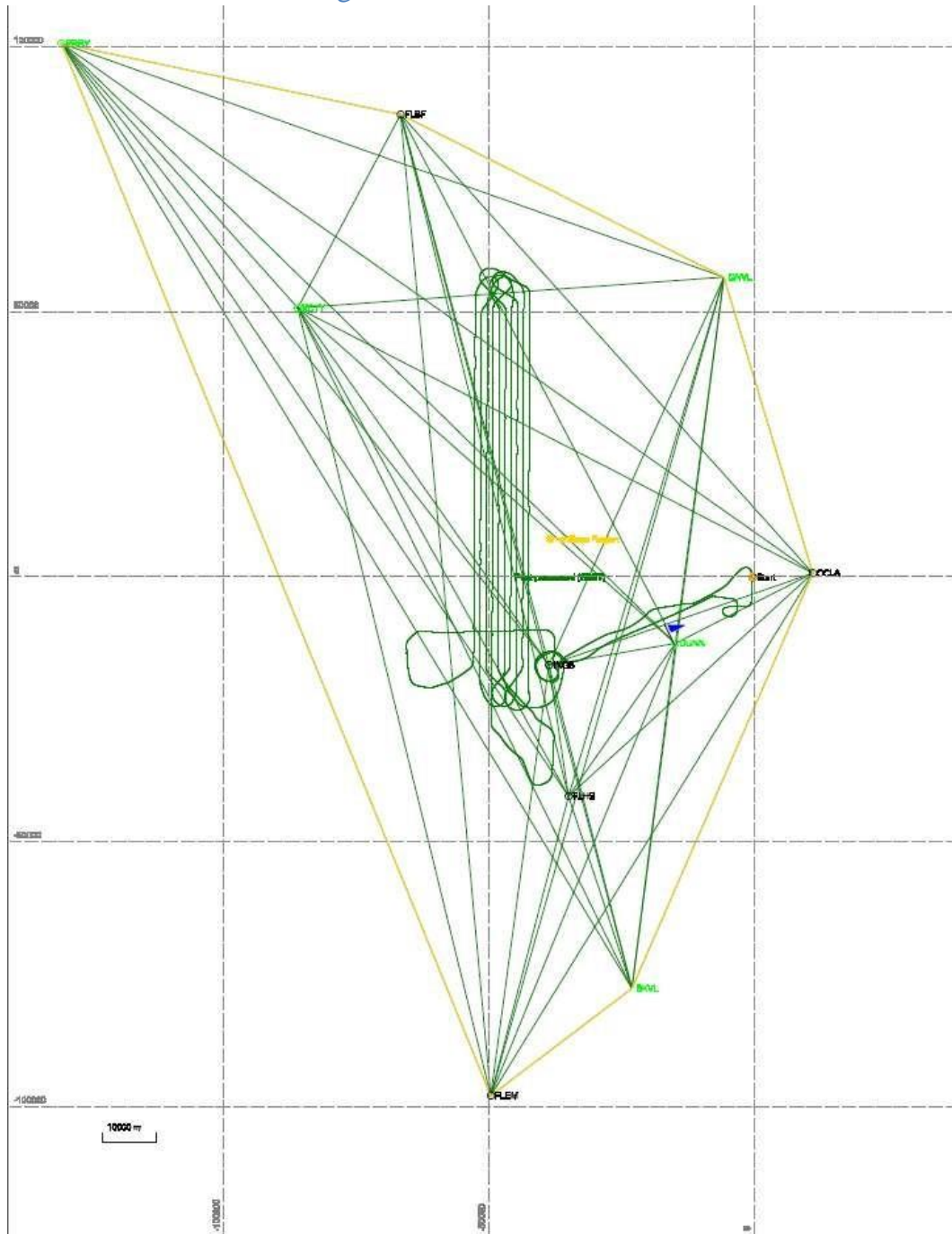
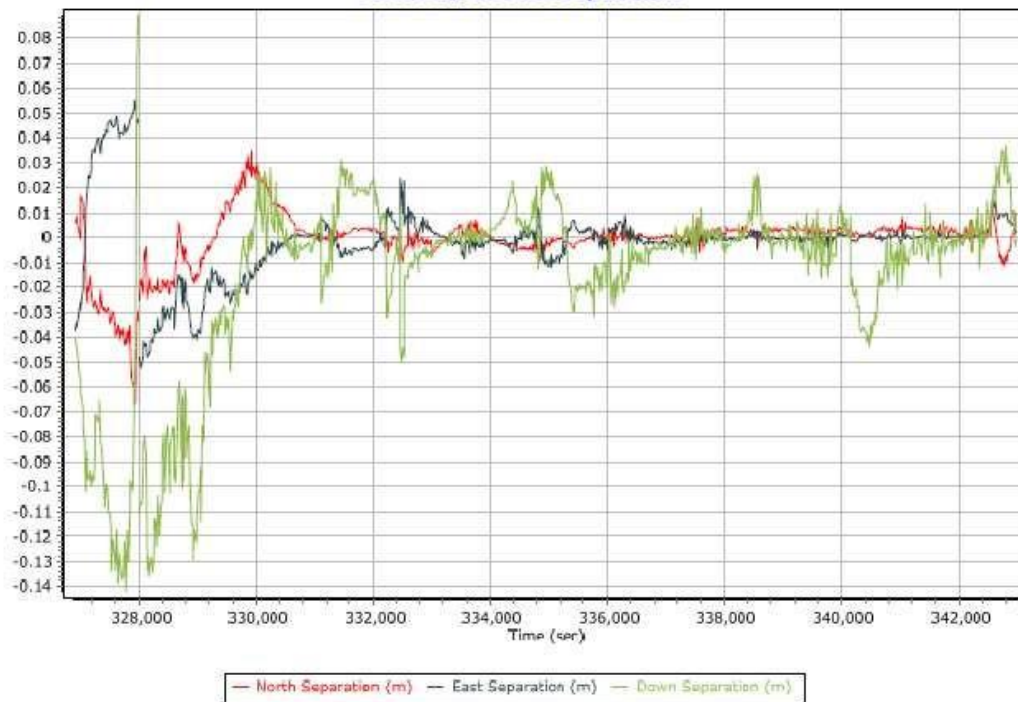


Appendix A: GNSS and IMU Processing Reports

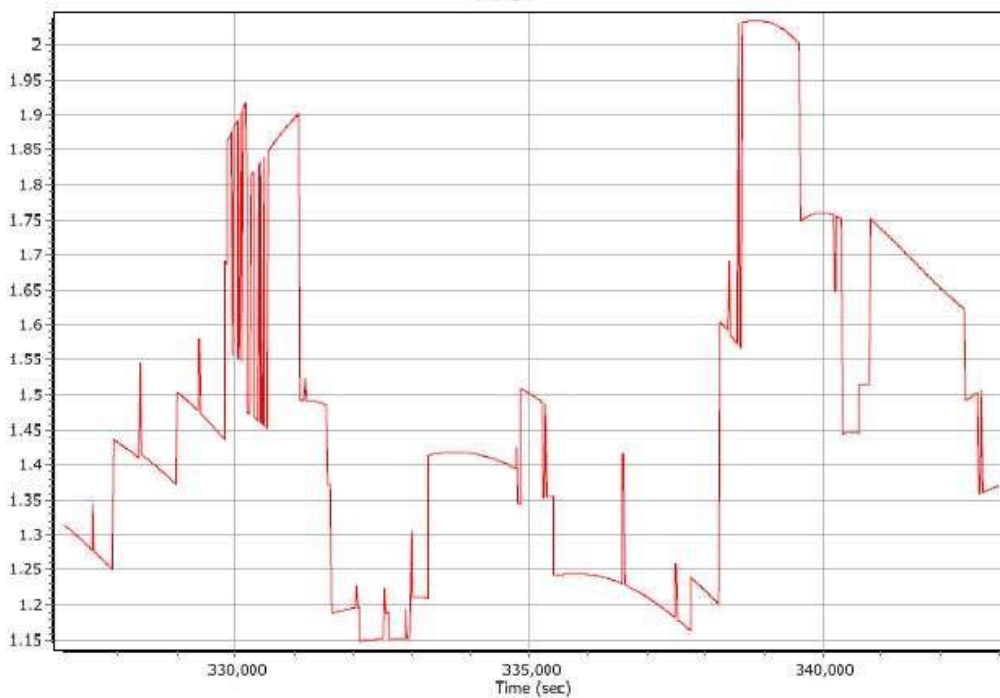
4318339a GNSS Processing

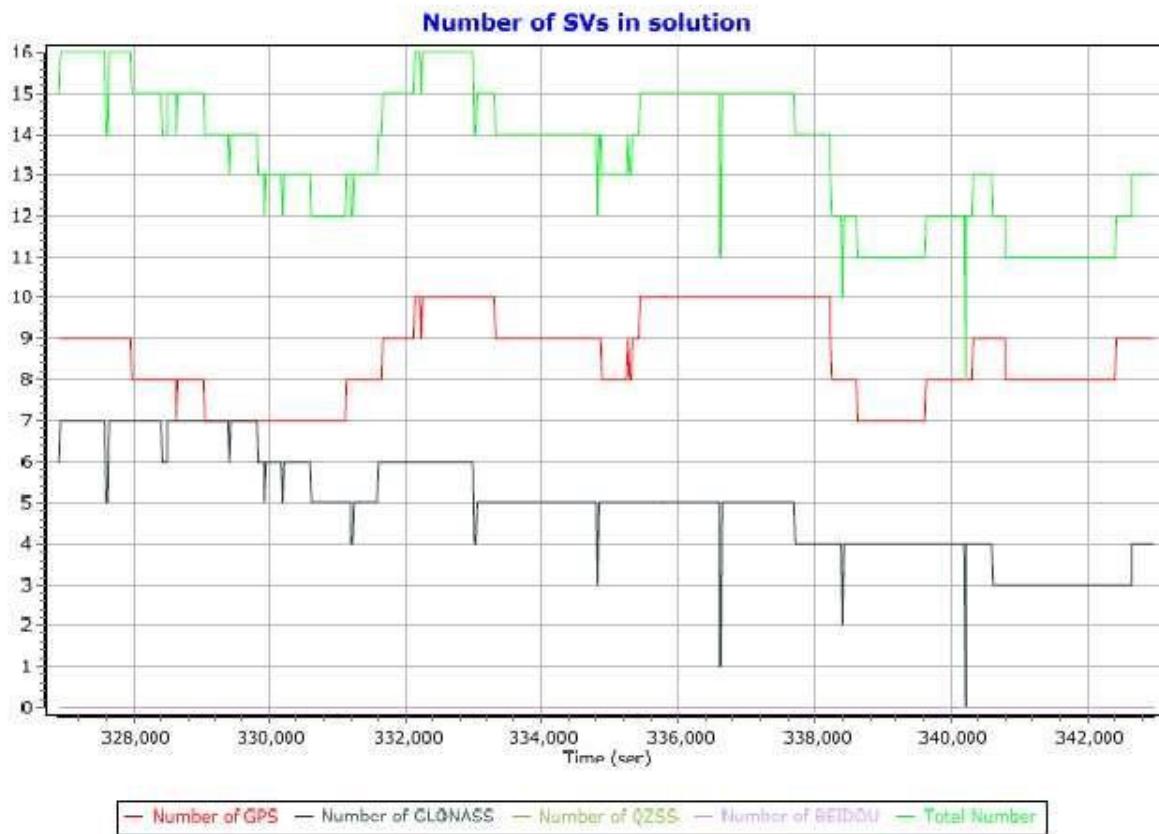


Forward/Reverse Separation

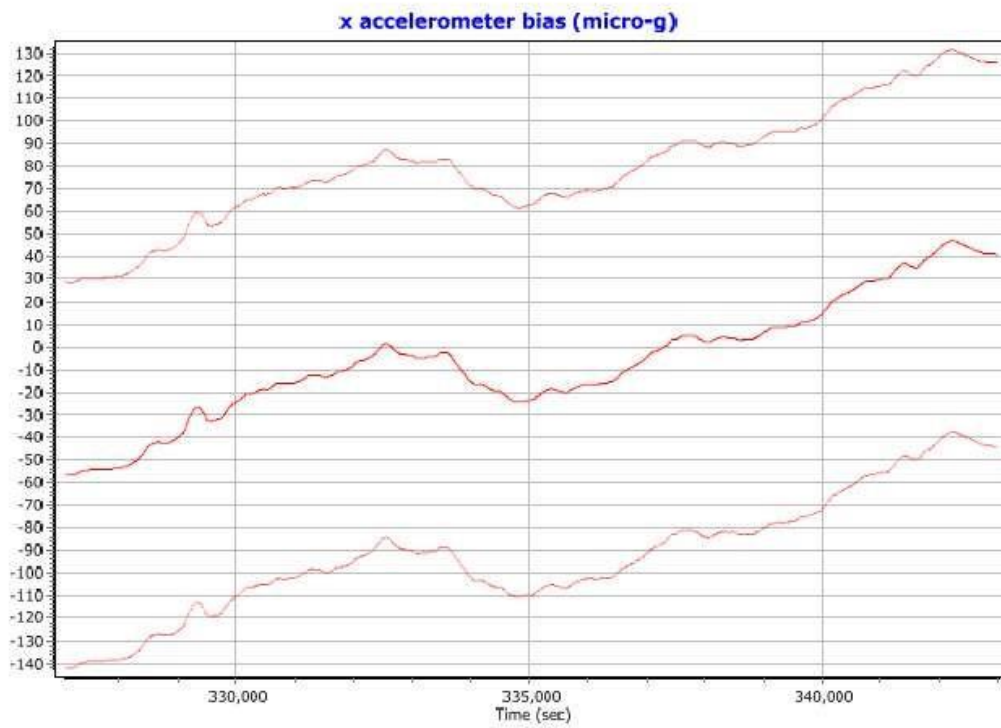


PDOP

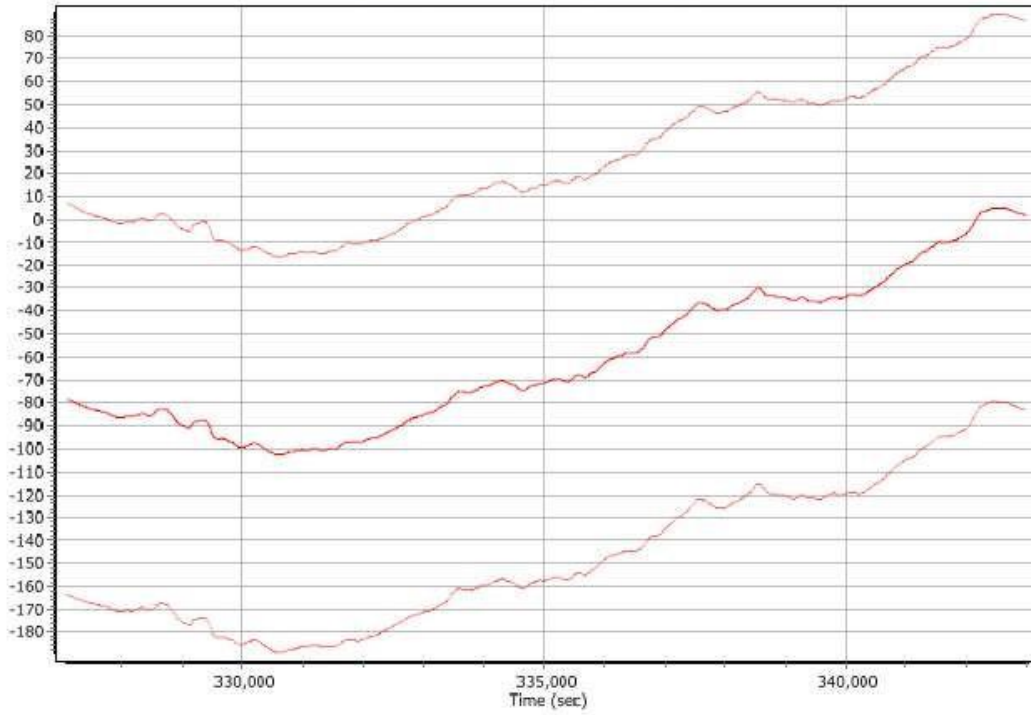




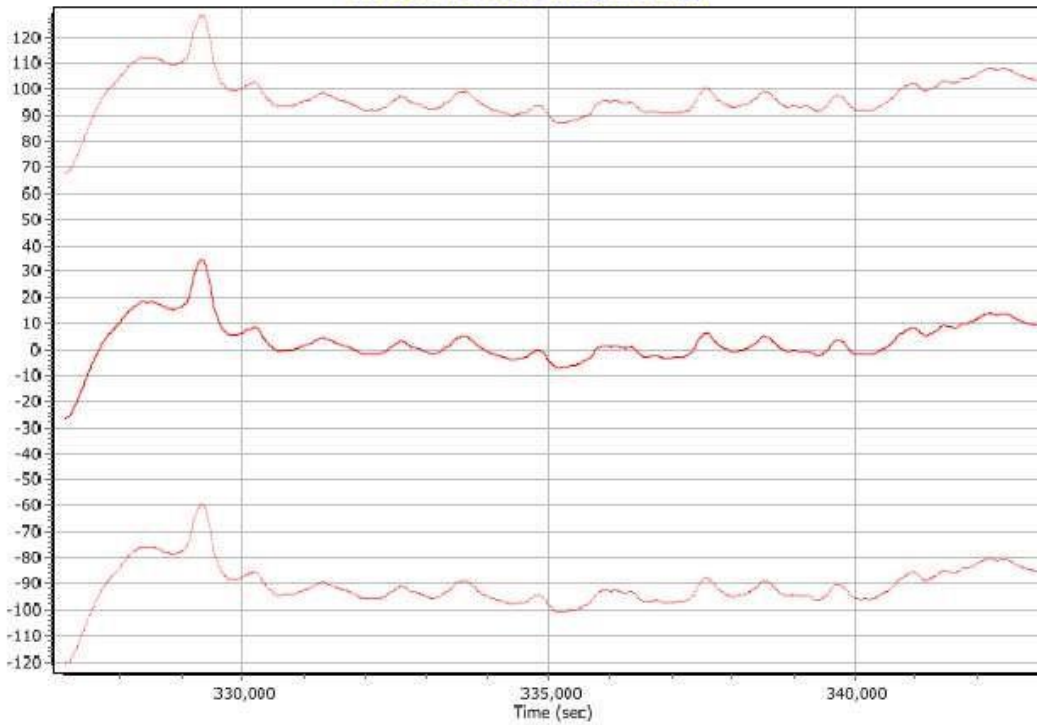
4318339a Sensor Errors



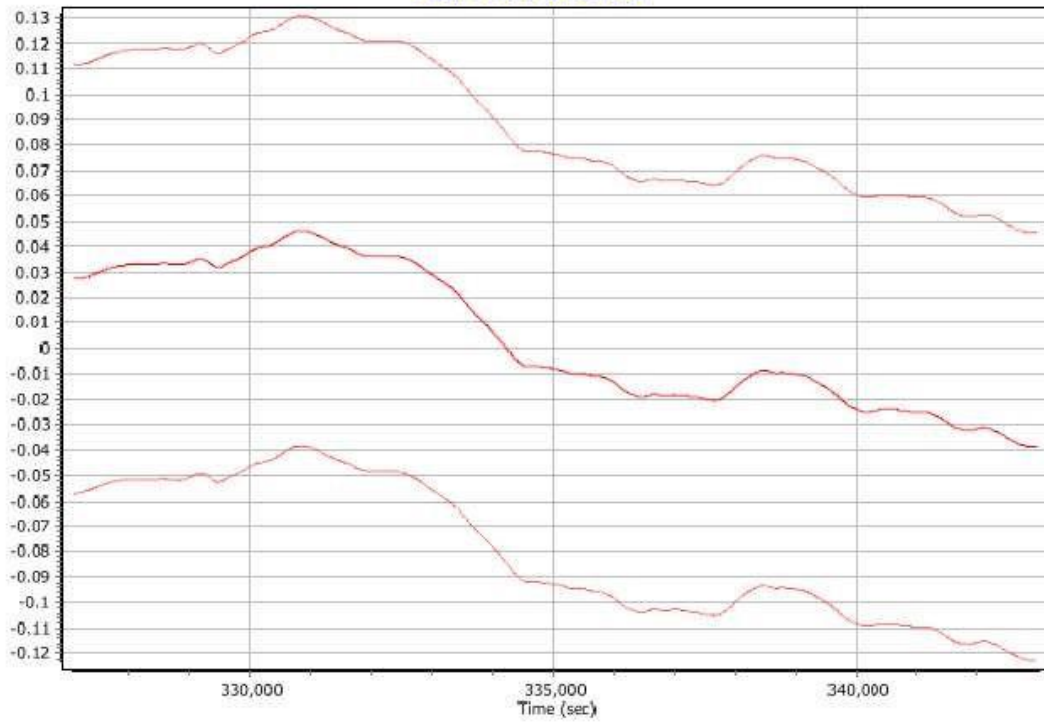
y accelerometer bias (micro-g)



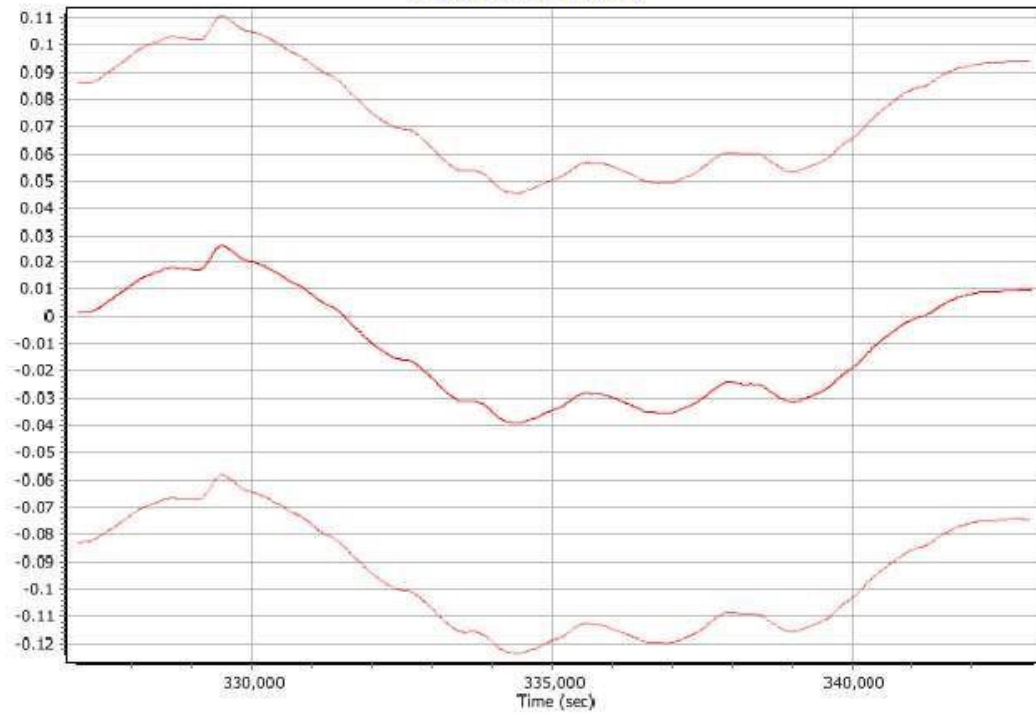
z accelerometer bias (micro-g)

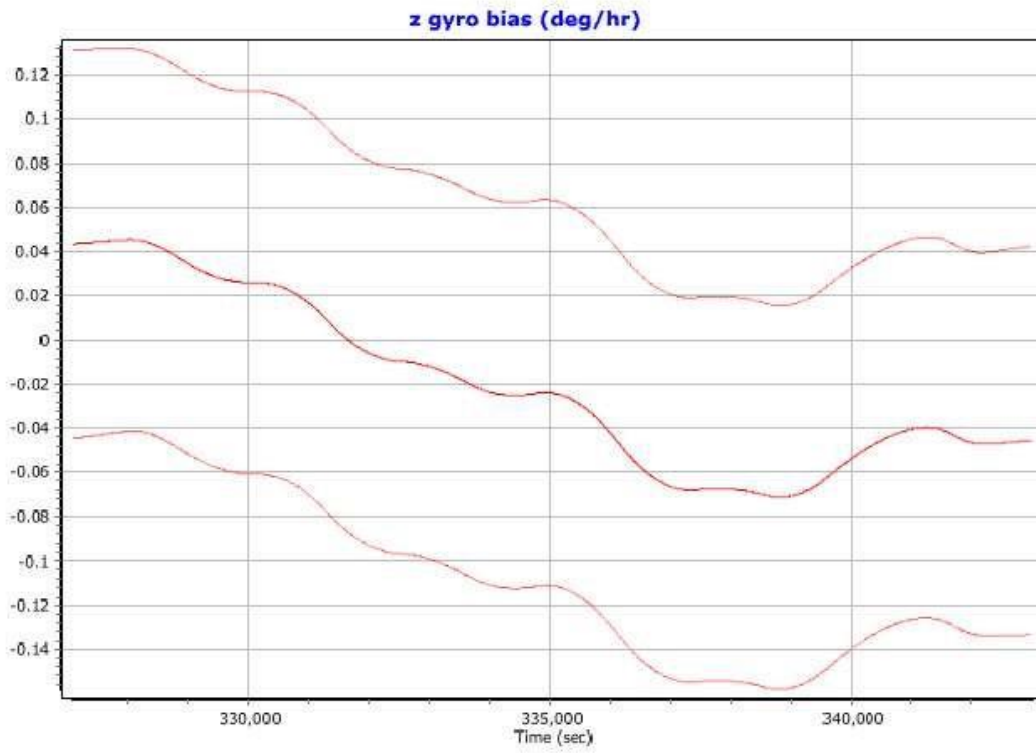


x gyro bias (deg/hr)



y gyro bias (deg/hr)





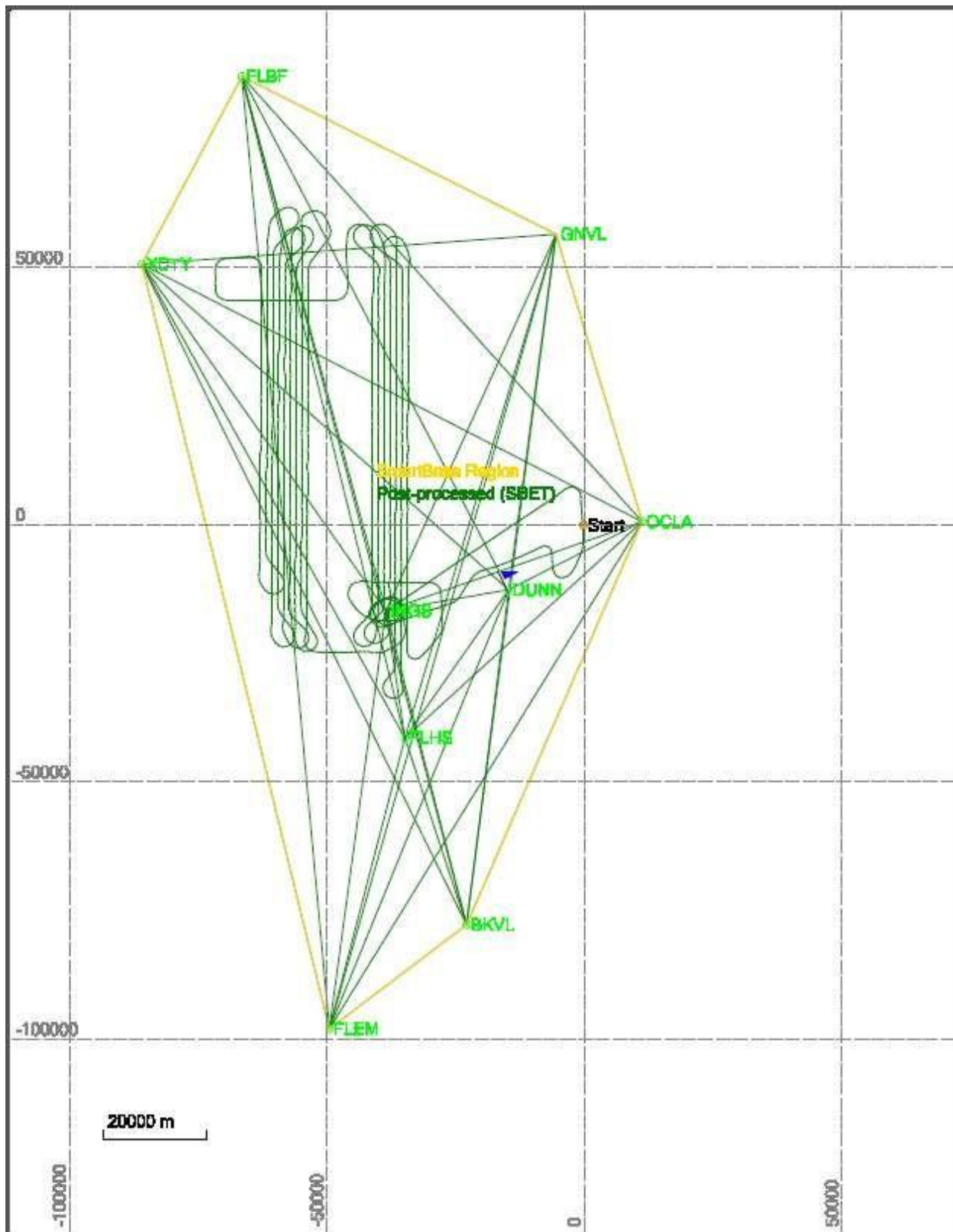
4318339a Processing Summary

```

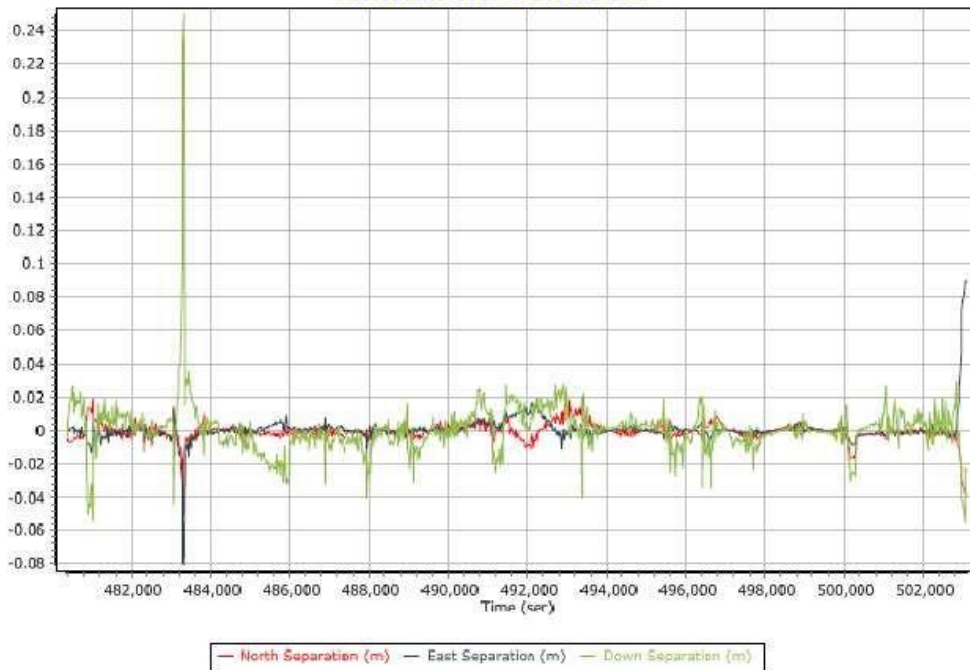
1 -----
2 IINPP Forward-Backward Navigator [Feb 28 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 12/07/18 Time : 10:24:29
5 -----
6 IINPP is using imported GNSS channel assignments
7 -----
8 Extracted data path :
9 D:\Projects\3165_Dewberry_Ocala\Lidar\4318339a\05_INS-GPS_PROC\01_POS\4318339a\4318339a\Ex
10 tract
11 Extracted data kernel : 4318339a
12 Processed data path :
13 D:\Projects\3165_Dewberry_Ocala\Lidar\4318339a\05_INS-GPS_PROC\01_POS\4318339a\4318339a\Proc
14 roc
15 Processed data kernel : 4318339a
16 Processing start time : 327117.000
17 Processing end time : 342993.000
18 -----
19 Selected GNSS mode : IN-Fusion SmartBase
20 Selected base station : ASB
21 Selected subsystems : SNV
22 : Primary GNSS
23 : Base GNSS
24 : Gimbal Encoder
25 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
26 Multipath setting : LOW
27 Stabilized mount to primary GNSS lever arm : 0.700 -0.222 -1.242
28 Base GNSS coordinates : 29.250988651 -82.629326606 1091.356
29 Dynamic lever arm : ACTIVE
30 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
31 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
32 -----
33 Mask angle : 10.000
34 -----
35 342992.998 : New or modified IIN install data
36 Reference-IMU lever arm: 0.00 0.00 0.00
37 Reference-primary GNSS lever arm: 0.70 -0.22 -1.24
38 Multipath environment: LOW
39 342992.998 : Reverse-time processing started
40 342991.998 : SmartBase observables in use
41 342991.998 : IIN primary GNSS solution in use.
42 342991.998 : IIN primary GNSS observables in use.
43 342991.998 : IIN in Fixed NL RTK mode.
44 338548.000 : IIN WL ambiguity failure cleared
45 338548.000 : IIN NL ambiguity failure cleared
46 327984.000 : WARNING : Gap in primary GNSS navigation data
47 327982.998 : IIN primary GNSS solution not in use.
48 327981.998 : IIN primary GNSS solution in use.
49 327980.997 : IIN WL ambiguity failure cleared
50 327116.996 : Processing ended
51 -----
52 Termination status : Normal
53 Execution time : 52.92
54 -----
55 Processing completed.
56 -----

```

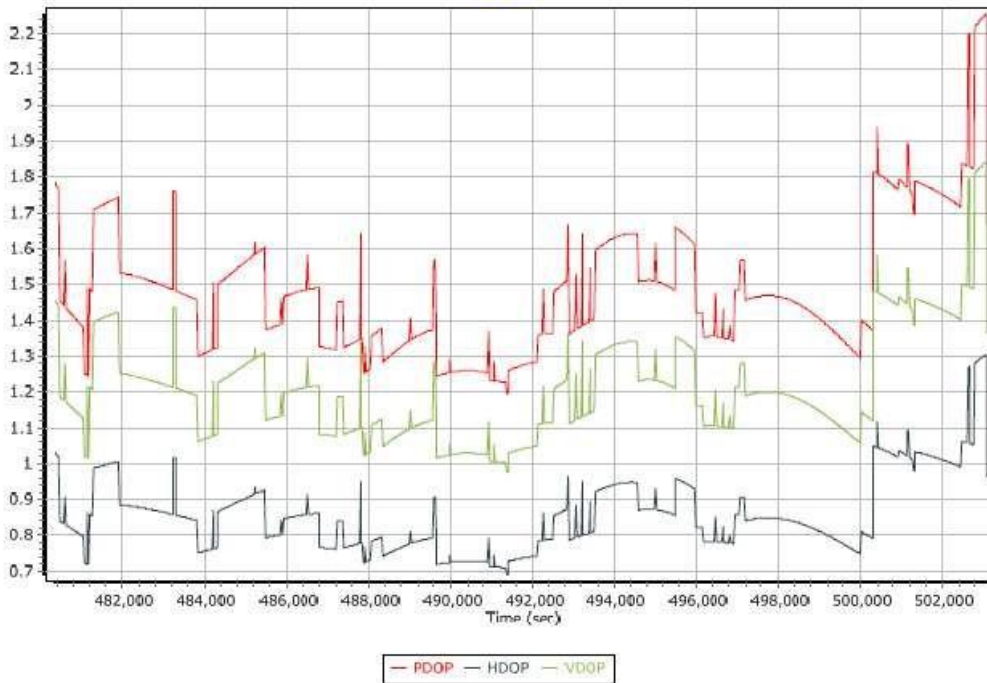
4318341a GNSS Processing

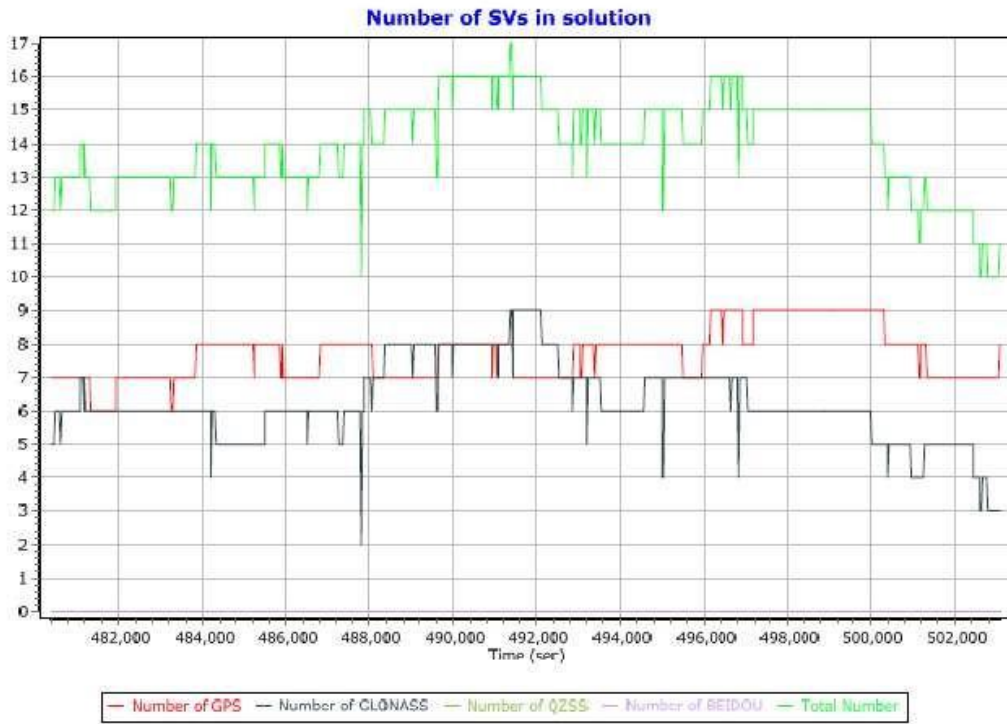


Forward/Reverse Separation

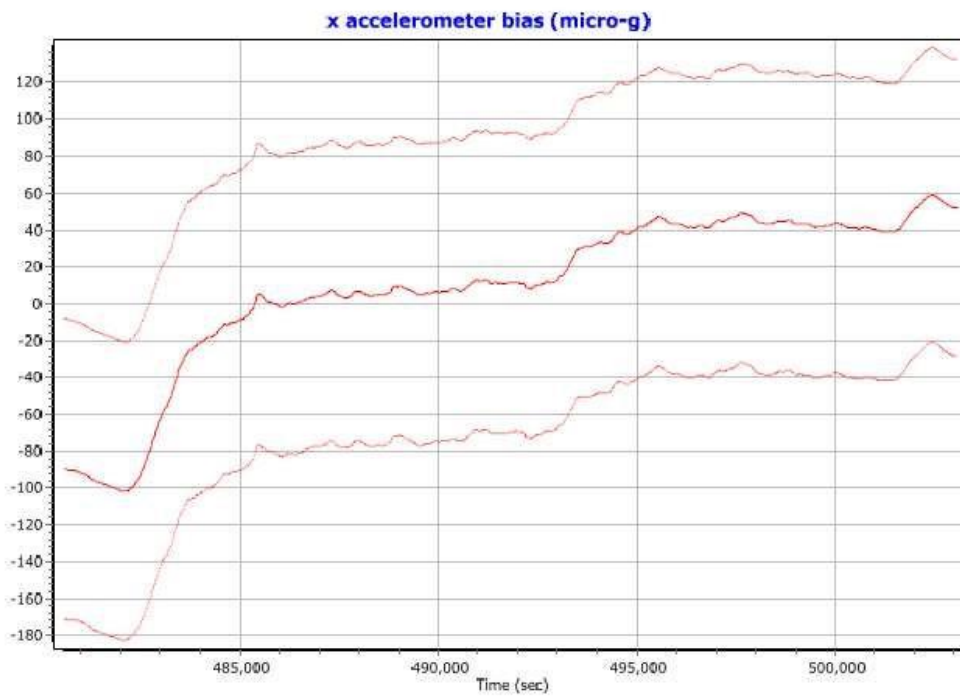


DOP

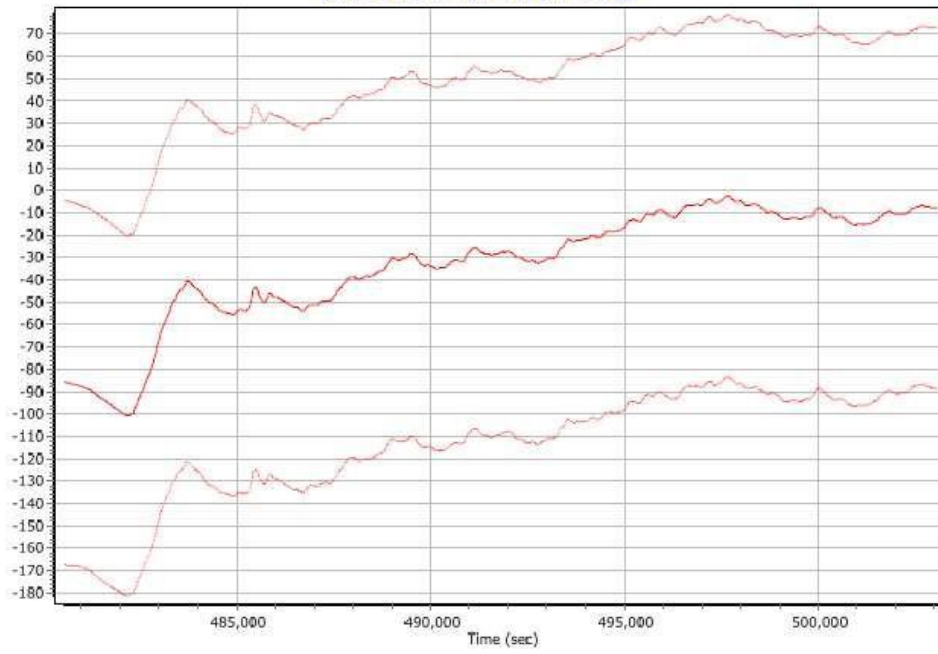




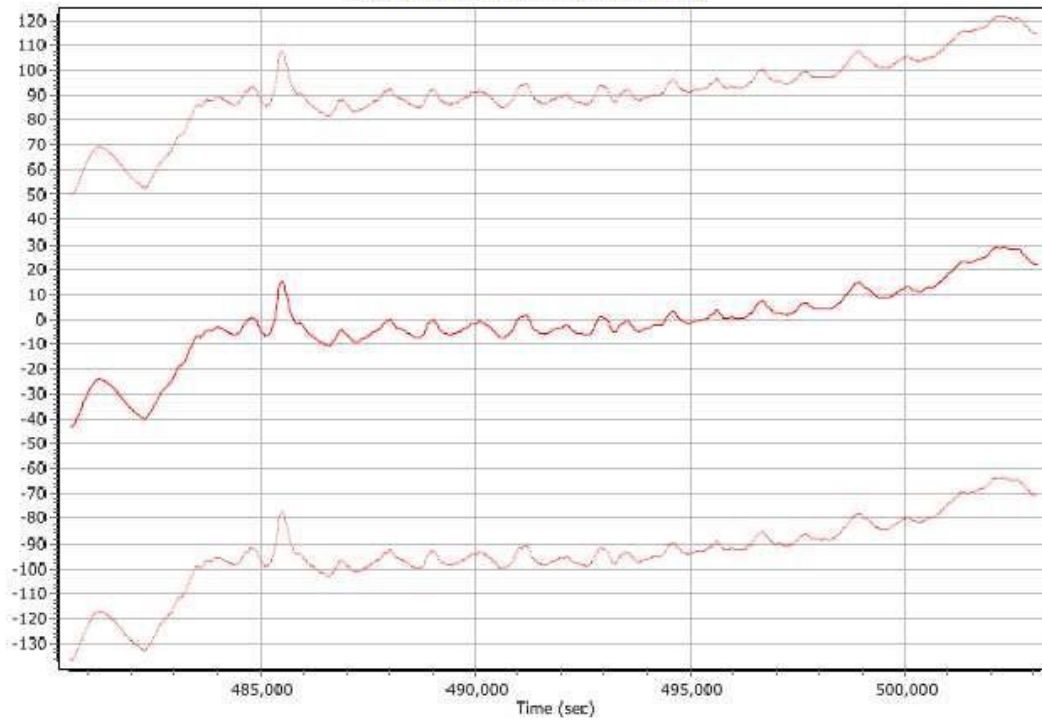
4318341a Sensor Errors



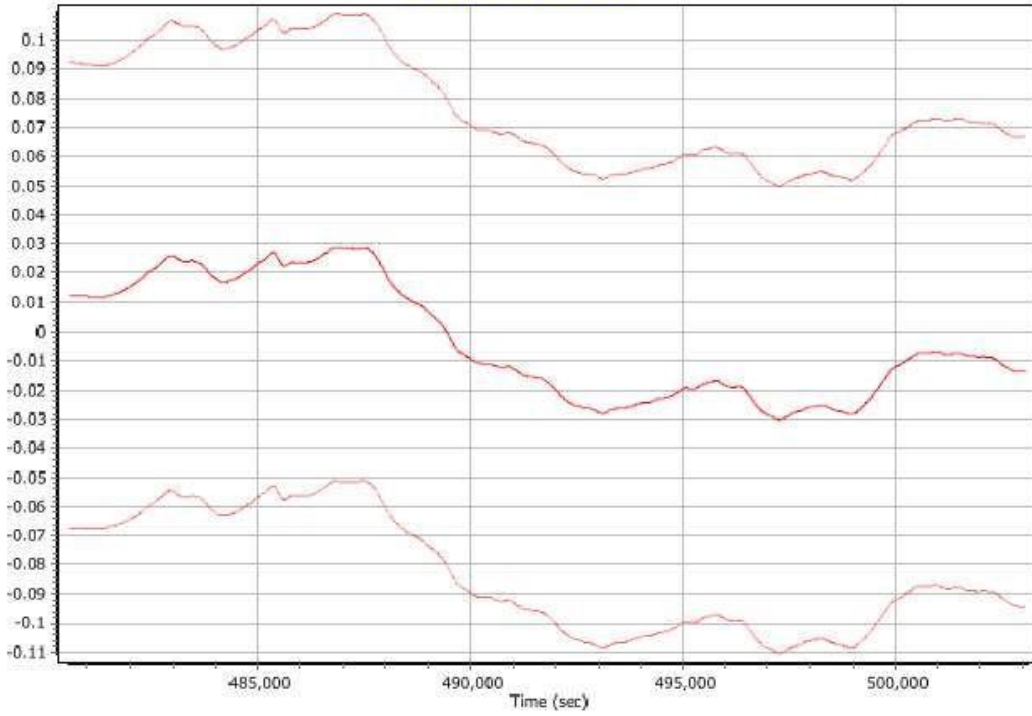
y accelerometer bias (micro-g)



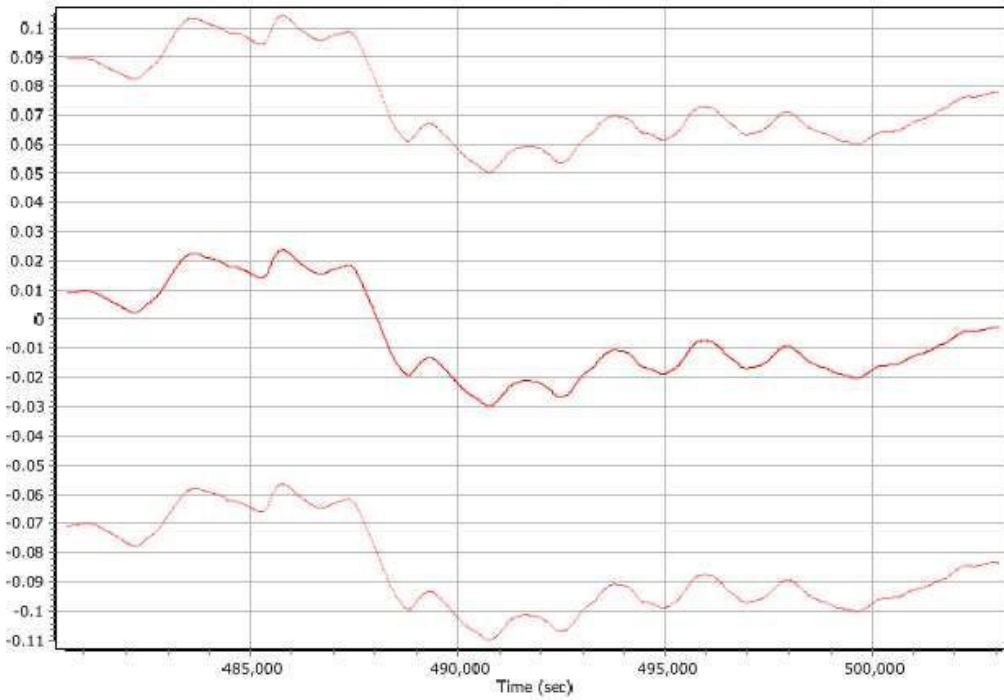
z accelerometer bias (micro-g)

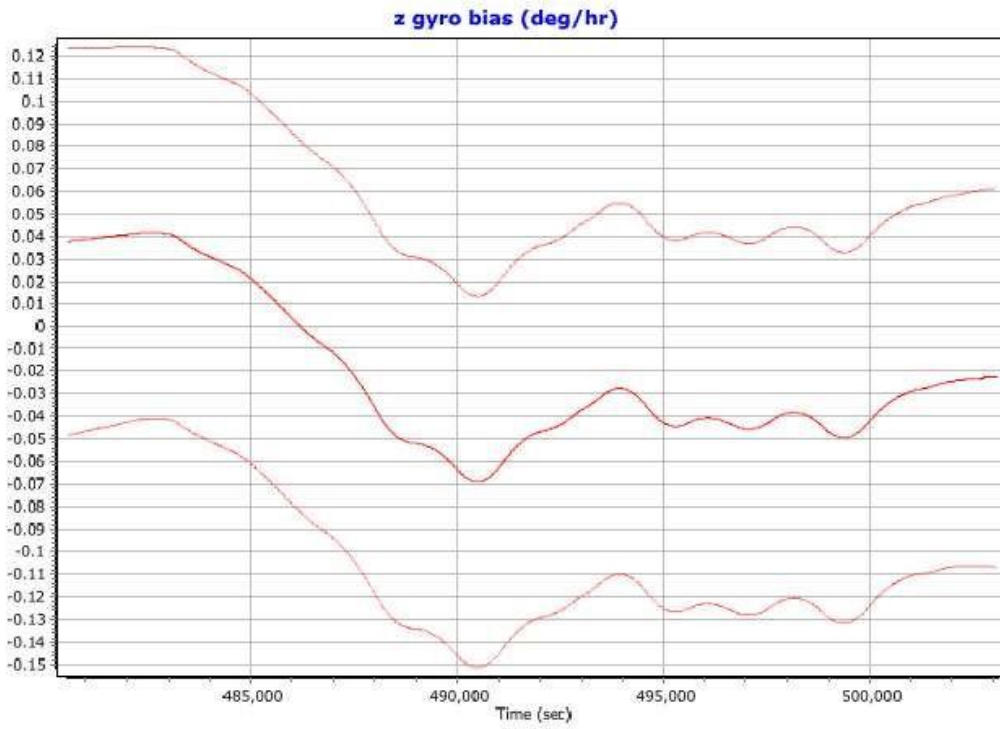


x gyro bias (deg/hr)



y gyro bias (deg/hr)





4318341a Processing Summary

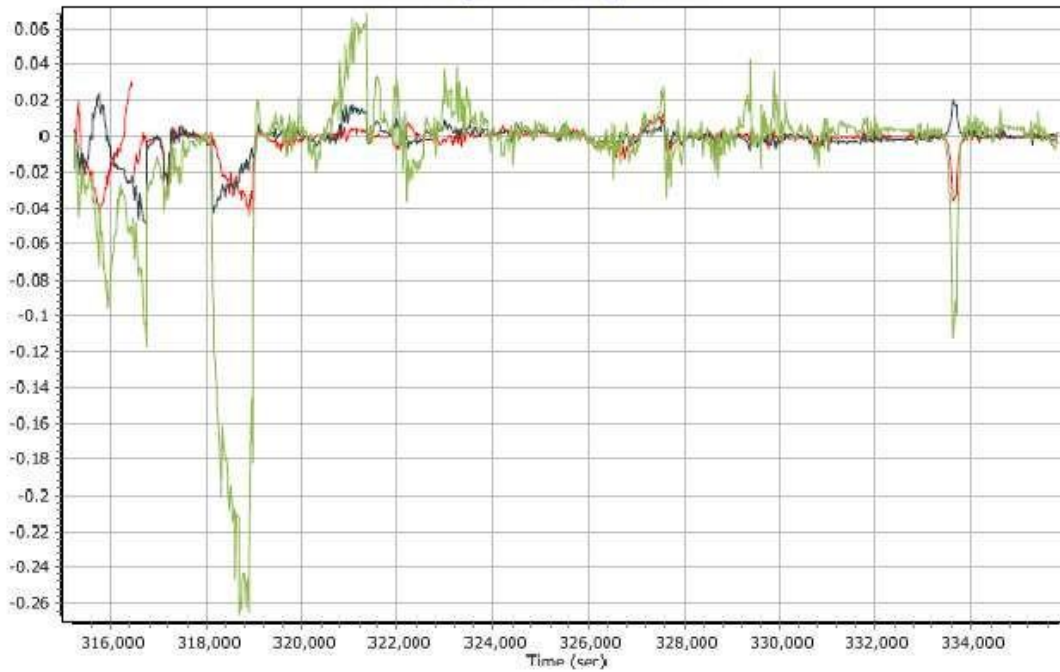
```

1 -----
2 IINPP Forward-Backward Navigator [Feb 28 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 12/09/18 Time : 13:53:37
5 -----
6 IINPP is using imported GNSS channel assignments
7 -----
8 Extracted data path :
9 D:\Projects\3165_Dewberry_Ocala\Lidar\4318341a\05_INS-GPS_PROC\01_POS\4318341a\4318341a\Ex
10 tract
11 Extracted data kernel : 4318341a
12 Processed data path :
13 D:\Projects\3165_Dewberry_Ocala\Lidar\4318341a\05_INS-GPS_PROC\01_POS\4318341a\4318341a\Pr
14 oc
15 Processed data kernel : 4318341a
16 Processing start time : 480565.000
17 Processing end time : 503113.000
18 -----
19 Selected GNSS mode : IN-Fusion SmartBase
20 Selected base station : ASB
21 Selected subsystems : SNV
22 : Primary GNSS
23 : Base GNSS
24 : Gimbal Encoder
25 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
26 Multipath setting : LOW
27 Stabilized mount to primary GNSS lever arm : 0.711 -0.215 -1.241
28 Base GNSS coordinates : 29.287174256 -82.643795940 1097.222
29 Dynamic lever arm : ACTIVE
30 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
31 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
32 -----
33 Mask angle : 10.000
34 -----
35 503112.999 : New or modified IIN install data
36 Reference-IMU lever arm: 0.00 0.00 0.00
37 Reference-primary GNSS lever arm: 0.71 -0.22 -1.24
38 Multipath environment: LOW
39 503112.999 : Reverse-time processing started
40 503111.999 : SmartBase observables in use
41 503111.999 : IIN primary GNSS solution in use.
42 503111.999 : IIN primary GNSS observables in use.
43 503111.999 : IIN in Fixed NL RTK mode.
44 501119.998 : IIN WL ambiguity failure cleared
45 501119.998 : IIN NL ambiguity failure cleared
46 491408.998 : IIN WL ambiguity failure cleared
47 491408.998 : IIN NL ambiguity failure cleared
48 487399.000 : WARNING : Gap in primary GNSS navigation data
49 487398.000 : IIN primary GNSS solution not in use.
50 487397.000 : IIN primary GNSS solution in use.
51 482286.000 : WARNING : Gap in primary GNSS navigation data
52 482283.996 : IIN primary GNSS solution not in use.
53 482282.996 : IIN primary GNSS solution in use.
54 482281.995 : IIN WL ambiguity failure cleared
55 480990.997 : IIN NL ambiguity failure cleared
56 480564.996 : Processing ended
57 -----
58 Termination status : Normal
59 Execution time : 74.99
60 -----
61 Processing completed.

