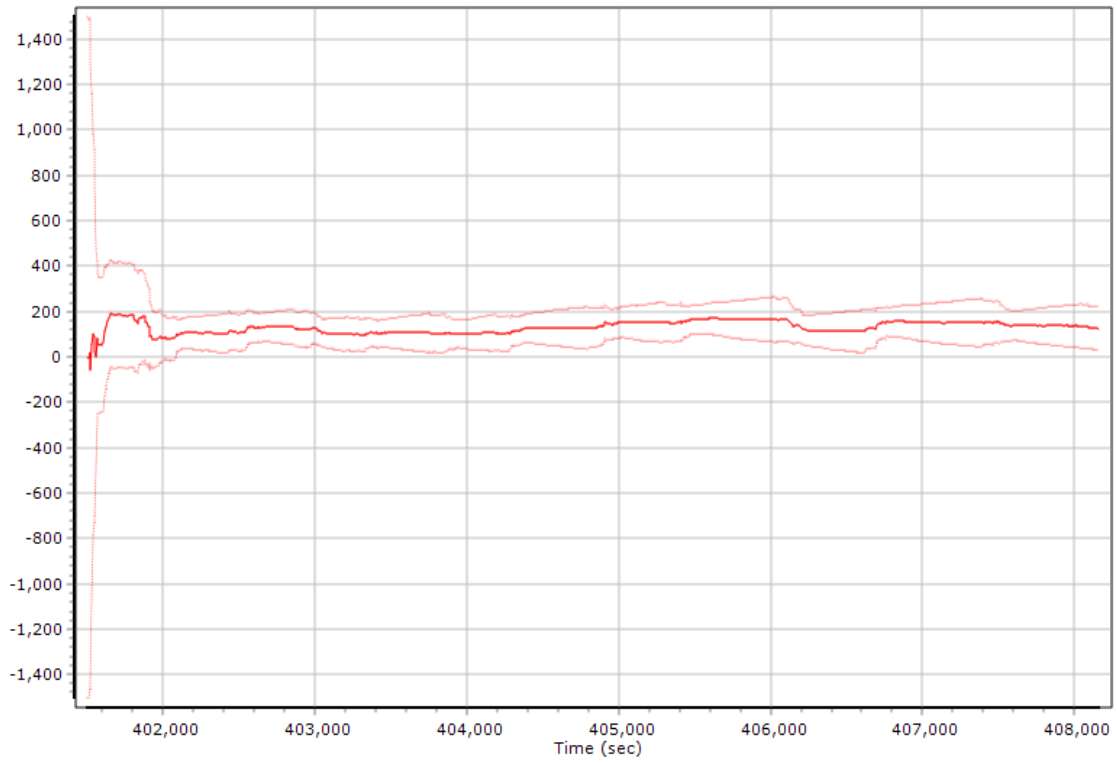
Baseline Distances (km):

Maximum: 48.01  
Minimum: 0.06  
Average: 16.15  
First Epoch: 48.01  
Last Epoch: 28.49

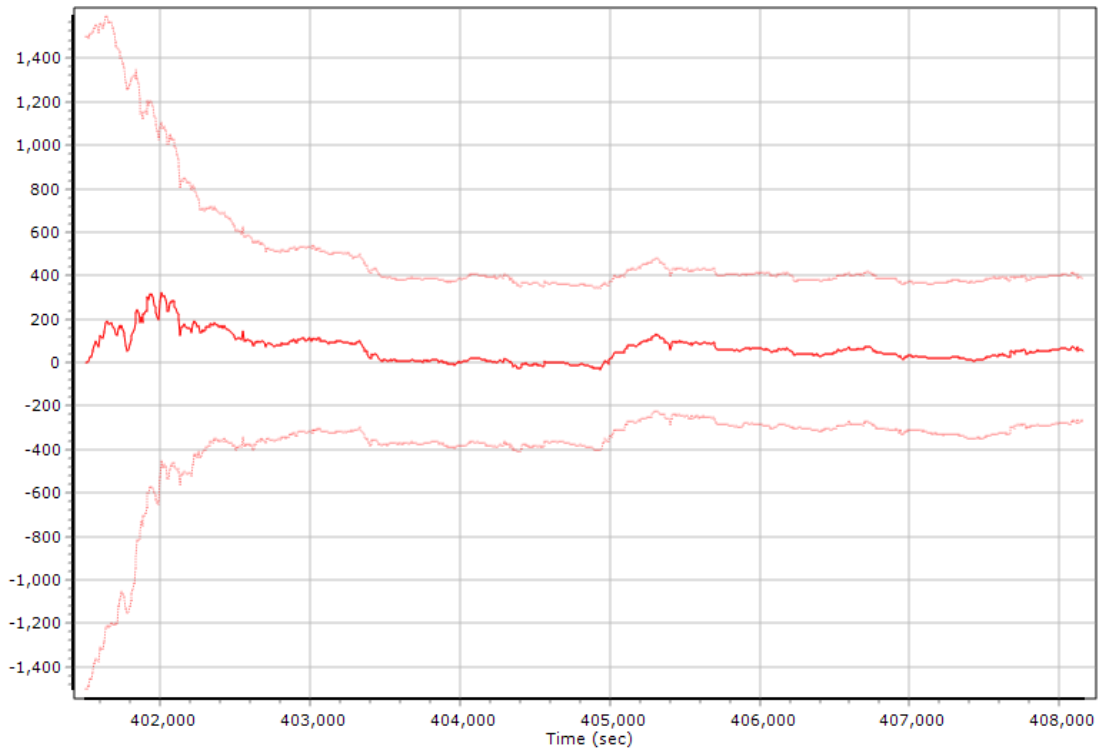
CORS Base Stations

Station	Original			Adjusted		
WVAT	N37°25'42.67838"	W81°04'04.40385"	704.674	N37°25'42.67840"	W81°04'04.40403"	704.687
NCWJ	N36°23'34.97454"	W81°28'42.29376"	933.47	N36°23'34.97460"	W81°28'42.29370"	933.504
NCWC	N36°22'19.71490"	W80°11'05.64904"	274.974	N36°22'19.71501"	W80°11'05.64923"	275.098
NCSR	N36°29'51.93288"	W81°06'52.95770"	838.659			
NCNW	N36°09'59.30172"	W81°07'57.24905"	269.085	N36°09'59.30166"	W81°07'57.24906"	269.111
LS04	N37°21'47.16695"	W79°57'26.99407"	324.139	N37°21'47.16710"	W79°57'26.99408"	324.154

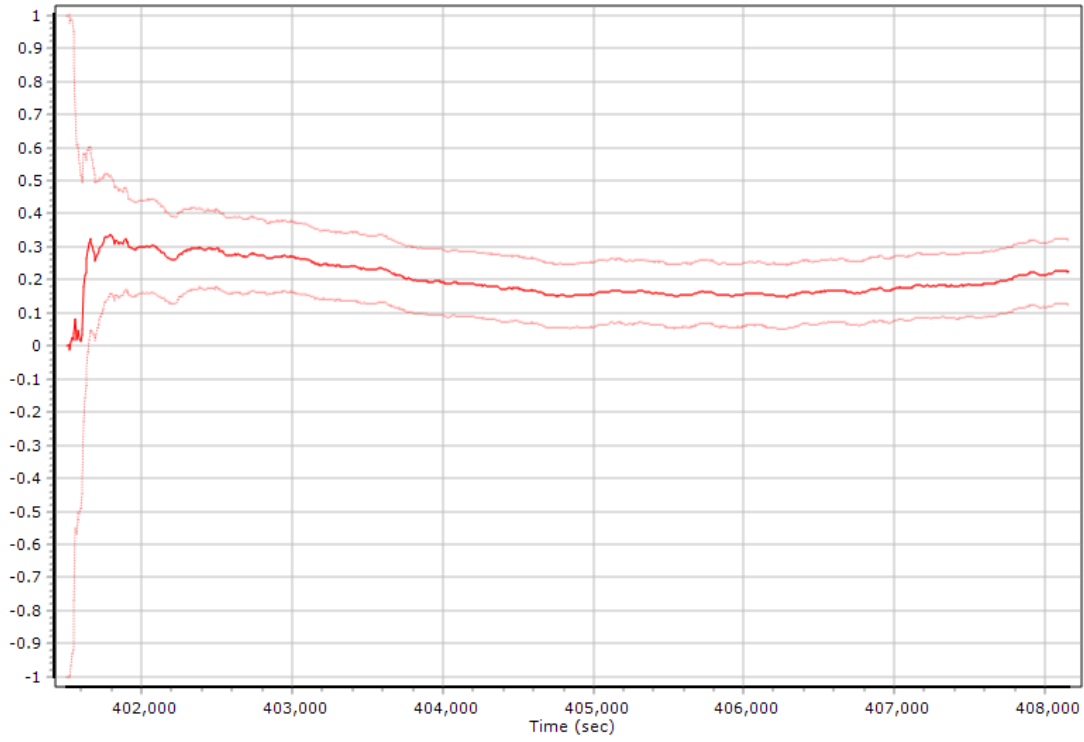
**x accelerometer bias (micro-g)**



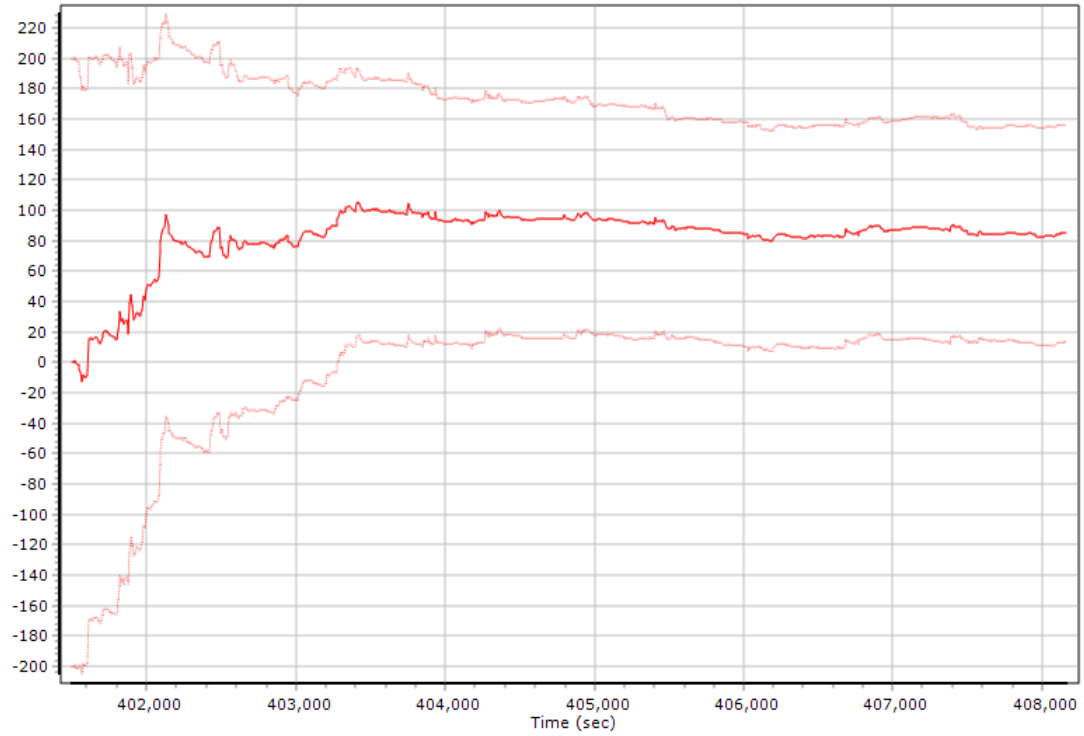
**x accelerometer scale error (ppm)**



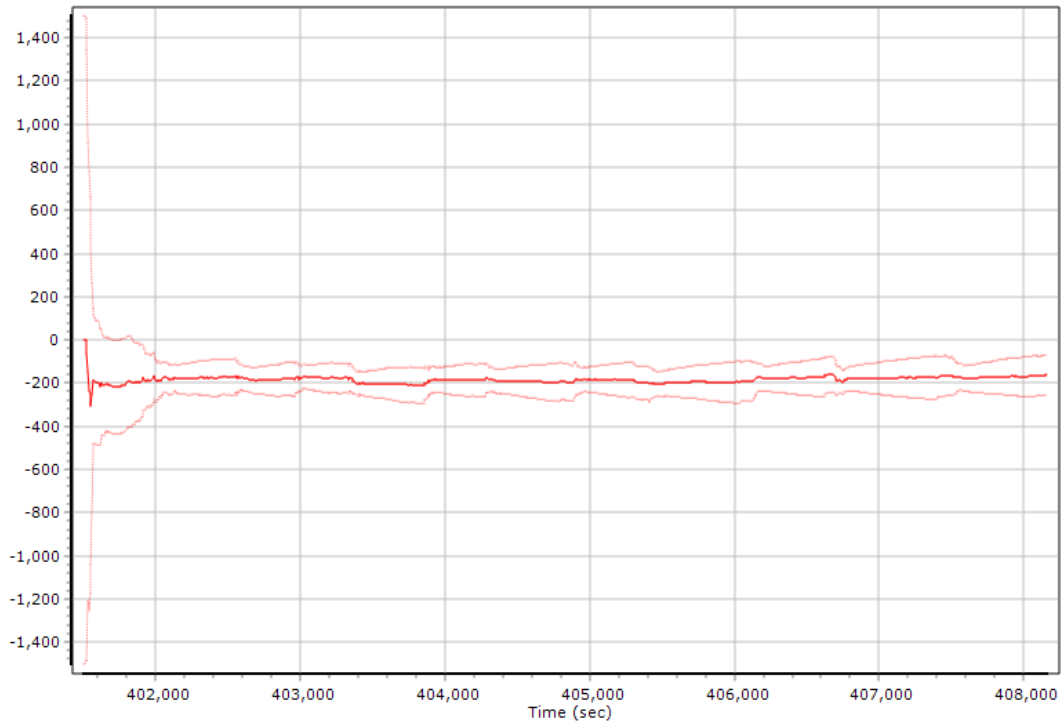
**x gyro bias (deg/hr)**



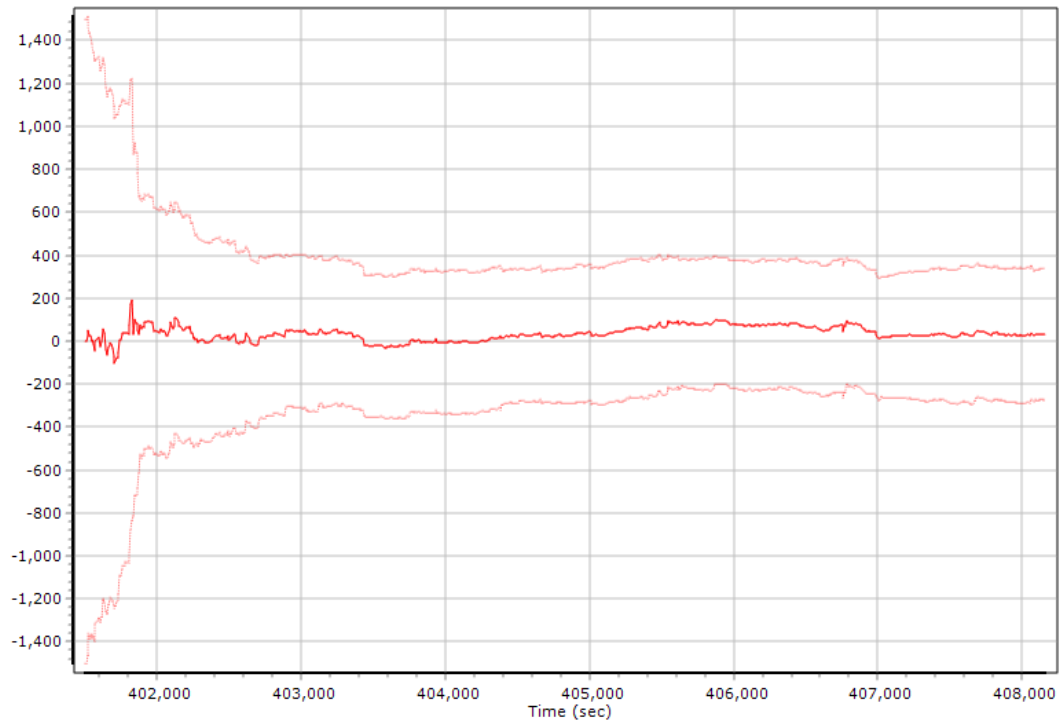
**x gyro scale error (ppm)**

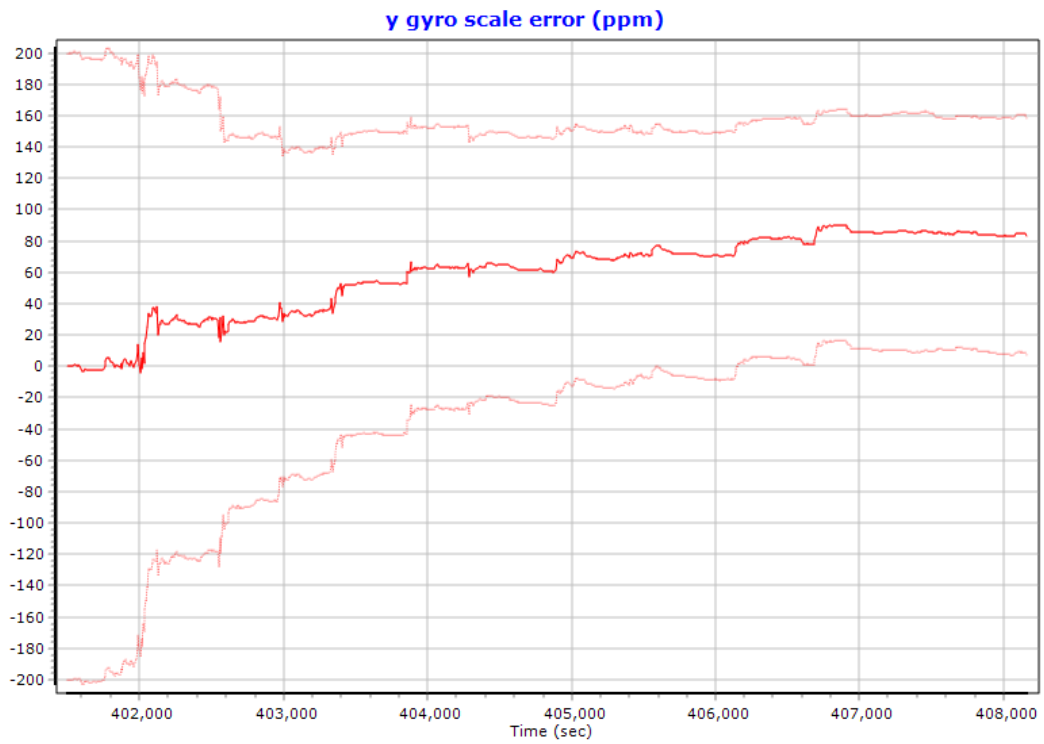
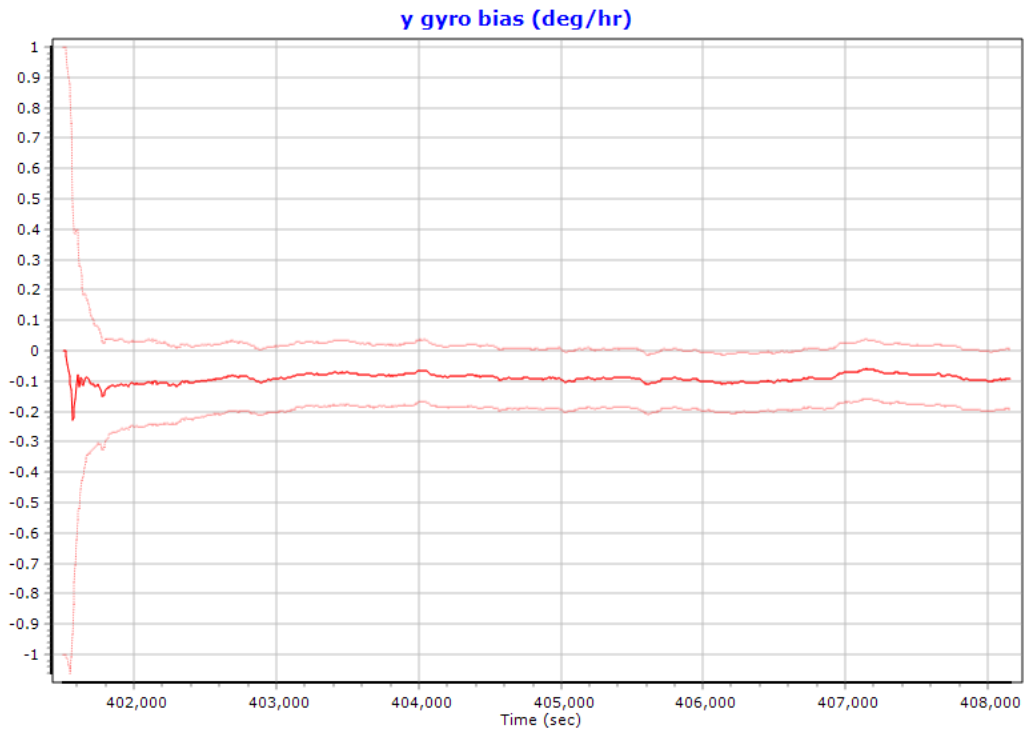


**y accelerometer bias (micro-g)**

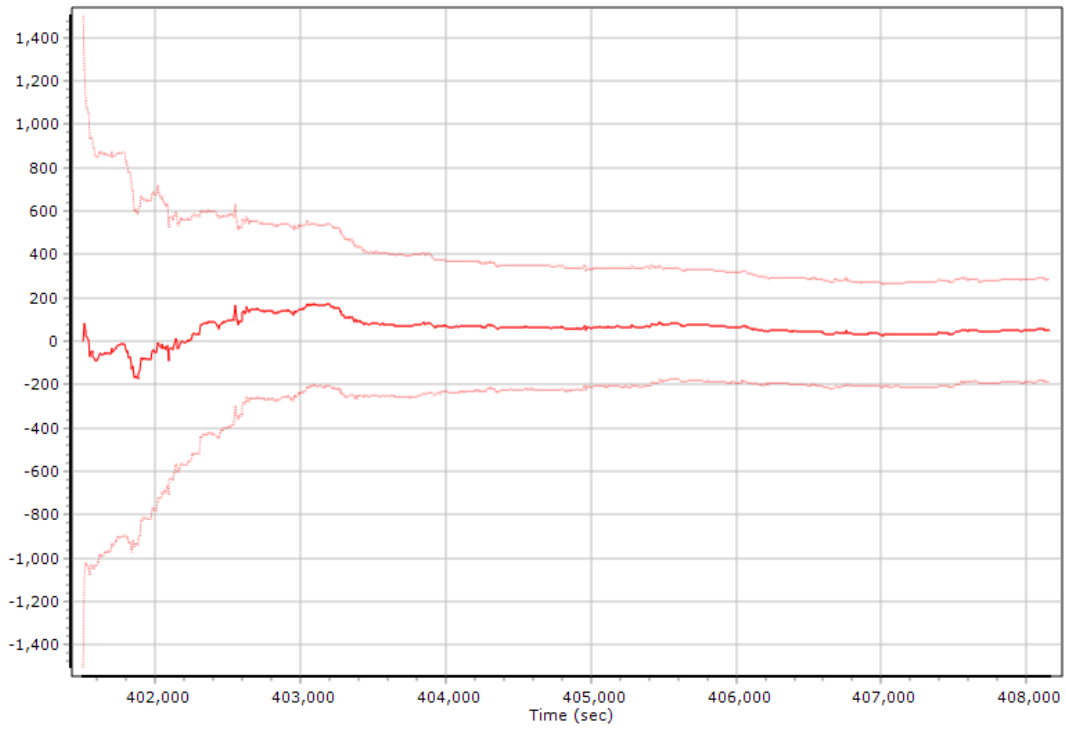


**y accelerometer scale error (ppm)**

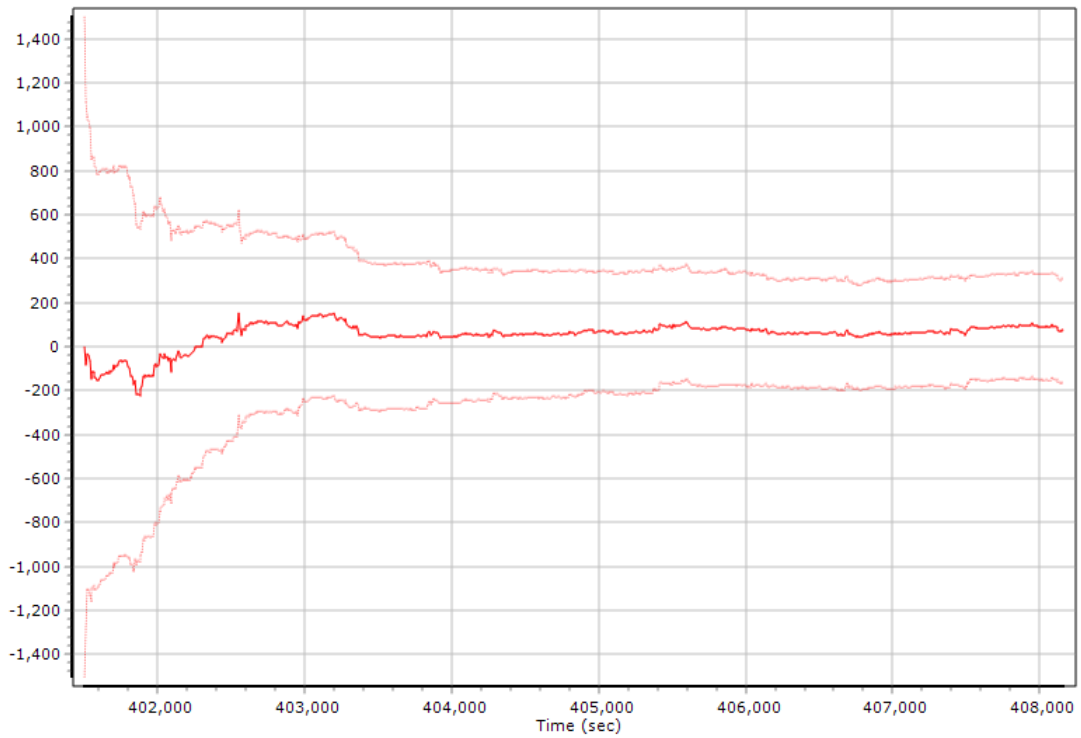


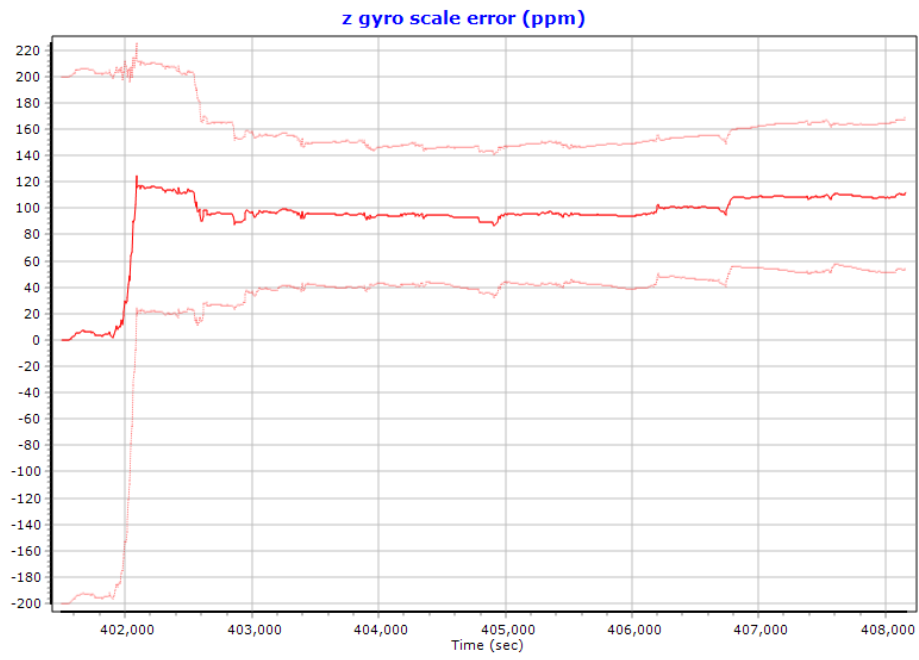
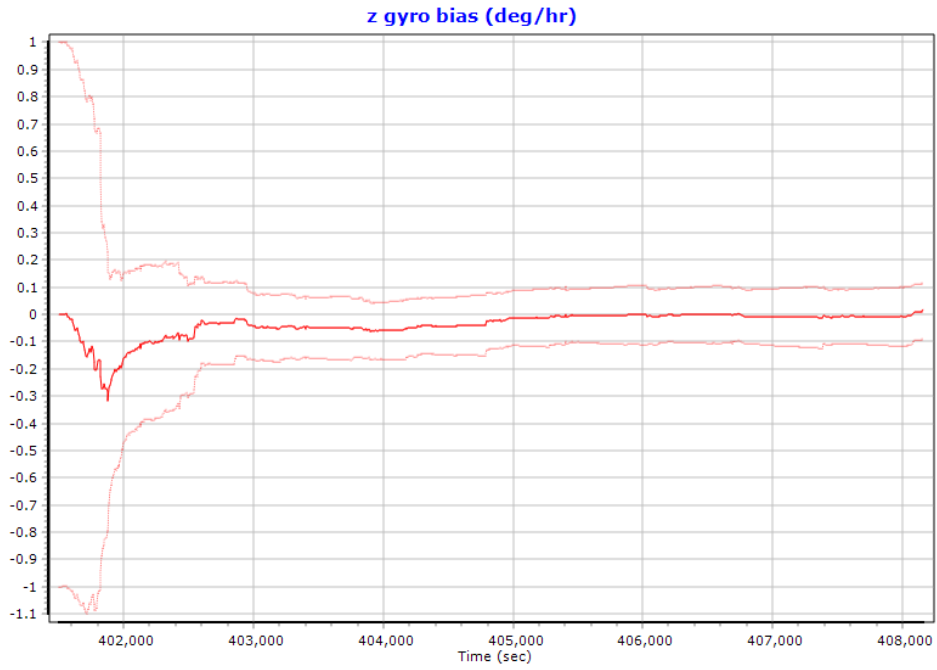


**z accelerometer bias (micro-g)**

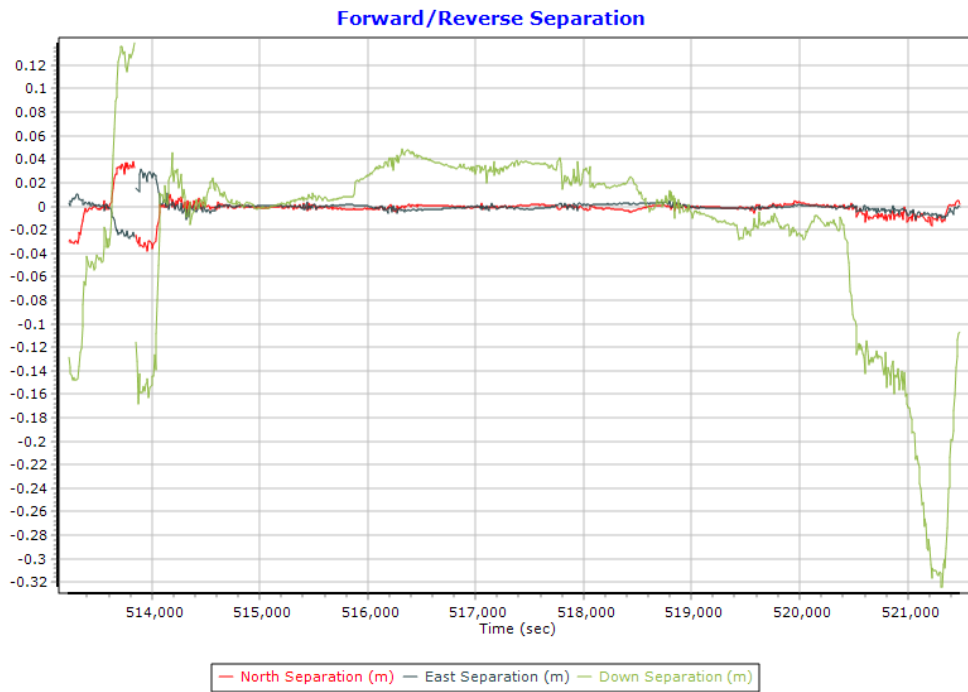
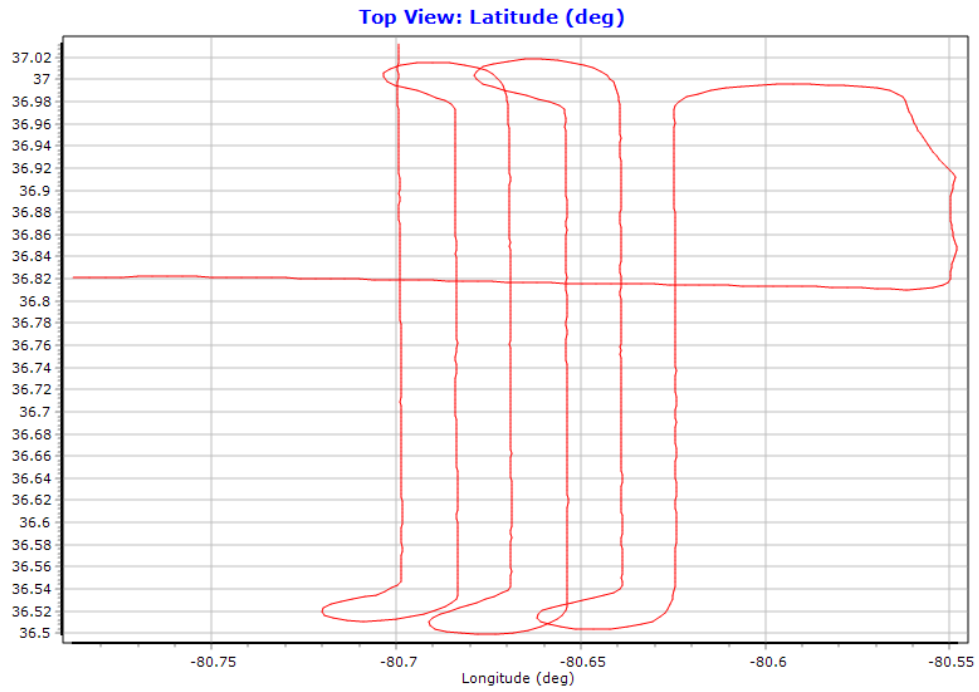


**z accelerometer scale error (ppm)**

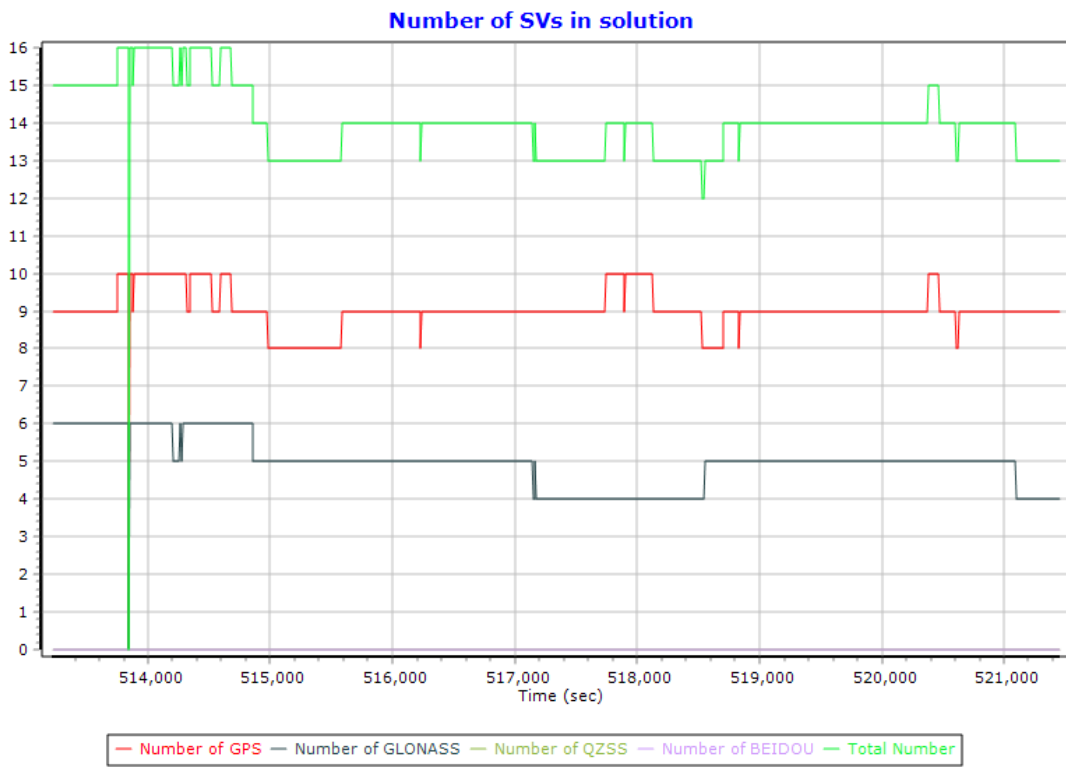
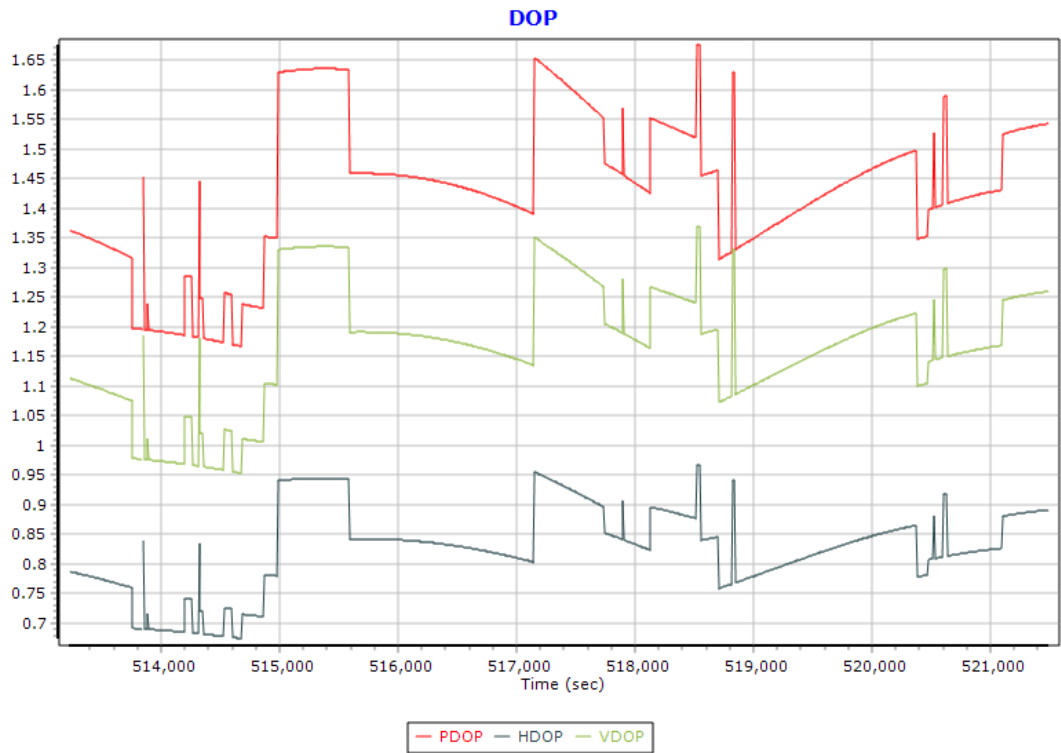




**NOVEMBER 17, 2017**







## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20171117\_VA\_B

Solution Type: IN-Fusion SmartBase

Fixed: 8246	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 8281  
No processed position: 35

Fwd/Rev Separation RMS Values (m):

North: 0.009  
East: 0.006  
Height: 0.081

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 1447 occurrences

North: 0.002  
East: 0.002  
Height: 0.026

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 99.307  
 0.10 - 0.30 m: 0.693  
 0.30 - 1.00 m: 0  
 1.00 - 5.00 m: 0  
 5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

DOP over Tol: 1.43%

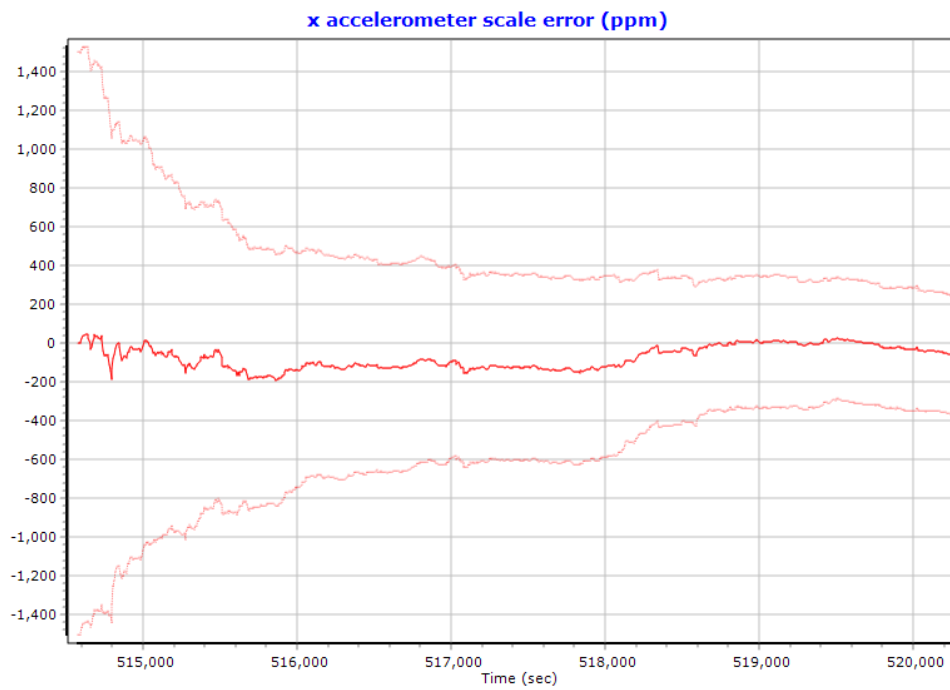
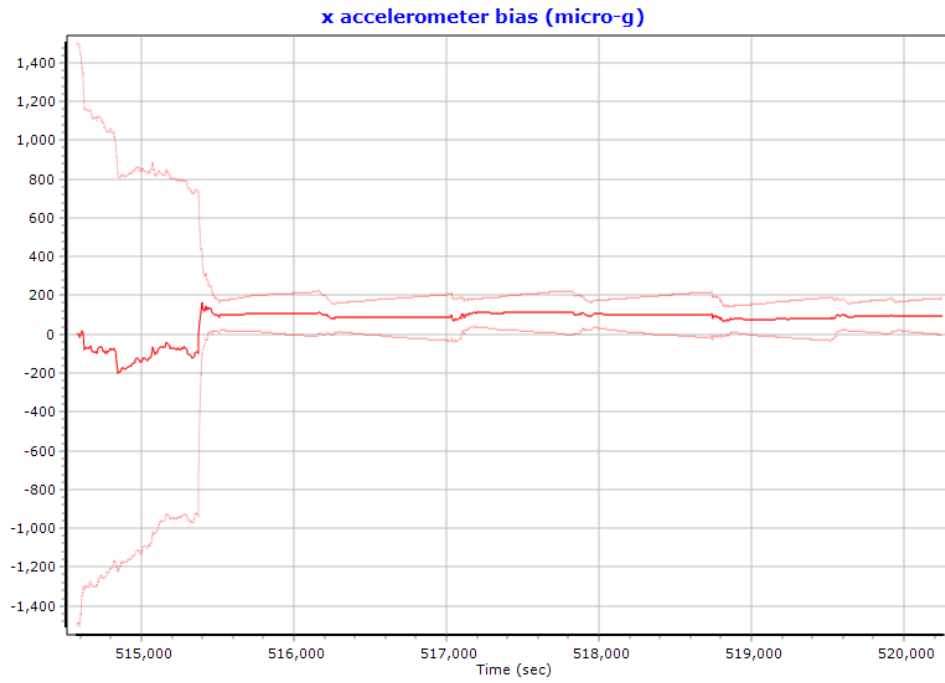
Baseline Distances (km):

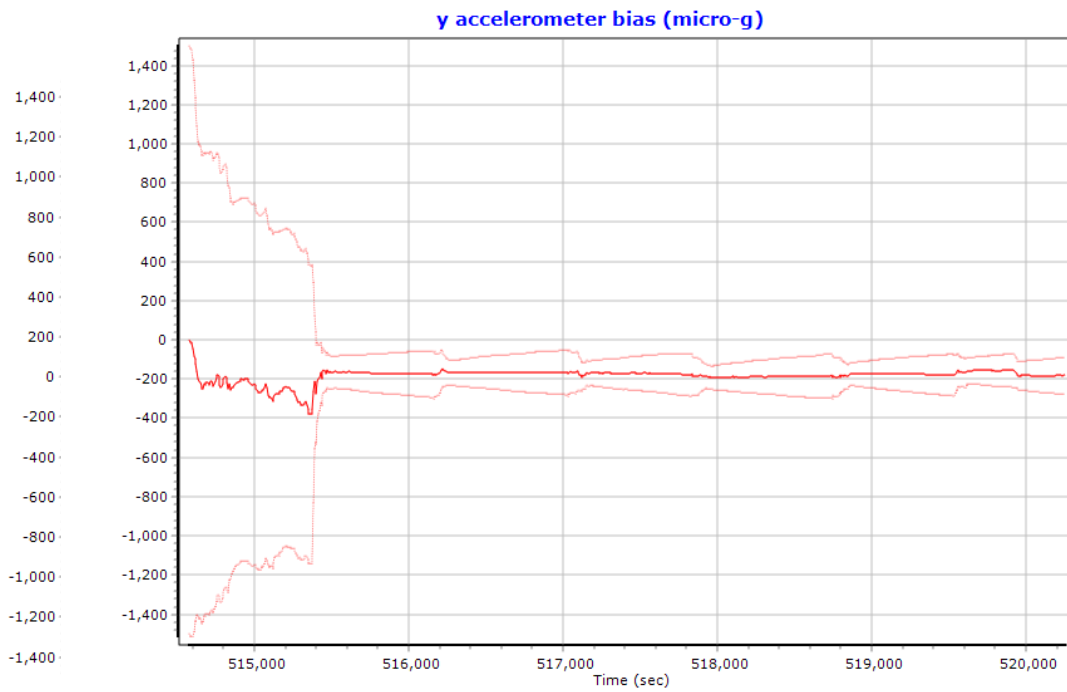
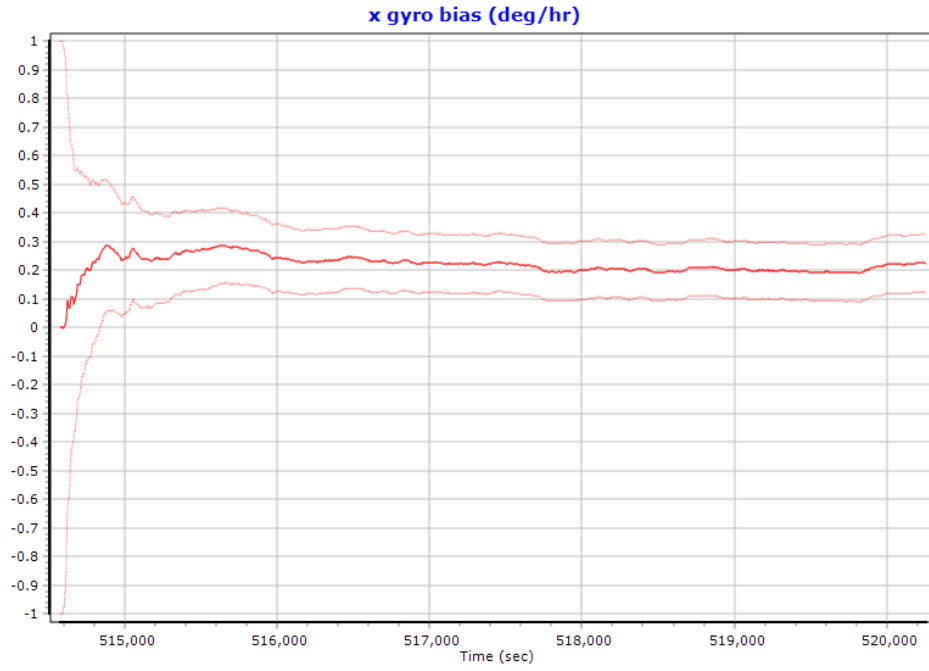
Maximum: 43.01  
 Minimum: 0.3  
 Average: 21.75  
 First Epoch: 40.62  
 Last Epoch: 40.62

CORS Base Stations

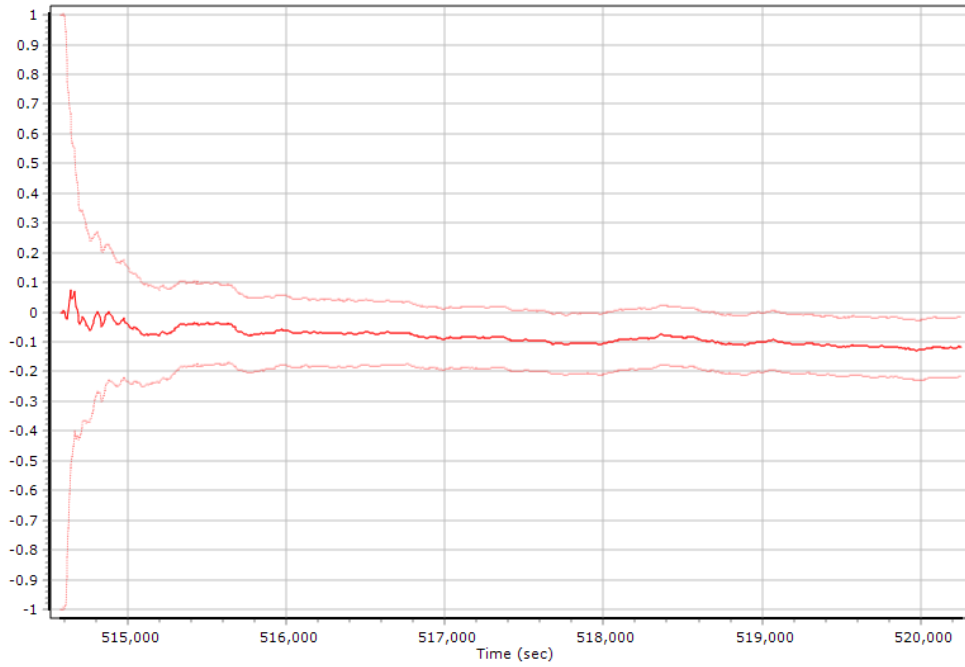
Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
WVAT	N37°25'42.67838"	W81°04'04.40385"	704.674	N37°25'42.67853"	W81°04'04.40388"	704.687
NCWC	N36°22'19.71490"	W80°11'05.64904"	274.974	N36°22'19.71491"	W80°11'05.64888"	275.085
NCSR	N36°29'51.93288"	W81°06'52.95770"	838.659			
LS04	N37°21'47.16695"	W79°57'26.99407"	324.139	N37°21'47.16720"	W79°57'26.99384"	324.148
DOBS	N36°25'31.54122"	W80°43'11.73521"	339.304	N36°25'31.54132"	W80°43'11.73506"	339.308
WVAT	N37°25'42.67838"	W81°04'04.40385"	704.674	N37°25'42.67853"	W81°04'04.40388"	704.687



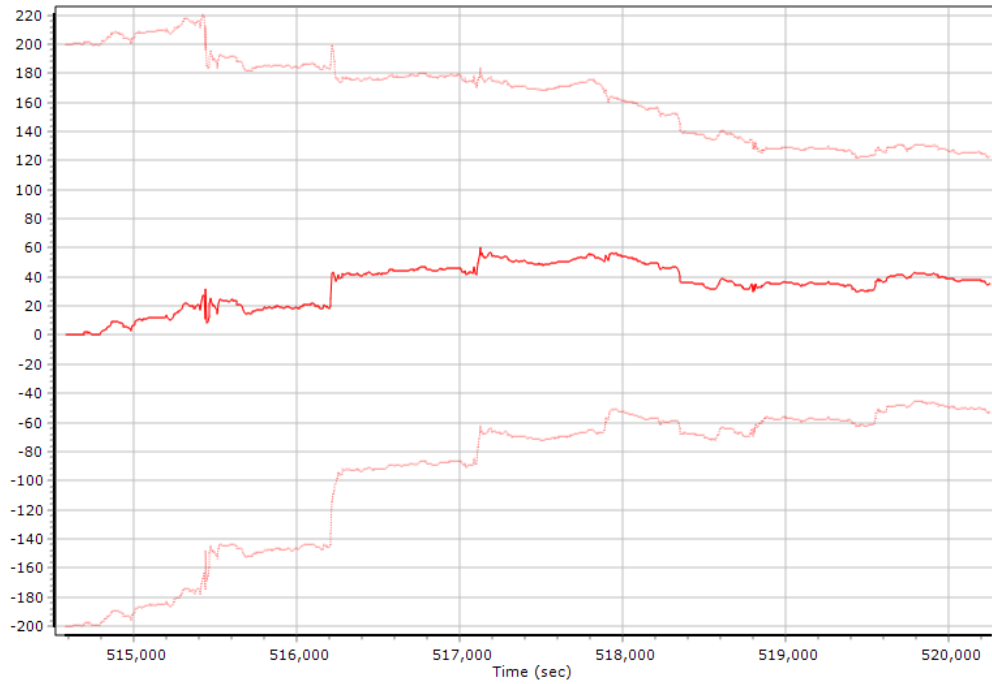




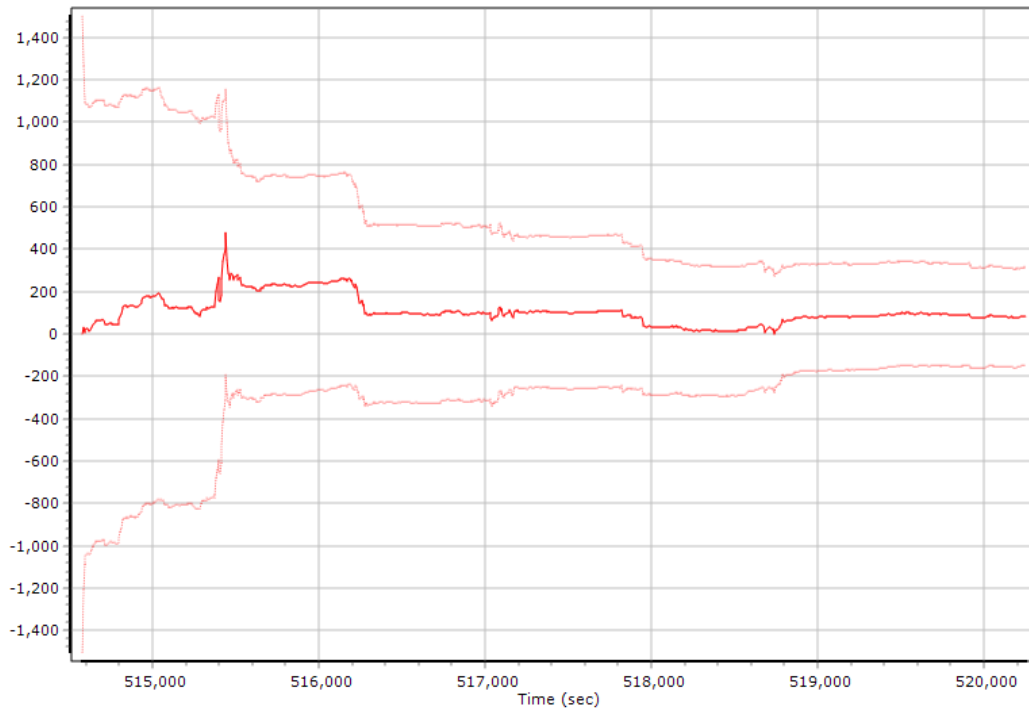
y gyro bias (deg/hr)



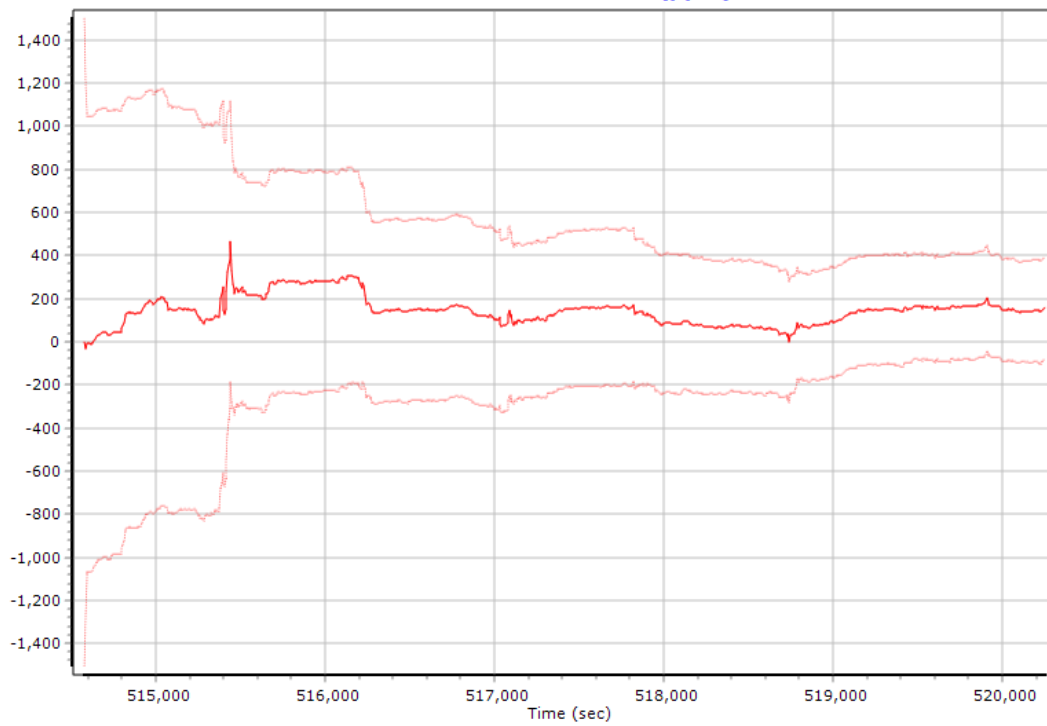
y gyro scale error (ppm)



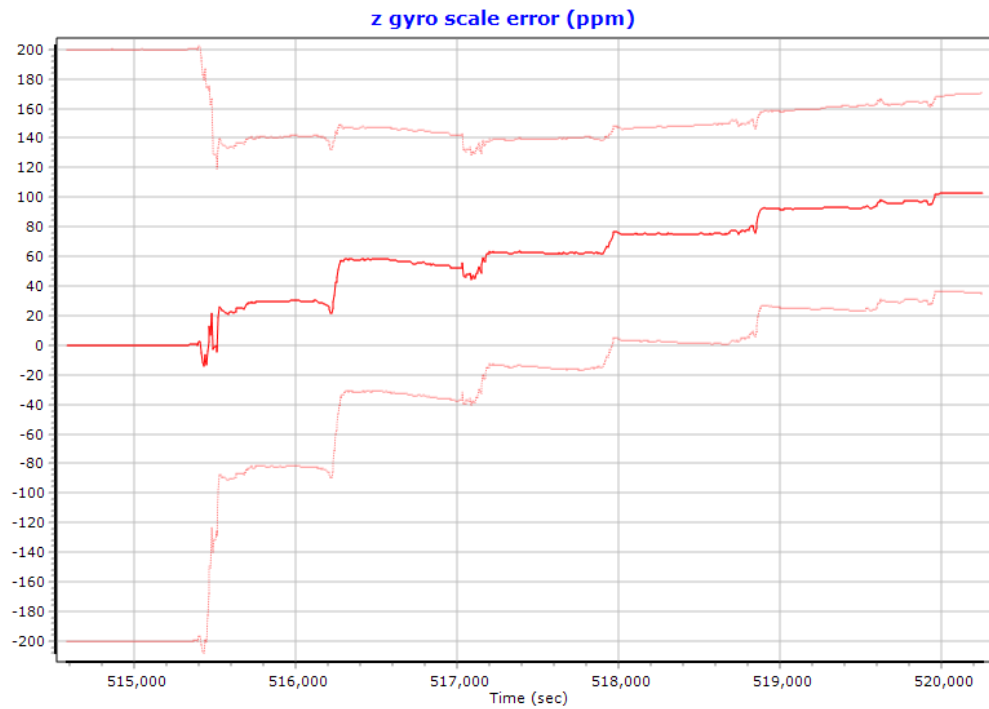
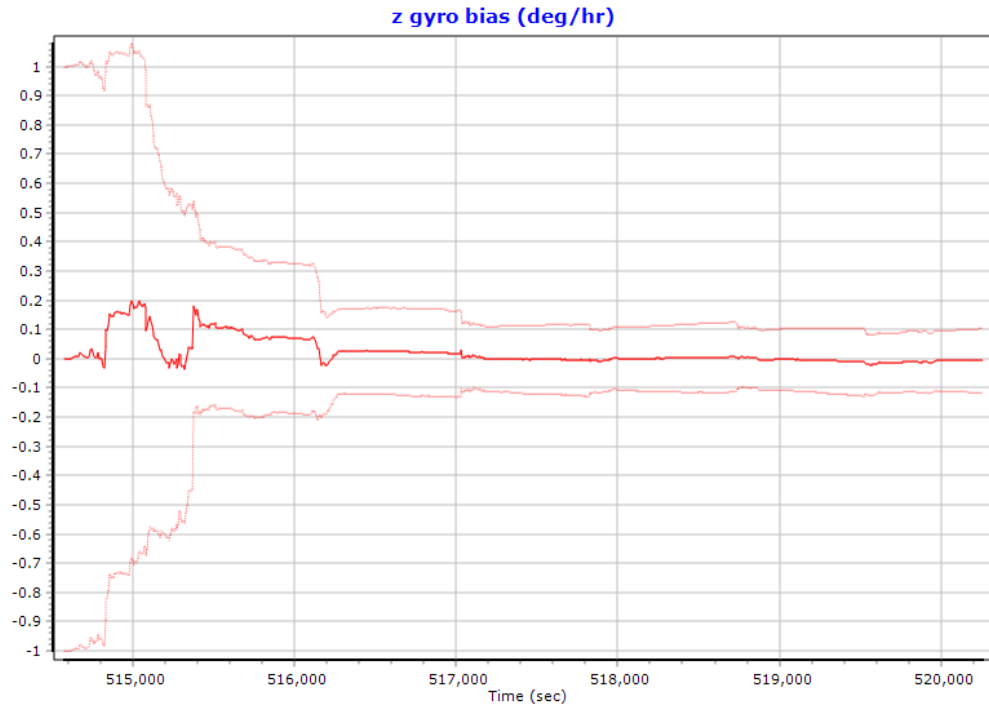
**z accelerometer bias (micro-g)**



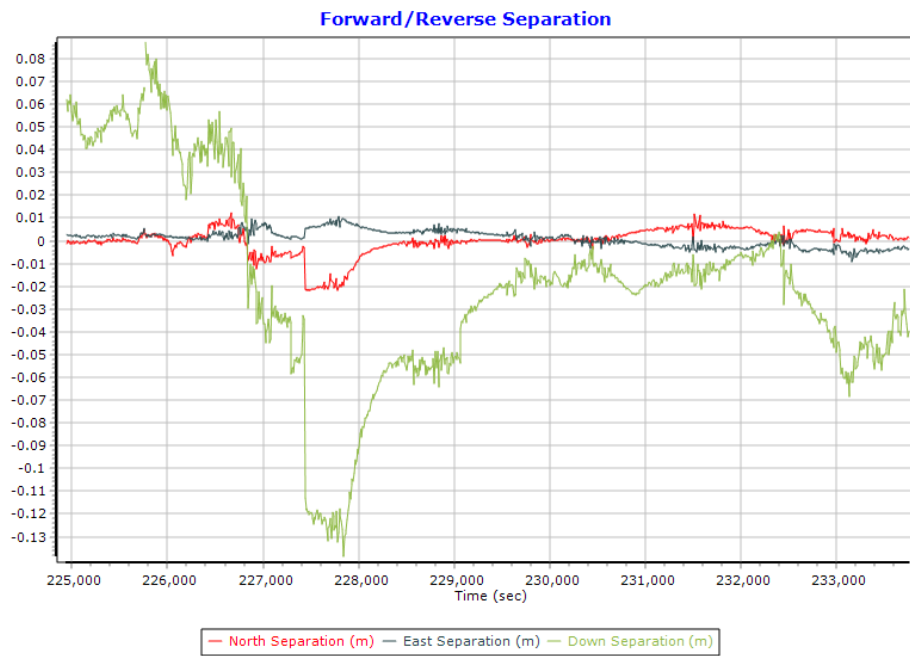
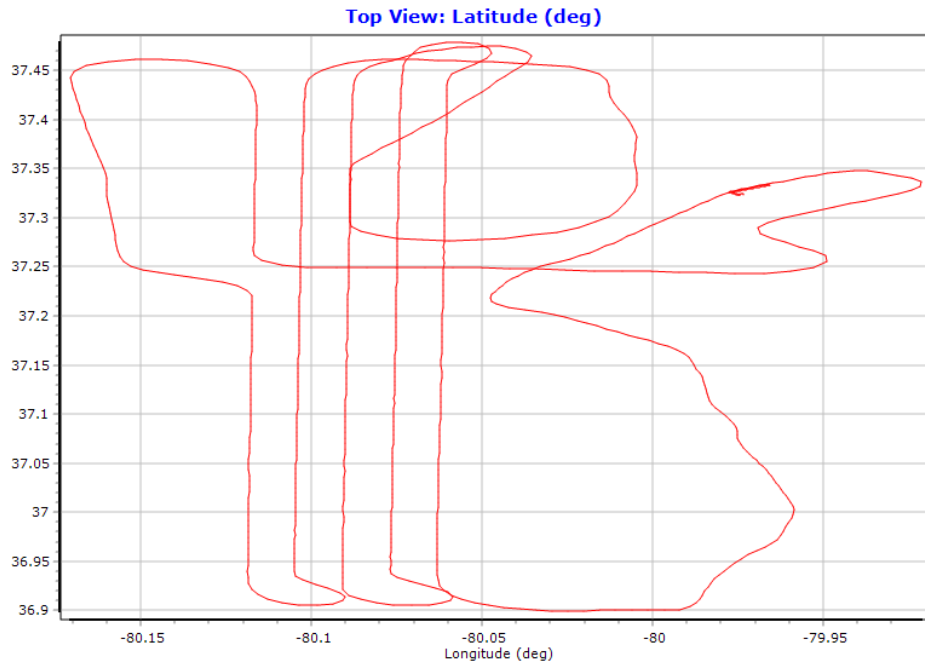
**z accelerometer scale error (ppm)**



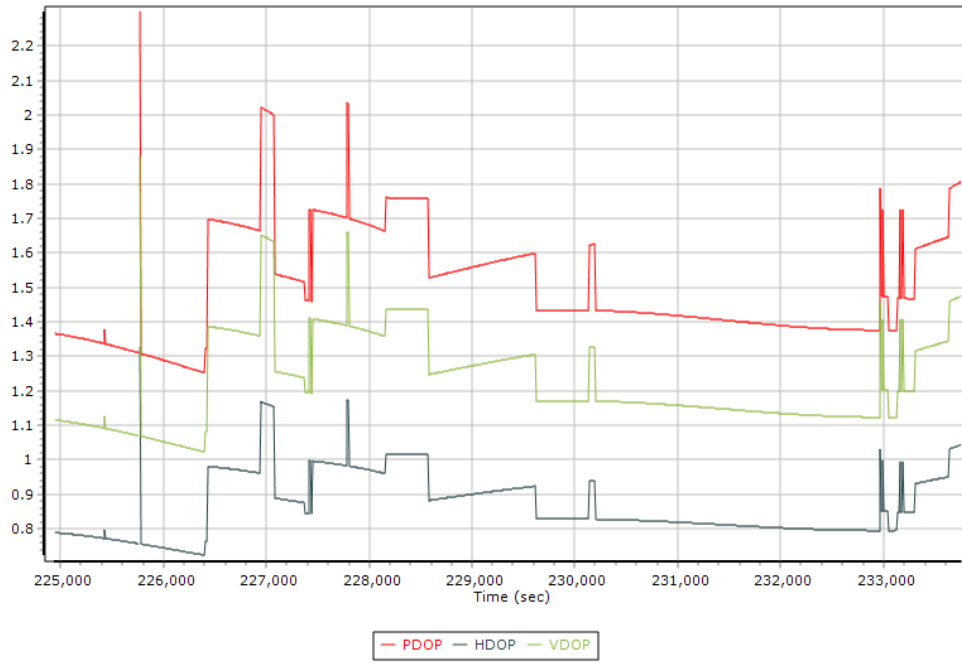




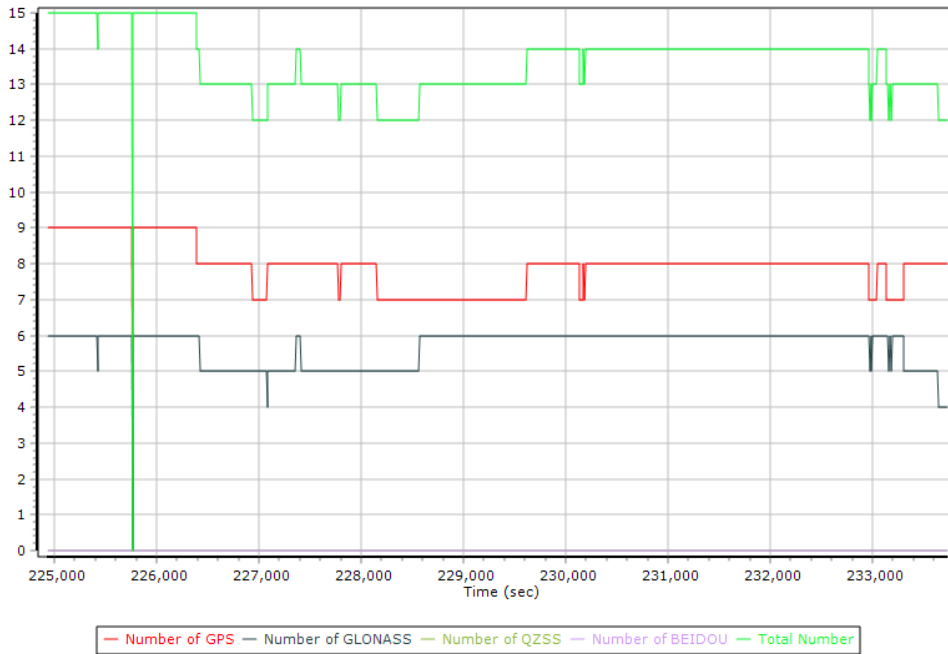
## NOVEMBER 21, 2017



### DOP



### Number of SVs in solution



## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20171121\_VA\_A

Solution Type: IN-Fusion SmartBase

Fixed: 8815 (99.99%)  
Float: 0 (0.00%)  
No Solution: 1 (0.01%)

Number of Epochs:

Total in RAW file: 8834  
No processed position: 18

Fwd/Rev Separation RMS Values (m):

North: 0.009  
East: 0.006  
Height: 0.081

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 4420 occurrences

North: 0.007  
East: 0.004  
Height: 0.055

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 99.992

0.10 - 0.30 m: 0.008  
0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

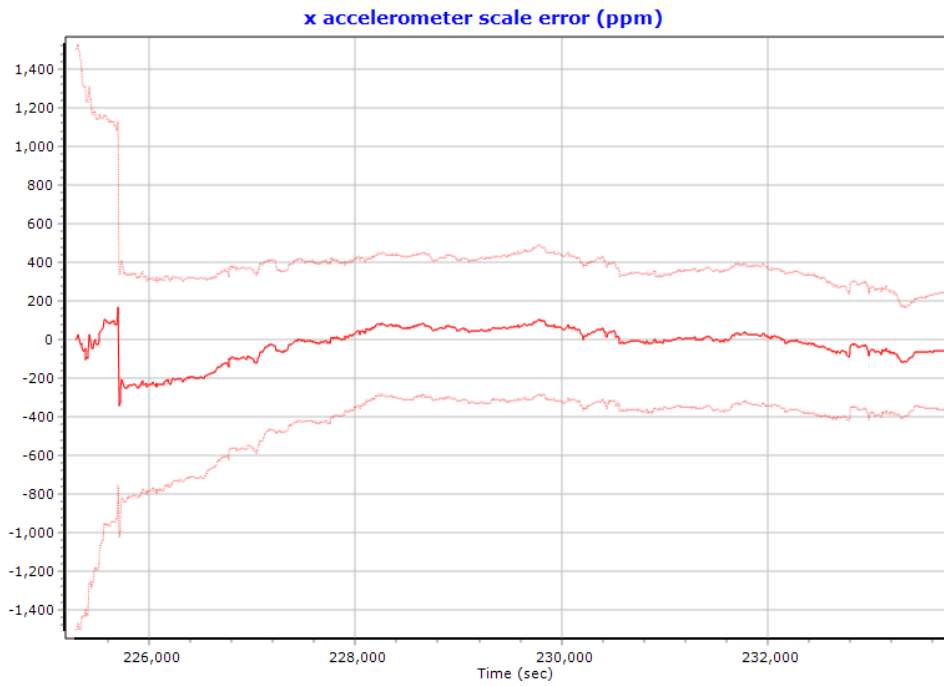
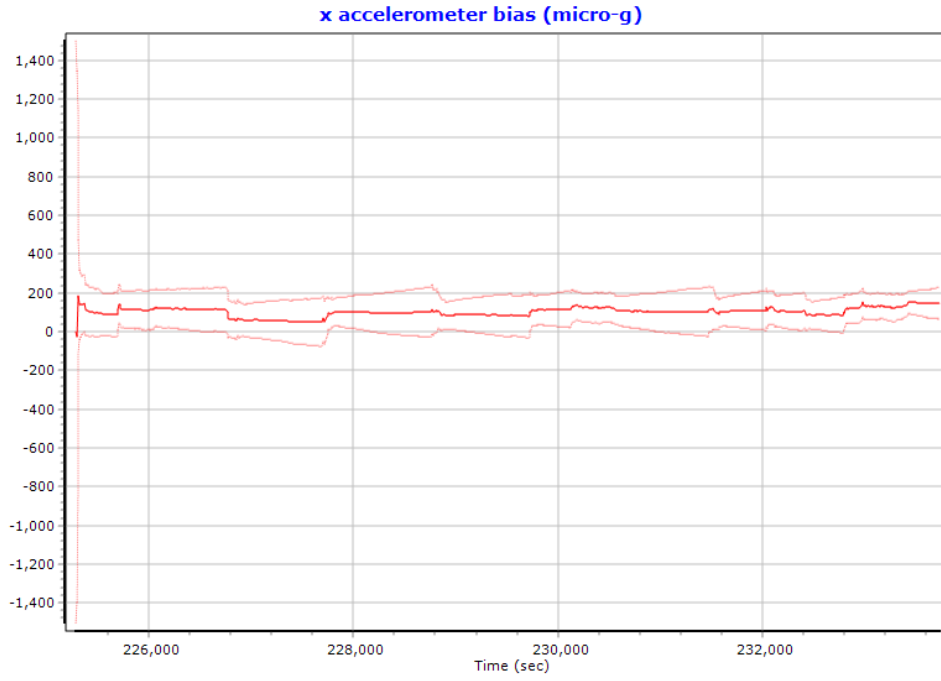
DOP over Tol: 1.50%

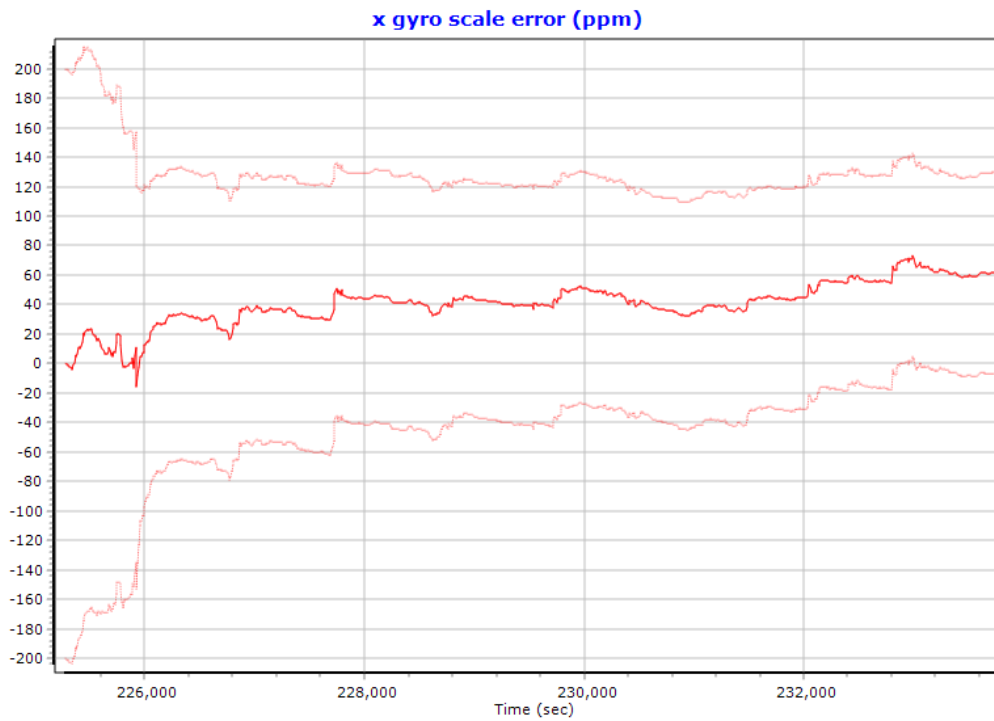
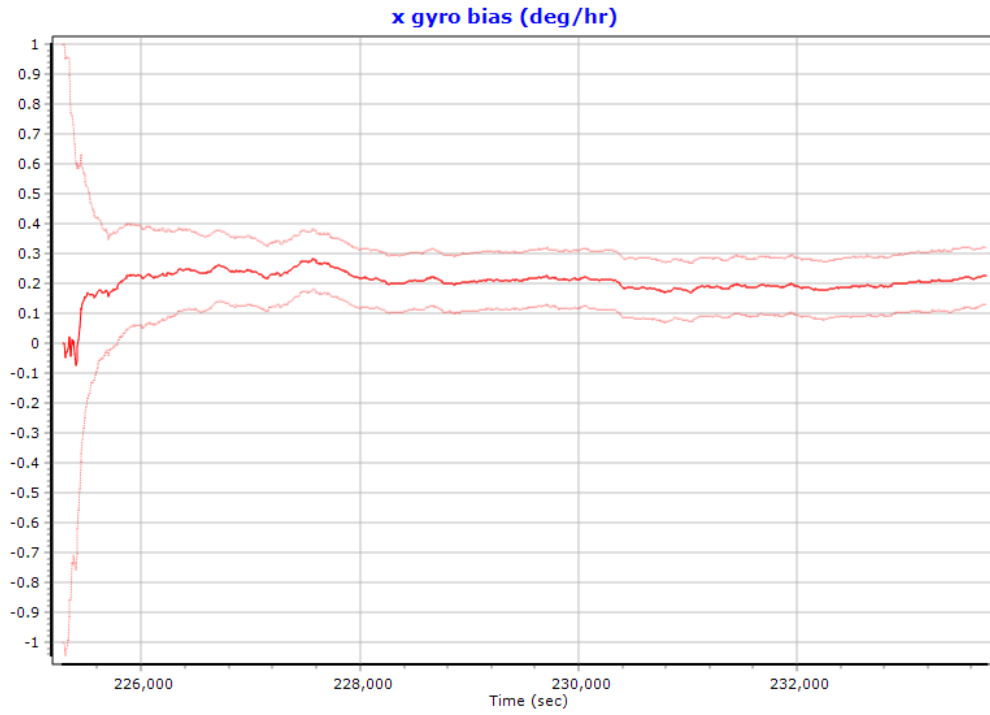
Baseline Distances (km):

