

Appendix A

GPS / IMU Processing Statistics Flight Logs

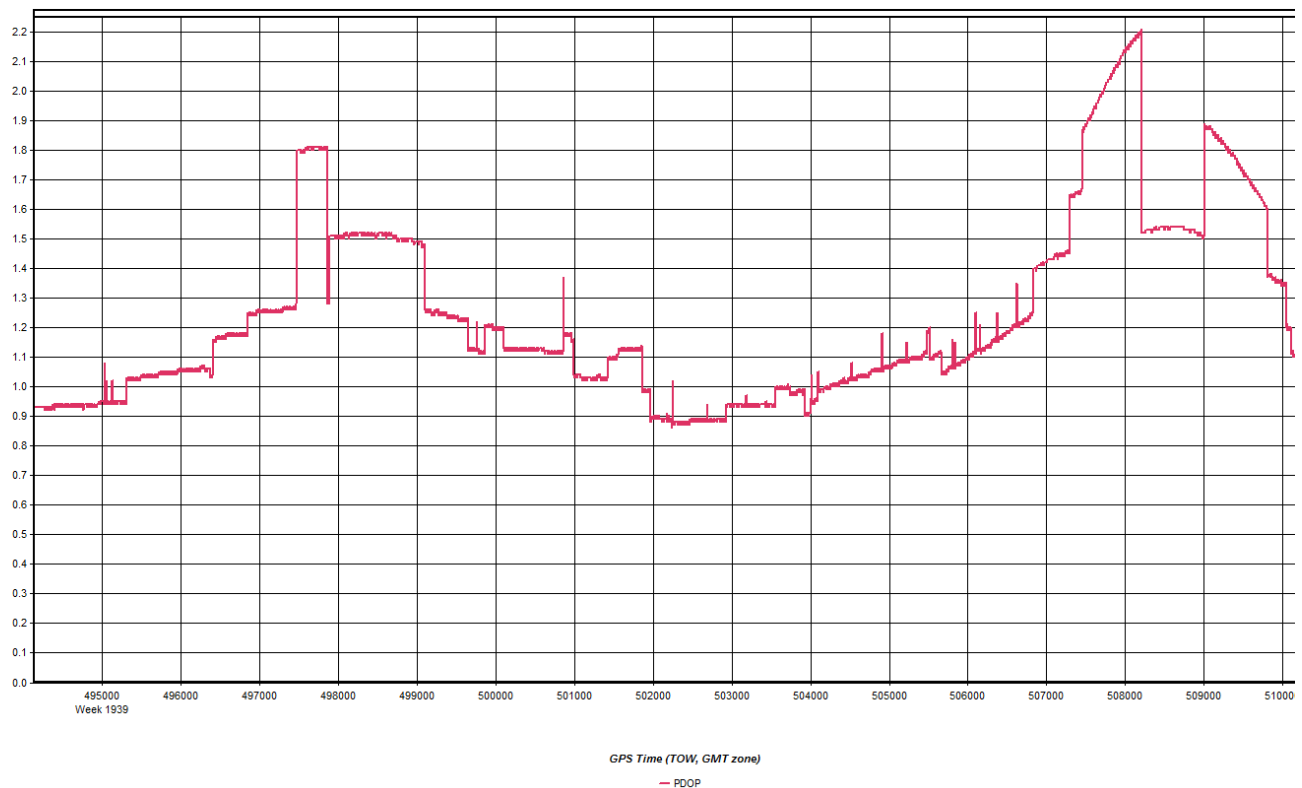
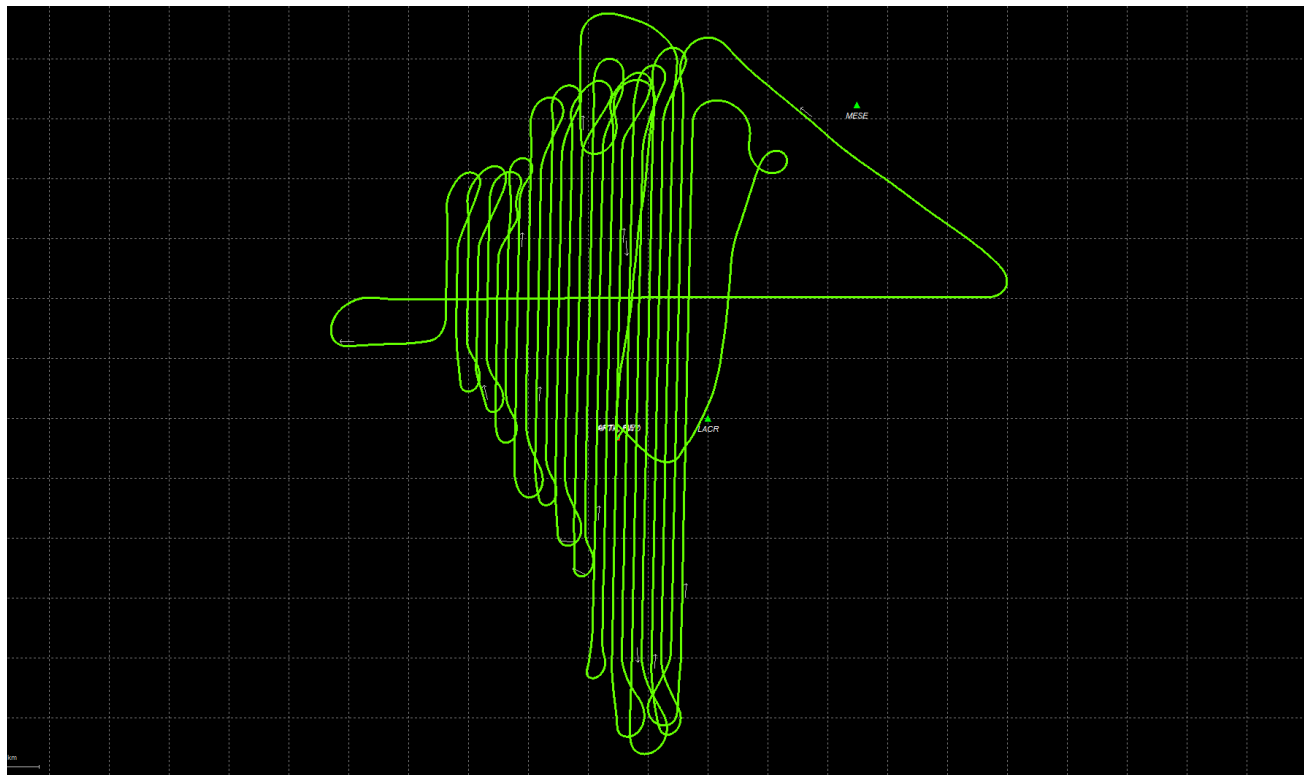
There were three total lifts. Graph reports generated from processing software and flight logs are found on the following pages.

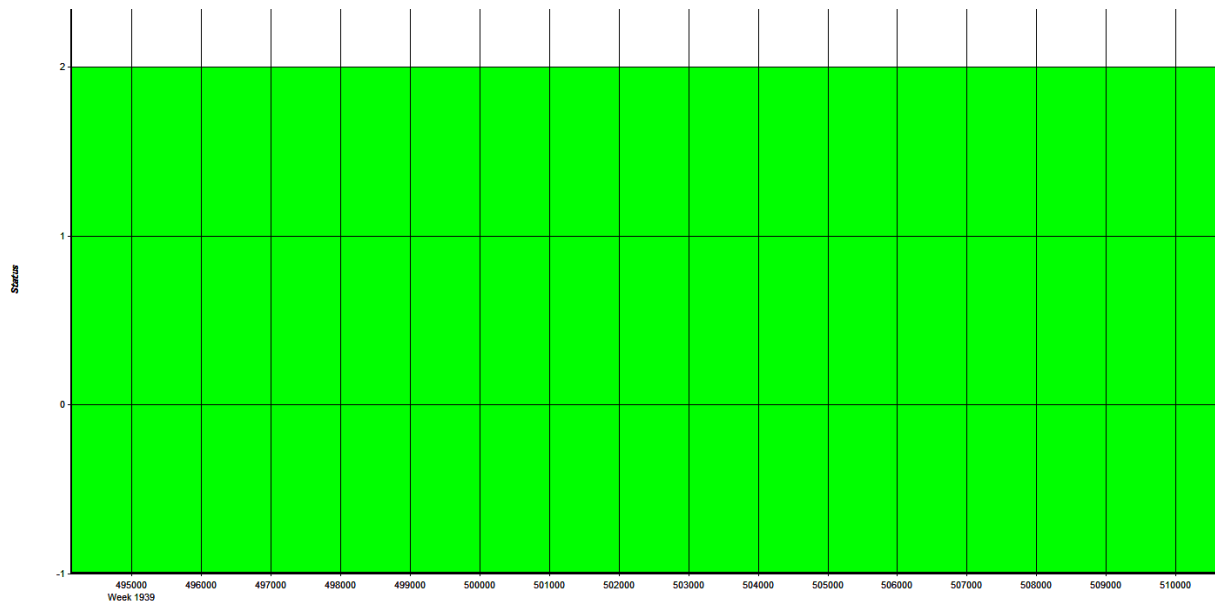
March 10, 2017-A (N262AS, SN7161) Page 2
 Flight Log Page 9

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 Flight Log Page 19

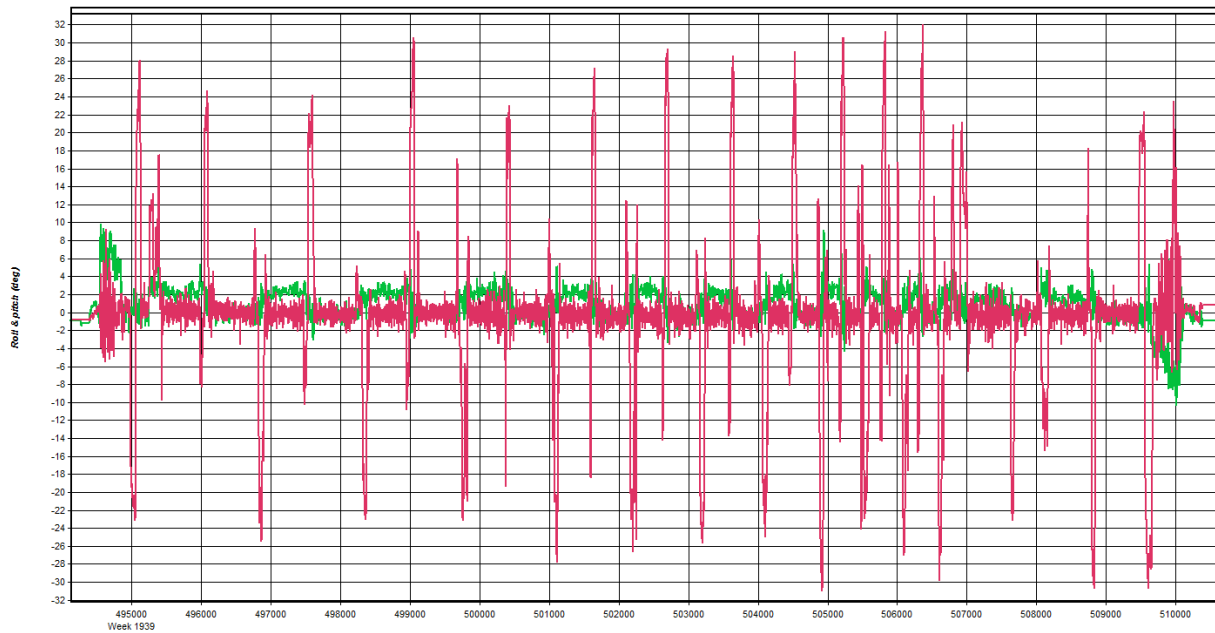
March 11, 2017-B (N262AS, SN7161) Page 22
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Mar 10, 2017-A N262AS, SN7161)