```

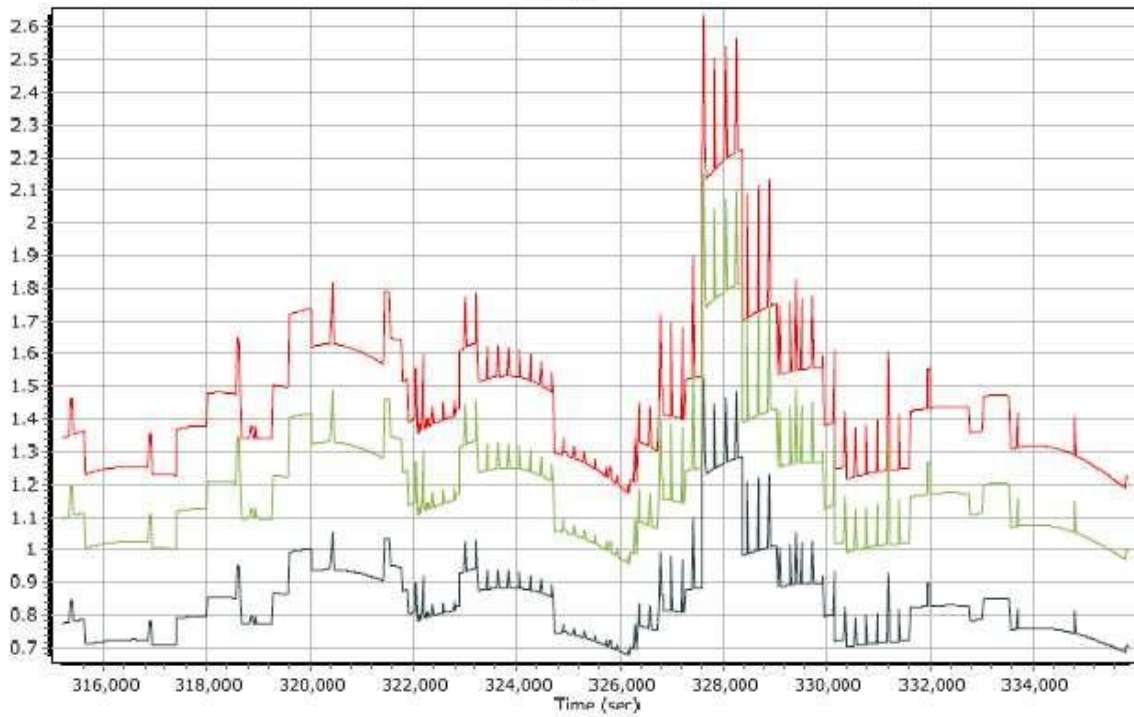
4318346b GNSS Processing

Forward/Reverse Separation

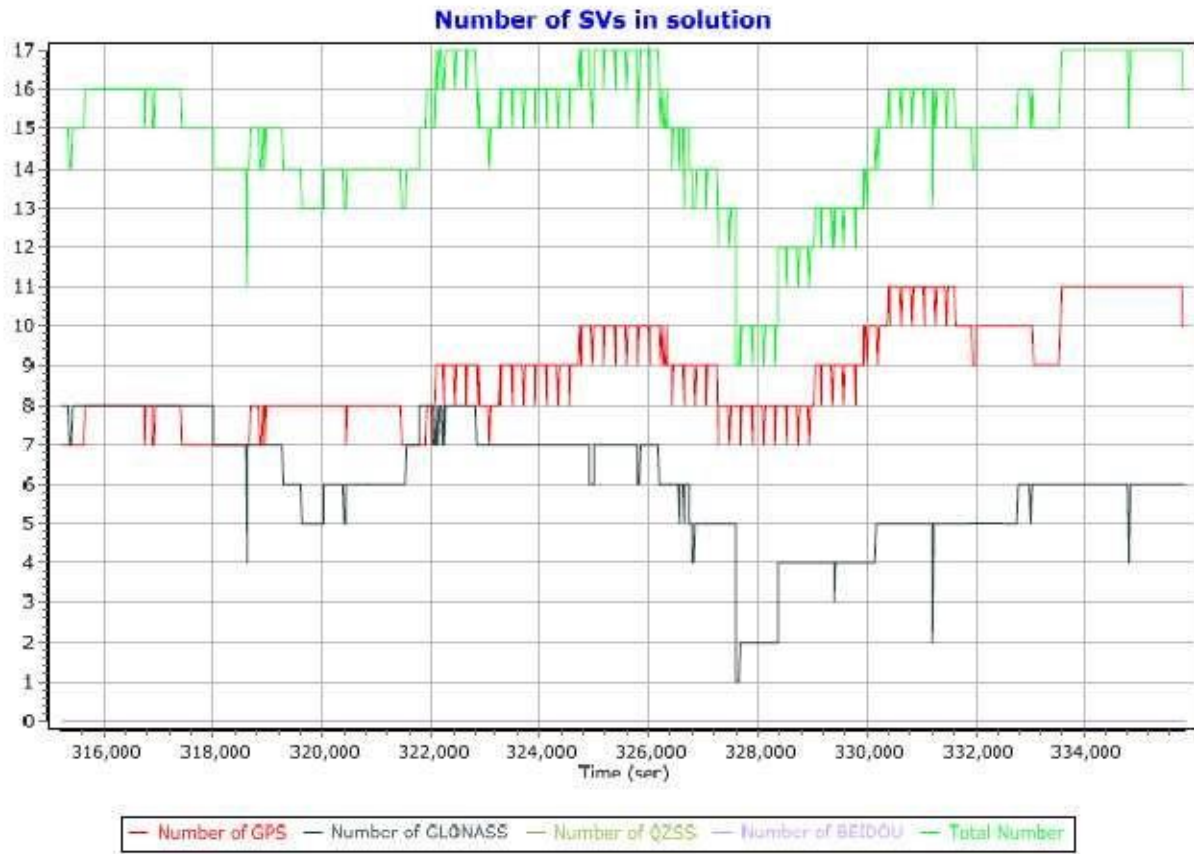


— North Separation (m) — East Separation (m) — Down Separation (m)

DOP

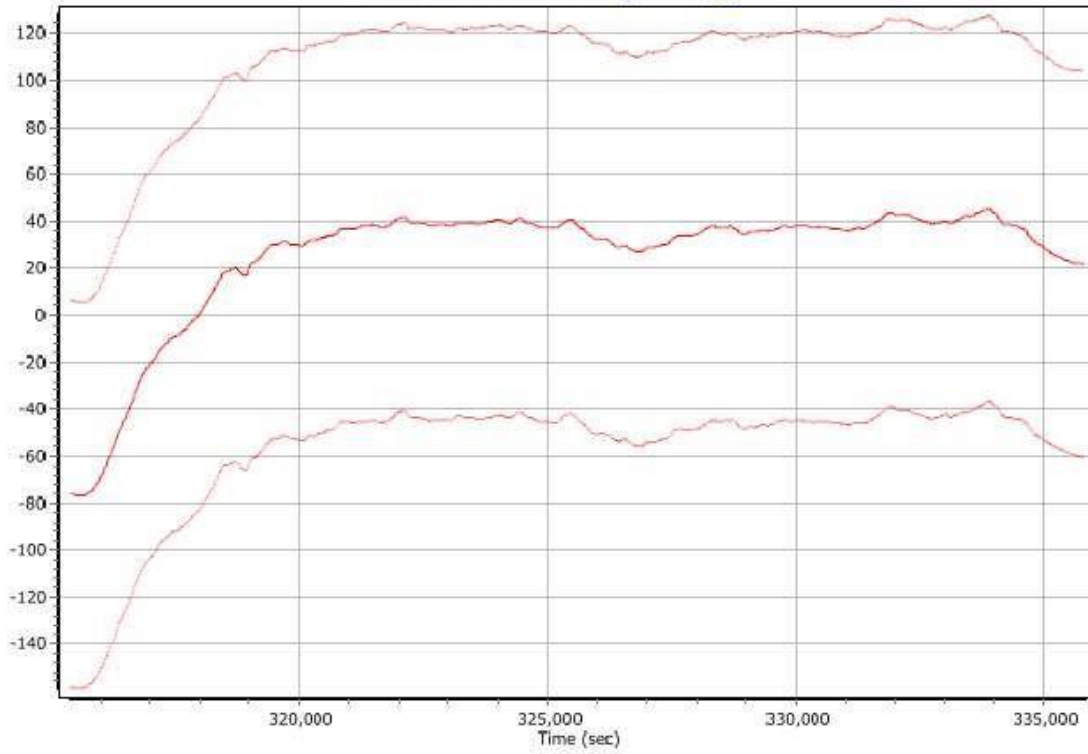


— PDOP — HDOP — VDOP

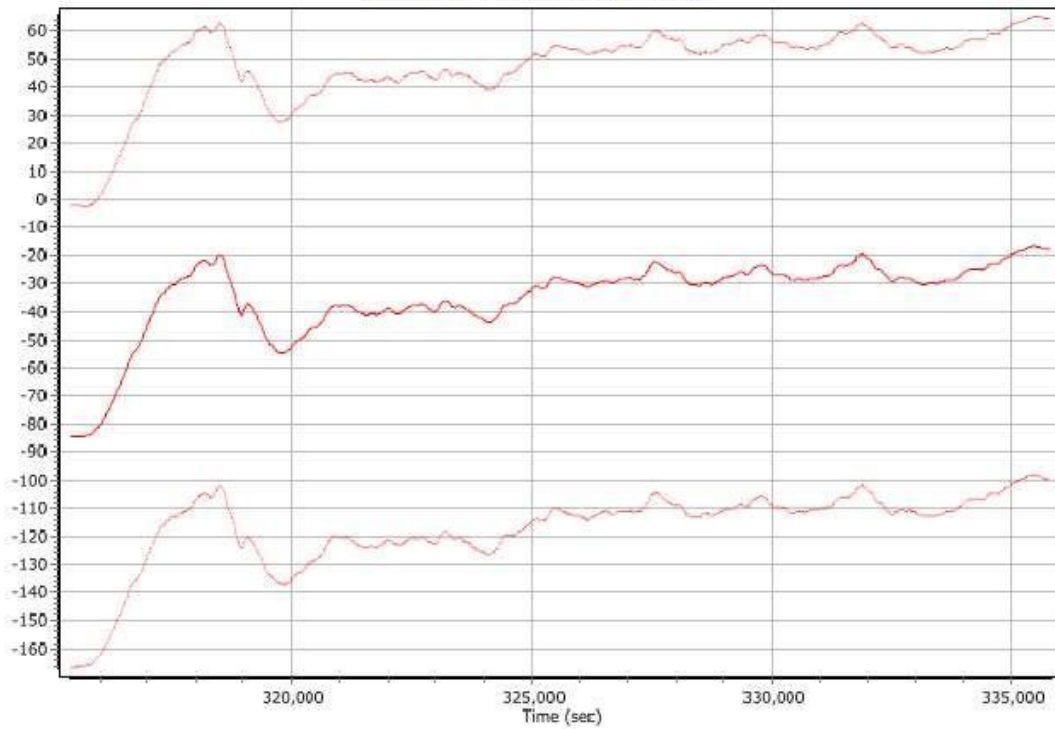


4318346b Sensor Errors

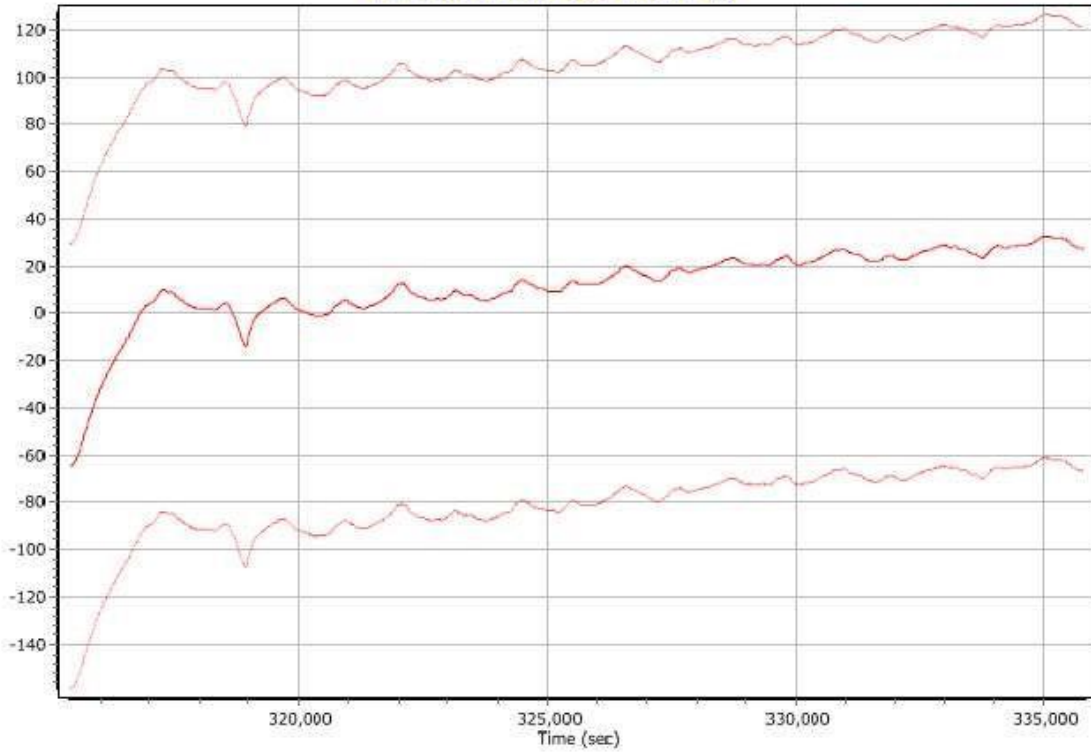
x accelerometer bias (micro-g)



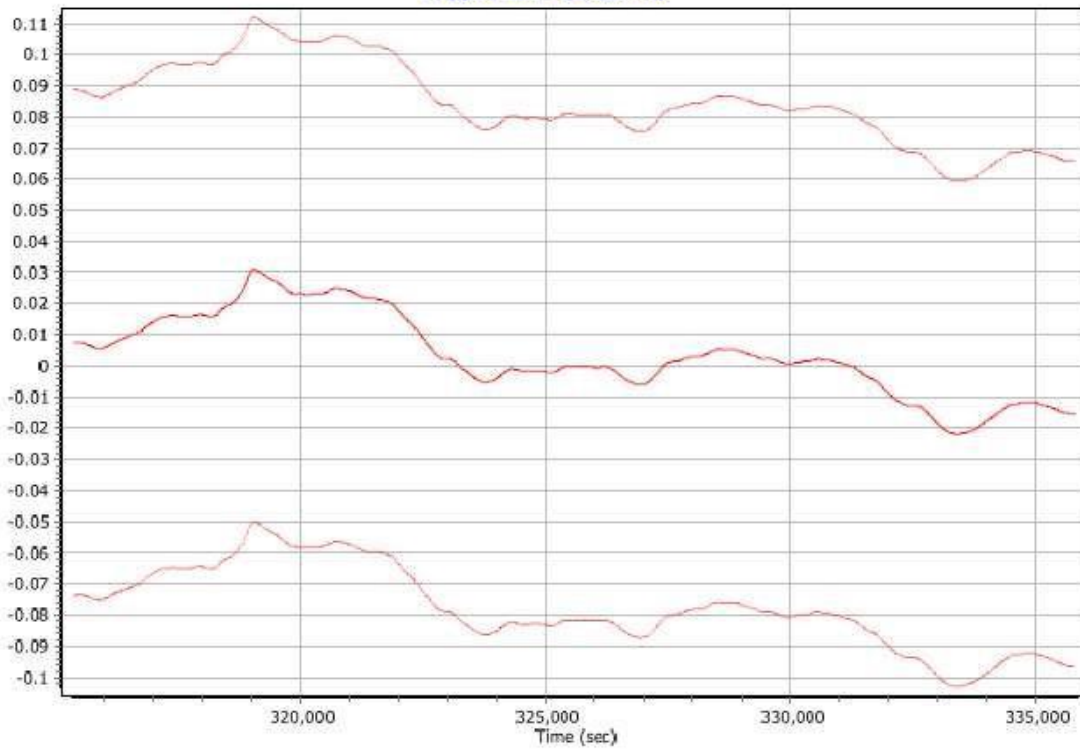
y accelerometer bias (micro-g)

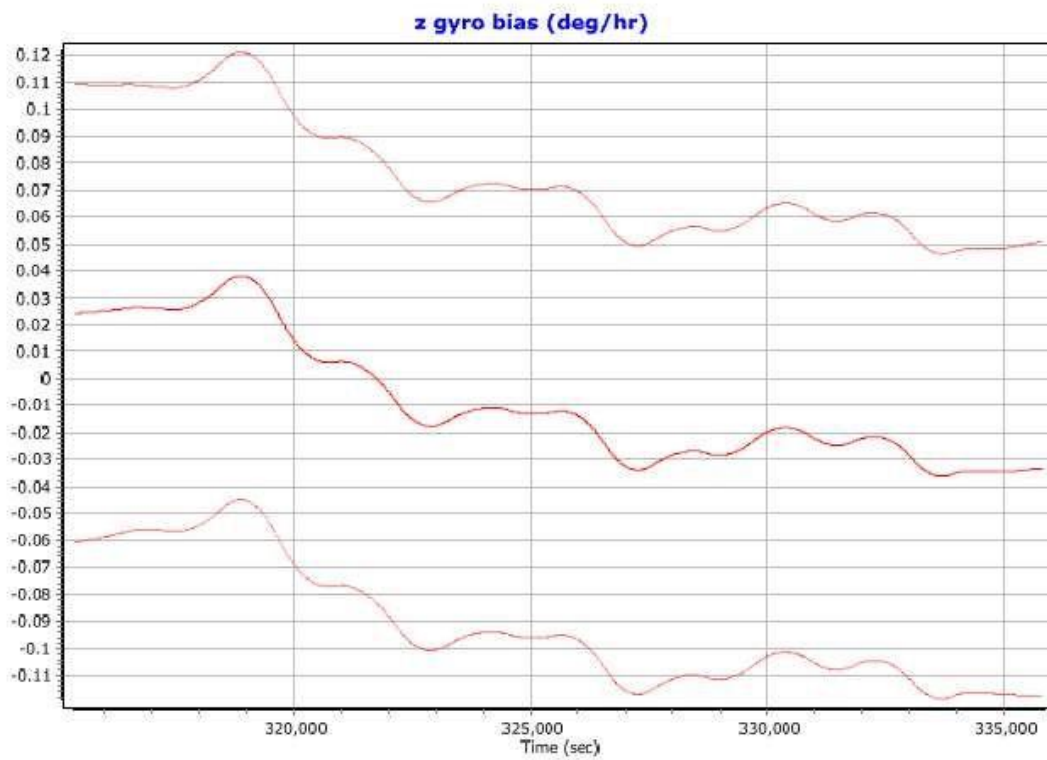
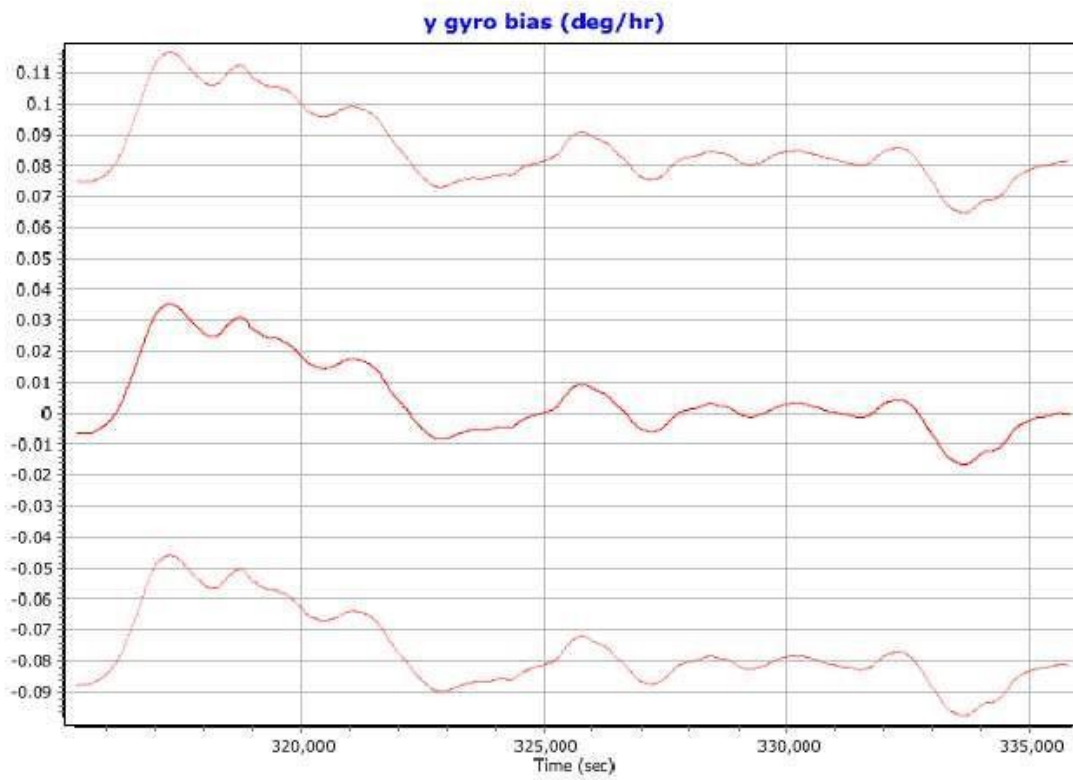


z accelerometer bias (micro-g)



x gyro bias (deg/hr)





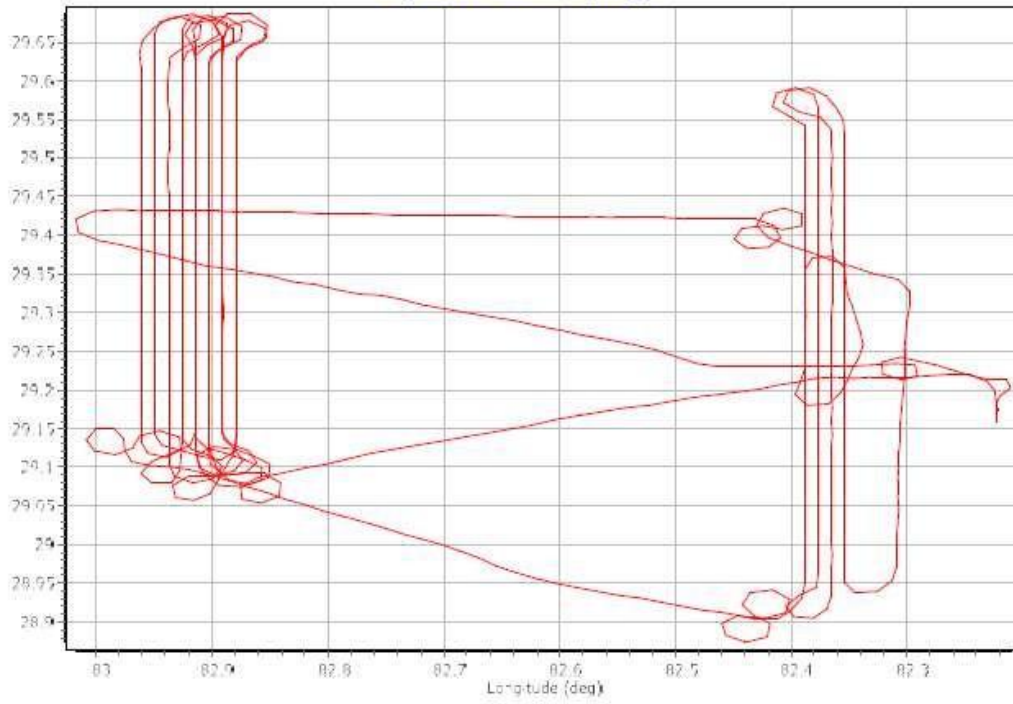
4318346b Processing Summary

```

1 -----
2 IINPP Forward-Backward Navigator [Feb 28 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 12/14/18 Time : 08:32:24
5 -----
6 IINPP is using imported GNSS channel assignments
7 -----
8 Extracted data path :
9 D:\Projects\3165_Dewberry_Ocala\Lidar\4318346b\05_INS-GPS_PROC\01_POS\4318346b\4318346b\E
xtract
10 Extracted data kernel : 4318346b
11 Processed data path :
12 D:\Projects\3165_Dewberry_Ocala\Lidar\4318346b\05_INS-GPS_PROC\01_POS\4318346b\4318346b\F
roc
13 Processed data kernel : 4318346b
14 Processing start time : 315398.000
15 Processing end time : 335842.000
16 -----
17 Selected GNSS mode : IN-Fusion SmartBase
18 Selected base station : ASB
19 Selected subsystems :
20 : SNV
21 : Primary GNSS
22 : Base GNSS
23 : Gimbal Encoder
24 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
25 Multipath setting : LOW
26 Stabilized mount to primary GNSS lever arm : 0.710 -0.214 -1.238
27 Base GNSS coordinates : 29.261443900 -82.451571755 1114.873
28 Dynamic lever arm : ACTIVE
29 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
30 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
31 -----
32 Mask angle : 10.000
33 -----
34 335841.995 : New or modified IIN install data
35 Reference-IMU lever arm: 0.00 0.00 0.00
36 Reference-primary GNSS lever arm: 0.71 -0.21 -1.24
37 Multipath environment: LOW
38 335841.995 : Reverse-time processing started
39 335841.000 : SmartBase observables in use
40 335841.000 : IIN primary GNSS solution in use.
41 335841.000 : IIN primary GNSS observables in use.
42 335841.000 : IIN in Fixed NL RTK mode.
43 335841.997 : IIN WL ambiguity failure cleared
44 332490.000 : WARNING : Gap in primary GNSS navigation data
45 332488.998 : IIN primary GNSS solution not in use.
46 332487.998 : IIN primary GNSS solution in use.
47 326563.997 : IIN WL ambiguity failure cleared
48 326563.997 : IIN NL ambiguity failure cleared
49 316442.000 : WARNING : Gap in primary GNSS navigation data
50 316440.998 : IIN primary GNSS solution not in use.
51 316439.998 : IIN in Float RTK mode.
52 316438.998 : IIN primary GNSS solution in use.
53 316438.998 : IIN in Fixed NL RTK mode.
54 316438.998 : IIN WL ambiguity failure cleared
55 316437.998 : IIN primary GNSS solution not in use.
56 316437.998 : IIN in Float RTK mode.
57 316436.997 : IIN primary GNSS solution in use.
58 316436.997 : IIN in Fixed NL RTK mode.
59 315397.999 : Processing ended
60 -----
61 Termination status : Normal
62 Execution time : 69.29
63 -----
64 Processing completed.

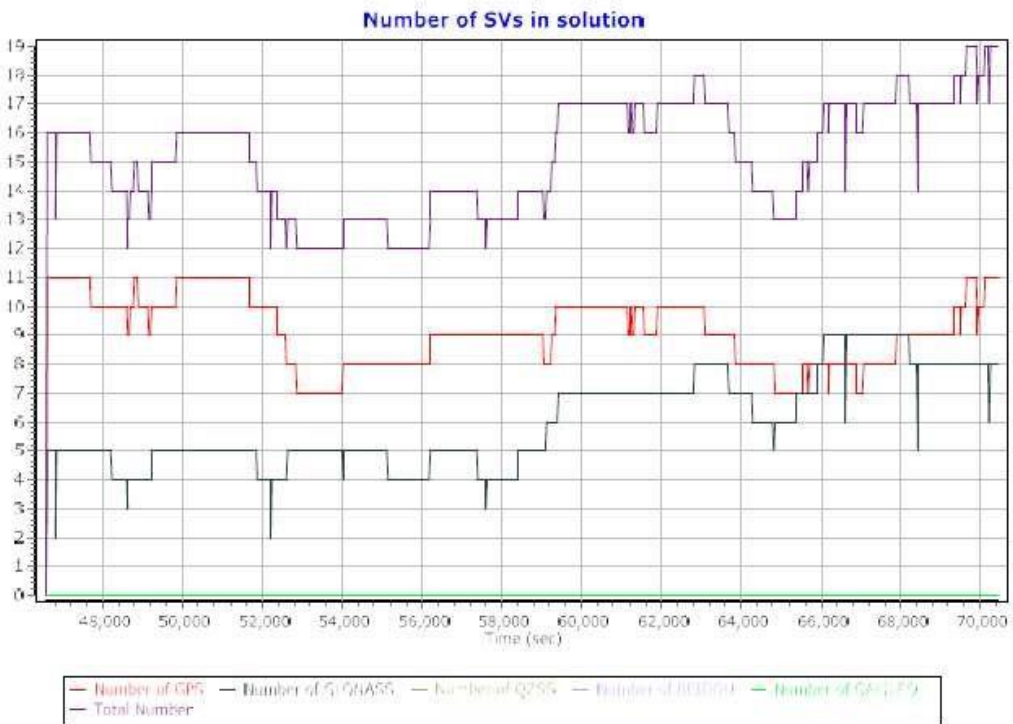
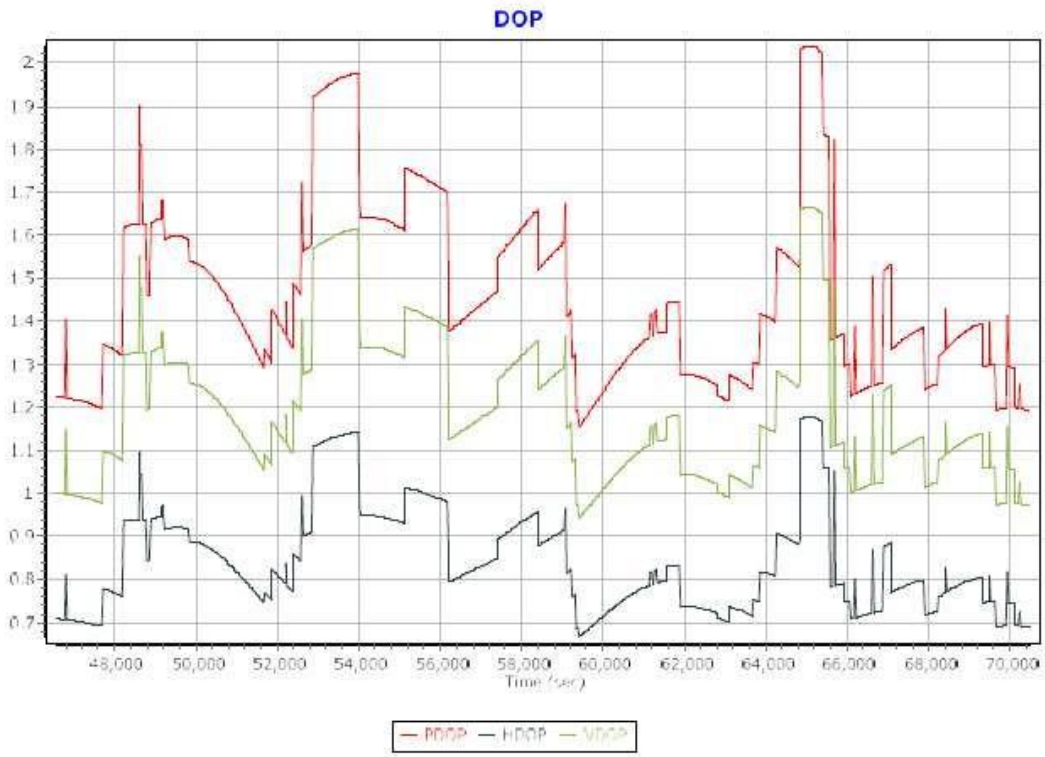
```


Top View: Latitude (deg)



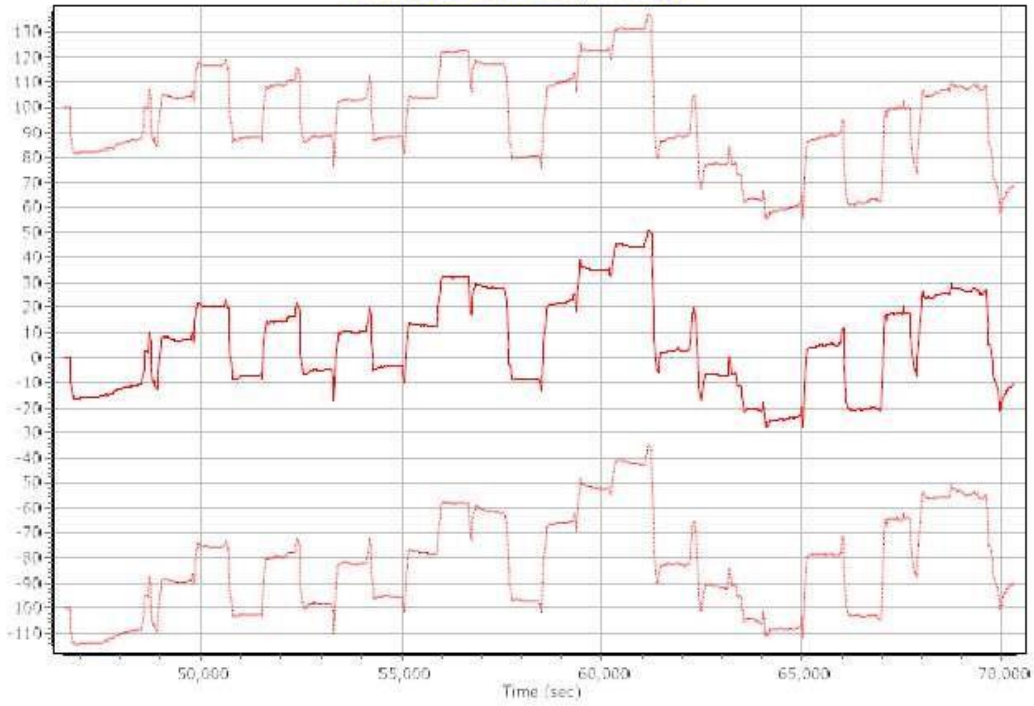
Forward/Reverse Separation



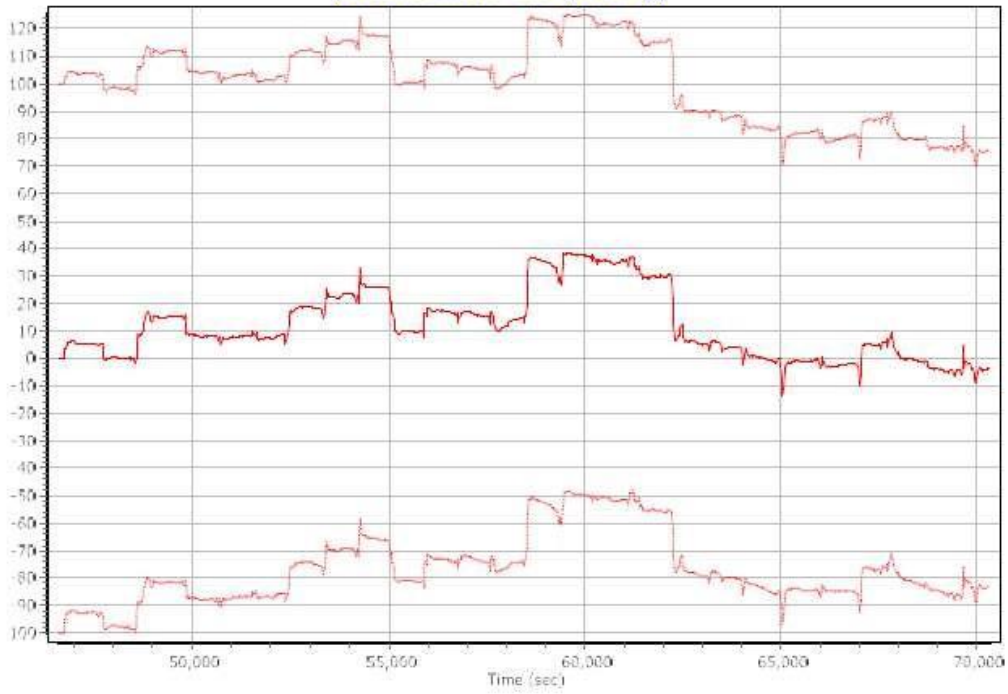


6219083a Sensor Errors

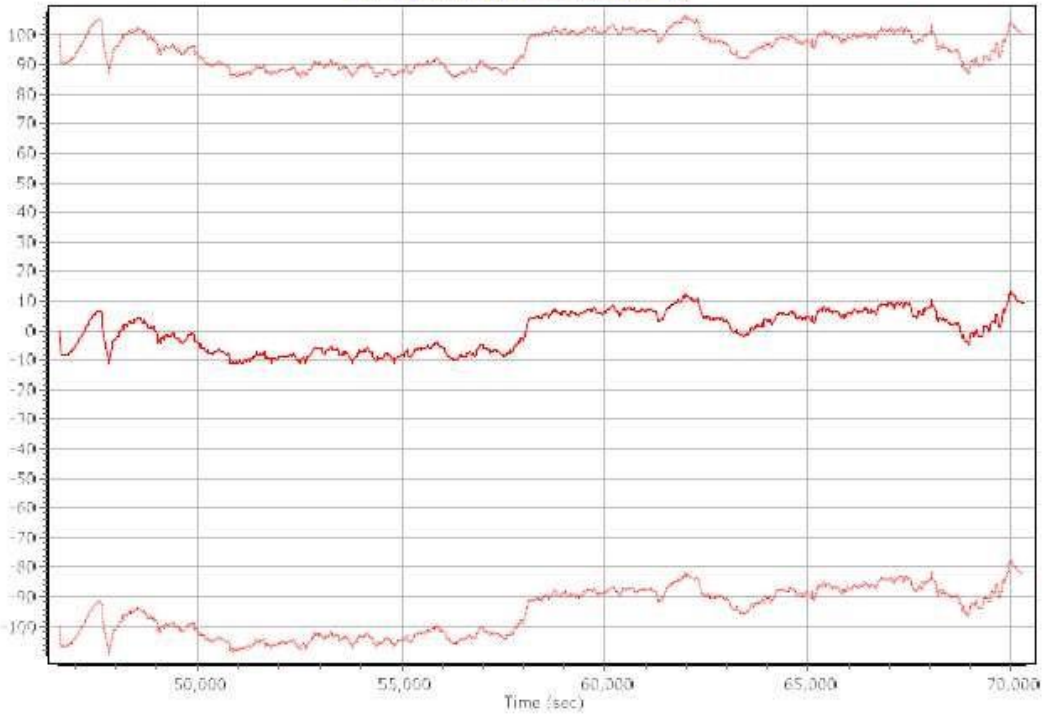
x accelerometer bias (micro-g)



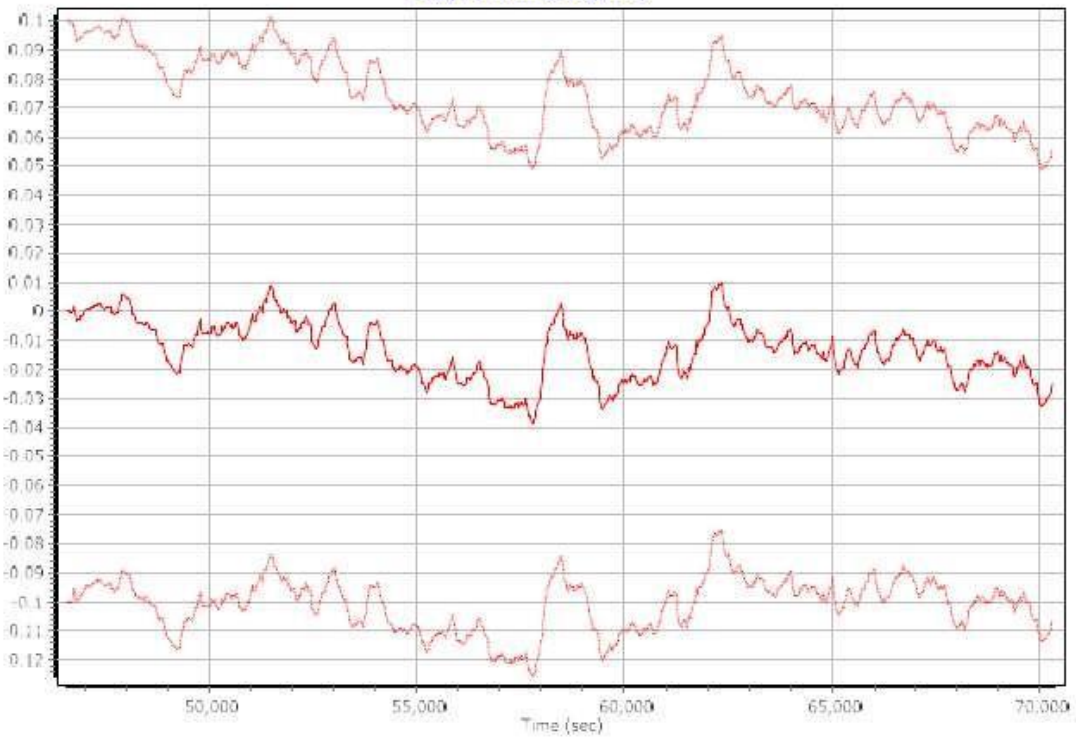
y accelerometer bias (micro-g)

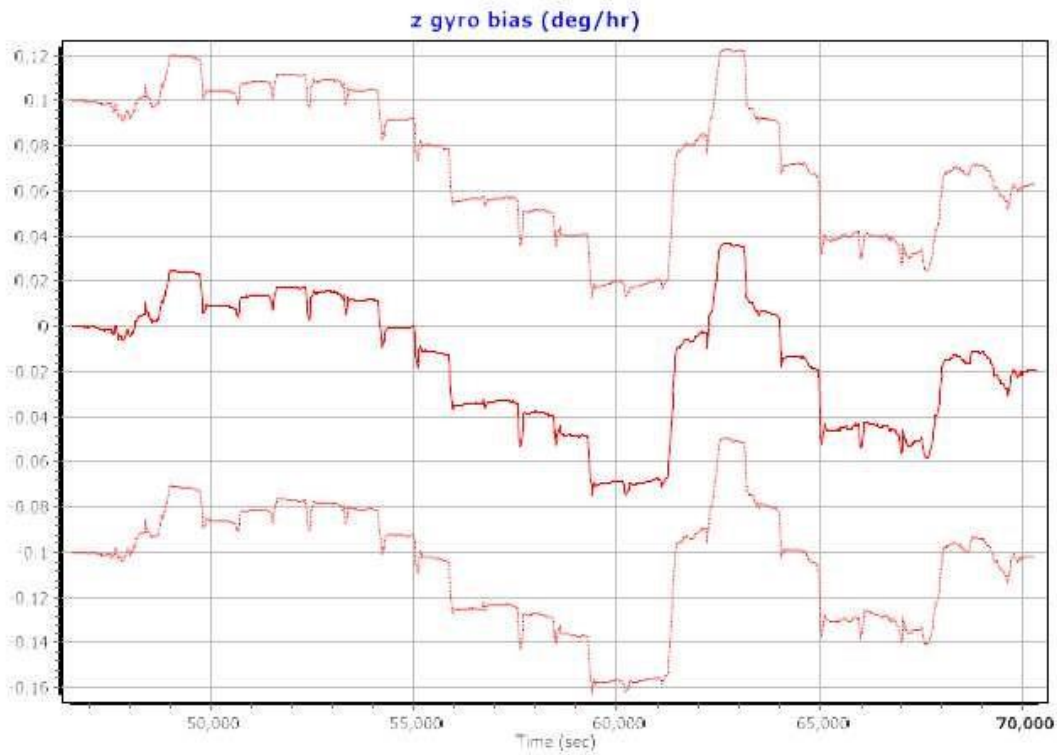
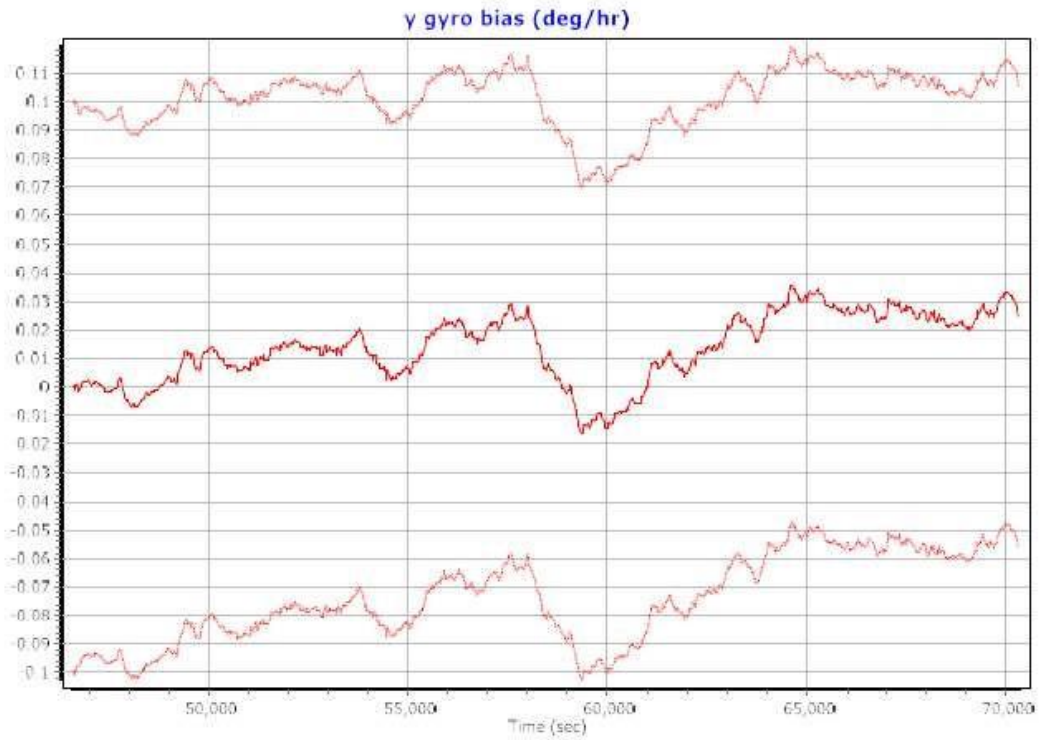


z accelerometer bias (micro-g)



x gyro bias (deg/hr)





6219083a Processing Summary


```

1 -----
2 IINPP Forward-Backward Navigator (Dec 17 2018)
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 03/28/19 Time : 17:30:26
5 -----
6 IINPP is using imported GNSS channel assignments
7 -----
8 Extracted data path :
9 D:\Projects\3165_Dewberry_Ocala\LIDAR\6219083a\05_INS-GPS_PROC\01_POS\6219083a\6219083a\Ex
10 tract
11 Extracted data kernel : 6219083a
12 Processed data path :
13 D:\Projects\3165_Dewberry_Ocala\LIDAR\6219083a\05_INS-GPS_PROC\01_POS\6219083a\6219083a\Proc
14
15 Processed data kernel : 6219083a
16 Processing start time : 46599.000
17 Processing end time : 70311.000
18 -----
19 Selected GNSS mode : IN-Fusion SmartBase
20 Selected base station : ASB
21 Selected subsystems : SNV
22 : Primary GNSS
23 : Base GNSS
24 : Gimbal Encoder
25 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
26 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
27 Multipath setting : LOW
28 Stabilized mount to primary GNSS lever arm : 0.054 -0.172 -1.272
29 Base GNSS coordinates : 29.300067656 -82.689300583 1139.131
30 Dynamic lever arm : ACTIVE
31 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
32 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
33 -----
34 Mask angle : 10.000
35 -----
36 70311.000 : New or modified IIN install data
37 Reference-IMU lever arm: 0.00 0.00 0.00
38 Reference-primary GNSS lever arm: 0.05 -0.17 -1.27
39 Multipath environment: LOW
40 70311.000 : Reverse-time processing started
41 70310.000 : SmartBase observables in use
42 70310.000 : IIN primary GNSS solution in use.
43 70310.000 : IIN primary GNSS observables in use.
44 70310.000 : IIN in Fixed NL RTK mode.
45 70143.000 : WARNING : Gap in primary GNSS navigation data
46 70142.000 : IIN primary GNSS solution not in use.
47 70140.999 : IIN primary GNSS solution in use.
48 68670.000 : WARNING : Gap in primary GNSS navigation data
49 68668.999 : IIN primary GNSS solution not in use.
50 68667.999 : IIN primary GNSS solution in use.
51 63818.998 : IIN WL ambiguity failure cleared
52 63818.998 : IIN NL ambiguity failure cleared
53 61166.000 : WARNING : Gap in primary GNSS navigation data
54 61164.999 : IIN primary GNSS solution not in use.
55 61163.998 : IIN primary GNSS solution in use.
56 47623.000 : WARNING : Gap in primary GNSS navigation data
57 47621.999 : IIN primary GNSS solution not in use.
58 47620.999 : IIN primary GNSS solution in use.
59 47619.999 : IIN WL ambiguity failure cleared
60 46598.998 : Processing ended
61 -----
62 Termination status : Normal
63 Execution time : 80.95
64 -----
65 Processing completed.
66 -----

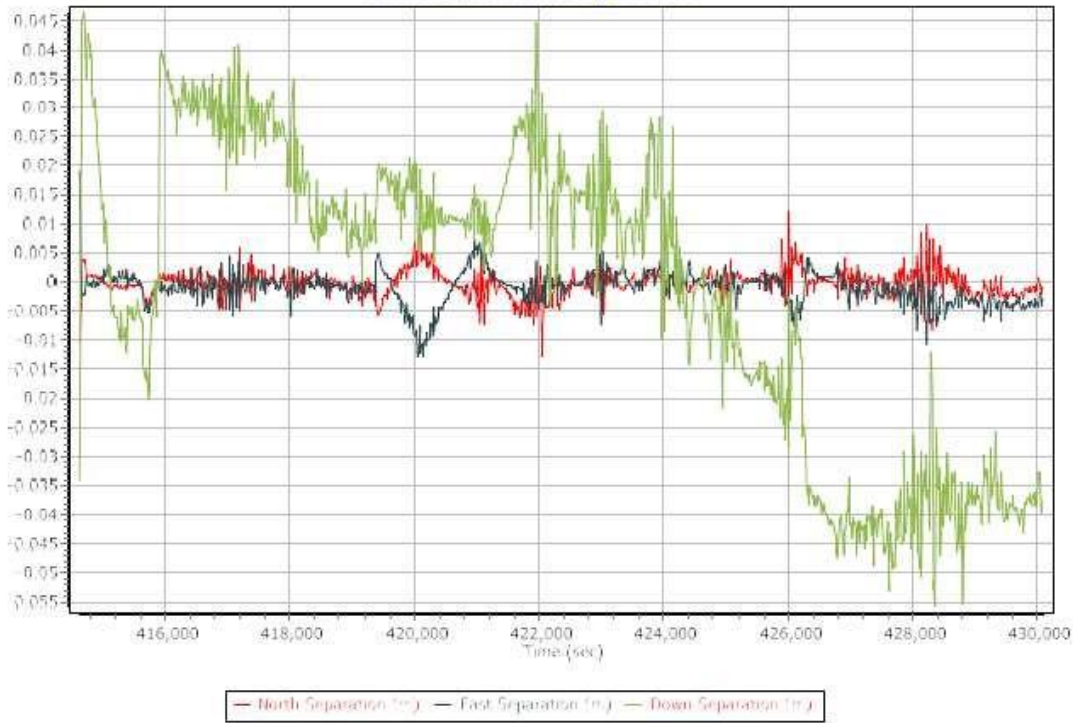
```

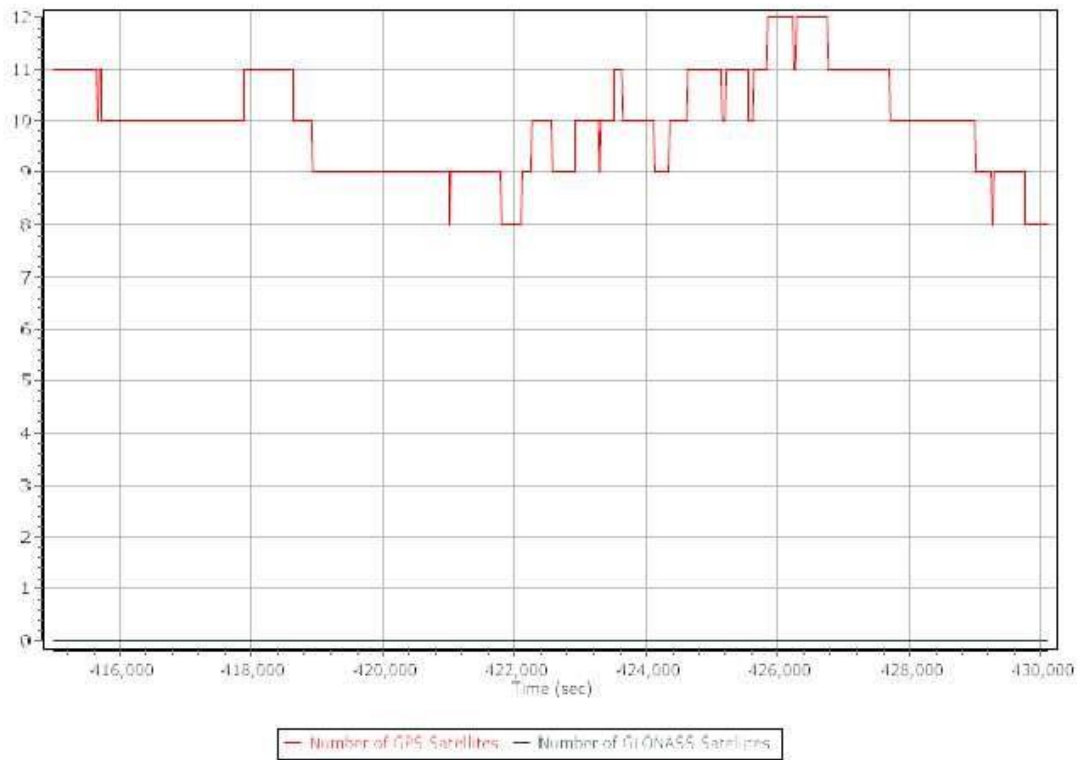
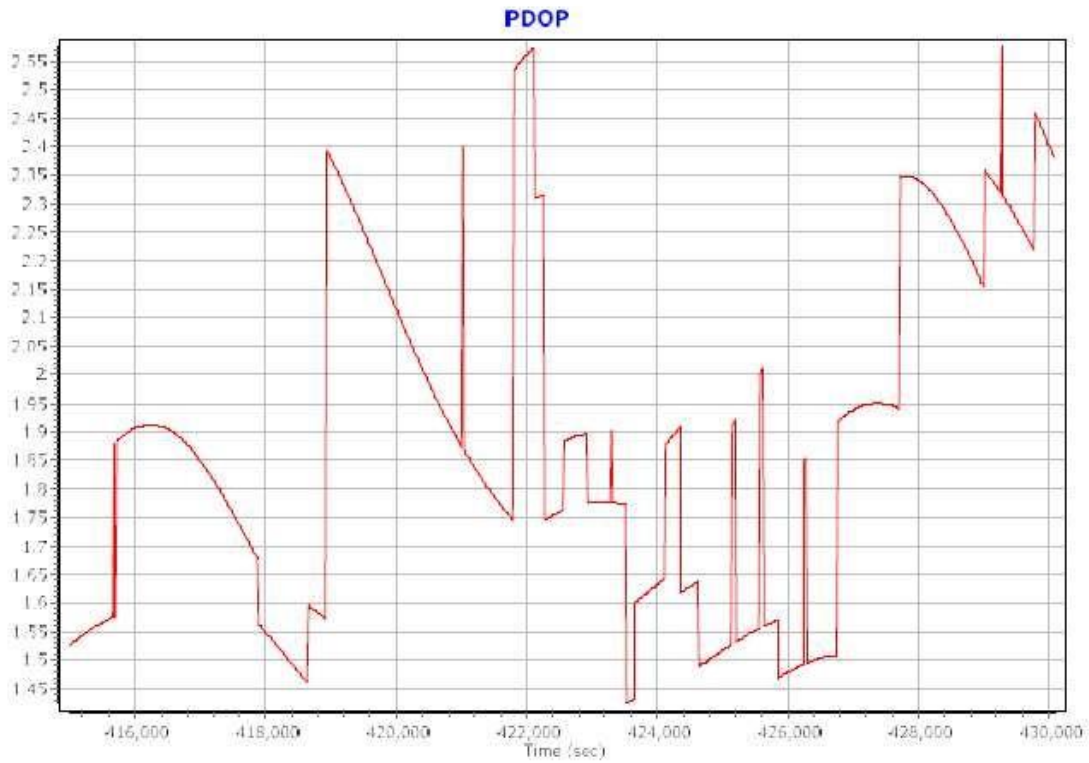
6219087a GNSS Processing

Top View: Latitude (deg)



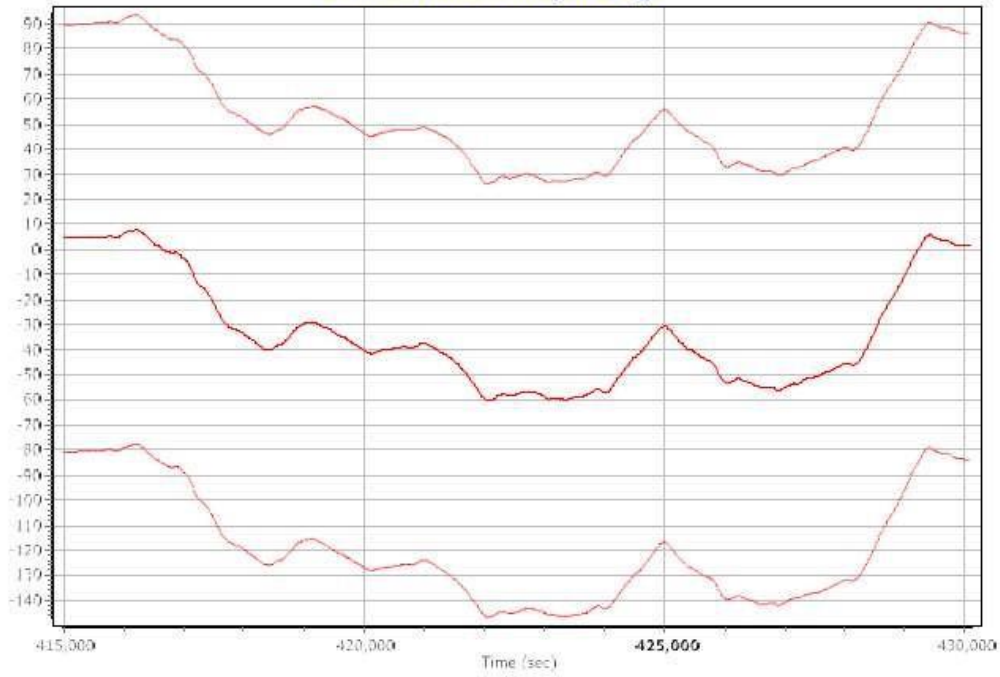
Forward/Reverse Separation



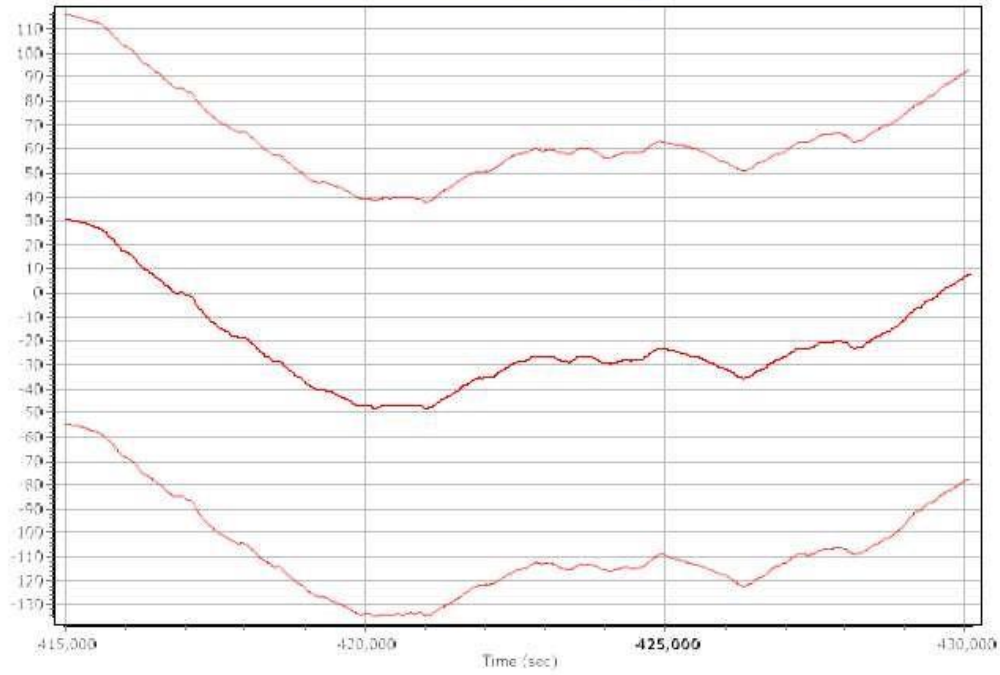


6219087a Sensor Errors

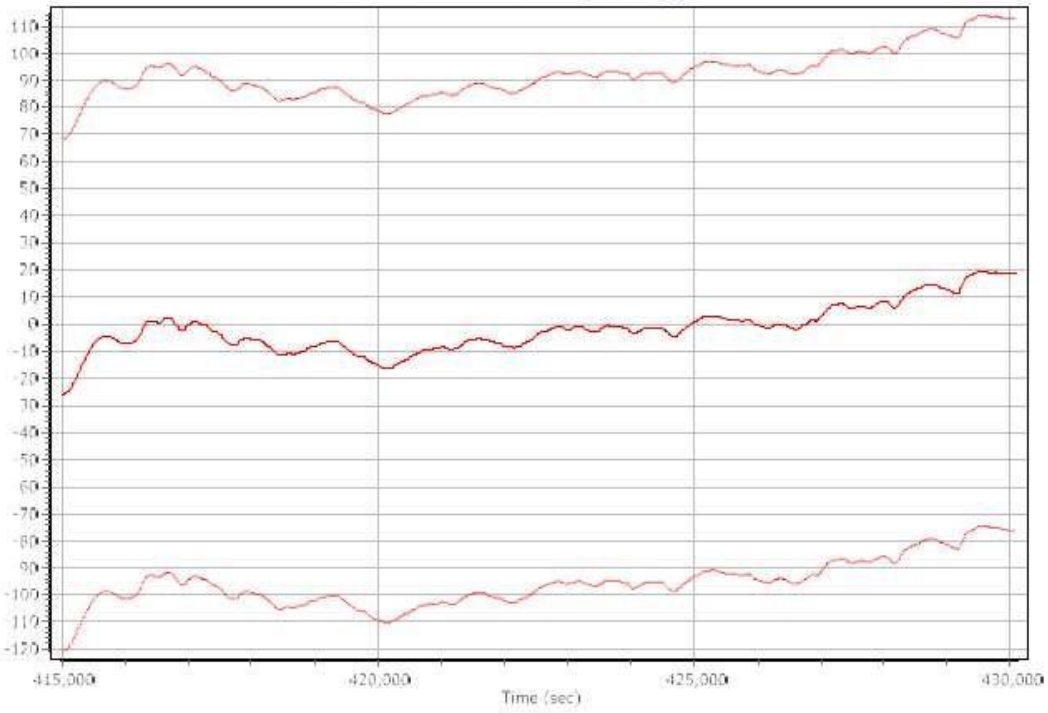
x accelerometer bias (micro-g)