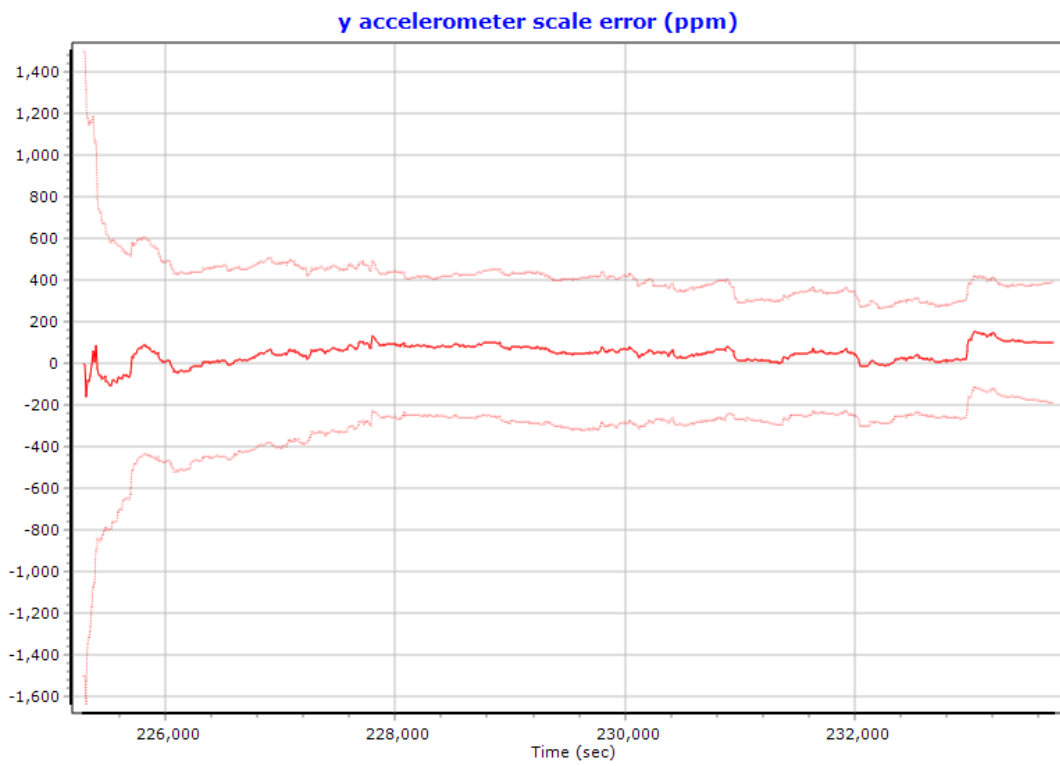
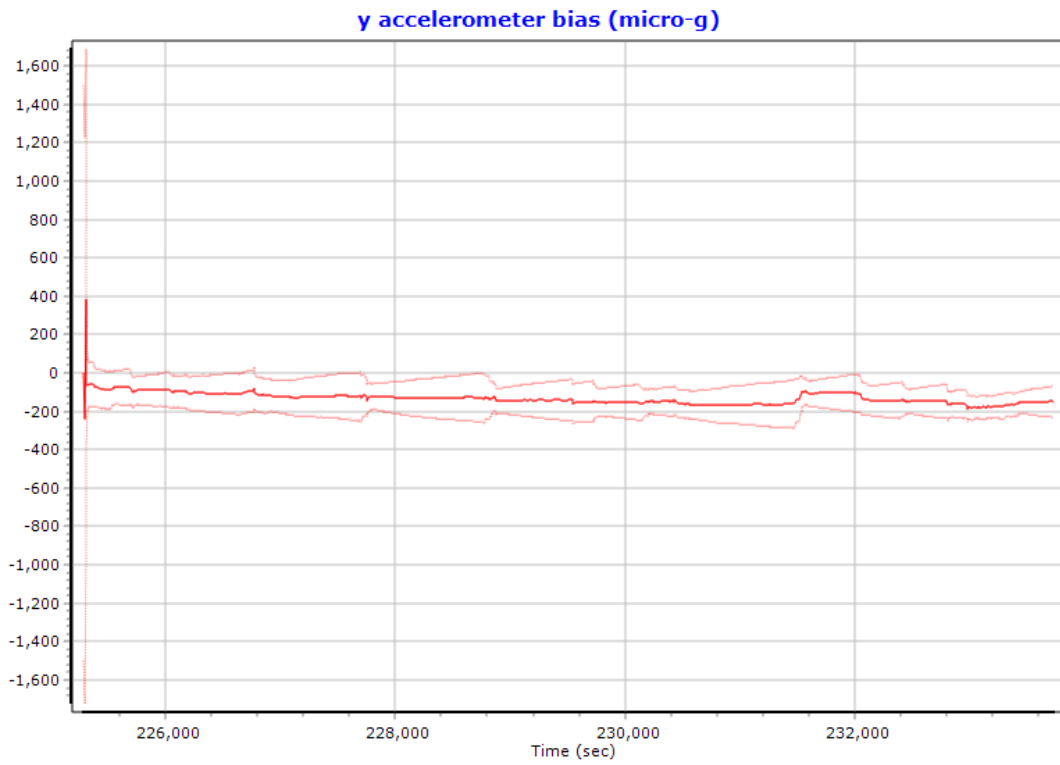
Maximum: 36.69  
Minimum: 0.84  
Average: 16.34  
First Epoch: 13.08  
Last Epoch: 12.95

#### CORS Base Stations

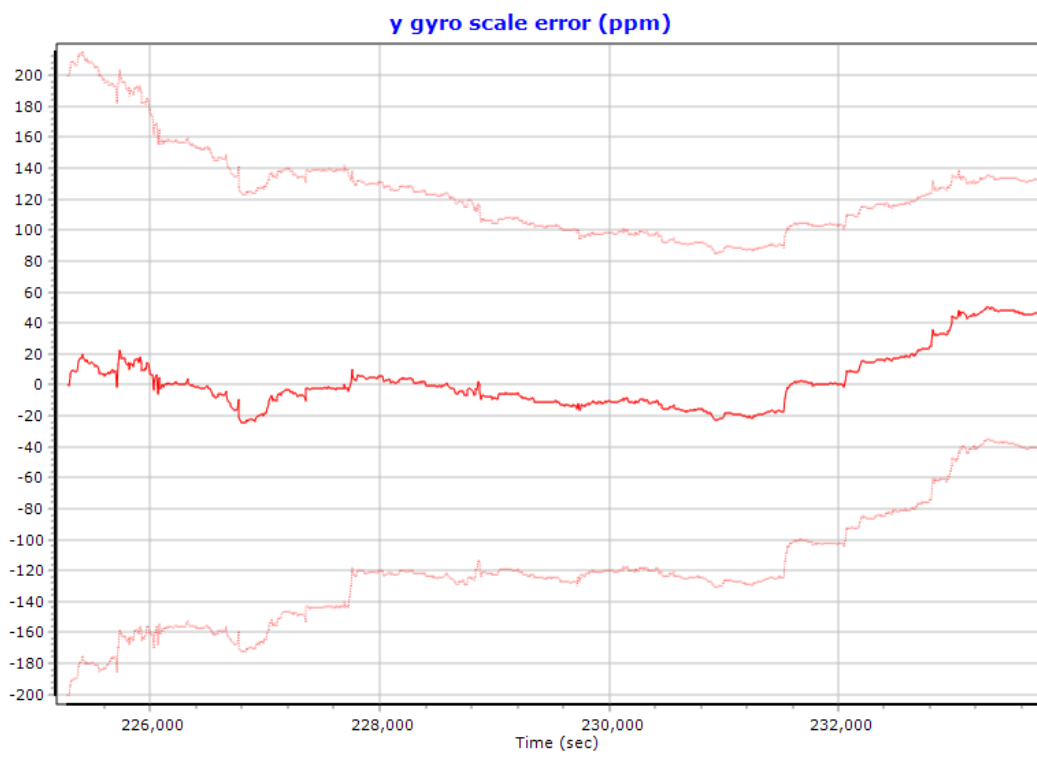
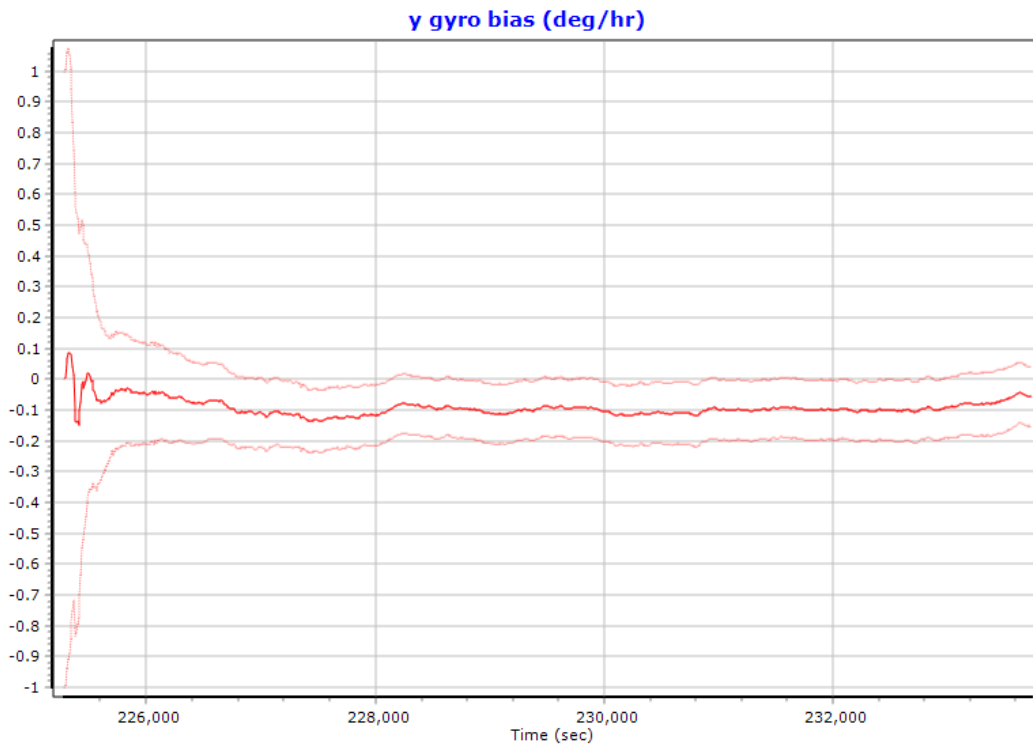
Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
WVLE	N37°49'20.23017"	W80°25'18.58191"	655.2	N37°49'20.23011"	W80°25'18.58194"	655.202
WVAT	N37°25'42.67838"	W81°04'04.40385"	704.674	N37°25'42.67827"	W81°04'04.40403"	704.677
NCWC	N36°22'19.71490"	W80°11'05.64904"	274.974	N36°22'19.71460"	W80°11'05.64899"	275.083
LS04	N37°21'47.16695"	W79°57'26.99408"	324.139			
LOYH	N37°18'09.77783"	W79°19'28.19950"	204.445	N37°18'09.77790"	W79°19'28.19933"	204.434

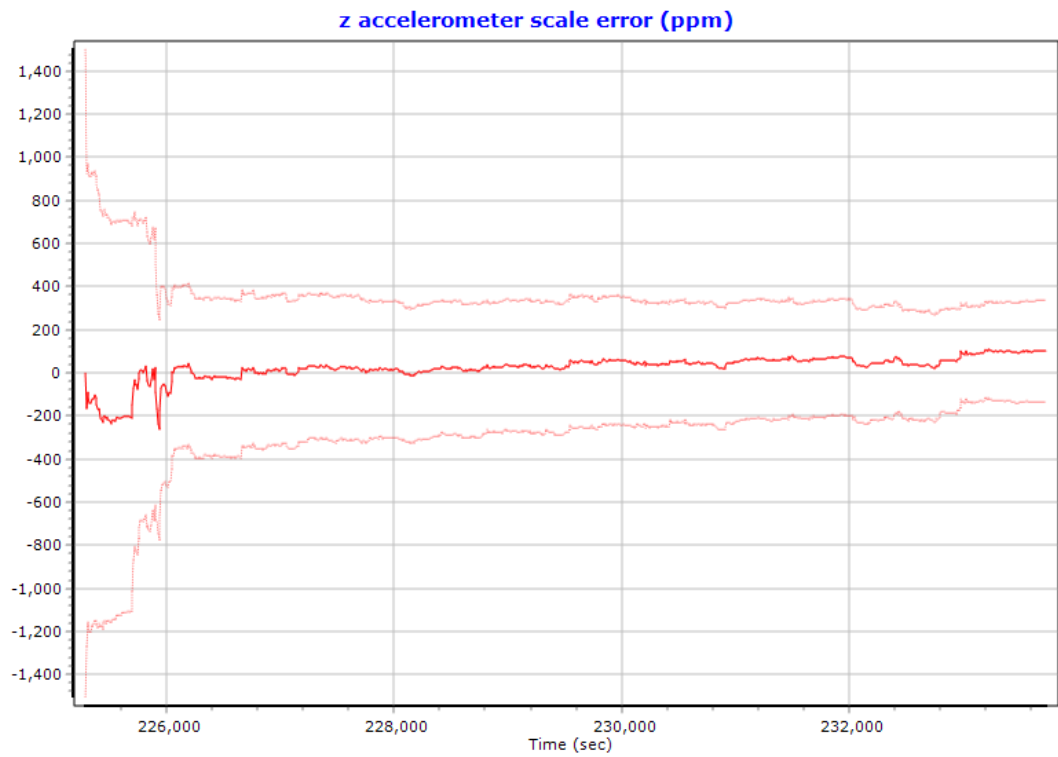
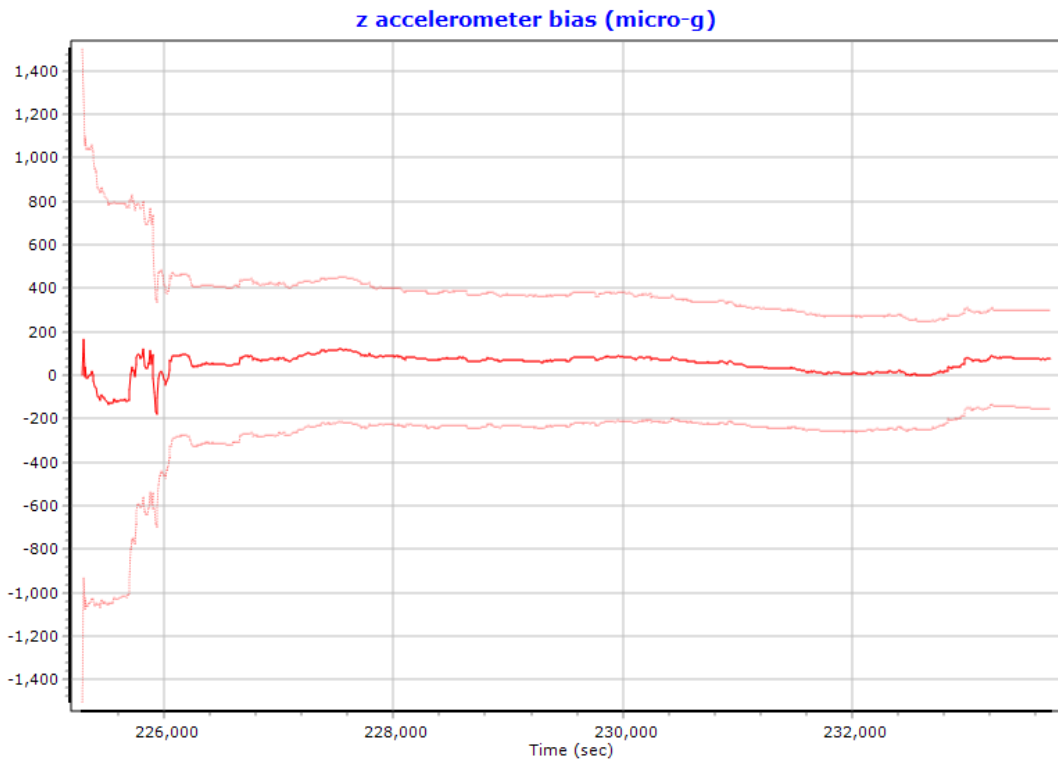




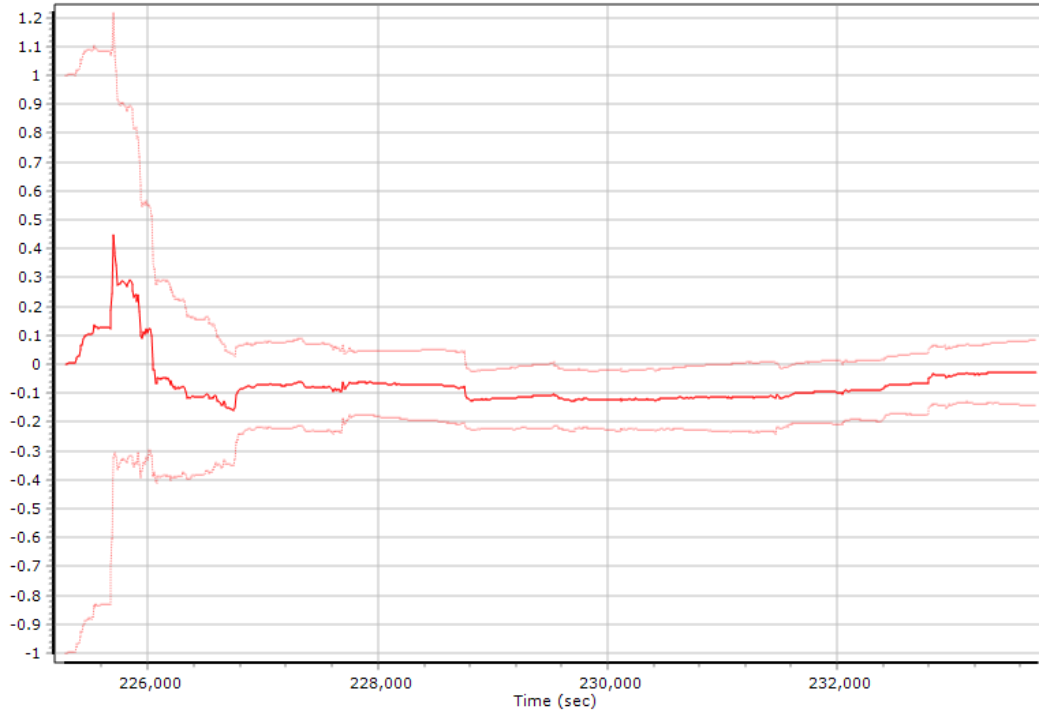




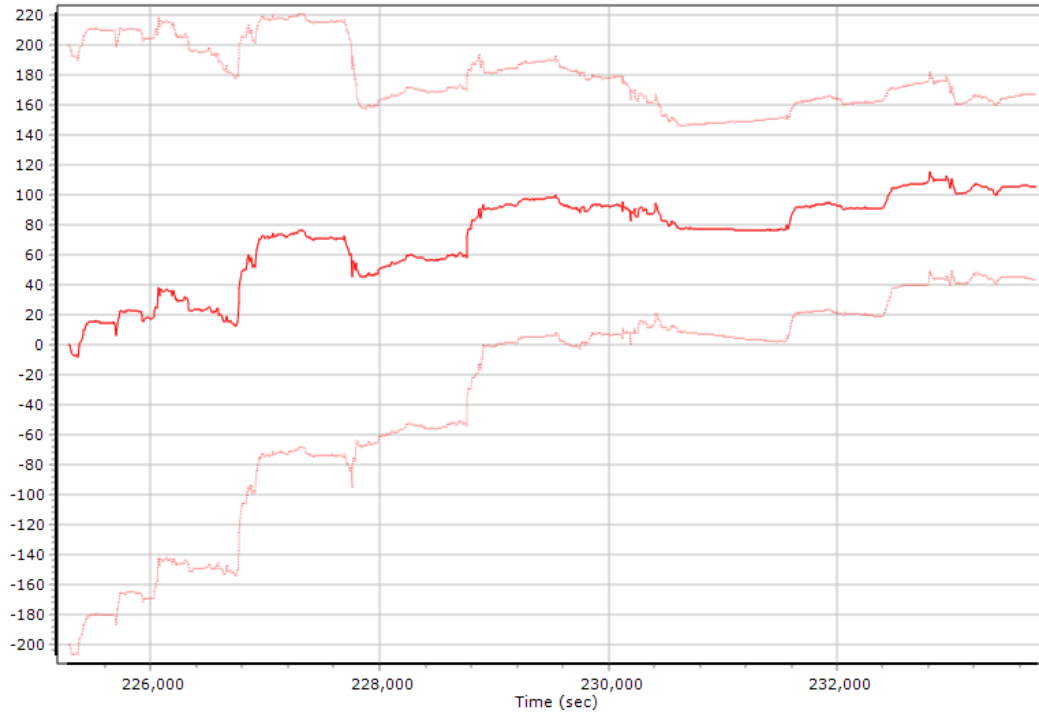




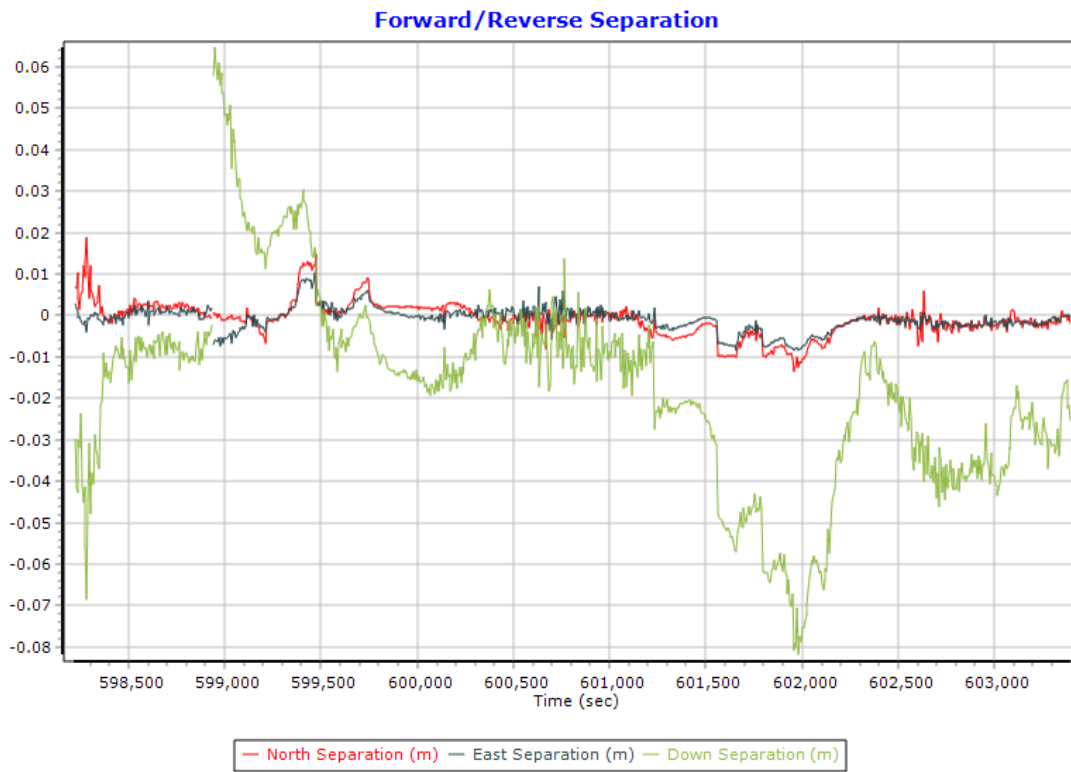
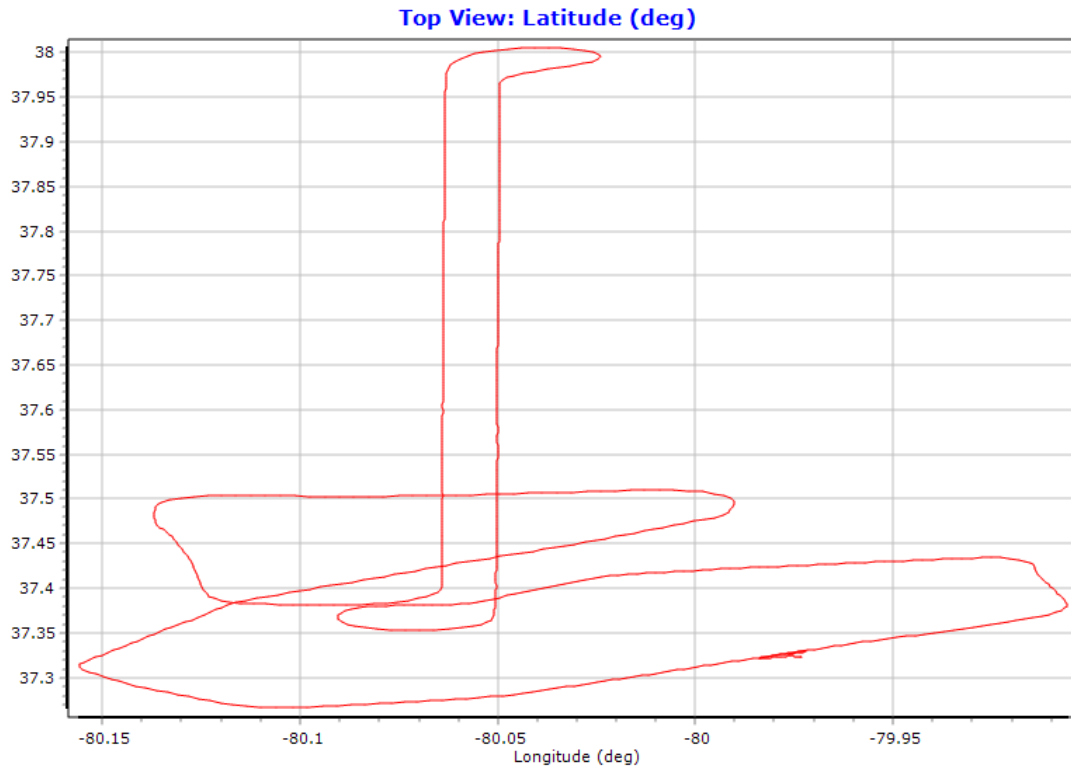
**z gyro bias (deg/hr)**

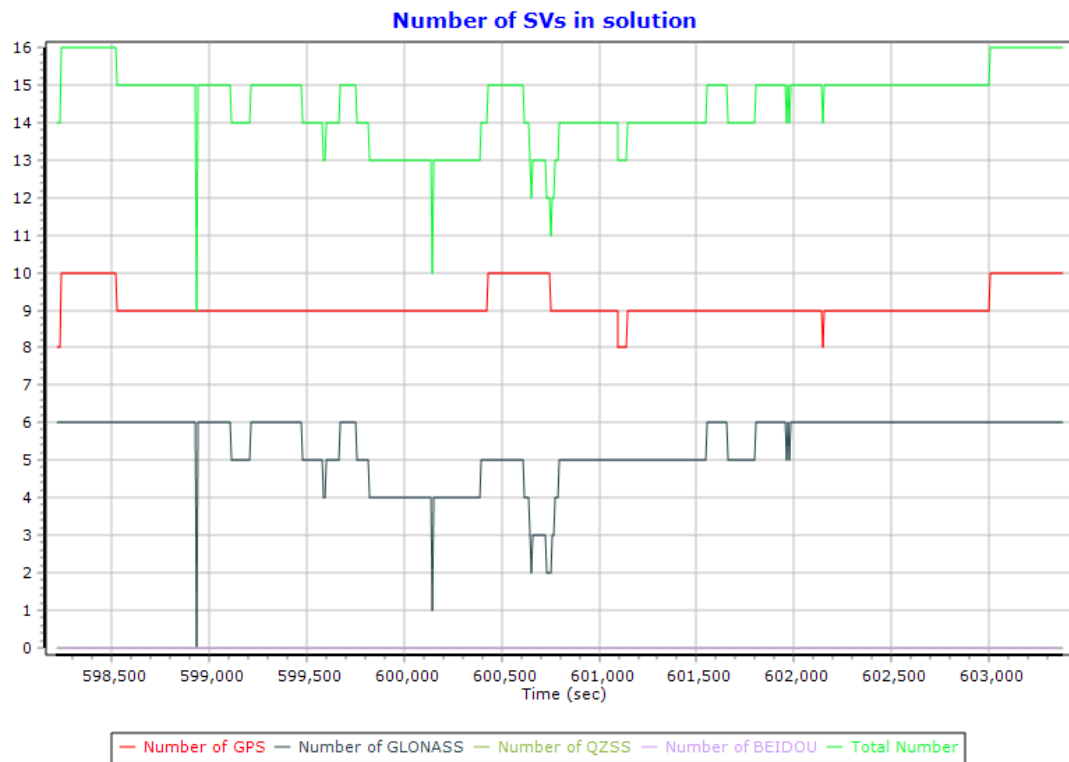
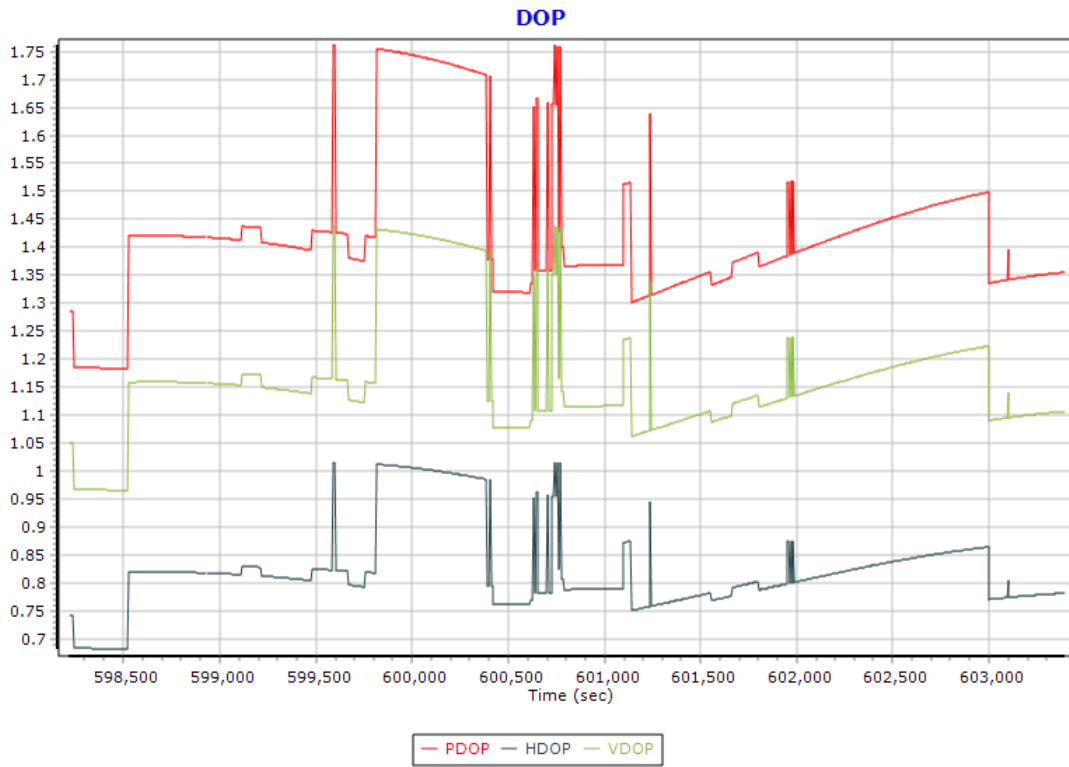


**z gyro scale error (ppm)**



**DECEMBER 02, 2017**





## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20171122\_VA

Solution Type: IN-Fusion SmartBase

Fixed: 4435	(99.98%)
Float: 0	(0.00%)
No Solution: 1	(0.02%)

Number of Epochs:

Total in RAW file: 4473  
No processed position: 38

Fwd/Rev Separation RMS Values (m):

North: 0.021  
East: 0.020  
Height: 0.039

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 2239 occurrences

North: 0.006  
East: 0.007  
Height: 0.039

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 100  
 0.10 - 0.30 m: 0  
 0.30 - 1.00 m: 0  
 1.00 - 5.00 m: 0  
 5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

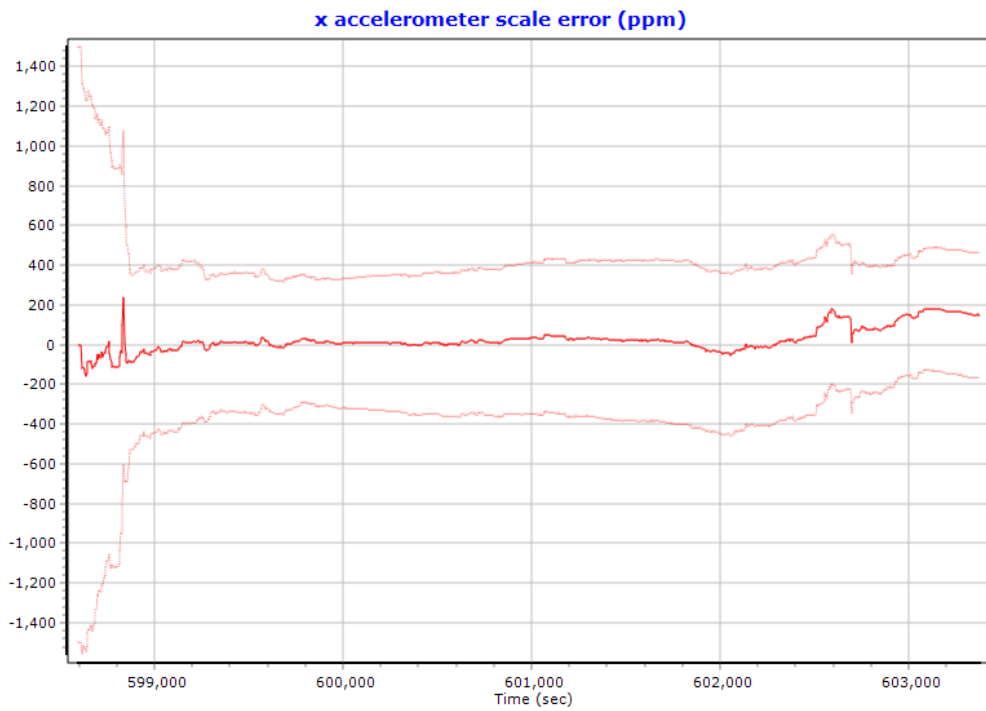
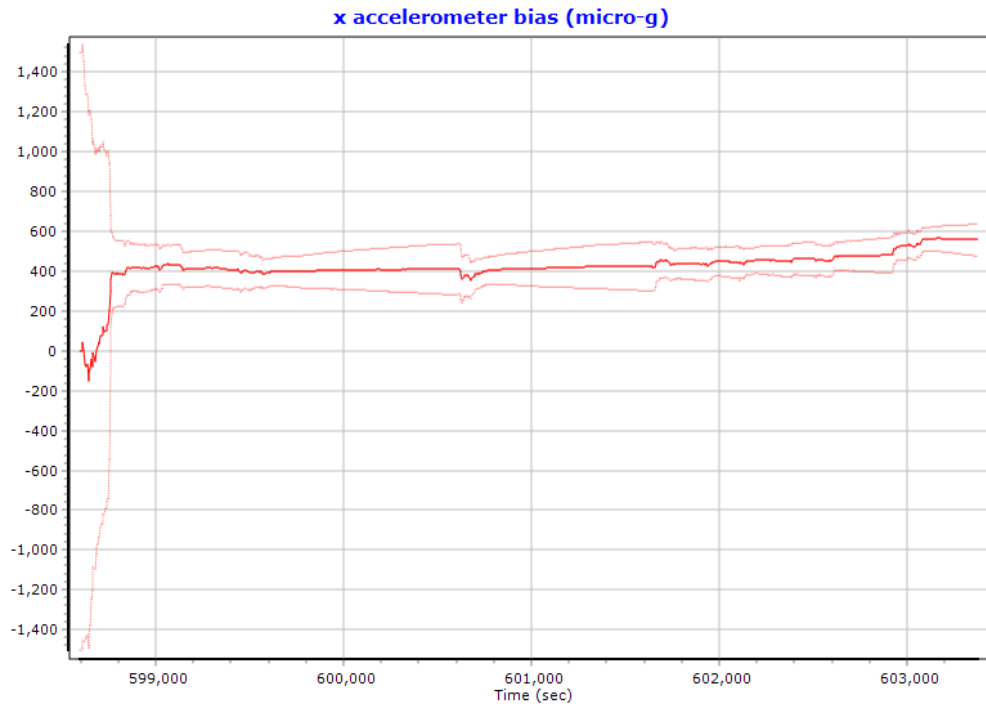
DOP over Tol: 1.41%

Baseline Distances (km):

Maximum: 62.18  
 Minimum: 2.9  
 Average: 27.38  
 First Epoch: 32.95  
 Last Epoch: 32.95

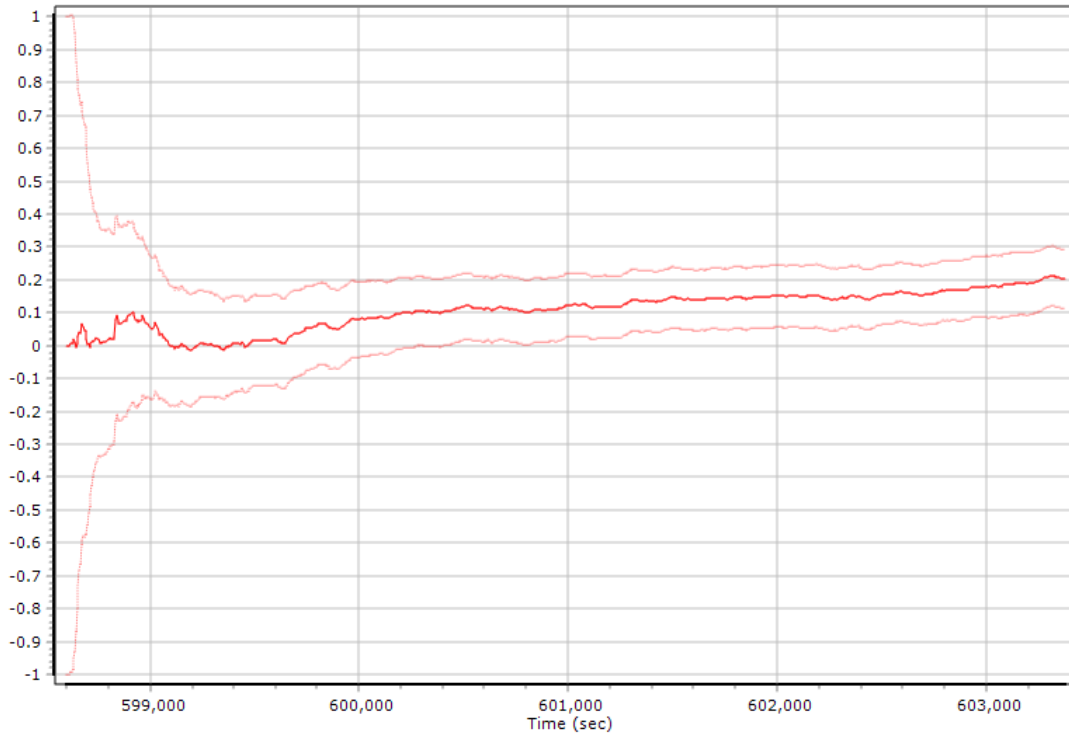
CORS Base Stations

Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
WVGB	N38°25'48.45404"	W79°49'01.31981"	811.18	N38°25'48.45379"	W79°49'01.32007"	811.172
WVAT	N37°25'42.67846"	W81°04'04.40374"	704.674	N37°25'42.67837"	W81°04'04.40378"	704.674
NCRE	N36°21'42.74202"	W79°39'56.56327"	233.466	N36°21'42.74191"	W79°39'56.56334"	233.455
WVLE	N37°49'20.23028"	W80°25'18.58180"	655.2	N37°49'20.23008"	W80°25'18.58191"	655.204
LS04	N37°21'47.16704"	W79°57'26.99400"	324.137			
LOYH	N37°18'09.77793"	W79°19'28.19940"	204.445	N37°18'09.77796"	W79°19'28.19943"	204.429

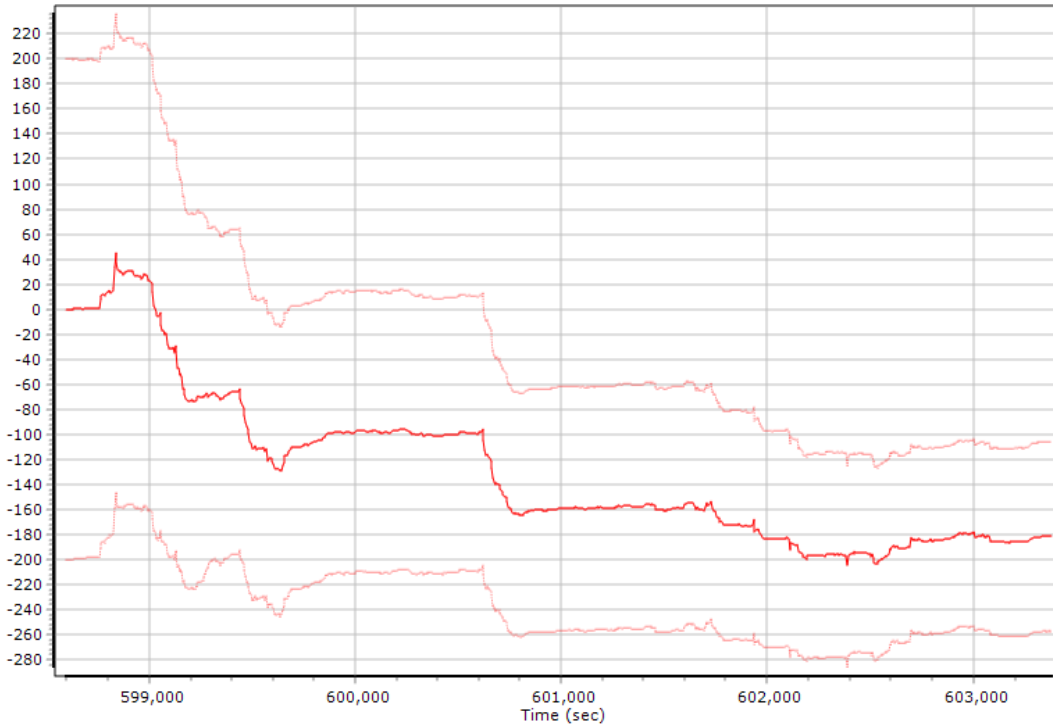




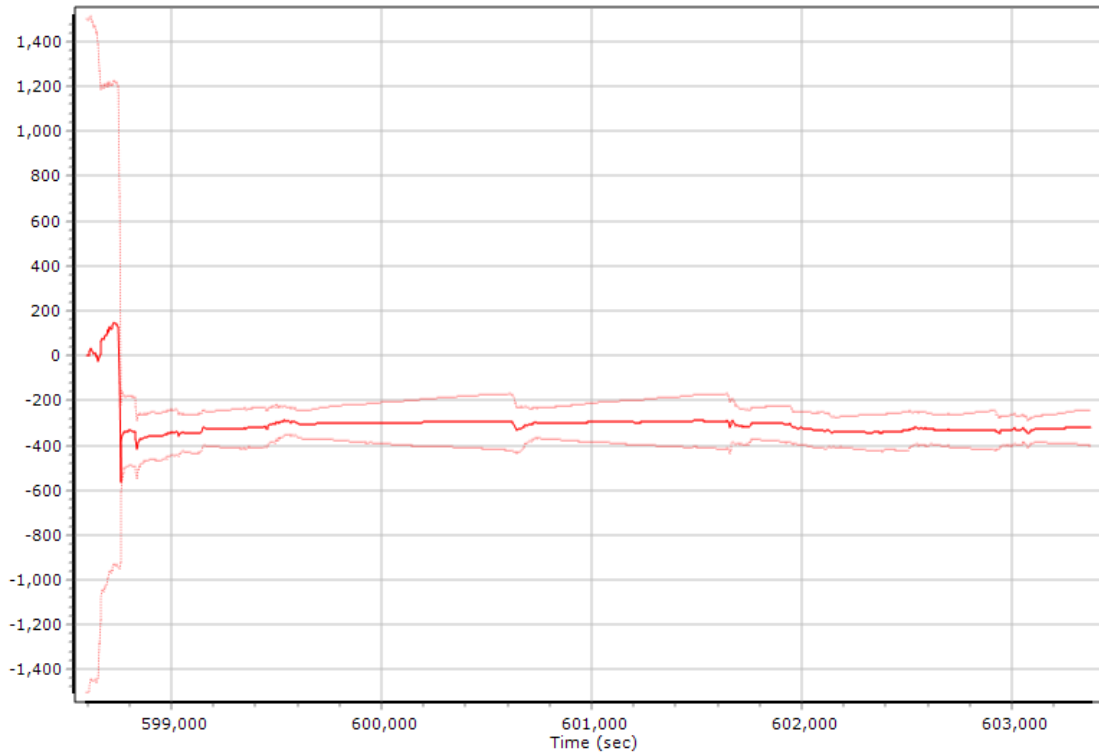
**x gyro bias (deg/hr)**



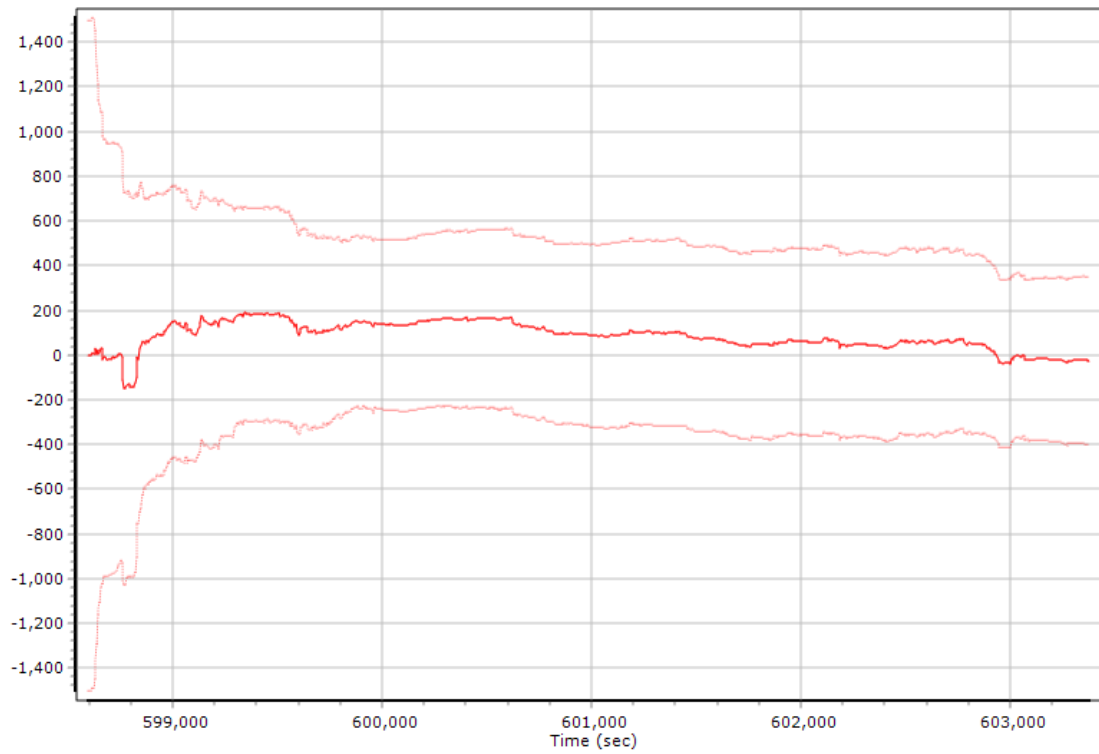
**x gyro scale error (ppm)**



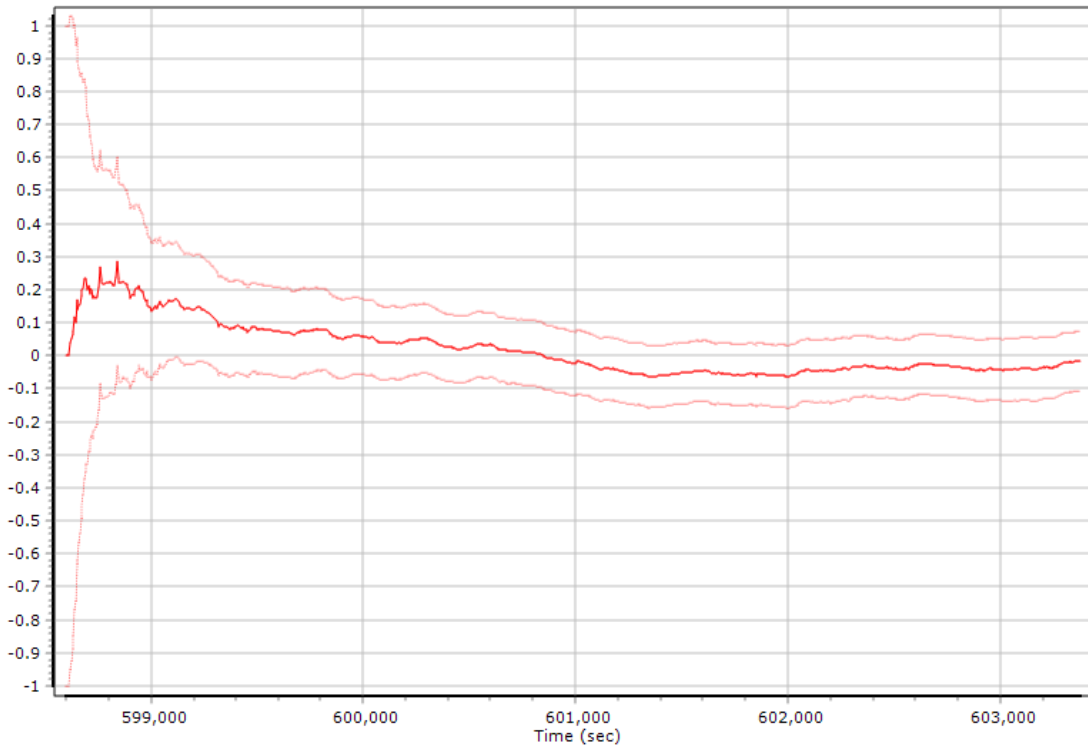
**y accelerometer bias (micro-g)**



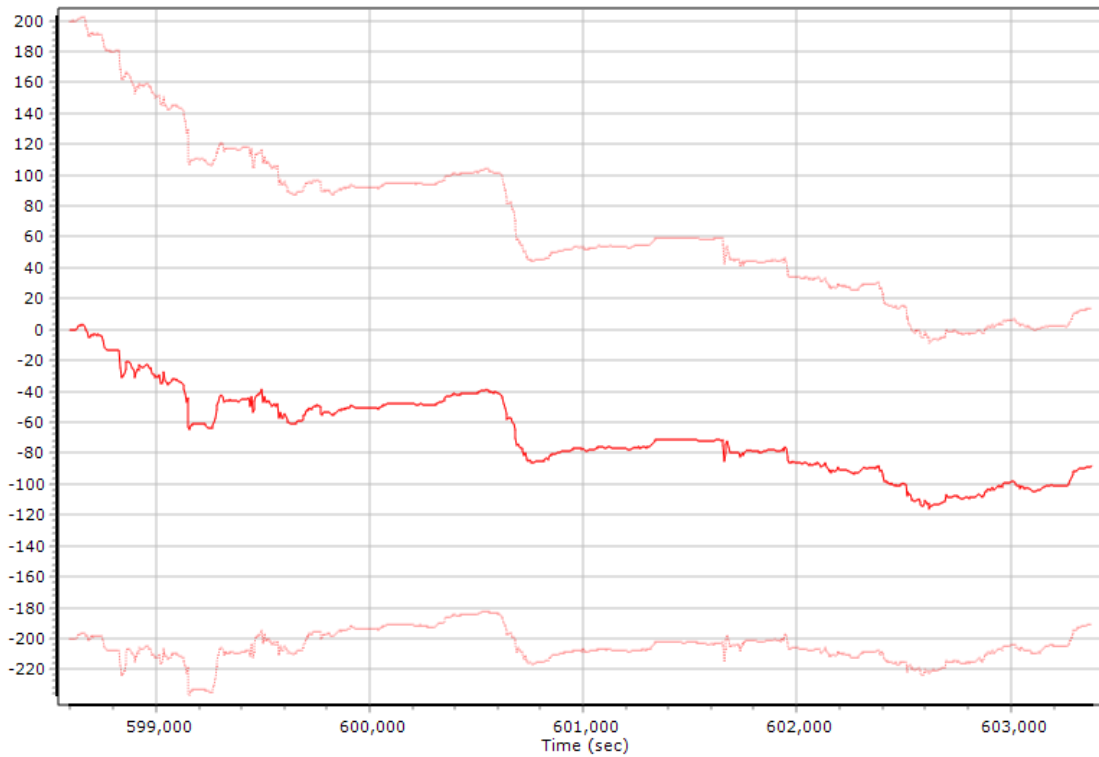
**y accelerometer scale error (ppm)**



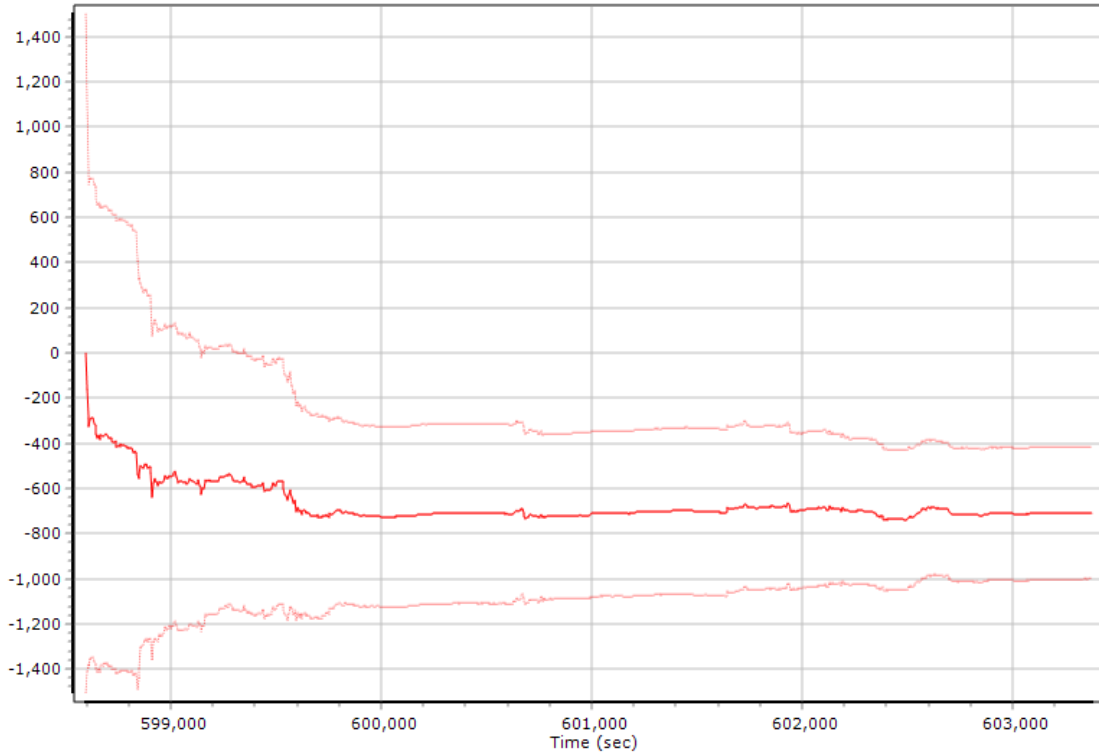
**y gyro bias (deg/hr)**



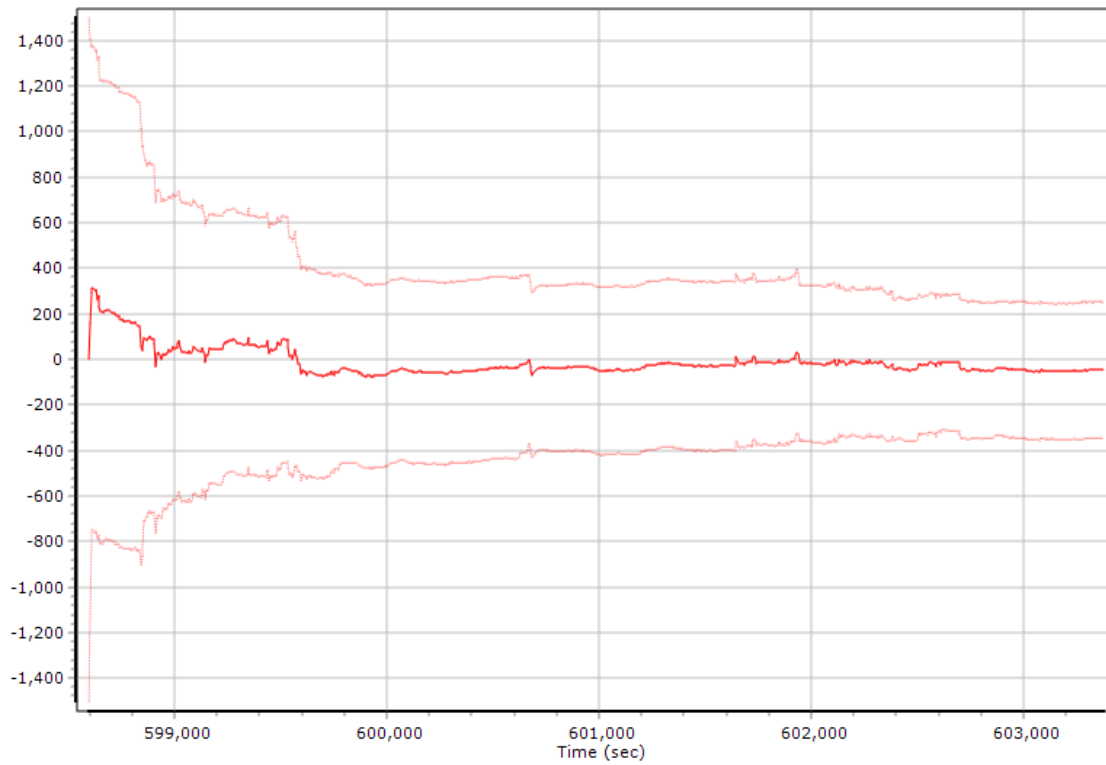
**y gyro scale error (ppm)**



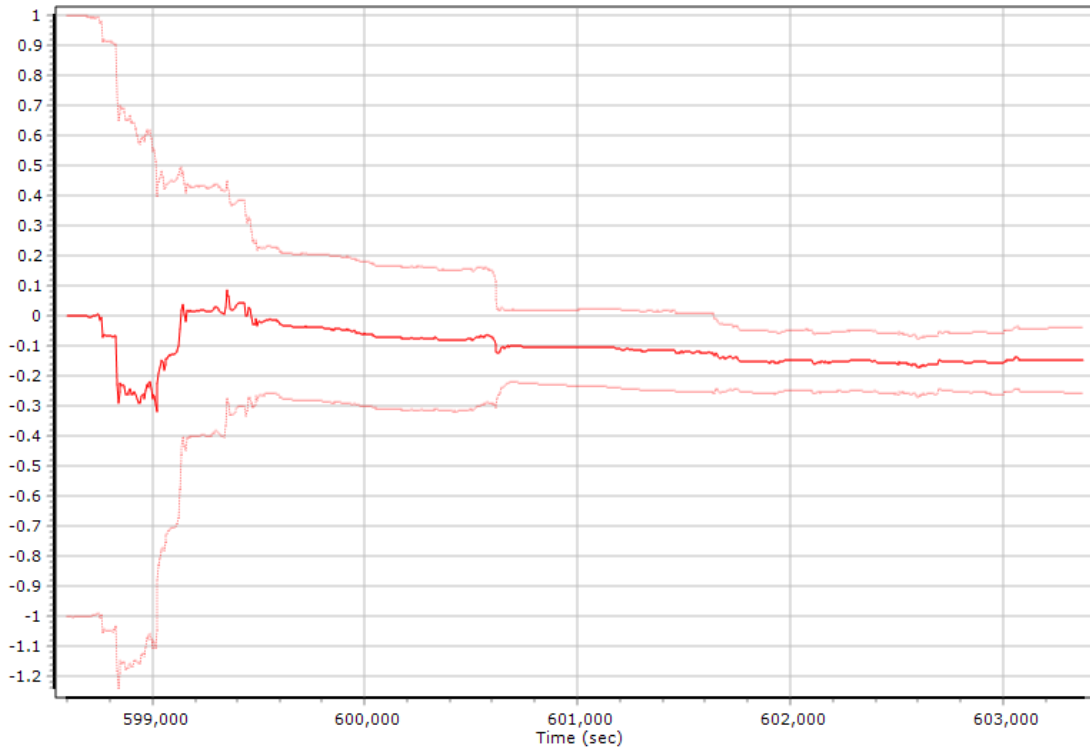
**z accelerometer bias (micro-g)**



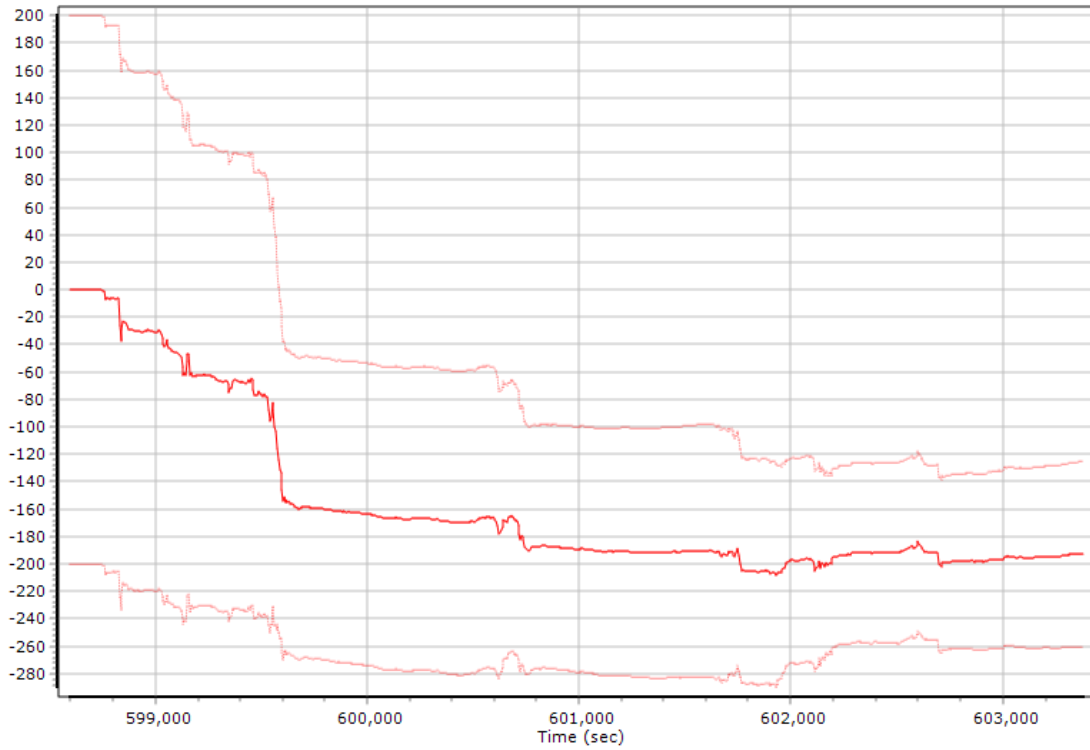
**z accelerometer scale error (ppm)**



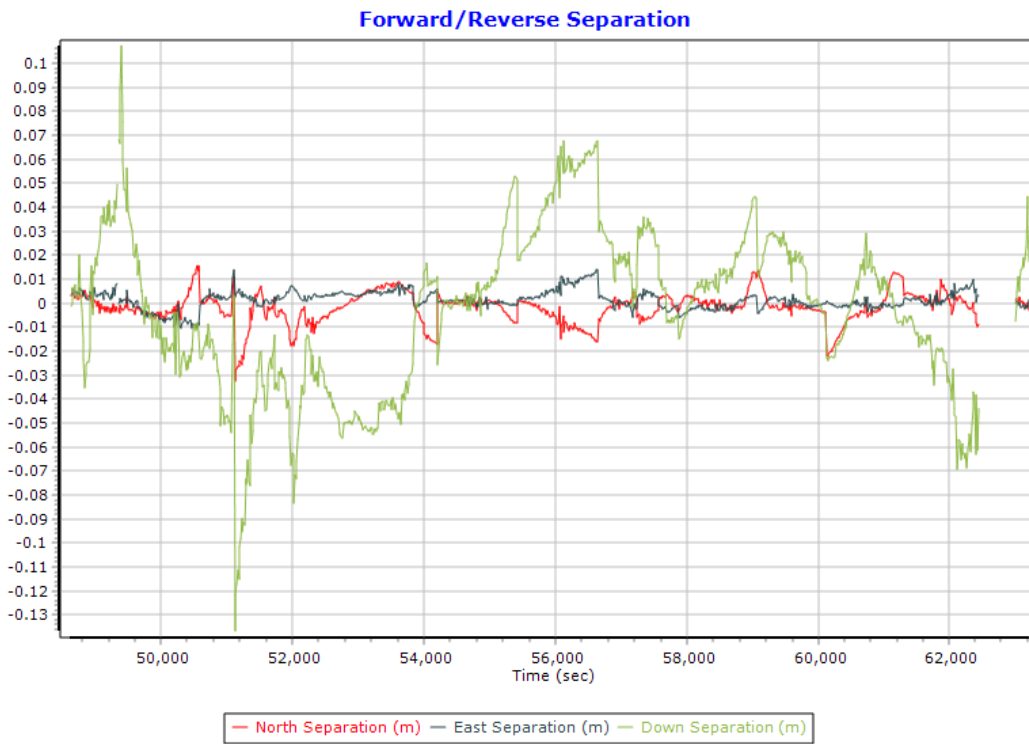
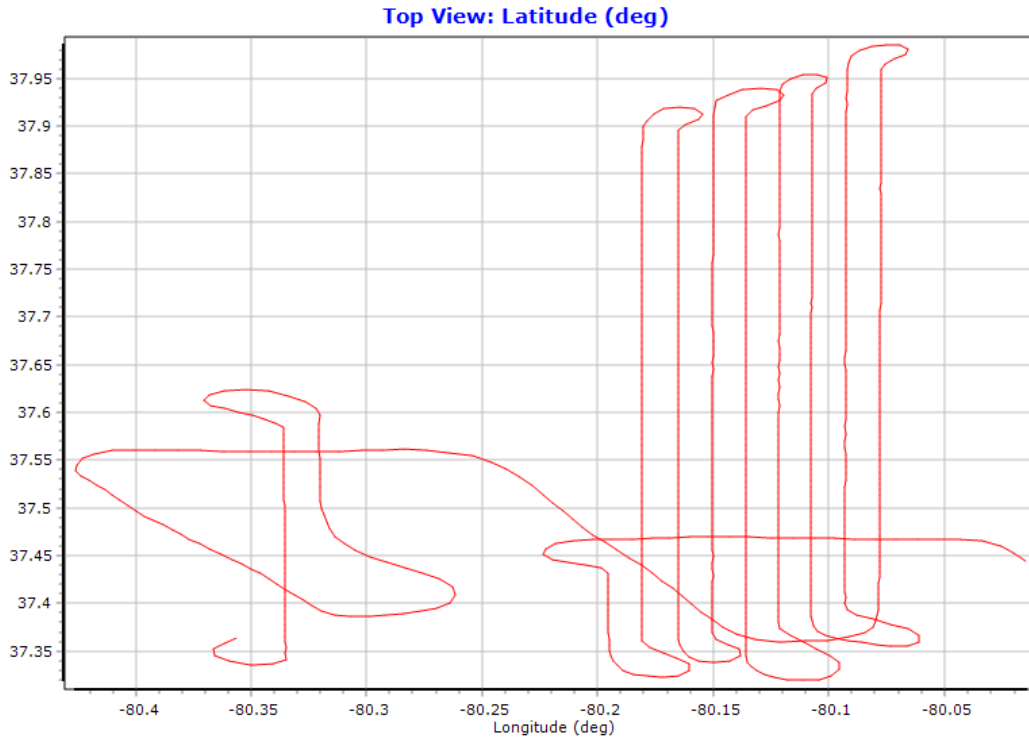
**z gyro bias (deg/hr)**

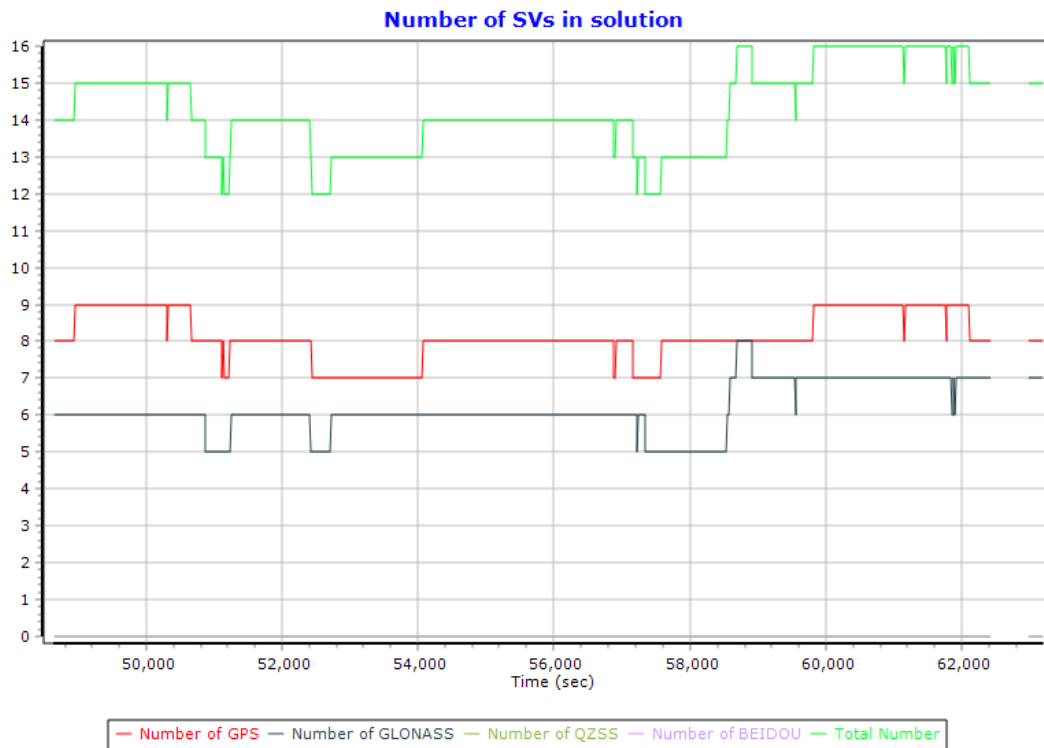
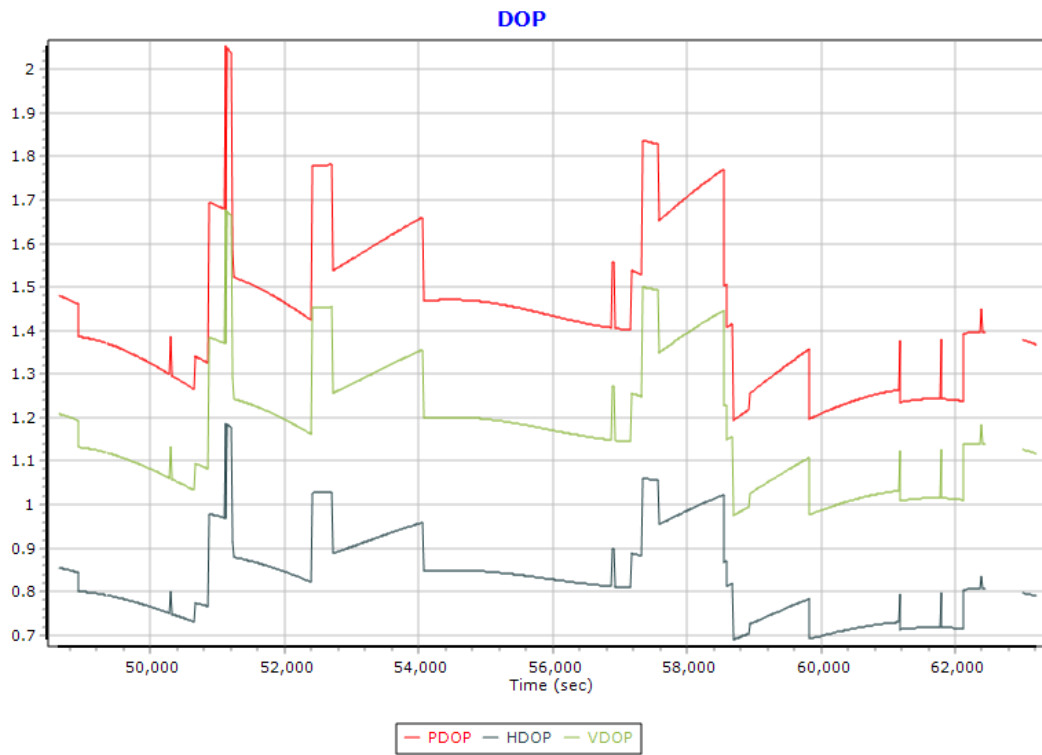


**z gyro scale error (ppm)**



## DECEMBER 03, 2017 MISSION 1





## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20171203\_VA\_A

Solution Type: IN-Fusion SmartBase

Fixed: 14048	(96.30%)
Float: 0	(0.00%)
No Solution: 540	(3.70%)

Number of Epochs:

Total in RAW file: 14592  
No processed position: 544

Fwd/Rev Separation RMS Values (m):

North: 0.007  
East: 0.004  
Height: 0.033

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 1906 occurrences

North: 0.006  
East: 0.004  
Height: 0.033

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):



0.00 - 0.10 m: 99.98  
 0.10 - 0.30 m: 0.012  
 0.30 - 1.00 m: 0  
 1.00 - 5.00 m: 0  
 5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

DOP over Tol: 1.44%

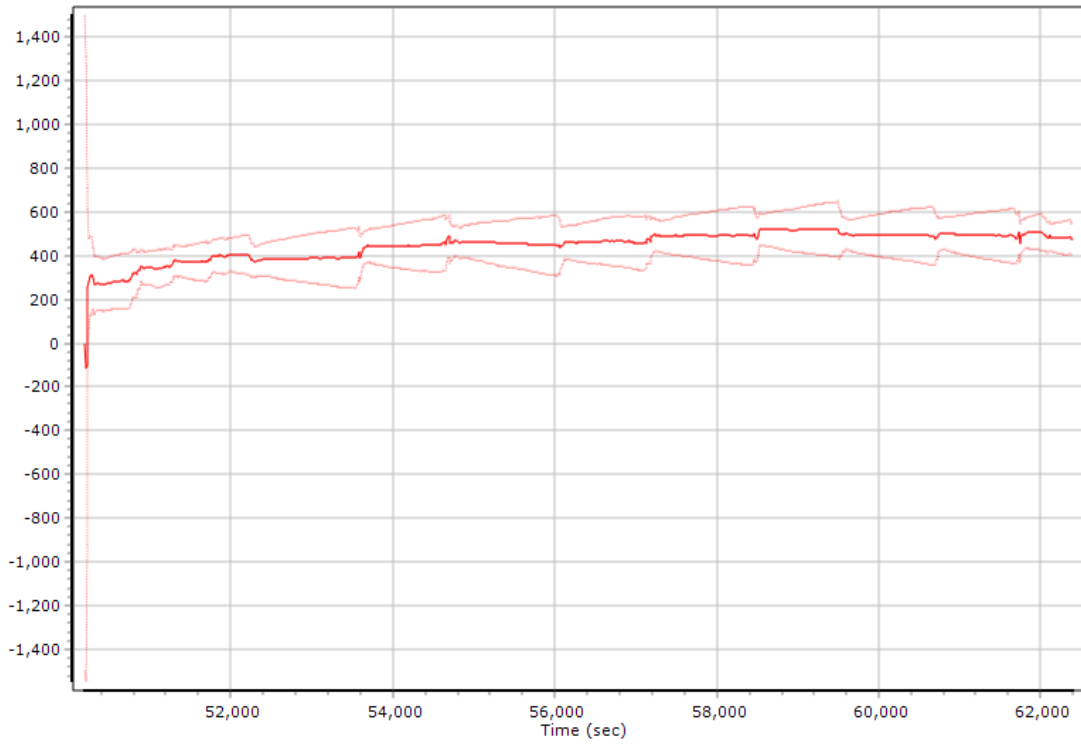
Baseline Distances (km):

Maximum: 43.15  
 Minimum: 0.48  
 Average: 20.75  
 First Epoch: 35.23  
 Last Epoch: 35.23