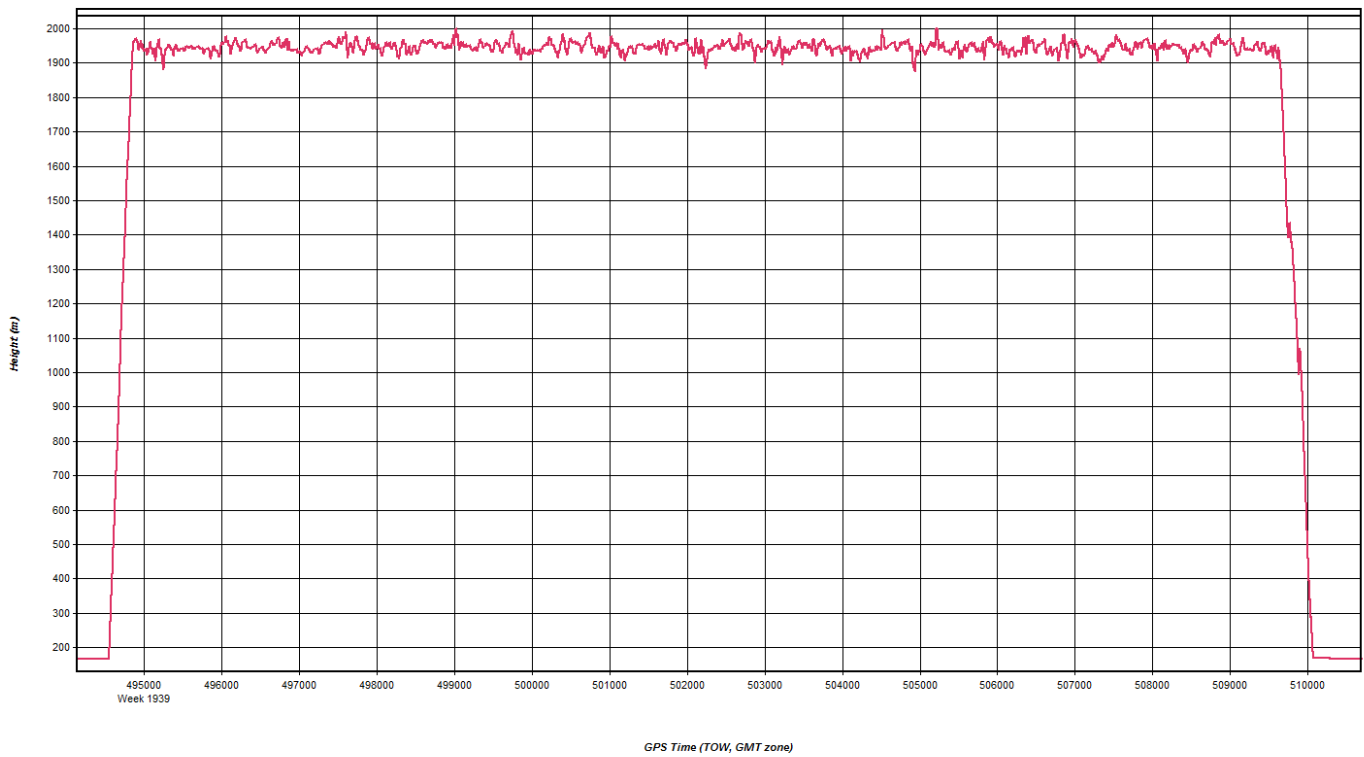
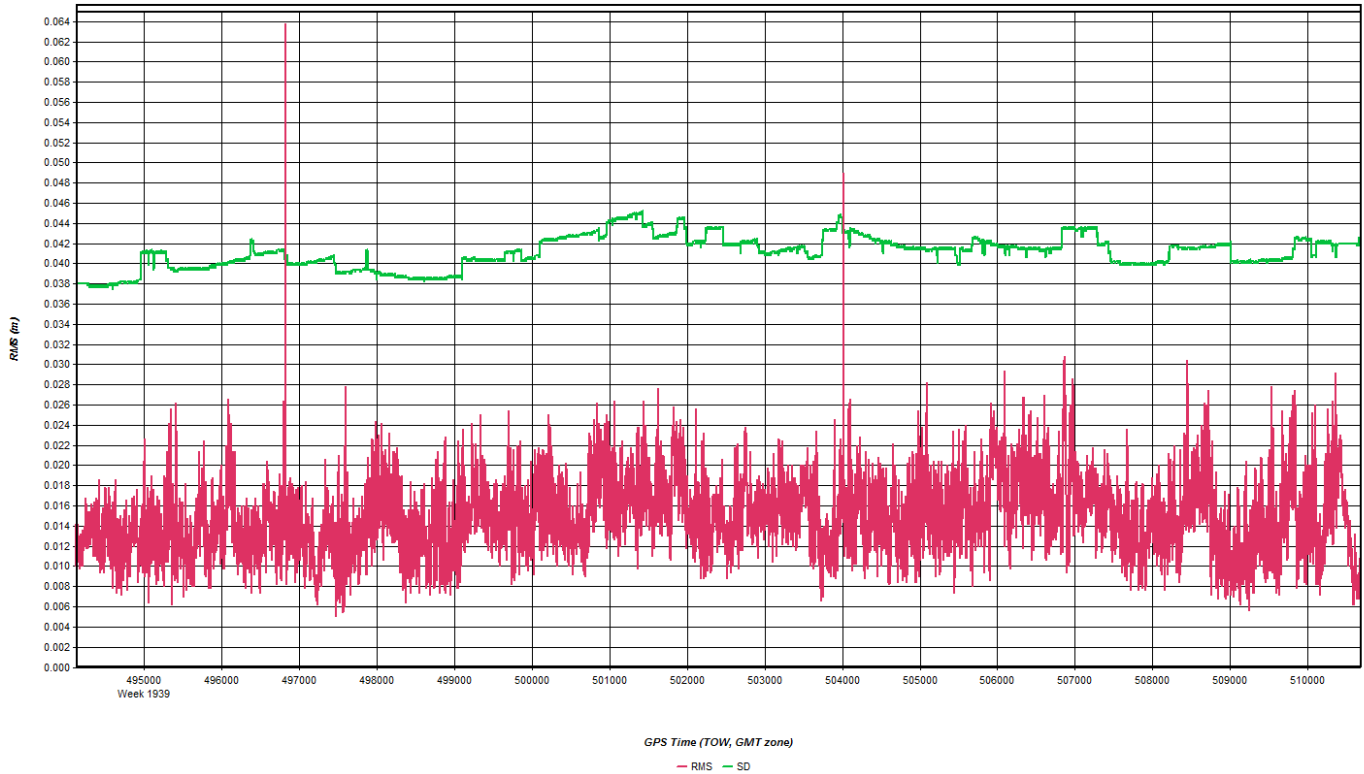


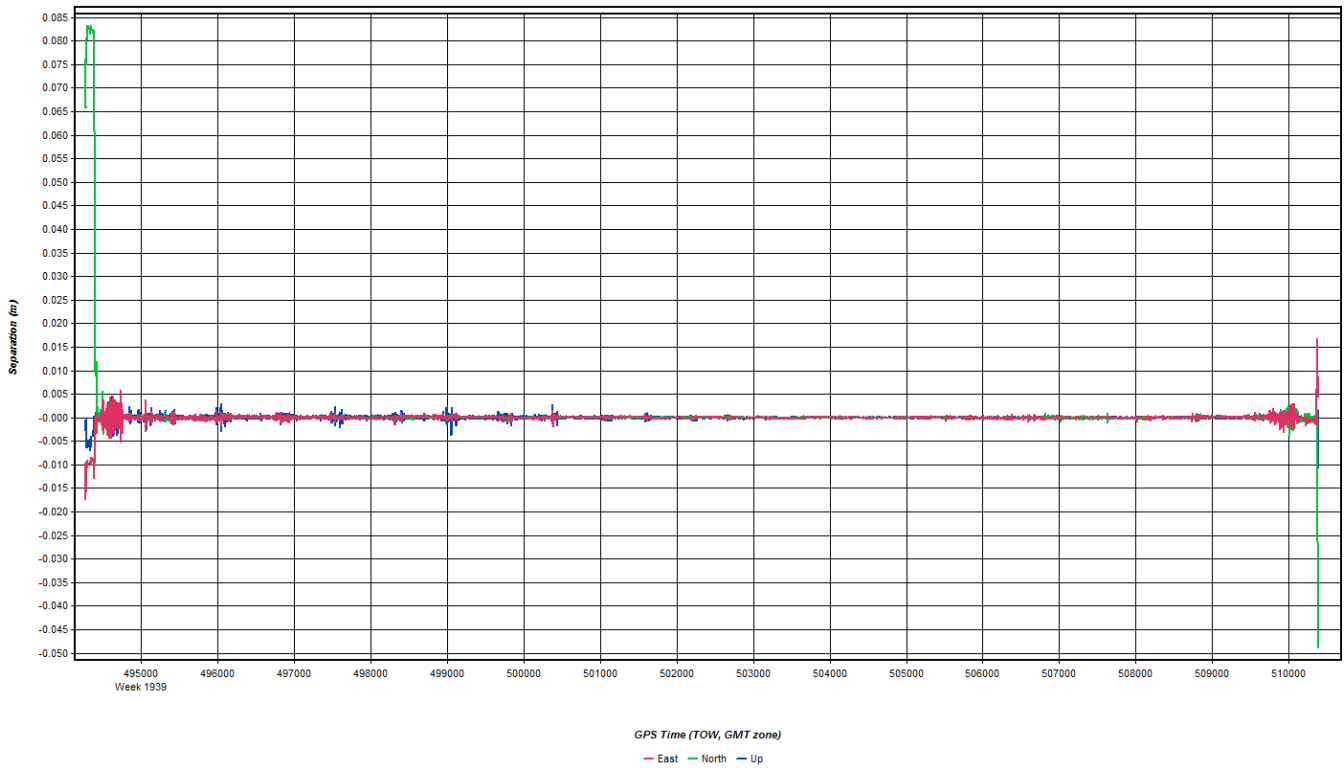
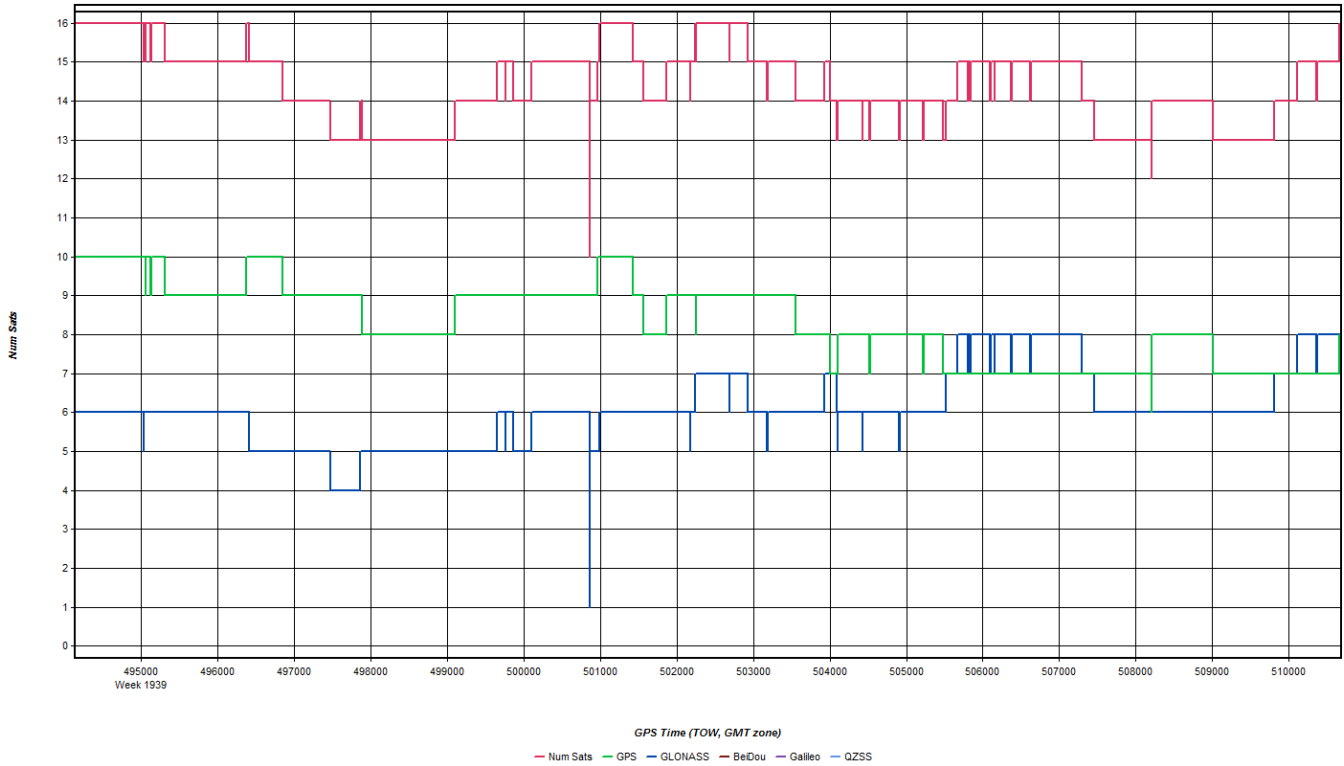


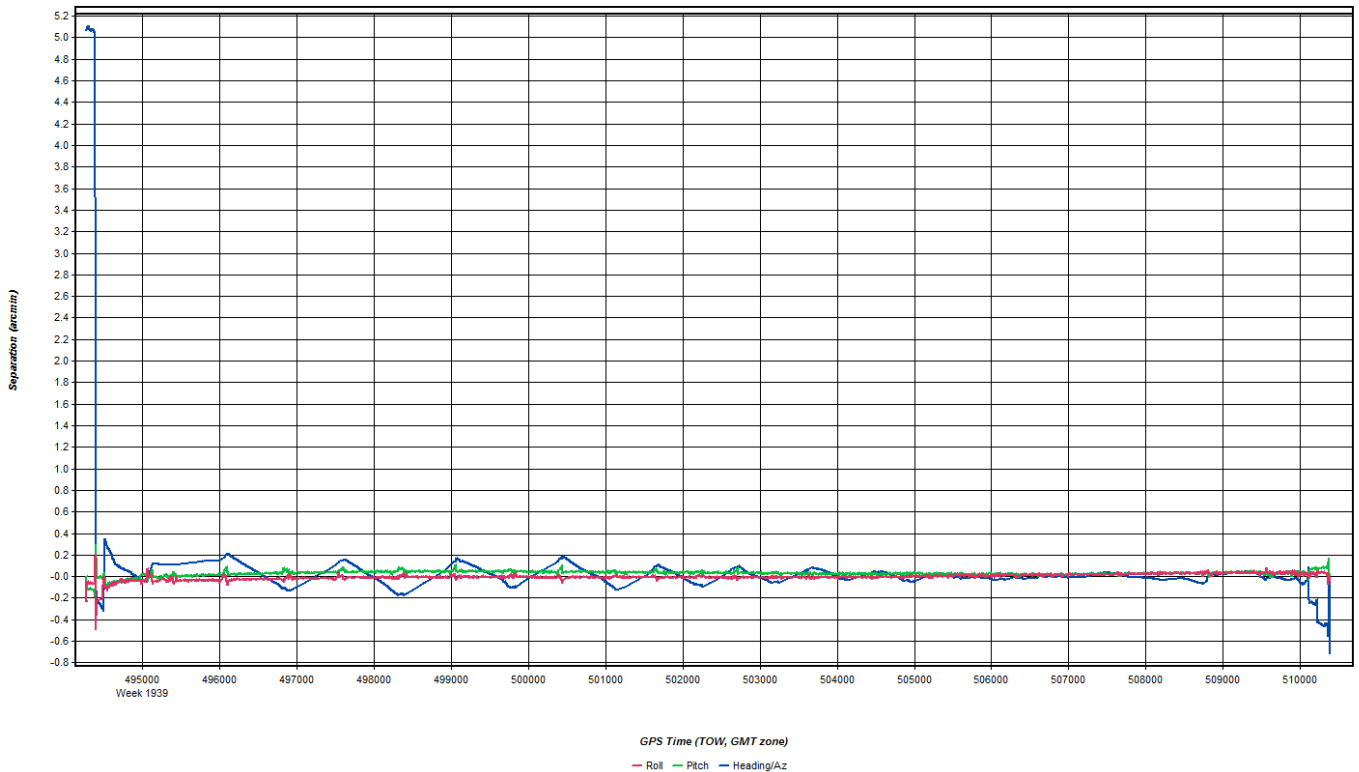
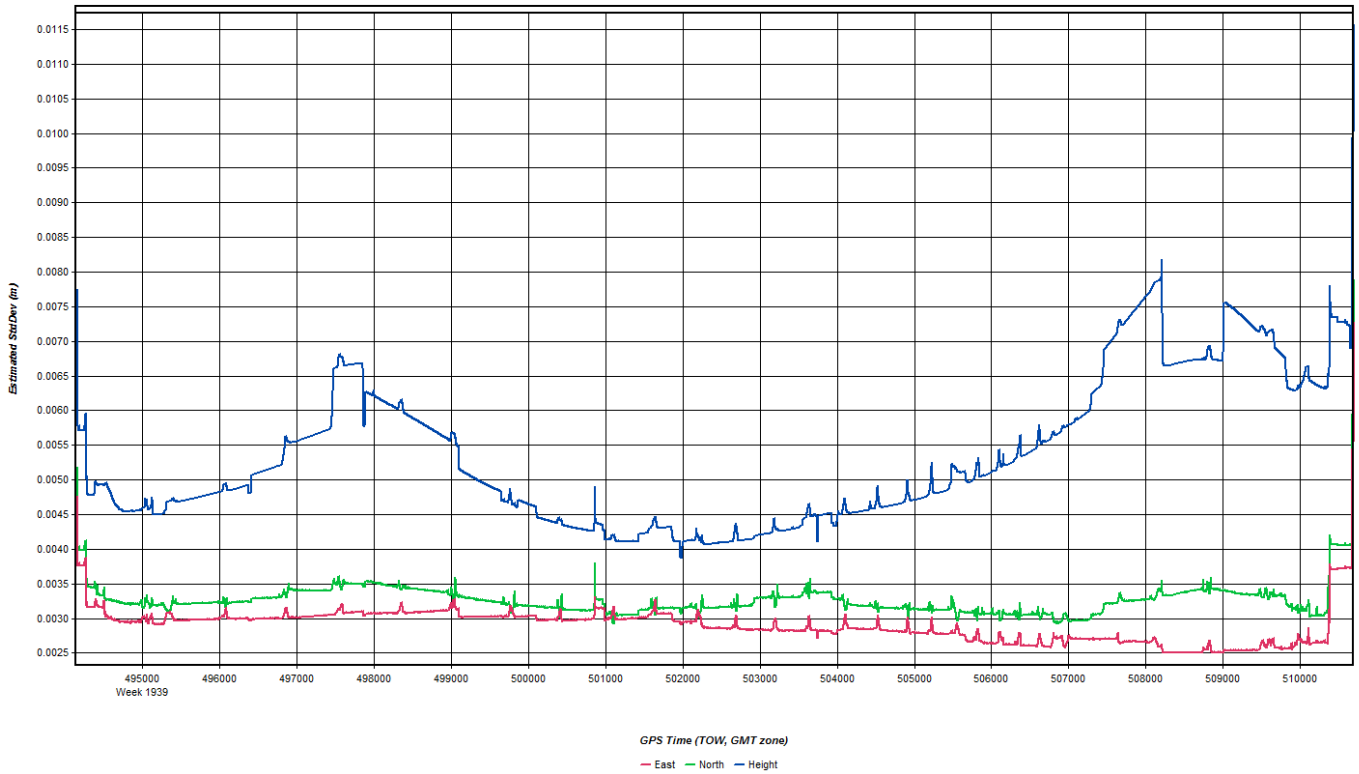
— Float — Forward Fixed — Reverse Fixed — Fixed (2 or more)