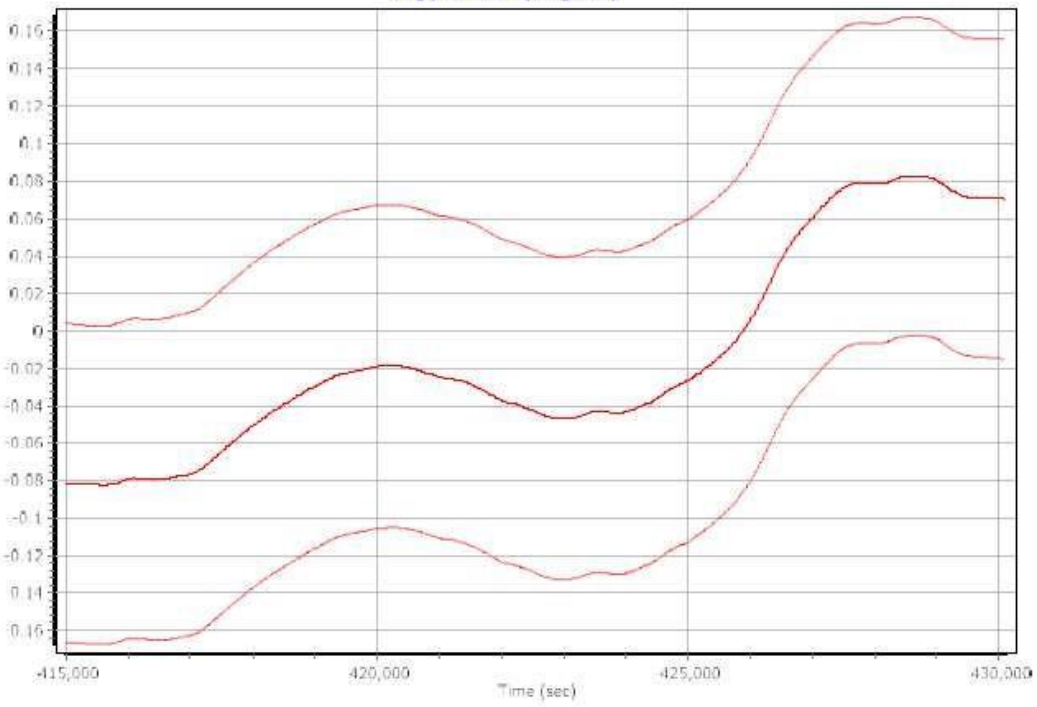
y accelerometer bias (micro-g)

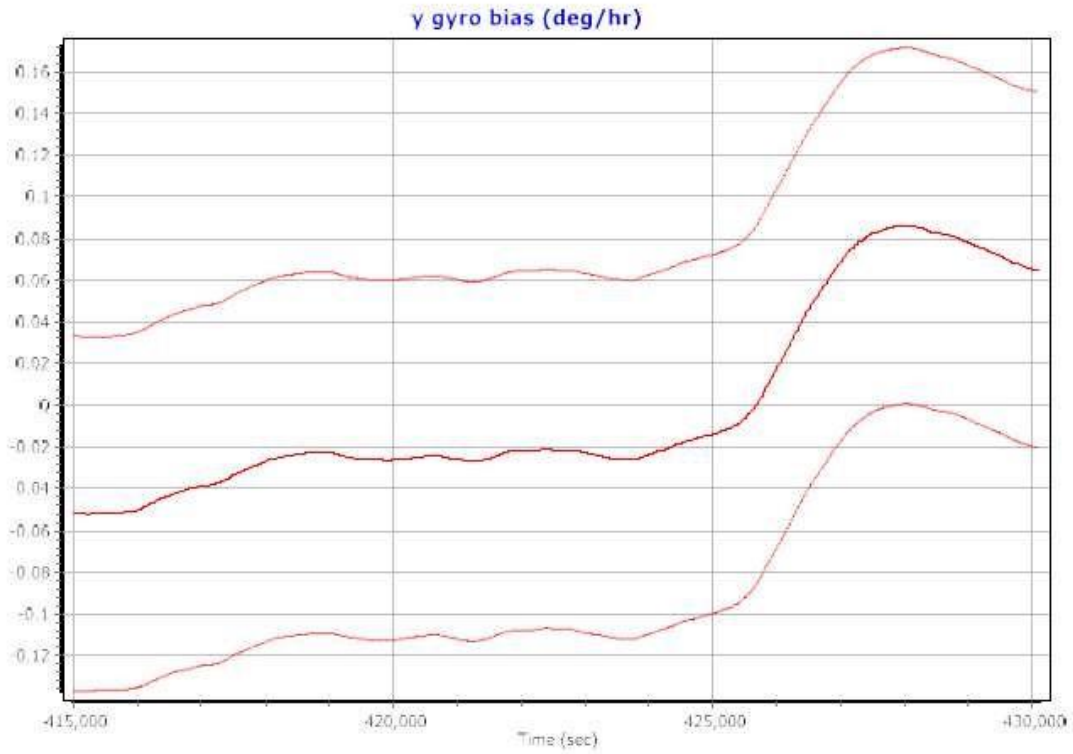


z accelerometer bias (micro-g)



x gyro bias (deg/hr)





6219087a Processing Summary

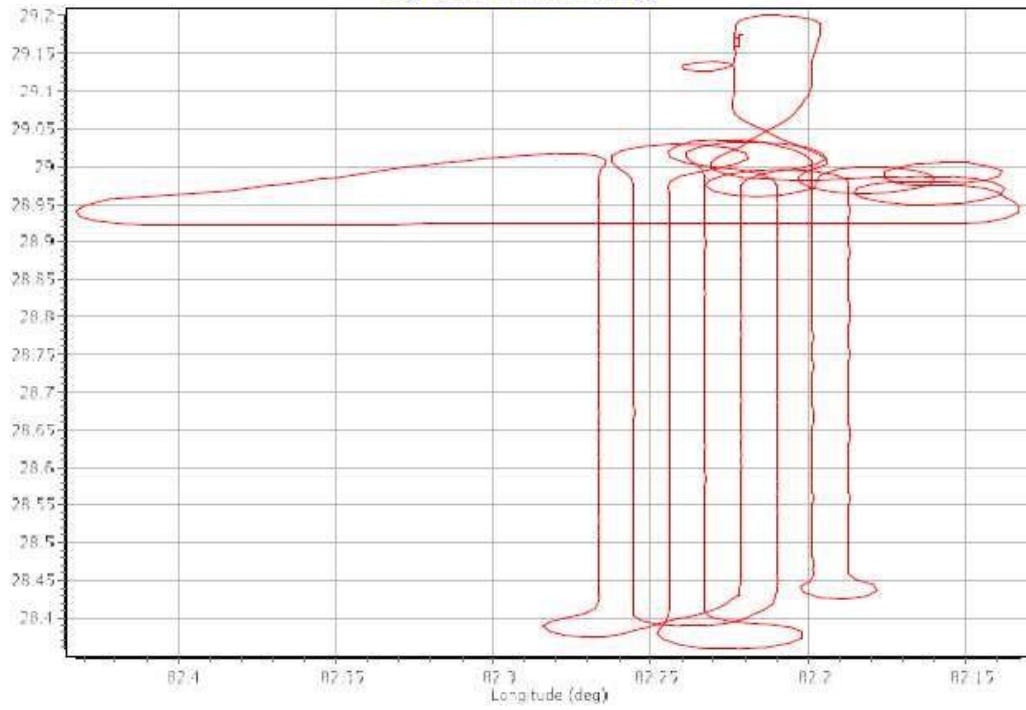

```

1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/02/19 Time : 15:06:31
5 -----
6 IINPP is using imported GNSS channel assignments
7 -----
8 Extracted data path :
9 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219087a\05_INS-GPS_PROC\01_POS\6219087a\6219087a\Ex
10 tract
11 Extracted data kernel : 6219087a
12 Processed data path :
13 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219087a\05_INS-GPS_PROC\01_POS\6219087a\6219087a\Proc
14 roc
15 Processed data kernel : 6219087a
16 Processing start time : 415005.000
17 Processing end time : 430078.000
18 -----
19 Selected GNSS mode : IN-Fusion SmartBase
20 Selected base station : ASB
21 Selected subsystems : SNV
22 : Primary GNSS
23 : Base GNSS
24 : Gimbal Encoder
25 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
26 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
27 Multipath setting : LOW
28 Stabilized mount to primary GNSS lever arm : 0.059 -0.194 -1.291
29 Base GNSS coordinates : 29.169661034 -82.326082372 1100.655
30 Dynamic lever arm : ACTIVE
31 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
32 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
33 -----
34 Mask angle : 10.000
35 -----
36 430077.997 : New or modified IIN install data
37 Reference-IMU lever arm: 0.00 0.00 0.00
38 Reference-primary GNSS lever arm: 0.06 -0.19 -1.29
39 Multipath environment: LOW
40 430077.997 : Reverse-time processing started
41 430076.997 : SmartBase observables in use
42 430076.997 : IIN primary GNSS solution in use.
43 430076.997 : IIN primary GNSS observables in use.
44 430076.997 : IIN in Fixed NL RTK mode.
45 429468.000 : WARNING : Gap in primary GNSS navigation data
46 429466.997 : IIN primary GNSS solution not in use.
47 429465.997 : IIN primary GNSS solution in use.
48 428282.000 : WARNING : Gap in primary GNSS navigation data
49 428280.996 : IIN primary GNSS solution not in use.
50 428279.996 : IIN primary GNSS solution in use.
51 428218.000 : WARNING : Gap in primary GNSS navigation data
52 428216.996 : IIN primary GNSS solution not in use.
53 428215.996 : IIN primary GNSS solution in use.
54 427768.000 : WARNING : Gap in primary GNSS navigation data
55 427766.999 : IIN primary GNSS solution not in use.
56 427765.999 : IIN primary GNSS solution in use.
57 427346.000 : WARNING : Gap in primary GNSS navigation data
58 427344.999 : IIN primary GNSS solution not in use.
59 427343.999 : IIN primary GNSS solution in use.
60 427054.000 : WARNING : Gap in primary GNSS navigation data
61 427052.998 : IIN primary GNSS solution not in use.
62 427052.000 : IIN primary GNSS solution in use.
63 425014.000 : WARNING : Gap in primary GNSS navigation data
64 425012.996 : IIN primary GNSS solution not in use.
65 425011.996 : IIN primary GNSS solution in use.
66 424958.000 : WARNING : Gap in primary GNSS navigation data
67 424956.998 : IIN primary GNSS solution not in use.

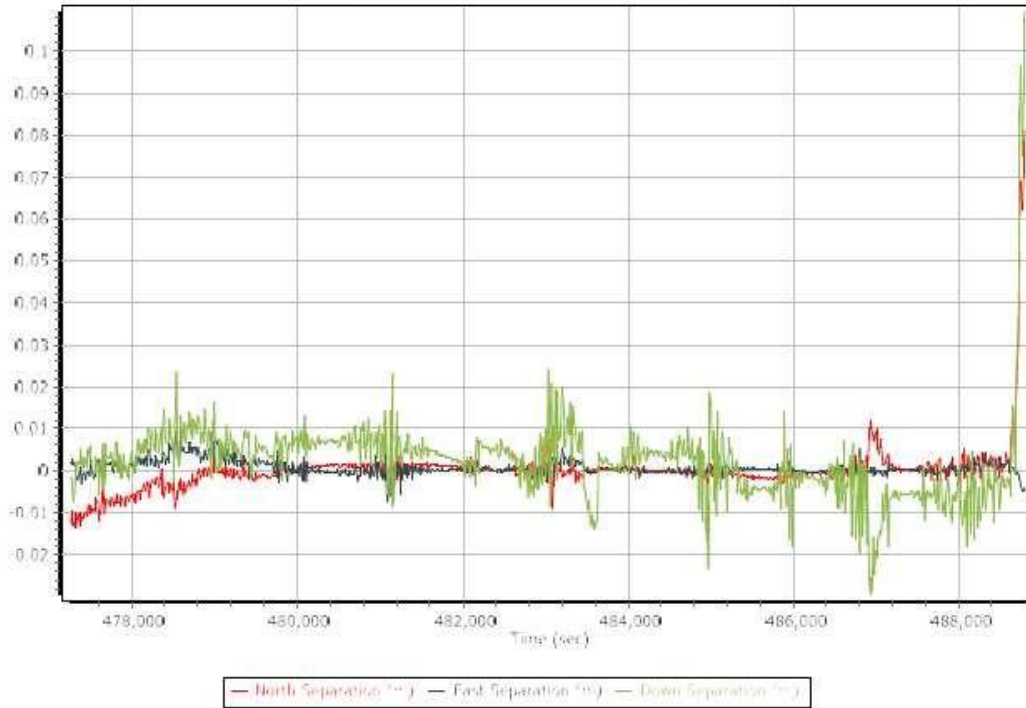
```

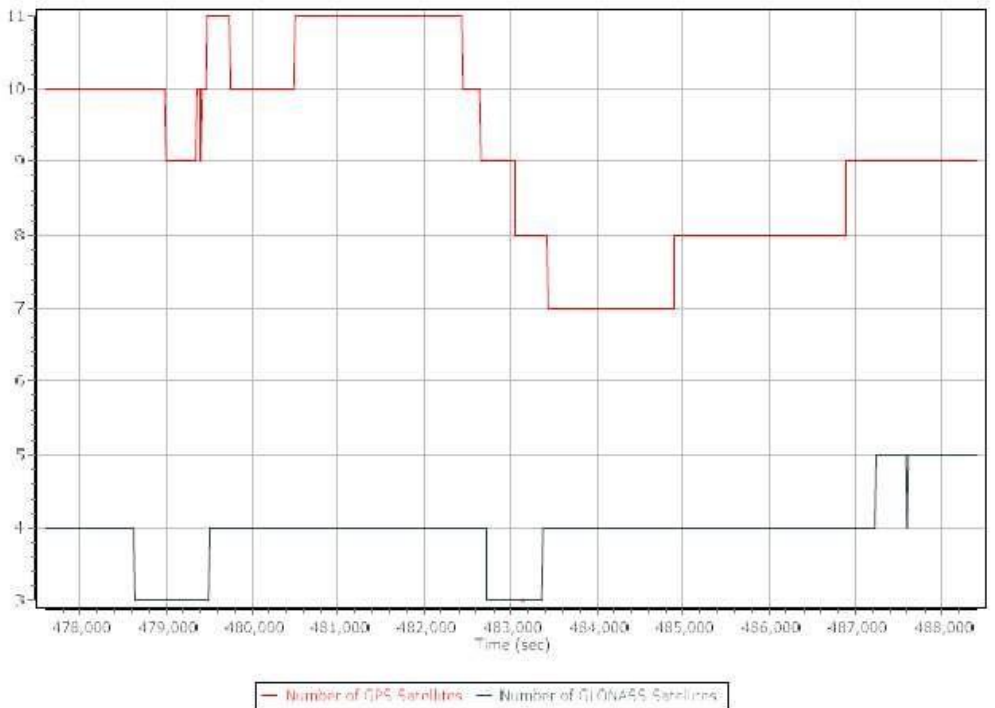
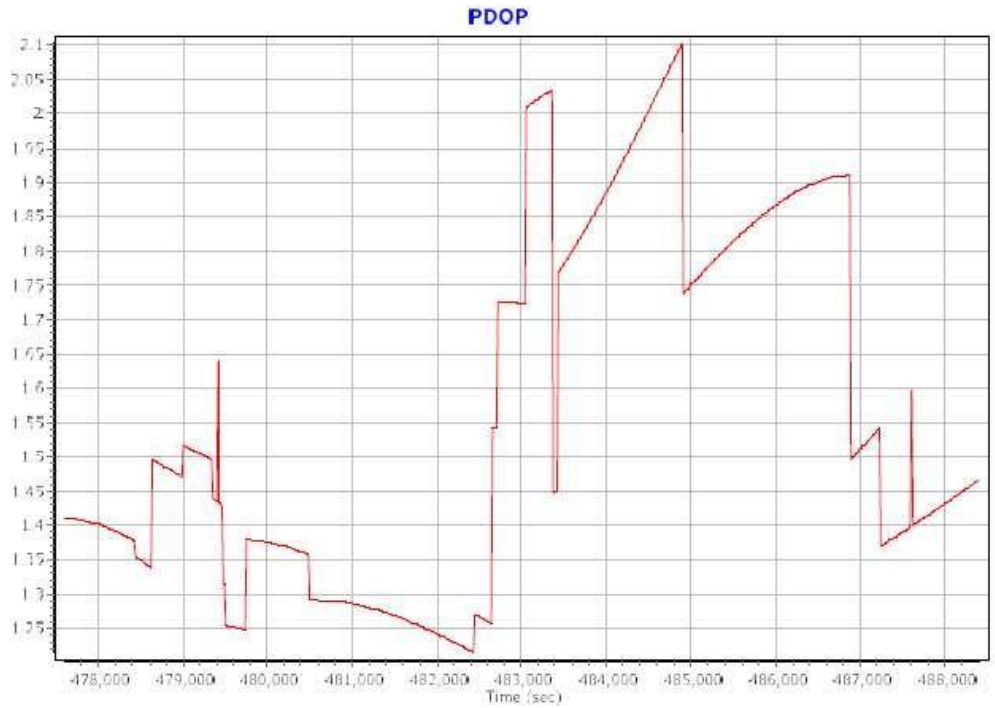
6219088a GNSS Processing

Top View: Latitude (deg)



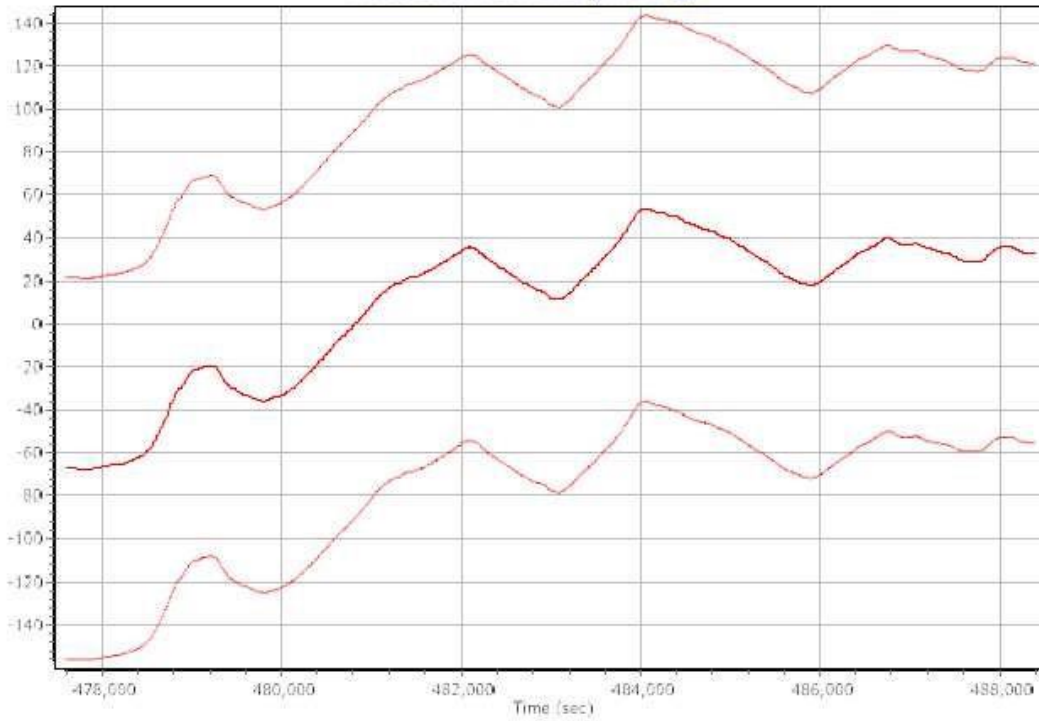
Forward/Reverse Separation



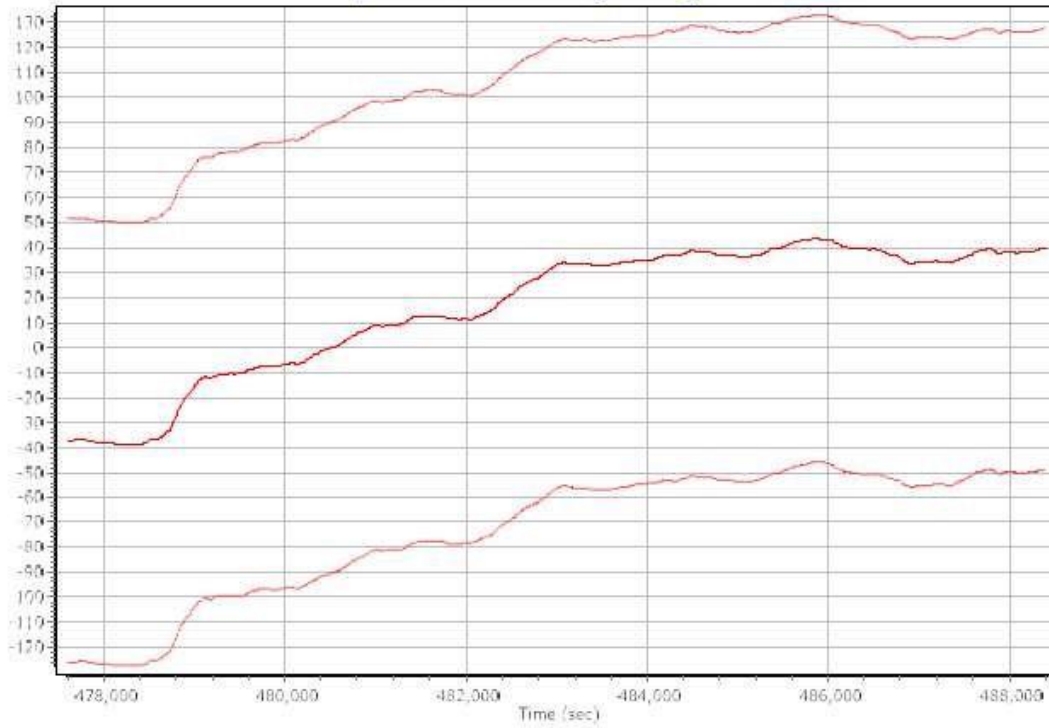


6219088a Sensor Errors

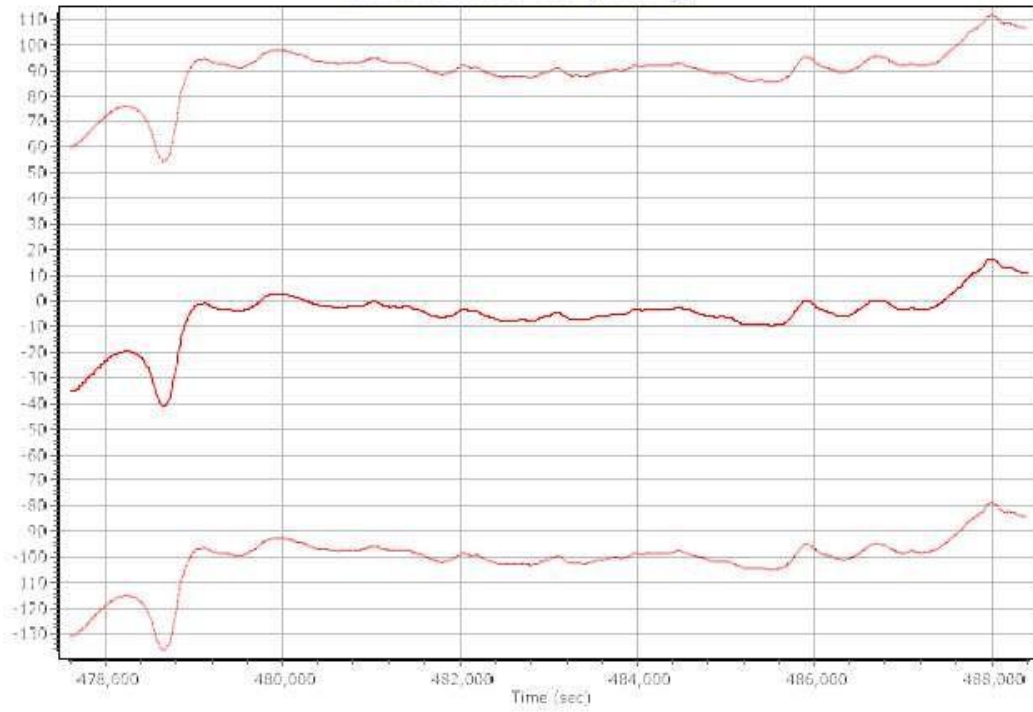
x accelerometer bias (micro-g)



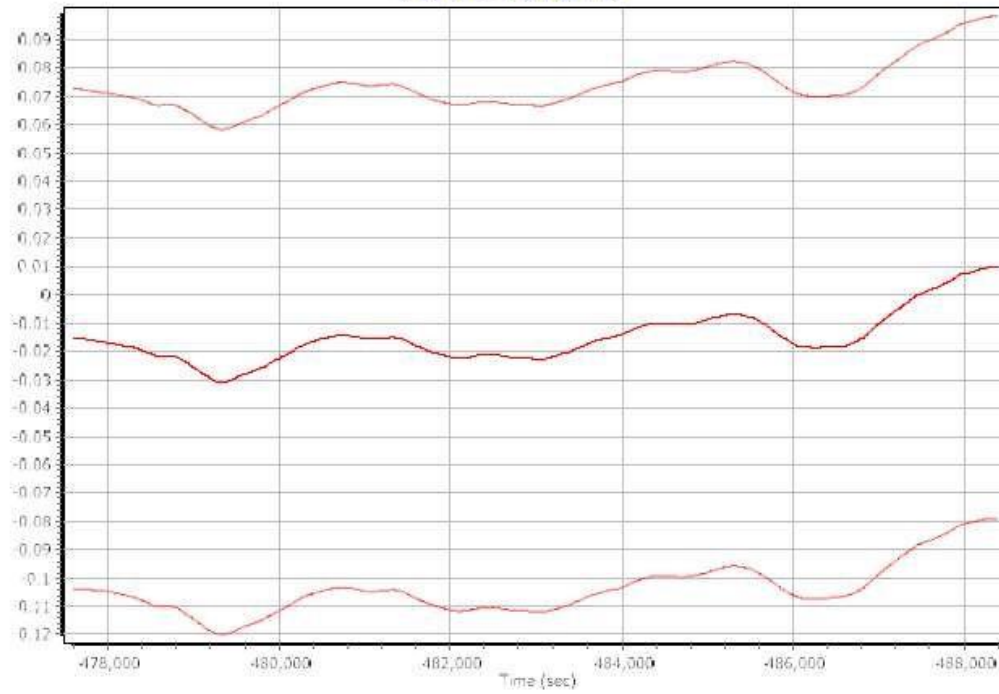
y accelerometer bias (micro-g)

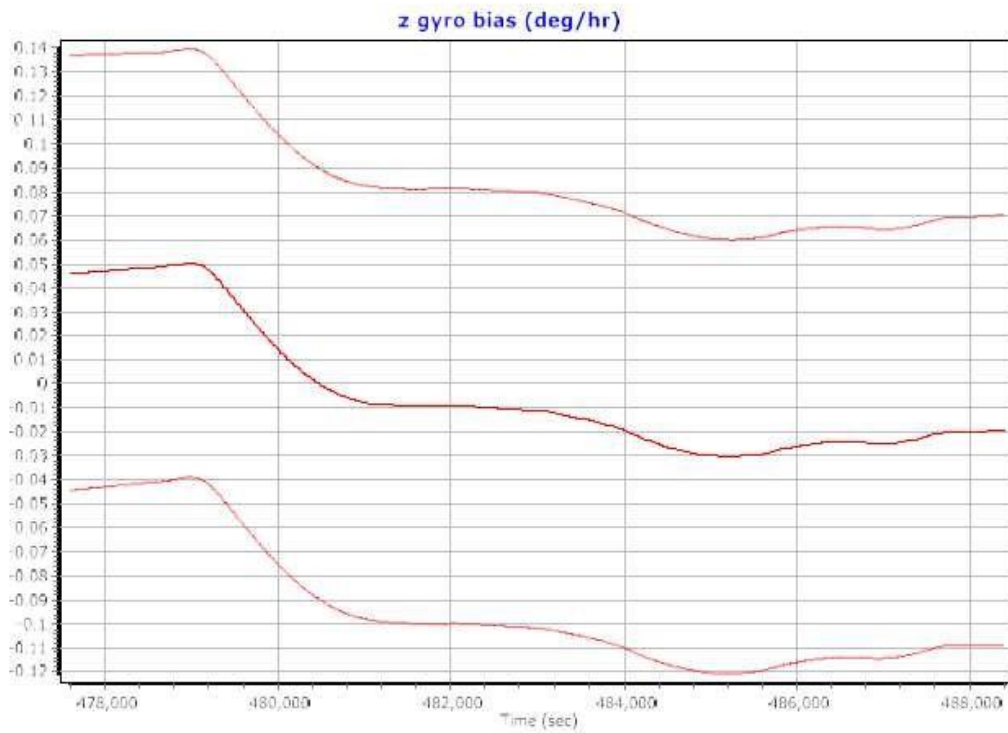
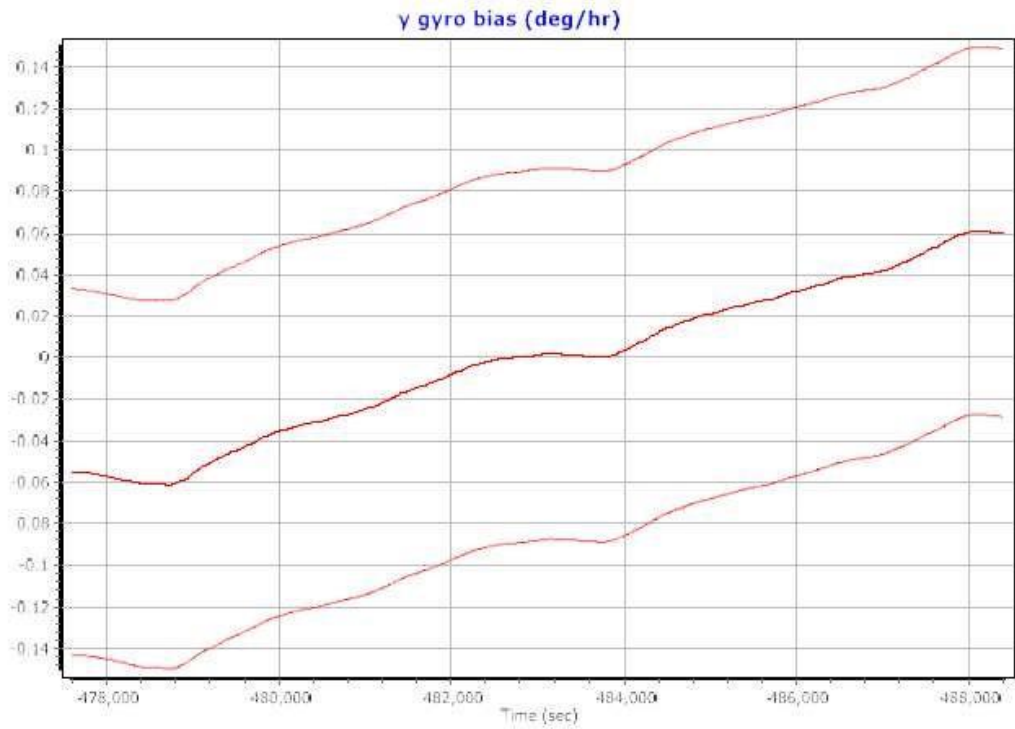


z accelerometer bias (micro-g)



x gyro bias (deg/hr)





6219088a Processing Summary

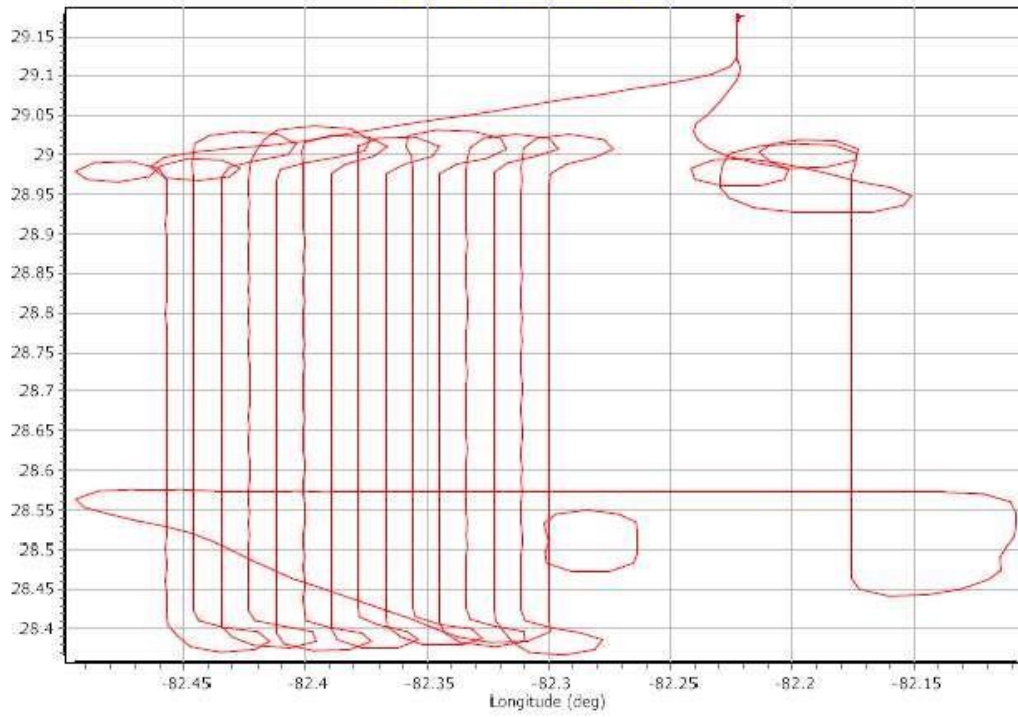
```

1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/03/19 Time : 11:14:59
5 -----
6
7 Extracted data path :
8 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219088a\05_INS-GPS_PROC\01_POS\6219088a\6219088a\Ex
9 tract
10 Extracted data kernel : 6219088a
11 Processed data path :
12 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219088a\05_INS-GPS_PROC\01_POS\6219088a\6219088a\P
13 roc
14 Processed data kernel : 6219088a
15 Processing start time : 477604.576
16 Processing end time : 488401.000
17 -----
18
19 Selected GNSS mode : IN-Fusion SmartBase
20 Selected base station : ASB
21 Selected subsystems : IMU
22 : Primary GNSS
23 : Base GNSS
24 : Gimbal Encoder
25
26 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
27 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
28 Multipath setting : LOW
29 Stabilized mount to primary GNSS lever arm : 0.069 -0.192 -1.284
30 Base GNSS coordinates : 28.836614169 -82.228197699 1022.224
31 Dynamic lever arm : ACTIVE
32 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
33 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
34 -----
35
36 Mask angle : 10.000
37 -----
38
39 477604.576 : New or modified IIN install data
40 Reference-IMU lever arm: 0.00 0.00 0.00
41 Reference-primary GNSS lever arm: 0.07 -0.19 -1.28
42 Multipath environment: LOW
43 477604.576 : Forward-time processing started
44 477604.672 : IIN coarse leveling started.
45 477605.672 : IIN coarse leveling ended.
46 477605.672 : IIN navigator initialized.
47 477605.672 : IIN degraded navigation solution.
48 477605.672 : IIN initial position valid.
49 477606.002 : SmartBase observables in use
50 477606.002 : IIN primary GNSS solution in use.
51 477606.002 : IIN primary GNSS observables in use.
52 477606.002 : IIN in Fixed NL RTK mode.
53 477606.102 : IIN navigator alignment active.
54 478433.000 : WARNING : Gap in primary GNSS navigation data
55 478434.004 : IIN primary GNSS solution not in use.
56 478435.004 : IIN primary GNSS solution in use.
57 478436.004 : IIN WL ambiguity failure cleared
58 488401.004 : Processing ended
59 -----
60
61 Termination status : Normal
62 Execution time : 24.96
63 -----
64
65 Processing completed.
66
67

```

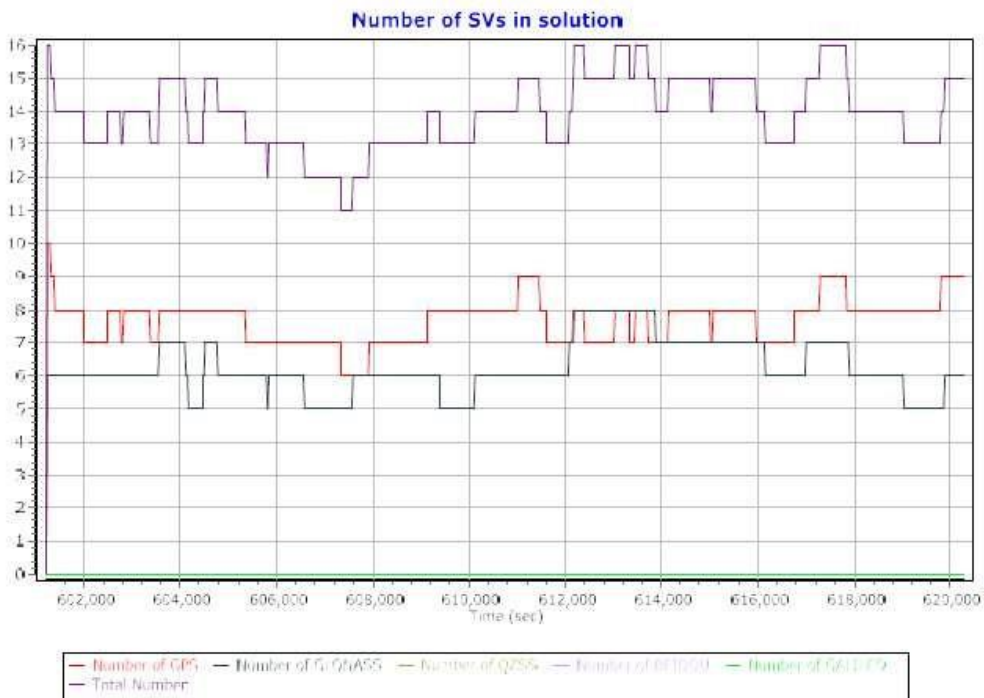
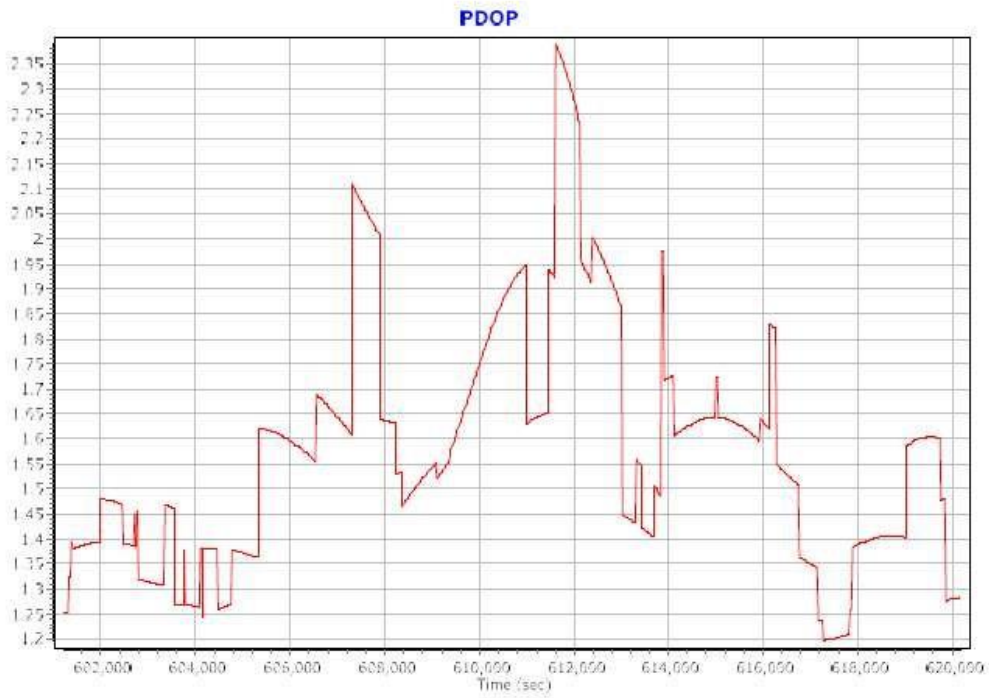
6219089a GNSS Processing

Top View: Latitude (deg)



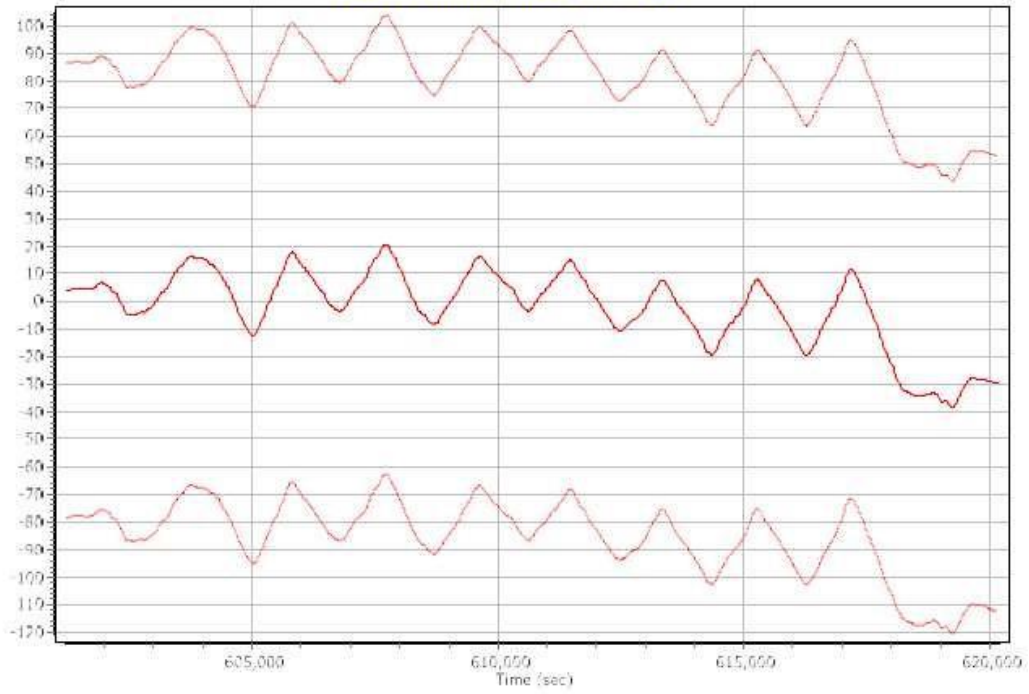
Forward/Reverse Separation



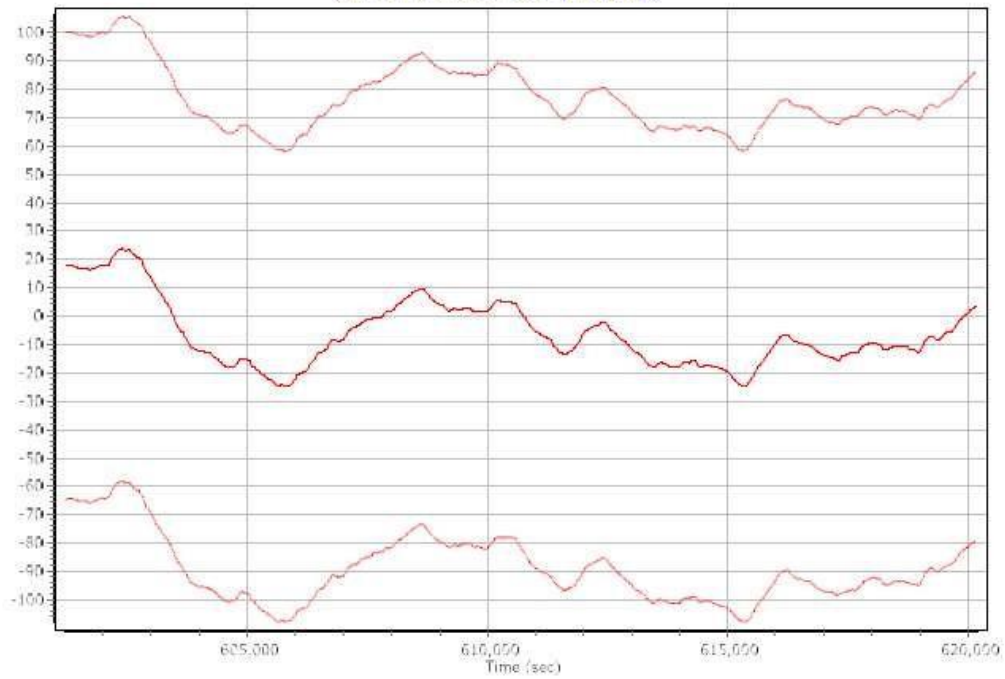


6219089a Sensor Errors

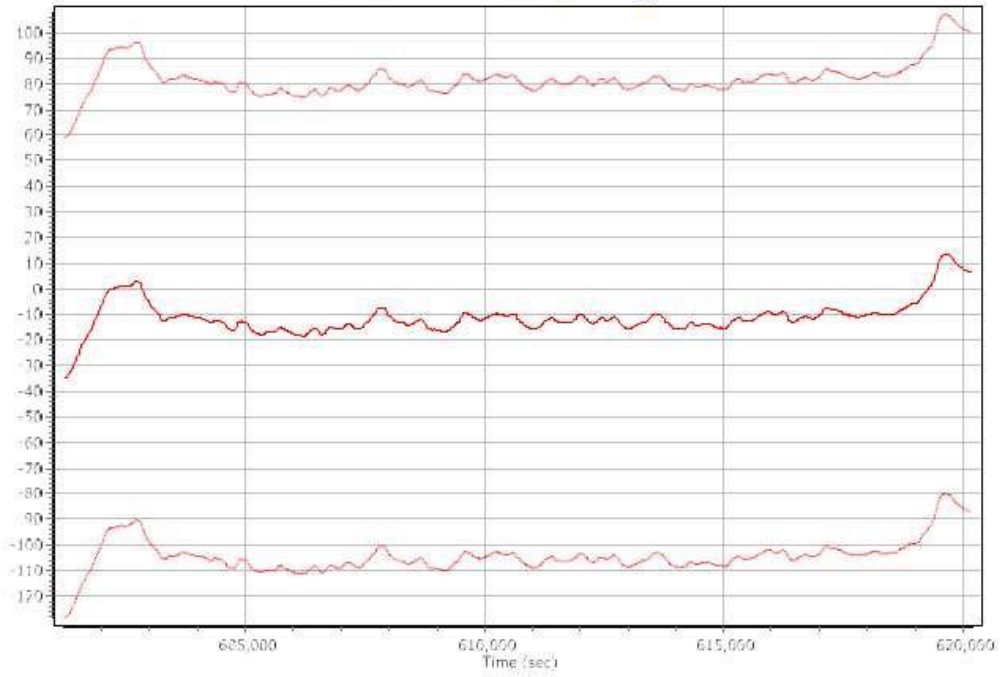
x accelerometer bias (micro-g)



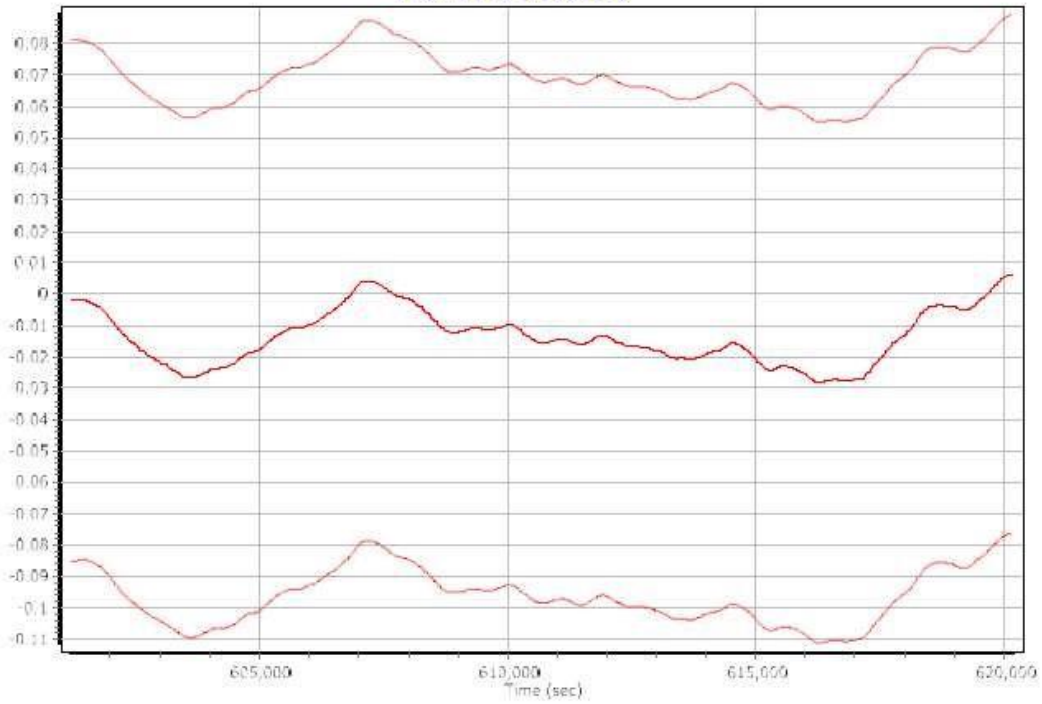
y accelerometer bias (micro-g)

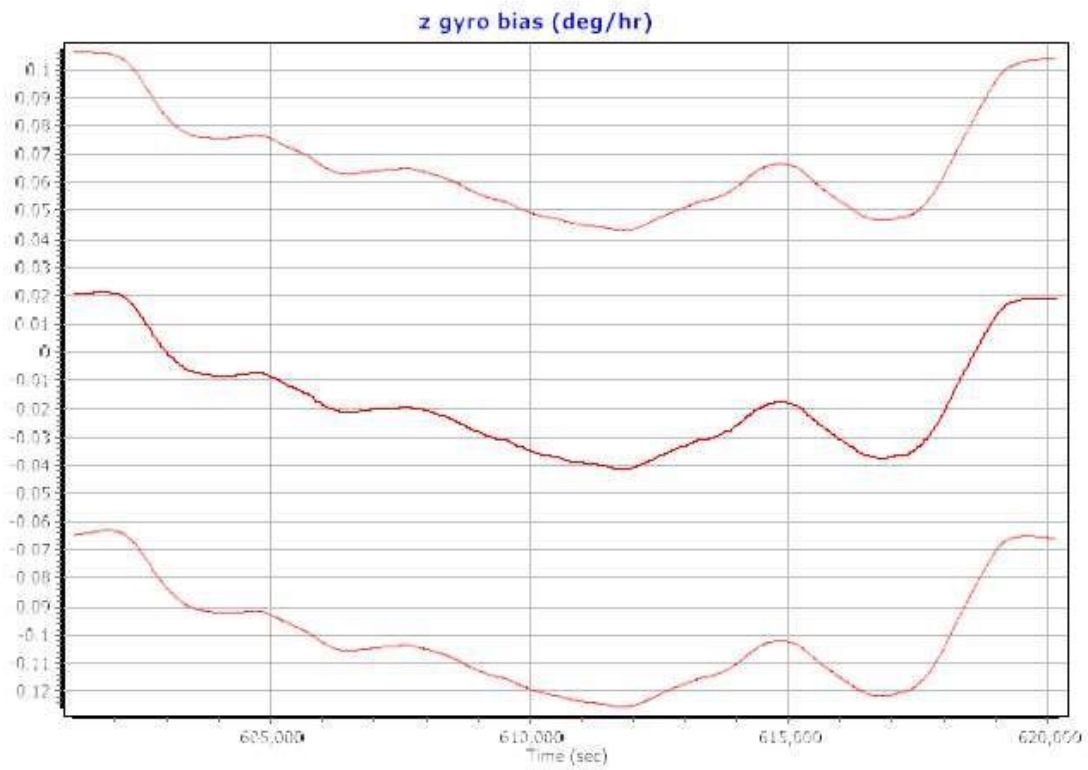
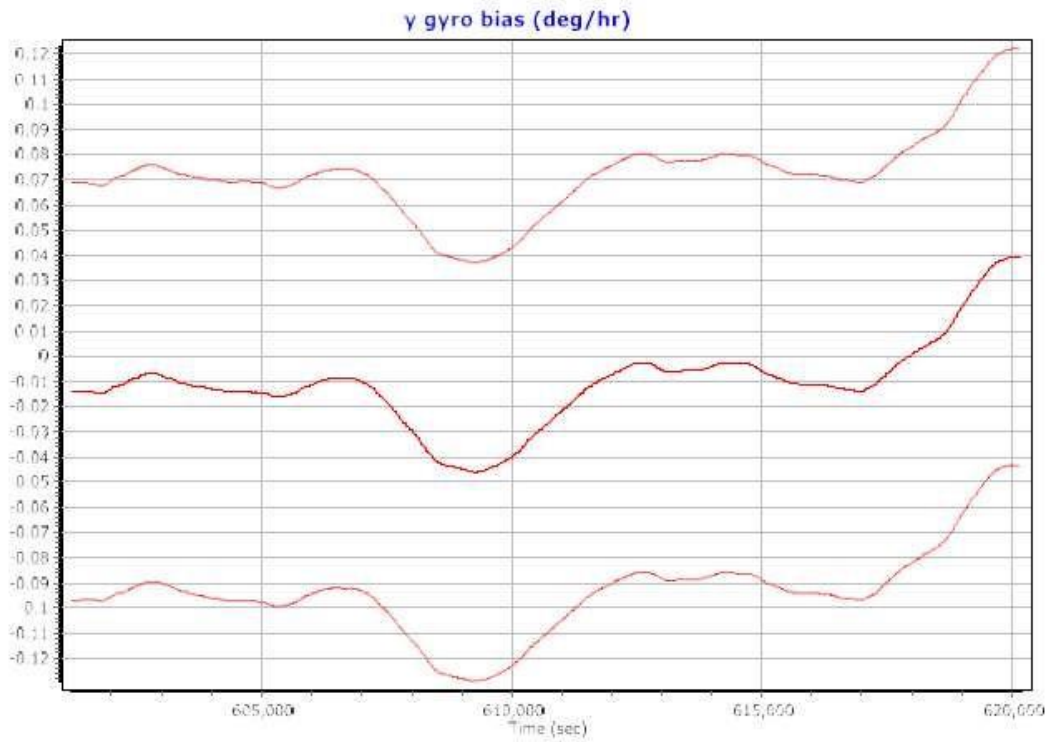


z accelerometer bias (micro-g)



x gyro bias (deg/hr)