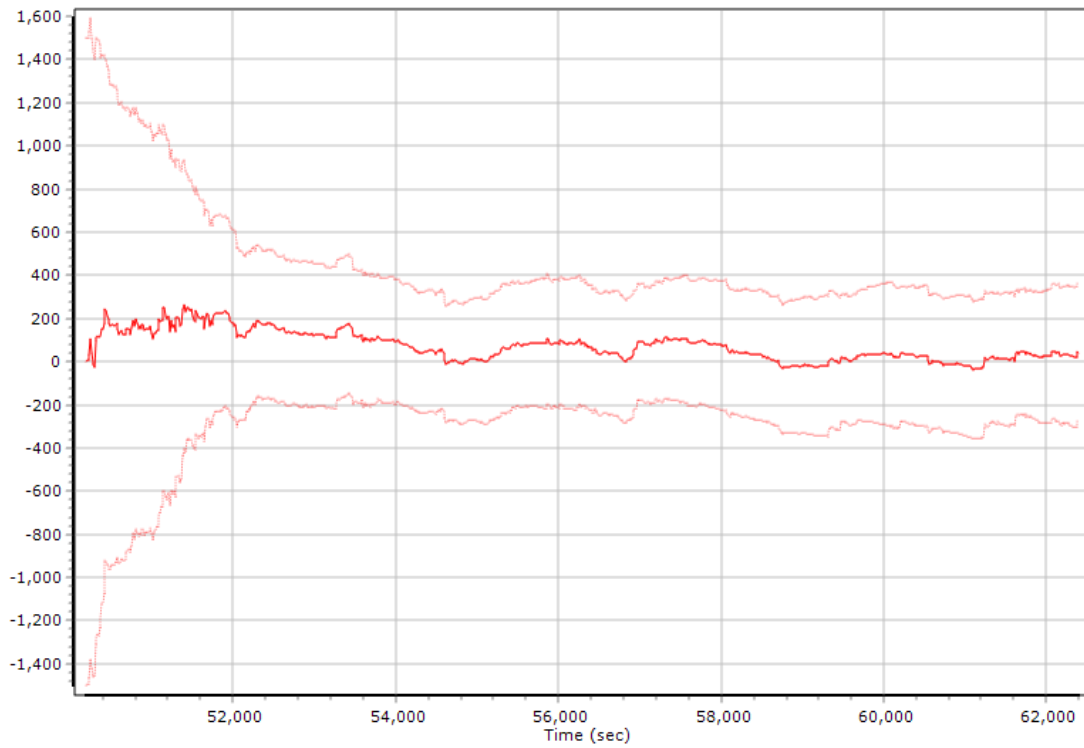
#### CORS Base Stations

Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
WVLE	N37°49'20.23017"	W80°25'18.58193"	655.2	N37°49'20.23010"	W80°25'18.58207"	655.204
WVGB	N38°25'48.45389"	W79°49'01.31999"	811.18	N38°25'48.45378"	W79°49'01.31998"	811.174
WVAT	N37°25'42.67838"	W81°04'04.40387"	704.674	N37°25'42.67828"	W81°04'04.40411"	704.678
NCWC	N36°22'19.71490"	W80°11'05.64906"	274.974	N36°22'19.71467"	W80°11'05.64912"	275.084
LS04	N37°21'47.16695"	W79°57'26.99410"	324.139			
LOYH	N37°18'09.77783"	W79°19'28.19952"	204.445	N37°18'09.77788"	W79°19'28.19936"	204.433

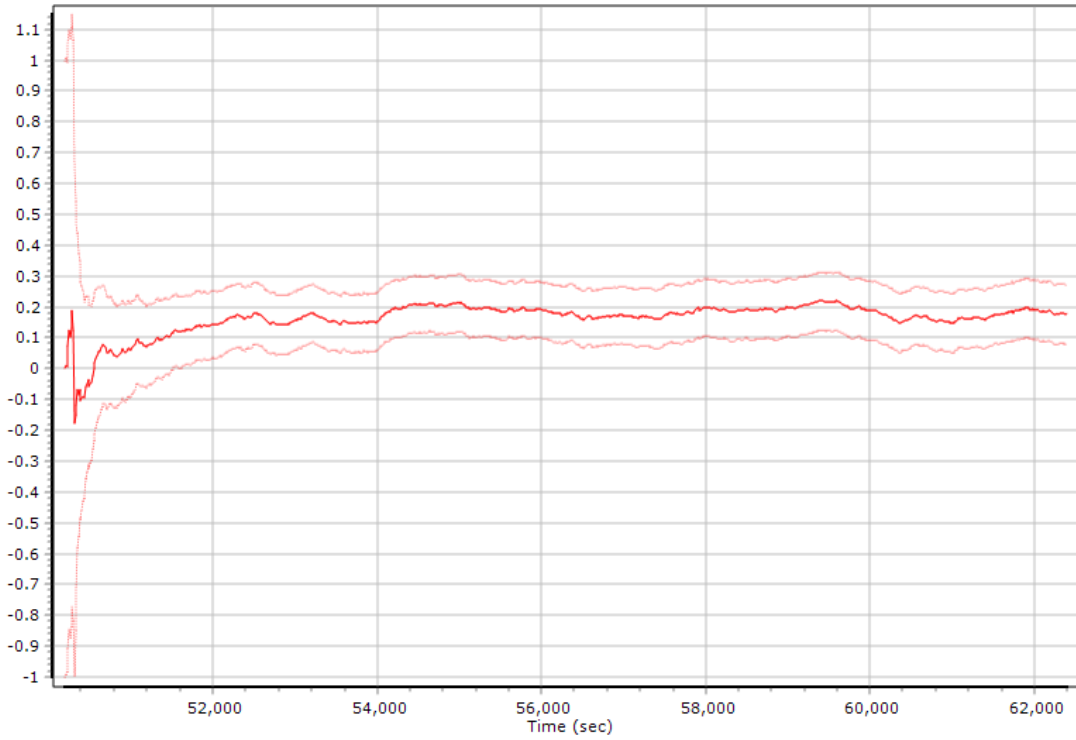
**x accelerometer bias (micro-g)**



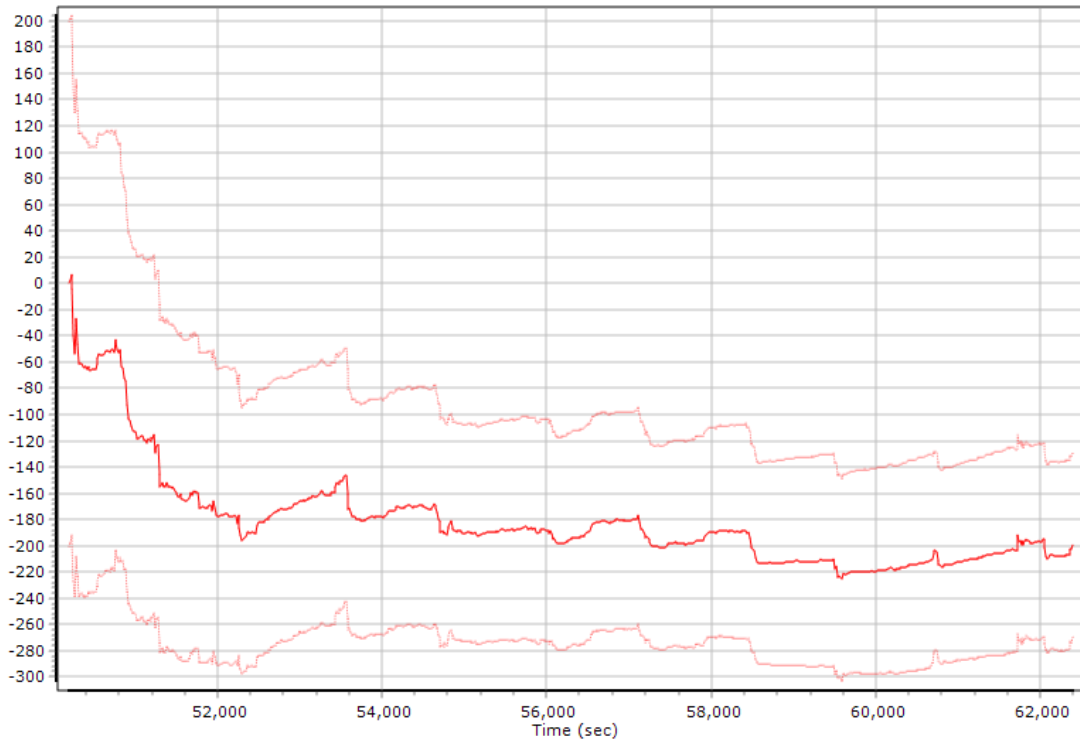
**x accelerometer scale error (ppm)**



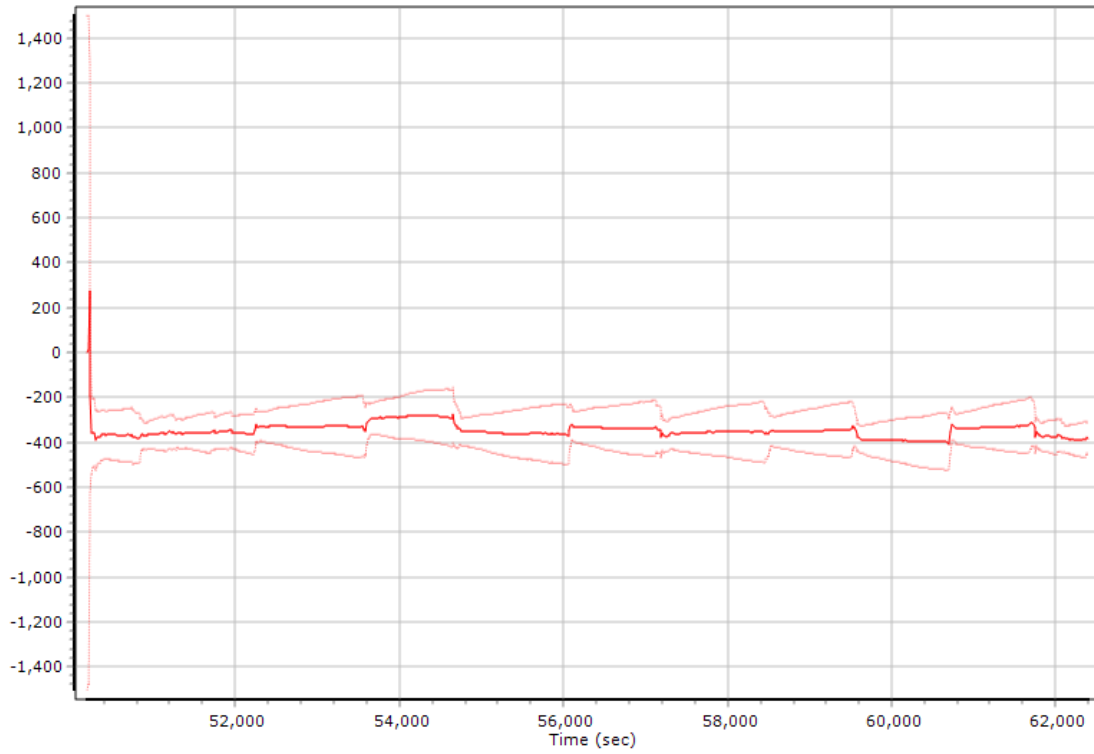
**x gyro bias (deg/hr)**



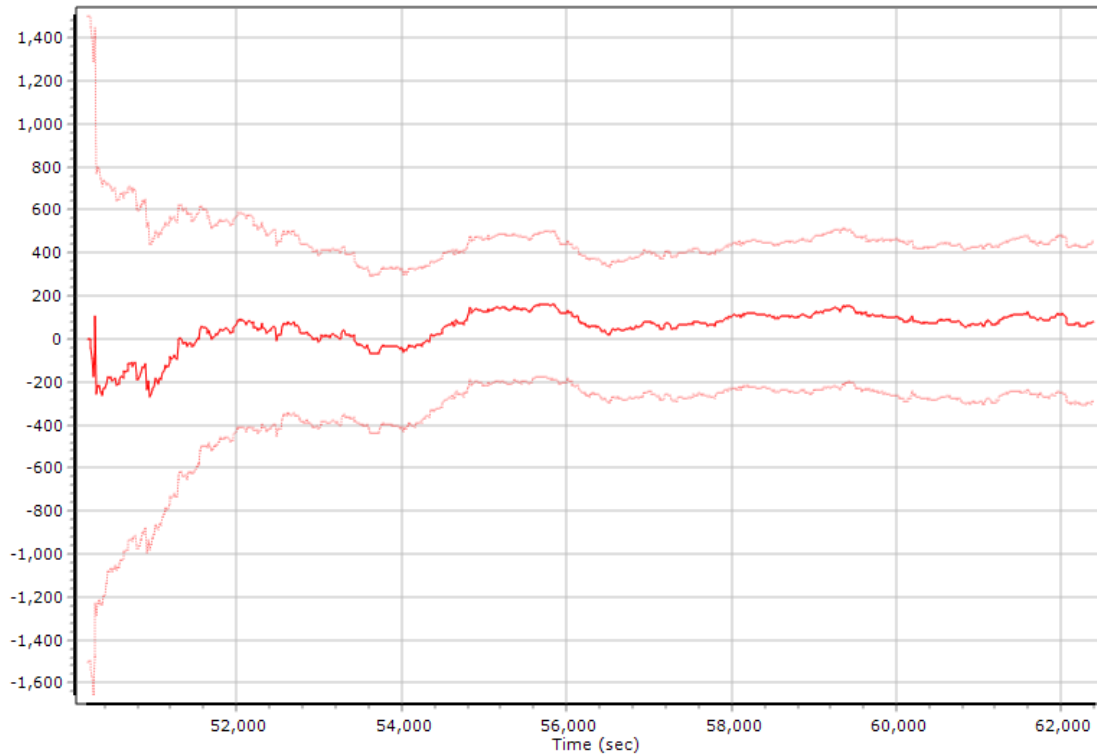
**x gyro scale error (ppm)**



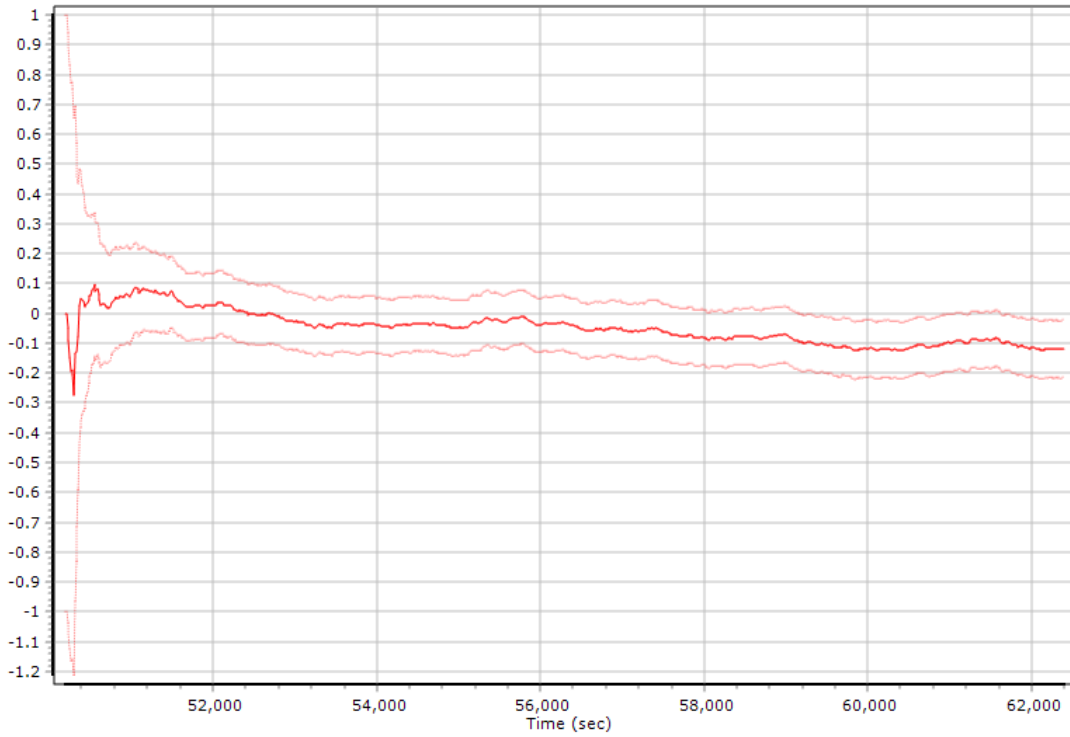
**y accelerometer bias (micro-g)**



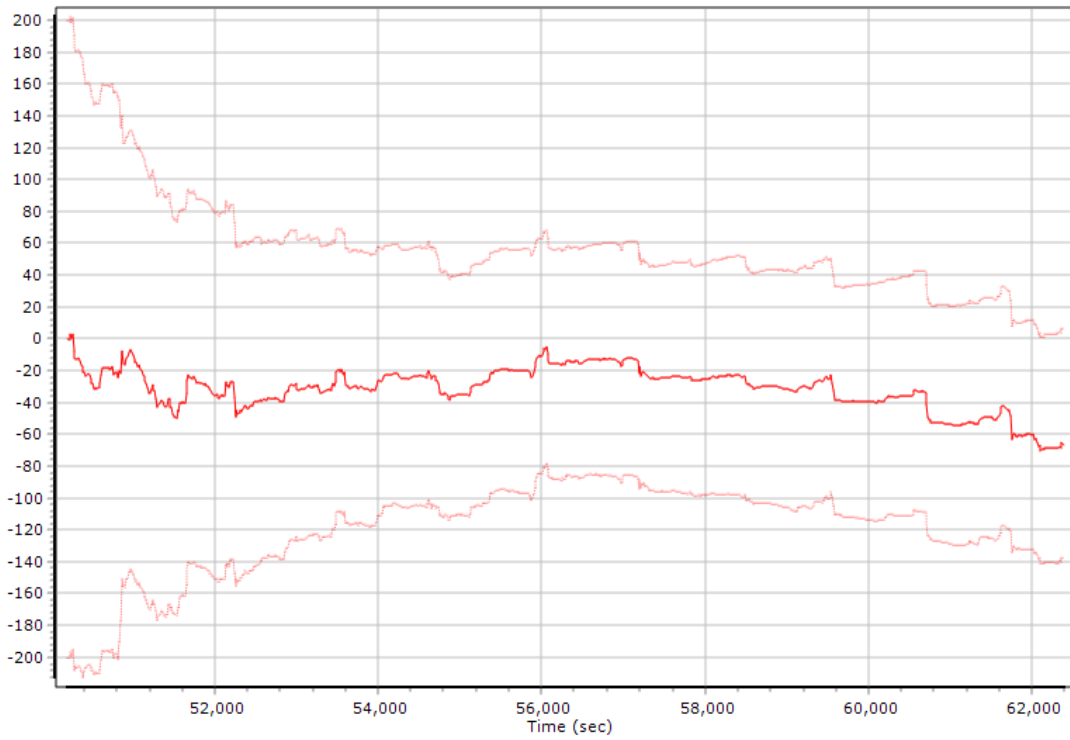
**y accelerometer scale error (ppm)**



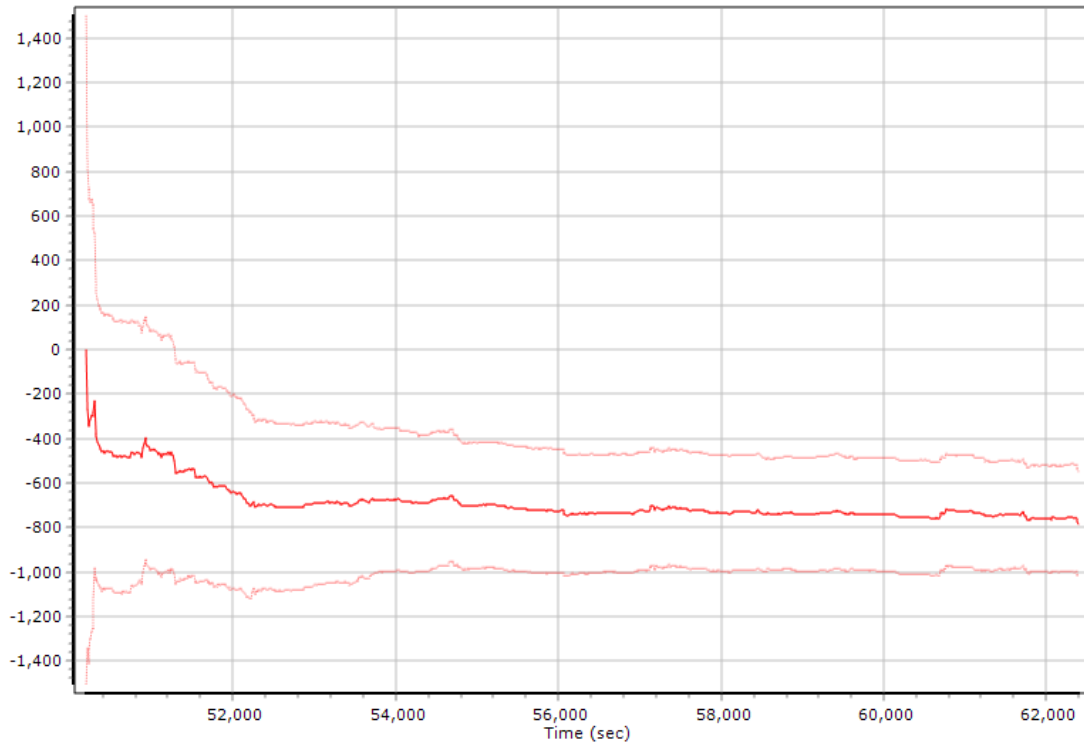
**y gyro bias (deg/hr)**



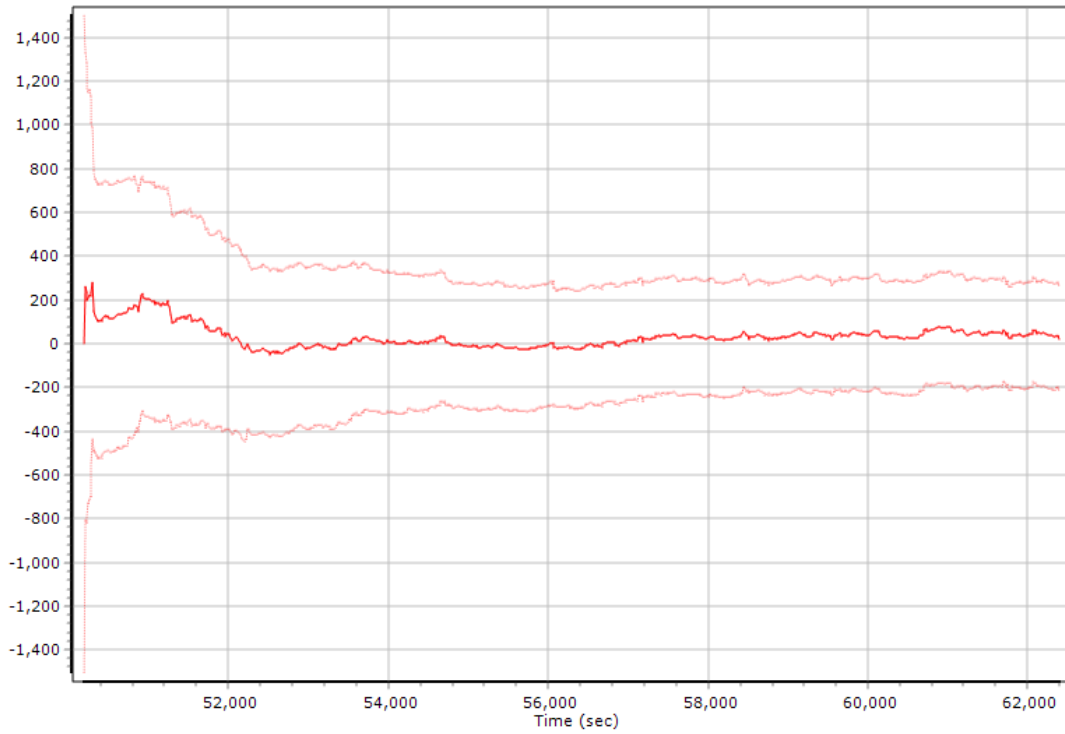
**y gyro scale error (ppm)**



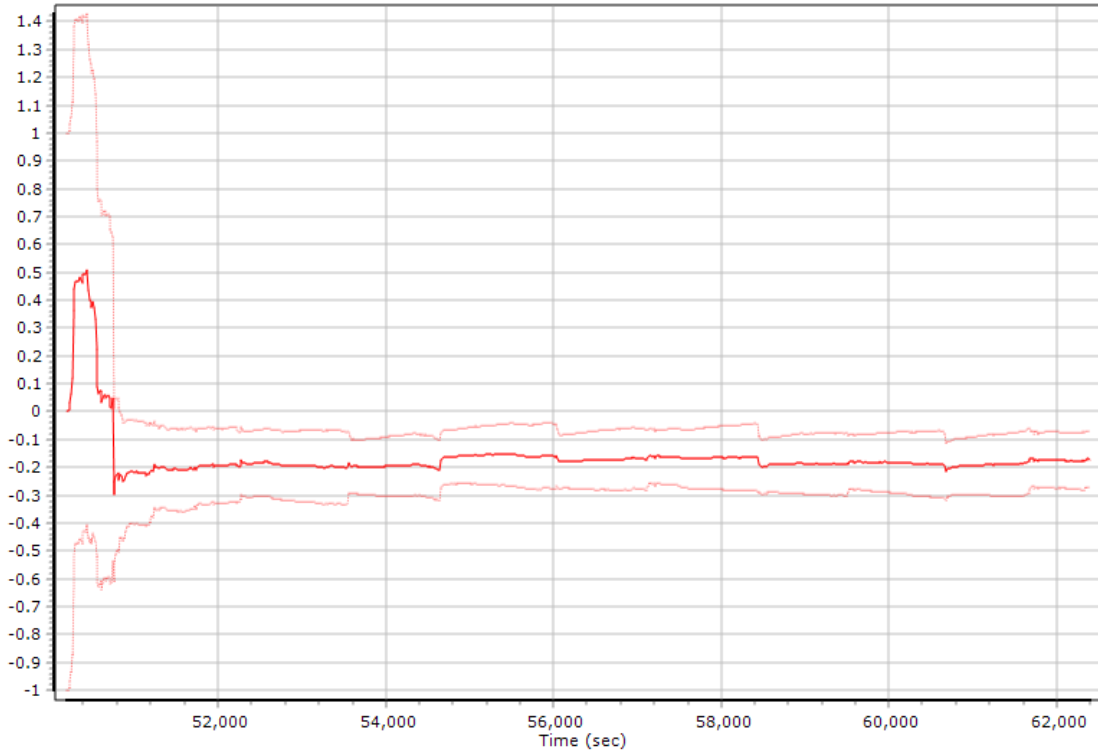
**z accelerometer bias (micro-g)**



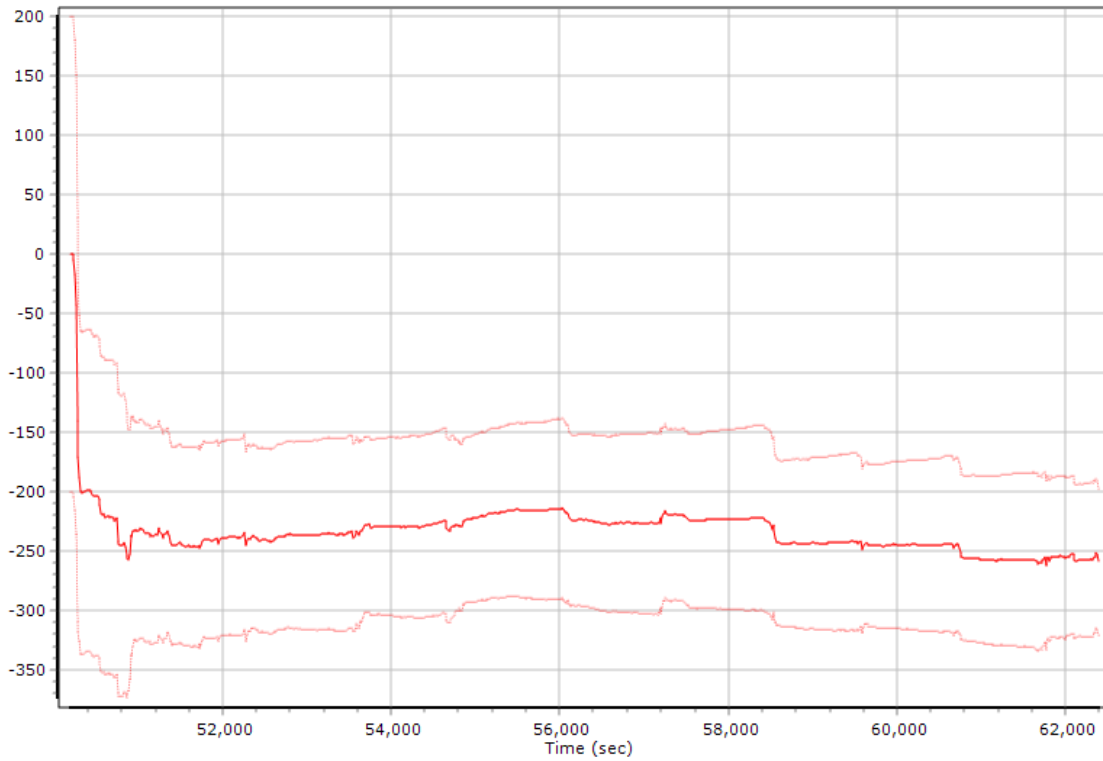
**z accelerometer scale error (ppm)**



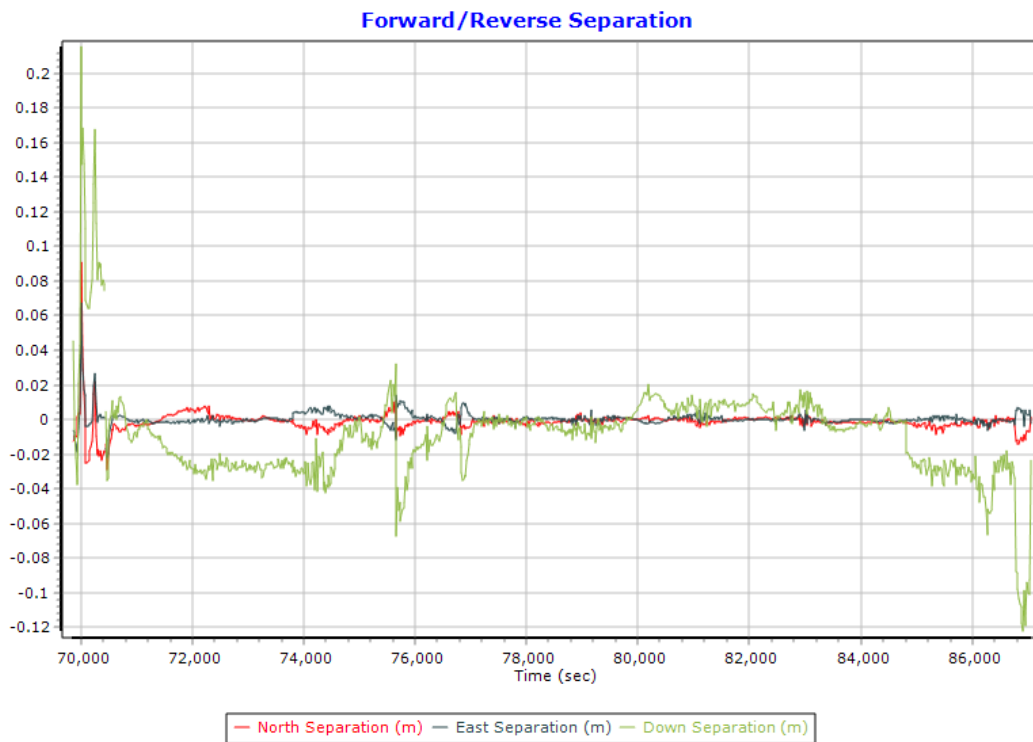
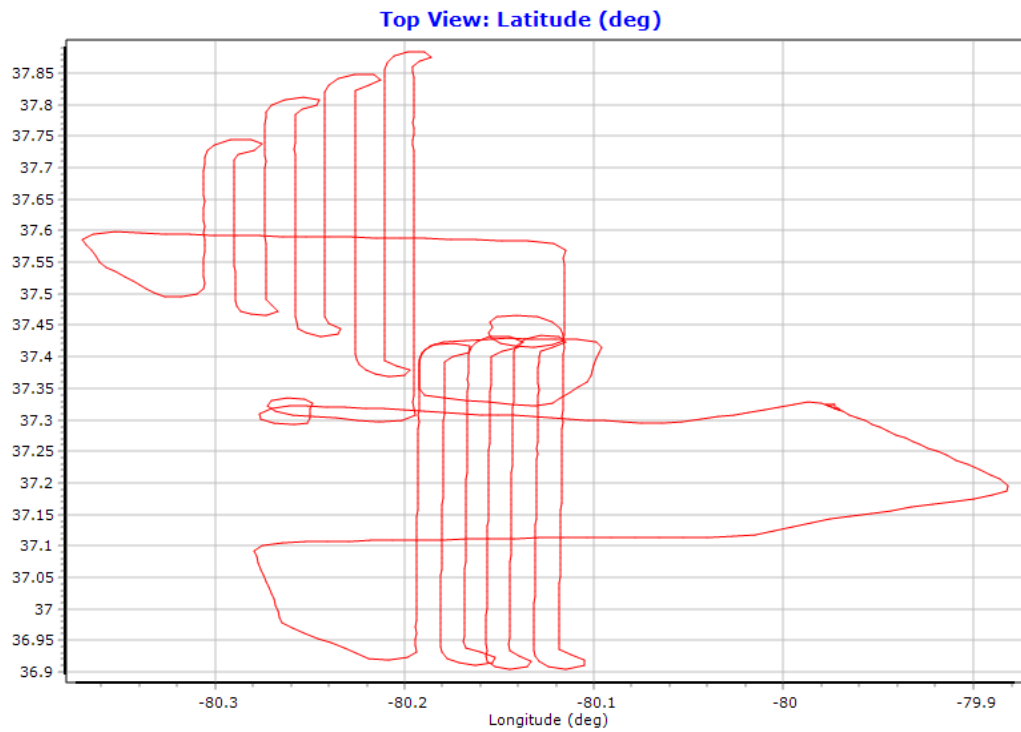
**z gyro bias (deg/hr)**



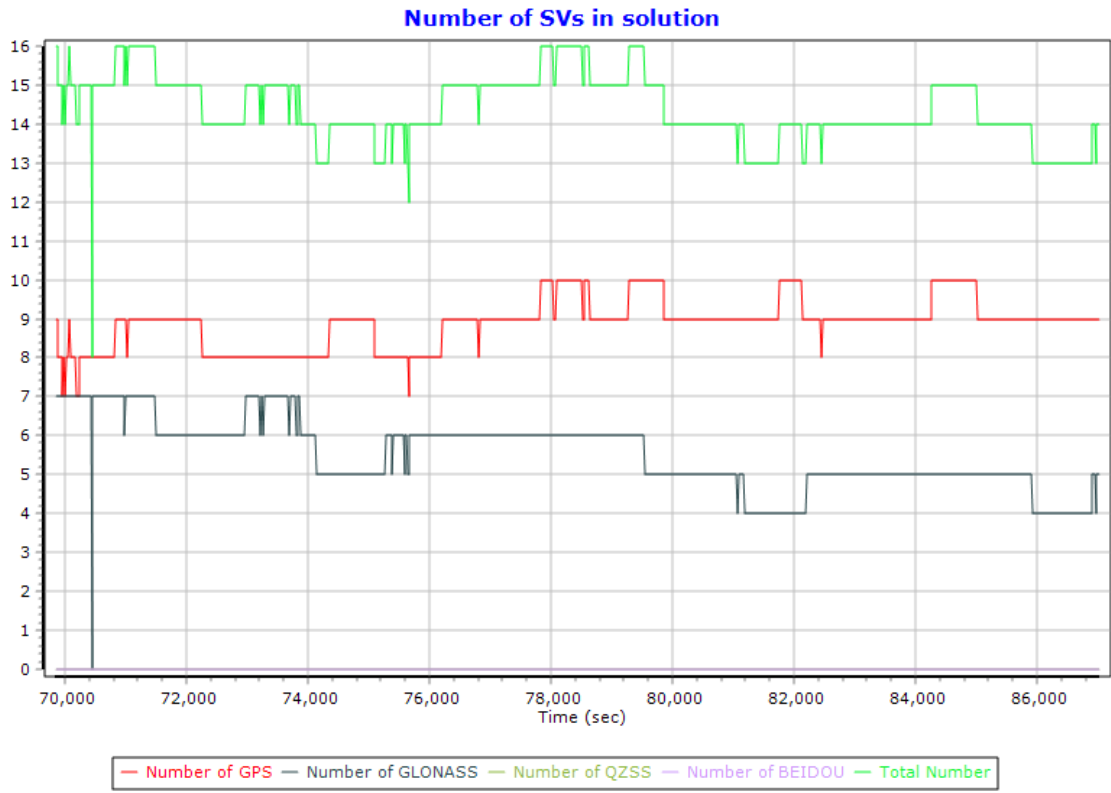
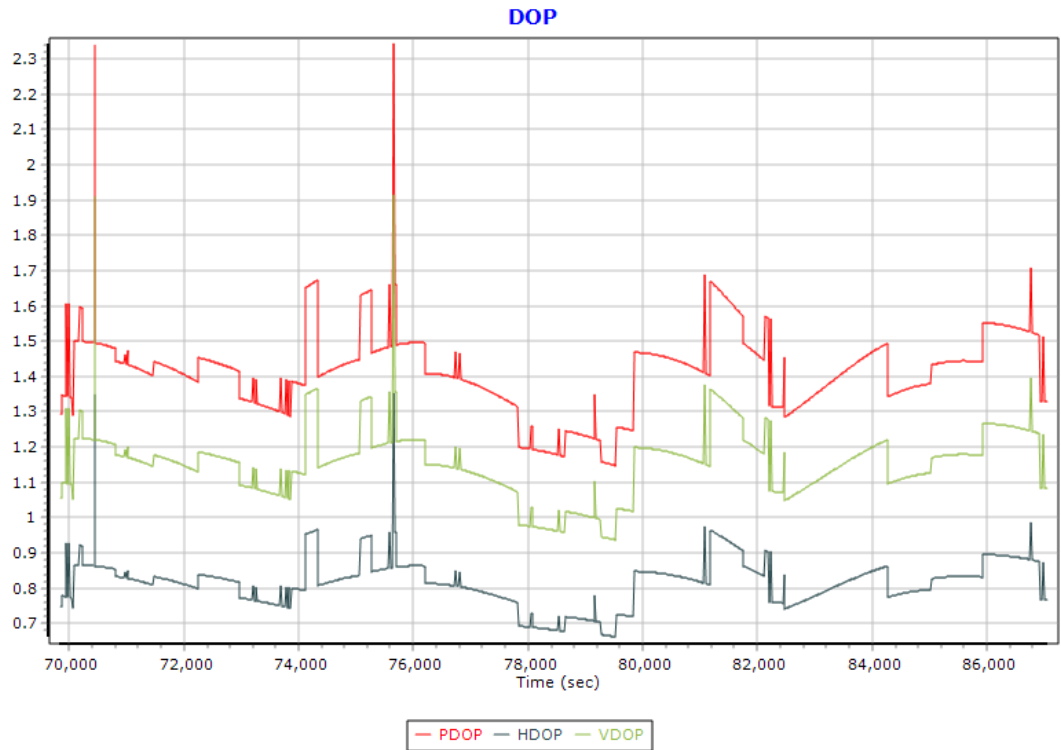
**z gyro scale error (ppm)**



## DECEMBER 03, 2017 MISSION 2







## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20171203\_VA\_B

Solution Type: IN-Fusion SmartBase

Fixed: 17235	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 17257  
No processed position: 22

Fwd/Rev Separation RMS Values (m):

North: 0.006  
East: 0.004  
Height: 0.029

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 8628 occurrences

North: 0.002  
East: 0.003  
Height: 0.014

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 99.720  
 0.10 - 0.30 m: 0.280  
 0.30 - 1.00 m: 0  
 1.00 - 5.00 m: 0  
 5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

DOP over Tol: 1.41%

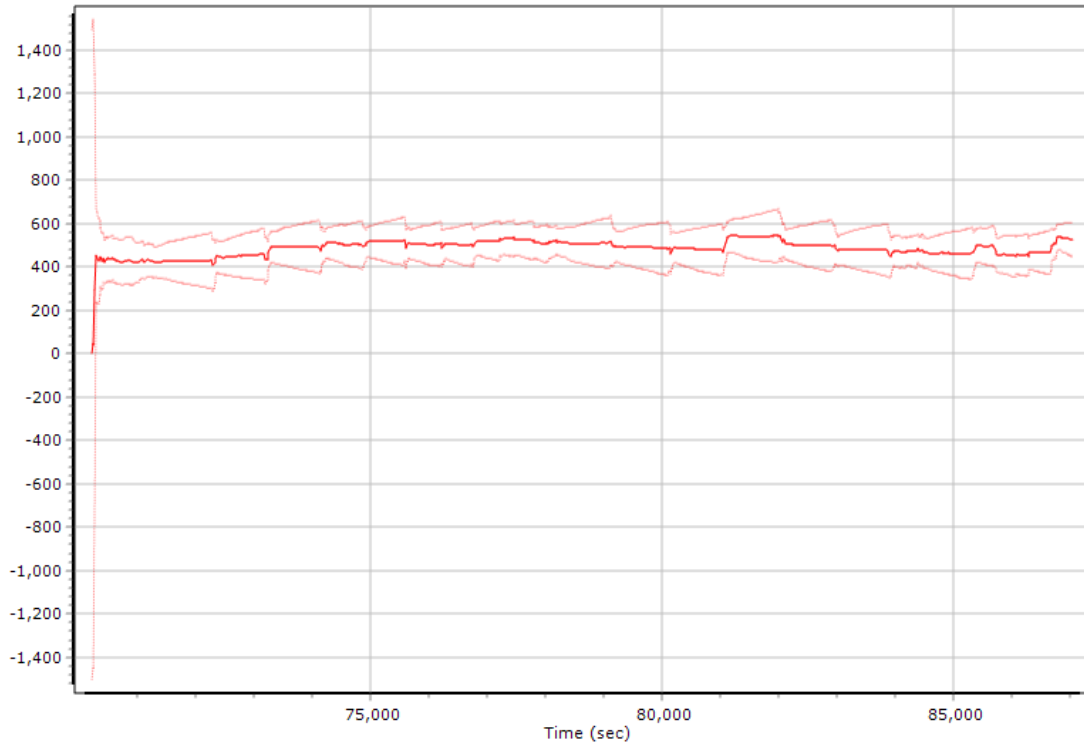
Baseline Distances (km):

Maximum: 57.73  
 Minimum: 0.46  
 Average: 24.2  
 First Epoch: 18.3  
 Last Epoch: 18.3

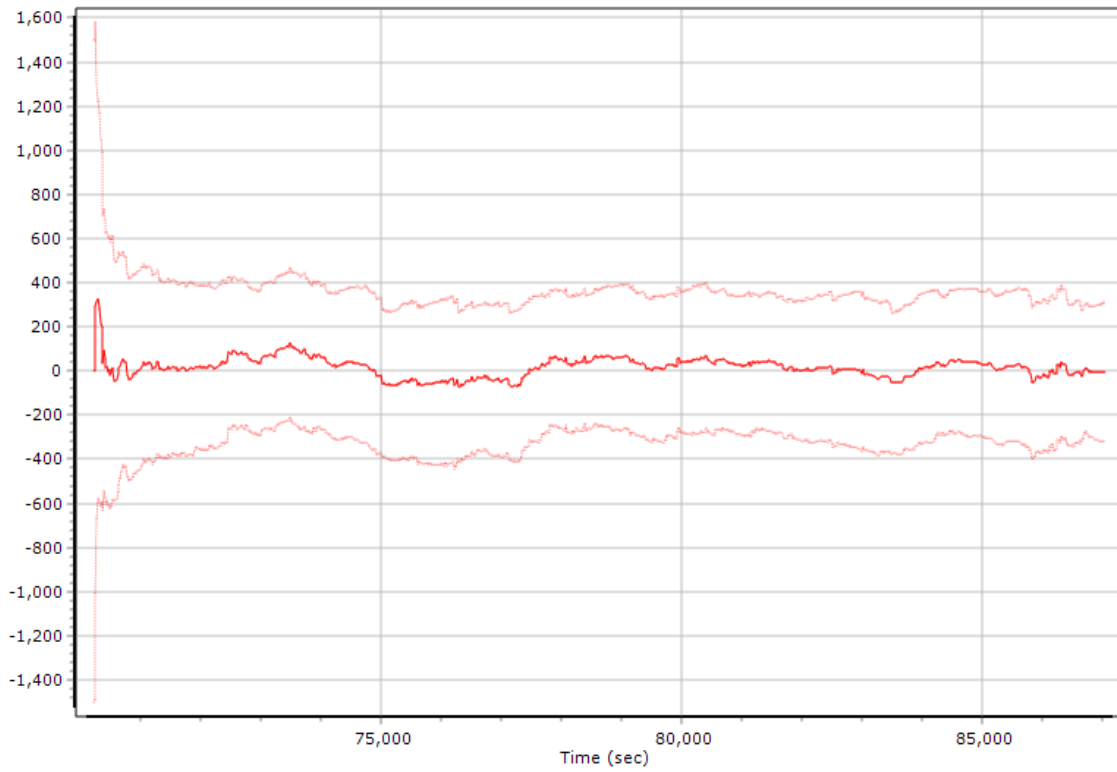
CORS Base Stations

Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
DOBS	N36°25'31.54122"	W80°43'11.73524"	339.304	N36°25'31.54118"	W80°43'11.73533"	339.301
WVLE	N37°49'20.23017"	W80°25'18.58193"	655.2	N37°49'20.23001"	W80°25'18.58200"	655.203
WVGB	N38°25'48.45389"	W79°49'01.31999"	811.18	N38°25'48.45371"	W79°49'01.32002"	811.171
WVAT	N37°25'42.67838"	W81°04'04.40387"	704.674	N37°25'42.67826"	W81°04'04.40404"	704.678
UVFM	N37°52'43.49361"	W78°41'37.27181"	512.944	N37°52'43.49355"	W78°41'37.27157"	512.941
LS04	N37°21'47.16695"	W79°57'26.99410"	324.139			

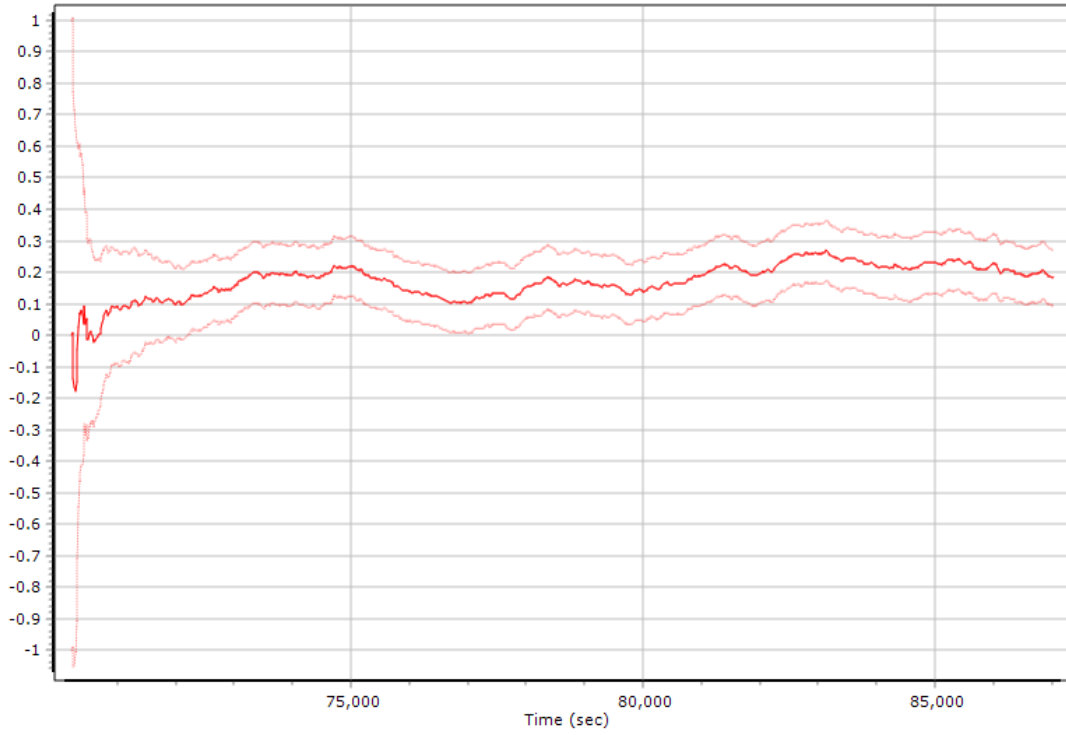
**x accelerometer bias (micro-g)**



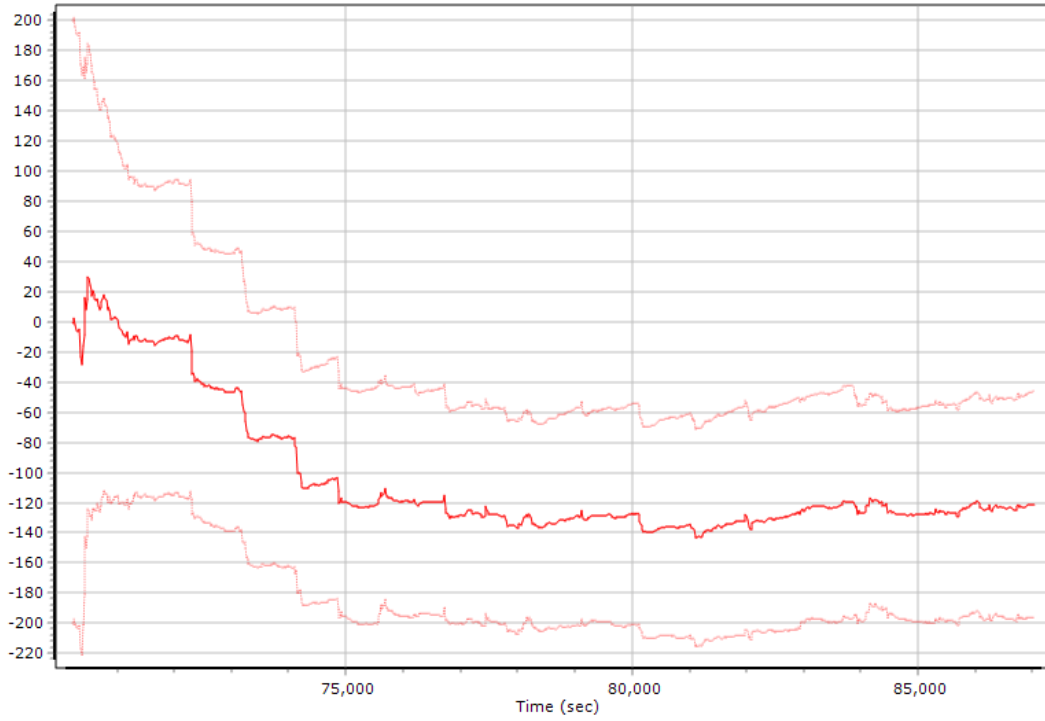
**x accelerometer scale error (ppm)**



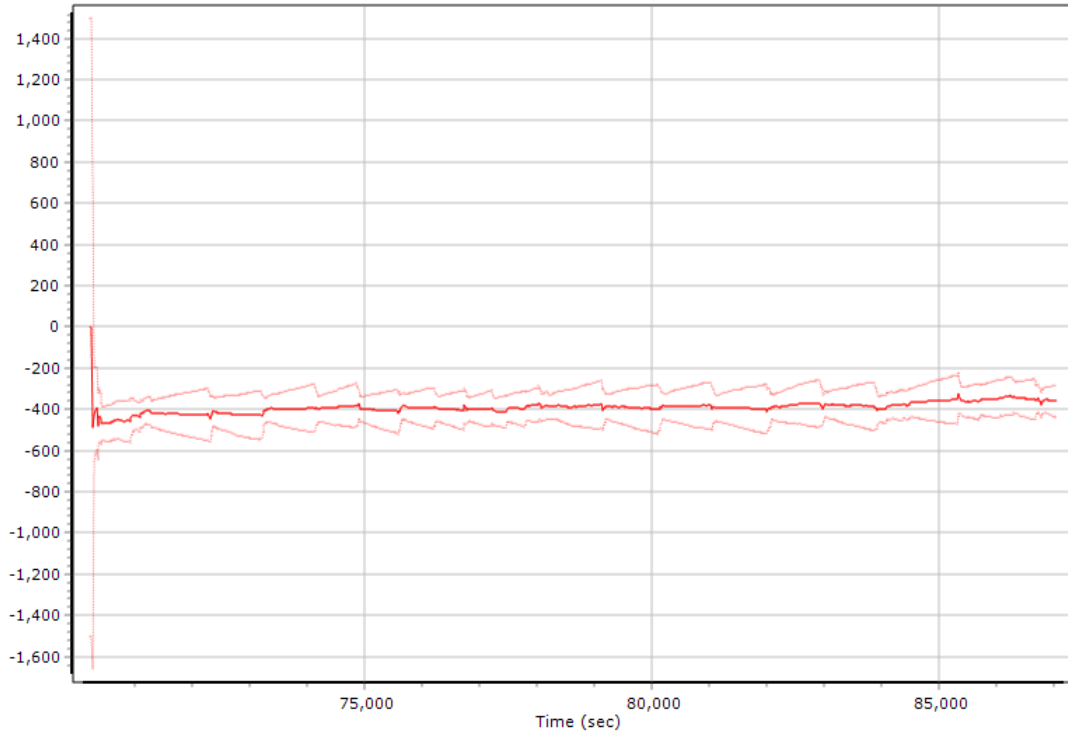
**x gyro bias (deg/hr)**



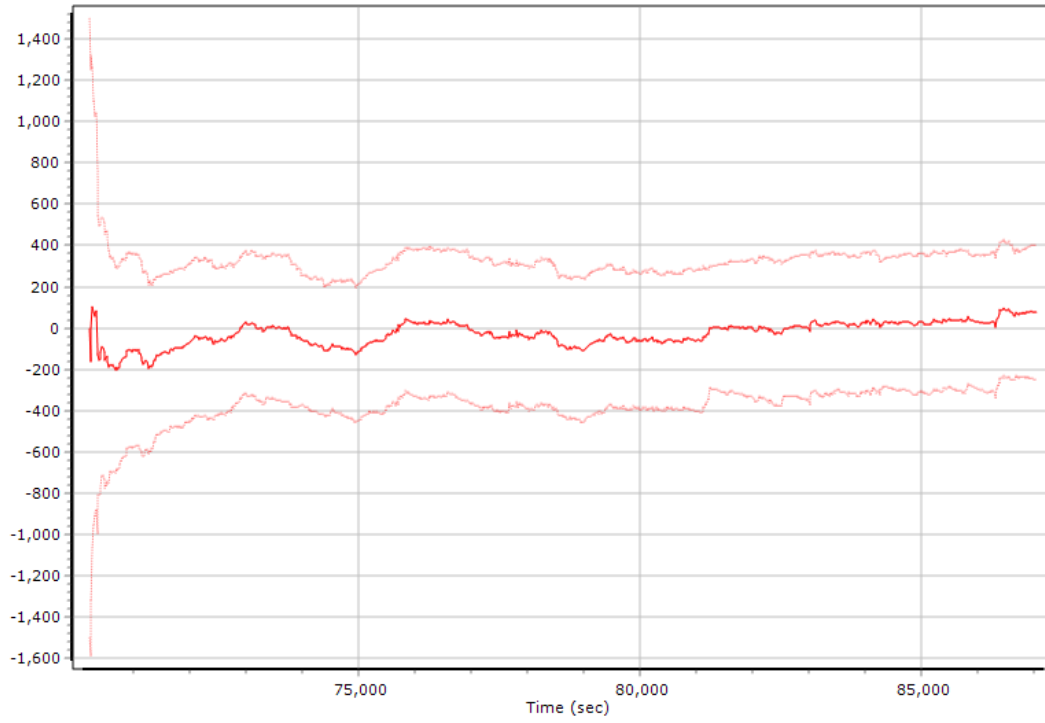
**x gyro scale error (ppm)**



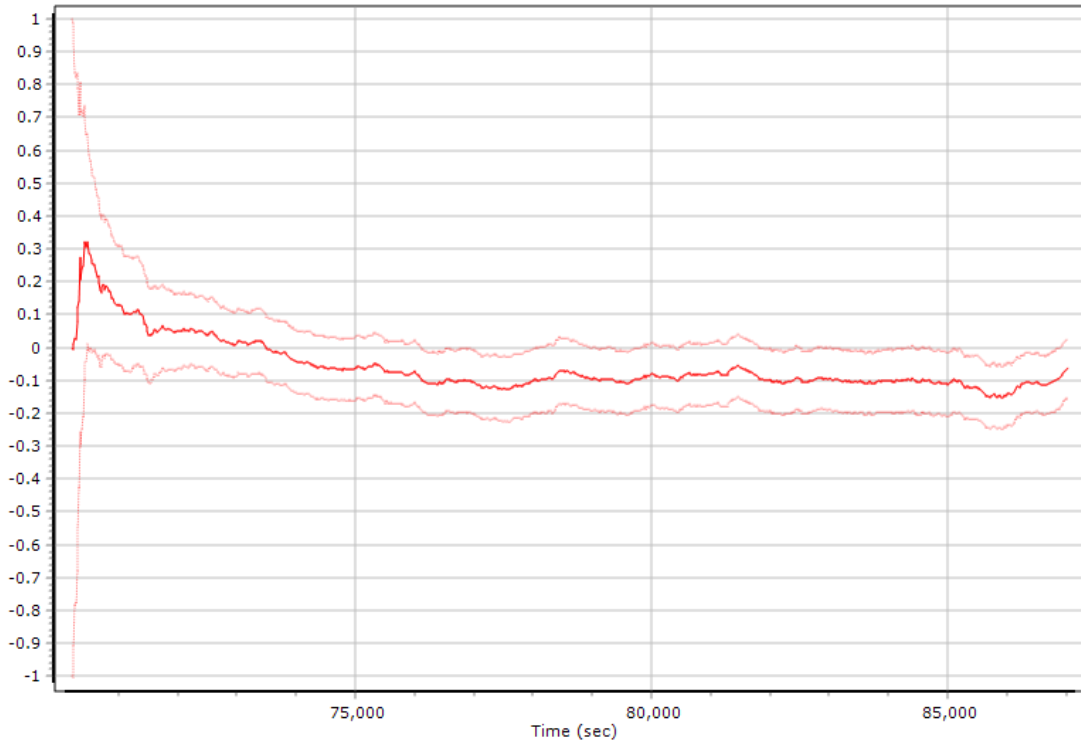
**y accelerometer bias (micro-g)**



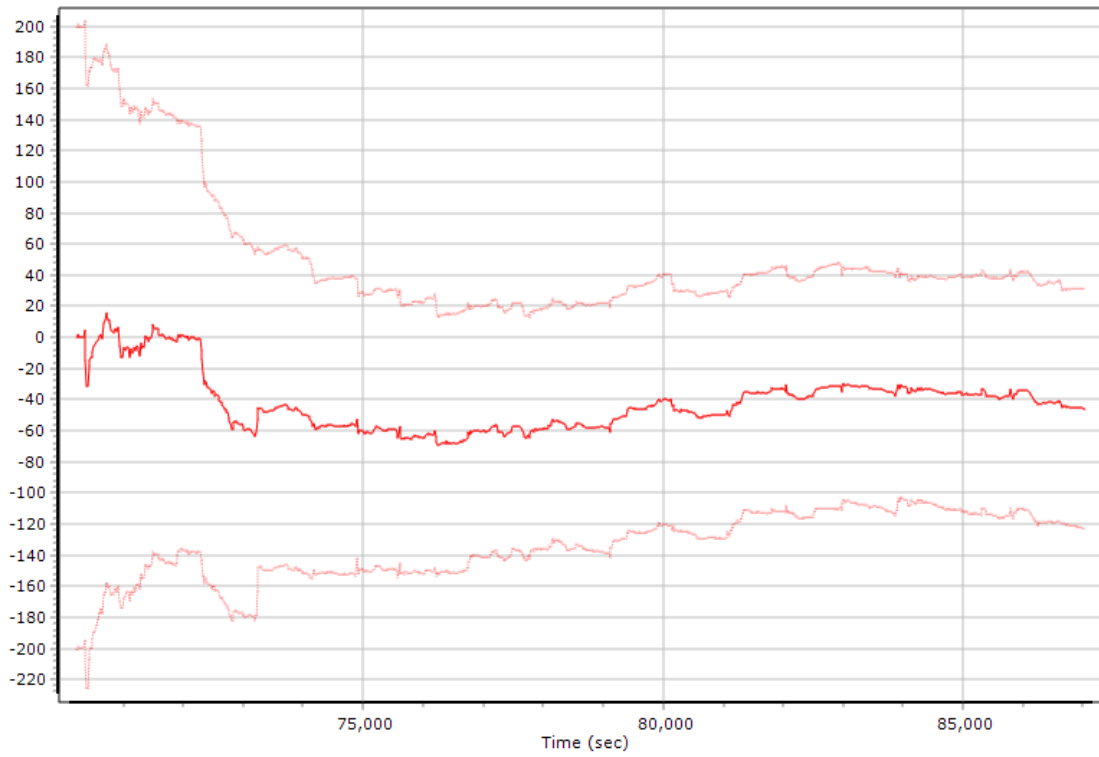
**y accelerometer scale error (ppm)**



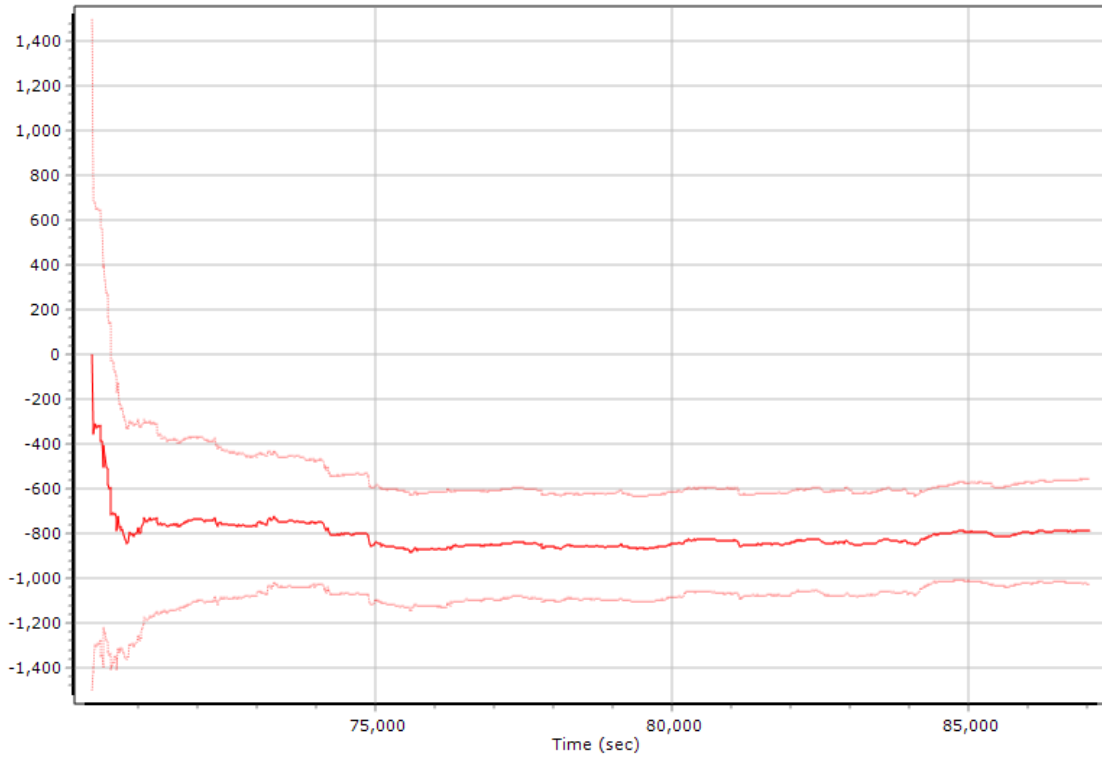
**y gyro bias (deg/hr)**



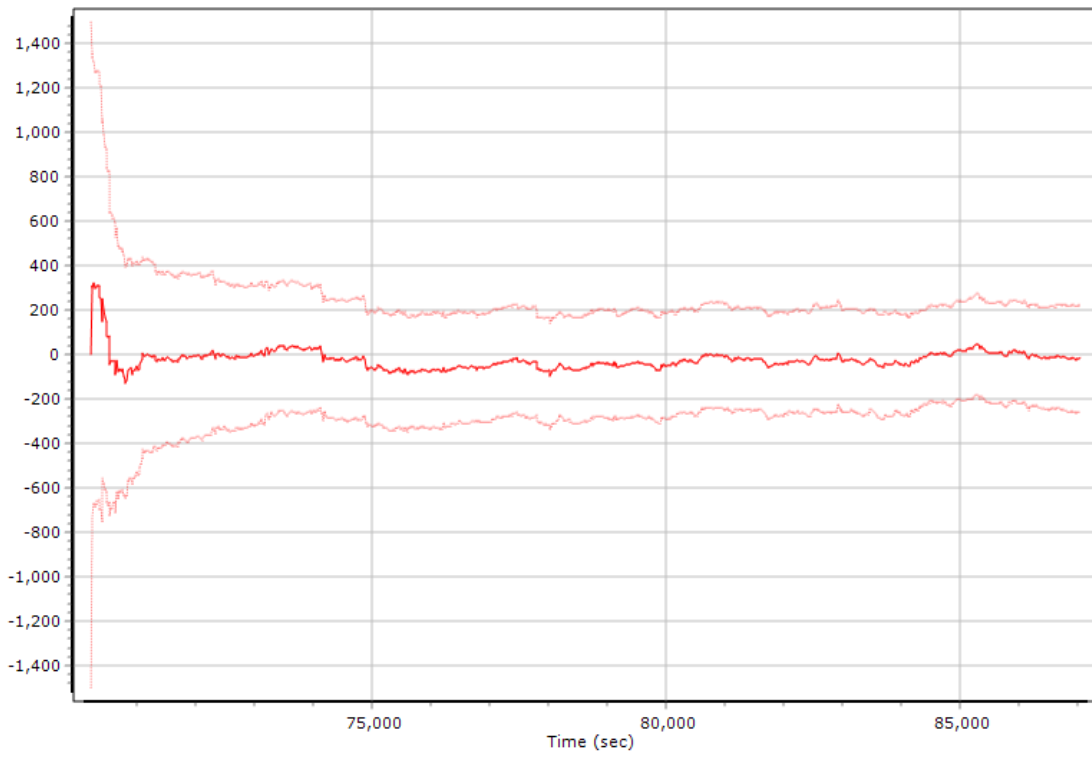
**y gyro scale error (ppm)**



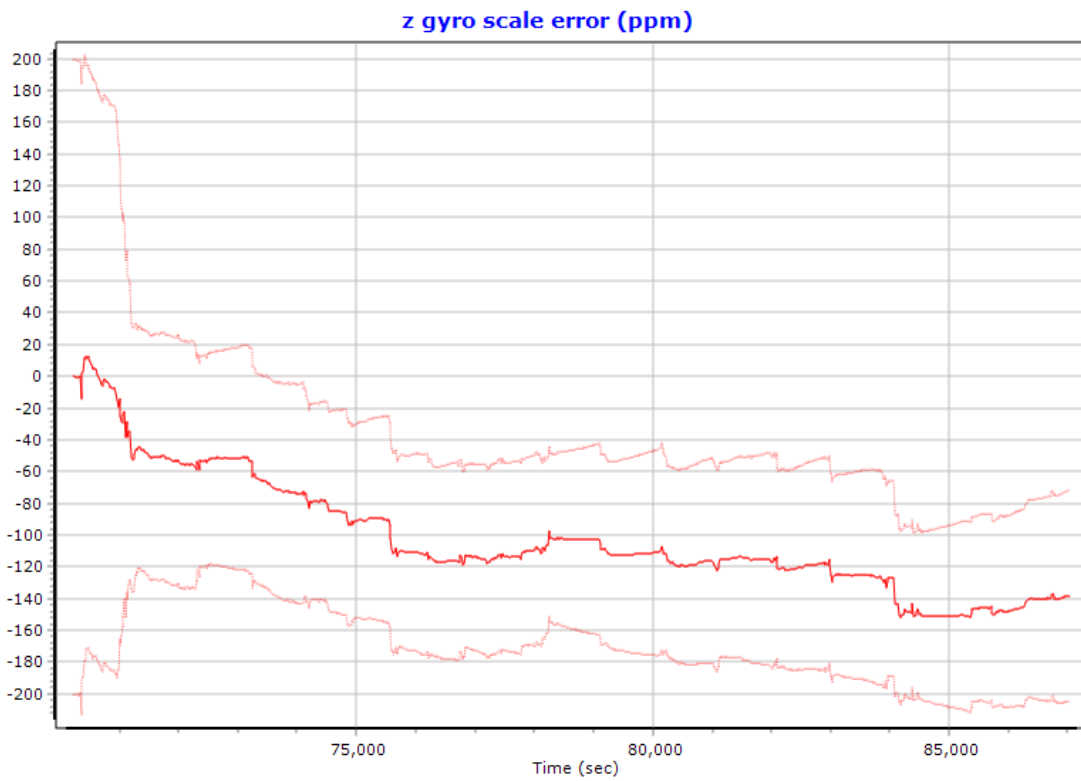
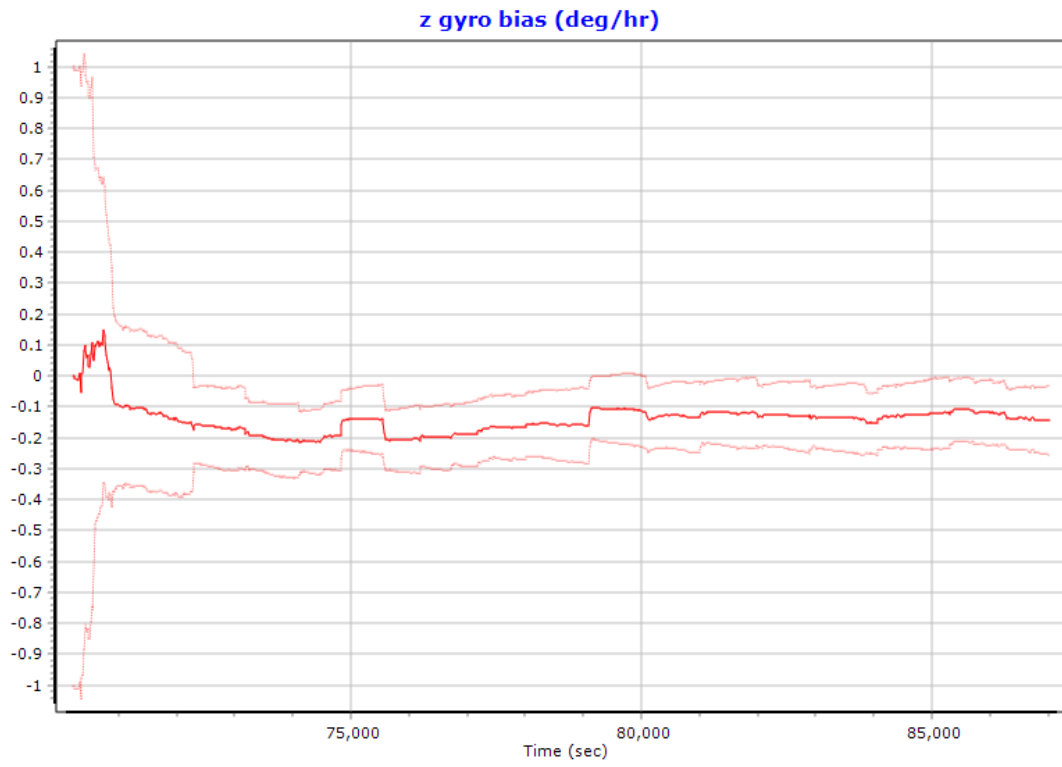
**z accelerometer bias (micro-g)**



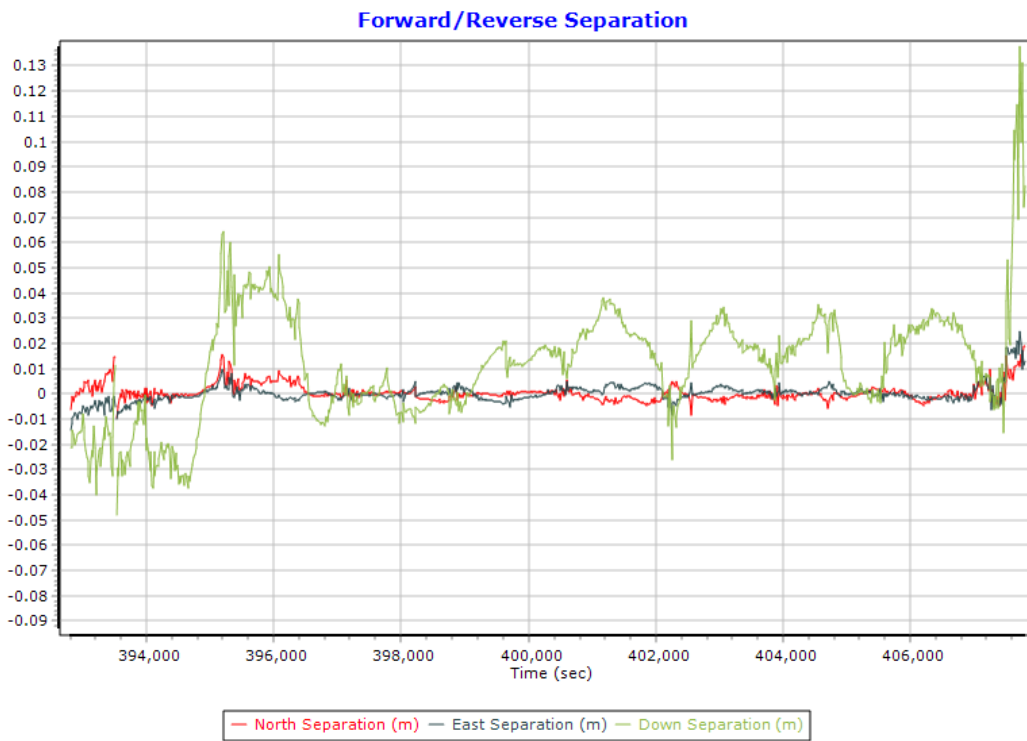
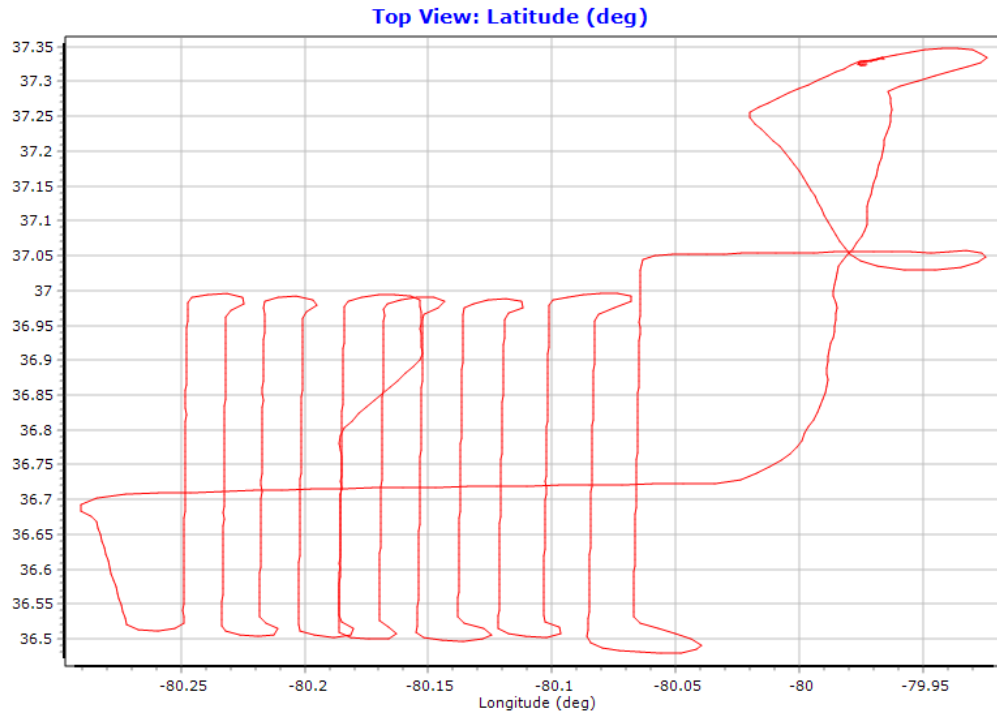
**z accelerometer scale error (ppm)**



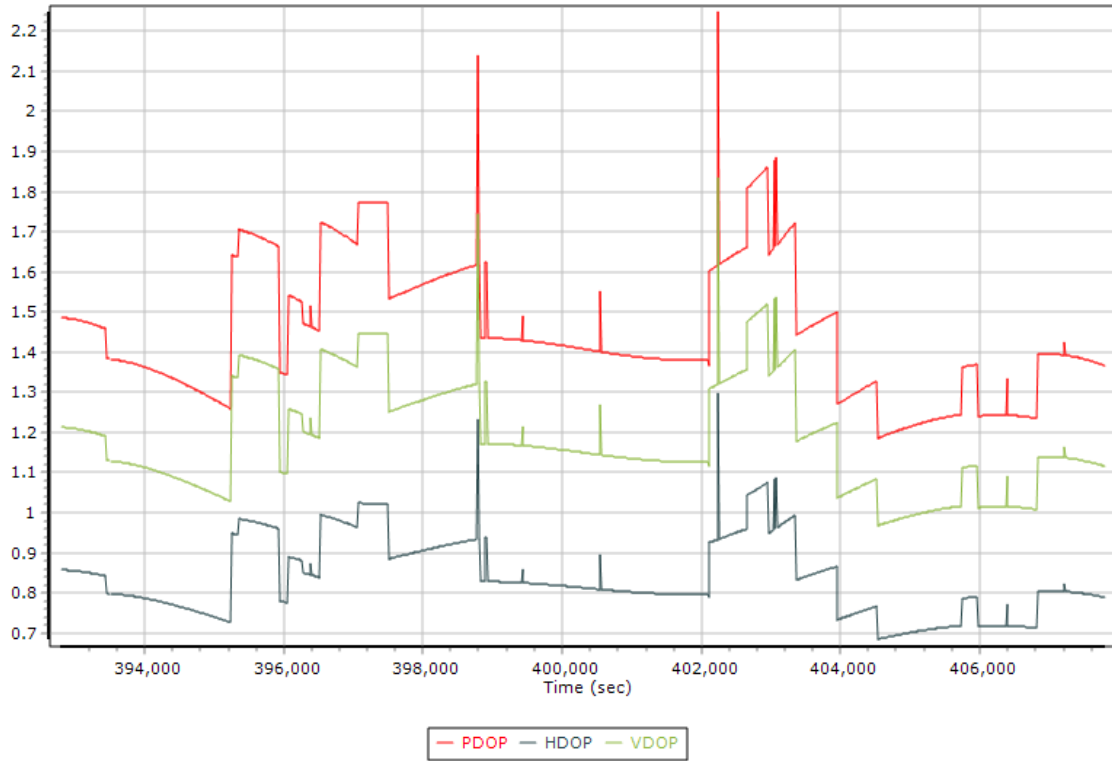




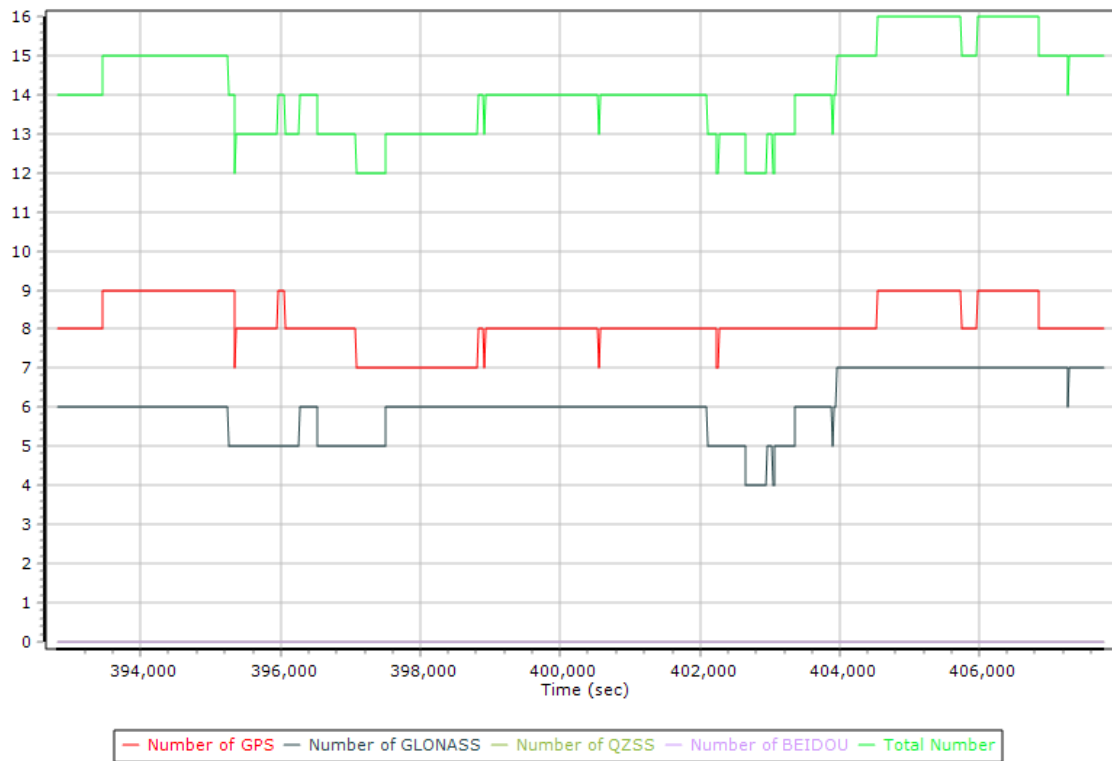
**DECEMBER 07, 2017**



### DOP



### Number of SVs in solution



## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20171207\_VA

Solution Type: IN-Fusion SmartBase

Fixed: 15016	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 15033  
No processed position: 17