— Roll — Pitch







Coordinate/Antenna Settings ? X

Master Remote

Base Station
 1: LACR Name: LACR Disabled
 File: E:\20170310_A_28571_SN7161_N262AS\LACR069Q (resampled).g

Coordinates
 Latitude: North 43 53 05.36168 Coord. options
 Longitude: West 91 09 49.14187 Save to Favorites
 Ellipsoidal height: 198.569 m
 Datum: WGS84 Proc Datum: WGS84
 Epoch: year

Antenna Height
 From station file: TRM57971.00, NONE View STA File
 Antenna profile: TRM57971.00 Info
 Measured height: 0.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 0.067 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

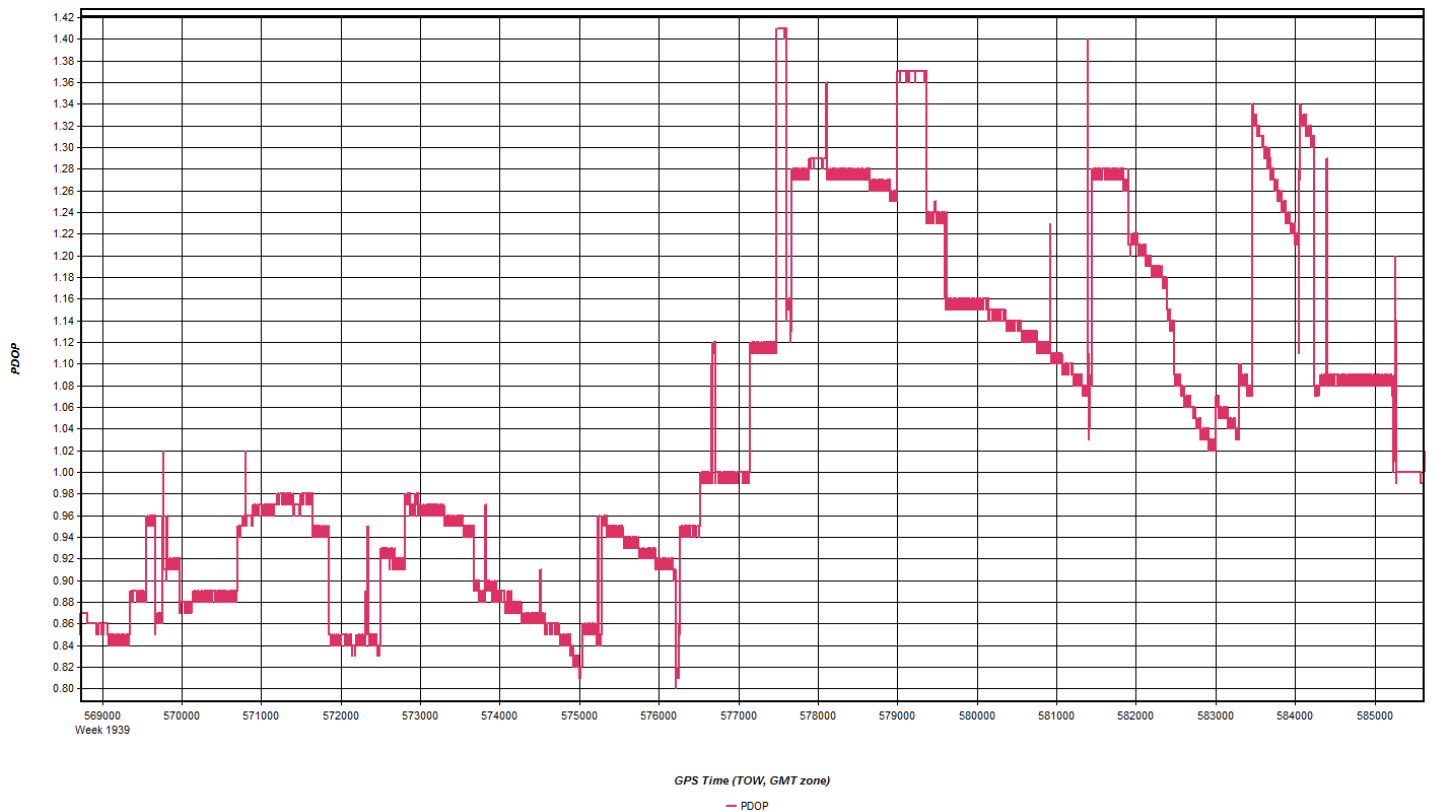
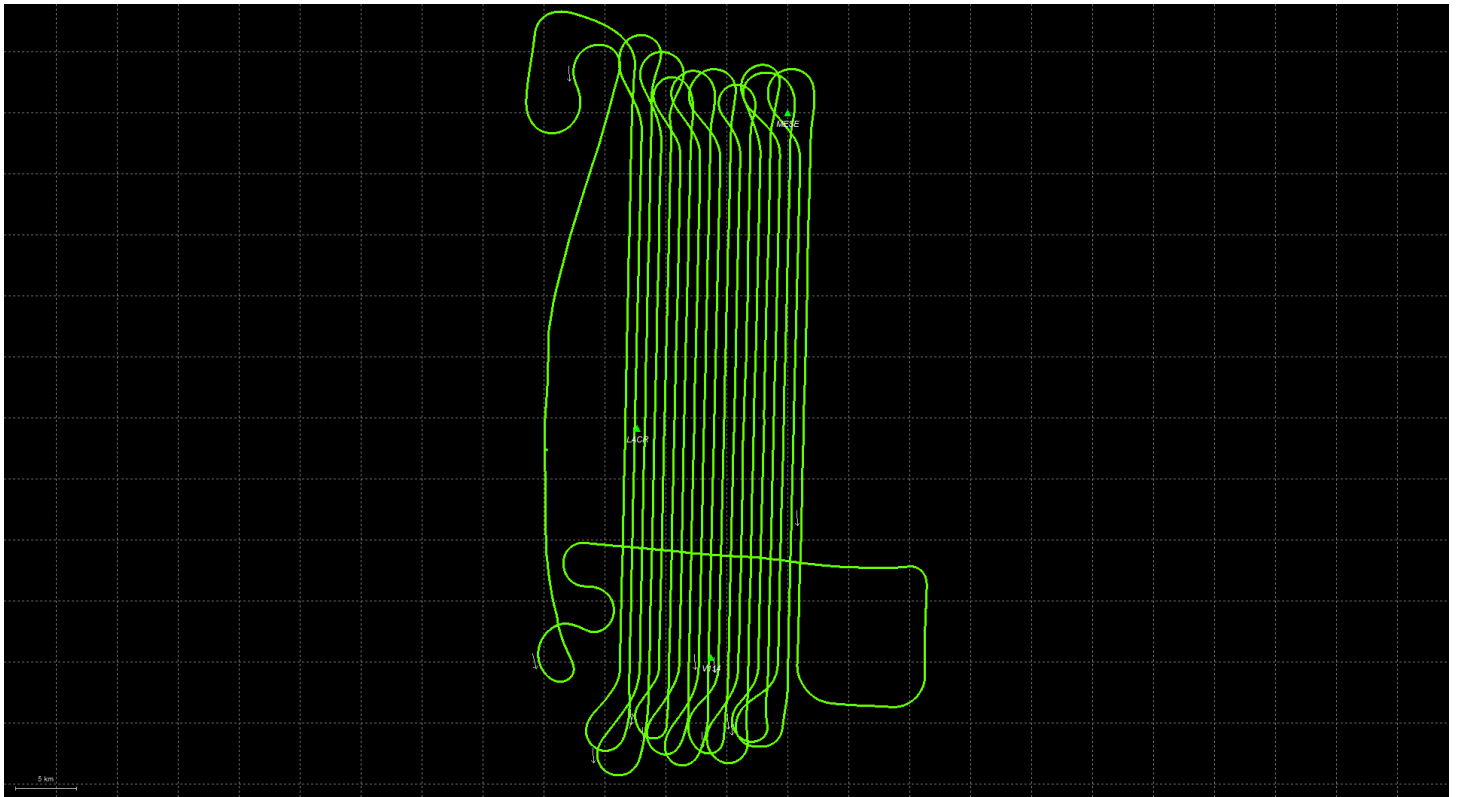
Base Station
 2: MESE Name: MESE Disabled
 File: E:\20170310_A_28571_SN7161_N262AS\MESE069Q (resampled).g

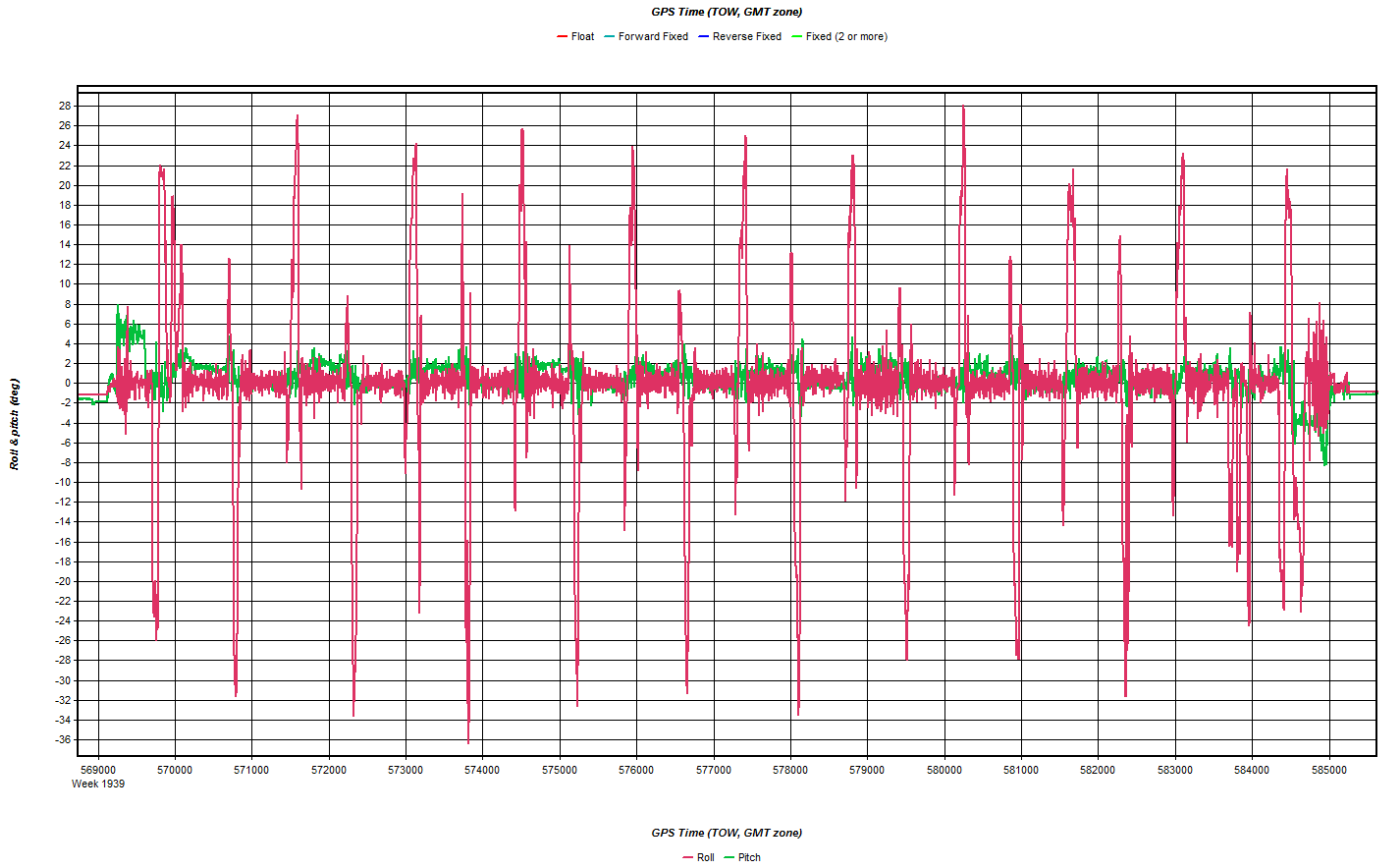
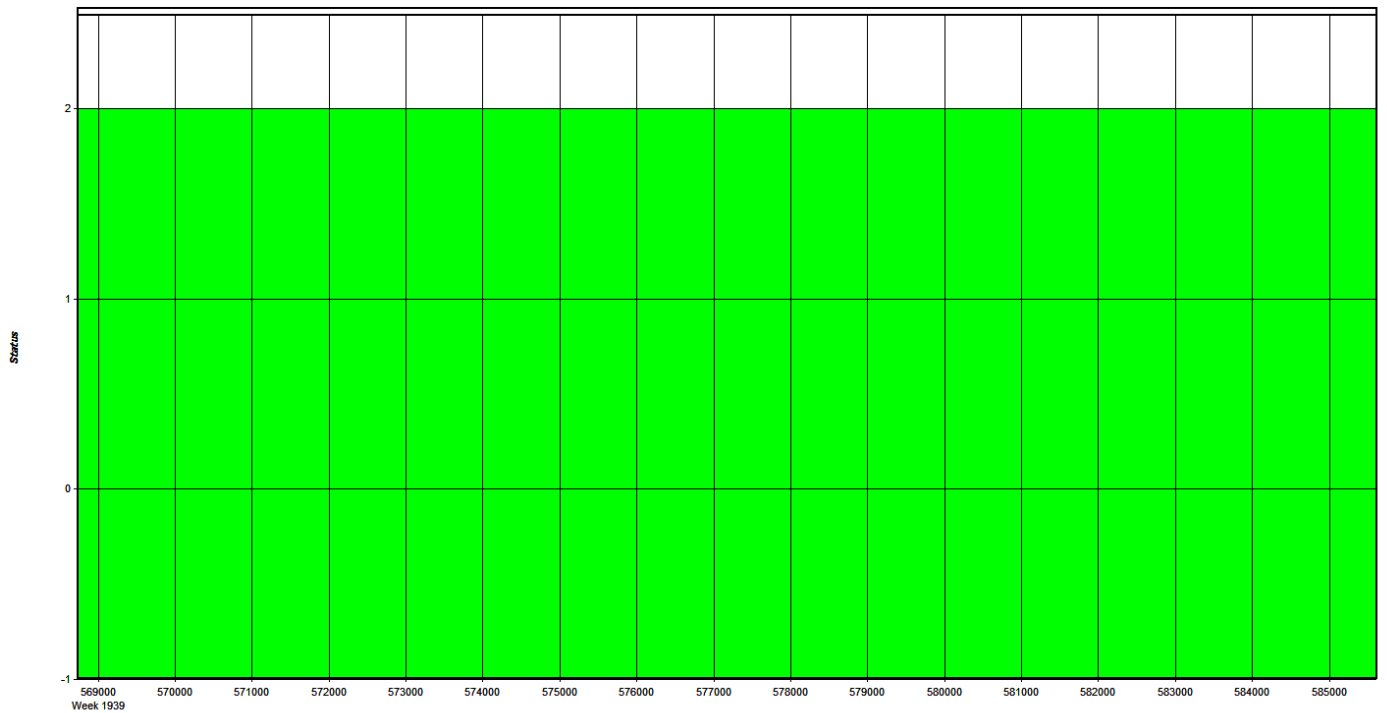
Coordinates
 Latitude: North 44 07 03.82667 Coord. options
 Longitude: West 91 00 35.05860 Save to Favorites
 Ellipsoidal height: 208.129 m
 Datum: WGS84 Proc Datum: WGS84
 Epoch: year