6219089a Processing Summary

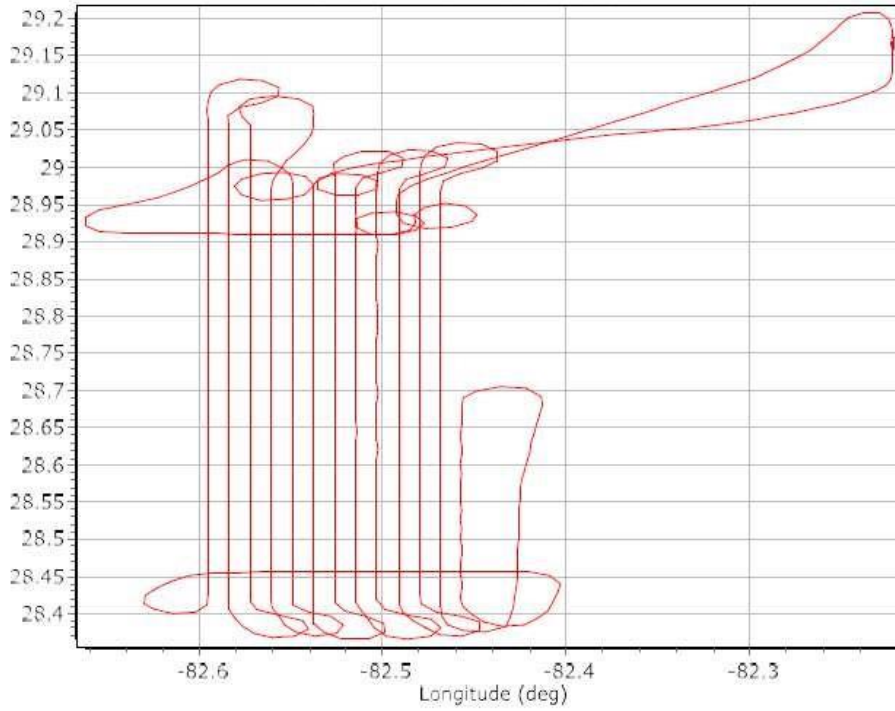
```

1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/04/19 Time : 15:22:29
5 -----
6
7 Extracted data path :
8 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219089A\05_INS-GPS_PROC\01_POS\6219089a\6219089a\Ex
9 tract
10 Extracted data kernel : 6219089a
11 Processed data path :
12 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219089A\05_INS-GPS_PROC\01_POS\6219089a\6219089a\Pr
13 ocessed
14 Processed data kernel : 6219089a
15 Processing start time : 601216.242
16 Processing end time : 620175.000
17 -----
18
19 Selected GNSS mode : IN-Fusion SmartBase
20 Selected base station : ASB
21 Selected subsystems : IMU
22 : Primary GNSS
23 : Base GNSS
24 : Gimbal Encoder
25 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
26 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
27 Multipath setting : LOW
28 Stabilized mount to primary GNSS lever arm : 0.059 -0.192 -1.286
29 Base GNSS coordinates : 28.745207809 -82.344609778 1159.458
30 Dynamic lever arm : ACTIVE
31 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
32 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
33 -----
34
35 Mask angle : 10.000
36 -----
37
38 601216.242 : New or modified IIN install data
39 Reference-IMU lever arm: 0.00 0.00 0.00
40 Reference-primary GNSS lever arm: 0.06 -0.19 -1.29
41 Multipath environment: LOW
42 601216.242 : Forward-time processing started
43 601216.337 : IIN coarse leveling started.
44 601217.338 : IIN coarse leveling ended.
45 601217.338 : IIN navigator initialized.
46 601217.338 : IIN degraded navigation solution.
47 601217.338 : IIN initial position valid.
48 601218.003 : SmartBase observables in use
49 601218.003 : IIN primary GNSS solution in use.
50 601218.003 : IIN primary GNSS observables in use.
51 601218.003 : IIN in Fixed NL-RTK mode.
52 601218.103 : IIN navigator alignment active.
53 601739.000 : WARNING : Gap in primary GNSS navigation data
54 601740.002 : IIN primary GNSS solution not in use.
55 601741.002 : IIN primary GNSS solution in use.
56 601742.002 : IIN WL ambiguity failure cleared
57 620175.003 : Processing ended
58 -----
59
60 Termination status : Normal
61 Execution time : 41.26
62 -----
63
64 Processing completed.
65 -----

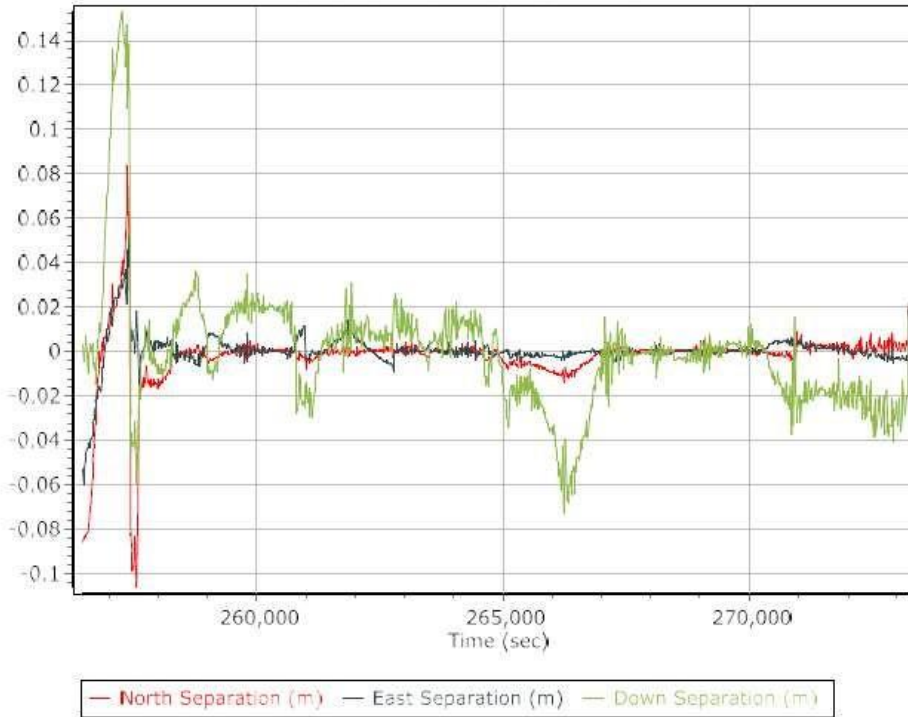
```

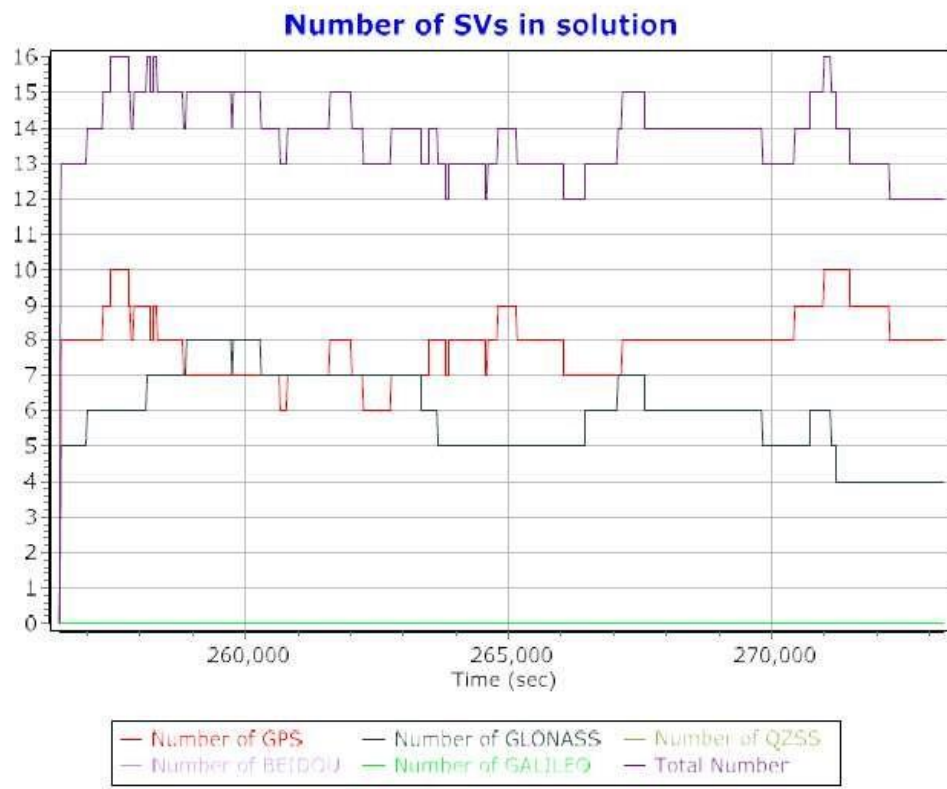
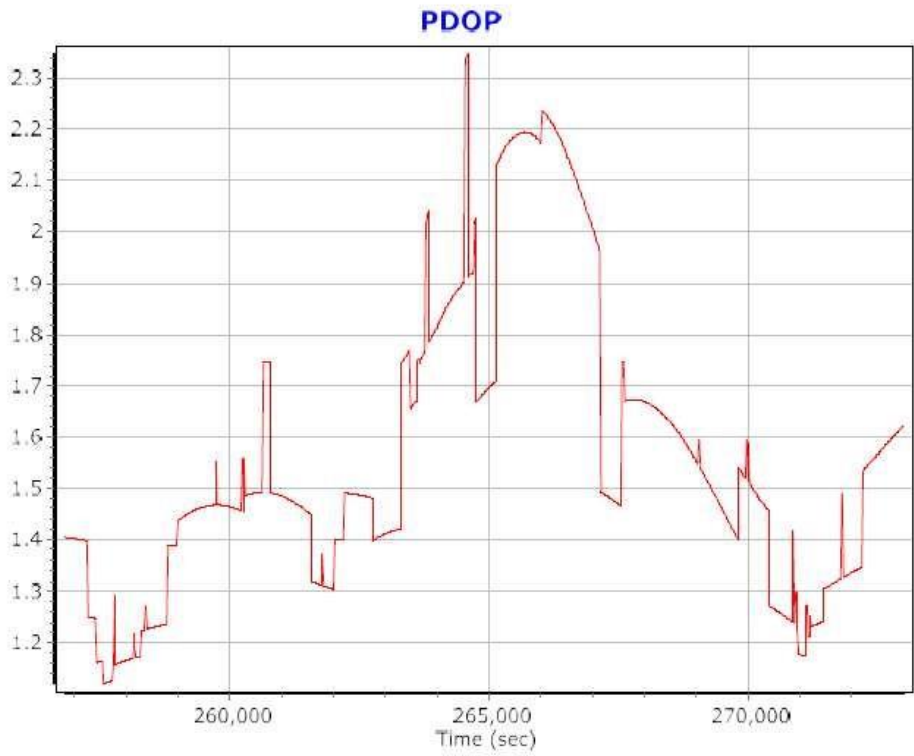
6219092a GNSS Processing

Top View: Latitude (deg)



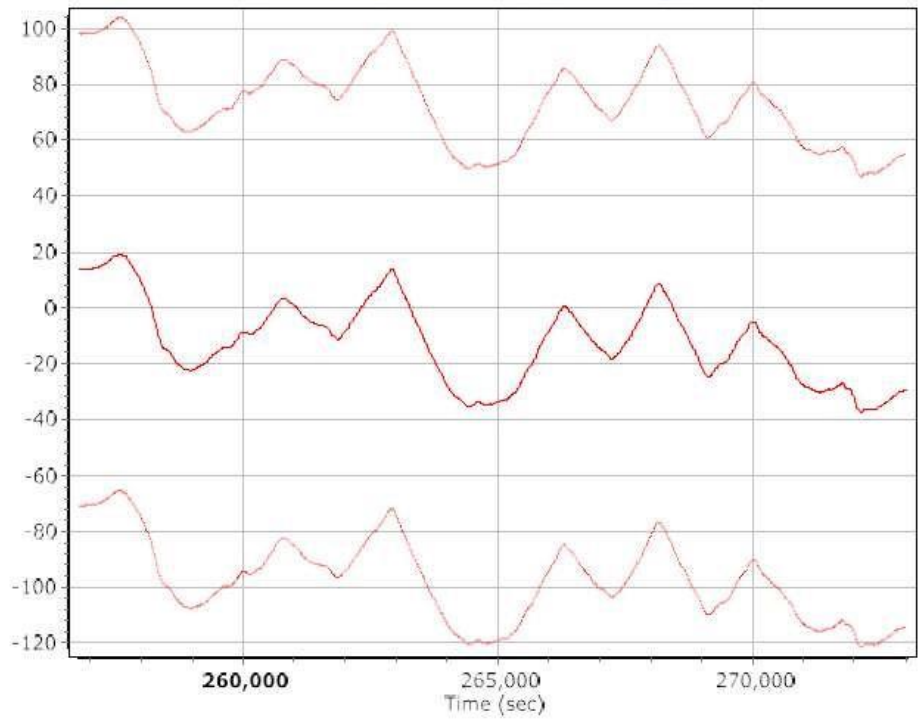
Forward/Reverse Separation



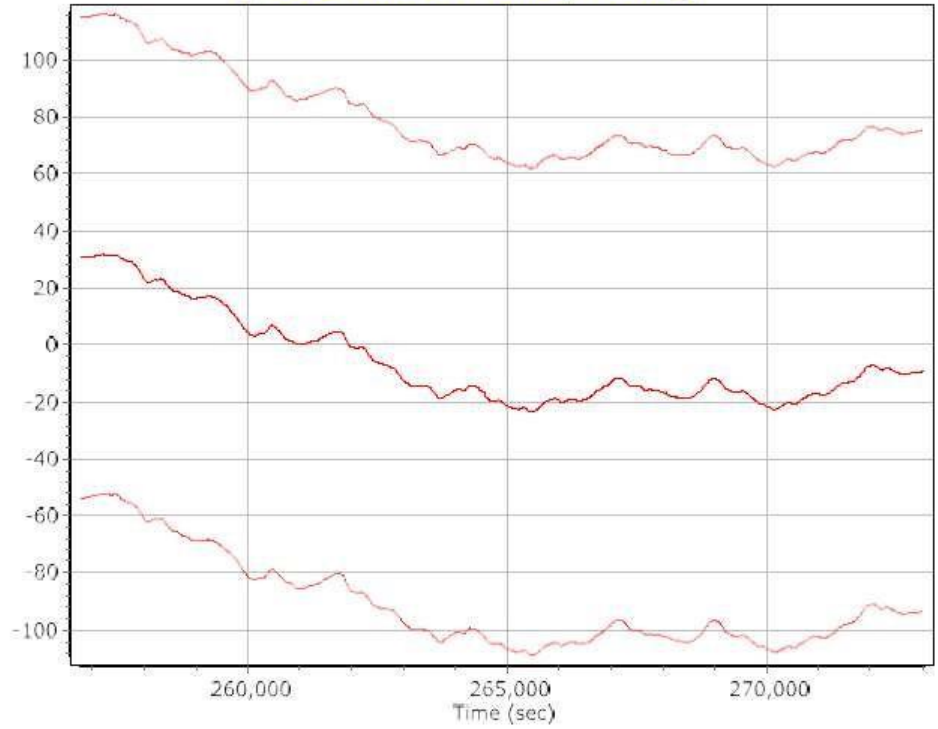


6219092a Sensor Errors

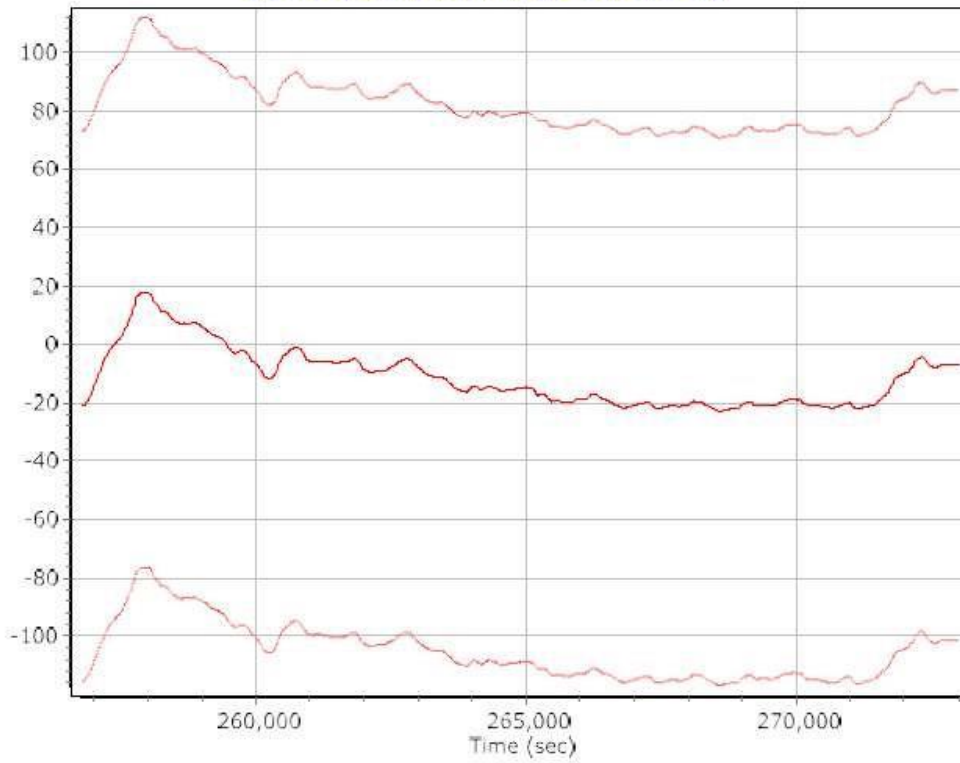
x accelerometer bias (micro-g)



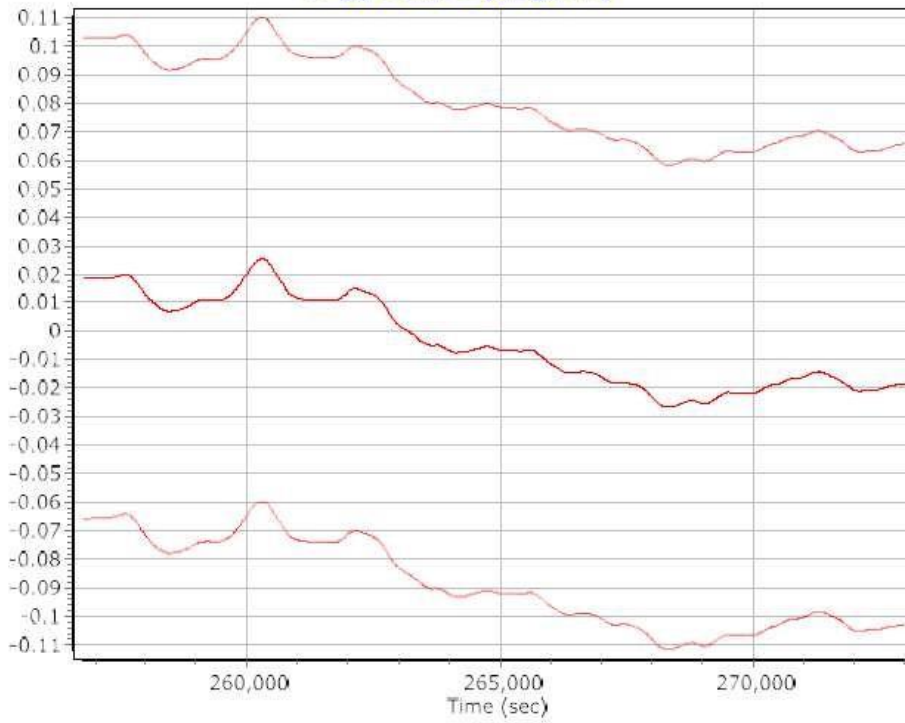
y accelerometer bias (micro-g)



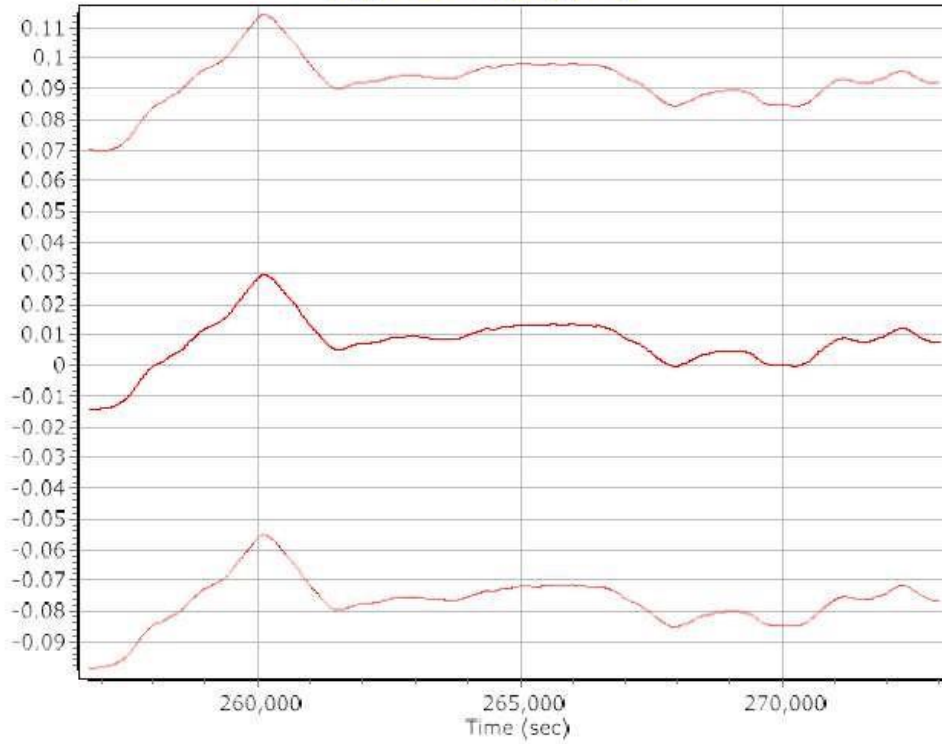
z accelerometer bias (micro-g)



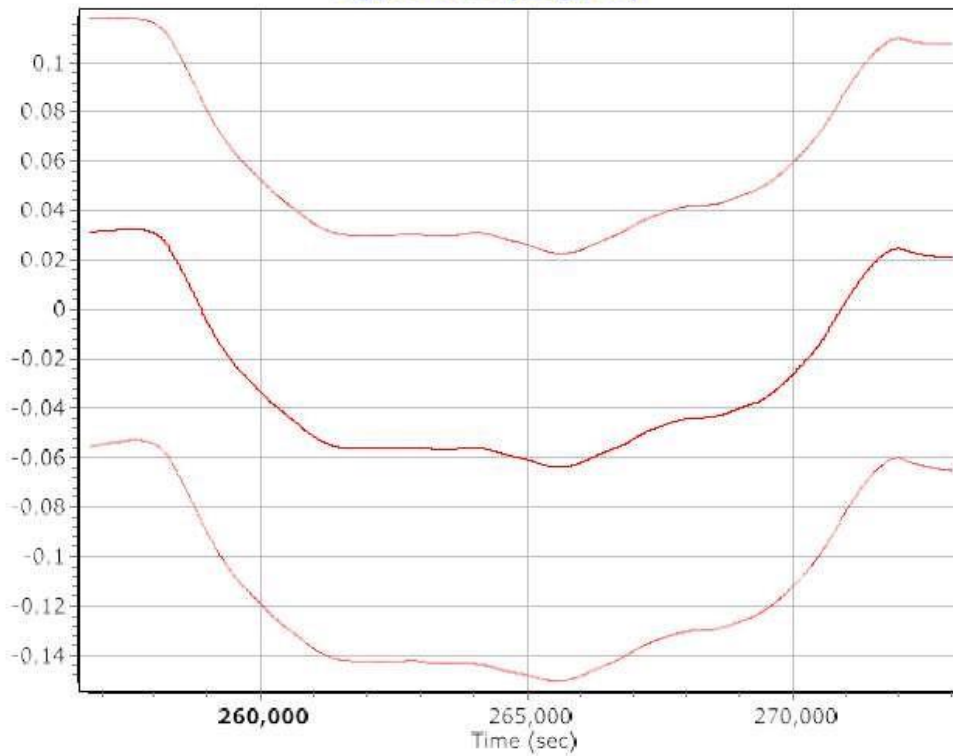
x gyro bias (deg/hr)



y gyro bias (deg/hr)



z gyro bias (deg/hr)

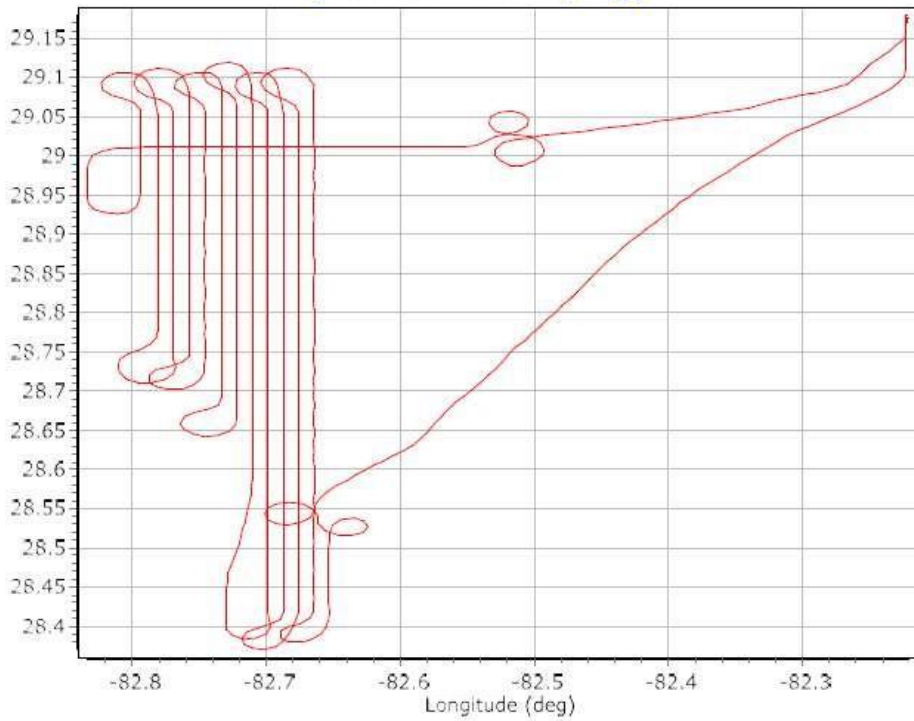


6219092a Processing Summary

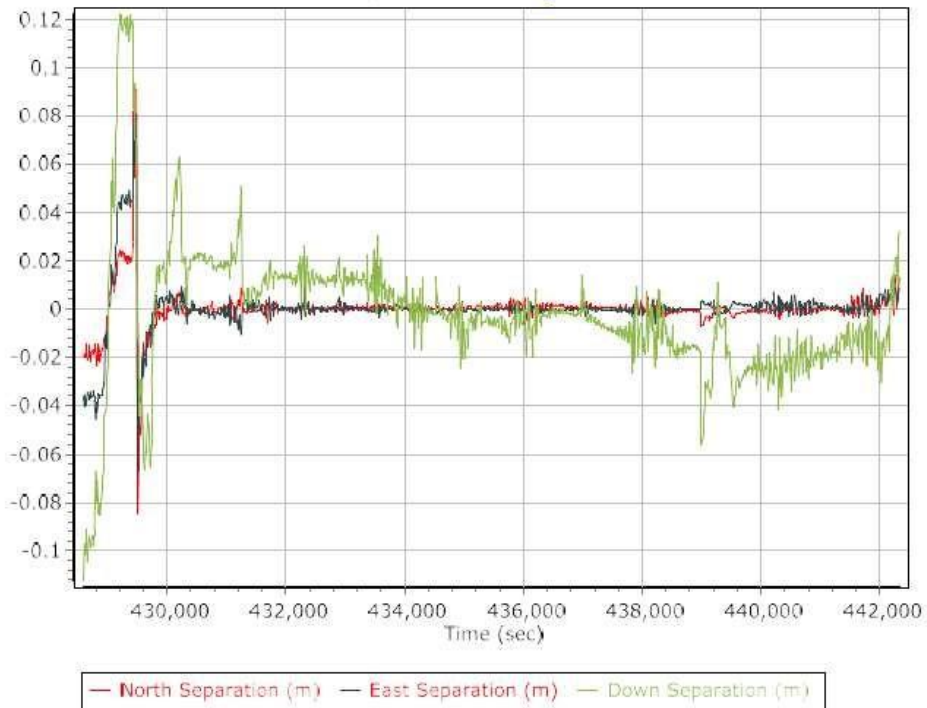
```
1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/05/19 Time : 22:01:31
5 -----
6
7 Extracted data path :
8 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219092a\05_INS-GPS_PROC\01_POS\6219092a\6219092a\Ex
9 xtract
10 Extracted data kernel : 6219092a
11 Processed data path :
12 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219092a\05_INS-GPS_PROC\01_POS\6219092a\6219092a\Pr
13 ocessed
14 Processed data kernel : 6219092a
15 Processing start time : 256807.576
16 Processing end time : 273001.000
17 -----
18 Selected GNSS mode : IN-Fusion SmartBase
19 Selected base station : ASB
20 Selected subsystems : IMU
21 : Primary GNSS
22 : Base GNSS
23 : Gimbal Encoder
24 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
25 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
26 Multipath setting : LOW
27 Stabilized mount to primary GNSS lever arm : 0.069 -0.198 -1.273
28 Base GNSS coordinates : 28.777604115 -82.484421034 1105.130
29 Dynamic lever arm : ACTIVE
30 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
31 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
32 -----
33 Mask angle : 10.000
34 -----
35 256807.576 : New or modified IIN install data
36 Reference-IMU lever arm: 0.00 0.00 0.00
37 Reference-primary GNSS lever arm: 0.07 -0.19 -1.27
38 Multipath environment: LOW
39 256807.576 : Forward-time processing started
40 256807.671 : IIN coarse leveling started.
41 256808.671 : IIN coarse leveling ended.
42 256808.671 : IIN navigator initialized.
43 256808.671 : IIN degraded navigation solution.
44 256808.671 : IIN initial position valid.
45 256809.002 : SmartBase observables in use
46 256809.002 : IIN primary GNSS solution in use.
47 256809.002 : IIN primary GNSS observables in use.
48 256809.002 : IIN in Fixed NL RTK mode.
49 256809.102 : IIN navigator alignment active.
50 257404.000 : WARNING : Gap in primary GNSS navigation data
51 257405.001 : IIN primary GNSS solution not in use.
52 257406.001 : IIN primary GNSS solution in use.
53 257407.002 : IIN WL ambiguity failure cleared
54 266026.003 : IIN WL ambiguity failure cleared
55 269977.000 : WARNING : Gap in primary GNSS navigation data
56 269978.000 : IIN primary GNSS solution not in use.
57 269979.001 : IIN primary GNSS solution in use.
58 273001.004 : Processing ended
59 -----
60 Termination status : Normal
61 Execution time : 33.87
62 -----
63 Processing completed.
```

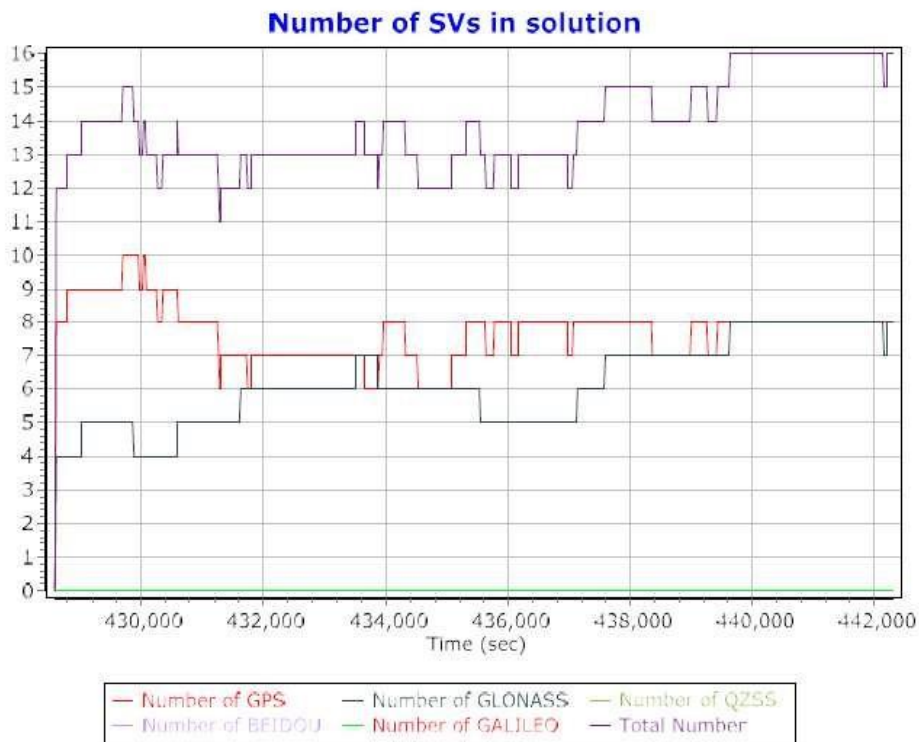
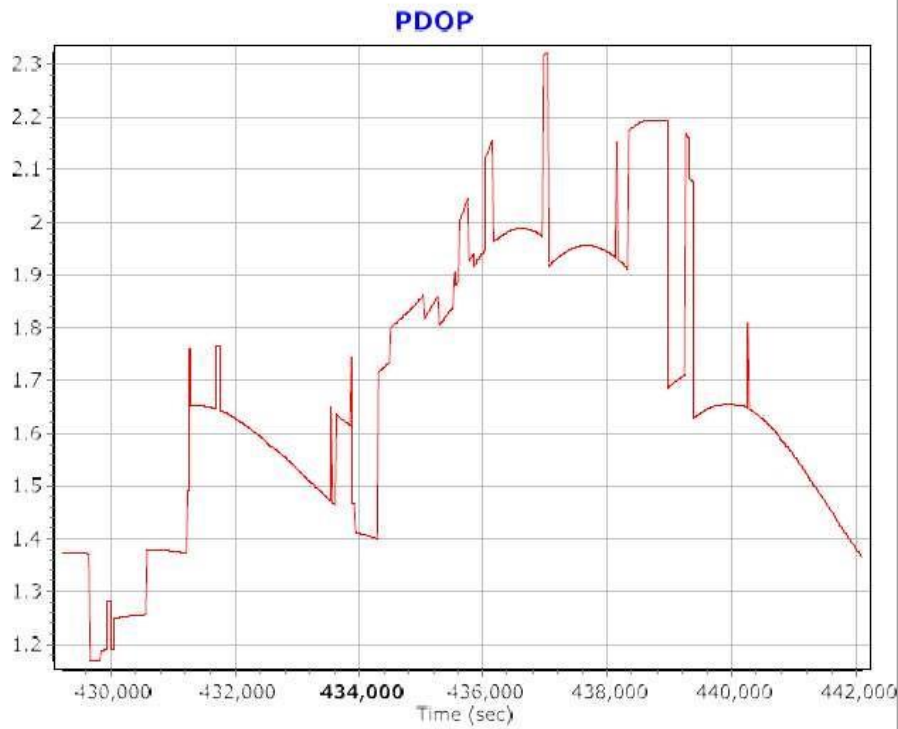
6219094a GNSS Processing

Top View: Latitude (deg)

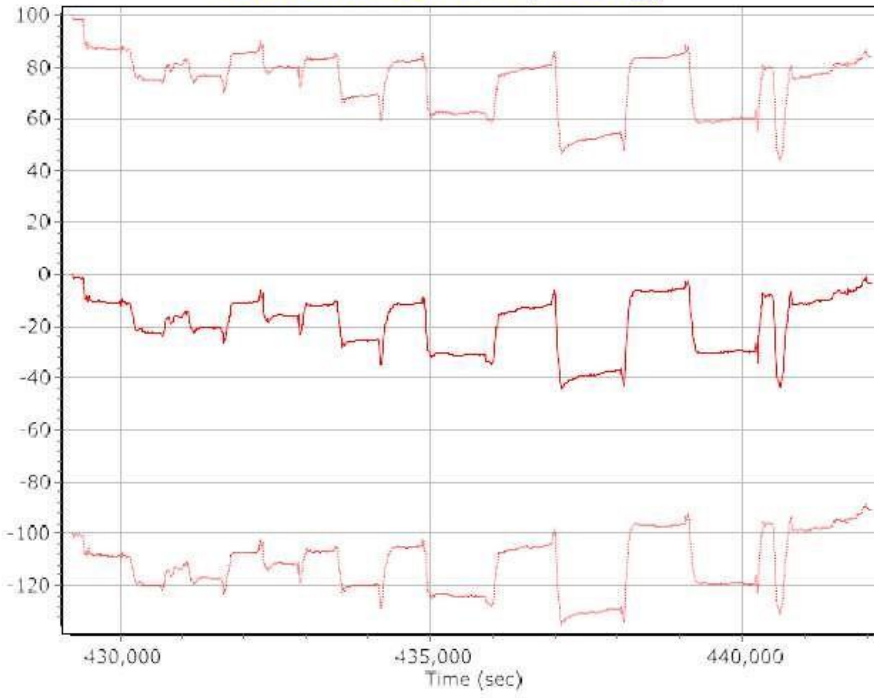


Forward/Reverse Separation

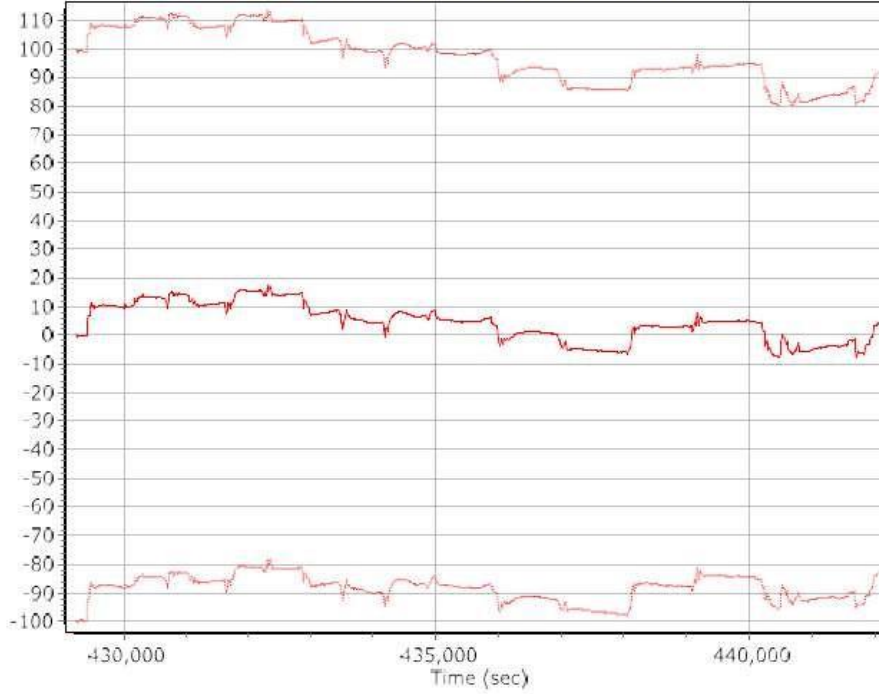




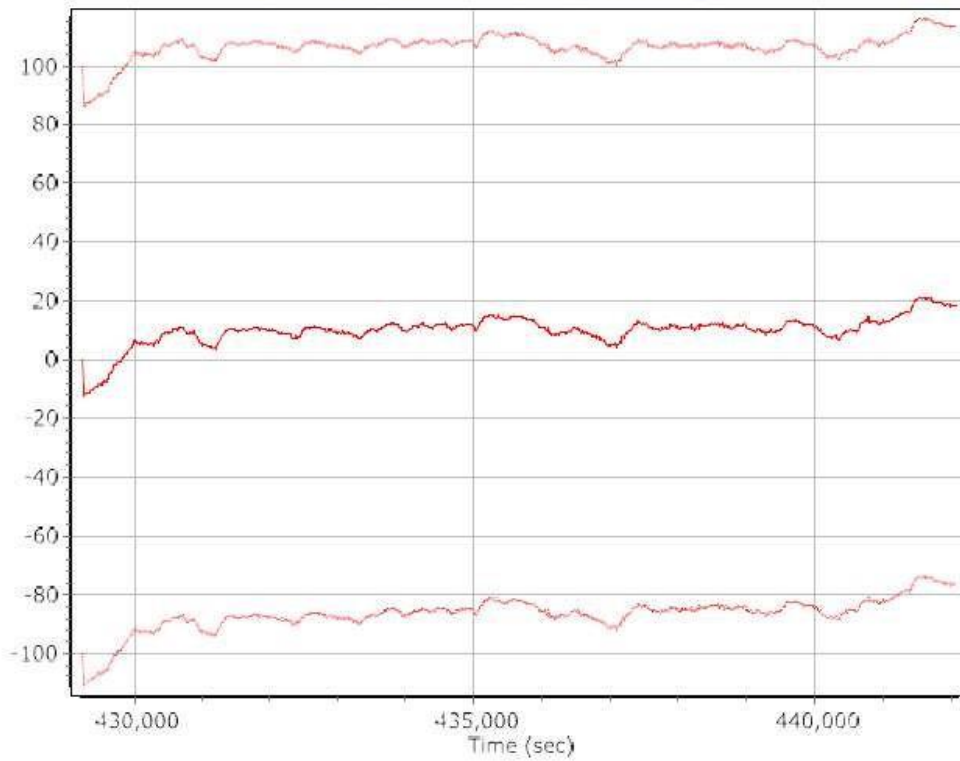
x accelerometer bias (micro-g)



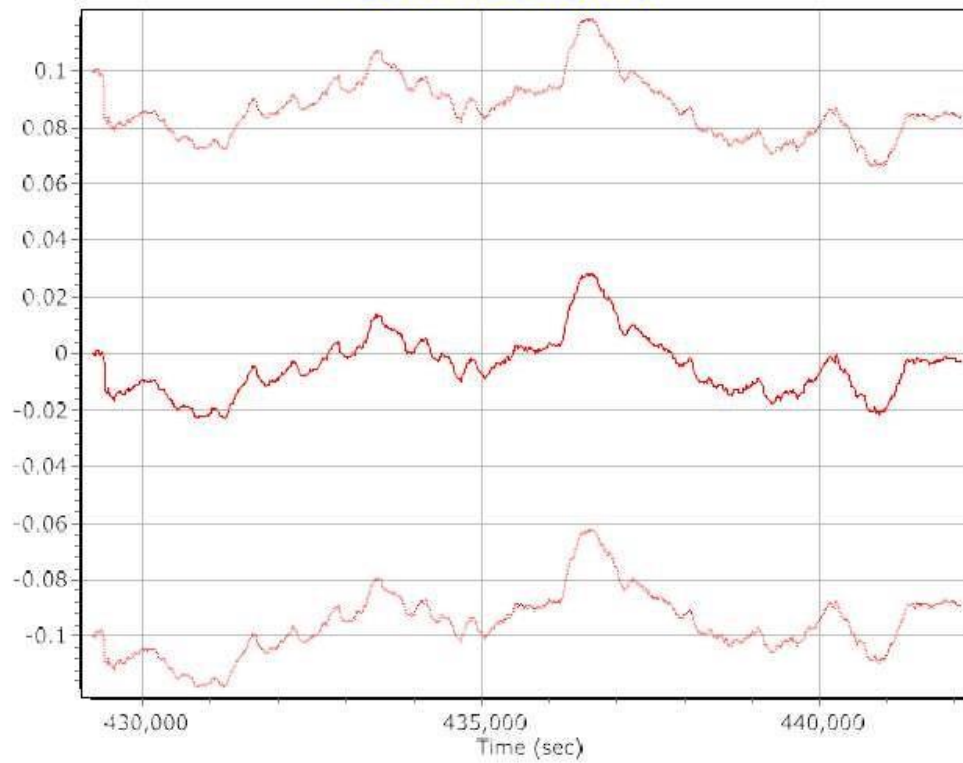
y accelerometer bias (micro-g)

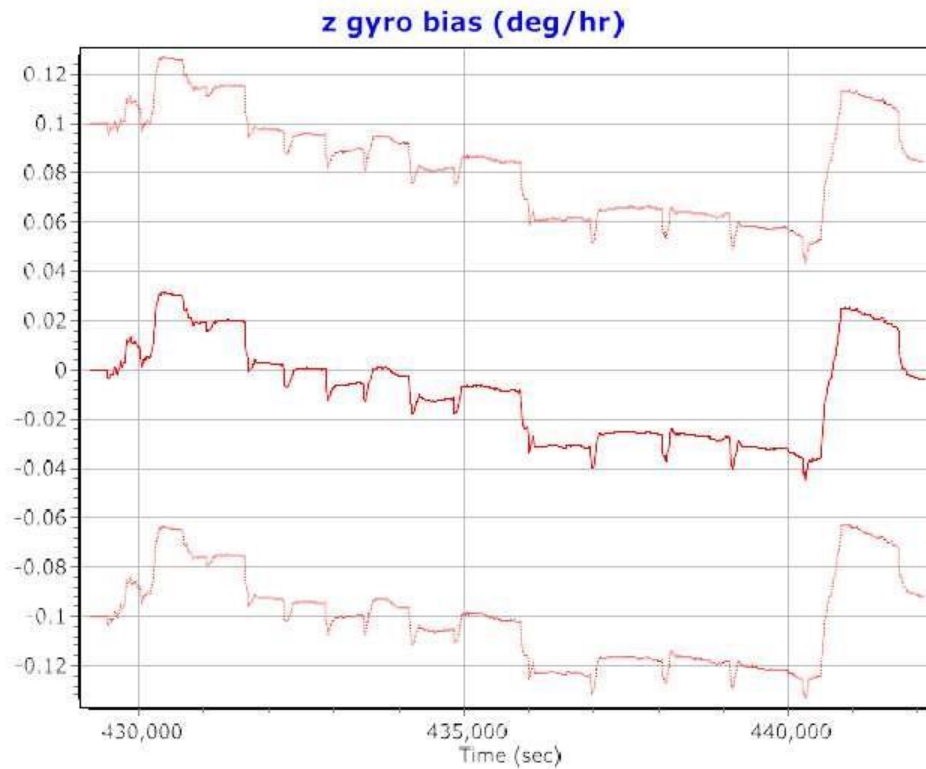
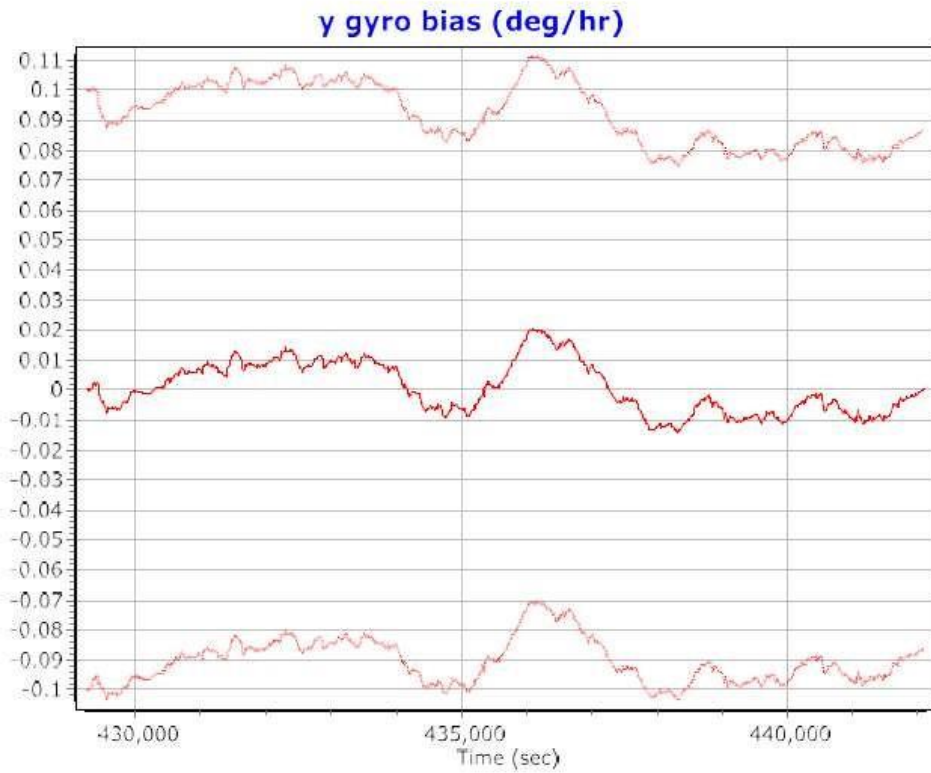


z accelerometer bias (micro-g)



x gyro bias (deg/hr)





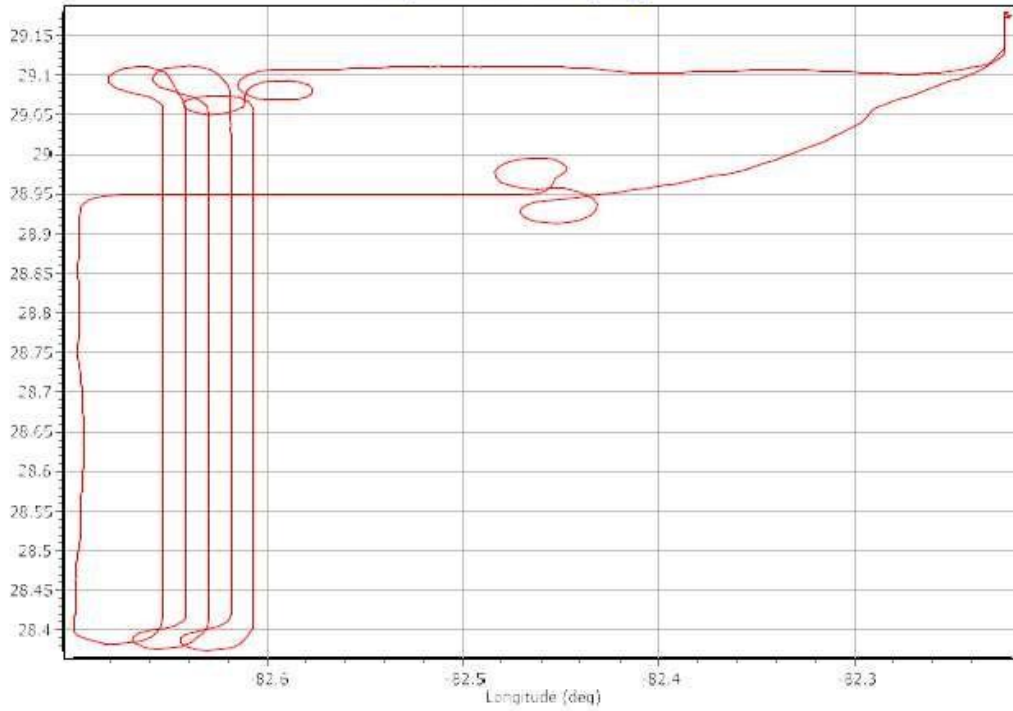
```

1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/09/19 Time : 12:43:41
5 -----
6
7 Extracted data path :
8 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219094A\05_INS-GPS_PROC\01_POS\6219094a\6219094a\Ex
9 tract
10 Extracted data kernel : 6219094a
11 Processed data path :
12 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219094A\05_INS-GPS_PROC\01_POS\6219094a\6219094a\Pr
13 ocess
14 Processed data kernel : 6219094a
15 Processing start time : 429241.412
16 Processing end time : 442092.000
17 -----
18 Selected GNSS mode : IN-Fusion SmartBase
19 Selected base station : ASB
20 Selected subsystems : IMU
21 : Primary GNSS
22 : Base GNSS
23 : Gimbal Encoder
24 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
25 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
26 Multipath setting : LOW
27 Stabilized mount to primary GNSS lever arm : 0.032 -0.197 -1.278
28 Base GNSS coordinates : 28.865525418 -82.624614750 1067.606
29 Dynamic lever arm : ACTIVE
30 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
31 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
32 -----
33 Mask angle : 10.000
34 -----
35 429241.417 : New or modified IIN install data
36 Reference-IMU lever arm: 0.00 0.00 0.00
37 Reference-primary GNSS lever arm: 0.03 -0.20 -1.28
38 Multipath environment: LOW
39 429241.417 : Forward-time processing started
40 429241.512 : IIN coarse leveling started.
41 429242.512 : IIN coarse leveling ended.
42 429242.512 : IIN navigator initialized.
43 429242.512 : IIN degraded navigation solution.
44 429242.512 : IIN initial position valid.
45 429243.002 : SmartBase observables in use
46 429243.002 : IIN primary GNSS solution in use.
47 429243.002 : IIN primary GNSS observables in use.
48 429243.002 : IIN in Fixed NL RTK mode.
49 429243.102 : IIN navigator alignment active.
50 429471.000 : WARNING : Gap in primary GNSS navigation data
51 429472.002 : IIN primary GNSS solution not in use.
52 429473.002 : IIN primary GNSS solution in use.
53 429474.002 : IIN WL ambiguity failure cleared
54 438150.003 : IIN WL ambiguity failure cleared
55 438150.003 : IIN NL ambiguity failure cleared
56 442092.002 : Processing ended
57 -----
58 Termination status : Normal
59 Execution time : 41.42
60 -----
61 Processing completed.

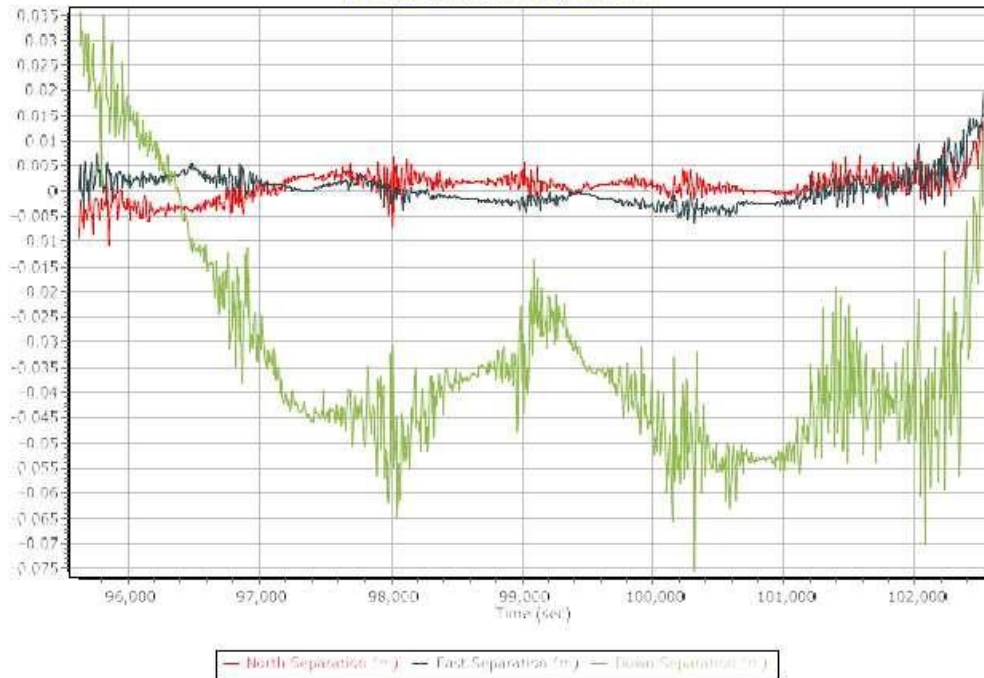
```

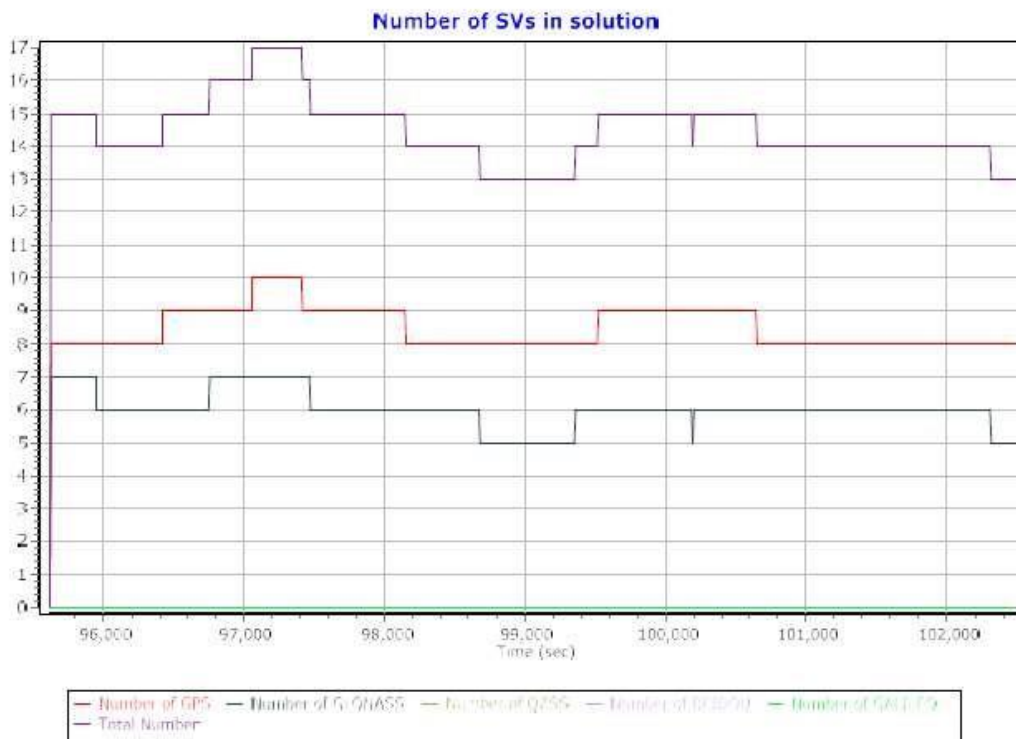
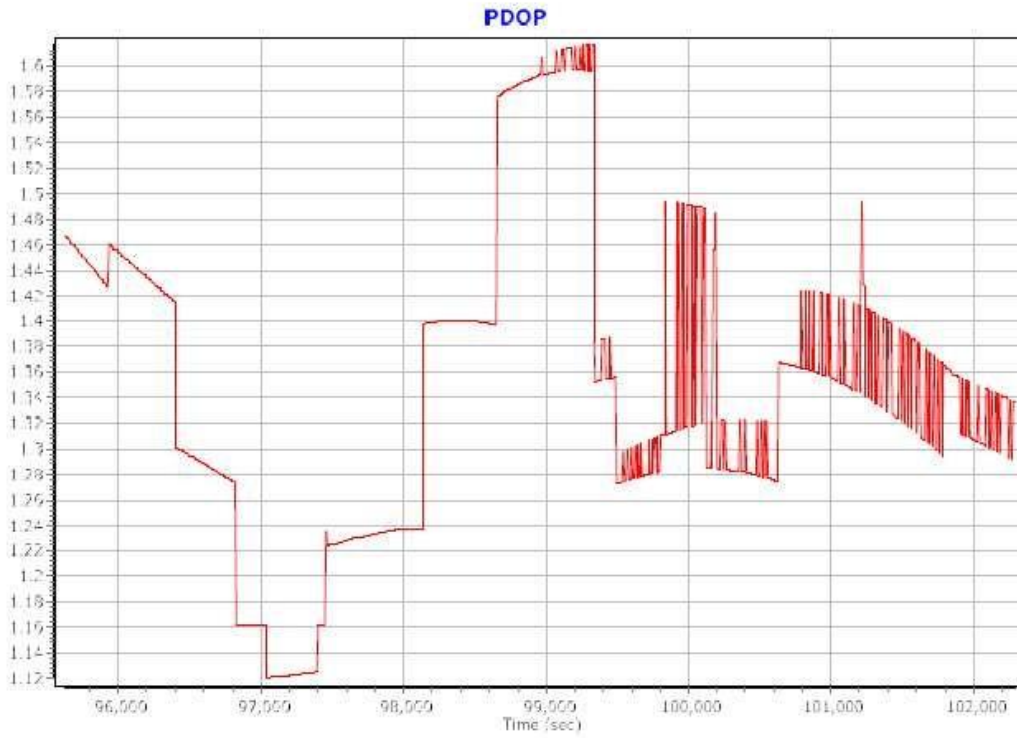
6219098a GNSS Processing

Top View: Latitude (deg)