Fwd/Rev Separation RMS Values (m):

North: 0.003  
East: 0.004  
Height: 0.025

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 7510 occurrences

North: 0.002  
East: 0.002  
Height: 0.016

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 99.765  
0.10 - 0.30 m: 0.235  
0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

DOP over Tol: 1.45%

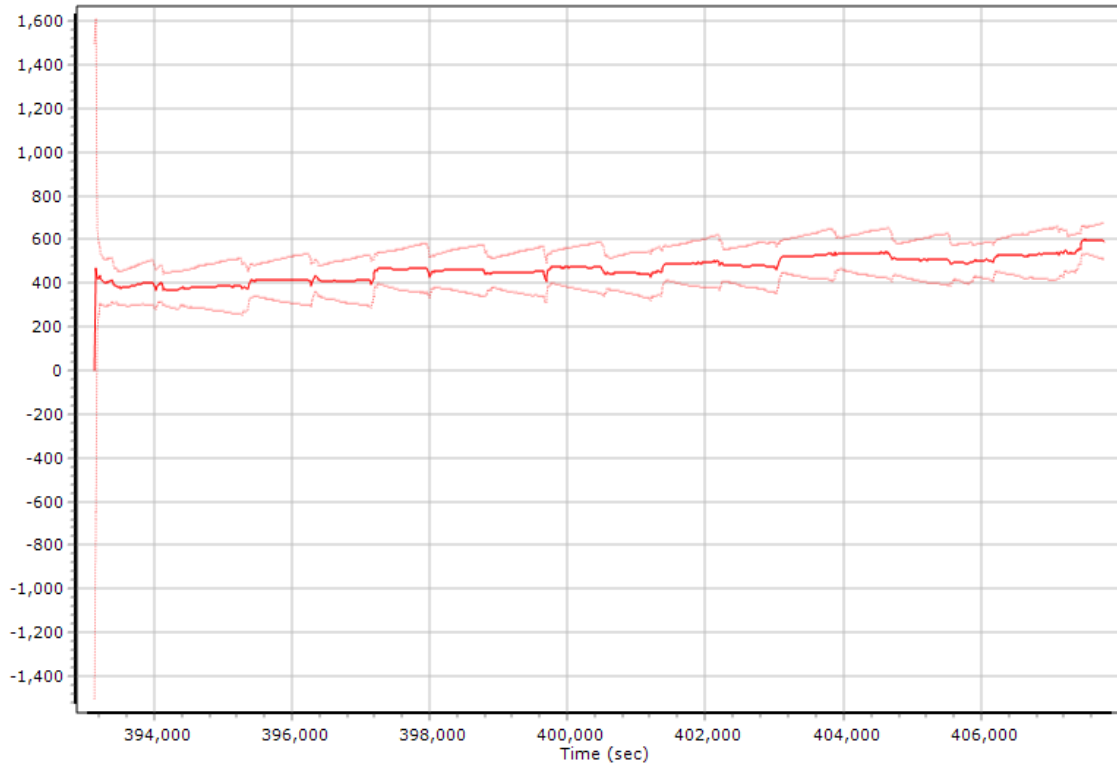
Baseline Distances (km):

Maximum: 59.11  
Minimum: 0.33  
Average: 22.96  
First Epoch: 55.91  
Last Epoch: 55.71

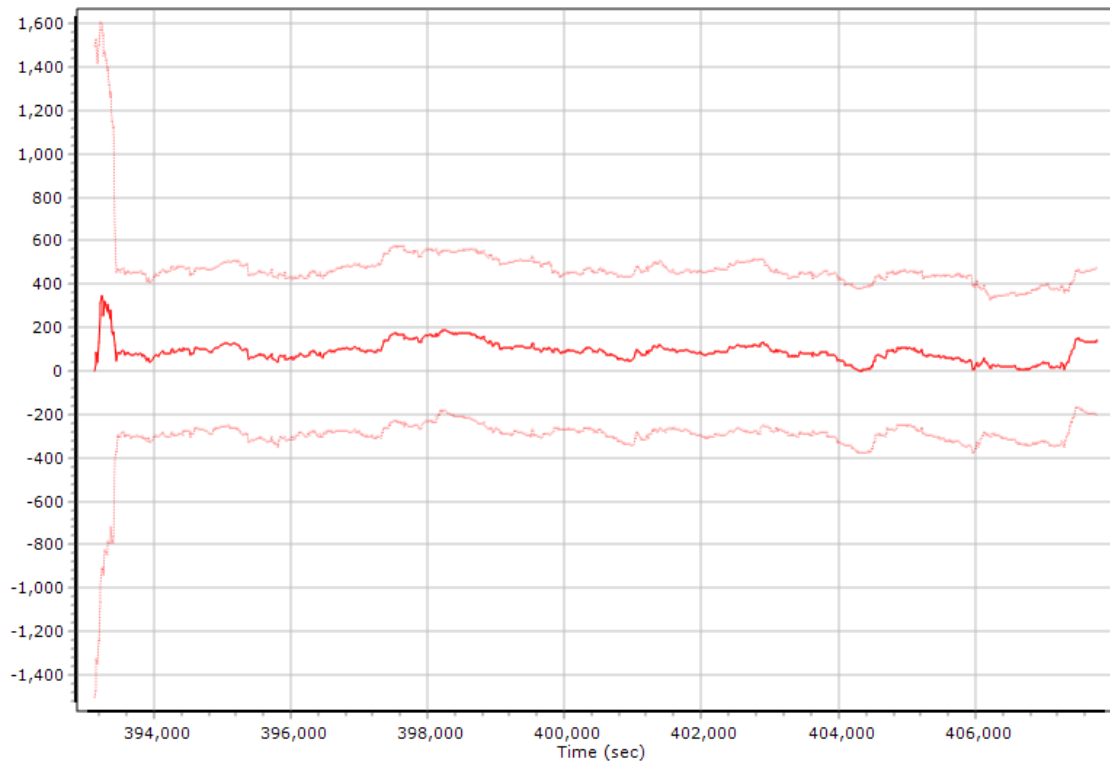
CORS Base Stations

Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
NCWC	N36°22'19.71490"	W80°11'05.64907"	274.974	N36°22'19.71468"	W80°11'05.64902"	275.09
NCRE	N36°21'42.74193"	W79°39'56.56341"	233.465	N36°21'42.74163"	W79°39'56.56339"	233.473
LS04	N37°21'47.16695"	W79°57'26.99410"	324.139			
LOYH	N37°18'09.77783"	W79°19'28.19953"	204.445	N37°18'09.77786"	W79°19'28.19948"	204.437
DOBS	N36°25'31.54122"	W80°43'11.73524"	339.304	N36°25'31.54112"	W80°43'11.73540"	339.307

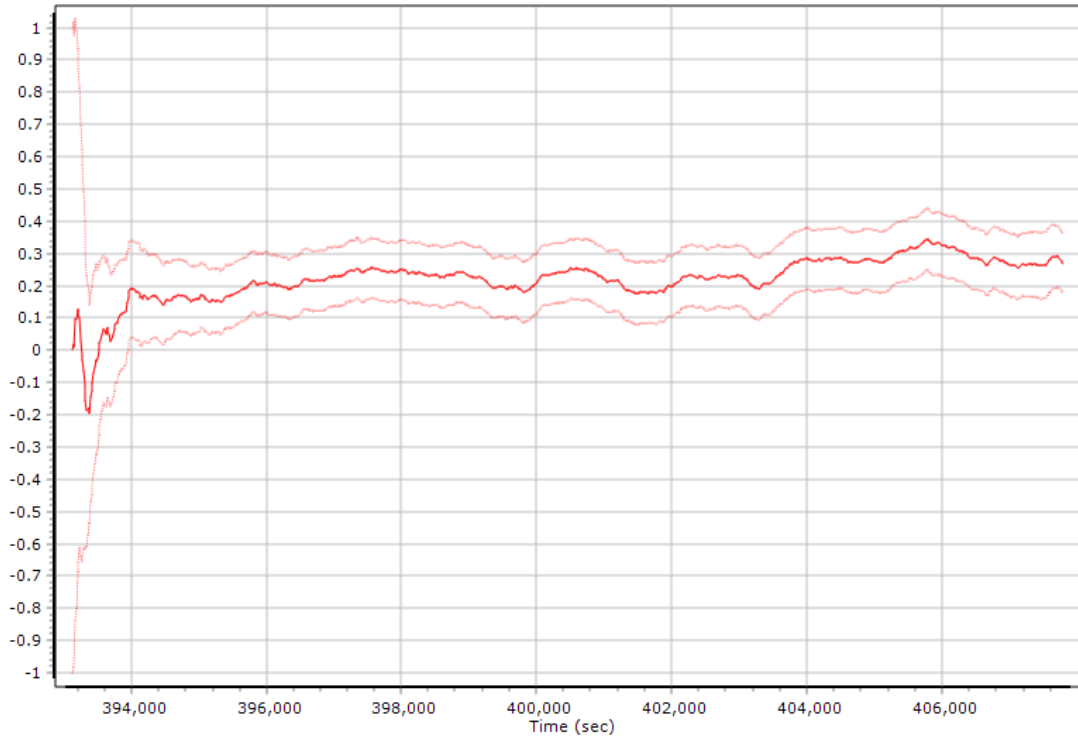
**x accelerometer bias (micro-g)**



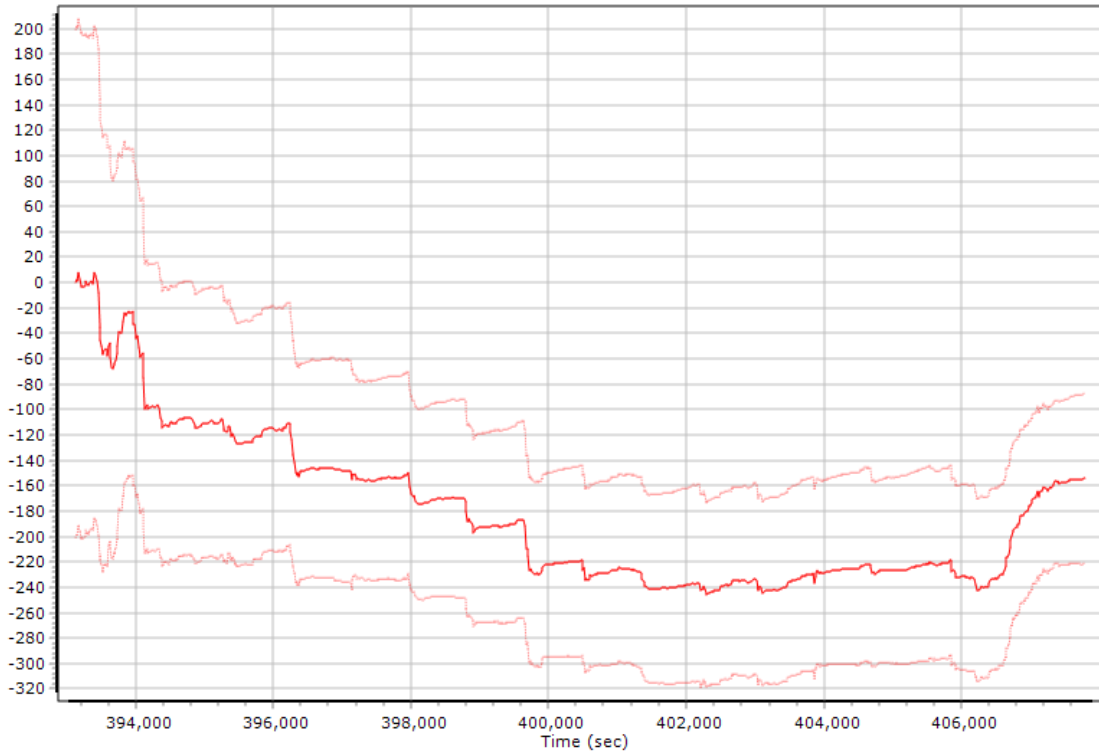
**x accelerometer scale error (ppm)**



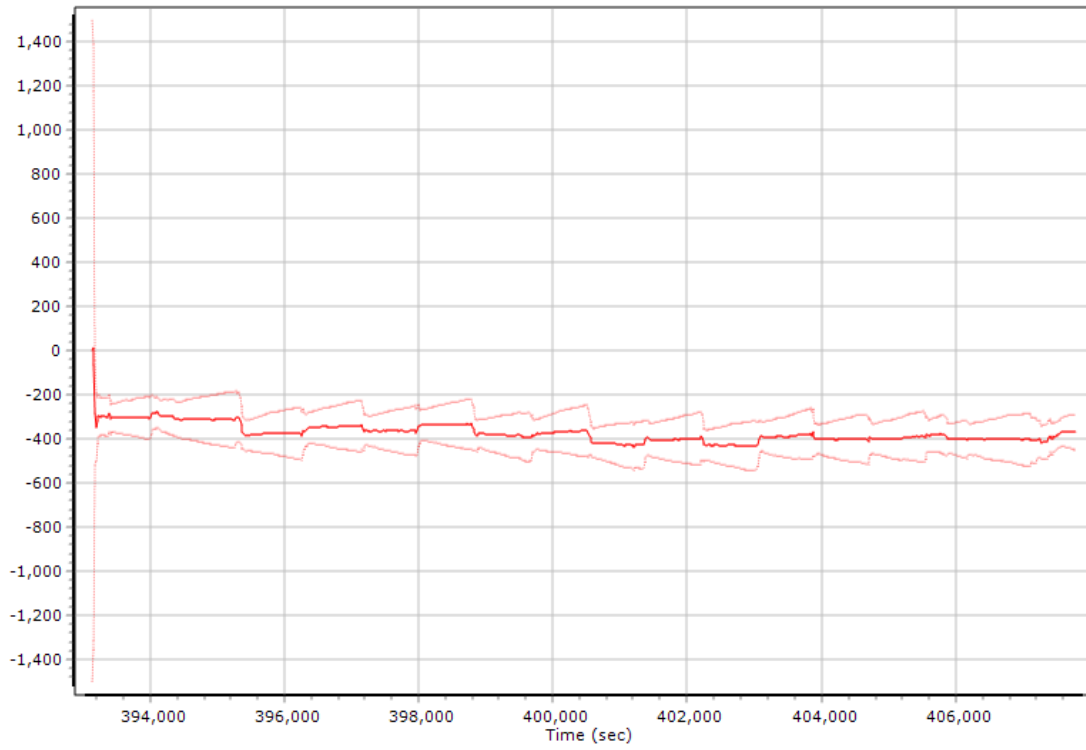
**x gyro bias (deg/hr)**



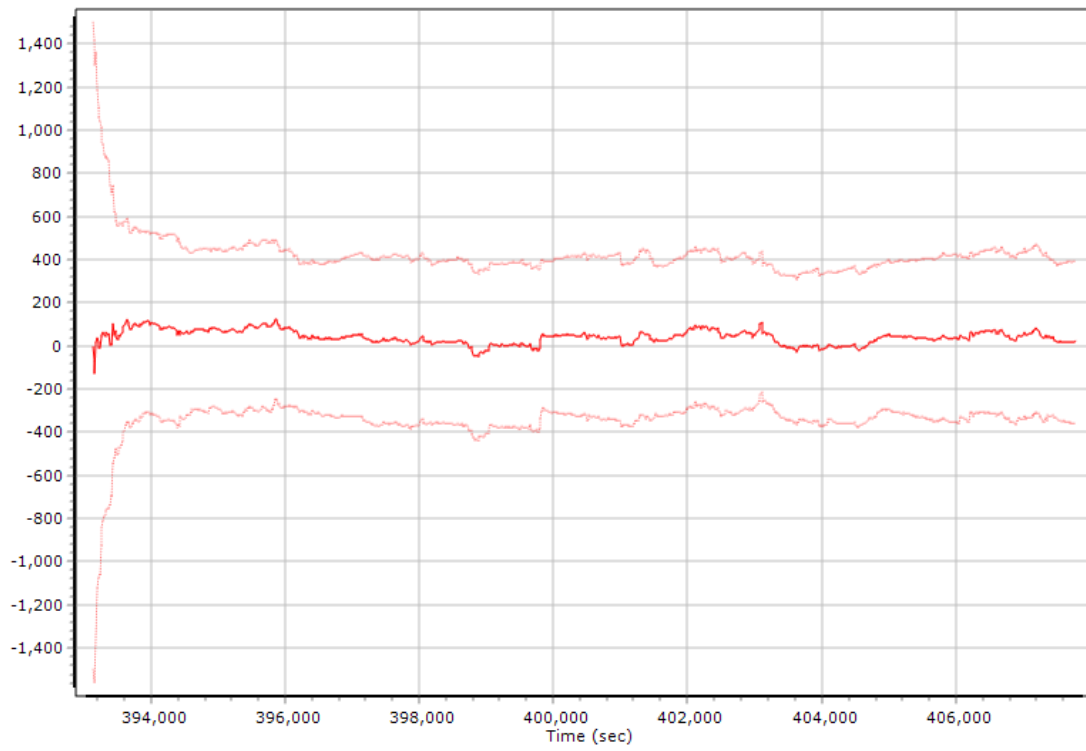
**x gyro scale error (ppm)**



**y accelerometer bias (micro-g)**

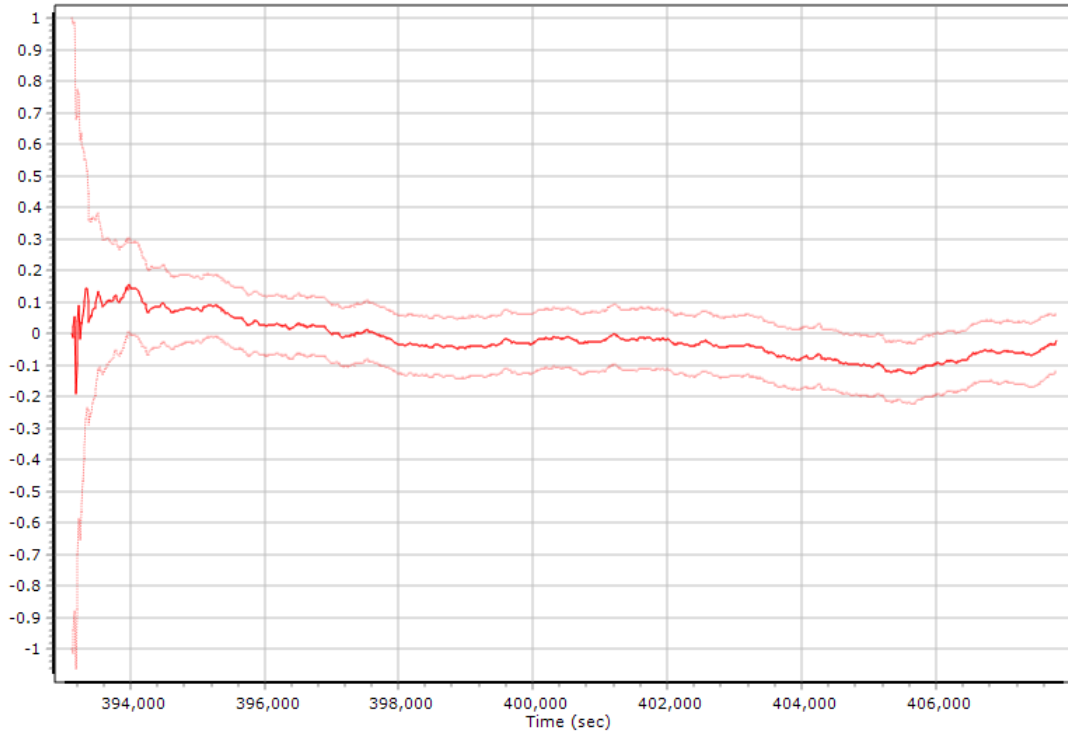


**y accelerometer scale error (ppm)**

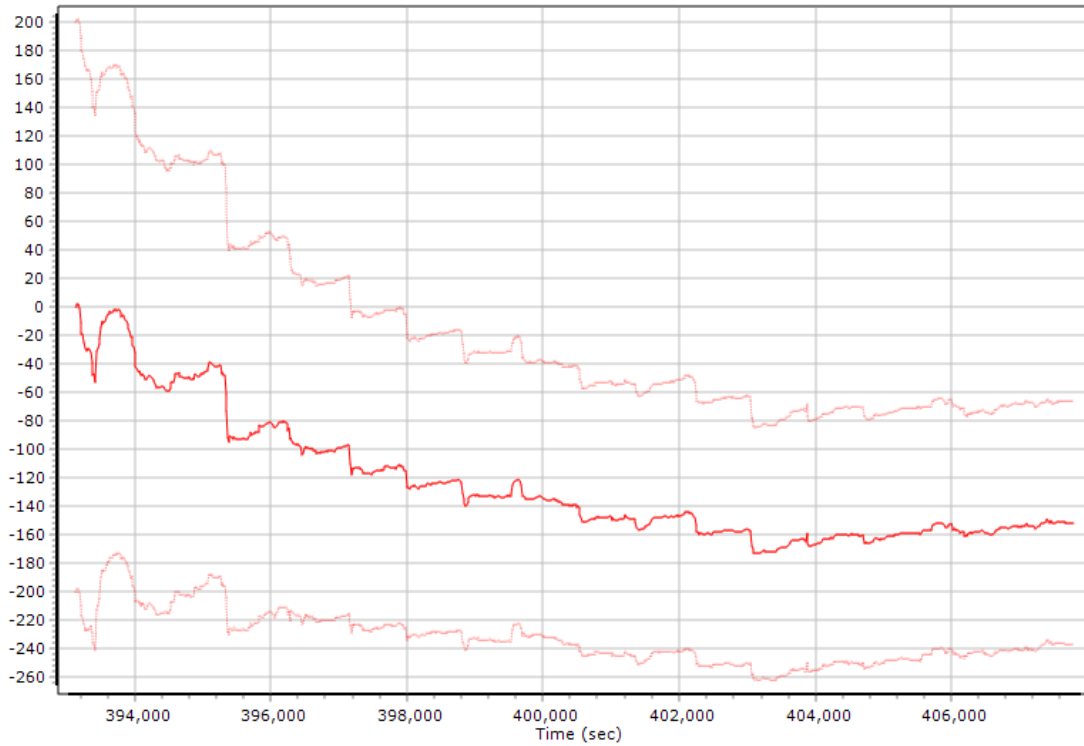




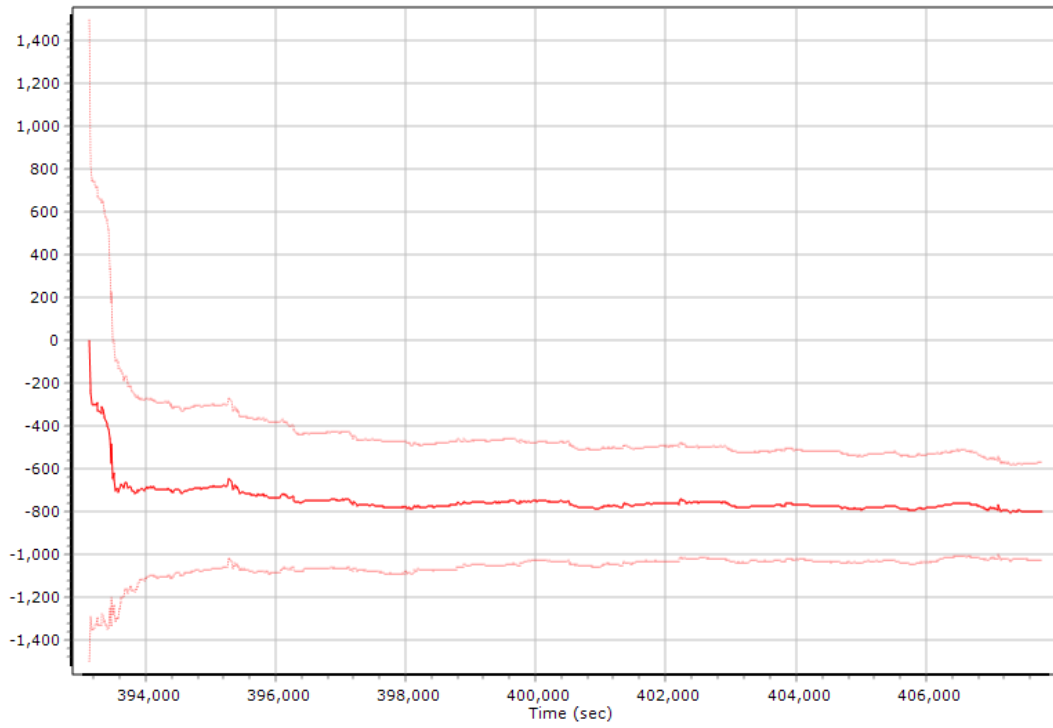
**y gyro bias (deg/hr)**



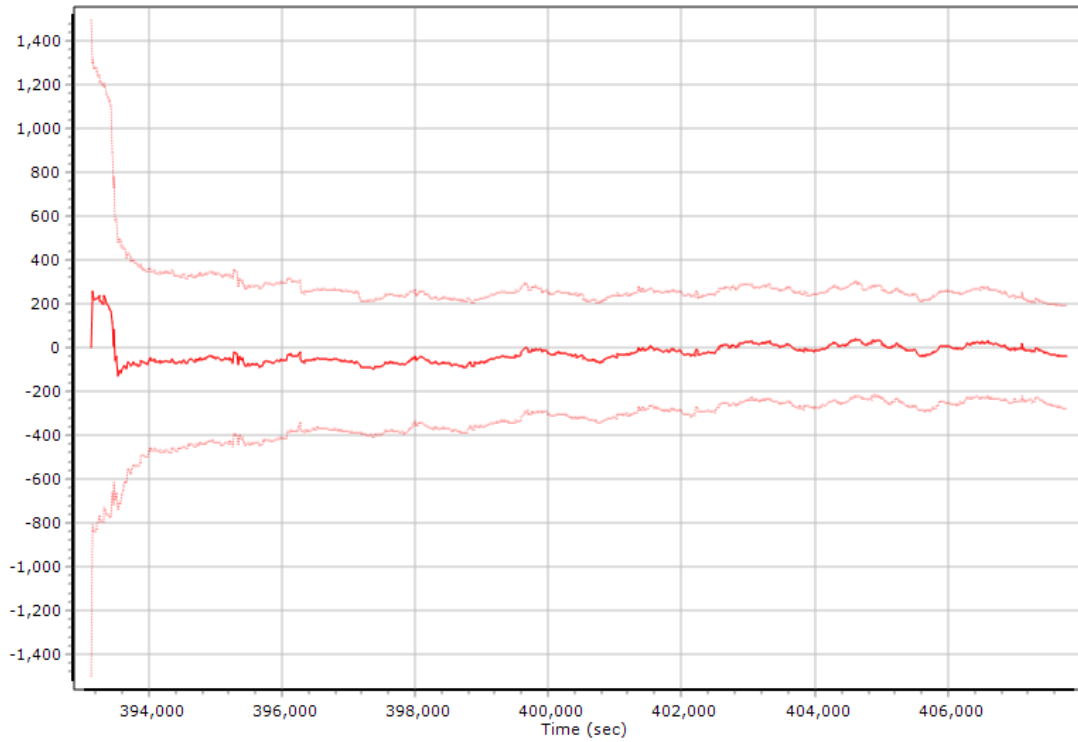
**y gyro scale error (ppm)**



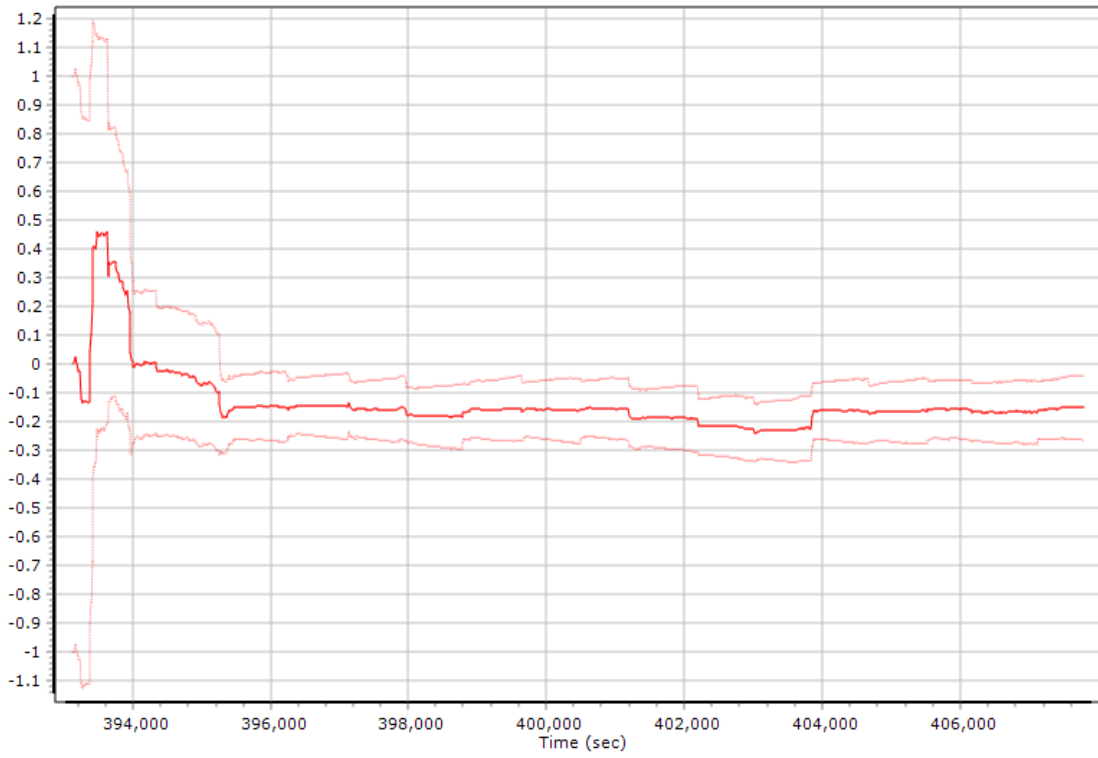
**z accelerometer bias (micro-g)**



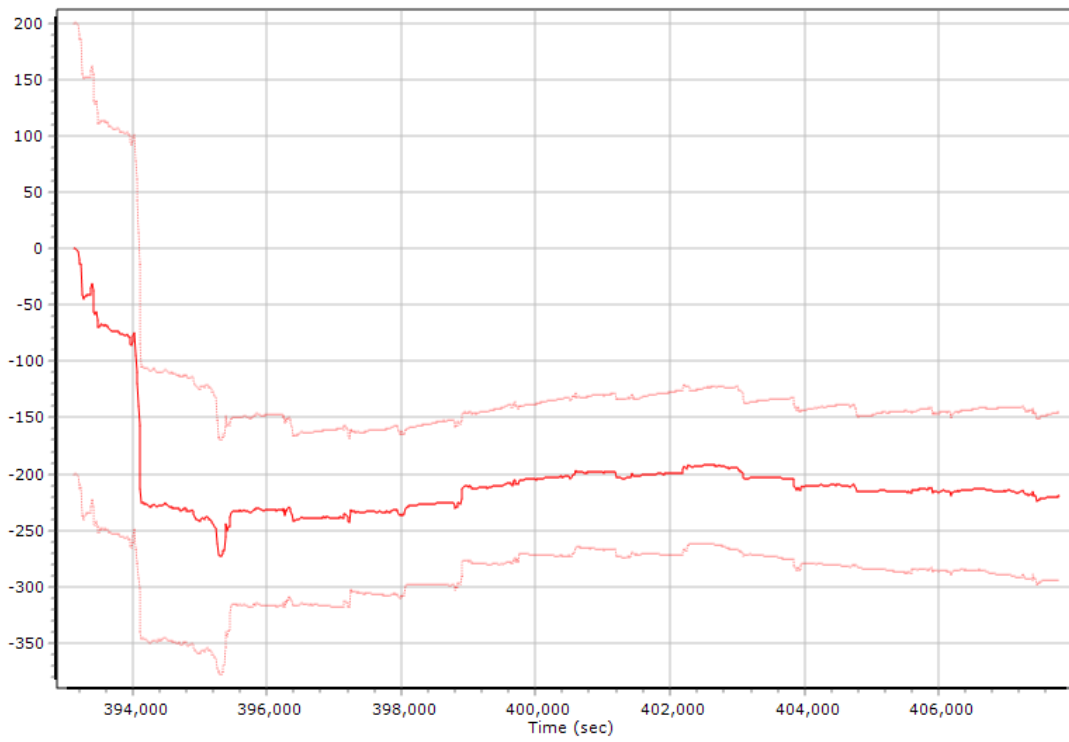
**z accelerometer scale error (ppm)**



**z gyro bias (deg/hr)**

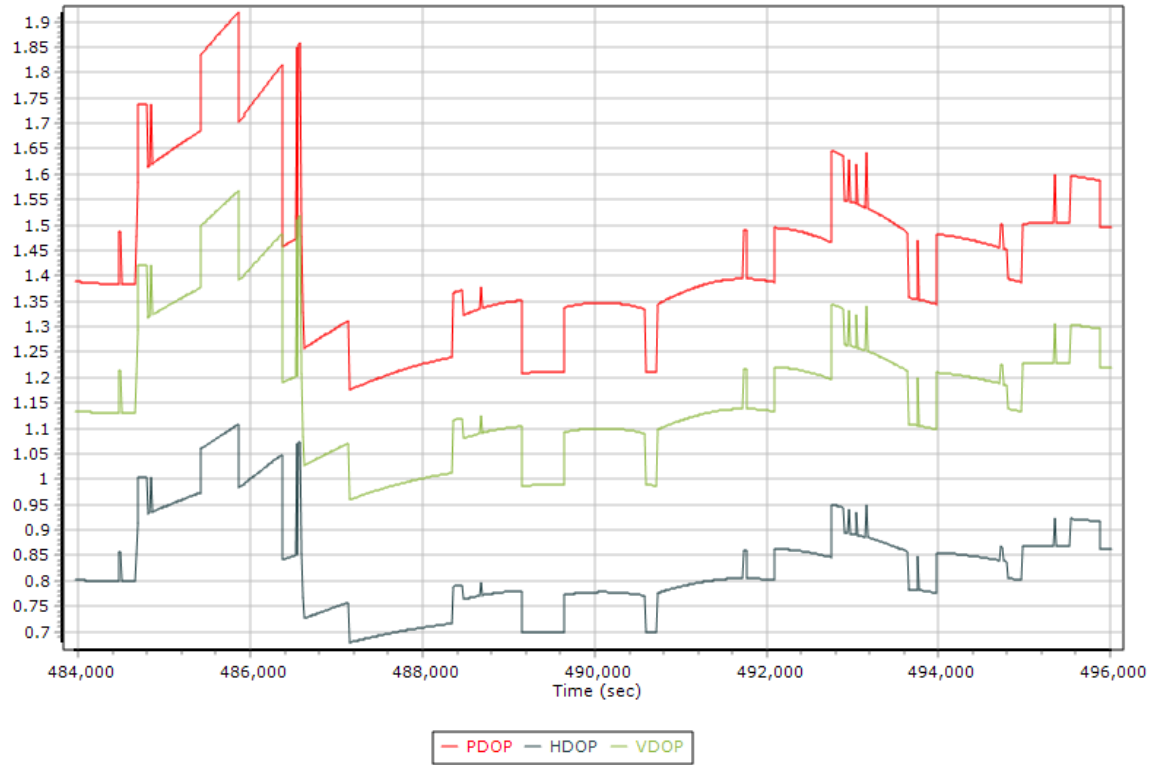


**z gyro scale error (ppm)**

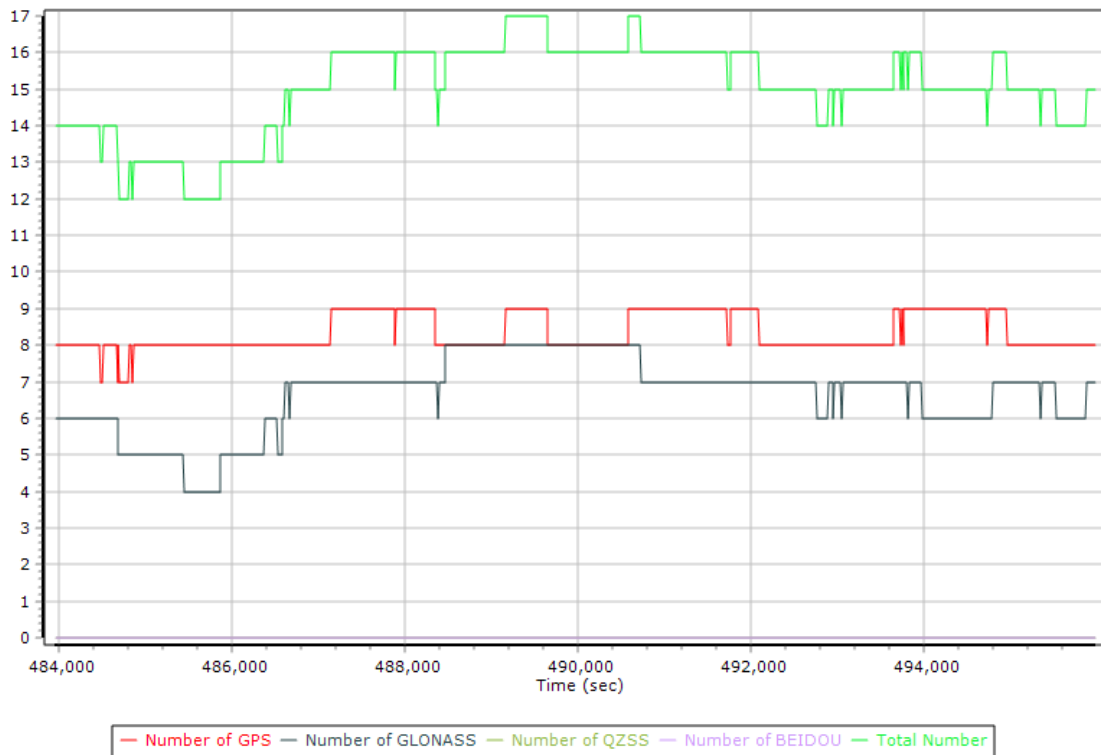




### DOP



### Number of SVs in solution



## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20171222\_VA\_A

Solution Type: IN-Fusion SmartBase

Fixed: 12058	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 12083  
No processed position: 25

Fwd/Rev Separation RMS Values (m):

North: 0.010  
East: 0.016  
Height: 0.090

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 6058 occurrences

North: 0.003  
East: 0.004  
Height: 0.055

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 96.881  
 0.10 - 0.30 m: 3.119  
 0.30 - 1.00 m: 0  
 1.00 - 5.00 m: 0  
 5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

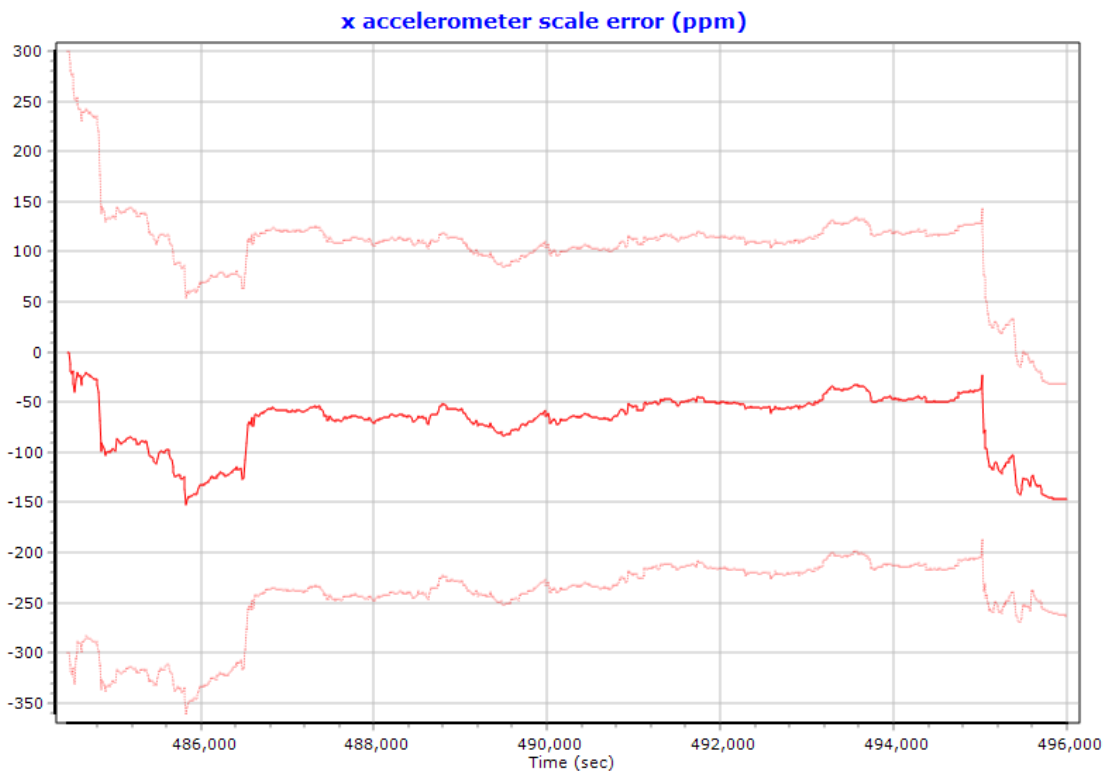
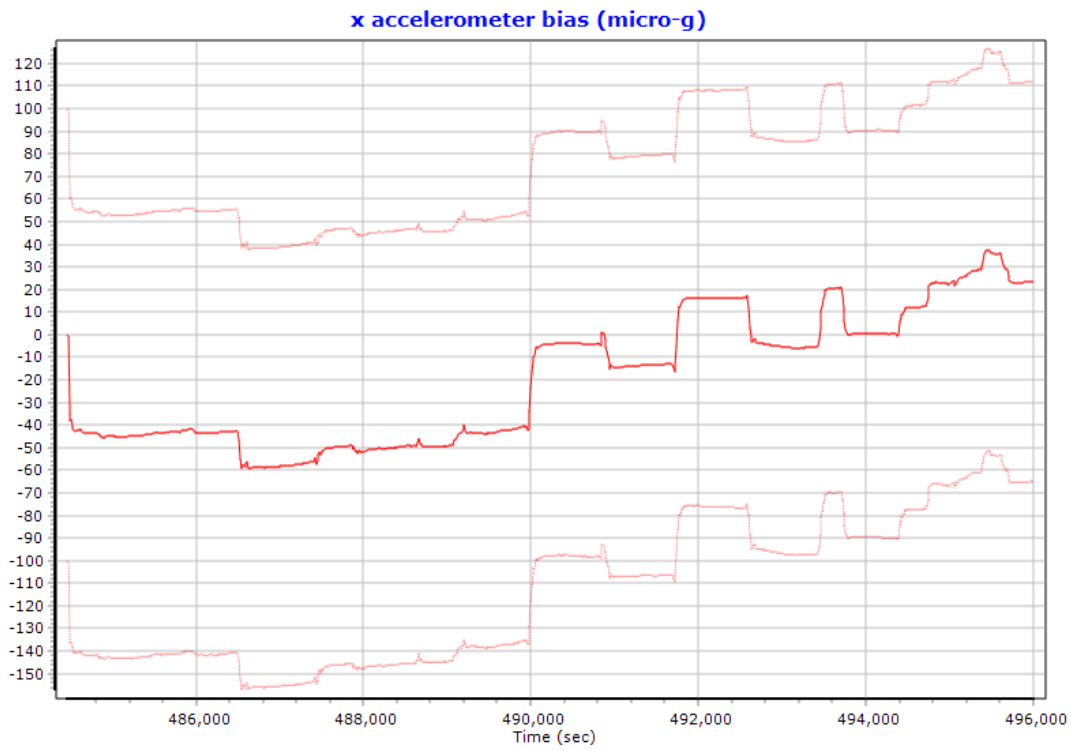
DOP over Tol: 1.44%

Baseline Distances (km):

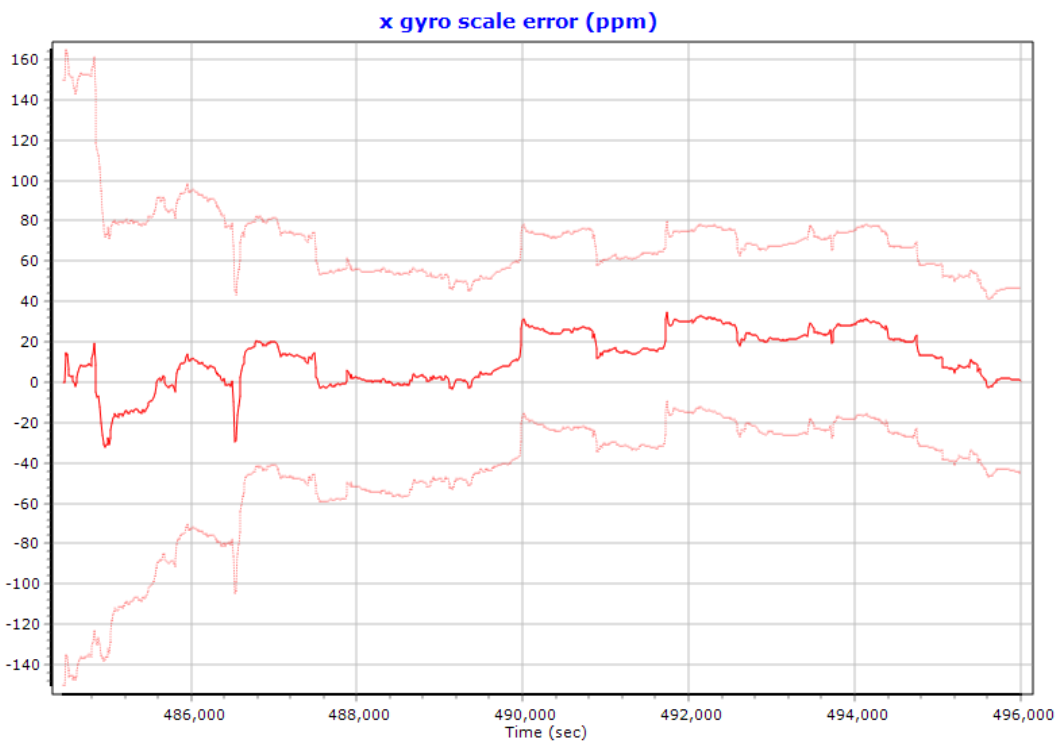
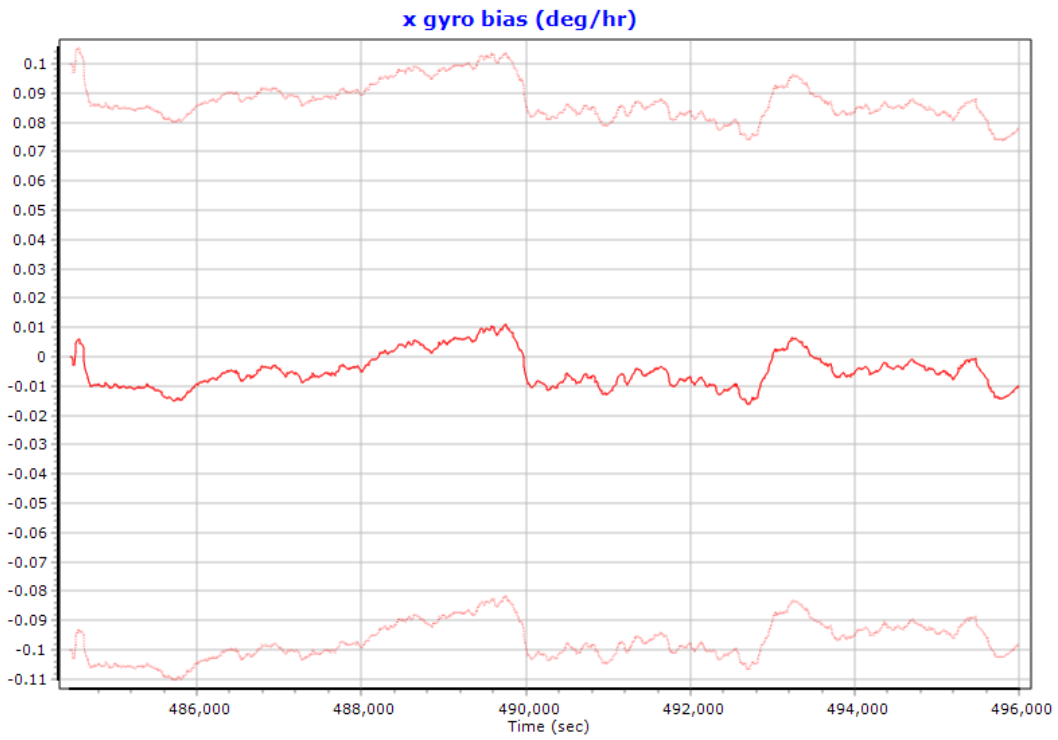
Maximum: 59.06  
 Minimum: 0.48  
 Average: 30.94  
 First Epoch: 51.68  
 Last Epoch: 51.68

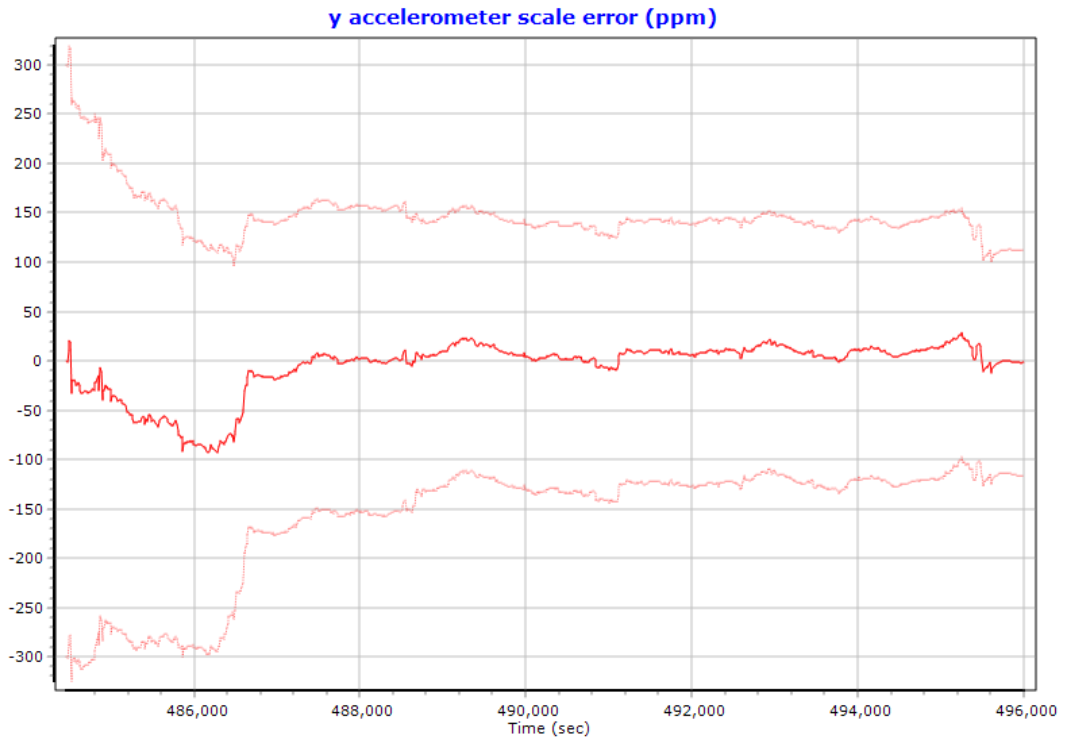
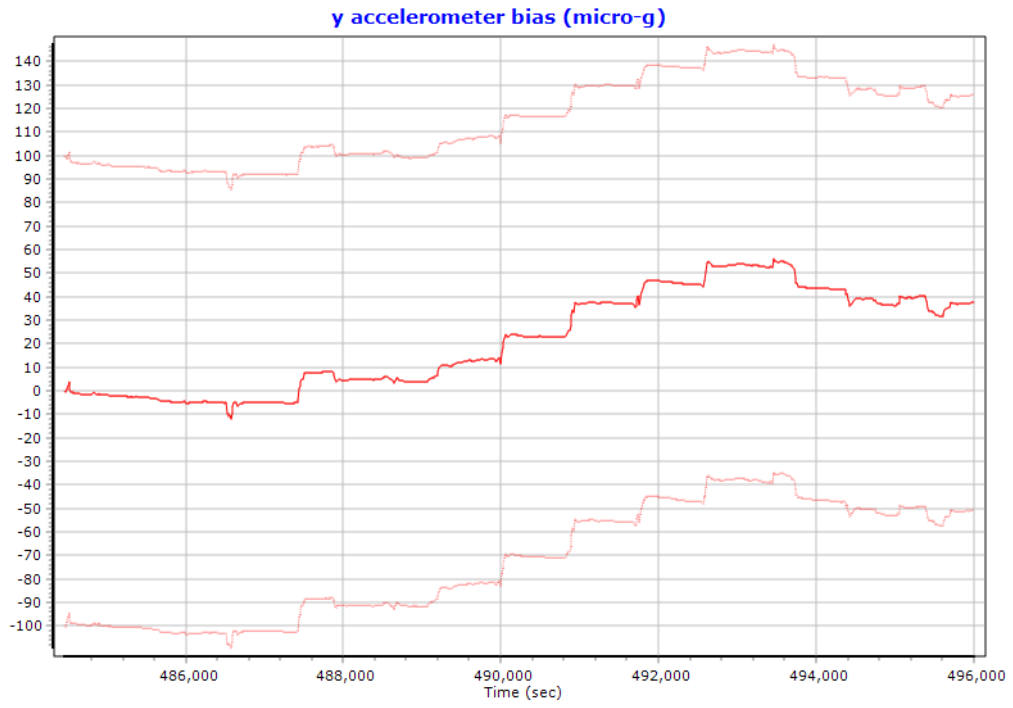
CORS Base Stations

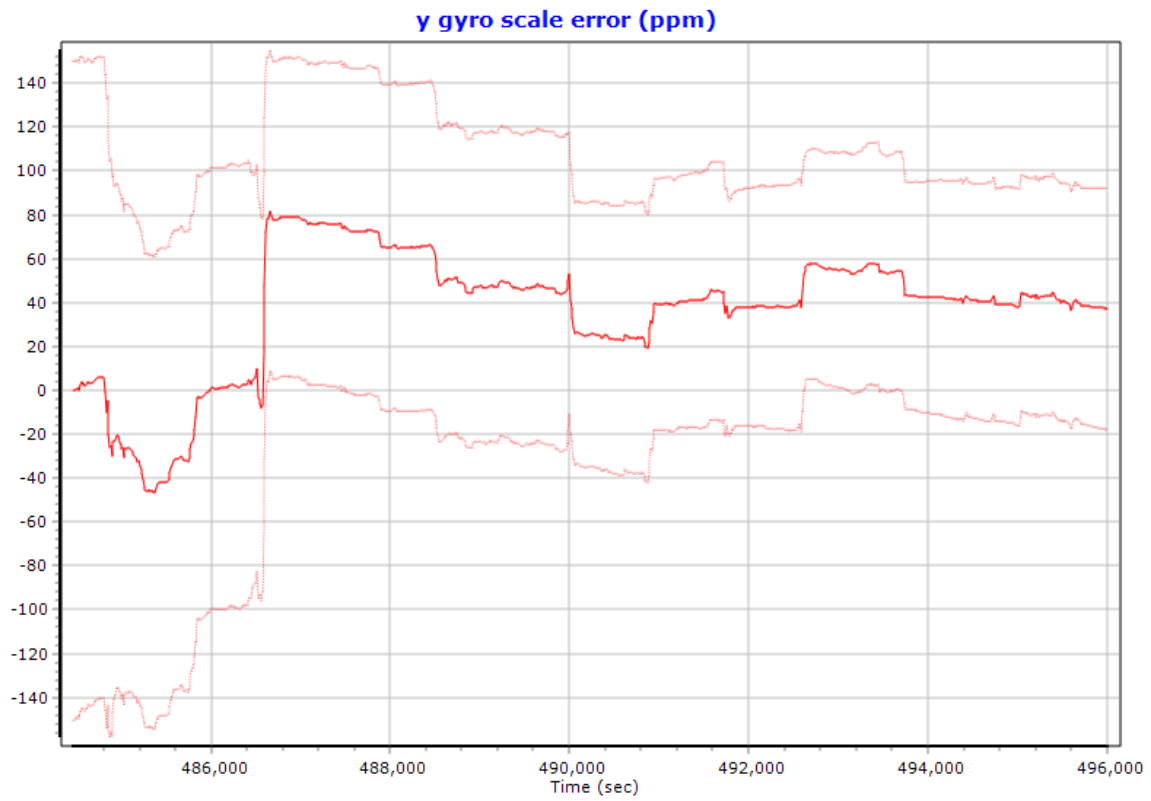
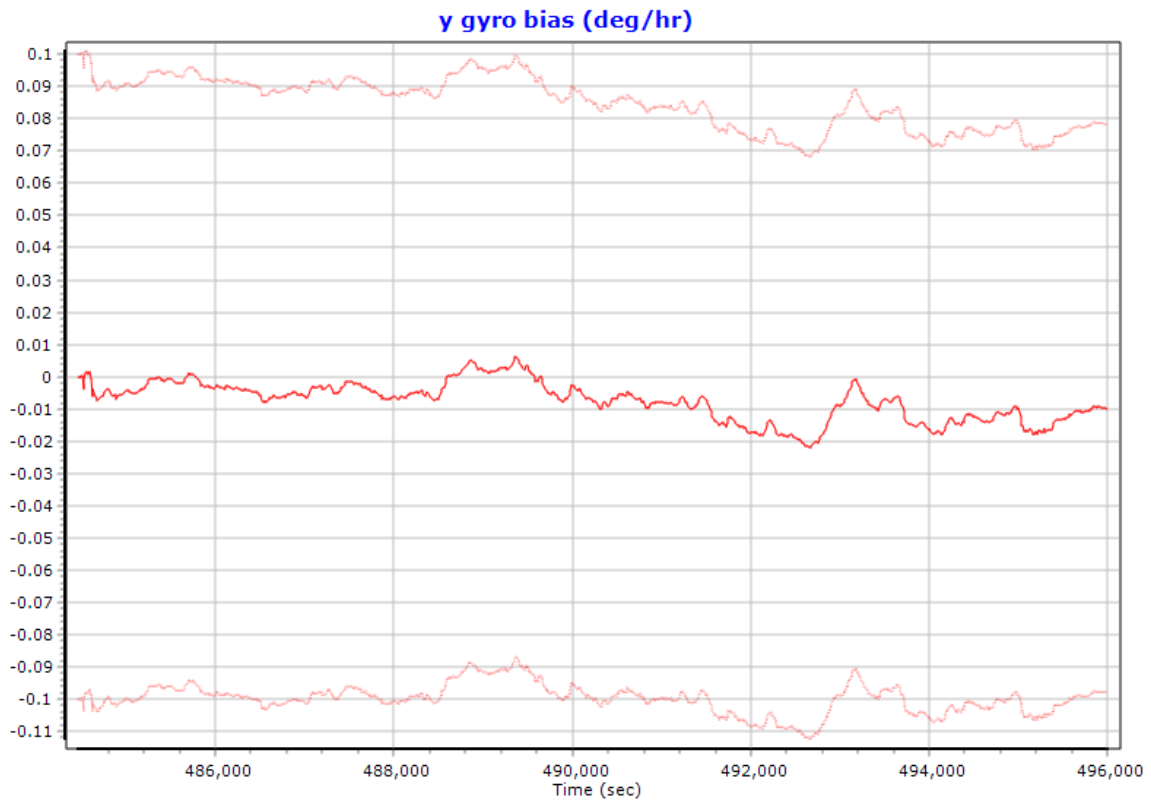
Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
WVAT	N37°25'42.67846"	W81°04'04.40377"	704.674	N37°25'42.67866"	W81°04'04.40390"	704.568
NCWC	N36°22'19.71501"	W80°11'05.64895"	274.974			
NCRE	N36°21'42.74202"	W79°39'56.56330"	233.466	N36°21'42.74198"	W79°39'56.56333"	233.357
LS04	N37°21'47.16696"	W79°57'26.99413"	324.139	N37°21'47.16736"	W79°57'26.99395"	324.032
DOBS	N36°25'31.54122"	W80°43'11.73527"	339.304	N36°25'31.54147"	W80°43'11.73543"	339.186

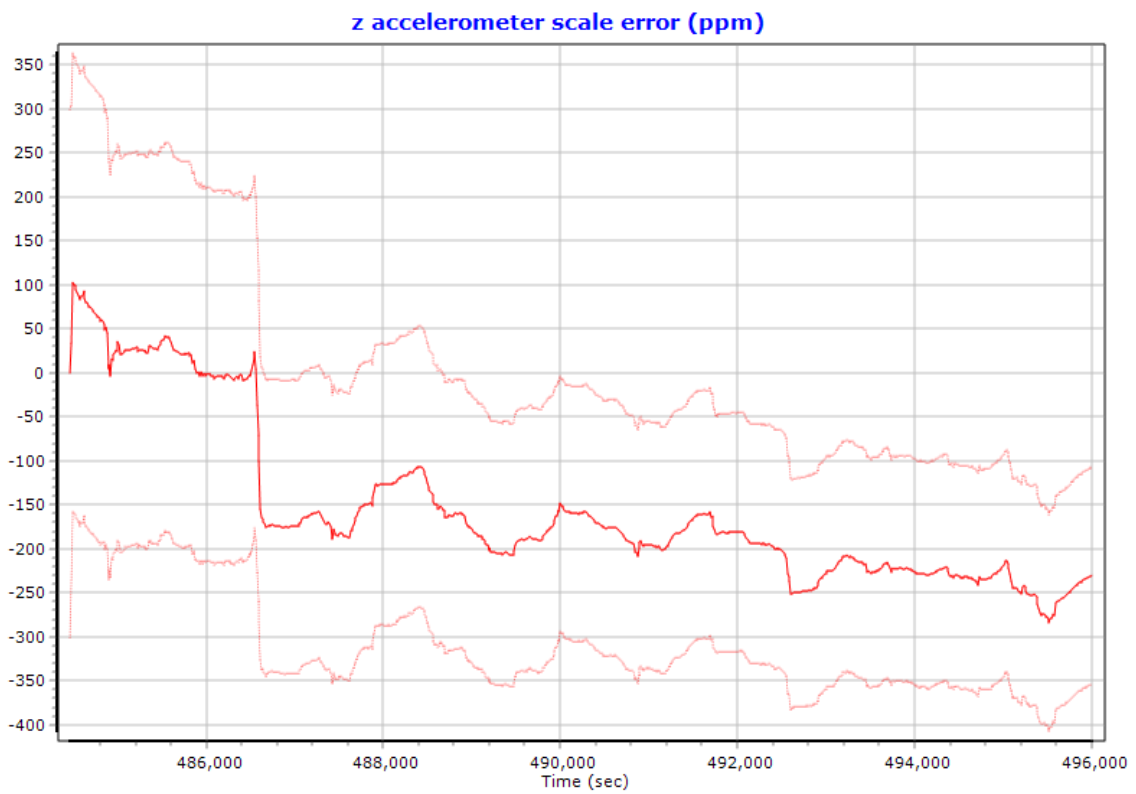
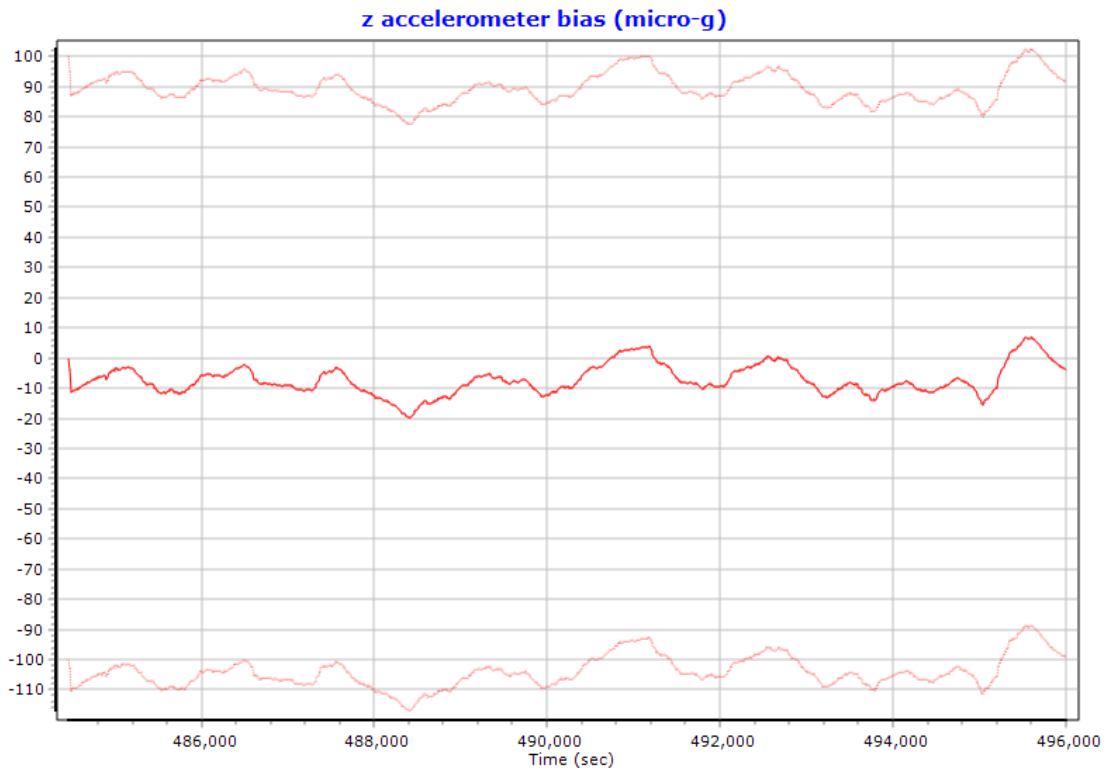


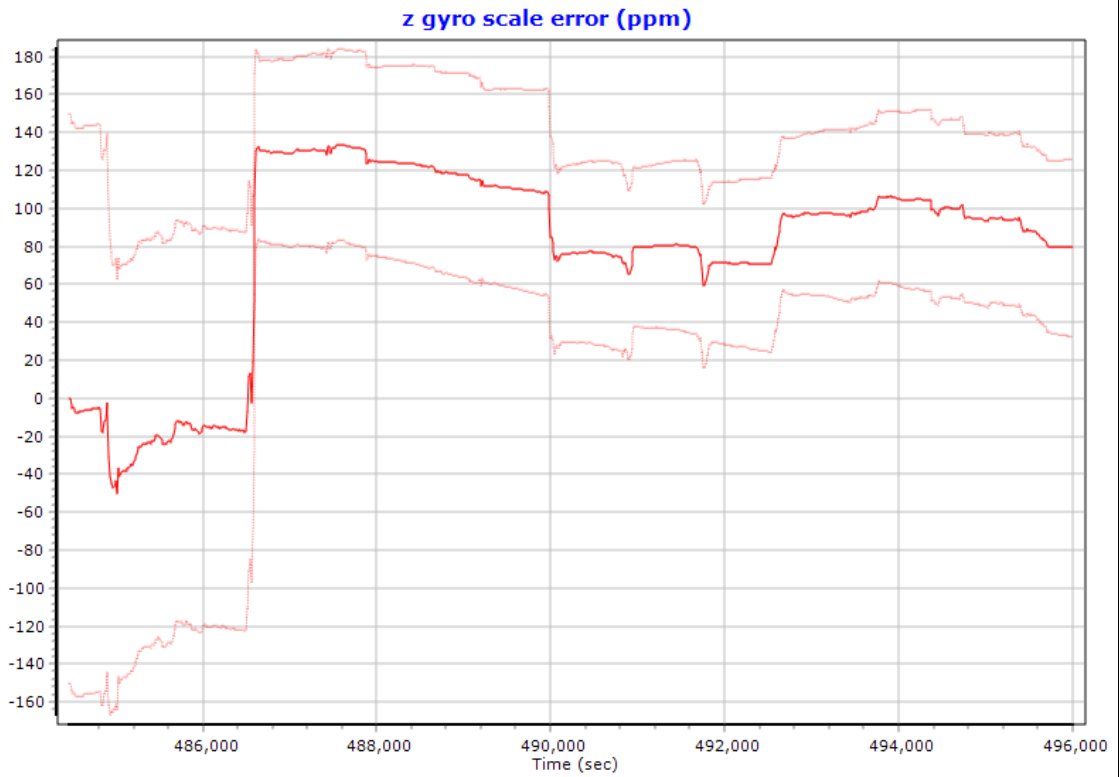
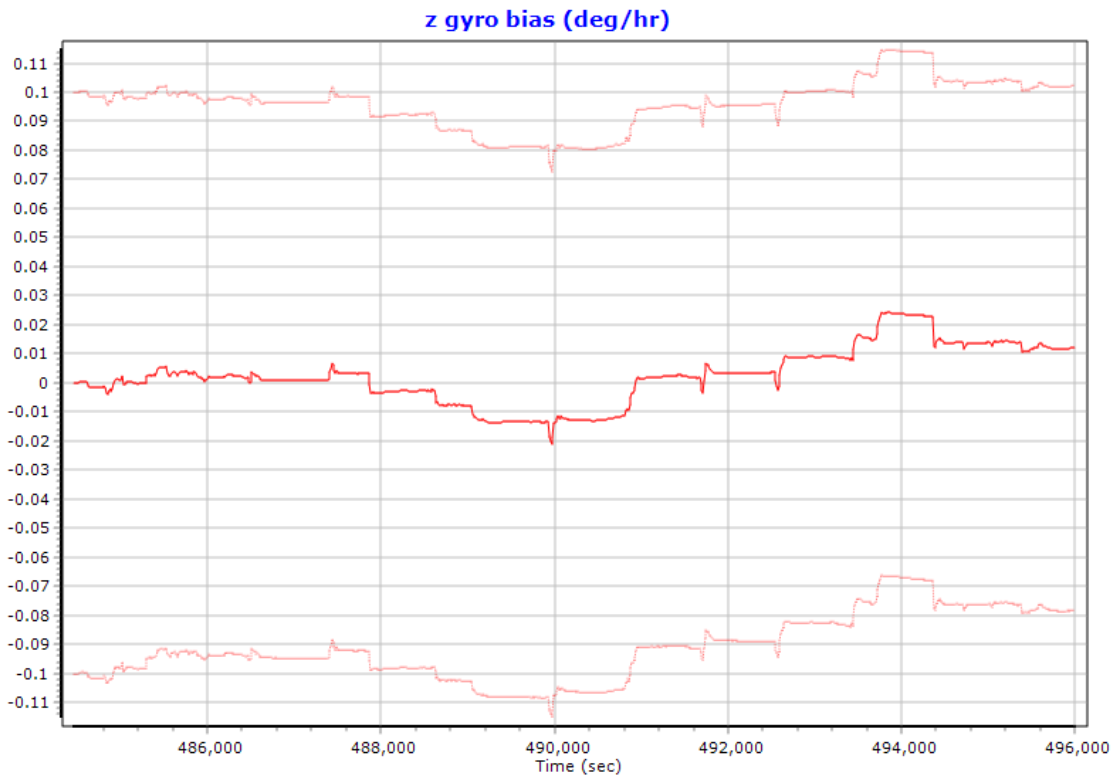




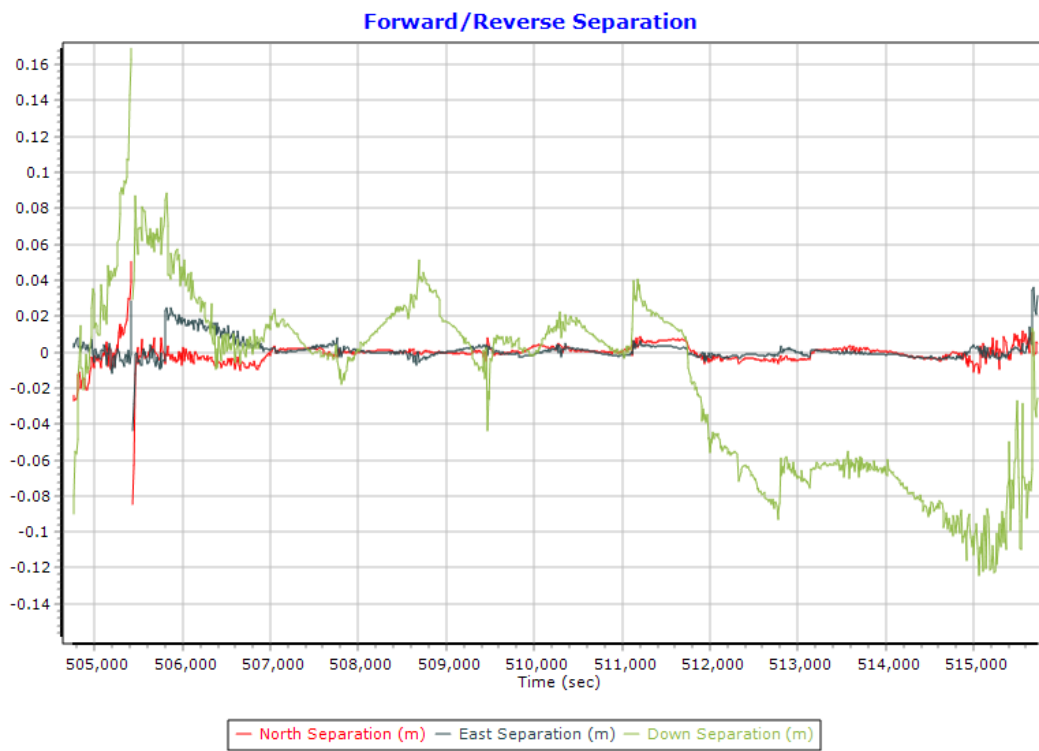
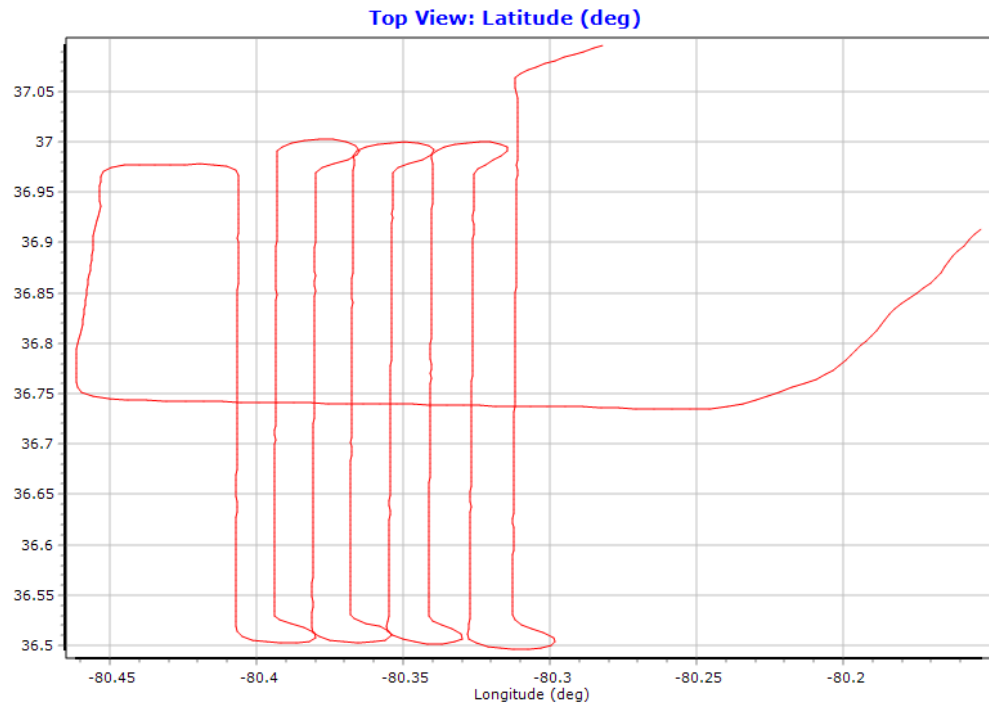