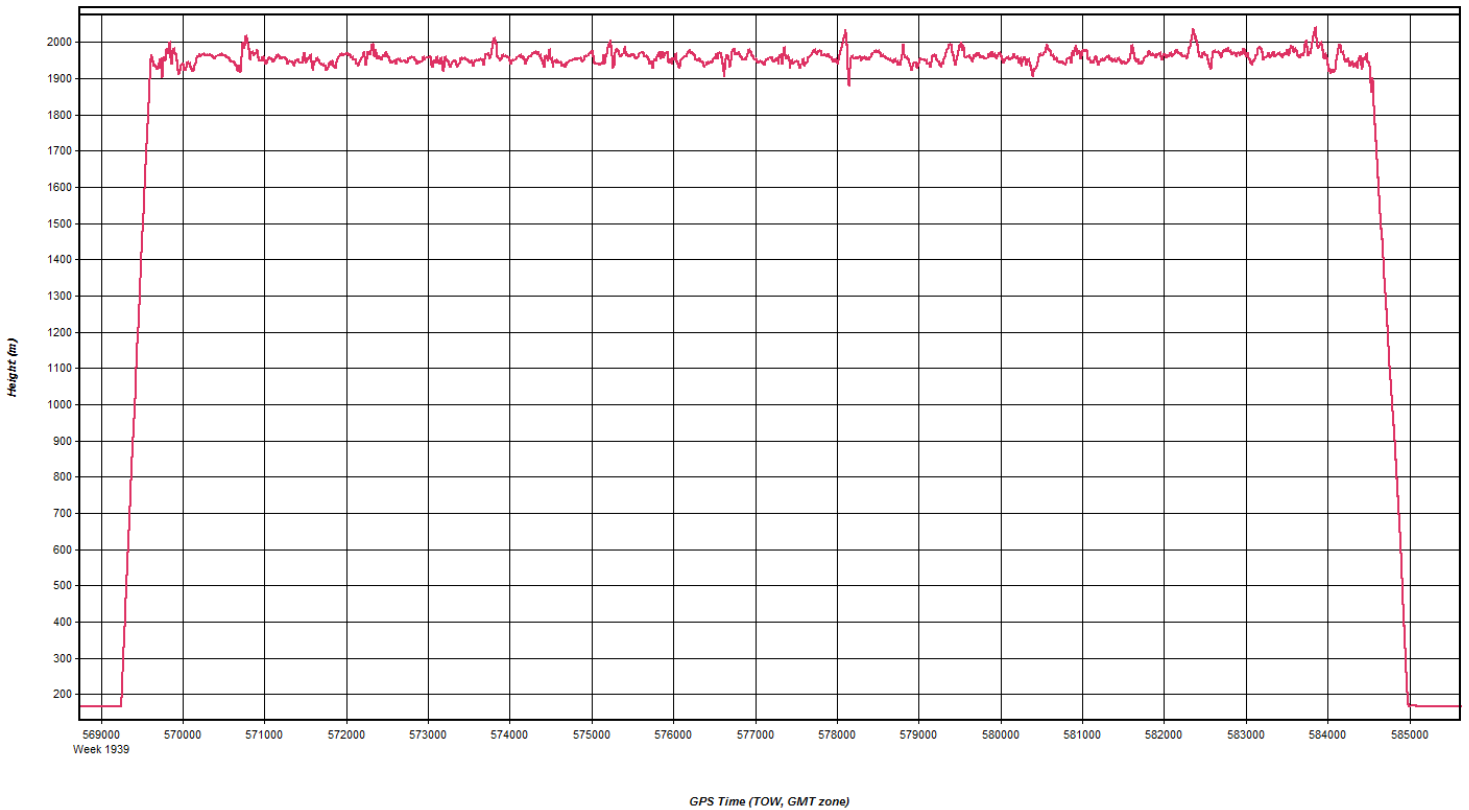
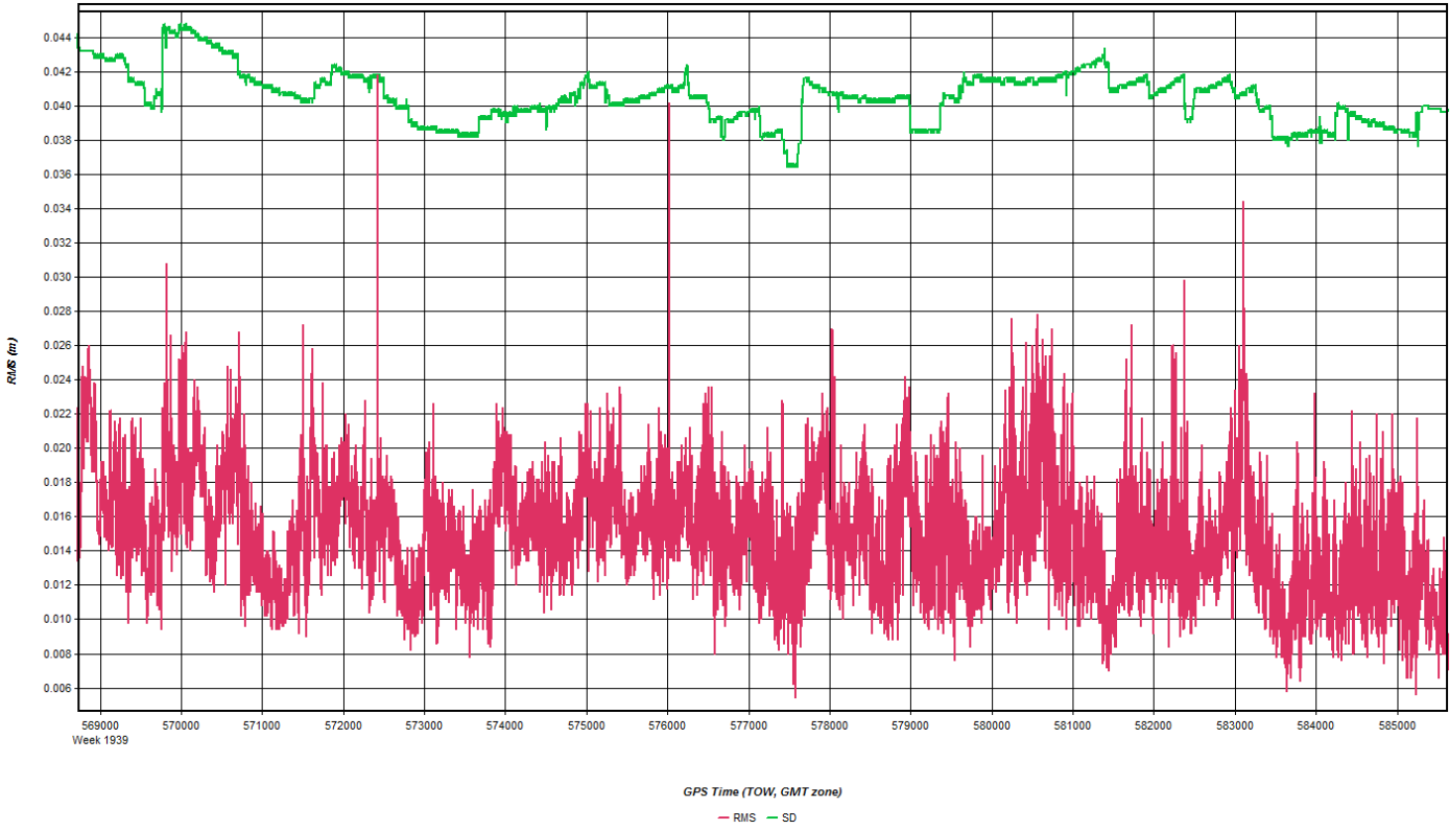
Antenna Height
 From station file: TRM57971.00, NONE View STA File
 Antenna profile: TRM57971.00 Info
 Measured height: 0.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 0.067 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