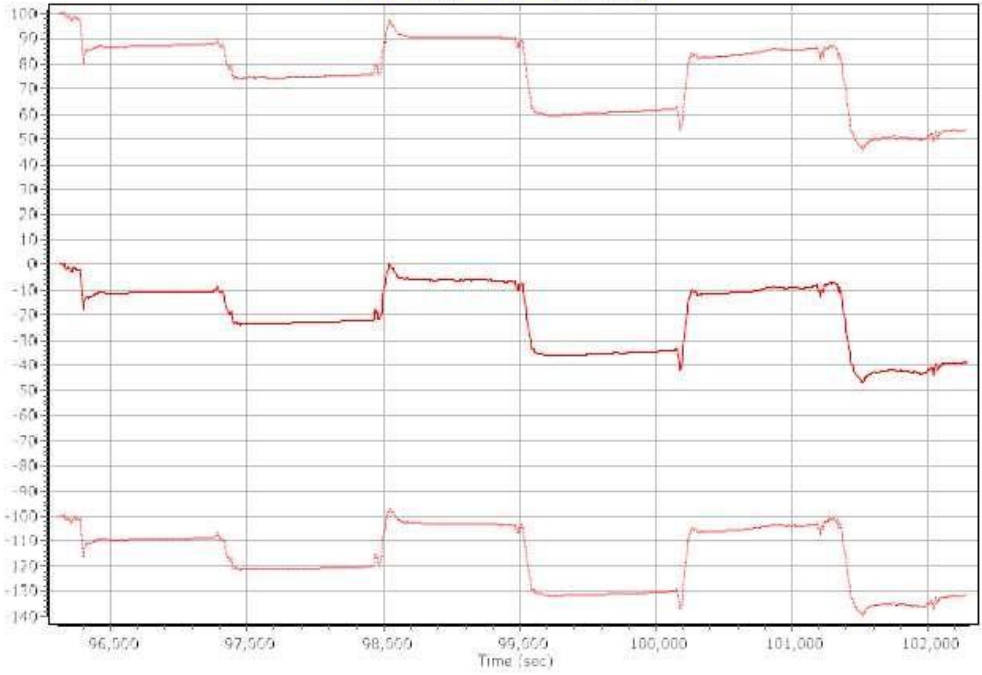
Forward/Reverse Separation



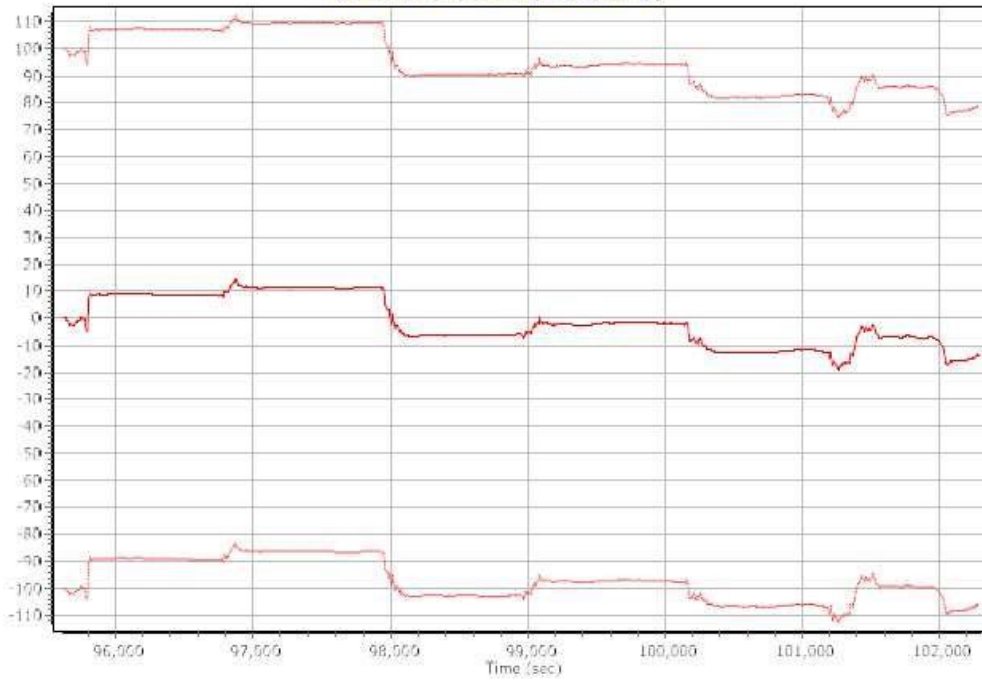


6219098a Sensor Errors

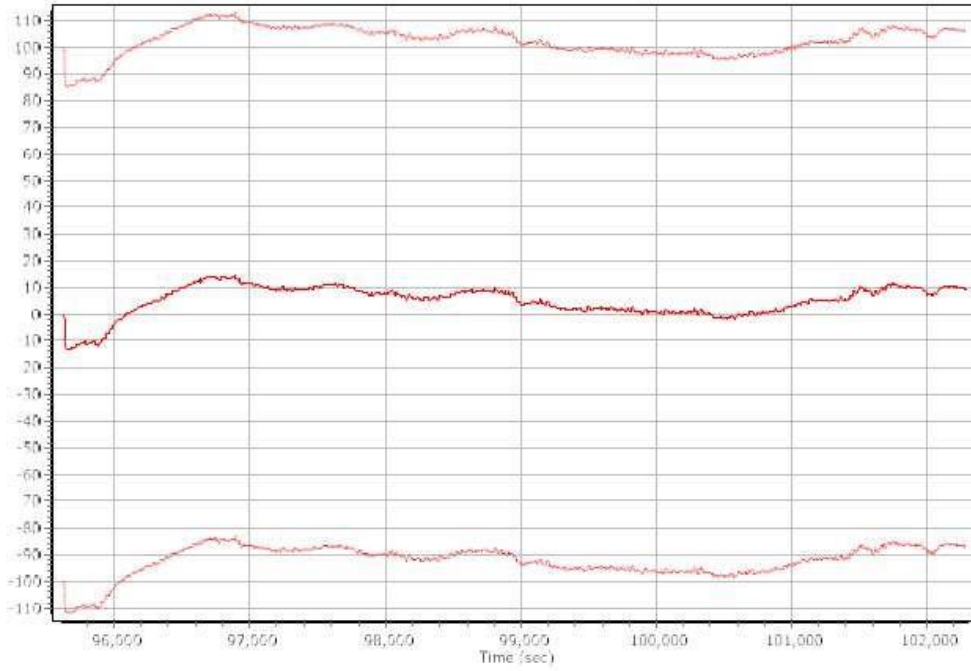
x accelerometer bias (micro-g)



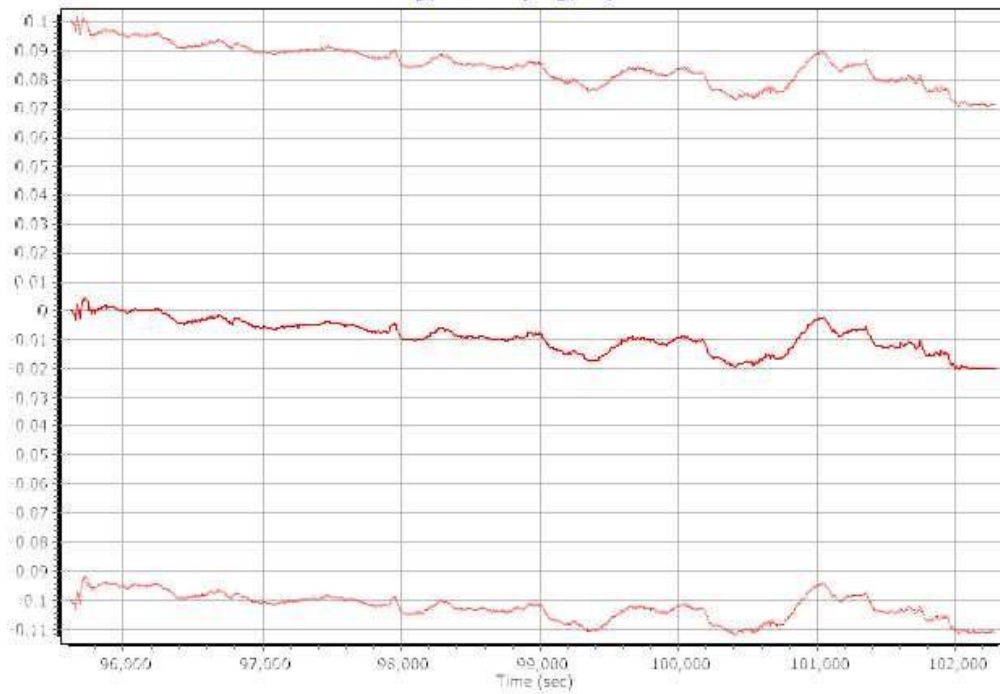
y accelerometer bias (micro-g)

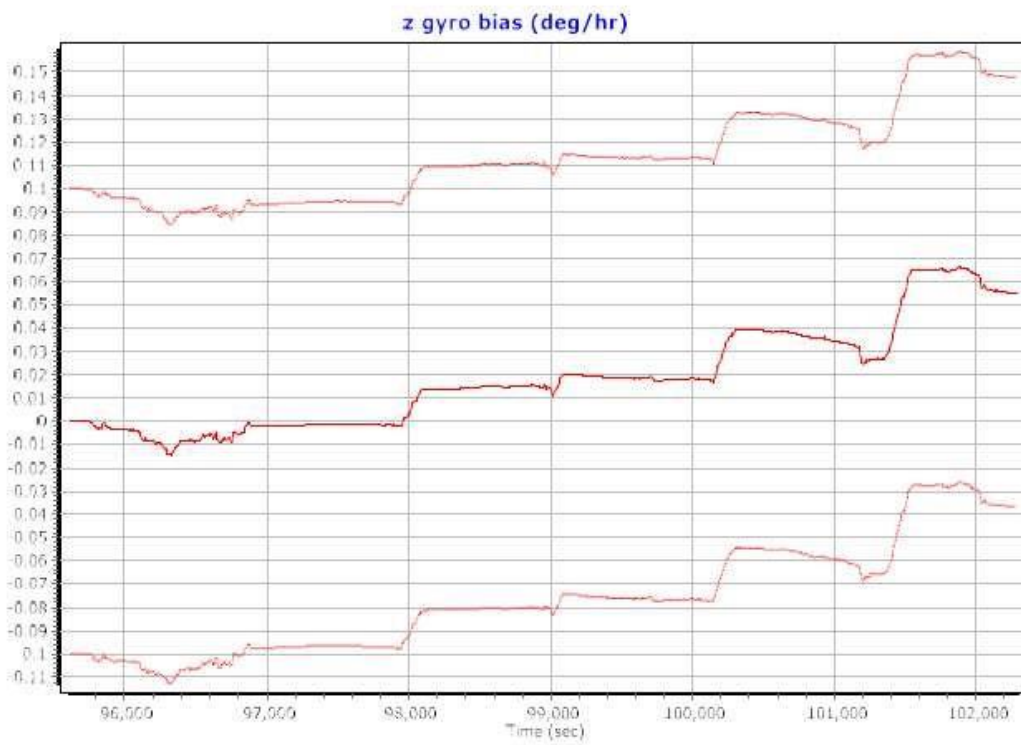
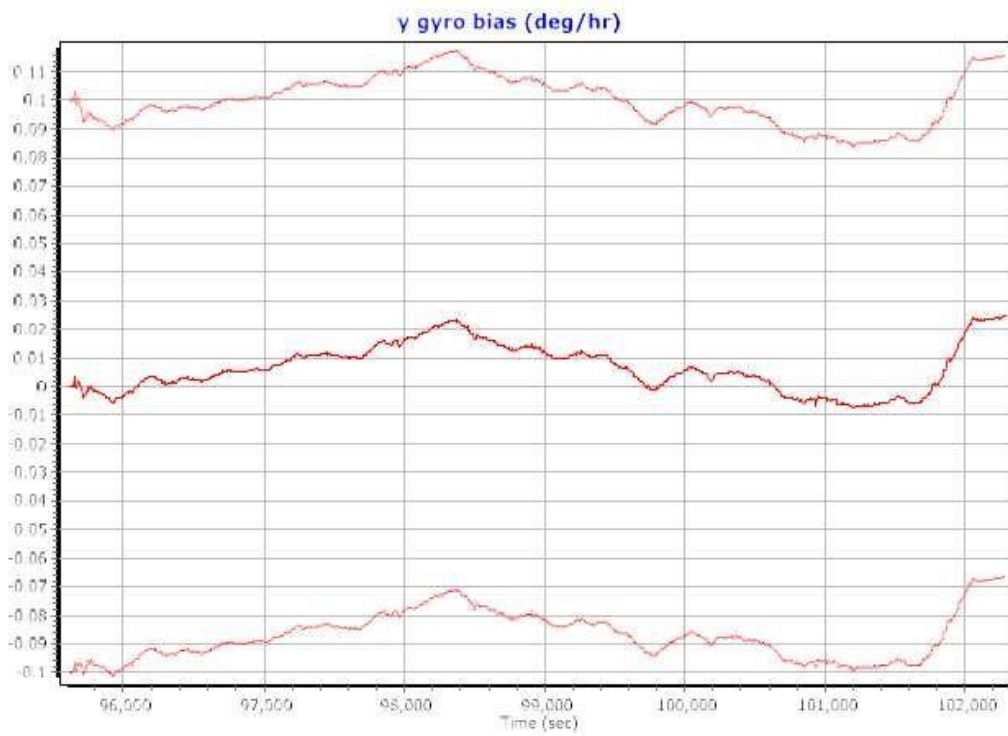


z accelerometer bias (micro-g)



x gyro bias (deg/hr)



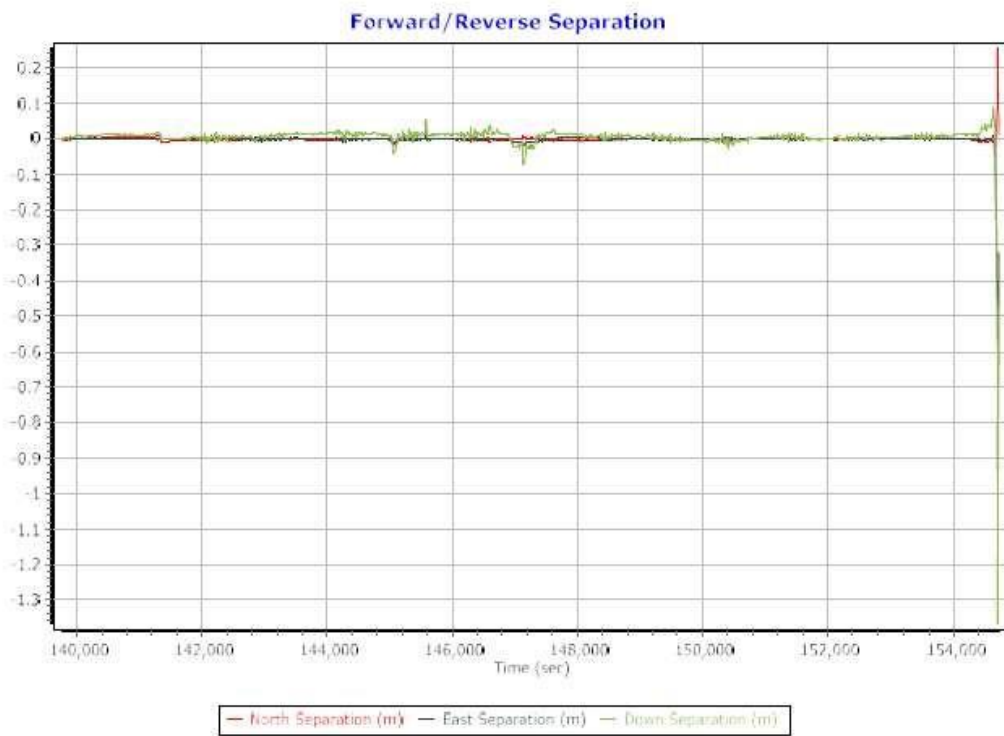
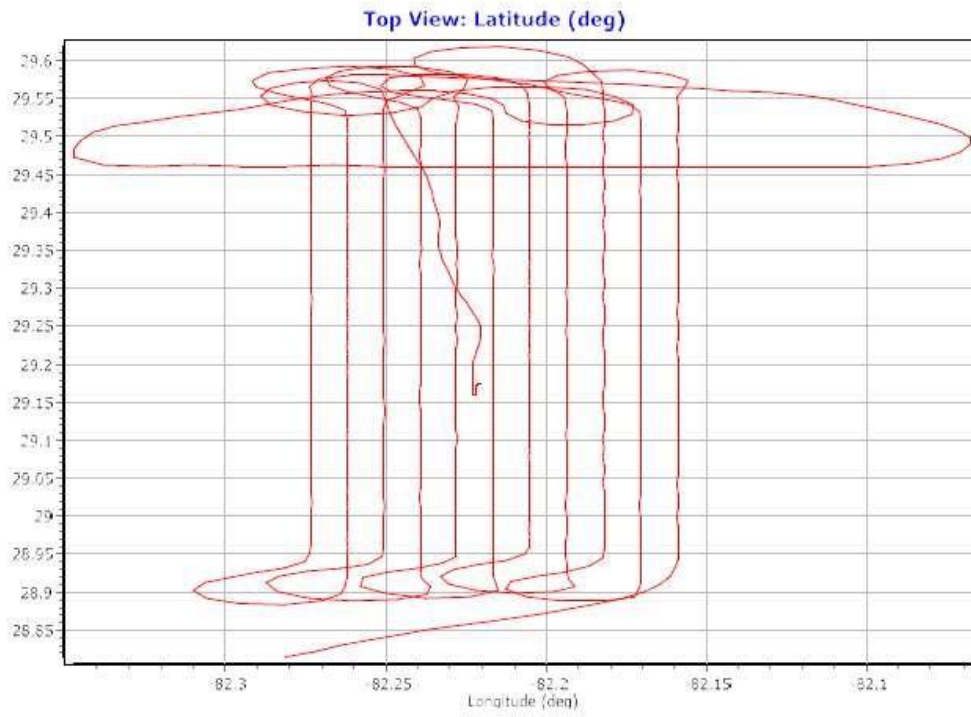


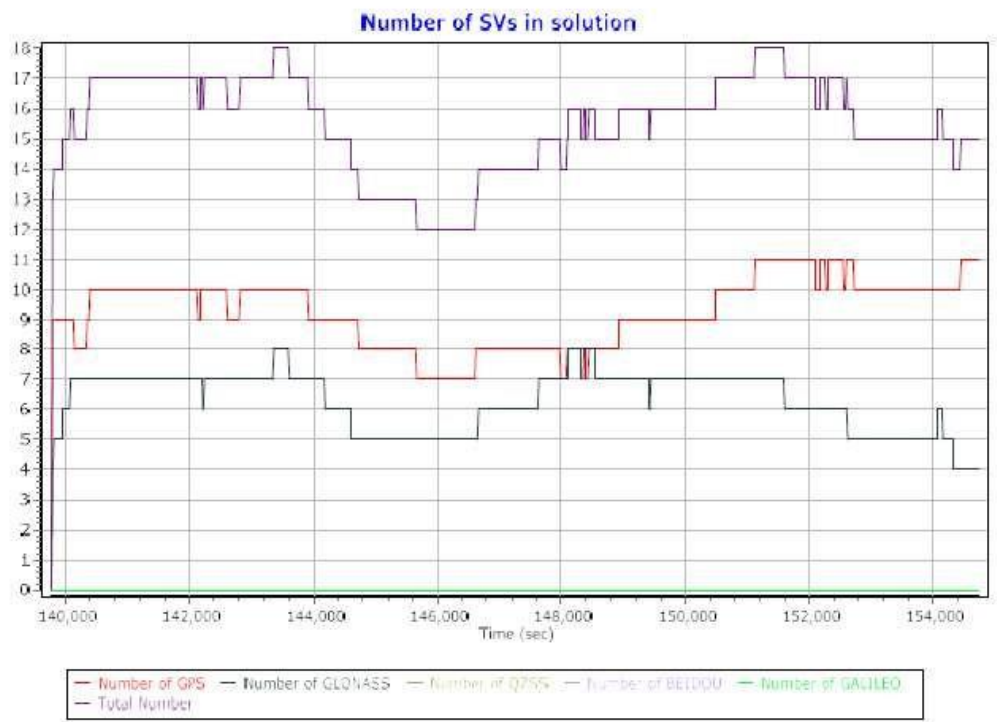
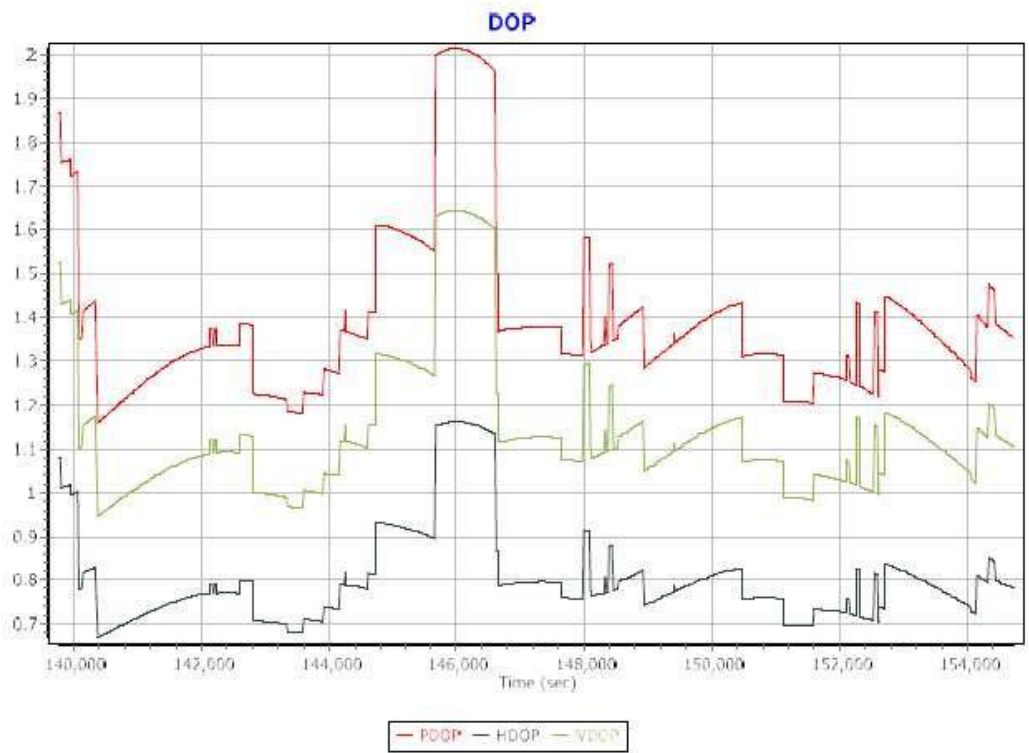

```

1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/16/19 Time : 07:28:53
5 -----
6
7 Extracted data path :
8 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219098A\05_INS-GPS_PROC\01_POS\6219098a2\6219098a2
9 \Extract
10 Extracted data kernel : 6219098a2
11 Processed data path :
12 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219098A\05_INS-GPS_PROC\01_POS\6219098a2\6219098a2
13 \Proc
14 Processed data kernel : 6219098a2
15 Processing start time : 85619.667
16 Processing end time : 102287.000
17 -----
18
19 Selected GNSS mode : IN-Fusion SmartBase
20 Selected base station : ASS
21 Selected subsystems : IMU
22 : Primary GNSS
23 : Base GNSS
24 : Gimbal Encoder
25
26 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
27 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
28 Multipath setting : LOW
29 Stabilized mount to primary GNSS lever arm : 0.064 -0.199 -1.296
30 Base GNSS coordinates : 28.801396048 -82.588621093 1136.296
31 Dynamic lever arm : ACTIVE
32 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
33 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
34 -----
35
36 Mask angle : 10.000
37 -----
38
39 95619.672 : New or modified IIN install data
40 Reference-IMU lever arm: 0.00 0.00 0.00
41 Reference-primary GNSS lever arm: 0.06 -0.20 -1.30
42 Multipath environment: LOW
43
44 95619.672 : Forward-time processing started
45 95619.767 : IIN coarse leveling started.
46 95620.767 : IIN coarse leveling ended.
47 95620.767 : IIN navigator initialized.
48 95620.767 : IIN degraded navigation solution.
49 95620.767 : IIN initial position valid.
50 95621.002 : SmartBase observables in use
51 95621.002 : IIN primary GNSS solution in use.
52 95621.002 : IIN primary GNSS observables in use.
53 95621.002 : IIN in Fixed NL RTK mode.
54 95621.102 : IIN navigator alignment active.
55 96300.000 : WARNING : Gap in primary GNSS navigation data
56 96301.004 : IIN primary GNSS solution not in use.
57 96302.008 : IIN primary GNSS solution in use.
58 96514.000 : WARNING : Gap in primary GNSS navigation data
59 96515.000 : IIN primary GNSS solution not in use.
60 96516.001 : IIN primary GNSS solution in use.
61 96590.000 : WARNING : Gap in primary GNSS navigation data
62 96591.001 : IIN primary GNSS solution not in use.
63 96592.001 : IIN primary GNSS solution in use.
64 96872.000 : WARNING : Gap in primary GNSS navigation data
65 96873.001 : IIN primary GNSS solution not in use.
66 96874.001 : IIN primary GNSS solution in use.
67 97352.000 : WARNING : Gap in primary GNSS navigation data
68 97353.000 : IIN primary GNSS solution not in use.
69 97354.001 : IIN primary GNSS solution in use.
70 97412.000 : WARNING : Gap in primary GNSS navigation data
71 97413.008 : IIN primary GNSS solution not in use.
72 97414.000 : IIN primary GNSS solution in use.
73
74 97502.000 : WARNING : Gap in primary GNSS navigation data
75 97503.001 : IIN primary GNSS solution not in use.
76 97504.002 : IIN primary GNSS solution in use.
77 99806.000 : WARNING : Gap in primary GNSS navigation data
78 99807.002 : IIN primary GNSS solution not in use.
79 99808.002 : IIN primary GNSS solution in use.
80 102287.005 : Processing ended
81 -----
82
83 Termination status : Normal
84 Execution time : 15.33
85 -----
86
87 Processing completed.
88

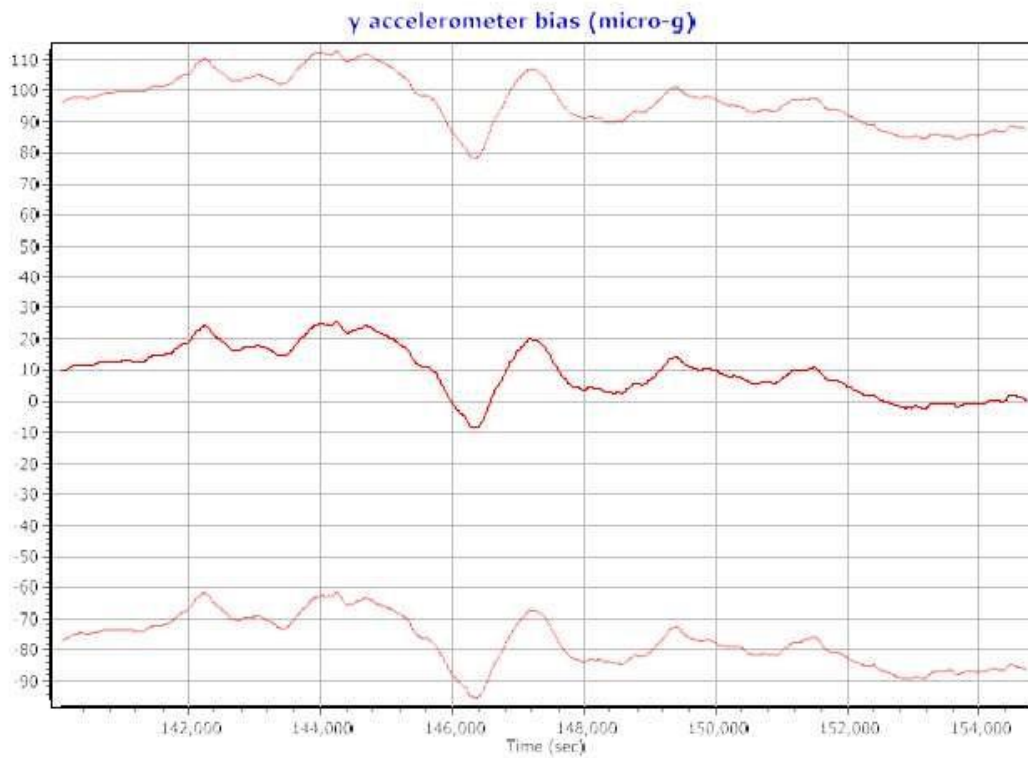
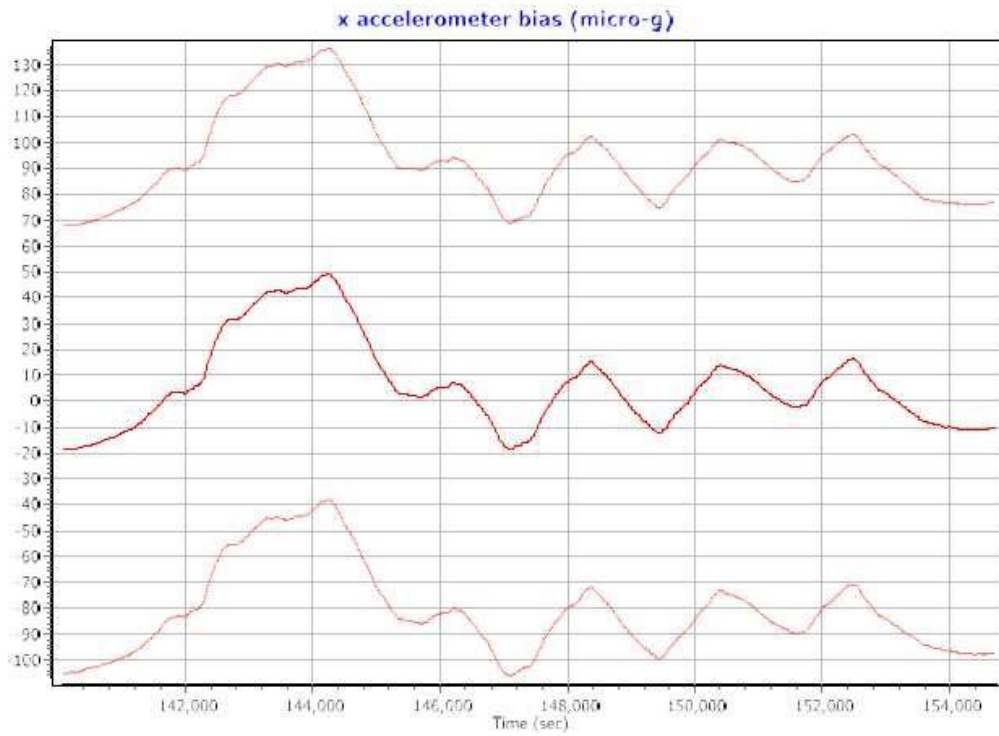
```

6219105a1 GNSS Processing

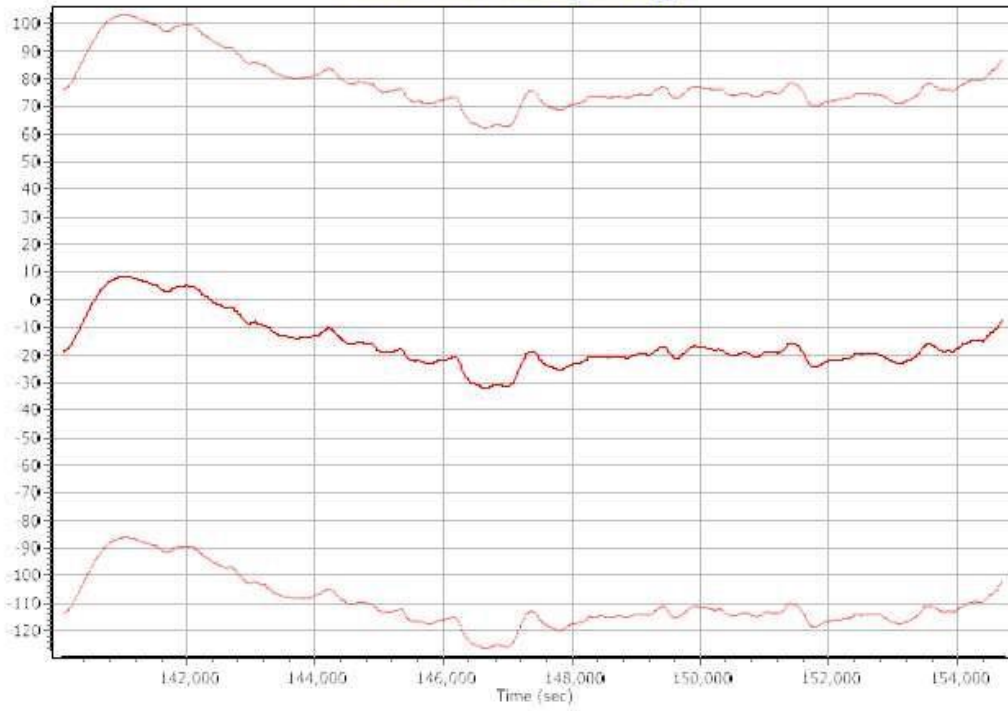




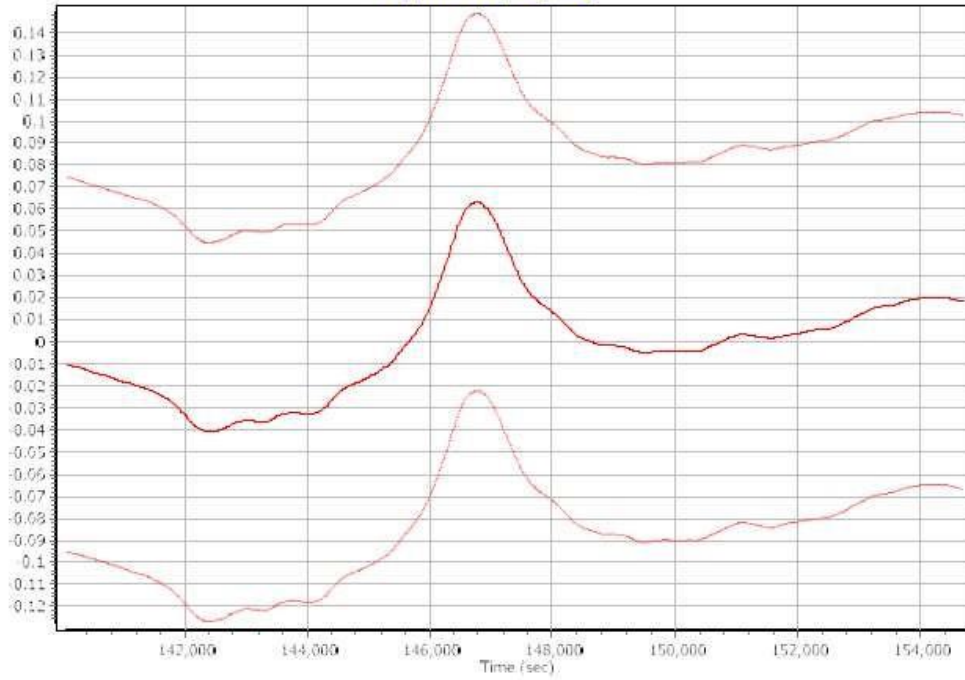
6219105a1 Sensor Errors

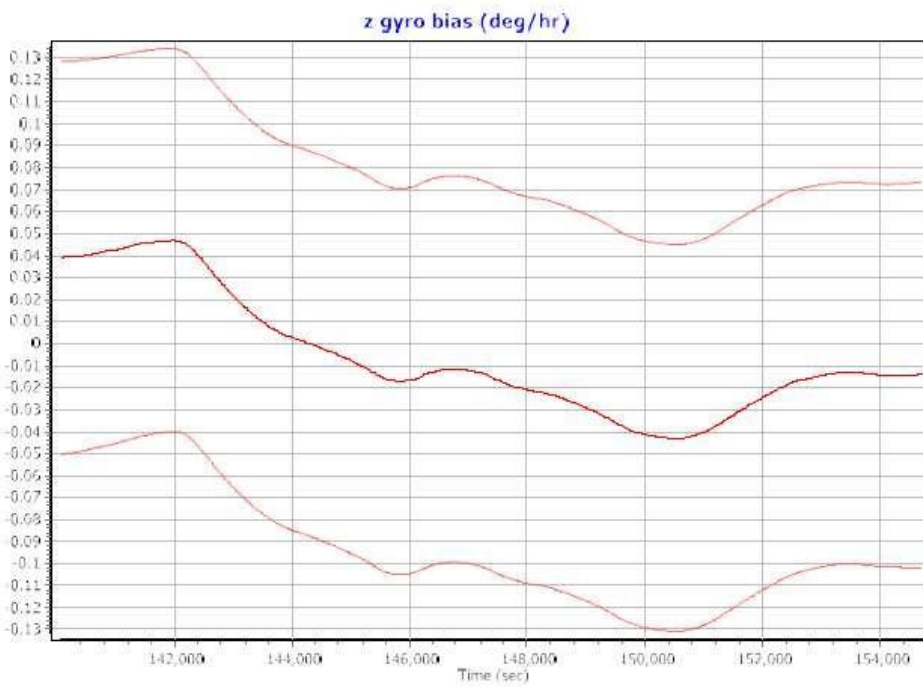
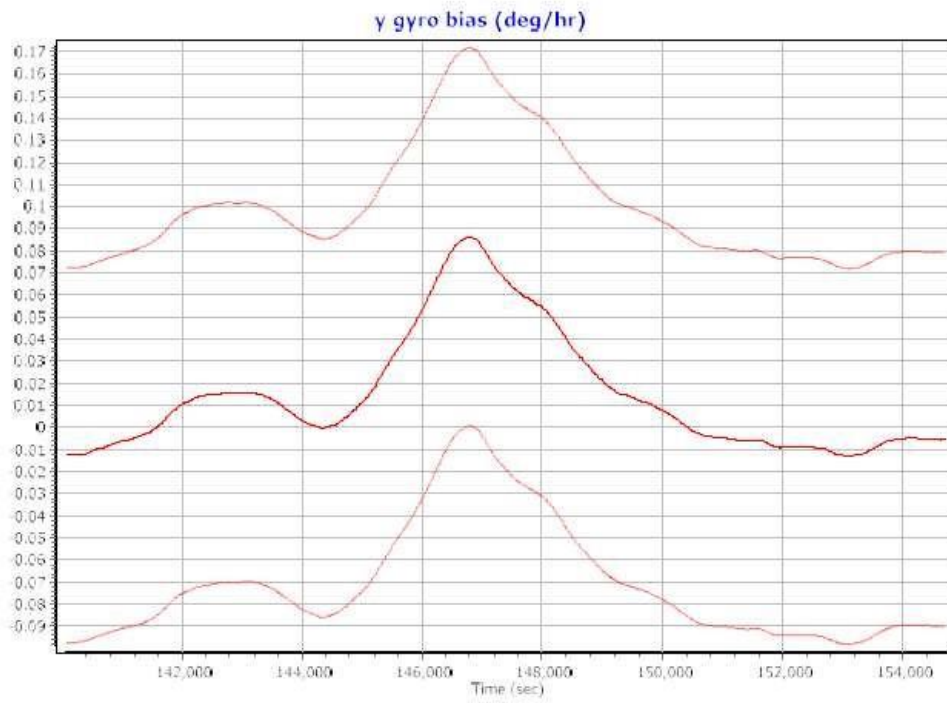


z accelerometer bias (micro-g)

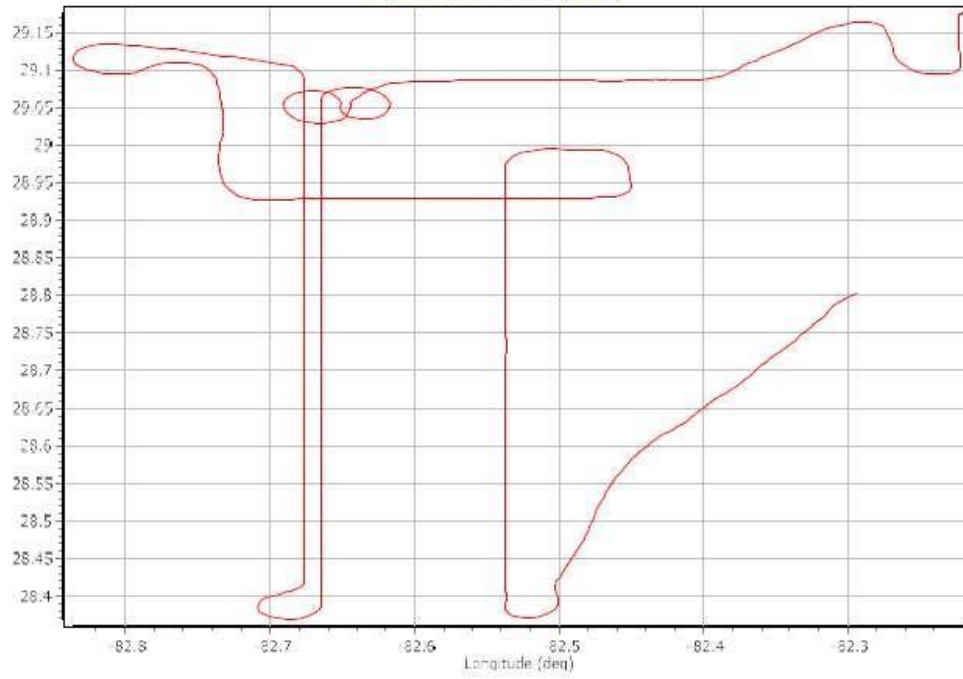


x gyro bias (deg/hr)

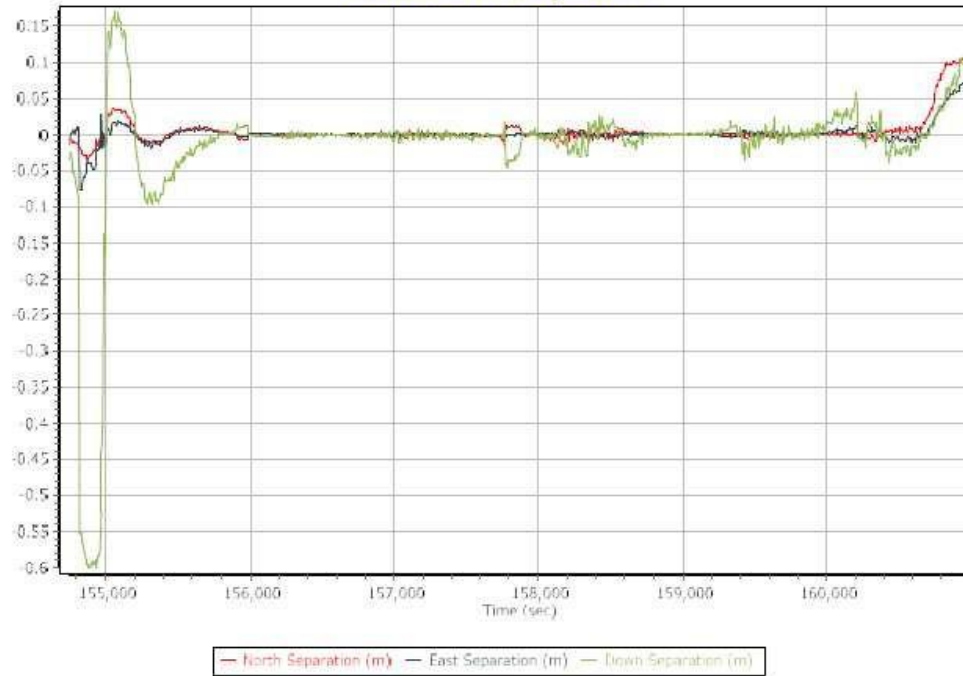


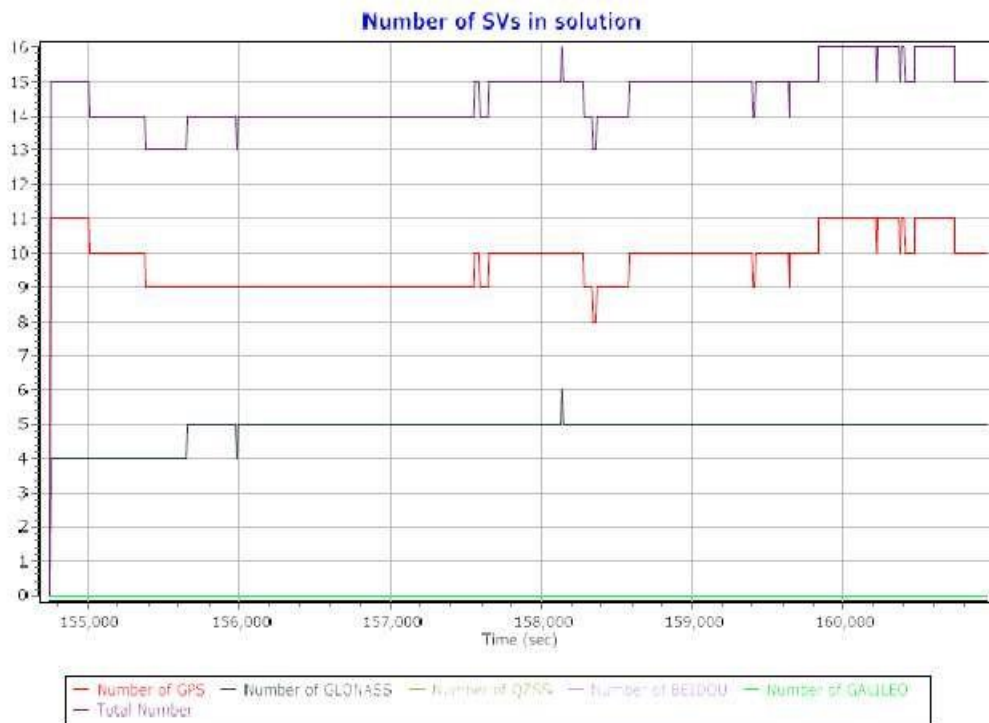
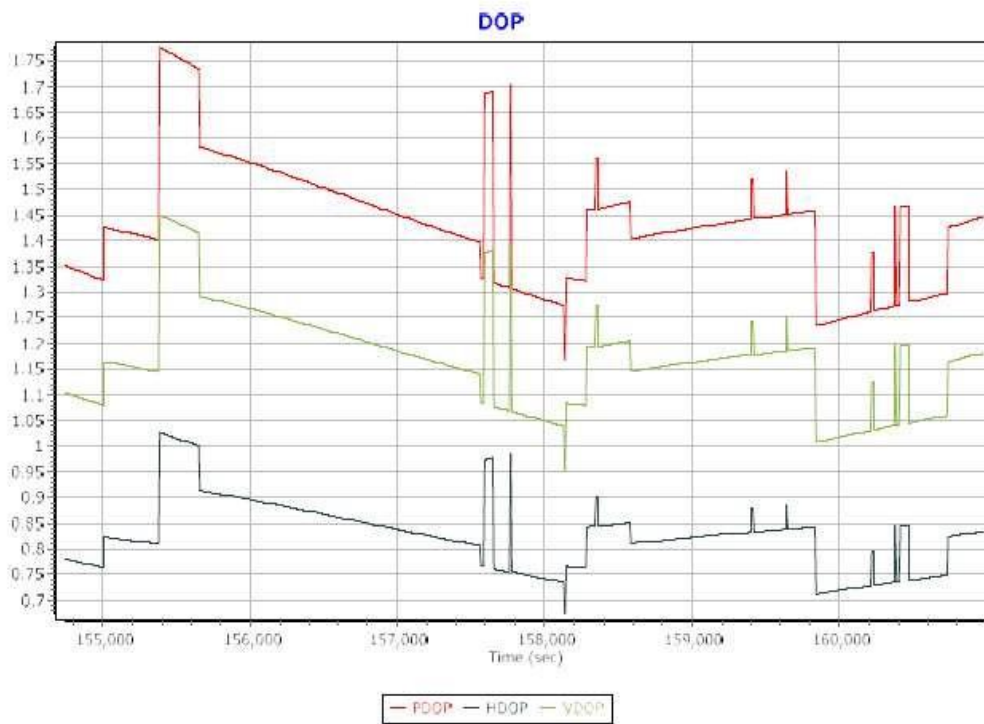


Top View: Latitude (deg)



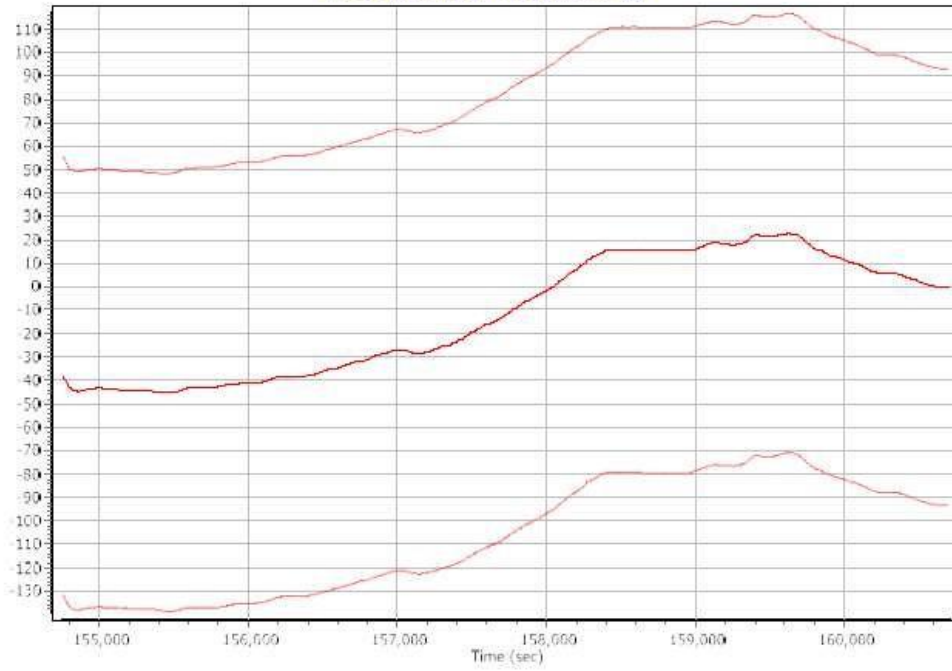
Forward/Reverse Separation



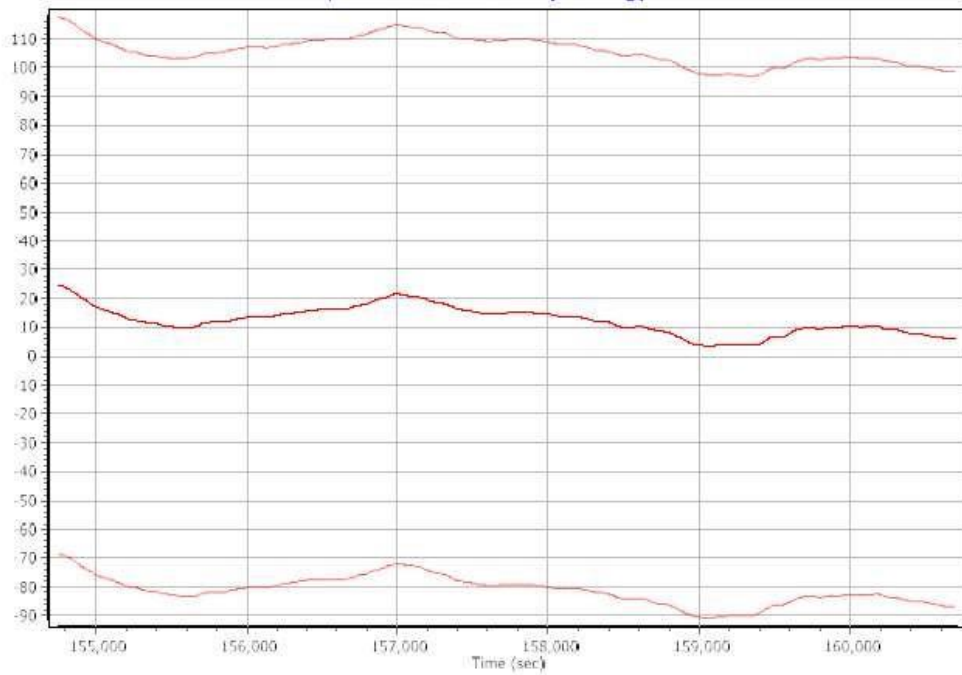


6219105a2 Sensor Errors

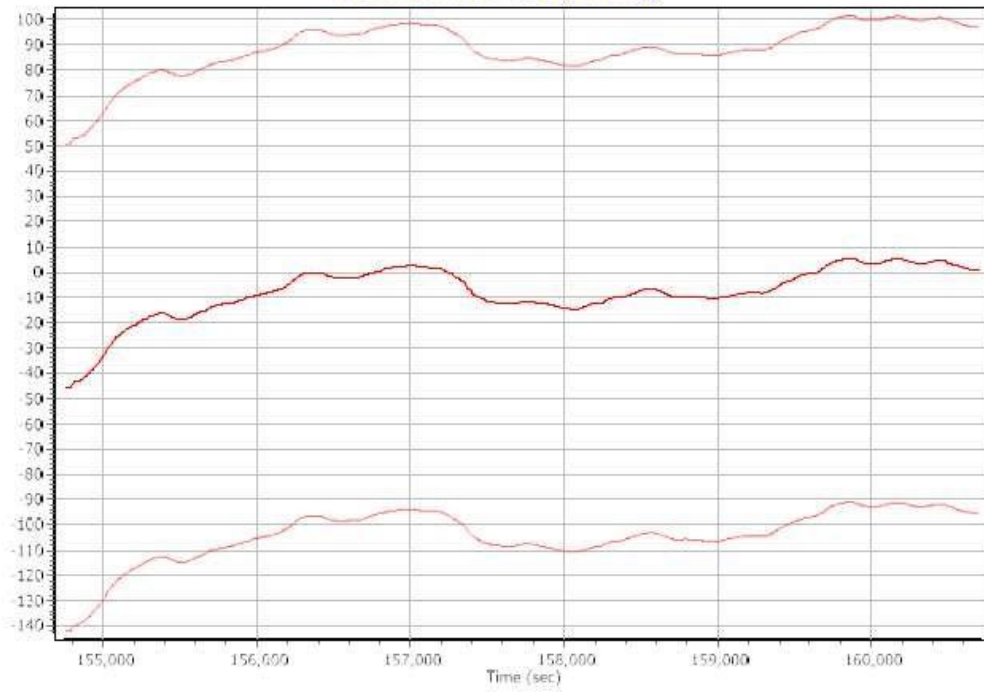
x accelerometer bias (micro-g)



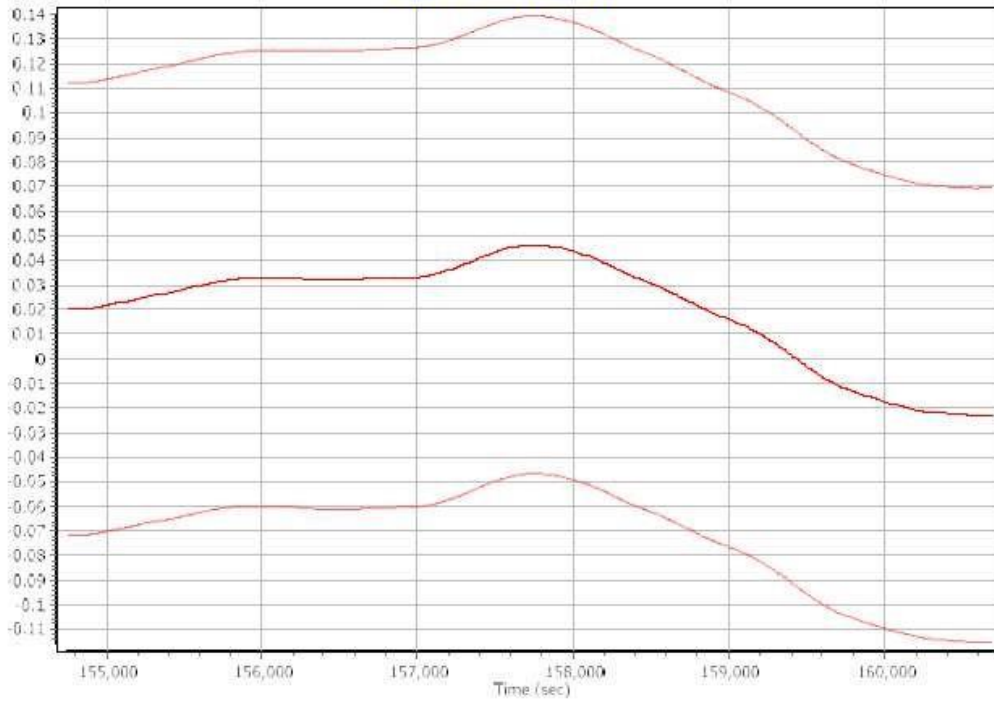
y accelerometer bias (micro-g)

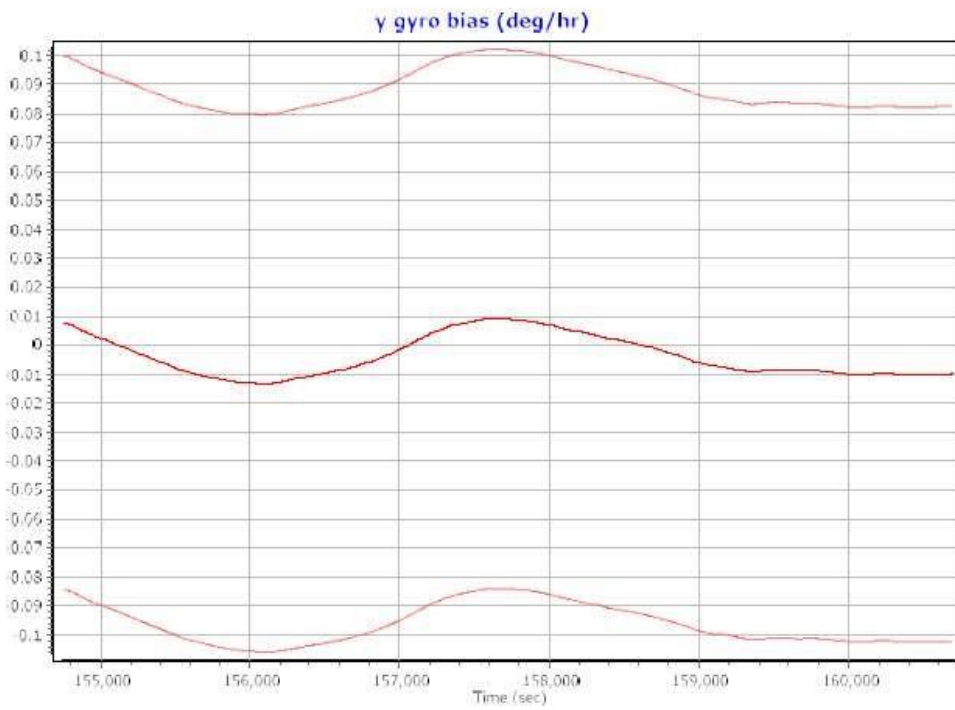


z accelerometer bias (micro-g)



x gyro bias (deg/hr)