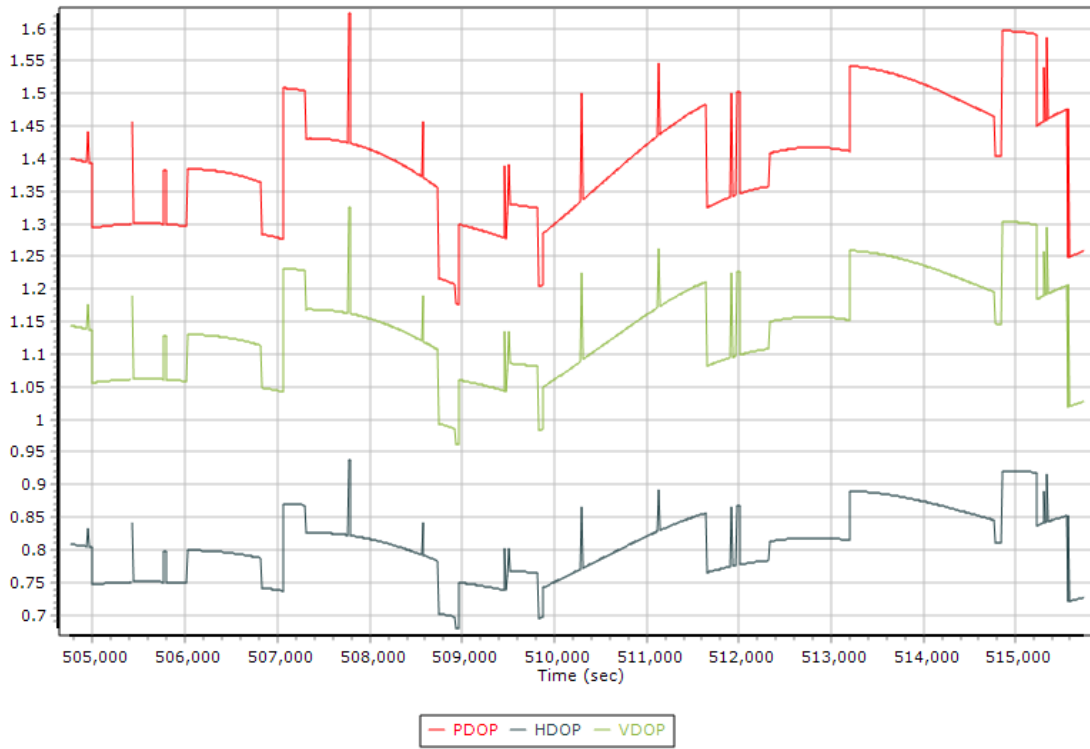




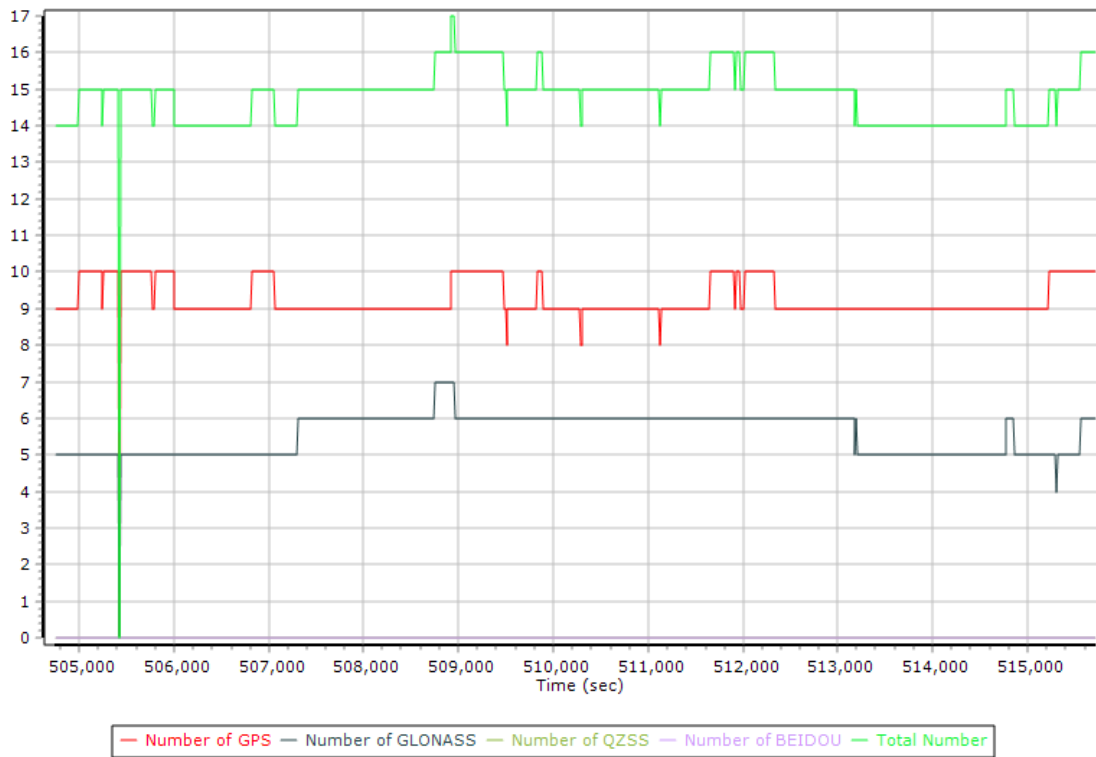
## DECEMBER 22, 2017 MISSION 2



### DOP



### Number of SVs in solution



## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20171222\_VA\_B

Solution Type: IN-Fusion SmartBase

Fixed: 10977	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 11000  
No processed position: 23

Fwd/Rev Separation RMS Values (m):

North: 0.006  
East: 0.006  
Height: 0.051

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 5507occurrences

North: 0.003  
East: 0.002  
Height: 0.033

Quality Number Percentages:

Q 0: 100.0 %



Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 99.845  
0.10 - 0.30 m: 0.155  
0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

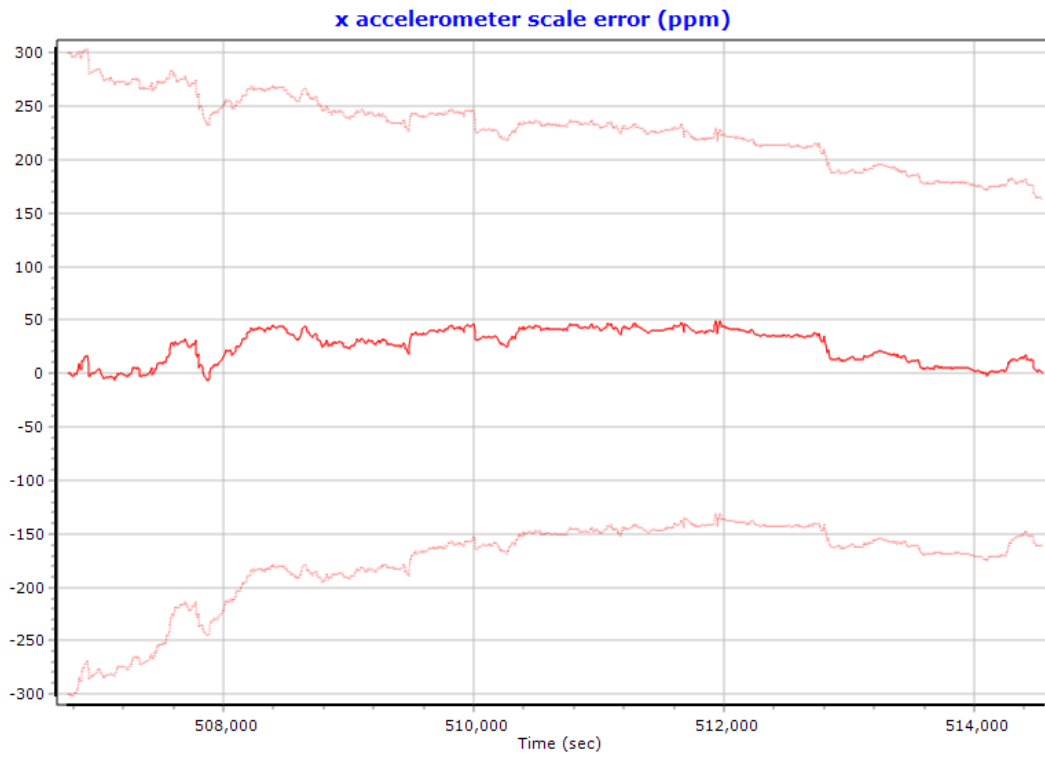
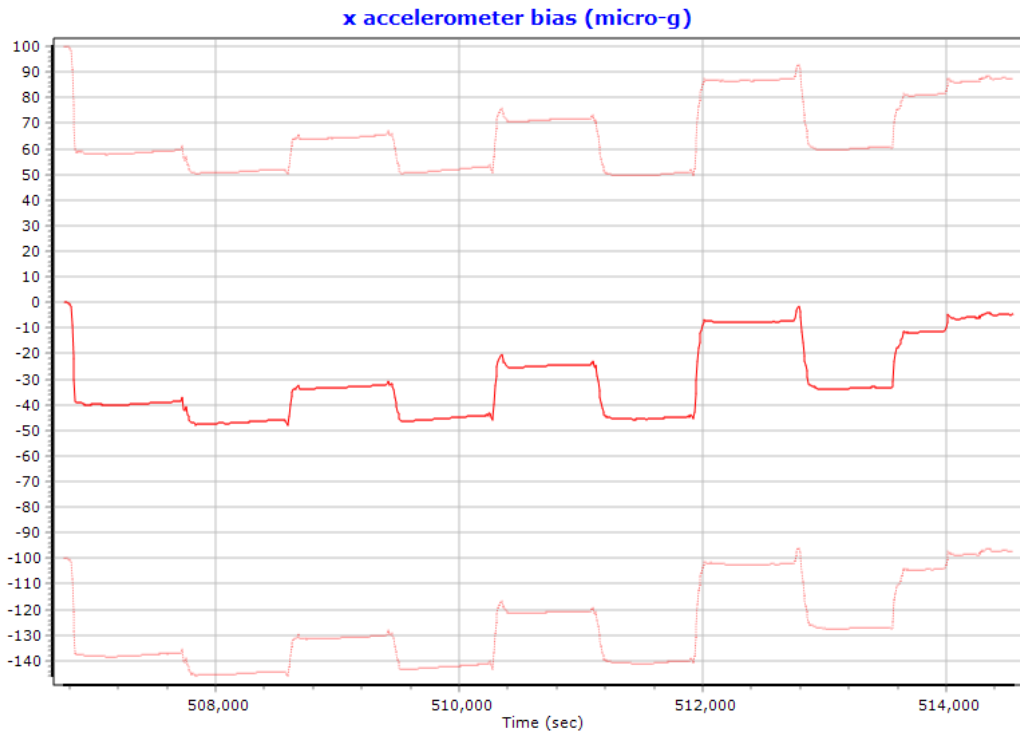
DOP over Tol: 1.40%

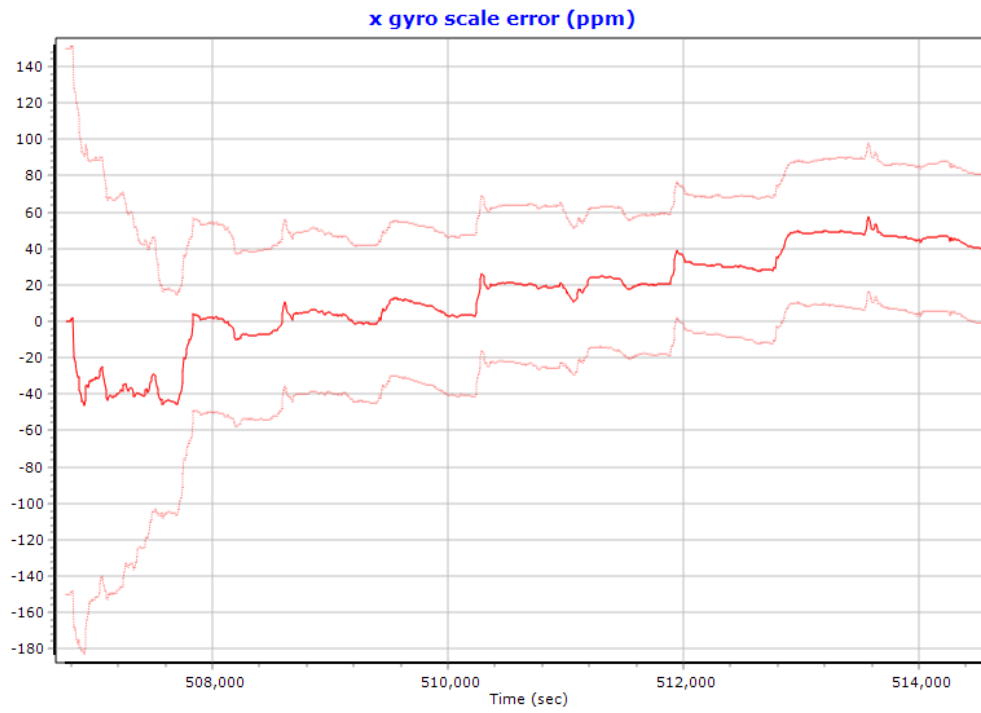
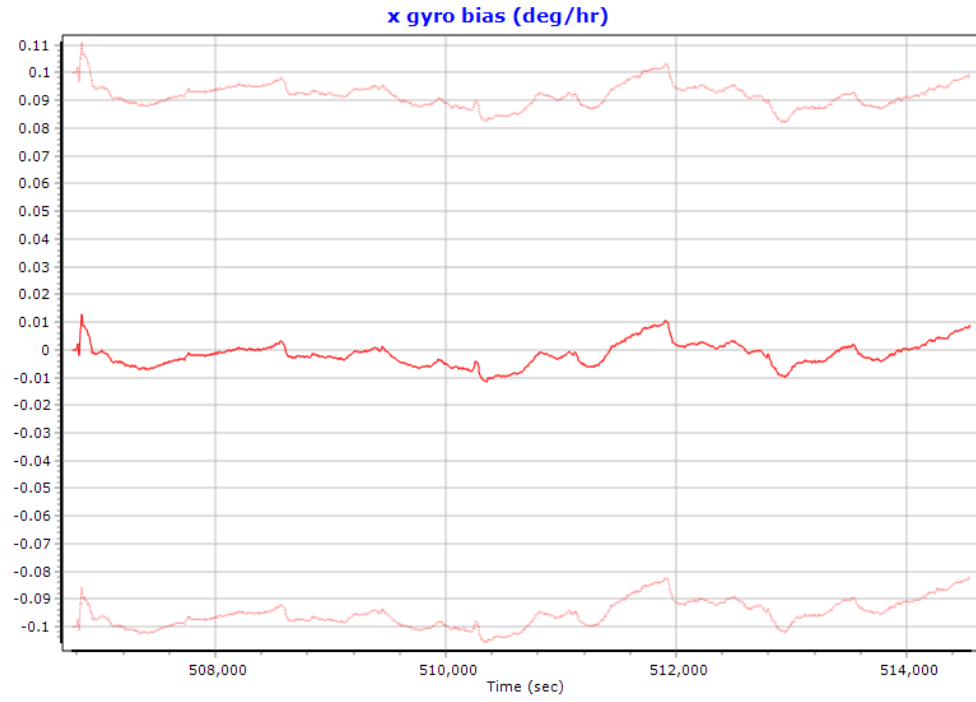
Baseline Distances (km):

Maximum: 79.88  
Minimum: 0.18  
Average: 29.91  
First Epoch: 70.77  
Last Epoch: 70.77

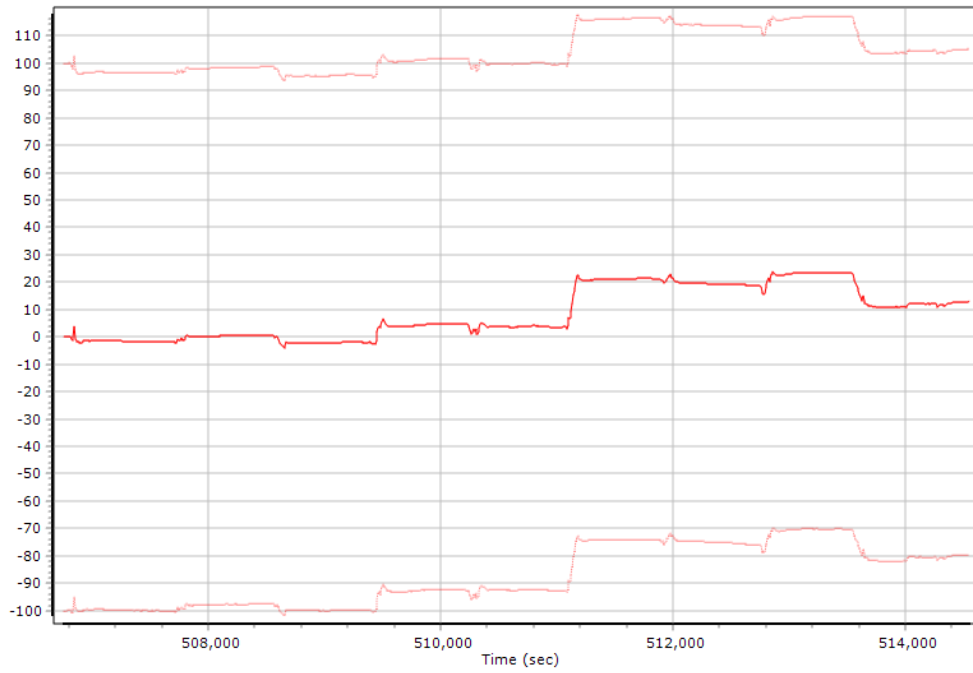
CORS Base Stations

Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
WVAT	N37°25'42.67846"	W81°04'04.40377"	704.674	N37°25'42.67866"	W81°04'04.40390"	704.568
NCWC	N36°22'19.71501"	W80°11'05.64895"	274.974			
NCRE	N36°21'42.74202"	W79°39'56.56330"	233.466	N36°21'42.74198"	W79°39'56.56333"	233.357
LS04	N37°21'47.16696"	W79°57'26.99413"	324.139	N37°21'47.16736"	W79°57'26.99395"	324.032
DOBS	N36°25'31.54122"	W80°43'11.73527"	339.304	N36°25'31.54147"	W80°43'11.73543"	339.186

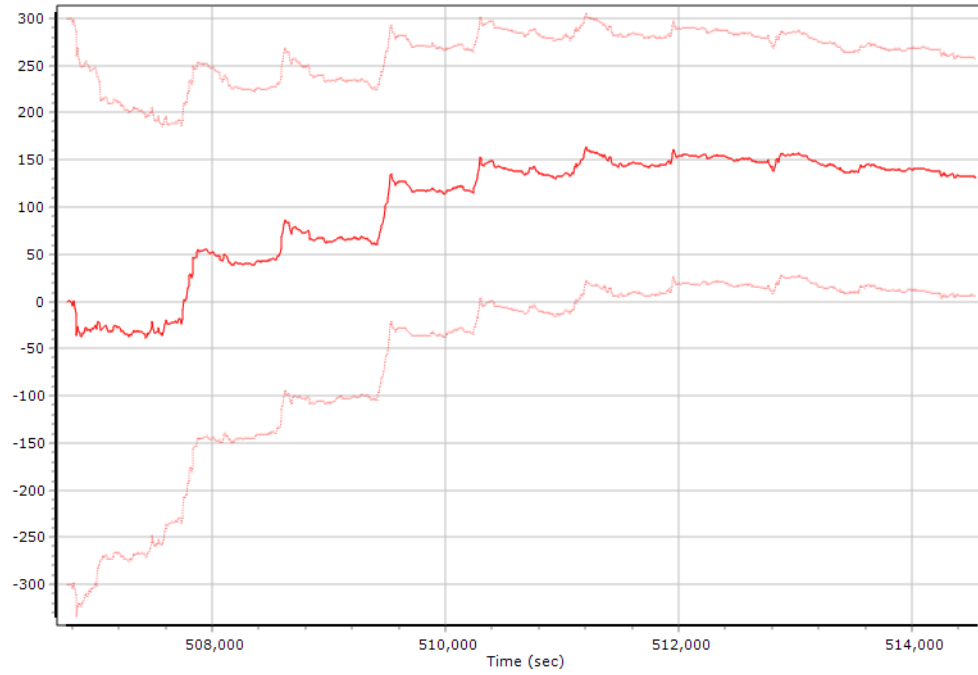


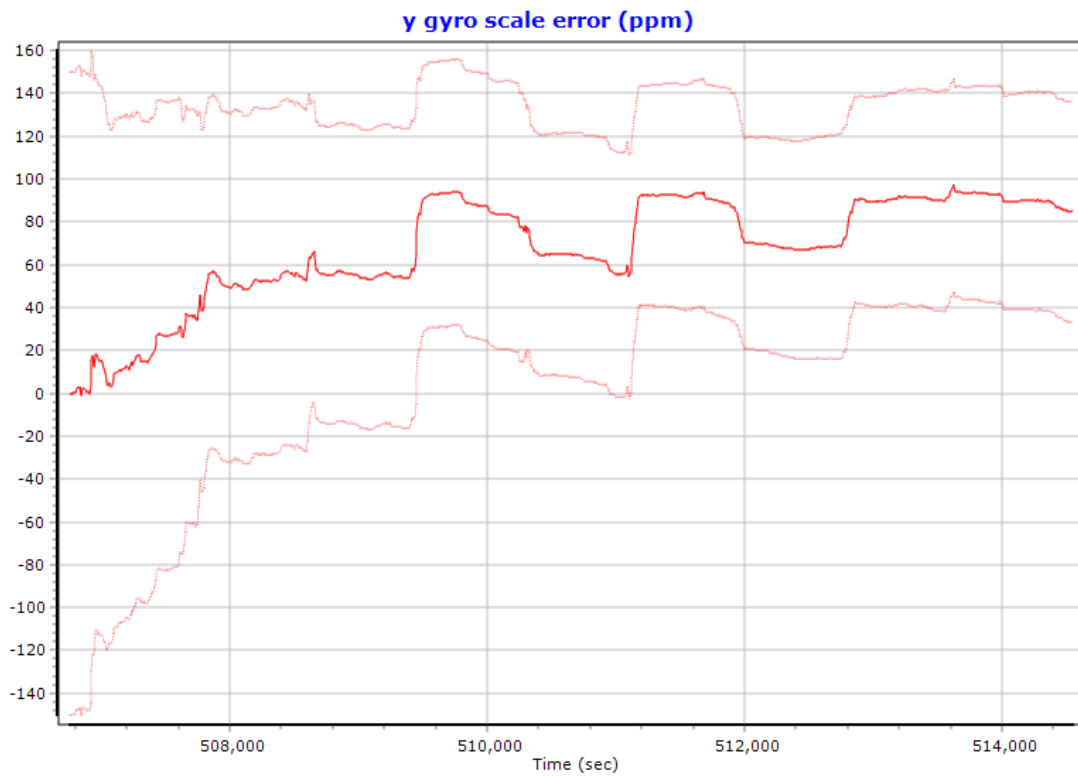
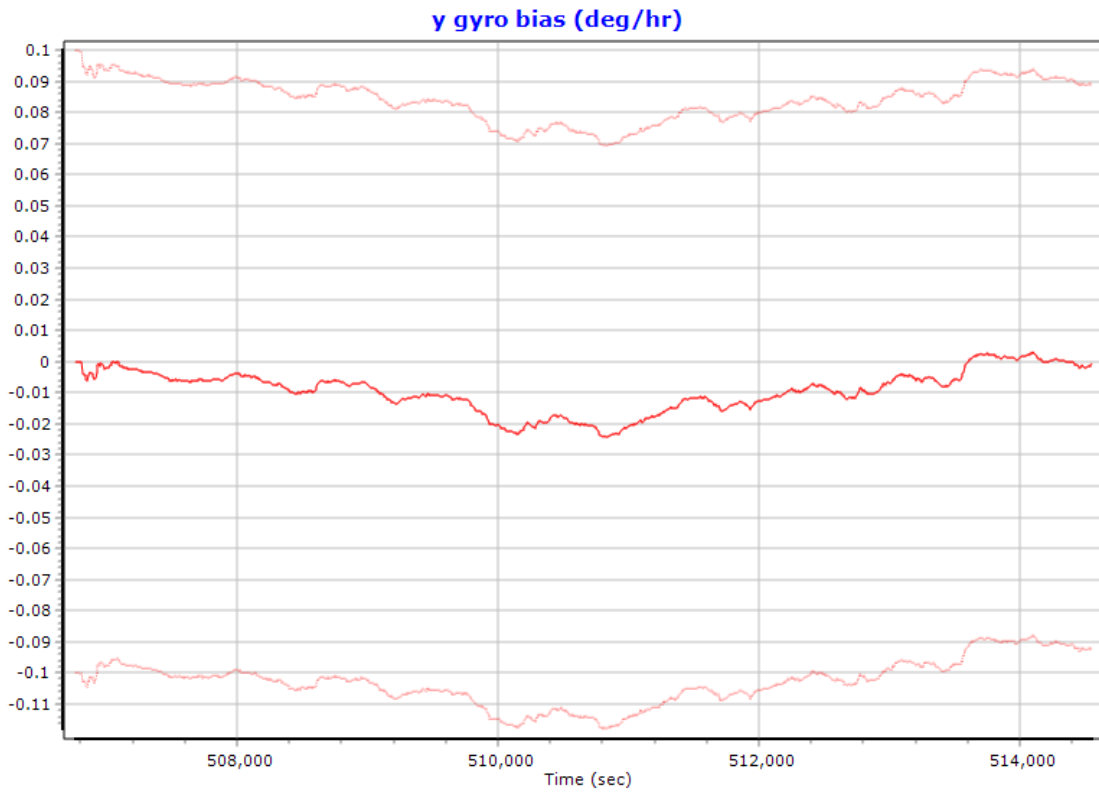


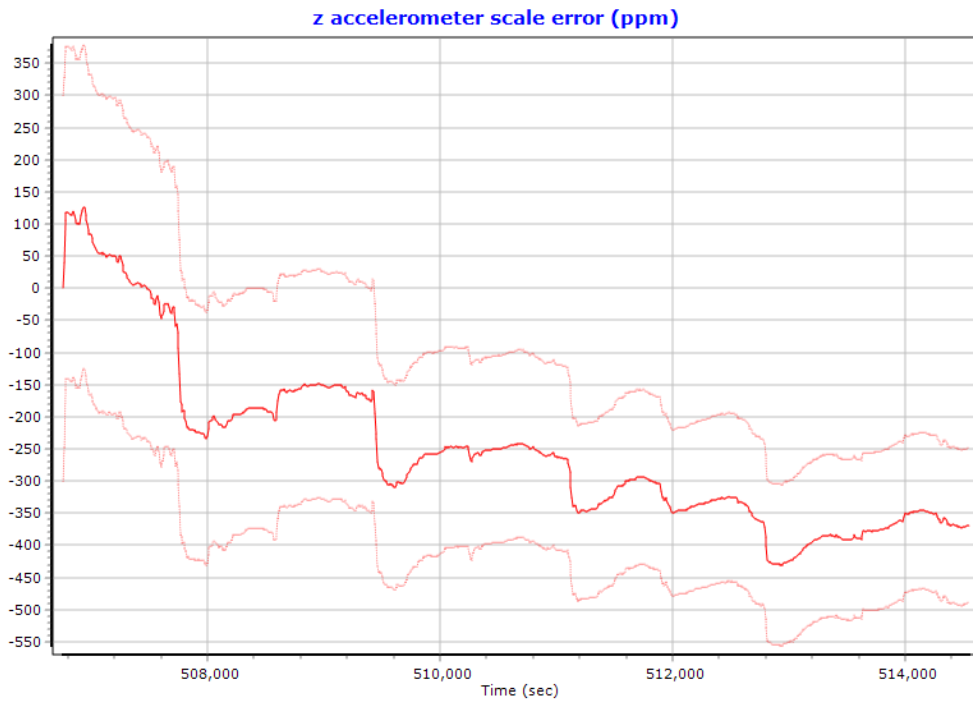
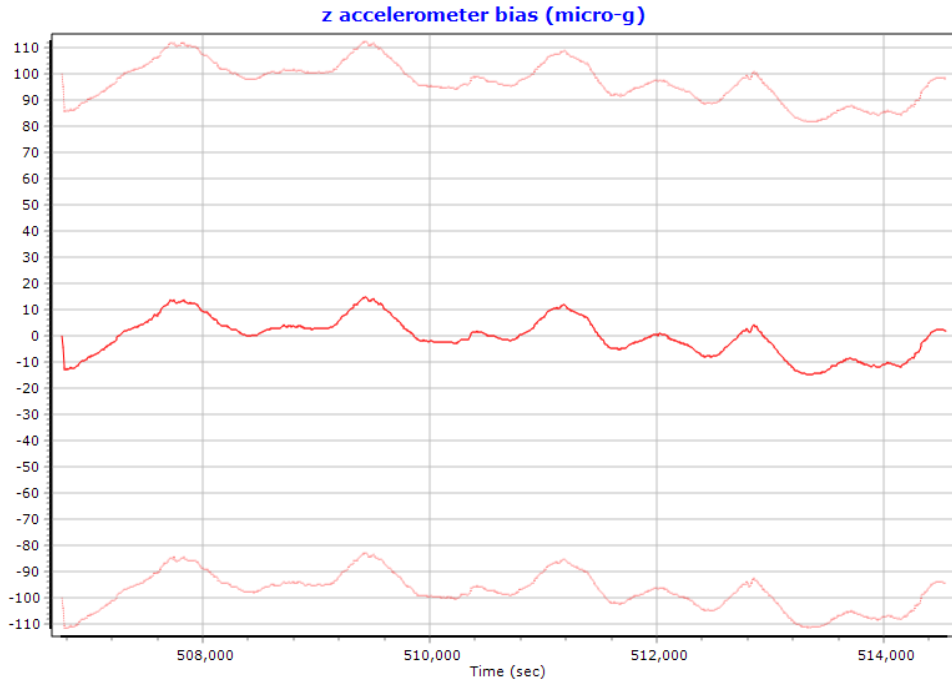
**y accelerometer bias (micro-g)**

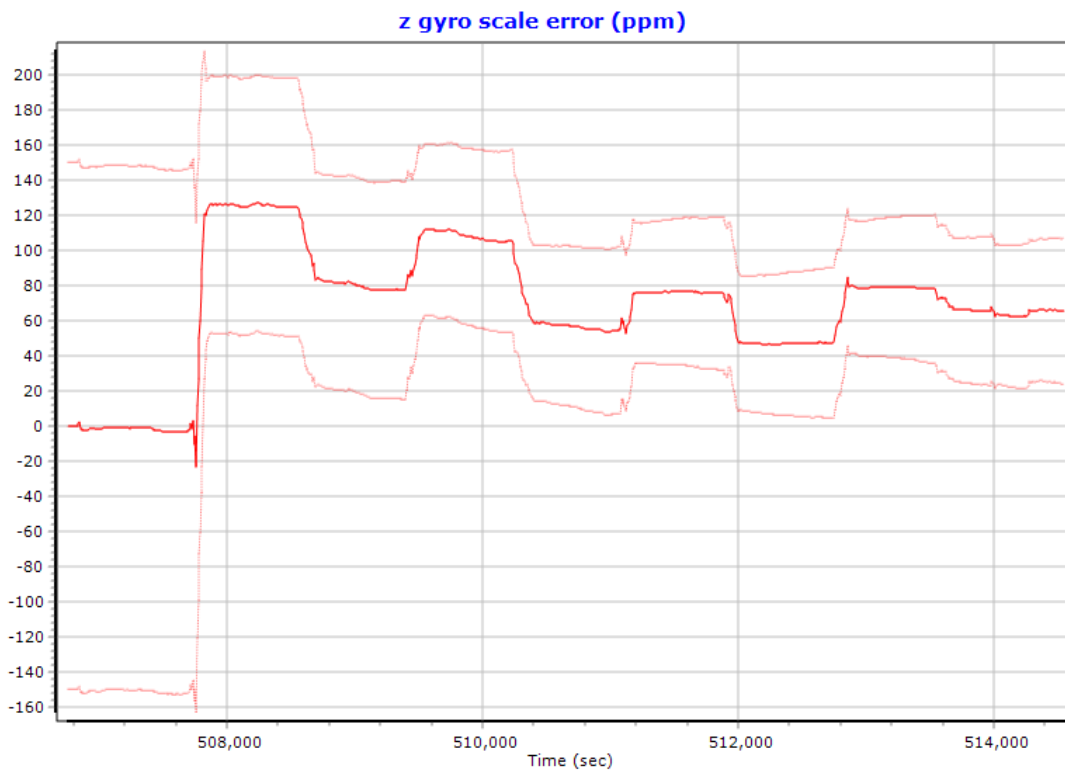
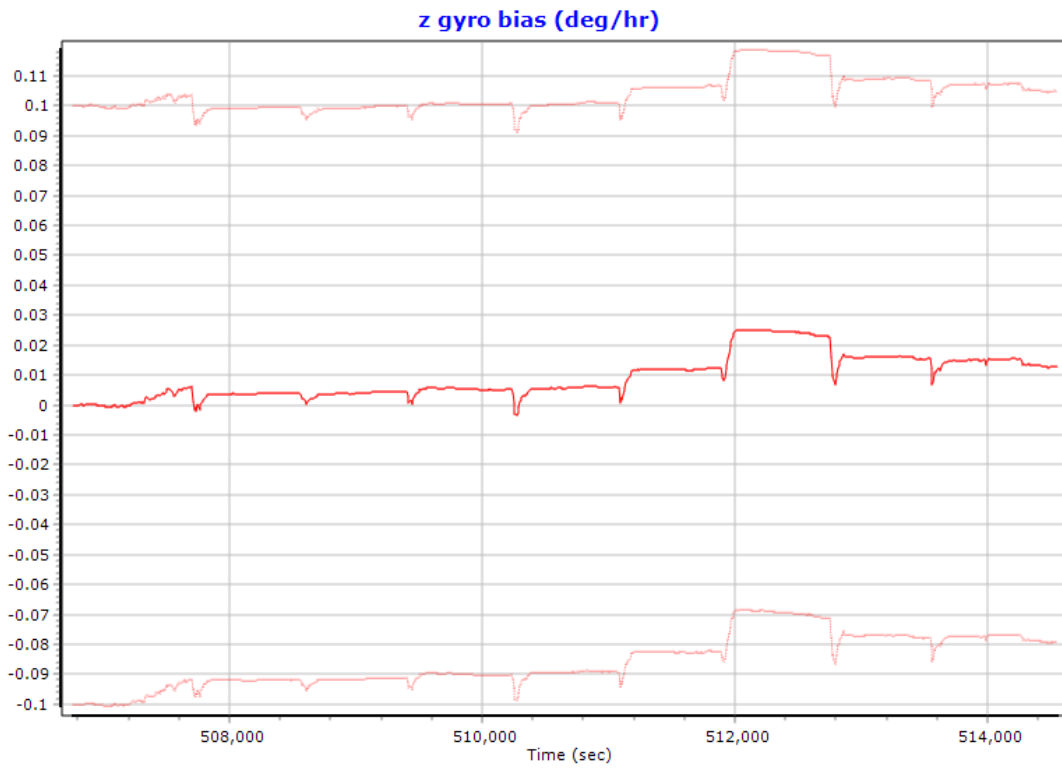


**y accelerometer scale error (ppm)**

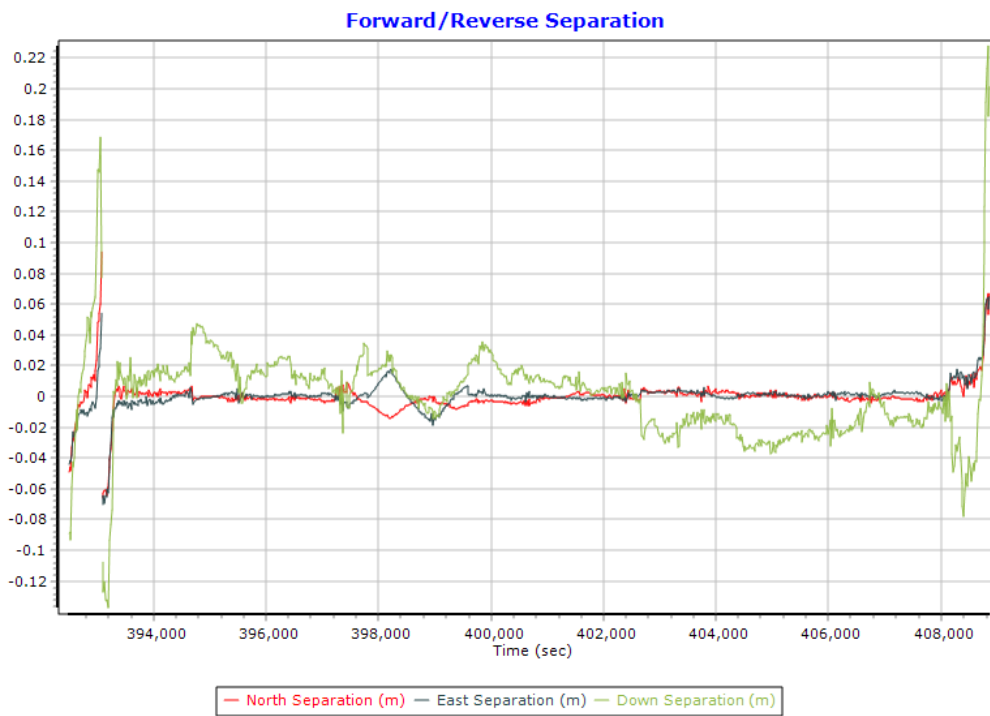
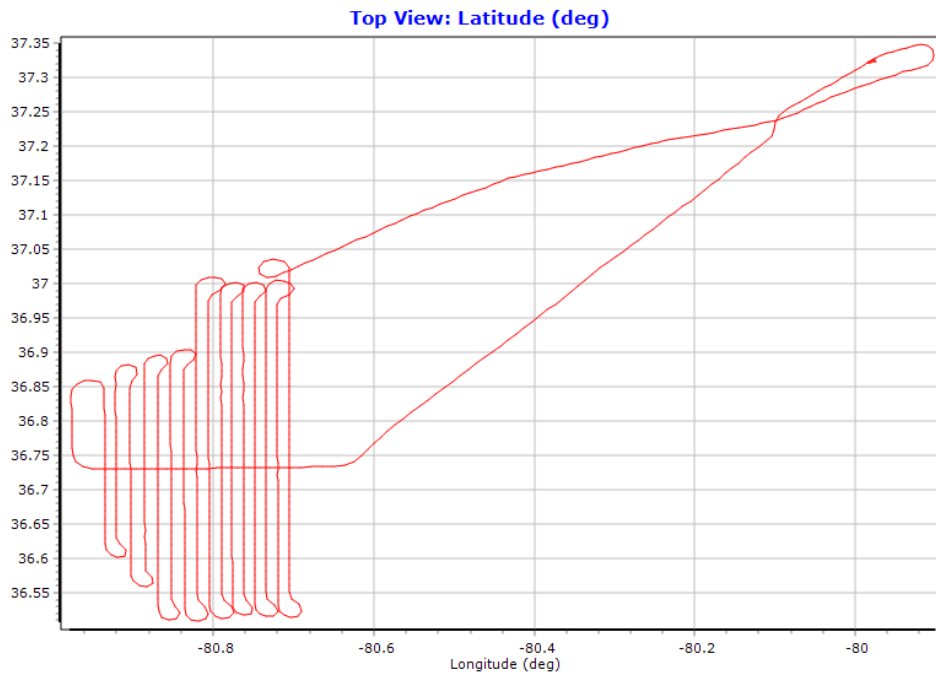




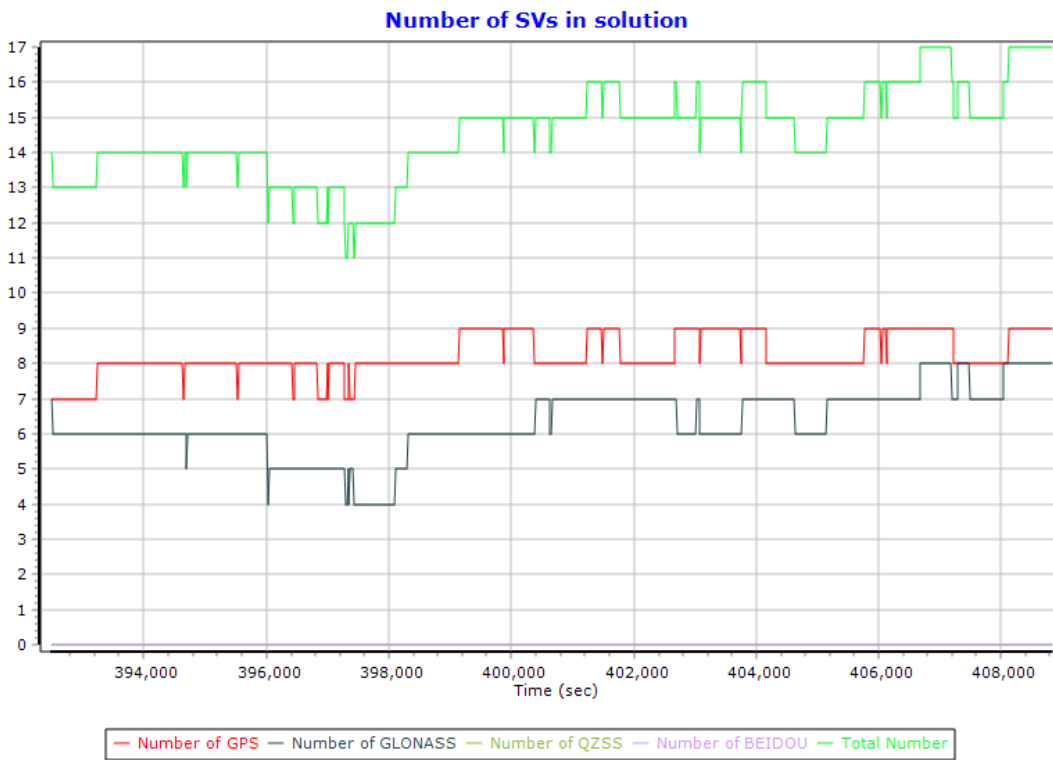
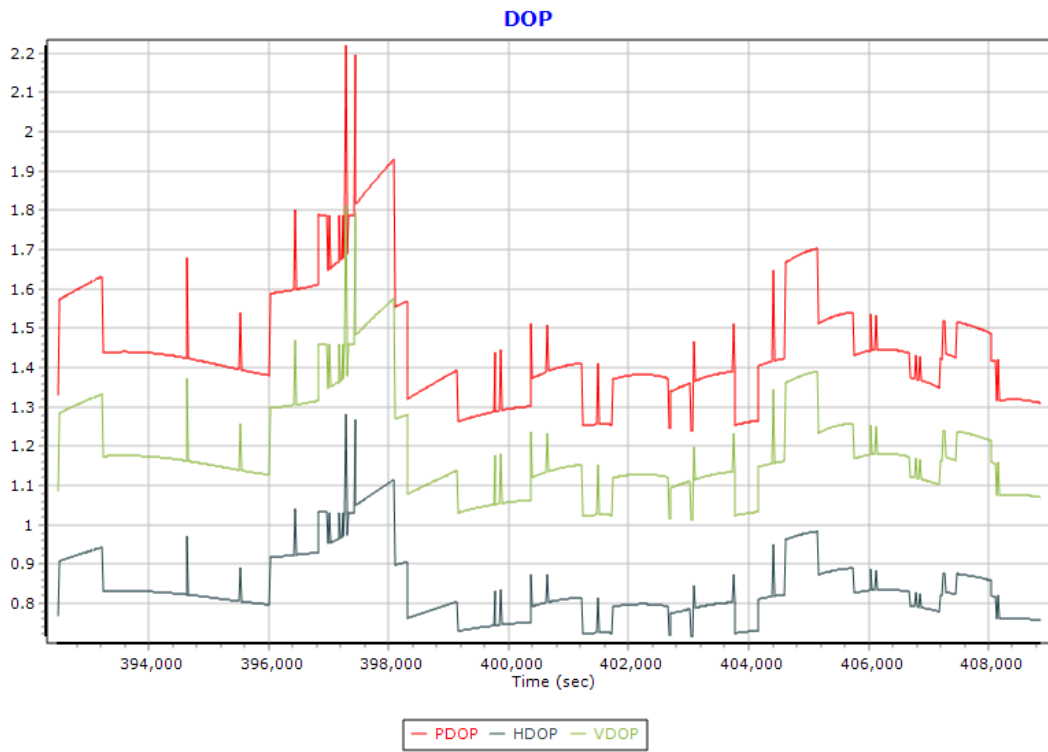




## DECEMBER 28, 2017 MISSION 1







## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20171228\_VA\_A

Solution Type: IN-Fusion SmartBase

Fixed: 16382	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 16420  
No processed position: 38

Fwd/Rev Separation RMS Values (m):

North: 0.010  
East: 0.010  
Height: 0.032

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 8219 occurrences

North: 0.004  
East: 0.005  
Height: 0.016

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 99.576

0.10 - 0.30 m: 0.424  
0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

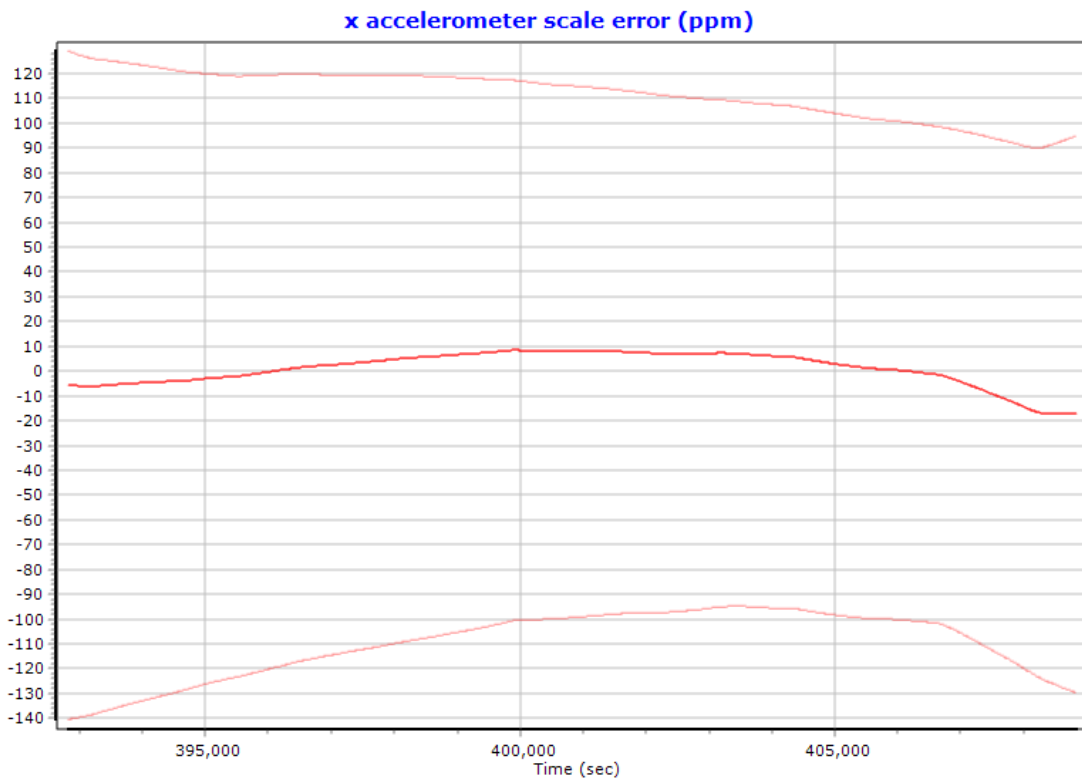
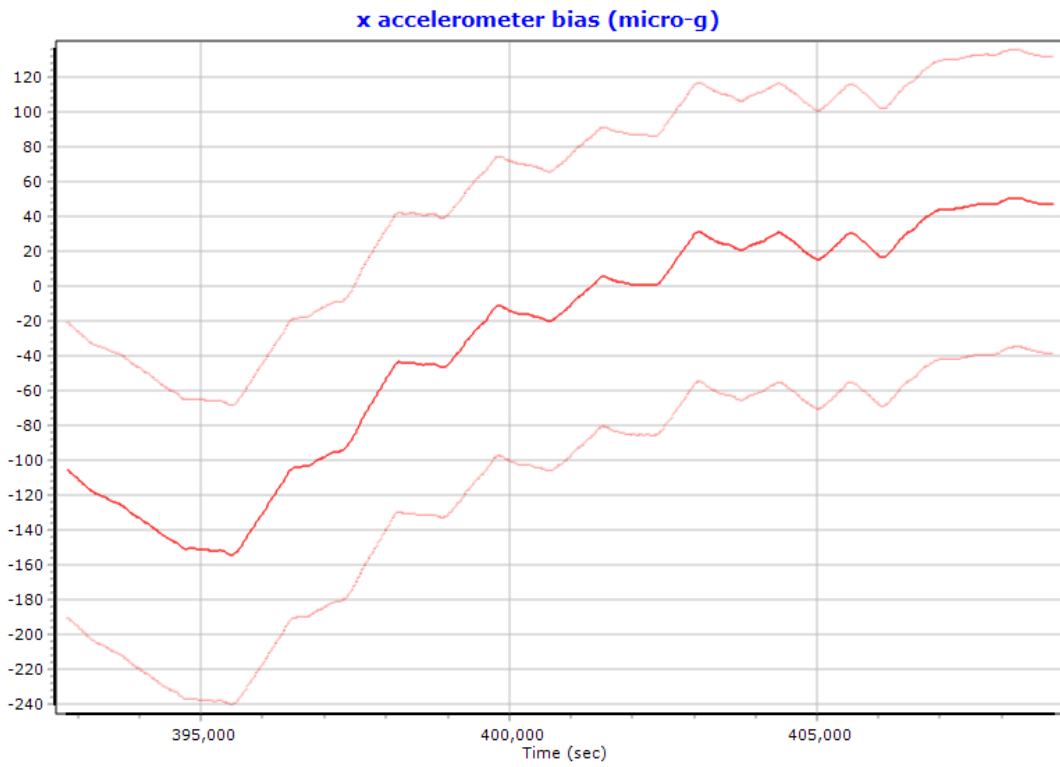
DOP over Tol: 1.45%

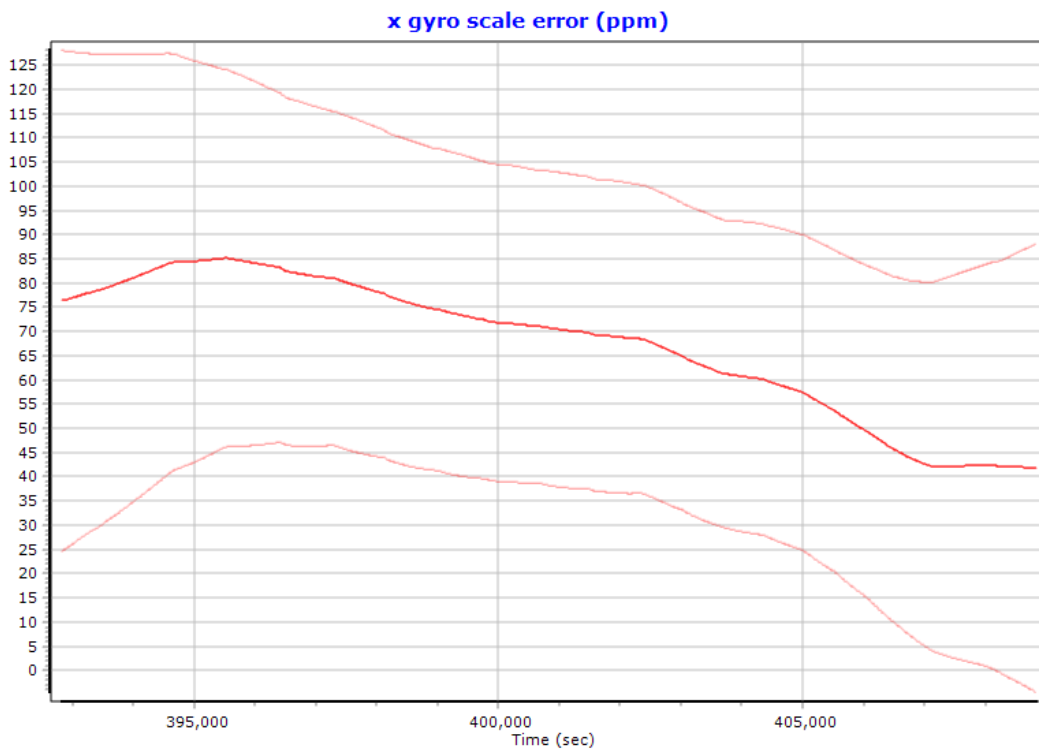
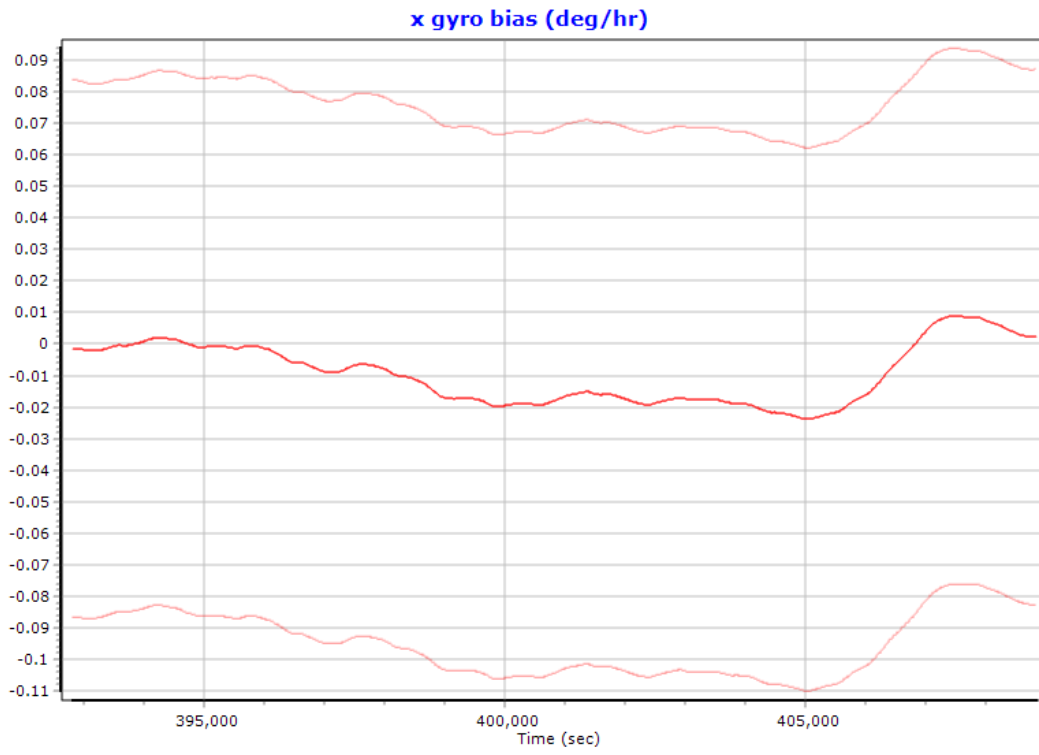
Baseline Distances (km):

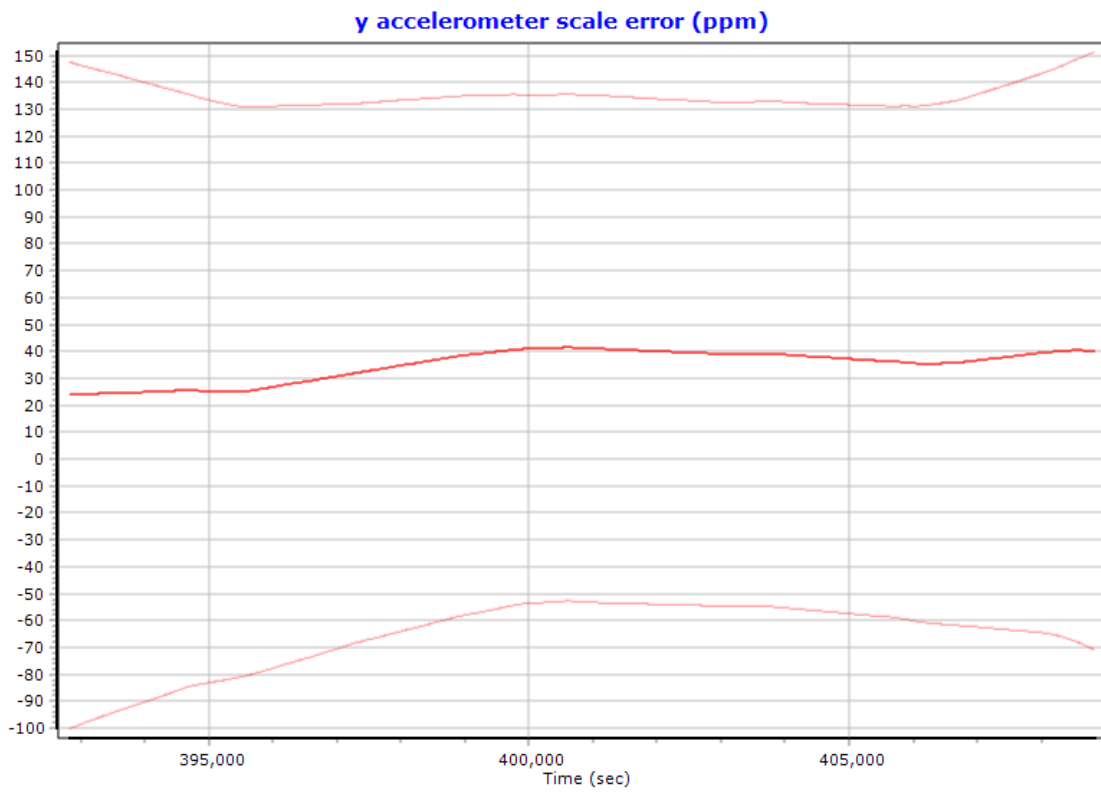
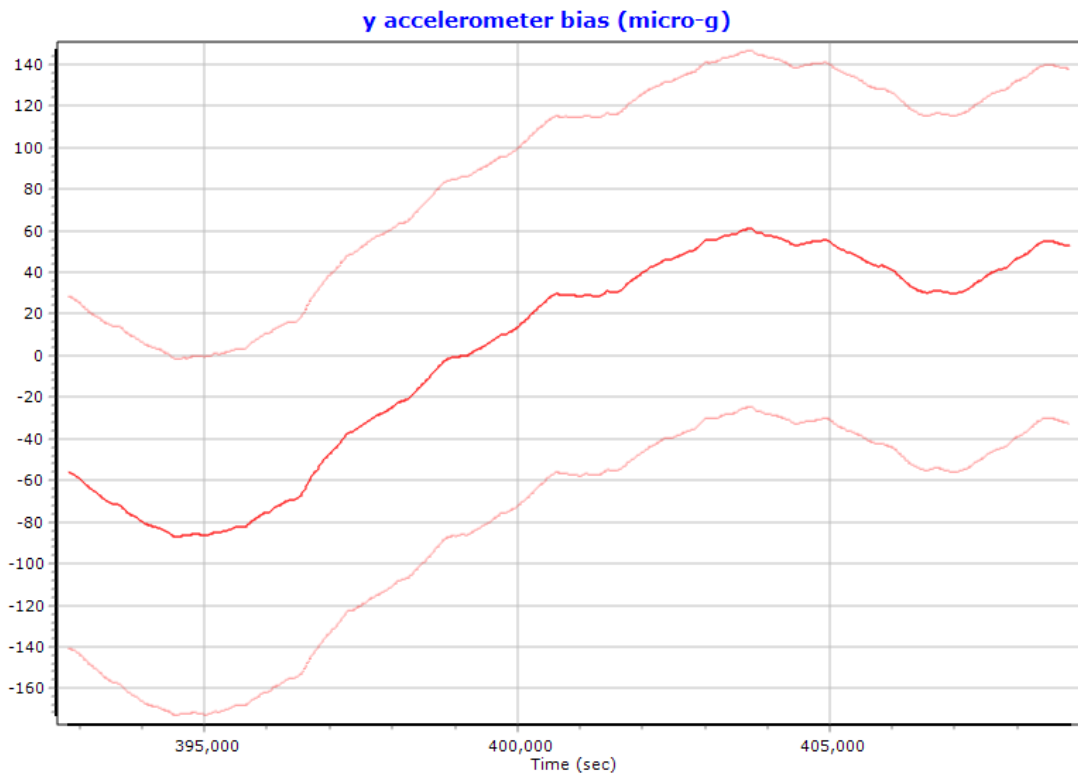
Maximum: 86.78  
Minimum: 3.82  
Average: 30.06  
First Epoch: 80.74  
Last Epoch: 80.76

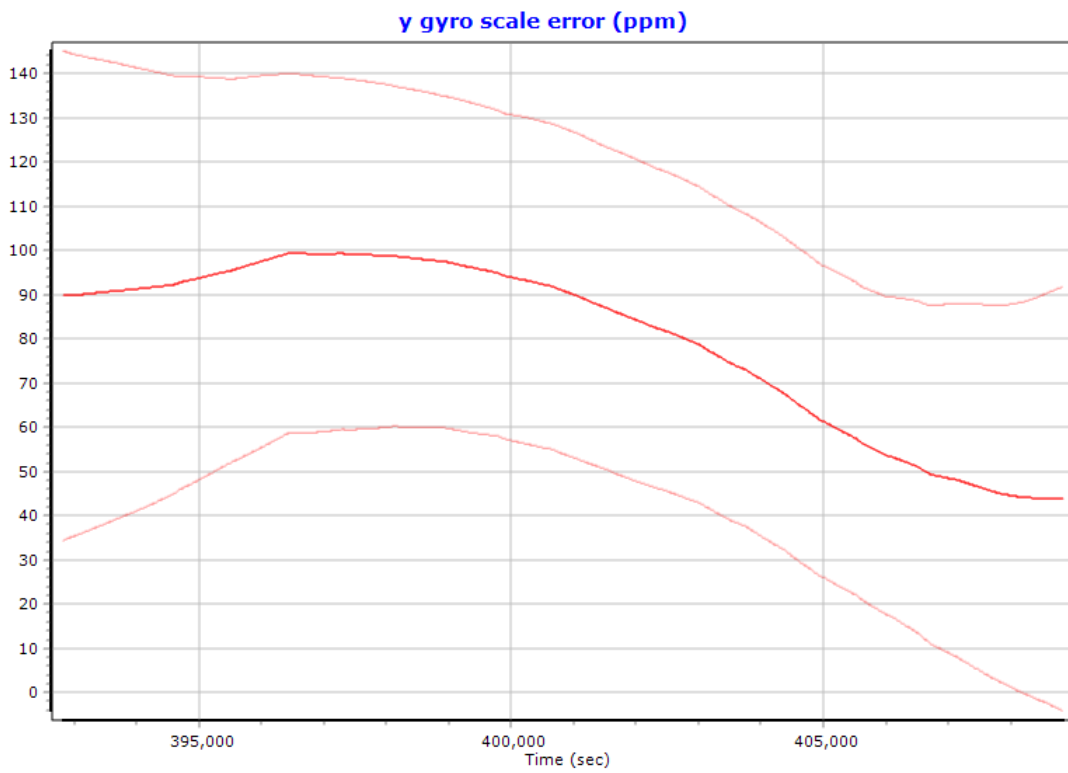
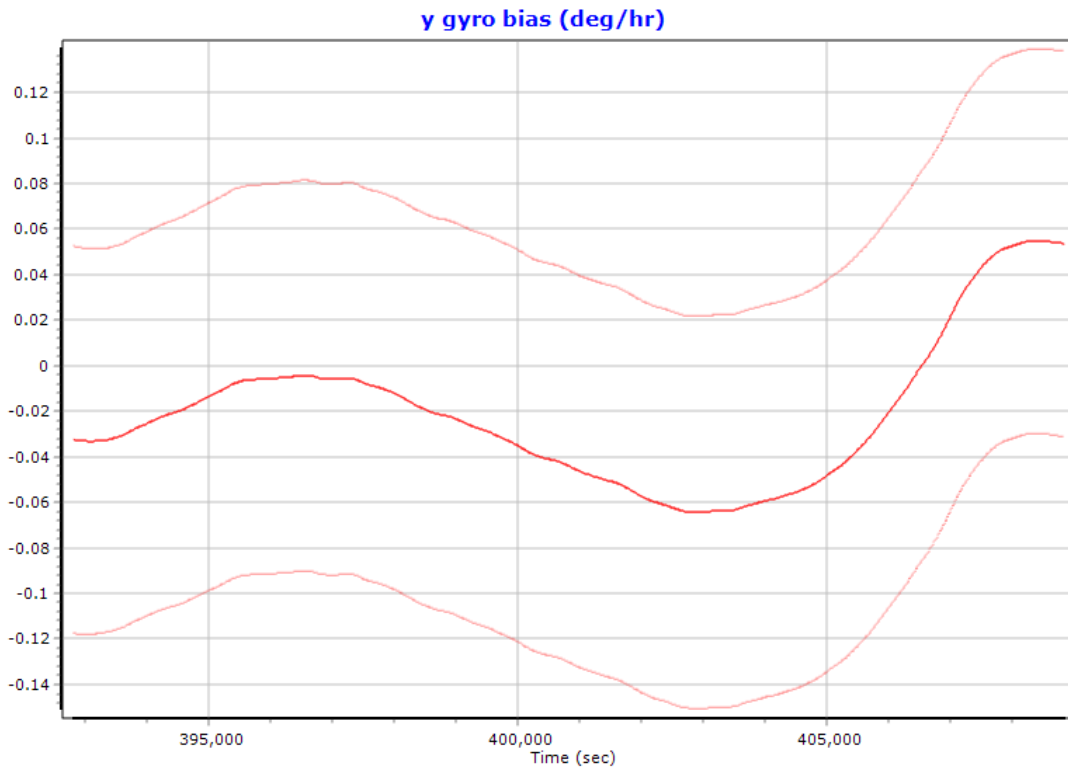
#### CORS Base Stations

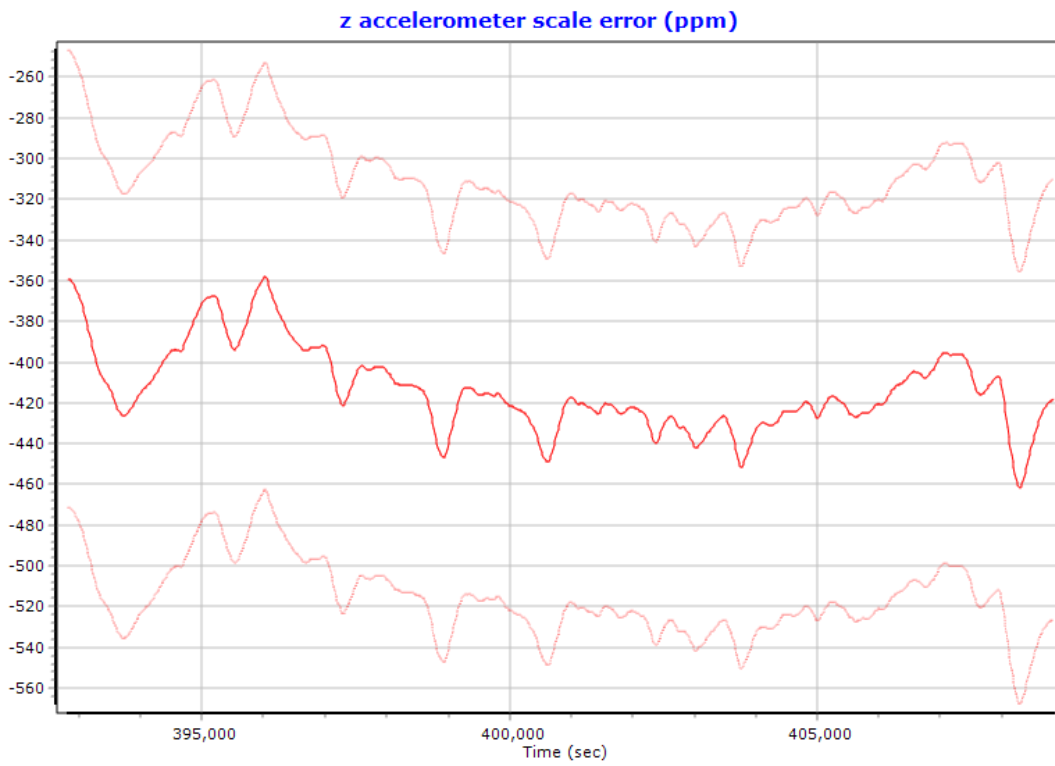
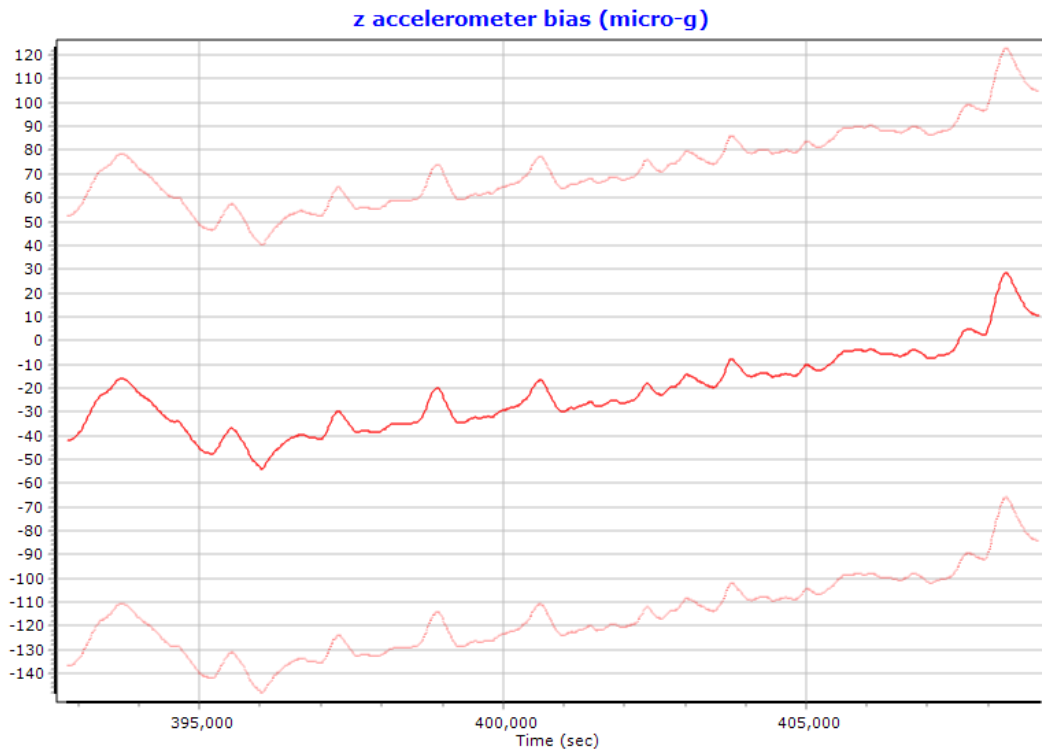
Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
DOBS	N36°25'31.54122"	W80°43'11.73528"	339.304			
WVAT	N37°25'42.67838"	W81°04'04.40392"	704.674	N37°25'42.67839"	W81°04'04.40401"	704.687
NCWC	N36°22'19.71491"	W80°11'05.64910"	274.974	N36°22'19.71483"	W80°11'05.64908"	275.092
NCSR	N36°29'51.93288"	W81°06'52.95776"	838.659	N36°29'51.93275"	W81°06'52.95786"	838.659
LS04	N37°21'47.16696"	W79°57'26.99414"	324.139	N37°21'47.16706"	W79°57'26.99400"	324.141



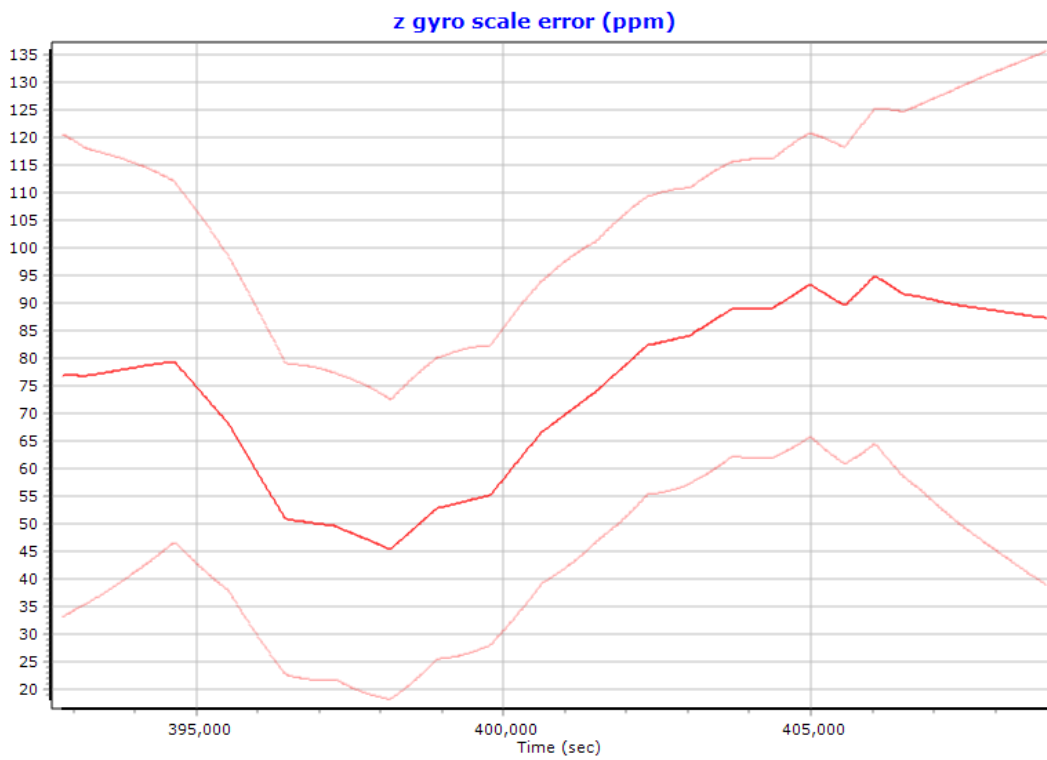
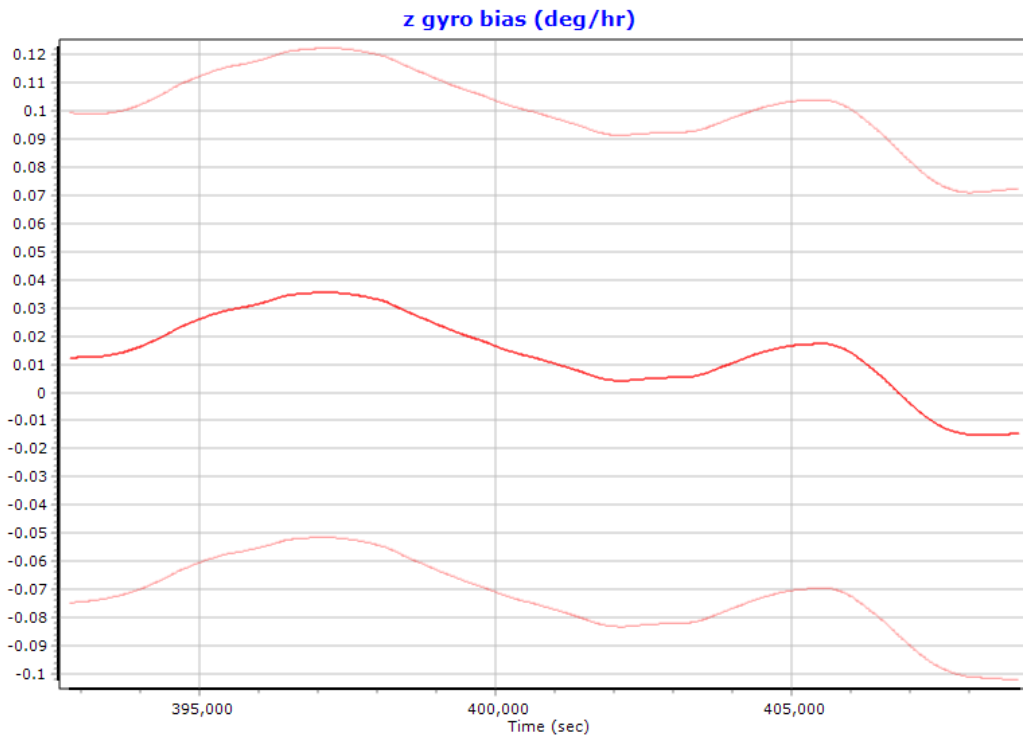




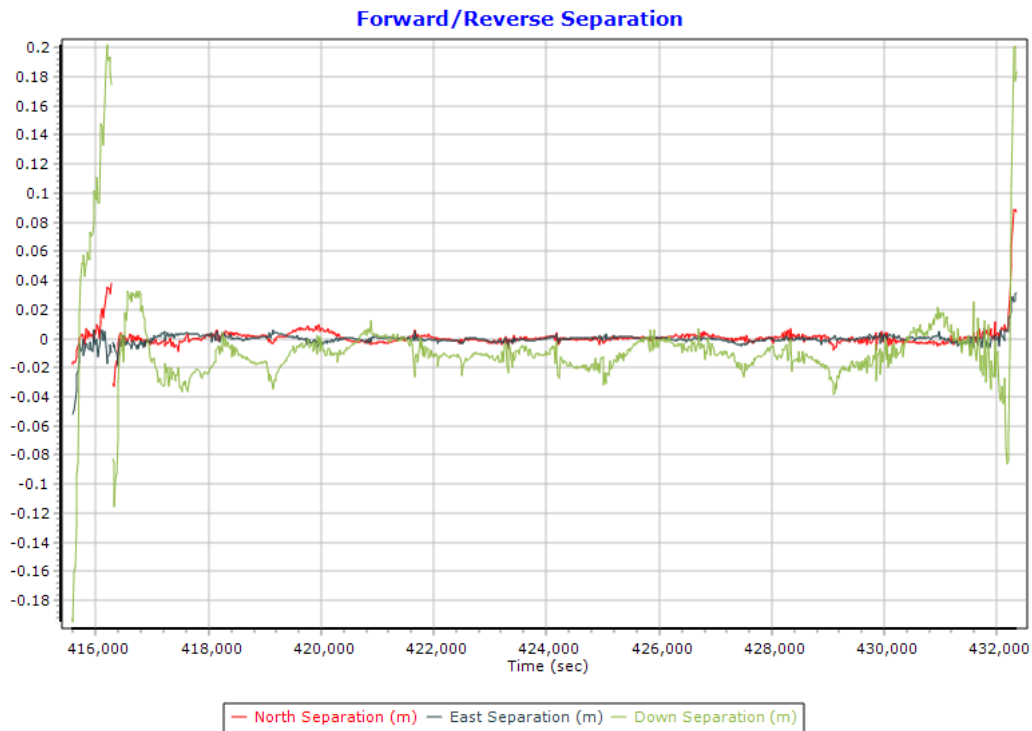
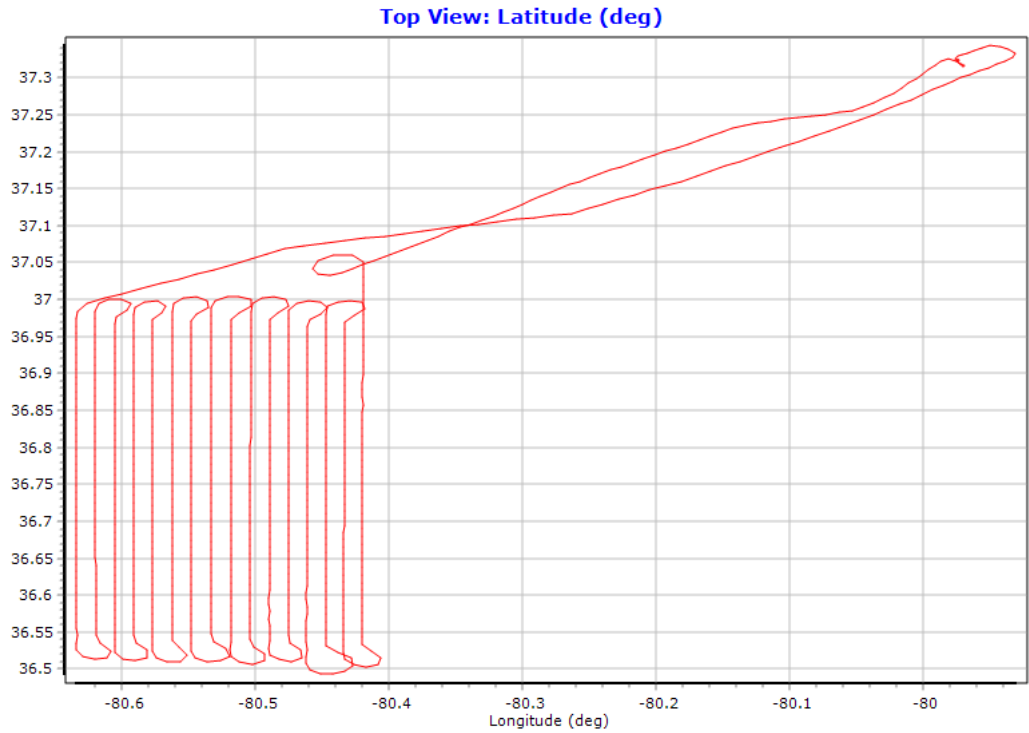