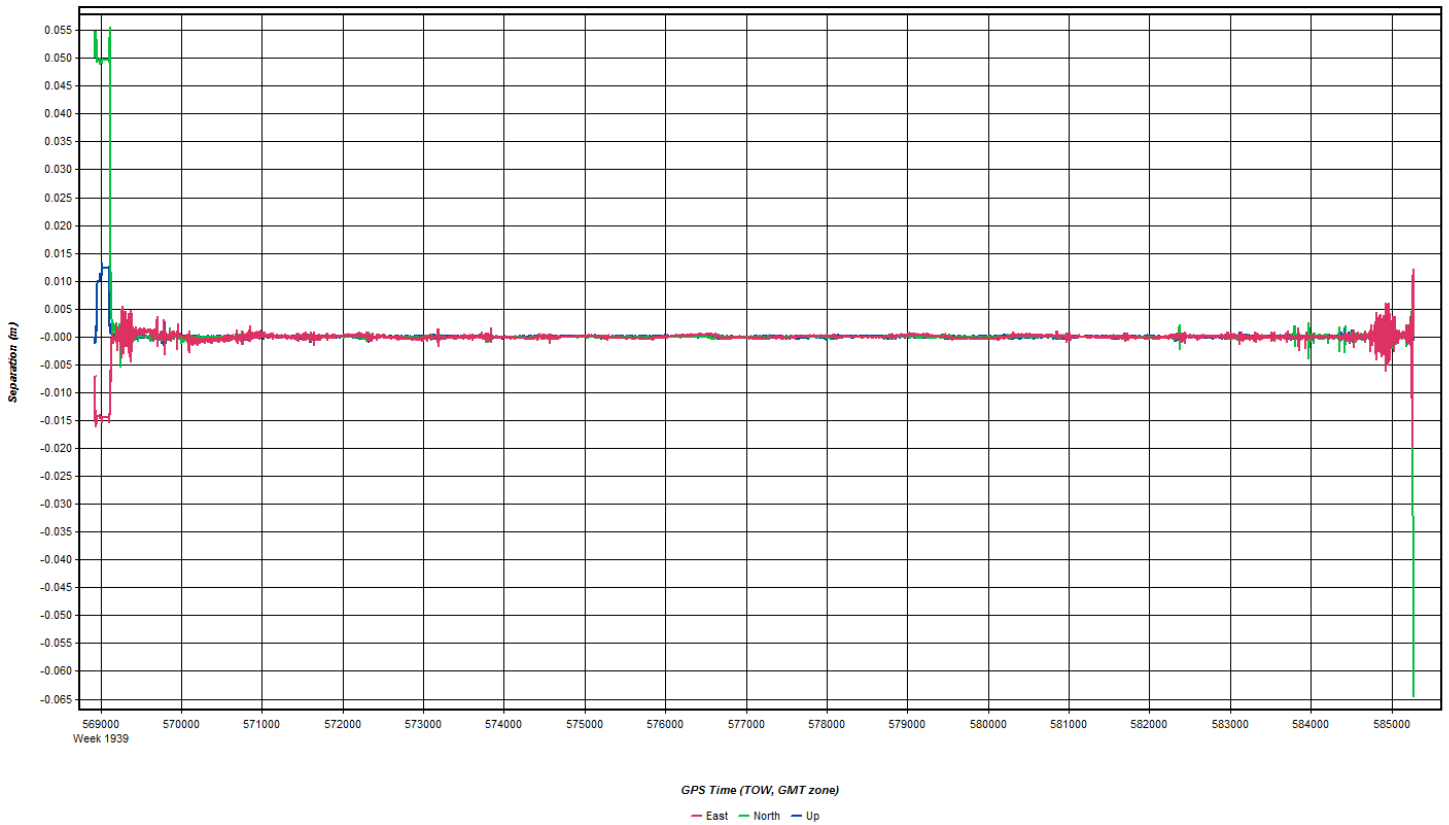
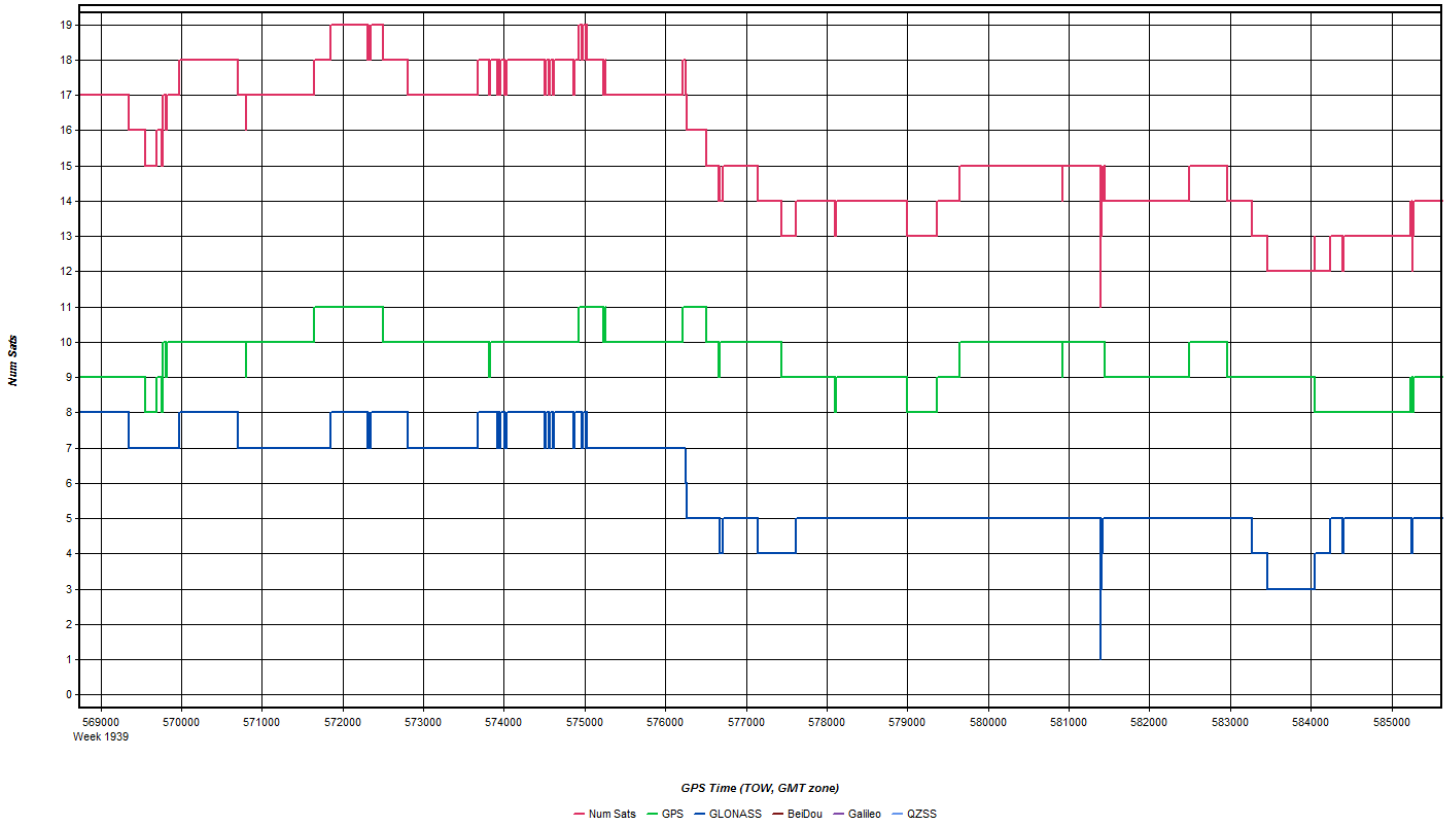
OK Cancel

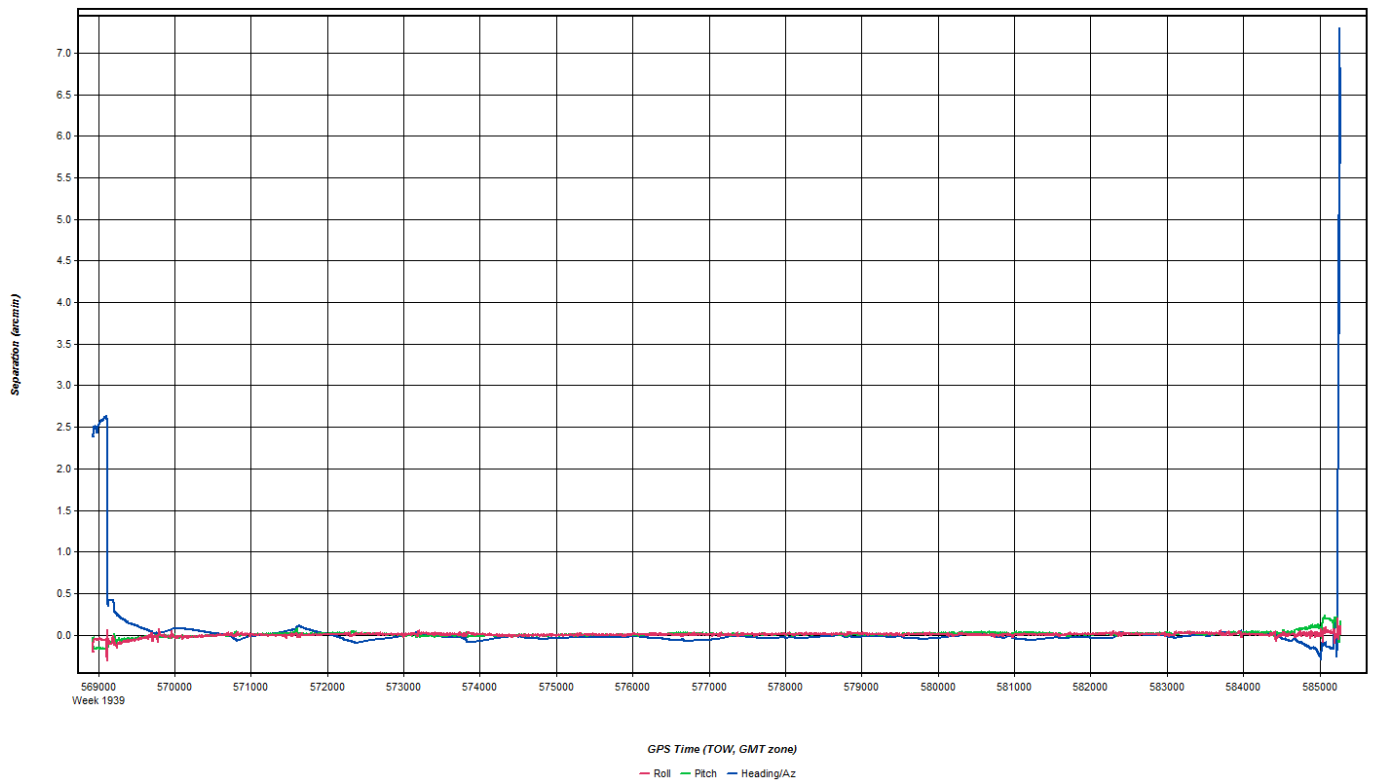
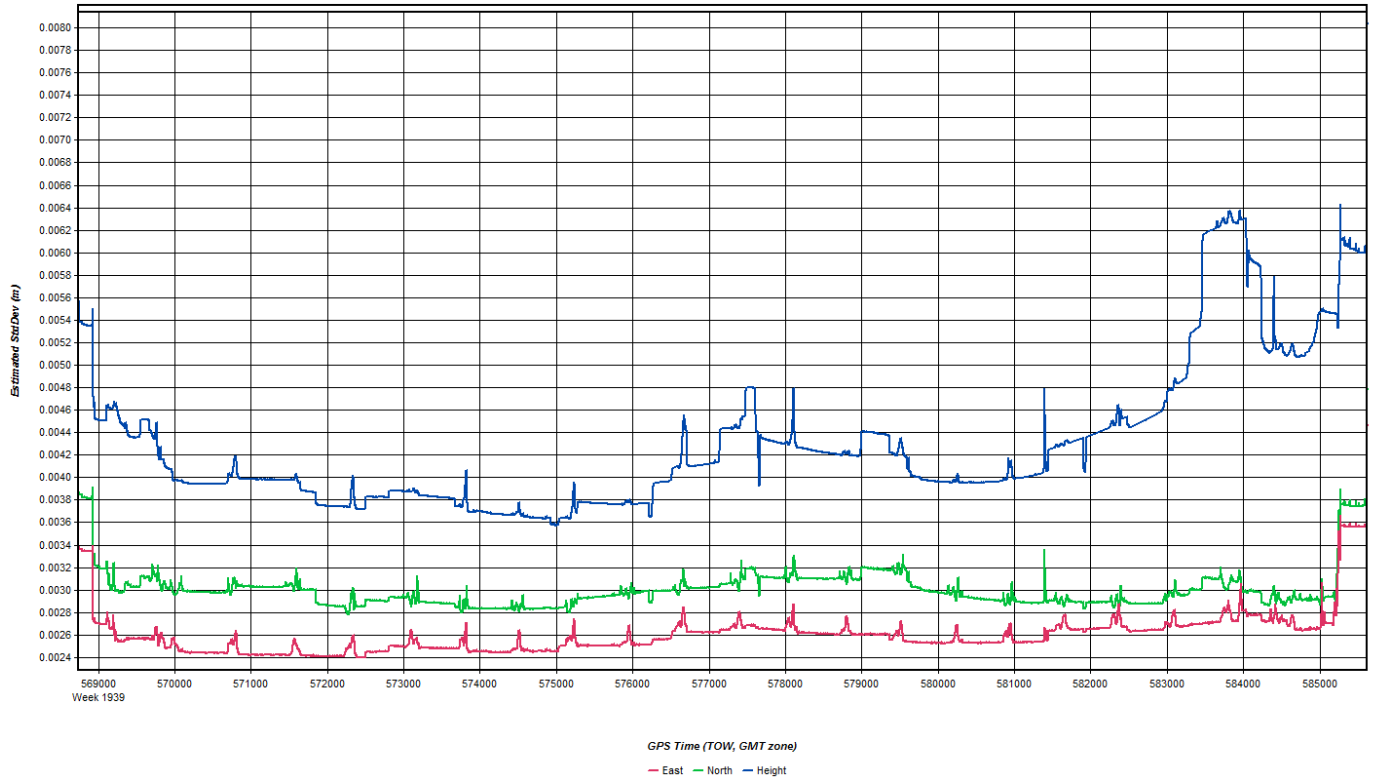
Mar 11, 2017-A (N262AS, SN7161)











Coordinate/Antenna Settings ? X

Master Remote

Base Station
 2: LACR Name: LACR Disabled
 File: E:\20170311_AB_28571_SN7161_N262AS\20170311_135704\LAC

Coordinates
 Latitude: North 43 53 05.36138 Coord. options
 Longitude: West 91 09 49.14230 Save to Favorites
 Ellipsoidal height: 198.563 m
 Datum: WGS84 Proc Datum: WGS84
 Epoch: year

Antenna Height
 From station file: TRM57971.00, NONE View STA File
 Antenna profile: TRM57971.00 Info
 Measured height: 0.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 0.067 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

Base Station
 1: MESE Name: MESE Disabled
 File: E:\20170311_AB_28571_SN7161_N262AS\20170311_135704\ME

Coordinates
 Latitude: North 44 07 03.82664 Coord. options
 Longitude: West 91 00 35.05885 Save to Favorites
 Ellipsoidal height: 208.120 m
 Datum: WGS84 Proc Datum: WGS84
 Epoch: year

Antenna Height
 From station file: TRM57971.00, NONE View STA File
 Antenna profile: TRM57971.00 Info
 Measured height: 0.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 0.067 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

Base Station
 3: V114 Name: V114 Disabled
 File: E:\20170311_AB_28571_SN7161_N262AS\20170311_135704\V1

Coordinates
 Latitude: North 43 42 57.75000 Coord. options
 Longitude: West 91 05 17.71027 Save to Favorites
 Ellipsoidal height: 99.995 m
 Datum: WGS84 Proc Datum: WGS84
 Epoch: year

Antenna Height
 From station file: TRM57971.00, NONE View STA File
 Antenna profile: TRM57971.00 Info
 Measured height: 0.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 0.067 m
 Measured to
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Flight Log

Date: 3-11-17
Pg. 1 of 2

WLC B C D E

Project: WROC LA CROSSE COUNTY

Flight Mgmt File: 2017-wroc-lidar-ssk... 20170311-135704

Project #: 28571

Flight Mgmt File: 2017-wroc-lidar-ssk... 20170311-135704

Aircraft: NZ6205 **Begin Hobbs:** 6476.0 **End Hobbs:** 6490.5 **Total:** 14.5 **Pilot:** MCDouglas **Co-Pilot:** - **Tech:** MOUNDY

Dep Apt: LSE **Dep Time (Lcl):** 0804 (Z): 1406 **Arr Apt:** LSE **Arr Time (Local):** 1230 (Z): 1830 **Tot Time Aloft:** 4:24

CORS: D/N Sta 1: LACR Sta 2: **Flyovers:** Y / (N) IF Y, times: Sta1) Sta2)

GPS Unit: D/N Sta 1: TRIMBLE R7 5" Sta 2: **Flyovers:** Y / (N) IF Y, times: Sta1) Sta2)

Gd Temp beg:		°C		End:		°C		OAT beg:		°C		End:		°C		Altimeter beg:		end:	
Type	Alt	Serial #	Alt	Alt	Alt	Avg Terr	Max	Avg Pt	Max	Avg Pt	Max	Avg Pt	Max	Avg Pt	Max	Avg Pt	Max	Avg Pt	Max
FOV	AGL	7161	5200'	6400'	6400'	Ht	Gapd	Spacing	Power	Power	Power	Power	Power	Power	Power	Power	Power	Power	Power
40°			MPIA	N	Pulses	Pulse	Rate	100%											
					In Air	Rate													

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	POB/SSS	GPS Altitude	Turb	Crab	Alt	Alt	Pulses	Pulse	Rate	Power	Power	Avg Pt	Max	Avg Pt	Max
026	183	1422	1431	151	1.0/2.0	6440	6	0											
027	003	1434	1443	153	1.1/1.9	6420	5	0											
028	183	1448	1457	162	1.1/1.9	6400	6	0											
029	003	1500	1509	159	1.1/2.0	6460	4	0											
030	183	1513	1521	161	1.2/1.9	6410	5	0											
031	003	1524	1533	156	1.2/1.8	6440	4	0											
032	183	1536	1545	156	1.1/1.9	6390	6	0											
033	003	1548	1556	158	1.1/1.9	6400	10	0											
034	183	1601	1608	160	1.1/1.8	6410	6	0											
035	003	1612	1620	160	1.0/1.9	6460	4	0											
036	183	1624	1632	162	0.9/2.0	6390	6	0											
037	003	1636	1644	154	1.1/1.7	6470	4	0											
038	183	1647	1656	162	1.1/1.7	6320	5	0											
039	003	1700	1708	161	1.2/1.7	6430	4	0											
040	183	1711	1720	159	1.2/1.6	6340	7	0											
041	003	1724	1731	164	1.2/1.7	6420	4	0											
042	183	1735	1744	155	1.1/1.8	6430	6	0											
043	003	1747	1755	160	1.1/1.7	6480	4	0											

FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.