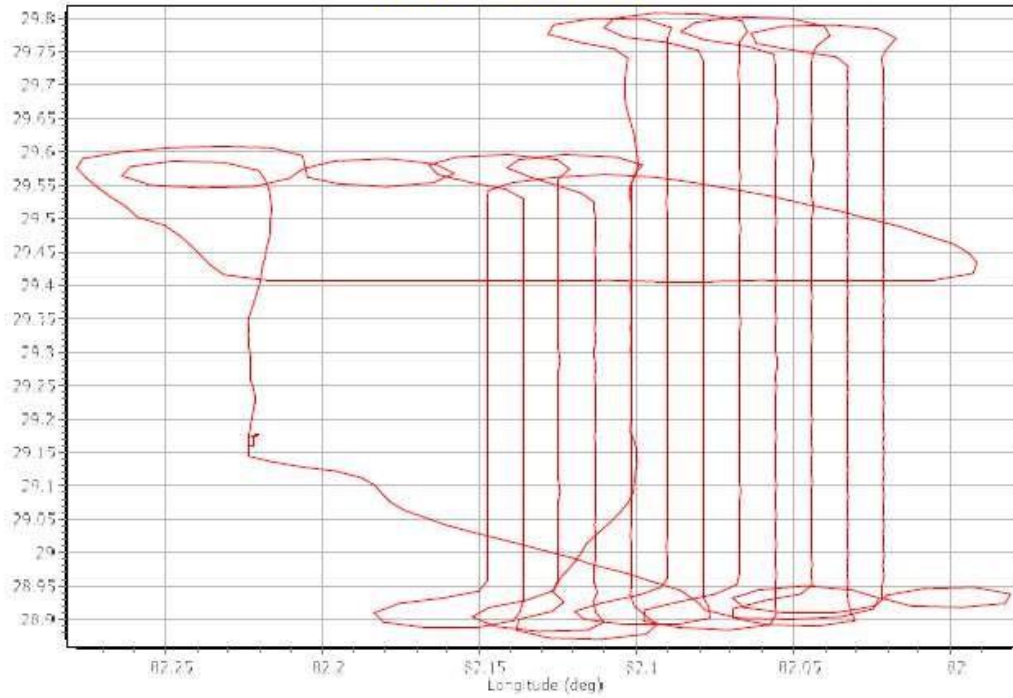
6219105a1 Processing Summary

```

1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/19/19 Time : 08:07:14
5 -----
6 IINPP is using imported GNSS channel assignments
7 -----
8 Extracted data path :
9 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219105a\05_INS-GPS_PROC\01_POS\6219105a4\6219105a4
10 \Extract
11 Extracted data kernel : 6219105a4
12 Processed data path :
13 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219105a\05_INS-GPS_PROC\01_POS\6219105a4\6219105a4
14 \Proc
15 Processed data kernel : 6219105a4
16 Processing start time : 140060.000
17 Processing end time : 160696.000
18 -----
19 Selected GNSS mode : IN-Fusion SmartBase
20 Selected base station : ASB
21 Selected subsystems : SNV
22 : Primary GNSS
23 : Base GNSS
24 : Gimbal Encoder
25 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
26 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
27 Multipath setting : LOW
28 Stabilized mount to primary GNSS lever arm : 0.052 -0.190 -1.281
29 Base GNSS coordinates : 29.138559438 -82.317657511 1101.669
30 Dynamic lever arm : ACTIVE
31 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
32 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
33 -----
34 Mask angle : 10.000
35 -----
36 160695.996 : New or modified IIN install data
37 Reference-IMU lever arm: 0.00 0.00 0.00
38 Reference-primary GNSS lever arm: 0.05 -0.19 -1.28
39 Multipath environment: LOW
40 160695.996 : Reverse-time processing started
41 160694.995 : SmartBase observables in use
42 160694.995 : IIN primary GNSS solution in use.
43 160694.995 : IIN primary GNSS observables in use.
44 160694.995 : IIN in Fixed NL RTK mode.
45 160194.996 : IIN WL ambiguity failure cleared
46 160194.996 : IIN NL ambiguity failure cleared
47 154738.000 : WARNING : Continuous primary GNSS position measurement rejections
48 152230.000 : IIN WL ambiguity failure cleared
49 152230.000 : IIN NL ambiguity failure cleared
50 144733.995 : IIN NL ambiguity failure cleared
51 142460.000 : WARNING : Gap in primary GNSS navigation data
52 142458.998 : IIN primary GNSS solution not in use.
53 142457.998 : IIN primary GNSS solution in use.
54 141314.000 : WARNING : Gap in primary GNSS navigation data
55 141312.998 : IIN primary GNSS solution not in use.
56 141311.997 : IIN primary GNSS solution in use.
57 141310.997 : IIN WL ambiguity failure cleared
58 140058.995 : Processing ended
59 -----
60 Termination status : Normal
61 Execution time : 71.90
62 -----
63 Processing completed.

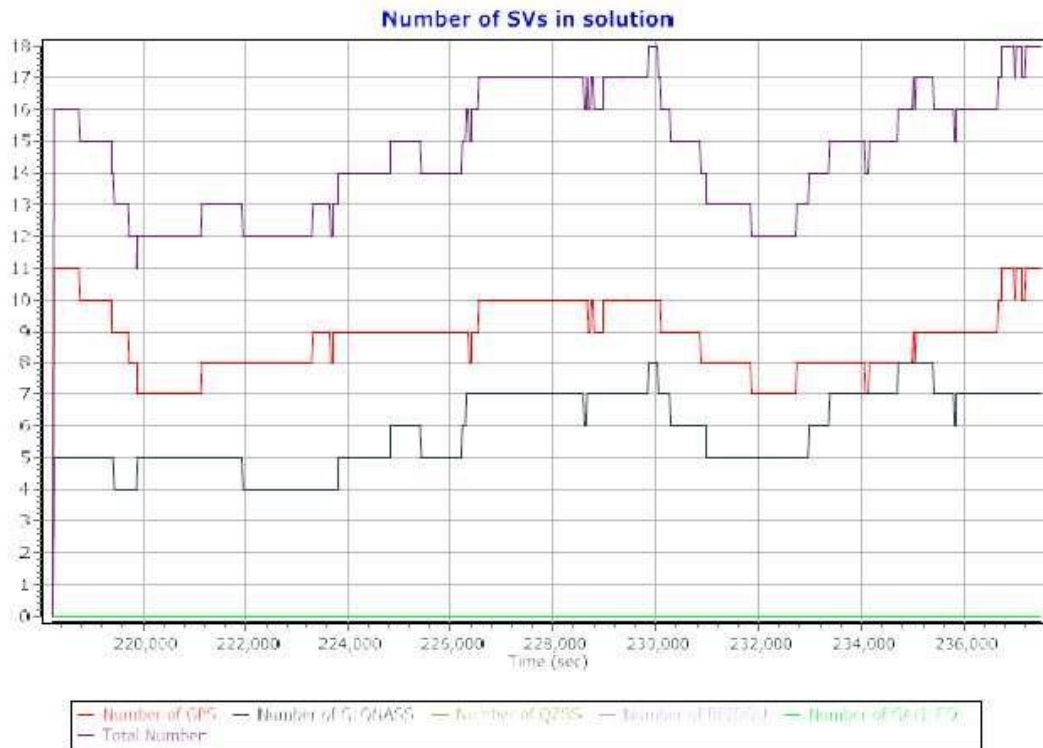
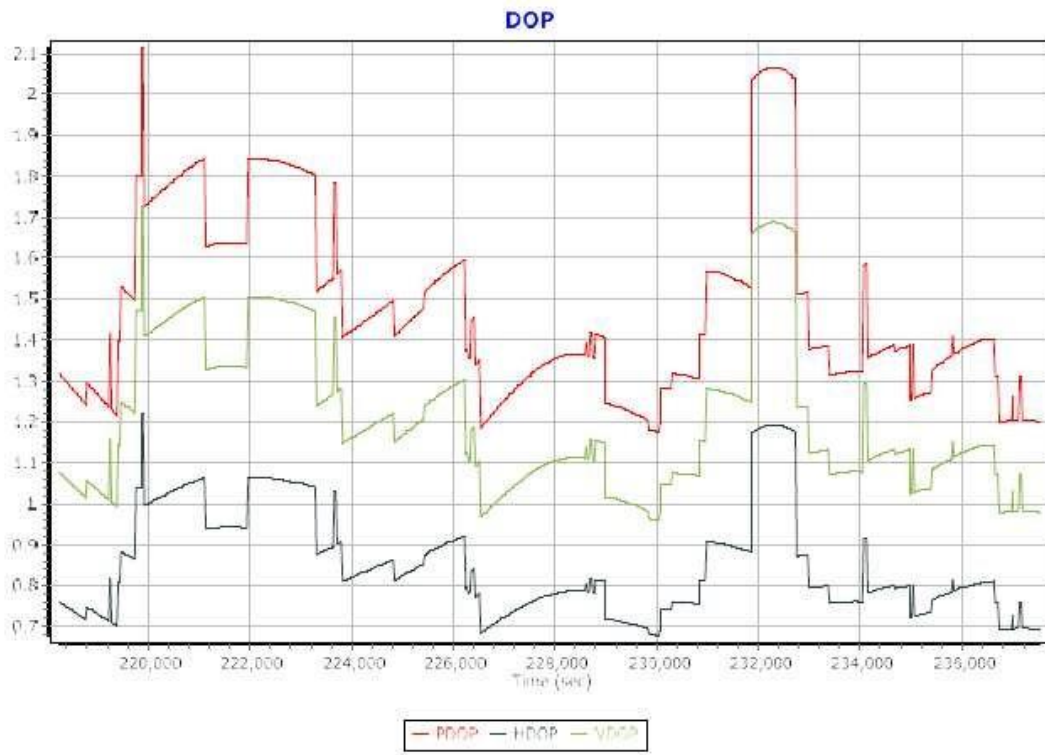
```

Top View: Latitude (deg)



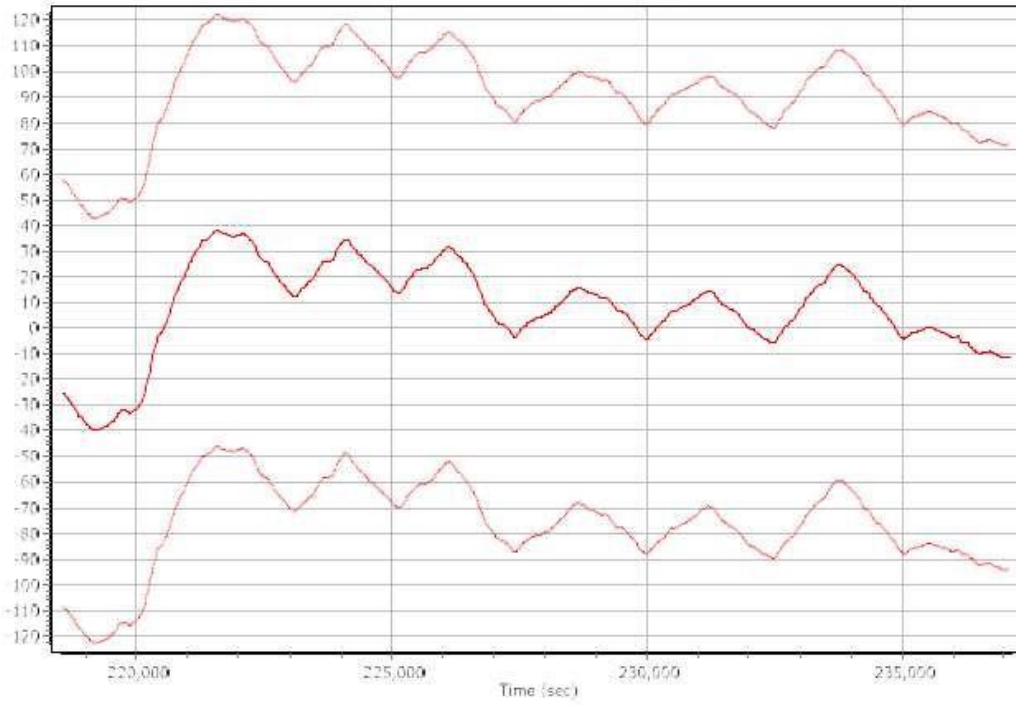
Forward/Reverse Separation



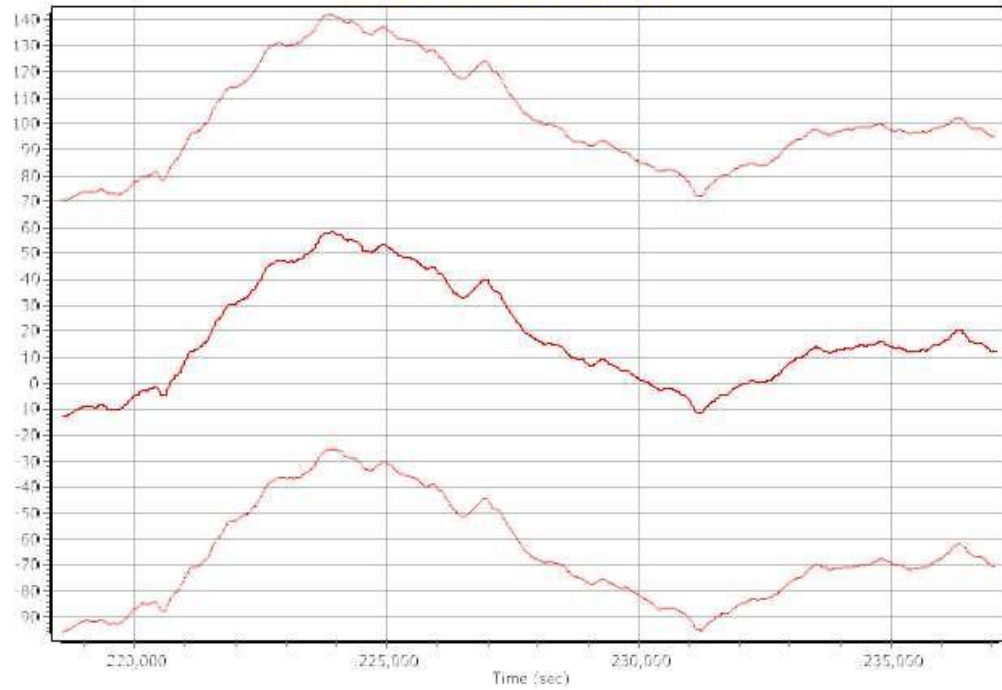


6219106a Sensor Errors

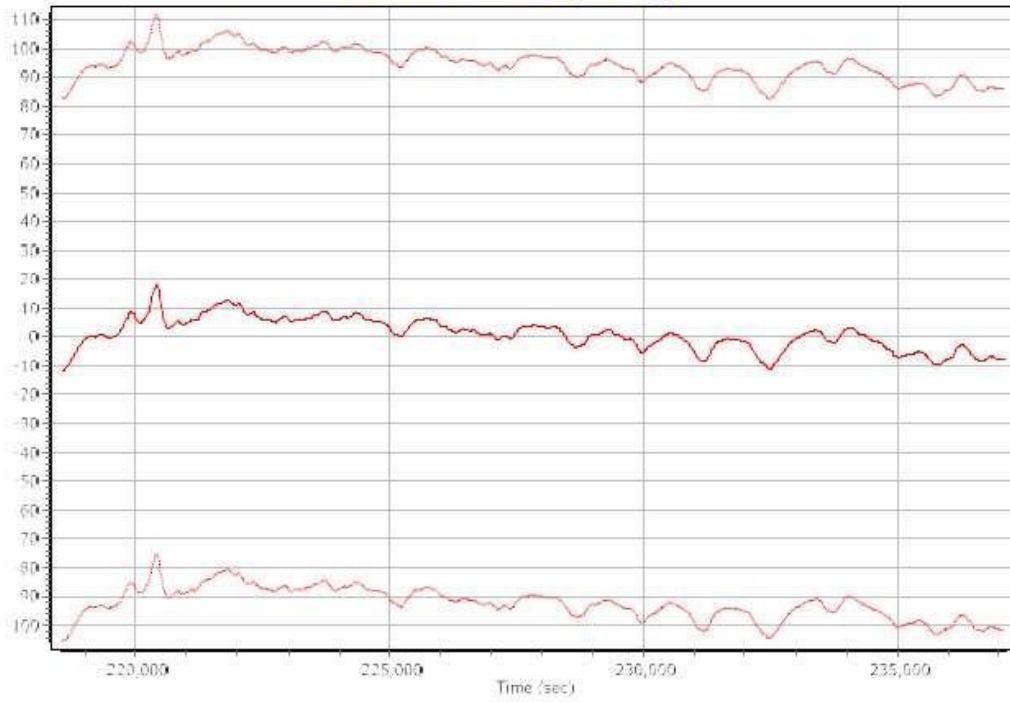
x accelerometer bias (micro-g)



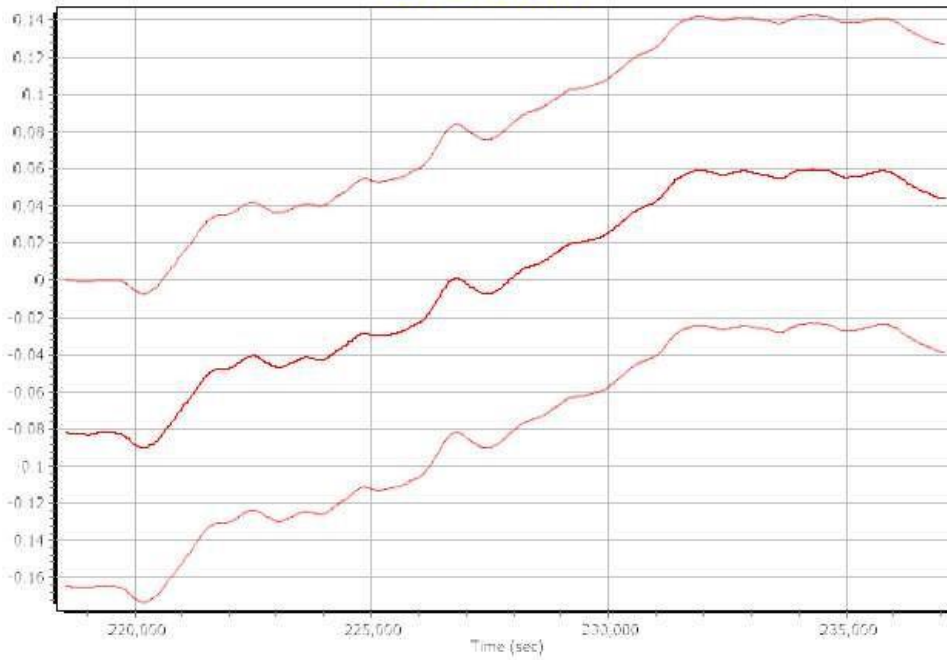
y accelerometer bias (micro-g)

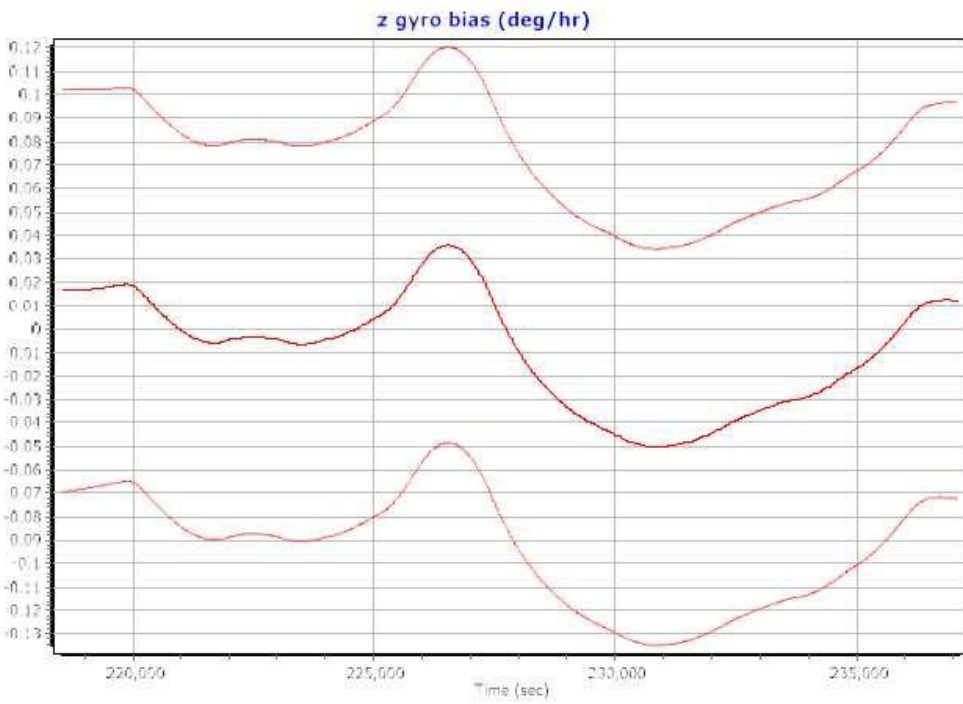
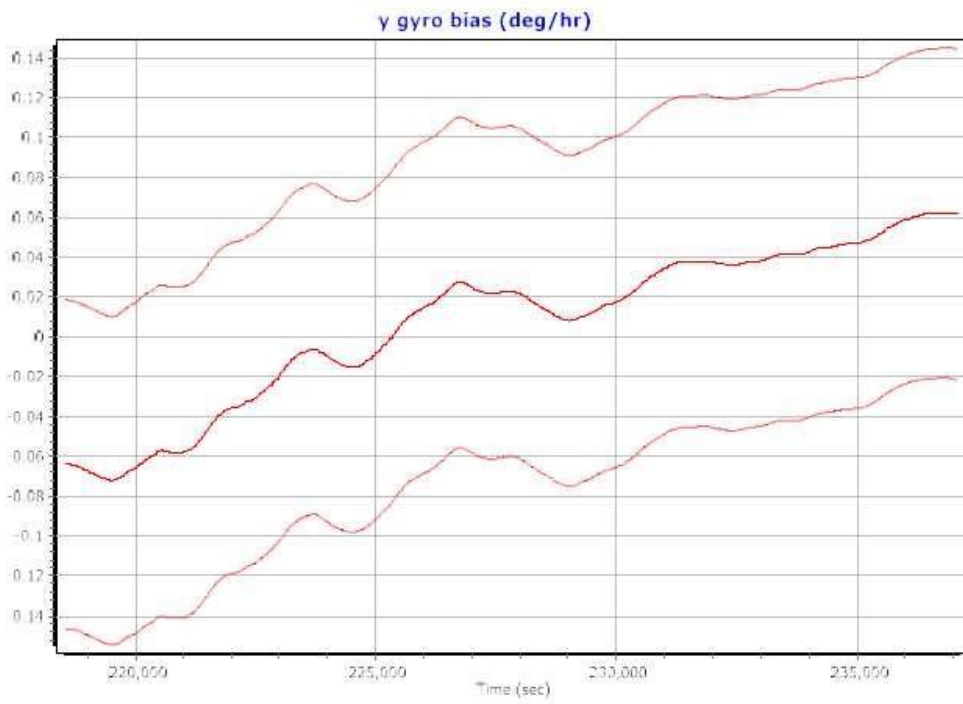


z accelerometer bias (micro-g)



x gyro bias (deg/hr)





6219106a Processing Summary

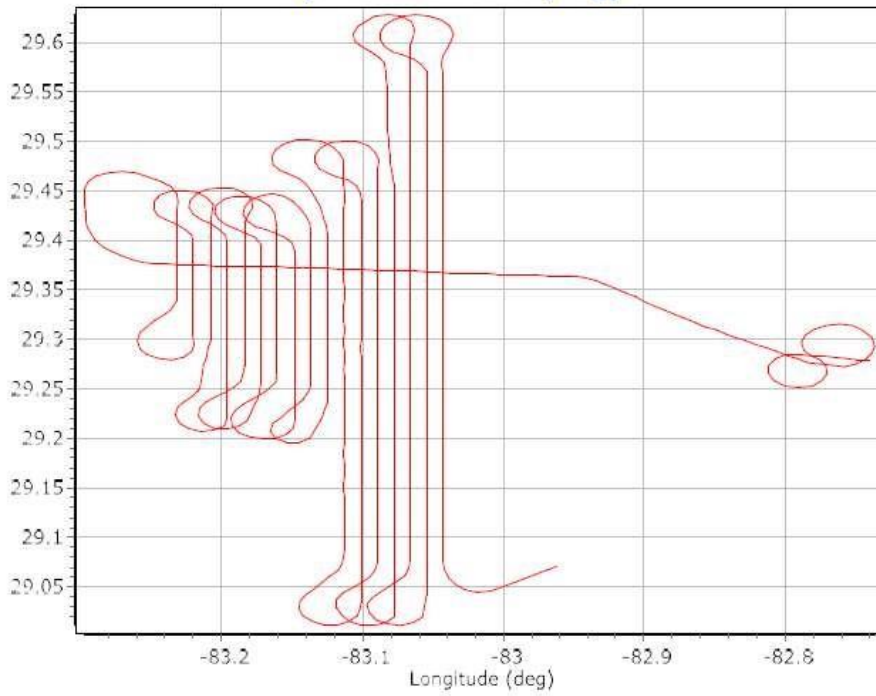
```

1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/22/19 Time : 10:52:31
5 -----
6
7 Extracted data path :
8 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219106a\05_INS-GPS_PROC\01_POS\6219106a\6219106a\Ex
9 tract
10 Extracted data kernel : 6219106a
11 Processed data path :
12 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219106a\05_INS-GPS_PROC\01_POS\6219106a\6219106a\Pr
13 ocessed
14 Processed data kernel : 6219106a
15 Processing start time : 218561.631
16 Processing end time : 237093.000
17 -----
18
19 Selected GNSS mode : IN-Fusion SmartBase
20 Selected base station : ASB
21 Selected subsystems : IMU
22 : Primary GNSS
23 : Base GNSS
24 : Gimbal Encoder
25 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
26 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
27 Multipath setting : LOW
28 Stabilized mount to primary GNSS lever arm : 0.051 -0.188 -1.225
29 Base GNSS coordinates : 29.299127276 -82.105161311 1128.709
30 Dynamic lever arm : ACTIVE
31 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
32 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
33 -----
34
35 Mask angle : 10.000
36 -----
37
38 218561.636 : New or modified IIN install data
39 Reference-IMU lever arm: 0.00 0.00 0.00
40 Reference-primary GNSS lever arm: 0.05 -0.18 -1.23
41 Multipath environment: LOW
42 218561.636 : Forward-time processing started
43 218561.731 : IIN coarse leveling started.
44 218562.731 : IIN coarse leveling ended.
45 218562.731 : IIN navigator initialized.
46 218562.731 : IIN degraded navigation solution.
47 218562.731 : IIN initial position valid.
48 218563.001 : SmartBase observables in use
49 218563.001 : IIN primary GNSS solution in use.
50 218563.001 : IIN primary GNSS observables in use.
51 218563.001 : IIN in Fixed NL RTK mode.
52 218563.101 : IIN navigator alignment active.
53 219206.000 : WARNING : Gap in primary GNSS navigation data
54 219207.001 : IIN primary GNSS solution not in use.
55 219208.001 : IIN primary GNSS solution in use.
56 219209.001 : IIN WL ambiguity failure cleared
57 230835.005 : IIN WL ambiguity failure cleared
58 235958.004 : IIN NL ambiguity failure cleared
59 237093.005 : Processing ended
60 -----
61
62 Termination status : Normal
63 Execution time : 40.90
64 -----
65
66 Processing completed.
67 -----

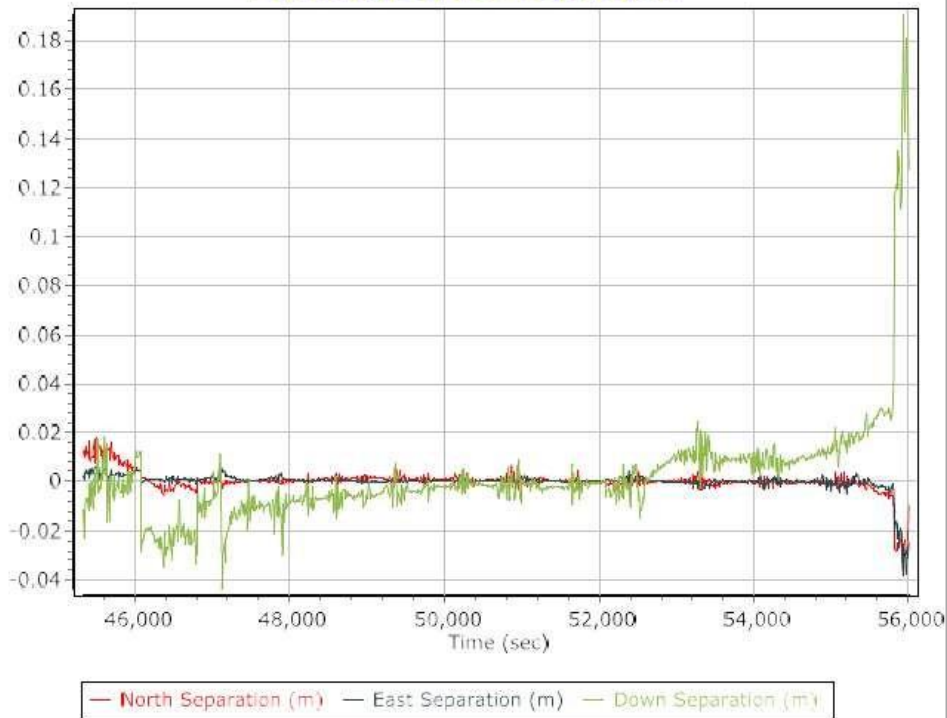
```

621911a GNSS Processing

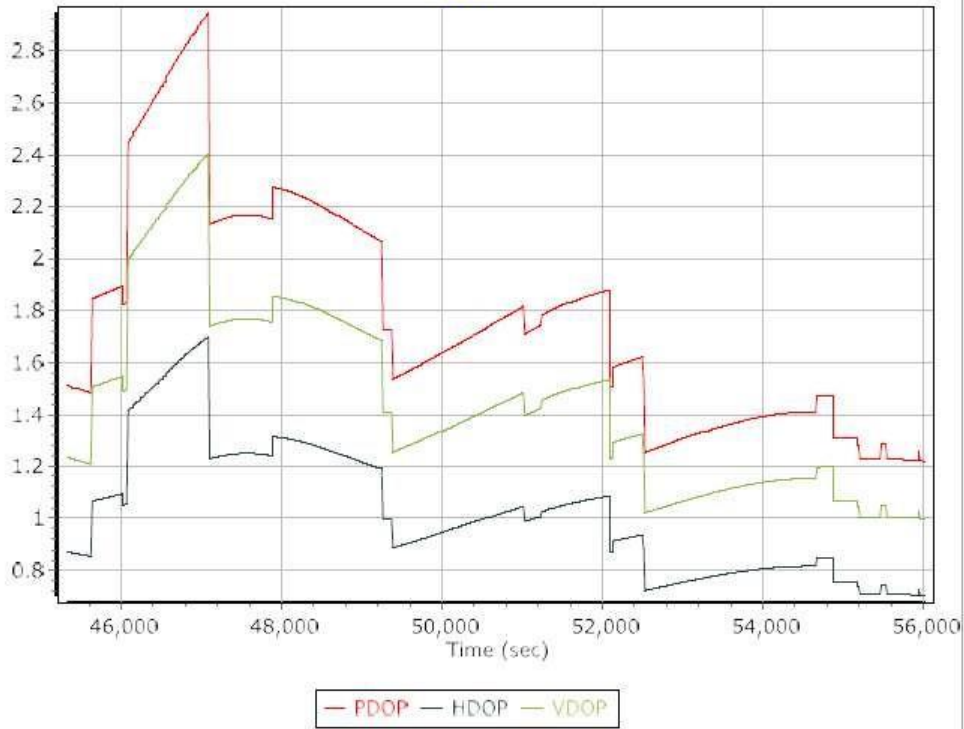
Top View: Latitude (deg)



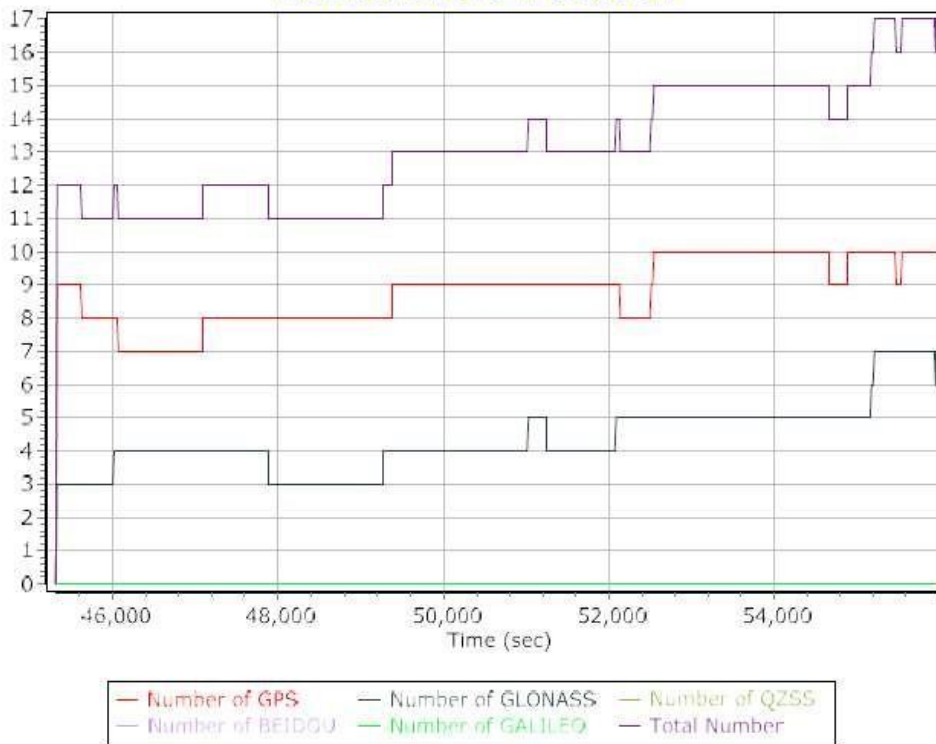
Forward/Reverse Separation



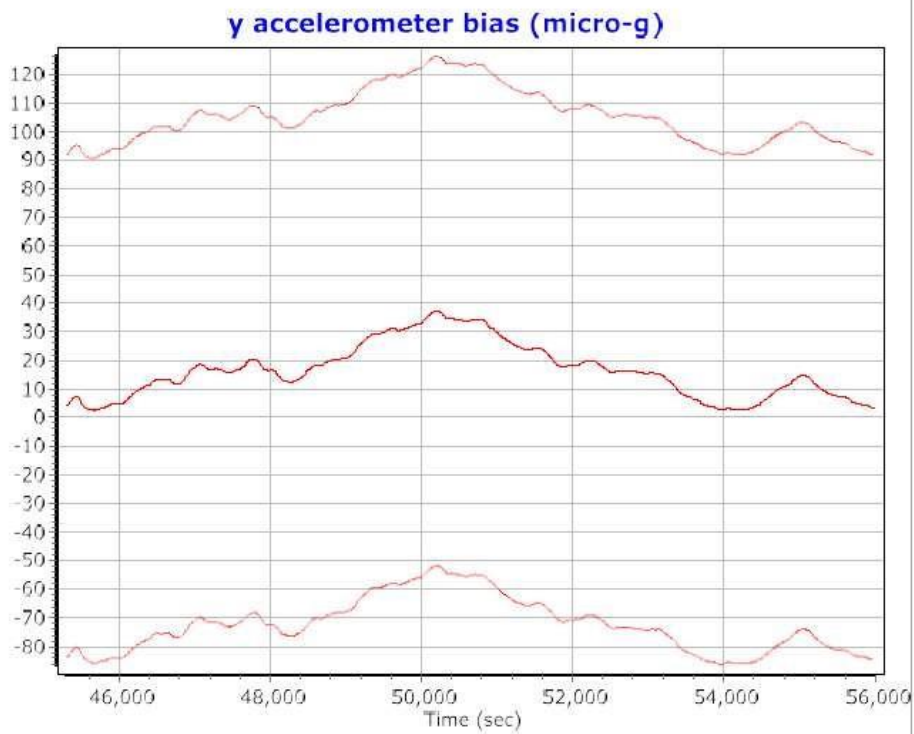
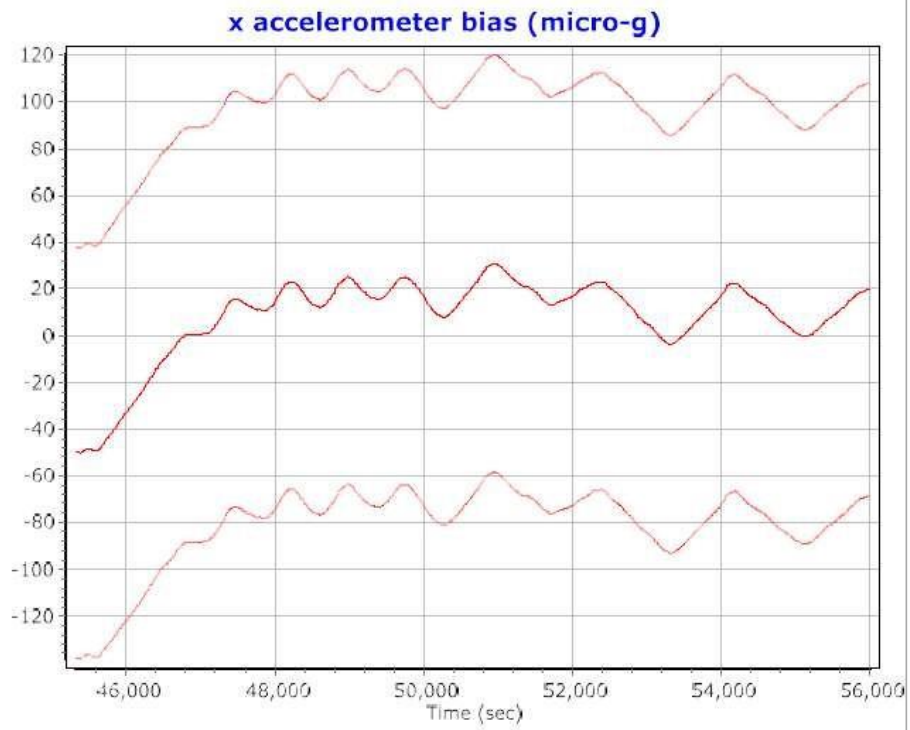
DOP



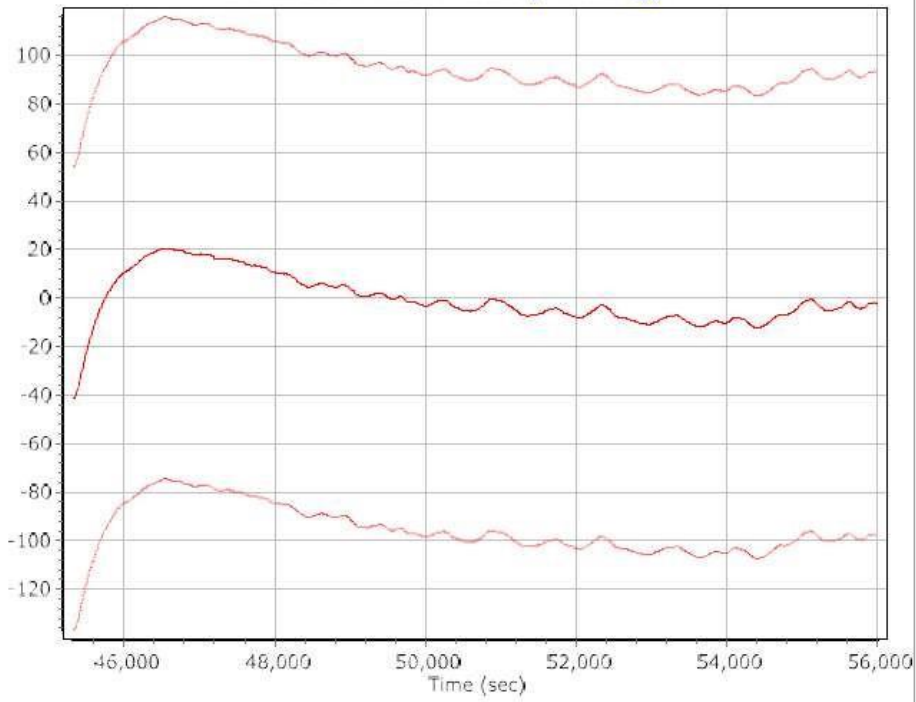
Number of SVs in solution



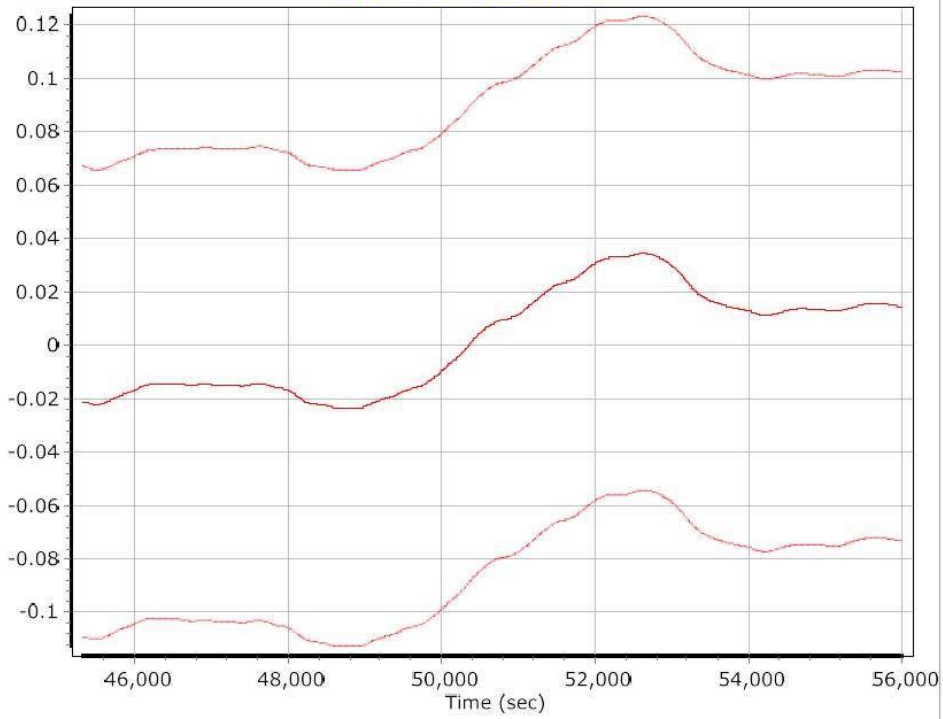
621911a Sensor Errors

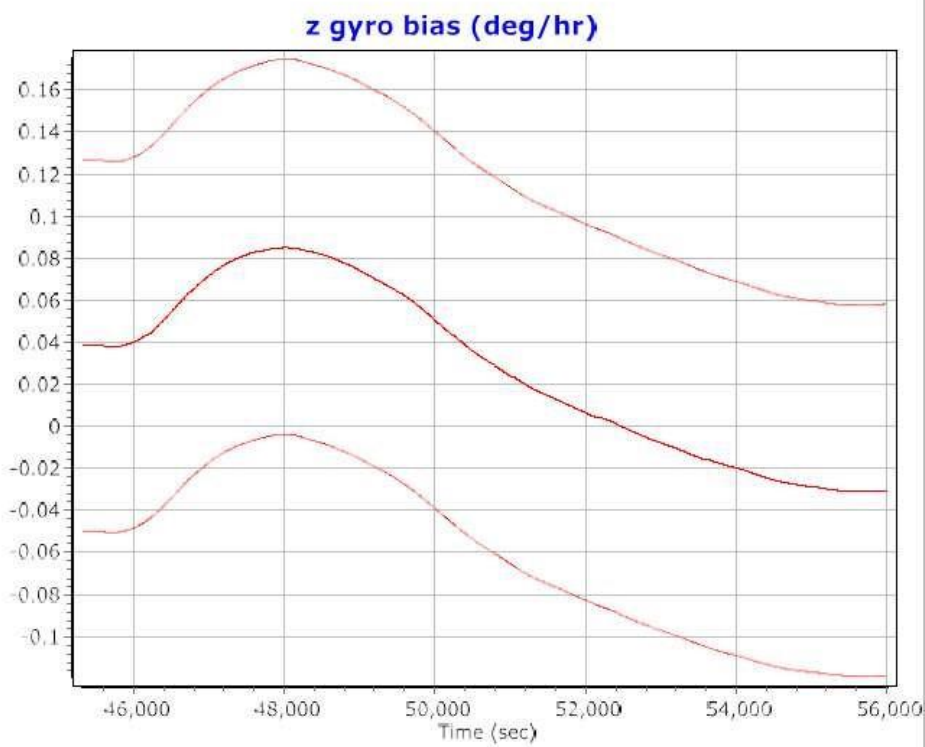
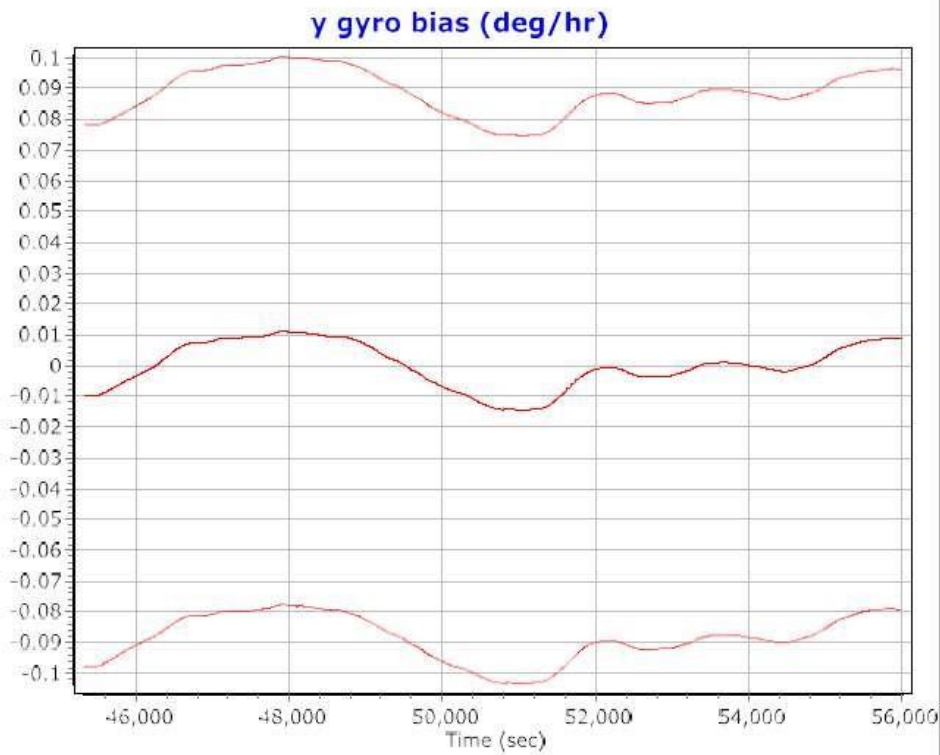


z accelerometer bias (micro-g)



x gyro bias (deg/hr)





```

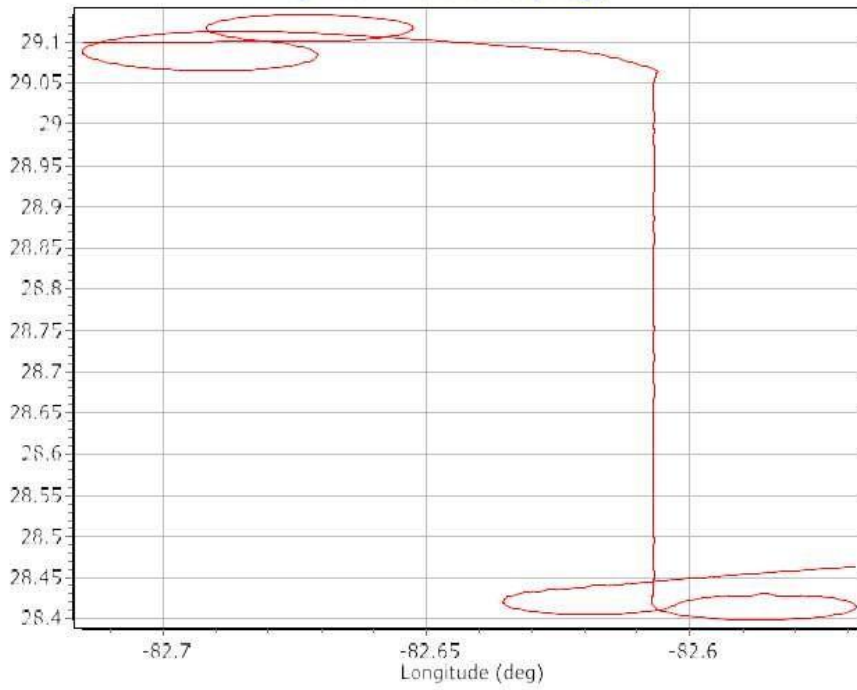
1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/24/19 Time : 15:49:36
5 -----
6 -----
7 Extracted data path :
8 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219111a\05_INS-GPS_PROC\01_POS\6219211a\6219111a\Ex
9 tract
10 Extracted data kernel : 6219111a
11 Processed data path :
12 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219111a\05_INS-GPS_PROC\01_POS\6219211a\6219111a\Pr
13 oc
14 Processed data kernel : 6219111a
15 Processing start time : 45319.332
16 Processing end time : 55999.000
17 -----
18 -----
19 Selected GNSS mode : IN-Fusion SmartBase
20 Selected base station : ASB
21 Selected subsystems : IMU
22 : Primary GNSS
23 : Base GNSS
24 : Gimbal Encoder
25 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
26 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
27 Multipath setting : LOW
28 Stabilized mount to primary GNSS lever arm : 0.046 -0.198 -1.280
29 Base GNSS coordinates : 29.315770227 -93.102431162 1247.027
30 Dynamic lever arm : ACTIVE
31 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
32 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
33 -----
34 -----
35 Mask angle : 10.000
36 -----
37 -----
38 45319.332 : New or modified IIN install data
39 Reference-IMU lever arm: 0.00 0.00 0.00
40 Reference-primary GNSS lever arm: 0.05 -0.20 -1.28
41 Multipath environment: LOW
42 45319.332 : Forward-time processing started
43 45319.427 : IIN coarse leveling started.
44 45320.428 : IIN coarse leveling ended.
45 45320.428 : IIN navigator initialized.
46 45320.428 : IIN degraded navigation solution.
47 45320.428 : IIN initial position valid.
48 45321.003 : SmartBase observables in use
49 45321.003 : IIN primary GNSS solution in use.
50 45321.003 : IIN primary GNSS observables in use.
51 45321.003 : IIN in Fixed NL RTK mode.
52 45321.103 : IIN navigator alignment active.
53 46398.000 : WARNING : Gap in primary GNSS navigation data
54 46399.003 : IIN primary GNSS solution not in use.
55 46400.004 : IIN primary GNSS solution in use.
56 46504.000 : WARNING : Gap in primary GNSS navigation data
57 46505.003 : IIN primary GNSS solution not in use.
58 46506.003 : IIN primary GNSS solution in use.
59 46552.000 : WARNING : Gap in primary GNSS navigation data
60 46553.004 : IIN primary GNSS solution not in use.
61 46554.004 : IIN primary GNSS solution in use.
62 46556.000 : WARNING : Gap in primary GNSS navigation data
63 46557.004 : IIN primary GNSS solution not in use.
64 46558.005 : IIN primary GNSS solution in use.
65 51978.000 : WARNING : Gap in primary GNSS navigation data
66 51979.002 : IIN primary GNSS solution not in use.
67 51980.002 : IIN primary GNSS solution in use.
68 52280.000 : WARNING : Gap in primary GNSS navigation data
69 52281.003 : IIN primary GNSS solution not in use.
70 52282.003 : IIN primary GNSS solution in use.

```

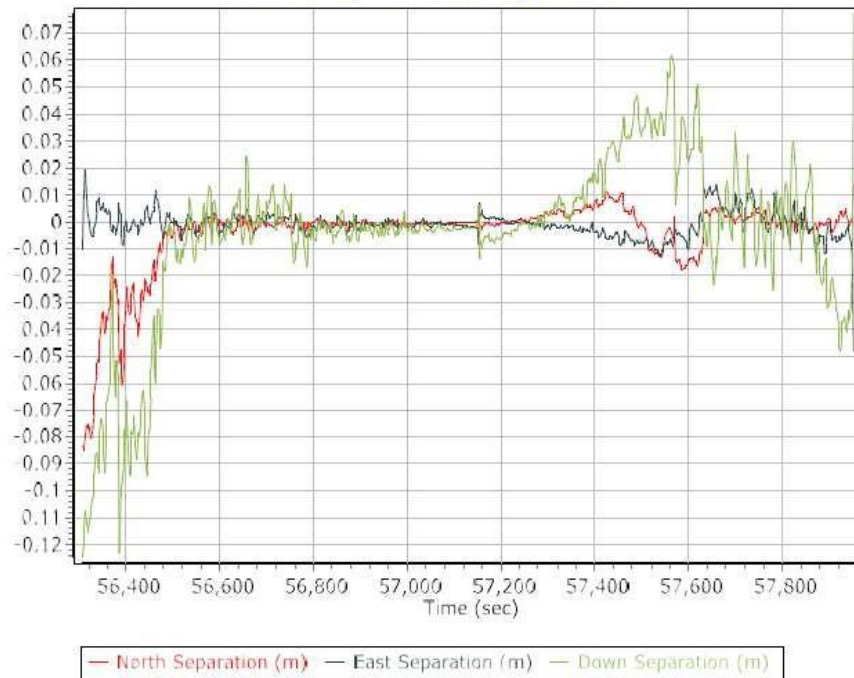
```
66 82282.000 : WARNING : Gap in primary GNSS navigation data
67 82283.004 : IIN primary GNSS solution not in use.
68 82284.004 : IIN primary GNSS solution in use.
69 82922.000 : WARNING : Gap in primary GNSS navigation data
70 82923.004 : IIN primary GNSS solution not in use.
71 82924.008 : IIN primary GNSS solution in use.
72 83780.000 : WARNING : Gap in primary GNSS navigation data
73 83781.002 : IIN primary GNSS solution not in use.
74 83782.002 : IIN primary GNSS solution in use.
75 83818.000 : WARNING : Gap in primary GNSS navigation data
76 83819.001 : IIN primary GNSS solution not in use.
77 83820.001 : IIN primary GNSS solution in use.
78 84154.000 : WARNING : Gap in primary GNSS navigation data
79 84155.000 : IIN primary GNSS solution not in use.
80 84156.000 : IIN primary GNSS solution in use.
81 85008.000 : WARNING : Gap in primary GNSS navigation data
82 85009.002 : IIN primary GNSS solution not in use.
83 85010.002 : IIN primary GNSS solution in use.
84 85154.000 : WARNING : Gap in primary GNSS navigation data
85 85155.001 : IIN primary GNSS solution not in use.
86 85156.002 : IIN primary GNSS solution in use.
87 85999.001 : Processing ended
88 -----
89 Termination status : Normal
90 Execution time      : 25.28
91 -----
92 Processing completed.
93
```

621911a2 GNSS Processing

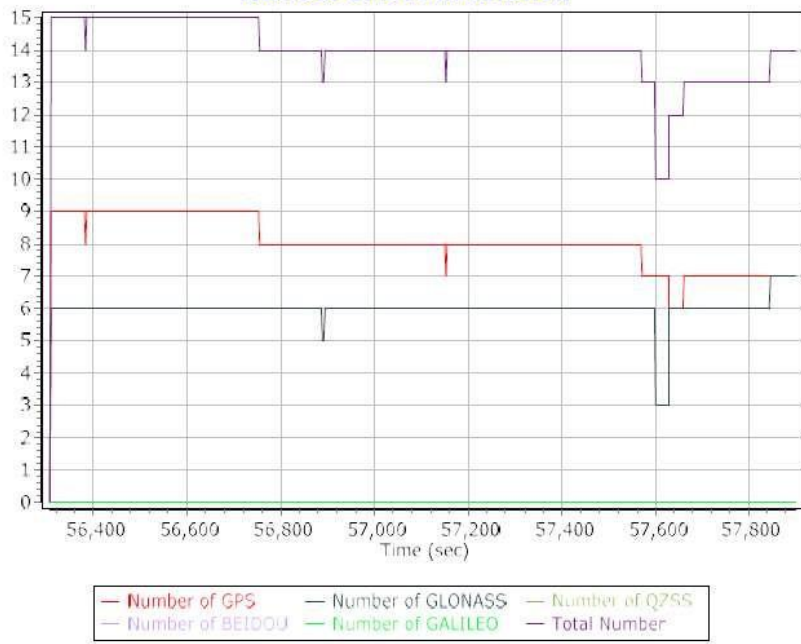
Top View: Latitude (deg)



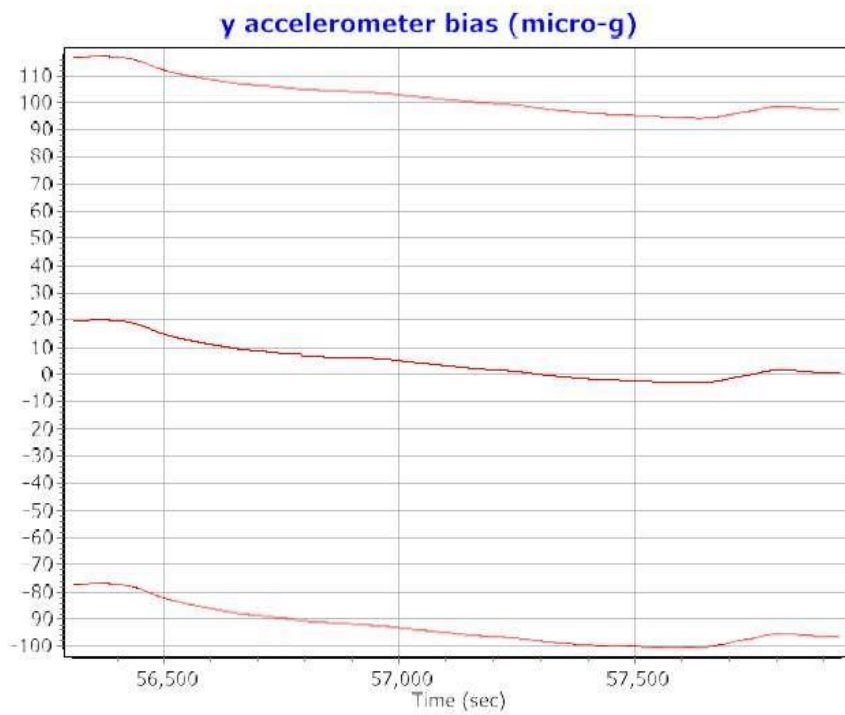
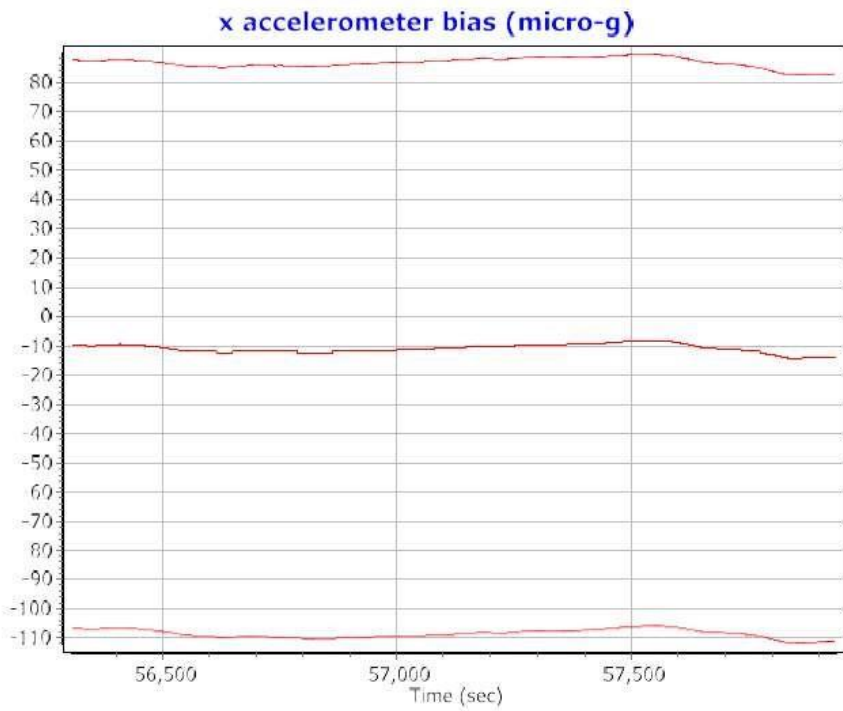
Forward/Reverse Separation



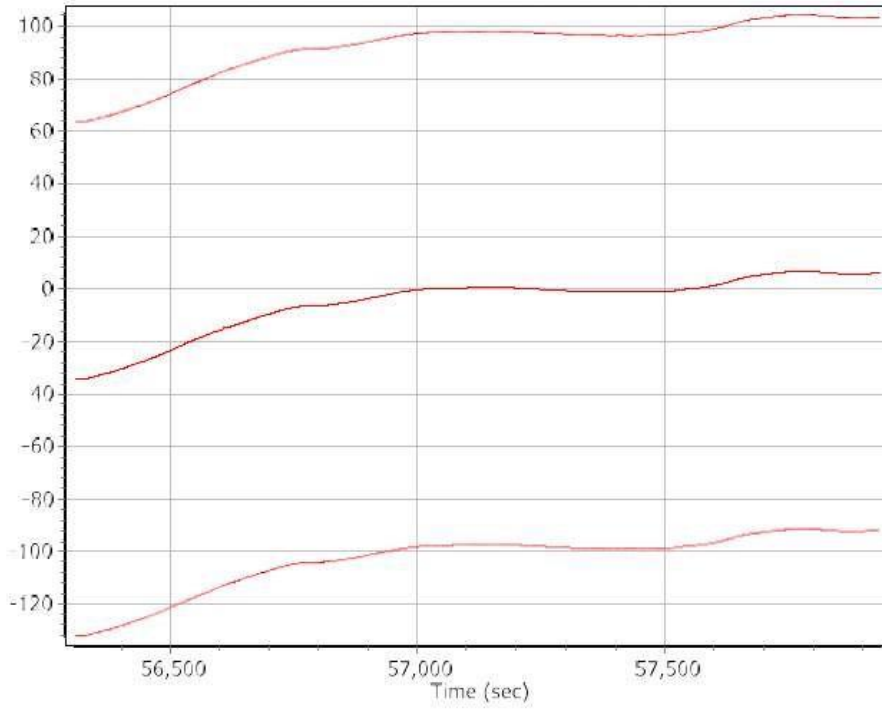
Number of SVs in solution



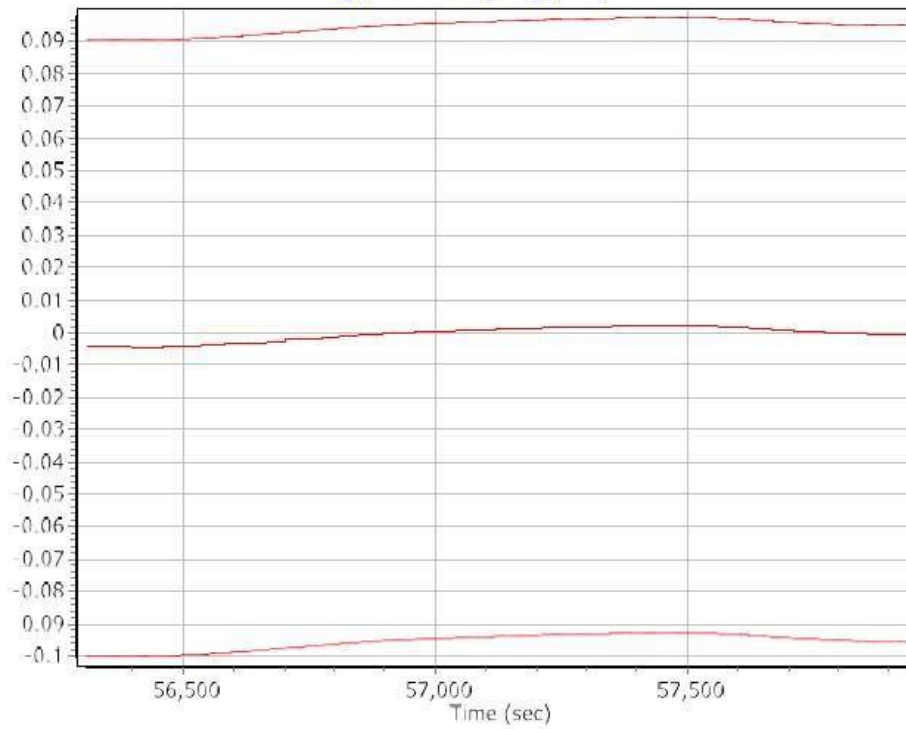
6219111a2 Sensor Errors



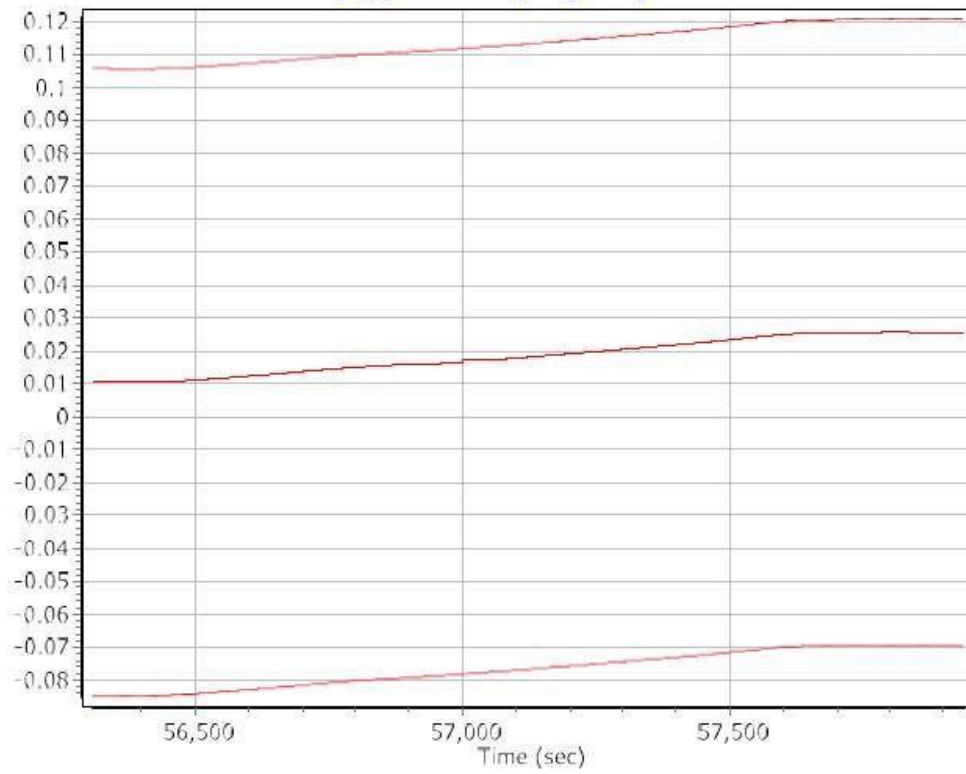
z accelerometer bias (micro-g)



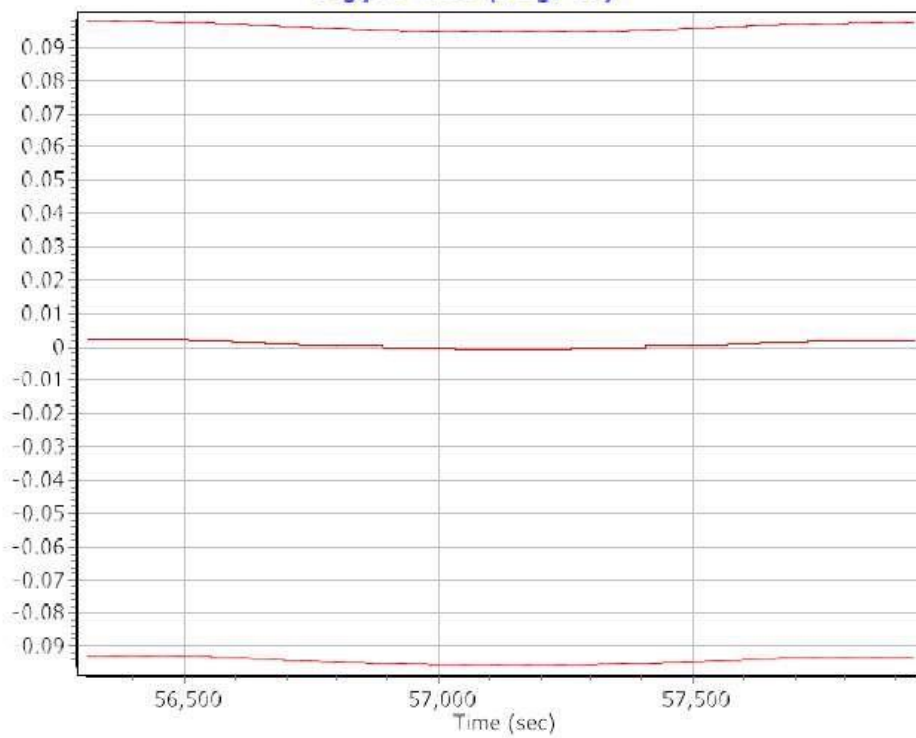
x gyro bias (deg/hr)



y gyro bias (deg/hr)



z gyro bias (deg/hr)

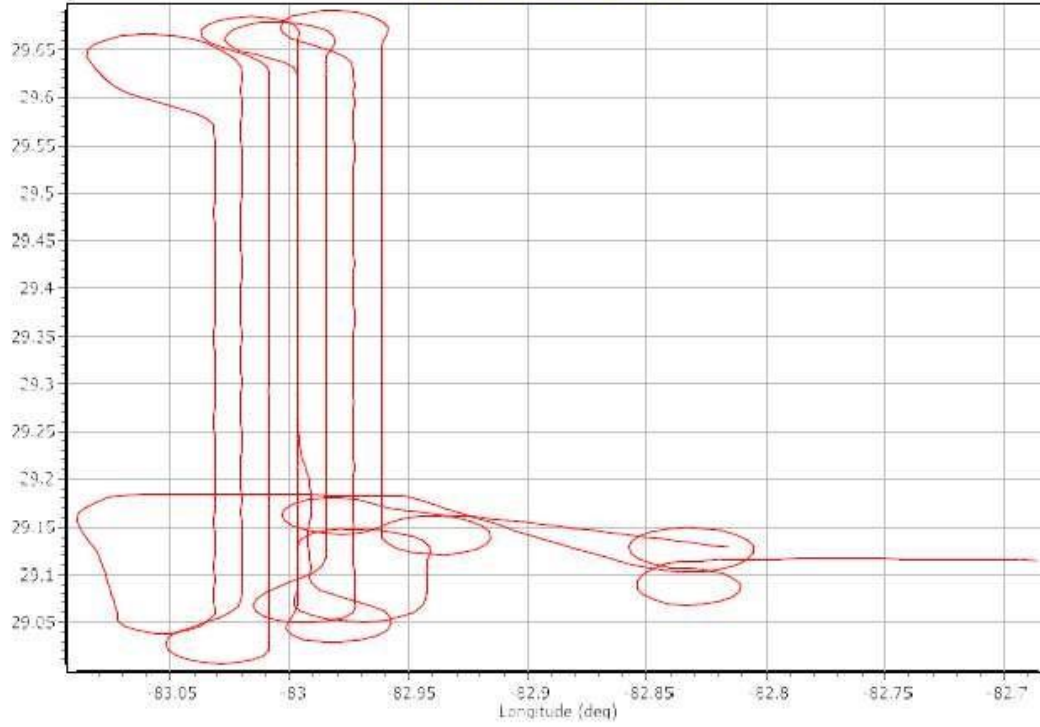



```

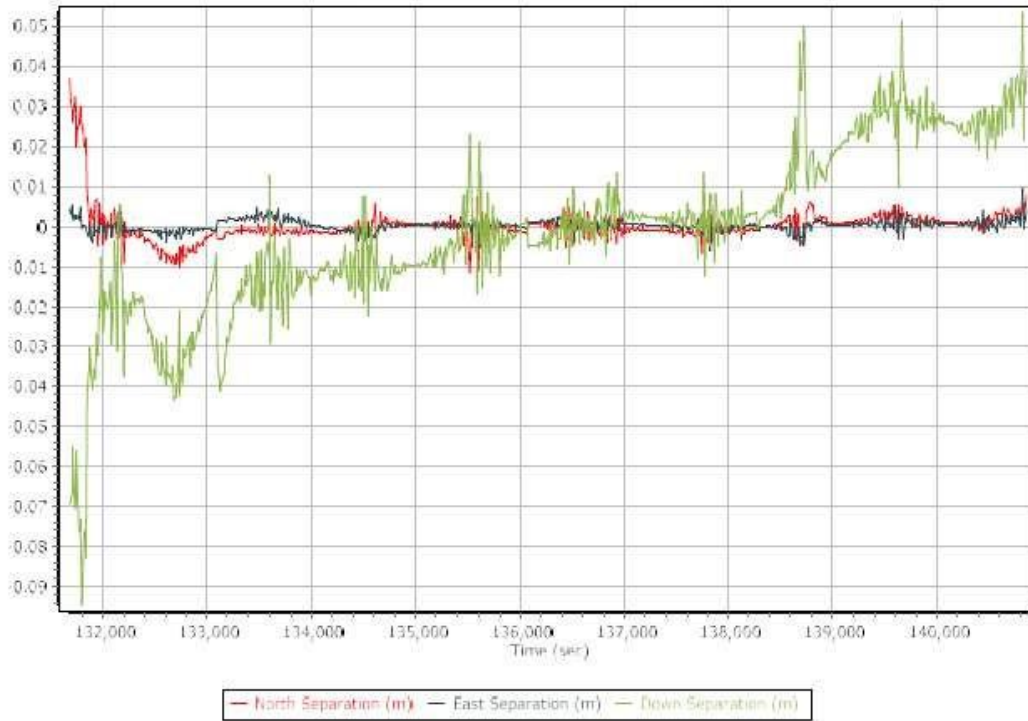
1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/24/19 Time : 16:38:42
5 -----
6
7 Extracted data path :
8 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219111a\06_INS-GPS_PROC\01_POS\6219111a2\6219111a2
9 \Extract
10 Extracted data kernel : 6219111a2
11 Processed data path :
12 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219111a\06_INS-GPS_PROC\01_POS\6219111a2\6219111a2
13 \Proc
14 Processed data kernel : 6219111a2
15 Processing start time : 56308.899
16 Processing end time : 57934.000
17 -----
18
19 Selected GNSS mode : IN-Fusion SmartBase
20 Selected base station : ASB
21 Selected subsystems : IMU
22 : Primary GNSS
23 : Base GNSS
24 : Gimbal Encoder
25
26 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
27 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
28 Multipath setting : LOW
29 Stabilized mount to primary GNSS lever arm : 0.030 -0.219 -1.275
30 Base GNSS coordinates : 28.790541162 -82.625838468 1262.247
31 Dynamic lever arm : ACTIVE
32 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
33 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
34 -----
35
36 Mask angle : 10.000
37 -----
38
39 56308.899 : New or modified IIN install data
40 Reference-IMU lever arm: 0.00 0.00 0.00
41 Reference-primary GNSS lever arm: 0.03 -0.22 -1.27
42 Multipath environment: LOW
43 56308.899 : Forward-time processing started
44 56308.994 : IIN coarse leveling started.
45 56309.994 : IIN coarse leveling ended.
46 56309.994 : IIN navigator initialized.
47 56309.994 : IIN degraded navigation solution.
48 56309.994 : IIN initial position valid.
49 56310.004 : SmartBase observables in use
50 56310.004 : IIN primary GNSS solution in use.
51 56310.004 : IIN primary GNSS observables in use.
52 56310.004 : IIN in Fixed NL RTK mode.
53 56310.104 : IIN navigator alignment active.
54 56356.000 : WARNING : Gap in primary GNSS navigation data
55 56357.001 : IIN primary GNSS solution not in use.
56 56357.001 : IIN in Fixed WL RTK mode.
57 56358.001 : IIN primary GNSS solution in use.
58 56358.001 : IIN in Fixed NL RTK mode.
59 56554.000 : WARNING : Gap in primary GNSS navigation data
60 56555.002 : IIN primary GNSS solution not in use.
61 56556.003 : IIN primary GNSS solution in use.
62 57934.004 : Processing ended
63 -----
64
65 Termination status : Normal
66 Execution time : 4.42
67 -----
68
69 Processing completed.
70 -----

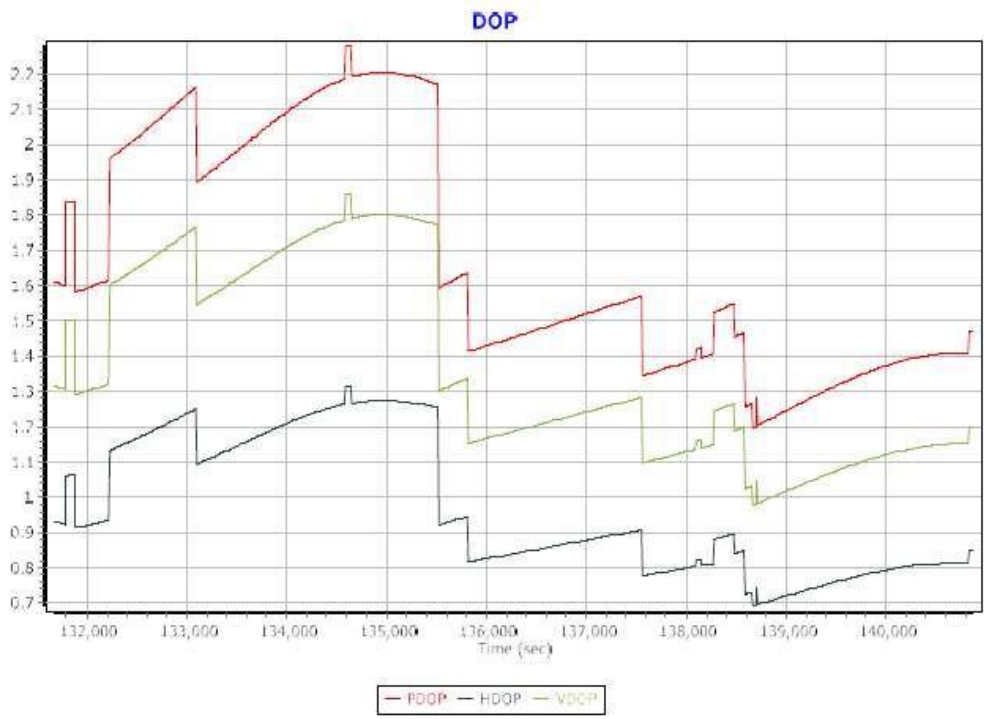
```

Top View: Latitude (deg)



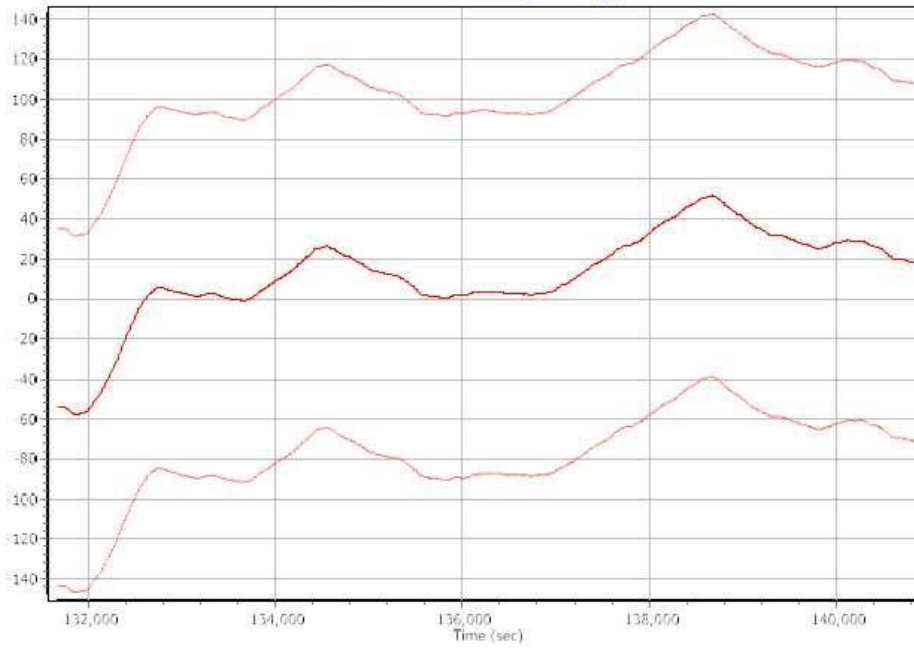
Forward/Reverse Separation



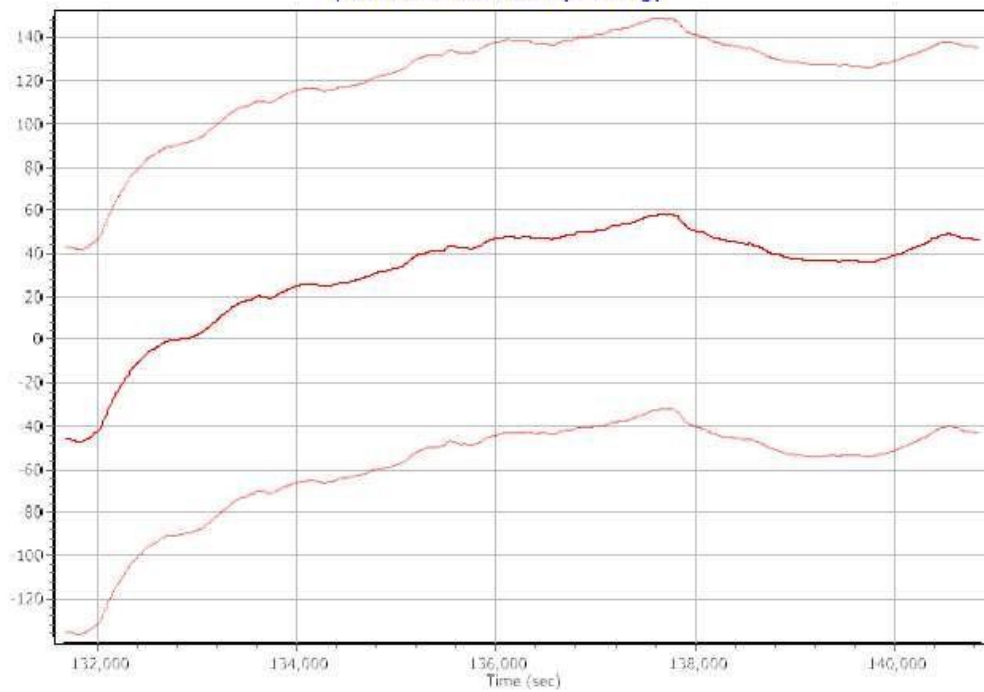


6219112a Sensor Errors

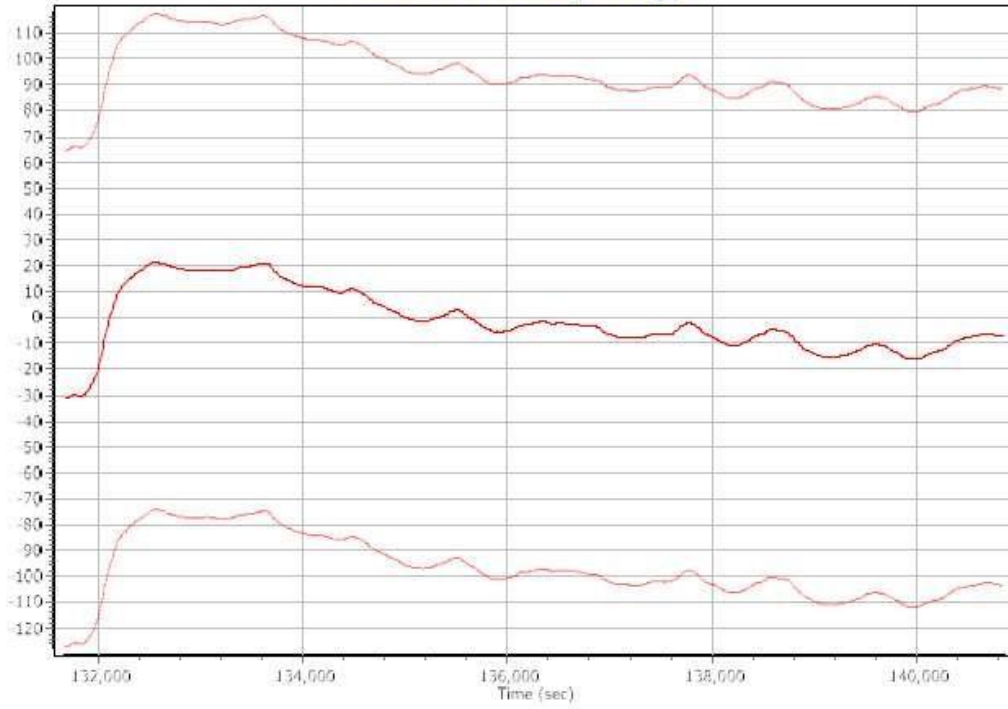
x accelerometer bias (micro-g)



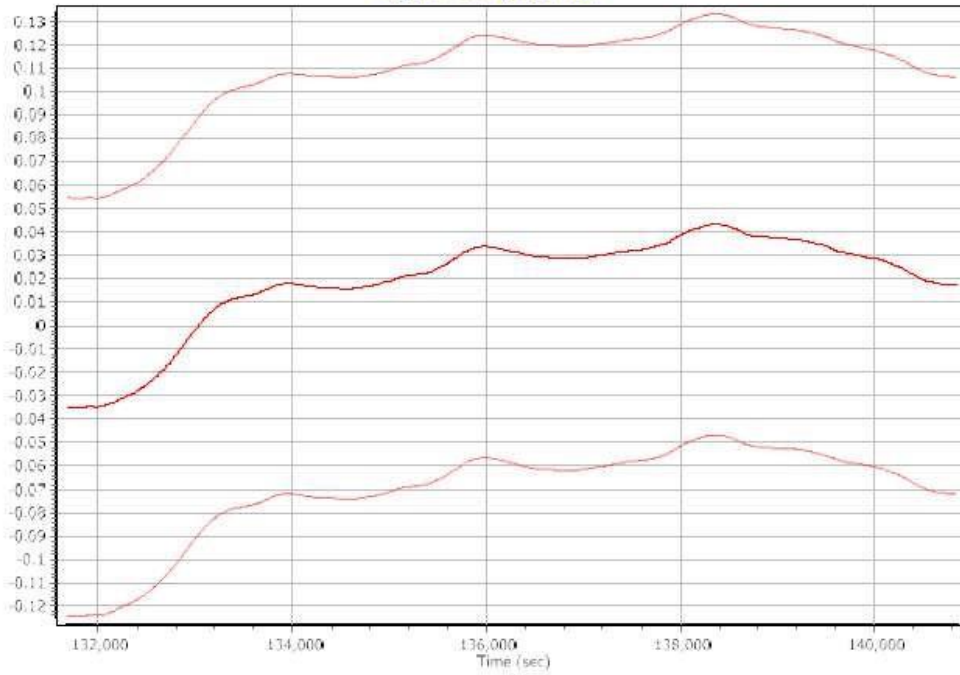
y accelerometer bias (micro-g)

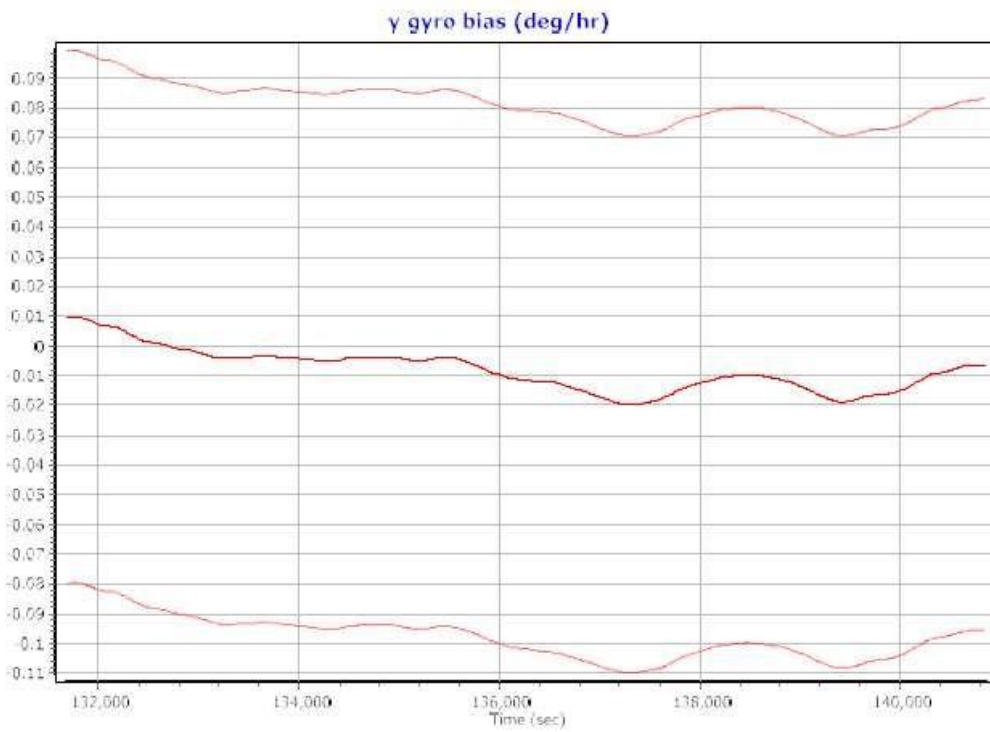


z accelerometer bias (micro-g)



x gyro bias (deg/hr)





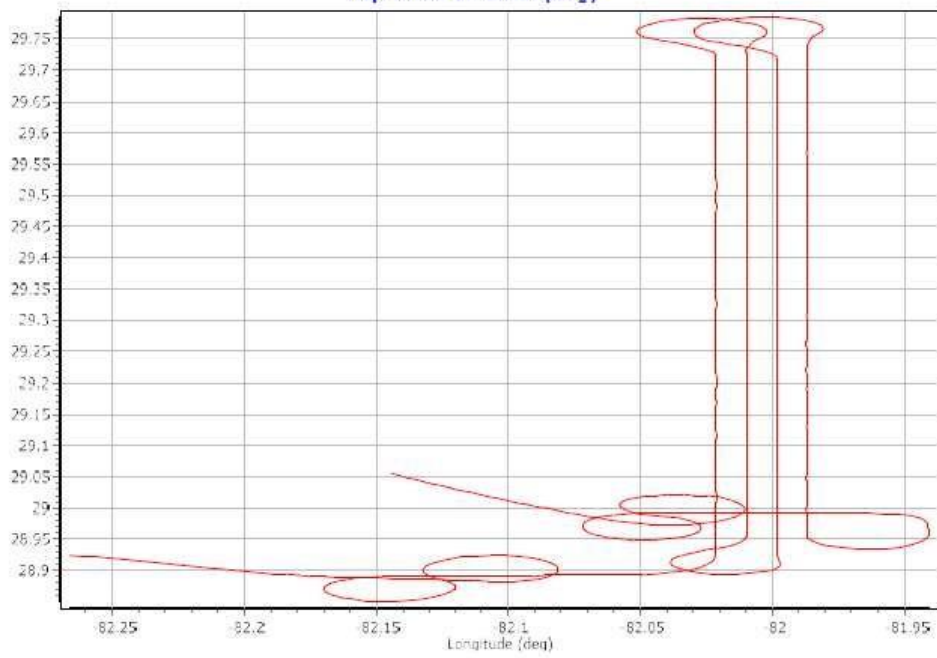
```

1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/26/19 Time : 11:42:44
5 -----
6
7 Extracted data path :
8 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219112a\05_INS-GPS_PROC\01_POS\6219112a\6219112a\Ex
9 xtract
10 Extracted data kernel : 6219112a
11 Processed data path :
12 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219112a\05_INS-GPS_PROC\01_POS\6219112a\6219112a\Pr
13 ocessed
14 Processed data kernel : 6219112a
15 Processing start time : 131679.790
16 Processing end time : 140844.000
17 -----
18
19 Selected GNSS mode : IN-Fusion SmartBase
20 Selected base station : ASB
21 Selected subsystems : IMU
22 : Primary GNSS
23 : Base GNSS
24 : Gimbal Encoder
25 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
26 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
27 Multipath setting : LOW
28 Stabilized mount to primary GNSS lever arm : 0.048 -0.192 -1.279
29 Base GNSS coordinates : 29.314288714 -82.984370280 1248.998
30 Dynamic lever arm : ACTIVE
31 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
32 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
33 -----
34
35 Mask angle : 10.000
36 -----
37
38 131679.790 : New or modified IIN install data
39 Reference-IMU lever arm: 0.00 0.00 0.00
40 Reference-primary GNSS lever arm: 0.05 -0.19 -1.28
41 Multipath environment: LOW
42 131679.790 : Forward-time processing started
43 131679.888 : IIN coarse leveling started.
44 131680.888 : IIN coarse leveling ended.
45 131680.888 : IIN navigator initialized.
46 131680.888 : IIN degraded navigation solution.
47 131680.888 : IIN initial position valid.
48 131681.001 : SmartBase observables in use
49 131681.001 : IIN primary GNSS solution in use.
50 131681.001 : IIN primary GNSS observables in use.
51 131681.001 : IIN in Fixed NL RTK mode.
52 131681.101 : IIN navigator alignment active.
53 140844.000 : WARNING : End of primary GNSS observables data
54 140844.000 : WARNING : End of reference GNSS observables data
55 140844.005 : Processing ended
56 -----
57
58 Termination status : Normal
59 Execution time : 20.39
60 -----
61
62 Processing completed.
63 -----

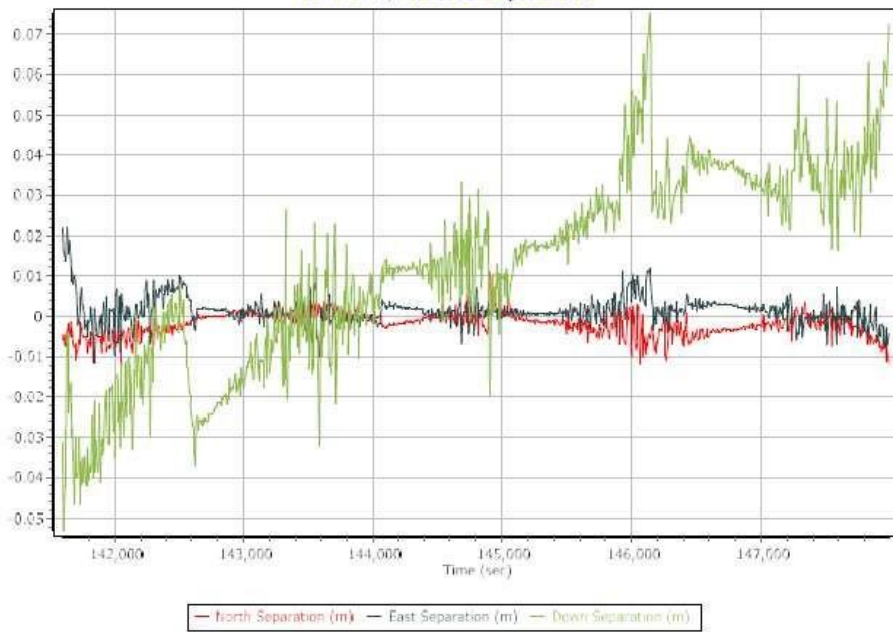
```

6219112a2 GNSS Processing

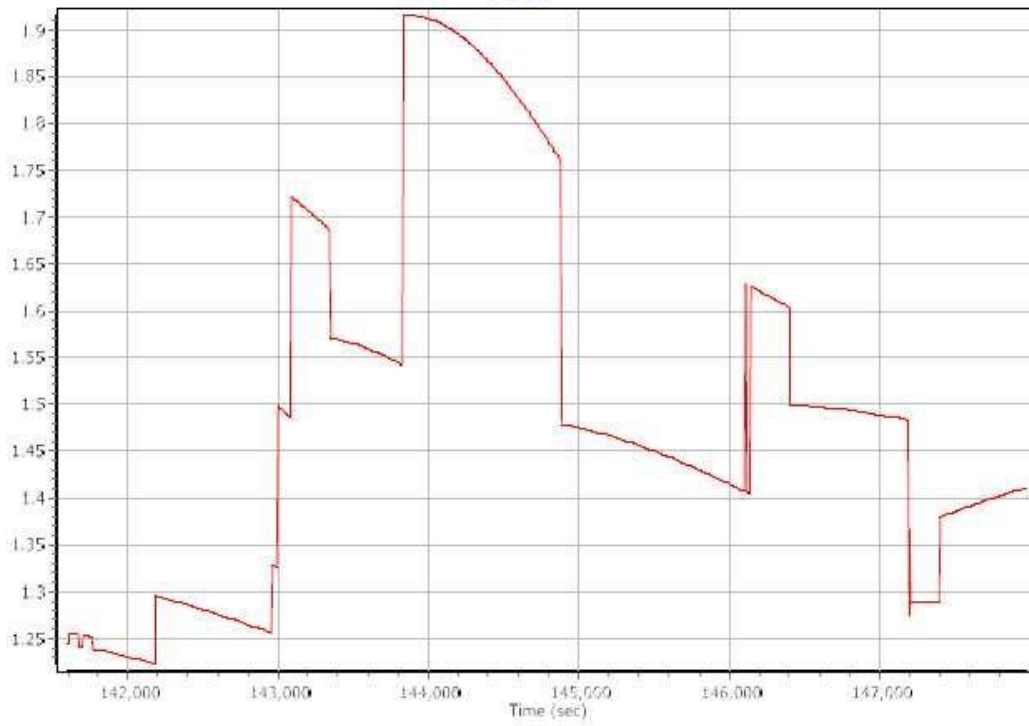
Top View: Latitude (deg)



Forward/Reverse Separation



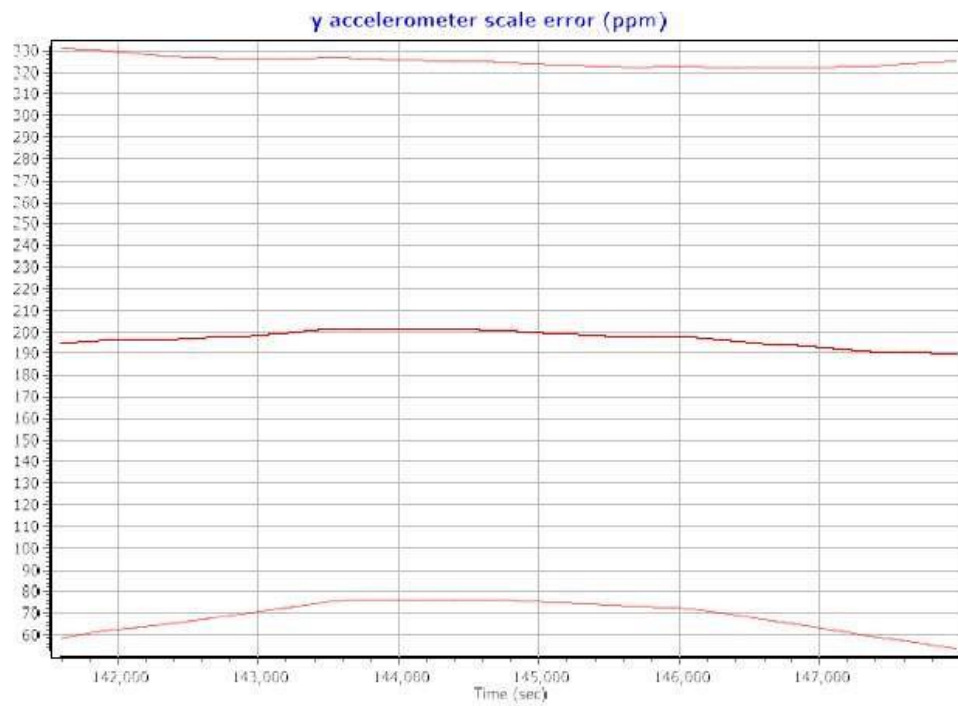
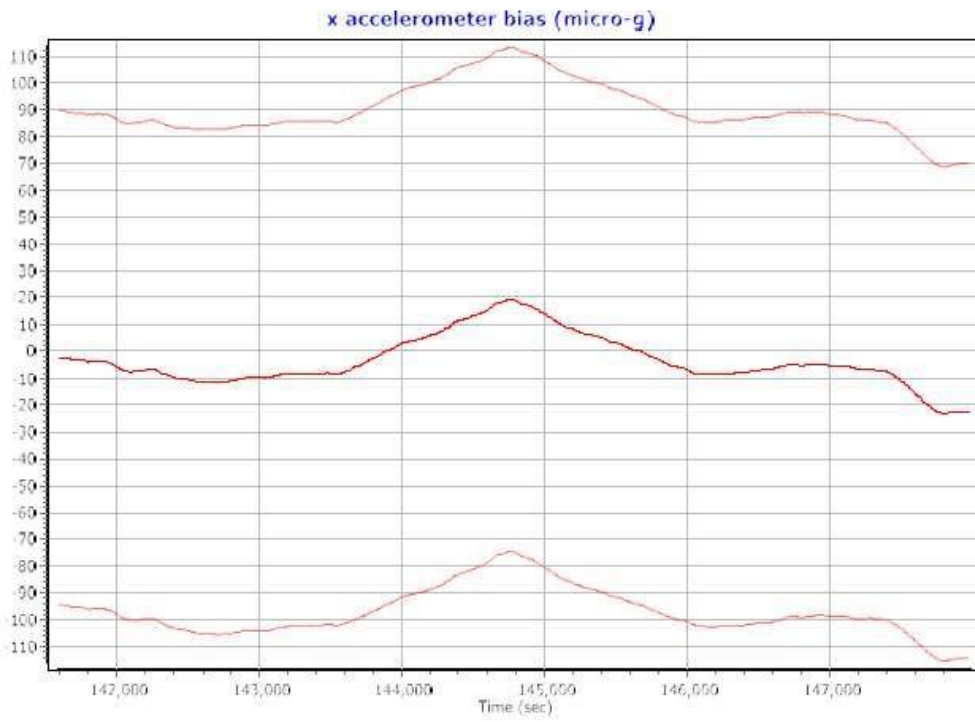
PDOP



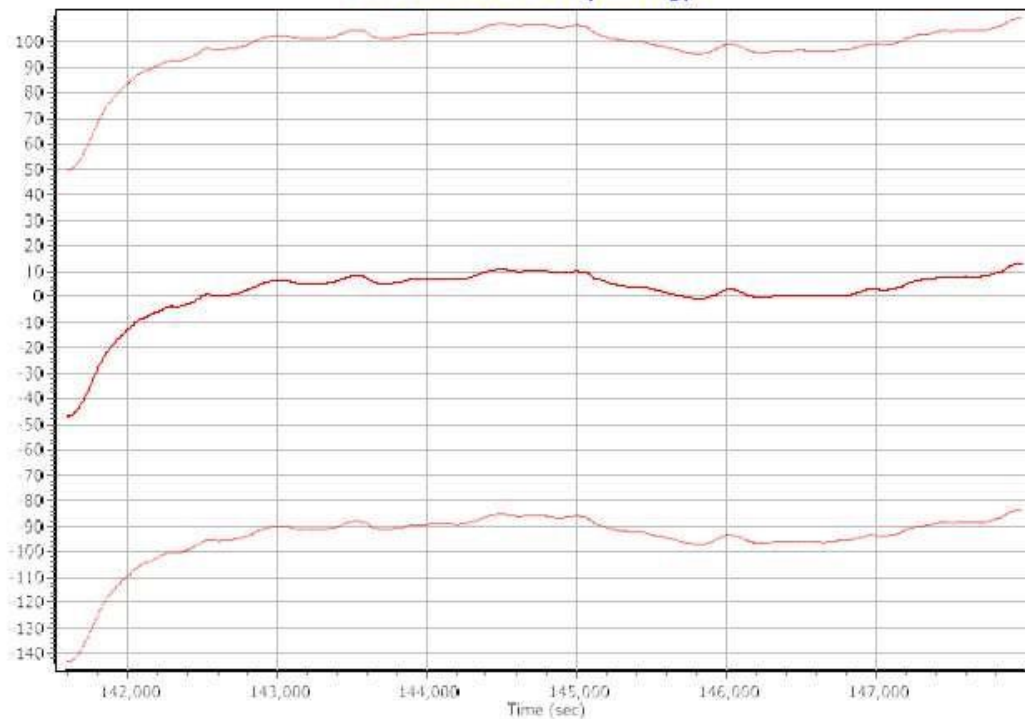
Number of SVs in solution



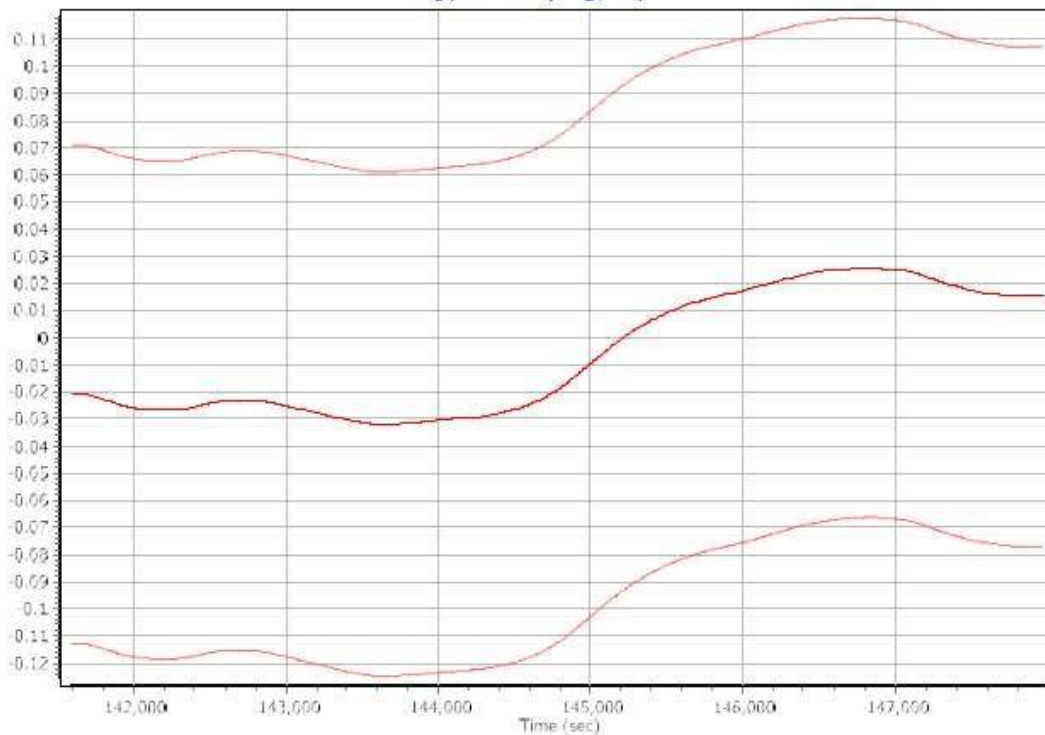
6219112a2 Sensor Errors

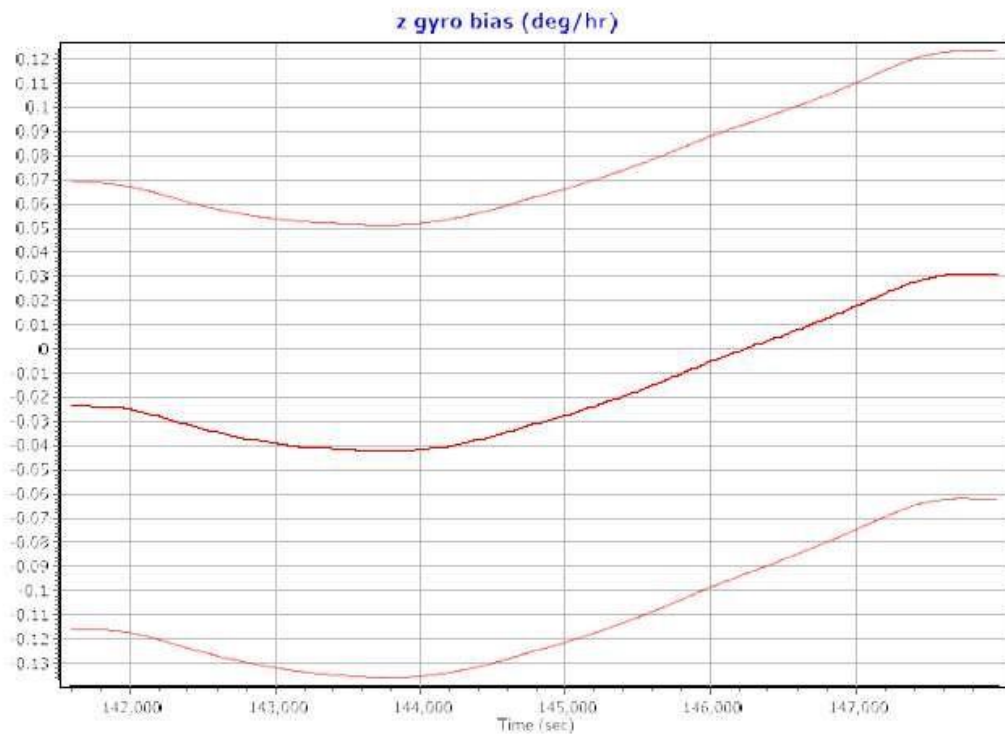
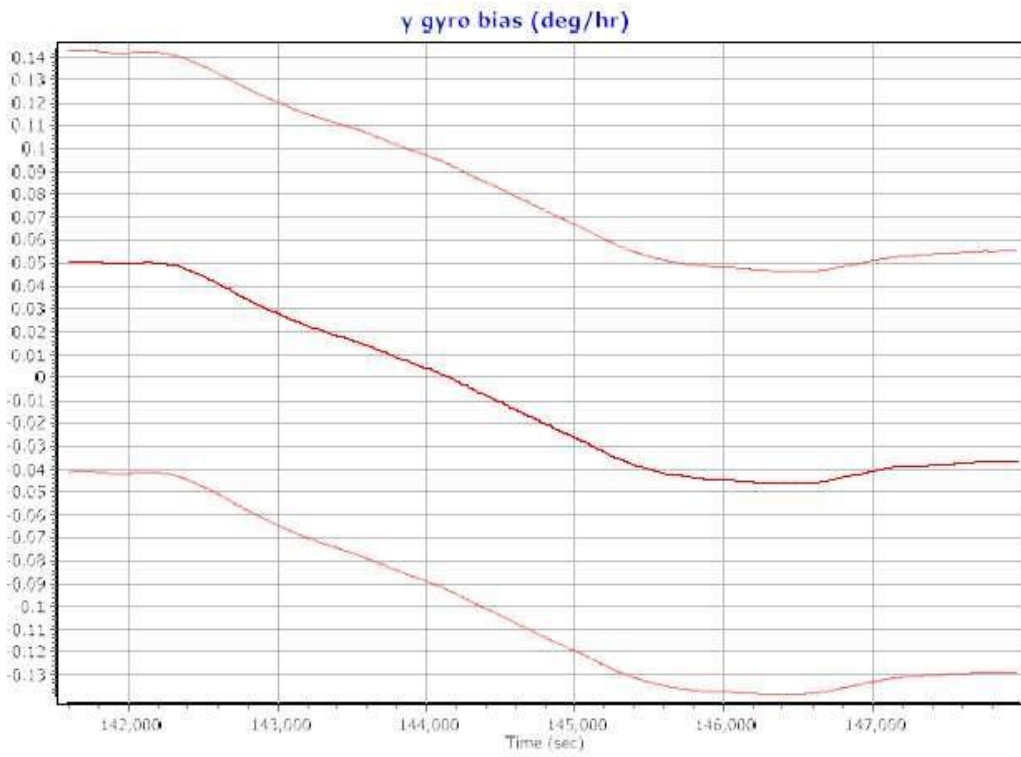


z accelerometer bias (micro-g)



x gyro bias (deg/hr)





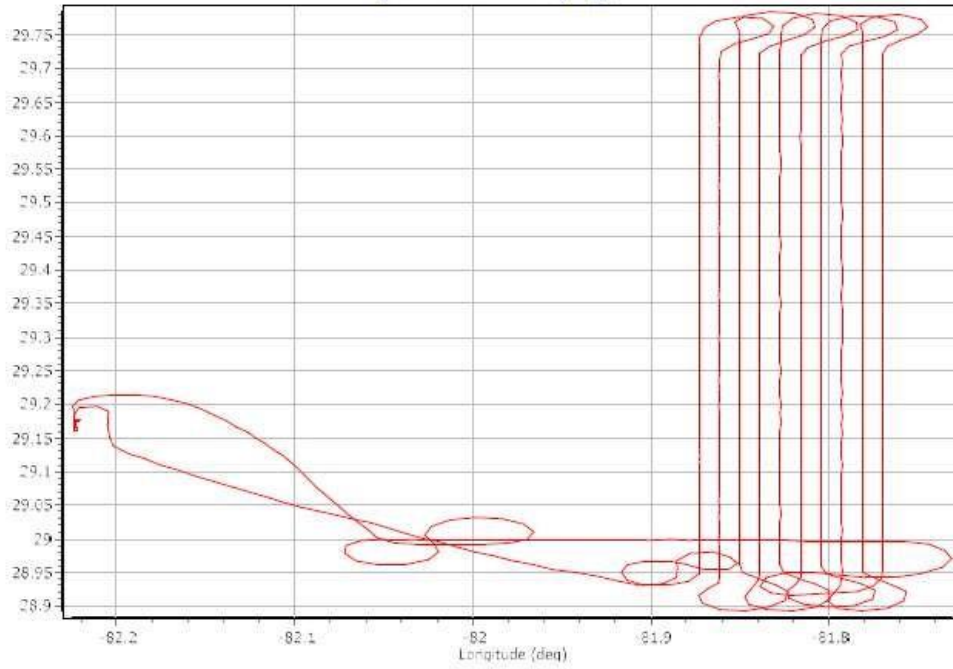
```

1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/25/19 Time : 12:23:30
5 -----
6 -----
7 Extracted data path :
8 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219112a\05_INS-GPS_PROC\01_POS\6219112a2\6219112a2
9 \Extract
10 Extracted data kernel : 6219112a2
11 Processed data path :
12 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219112a\05_INS-GPS_PROC\01_POS\6219112a2\6219112a2
13 \Proc
14 Processed data kernel : 6219112a2
15 Processing start time : 141595.103
16 Processing end time : 147979.000
17 -----
18 -----
19 Selected GNSS mode : IN-Fusion SmartBase
20 Selected base station : ASB
21 Selected subsystems : IMU
22 : Primary GNSS
23 : Base GNSS
24 : Gimbal Encoder
25 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
26 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
27 Multipath setting : LOW
28 Stabilized mount to primary GNSS lever arm : 0.079 -0.192 -1.268
29 Base GNSS coordinates : 29.256506439 -82.022717673 1240.236
30 Dynamic lever arm : ACTIVE
31 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
32 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
33 -----
34 -----
35 Mask angle : 10.000
36 -----
37 -----
38 141595.108 : New or modified IIN install data
39 Reference-IMU lever arm: 0.00 0.00 0.00
40 Reference-primary GNSS lever arm: 0.08 -0.19 -1.27
41 Multipath environment: LOW
42 141595.108 : Forward-time processing started
43 141595.203 : IIN coarse leveling started.
44 141596.203 : IIN coarse leveling ended.
45 141596.203 : IIN navigator initialized.
46 141596.203 : IIN degraded navigation solution.
47 141596.203 : IIN initial position valid.
48 141597.003 : SmartBase observables in use
49 141597.003 : IIN primary GNSS solution in use.
50 141597.003 : IIN primary GNSS observables in use.
51 141597.003 : IIN in Fixed NL RTK mode.
52 141597.103 : IIN navigator alignment active.
53 147979.001 : Processing ended
54 -----
55 Termination status : Normal
56 Execution time : 13.58
57 -----
58 Processing completed.
59 -----

```

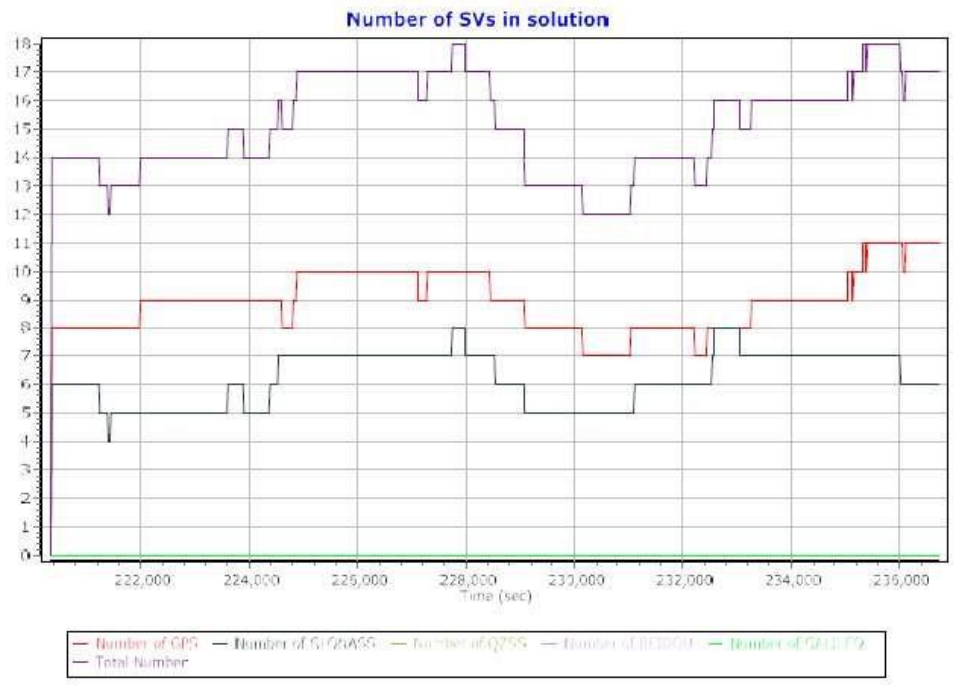
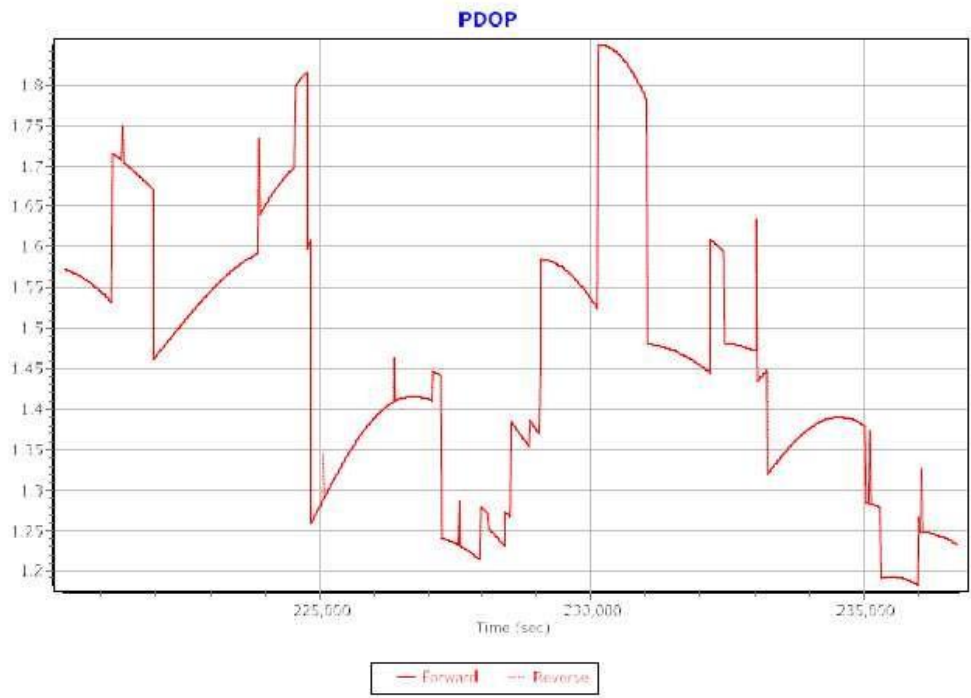
6219113a GNSS Processing

Top View: Latitude (deg)

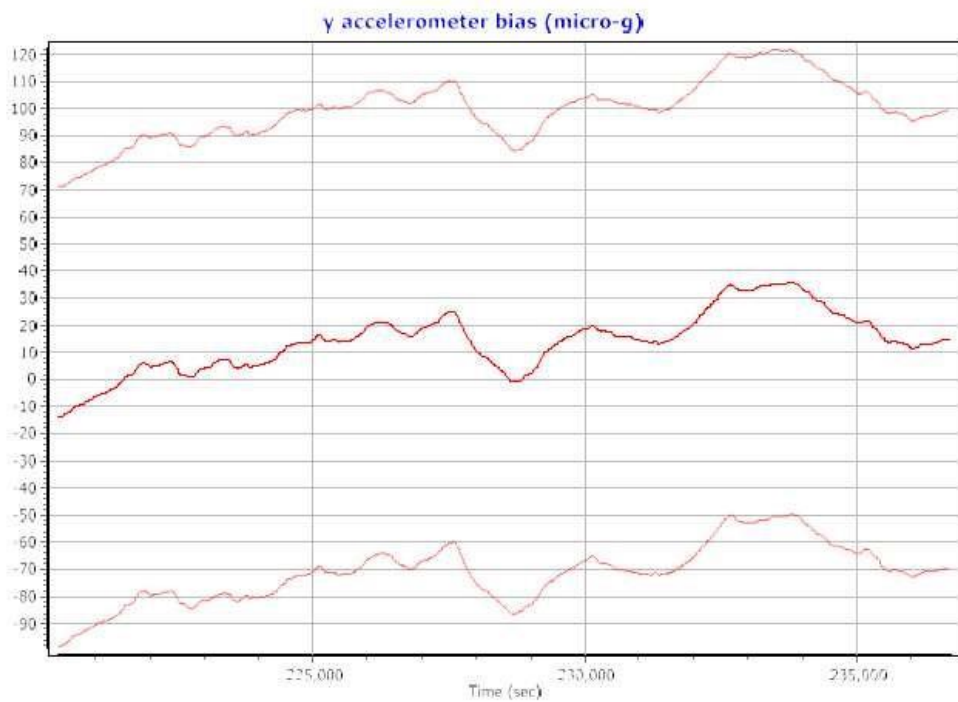


Forward/Reverse Separation

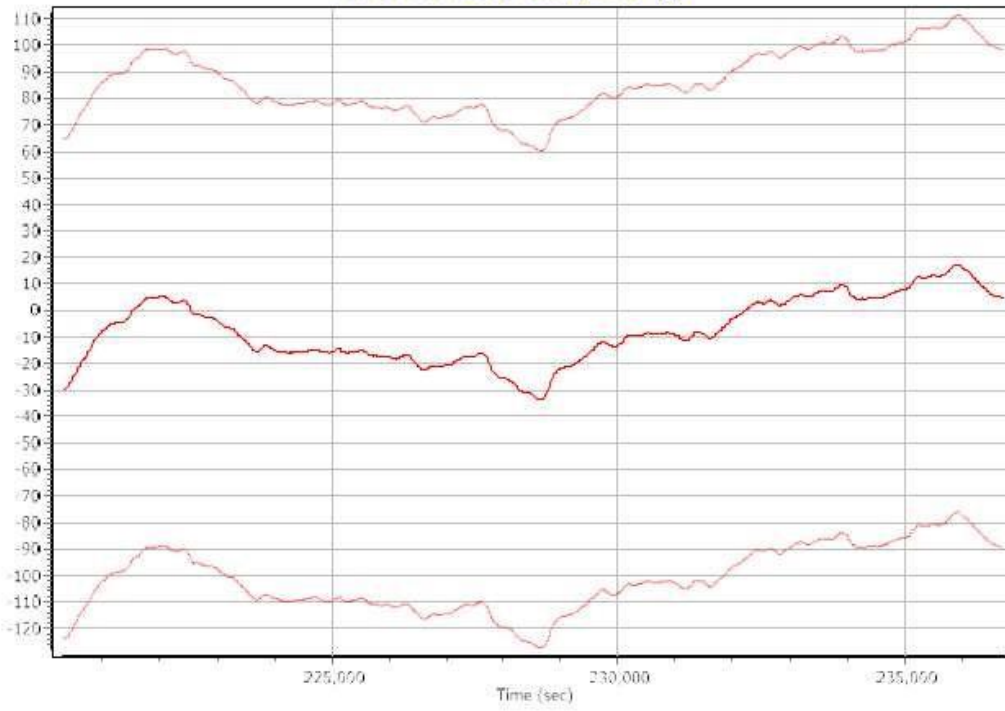




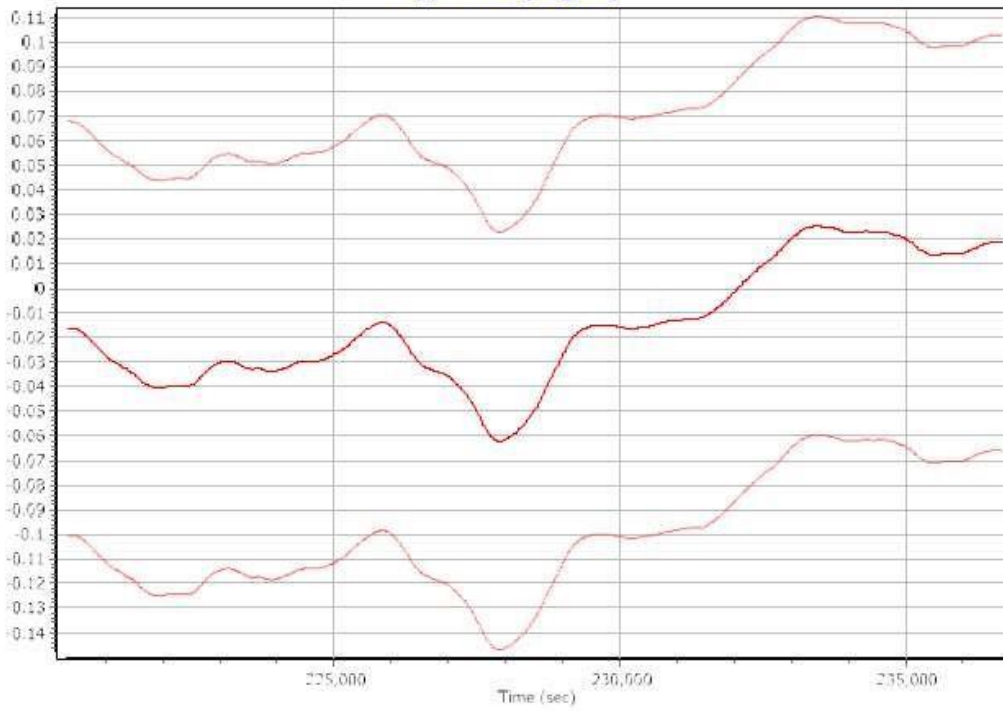
6219113a Sensor Errors

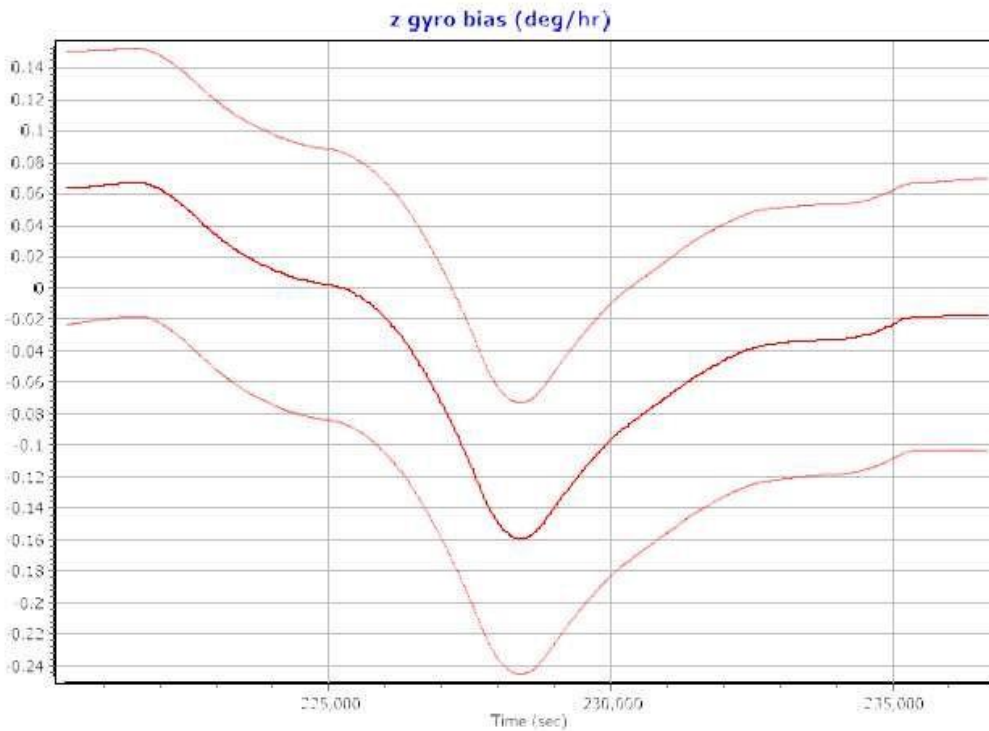
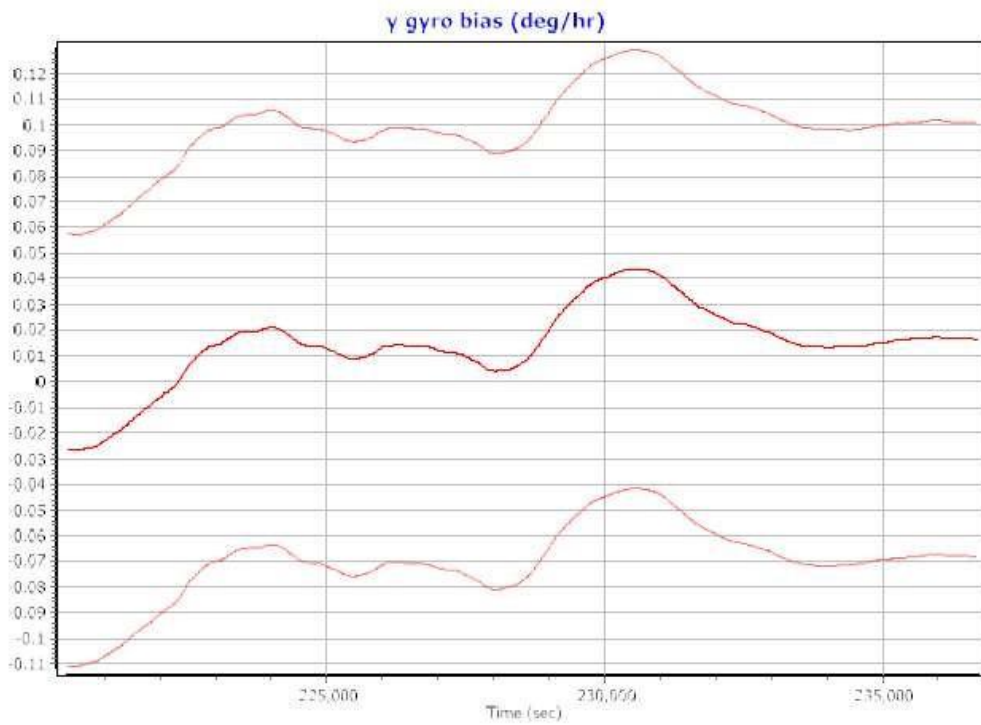


z accelerometer bias (micro-g)



x gyro bias (deg/hr)



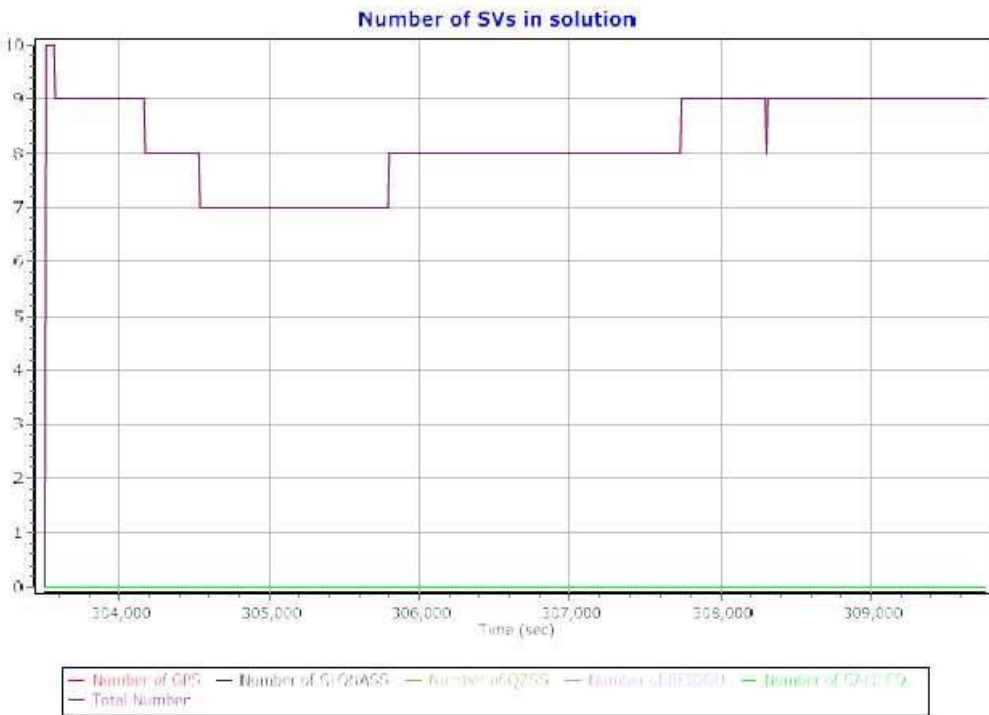
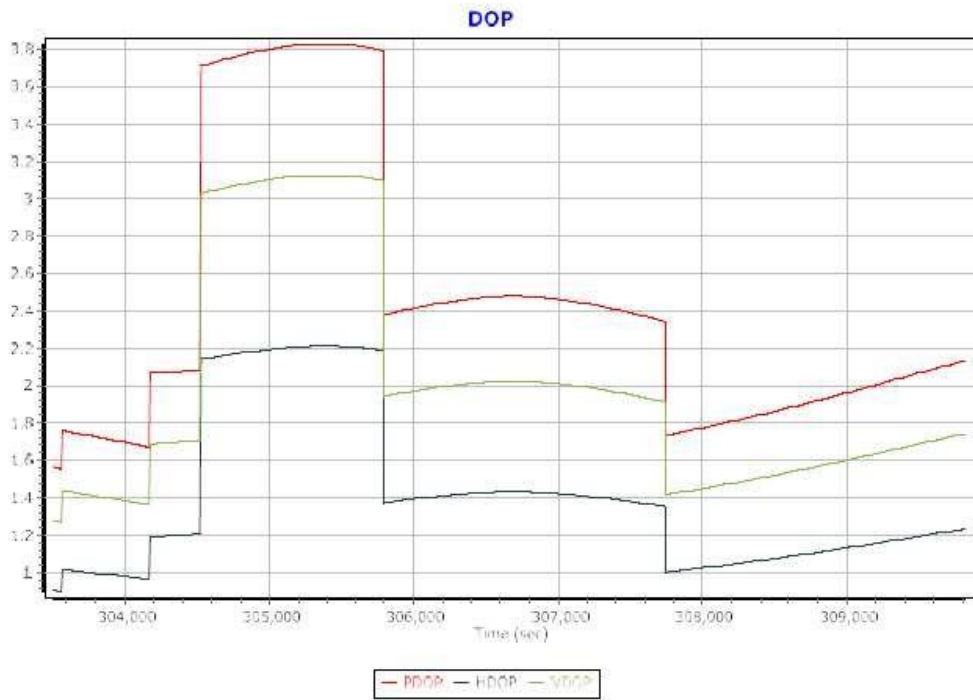


```

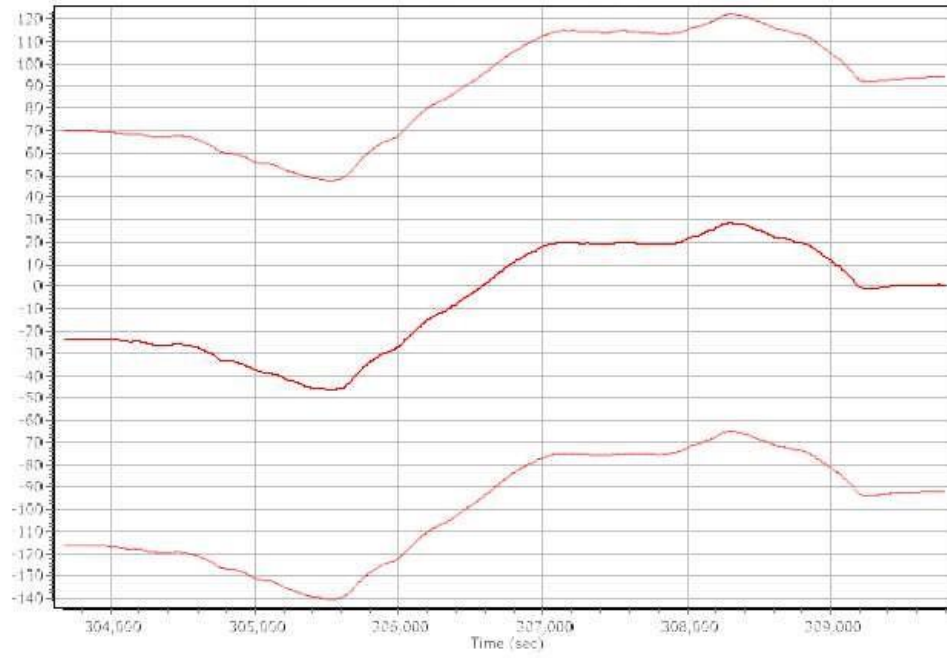
1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/29/19 Time : 12:54:09
5 -----
6
7 Extracted data path :
8 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219113a\05_INS-GPS_PROC\01_POS\6219113a\6219113a\Ex
9 tracted
10 Extracted data kernel : 6219113a
11 Processed data path :
12 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219113a\05_INS-GPS_PROC\01_POS\6219113a\6219113a\Pr
13 ocessed
14 Processed data kernel : 6219113a
15 Processing start time : 220331.272
16 Processing end time : 236715.000
17 -----
18 Selected GNSS mode : IN-Fusion SmartBase
19 Selected base station : ASB
20 Selected subsystems : IMU
21 : Primary GNSS
22 : Base GNSS
23 : Gimbal Encoder
24 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
25 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
26 Multipath setting : LOW
27 Stabilized mount to primary GNSS lever arm : 0.059 -0.195 -1.261
28 Base GNSS coordinates : 29.277740037 -81.881829106 1109.757
29 Dynamic lever arm : ACTIVE
30 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
31 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
32 -----
33 Mask angle : 10.000
34 -----
35 220331.277 : New or modified IIN install data
36 Reference-IMU lever arm: 0.00 0.00 0.00
37 Reference-primary GNSS lever arm: 0.06 -0.19 -1.28
38 Multipath environment: LOW
39 220331.277 : Forward-time processing started
40 220331.372 : IIN coarse leveling started.
41 220332.372 : IIN coarse leveling ended.
42 220332.372 : IIN navigator initialized.
43 220332.372 : IIN degraded navigation solution.
44 220332.372 : IIN initial position valid.
45 220333.002 : SmartBase observables in use
46 220333.002 : IIN primary GNSS solution in use.
47 220333.002 : IIN primary GNSS observables in use.
48 220333.002 : IIN in Fixed NL RTK mode.
49 220333.102 : IIN navigator alignment active.
50 221053.000 : WARNING : Gap in primary GNSS navigation data
51 221054.001 : IIN primary GNSS solution not in use.
52 221055.001 : IIN primary GNSS solution in use.
53 232185.003 : IIN WL ambiguity failure cleared
54 236715.002 : Processing ended
55 -----
56 Termination status : Normal
57 Execution time : 38.57
58 -----
59 Processing completed.

```

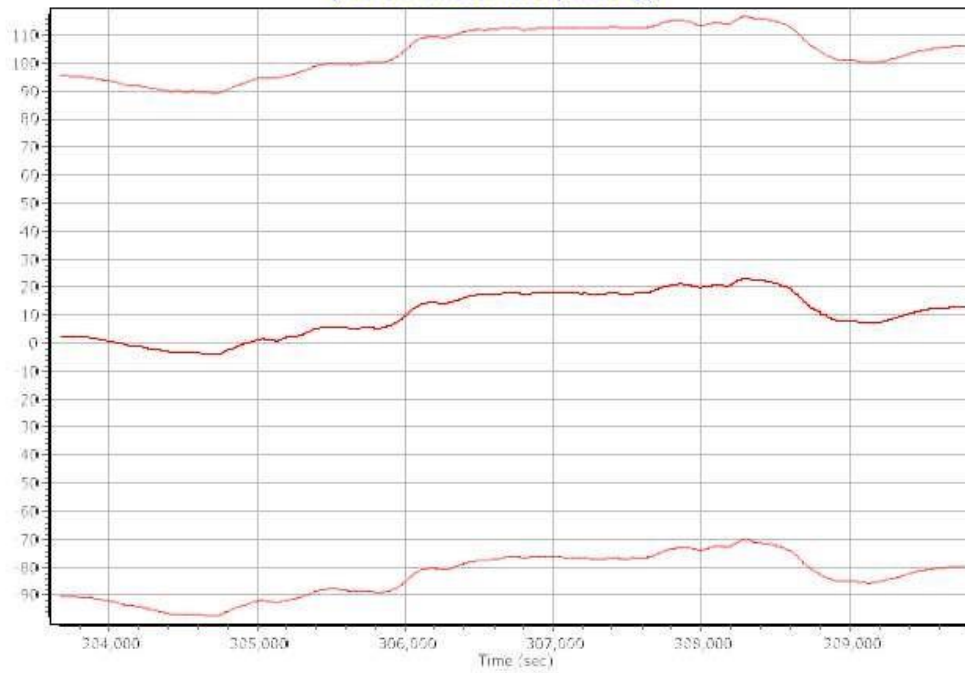
6219114a GNSS Processing



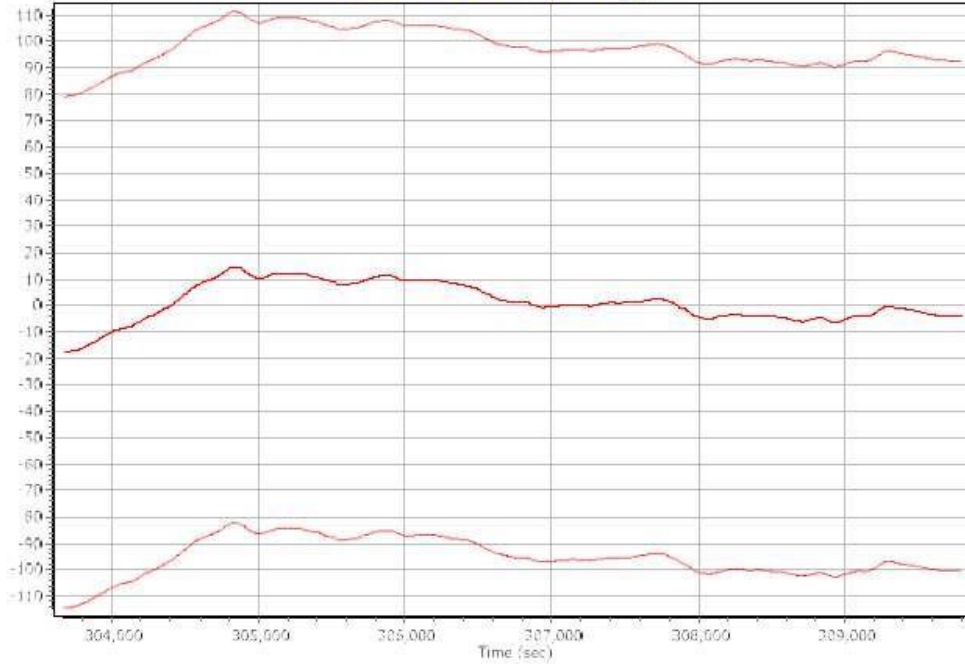
x accelerometer bias (micro-g)



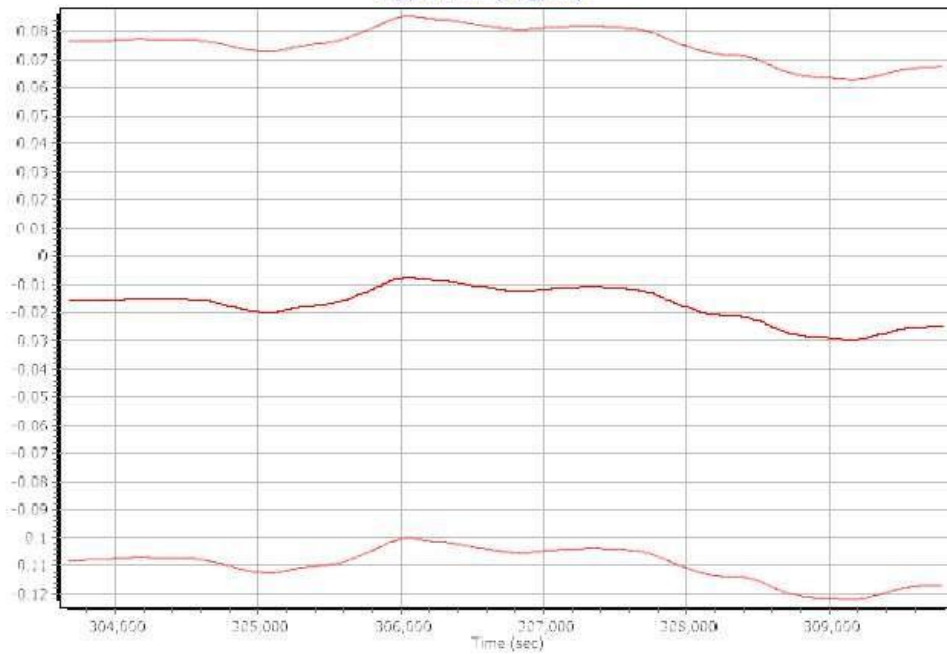
y accelerometer bias (micro-g)

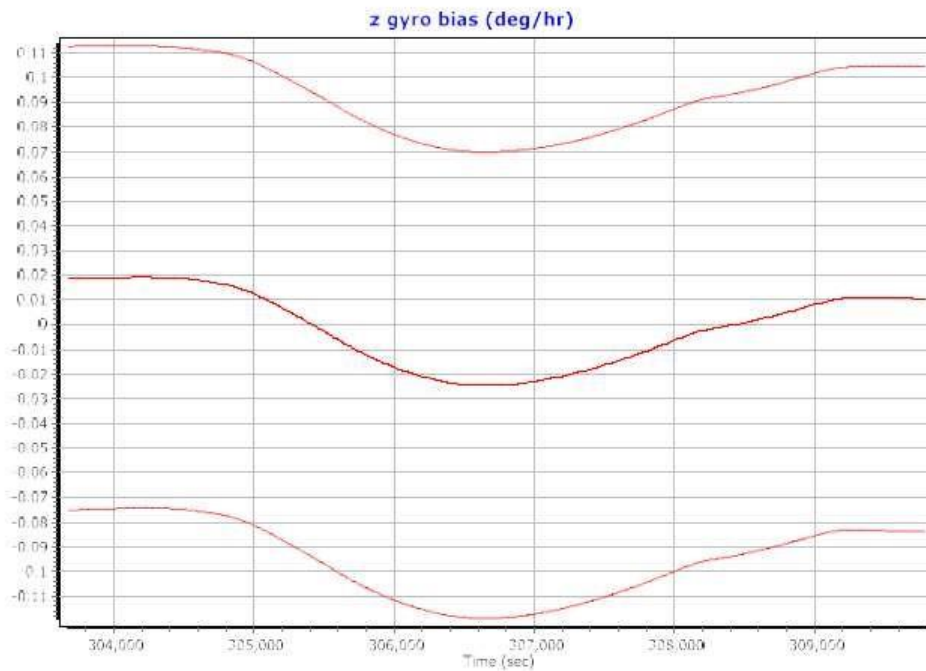
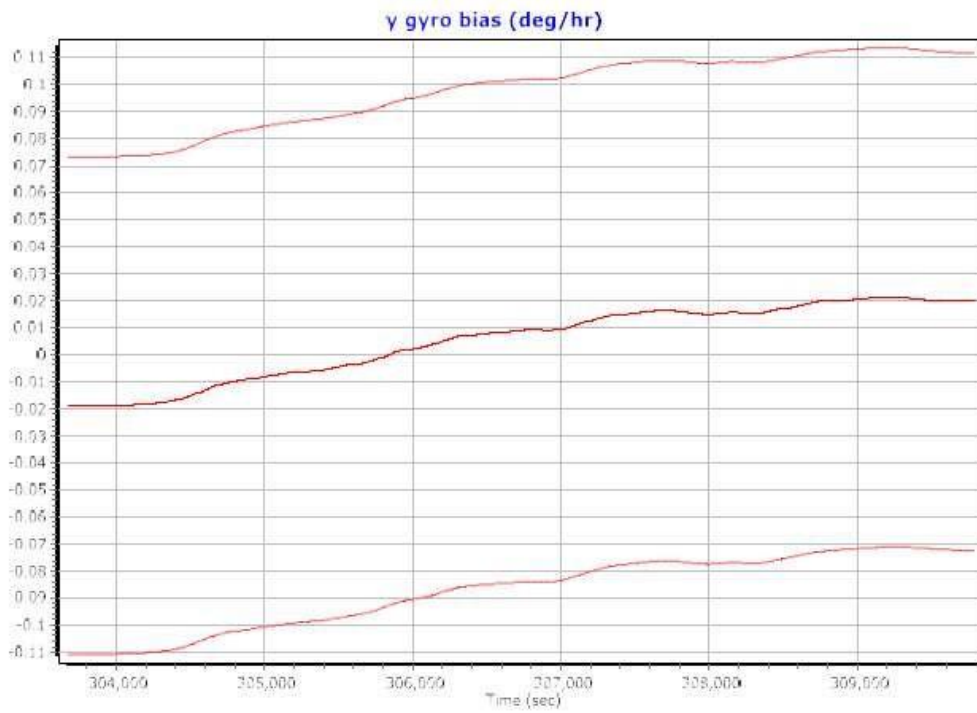


z accelerometer bias (micro-g)



x gyro bias (deg/hr)





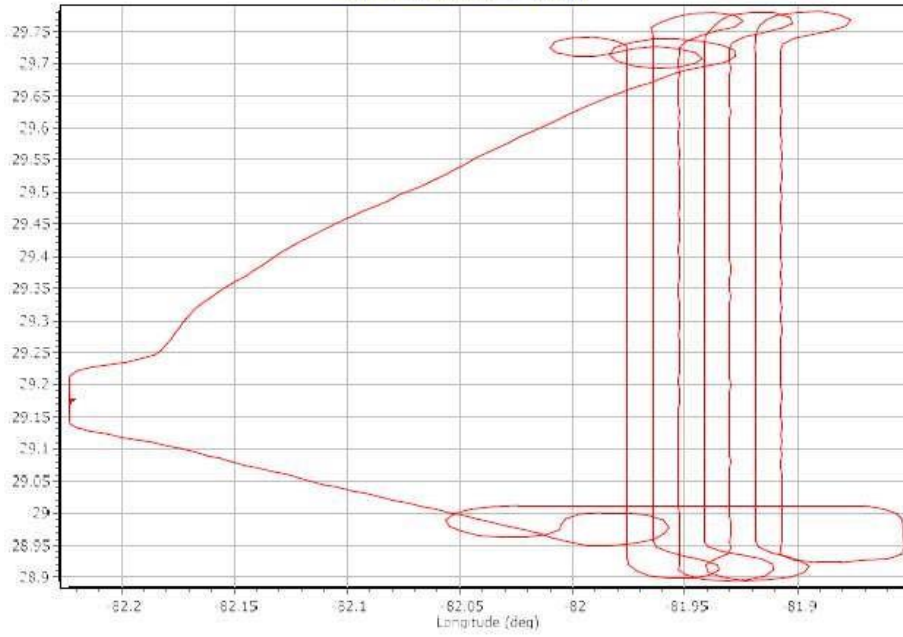
```

1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/29/19 Time : 16:11:29
5 -----
6 -----
7 Extracted data path :
8 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219114a\05_INS-GPS_PROC\01_POS\6219114a\6219114a\Ex
9 tract
10 Extracted data kernel : 6219114a
11 Processed data path :
12 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219114a\05_INS-GPS_PROC\01_POS\6219114a\6219114a\Proc
13 oc
14 Processed data kernel : 6219114a
15 Processing start time : 303675.766
16 Processing end time : 309796.000
17 -----
18 -----
19 Selected GNSS mode : IN-Fusion SmartBase
20 Selected base station : ASB
21 Selected subsystems : IMU
22 : Primary GNSS
23 : Base GNSS
24 : Gimbal Encoder
25 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
26 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
27 Multipath setting : LOW
28 Stabilized mount to primary GNSS lever arm : 0.031 -0.198 -1.275
29 Base GNSS coordinates : 29.185140101 -82.027756954 863.369
30 Dynamic lever arm : ACTIVE
31 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
32 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
33 -----
34 -----
35 Mask angle : 10.000
36 -----
37 -----
38 303675.771 : New or modified IIN install data
39 Reference-IMU lever arm: 0.00 0.00 0.00
40 Reference-primary GNSS lever arm: 0.03 -0.20 -1.27
41 Multipath environment: LOW
42 303675.771 : Forward-time processing started
43 303675.866 : IIN coarse leveling started.
44 303676.866 : IIN coarse leveling ended.
45 303676.866 : IIN navigator initialized.
46 303676.866 : IIN degraded navigation solution.
47 303676.866 : IIN initial position valid.
48 303677.001 : SmartBase observables in use
49 303677.001 : IIN primary GNSS solution in use.
50 303677.001 : IIN primary GNSS observables in use.
51 303677.001 : IIN in Fixed NL RTK mode.
52 303677.101 : IIN navigator alignment active.
53 304126.000 : WARNING : Gap in primary GNSS navigation data
54 304127.004 : IIN primary GNSS solution not in use.
55 304128.004 : IIN primary GNSS solution in use.
56 304129.004 : IIN WL ambiguity failure cleared
57 309796.004 : Processing ended
58 -----
59 -----
60 Termination status : Normal
61 Execution time : 13.83
62 -----
63 -----
64 Processing completed.
65 -----

```

6219115a GNSS Processing

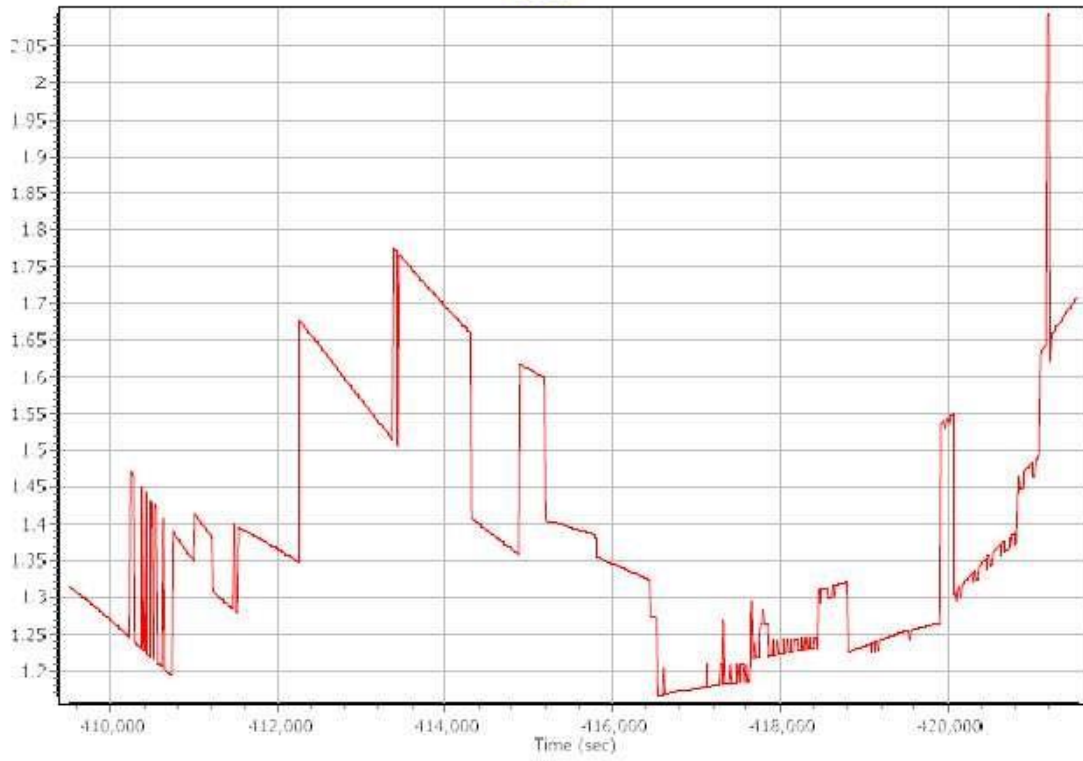
Top View: Latitude (deg)



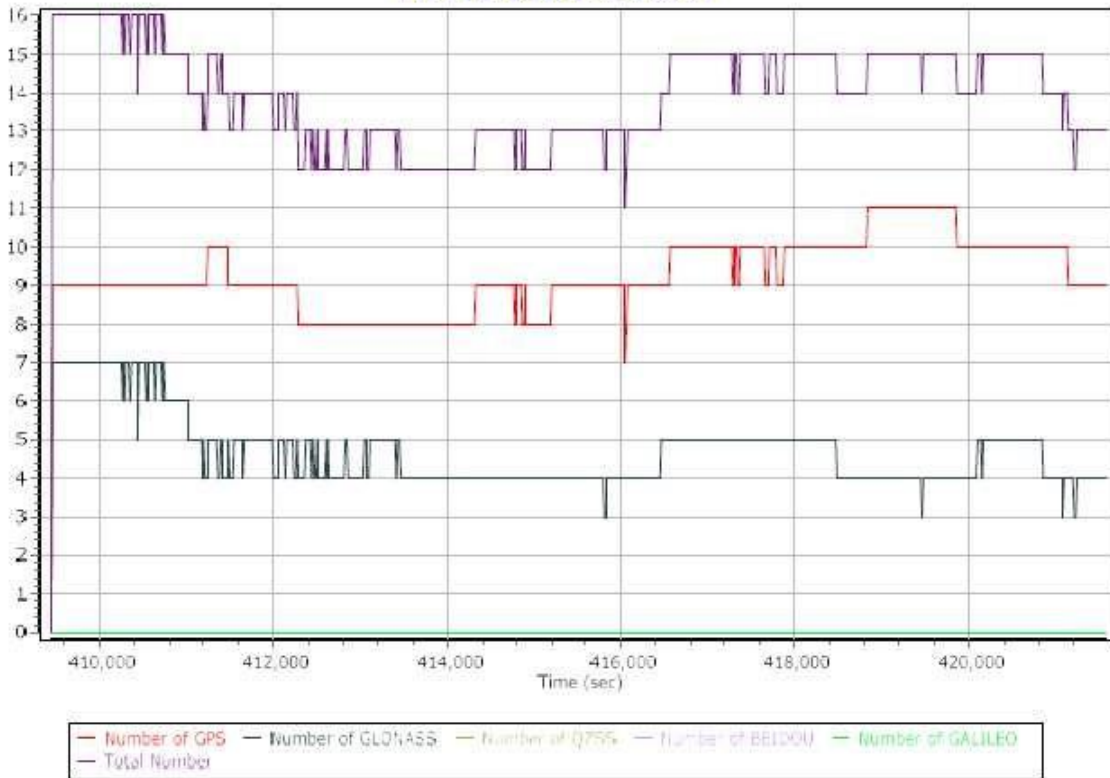
Forward/Reverse Separation



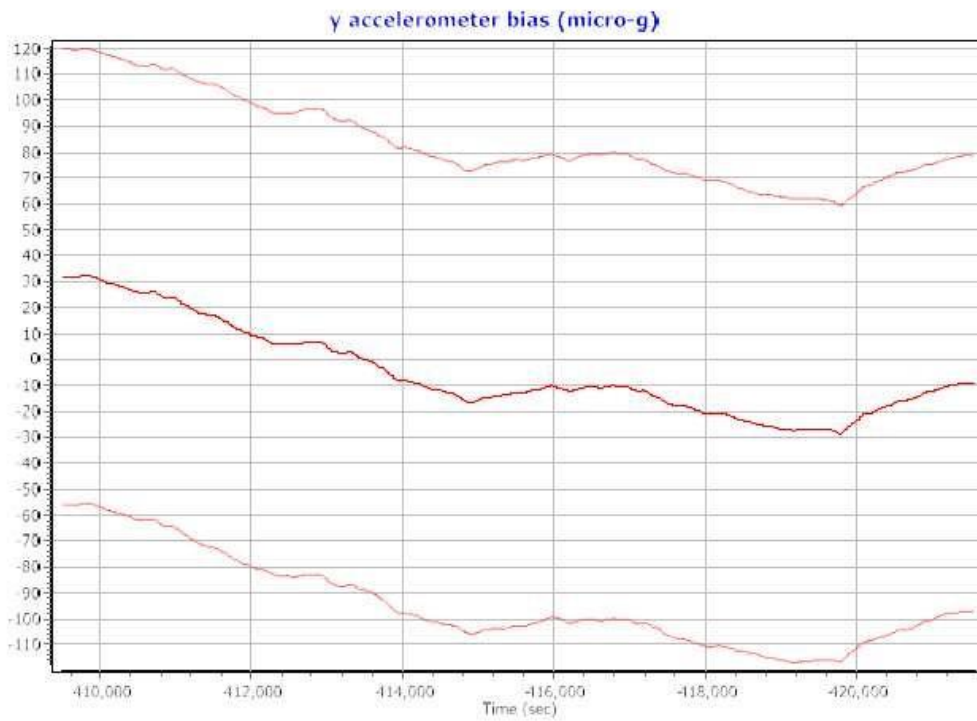
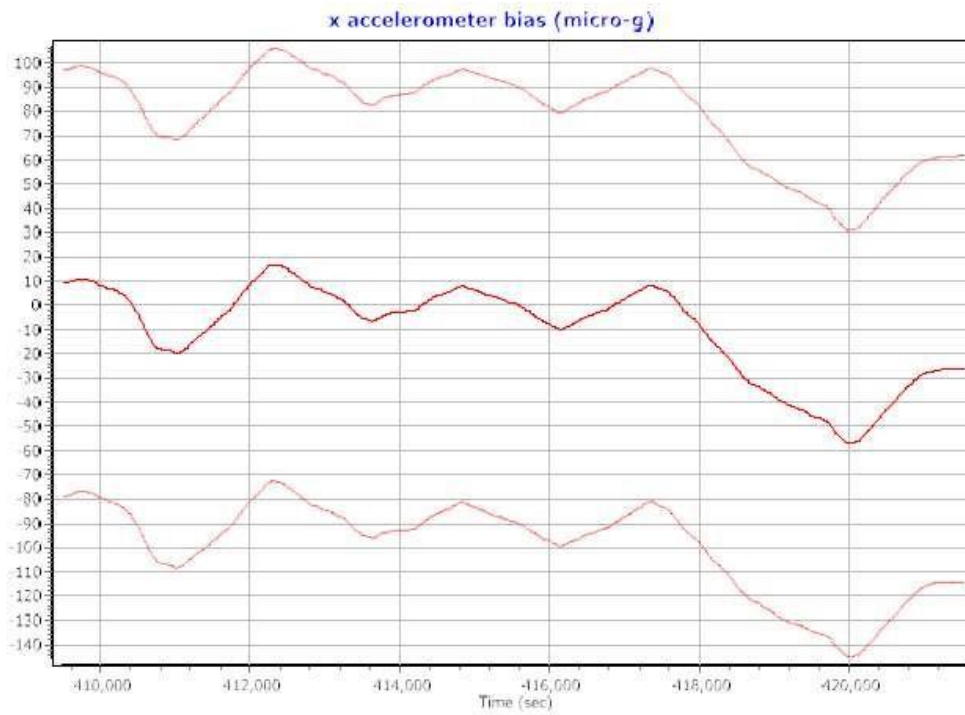
PDOP



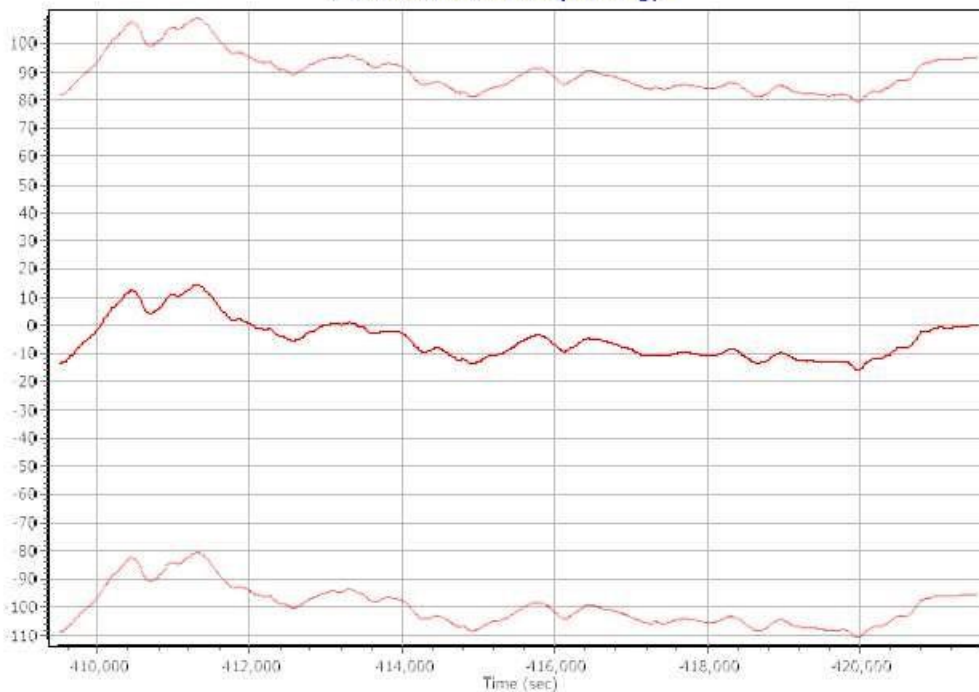
Number of SVs in solution



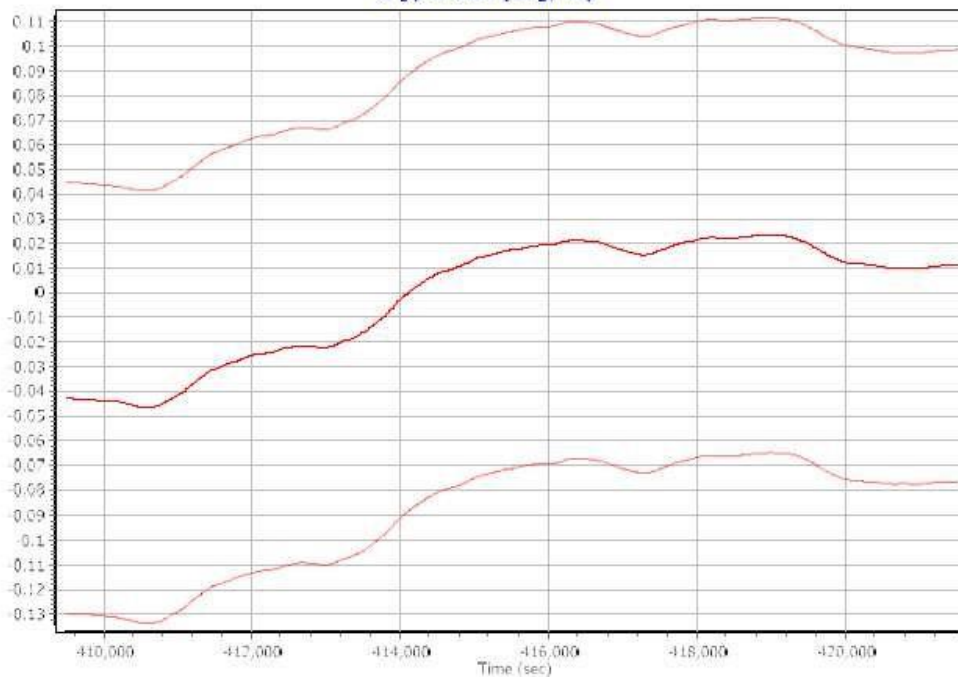
6219115a Sensor Errors

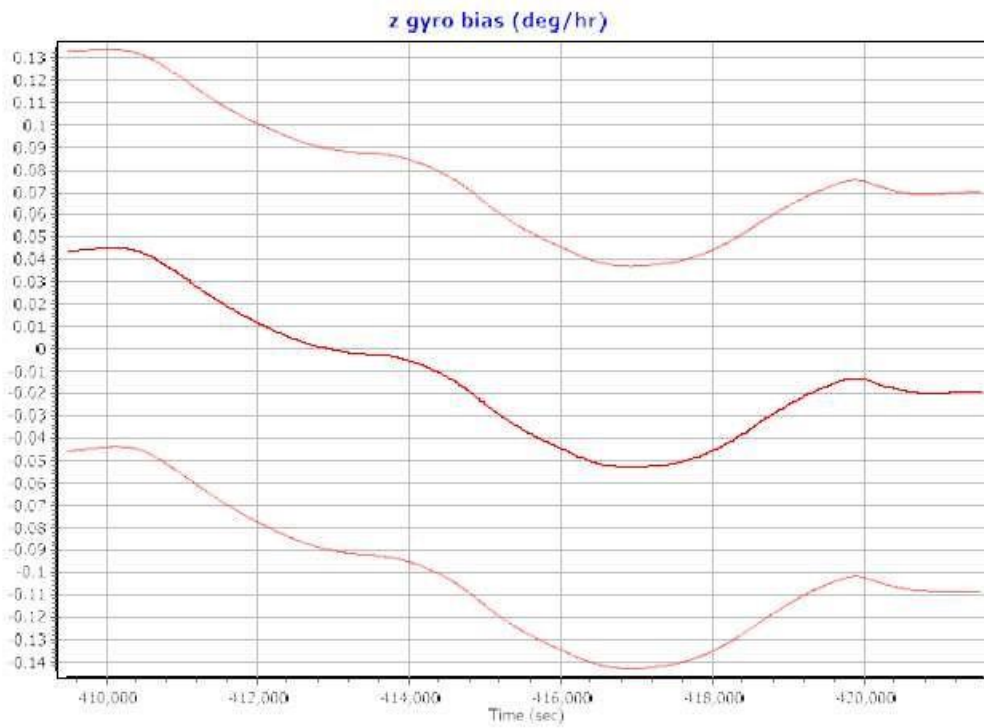
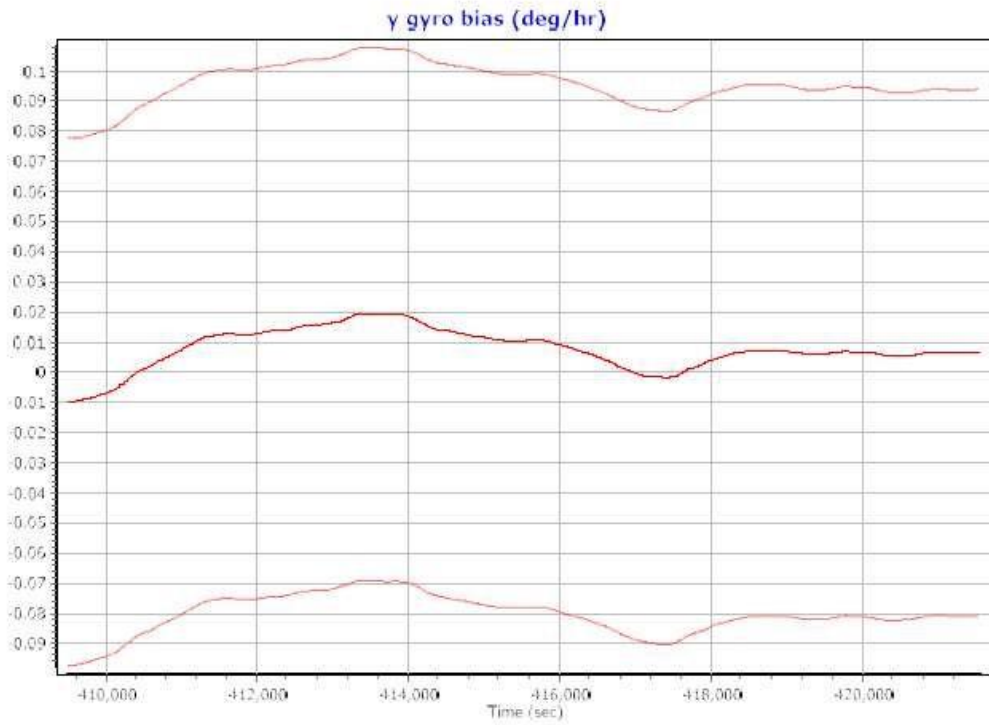


z accelerometer bias (micro-g)



x gyro bias (deg/hr)






```

1 -----
2 IINPP Forward-Backward Navigator [Dec 17 2018]
3 Copyright (c) 2008-2018 Applanix Corporation. All rights reserved.
4 Date : 04/30/19 Time : 10:20:10
5 -----
6 IINPP is using imported GNSS channel assignments
7 -----
8 Extracted data path :
9 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219115a\05_INS-GPS_PROC\01_POS\6219115a\6219115a\Ex
10 tracted
11 Extracted data kernel : 6219115a
12 Processed data path :
13 D:\Projects\3165_Dewberry_Ocala\LiDAR\6219115a\05_INS-GPS_PROC\01_POS\6219115a\6219115a\Proc
14
15 -----
16 Selected GNSS mode : IN-Fusion SmartBase
17 Selected base station : ASB
18 Selected subsystems : SNV
19 : Primary GNSS
20 : Base GNSS
21 : Gimbal Encoder
22 Vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
23 Realtime vehicle to stabilized mount alignment angles : 0.000 0.000 0.000
24 Multipath setting : LOW
25 Stabilized mount to primary GNSS lever arm : 0.061 -0.194 -1.293
26 Base GNSS coordinates : 29.310111464 -81.983698143 1076.876
27 Dynamic lever arm : ACTIVE
28 Stabilized mount to IMU lever arm : -0.034 -0.010 -0.374
29 Stabilized mount to IMU alignment angles : 0.000 0.000 0.000
30 -----
31
32 Mask angle : 10.000
33 -----
34 421547.995 : New or modified IIN install data
35 Reference-IMU lever arm: 0.00 0.00 0.00
36 Reference-primary GNSS lever arm: 0.06 -0.19 -1.29
37 Multipath environment: LOW
38 421547.995 : Reverse-time processing started
39 421547.000 : SmartBase observables in use
40 421547.000 : IIN primary GNSS solution in use.
41 421547.000 : IIN primary GNSS observables in use.
42 421547.000 : IIN in Fixed NL RTK mode.
43 409914.000 : WARNING : Gap in primary GNSS navigation data
44 409912.998 : IIN primary GNSS solution not in use.
45 409911.997 : IIN primary GNSS solution in use.
46 409910.997 : IIN WL ambiguity failure cleared
47 409511.999 : Processing ended
48 -----
49 Termination status : Normal
50 Execution time : 40.46
51 -----
52 Processing completed.
53

```