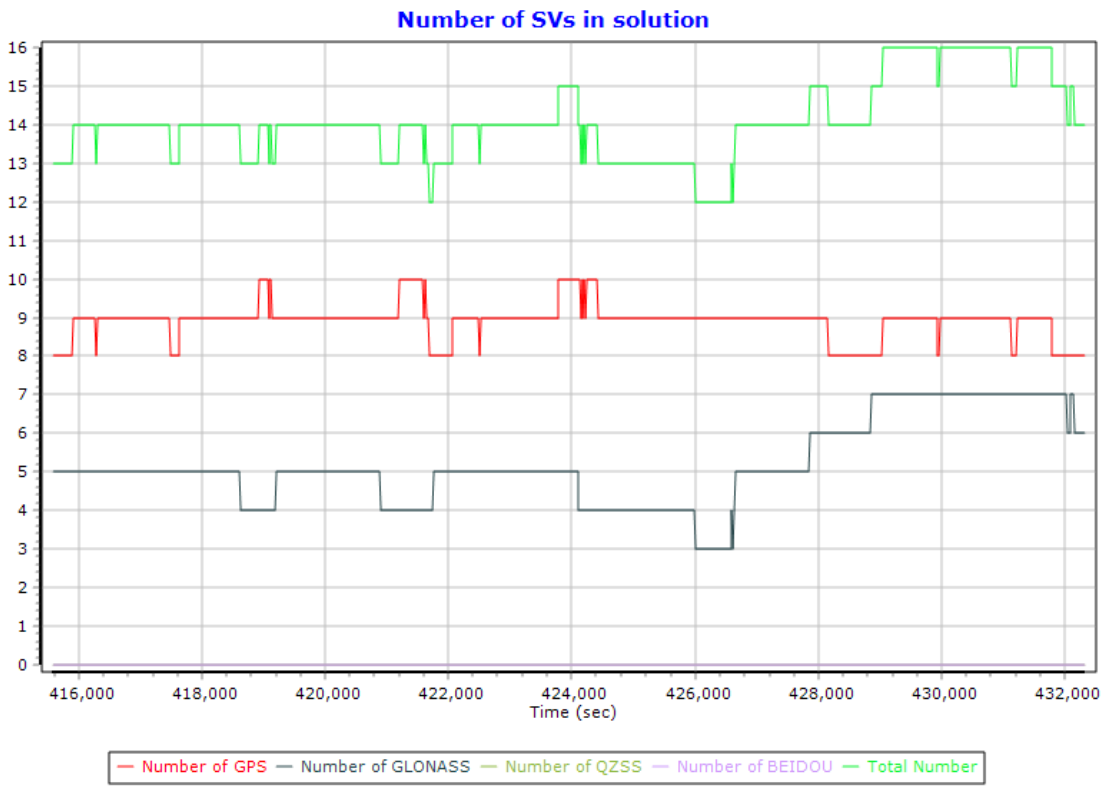
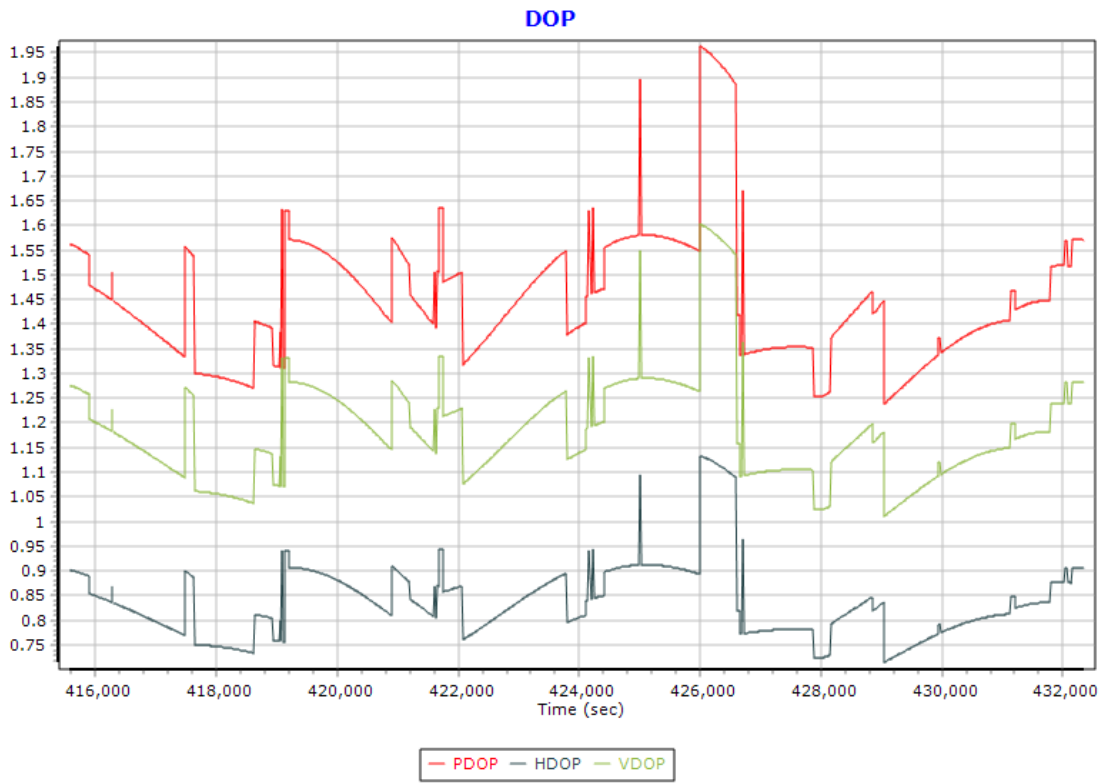






## DECEMBER 28, 2017 MISSION 2





## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20171228\_VA\_B

Solution Type: IN-Fusion SmartBase

Fixed: 16780	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 16807  
No processed position: 27

Fwd/Rev Separation RMS Values (m):

North: 0.009  
East: 0.005  
Height: 0.034

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 8418 occurrences

North: 0.002  
East: 0.001  
Height: 0.012

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 99.262  
0.10 - 0.30 m: 0.738  
0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

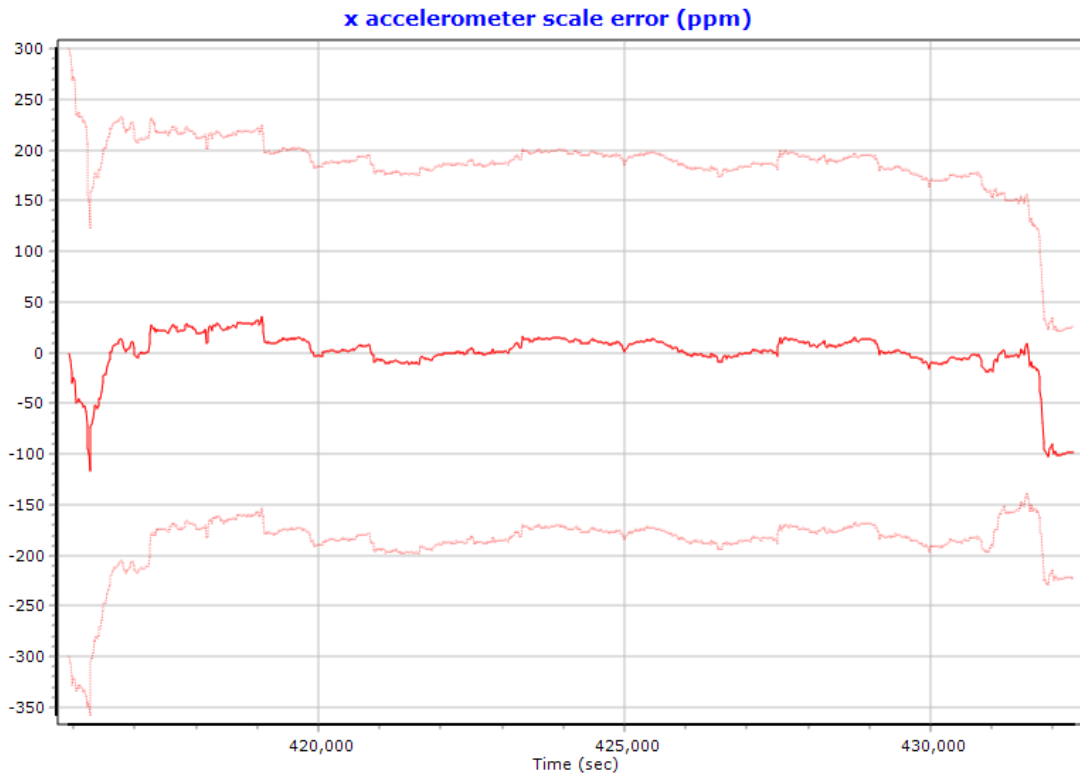
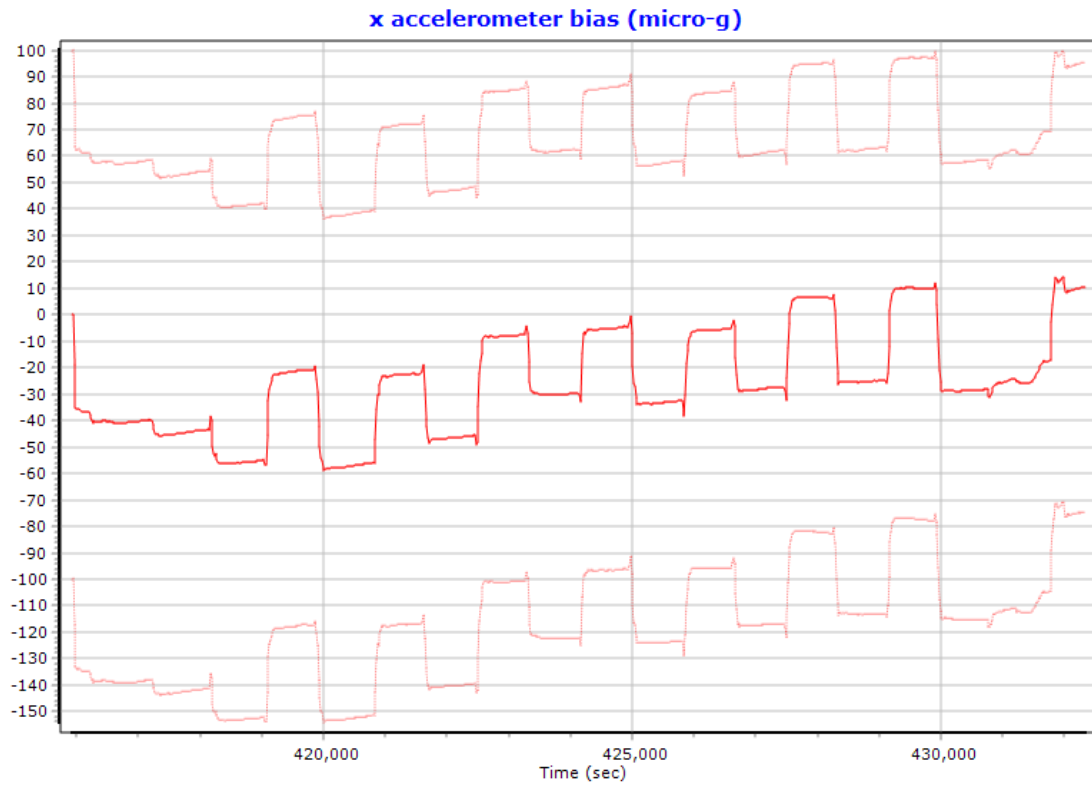
DOP over Tol: 1.45%

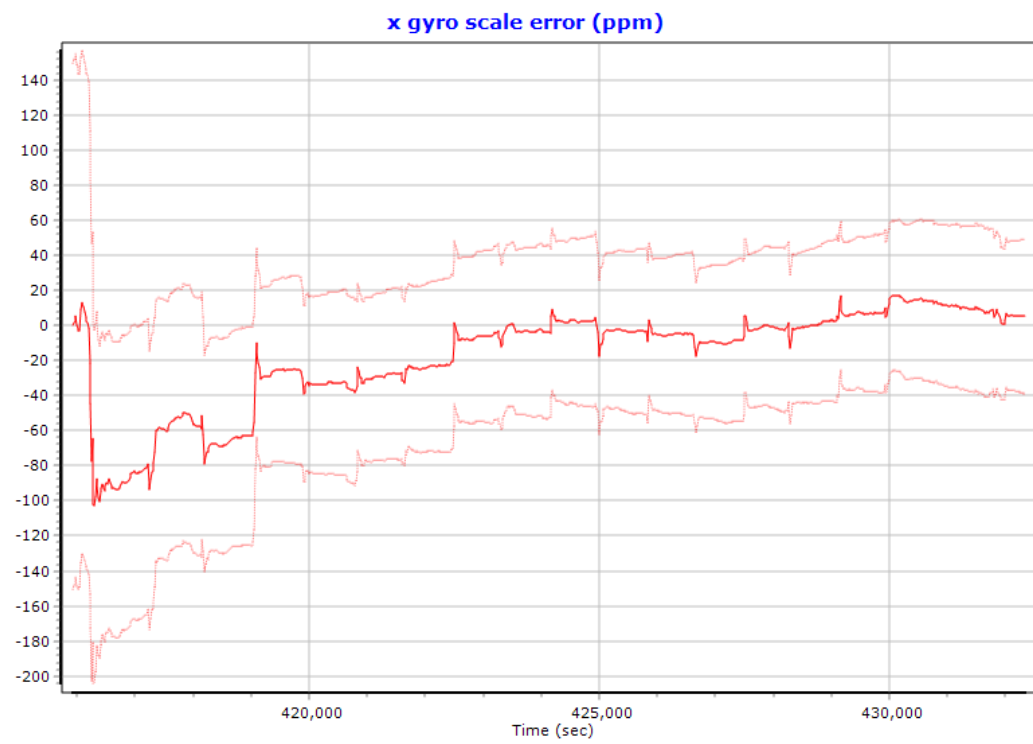
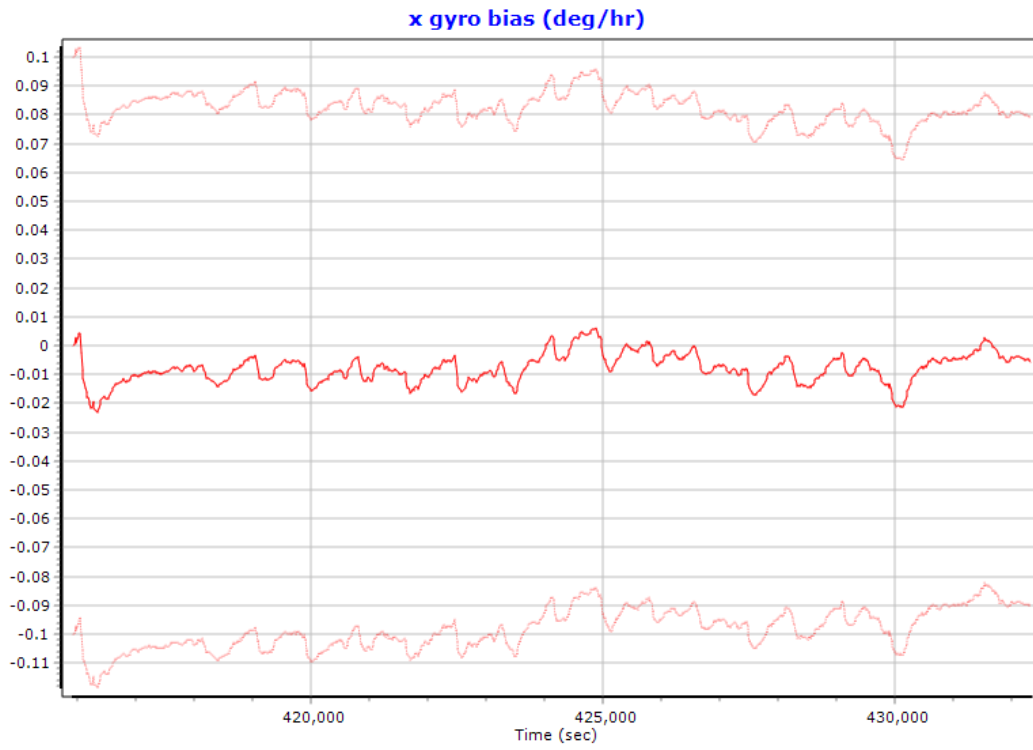
Baseline Distances (km):

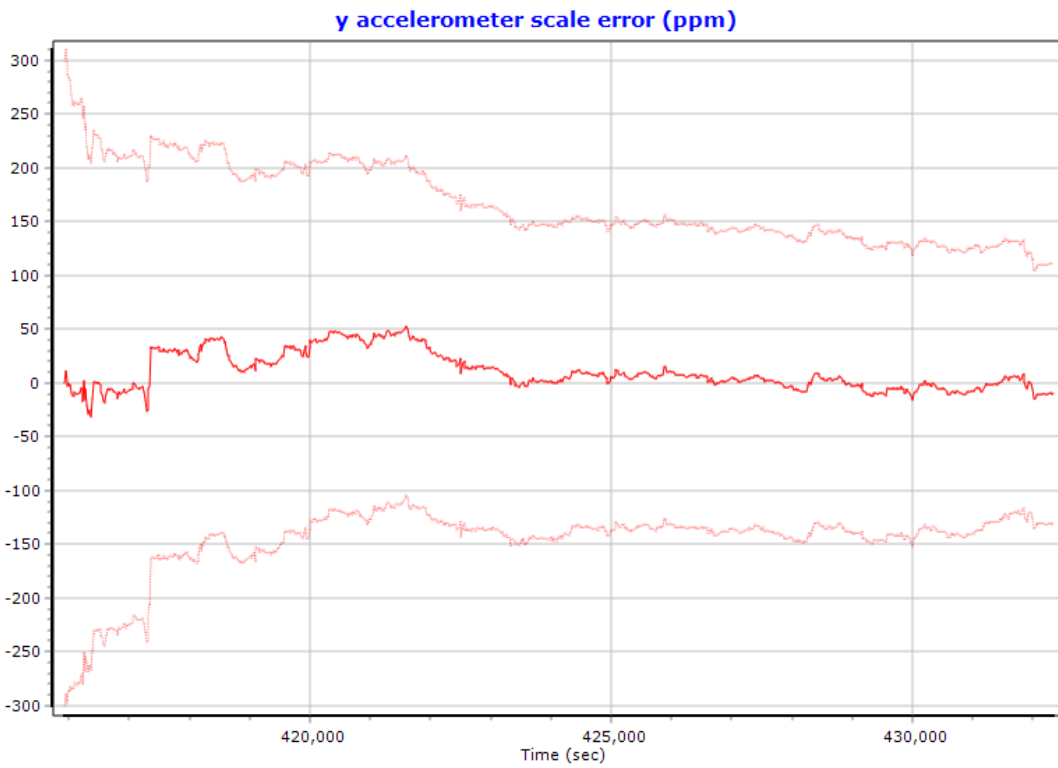
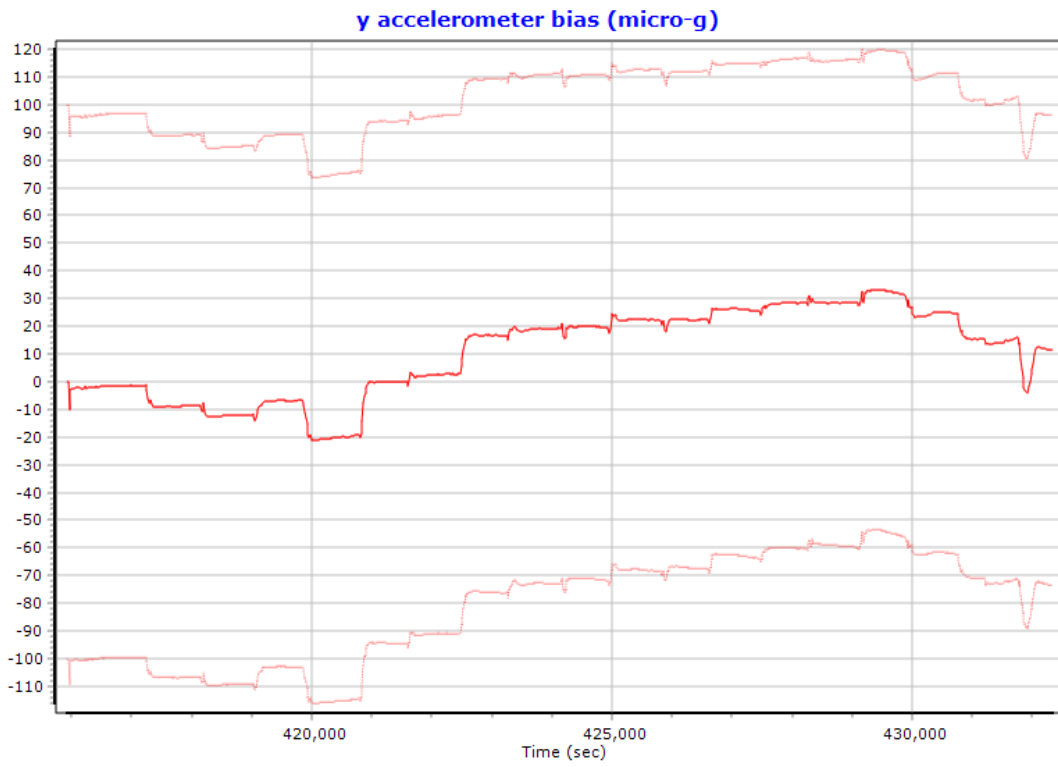
Maximum: 70.9  
Minimum: 0.25  
Average: 25.52  
First Epoch: 67.46  
Last Epoch: 67.46

CORS Base Stations

Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
WVAT	N37°25'42.67838"	W81°04'04.40392"	704.674	N37°25'42.67841"	W81°04'04.40403"	704.687
NCWC	N36°22'19.71491"	W80°11'05.64910"	274.974	N36°22'19.71484"	W80°11'05.64908"	275.088
NCSR	N36°29'51.93288"	W81°06'52.95776"	838.659	N36°29'51.93277"	W81°06'52.95793"	838.659
LS04	N37°21'47.16696"	W79°57'26.99414"	324.139	N37°21'47.16706"	W79°57'26.99405"	324.142
DOBS	N36°25'31.54122"	W80°43'11.73528"	339.304			

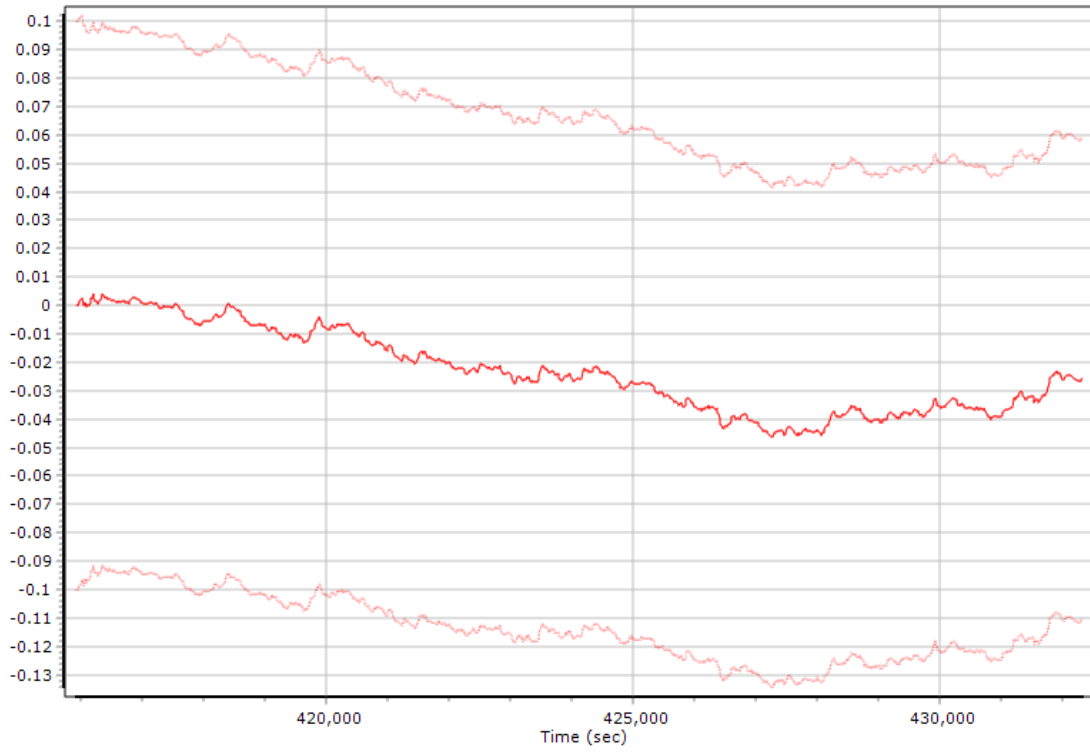




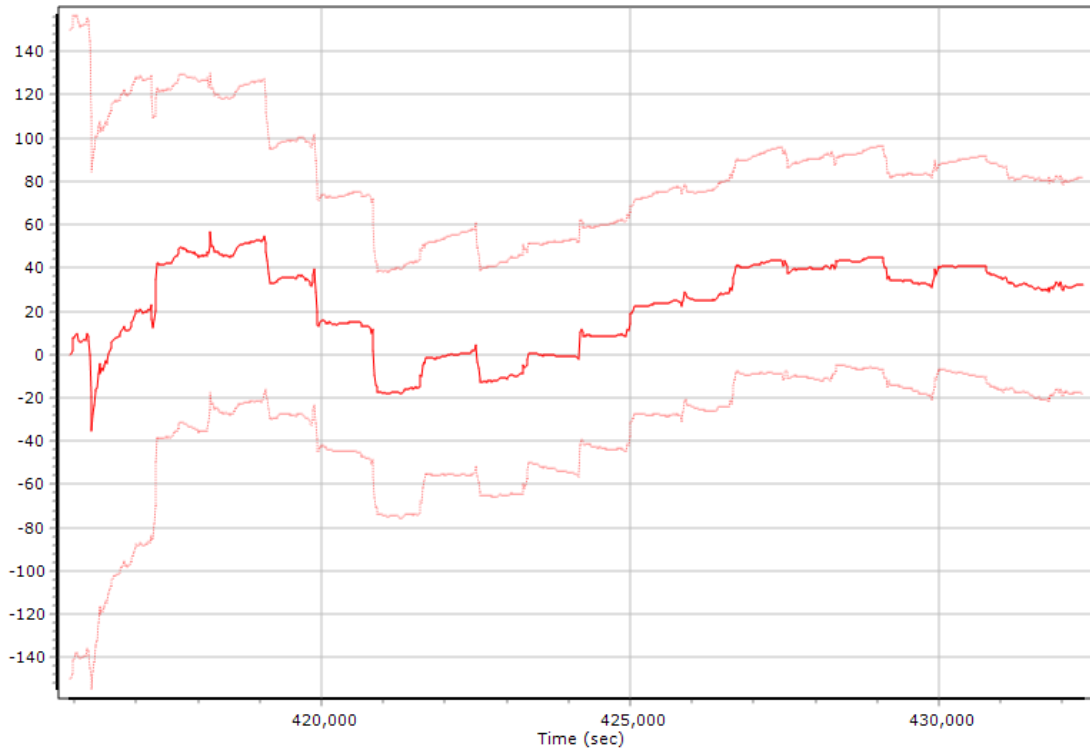


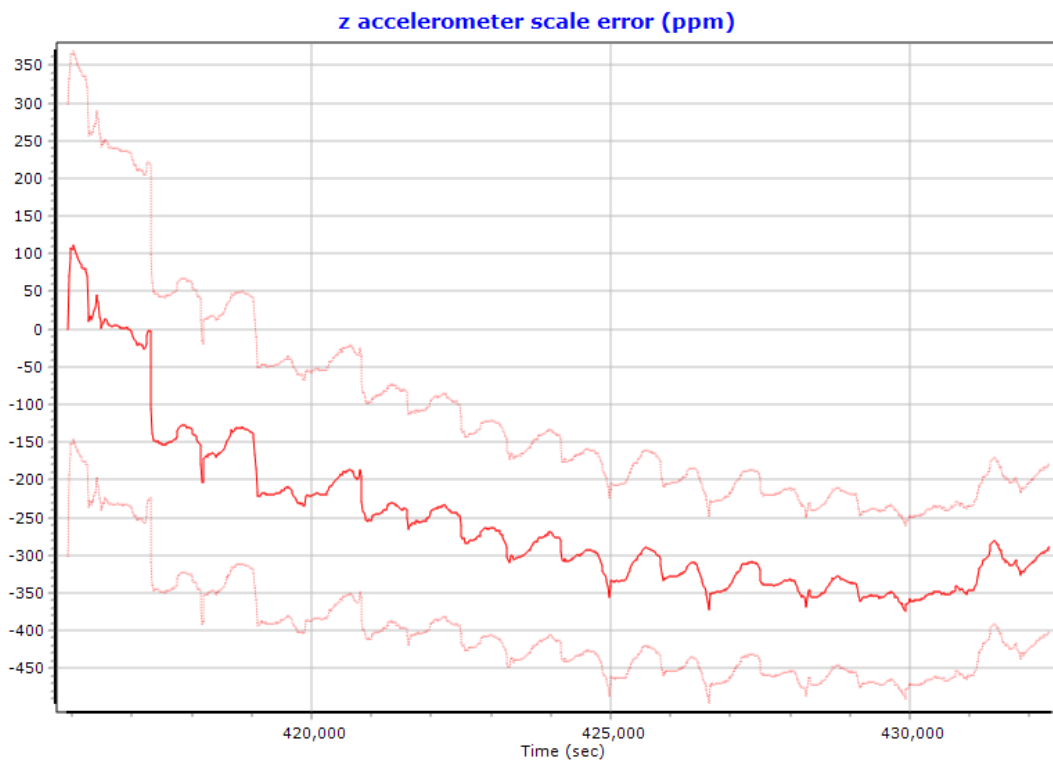
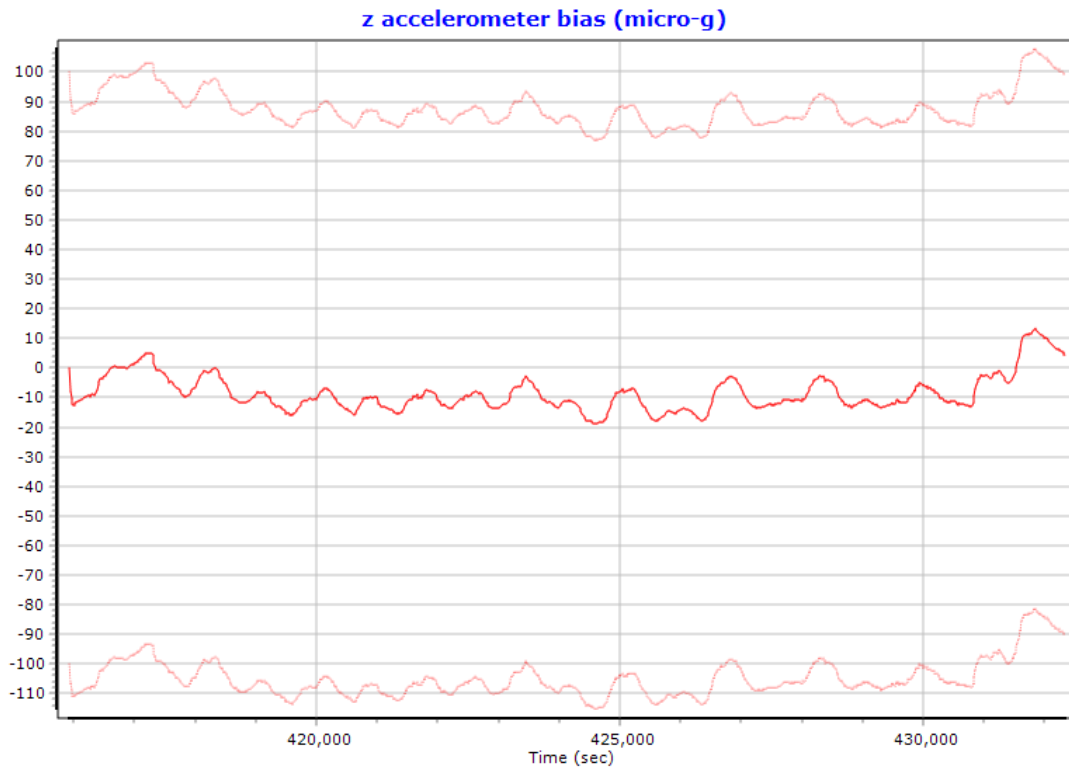


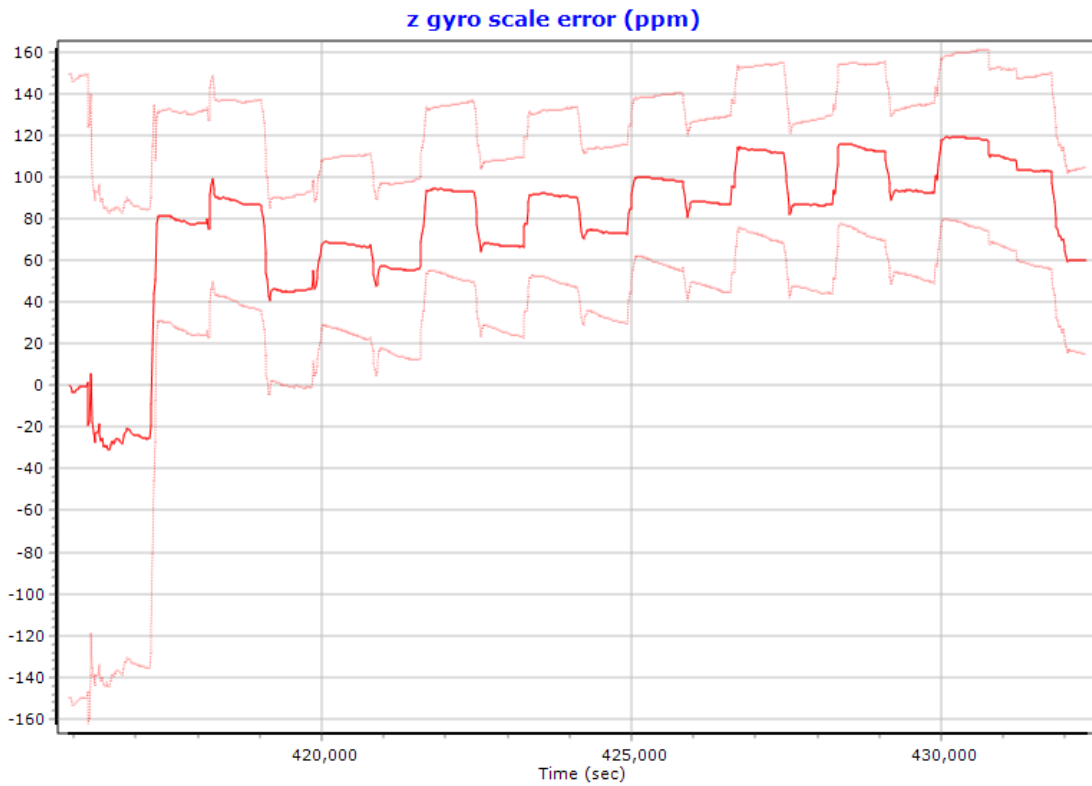
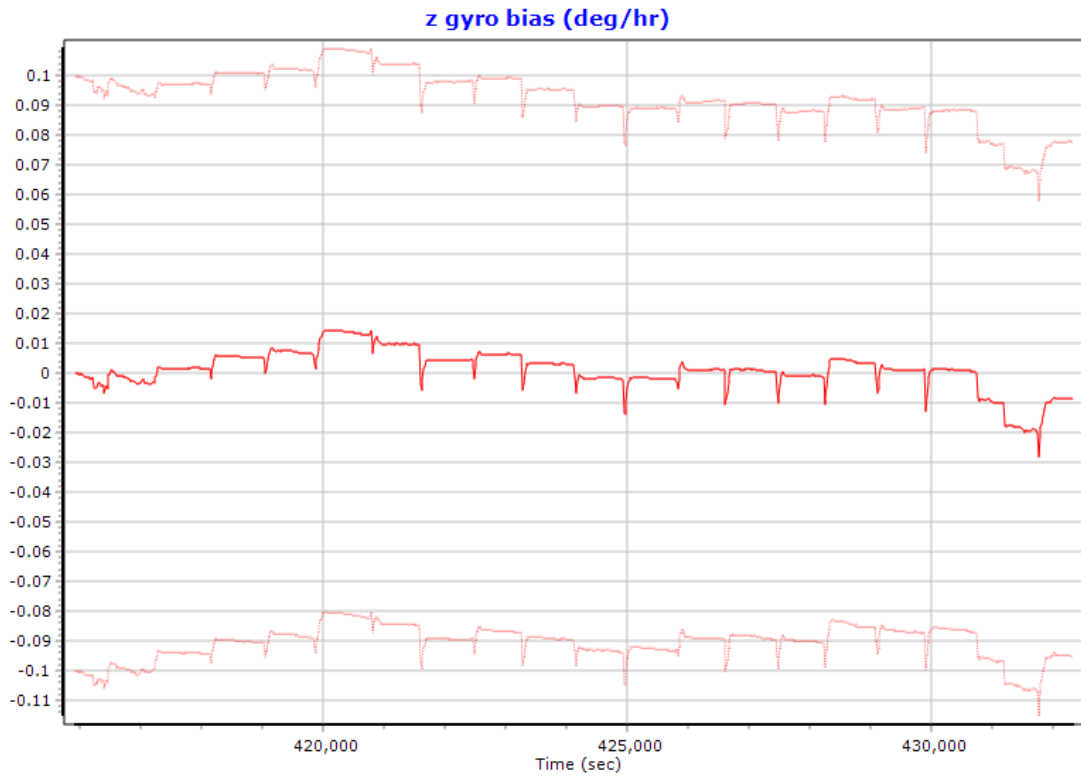
**y gyro bias (deg/hr)**



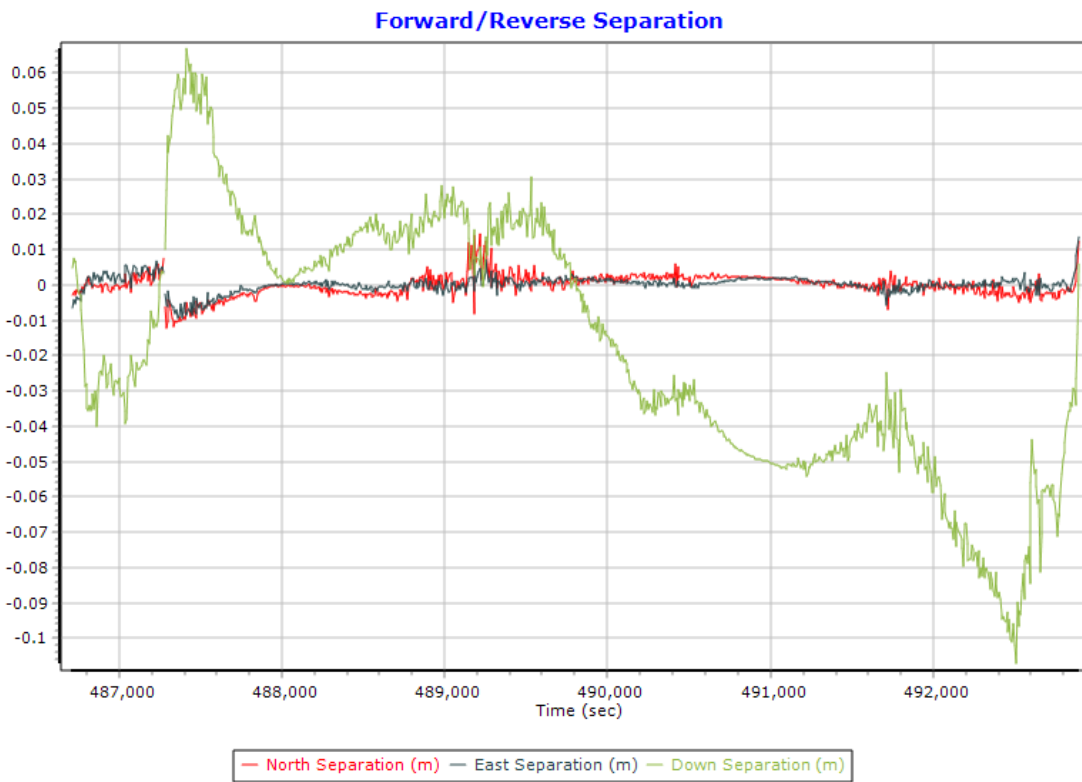
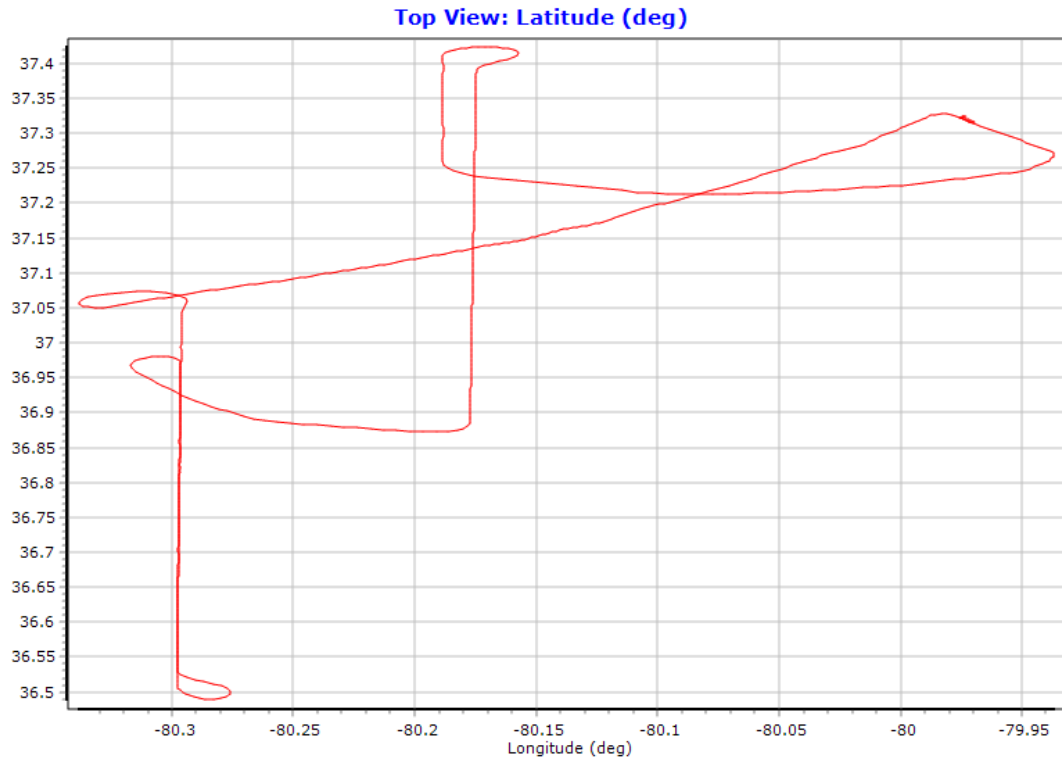
**y gyro scale error (ppm)**



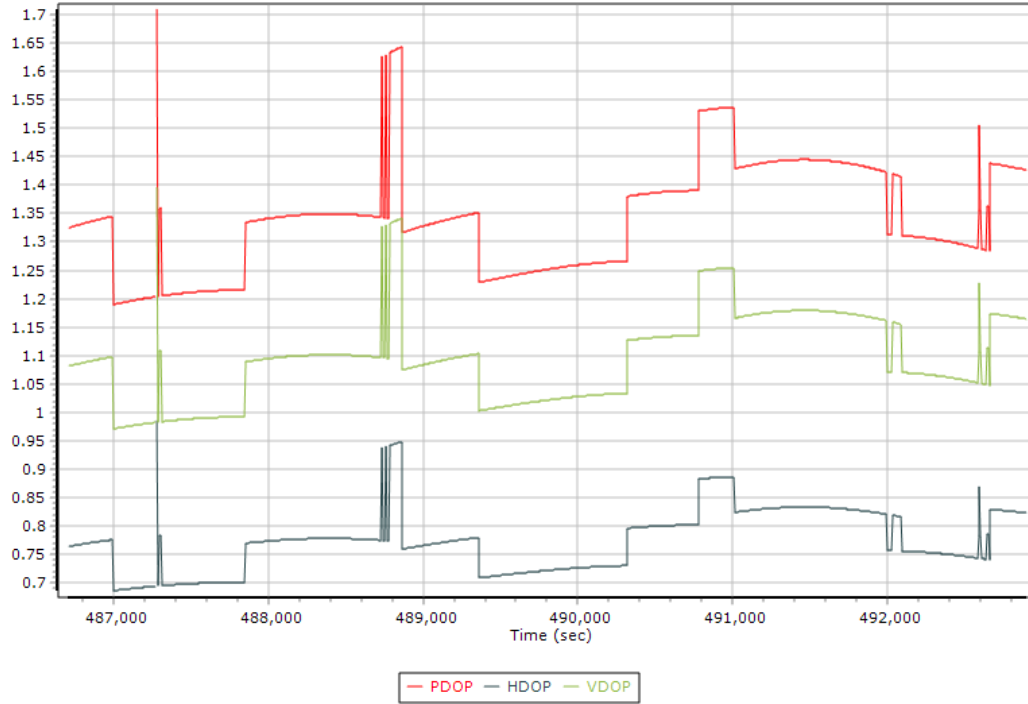




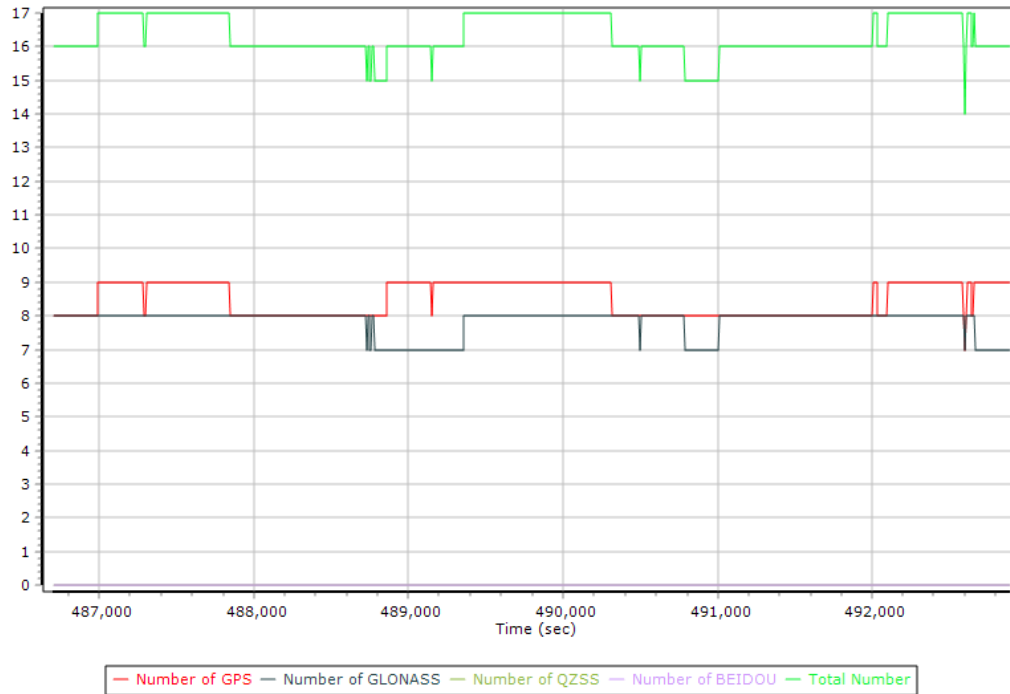
### DECEMBER 29, 2017



### DOP



### Number of SVs in solution



## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20171229\_VA

Solution Type: IN-Fusion SmartBase

Fixed: 6198	(99.98%)
Float: 0	(0.00%)
No Solution: 1	(0.02%)

Number of Epochs:

Total in RAW file: 6203  
No processed position: 5

Fwd/Rev Separation RMS Values (m):

North: 0.003  
East: 0.002  
Height: 0.040

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 3099 occurrences

North: 0.003  
East: 0.001  
Height: 0.029

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 100  
0.10 - 0.30 m: 0  
0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

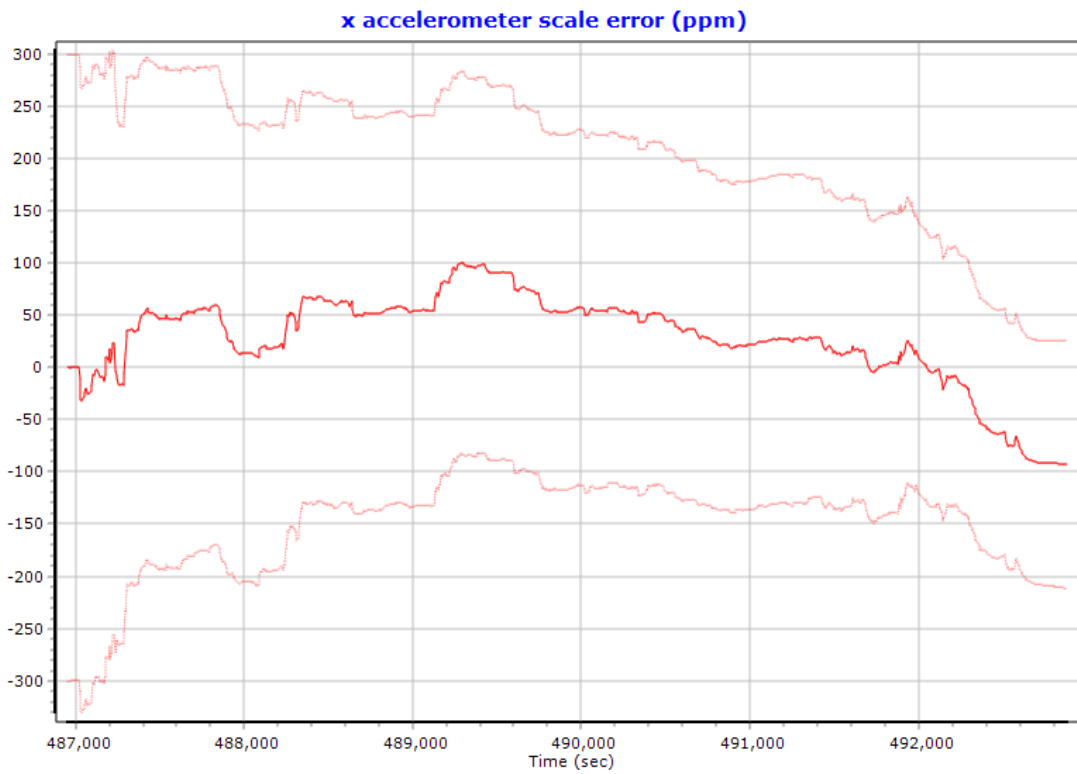
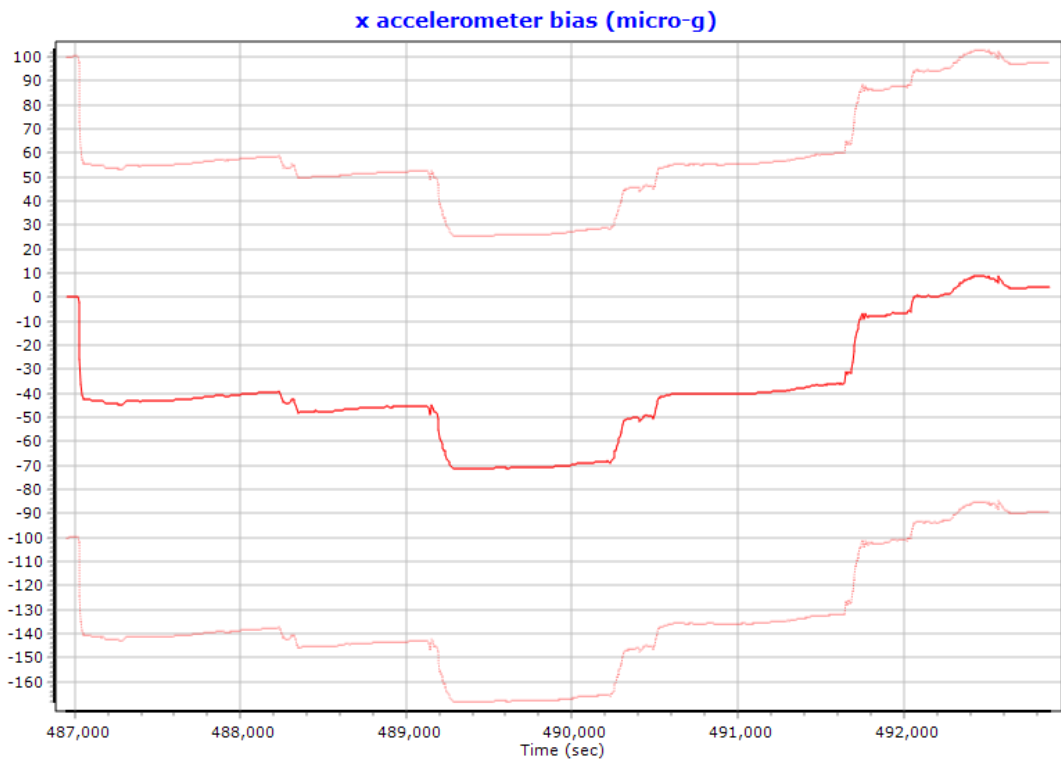
DOP over Tol: 1.34%

Baseline Distances (km):

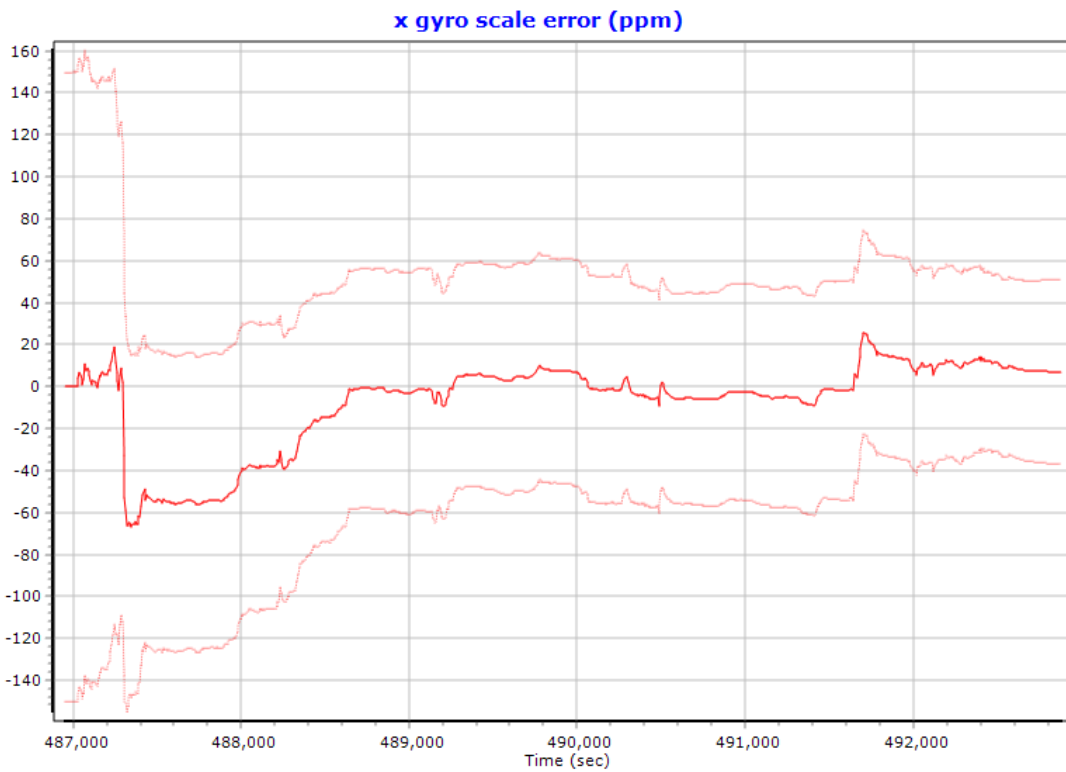
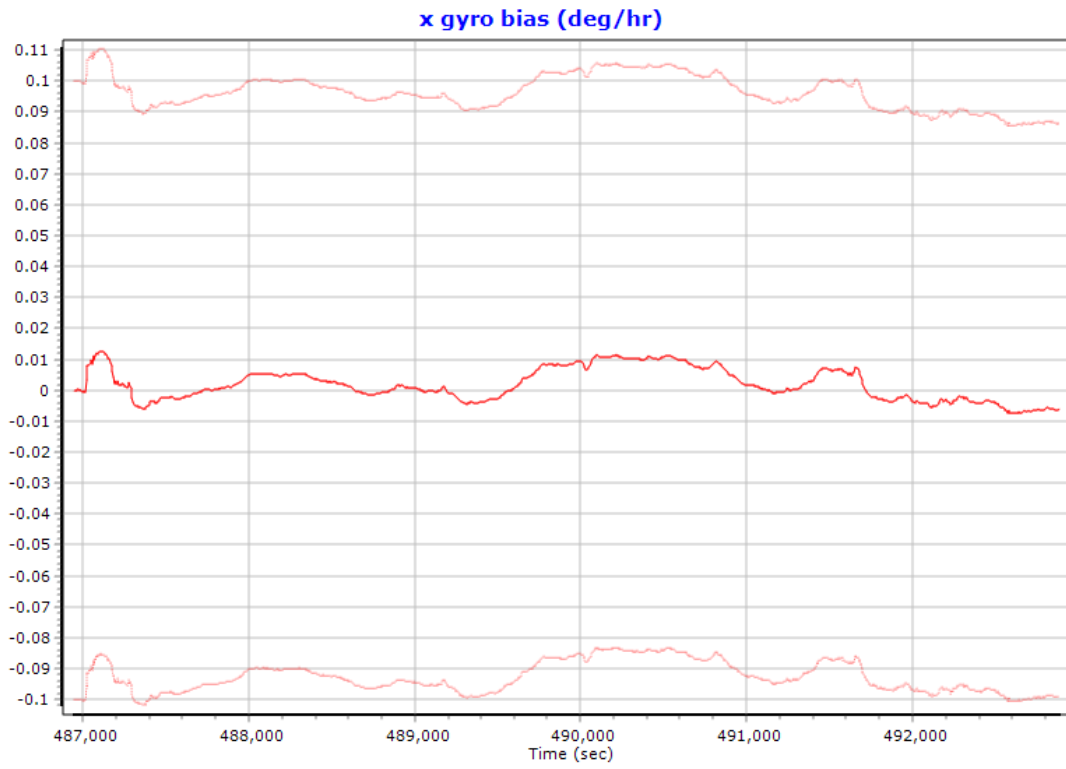
Maximum: 64.57  
Minimum: 0.76  
Average: 27.09  
First Epoch: 33.88  
Last Epoch: 33.74

CORS Base Stations

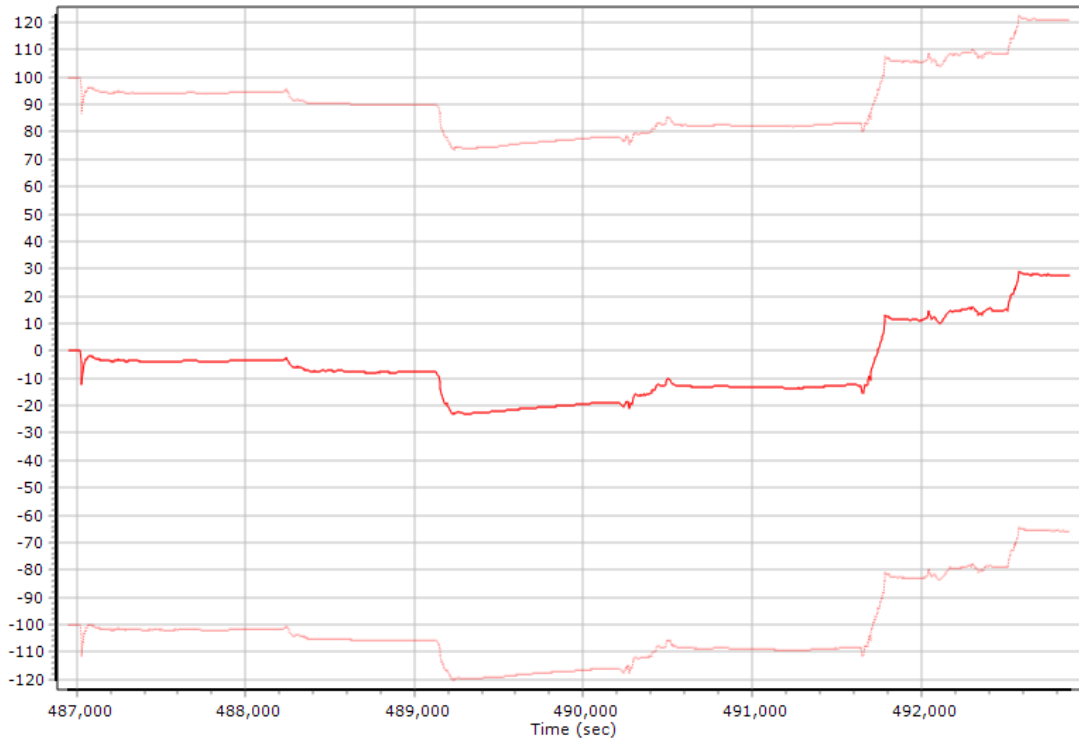
Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
WVLE	N37°49'20.23028"	W80°25'18.58185"	655.2	N37°49'20.23010"	W80°25'18.58194"	655.201
WVAT	N37°25'42.67838"	W81°04'04.40392"	704.674	N37°25'42.67832"	W81°04'04.40402"	704.678
NCRE	N36°21'42.74202"	W79°39'56.56331"	233.466	N36°21'42.74179"	W79°39'56.56333"	233.466
LS04	N37°21'47.16696"	W79°57'26.99414"	324.139			
DOBS	N36°25'31.54122"	W80°43'11.73528"	339.304	N36°25'31.54123"	W80°43'11.73528"	339.298



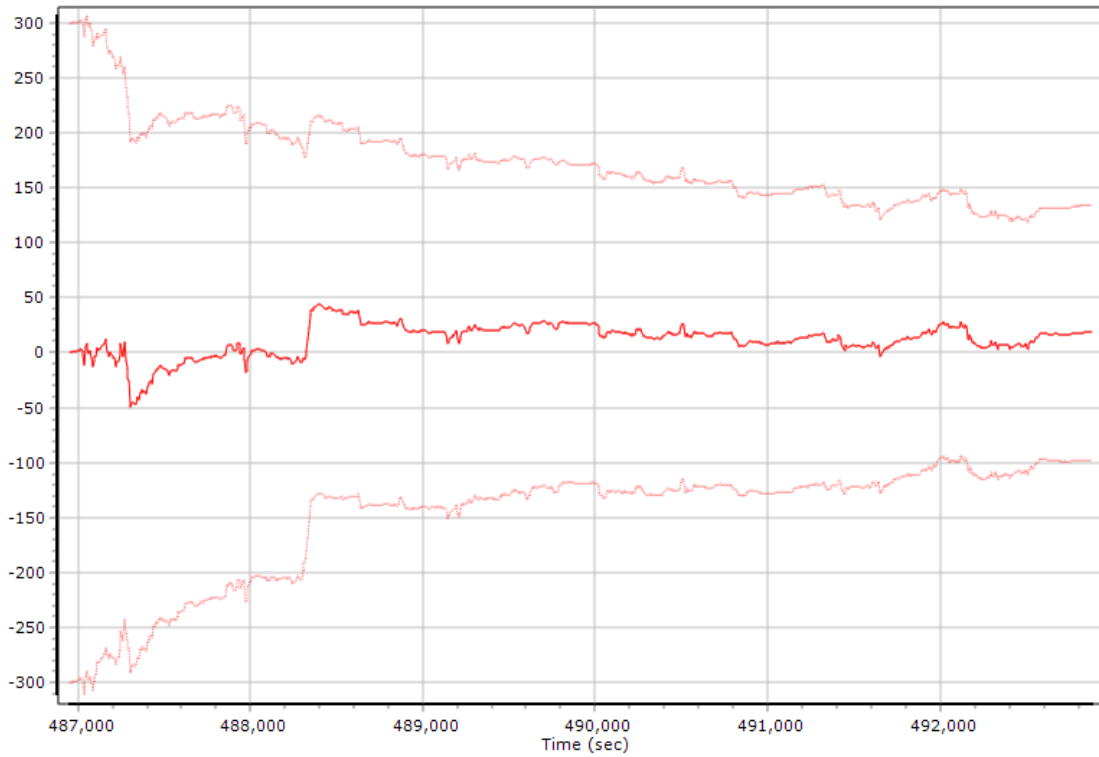


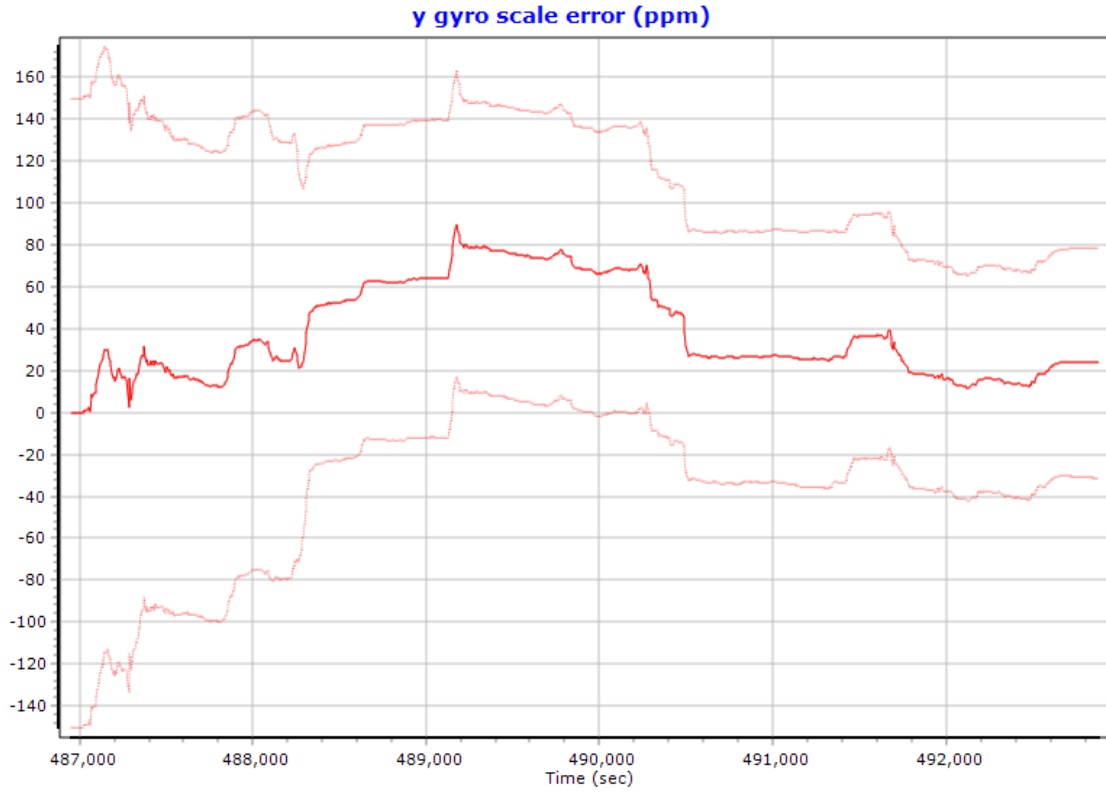
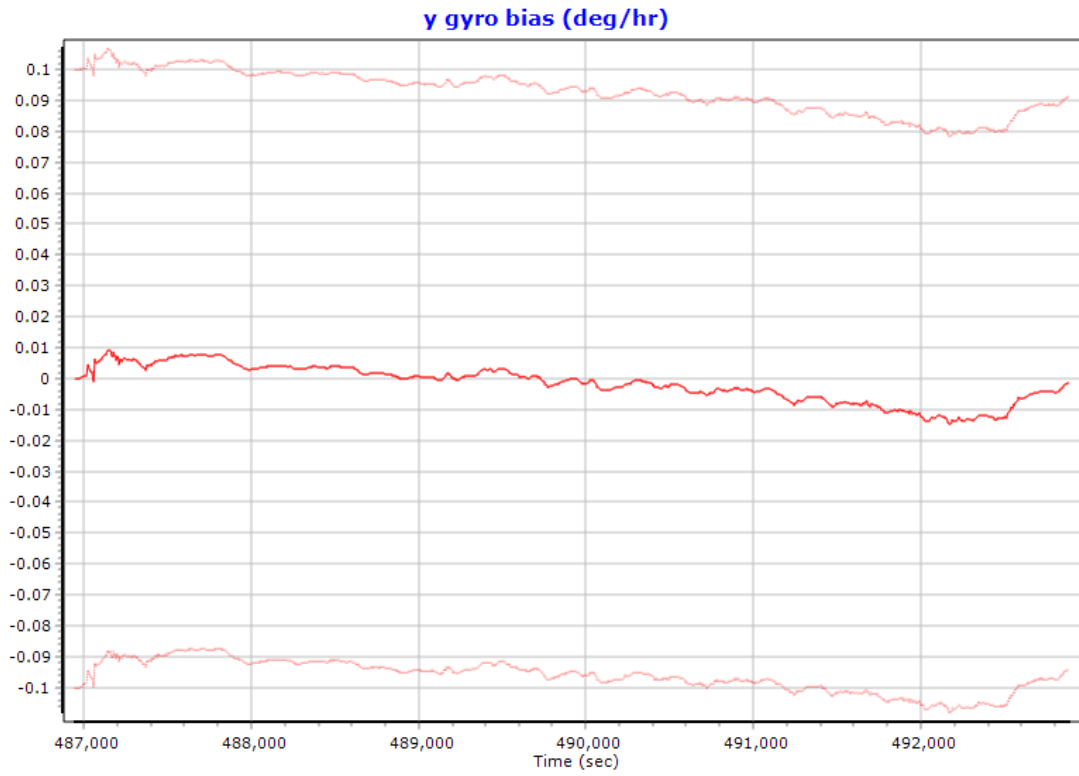


**y accelerometer bias (micro-g)**

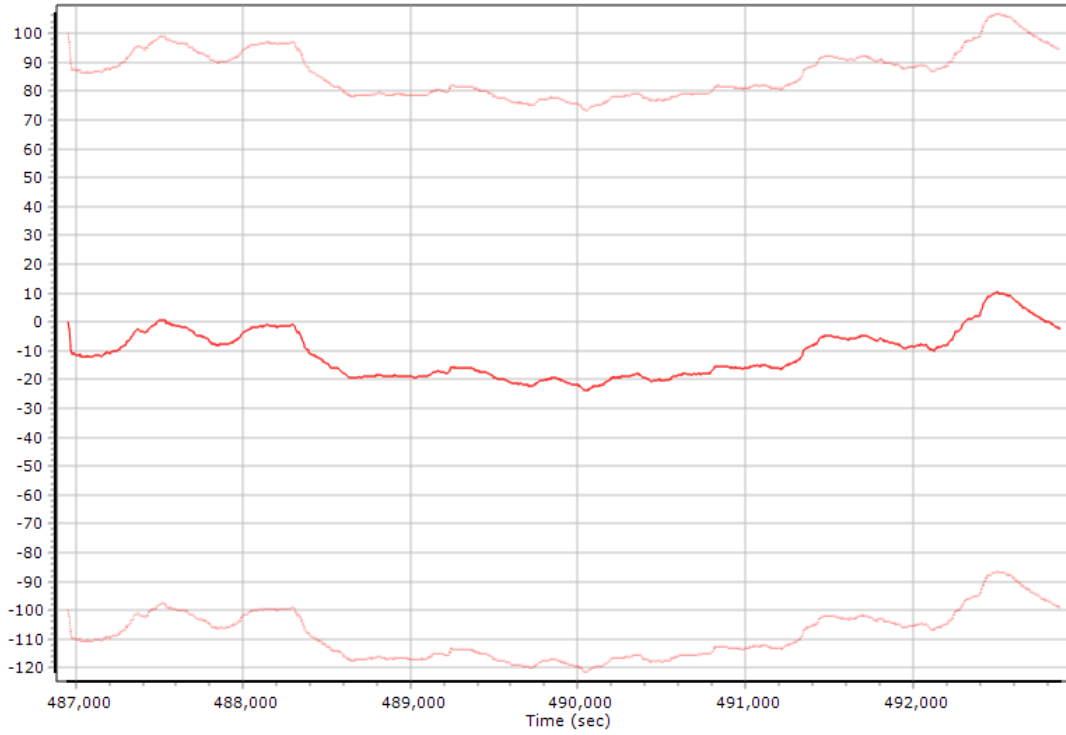


**y accelerometer scale error (ppm)**

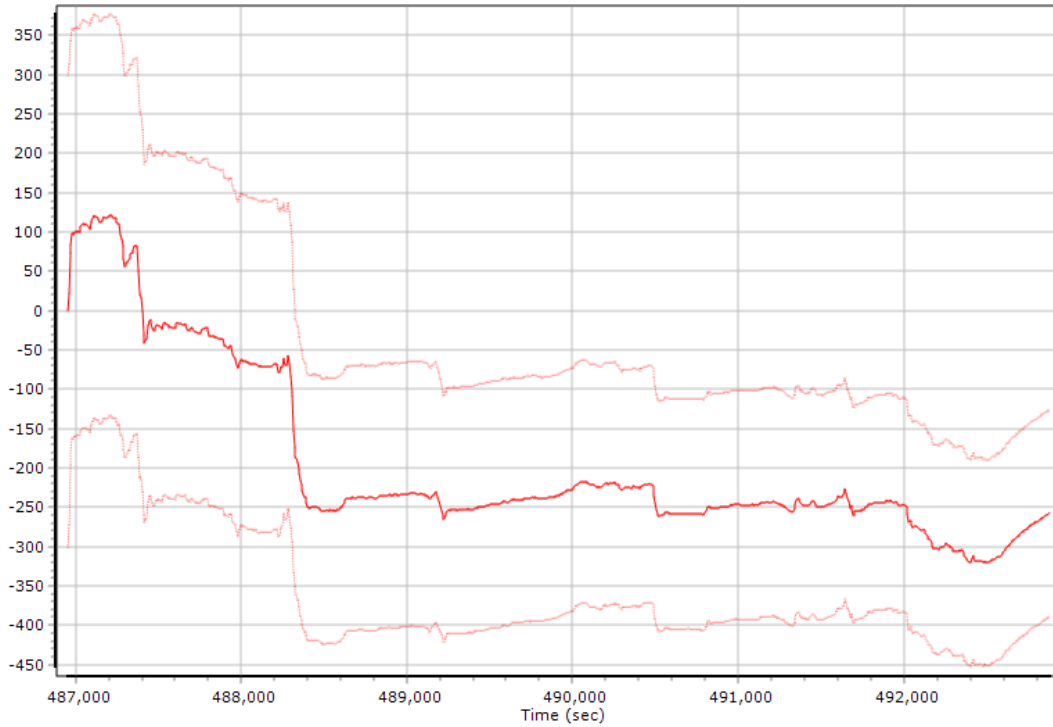


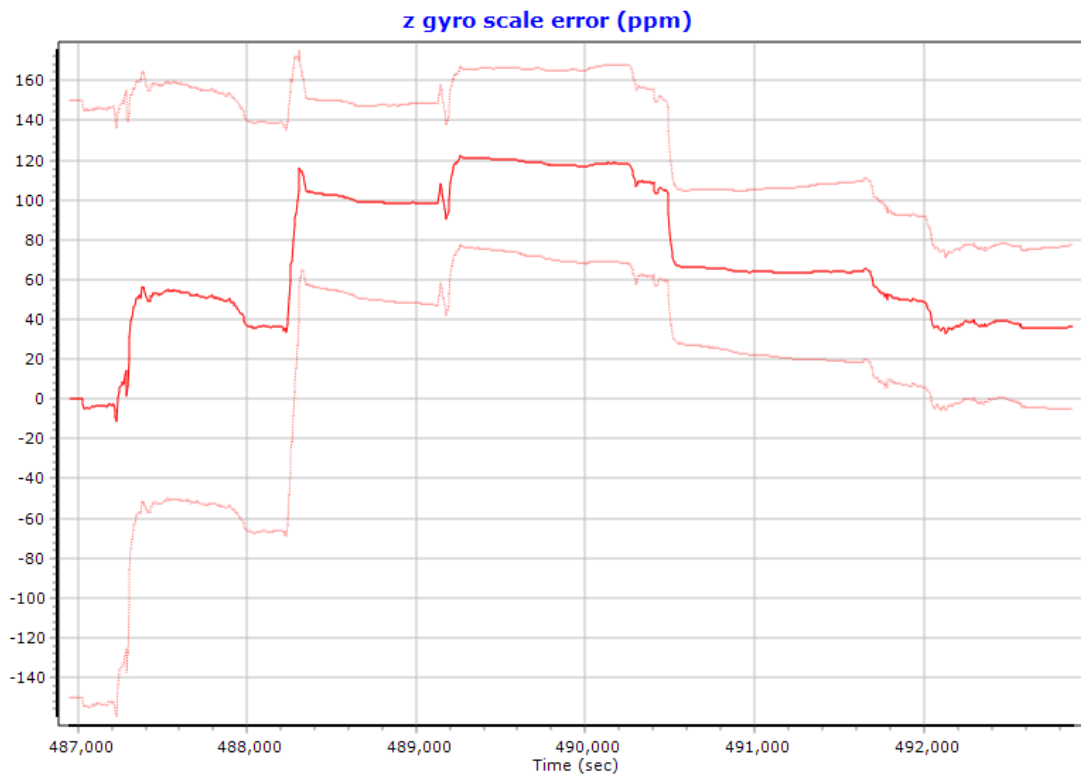
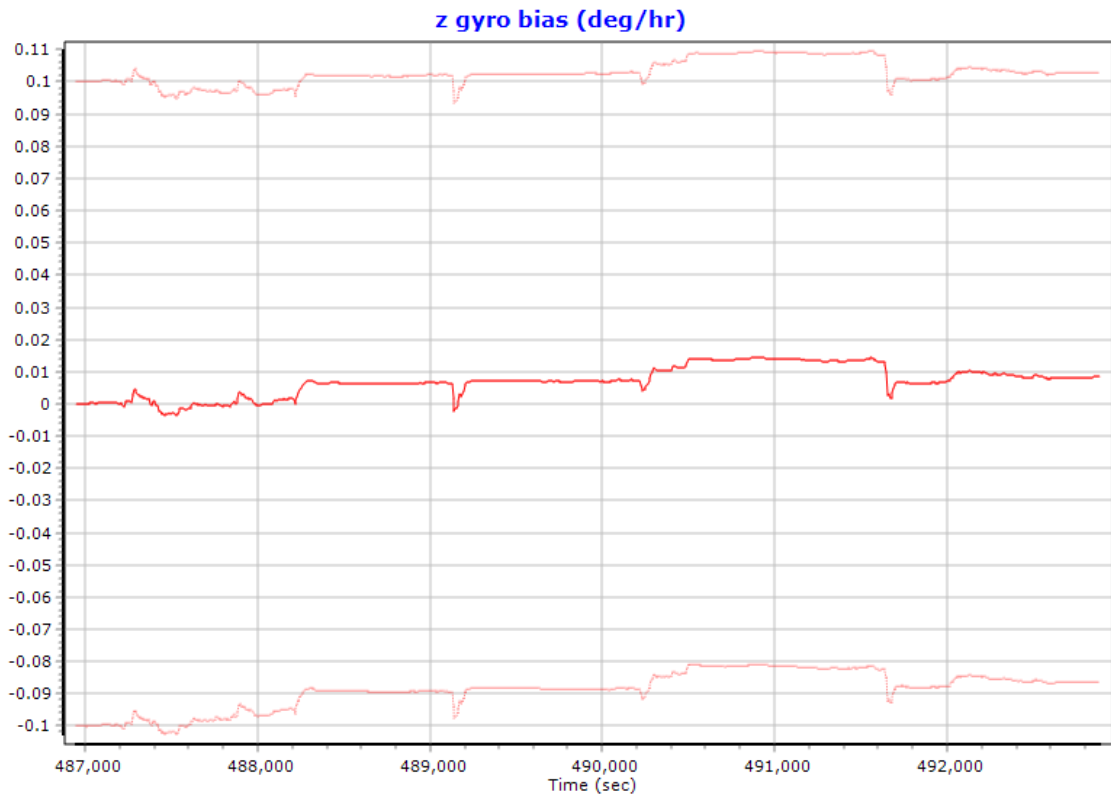


**z accelerometer bias (micro-g)**



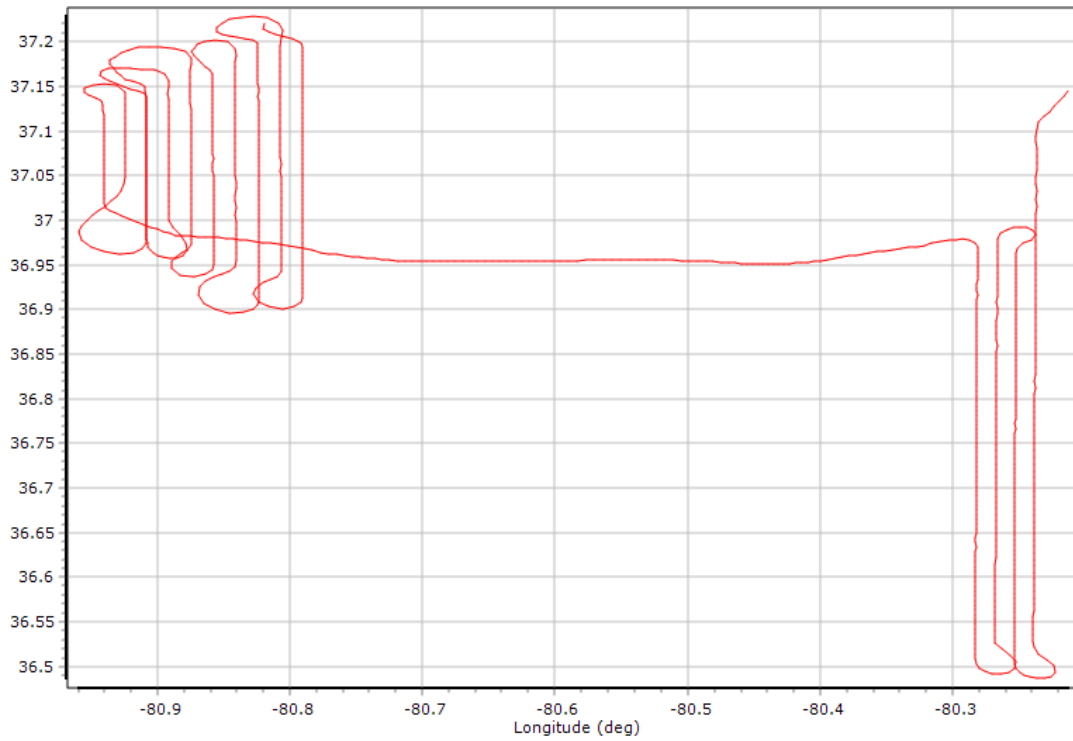
**z accelerometer scale error (ppm)**





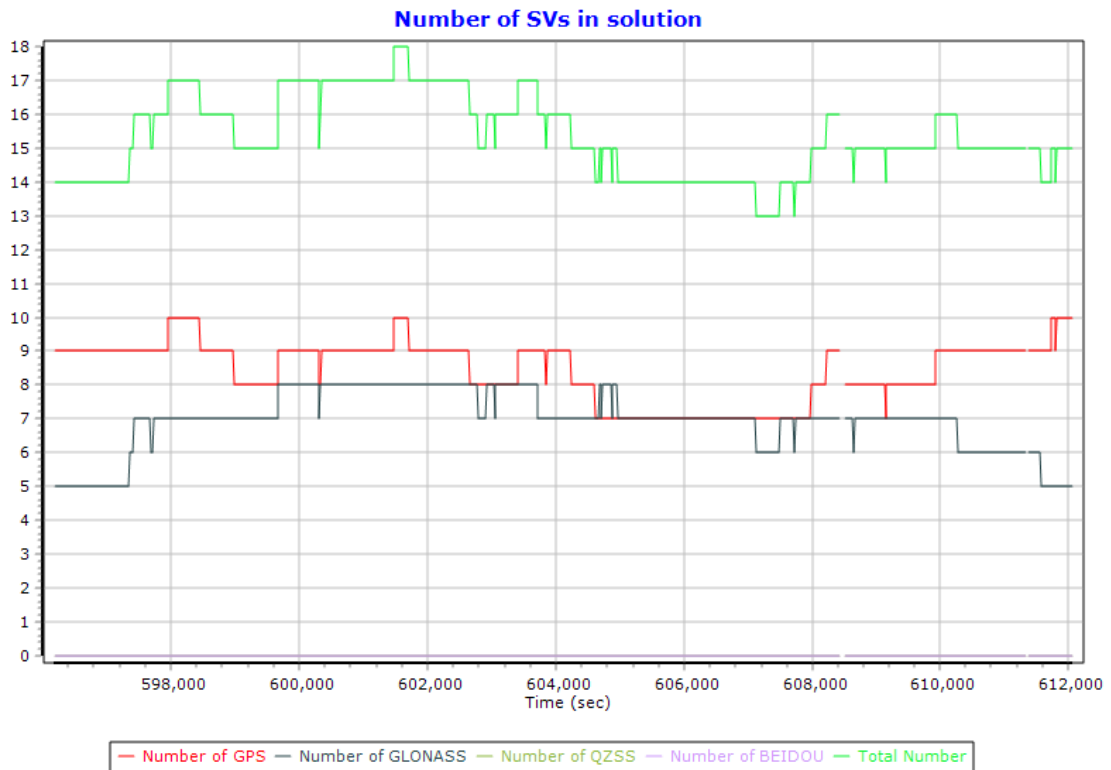
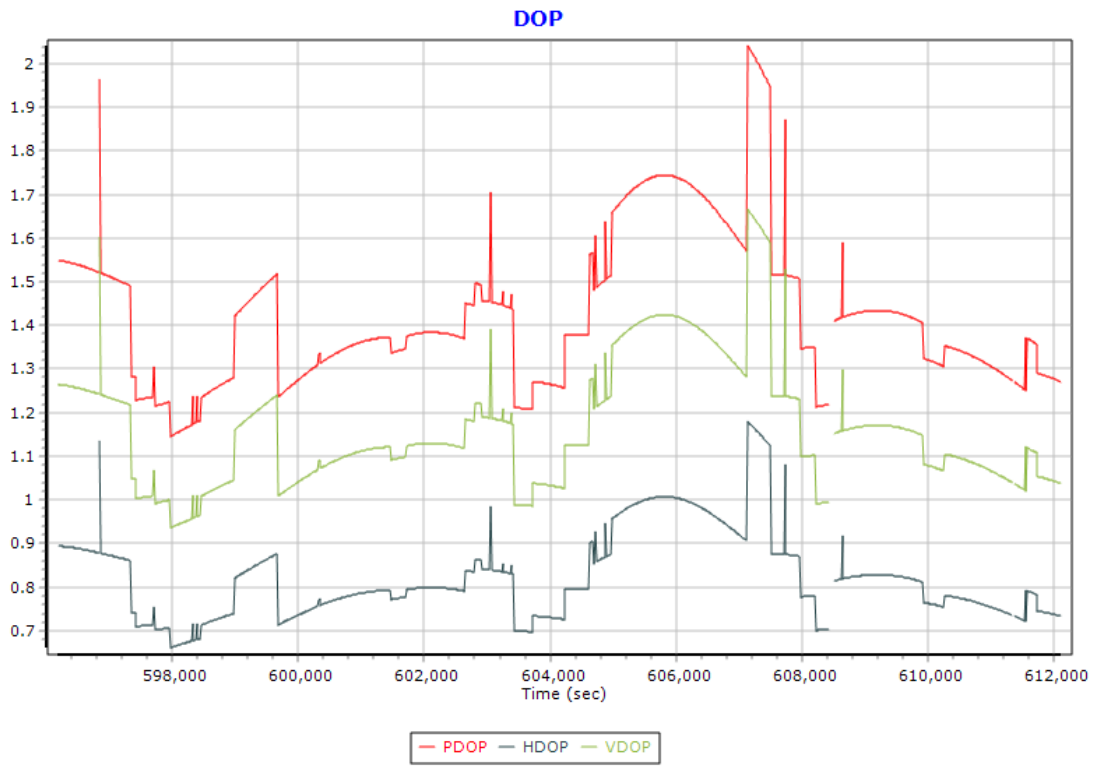
# JANUARY 06, 2018

Top View: Latitude (deg)



Forward/Reverse Separation





## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20180106\_VA

Solution Type: IN-Fusion SmartBase

Fixed: 15813	(99.52%)
Float: 0	(0.00%)
No Solution: 77	(0.48%)

Number of Epochs:

Total in RAW file: 15935  
No processed position: 122

Fwd/Rev Separation RMS Values (m):

North: 0.008  
East: 0.011  
Height: 0.052

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 7968 occurrences

North: 0.004  
East: 0.003  
Height: 0.019

Quality Number Percentages:

Q 0: 100.0 %



Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 98.549  
 0.10 - 0.30 m: 1.539  
 0.30 - 1.00 m: 0.002  
 1.00 - 5.00 m: 0  
 5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

DOP over Tol: 1.43%

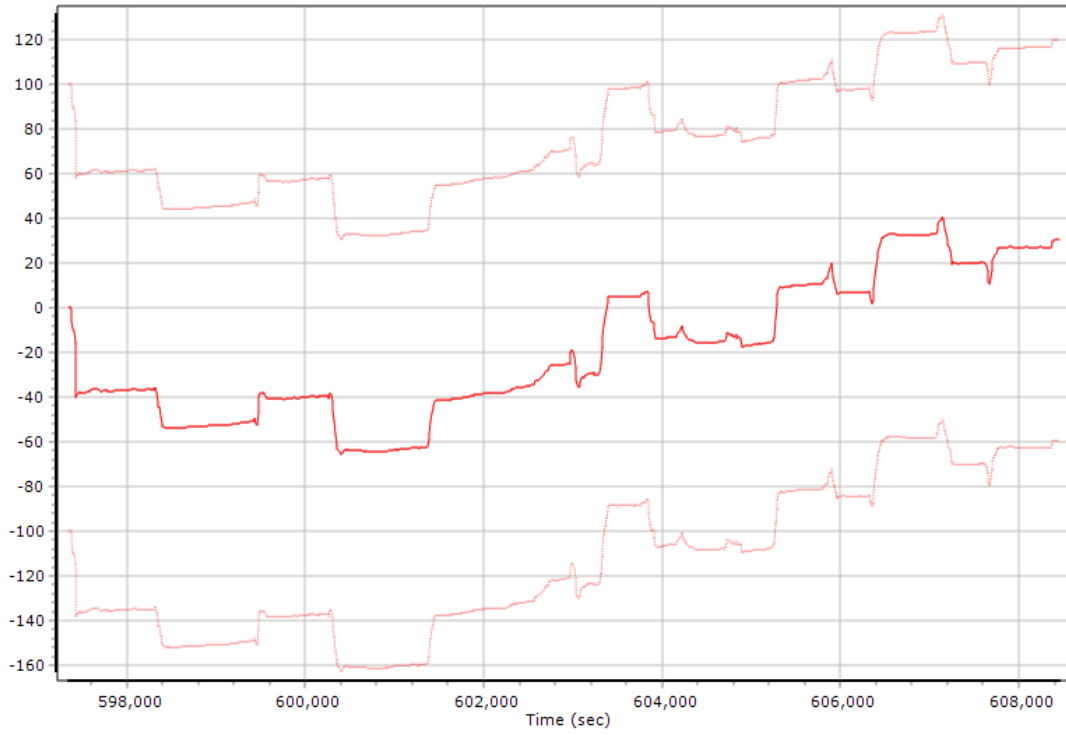
Baseline Distances (km):

Maximum: 71.72  
 Minimum: 1.24  
 Average: 35.75  
 First Epoch: 70.92  
 Last Epoch: 70.87

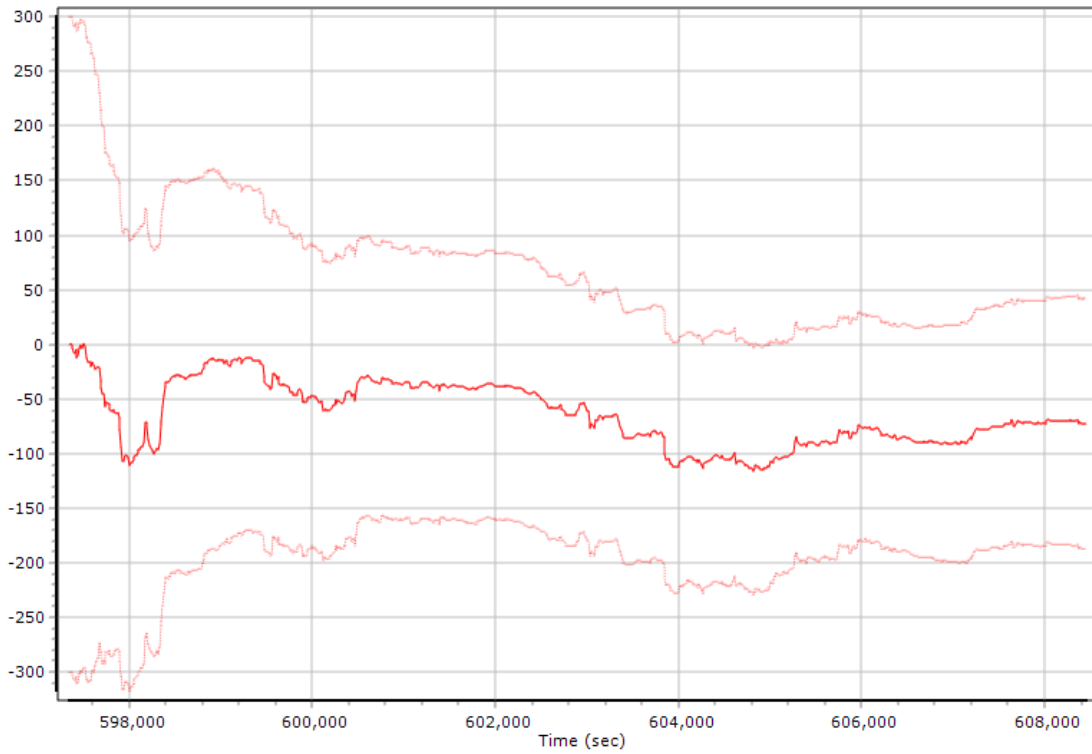
CORS Base Stations

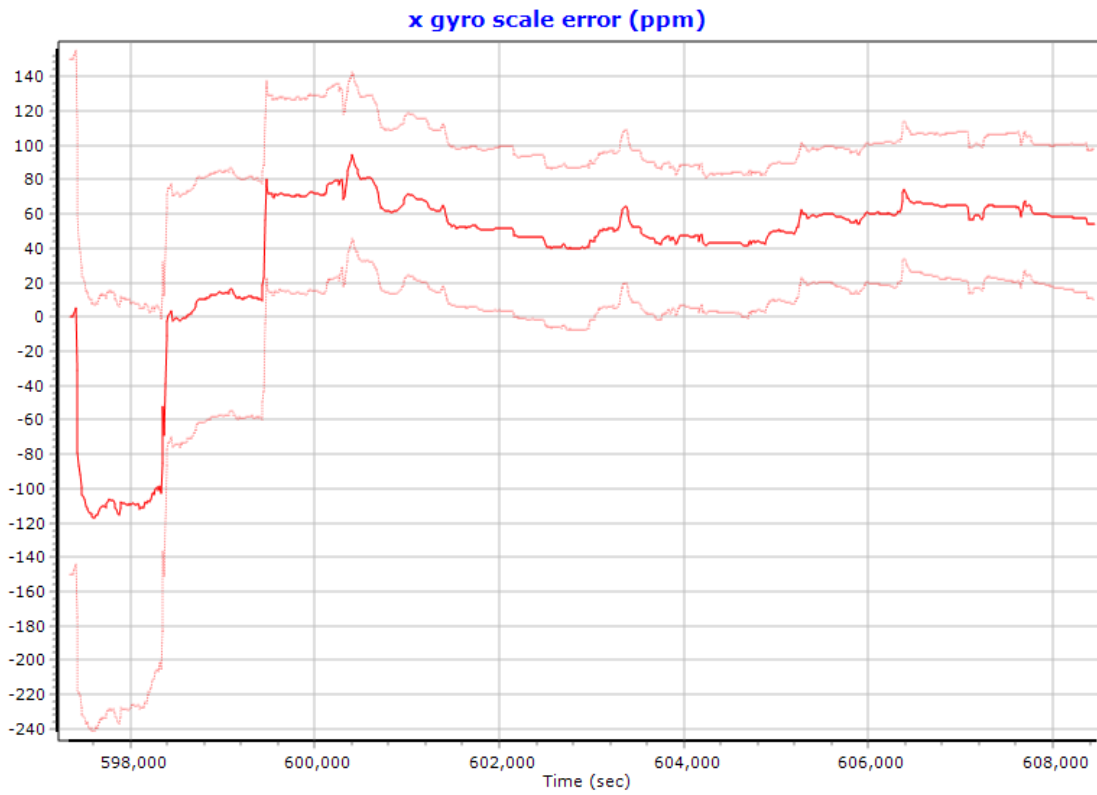
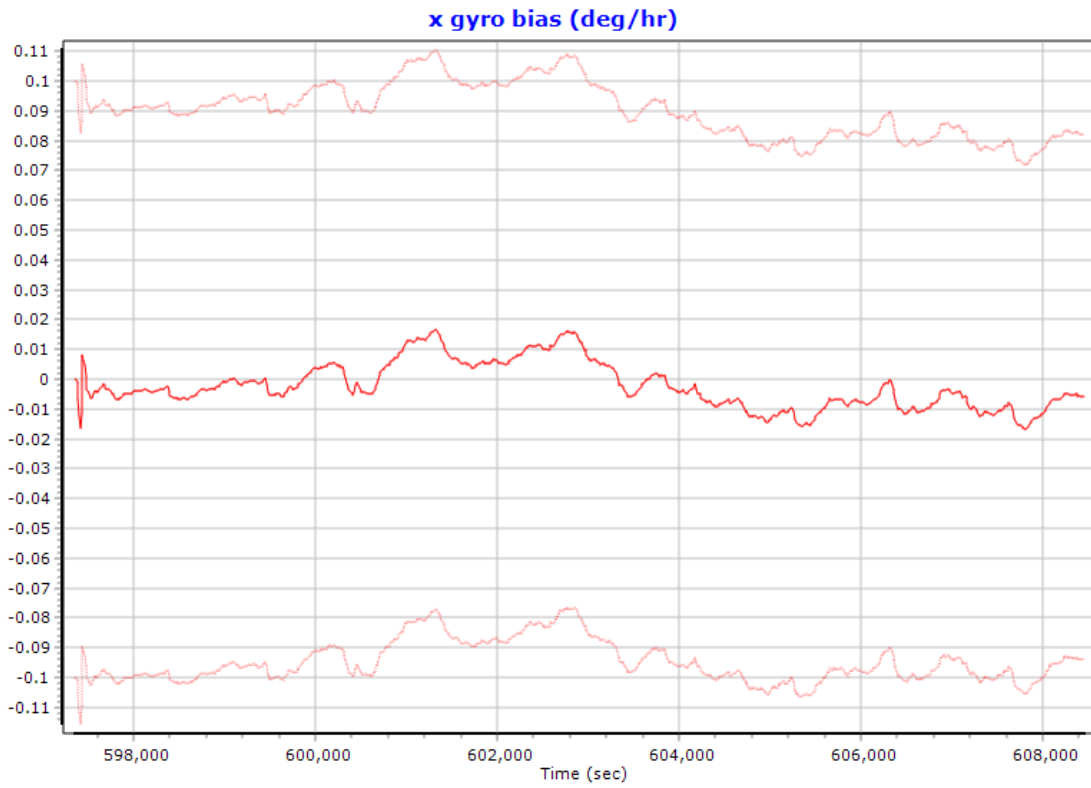
Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
WVAT	N37°25'42.67838"	W81°04'04.40393"	704.674	N37°25'42.67830"	W81°04'04.40410"	704.679
NCWC	N36°22'19.71491"	W80°11'05.64912"	274.974	N36°22'19.71481"	W80°11'05.64909"	275.076
NCSR	N36°29'51.93288"	W81°06'52.95778"	838.659	N36°29'51.93267"	W81°06'52.95810"	838.645
NCRE	N36°21'42.74194"	W79°39'56.56346"	233.465	N36°21'42.74173"	W79°39'56.56344"	233.467
LS04	N37°21'47.16696"	W79°57'26.99415"	324.139			
DOBS	N36°25'31.54122"	W80°43'11.73529"	339.304	N36°25'31.54111"	W80°43'11.73545"	339.297

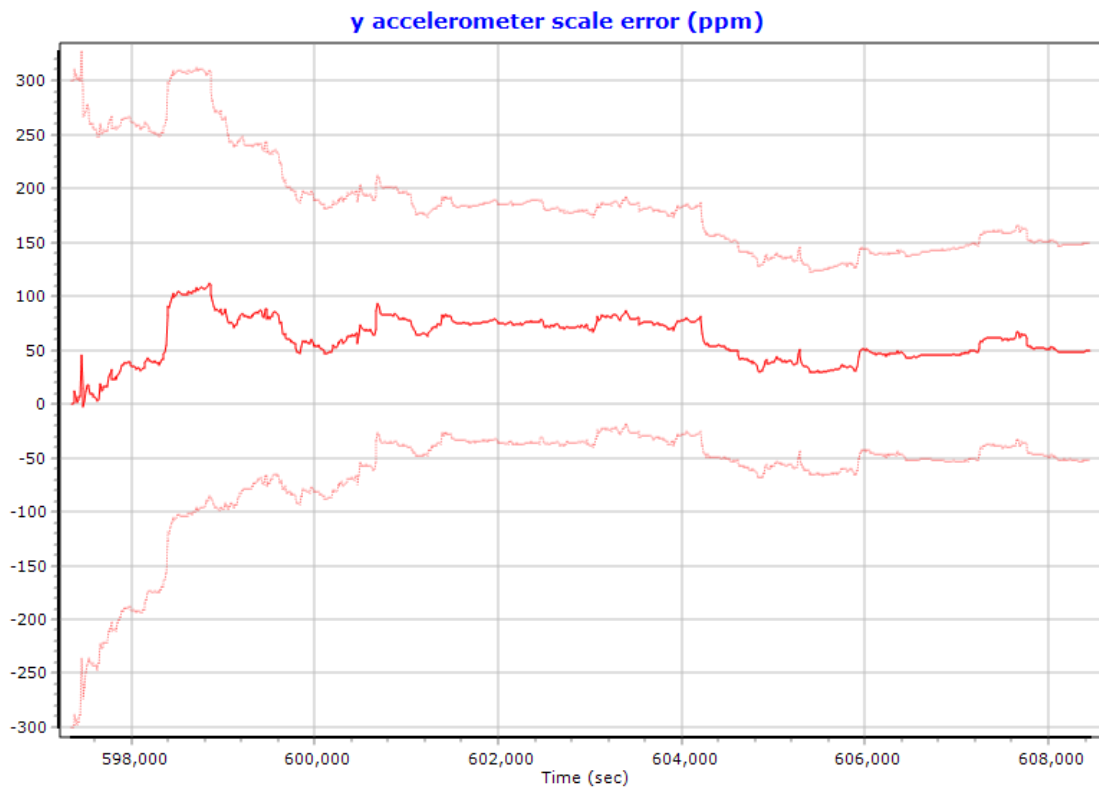
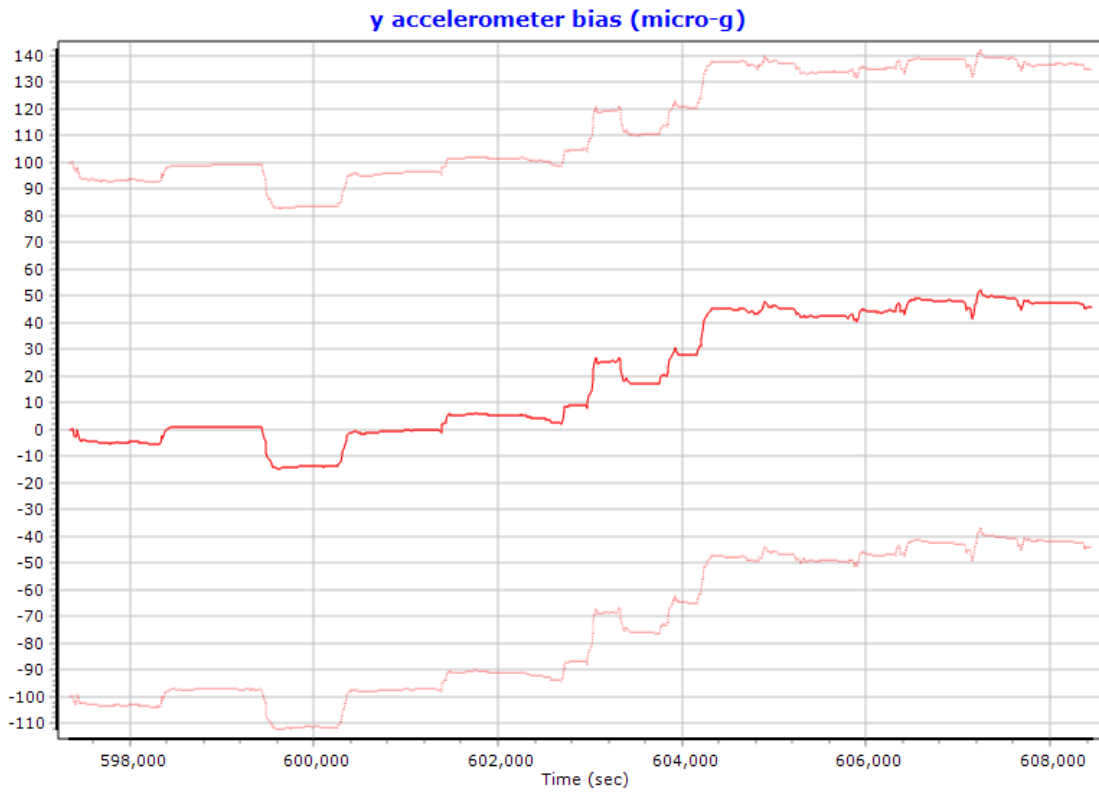
**x accelerometer bias (micro-g)**

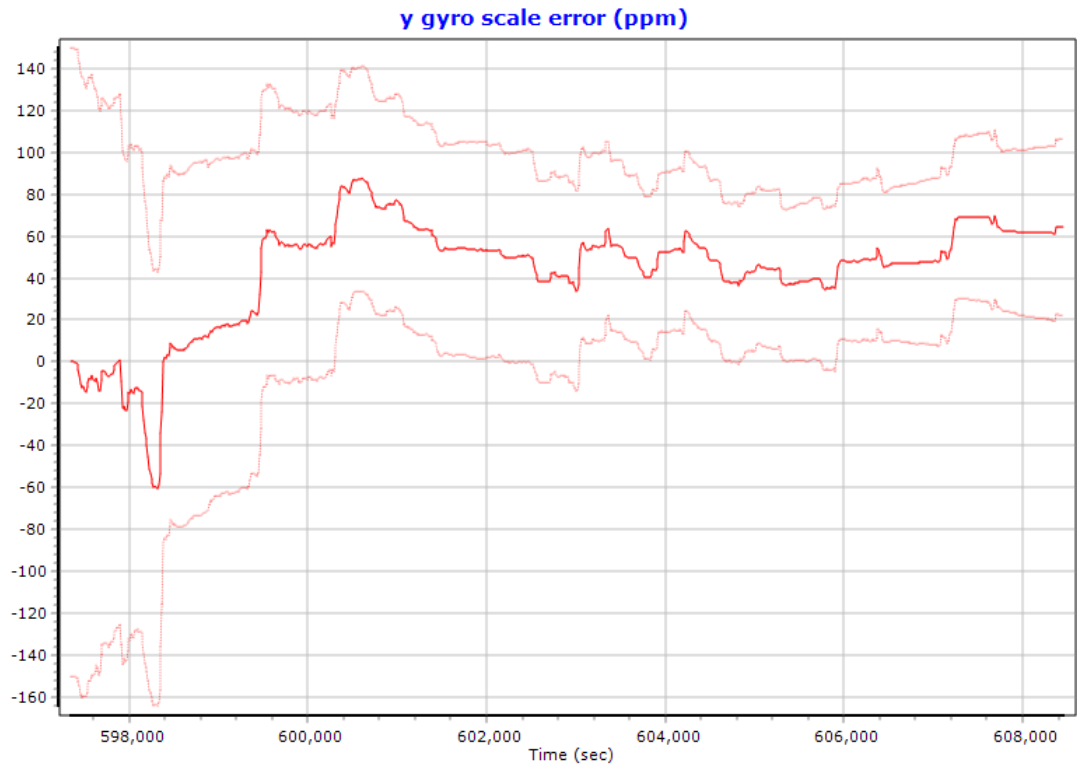
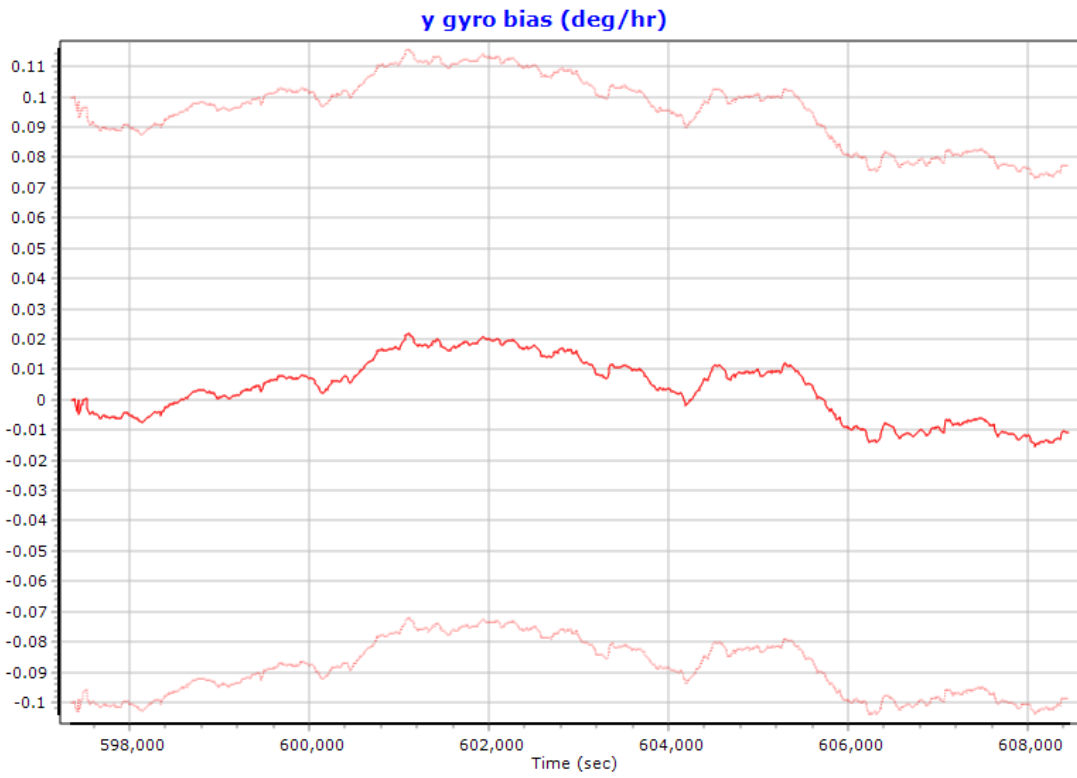


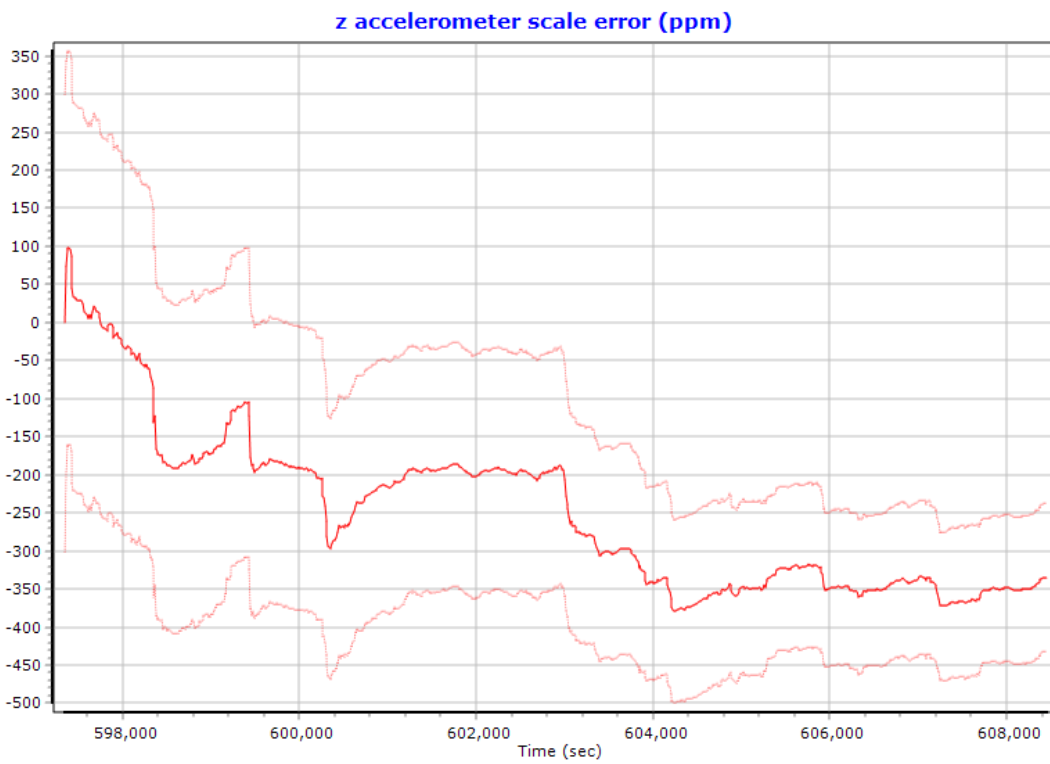
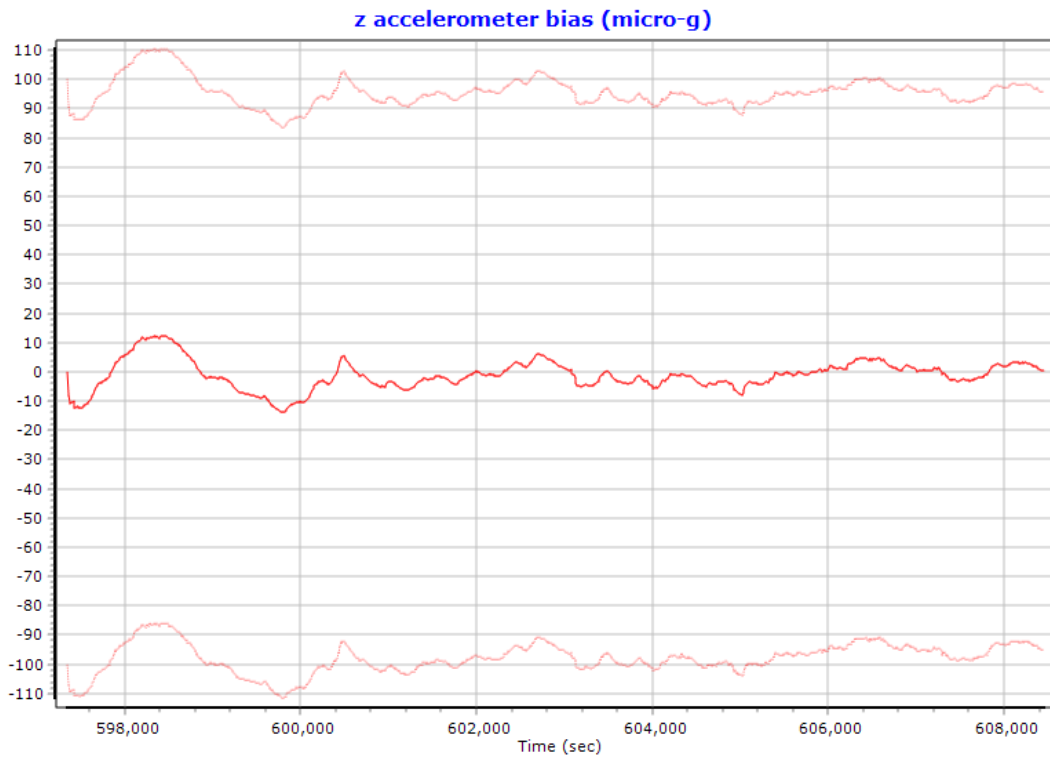
**x accelerometer scale error (ppm)**



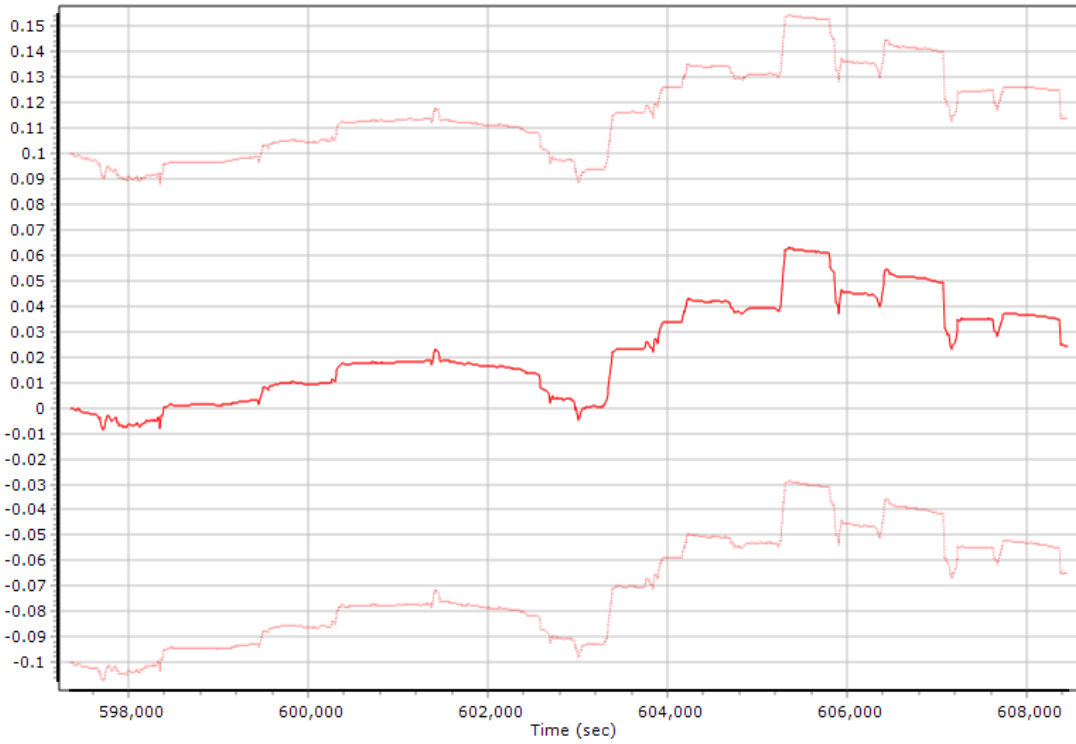




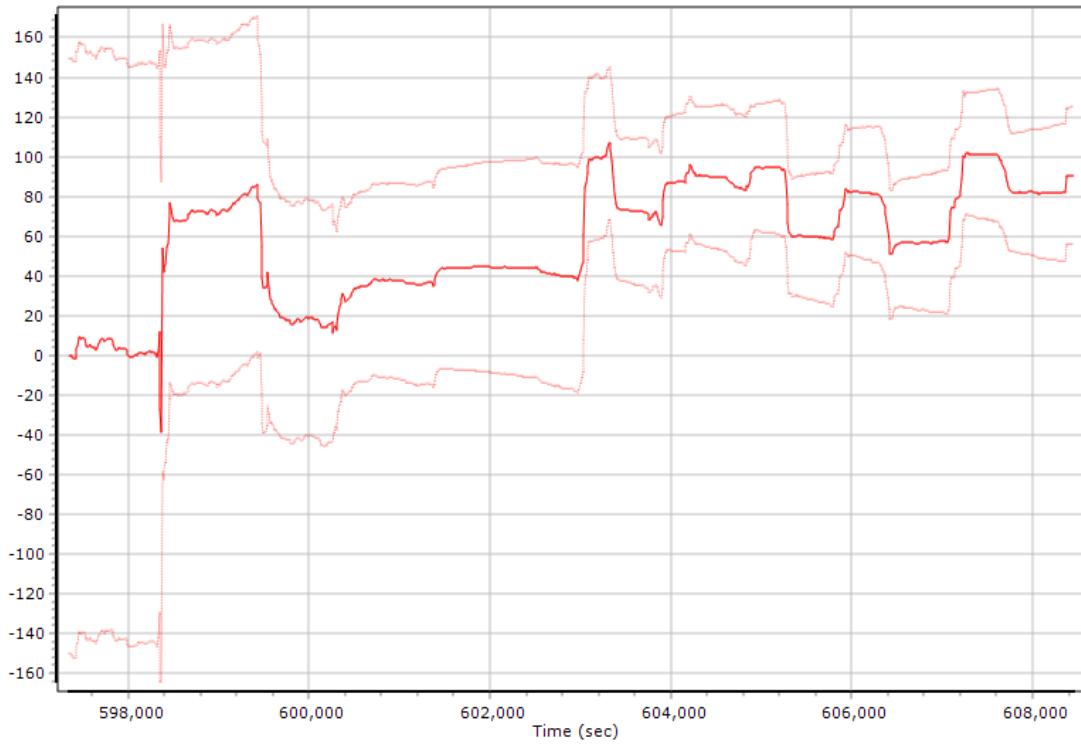




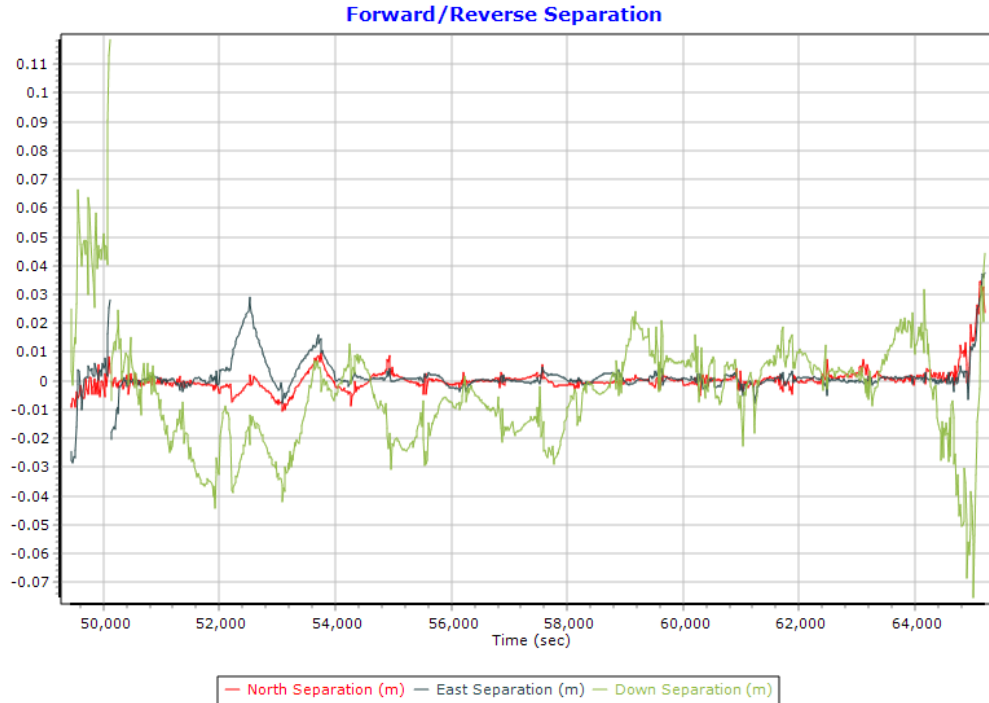
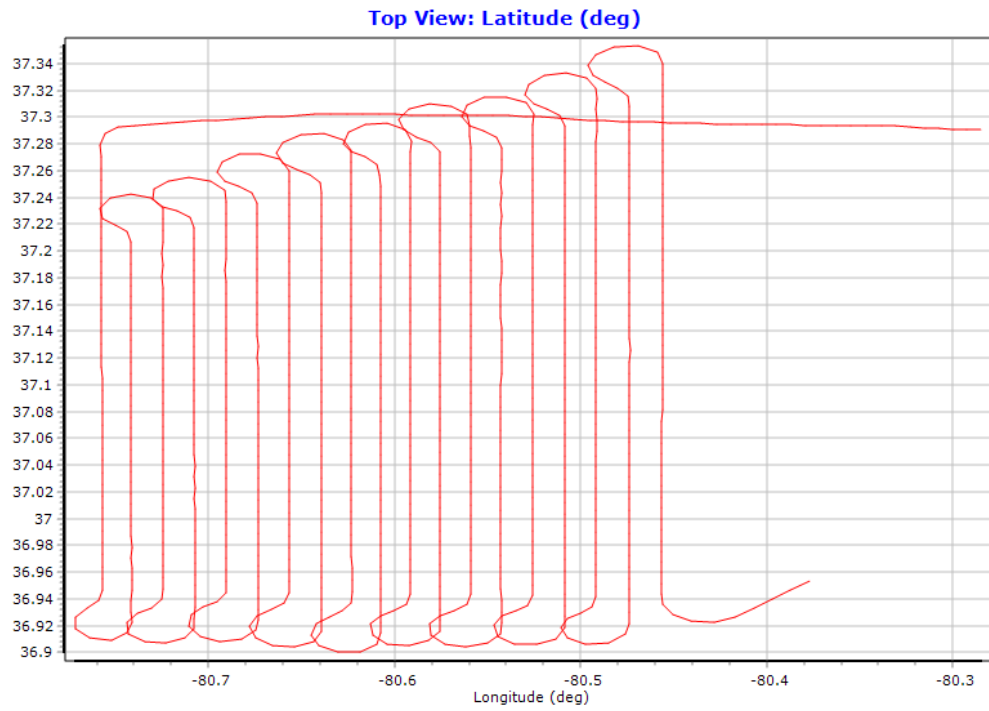
**z gyro bias (deg/hr)**



**z gyro scale error (ppm)**

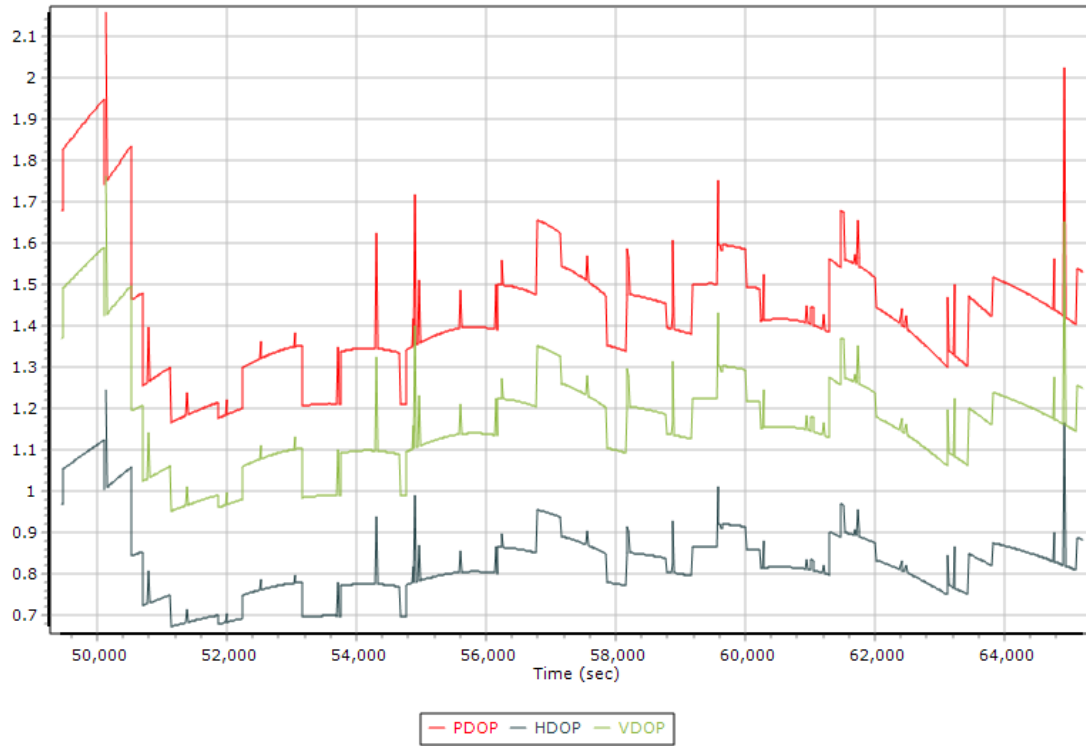


## JANUARY 07, 2018 MISSION 1

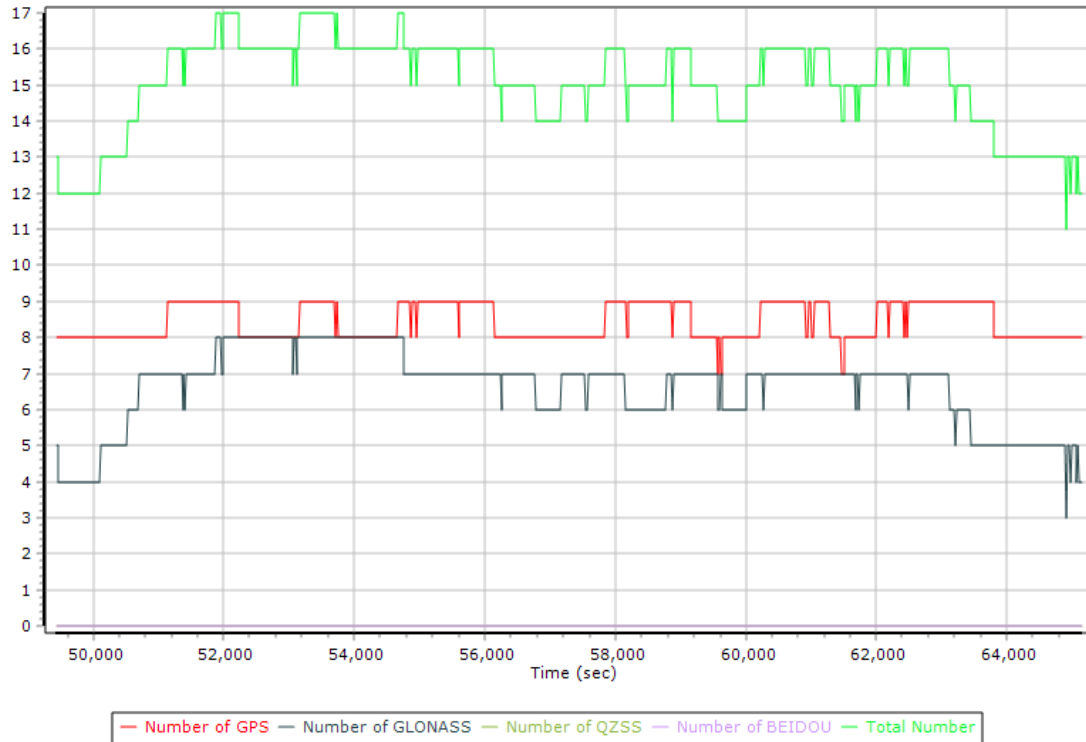




### DOP



### Number of SVs in solution



## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20180107\_VA\_A

Solution Type: IN-Fusion SmartBase

Fixed: 15756	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 15807  
No processed position: 51

Fwd/Rev Separation RMS Values (m):

North: 0.005  
East: 0.006  
Height: 0.020

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 7915 occurrences

North: 0.002  
East: 0.003  
Height: 0.012

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 99.909

0.10 - 0.30 m: 0.091  
0.30 - 1.00 m: 0  
1.00 - 5.00 m: 0  
5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

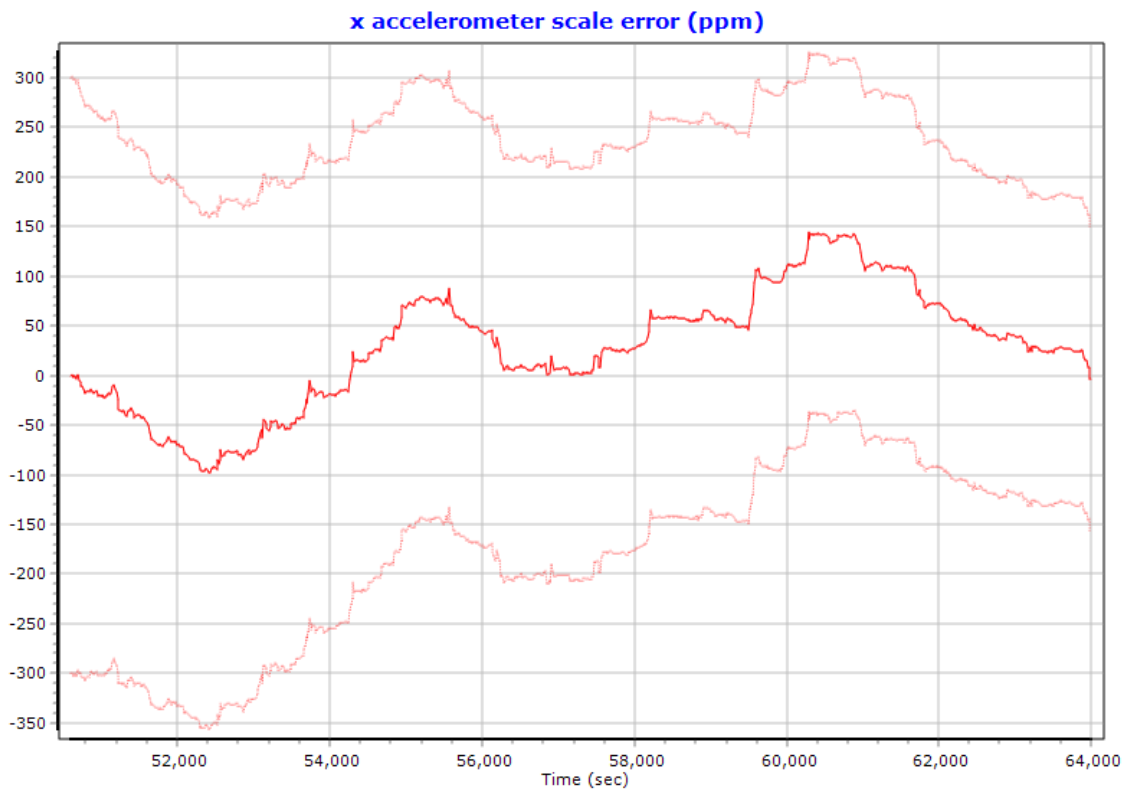
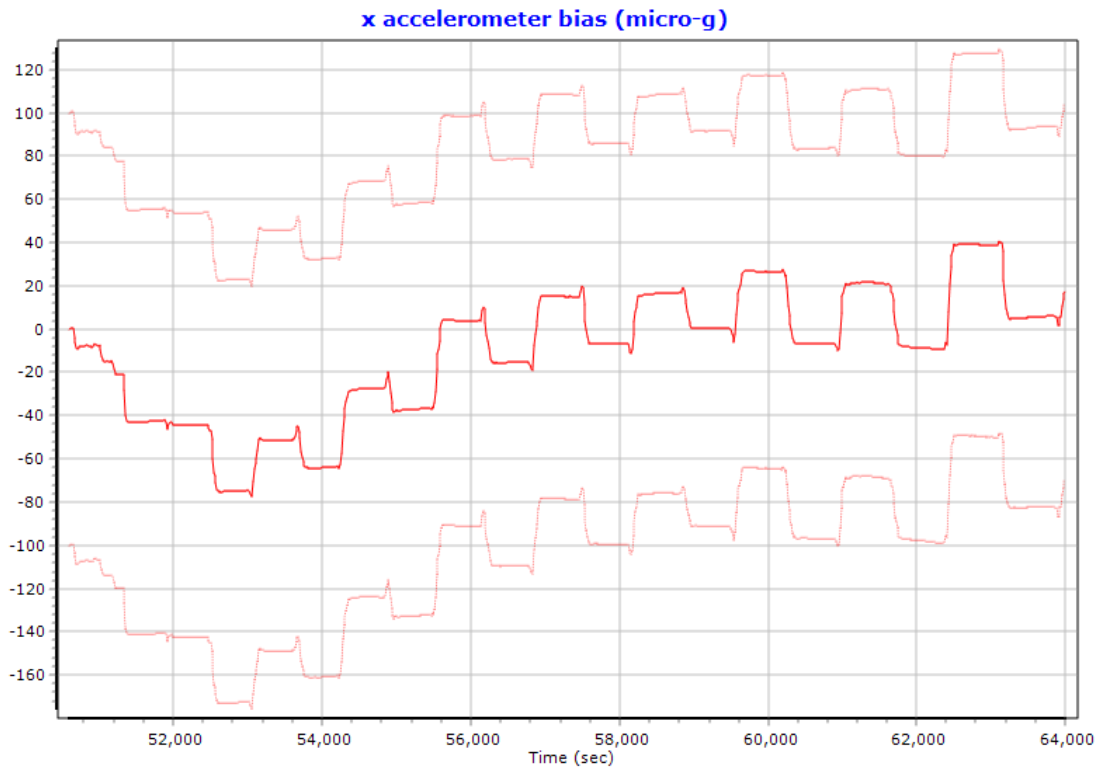
DOP over Tol: 1.44%

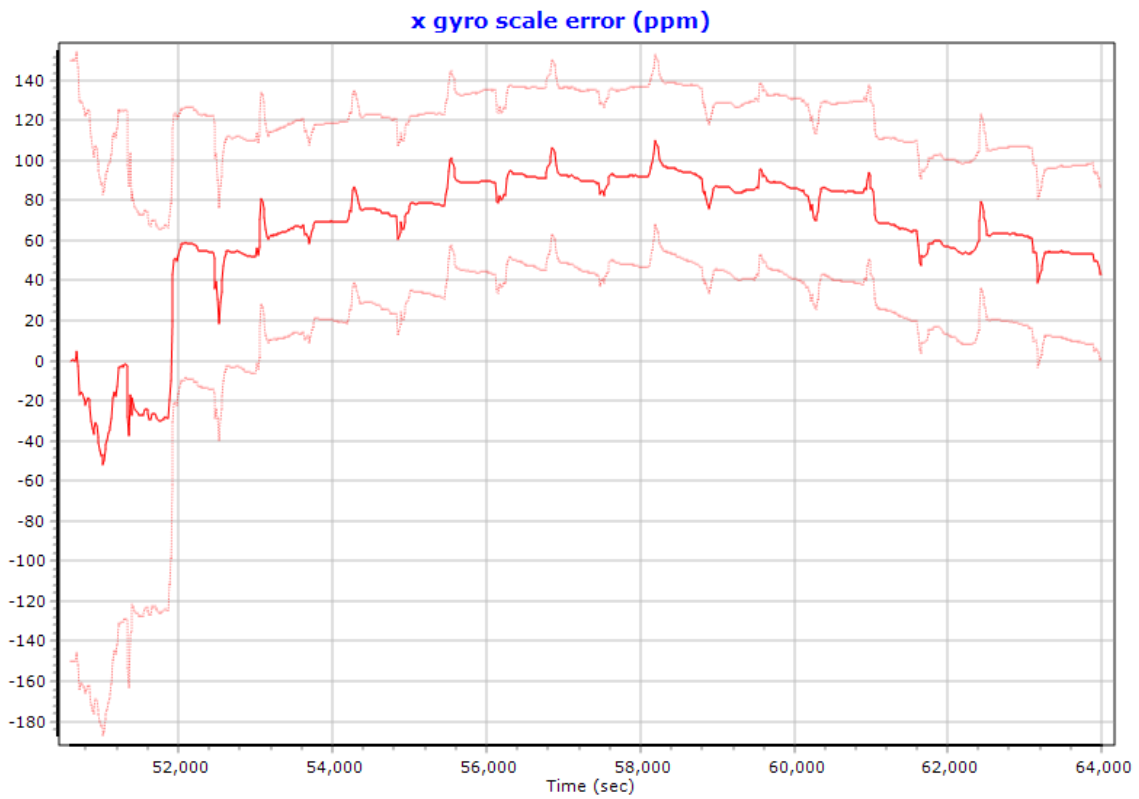
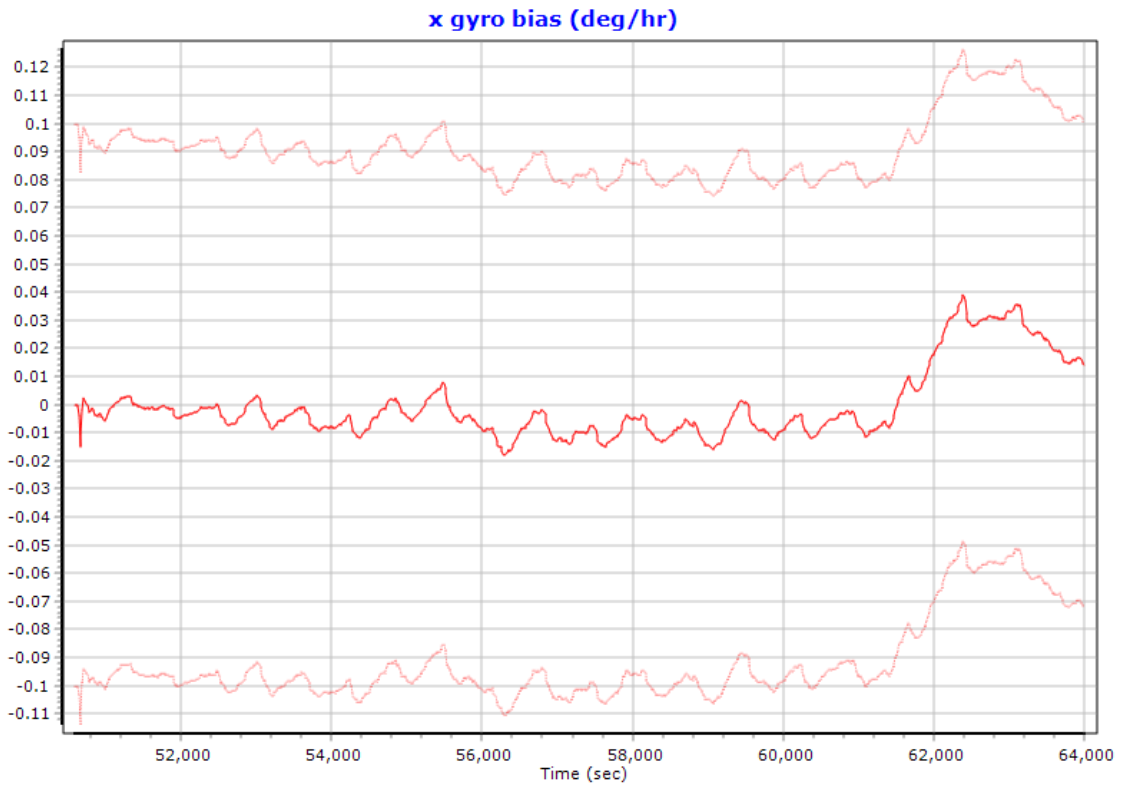
Baseline Distances (km):

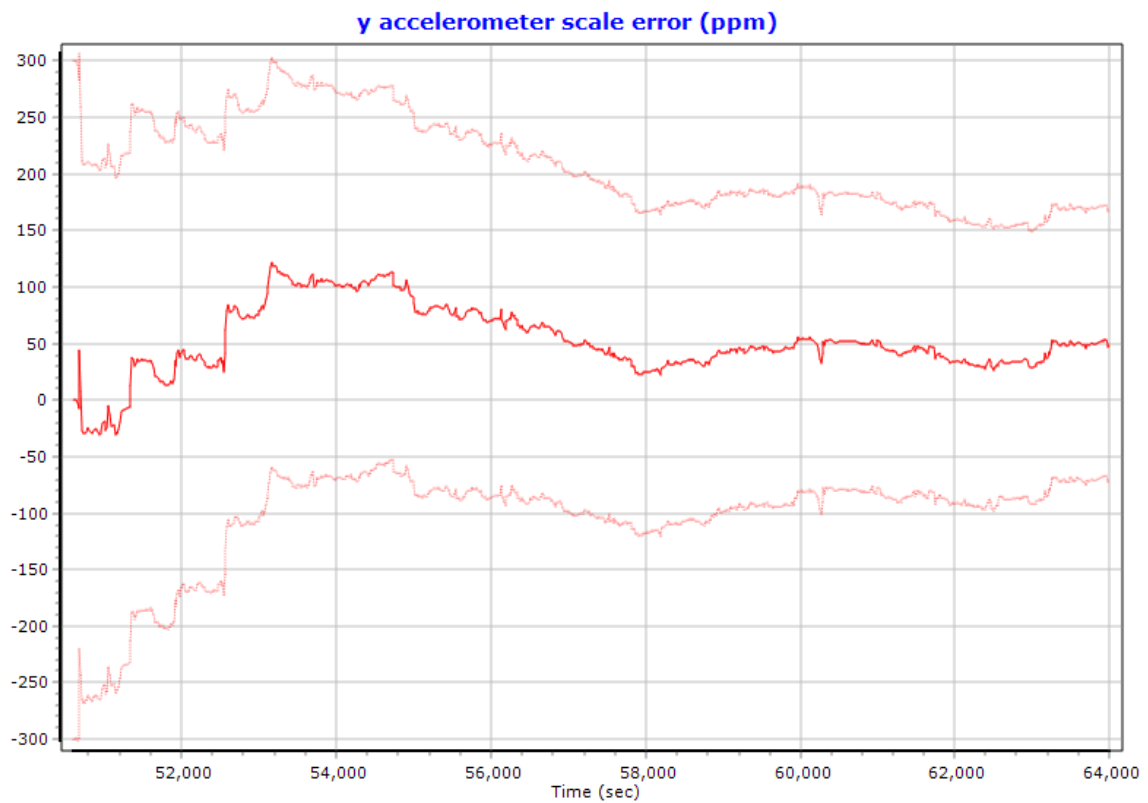
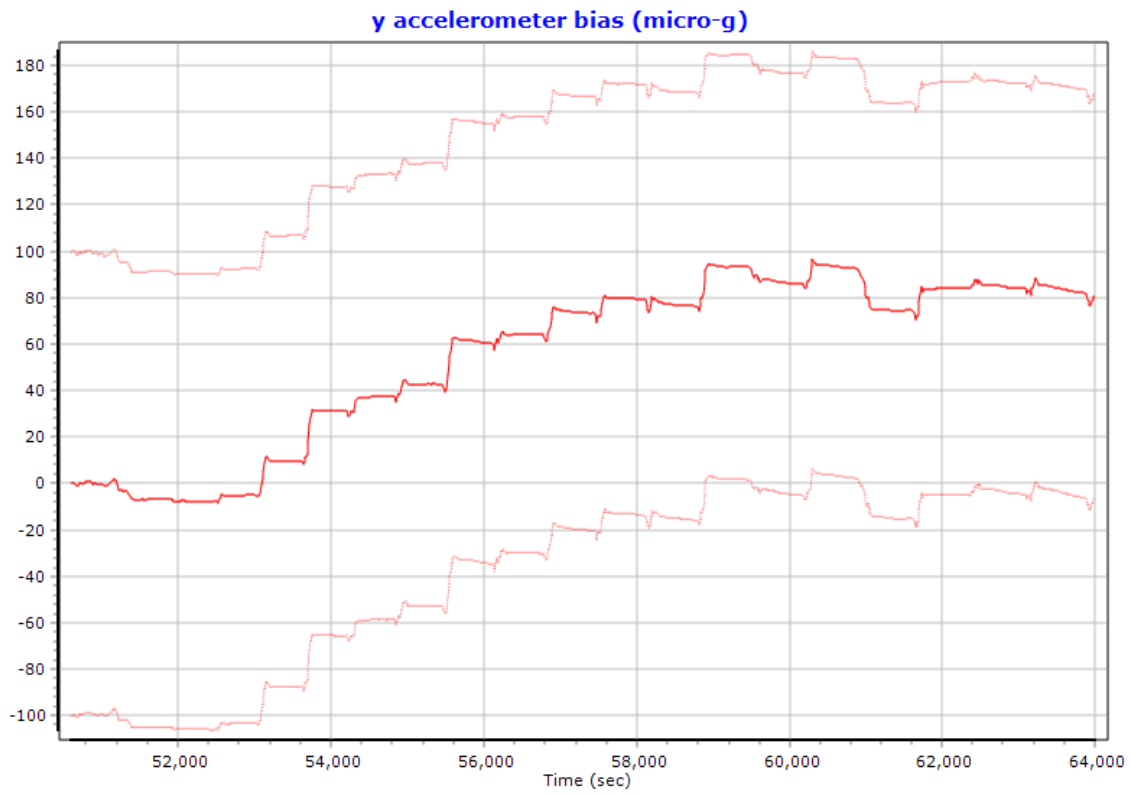
Maximum: 60.92  
Minimum: 0.38  
Average: 20.54  
First Epoch: 60.01  
Last Epoch: 60.03

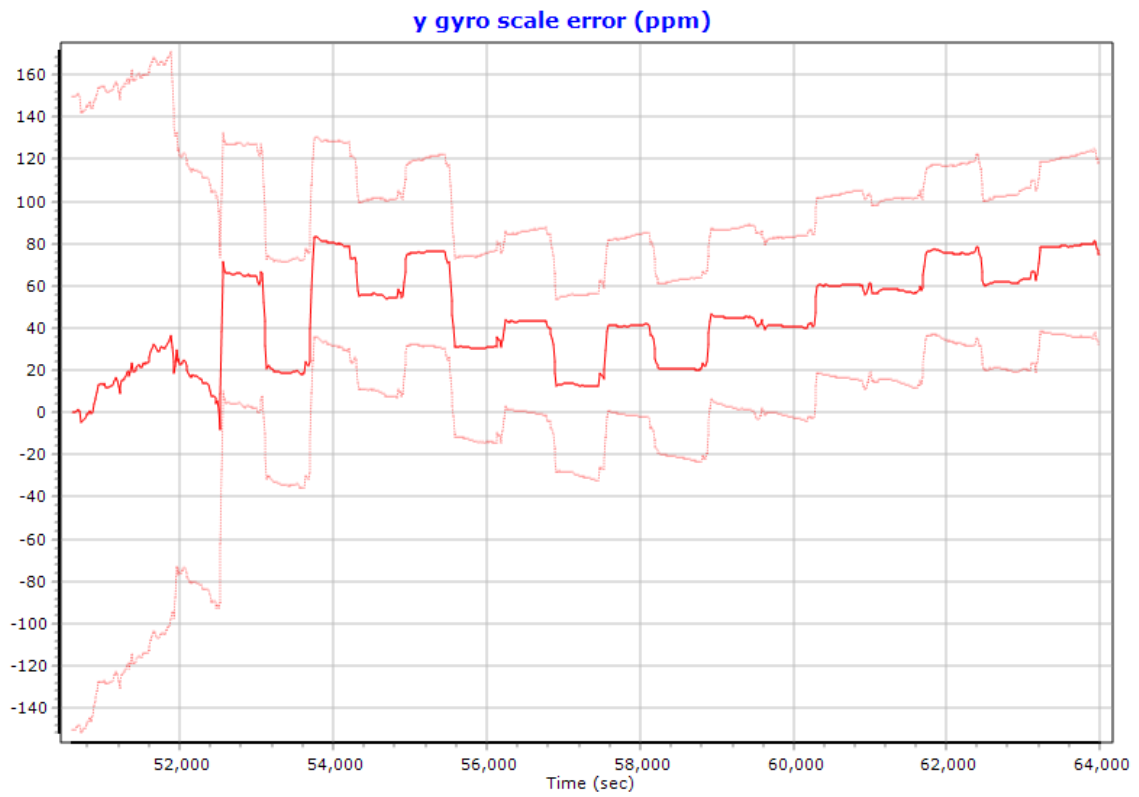
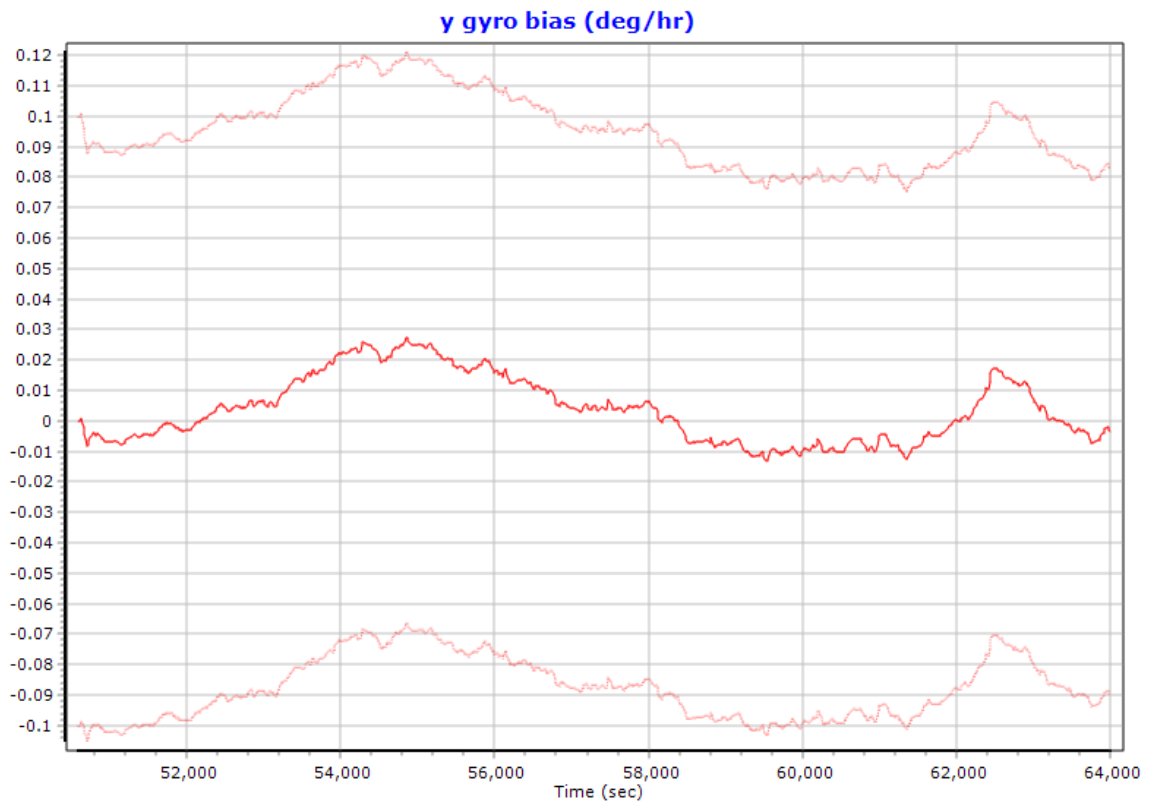
#### CORS Base Stations

Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
WVLE	N37°49'20.23018"	W80°25'18.58199"	655.2	N37°49'20.23012"	W80°25'18.58211"	655.21
WVAT	N37°25'42.67838"	W81°04'04.40393"	704.674	N37°25'42.67834"	W81°04'04.40409"	704.69
LS04	N37°21'47.16696"	W79°57'26.99415"	324.139	N37°21'47.16703"	W79°57'26.99433"	324.144
DOBS	N36°25'31.54122"	W80°43'11.73529"	339.304	N36°25'31.54129"	W80°43'11.73549"	339.308
BLA1	N37°12'40.85421"	W80°25'13.83284"	605.704			

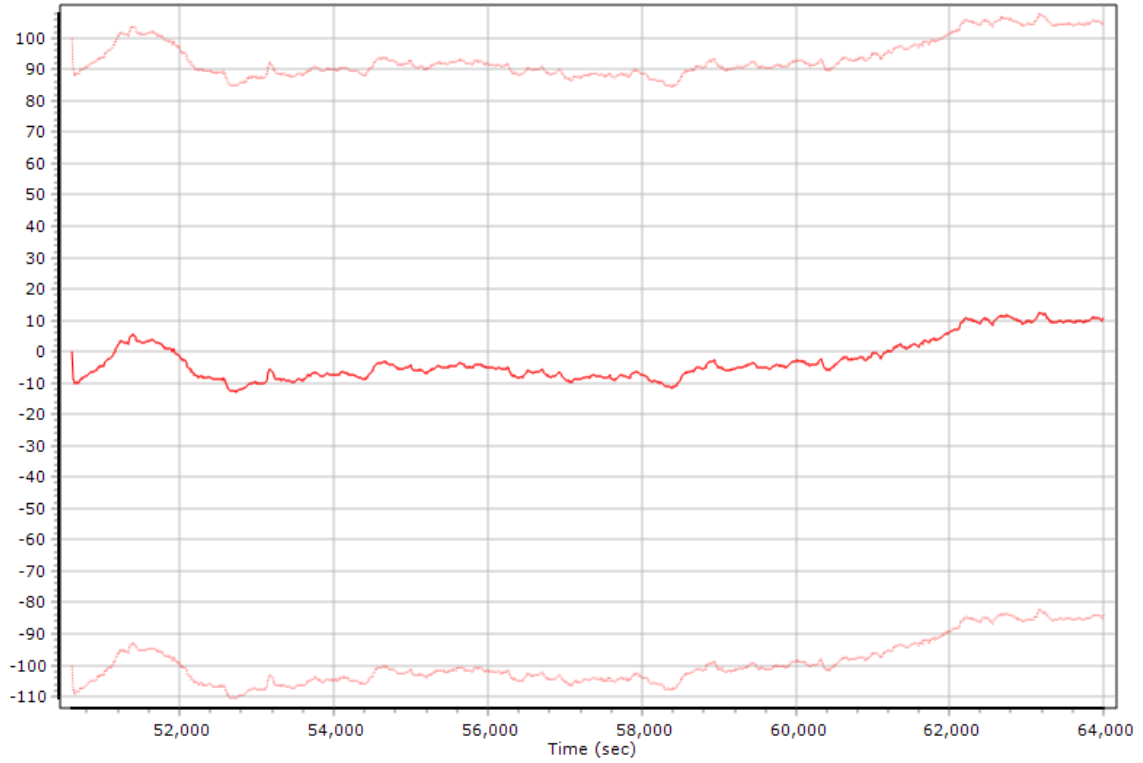




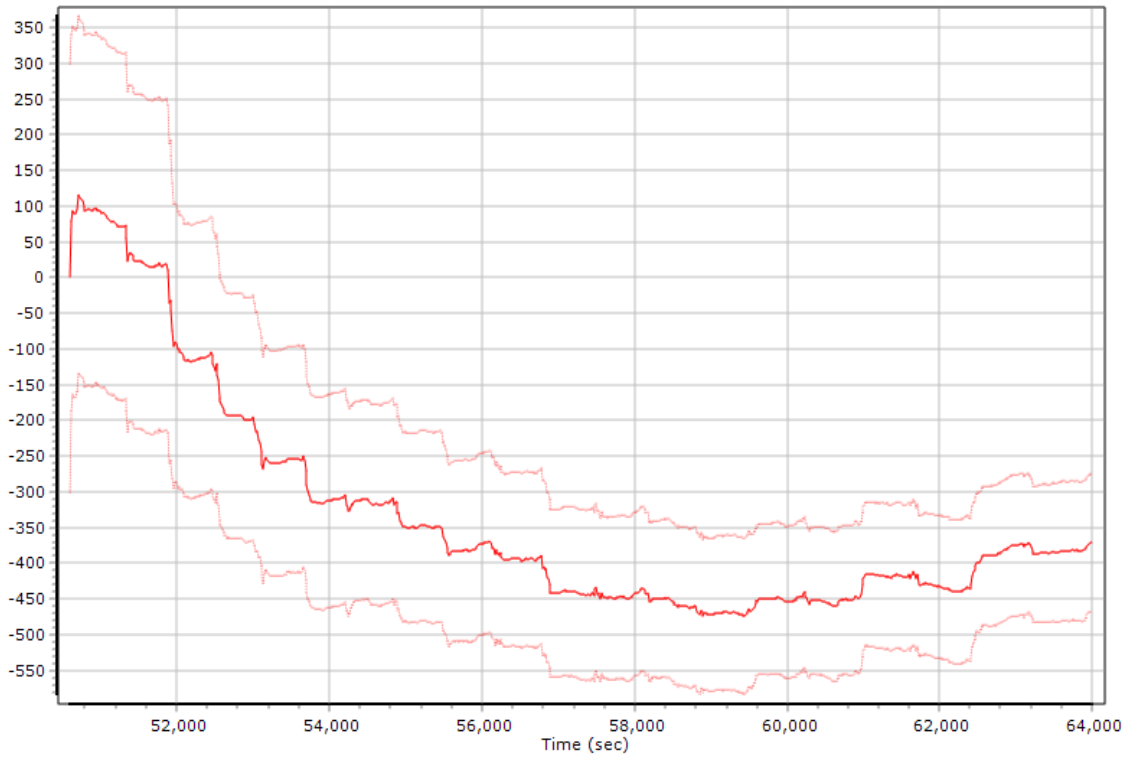




**z accelerometer bias (micro-g)**

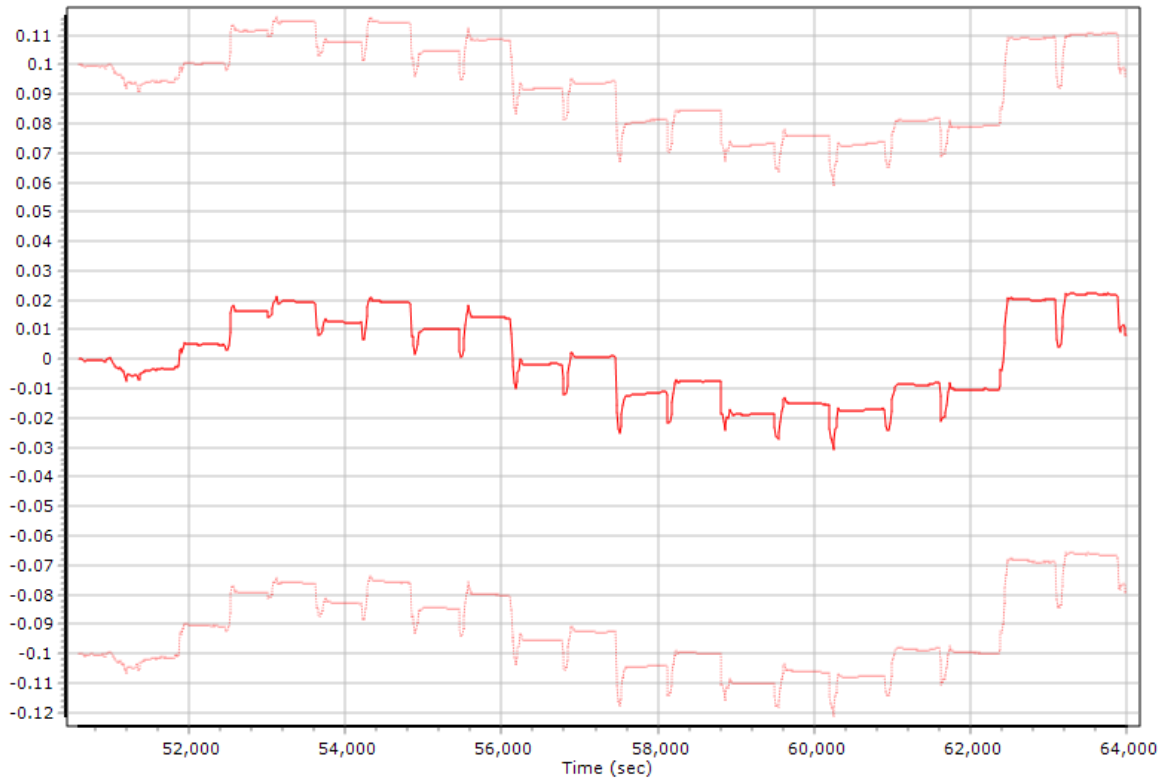


**z accelerometer scale error (ppm)**

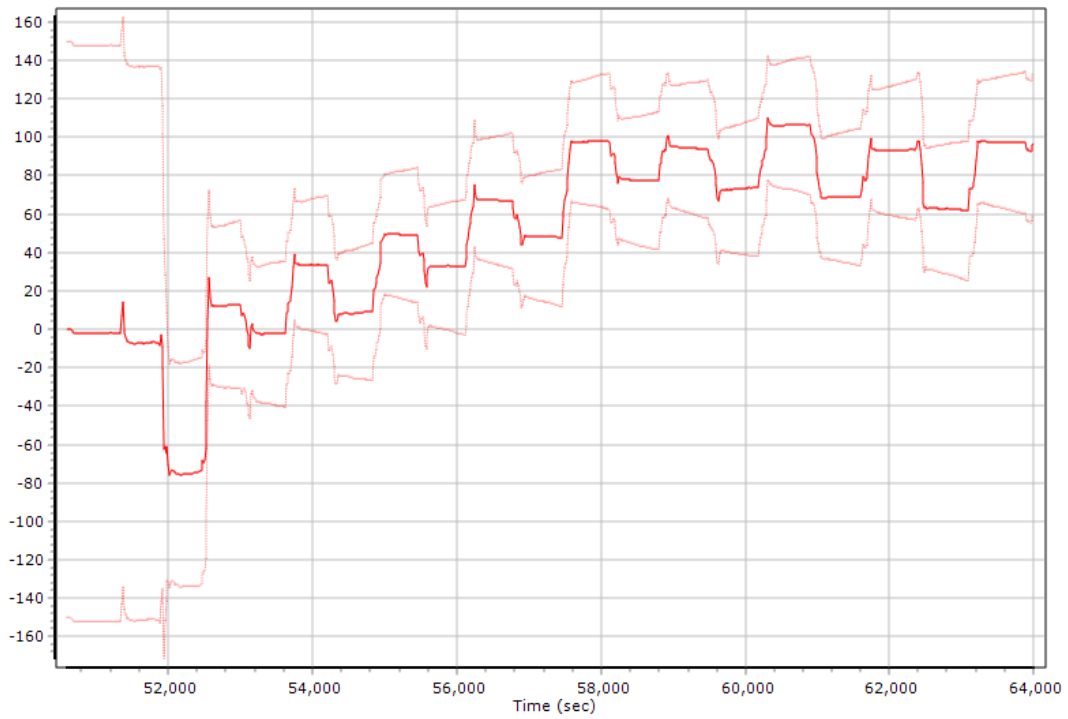




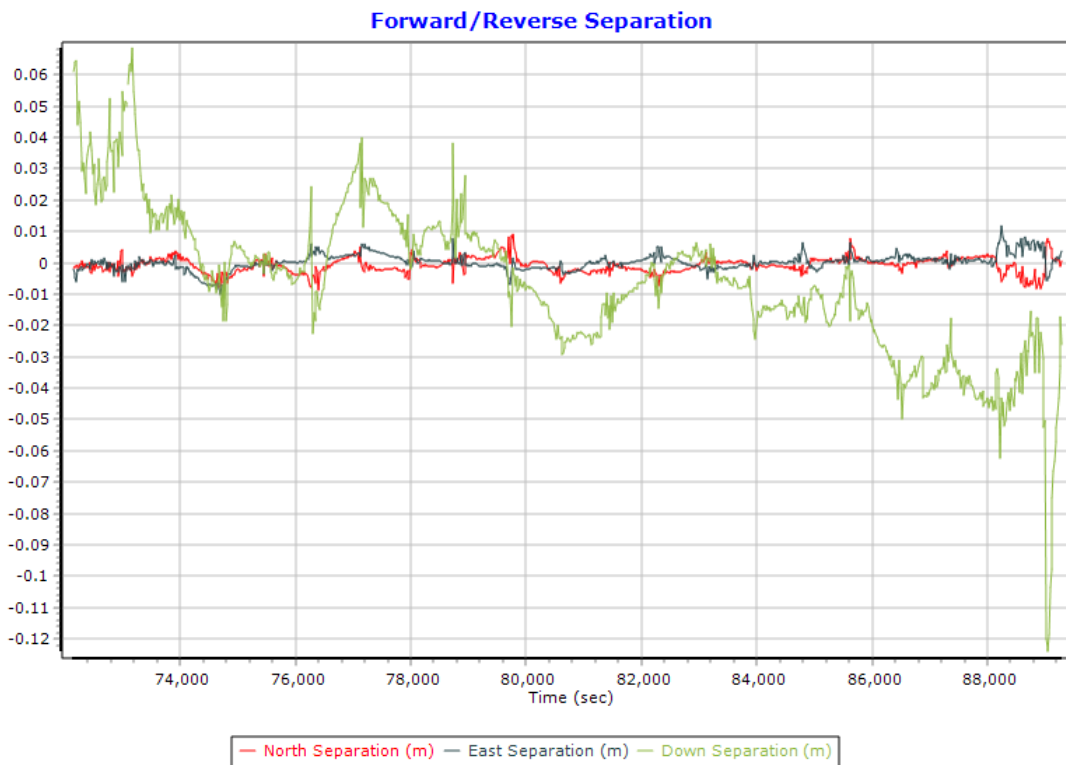
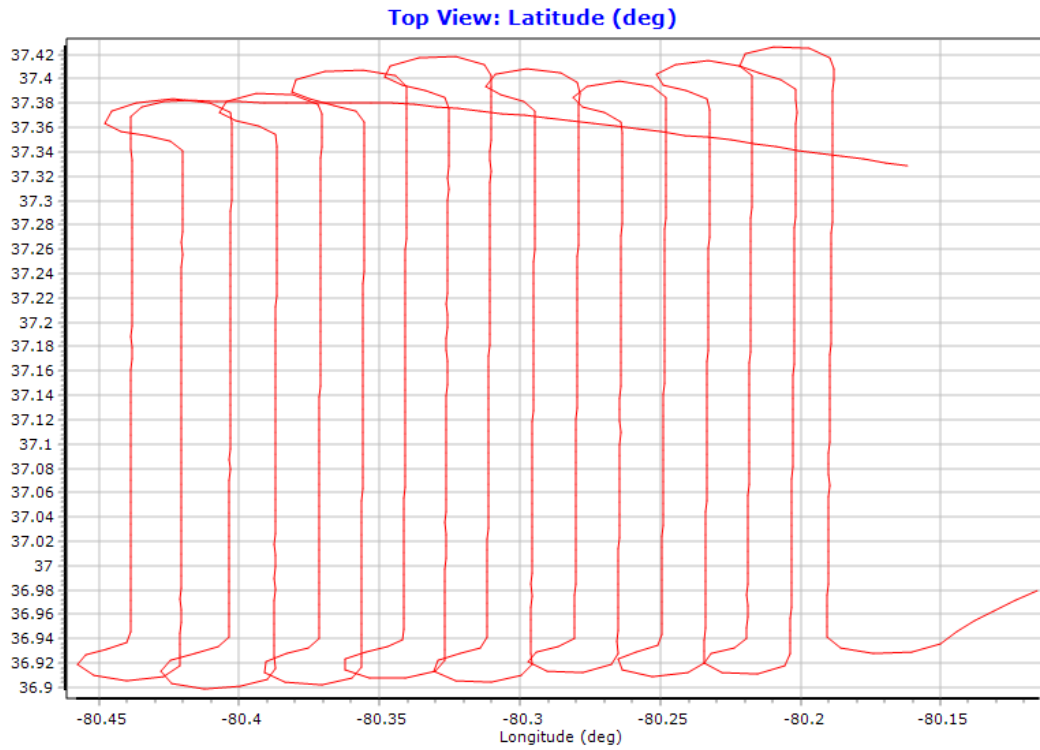
**z gyro bias (deg/hr)**



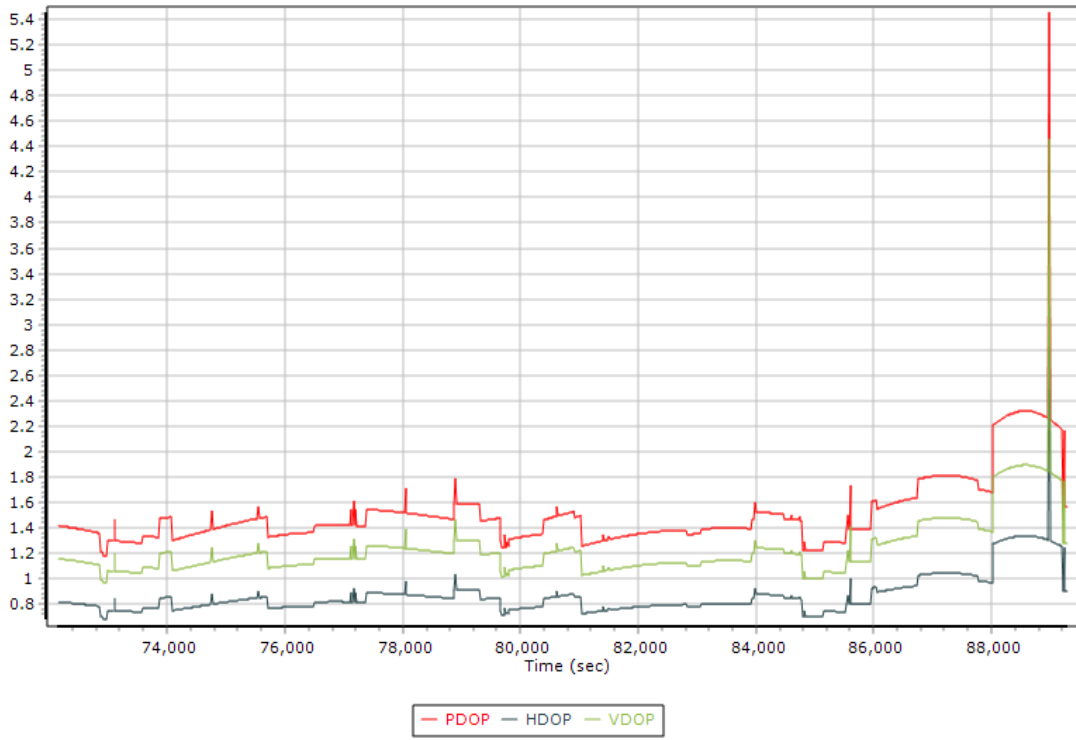
**z gyro scale error (ppm)**



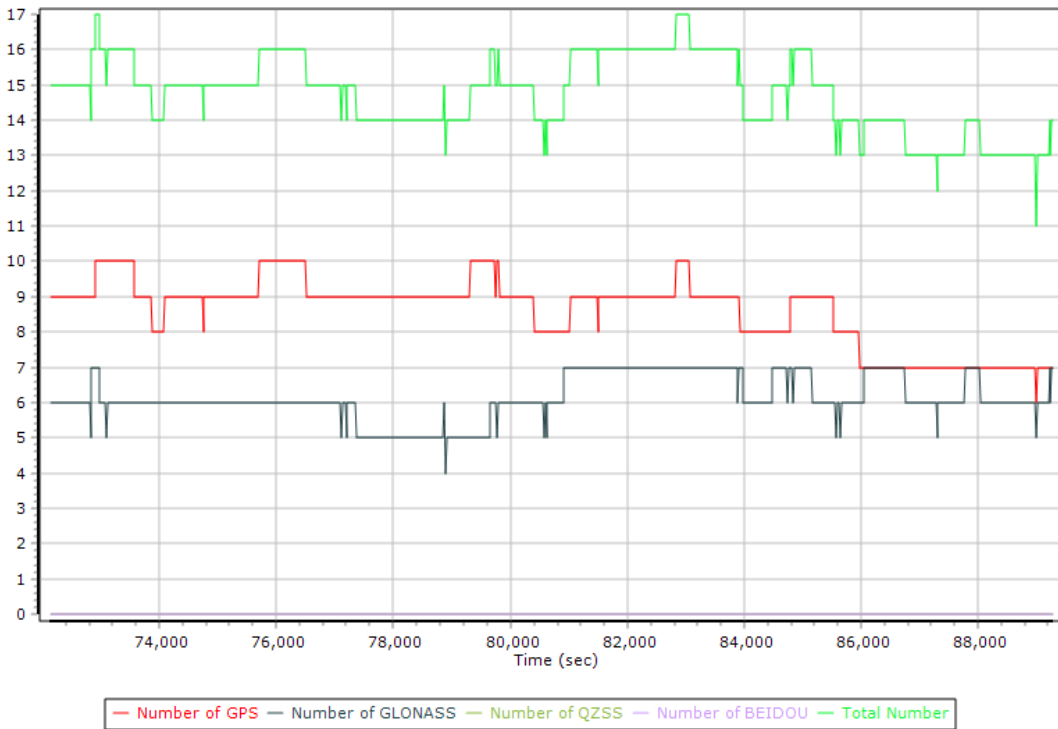
## JANUARY 07, 2018 MISSION 2



### DOP



### Number of SVs in solution



## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20180107\_VA\_B

Solution Type: IN-Fusion SmartBase

Fixed: 17178	(99.99%)
Float: 0	(0.00%)
No Solution: 1	(0.01%)

Number of Epochs:

Total in RAW file: 17190  
No processed position: 12

Fwd/Rev Separation RMS Values (m):

North: 0.003  
East: 0.003  
Height: 0.025

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 8602 occurrences

North: 0.002  
East: 0.002  
Height: 0.014

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 99.909  
 0.10 - 0.30 m: 100  
 0.30 - 1.00 m: 0  
 1.00 - 5.00 m: 0  
 5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

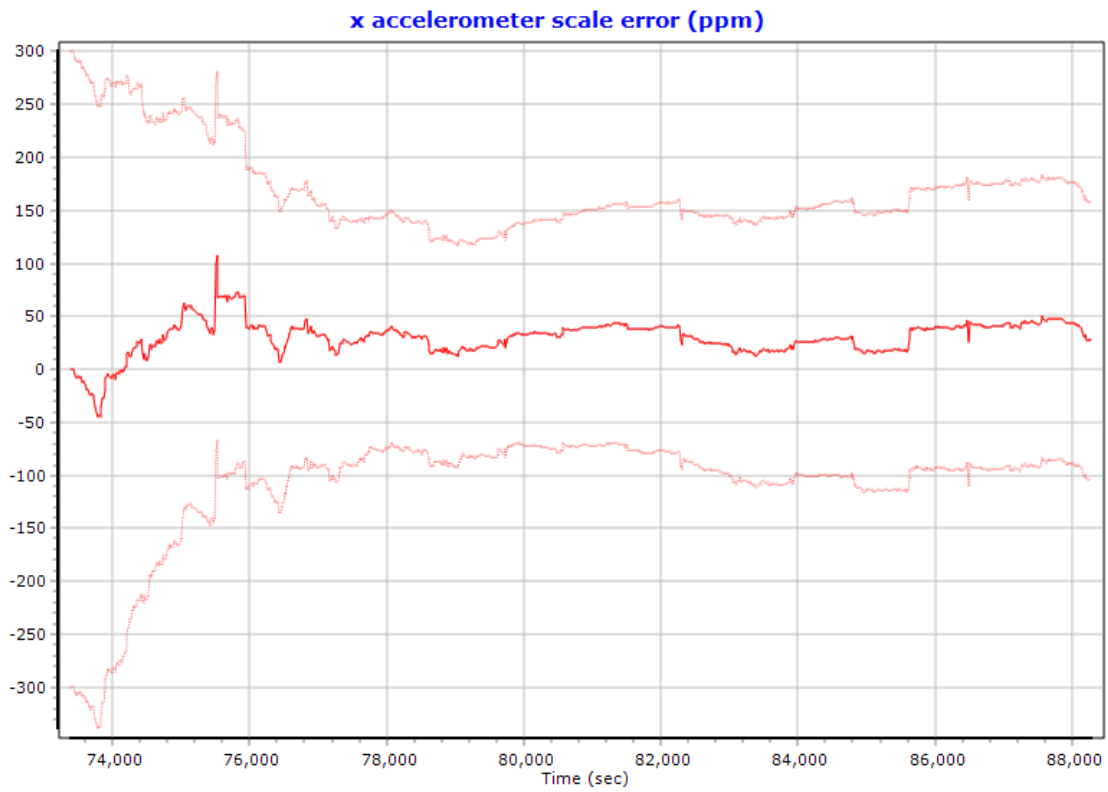
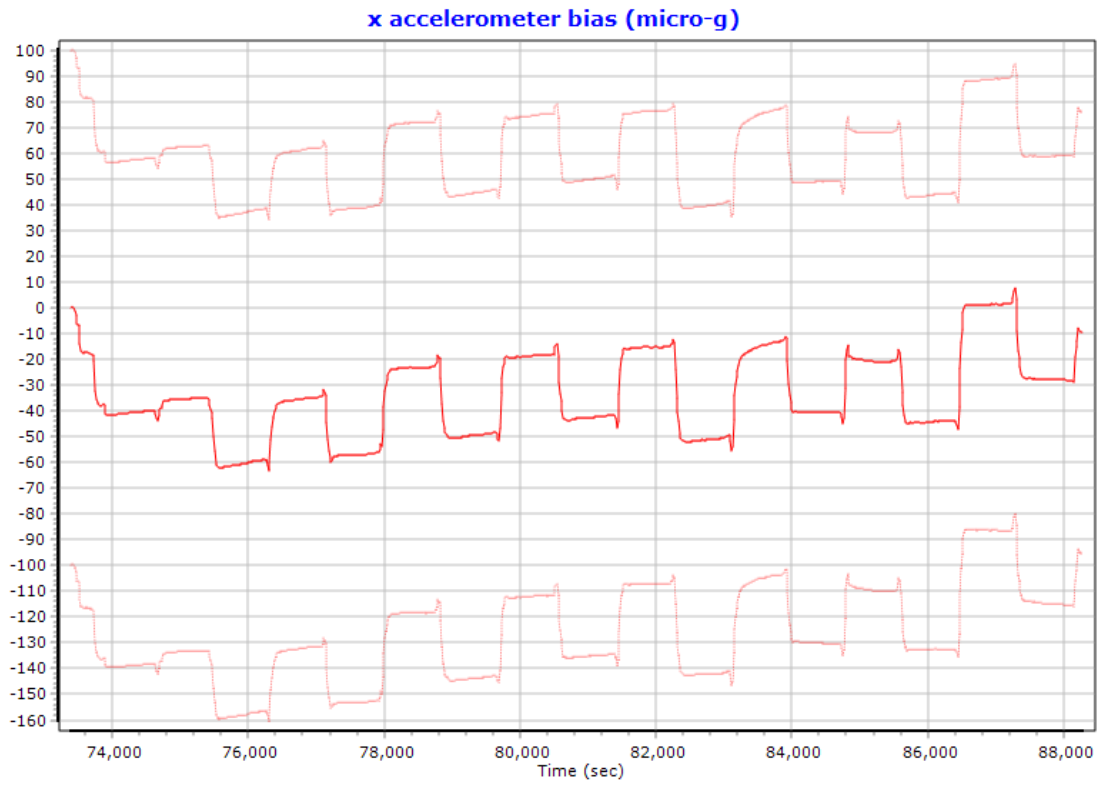
DOP over Tol: 1.51%

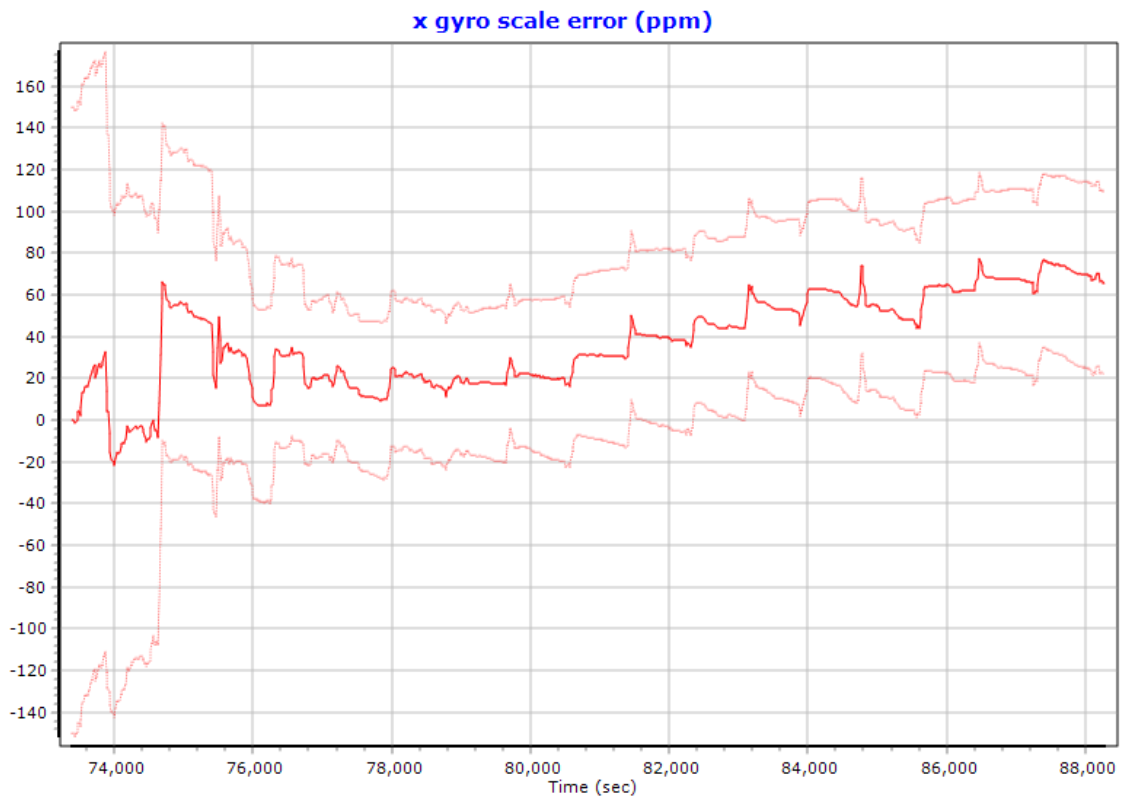
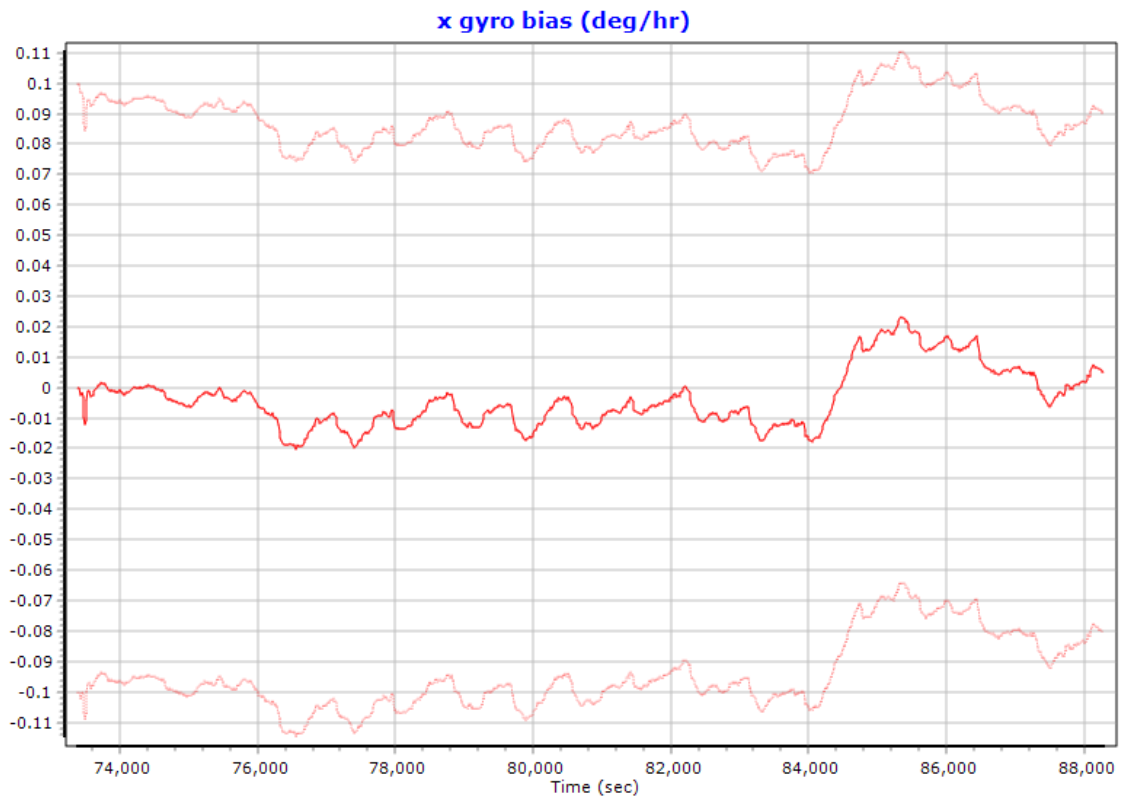
Baseline Distances (km):

Maximum: 36.09  
 Minimum: 0.19  
 Average: 18.75  
 First Epoch: 34.77  
 Last Epoch: 34.77

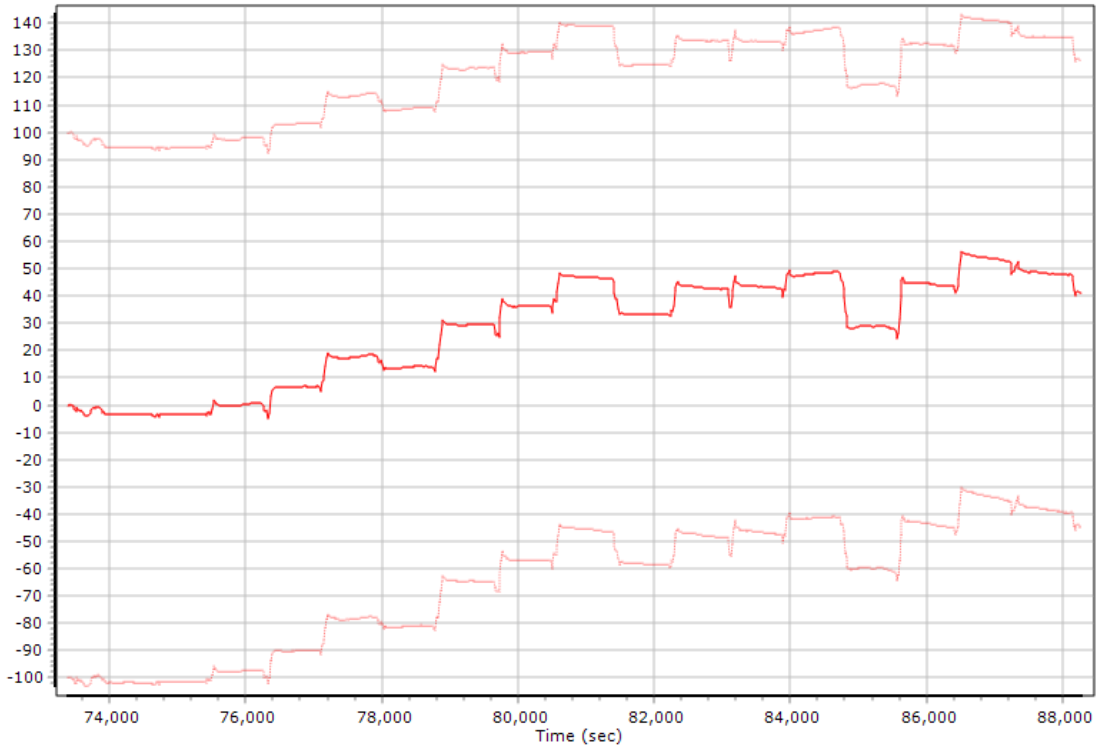
CORS Base Stations

Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
vWVLE	N37°49'20.23028"	W80°25'18.58186"	655.200	N37°49'20.23002"	W80°25'18.58195"	655.201
WVGB	N38°25'48.45404"	W79°49'01.31987"	811.180	N38°25'48.45356"	W79°49'01.32031"	811.171
WVAT	N37°25'42.67846"	W81°04'04.40380"	704.674	N37°25'42.67831"	W81°04'04.40390"	704.681
NCRE	N36°21'42.74202"	W79°39'56.56333"	233.465	N36°21'42.74183"	W79°39'56.56352"	233.464
LS04	N37°21'47.16696"	W79°57'26.99415"	324.139			
BLA1	N37°12'40.85437"	W80°25'13.83274"	605.692	N37°12'40.85416"	W80°25'13.83273"	605.697

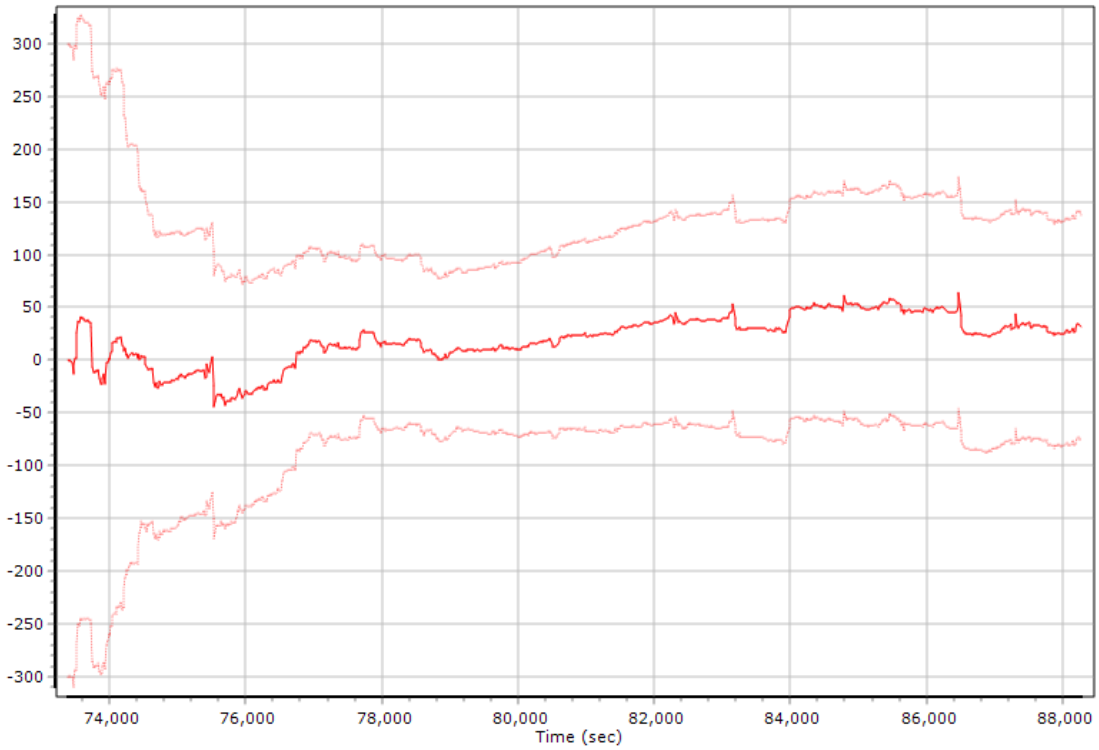




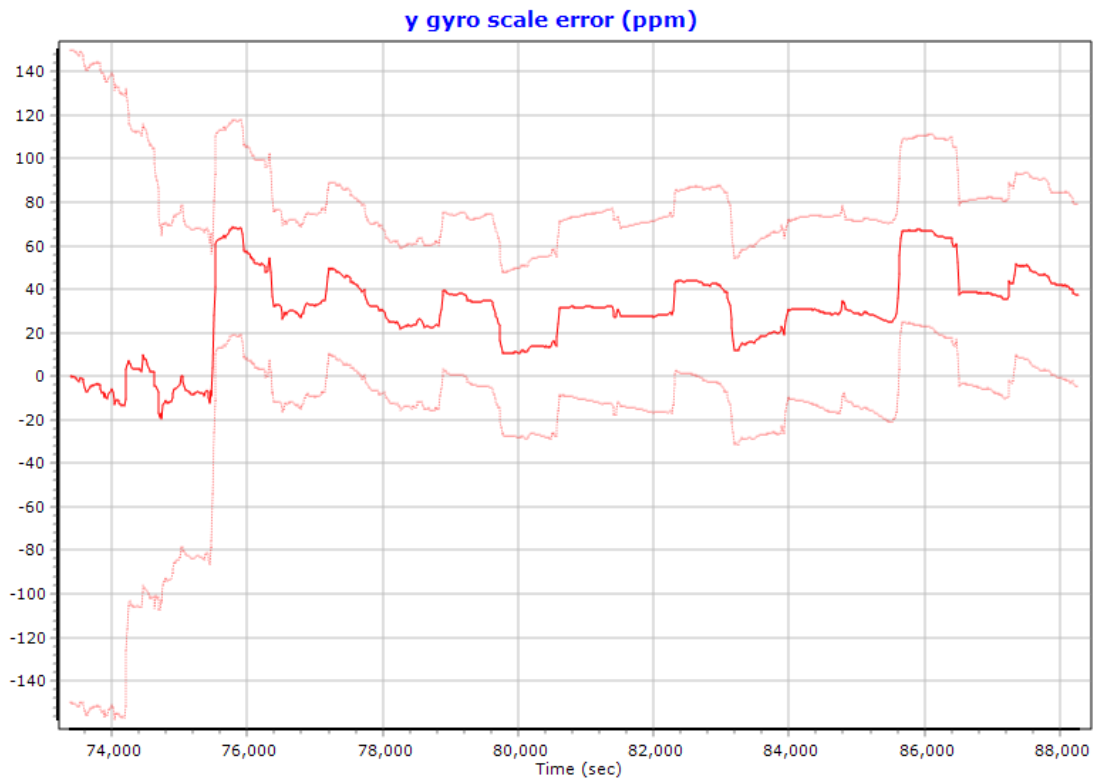
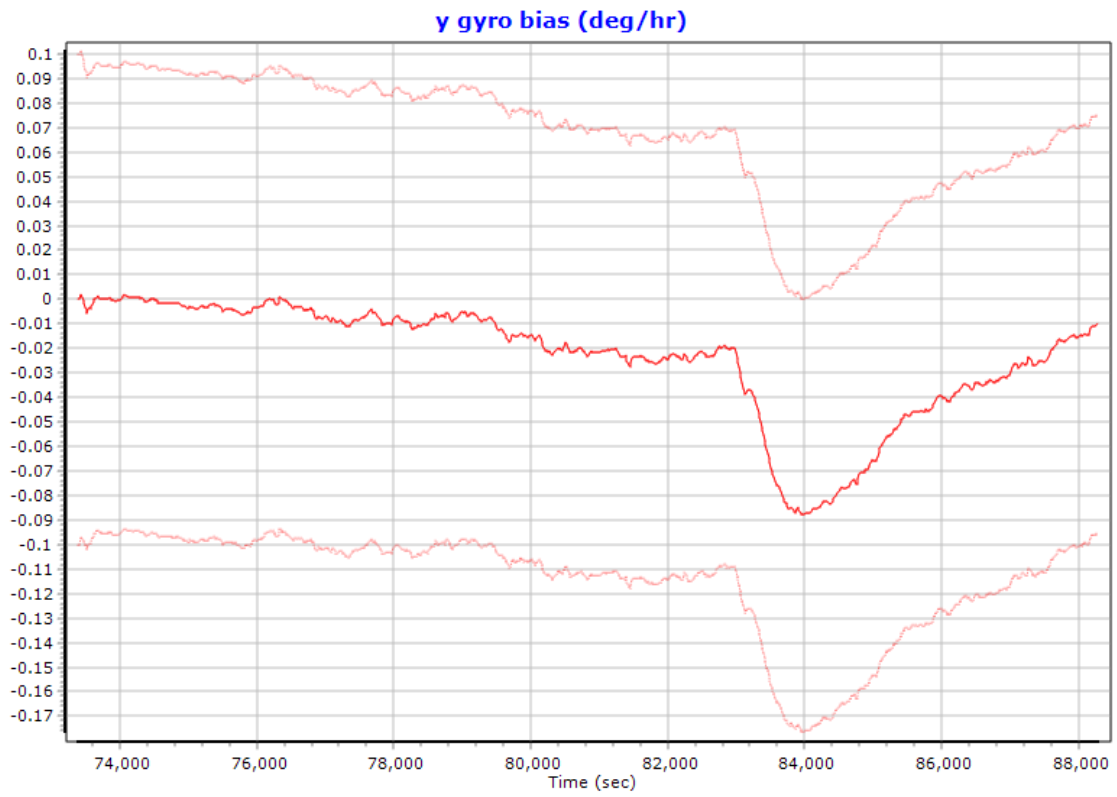
**y accelerometer bias (micro-g)**



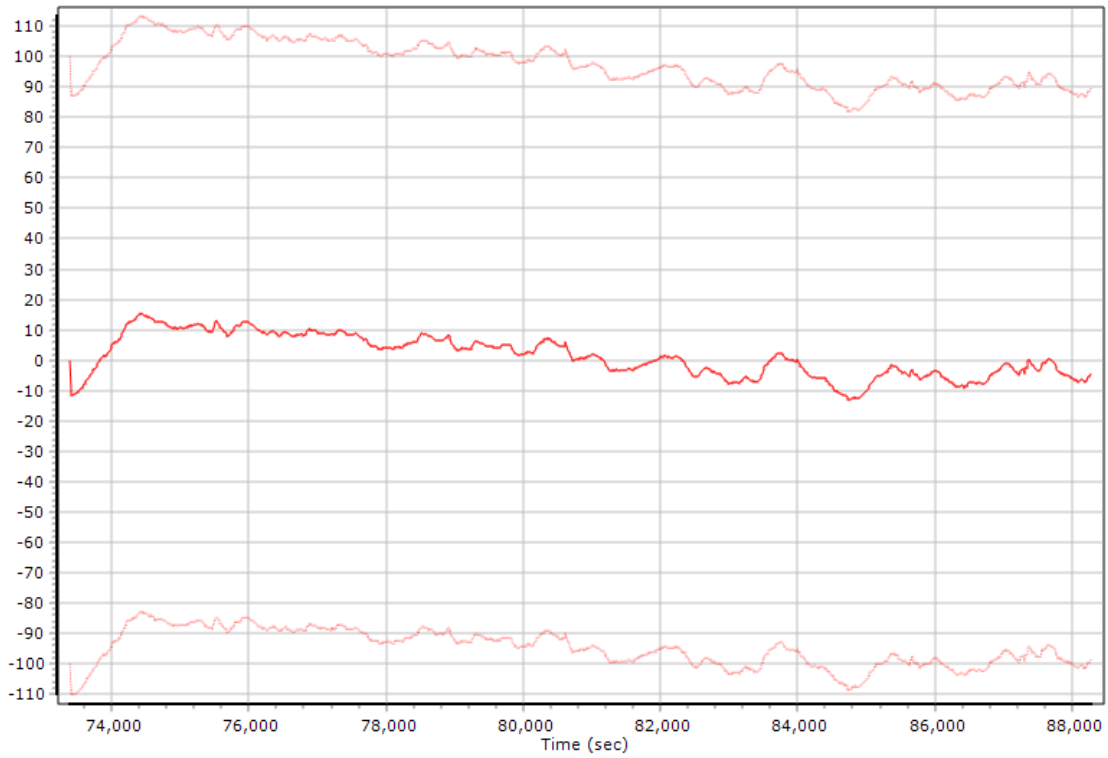
**y accelerometer scale error (ppm)**





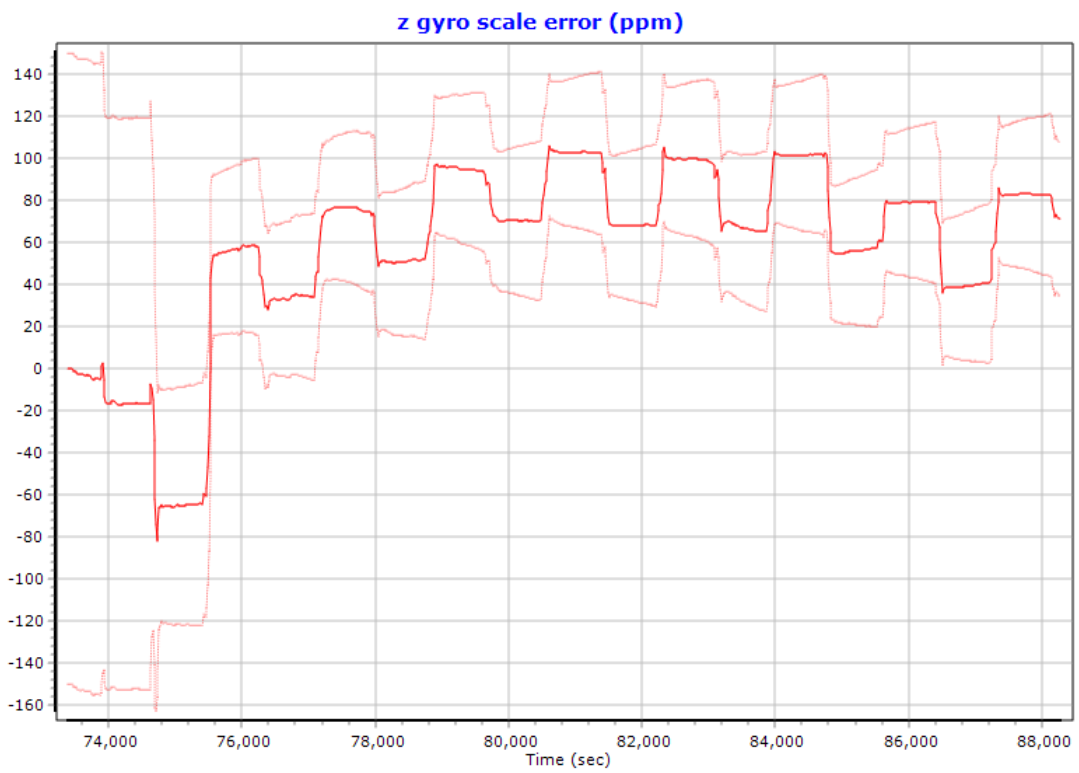
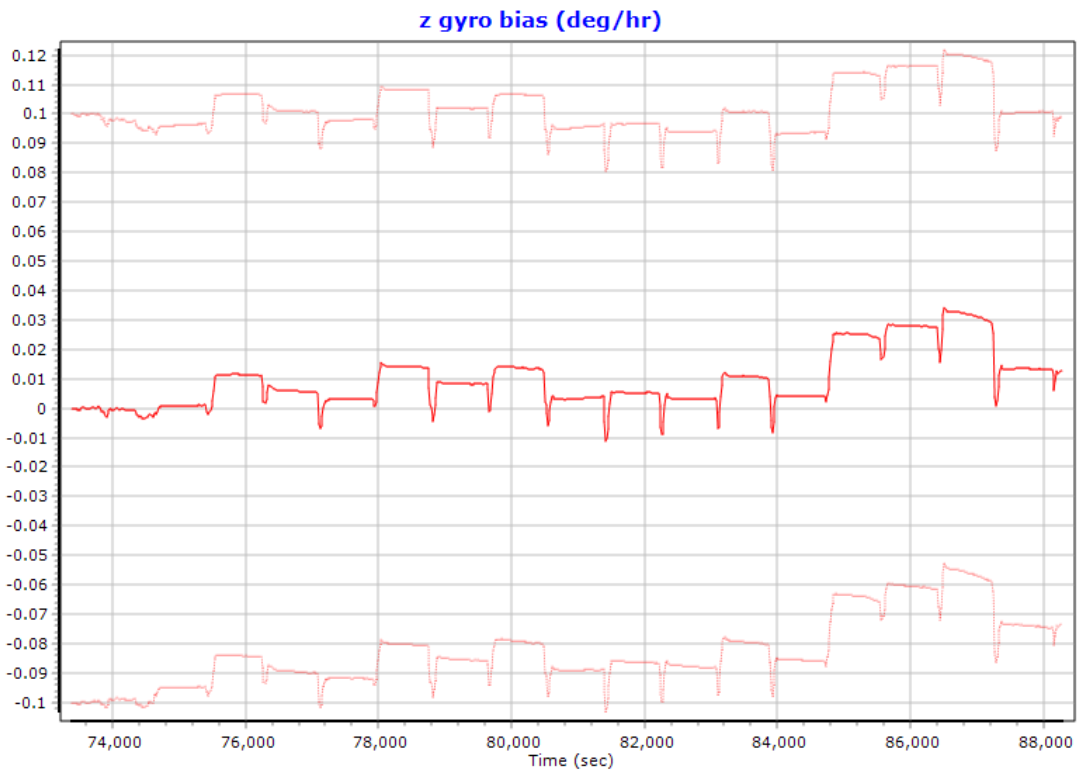


**z accelerometer bias (micro-g)**



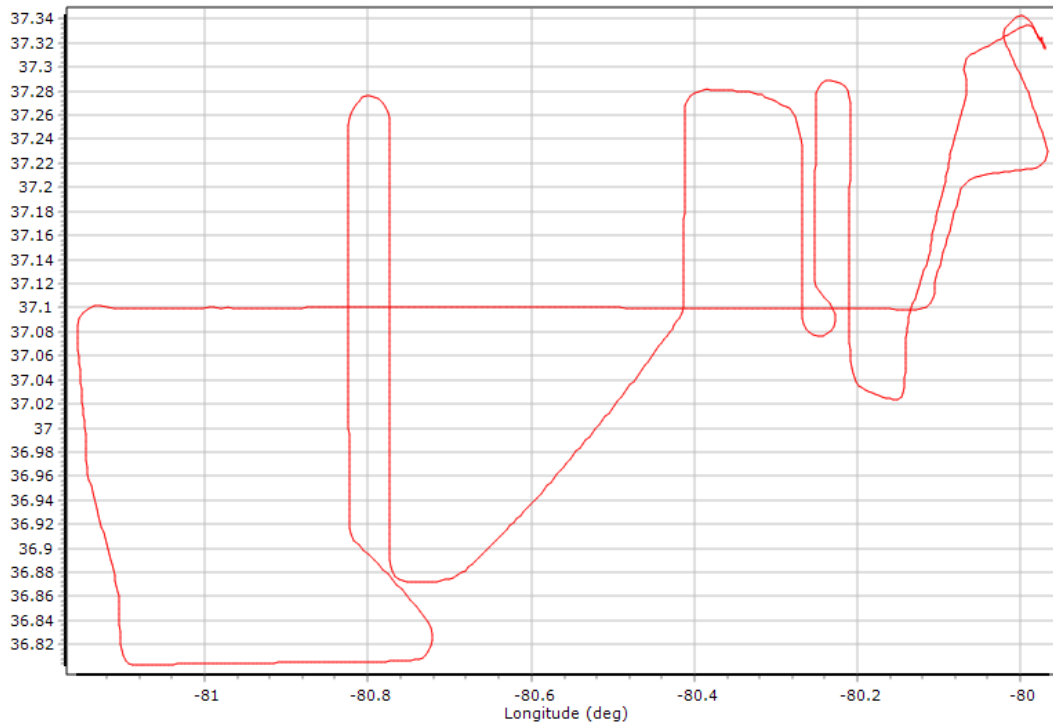
**z accelerometer scale error (ppm)**



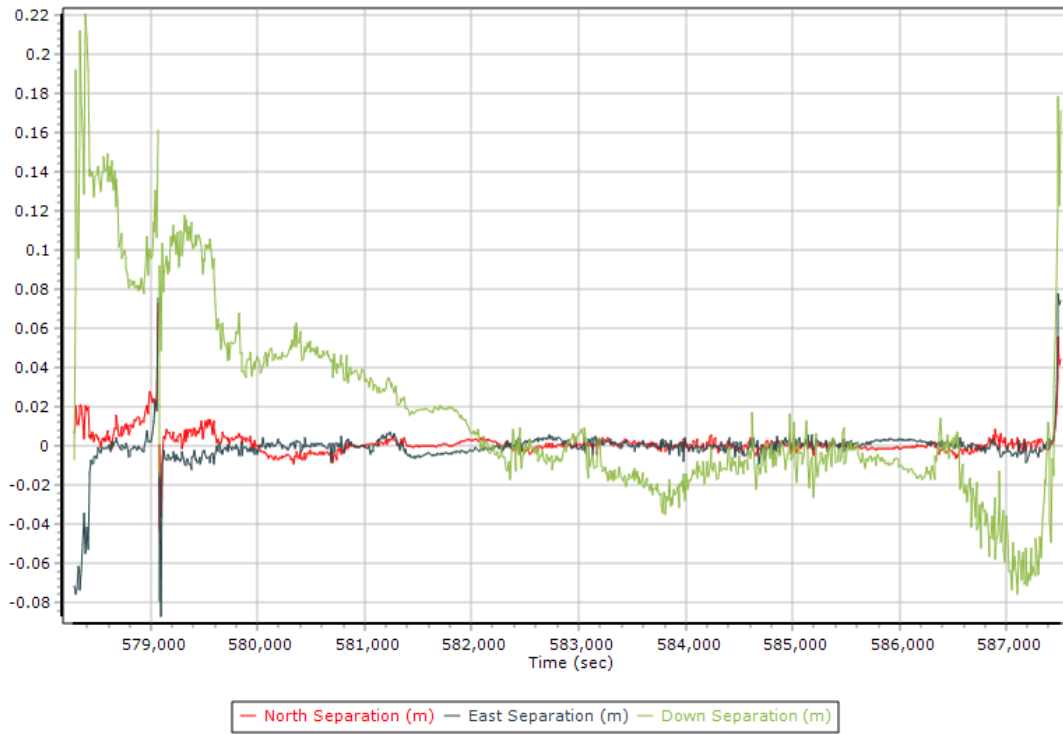


**MARCH 31, 2018**

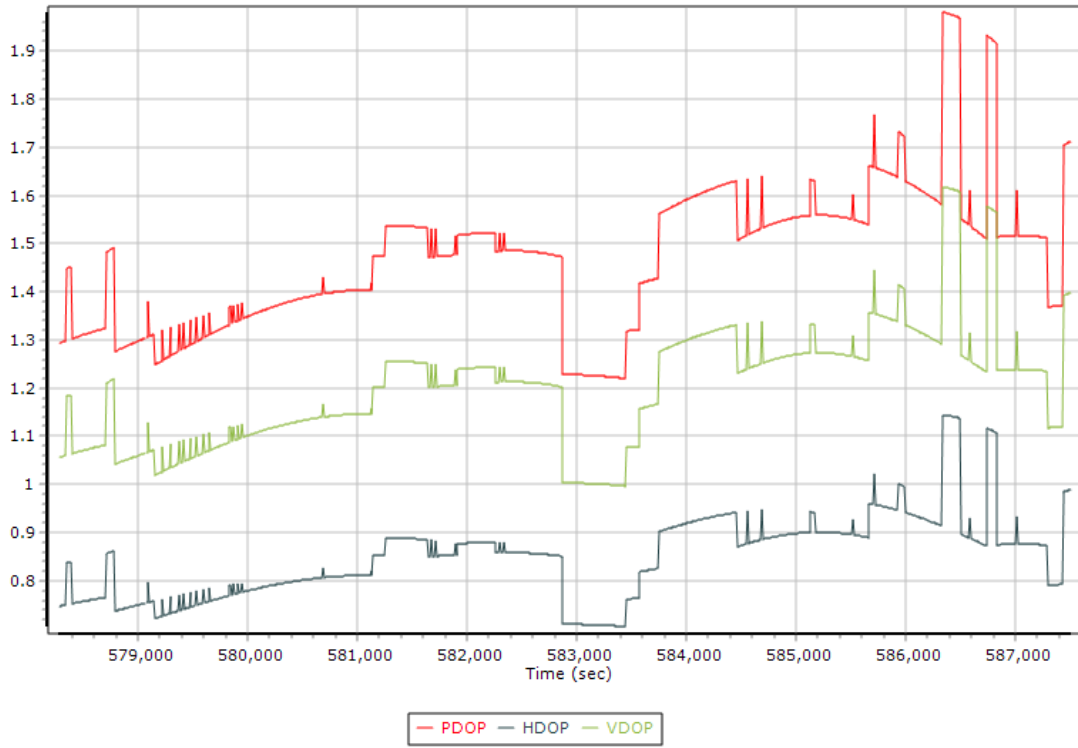
Top View: Latitude (deg)



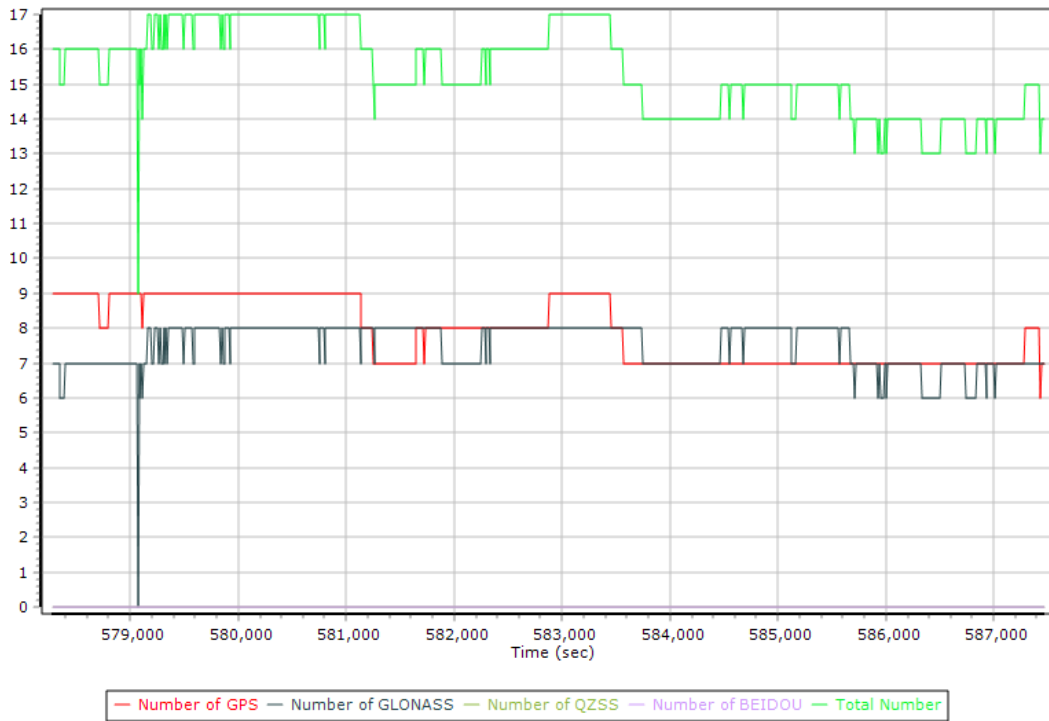
Forward/Reverse Separation



### DOP



### Number of SVs in solution



## Processing Summary Information

### Processing Summary Information

Program: POSPac MMS  
Version: 8.1.6388.30062  
Project: \\sa\data\riegl\217058\ 20180331\_VA

Solution Type: IN-Fusion SmartBase

Fixed: 9214 (99.99%)  
Float: 0 (0.00%)  
No Solution: 1 (0.01%)

Number of Epochs:

Total in RAW file: 9243  
No processed position: 29

Fwd/Rev Separation RMS Values (m):

North: 0.006  
East: 0.011  
Height: 0.052

Fwd/Rev Sep. RMS for 25%-75% weighting (m): 4620 occurrences

North: 0.002  
East: 0.003  
Height: 0.019

Quality Number Percentages:

Q 0: 100.0 %

Position Standard Deviation Percentages (%):

0.00 - 0.10 m: 96.991  
 0.10 - 0.30 m: 3.009  
 0.30 - 1.00 m: 0  
 1.00 - 5.00 m: 0  
 5.00 m + over: 0

Percentages of epochs with DD\_DOP over 10.00: 0 %

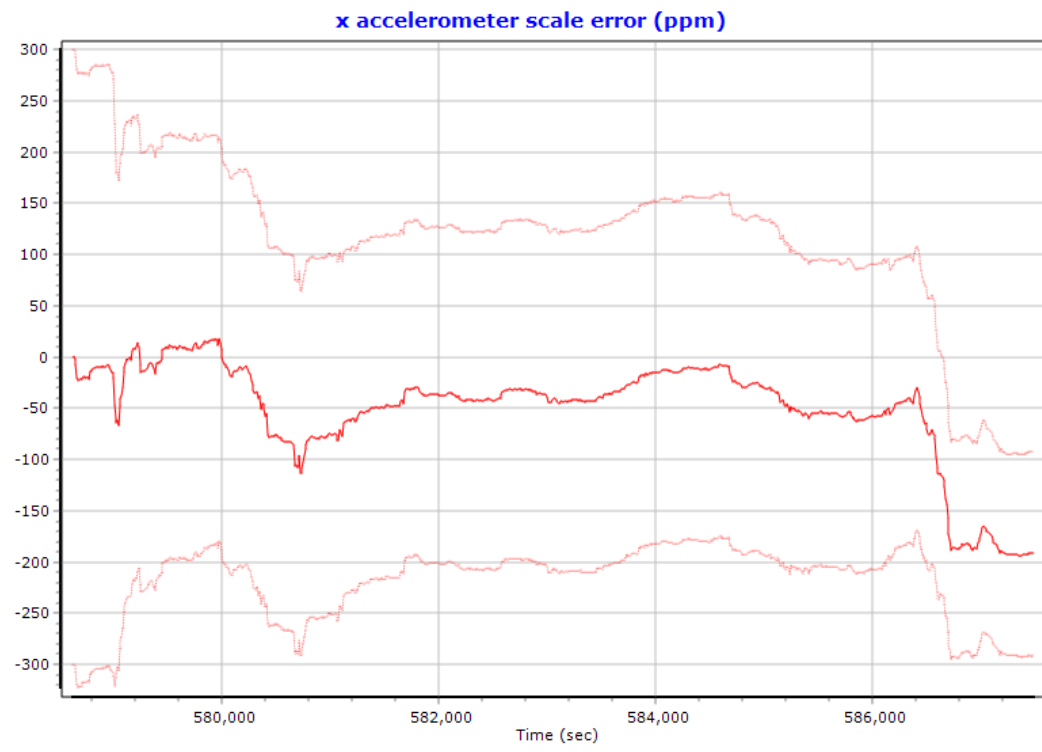
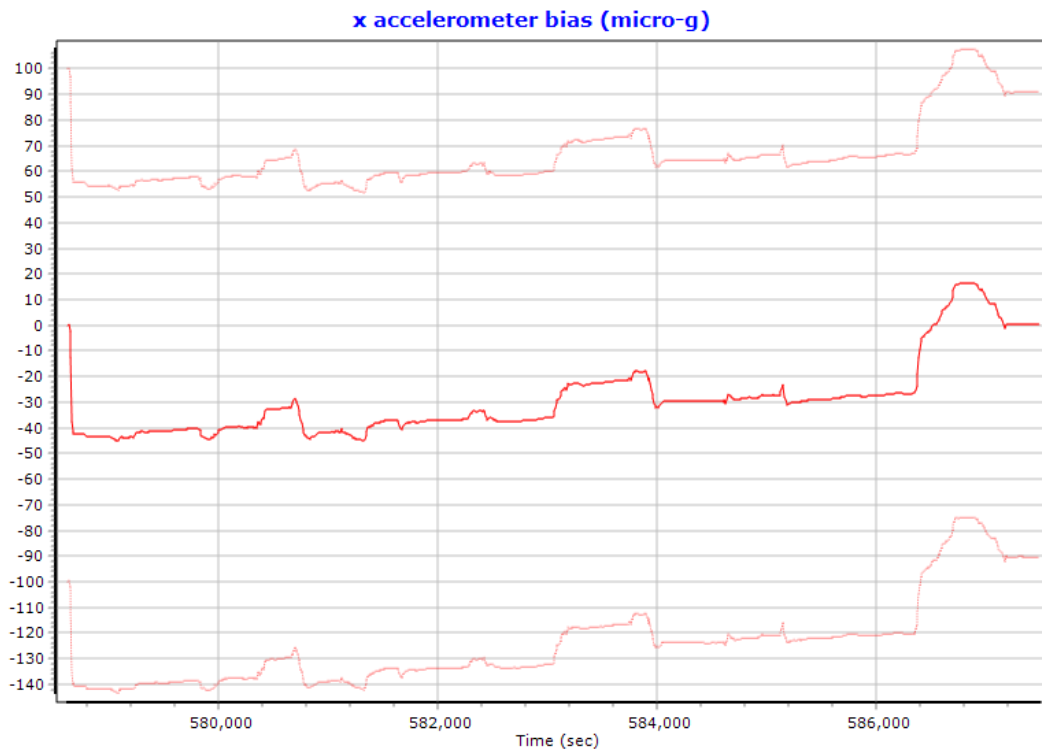
DOP over Tol: 1.47%

Baseline Distances (km):

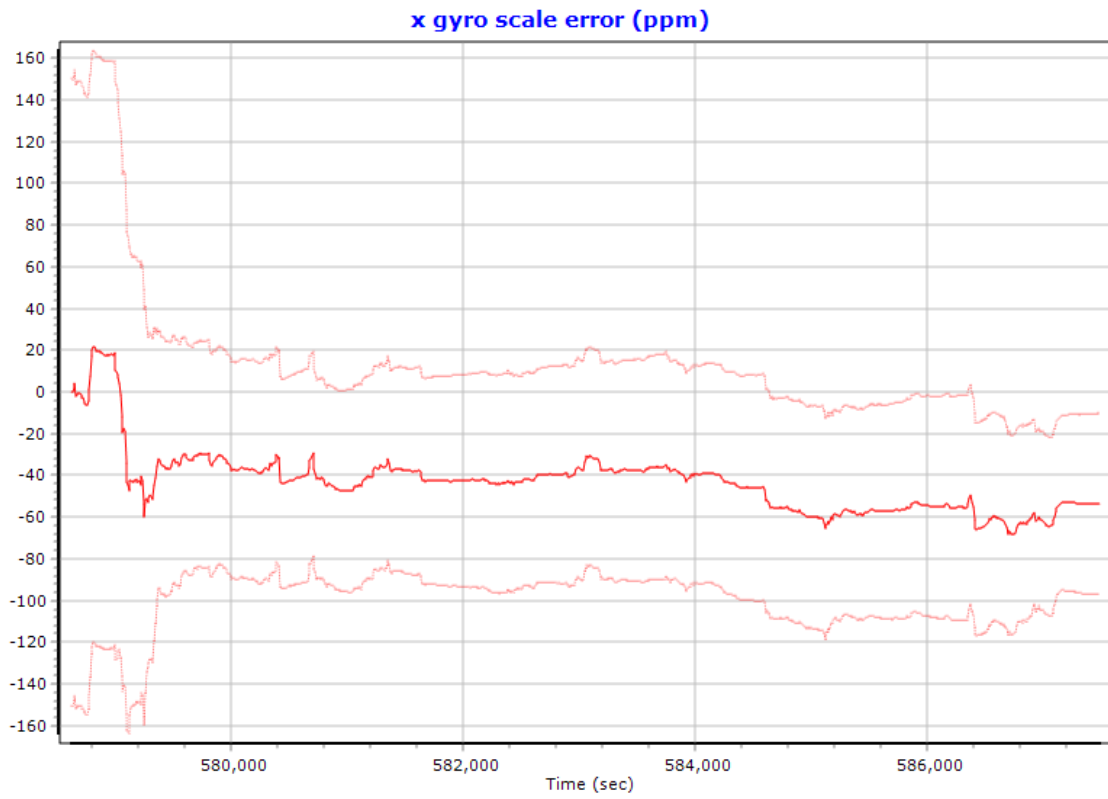
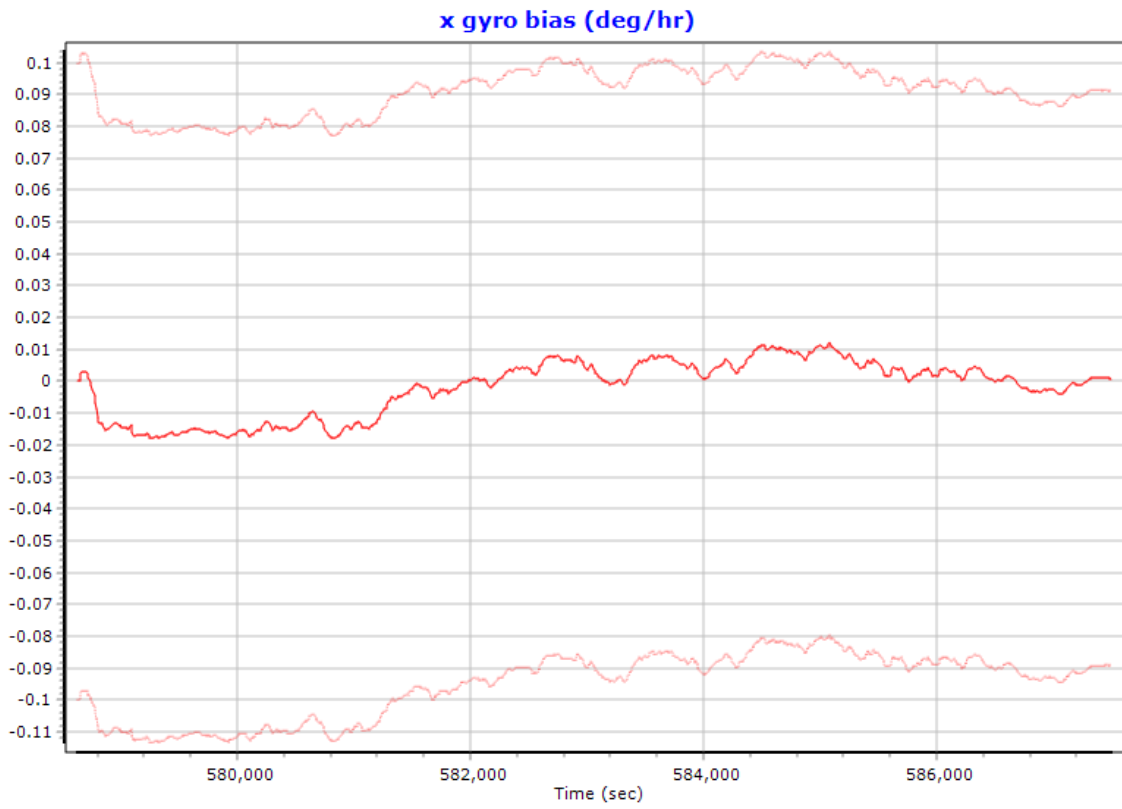
Maximum: 66.96  
 Minimum: 3.31  
 Average: 34.65  
 First Epoch: 48.38  
 Last Epoch: 48.34

CORS Base Stations

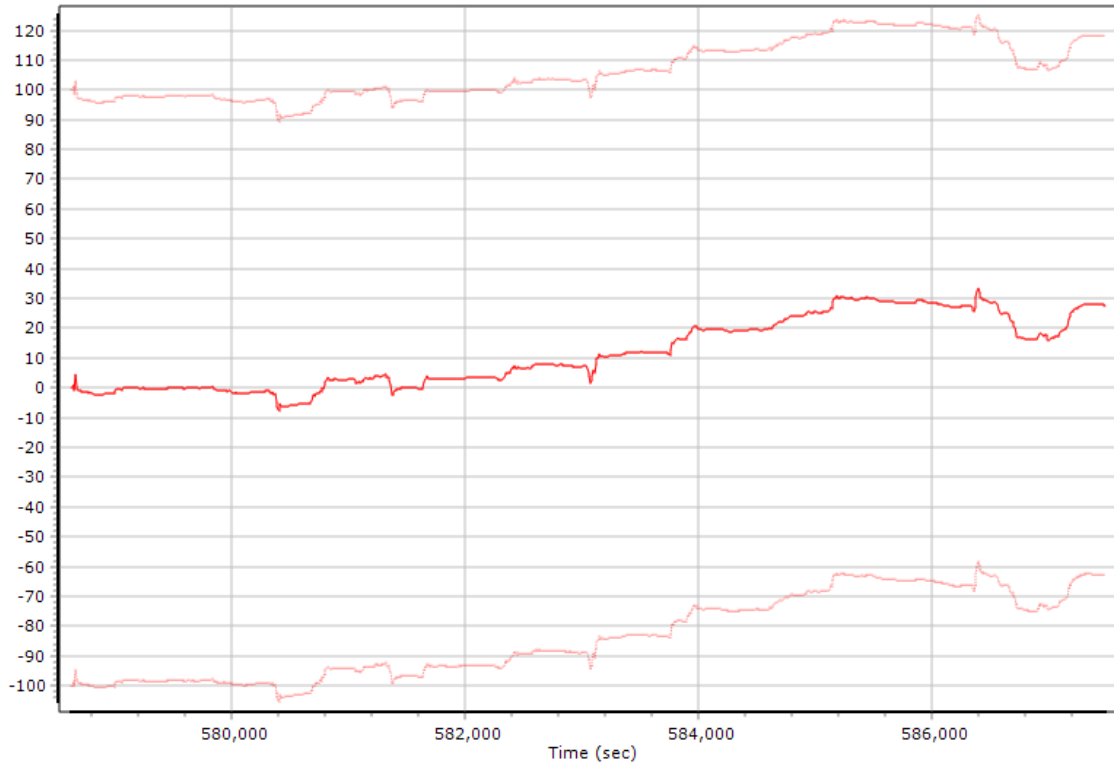
Station	Original			Adjusted		
	Latitude	Longitude	Altitude	Latitude	Longitude	Altitude
WVAT	N37°25'42.67838"	W81°04'04.40407"	704.673		W78°59'54.44159"	193.317
NCRX	N36°23'28.08364"	W78°59'54.44155"	193.300	N36°23'28.08341"	W78°41'37.27174"	512.945
UVFM	N37°52'43.49379"	W78°41'37.27175"	512.938	N37°52'43.49371"	W82°32'07.72304"	185.701
KYTL	N37°29'00.20373"	W82°32'07.72254"	185.679	N37°29'00.20355"	W81°40'54.67385"	956.592
ASUB	N36°12'50.87093"	W81°40'54.67348"	956.569	N36°12'50.87081"	W81°07'55.81247"	596.185
WVOH	N37°59'53.75060"	W81°07'55.81221"	596.194	N37°59'53.75053"	W80°25'18.58204"	655.203
WVLE	N37°49'20.23029"	W80°25'18.58199"	655.200	N37°49'20.23013"	W81°06'52.95811"	838.643
NCSR	N36°29'51.93297"	W81°06'52.95777"	838.659	N36°29'51.93282"	W80°00'48.96124"	266.586
HIPT	N35°57'56.51370"	W80°00'48.96086"	266.584	N35°57'56.51339"	W80°43'11.73554"	339.303
DOBS	N36°25'31.54135"	W80°43'11.73514"	339.298	N36°25'31.54127"	W80°25'13.83270"	605.693
BLA1	N37°12'40.85438"	W80°25'13.83288"	605.692	N37°12'40.85423"	W78°59'54.44159"	193.317







**y accelerometer bias (micro-g)**



**y accelerometer scale error (ppm)**