Total Proj Lines: 28 **Lines Flowing:** 19 **Lines Remain:** 9 **Online Time:** 4:0 **Mob Time:** 0:5 **Notes:**

Project: WROc LA CROSSE COUNTY
 (email log daily to flight_log_distribution_list@quantumspatial.com)

Project #: 28971

Flight Mgmt File: 2017. WROc - 20170211-200930

Aircraft: N2529S Begin Hobbs: 6480.5 End Hobbs: 6822.8 Total: 2.3 Pilot: M.L.S.P.A.S. Co-Pilot: - Tech: M.L.S.P.A.S.

Dep Apt: LSE Dep Time (Lcl): 1415 (Z): 2015 Arr Apt: LSE Arr Time (Local): 1635 (Z): 2235 Tot Time Aloft: 2:20

CORS: D/N Sta 1: LAC2 Sta 2: Flyovers: Y (N) If Y, times: Sta1) Sta2)

GPS Unit: D/N Sta 1: TRIMBLE R7 "5" Sta 2: Flyovers: Y (N) If Y, times: Sta1) Sta2)

Gd Temp beg: °C End: °C OAT beg: °C End: °C Altimeter begin: end:

Date: 3-7-17
 L M A D C D E Pg 1 of 1

Max Alt: 6500' Avg Terr: 4800' Max Gndpd: 150 KTS Avg Pt Spacing: 0.18

Scan Rate: 53 Hz MplA: D/N Pulse Rate: 299 Hz Power: 100% PFSM: 33

End: 128
End: 161
End: 33

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	FOOF: Sns	GPS Altitude	Crb	Temp	Notes
045	003	2021	2039	157	1.3/17	6400	3	-	
046	183	2043	2052	164	1.4/16	6400	4	-	
047	003	2055	2105	148	1.4/17	6500	4	-	
048	153	2107	2116	162	1.3/16	6400	5	-	
049	003	2120	2129	155	1.3/16	6500	4	-	
050	153	2132	2141	157	1.2/18	6460	5	-	
051	003	2144	2152	158	1.2/18	6490	3	-	
052	153	2156	2205	153	1.4/19	6500	5	-	
053	003	2209	2216	154	1.2/19	6540	4	-	
T1E	273	2222	2225	145	1.2/17	6460	6	-	- MANUAL TIR LINE

FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc

Total Proj Lines: 7

Lines Flown: 9

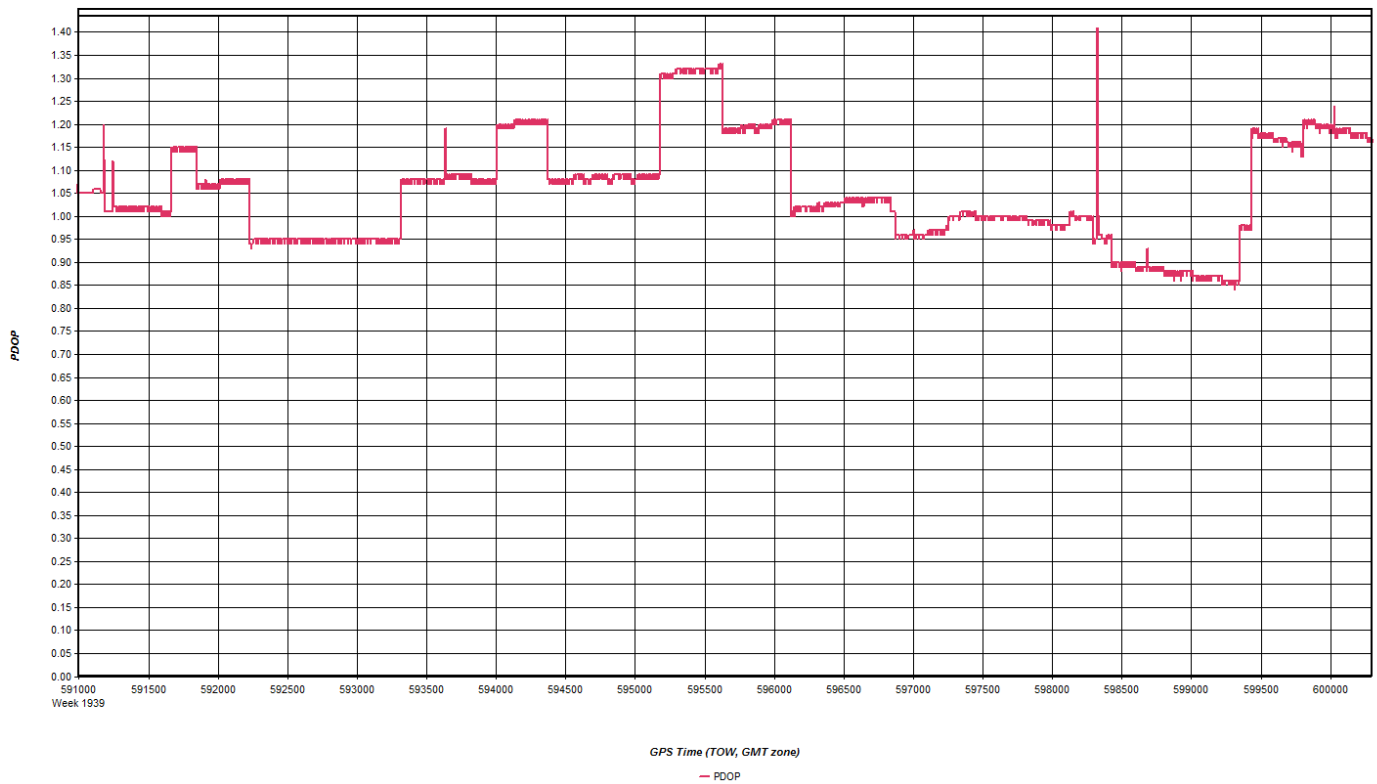
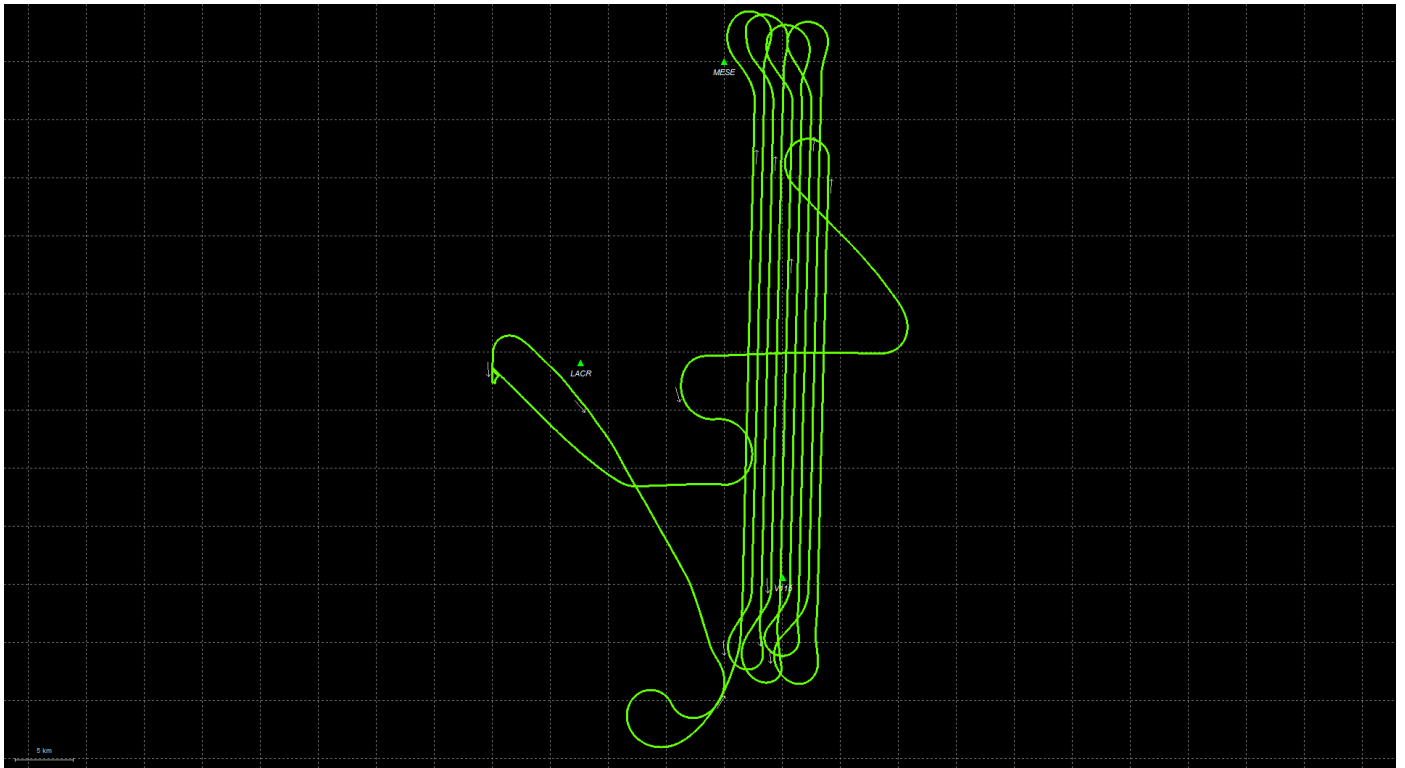
Lines Remain: 0

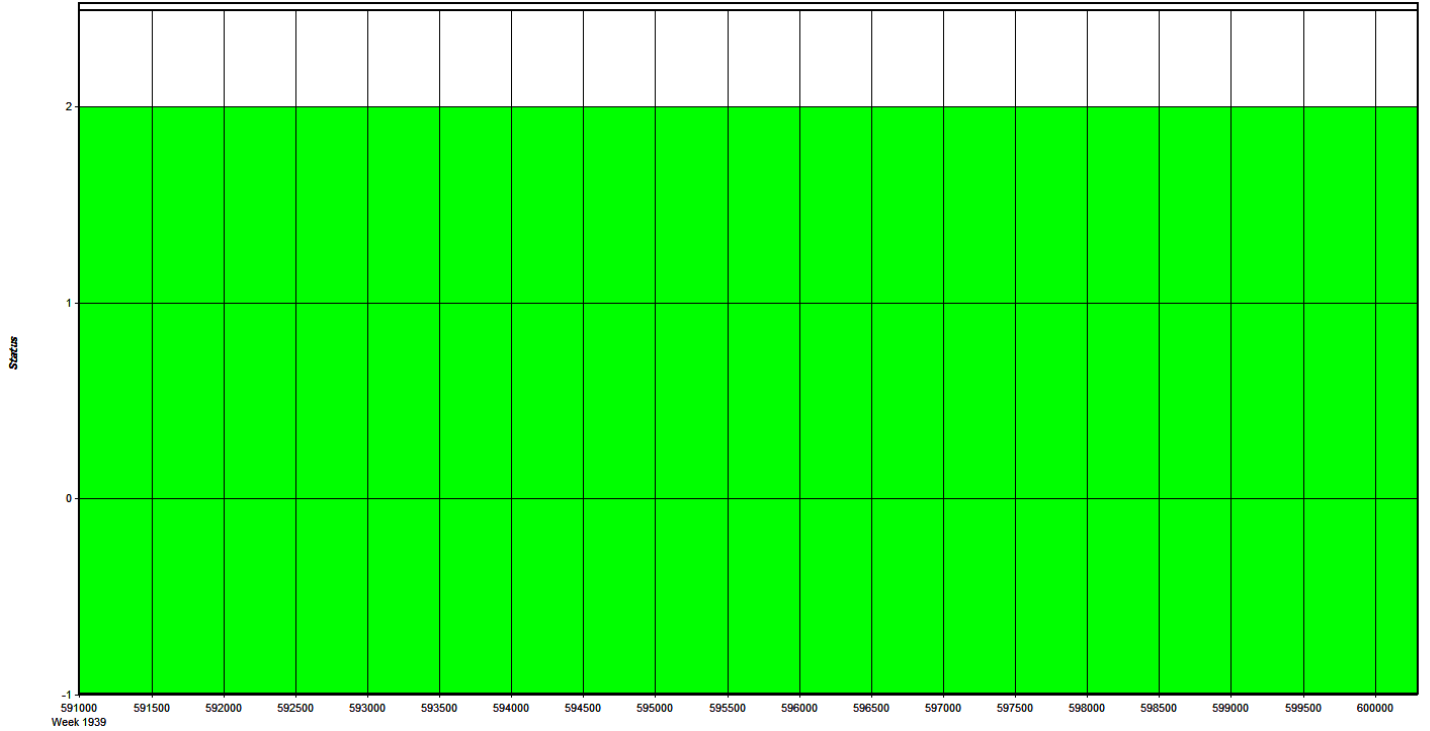
Online Time: 1.9

Mob Time: 0.4

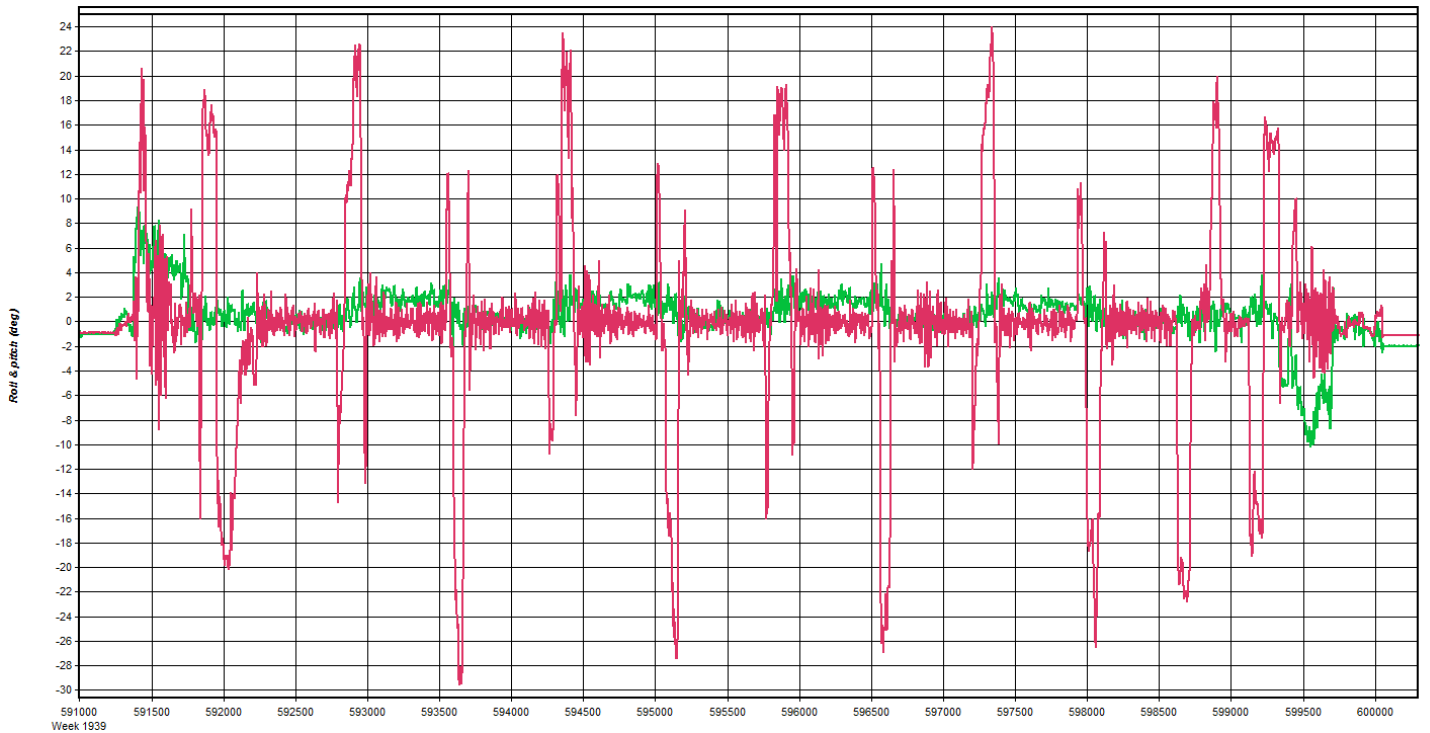
Notes:

Mar 11, 2017-B (N262AS, SN7161)

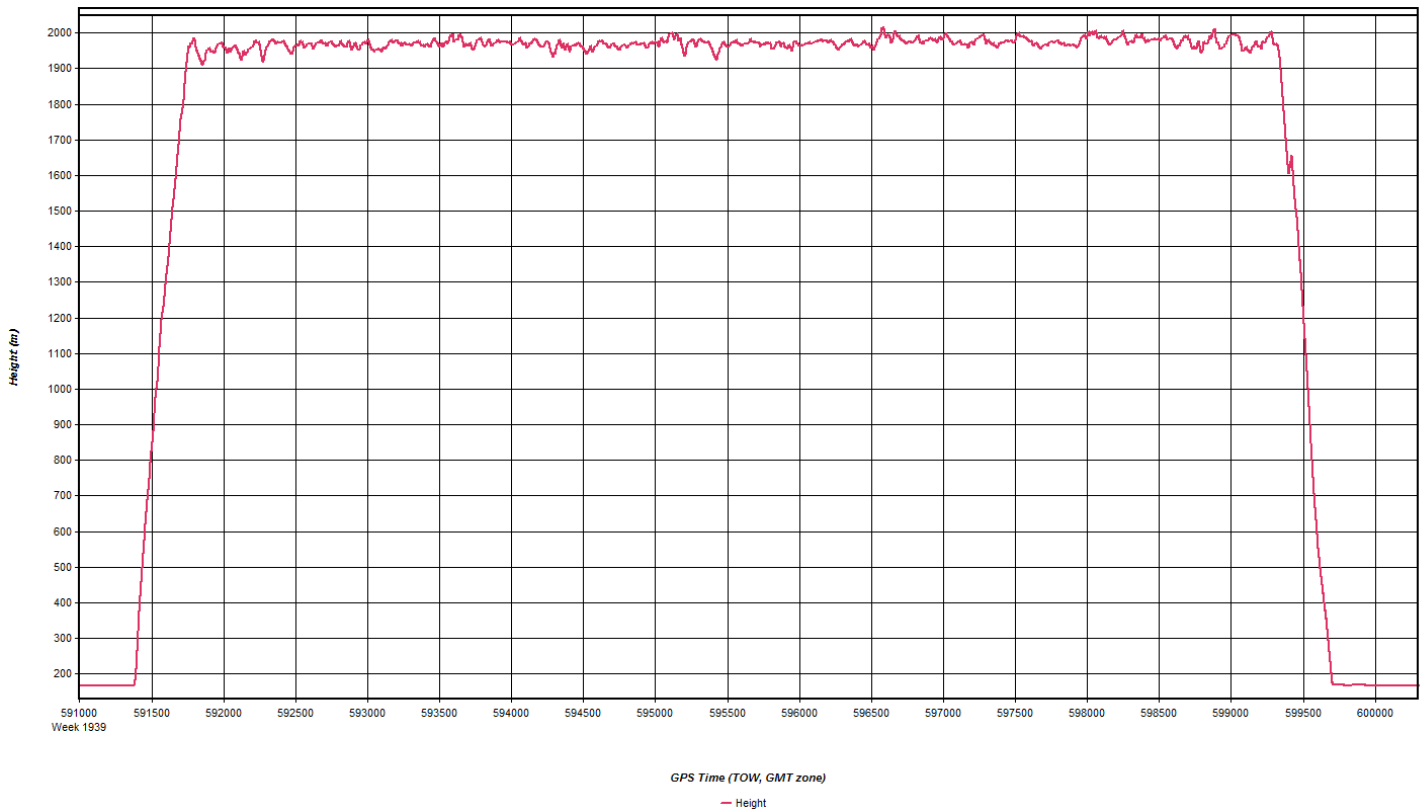
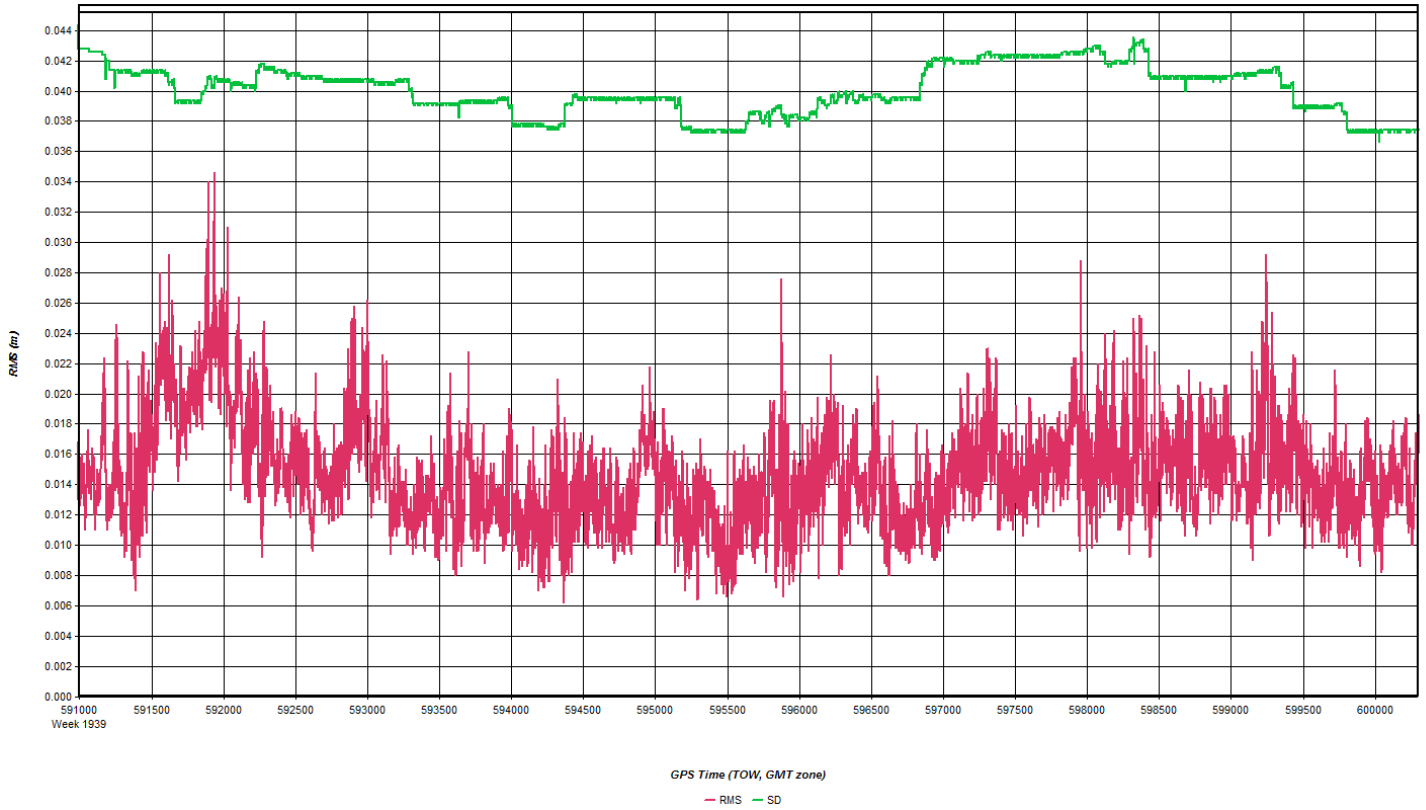


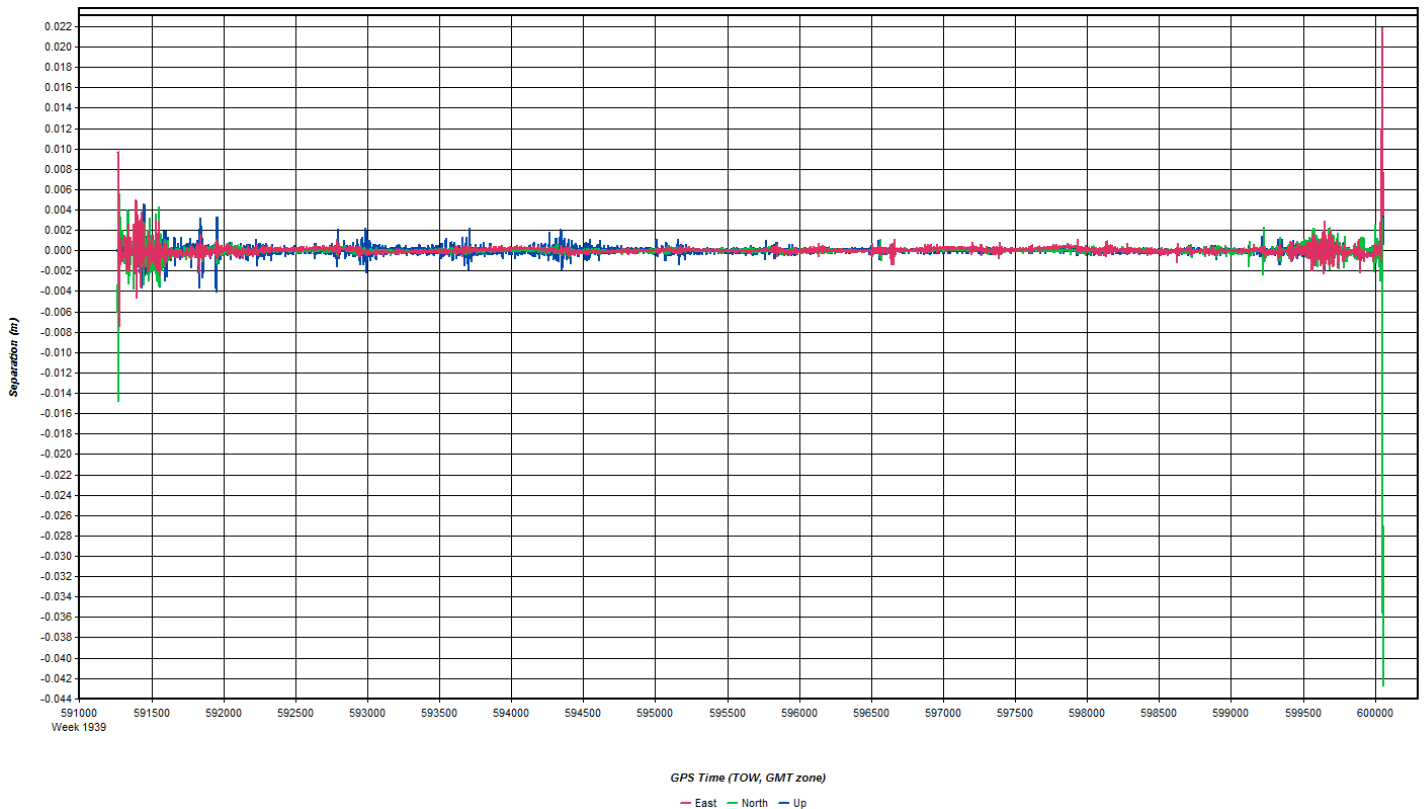
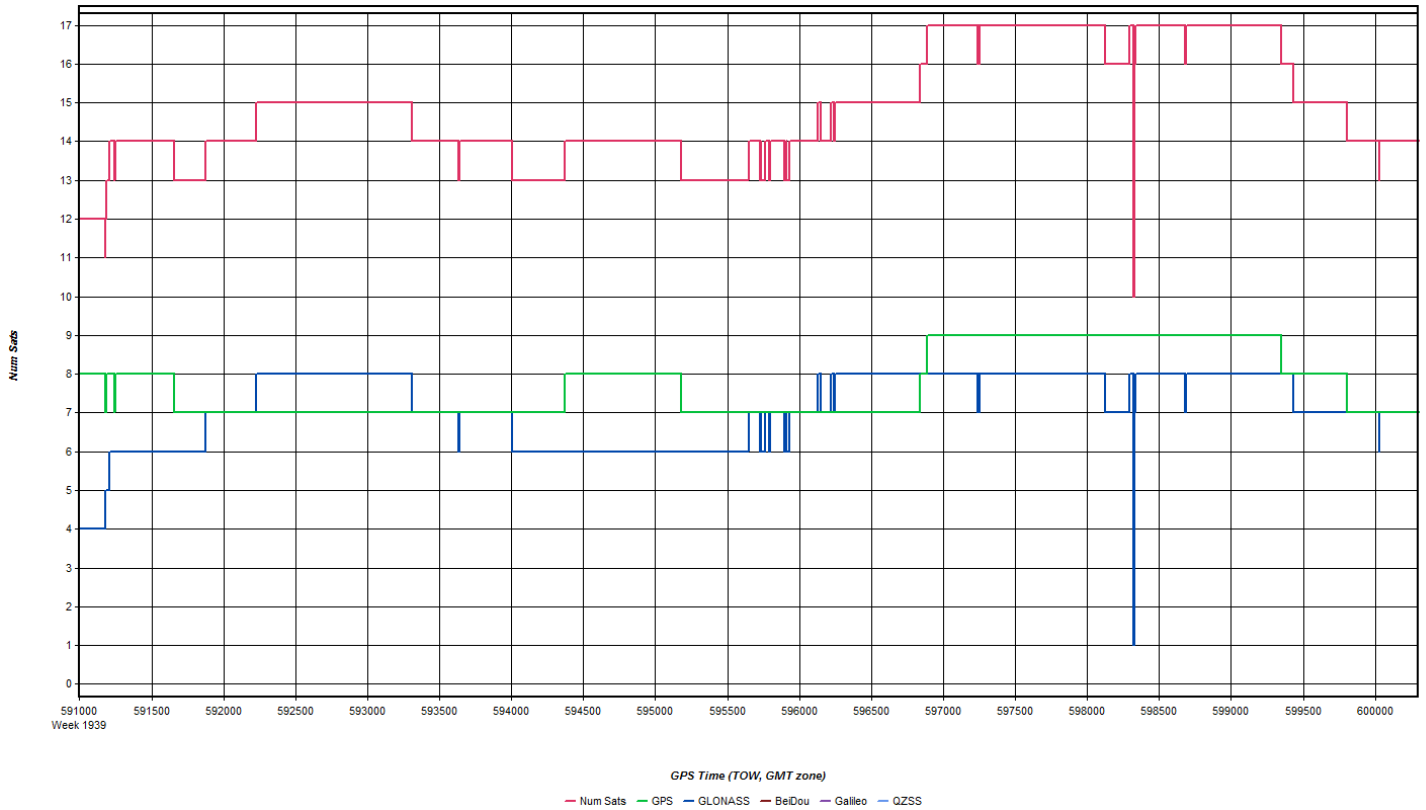


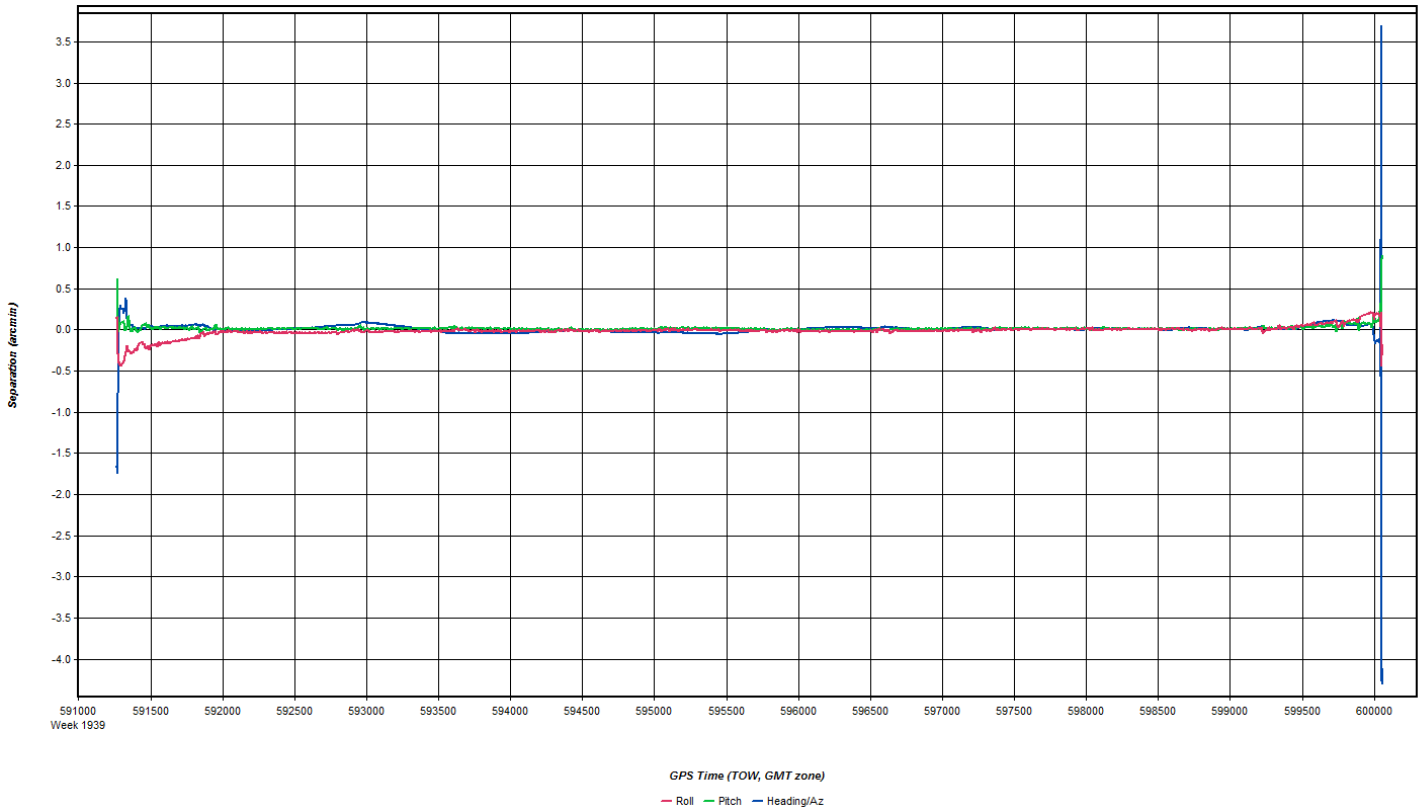
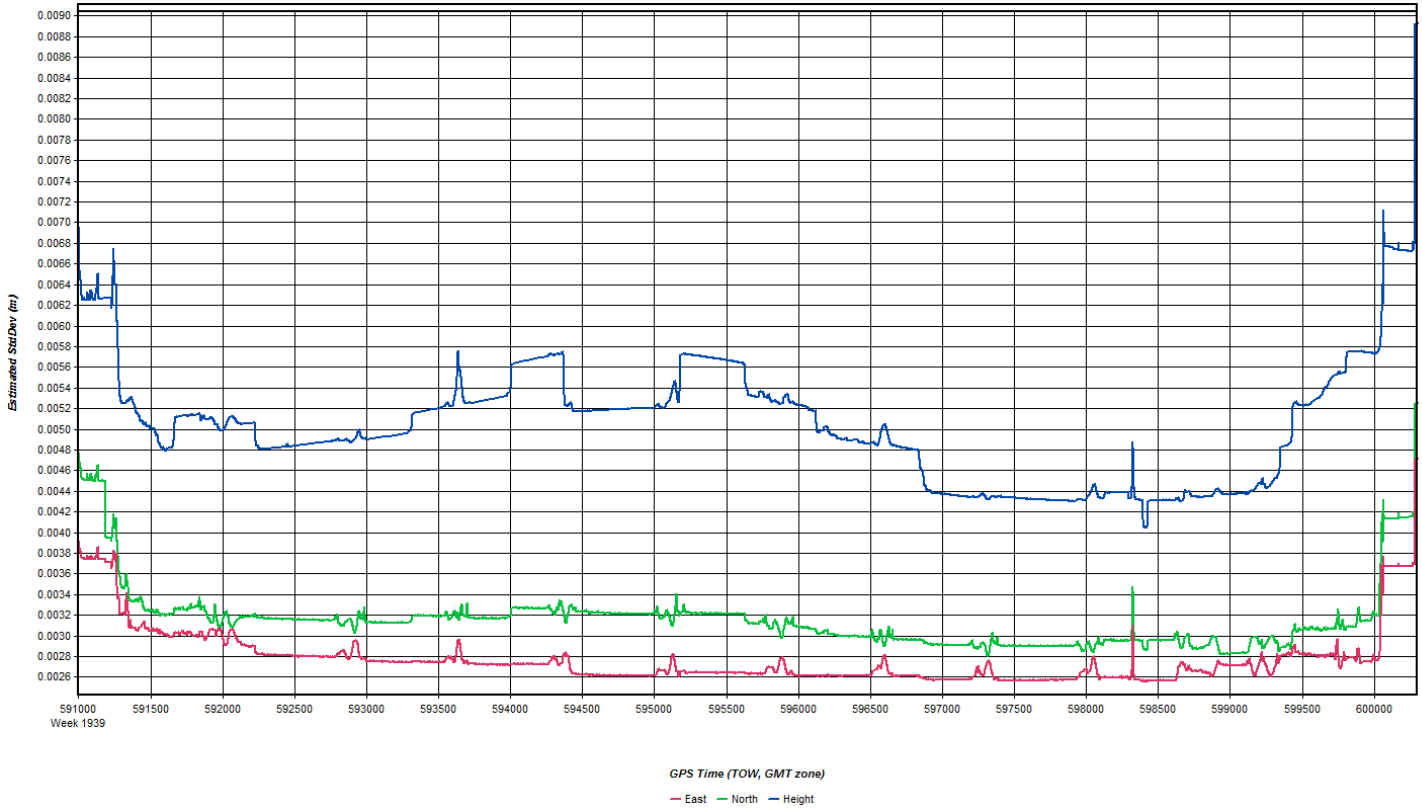
GPS Time (TOW, GMT zone)
— Float — Forward Fixed — Reverse Fixed — Fixed (2 or more)



GPS Time (TOW, GMT zone)
— Roll — Pitch







Coordinate/Antenna Settings ? X

Master Remote

Base Station
 2: LACR Name: LACR Disabled
 File: E:\20170311_AB_28571_SN7161_N262AS\20170311_200830\LAC

Coordinates
 Latitude: North 43 53 05.36138 Coord. options
 Longitude: West 91 09 49.14230 Save to Favorites
 Ellipsoidal height: 198.563 m
 Datum: WGS84 Proc Datum: WGS84
 Epoch: year

Antenna Height
 From station file: TRM57971.00, NONE View STA File
 Antenna profile: TRM57971.00 Info
 Measured height: 0.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 0.067 m
 Measured to
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

Base Station
 1: MESE Name: MESE Disabled
 File: E:\20170311_AB_28571_SN7161_N262AS\20170311_200830\ME

Coordinates
 Latitude: North 44 07 03.82664 Coord. options
 Longitude: West 91 00 35.05885 Save to Favorites
 Ellipsoidal height: 208.120 m
 Datum: WGS84 Proc Datum: WGS84
 Epoch: year

Antenna Height
 From station file: TRM57971.00, NONE View STA File
 Antenna profile: TRM57971.00 Info
 Measured height: 0.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 0.067 m
 Measured to
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

Base Station
3: V115 Name: V115 Disabled
File: E:\20170311_AB_28571_SN7161_N262AS\20170311_200830\V1

Coordinates
Latitude: North 43 43 06.81998 Coord. options
Longitude: West 90 56 47.24020 Save to Favorites
Ellipsoidal height: 99.995 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year

Antenna Height
From station file: TRM57971.00, NONE View STA File
Antenna profile: TRM57971.00 Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to:
 ARP
 L1 Phase Centre
Compute From Slant

OK Cancel

Flight Log

Project: WROC LA CROSSE COUNTY

Aircraft: N282AS

Dep Apt: LSE

CORS: D/N

GPS Unit: D/N

Date: 3-11-17

Flight Mgmt File: 2017-WROC-LACASSE

Pilot: MCDONALD

Co-Pilot: -

Tech: MOUNDY

Proj #: 28571

Alt Hobbs: 6476.0

Arr Apt: LSE

Sta 1: LACR

Sta 2: -

Flight Log Summary:

Begin Hobbs: 6476.0 **Total:** 4.5 **Alt:** 5200' **Max Gdapt:** 150 KTS **Avg Ft Spacing:** 100%

Dep Time (Lcl): 0804 **Arr Time (Local):** 1236 **Z:** 1830 **Tot Time Aloft:** 4:24

Sta 1: LACR **Sta 2:** - **Flyovers:** Y / (N) **Altimeter begin:** - **end:** -

Sta 1: TRAMPLE R7 5" **Sta 2:** - **Flyovers:** Y / (N) **Altimeter begin:** - **end:** -

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	Alt (AGL)	Alt (MSL)	Pulses In Air	Pulse Rate	Temp	OAT	GPS Altitude	Crab	Turb	Altimeter begin:			Altimeter end:		
														Max	Avg	Power	Max	Avg	Power
026	183	1422	1431	151	10/20	4440	6	0											
027	003	1434	1443	153	11/19	6420	5	0											
028	183	1448	1457	162	11/19	6400	6	0											
029	003	1500	1509	159	11/20	6460	4	0											
030	183	1513	1521	161	12/19	6410	5	0											
031	003	1524	1533	156	12/18	6440	4	0											
032	183	1536	1545	156	11/19	6390	6	0											
033	003	1548	1556	158	11/19	6400	10	0											
034	183	1601	1608	160	11/18	6410	6	0											
035	003	1612	1620	160	10/19	6460	4	0											
036	183	1624	1632	162	09/20	6390	6	0											
037	003	1636	1644	154	11/17	6410	4	0											
038	183	1647	1656	162	11/17	6320	5	0											
039	003	1700	1708	161	12/17	6420	4	0											
040	183	1712	1720	159	13/16	6340	7	0											
041	003	1724	1731	164	12/17	6420	4	0											
042	183	1735	1744	155	11/18	6430	6	0											
043	003	1747	1755	160	11/17	6480	4	0											

Summary: Total Proj Lines: 28 Lines Flown: 19 Lines Remain: 9 Online Time: 4.0 Mob Time: 0.5 Notes:

