

Project Report Appendices

The following section contains the appendices as listed in the Maine 2016 QL2 LiDAR Project Report.

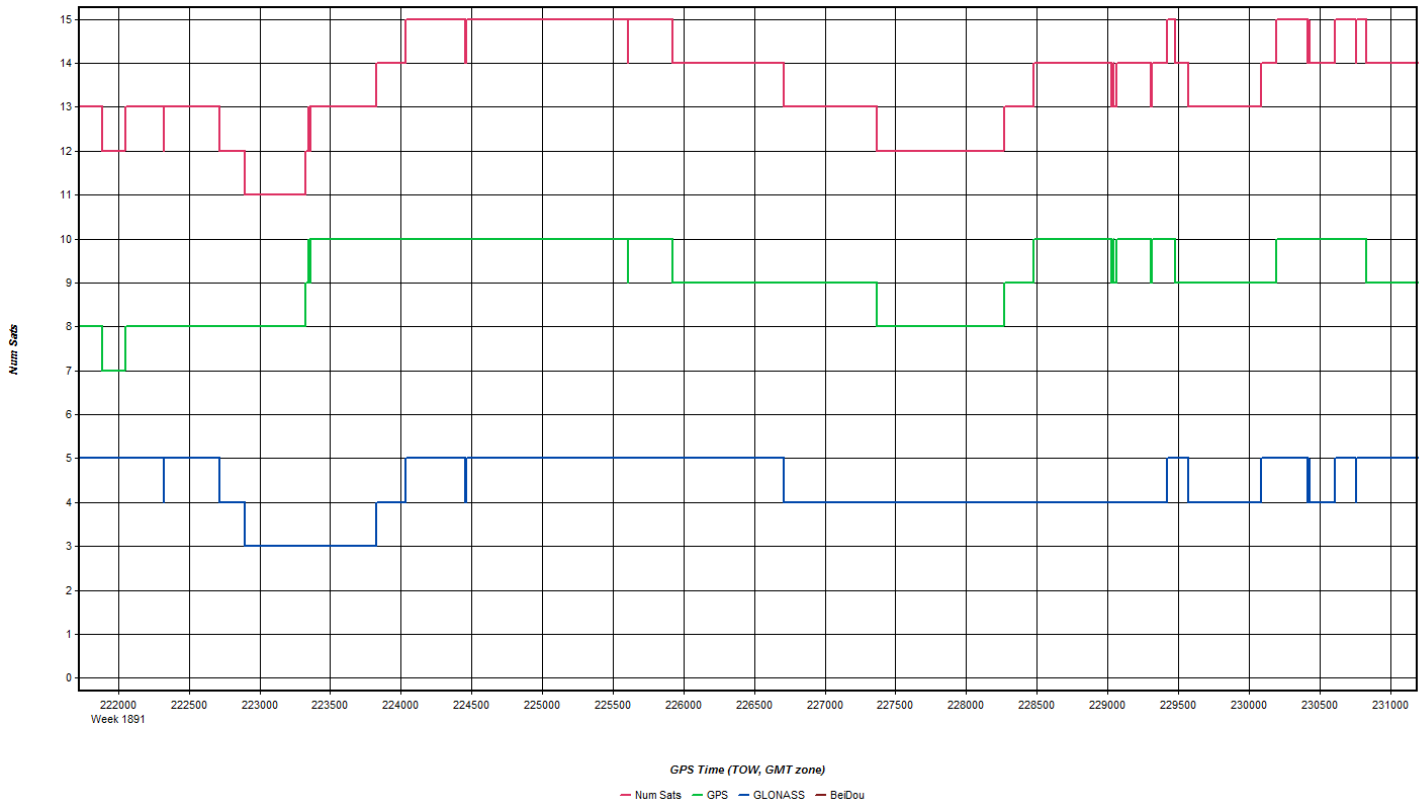
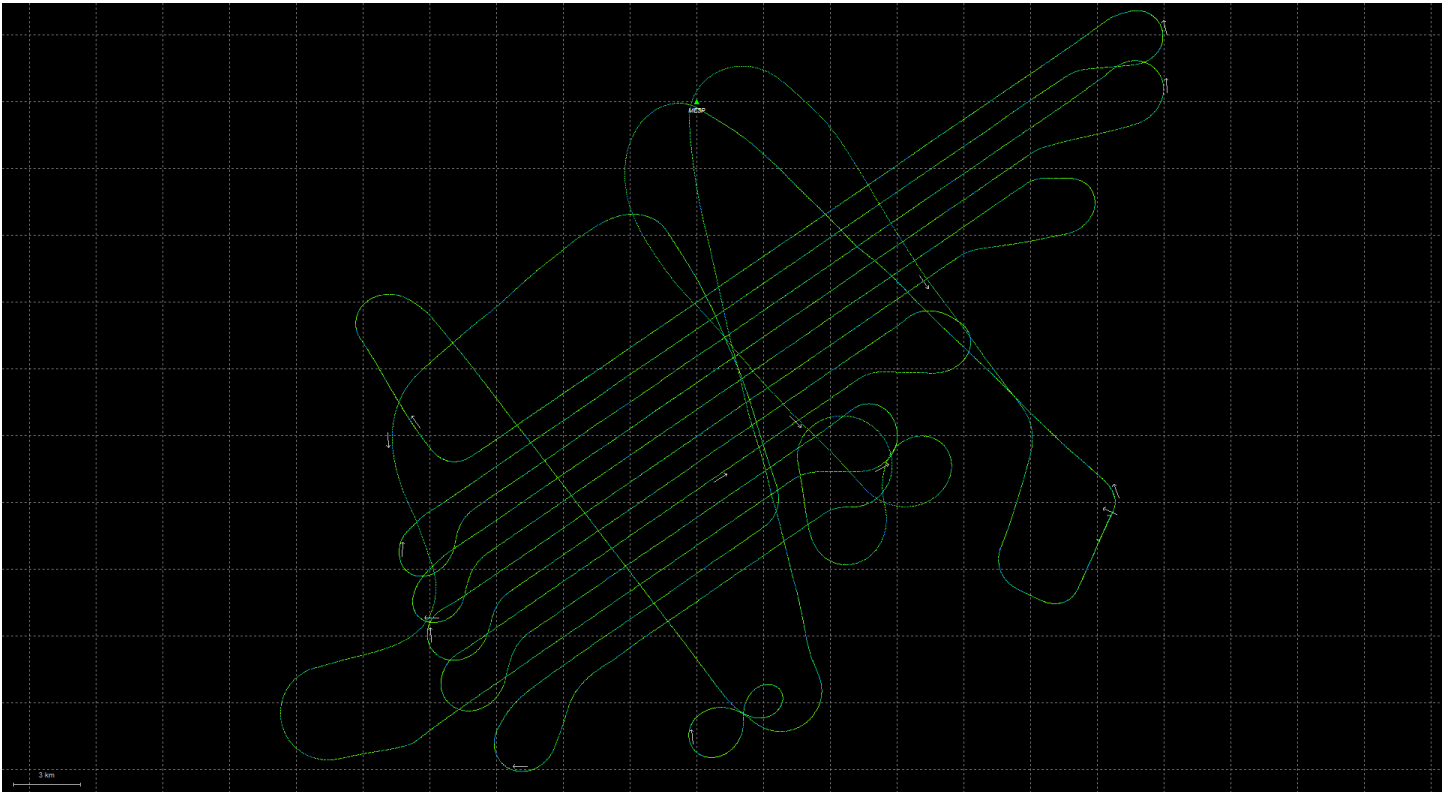
Appendix A

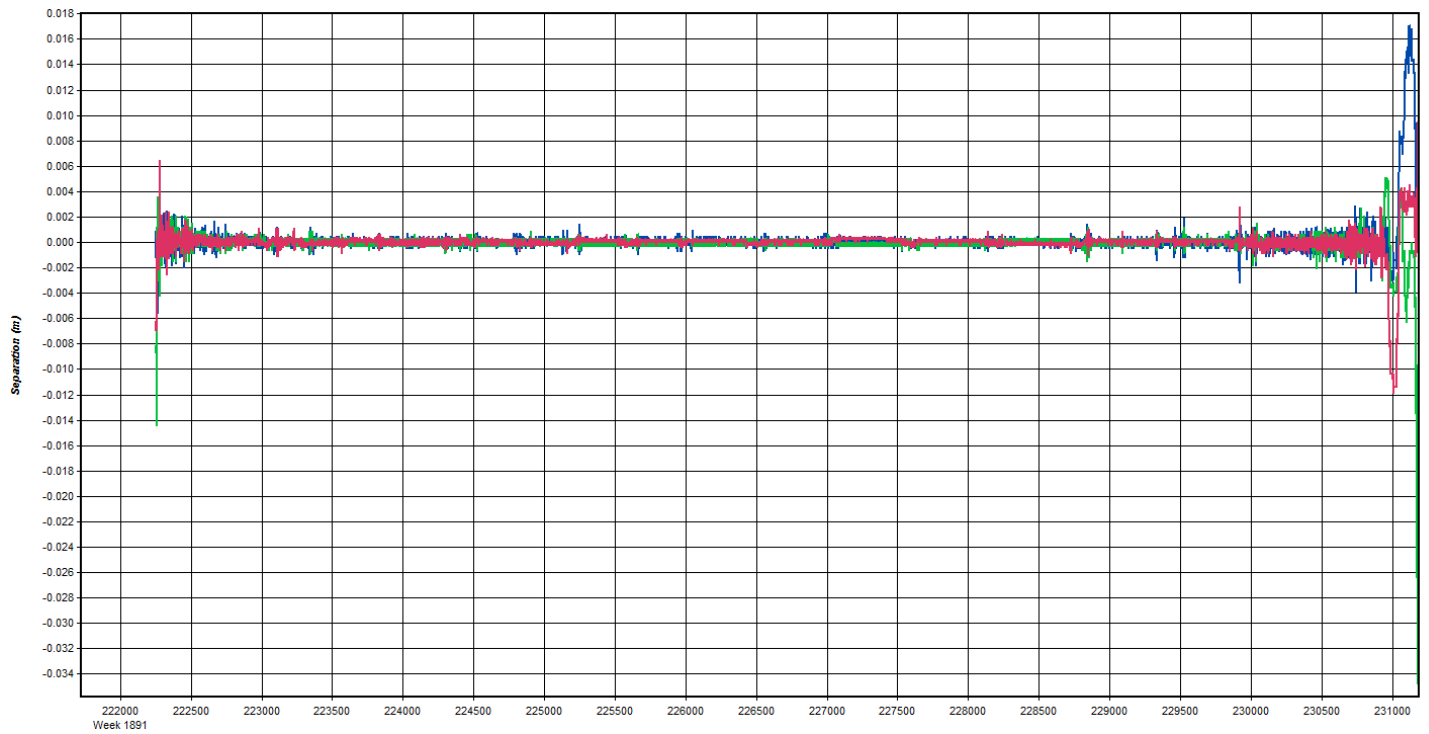
GPS/IMU Processing Statistics Flight Logs

There were 42 total lifts. Graph reports generated from processing software and flight logs are found on the following pages.

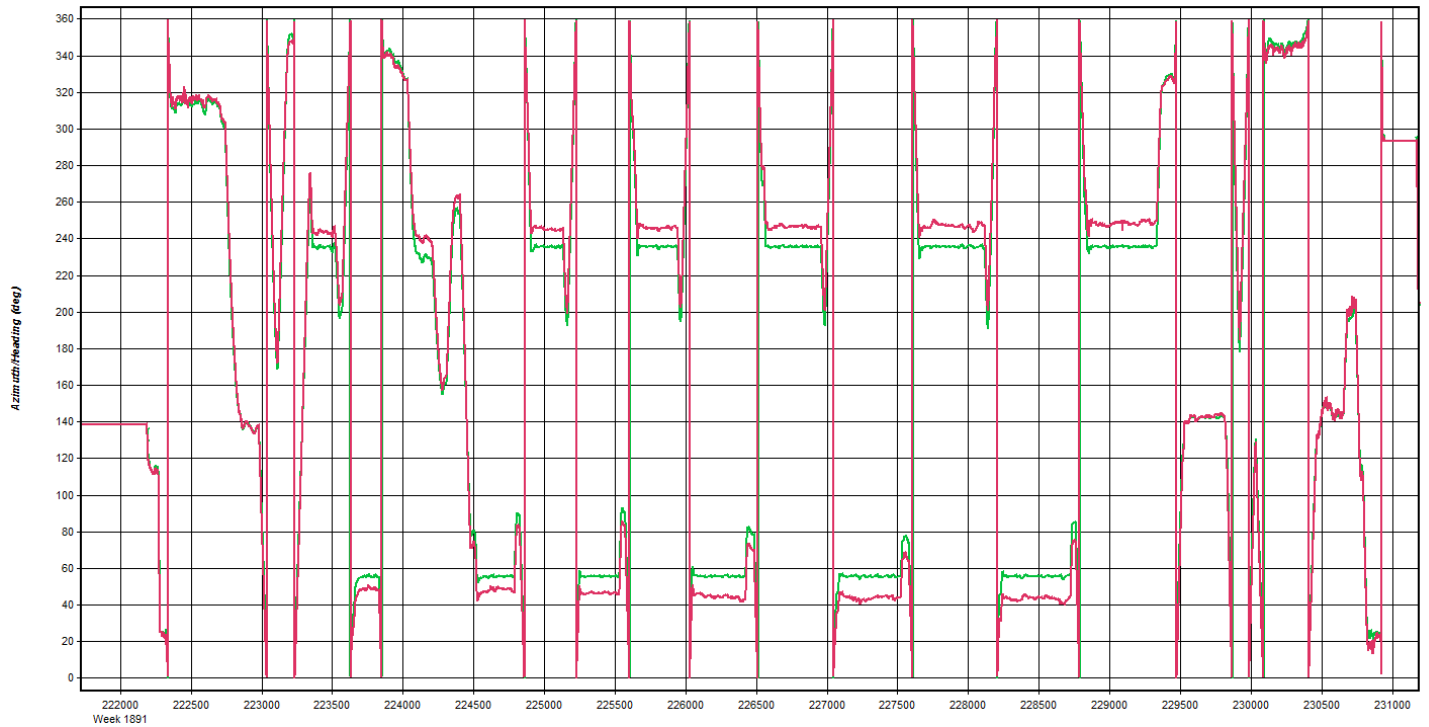
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Apr 5, 2016-A (N812TB, SN7161)

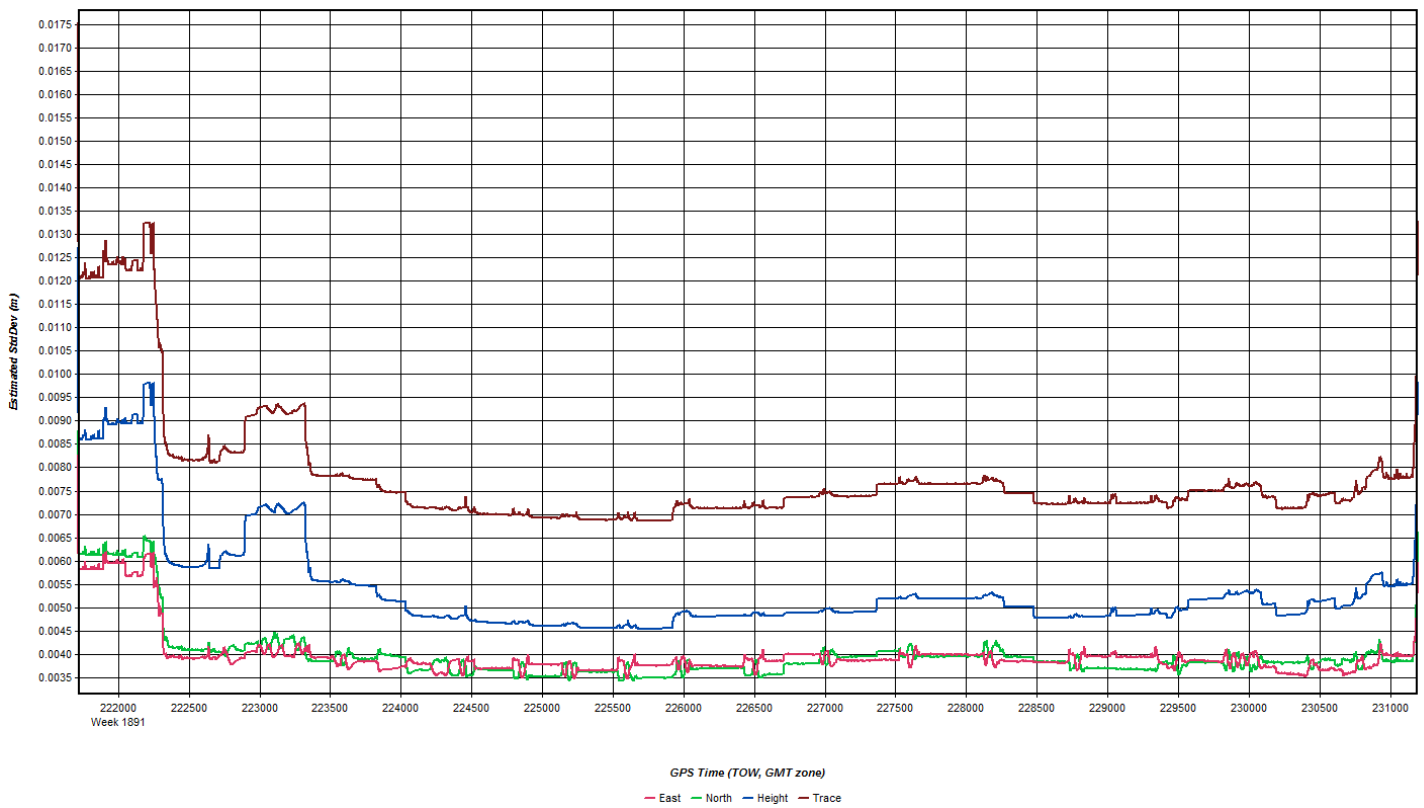
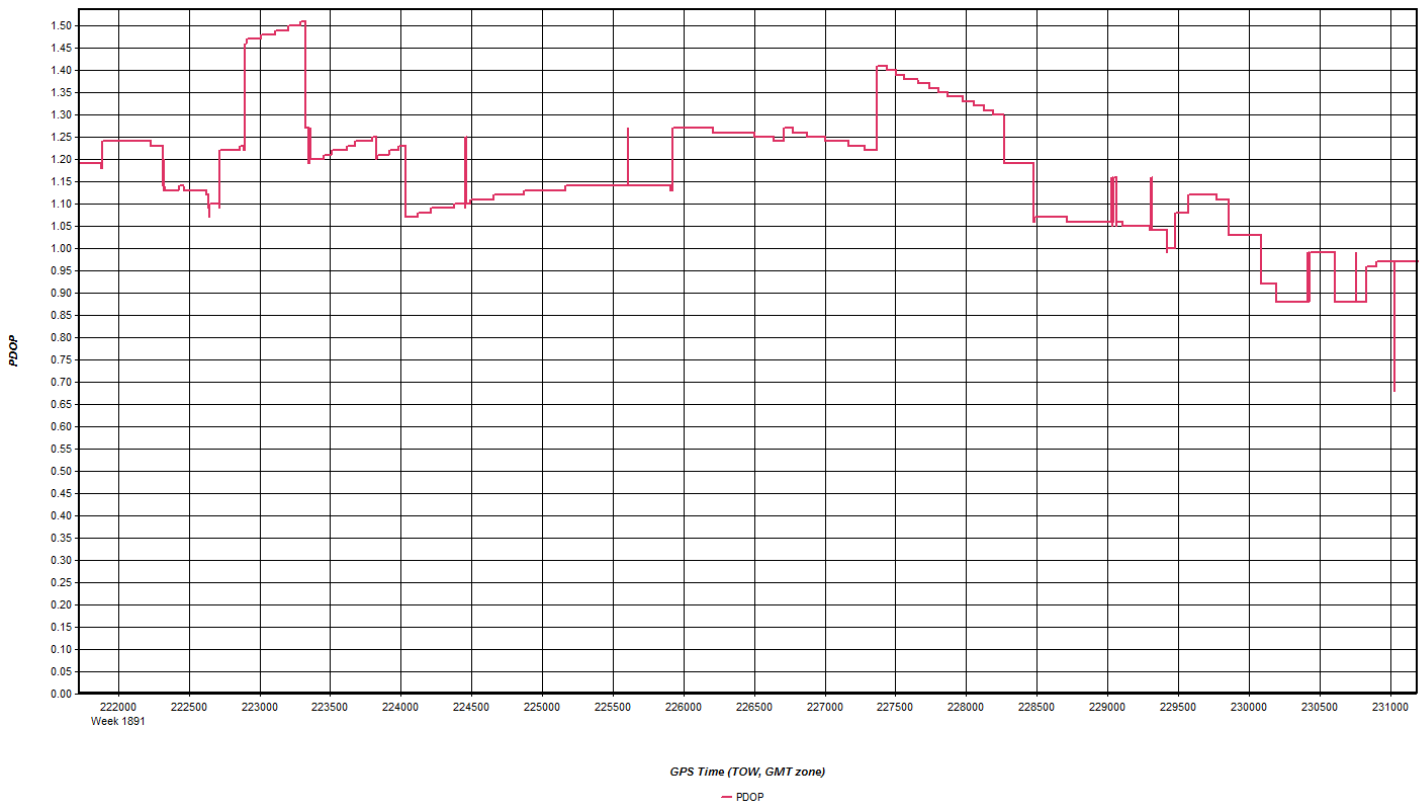


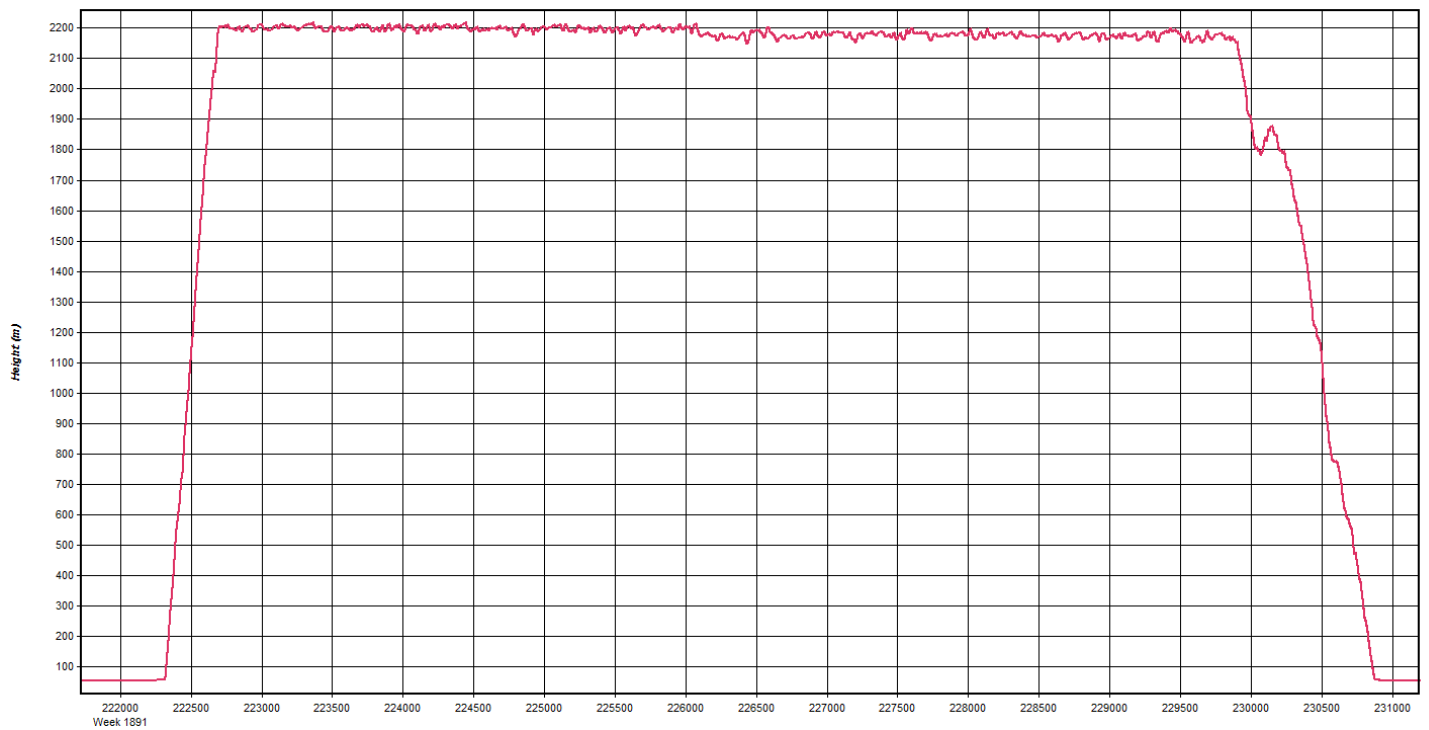
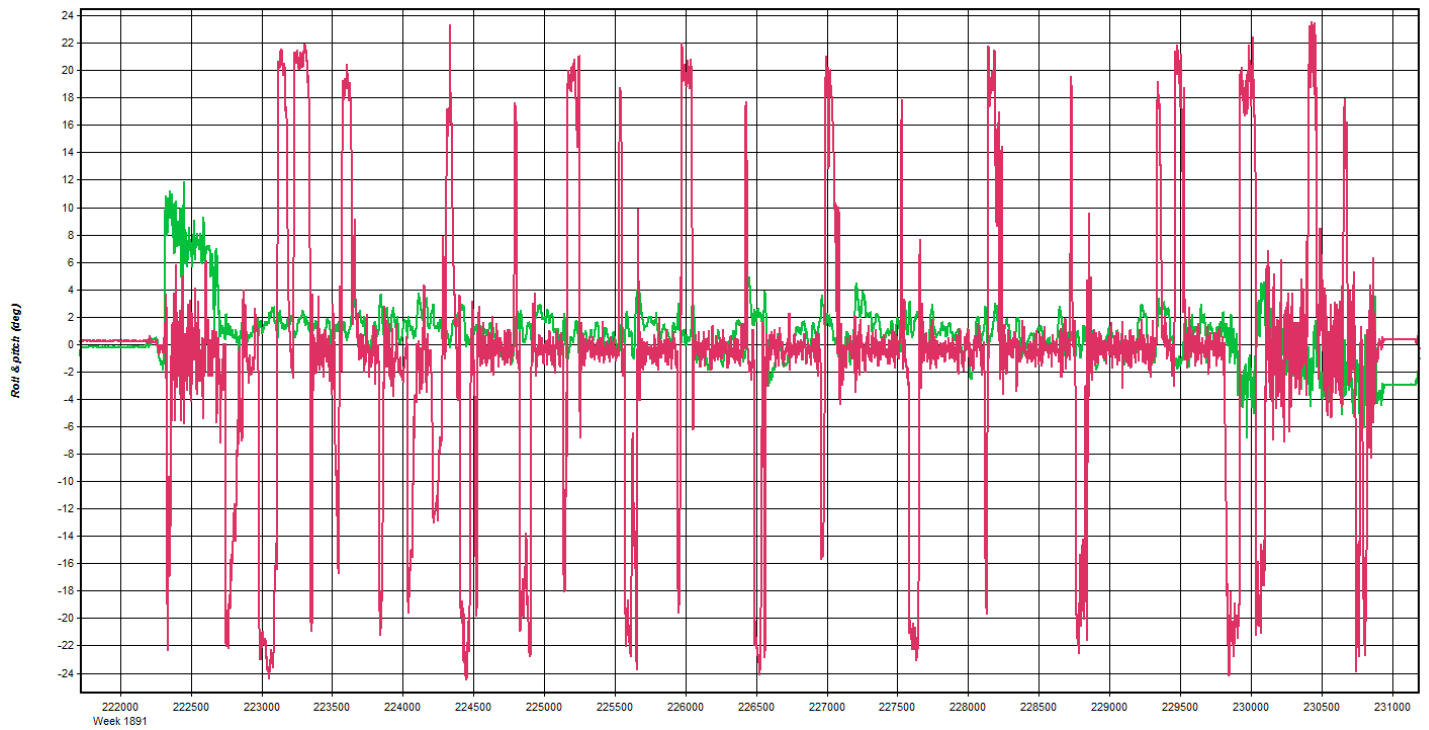


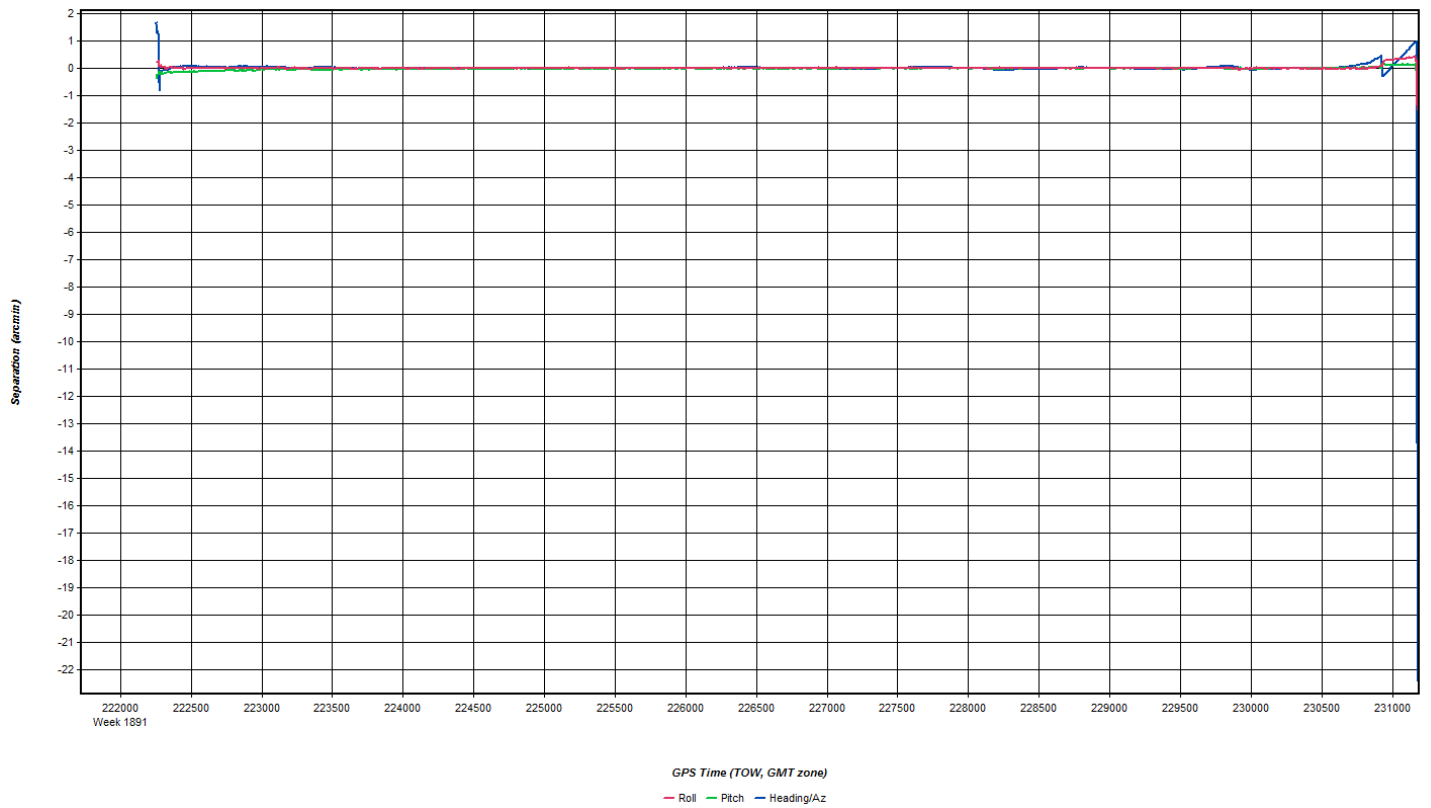
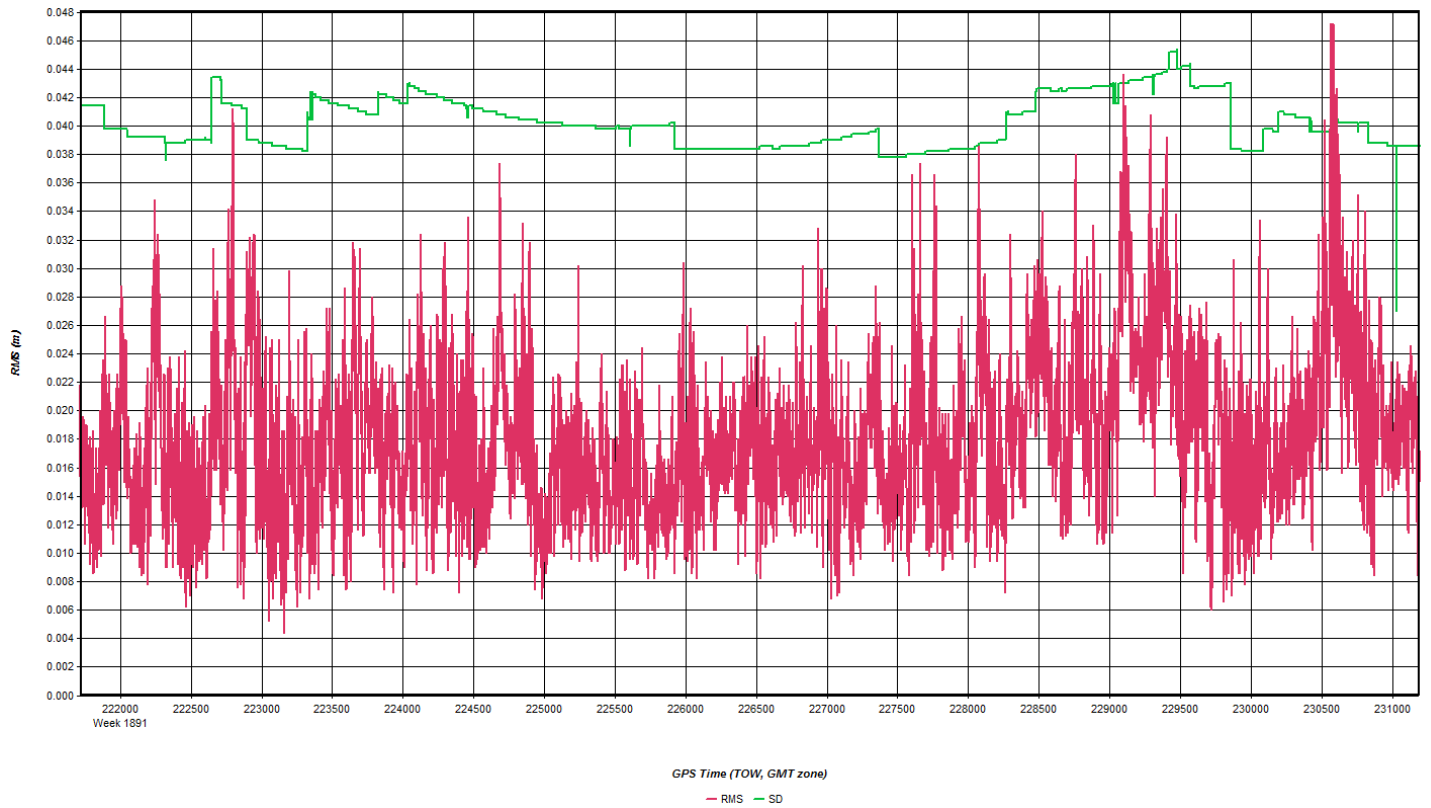
GPS Time (TOW, GMT zone)
— East — North — Up

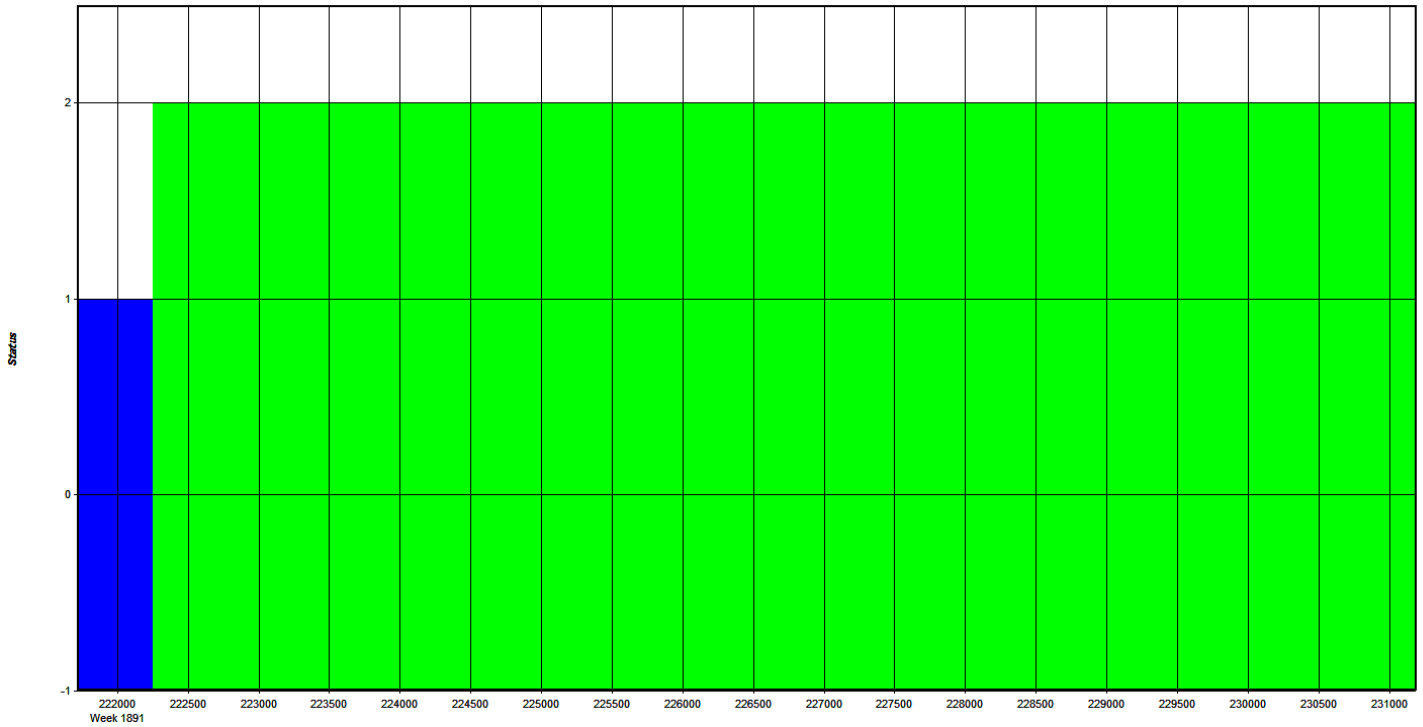


GPS Time (TOW, GMT zone)
— Heading/Azimuth — GPS-COG









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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MESP Name: MESP Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\29CL\160405_SN7161_A

Coordinates
 Latitude: North 44 13 06.19617 Compute from PPP
 Longitude: West 70 30 47.10740 Enter Grid Values
 Ellipsoidal height: 105.463 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRM55971.00, NONE View STA File
 Antenna profile: TRM55971.00 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: USGS Maine MESP **Proj #:** 21146 **Date:** 4-5-16

Flight Mgmt File: 20160405_132923

Aircraft: N812TB **Begin Hobbs:** 3888.2 **End Hobbs:** 3890.6 **Total:** 2.4 **Pilot:** Jacobsen **Co-Pilot:** Dyrson

Dep Apt: LEW **Arr Apt:** LEW **Arr Time (Local):** 07:16:07 **Tot Time Aloft:** 2.4

CORS: **Sta 1:** MESP **Sta 2:** **Flyovers:** N **If Y, times: Sta1:** 13:52 **Sta2:** 15:59

GPS Unit: N **Serial:** LEW1 **Flyovers:** Y N **If Y, times: Sta1:** 8-13:56 **Sta2:** 8-15:51

Gd Temp beg: -6 °C **End:** -2 °C **OAT beg:** -16 °C **End:** -18 °C **Altimeter begin:** 30.26 **end:** 30.25

Type	Serial #	Alt AGL	Alt ANSL	Pulses In Air	Avg Terr Ht	Max Gdspd	Avg Pt Spacing	Power	PPSM	Source Number
LIDAR	ALS70	7161	7100	260	150	100	100	100	100	016
FOV	40	53	MPIA	<input checked="" type="checkbox"/> N						

S Start End T 13:55 15:58 A 16:03 16:11 C 1 18

Line #	Hgt	Start (UTC)	End (UTC)	Gd Spd	GPS Altitude	Crab	Turb (0-10)
1108	235	14:03	14:04	149	11/19	7185	
1107	55	14:08	14:10	153	13/17	7186	
1106	55	14:23	14:26	149	13/17	7181	
1105	235	14:28	14:31	147	13/16	7178	
1104	55	14:34	14:38	147	13/16	7186	
1103	235	14:41	14:45	148	13/16	7175	
1102	55	14:47	14:53	149	13/15	7132	
1101	235	14:56	15:02	141	12/15	7133	
1100	55	15:05	15:11	148	14/13	7135	
1099	235	15:14	15:21	146	13/15	7154	
1098	55	15:24	15:31	133	13/14	7142	
1097	235	15:34	15:41	134	12/15	7193	
1112	142	15:46	15:49	141	10/18	7200	

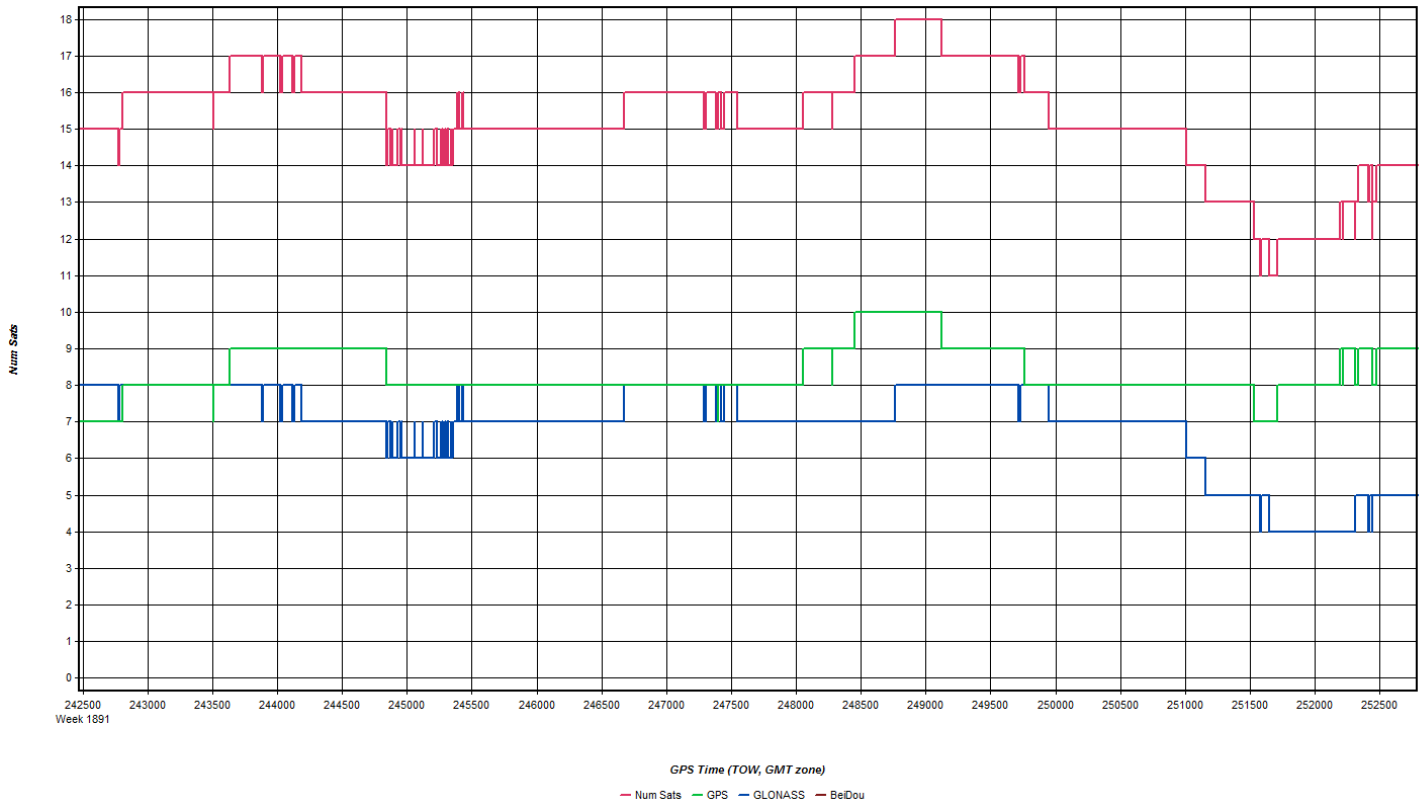
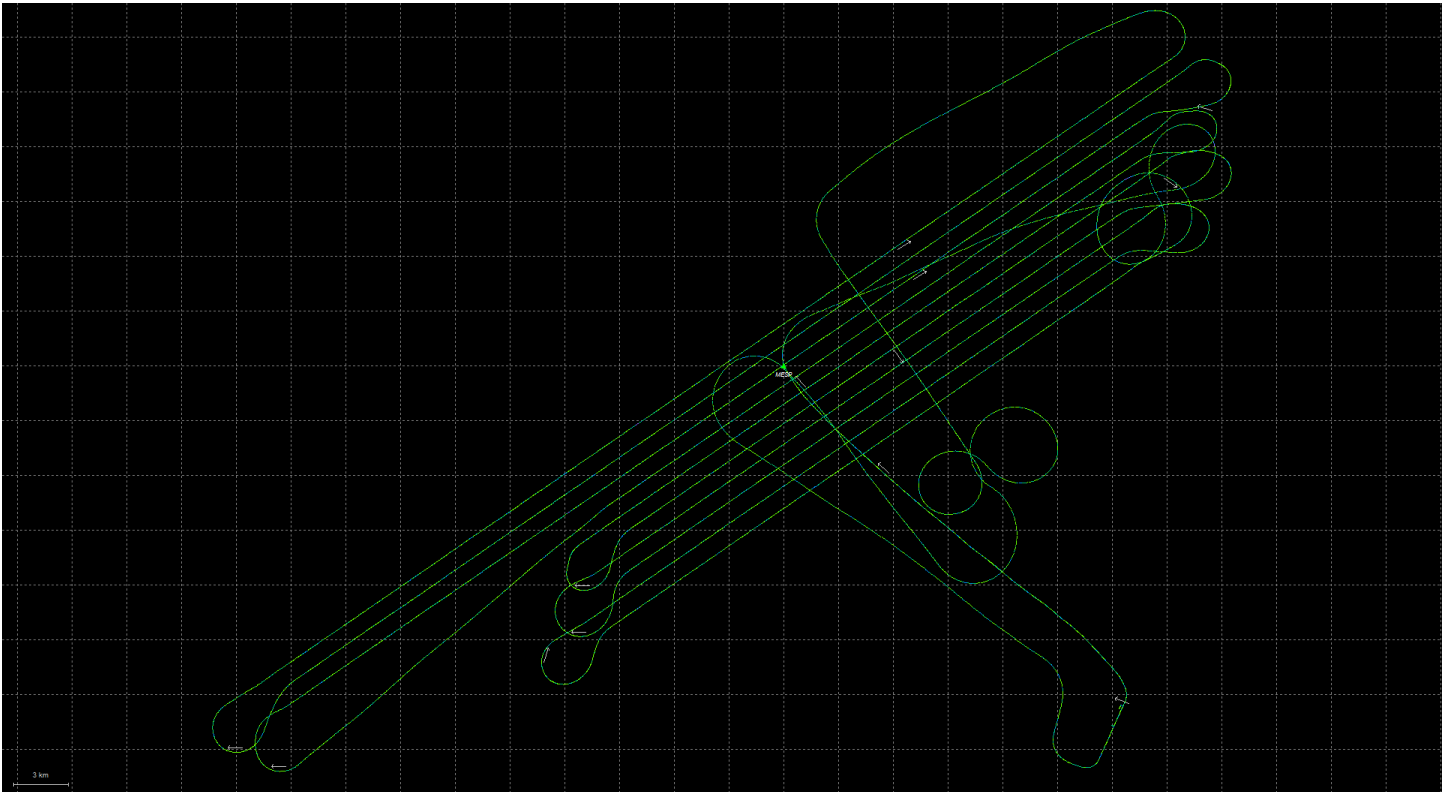
FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.

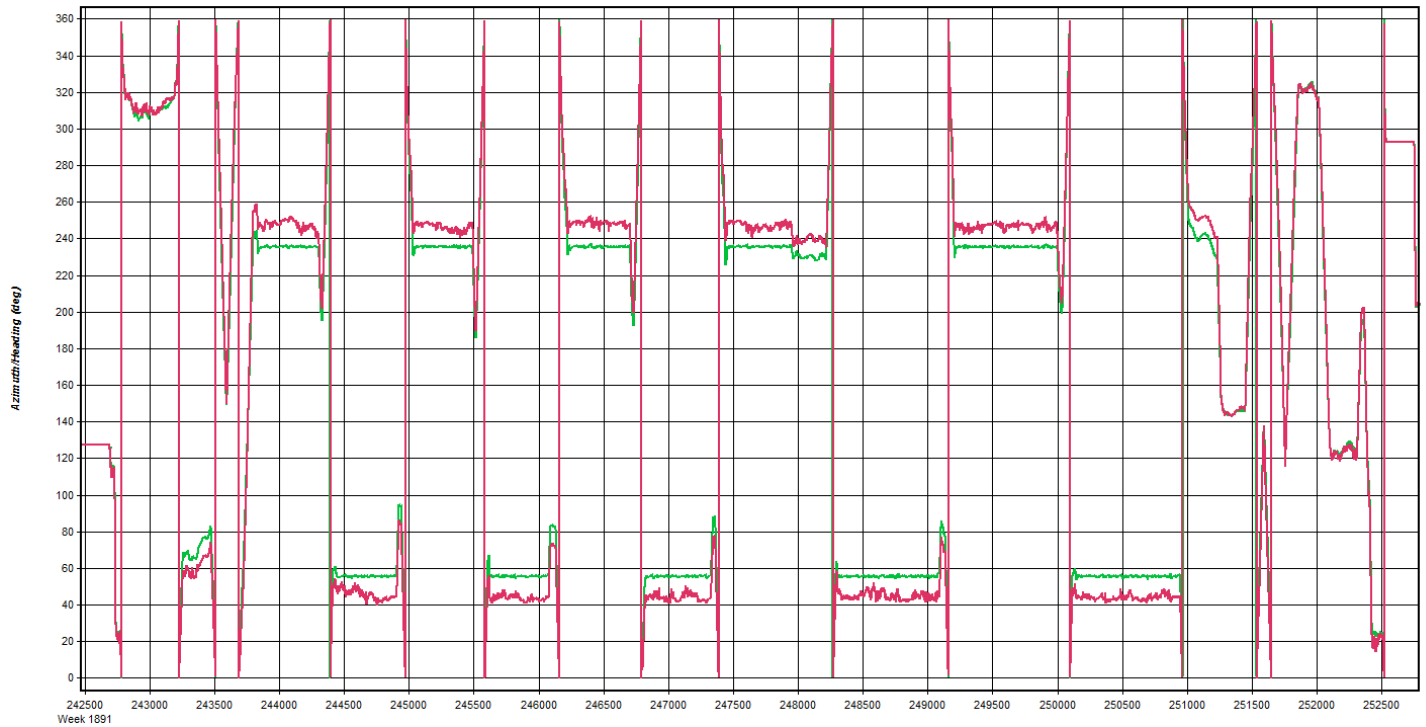
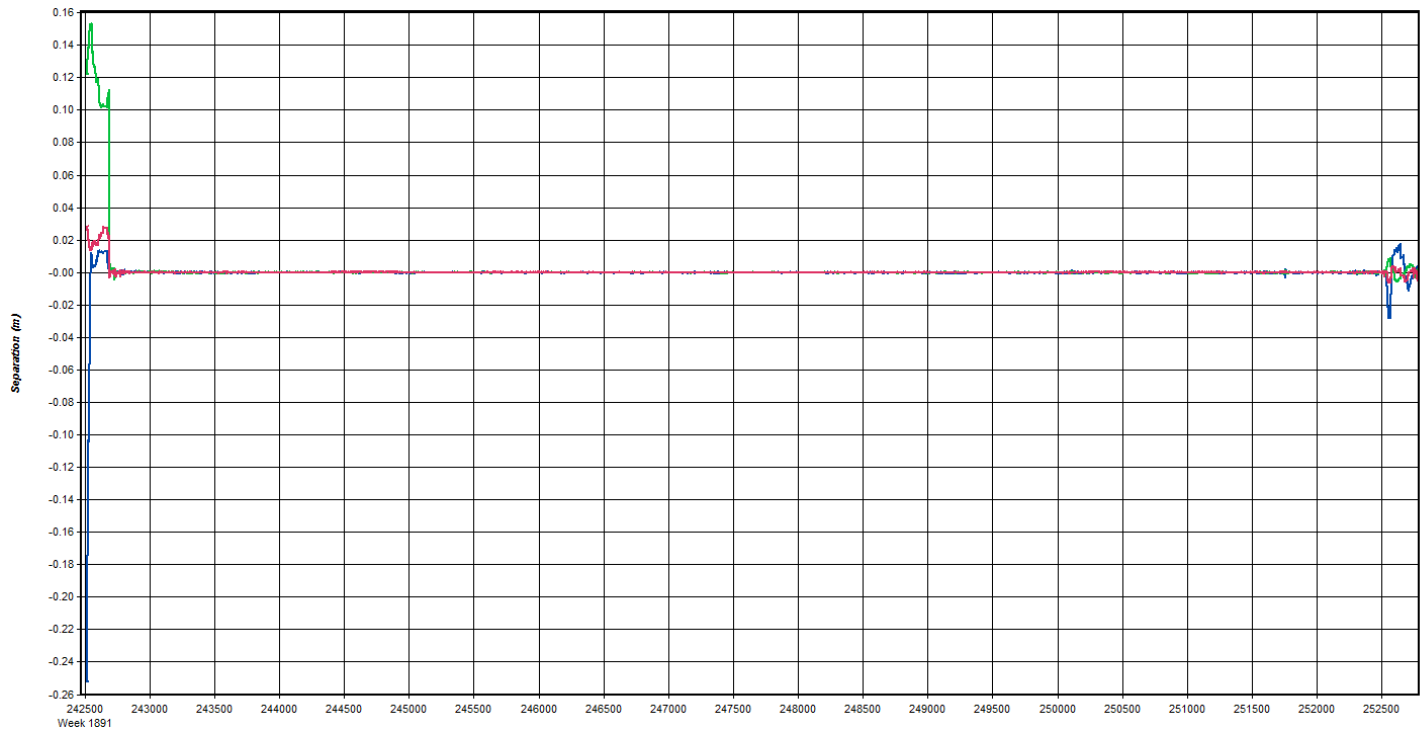
few clouds ~ 3mi from start
few small clouds ~ 1.5mi from end
few clouds at start?

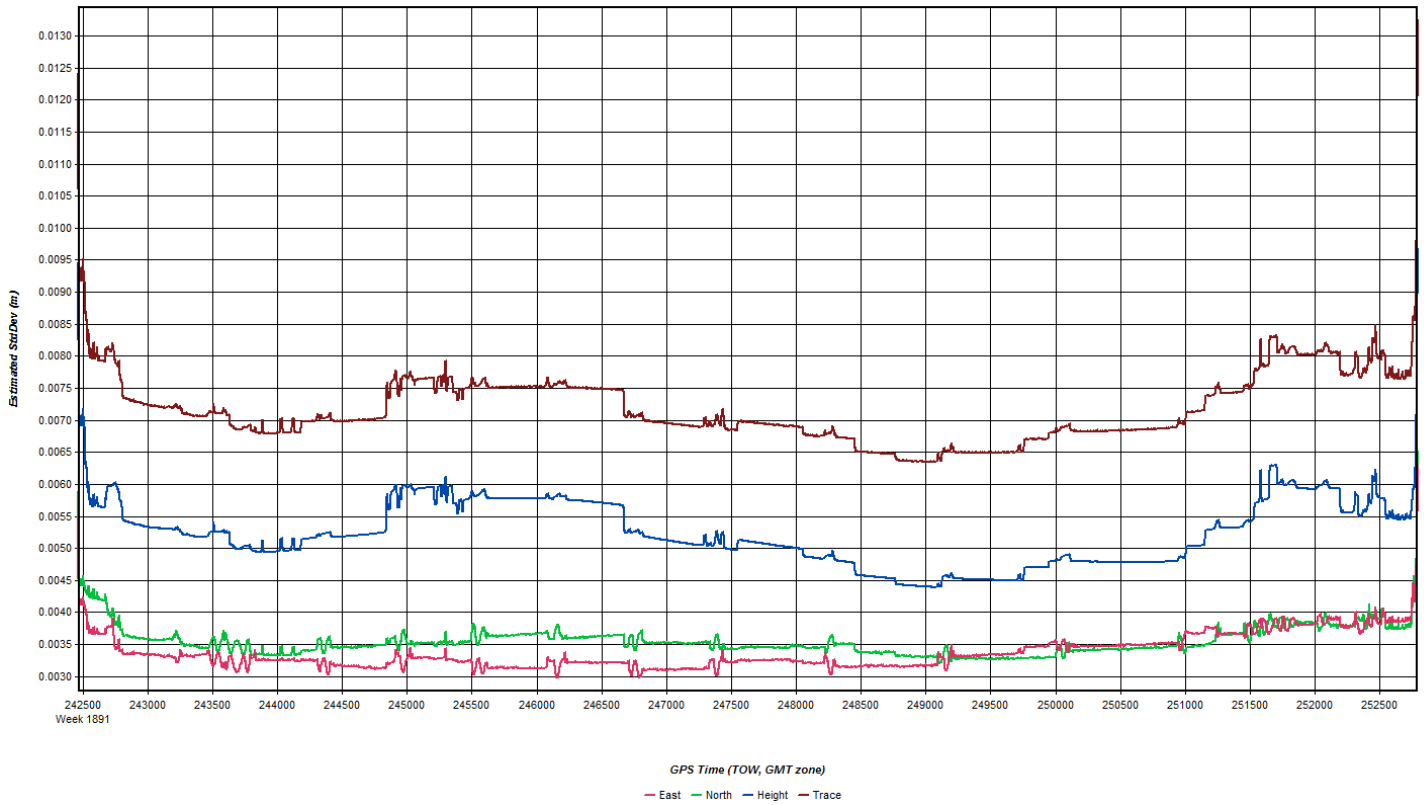
Total Prof Lines: 13	Lines Flown: 13	Lines Remain: 100	Online Time: 1.8	Job Time: 0.6	Notes:
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Generated by CamScanner

Apr 5, 2016-B (N812TB, SN7161)



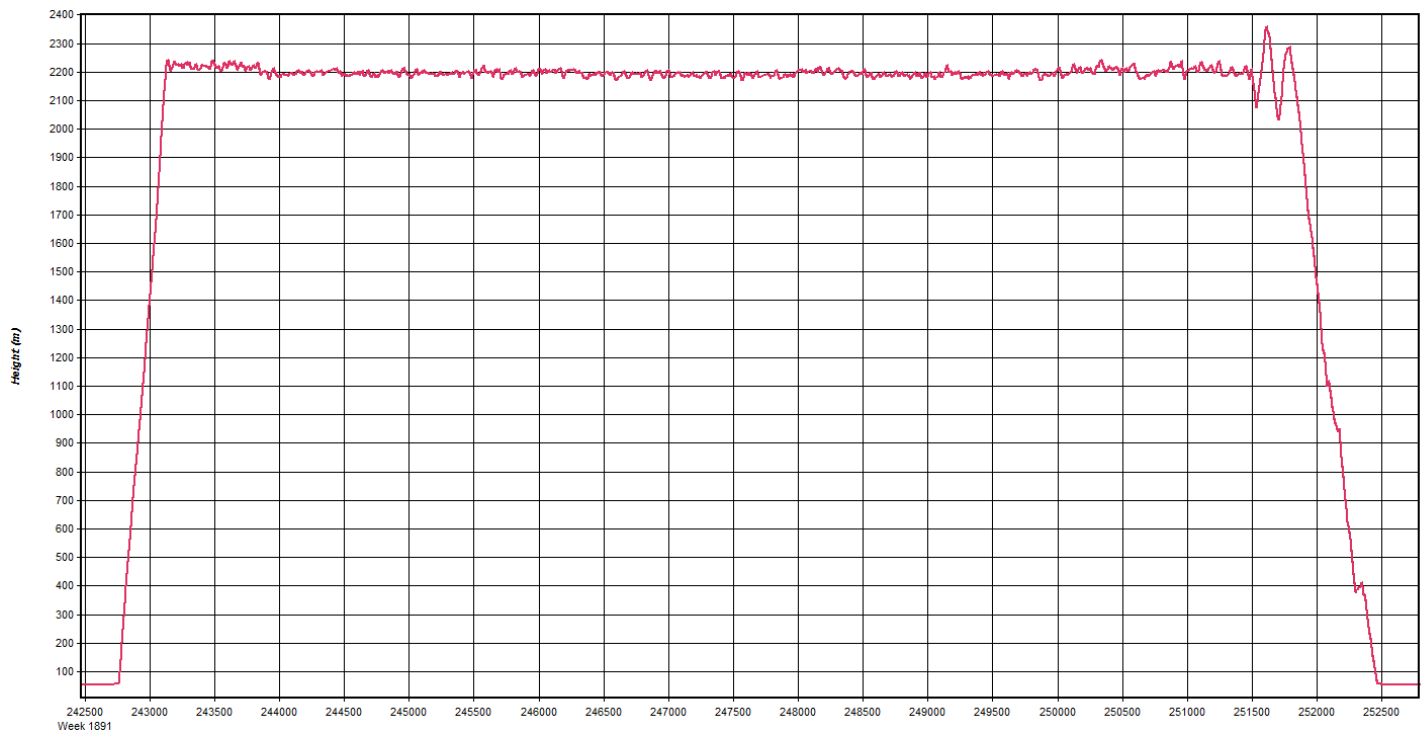






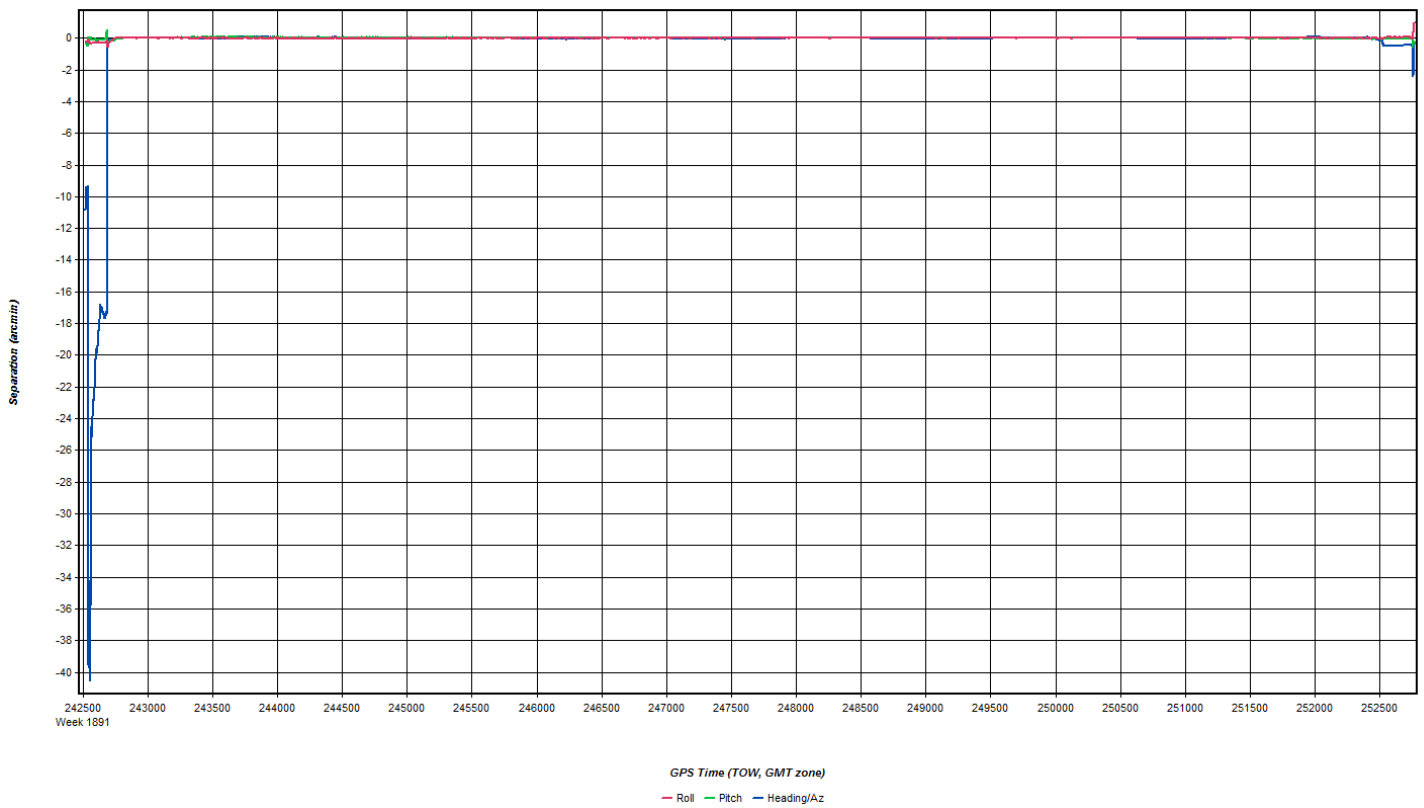
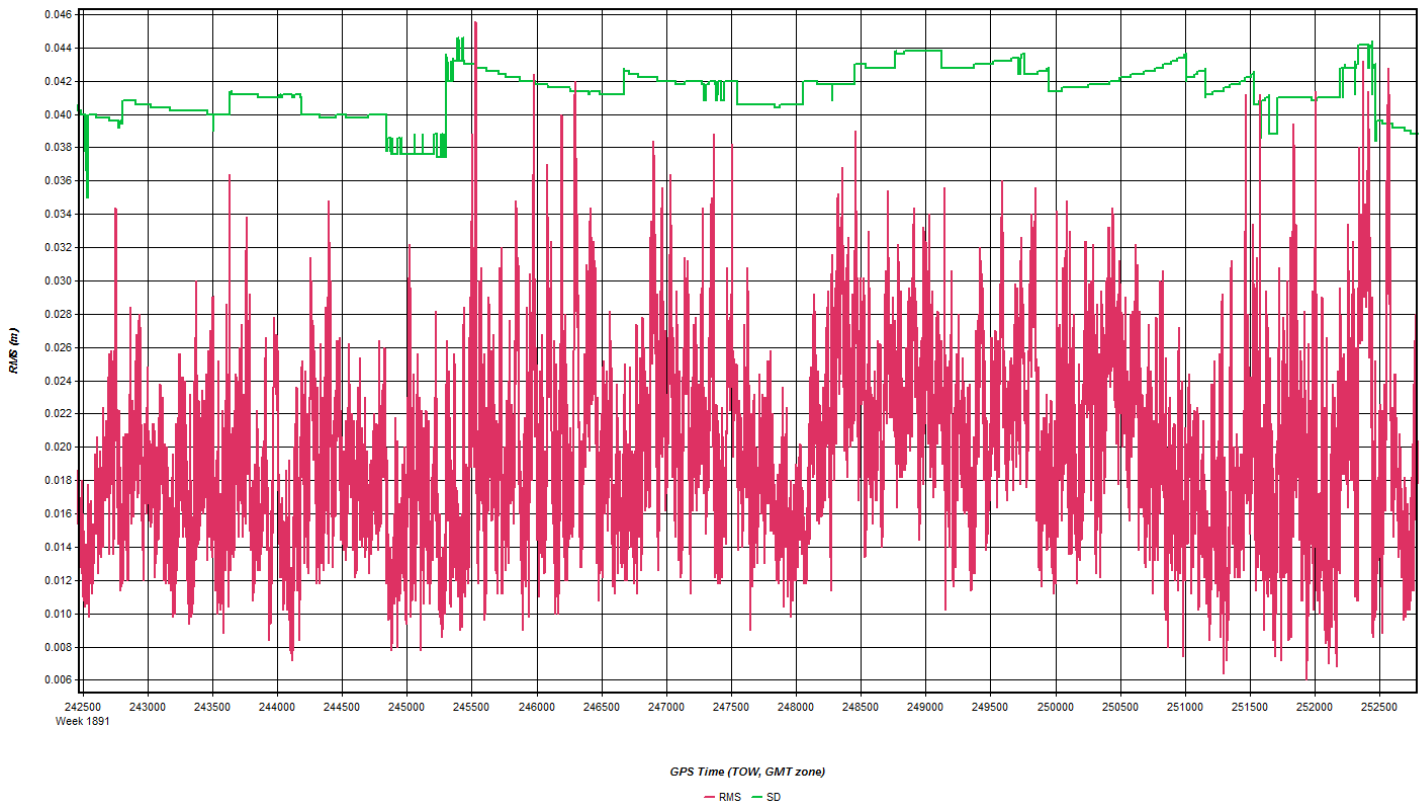
GPS Time (TOW, GMT zone)

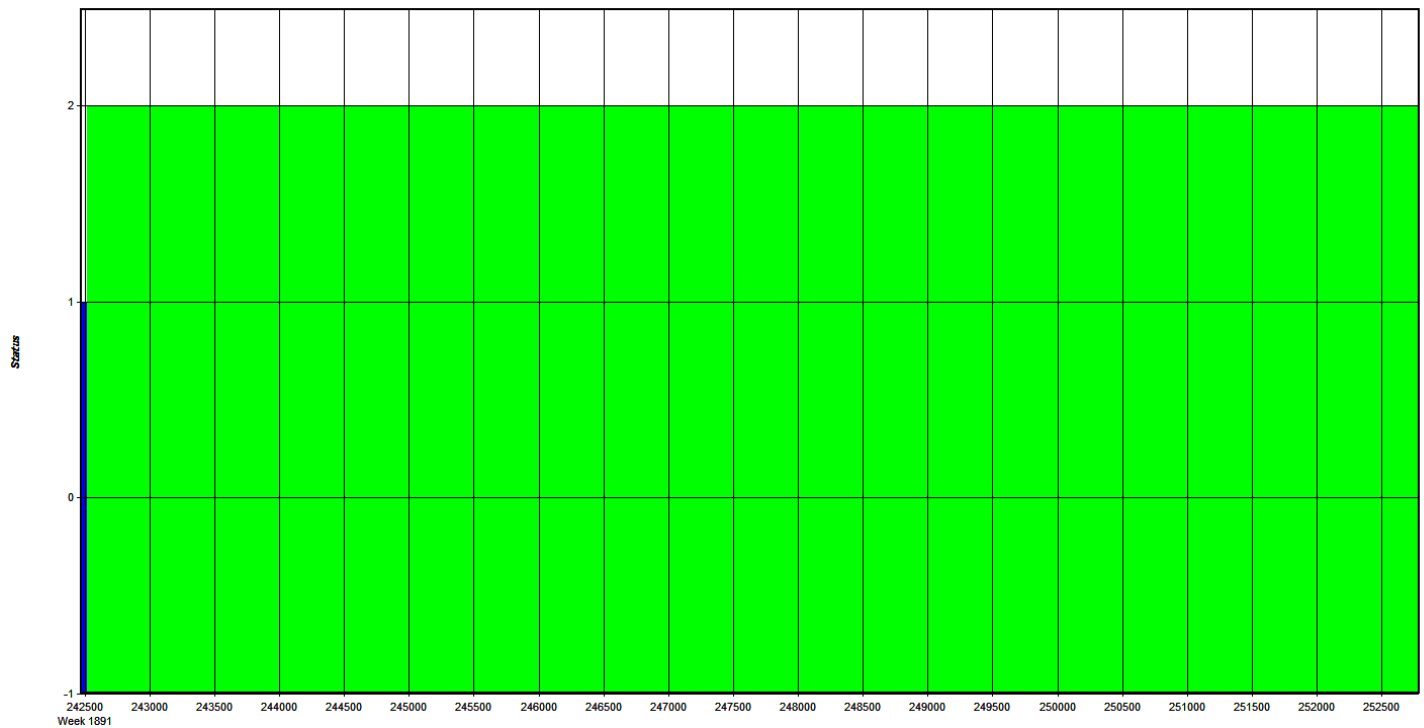
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MESP Name: MESP Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\29CL\160405_SN7161_A

Coordinates
 Latitude: North 44 13 06.19617 Compute from PPP
 Longitude: West 70 30 47.10740 Enter Grid Values
 Ellipsoidal height: 105.463 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRM55971.00, NONE View STA File
 Antenna profile: TRM55971.00 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

Quantum Spatial
Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log daily to flight_log_distribution_line@quantumspatial.com)

Date: 4-5-16
 LIDAR: A B C D E Pg. 1 of 1

Project: USGS Maine MESP **Prof #:** 27146 **Flight Mgmt File:** 20160405-191654
Aircraft: NGZTB **Begin Hobbs:** 3890.6 **End Hobbs:** 3913.2 **Total:** 2.6 **Pilot:** Jacobson **Co-Pilot:** Tech: Dyresn
Dep Apt: KLEW **Dep Time (Local):** 15:25 **Arr Apt:** KLEW **Arr Time (Local):** 18:07 **Tot Time Aloft:** 2.6
CORS: N **Sta 1:** MESP **Sta 2:** **Flyovers:** N **IF Y, times: Sta1:** 19:33 **Sta2:** 22:00
GPS Unit: N **Sta-1:** LEW1 **Sta-2:** **Flyovers:** Y N **IF Y, times: Sta1:** 19:37 **Sta2:** 19:38-21:51

Gd Temp beg: 0 °C **End:** 0 °C **OAT beg:** -19 °C **End:** -18 °C **Altimeter begin:** 30.19 **end:** 30.21
LIDAR **Type:** ALS70 **Serial #:** 7161 **Alt AGL:** 7200 **Avg Pt Spacing:** 150 **Max Gdspd:** 150 **IFSM:** 100
FOV: 40 **Scan Freq:** 53 **MplA:** N **Power:** 260 **Pulse Rate:** 100

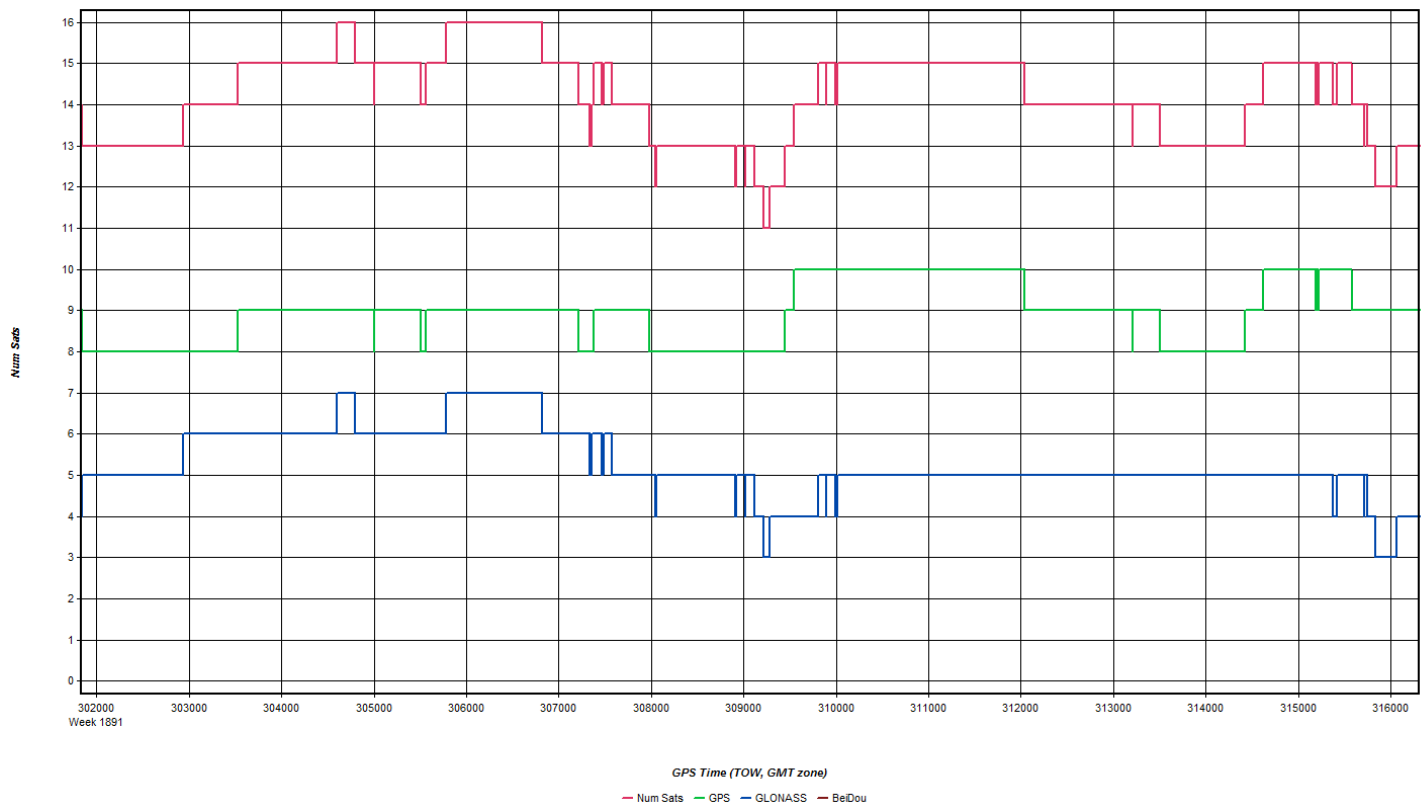
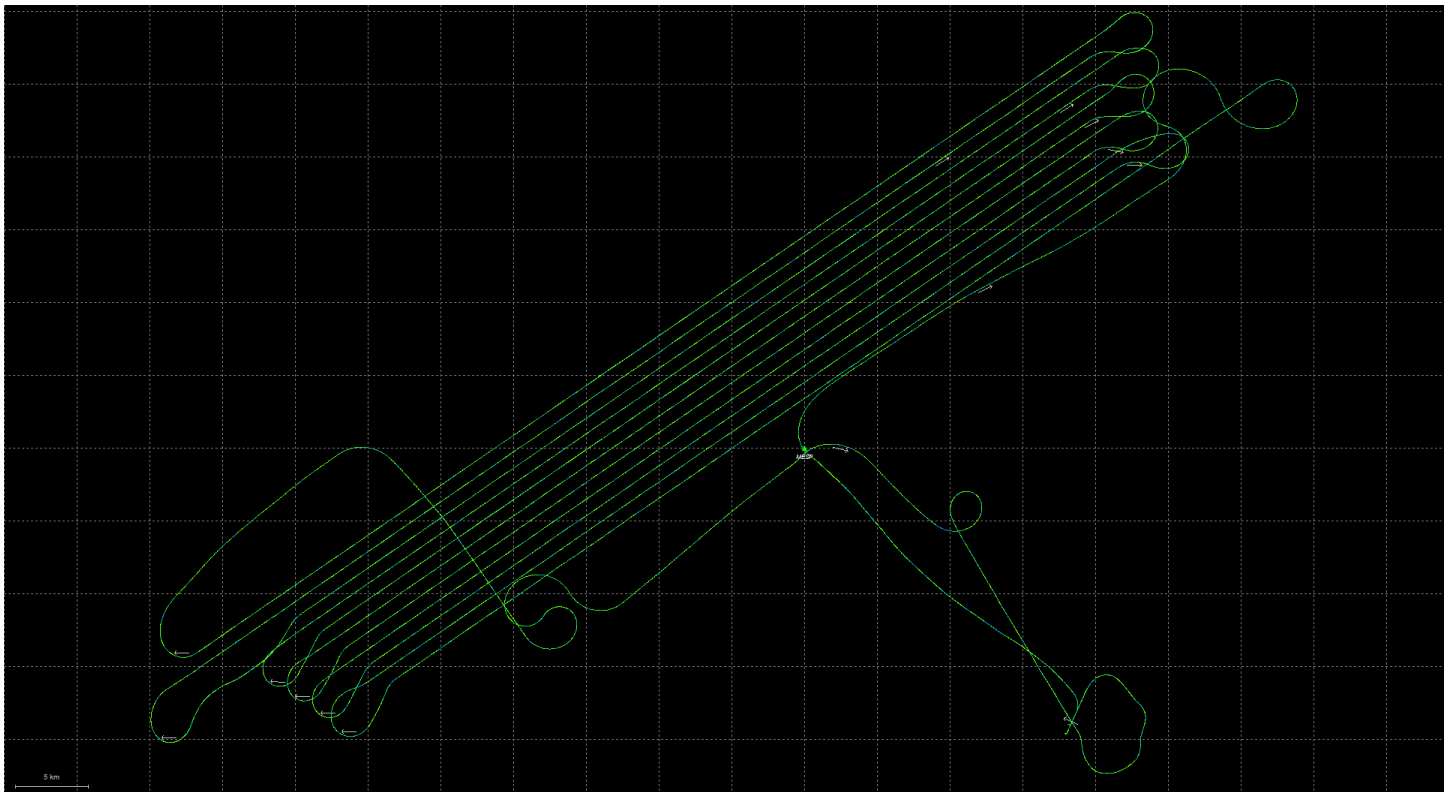
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	1000ft/s	GPS Altitude	Crab	Turn (0-1)	FUGIT LINE NOTES - visibility, clouds, smoke, partial, etc.
1096	235	19:44	19:51	147	1.2/17	7193			
1095	55	19:54	20:01	151	1.1/17	7195			
1094	235	20:04	20:11	149	1.2/17	7194			
1093	55	20:14	20:20	145	1.2/17	7194			
1092	235	20:23	20:31	151	1.2/16	7195			
1091	55	20:34	20:41	140	1.3/16	7195			
1090	235	20:44	20:52	146	1.2/18	7195			
1089	55	20:53	21:10	152	1.0/19	7195			
1088	235	21:13	21:26	152	1.1/18	7198			
1087	55	21:29	21:42	147	1.0/18	7215			
001	146	21:47	21:50	153	1.0/17	7190			

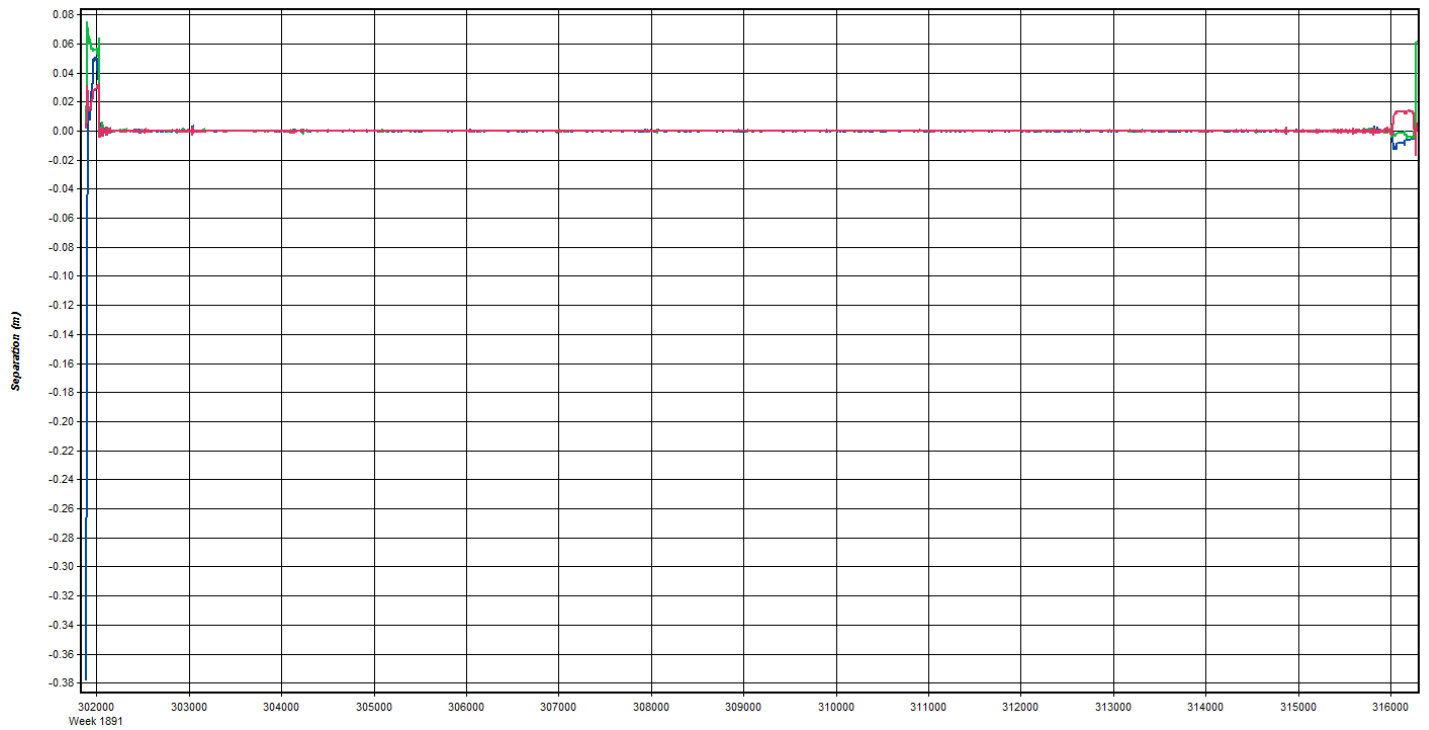
Total Prof/Lines: 13 **Lines Flown:** 10 **Lines Remain:** 90 **Online Time:** 2.1 **Mob Time:** 0.5 **Notes:**

occasional slight turbulence throughout mission
 Cross tie for lines 1096-1087

Generated by CamScanner

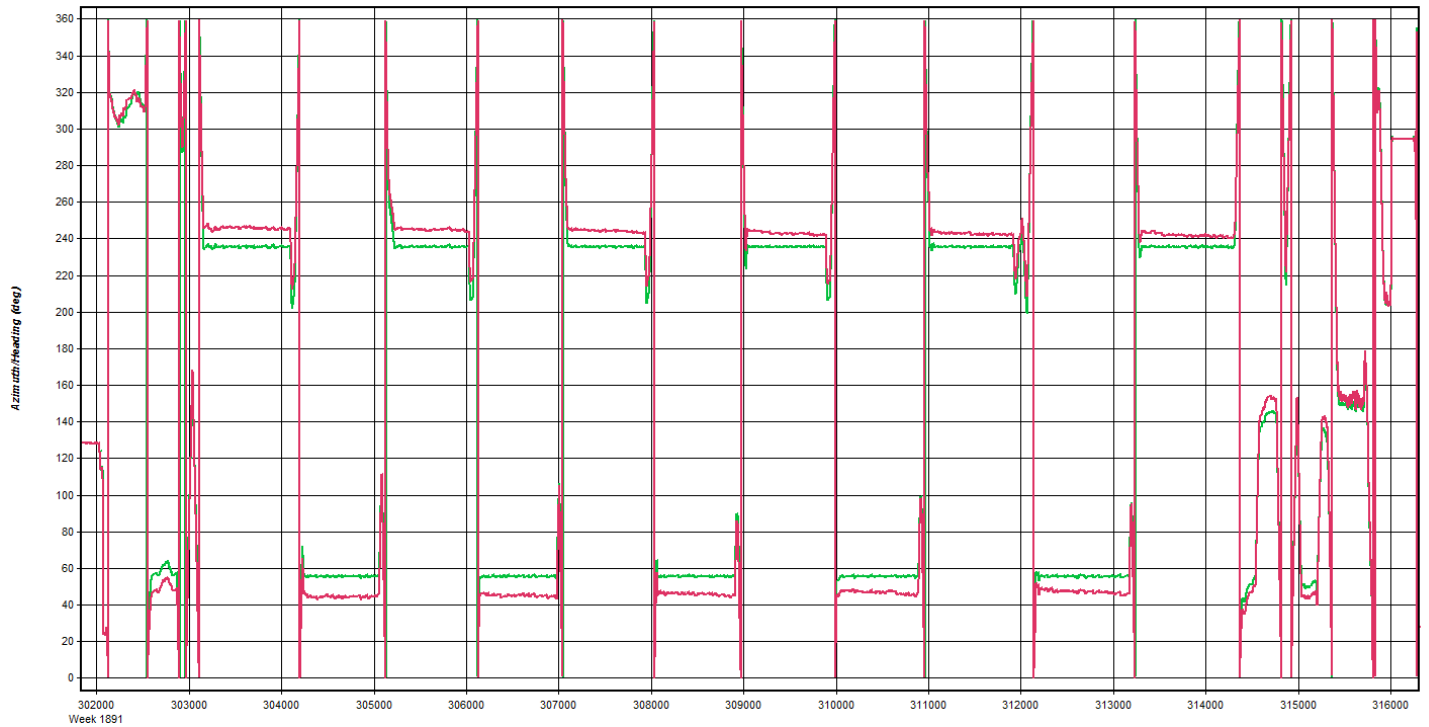
Apr 6, 2016-A (N812TB, SN7161)





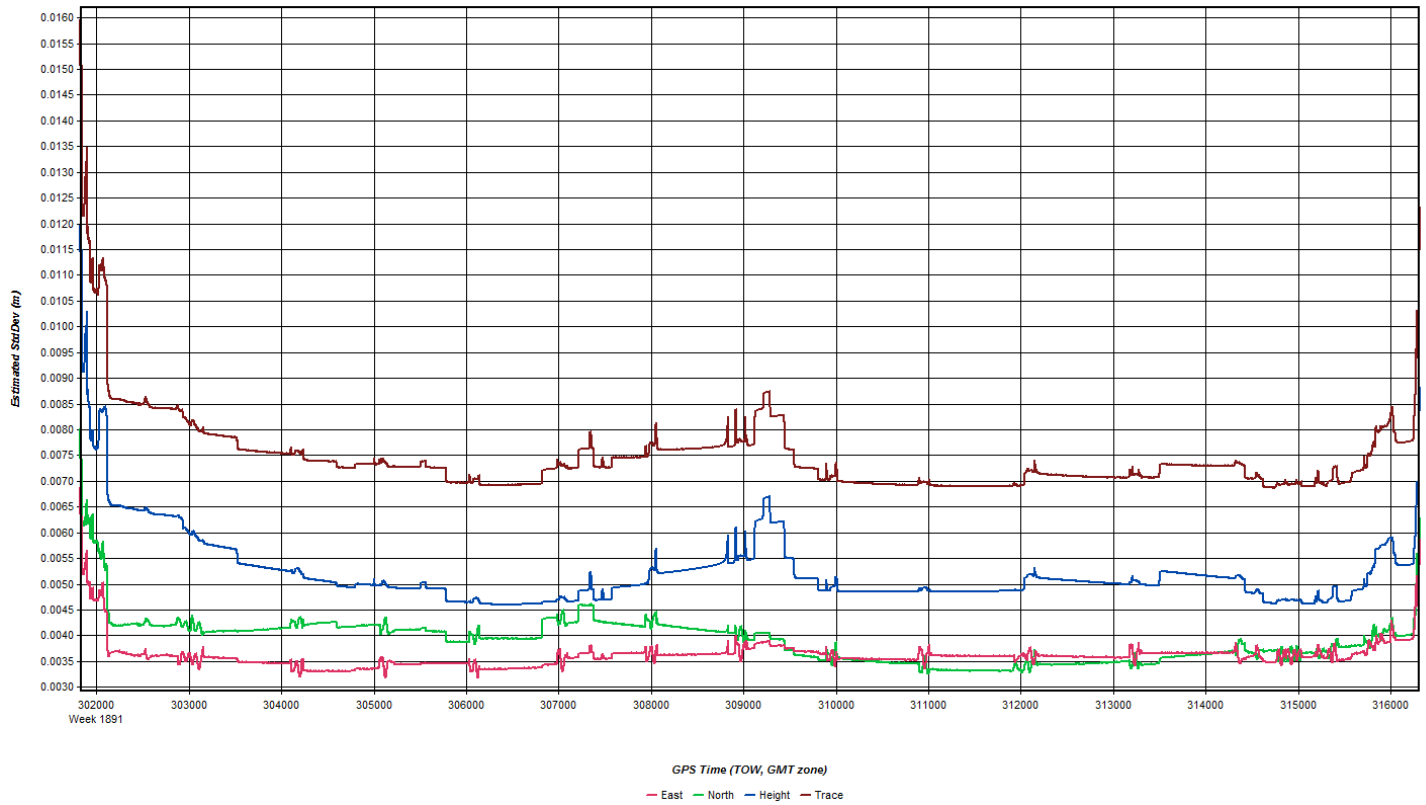
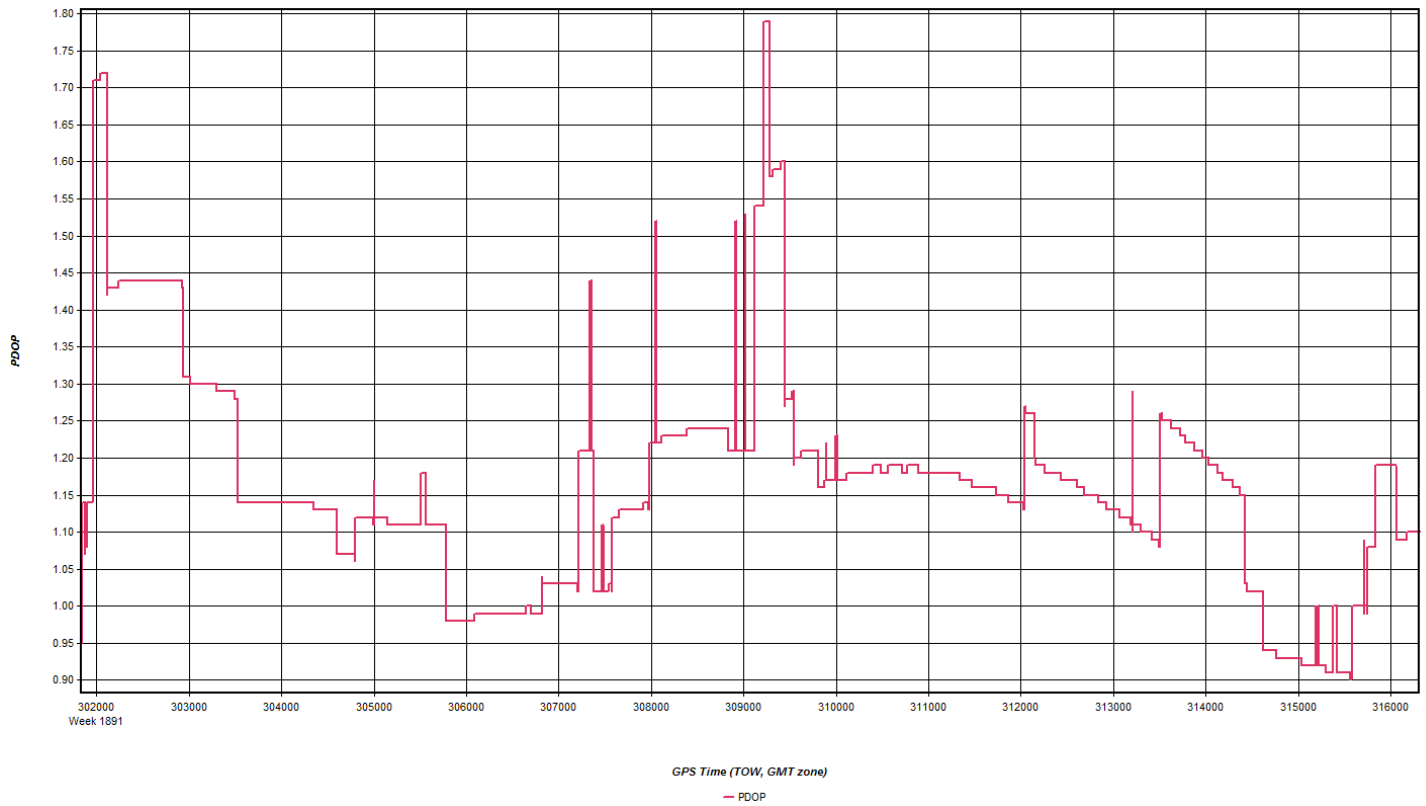
GPS Time (TOW, GMT zone)

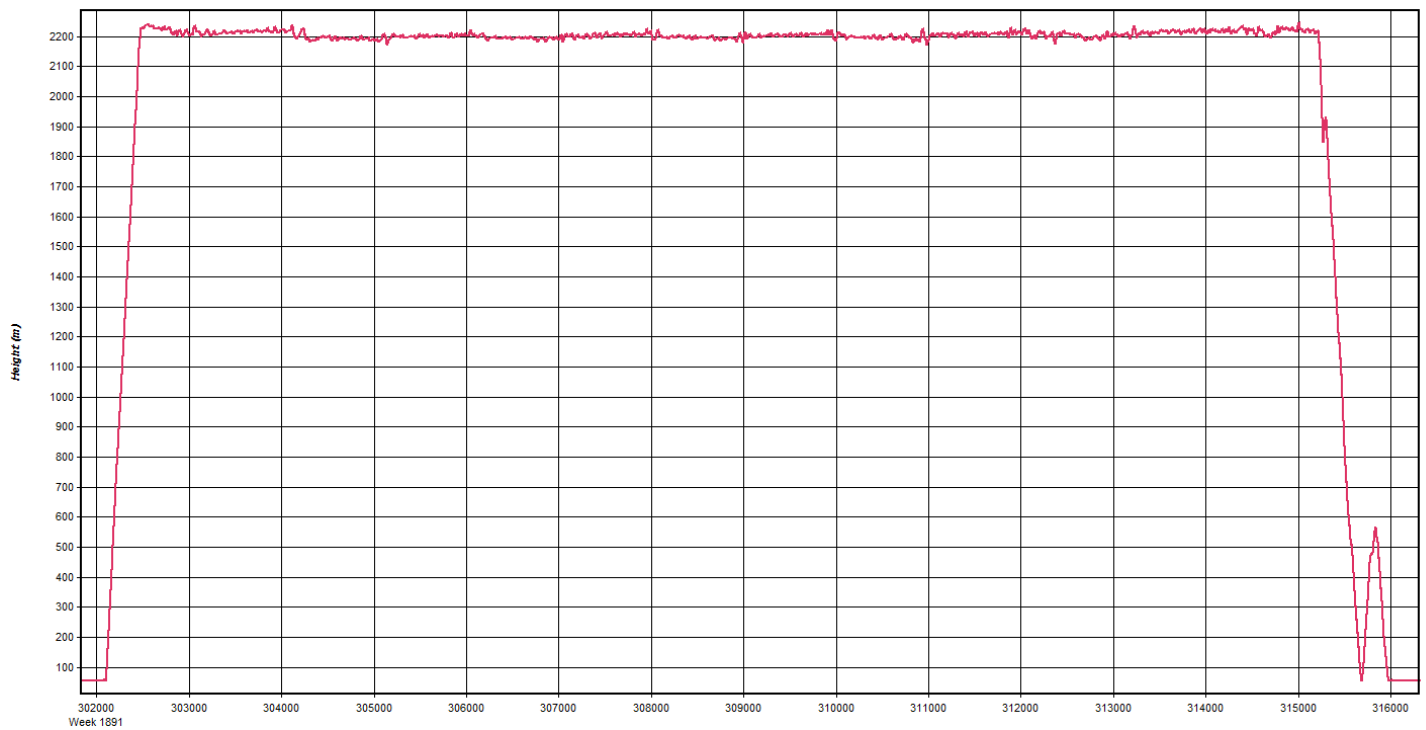
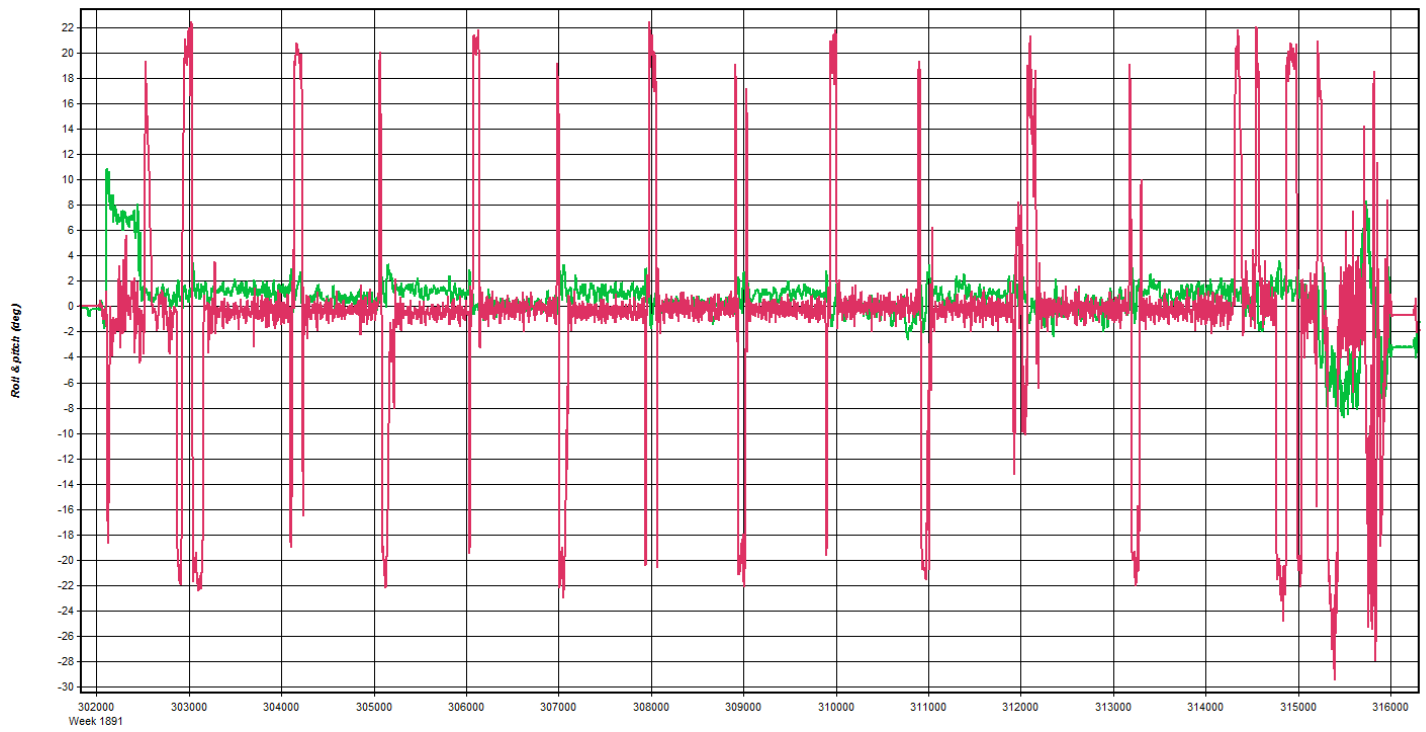
— East — North — Up

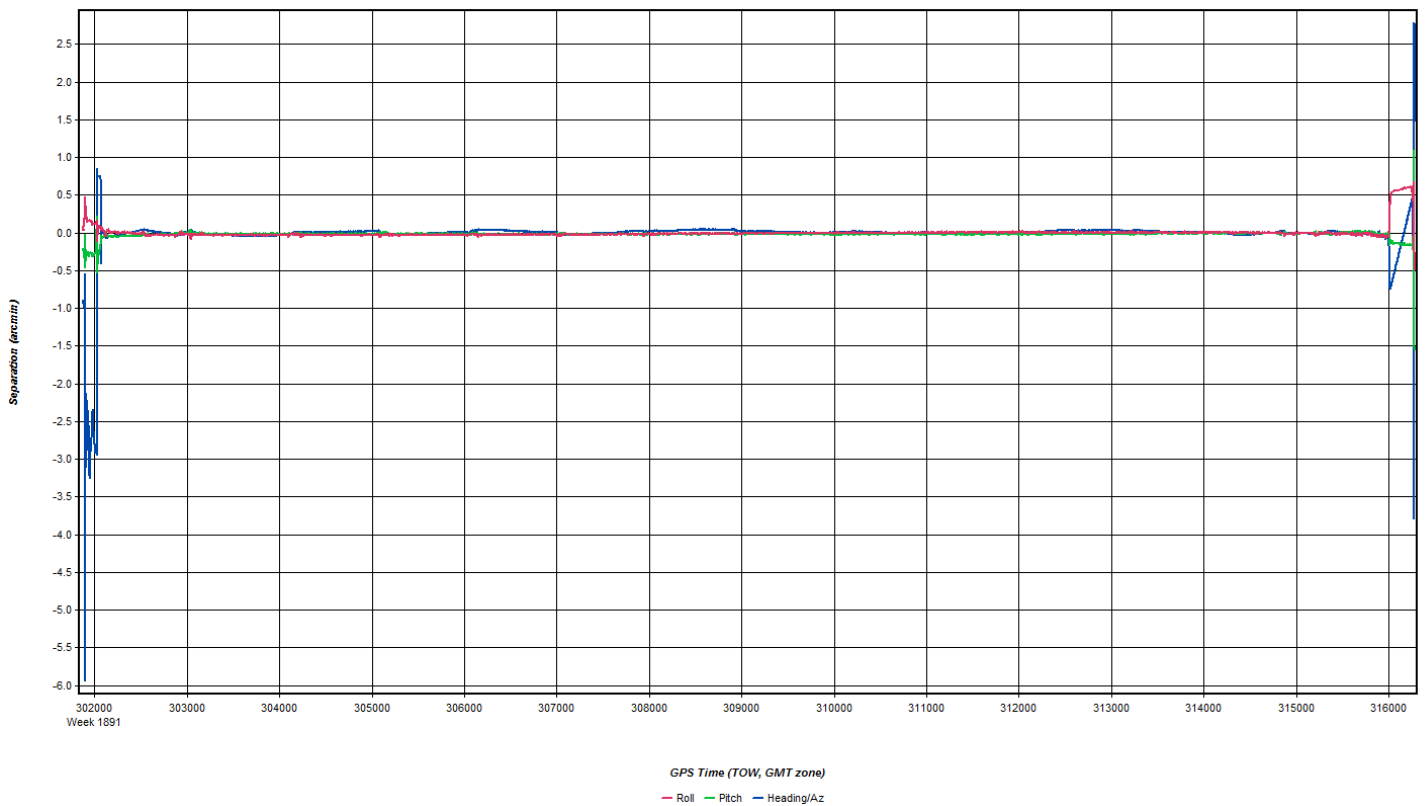
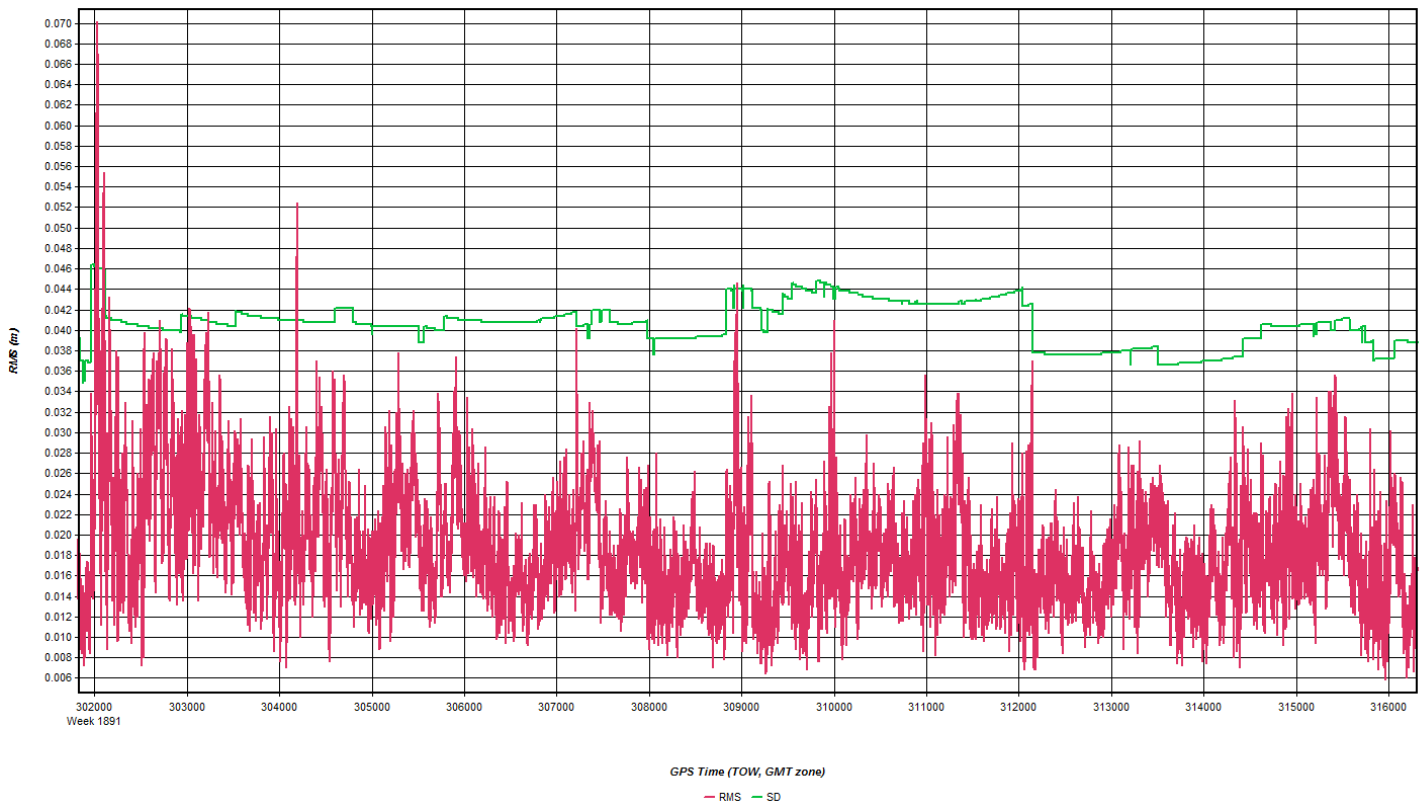


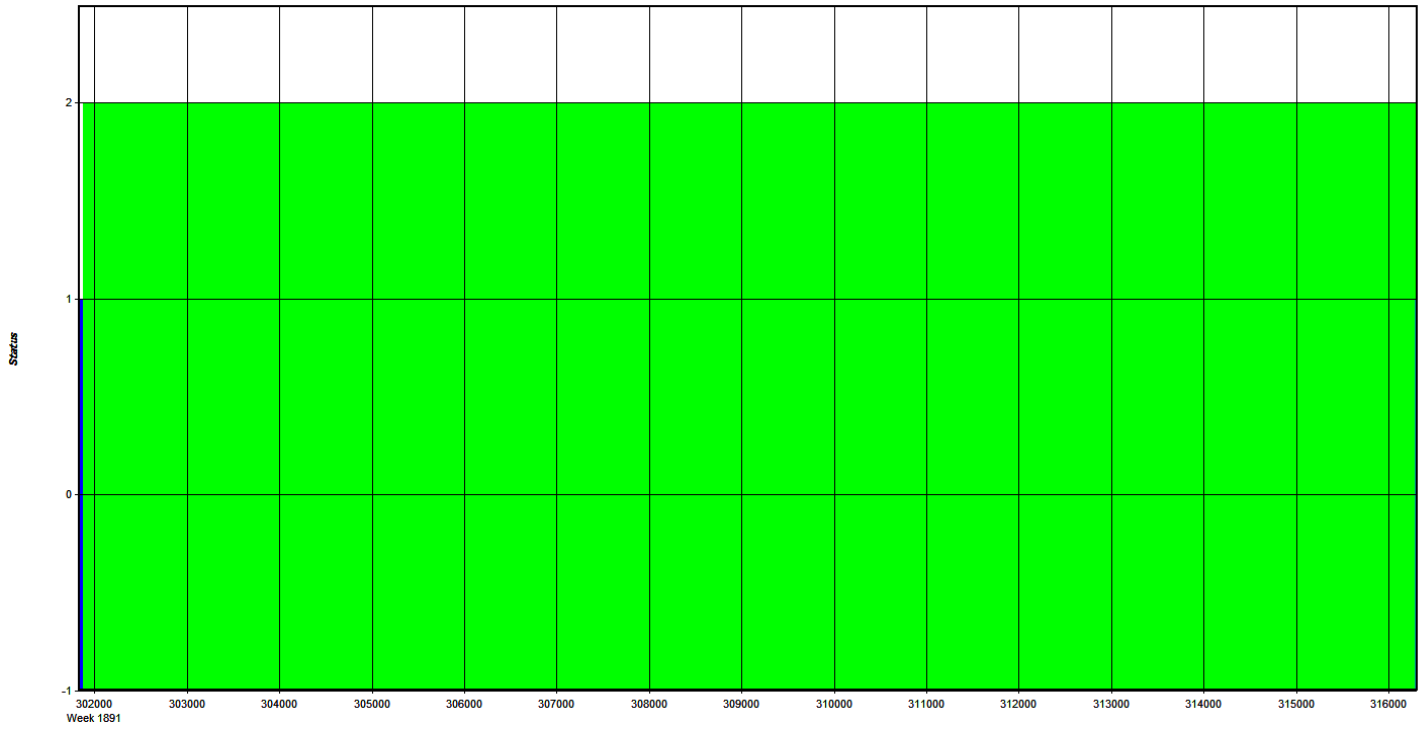
GPS Time (TOW, GMT zone)

— Heading/Azimuth — GPS-COG









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

? X

Coordinate/Antenna Settings

Master Remote

Base Station

1: MESP Name: MESP Disabled

File: E:\Proc\27146_ME_2016_BAA_GPSC\29CL\160406_SN7161_A

Coordinates

Latitude: North 44 13 06.19617

Longitude: West 70 30 47.10740

Ellipsoidal height: 105.463 m

Datum: WGS84

Antenna Height

From station file: TRM55971.00, NONE

Antenna profile: TRM55971.00

Measured height: 0.000 m

ARP to L1 offset: 0.067 m

Applied height: 0.067 m

Measured to

ARP

L1 Phase Centre

Flight Log

Project: USGS Aerial MESP **Date:** 4-6-16
(email log daily to flight_log_distribution_list@quantumspatial.com)

Project #: 27146 **Flight Mgmt File:** 20160406_114608 **Tech:** DyreSon

Aircraft: N312TB **Begin Hobbs:** 3893.2 **End Hobbs:** 3897.0 **Total:** 3.8 **Pilot:** Jacobson **Co-Pilot:**

Dep Apt: KLEW **Dep Time (Lcl):** 07:54 **Arr Apt:** KLEW **Arr Time (Local):** 11:46 **Tot Time Aloft:** 3.8

CORS: (Y) N **Sta 1:** MESP **Sta 2:** **Flyovers:** (Y) N **If Y, times: Sta 1:** 12:01 **Start:** 15:33

GPS Unit: (Y) N **Sta 1:** LEW1 **Sta 2:** **Flyovers:** Y (N) **If Y, times: Sta 1:** 11:48-12:08 **Start:** 15:26

Gd Temp beg: -7 °C **End:** 2 °C **OAT beg:** -12 °C **End:** -10 °C **Altimeter begin:** 30.32 **end:** 30.30

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	Foot/Sec	GPS Altitude	Crab	Turb	10-1
1086	235	12:15	12:27	148	1.2/16	7221			
1085	55	12:30	12:43	152	1.4/16	7221			
1084	235	12:47	13:00	142	1.1/18	7238			
1083	55	13:02	13:15	150	1.2/17	7240			
1082	235	13:18	13:31	147	1.1/16	7247			
1081	55	13:34	13:48	151	1.1/16	7260			
1080	235	13:50	14:04	144	1.1/17	7267			
1079	55	14:07	14:21	152	1.2/18	7261			
1078	235	14:24	14:38	147	1.2/16	7260			
1077	55	14:43	14:59	148	1.3/15	7260			
1076	235	15:02	15:17	145	1.3/14	7263			
1001	137	15:22	15:25	160	1.1/16	7260			

LIDAR Type: ALS7D **Serial #:** 7161 **Alt:** ANSL **Avg. Terr. Ht:** 7200-ft **Max. Gdspd:** 150 **Avg Pt Spacing:** **Power:** 100 **Pulse Rate:** 260 **Storage Number:** 016

FOV: 40 **Scan Freq:** 53 **MPIA:** (Y) N **Pulse In Air:** **Max. Power:** 100 **PPSM:**

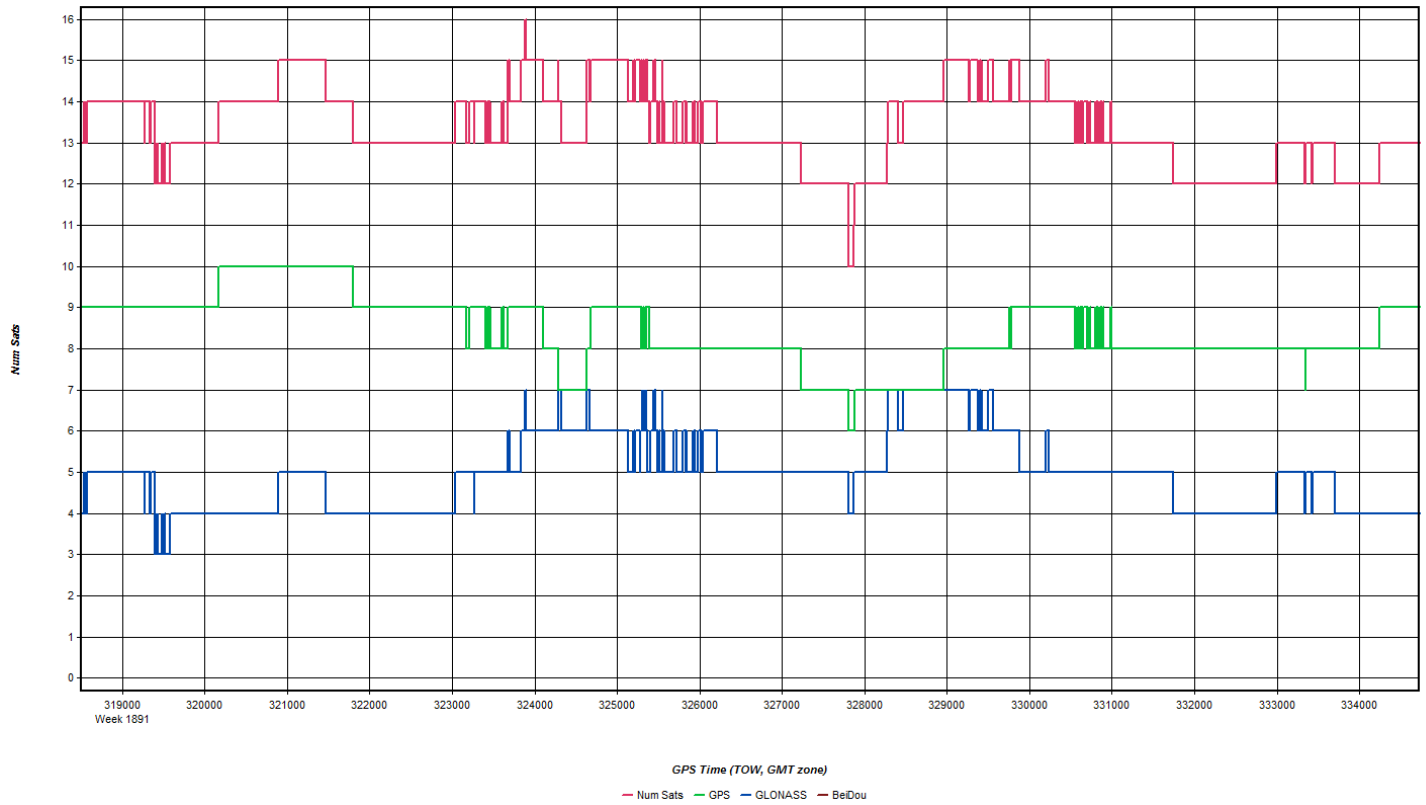
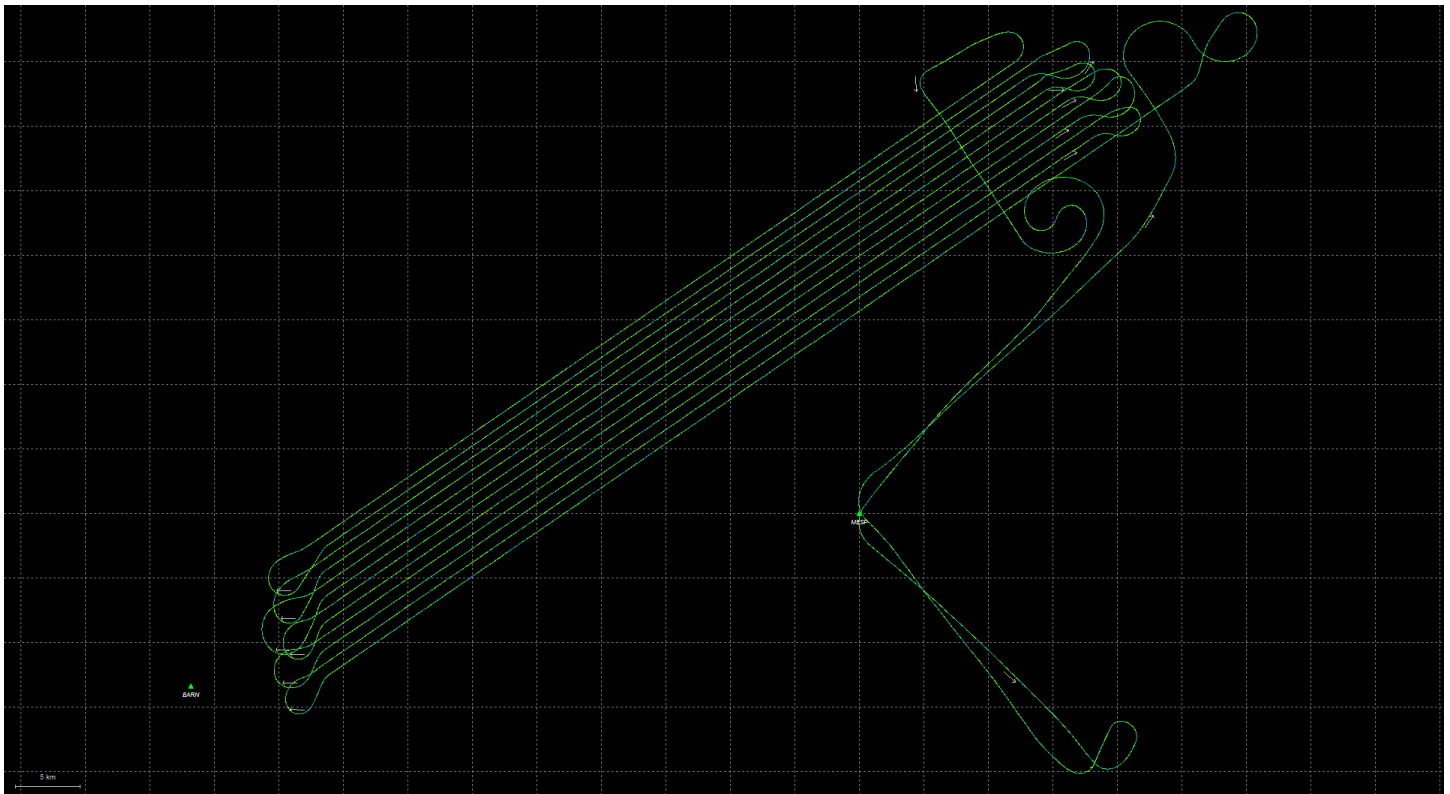
FLIGHT LINE NOTES: - visibility, clouds, smoke, parallax, etc.

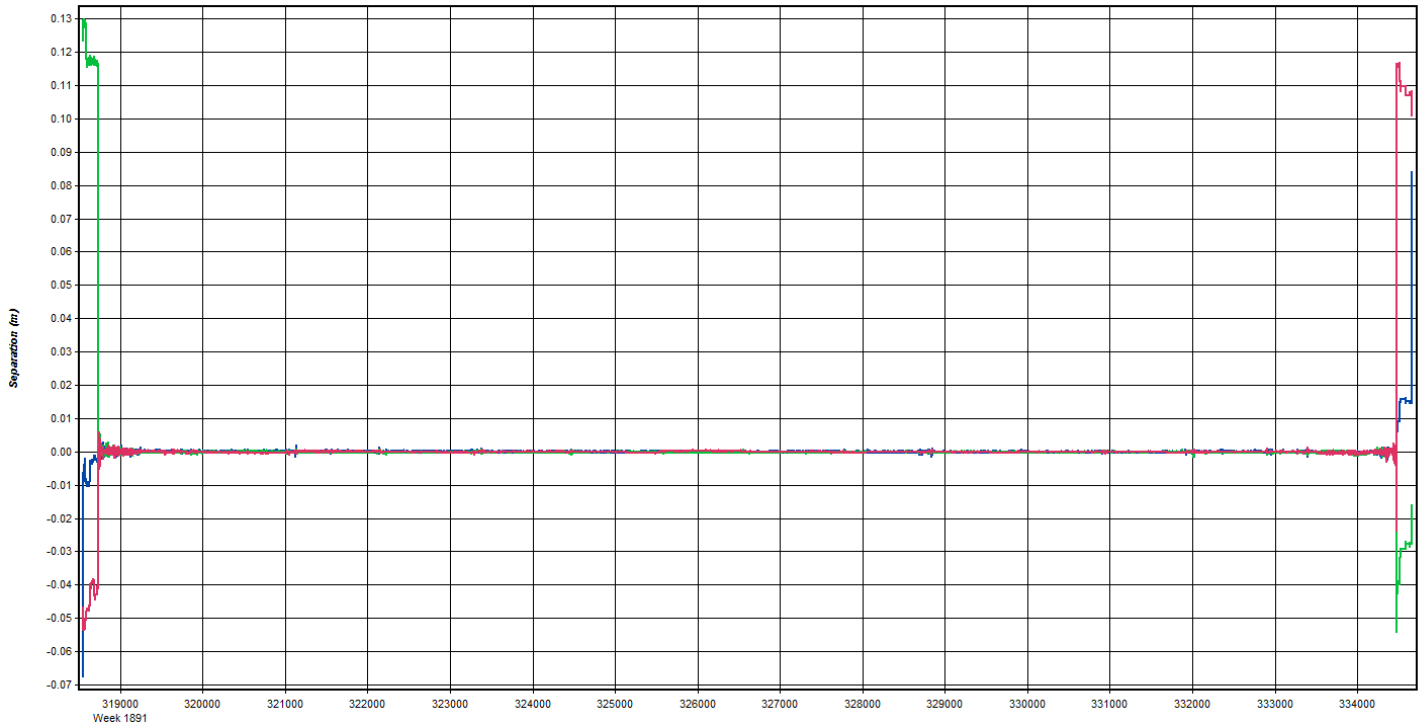
Cross tie for lines 1096-1076

Total Proj Lines: 113 **Lines Flown:** 11 **Lines Remain:** 79 **Online Time:** 3:2 **Job Time:** 0:6 **Notes:**

Generated by CamScanner

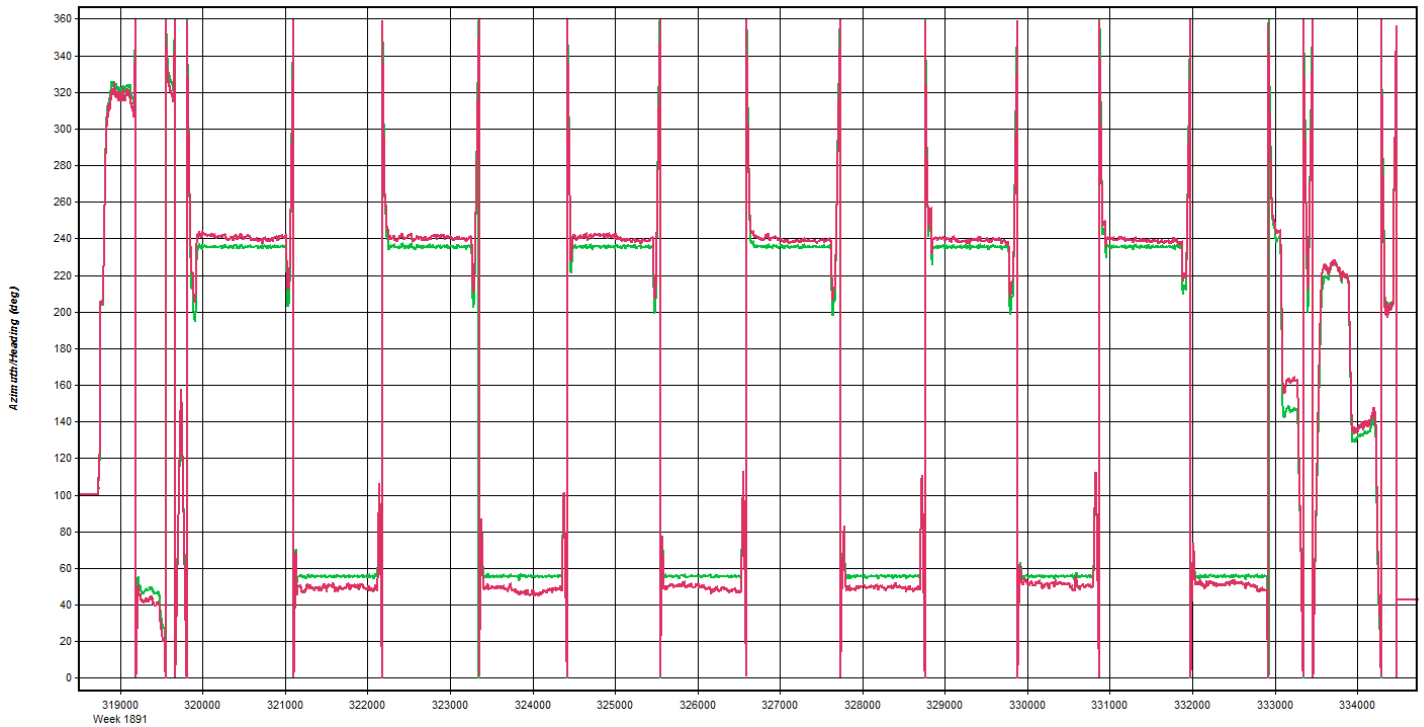
Apr 6, 2016-B (N812TB, SN7161)





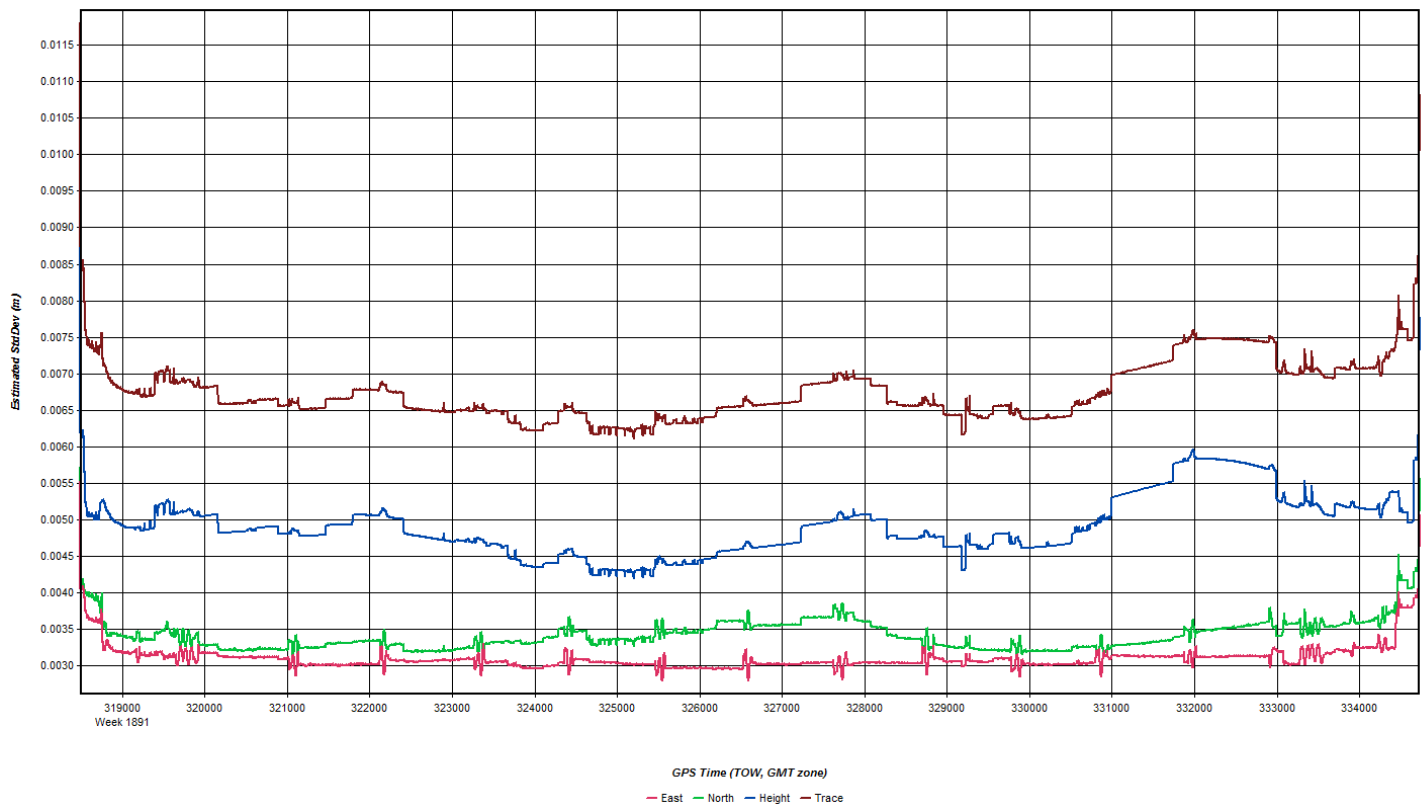
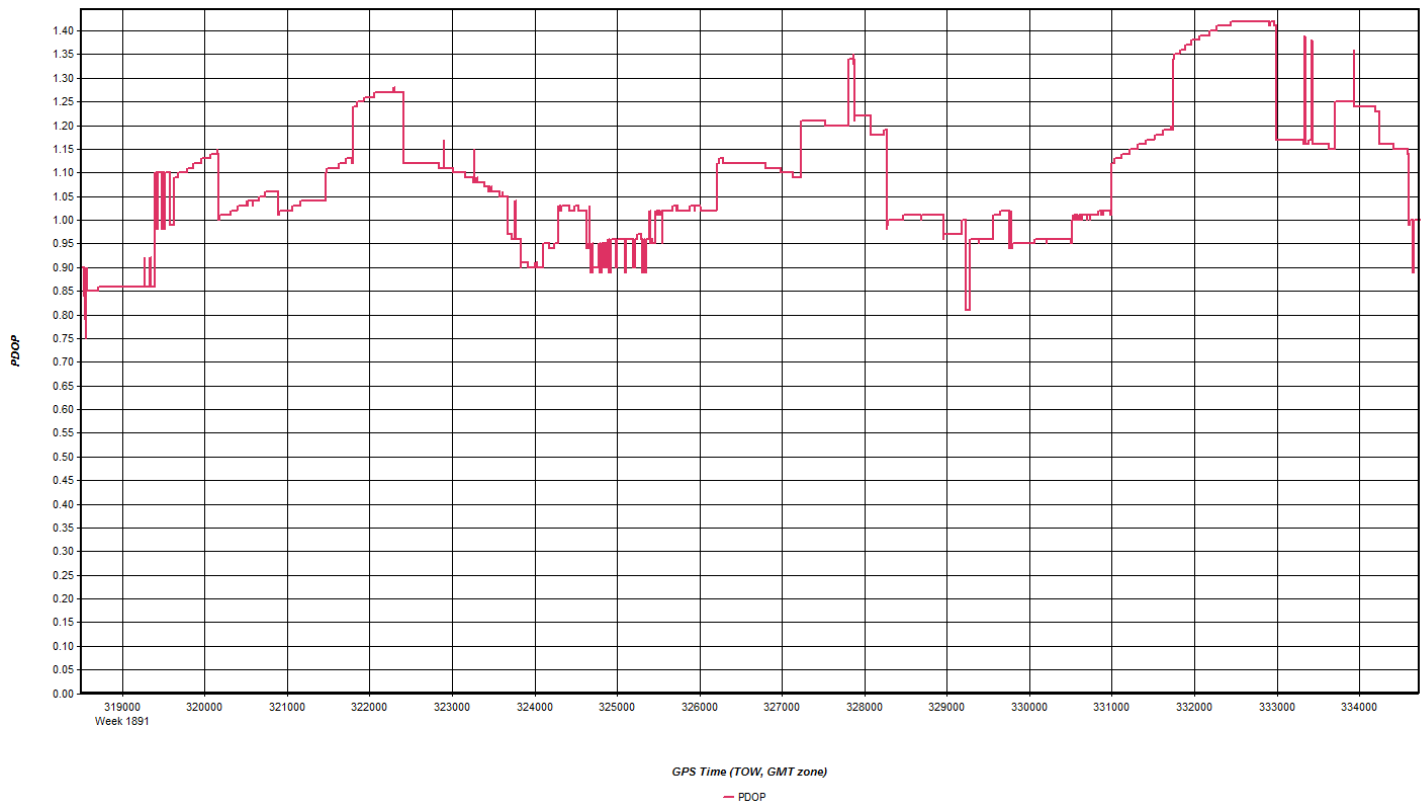
GPS Time (TOW, GMT zone)

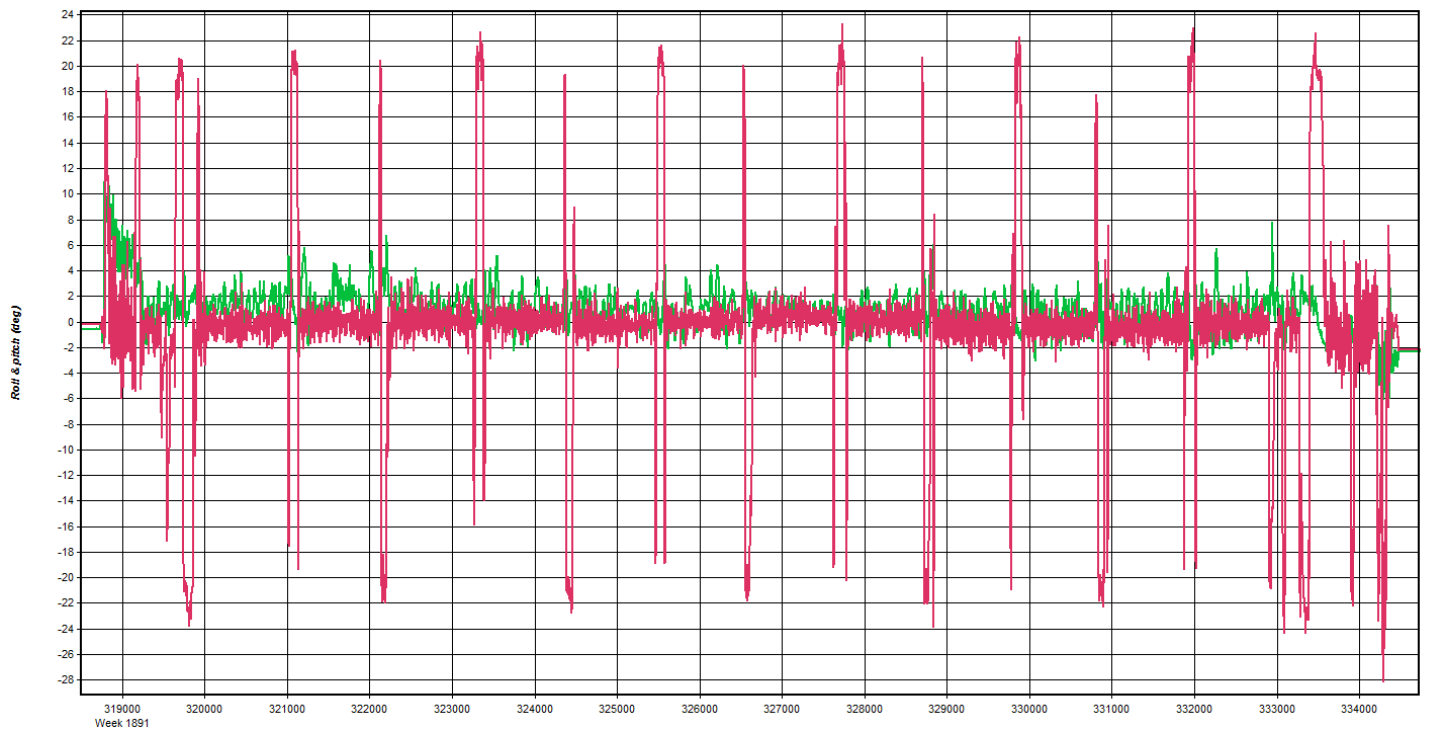
— East — North — Up



GPS Time (TOW, GMT zone)

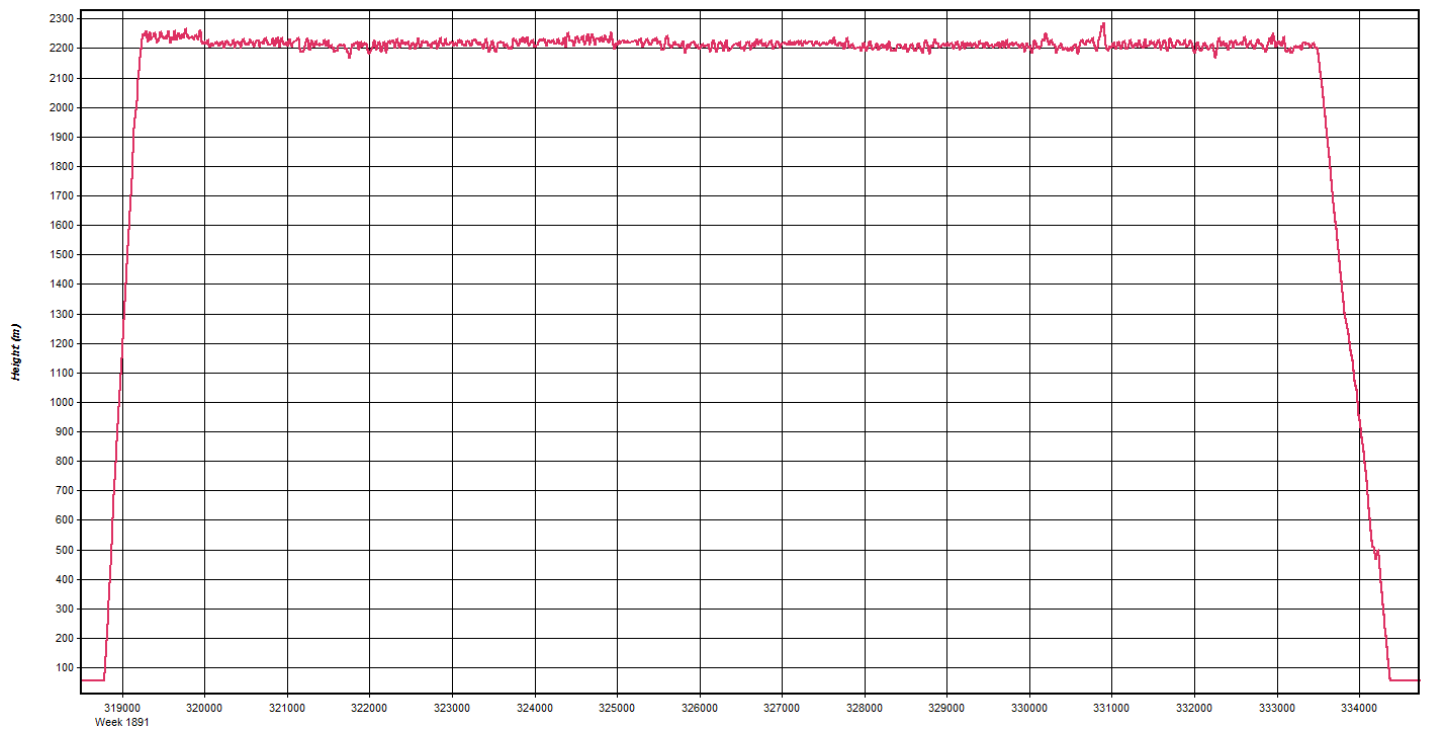
— Heading/Azimuth — GPS-COG





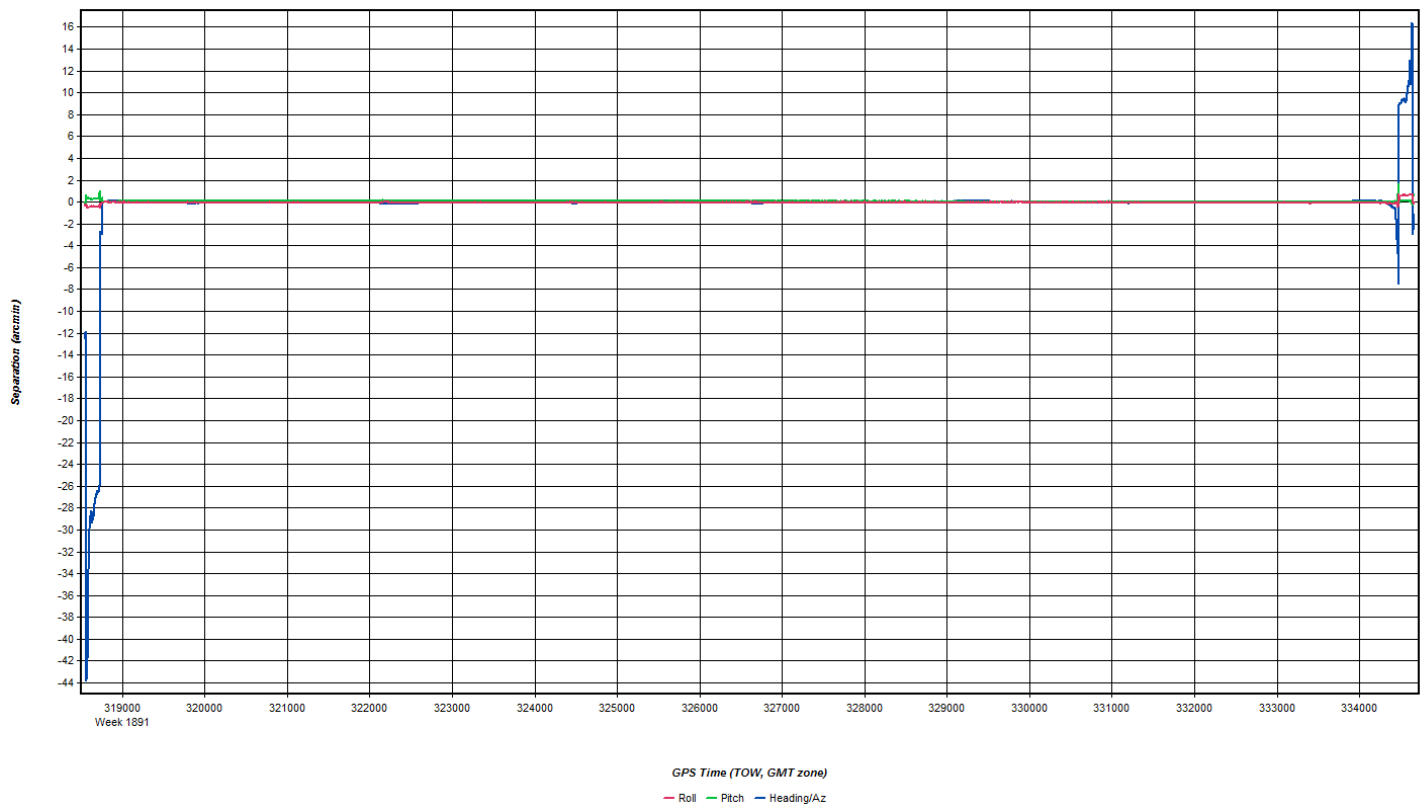
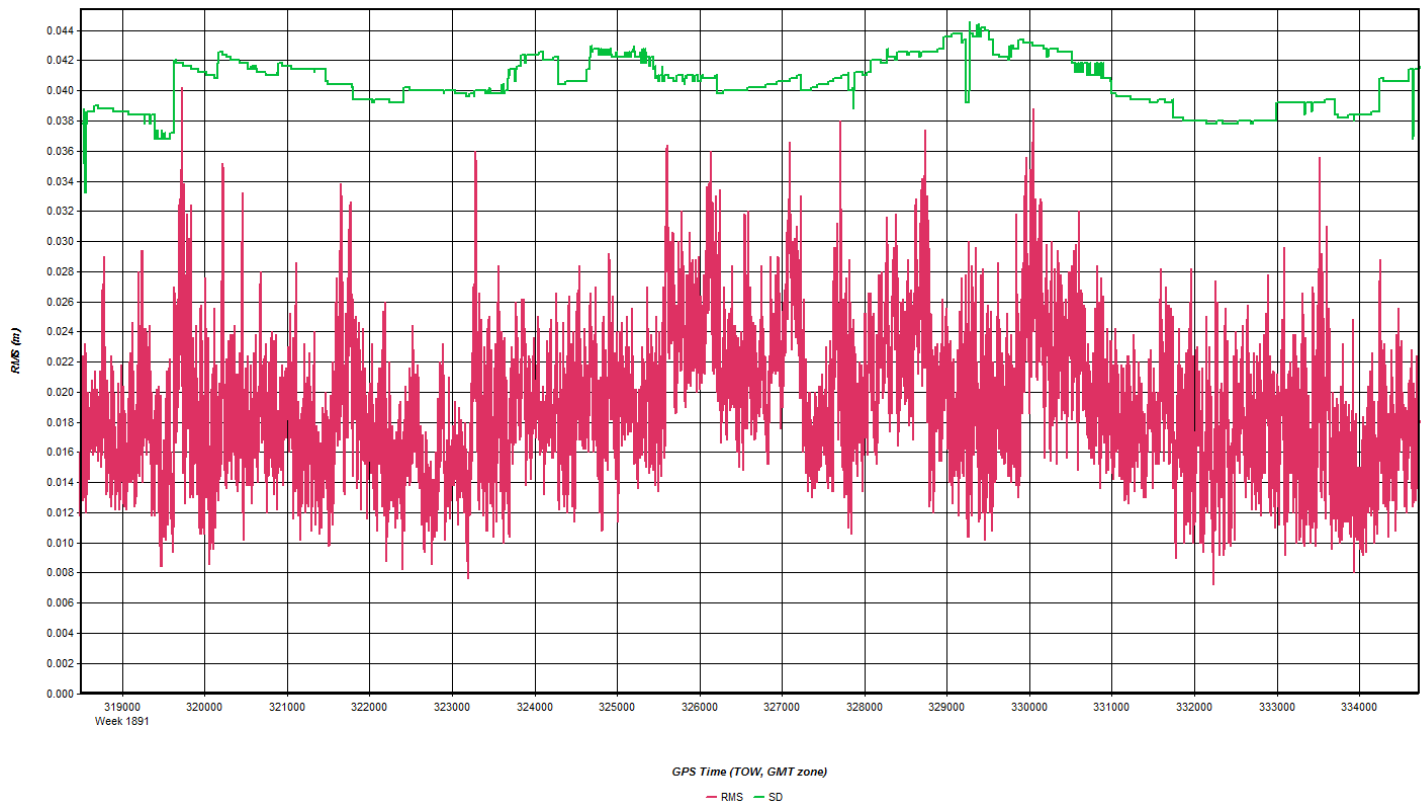
GPS Time (TOW, GMT zone)

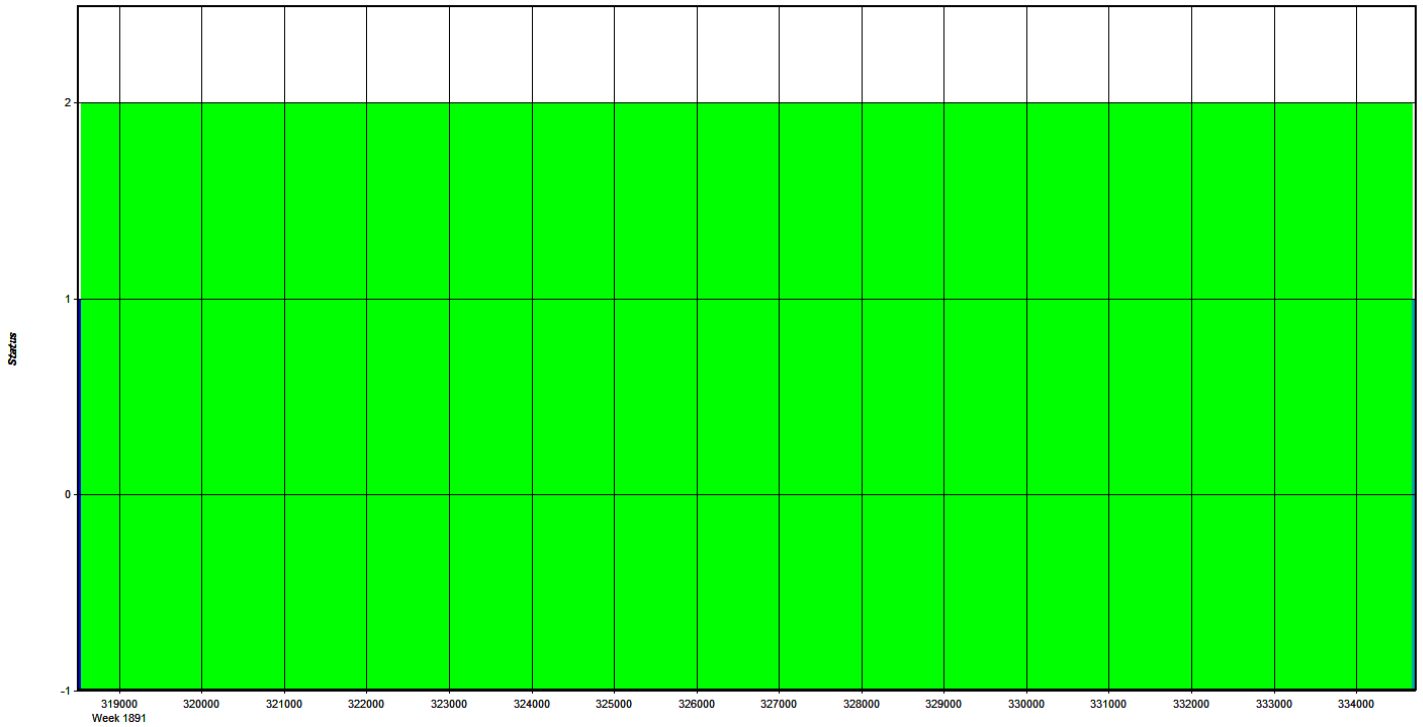
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 2: BARN Name: BARN Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\29CL\160406_SN7161_A

Coordinates
 Latitude: North 44 05 56.68362 Compute from PPP
 Longitude: West 71 09 34.39925 Enter Grid Values
 Ellipsoidal height: 140.793 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Master Remote

Base Station
1: MESP Name: MESP Disabled
File: E:\Proc\27146_ME_2016_BAA_GPSC\29CL\160406_SN7161_A

Coordinates
Latitude: North 44 13 06.19617 Compute from PPP
Longitude: West 70 30 47.10740 Enter Grid Values
Ellipsoidal height: 105.463 m Enter MSL Height
Datum: WGS84 Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: TRM55971.00, NONE View STA File
Antenna profile: TRM55971.00 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

Quantum Spatial
Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email Log daily to flight_log_distribution_list@quantumspatial.com)

Date: 4-6-16
 LTR: A B C D E Pg 1 of 1

Project: USGS Maine MESP
 Flight Mgmt File: 2060406-162424

Aircraft: N812TB Begin Hobbs: 3817.0 End Hobbs: 3401.3 Total: 4.3 Pilot: Jacobson Co-Pilot: Dyresn Tech: Dyresn

Dep Apt: KLEW Dep Time (Lcl): 12:32 (Z): 16:32 Arr Apt: KLEW Arr Time (Local): 16:52 (Z): 20:52 Tot Time Aloft: 4.3

CORS: N Sta 1: MESP N Sta 2: N Sta 3: N
 Flyovers: N IF Y, times: Sta 1) 16:39 N IF Y, times: Sta 2) 16:50 Sta 3) 16:58 - 20:35

GPS Unit: N Sta 1: LEW1 N Sta 2: N Sta 3: N
 Flyovers: Y 1 N IF Y, times: Sta 1) 30:25 end: 30:14

Gd Temp beg: 2 °C End: °C OAT beg: -10 °C End: -10 °C

Type	Serial #	Alt AGL	Alt AMSL	Avg Tier	Max Gdspd	Avg Pt Spacing	Power	PRSM	Start	End	Mag	Avg
LIDAR	FOV	Scan Freq	Mpi	(Y) N	Pulse Rate	Power	PRSM	PRSM	Start	End	Start	End
	40	53	7161	7200	150	100	260	100	10:28	14:51	163	163
									20:51	20:51	222	222
											59	59

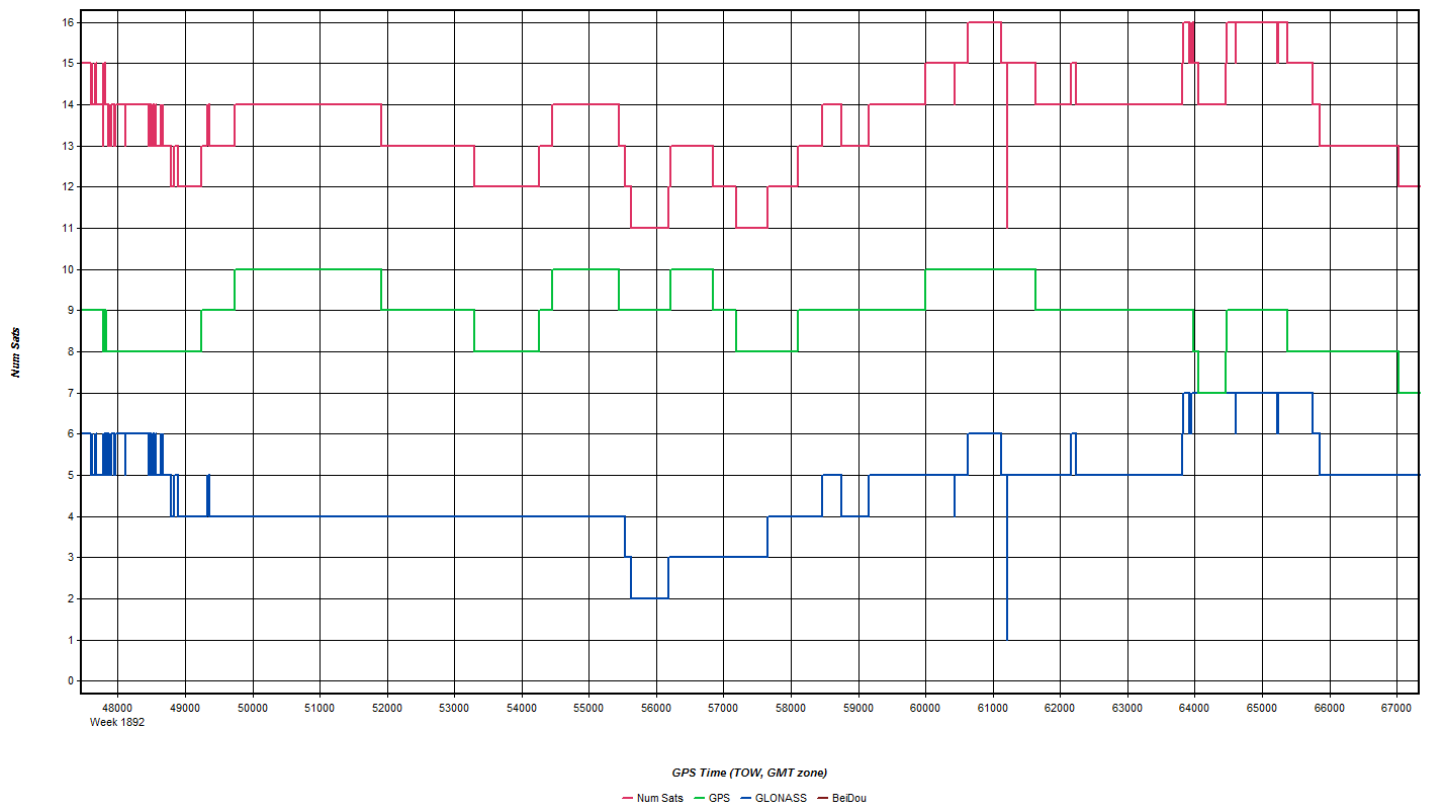
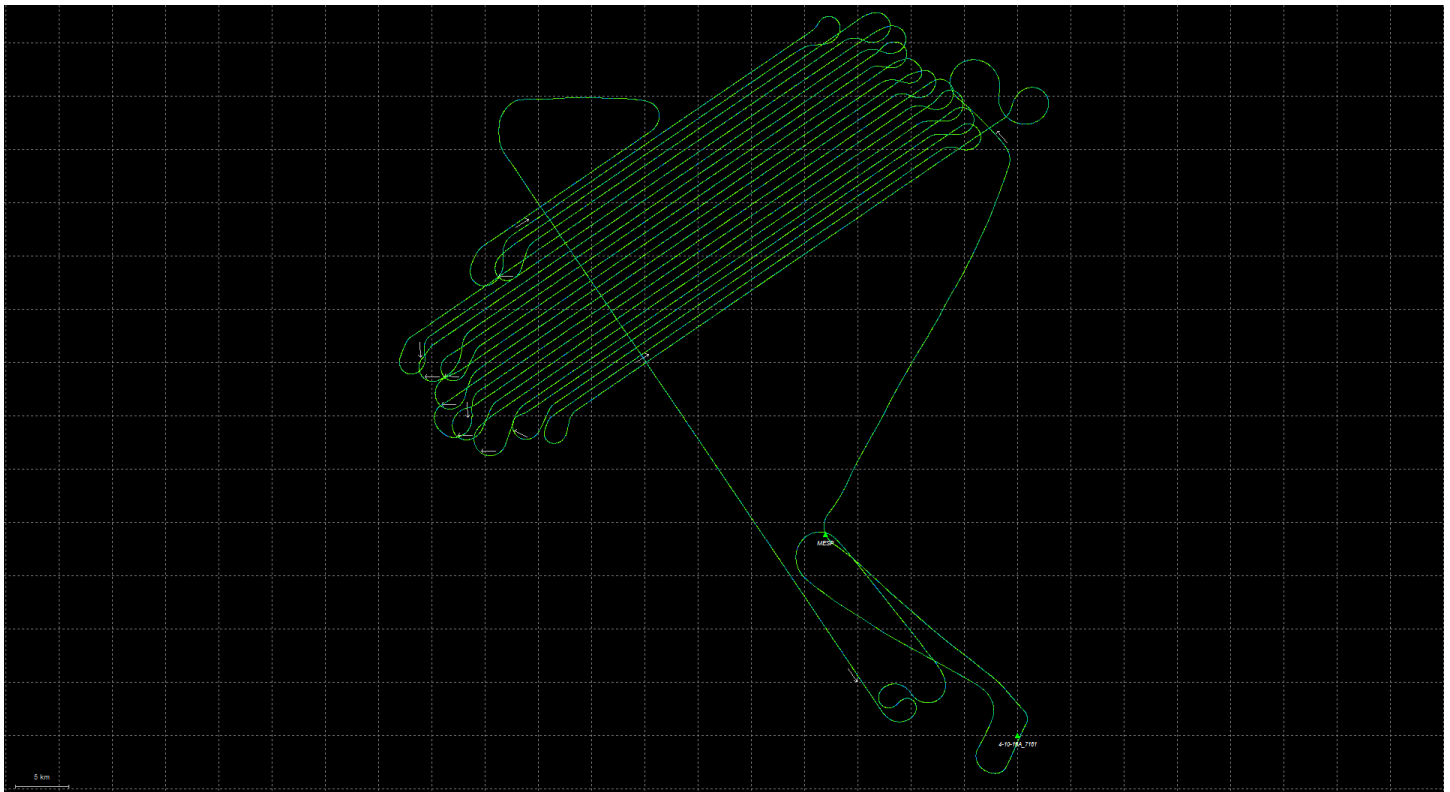
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	Foot/s	GPS Altitude	Crsb	Turb	Notes
					(0..1)				
1075	235	16:53	17:09	154	1.2/17	7260			
1074	55	17:12	17:28	147	1.3/17	7260			
1073	235	17:31	17:47	144	1.3/17	7263			
1072	55	17:50	18:05	150	1.1/18	7264			
1071	235	18:08	18:23	137	1.0/20	7264			
1070	55	18:26	18:41	148	1.1/18	7263			
1069	235	18:44	18:59	147	1.2/16	7266			
1068	55	19:03	19:17	154	1.0/19	7267			
1067	235	19:20	19:35	135	1.2/17	7267			
1066	55	19:38	19:53	146	1.1/18	7267			
1065	235	19:56	20:10	137	1.1/17	7267			
1064	55	20:13	20:28	150	1.5/15	7270			
061	142	20:31	20:34	159	1.2/16	7190			Cross tree for lines 1075-1064

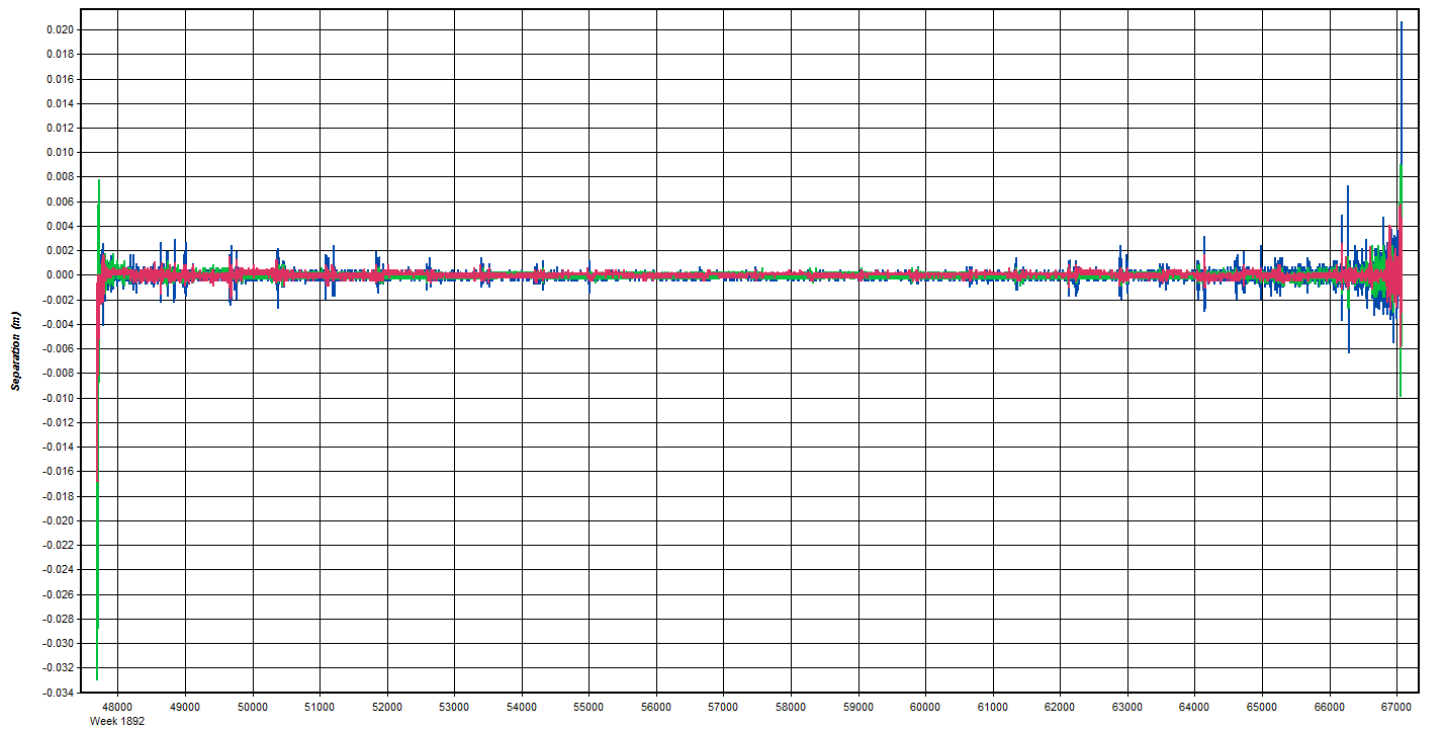
FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.

Total Prof Lines: 113 Lines Flown: 12 Lines Remains: 67 Online Time: 3.7 Mob Time: 0.6 Notes:

Generated by CamScanner

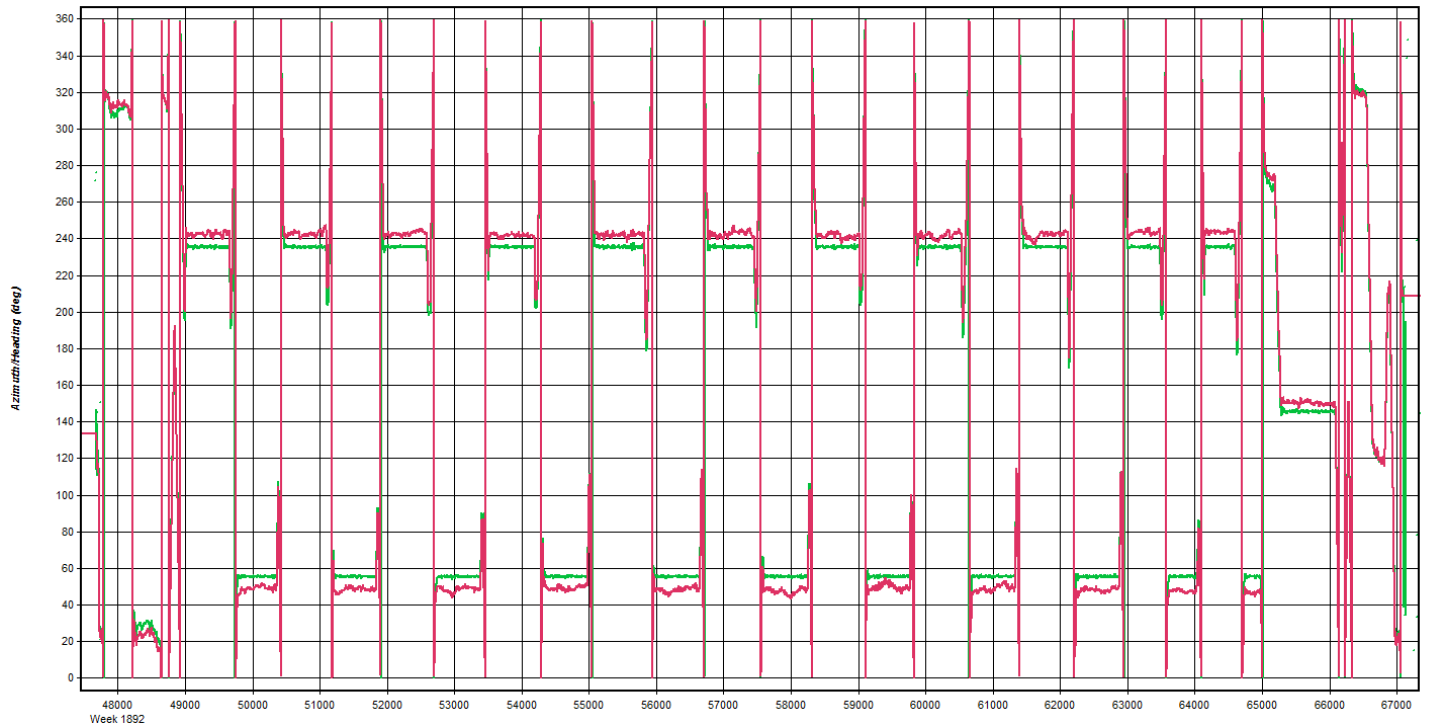
Apr 10, 2016-A (N812TB, SN7161)





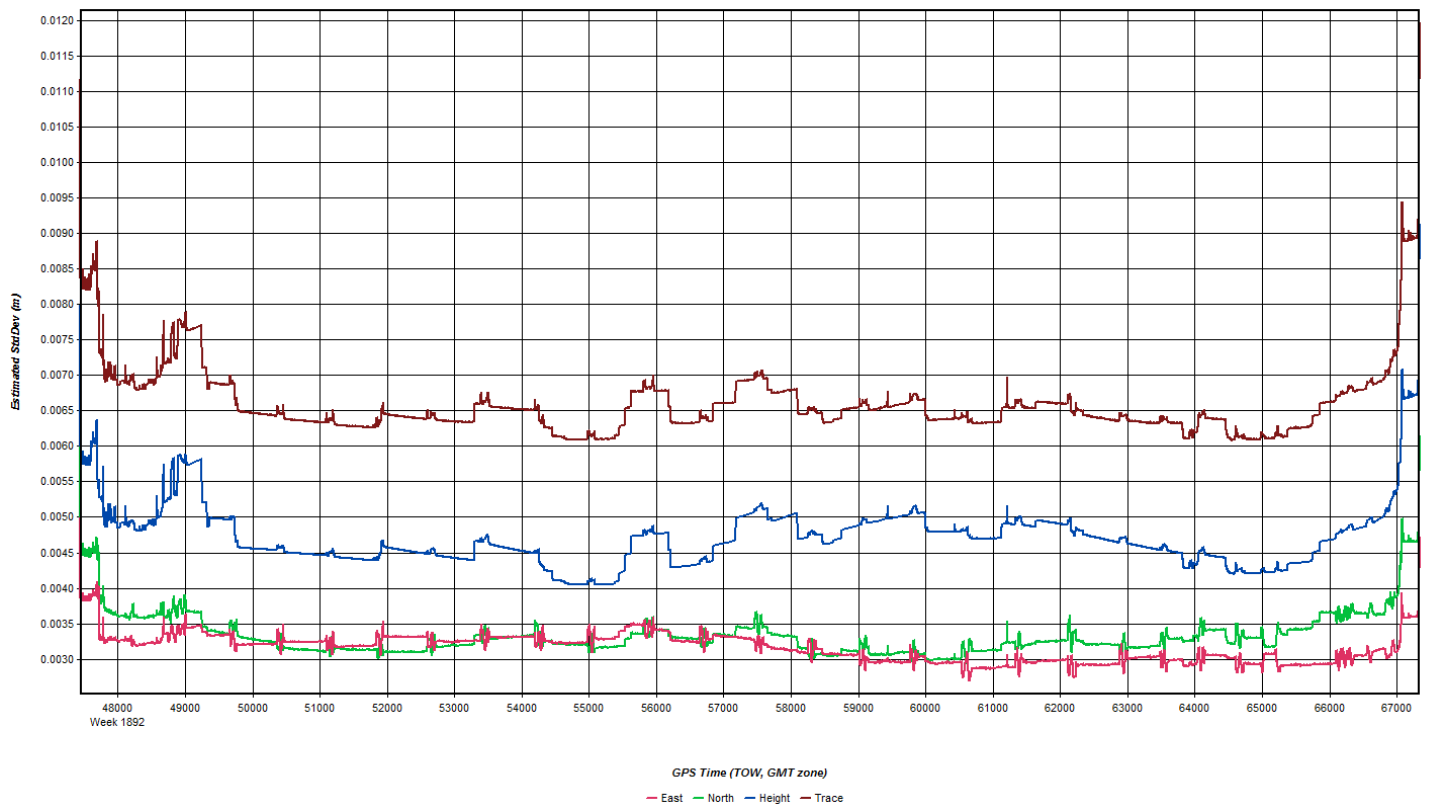
GPS Time (TOW, GMT zone)

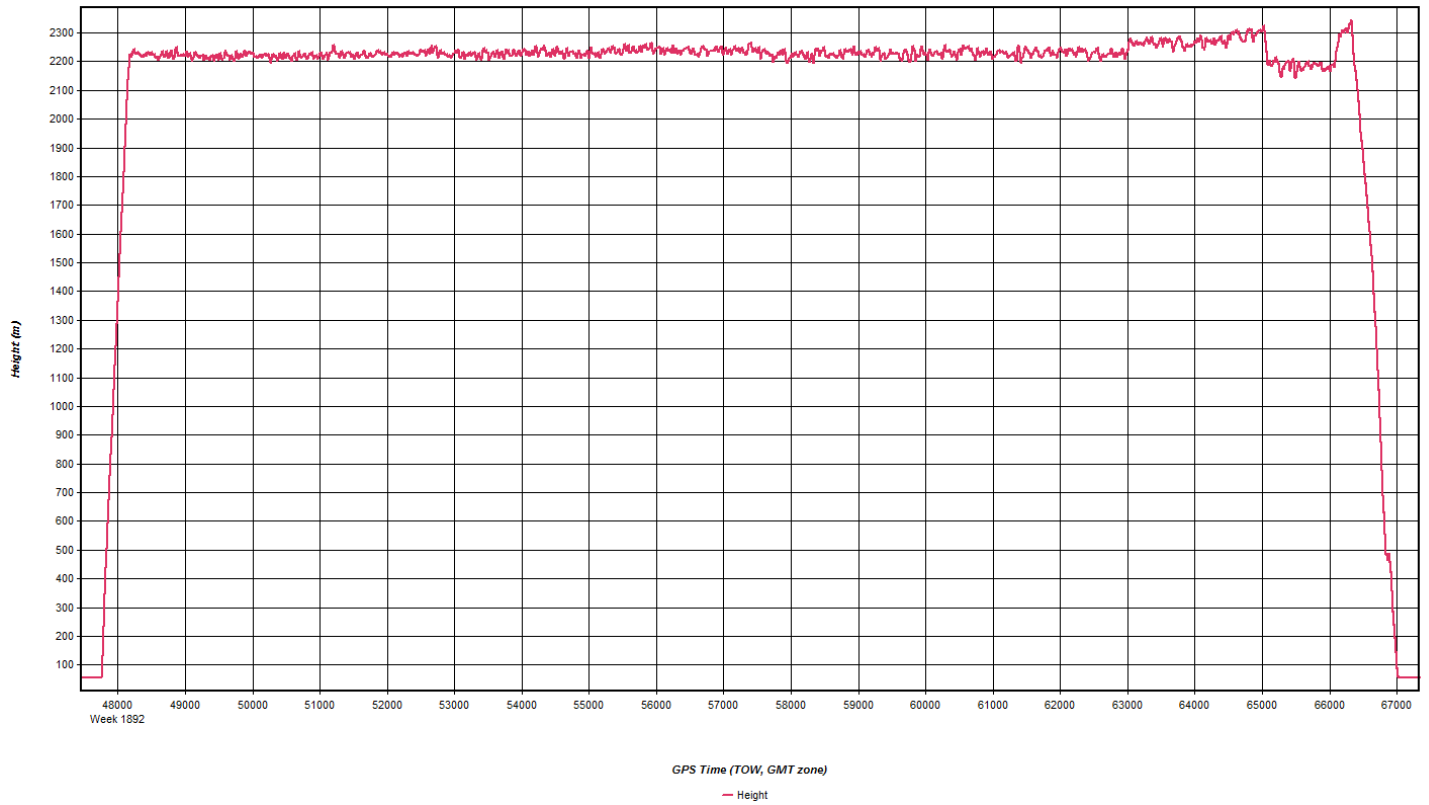
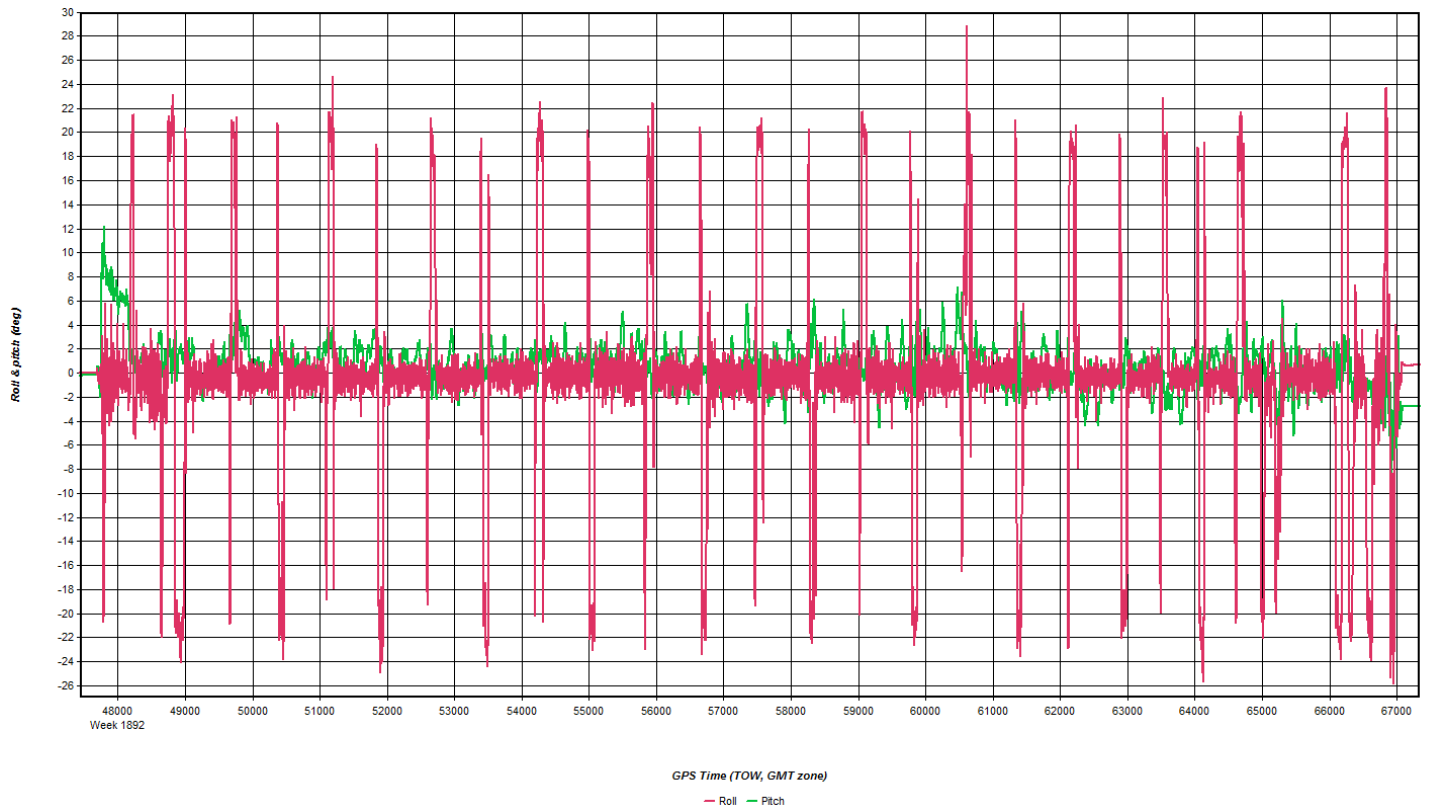
— East — North — Up

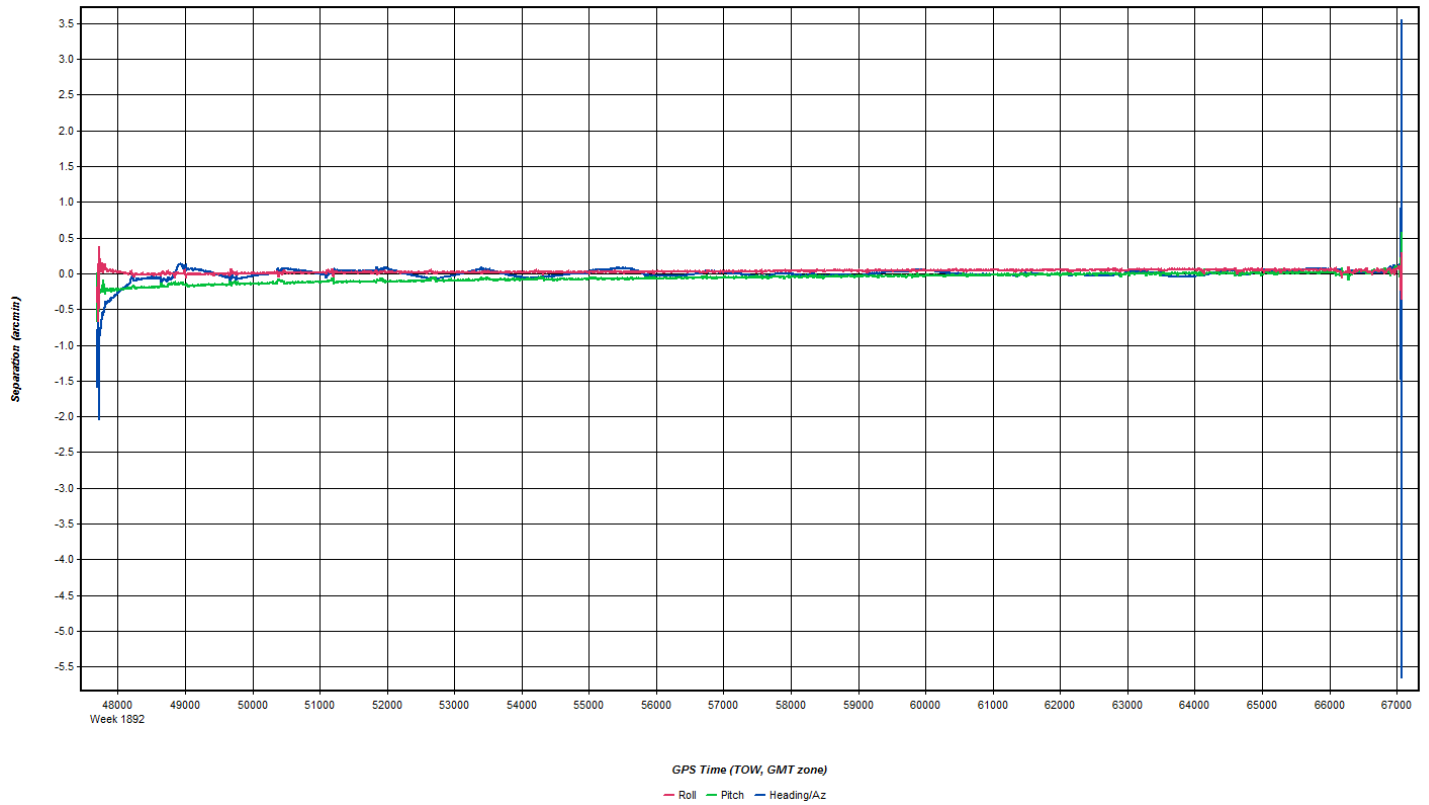
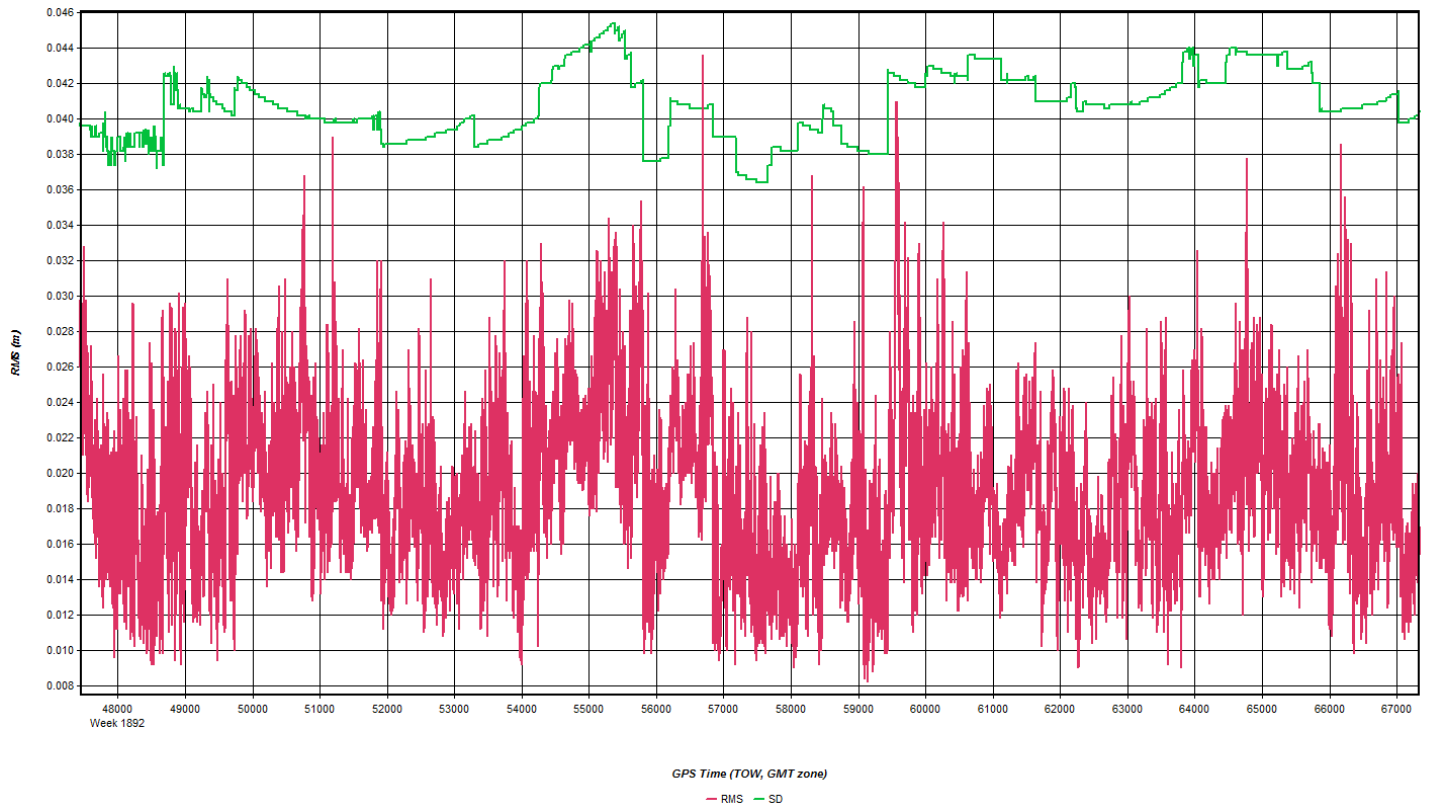


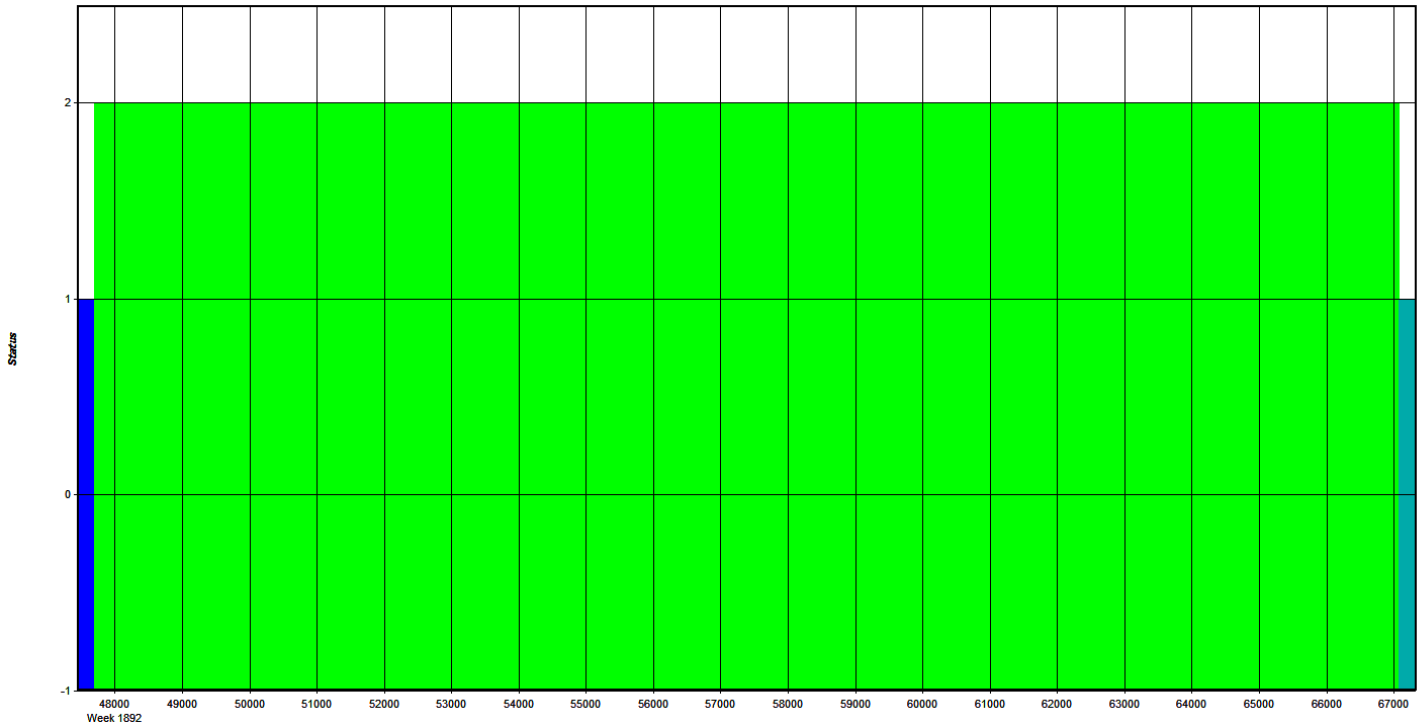
GPS Time (TOW, GMT zone)

— Heading/Azimuth — GPS-COG









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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: 4-10-16A_7161 Name: 4-10-16A_7161 Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\ASH7\160410_SN7161_

Coordinates
 Latitude: North 44 02 56.74648 Compute from PPP
 Longitude: West 70 17 12.20047 Enter Grid Values
 Ellipsoidal height: 51.351 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRM55971.00 View STA File
 Antenna profile: TRM55971.00 Info
 Measured height: 1.219 m
 ARP to L1 offset: 0.067 m
 Applied height: 1.286 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

Base Station
2: MESP Name: MESP Disabled
File: E:\Proc\27146_ME_2016_BAA_GPSC\ASH7\160410_SN7161_...

Coordinates
Latitude: North 44 13 06.19617 Compute from PPP
Longitude: West 70 30 47.10740 Enter Grid Values
Ellipsoidal height: 105.463 m Enter MSL Height
Datum: WGS84 Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: TRM55971.00, NONE View STA File
Antenna profile: TRM55971.00 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

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log only to flight_log_distribution_list@quantumspatial.com)

Date: 4-10-16 Page 2 of 2

Project: USGS Maine MESP Proj #: 27146 Flight Mgmt File: 20160410-130626 Tech: Dynesin

Aircraft: N812TB Begin Hobbs: 34069 Total: 5.6 PILOT: S. Johnson Co-Pilot:

Dep Apt: KLEW Dep Time (Local): 01:15 (Z): 13:15 Arr Apt: KLEW Arr Time (Local): 14:36 (Z): 18:36 Tot Time Aloft: 5.6

CORS: (Y) N Sta 1: MESP Sta 2: Flyovers: (Y) N IF Y, times: Sta 1) 13:23 Sta 2) 18:29

GPS Units: (Y) N Sta 1: KLEW 1 Sta 2: Flyovers: (N) N IF Y, times: Sta 1) 8-13:30 Sta 2) 8-18:21

Gd Temp beg: -2 °C End: °C OAT beg: -15 °C End: -16 °C Altimeter begin: 30.12 end: 30.16

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	Foot-cms	GPS Altitude	Turb (0-1)	Crab	Alt AMSL	Avg Terr Ht	Max Gdspd	Avg Ft Spacing	Power	PRSN	Start	End	Storage Number
1063	235	13:38	13:47	144	1.1/19	7270			7200ft		150		100		13:11	13:14	222
1062	55	13:50	13:59	141	1.1/18	7276									15:58	15:41	290
1061	235	14:01	14:11	146	1.2/17	7276											68
1060	55	14:13	14:23	154	1.2/16	7274											
1059	235	14:26	14:36	151	1.3/15	7275											
1058	55	14:39	14:49	147	1.4/14	7278											
1057	235	14:52	15:02	140	1.2/15	7277											
1056	55	15:05	15:15	154	1.1/16	7243											
1055	235	15:18	15:29	136	1.1/15	7302											
1054	55	15:33	15:43	147	0.9/18	7302											
1053	235	15:46	15:57	139	1.0/16	7303											
1052	55	16:00	16:10	151	1.1/16	7303											
1051	235	16:13	16:23	151	1.2/15	7310											
1050	55	16:25	16:35	149	1.3/17	7323											
1049	235	16:38	16:48	130	1.2/18	7332											
1048	55	16:51	17:01	147	1.2/18	7329											
1047	235	17:04	17:14	152	1.1/18	7329											
1046	55	17:17	17:27	153	1.3/17	7339											

Total Proj Lines: 142 Lines Flown: 23 Lines Remain: 73 Online Time: 4.7 Mob Time: 0.9 Notes: Continued on next page

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: 4-10-16
 UIC: B C D E Pg 2 of 2

Project: USGS Maine MESP
 Flight Mgmt File: 20160410_130626

Aircraft: N92TB
 End Hobbs: 3906.9
 Pilot: Jacobsen
 Co-Pilot: Dyreson

Dep Apt: KLEW
 Arr Apt: KLEW
 Arr Time (Local): 14:26
 Tot Time Aloft: 18:29

CORS: Y/N
 Sta 1: MESP
 Sta 2:

GPS Unit: Y/N
 Sta 1: LEW1
 Sta 2:

Flyovers: Y (N) IF Y, times: Sta 1 13:25
 Flyovers: Y (N) IF Y, times: Sta 2 13:30

Gd Temp beg: -2 °C End: °C OAT beg: -15 °C End: -16 °C
 Altimeter begin: 30.12 end: 30.16

Storage Number: 016

Type	Serial #	Alt AGL	Alt AMSL	Avg Ft Spacing	Max Gap	Power	PPSM	Start	End
LIDAR	ALS70	7161	7300	150	100	100		13:11	13:14
	40	53	MPIA	Y/N				18:38	18:41

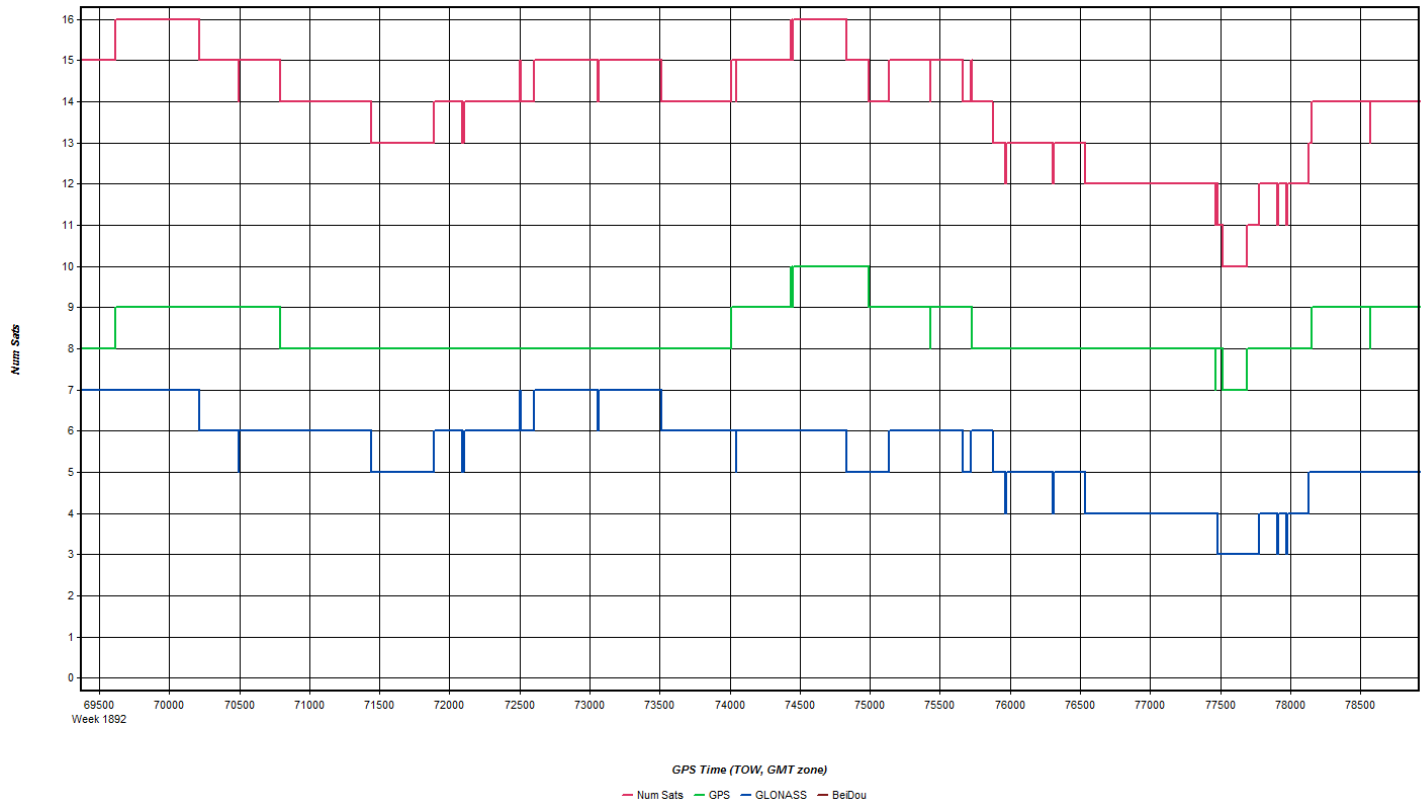
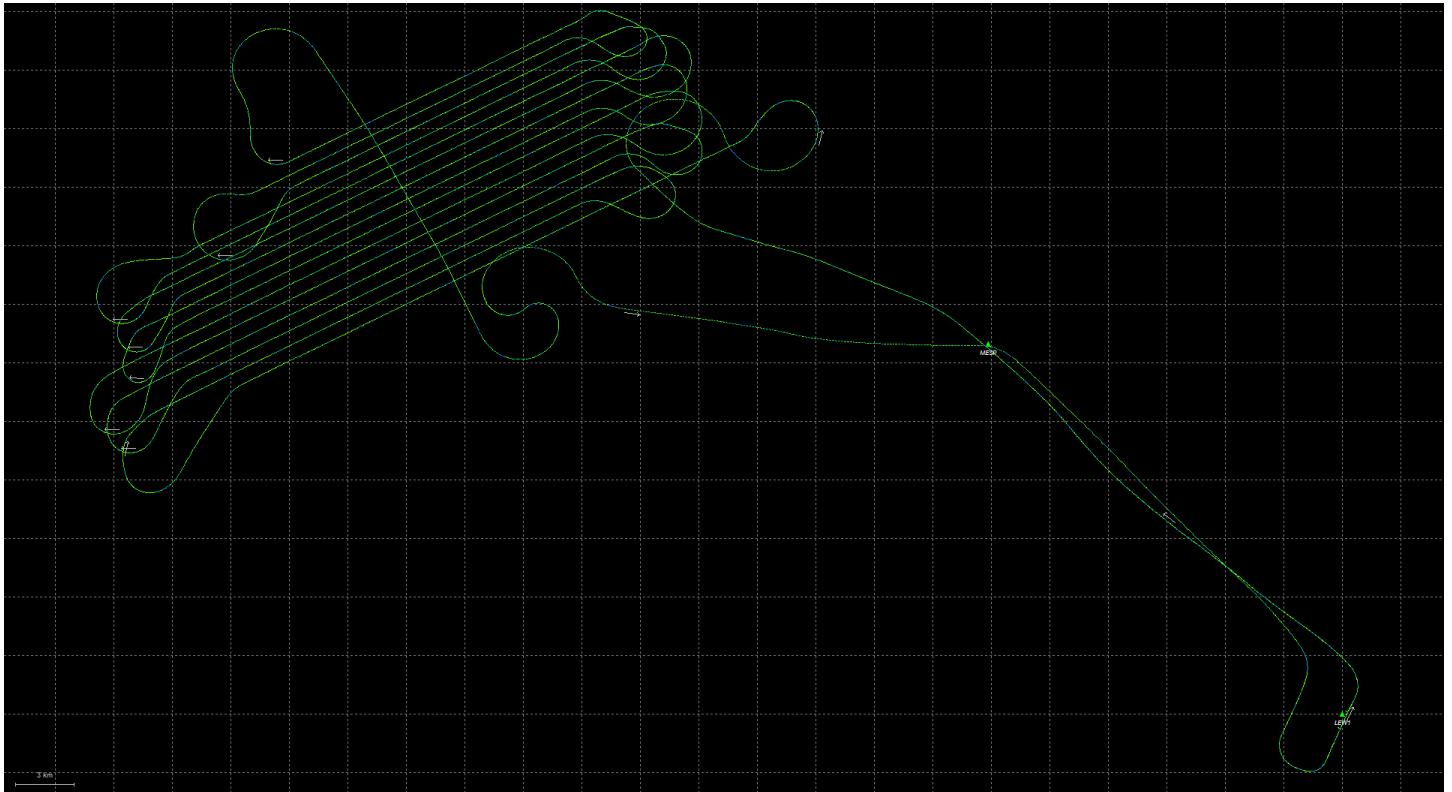
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	PPSM	GPS Altitude	Crab	Temp
1045	235	17:30	17:37	150	12/17	7422	10.5	
1044	55	17:40	17:46	152	12/17	7431		
1043	235	17:51	17:56	155	11/19	7503		
1042	55	17:59	18:02	149	11/18	7549		
1111	145	18:08	18:21	151	12/17	7192		

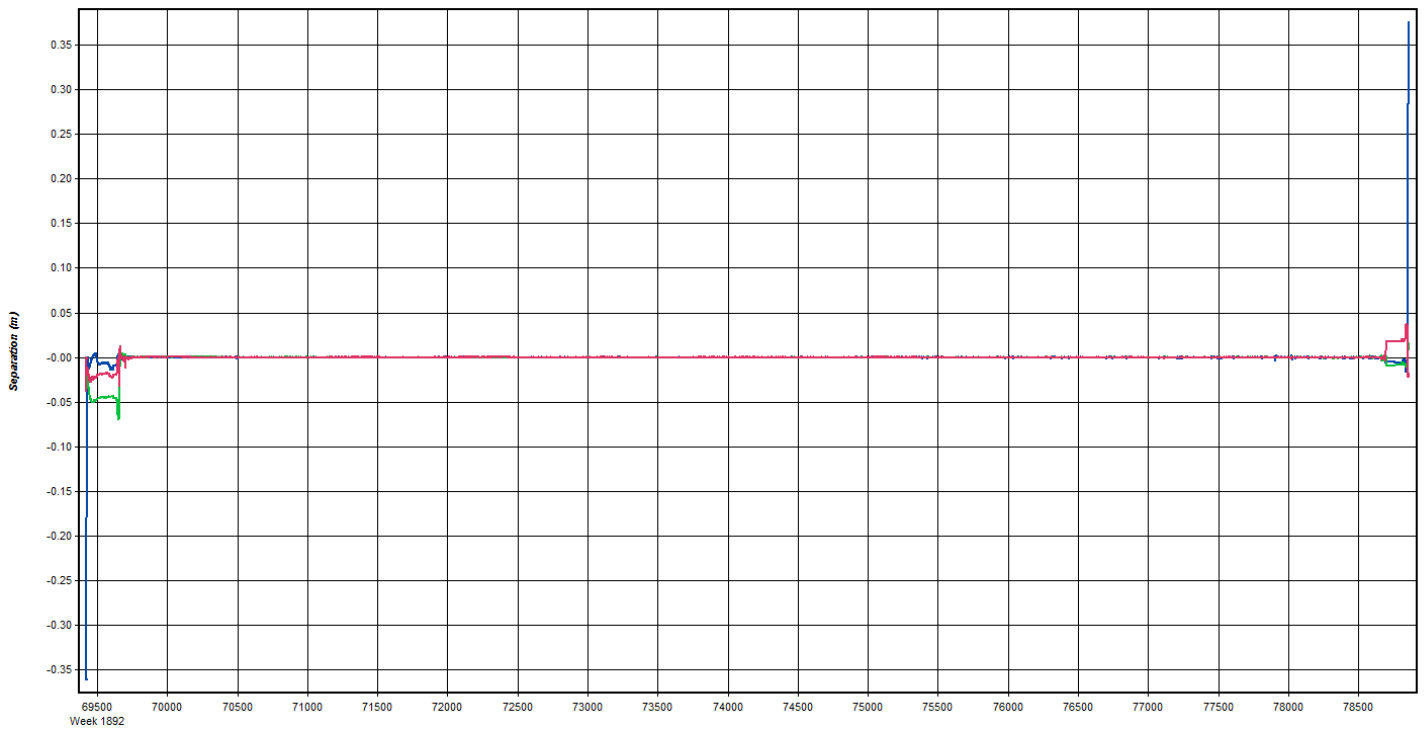
FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.

Total Proj Lines: 142 Lines Flown: 23 Lines Remain: 73
 Online Time: 4.7 Mob Time: 0.9 Notes:

Generated by CamScanner

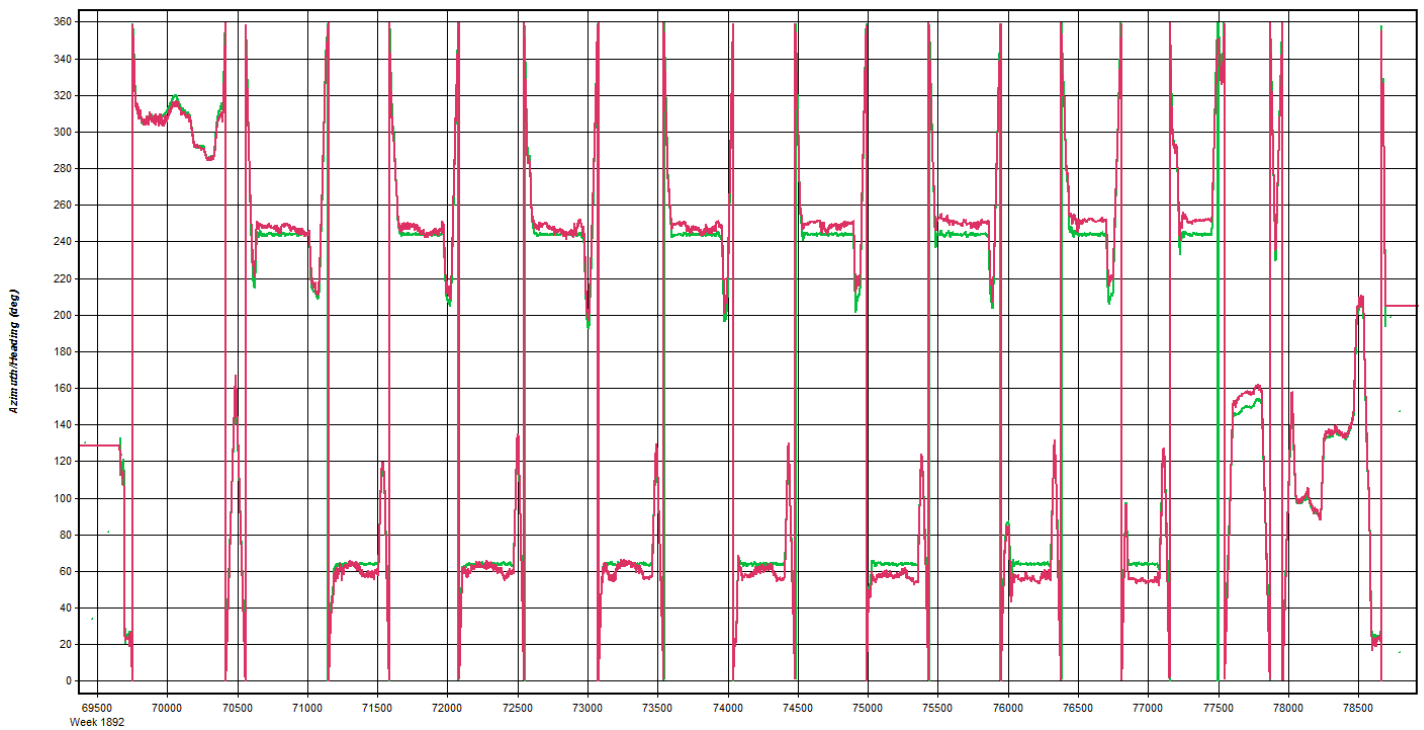
Apr 10, 2016-B (N812TB, SN7161)





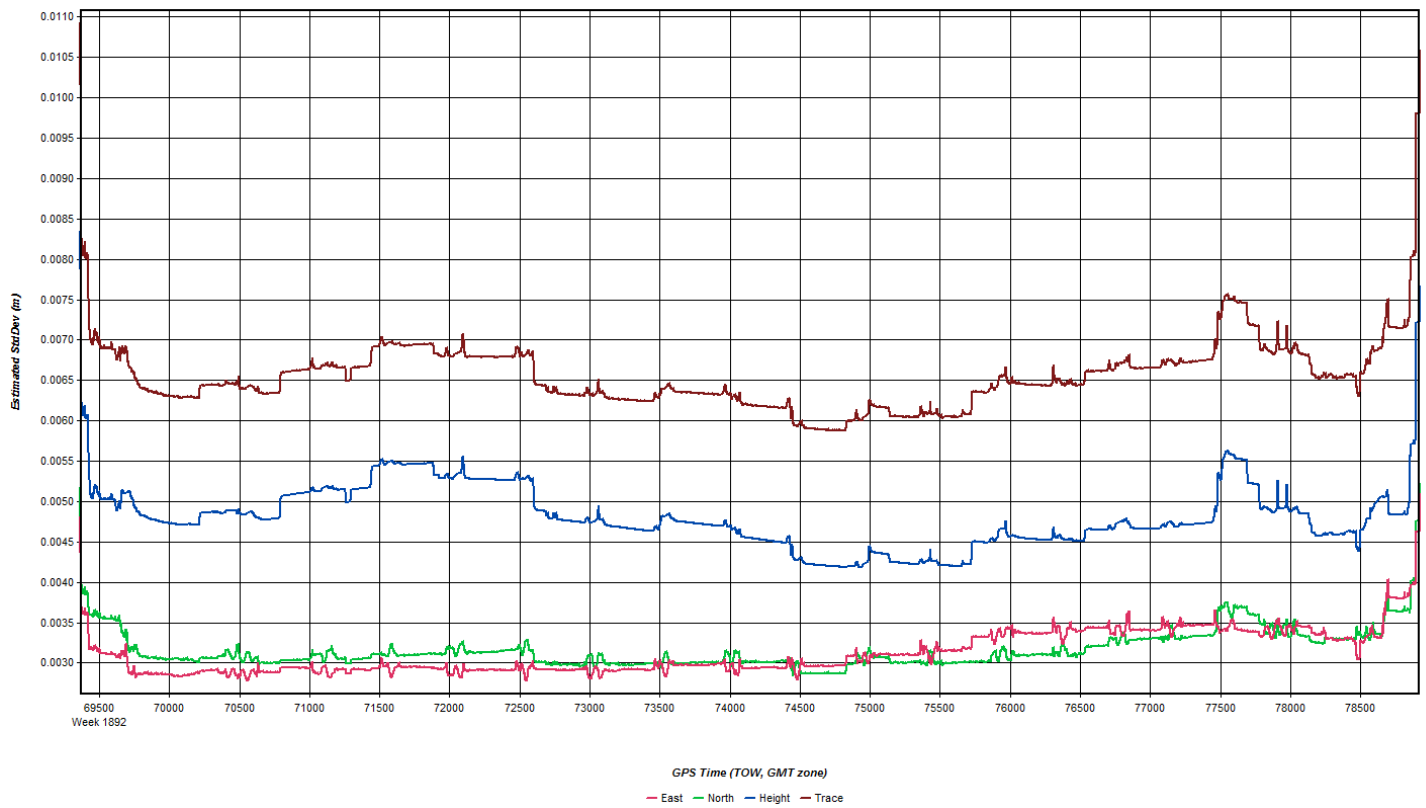
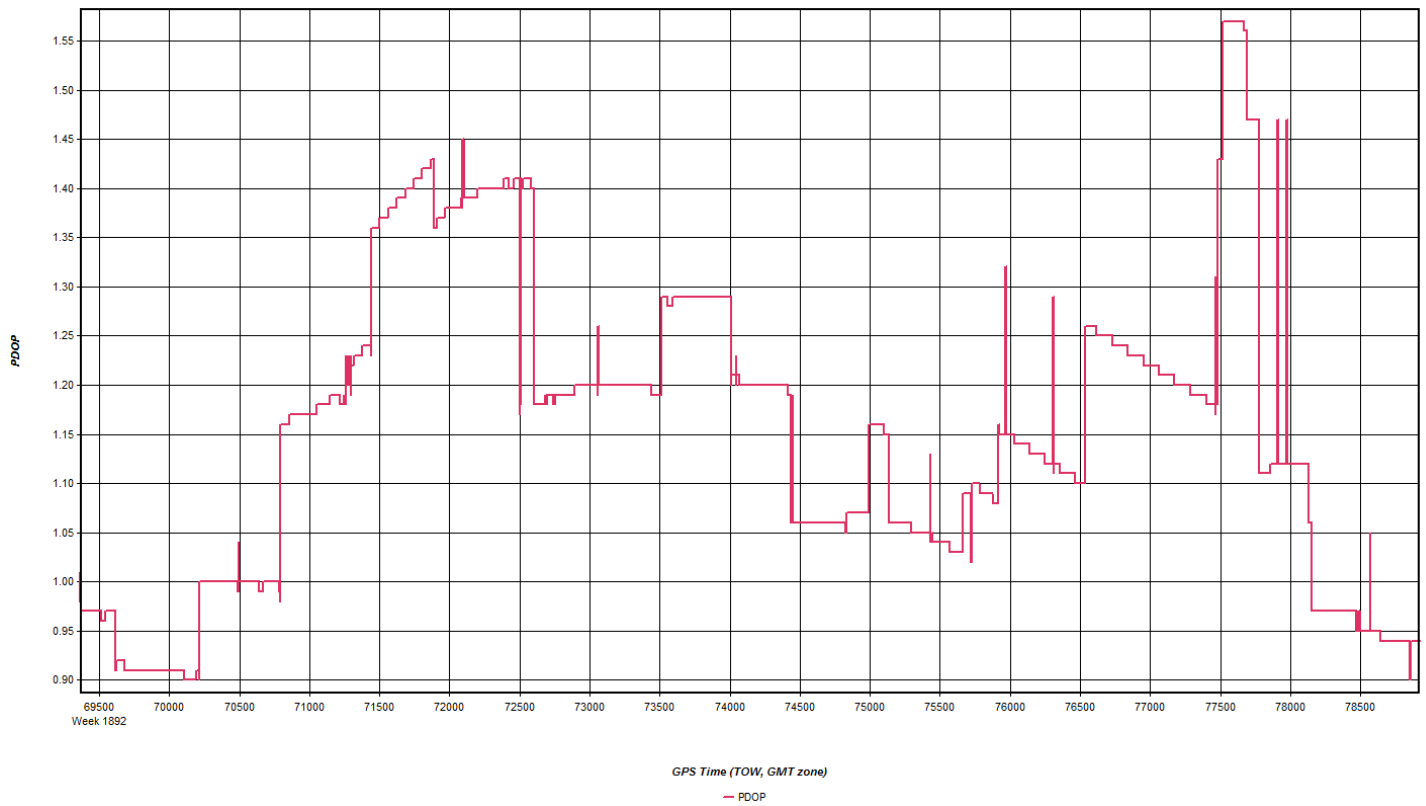
GPS Time (TOW, GMT zone)

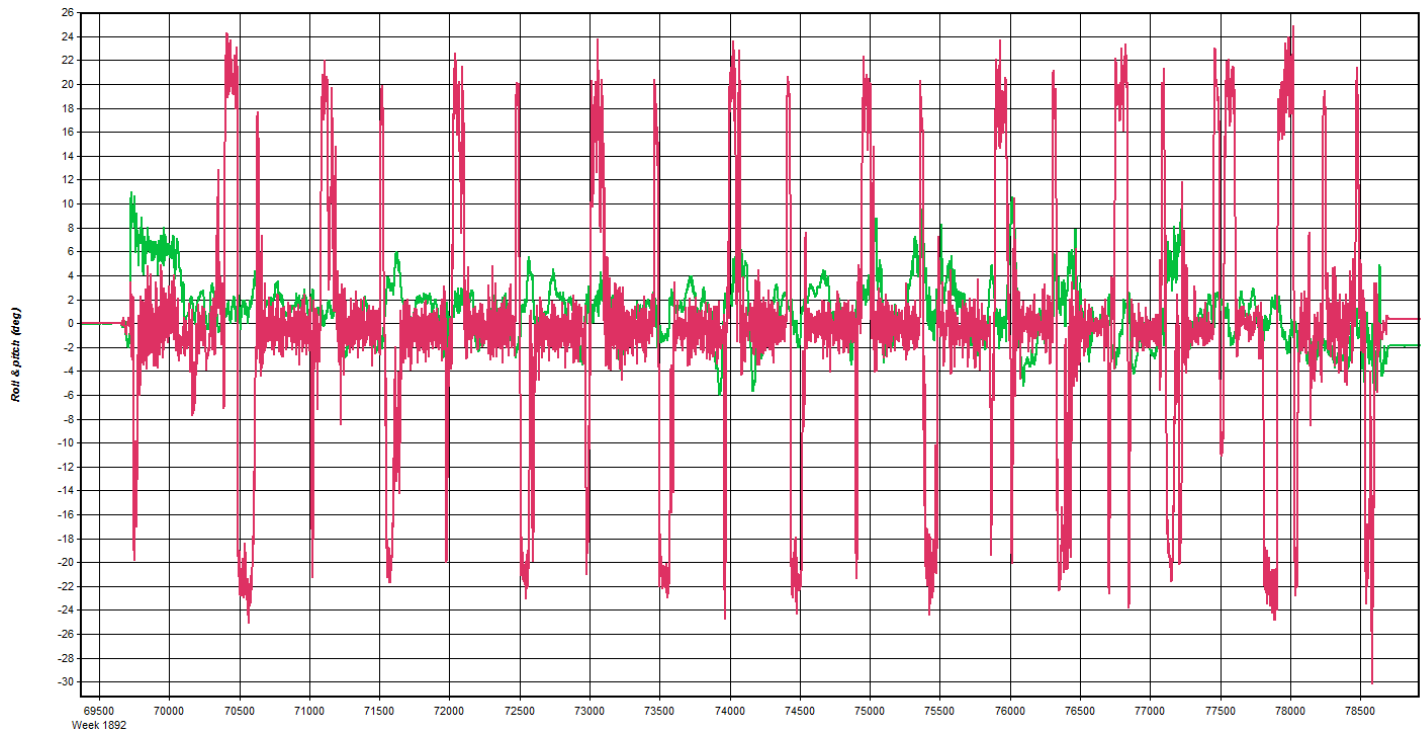
— East — North — Up



GPS Time (TOW, GMT zone)

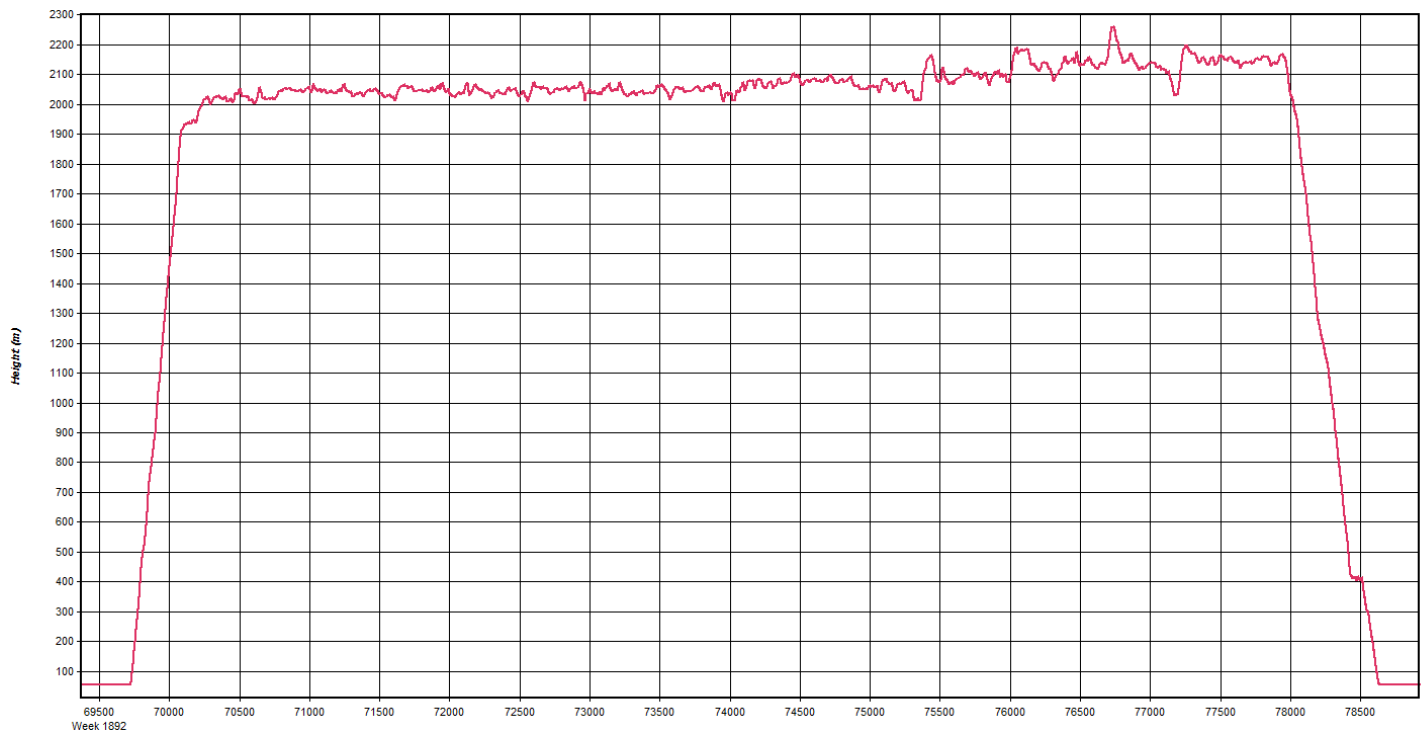
— Heading/Azimuth — GPS-COG





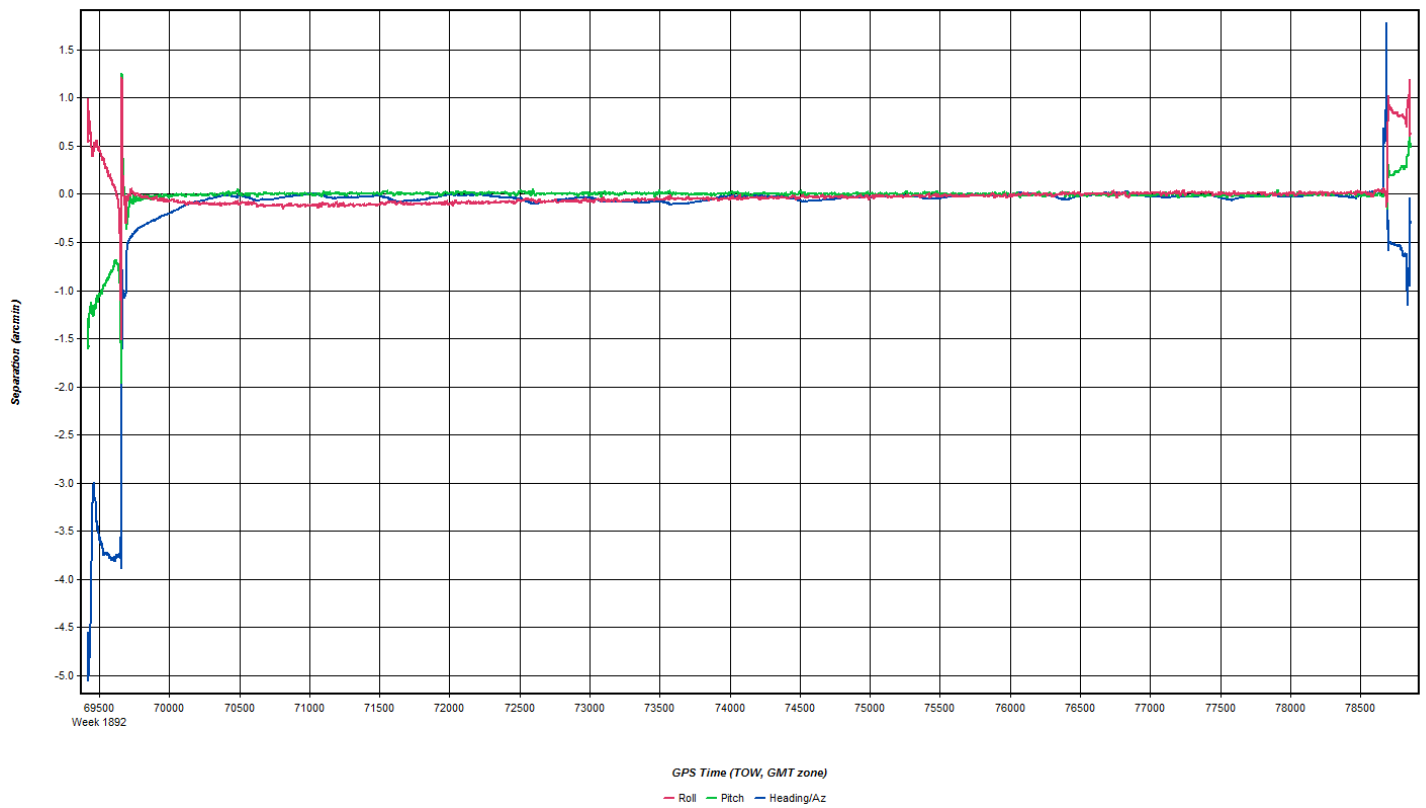
GPS Time (TOW, GMT zone)

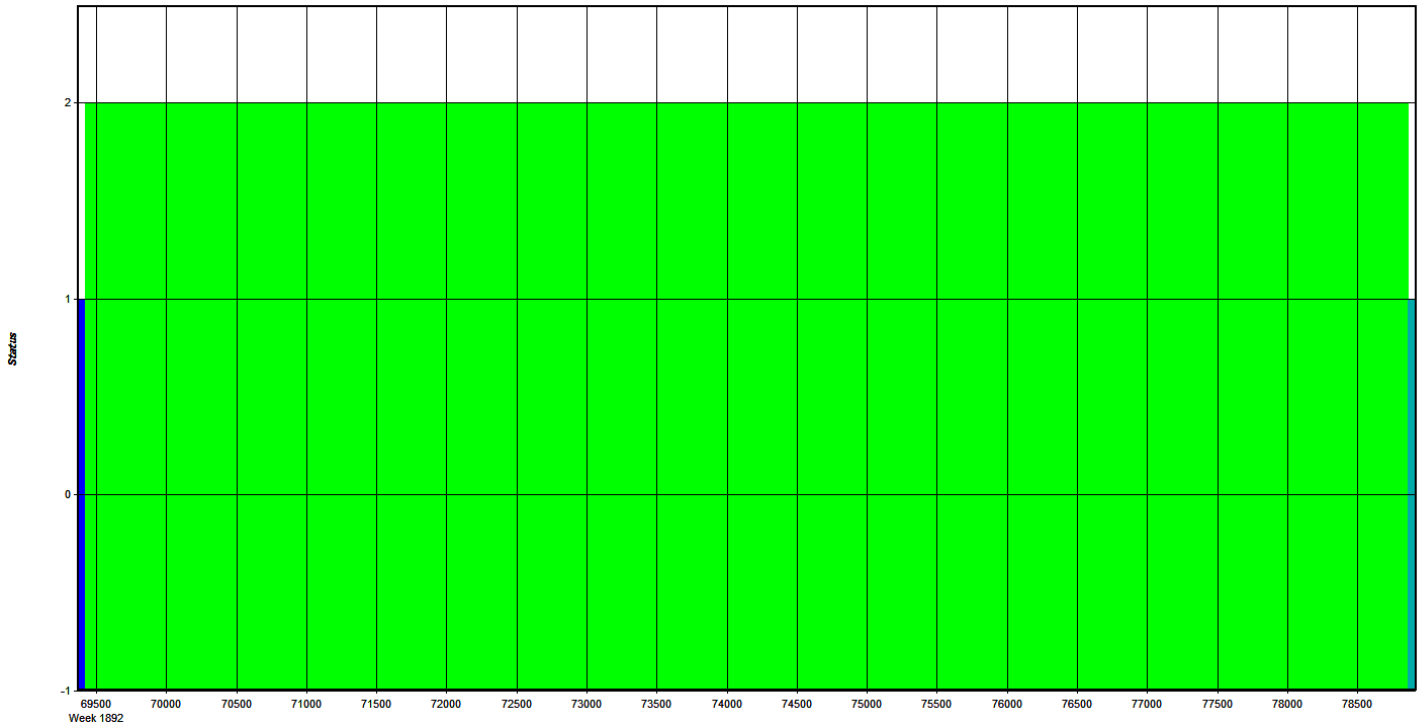
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: LEW1 Name: LEW1 Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\ASH7\160410_SN7161_

Coordinates
 Latitude: North 44 02 56.74648 Compute from PPP
 Longitude: West 70 17 12.20047 Enter Grid Values
 Ellipsoidal height: 51.351 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRM55971.00 View STA File
 Antenna profile: TRM55971.00 Info
 Measured height: 1.219 m
 ARP to L1 offset: 0.067 m
 Applied height: 1.286 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
 2: MESP Name: MESP Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\ASH7\160410_SN7161_...

Coordinates
 Latitude: North 44 13 06.19617 Compute from PPP
 Longitude: West 70 30 47.10740 Enter Grid Values
 Ellipsoidal height: 105.463 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRM55971.00, NONE View STA File
 Antenna profile: TRM55971.00 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

Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email: log_daily_to_flight_log_distribution_list@quantumspatial.com)

Date: 4-10-16 Page 1 of 1

Project: USGS Maine MESP Flight Mgmt File: 20160410_191212

Altitude: 192TB Begin Hobbs: 3909.3 Total: 2.4 Pilot: Jackson Co-Pilot: Tech: Dyer

Dep Apt: KLEW Dep Time (Local): 17:50 Arr Time (Local): 17:50 Alt: 21:50 Tot Time Aloft: 2.4

CORS: Y/N Sta 1: MESP Sta 2: _____

GPS Unit: Y/N If Y, times: Sta1 19:28 If Y, times: Sta2 21:37

Gd Temp beg: _____ °C End: 6 °C OAT beg: -12 °C End: -9 °C

Altitude: _____ ft End: 6100 ft

Altitude: _____ ft End: 150 ft

Power: _____ Power: 100

Type	Start	End	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt
LIDAR	Type	Start	End	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt
1530	244	19:39	19:43	136	1277	6716								
1529	64	19:47	19:51	152	13716	6716								
1528	244	19:54	19:59	146	15715	6716								
1527	64	20:02	20:07	147	13715	6716								
1526	244	20:10	20:15	144	13715	6716								
1525	64	20:19	20:23	154	12717	6724								
1524	244	20:27	20:32	139	11718	6733								
1523	64	20:34	20:39	138	11718	6733								
1522	244	20:42	20:47	127	11717	6783								
1521	64	20:50	20:55	140	11716	6818								
1520	244	20:58	21:03	125	11716	6856								
1519	64	21:08	21:11	155	11716	6961								
1518	244	21:14	21:17	143	11715	6972								
1517	64	21:21	21:24	154	13714	6993								
1516	244	21:28	21:30	151	11716	7001								
1515	64	21:33	21:36	154	11717	6970								

Flyovers: Y N If Y, times: Sta1 19:28 If Y, times: Sta2 21:37

Altitude: _____ ft Max: _____ ft Avg Ft Spacing: _____ FFSM: _____

Power: _____ Power: 100

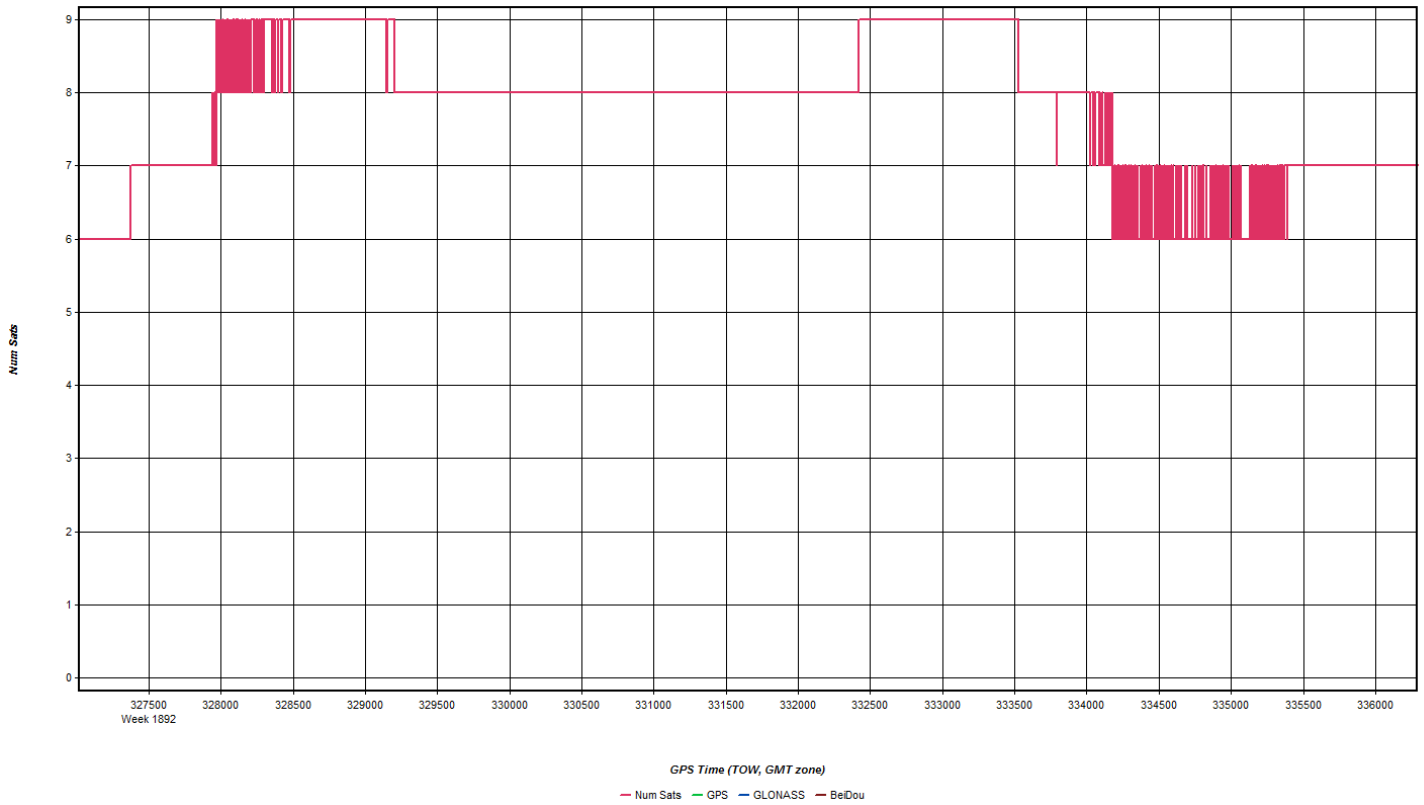
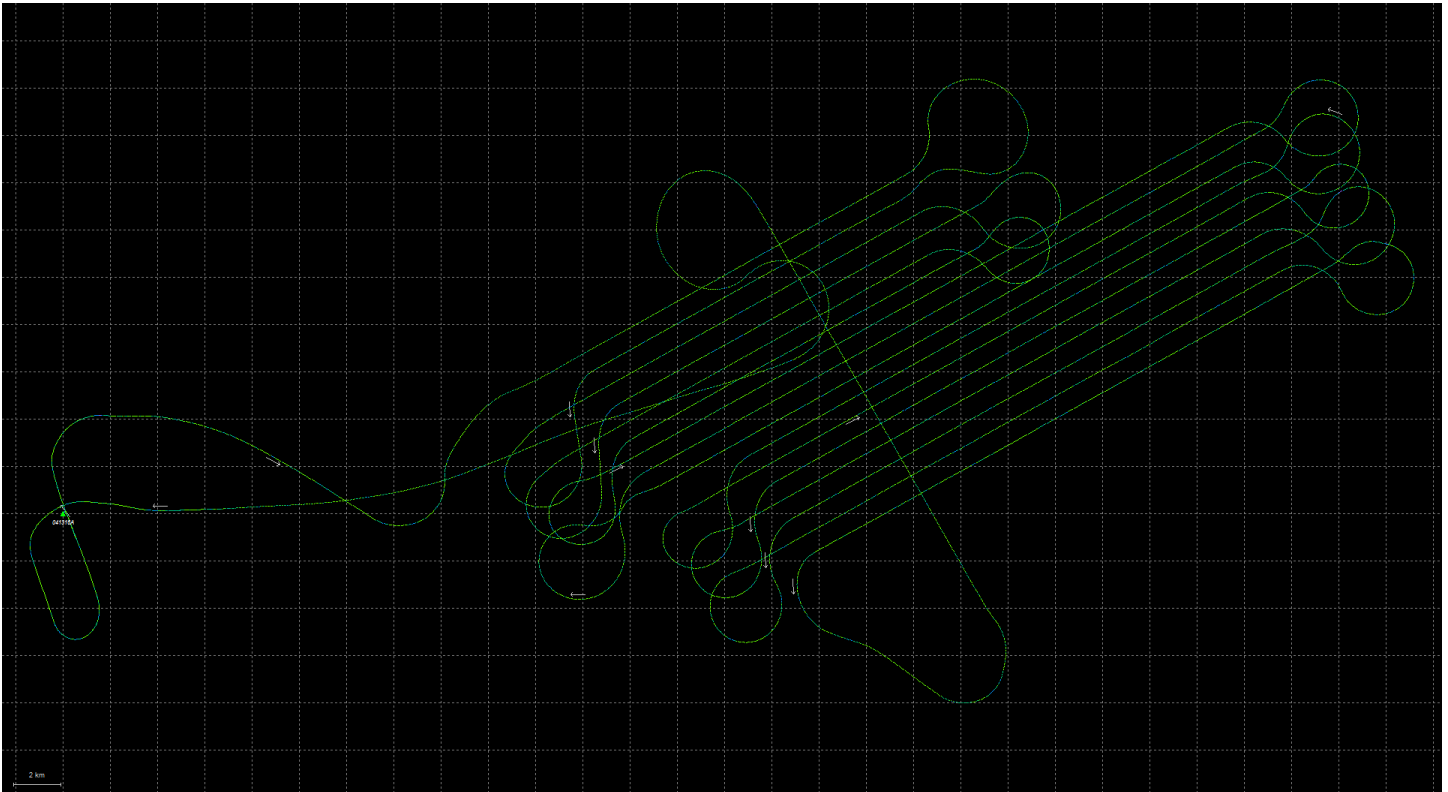
Notes: ~200 ft high at line start

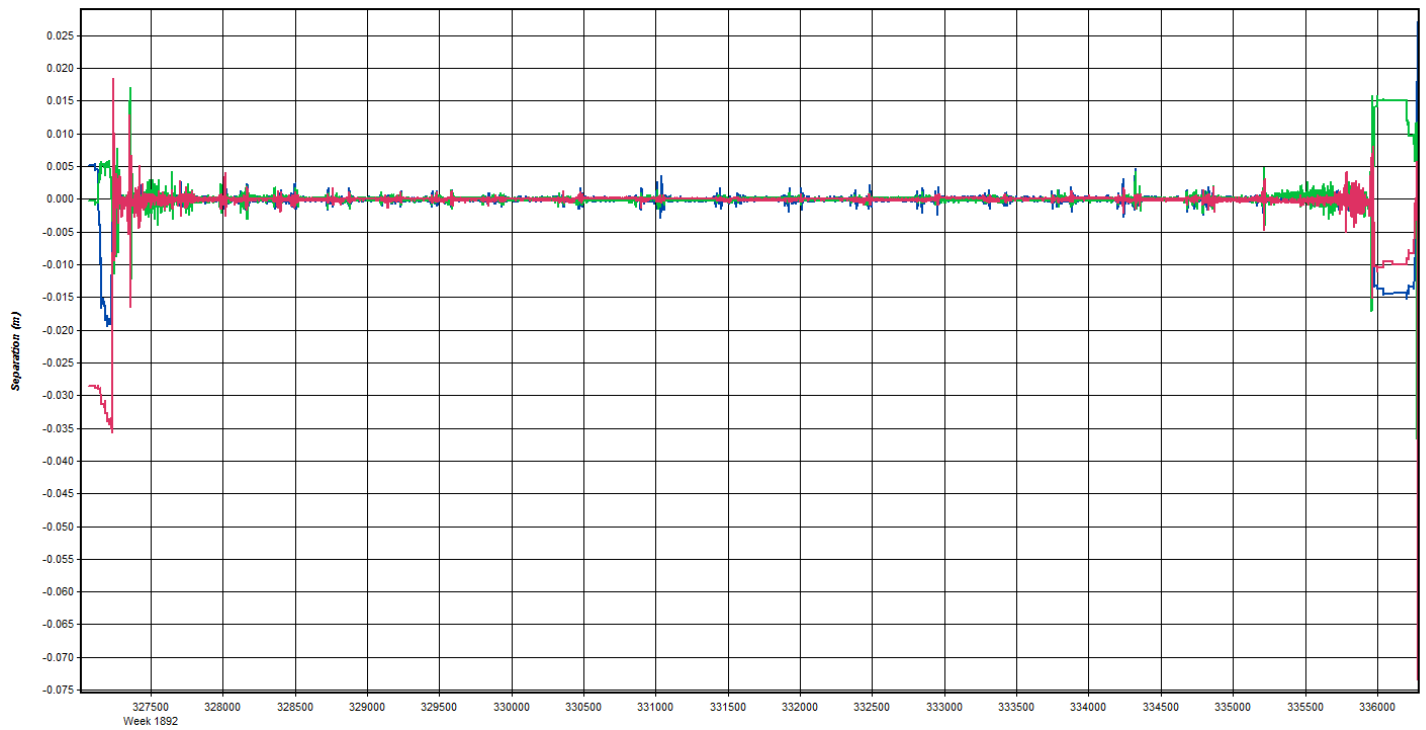
Notes: cross tie for lines 1516-1530

Line #	Hgt	Start	End	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt
LIDAR	Type	Start	End	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt	Alt
1530	244	19:39	19:43	136	1277	6716								
1529	64	19:47	19:51	152	13716	6716								
1528	244	19:54	19:59	146	15715	6716								
1527	64	20:02	20:07	147	13715	6716								
1526	244	20:10	20:15	144	13715	6716								
1525	64	20:19	20:23	154	12717	6724								
1524	244	20:27	20:32	139	11718	6733								
1523	64	20:34	20:39	138	11718	6733								
1522	244	20:42	20:47	127	11717	6783								
1521	64	20:50	20:55	140	11716	6818								
1520	244	20:58	21:03	125	11716	6856								
1519	64	21:08	21:11	155	11716	6961								
1518	244	21:14	21:17	143	11715	6972								
1517	64	21:21	21:24	154	13714	6993								
1516	244	21:28	21:30	151	11716	7001								
1515	64	21:33	21:36	154	11717	6970								

Total Proj Lines: 142 Lines Flown: 15 Lines Remain: 58 Online Time: 2.0 Mob Time: 0.4 Notes: OCAR 10 med. turbulence

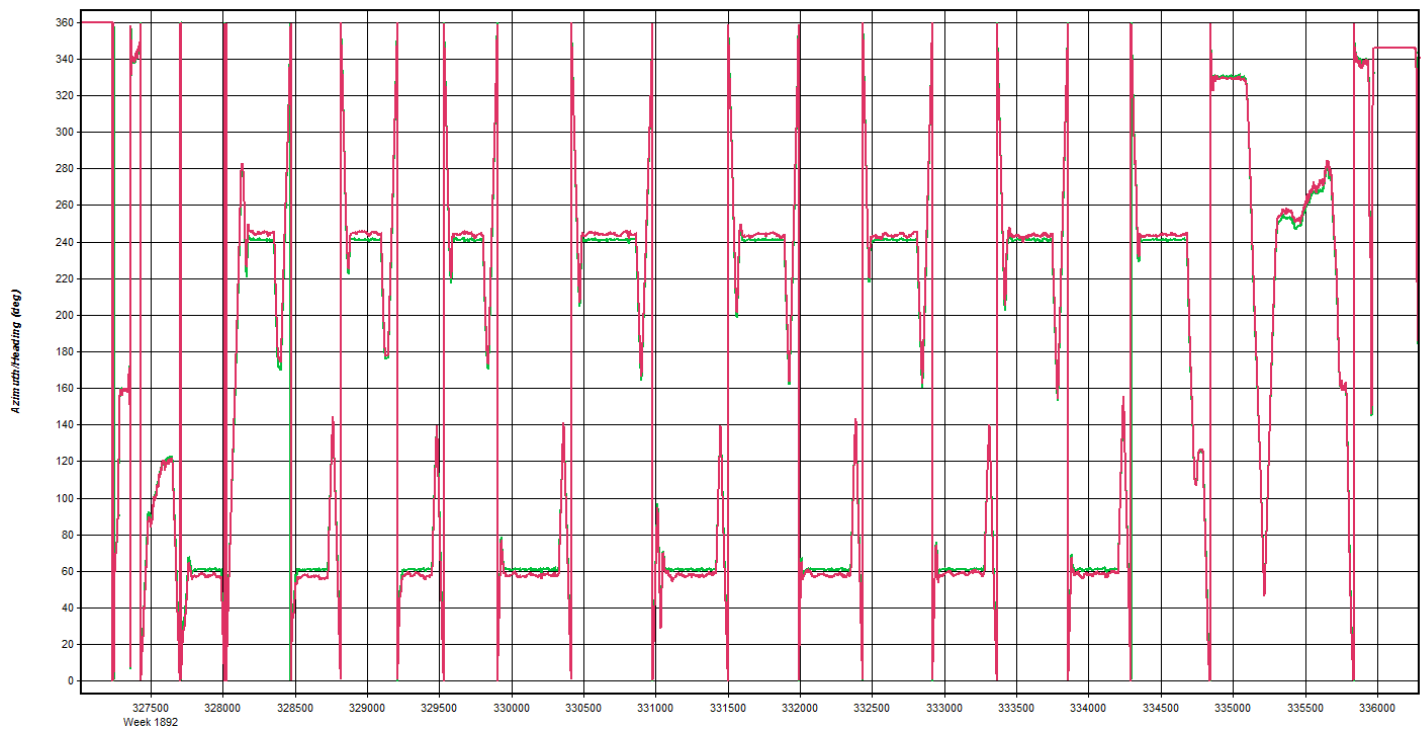
Apr 13, 2016-A (N73TM, SN7178)





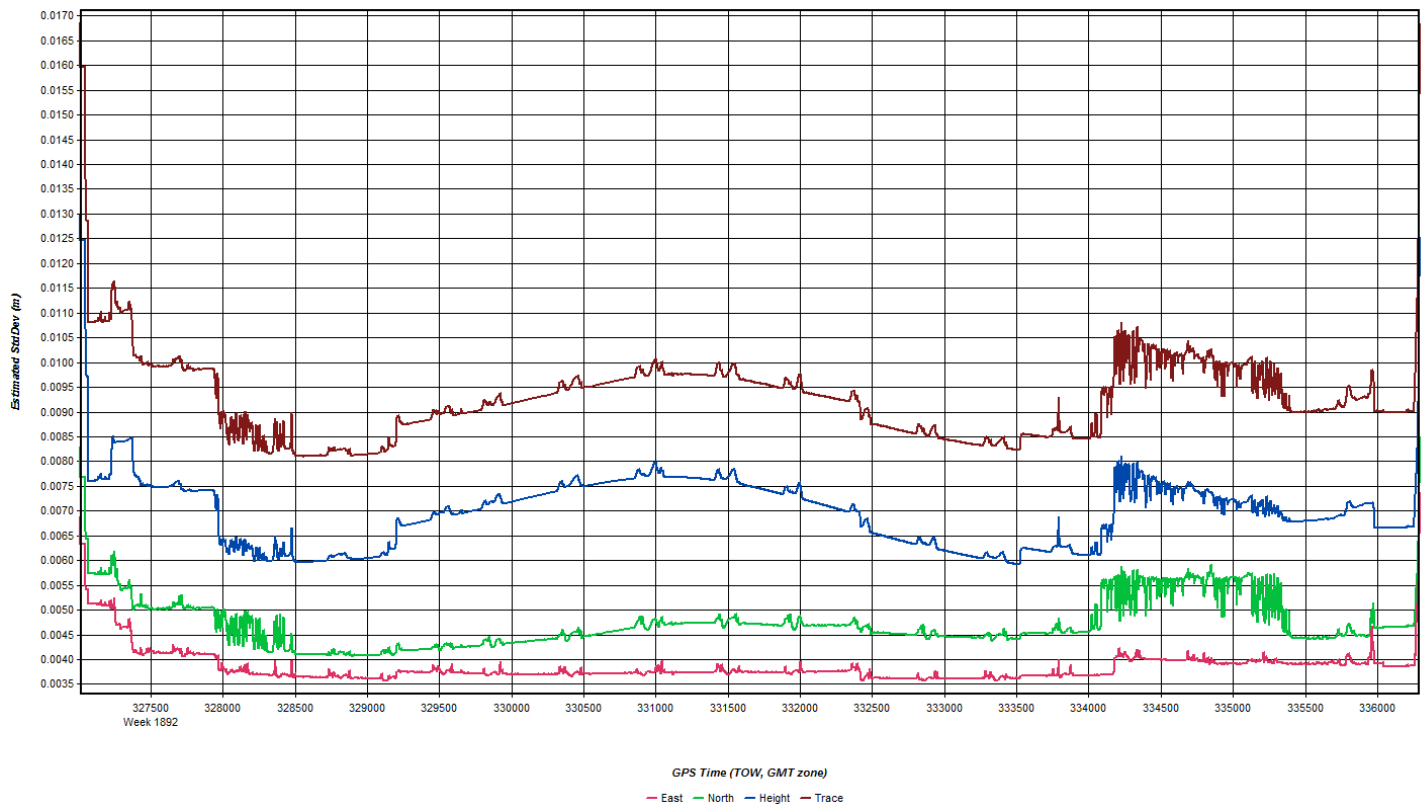
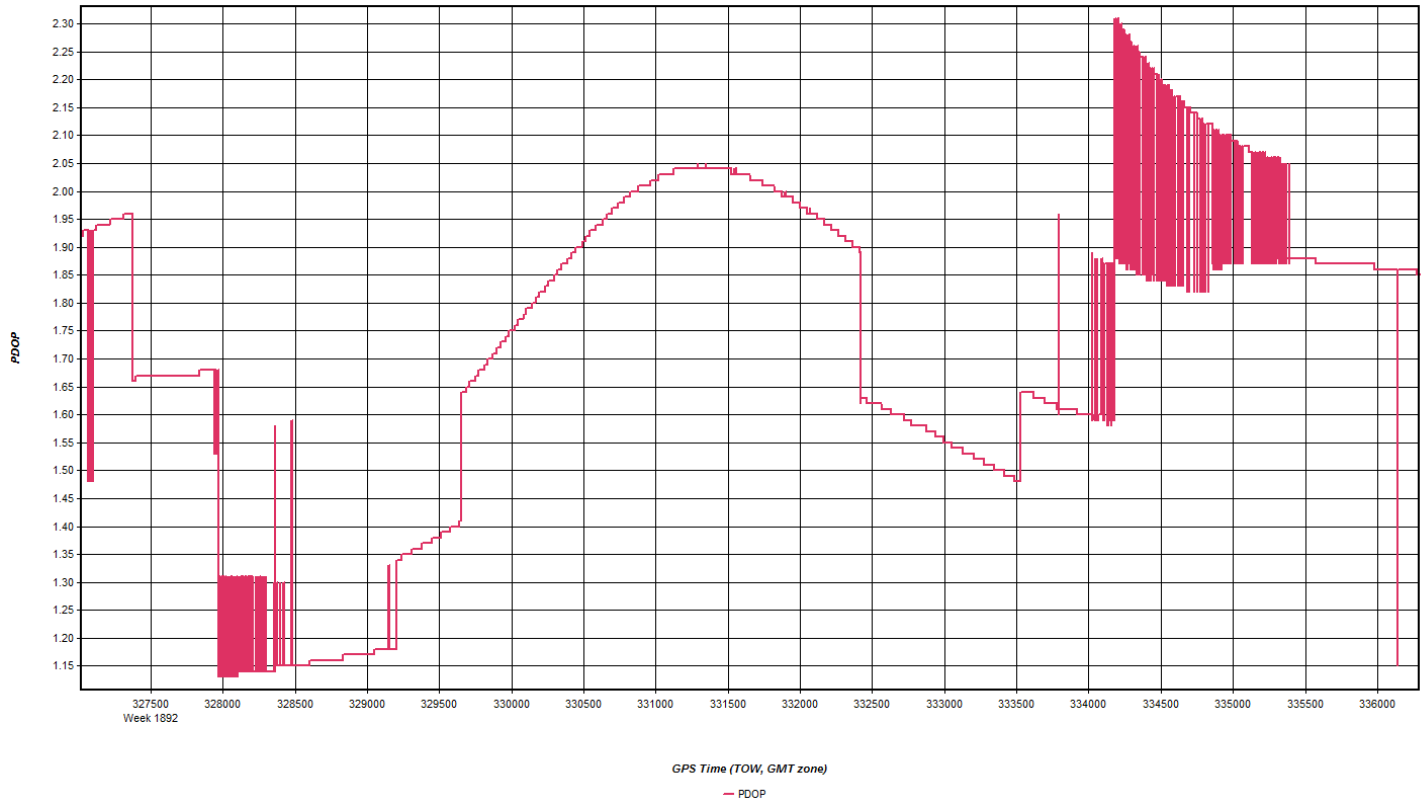
GPS Time (TOW, GMT zone)

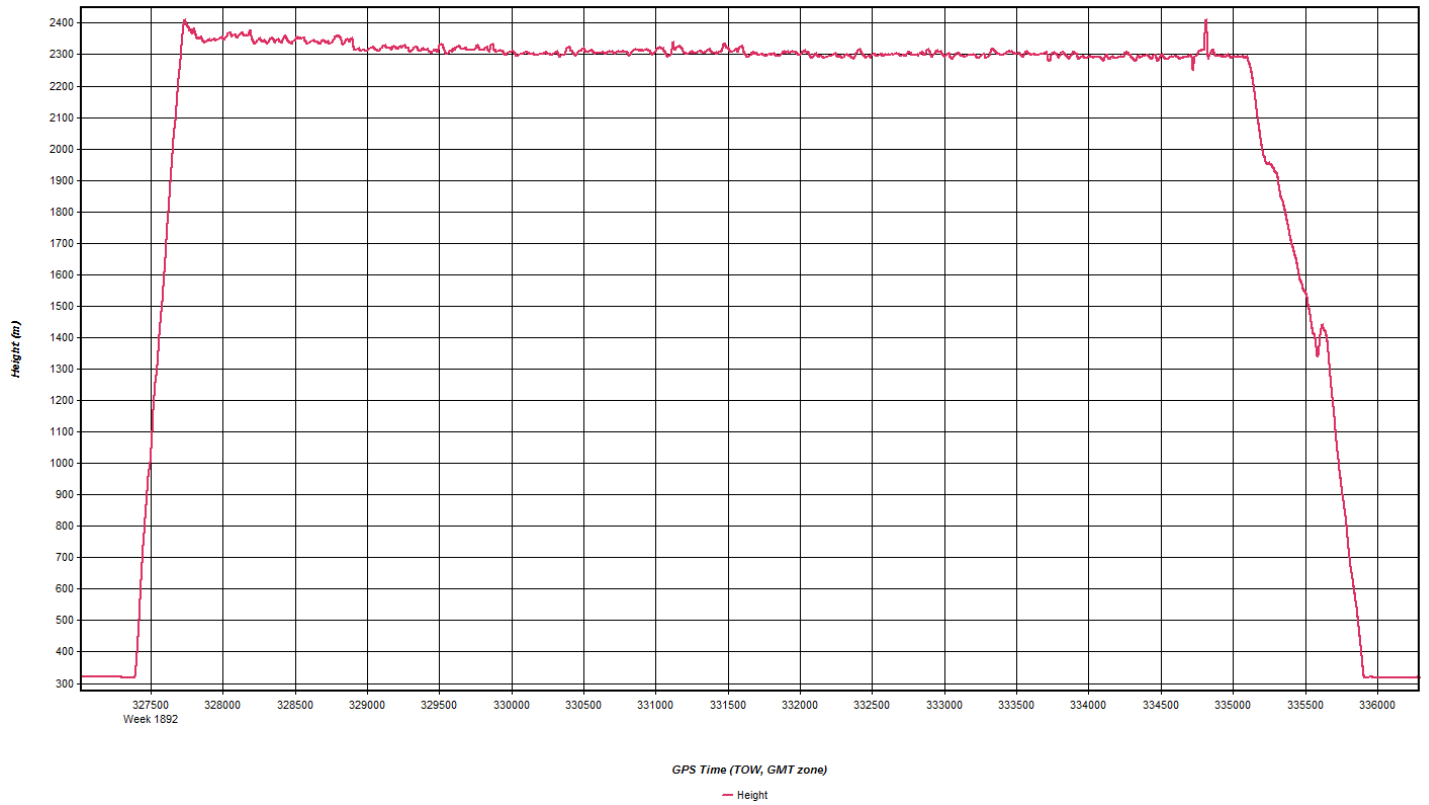
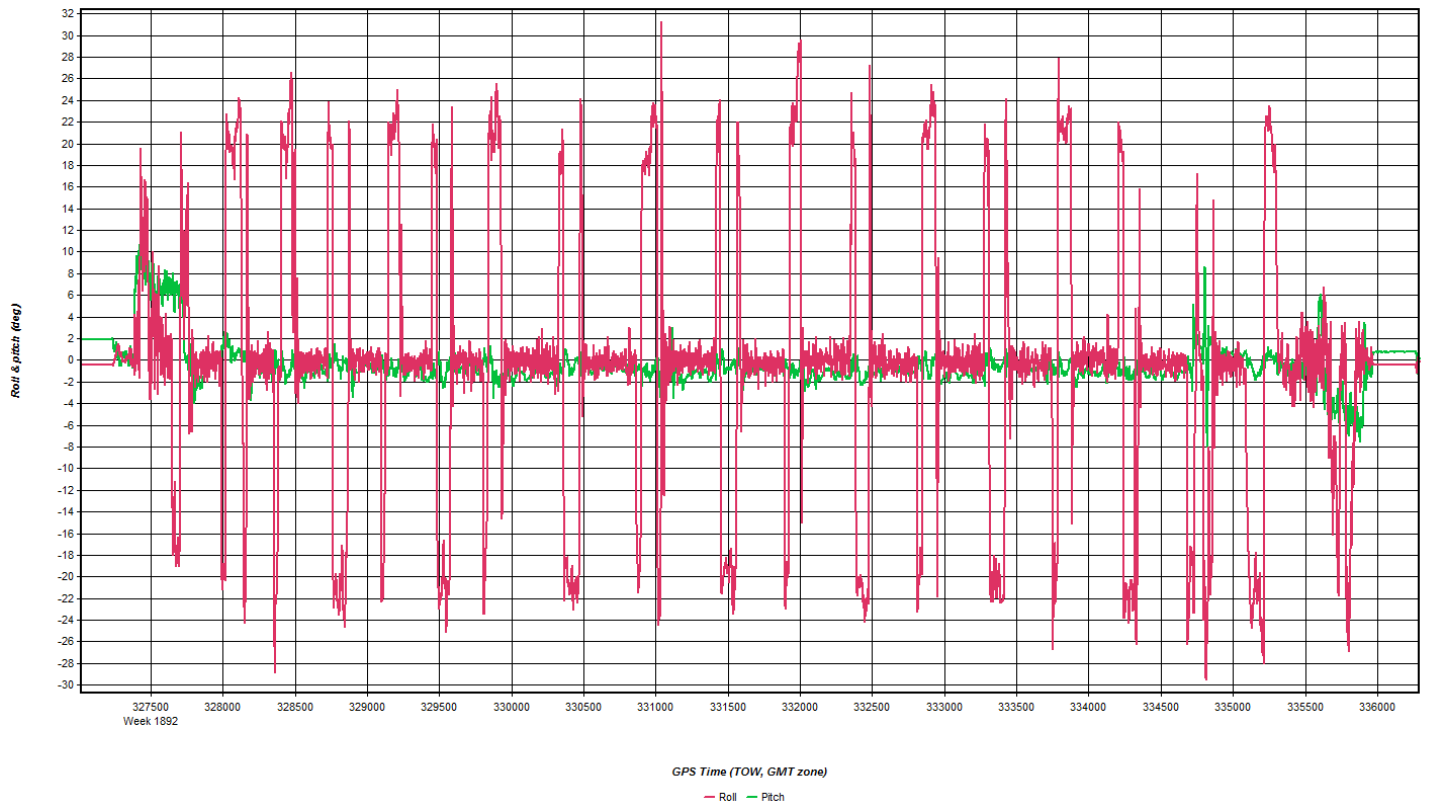
— East — North — Up

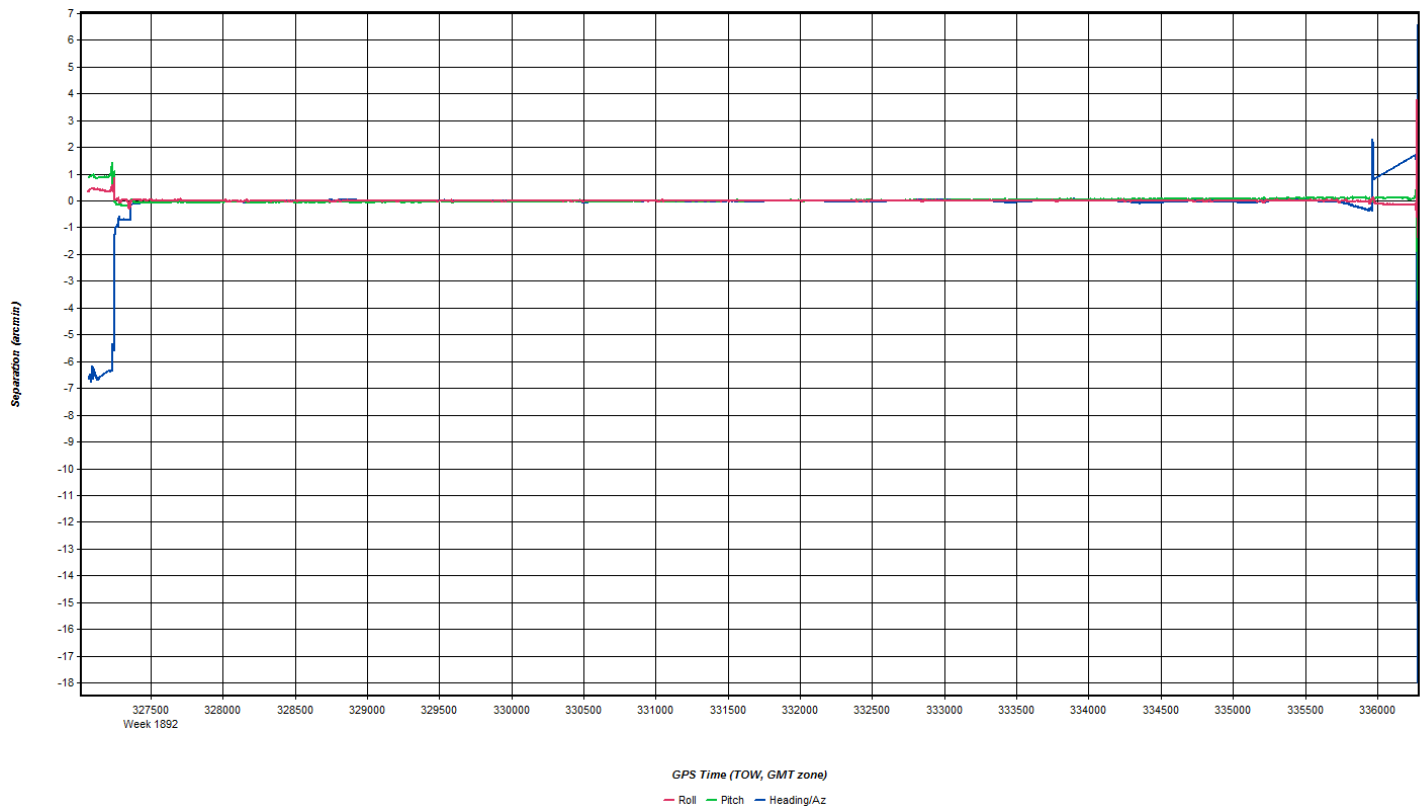
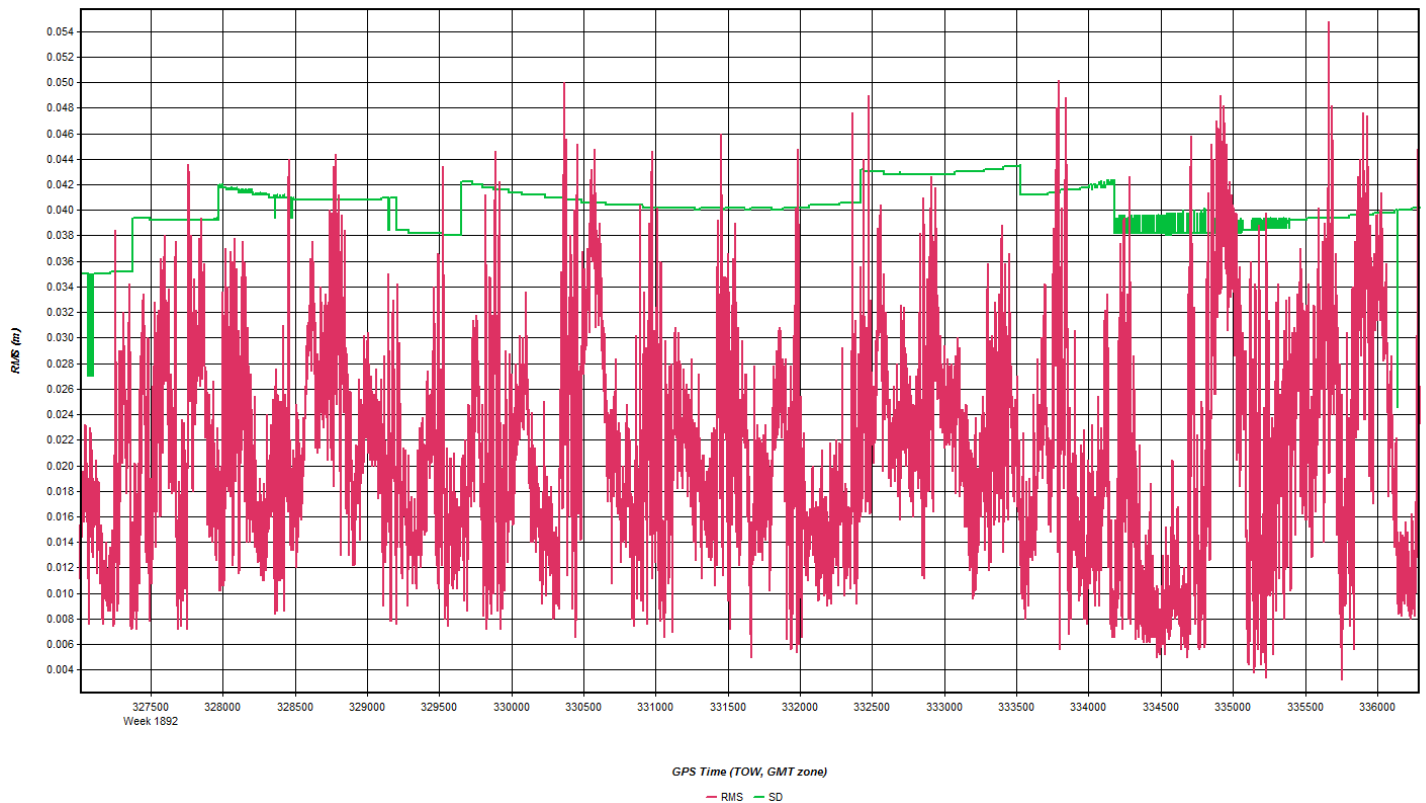


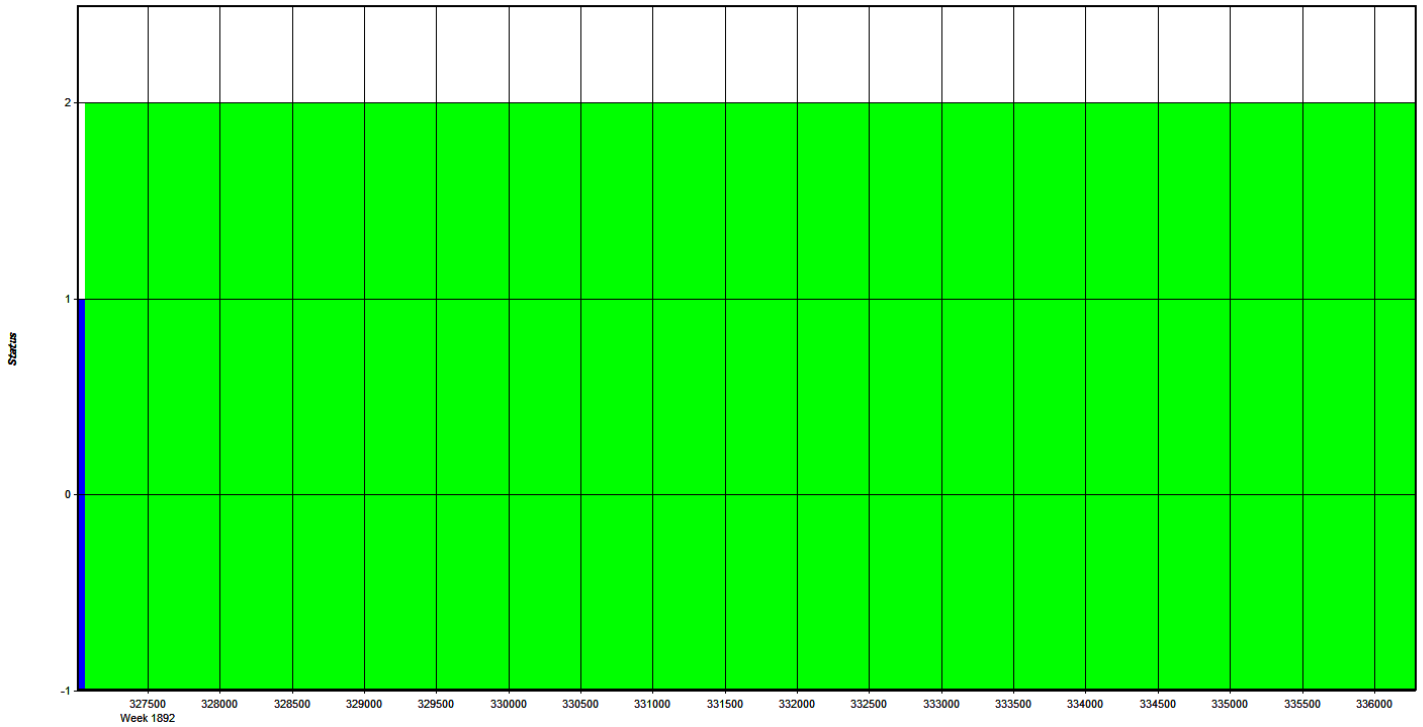
GPS Time (TOW, GMT zone)

— Heading/Azimuth — GPS-COG









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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: 041316A Name: 041316A Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\4628\20160413a-7178\G

Coordinates
 Latitude: North 44 34 37.37822 Compute from PPP
 Longitude: West 71 10 43.67149 Enter Grid Values
 Ellipsoidal height: 318.188 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: N/A View STA File
 Antenna profile: NOV702GG Info
 Measured height: 2.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 2.067 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Flight Log

Project: USGS WESTERN MAINE **Project #:** 27146 **Date:** APRIL 12th, 2016
(email log daily to flight_log_distribution_list@quantumspatial.com) 20160413-184740 **Page 1 of 1**

Flight Mgmt File: MS65-Maine-Berlin-S47178-150.kts **UIC:** (A) B C D E

Aircraft: N73TM **Begin Hobbs:** 6166.7 **Total:** 2.3 **Pilot:** J. BILLINGTON **Co-Pilot:** — **Tech:** P. HRABAK

Dep Apt: KBML **Dep Time (Local):** 17:18 **Arr Apt:** KBML **Arr Time (Local):** 17:18 **ZF:** 21:18 **Tot Time Aloft:** 2:22

CORS: Y (N) **Sta 1:** — **Sta 2:** — **Flyovers:** Y (N) **IF Y, times: Sta 1:** — **Sta 2:** —

GPS Unit: (Y) N **Sta 1:** "BERLIN" (010:PE034L) **Sta 2:** — **Flyovers:** Y (N) **IF Y, times: Sta 1:** STAT1 **Sta 2:** —

Gd Temp	beg:	+08 °C	End:	+08 °C	OAT beg:	-08 °C	End:	-07 °C	Altimeter beg:	30.30"	end:	30.30"
Type	ALS 70								Avg Terr	150	Avg Pt	?
FOV	40°								Max Gdspd	150	Max Spacing	?
									Power	100%	PPSM	2.2
									Pulse Rate	260.4 kHz		
									Alt AGL	4965'	Alt AMSL	~7720'
									Pulses in Air	MPIA (Y) N		
									Scan Freq	53.4 Hz		
									Alt AGL	7178'	Alt AMSL	~7720'
									End UTC	19:06	End UTC	19:06
									Start UTC	19:03	Start UTC	19:03
									End UTC	19:09	End UTC	19:09
									Start UTC	19:15	Start UTC	19:15
									End UTC	19:21	End UTC	19:21
									Start UTC	19:27	Start UTC	19:27
									End UTC	19:33	End UTC	19:33
									Start UTC	19:39	Start UTC	19:39
									End UTC	19:45	End UTC	19:45
									Start UTC	19:54	Start UTC	19:54
									End UTC	20:03	End UTC	20:03
									Start UTC	20:06	Start UTC	20:06
									End UTC	20:14	End UTC	20:14
									Start UTC	20:21	Start UTC	20:21
									End UTC	20:29	End UTC	20:29
									Start UTC	20:37	Start UTC	20:37
									End UTC	20:45	End UTC	20:45
									Start UTC	20:52	Start UTC	20:52
									End UTC	21:00	End UTC	21:00

FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc. (5 lines @ 19:03)

2058 NE 19:03 165 kts 1.2/17 7720' 4° good visibility, occ -turb, few below nearby, ske above, almost no snow below

2059 SW 19:09 165 kts 1.2/17 7680' 5° good visibility, occ -turb, few below nearby, ske above, almost no snow below

2060 NE 19:15 160 kts 1.2/17 7600' 3° good visibility, occ -turb, few below nearby, ske above, almost no snow below

2061 SW 19:21 155 kts 1.1/17 7600' 4° good visibility, occ -turb, few below nearby, ske above, almost no snow below

2062 NE 19:27 170 kts 1.1/18 7580' 2° good visibility, occ -turb, few below nearby, ske above, almost no snow below

2063 SW 19:33 150 kts 1.2/17 7600' 3° good visibility, occ -turb, few below nearby, ske above, almost no snow below

2064 NE 19:39 155 kts 1.2/17 7580' 2° good visibility, occ -turb, few below nearby, ske above, almost no snow below

2065 SW 19:48 155 kts 1.6/16 7560' 3° good visibility, occ -turb, few below nearby, ske above, almost no snow below

2066 NE 19:57 155 kts 1.3/16 7540' 5° good visibility, occ -turb, few below nearby, ske above, almost no snow below

2067 SW 20:06 155 kts 1.2/17 7540' 2° good visibility, occ -turb, few below nearby, ske above, almost no snow below

2068 NE 20:14 160 kts 1.2/18 7540' 2° good visibility, occ -turb, few below nearby, ske above, almost no snow below

2069 SW 20:21 155 kts 1.0/19 7520' 3° good visibility, occ -turb, few below nearby, ske above, almost no snow below

2070 NE 20:29 155 kts 1.1/18 7500' 3° good visibility, occ -turb, few below nearby, ske above, almost no snow below

2071 SW 20:37 155 kts 1.1/18 7500' 2° good visibility, occ -turb, few below nearby, ske above, almost no snow below

2072 NE 20:45 160 kts 1.1/18 7520' 3° good visibility, occ -turb, few below nearby, ske above, almost no snow below

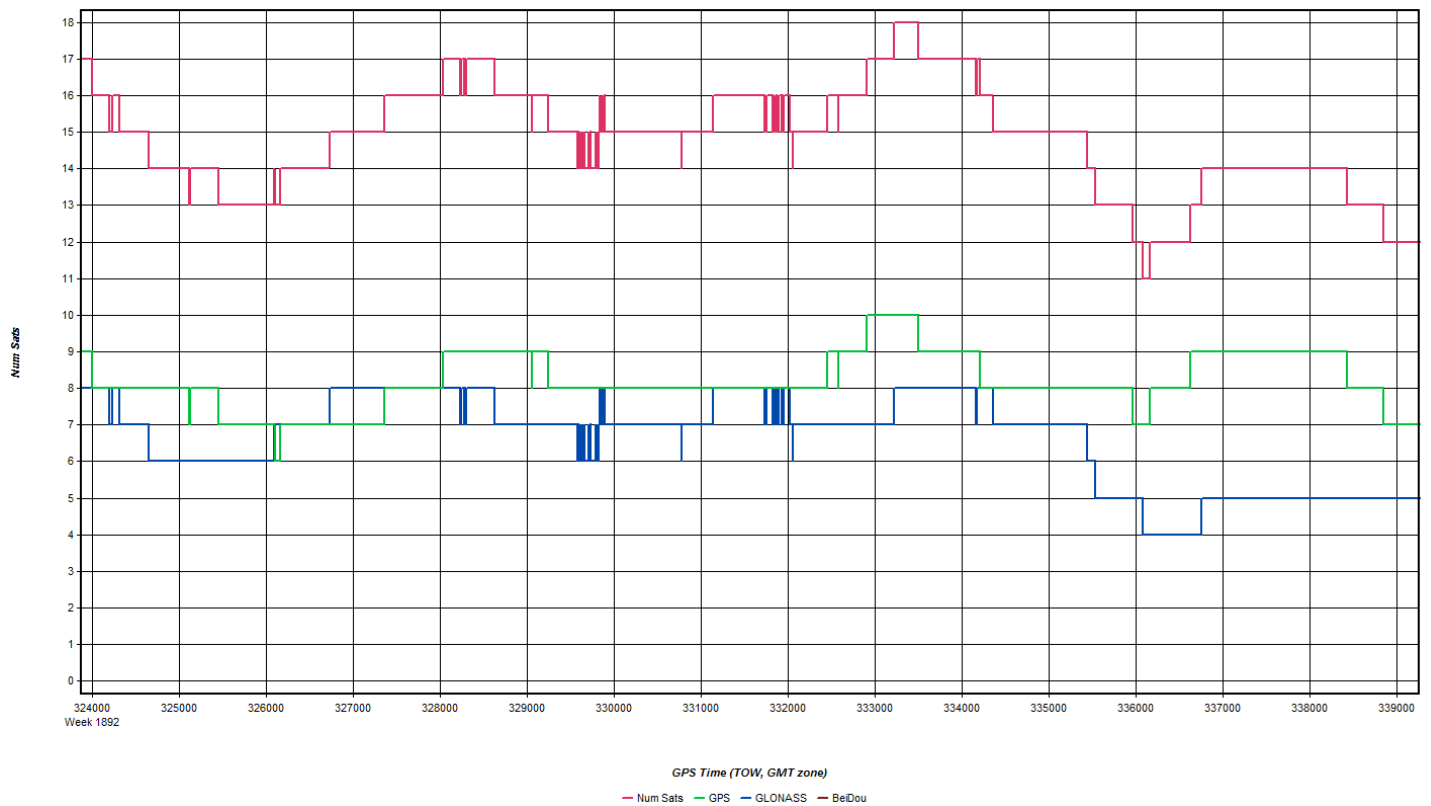
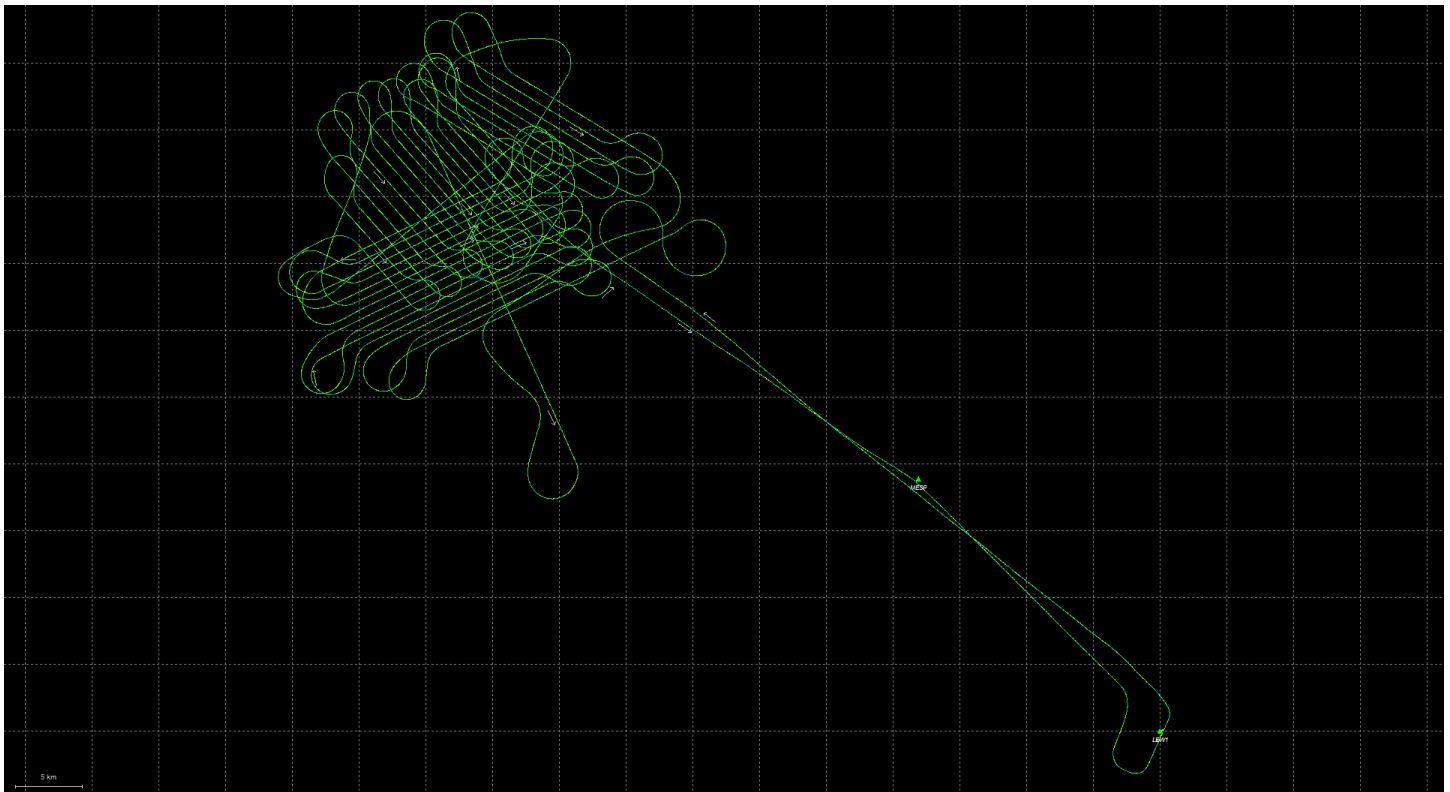
2073 SW 20:52 150 kts 1.0/18 7560' 3° good visibility, occ -turb, few below nearby, ske above, almost no snow below

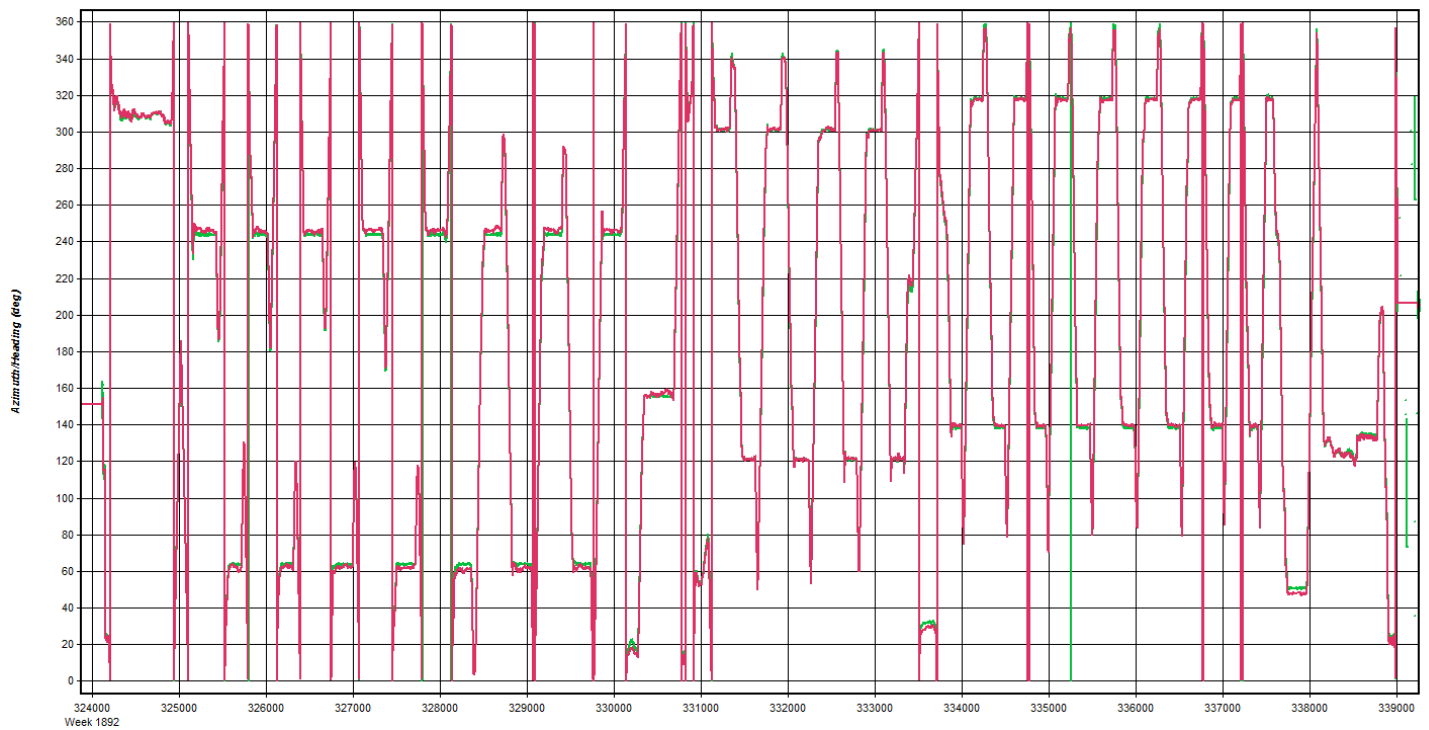
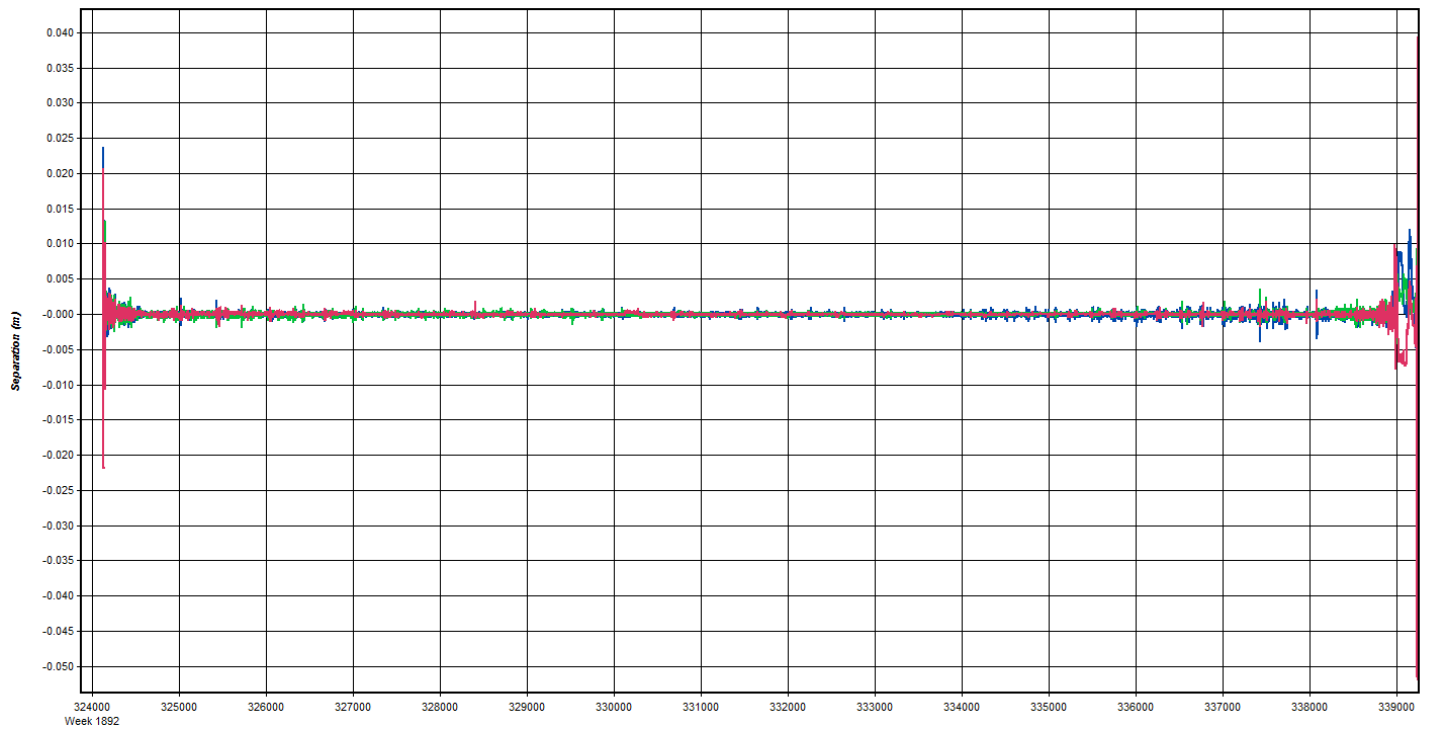
2091 NW 21:00 170 kts 1.0/18 7540' 1° good visibility, occ -turb, few below nearby, ske above, almost no snow below

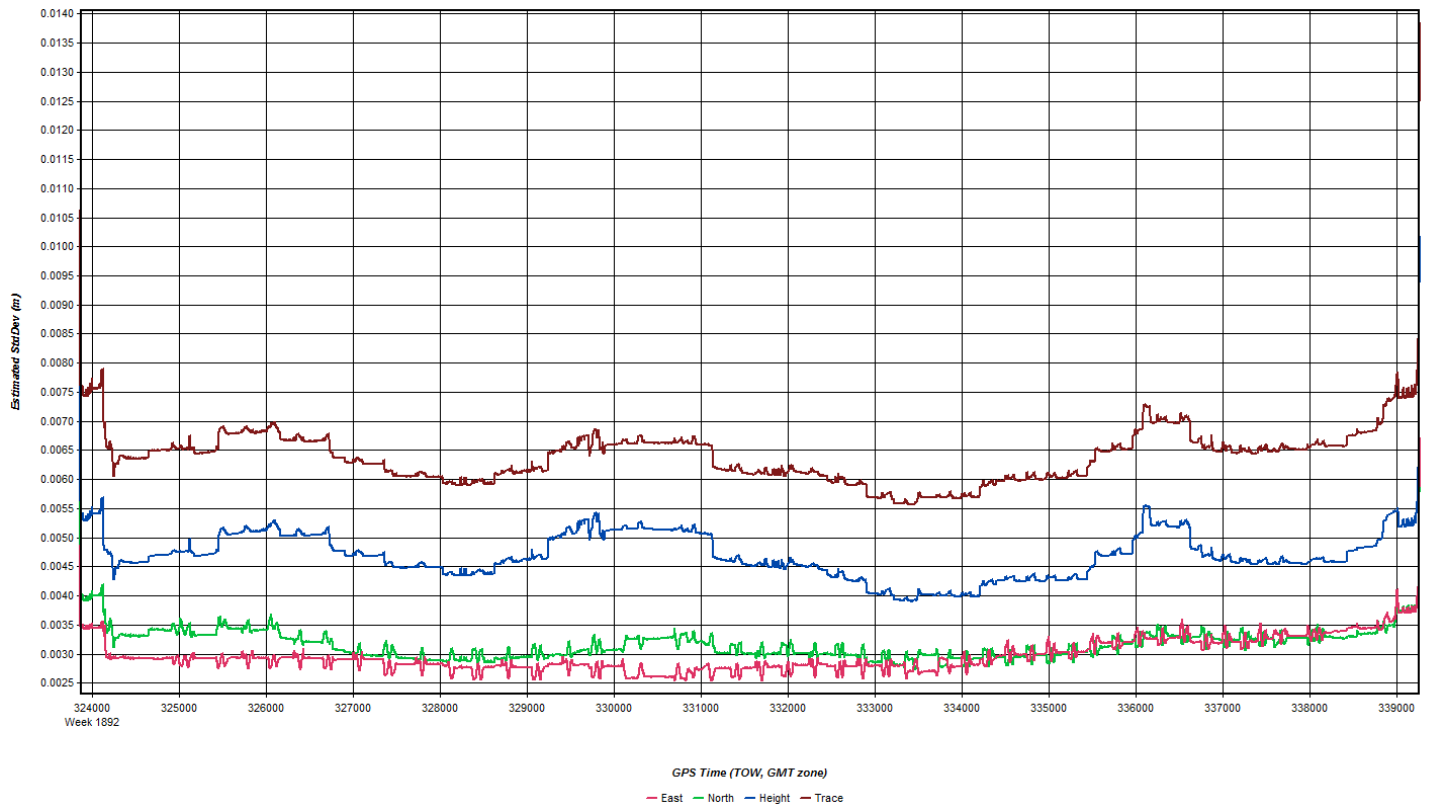
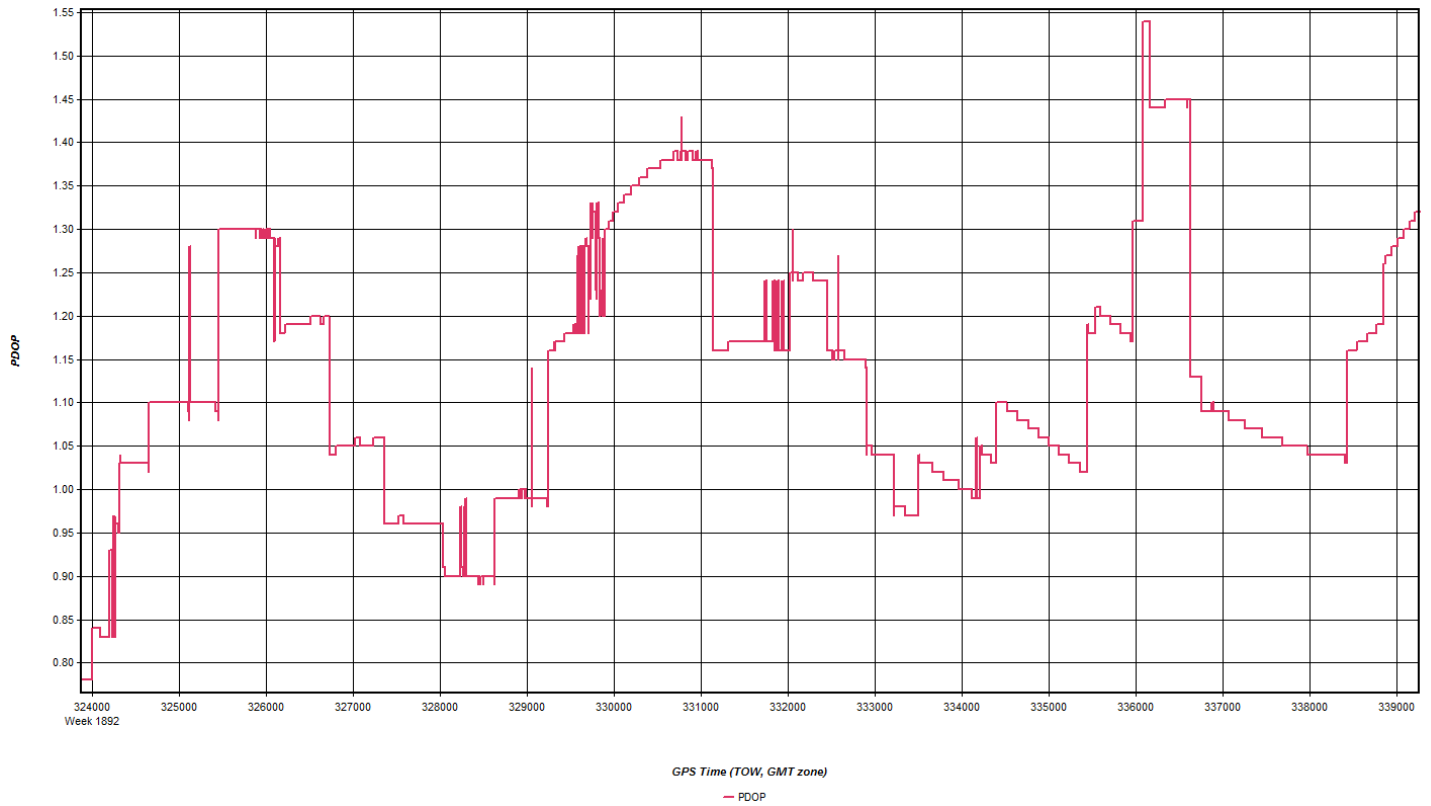
→ LANDED TO ENSURE IN HEATED HANDS FOR EARLY MORNING OPERATIONS →

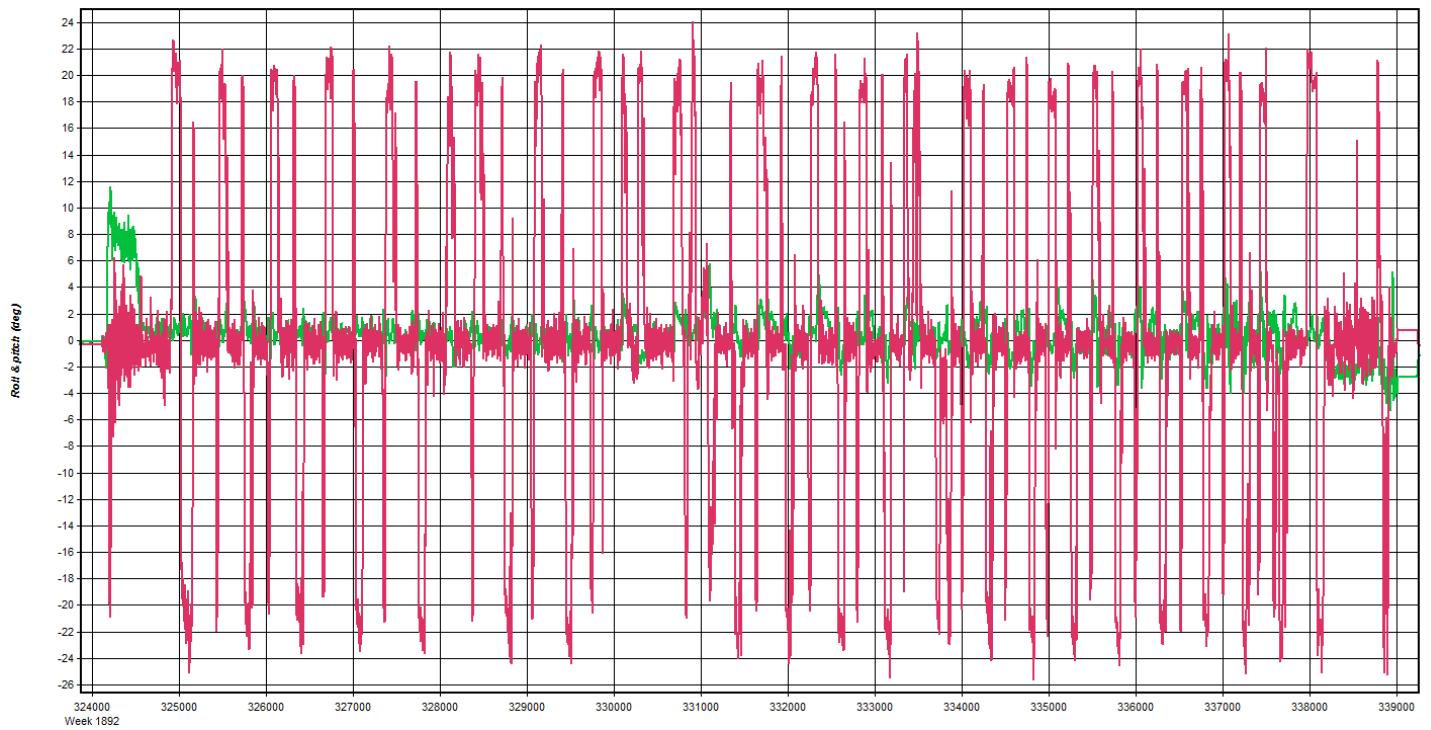
Total Proj Lines: 99 **Lines Flown:** 17 **Lines Remain:** 82 **Online Time:** 2:01 **Job Time:** 0:21 **Notes:** 20160413-184740 - 184916

Apr 13, 2016-A (N812TB, SN7161)



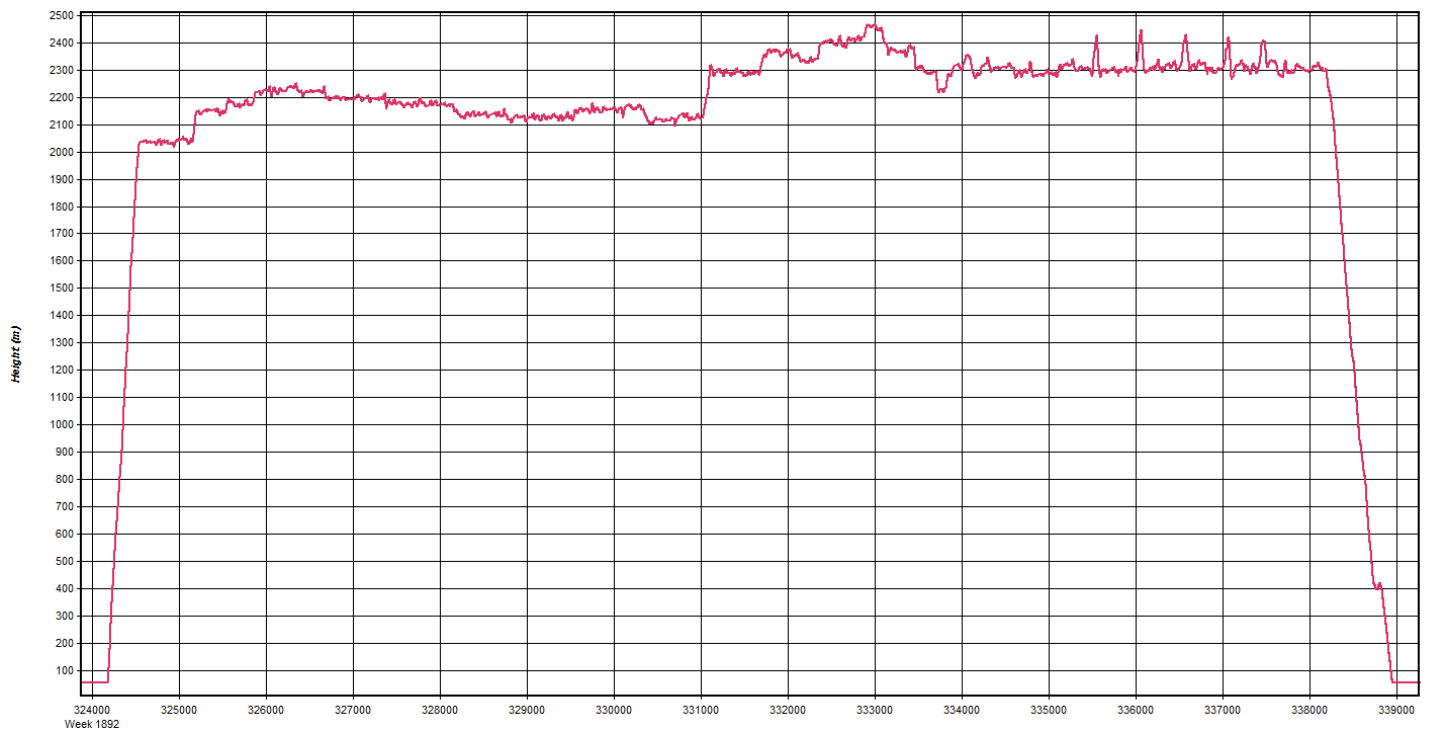






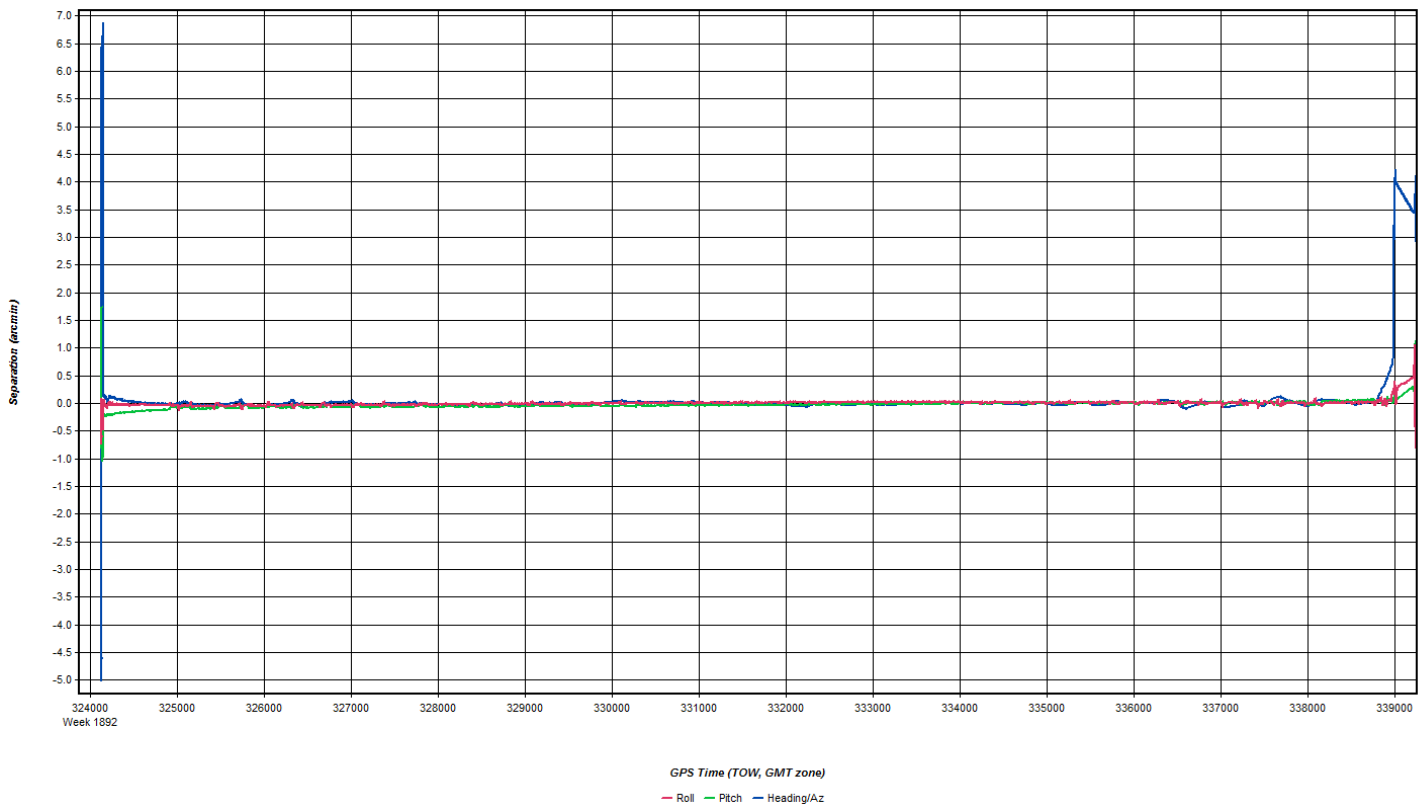
GPS Time (TOW, GMT zone)

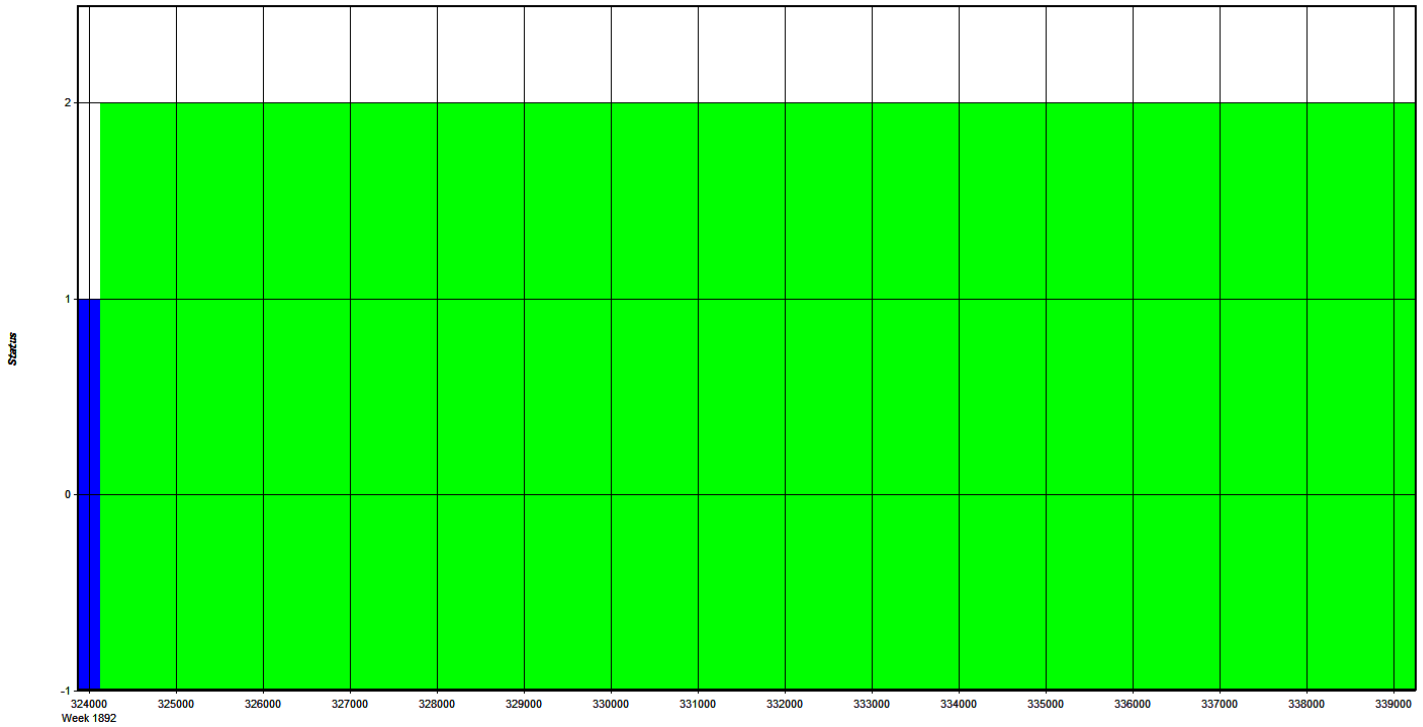
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: LEW1 Name: LEW1 Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\ASH7\160413_SN7161_

Coordinates
 Latitude: North 44 02 56.74648 Compute from PPP
 Longitude: West 70 17 12.20047 Enter Grid Values
 Ellipsoidal height: 51.351 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRM55971.00 View STA File
 Antenna profile: TRM55971.00 Info
 Measured height: 1.219 m
 ARP to L1 offset: 0.067 m
 Applied height: 1.286 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
 2: MESP Name: MESP Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\ASH7\160413_SN7161_...

Coordinates
 Latitude: North 44 13 06.19617 Compute from PPP
 Longitude: West 70 30 47.10740 Enter Grid Values
 Ellipsoidal height: 105.463 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRM55971.00, NONE View STA File
 Antenna profile: TRM55971.00 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: U.S.G.S Maine MESP **Flight Mgmt File:** 20160413-175153 **Date:** 4-13-16 **Page:** 1 of 3

Aircraft: N812TB **Begin Hobbs:** 3909.3 **End Hobbs:** 3913.4 **Total:** 4.1 **Pilot:** Jacobson **Co-Pilot:** **Tech:** Dy... **Tot Time Aloft:** 4.1

Dep Apt: KLEW **Arr Time (Local):** 18:04 **Arr Apt:** KLEW **IF Y, times: Sta1:** 18:04 **Start:** 22:02 **IF Y, times: Sta2:** 18:15 **End:** 21:53

CORS: **Sta 1:** MESP **Sta 2:** **Flyovers:** (Y) N **IF Y, times: Sta1:** 18:04 **Flyovers:** (Y) (N) **IF Y, times: Sta2:** 18:15

GPS Unit: (Y) N **Sta 1:** LEW1 **Sta 2:** **Flyovers:** Y (N) **IF Y, times: Sta1:** 18:04 **Flyovers:** Y (N) **IF Y, times: Sta2:** 18:15

Gd Temp beg: 26 °C **End:** 10 °C **OAT beg:** -7 °C **End:** -7 °C **Altimeter begin:** 30.38 **end:** 30.51 **Start (Gd):** 17:58:01 **End (Gd):** 18:01:01 **For (Gd):** 32 **Storage Name/ID:** 248 **End job:** 280

Line #	Hgt	Start (UTC)	End (UTC)	Gd Spd	Altitude	Crab	Turn	Alt	APSL	Alt	AGL	MPLA	Pulse	In Air	Avg Terr	Max	Alt	Spacing	Power	FFSM
1515	244	18:21	18:23	148	7003	1.3/15	7003	7161	57	MPLA	N	288	150	100						
1514	64	18:26	18:28	147	7112	1.2/16	7112													
1513	244	18:31	18:33	135	7254	1.1/18	7254													
1512	64	18:36	18:38	147	7380	1.0/18	7380													
1511	244	18:41	18:43	145	7236	1.2/17	7236													
1510	64	18:47	18:49	150	7213	1.1/17	7213													
1509	244	18:52	18:55	145	7194	1.1/17	7194													
1508	64	18:58	19:01	148	7122	1.1/17	7122													
1507	244	19:04	19:07	147	7106	1.2/17	7106													
1501	64	19:10	19:12	149	6957	1.2/17	6957													
1502	244	19:15	19:17	146	6458	1.2/17	6458													
1503	64	19:21	19:23	151	6962	1.1/17	6962													
1504	244	19:27	19:29	147	6990	1.1/18	6990													
1505	64	19:32	19:35	146	7001	1.2/17	7001													
1506	244	19:38	19:41	144	7036	1.2/17	7036													
1548	155	19:46	19:51	153	6917	1.6/16	6917													
1001	301	20:00	20:01	150	7523	1.3/16	7523													
1002	121	20:05	20:06	148	7542	1.2/17	7542													

Total Prof Lines: 42 **Lines Flown:** 42 **Lines Remain:** 18 **Online Time:** 3.5 **Mobile Time:** 0.6 **Notes:**

Generated by CamScanner

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log daily to flight_log_distribution_list@quantumspatial.com)

Date: **4-13-16** Page 2 of 3

Project: **USGS Maine MESP** Prof #: **27146** Flight Mgmt File: **20160413_175153**

Aircraft: **N812TB** Begin Hobbs: **349.3** End Hobbs: **393.4** Total: **4.1** Pilot: **Johnson** Co-Pilot: **Tech: Dykes 01**

Dep Apt: **KLEW** Dep Time (Local): **14:02** (Z): **18:02** Arr Apt: **KLEW** Arr Time (Local): **18:09** (Z): **22:04** Tot Time Aloft: **4.1**

CORS: **01N** Sta 1: **MESP** Sta 2: **01N** Flyovers: **01N** If Y, times: **Sta1 18:09 - Sta2 22:02**

GPS Unit: **01N** Sta 1: **LEW1** Sta 2: **01N** Flyovers: **Y 10N** If Y, times: **Sta1 18:09 - Sta2 22:02**

Gd Temp beg: **6** °C End: **10** °C OAT beg: **-7** °C End: **-7** °C Altimeter begin: **30.33** end: **30.31**

Type	Serial #	Scan Freq	Alt AGL	Alt MSL	Pulse In Air	Pulse Rate	Avg Terr Ht	Max Gdspd	Power	Ave Ft Spacing	PSDI	Storage Name	
												Mag	Mag
LIDAR	AL570	40	7161	7500	7500	260	7500	150	100	150	100	17:59	18:01
			53									248	016

Line #	Mag	Start (UTC)	End (UTC)	Gd Spd	GPS Altitude	Turb (0-1)	Crab
1003	301	20:09	20:11	148	1.2/18		7740
1004	121	20:15	20:16	147	1.0/19		7654
1005	301	20:20	20:21	148	1.0/19		7862
1006	121	20:24	20:26	144	1.0/19		7431
1007	301	20:29	20:30	148	1.1/18		8024
1008	121	20:33	20:35	149	1.1/18		7743
1009	32	20:39	20:41	153	1.1/18		7572
1024	138	20:45	20:46	145	1.1/18		7628
1023	318	20:49	20:50	147	1.0/18		7564
1022	138	20:53	20:54	149	1.0/18		7534
1021	318	20:57	20:58	141	1.0/18		7531
1020	139	21:01	21:02	146	1.0/18		7567
1019	318	21:05	21:06	147	1.1/16		7608
1018	138	21:09	21:10	147	1.1/16		7530
1017	318	21:13	21:15	148	1.0/17		7531
1016	138	21:17	21:19	149	1.0/17		7550
1015	318	21:22	21:23	150	1.0/17		7550
1014	138	21:26	21:28	150	1.1/17		7551

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

Total Proj Lines: **142** Lines Flown: **112** Lines Remain: **18** Online Time: **3.5** Mob Time: **0.6** Notes:

Generated by CamScanner

Date: 4/13/16
Pg. 3 of 3

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log daily to flight_log_distribution_list@quantumspatial.com)

Project: USGS Maine MESP Prof #: 27146 Flight Mgmt File: 20160413-175153 Tech: Dyrneson

Aircraft: N812TB Begin Hobbs: 3909.3 End Hobbs: 3913.4 Total: 4.1 Pilot: Jicebson Co-Pilot:

Dep Apt: KLEW Dep Time (Lcl): 18:02 Arr Time (Local): 18:09 Arr Time (UTC): 18:09 Tot Time Aloft: 4.1

CORS: N Sta 1: MESP Sta 2:

GPS Unit: N Sta 1: LEW1 Sta 2:

Gd Temp beg: 6 °C End: 10 °C OAT beg: -7 °C End: -7 °C Altimeter begin: 30.33 end: 30.31

Flyovers: N if Y, times: Sta1 18:09 -Sta2 22:02

Flyovers: Y N if Y, times: Sta1 8-18:15 Sta2 8-21:53

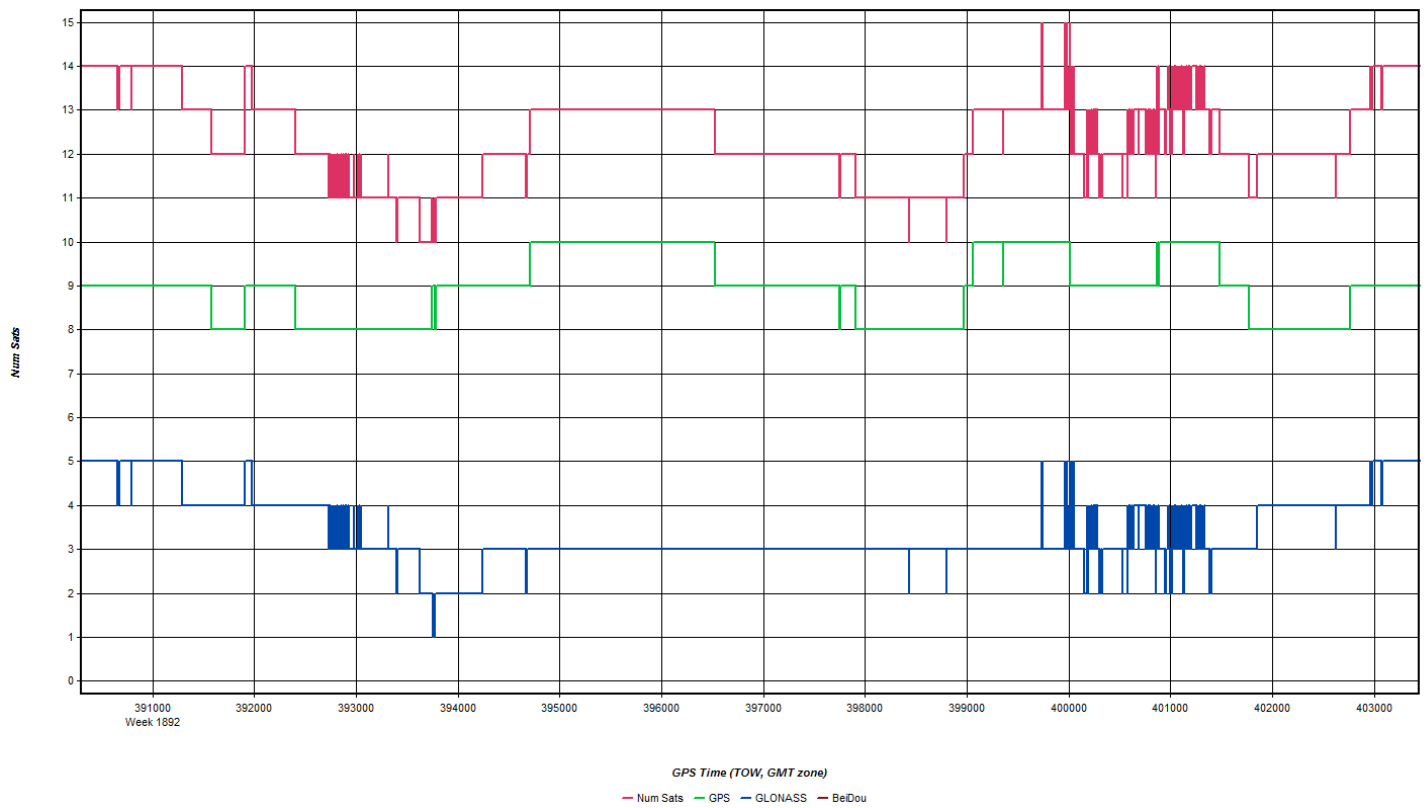
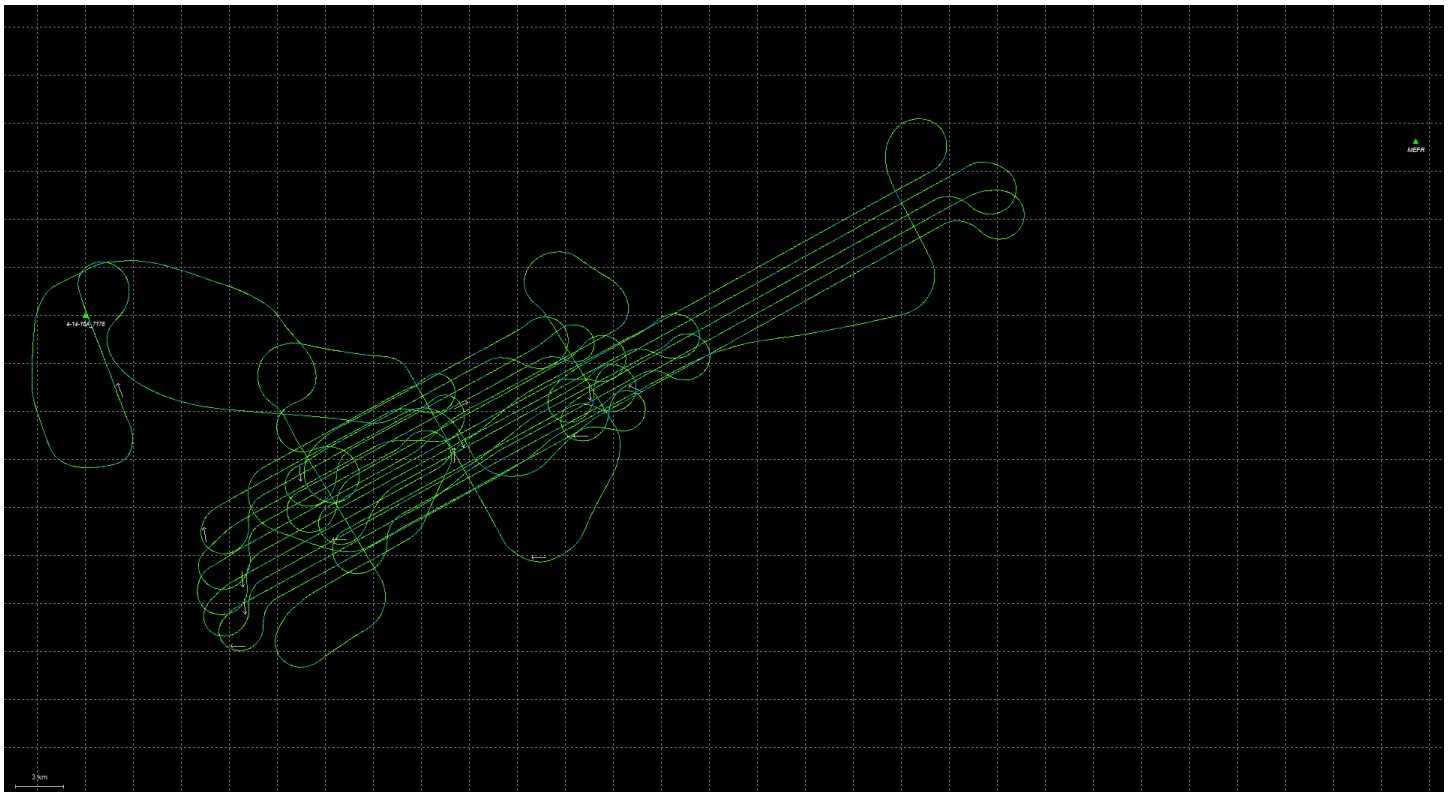
Type	Serial #	Alt AGL	Alt MSL	Avg Terr Ht	Avg Pt Spacing	Max Gdwd	Power	Altimeter begin	end	Start	End	Mag	Storage Name
FOV	Scan Freq		Mps	Rate	PSM					Time	Time	DB	DB
LIDAR	40	7161	53	750	150	100	260	30.33	30.31	17:58	18:01	248	016
										22:10	22:13	280	
												32	

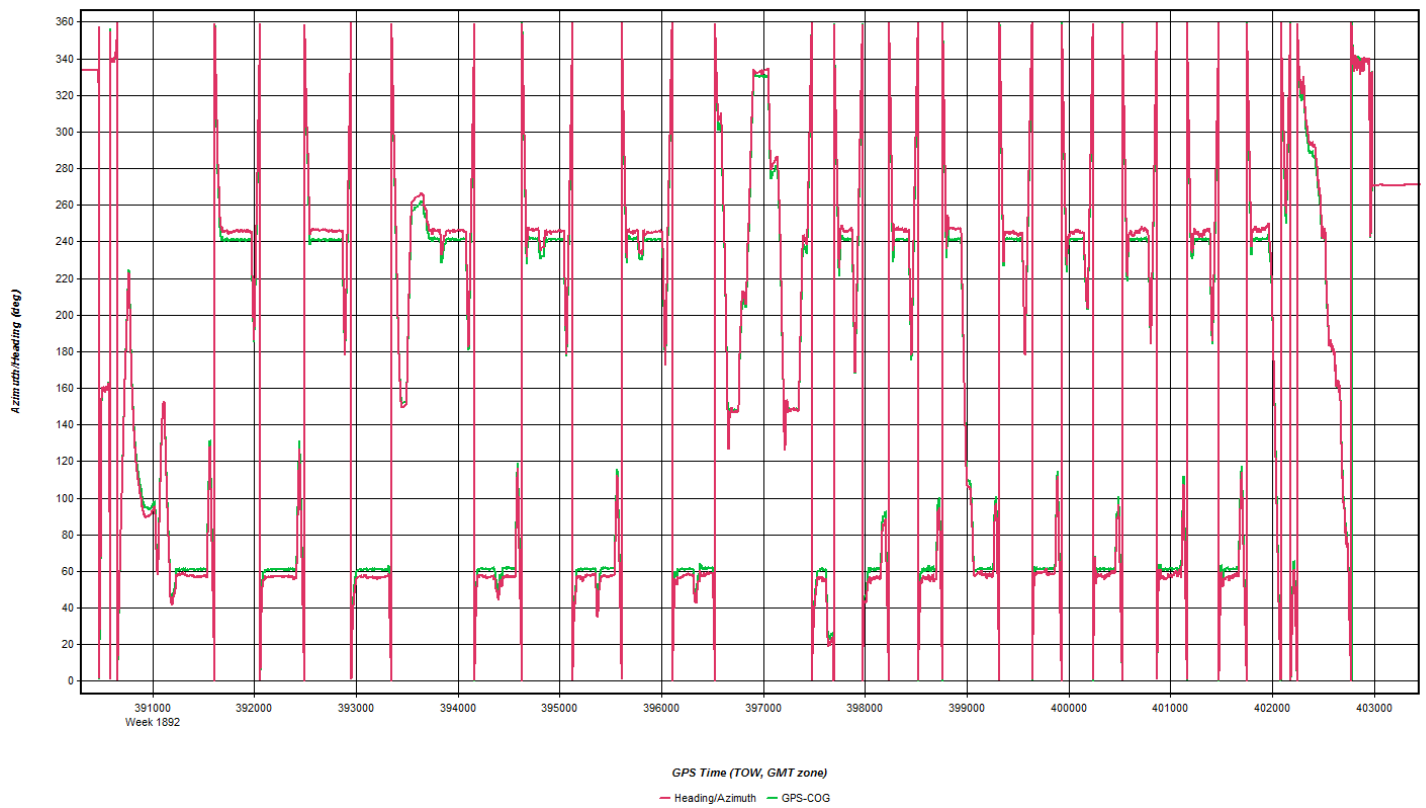
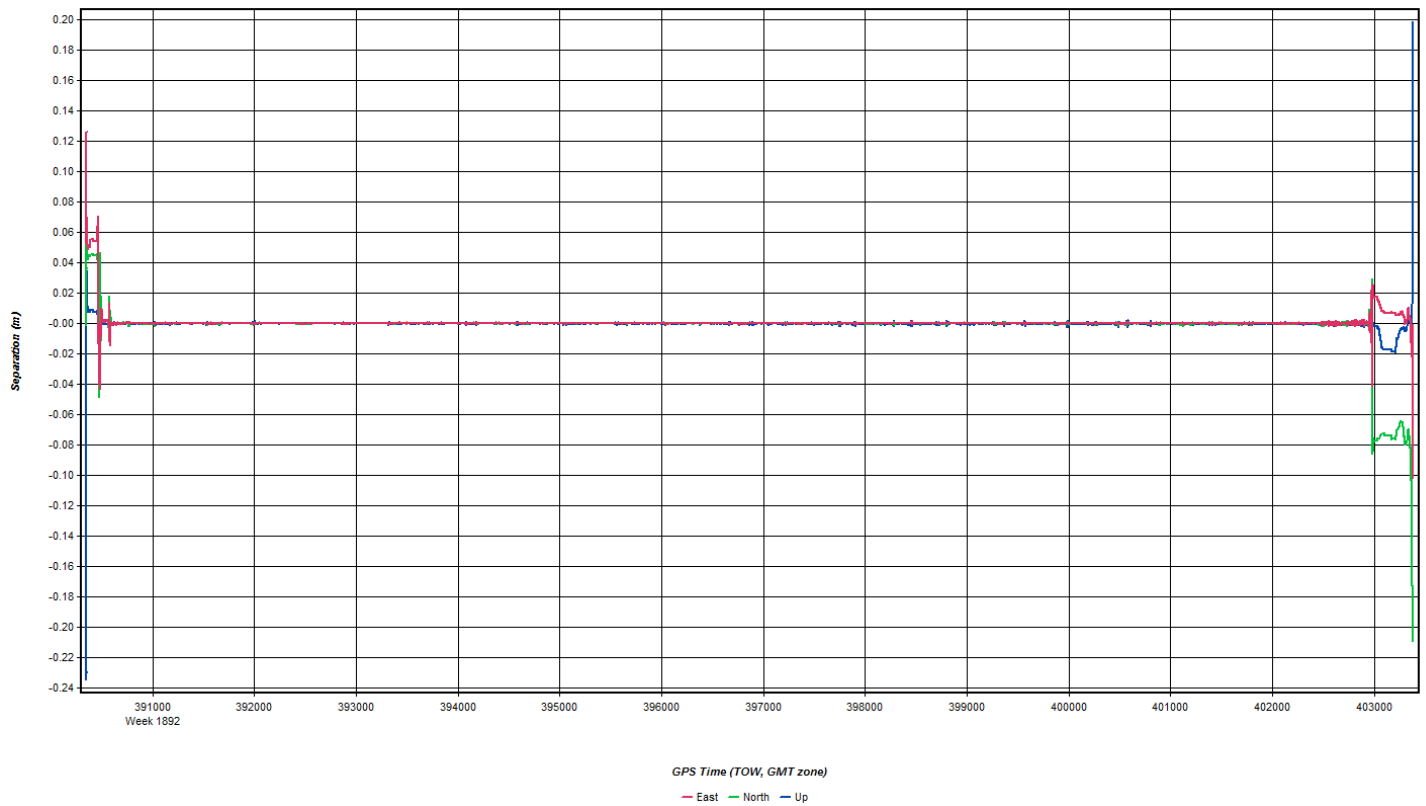
Line #	Hdg	Start [UTC]	End [UTC]	Gd Spd	POOP/s	GPS Altitude	Crab	Turb	FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.
								[0, -1]	
1013	318	21:30	21:32	150	1.0/17	7572			
1012	138	21:34	21:36	152	1.2/15	7572			
1011	318	21:38	21:39	153	1.2/15	7572			
1010	138	21:42	21:43	151	1.4/14	7572			
1009	318	21:45	21:45	150	1.4/14	7721			
1110	50	21:49	21:52	150	1.3/14	7550			

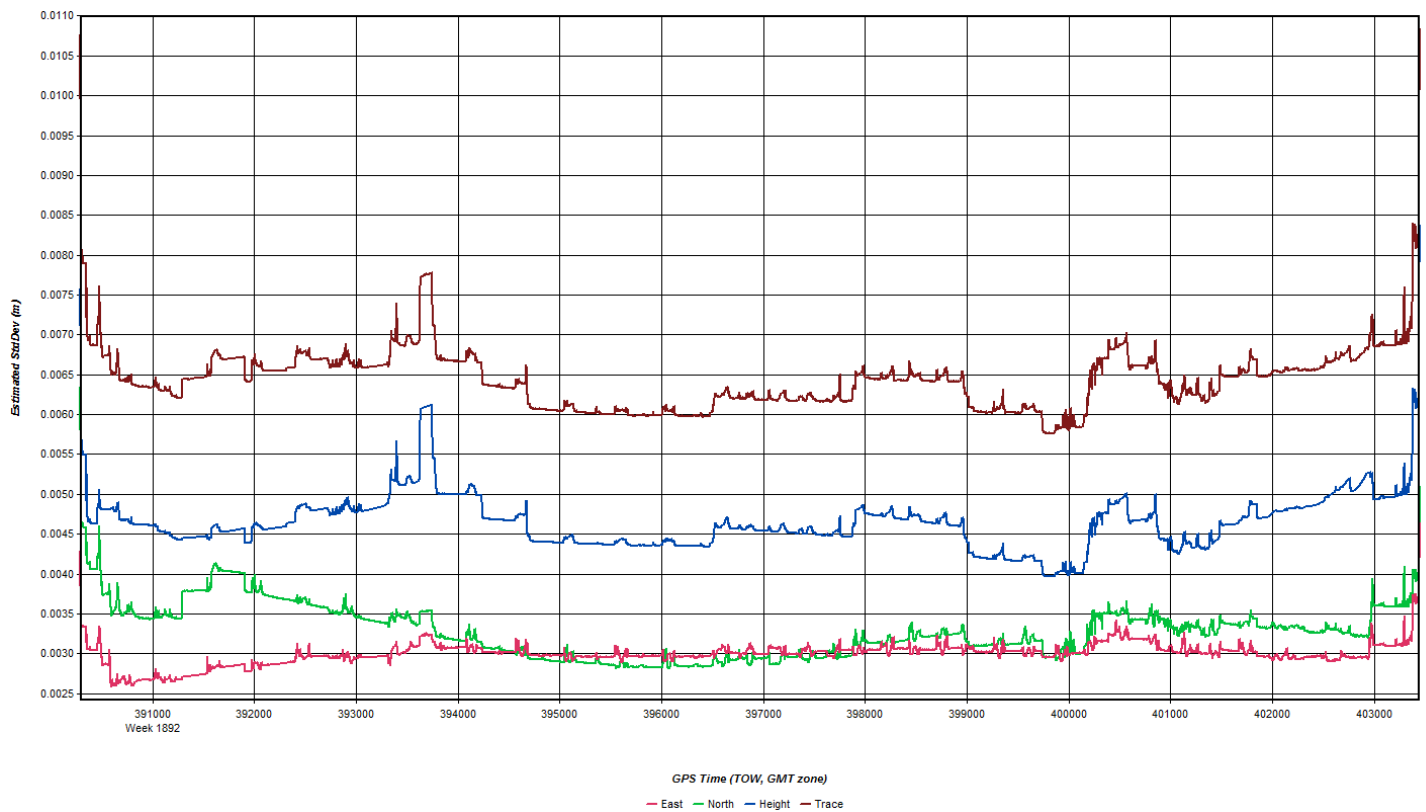
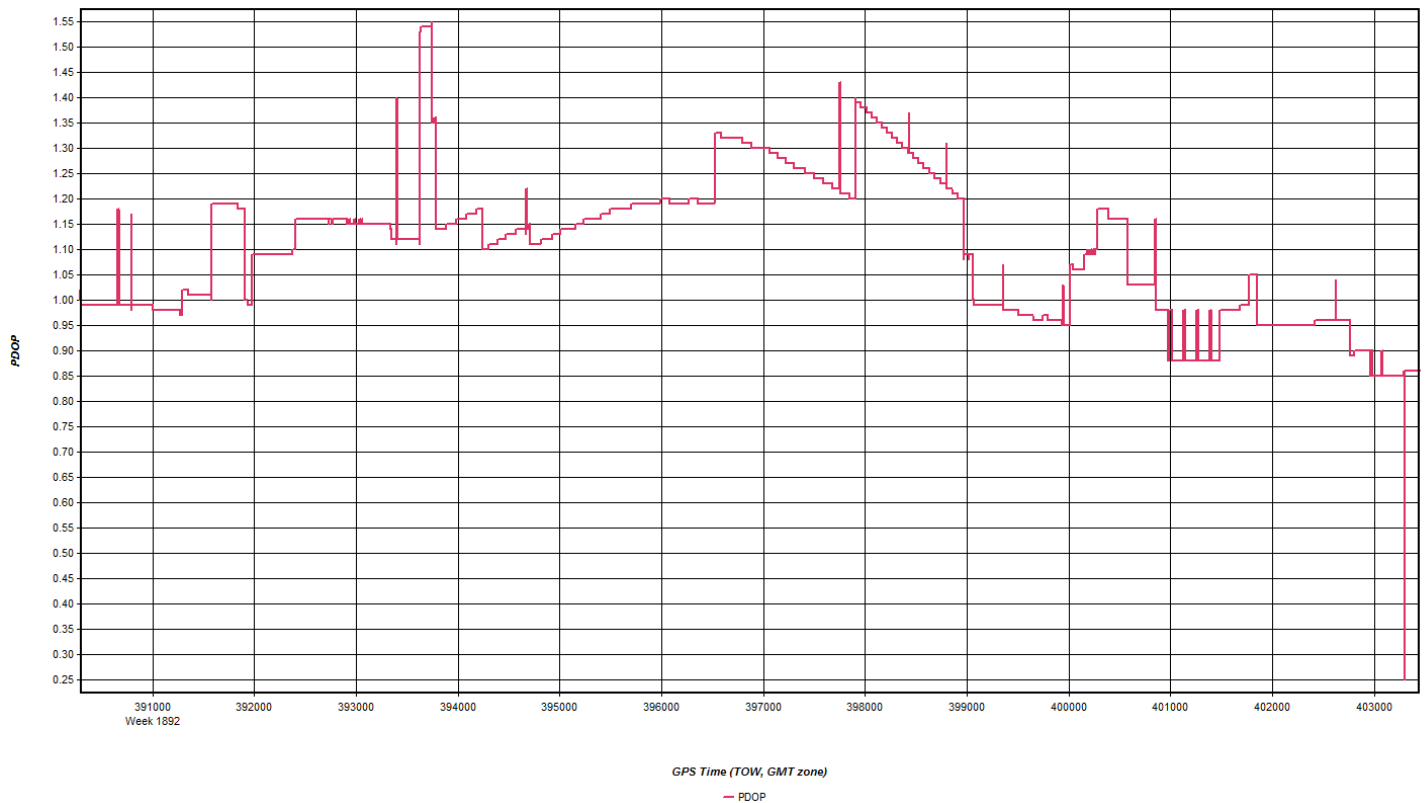
Total Proj Lines: 142 Lines Flown: 42 Lines Remain: 100 Online Time: 3.5 Mob Time: 0.6 Notes:

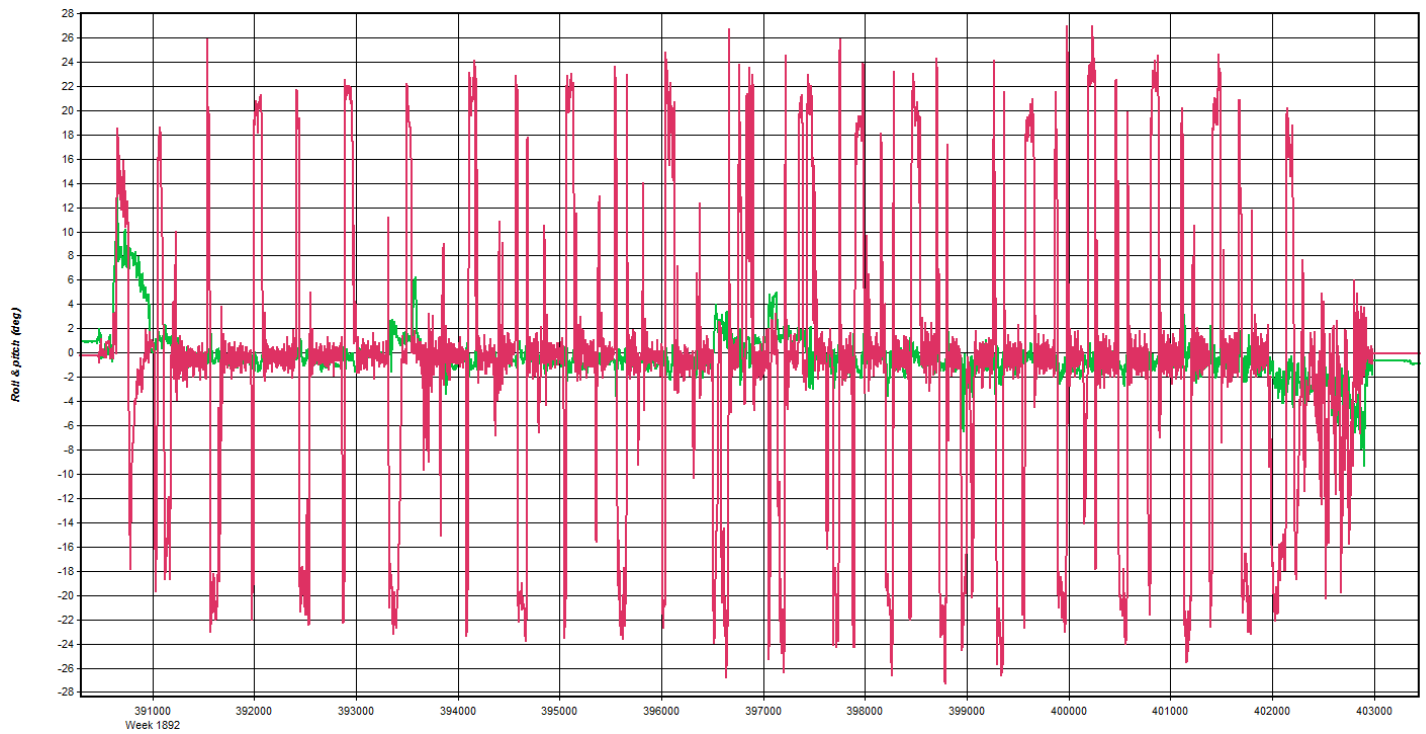
Generated by CamScanner

Apr 14, 2016-A (N73TM, SN7178)









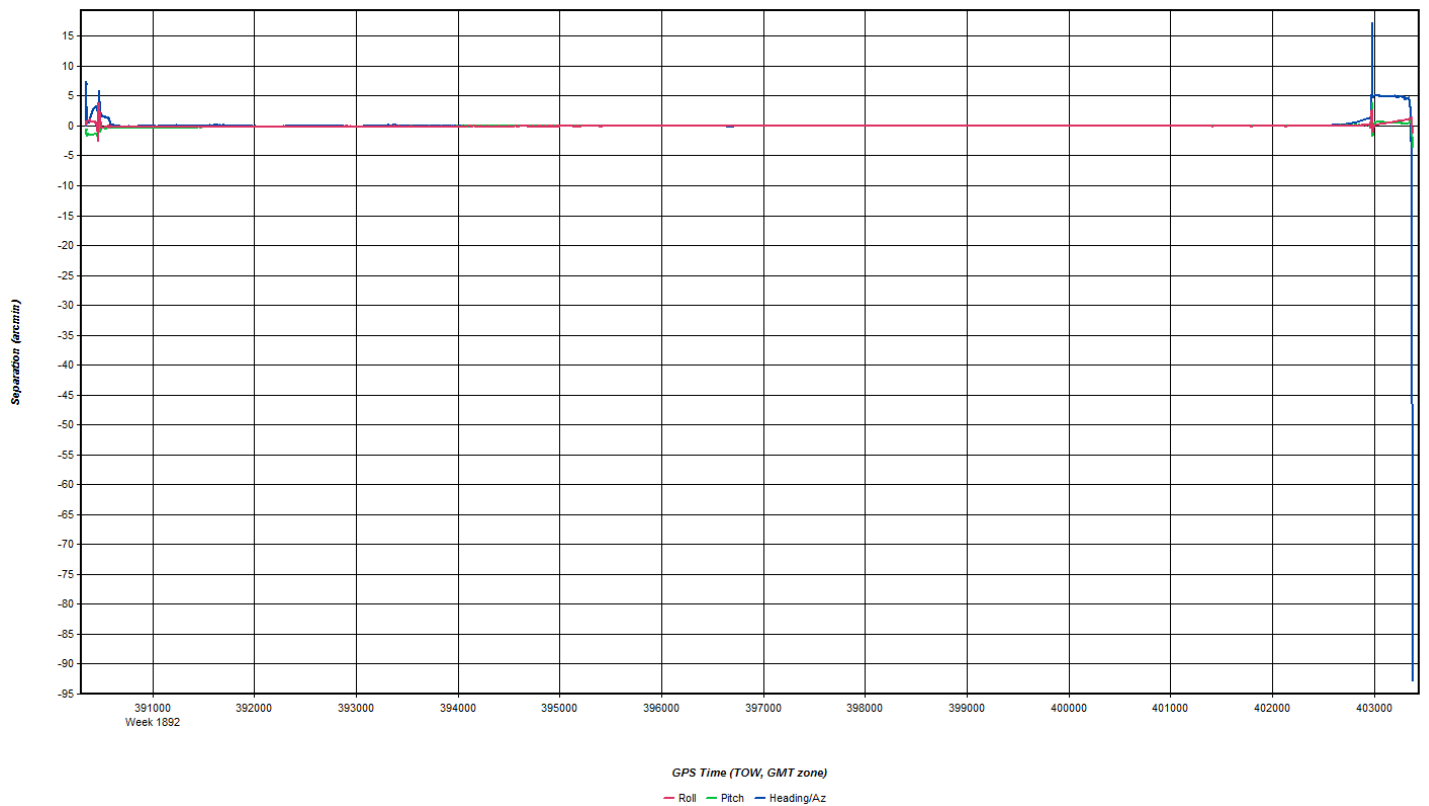
GPS Time (TOW, GMT zone)

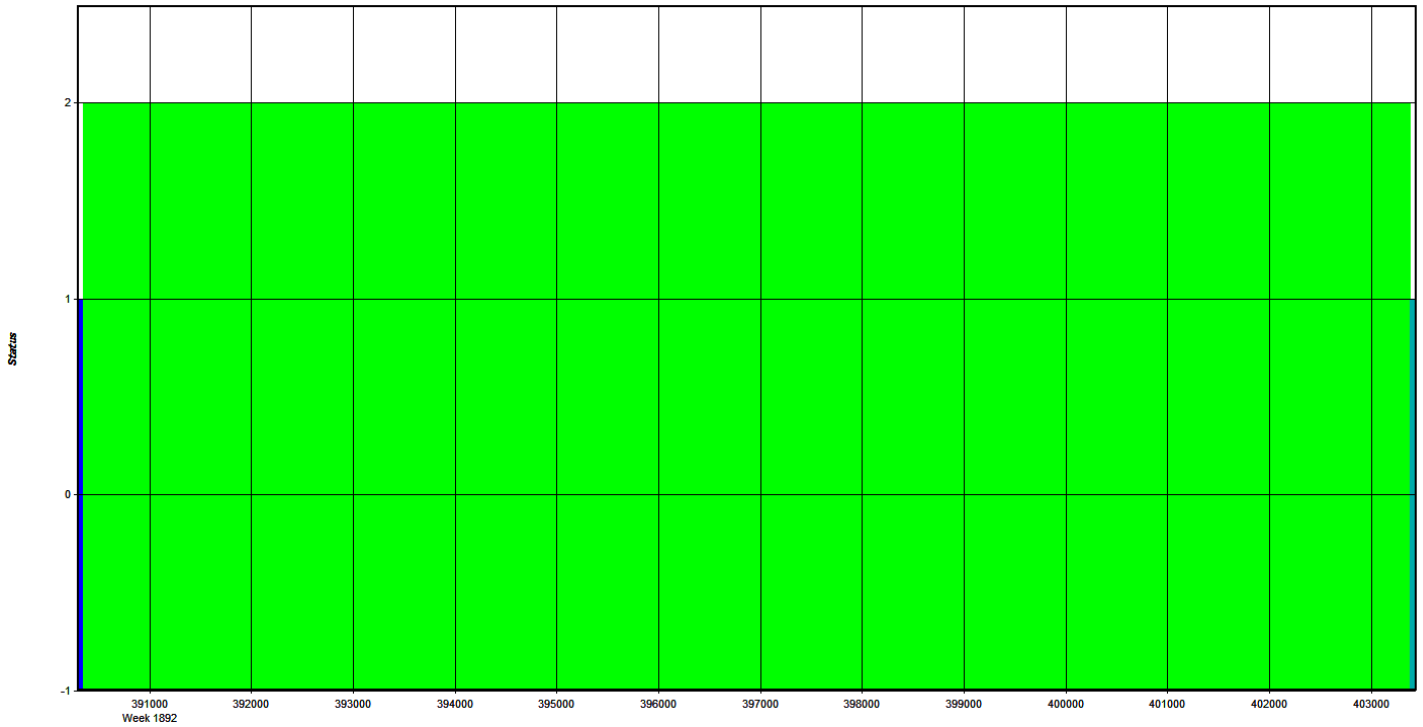
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: 4-14-16A_7178 Name: 4-14-16A_7178 Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\4628\20160414a-7178\G

Coordinates
 Latitude: North 44 34 37.37822 Compute from PPP
 Longitude: West 71 10 43.67149 Enter Grid Values
 Ellipsoidal height: 318.188 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: N/A View STA File
 Antenna profile: NOV702GG Info
 Measured height: 2.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 2.067 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
2: MEFR Name: MEFR Disabled
File: E:\Proc\27146_ME_2016_BAA_GPSC\4628\20160414a-7178\G

Coordinates
Latitude: North 44 40 28.97450 Compute from PPP
Longitude: West 70 07 54.54215 Enter Grid Values
Ellipsoidal height: 131.643 m Enter MSL Height
Datum: WGS84 Datum Options
Select From Favorites Add To Favorites Use Average Position

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: USGS WESTERN MARINE **Proj #:** 27146 **Date:** APRIL 14th, 2016
 (email log daily to flight_log_distribution_list@quantumspatial.com) 2016-04-14-122217 Pg 1 of 2

Aircraft: N735M **Begin Hobbs:** 6170.8 **End Hobbs:** 6170.8 **Total:** 3.4 **Pilot:** J. BILLINGTON **Co-Pilot:** - **Tech:** P. HRABAK
Dep Apt: KBML **Dep Time (Lcl):** 08:30(Z) **Arr Apt:** KBML **Arr Time (Local):** 11:55 (Z): 15:55Z **Tot Time Aloft:** 3:25

CORS: Y / (N) **Sta 1:** - **Sta 2:** - **-Flyovers:** Y / N **IF Y, times: Sta1)** - **Sta2)** -
GPS Unit: (Y) / N **Sta 1:** "BERLIN" (FID: PE0306) **Sta 2:** - **Flyovers:** Y / (N) **IF Y, times: Sta1)** - **Sta2)** -

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	PROPS/Secs	GPS Altitude	Crab	Turb	IF Y, times: Sta1)	IF Y, times: Sta2)	FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc
2078	NE	12:40	12:45	160 kt	1.1/17	7400'	2°	0			good vis., smooth, skc above & below, almost no snow below
2077	SW	12:47	12:52	160 kt	1.0/17	7400'	5°	0			good vis., smooth, skc above & below, almost no snow below
2076	NE	12:55	12:59	155 kt	1.0/17	7420'	4°	0			good vis., smooth, skc above & below, almost no snow below
2075	SW	13:02	13:07	155 kt	1.1/17	7400'	6°	0			good vis., smooth, skc above & below, almost no snow below
2074	NE	13:10	13:14	155 kt	1.0/17	7420'	4°	0			good vis., smooth, skc above & below, almost no snow below
2073	NW	13:17	13:17	100 kt	1.1/16	7430'	2°	0			good vis., smooth, skc above & below, almost no snow below
2072	SW	13:22	13:23	155 kt	1.1/17	7300'	5°	0			good vis., smooth, skc above & below, almost no snow below
2069	SW	13:25	13:27	155 kt	1.1/18	7760'	5°	0			good vis., smooth, skc above & below, almost no snow below
2068	NE	13:30	13:32	150 kt	1.0/18	7700'	4°	0			good vis., smooth, skc above & below, almost no snow below
2015	NE	13:34	13:35	155 kt	1.1/18	7800'	5°	0			good vis., smooth, skc above & below, almost no snow below
2014	SW	13:38	13:39	155 kt	1.2/18	7800'	5°	0			good vis., smooth, skc above & below, almost no snow below
2087	SW	13:41	13:43	155 kt	1.2/18	7860'	4°	0			good vis., smooth, skc above & below, almost no snow below
2086	NE	13:46	13:48	150 kt	1.2/17	7860'	3°	0			good vis., smooth, skc above & below, almost no snow below
2013	NE	13:50	13:52	145 kt	1.2/17	7970'	4°	0			good vis., smooth, skc above & below, almost no snow below
2012	SW	13:54	13:55	155 kt	1.2/17	7760'	3°	0			good vis., smooth, skc above & below, almost no snow below
2095	SW	13:57	13:59	155 kt	1.2/16	7730'	4°	0			good vis., smooth, skc above & below, almost no snow below
2094	NE	14:02	14:04	150 kt	1.2/16	7790'	4°	0			good vis., smooth, skc above & below, almost no snow below
2011	NE	14:06	14:08	150 kt	1.2/16	7700'	4°	0			good vis., smooth, skc above & below, almost no snow below

Total Prof Lines: 99 **Lines Flown:** 37 **Lines Remain:** 45 **Online Time:** 2:58 **Job Time:** 0:27 **Notes:** 20160414_122217_122423

Date: April 14th, 2016
Pg 2 of 2

(email log daily to flight_log_distribution_list@quantumspatial.com) 40100114-22217

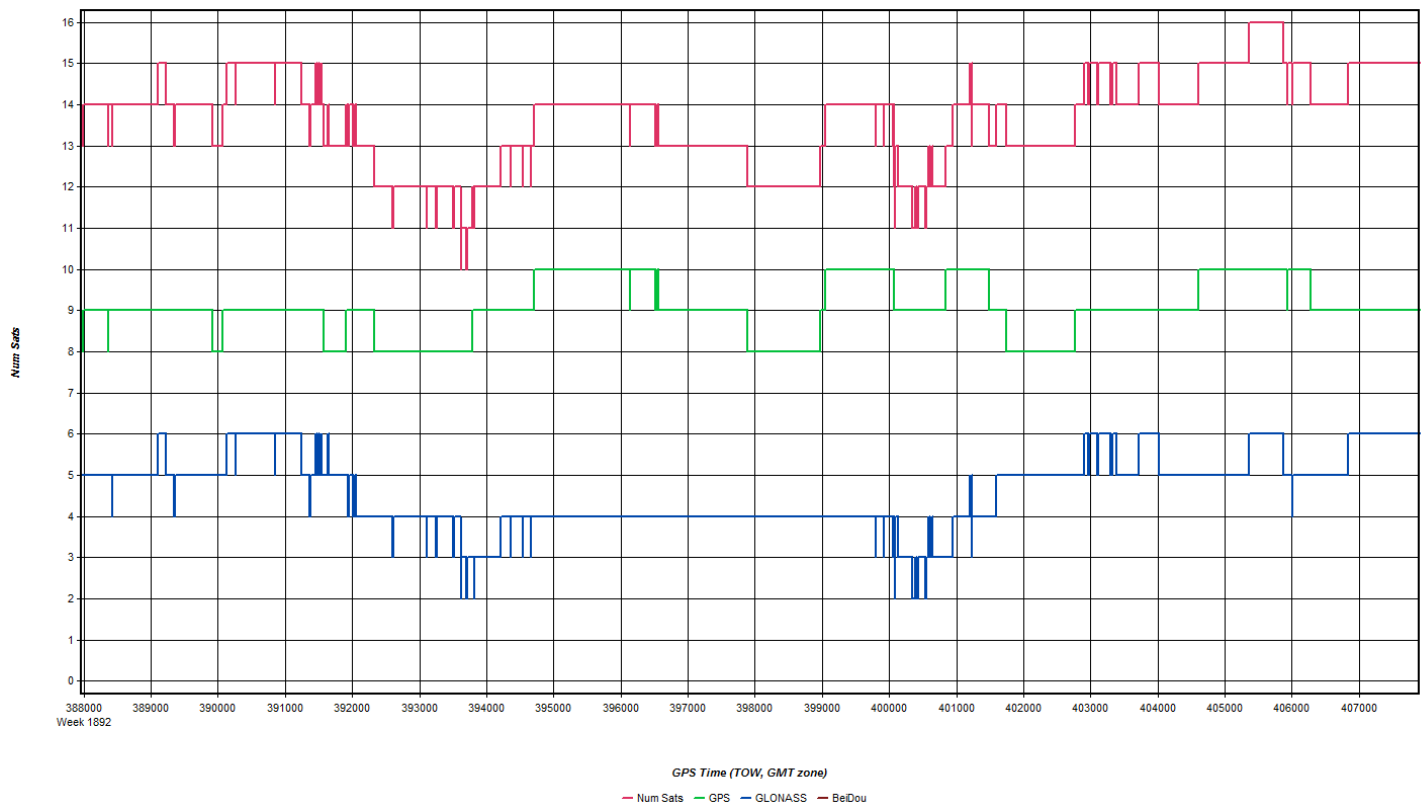
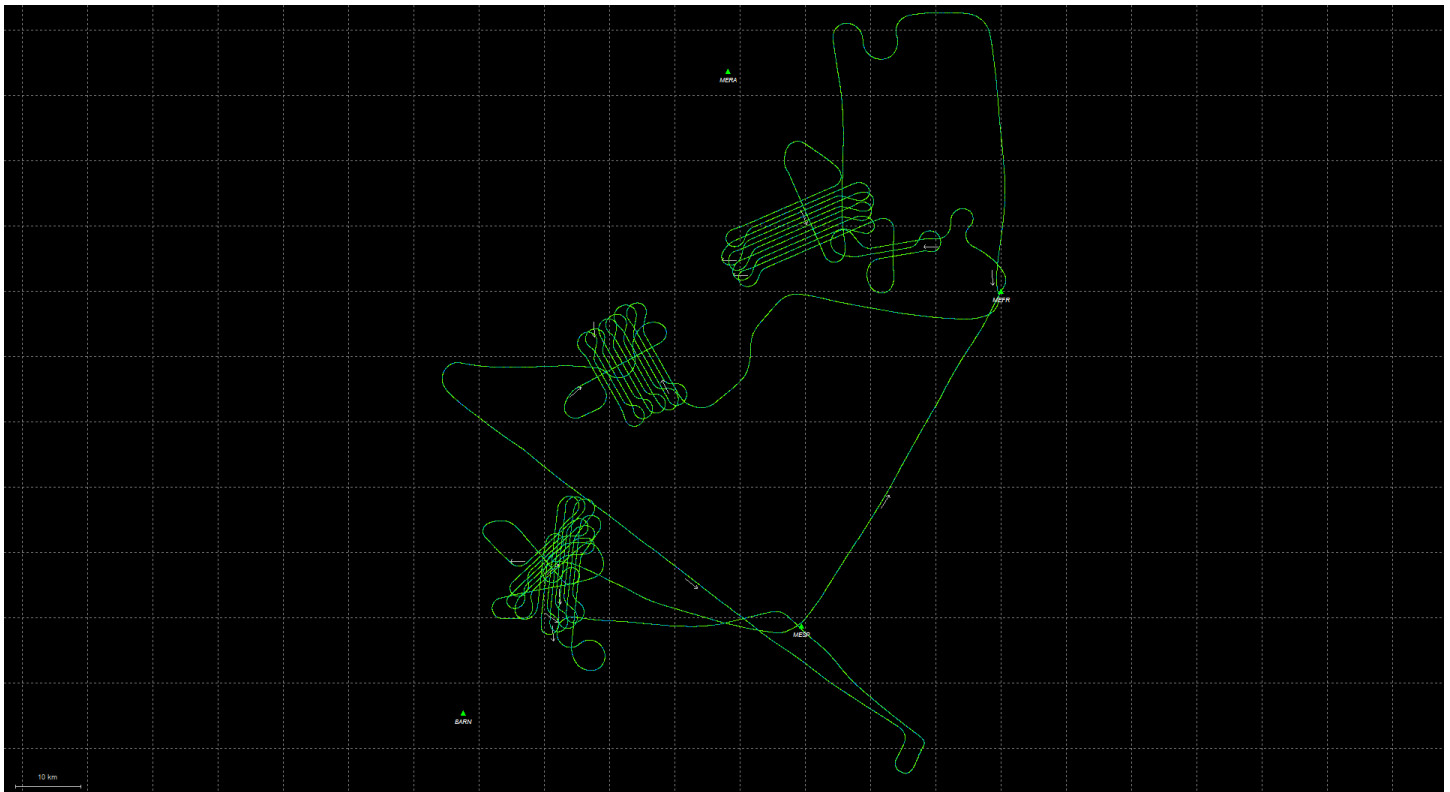
Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc

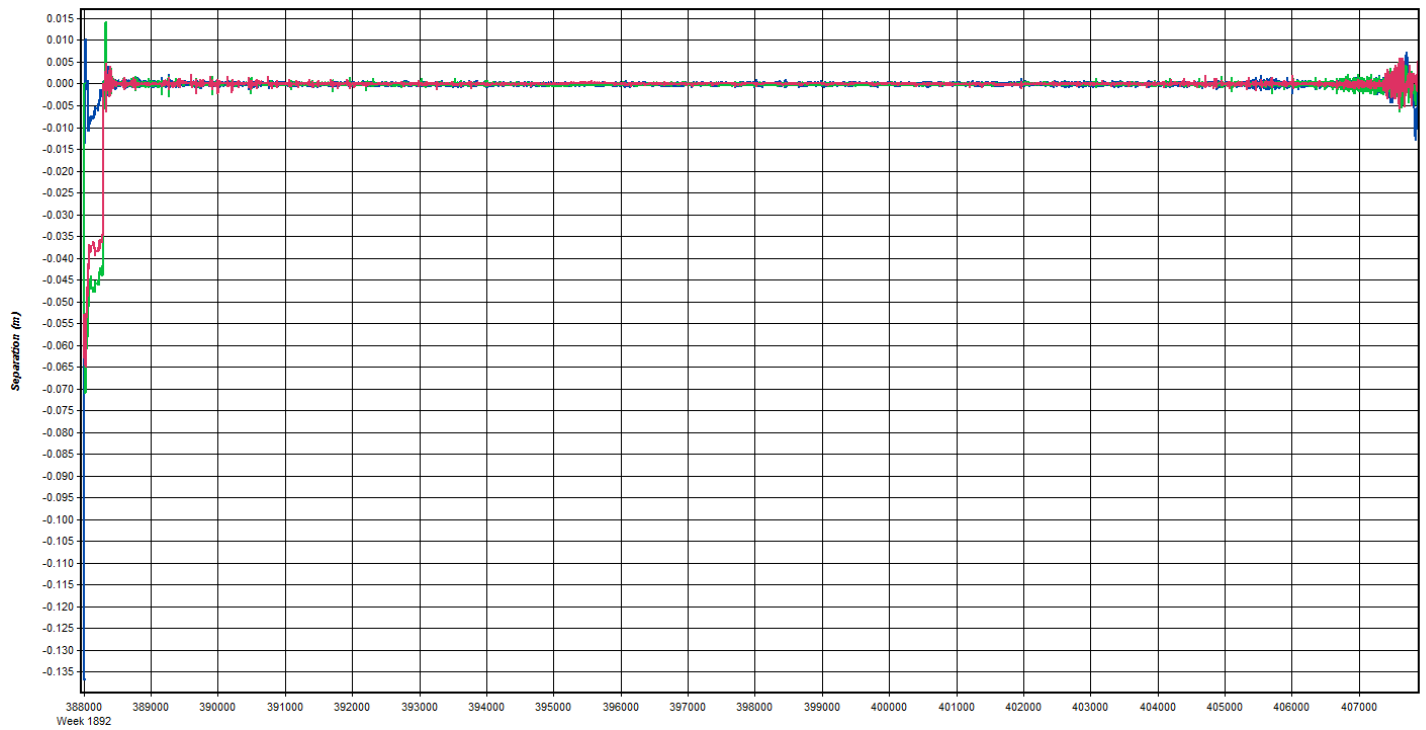
Project: USGS WESTERN MAINE Proj #: 27146 Flight Mgmt File: USGS-Maine-Berlin-SH7178-1505.kts
 Aircraft: N737M Begin Hobbs: 6170.8 Total: 3.4 Pilot: J.BILLINGTON Co-Pilot: - Tech: P. HAZEN
 Dep Apt: KBML Dep Time (Lcl): 08:30 (Z): 12:30 (Z) Arr Apt: KBML Arr Time (Local): 11:55 (Z): 15:55 (Z) Tot Time Aloft: 3:25
 CORS: Y (N) Sta 1: - Sta 2: - Flyovers: Y (N) IF Y, times: (Sta1) - (Sta2) -
 GPS Unit: Y (N) Sta 1: 350 (M) (RID: PF0346) Sta 2: - Flyovers: Y (N) IF Y, times: (Sta1) (Sta2) -
 Gd Temp beg: SEE SHEET 1 c End: 40.8 c OAT beg: SEE SHEET 2 c End: 47 c Altimeter begin: SEE SHEET 3 ONE end: 30.40

LIDAR	Type	Serial #	Alt AGL	Alt AMSL	AVG Terr. Ht	Max Gaspd	Avg Pt Spacing	Power	Pulse Rate	IFPSM	Mag CB	Storage Name
	FOV	Scan Freq	MPIA	Pulses In Air	VARIES	VARIES	?	260.4 kHz	2	2.2	172	ALS 70 SN 7198 SSD 4
2093	SE	14:11	14:12	180 kts	1.3/15	8160'	2°	0	good vis, smooth, ske above & below, almost no snow below			CROSS LINE
2094	NW	14:15	14:17	160 kts	1.2/15	7700'	2°	0	good vis, smooth, ske above & below, almost no snow below			CROSS LINE
2095	SE	14:20	14:22	130 kts	1.2/15	8500'	1°	0	good vis, smooth, ske above & below, almost no snow below			CROSS LINE
2096	NE	14:25	14:26	150 kts	1.4/14	8400'	7°	0	good vis, smooth, ske above & below, almost no snow below			
2097	SW	14:29	14:30	150 kts	1.3/14	8200'	6°	0	good vis, smooth, ske above & below, almost no snow below			
2098	NE	14:33	14:35	150 kts	1.3/14	8260'	6°	0	good vis, smooth, ske above & below, almost no snow below			
2099	SW	14:38	14:40	150 kts	1.0/17	8360'	6°	0	good vis, smooth, ske above & below, almost no snow below			
2099	NE	14:42	14:44	155 kts	1.0/17	8400'	5°	0	good vis, smooth, ske above & below, almost no snow below			
2099	SW	14:47	14:48	150 kts	1.1/16	8450'	7°	0	good vis, smooth, ske above & below, almost no snow below			
2099	NE	14:51	14:54	180 kts	1.1/16	7700'	3°	0	good vis, acc-turb, ske above & below, almost no snow below			
2099	SW	14:56	14:58	155 kts	1.1/16	7620'	3°	0	good vis, smooth, ske above & below, almost no snow below			
2099	NE	15:01	15:04	150 kts	1.0/17	7600'	3°	0	good vis, smooth, ske above & below, almost no snow below			
2099	SW	15:06	15:08	160 kts	1.0/17	7600'	4°	0	good vis, acc-turb, ske above & below, almost no snow below			
2099	NE	15:11	15:14	155 kts	0.9/18	7600'	4°	0	good vis, acc-turb, ske above & below, almost no snow below			
2099	SW	15:16	15:19	155 kts	0.9/19	7600'	3°	0	good vis, smooth, ske above & below, almost no snow below			
2099	NE	15:22	15:24	150 kts	1.0/18	7620'	6°	0	good vis, acc-turb, ske above & below, almost no snow below			
2099	SW	15:27	15:29	155 kts	1.0/17	7880'	2°	0	good vis, smooth, ske above & below, almost no snow below			
2099	NE	15:32	15:34	150 kts	1.0/17	7960'	3°	0	good vis, smooth, ske above & below, almost no snow below			

Total Proj Lines: 99 Lines Flown: 37 Lines Remain: 45 Online Time: 2:58 Mob Time: 0:27 Notes: 20160414-12217 & -122123
 2099 SW 15:37 15:38 150 kts 1.1/16 8120' 4° 0 Good vis, smooth, ske above & below, almost no snow below "FLIGHT 15:41
 → LANDED FOR FUEL ←

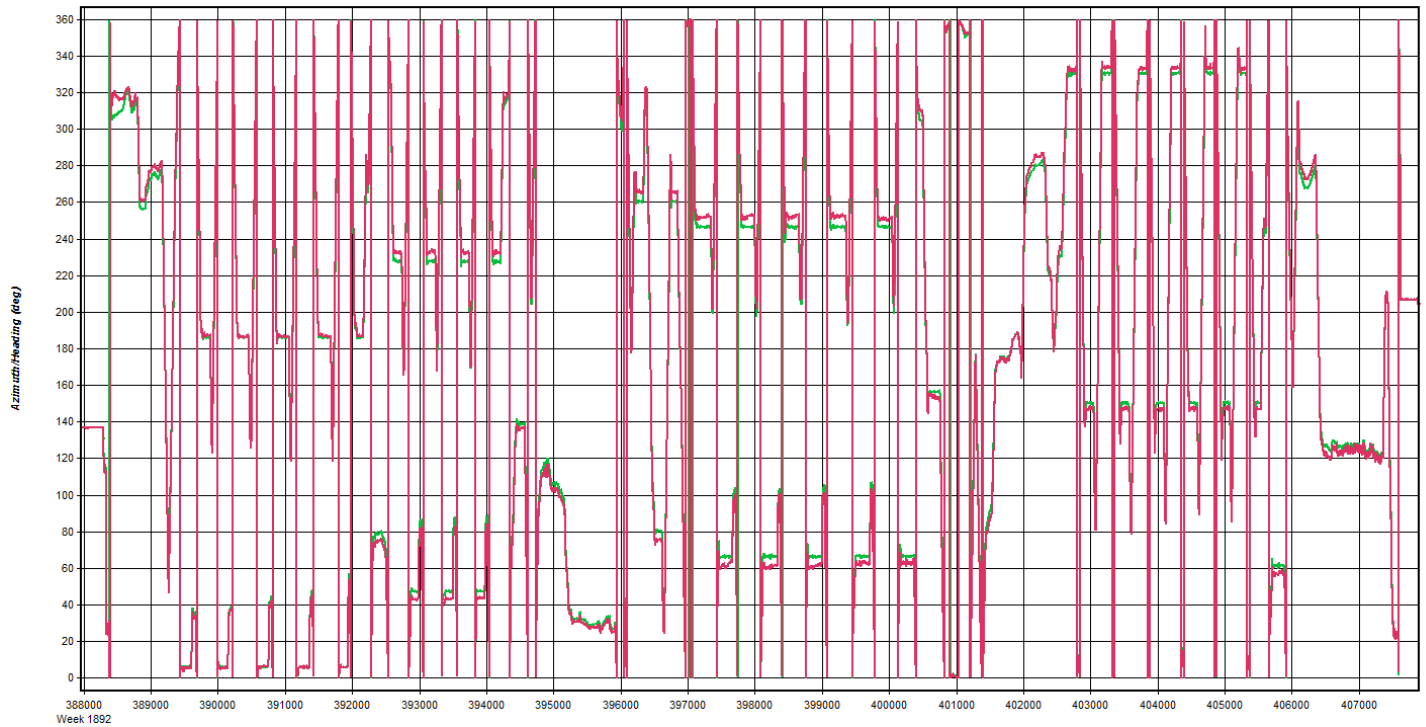
Apr 14, 2016-A (N812TB, SN7161)





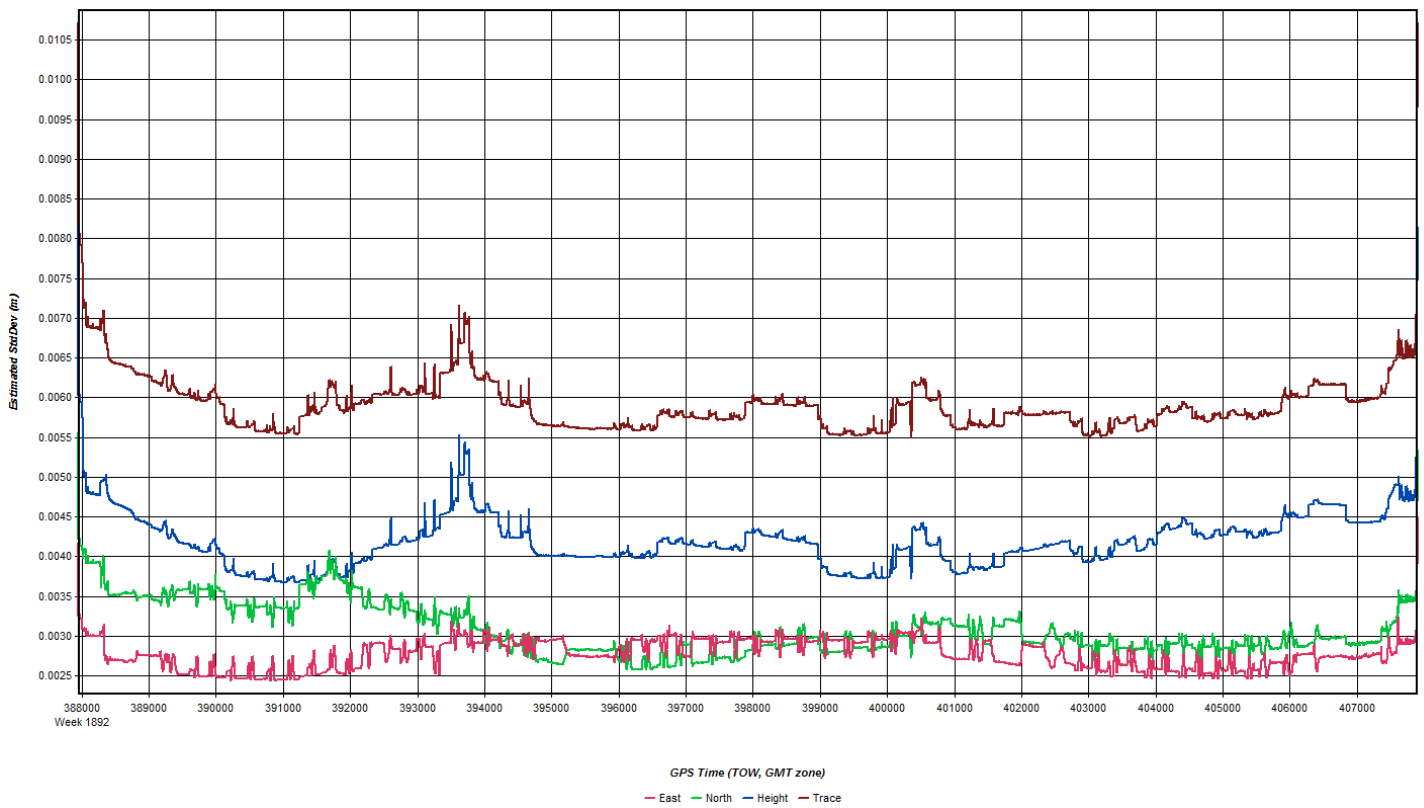
GPS Time (TOW, GMT zone)

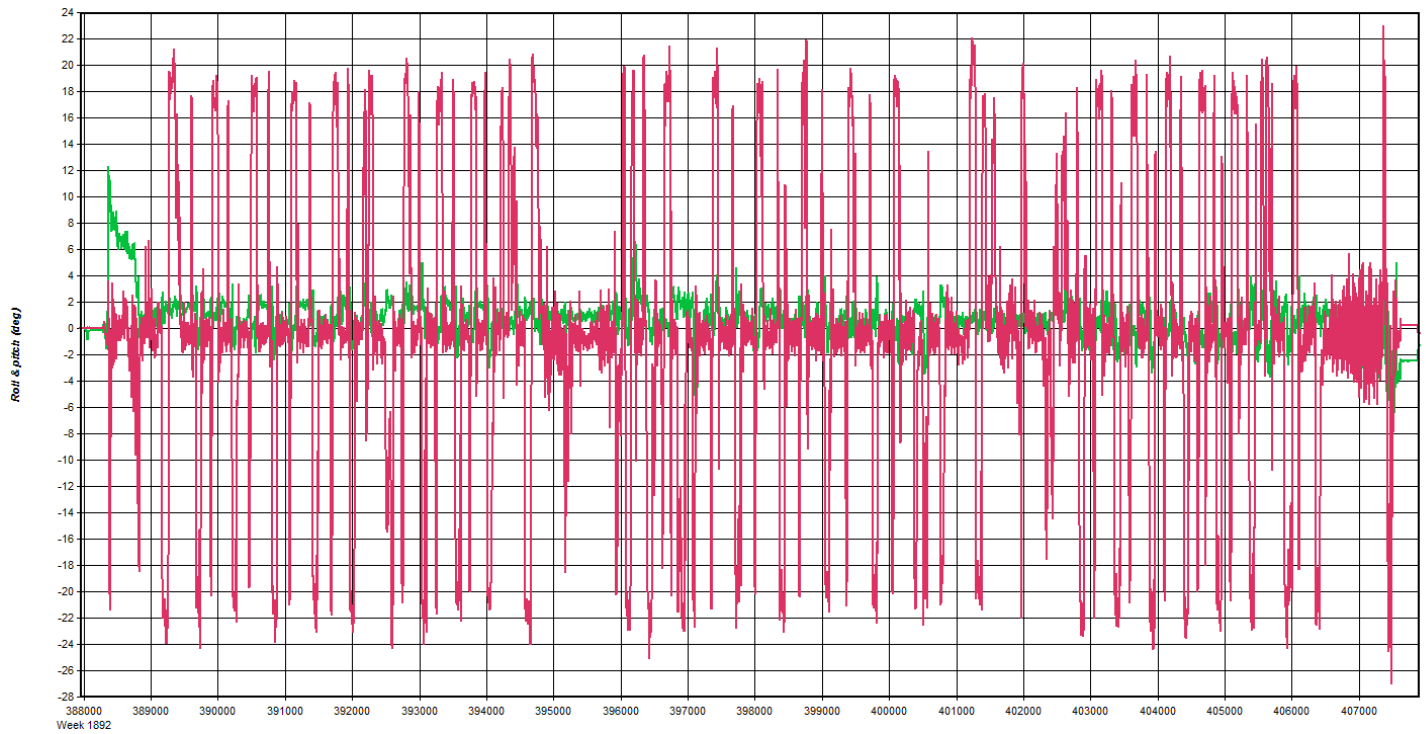
— East — North — Up



GPS Time (TOW, GMT zone)

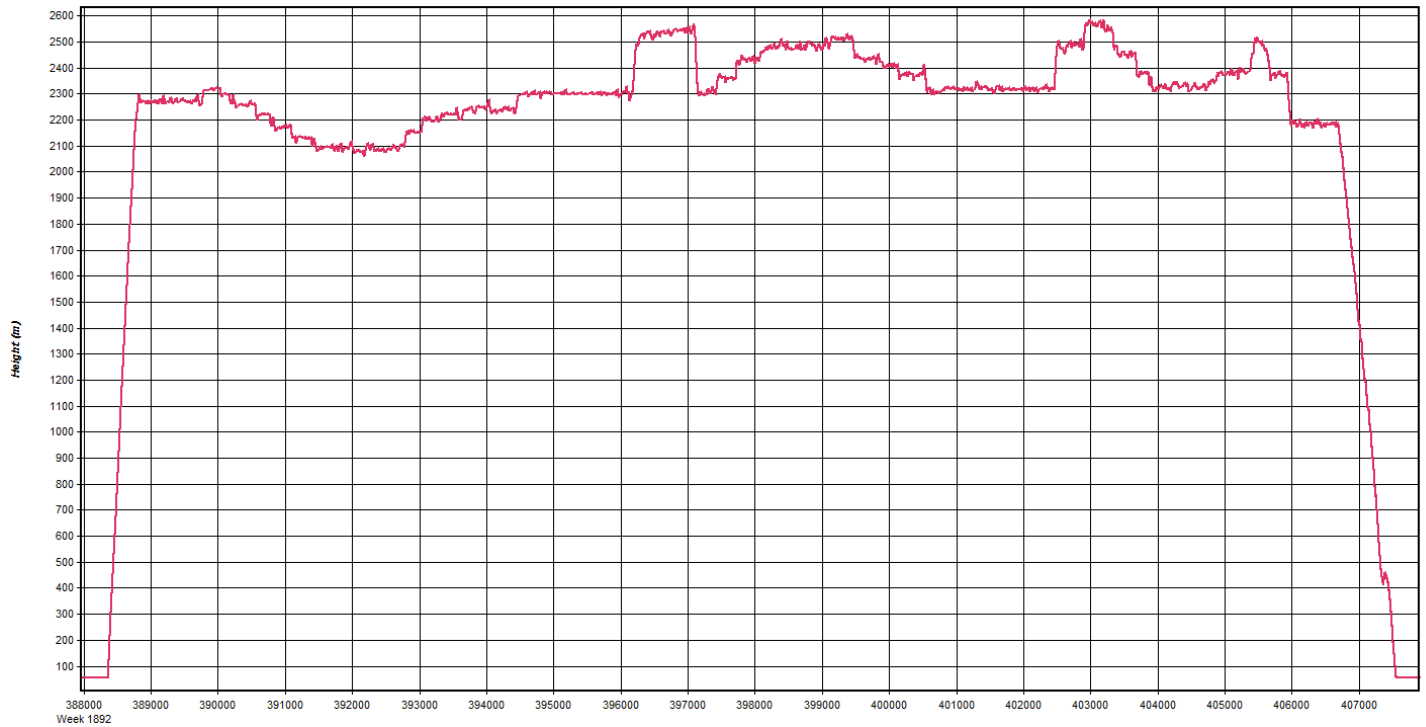
— Heading/Azimuth — GPS-COG





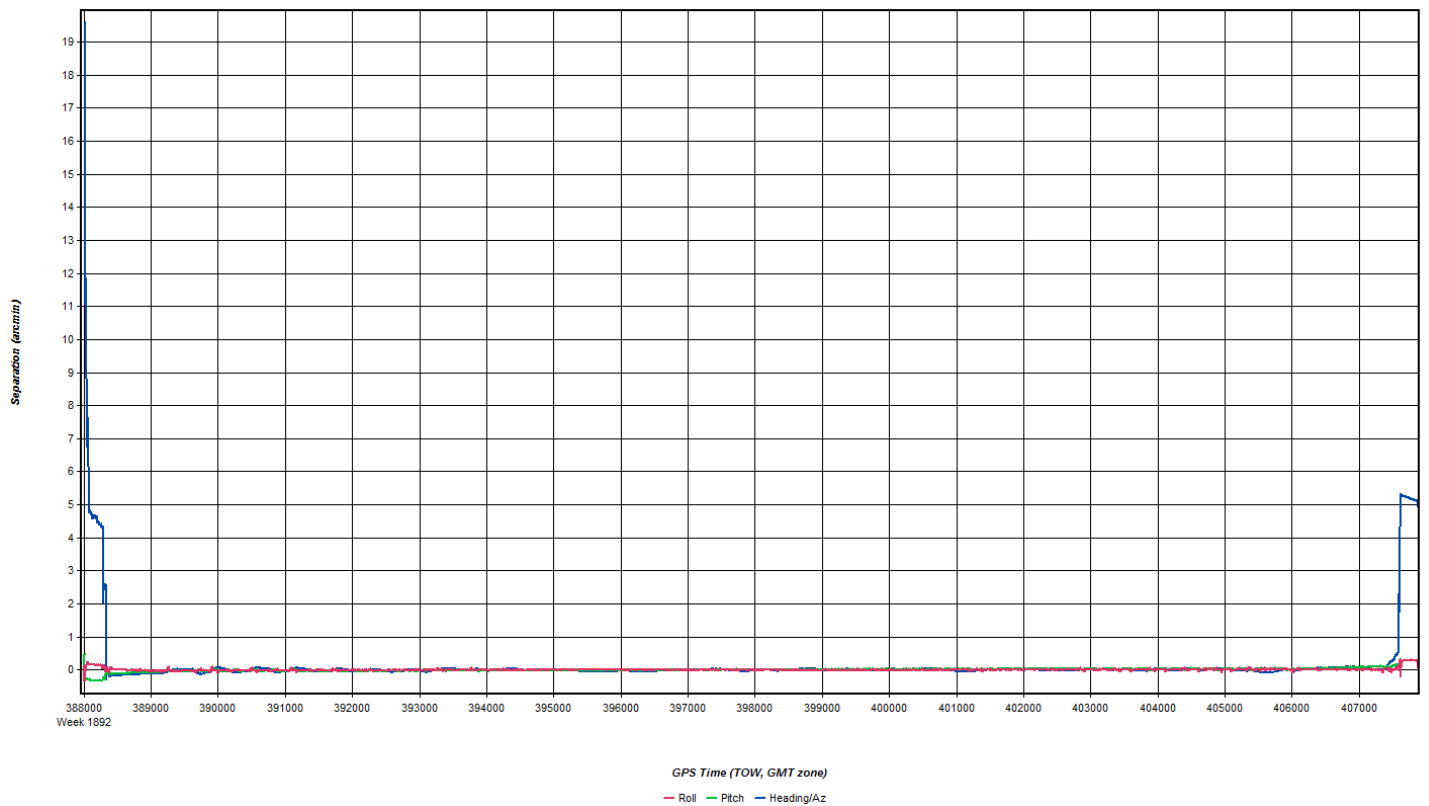
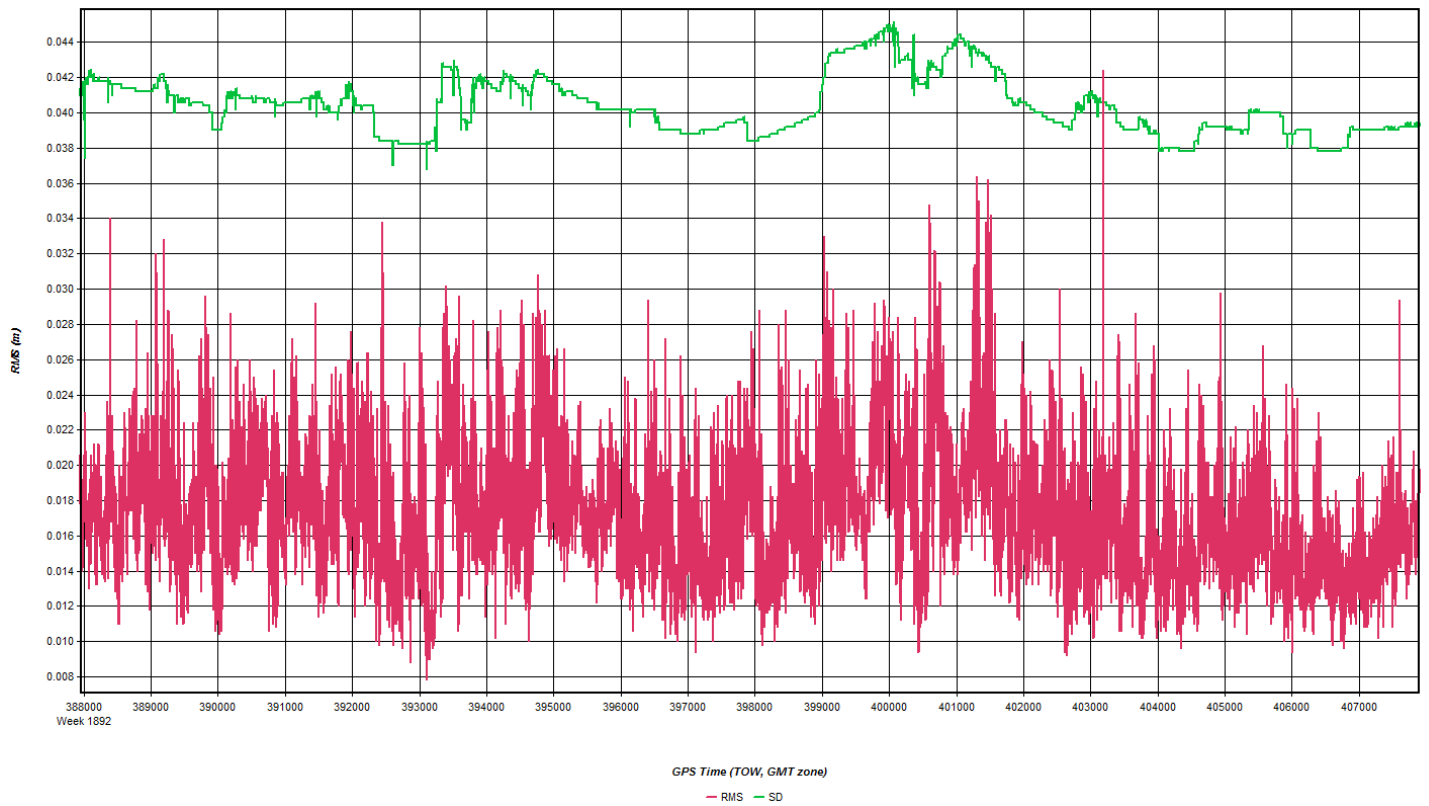
GPS Time (TOW, GMT zone)

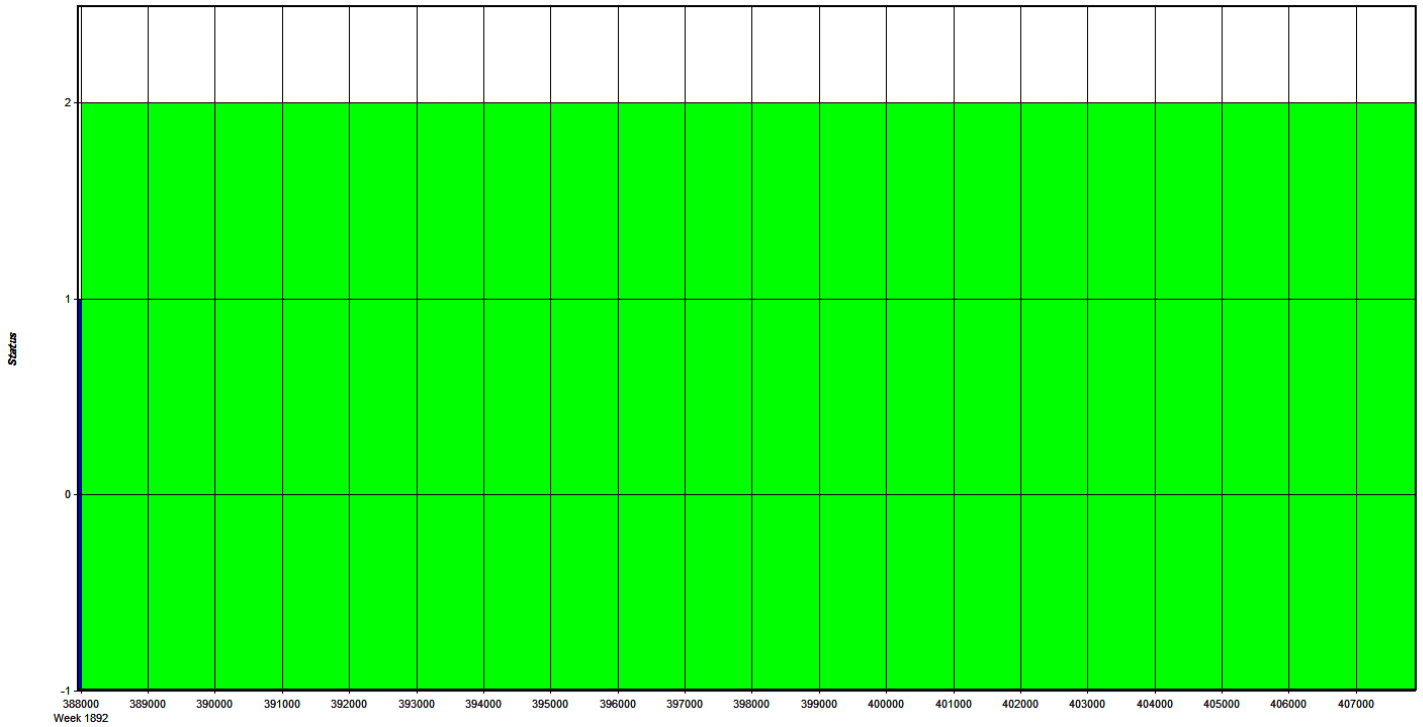
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 2: BARN Name: BARN Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\ASH7\160414_SN7161_...

Coordinates
 Latitude: North 44 05 56.68362 Compute from PPP
 Longitude: West 71 09 34.39925 Enter Grid Values
 Ellipsoidal height: 140.793 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Master Remote

Base Station
 1: MEFR Name: MEFR Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\ASH7\160414_SN7161_

Coordinates
 Latitude: North 44 40 28.97450 Compute from PPP
 Longitude: West 70 07 54.54215 Enter Grid Values
 Ellipsoidal height: 131.643 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Master Remote

Base Station
 3: MERA Name: MERA Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\ASH7\160414_SN7161_

Coordinates
 Latitude: North 44 58 25.33352 Compute from PPP
 Longitude: West 70 39 10.58376 Enter Grid Values
 Ellipsoidal height: 489.568 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRM55971.00, NONE View STA File
 Antenna profile: TRM55971.00 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
4: MESP Name: MESP Disabled
File: E:\Proc\27146_ME_2016_BAA_GPSC\ASH7\160414_SN7161_...

Coordinates
Latitude: North 44 13 06.19617 Compute from PPP
Longitude: West 70 30 47.10740 Enter Grid Values
Ellipsoidal height: 105.463 m Enter MSL Height
Datum: WGS84 Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: TRM55971.00, NONE View STA File
Antenna profile: TRM55971.00 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

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(Email log daily to flight_log_distribution_list@quantumspatial.com)

Date: 4-14-16
 Ltr: (A) B C D E Pg. 1 of 3

Project: USGS Maine MESP
 Proj #: 21146
 Flight Mgmt File: 20160414-114211

Aircraft: N812TB Begin Hobbs: 3913.4 End Hobbs: 3918.7 Total: 5.3 Pilot: Jacobson Co-Pilot: Dyreson
 Tech: Dyreson

Dep Apt: KLEW Dep Time (Local): 07:52 (Z): 11:52 Arr Apt: KLEW Arr Time (Local): 13:12 (Z): 17:12 Tot Time Aloft: 5.3

CORS: (Y) N Sta 1: MESP Sta 2: Flyovers: (Y) N IF Y, times: Sta 1: 1:59, 13:44 Sta 2) Flyovers: (Y) N IF Y, times: Sta 1: 8:12, 07:13, 31:6

GPS Unit: (Y) N Sta 1: LEW1 Sta 2: Pulses in Air: 289

Gd Temp beg: 3 °C End: 10 °C OAT beg: -6 °C End: -7 °C Altimeter begin: 30.43 end: 30.38

Max Glaspd: 150 Avg Ft Spacing: 150
 Power: 100 PFSM: 100

Type	AL570	Serial #	Alt AGL	Alt AMSL	Avg Terr Ht	Pulse Rate	Power	Avg Ft Spacing	PFSM	Mag	Start	End	Storage Name	
FOV	34	57	MPIA (Y) N	Pulses in Air	7400ft	289	100	150	100	17.13	17.16	305	016	
Line #	Mag	Start (UTC)	End (UTC)	Gd Spd	Roll (°)	Yaw (°)	Altitude (ft)	Altitude (ft)	Roll (°)	Yaw (°)	Roll (°)	Yaw (°)	Roll (°)	Yaw (°)
1540	006	12:12	12:13	150	11/18	7487								
1539	186	12:16	12:17	141	11/18	7611								
1538	006	12:20	12:22	148	11/18	7529								
1537	186	12:25	12:27	148	12/17	7421								
1536	006	12:30	12:32	145	12/17	7280								
1535	186	12:35	12:37	152	12/16	7154								
1534	006	12:40	12:42	143	11/17	6931								
1533	186	12:45	12:47	151	11/16	6863								
1532	006	12:50	12:51	145	10/17	6850								
1531	186	12:54	12:55	146	10/17	6850								
1530	79	12:59	13:01	147	10/17	6850								
1547	227	13:04	13:05	149	10/17	6962								
1546	47	13:08	13:09	147	10/17	7034								
1545	227	13:12	13:13	149	10/17	7197								
1544	47	13:16	13:17	146	11/16	7388								
1543	227	13:20	13:21	147	11/17	7371								
1542	47	13:24	13:25	147	11/18	7386								
1541	227	13:28	13:29	149	10/18	7586								
1540	134	13:34	13:35	144	11/18	7545								

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

Cross the fire lines 1540-1531

Total Prof Lines: 142 Lines Flown: 8 Lines Remain: 0 Online Time: 1.4 Mob Time: 0.3 Notes: Continued on next page

Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log daily to flight_log_distribution_list@quantumspatial.com)

Date: 4-14-16
 LITE (A) B C D E Pg 2 of 3

Project: USGS Maine MEFR
 Flight Mgmt File: 20160414_114211

Aircraft: N812TB Begin Hobbs: 3913.4 End Hobbs: 3918.7 Total: 5.3 Pilot: Jacobsen Co-Pilot: Tech: Dyrnesen

Dep Apt: KLEW Dep Time (Local): 07:52 Arr Apt: KLEW Arr Time (Local): 13:12 (Z): 17:12 Tot Time Aloft: 5.3

CORS: N Sta 1: MEFR Flyovers: N IF Y, times: Sta1) Sta2) 13:58, 15:39
 N Sta 2: Flyovers: N IF Y, times: Sta1) Sta2) 13:58-14:00, 15:39-15:25

GPS Unit: N OAT beg: -6 °C End: -7 °C Altimeter begin: 30.43 end: 30.38
 Gd Temp beg: 3 °C End: 10 °C OAT beg: -6 °C End: -7 °C

Type	FOV	Serial #	Scan Freq	Alt AGL	Alt AMSL	Max Gdspd	Avg Pt Spacing	Pulse Rate	Power	Storage Name
LIDAR	40	AL570	53	1161	1800ft	150	150	261	100	016

Line #	Hgt	Start (UTC)	End (UTC)	Gd Spd	Roll/Pitch	GPS Altitude	Crab	Turn
3069	260	14:04	14:05	147	1.2/16	8237		
3070	80	14:09	14:09	143	1.2/16	8333		
3071	260	14:12	14:13	149	1.3/15	8303		
3068	246	14:19	14:22	152	1.2/15	8324		
3067	66	14:24	14:27	146	1.4/14	7720		
3066	246	14:30	14:33	151	1.3/14	7420		
3065	66	14:35	14:38	141	1.2/15	8146		
3064	246	14:41	14:43	153	1.0/17	8182		
3063	66	14:46	14:49	151	1.1/16	8182		
3062	246	14:52	14:55	149	1.1/16	8241		
3061	66	14:58	15:01	152	1.1/16	8035		
3060	246	15:04	15:07	150	0.9/18	7874		
3059	66	15:09	15:12	149	0.9/18	7745		
3144	156	15:16	15:18	152	0.9/19	7526		
		15:25	15:45					

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

Cross the for lines 3069-3071

too much snow?

still a little snow in lines 3061-3059 / 3144?

snow recon on MEFR black → moving to Berth desk

Total Proj Lines: 145 Lines Flown: 14 Lines Remain: 31 Online Time: 1.2 Mob Time: 1.0 Notes:

Continued on next page

0.5
6.5

Generated by CamScanner

Quantum Spatial
Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: 4-14-16
Utr: ABCDE
Pg 3 of 3

Project: USGS Maine Berlin Proj #: 21146 Flight Mgmt File: 20160414-114211 Tech: Dyrnes 41

Aircraft: N812TB Begin Hobbs: 3913.4 End Hobbs: 3918.7 Total: 5.3 Pilot: JCOBSON Co-Pilot:

Dep Apt: KLEW Dep Time (UTC): 07:52 (Z): 11:52 Arr Apt: KLEW Arr Time (Local): 13:12 (Z): 17:12 Tot Time Aloft: 5.3

CORS: Y/N Sta 1: Sta 2: Flyovers: Y/N IF Y, times: Sta 1) Sta 2)

GPS Unit: N Sta 1: BML bise station Sta 2: Flyovers: (Y/N) IF Y, times: Sta 1) 16:52 Sta 2) 16:58-16:45

Gd Temp beg: 3 °C End: 10 °C OAT beg: -6 °C End: -7 °C Altimeter begin: 30.43 end: 30.38

LIDAR Type: ALS 70 Scan Rate: 1161 Max Gdspd: 150 Avg Ft Spacing: 276
FOV: 40 Scan Freq: 53 Power: 100 PPRM: 29

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	Foot-cans	GPS Altitude	Crab	Temp (0..1)
2057	350	15:51	15:52	150	1.2/16	8180		
2056	150	15:55	15:56	153	1.2/16	8496		
2055	330	16:00	16:01	145	1.2/16	8347		
2054	150	16:04	16:05	151	1.3/16	8010		
2053	330	16:08	16:10	143	1.3/17	7740		
2052	150	16:13	16:14	150	1.2/17	7638		
2051	330	16:17	16:18	149	1.2/17	7620		
2050	150	16:21	16:22	151	1.2/17	7620		
2049	330	16:25	16:26	144	1.2/18	7718		
2048	150	16:29	16:30	150	1.2/18	7787		
2047	330	16:34	16:34	144	1.2/18	7827		
2046	150	16:37	16:38	154	1.2/18	8202		
2042	61	16:42	16:44	145	1.3/17	7710		

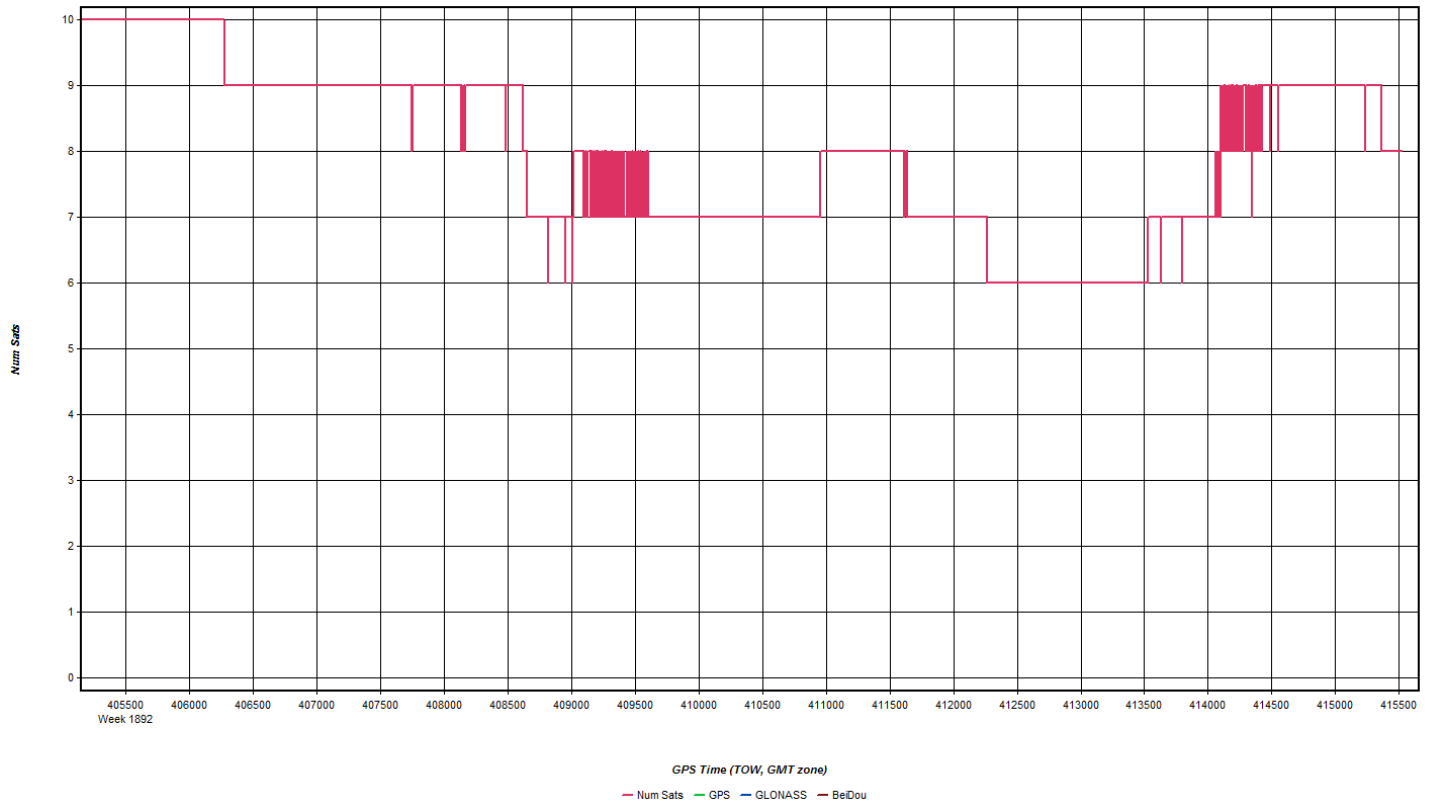
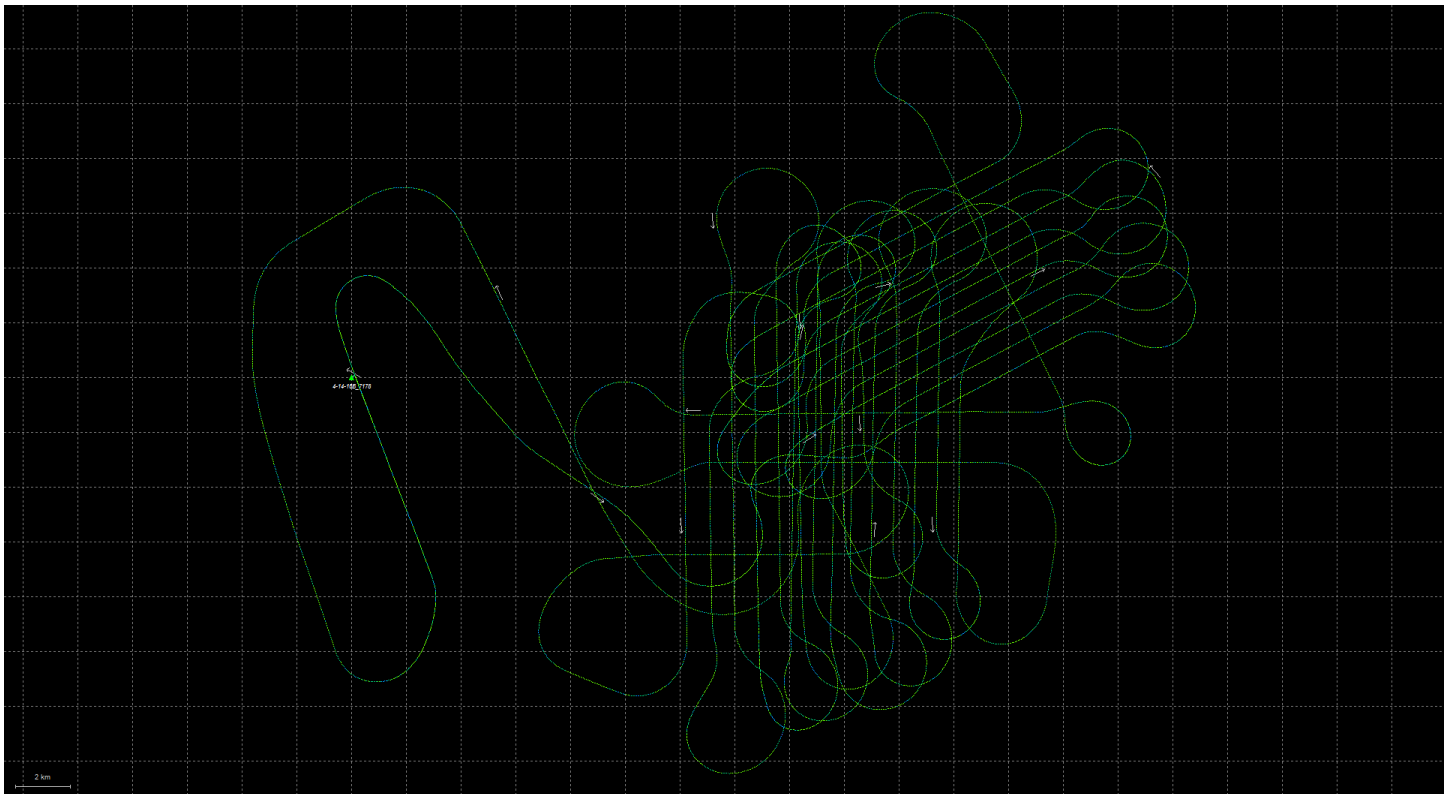
FLIGHT LINE NOTES - visibility, clouds, smoke, paramk, etc.

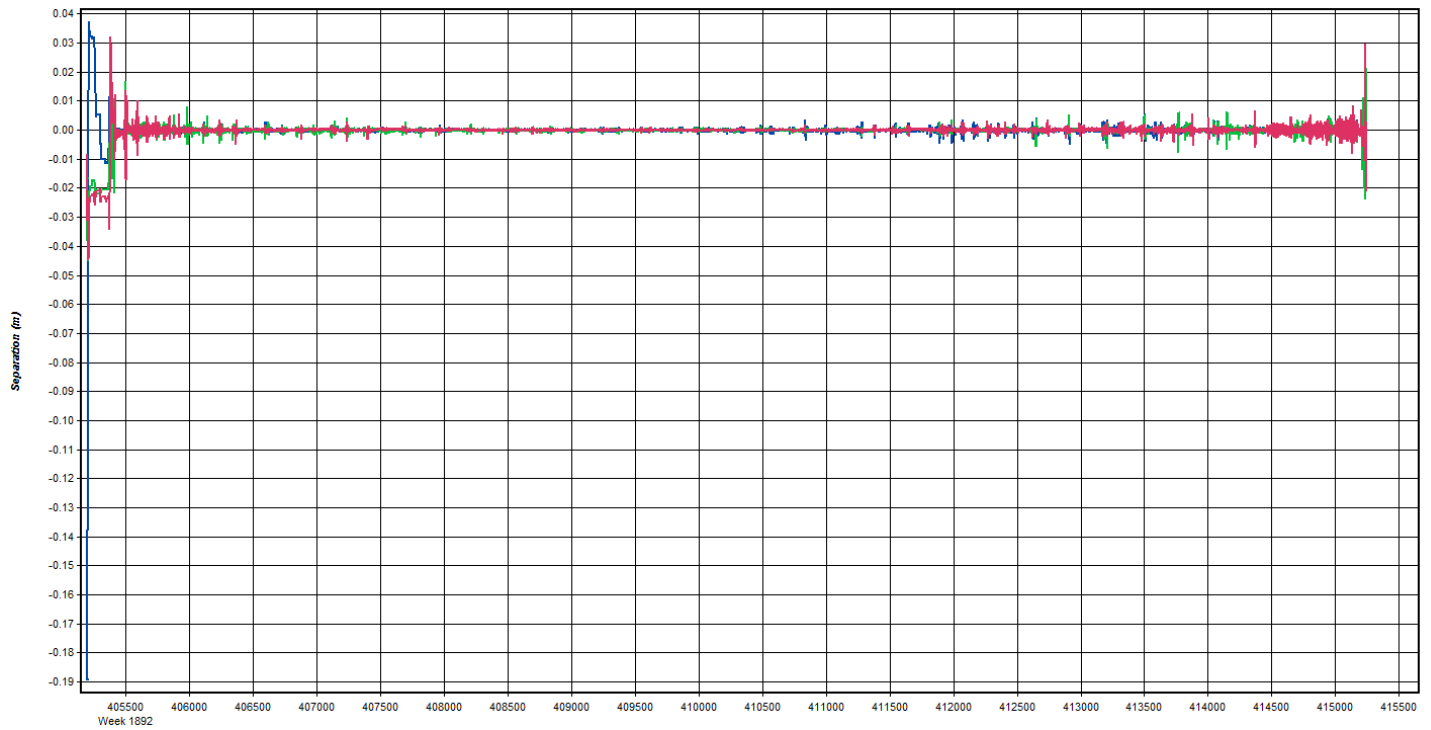
Total Proj Lines: 94 Lines Flown: 13 Lines Remain: Online Time: 0.9 Mob Time: 0.6 Notes:

6.1 x 0.5

Generated by CamScanner

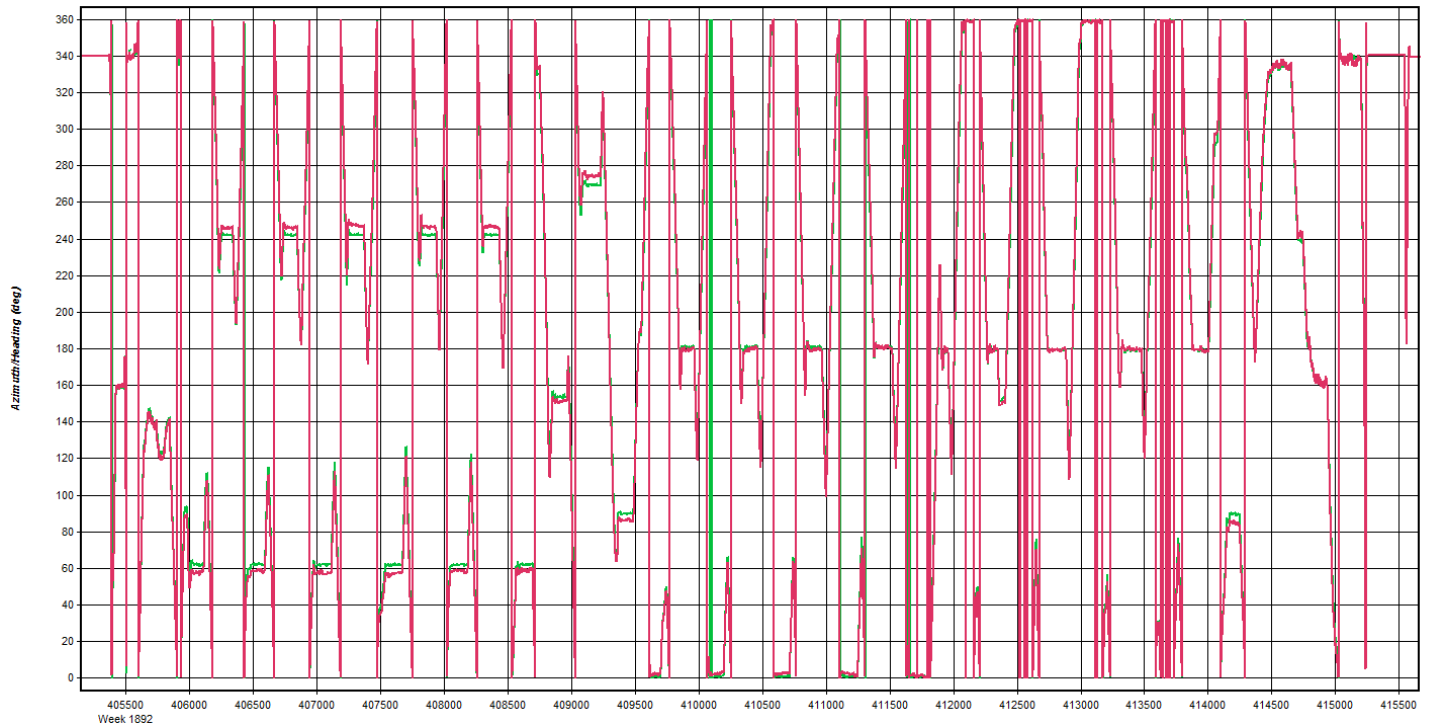
Apr 14, 2016-B (N73TM, SN7178)





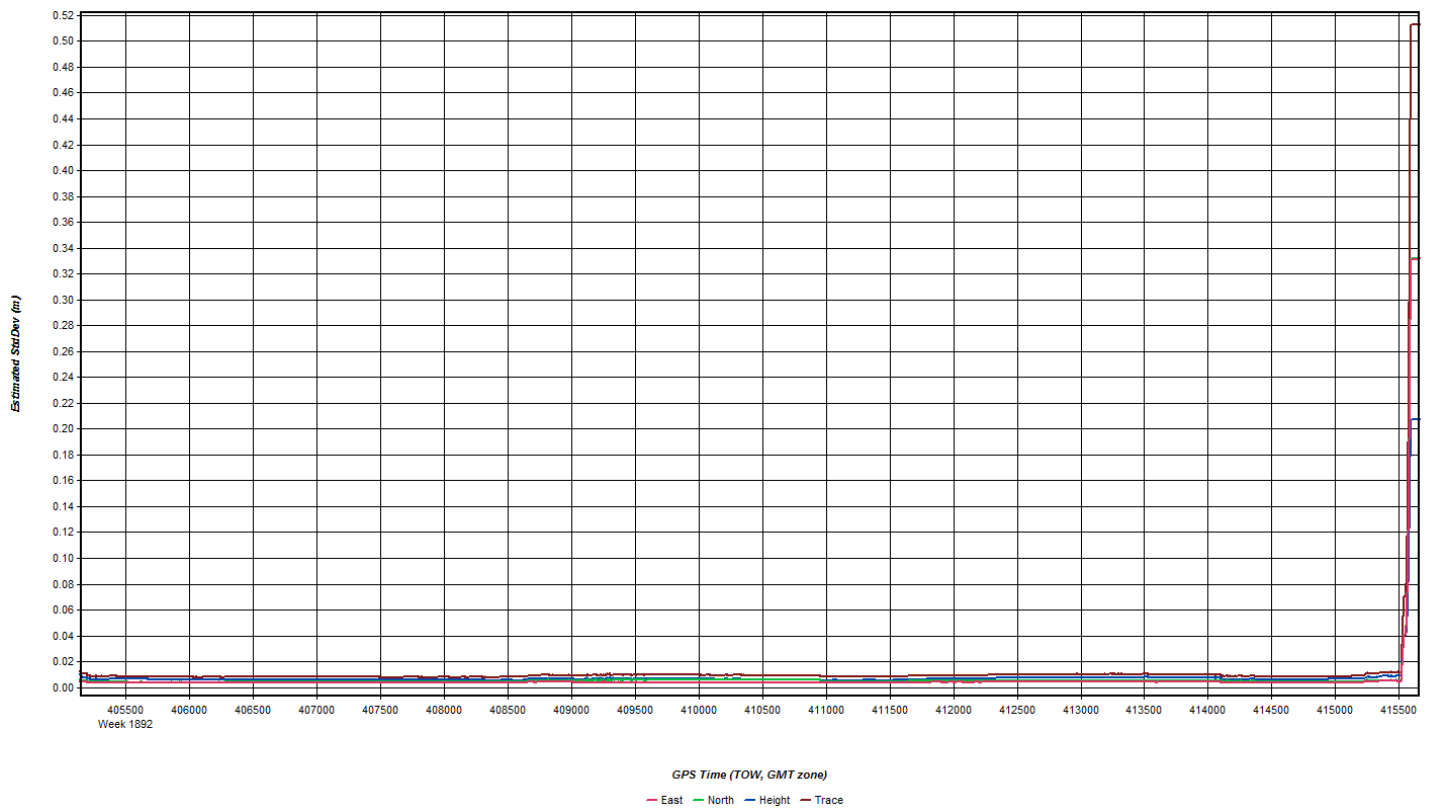
GPS Time (TOW, GMT zone)

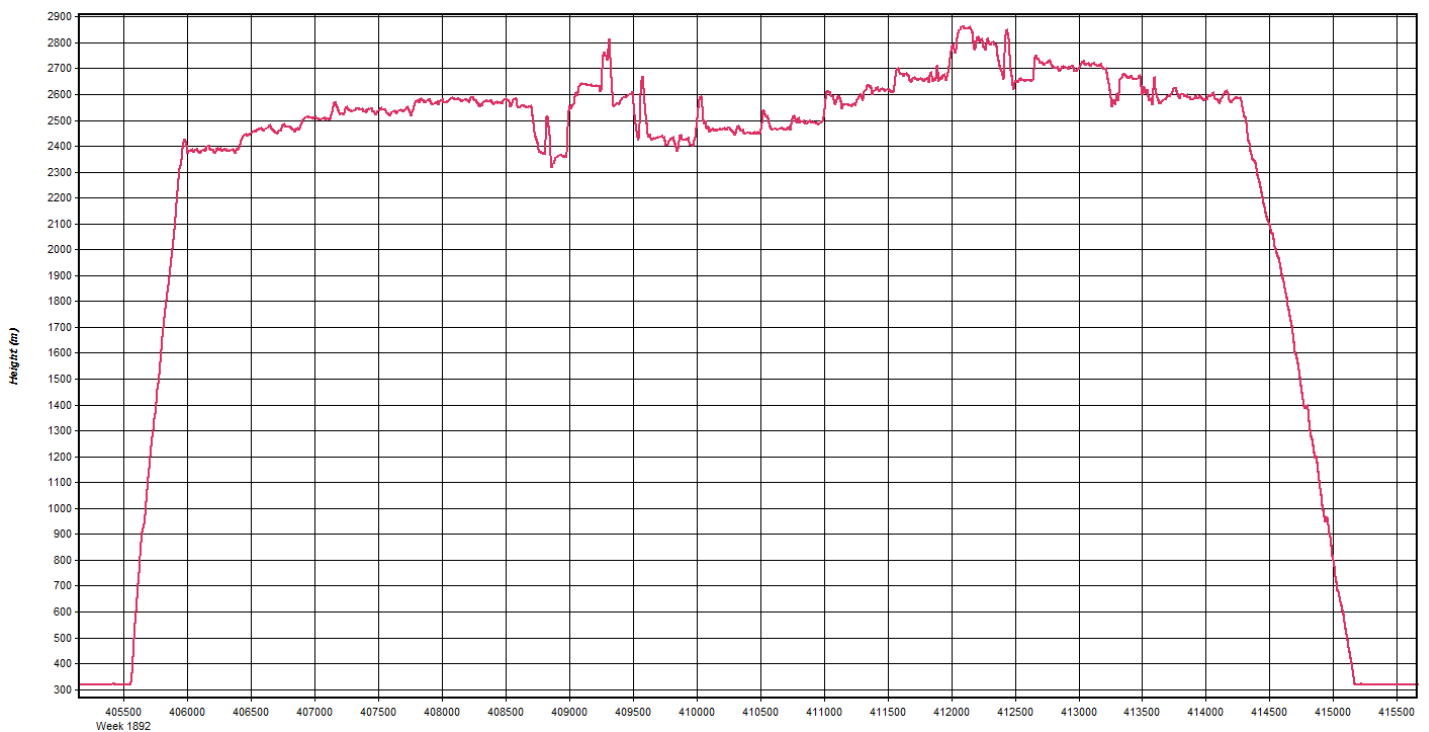
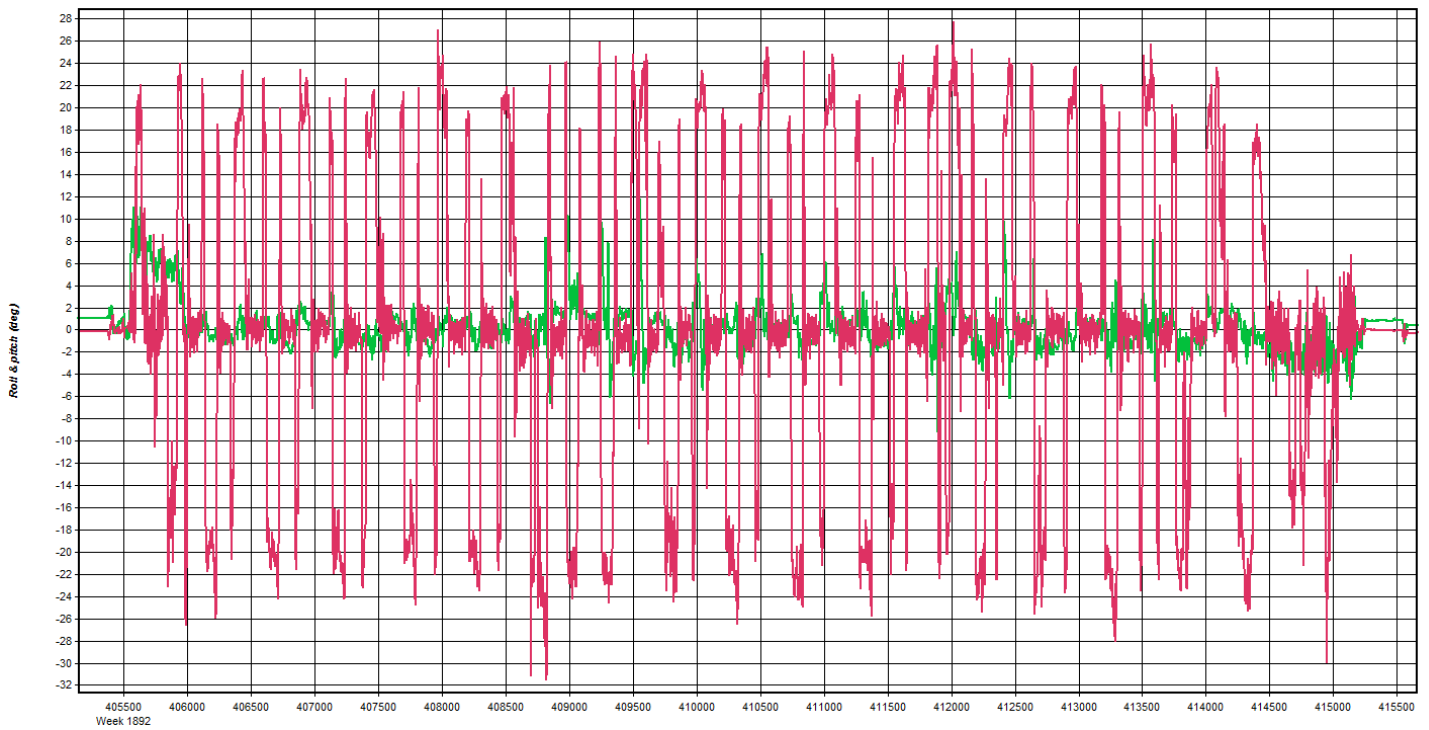
— East — North — Up

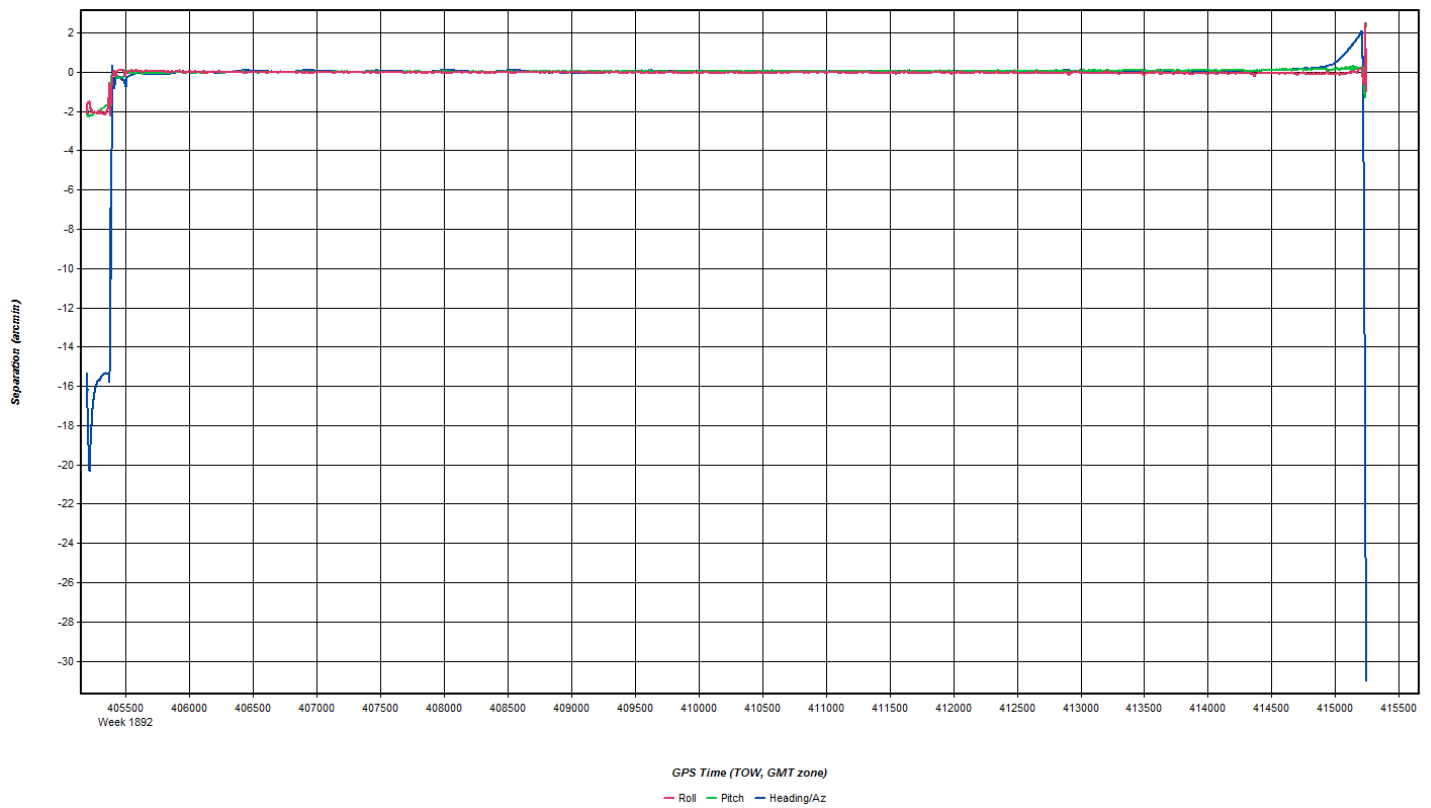
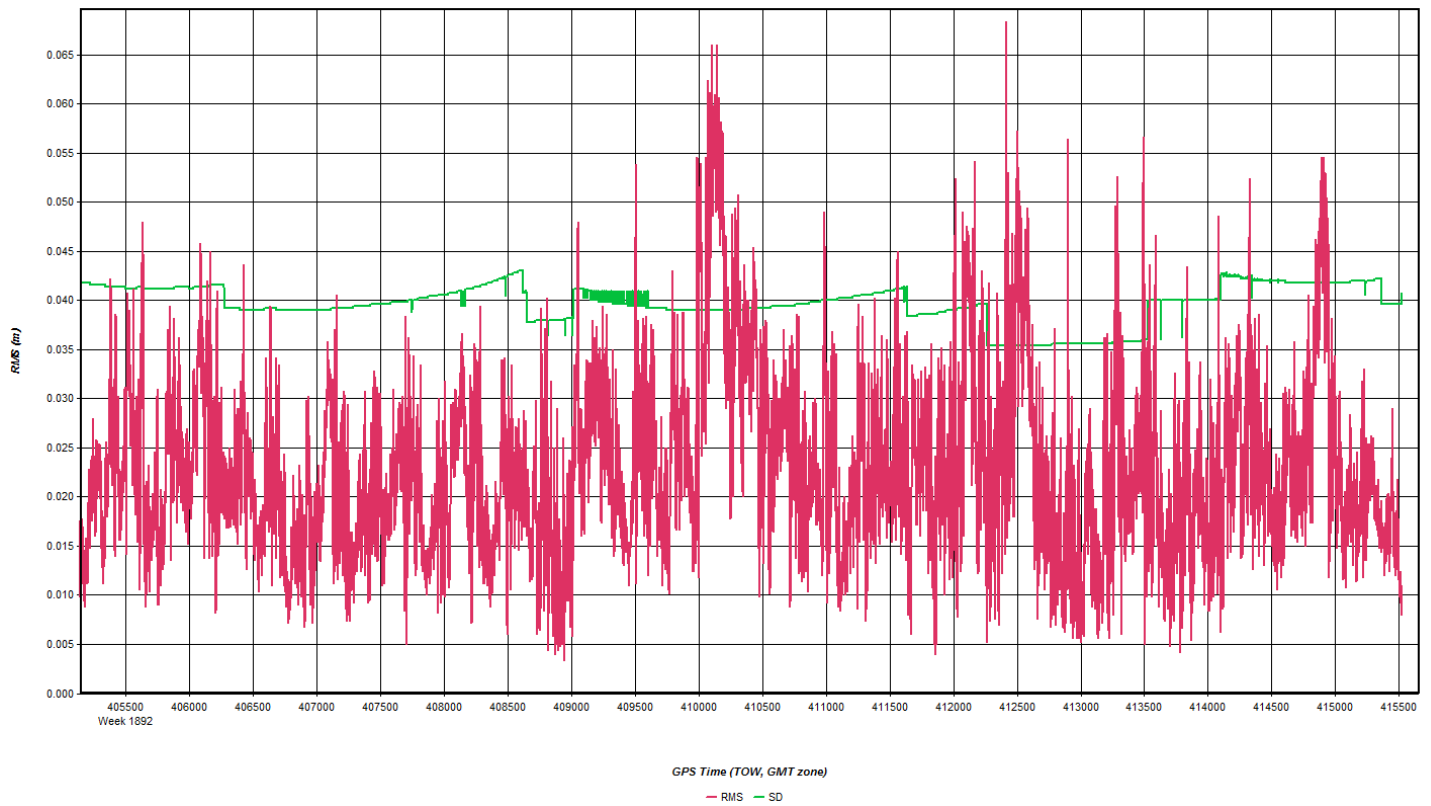


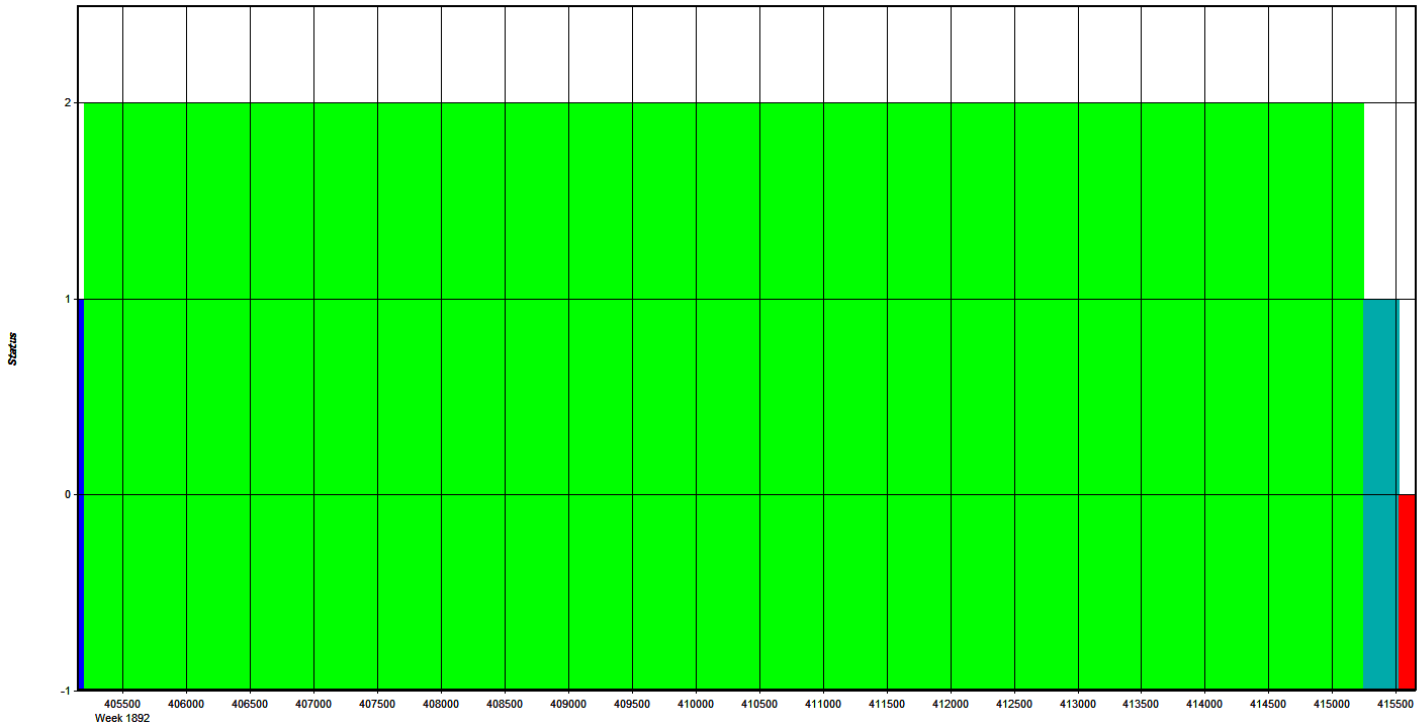
GPS Time (TOW, GMT zone)

— Heading/Azimuth — GPS-COG









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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: 4-14-16B_7178 Name: 4-14-16B_7178 Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\4628\20160414b-7178\G

Coordinates
 Latitude: North 44 34 37.37822 Compute from PPP
 Longitude: West 71 10 43.67149 Enter Grid Values
 Ellipsoidal height: 318.188 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: N/A View STA File
 Antenna profile: NOV702GG Info
 Measured height: 2.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 2.067 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Flight Log

Project: USGS WESTERN MAINE **Proj #:** 27116 **Date:** APRIL 14th, 2016
(email log daily to flight_log_distribution_list@quantumspatial.com) 20160414 - 16:29:49 Pg. 1 of 2

Alcrafter: N737M **Begin Hobbs:** 6170.8 **End Hobbs:** 617 **Flight Mgmt File:** USGS_Maine_Berlin_SN717B-150.kts
USGS_Maine_Berlin_SN717B-150.kts **Pilot:** J. BILLYINGTON **Co-Pilot:** Tech: P. HRASAK

Dep Apt: KBML **Dep Time (Lcl):** 12:38 **Zf:** 16:38 **Arr Apt:** KBML **Arr Time (Local):** 15:19 **Zf:** 19:19 **Tot Time Aloft:** 2:41

CORS: Y/N Sta 1: - **Flyovers:** Y/N IF Y, times: Sta1) - **Sta2)** -

GPS Unit: Y/N Sta 1: "BEELIN" (PID: 40304) Sta 2: - **Flyovers:** Y/N IF Y, times: Sta1) STAYIC **Sta2)** -

Gd Temp beg: 7.09 °C **End:** 7.09 °C **OAT beg:** 7.09 °C **End:** 7.09 °C **SEE SHEET TWD**

Type	FOV	Senal #	Scan Freq	Alt AGL	Alt AMSL	Pulses In Air	Avg Terr Ht	Max Gapped	Avg Pt kts	Power	PPSM	Storage	
												End CB	Tot CB
LIDAR	40°	717B	53.4 Hz	4965'	4965'	MP(A)N	VARIES	VARIES	150 kts	7	2.2	203	18

Altimeter begin: 30.33" **end:** 30.33" **SEE SHEET TWD**

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	POD/Stats	GPS Altitude	Crab	Turb (0-4)	Notes
2045	NE	16:46	16:58	145 kts	1.3/17	7820'	4°	0	good vis., smooth, skc above & below, almost no snow
2044	SW	16:50	16:52	155 kts	1.1/18	7840'	4°	0	good vis., smooth, skc above & below, almost no snow
2043	NE	16:54	16:56	150 kts	1.1/18	8060'	3°	0	good vis., smooth, skc above & below, almost no snow
2042	SW	16:58	17:00	155 kts	1.3/17	8120'	4°	0	good vis., smooth, skc above & below, almost no snow
2041	NE	17:03	17:05	155 kts	1.3/17	8220'	4°	0	good vis., smooth, skc above & below, almost no snow
2040	SW	17:07	17:09	155 kts	1.4/17	8320'	6°	0	good vis., smooth, skc above & below, almost no snow
2039	NE	17:12	17:14	145 kts	1.2/17	8280'	5°	0	good vis., smooth, skc above & below, almost no snow
2038	SW	17:17	17:18	155 kts	1.1/18	8440'	5°	0	good vis., smooth, skc above & below, almost no snow
2037	NE	17:21	17:22	150 kts	1.2/18	8460'	3°	0	good vis., smooth, skc above & below, almost no snow
2036	SW	17:25	17:26	155 kts	1.1/19	8440'	5°	0	good vis., smooth, skc above & below, almost no snow
2035	NE	17:29	17:31	155 kts	1.0/20	8380'	4°	0	good vis., smooth, skc above & below, almost no snow
2099	SE	17:34	17:35	185 kts	1.0/20	7800'	1°	0	good vis., smooth, skc above & below, almost no snow
2097	W	17:38	17:40	170 kts	1.0/20	8640'	6°	0	good vis., occ. turb, skc above & below, almost no snow
2098	E	17:42	17:44	165 kts	1.0/20	8400'	4°	0	good vis., occ. turb, skc above & below, almost no snow
2025	N	17:47	17:48	165 kts	1.1/18	7970'	2°	0	good vis., occ. turb, skc above & below, almost no snow
2024	S	17:51	17:52	155 kts	1.1/18	7940'	1°	0	good vis., occ. turb, skc above & below, almost no snow
2023	N	17:54	17:56	150 kts	1.1/18	8060'	1°	0	good vis., occ. turb, skc above & below, almost no snow
2022	S	17:59	18:00	160 kts	1.1/18	8000'	2°	0	good vis., occ. turb, skc above & below, almost no snow

Total Proj Lines: 99 **Lines Flown:** 33 **Lines Remain:** 0 (?) **Online Time:** 2:17 **Mob Time:** 0:74 **Notes:** 20160414-162949 E - 163156

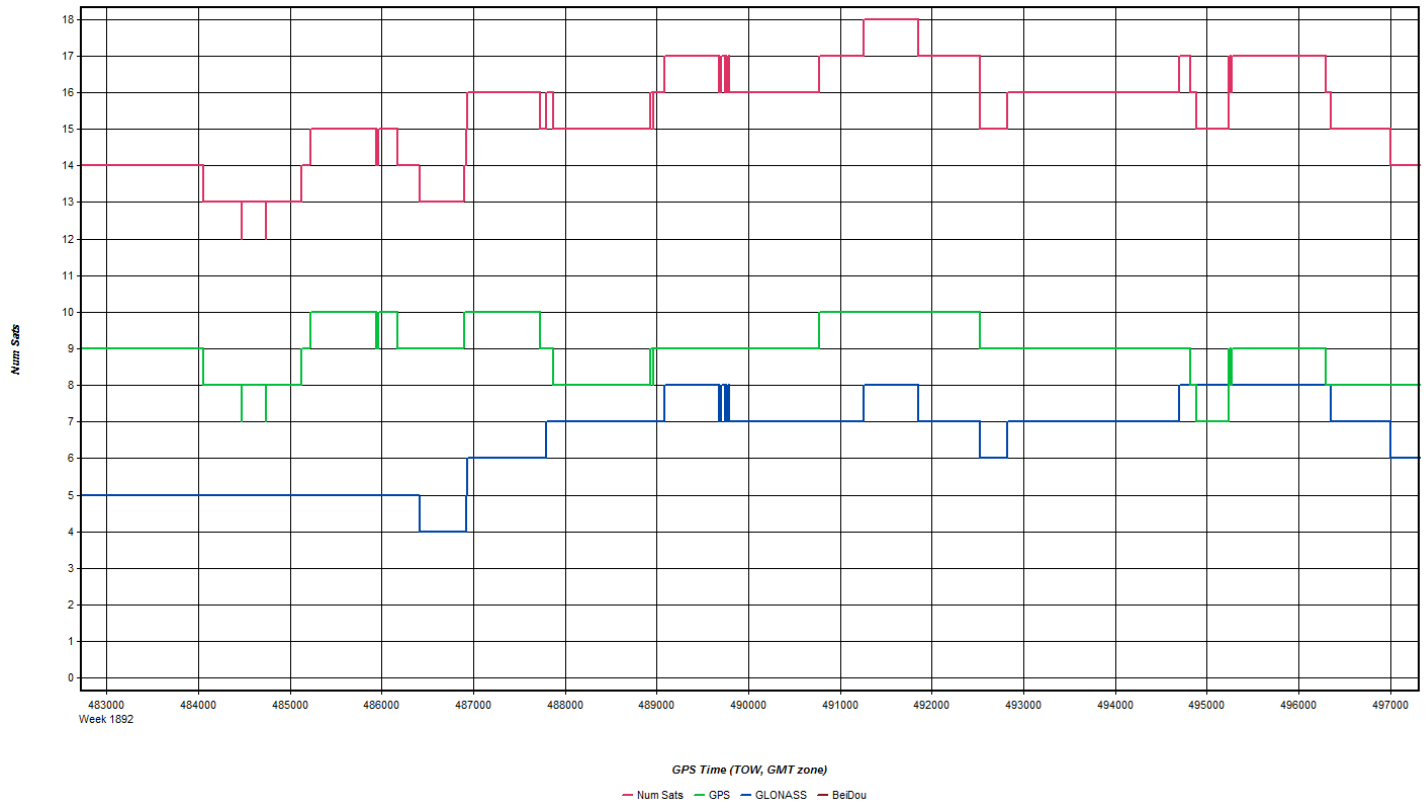
Quantum Spatial
Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
 [email:log_shty_to_flight_log_distribution_list@quantumspatial.com] 2/16/04/14-162949 Page 2 of 2
 Date: April 14th, 2016
 Project: USGS WESTERN MOUNTAIN Proj #: 27116 Flight Mgmt File: USGS_Maine_Bearlin-SM717B-15D.kts
 Aircraft: N73TM Begin Hobbs: 6173.7 Total: 2.9 Pilot: J. BILLINGTON Co-Pilot: - Tech: P. HERRON
 Dep Apt: KBML Dep Time (Lcl): 12:38 (Z: 16:38 z) Arr Apt: KBML Arr Time (Local): 15:19 (Z: 19:19 z) Tot Time Aloft: 2:41
 CORS: Y (N) Sta 1: - Sta 2: - Flyovers: Y/N If Y, times: Sta1 - Sta2 -
 GPS Unit: Y/N Sta 1: "BEARLIN" (P1B: P0316) Sta 2: - Flyovers: Y (N) If Y, times: Sta1 STATIC STATIC -
 Gd Temp beg: SEE SHEET 1 °C End: 12 °C OAT beg: SEE SHEET 1 °C End: 06 °C Altimeter begin: SEE SHEET 1 end: 30.33"
 Type: ALS7D Serial #: 7173 ALT: 4965' ALT: VARIABLES Max Spacing: ? Storage Name: ALS7D
 FOV: 4.0° Scan Freq: 53.4 Hz MPA: (X) N Pulses In Air: 2 Pulse Rate: 260.4 kHz Power: 100% PPSM: 2.2 End GB: 203 Tot GB: 18

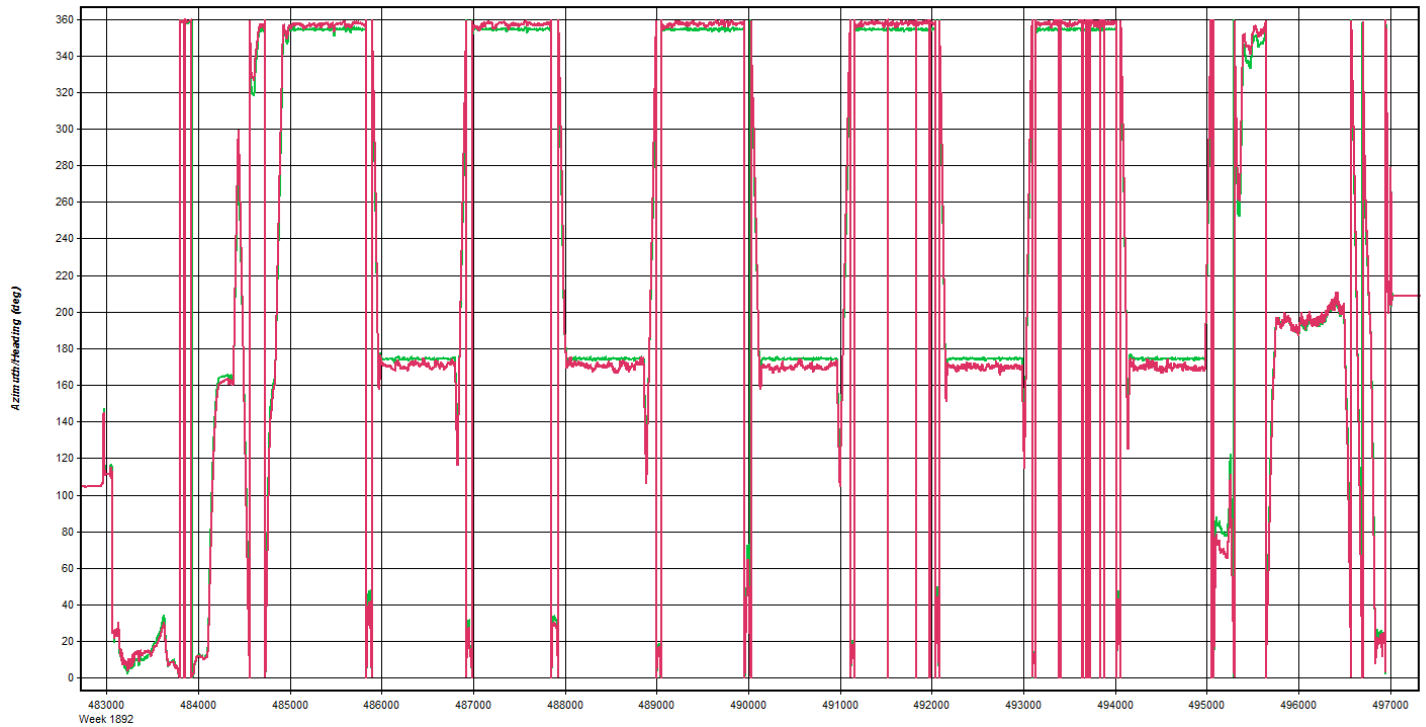
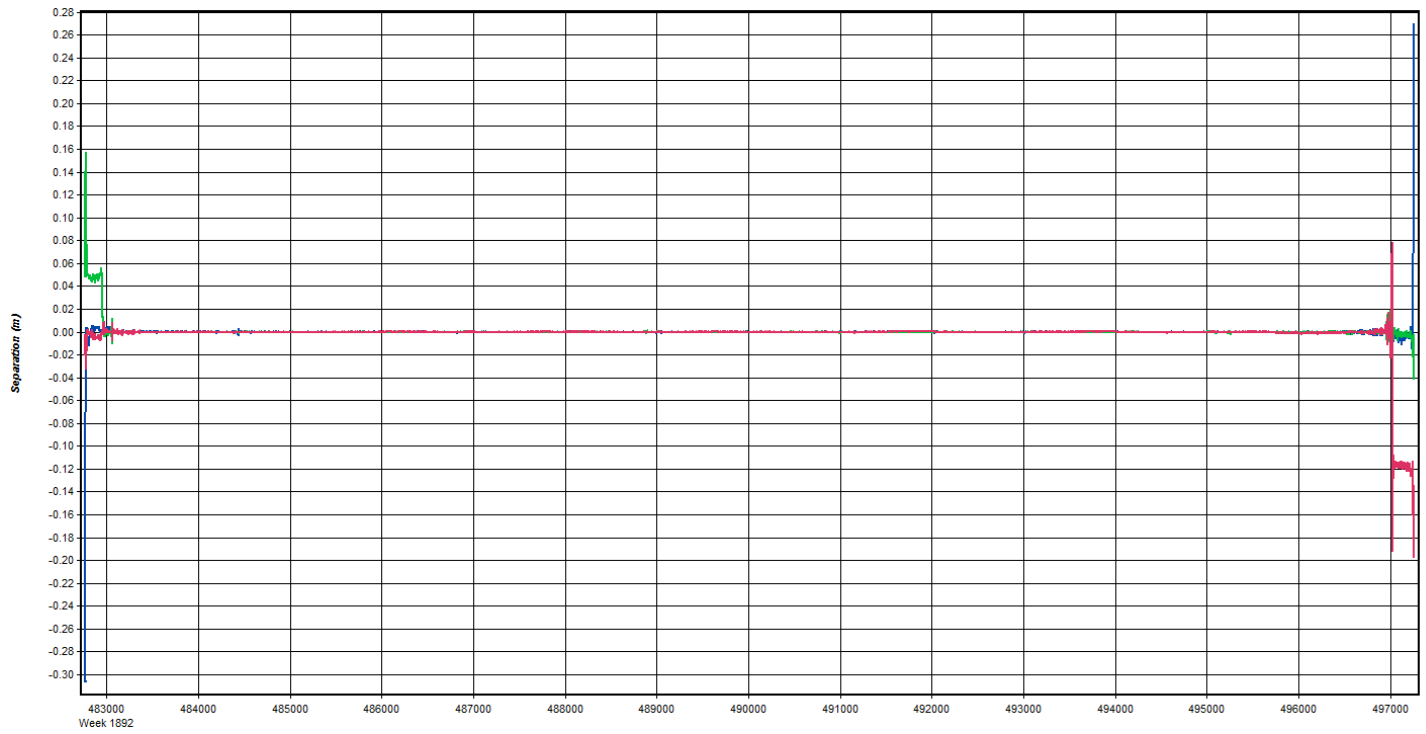
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	FOOTPRINT	GPS Altitude	Crab	Turb	FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.
2021	N	18:03	18:04	155 kts	1.1/1.8	8100'	2°	0	good vis, cont - turb, s/c above & below, 2 almost no snow
2000	S	18:07	18:09	155 kts	1.1/1.8	8180'	2°	0	good vis, cont - turb, s/c above & below, 2 almost no snow
2019	N	18:12	18:13	155 kts	1.2/1.6	8400'	2°	0	good vis, cont - turb, s/c above & below, 2 almost no snow
2018	S	18:16	18:18	160 kts	1.3/1.5	8600'	1°	0	good vis, cont - turb, s/c above & below, 2 almost no snow
2017	N	18:21	18:23	155 kts	1.2/1.6	8730'	1°	0	good vis, cont - turb, s/c above & below, 2 almost no snow
2034	S	18:25	18:25	160 kts	1.1/1.8	8740'	1°	0	good vis, occ - turb, s/c above & below, 2 almost no snow
2033	N	18:28	18:29	145 kts	1.0/1.9	9350'	1°	0	good vis, smooth, s/c above & below, 2 almost no snow
2032	S	18:31	18:32	160 kts	1.0/1.9	9170'	1°	0	good vis, occ - turb, s/c above & below, 2 almost no snow
2031	N	18:34	18:36	155 kts	1.0/1.9	8600'	2°	0	good vis, smooth, s/c above & below, 2 almost no snow
2030	S	18:39	18:41	155 kts	1.1/1.8	8900'	1°	0	good vis, smooth, s/c above & below, 2 almost no snow
2029	N	18:43	18:45	145 kts	1.1/1.8	8900'	1°	0	good vis, smooth, s/c above & below, 2 almost no snow
2028	S	18:48	18:51	155 kts	1.1/1.8	8700'	1°	0	good vis, smooth, s/c above & below, 2 almost no snow
2027	N	18:53	18:55	155 kts	1.1/1.8	8430'	1°	0	good vis, smooth, s/c above & below, 2 almost no snow
2026	S	18:58	18:59	160 kts	1.1/1.8	8780'	1°	0	good vis, smooth, s/c above & below, 2 almost no snow
2016	E	19:02	19:03	165 kts	1.1/1.8	8480'	5°	0	good vis, smooth, s/c above & below, 2 almost no snow [CROSS LINE] ("FIG 8" @ 19:05)

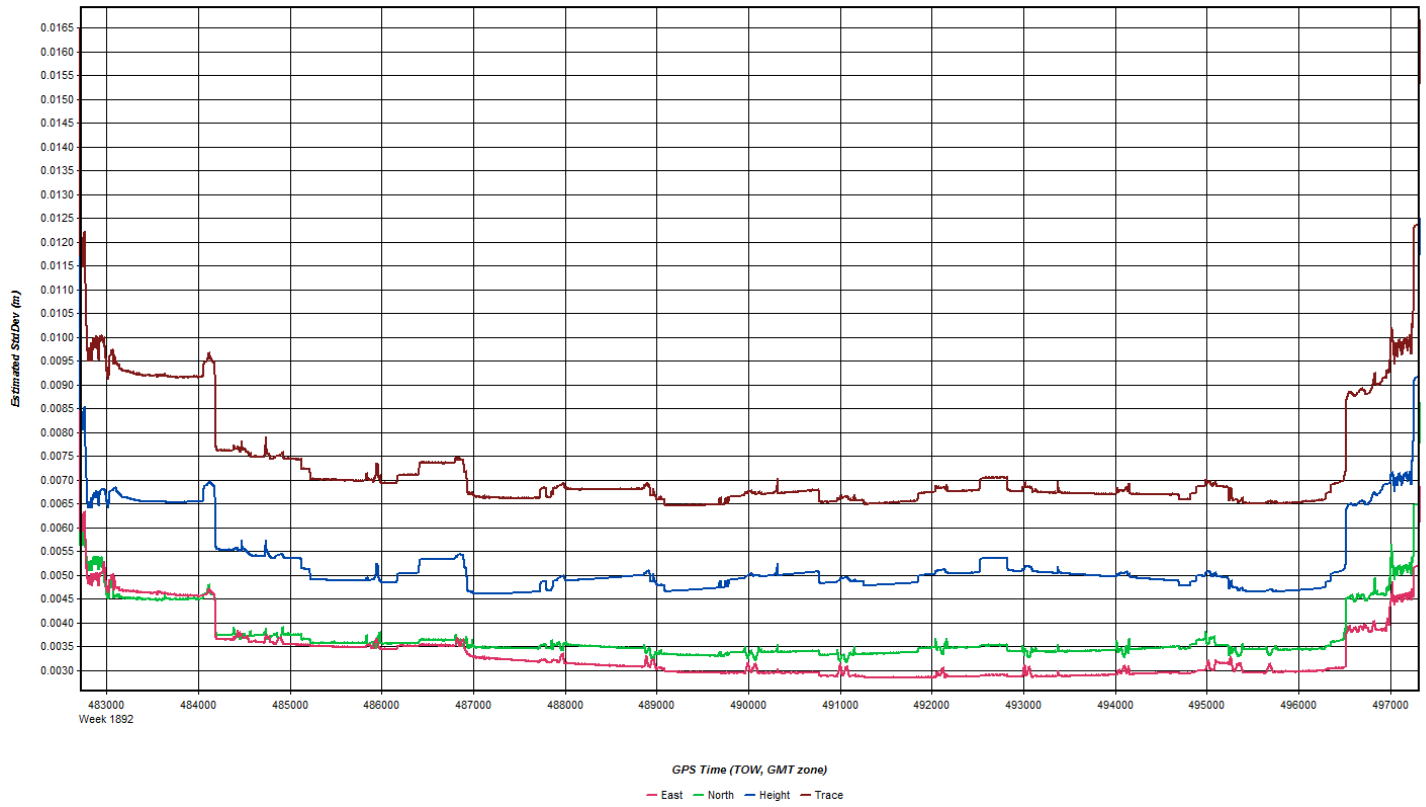
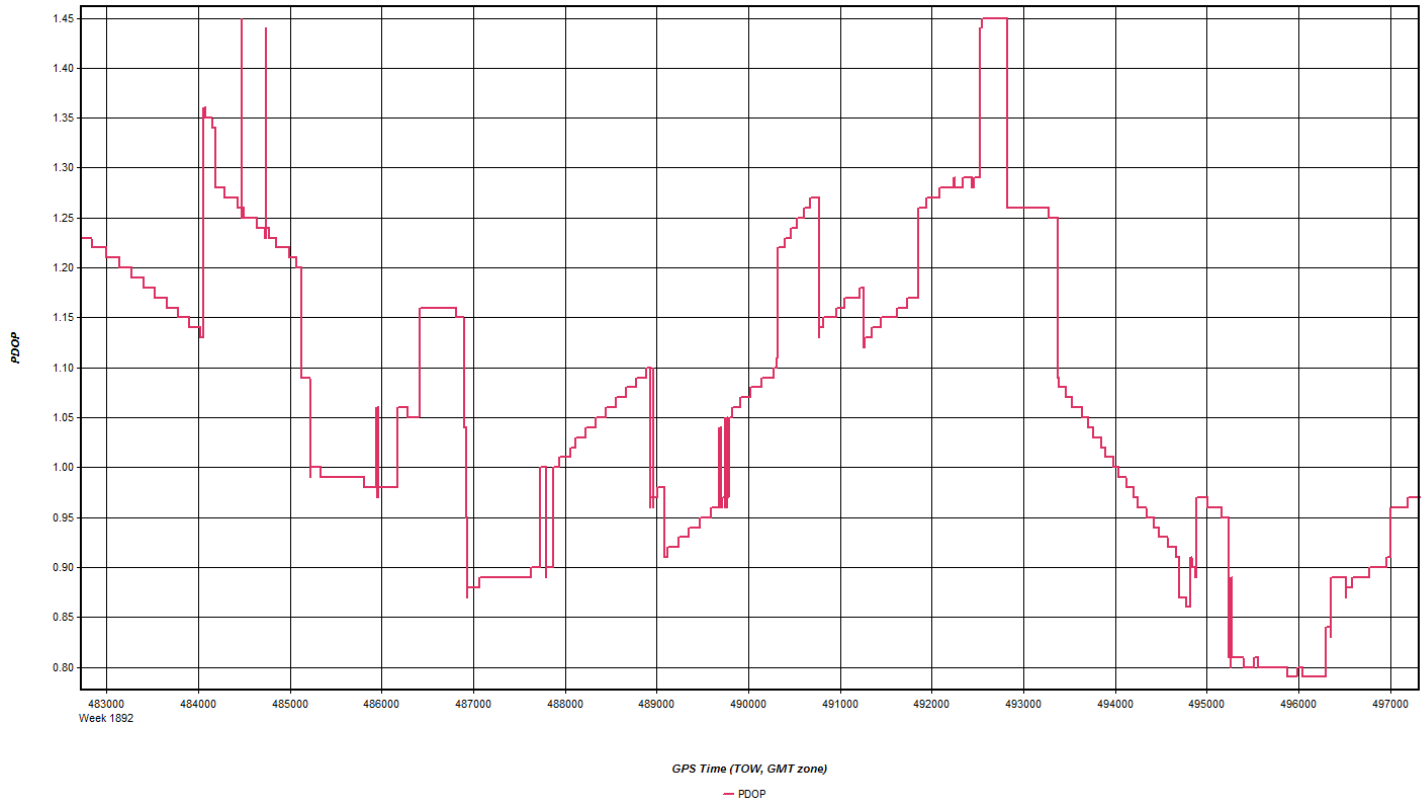
→ LANDED DUE TO POTENTIAL BLOCK COMPLETION, RELOADING
 ACCEPTANCE OF OTHER CREW'S DATA COLLECTION ←

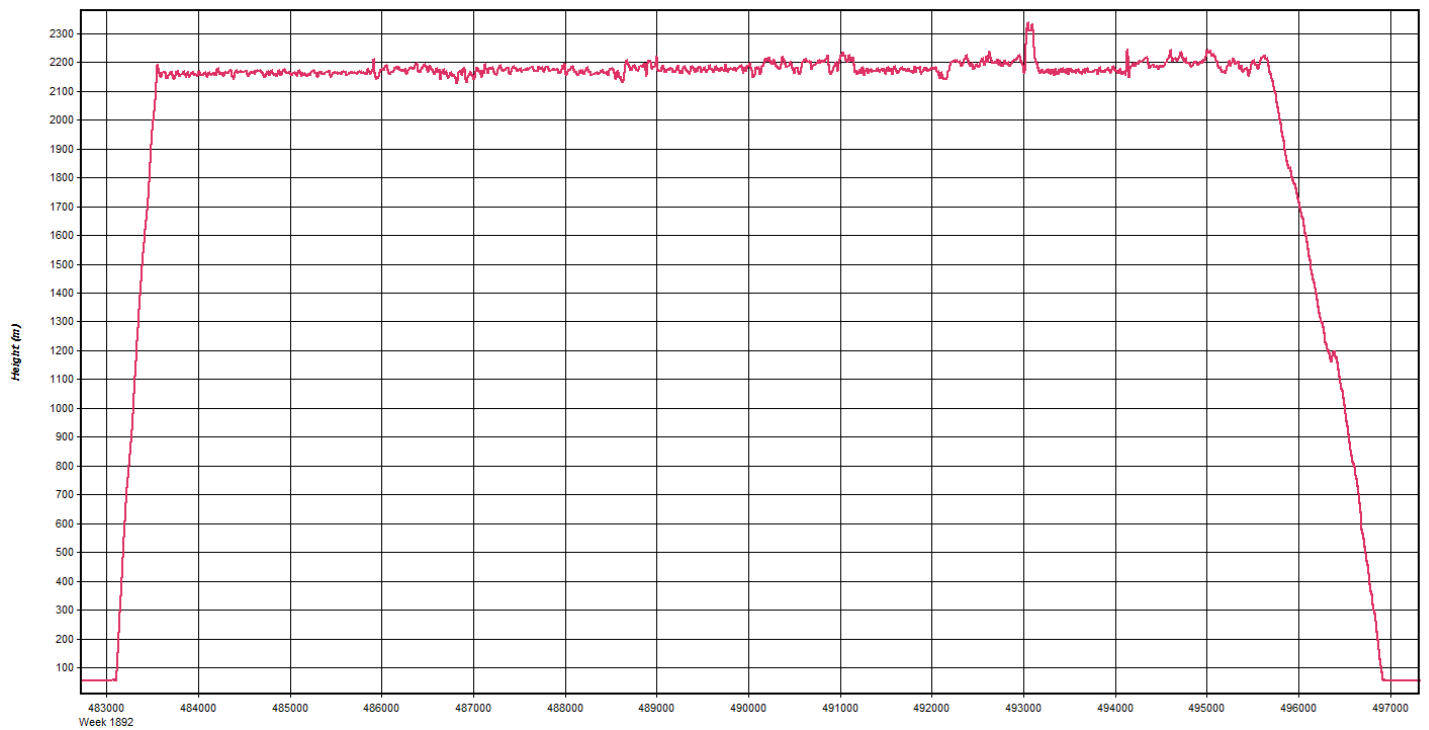
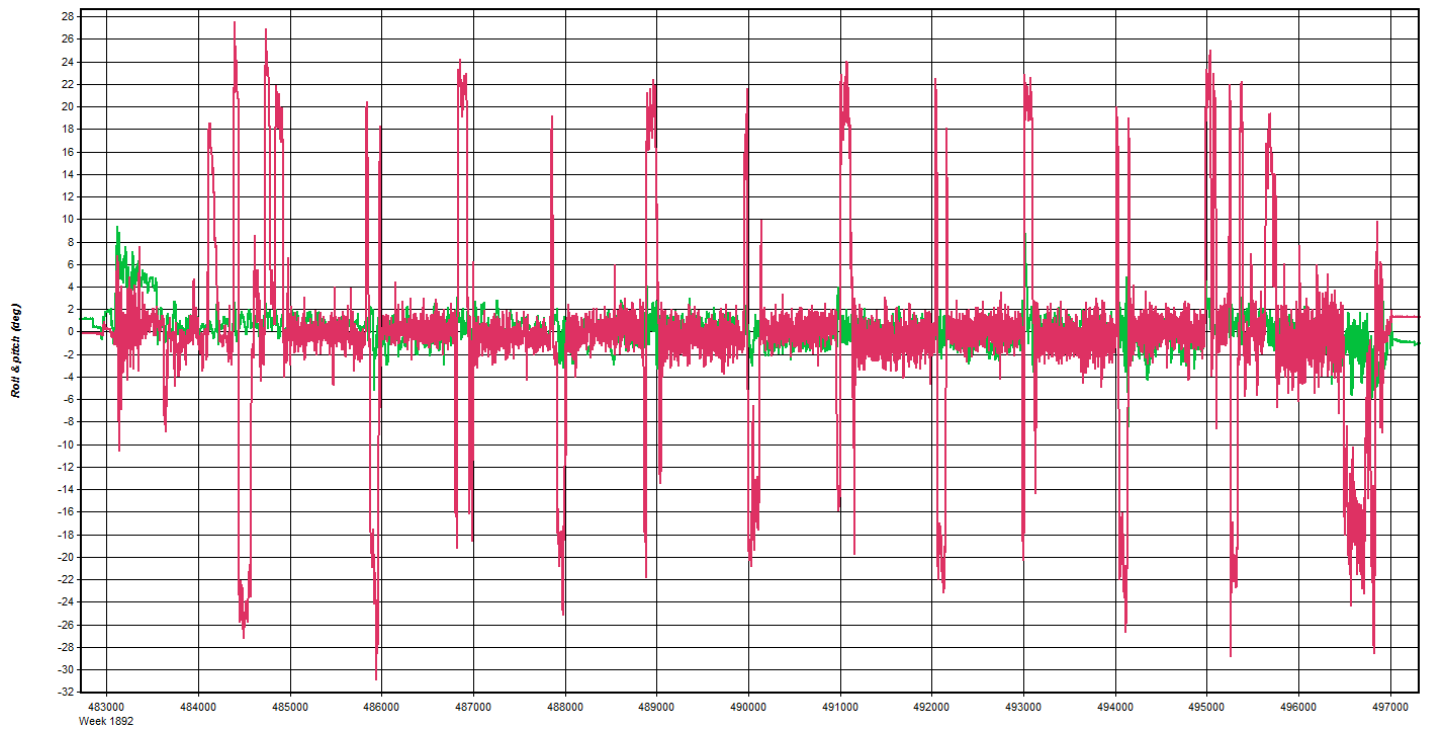
Total Proj Lines: 99 Lines Flown: 33 Lines Remain: 0 (?) Online Time: 2:17 Mob Time: 0:24 Notes: 20160714-162949 z - 122723

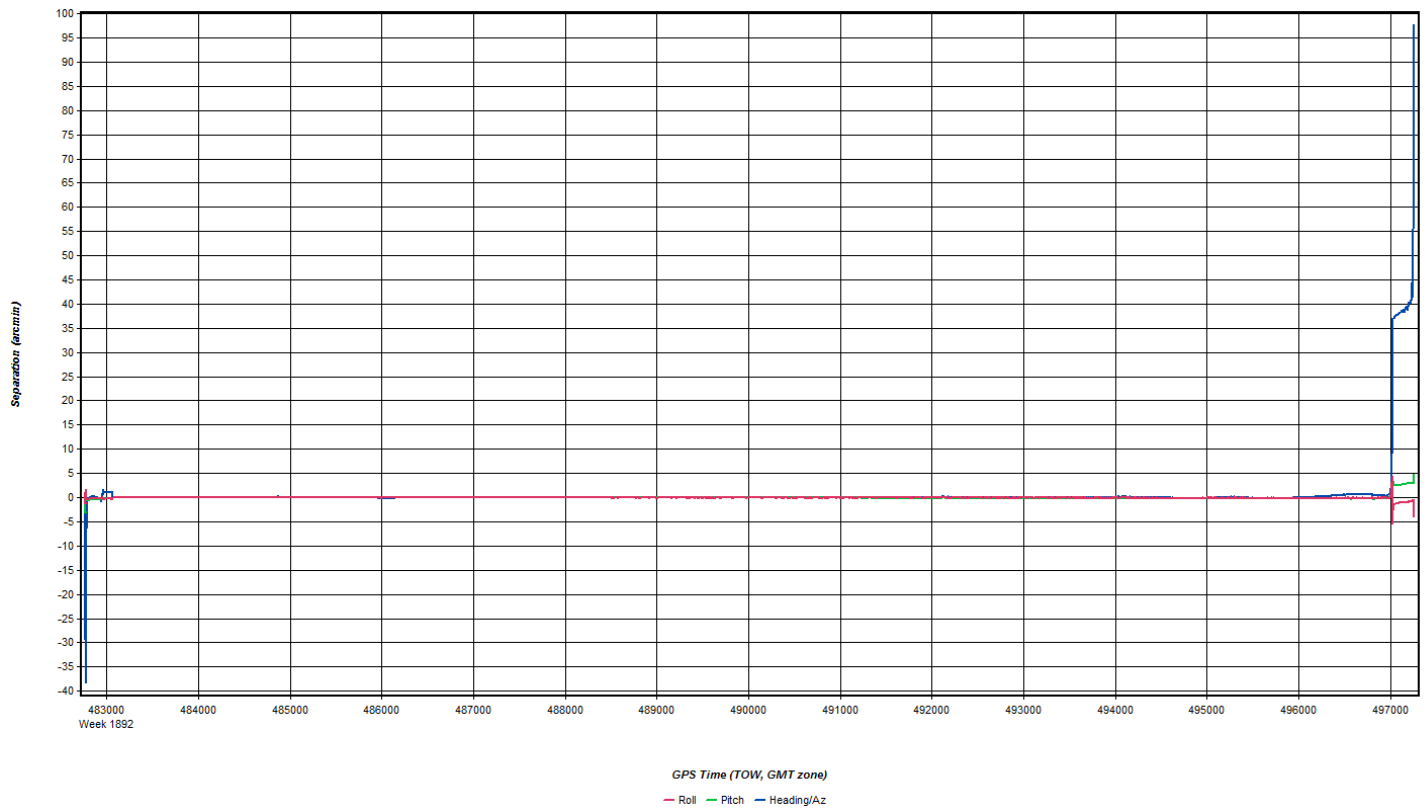
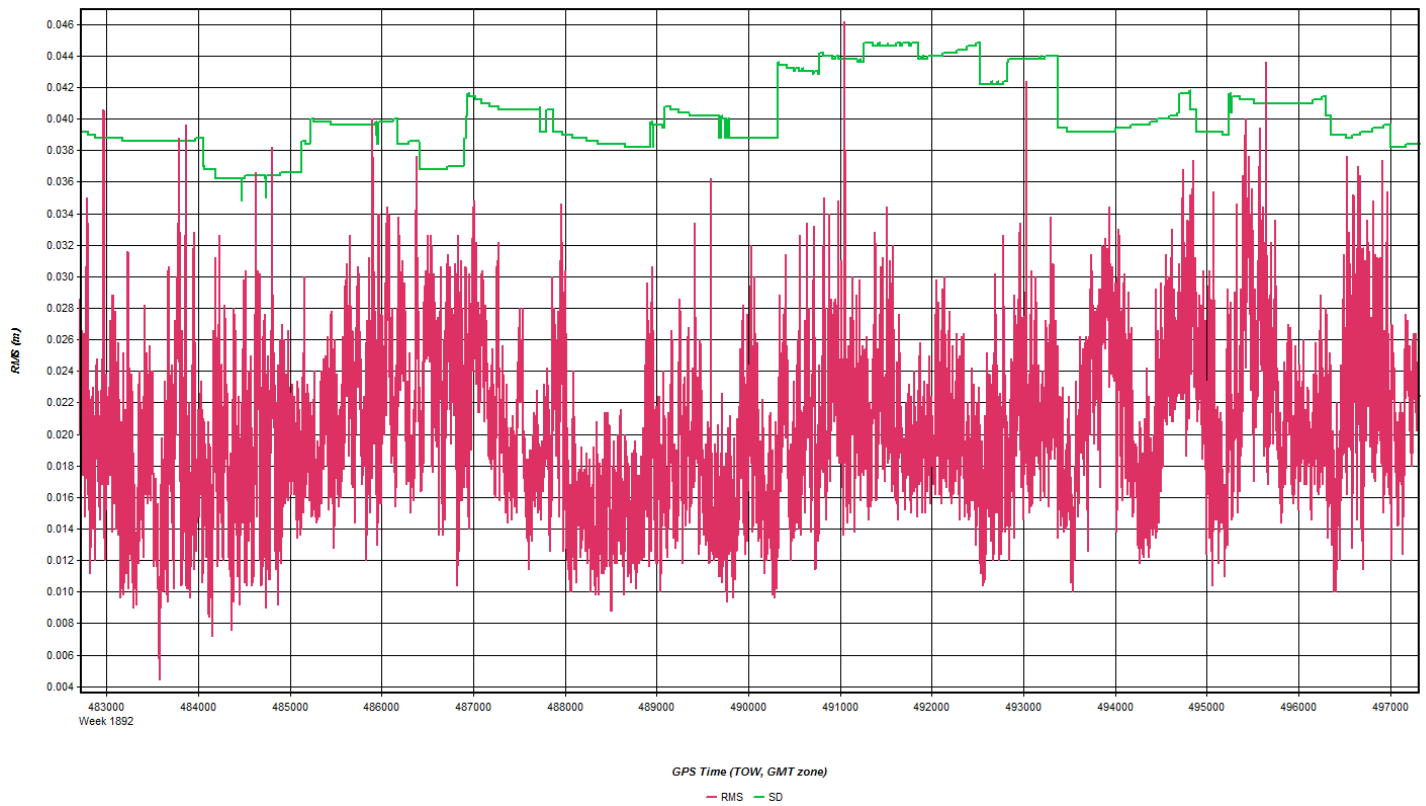
Apr 15, 2016-A (N73TM, SN7178)

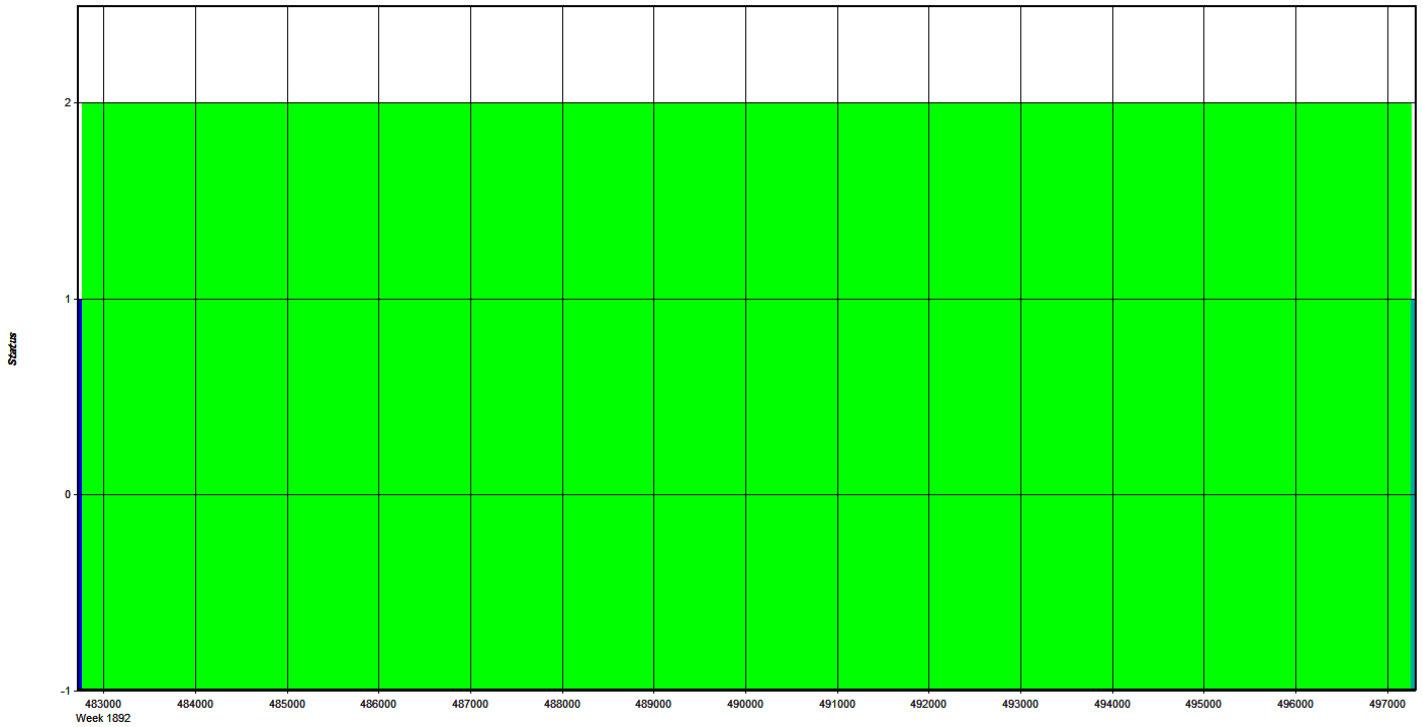












GPS Time (TOW, GMT zone)
 - Float - Forward Fixed - Reverse Fixed - Fixed (2 or more)

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEFR Name: MEFR Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\0498\20160415a-7178\m

Coordinates
 Latitude: North 44 40 28.97450 Compute from PPP
 Longitude: West 70 07 54.54215 Enter Grid Values
 Ellipsoidal height: 131.643 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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: USGS WESTERN MAINE **Proj #:** 27146 **Date:** APRIL 15th, 2016 **Page 1 of 1**

Aircraft: N73TM **Begin Hobbs:** 6173.8 **End Hobbs:** 6177.7 **Total:** 3.9 **Pilot:** J. BULLINGTON **Co-Pilot:** - **Tech:** P. HAZBARK

Dep Apt: KLEW **Dep Time (Lcl):** 10:11 Z **Arr Apt:** KLEW **Arr Time (Local):** 14:00 (Z: 18:02) **Tot Time Aloft:** 3:50

CORs: Y/N Sta 1: MEFR corp Sta 2: - **Flyovers:** Y/N If Y, times: Sta1) 14:28 & 17:47 Sta2) -

GPS Unit: Y/N Sta 1: - Sta 2: - **Flyovers:** Y/N If Y, times: Sta1) - Sta2) -

Gd Temp beg: 08 °C **End:** 10 °C **OAT beg:** 06 °C **End:** 08 °C **Altimeter begin:** 30.48" **end:** 30.44"

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	POOP/μs/s	GPS Altitude	Crab	Turb (0-1)	Alt AMSL	Alt AGL	Max Gasp	Avg Pt Spacing	Power	PPSM	Storage Name
3134	N	14:39	14:39	150 kt	1.0/17	7120'	2°	0	7120'	~500'	VARIES	150 kts	2	2.2	ALS70
3134	N	14:43	14:56	~150 kt	1.1/16	7100'	2°	0	7100'	~500'	VARIES	150 kts	2	2.2	ALS70
3133	S	14:59	15:13	~150 kt	1.0/18	7140'	2°	0	7140'	~500'	VARIES	150 kts	2	2.2	SN713
3132	N	15:16	15:30	~150 kt	0.9/19	7120'	2°	0	7120'	~500'	VARIES	150 kts	2	2.2	SSD4
3131	S	15:34	15:47	~160 kt	1.1/17	7100'	2°	0	7100'	~500'	VARIES	150 kts	2	2.2	SSD4
3130	N	15:51	16:05	~145 kt	1.2/17	7100'	2°	0	7100'	~500'	VARIES	150 kts	2	2.2	SSD4
3129	S	16:09	16:22	~155 kt	1.2/18	7130'	4°	0	7130'	~500'	VARIES	150 kts	2	2.2	SSD4
3128	N	16:26	16:40	~150 kt	1.2/19	7130'	3°	0	7130'	~500'	VARIES	150 kts	2	2.2	SSD4
3127	S	16:42	16:56	~155 kt	1.1/19	7120'	3°	0	7120'	~500'	VARIES	150 kts	2	2.2	SSD4
3126	N	16:59	17:13	~150 kt	1.2/18	7130'	2°	0	7130'	~500'	VARIES	150 kts	2	2.2	SSD4
3125	S	17:15	17:29	~155 kt	1.3/17	7160'	4°	0	7160'	~500'	VARIES	150 kts	2	2.2	SSD4
UL01	E	17:31	17:33	~145 kt	1.1/19	7170'	10°	0	7170'	~500'	VARIES	150 kts	2	2.2	SSD4

FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc. (Start @ 14:34)

VOID - hE, smooth, ske above & below, VOID - CAMERA DOOR NOT FULLY OPEN - 0% REMAINING

hE, occ - turb, ske above & below, 35 kt. headwind, min. snow below @ N end

hE, occ - turb, ske above & below, 35 kt. tailwind, min. snow below @ N end

hE, occ - turb, ske above & below, 35 kt. headwind, min. snow below @ N end

hE, cont. - turb, ske above & below, 35 kt. tailwind, min. snow below @ N end

hE, cont. - turb, ske above & below, 40 kt. headwind, min. snow below @ N end

hE, cont. - turb, ske above & below, 30 kt. tailwind, min. snow below @ N end

hE, cont. - turb, ske above & below, 35 kt. headwind, min. snow below @ N end

hE, cont. - turb, ske above & below, 30 kt. tailwind, min. snow below @ N end

hE, cont. H/mid, ske above & below, 35 kt. headwind, min. snow below @ N end

hE, cont. H/mid, ske above & below, 30 kt. tailwind, min. snow below @ N end

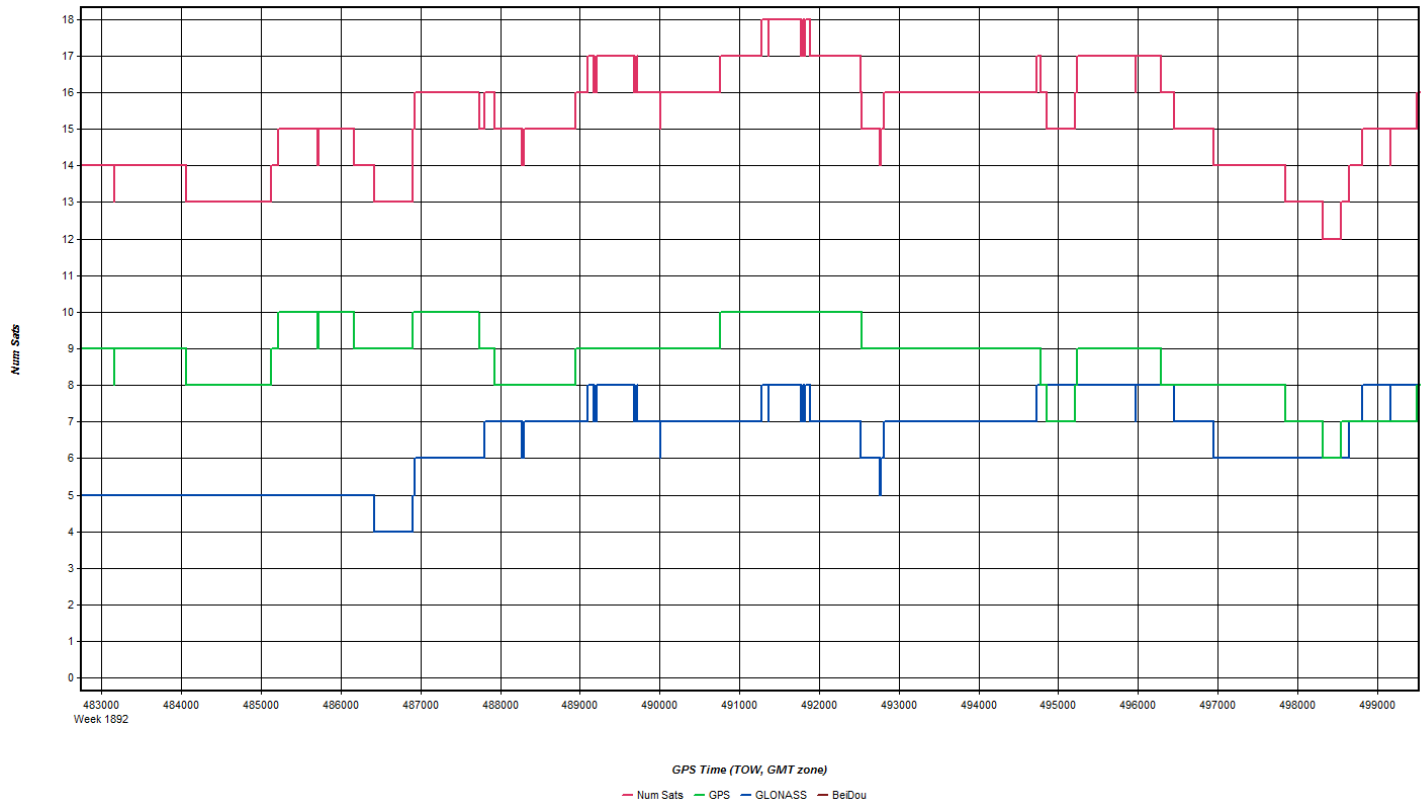
hE, cont. - turb, ske above & below, 30 kt. crosswind, no snow below

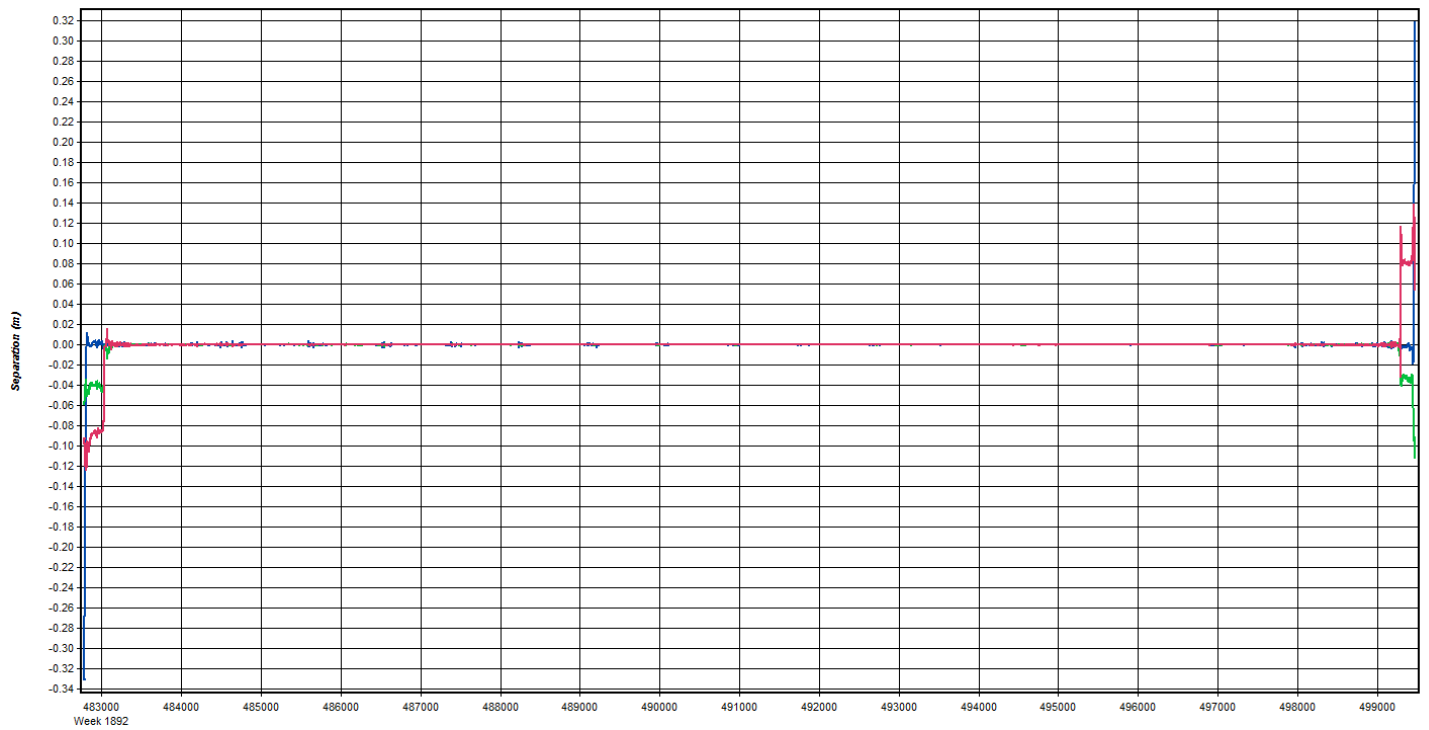
(Start @ 17:35)

→ LANDED FOR FUEL ←

Total Proj Lines: 145 **Lines Flown:** 10 **Lines Remain:** 2 - Turb only **Online Time:** 2:55 **Job Time:** 0:55 **Notes:** 20160415-14030 E - 140447

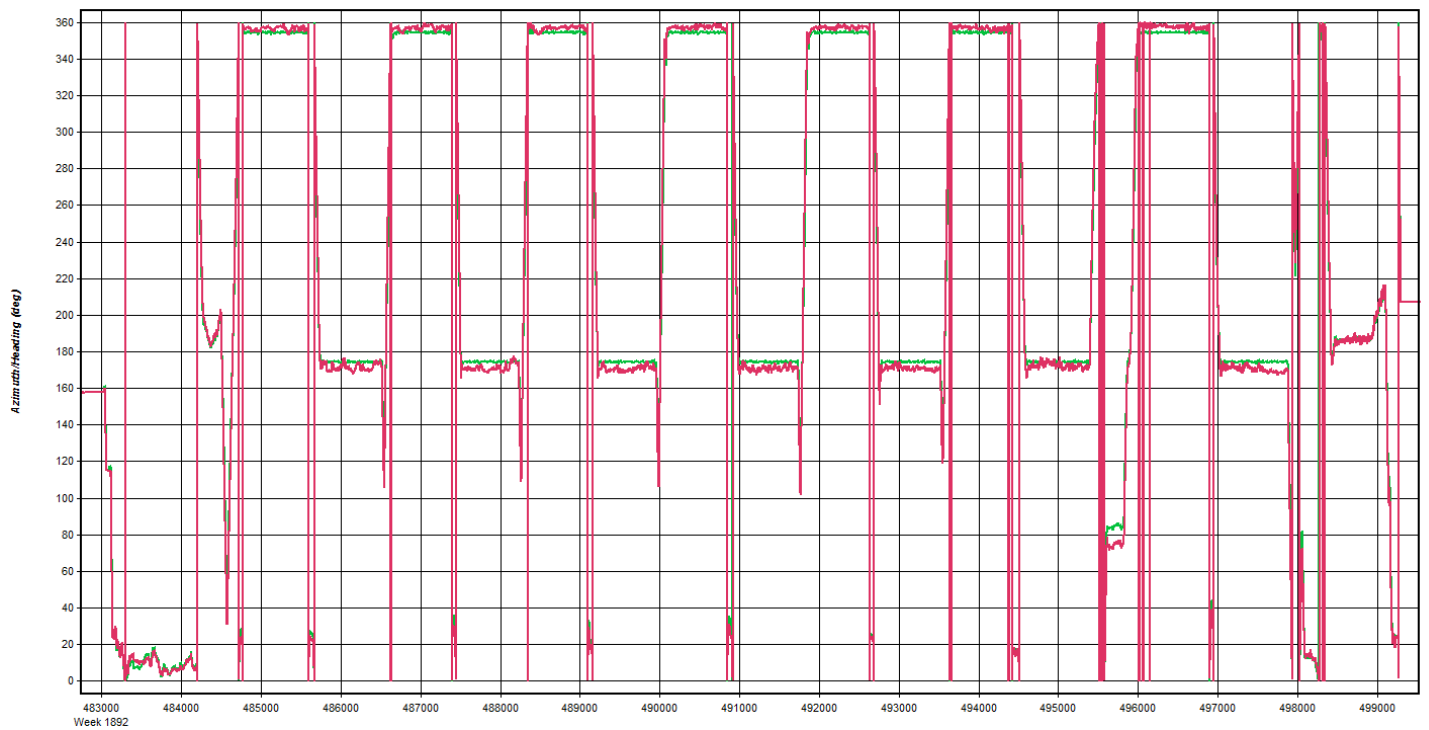
Apr 15, 2016-A (N812TB, SN7161)





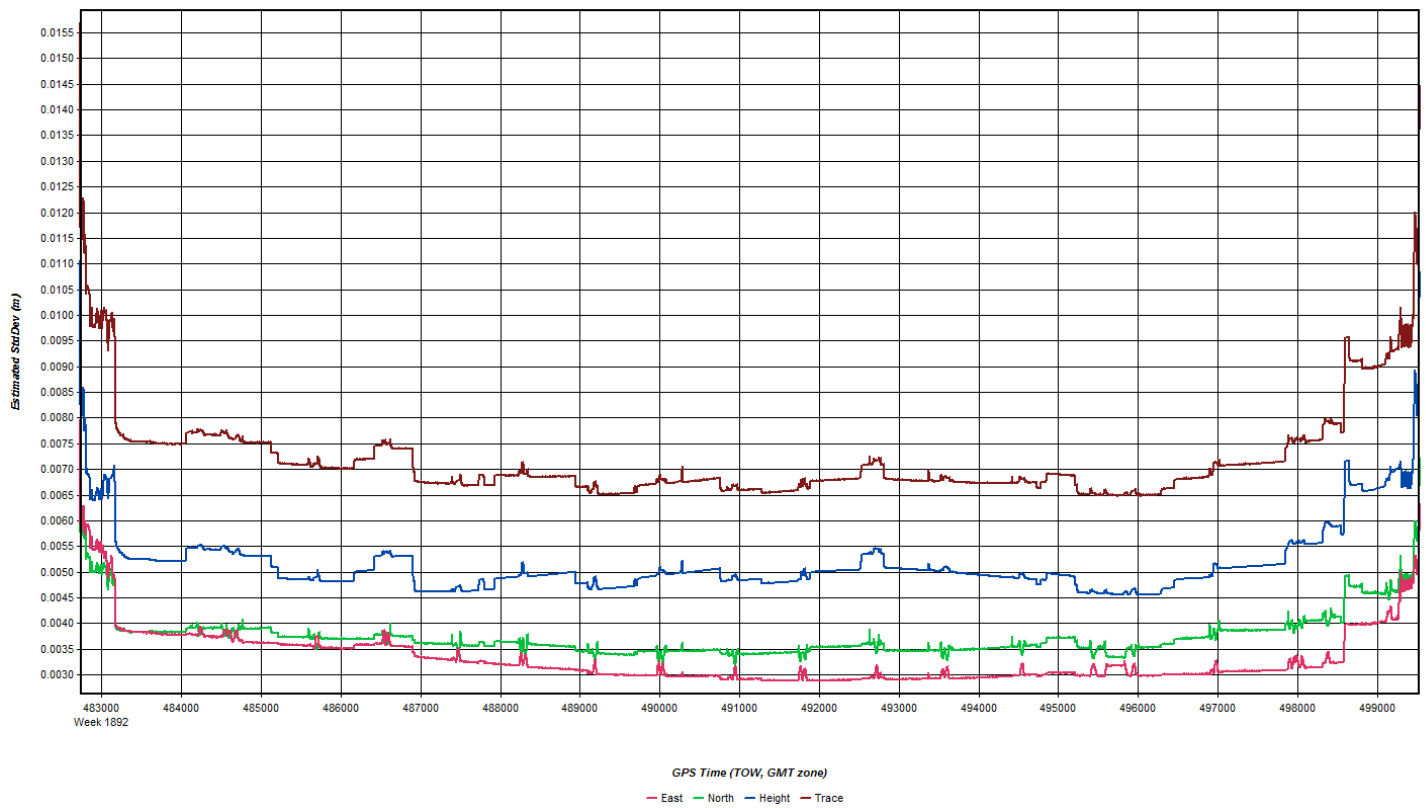
GPS Time (TOW, GMT zone)

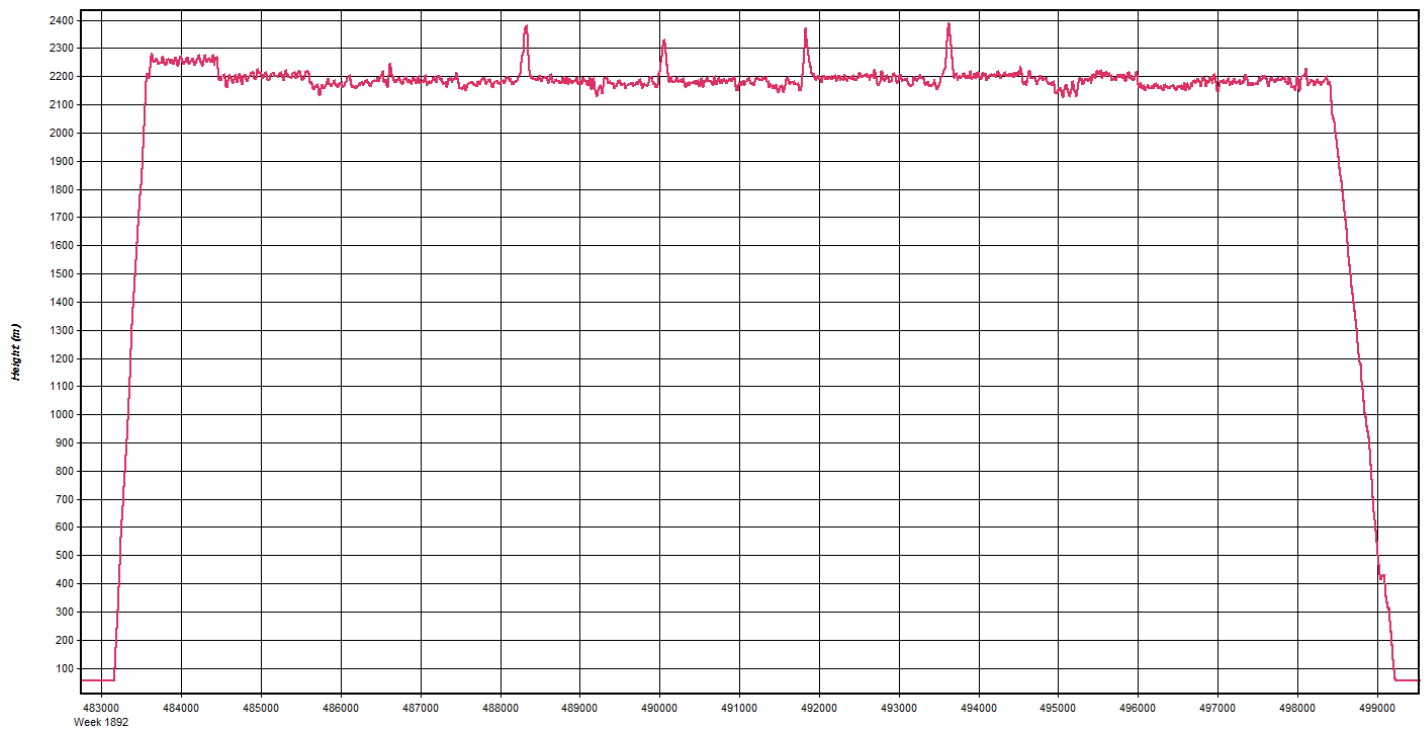
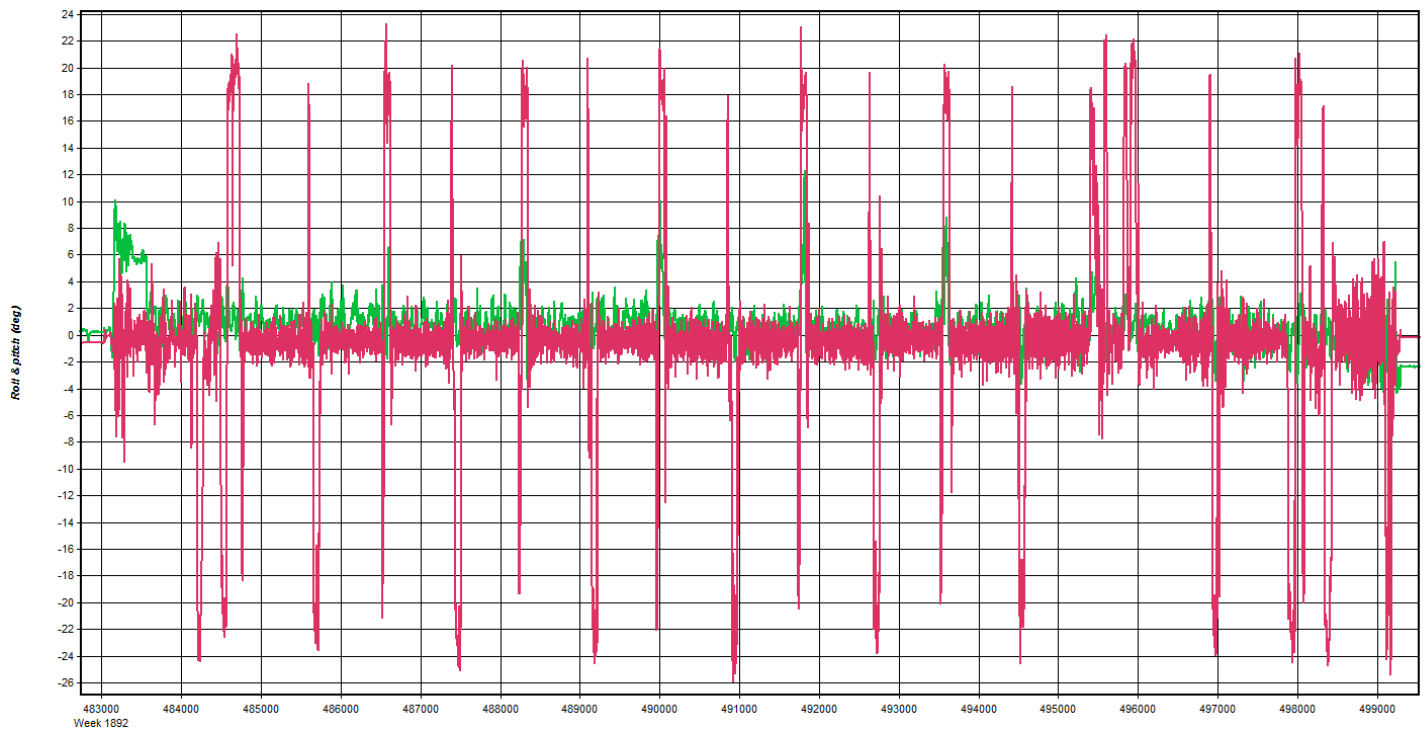
— East — North — Up

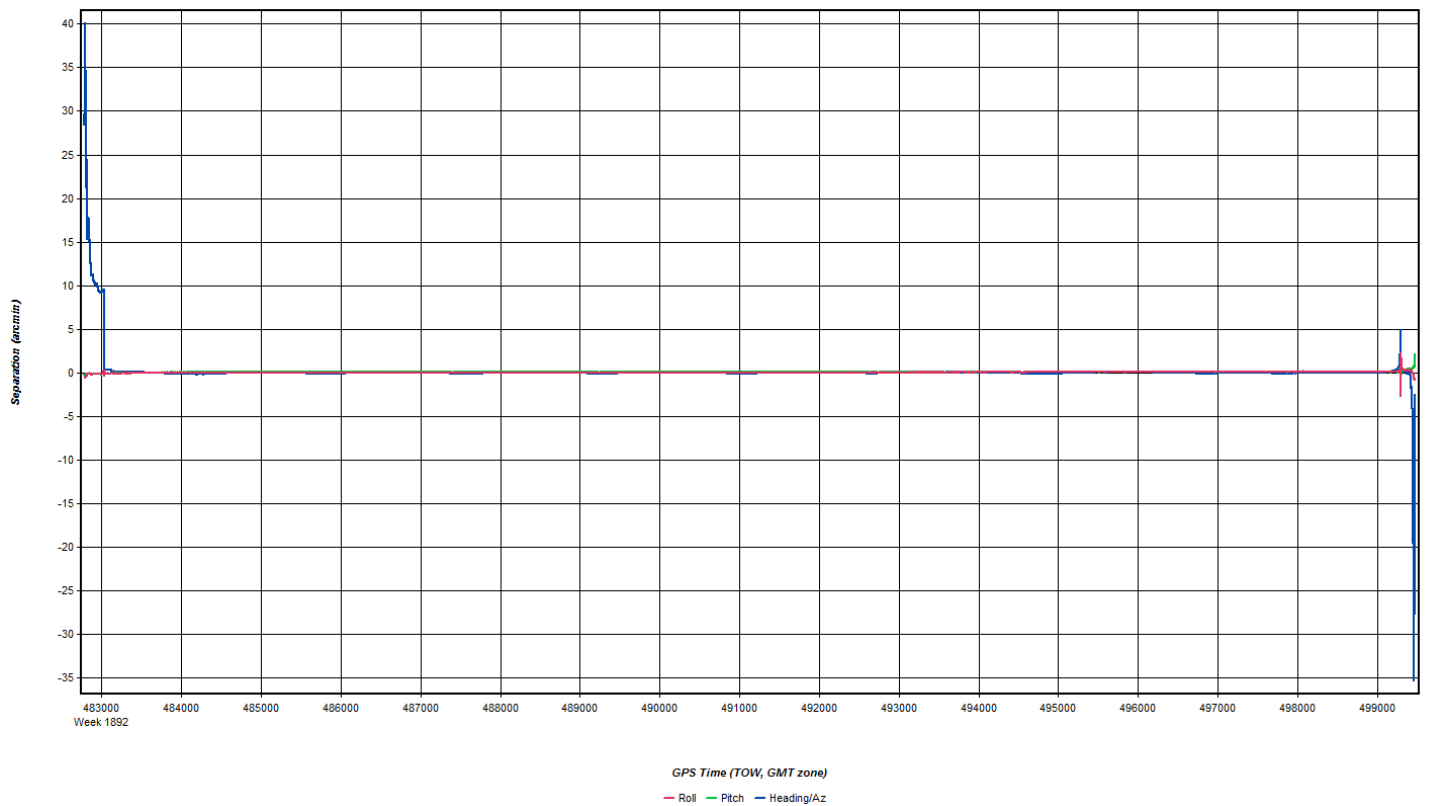
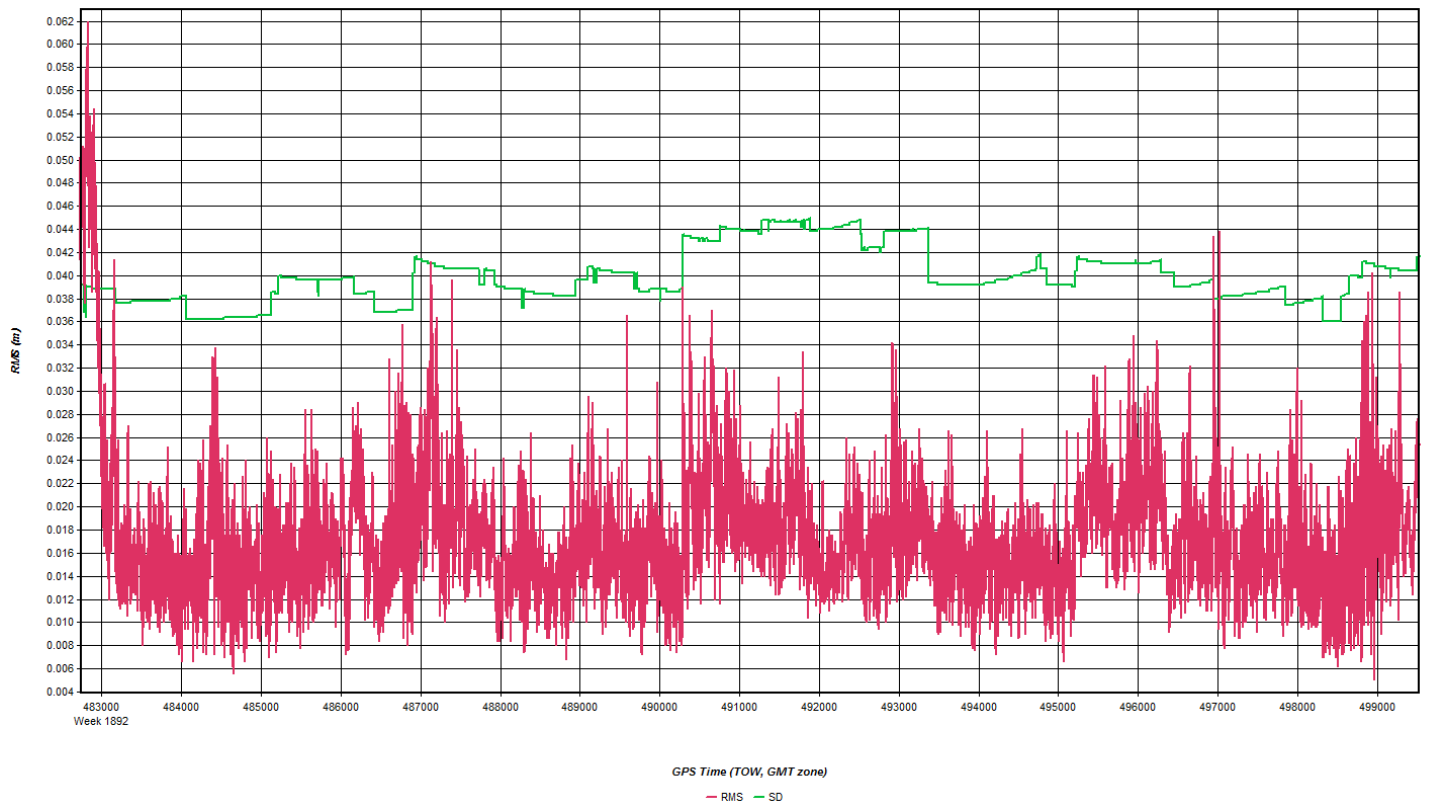


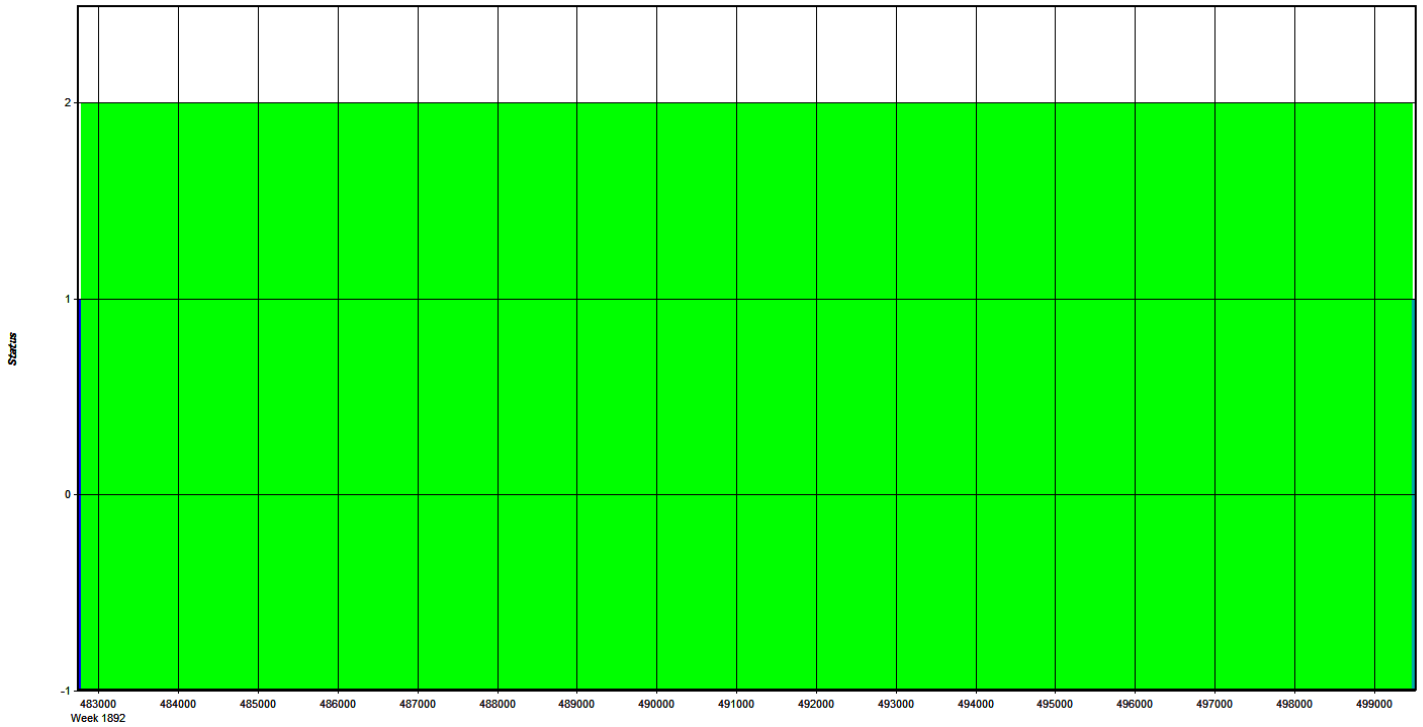
GPS Time (TOW, GMT zone)

— Heading/Azimuth — GPS-COG









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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEFR Name: MEFR Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\NS6R\160415_SN7161_

Coordinates
 Latitude: North 44 40 28.97450 Compute from PPP
 Longitude: West 70 07 54.54215 Enter Grid Values
 Ellipsoidal height: 131.643 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Quantum Spatial
Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log daily to flight_log_distribution_list@quantumspatial.com)

Date: 1-15-16 Pg. 1 of 1

Project: USGS Maine MEFR Proj #: 27146 Flight Mgmt File: 20160415-140157

Aircraft: N812TB Begin Hobbs: 3918.7 End Hobbs: 3923.1 Total: 4.4 Pilot: Jacobson Co-Pilot: Dyerson

Dep Apt: KLEW Dep Time (Local): 10:12 Arr Apt: KLEW Arr Time (Local): 14:40 (ZT): 18:40 Tot Time Aloft: 4.4

CORS: Y/N Sta 1: MEFR Sta 2: _____
Flyovers: Y N IF Y, times: Sta1 | 14:29, 18:25 Sta2 | fig. 7 - 14:35, 18:18

GPS Unit: Y/N Sta 1: _____ Sta 2: _____
Flyovers: Y / N IF Y, times: Sta1 | _____ Sta2 | _____

Gd Temp beg: 9 °C End: 12 °C OAT beg: -4 °C End: -5 °C Altimeter begin: 30.48 end: 30.42

LIDAR	Type	Alt AGL	Alt MSL	Pulses In Air	Avg Terr Ht	Max Gdspd	Avg Fc Spacing	Power	PPSM	Shut End	Log	Trace Name
	FOV	Scan Freq	Mpi/A	Pulses	Rate	Power	PPSM			End	Tot	
3122	354	14:40	14:52	145	1.1/16	7185						
3121	174	14:56	15:08	143	1.1/16	7133						
3120	354	15:11	15:22	142	0.9/14	7106						
3119	174	15:25	15:36	152	1.0/18	7132						
3118	354	15:39	15:51	141	1.1/19	7133						
3117	174	15:54	16:05	147	1.2/17	7132						
3116	354	16:08	16:20	141	1.2/18	7135						
3115	174	16:23	16:35	152	1.1/19	7142						
3114	354	16:38	16:50	149	1.2/18	7155						
3113	174	16:53	17:05	153	1.3/19	7156						
3112	354	17:08	17:19	144	1.3/16	7159						
3111	174	17:23	17:36	147	1.1/19	7155						
001	83	17:40	17:43	156	1.1/18	7224						
3124	354	17:47	18:0	150	1.2/17	7119						
3123	174	18:05	18:17	152	1.1/17	7116						

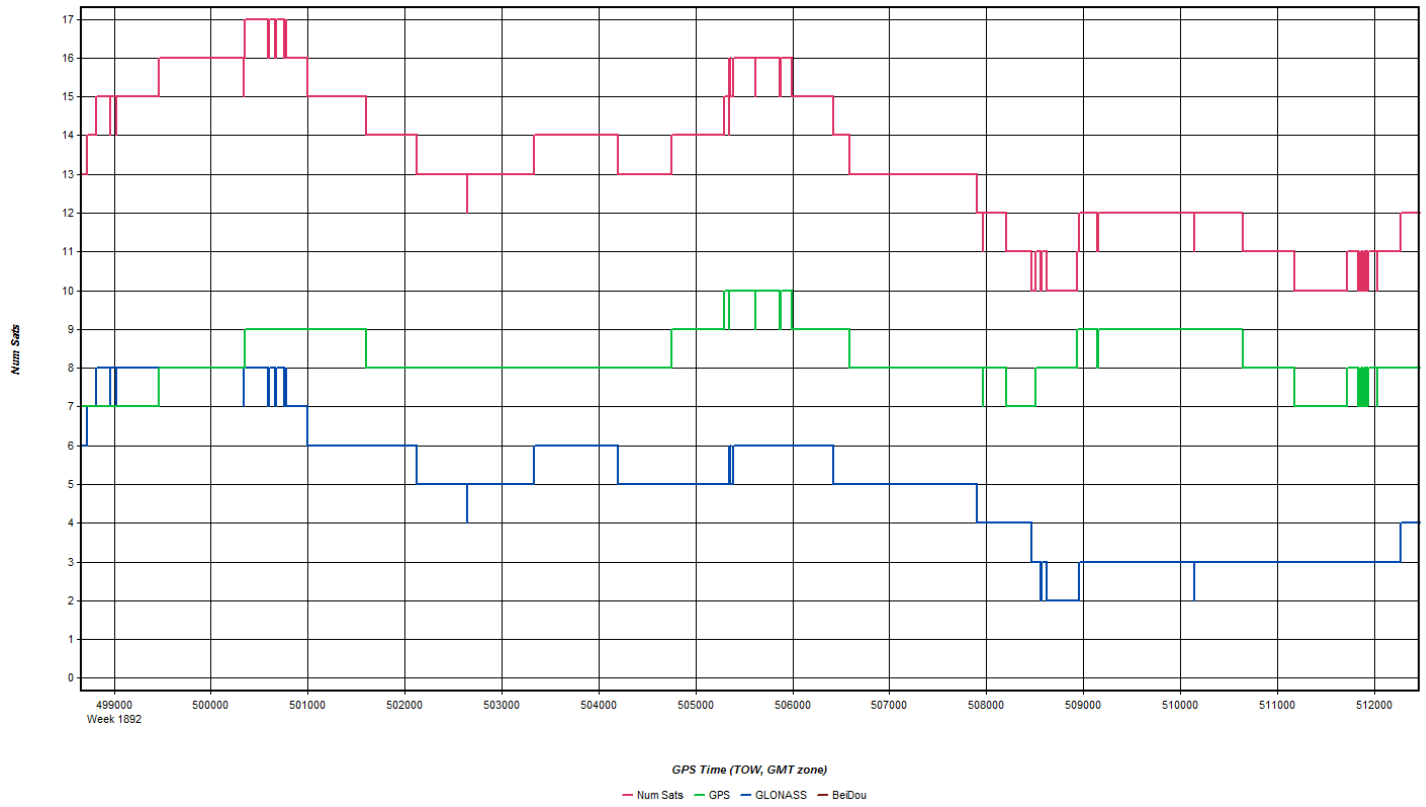
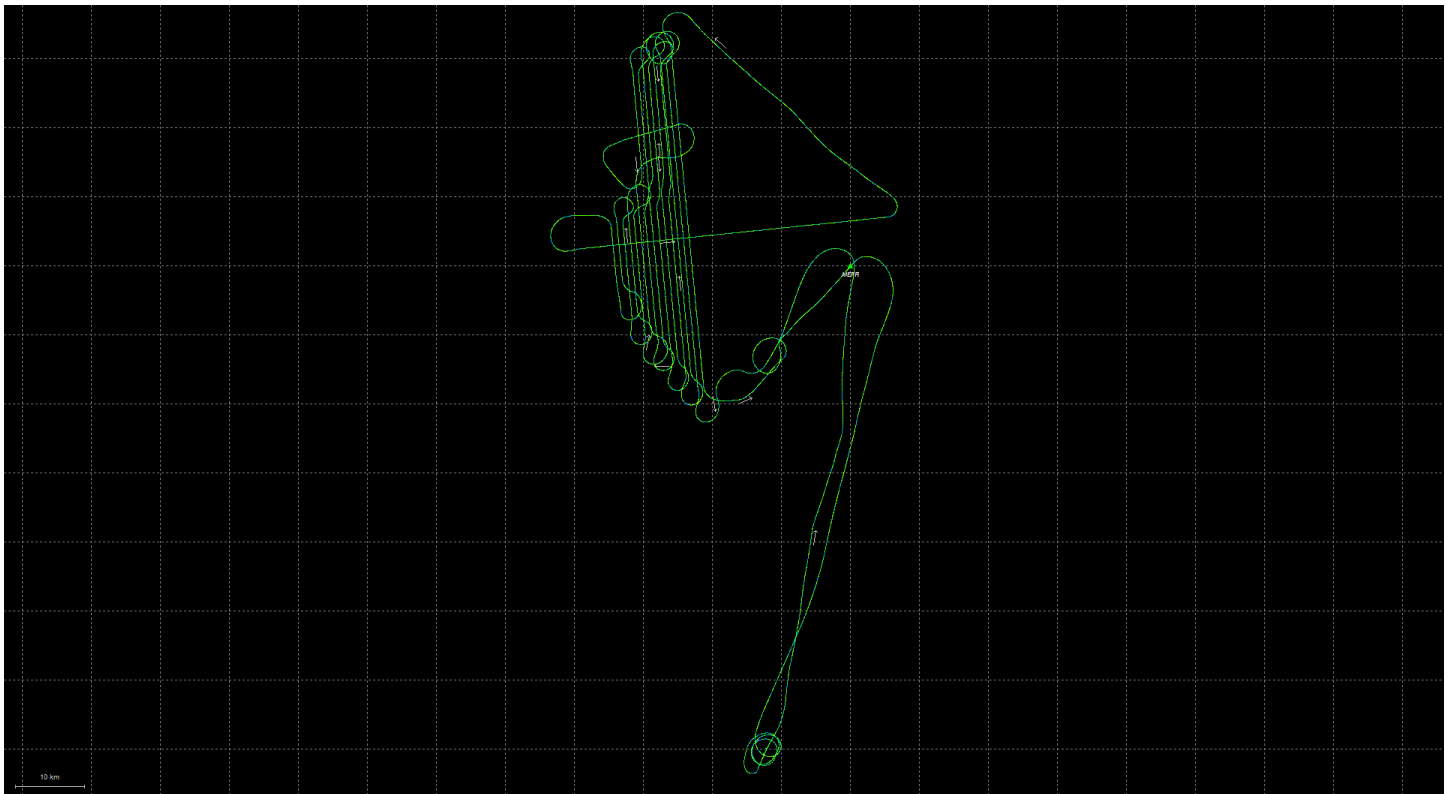
FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.

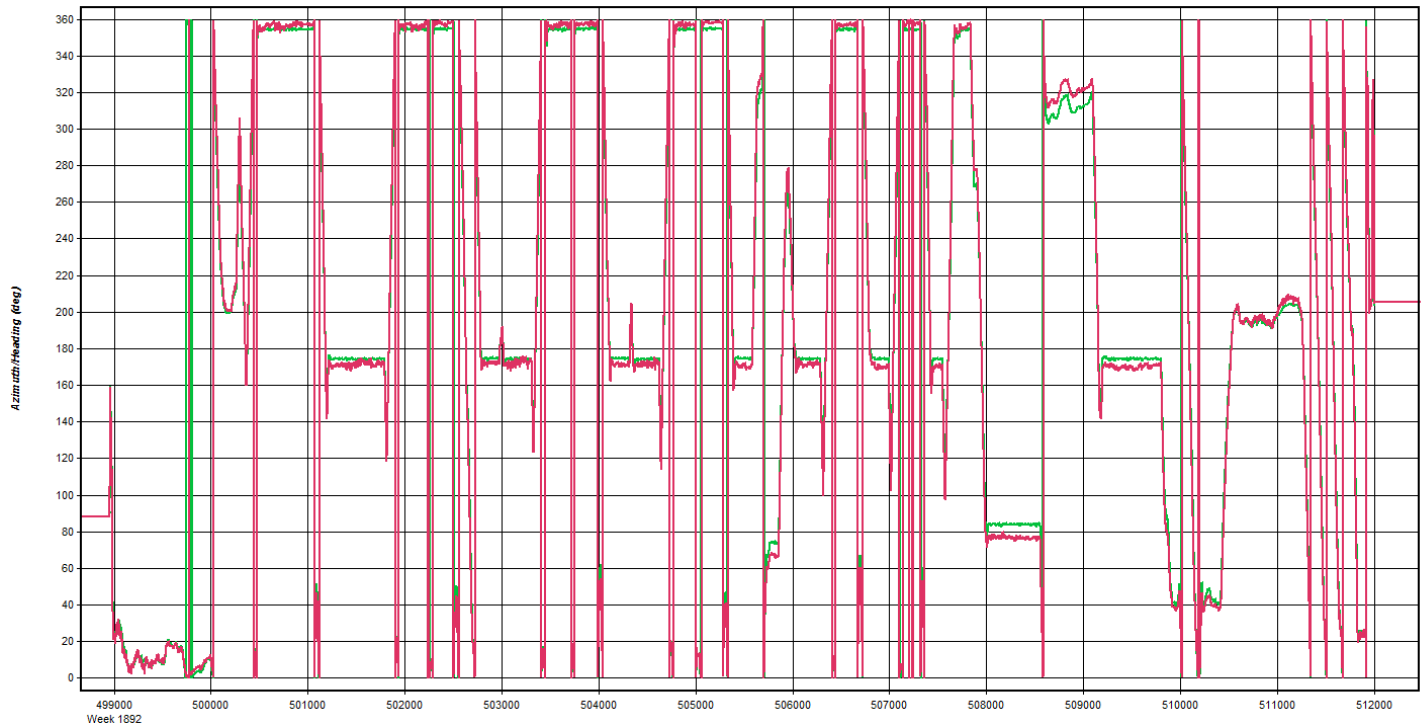
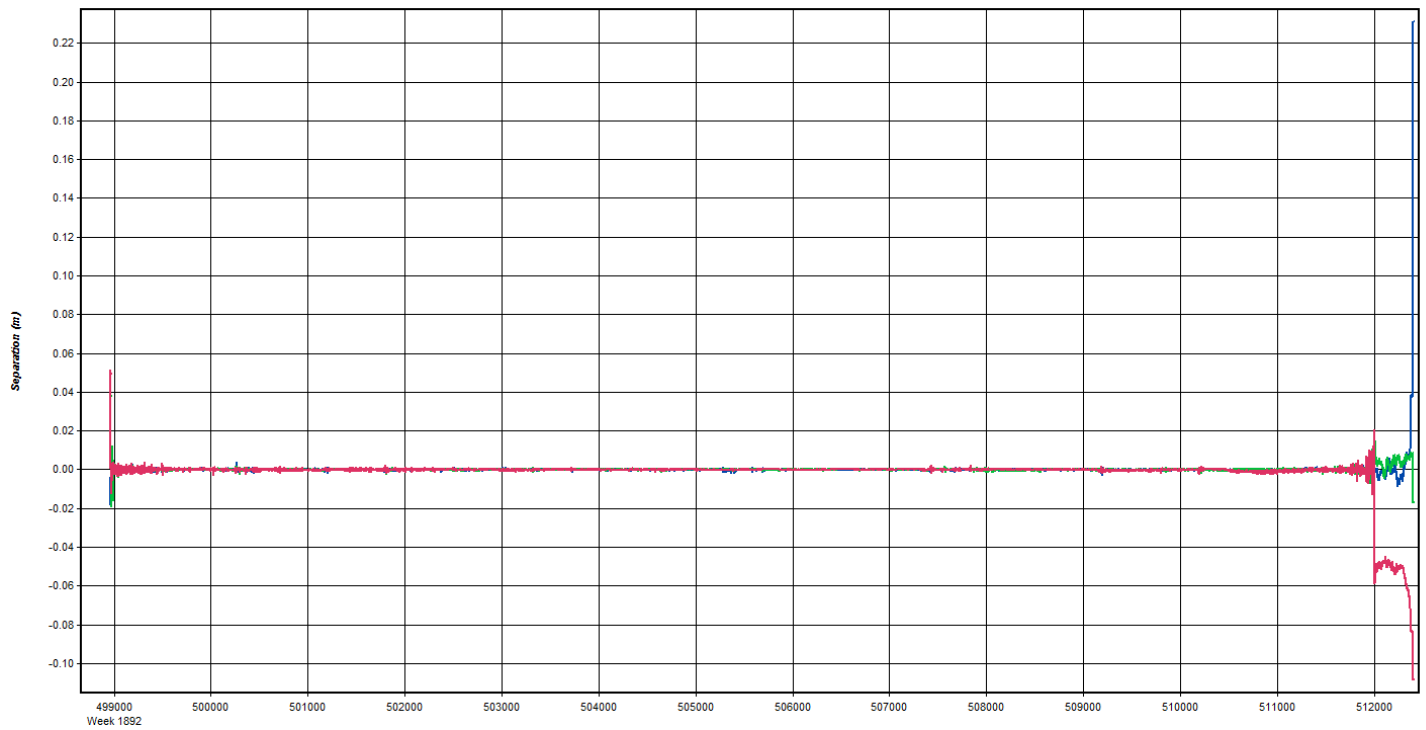
3122 a little residual snow ~ 3mi. from N end
3121 a little snow on north end ~ 2.5mi.
3120 small amount of snow ~ 3mi. from N end / little more on hills
3119 residual snow on N end
3118 residual snow ~ 2mi. from north end
3117 same as above
3116 little snow north end
3115 see above
3114 trace amounts of snow up north
3113 trace snow up north, mostly in areas with trees
3112 same as above - just north end of line
3111 cross tie for lines 3124-3111

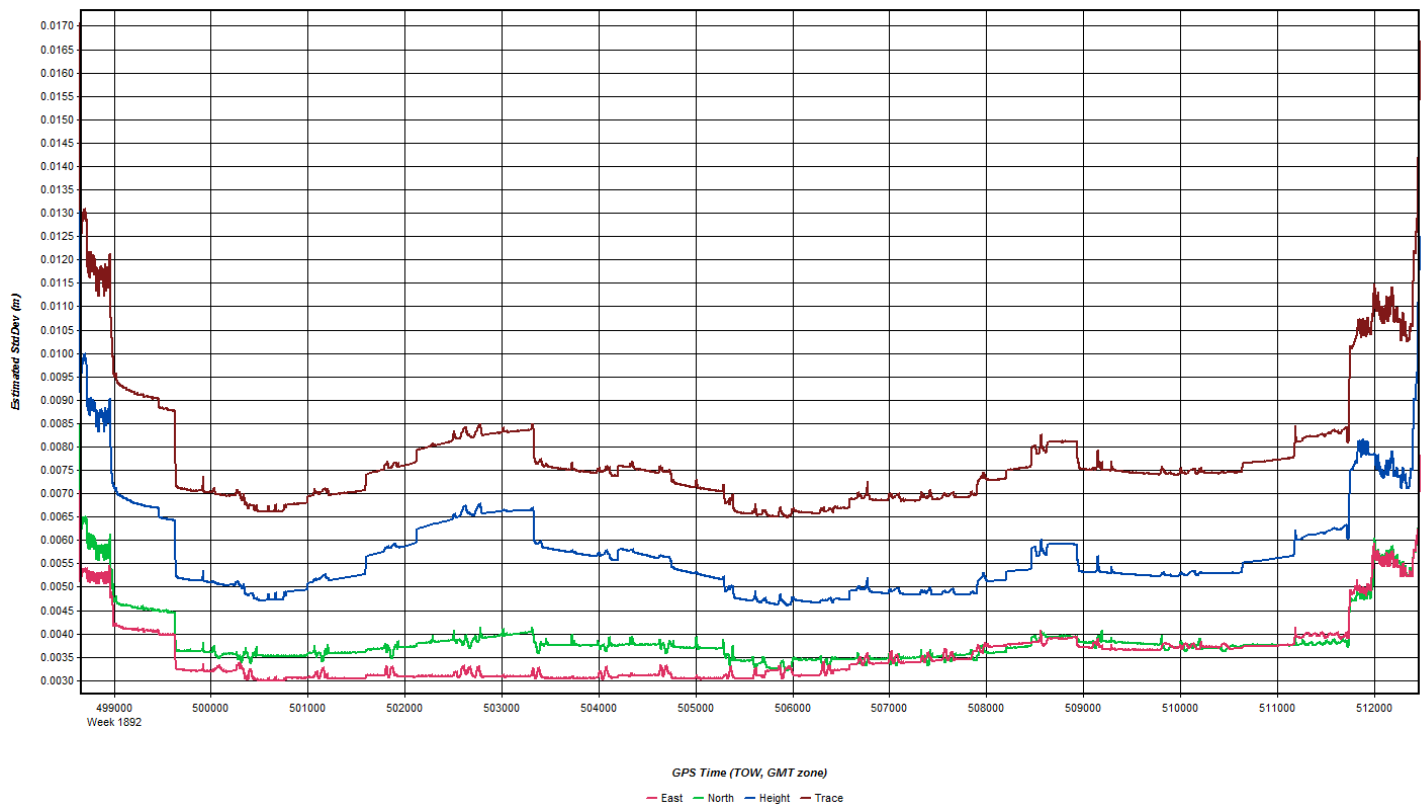
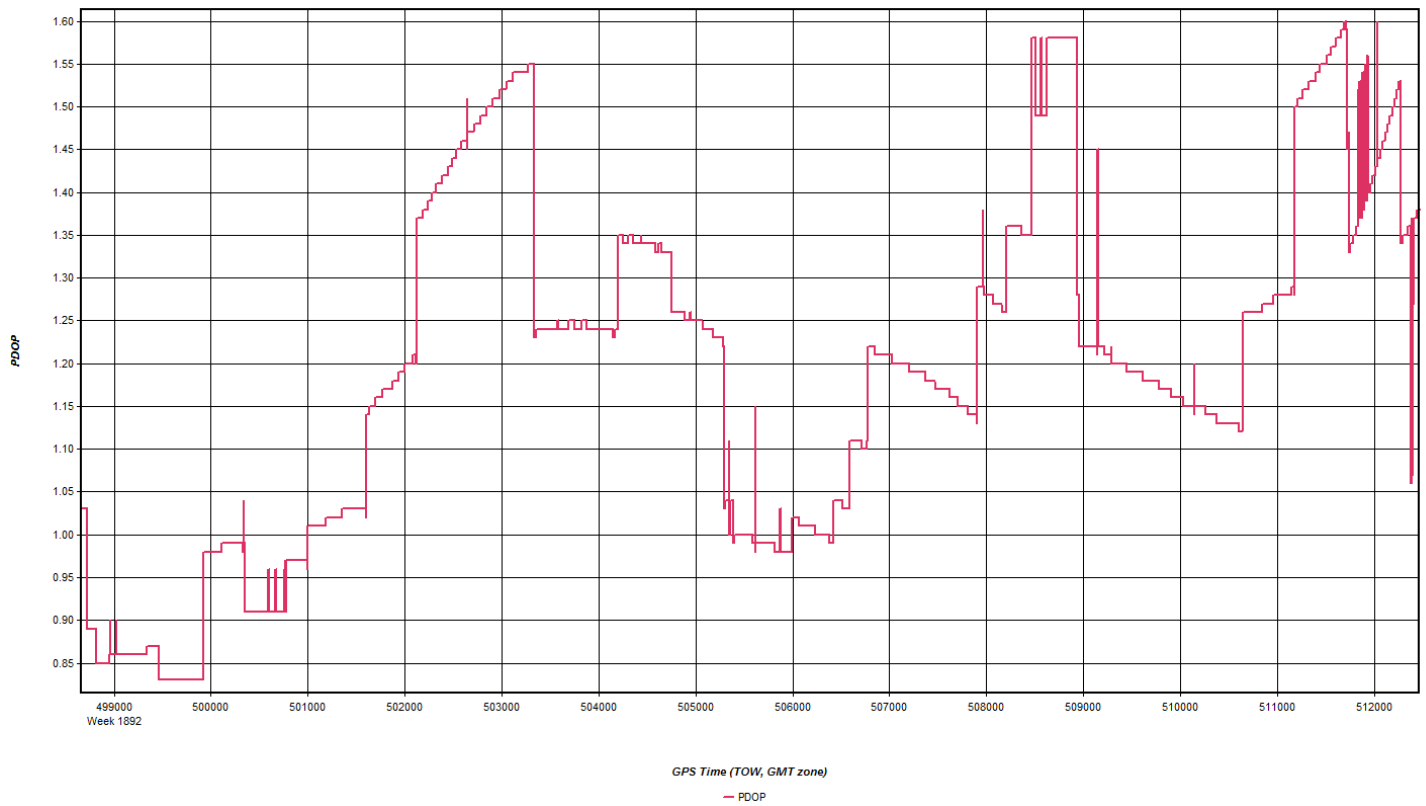
Total Proj Lines:	Lines Flown:	Lines Remain:	Online Time:	Mob Time:	Notes:
145	14	3.6	0.8		Trace snow amounts - North Ends of lines ~ 3 mi. or so

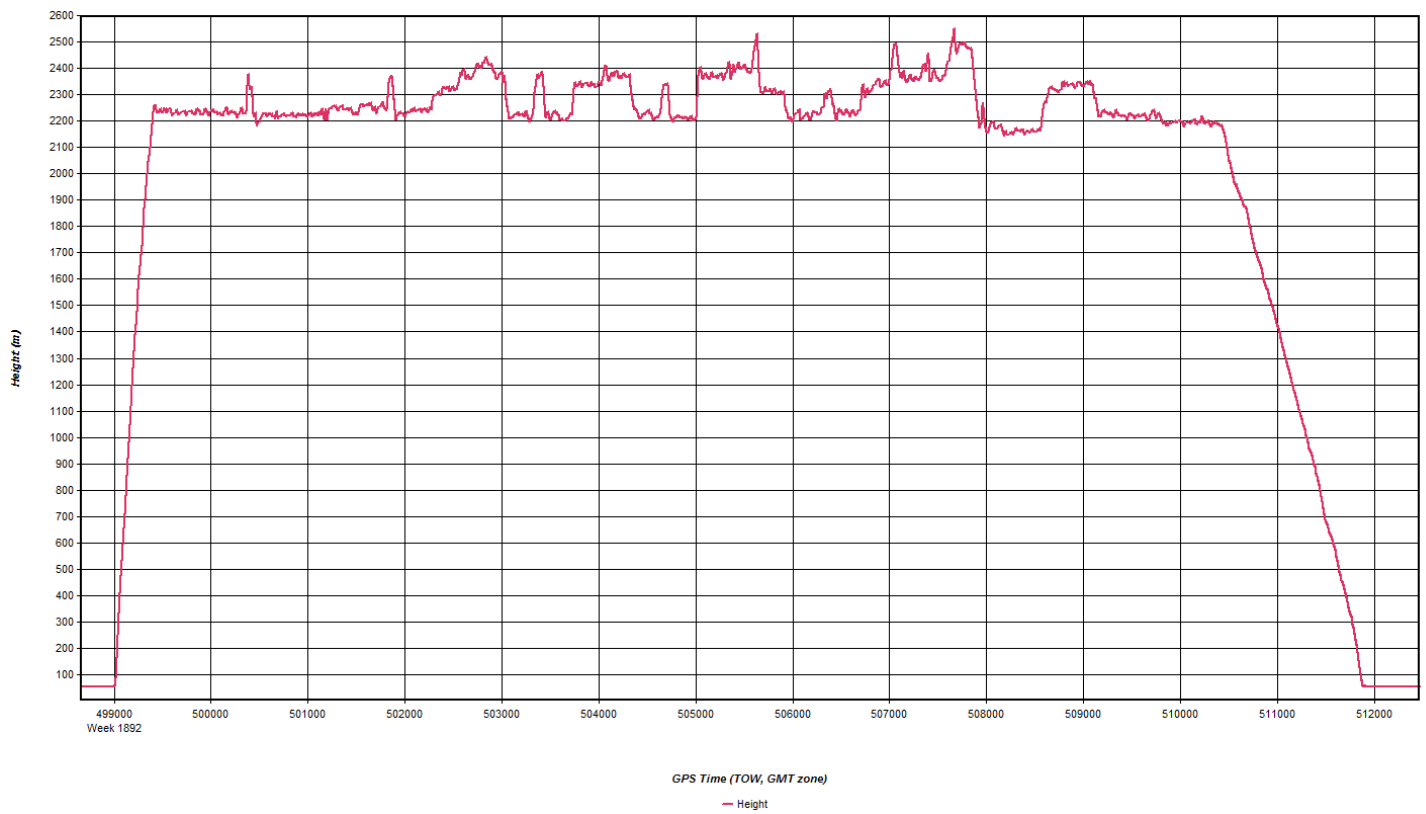
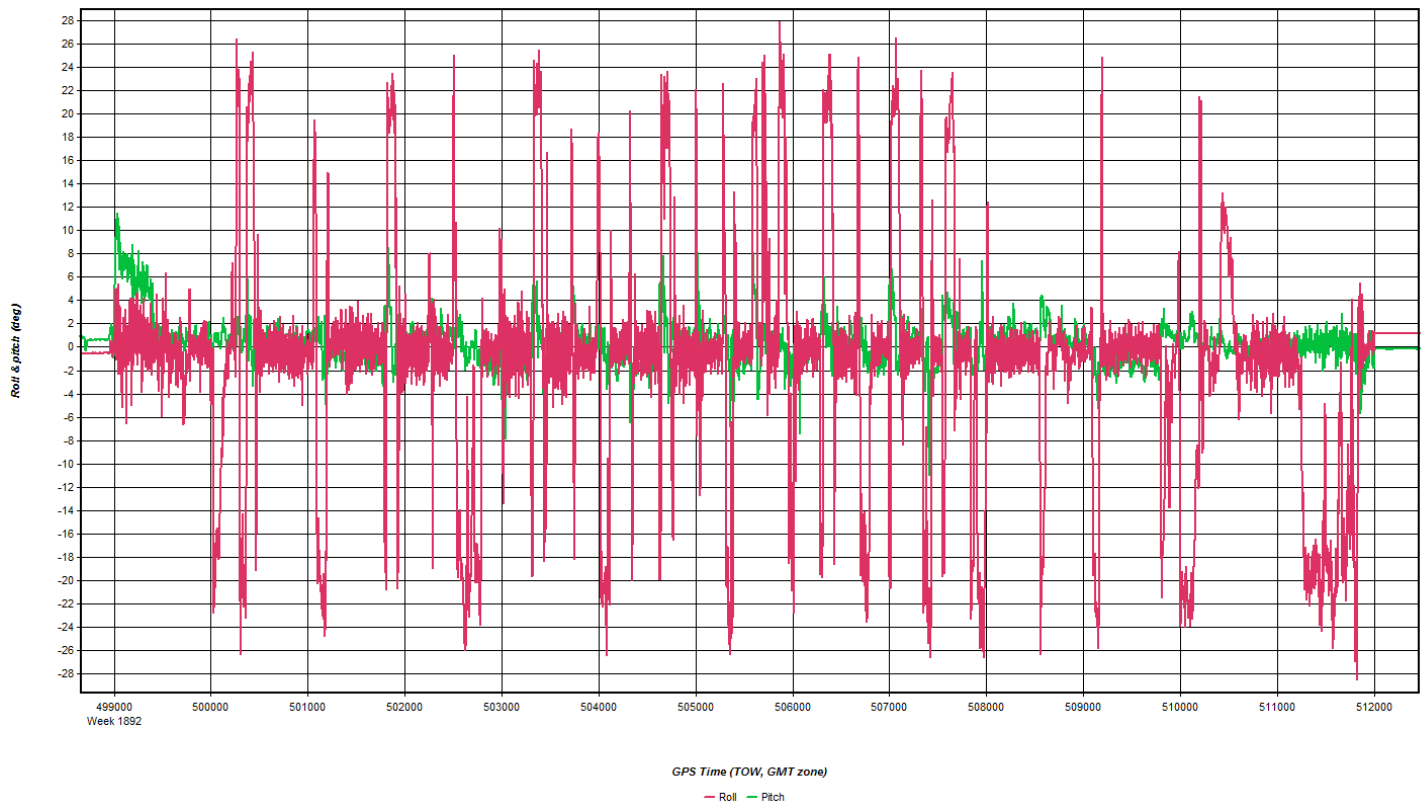
Generated by CamScanner

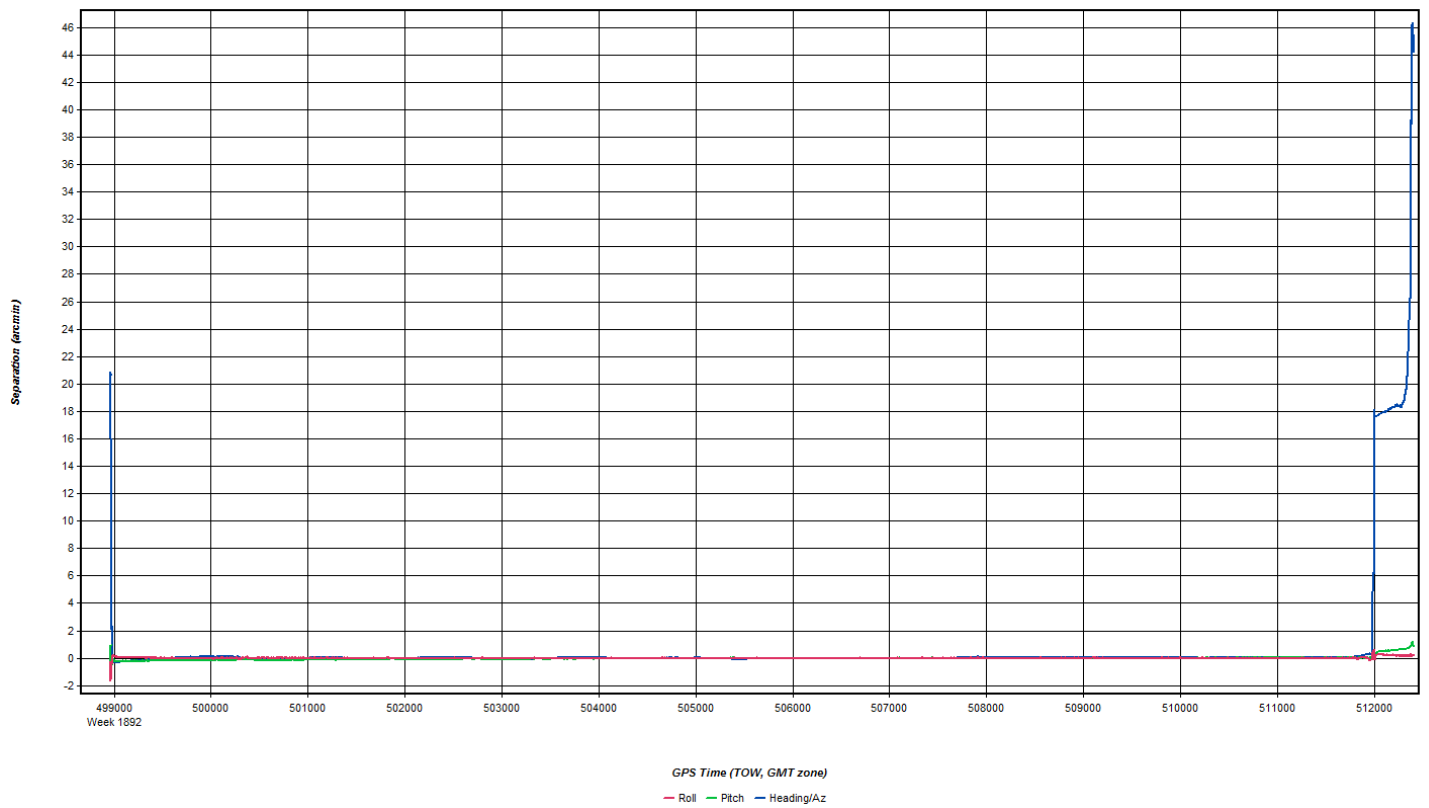
Apr 15, 2016-B (N73TM, SN7178)

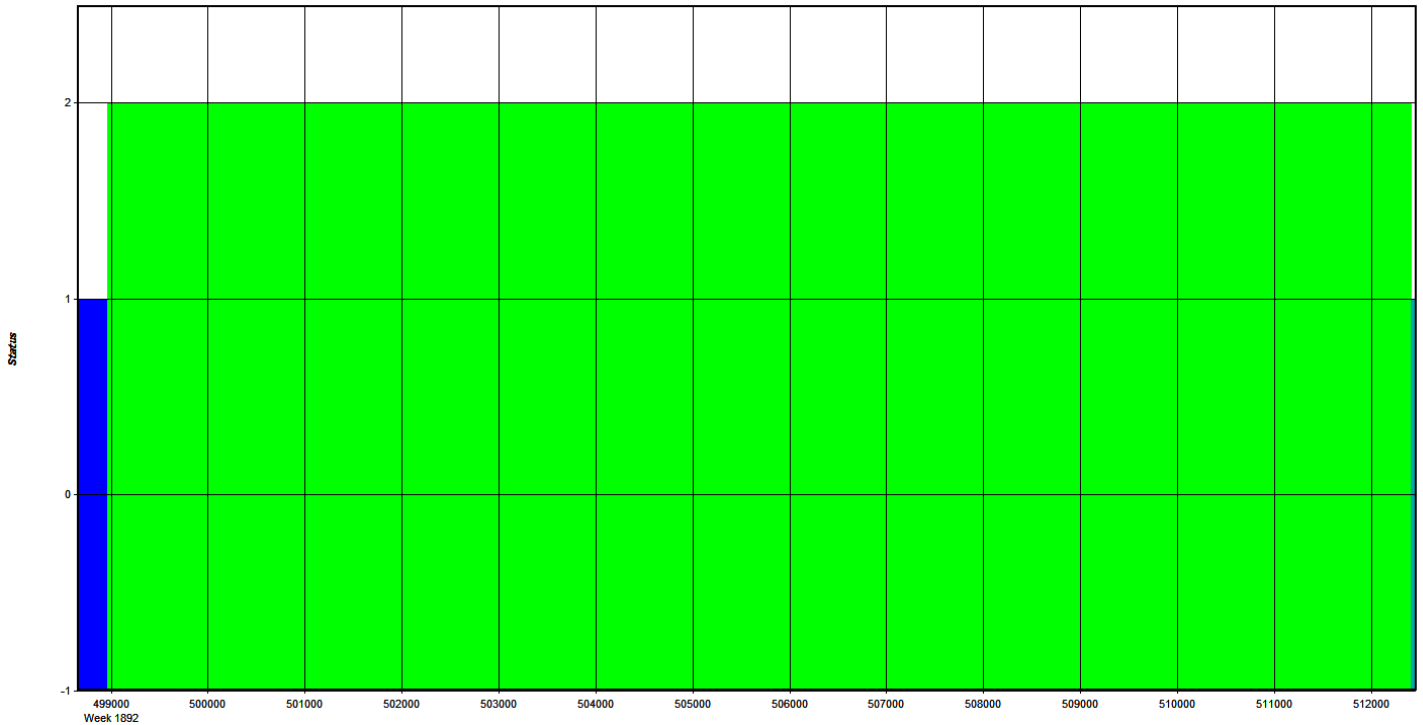












GPS Time (TOW, GMT zone)
 - Float - Forward Fixed - Reverse Fixed - Fixed (2 or more)

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEFR Name: MEFR Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\0498\20160415b-7178\m

Coordinates
 Latitude: North 44 40 28.97450 Compute from PPP
 Longitude: West 70 07 54.54215 Enter Grid Values
 Ellipsoidal height: 131.643 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Quantum Spatial		Project: USGS WESTERN MOUNTAIN		Proj #: 27146		Date: APRIL 15th, 2016	
Alt: N73TM		Begin Hobbs: 6177.7		End Hobbs: 618		Lift: (A) C D E Pg 1 of 2	
Dep Apt: KLEW		Dep Time (Lcl): 14:36 (Z): 18:36Z		Arr Apt: KLEW		Arr Time (Local): 15:11 (Z): 22:11Z	
CORs: (Y) N		Sta 1: "MEPR" 6005		Sta 2: -		Flyovers: (Y) N	
GPS Unit: Y (N)		Sta 1: -		Sta 2: -		-Flyovers: Y / N -	
Gd Temp beg: 12 °C		End: 12 °C		OAT beg: 06 °C		End: 06 °C	
Type: ALS 70		Serial #: 7178		Alt: 5000' AGL		Alt: 5000' AMSL	
FOV: 40°		Scan Freq: 53.4 Hz		MPLA (Y) N		Pulses In Air: 2	
Avg Terr Ht: VARIES		Max Gdspd: 150 kts		Avg Pt Spacing: ?		Power: 100%	
Pulse Rate: 261.0 Hz		Altimeter begin: 300.42"		end: 211.00"		SEE TWRD TWRD	
Mag CB: 270		Storage Name: ALS 70		End CB: 303		Tor CB: 33	
SSB: 5504		Tor CB: 33		SSB: 5504		Tor CB: 33	
FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc. (S turn @ 15:57)							
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	GPS Altitude	Crab	Turb (0-4)
3100	7	19:40	19:40	~155 kts	1.1/17	7260'	3
3099	S	19:13	19:23	~155 kts	1.1/18	7350'	5
3098	N	19:25	19:30	~155 kts	1.2/16	7300'	2
3058	N	19:31	19:34	~150 kts	1.2/16	7500'	4
3057	S	19:40	19:42	~170 kts	1.3/15	7930'	2
3097	S	19:43	19:48	~160 kts	1.4/15	7250'	2
3096	N	19:50	19:55	~160 kts	1.4/15	7250'	2
3056	N	19:56	19:59	~150 kts	1.3/16	7700'	3
3055	S	20:02	20:05	~170 kts	1.3/17	7750'	4
3095	S	20:06	20:10	~155 kts	1.3/17	7250'	3
3094	N	20:12	20:16	~150 kts	1.1/18	7200'	2
3054	N	20:17	20:21	~140 kts	1.2/17	7700'	4
3053	S	20:23	20:26	~165 kts	1.2/17	7850'	5
3143	E	20:29	20:30	~155 kts	1.2/17	7800'	6
3093	S	20:34	20:37	~150 kts	1.1/17	7250'	3
3092	N	20:41	20:44	~150 kts	1.1/17	7300'	3
3091	S	20:46	20:49	~155 kts	1.1/17	7650'	4
3090	N	20:52	20:55	~145 kts	1.0/17	7700'	4
Total Proj Lines: 145		Lines Flown: 22		Lines Remain: 2		Online Time: 2:55	
Total Proj Lines: 145		Lines Flown: 22		Lines Remain: 2		Notes: 20160415-192815 -183025	

Date: April 15th, 2016
Pg 2 of 2

Project: USGS WESTERN MAINE Proj #: 27146 Flight Mgmt File: USGS_Maine_MEFRL-SH718-150kts
 Aircraft: N73TM Begin Hobbs: 6177.7 End Hobbs: 618 Total: 618 Pilot: J. Sullivan Co-Pilot: - Tech: P. HRABAK
 Dep Apt: KLEW Dep Time (Lcl): 14:36 (Z): 18:36 Arr Apt: KLEW Arr Time (Local): 18:11 (Z): 22:11 Tot Time Aloft: 3:35
 CORS: Y/N Sta 1: "MEFR" CORS Sta 2: - Flyovers: Y/N If Y, times: Sta1 End: 21:46 Sta2) -
 GPS Unit: Y (N) Sta 1: - Sta 2: - Flyovers: Y/N If Y, times: Sta1 - Sta2) -

Line #	Hdg	Start (UTC)	End (UTC)	Alt (ft)	Alt (AGL)	Alt (MSL)	GPS Altitude	Crab	Turb (0-1)	Avg Terr Ht	Max Gspsd	Avg Pt Spacing	Power	Pulse Rate	Pulse In Air	Pulse In Air	Mag CB	End CB	Test CB	Storage Name
3089	S	20:57	20:58	~165	~115	7750'	4°	-	-	-	-	-	-	-	-	-	-	-	-	-
3088	N	21:02	21:03	~145	~115	8140'	1°	-	-	-	-	-	-	-	-	-	-	-	-	-
3145	E	21:07	21:15	~170	~116	7150'	7°	-	-	-	-	-	-	-	-	-	-	-	-	-
3101	S	21:26	21:36	~160	~115	7000'	3°	-	-	-	-	-	-	-	-	-	-	-	-	-

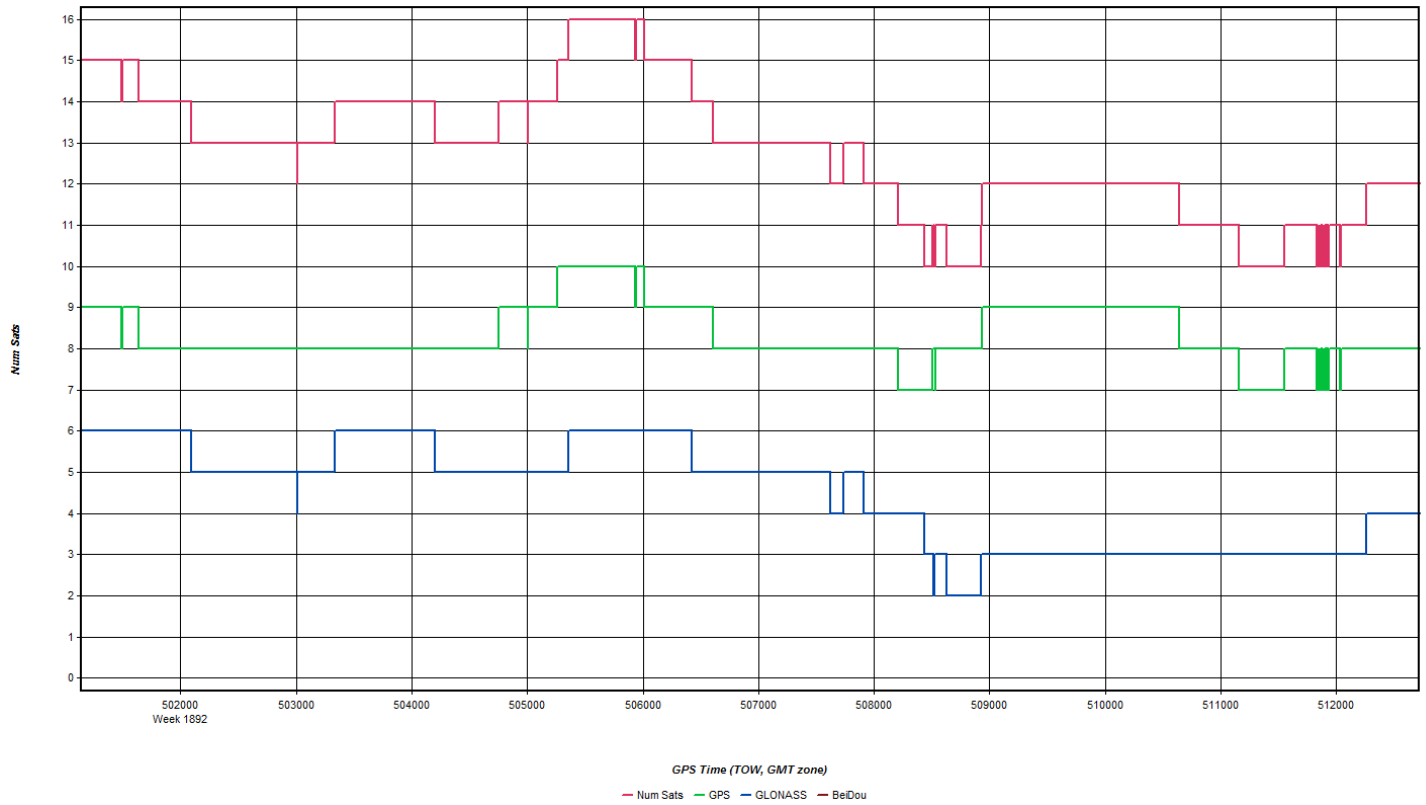
Altitude begin: SEE SWEEP ONE end: 30.41
 Avg Pt Spacing: 2
 Power: 2.2
 Pulse Rate: 161.0 kHz
 Pulse In Air: 2

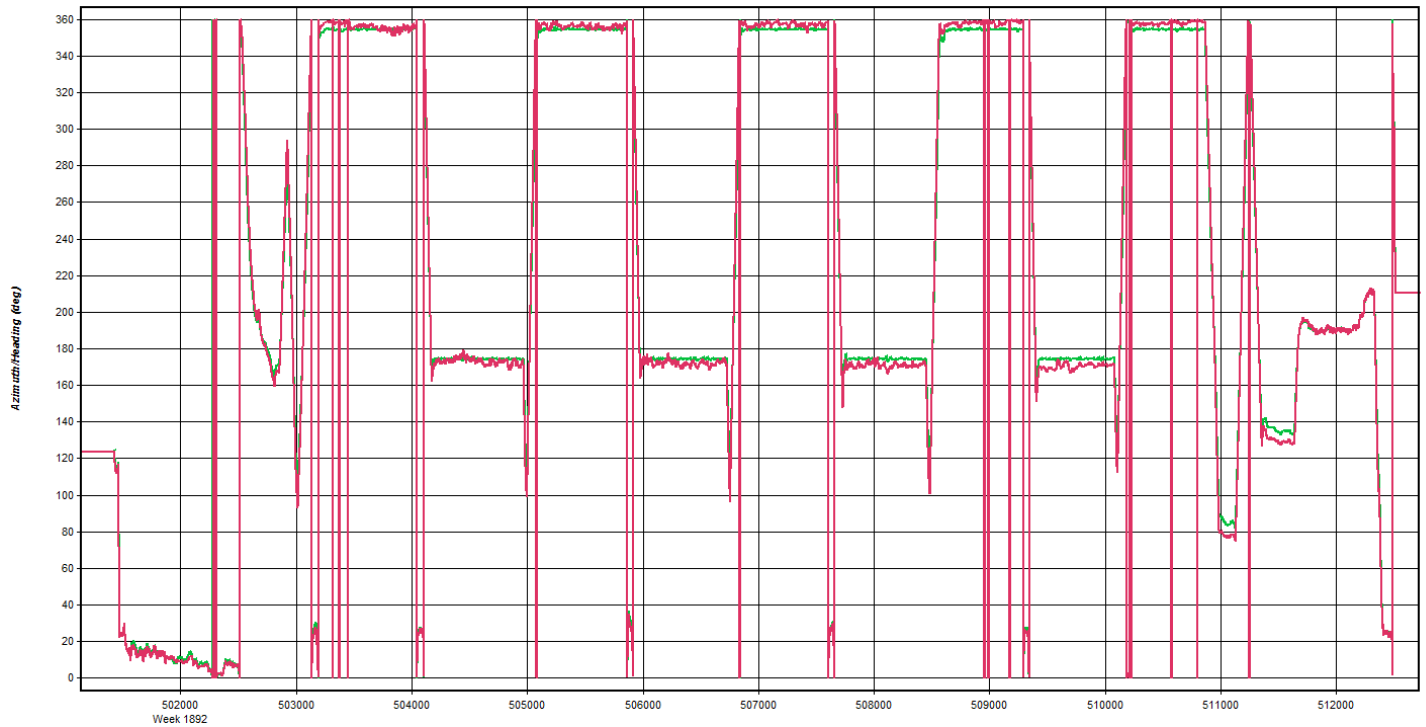
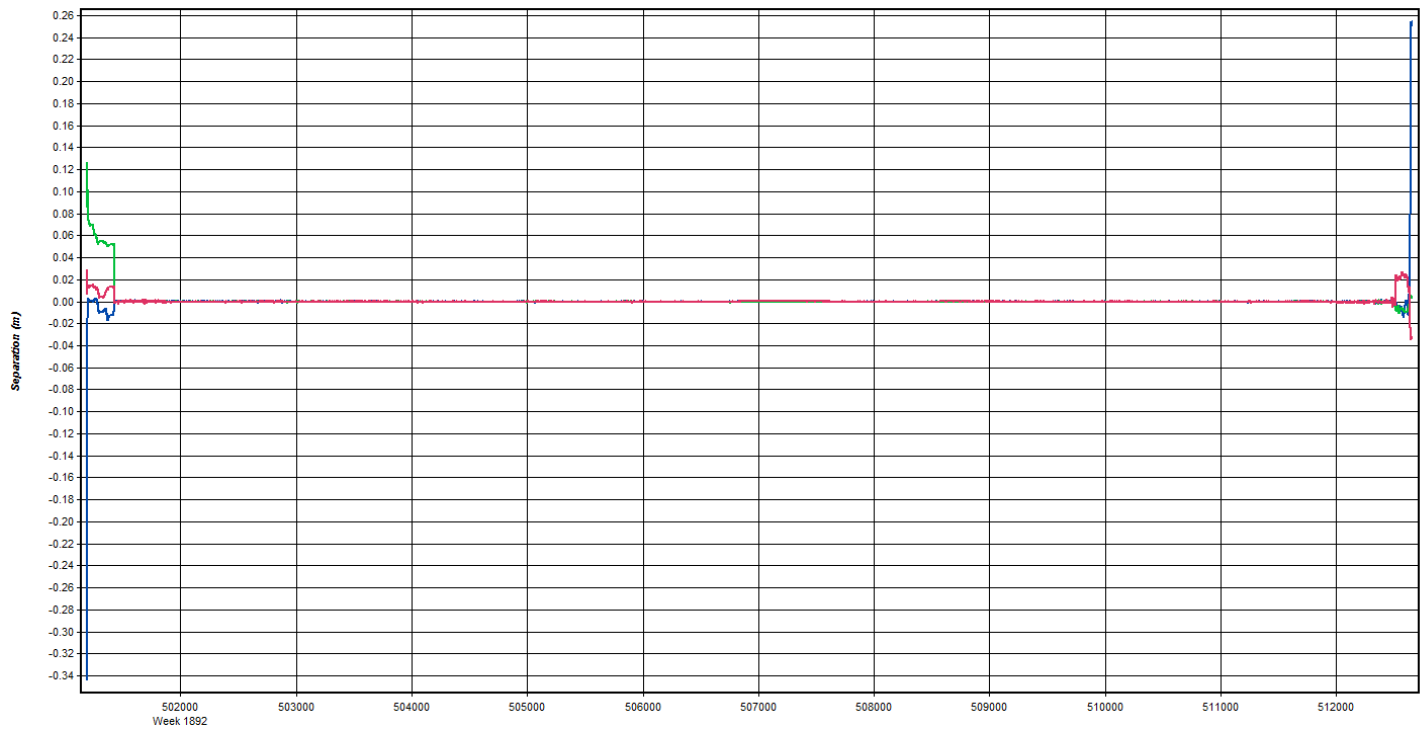
FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.
 -h-E, occ - turb, skt above & below, 300 ft below, no snow below
 -h-E, smooth, skt above & below, 300 ft below, no snow below
 -h-E, occ - turb, skt above & below, 300 ft below, no snow below
 -h-E, occ - turb, skt above & below, 25 kt. limited, min snow below e End
 (FIG 8 e 21:40)

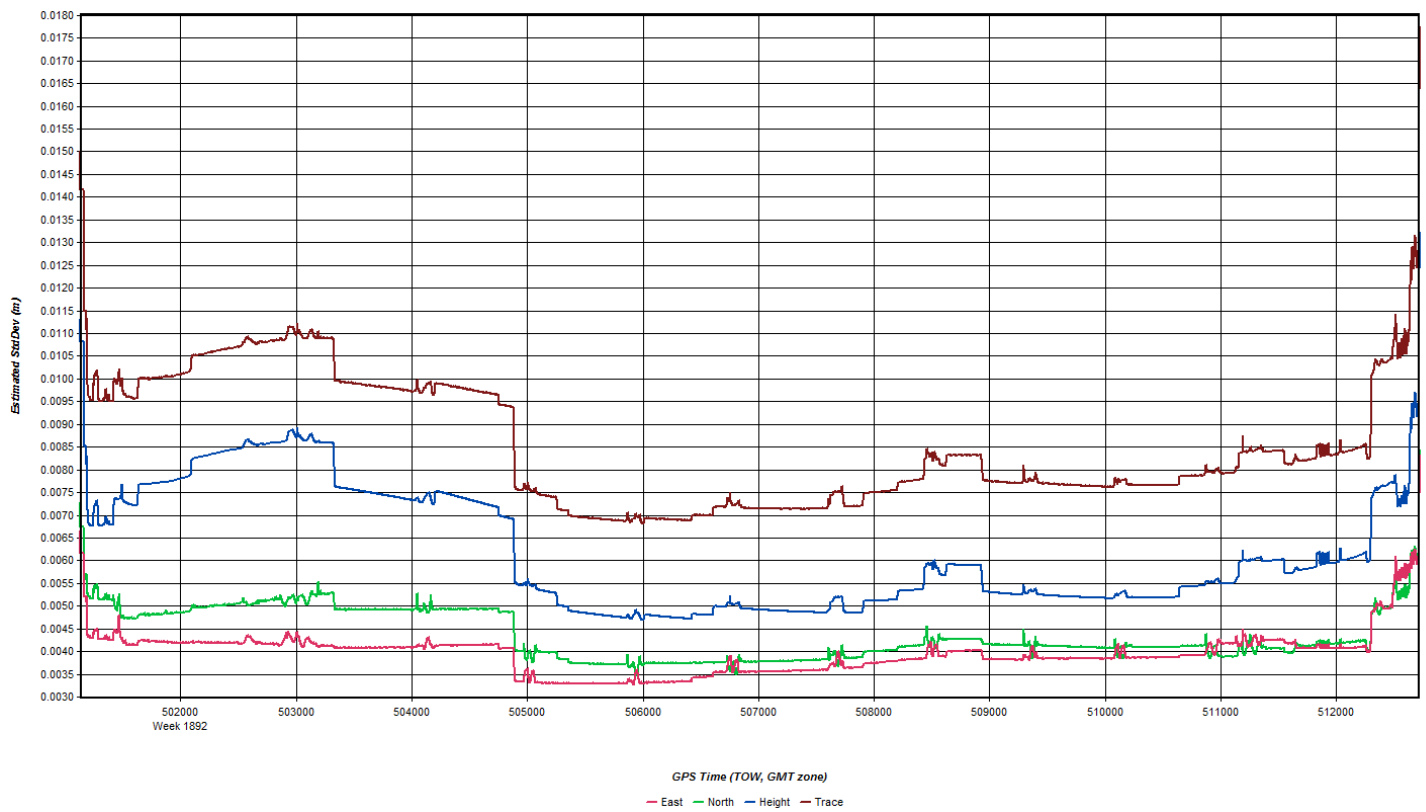
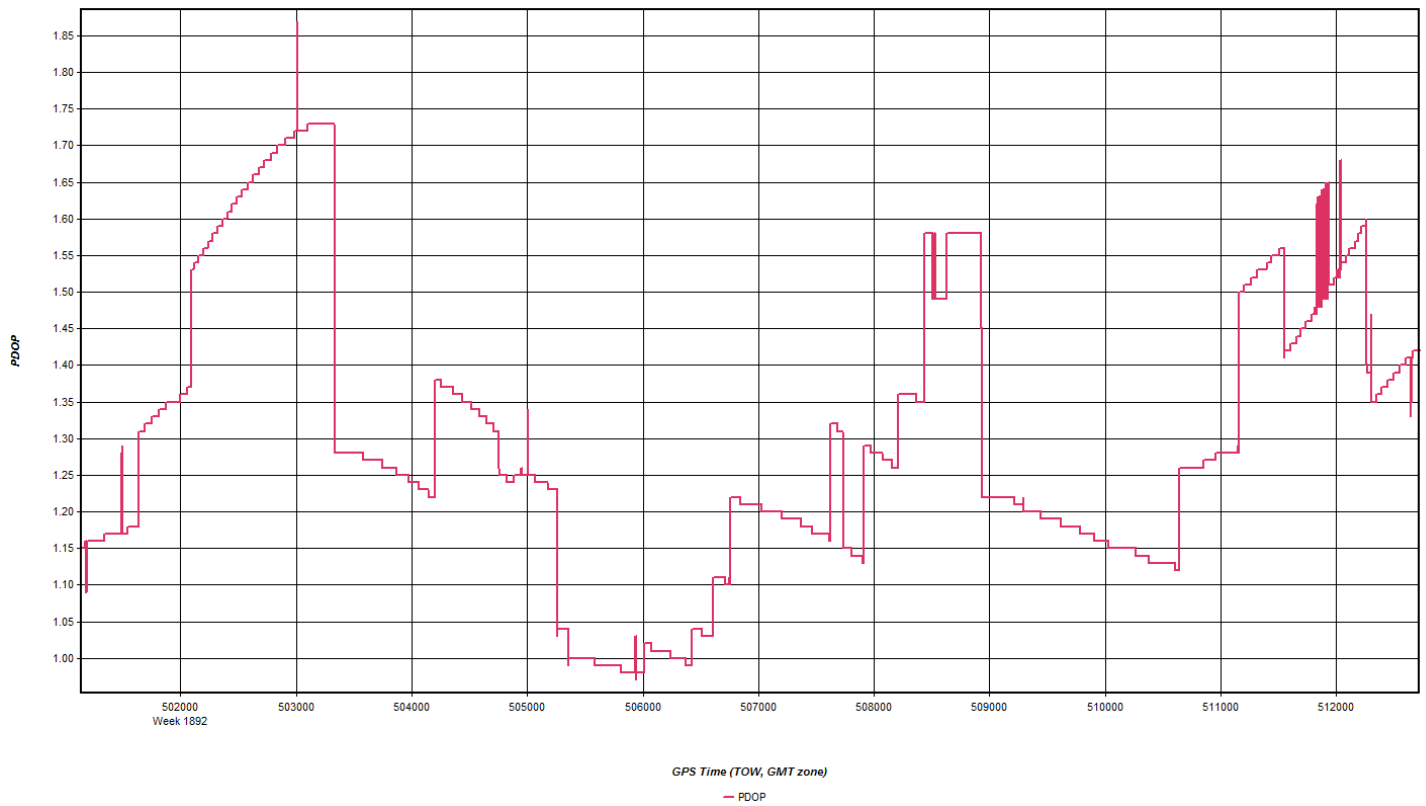
→ LANDED FOR FUEL & TO COORDINATE FOR MORNING ←

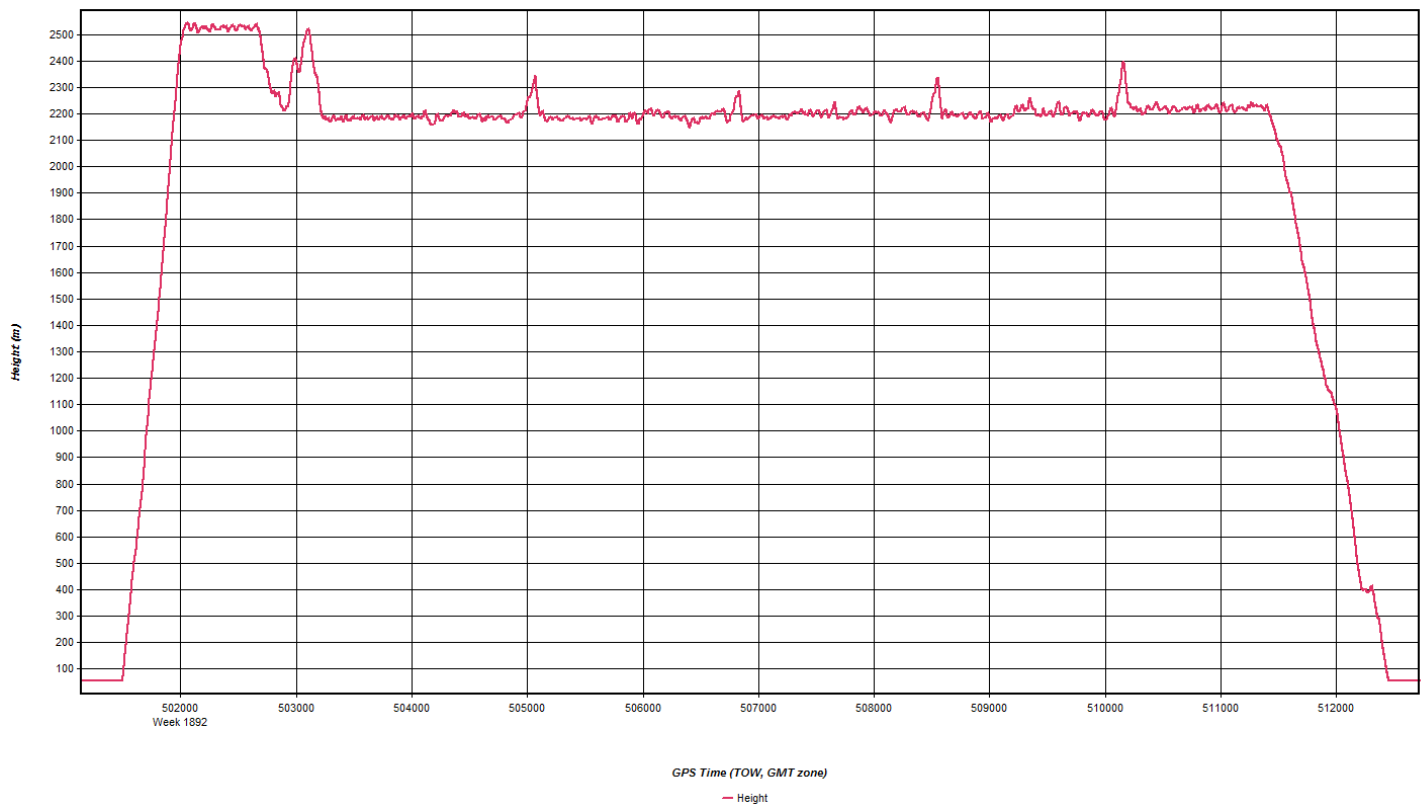
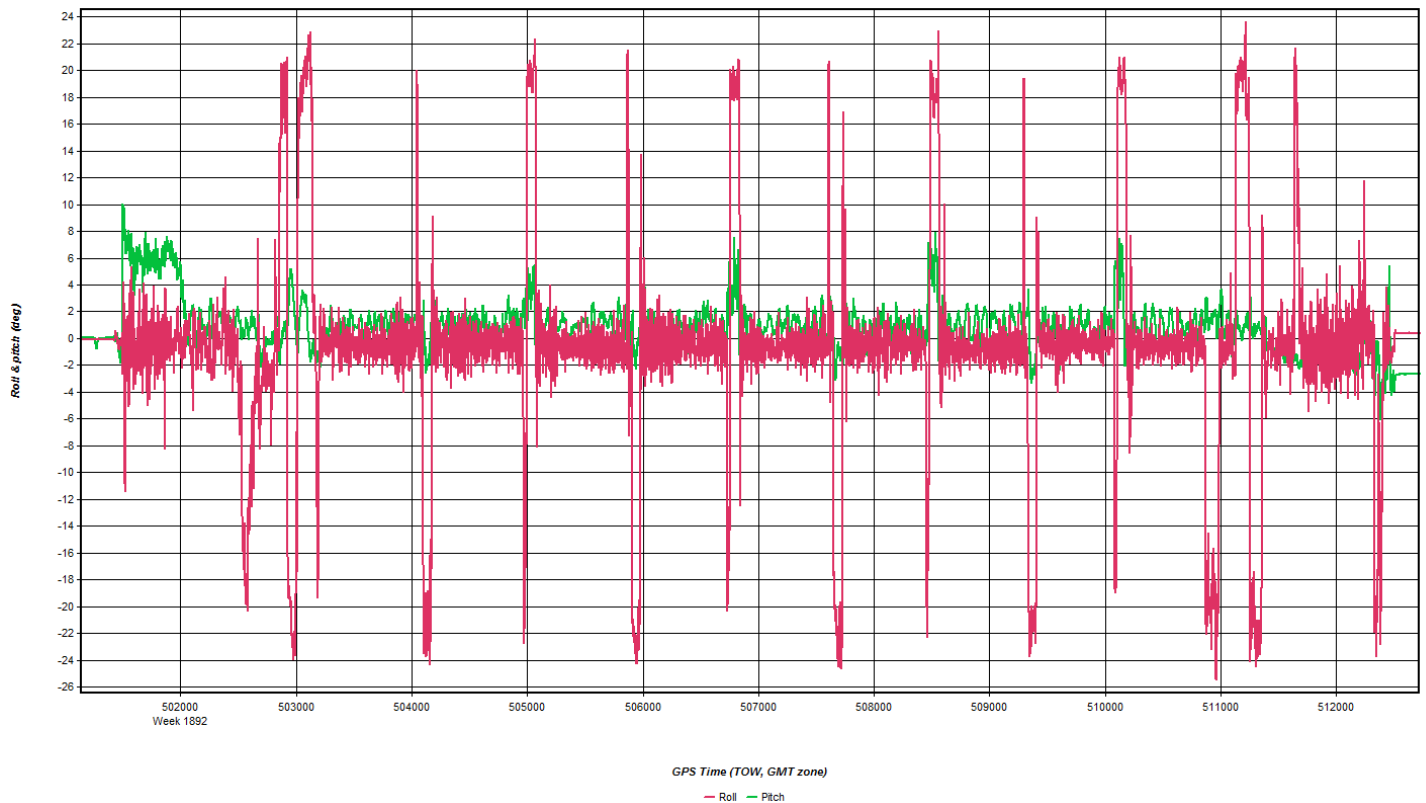
Total Proj Lines: 145 Lines Flown: 22 Lines Remain: ? Online Time: 2:35 Mob Time: 1:00 Notes: 20160415-1818 E -183025

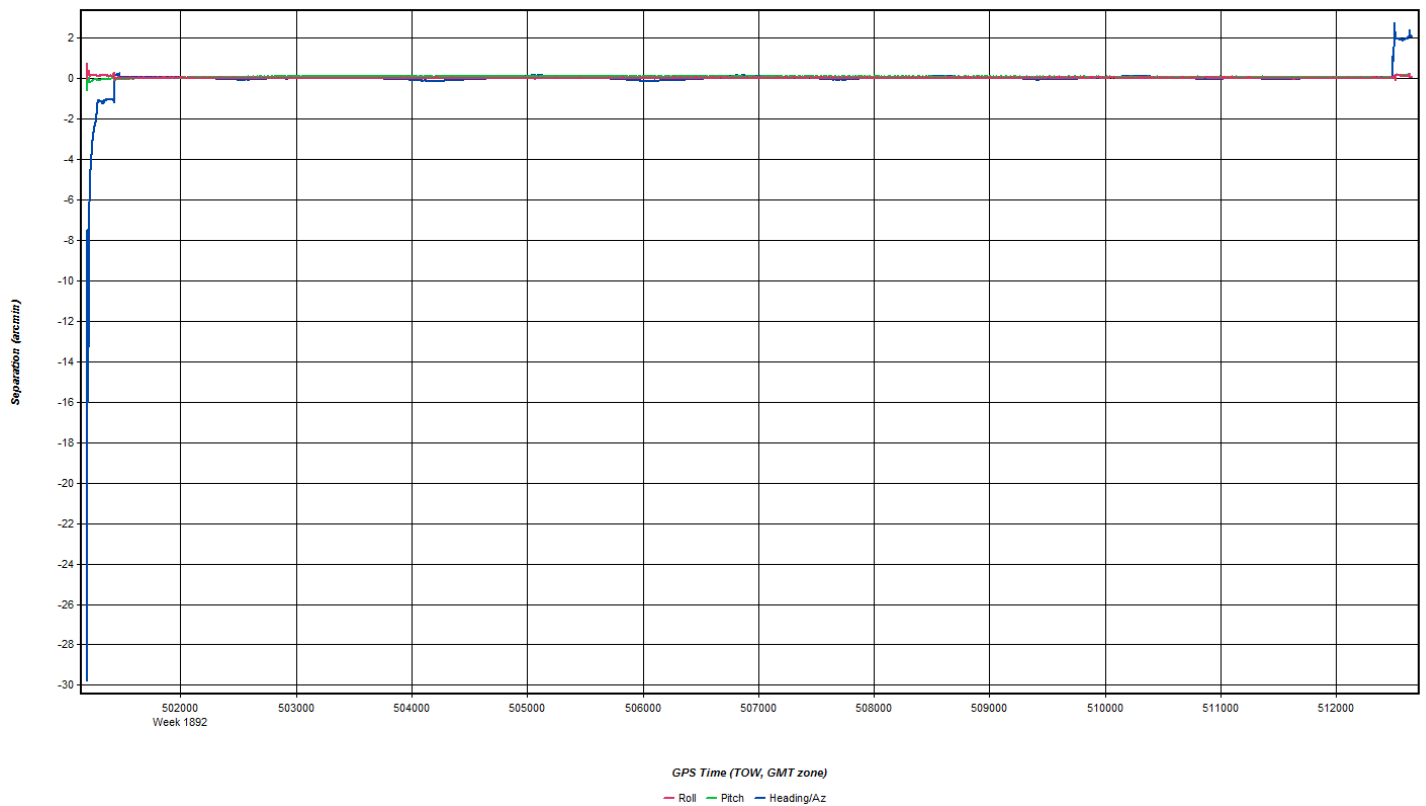
Apr 15, 2016-B (N812TB, SN7161)

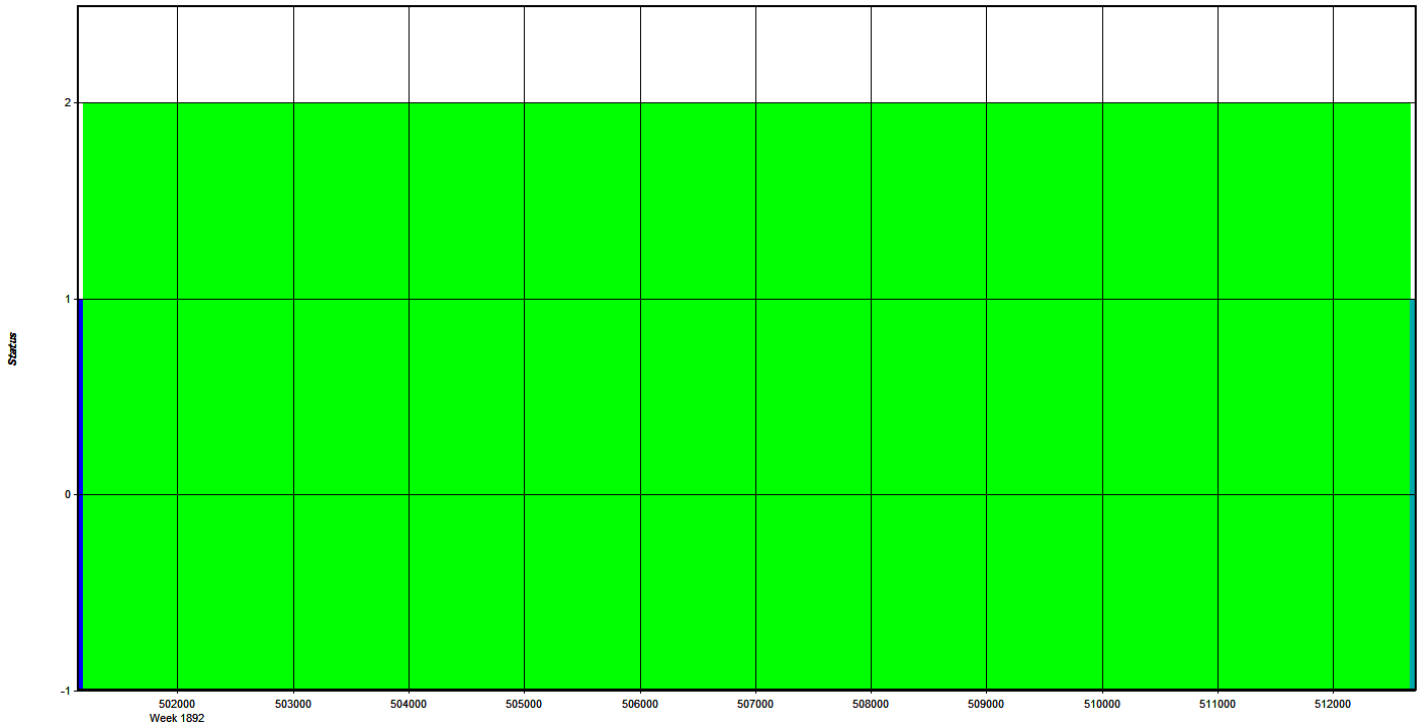












GPS Time (TOW, GMT zone)
 - Float - Forward Fixed - Reverse Fixed - Fixed (2 or more)

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEFR Name: MEFR Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\NS6R\160415_SN7161_

Coordinates
 Latitude: North 44 40 28.97450 Compute from PPP
 Longitude: West 70 07 54.54215 Enter Grid Values
 Ellipsoidal height: 131.643 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log daily to flight_log_distribution_list@quantumspatial.com)

Project: USGS Maine MEFF Proj #: 27146 Date: 4-15-16
UTC A B C D E pg. 1 of 1

Aircraft: N812TB Begin Hobbs: 3923.1 End Hobbs: 3926.1 Total: 3.0 Pilot: Jacobsen Co-Pilot: Tech: Dyresen
 Dep Apt: KLEW Dep Time (Ldt): 15:18Z Arr Apt: KLEW Arr Time (Local): 19:20 (Zt): 22:20 Tot Time Aloft: 3.0
 CORS: YN Sta 1: MEFR Sta 2: Flyovers: Y/N If Y, times: Sta1 19:36, Sta2 22:07 (Sta2)
 GPS Unit: Y10 Sta 1: Sta 2: Flyovers: Y/N If Y, times: Sta1 19:36, Sta2 22:07 (Sta2)

Gd Temp beg: °C End: °C OAT beg: -6 °C End: -3 °C Altimeter begin: 30.43 end: 30.41
 S Start 19:12 Alt 19.15 End 19:15 Avg Pt Spacing Max Gaps Power Pulse Rate Avg Pt Spacing Max Gaps Power Pulse Rate

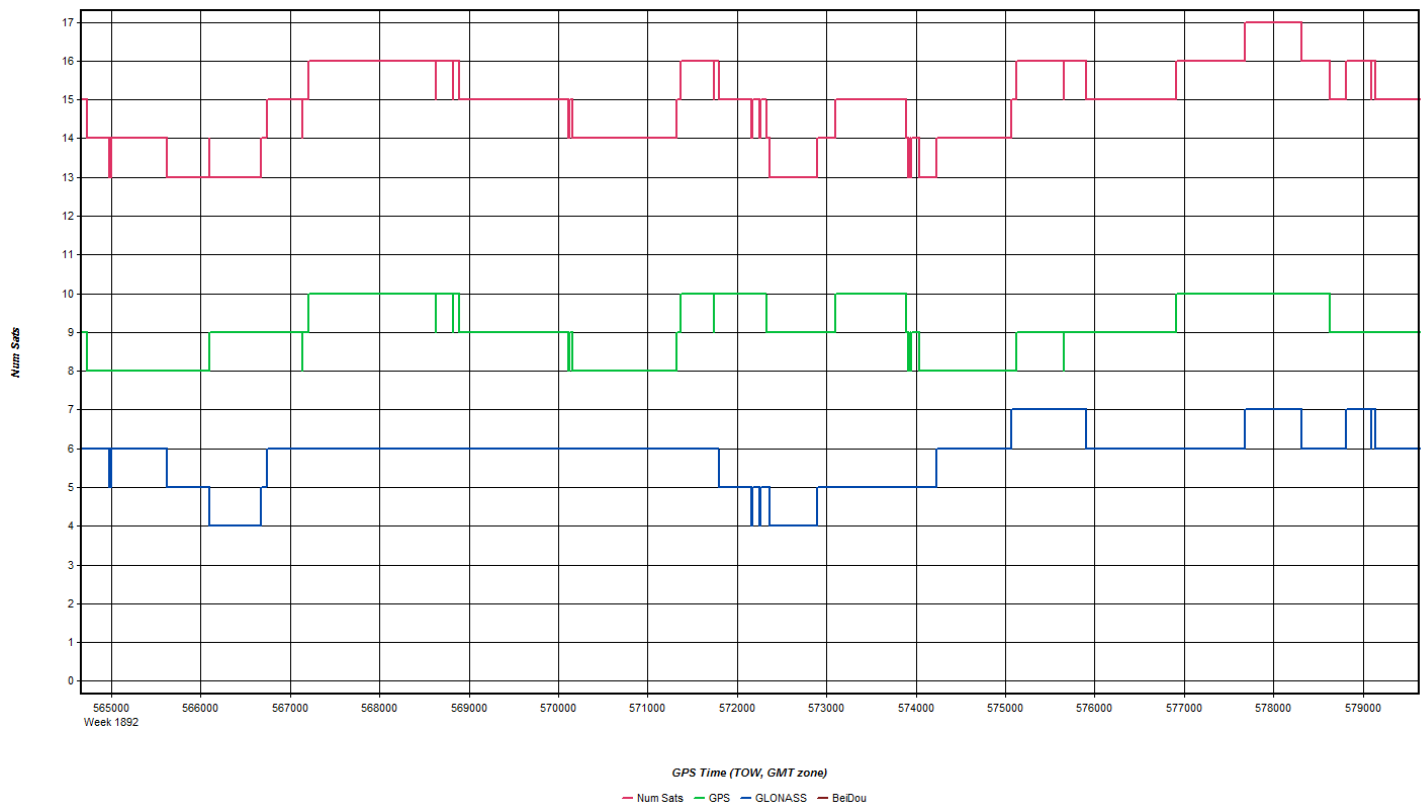
Staz: 19.8-19.42.21:58
 S Start 19:12 Alt 19.15 End 19:15 Avg Pt Spacing Max Gaps Power Pulse Rate Avg Pt Spacing Max Gaps Power Pulse Rate
 A 22:21 Alt 20.44 End 22:21 Avg Pt Spacing Max Gaps Power Pulse Rate Avg Pt Spacing Max Gaps Power Pulse Rate
 C 361 397 36

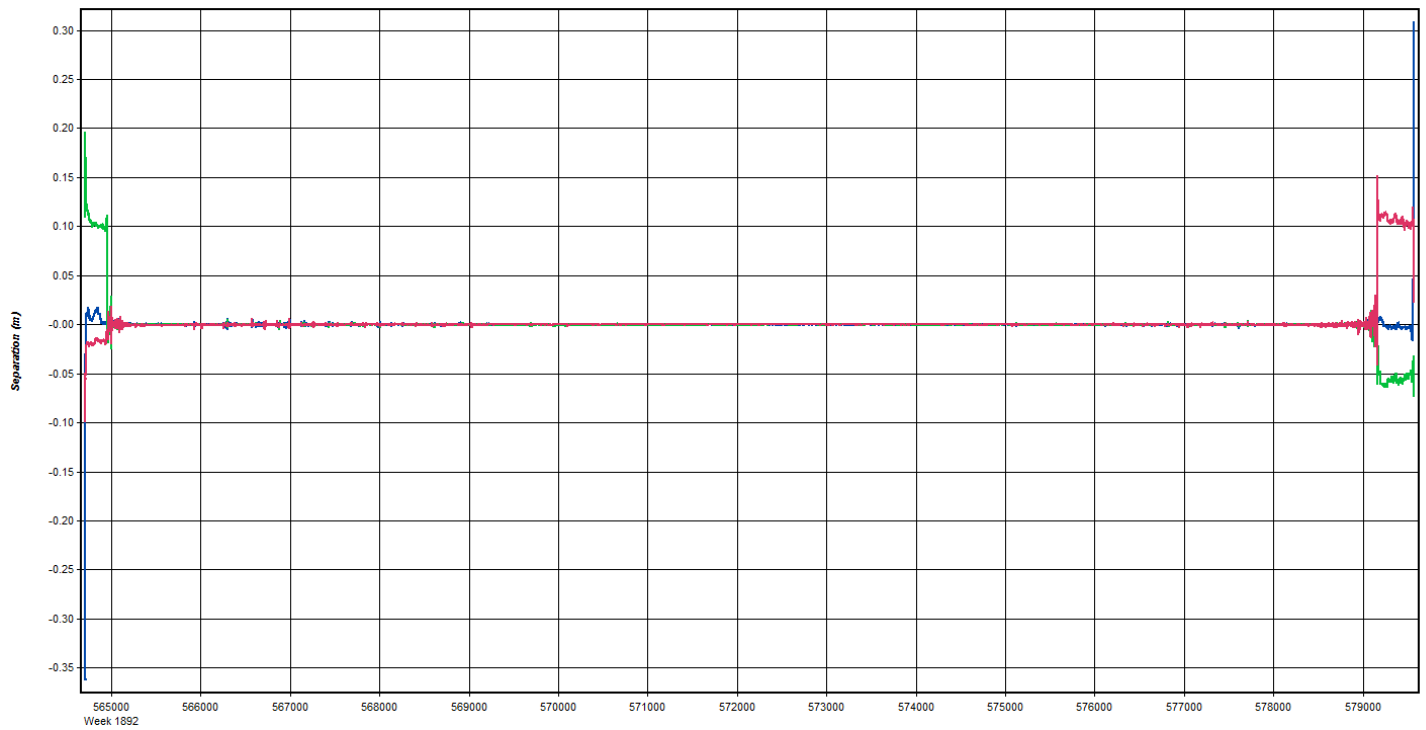
Line #	Hgt	Inertial BTQ	End BTQ	GS/Sec	Position	GPS Altitude	Crab	Turn	FLIGHT LINE NOTES - vibration, clouds, smoke, partial, etc.
					North	East	Roll	Yaw	
3110	394	19:48	20:00	149	1.4/15	7155			
3109	174	20:03	20:15	145	1.3/17	7158			
3108	354	20:18	20:30	146	1.2/17	7165			
3107	174	20:33	20:45	151	1.2/17	7169			
3106	354	20:48	20:59	146	1.1/17	7172			
3105	174	21:02	21:13	151	1.2/15	7172			
3104	354	21:17	21:27	151	1.0/17	7198			
3103	174	21:30	21:40	144	1.1/15	7250			
3102	354	21:43	21:54	154	1.1/15	7237			
UL 001	88	21:56	21:58	148	1.1/15	7300			

Cross tie for lines 3110-3102

Total Proj Lines: 145 Lines Flown: 9 Lines Remain: Online Time: 2.2 Mob Time: 0.8 Notes:

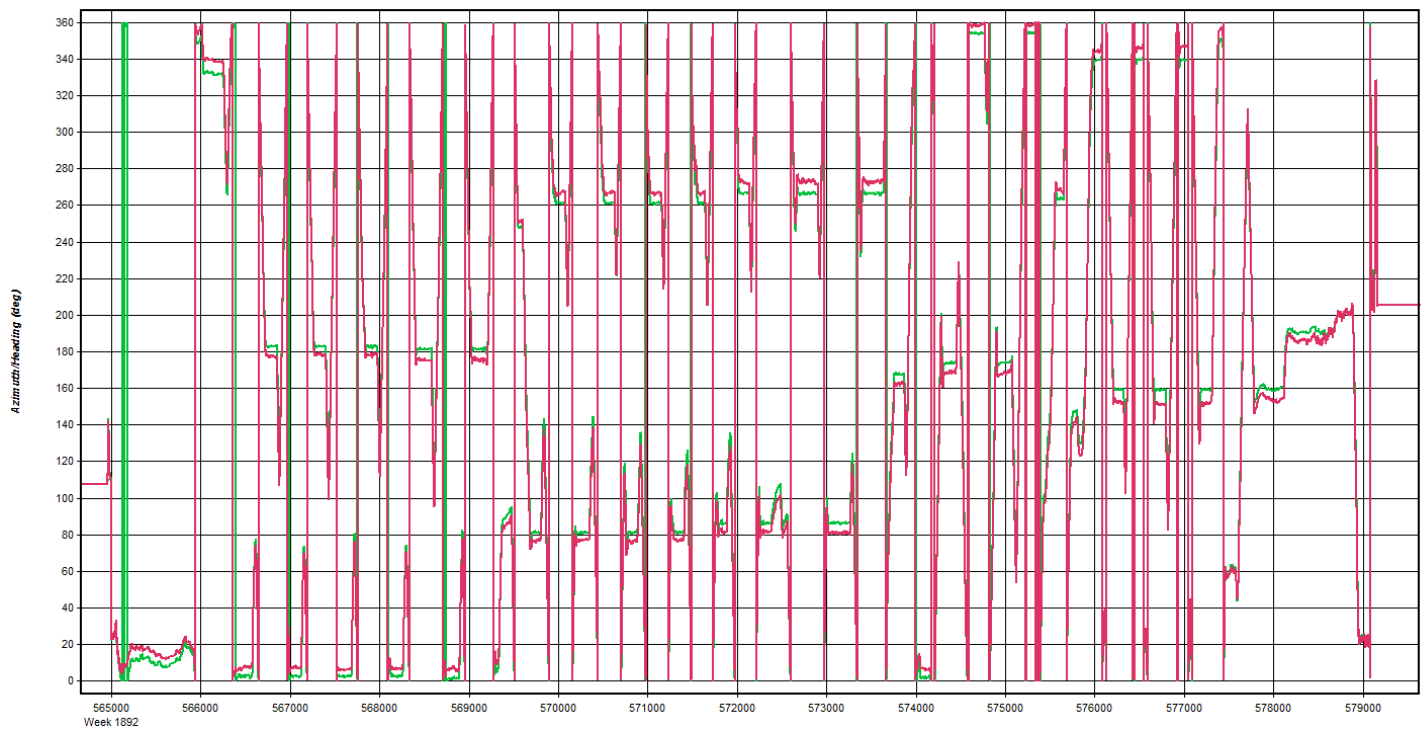
Apr 16, 2016-A (N73TM, SN7178)





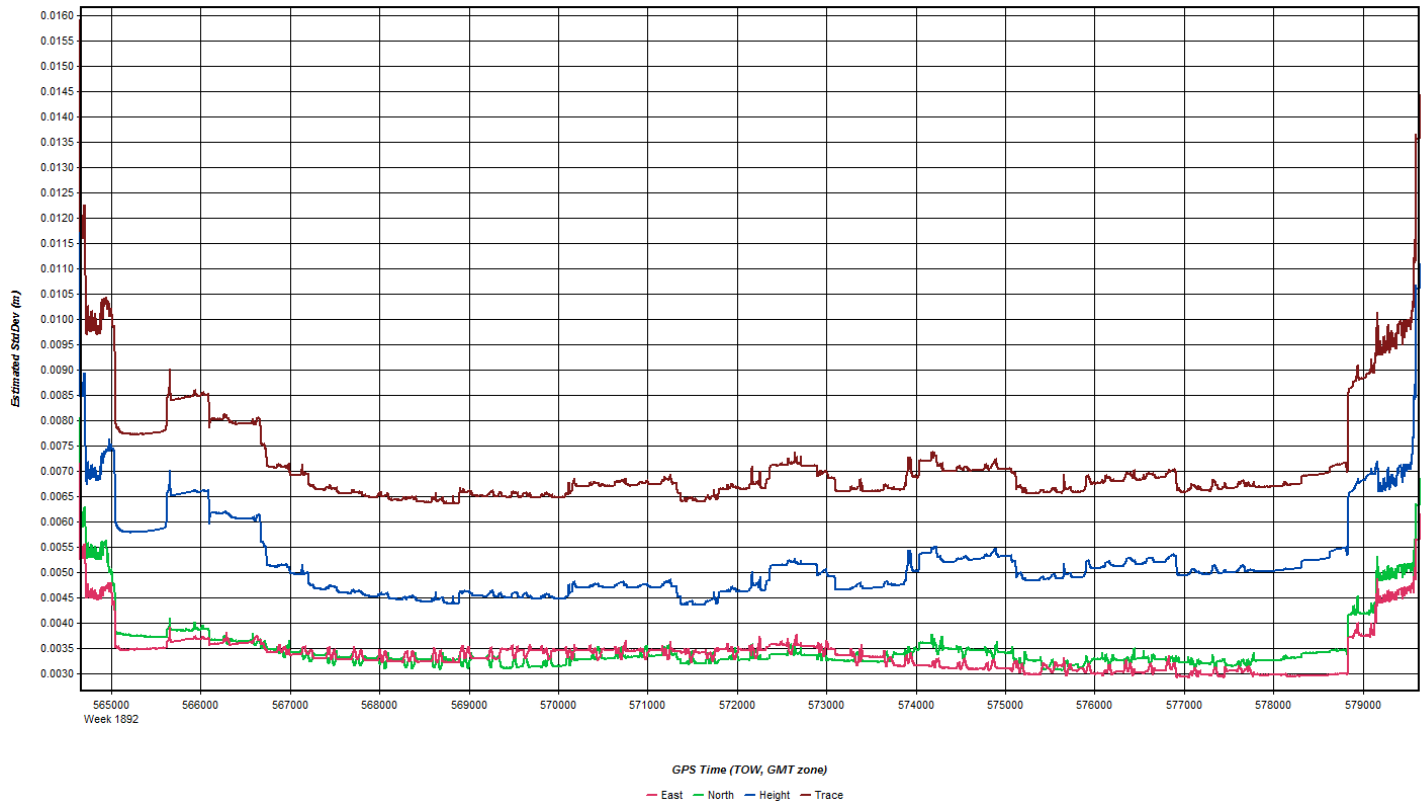
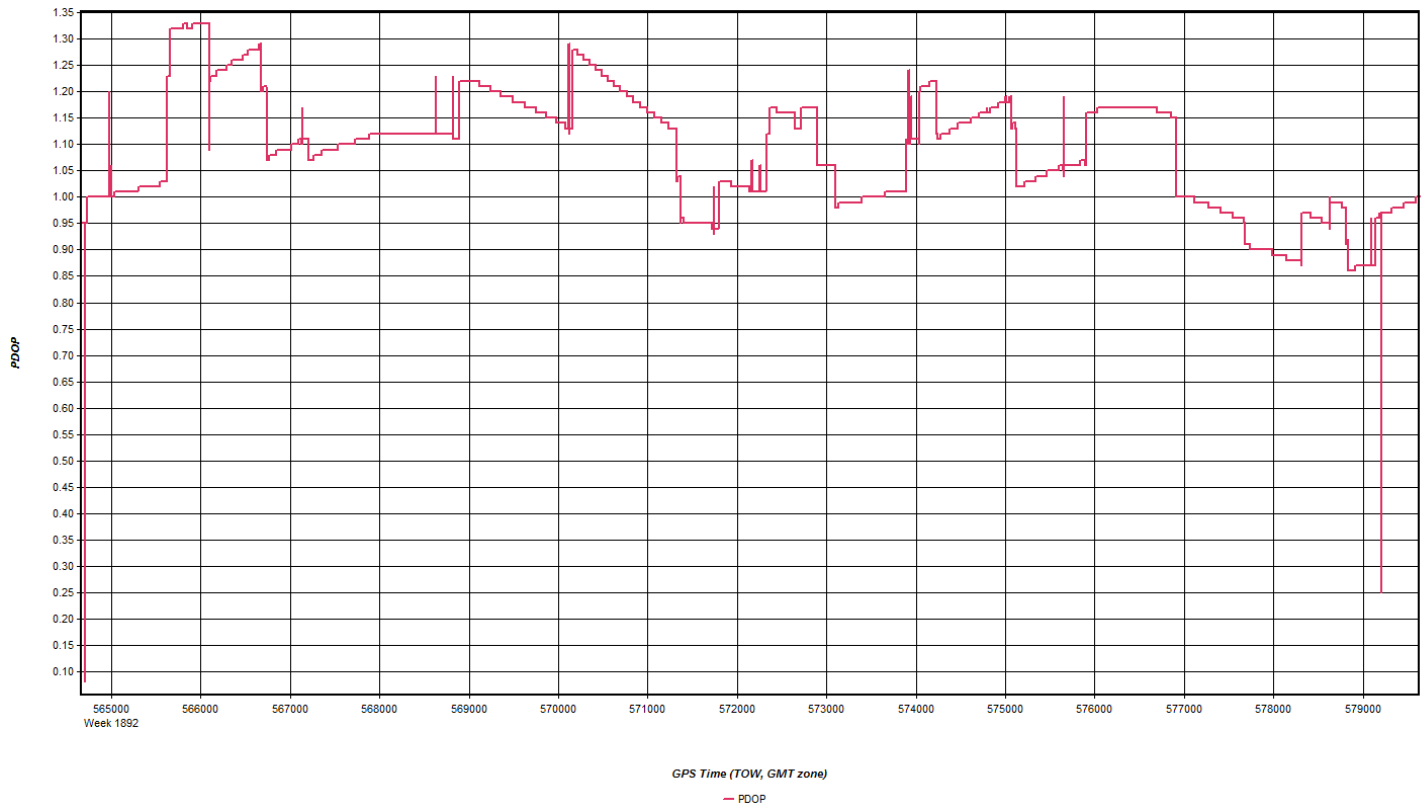
GPS Time (TOW, GMT zone)

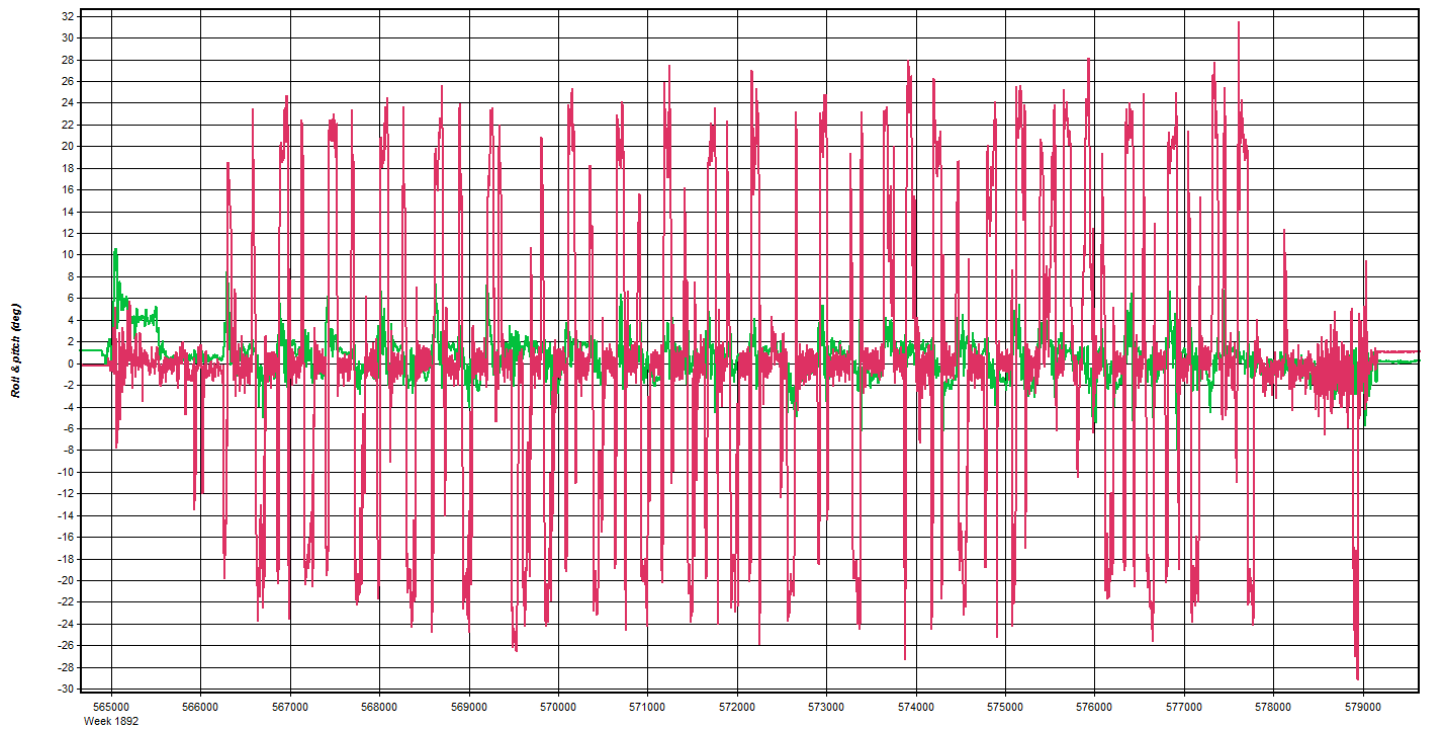
— East — North — Up



GPS Time (TOW, GMT zone)

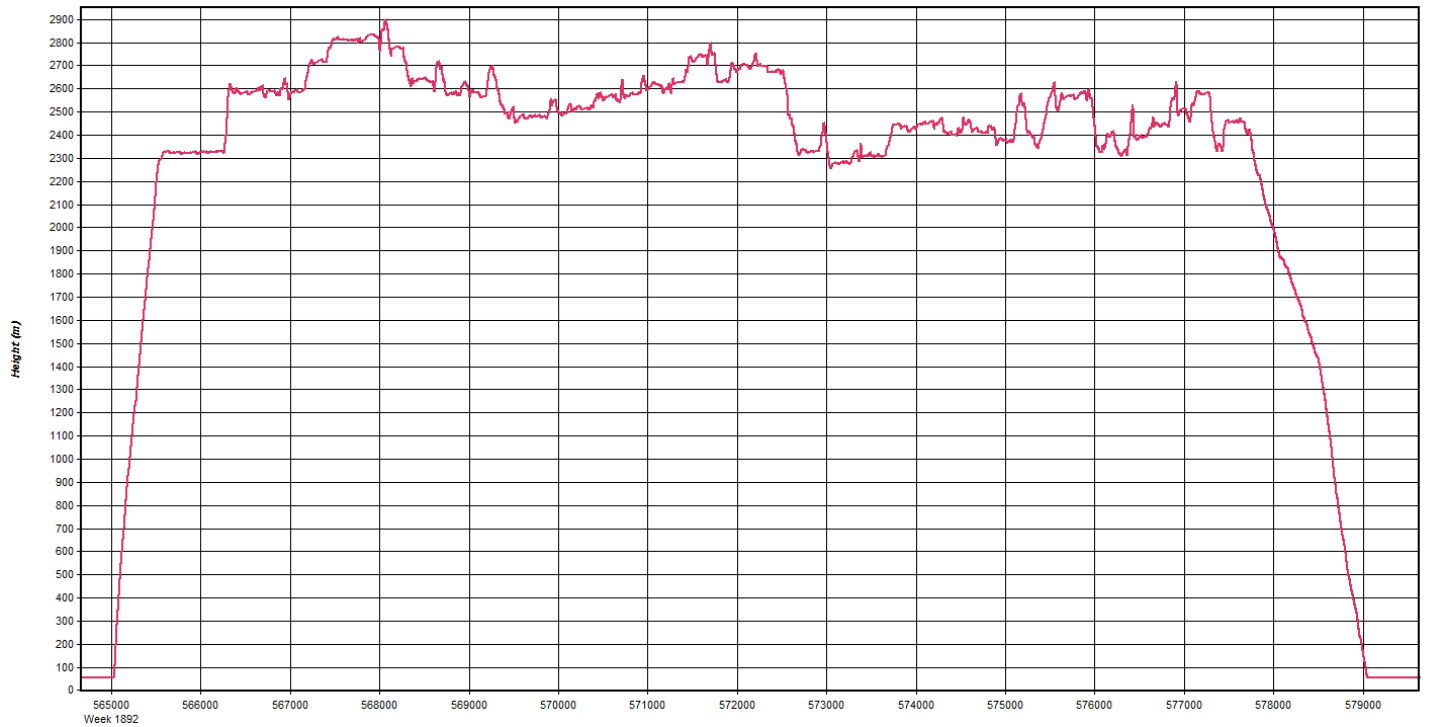
— Heading/Azimuth — GPS-COG





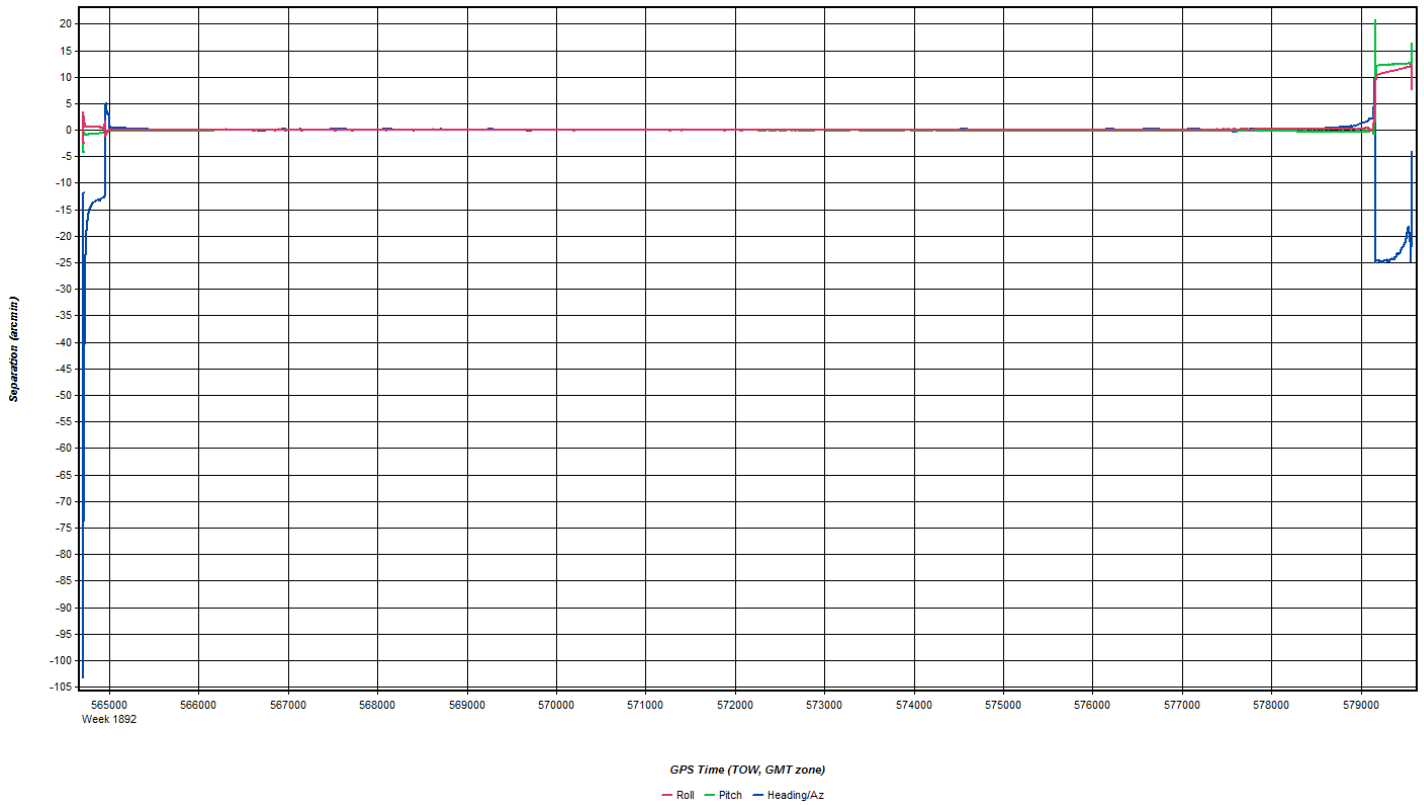
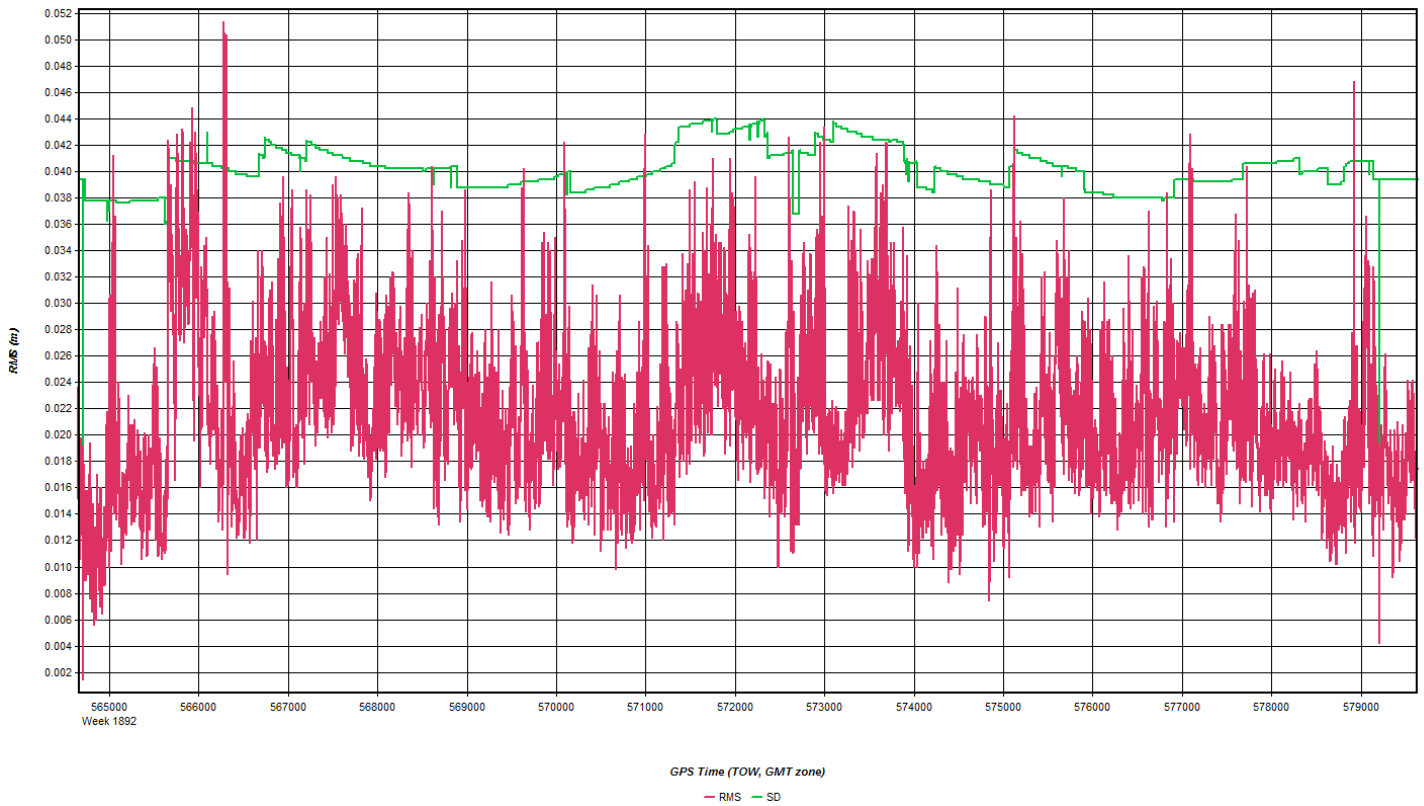
GPS Time (TOW, GMT zone)

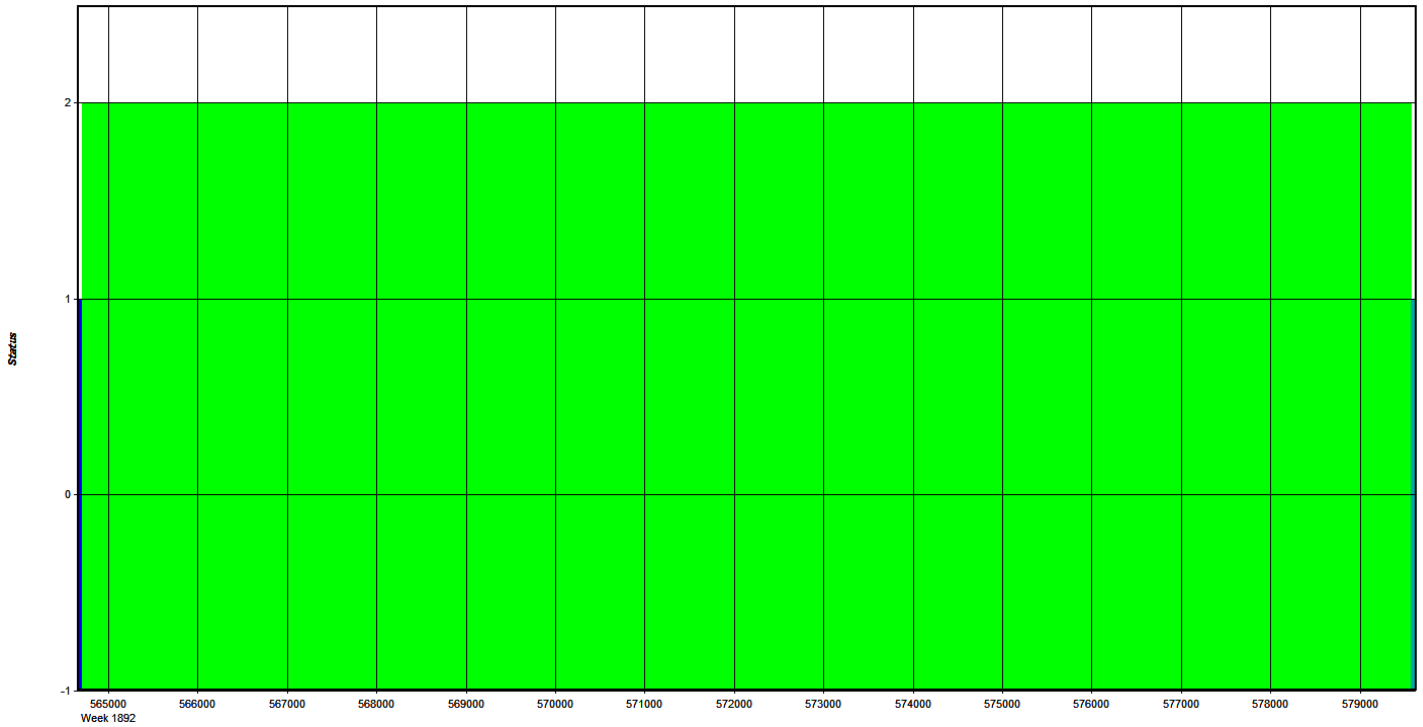
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEFR Name: MEFR Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\0498\20160416a-7178\m

Coordinates
 Latitude: North 44 40 28.97450 Compute from PPP
 Longitude: West 70 07 54.54215 Enter Grid Values
 Ellipsoidal height: 131.643 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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: USGS WESTERN MAINE **Project #:** 27146 **Date:** APRIL 16th 2016

(email log daily to flight_log_distribution_list@quantumspatial.com) 20160416-124539

Flight Mgmt File: USGS_Maine_MEFIL-SH717B-150.kts **Page 1 of 2**

Aircraft: N73TM **Begin Hobbs:** 6185.2 **Total:** 3.9 **Pilot:** J. BILKINSON **Co-Pilot:** - **Tech:** P. HEDGAK

Dep Apt: KLEW **Dep Time (Lcl):** 8:56 **[Z]:** 12:56Z **Arr Apt:** - **Arr Time (Local):** 12:50 **[Z]:** 16:50Z **Tot Time Aloft:** 3:54

CORS: Y/N **Sta 1:** MEFIL CORS **Sta 2:** - **Flyovers:** Y/N **IF Y, times: Sta1** - **Sta2** -

GPS Unit: Y/N **Sta 1:** - **Sta 2:** - **Flyovers:** Y/N **IF Y, times: Sta1** - **Sta2** -

Gd Temp beg: 04 °C **End:** 02 °C **OAT beg:** 02 °C **End:** 02 °C **Alt AMSL:** 5000' **Alt AGL:** ~5000' **Max Gaspd:** 150 kts **Avg Pt Spacing:** ?

Alt AMSL: 5000' **Alt AGL:** ~5000' **Max Gaspd:** 150 kts **Avg Pt Spacing:** ?

Type: ALS70 **Serial #:** 717B **Scan Freq:** 53.4 Hz **MPIA:** Y/N **Pulses In Air:** 2 **Power:** 100% **PPSM:** 2.2

FOV: 40°

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	POF/Sets	GPS Altitude	Crab	Turb ID = 4	FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.
3034	N	13:20	13:22	155 kts	1.0/20	8430'	4°	0	good vis, smooth, skc above & below, min snow below
3033	S	13:25	13:27	155 kts	1.0/20	8480'	6°	0	good vis, smooth, skc above & below, min snow below
3032	N	13:29	13:31	155 kts	1.1/19	8500'	5°	0	good vis, smooth, skc above & below, min snow below
3031	S	13:34	13:36	155 kts	1.1/18	8900'	5°	0	good vis, smooth, skc above & below, min snow below
3030	N	13:39	13:41	150 kts	1.1/18	9200'	4°	0	good vis, smooth, skc above & below, min snow below
3029	S	13:44	13:46	150 kts	1.1/18	9300'	5°	0	good vis, smooth, skc above & below, min snow below
3028	N	13:48	13:50	150 kts	1.2/17	9120'	4°	0	good vis, smooth, skc above & below, min snow below
3013	S	13:53	13:56	155 kts	1.1/17	8650'	6°	0	good vis, smooth, skc above & below, min snow below
3012	N	13:58	14:01	150 kts	1.1/17	8450'	5°	0	good vis, smooth, skc above & below, min snow below
3011	S	14:04	14:06	155 kts	1.1/17	8480'	5°	0	good vis, smooth, skc above & below, min snow below
3052	E	14:09	14:11	155 kts	1.2/16	8150'	6°	0	good vis, smooth, skc above & below, min snow below
3051	E	14:14	14:16	150 kts	1.3/15	8140'	5°	0	good vis, smooth, skc above & below, min snow below
3050	E	14:19	14:21	155 kts	1.2/15	8180'	4°	0	good vis, smooth, skc above & below, min snow below
3049	E	14:23	14:25	150 kts	1.1/16	8240'	5°	0	good vis, smooth, skc above & below, min snow below
3048	E	14:28	14:30	150 kts	1.1/17	8400'	6°	0	good vis, smooth, skc above & below, min snow below
3047	E	14:32	14:34	150 kts	1.0/18	8450'	5°	0	good vis, smooth, skc above & below, min snow below
3046	E	14:37	14:39	160 kts	1.0/17	8600'	5°	0	good vis, smooth, skc above & below, min snow below
3045	E	14:41	14:43	150 kts	1.0/17	8600'	4°	0	good vis, smooth, skc above & below, min snow below

Total Proj Lines: 1415 **Lines Flow:** 37 **Lines Remain:** 7 (Two (155), Online Time: 3:05 **Notes:** 20160416-124539Z - 125024

Mob Time: 0:49 **Notes:** 20160416-124539Z - 125024

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc.															
Project: USGS WESTERN MAINE Proj #: 27146 Date: April 16th, 2016															
Flight Mgmt File: USGS_Maine_MEFR_SN77B_150.kts Tech: P. HRABAK															
Aircraft: N73TM Begin Hobbs: 6191.3 End Hobbs: 6185.2 Total: 3.9 Pilot: J. BULLINGTON Co-Pilot: —															
Dep Apt: KLEW Dep Time (Lcl): 0:56 (Z): 12:56 Arr Apt: KLEW Arr Time (Local): 12:50 (Z): 16:50 Tot Time Aloft: 3:54															
CORRS: 0/N Sta 1: MEFR 2025 Sta 2: — Flyovers: Y/N If Y, times: Sta1) SEELIMER, SMERS, Staz2) —															
GPS Unit: Y/N Sta 1: — Sta 2: — —Flyovers: Y/N If Y, times: Sta1) — Sta2) —															
Gd Temp beg: SEE SLIST ONE °C		End: °C		OAT beg: SEE SLIST ONE °C		End: °C		Altimeter begin: SEE SLIST ONE		end:		Mag Cal		Storage Name	
Type	Serial #	ALT AGL	ALT AMSL	Alt. VARIES	Max Gspp	Avg Pt Spacing	Power	PPSM	End Cal			End Cal		AS7B	
FOV	Scan Freq	MPIA	Pulses in Air	Pulses in Air	Rate	Rate	Rate	Rate	Tot Cal			Tot Cal		SSD 4	
Line #	Hgt	Start LUTC	End LUTC	Gd Spd	FOV/Rate	GPS Altitude	Crab	Turb (0..9)	FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.						
3045	W	14:45	14:47	150 kts	1.0/17	9000'	5°	0	good vis, smooth, skc above & below, min snow below						
3040	E	14:49	14:51	155 kts	1.0/17	8600'	4°	0	good vis, smooth, skc above & below, min snow below						
3039	W	14:53	14:55	150 kts	1.1/17	8340'	7°	0	good vis, smooth, skc above & below, min snow below						
3038	E	14:57	14:59	155 kts	1.0/20	8940'	4°	0	good vis, smooth, skc above & below, min snow below						
3037	W	15:04	15:08	155 kts	0.9/18	7600'	6°	0	good vis, smooth, skc above & below, min snow below						
3036	E	15:10	15:14	160 kts	1.0/17	7450'	5°	0	good vis, smooth, skc above & below, min snow below						
3035	W	15:16	15:20	150 kts	1.0/17	7570'	5°	0	good vis, smooth, skc above & below, min snow below						
3139	S	15:22	15:24	175 kts	1.1/16	8000'	5°	0	good vis, smooth, skc above & below, min snow below						
3138	N	15:27	15:29	150 kts	1.1/17	8060'	5°	0	good vis, smooth, skc above & below, min snow below						
3041	S	15:31	15:33	160 kts	1.1/17	7880'	4°	0	good vis, smooth, skc above & below, min snow below						
3042	N	15:37	15:39	155 kts	1.0/18	7900'	5°	0	good vis, smooth, skc above & below, min snow below						
3043	S	15:42	15:44	155 kts	1.2/16	7800'	6°	0	good vis, smooth, skc above & below, min snow below						
3044	N	15:47	15:49	155 kts	1.2/16	7840'	4°	0	good vis, smooth, skc above & below, min snow below						
3142	W	15:52	15:53	180 kts	1.3/16	8900'	7°	0	good vis, smooth, skc above & below, min snow below						
3084	N	16:00	16:01	155 kts	1.3/16	7700'	5°	0	good vis, smooth, skc above & below, min snow below						
3083	S	16:03	16:05	150 kts	1.4/17	7660'	6°	0	good vis, smooth, skc above & below, min snow below						
3082	N	16:07	16:08	160 kts	1.2/17	7900'	7°	0	good vis, smooth, skc above & below, min snow below						
3081	S	16:11	16:12	170 kts	1.2/17	8000'	8°	0	good vis, smooth, skc above & below, min snow below						
Total Proj Lines: 145		Lines Flown: 37		Lines Remain: ? (max 0500)		Online Time: 3:05		Mob Time: 0:49		Notes: 20160416-124539 & -128224					

Project: USGS WESTERN MAINE **Proj #:** 27146 **Date:** April 16th, 2016 **Page:** 3 of 3
(email log daily to flight_log_distribution_list@quantumspatial.com) 20160416-12:45:39

Flight Mgmt File: USGS_Maine-MEFFR-SN7178-150.kts **Tech:** P.HRABAK

Aircraft: N737M **Begin Hobbs:** 6181.3 **End Hobbs:** 6185.2 **Total:** 3.9 **Pilot:** J.B. WILKINSON **Co-Pilot:** -

Dep Apt: KLEW **Dep Time (Lcl):** 8:56 (Z): 12:56 Z **Arr Apt:** KLEW **Arr Time (Local):** 12:58 (Z): 16:58 Z **Tot Time Aloft:** 3:54

CORS: N Sta 1: "MEFR" CORS **Sta 2:** - **Flyovers:** Y / N If Y, times: Sta1) 0410 16:35Z **Sta2)** -

GPS Unit: Y (N) **Sta 1:** - **Sta 2:** - **Flyovers:** Y / N If Y, times: Sta1) - **Sta2)** -

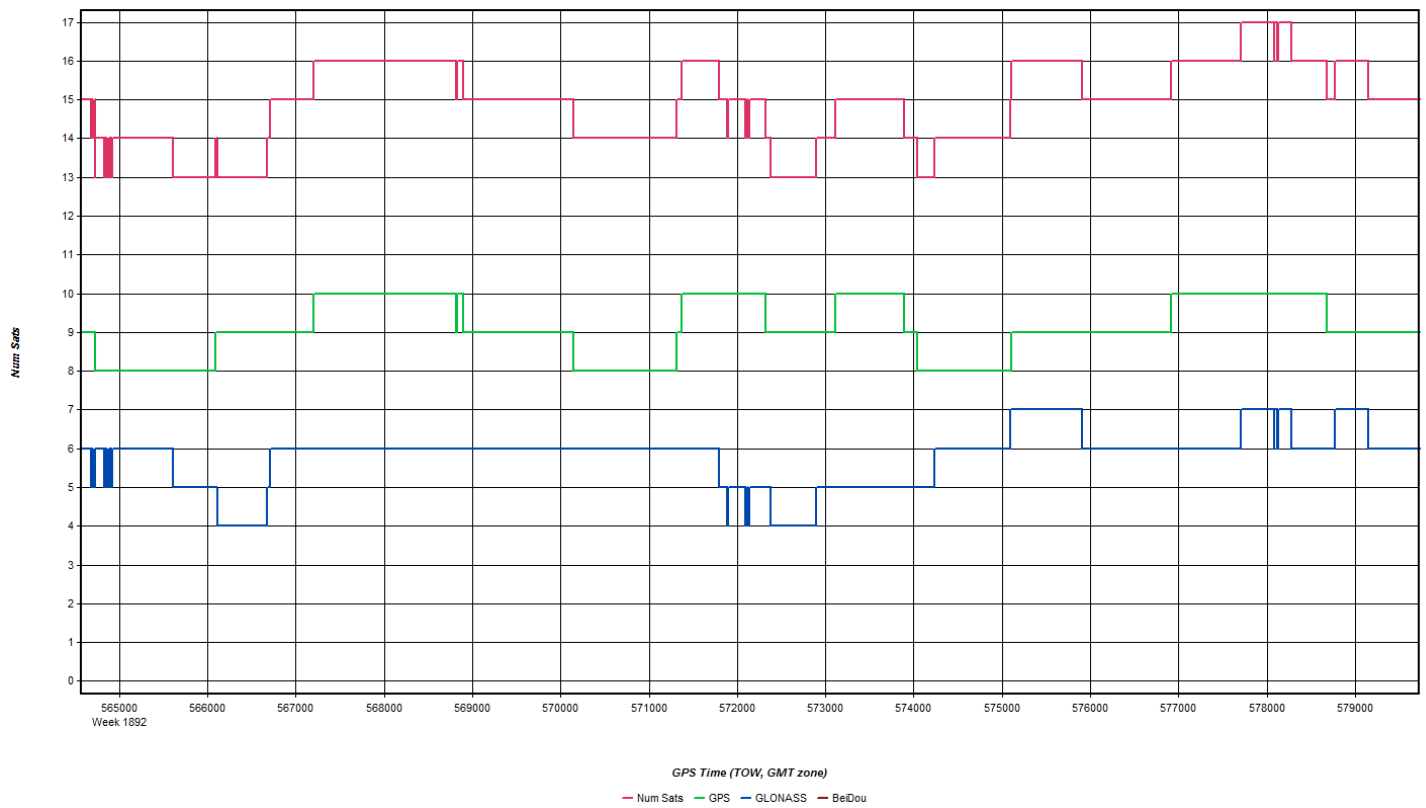
Gd Temp beg: ^{SEE SHEET 1} °C **End:** +11 °C **OAT beg:** ^{SEE SHEET 1} °C **End:** +02 °C **Altimeter begin:** ^{SEE SHEET 1} end: 30.50"

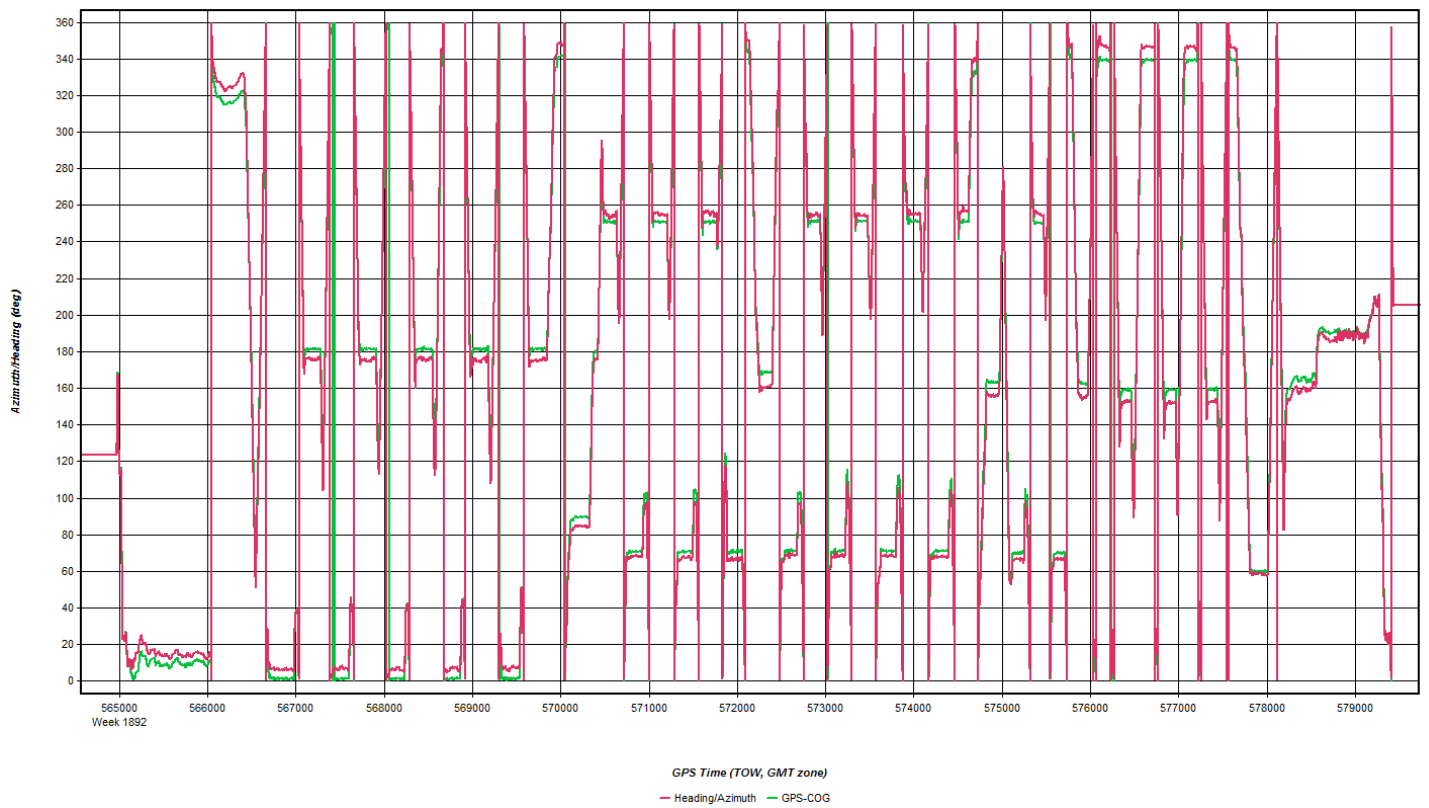
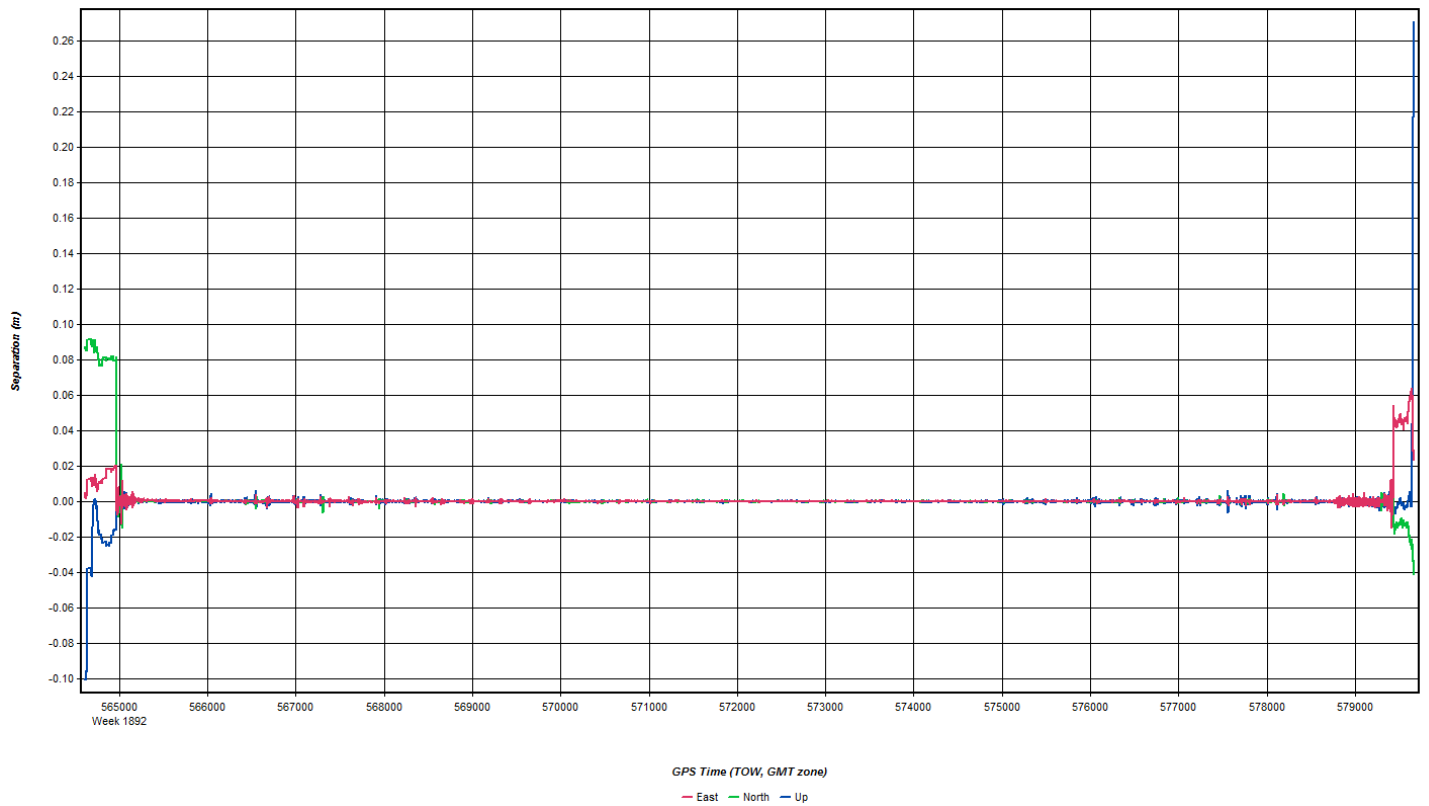
Type	ALS 70	Serial #	Scan Freq	Gd Spd	Alt AGL	Alt AMSL	Pulses In Air	Pulse Rate	Power	Max Gsps	Avg Pt Spacing	Storage			
												Mag CA	End CA	Tot CA	
FOV	40°	7178	53.4 Hz	MPIA (Y) N	~5000'	~5000'	2	2600.4 kHz	160%	150 kts	7	303	ALS 70	SN 7178	5504

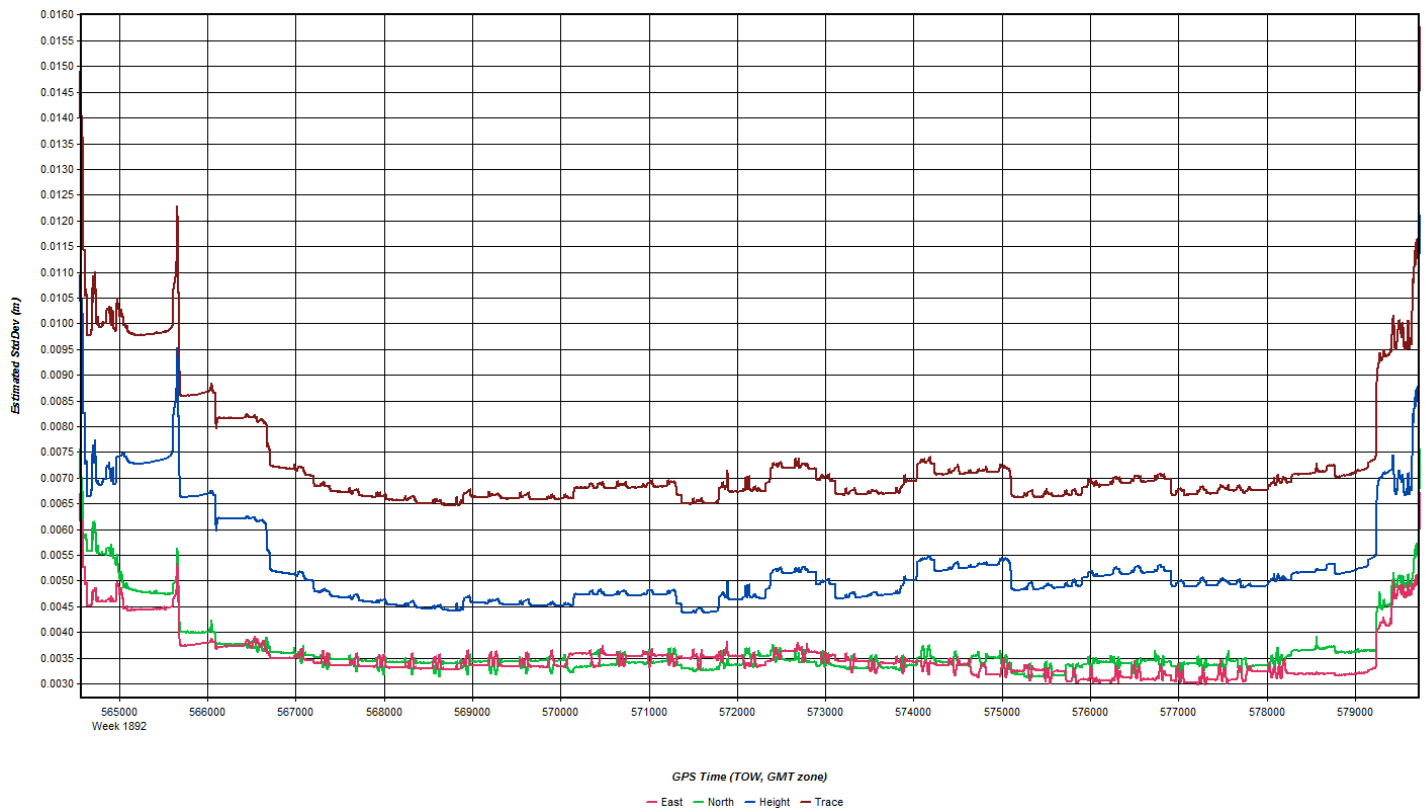
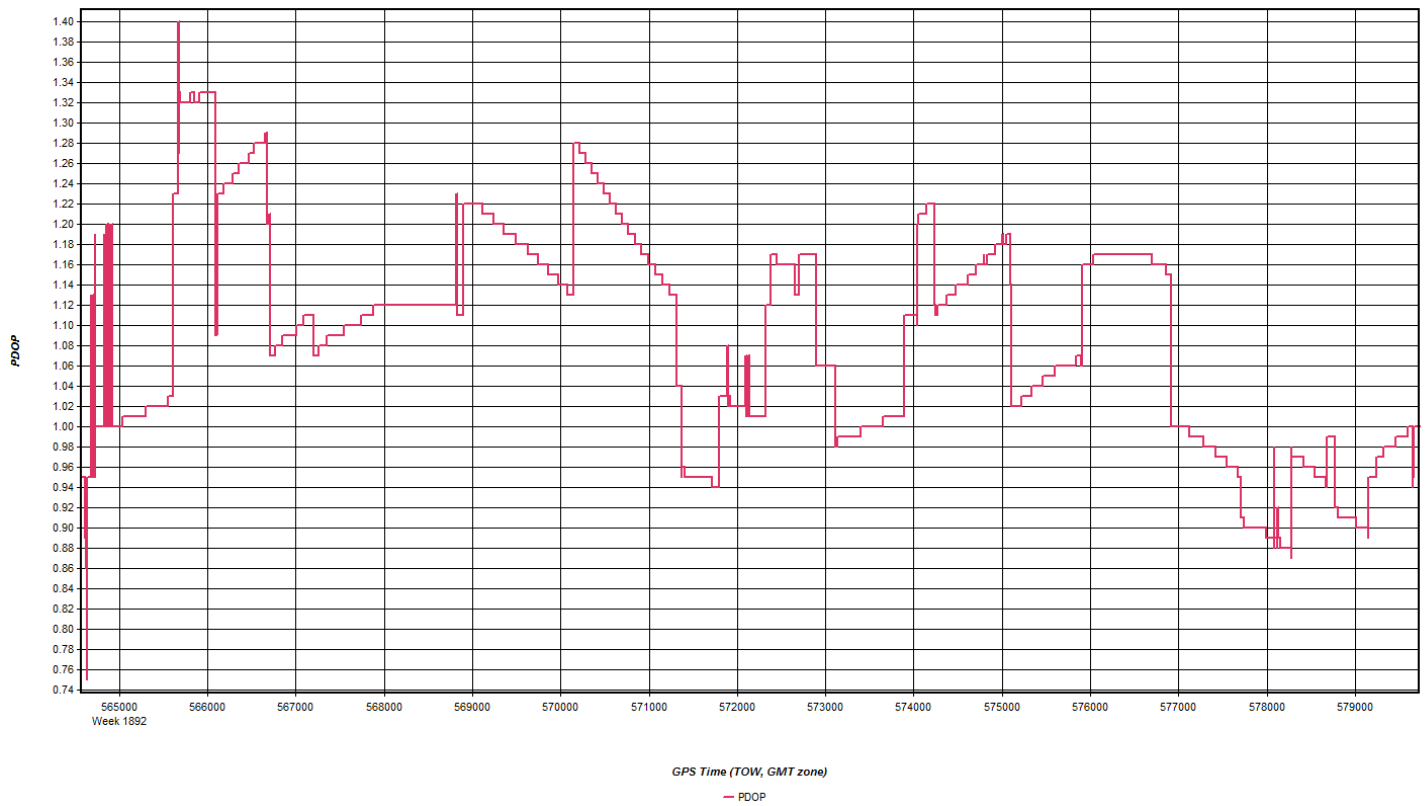
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	POOP/sats	GPS Altitude	Crab	Turb (0-1)	FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc
3080	N	16:15	16:17	155 kts	1.1/18	8240'	8°	0	good vis, smooth, skt above & below, min snow below
3079	S	16:19	16:21	155 kts	1.2/18	8400'	7°	0	good vis, smooth, skt above & below, min snow below
1102	W	16:24	16:25	145 kts	1.2/18	8050'	2°	0	good vis, smooth, skt above & below, min snow below → LANDED DUE TO ANTICIPATED BLOCK COMPLETION → → (2 FOR FUEL) ← (Station 16:23)

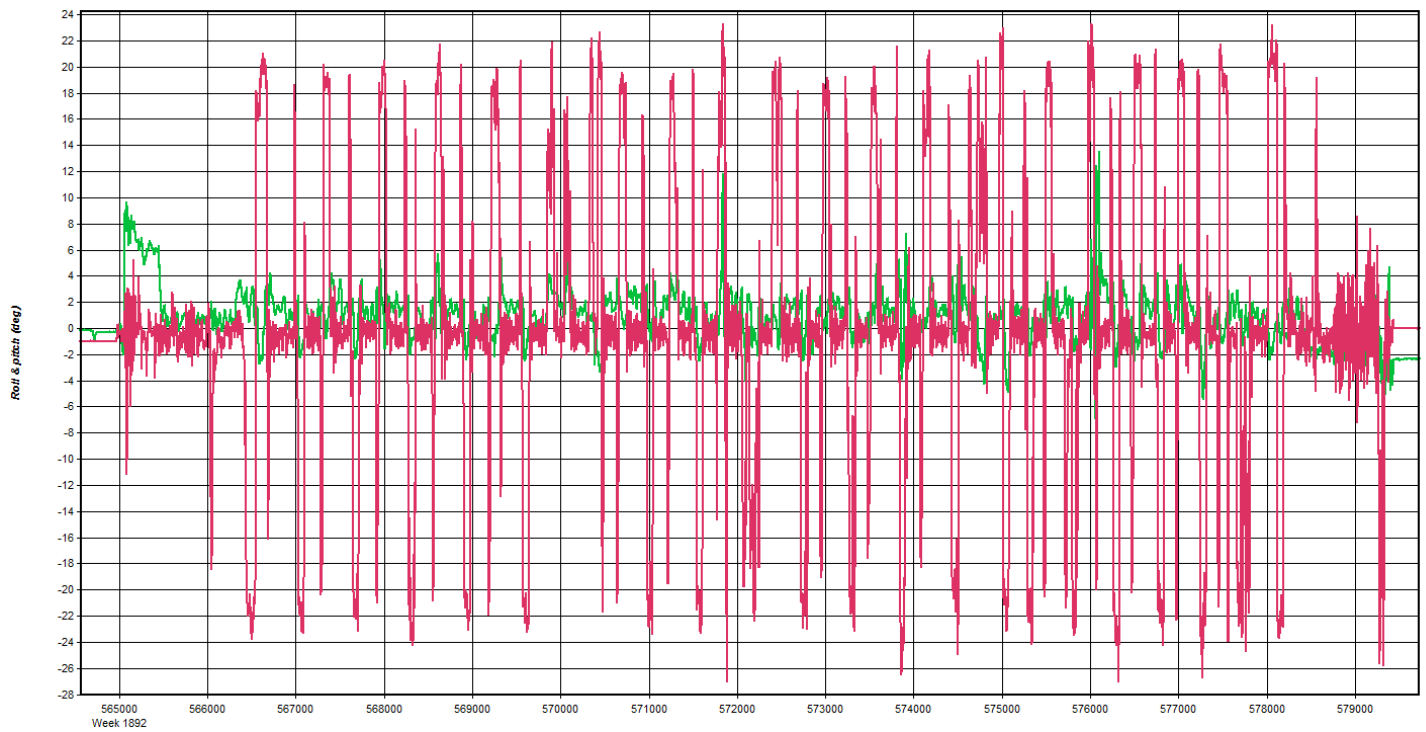
Total Proj Lines: 145 **Lines Flown:** 37 **Lines Remain:** 108 **Online Time:** 3:45 **Mob Time:** 0:19 **Notes:** 20160416-12:539 E - 125024

Apr 16, 2016-A (N812TB, SN7161)



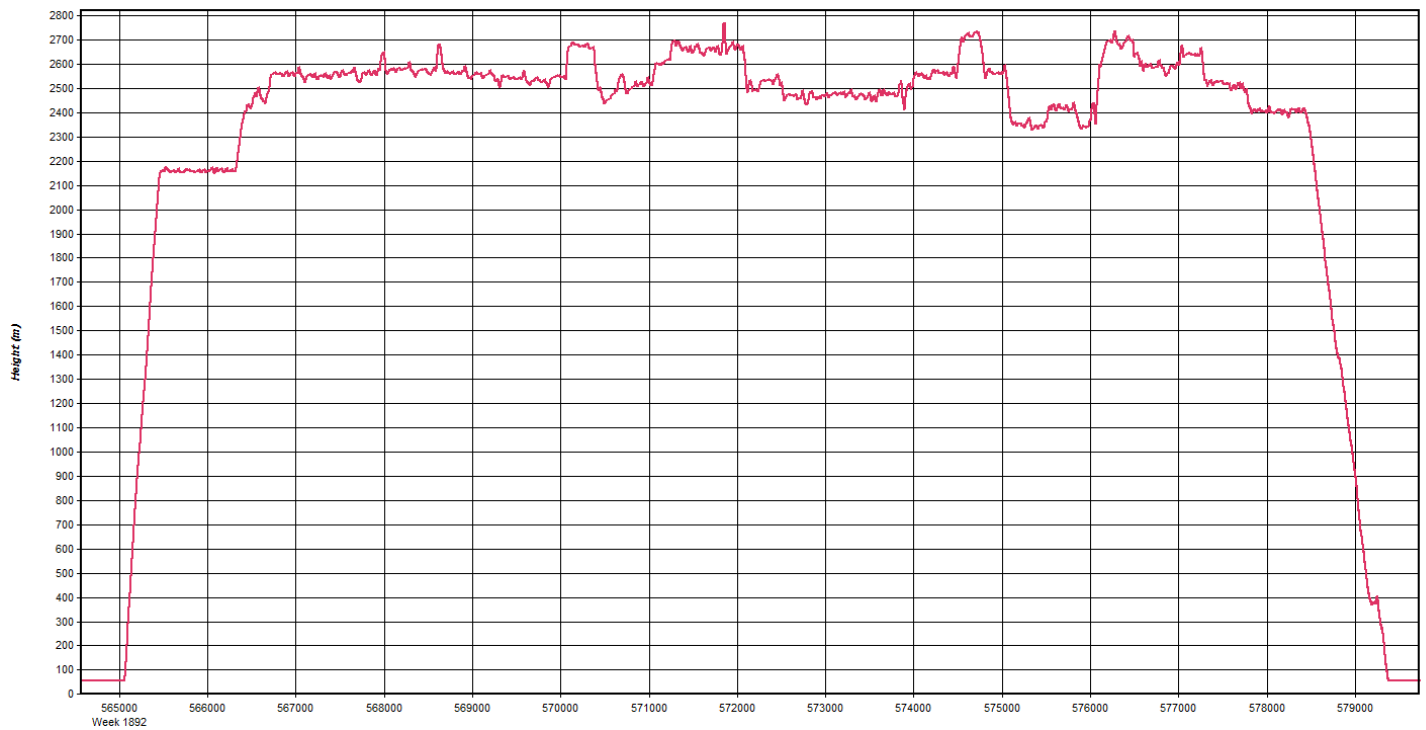






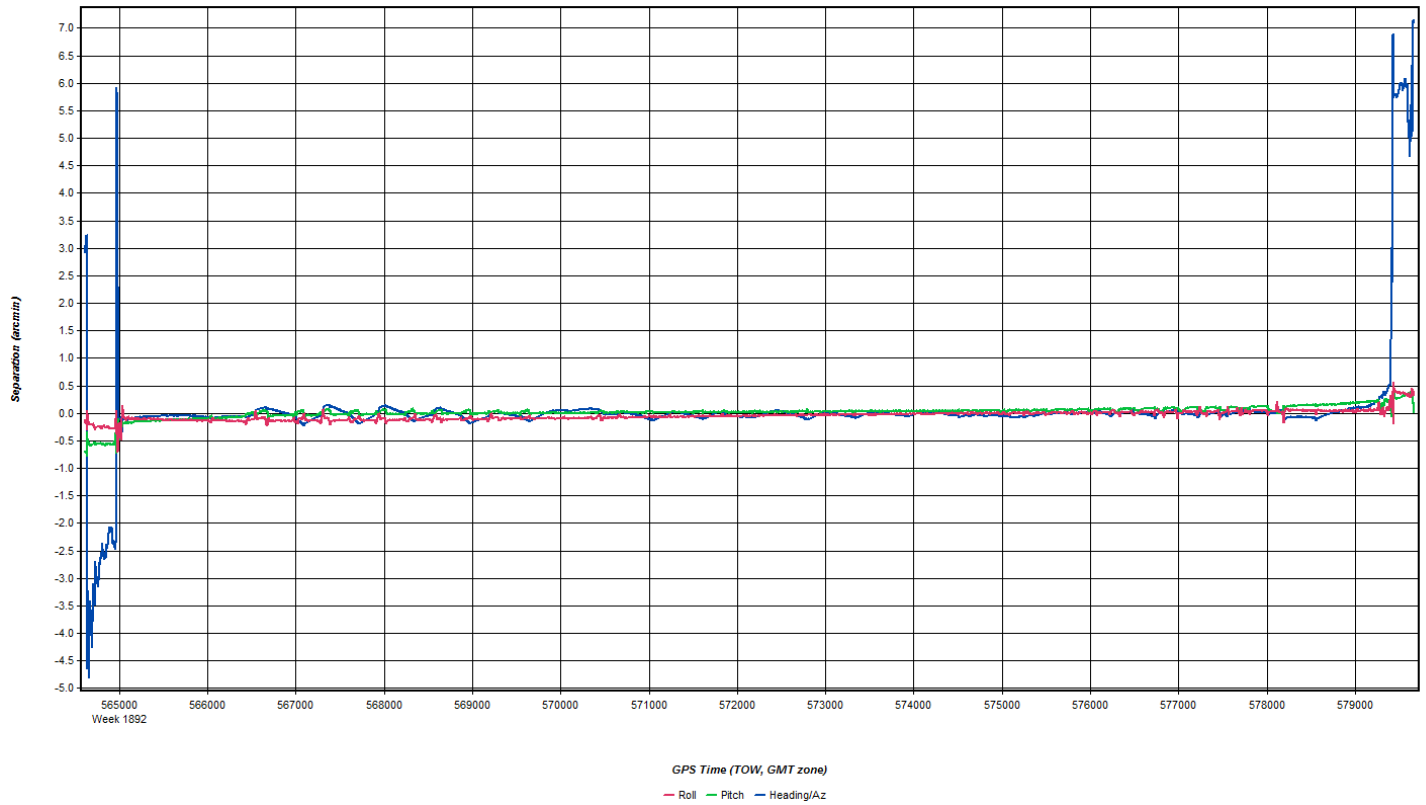
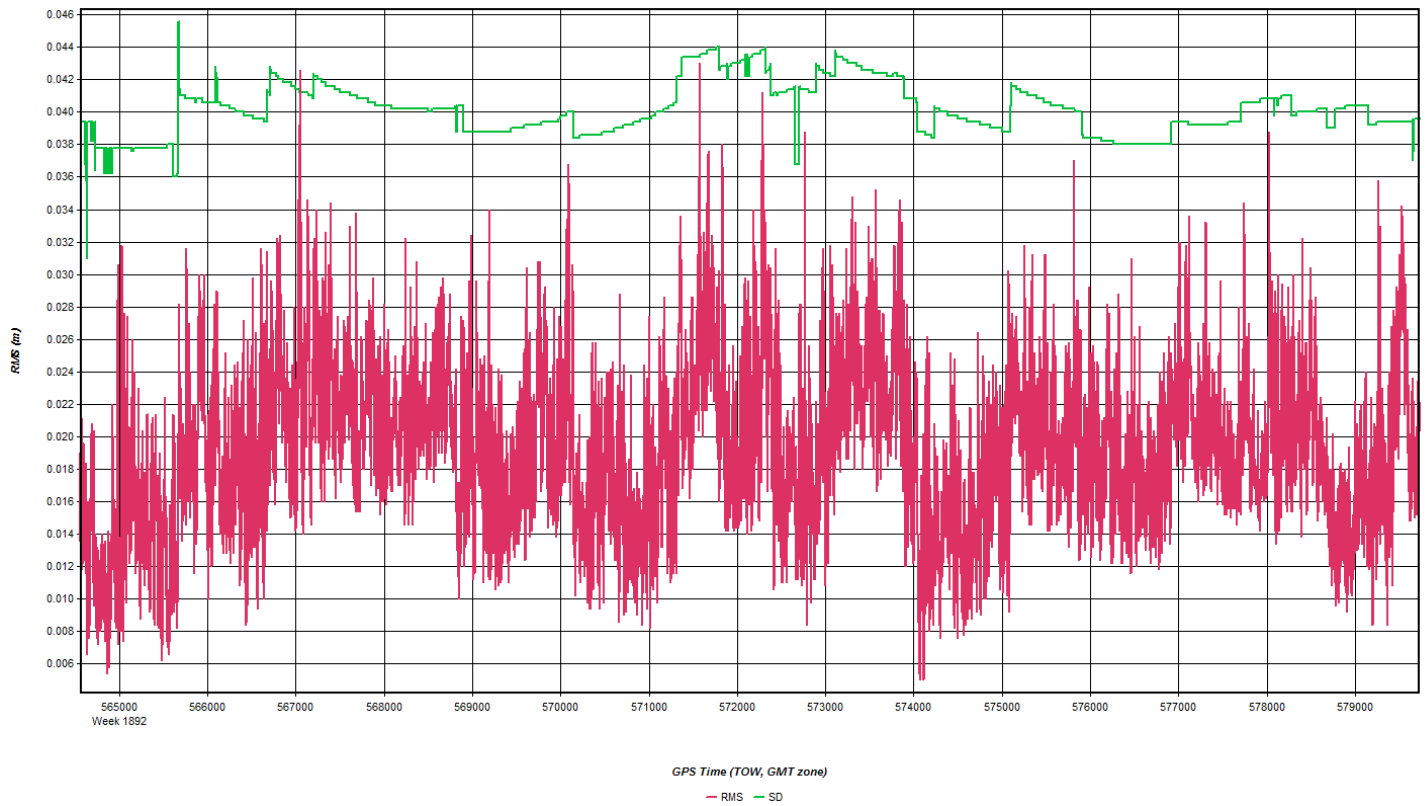
GPS Time (TOW, GMT zone)

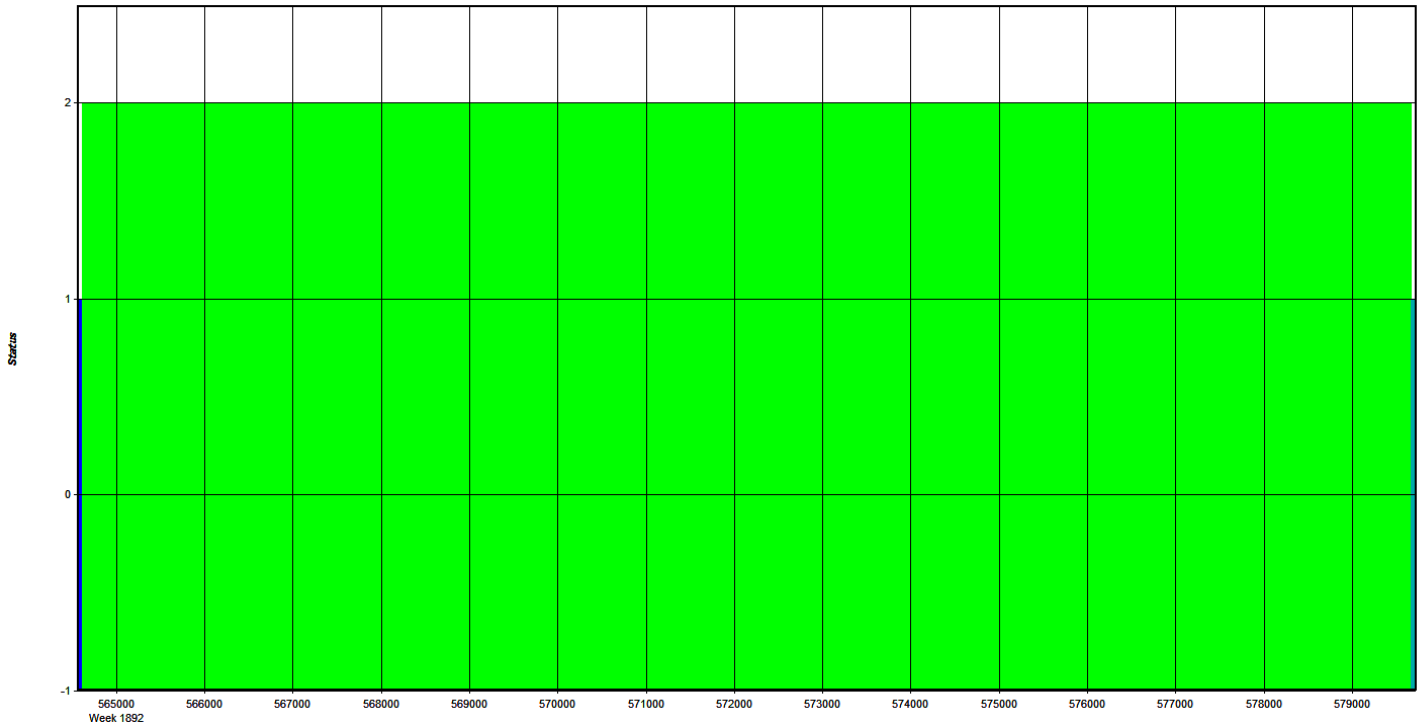
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEFR Name: MEFR Disabled
 File: E:\Proc\27146_ME_2016_BAA_GPSC\NS6R\160416_SN7161_

Coordinates
 Latitude: North 44 40 28.97450 Compute from PPP
 Longitude: West 70 07 54.54215 Enter Grid Values
 Ellipsoidal height: 131.643 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Quantum Spatial Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: 4-16-16
 U.S. A B C D E 19 1 of 3

Project: USGS Maine MEFR Prof #: 27146 Flight Mgmt File: 20160416_124534

Aircraft: NS1215 Begin Hobbs: 3926.1 End Hobbs: 3930.1 Total: 4.0 Pilot: Treibson Co-Pilot: Tech: Dyrson

Dep Apt: KLEW Dep Time (Local): 08:57 [Z] 12:57 Arr Apt: KLEW Arr Time (Local): 2:56 [Z] 16:56 Tot Time Aloft: 4.0

CORS: Y/N Sta 1: MEFR Sta 2: Flyovers: Y/N If Y, times: Sta 1: 13:13, 16:42, Sta 2: Flyovers: Y/N If Y, times: Sta 1: 13:20, Sta 2: 16:33

GPS Unit: Y/N

Gd Temp beg: 4 °C End: 11 °C OAT beg: 2 °C End: 11 °C Altimeter beg: 30.54 end: 30.50

LIDAR Type: ALS70 Scan #: 1161 Alt: 540.5 ft Avg Pt Spacing: 150

FOV: 40 Scan Freq: 53 MpsA: Y/N Pulses in Air: 261 Power: 100 PPSM: 26

Start: 12:50 17:55
 End: 16:57 17:55
 Time: 26

Line # | Hgt | Scan LTG | End LTG | Gd Spd | Rockiness | GPS Altitude | Crd | UTM
 3010 001 13:26 13:29 146 1.1/19 8415
 3009 191 13:32 13:34 151 1.1/19 8415
 3008 001 13:37 13:39 132 1.1/18 8442
 3007 181 13:42 13:44 144 1.1/18 8435
 3006 001 13:47 13:50 140 1.2/17 8422
 3005 181 13:52 13:55 149 1.1/17 8383
 3004 001 13:57 14:00 149 1.1/17 8360
 3003 181 14:03 14:05 151 1.1/17 8343
 3002 001 14:09 14:11 135 1.2/16 8330
 3001 181 14:14 14:17 150 1.1/16 8314
 3135 84 14:22 14:24 152 1.2/16 8146
 3019 250 14:28 14:30 141 1.1/17 8146
 3018 70 14:32 14:35 131 1.0/18 8251
 3017 250 14:37 14:39 141 1.0/17 8524
 3016 70 14:42 14:44 140 1.0/17 8114
 3015 250 14:47 14:49 139 1.0/17 8737
 3014 70 14:51 14:53 137 1.0/17 8717
 3136 108 14:57 14:59 146 0.9/20 8346

Total Proj Lines: 145 Lines Flown: 39 Lines Remaining: 6 Online Time: 3.1 Mob Time: 0.9 Notes:

Continued on next page

Generated by CamScanner

Quantum Spatial
Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: 4-16-16
Page 2 of 3

Project: USGS Maine MEFR
Flight Mgmt File: 20160416_124334

Aircraft: N812TB Begin Hobbs: 3424.1 End Hobbs: 3430.1 Total: 4.0 Pilot: Jacobson Co-Pilot: Tech: Dyresen

Dep Apt: KLEW Dep Time (Lcl): 08:57 (Z): 12:57 Arr Apt: KLEW Arr Time (Local): 12:56 (Z): 16:56 Tot Time Aloft: 4.0

CORS: Y N Sta 1: MEFR Sta 2: Flyovers: Y/N IF Y, times: Sta 1: 13:13, 16:42 Sta 2: Flyovers: Y/N IF Y, times: Sta 1: 13:13, 16:42 Sta 2: 13:20, 16:33

GPS Unit: Y (N) Sta 1: MEFR Sta 2: Flyovers: Y/N IF Y, times: Sta 1: 13:13, 16:42 Sta 2: Flyovers: Y/N IF Y, times: Sta 1: 13:13, 16:42 Sta 2: 13:20, 16:33

Gd Temp beg: 4 °C End: 11 °C OAT beg: 2 °C End: 1 °C Altimeter begin: 38.54 end: 30.50

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	Altitude	Crab	Turb (0-1)
3027	71	15:02	15:04	135	0.9/18	8015	
3026	251	15:07	15:08	152	1.0/18	8081	
3025	71	15:11	15:13	133	1.0/17	8117	
3024	251	15:15	15:17	155	1.0/17	8149	
3023	71	15:20	15:22	137	1.0/17	8172	
3022	251	15:25	15:27	151	1.1/16	8307	
3021	71	15:30	15:32	140	1.1/17	8399	
3020	251	15:35	15:36	141	1.0/18	8433	
3157	163	15:40	15:42	157	1.2/16	8349	
3087	70	15:45	15:47	142	1.2/16	7667	
3086	250	15:49	15:50	154	1.2/16	7726	
3085	70	15:53	15:54	134	1.3/16	7939	
3141	162	15:58	15:58	144	1.3/16	7680	
3078	289	16:01	16:03	130	1.2/17	8858	
3077	159	16:05	16:07	148	1.2/17	8822	
3076	339	16:10	16:11	143	1.2/17	8477	
3075	159	16:14	16:15	150	1.2/17	8536	
3074	339	16:18	16:19	136	1.2/18	8609	

Altitude: MSL 8430ft, AGL 7161, MSL 53, MSL 53
Pulses in Air: 261, Pulse Rate: 100
Avg Pt Spacing: 150, Power: 100

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

Total Proj Lines: 145 Lines Flown: 39 Lines Remain: 3.1 Online Time: 0.19 Mob Time: 0.19 Notes: Continued on next page

Generated by CamScanner

Project: USGS Maine MEFR (email Log daily to flight_log_distribution_list@quantumspatial.com)

Date: 4-16-16 Life: A B C D E pg 3 of 3

Project #: 27146 **Flight Mgmt File:** 20160416_124534

Aircraft: N712TB **Begin Hobbs:** 3926.1 **End Hobbs:** 3930.1 **Total:** 4.0 **Pilot:** Jacobson **Co-Pilot:** Tech: Dyresen

Dep Apt: KLEW **Dep Time (Local):** 12:57 **Arr Apt:** KLEW **Arr Time (Local):** 12:56 **Tot Time Aloft:** 4.0

CORS: Y/N **Sta 1:** MEFR **Sta 2:** Flyovers: Y/N **IF Y, times: Sta 1:** 13:13, 16:42 **Sta 2:** 18:3-16:33

GPS Unit: Y/N **Sta 1:** Flyovers: Y/N **IF Y, times: Sta 1:** 18:3-13:20 **Sta 2:** 18:3-16:33

Gd Temp beg: 4 °C **End:** 11 °C **OAT beg:** 2 °C **End:** 1 °C **Altimeter begin:** 30.54 **end:** 30.50 **Start:** 5:56 **End:** 12:53 **Storage Name:** 016

Type	Serial #	Alt AGL	Alt MSL	Avg Terr Ht	Max Gdspd	Avg Ft Spacing	End
LIDAR	4570	7161	8700.44	150	100	17.00	423
FOV	40	53	MpiA Y/N	Pulse Rate	Power	PF0H	26

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	ROOF/Sea	GPS Altitude	Crab	Turb (0.5-1)
3073	159	16:22	16:23	156	1.2/18	8281		
3072	339	16:26	16:27	144	1.2/18	8169		
3140	60	16:30	16:33	139	1.3/18	7884		

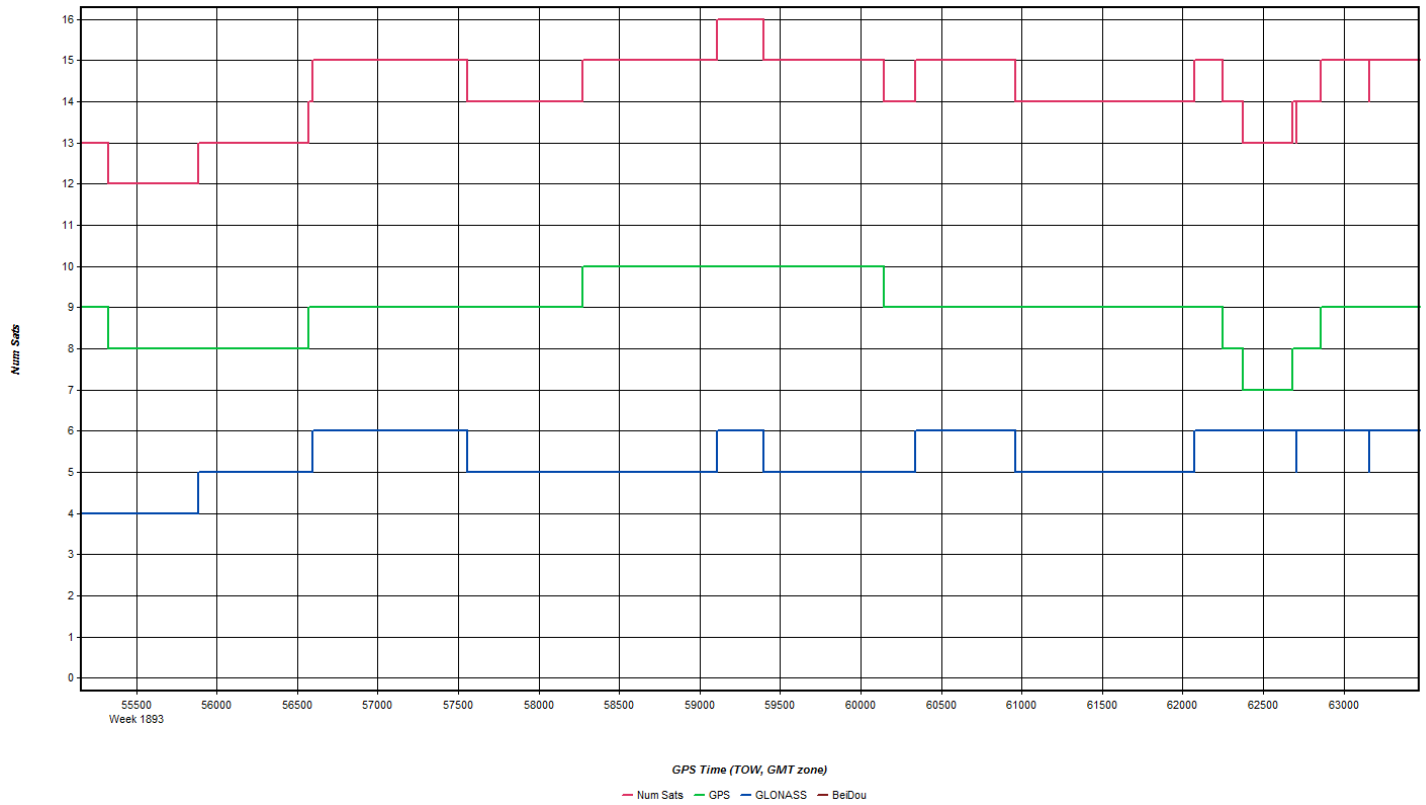
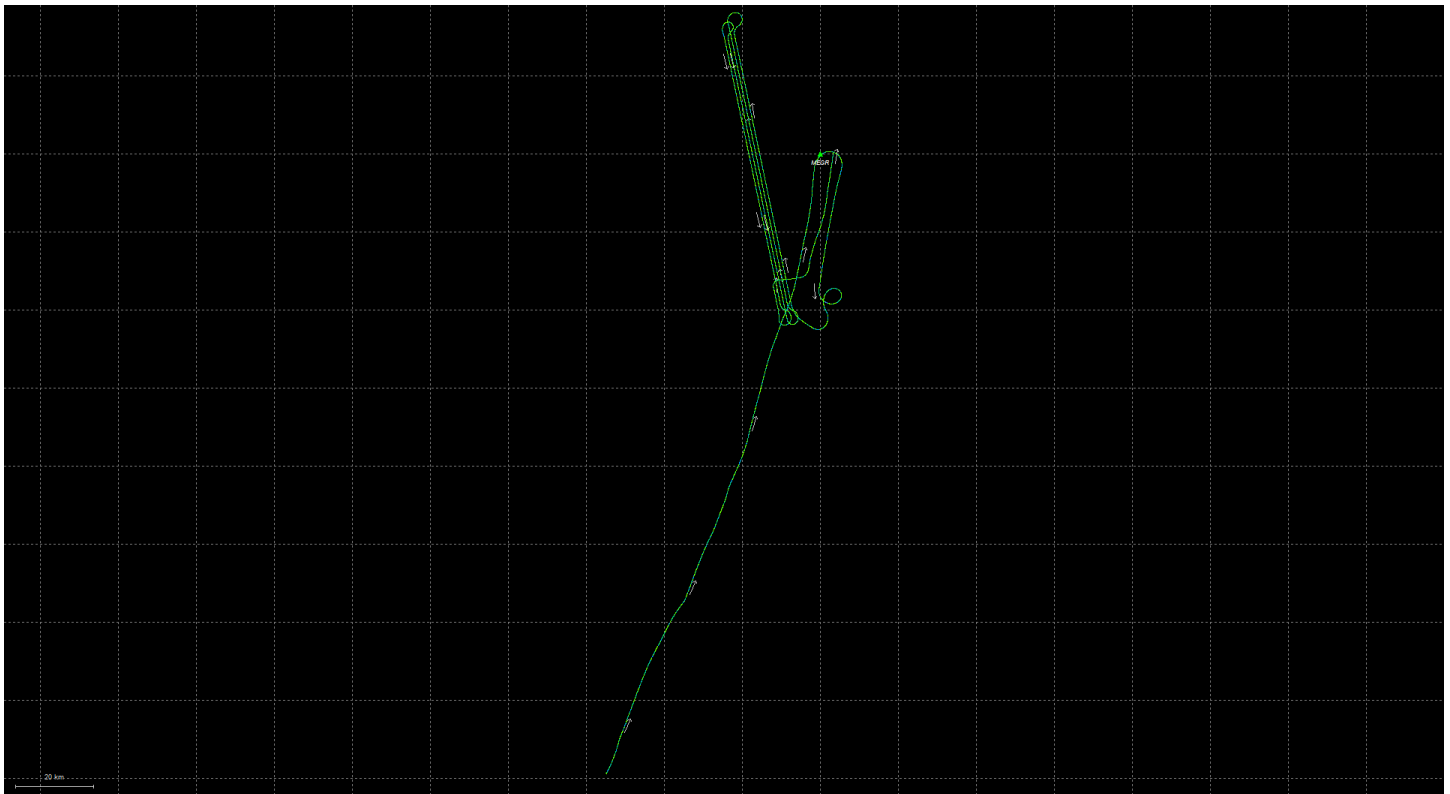
FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.

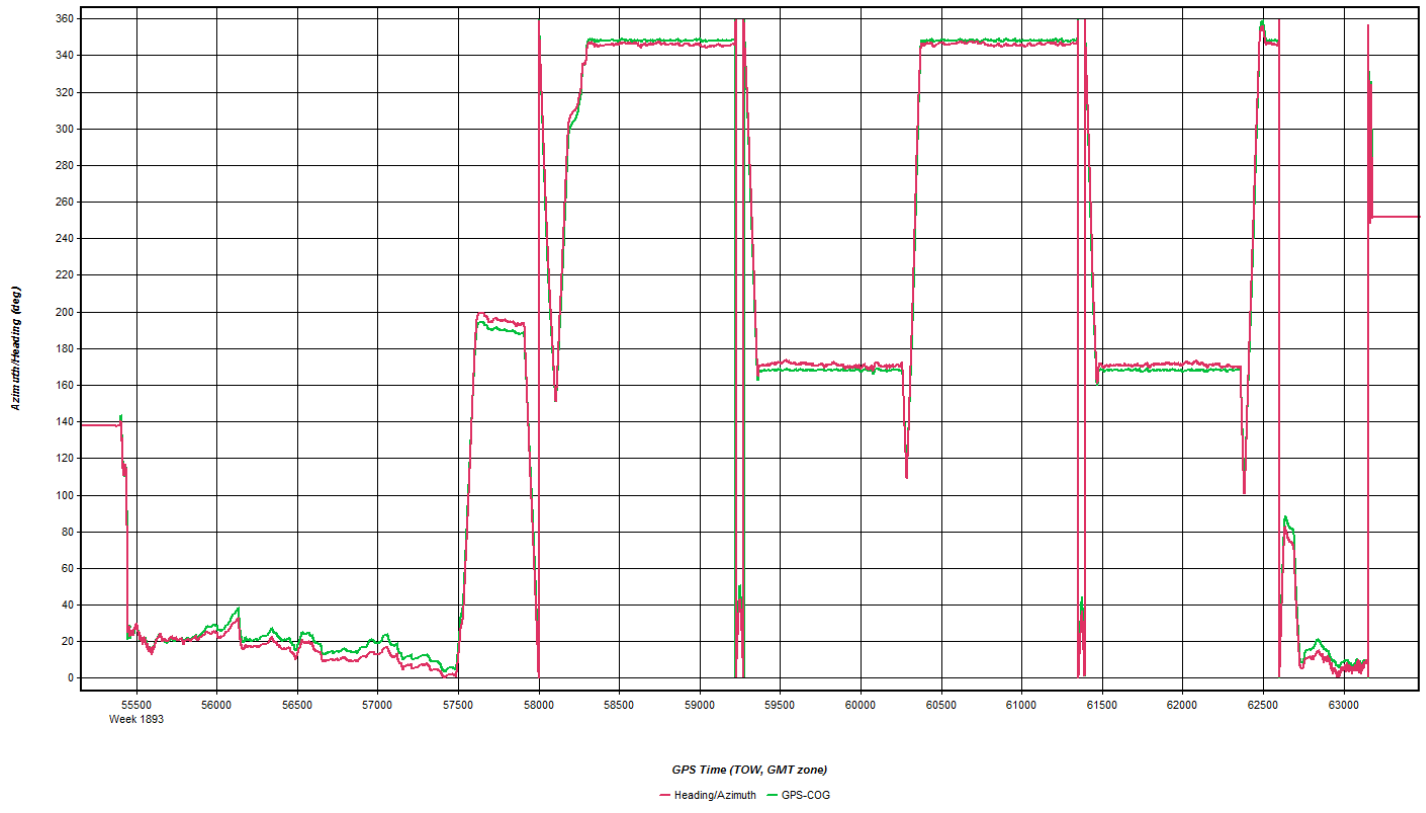
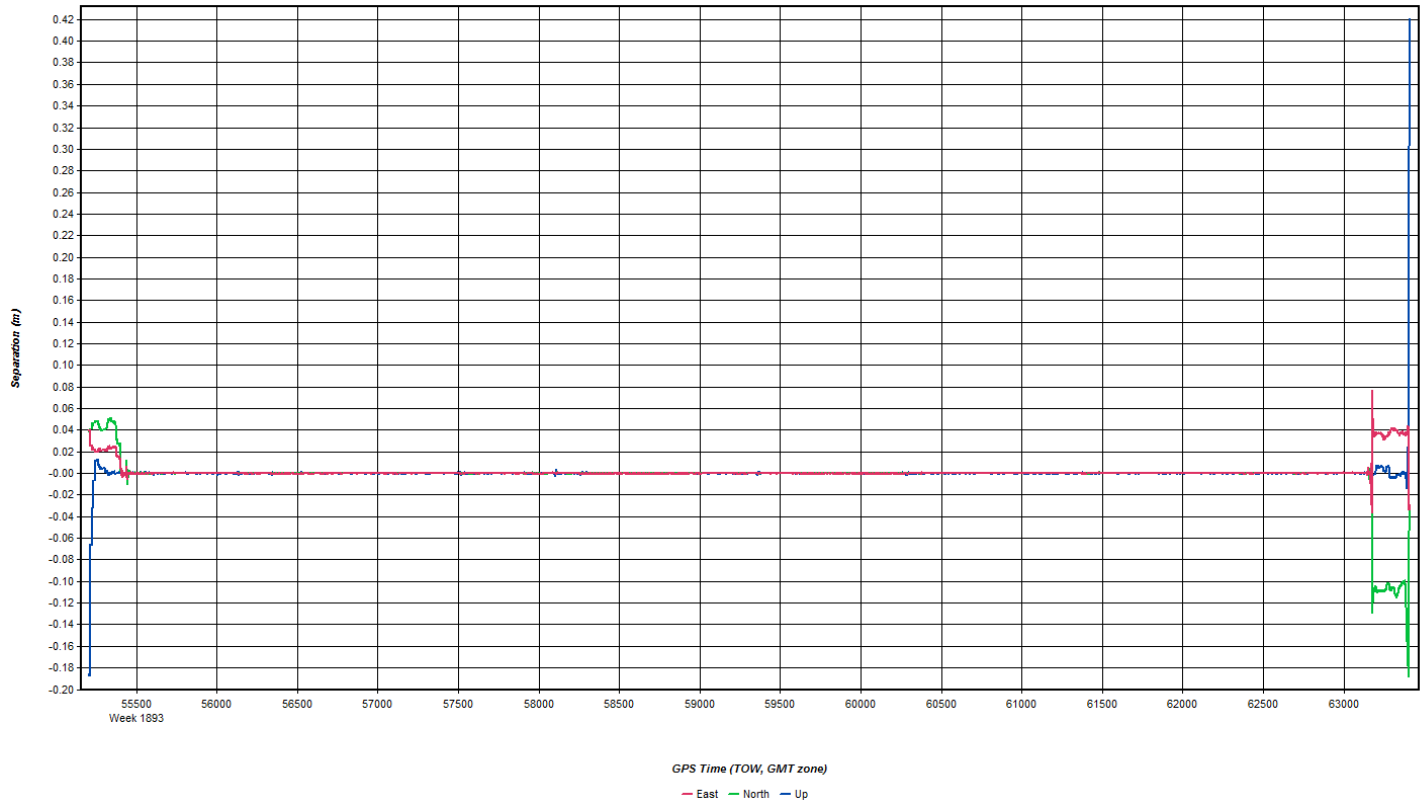
Total Proj Lines: 145 **Lines Flown:** 39 **Lines Remain:** 0 **Online Time:** 3.1 **Mob Time:** 0.9 **Notes:**

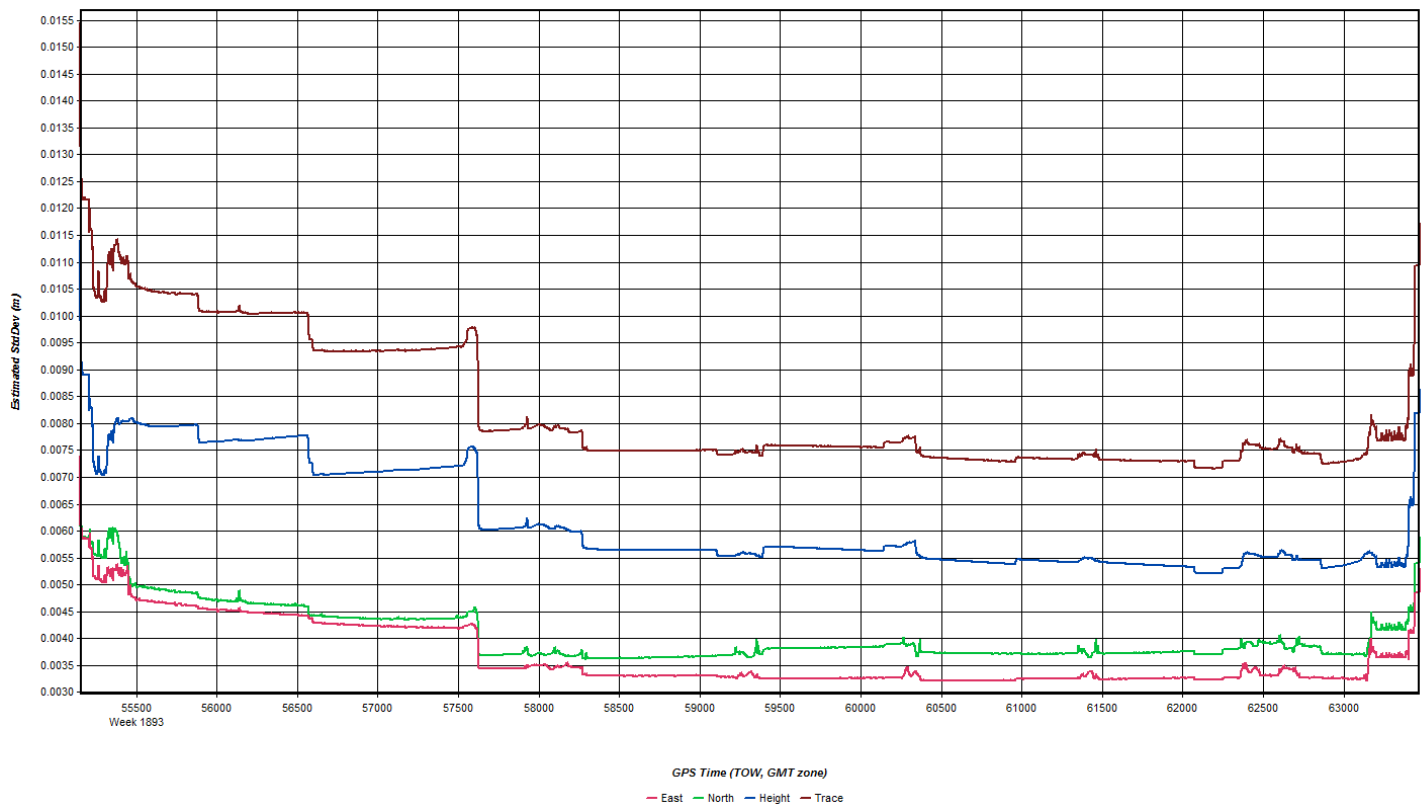
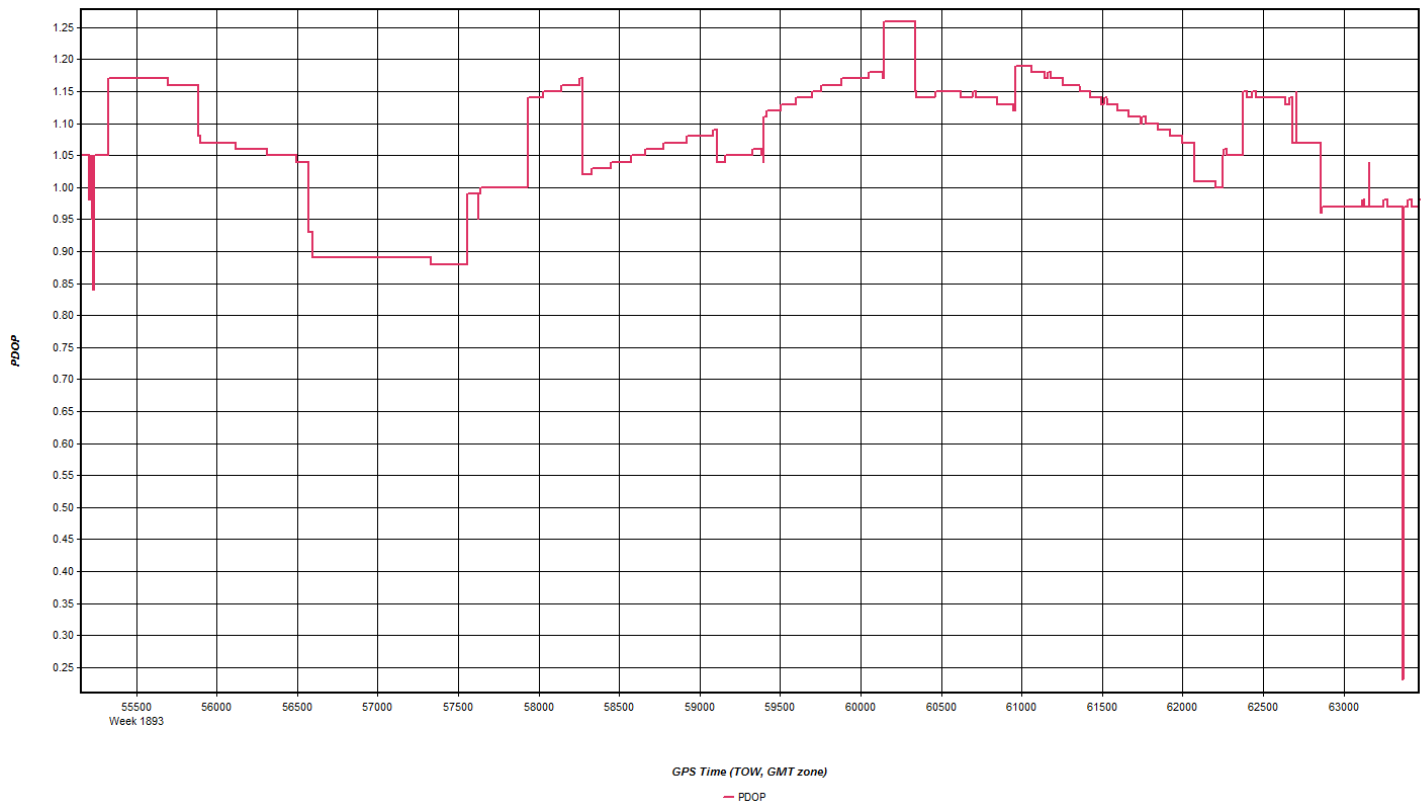
14

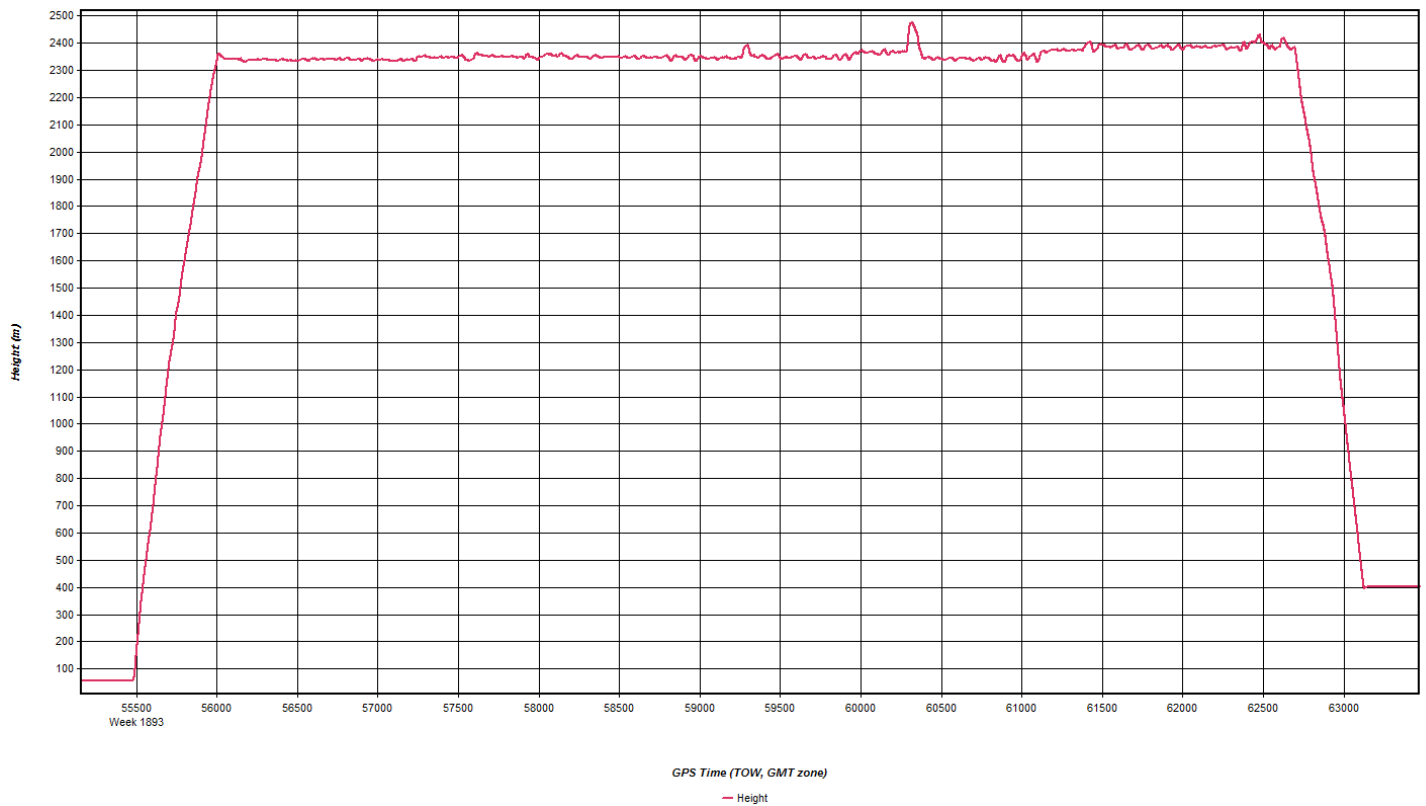
Generated by CamScanner

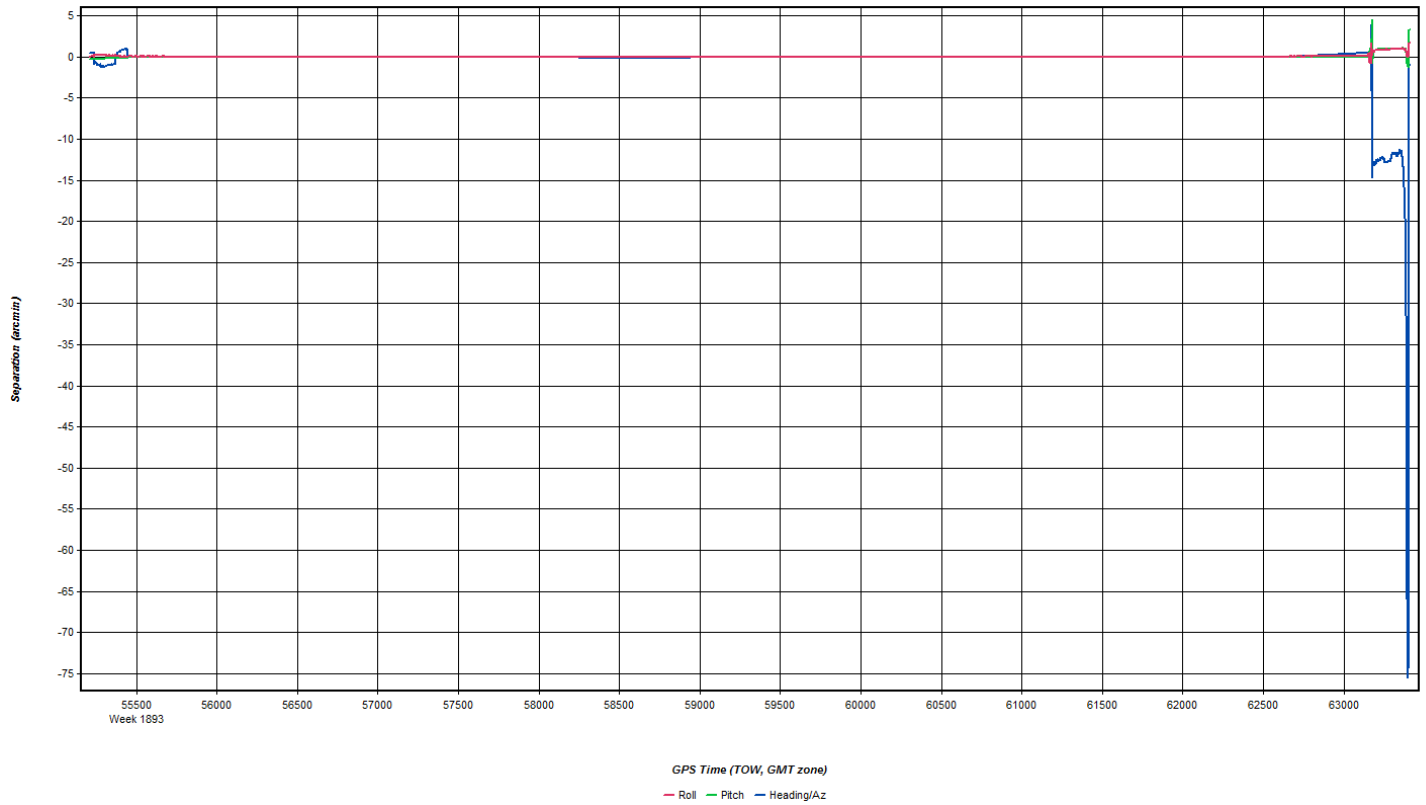
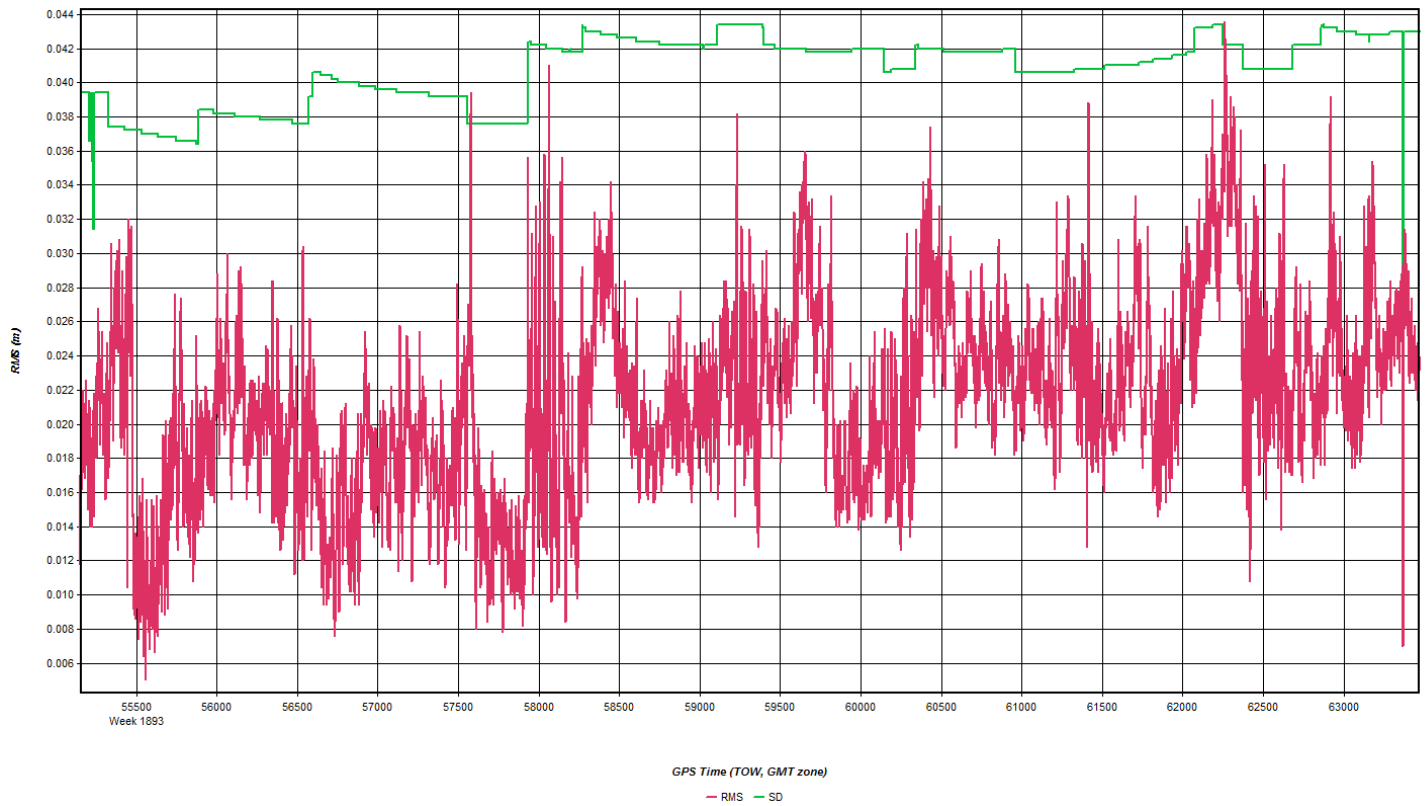
Apr 17, 2016-A (N73TM, SN7178)

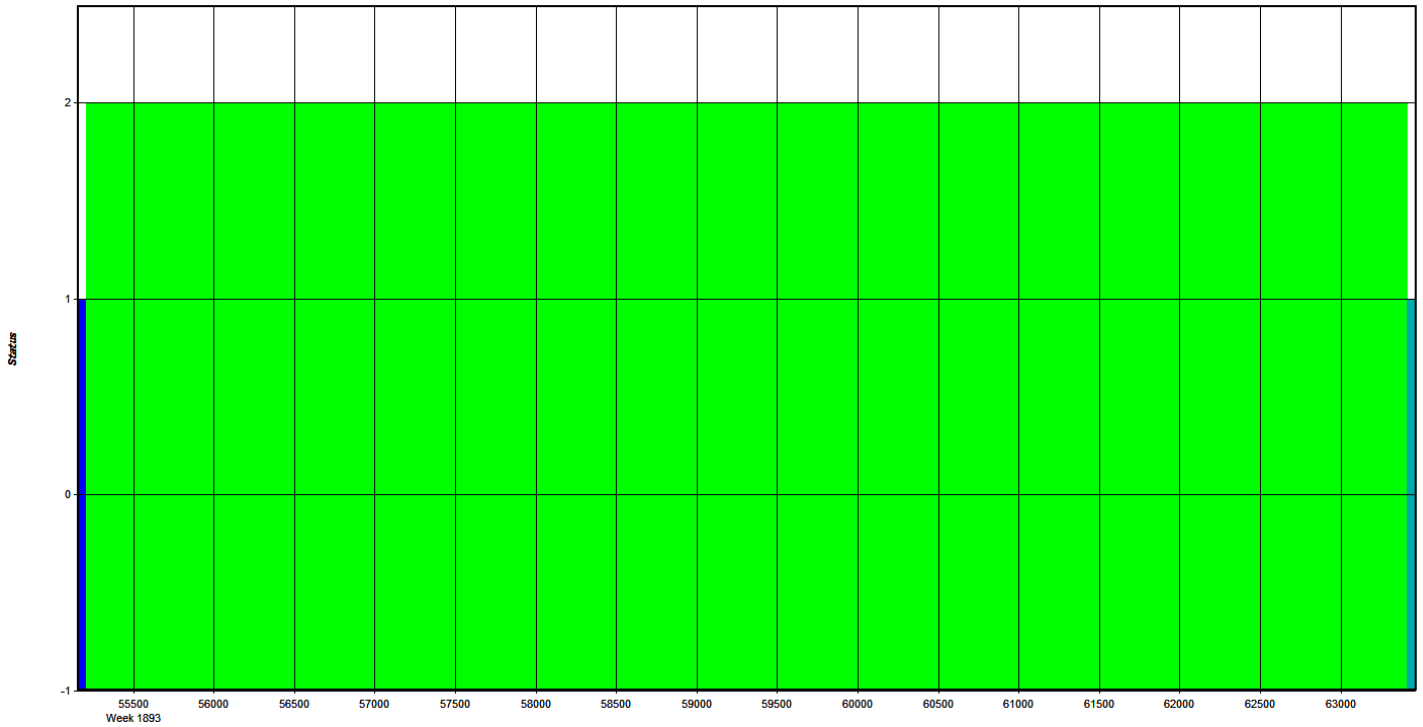












GPS Time (TOW, GMT zone)
 - Float - Forward Fixed - Reverse Fixed - Fixed (2 or more)

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\0539\20160417a-7178\megr1080.gi

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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: USGS WESTERN MAINE **Proj #:** 27146 **Date:** APRIL 17th, 2016 **Page 1 of 1**

Aircraft: N737M **Begin Hobbs:** 6185.1 **End Hobbs:** 6187.3 **Total:** 2.2 **Pilot:** J. BILLYINGTON **Co-Pilot:** — **Tech:** P. HERRON

Dep Apt: KLEW **Dep Time (Lcl):** 11:24 **Arr Apt:** 3B1 **Arr Time (Local):** 13:31 **Tot Time Aloft:** 2:07

CORS: N Sta 1: "MEGR" CORS **Sta 2:** — **Flyovers:** N IF Y, times: Sta 1) 15:58 & 15:59 & 15:59 **Sta 2)** —

GPS Unit: Y N Sta 1: — **Sta 2:** — **Flyovers:** N IF Y, times: Sta 1) — **Sta 2)** —

Gd Temp beg: +12 °C **End:** — °C **OAT beg:** +04 °C **End:** — °C **Altimeter begin:** 30.37" **end:** —

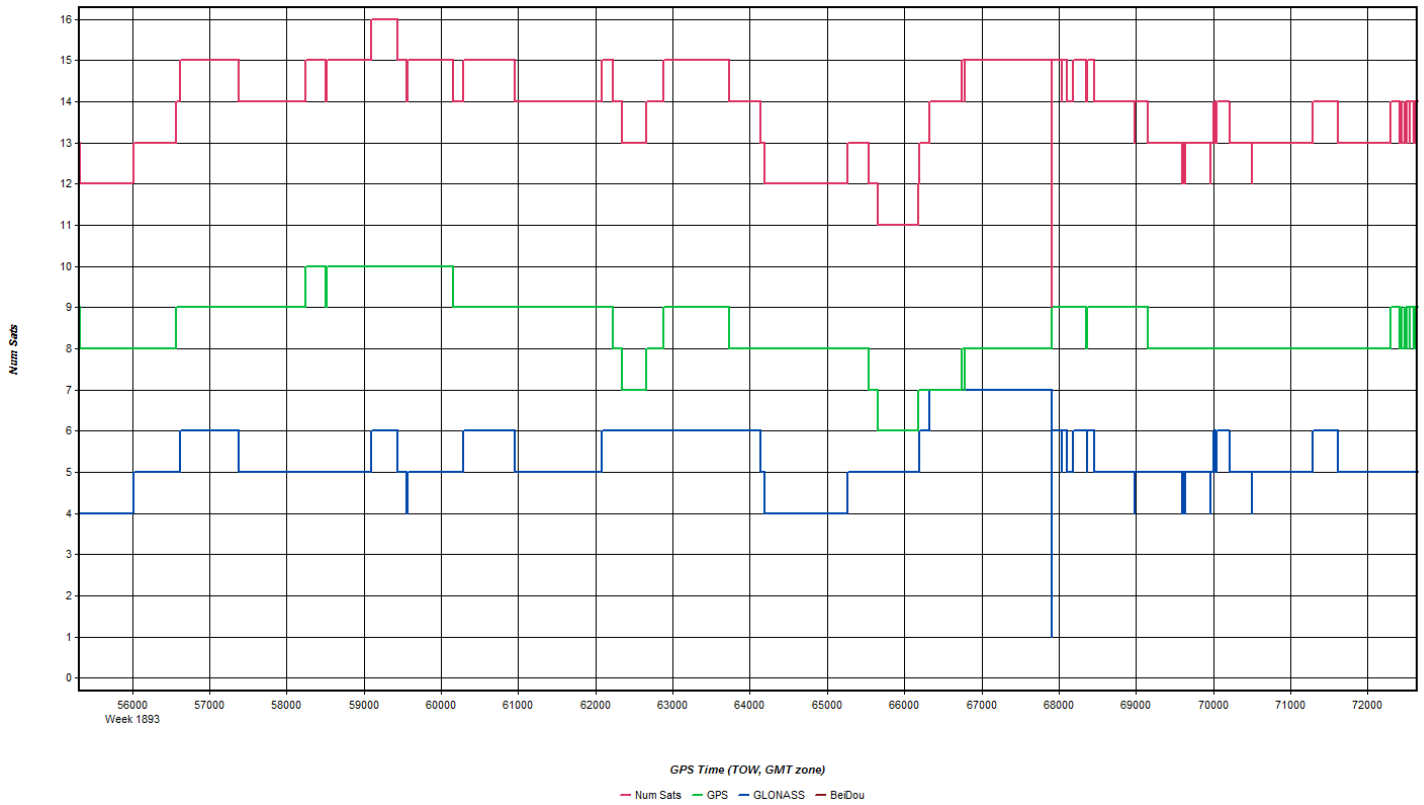
Type	Serial #	Alt	Alt	Max	Avg Ft
FOV	Scan Freq	AGL	MSL	Ground	Opening
7178	53.4 Hz	6030'	6178'	VARIES	150' kft
10°		MPIA <input checked="" type="checkbox"/> N	Pulses In Air	Power	PPSM
			2	100%	2.2

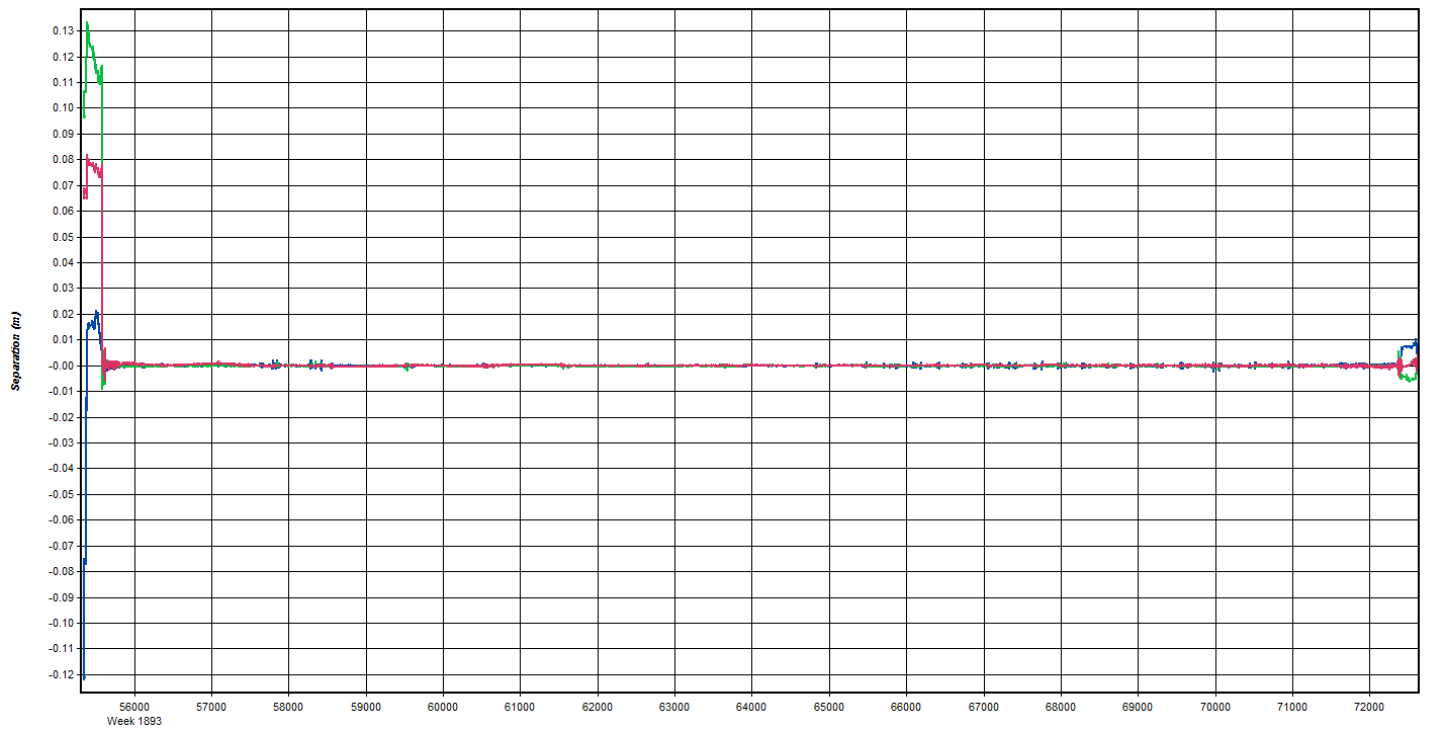
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	FOV/Scan	GPS Altitude	Crab	Turb (0..4)	FLIGHT LINE NOTES - visibility, clouds, smoke, parrot, etc.
S0418	N	16:11	16:26	~150 kft	1.3/17700°	2°	0	0	KE, smooth, high than bln, ske below, some snow below
S0475	S	16:29	16:44	~160 kft	1.3/17700°	2°	0	0	KE, smooth, high than bln, ske below, some snow below
S0416	N	16:46	17:02	~150 kft	1.4/17700°	2°	0	0	KE, smooth, high than bln, ske below, some snow below
S0415	S	17:04	17:19	~160 kft	1.3/17700°	2°	0	0	KE, smooth, high than bln, ske below, some snow below
S0414	N	17:21	17:22	~175 kft	/	?	?	?	KE, smooth, high than bln, ske below, some snow below (VOID - APPROX)
U101	E	17:23	17:24	~175 kft	?	?	?	?	KE, smooth, high than bln, ske below, some snow below (VOID - APPROX) IMPROV CROSS LINE
									→ LANDED DUE TO IMPENDING BIOLOGICAL HAZARD ←

Storage Name#	Bag GB	End GB	Tot GB
128	128	143	20
143	143	143	0
SSD3	20	20	0

Total Proj Lines: 136 **Lines Flown:** 4 **Lines Remains:** 2 **Time (Cross):** Online Time: 1:13 **Job Time:** 0:34 **Notes:** 20160417-151634 -151348

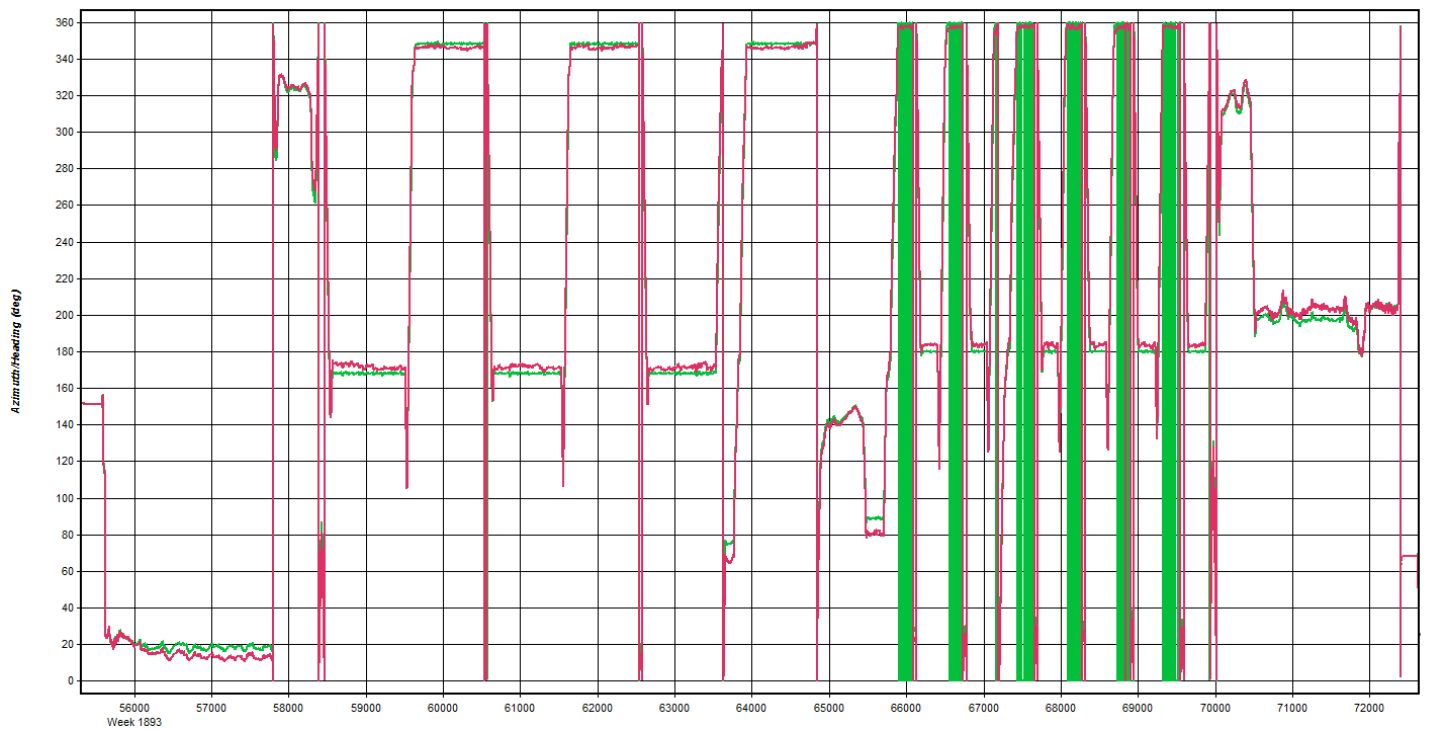
Apr 17, 2016-A (N812TB, SN7161)





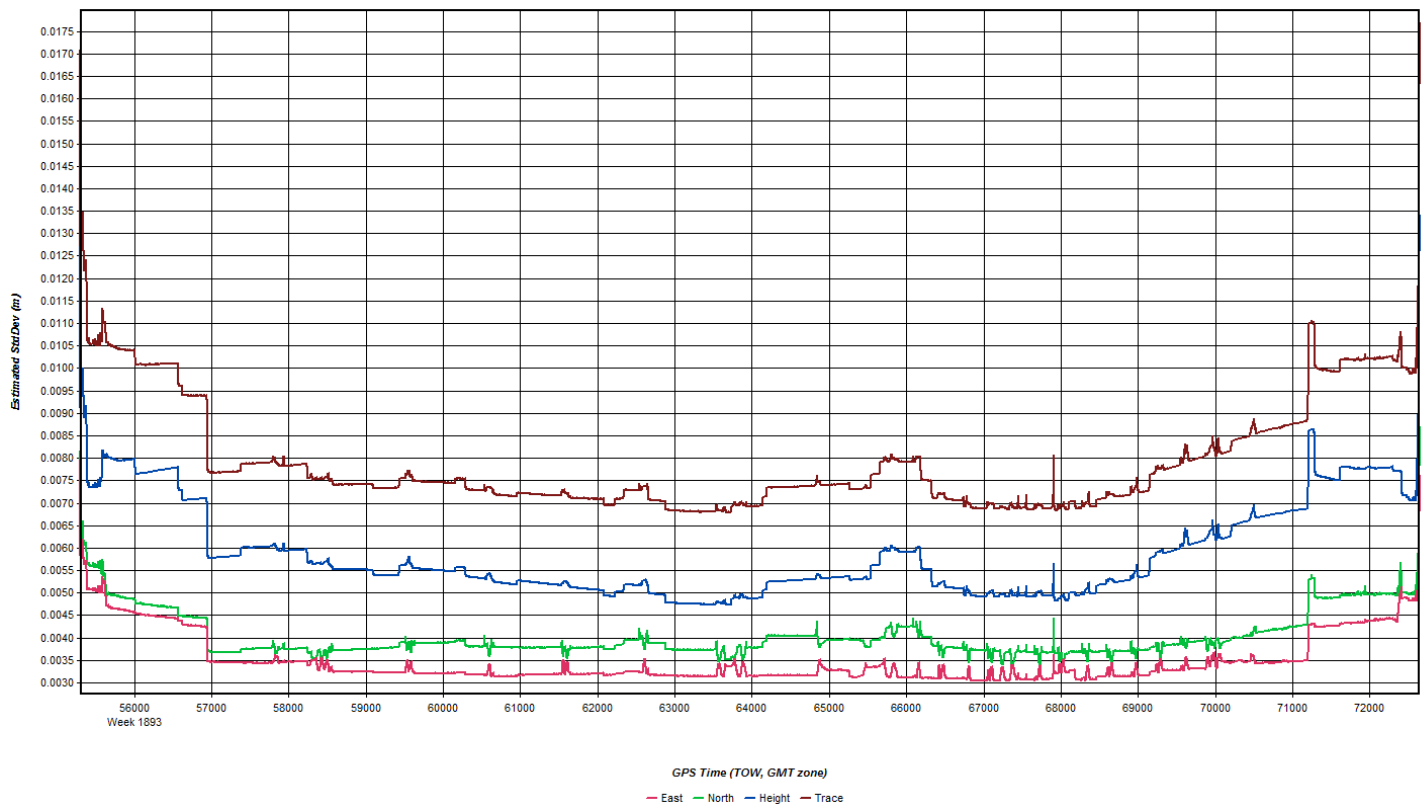
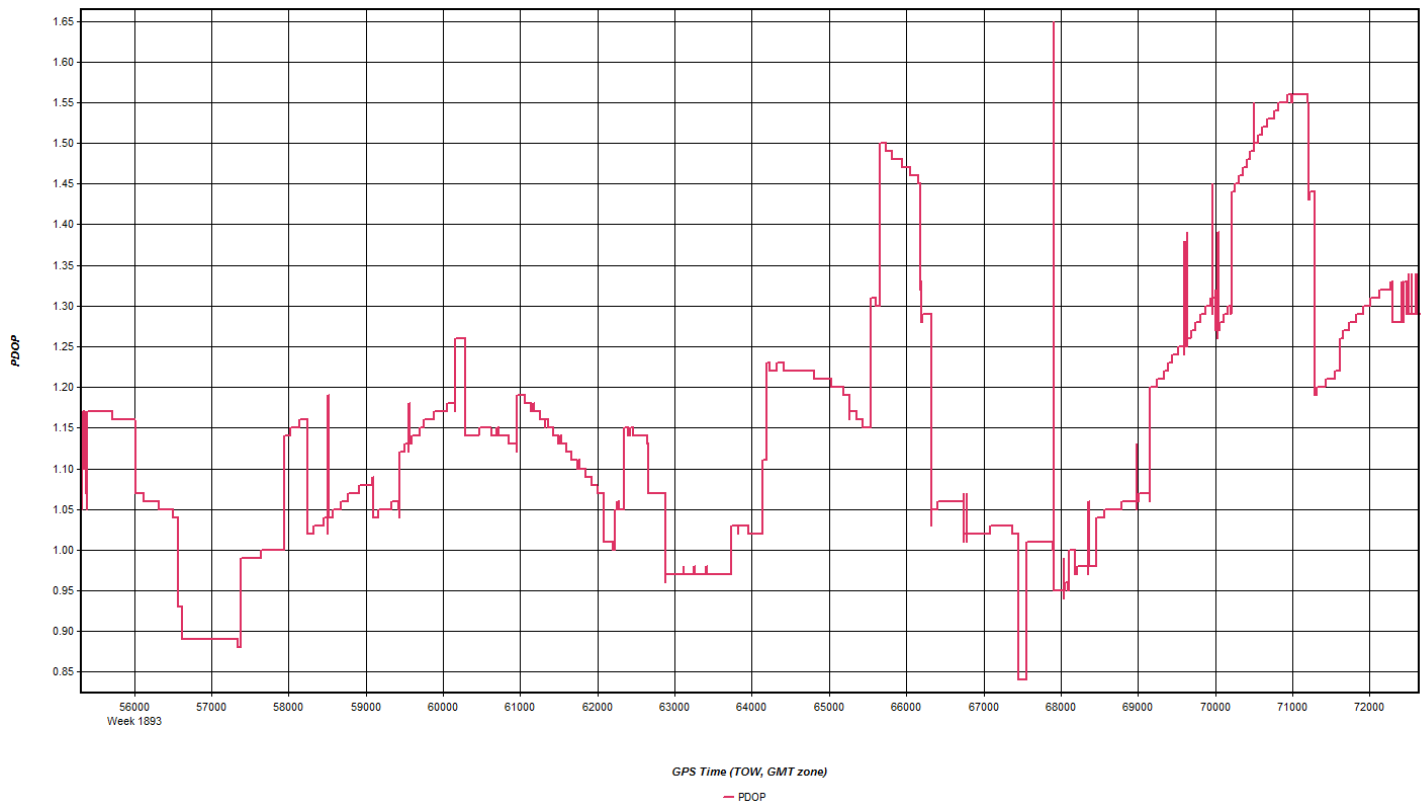
GPS Time (TOW, GMT zone)

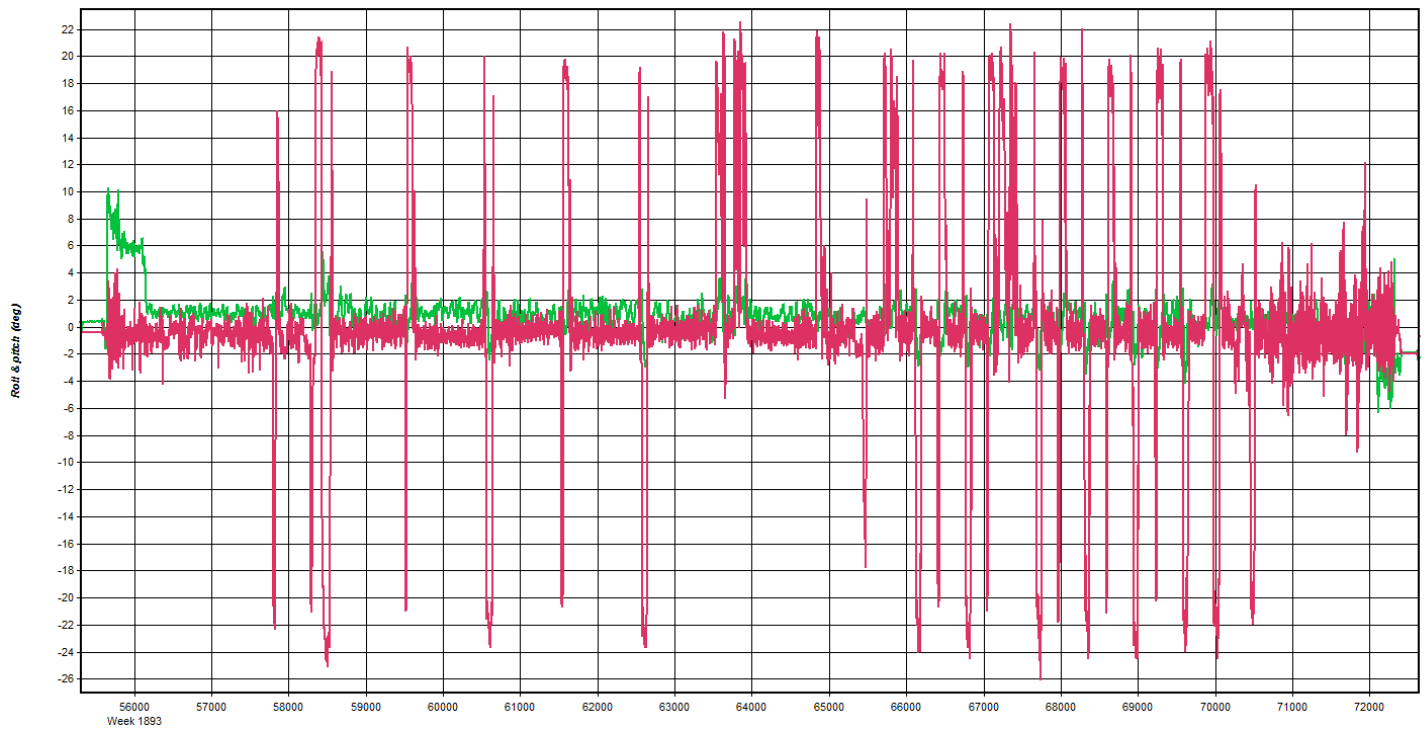
— East — North — Up



GPS Time (TOW, GMT zone)

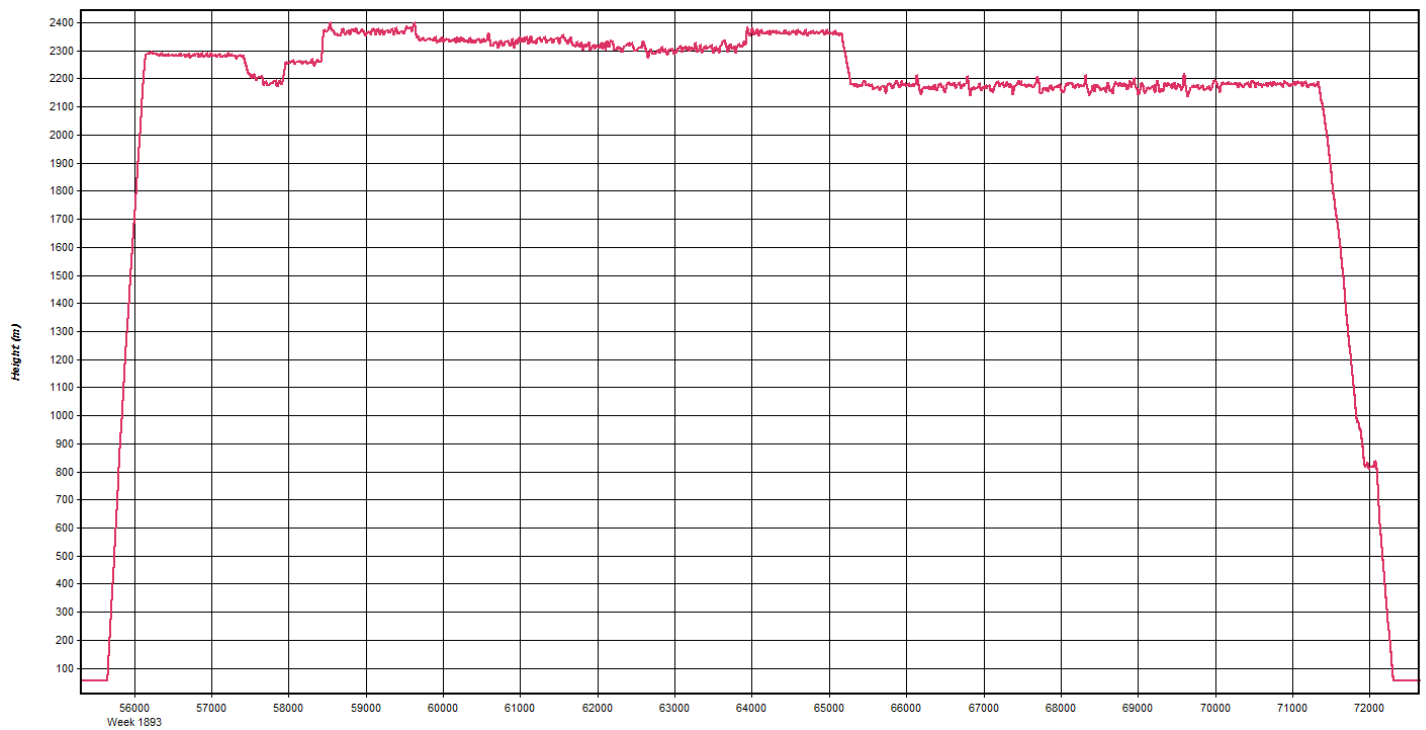
— Heading/Azimuth — GPS-COG





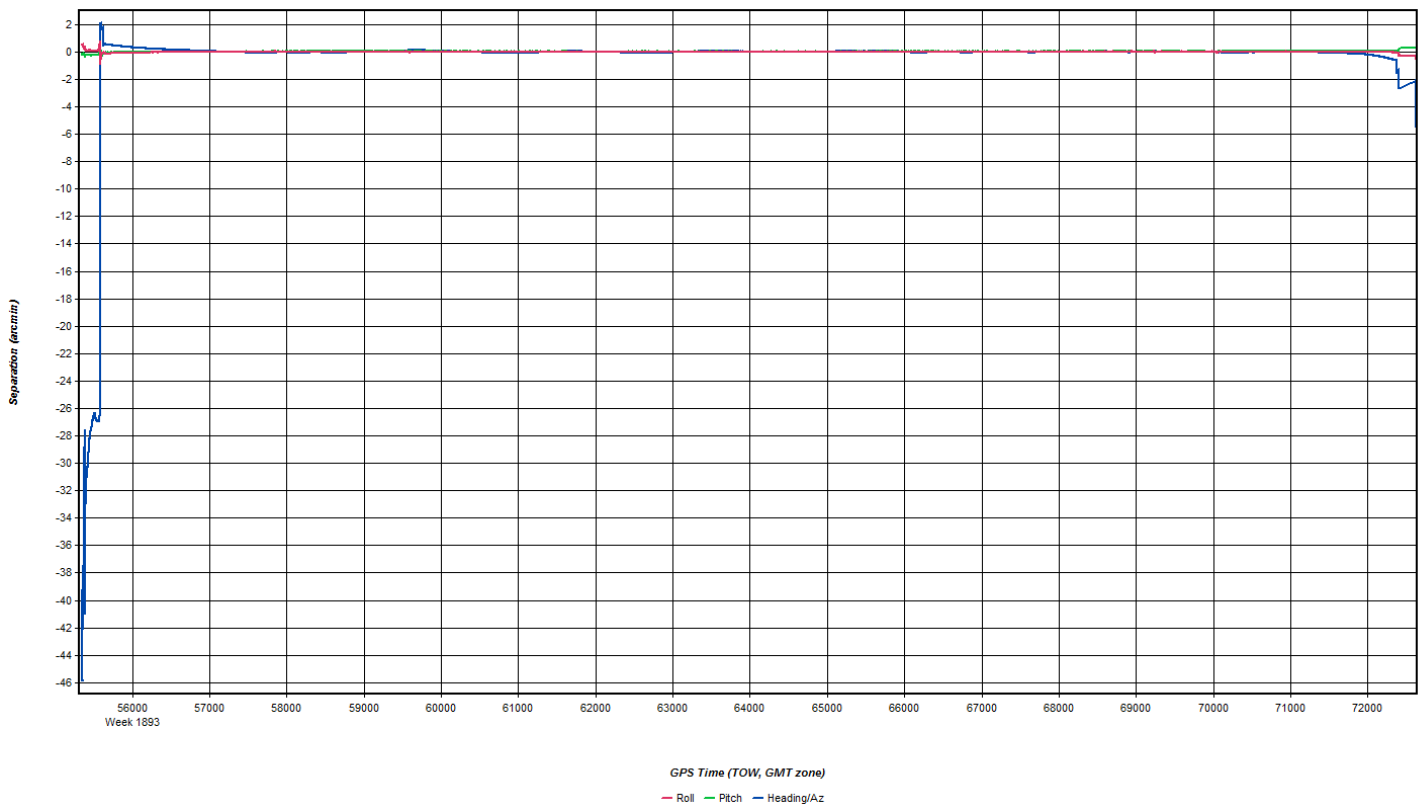
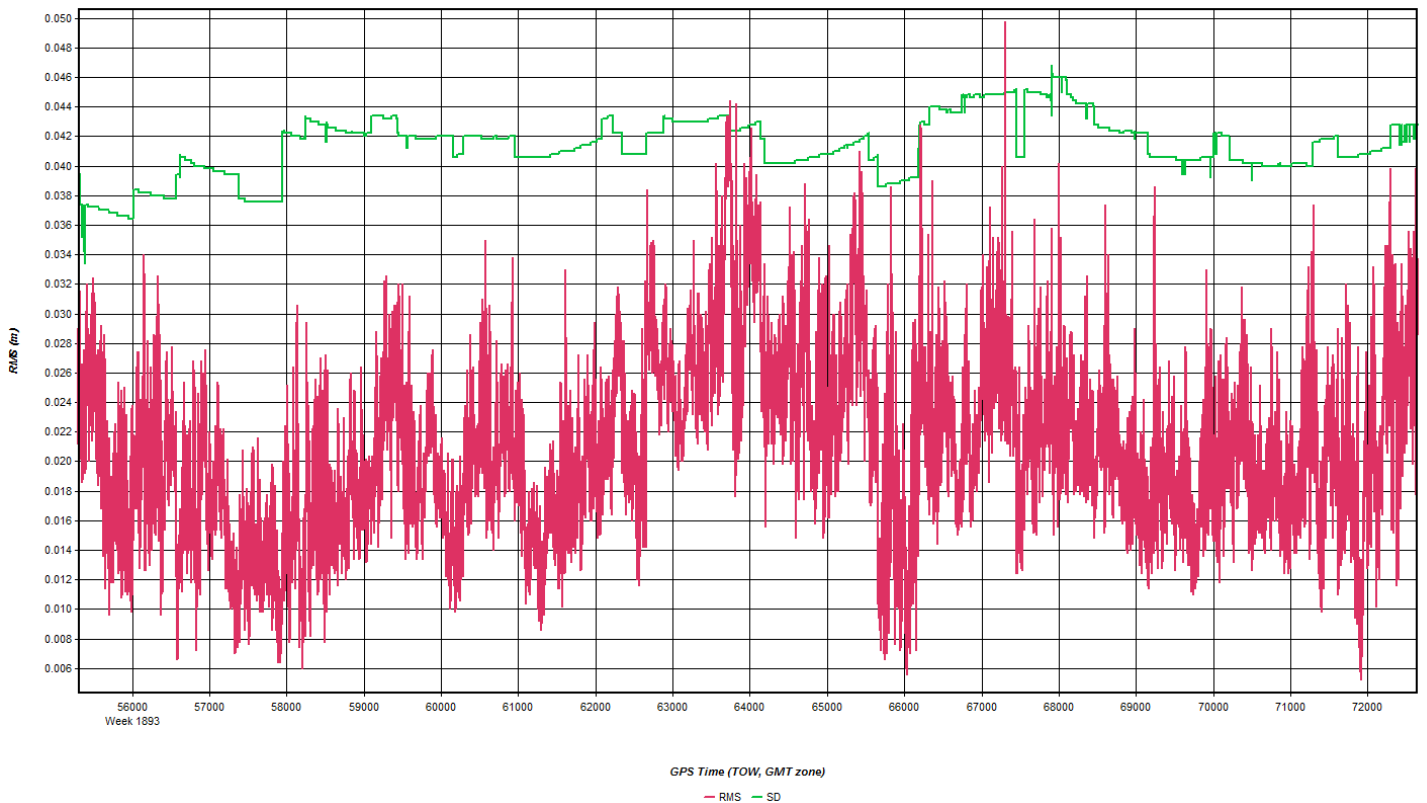
GPS Time (TOW, GMT zone)

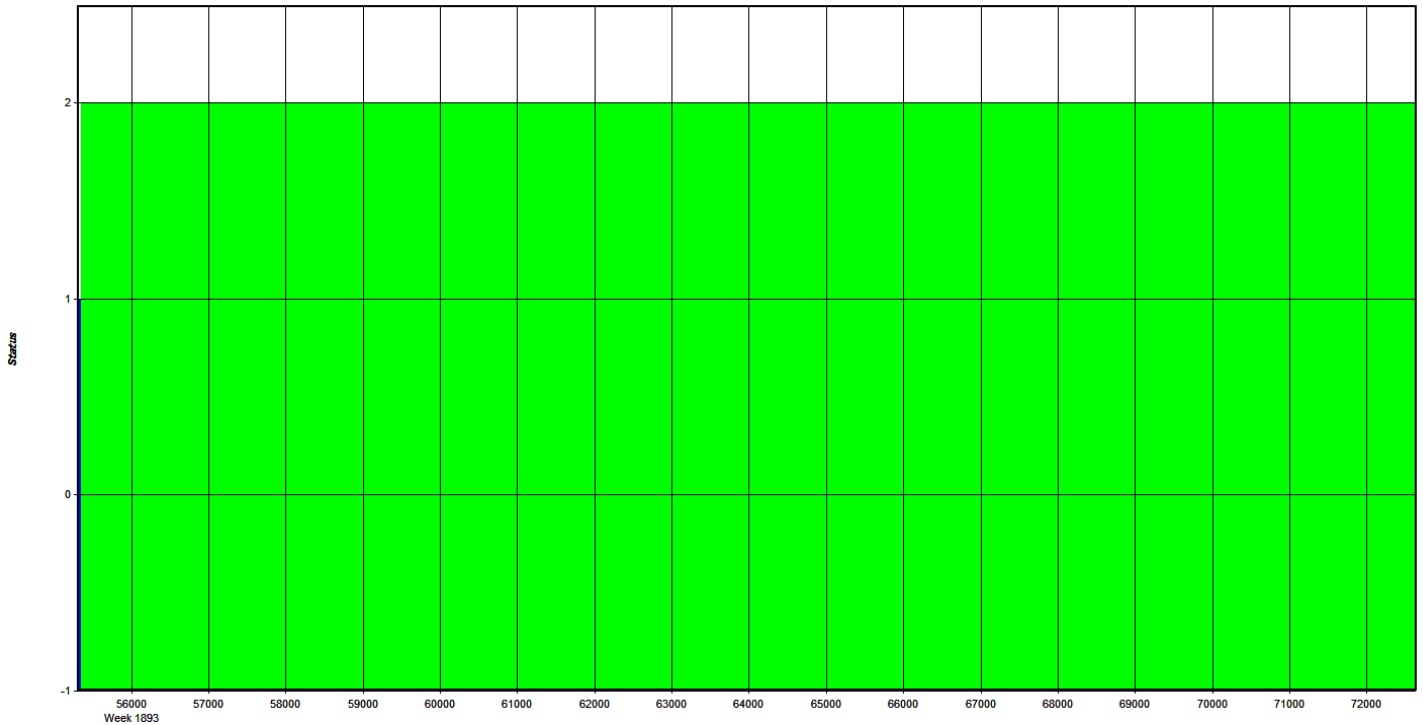
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\SRE8\160417_SN7161_A\2016041

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Quantum Spatial Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log daily to flight_log_distribution_list@quantumspatial.com)

Project: USGS Maine MEGR Proj #: 2-7146 Date: 4-17-16
 Altcraft: NR12IB Begin Hobbs: 3430.1 End Hobbs: 3434.6 Total: 4.5 Flight Mgmt File: 20160417-151538
 Dep Apt: KLEW Dep Time (Lcl): 11:27 (Z): 15:27 Arr Apt: KLEW Arr Time (Local): 16:05 (Z): 20:05 Tech: Dyrish
 CORs: Y/N Sta 1: MEGR Sta 2: Flyovers: Y/N IF Y, times: Start) 16:03, 19:34 (Sta2) Fly. 8-19:25
 GPS Unit: Y/N Sta 1: MEGR Sta 2: Flyovers: Y/N IF Y, times: Start) 16:12, 16:12 (Sta2) (y. 8-19:25)

Gd Temp beg:	°C	End:	°C	OAT beg:	°C	End:	°C	Altimeter begin:	ft	end:	ft	Max	Avg Ft	Power	Alt	Rate	Alt	Rate	Alt	Rate	Alt	Rate	
ALS 70	7161	ALT	7500ft	Max	150	Alt	3040	end:	3040	end:	3040	Alt	150	Power	100	Alt	3040	Rate	3040	Alt	3040	Rate	3040
LIDAR	40	Scan	53	MPIA	Y/N	Alt	7500ft	Max	150	Avg Ft	Spacing	Power	100	Alt	3040	Rate	3040	Alt	3040	Rate	3040	Alt	3040

Line #	Hdg	Start (UTC)	End (UTC)	Alt	Speed	Altitude	GPS	Altitude	Grab	Grab	Notes
5043	168	16:17	16:31	144	1.2/18	7755					residual snow in a few areas
5042	168	16:34	16:48	148	1.3/18	7628					a little residual snow in northern areas
5041	168	16:51	17:05	156	1.4/17	7628					northern areas - residual snow in places
5040	348	17:07	17:22	152	1.2/17	7579					a little snow/residual up north
5039	168	17:24	17:38	155	1.1/18	7579					residual snow north end
5001	75	17:40	17:42	152	1.2/16	7540					cross tie for lines 5039-5044
5044	348	17:45	18:00	152	1.1/16	7752					residual snow north end
5134	89	18:12	18:14	157	1.0/18	7122					
5129	0	18:19	18:20	141	1.0/18	7135					
5128	180	18:23	18:26	143	1.0/18	7123					
5127	0	18:24	18:34	142	1.2/17	7122					
5126	180	18:34	18:37	151	1.2/16	7122					ALS datalogger error on end of line line darked
5125	0	18:44	18:47	150	1.2/17	7122					return due to datalogger error
5125	180	18:44	18:52	146	1.2/17	7119					
5124	0	18:54	18:57	146	1.2/17	7119					
5123	180	19:00	19:02	150	1.2/17	7119					
5122	0	19:05	19:08	153	1.3/16	7122					
5121	180	19:10	19:13	148	1.3/16	7122					

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

Total Proj Lines: 136 Lines Flown: 18 Online Time: 3.1 Mob Time: 1.4 Notes:

Q Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: 4-17-16

JOB NO: 012-02

Project: USGS Maine MEGAR Prof: 27116 Flight Mgr: P.M. 20160417 151539

Aircraft: P32TB Begin Hobbs: 3936.1 End Hobbs: 3934.6 Total: 4.5 Pilot: Jackson Co-Pilot: Tech: D. P. S. M.

Dep Apt: KLEW Dep Time (Local): 11:27 Arr Apt: KLEW Arr Time (Local): 6:05 TA 20.05 Tot Time Alot: 4.5

COORDS: (Y/N) Sta 1: MEGAR Sta 2: Flyovers: (Y/N) W.T. (min sec) (6:03, 14:34, 5:22) Sta 3: 8-14:25

GPS Unit: (Y/N) Sta 1: Sta 2: Flyovers: (Y/N) W.T. (min sec) (5:3, 16:12) Sta 4: 8-14:25

Cell Temp: °C End 2: 1 °C OAT bag 5 °C End 4: 1 °C Altimeter begin: 3046 end: 30.26

Type	Alt	Speed	Wind	Temp	Pressure	Altitude	Height	Pitch	Roll	Yaw	Heading	Mach	Fuel	Power	Temp	Time	Remarks	
																		Altitude
LIDAR	4570	161	105.64	70.64	260	150	100	100	100	100	100	100	100	100	100	100	100	015
LIDAR	40	53	105.64	70.64	260	150	100	100	100	100	100	100	100	100	100	100	100	015

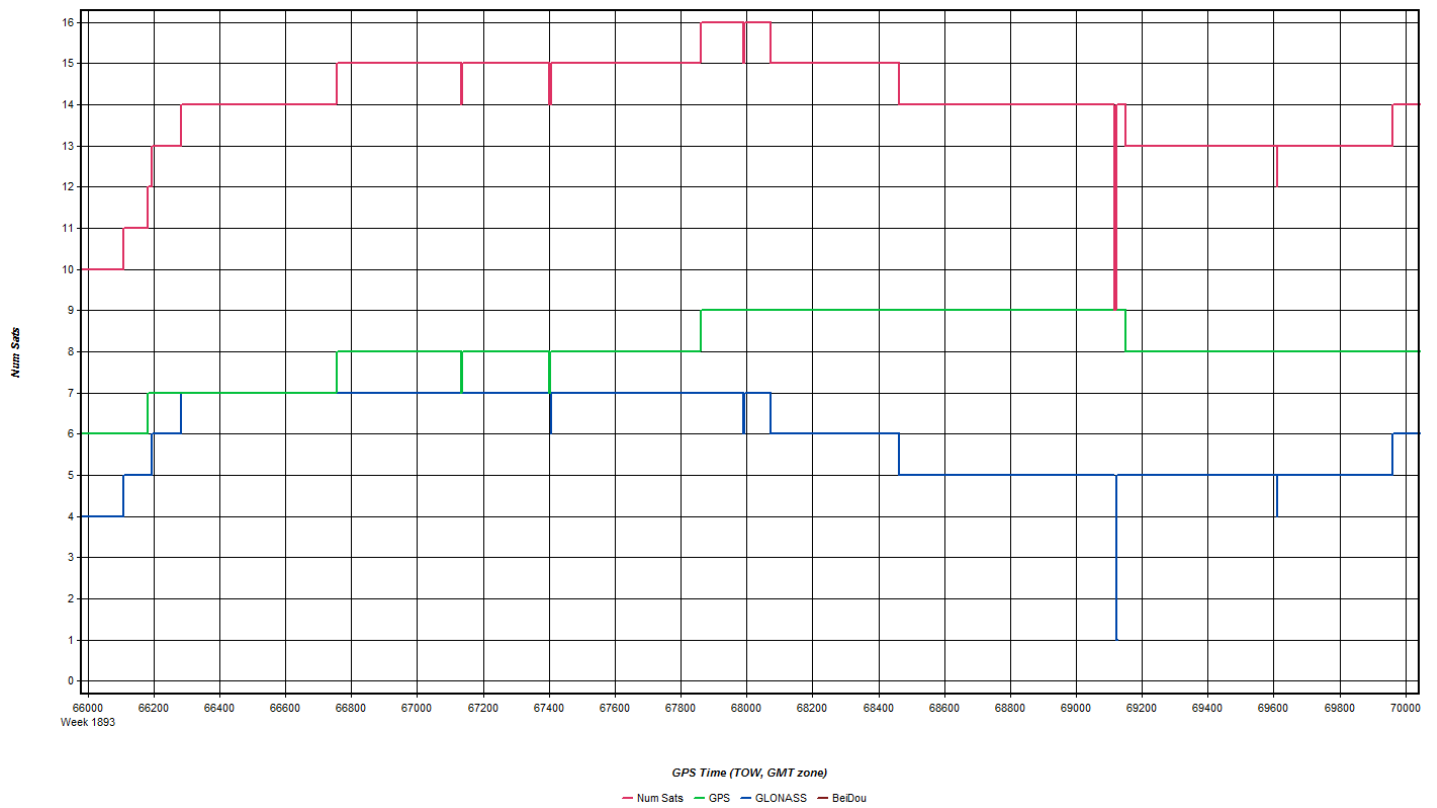
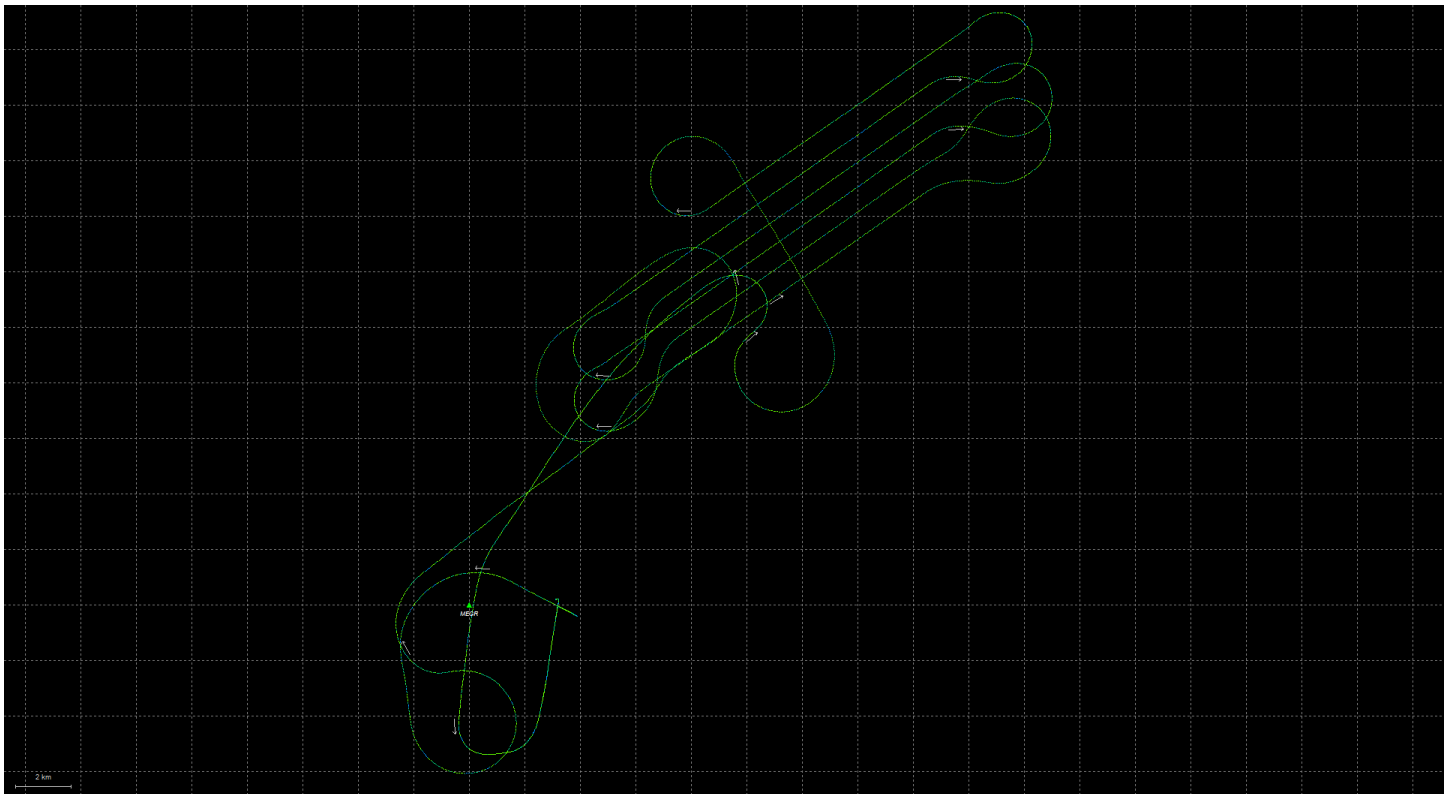
Line # Log Start/End Alt Speed Wind Temp Pressure Altitude Height Pitch Roll Yaw Heading Mach Fuel Power Temp Time Remarks

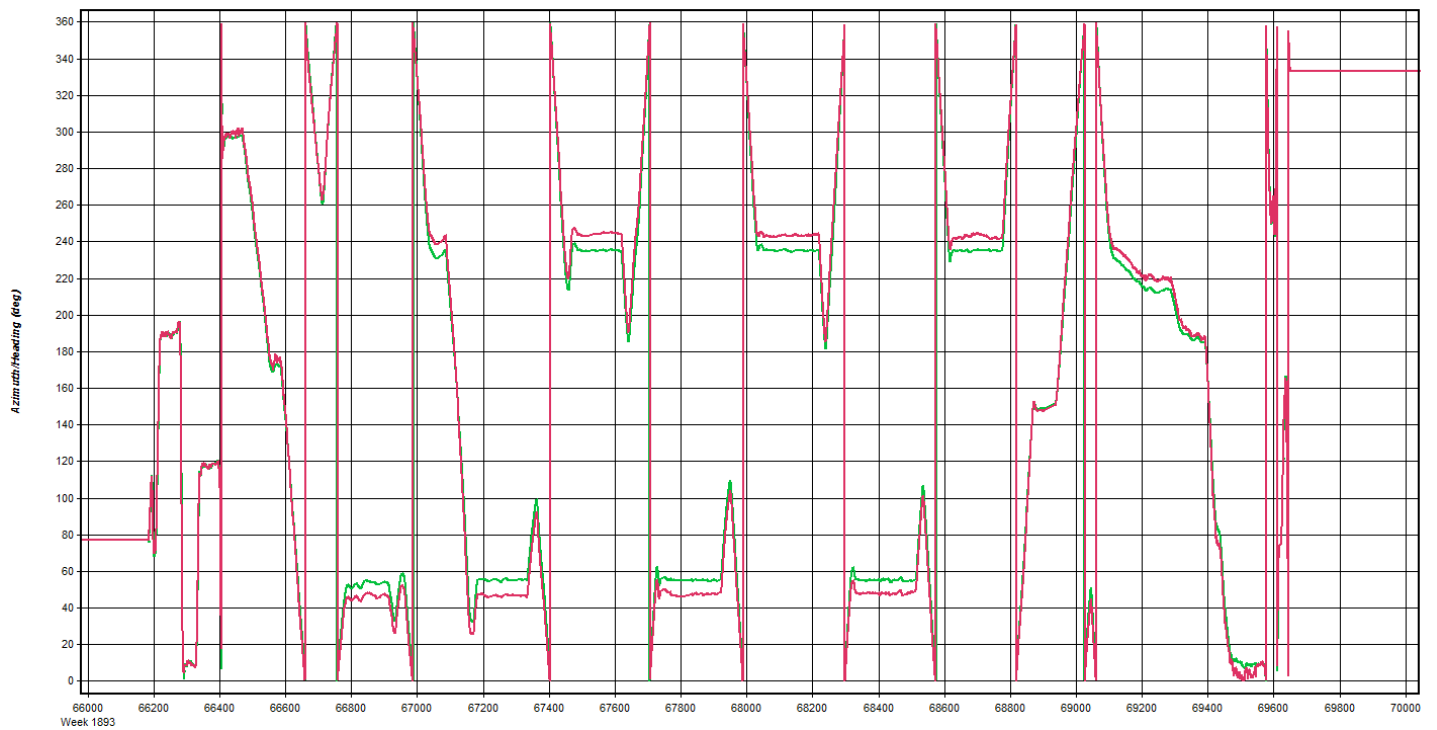
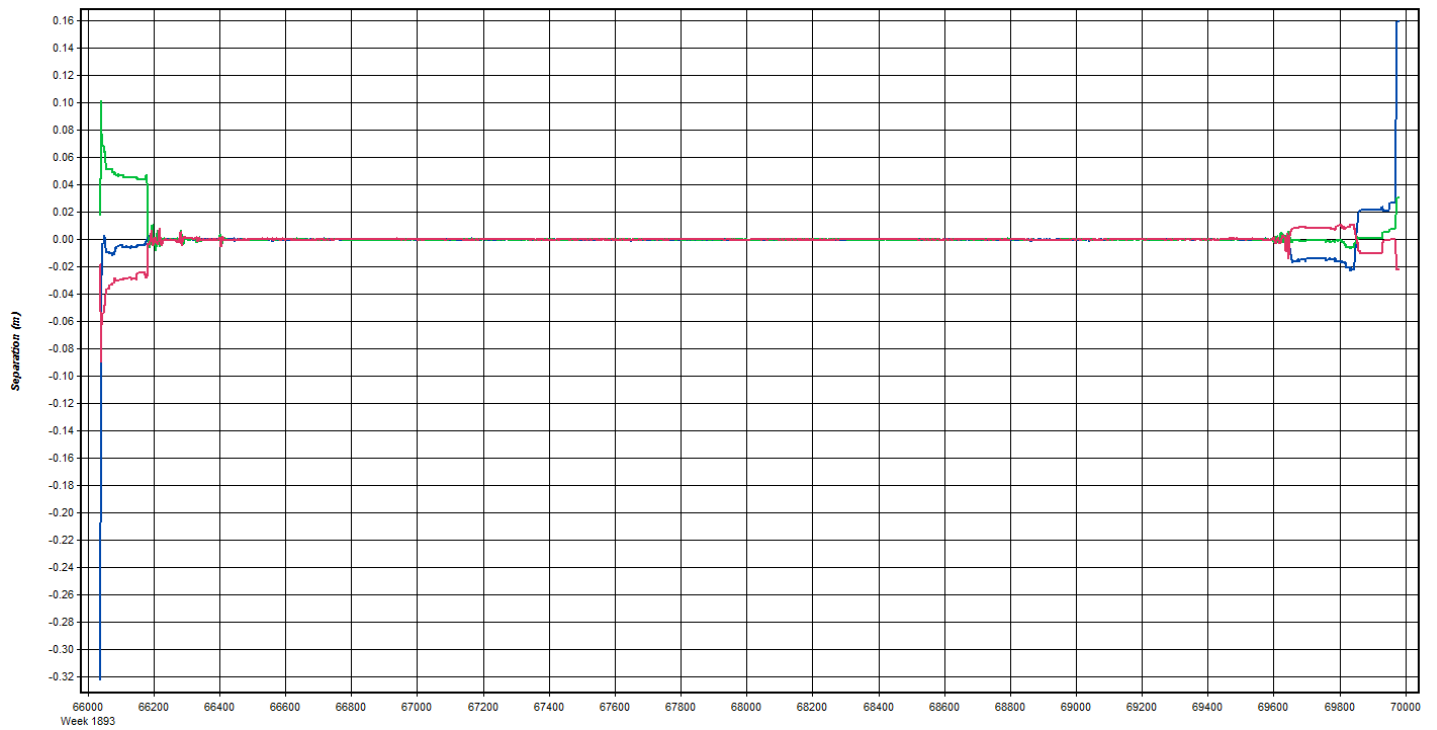
5120	0	19:15	19:18	154	12/16	1122													
5119	180	19:21	19:24	150	12/16	1122													

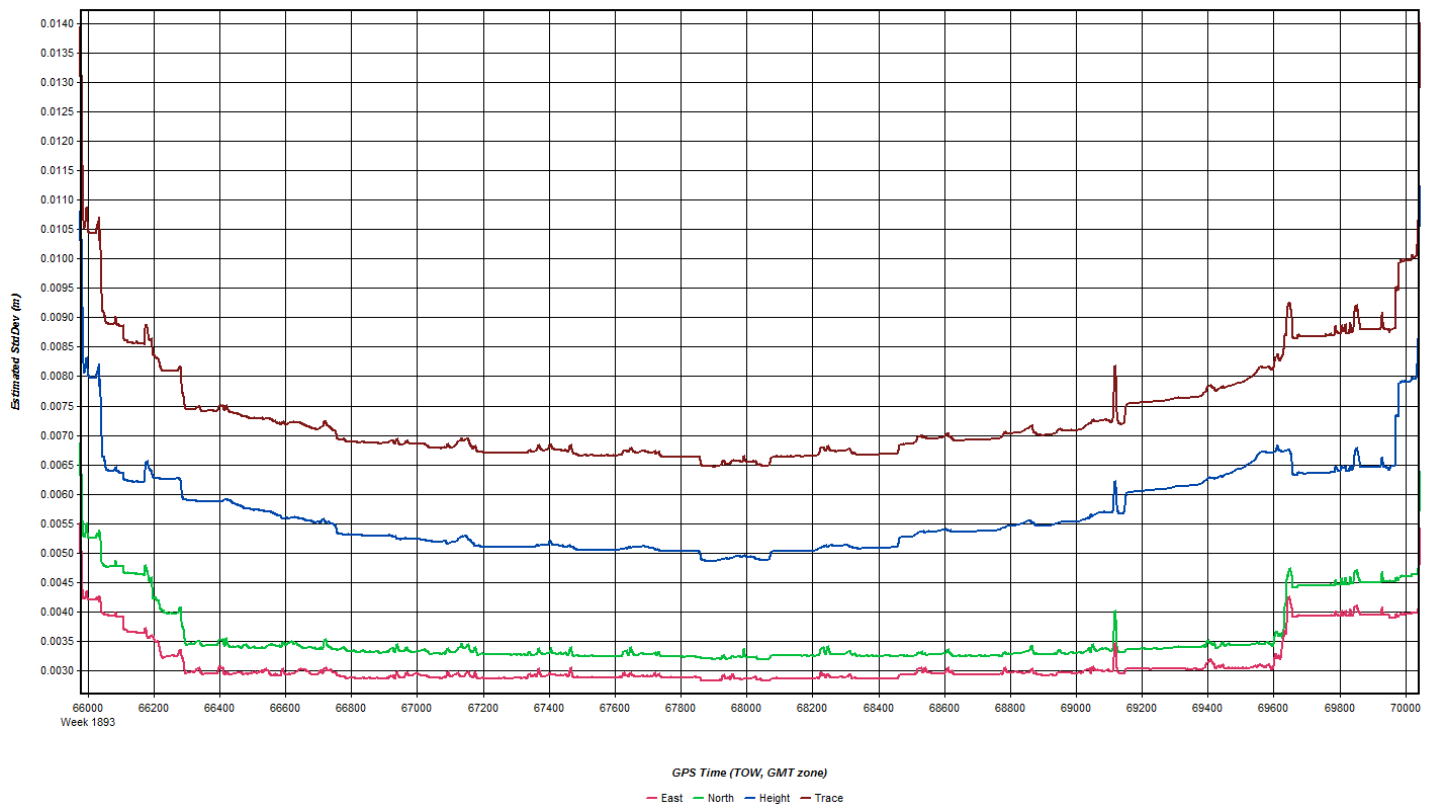
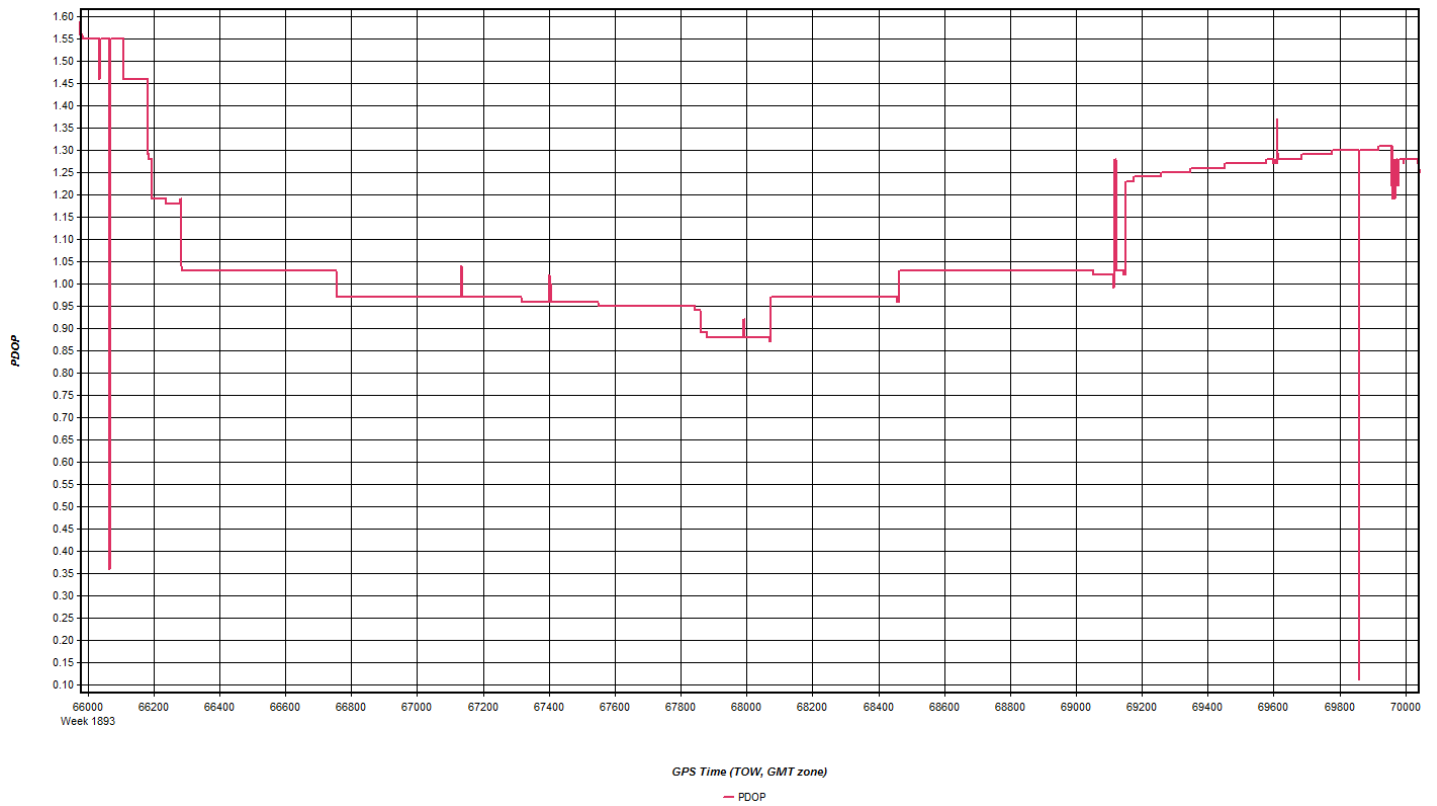
Total Proj Lines: 136 Lines Flown: 16 Lines Remain: 3 Online Time: 3.1 Mob Time: 1.4 Notes:

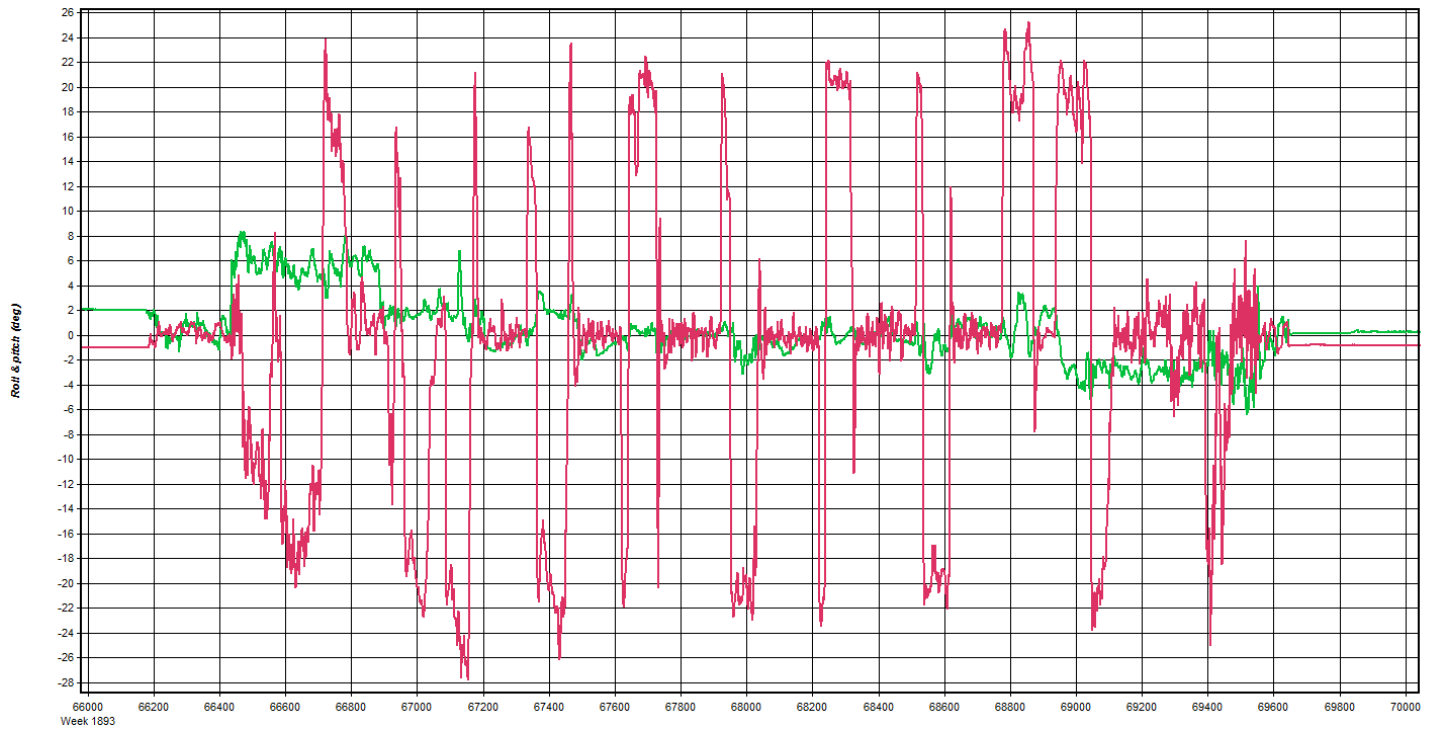
Generated by CamScanner

Apr 17, 2016-B (N73TM, SN7178)



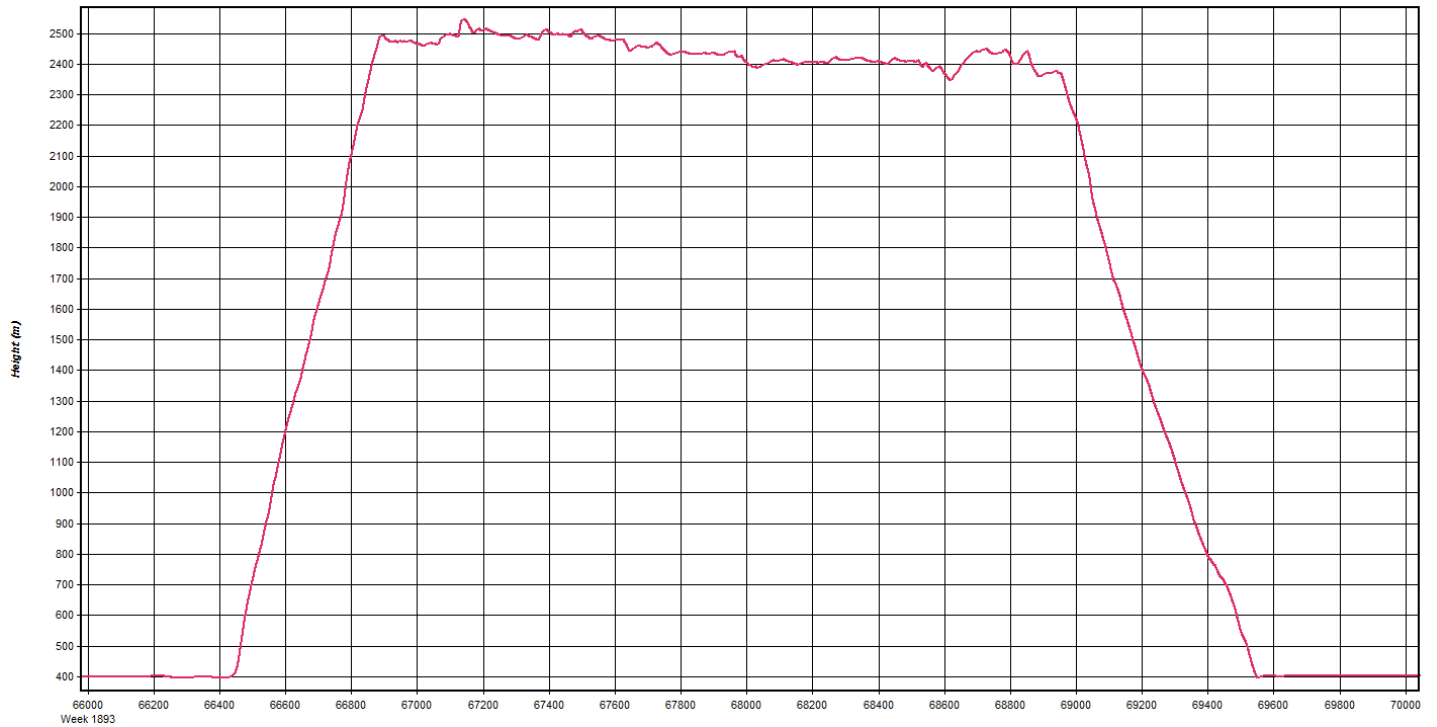






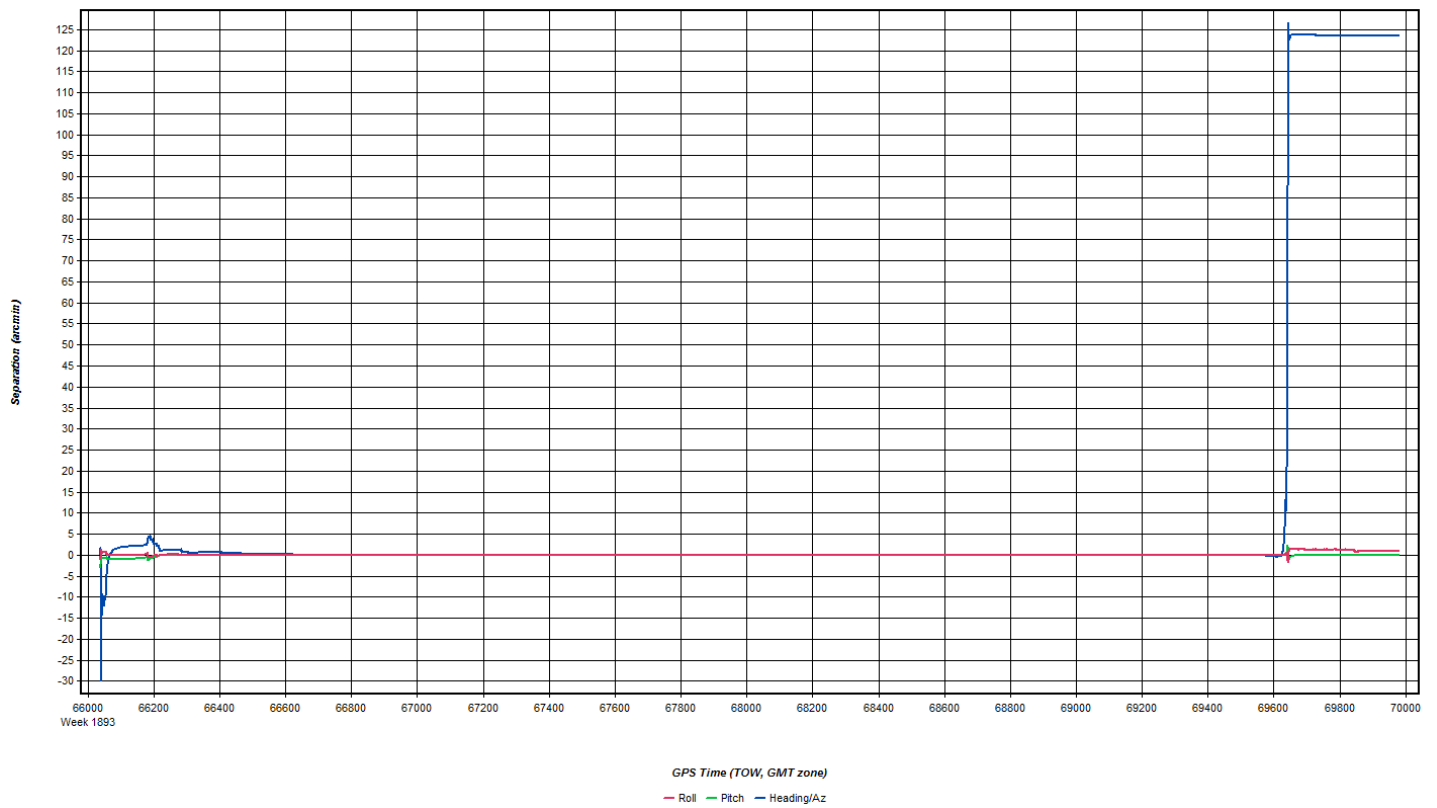
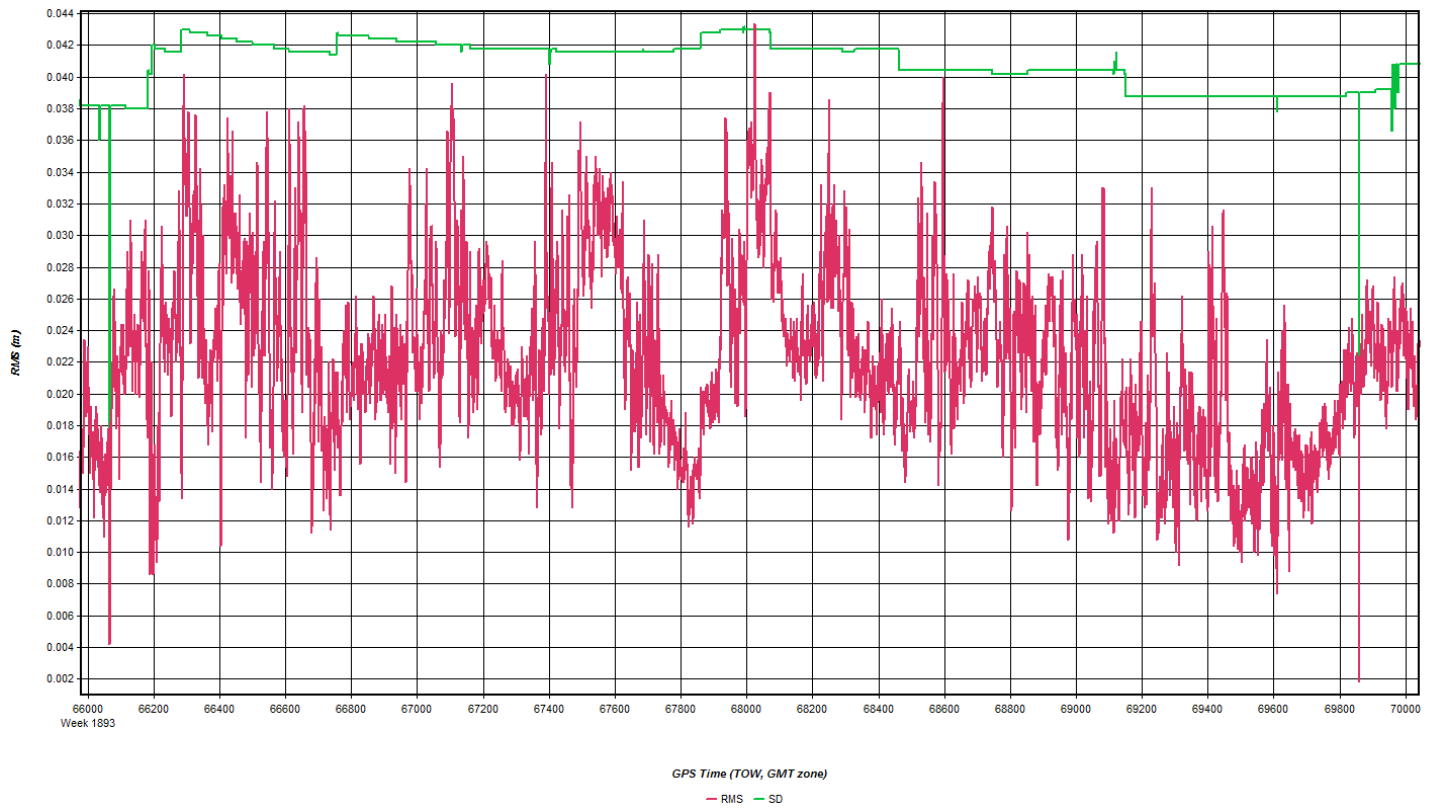
GPS Time (TOW, GMT zone)

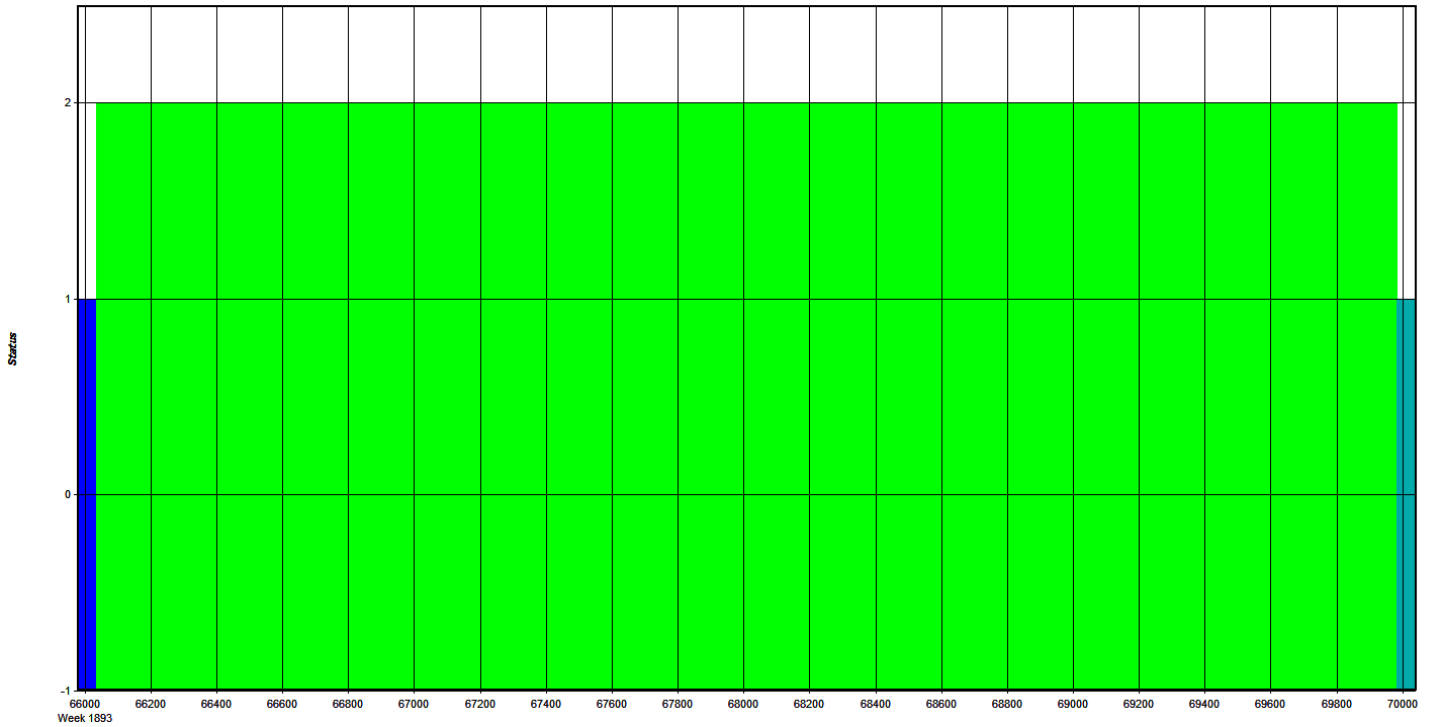
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\0539\20160417b-7178\megr1080.gi

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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: USGS WESTERN MARINE **Proj #:** 27146 **Date:** April 17th, 2016 **Page 1 of 1**

Aircraft: N73TM **Begin Hobbs:** 6187.3 **End Hobbs:** 6193.2 **Total:** 6.9 **Pilot:** J. BULLINGTON **Co-Pilot:** - **Tech:** P. HERRMAN

Flight Mgmt File: USGS_Marine_MEGR-SN717B_150.kts

Dep Apt: 3B1 **Dep Time (lcl):** 14:24 **(Z):** 18:27 **Arr Apt:** 3B1 **Arr Time (Local):** 15:19 **(Z):** 19:19 **Tot Time Aloft:** 0:52

CORS: N S **Sta 1:** MEGR CORS **Sta 2:** - **Flyovers:** Y / N **If Y, times: Sta1** STATUL **Sta2:** -

GPS Unit: Y / N **Sta 1:** - **Sta 2:** - **Flyovers:** Y / N **If Y, times: Sta1** - **Sta2:** -

Gd Temp beg: +18 °C **End:** - °C **OAT beg:** 104 °C **End:** - °C **Altimeter begin:** 30.28" **end:** -

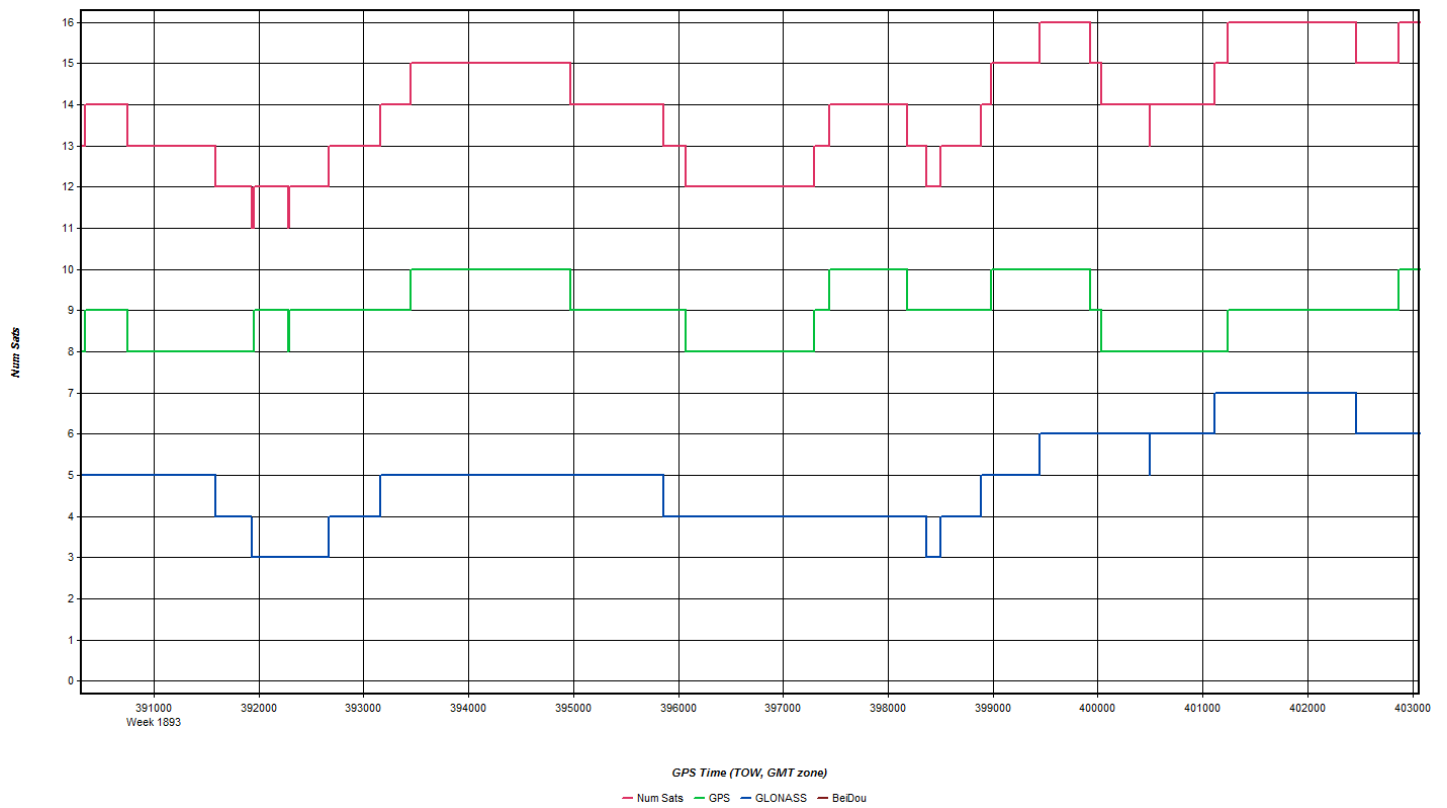
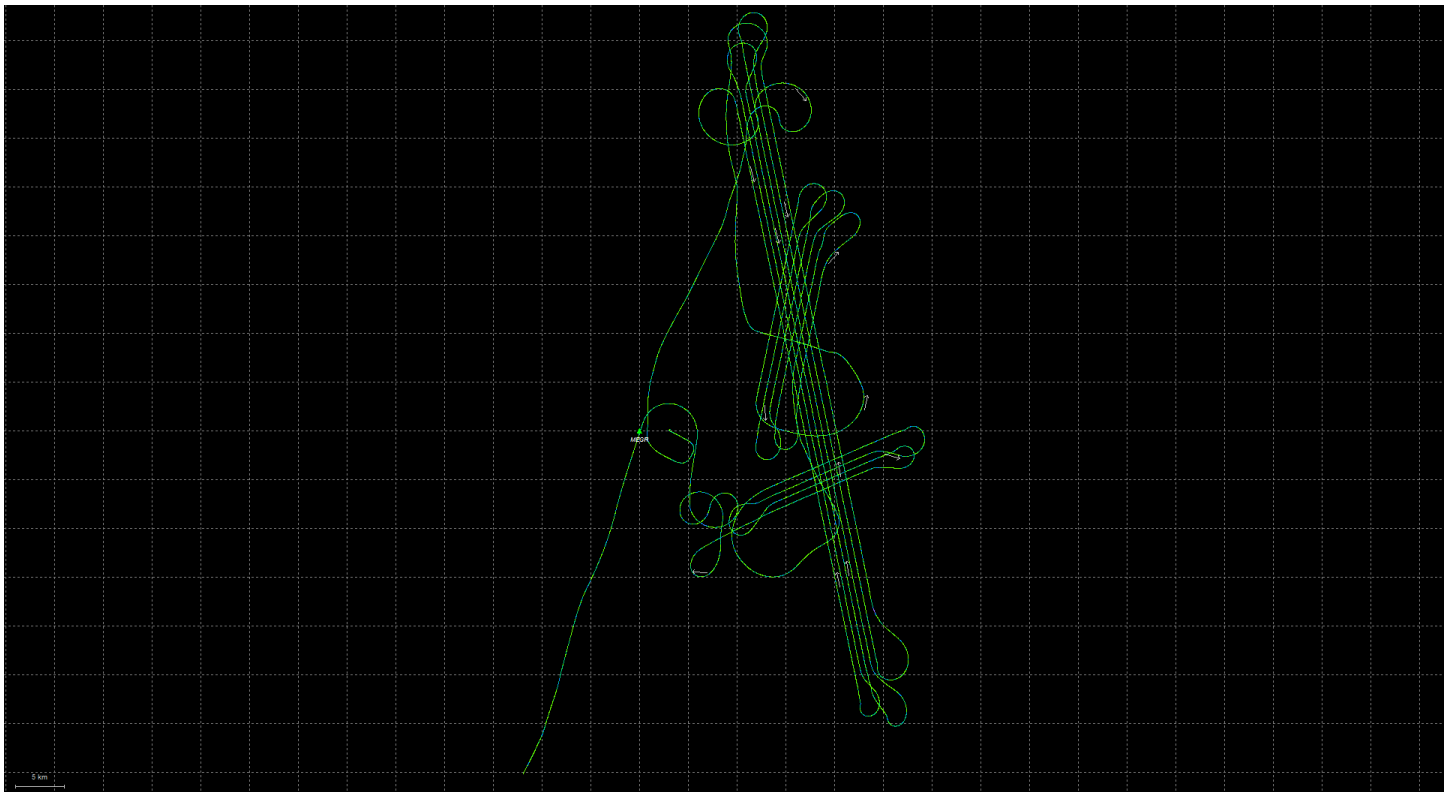
Type	FOV	Serial #	Scan Freq	Gd Spd	POPI/s	GPS Altitude	Crab	Turb (0-4)	Pulse Rate	Pulse Rate	Power	Max Gspd	Avg Pt Spacing	Storage Name			
														Alt AGL	Alt AMSL	End CB	
LIDAR	40°	16570	53.4 Hz	160 kts	MPIA	N	2	2	2.2	100%	2.2	150 kts	7	148	154	6	
5118	NE	18:40	18:41	160 kts	1.2/17	8030	9°	0	h.E, smooth, s.k.e above & below, some snow below								
5117	SW	18:44	18:46	150 kts	1.2/17	8190	8°	0	h.E, smooth, s.k.e above & below, some snow below								
5116	NE	18:49	18:51	150 kts	1.2/17	7970	9°	0	h.E, smooth, s.k.e above & below, some snow below								
5115	SW	18:54	18:56	150 kts	1.2/17	7890	8°	0	h.E, smooth, s.k.e above & below, some snow below								
5114	NE	18:59	19:01	150 kts	1.2/17	7900	7°	0	h.E, smooth, s.k.e above & below, some snow below								
5113	SW	19:04	19:05	145 kts	1.2/17	7900	8°	0	h.E, smooth, s.k.e above & below, some snow below								
UL01	SE	19:07	19:08	190 kts	1.3/16	7770	1°	0	h.E, smooth, s.k.e above & below, some snow below								

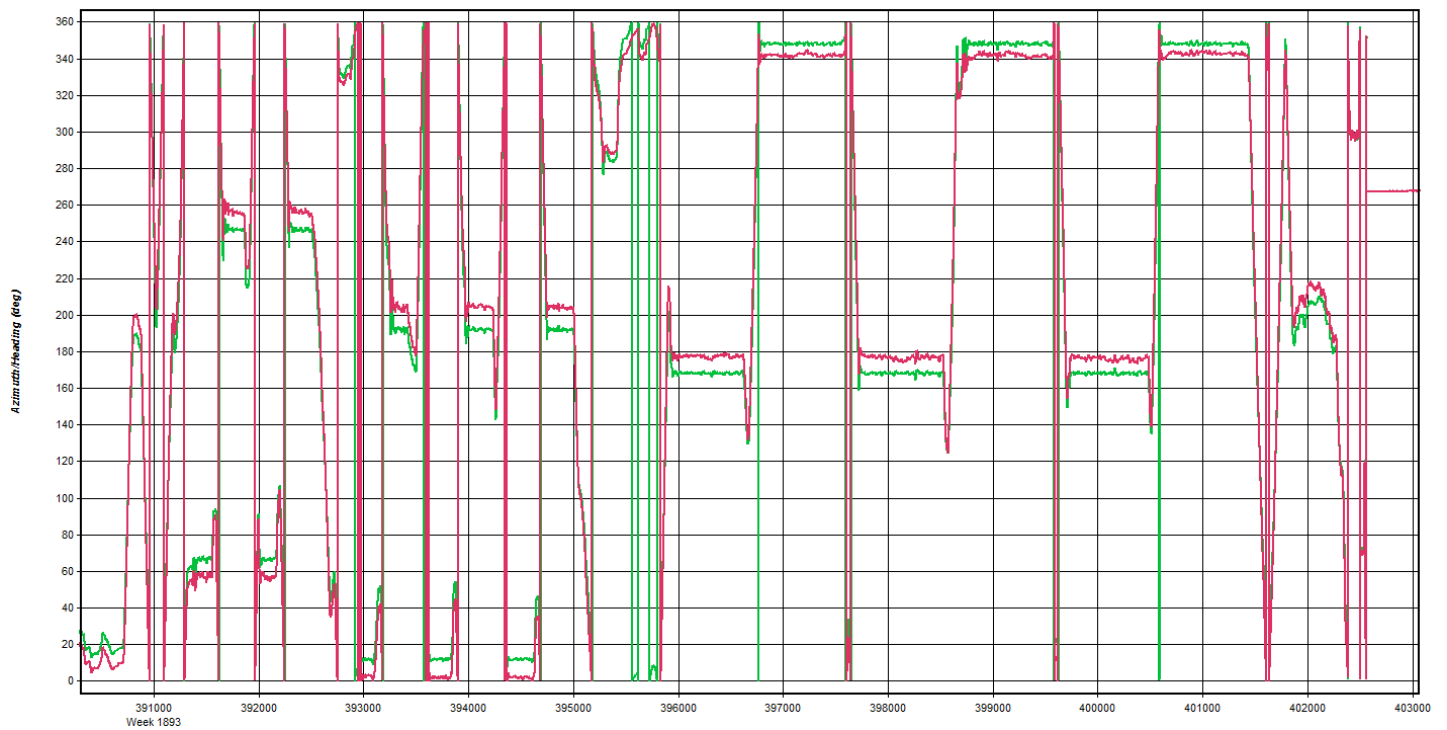
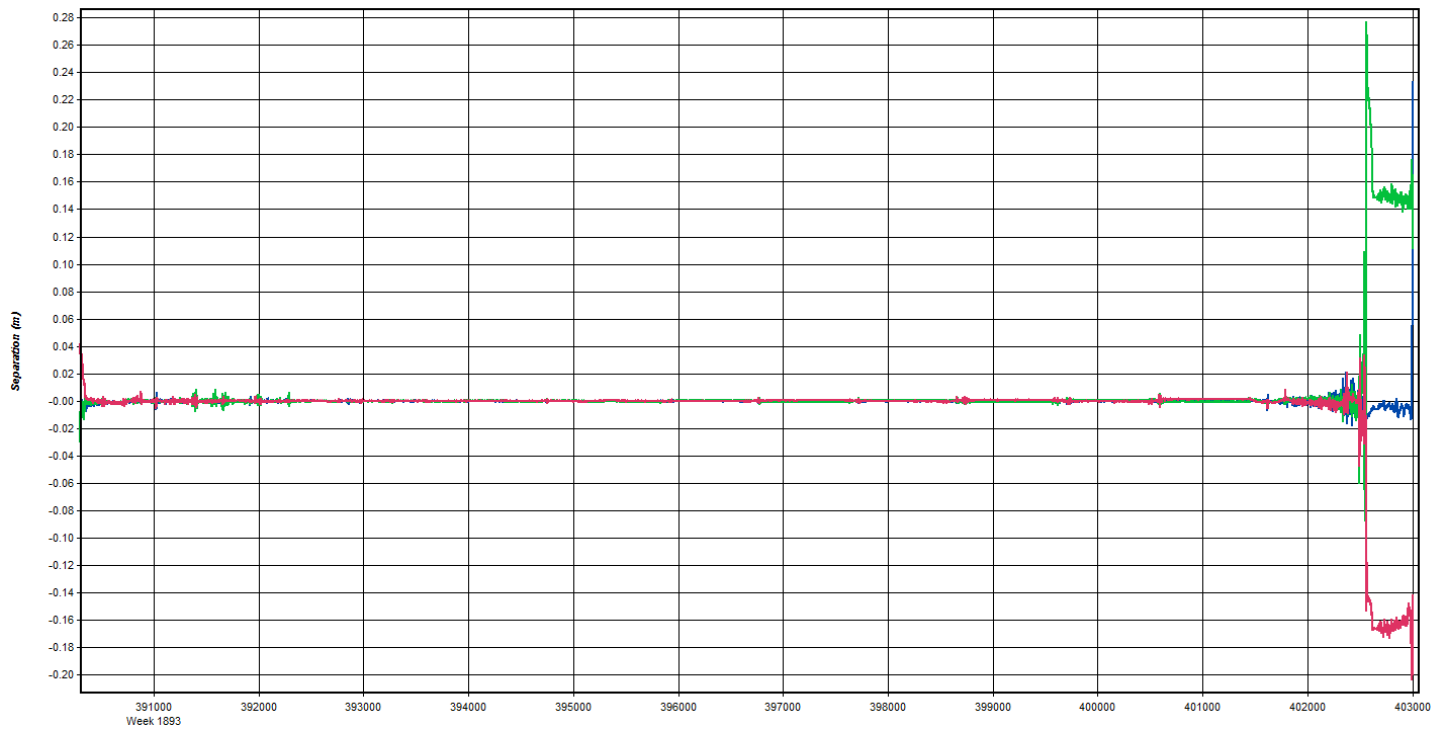
FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.
(Fig. 8s in Recording)

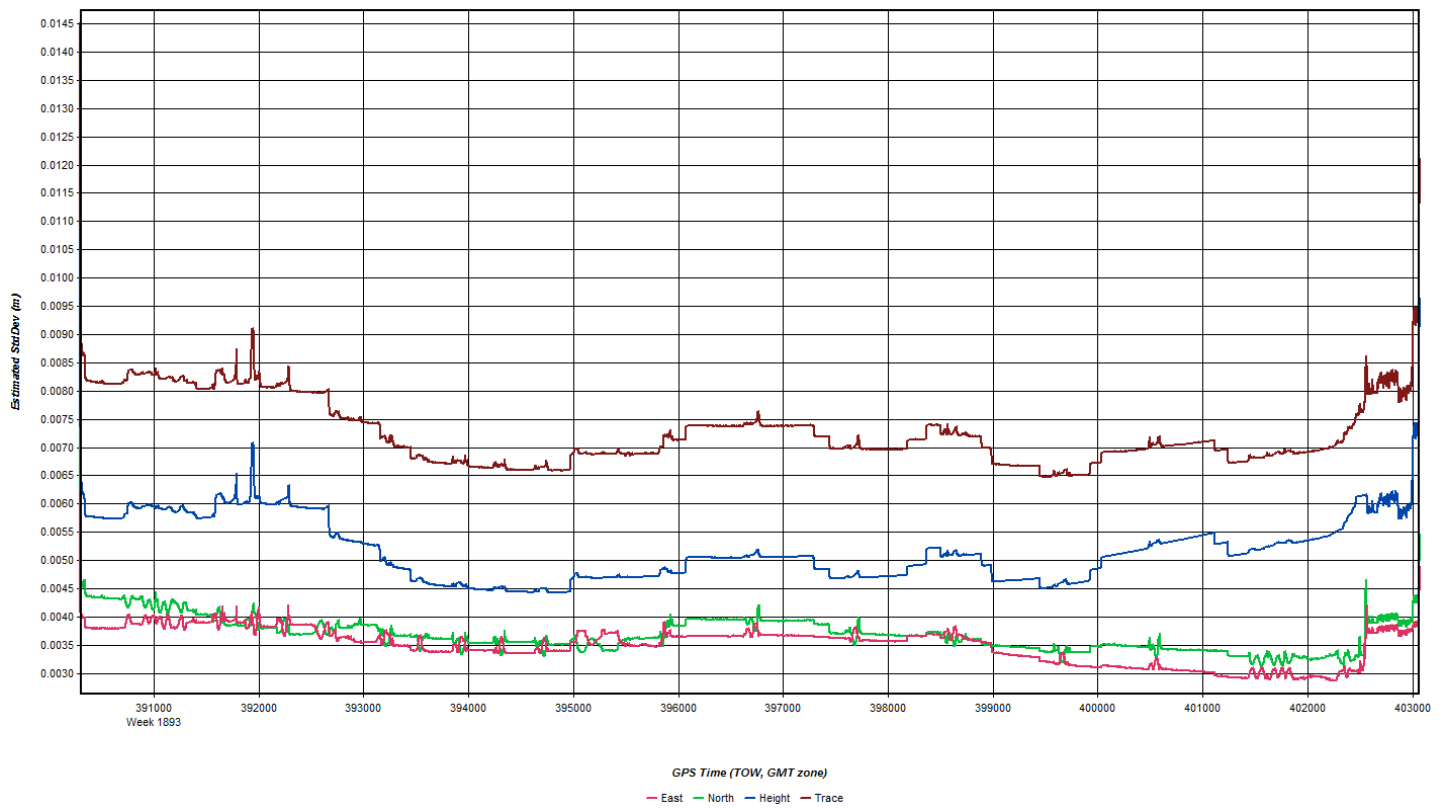
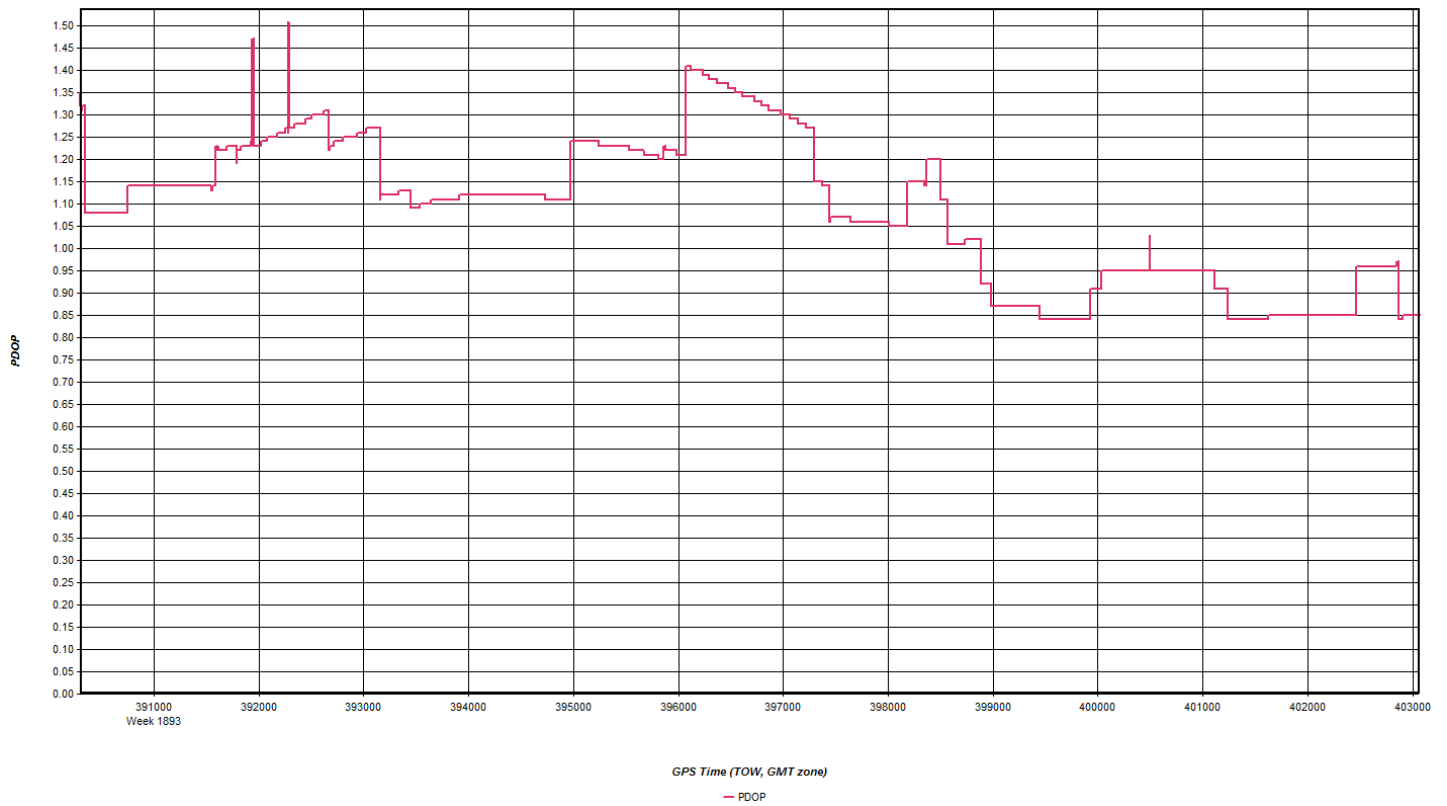
→ LANDED DUE TO IMPENDING BLOHARZARD SITUATION ←
→ COMPLETION OF LINES SUGGESTED AS MINIMAL SNOW ←
(Fig. 8s in descent)

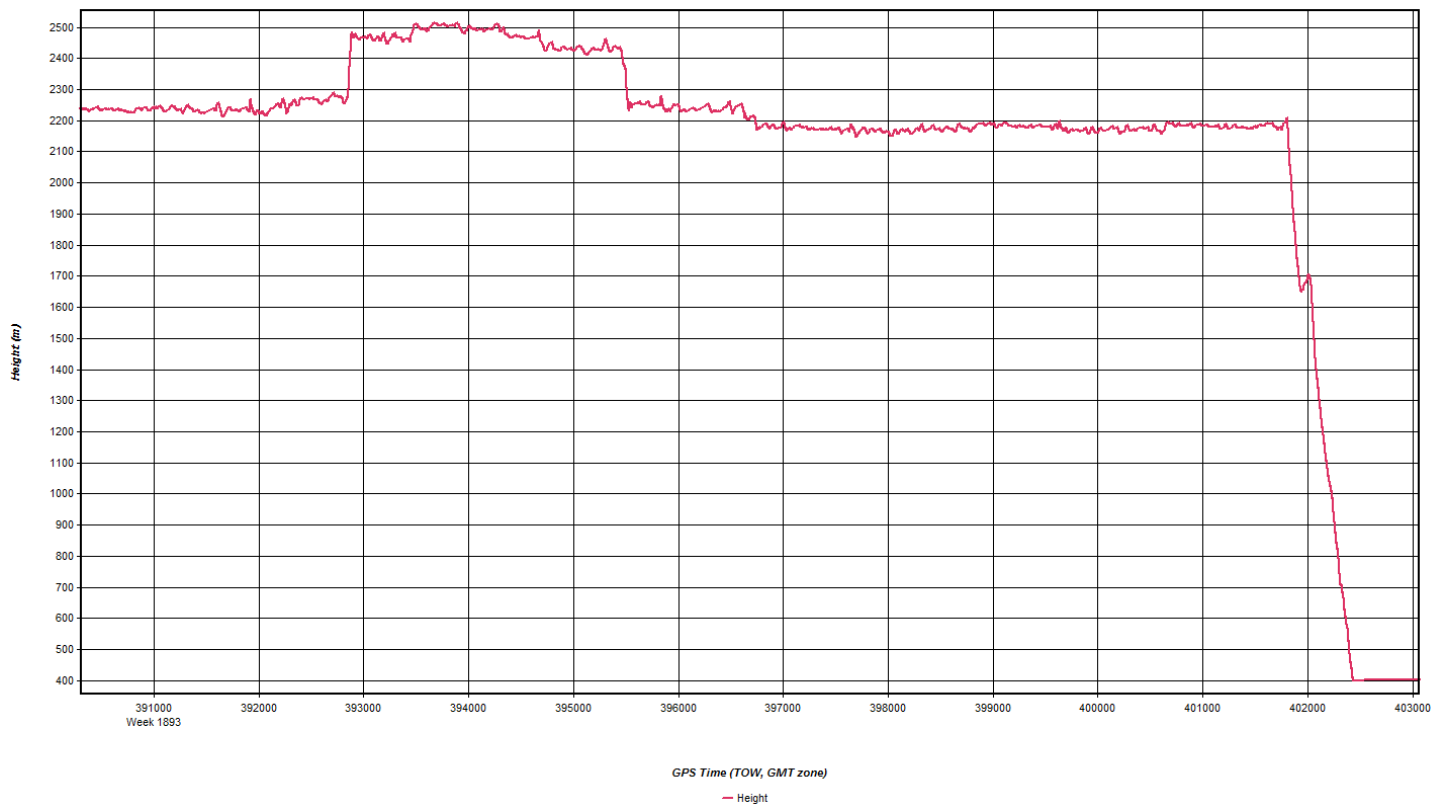
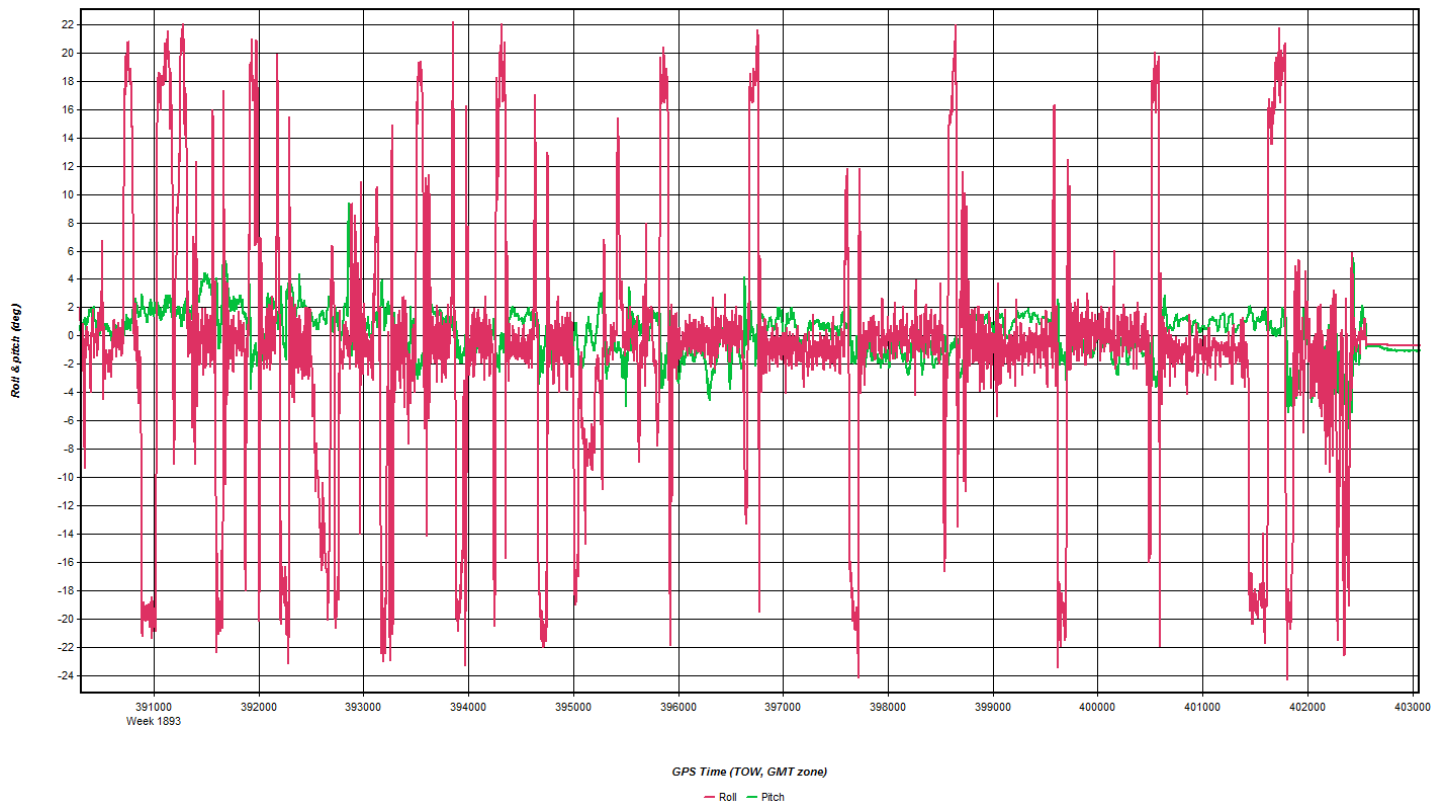
Total Proj Lines: 136 **Lines Flown:** 6 **Lines Remain:** 2 - 20000 **Online Time:** 0:28 **Mob Time:** 0:24 **Notes:** 20160417-181658 & -181915

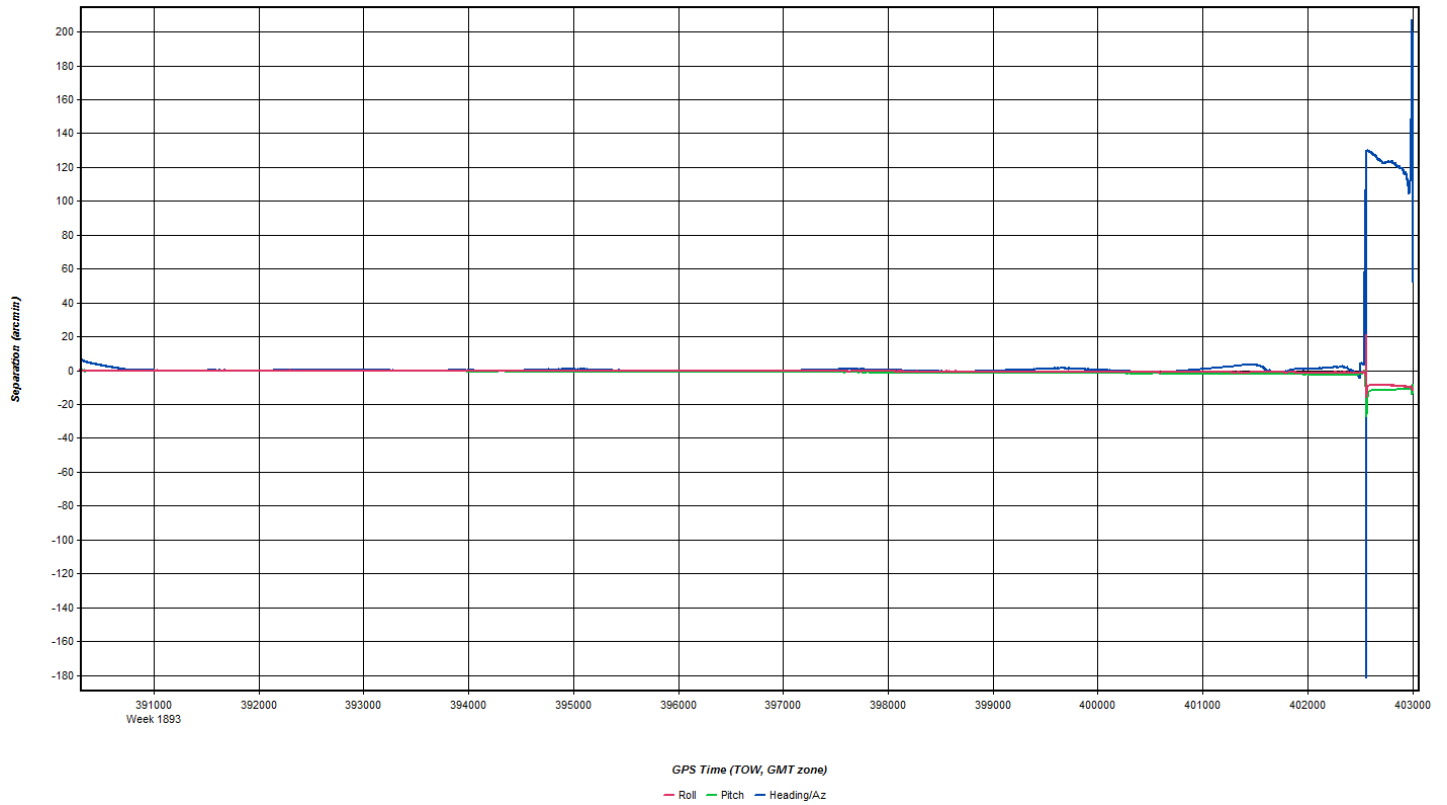
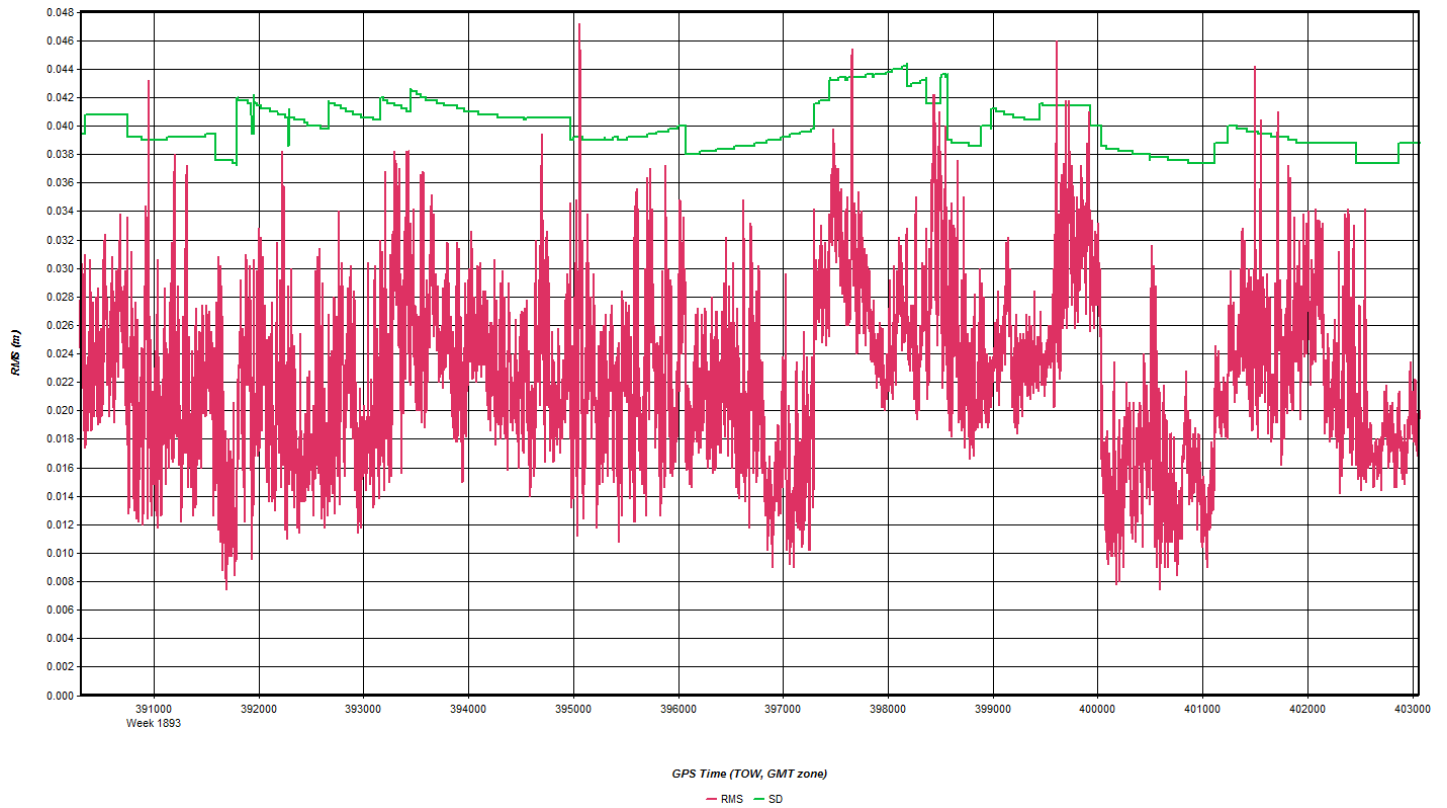
Apr 21, 2016-A (N73TM, SN7178)

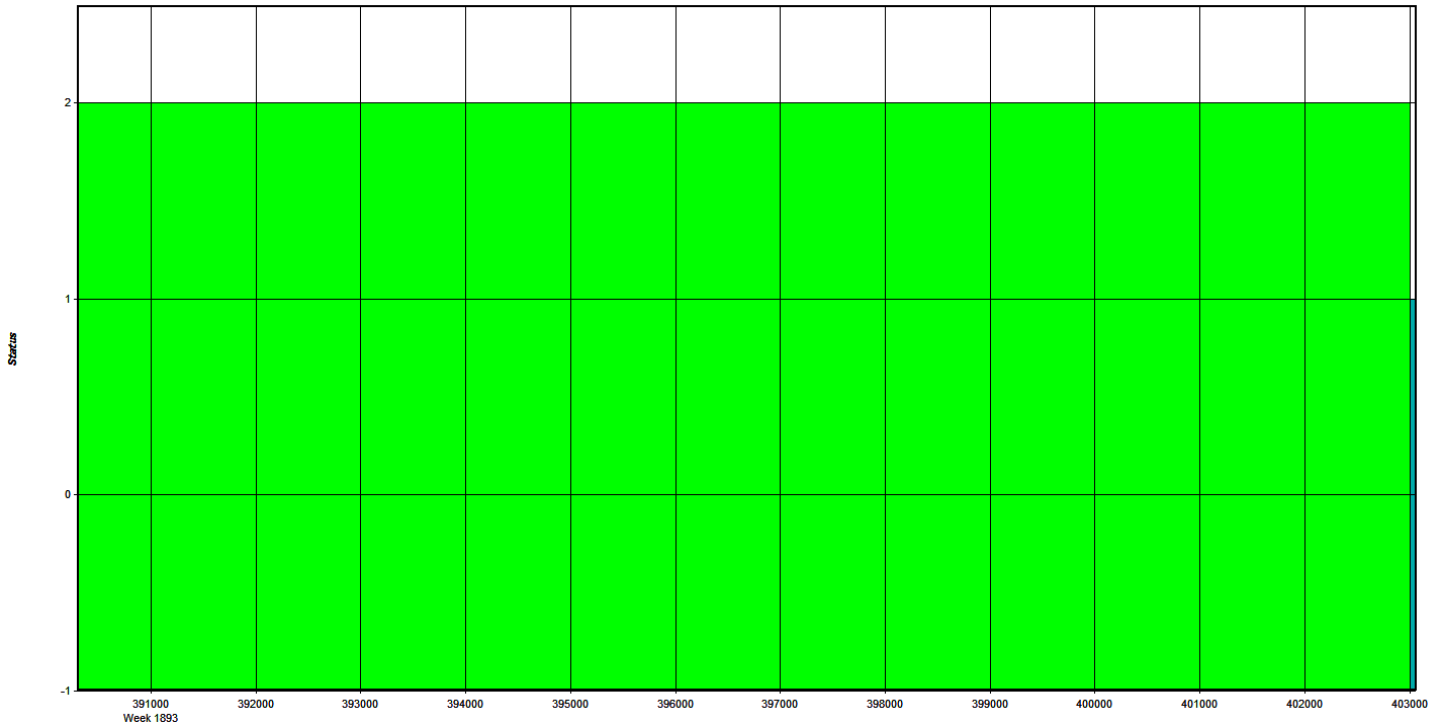












GPS Time (TOW, GMT zone)
 - Float - Forward Fixed - Reverse Fixed - Fixed (2 or more)

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\0511\20160421a-7178\megr1120.gi

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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: USGS WESTERN MAINE **Proj #:** 27146 **Date:** April 21st, 2016
(email log daily to flight_log_distribution_list@quantumspatial.com) 20160421-114641 **Page 1 of 1**

Flight Mgmt File: USGS_Maine_MEGIR_SN7178_150.kh **Tech:** P. HRASAK

Aircraft: N737M **Begin Hobbs:** 6188.7 **End Hobbs:** 6192.5 **Total:** 3.8 **Pilot:** D. WANNER **Co-Pilot:** - **Reg ID:** 53

Dep Apt: ILEW **Dep Time (Lcl):** 07:58 (Z) 11:58Z **Arr Apt:** 3BI **Arr Time (Local):** 11:47 (Z) 15:47Z **Tot Time Aloft:** 3:49

CORS: Y/N **Sta 1:** MEGIR CORS **Sta 2:** - **Flyovers:** Y/N **IF Y, times: Sta1** (12:3) & STA1 (4) **Sta2** -

GPS Unit: Y/N **Sta 1:** - **Sta 2:** - **Flyovers:** Y/N **IF Y, times: Sta1** - **Sta2** -

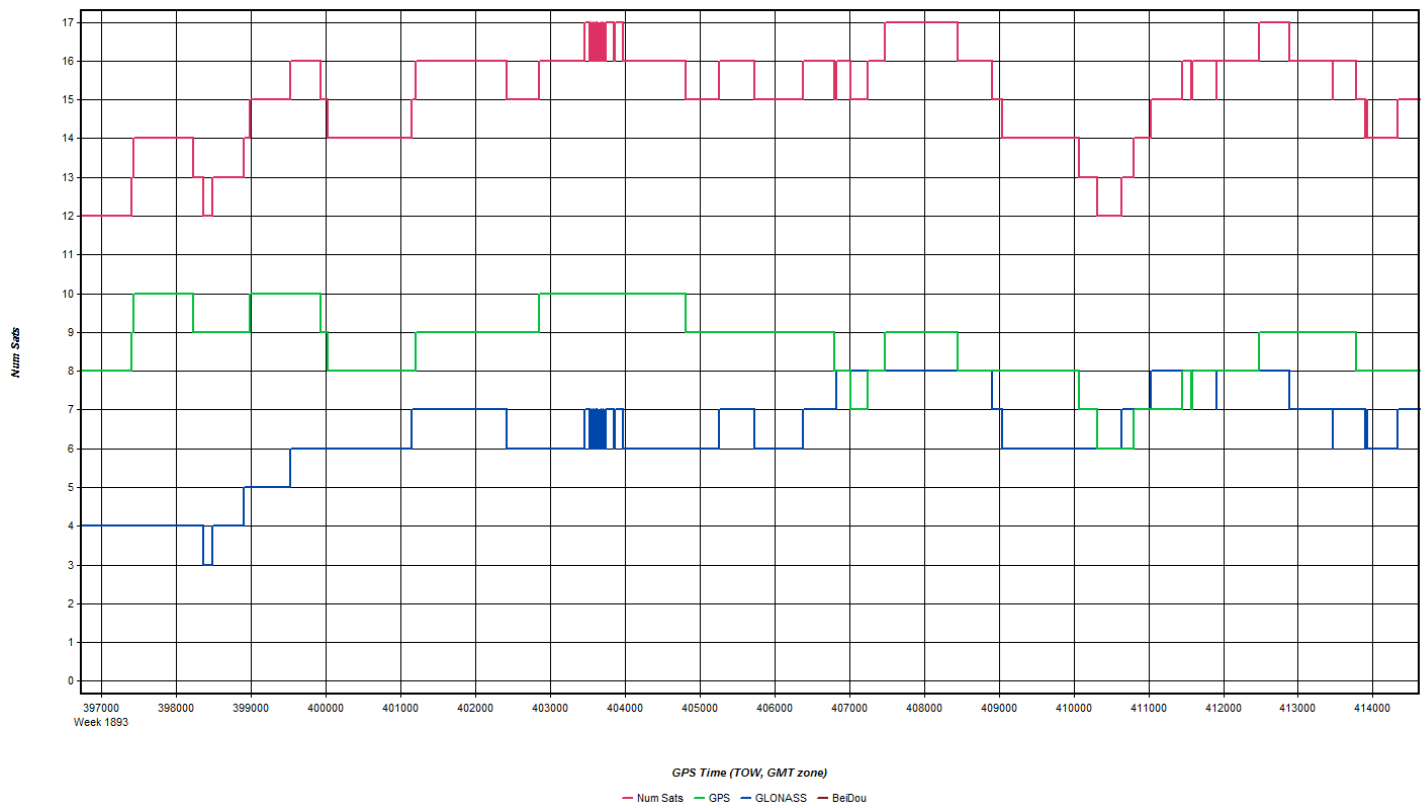
Go Temp beg: 07 °C **End:** 14 °C **OAT beg:** 03 °C **End:** 03 °C **Altimeter begin:** 30.11" **end:** 30.00"

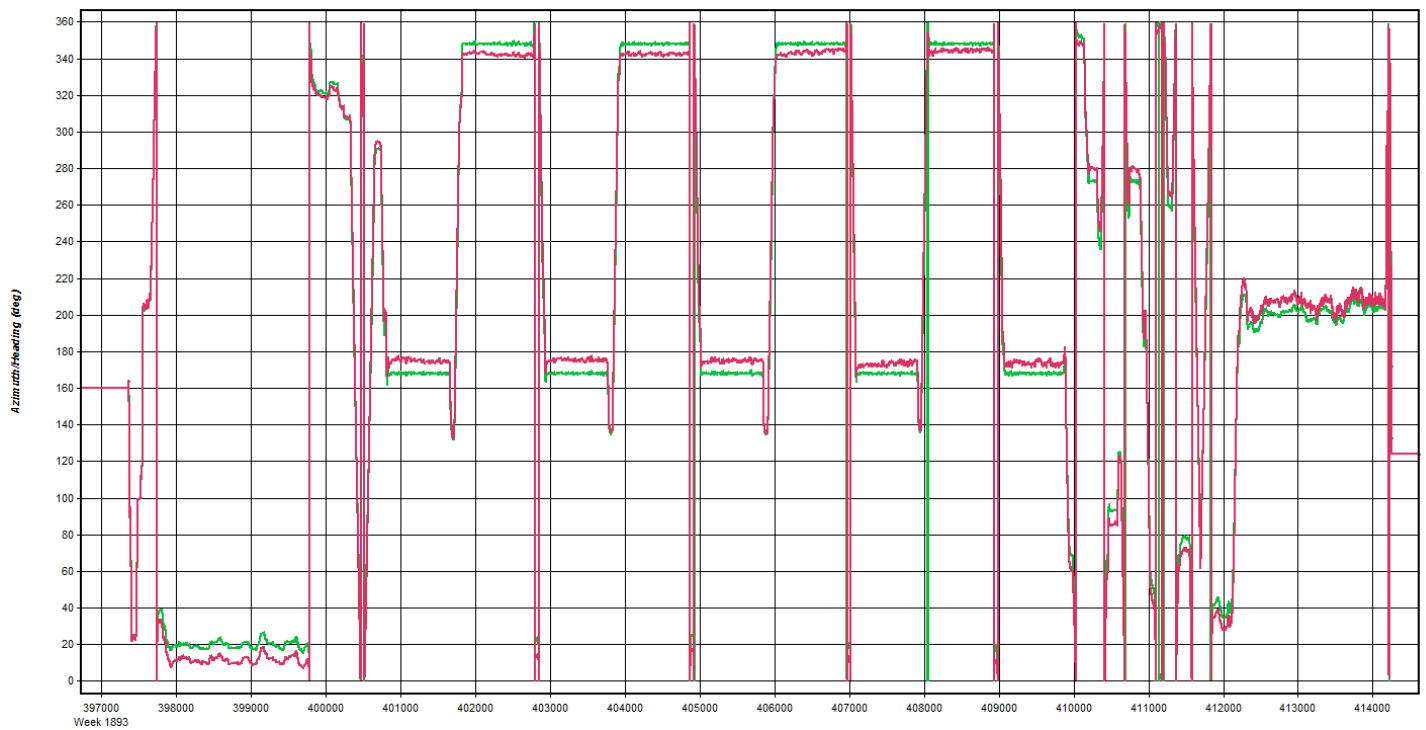
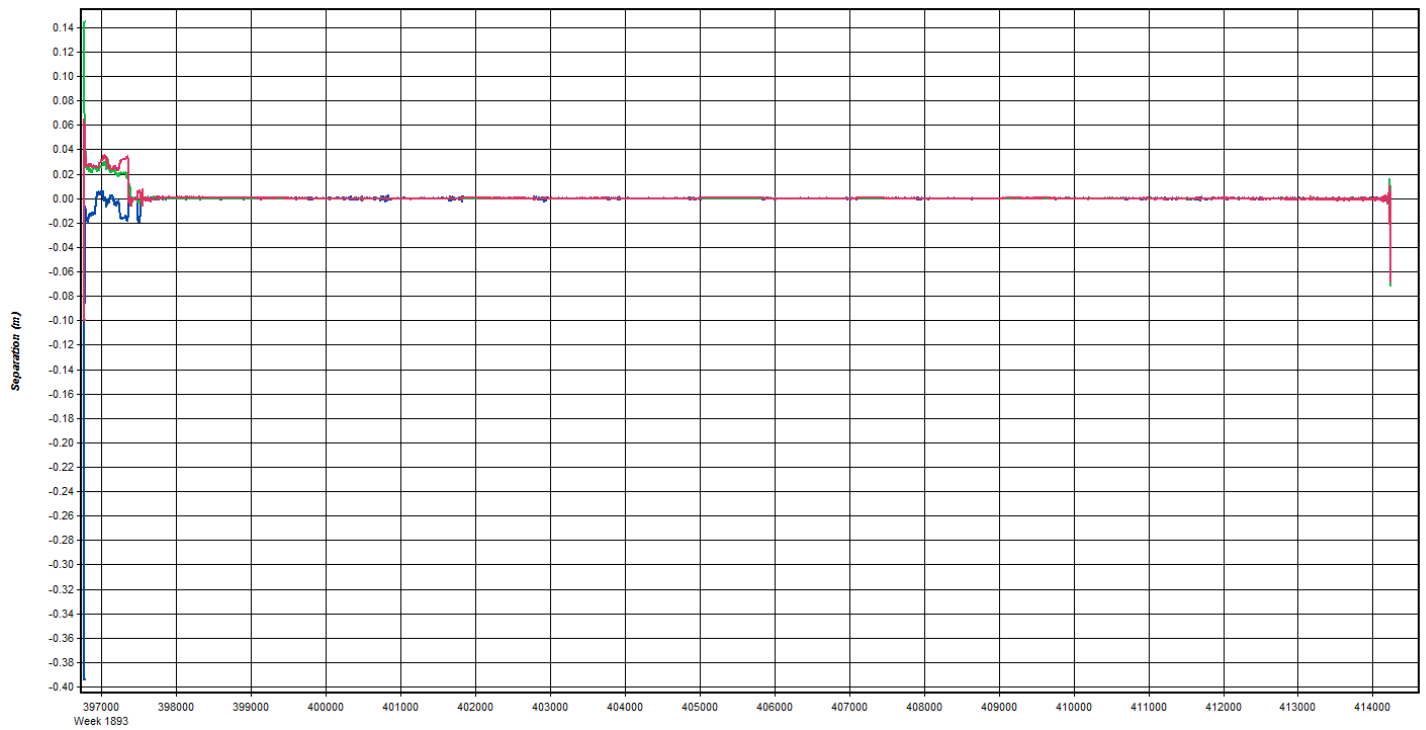
Line #	Hdg	Start (UTC)	End (UTC)	Alt (AGL)	Alt (MSL)	GPS Altitude	Crab	Turb (0-1)	Notes
5706	E	12:43	12:45	150 kh	1,177	7350'	10°	0	-h2, smooth, sfc above & below, minimal snow below
5705	W	12:48	12:50	130 kh	1,177	7350'	10°	0	-h2, smooth, sfc above & below, minimal snow below
5704	E	12:53	12:55	150 kh	1,177	7340'	9°	0	-h2, smooth, sfc above & below, minimal snow below
5703	W	12:59	13:01	145 kh	1,118	7160'	10°	0	-h2, smooth, sfc above & below, minimal snow below
5701	N	13:06	13:07	145 kh	1,318	7440'	4°	0	-h2, smooth, sfc above & below, minimal snow below
5712	N	13:09	13:11	155 kh	1,318	8100'	9°	0	-h2, smooth, sfc above & below, some snow below
5711	S	13:14	13:16	165 kh	1,318	8140'	12°	0	-h2, smooth, sfc above & below, some snow below
5710	N	13:20	13:23	145 kh	1,317	8230'	10°	0	-h2, smooth, sfc above & below, some snow below
5709	S	13:26	13:29	150 kh	1,316	8210'	13°	0	-h2, smooth, sfc above & below, some snow below
5708	N	13:33	13:36	150 kh	1,316	8100'	10°	0	-h2, smooth, sfc above & below, some snow below
5707	S	13:39	13:42	160 kh	1,216	7980'	13°	0	-h2, smooth, sfc above & below, some snow below
5702	E	13:48	13:49	120 kh	1,216	8000'	4°	0	-h2, smooth, sfc above & below, some snow below
57091	S	13:58	14:09	160 kh	1,214	7350'	9°	0	-h2, smooth, sfc above & below, some snow below in some areas
57090	N	14:13	14:25	145 kh	1,016	7120'	6°	0	-h2, smooth, sfc above & below, some snow below in some areas
57089	S	14:29	14:41	155 kh	1,116	7120'	9°	0	-h2, smooth, sfc above & below, some snow below in some areas
57088	N	14:45	14:59	140 kh	0,918	7100'	7°	0	-h2, smooth, sfc above & below, some snow below in some areas
57087	S	15:02	15:14	155 kh	1,116	7100'	9°	0	-h2, smooth, sfc above & below, some snow below in some areas
57086	N	15:17	15:30	145 kh	1,216	7150'	6°	0	-h2, smooth, sfc above & below, some snow below in some areas

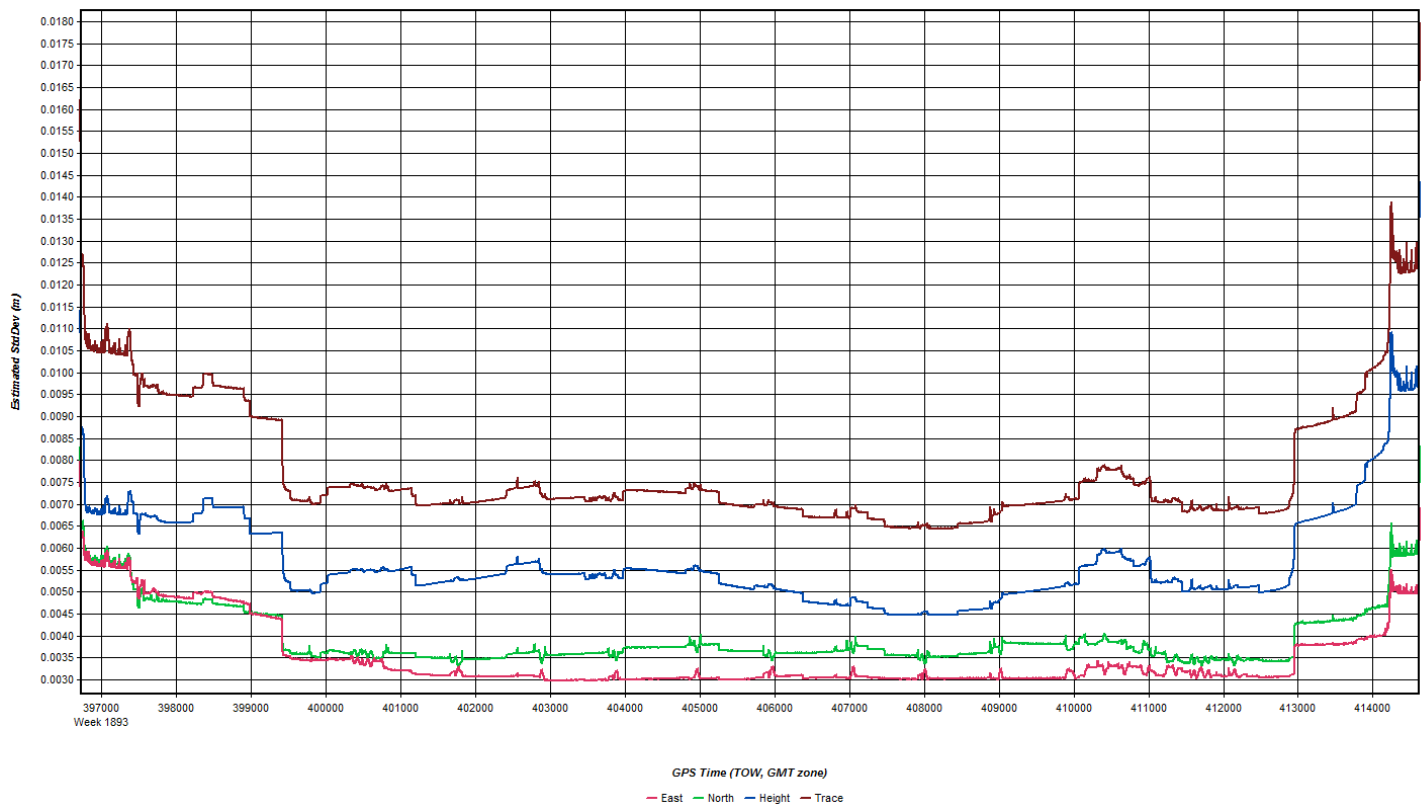
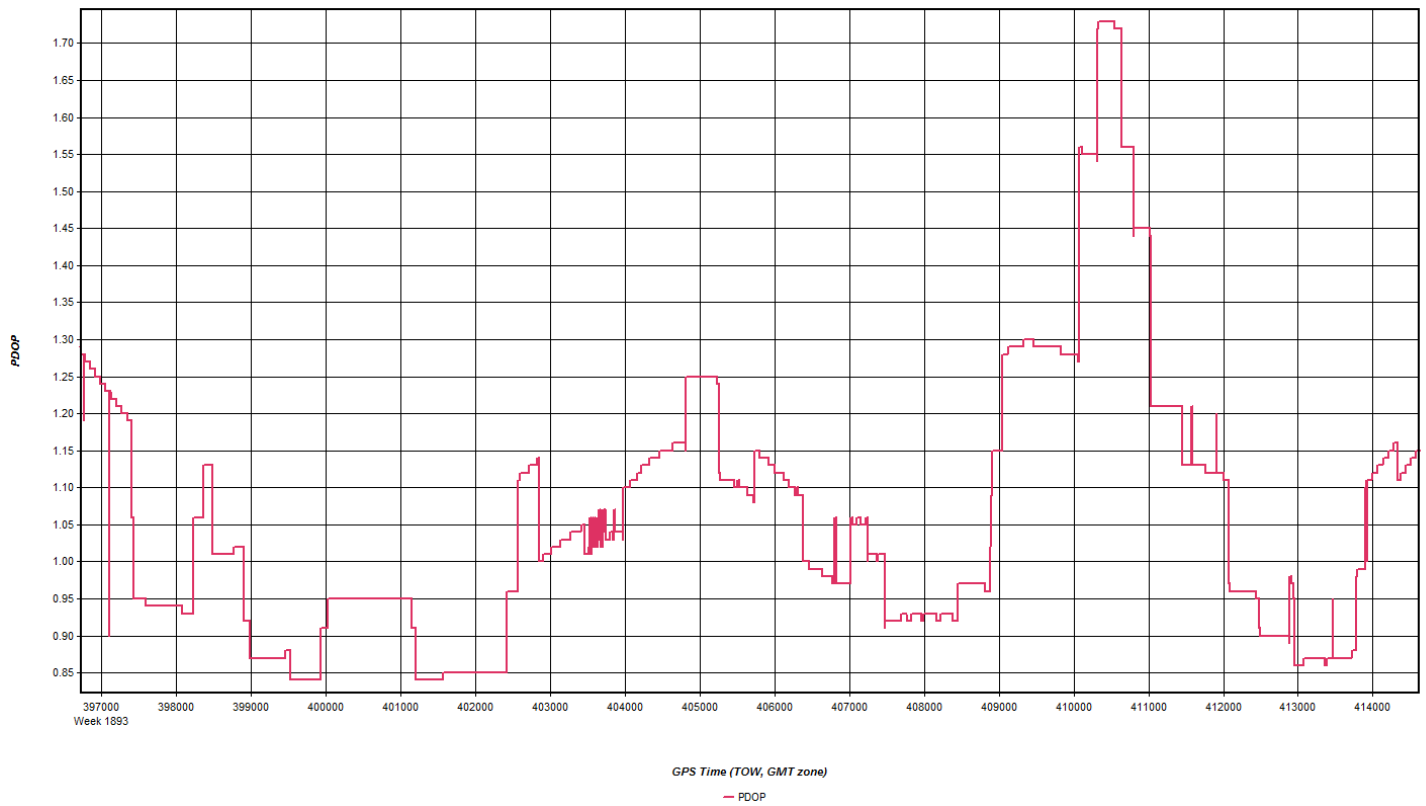
Total Proj Lines: 136 **Lines Flown:** 16 **Lines Remain:** ?-Two CES-45 **Online Time:** 2:47 **Mob Time:** 1:02 **Notes:** 23160421-114641 & -114952

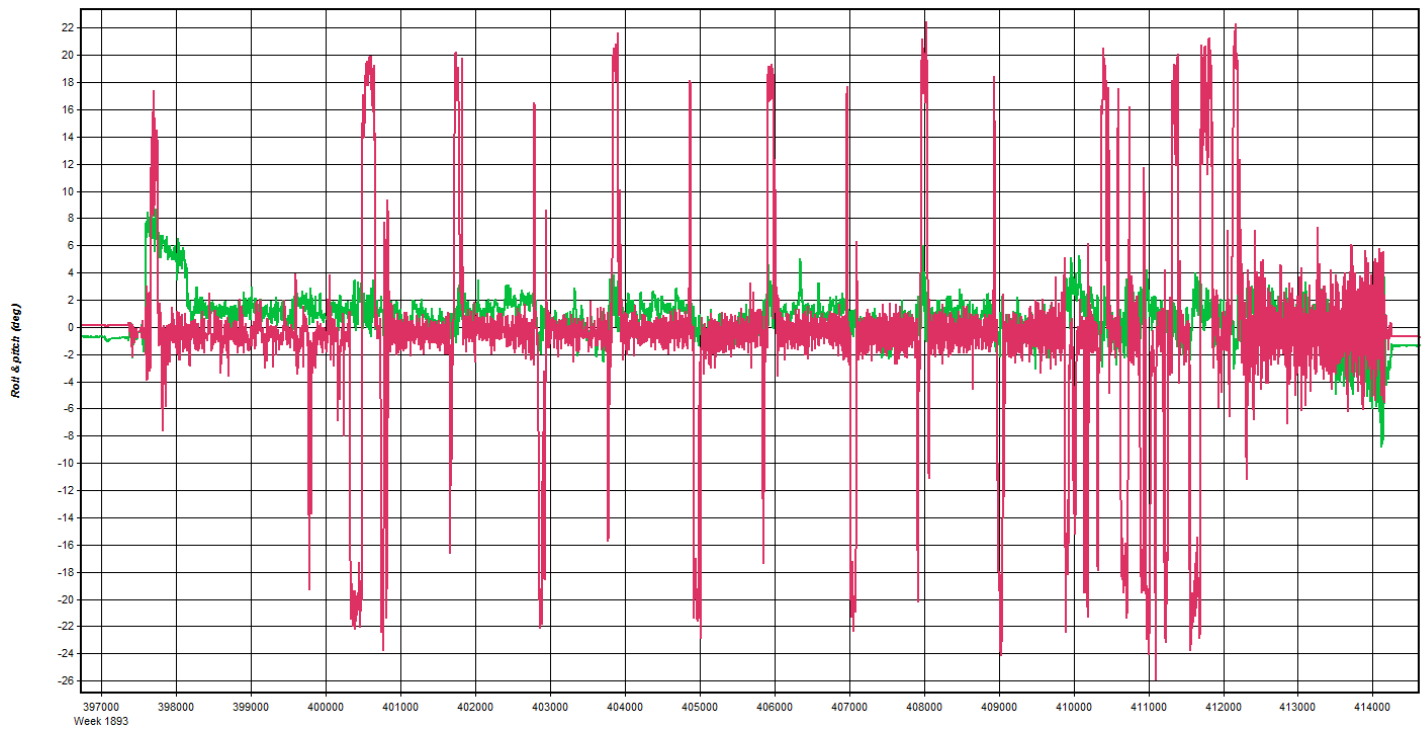
→ LANDED FOR FUEL ←

Apr 21, 2016-A (N812TB, SN7161)



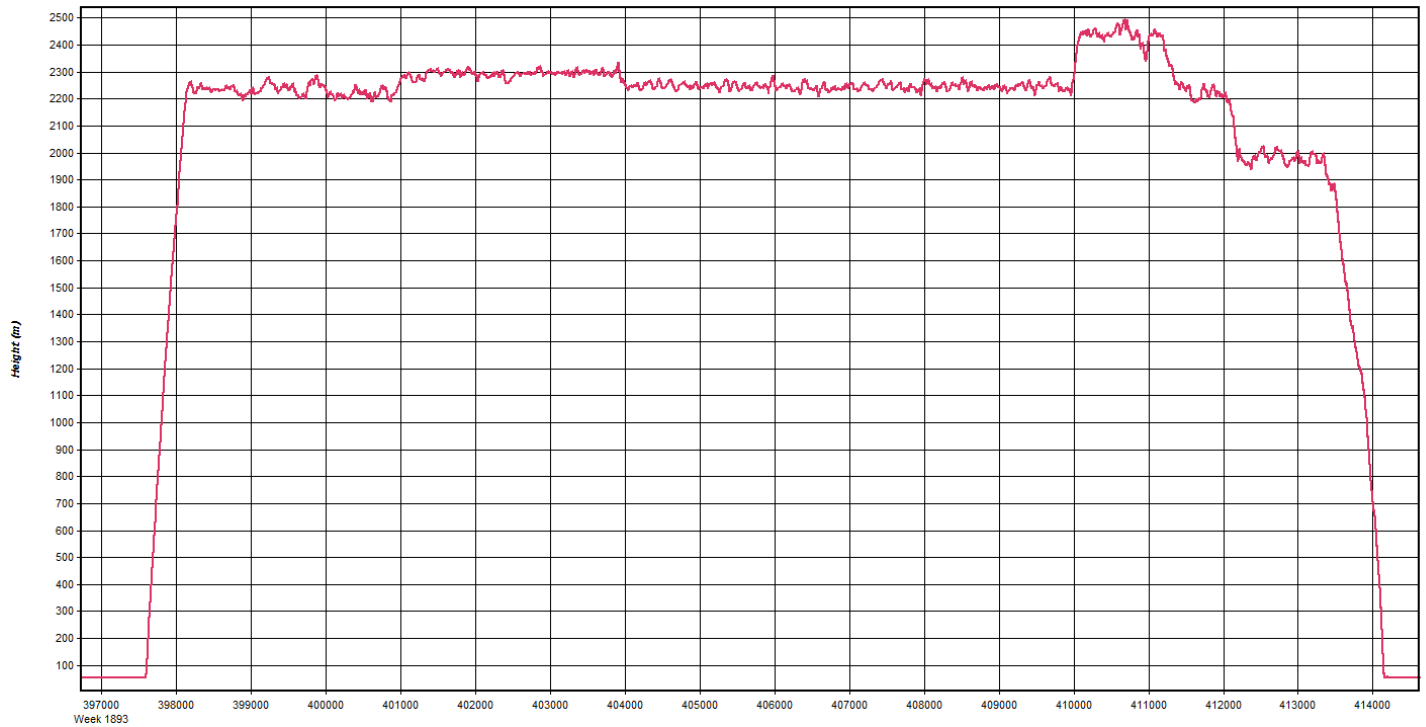






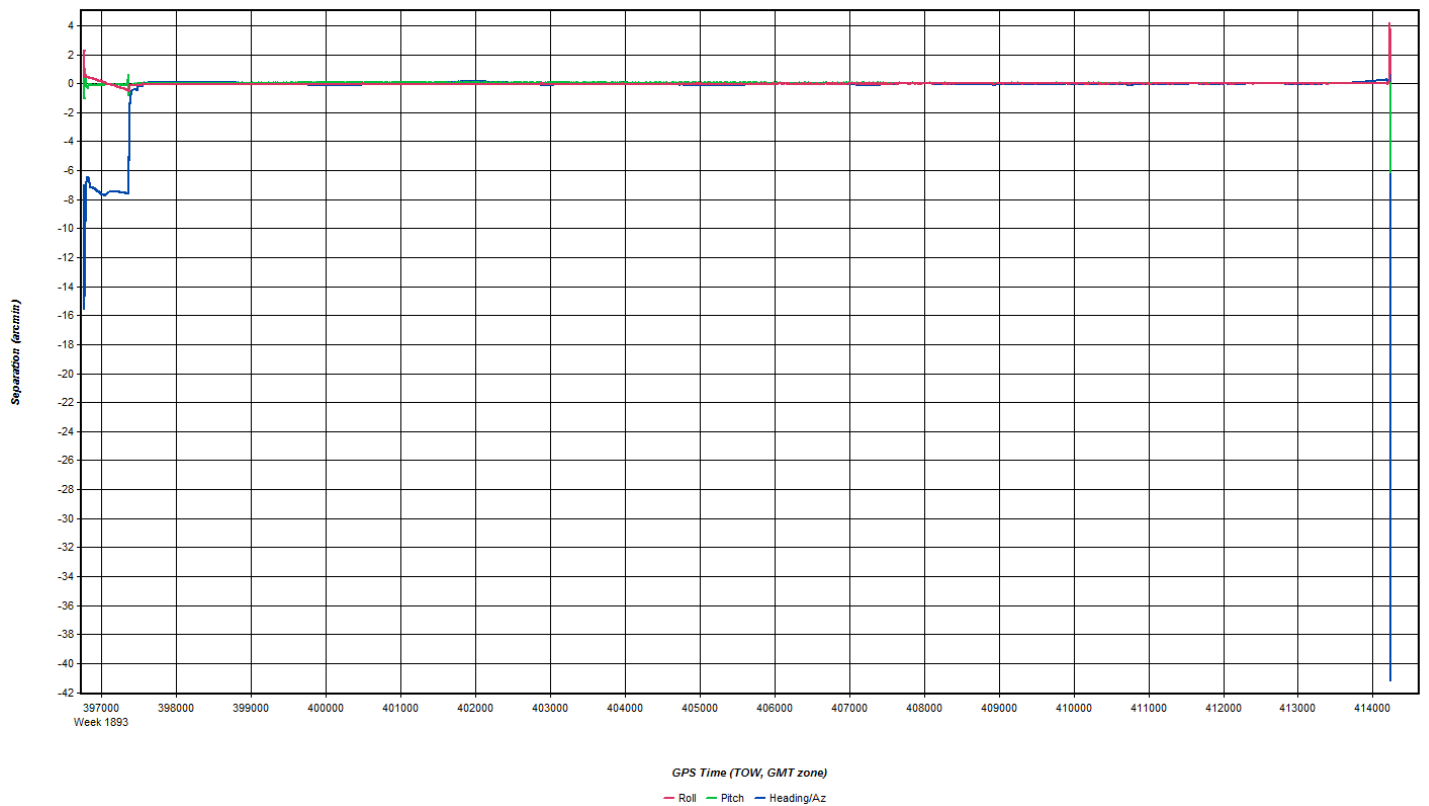
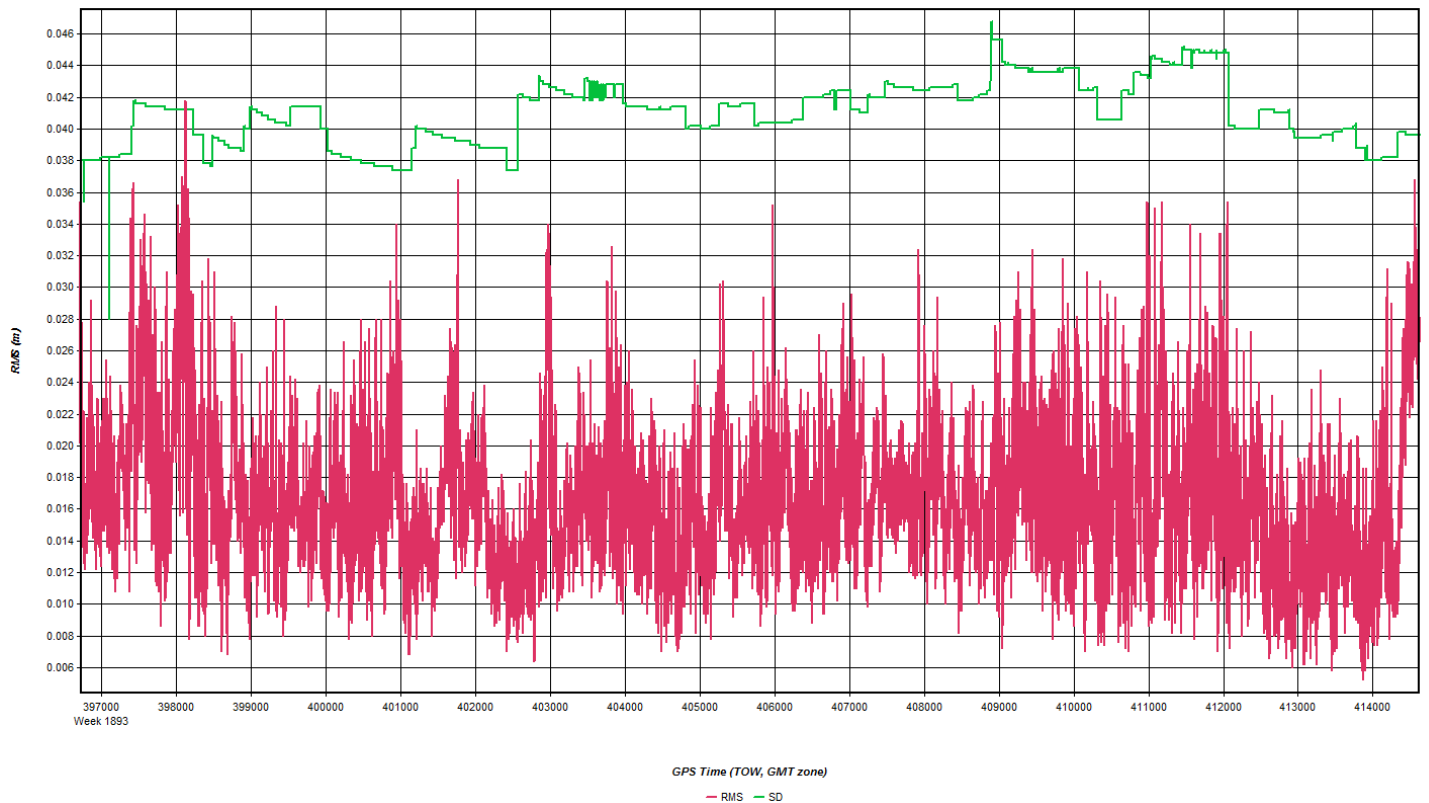
GPS Time (TOW, GMT zone)

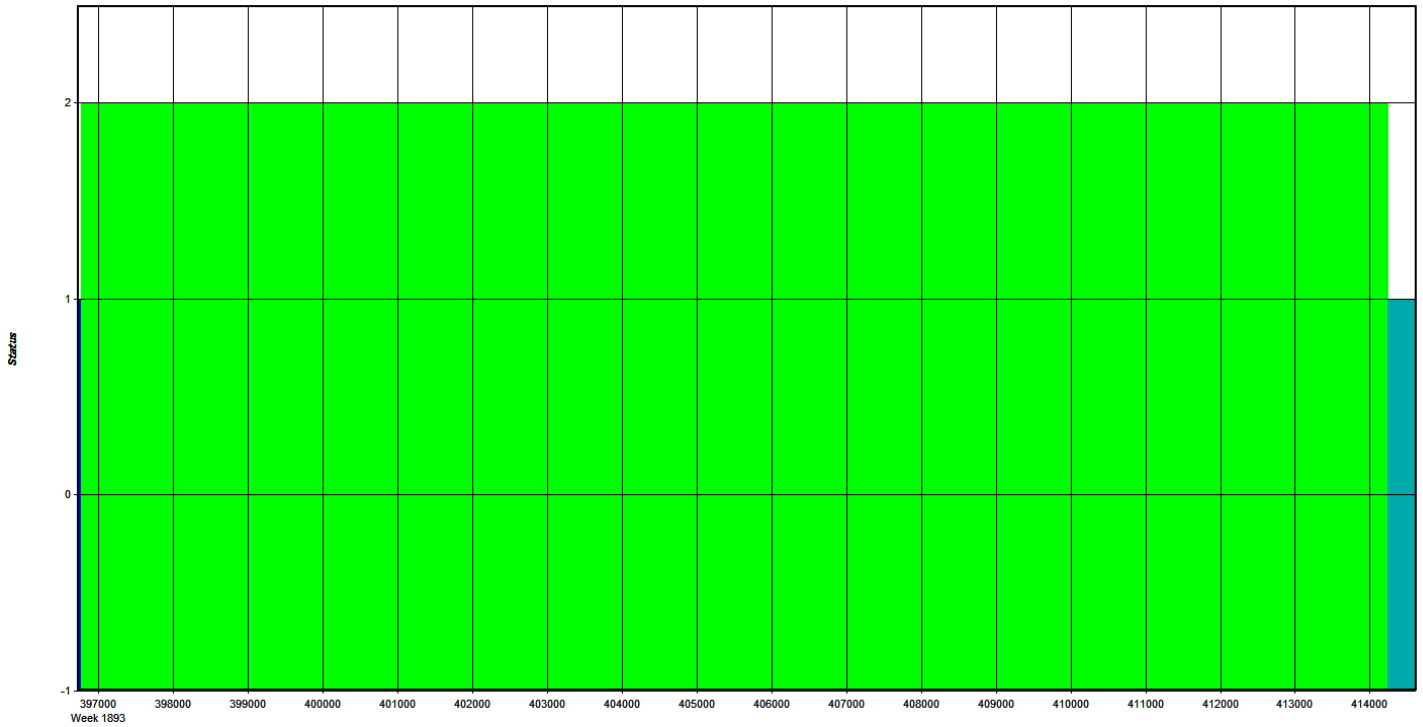
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\4283\27146_USGS_ME_MEGR_NE

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Scanned by CamScanner

Q Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log daily to flight_log_distribution_list@quantumspatial.com) Date: 21 APR 2016
Page 1 of 2

Project: 27146-USEGS Maine - MEGR Proj #: 27146 Flight Mgmt File: 217146-USEGS-NE-NB12TB-21APR2016
Altitude Alt: 6300 ft

Aircraft: NE12TB Begin Hobbs: 3939.7 Total: 4.6 Pilot: Rodtke Co-Pilot: Tech: Mingy
End Hobbs End Hobbs: 3944.3

Dep Apt: KLEW Dep Time (Local): 1425 Air Apt: XLEW Air Time (Local): 1502A: 902 Tot Time Aloft:
Altitude Alt: 6300 ft

CORS: N Sta 1: MEGR Sta 2: Flyovers: N If Y, times: Sta1) 1502 Sta2) 1828
Altitude Alt: 6300 ft

GPS Unit: Y/N Sta 1: Sta 2: Flyovers: Y/N If Y, times: Sta1) Sta2)

Col Temp beg:	°C	End:	°C	OAT beg:	°C	End:	°C	Altimeter begin:	end:
LIDAR	71.6	73.8	73.8	73.8	73.8	73.8	73.8	150k	150k
Type	ALS70	Serial #	5101F	Alt	7380ft	Avg Pt	150k	Max	150k
FOV	40°	Scan Freq	53Hz	Mp/A	Y/N	Pr/A	10676	Power	10676

Line #	Hdg	Start (UTC)	End (UTC)	Col Spd	FOF/size	GPS Altitude	Crs	Turn (D, -)	FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.
Block MEGR									5 minute static start @ 1413 End 1418
Tot Fim 320	1508	1509	1510	1511	1512	7365	N/A		Flapper CORS MEGR @ 1502
5038	170	1520	1533	156	17/16	7500	N/A		Figure 8 start @ 1512 stop @ 1516
5037	350	1538	1552	150	14/16	7520	N/A		some ice + snow on water bodies
5036	170	1556	1610	152	12/18	7540	N/A		some ice + snow on water bodies
5035	350	1613	1627	147	13/17	7390	N/A		some ice + snow on water bodies
5034	170	1631	1643	160	14/17	7410	N/A		some ice + snow on water bodies
5033	350	1648	1702	150	12/18	7345	N/A		some ice + snow on water bodies - snow between trees - north
5032	170	1705	1718	158	11/19	7380	N/A		some ice + snow on water bodies - snow between trees - north
5031	350	1721	1735	150	11/17	7360	N/A		some ice + snow on water bodies - snow between trees - north
5030	170	1738	1751	159	11/17	7350	N/A		some ice + snow on water bodies - snow between trees - north
5132	270	1757	1758	148	10/18	8045	N/A		some ice + snow on water bodies
5131	90	1801	1802	156	10/18	8030	N/A		Ice + snow on water bodies
5130	270	1806	1807	152	10/18	7975	N/A		Ice + snow on water bodies
522	0	1811	1812	146	11/17	8018	N/A		Cross Tie
521	77	1817	1818	176	13/16	7530	N/A		Cross Tie

Total Proj Lines: 136 Lines Flown: 12 Lines Remain: 7 Online Time: 3.2 Min Time: 1.4 Notes:
 Block MEGR

Scanned by CamScanner

Quantum Spatial
Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
 Date: 21 APR 2016
 Project: 21146-0365 Maine-Block MEGR Proj #: 27146
 Flight Mgmt File: 21146-USGS-ME-NB21B-21 APR 2016
 (email log daily to flight_log_distribution_list@quantumspatial.com) 20160421-140815
 Page 2 of 2

Aircraft: NB21B Begin Hobbs: 3734.6 End Hobbs: 3939.2 Total: 4.6 Pilot: RedHke Co-Pilot: Tech: M...
 Dep Apt: KLEV Dep Time (UTC): 0225 (Z) 1425 Air Apt: KLEV Air Time (Local): 1502 (Z) 1902 (Lot Time Aloft: 4.5)
 CORS: ON Sta 1: MEGR Sta 2: Flyovers: ON IF Y, times: Sta 1) 1502 Sta 2) 1828
 GPS Unit: Y/N Sta 1: Sta 2: Flyovers: Y/N IF Y, times: Sta 1) Sta 2)

GD Temp beg:	°C	End:	°C	OAT beg:	°C	End:	°C	Altimeter begin:	end:
Type: LIDAR	Alt: 1570	Serial #: 7161	Alt: 7380 ft	Alt: 5101 ft	Alt: 7380 ft	Max: 2280 ft	Avg Ft: 150 k	Max: 100%	End: 1186B
FOV: 40°	Scan Freq: 53 Hz	MPJA: Y/N	Pulse In Air	Pulse In Air	Power	Power	PPPM	Power	End: 1616B
									End: 436B

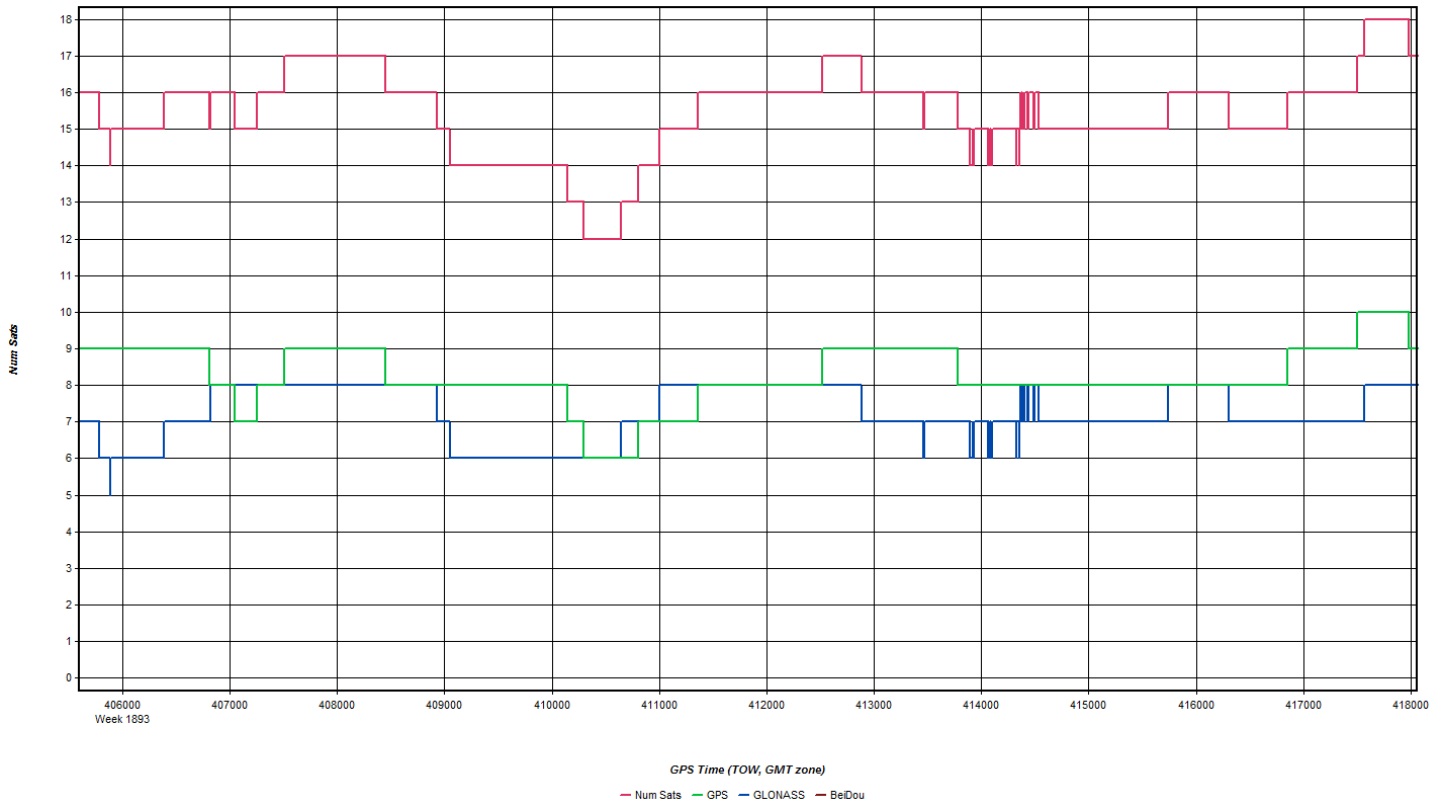
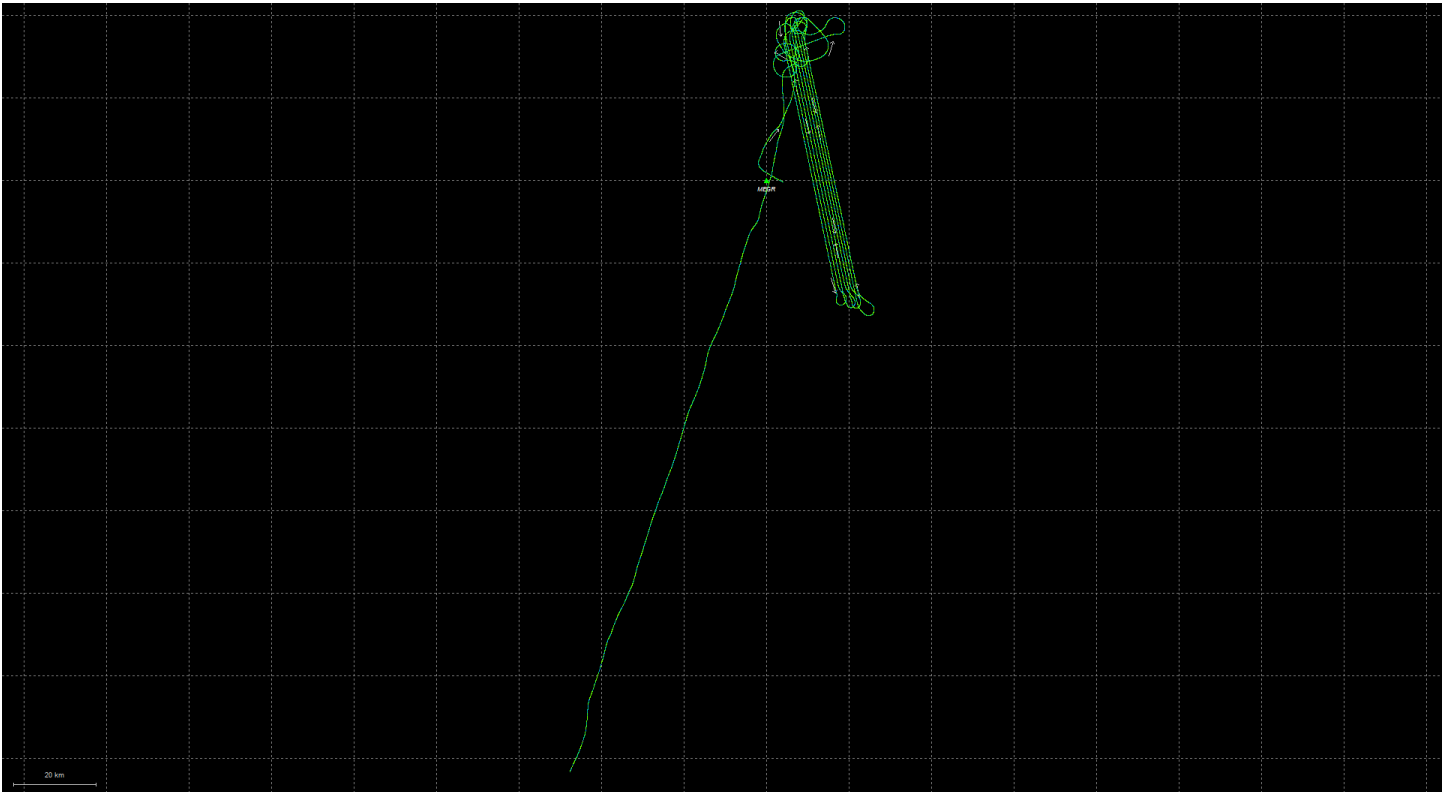
Line # | Hdg | Start (UTC) | End (UTC) | Gd Spd | GPSP/Sec | GPS Altitude | Crab | Turb (ft) | Notes

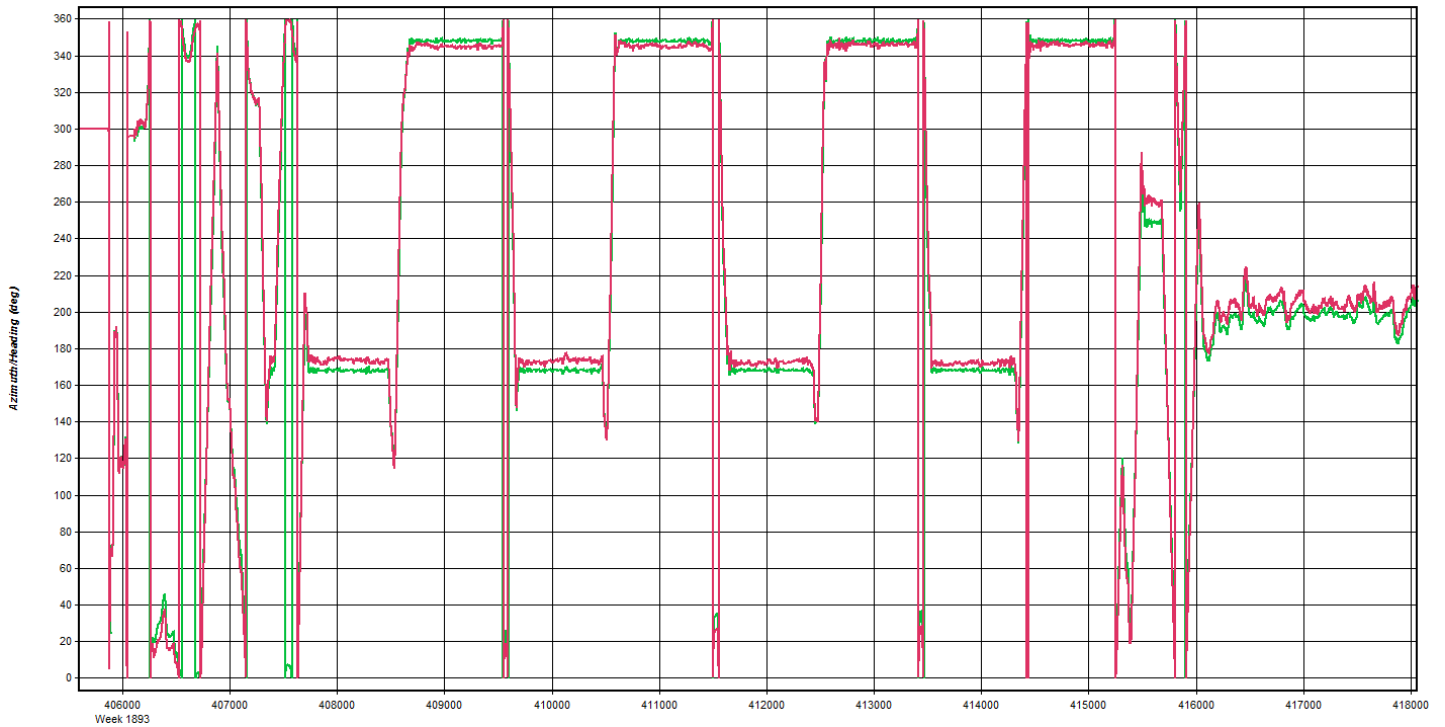
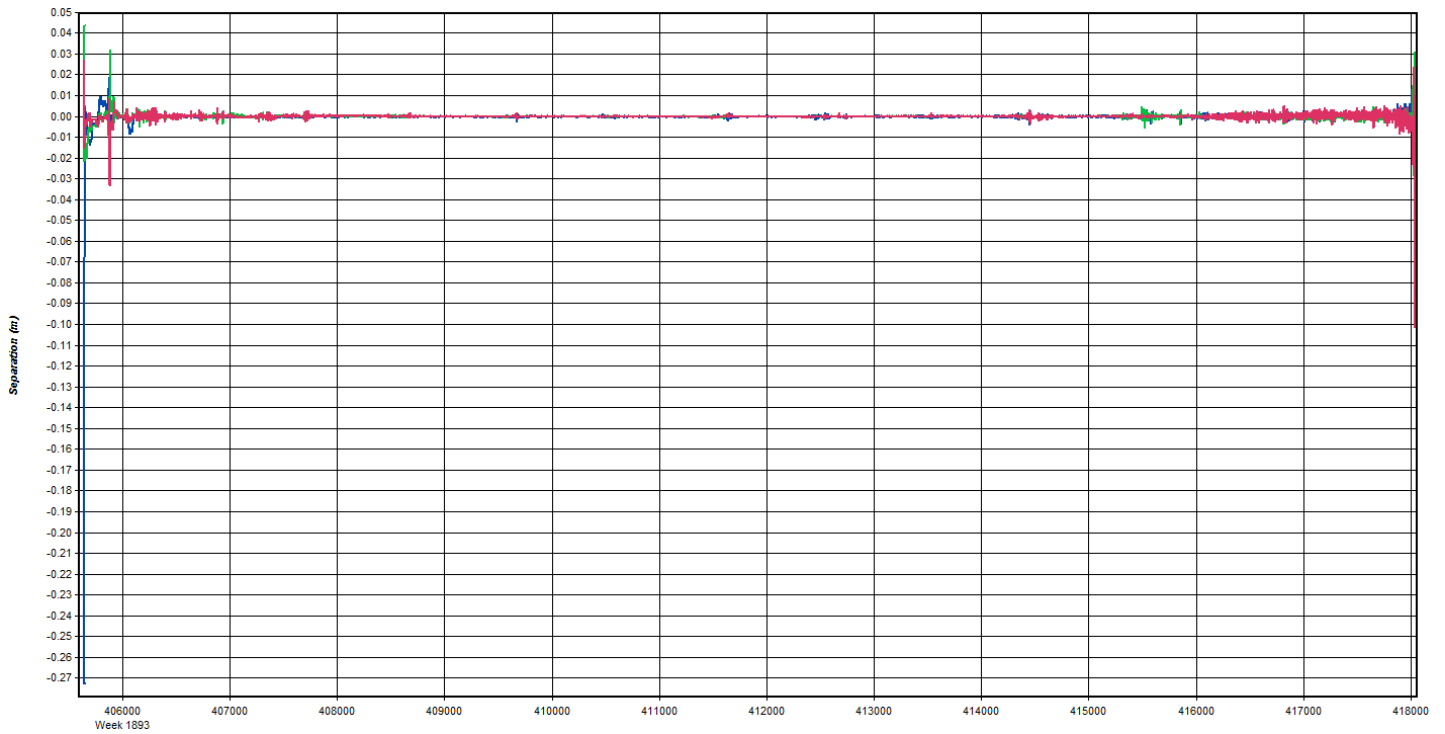
Block MEGR

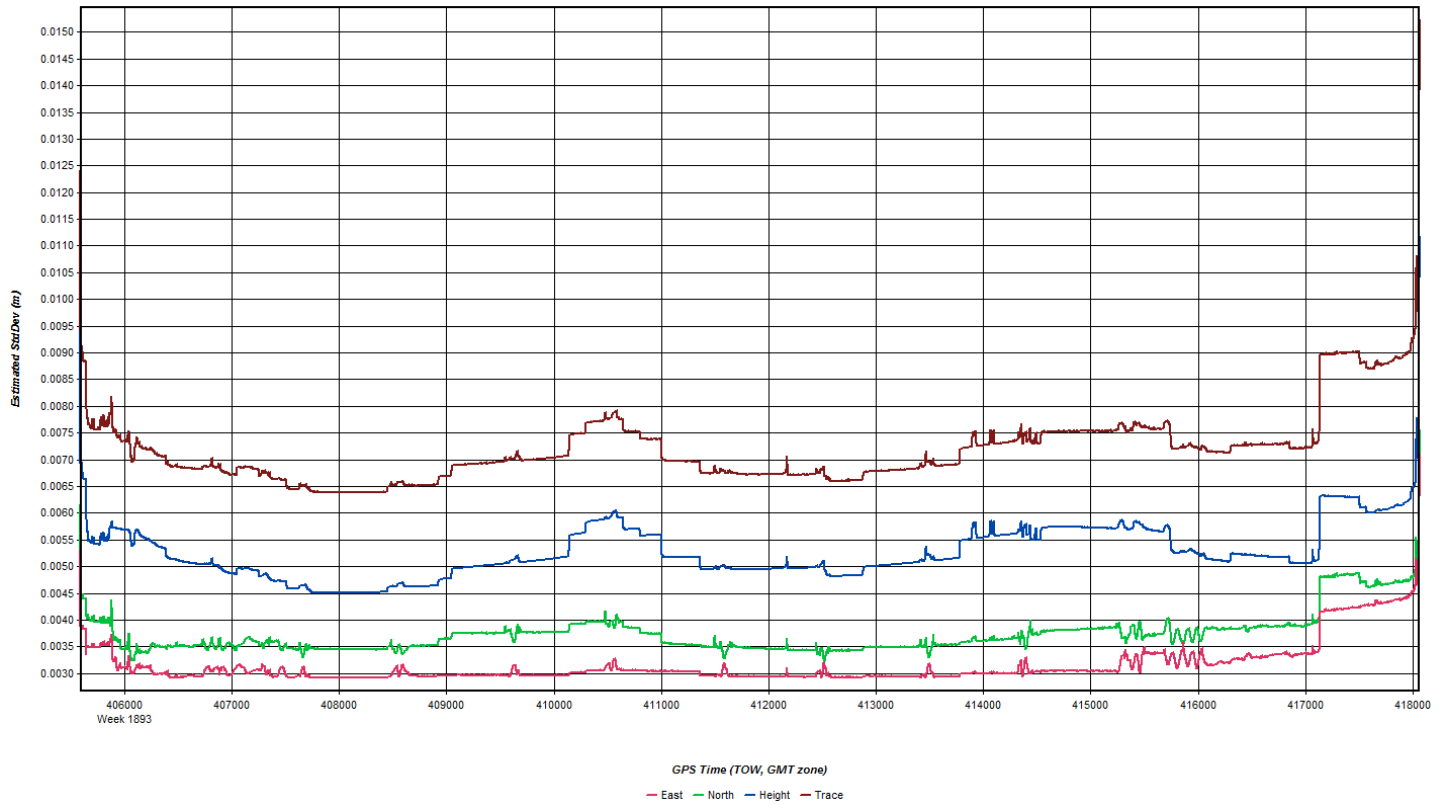
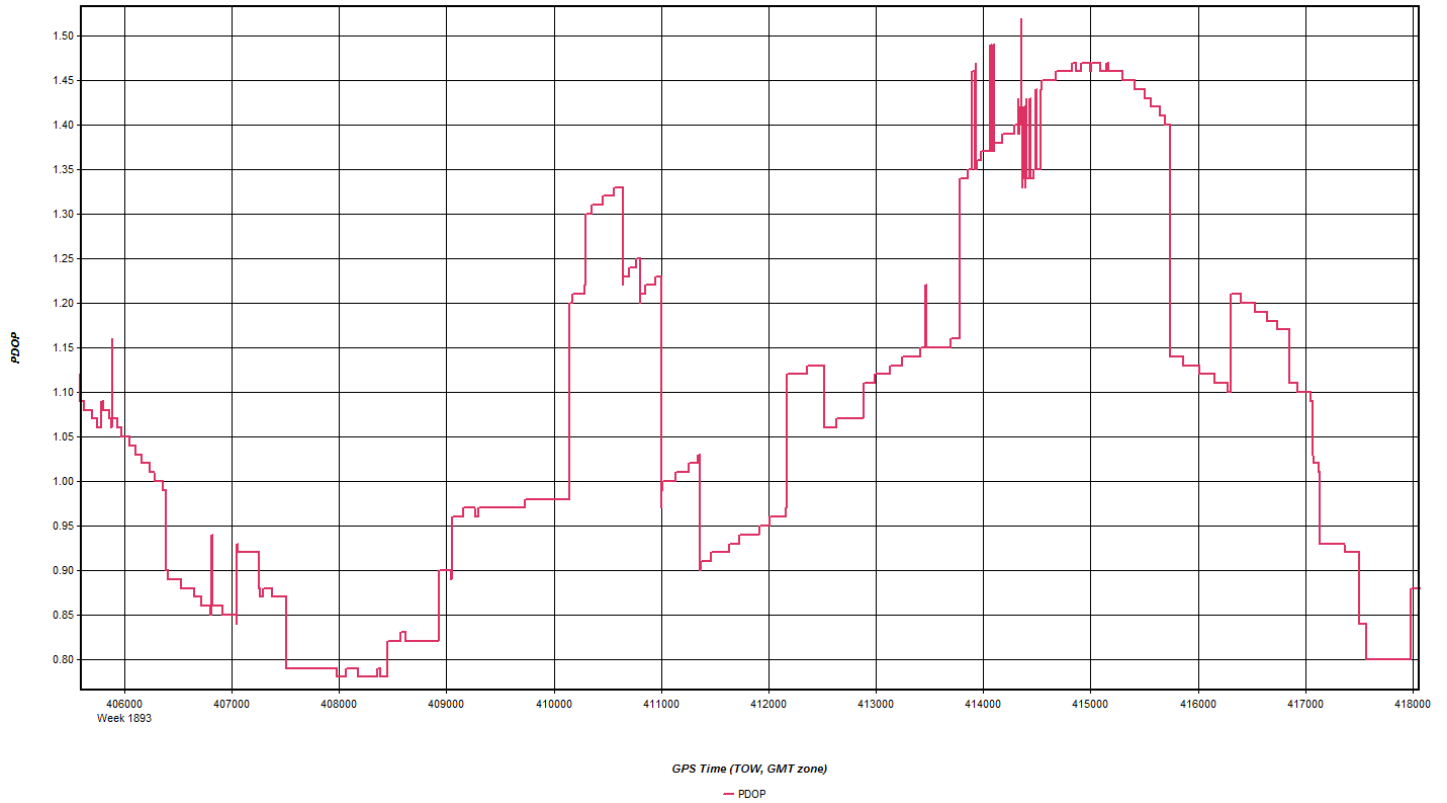
Figure 8 start @ 1818 stop @ 1823
 Flyover CORS @ 1828
 5 minute static start @ 1904 end @ 1909

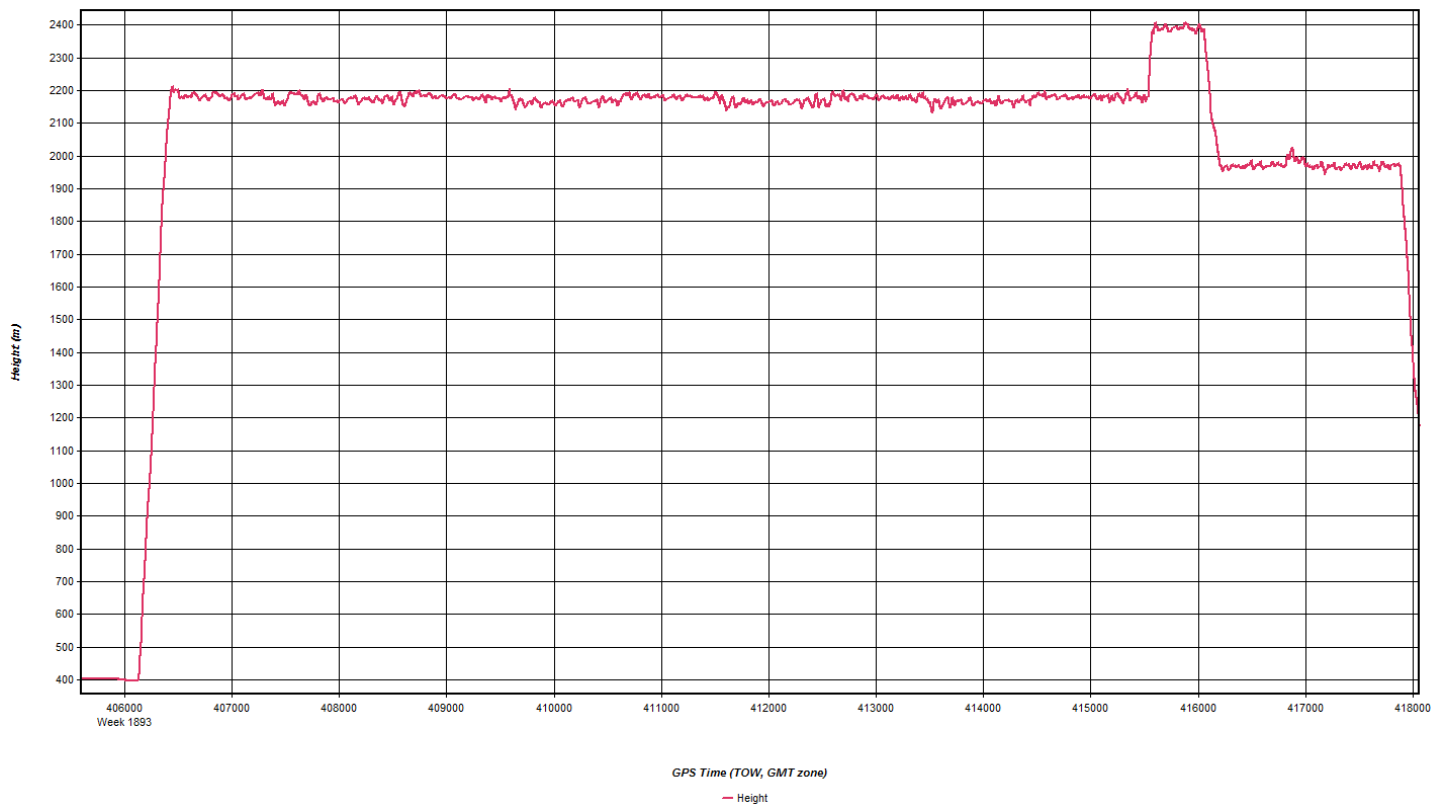
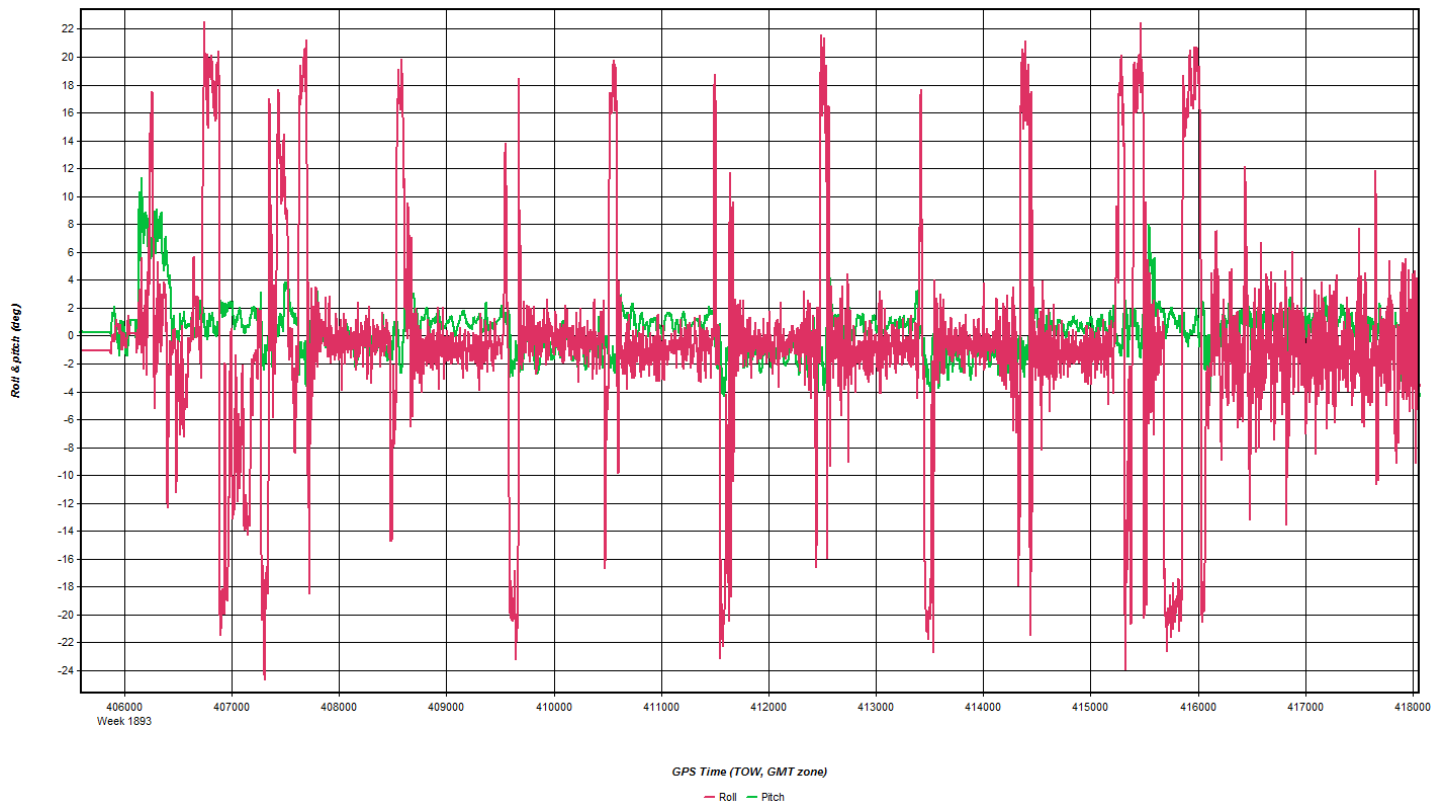
Total Proj Lines: 136 Lines Flown: 12 Lines Remains: 71 Online Time: 3:22 Job Time: 1:41 Notes: Block MEGR

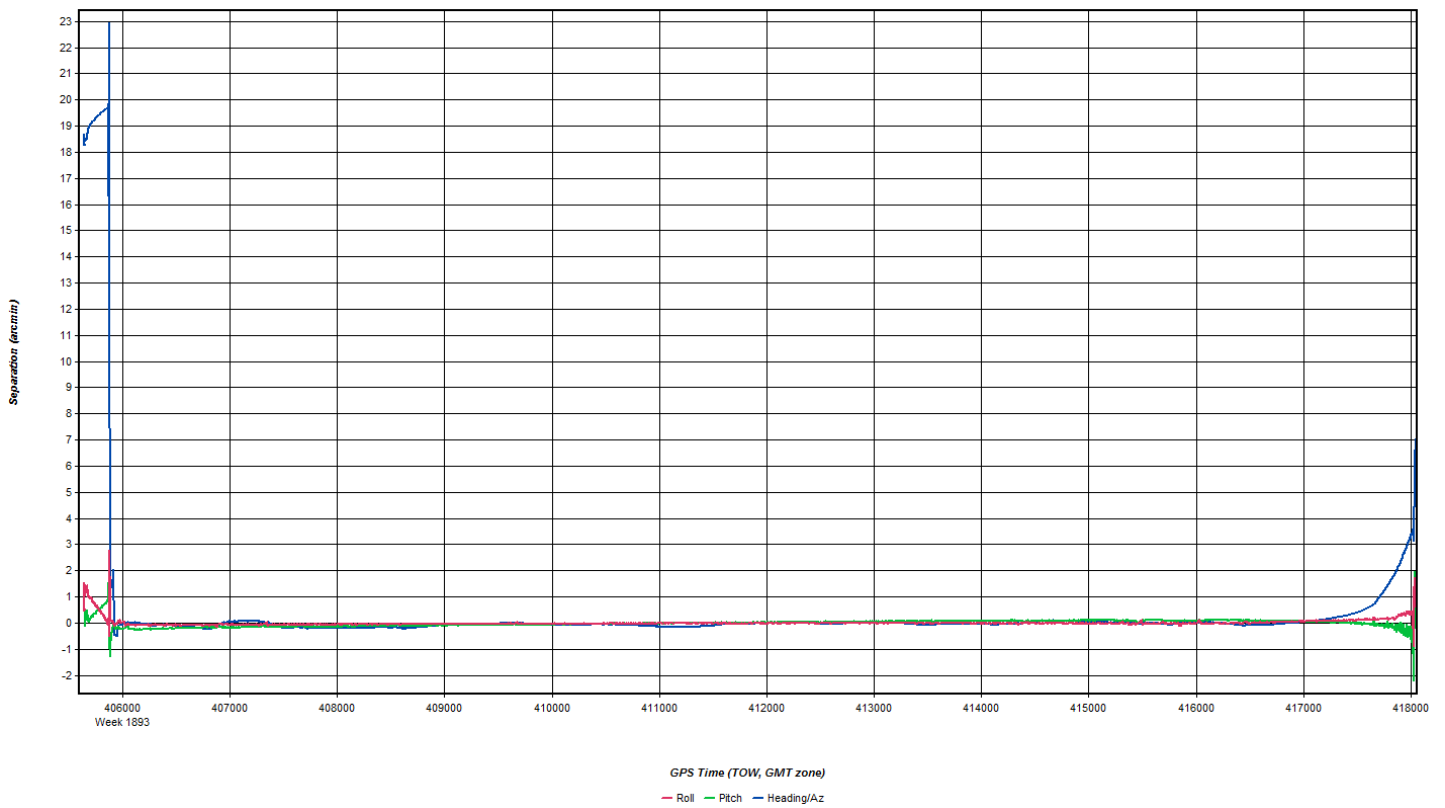
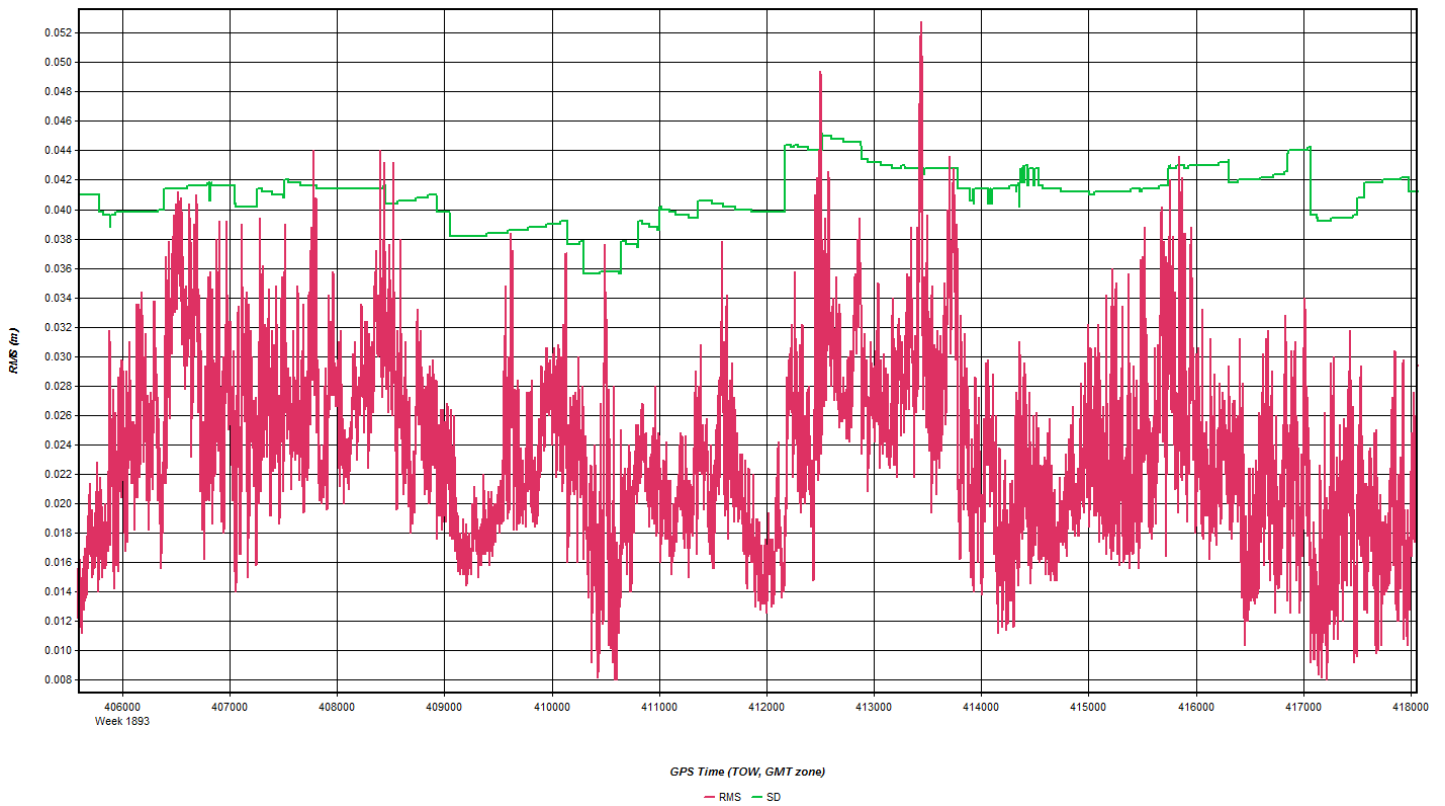
Apr 21, 2016-B (N73TM, SN7178)

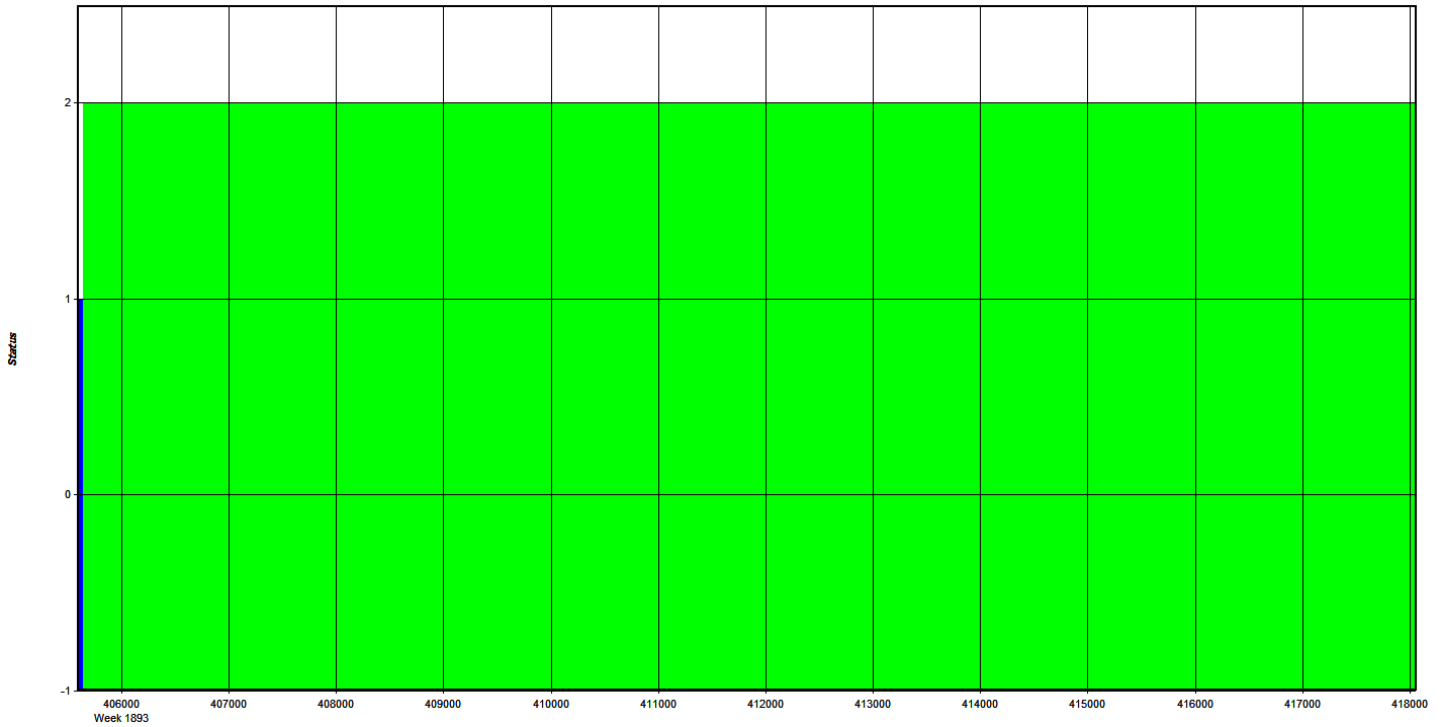












GPS Time (TOW, GMT zone)
 - Float - Forward Fixed - Reverse Fixed - Fixed (2 or more)

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\0511\20160421b-7178\megr1120.gi

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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: USGS WESTERN MARINE
Date: April 21st, 2016
 (email log daily to flight_log_distribution_list@quantumspatial.com) 20160421-163705
 Page 1 of 1

Flight Mgmt File: USGS_Maine_MEGR_SN717B-150.kt.
Ute: A C D E

Aircraft: N73TM
Pilot: D. WAGNER
Co-Pilot: —
Tech: P. HRABAK

Dep Apt: 3B1
Arr Time (Local): 16:11 (Z: 200:11Z) **Tot Time Aloft:** 3:23
Arr Apt: FLEW
Arr Time (Local): 19:38 (Z: 200:11Z) **Tot Time Aloft:** 3:23

CORS: Y/N Sta 1: "MEGR" CORS Sta 2: —
Flyovers: Y/N IF Y, times: Sta1) —
 Y/N IF Y, times: Sta2) —

GPS Unit: Y(N) Sta 1: — Sta 2: —
Flyovers: Y/N IF Y, times: Sta1) —
 Y/N IF Y, times: Sta2) —

Gd Temp beg: +15 °C **End:** +20 °C **OAT beg:** 103 °C **End:** 103 °C **Altimeter begin:** 30,000' **end:** 29,890'

Type	Serial #	Alt	AGL	Alt	AMSL	Pulses In Air	Max		Avg Pt Spacing	Storage Name
							Alt	Power		
LIDAR	ALS70	7178	~6000'	VALUES	VALUES	VALUES	150 kts	?	?	ALS70
FOV	40°	Scan Freq	53.4 Hz	MPIA	Y/N	2	100%	2.2	PPSM	SN717B
										SSD3

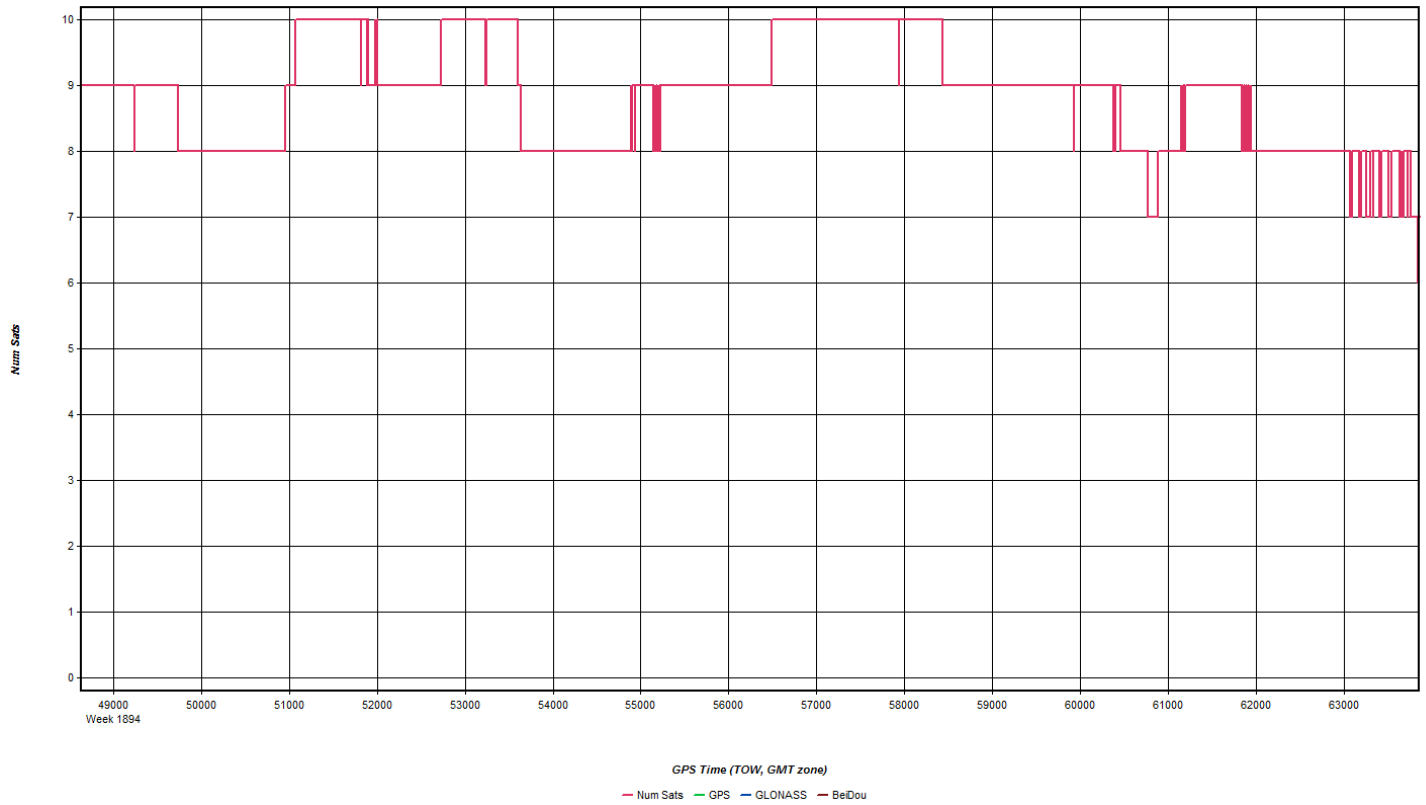
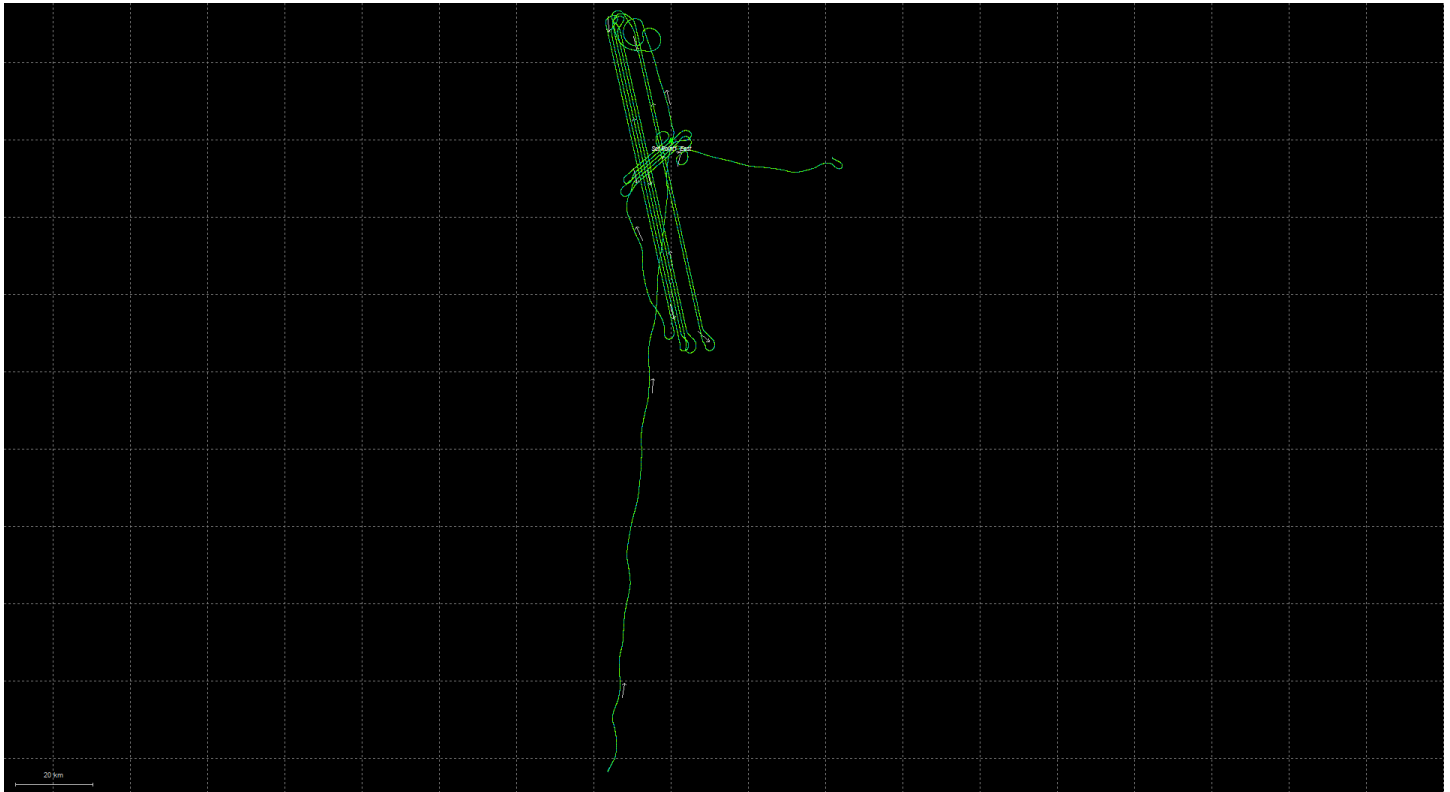
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	Alt	GPS Altitude	Crab	Turb (0-1)	Notes
5035	S	17:15	17:27	160 kts	1.1/17	7120'	5°	0	-h-E, smooth, high thin seat, she below, min snow below in some areas
5034	N	17:32	17:45	150 kts	1.1/17	7150'	3°	0	-h-E, smooth, high thin seat, she below, min snow below in some areas
5033	S	17:48	18:00	155 kts	1.2/15	7100'	5°	0	-h-E, smooth, high thin seat, she below, min snow below in some areas
5032	N	18:04	18:17	145 kts	1.0/18	7160'	4°	0	-h-E, smooth, high thin seat, she below, min snow below in some areas
5031	S	18:21	18:33	155 kts	1.1/17	7160'	3°	0	-h-E, occ - turb, high thin seat, she below, min snow below in some areas
5030	N	18:36	18:49	150 kts	1.2/17	7160'	2°	0	-h-E, occ - turb, high thin seat, she below, min snow below in some areas
5079	S	18:52	19:04	155 kts	1.2/17	7140'	5°	0	-h-E, occ - turb, high thin seat, she below, min snow below in some areas
5078	N	19:07	19:20	155 kts	1.2/17	7160'	3°	0	-h-E, occ - turb, high thin seat, she below, min snow below in some areas
5016	W	19:26	19:27	140 kts	1.3/16	7800'	12°	0	-h-E, smooth, high thin seat, she below, min snow below (FIG 8E19:29) [CROSS LINE]

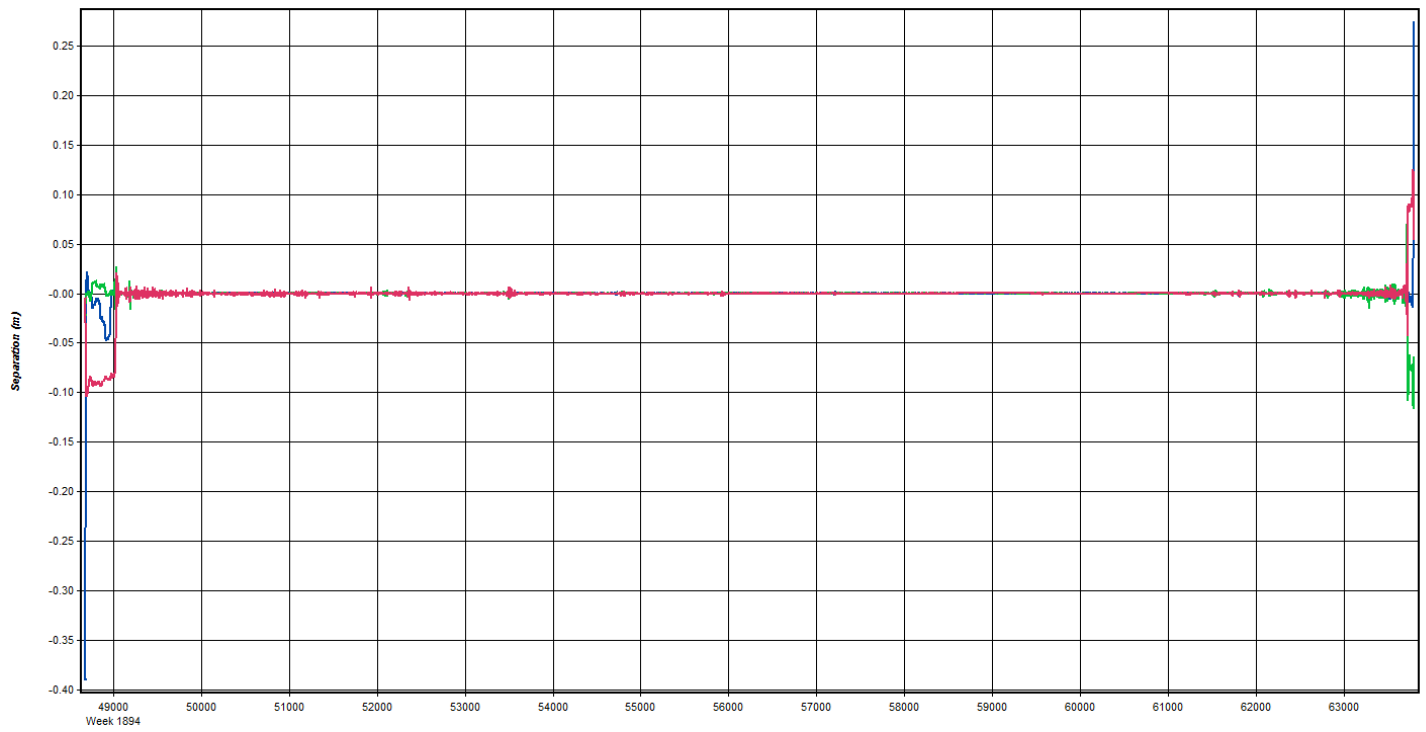
FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc (FIG 8E17:20)

(TWO ATTEMPTS TO INTERCEPT ST05, FIRST WAS UNSUCCESSFUL, LATER DID NOT BEGIN EMITTING / COLLECTING, MANUALLY TRIGGERED FOR SHORT "UL01" BUT WE ADAPTED TO RE-ENGAGE, SECOND TIME ALSO DID NOT EMIT / COLLECT, MANUALLY TRIGGERED AND FLEW FULL LINE, LEFT AS "UL02" BUT IS ST05 (SHUT DOWN SENSOR / TRIGGERING LOGGING IS TAKING AFTER CORRS PROVERE) → ADDED DUE TO COMPLETION OF LINES OK'D AS GO FOR SNOW ←

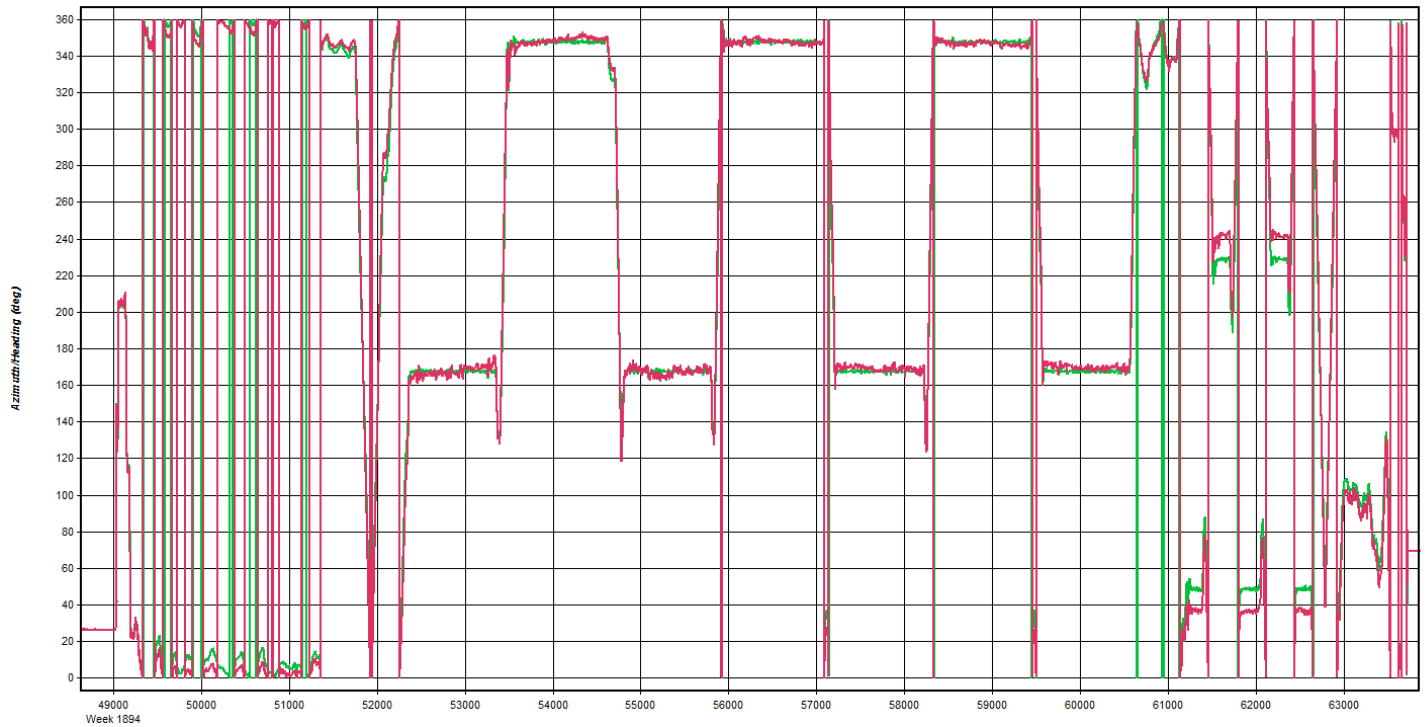
Total Proj Lines: 136 **Lines Flown:** 8 **Lines Remain:** ? **Online Time:** 2:12 **Mob Time:** 1:11 **Notes:** 20160421-163705 #_163923

Apr 24, 2016-A (N73TM, SN7178)

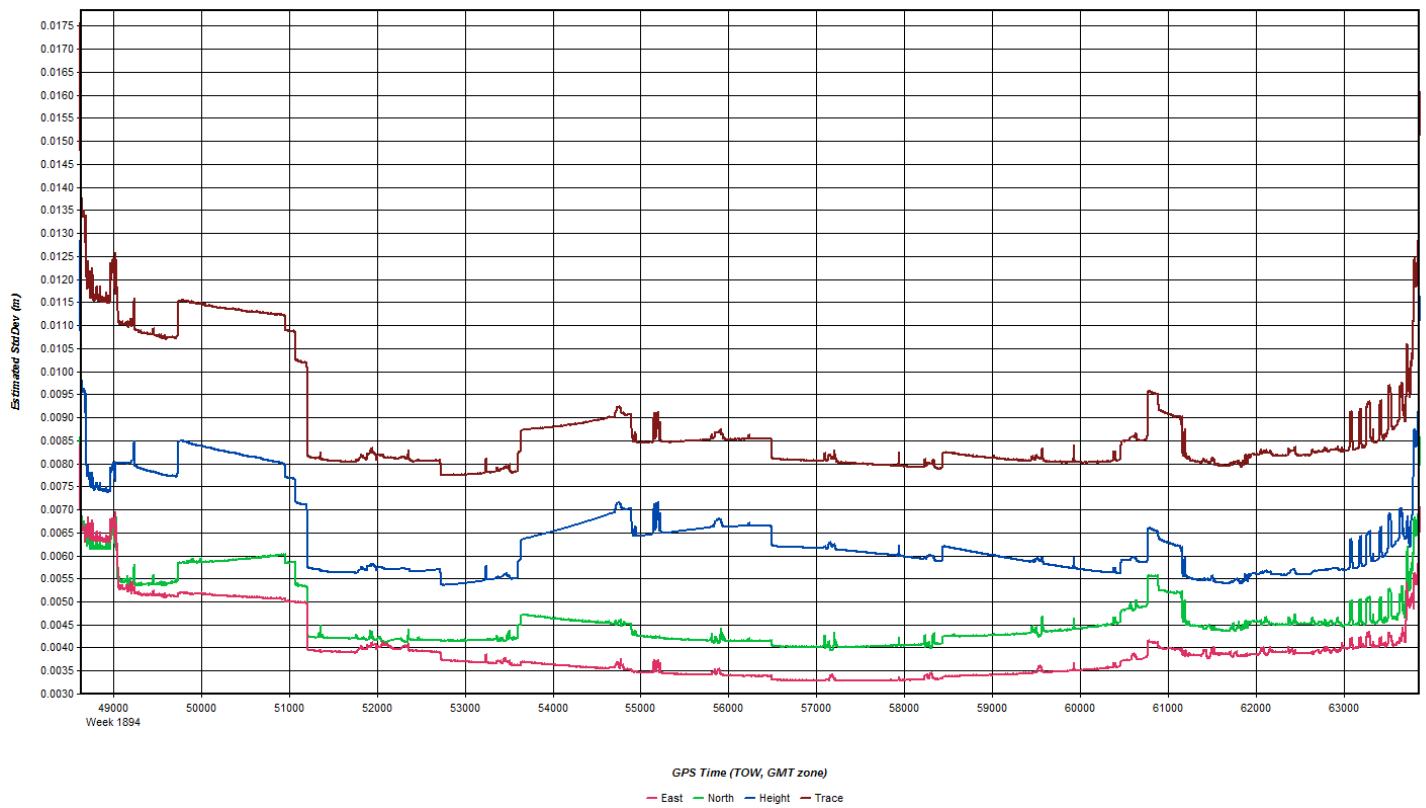
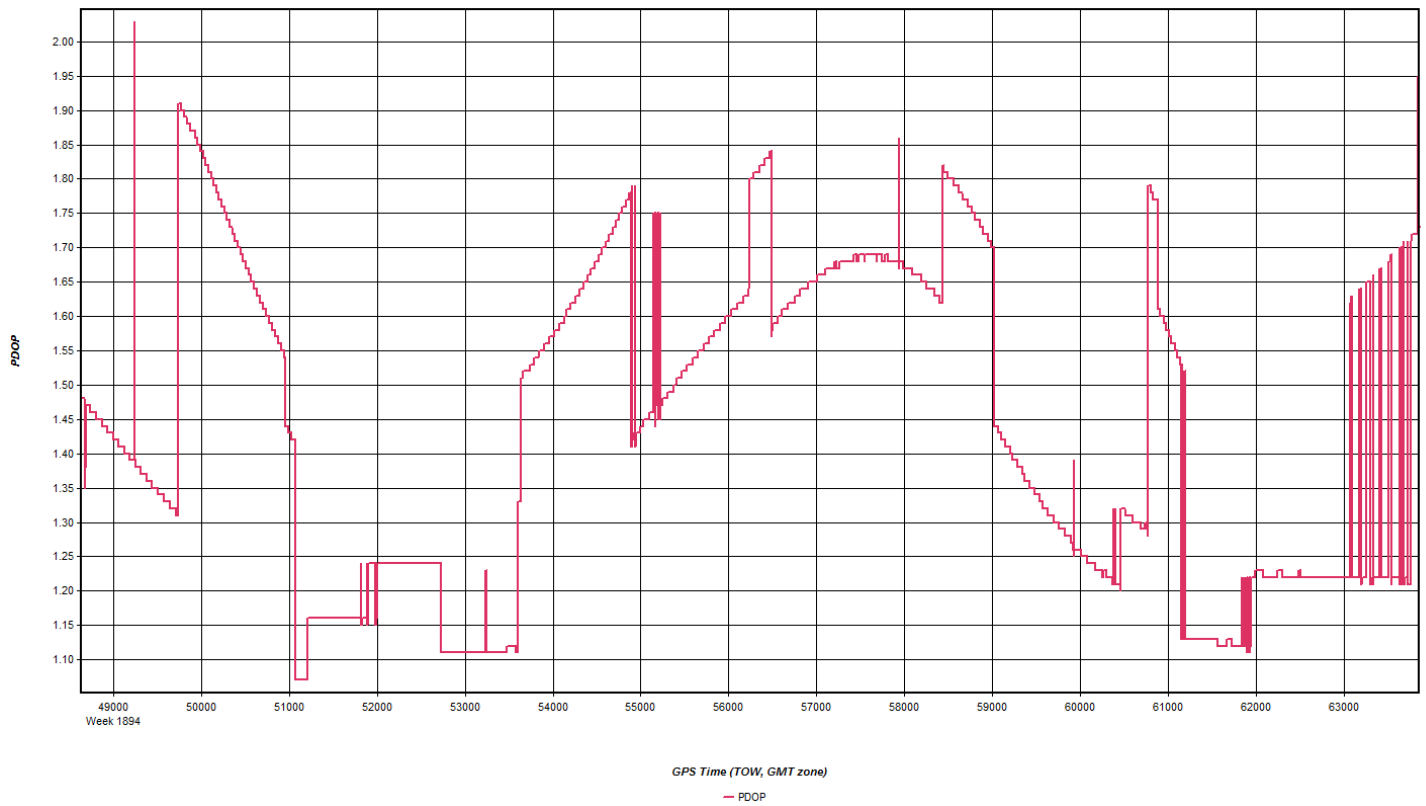


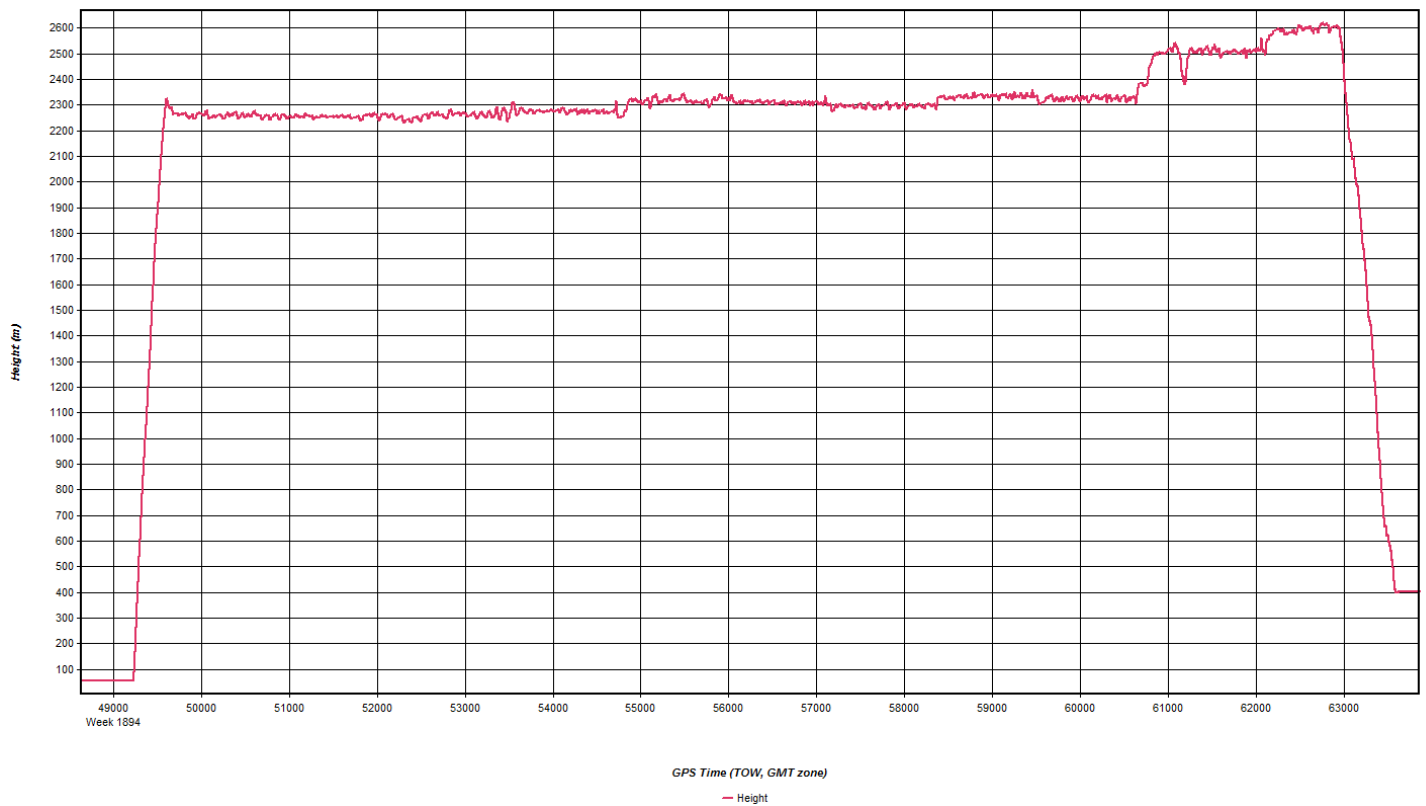
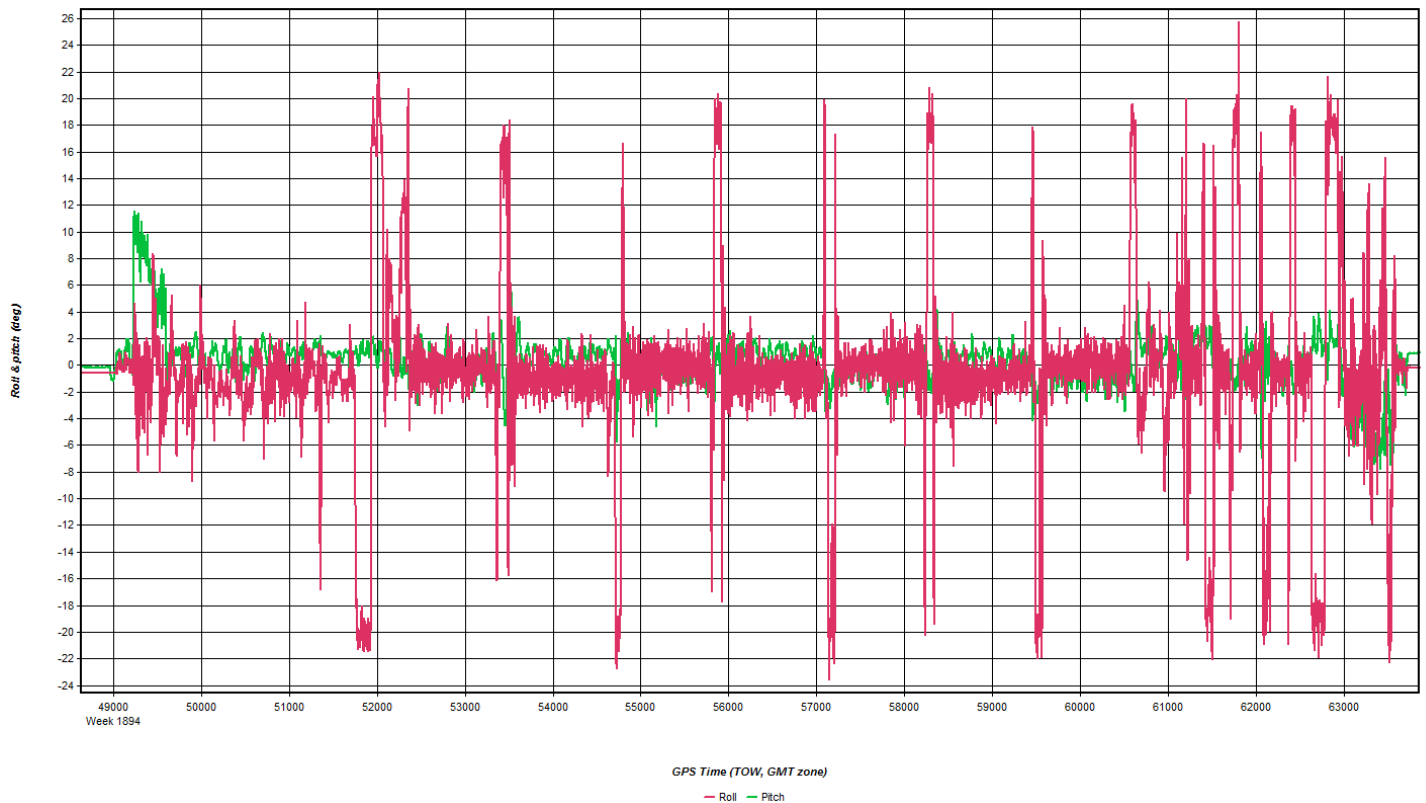


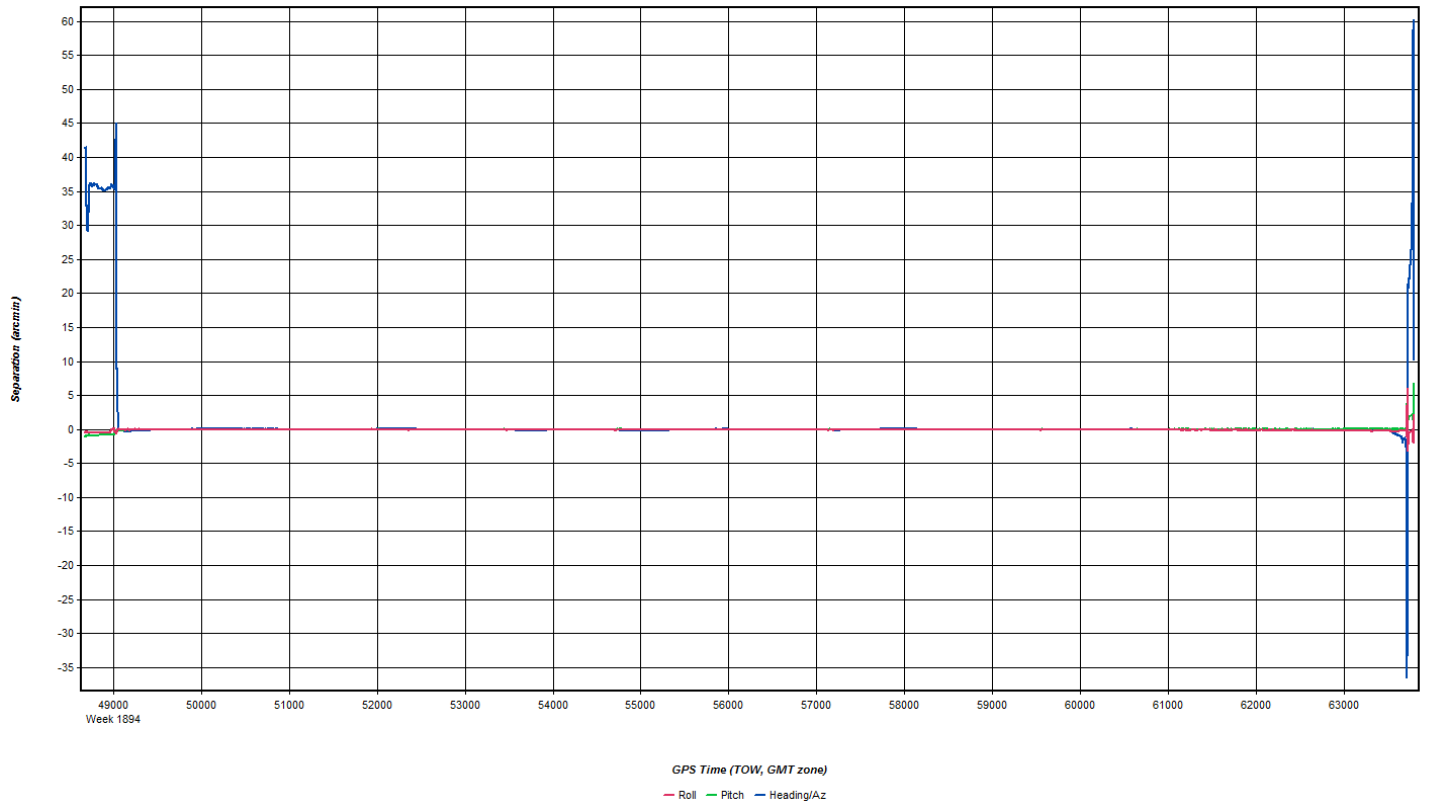
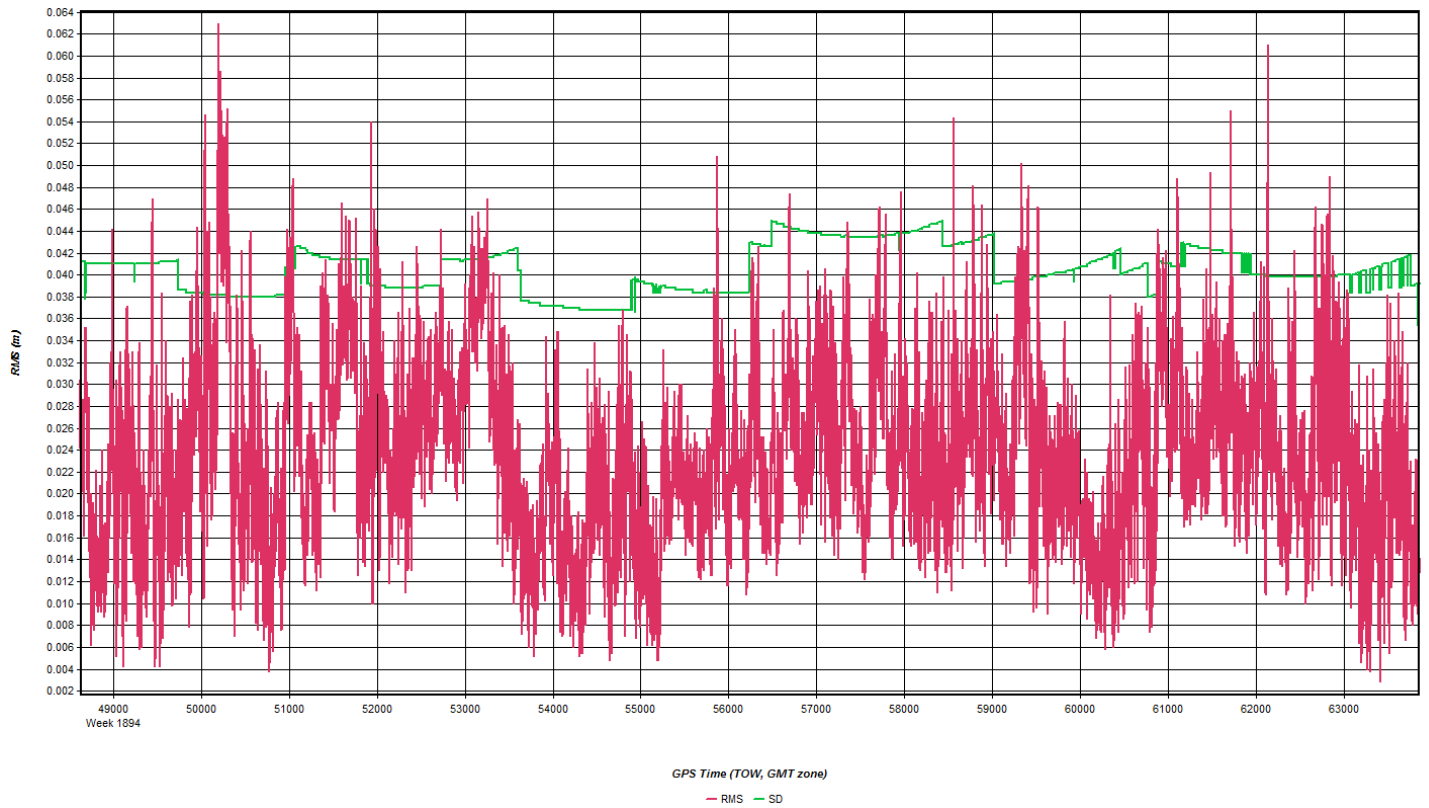
GPS Time (TOW, GMT zone)
— East — North — Up

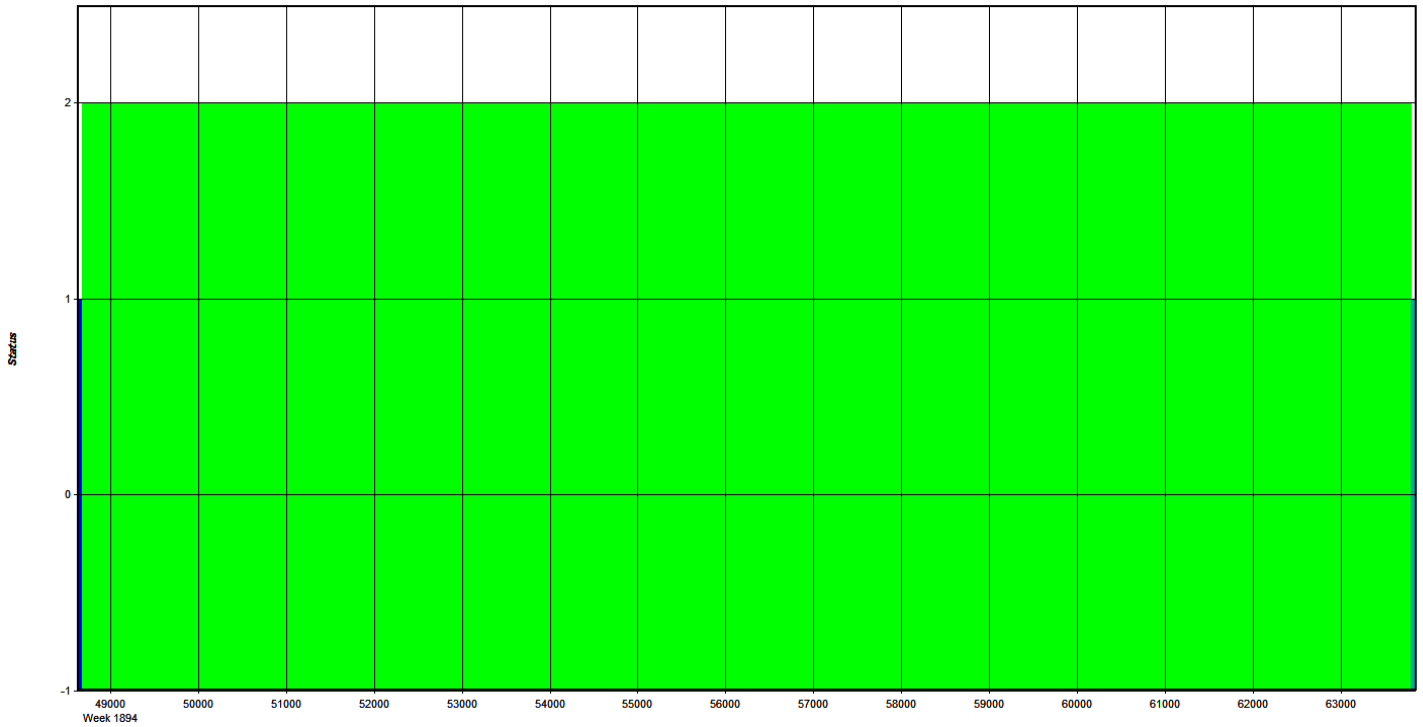


GPS Time (TOW, GMT zone)
— Heading/Azimuth — GPS-COG









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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: Set Point1_East Name: Set Point1_East Disabled
 File: E:\Proc\27146_Maine_2016\2661\Base_Data_042416_042516\

Coordinates
 Latitude: North 45 30 23.79424 Compute from PPP
 Longitude: West 70 04 53.68744 Enter Grid Values
 Ellipsoidal height: 471.643 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: N/A View STA File
 Antenna profile: NOV702GG Info
 Measured height: 2.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 2.067 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Flight Log

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
 (email log daily to flight_log_distribution_list@quantumspatial.com) 20180114-132759

Project: USGS WESTERN MINE **Proj #:** 27146 **Date:** APRIL 24th 2016 **Page 1 of 1**
 (email log daily to flight_log_distribution_list@quantumspatial.com) 20180114-132759

Flight Mgmt File: USGS_Mine_Sc1Point1-SN7173-150.kts **UIC:** B C D E **Tech:** P. HARBAK

Aircraft: N73TM **Begin Hobbs:** 6195.9 **End Hobbs:** 6199.8 **Total:** 3.9 **Pilot:** D. LANGNER **Co-Pilot:** — **Tot Time Aloft:** 3:59

Dep Apt: KLEW **Dep Time (Local):** 9:40Z **Arr Apt:** 3B1 **Arr Time (Local):** 13:39Z **(Z):** 17:39Z

CORS: Y (N) **Sta 1:** — **Sta 2:** — **Flyovers:** Y / N **Altitude:** 15:17:28 **Sta 2:** —

GPS Unit: Y / N **Sta 1:** "SET POINT ONE EXT" **Sta 2:** — **Flyovers:** Y / N **Altitude:** 15:17:28 **Sta 2:** —

Gd Temp beg: 70.6 °C **End:** 70.5 °C **OAT beg:** -10 °C **End:** -0.8 °C **Altimeter begin:** 3000.3" **end:** 29.99"

Type	Serial #	Alt AGL	Alt AMSL	Avg Terr Ht	Max Gspnd	Avg Pt Spacing	Power	Pulse Rate	Power	PPSM	Storage Name
LIDAR	ALS 70	7178	6500	VARIABLES	VARIABLES	1500 kts	?	2	2610 Hz	10	ALS70
FOV	40°	53.4 Hz	MPIA Y / N								SN7178

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	POB/Start	GPS Altitude	Crab	Turb (0-1)	Notes
4062	S	14:33	14:48	160 kts	0.9/1.9	7400'	2°	0	"severe clear", occ -trbs, some snow below in some areas exp. N end, 400 kt tailwind
4061	N	14:52	15:09	140 kts	1.1/1.6	7500'	2°	0	"severe clear", occ -trbs, some snow below in some areas exp. N end, 400 kt headwind
4056	S	15:13	15:29	160 kts	1.2/1.6	7600'	2°	0	"severe clear", occ -trbs, some snow below in some areas exp. N end, 300 kt tailwind
4055	N	15:33	15:50	140 kts	1.2/1.7	7600'	2°	0	"severe clear", occ -trbs, some snow below in some areas exp. N end, 400 kt headwind
4054	S	15:53	16:09	160 kts	1.2/1.8	7500'	2°	0	"severe clear", occ -trbs, some snow below in some areas exp. N end, 300 kt tailwind
4053	N	16:13	16:30	145 kts	1.1/1.8	7650'	1°	0	-h2, occ -trbs, some snow below in some areas exp. N end, 35 kt headwind
4052	S	16:33	16:49	160 kts	1.3/1.7	7650'	2°	0	-h2, occ -trbs, some snow below in some areas exp. N end, 35 kt tailwind
4074	NE	16:59	17:02	140 kts	1.1/1.9	8200'	15°	0	-h2, smooth, some snow below, 30 kt crosswind TRIGGERED ERROR IN FULL CROSS WIND
4075	SW	17:05	17:07	160 kts	1.2/1.7	8250'	12°	0	-h2, -trbs, some snow below, 300 kt crosswind
4074	NE	17:11	17:13	145 kts	1.2/1.7	8250'	13°	0	-h2, smooth, some snow below, 35 kt, crosswind
4073	SW	17:16	17:18	155 kts	1.2/1.7	8500'	13°	0	-h2, smooth, some snow below, 35 kt, crosswind
4072	NE	17:21	17:23	150 kts	1.2/1.7	8550'	11°	0	-h2, smooth, some snow below, 35 kt, crosswind (FIG 17:25Z)

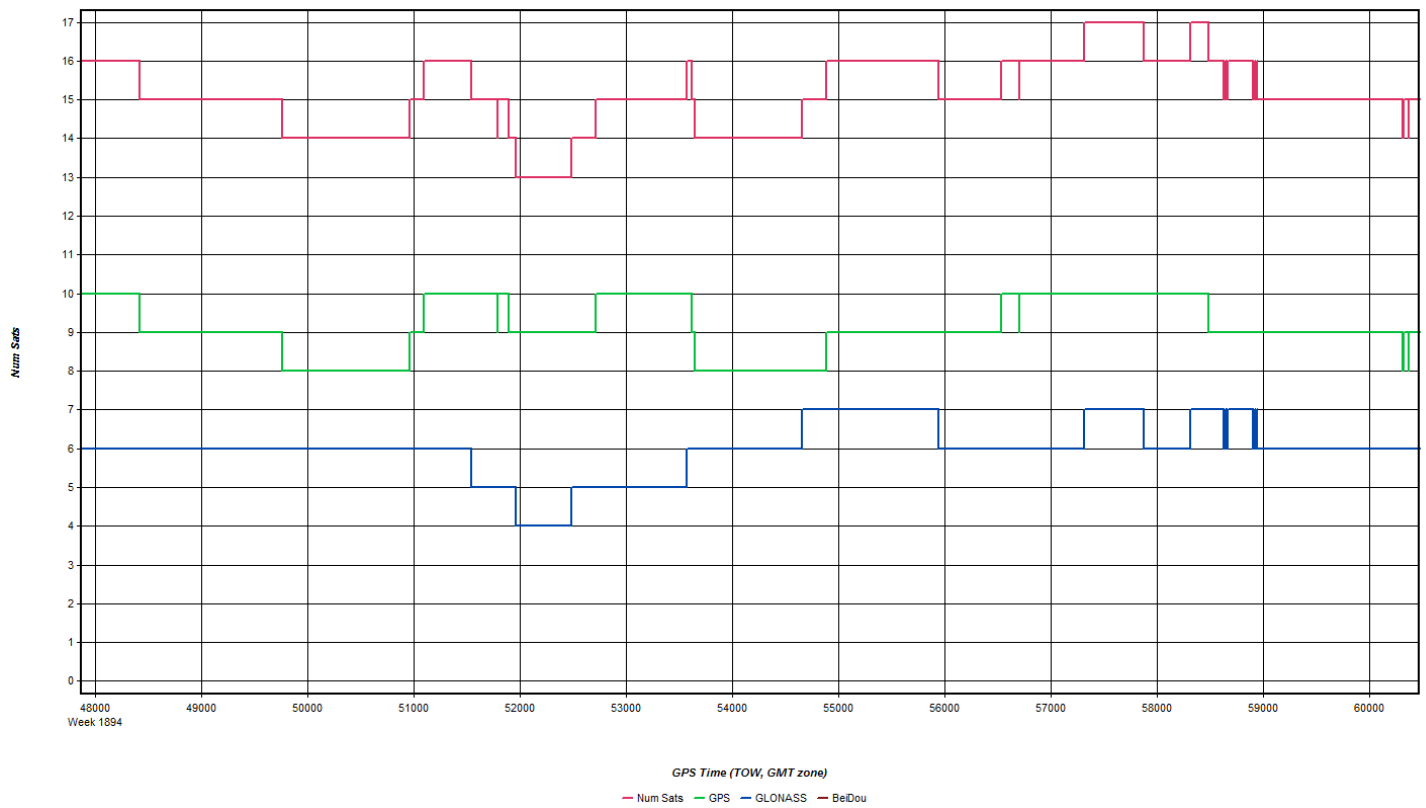
→ ARMED FOR FUEL →

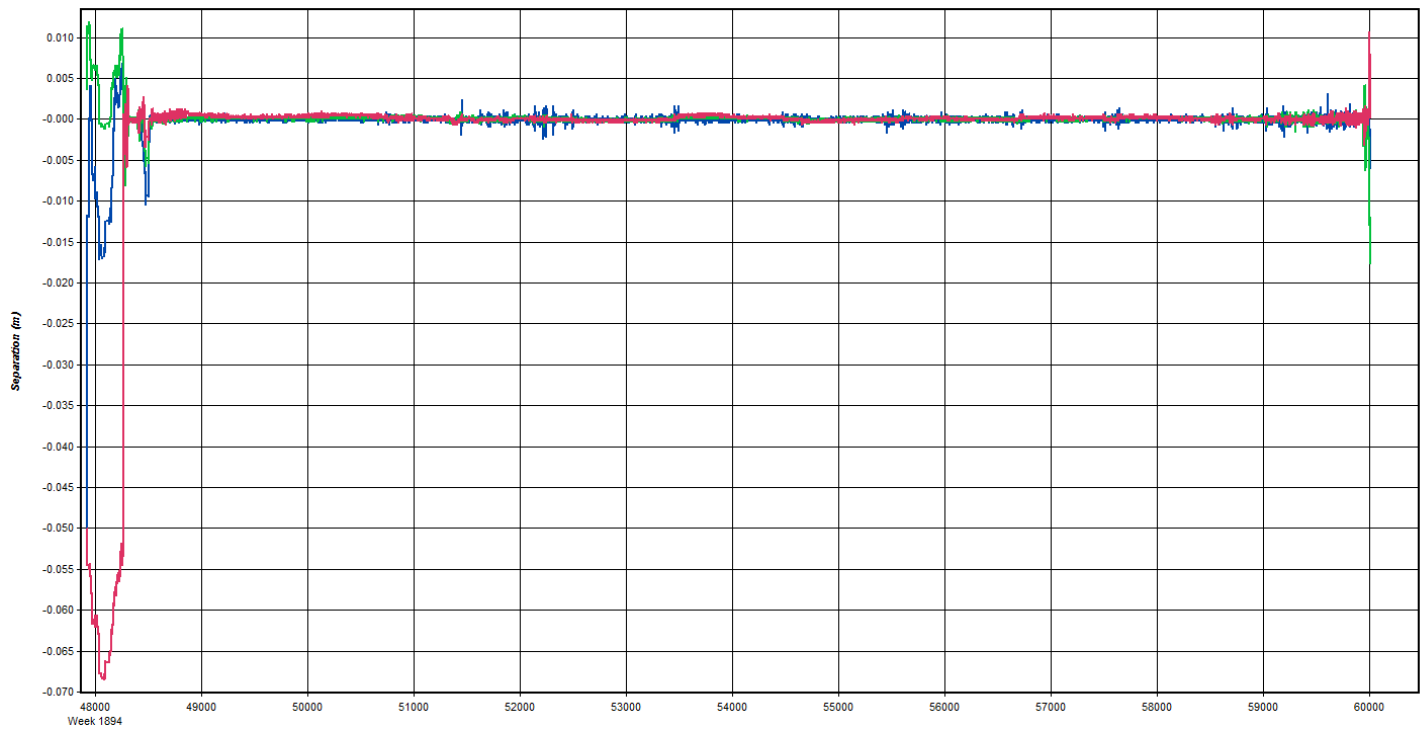
-ice on most lakes

FLIGHT LINE NOTES - visibility, clouds, smoke, parrot, etc (FIG 19:24Z)

Total Proj Lines: 83 **Lines Flown:** 12 **Lines Remain:** 71 **Online Time:** 2:50 **Job Time:** 1:09 **Notes:** 20180114-132759 - 132759

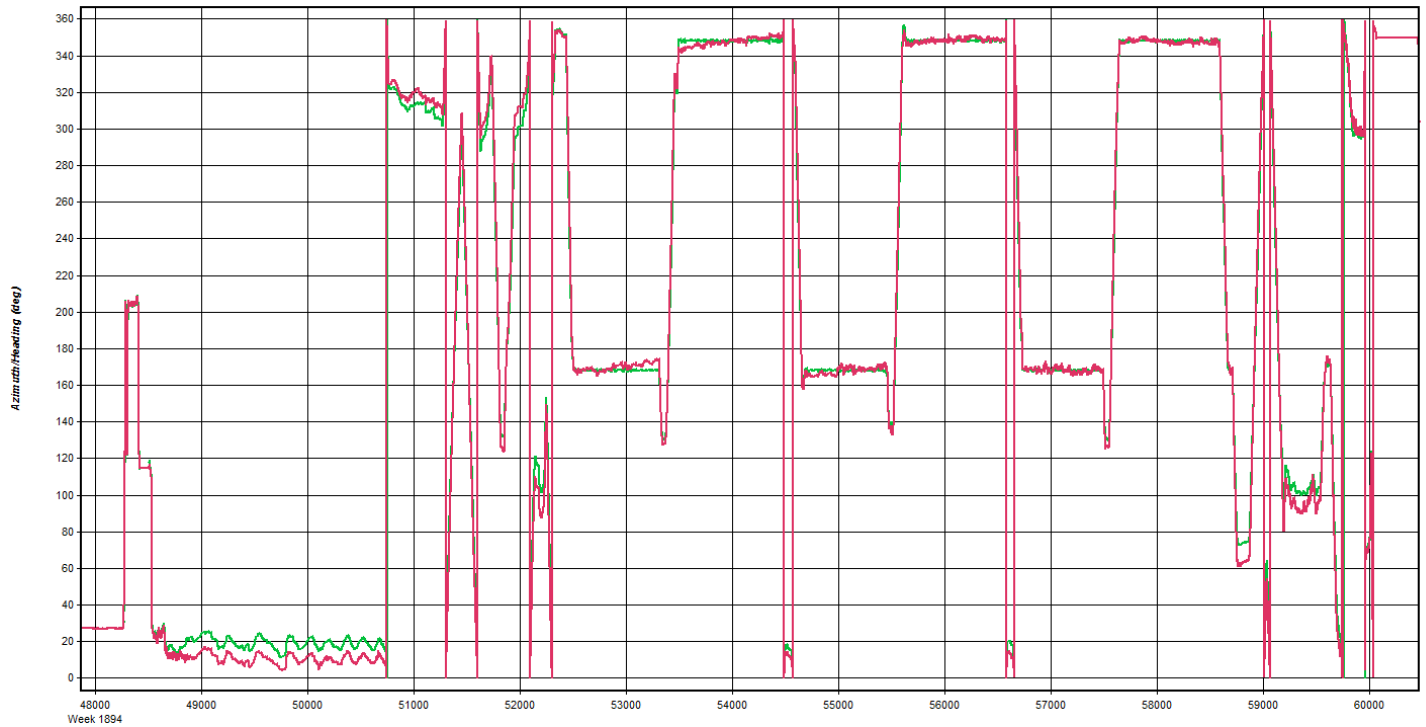
Apr 24, 2016-A (N812TB, SN7161)





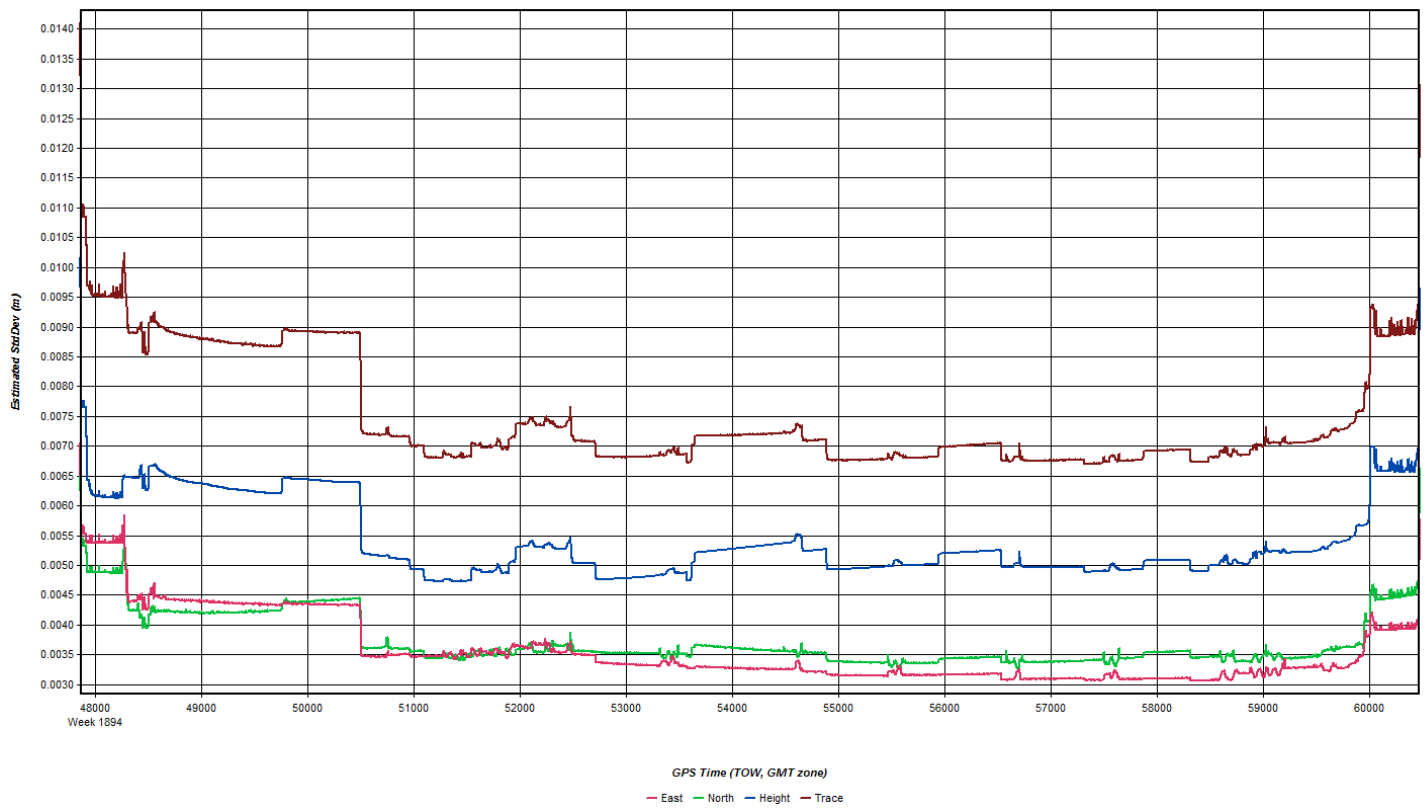
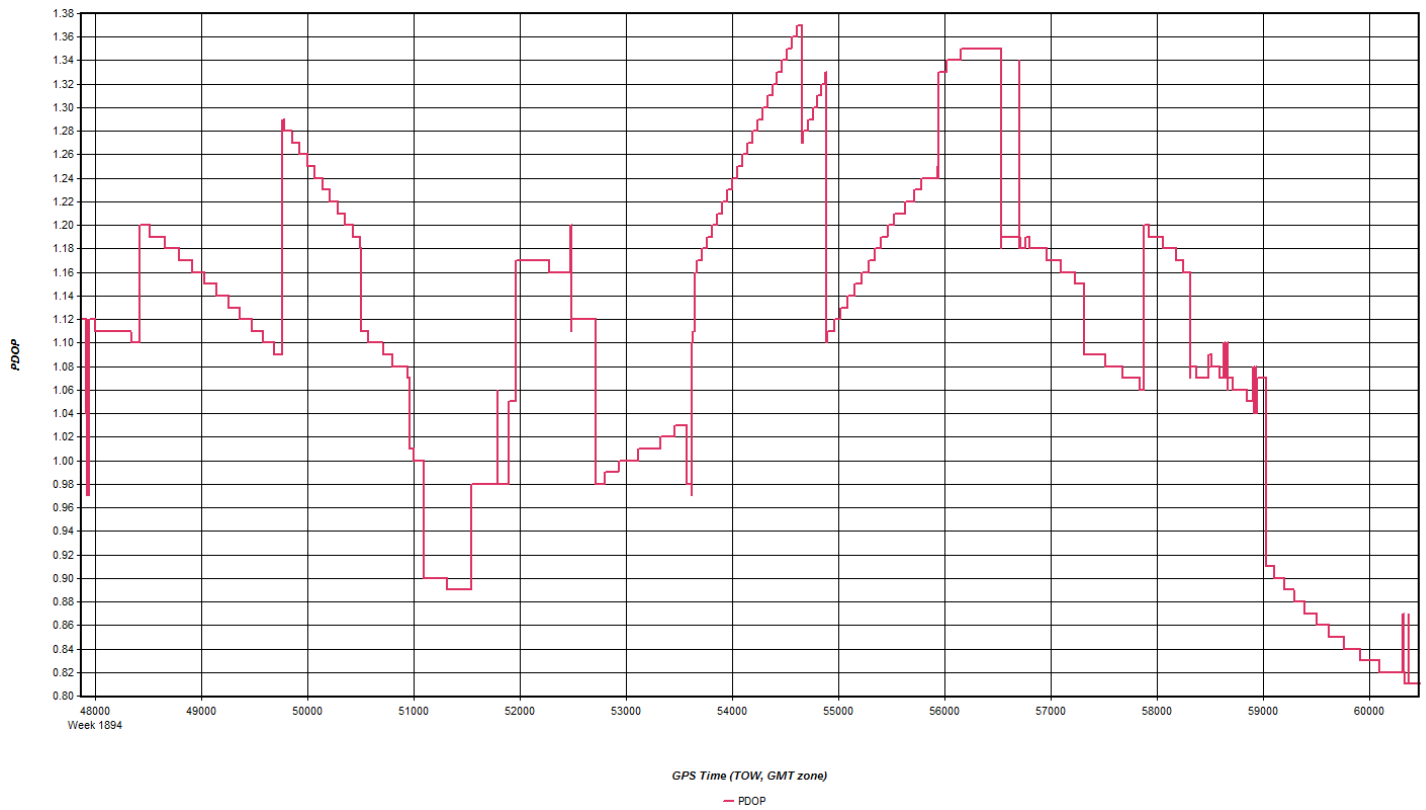
GPS Time (TOW, GMT zone)

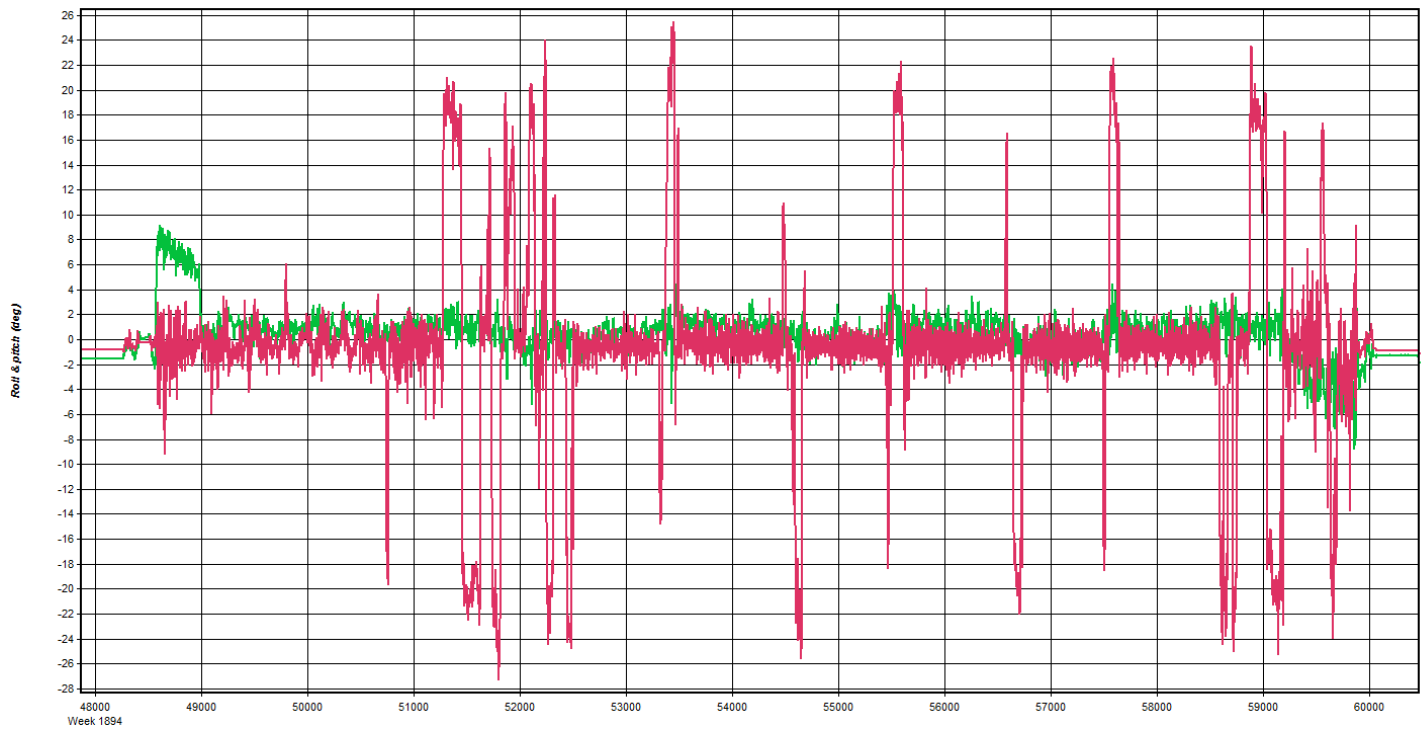
— East — North — Up



GPS Time (TOW, GMT zone)

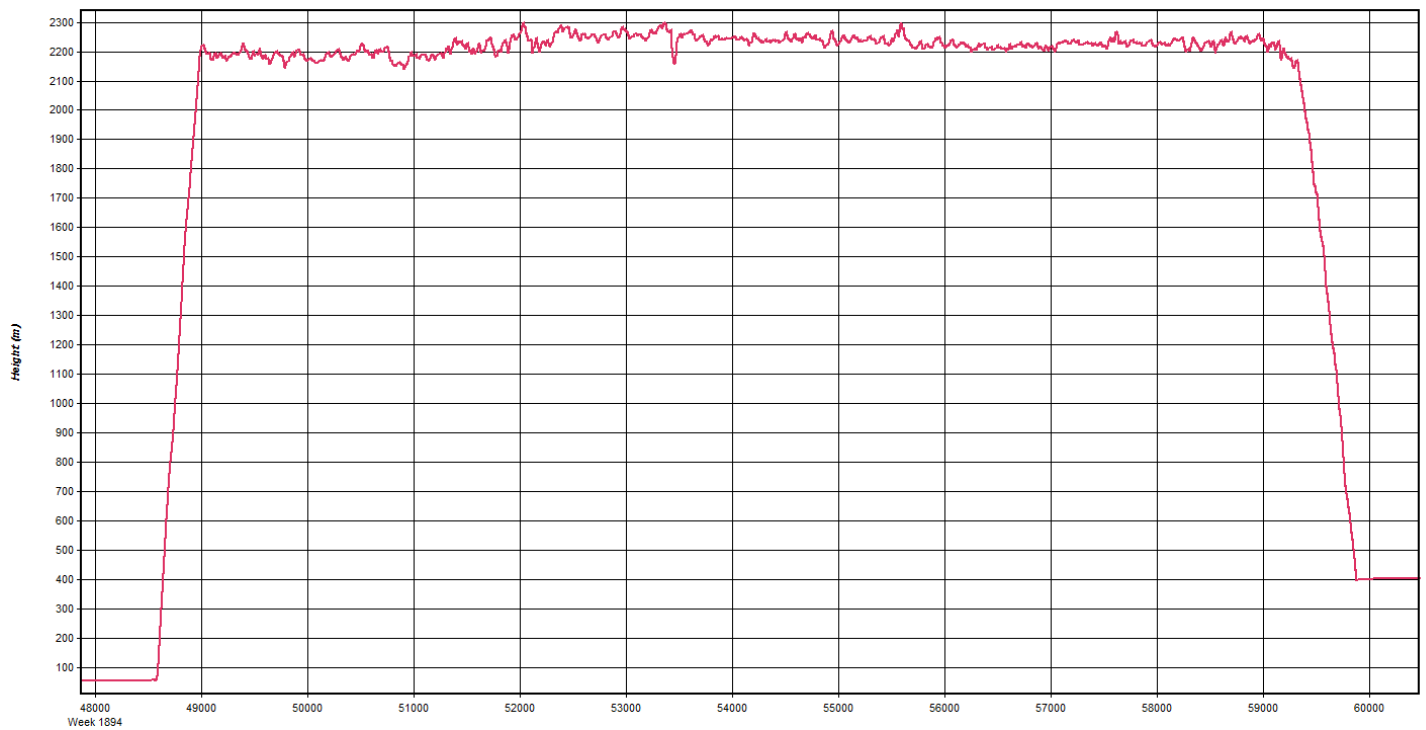
— Heading/Azimuth — GPS-COG





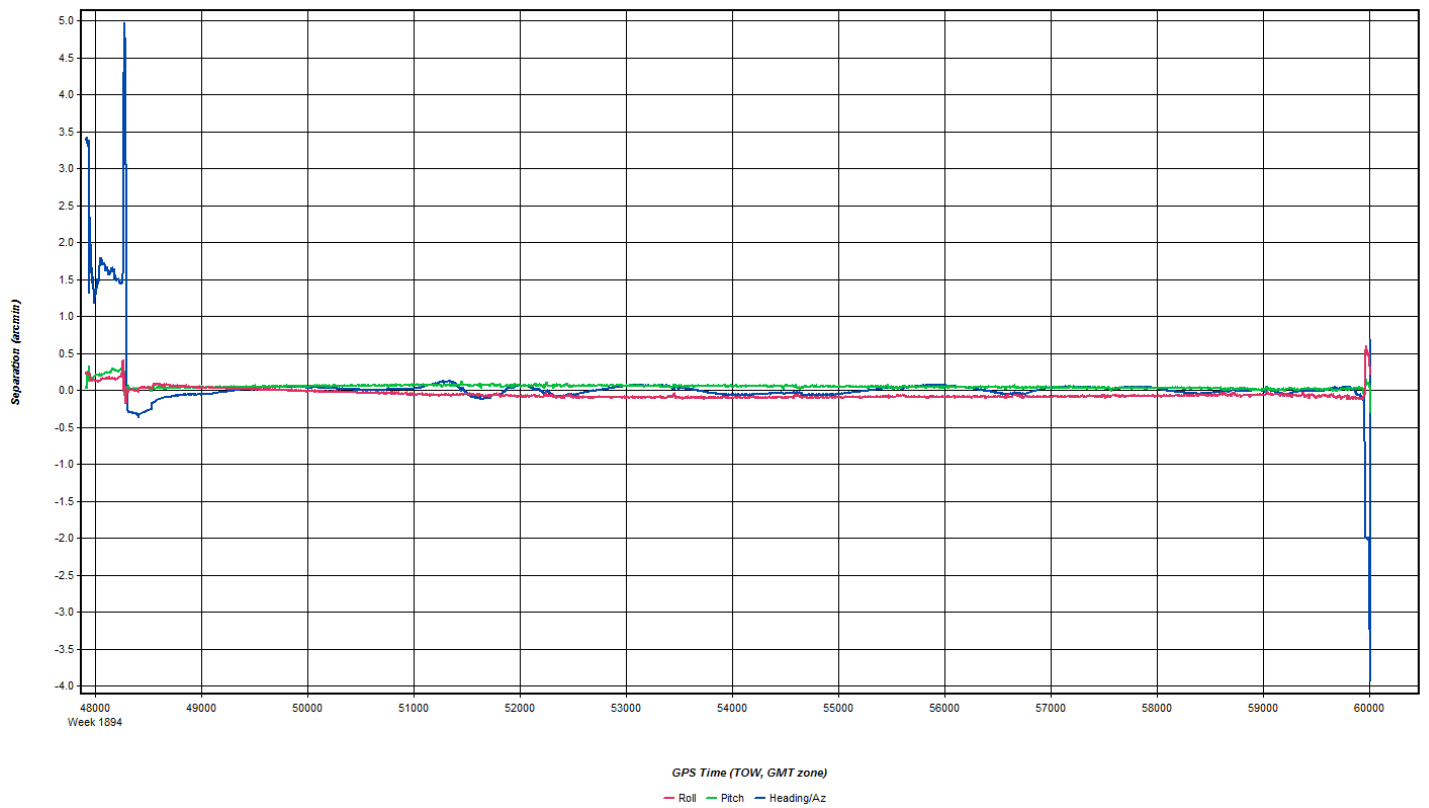
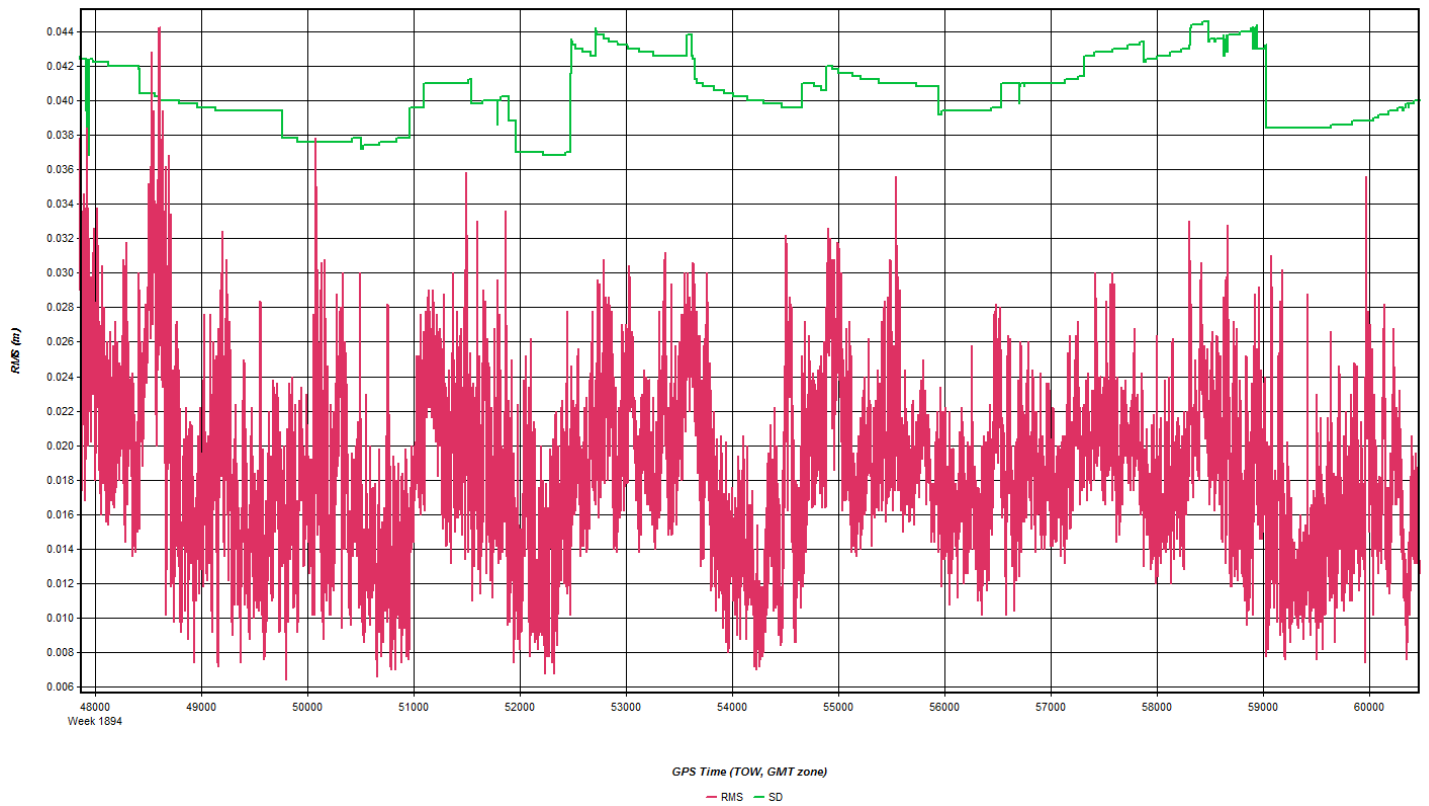
GPS Time (TOW, GMT zone)

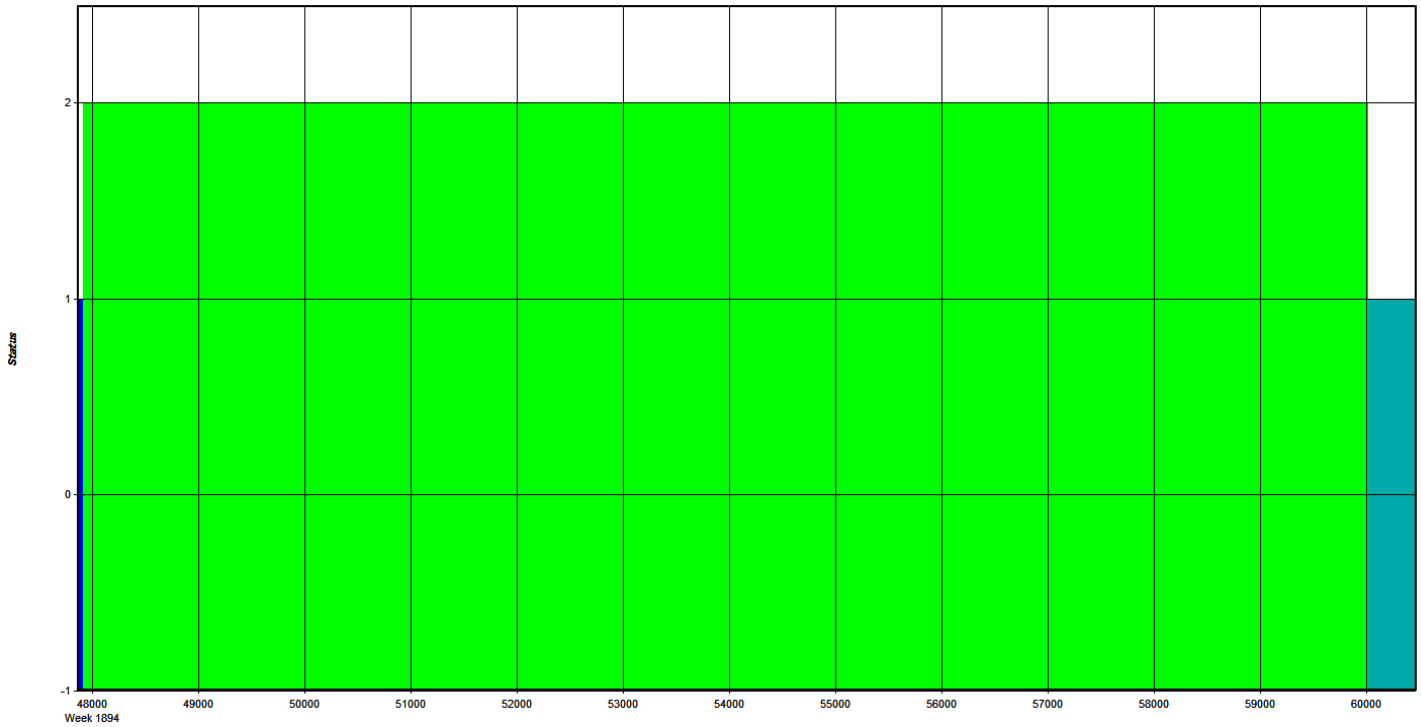
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\NETAA\27146_USGS_ME_MEGR_N

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Scanned by CamScanner

Quantum Spatial Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log daily to flight_log_distribution_list@quantumspatial.com)

Date: 24 APR 2016
 URL: [@j.c.d.e](#)

Project: USGS Maine - Block MEGR Proj #: 27146 Flight Mgmt File: 20160424-131335
 Aircraft: N812TB Begin Hobbs: 3939.2 End Hobbs: 3947.3 Total: 3.1 Pilot: Radtke Co-Pilot: — Tech: Haggerty
 Dep Apt: KLEW Dep Time (Local): 0930Z Arr Apt: K3B1 Arr Time (Local): 1237Z 1637Z Tot Time Aloft: 3.1
 COORS: 01N Sta 1: MEGR Sta 2: Flyovers: 01N If Y, times: Sta1) 1405 Sta2) 1632
 GPS Unit: Y/N Sta 1: Flyovers: Y/N If Y, times: Sta1) Sta2)

Gd Temp beg:		°C		End:		°C		OAT beg:		°C		End:		°C		Altimeter begin:		end:		Memory		
Type	Serial #	Alt	AGL	Alt	AGL	Alt	AGL	Alt	AGL	Alt	AGL	Alt	AGL	Max	Avg Pt	Max	Avg Pt	Max	Avg Pt	Max	Avg Pt	
LIDAR	FOV	Scan	Rate	Alt	AGL	Alt	AGL	Alt	AGL	Alt	AGL	Alt	AGL	Alt	AGL	Alt	AGL	Alt	AGL	Alt	AGL	
40°	7161	53Hz	5701 FT	7380 FT	7380 FT	7380 FT	7380 FT	7380 FT	7380 FT	7380 FT	7380 FT	7380 FT	7380 FT	150kts	150kts	150kts	150kts	150kts	150kts	150kts	150kts	150kts
																						16 GB
																						188 GB
																						276 GB

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

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	POPH/As	GPS Altitude	Crab	Turb	Notes
Block MEGR									
102	305	1412	1414	144	10/17	7150			5 minute static start @ 1318 stop @ 1323
5029	170	1436	1448	165	10/17	7400			Flyover CORS MEGR @ 1405
5028	360	1453	1507	135	11/16	7340			Test Fire upper
5027	170	1511	1523	165	12/16	7380			Figure 8 start @ 1415 stop @ 1421
5026	350	1528	1542	140	13/16	7250			some ice/snow on lakes. minimal snow visible in tree lines
5025	170	1546	1558	163	12/18	7310			"
5024	360	1602	1616	137	11/18	7300			11 34 knot tail wind impacting southbound speed
5023	1619	1621	168	13/17	7370				some ice on lakes. minimal snow visible in tree lines
									"
									34 knot tail wind impacting southbound speed
									some ice/snow on lakes. minimal snow visible in tree lines
									Cross Tie upper
									Figure 8 start @ 1621 stop @ 1626
									Flyover CORS @ 1632
									5 minute static start @ 1641 stop @ 1646

Total Proj Lines: 136 Lines Flown: 6 Lines Remain: 65 Online Time: 2.7 Mob Time: 0.9 Notes:

Scanned by CamScanner

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log daily to flight_log_distribution_list@quantumspatial.com)

Date: **24 APR 2016**
 UIC: **A C D E**

Project: **USGS Maine-Block MEGR** Proj #: **27146** Flight Mgmt File: **20160424-180507**

Aircraft: **N812TB** Begin Hobbs: **3942.3** End Hobbs: **3944.6** Total: **2.3** Pilot: **Radtke** Co-Pilot: **—** Tech: **Mingay**

Dep Apt: **K3BT** Dep Time (Local): **1420** (Z): **1820** Arr Apt: **KLEW** Arr Time (Local): **1624** (Z): **2042** Tot Time Aloft: **2:4**

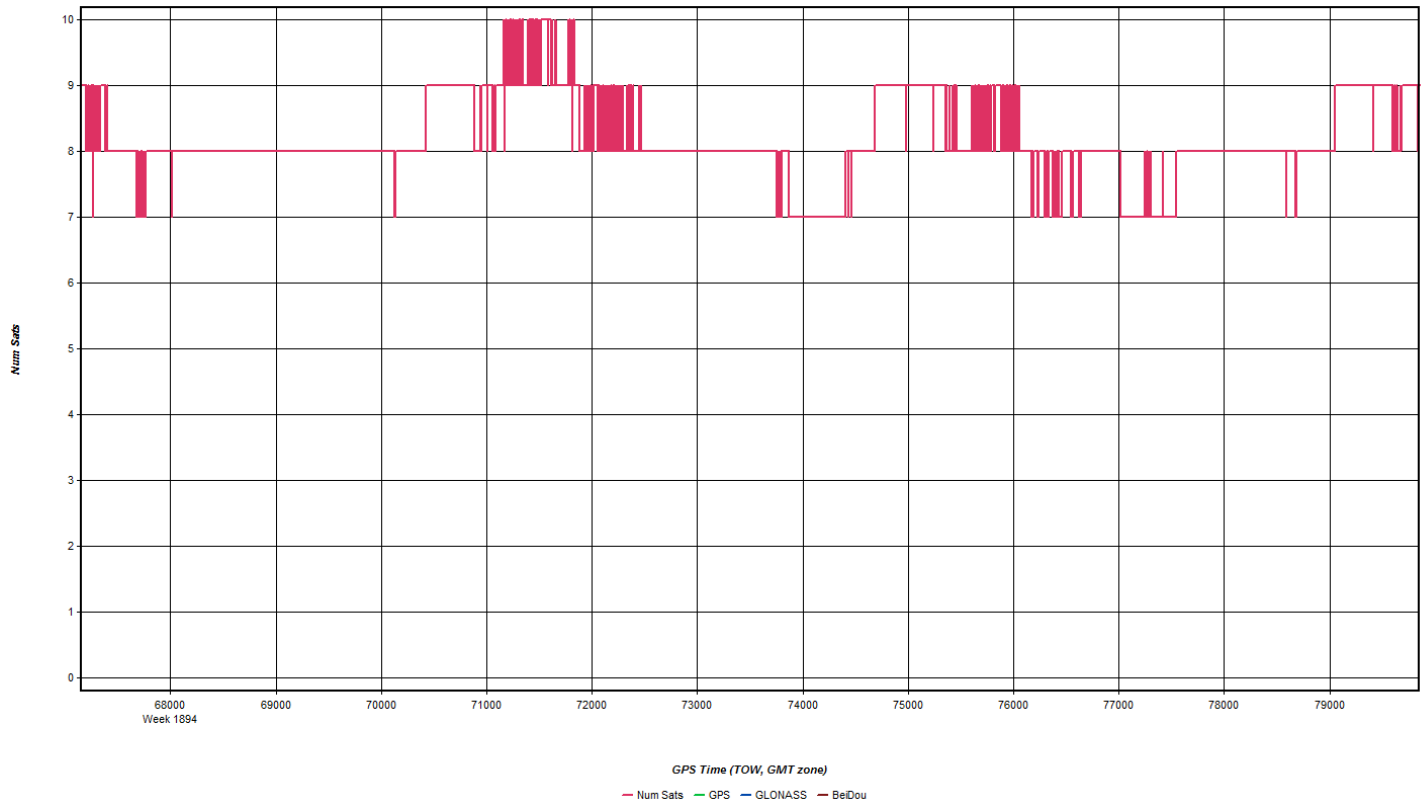
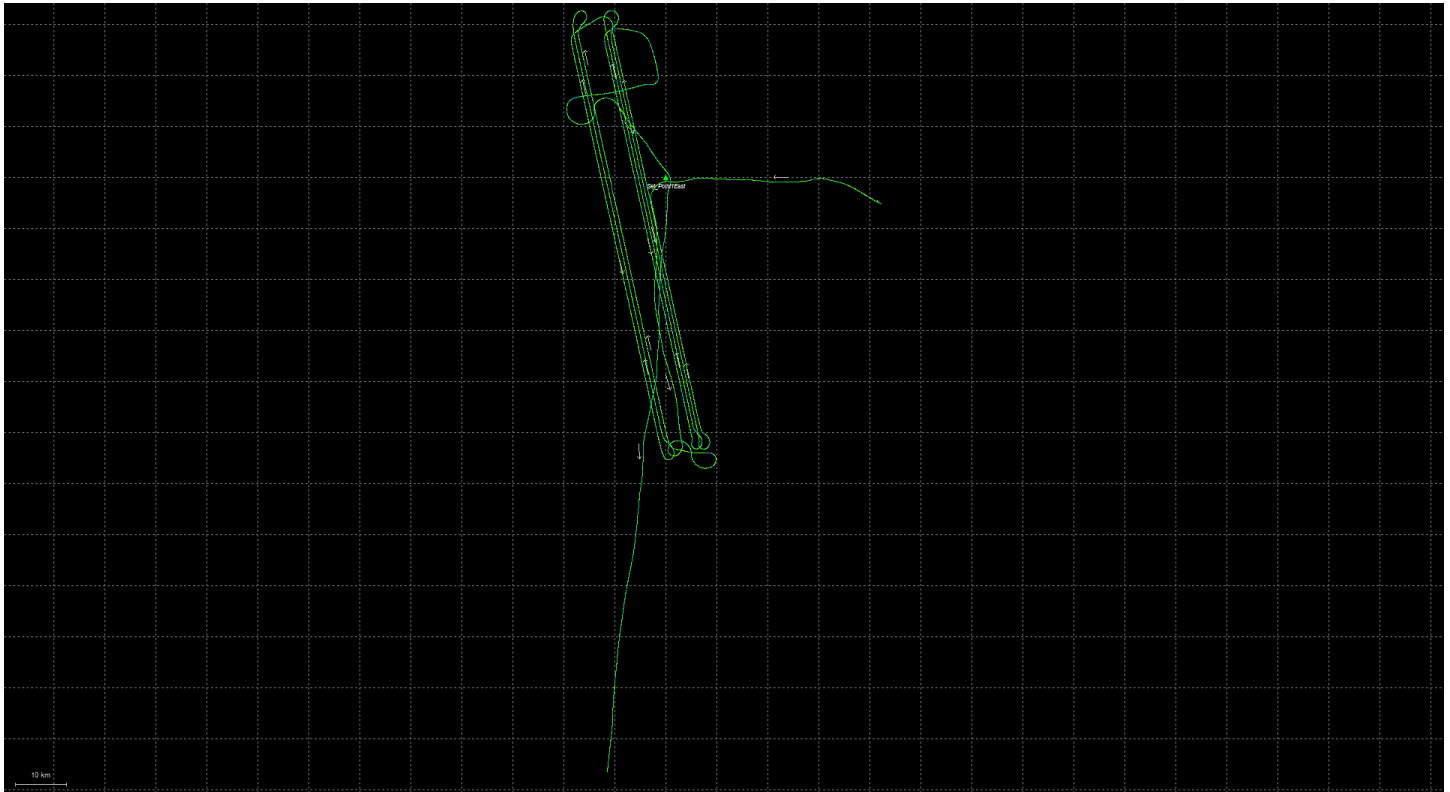
CORS: **0/N** Sea 1: **MEGR** Sea 2: **—** Flyovers: **Y/N** If Y, times: **Sea1 2007** Sea2: **—**

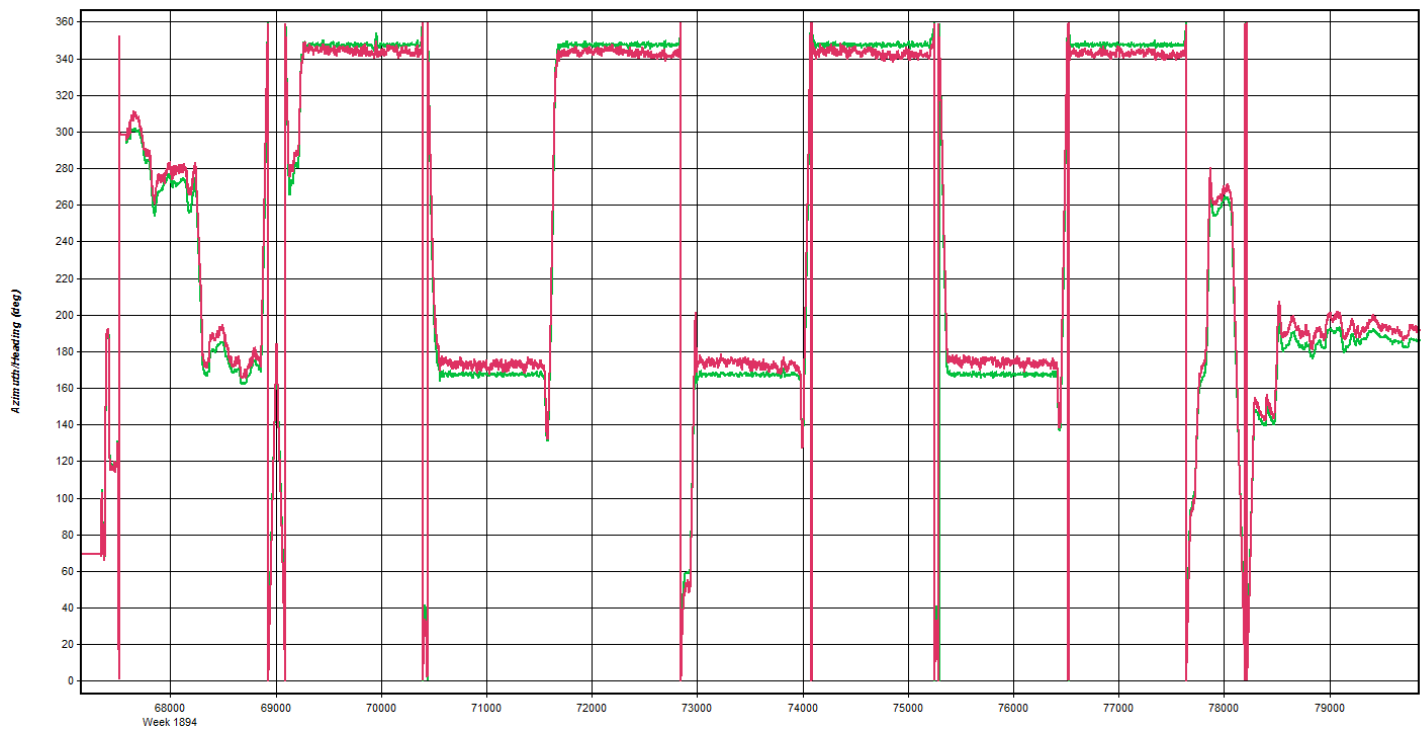
GPS Unit: **Y/N** Sea 1: **—** Sea 2: **—** Flyovers: **Y/N** If Y, times: **Sea1** Sea2: **—**

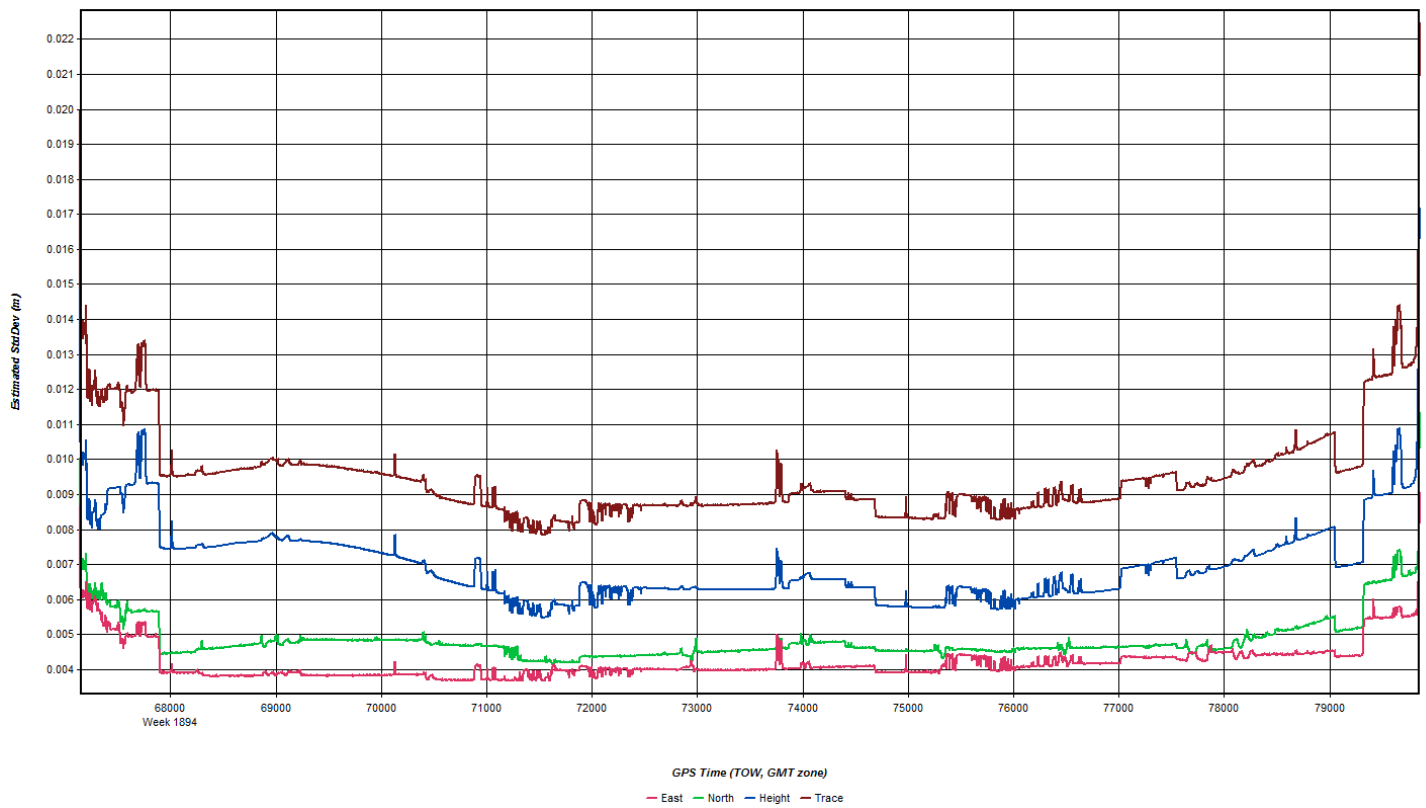
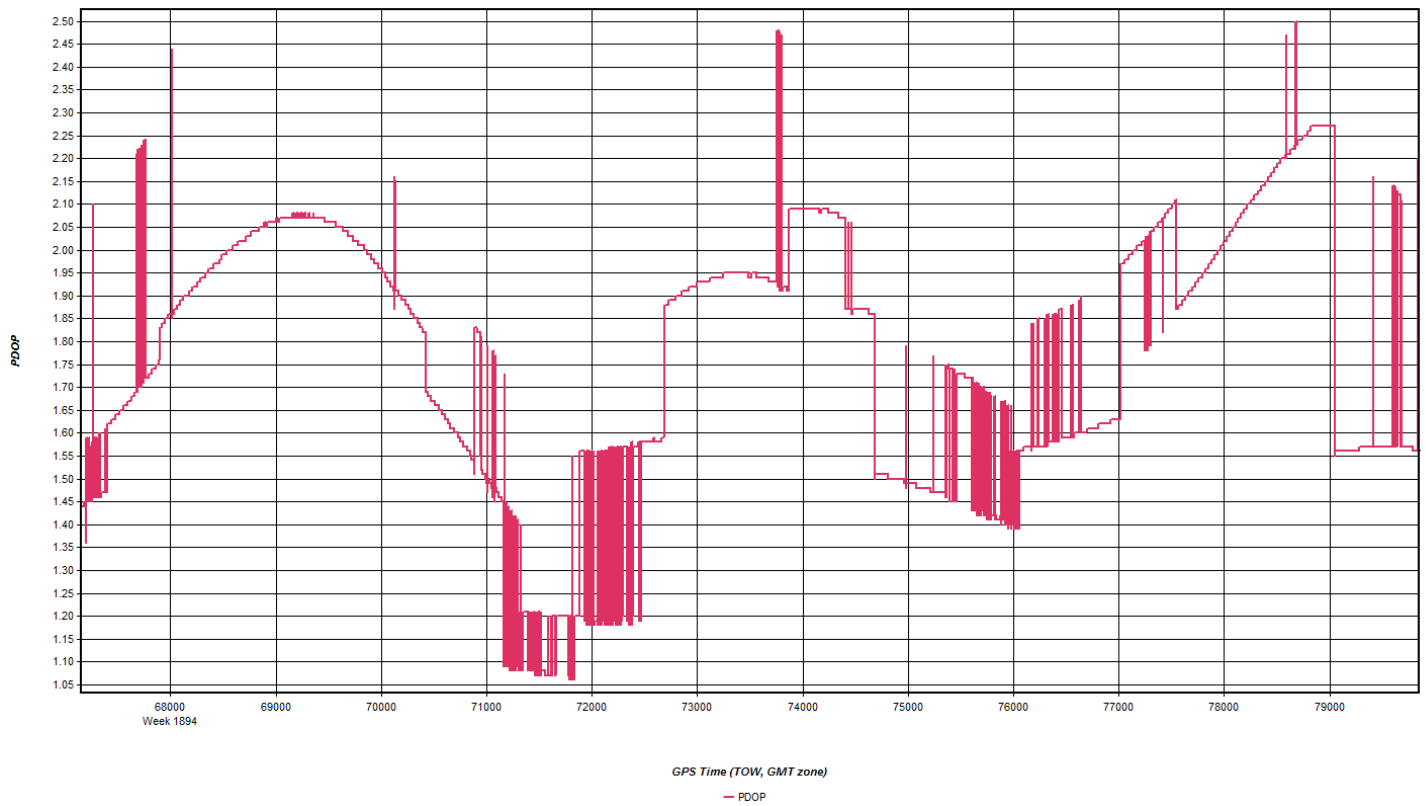
Gd Temp beg:	°C	End:	°C	OAT beg:	°C	End:	°C	Altimeter begin:	
								Alt	End
Type	Serial #	Alt AGL	Alt AMSL	Alt	End	Avg Pt Ht	Max Glided	Avg Pt Spd	Power
FOV	Scan Freq	Mph	Y/N	Mph	Y/N	Rate	Power	PPH	PPH
LIDAR	AL570	716		5101F+		7380 FT	150kts		
	400	53 Hz				960.4 kHz	10070		
Line #	Hdg	Start [UTC]	End [UTC]	Gd Spd	Foot/Sec	GPS Altitude	Crab	Turn [0...1]	FLIGHT LINE NOTES - visibility, clouds, smoke, parallel, etc.
Block MEGR									5 minute static start @ 1810 stop @ 1815
5021	210	1845	1844	144	12/16	7316			Figure 6 start @ 1836 stop @ 1841
5022	215	1844	1844	144	12/16	7300			ALS Data Logger Error @ 1839
5023	190	1949	1900	160	12/16	7300			Test Fire No % Returns
5024	350	1904	1919	133	12/15	7320			Test Fire % Returns Good
5025	190	1923	1935	157	12/16	7360			Turbulence. Minimal snow. ice on lakes
5026	350	1938	1951	155	11/16	7540			Turbulence. Minimal snow. ice on lakes
5027	078	1954	1956	174	11/17	7560			Turbulence. Minimal snow. ice on lakes
									Bad Turbulence. min snow. ice on lakes
									Bad Turbulence. min snow. ice on lakes
									Bad Turbulence. min snow. ice on lakes
									Figure 8 start @ 1956 stop @ 2001
									Flyover CORS MEGR @ 2007
									5 minute static start @ 2015 stop @ 2050

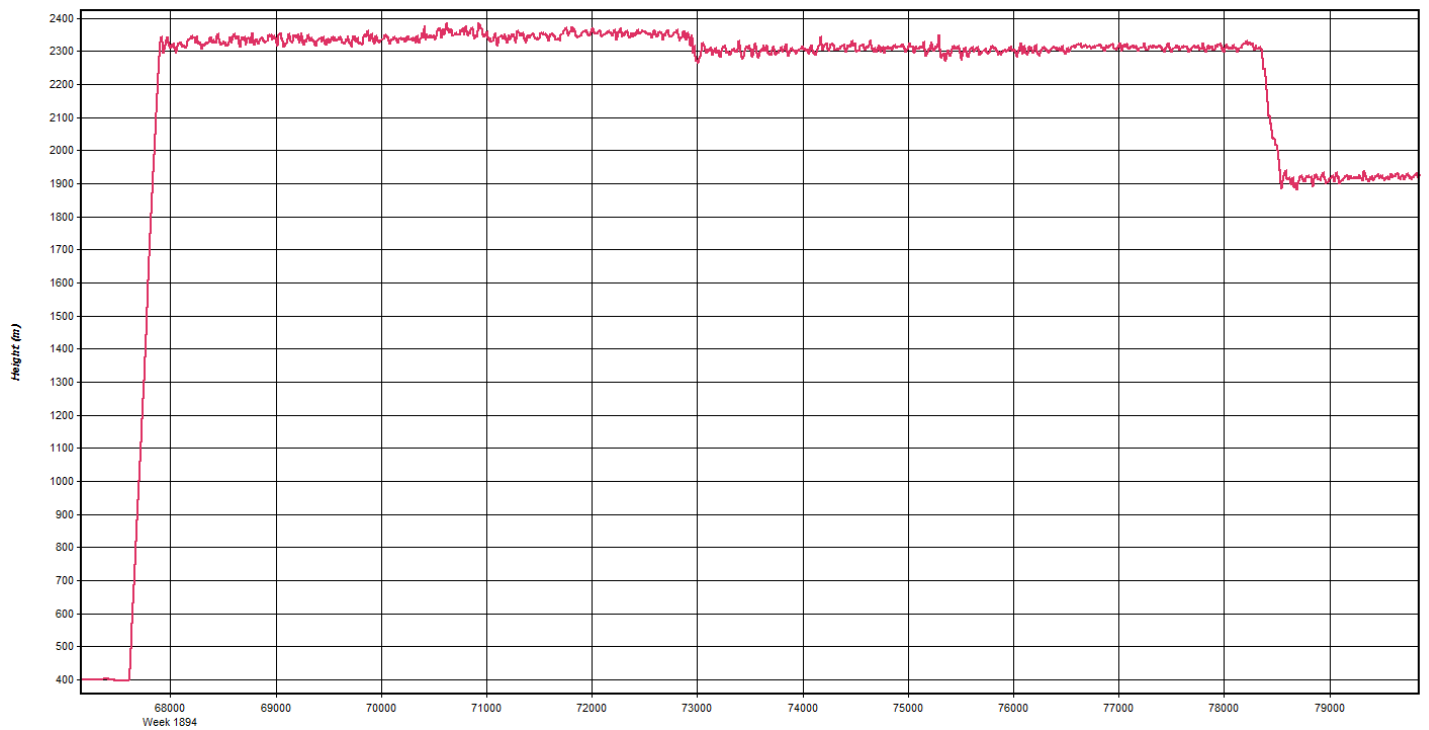
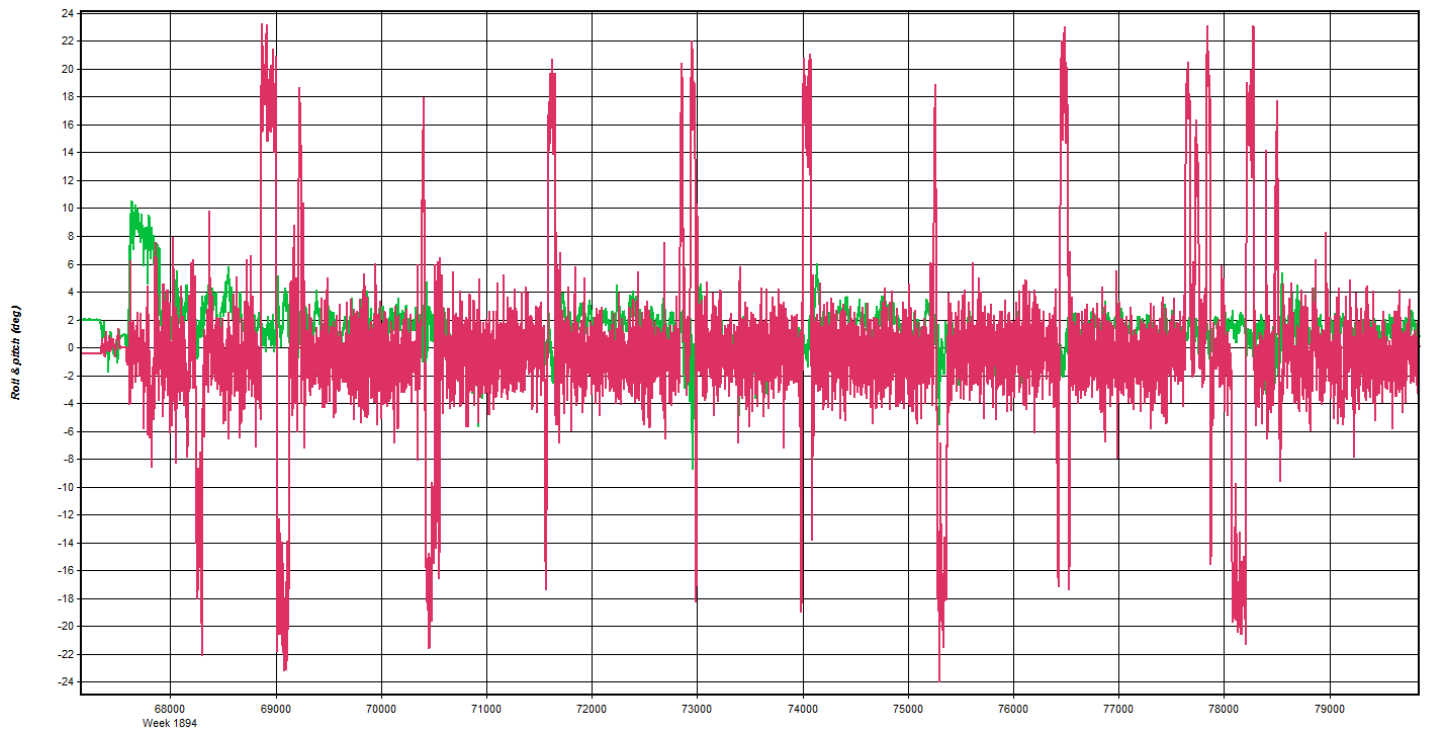
Total Proj Lines: **136** Lines Flown: **4** Lines Remains: **61** Online Time: **1:2** Mob Time: **1:2** Notes:

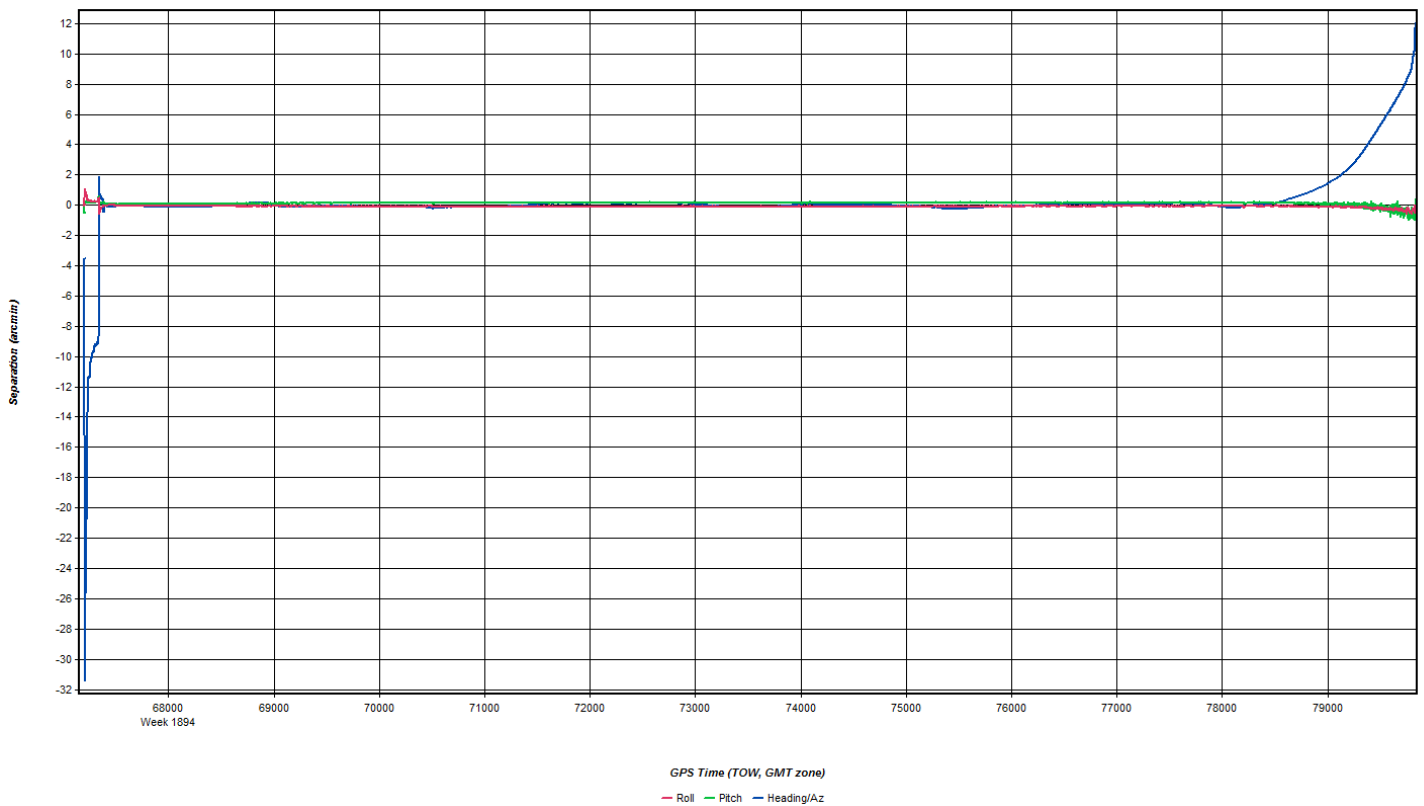
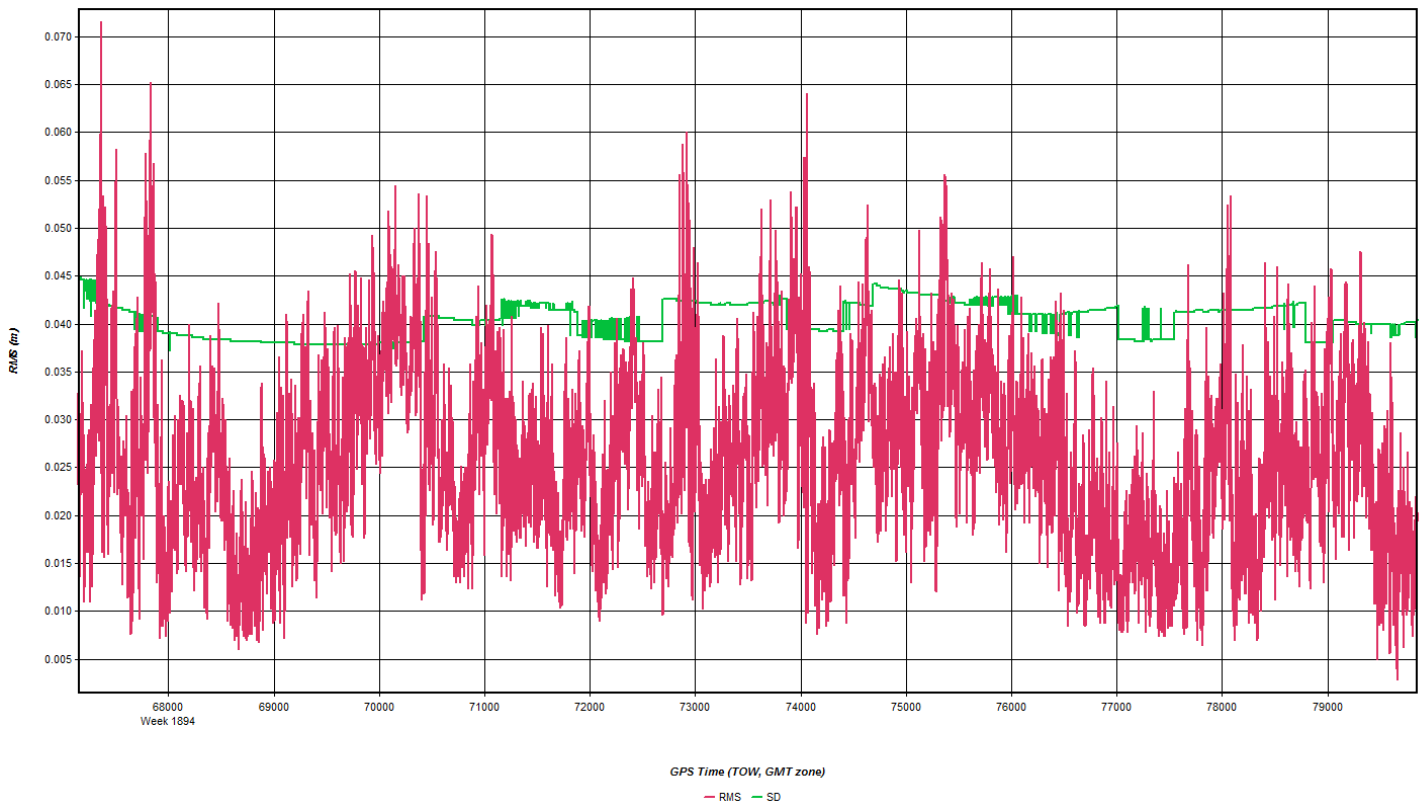
Apr 24, 2016-B (N73TM, SN7178)

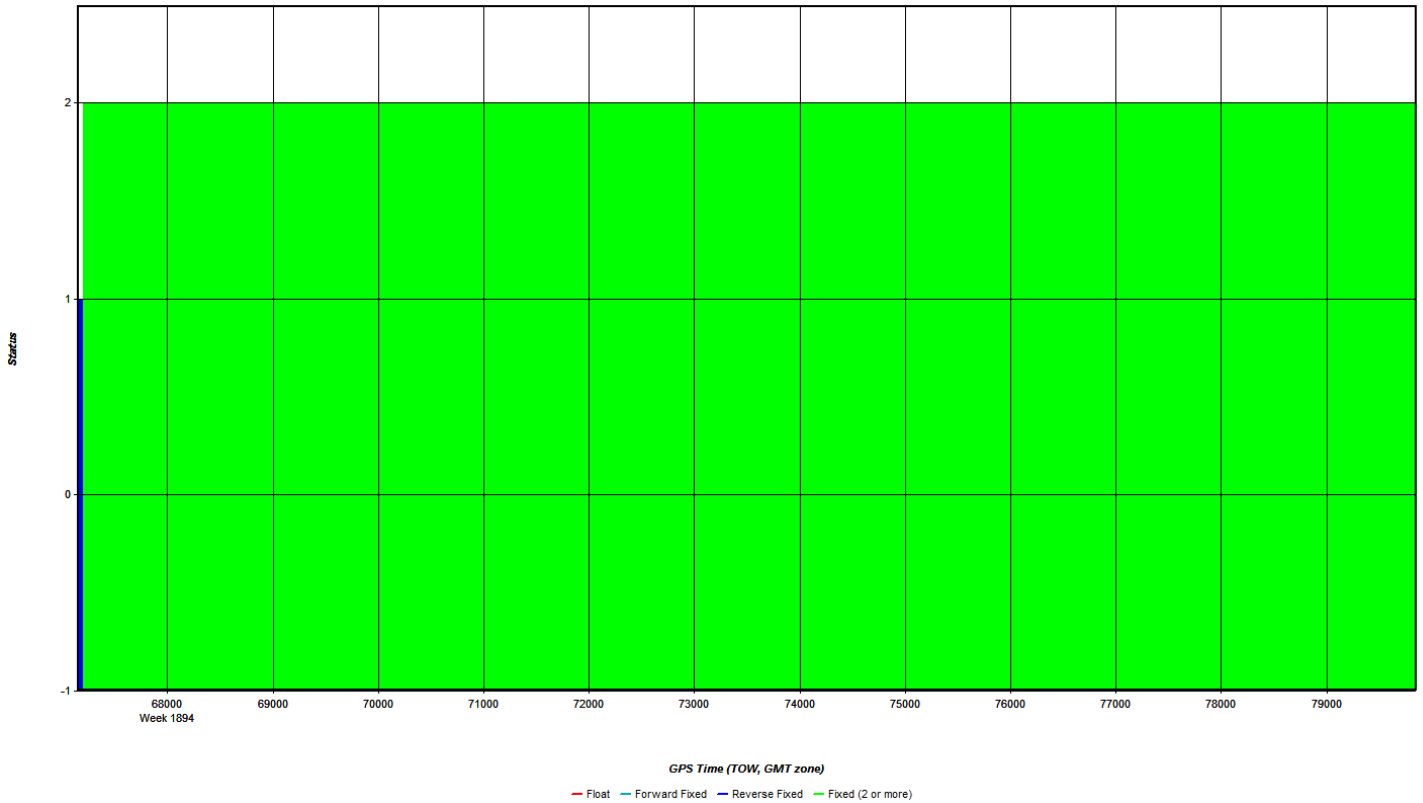












Coordinate/Antenna Settings

Master Remote

Base Station
 1: Set_Point1East Name: Set_Point1East Disabled
 File: E:\Proc\27146_Maine_2016\2661\Base_Data_042416_042516\

Coordinates
 Latitude: North 45 30 23.79424 Compute from PPP
 Longitude: West 70 04 53.68744 Enter Grid Values
 Ellipsoidal height: 471.643 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: N/A View STA File
 Antenna profile: NOV702GG Info
 Measured height: 2.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 2.067 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Flight Log

Project: USGS WESTERN MAINE **Proj #:** 27146 **Date:** APRIL 24th, 2016 **Page 1 of 1**
(email log daily to flight_log_distribution_list@quantumspatial.com) 20160424-183629

Flight Mgmt Files: USGS_Maine_Set Point 1 - SNT173-150.ktz **UIC:** A C D E

Alcraft: N73TM **Begin Hobbs:** 6199.8 **End Hobbs:** 6203.3 **Total:** 3.5 **Pilot:** D. WAGNER **Co-Pilot:** - **Tech:** P. HRABAK

Dep Apt: 3B1 **Dep Time (Lcl):** 14:46 **Z:** 18:46 **Arr Apt:** KLEW **Arr Time (Local):** 18:21 **Z:** 22:21 **Tot Time Aloft:** 3:35

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

GPS Unit: Y / N **Sta 1:** "SET POINT ONE EAST" **Sta 2:** - **Flyovers:** Y / N **IF Y, times: Sta1** 18:57 **Sta2** -

Gd Temp beg: +08 °C **End:** +08 °C **OAT beg:** -12 °C **End:** -12 °C **Altimeter begin:** 29.97" **end:** 29.95"

Type	ALS 70	Serial #	7178	Alt AGL	~6500'	Alt ANSL	VARIES	Avg Terr Hc	VARIES	Max Gspsd	150 kts	Avg Pt Spacing	?	Storage Name
FOV	40°	Scan Freq	53.4 Hz	MPIA	Y / N	Pulses In Air	2	Pulse Rate	261.0 kHz	Power	100%	PPSM	2	ALS 70 SNT173 SSD2

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	200ft/s	GPS Altitude	Crab	Turb	10-1	FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.
4057	N	19:14	19:32	140 kts	1.3/14	7700'	4°	-	-	-h2, few above, slc below, cont lt/mud turb, some snow below N end
4058	S	19:36	19:52	160 kts	1.1/16	7700'	7°	-	-	-h2, few above, slc below, cont lt/mud turb, some snow below N end
4059	N	19:55	20:13	140 kts	1.1/17	7700'	5°	-	-	-h2, few above, slc below, cont lt/mud turb, some snow below N end
4060	S	20:16	20:32	160 kts	1.1/17	7550'	7°	-	-	-h2, few above, slc below, cont lt/mud turb, some snow below N end
4059	N	20:35	20:53	140 kts	1.1/16	7600'	4°	-	-	-h2, set above, slc below, cont lt turb, some snow below N end
4058	S	20:56	21:13	155 kts	1.1/16	7600'	8°	-	-	-h2, set above, slc below, cont lt turb, some snow below N end
4057	N	21:16	21:33	140 kts	1.1/16	7600'	5°	-	-	-h2, set above, slc below, cont lt turb, some snow below N end
4060	W	21:37	21:40	140 kts	1.7/13	7600'	3°	-	-	-h2, set above, slc below, cont lt turb, minimal snow below [IMPROV CROSS LINE]

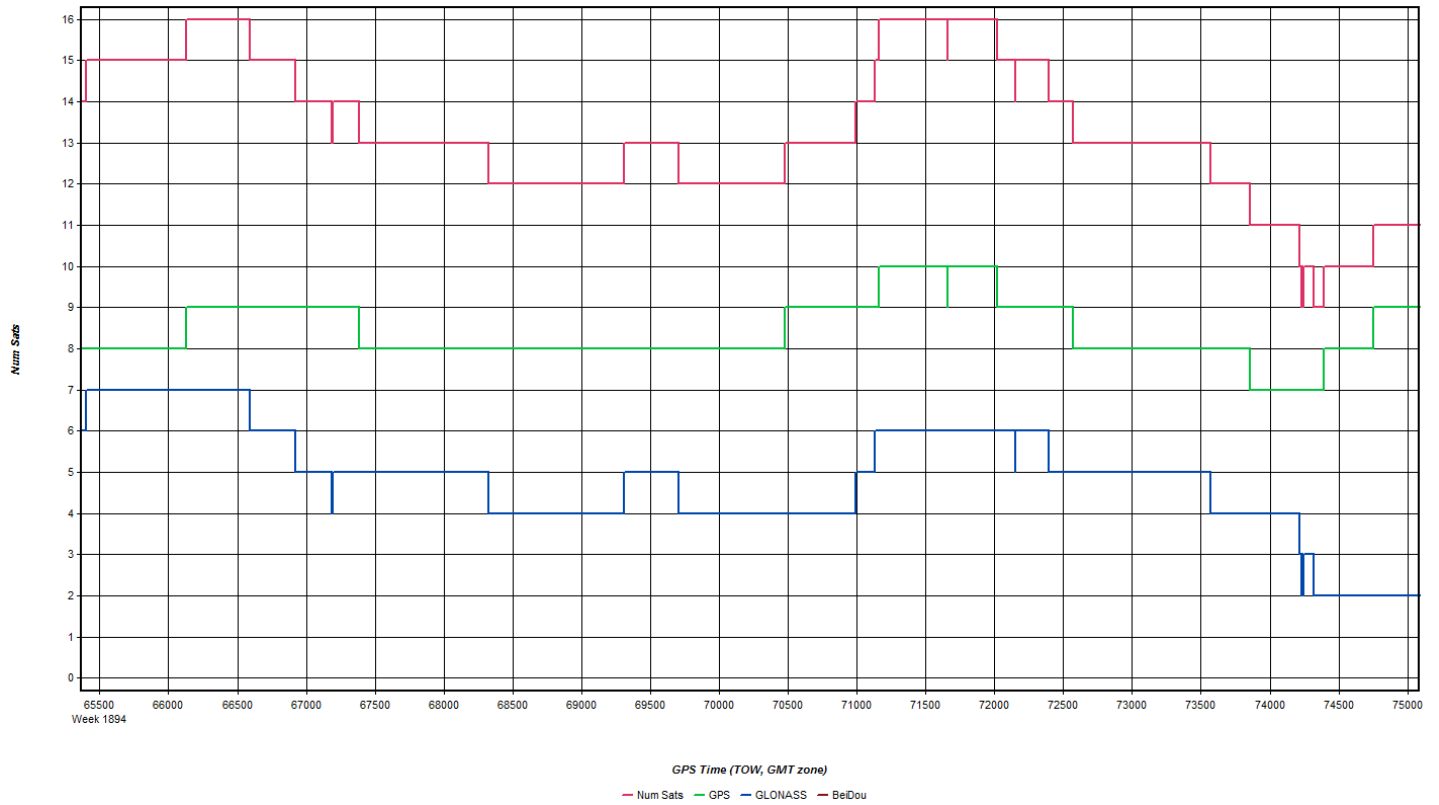
Total Proj Lines: 03 **Lines Flown:** 7 **Lines Remain:** 64 **Online Time:** 2:26 **Mob Time:** 1:09 **Notes:** 20160424-183629 - 183638

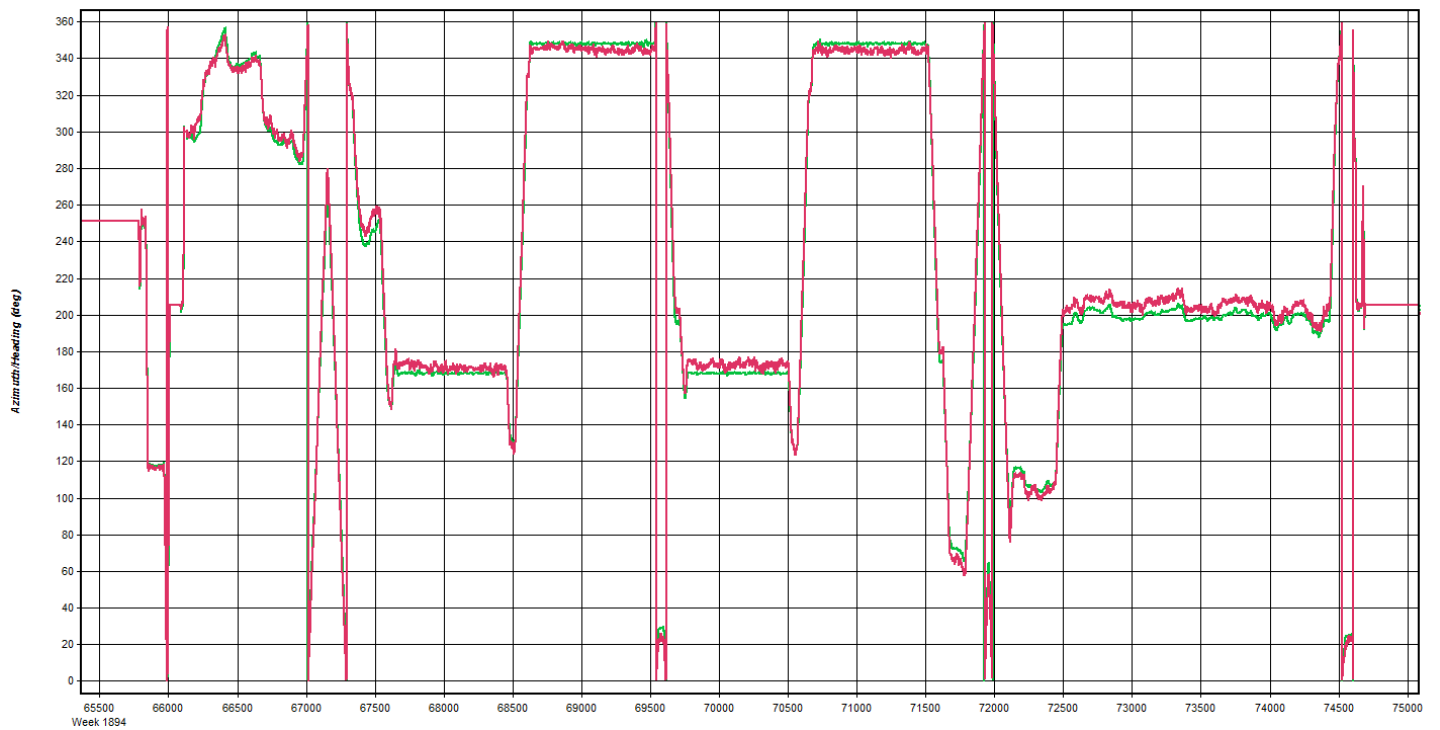
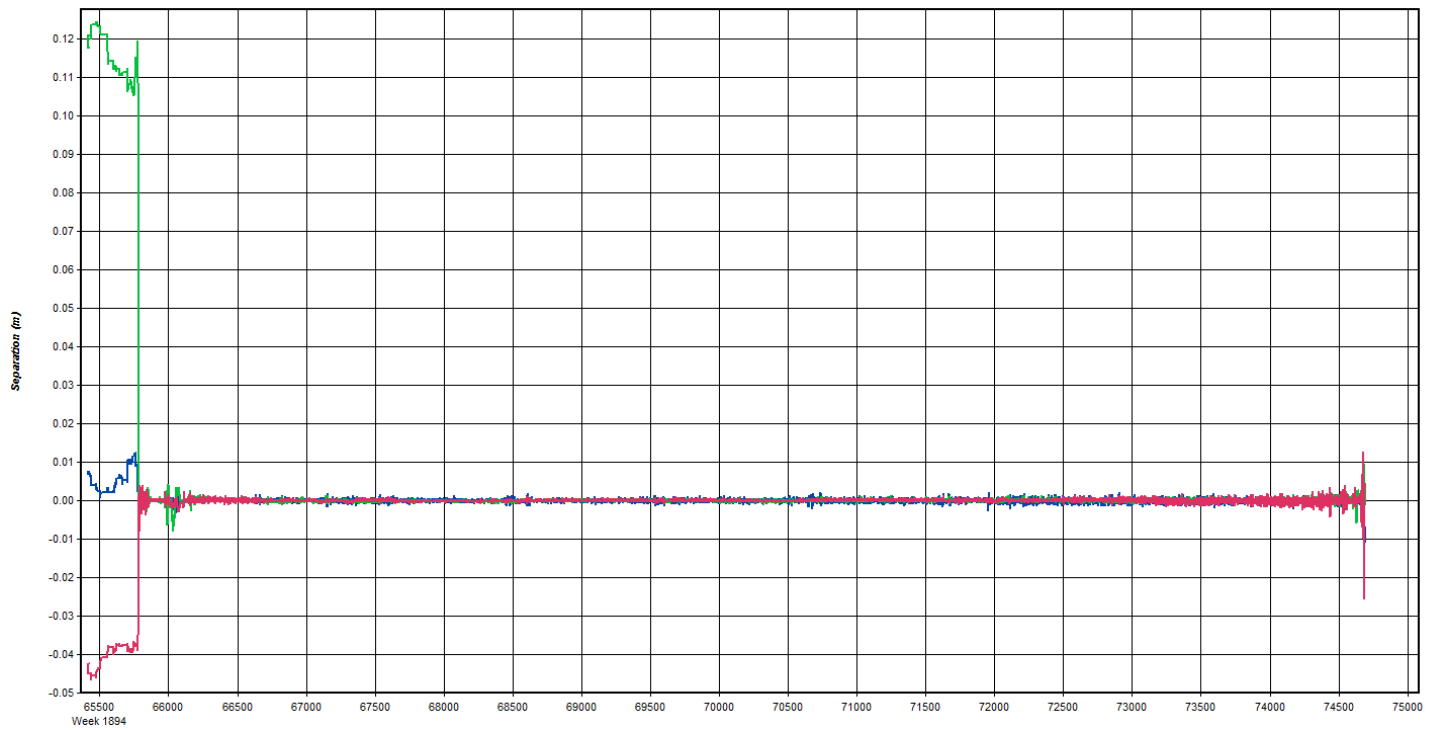
→ LANDED DUE TO FUEL & CREW FATIGUE ←

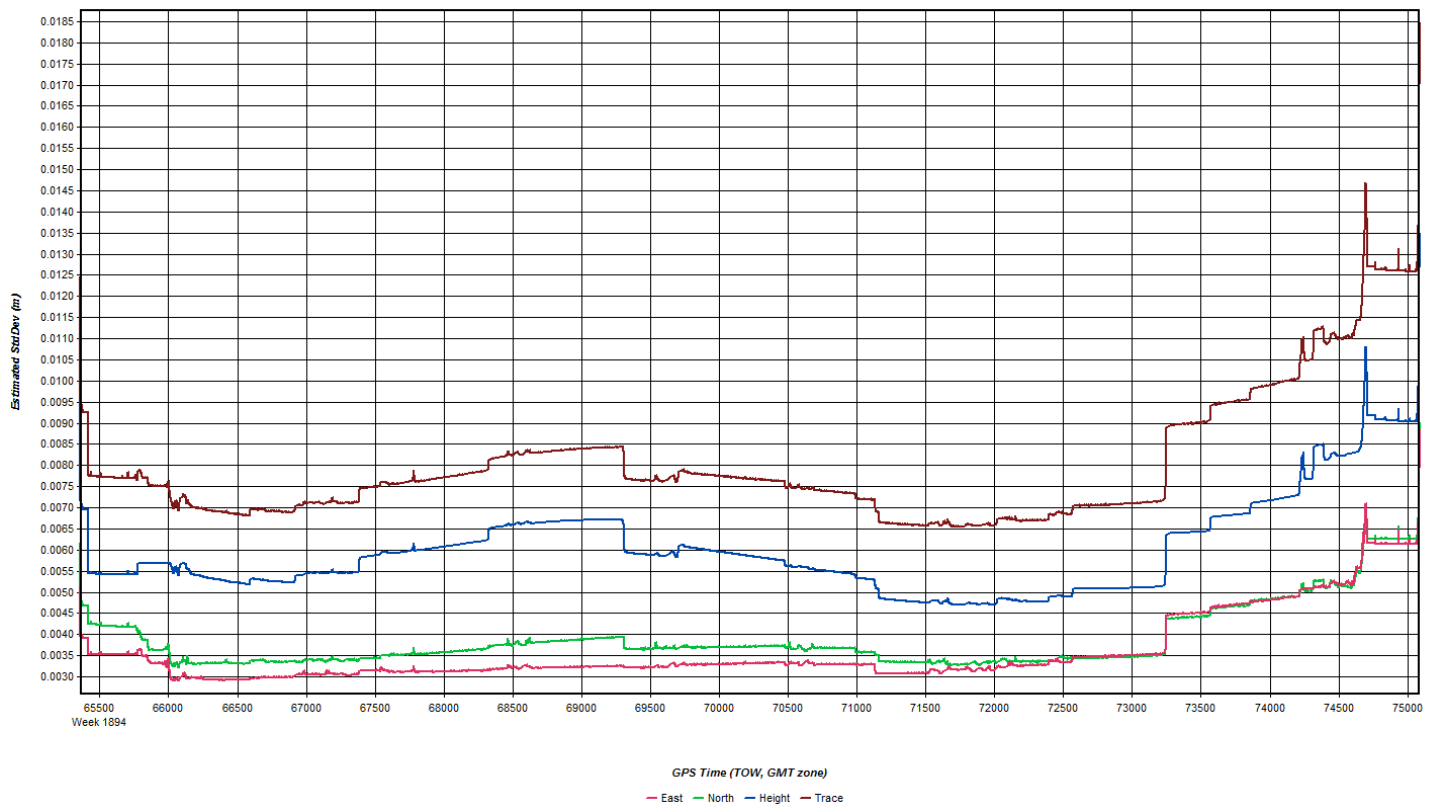
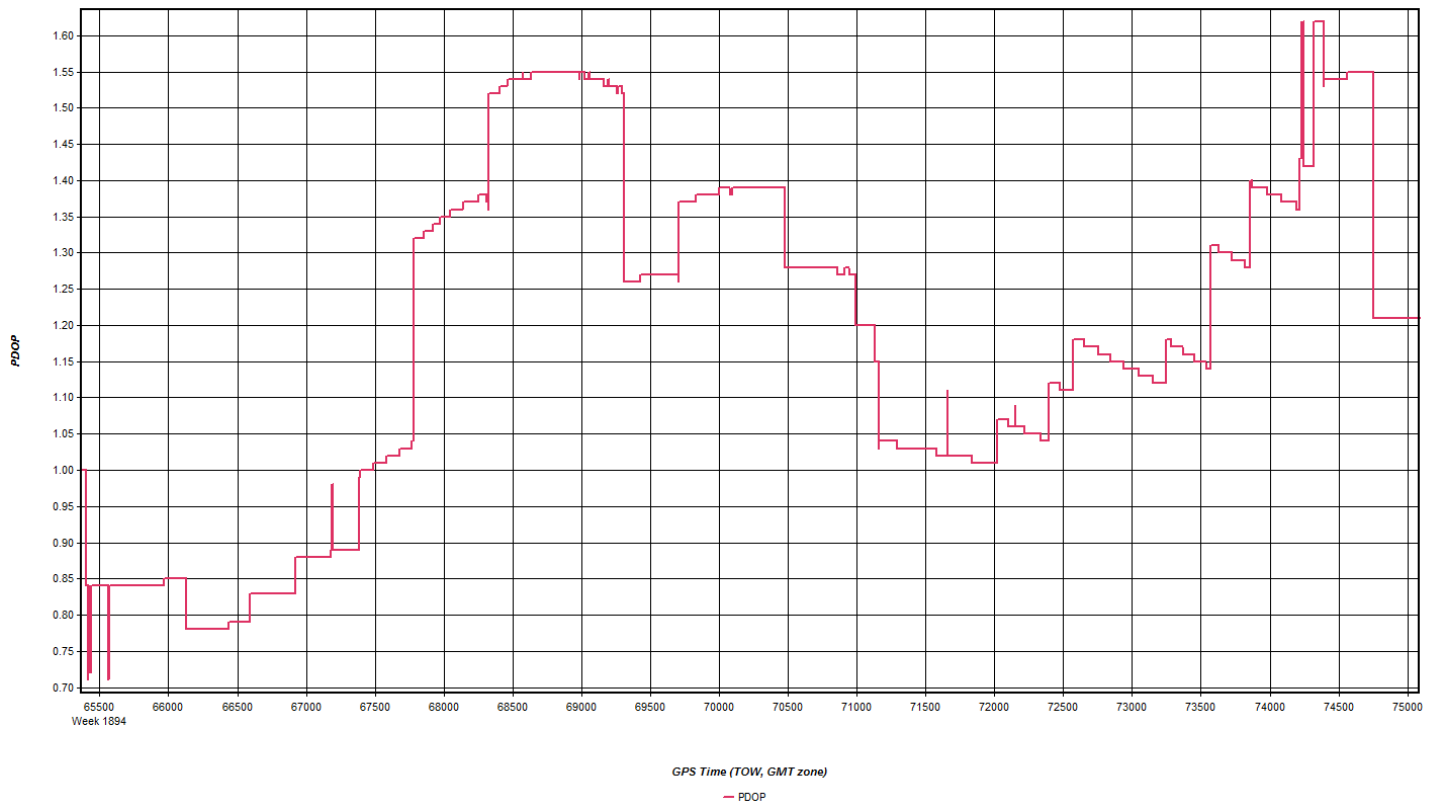
- ice on mount takes

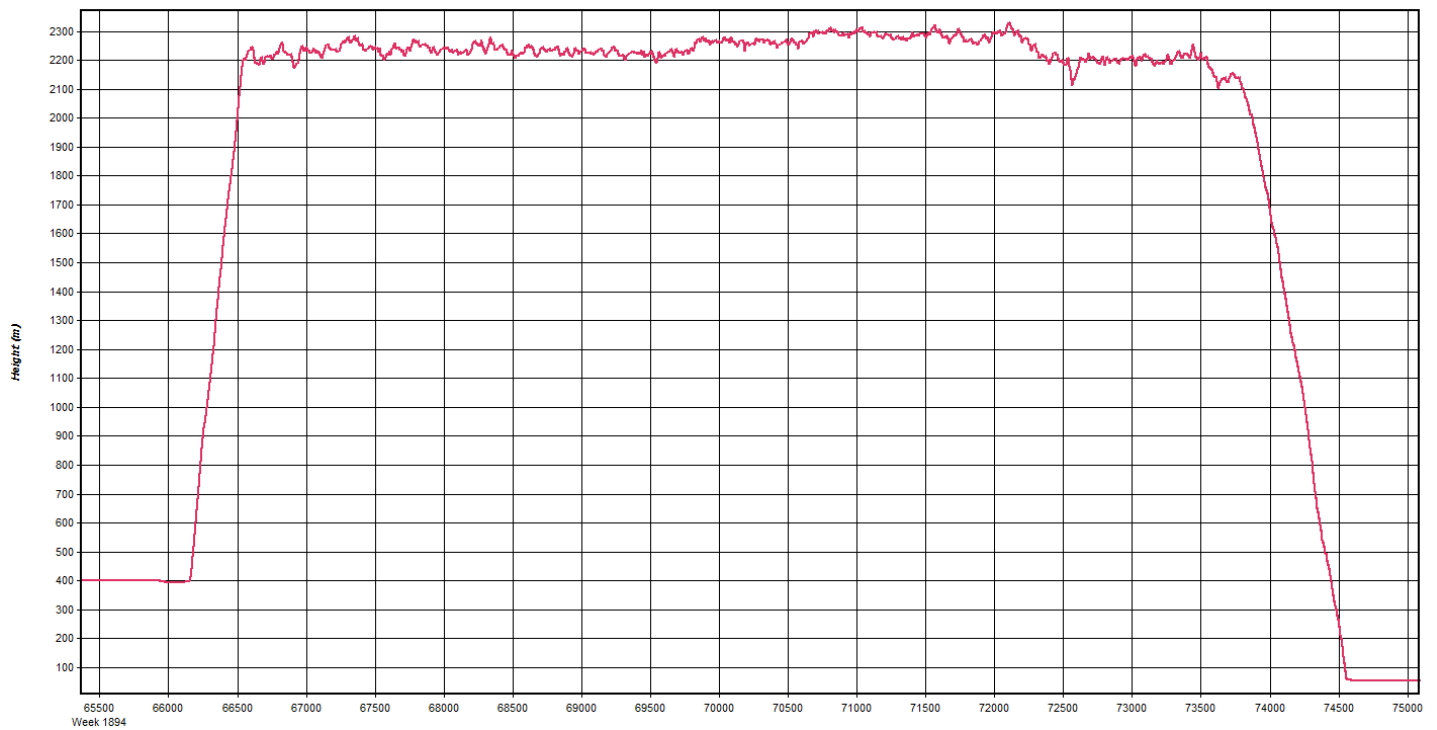
(FIG 8 @ 21:42)

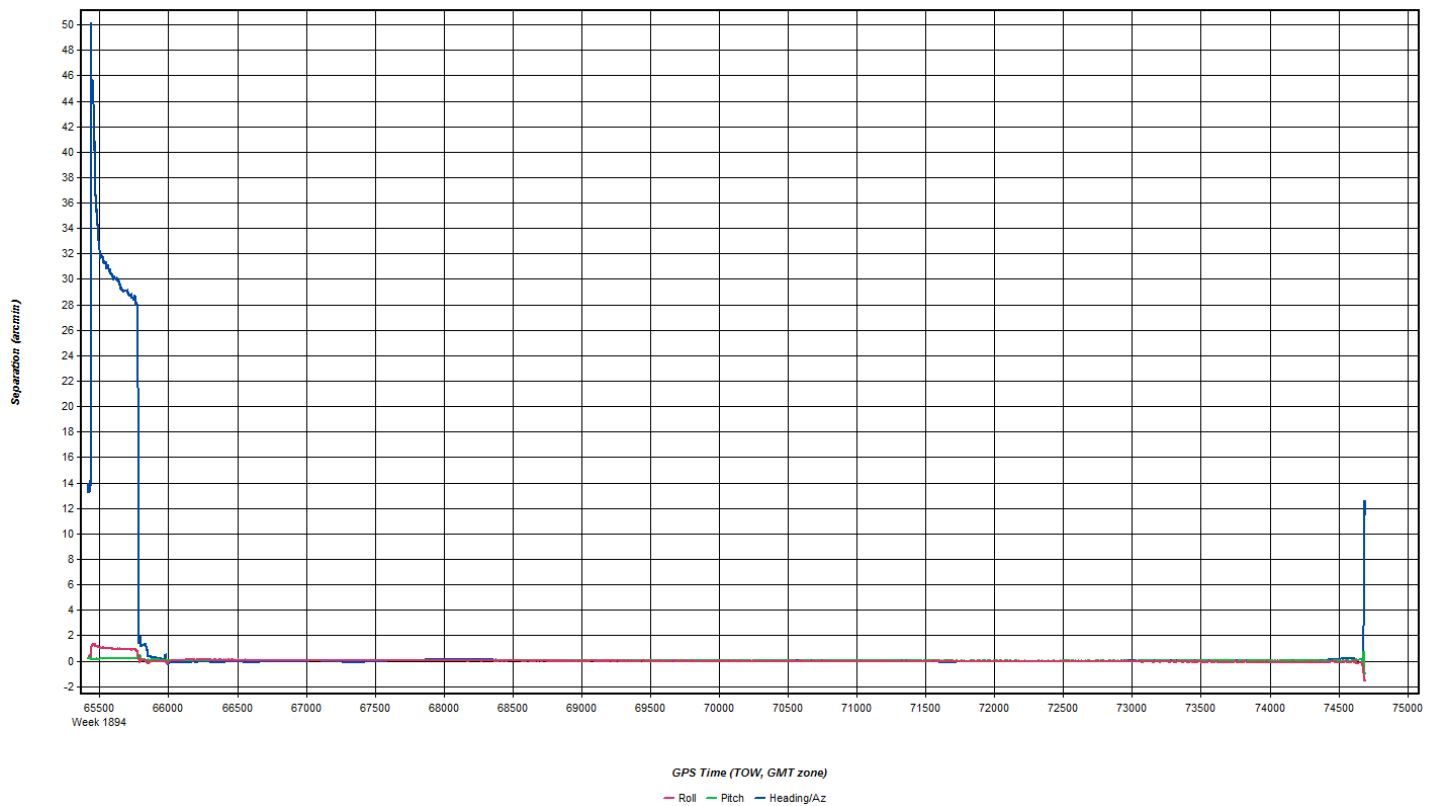
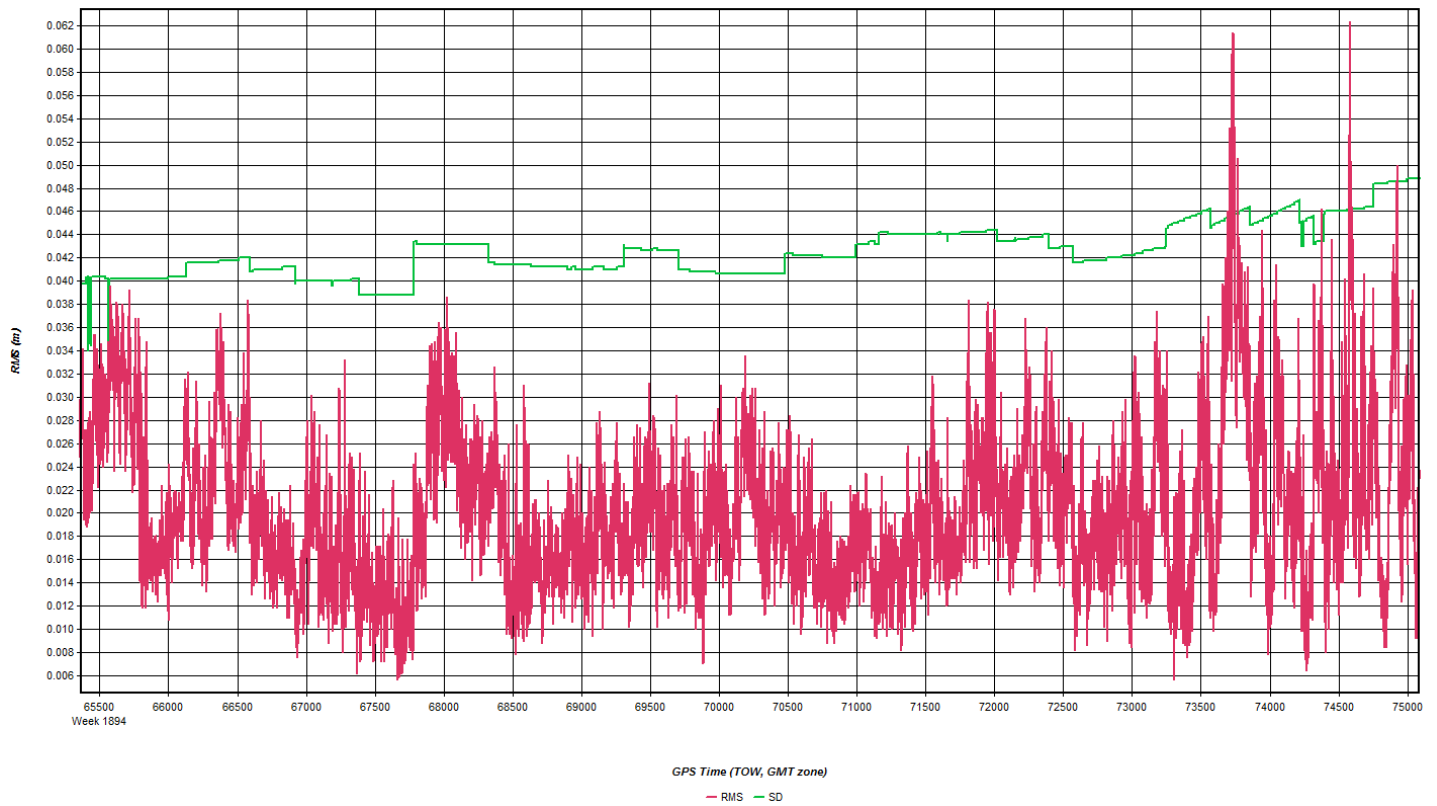
Apr 24, 2016-B (N812TB, SN7161)

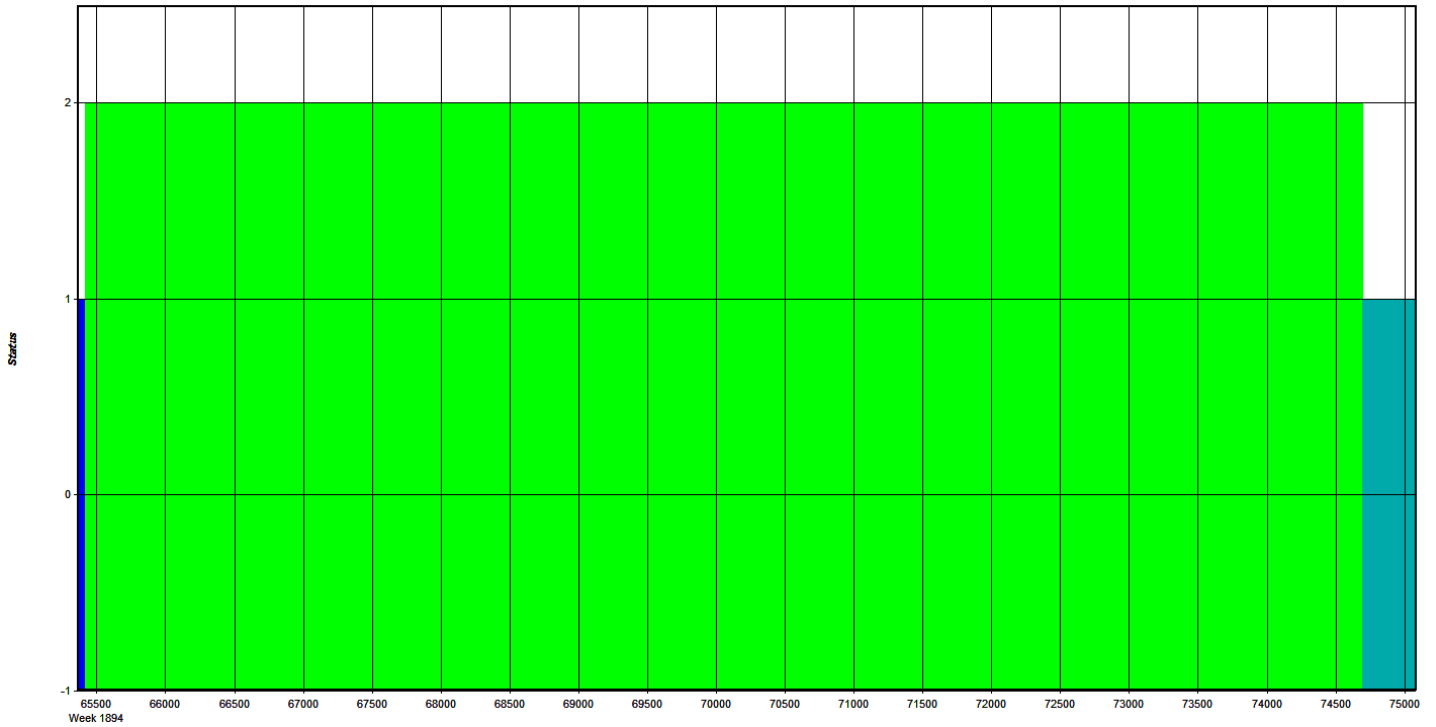












GPS Time (TOW, GMT zone)
 - Float - Forward Fixed - Reverse Fixed - Fixed (2 or more)

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\NETAA\27146_USGS_ME_MEGR_N

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Scanned by CamScanner

Quantum Spatial Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log daily to flight_log_distribution_list@quantumspatial.com)

Date: 24 APR 2016
 URL: [@s.c.d.e](#)

Project: USGS Maine - Block MEGR Proj #: 27146 Flight Mgmt File: 20160424-131335
 Aircraft: N812TB Begin Hobbs: 3939.2 End Hobbs: 3947.3 Total: 3.1 Pilot: Radtke Co-Pilot: — Tech: Haggerty
 Dep Apt: KLEW Dep Time (Local): 0930Z Arr Apt: K3B1 Arr Time (Local): 1237Z 1637Z Tot Time Aloft: 3.1
 COORS: 01N Sta 1: MEGR Sta 2: Flyovers: 01N If Y, times: Sta1) 1405 Sta2) 1632
 GPS Unit: Y/N Sta 1: Flyovers: Y/N If Y, times: Sta1) Sta2)

Gd Temp beg:		°C		End:		°C		OAT beg:		°C		End:		°C		Altimeter begin:		end:		Memory	
Type	Serial #	Alt	AGL	Alt	AGL	Alt	AGL	Alt	AGL	Alt	AGL	Alt	AGL	Max	Avg Pt	Max	Avg Pt	Max	Avg Pt	Max	Avg Pt
LIDAR	FOV	Scan	Rate	Pulses	In Air	Pulses	In Air	Pulses	In Air	Pulses	In Air	Pulses	In Air	Speed	Speed	Power	Power	Speed	Speed	Power	Power
Block MEGR	40°	7161	5701 FT	7380 FT	150 kts	100%	100%	16 GB	15												
1028 305	1412	1414	144	10/17	7150																
5029 170	1436	1448	165	10/17	7400																
5028 350	1453	1507	135	11/16	7340																
5027 170	1511	1523	165	12/16	7380																
5026 350	1528	1542	140	13/16	7250																
5025 170	1546	1558	163	12/18	7310																
5024 350	1602	1616	137	11/18	7300																
5023 023	1619	1621	168	13/17	7370																
FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.																					
5 minute static start @ 1318 stop @ 1323																					
Flyover CORS MEGR @ 1405																					
Test Fire upper																					
Figure 8 start @ 1415 stop @ 1421																					
some ice/snow on lakes. minimal snow visible in tree lines																					
"																					
" 34 knot tail wind impacting southbound speed																					
some ice on lakes. minimal snow visible in tree lines																					
" 34 knot tail wind impacting southbound speed																					
some ice/snow on lakes. minimal snow visible in tree lines																					
Cross Tie upper																					
Figure 8 start @ 1621 stop @ 1626																					
Flyover CORS @ 1632																					
5 minute static start @ 1641 stop @ 1646																					

Total Proj Lines: 136 Lines Flown: 6 Lines Remain: 65 Online Time: 2.7 Job Time: 0.9 Notes:

Scanned by CamScanner

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log daily to flight_log_distribution_list@quantumspatial.com)

Date: 24 APR 2016
 UIC: A C D E

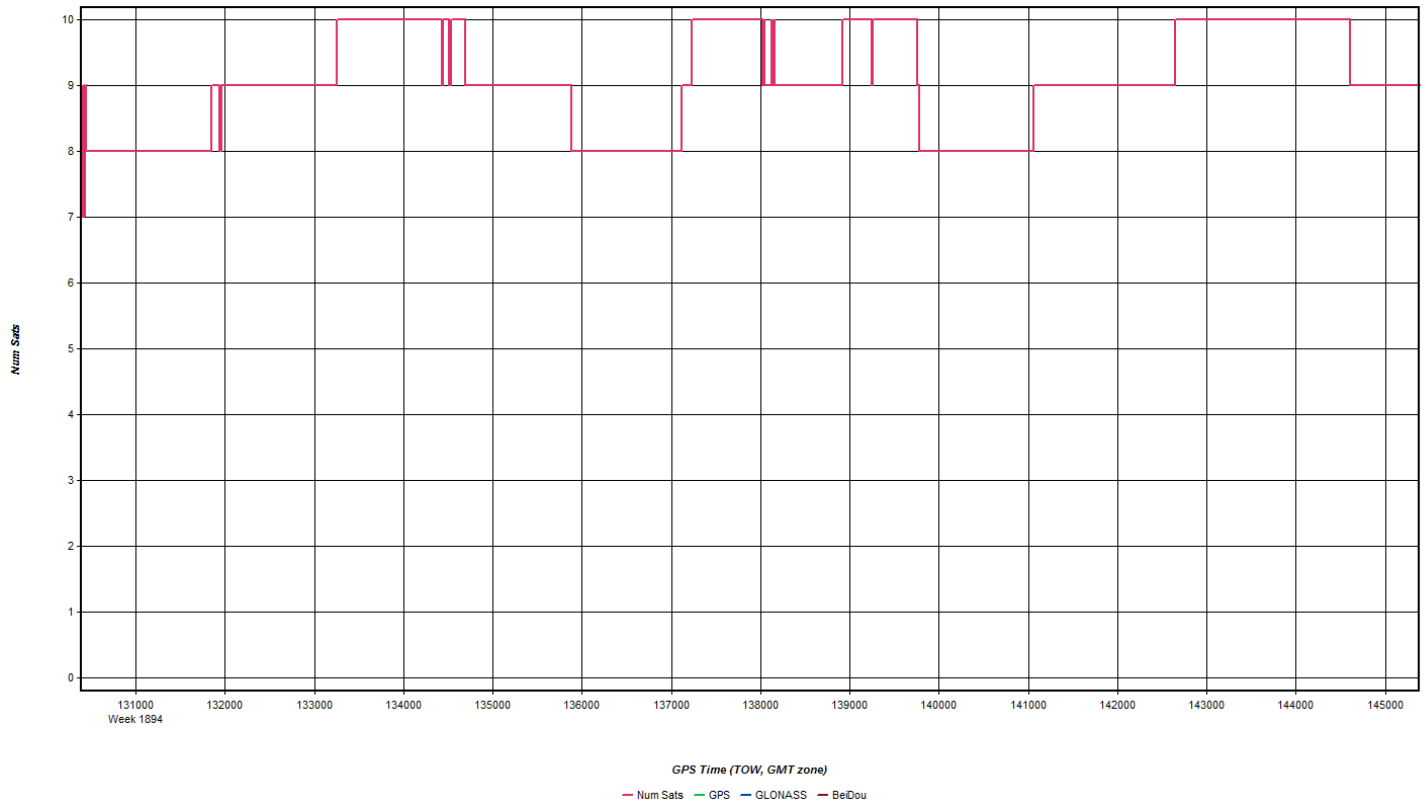
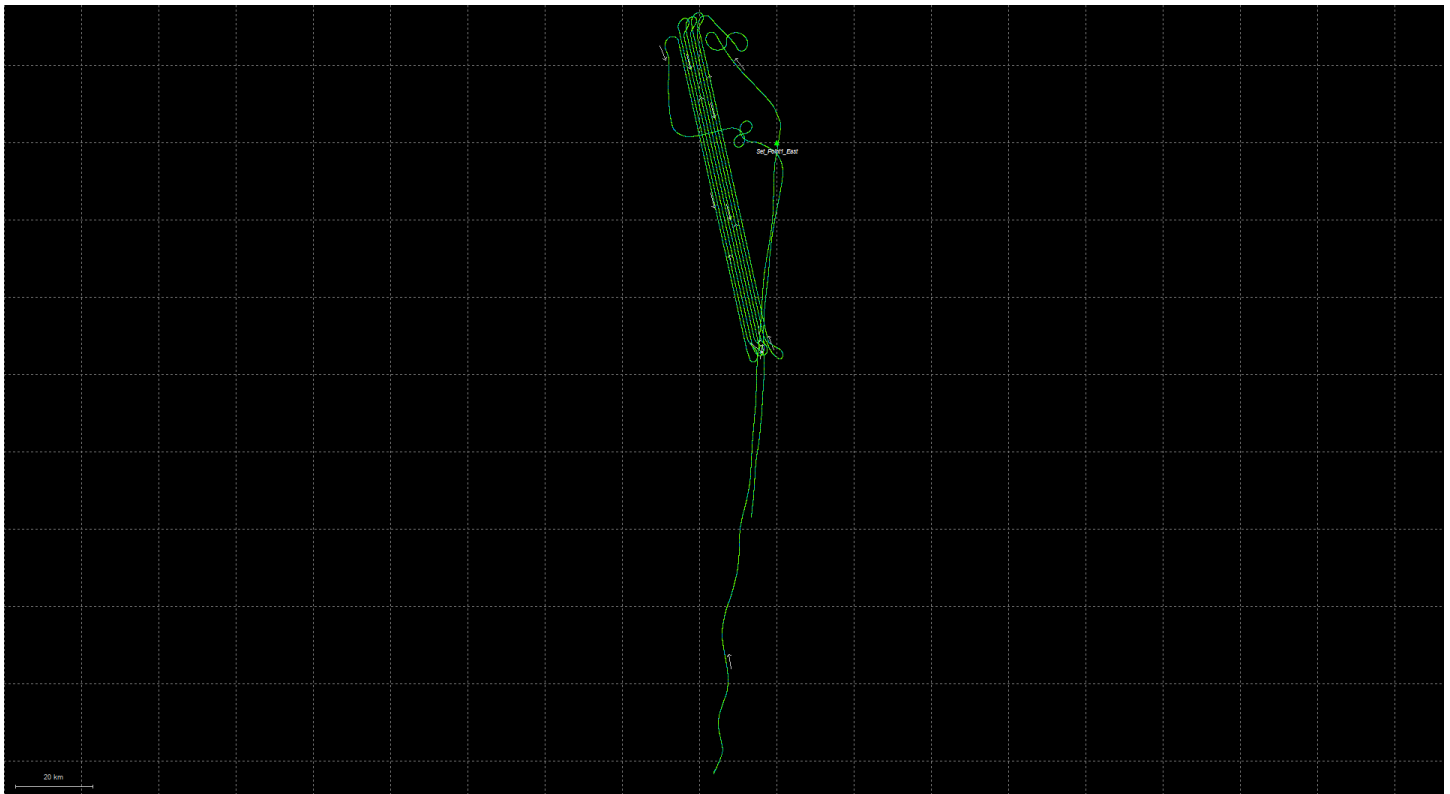
Project: USGS Maine-Block MEGR Proj #: 27146 Flight Mgmt File: 20160424-180507
 Aircraft: NB12TB Begin Hobbs: 3942.3 End Hobbs: 3944.6 Total: 2.3 Pilot: Radtke Co-Pilot: Tech: Mingo
 Dep Apt: KSBT Dep Time (Local): 1420 (Z): 1820 Arr Apt: KLEW Arr Time (Local): 1624 (Z): 2042 Tot Time Aloft: 2:4
 CORRS: 0/N Sea 1: MEGR Sea 2: Flyovers: (Y/N) If Y, times: Sea 1) 2007 Sea 2) 2007
 GPS Unit: Y/N Sea 1: Sta 1: Flyovers: Y/N If Y, times: Sea 1) Sea 2) Sta 2)

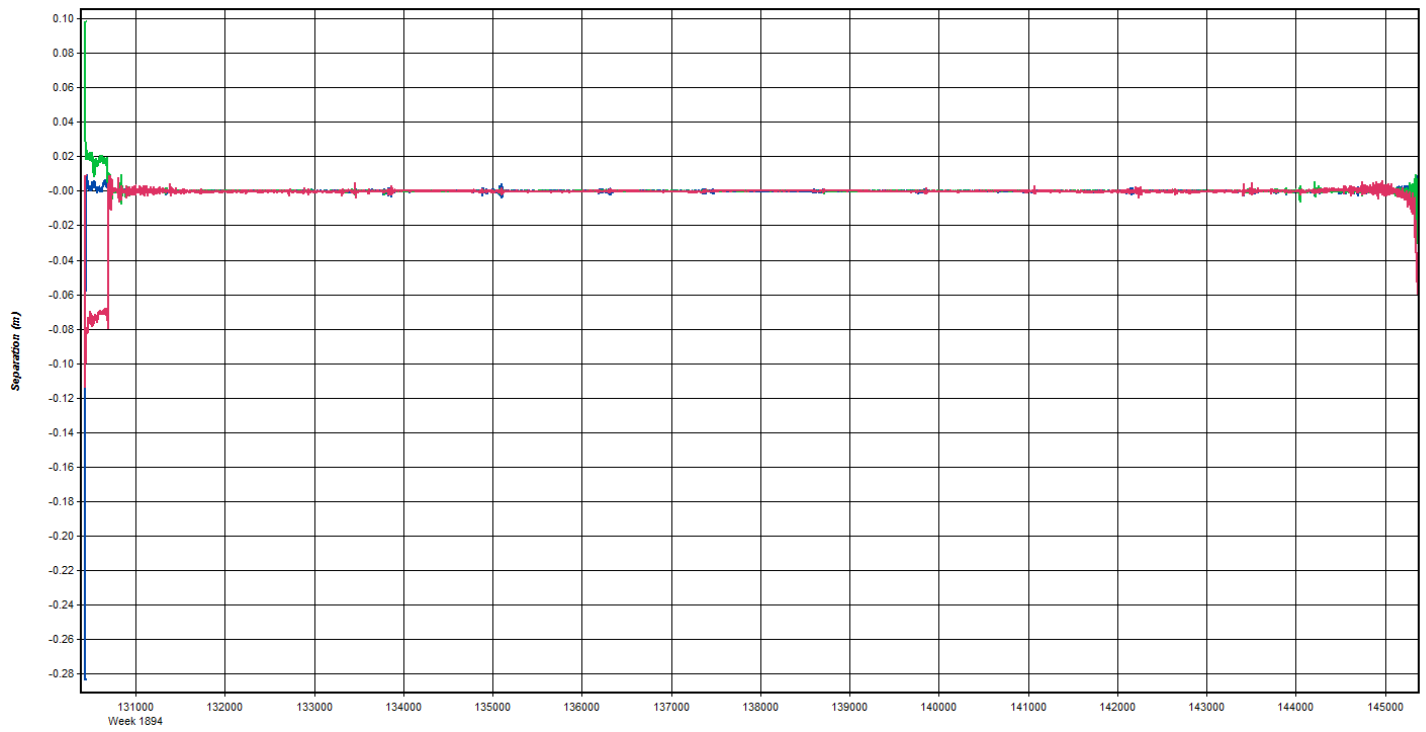
Gd Temp beg:	°C	End:	°C	OAT beg:	°C	End:	°C	Altimeter begin:	
								Alt	End
LIDAR	Type: ALS70	Serial #: 716	Alt: 7380 FT	Avg Terr Ht: 2280 FT	Max Glpd: 150 kts	Avg Pt Spd: 150 kts	Power: 100%	Power: 100%	Power: 100%
	FOV: 40°	Scan Freq: 53 Hz	MPIA: Y/N						

Line #	Hdg	Start [UTC]	End [UTC]	Gd Spd	Foot/Sec	GPS Altitude	Crab	Turn [0...1]	FLIGHT LINE NOTES - visibility, clouds, smoke, parallel, etc.
Block MEGR									5 minute static start @ 1810 stop @ 1815
Footline 210	1845	1844	1844	144	12/16	7316			Figure 6 start @ 1836 stop @ 1841
Tst 215	1844	1844	1844	144	12/16	7300			ALS Data Logger Error @ 1836
5023	190	1949	1900	160	12/16	7300			Test Fire No % Returns
5022	350	1904	1919	133	12/15	7320			Test Fire % Returns Good
502	190	1923	1935	157	12/16	7360			Turbulence. Minimal snow. ice on lakes
5000	350	1938	1951	155	11/16	7540			Turbulence. Minimal snow. ice on lakes
5022	078	1954	1956	174	11/17	7560			Turbulence. Minimal snow. ice on lakes
									Bad Turbulence. min snow. ice on lakes
									Bad Turbulence. min snow. ice on lakes
									Bad Turbulence. min snow. ice on lakes
									Figure 8 start @ 1956 stop @ 2001
									Figure 8 start @ 1956 stop @ 2001
									Figure 8 start @ 1956 stop @ 2001
									5 minute static start @ 2015 stop @ 2050

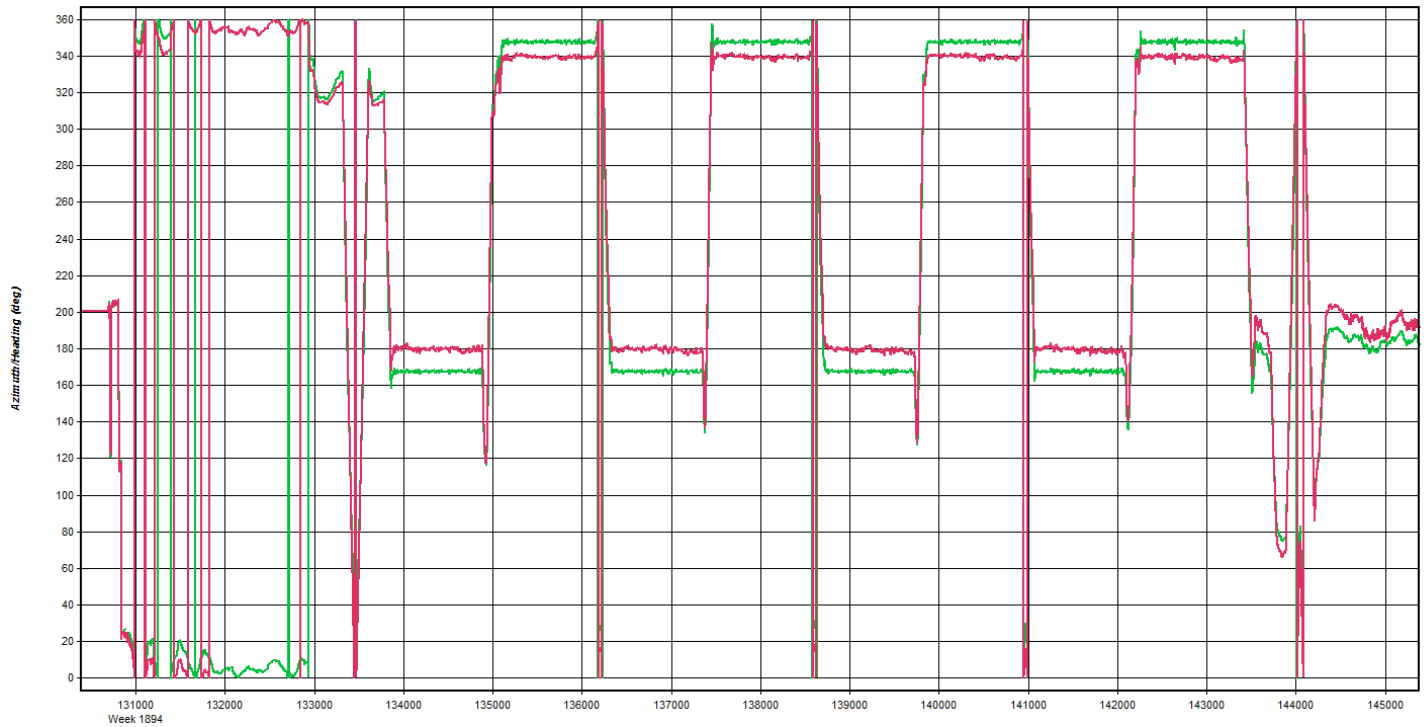
Total Proj Lines: 136 Lines Flown: 4 Lines Remains: 61 Online Time: 1:2 Mob Time: 1:2 Notes:

Apr 25, 2016-A (N73TM, SN7178)

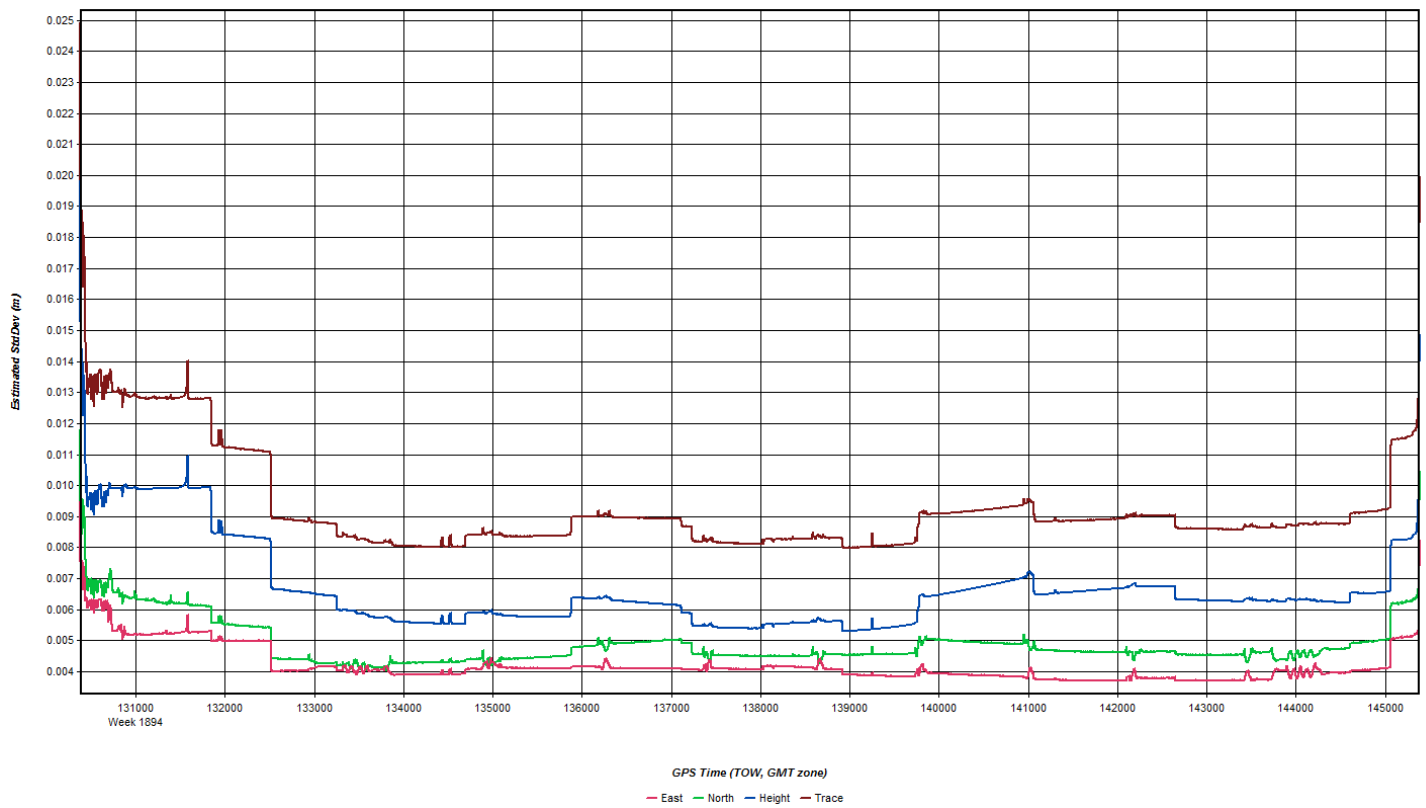
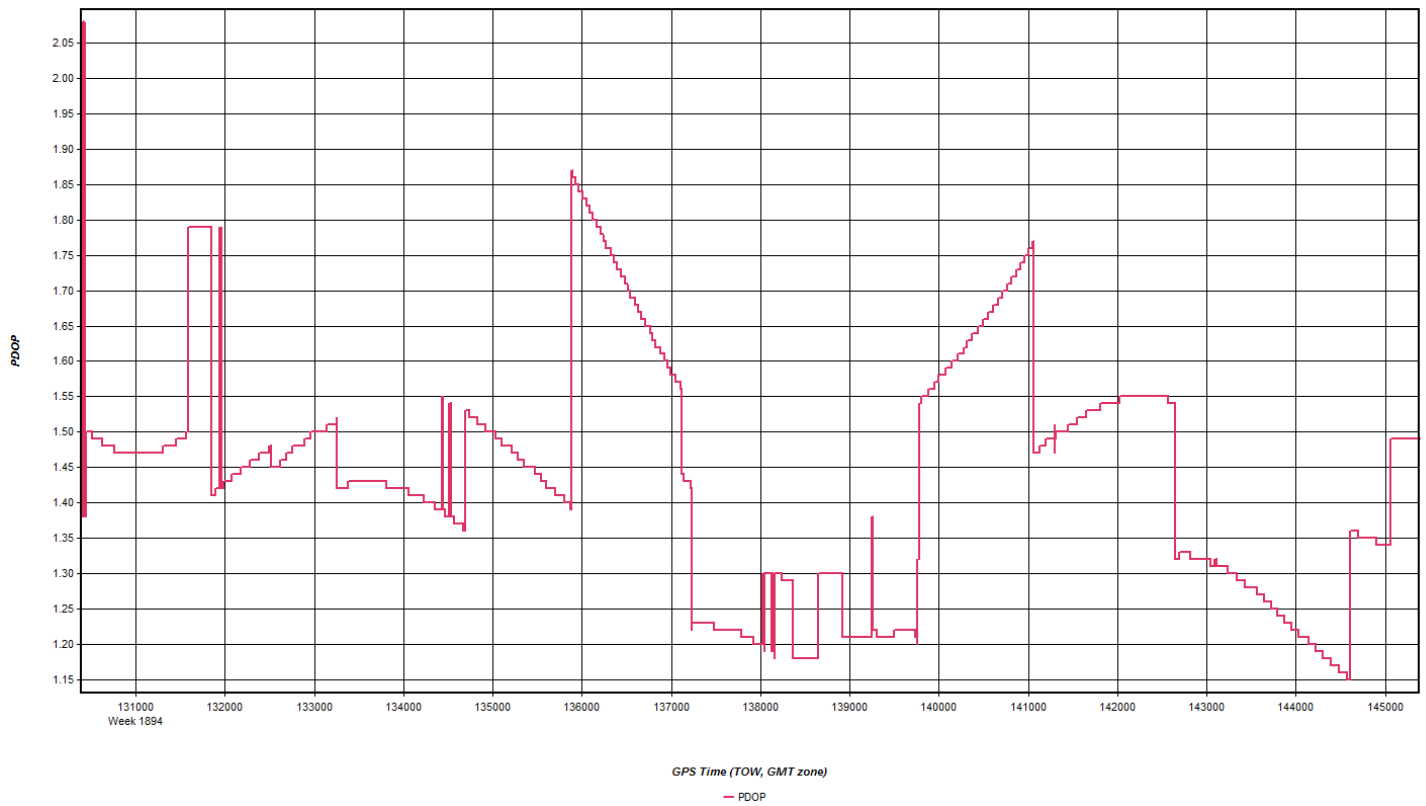


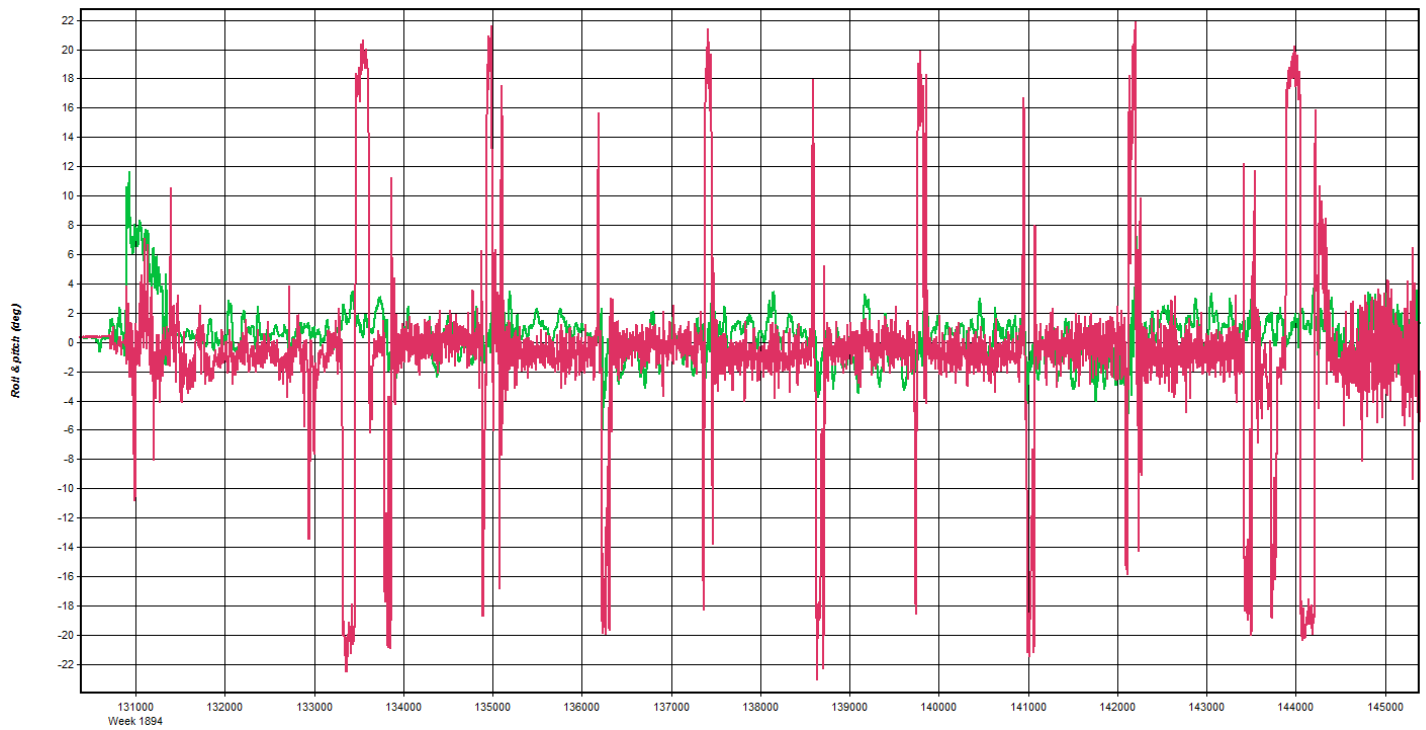


GPS Time (TOW, GMT zone)
— East — North — Up



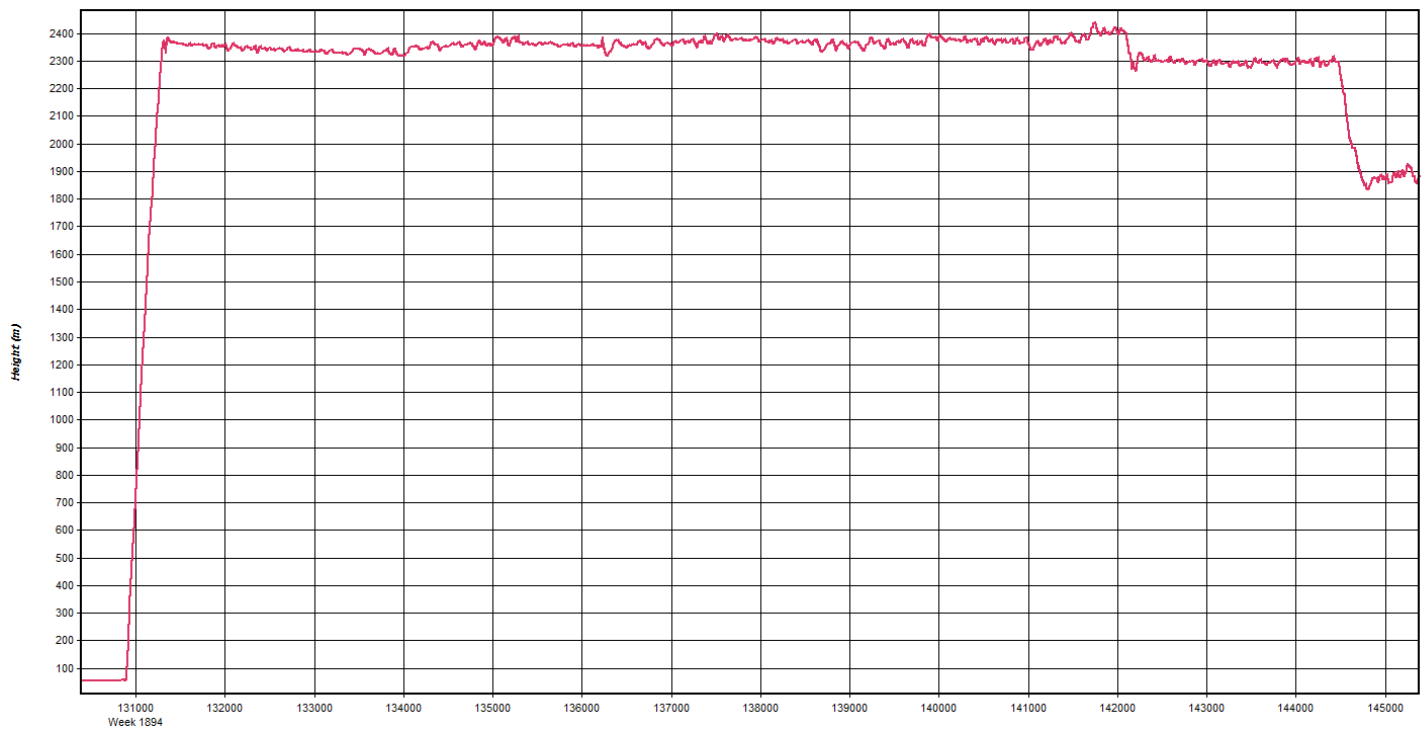
GPS Time (TOW, GMT zone)
— Heading/Azimuth — GPS-COG





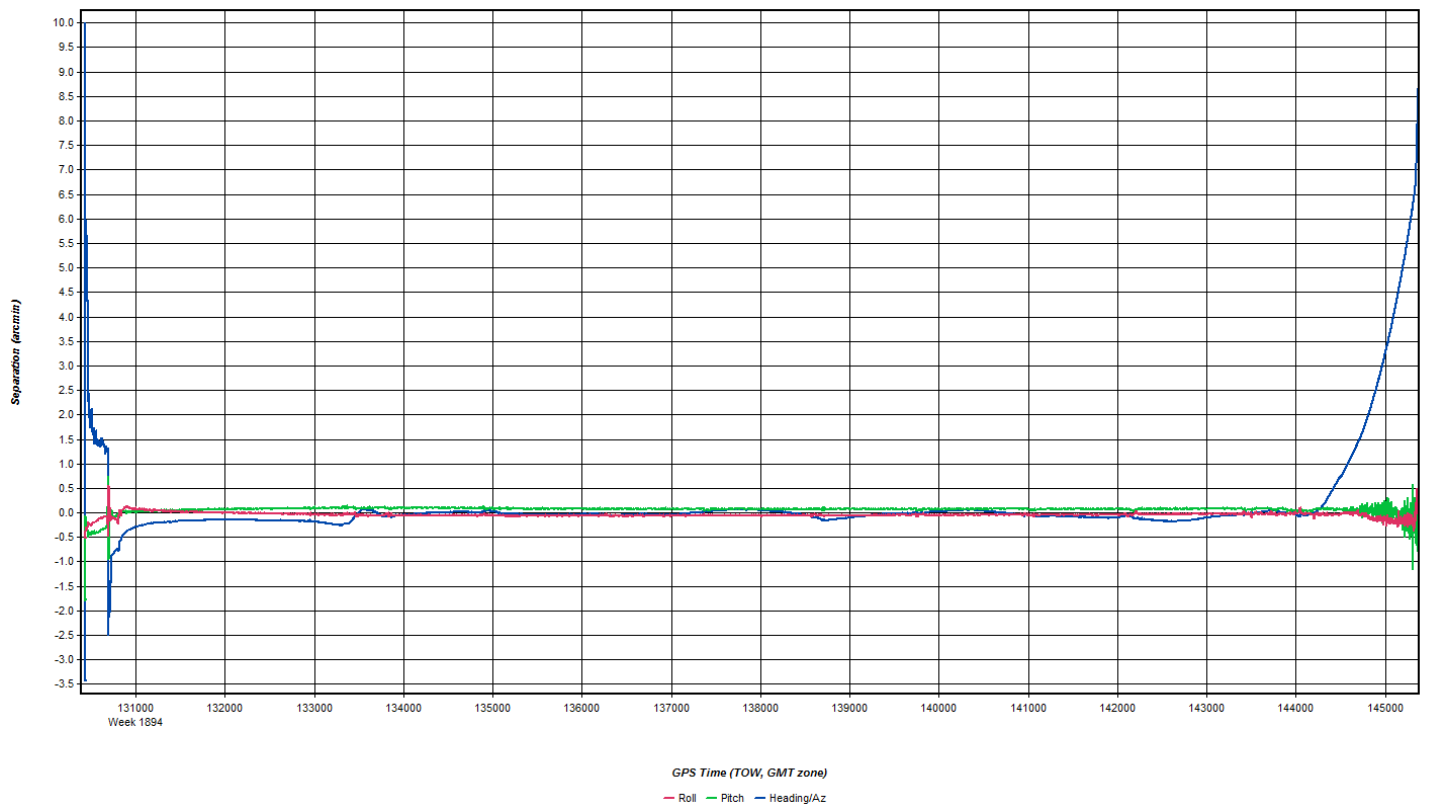
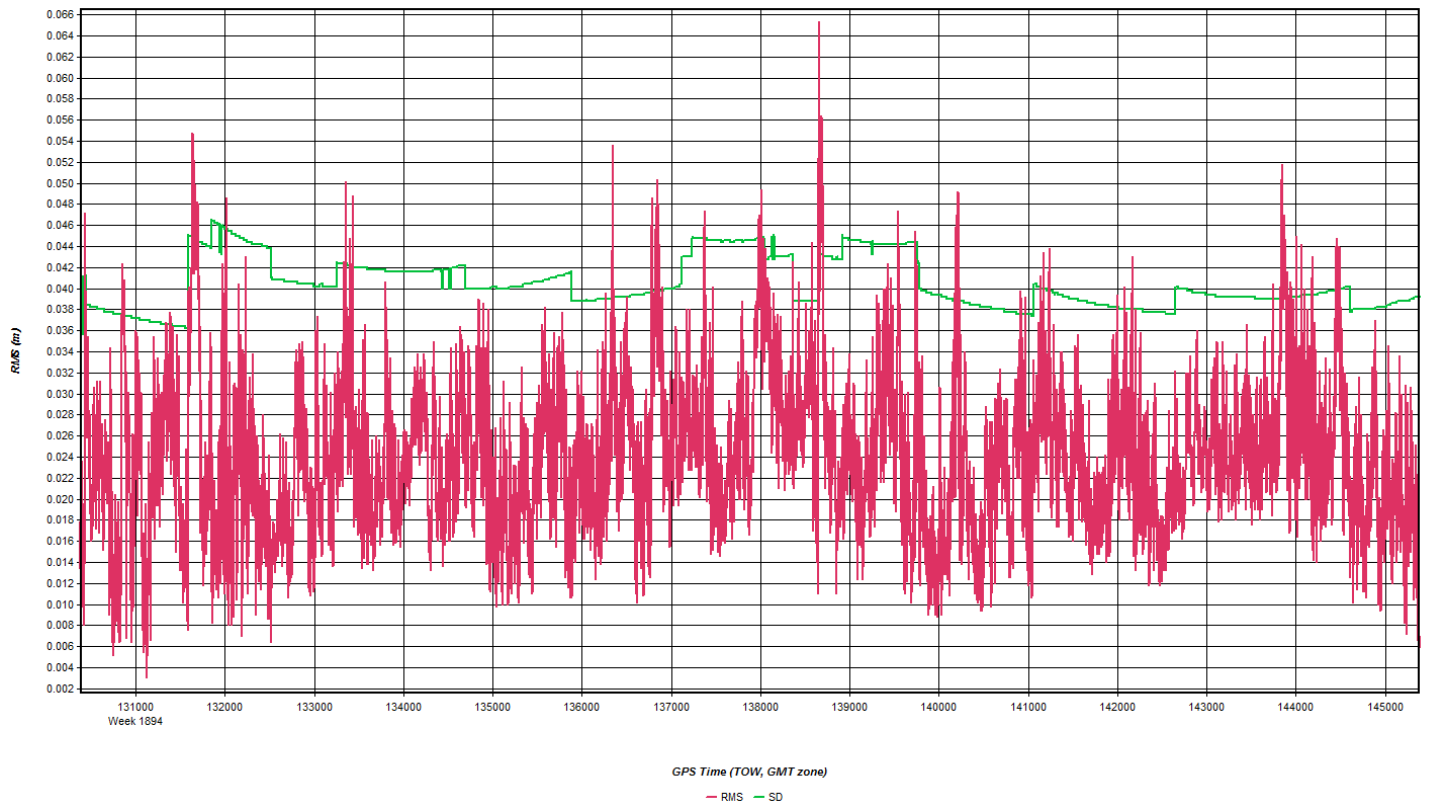
GPS Time (TOW, GMT zone)

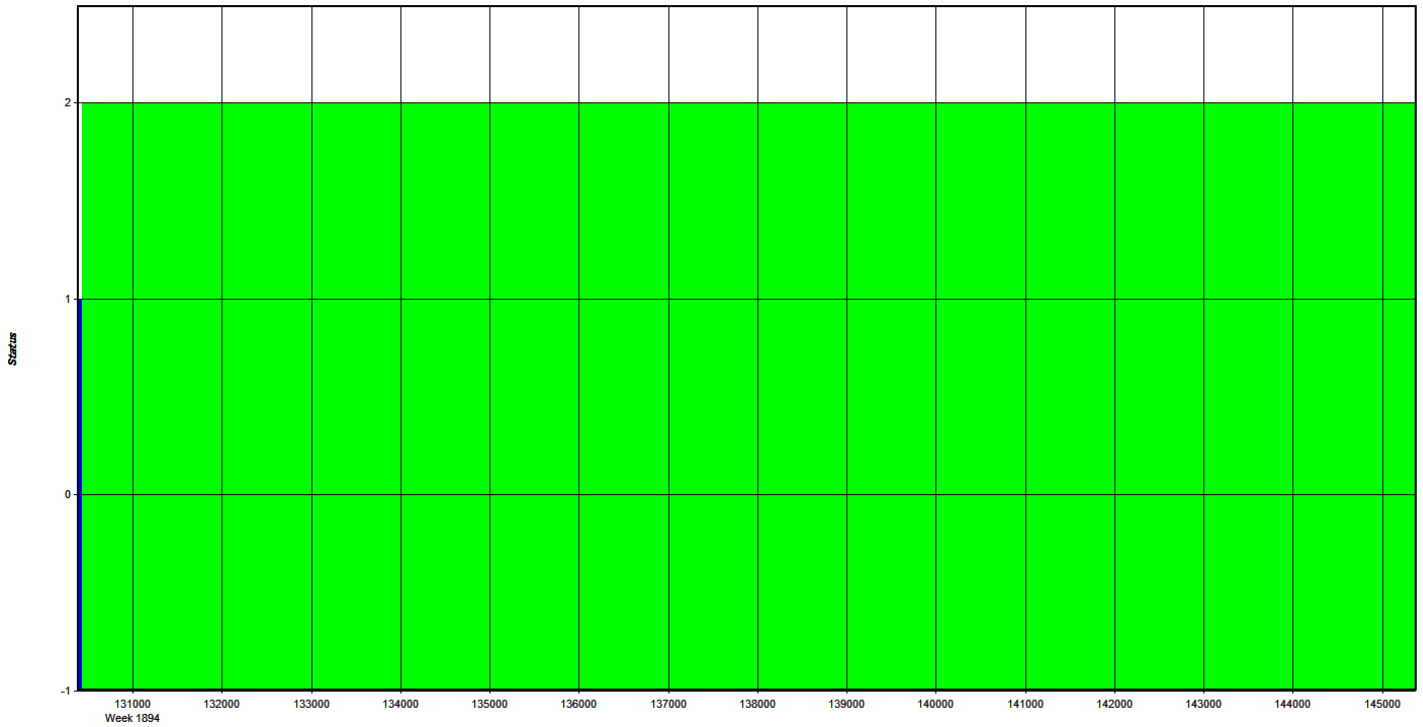
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: Set_Point1_East Name: Set_Point1_East Disabled
 File: E:\Proc\27146_Maine_2016\2661\Base_Data_042416_042516\

Coordinates
 Latitude: North 45 30 23.79424 Compute from PPP
 Longitude: West 70 04 53.68744 Enter Grid Values
 Ellipsoidal height: 471.643 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: N/A View STA File
 Antenna profile: NOV702GG Info
 Measured height: 2.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 2.067 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Flight Log

Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log only to flight_log_distribution_list@quantumspatial.com) 2016-01-25-12:02:33

Date: APRIL 25th 2016
 UTM: B C D E Pg 1 of 1

Project: USGS WESTERN MARINE Proj #: 27146 Flight Mgmt File: USGS_Maine - Set Point 1 - S717B-1504ts Tech: P. HRAIBAK
 Aircraft: N73TM Begin Hobbs: 6207.6 End Hobbs: 6207.6 Total: 4.3 Pilot: D. WAGNER Co-Pilot: --

Dep Apt: KLEW Dep Time (Lcl): 8:21 [Z]: 12:21 z Arr Apt: 3B1 Arr Time (Local): 12:39 [Z]: 16:39 z Tot Time Aloft: 4:18
 CORS: Y (N) Sta 1: -- Sta 2: -- Flyovers: Y/N IF Y, times: Sta1) -- Sta2) --

GPS Unit: (Y) N Sta 1: 'SET POINT ONE EAST' Sta 2: -- Flyovers: (Y) N IF Y, times: Sta1) 12:54 #16:42 Sta2) --

Gd Temp beg: +06 °C End: +10 °C OAT beg: -10 °C End: -08 °C Altimeter begin: 30.04" end: 29.97"

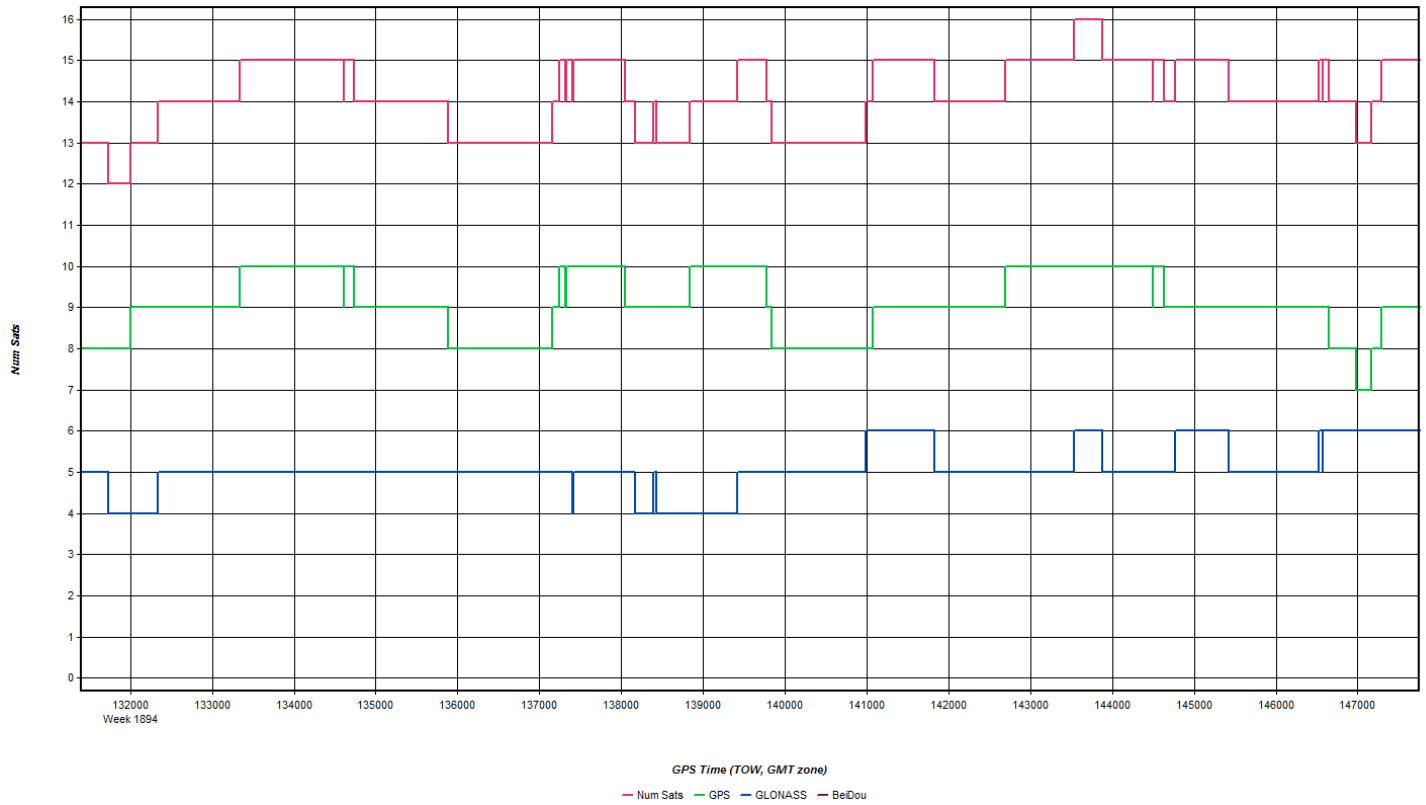
Type	ALS 70	FOV	Scan Freq	Semit #	End UTC	Gd Spd	POOF/s	GPS Altitude	Crab	Turn (0.1)	Avg Terr HE	Max Gdspd	Pulse Rate	Power	Avg Pt Spacing	PPSM	Mag GB	Ech GB	Tot GB	Storage Name/ #
LIDAR	40°	40°	53.4 Hz	MpiA (Y) N	13:27	155 kt	1.3/16	7750'	12°	0	-kt, smooth, skt above & below, some snow below @ N end, 35 kt crosswind	150 kt	2610 kHz	100%	?	2.2				
S	13:31	13:48	155 kt	1.2/15	7750'	10°	0	-kt, smooth, skt above & below, some snow below @ N end, 40 kt crosswind												
N	13:52	14:08	155 kt	1.1/16	7800'	11°	0	-kt, smooth, skt above & below, some snow below @ N end, 35 kt crosswind												
S	14:11	14:28	150 kt	1.1/16	7800'	9°	0	-kt, smooth, skt above & below, some snow below @ N end, 40 kt crosswind												
N	14:32	14:48	155 kt	0.9/19	7800'	12°	0	-kt, smooth, skt above & below, some snow below @ N end, 35 kt crosswind												
S	14:51	15:08	150 kt	1.1/16	7850'	8°	0	-kt, smooth, skt above & below, some snow below @ N end, 40 kt crosswind												
N	15:11	15:27	155 kt	1.2/16	7800'	11°	0	-kt, smooth, skt above & below, some snow below @ N end, 35 kt crosswind												
S	15:31	15:49	140 kt	1.3/17	7600'	7°	0	-kt, smooth, skt above & below, some snow below @ N end, 35 kt crosswind												
N	15:56	15:57	185 kt	1.3/17	7550'	8°	0	-kt, smooth, skt above & below, no snow below, 35 kt crosswind (FIG 8 @ 15:59 z)												

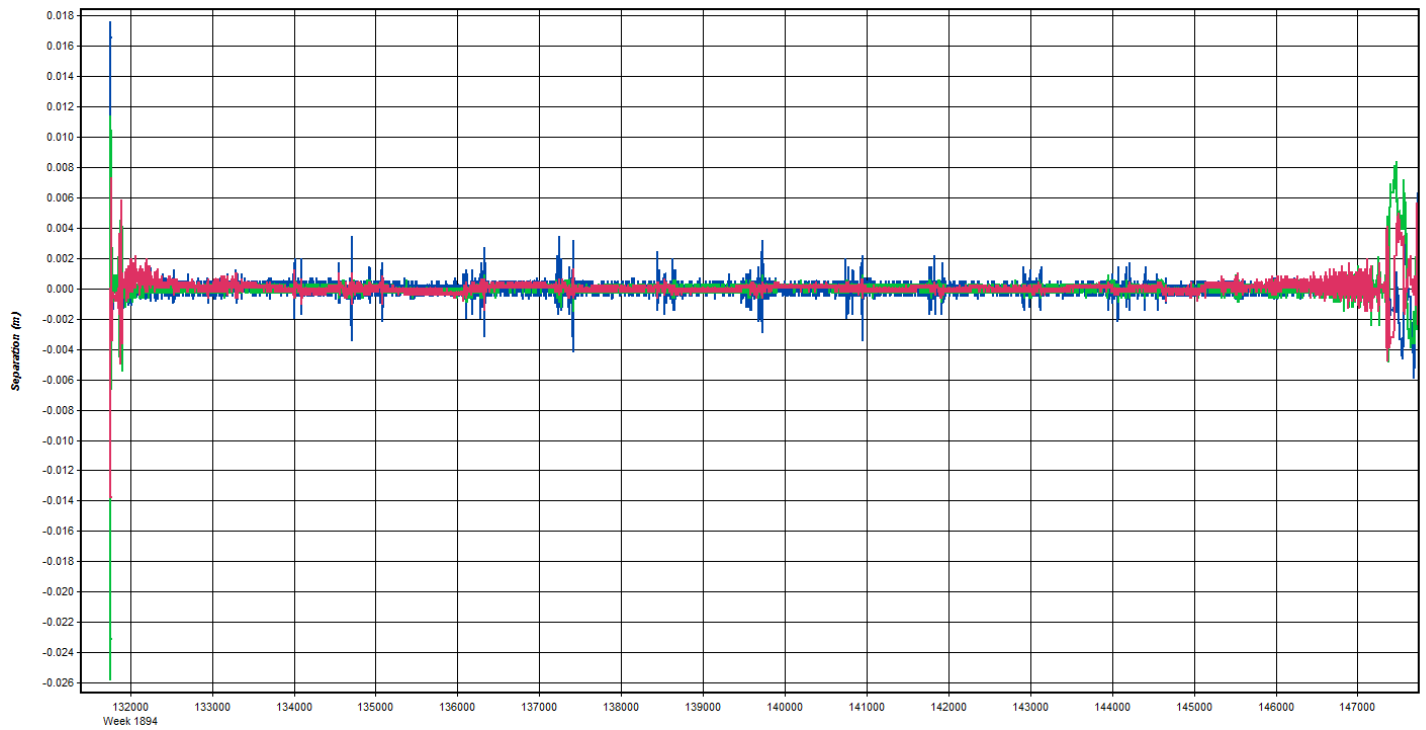
FLIGHT LINE NOTES - visibility, clouds, smoke, parata, etc. (FIG 8 @ 13:03 z)

→ LANDED FOR FUEL ←
 (ice on runway/holes)

Total Proj Lines: 53 Lines Flown: 8 Lines Remain: 55 Online Time: 2:46 Mob Time: 1:32 Notes: 20160425-12:02:33 - 12:12:29

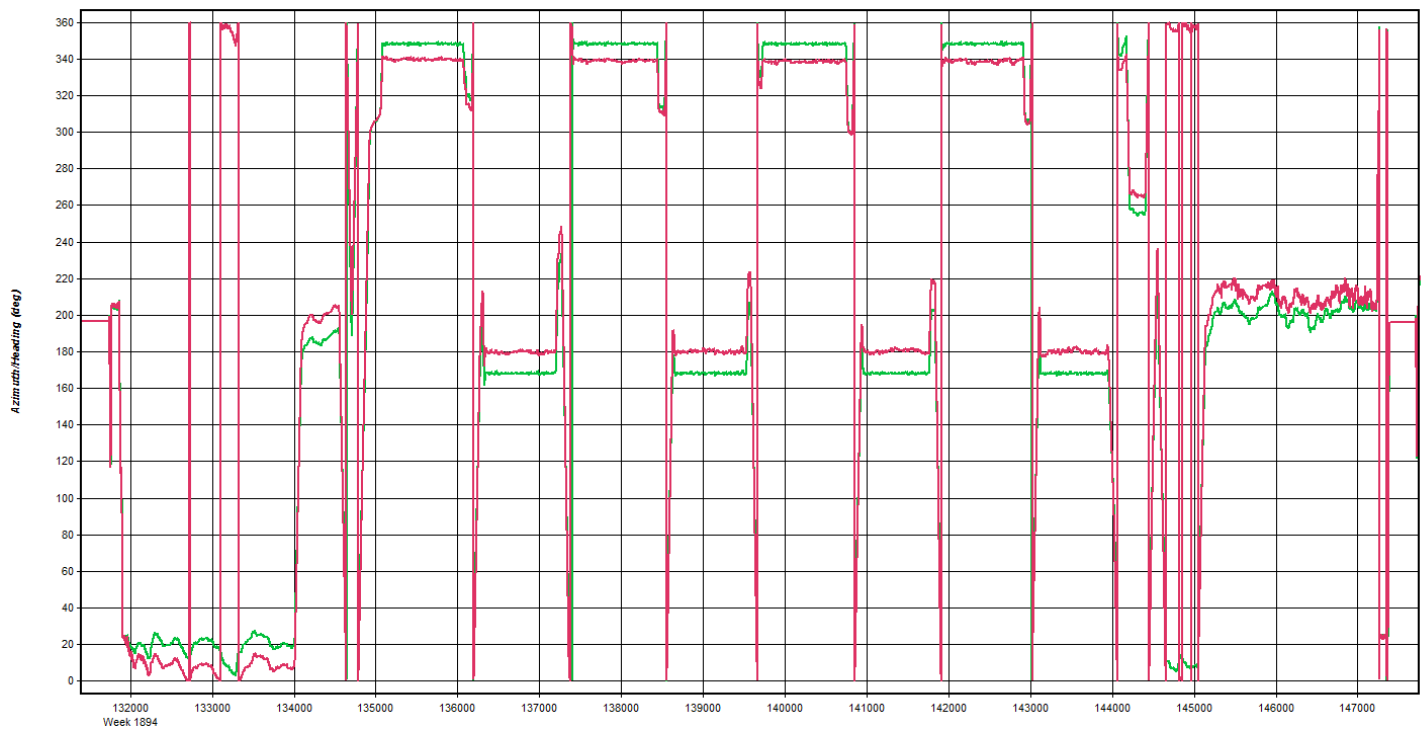
Apr 25, 2016-A (N812TB, SN7161)





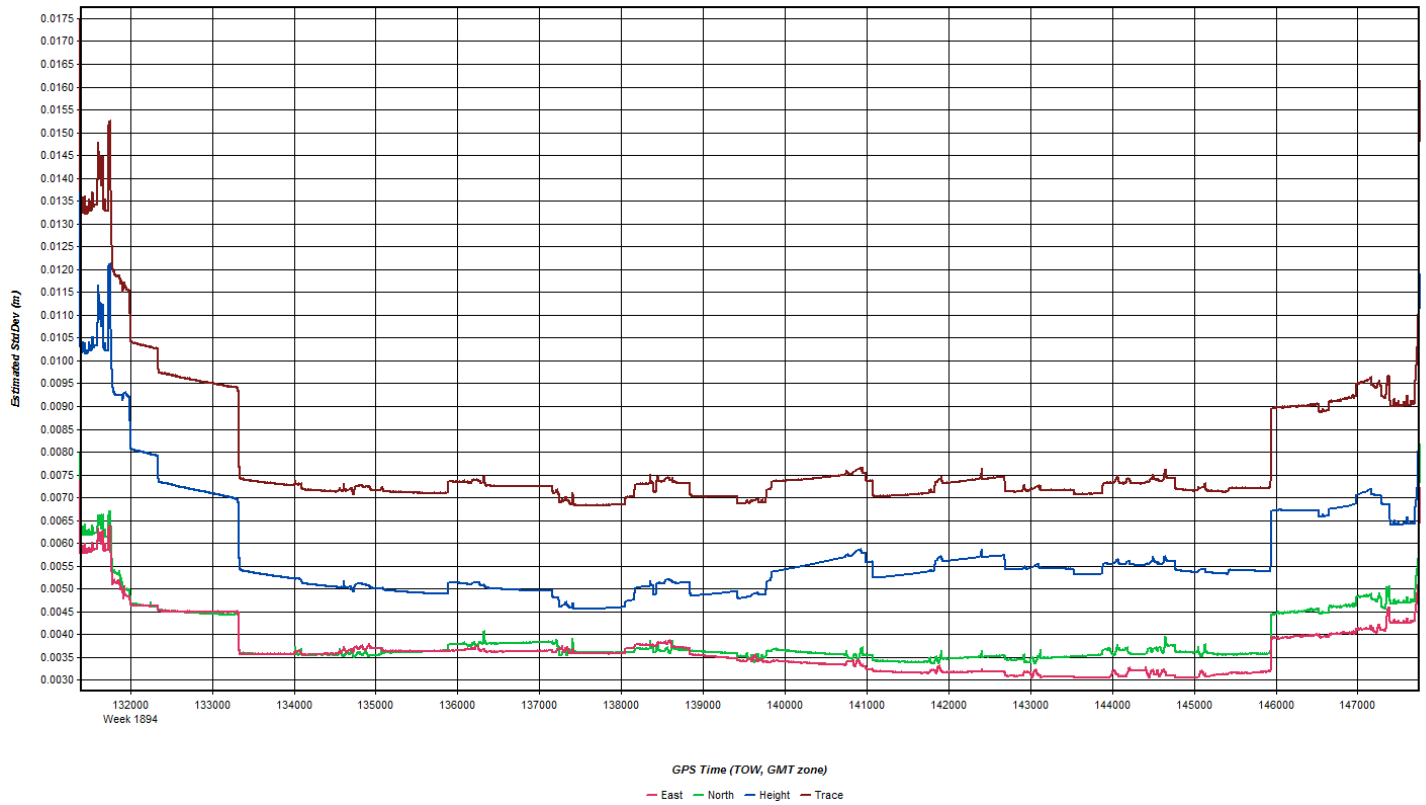
GPS Time (TOW, GMT zone)

— East — North — Up



GPS Time (TOW, GMT zone)

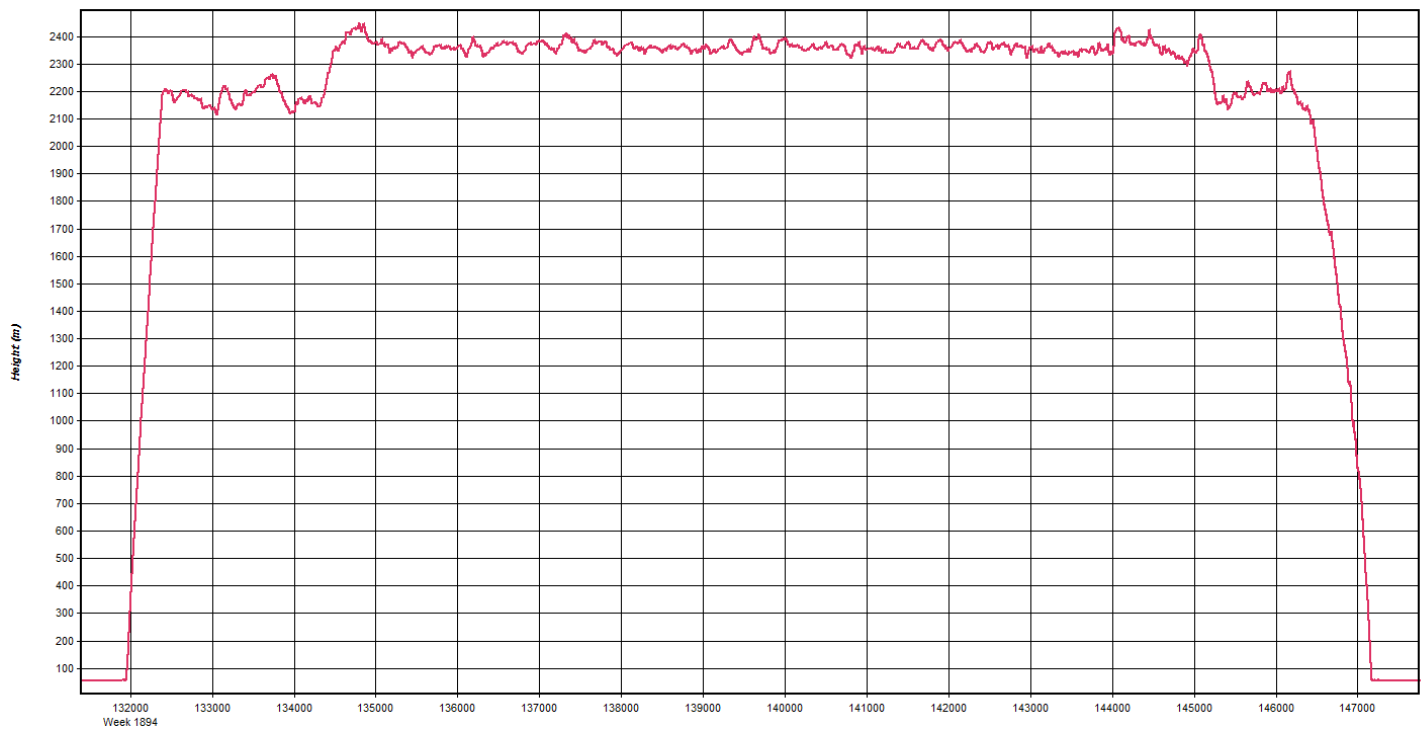
— Heading/Azimuth — GPS-COG





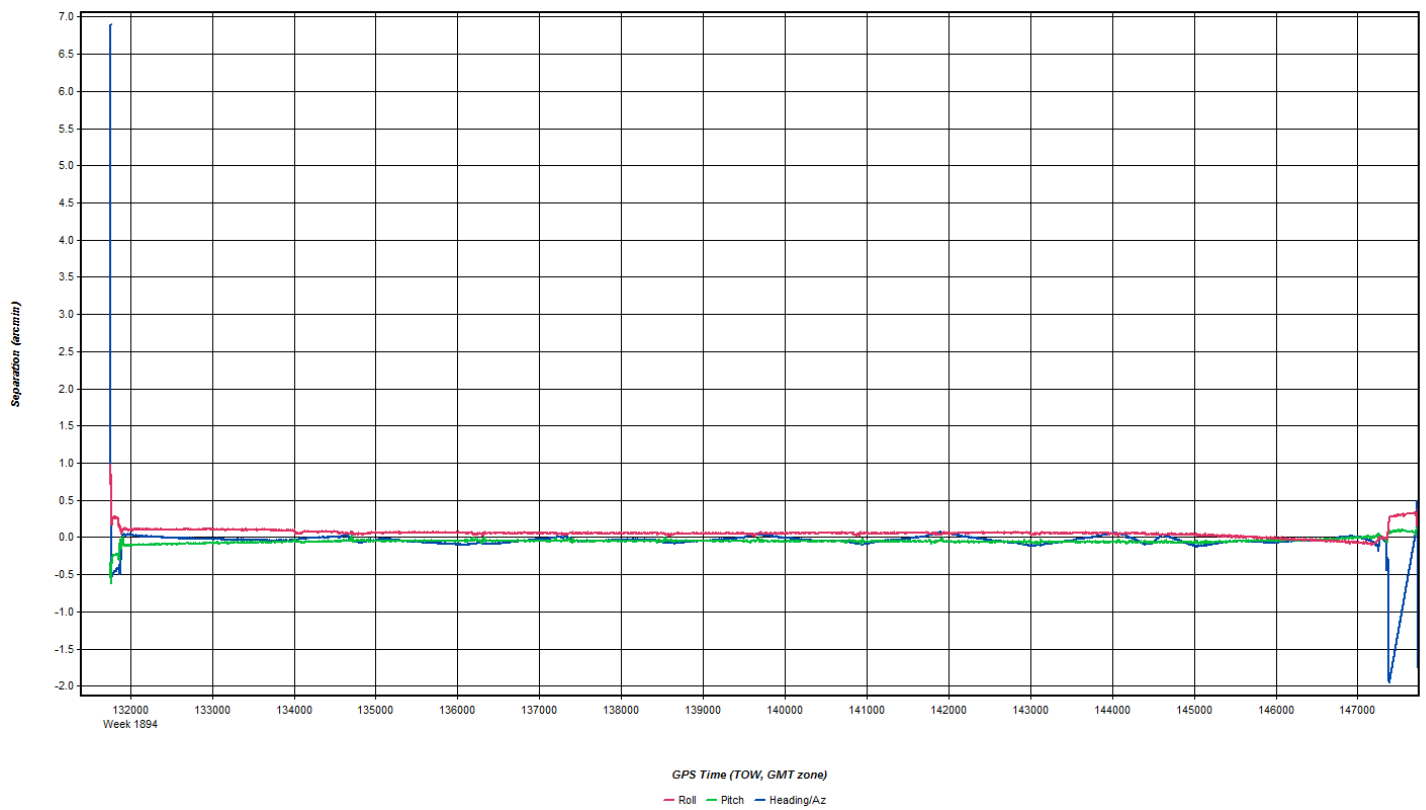
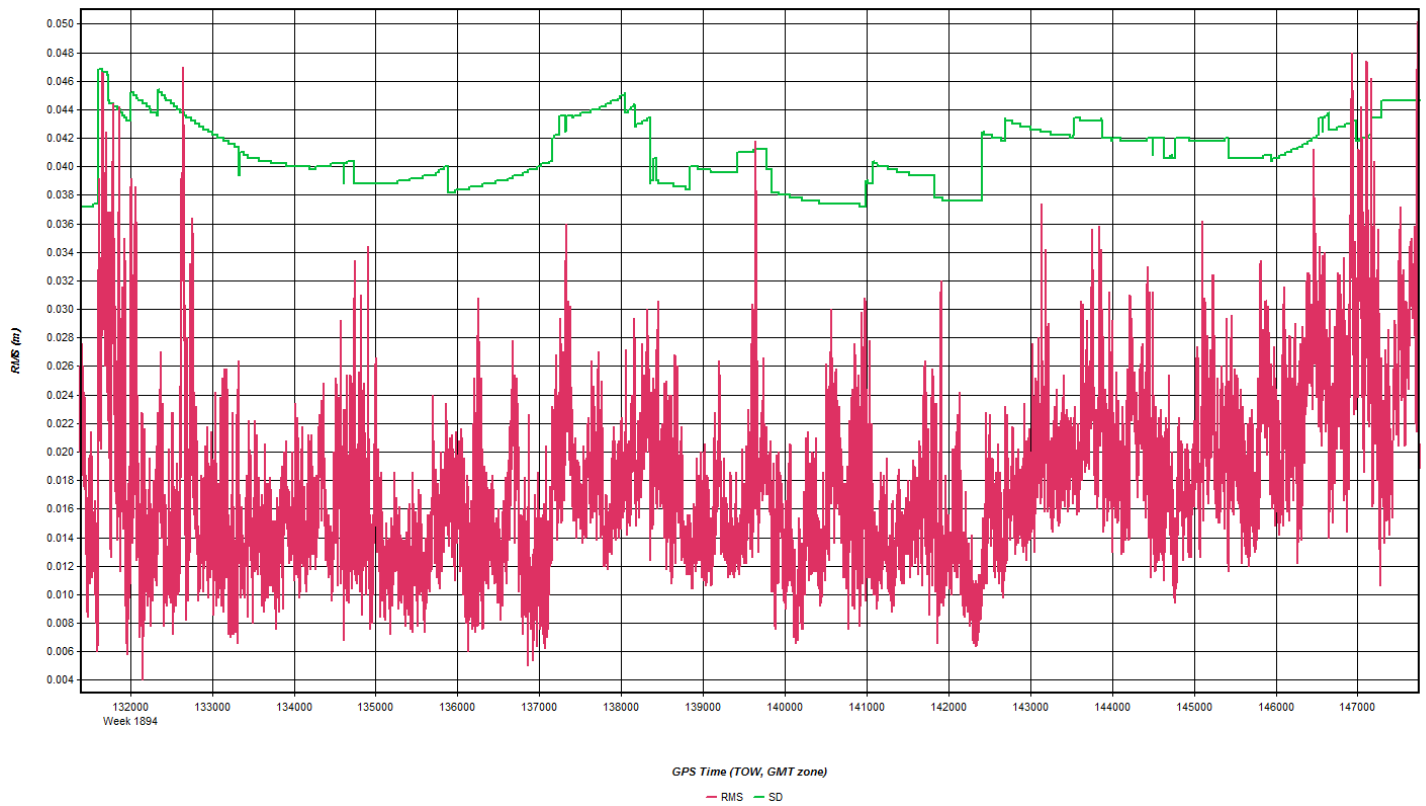
GPS Time (TOW, GMT zone)

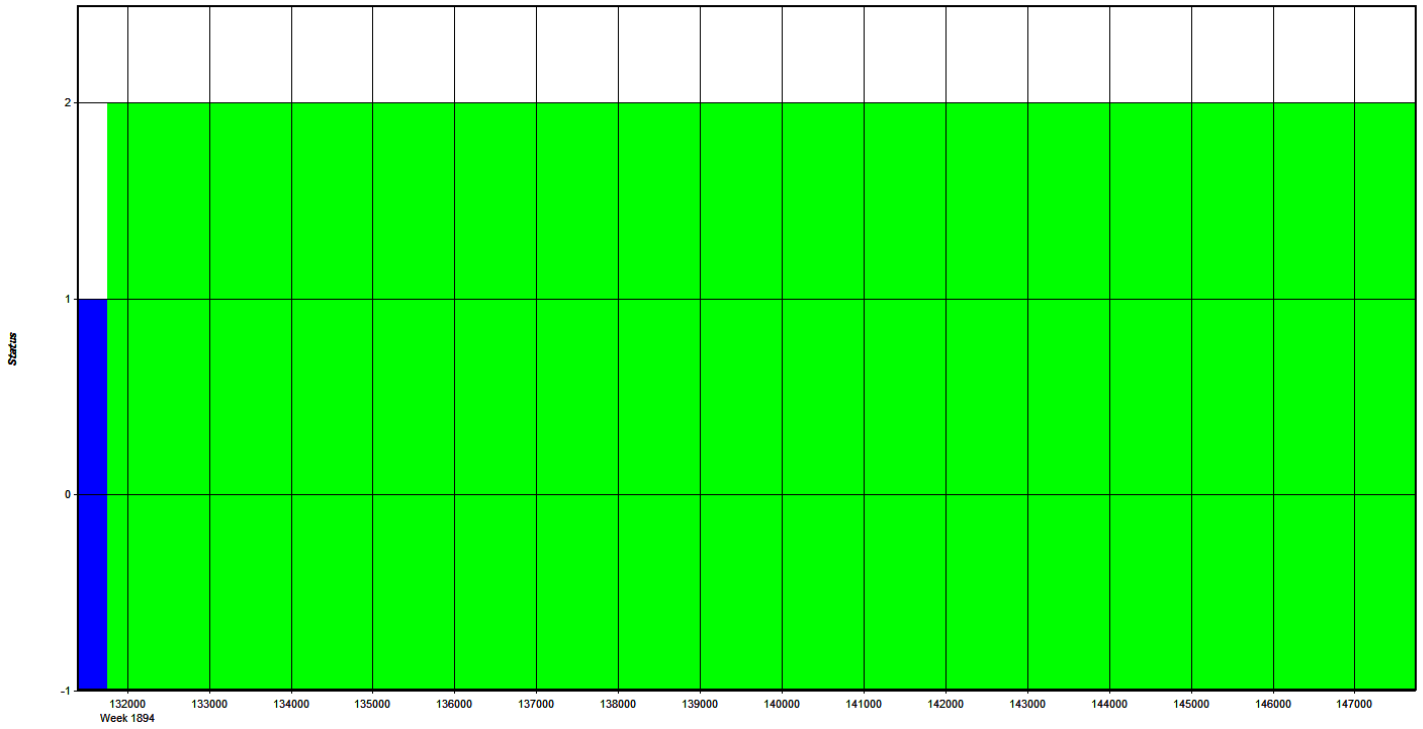
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\01G8\27146_USGS_ME_MEGR_NI

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Scanned by CamScanner

Q Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log entry to flight_log_distribution_list@quantumspatial.com)

Date: 25 APR 2016
 UTM: Q B C D E
 Page: 1 of 1

Project: VEGS Maine - Block MEGR Proj #: 27146 Flight Mgmt File: 20160425-122516
 Aircraft: N912TB Begin Hobbs: 3944.6 End Hobbs: 3948.8 Total: 4.2 Pilot: Radtke Co-Pilot: Teach: Mingant
 Dep Apt: KLEW Dep Time (Local): 0838 (Z): 1236 Arr Apt: KLEW Arr Time (Local): 1253 (Z): 1653 Tot Time Aloft: 4:15
 CORS: Y/N Sta 1: MEGR Sta 2: Flyovers: 0/N IF Y, times: Sta1 1313 Sta2 1617
 GPS Unit: Y/N Sta 1: Sta 2: Flyovers: Y/N IF Y, times: Sta1 Sta2

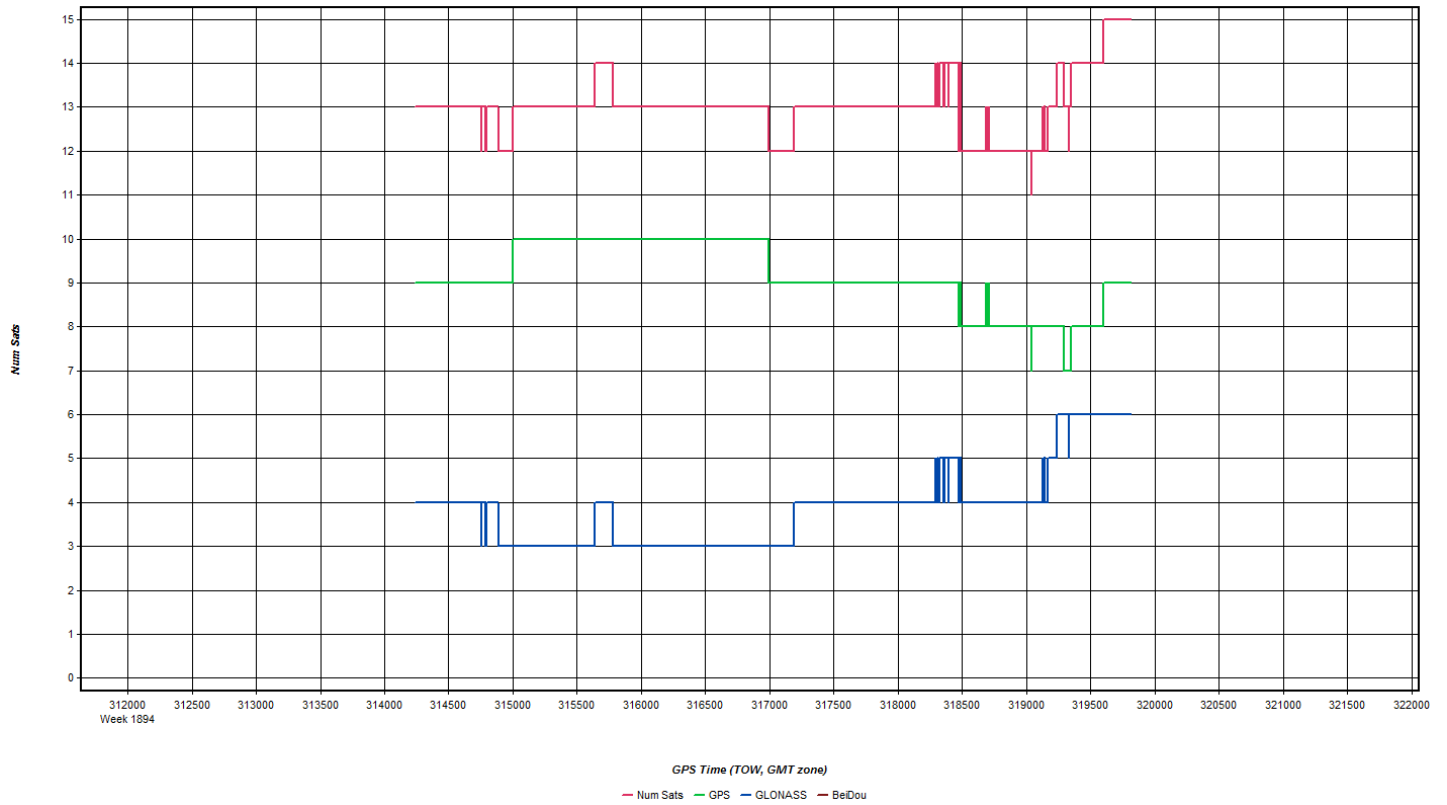
Gd Temp beg: °C End: °C OAT beg: °C End: °C Altimeter begin: °C end: °C
 Type: ALS70 Serial #: 7161 ALT ANSL: 7380 Ft Max Avg Pt Spacing
 FOV: 40° Scan Freq: 53Hz MSLA Y/N Pulses In Air Pulse Rate: 2604kHz Power: 100% Error: #/S

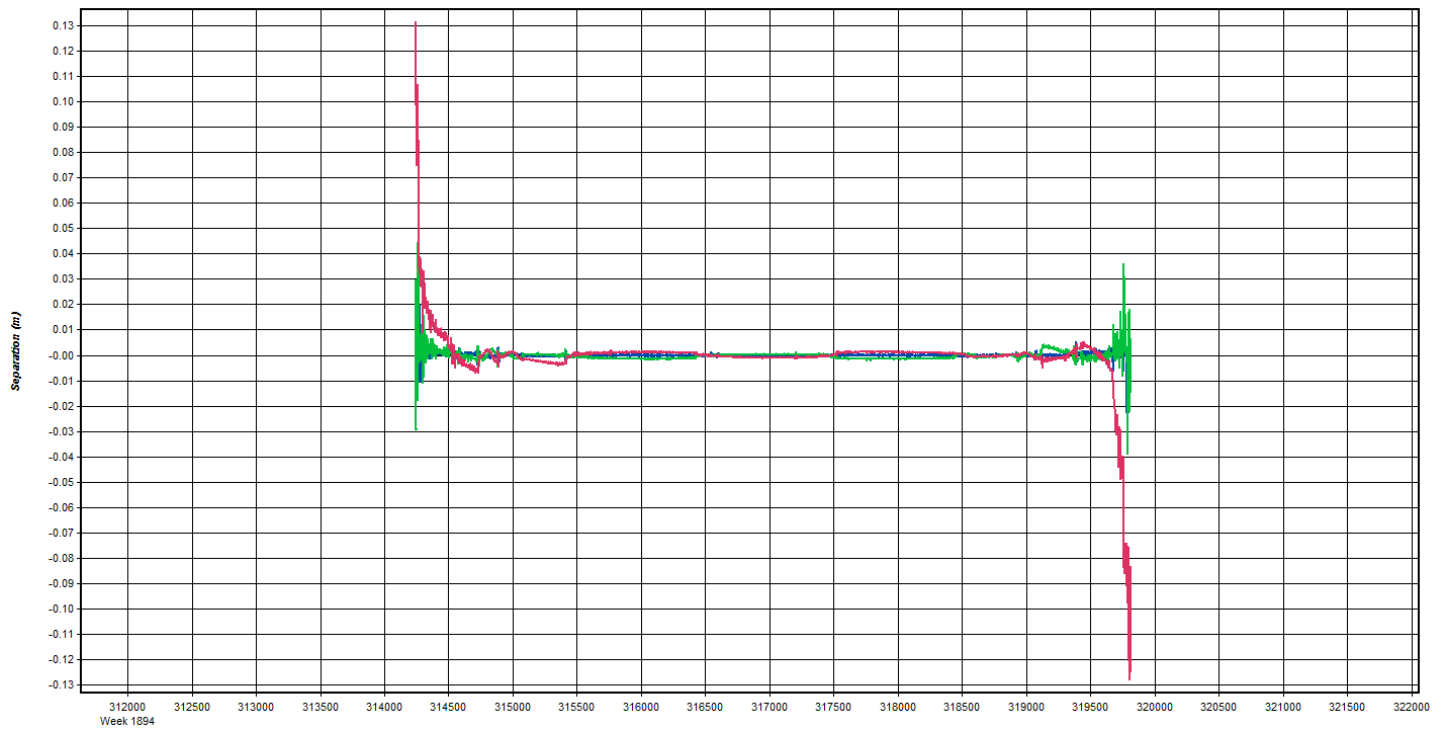
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	FOOF/s	GPS Altitude	Crab	Turb (0-1)	Notes
Block MEGR									5 minute static start @ 1230 Stop @ 1235
Test fir 170	132	1322	172	172	1.2/16	7770	-	-	Flyover CORS MEGR @ 1313 Test Fire
5049	350	1332	1547	149	1.2/15	7750	-	-	figure 8 start @ 1322 stop @ 1328 good.
5050	170	1352	1406	162	1.1/16	7730	-	-	tailwinds impacting southbound speeds.
5051	350	1410	1427	158	1.1/16	7695	-	-	some ice on lake in north
5052	170	1431	1445	163	0.7/19	7750	30	-	some ice on lake in north. Tailwinds impacting southbound speed
5053	350	1450	1505	130	1.1/16	7750	15	-	ice on lake
5054	170	1509	1522	158	1.2/16	7730	30	-	some ice on lakes. Tailwinds impacting southbound speed
5055	350	1526	1542	140	1.3/17	7740	15	-	ice on lake
5056	170	1545	1559	164	1.2/16	7780	30	-	some ice on lakes. Tailwinds impacting southbound speeds
Cross Tie	265	1604	1606	143	1.2/18	7810	-	-	Cross Tie
									figure 8 start @ 1606 stop @ 1610
									flyover CORS MEGR @ 1617
									5 minute static start @ 1656 stop @ 1701

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

Total Proj Lines: 136 Lines Flown: 8 Lines Remain: 53 Online Time: 2:75 Mob Time: 1:15 Notes: Tailwinds had after cross tie

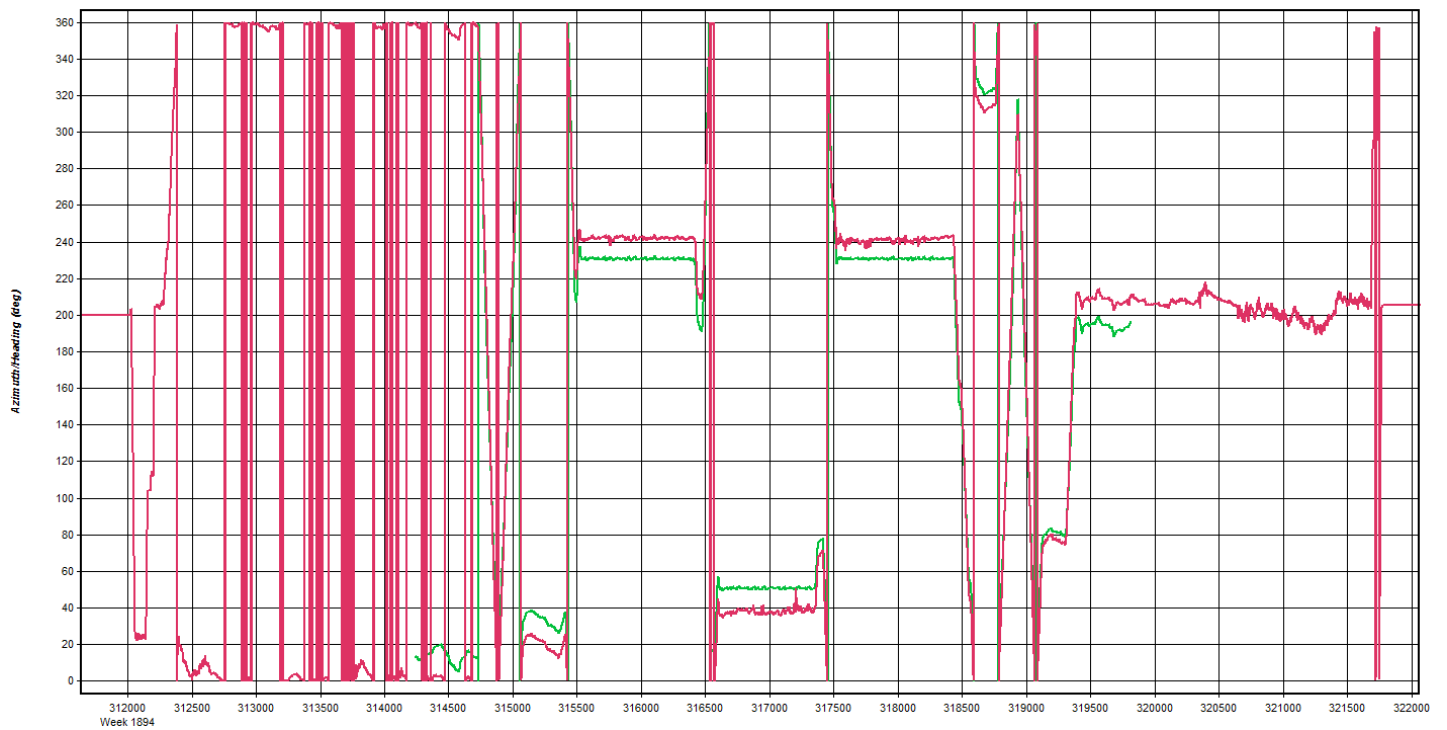
Apr 27, 2016-A (N812TB, SN7161)





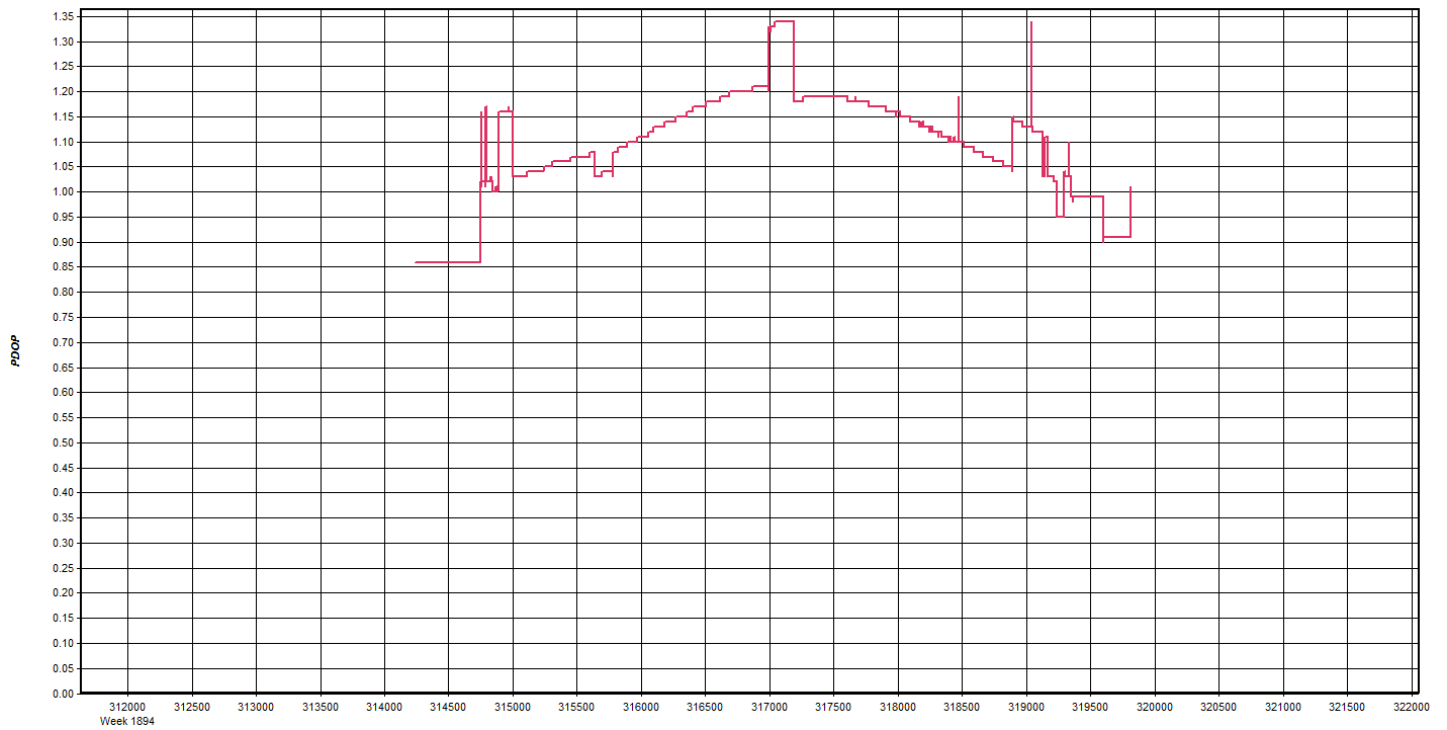
GPS Time (TOW, GMT zone)

— East — North — Up



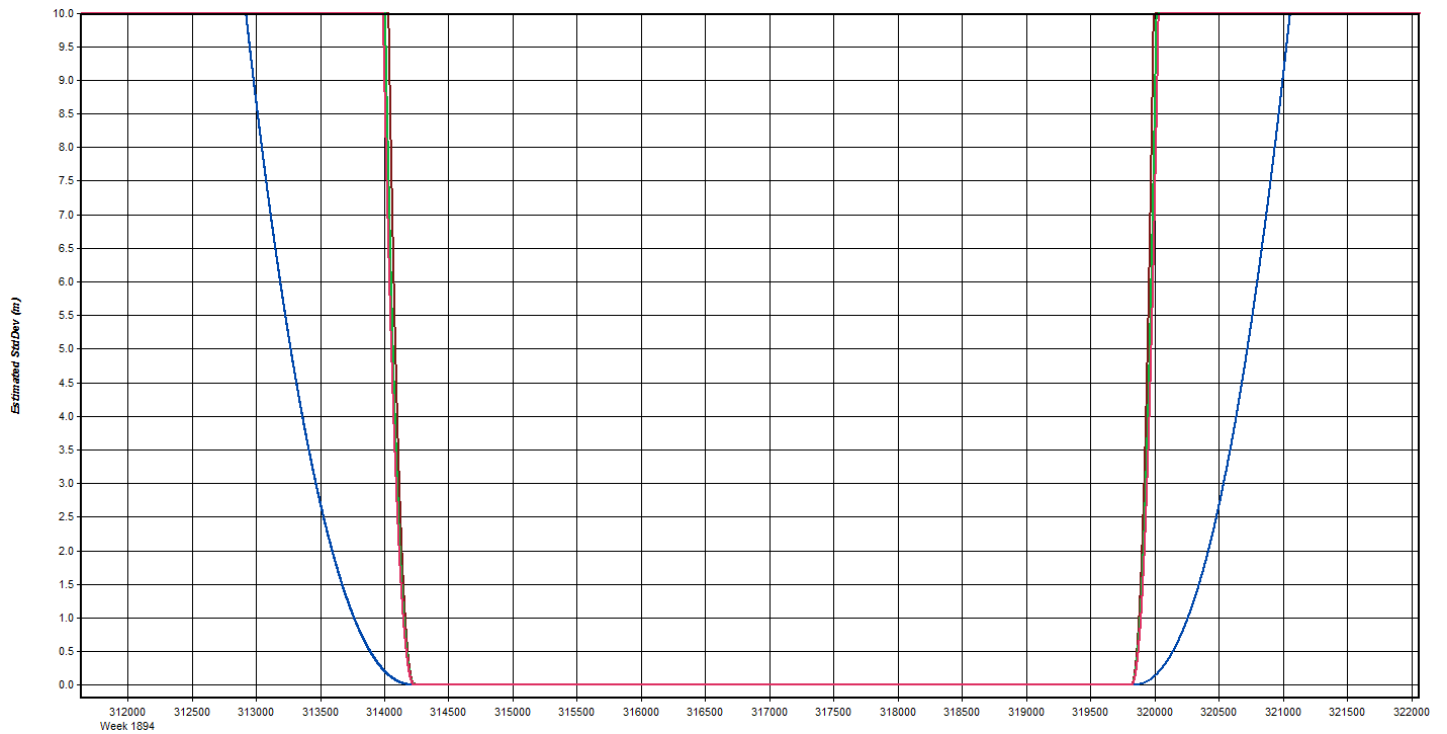
GPS Time (TOW, GMT zone)

— Heading/Azimuth — GPS-COG



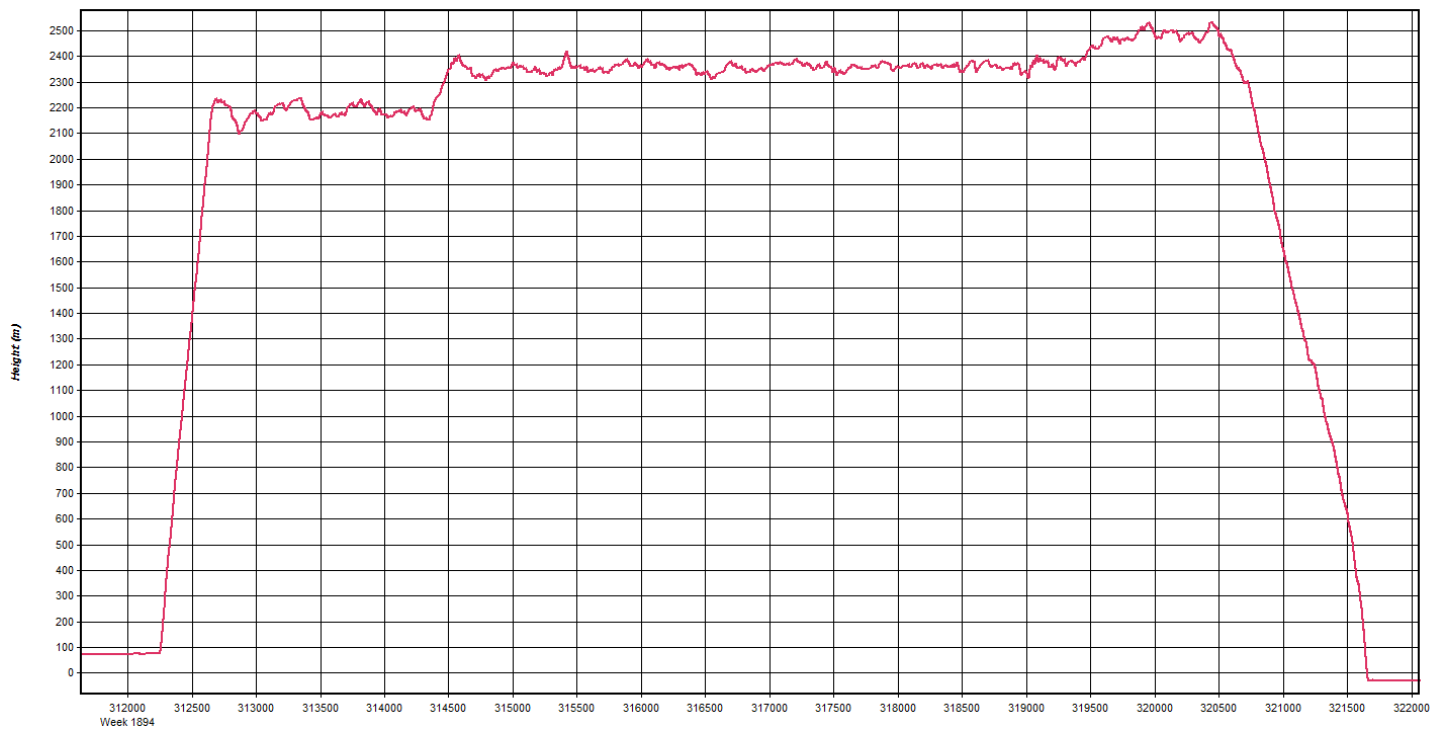
GPS Time (TOW, GMT zone)

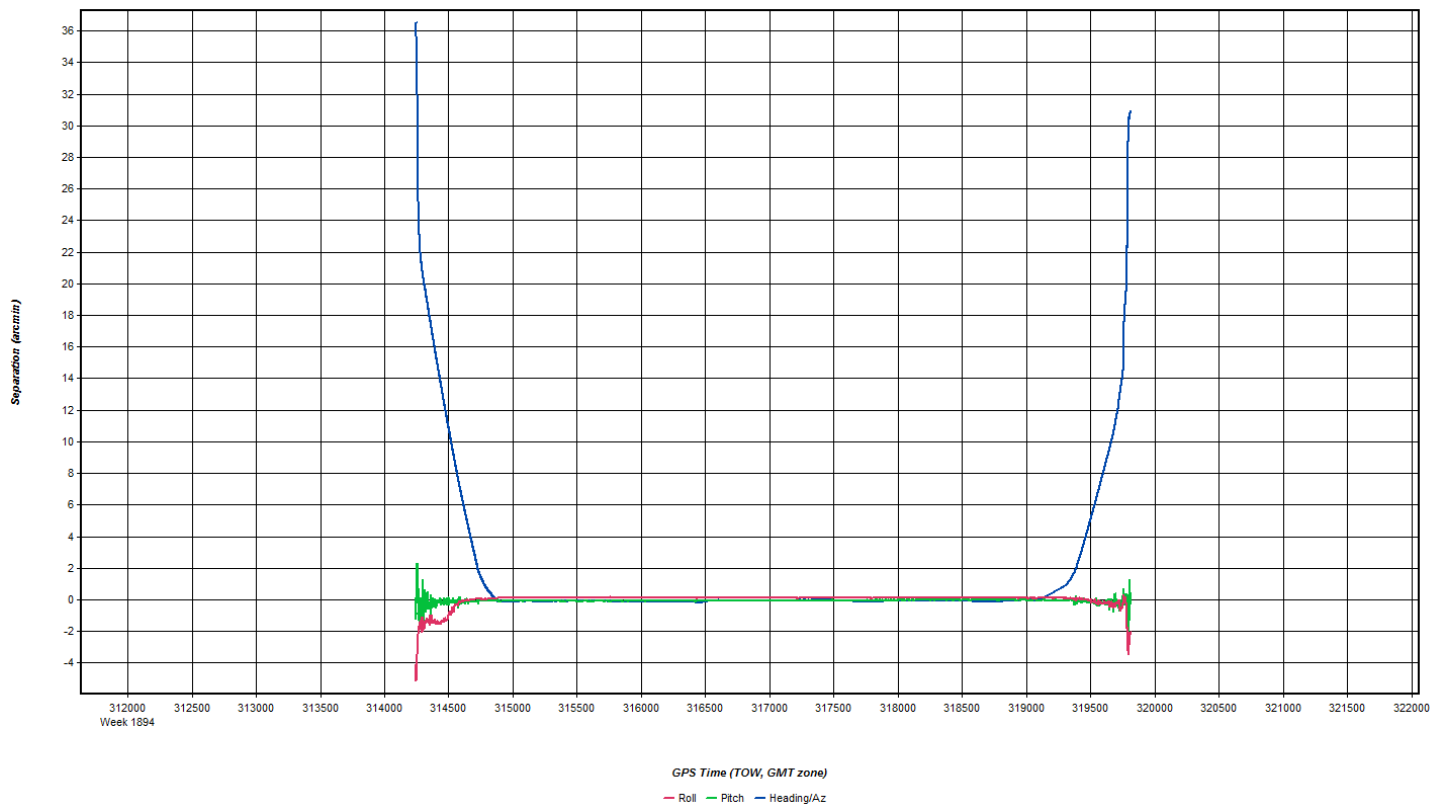
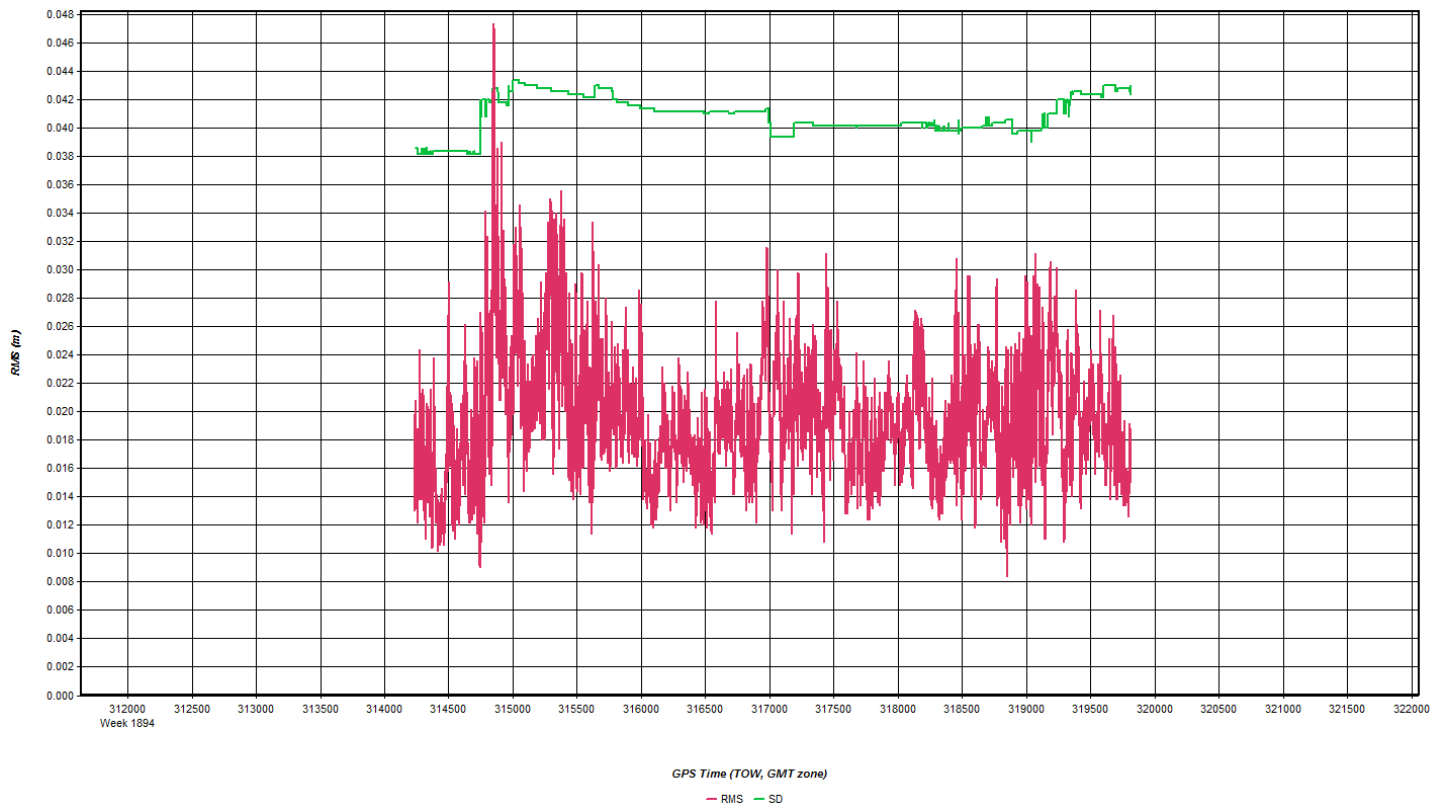
— PDOP

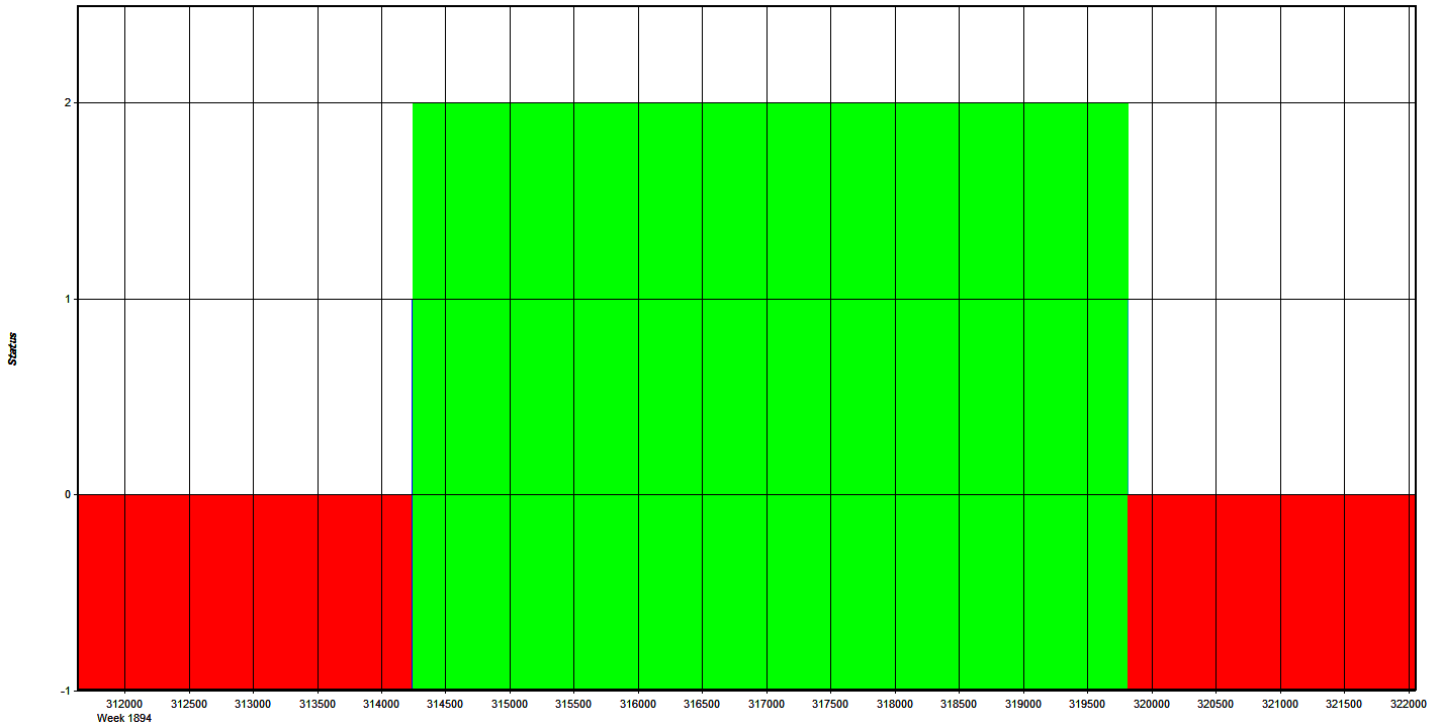


GPS Time (TOW, GMT zone)

— East — North — Height — Trace







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

Coordinate/Antenna Settings

Master Remote

Base Station
 ID: 00081180 Name: 00081180 Disabled
 File: E:\Proc\27146_Maine_2016\090B\27146_USGS_ME_SetPoint2_

Coordinates
 Latitude: North 45 40 46.36943 Compute from PPP
 Longitude: West 69 46 08.20125 Enter Grid Values
 Ellipsoidal height: 295.651 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: N/A View STA File
 Antenna profile: NOV702GG Info
 Measured height: 2.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 2.067 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\090B\27146_USGS_ME_SetPoint2_

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Scanned by CamScanner

Quantum Spatial
Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log daily to flight_log_distribution_list@quantumspatial.com)

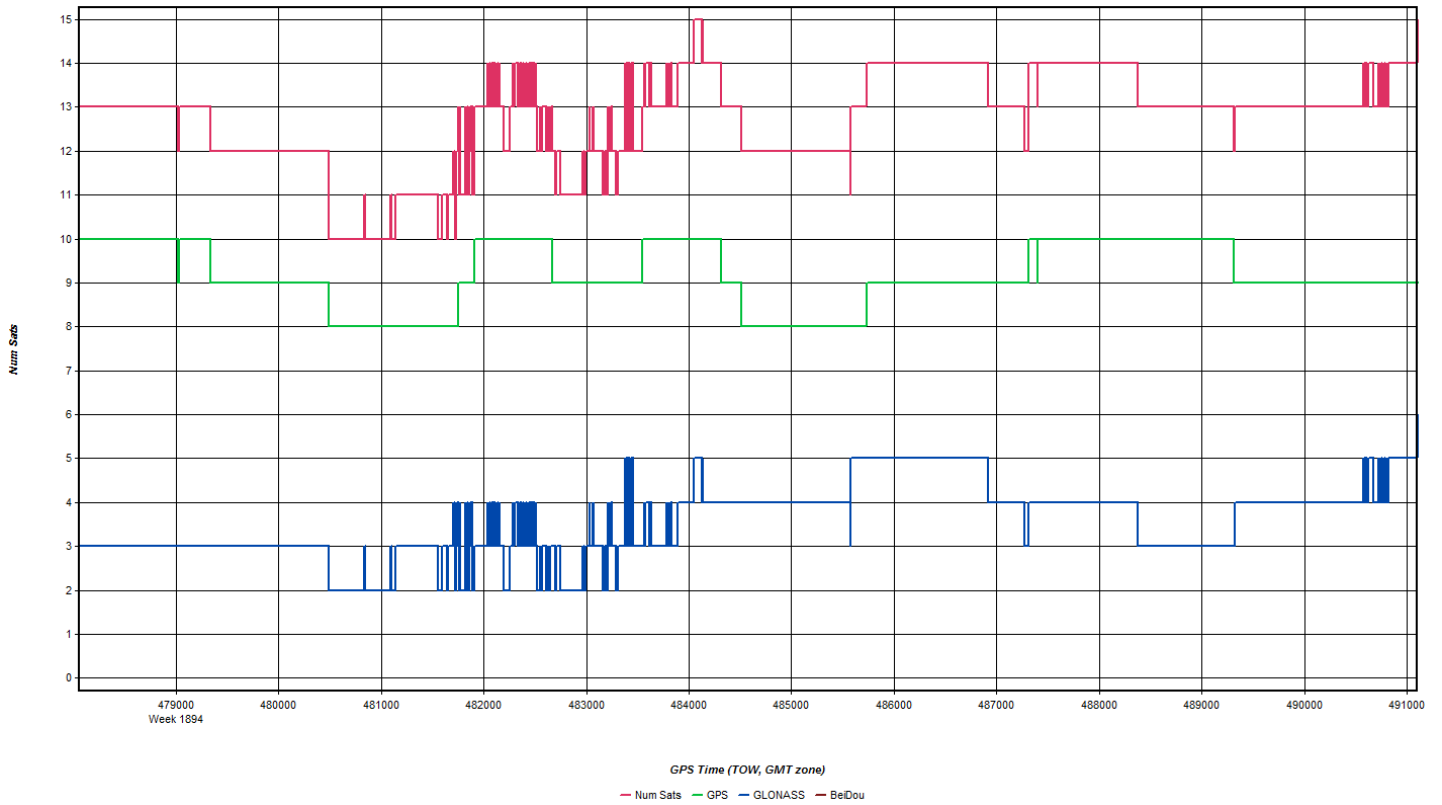
Date: 27 APR 2016
 UIC: 080808
 Project: USGS Maine - Block Set Point #1: 27146 Flight Mgmt File: 20160427-142832
 Aircraft: N812TB Begin Hobbs: 3948.6 End Hobbs: 3957.3 Total: 2.5 Pilot: Radtke Co-Pilot: Tech: Minger
 Dep Apt: KLEW Dep Time (Lcl): 1043Z Air Apt: KLEW Air Time (Local): 1320Z 1720 Tot Time Aloft: 2:28
 CORS: Y/N Sta 1: Sta 2: Flyovers: Y/N IF Y, times: Sta 1: Sta 2: 1641
 GPS Units: Y/N Sta 1: Set Point 2 Sta 2: Flyovers: Y/N IF Y, times: Sta 1: 1525 Sta 2: 1641
 Gd Temp beg: °C End: °C OAT beg: °C End: °C Altimeter begin: °C end: °C
 LIDAR Type: MS70 Serial #: 7161 Alt: 5390 Ft Max Alt: 7759 Ft Avg Ft: 1600 Max Gap: 150 kts Avg Spd: 150 kts
 FOV: 40° Scan Freq: 53 Hz MplA: Y/N Pulses In Air: 261 k Hz Power: 100 W PPSM: 15
 Storage Number: 24468
 File Name: 25868 #15
 File Size: 146 B

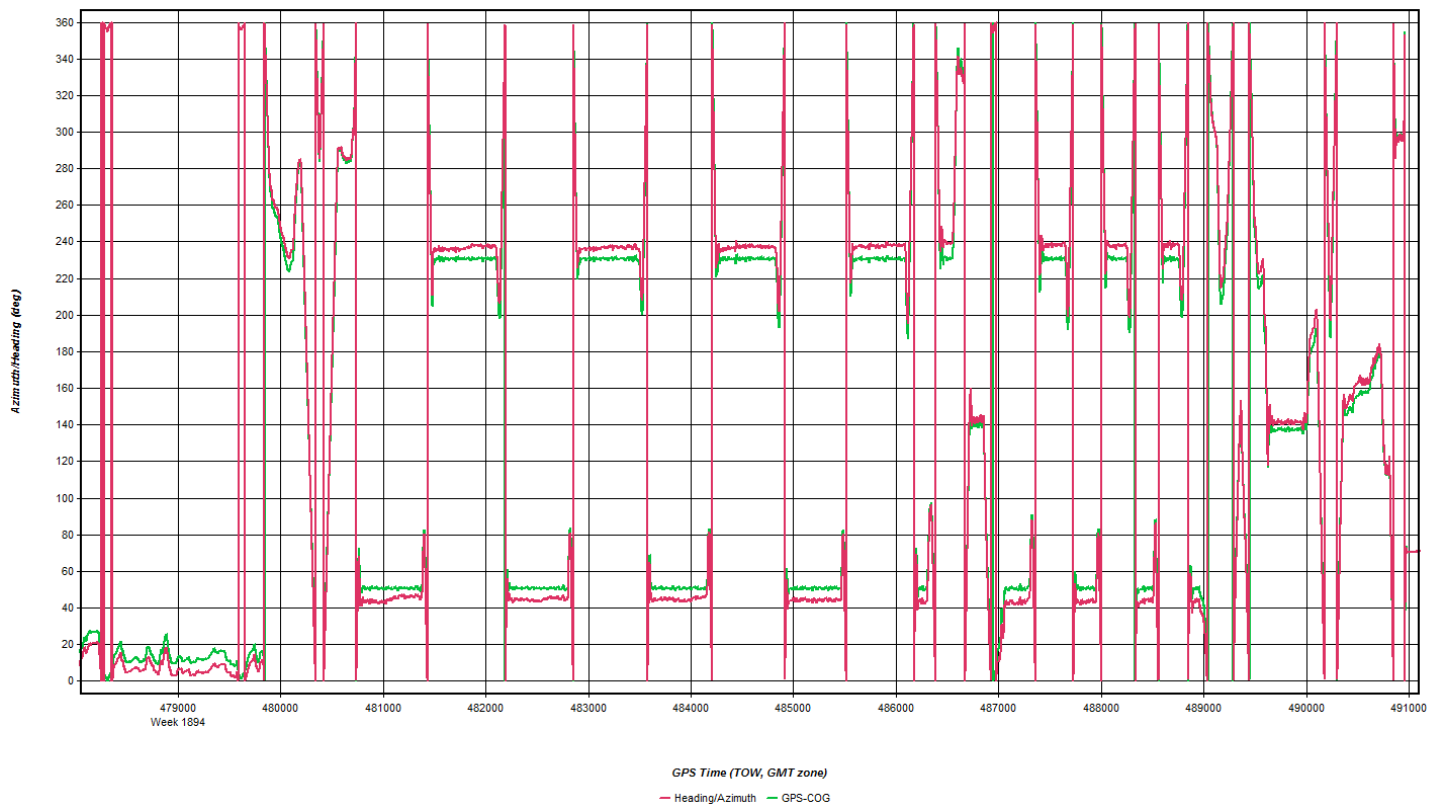
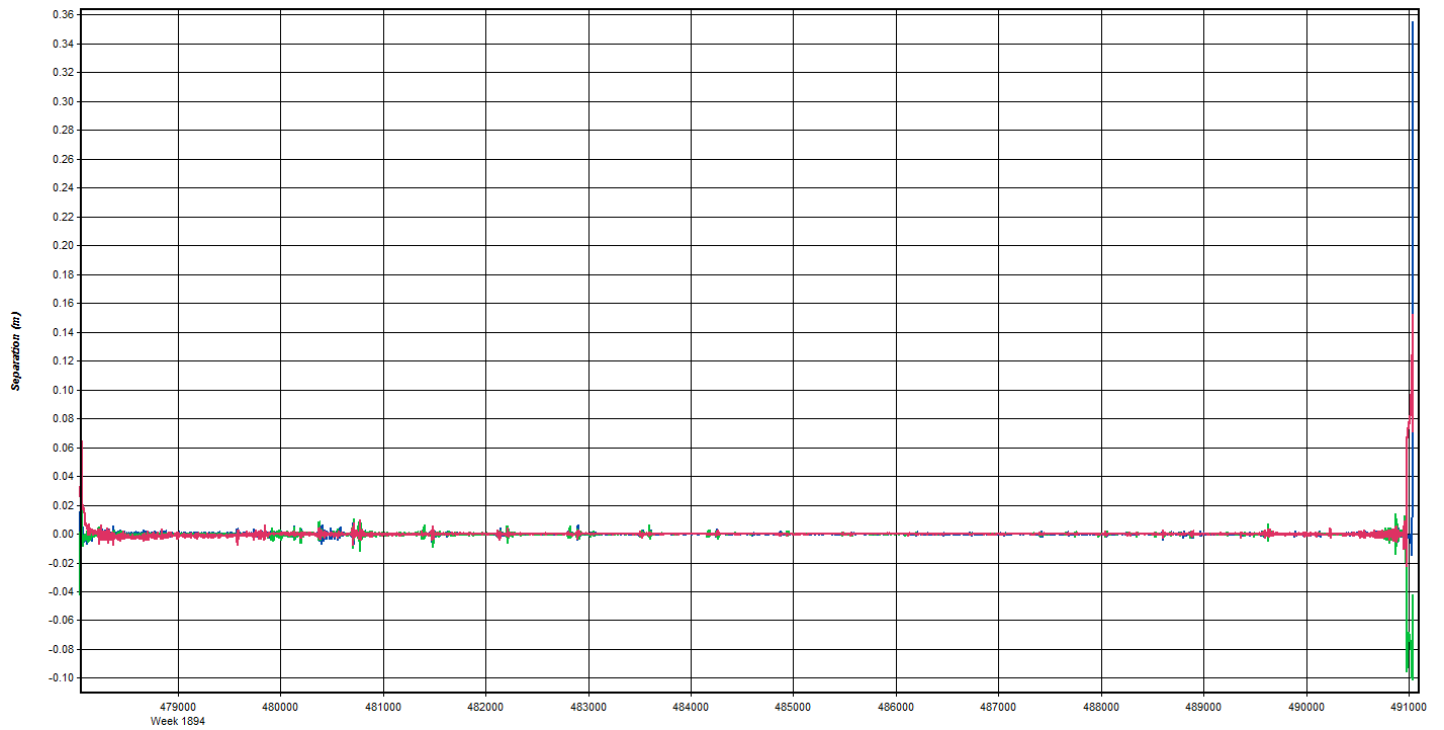
FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.

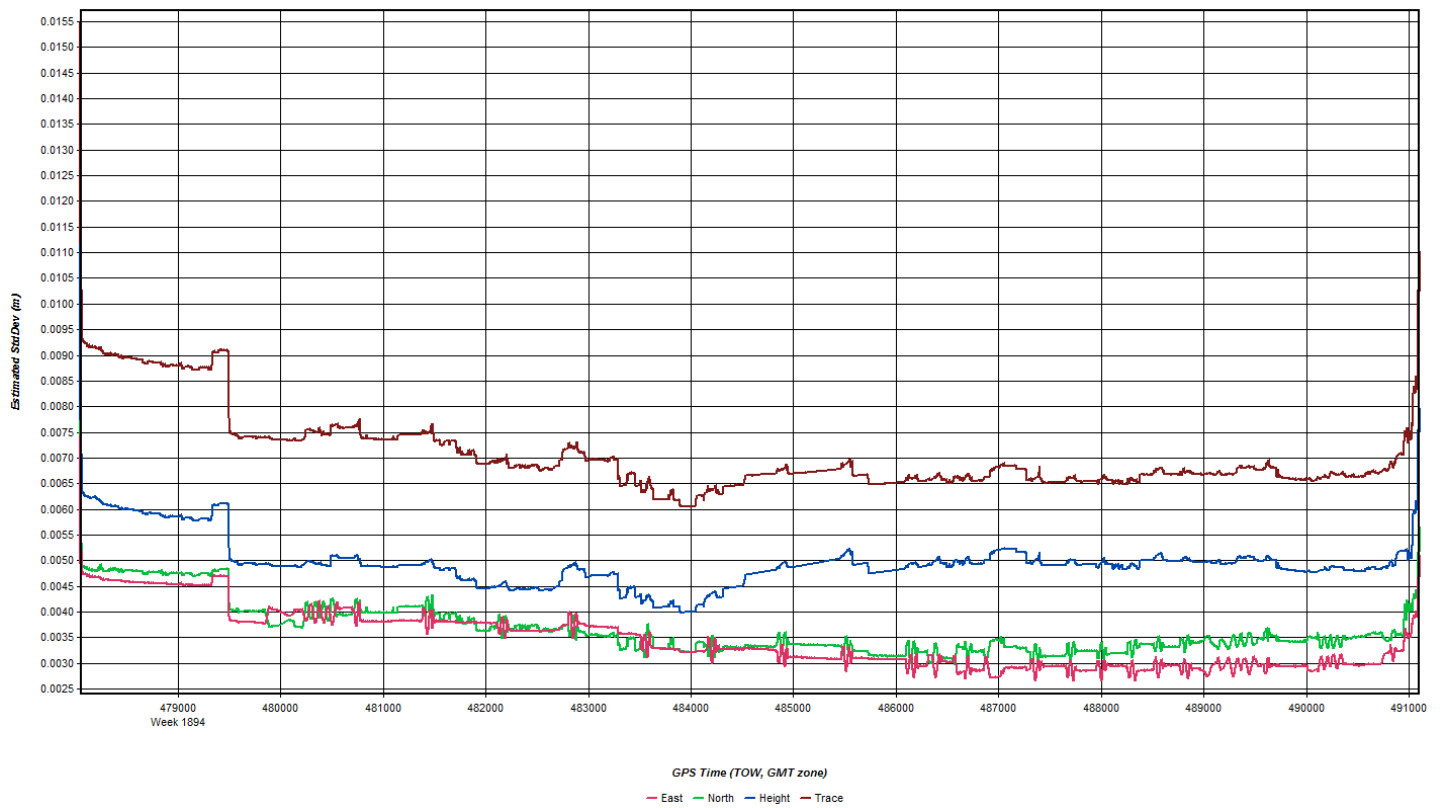
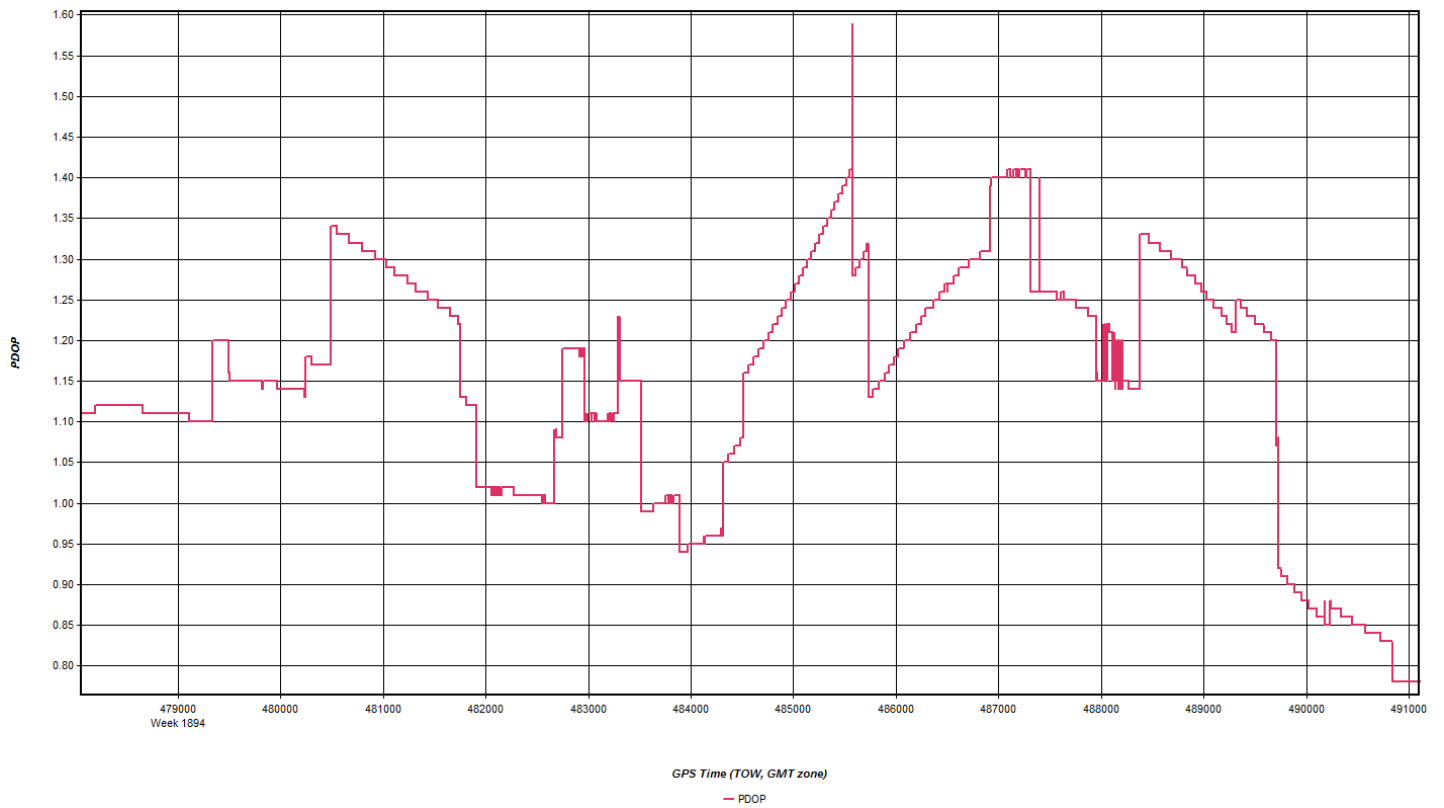
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	GPS Altitude	Crab	Turb	Notes
Block Set Point Two								
057	153	1532	187	12/18	7675			5 min static start @ 1434 stop @ 1439
6050	200	1539	1553	12/18	7700	30		Flyover Base station @ 1525
6029	50	1556	1606	14/17	7760	6		Figure 8 start @ 1526 End @ 1530
6028	230	1613	1626	13/17	7725	30		Test Fire
320	320	1630	1632	11/18	7823			N/A good - possible snow in forested areas
								Y tail winds impacting speed on east bound lines (45 kts)
								Y snow in woods between trees
								Y Cross Tie
								Figure 8 start @ 1632 stop @ 1637
								Flyover Base station @ 1641
								5 min static start @ 1722 stop @ 1727

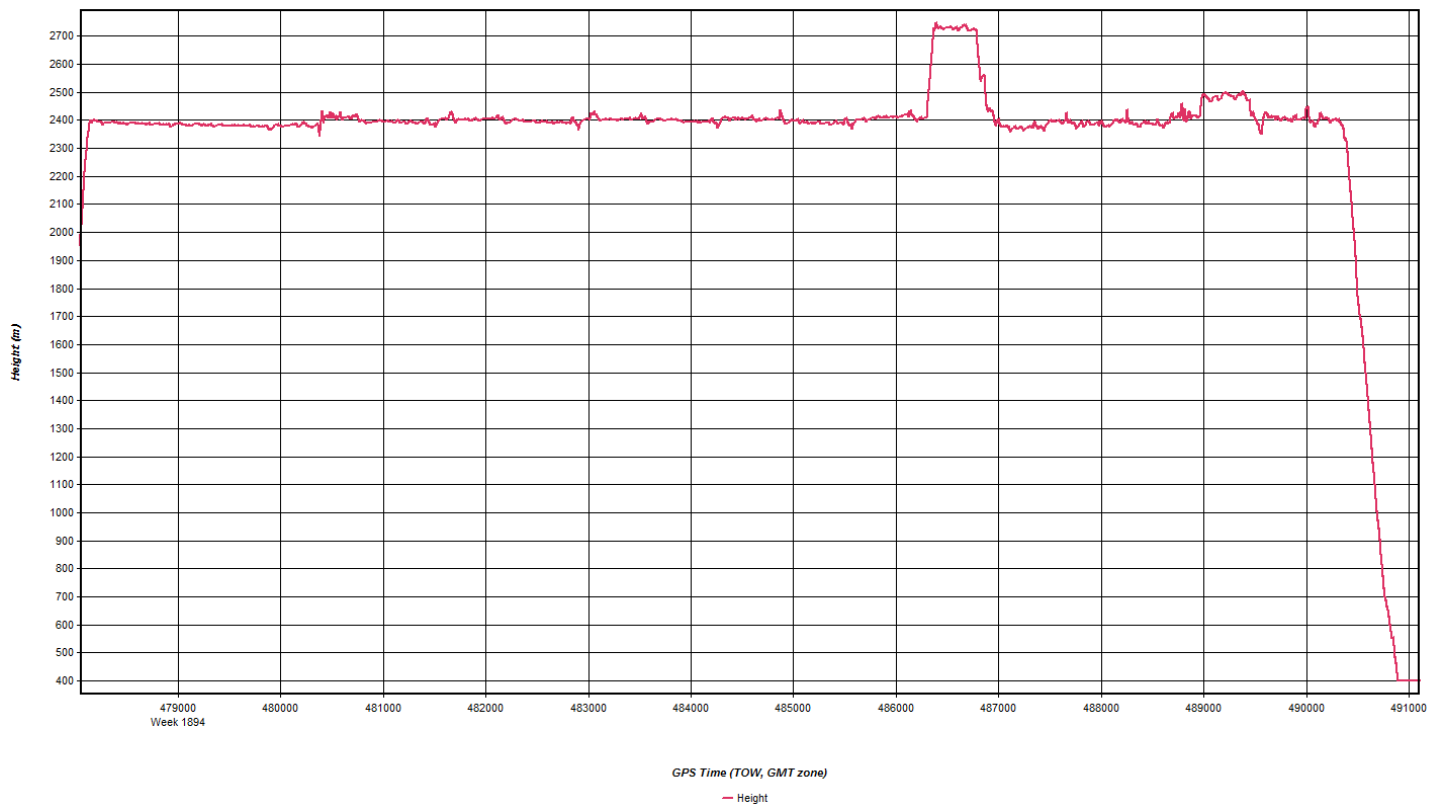
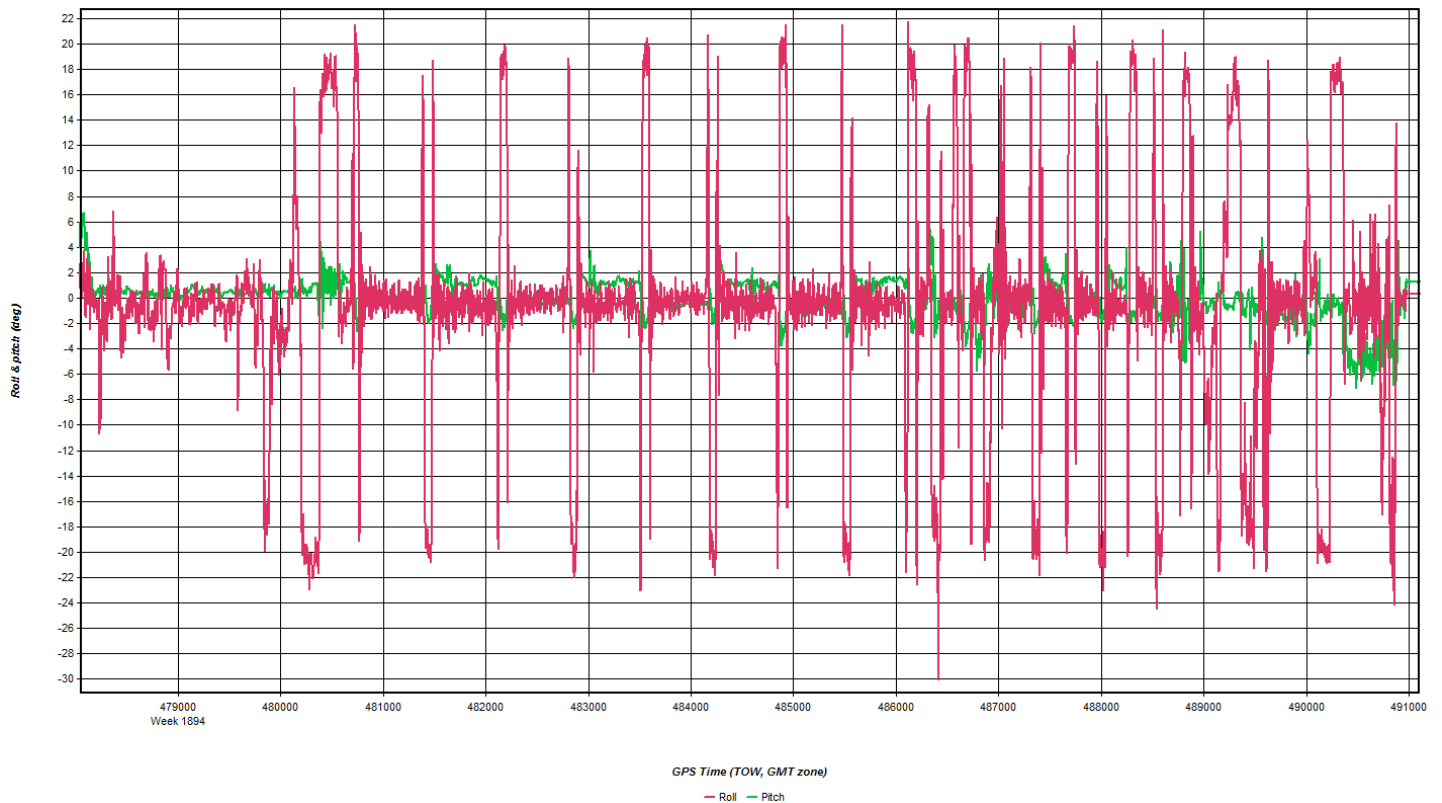
Total Proj Lines: 32 Lines Flown: 3 Lines Remains: 29
 Online Time: 1:0 Mob Time: 1:5
 Notes: 45 kt winds @ altitude turbulence had a few waves.

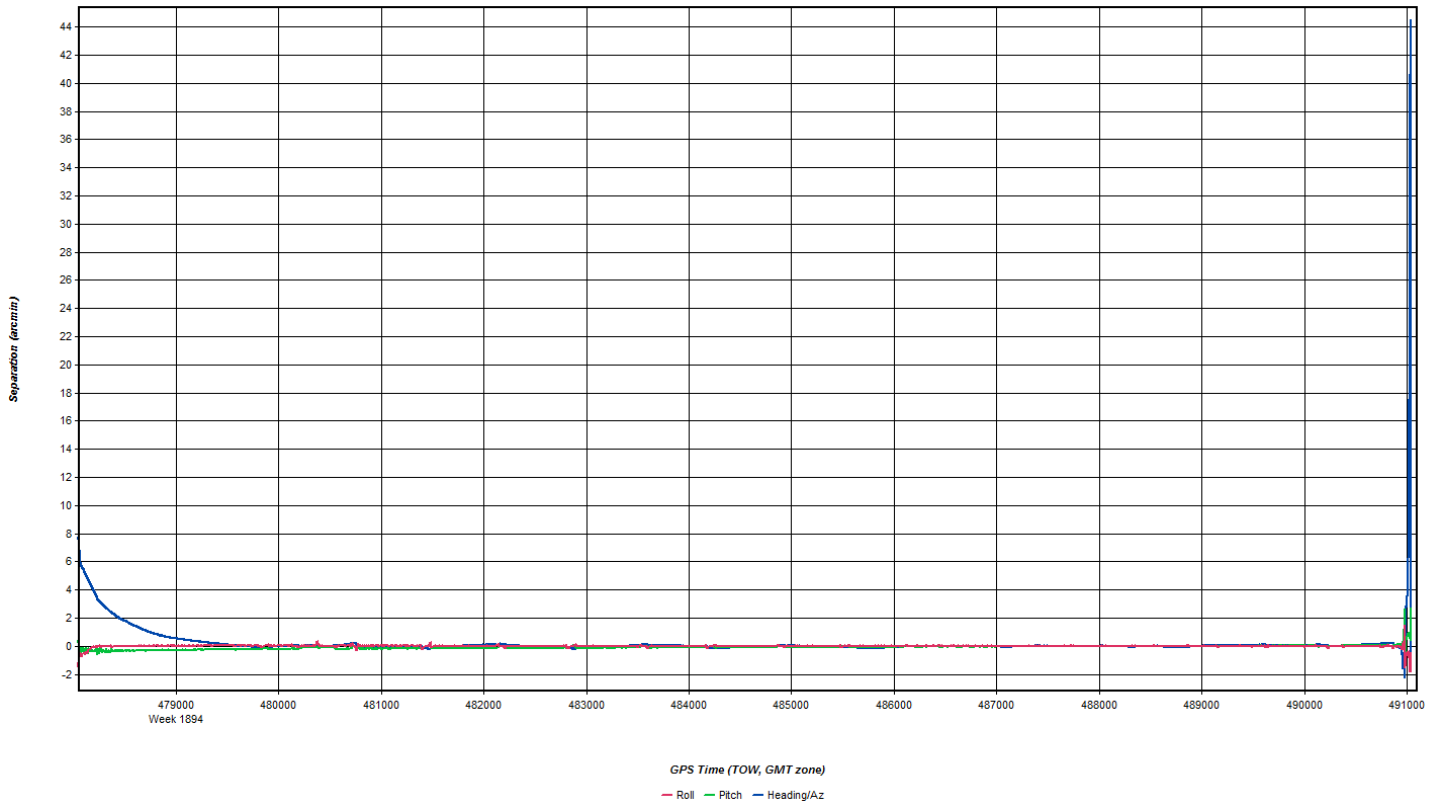
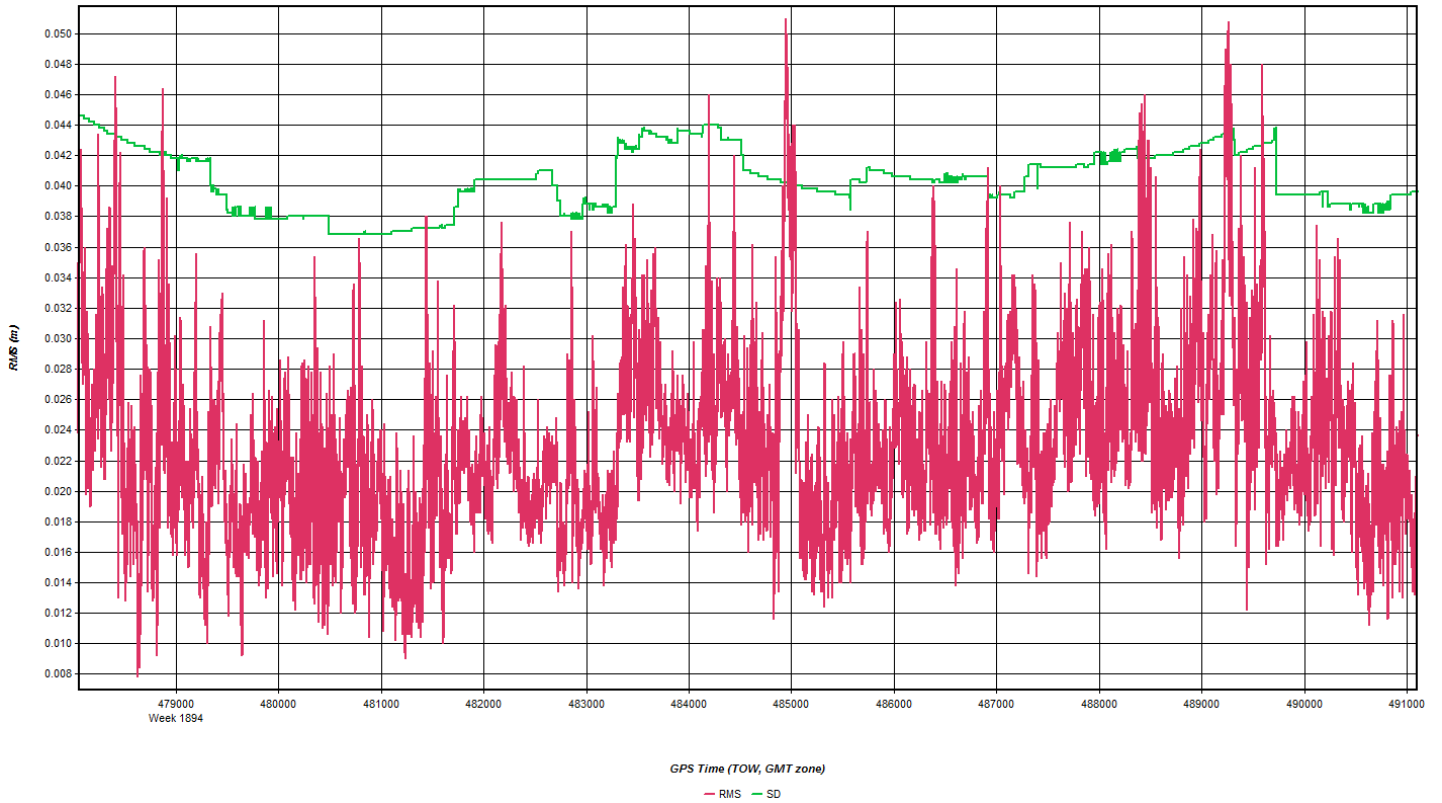
Apr 29, 2016-A (N73TM, SN7178)

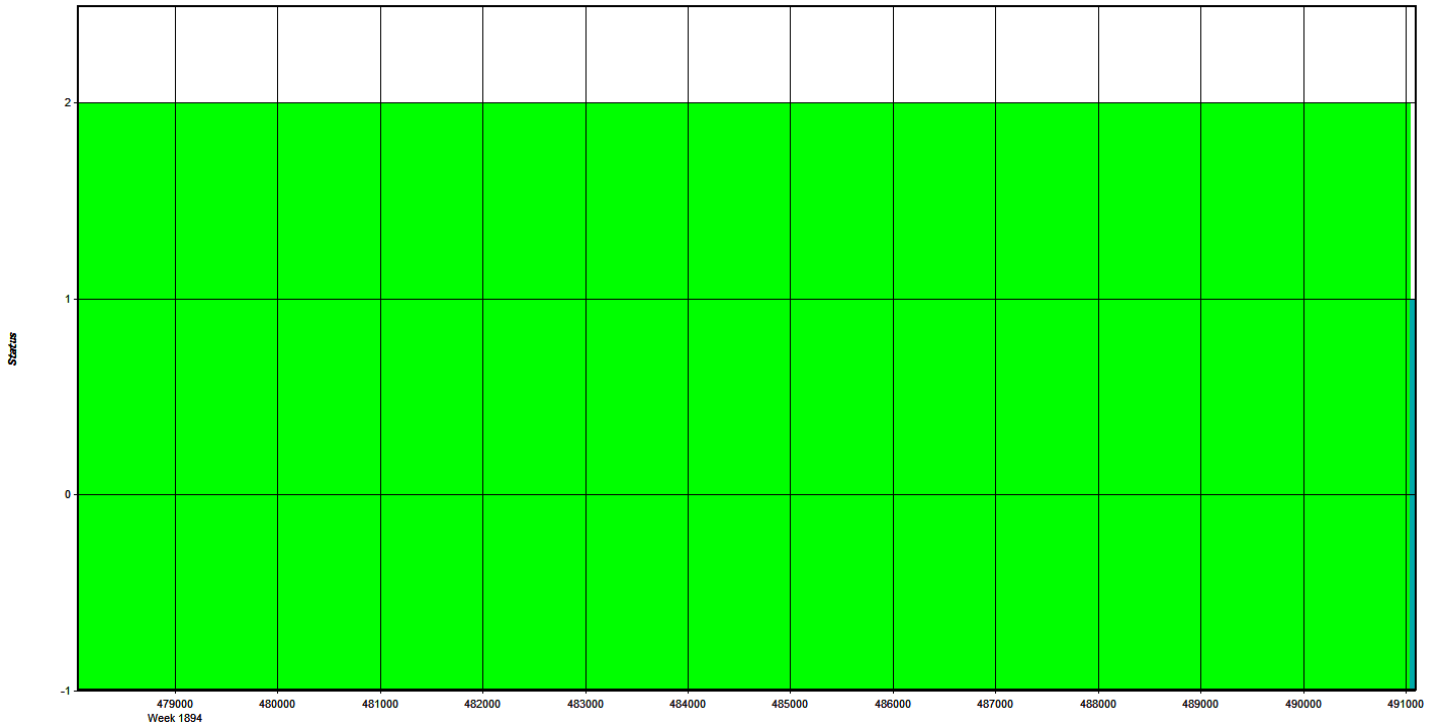












GPS Time (TOW, GMT zone)
 - Float - Forward Fixed - Reverse Fixed - Fixed (2 or more)

Coordinate/Antenna Settings

Master Remote

Base Station
 2: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\79AP\20160429a-7178\GPSbase\vr

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Master Remote

Base Station
1: Set_Point2 Name: Set_Point2 Disabled
File: E:\Proc\27146_Maine_2016\79AP\20160429a-7178\GPSbase\2

Coordinates
Latitude: North 45 40 46.36938 Compute from PPP
Longitude: West 69 46 08.20112 Enter Grid Values
Ellipsoidal height: 295.651 m Enter MSL Height
Datum: WGS84 Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: N/A View STA File
Antenna profile: NOV702GG Info
Measured height: 2.000 m
ARP to L1 offset: 0.067 m
Applied height: 2.067 m
Measured to:
 ARP
 L1 Phase Centre
Compute From Slant

OK Cancel

Flight Log

Project: USGS WESTERN MAINE **Proj #:** 27146 **Date:** APRIL 29th 2016
(email log daily to flight_log_distribution_list@quantumspatial.com) 2016-04-29 - 12:44:50 **Page 1 of 1**

Flight Mgmt File: USGS_Maine_SettPoint2_SN717B-150.kts **Tech:** P. HERGEN

Aircraft: N73TM **Begin Hobbs:** 6207.7 **Total:** 3.6 **Pilot:** D. WAGNER **Co-Pilot:** -

Dep Apt: KLEW **Dep Time (Lcl):** 8:42 Z **Arr Apt:** 3B1 **Arr Time (Local):** 12:21 Z **Tot Time Aloft:** 3:39

CORS: Y/N **Sta 1:** - **Sta 2:** - **Flyovers:** Y/N **IF Y, times: Sta1:** - **Sta2:** -

GPS Unit: N **Sta 1:** SETT POINT 2 **Sta 2:** - **Flyovers:** Y/N **IF Y, times: Sta1:** (3:17, 8:16, 11:2) **Sta2:** -

Gd Temp beg: +01 °C **End:** +06 °C **OAT beg:** -05 °C **End:** -05 °C **Altimeter beg:** 30.18" **end:** 30.11"

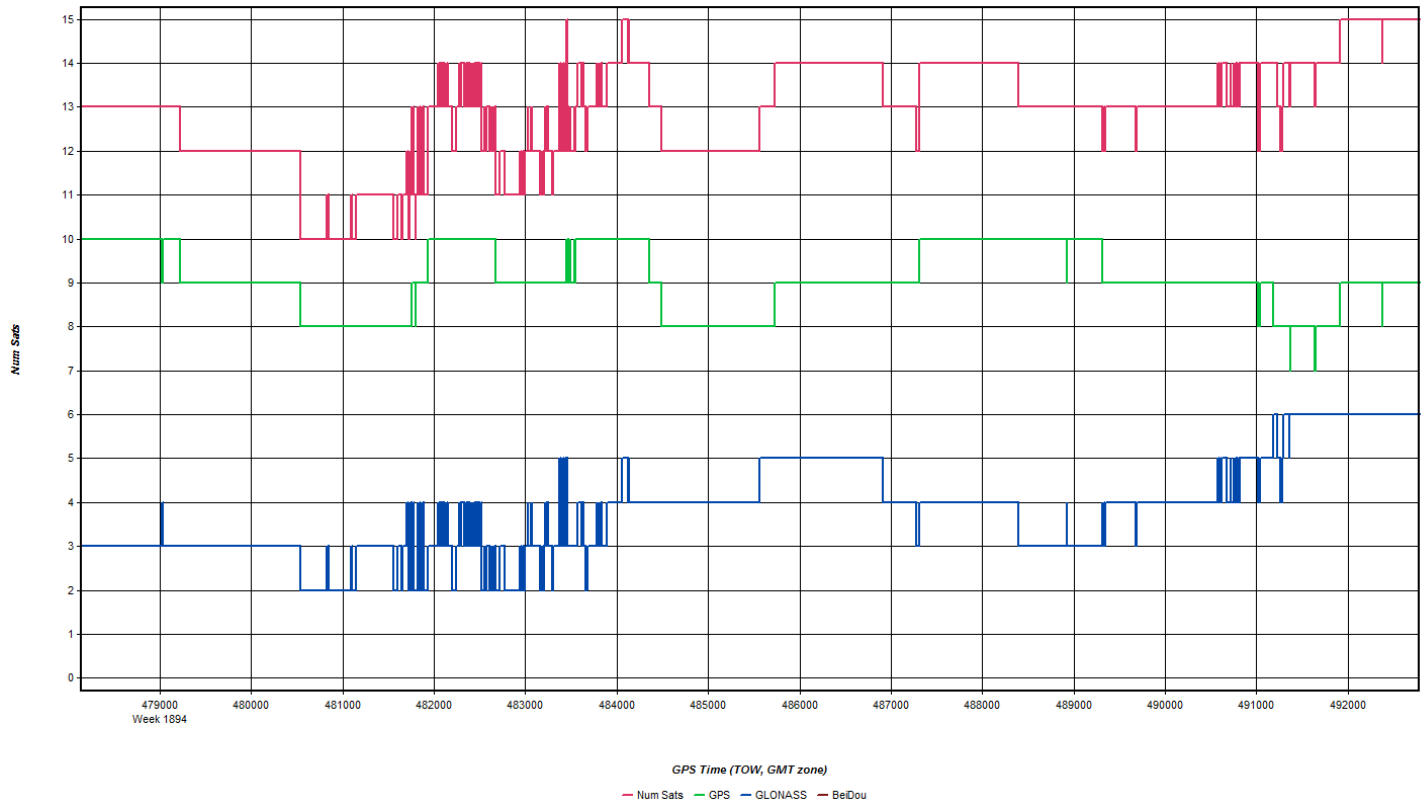
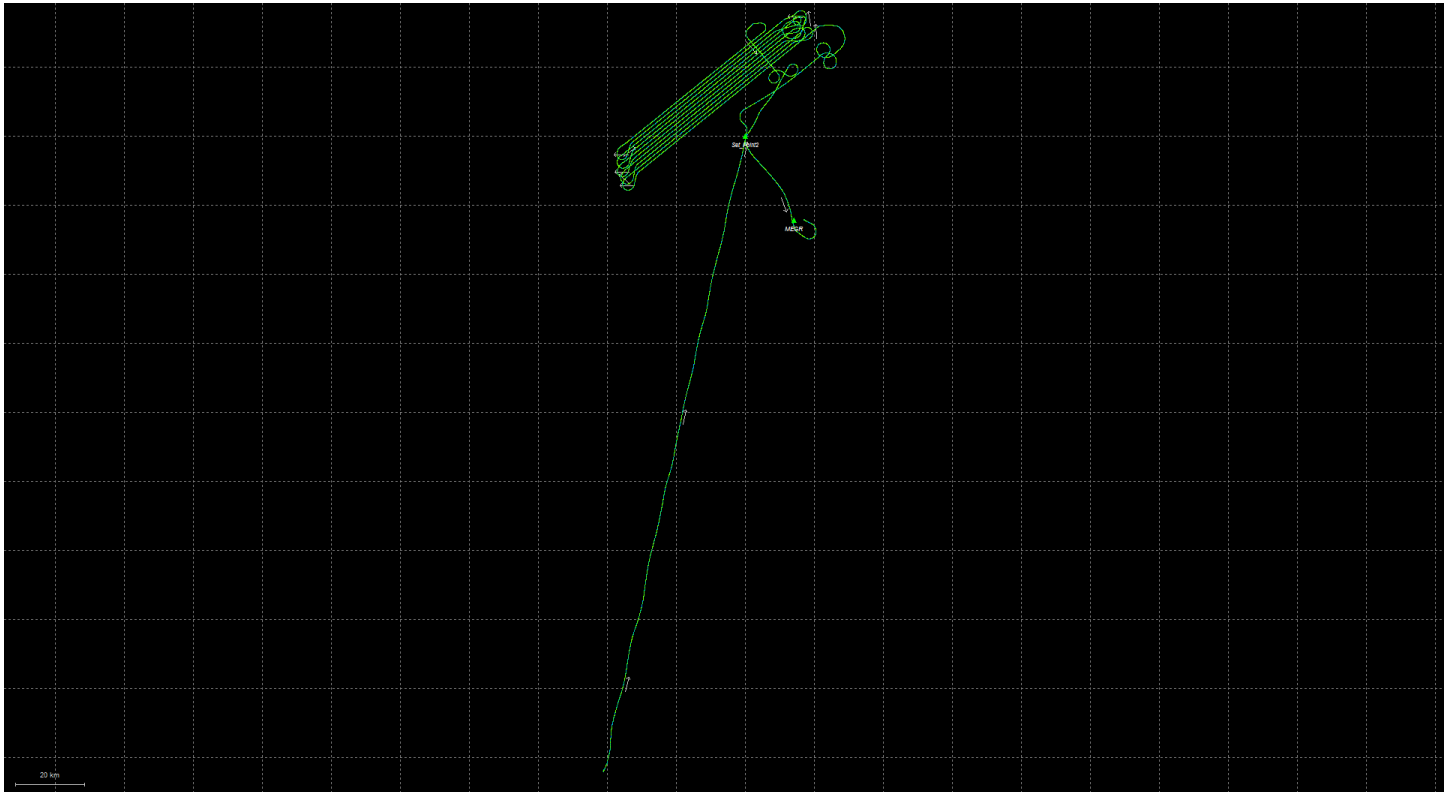
Type	Serial #	Alt AGL	Alt AMSL	Alt. VARIES	Avg Ter. HT	Max Gspsd	Avg Pt Spacing	Storage Name
LIDAR	MS70	6500'	6500'	VARIES	150 Wk	100%	2.2	MS70
FOV	40°	Scan Freq	53.4 Hz	MPIA Y/N	2	Power	100%	SN717B
								SSD 2

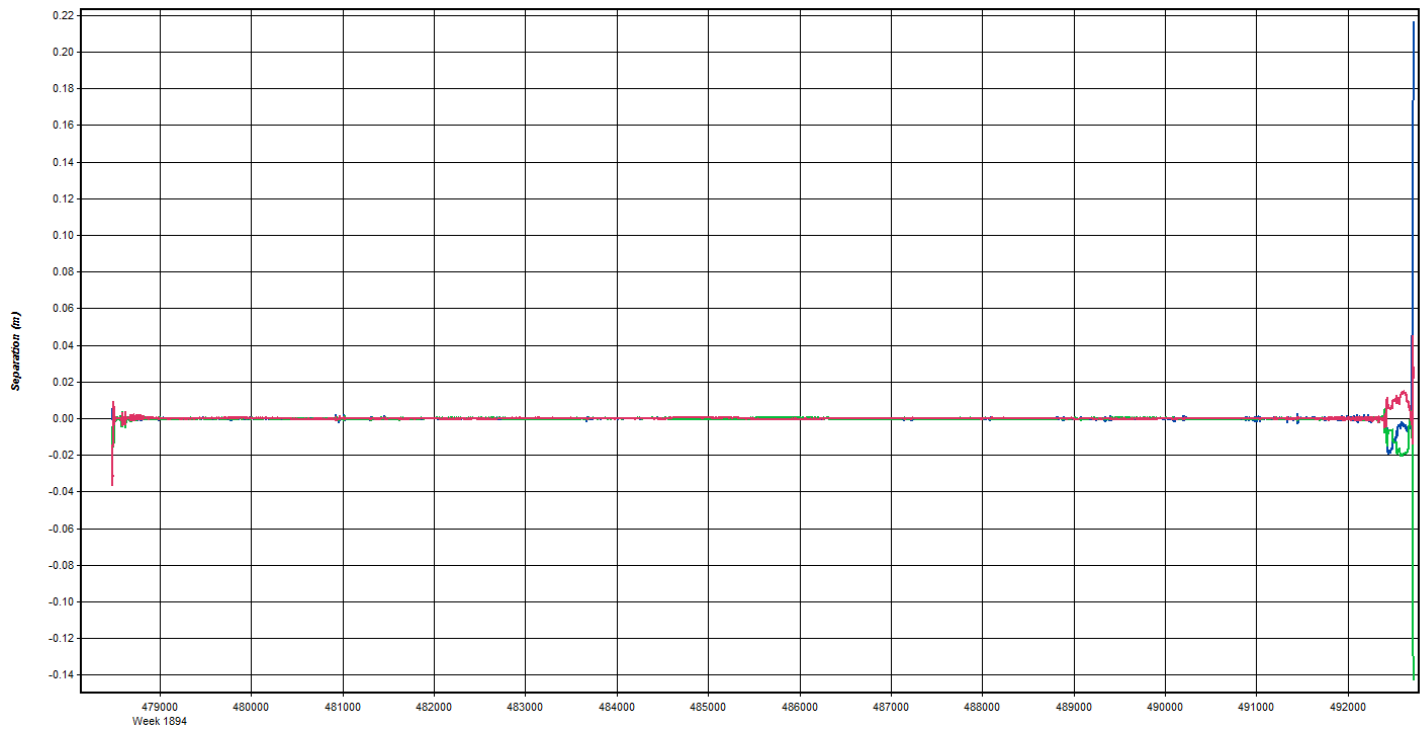
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	FOOPI-Six	GPS Altitude	Crab	Turb (0-1)	Notes
6017	NE	13:33	13:42	155 kts	1.2/14	7860'	7°	0	-H, s/c above & below, smooth, minimal snow below in some areas
6016	SW	13:45	13:54	150 kts	1.1/15	7860'	5°	0	-H, s/c above & below, smooth, minimal snow below in some areas
6015	NE	13:57	14:06	155 kts	1.1/16	7860'	6°	0	-H, s/c above & below, smooth, minimal snow below in some areas
6014	SW	14:08	14:17	150 kts	0.9/19	7860'	6°	0	-H, s/c above & below, smooth, minimal snow below in some areas
6013	NE	14:20	14:28	155 kts	1.0/17	7860'	6°	0	-H, s/c above & below, smooth, minimal snow below in some areas
6012	SW	14:31	14:40	150 kts	1.1/16	7860'	5°	0	-H, s/c above & below, smooth, minimal snow below in some areas
6011	NE	14:42	14:50	160 kts	1.1/18	7860'	6°	0	-H, s/c above & below, smooth, minimal snow below in some areas
6010	SW	14:53	15:00	155 kts	1.2/16	7870'	7°	0	-H, s/c above & below, smooth, minimal snow below in some areas
6008	NE	15:04	15:04	160 kts	1.3/16	7900'	7°	0	-H, s/c above & below, smooth, some residual snow below
6006	SW	15:08	15:08	150 kts	1.2/17	8900'	8°	0	-H, s/c above & below, smooth, some residual snow below
6032	SE	15:12	15:13	160 kts	1.3/17	8300'	4°	0	-H, s/c above & below, smooth, some residual snow below
6009	NE	15:18	15:21	160 kts	1.3/17	7840'	7°	0	-H, s/c above & below, smooth, minimal snow below in some areas
6007	SW	15:24	15:27	150 kts	1.2/18	7860'	8°	0	-H, s/c above & below, smooth, minimal snow below in some areas
6005	NE	15:29	15:32	160 kts	1.3/18	7860'	9°	0	-H, s/c above & below, smooth, minimal snow below in some areas
6004	SW	15:35	15:37	145 kts	1.3/18	7860'	7°	0	-H, s/c above & below, smooth, minimal snow below in some areas
6003	NE	15:39	15:41	155 kts	1.3/18	7860'	7°	0	-H, s/c above & below, smooth, minimal snow below
6002	SW	15:44	15:45	145 kts	1.3/17	7860'	9°	0	-H, s/c above & below, smooth, minimal snow below
6001	NE	15:48	15:49	160 kts	1.3/17	7900'	7°	0	-H, s/c above & below, smooth, minimal snow below

Total Proj Lines: 32 **Lines Flown:** 19 **Lines Remain:** ? **Online Time:** 2:33 **Mob Time:** 1:06 **Notes:** 20160429_124450.k - 124700

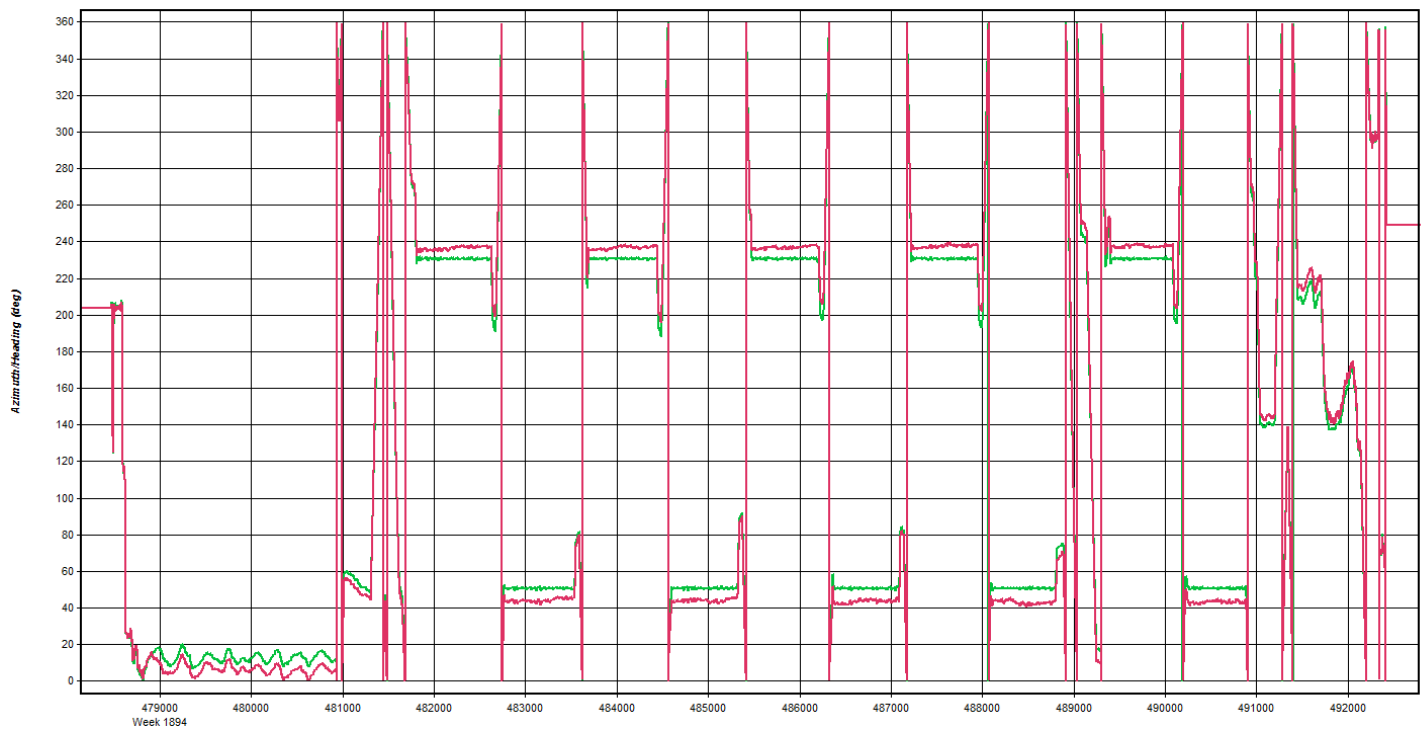
6031 SW 16:00 16:06 160 kts 1.4/17 7900' 5° 0 -H, s/c above & below, smooth, minimal snow below {CROSS LINE} (Fig. 06.16.102) → LANDED FOR FUEL

Apr 29, 2016-A (N812TB, SN7161)

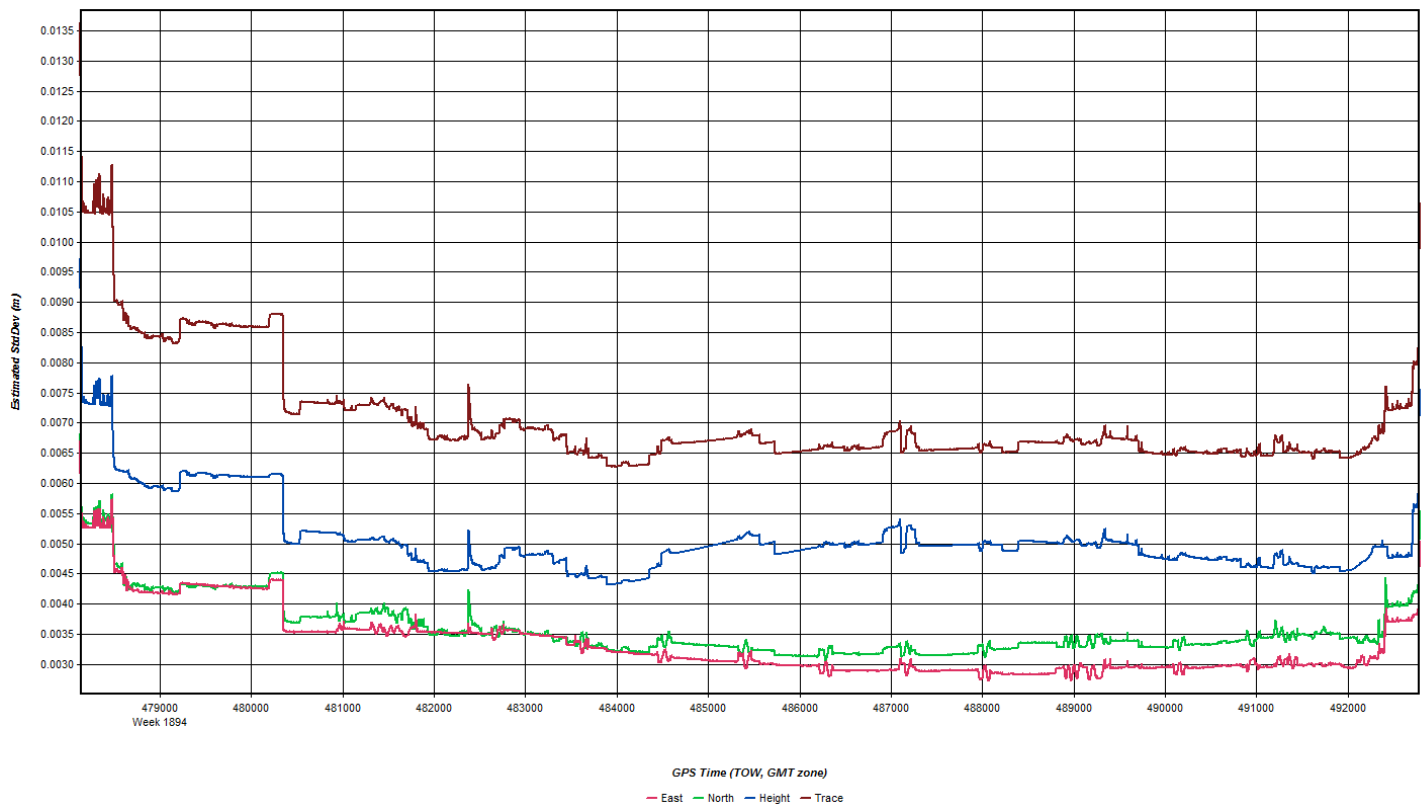
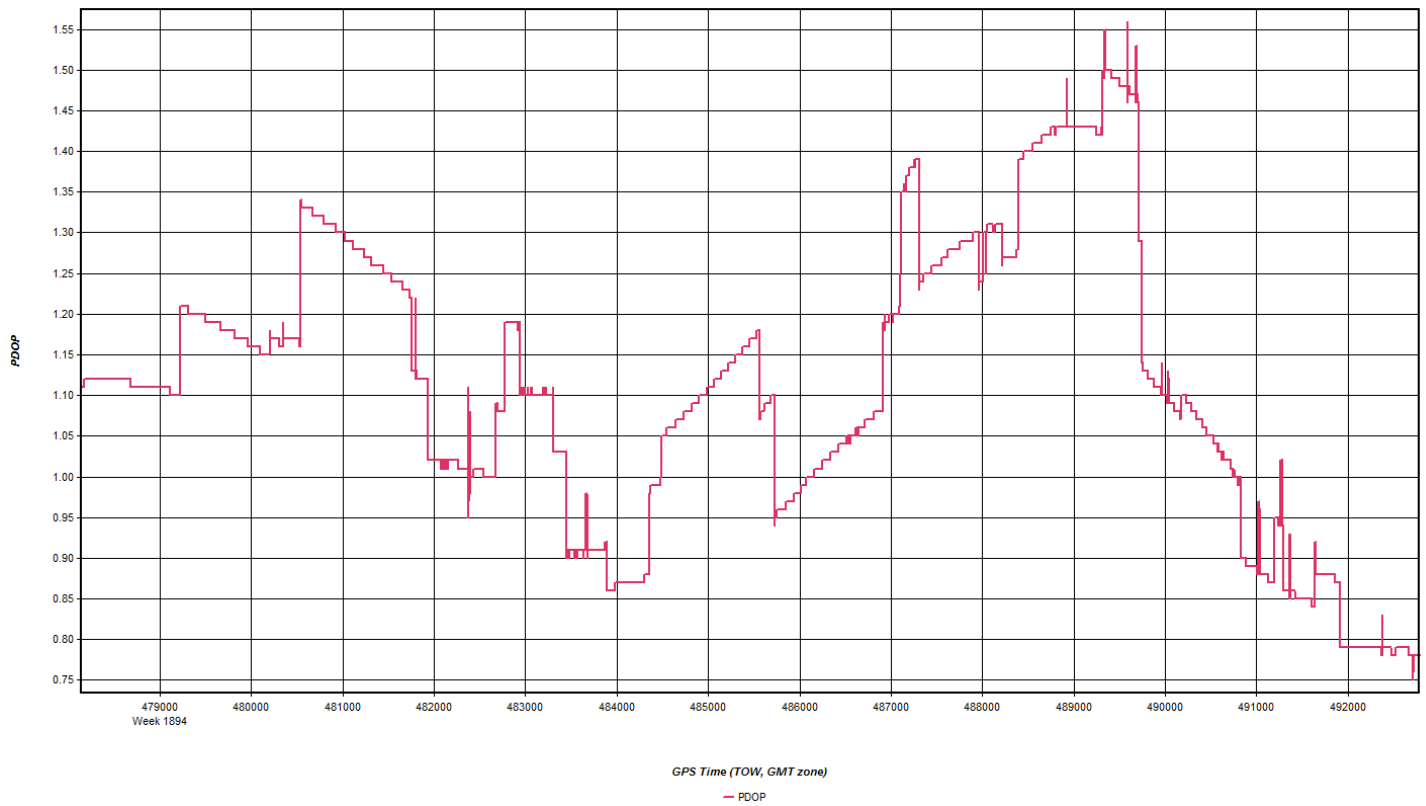


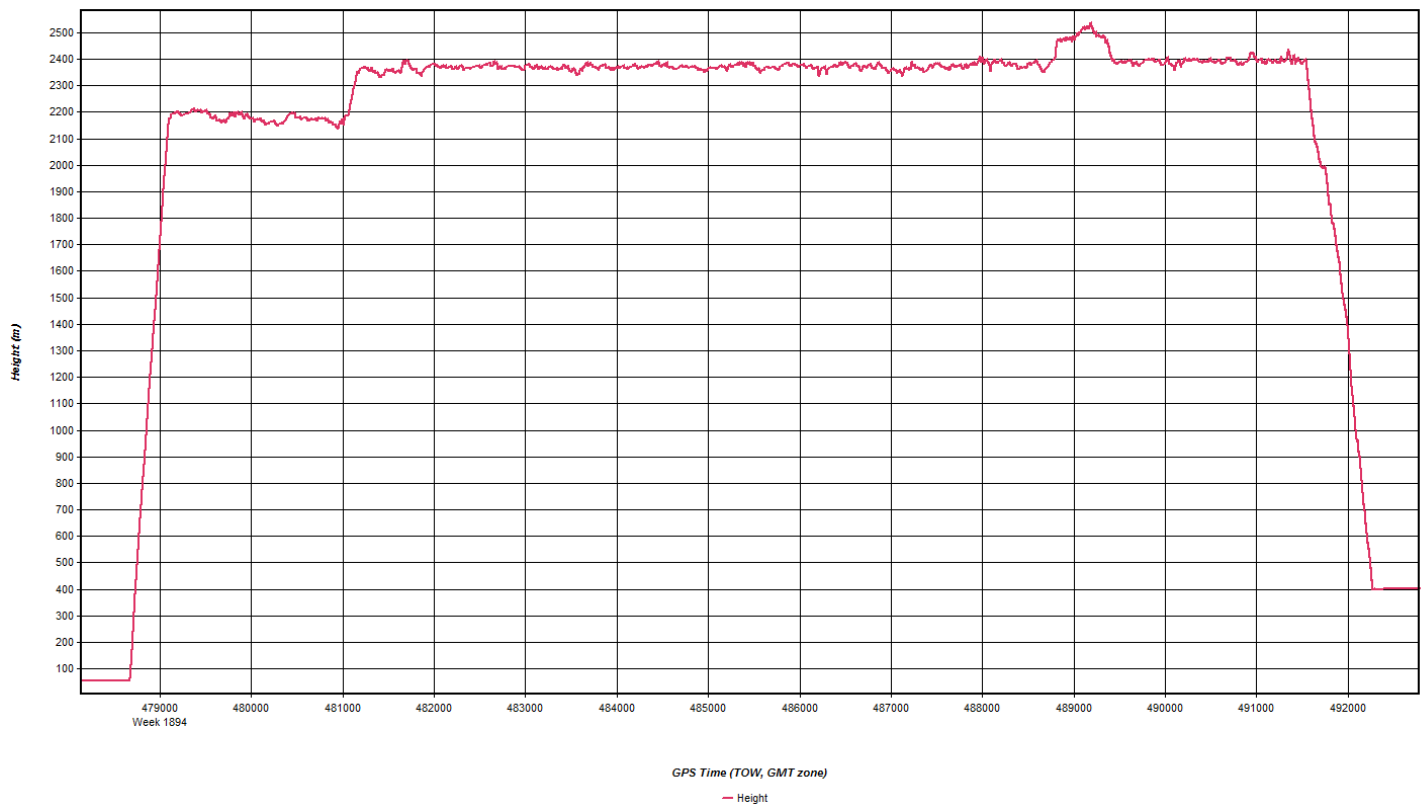


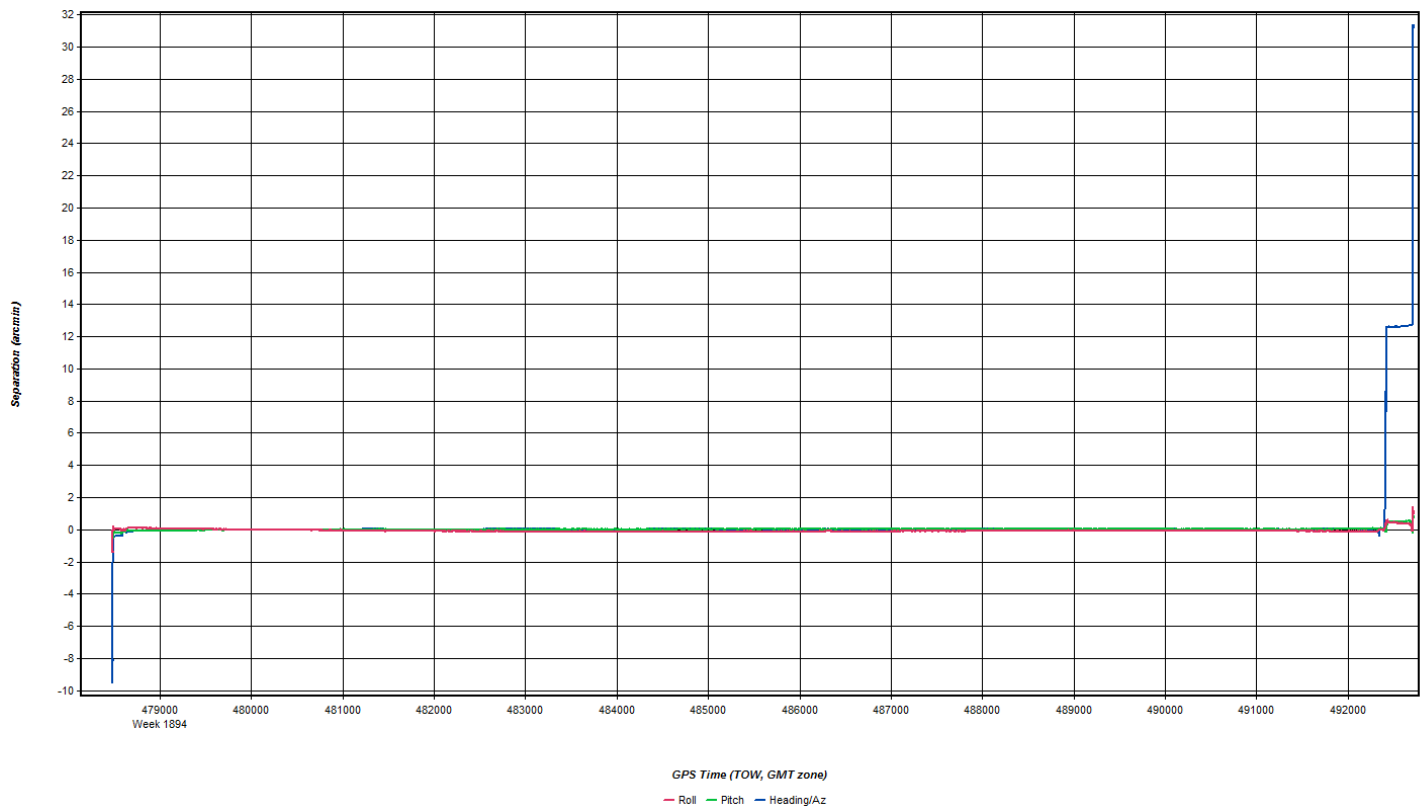
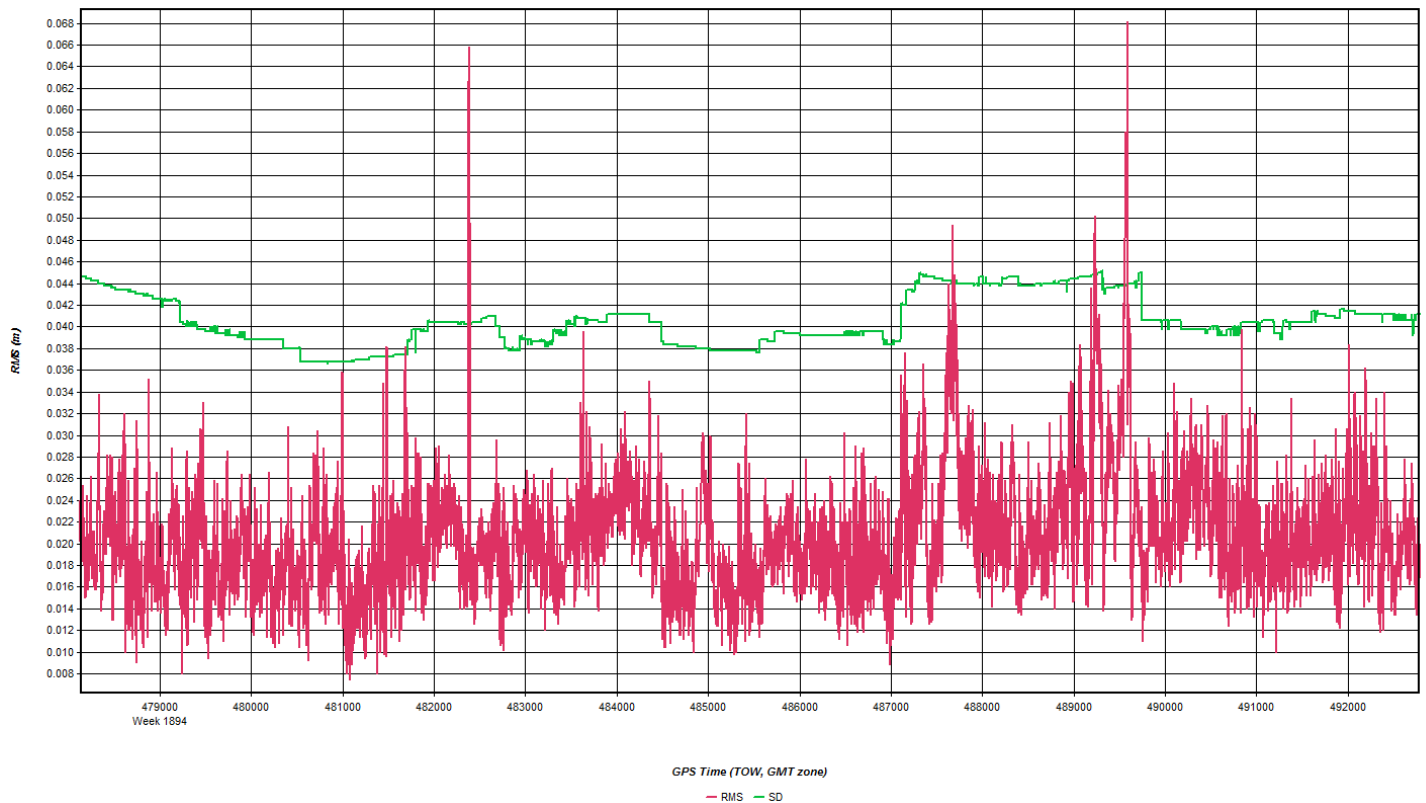
GPS Time (TOW, GMT zone)
— East — North — Up

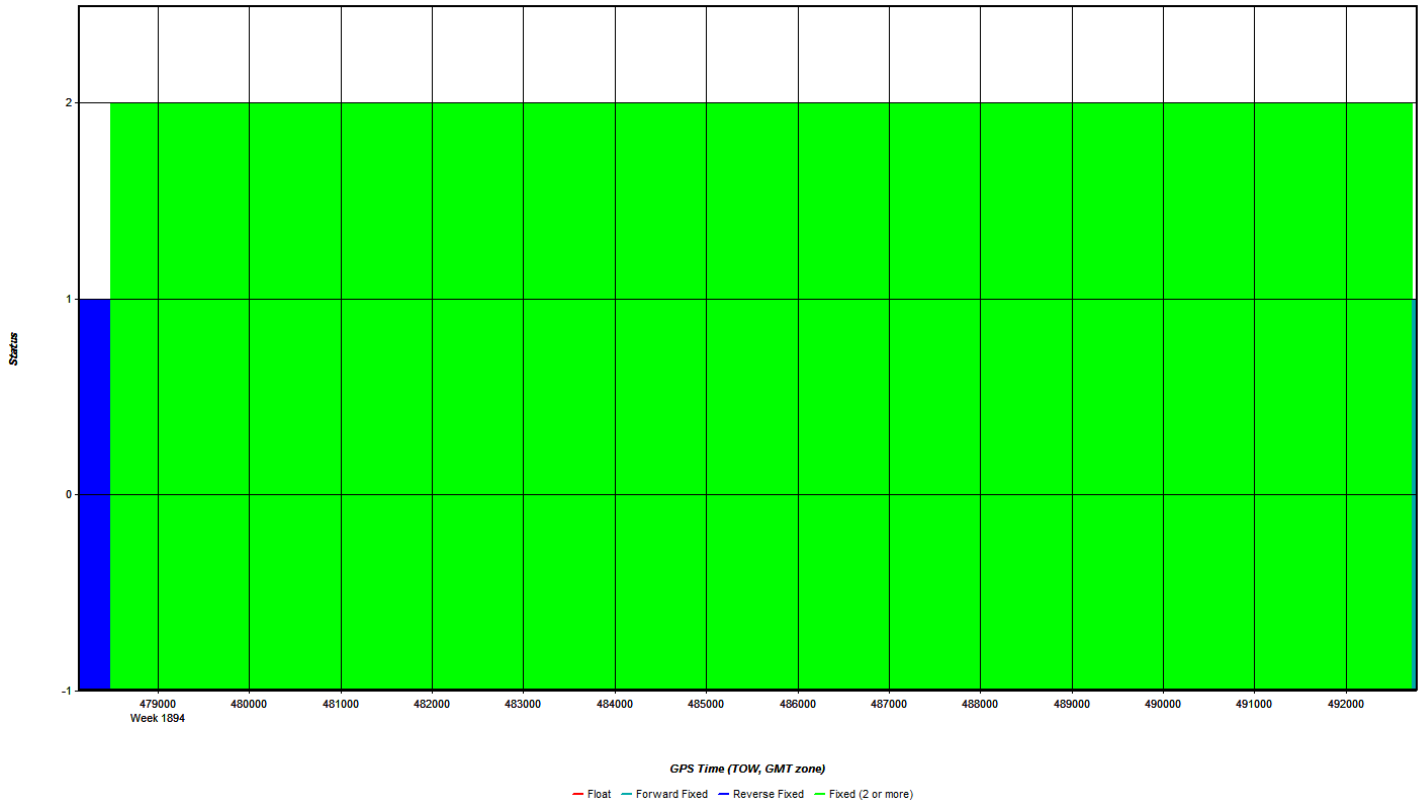


GPS Time (TOW, GMT zone)
— Heading/Azimuth — GPS-COG









Coordinate/Antenna Settings

Master Remote

Base Station
 2: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\CJYQ\Base\megr1200 (resampled).g

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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: Set_Point2 Name: Set_Point2 Disabled
File: E:\Proc\27146_Maine_2016\CJYQ\Base\20160429_27146_Base

Coordinates
Latitude: North 45 40 46.36938 Compute from PPP
Longitude: West 69 46 08.20112 Enter Grid Values
Ellipsoidal height: 295.651 m Enter MSL Height
Datum: WGS84 Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: N/A View STA File
Antenna profile: NOV702GG Info
Measured height: 2.000 m
ARP to L1 offset: 0.067 m
Applied height: 2.067 m
Measured to:
 ARP
 L1 Phase Centre
Compute From Slant

OK Cancel

Flight Log

Scanned by CamScanner

Quantum Spatial Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: 30 APR 2016

Project: USGS Western Maine Set Point 2 Wkst Proj #: 27146 Flight Mgmt File: 20160430-125859

Aircraft: N812TB Begin Hobbs: 3956.4 End Hobbs: 3960.0 Total: 3.6 Pilot: Radtke Co-Pilot: Mingsy Tech: Mingsy

Dep Apt: KLEW Dep Time (Local): 0909 (Z): 1309 Arr Apt: KLEW Arr Time (Local): 1247 (Z): 1647 Tot Time Aloft: 3:6

CORS: Y18 Sta 1: Sta 2: Flyovers: Y18 IF Y, times: Sta1) Sta2) 16K

GPS Unit: DYN Sta 1: Set Point 2 West Sta 2: Flyovers: DYN IF Y, times: Sta1) 1339 Sta2) 16K

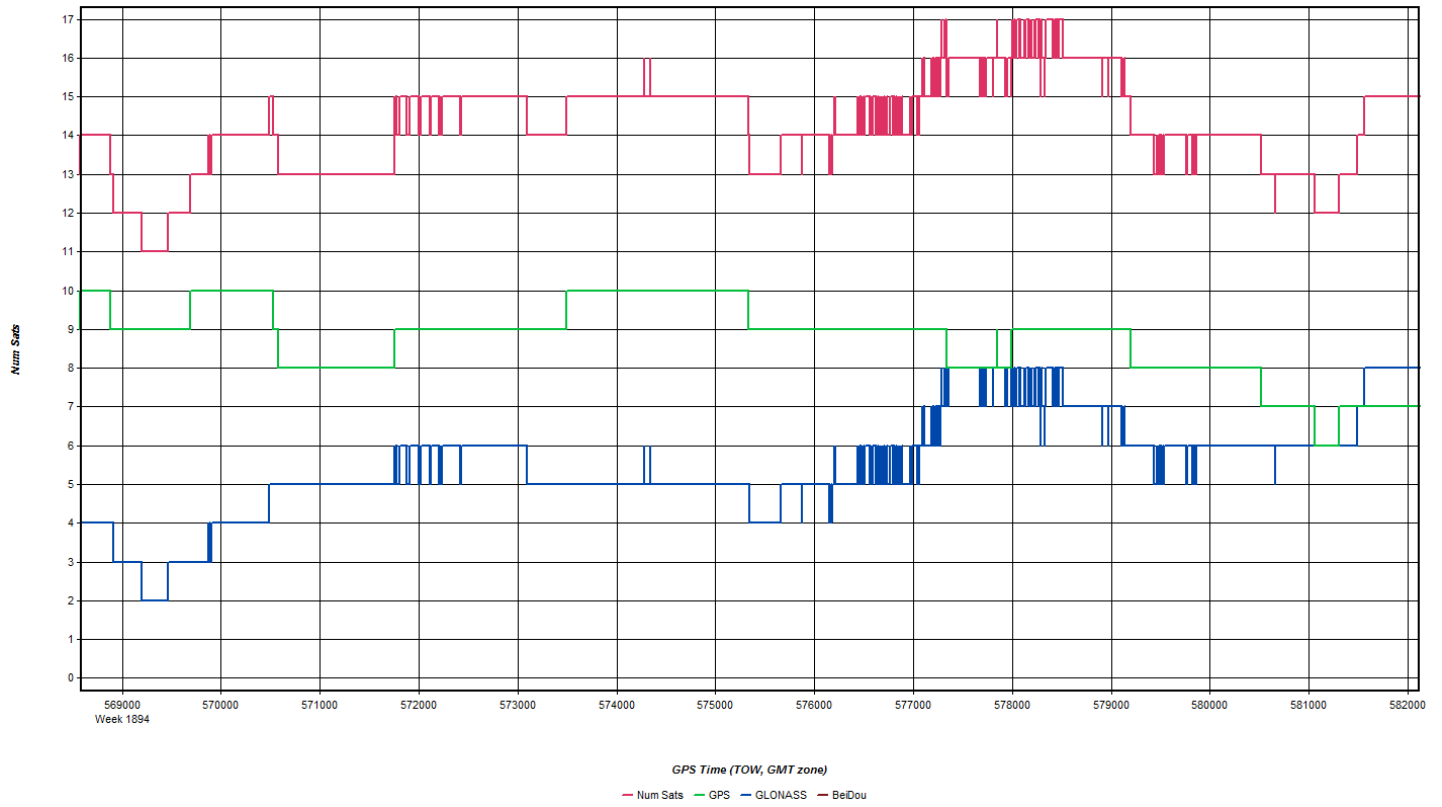
Gd Temp beg: °C End: °C OAT beg: °C End: °C Altimeter begin: end:

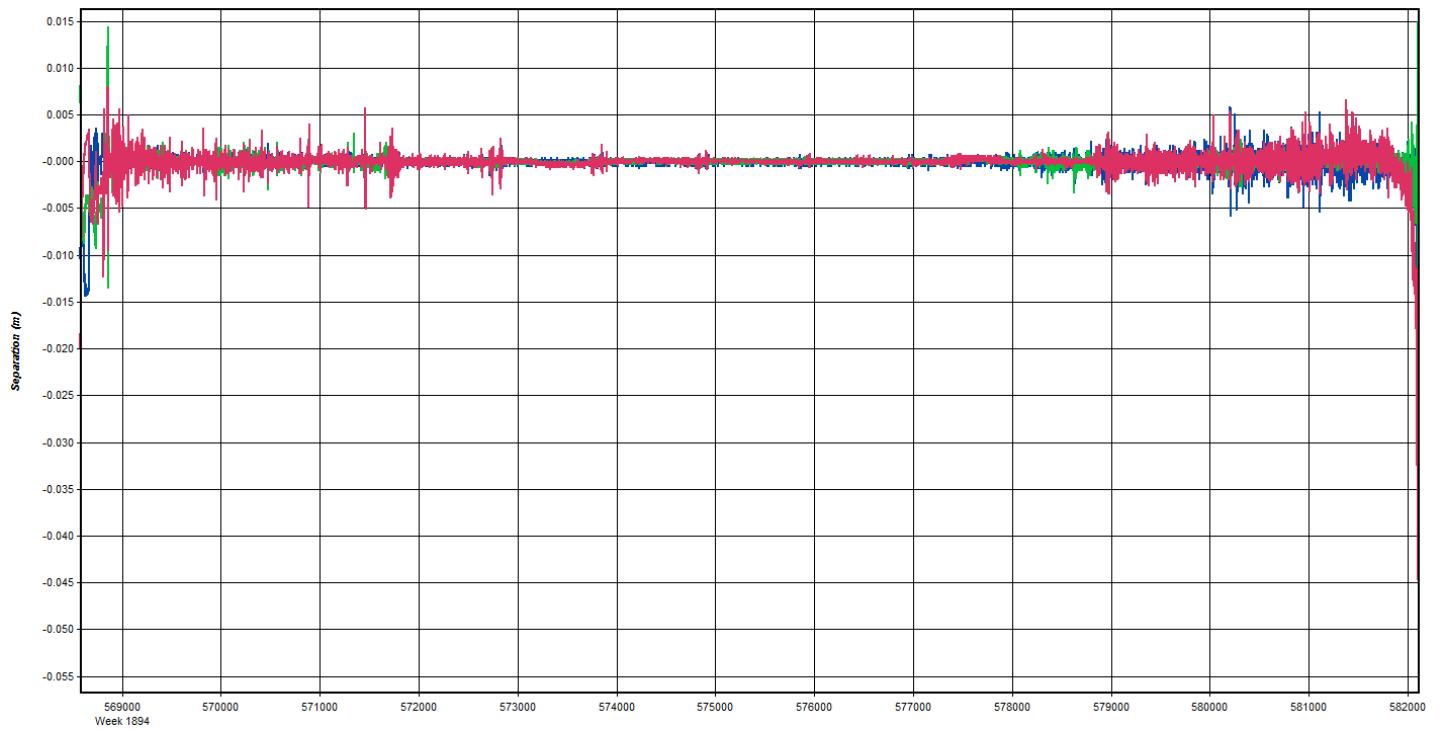
Type	Serial #	Alt AGL	Alt AMSL	Avg Temp	Max Colored	Avg Pt Ignoring
LIDAR	ALS70	7161	4675	150 kts	150 kts	150 kts
FOV	40°	53 Hz	MPIA Y1N	Power	100%	100%

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	Pool/Sea	GPS Altitude	Orb	Turb (0..1)	FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.
									3 minute static start @ 1303 stop @ 1306
									Flyover Base Station set point 2 west @ 1339
									Figure 8 start @ 1347 stop @ 1353
									Fire Test
									sky clear, some ice on lakes, minimal snow on mountain tops
									sky clear, some ice on lakes, snow on mountain tops
									sky clear, some ice on lakes, snow in North + on mountain tops
									sky clear, some ice on lakes, snow in North + on mountain tops
									sky clear, some ice on lakes, snow in North + on mountain tops, bit turbulence
									sky clear, some ice on lakes, snow in North + on mountain tops,
									Cross Tie
									Figure 8 start @ 1601 stop @ 1606
									Flyover Base Station @ 1614
									3 minute static start @ 1648 stop @ 1651

Total Proj Lines: 85 Lines Flown: 6 Lines Remain: 50 Online Time: 2:1 Mob Time: 1:5 Notes:

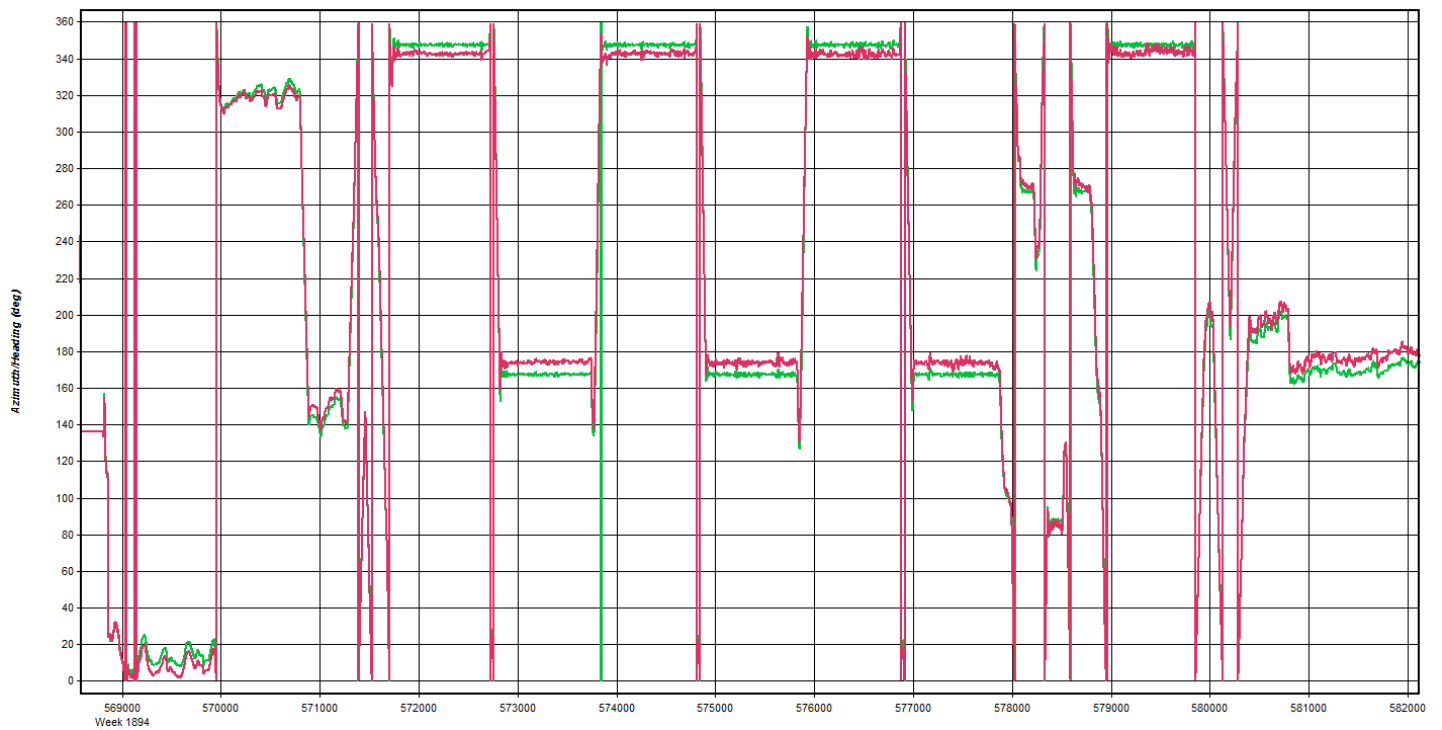
Apr 30, 2016-A (N73TM, SN7178)





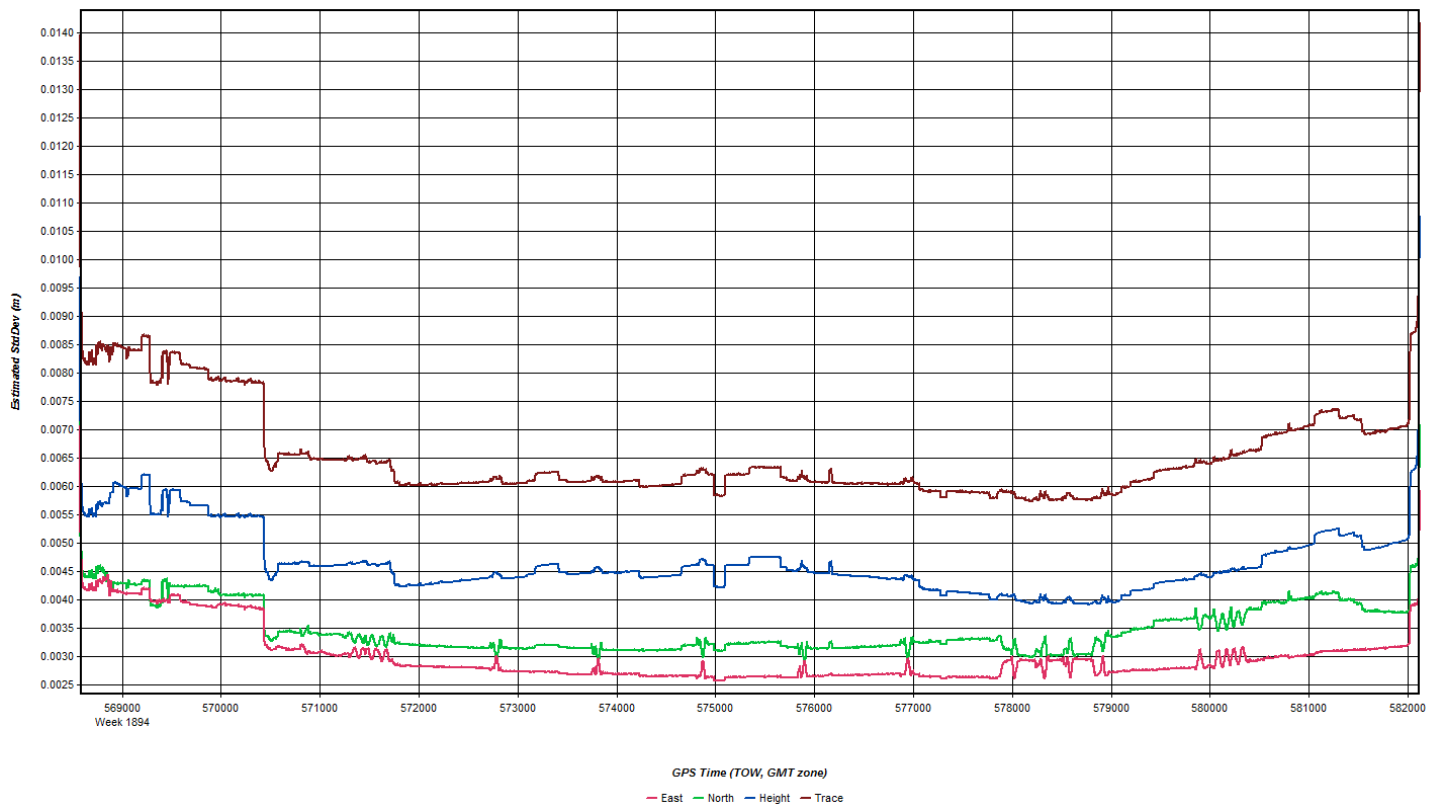
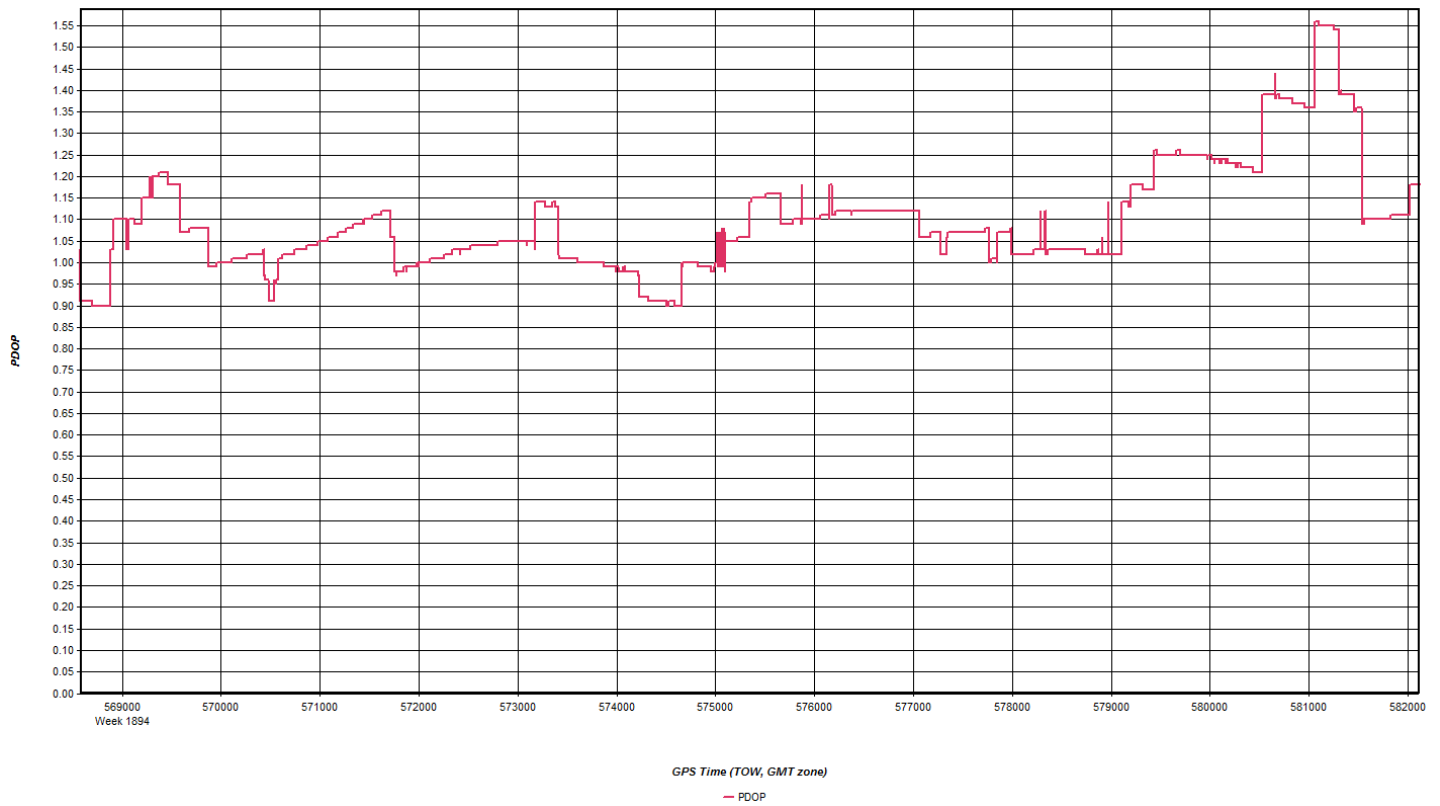
GPS Time (TOW, GMT zone)

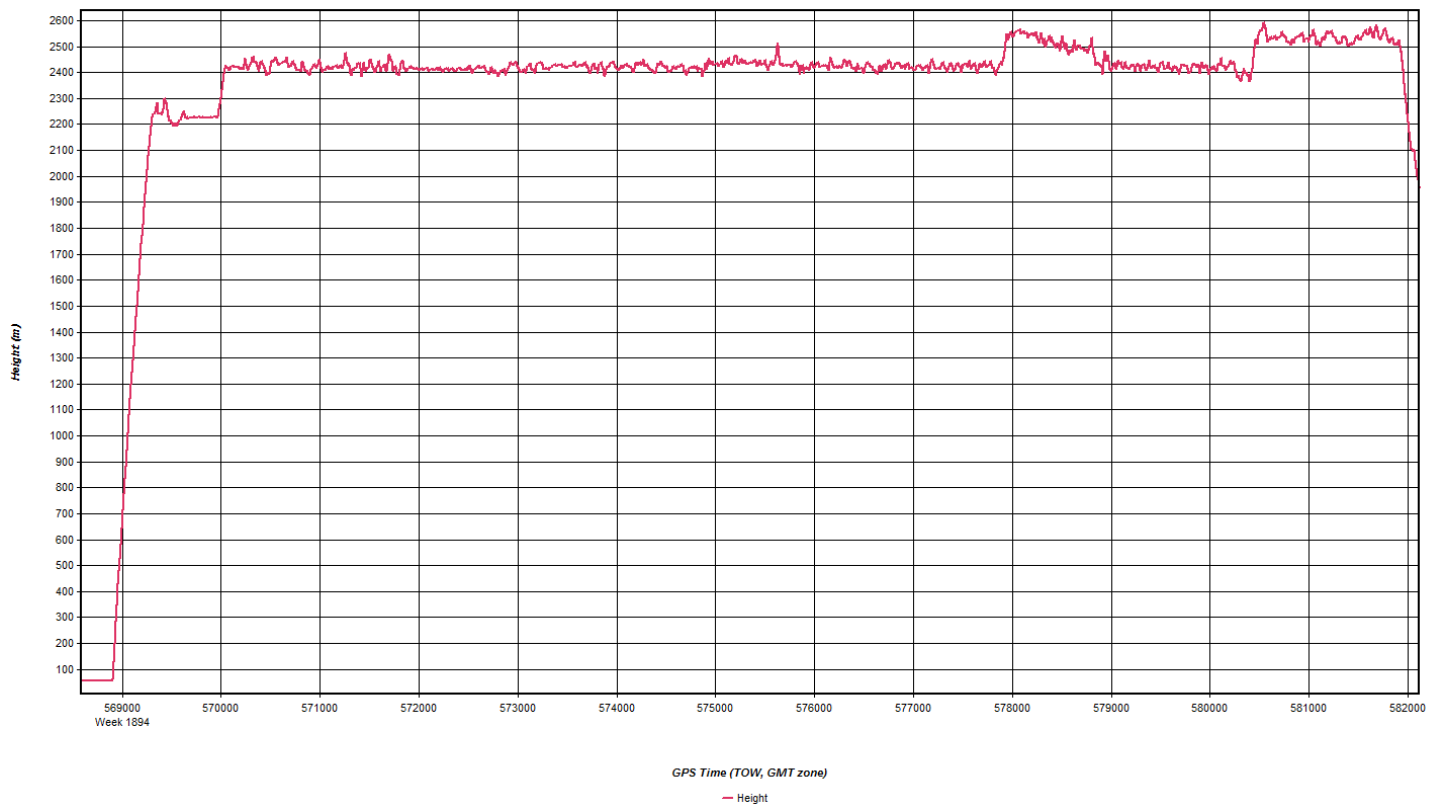
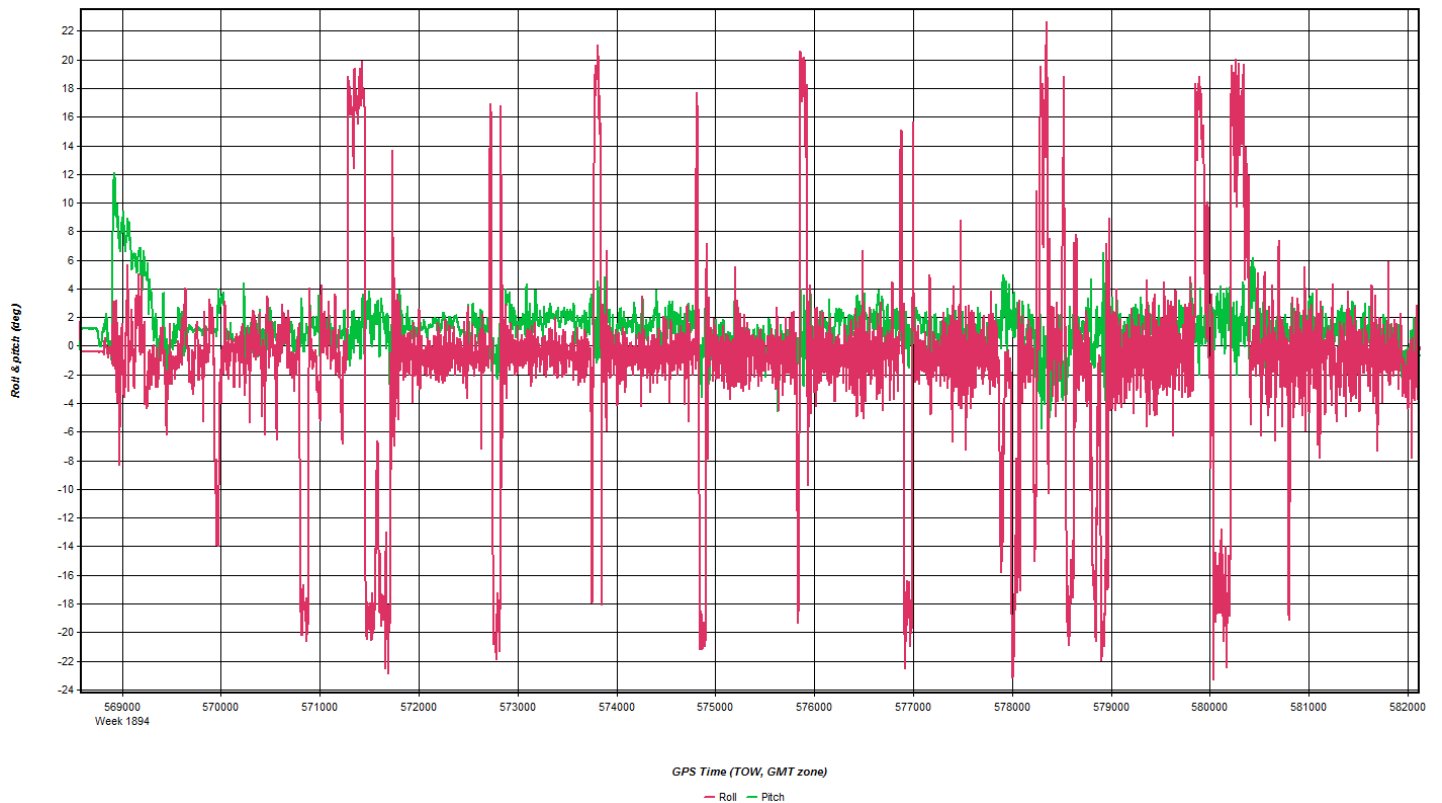
— East — North — Up

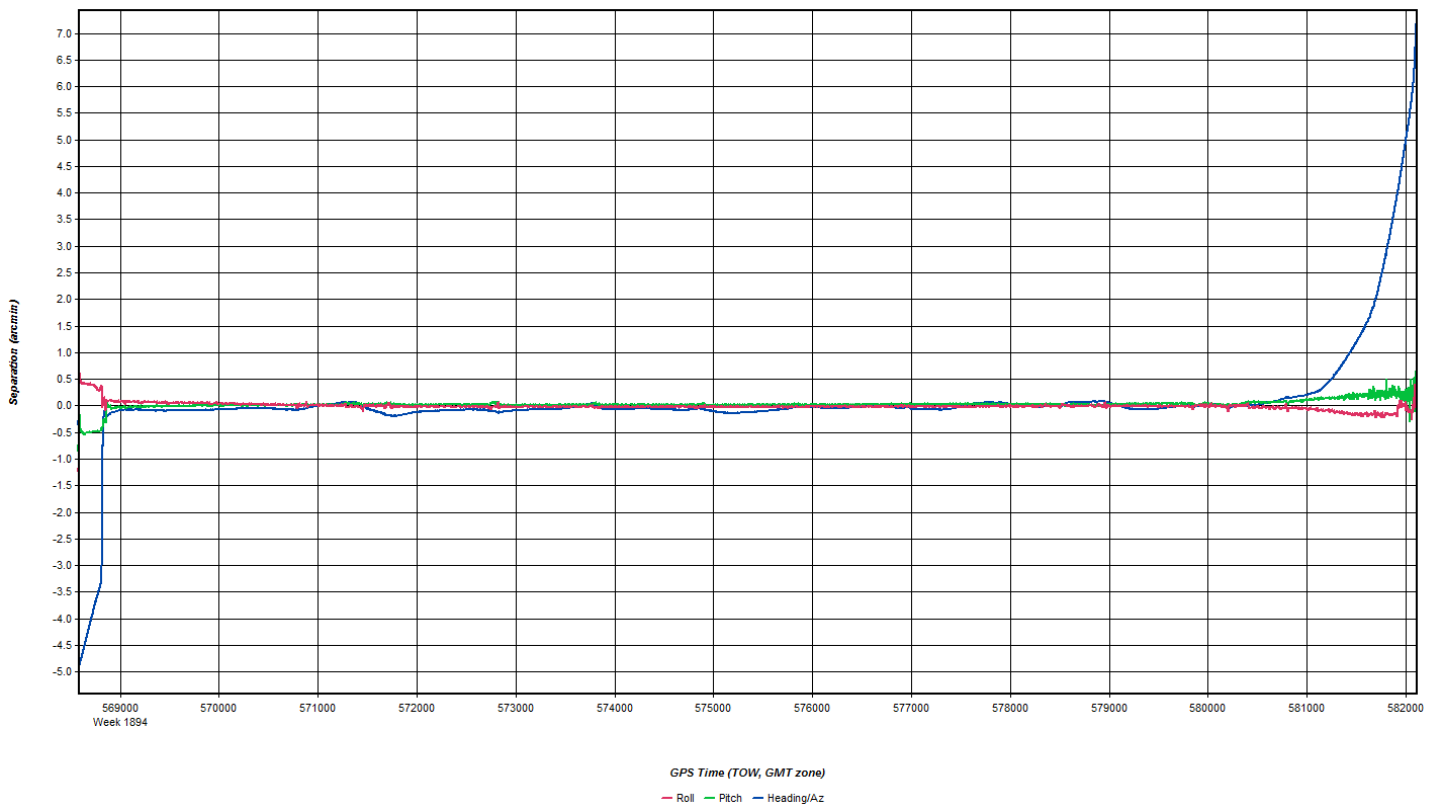
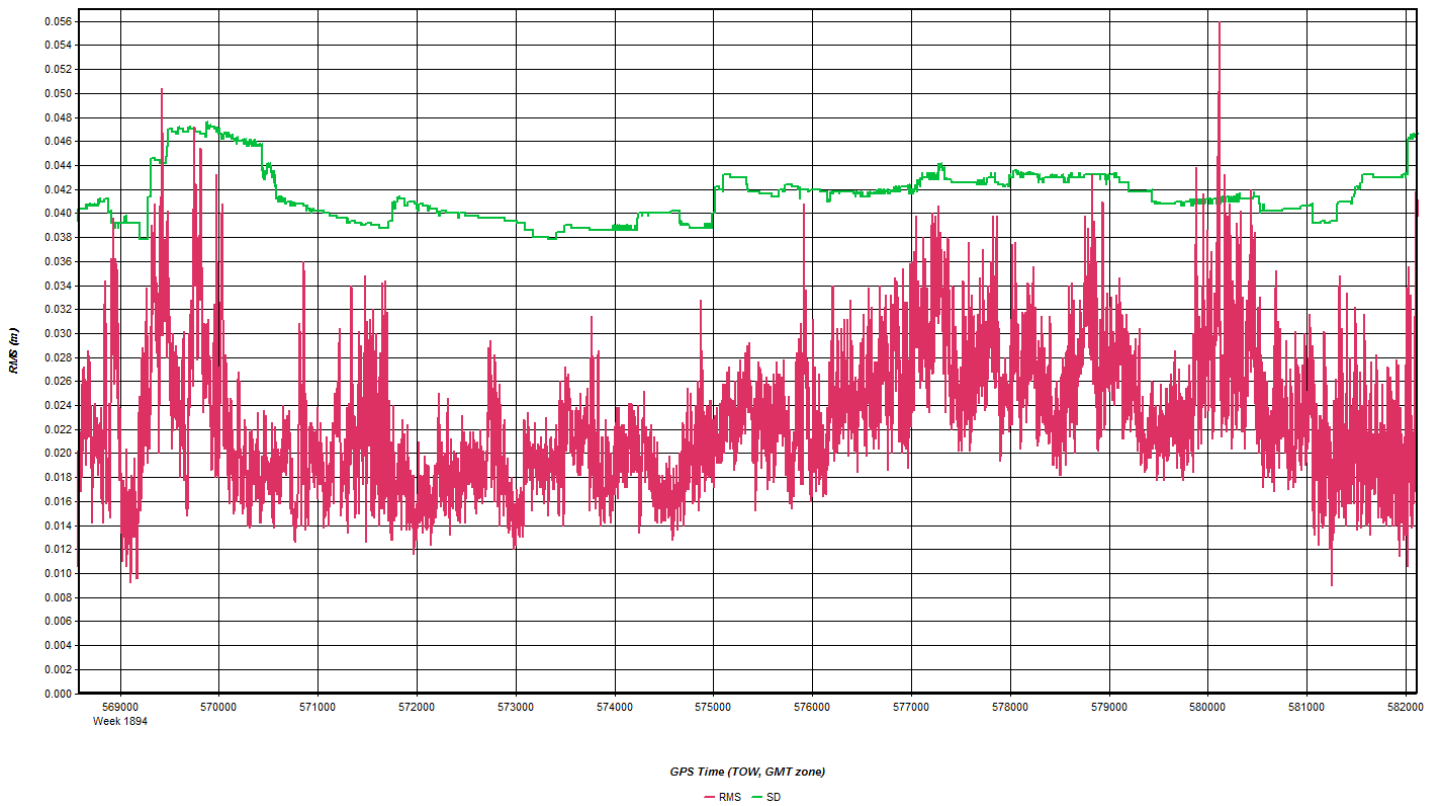


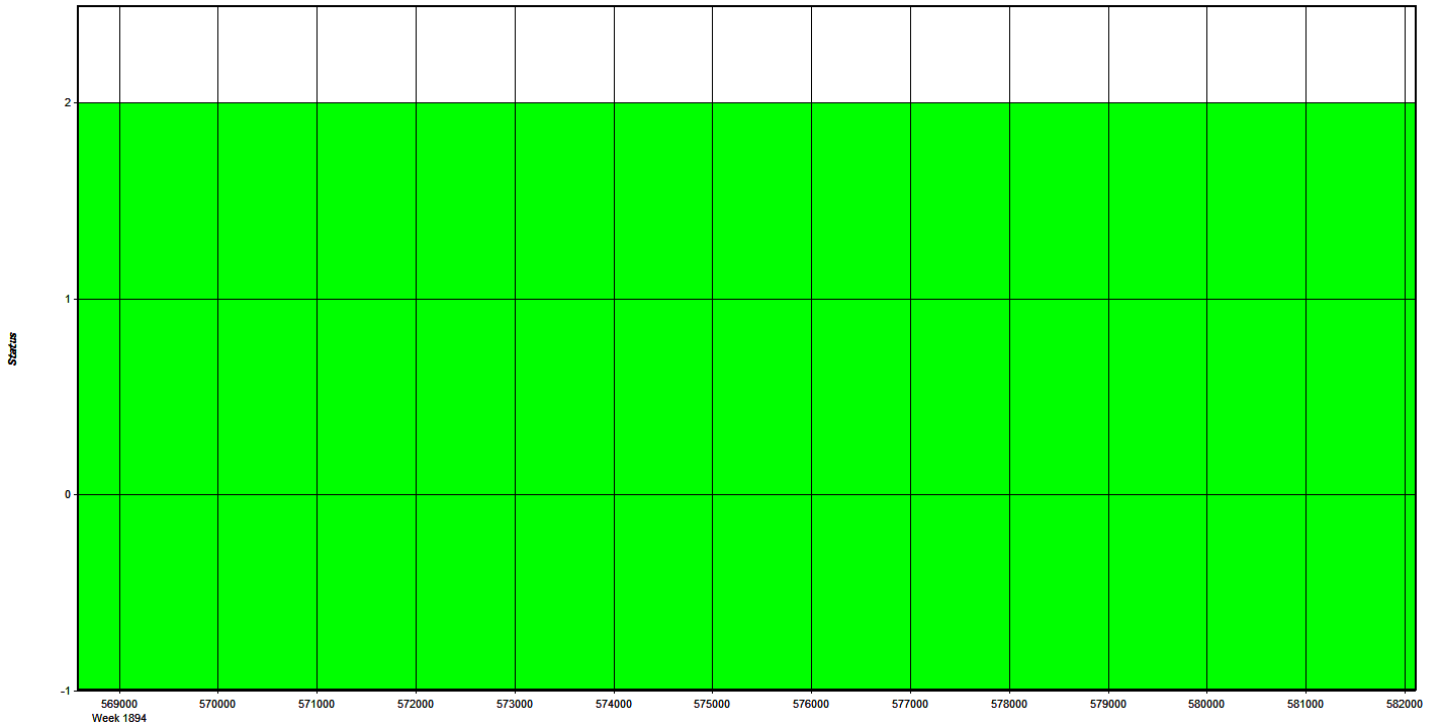
GPS Time (TOW, GMT zone)

— Heading/Azimuth — GPS-COG









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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEFR Name: MEFR Disabled
 File: E:\Proc\27146_Maine_2016\79AP\20160430a-7178\mefr1210.gp

Coordinates
 Latitude: North 44 40 28.97450 Compute from PPP
 Longitude: West 70 07 54.54215 Enter Grid Values
 Ellipsoidal height: 131.643 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Master Remote

Base Station
 2: MERA Name: MERA Disabled
 File: E:\Proc\27146_Maine_2016\79AP\20160430a-7178\mvera1210.g

Coordinates
 Latitude: North 44 58 25.33352 Compute from PPP
 Longitude: West 70 39 10.58376 Enter Grid Values
 Ellipsoidal height: 489.568 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRM55971.00, NONE View STA File
 Antenna profile: TRM55971.00 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

Master Remote

Base Station
 3: Set_Point1_West Name: Set_Point1_Wes Disabled
 File: E:\Proc\27146_Maine_2016\79AP\20160430a-7178\GPSbase\2

Coordinates
 Latitude: North 45 18 04.00868 Compute from PPP
 Longitude: West 70 36 12.34092 Enter Grid Values
 Ellipsoidal height: 351.264 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: N/A View STA File
 Antenna profile: NOV702GG Info
 Measured height: 2.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 2.067 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Flight Log

Project: USGS WESTERN MAINE **Proj #:** 27146 **Date:** APRIL 30th, 2016
 (email log daily to flight_log_distribution_list@quantumspatial.com) 20160430-135331 **Page 1 of 1**

Flight Mgmt File: USGS_Maine_SatPointI-SM7173-135331 **UTC:** A B C D E

Aircraft: N73JM **Begin Hobbs:** 6215.9 **Total:** 3.8 **Pilot:** D. WAGNER **Co-Pilot:** - **Tech:** P. HARAWAY

Dep Apt: KLEW **Dep Time (Lcl):** 10:01 [Z:14:01] **Arr Apt:** KLEW **Arr Time (Local):** 13:49 [Z:17:49] **Tot Time Aloft:** 3:48

CORS: Y / N **Sta 1:** - **Sta 2:** - **Flyovers:** Y / N **IF Y, times: Sta 1:** - **Sta 2:** -

GPS Unit: N **Sta 1:** SET POINT I WEST **Sta 2:** - **Flyovers:** Y / N **IF Y, times: Sta 1:** 14:33 & 17:19 **Sta 2:** -

Gd Temp beg: +05 °C **End:** +10 °C **OAT beg:** -04 °C **End:** -03 °C **Altimeter begin:** 30.25" **end:** 30.20"

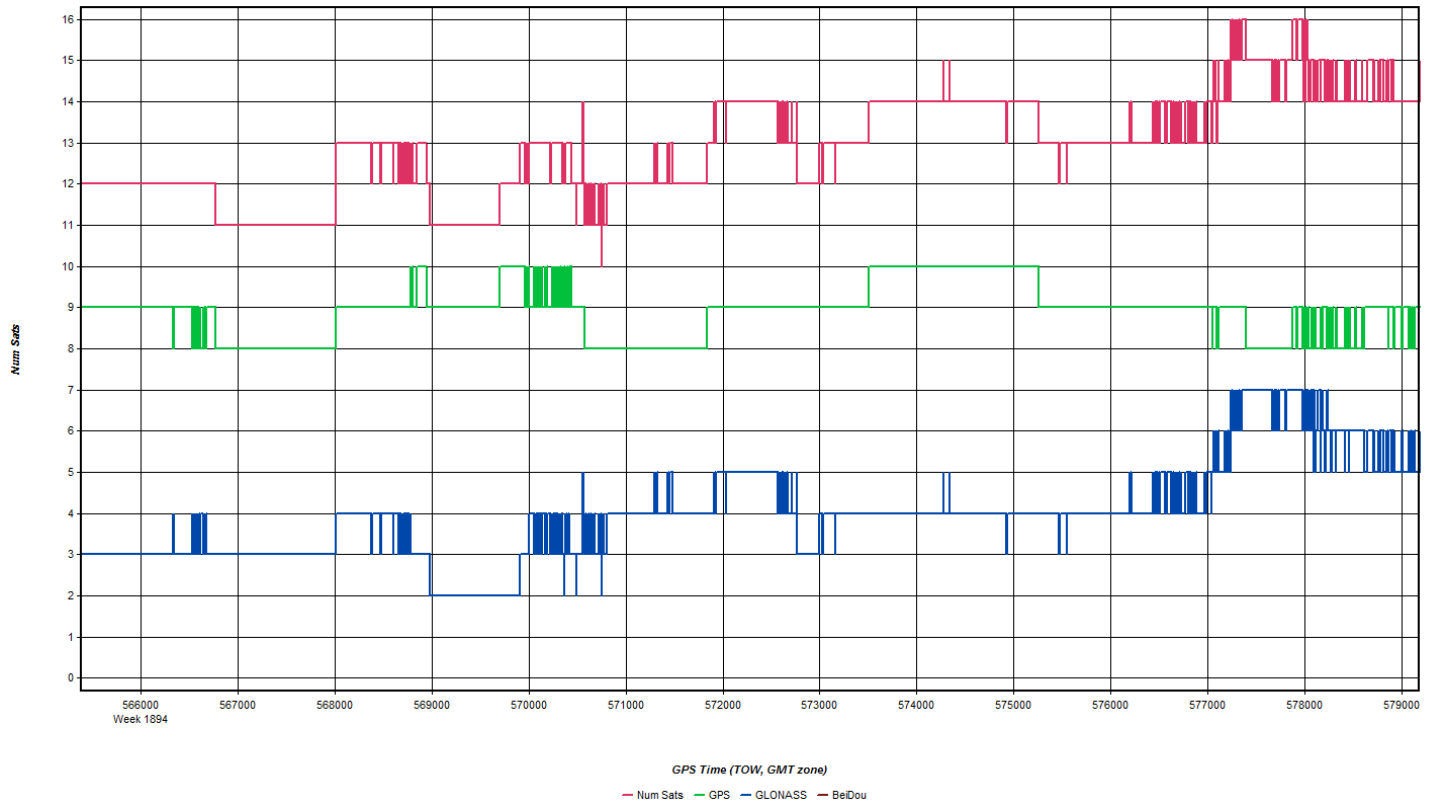
Type	FOV	Send #	Scan Freq	Alt AGL	Alt MSL	Alt AMSL	Pulses in Air	Crab	Turb (0-1)	Avg Terr Ht	Max Gspsd	Avg Pt Spacing	PPSM	End GB	Tot GB	Storage Name
LIDAR	40°	MS70	53.4 Hz	778	6500'	6500'	MPIA	N	0	VARIES	150	150	2.2	MS70	37	MS70
											180%			37		MS70

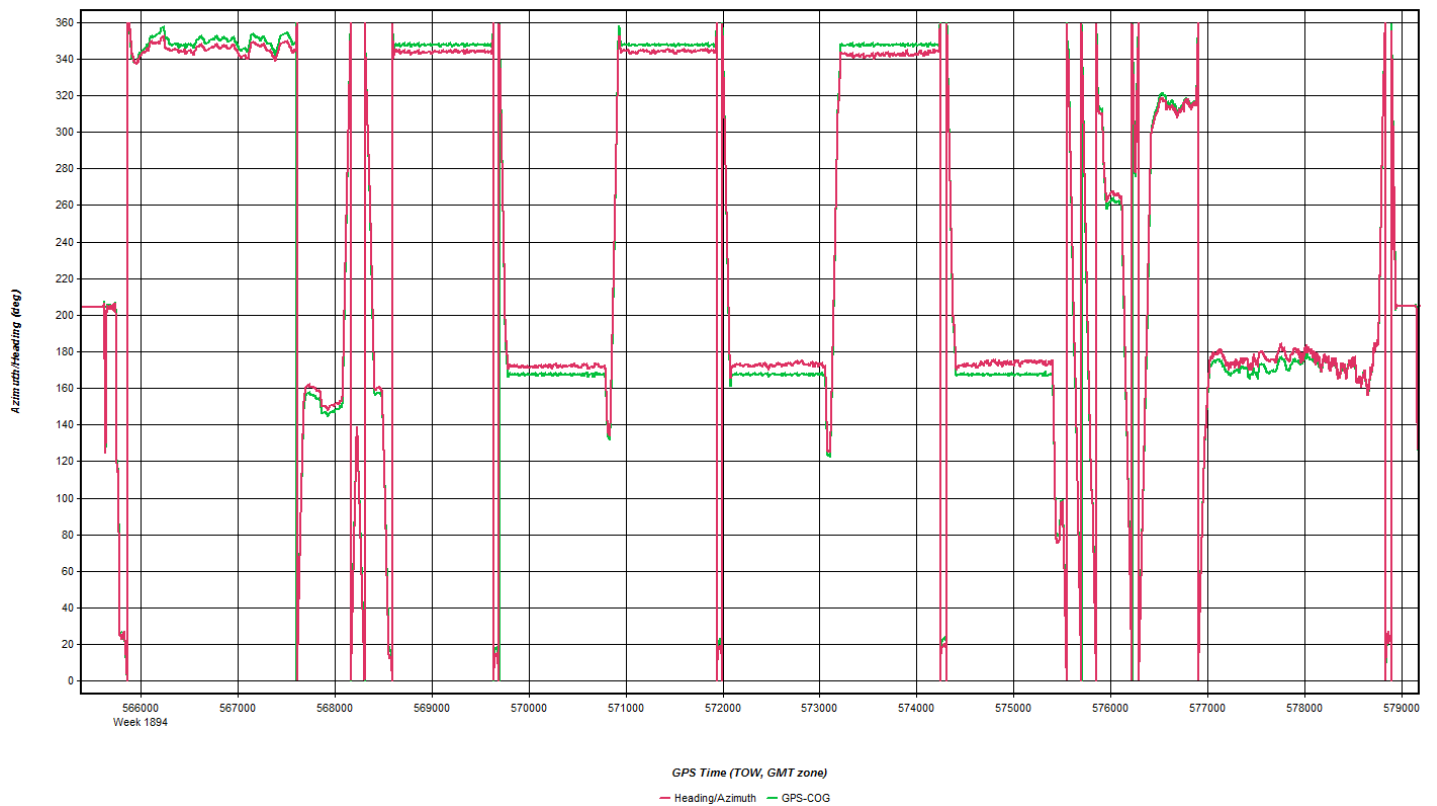
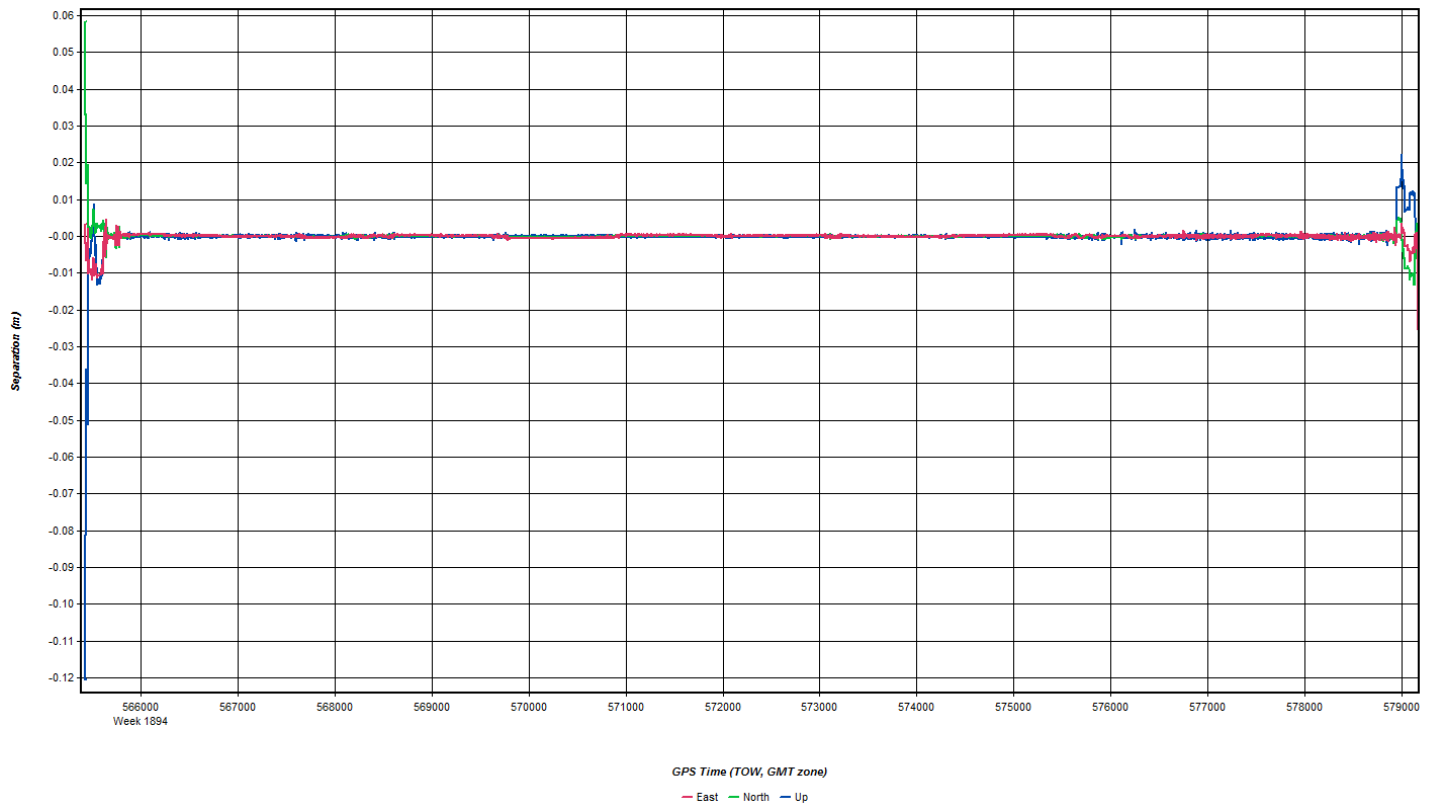
Line #	Hdg	Start UTC	End UTC	Gd Spd	POOP/SEA	GPS Altitude	Crab	Turb (0-1)	FLIGHT LINE NOTES - visibility, clouds, smoke, parrot, etc.
4025	N	14:50	15:04	155 kts	1.2/16	7900'	5°	0	h.E, s.l.c. above & below, smooth, minimal snow below
4024	S	15:07	15:21	155 kts	1.2/17	7940'	6°	0	h.E, s.l.c. above & below, smooth, minimal snow below
4023	N	15:24	15:39	150 kts	1.2/18	7940'	6°	0	h.E, s.l.c. above & below, smooth, minimal snow below
4022	S	15:42	15:56	155 kts	1.1/18	7940'	5°	0	h.E, s.l.c. above & below, occ - turb, minimal snow below
4021	N	15:59	16:14	150 kts	1.3/17	7940'	5°	0	h.E, s.l.c. above & below, occ - turb, minimal snow below
4020	S	16:17	16:31	160 kts	1.1/19	7940'	6°	0	h.E, s.l.c. above & below, int - turb, minimal snow below
4019	W	16:35	16:36	140 kts	1.0/20	8350'	4°	-	h.E, s.l.c. above & below, cont - turb, minimal snow below
4018	E	16:39	16:41	155 kts	1.1/19	8200'	3°	-	h.E, s.l.c. above & below, cont - turb, minimal snow below
4017	W	16:44	16:46	145 kts	1.1/18	8150'	3°	-	h.E, s.l.c. above & below, cont - turb, minimal snow below
4016	N	16:50	17:03	155 kts	1.1/18	7950'	4°	-	h.E, s.l.c. above & below, cont - turb, minimal snow below

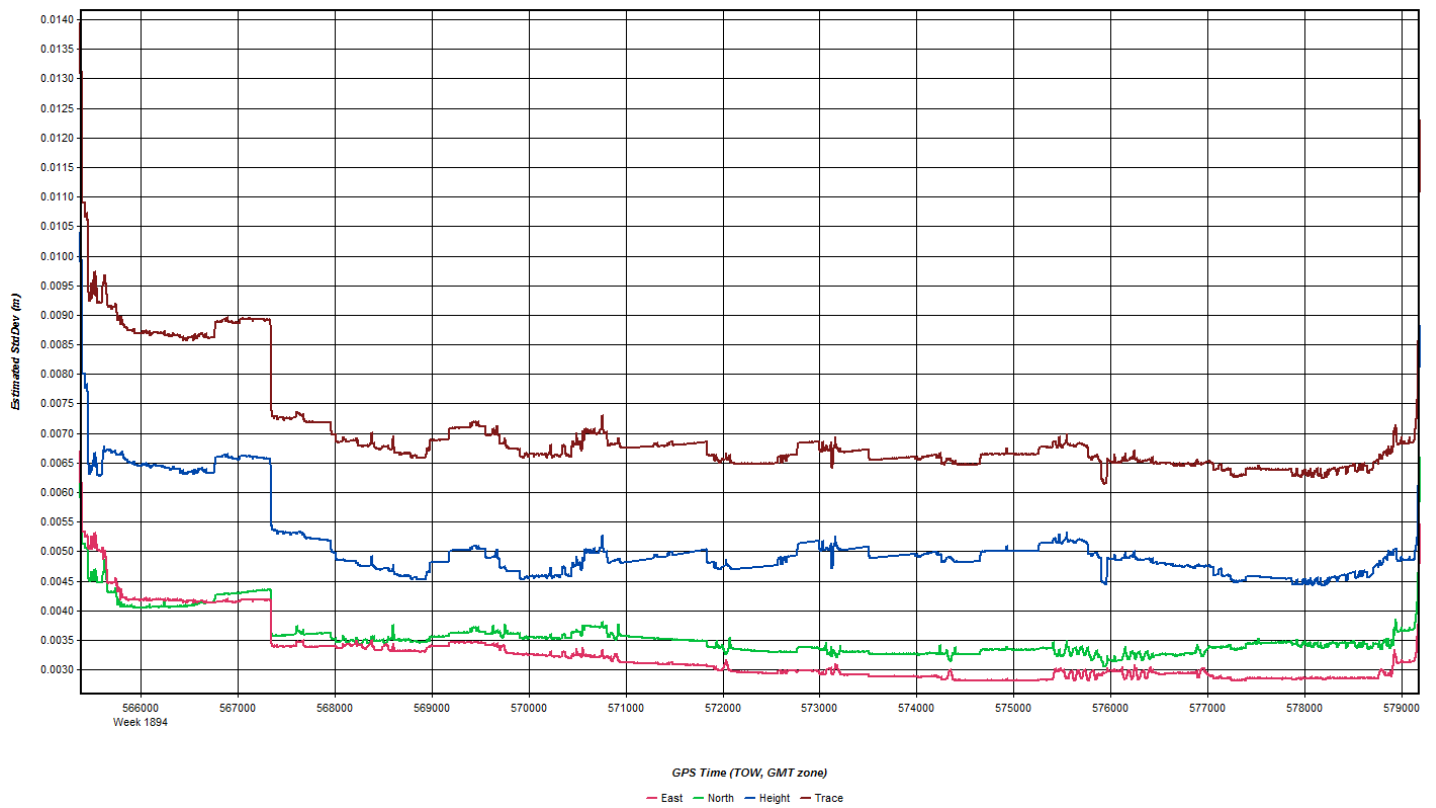
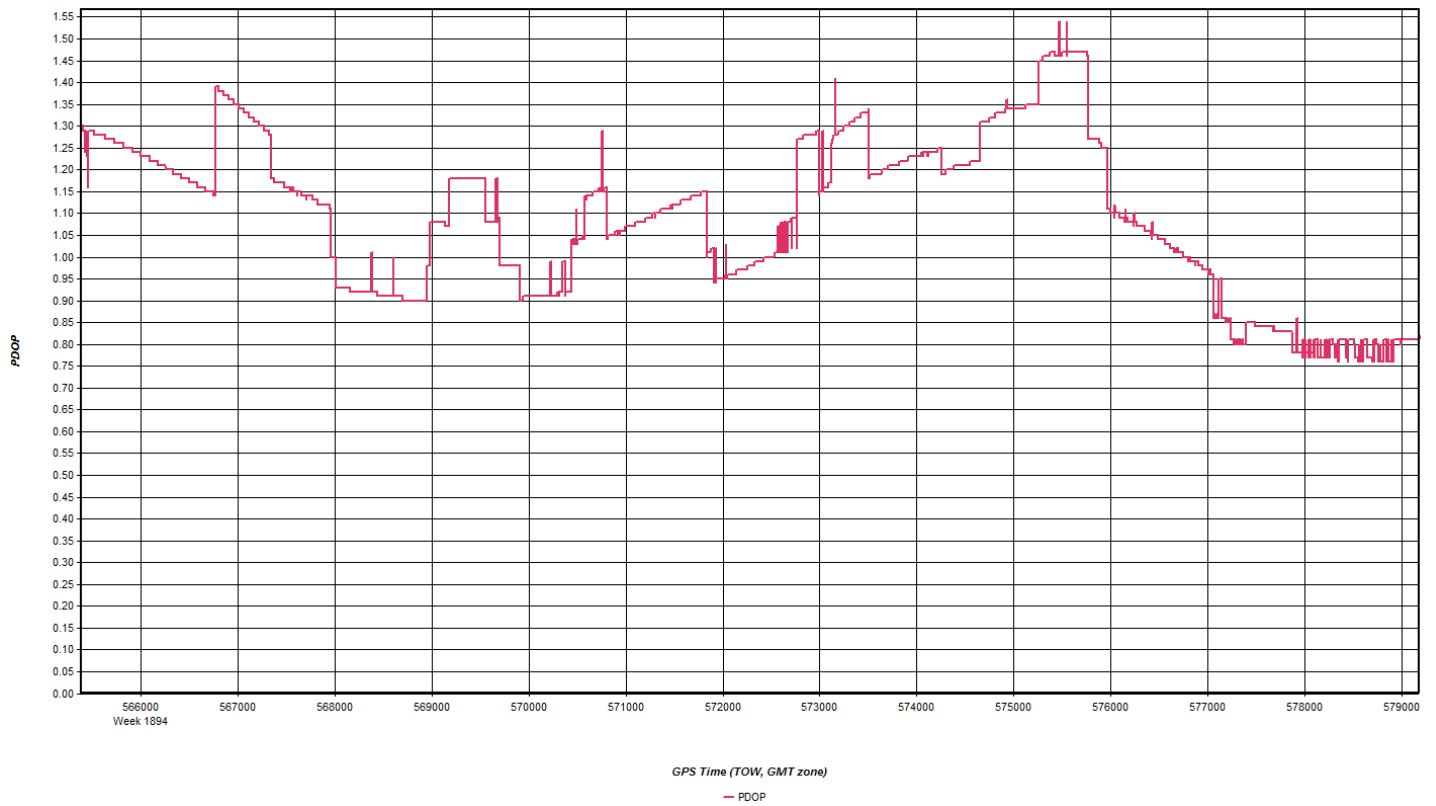
Notes: LANDED FOR FUEL & TO ASSESS TURBULENCE FORECAST (FIG 0E17:08g)

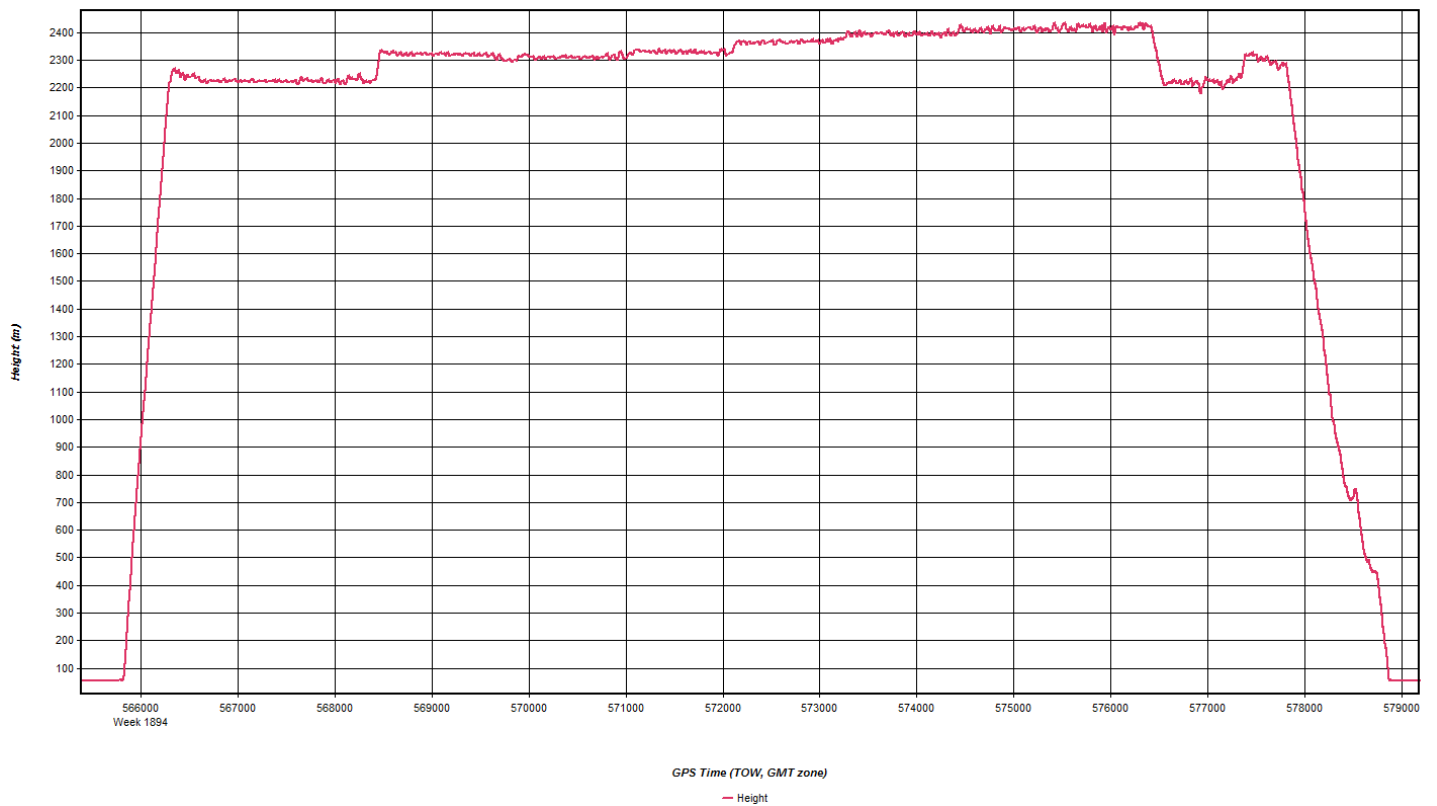
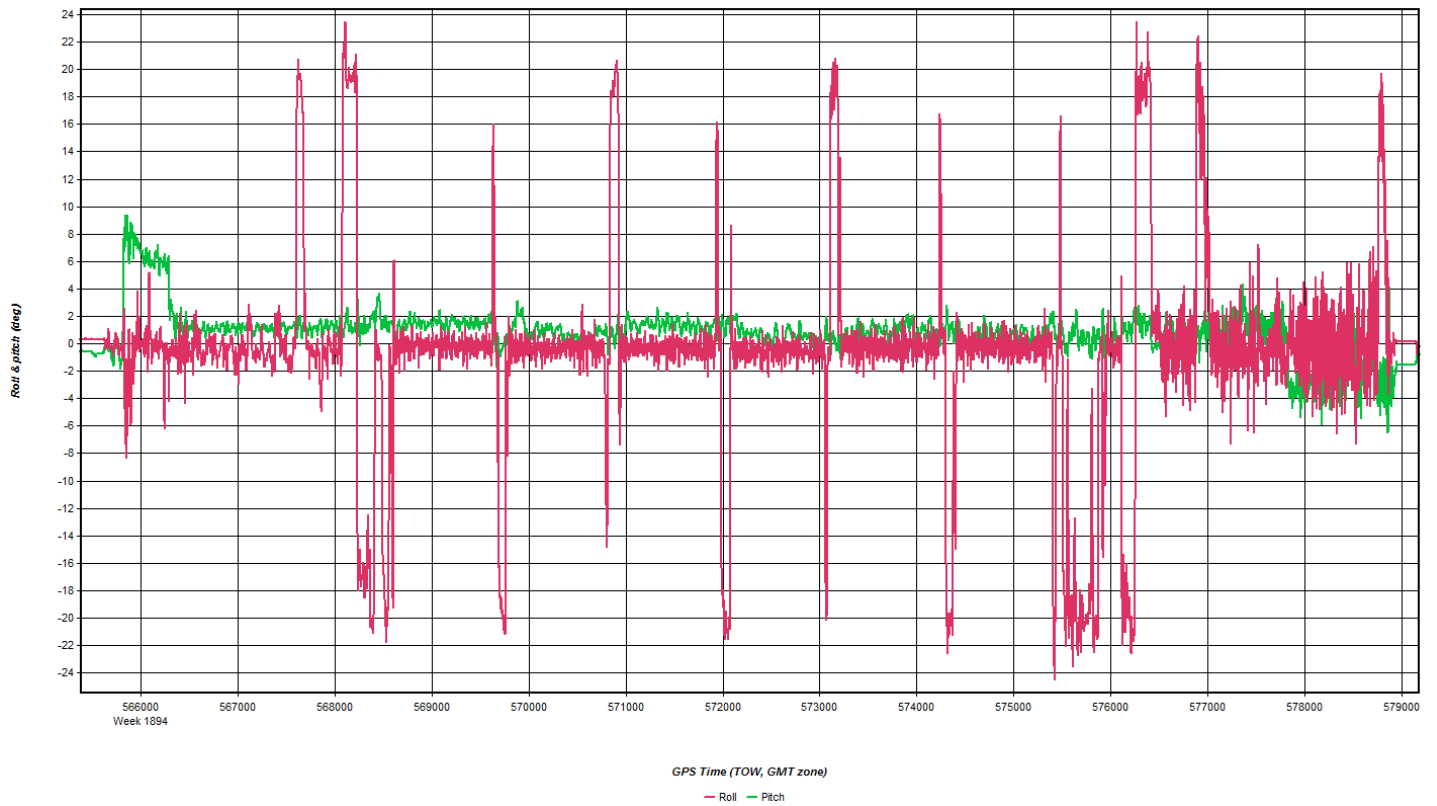
Total Proj Lines: 83 **Lines Flown:** 10 **Lines Remain:** ? **Time of Day:** 13:53 **Online Time:** 2:13 **Job Time:** 1:35 **Notes:** 20160430-135331-135509

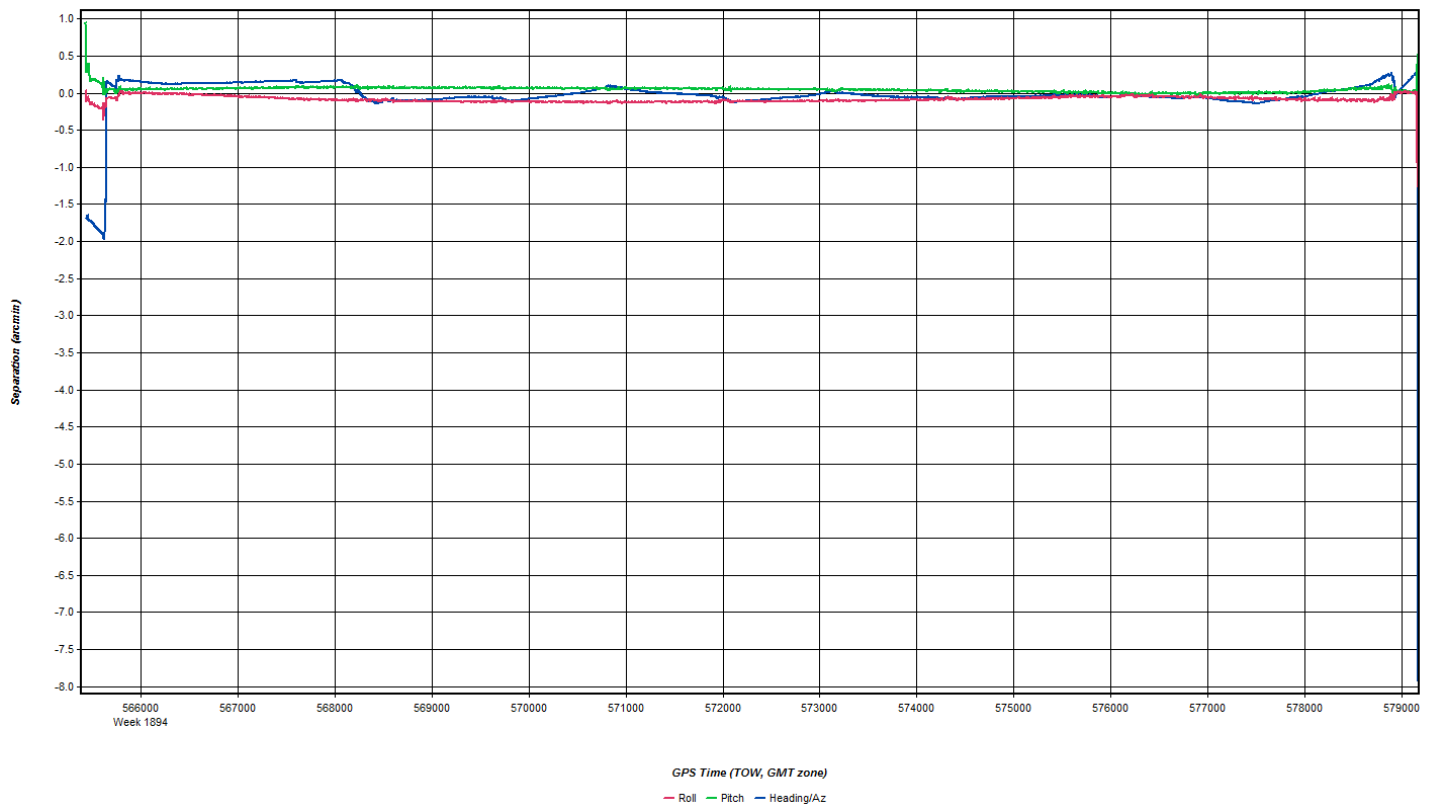
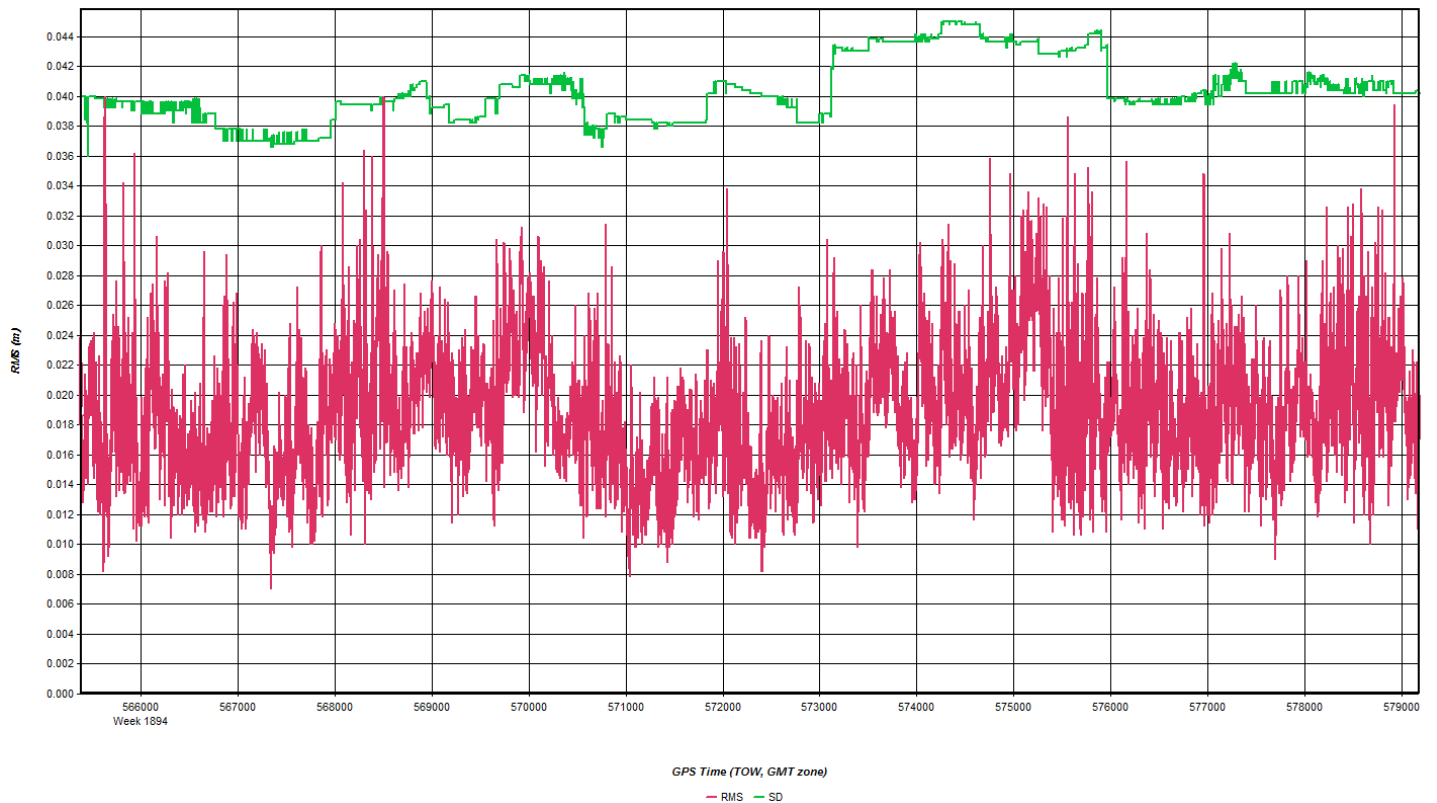
Apr 30, 2016-A (N812TB, SN7161)

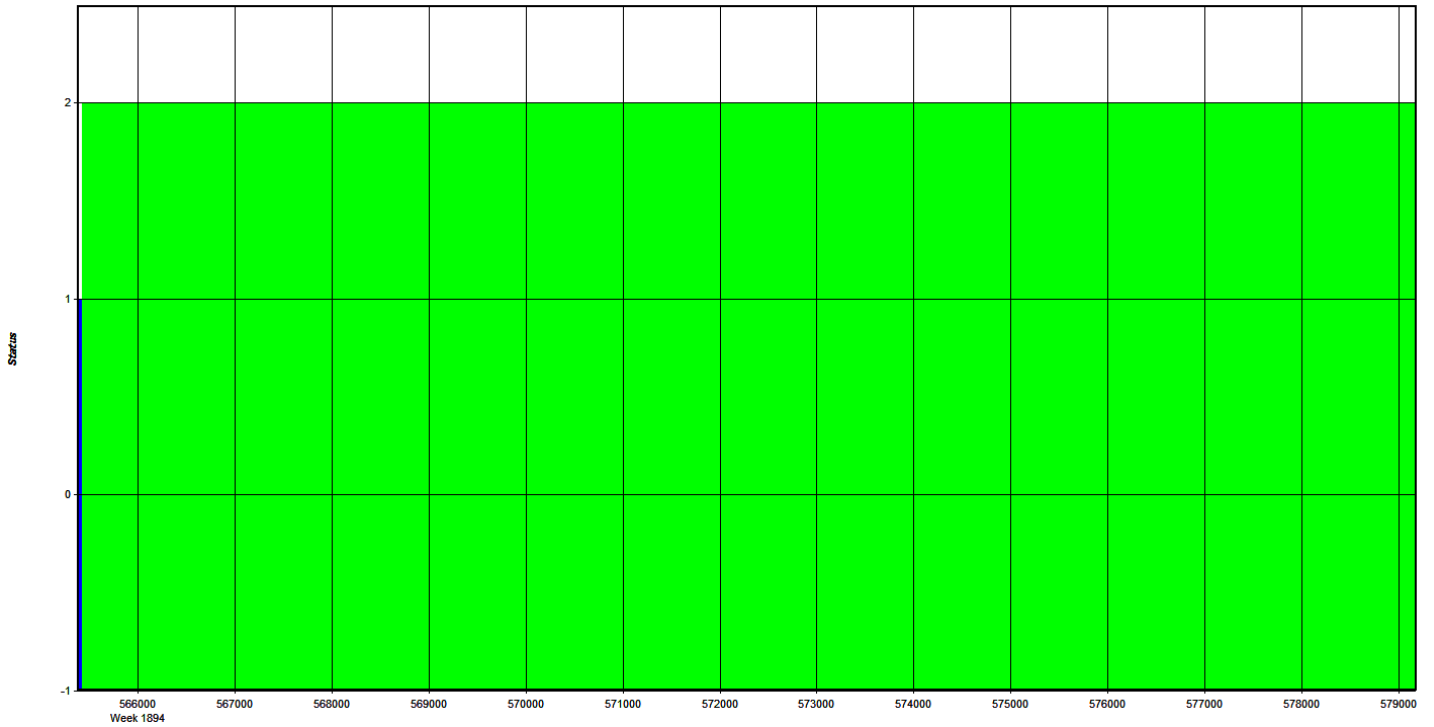












GPS Time (TOW, GMT zone)
 - Float - Forward Fixed - Reverse Fixed - Fixed (2 or more)

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MESP Name: MESP Disabled
 File: E:\Proc\27146_Maine_2016\4413\27146_USGS_ME_SetPoint1_

Coordinates
 Latitude: North 44 13 06.19617 Compute from PPP
 Longitude: West 70 30 47.10740 Enter Grid Values
 Ellipsoidal height: 105.463 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRM55971.00, NONE View STA File
 Antenna profile: TRM55971.00 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

Master Remote

Base Station
2: Set_Point1_West Name: Set_Point1_Wes Disabled
File: E:\Proc\27146_Maine_2016\4413\27146_USGS_ME_SetPoint1_

Coordinates
Latitude: North 45 18 04.00868 Compute from PPP
Longitude: West 70 36 12.34092 Enter Grid Values
Ellipsoidal height: 351.264 m Enter MSL Height
Datum: WGS84 Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: N/A View STA File
Antenna profile: NOV702GG Info
Measured height: 2.000 m
ARP to L1 offset: 0.067 m
Applied height: 2.067 m
Measured to:
 ARP
 L1 Phase Centre
Compute From Slant

OK Cancel

Flight Log

Scanned by CamScanner

Quantum Spatial Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: 30 APR 2016

Project: USGS Western Maine Set Point 2 Wkst Proj #: 27146 Flight Mgmt File: 20160430-125859

Aircraft: N812TB Begin Hobbs: 3956.4 End Hobbs: 3960.0 Total: 3.6 Pilot: Radtke Co-Pilot: Mingsy Tech: Mingsy

Dep Apt: KLEW Dep Time (Local): 0909 (Z): 1309 Arr Apt: KLEW Arr Time (Local): 1247 (Z): 1647 Tot Time Aloft: 3:6

CORS: Y18 Sta 1: Sta 2: Flyovers: Y18 If Y, times: Sta1) Sta2) 16K4

GPS Unit: DYN Sta 1: Set Point 2 West Sta 2: Flyovers: DYN If Y, times: Sta1) 1339 Sta2) 16K4

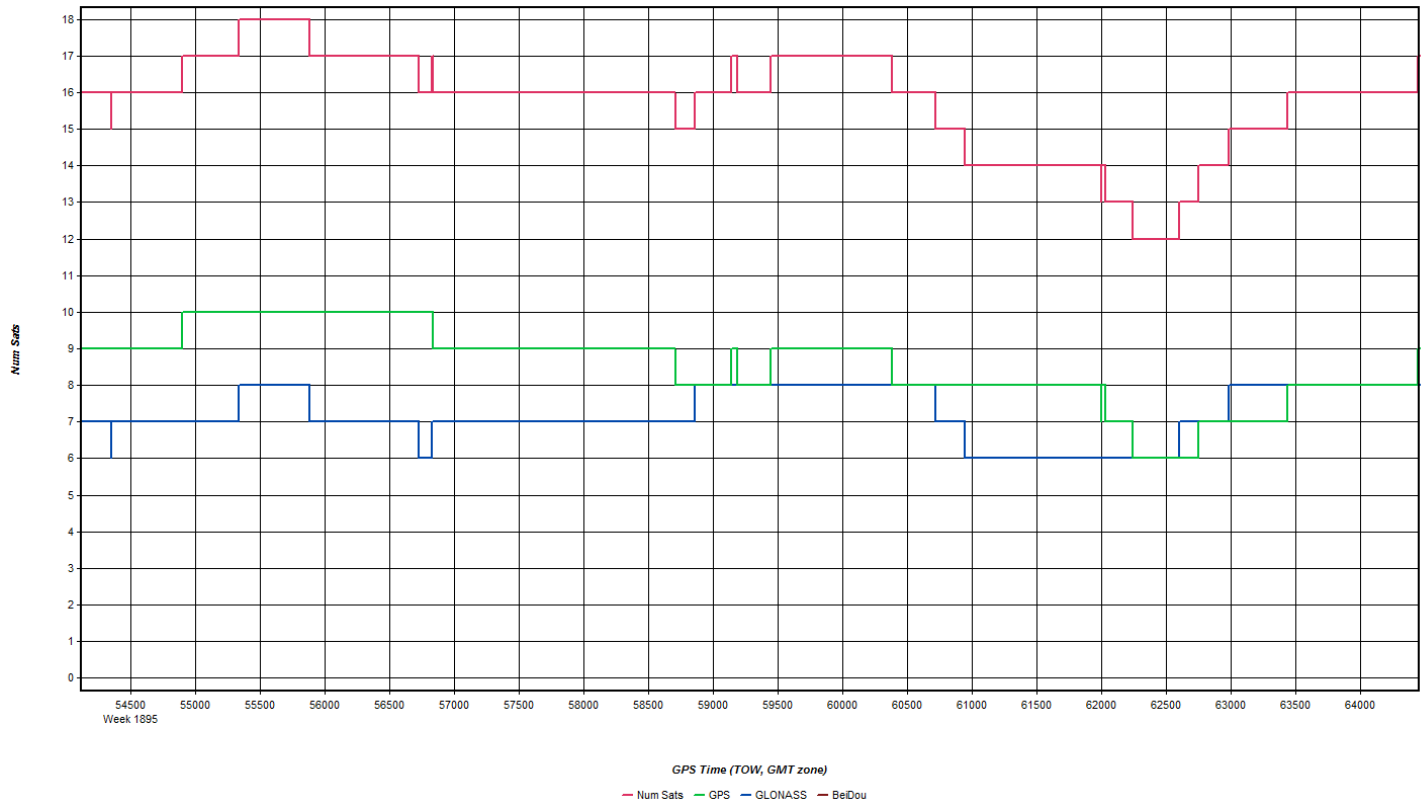
Gd Temp beg: °C End: °C OAT beg: °C End: °C Altimeter begin: end:

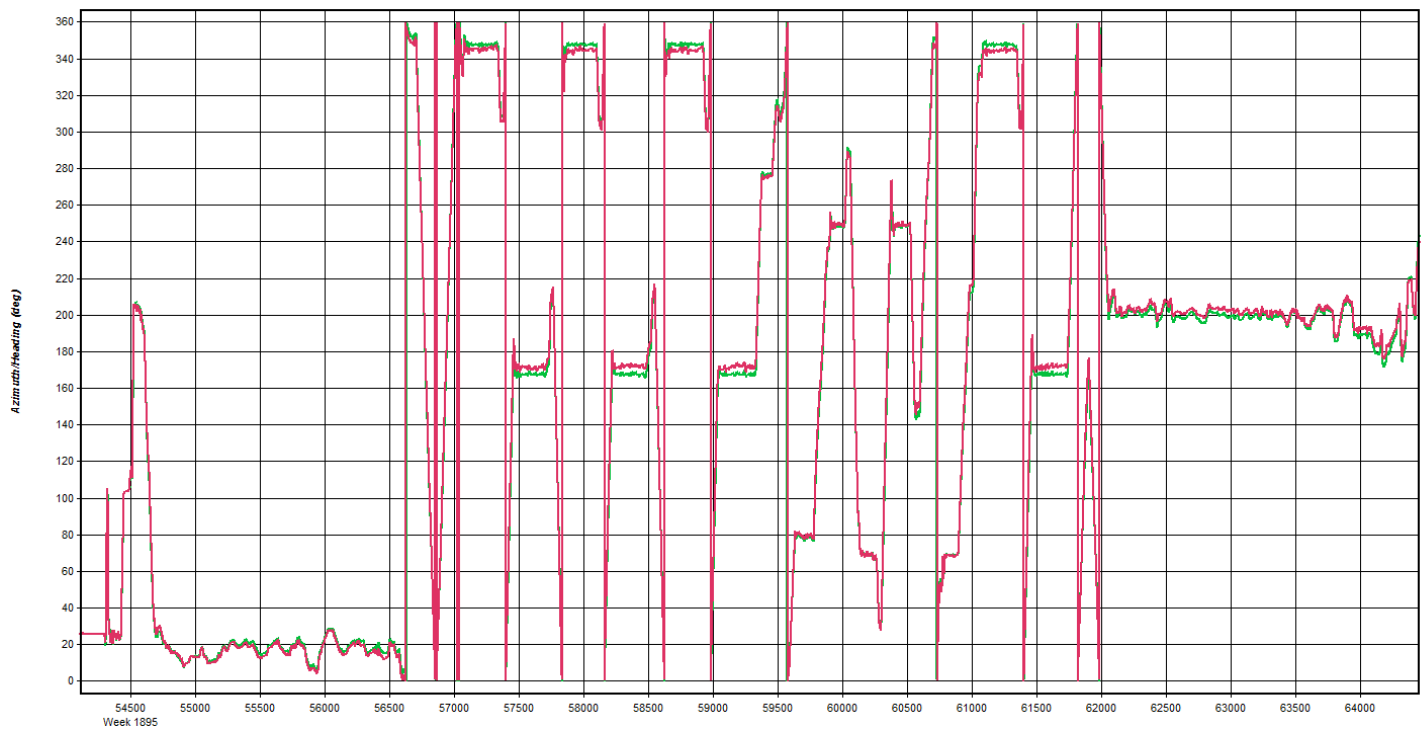
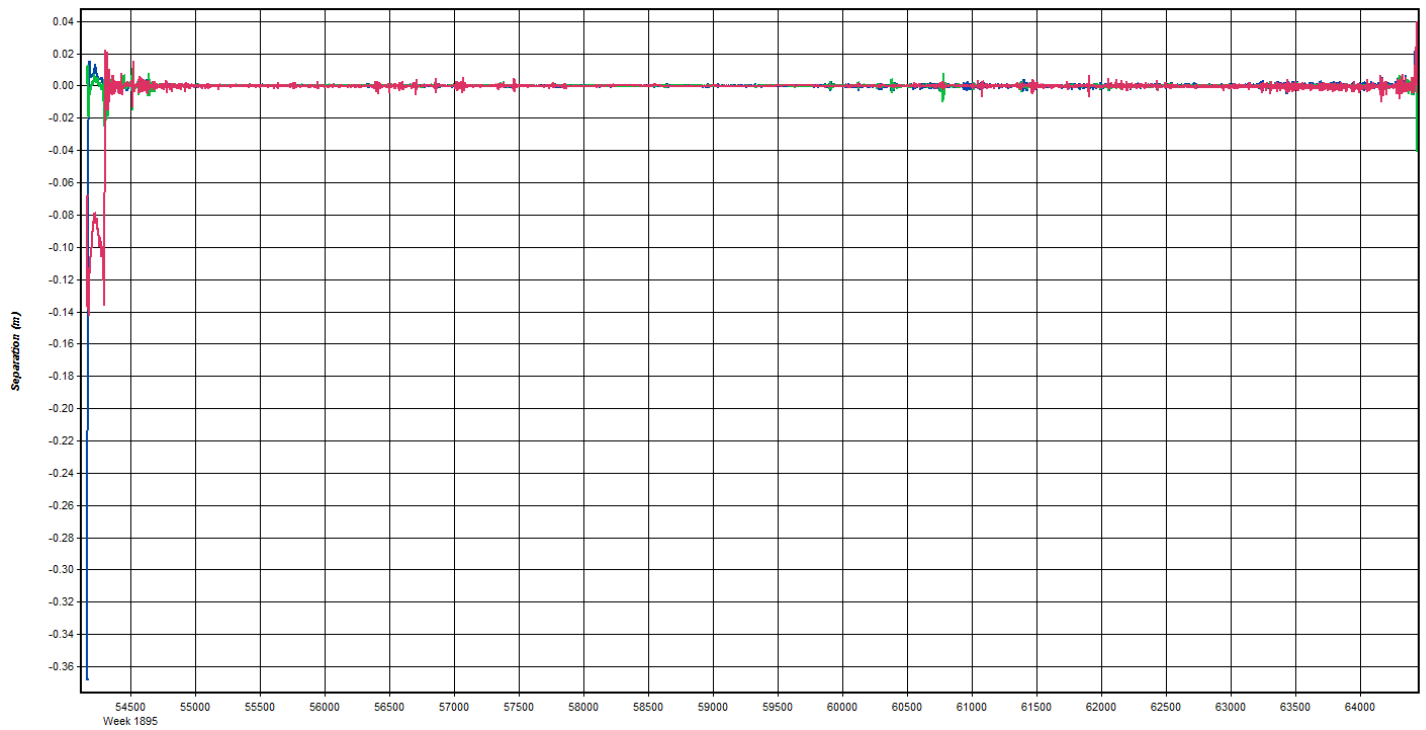
Type	Serial #	Alt AGL	Alt AMSL	Avg Temp	Max Colored	Avg Pt Ignoring
LIDAR	ALS70	7161	4675	150 kts	150 kts	150 kts
FOV	40°	53 Hz	MPIA Y1N	Power	100%	100%

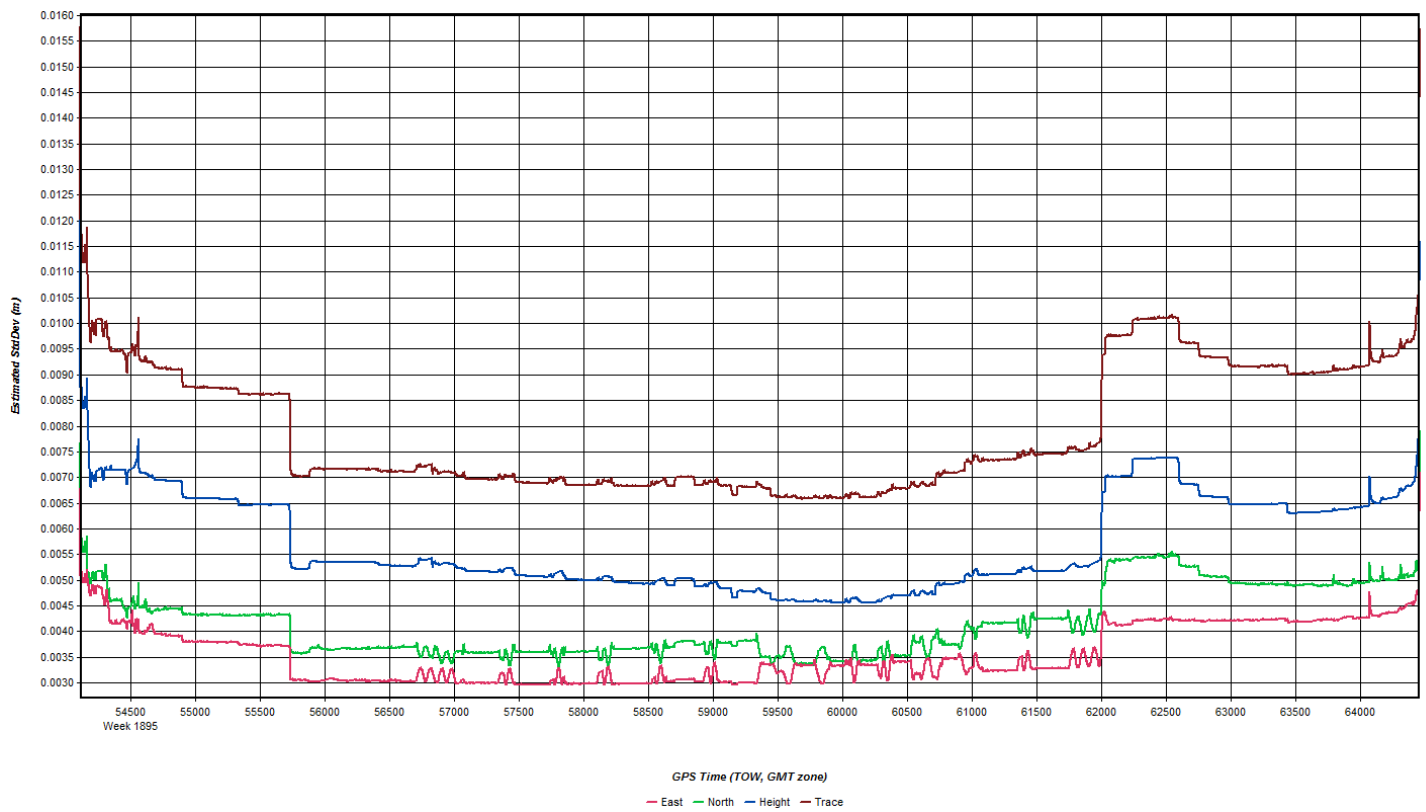
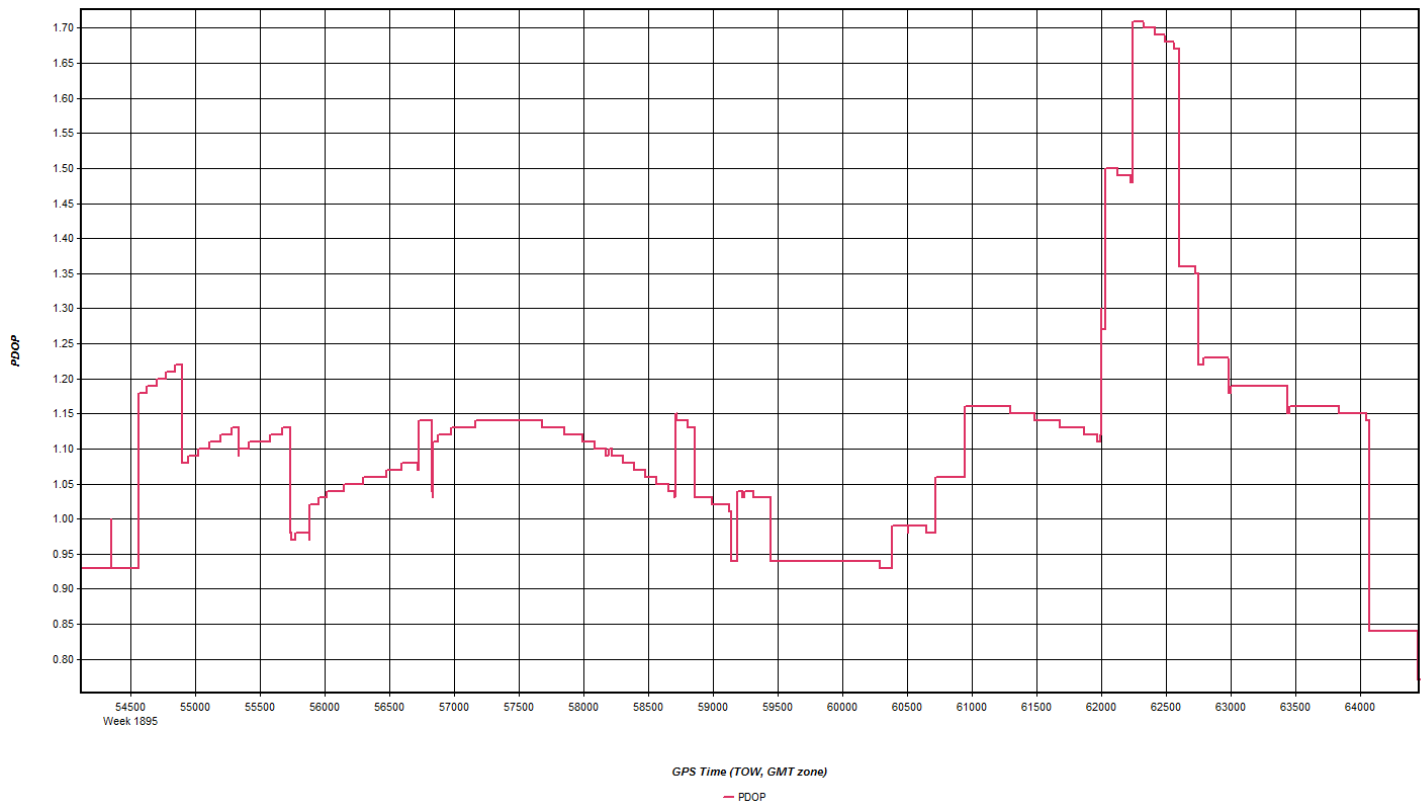
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	Pool/Sea	GPS Altitude	Orb	Turb	Notes
									FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.
									3 minute static start @ 1303 stop @ 1306
									Flyover Base Station set point 2 west @ 1339
									Figure 8 start @ 1347 stop @ 1353
									Fire Test
									sky clear, some ice on lakes, minimal snow on mountain tops
									sky clear, some ice on lakes, snow on mountain tops
									sky clear, some ice on lakes, snow in North + on mountain tops
									sky clear, some ice on lakes, snow in North + on mountain tops
									sky clear, some ice on lakes, snow in North + on mountain tops, bit turbulence
									sky clear, some ice on lakes, snow in North + on mountain tops.
									Cross Tie
									Figure 8 start @ 1601 stop @ 1606
									Flyover Base Station @ 1614
									3 minute static start @ 1648 stop @ 1651

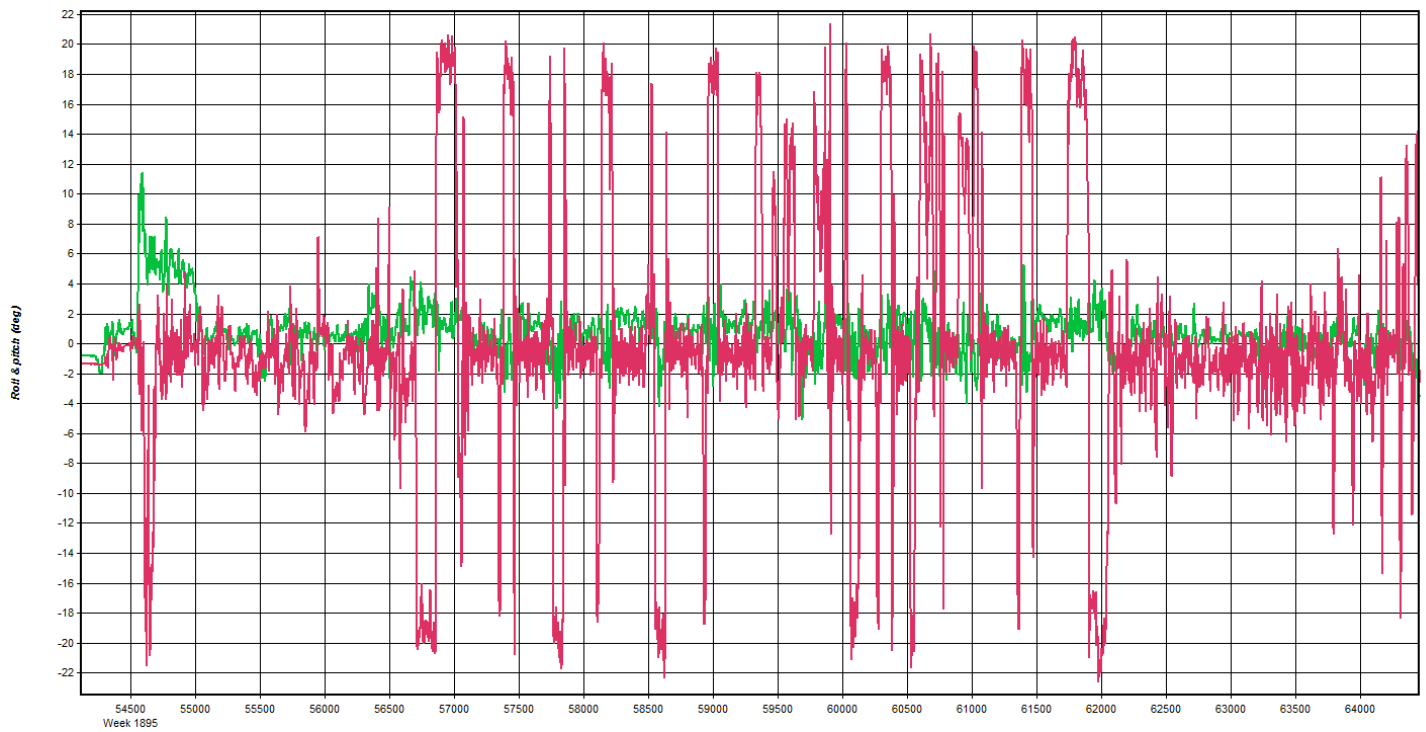
Total Proj Lines: 85 Lines Flown: 6 Lines Remain: 50 Online Time: 2:1 Mob Time: 1:5 Notes:

May 1, 2016-A (N73TM, SN7178)



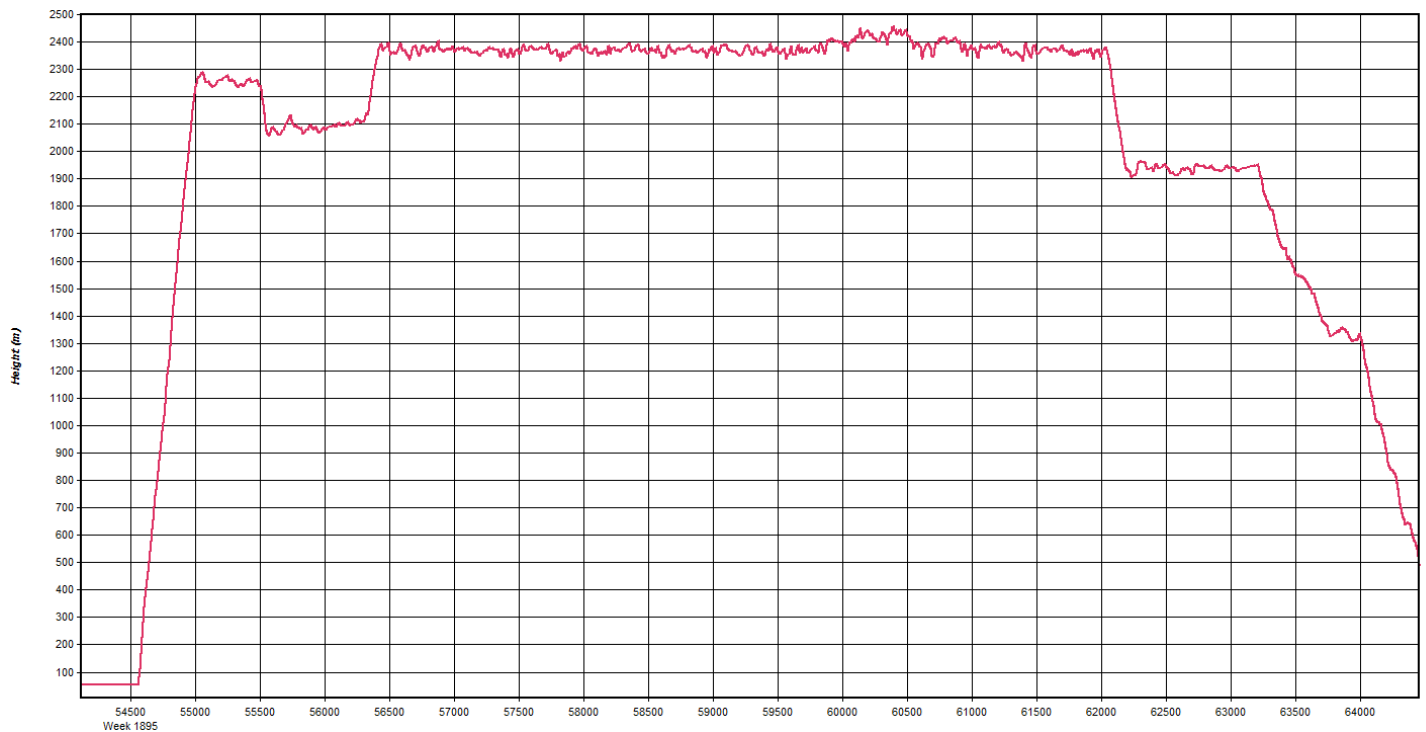






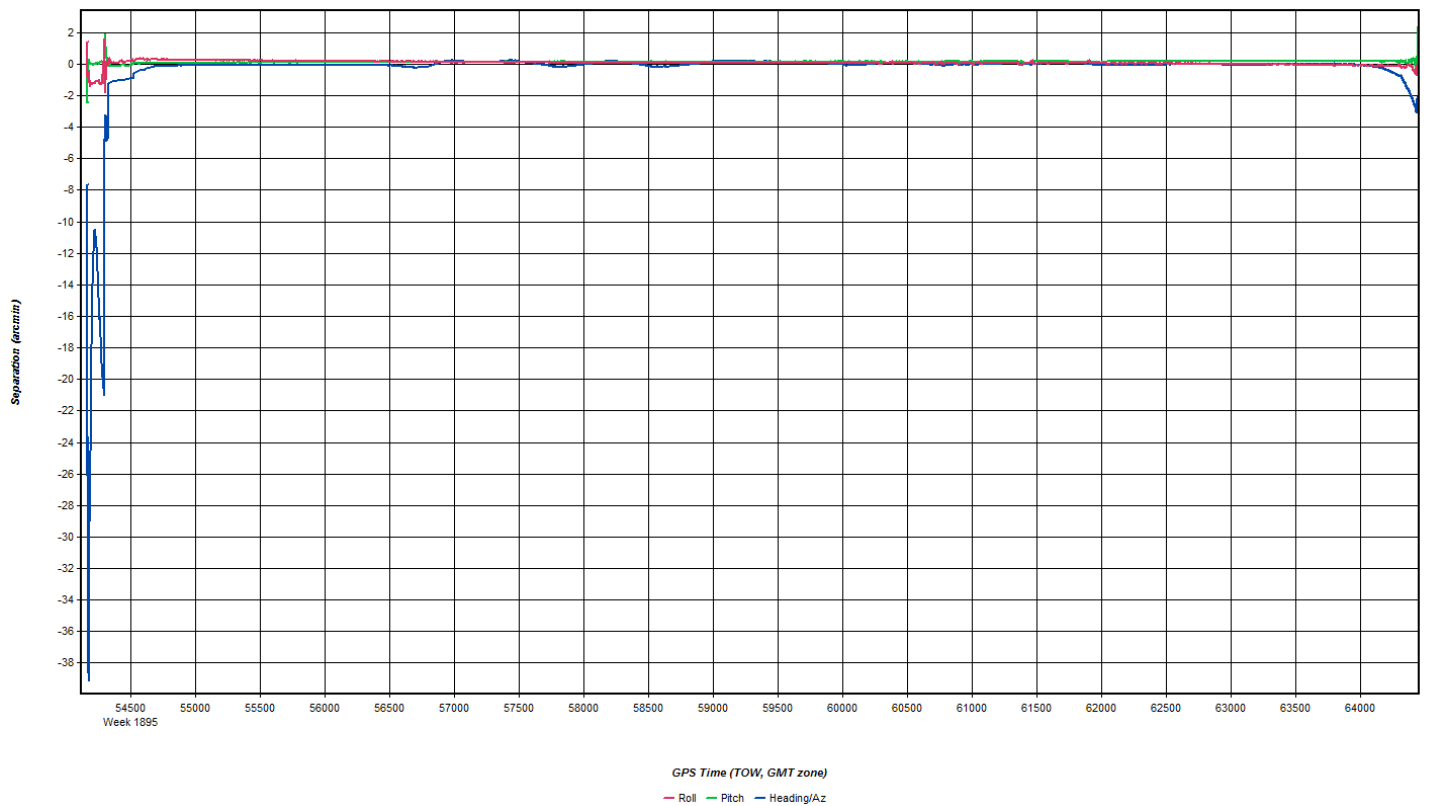
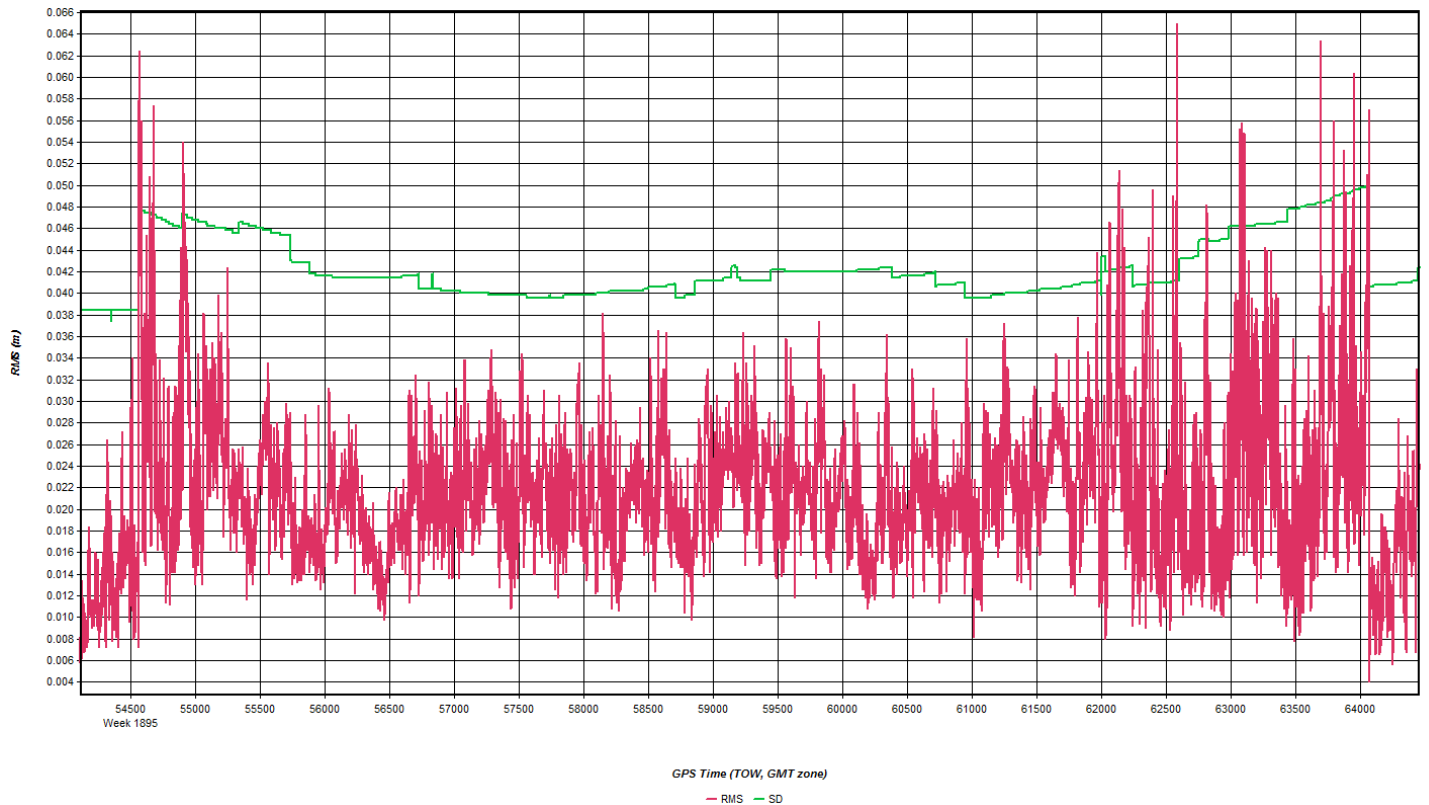
GPS Time (TOW, GMT zone)

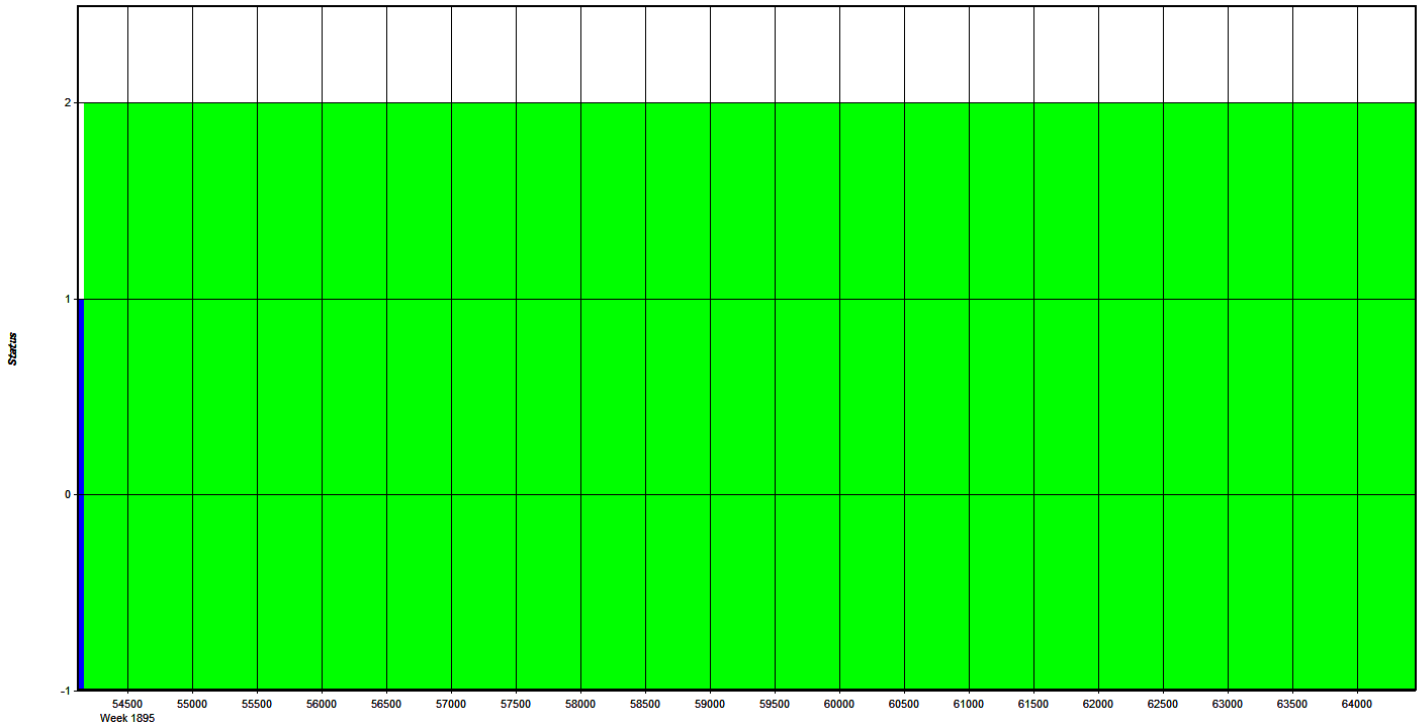
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\1736\20160501a-7178\megr1220.gi

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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: USGS WESTERN MAINE **Proj #:** 27146 **Date:** MAY 1st, 2016

Flight Mgmt File: USGS_Maine-MEGR-SN7178-150kts. **UHF:** C D E **Page:** 1 of 1

Aircraft: N73TM **Begin Hobbs:** 6215.8 **End Hobbs:** 6218.7 **Total:** 2.9 **Pilot:** D. WAGNER **Co-Pilot:** Tech: P. HRABAK

Dep Apt: KLEW **Dep Time (lcl):** 11:09 Z **Arr Apt:** KLEW **Arr Time (Local):** 11:07 Z **Tot Time Aloft:** 2:53

CORS: Y(N) **Sta 1:** "MEGR" CORS **Sta 2:** - **Flyovers:** Y/N **If Y, times: Sta1:** 15:40, 17:10 **Sta2:** -

GPS Unit: Y(N) **Sta 1:** - **Sta 2:** - **Flyovers:** Y/N **If Y, times: Sta1:** - **Sta2:** -

Gd Temp beg: +10 °C **End:** + °C **OAT beg:** -03 °C **End:** -03 °C **Altimeter begin:** 30.22" **end:** 30. " **Storage Name:** ACS70

Type	FOV	Scan Freq	Sens* 7178	Alt AGL ~ 6500'	Alt ANSL	VIRAGES	Max Gdspd	Avg Pt Spacing	Power	Pulse Rate	PFSM	Big CB	
												End	CB
LIDAR	40°	53.4 Hz	MPIA (Y) N	2	2	260.4 kts	100%	2.2				End CB	216
												Tot CB	12

FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc. (FIG 30 15:16 Z)

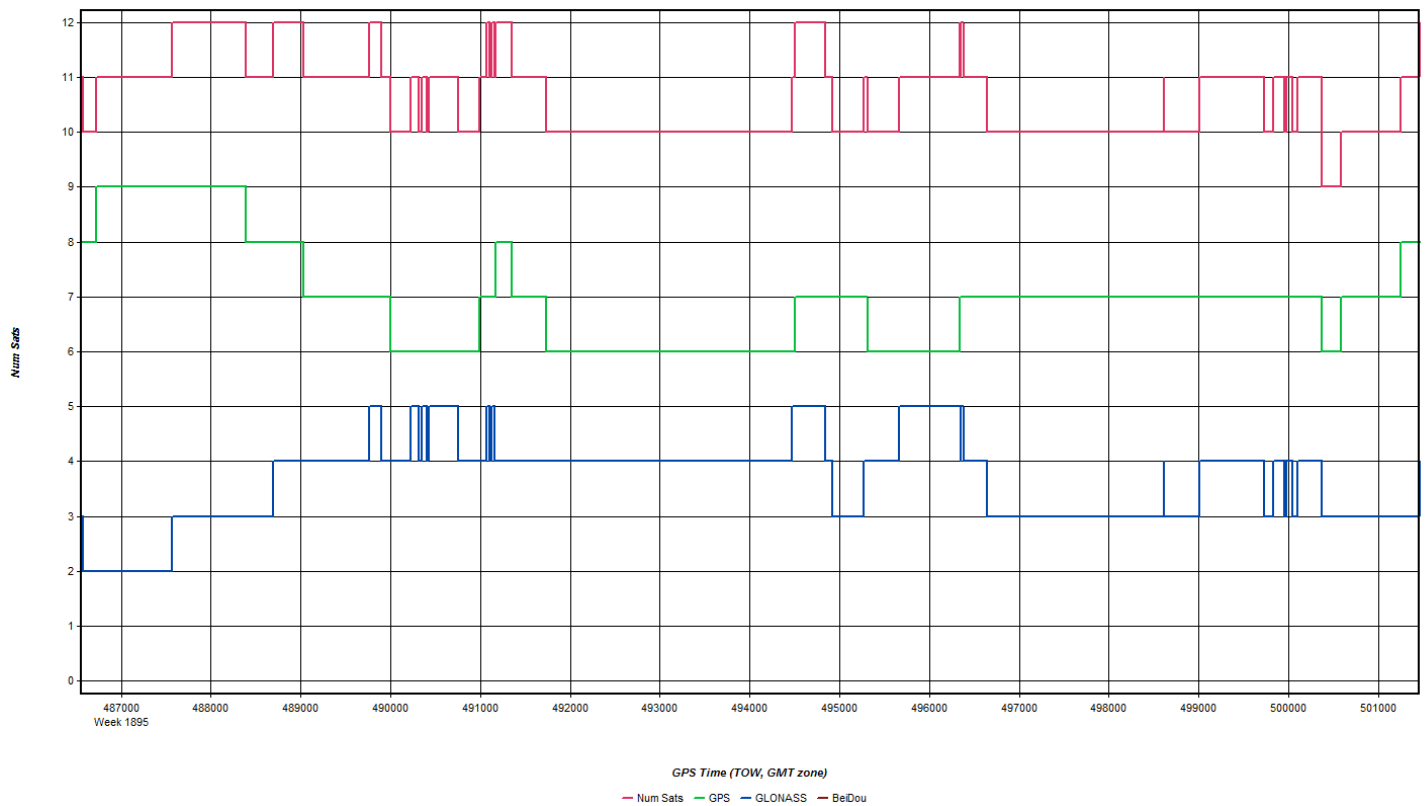
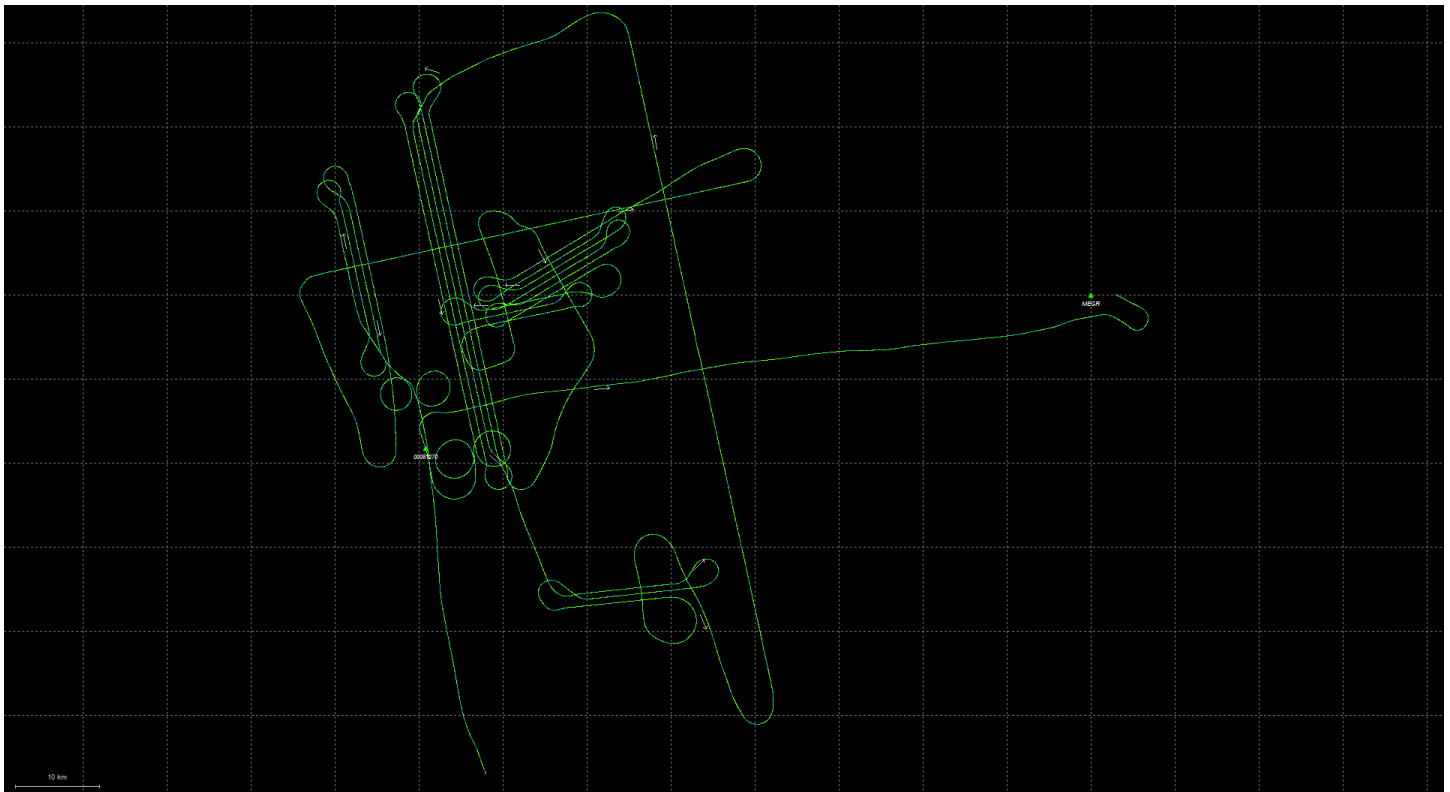
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	POB/sats	GPS Altitude	Crab	Turb (0..4)	Notes
S001	N	15:52	15:55	155 kts	1.3/18	7760'	3°	0	h2, ovc above, scat below nearby, smooth, no snow below
S002	S	15:58	16:01	145 kts	1.2/18	7750'	4°	0	h2, ovc above, scat below nearby, smooth, no snow below
S003	N	16:04	16:07	155 kts	1.4/16	7750'	3°	0	h2, ovc above, scat below nearby, smooth, no snow below
S004	S	16:11	16:14	155 kts	1.3/17	7760'	4°	0	h2, ovc above, scat below nearby, smooth, no snow below
S005	N	16:17	16:21	150 kts	1.1/18	7750'	3°	0	h2, ovc above, scat below nearby, smooth, no snow below
S006	S	16:24	16:28	155 kts	1.1/19	7760'	2°	0	h2, ovc above, scat below nearby, smooth, no snow below (CLOUDS BECOME END)
U1001	E	16:34	16:35	155 kts	1.1/18	7760'	1°	0	h2, ovc above, scat below nearby, smooth, no snow below [IMPROV CROSS LINE]
S012	W	16:38	16:39	145 kts	1.1/18	7800'	1°	0	h2, ovc above, scat below nearby, smooth, no snow below
S013	E	16:42	16:43	160 kts	1.2/17	7940'	1°	0	h2, ovc above, scat below nearby, smooth, no snow below
S014	W	16:47	16:48	150 kts	1.1/17	7950'	2°	0	h2, ovc above, scat below nearby, smooth, no snow below
S015	E	16:53	16:54	160 kts	1.1/17	7900'	1°	0	h2, ovc above, scat below nearby, smooth, no snow below
S016	N	16:58	17:01	155 kts	1.1/17	7920'	3°	0	h2, ovc above, scat below nearby, smooth, no snow below (REFLIGHT OF ABOVE)
S017	S	17:05	17:08	155 kts	1.1/16	7750'	4°	0	h2, ovc above, scat below in immediate vicinity, no snow below (CLOUDS BELOW 5' 1/2)

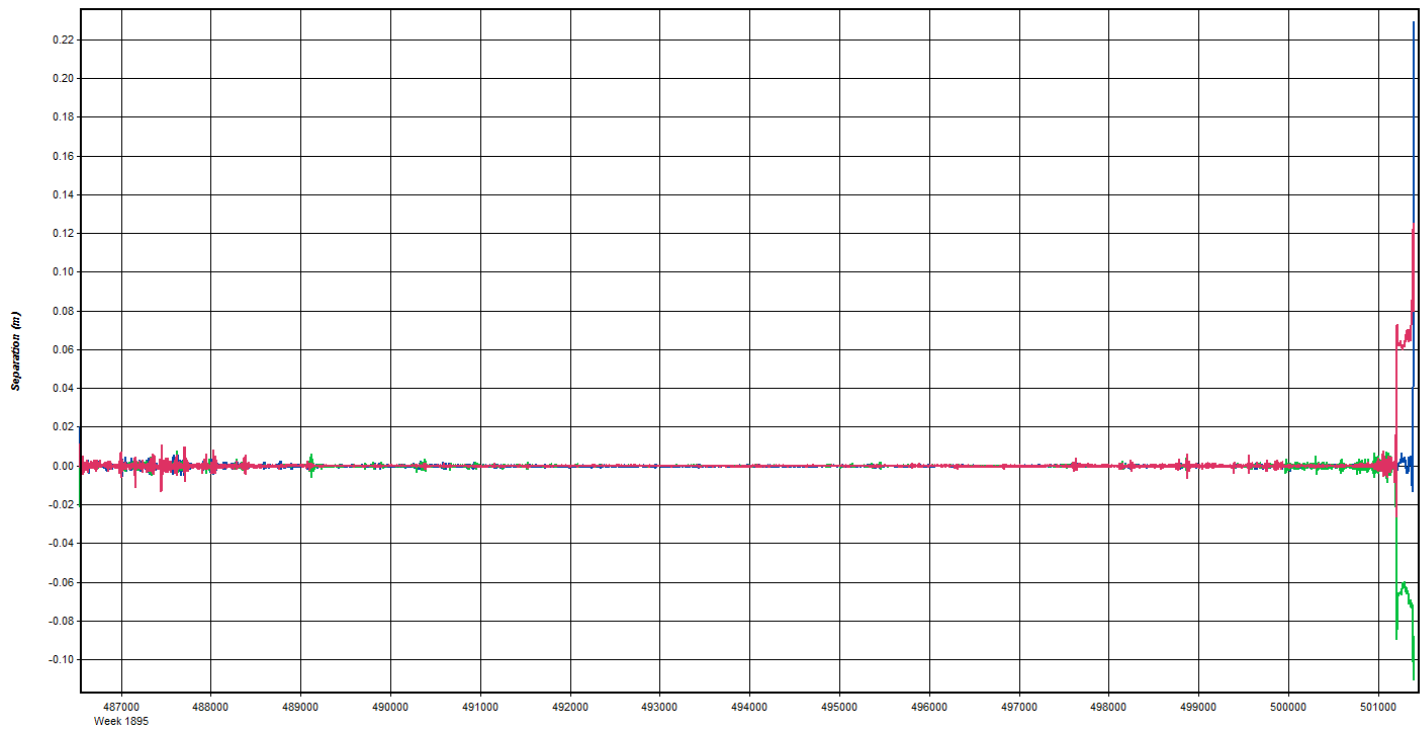
(FIG 30 17:10 Z)

→ RETURNED TO BASE BECAUSE CLOUDS THROUGHOUT
REMAINER OF OUR PROJECT AREA ←

Total Proj Lines: 136 **Lines Flown:** 16 **Lines Remain:** 43 **Online Time:** 1:16 **Mob Time:** 1:37 **Notes:** 75160501-145910 Z - 15017

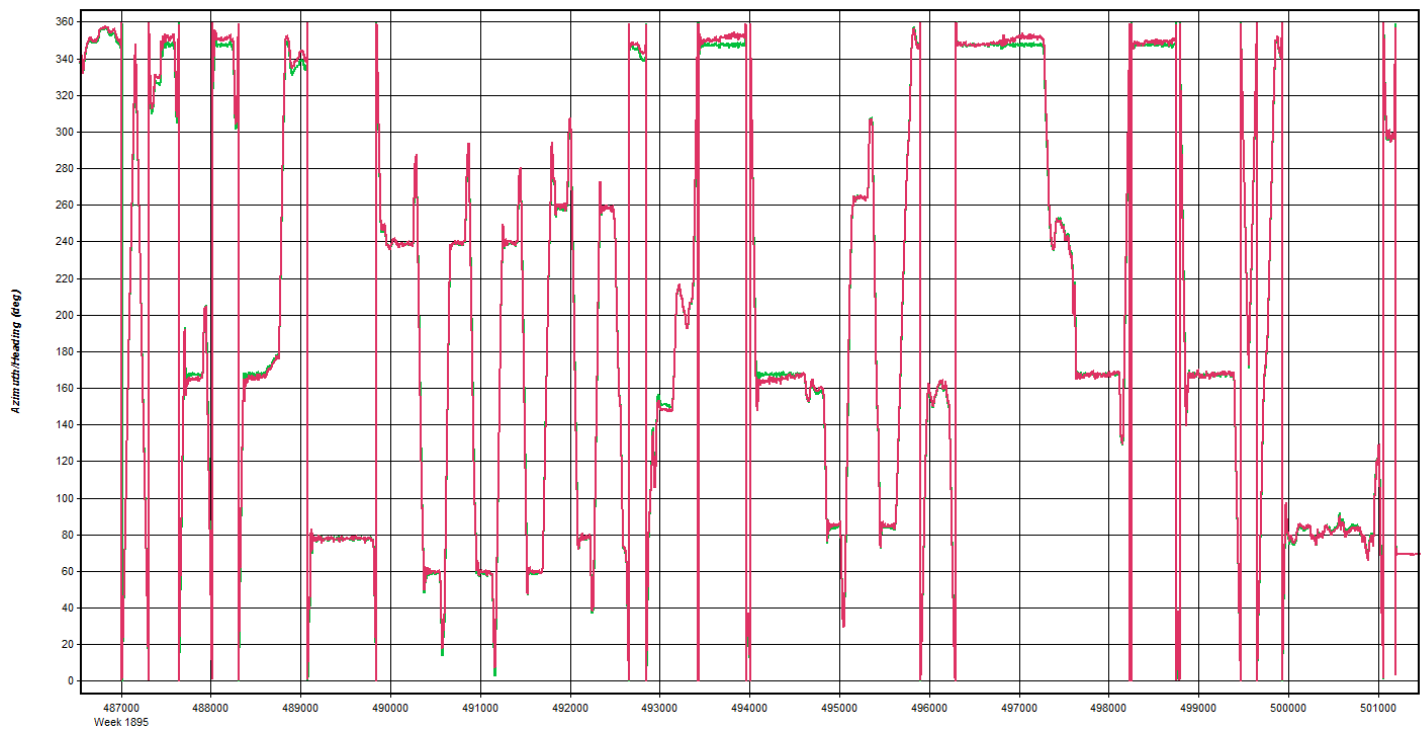
May 6, 2016-A (N73TM, SN7178)





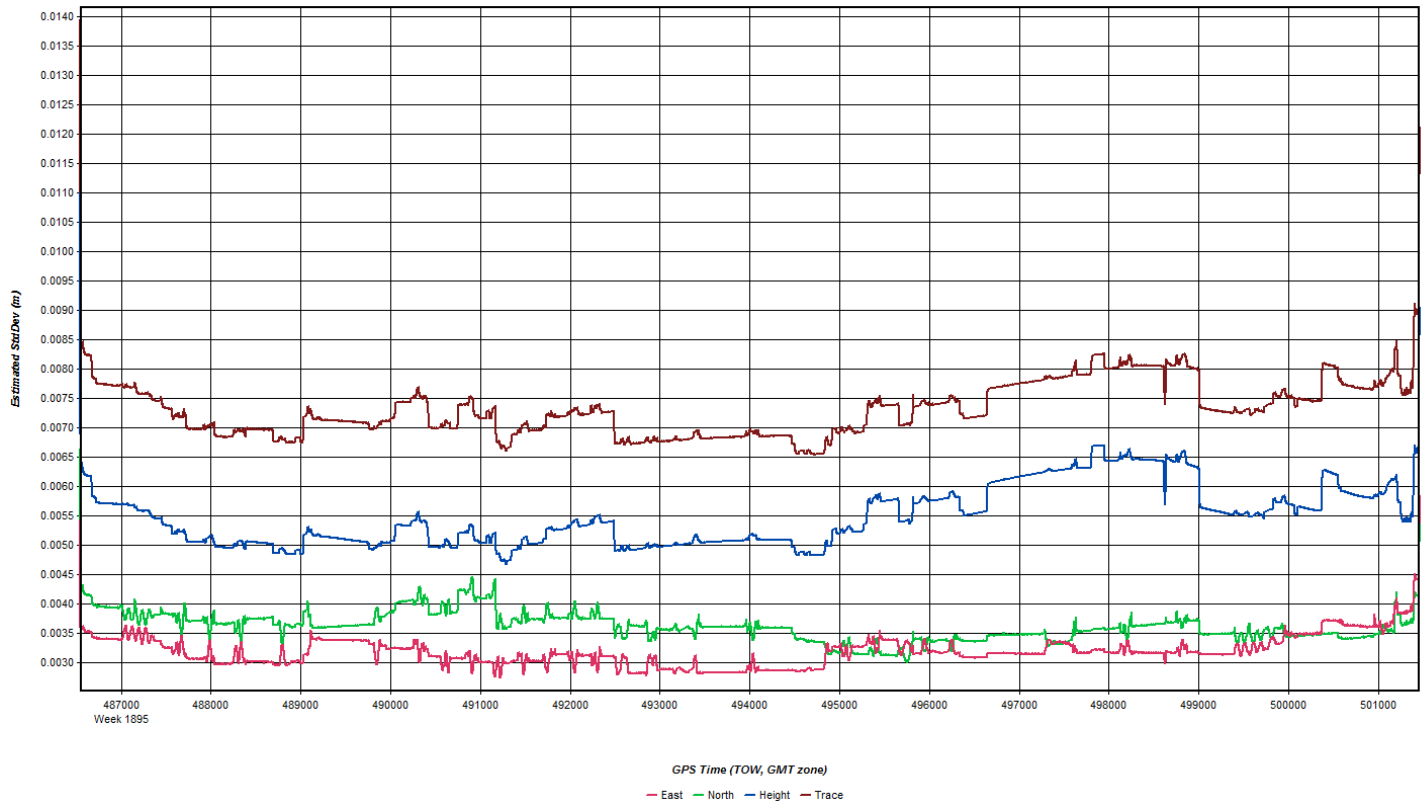
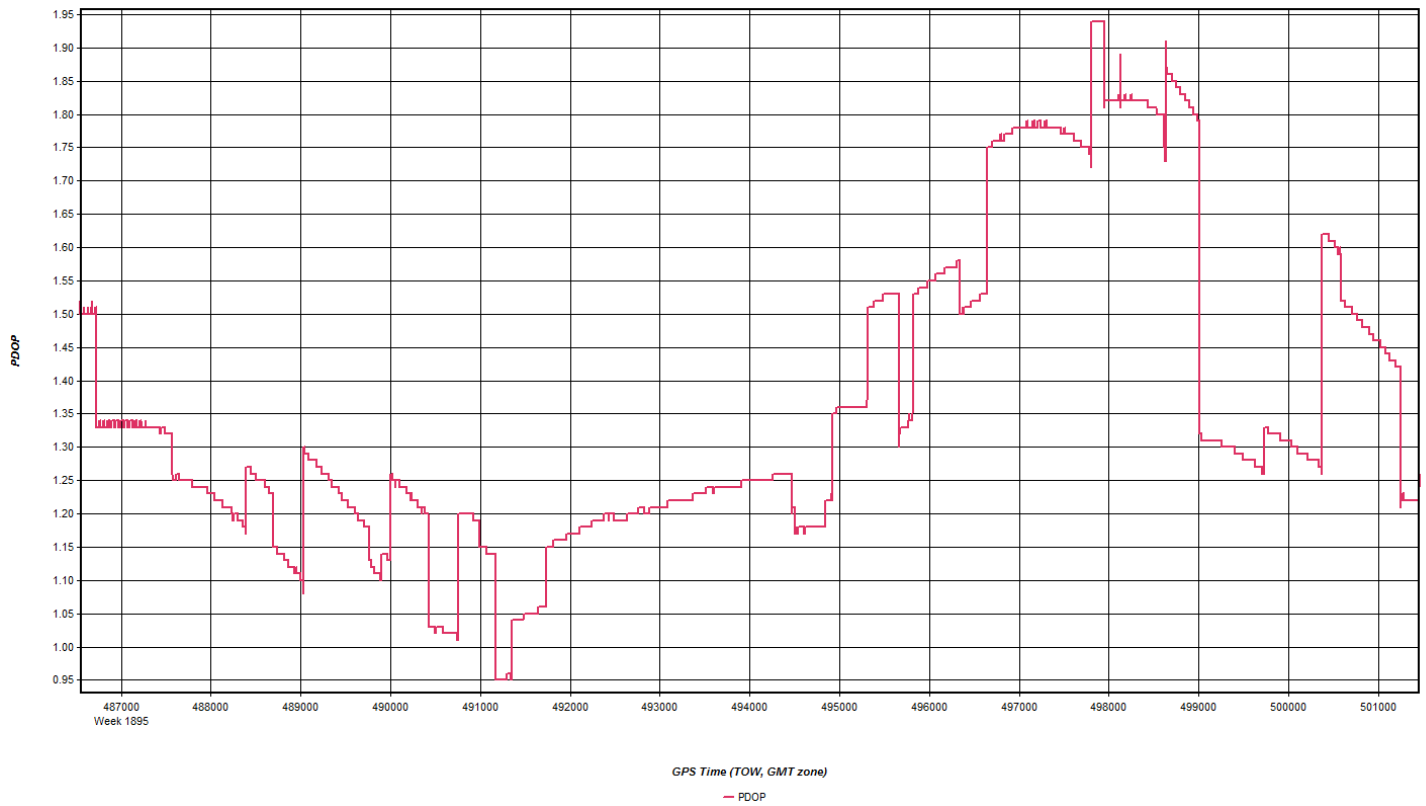
GPS Time (TOW, GMT zone)

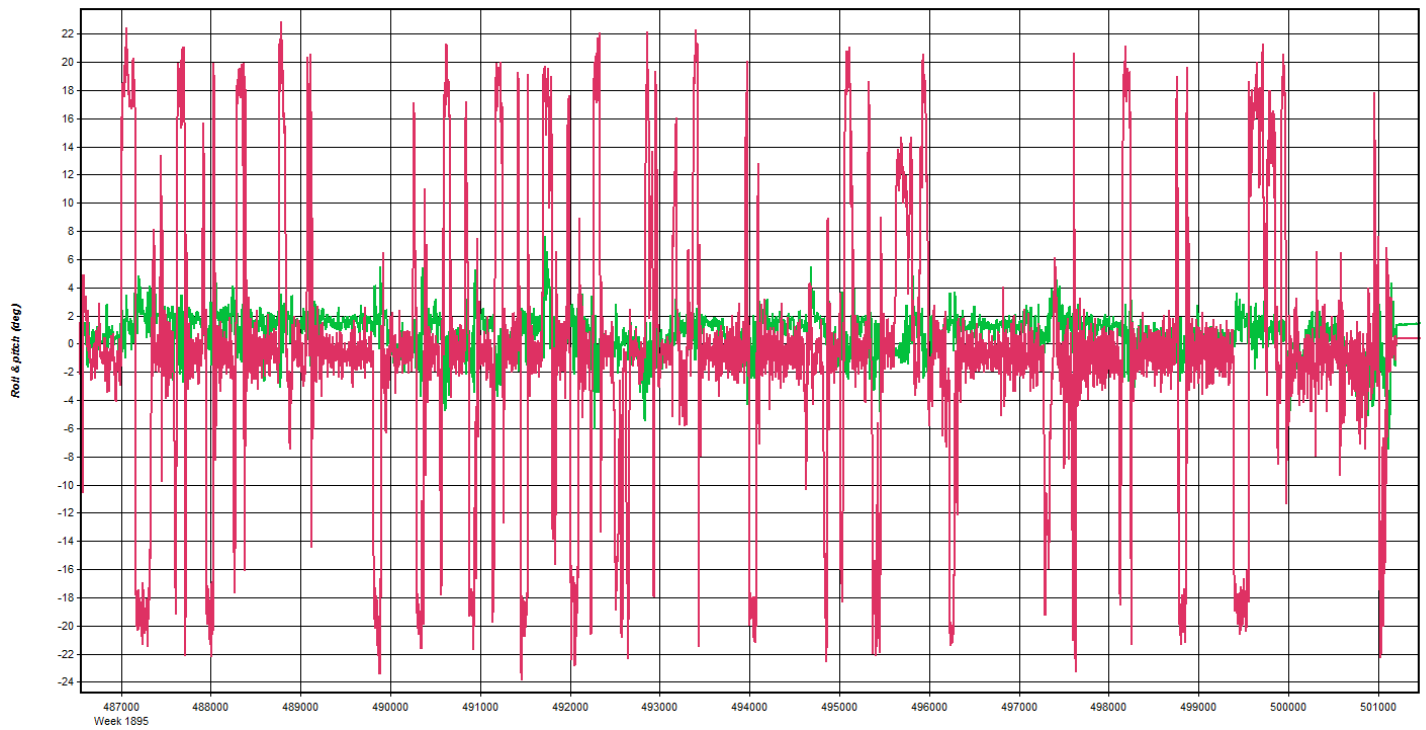
— East — North — Up

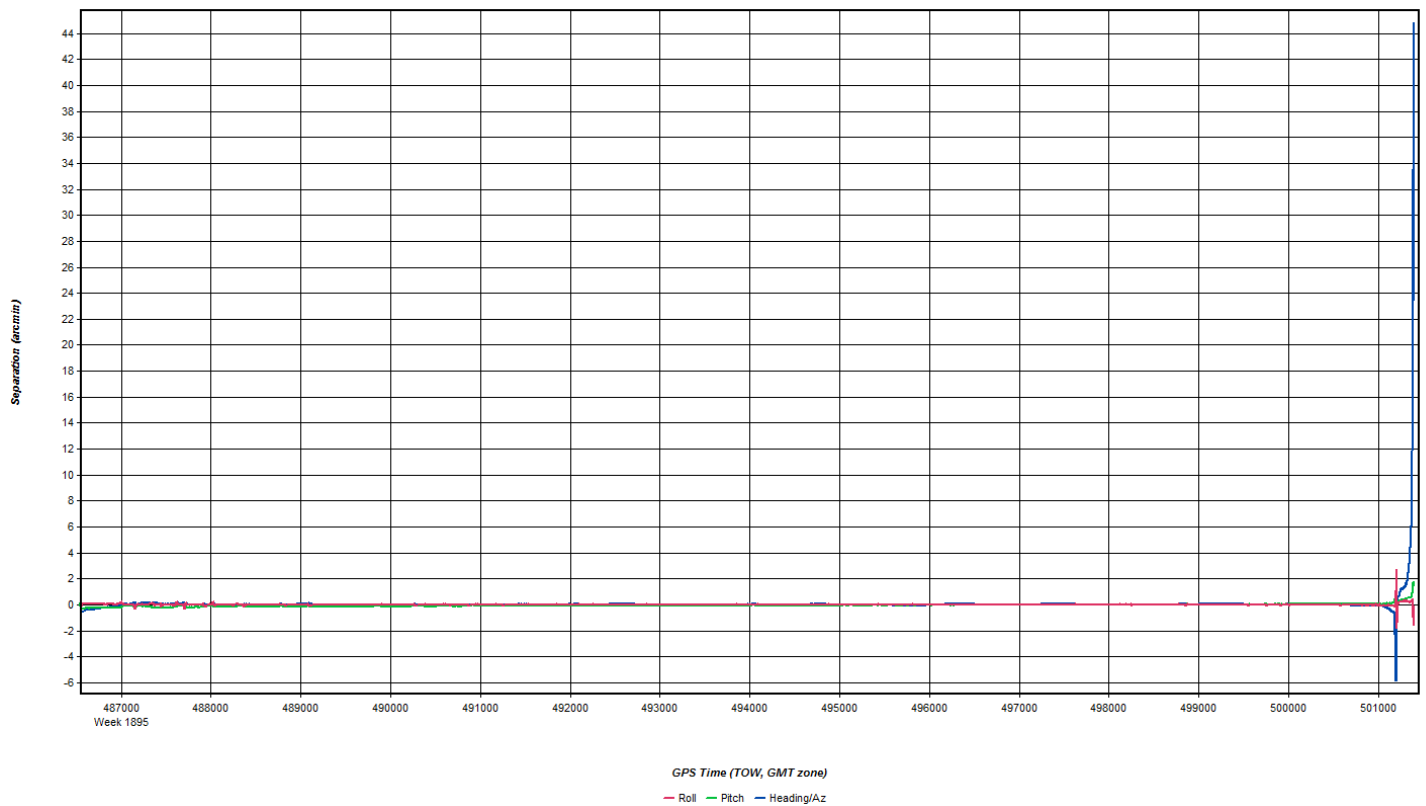
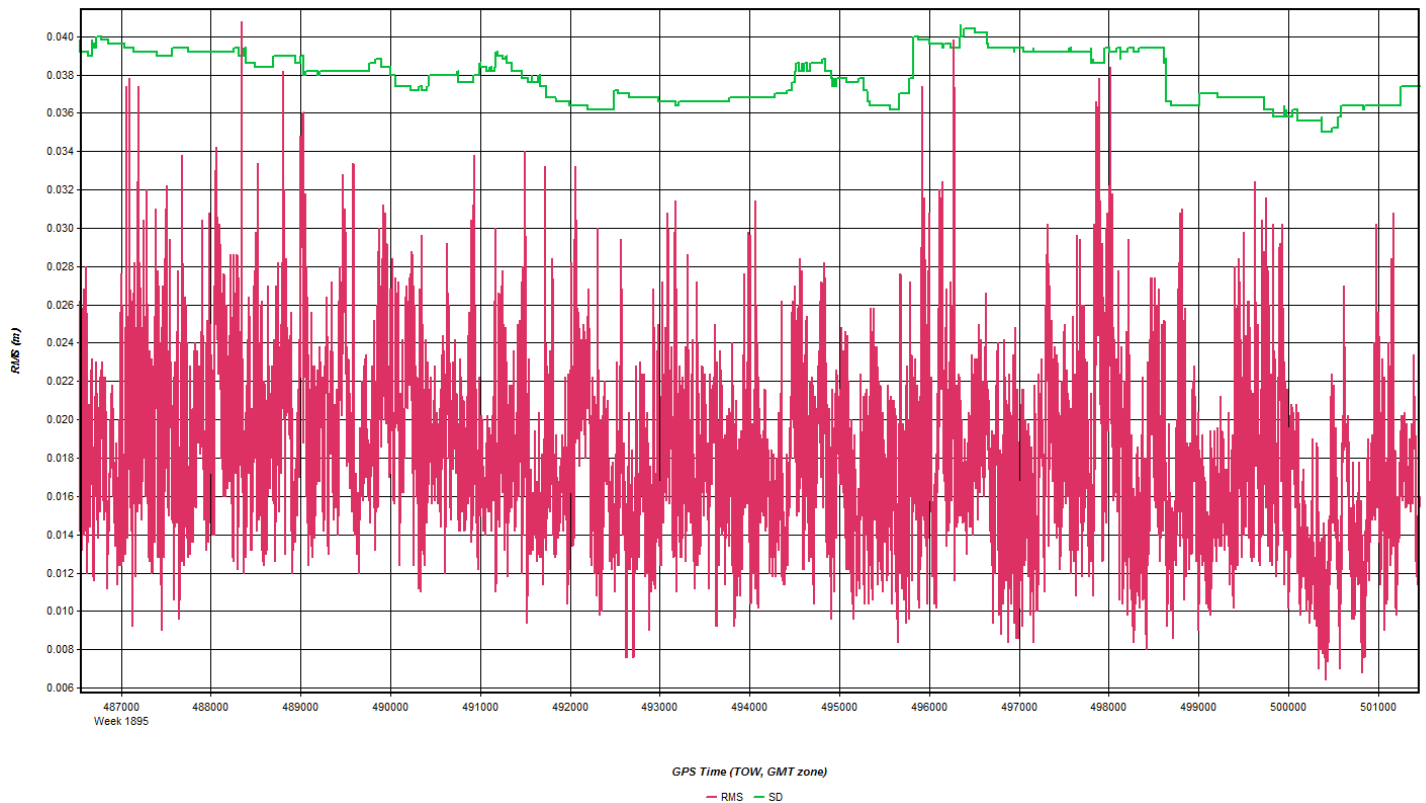


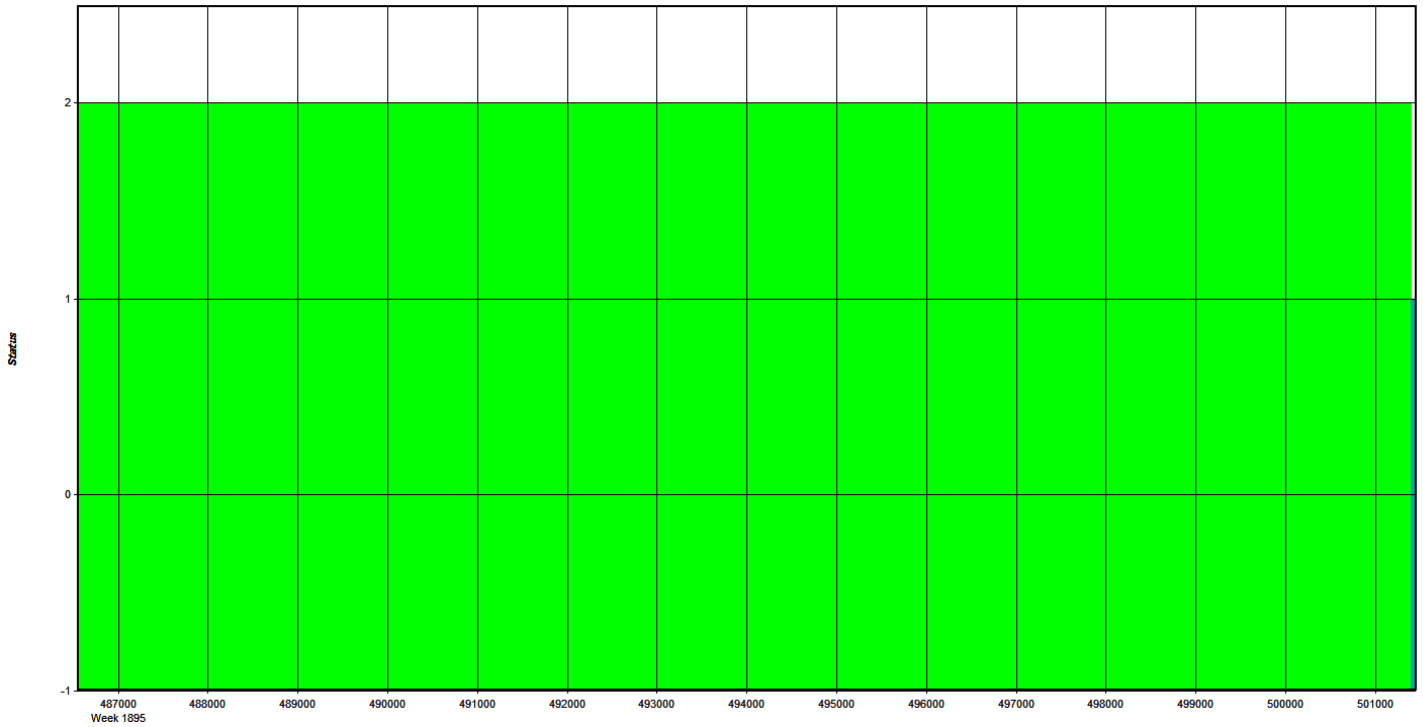
GPS Time (TOW, GMT zone)

— Heading/Azimuth — GPS-COG









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

Coordinate/Antenna Settings

Master Remote

Base Station
 2: 00081270 Name: 00081270 Disabled
 File: E:\Proc\27146_Maine_2016\7HWR\27146_USGS_Western_Mai

Coordinates
 Latitude: North 45 18 04.00868 Compute from PPP
 Longitude: West 70 36 12.34092 Enter Grid Values
 Ellipsoidal height: 351.264 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: N/A View STA File
 Antenna profile: NOV702GG Info
 Measured height: 2.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 2.067 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
1: MEGR Name: MEGR Disabled
File: E:\Proc\27146_Maine_2016\ZHWR\27146_USGS_Western_Mai

Coordinates
Latitude: North 45 27 49.23447 Compute from PPP
Longitude: West 69 35 36.89811 Enter Grid Values
Ellipsoidal height: 293.886 m Enter MSL Height
Datum: WGS84 Datum Options
Select From Favorites Add To Favorites Use Average Position

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

Scanned by CamScanner

Albion LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(Email log only to flight_log_distribution_list@quantumspatial.com)

Date: **5/16/2016** pg. **1** of **85**
 UN: **DSC01**

Project: **USGS WESTERN MAINE - SET POINT 1** Prof #: **27146** Flight Mgmt File: **20160506-141105**
 Aircraft: **N73TM** Begin Hobbs: **06218.7** End Hobbs: **06223.1** Total: **4.4** Pilot: **WAGNER** Co-Pilot: **—** Tech: **SCIDONE**
 Dep Apt: **KLEW** Dep Time (Local): **10:44** (Z): **14:44** Arr Apt: **K361** Arr Time (Local): **15:15** (Z): **19:15** Tot Time Aloft: **4.4**
 CORS: **Y 10** Sta 1: **SET POINT 1** Sta 2: **—** Flyovers: **Y / N** H/Y, times: **Sta 1** **Sta 2**
 GPS Unit: **D/N** Sta 1: **SET POINT 1** Sta 2: **—** Flyovers: **Y / N** H/Y, times: **Sta 1** **15:15 / 18:51** **Sta 2**

Cell Temp beg: **+11** °C End: **+18** °C OAT beg: **+4** °C End: **+4** °C Altimeter begin: **29.84** end: **29.84** Figure 8
 Type: **ALS-70** Serial #: **7178** Alt: **6500** Alt: **VARIOUS** Avg Temp: **VARIOUS** Max Avg Spacing: **150** Figure 8
 FOV: **40°** Scan Freq: **53.4** Mps: **0/N** Pulses In Air: **2** Pulse Rate: **2604** Power: **100%** PRST: **2.2** Figure 8
 End Cal: **204** Average Humidity: **SSDI**
 End Cal: **240**
 Test Cal: **3C**

Line #	Hgt	Start UTC	End UTC	Cell Spd	Foot-cans	GPS Altitude	Orb	Temp	Notes
4001	318	15:24	15:27	156	1.3/16	8409	+4		LOW CUE TO THE EAST - THIS LINE GOOD
4002	168	15:28	15:31	156	1.2/17	8297	-3		TRACES OF SNOW ON MOUNTAIN TOPS
4003	318	15:34	15:36	155	1.2/17	8356	+4		
4004	168	15:40	15:42	160	1.3/16	8445	-2		
4005	348					8044			NO GO - LOW CUE OF THE SOUTH END
4006	78	15:52	16:03	147	1.1/18	7949	0		CROSS TIE
4007	239	16:08	16:10	160	1.1/19	8002	0		
4008	59	16:13	16:15	146	1.1/18	8002	+1		
4009	239	16:18	16:24	155	1.1/18	8002	0		
4010	59	16:25	16:25	150	1.2/17	8025	0		
4011	239	16:28	16:29	152	1.3/17	8034	+1		
4012	59	16:32	16:34	150	1.2/17	8064	0		
4013	258	16:39	16:40	147	1.1/17	8930	+2		
4014	78	16:42	16:43	158	1.1/17	8961	0		TRACES OF SNOW ON MOUNTAIN TOPS
4015	258	16:46	16:47	150	1.1/17	8961	0		"
4016	239	16:50	16:52	149	1.5/14	8710	0		
4017	154	16:56	16:58	142	1.4/14	8710	0		CROSS TIE
4018	348	17:04	17:12	160	1.2/17	8200	0		CROSS TIE
4019	548	17:04	17:12	160	1.0/18	8110	+2		

Total Prof Lines: **83** Lines Flown: **52/23** Lines Remain: **9** Online Time: **3.3** Mob Time: **1.1** Notes:

Date: 5/16/2014
UN: DBCOI 7/2/13

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log daily to flight_log_distribution_list@quantumspatial.com)

Project: USGS WESTERN MAINE - SET POINT / Proj #: 27146 Flight Mgmt File: 20100506-14105
Aircraft: N737M Begin Hobbs: 06287.7 End Hobbs: 06283.1 Total: 4.4 Pilot: WAGNER Co-Pilot: — Tech: SCIFONE
Dep Apt: KLEW Dep Time (Lok): 10:44 [Z] 14:44 Arr Apt: K3B1 Arr Time (Local): 15:15 [Z] 19:15 Tot Time Aloft: 4.4
CORs: Y (N) Sta 1: Sta 2: Flyovers: Y / N IF Y, times: Sta1) Sta2)
GPS Unit: D / N Sta 1: SET POINT / Sta 2: Flyovers: N / N IF Y, times: Sta1) 15:15 / (Sta2)
Gd Temp beg: +11 °C End: +18 °C OAT beg: +4 °C End: +4 °C Altimeter begin: 29.84 end: 29.46

Type	Serial #	Alt AGL	Alt MSL	Alt ASL	Max Gpsd	Avg Pt Spacing	Max Gpsd	Power	Fig 8	Energy Name
FOV	Scan Freq	Mph	Mph	Mph	Power	PPSM	Power			
LIDAR	ALS-70	7178	VARIOUS	VARIOUS	150	2.2	100%		15:19	SSDI
	40°	53.4	Mph	D / N	2	2.2			18:44	

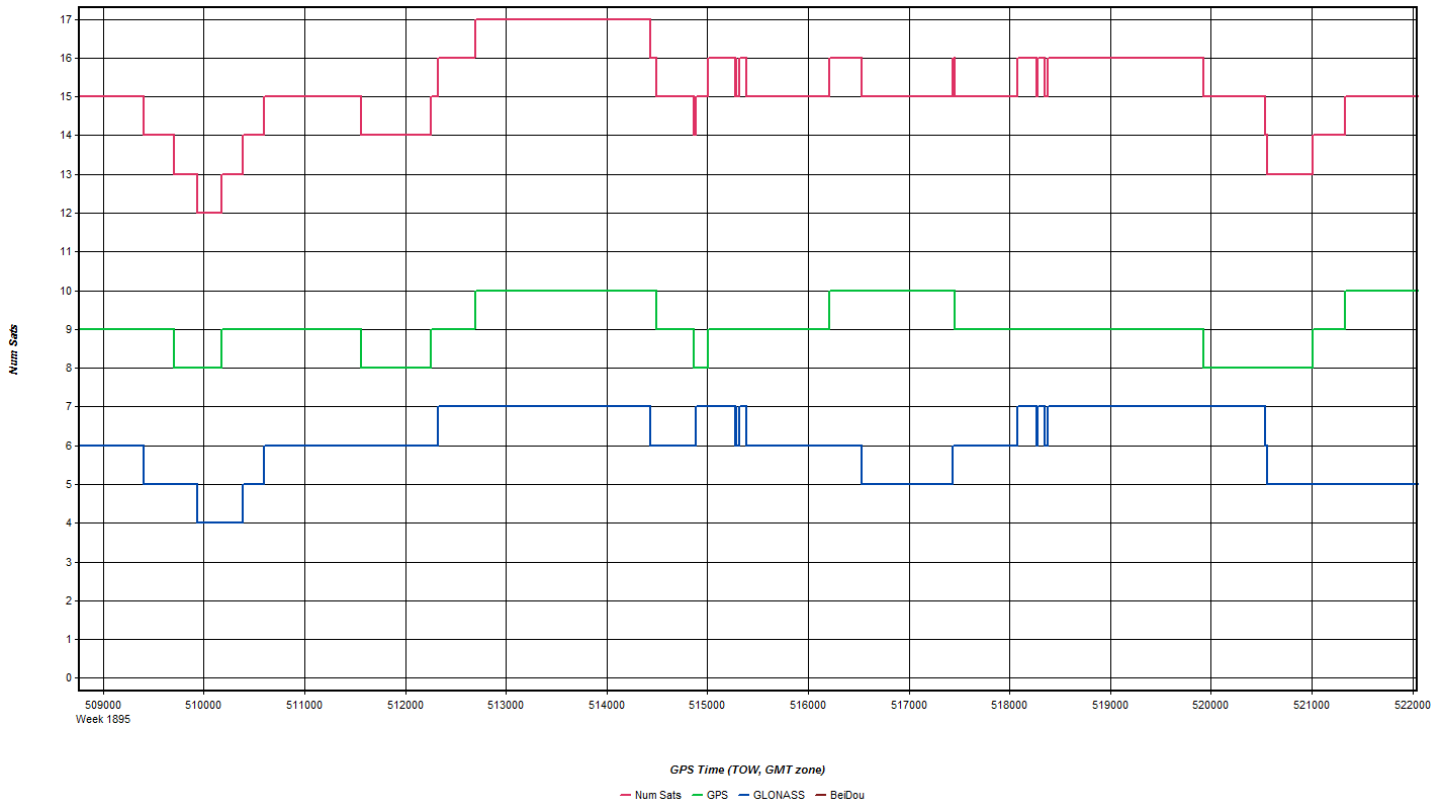
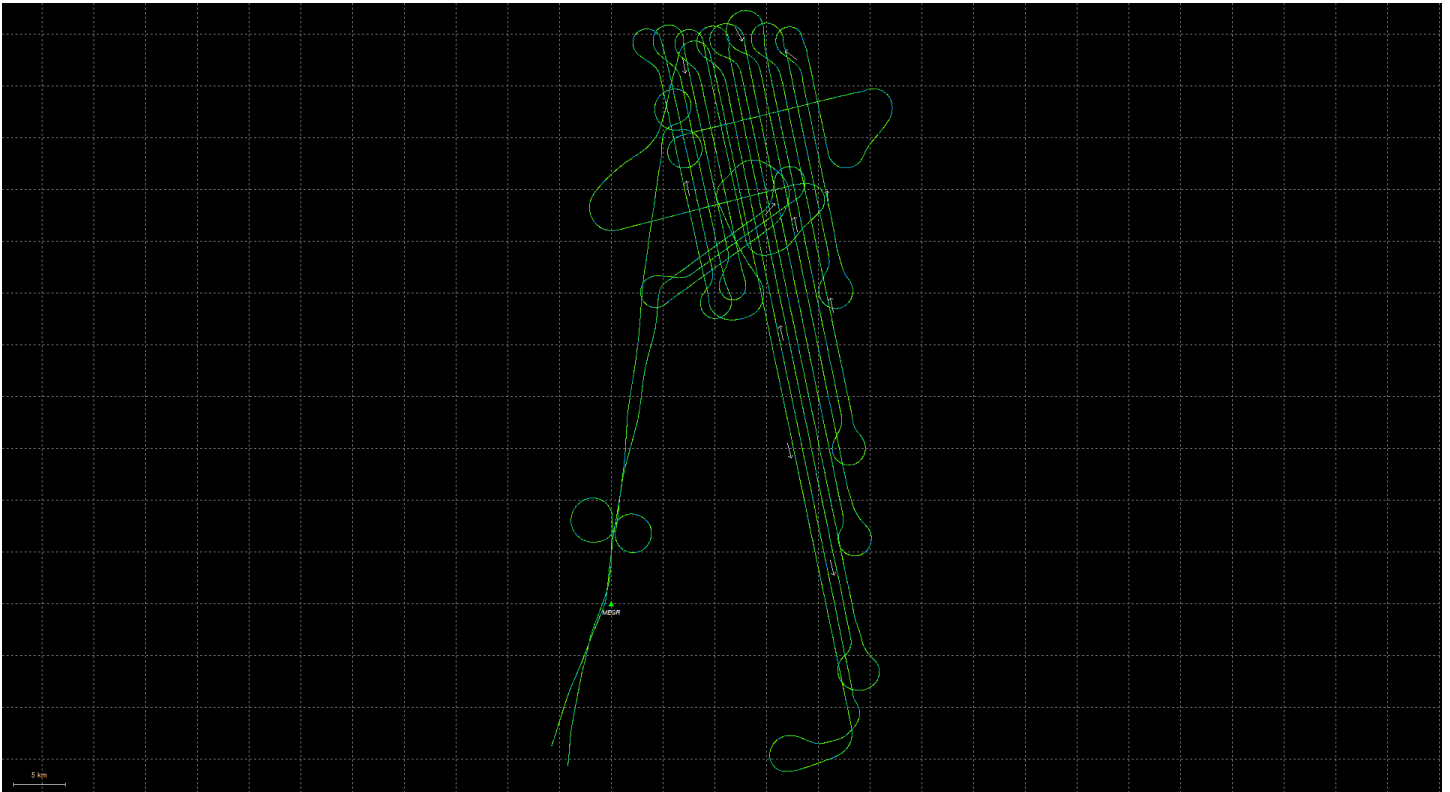
Line #	Hdg	Start [UTC]	End [UTC]	Gdspd	Foot/sen	GPS Altitude	Crab	Turb [0.2-1]
4017	108	17:15	17:22	154	1.2/16	8117	-1	
4077	84	17:28	17:29	159	1.2/17	8425	+1	
4078	24	17:33	17:34	148	1.2/17	8553	0	
4079	84	17:38	17:40	151	1.2/17	8366	+1	
01003	346	17:43	17:44	156	1.1/17	8357	0	
4051	348	17:52	18:07	157	1.1/18	7697	0	
4014	108	18:14	18:21	155	1.2/16	8133	0	
4015	348	18:24	18:32	162	1.2/16	8153	+2	
4014	108	18:34	18:42	148	1.3/17	8182	-1	

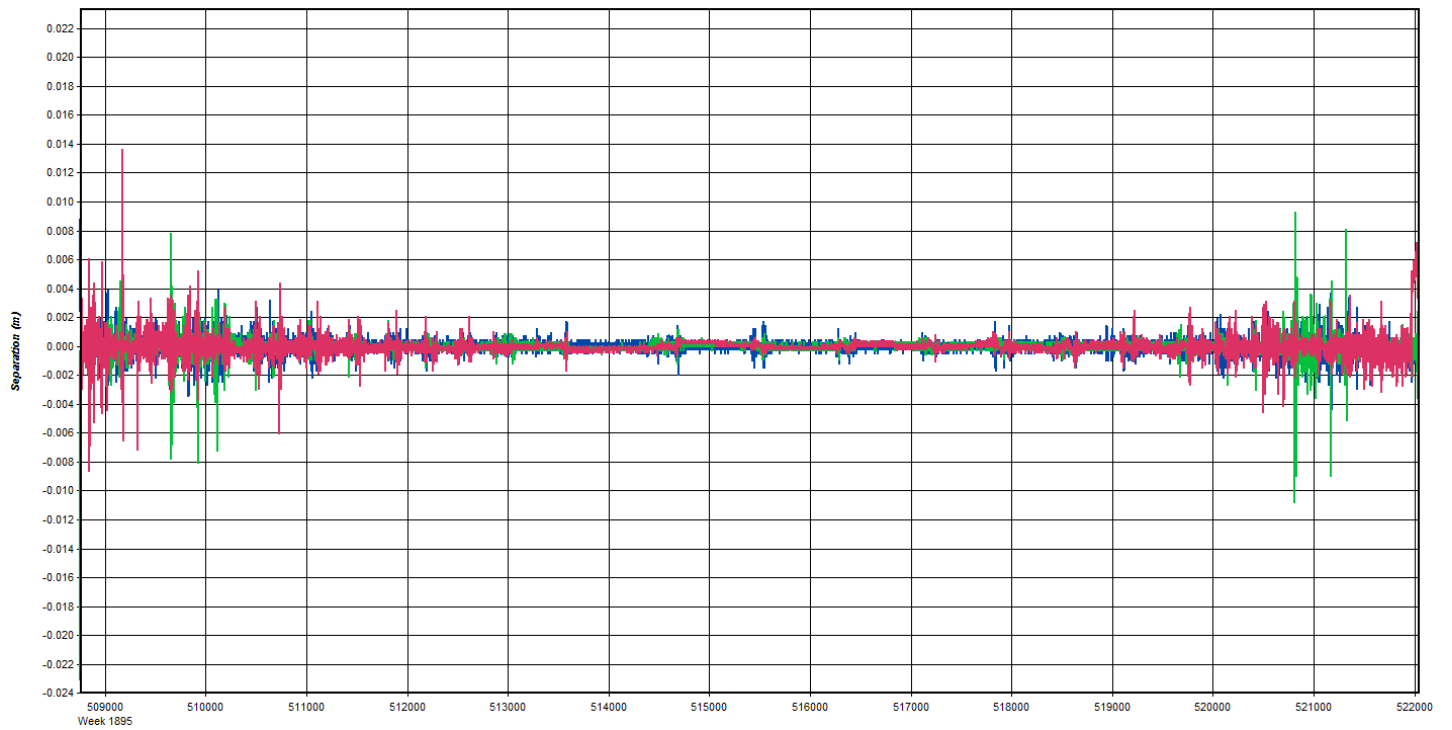
FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.
MILD TURBULANCE - GUE POPPING - THIS LINE OK
CROSS TIE
REFLIGHT LINE - SLIGHT TURB N. 1/2 OF LINE
→ FOR FUEL

Total Proj Lines: 8-3 Lines Flown: 52/28 Lines Remain: 9 Online Time: 3:3 Job Time: 1:1 Notes:

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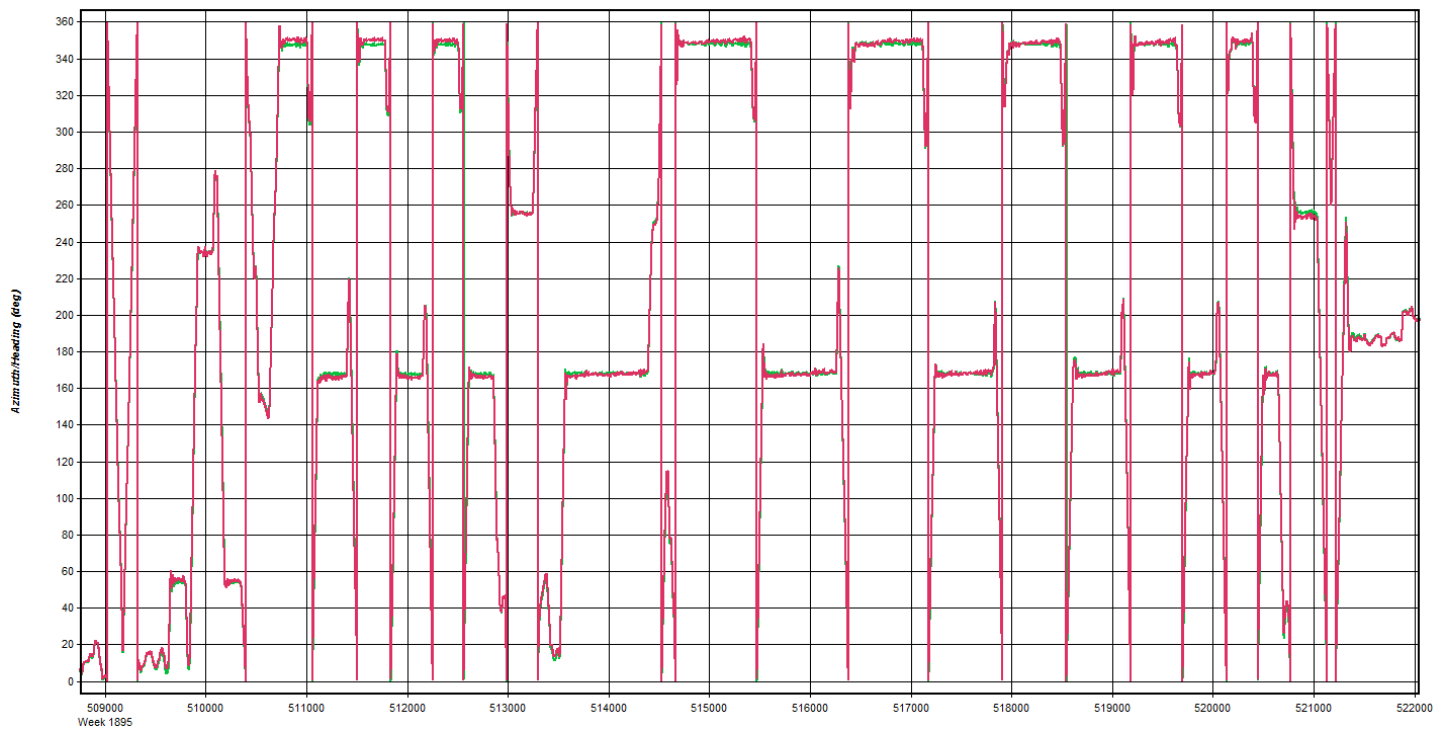
May 6, 2016-B (N73TM, SN7178)





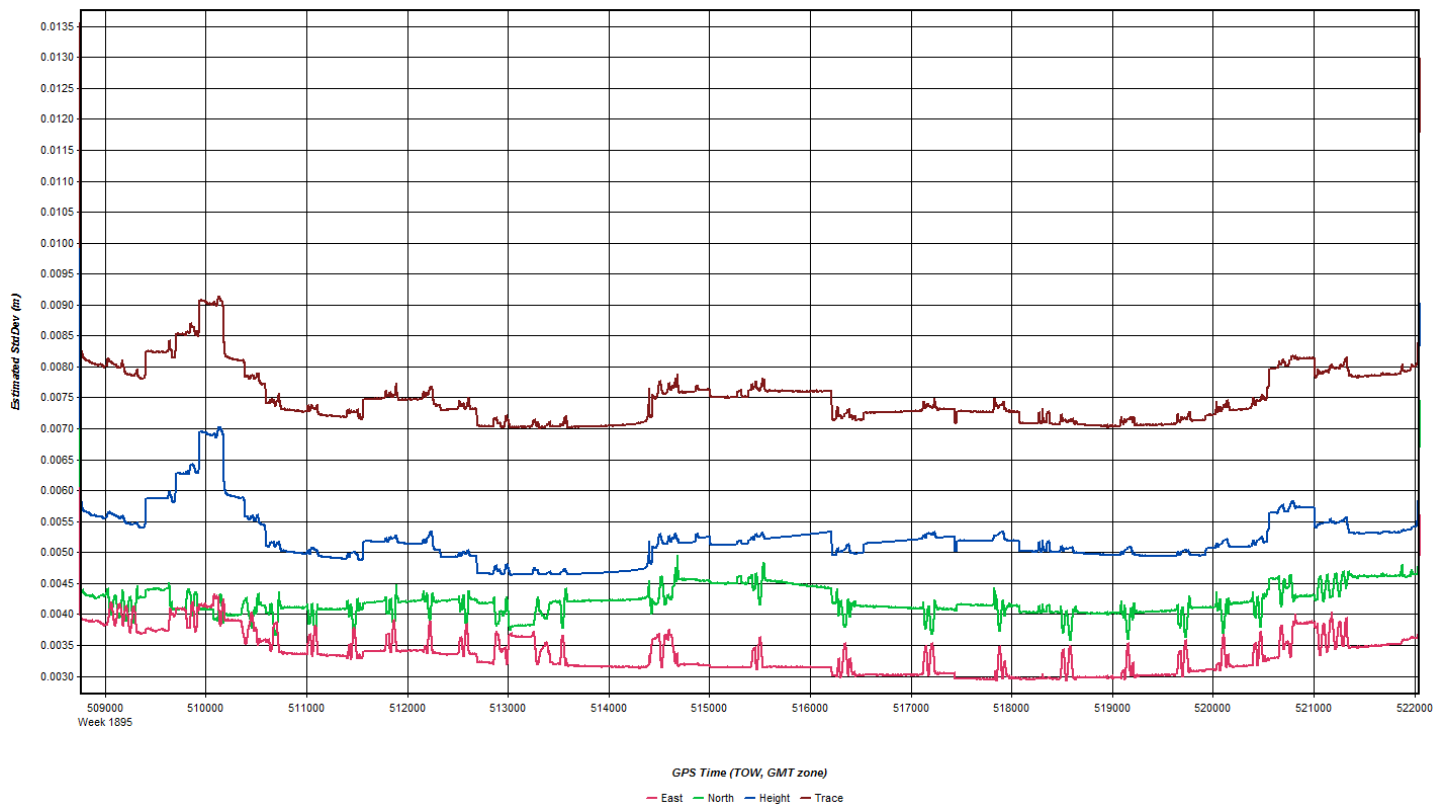
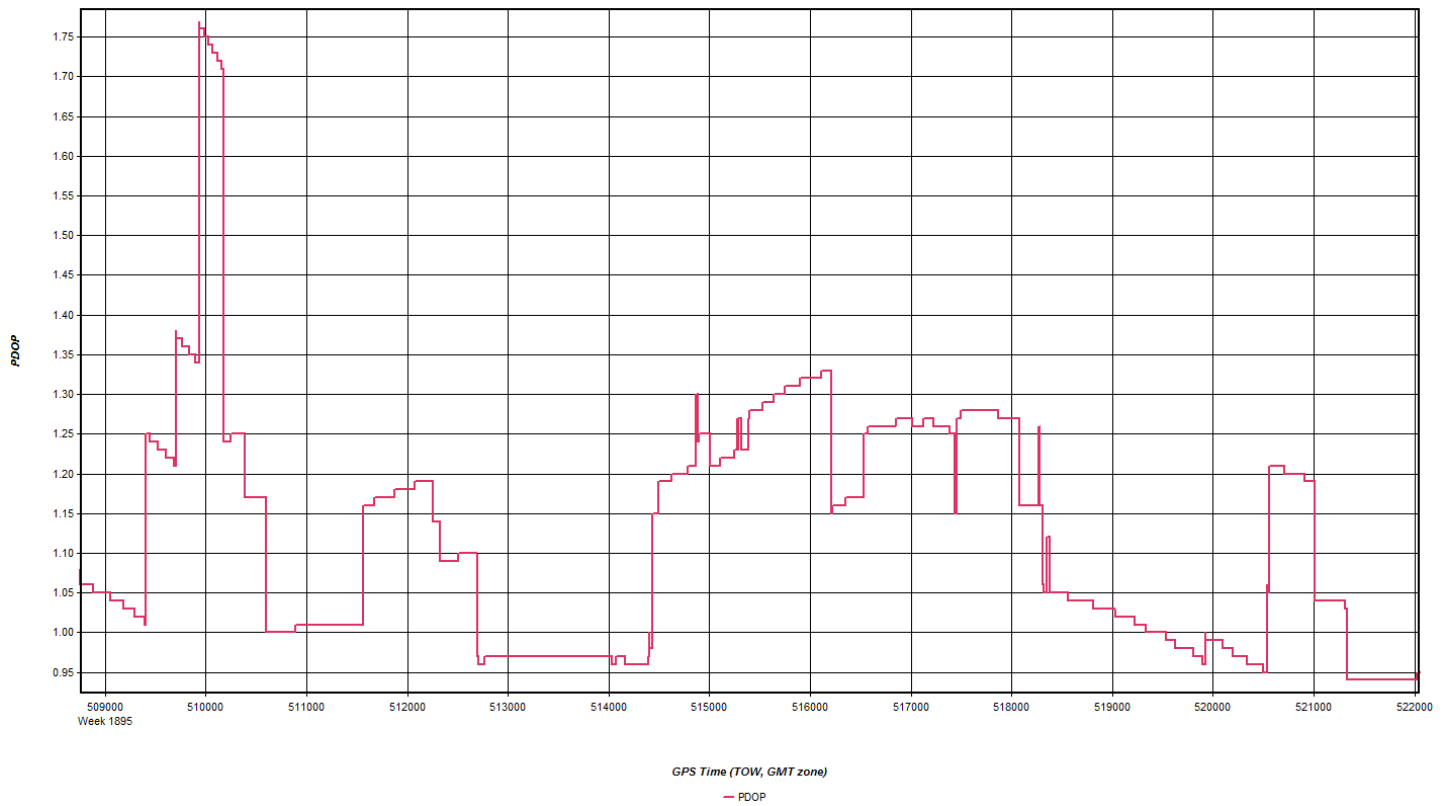
GPS Time (TOW, GMT zone)

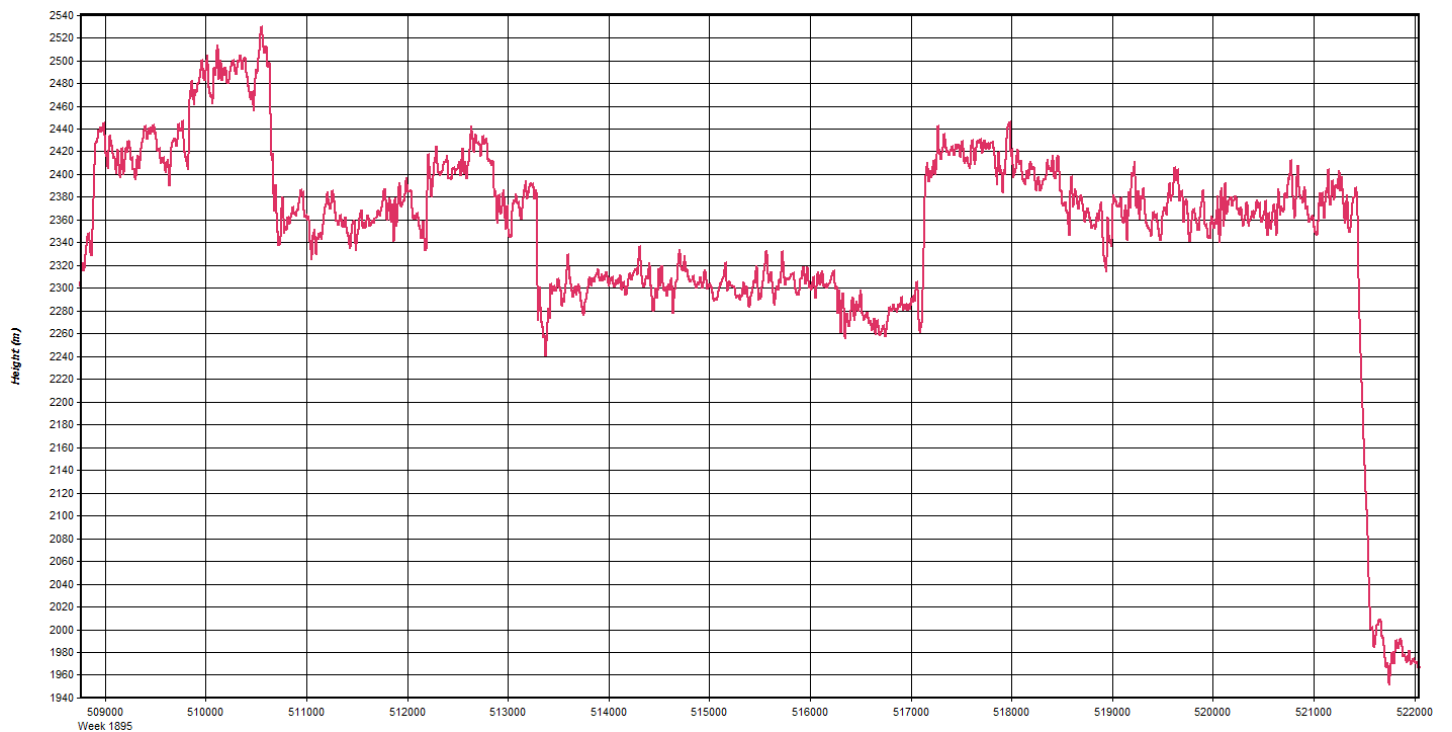
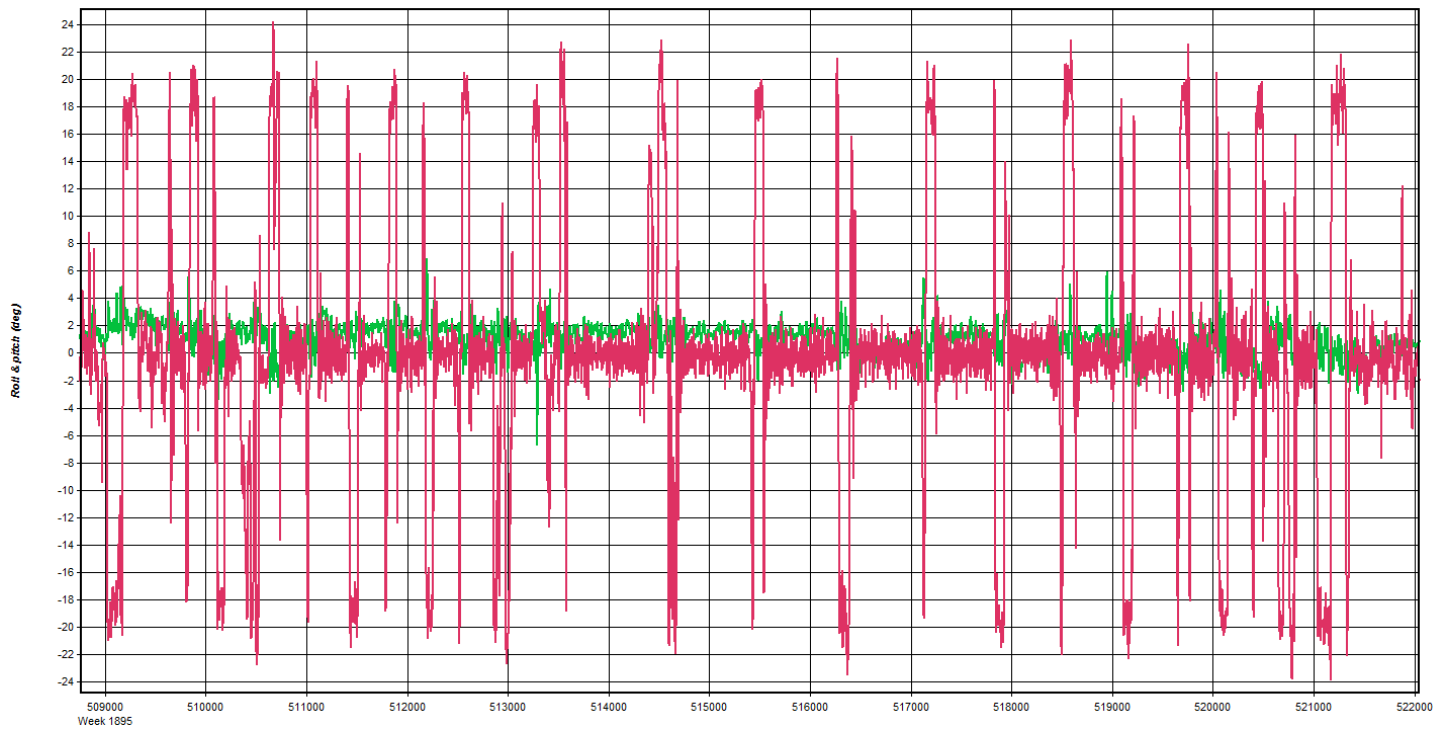
— East — North — Up

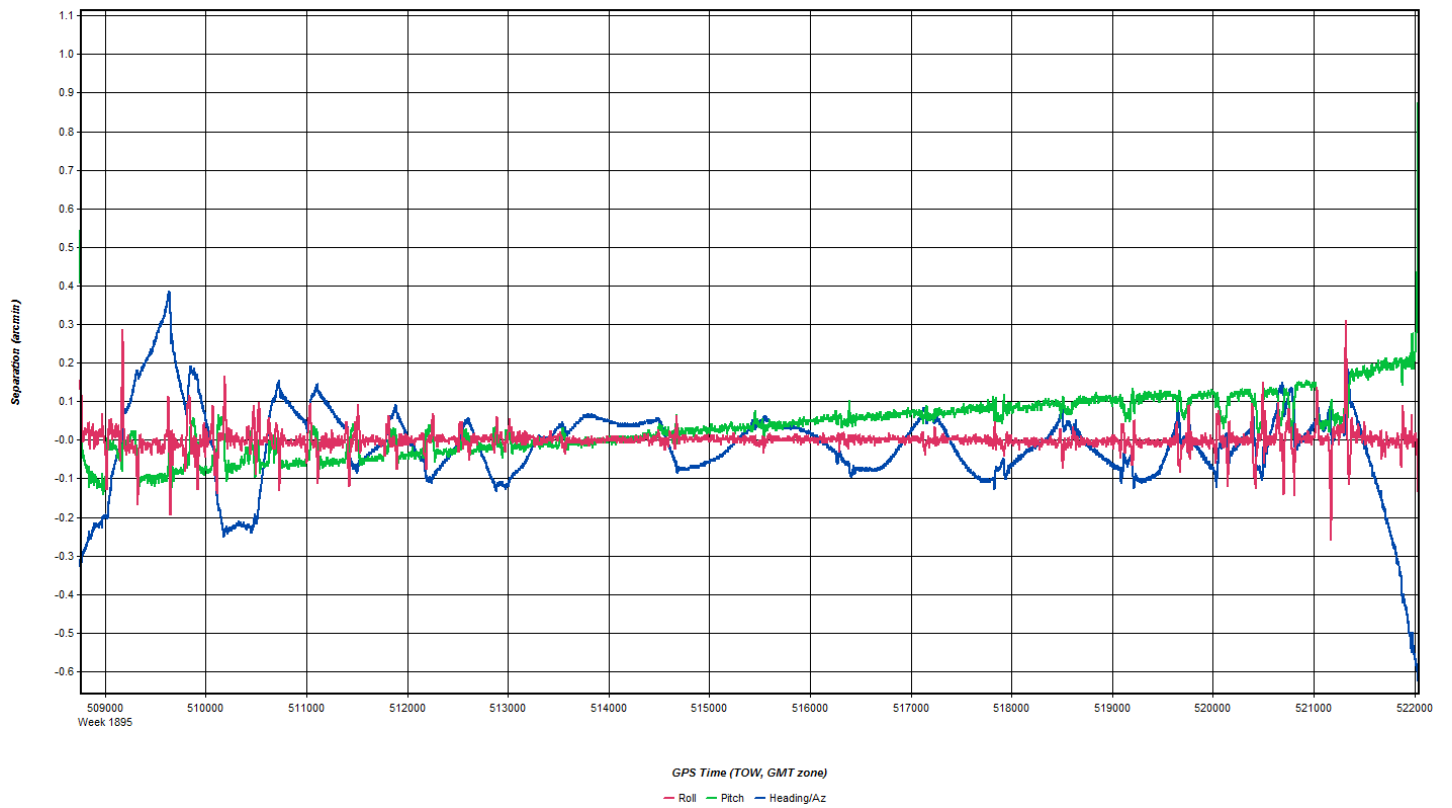
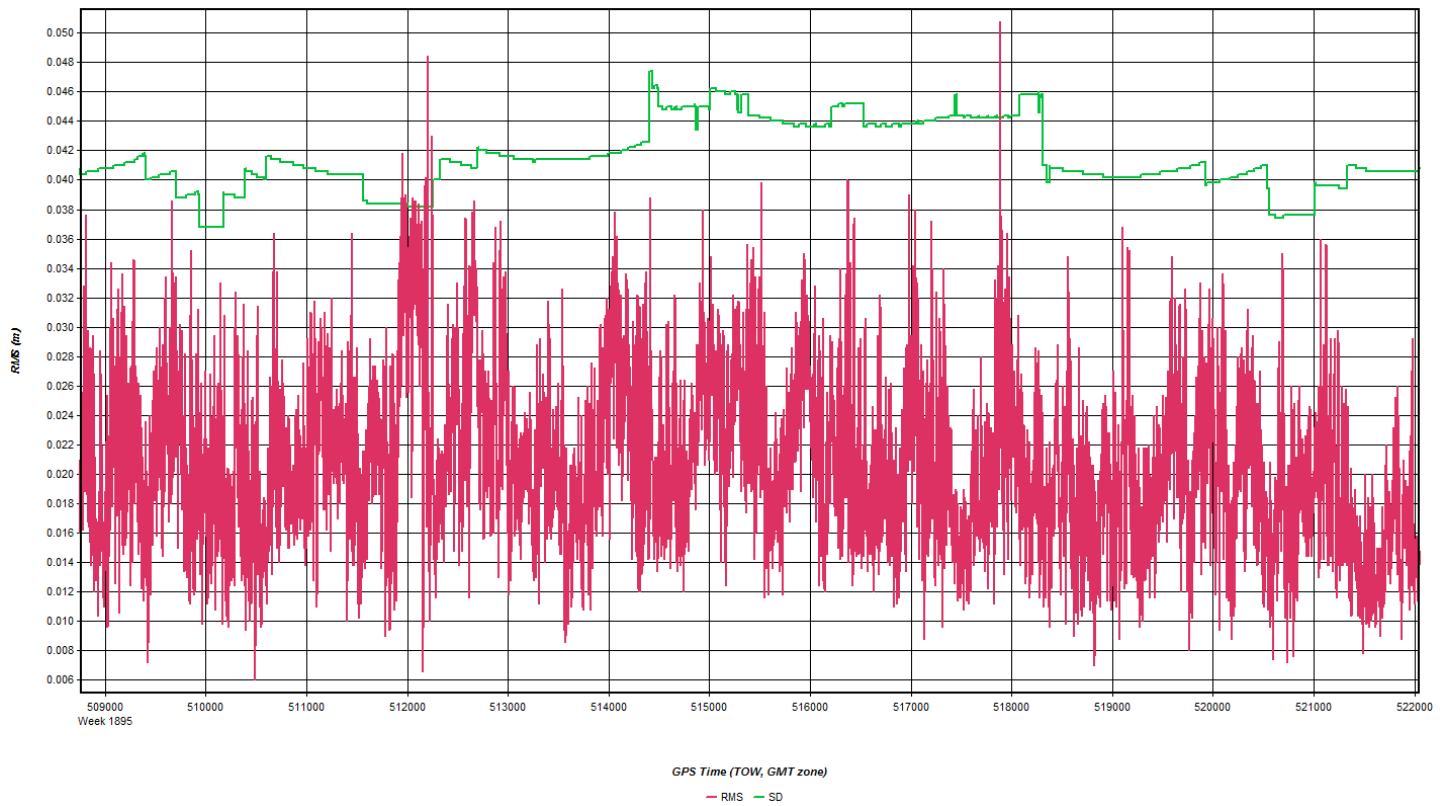


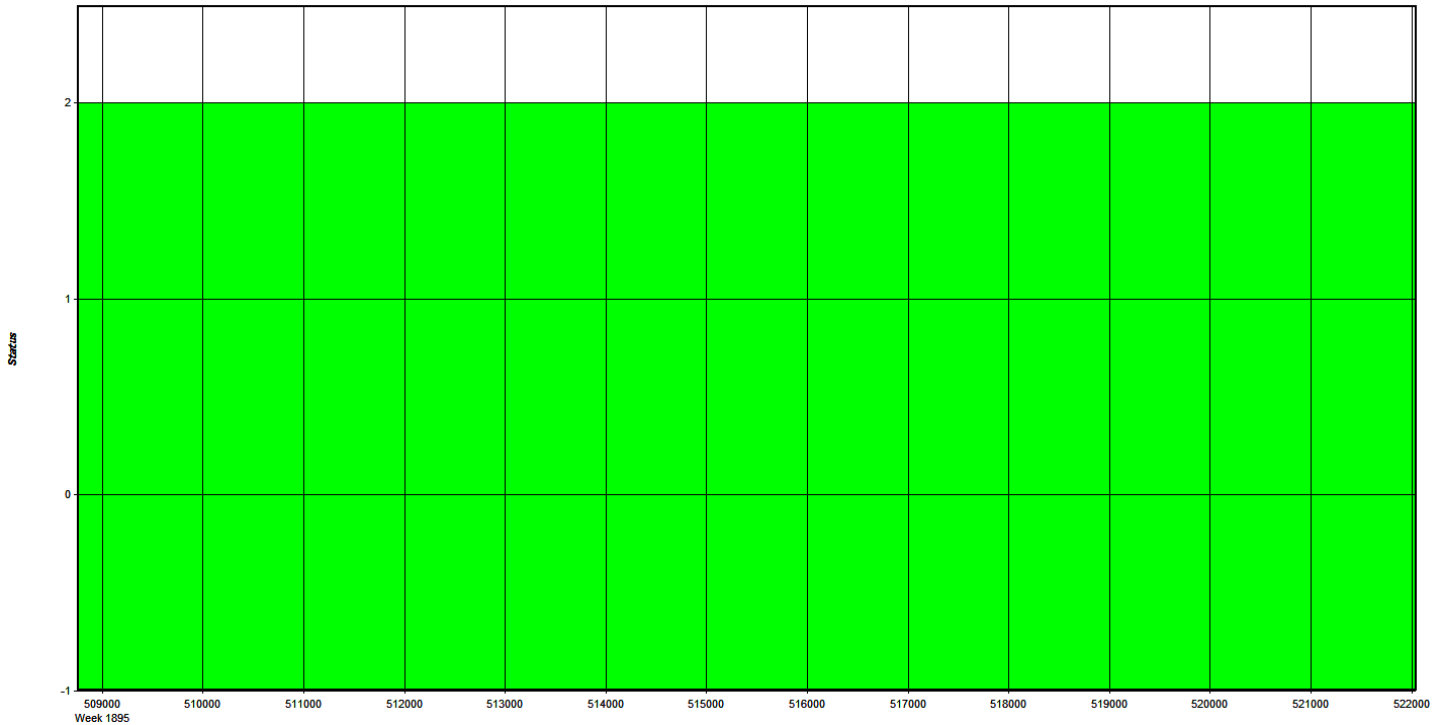
GPS Time (TOW, GMT zone)

— Heading/Azimuth — GPS-COG









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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\7HWR\27146_USGS_Western_Mai

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Scanned by CamScanner

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email log data to flight_log_distribution_list@quantumspatial.com)

Date: 5/06/2016
 US A C O I 21145

Project: USGS WESTERN MAINS MEGN Proj #: 2714C Flight Mgmt File: 20160506-205420 Tech: SCIF0001C
 Altcraft: N737M Begin Hobbs: 06233.5 End Hobbs: Total: Pilot: WAGNER Co-Pilot: — Tot Time Aloft: —

Dep Apt: KOWK Dep Time (Ldt): 16:57 ZF 20:57 Alt Apt: Air Time (Local): ZF Flyovers: Y / N # Y, times: Stat1) 21:21 Stat2) —
 CORS: Y / N Sta 1: MEGN Sta 2: Flyovers: Y / N # Y, times: Stat1) Stat2) —
 GPS Unit: Y / N Sta 1: Sta 2: °C OAT beg: + / - °C End: °C Altimeter begin: 29.85 end: —

LIDAR	Type	ALS-70	Serial #	7178	Alt AGL	60500	Alt	VAR1005	Avg Time	VAR1005	Max	Avg Pk	Range	150	Power	100%	PRF	2.2	FIGURE	Y	240	Average	Number
	FOV	40°	Scan	53.4	Mph	1000/Min	GPS	Altitude	Crab	Roll	Yaw	Roll	Yaw	Roll	Yaw	Roll	Yaw	Roll	Yaw	Roll	Yaw	Roll	Yaw
5017	54	21:34	21:36	140	1.0/19	7949	+1																
5018	234	21:39	21:40	160	1.0/19	8123	-1																
5019	54	21:43	21:45	150	1.0/18	8176	+1																
5001	157	21:48	21:50	154	1.1/16	8260	0																
5006	348	21:52	21:56	158	1.1/16	7759	+3																
5007	168	21:59	22:02	149	1.1/16	7756	-1																
5008	348	22:05	22:09	155	1.2/16	7756	+2																
5009	168	22:12	22:15	157	1.1/17	7782	-1																
5010	348	22:18	22:21	148	1.0/18	7841	+3																
5011	168	22:24	22:27	151	1.0/18	7910	-1																
5133	256	22:30	22:33	162	1.2/17	7799	+1																
5092	168	22:39	22:52	152	1.2/17	7573	-1																
5093	348	22:58	23:09	160	1.1/19	7598	0																
5094	168	23:12	23:23	156	1.0/19	7549	-1																
5095	348	23:27	23:38	160	1.1/17	7493	0																
5096	168	23:41	23:49	148	1.2/17	7913	-2																
5097	348	23:53	00:00	160	1.1/18	7897	0																
5098	168	00:04	00:11	161	1.3/17	7785	-1																

FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.
 LOW CUE IN THE VICINITY
 CROSS TIE
 RFT LINE
 CROSS TIE

Total Proj Lines: 136 Lines Flown: 93/22 Lines Remains: 21 Online Time: 3.1 Mob Time: —

Scanned by CamScanner

Albion LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(Save Log File to Flight Log directory with name spatial.com)

Date: 5/06/2016
 User: JSC 5:25

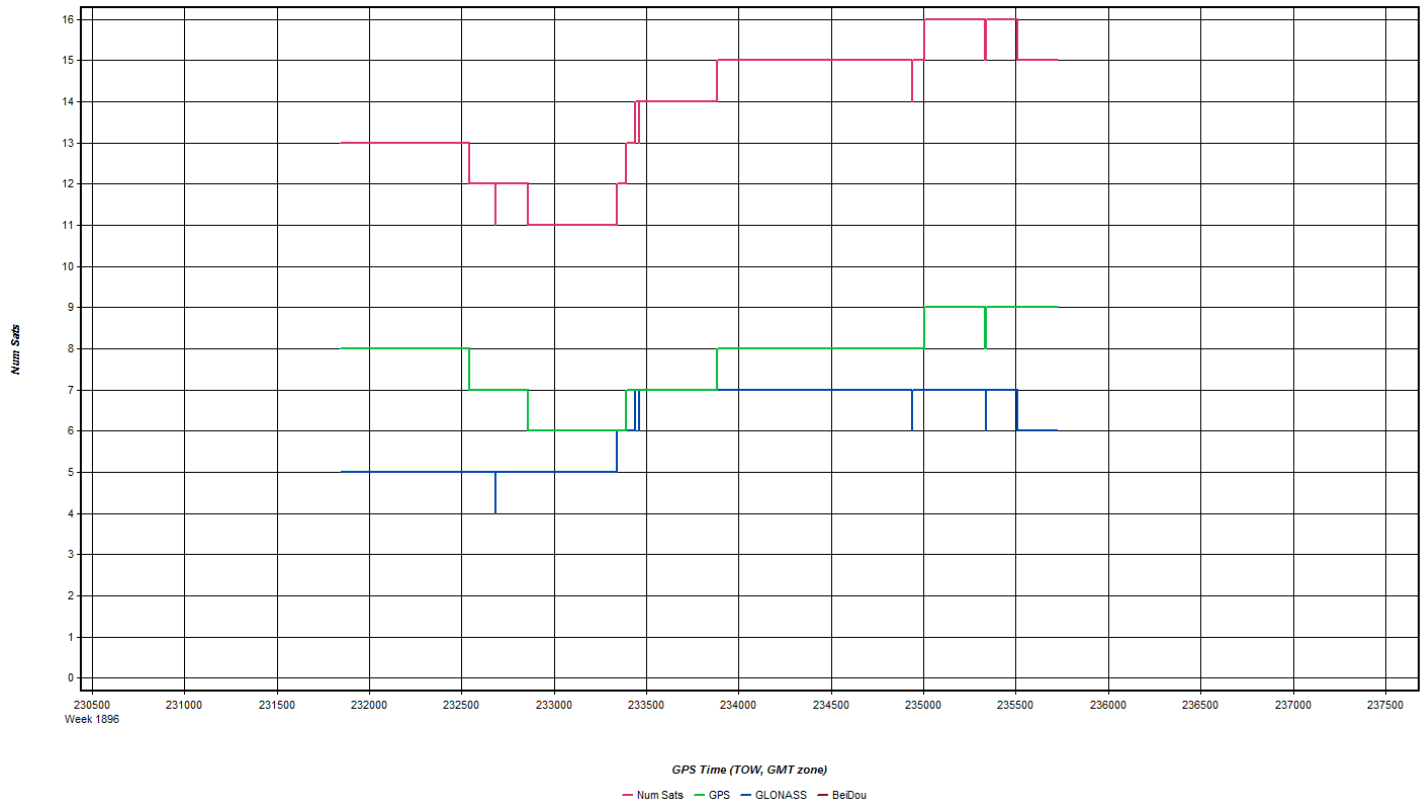
Project: USGS WESTERN MAINE - MEGR Prof: 27116 Flight Mgmt File: 20160506-205120
 Aircraft: N73TH Begin Hobbs: 0622.5 End Hobbs: 0726.0 Total: 4.5 Pilot: WAGNER Co-Pilot: - Tech: SCHOCHE
 Dep Apt: KOWK Dep Time: 16:57 DTG: 20:57 Alt Apt: KOWK Alt Time Local: 21:37 DTG: 01:37 Tot Time Aloft: 4.5
 COR: 01N Sea 1: MEGR Sea 2: Flyover: Y/N #Y, time: Sea1) 21:21 Sea2) Sea2)
 GPS Unit: Y/N Sea 1: Sea 2: Flyover: Y/N #Y, time: Sea1) 00:57 Sea2) Sea2)
 Cdt Temp: 19 °C End: °C OAT: 19 °C End: °C Altitude: 29.95
 LIDAR Type: ALS-70 Beam: 7178 Alt: 6500 Alt: VARIOUS Pos: 150 Alt: 150
 FOV: 40° Scan: 53-H Mhz: 0.1 IN Pulse: 2 Pulse Rate: 260-H Power: 100% PRF: 2.2
 LIDAR Type: ALS-70 Beam: 7178 Alt: 6500 Alt: VARIOUS Pos: 150 Alt: 150
 FOV: 40° Scan: 53-H Mhz: 0.1 IN Pulse: 2 Pulse Rate: 260-H Power: 100% PRF: 2.2

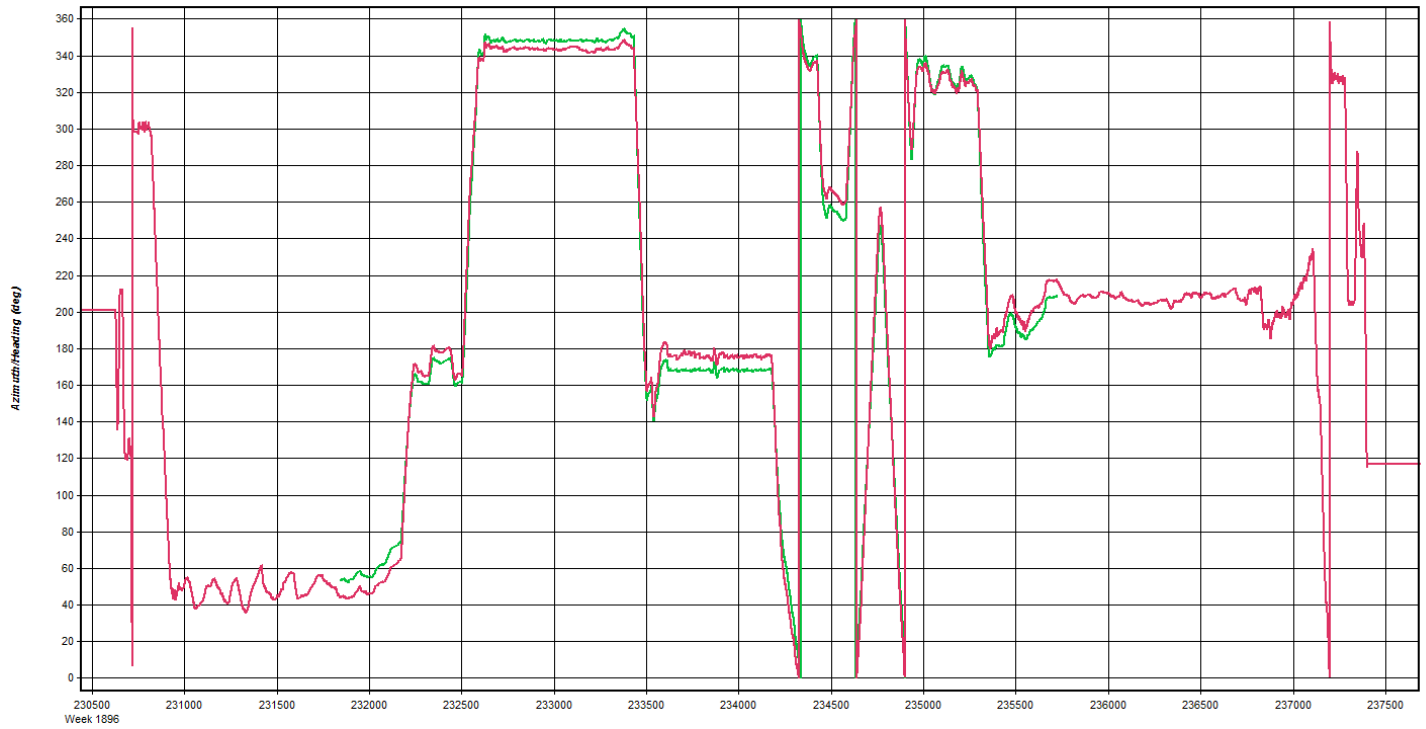
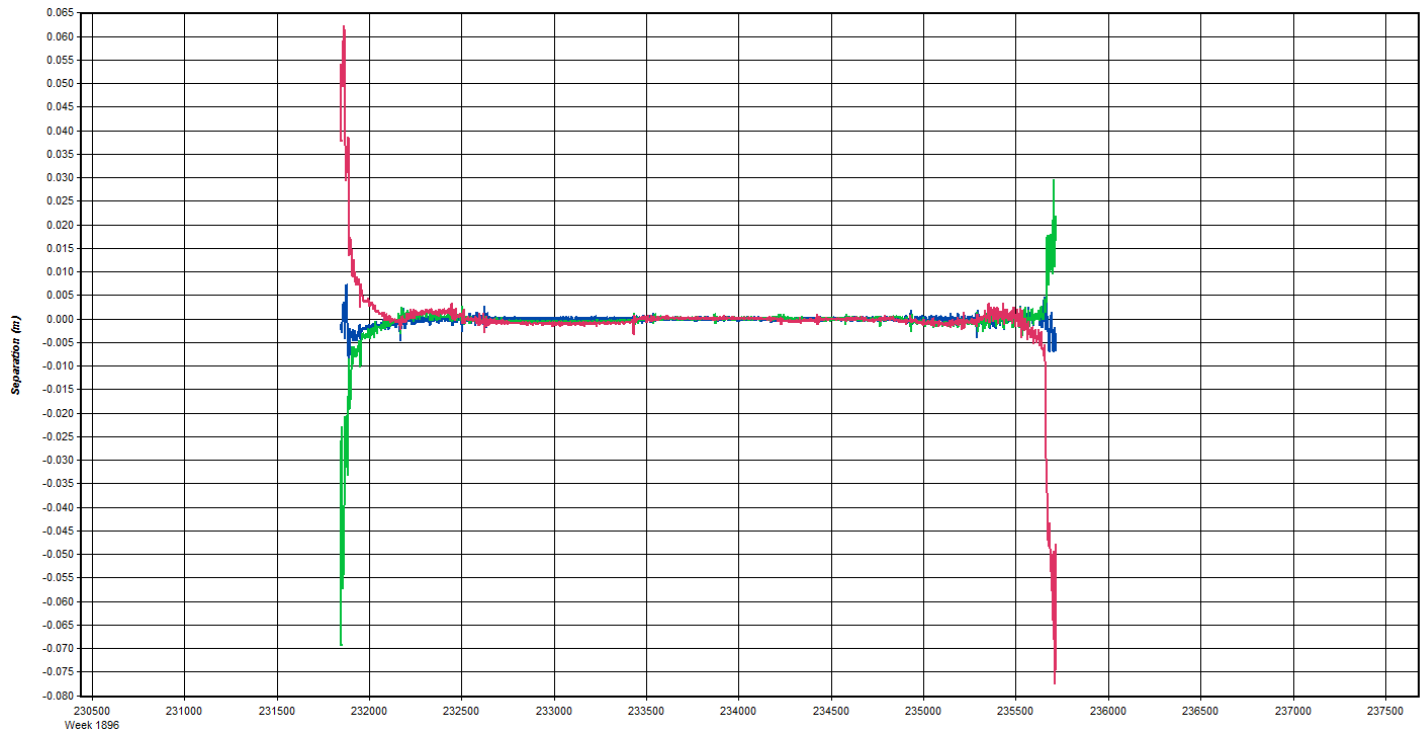
Line #	MGR	Starting	Ending	Alt	Pos	Power	PRF	Notes
5099	318	00:14	00:20	163	13/17	772	0	
5100	168	00:23	00:26	153	1.2/17	7736	-1	
5101	348	00:30	00:32	165	1.2/17	7736	0	
5102	168	00:35	00:37	138	1.1/18	7739	-1	
5126	216	00:10	00:13	160	1.1/17	7736	0	CROSS TIE

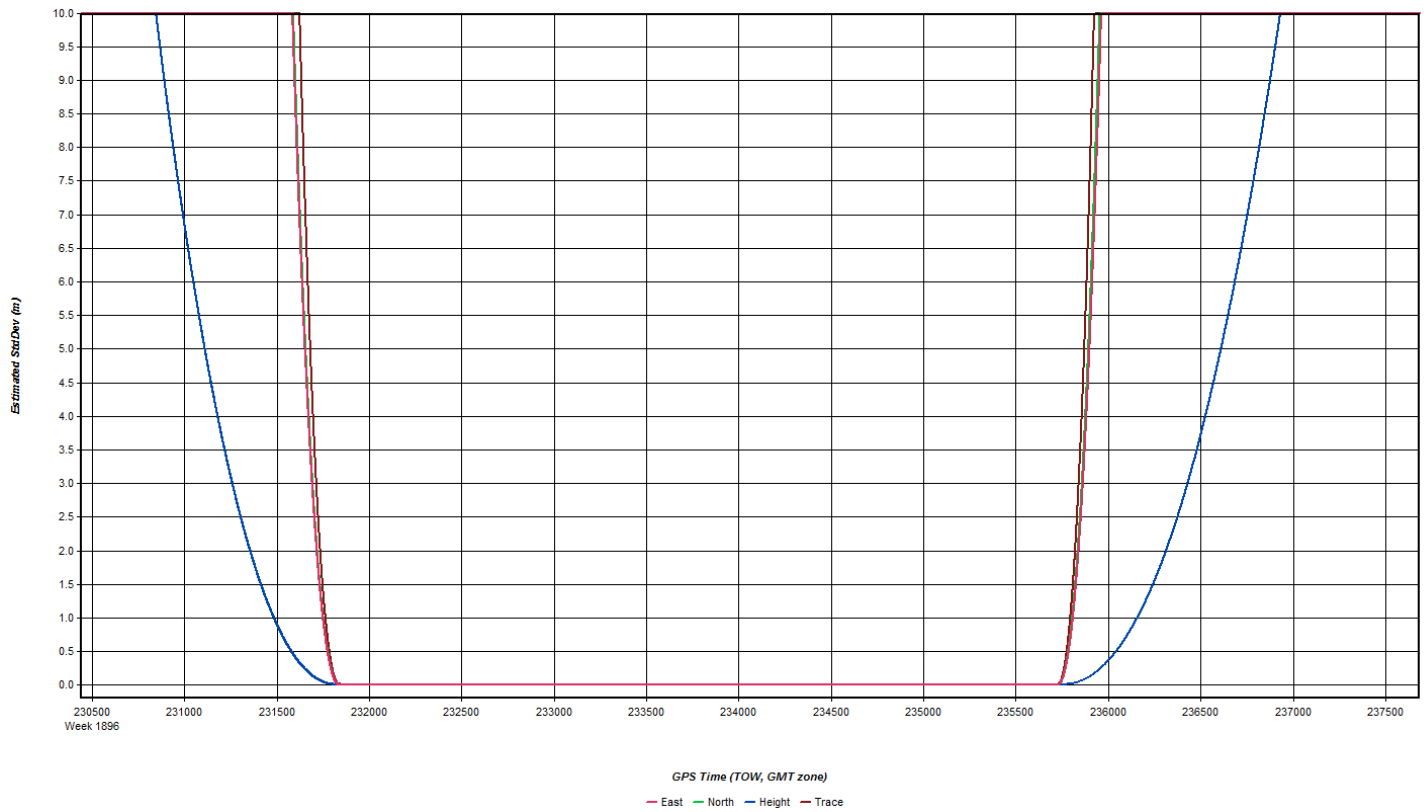
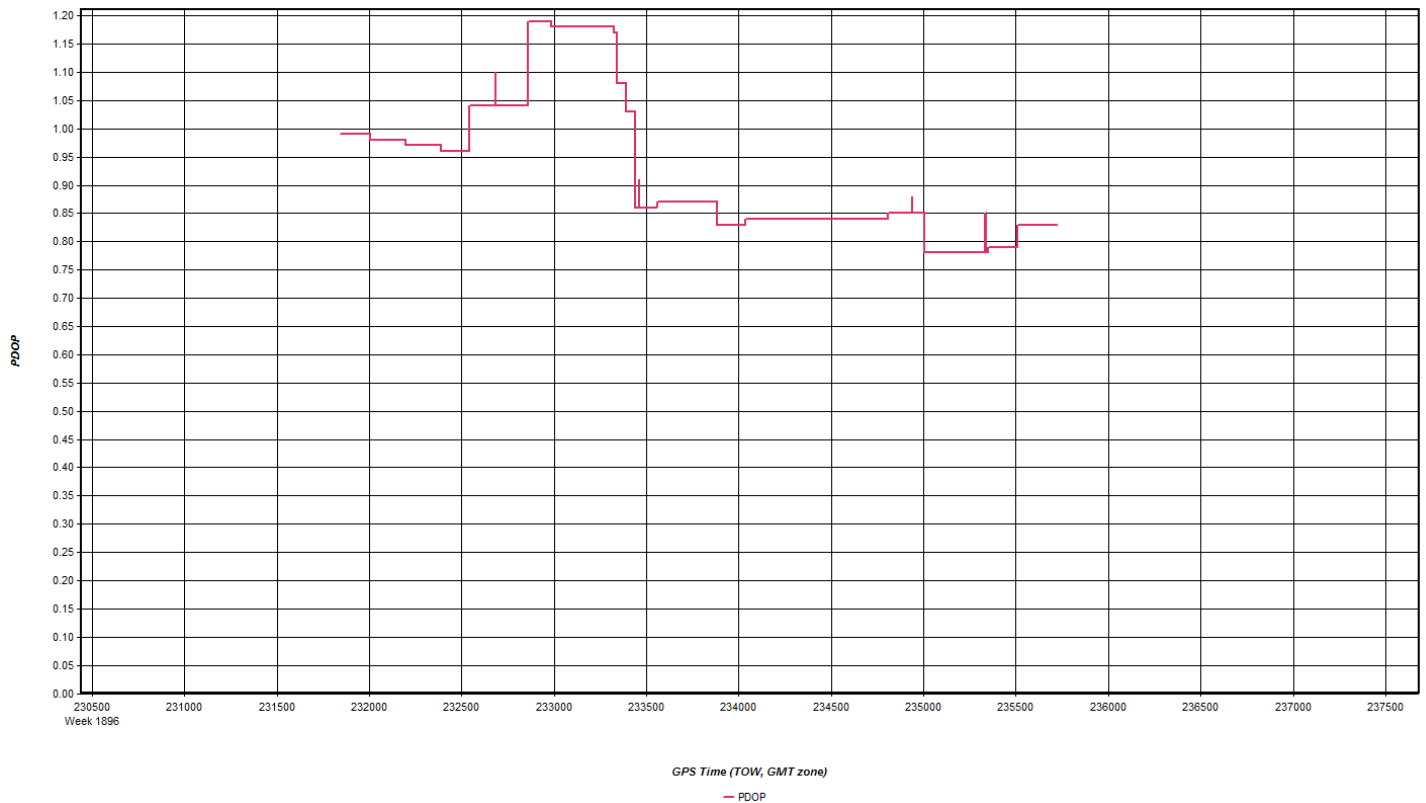
FLIGHT LINE NOTES - visibility, clouds, smoke, terrain, etc.

Total Prof Lines: 136 Lines Flown: 93 / 28 Lines Remaining: 2 Online Time: 3:1 Mob Time: 1:4 Notes:

May 10, 2016-B (N73TM, SN7178)



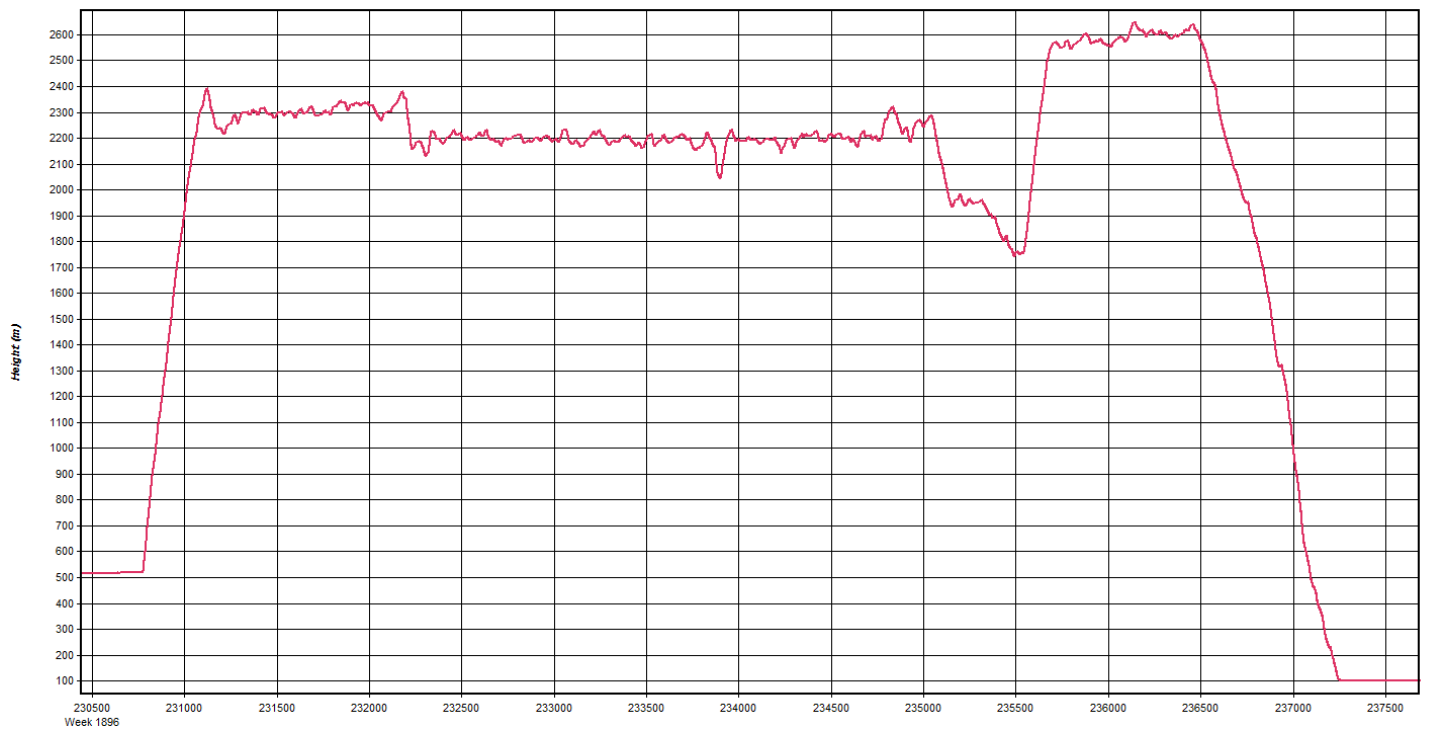






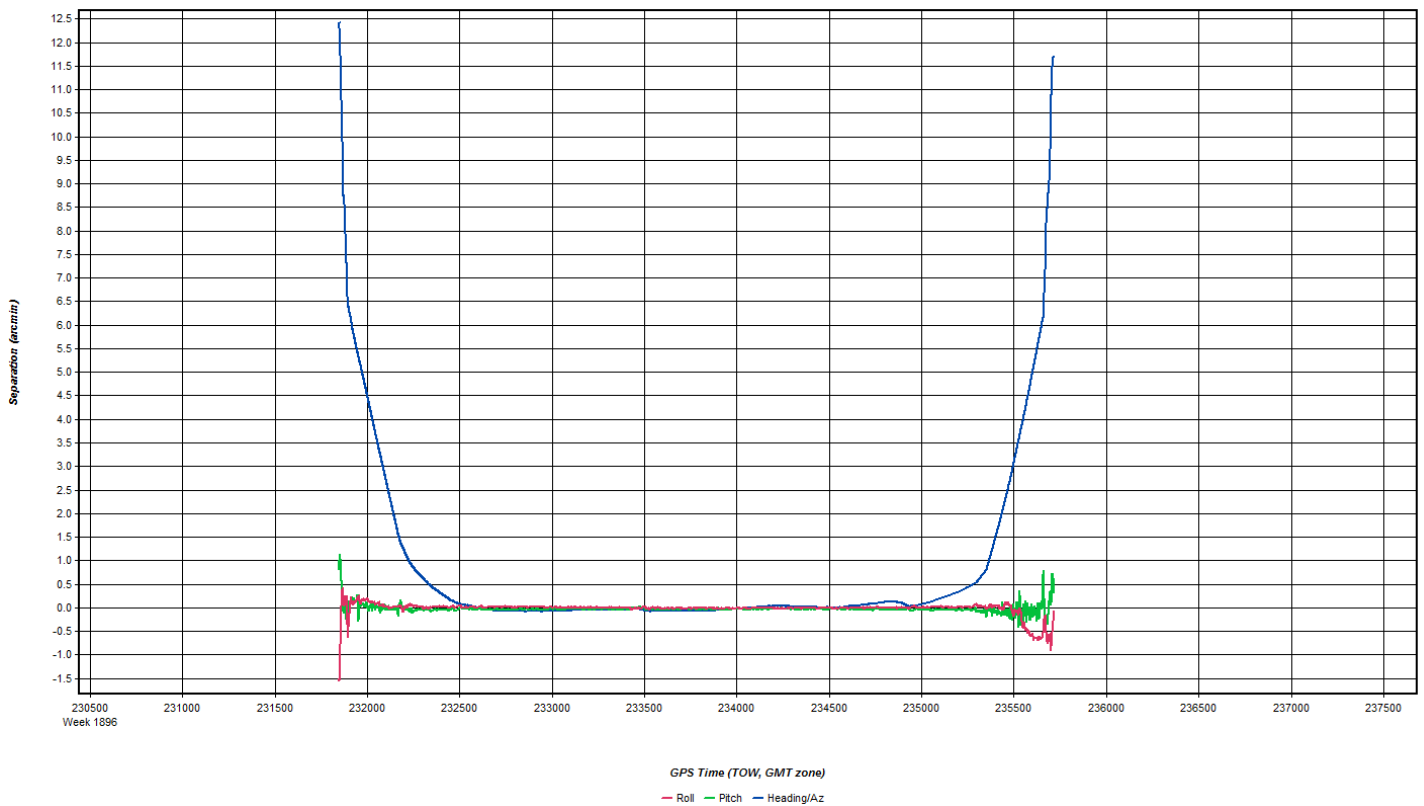
GPS Time (TOW, GMT zone)

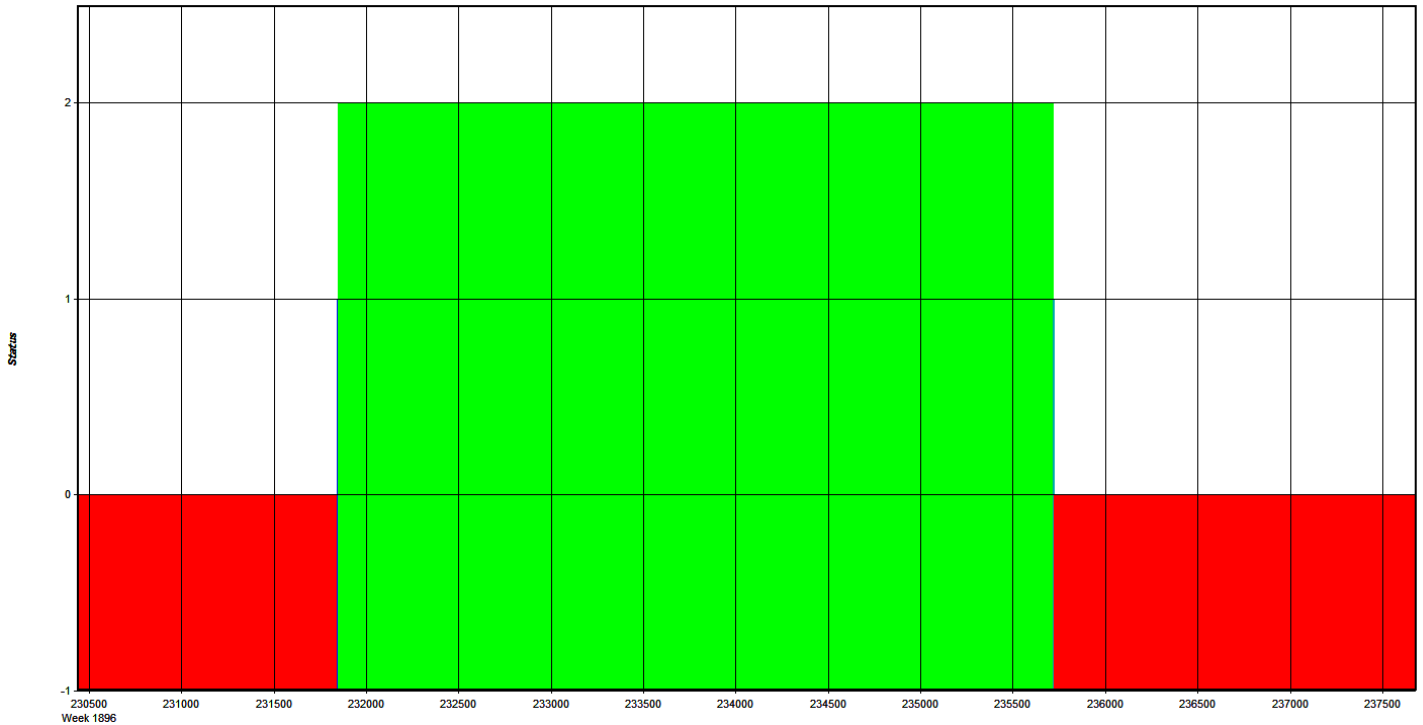
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\6S8Y\20160510_155754\megr1310

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Scanned by CamScanner

Project: USGS WESTERN MAINE - **Proj #:** 27146 **Flight Mgmt File:** N/A **Date:** 5/10/16 **Page:** 1 of 2
(email log daily to flight_log_distribution_list@quantumspatial.com)

Aircraft: N73TM **Begin Hobbs:** 6228.0 **End Hobbs:** 6228.9 **Total:** .9 **Pilot:** WAGNER **Co-Pilot:** - **Tech:** SCHOOPE

Dep Apt: KLEW **Dep Time (Local):** 08:34 **Arr Apt:** K888 **Arr Time (Local):** 09:42 **Tot Time Aloft:** .9

CORS: N **Sta 1:** MEGR **Sta 2:** N **Flyovers:** N **IF Y, times: Sta1)** **Sta2)**

GPS Unit: N **Sta 1:** SET POINT | **Sta 2:** N **Flyovers:** N **IF Y, times: Sta1)** **Sta2)**

Gd Temp beg:		°c		End:		°c		OAT beg:		°c		End:		°c		Altimeter begin:		end:		Fig		Image Name		
Type	Serial #	Alt AGL	Alt AMSL	Alt AGL	Alt AMSL	Avg Temp	Max	Humidity	Wind	Pressure	Power	Avg Pt Spacing	FSM	Mag	End	Time	Mag	End	Time	Mag	End	Time	Mag	End
LIDAR	ALS-70	7178	6500	6500	VARIOUS	VARIOUS	150	100%	2.2	200.4	100%	2.2												
FOV	+10°	53.4	MPI	N	2																			

FLIGHT LINE NOTES - visibility, clouds, smoke, partisk, etc.
 CLOUDS NOT AT YL OF SITE. NOT SHARED ON SAT

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	Temp (°C)	GPS Altitude	Crab	Lines Flown:	Lines Remains:	Online Time:	Job Timer:	Notes:
Total Proj Lines:	83										.9	

Scanned by CamScanner

Project: USGS WESTERN MAIN
Project #: 27116
Date: 5/10/16
File: A C D I PBL of 2

Aircraft: N737M
Begin Hobbs: 6225.9
End Hobbs: 6230.7
Total: 4.8
Pilot: WAGNER
Co-Pilot: ~
Tech: SC HOOD

Dep Apt: K8B
Dep Time (Local): 12:00
Air Apt: KEGW
Air Time (Local): 14:00
Tot Time Aloft: 1.8
Altitude: 16:00
Altitude: 18:00

CORS: Y/N
Sta 1: MEGR
Sta 2:
Flyover: Y/N
IF Y, time: Sta1: 16:27
IF Y, time: Sta2: 17:21

GPS Unit: Y/N
Sta 1:
Sta 2:

Gd Temp beg: 16
End:
OAT beg: 30.11
End:

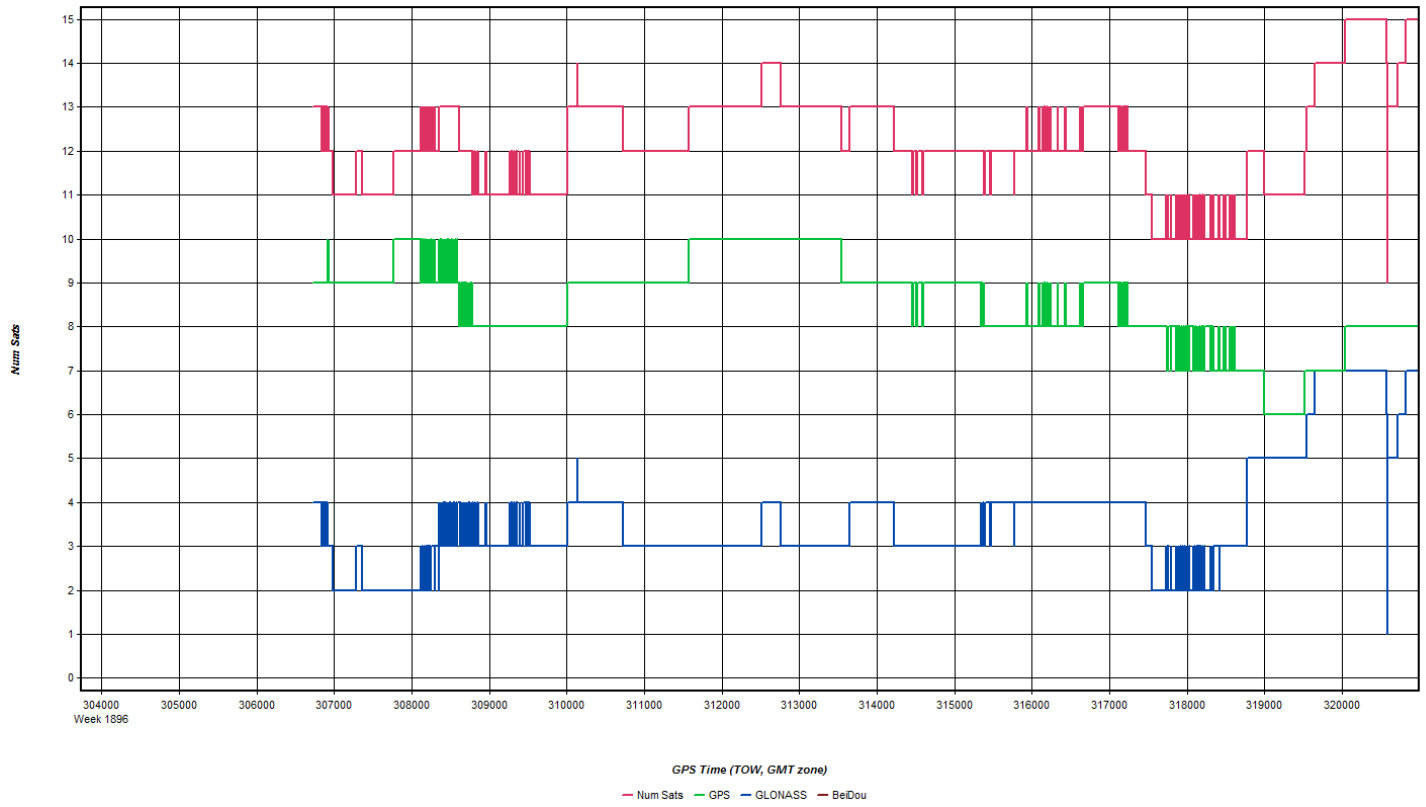
Type	Serial #	Alt	ASL	VARIOUS	Avg Temp	Max	Avg Pt
FOV	410	7178	6500	VARIOUS	150	150	Spacing
		53.4	MpA	N	Power	100%	PRM
							2.2

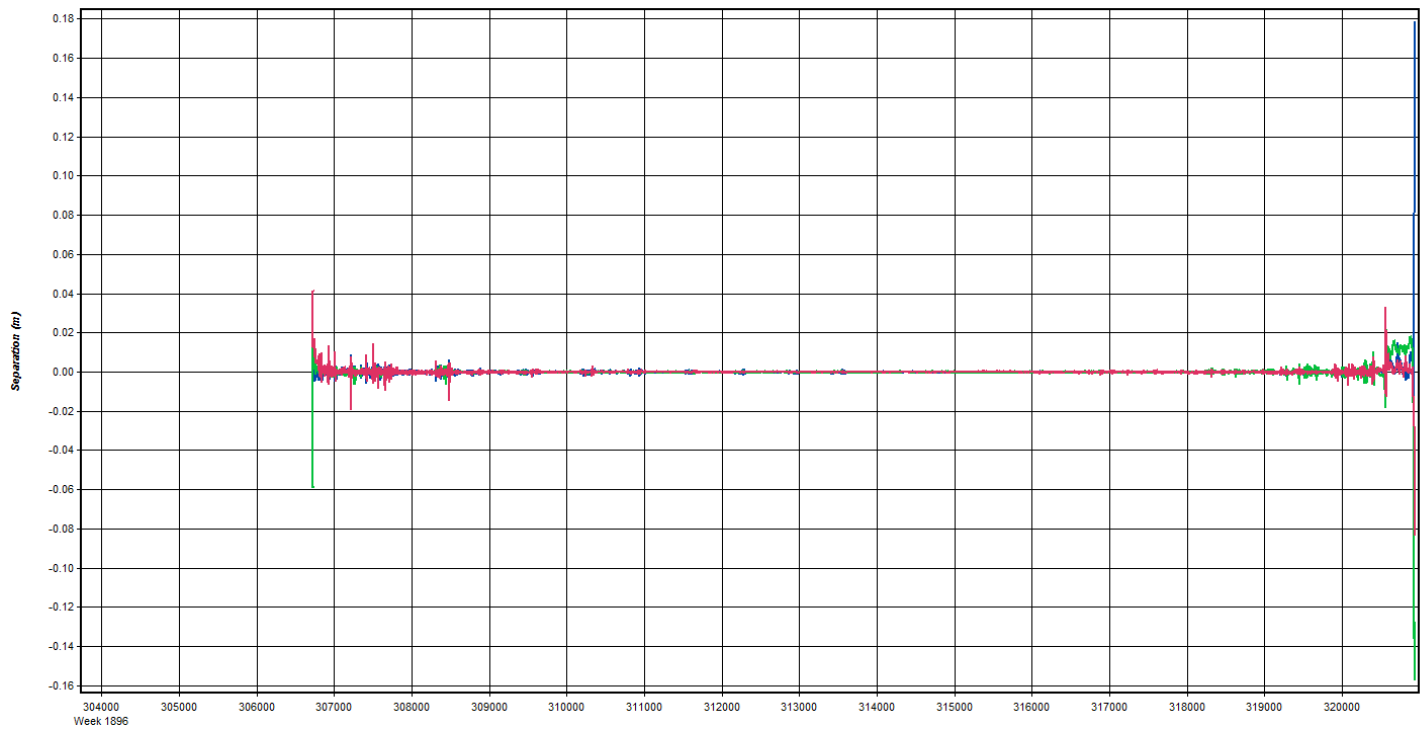
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	Foot/Sec	GPS Altitude	Crab	Yaws
						(ft)	(Deg)	(Deg)
5077	348	16:37	16:48	142	1.2/16	7178	-3	
5076	168	16:54	17:02	163	1.2/17	7178	3	
5001	284	17:07	17:09	164	1.2/17	7200	0	

FLIGHT LINE NOTES - visibility, clouds, smoke, parallax, etc.
 CUE IN THE AREA AT 6500 / CUE 24 MILE IN FROM S. END PARTIAL
 START AT 83 MILES IN FROM S. END PARTIAL
 CROSS TIE

Total Proj Lines: 136
Lines Flown: 115 / 8
Lines Remain: 21
Online Time: .5
Job Time: 1.3
Notes:

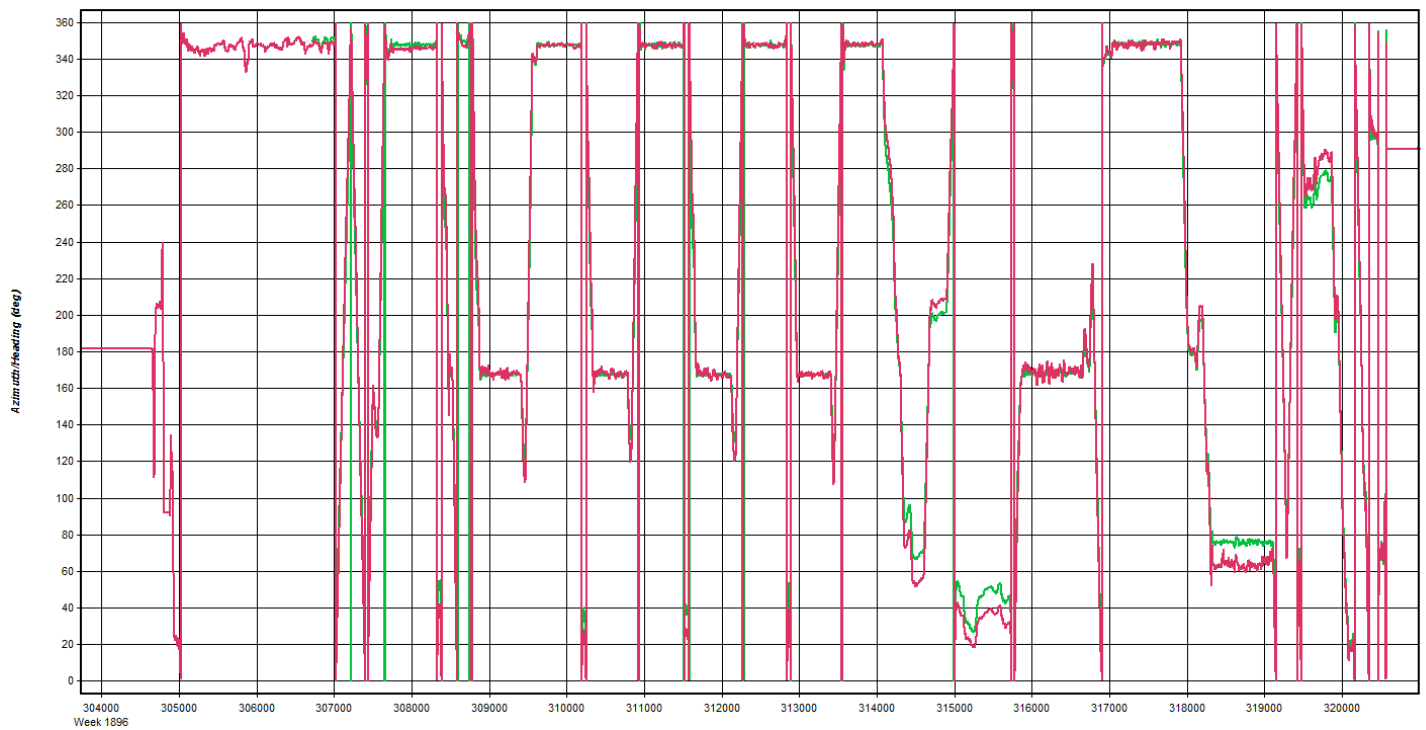
May 11, 2016-A (N73TM, SN7178)





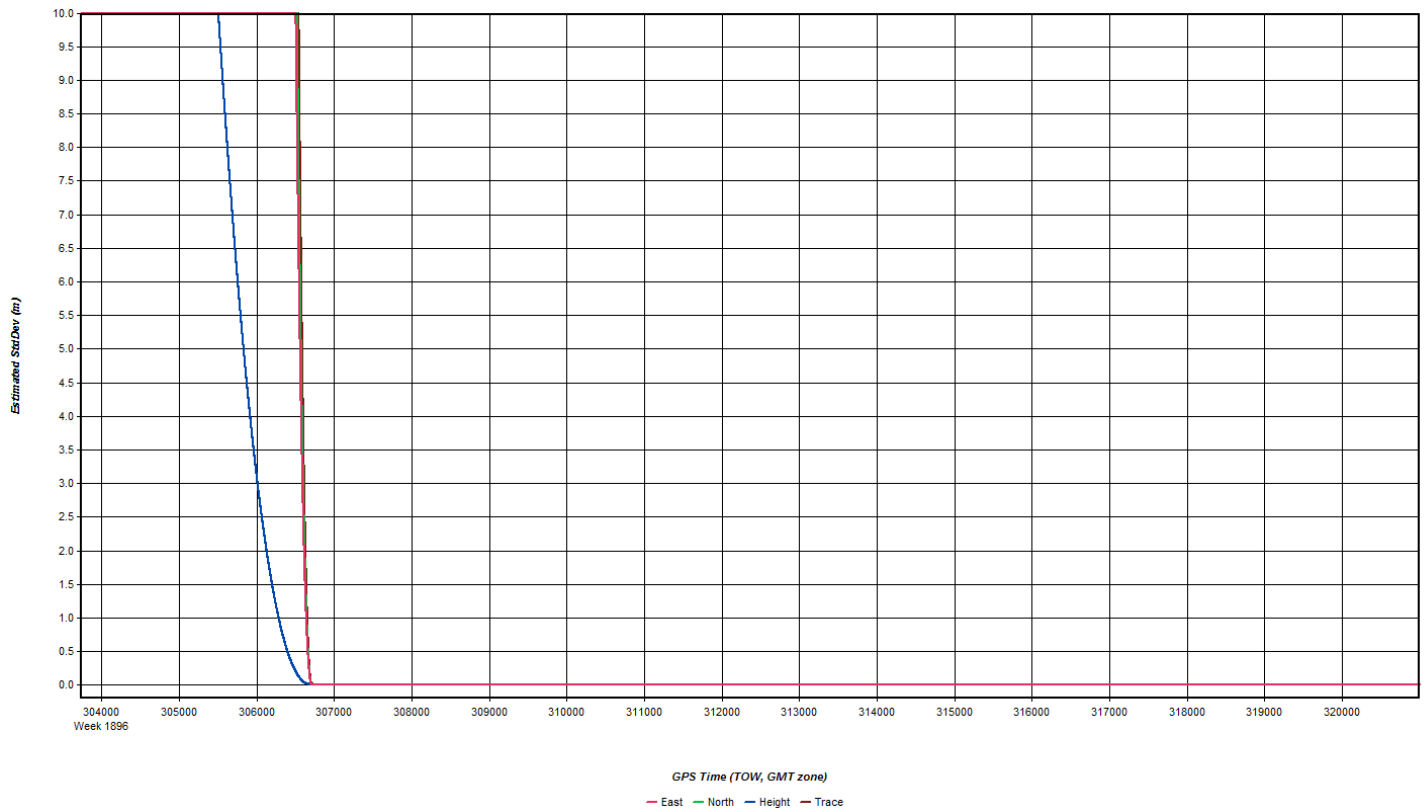
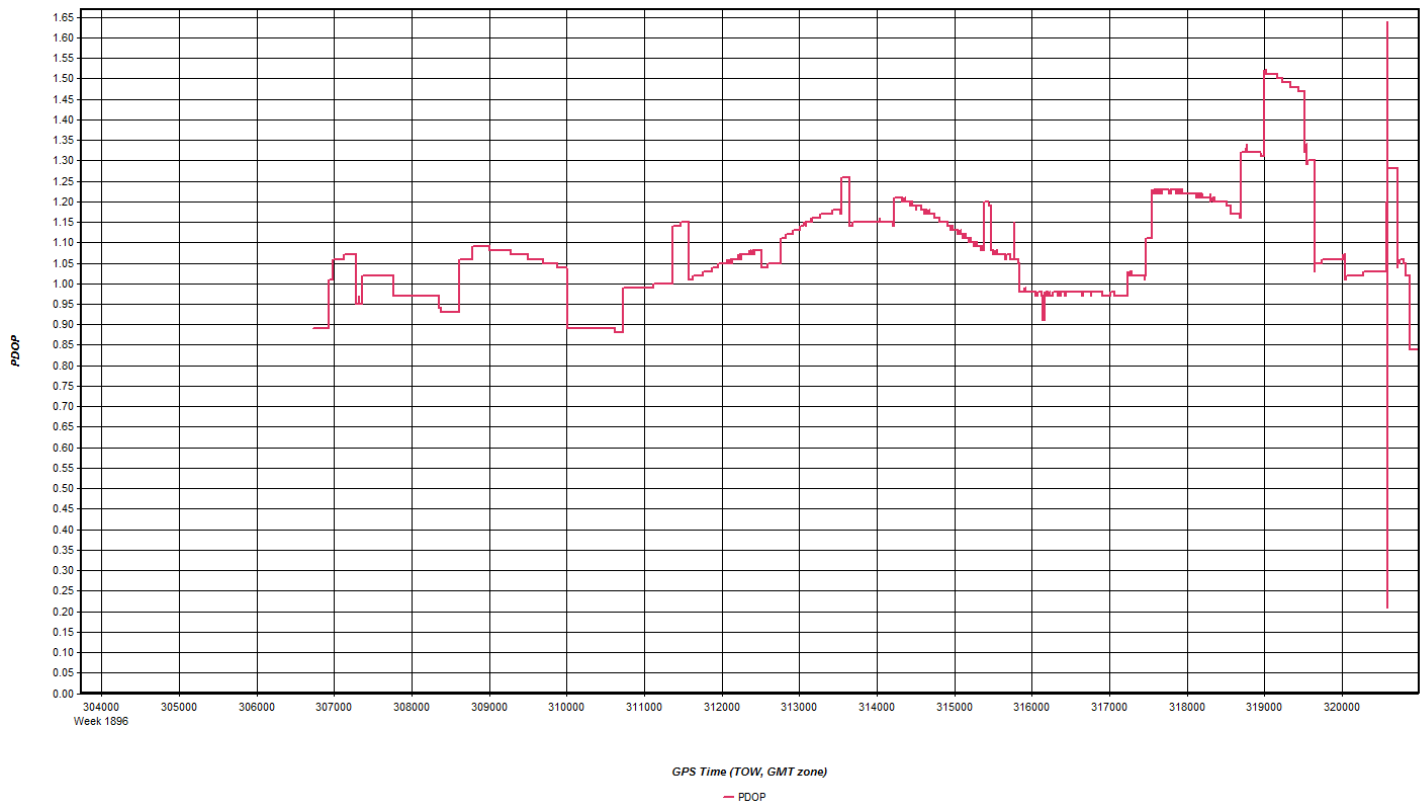
GPS Time (TOW, GMT zone)

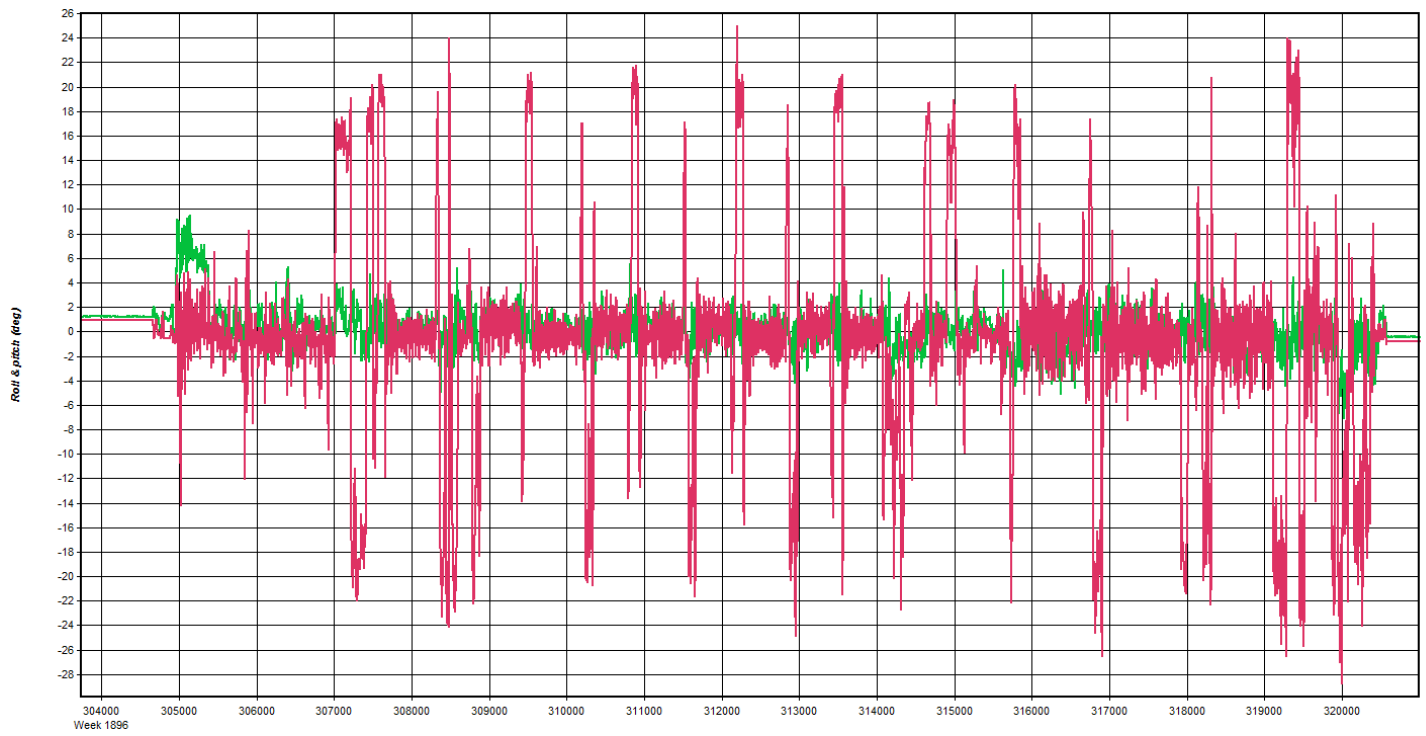
— East — North — Up



GPS Time (TOW, GMT zone)

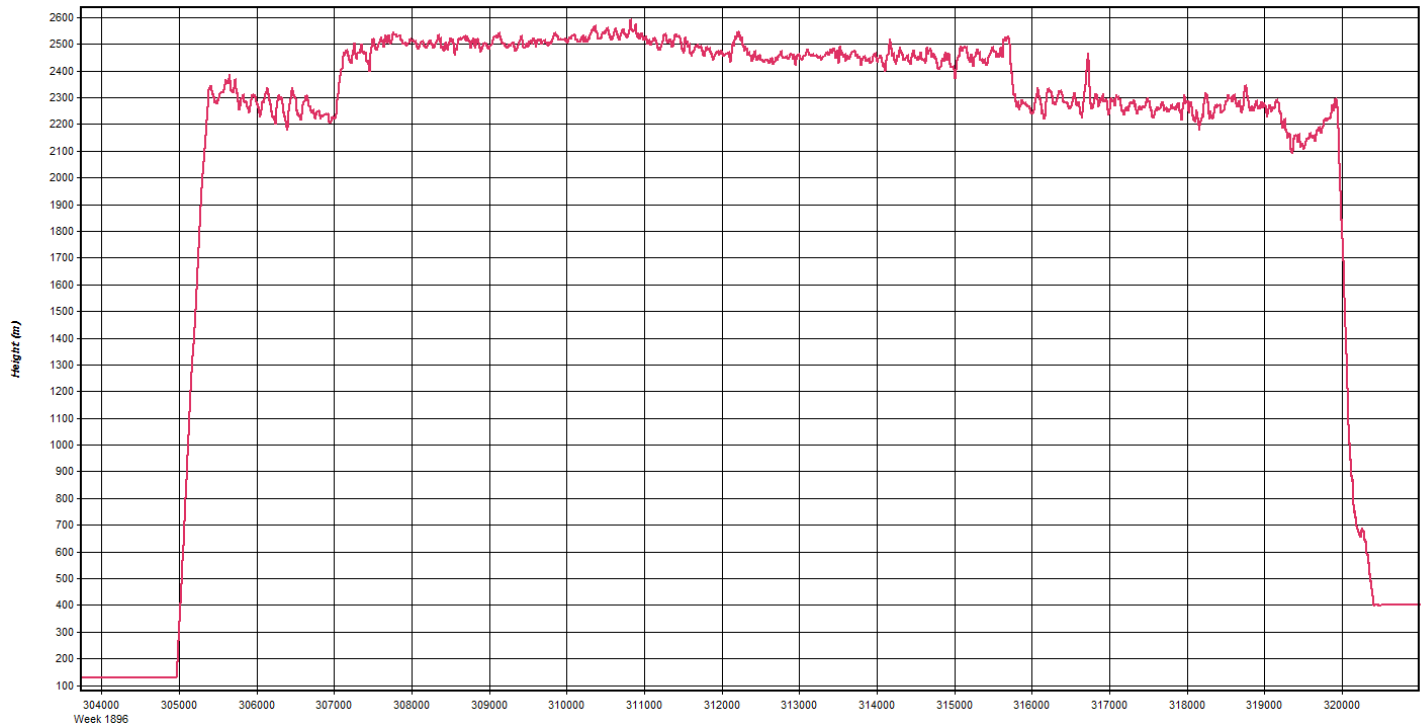
— Heading/Azimuth — GPS-COG





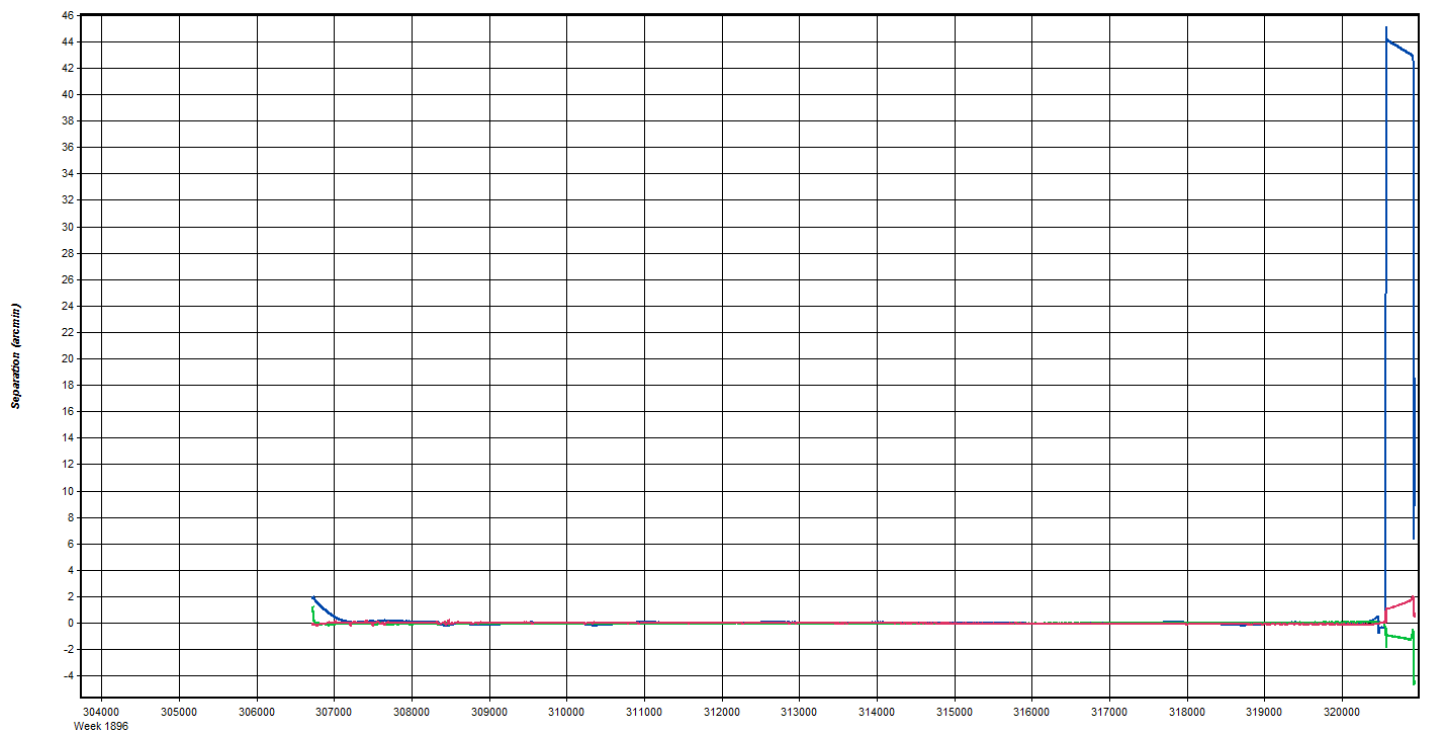
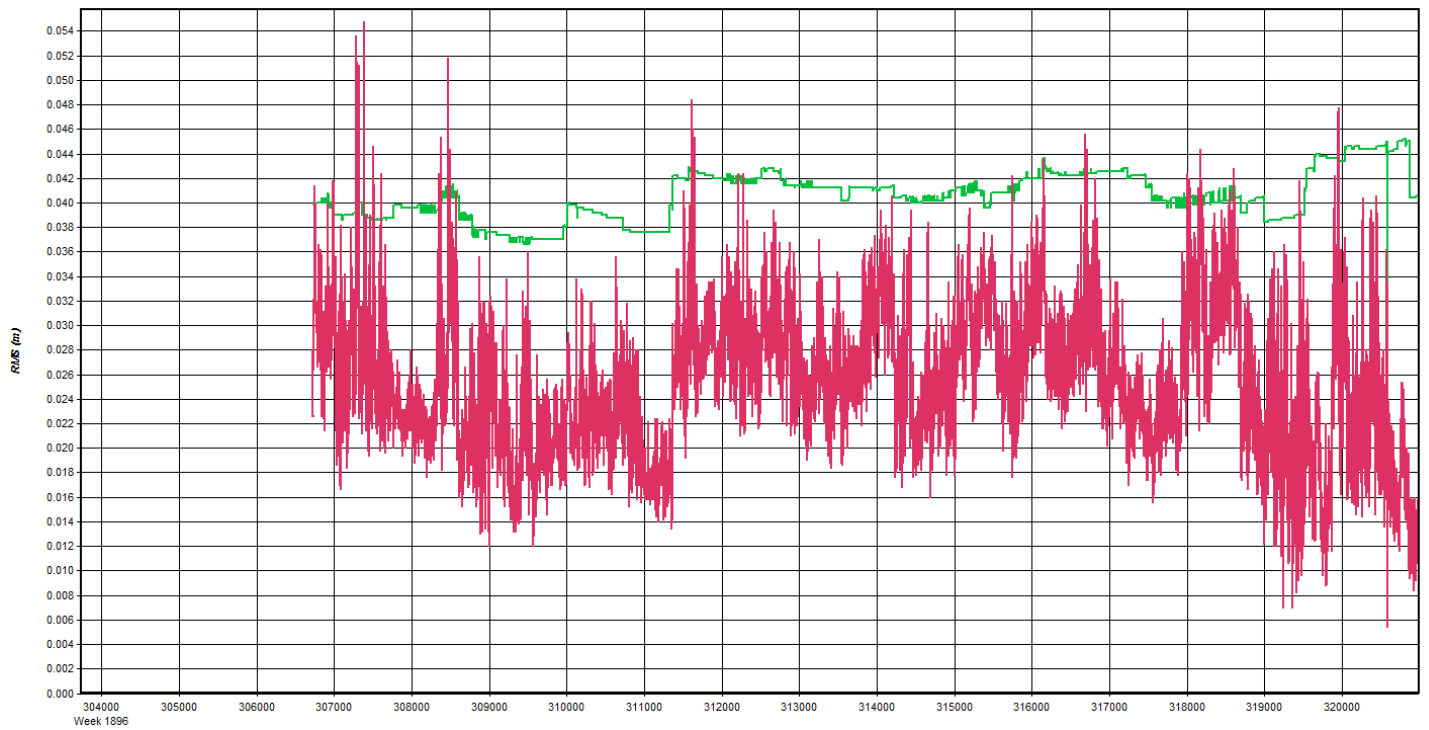
GPS Time (TOW, GMT zone)

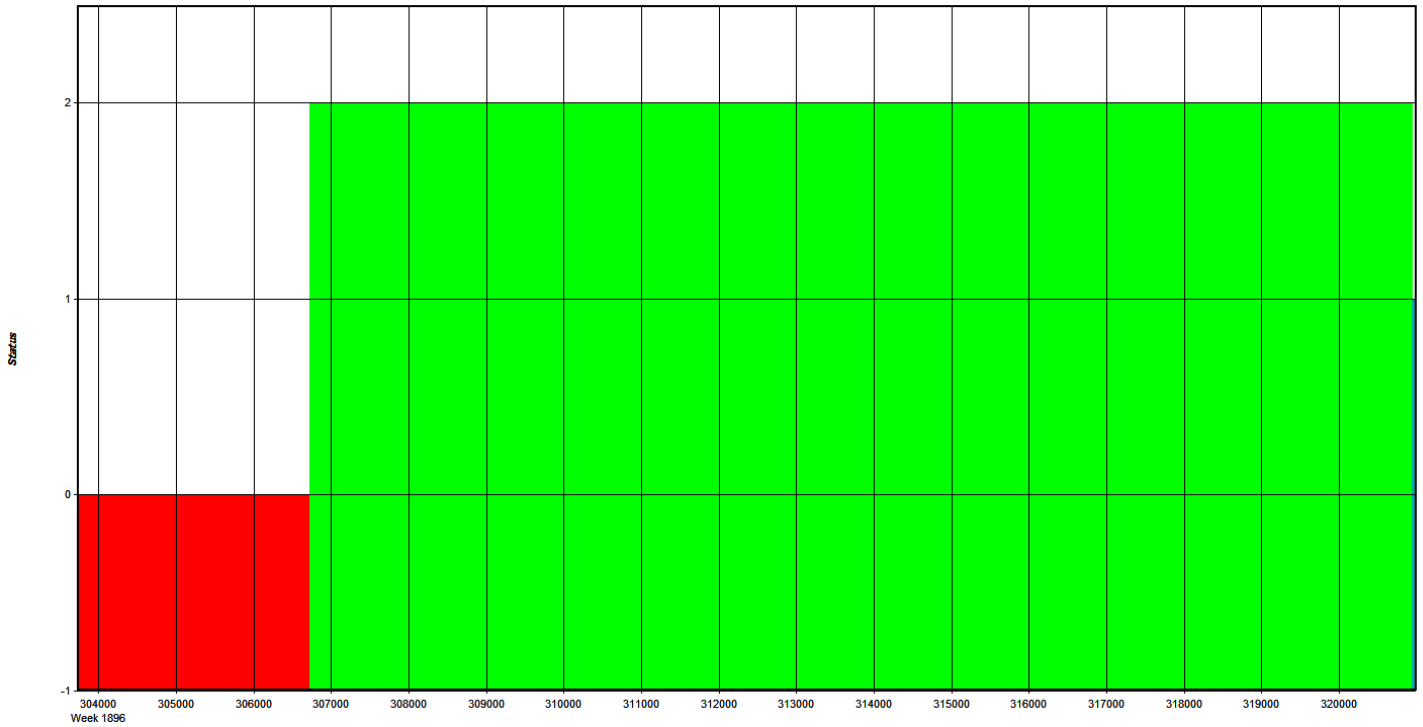
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





GPS Time (TOW, GMT zone)

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

Coordinate/Antenna Settings ? X

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\Black_Currant\20160511_121915\vr

Coordinates
 Latitude: North 45 27 49.23446 Compute from PPP
 Longitude: West 69 35 36.89808 Enter Grid Values
 Ellipsoidal height: 293.885 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

Master Remote

Base Station
2: Set_Point1_West Name: Set_Point1_Wes Disabled
File: E:\Proc\27146_Maine_2016\Black_Currant\20160511_121915\B

Coordinates
Latitude: North 45 18 04.00868 Compute from PPP
Longitude: West 70 36 12.34092 Enter Grid Values
Ellipsoidal height: 351.264 m Enter MSL Height
Datum: WGS84 Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: N/A View STA File
Antenna profile: NOV702GG Info
Measured height: 2.000 m
ARP to L1 offset: 0.067 m
Applied height: 2.067 m
Measured to:
 ARP
 L1 Phase Centre
Compute From Slant

OK Cancel

Flight Log

Scanned by CamScanner

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc Date: 5/11/16
Page 1 of 2

Project: USGS WESTERN MAINE - SET PT. 1 Flight Mgmt File: 20160511-121915

Aircraft: N737A Begin Hobbs: 6230.7 End Hobbs: 6350.0 Total: 4.3 Pilot: BARNHAM Co-Pilot: - Tech: SCHROEDER

Dep Apt: KLEW Dep Time (Local): 13:05 (Z) 17:05 Arr Apt: K3B1 Arr Time (Local): 13:15 (Z) 17:05 Tot Time Aloft: -

CORS: Y (N) Sta 1: SET POINT 1 Sta 2: Flyovers: Y (N) IF Y, times: Sta1) 16:30 Sta2)

GPS Unit: Y (N) Sta 1: SET POINT 1 Sta 2: Flyovers: Y (N) IF Y, times: Sta1) 13:15/15:27 Sta2)

Gd Temp beg: 12 °C End: 19 °C OAT beg: °C End: °C Altimeter begin: 30.16 end: 30.09 Fig 8

Type	ALS-70	Serial #	7178	ALT	AGL	6500	AVSL	VARIOUS	Max	Avg	End	SSDB
FOV	40	Scan	53.4	Mph	MPH	Y (N)	Pulse	200-4	Power	100%	PPM	22
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	Foot/Sec	GPS Altitude	Crab	Turb (ft/s)	FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.			
4013	348	13:30	13:38	142	0.9/19	8212	-3		SKC ± 10 VIS			
4012	168	13:42	13:42	-	1.0/17	8241			SPEED TO FAST - ADVERT LINE			
4012	168	13:48	13:56	153	1.1/16	8241	+2					
4011	348	14:01	14:09	140	1.2/16	8278	0					
4010	168	14:12	14:19	160	1.3/16	8291	+1					
4009	348	14:23	14:31	143	1.2/17	8212	-1					
4008	168	14:34	14:41	163	1.3/17	8064	+1					
4007	348	14:45	14:53	145	1.3/18	8038	0					
4006	168	14:56	15:02	162	1.2/18	8038	0					
4005	348	15:07	15:14	140	1.1/17	8044	0					
4001	168	15:19	15:22	152	1.1/16	8055	0		CROSS TIE			

Total Proj Lines: 83	Lines Flown: 9	Lines Remain: 0	Online Time: 1.9	Job Time: 1.0	Notes: SET PT. 1 COMPLETE
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Scanned by CamScanner

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: 5/11/16
Use (D B C D E) pg 2 of 2

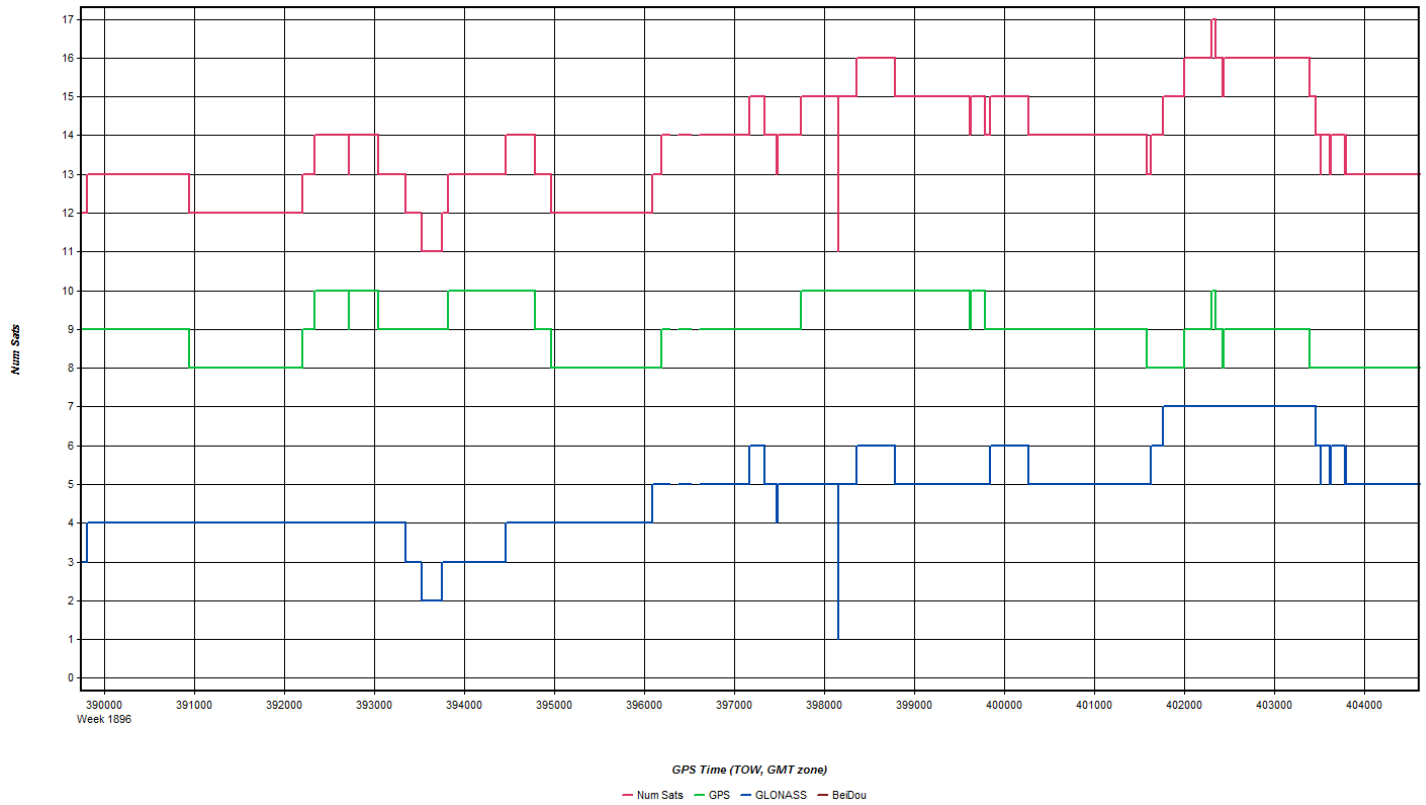
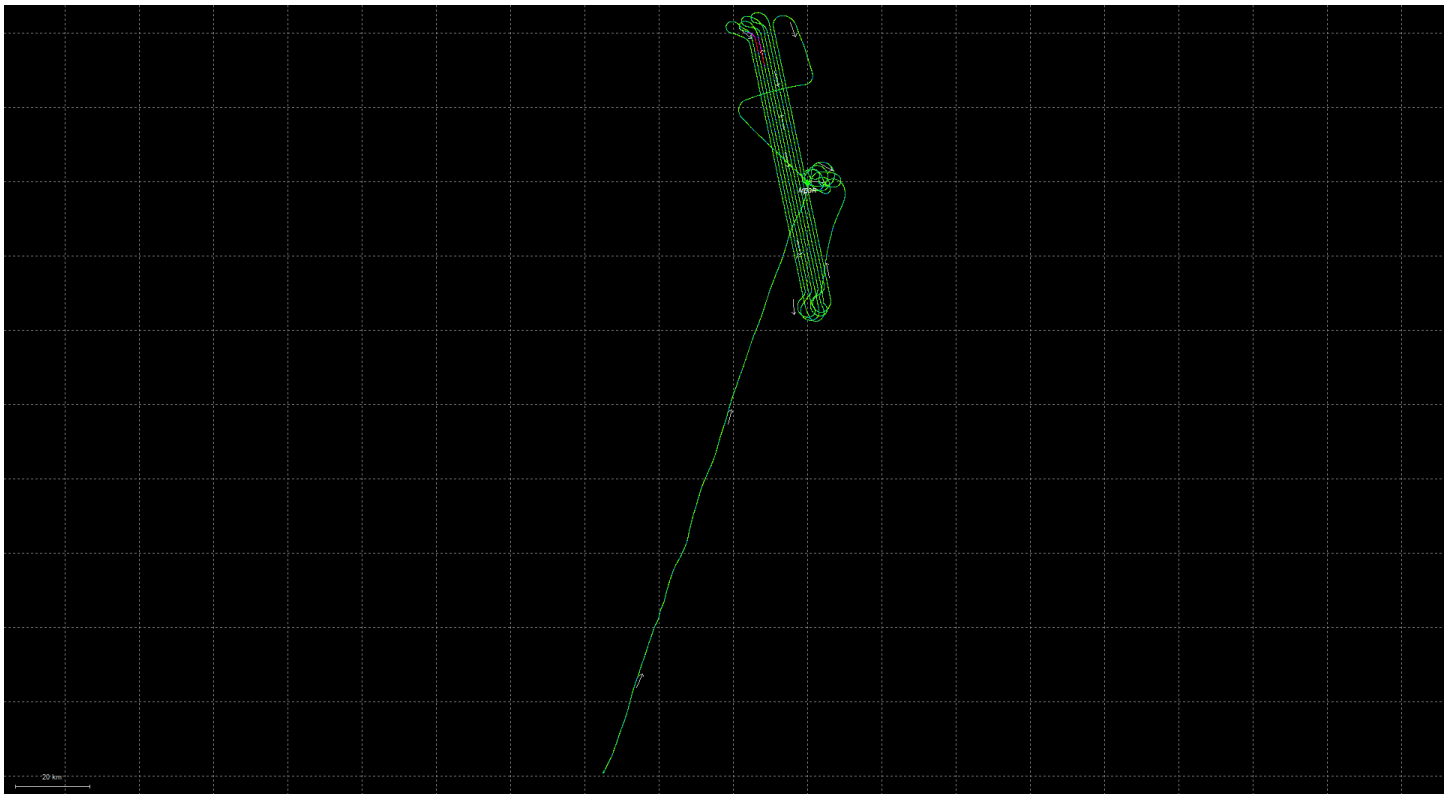
Project: USGS WESTERN MAINE - MEGR Flight Mgmt File: 20160511-121915
 Aircraft: N73TM Begin Hobbs: 6235.0 Total: 4.3 Pilot: BARNHAM Co-Pilot: - Tech: SCHOONE
 Dep Apt: KLEW Dep Time (Lcl): 08:22 (Z): 12:22 Arr Apt: K301 Arr Time (Local): 13:05 (Z): 17:05 Tot Time Aloft: 4.3
 CORS: @/N Sta 1: MEGR Sta 2:
 GPS Units: @/N Sta 1: SET POINT 1 Sta 2:
 Gd Temp beg: 12 °C End: 19 °C OAT beg: °C End: °C Altimeter begin: 30.86 end: 30.09 Fic 8
 Type ALS-70 Serial # 7178 ALT ANSL 6500 ALT VARIOUS Hc VARIOUS Hc VARIOUS Avg Pt Spacing 150 Avg Pt Spacing 150 End 216 End 255
 FOV 40 Scan Freq 53.4 Mpl @/N Pulses In Air 2 Pulses In Air 2 Power 100% Power 100% Time 39 Time 39

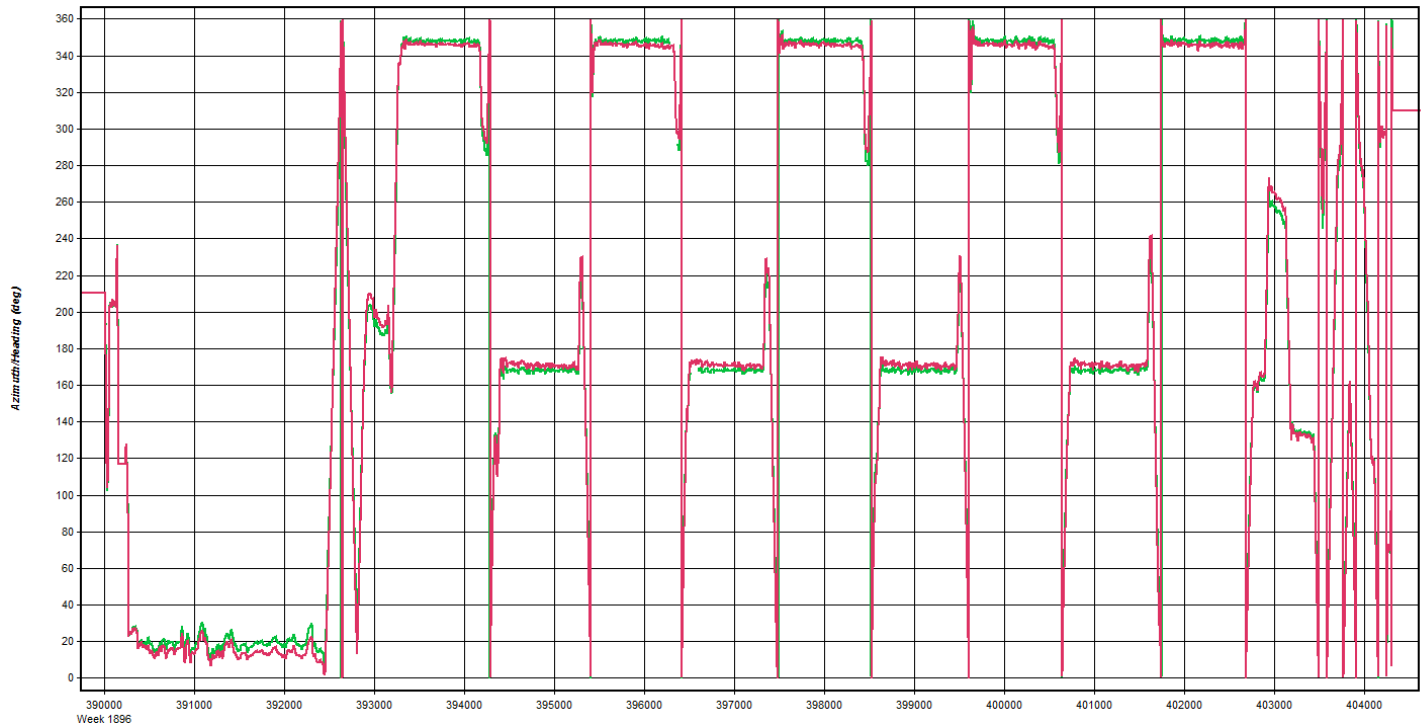
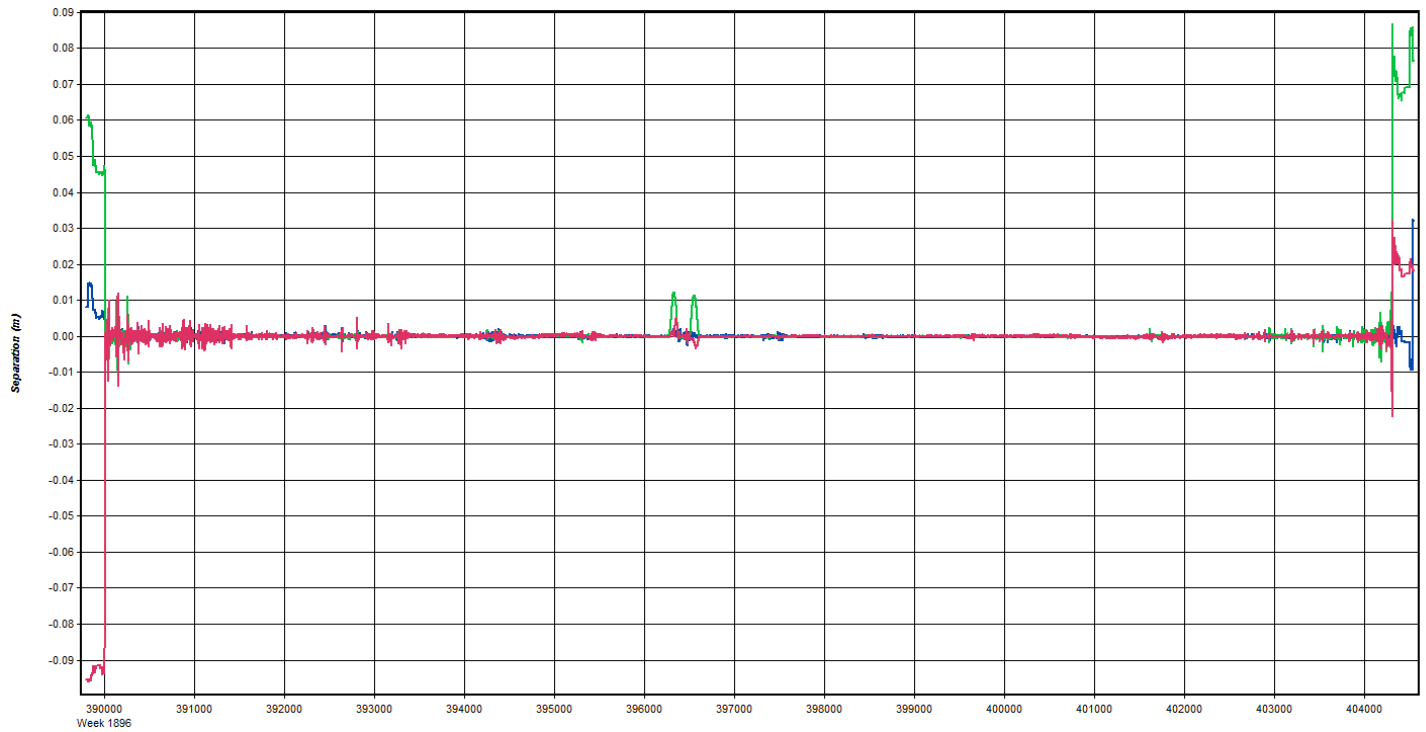
Line #	Hdg	Start (UTC)	End (UTC)	GSpd	Position	GPS Altitude	Orb	Temp (C)	Notes
5081	168	15:45	15:56	164	14/18	7401	12		TURBULANT REFUGHT LINE - OFF LINE TWICE
5021	348	16:05	16:18	151	12/17	7401	0		TURBULANT
5135	76	16:25	16:38	164	11/13	7395	18		CROSS
									EXTREME TURBULANCE / HIGH WINDS
									MOB BACK TO KLEW
									13:51 / 17:51Z → 14:32 / 18:32Z
									HOBBS 6235.0 / 6235.6 (1.6)

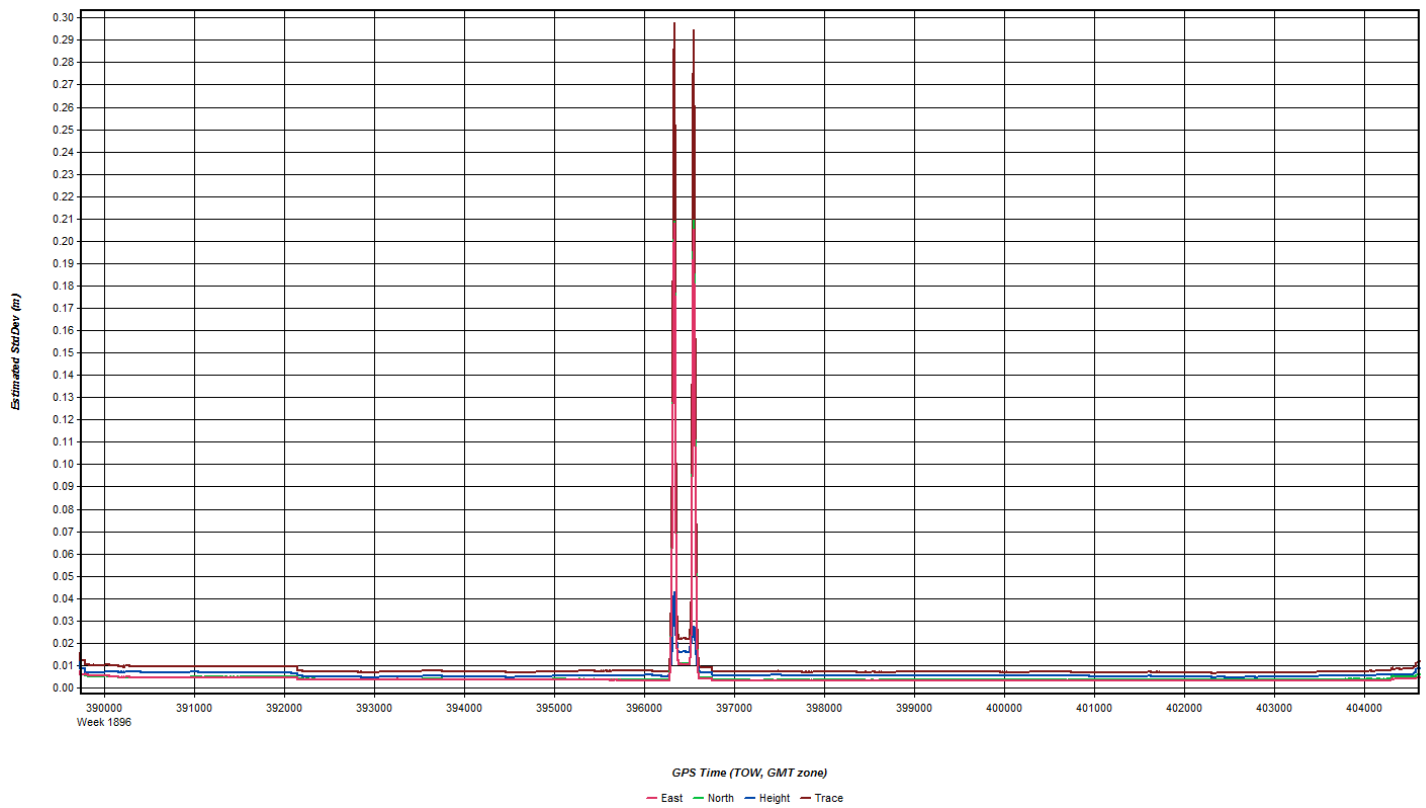
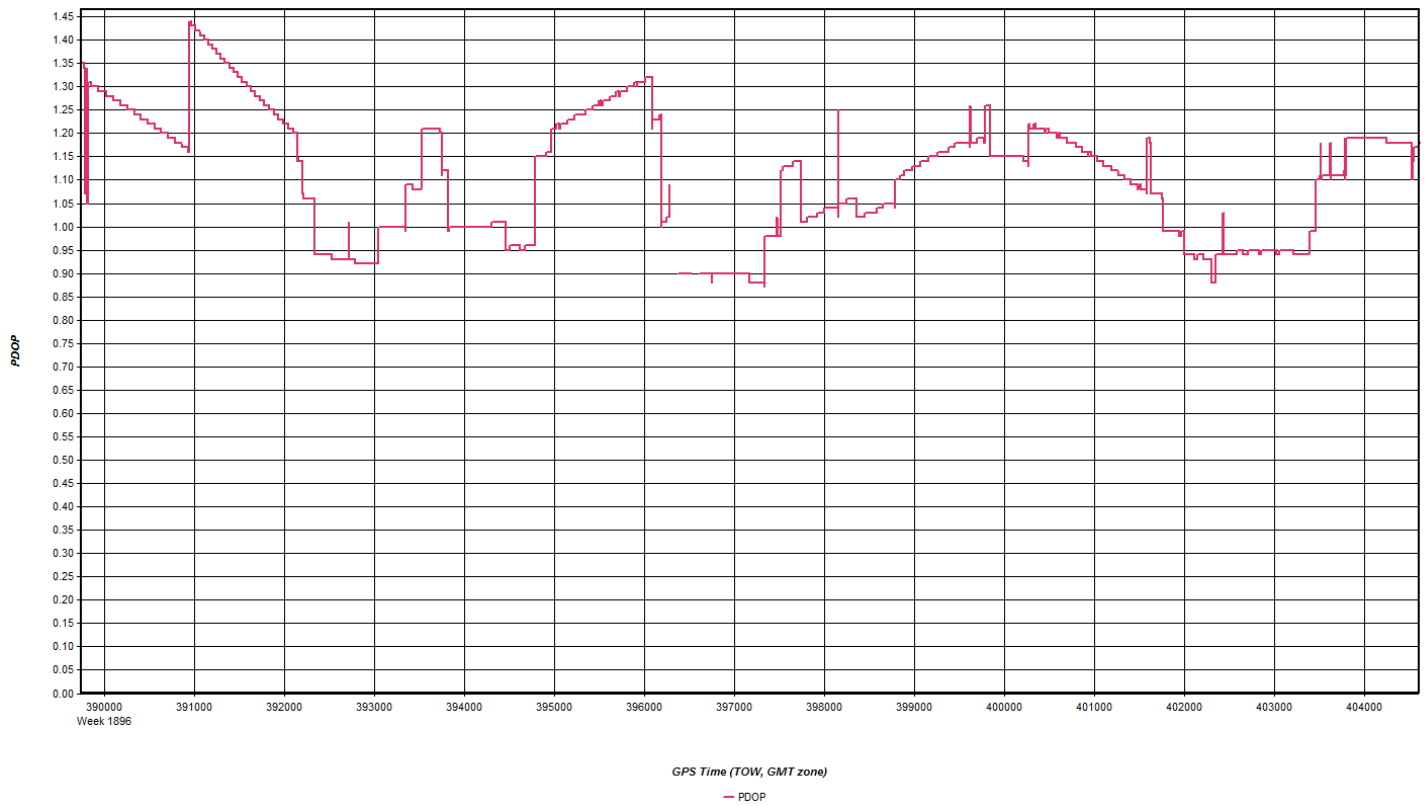
FLIGHT LINE NOTES - visibility, clouds, smoke, parallax, etc.

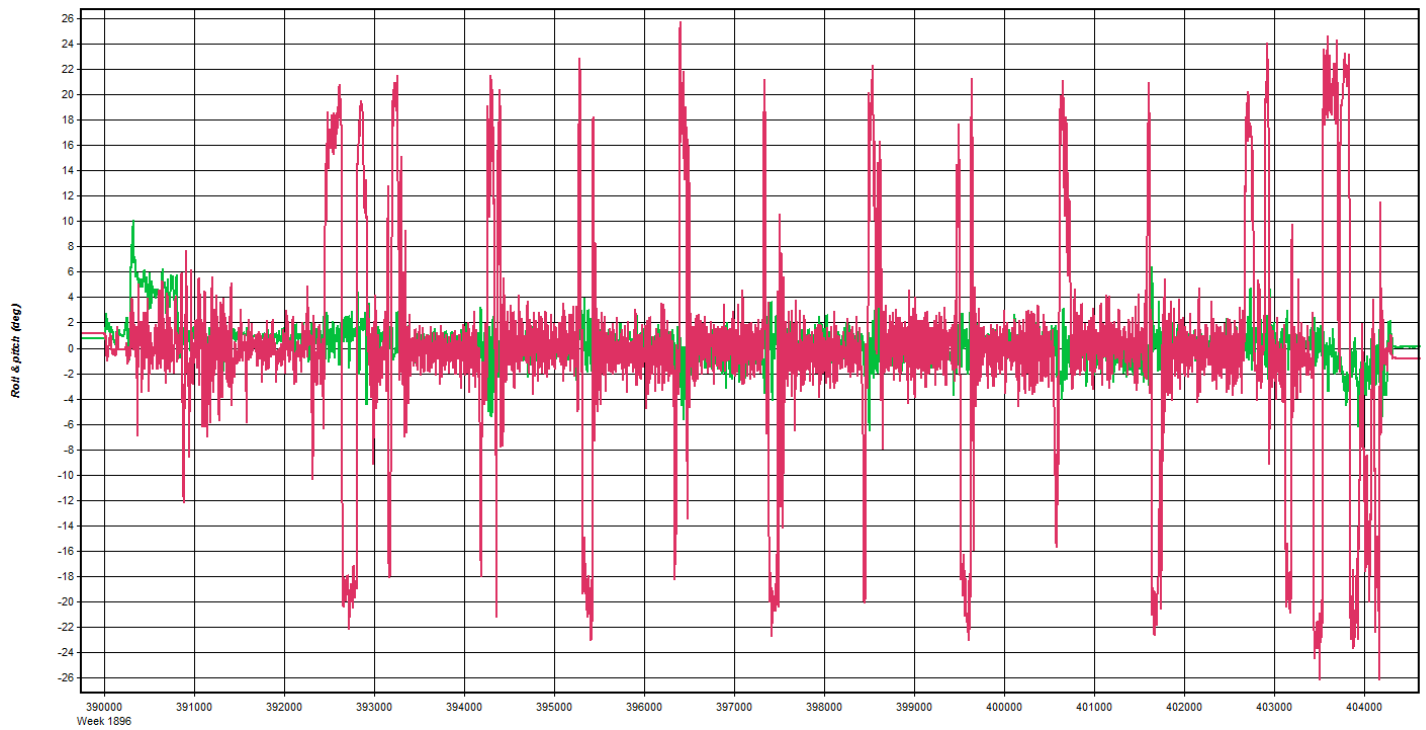
Total Proj Lines: 136 Lines Flown: 8 Lines Remains: 19 Online Time: 57 Job Time: 1:06 Notes:

May 12, 2016-A (N73TM, SN7178)



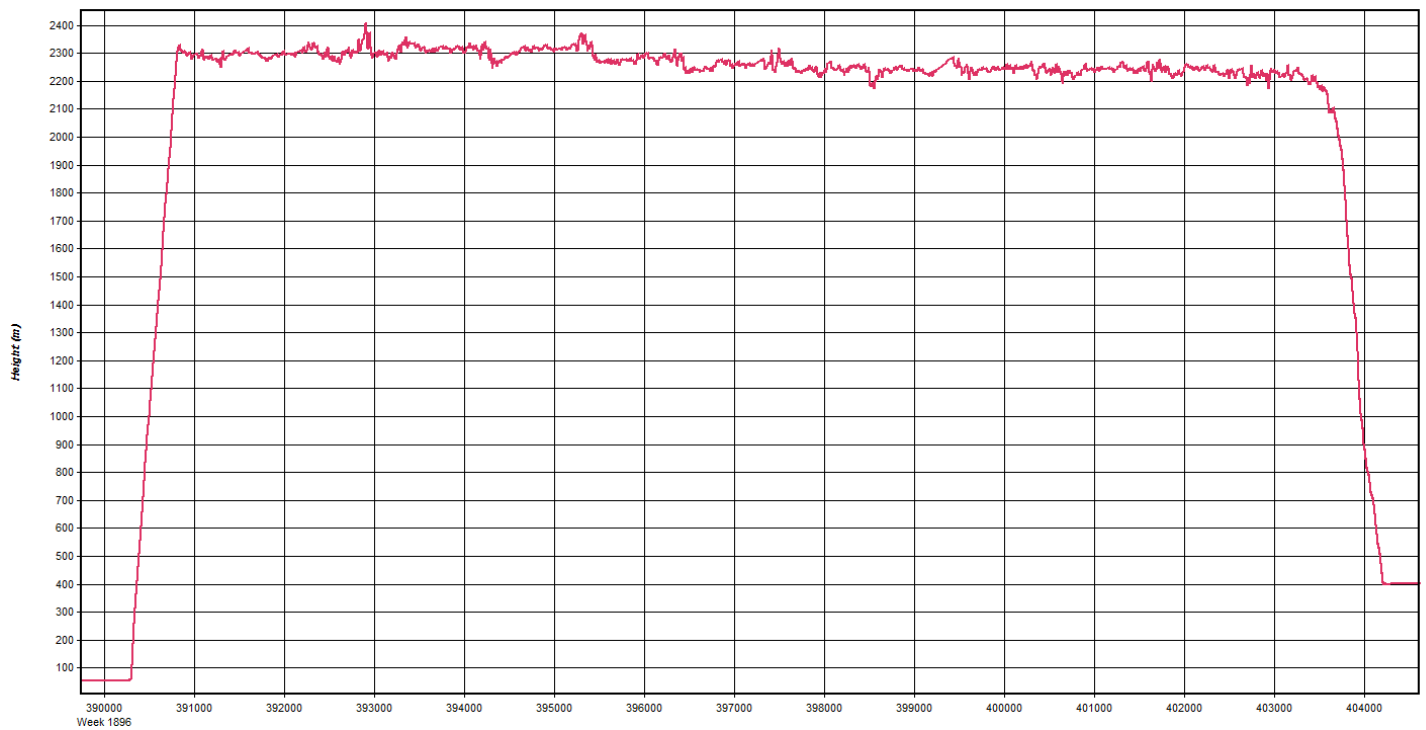






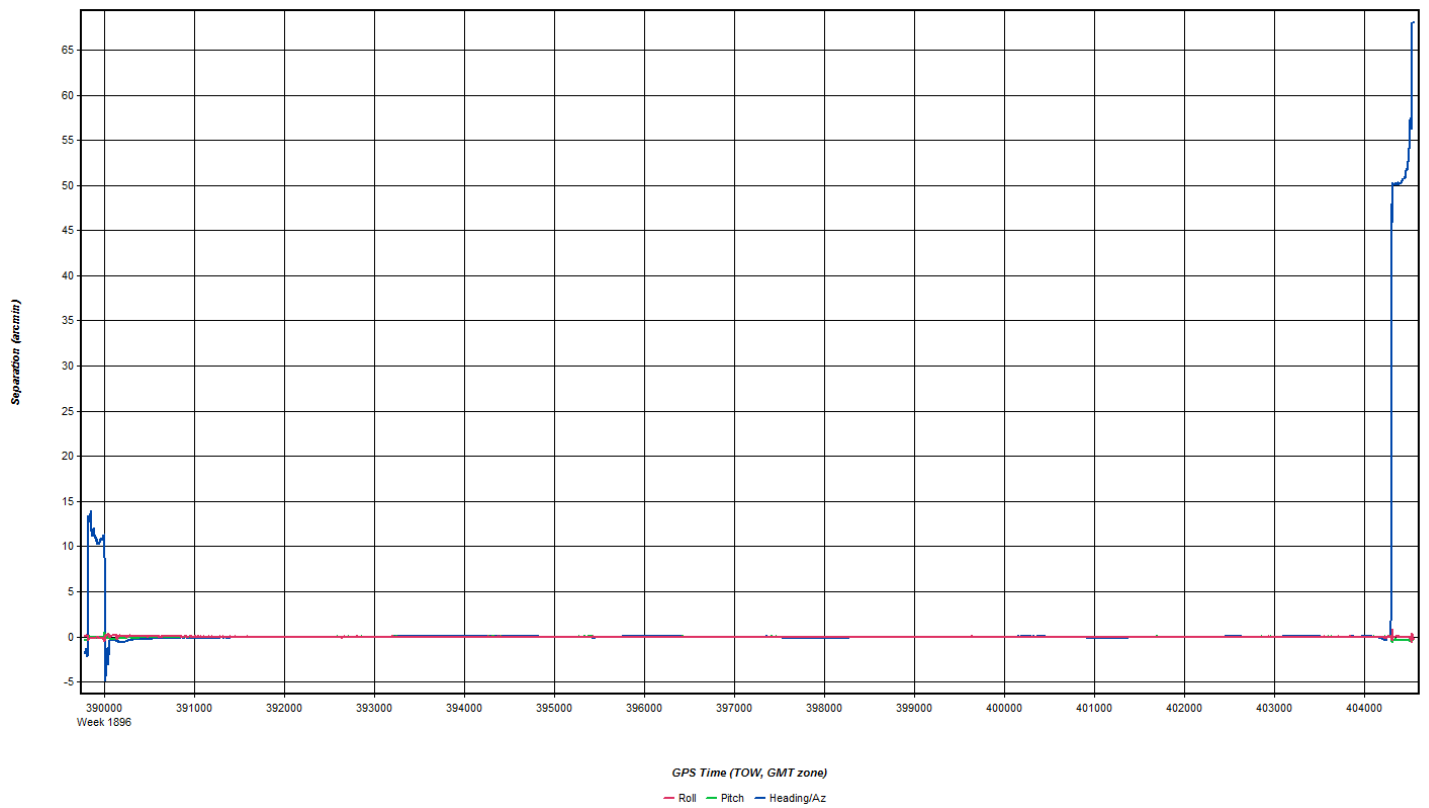
GPS Time (TOW, GMT zone)

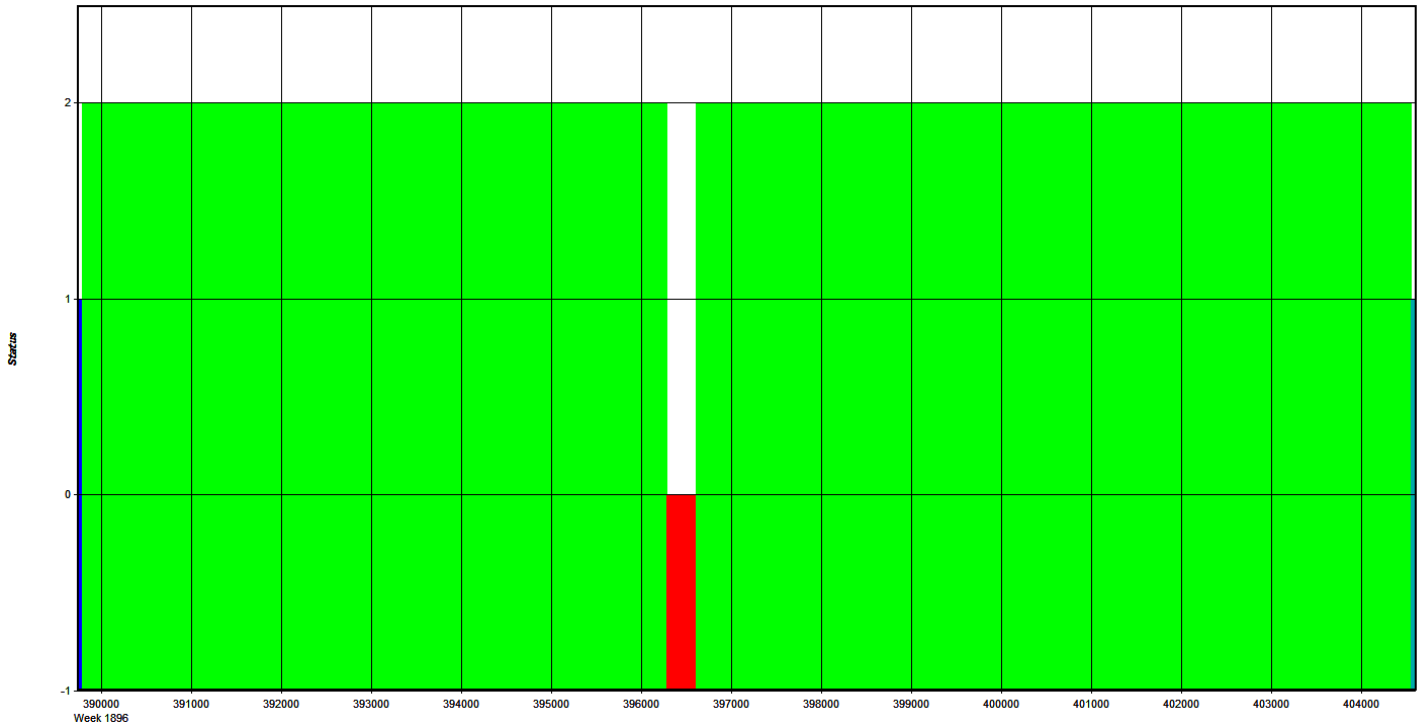
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\2254\20160512_121259\megr1330.

Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

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

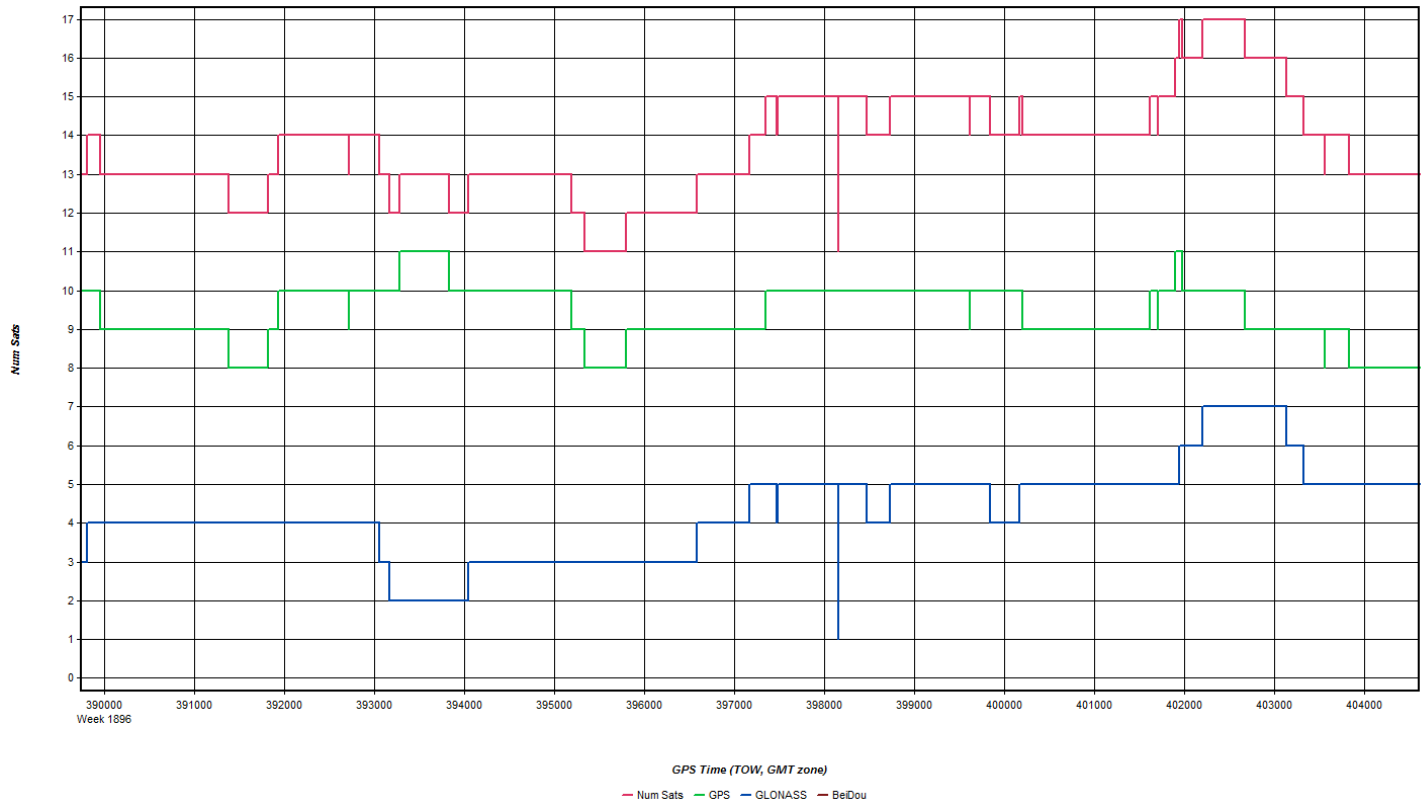
OK Cancel

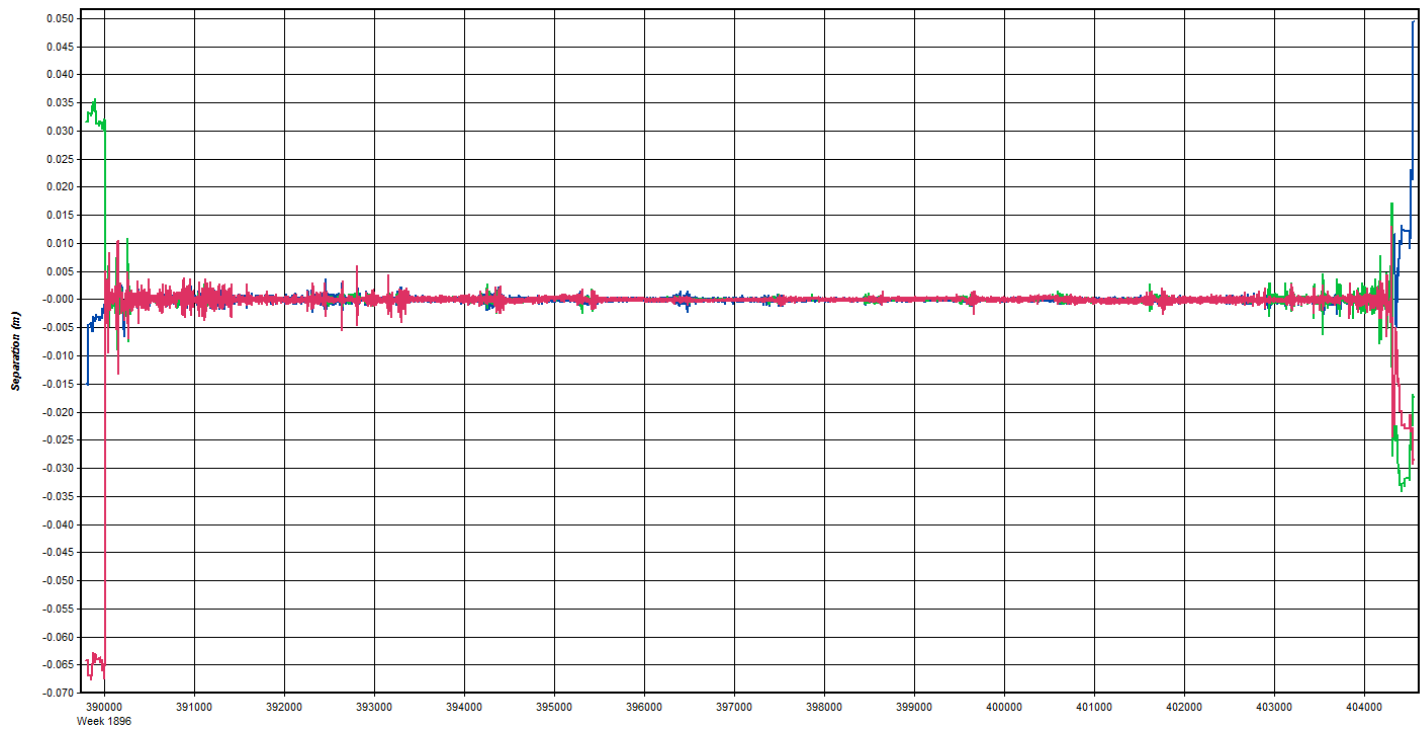
Flight Log

Scanned by CamScanner

Project: USGS WESTERN MAINE - MISC <small>(email log daily to flight_log_distribution_list@quantumspatial.com)</small>		Date: 5/12/16 <small>US C D I</small>								
Project: 27146 Flight Mgmt File: 20160512_121259		Tech: SCHOLLE								
Altitude: N737M Begin Hobbs: 6235.6 End Hobbs: 6239.4 Total: 3.8 Pilot: BARNHAM Co-Pilot: -		Tot Time Aloft: 3.8								
Dep Aft: KLEW Dep Time (Local): 08:12 Air Apt: K3B1 Air Time (Local): 12:22 Tot Time Aloft: 3.8		FLYOVERS: N IF Y, times: Sta1) 13:00/16:03Sta2)								
GPS Unit: Y/N Sta 1: M1GR Sta 2:		FLYOVERS: Y/N IF Y, times: Sta1) Sta2)								
Gd Temp beg: 10 °C End: 20 °C OAT beg: 6 °C End: 30.07		Alt: 126 End: 5503								
LIDAR Type: ALS-70 Scan Rate: 7178 Scan Freq: 53.4 Mpd/Min: 2		Avg Terr. Alt: VAR Max. Clipped: 150 Power: 100% PPSH: 2.2								
Line # Hdg Start (UTC) End (UTC) Gd Spd FOOTPRINT GPS Altitude Crab Yrb IB (C)		FLIGHT LINE NOTES - visibility, clouds, smoke, parcel, etc.								
5057	348	13:16	13:29	156	0.9/18	7592	-1			HAZY CONDITIONS - SMOOTH AIR - SKC
5058	168	13:33	13:47	149	1.0/16	7500	+4			
5059	378	13:51	14:04	160	1.1/17	7441	-2			
5060	168	14:08	14:21	162	1.3/15	7375	+4			
5061	378	14:26	14:39	161	1.3/17	7349	-1			
5062	168	14:43	14:57	161	1.2/18	7336	+4			
5063	378	15:01	15:15	160	1.3/17	7336	-2			
5064	168	15:19	15:32	155	1.4/16	7329	+4			
5065	378	15:36	15:50	156	1.1/19	7316	-2			
UL001	258	15:55	15:58	167	1.1/18	7319	0		CROSS TIE	
Total Proj Lines: 136 Lines Flown: 9 Lines Remains: 128 Online Time: 2.7 Job Time: 1.1 Notes:										

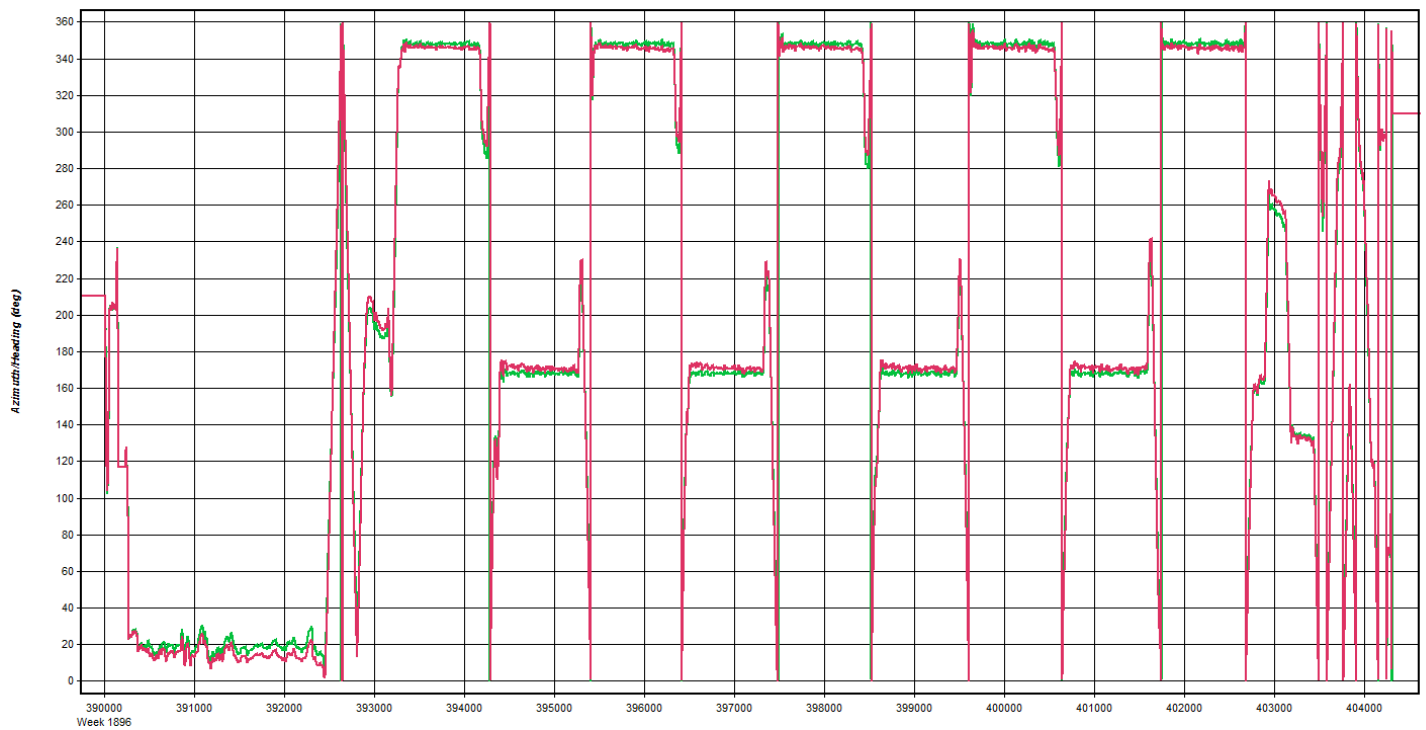
May 12, 2016-A PPP (N73TM, SN7178)





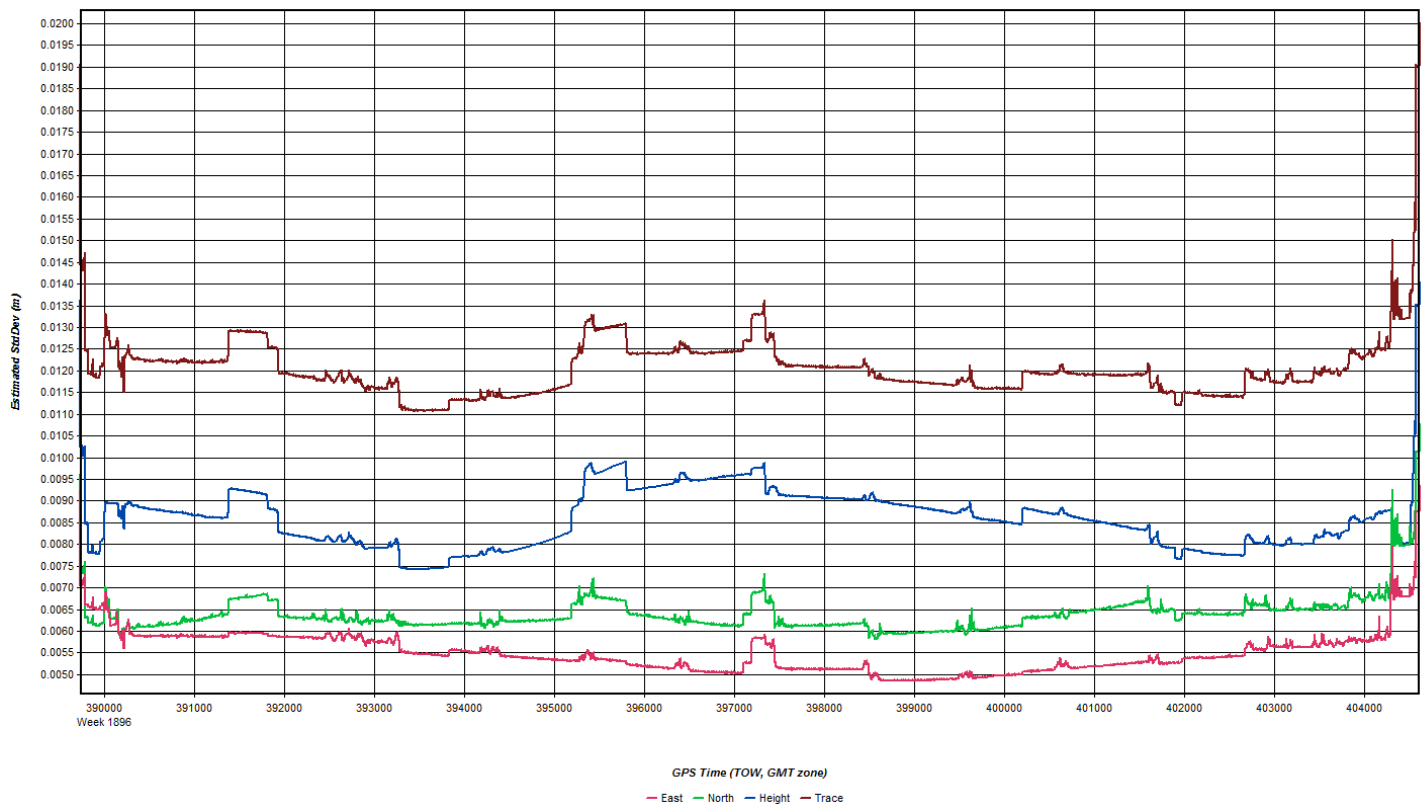
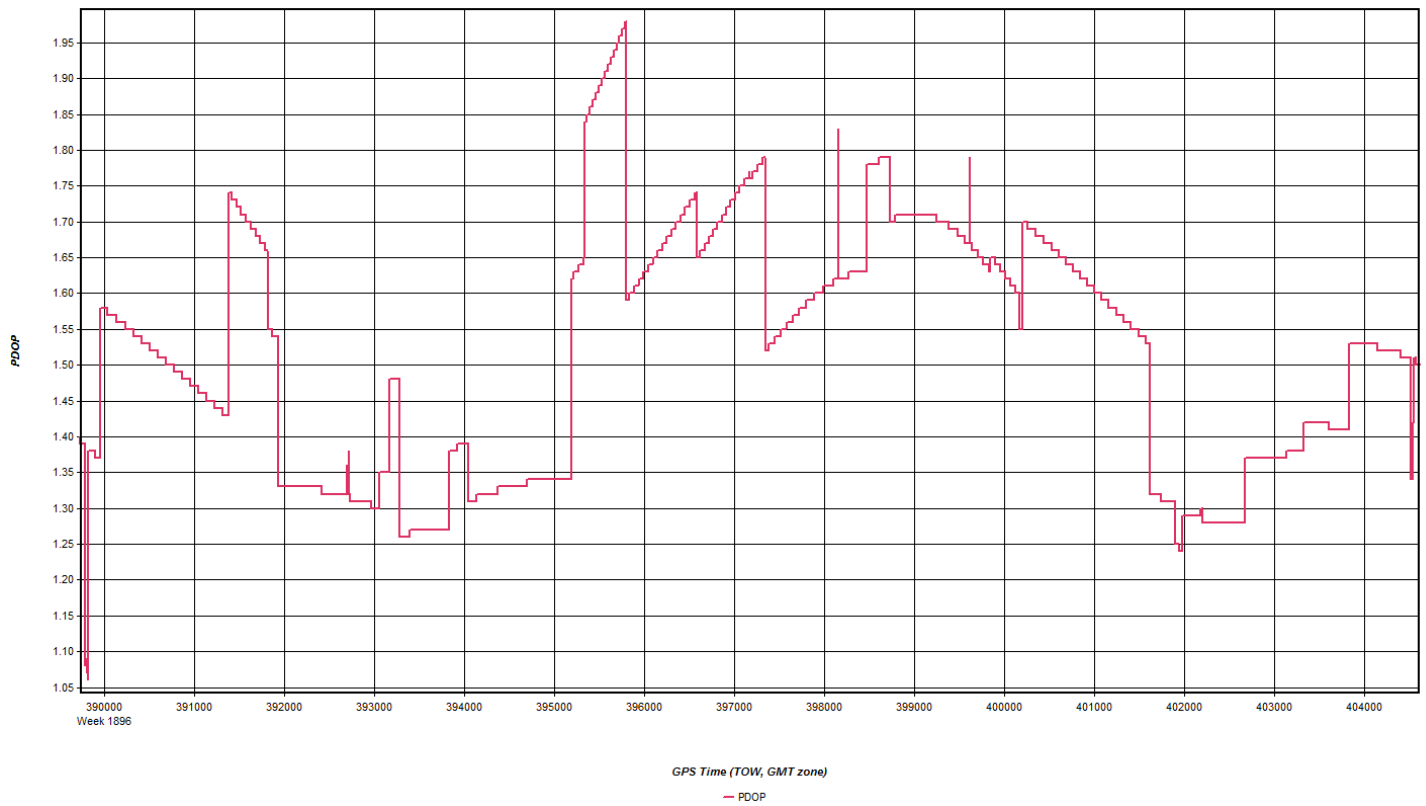
GPS Time (TOW, GMT zone)

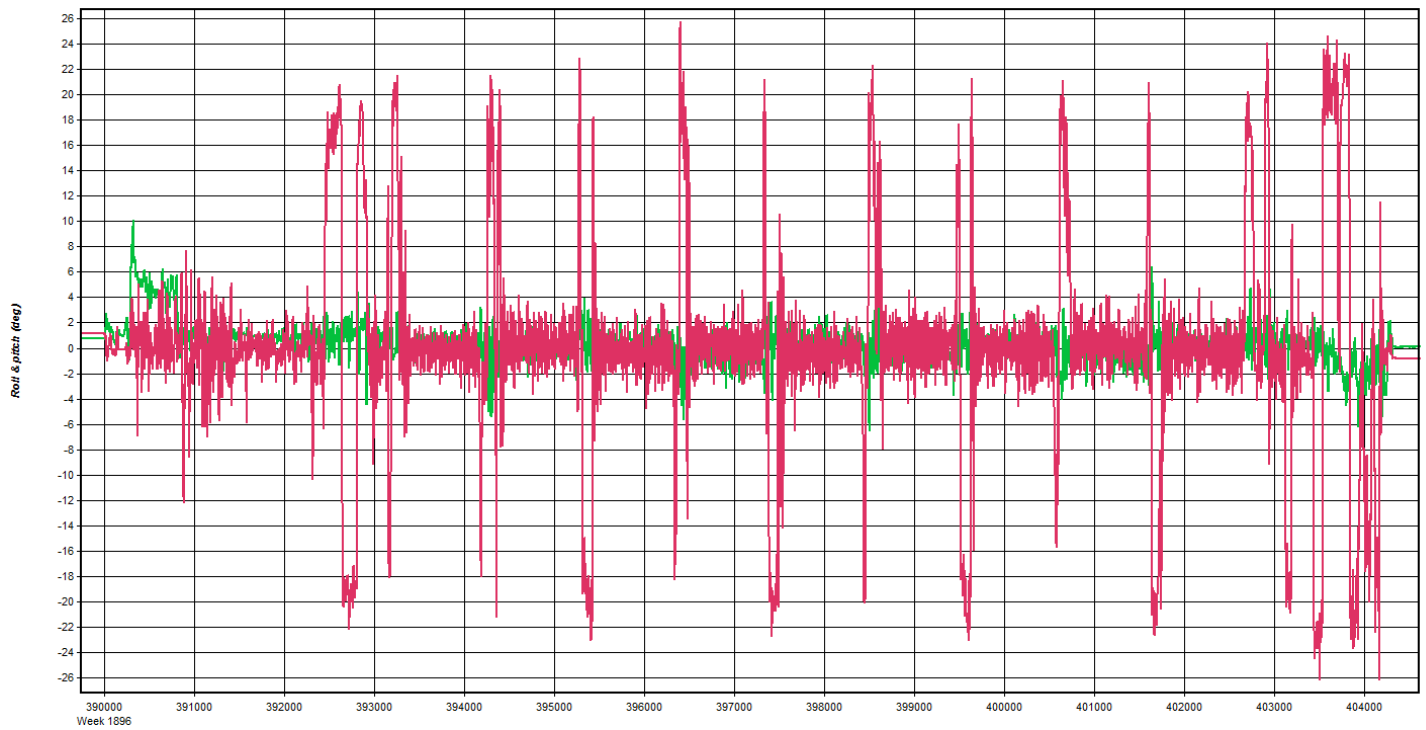
— East — North — Up



GPS Time (TOW, GMT zone)

— Heading/Azimuth — GPS-COG





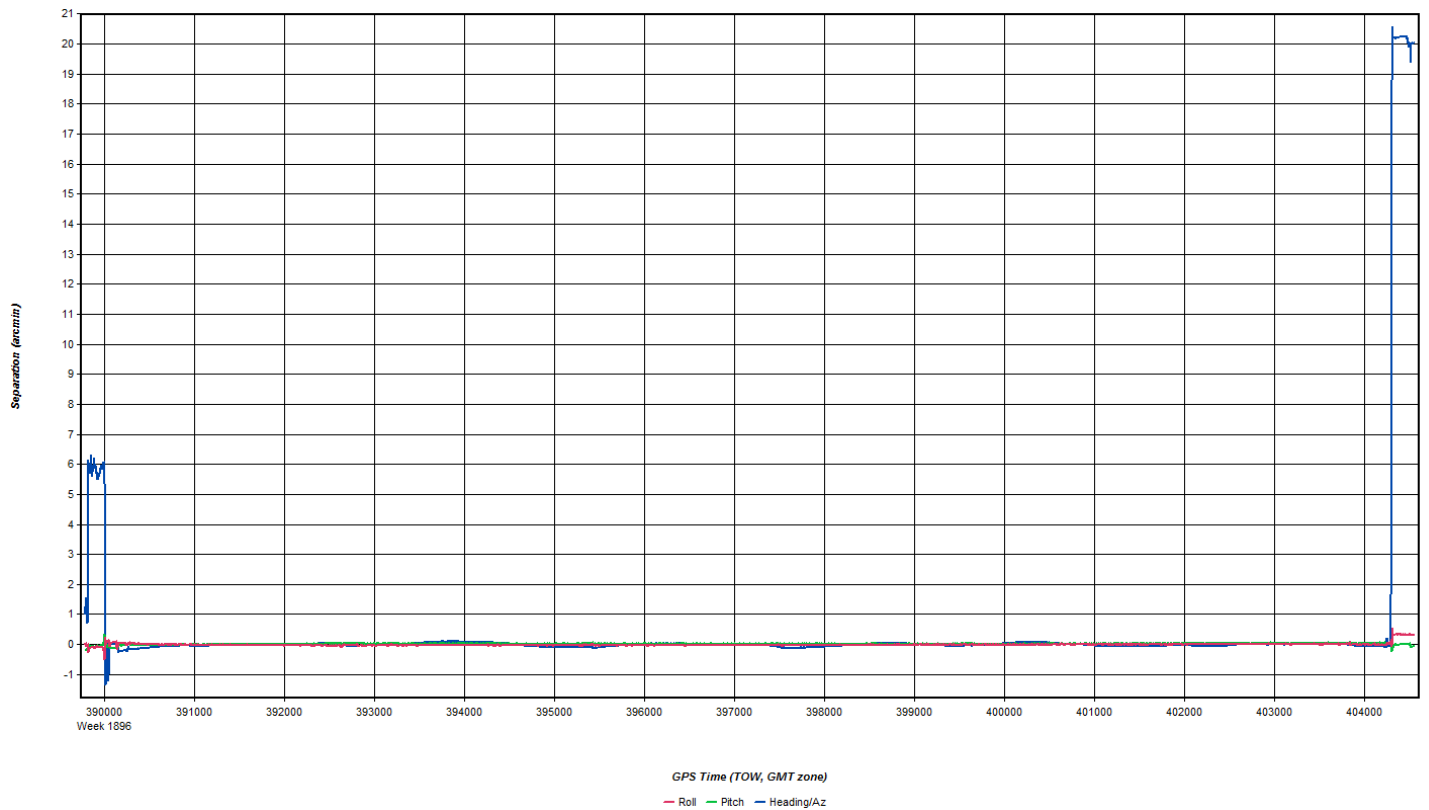
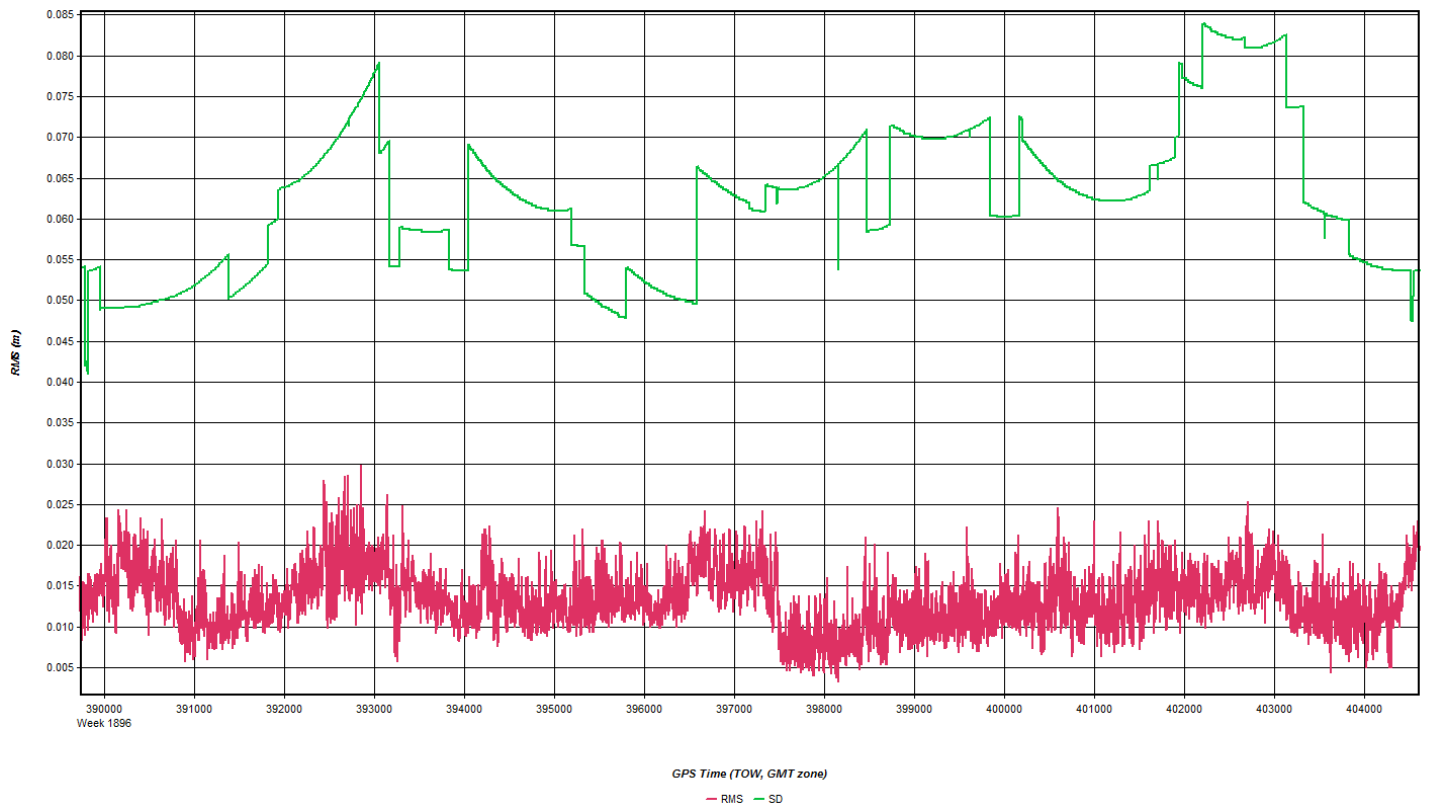
GPS Time (TOW, GMT zone)

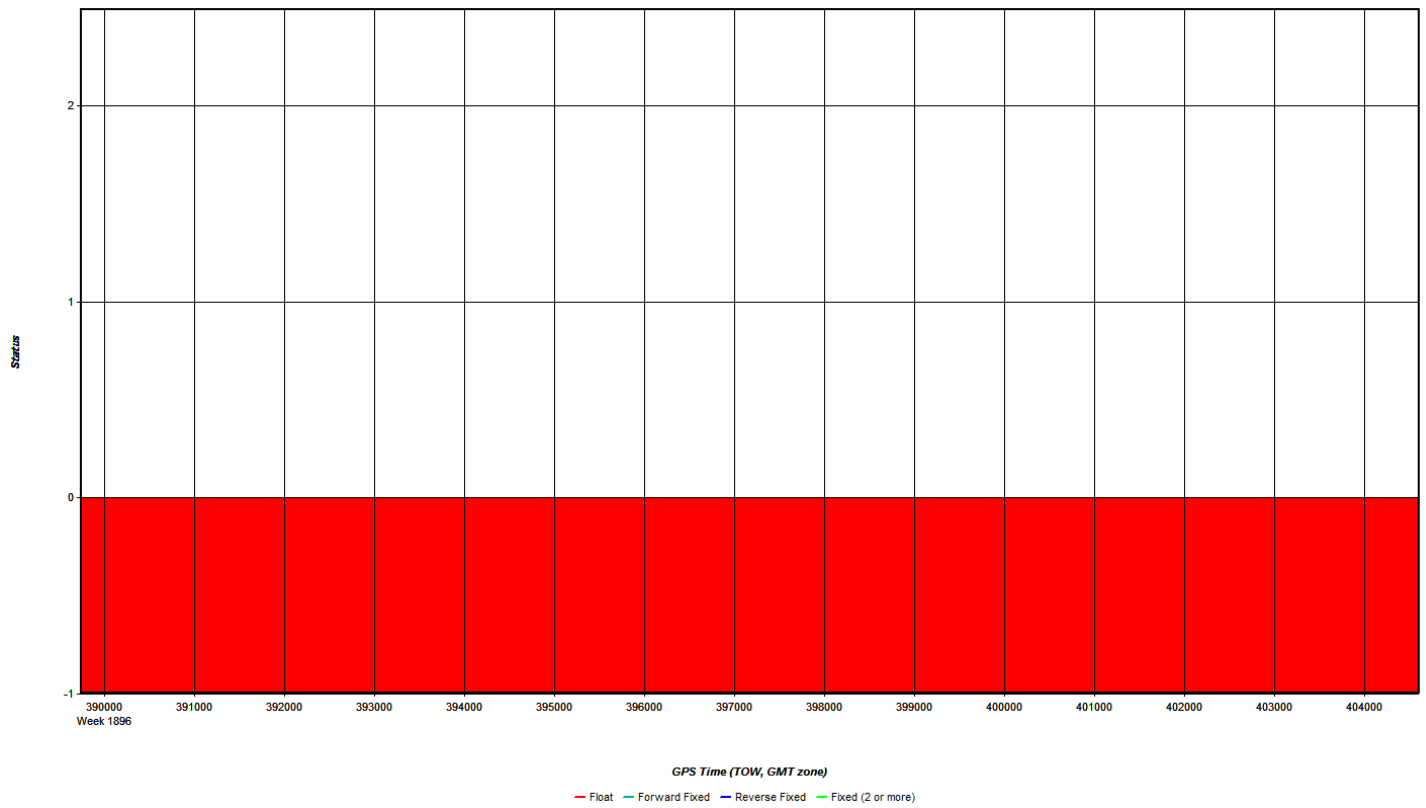
— Roll — Pitch



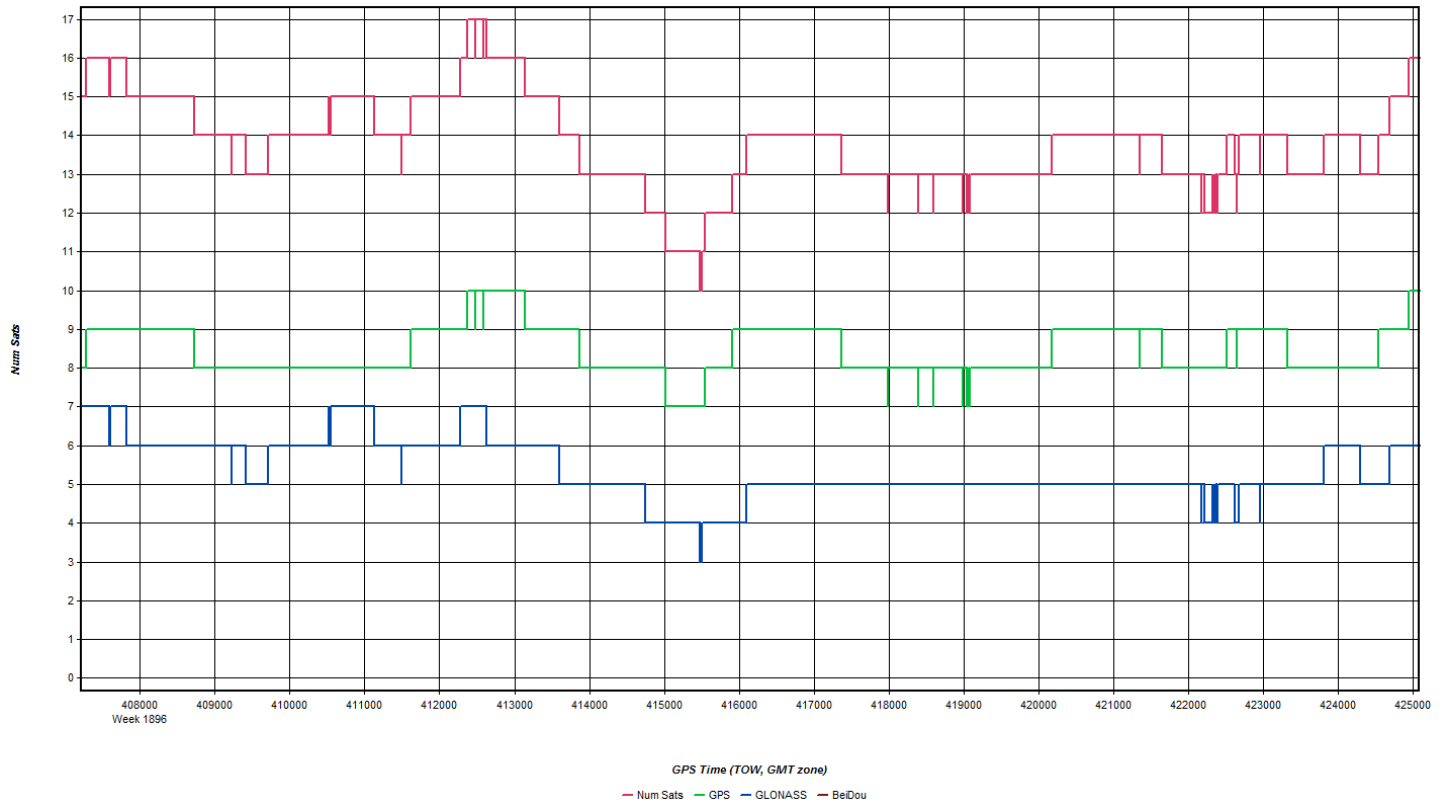
GPS Time (TOW, GMT zone)

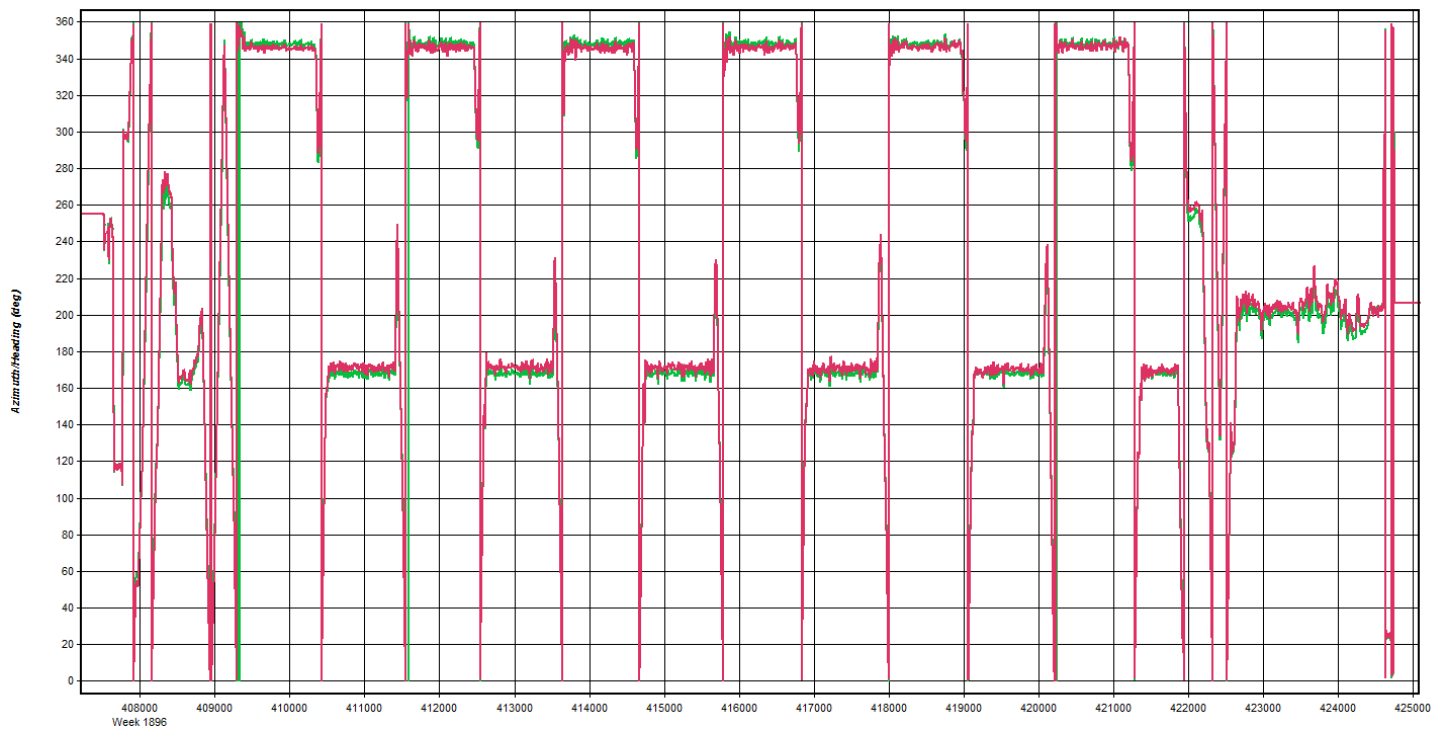
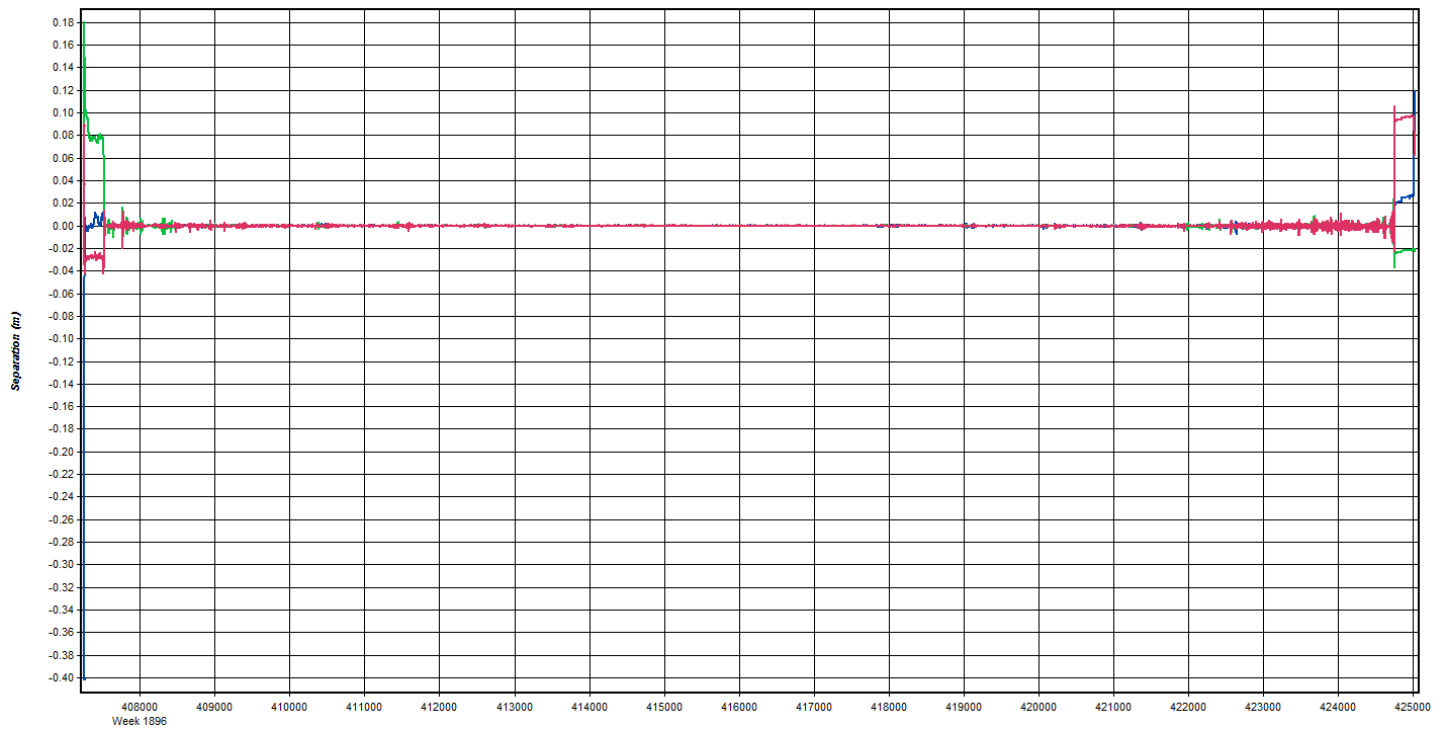
— Height

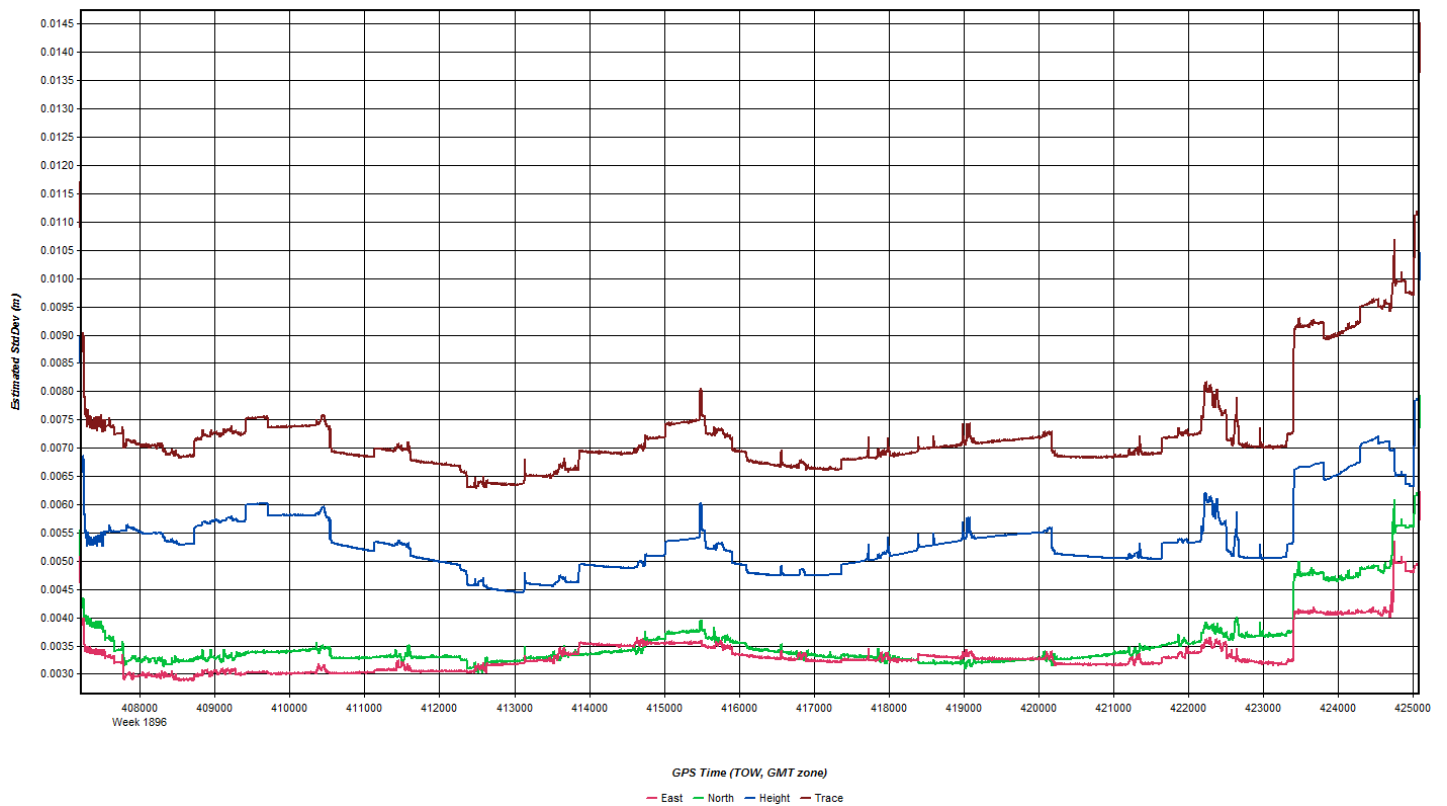
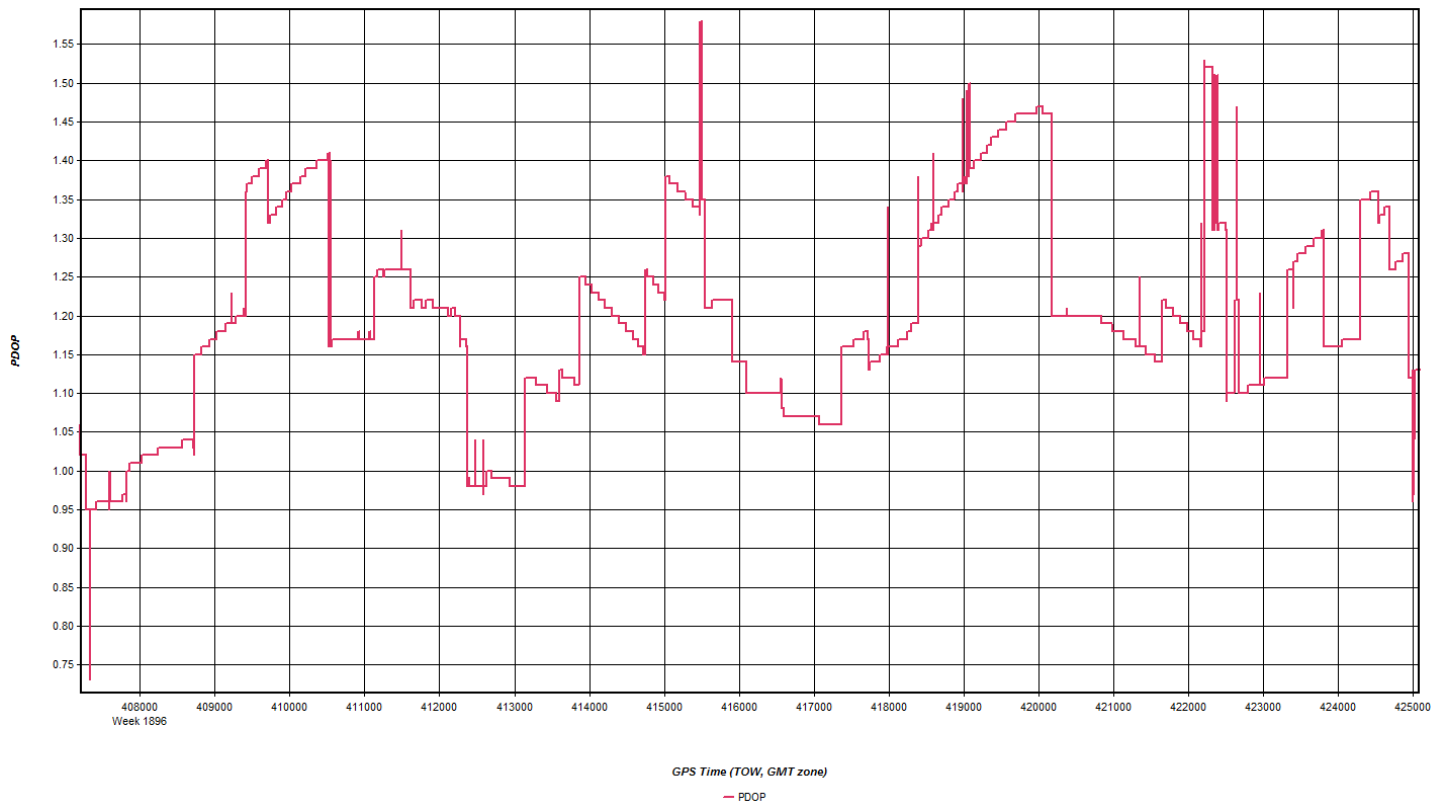


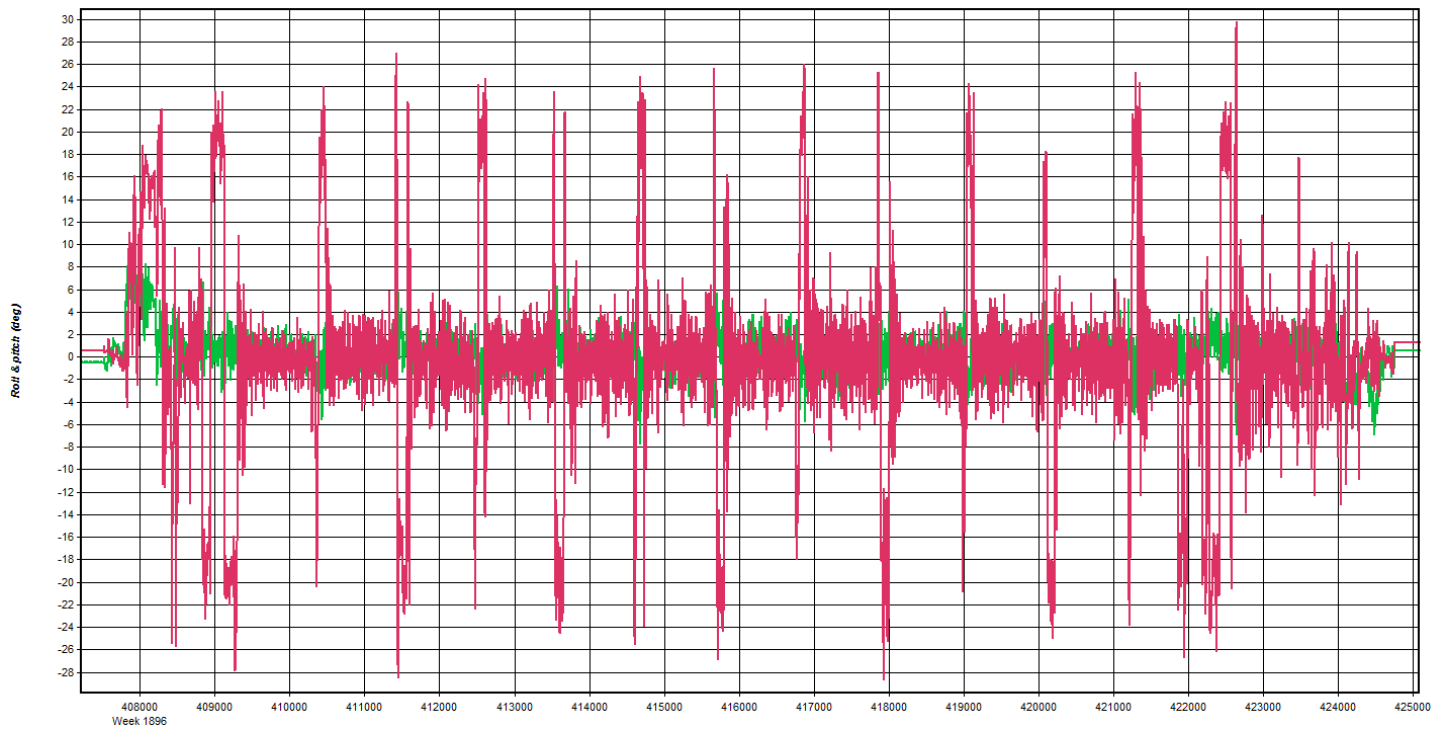


May 12, 2016-B (N73TM, SN7178)



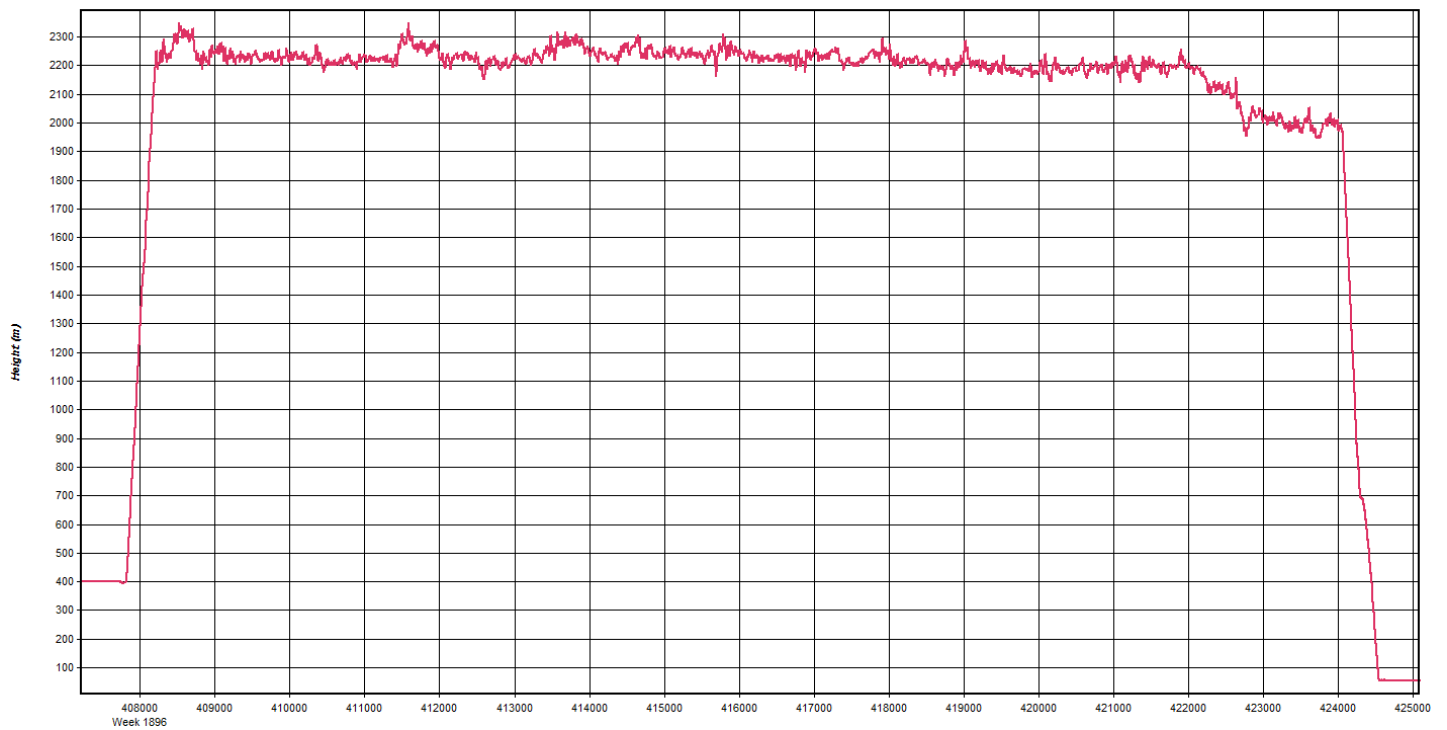






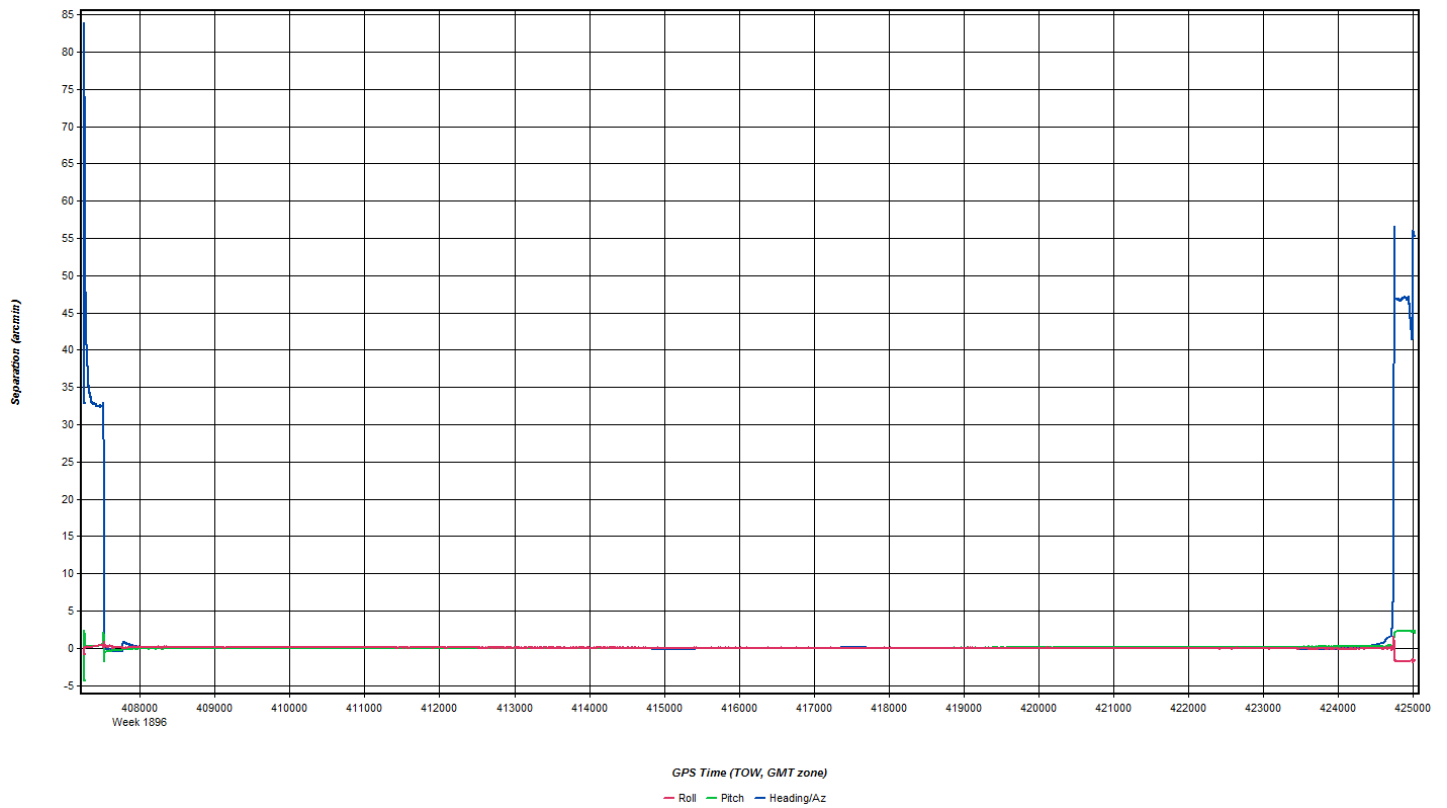
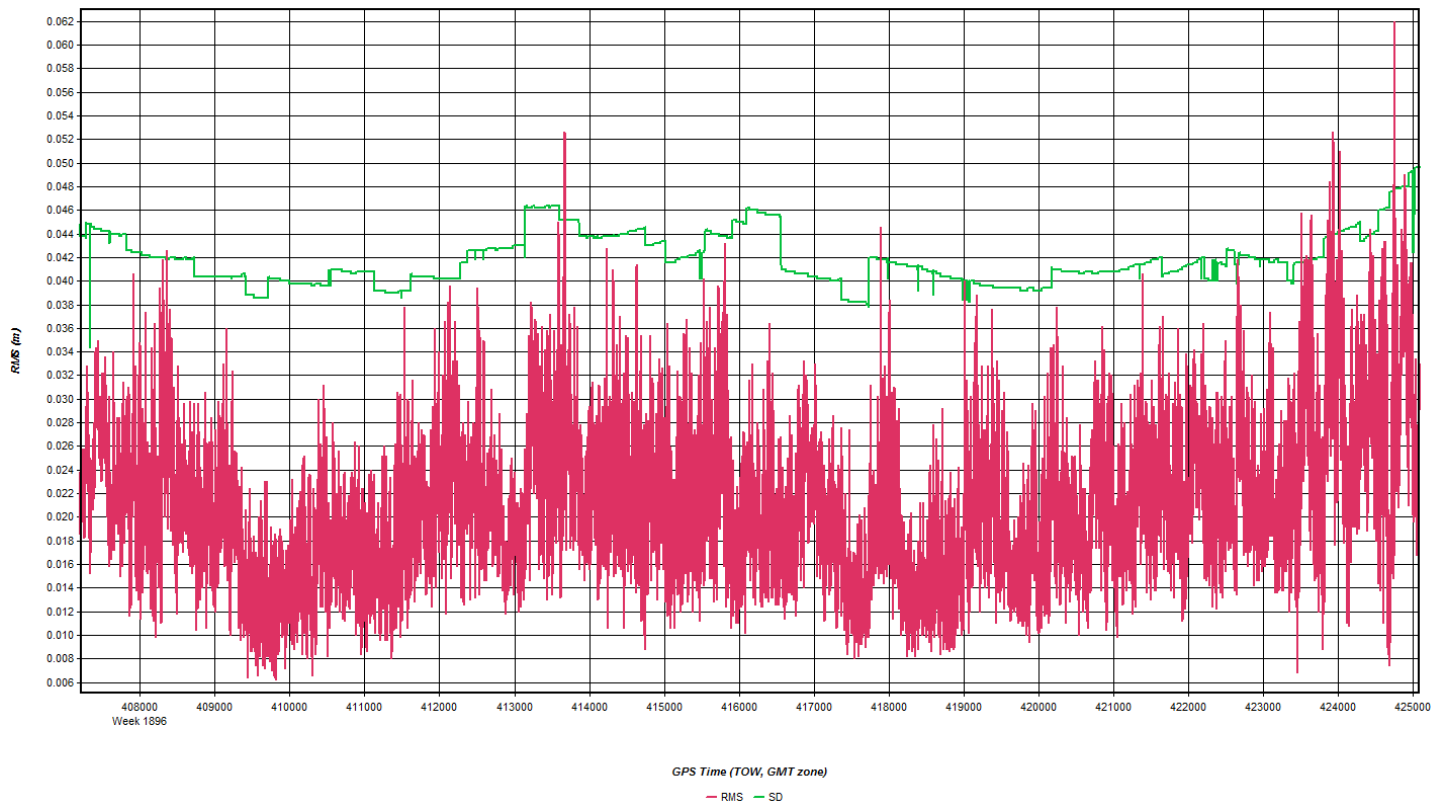
GPS Time (TOW, GMT zone)

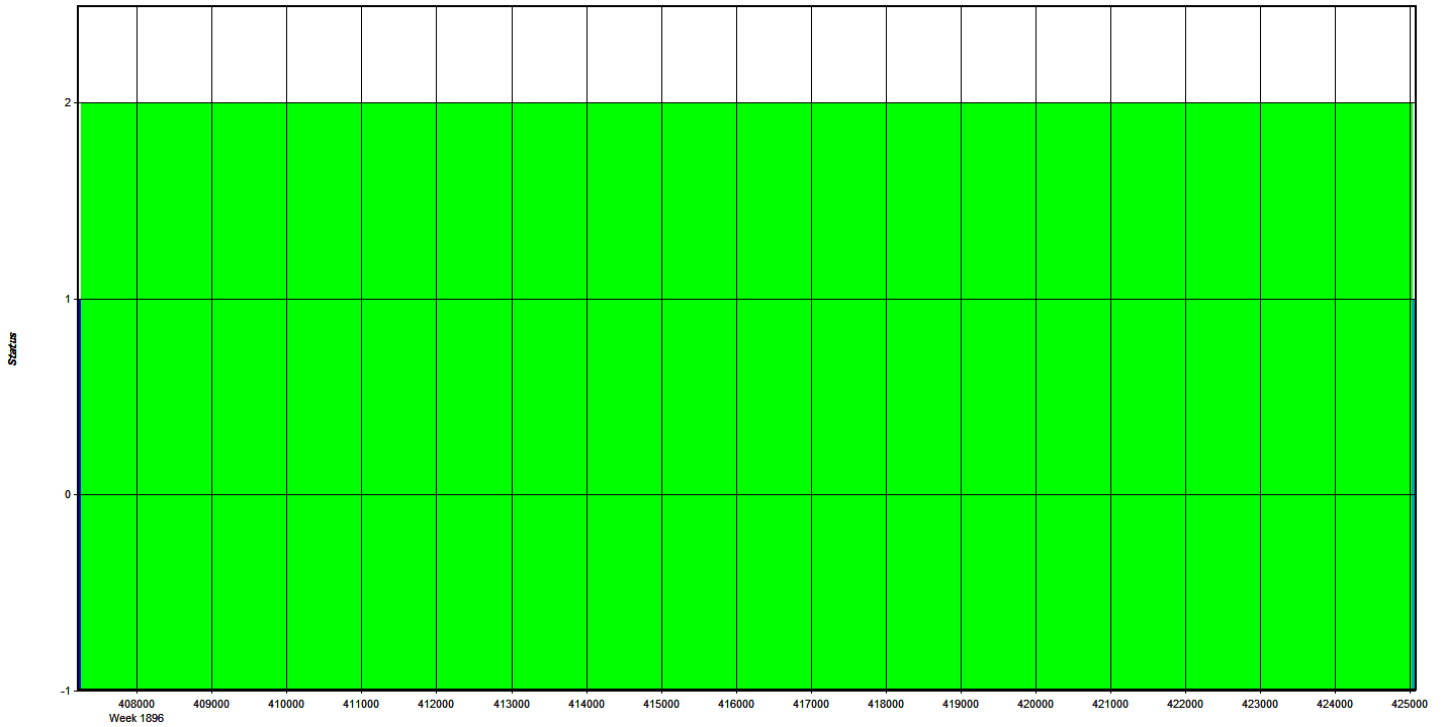
— Roll — Pitch



GPS Time (TOW, GMT zone)

— Height





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

Coordinate/Antenna Settings

Master Remote

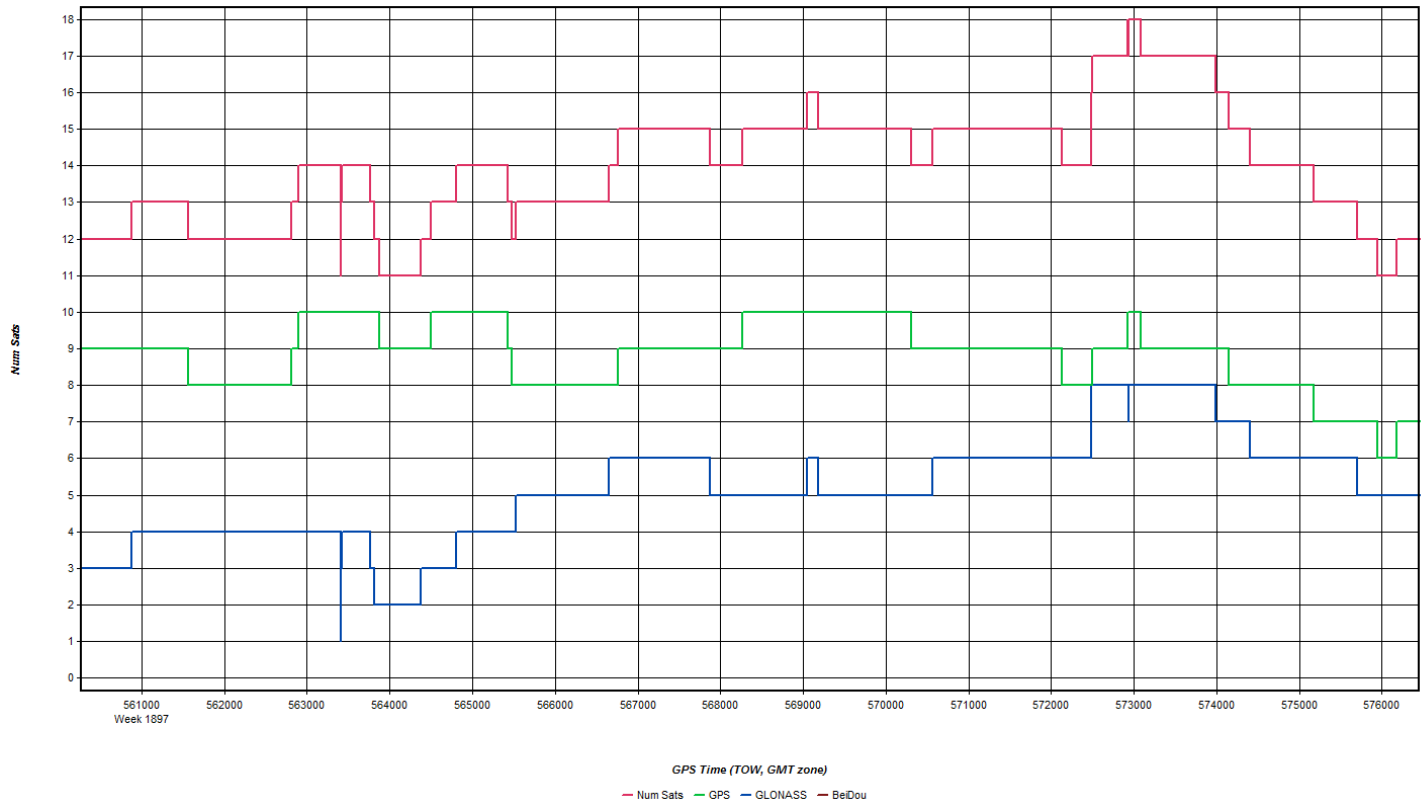
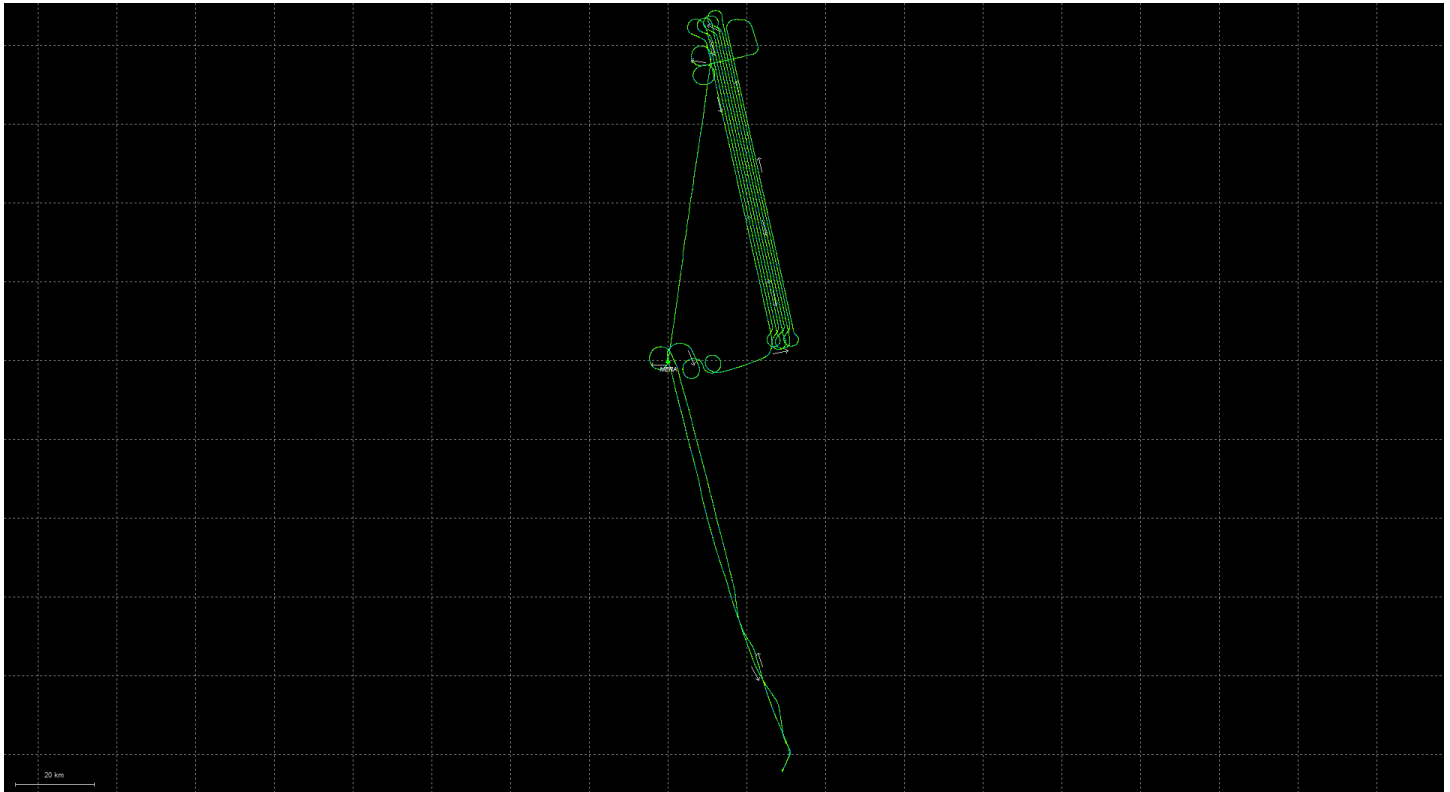
Base Station
 1: MEGR Name: MEGR Disabled
 File: E:\Proc\27146_Maine_2016\2254\20160512_170408\megr1330.

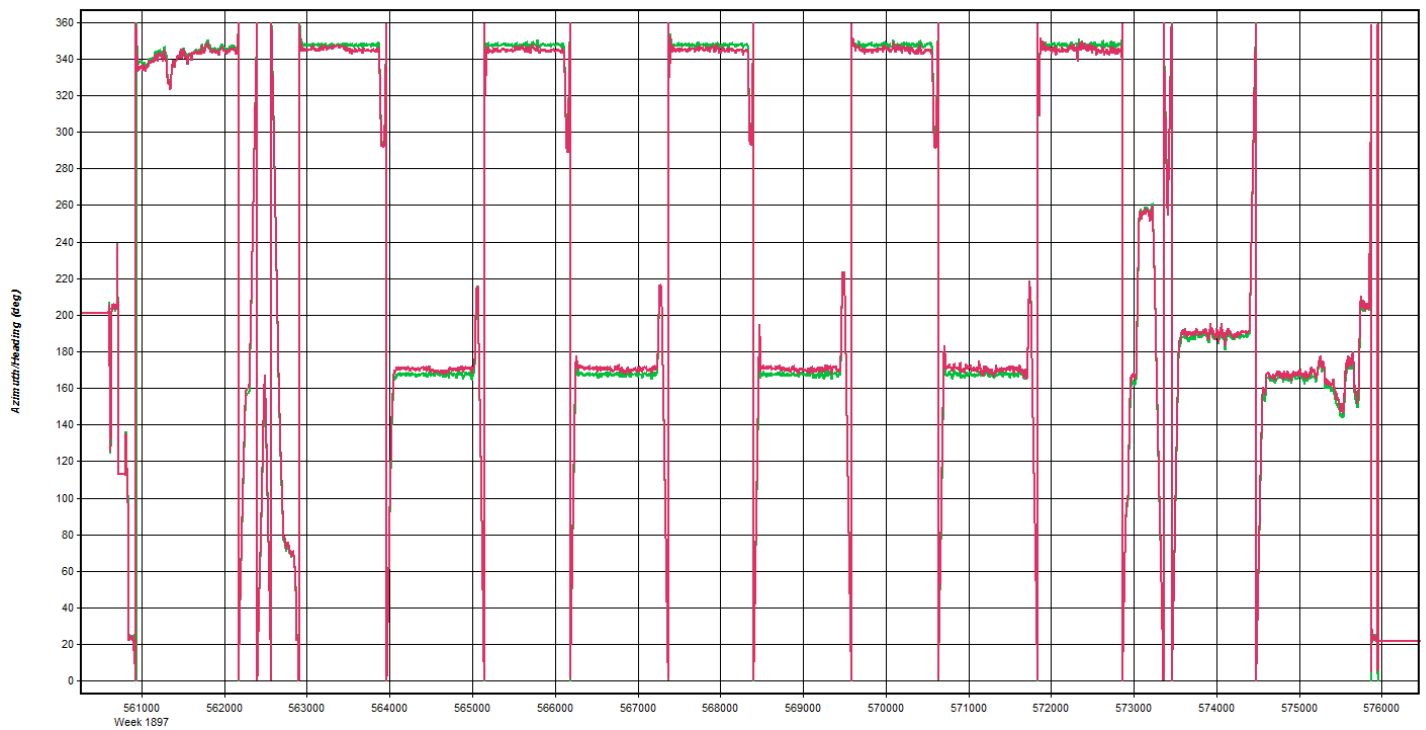
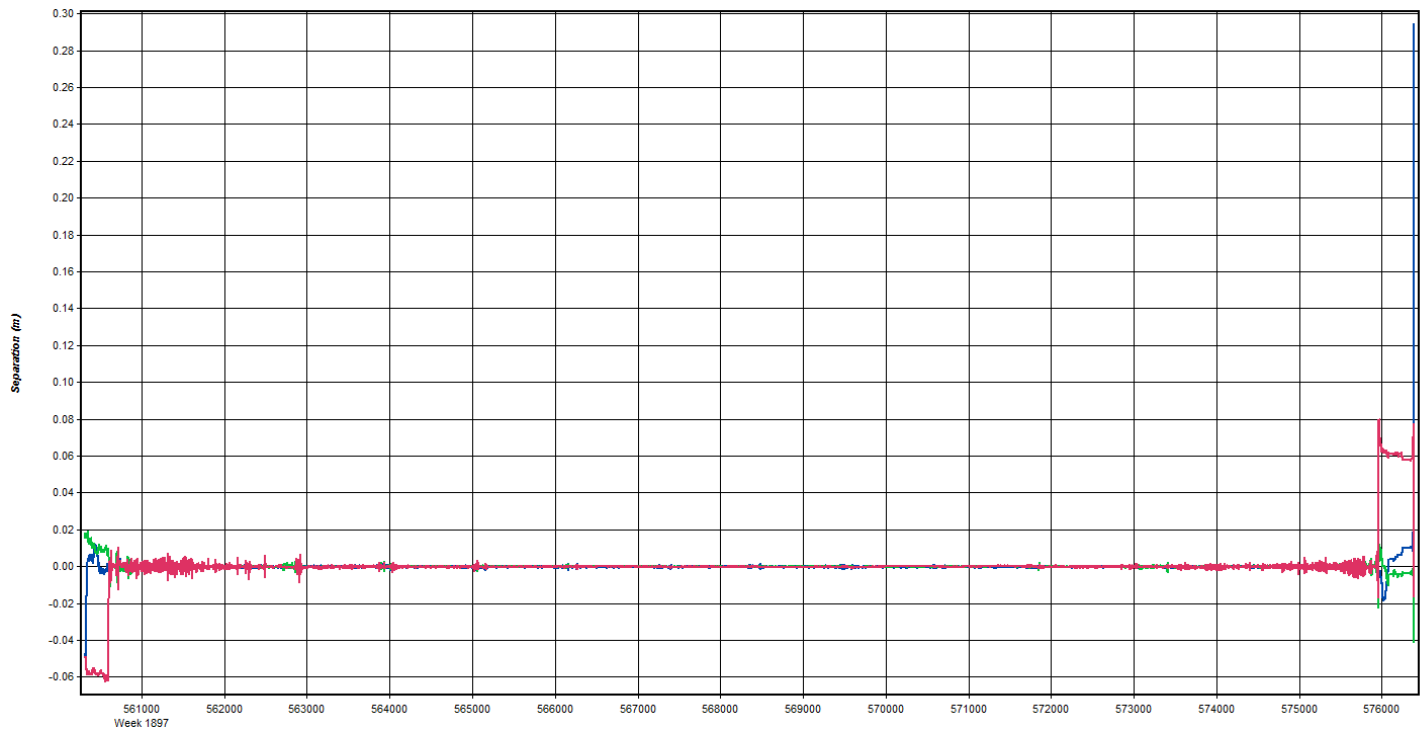
Coordinates
 Latitude: North 45 27 49.23447 Compute from PPP
 Longitude: West 69 35 36.89811 Enter Grid Values
 Ellipsoidal height: 293.886 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

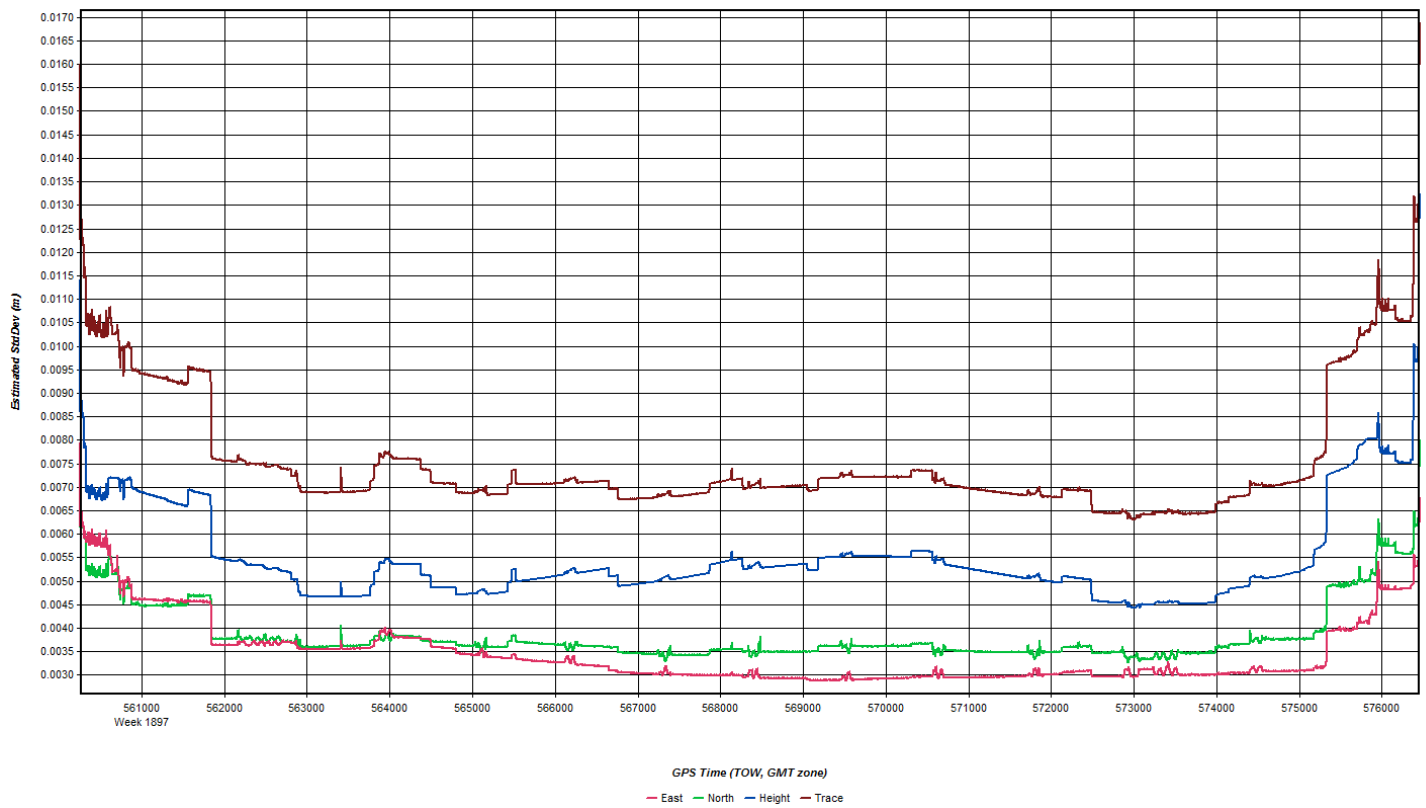
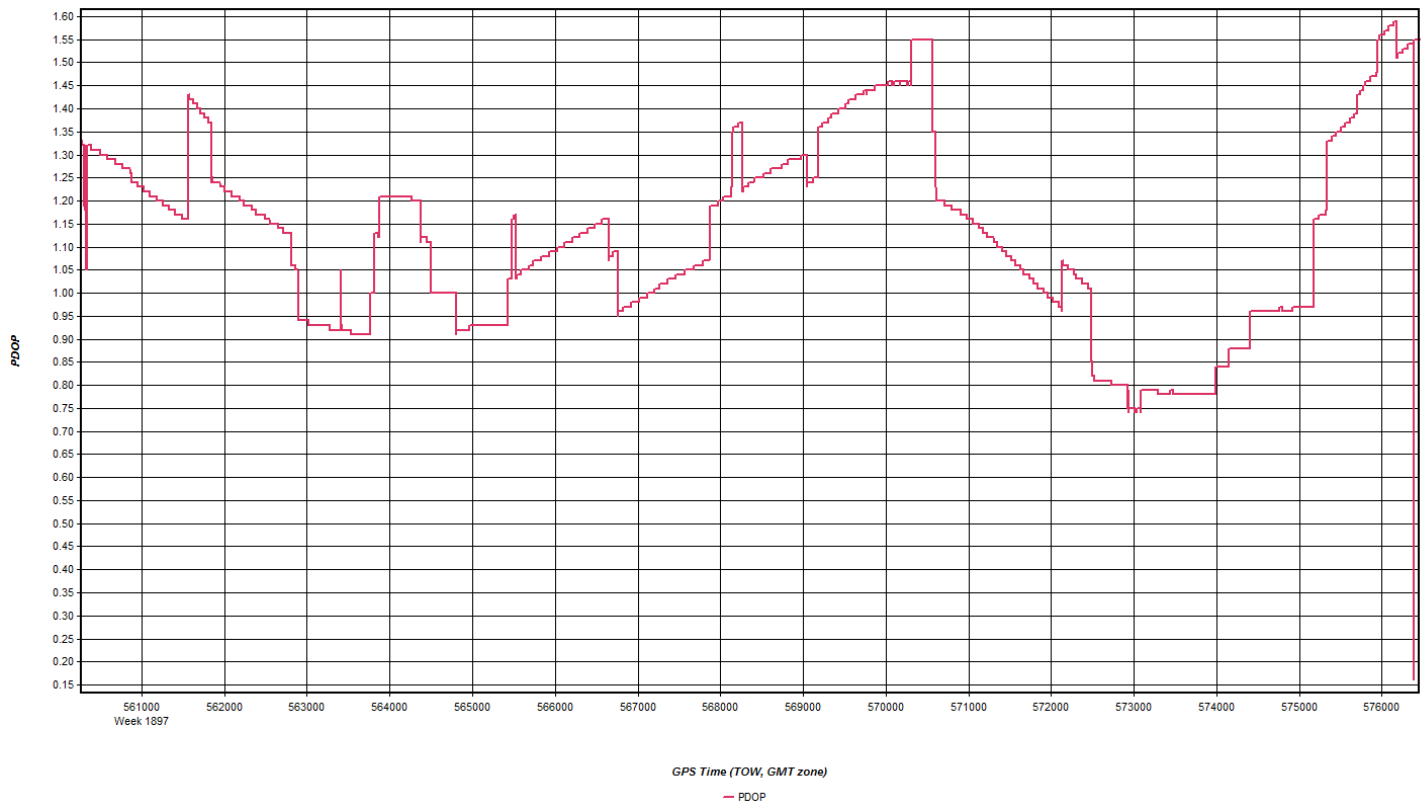
Antenna Height
 From station file: TRM57971.00, NONE View STA File
 Antenna profile: TRM57971.00 Info
 Measured height: 0.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 0.067 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

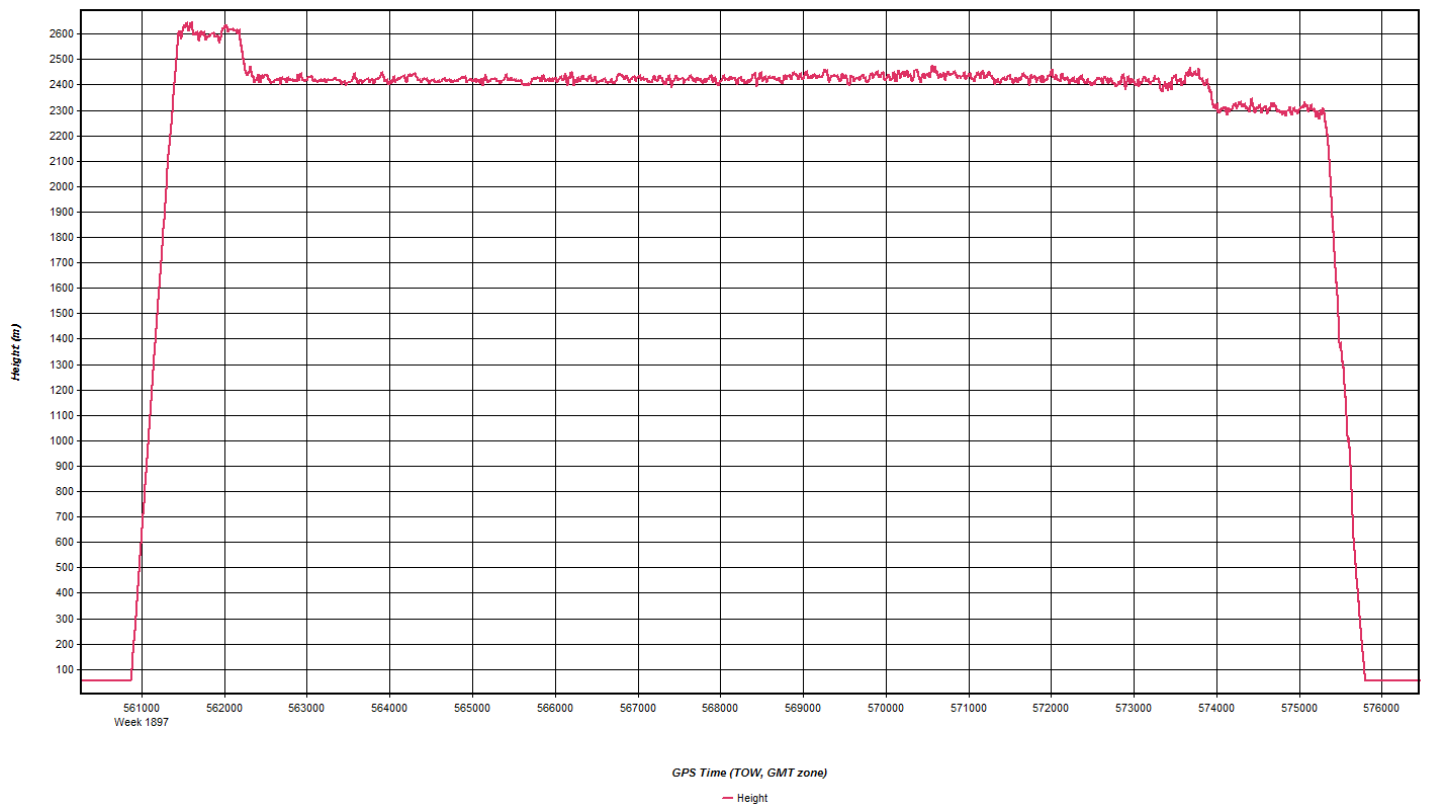
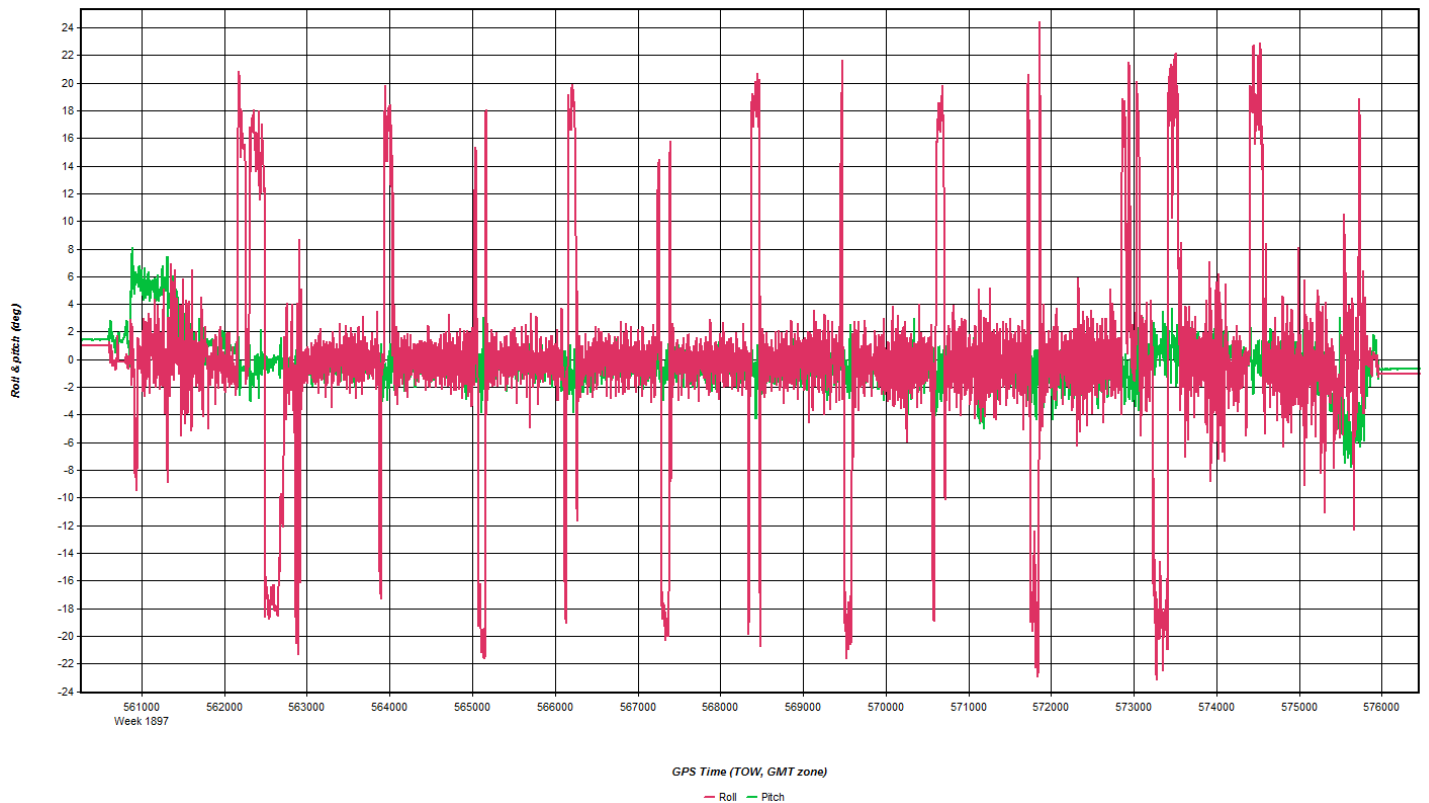
OK Cancel

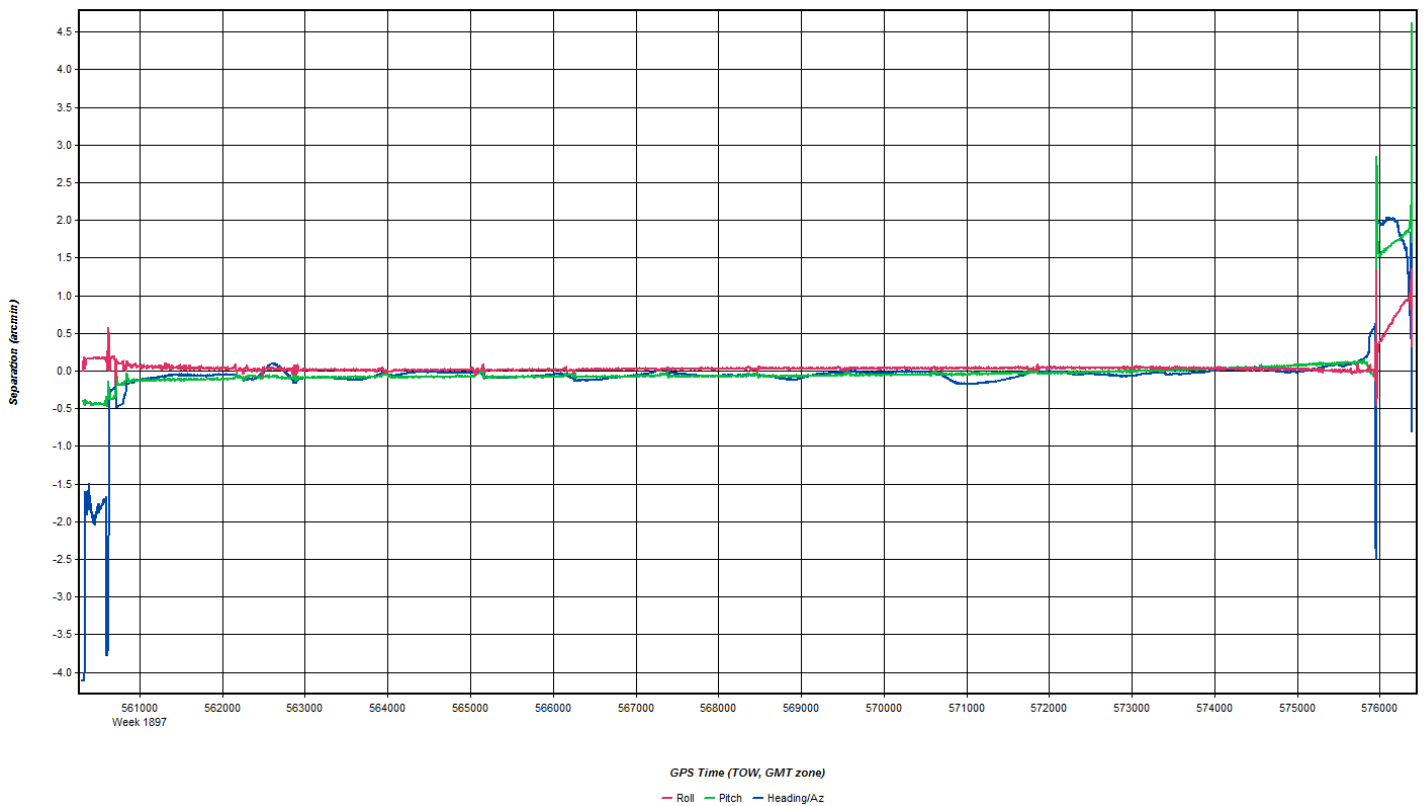
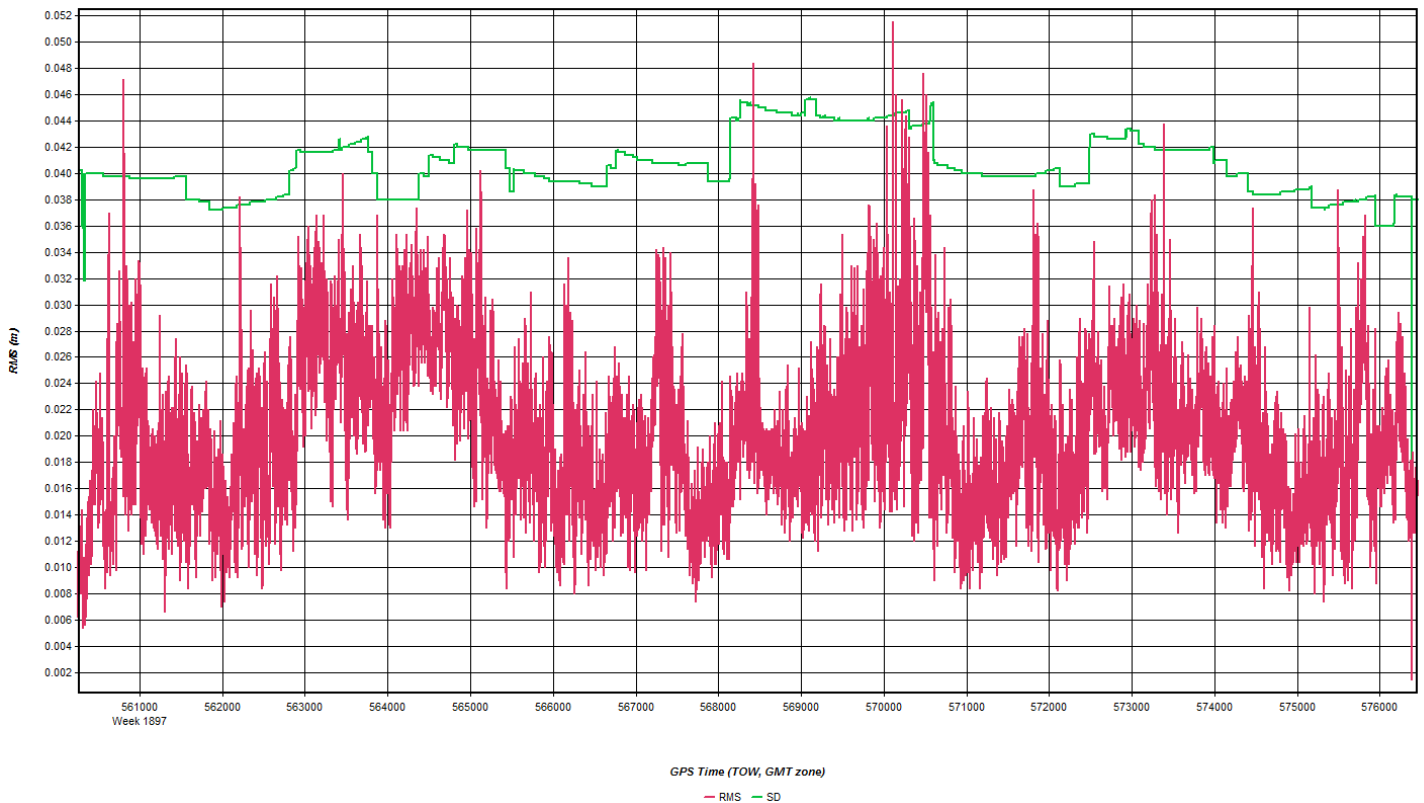
May 21, 2016-A (N73TM, SN7178)

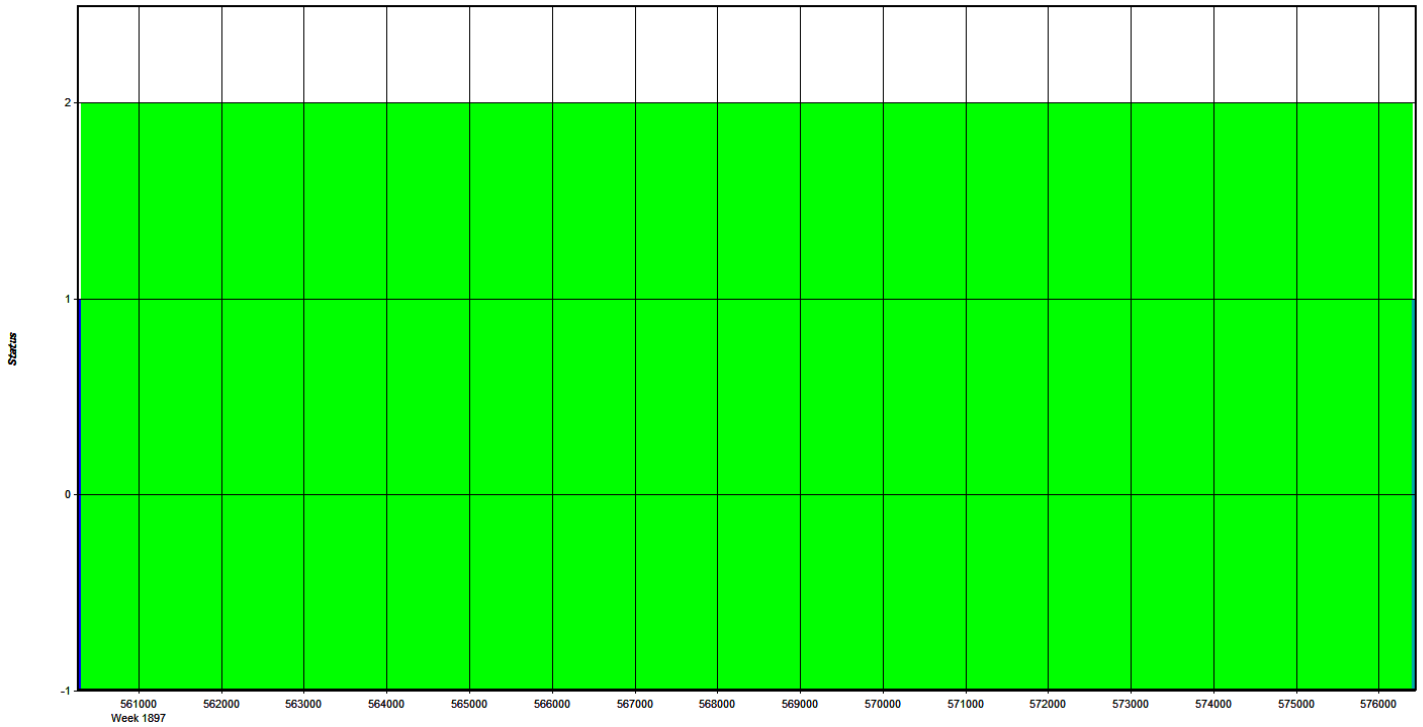












GPS Time (TOW, GMT zone)
 - Float - Forward Fixed - Reverse Fixed - Fixed (2 or more)

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MERA Name: MERA Disabled
 File: E:\Proc\27146_Maine_2016\D87N\20160521_113343\mera142

Coordinates
 Latitude: North 44 58 25.33352 Compute from PPP
 Longitude: West 70 39 10.58376 Enter Grid Values
 Ellipsoidal height: 489.568 m Enter MSL Height
 Datum: WGS84 Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRM55971.00, NONE View STA File
 Antenna profile: TRM55971.00 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

Quantum Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: 5-21-16
 UIC: 0 B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Project: UGS Maine ~~Appalachian~~ Prof #: 27146 Flight Mgmt File: 20160521-113343
 Aircraft: N751M Begin Hobbs: 6264.2 End Hobbs: 6264.2 Total: 4.2 Pilot: BLM Co-Pilot: Tech: Dyr3ch
 Dep Apt: KLEW Dep Time (Local): 11:47 Arr Apt: KLEW Arr Time (Local): 11:56 (ZT: 15:56) Tot Time Aloft: 4.2
 CORS: Y N Sta 1: MERA Sta 2: Flyovers: Y N IF Y, times: Sta 1 | 12:09 start: 15:33
 GPS Unit: Y (N) Sta 1: Flyovers: Y (N) IF Y, times: Sta 1 | 8-12-11 start: 8-15:13
 Gd Temp beg: 13 °C End: 23 °C OAT beg: 5 °C End: 4 °C Altimeter begin: 30.12 end: 30.06

Type	Mag	Start (UTC)	End (UTC)	Gd Spd	FOV (deg)	Alt AGL	Alt AMSL	Avg Terr Ht	Max Gdspd	Avg Pt Spacing	Power	Rate	Pulse Rate	Scan Freq	End	Start	End	Start	End	Start	End	Start	End	Start	End	
LIDAR	4026	347	12:22	12:37	154	1.1/16	7935	7400ft	150	150	100	261	261	53	11:37	11:40	11:37	11:40	11:37	11:40	11:37	11:40	11:37	11:40	11:37	11:40
	4027	167	12:41	12:56	152	0.9/20	7930								15:59	16:02	15:59	16:02	15:59	16:02	15:59	16:02	15:59	16:02	15:59	16:02
	4028	347	12:59	13:14	154	1.1/16	7930																			
	4029	167	13:18	13:33	149	1.1/17	7930																			
	4030	347	13:36	13:51	157	1.3/17	7930																			
	4031	167	13:55	14:10	151	1.2/18	7929																			
	4032	347	14:13	14:29	160	1.3/17	7933																			
	4033	167	14:32	14:48	150	1.4/17	7933																			
	4034	347	14:51	15:07	154	1.1/18	7933																			
	4035	167	15:11	15:13	150	1.1/18	7950																			

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

set Point 1 ↓

slight turb. ~ 20 mi from north end - clouds popping
 cross tie for lines 4026-4034

Total Prof Lines: 9 Lines Flown: 9 Lines Remain: 0 Online Time: 2.9 Mob Time: 1.3 Notes:

Generated by CamScanner

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email Log daily to flight_log_distribution_list@quantumspatial.com)

Date: 5-21-16 pg 2 of 2

Project: USGS Maine Modport ME Super-17146 Flight Mgmt File: 20160521_163251

Aircraft: N73TM Begin Hobbs: 6269.2 End Hobbs: 6272.5 Total: 3.3 Pilot: Barham Co-Pilot: Dymen

Dep Apt: KLEW Dep Time (Local): 12:46 (Z): 16:46 Air Apt: KLEW Air Time (Local): 16:03 (Z): 20:03 Tot Time Aloft: 3:3

CORS: YN Sta 1: MERA Sta 2: _____

GPS Unit: Y18 Flyovers: YN IF Y, times: Sta1 17:08 scrub 19:42

Gd Temp beg: 24 °C End: 24 °C OAT beg: _____ °C End: _____ °C Altimeter begin: 30.04 end: 29.97

LIDAR Type: ALS70 Serial #: 7178 Alt AGL: 7500ft Max Gdspd: _____ Avg Ft Spacing: _____ Storage Name: _____

FOV: 40 Scan Freq: 53 MplA: YN Pulse Rate: _____ Power: 100 PPSM: _____

Line # | Hdg | Start (UTC) | End (UTC) | GdSpd | Alt (AGL) | Alt (MSL) | Pulse Rate | Pulse Rate in Air | Turb (0..1)

005	89	19:01	19:03	153	1017	7602			
004	261	19:07	19:10	144	1115	7635			
003	89	19:12	19:15	153	1115	7644			
002	269	19:18	19:21	150	1116	7674			
001	89	19:24	19:26	155	1116	8035			
UB02	185	19:29	19:31	142	1116	8035			

Cross tie for lines 001-011

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

Total Proj Lines: _____

Lines Flown: _____

MEFF: 8 Lines remain: 0

Superleaf: 14 Lines remain: 0

Online Time: (2.2) Mob Time: (1.2) Notes: Occasional slight to med turb

MEFF: 0.8 Superleaf: 0.6

Superleaf/
Carnibissett

Generated by CamScanner

Appendix B

Survey Report



July 25, 2016

Survey Report of
LiDAR Calibration & Quality Control Points

USGS Contract: G16PC00016

ME_Western ME LiDAR_2016_B16

USGS Task Order: G16PD00396

Presented to:



Presented By:





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• VVA - Forest Points.....	255
• VVA – Brushland Points.....	329

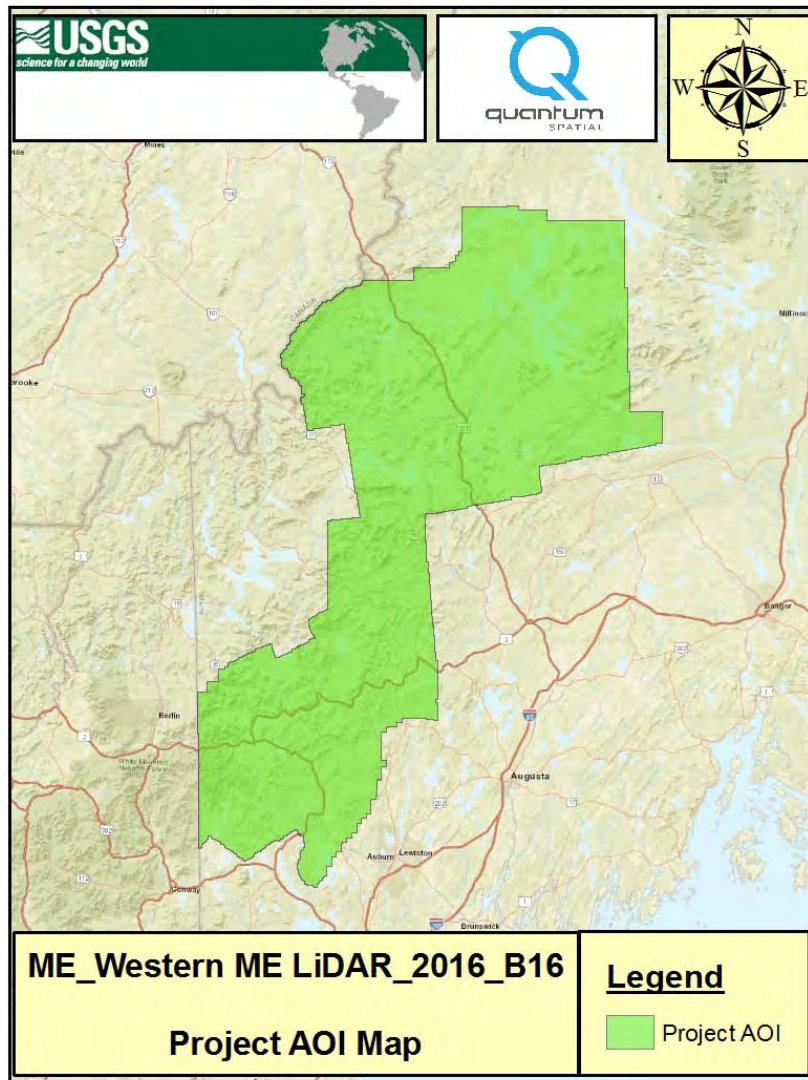


Introduction

Quantum Spatial, Inc. was contracted by USGS under task order G16PD00396 to Survey LiDAR calibration and quality control points in support of ME_Western ME LiDAR_2016_B16. The James W Sewall Company was sub-contracted to perform the field survey and post processing. This is the report of the technical approach used and detail of each point surveyed.

Project Area

The Project Areas, shown in the figure below, consists of approximately 13,046 square kilometers.





Technical Approach to Land Cover Validation Point Selection

Referencing ASPRS Positional Accuracy Standards for Digital Geospatial Data (Edition 1, Version 1.0, - November, 2014) table C.1 Recommended Number of Checkpoints based on Area, Quantum Spatial calculated that 118 Non-Vegetated Vertical Assessment (NVA) and 87 Vegetated Vertical Assessment (VVA) points are required for this project area.

To ensure that checkpoints were distributed generally proportionate among the various vegetated land cover types, Quantum Spatial used existing USGS Land Cover data to divide both the NVA and VVA categories among the various types, calculating the approximate number of required points in each representative type proportionate to the total project area. The resulting point classes are detailed below:

<u>NVA Class</u>	<u># of Points</u>	<u>VVA Class</u>	<u># of Points</u>
Bare Earth	90	Forested	73
Urban Area	28	Tall Weeds/Crops	4
		Brushland/Trees	10

Quantum Spatial has adopted the philosophy that each vegetative class must be well distributed throughout the project area. While points in varying classes may be near to one another, points of a single vegetative class may not. Proposed point locations are selected with this distribution methodology in mind.

Survey Accuracy Requirements

Given that the survey accuracy of calibration and quality control check points should be 3 times more accurate than the required accuracy of the data set, Quantum Spatial requires that calibration and NVA points are better than 3 centimeters RMSE, both horizontally and vertically, and that VVA points be better than 5 centimeters RMSE, both horizontally and vertically. The surveyed accuracy of each point must be determined through redundant measurements and/or network adjustment using procedures and methodologies that reliably and consistently result in the aforementioned accuracies.

Due to variances in reference control accuracy and adjustment, Quantum Spatial requires that the survey methodology used be explained, so that it can be repeated if necessary.



Field Survey Methodology

Date Range: May 9, 2016 – May 28, 2016

Equipment Used:

Field crews used Topcon Hiper GD and Hiper II dual frequency GNSS receiver as base stations and rovers.

GNSS Methodology:

A combination of RTK GPS, fast static GPS, and traditional surveying methods were used during this project. The RTK GPS survey procedure involved placing a GPS receiver on a check point and collecting three minute “fixed” observations. RTK GPS corrected observations were provided from a Virtual Reference Station System (VRS network – KeyNetGPS, Inc.). KeyNetGPS is a series of continuously operating, high precision GNSS reference stations working through a cellular modem. Two observations were taken at each check point and the two coordinates were compared and averaged. Published control check points were also located with RTK methods. A Hiper II centimeter accuracy survey grade GPS receiver was used to collect the data.

In areas with limited cellular coverage, fast static GPS methods were used to collect check points. The methods consisted of collecting data using two Hiper GD dual frequency GPS receivers. One unit was setup as a “base” which collected data during all of the “rover” sessions within a point cluster area. The point clusters consisted of 2 to 5 points each. The data was downloaded and processed using the closest CORS station. A total of 89 points were collected using this method.

In areas under the tree canopy, traditional surveying methods were used. Pairs of points were collected in open areas using GPS methods. The points were occupied using a Topcon GTS total station to survey the forested check points as well as locating a few other points near the forested points. Multiple observations were collected at each check point and the coordinates were compared and averaged. A total of 76 points were collected using this method.

All of the GPS information was downloaded, processed and analyzed using Topcon Tools processing software.



Overall Project Accuracy Statement

All point coordinates have been reported in the North American Datum of 1983 (NAD83 2011), UTM Zone 19 in meters. Elevations are relative to the North American Vertical Datum of 1988 (NAVD 88) which were derived using the Geoid 12B model and are reported in meters.

Calibration Points

Average Horizontal RMSE is 0.010 meter.

Average Elevation RMSE is 0.017 meter.

Average 3 dimensional RMSE is 0.020 meter.

NVA Points

Average Horizontal RMSE is 0.010 meter.

Average Elevation RMSE is 0.016 meter.

Average 3 dimensional RMSE is 0.019 meter.

VVA Points

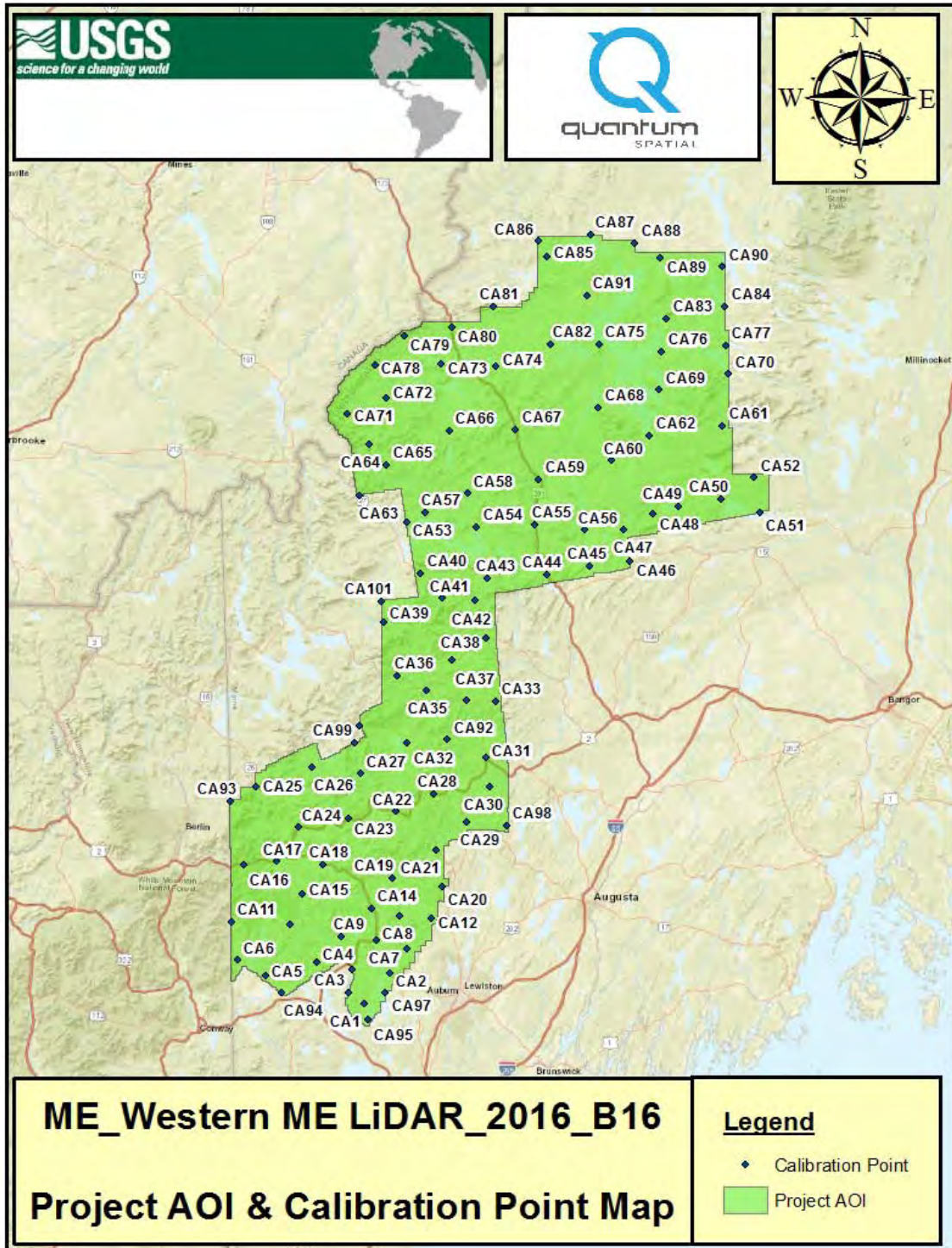
Average Horizontal RMSE is 0.028 meter.

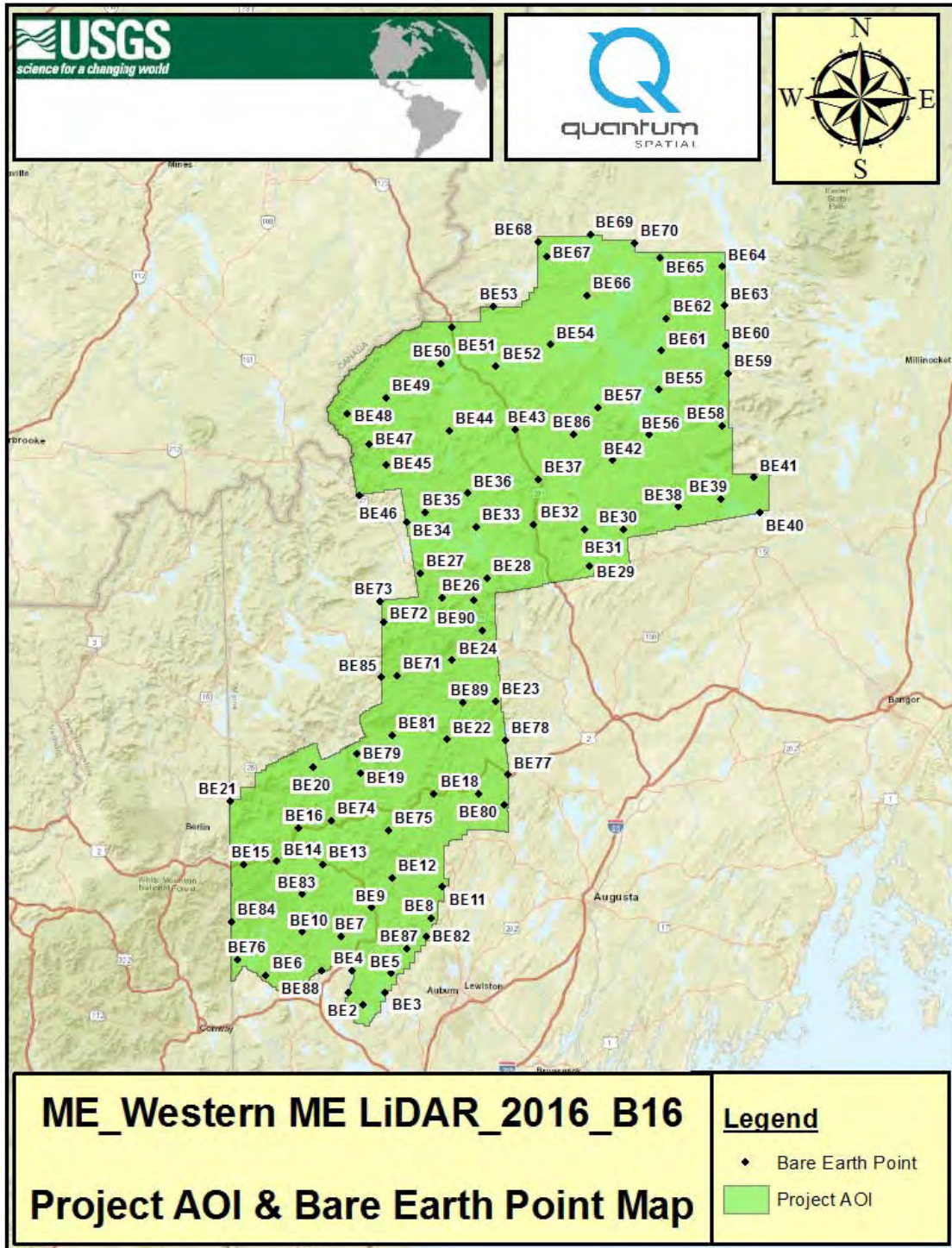
Average Elevation RMSE is 0.029 meter.

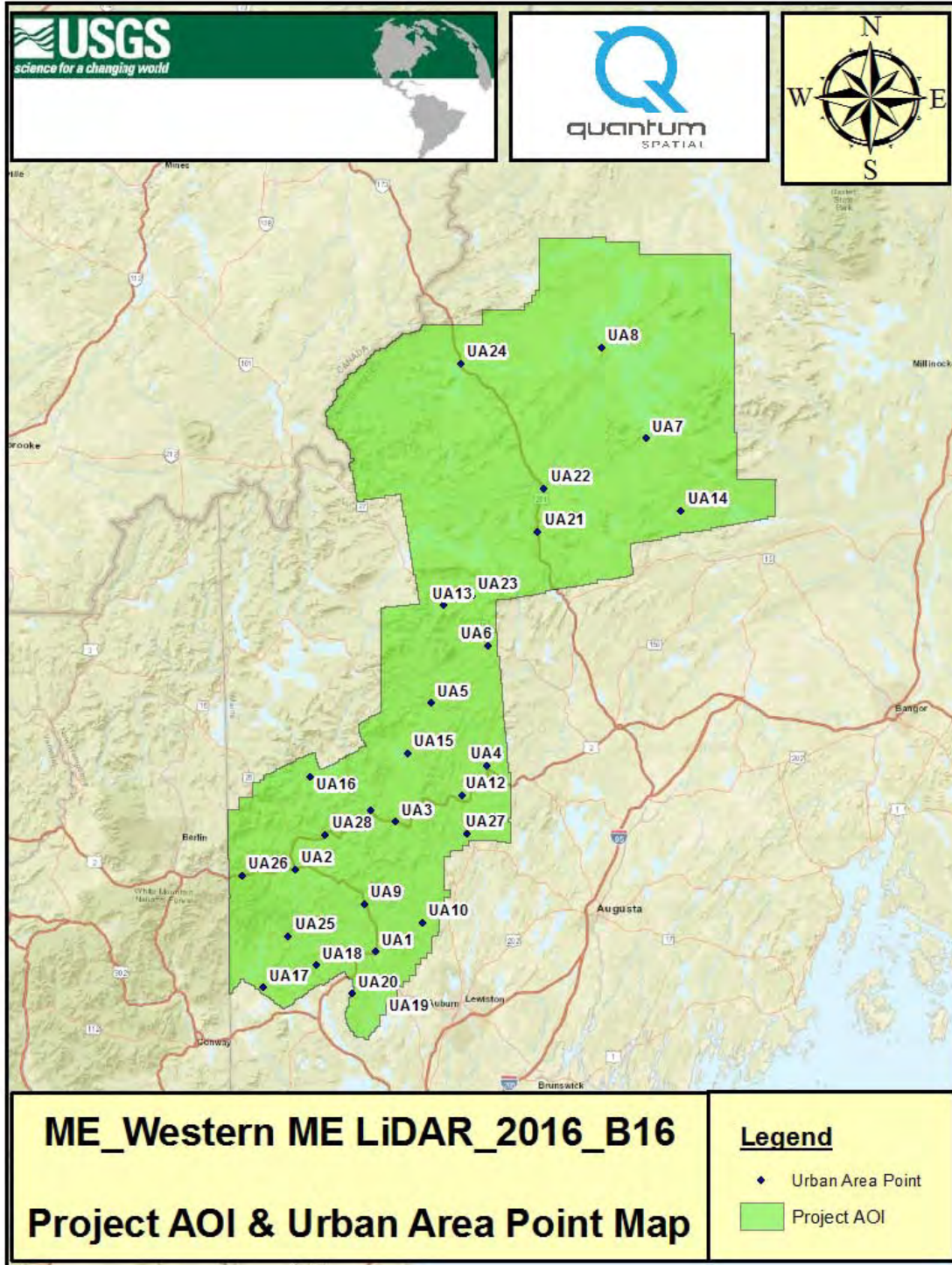
Average 3 dimensional RMSE is 0.040 meter.

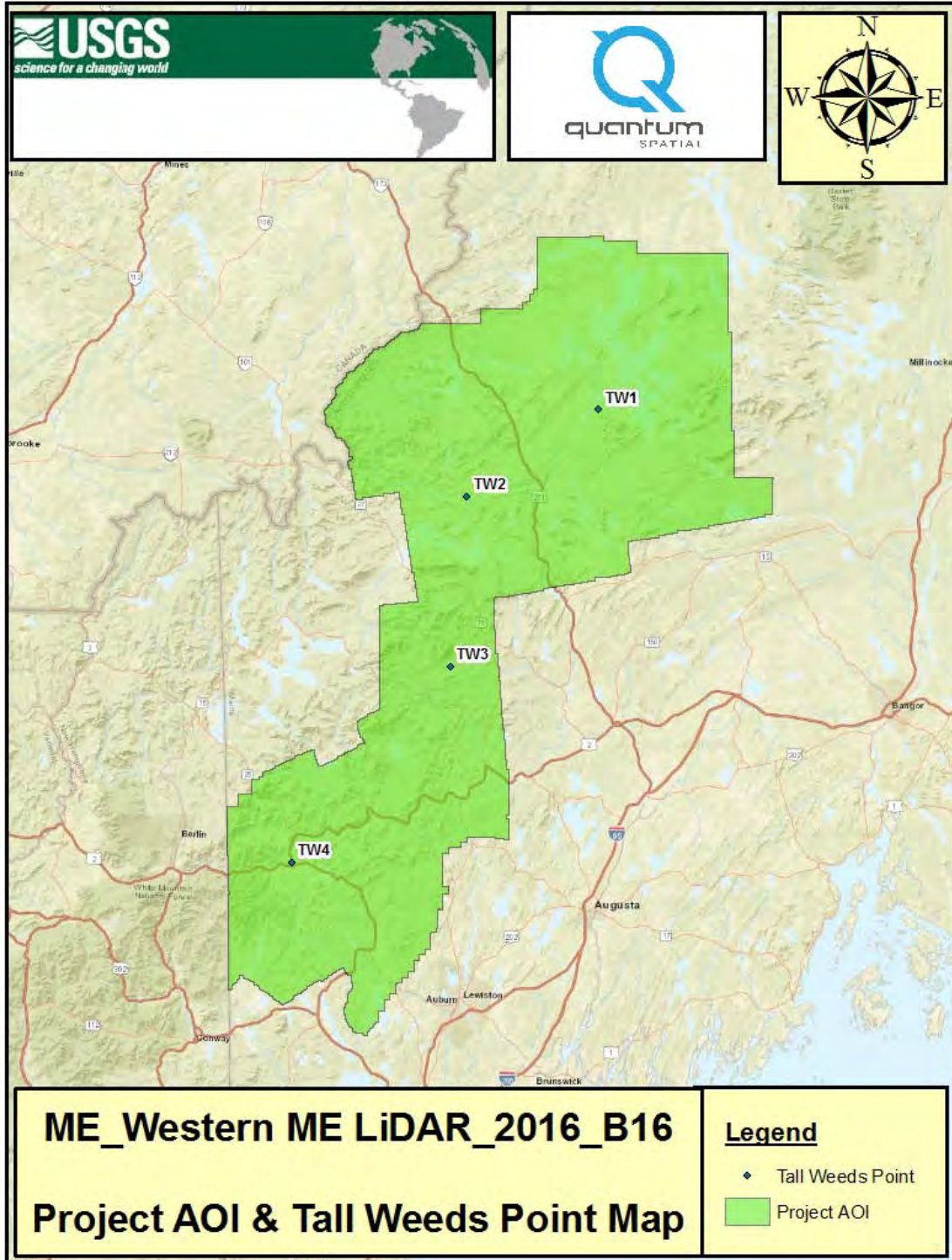


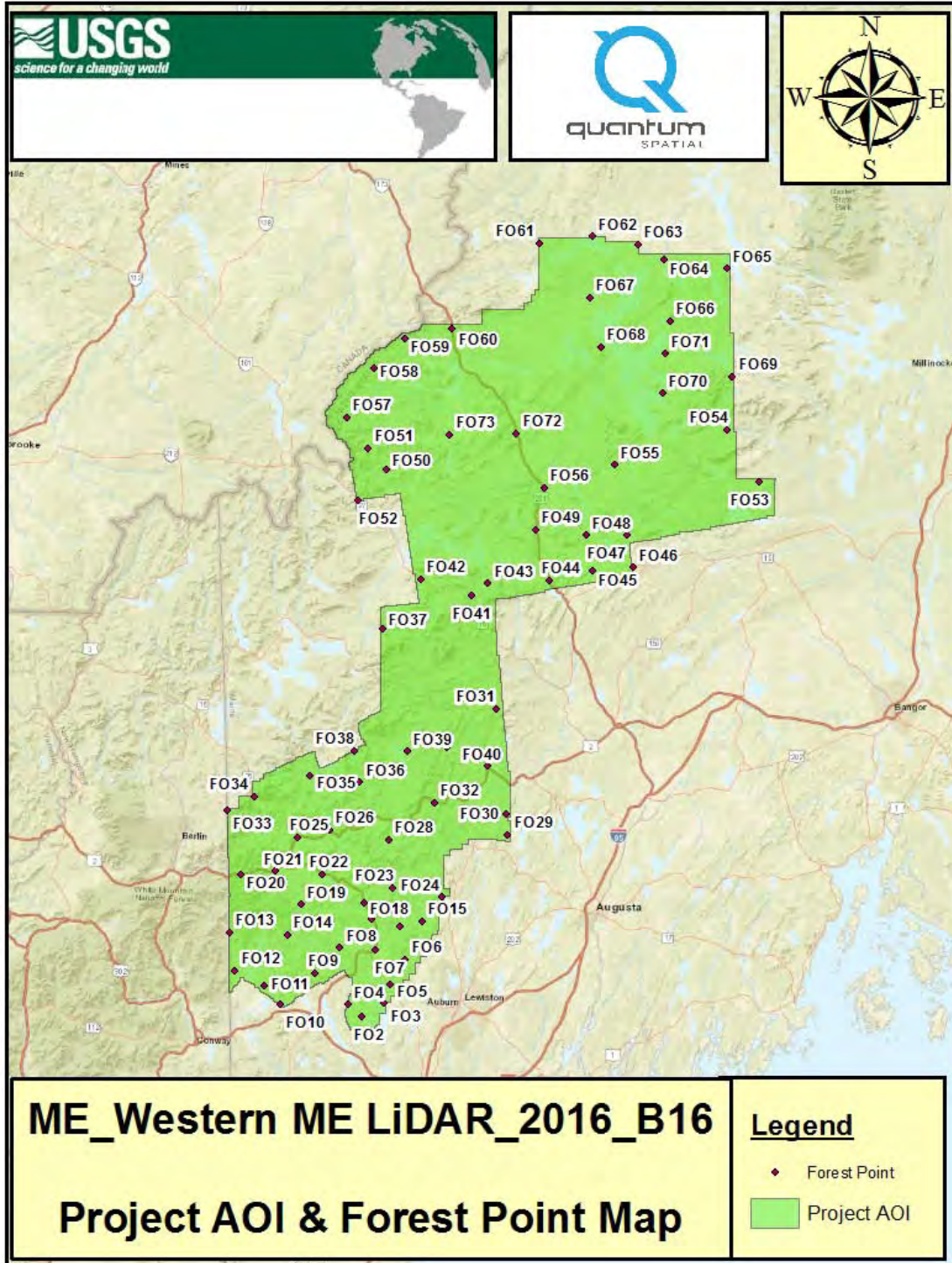
Project AOI & Point Location Maps

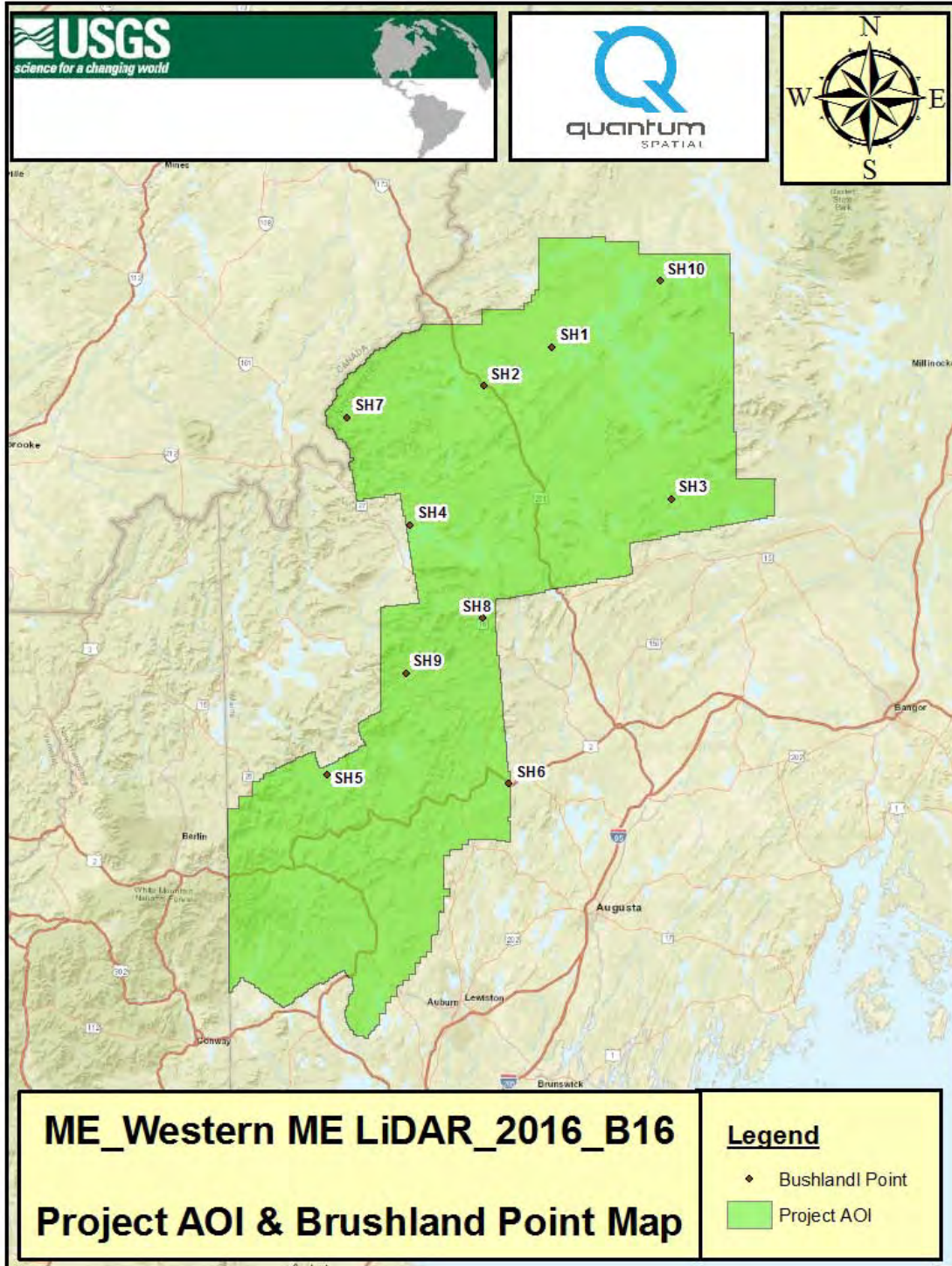














Final Point Coordinates



Calibration Point Coordinates

Horizontal Datum - NAD83(2011)
UTM-Zone 19N
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
CA1	4879641.45	375599.52	148.87
CA2	4887913.73	382773.97	97.11
CA3	4888860.15	372231.03	123.68
CA4	4891080.06	362648.73	130.69
CA5	4887420.71	348843.90	127.21
CA6	4891587.87	341276.03	131.46
CA7	4894754.88	387417.59	170.87
CA8	4897111.17	378843.28	118.84
CA9	4897924.87	369259.60	166.75
CA10	4901242.72	355353.36	183.00
CA11	4901954.50	339473.10	167.83
CA12	4902971.34	393887.91	108.69
CA13	4903667.19	385392.78	273.35
CA14	4905691.83	377633.92	137.63
CA15	4909409.99	358925.00	196.79
CA16	4917474.81	342749.83	218.47
CA17	4918303.16	351931.31	206.82
CA18	4917555.64	364557.62	220.92
CA19	4913818.92	383342.86	191.23
CA20	4911422.54	396701.66	133.48
CA21	4921529.95	395286.36	123.62
CA22	4931936.72	384270.48	128.26
CA23	4930139.05	371286.61	189.03
CA24	4927623.44	357869.08	194.80
CA25	4938500.29	346266.92	455.90
CA26	4943995.69	361547.62	199.54
CA27	4942166.25	374659.95	174.42
CA28	4936697.27	394674.27	168.97
CA29	4928941.60	403330.43	123.95



CA30	4938741.00	409704.71	113.25
CA31	4946586.16	408742.80	107.37
CA31	4946586.16	408742.80	107.37
CA32	4950399.08	387329.96	226.92
CA33	4961845.92	411324.39	184.78
CA34	4962129.69	403496.28	153.65
CA35	4964694.30	392518.40	232.82
CA36	4968876.38	384567.64	258.78
CA37	4972933.83	399617.96	263.26
CA38	4979030.52	408859.08	175.70
CA39	4983380.62	380930.11	468.40
CA40	4996635.29	390991.44	365.94
CA41	4989801.58	396873.12	532.12
CA42	4989131.43	405618.92	231.94
CA43	4995375.46	408957.41	379.41
CA44	4996234.32	425453.27	158.70
CA45	4998586.43	437042.79	311.23
CA46	5000013.40	447936.19	483.89
CA47	5008507.18	446264.91	401.26
CA48	5012827.81	454224.66	177.85
CA49	5014690.78	460910.51	260.75
CA50	5016768.60	472551.45	110.38
CA51	5013219.68	483154.98	128.18
CA52	5022605.84	481622.41	215.70
CA53	5010453.86	387218.96	425.02
CA54	5009275.89	406150.44	317.37
CA55	5009823.33	421839.59	158.10
CA56	5008310.01	435519.16	303.23
CA57	5013128.22	392202.05	424.18
CA58	5018310.77	403683.27	335.74
CA59	5022093.16	423006.35	187.08
CA60	5027204.38	442935.70	381.82
CA61	5036630.04	472946.77	422.13
CA62	5034070.49	453146.65	322.83
CA63	5017644.12	374282.59	377.46
CA64	5031573.03	376880.42	680.94
CA65	5026089.67	381766.48	725.65
CA66	5035416.48	398669.24	338.83
CA67	5035574.46	416724.89	516.43
CA68	5041699.71	439198.91	325.87
CA69	5046375.89	455836.29	313.99



CA70	5050748.85	474640.25	396.23
CA71	5039988.29	371168.86	513.26
CA72	5044260.64	381623.04	450.78
CA73	5053393.23	396554.51	381.14
CA74	5052799.39	411530.57	361.64
CA75	5058807.27	439445.29	317.15
CA76	5056918.95	456515.39	364.35
CA77	5058495.59	473922.02	408.36
CA78	5053265.56	378517.87	443.05
CA79	5060992.97	386574.06	539.75
CA80	5063520.91	399473.65	428.69
CA81	5068984.81	410650.16	455.58
CA82	5058727.04	426194.55	340.18
CA83	5065785.54	457829.47	344.10
CA84	5069092.22	473645.40	370.38
CA85	5082534.52	425427.21	335.18
CA86	5086730.41	422890.48	348.95
CA87	5088542.34	437264.21	335.54
CA88	5086242.13	449174.40	315.41
CA89	5082195.25	456129.42	295.13
CA90	5079827.80	473060.54	308.39
CA91	5072063.97	436212.19	318.73
CA92	4951394.37	398191.16	331.26
CA93	4934744.13	339198.78	486.19
CA94	4882716.00	353336.11	241.20
CA95	4875527.17	376550.77	166.90
CA96	4882630.01	371494.90	101.77
CA97	4882830.23	381310.62	130.37
CA98	4928088.31	414314.17	175.53
CA99	4950584.27	373059.43	228.00
CA100	4955178.62	374251.97	427.00
CA101	4989043.44	380160.76	869.45



Bare Earth Point Coordinates

Horizontal Datum - NAD83(2011)
UTM-Zone 19N
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
BE1	4879323.20	375393.87	148.15
BE2	4882670.92	371477.58	104.03
BE3	4882790.71	381360.24	132.17
BE4	4888806.22	372256.08	123.43
BE5	4887909.66	382811.59	97.07
BE6	4887481.59	348994.11	127.40
BE7	4897902.16	369273.36	166.64
BE8	4902967.74	393908.72	108.52
BE9	4905728.78	377594.10	138.08
BE10	4899177.34	358729.97	189.82
BE11	4911419.18	396829.84	127.20
BE12	4913836.85	383304.29	187.08
BE13	4917599.27	364458.03	221.06
BE14	4918308.12	351987.64	206.61
BE15	4917455.70	342763.59	218.68
BE16	4927546.11	357861.95	194.30
BE17	4936644.34	406782.42	192.76
BE18	4936719.97	394646.49	169.09
BE19	4942147.07	374648.75	174.37
BE20	4943972.28	361625.32	199.58
BE21	4934781.62	339200.66	487.99
BE22	4951395.50	398154.78	331.80
BE23	4961824.17	411306.17	185.05
BE24	4972969.31	399623.33	263.03
BE25	4989199.63	405591.45	232.50
BE26	4989991.62	396818.27	512.42
BE27	4996656.55	390927.05	366.67
BE28	4995379.36	409017.37	384.24
BE29	4998660.18	437031.08	312.58
BE30	5008502.12	446302.76	402.04



BE31	5008341.26	435485.98	303.09
BE32	5009852.98	421818.69	157.93
BE33	5009245.43	406137.76	317.06
BE34	5010472.48	387255.36	424.43
BE35	5013131.62	392156.31	422.07
BE36	5018298.69	403709.47	334.85
BE37	5022074.67	423005.75	186.89
BE38	5014682.09	460897.96	261.13
BE39	5016774.53	472544.15	110.59
BE40	5013212.26	483171.80	127.67
BE41	5022590.43	481632.43	215.52
BE42	5027166.00	443010.63	385.95
BE43	5035570.16	416693.39	517.38
BE44	5035393.96	398689.16	338.38
BE45	5026048.91	381760.92	722.21
BE46	5017612.28	374273.25	377.28
BE47	5031574.33	376934.63	679.75
BE48	5039928.48	371182.32	515.41
BE49	5044250.53	381627.77	450.68
BE50	5053407.23	396556.27	381.81
BE51	5063516.08	399473.25	428.38
BE52	5052810.45	411557.98	360.95
BE53	5068979.54	410640.79	456.09
BE54	5058654.88	426204.01	340.58
BE55	5046401.12	455835.52	314.06
BE56	5034141.89	453206.28	322.41
BE57	5041678.37	439153.14	325.32
BE58	5036676.19	472975.01	420.88
BE59	5050757.12	474611.85	396.25
BE60	5058502.59	473917.93	408.23
BE61	5056933.13	456561.61	366.34
BE62	5065822.15	457848.54	347.14
BE63	5069181.86	473658.46	371.72
BE64	5079846.74	473040.22	307.12
BE65	5082219.38	456165.92	295.02
BE66	5072044.86	436278.81	317.75
BE67	5082549.04	425357.28	336.06
BE68	5086682.60	422926.30	345.88
BE69	5088545.61	437298.30	333.91
BE70	5086207.77	449119.05	313.20
BE71	4968870.85	384581.24	258.41



BE72	4983360.37	380874.06	468.26
BE73	4989029.86	380137.36	867.58
BE74	4929455.35	366615.74	191.81
BE75	4926785.59	382266.23	153.87
BE76	4891624.37	341250.90	132.56
BE77	4941801.17	414600.10	105.04
BE78	4951288.90	413933.97	176.46
BE79	4947459.55	373710.25	219.40
BE80	4933656.26	413761.11	116.82
BE81	4952495.60	383270.89	207.90
BE82	4898008.02	392436.99	105.33
BE83	4909420.28	358945.23	196.33
BE84	4901992.65	339692.43	165.64
BE85	4968325.82	380439.33	325.58
BE86	5034223.56	432675.42	296.55
BE87	4894782.01	387098.29	165.96
BE88	4888663.60	364165.23	118.38
BE89	4961444.18	402604.69	149.25
BE90	4981022.88	407823.35	184.80



Urban Area Point Coordinates

Horizontal Datum - NAD83(2011)
UTM-Zone 19N
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
UA1	4897127.42	378813.44	119.17
UA2	4919093.86	357378.61	201.39
UA3	4931919.03	384260.59	127.92
UA4	4946914.49	408632.47	111.84
UA5	4963685.89	393794.41	172.11
UA6	4979036.24	408866.43	175.62
UA7	5034504.83	451420.89	314.85
UA8	5058798.43	439421.61	317.77
UA9	4909872.96	375960.63	144.69
UA10	4904906.83	391287.98	109.80
UA11	4934841.24	377474.43	132.56
UA12	4939118.42	401827.03	188.30
UA13	4989822.79	396877.44	531.30
UA14	5015094.81	460593.90	266.35
UA15	4950377.93	387287.00	225.83
UA16	4943778.07	361216.07	213.07
UA17	4887516.30	348579.74	126.92
UA18	4893528.23	362888.21	154.08
UA19	4887593.00	380538.43	99.83
UA20	4885909.48	372409.13	115.18
UA21	5009428.18	422158.46	170.47
UA22	5021121.95	423926.09	177.93
UA23	4992230.48	404582.38	255.78
UA24	5054528.50	401529.69	357.70
UA25	4901236.37	355399.80	182.70
UA26	4917593.83	342932.94	218.38
UA27	4928782.36	403358.60	121.68
UA28	4928459.10	365314.32	194.23



Tall Weed Point Coordinates

Horizontal Datum - NAD83(2011)

UTM-Zone 19N

Vertical Datum - NAVD 88

Geoid - GEOID12B

Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
TW1	5041730.49	439173.11	324.51
TW2	5018326.81	403708.54	335.64
TW3	4972724.34	399210.38	263.81
TW4	4920154.11	356541.25	197.24



Forest Point Coordinates

Horizontal Datum - NAD83(2011)
UTM-Zone 19N
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
FO1	4875578.70	376640.46	162.40
FO2	4879481.52	375328.29	144.85
FO3	4882892.81	381287.80	126.93
FO4	4882620.78	371445.75	102.20
FO5	4887936.58	382859.62	96.33
FO6	4894733.62	386912.78	163.43
FO7	4897348.27	378688.89	126.89
FO8	4897879.61	369291.75	165.86
FO9	4891135.53	362714.18	132.11
FO10	4882810.09	353302.36	239.90
FO11	4887517.34	348953.34	126.89
FO12	4891597.54	341211.81	131.23
FO13	4901951.97	339689.12	165.00
FO14	4901318.19	355291.84	192.17
FO15	4904978.60	391287.72	102.67
FO16	4903620.15	385384.46	275.25
FO17	4905714.40	377701.51	135.33
FO18	4909816.99	375905.27	140.81
FO19	4909441.87	358928.02	195.56
FO20	4917338.73	342789.44	221.76
FO21	4918313.34	352032.24	205.90
FO22	4917581.62	364427.90	220.84
FO23	4913793.93	383313.27	185.67
FO24	4911420.85	396627.02	140.47
FO25	4927505.29	357897.04	192.25
FO26	4929430.18	366653.27	191.24
FO27	4951423.80	398130.26	330.87
FO28	4926779.91	382325.07	152.12
FO29	4928117.33	414349.38	175.95



FO30	4933667.21	413786.76	119.87
FO31	4961829.46	411251.77	185.31
FO32	4936773.94	394652.09	177.26
FO33	4934798.85	339185.04	487.42
FO34	4938467.43	346257.79	458.09
FO35	4943907.34	361441.72	199.53
FO36	4942196.76	374676.71	173.96
FO37	4983341.10	380868.67	467.55
FO38	4950557.65	373110.93	227.45
FO39	4950448.36	387292.41	226.61
FO40	4946513.96	408774.27	104.22
FO41	4992249.40	404510.83	260.61
FO42	4996696.56	390996.59	365.93
FO43	4995407.33	409043.63	386.62
FO44	4996198.11	425497.17	167.23
FO45	4998722.99	437051.26	317.57
FO46	4999992.37	447857.35	481.78
FO47	5008535.11	446266.77	403.06
FO48	5008375.89	435501.20	301.64
FO49	5009783.49	421820.86	158.48
FO50	5026082.08	381798.21	723.16
FO51	5031587.28	376945.98	677.86
FO52	5017608.31	374218.25	389.21
FO53	5022657.59	481601.11	214.23
FO54	5036742.89	472964.52	418.52
FO55	5027188.01	443046.05	383.67
FO56	5021099.48	423991.81	177.04
FO57	5039905.10	371165.48	516.11
FO58	5053261.38	378549.92	442.15
FO59	5060948.47	386612.62	544.04
FO60	5063550.64	399484.95	430.13
FO61	5086668.80	422817.55	347.51
FO62	5088437.29	437116.61	344.90
FO63	5086170.33	449217.04	312.75
FO64	5082170.90	456101.08	295.34
FO65	5079768.30	473050.08	309.48
FO66	5065783.06	457764.28	341.29
FO67	5072112.61	436311.95	320.97
FO68	5058799.33	439370.03	318.95
FO69	5050776.93	474581.81	396.35
FO70	5046449.19	455868.68	315.99



FO71	5056937.46	456604.81	368.10
FO72	5035588.54	416690.79	519.14
FO73	5035390.69	398786.81	343.52



Brushland Point Coordinates

Horizontal Datum - NAD83(2011)
UTM-Zone 19N
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
SH1	5058708.69	426234.63	337.53
SH2	5048412.34	407815.75	606.63
SH3	5018183.96	458158.04	336.80
SH4	5011062.48	388176.84	422.94
SH5	4944265.42	365837.18	231.88
SH6	4941824.03	414593.37	104.54
SH7	5039922.60	371195.08	515.56
SH8	4986165.30	407735.94	227.84
SH9	4971551.55	386930.93	297.99
SH10	5076729.66	455158.38	327.81



Point Data and Accuracy Log Sheets



Calibration Point Log Sheets

Point ID	CA1
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4879641.45	375599.52	148.87

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA2
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Poland

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4887913.73	382773.97	97.11

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA3
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Cumberland
Quad	Norway

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4888860.15	372231.03	123.68

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA4
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4891080.06	362648.73	130.69

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CA5
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Fryeburg

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

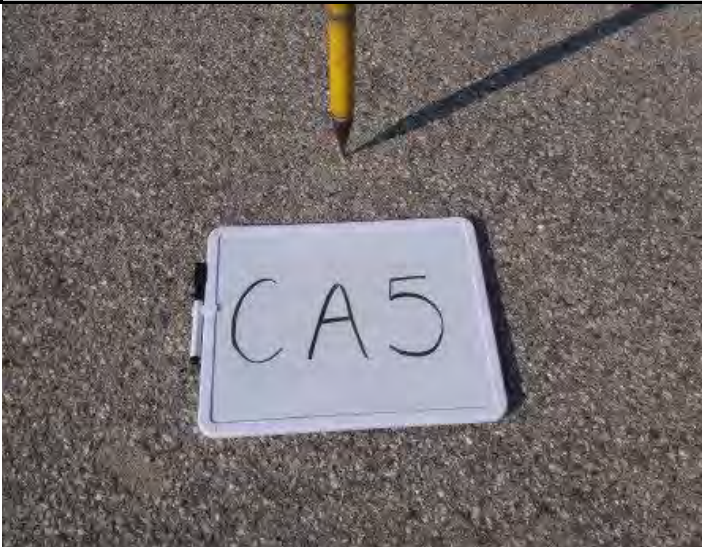
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4887420.71	348843.90	127.21

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA6
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Fryeburg

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4891587.87	341276.03	131.46

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.003
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CA7
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Poland

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

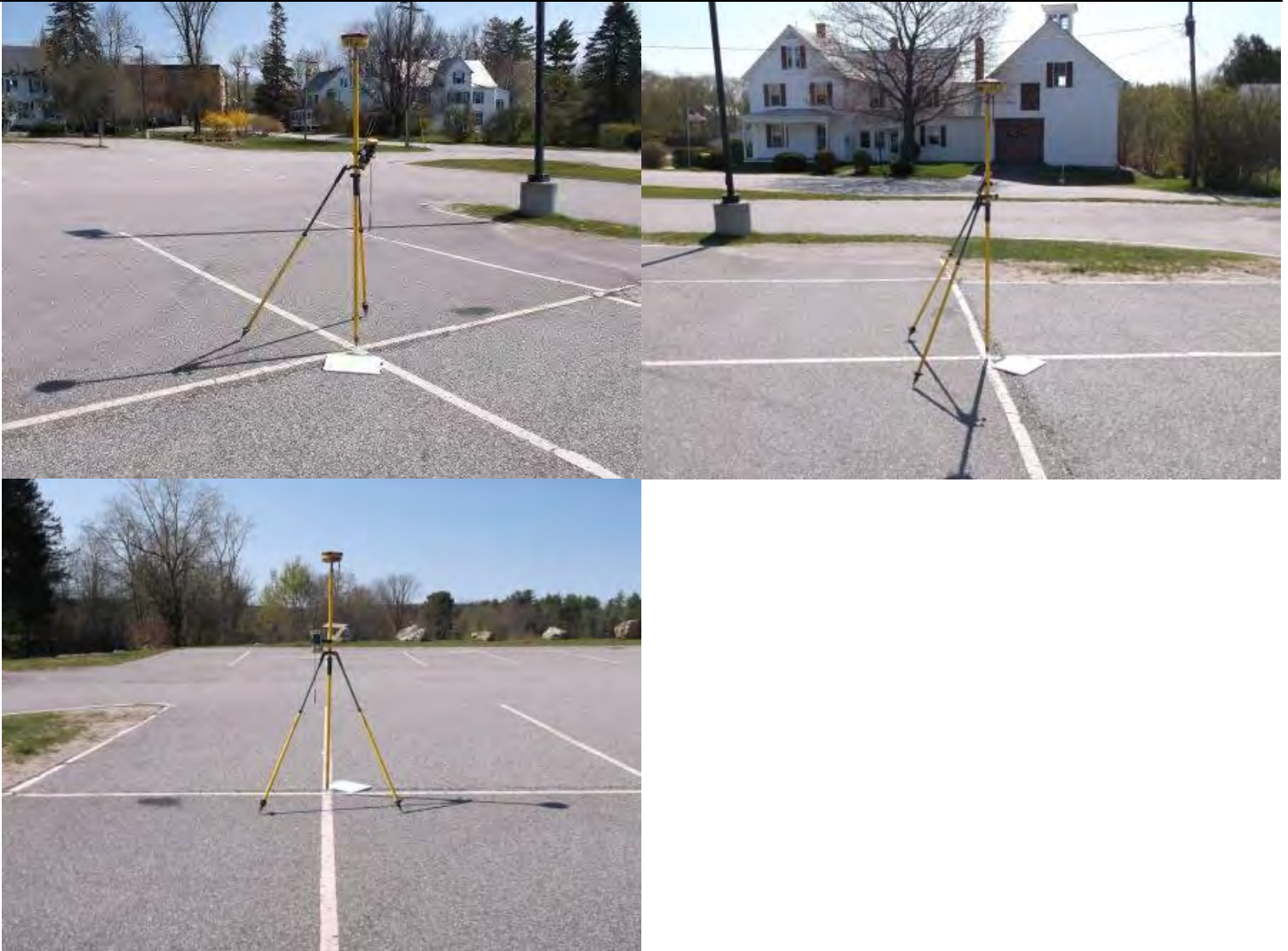
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4894754.88	387417.59	170.87

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA8
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4897111.17	378843.28	118.84

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA9
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4897924.87	369259.60	166.75

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CA10
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4901242.72	355353.36	183.00

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA11
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	New Hampshire
County	Carroll
Quad	Gorham

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4901954.50	339473.10	167.83

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.006
RMSE Z	0.013
Method	Fast Static GPS

PHOTOS:



Point ID	CA12
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckfield

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4902971.34	393887.91	108.69

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA13
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckfield

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4903667.19	385392.78	273.35

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA14
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bryant Pond

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4905691.83	377633.92	137.63

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CA15
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4909409.99	358925.00	196.79

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA16
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4917474.81	342749.83	218.47

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CA17
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4918303.16	351931.31	206.82

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Z

Point ID	CA18
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bryant Pond

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4917555.64	364557.62	220.92

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA19
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckfield

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4913818.92	383342.86	191.23

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA20
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckfield

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4911422.54	396701.66	133.48

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.003
RMSE Z	0.003
Method	RTK GPS

PHOTOS:



Point ID	CA21
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckfield

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4921529.95	395286.36	123.62

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.004
RMSE Z	0.004
Method	RTK GPS

PHOTOS:



Point ID	CA22
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Dixfield

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

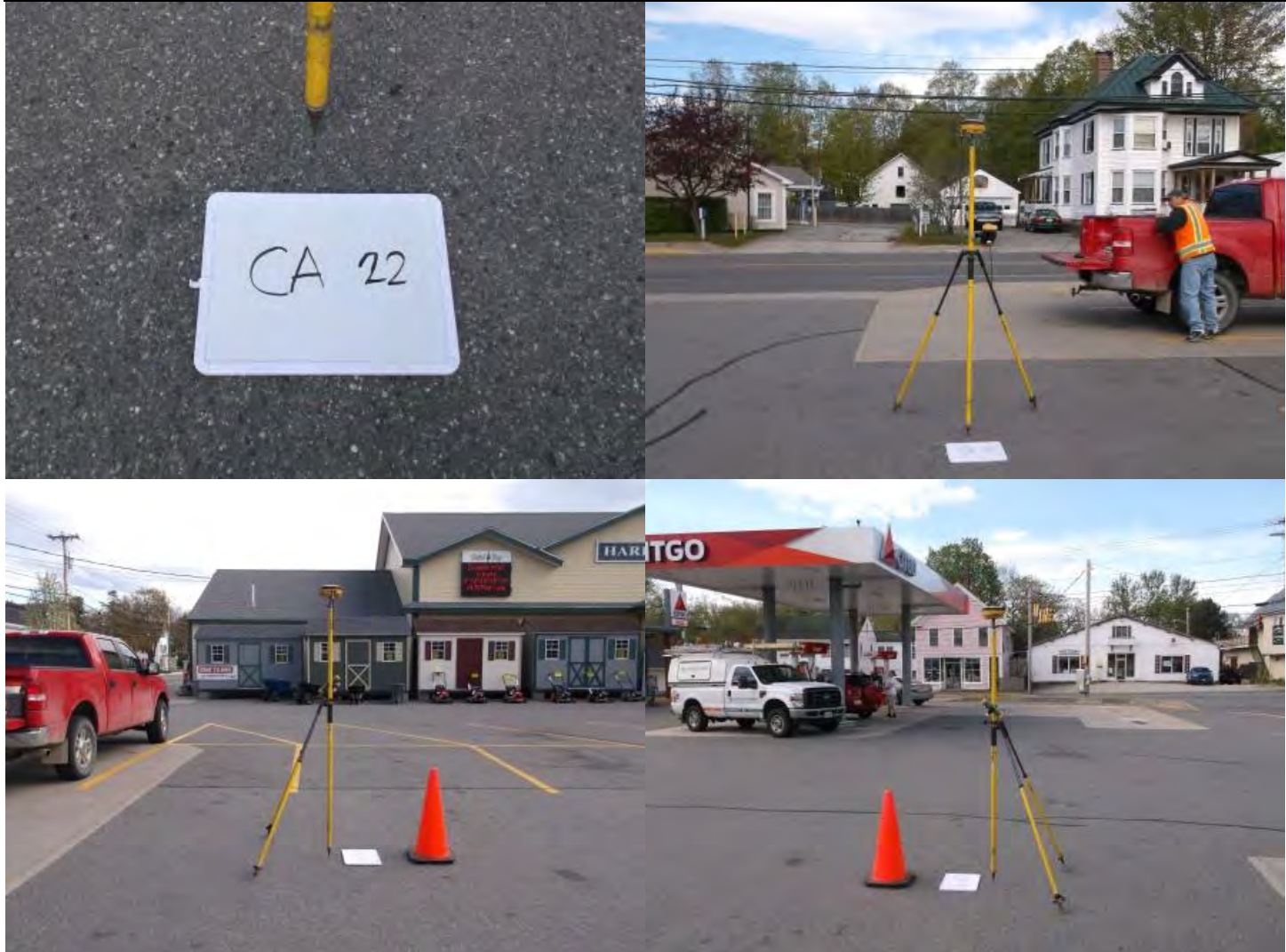
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4931936.72	384270.48	128.26

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA23
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4930139.05	371286.61	189.03

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA24
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4927623.44	357869.08	194.80

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA25
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Old Speck Mountain

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4938500.29	346266.92	455.90

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00107
Antenna Height	2.100 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.012
RMSE Z	0.027
Method	Fast Static GPS

PHOTOS:



Point ID	CA26
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4943995.69	361547.62	199.54

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CA27
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4942166.25	374659.95	174.42

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CA28
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Dixfield

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4936697.27	394674.27	168.97

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/13/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA29
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4928941.60	403330.43	123.95

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/13/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA30
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4938741.00	409704.71	113.25

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/13/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA31
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4946586.16	408742.80	107.37

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/13/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA32
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Dixfield

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4950399.08	387329.96	226.92

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.014
RMSE Z	0.024
Method	Fast Static GPS

PHOTOS:



Point ID	CA33
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Kingfield

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4961845.92	411324.39	184.78

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Ze

Point ID	CA34
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Kingfield

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4962129.69	403496.28	153.65

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA35
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Phillips

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4964694.30	392518.40	232.82

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA36
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Phillips

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4968876.38	384567.64	258.78

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00107
Antenna Height	2.100 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.006
RMSE Z	0.012
Method	Fast Static GPS

PHOTOS:



Point ID	CA37
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Phillips

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4972933.83	399617.96	263.26

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA38
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Kingfield

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

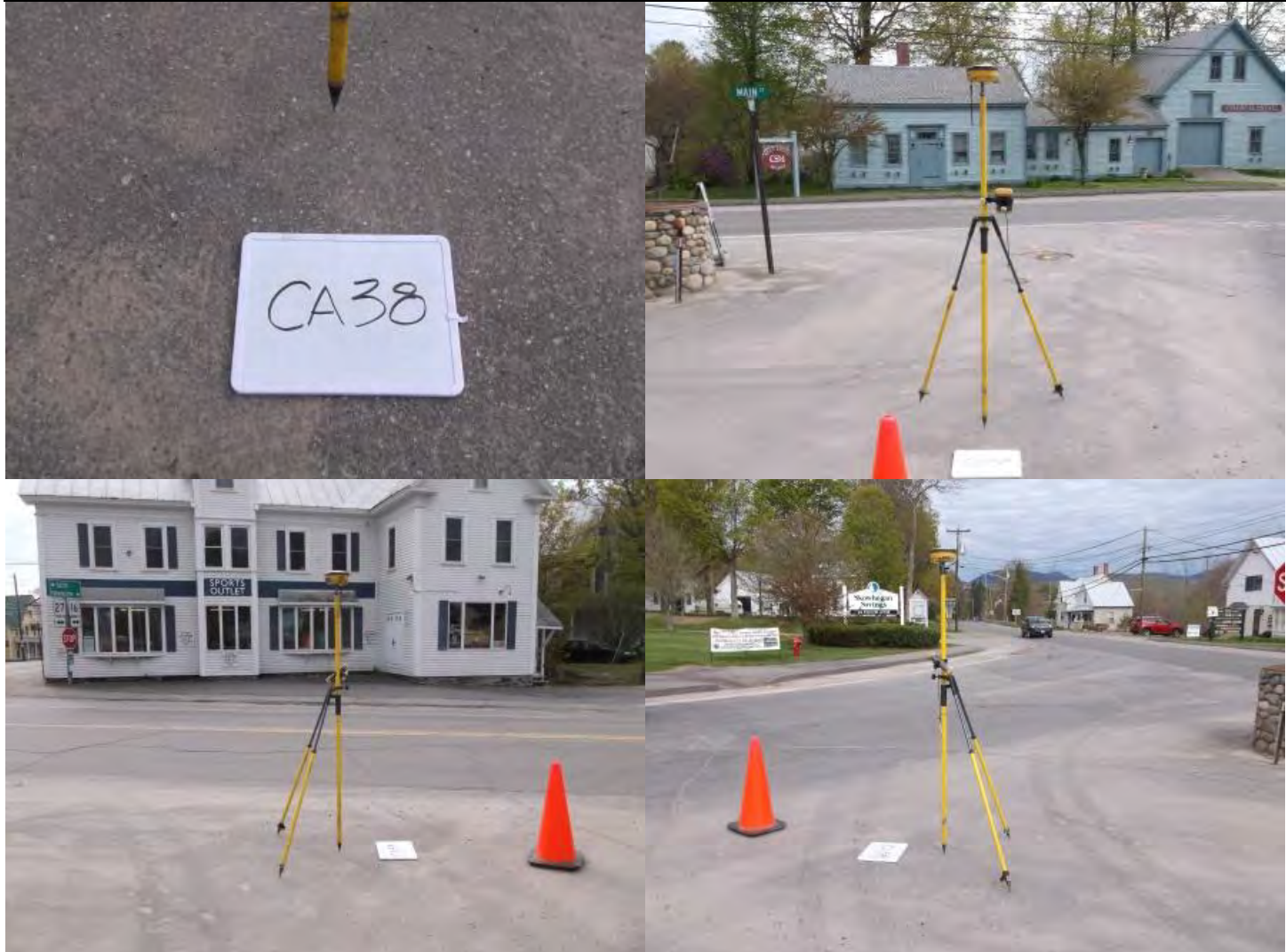
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4979030.52	408859.08	175.70

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CA39
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Rangeley

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

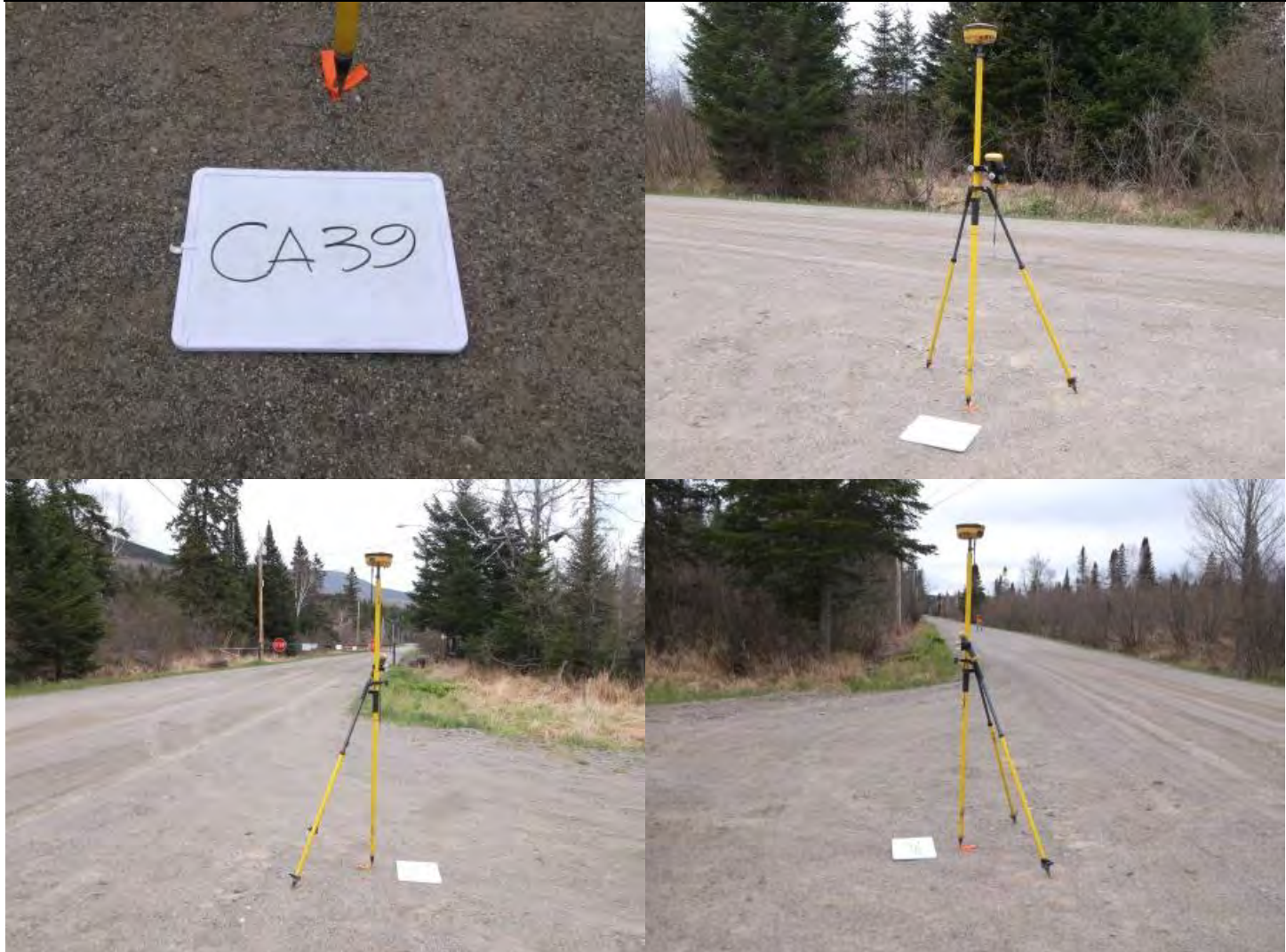
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4983380.62	380930.11	468.40

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA40
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Stratton

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4996635.29	390991.44	365.94

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA41
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Stratton

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4989801.58	396873.12	532.12

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.004
RMSE Z	0.004
Method	RTK GPS

PHOTOS:



Point ID	CA42
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Little Bigelow Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4989131.43	405618.92	231.94

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA43
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Little Bigelow Mountain

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4995375.46	408957.41	379.41

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA44
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Bingham

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4996234.32	425453.27	158.70

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/25/2016
RMSE Hz	0.002
RMSE Z	0.004
Method	RTK GPS

PHOTOS:



Point ID	CA45
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Bingham

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4998586.43	437042.79	311.23

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/25/2016
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CA46
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Kingsbury

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5000013.40	447936.19	483.89

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.015
RMSE Z	0.021
Method	Fast Static GPS

PHOTOS:



Point ID	CA47
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Kingsbury

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5008507.18	446264.91	401.26

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.013
RMSE Z	0.026
Method	Fast Static GPS

PHOTOS:



Point ID	CA48
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Greenville

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5012827.81	454224.66	177.85

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.011
RMSE Z	0.020
Method	Fast Static GPS

PHOTOS:



Point ID	CA49
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Sebec Lake

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5014690.78	460910.51	260.75

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.006
RMSE Z	0.013
Method	Fast Static GPS

PHOTOS:



Point ID	CA50
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Sebec Lake

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5016768.60	472551.45	110.38

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.013
RMSE Z	0.018
Method	Fast Static GPS

PHOTOS:



Point ID	CA51
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Sebec

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5013219.68	483154.98	128.18

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.014
RMSE Z	0.031
Method	Fast Static GPS

PHOTOS:



Point ID	CA52
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Sebec

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5022605.84	481622.41	215.70

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.013
RMSE Z	0.022
Method	Fast Static GPS

PHOTOS:



Point ID	CA53
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Stratton

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5010453.86	387218.96	425.02

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA54
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Little Bigelow Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5009275.89	406150.44	317.37

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/26/2016
RMSE Hz	0.014
RMSE Z	0.028
Method	Fast Static GPS

PHOTOS:



Point ID	CA55
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Bingham

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5009823.33	421839.59	158.10

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/19/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA56
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Bingham

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5008310.01	435519.16	303.23

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/25/2016
RMSE Hz	0.010
RMSE Z	0.020
Method	Fast Static GPS

PHOTOS:



Point ID	CA57
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Spencer Lake

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5013128.22	392202.05	424.18

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/26/2016
RMSE Hz	0.014
RMSE Z	0.022
Method	Fast Static GPS

PHOTOS:



Point ID	CA58
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Pierce Pond

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5018310.77	403683.27	335.74

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.018
RMSE Z	0.031
Method	Fast Static GPS

PHOTOS:



Point ID	CA59
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	The Forks

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5022093.16	423006.35	187.08

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.003
RMSE Z	0.006
Method	RTK GPS

PHOTOS:



Point ID	CA60
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Greenville

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5027204.38	442935.70	381.82

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CA61
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Sebec Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

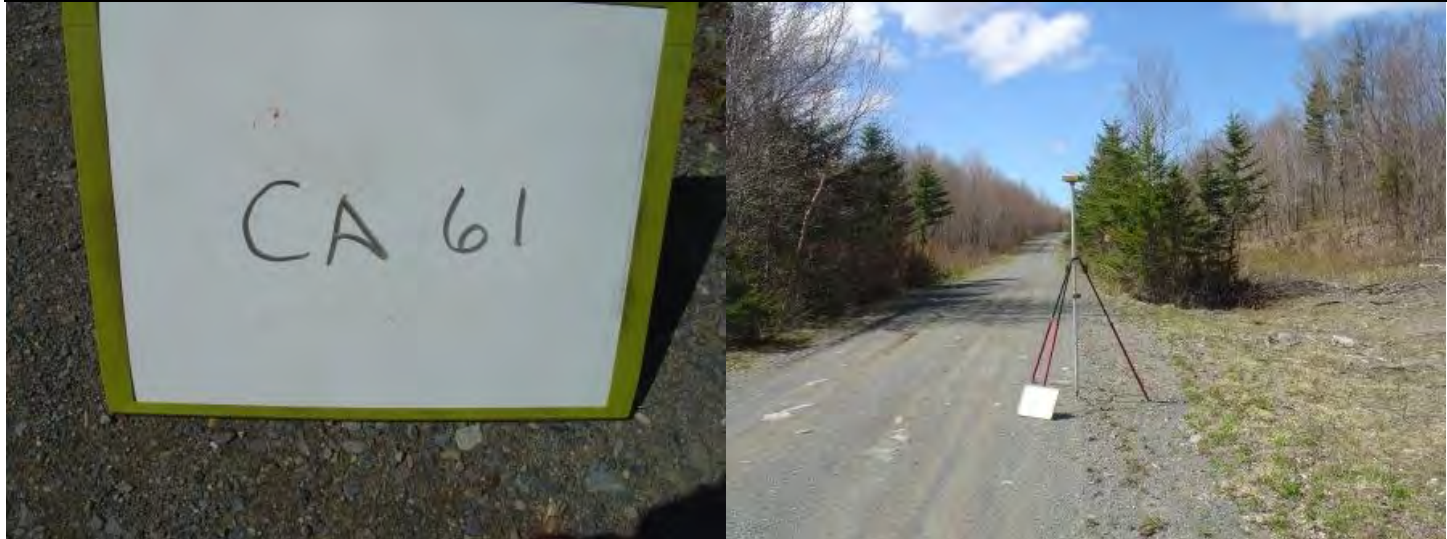
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5036630.04	472946.77	422.13

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.008
RMSE Z	0.016
Method	Fast Static GPS

PHOTOS:



Point ID	CA62
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Greenville

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5034070.49	453146.65	322.83

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA63
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Chain Lakes

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5017644.12	374282.59	377.46

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA64
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Chain Lakes

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5031573.03	376880.42	680.94

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.016
RMSE Z	0.030
Method	Fast Static GPS

PHOTOS:



Point ID	CA65
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Chain Lakes

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5026089.67	381766.48	725.65

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/26/2016
RMSE Hz	0.017
RMSE Z	0.026
Method	Fast Static GPS

PHOTOS:



Point ID	CA66
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Spencer Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5035416.48	398669.24	338.83

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.007
RMSE Z	0.014
Method	Fast Static GPS

PHOTOS:



Point ID	CA67
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Pierce Pond

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5035574.46	416724.89	516.43

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.009
RMSE Z	0.017
Method	Fast Static GPS

PHOTOS:



Point ID	CA68
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Brassua Lake

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5041699.71	439198.91	325.87

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.005
RMSE Z	0.010
Method	Fast Static GPS

PHOTOS:



Point ID	CA69
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Moosehead Lake

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5046375.89	455836.29	313.99

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.005
RMSE Z	0.009
Method	Fast Static GPS

PHOTOS:



Point ID	CA70
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	First Roach Pond

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5050748.85	474640.25	396.23

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.009
RMSE Z	0.016
Method	Fast Static GPS

PHOTOS:



Point ID	CA71
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Skinner

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5039988.29	371168.86	513.26

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.015
RMSE Z	0.033
Method	Fast Static GPS

PHOTOS:



Point ID	CA72
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Skinner

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5044260.64	381623.04	450.78

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/25/2016
RMSE Hz	0.008
RMSE Z	0.016
Method	Fast Static GPS

PHOTOS:



Point ID	CA73
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Attean

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5053393.23	396554.51	381.14

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/25/2016
RMSE Hz	0.002
RMSE Z	0.005
Method	Fast Static GPS

PHOTOS:



Point ID	CA74
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Long Pond

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5052799.39	411530.57	361.64

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.003
RMSE Z	0.007
Method	Fast Static GPS

PHOTOS:



Point ID	CA75
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Brassua Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5058807.27	439445.29	317.15

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/23/2016
RMSE Hz	0.011
RMSE Z	0.016
Method	Fast Static GPS

PHOTOS:



Point ID	CA76
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Moosehead Lake

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

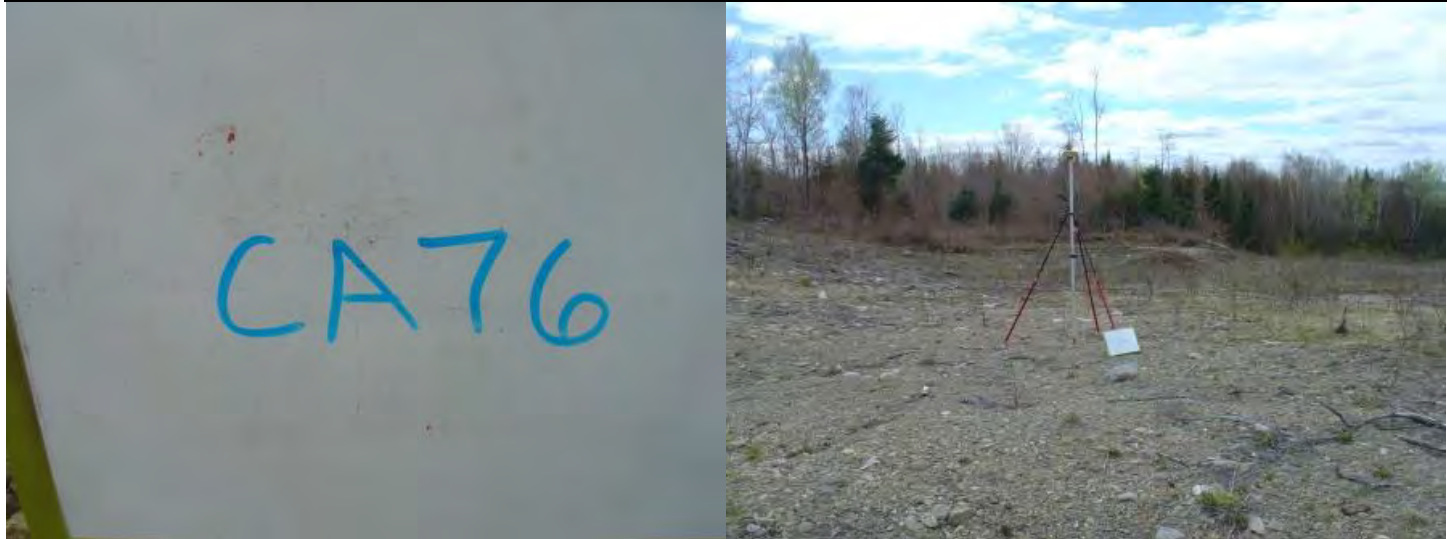
Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5056918.95	456515.39	364.35

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.008
RMSE Z	0.016
Method	Fast Static GPS

PHOTOS:



Point ID	CA77
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	First Roach Pond

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5058495.59	473922.02	408.36

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.005
RMSE Z	0.009
Method	Fast Static GPS

PHOTOS:



Point ID	CA78
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Skinner

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5053265.56	378517.87	443.05

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/25/2016
RMSE Hz	0.009
RMSE Z	0.014
Method	Fast Static GPS

PHOTOS:



Point ID	CA79
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Attean

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5060992.97	386574.06	539.75

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/25/2016
RMSE Hz	0.007
RMSE Z	0.011
Method	Fast Static GPS

PHOTOS:



Point ID	CA80
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Attean

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5063520.91	399473.65	428.69

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.003
RMSE Z	0.007
Method	Fast Static GPS

PHOTOS:



Point ID	CA81
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Penobscot Lake

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5068984.81	410650.16	455.58

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/23/2016
RMSE Hz	0.018
RMSE Z	0.031
Method	Fast Static GPS

PHOTOS:



Point ID	CA82
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Brassua Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5058727.04	426194.55	340.18

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.009
RMSE Z	0.016
Method	Fast Static GPS

PHOTOS:



Point ID	CA83
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Moosehead Lake

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5065785.54	457829.47	344.10

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.011
RMSE Z	0.019
Method	Fast Static GPS

PHOTOS:



Point ID	CA84
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Ragged Lake

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5069092.22	473645.40	370.38

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	Fast Static GPS

PHOTOS:



Point ID	CA85
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Seboomook Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

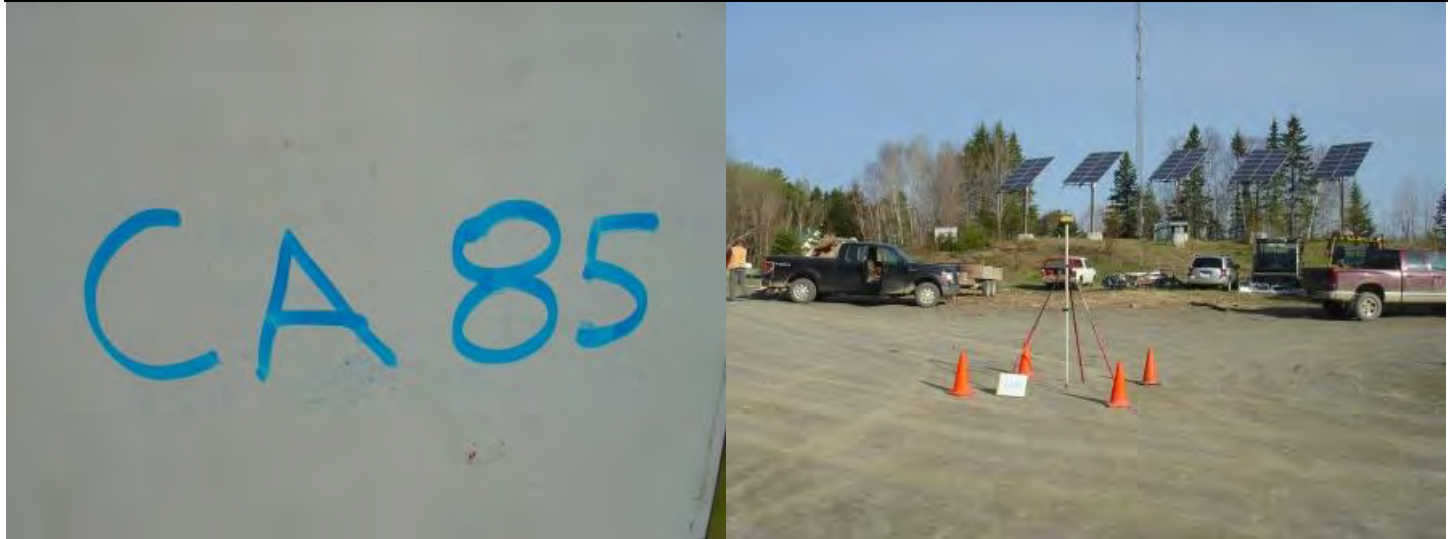
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5082534.52	425427.21	335.18

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.018
RMSE Z	0.031
Method	Fast Static GPS

PHOTOS:



Point ID	CA86
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Seboomook Lake

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5086730.41	422890.48	348.95

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.002
RMSE Z	0.004
Method	Fast Static GPS

PHOTOS:



Point ID	CA87
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Seboomook Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5088542.34	437264.21	335.54

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.002
RMSE Z	0.004
Method	Fast Static GPS

PHOTOS:



Point ID	CA88
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	North East Carry

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5086242.13	449174.40	315.41

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.007
RMSE Z	0.017
Method	Fast Static GPS

PHOTOS:



Point ID	CA89
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	North East Carry

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5082195.25	456129.42	295.13

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.003
RMSE Z	0.004
Method	Fast Static GPS

PHOTOS:



Point ID	CA90
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Ragged Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5079827.80	473060.54	308.39

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.006
RMSE Z	0.012
Method	Fast Static GPS

PHOTOS:



Point ID	CA91
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Seboomook Lake

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

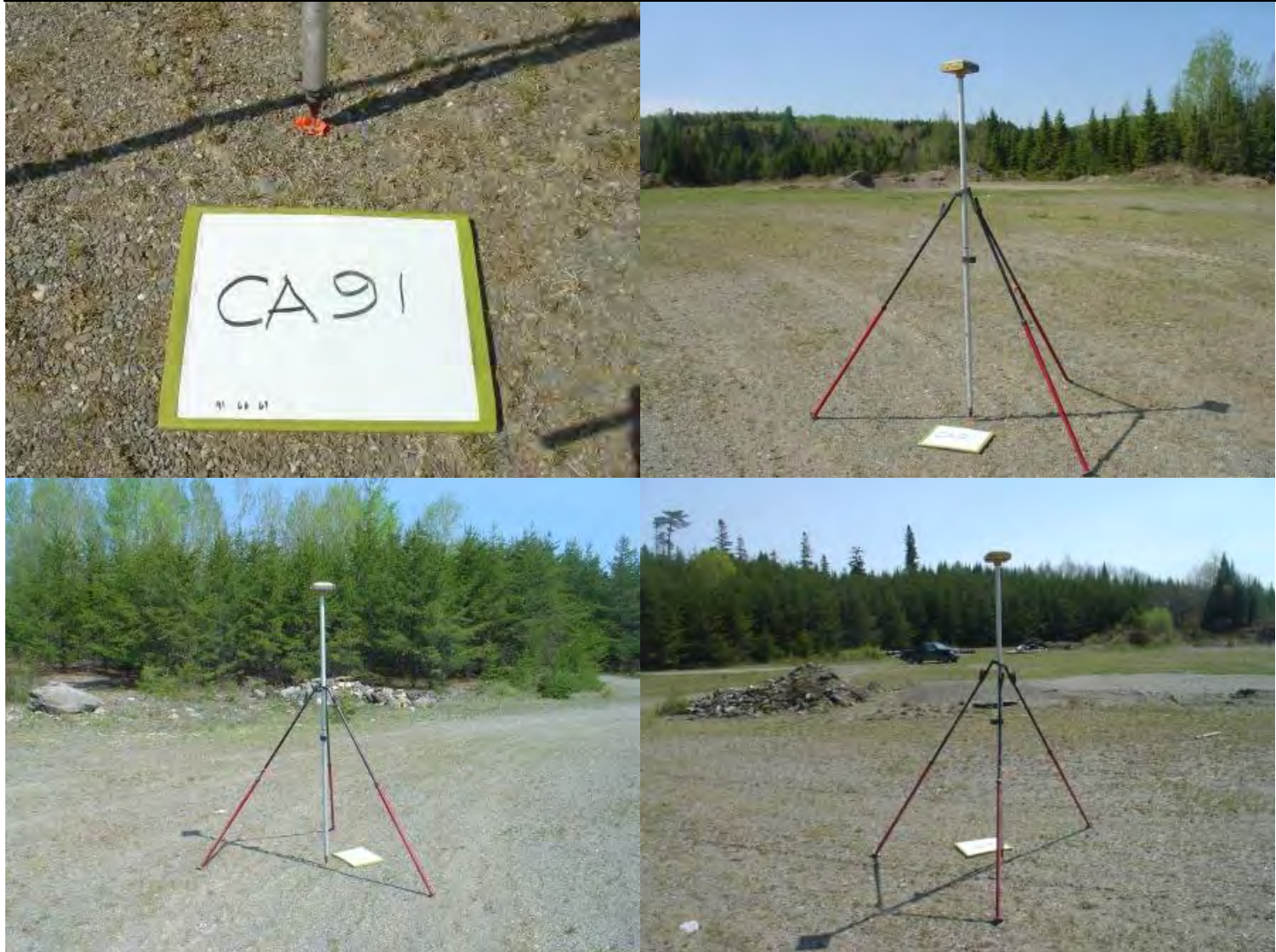
Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5072063.97	436212.19	318.73

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/23/2016
RMSE Hz	0.015
RMSE Z	0.023
Method	Fast Static GPS

PHOTOS:



Point ID	CA92
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Dixfield

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4951394.37	398191.16	331.26

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CA93
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Milan

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4934744.13	339198.78	486.19

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.002
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA94
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Fryeburg

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4882716.00	353336.11	241.20

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA95
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4875527.17	376550.77	166.90

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA96
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Cumberland
Quad	Norway

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4882630.01	371494.90	101.77

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA97
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Poland

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4882830.23	381310.62	130.37

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CA98
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4928088.31	414314.17	175.53

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/13/2016
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CA99
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rimford

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4950584.27	373059.43	228.00

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CA100
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4955178.62	374251.97	427.00

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.011
RMSE Z	0.021
Method	Fast Static GPS

*Mislabeled Photo Board

PHOTOS:



Point ID	CA101
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Kennebago Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4989043.44	380160.76	869.45

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:





Bare Earth Point Log Sheets



Point ID	BE1
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4879323.20	375393.87	148.15

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE2
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Cumberland
Quad	Norway

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4882670.92	371477.58	104.03

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE3
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Poland

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4882790.71	381360.24	132.17

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE4
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Cumberland
Quad	Norway

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4888806.22	372256.08	123.43

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE5
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Poland

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4887909.66	382811.59	97.07

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE6
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Fryeburg

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4887481.59	348994.11	127.40

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE7
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4897902.16	369273.36	166.64

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.002
RMSE Z	0.003
Method	RTK GPS

PHOTOS:



Point ID	BE8
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckfield

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4902967.74	393908.72	108.52

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE9
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bryant Pond

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4905728.78	377594.10	138.08

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE10
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Fryeburg

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4899177.34	358729.97	189.82

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE11
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckfield

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4911419.18	396829.84	127.20

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE12
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckfield

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4913836.85	383304.29	187.08

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE13
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bryant Pond

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4917599.27	364458.03	221.06

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE14
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4918308.12	351987.64	206.61

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE15
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4917455.70	342763.59	218.68

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE16
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4927546.11	357861.95	194.30

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE17
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4936644.34	406782.42	192.76

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/13/2016
RMSE Hz	0.003
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE18
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Dixfield

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4936719.97	394646.49	169.09

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/13/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE19
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4942147.07	374648.75	174.37

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE20
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4943972.28	361625.32	199.58

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE21
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Milan

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4934781.62	339200.66	487.99

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE22
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Dixfield

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4951395.50	398154.78	331.80

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE23
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Kingfield

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4961824.17	411306.17	185.05

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE24
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Phillips

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

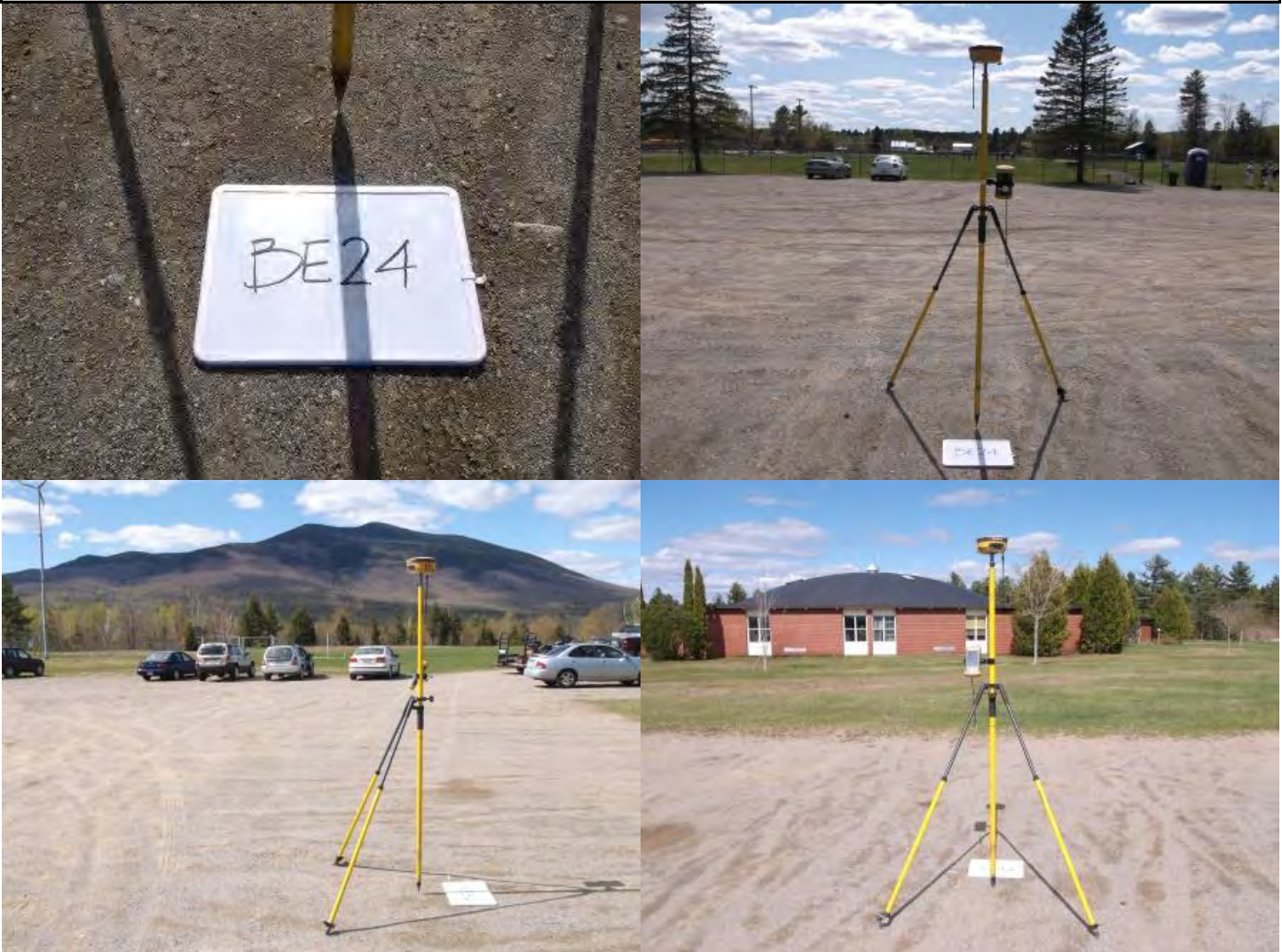
Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4972969.31	399623.33	263.03

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE25
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Little Bigelow Mountain

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4989199.63	405591.45	232.50

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE26
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Stratton

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4989991.62	396818.27	512.42

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.003
RMSE Z	0.003
Method	RTK GPS

PHOTOS:



Point ID	BE27
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Stratton

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4996656.55	390927.05	366.67

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE28
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Little Bigelow Mountain

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4995379.36	409017.37	384.24

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Ze

Point ID	BE29
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Bingham

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4998660.18	437031.08	312.58

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/25/2016
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE30
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Kingsbury

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

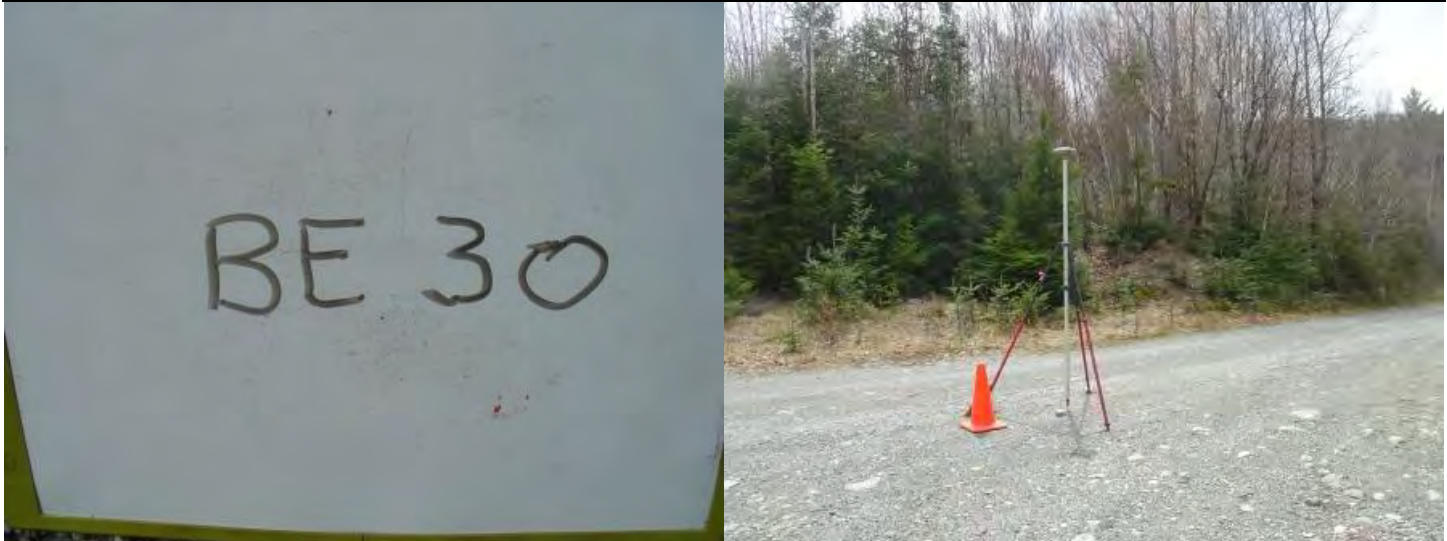
Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5008502.12	446302.76	402.04

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.017
RMSE Z	0.031
Method	Fast Static GPS

PHOTOS:



Point ID	BE31
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Bingham

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5008341.26	435485.98	303.09

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00107
Antenna Height	2.100 Meters

Date (MM-DD-YYYY)	5/25/2016
RMSE Hz	0.010
RMSE Z	0.020
Method	Fast Static GPS

PHOTOS:



Point ID	BE32
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Bingham

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5009852.98	421818.69	157.93

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/25/2016
RMSE Hz	0.003
RMSE Z	0.007
Method	Fast Static GPS

PHOTOS:



Point ID	BE33
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Little Bigelow Mountain

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5009245.43	406137.76	317.06

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-93
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/26/2016
RMSE Hz	0.013
RMSE Z	0.028
Method	Fast Static GPS

PHOTOS:



Point ID	BE34
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Stratton

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5010472.48	387255.36	424.43

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE35
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Spencer Lake

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5013131.62	392156.31	422.07

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/26/2016
RMSE Hz	0.014
RMSE Z	0.022
Method	Fast Static GPS

PHOTOS:



Point ID	BE36
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Pierce Pond

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5018298.69	403709.47	334.85

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00107
Antenna Height	2.100 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	Fast Static GPS

PHOTOS:



Point ID	BE37
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	The Forks

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5022074.67	423005.75	186.89

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.003
RMSE Z	0.006
Method	RTK GPS

PHOTOS:



Point ID	BE38
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Sebec Lake

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5014682.09	460897.96	261.13

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-07888
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.012
RMSE Z	0.024
Method	Fast Static GPS

PHOTOS:



Point ID	BE39
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Sebec Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

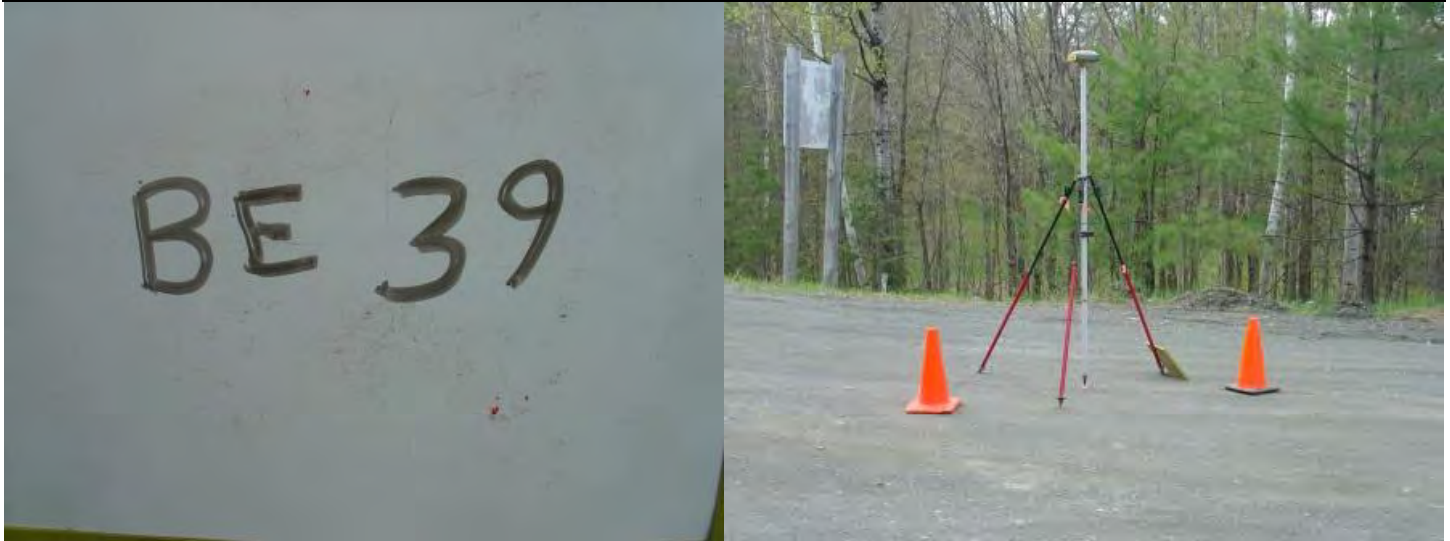
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5016774.53	472544.15	110.59

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.014
RMSE Z	0.017
Method	Fast Static GPS

PHOTOS:



Point ID	BE40
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Sebec

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5013212.26	483171.80	127.67

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.011
RMSE Z	0.025
Method	Fast Static GPS

PHOTOS:



Point ID	BE41
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Sebec

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5022590.43	481632.43	215.52

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.033
RMSE Z	0.028
Method	Fast Static GPS

PHOTOS:



Point ID	BE42
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Greenville

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5027166.00	443010.63	385.95

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE43
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Pierce Pond

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5035570.16	416693.39	517.38

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.009
RMSE Z	0.015
Method	Fast Static GPS

PHOTOS:



Point ID	BE44
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Spencer Lake

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5035393.96	398689.16	338.38

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.006
RMSE Z	0.013
Method	Fast Static GPS

PHOTOS:



Point ID	BE45
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Chain Lakes

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5026048.91	381760.92	722.21

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/26/2016
RMSE Hz	0.016
RMSE Z	0.027
Method	Fast Static GPS

PHOTOS:



Point ID	BE46
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Chain Lakes

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5017612.28	374273.25	377.28

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.002
RMSE Z	0.003
Method	RTK GPS

PHOTOS:



Point ID	BE47
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Chain Lakes

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5031574.33	376934.63	679.75

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00107
Antenna Height	2.100 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.017
RMSE Z	0.031
Method	Fast Static GPS

PHOTOS:



Point ID	BE48
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Skinner

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5039928.48	371182.32	515.41

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00107
Antenna Height	2.100 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.017
RMSE Z	0.033
Method	Fast Static GPS

PHOTOS:



Point ID	BE49
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Skinner

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5044250.53	381627.77	450.68

Operator	Robert P{rescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/25/2016
RMSE Hz	0.008
RMSE Z	0.017
Method	Fast Static GPS

PHOTOS:



Point ID	BE50
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Attean

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5053407.23	396556.27	381.81

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/25/2016
RMSE Hz	0.003
RMSE Z	0.006
Method	Fast Static GPS

PHOTOS:



Point ID	BE51
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Attean

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5063516.08	399473.25	428.38

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.004
RMSE Z	0.006
Method	Fast Static GPS

PHOTOS:



Point ID	BE52
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Long Pond

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5052810.45	411557.98	360.95

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.003
RMSE Z	0.006
Method	Fast Static GPS

PHOTOS:



Point ID	BE53
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Penobscot Lake

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5068979.54	410640.79	456.09

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/23/2016
RMSE Hz	0.002
RMSE Z	0.003
Method	Fast Static GPS

PHOTOS:



Point ID	BE54
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Brassua Lake

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

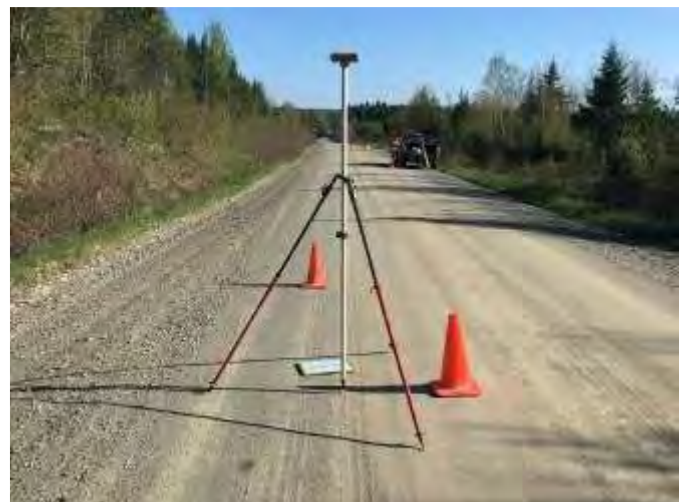
Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5058654.88	426204.01	340.58

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.009
RMSE Z	0.014
Method	Fast Static GPS

PHOTOS:



Point ID	BE55
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Moosehead Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

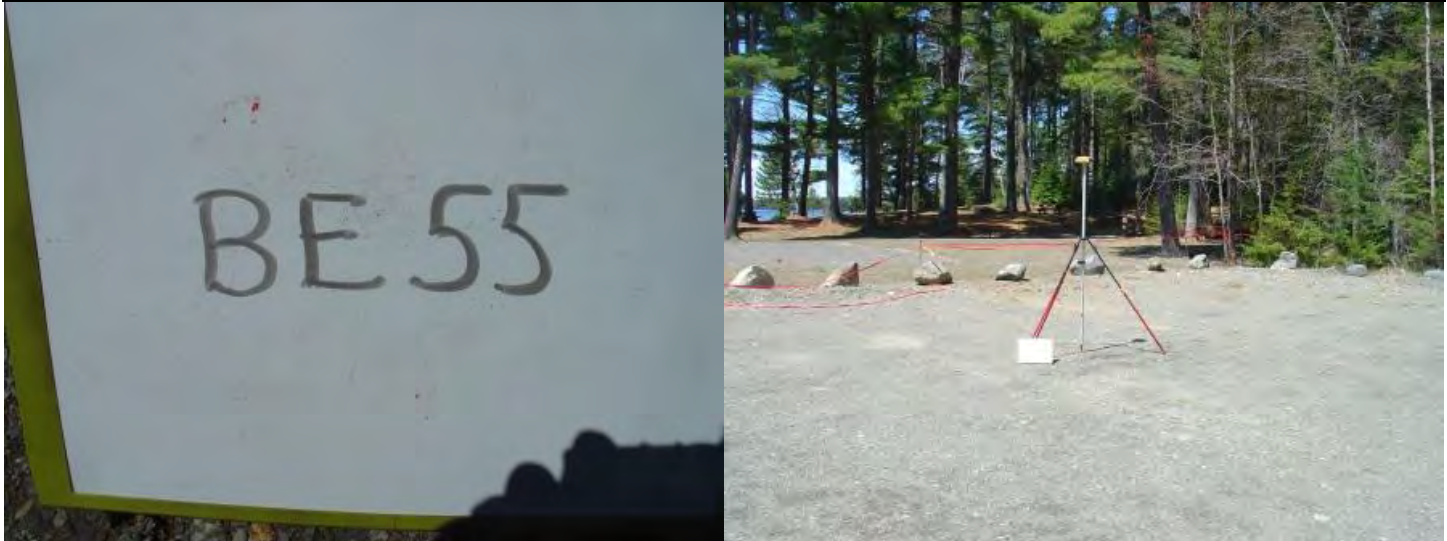
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5046401.12	455835.52	314.06

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.009
RMSE Z	0.017
Method	Fast Static GPS

PHOTOS:



Point ID	BE56
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Greenville

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5034141.89	453206.28	322.41

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE57
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Brassua Lake

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5041678.37	439153.14	325.32

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00107
Antenna Height	2.100 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.013
RMSE Z	0.023
Method	Fast Static GPS

PHOTOS:



Point ID	BE58
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Sebec Lake

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5036676.19	472975.01	420.88

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.010
RMSE Z	0.020
Method	Fast Static GPS

PHOTOS:



Point ID	BE59
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	First Roach Pond

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

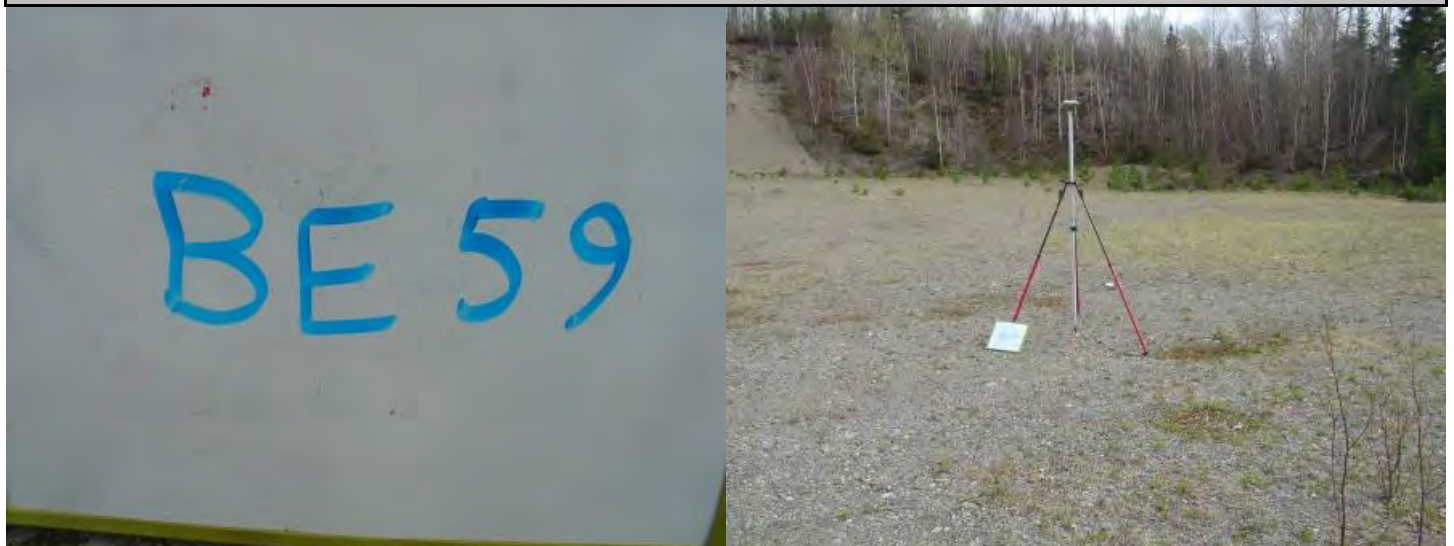
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5050757.12	474611.85	396.25

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.017
RMSE Z	0.029
Method	Fast Static GPS

PHOTOS:



Point ID	BE60
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	First Roach Pond

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5058502.59	473917.93	408.23

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/19/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE61
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Moosehead Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5056933.13	456561.61	366.34

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.008
RMSE Z	0.020
Method	Fast Static GPS

PHOTOS:



Point ID	BE62
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Moosehead Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

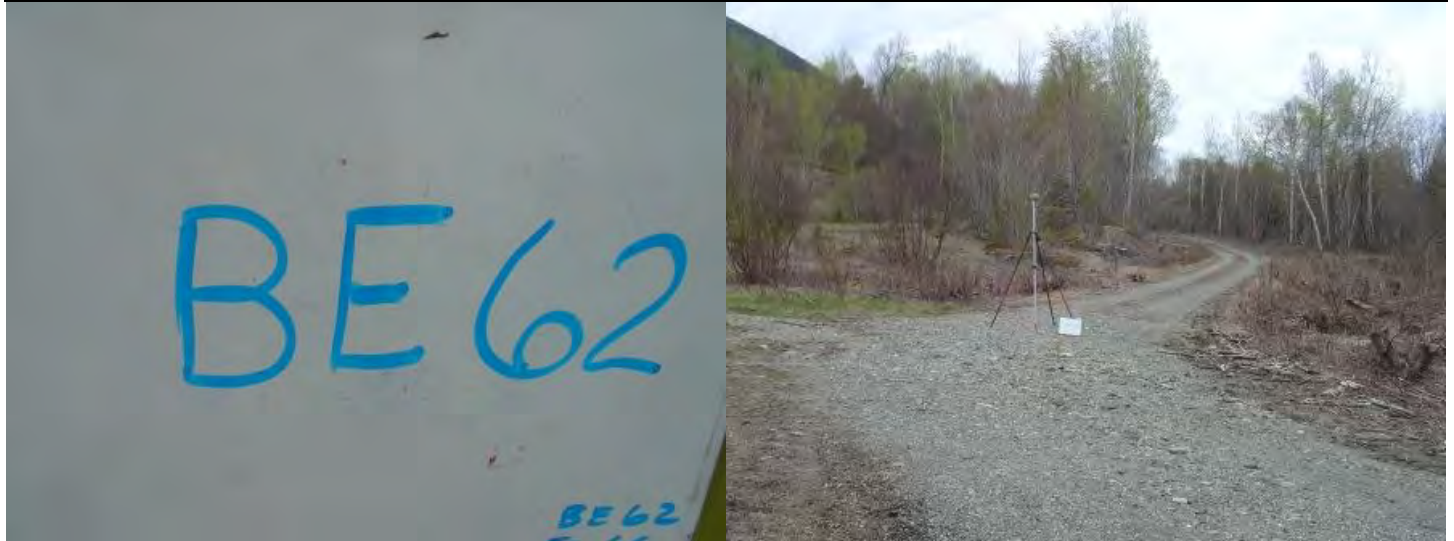
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5065822.15	457848.54	347.14

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	Fast Static GPS

PHOTOS:



Point ID	BE63
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Ragged Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5069181.86	473658.46	371.72

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	Fast Static GPS

PHOTOS:



Point ID	BE64
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Ragged Lake

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

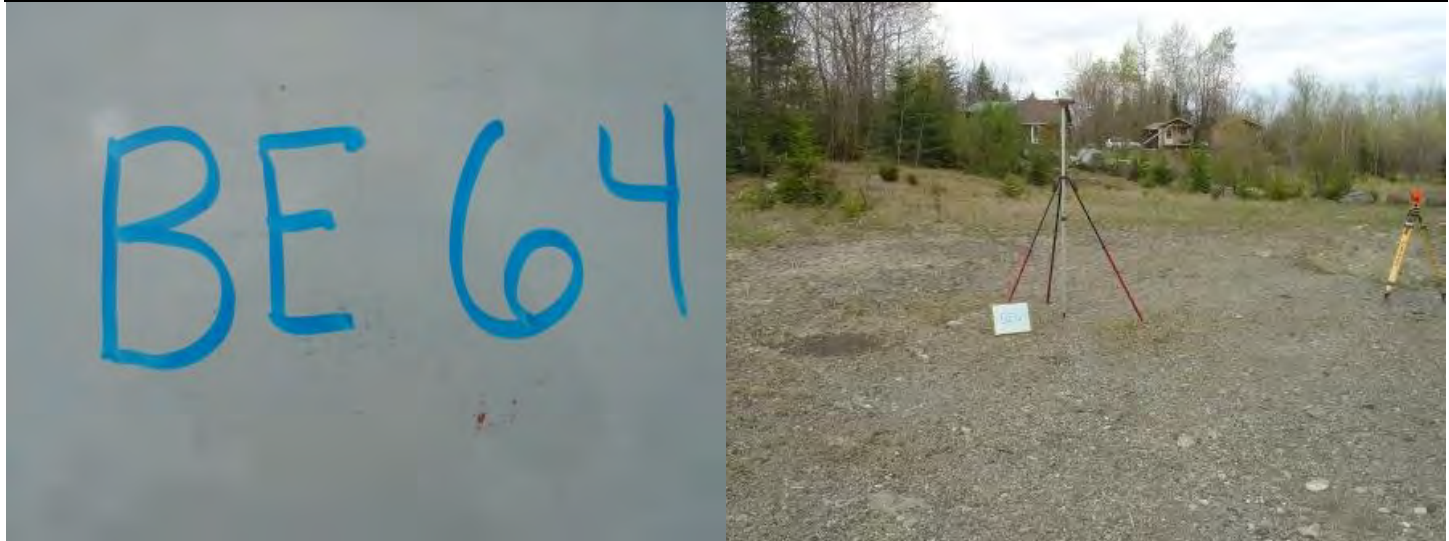
Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5079846.74	473040.22	307.12

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.006
RMSE Z	0.014
Method	Fast Static GPS

PHOTOS:



Point ID	BE65
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	North East Carry

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

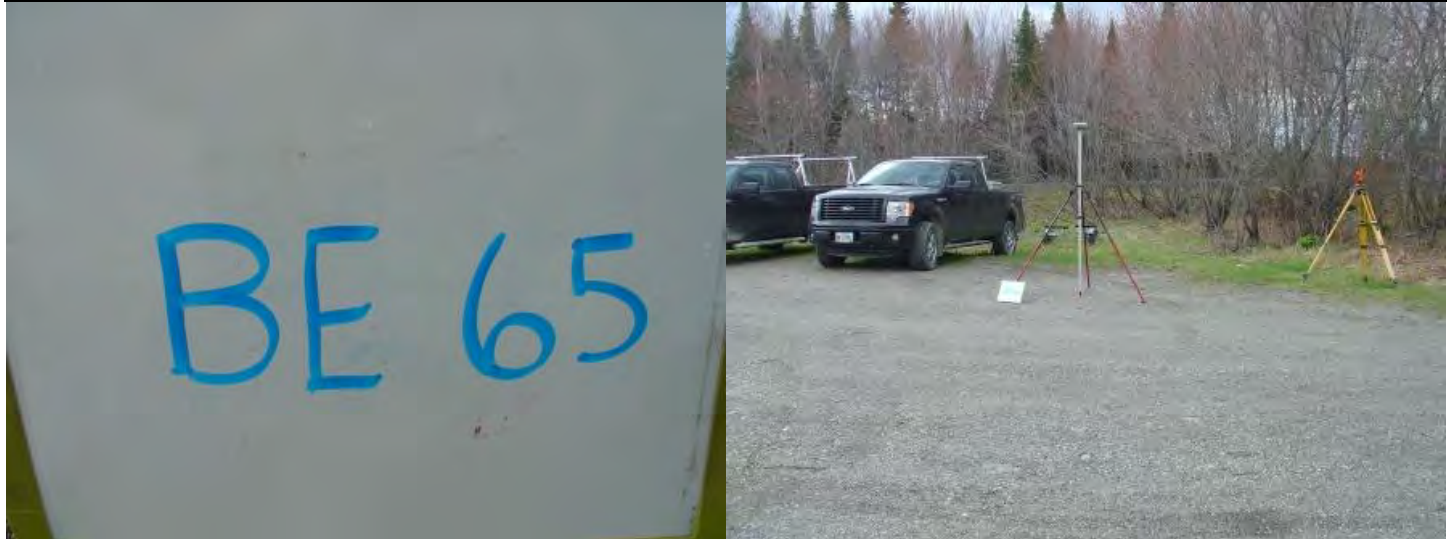
Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5082219.38	456165.92	295.02

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.003
RMSE Z	0.005
Method	Fast Static GPS

PHOTOS:



Point ID	BE66
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Seboomook Lake

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5072044.86	436278.81	317.75

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/23/2016
RMSE Hz	0.015
RMSE Z	0.023
Method	Fast Static GPS

PHOTOS:



Point ID	BE67
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Seboomook Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

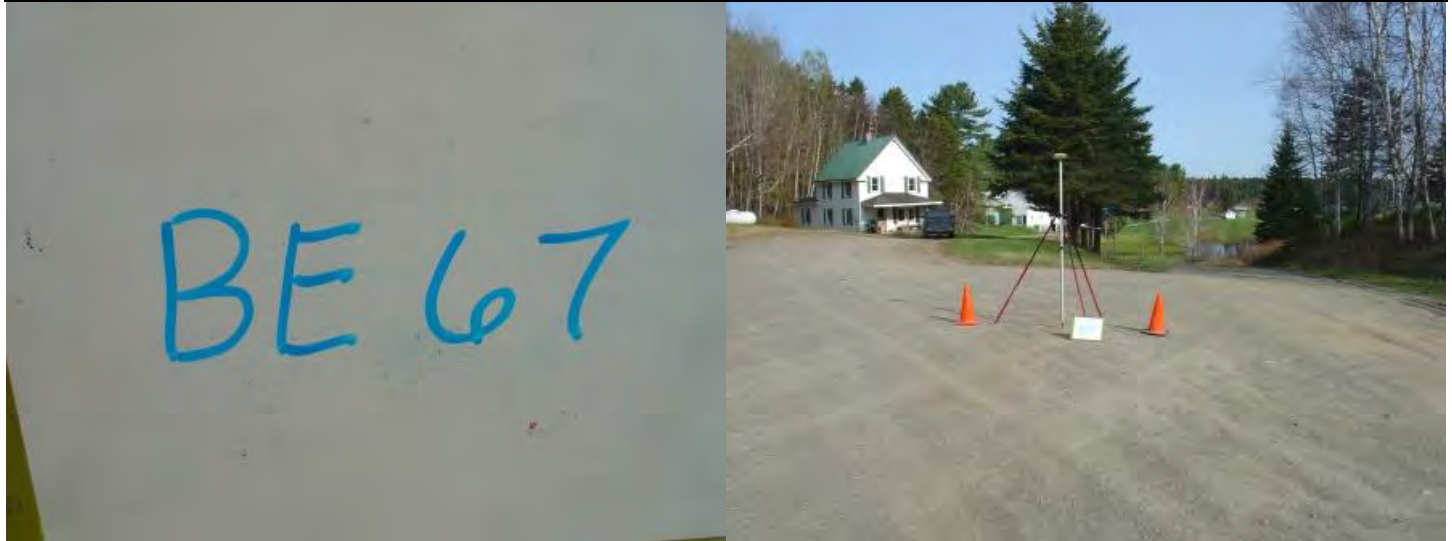
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5082549.04	425357.28	336.06

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.002
RMSE Z	0.003
Method	Fast Static GPS

PHOTOS:



Point ID	BE68
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Seboomook Lake

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5086682.60	422926.30	345.88

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.003
RMSE Z	0.006
Method	Fast Static GPS

PHOTOS:



Point ID	BE69
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Seboomook Lake

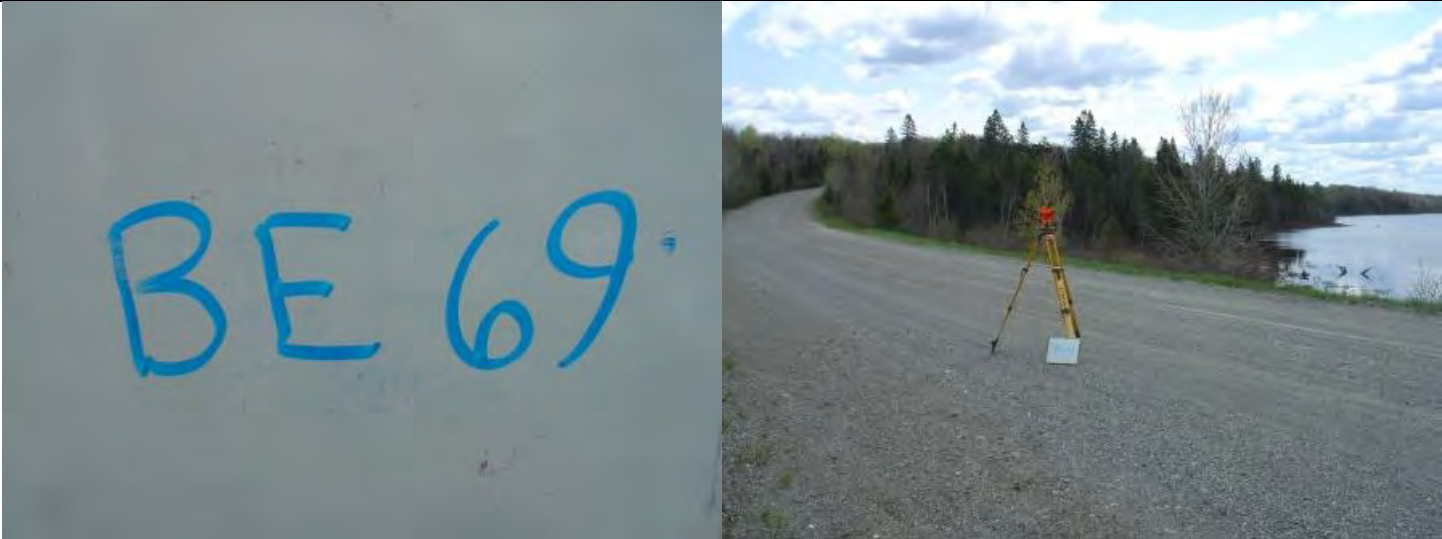
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5088545.61	437298.30	333.91

Operator	Daniel Livingstone
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/20/2016
Occupy PT	STN GPS E
Back Sight PT	STN CA 87
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	BE70
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	North East Carry

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5086207.77	449119.05	313.20

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.007
RMSE Z	0.016
Method	Fast Static GPS

PHOTOS:



Point ID	BE71
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Phillips

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4968870.85	384581.24	258.41

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.010
RMSE Z	0.022
Method	Fast Static GPS

PHOTOS:



Point ID	BE72
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Rangeley

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4983360.37	380874.06	468.26

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE73
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Kennebago Lake

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4989029.86	380137.36	867.58

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE74
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4929455.35	366615.74	191.81

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE75
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckford

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4926785.59	382266.23	153.87

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE76
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Fryeburg

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4891624.37	341250.90	132.56

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE77
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4941801.17	414600.10	105.04

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/13/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE78
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4951288.90	413933.97	176.46

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/13/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE79
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4947459.55	373710.25	219.40

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE80
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4933656.26	413761.11	116.82

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/13/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE81
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Dixfield

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4952495.60	383270.89	207.90

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.016
RMSE Z	0.023
Method	Fast Static GPS

PHOTOS:



Point ID	BE82
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Poland

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4898008.02	392436.99	105.33

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE83
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4909420.28	358945.23	196.33

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE84
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Gorham

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4901992.65	339692.43	165.64

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/16
RMSE Hz	0.007
RMSE Z	0.015
Method	Fast Static GPS

PHOTOS:



Point ID	BE85
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Rangeley

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4968325.82	380439.33	325.58

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.014
RMSE Z	0.018
Method	Fast Static GPS

PHOTOS:



Point ID	BE86
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	The Forks

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5034223.56	432675.42	296.55

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.010
RMSE Z	0.020
Method	Fast Static GPS

PHOTOS:



Point ID	BE87
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Poland

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4894782.01	387098.29	165.96

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE88
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4888663.60	364165.23	118.38

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE89
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Kingfield

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4961444.18	402604.69	149.25

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE90
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Kingfield

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4981022.88	407823.35	184.80

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:





Urban Area Point Log Sheets

Point ID	UA1
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4897127.42	378813.44	119.17

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA2
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

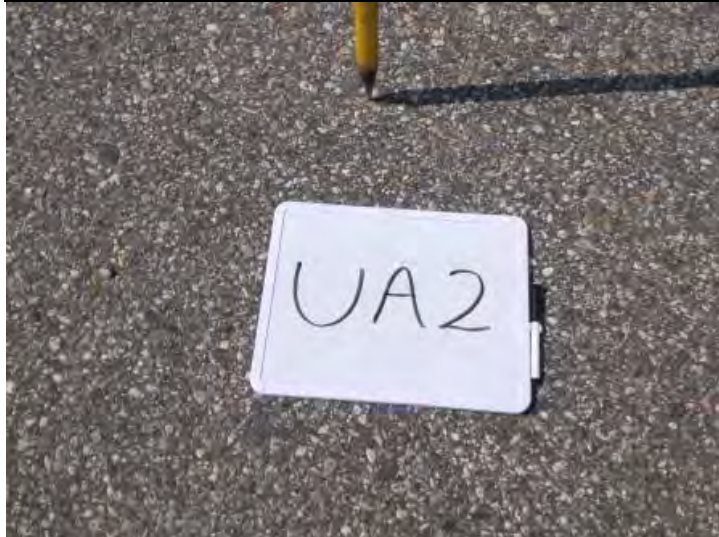
Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4919093.86	357378.61	201.39

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA3
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Dixfield

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

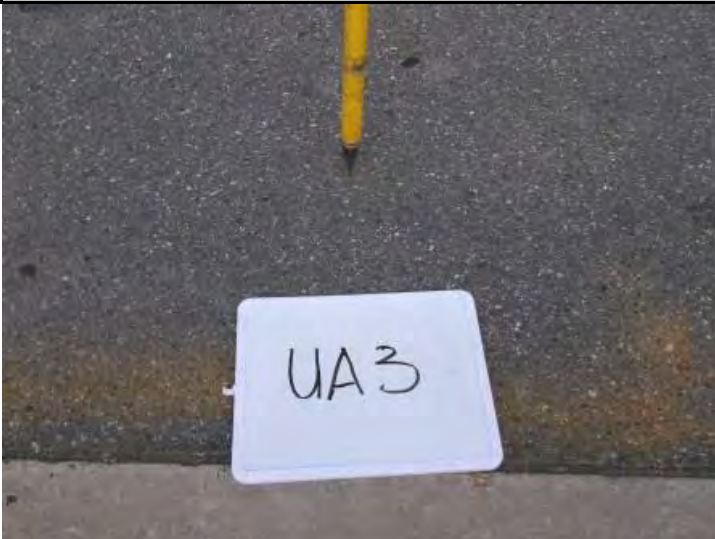
Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4931919.03	384260.59	127.92

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA4
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4946914.49	408632.47	111.84

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/13/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA5
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Phillips

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4963685.89	393794.41	172.11

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA6
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Kingfield

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4979036.24	408866.43	175.62

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA7
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Greenville

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5034504.83	451420.89	314.85

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA8
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Brassua Lake

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5058798.43	439421.61	317.77

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/23/2016
RMSE Hz	0.011
RMSE Z	0.017
Method	Fast Static GPS

PHOTOS:



Point ID	UA9
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bryant Pond

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4909872.96	375960.63	144.69

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA10
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4904906.83	391287.98	109.80

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA11
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4934841.24	377474.43	132.56

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA12
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4939118.42	401827.03	188.30

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/13/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA13
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Stratton

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4989822.79	396877.44	531.30

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA14
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Greenville

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5015094.81	460593.90	266.35

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.015
RMSE Z	0.026
Method	Fast Static GPS

PHOTOS:



Point ID	UA15
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Dixfield

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

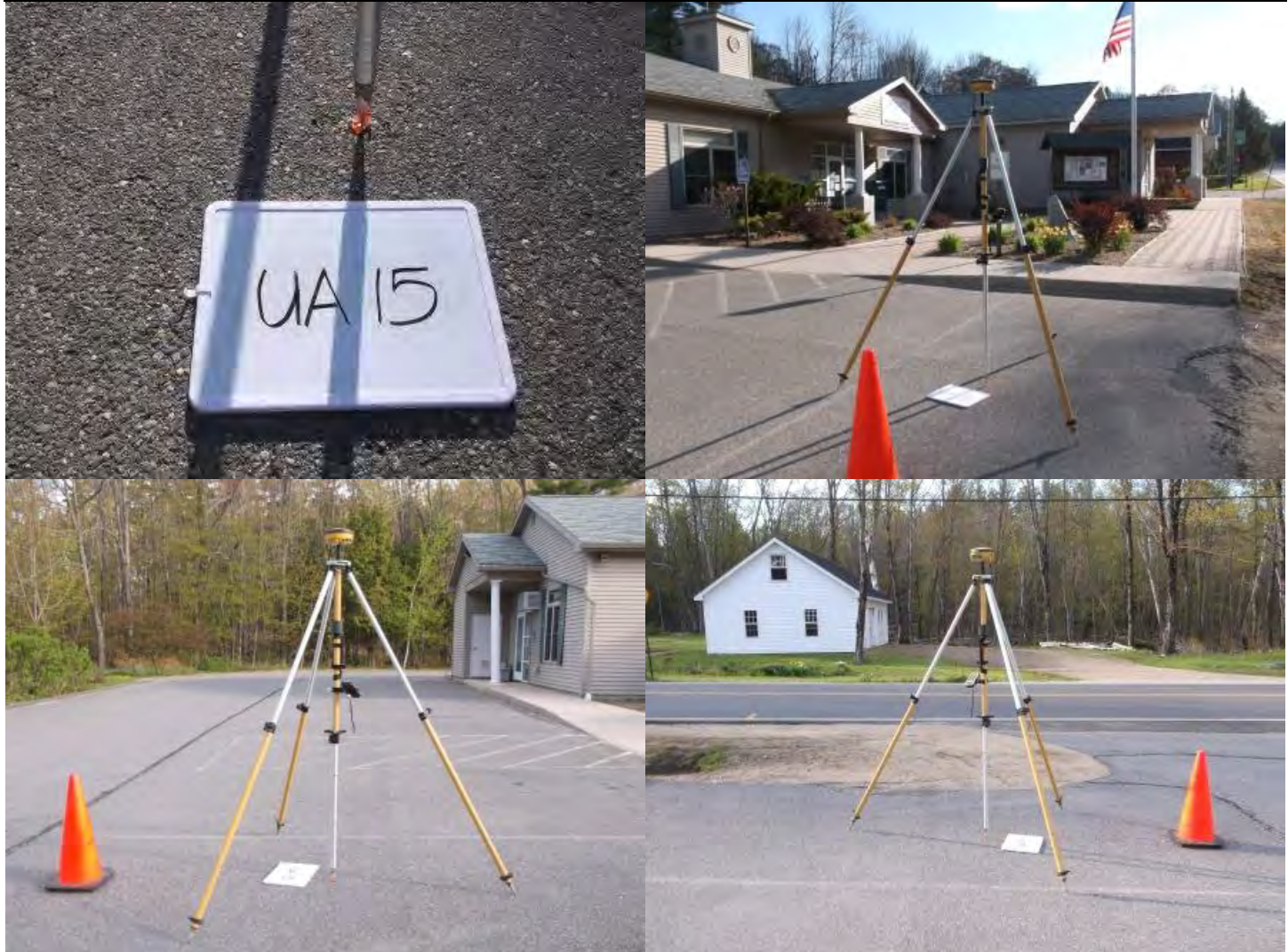
Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4950377.93	387287.00	225.83

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00107
Antenna Height	2.100 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	Fast Static GPS

PHOTOS:



Point ID	UA16
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4943778.07	361216.07	213.07

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA17
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Fryeburg

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4887516.30	348579.74	126.92

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA18
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4893528.23	362888.21	154.08

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA19
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Poland

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4887593.00	380538.43	99.83

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/11/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA20
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4885909.48	372409.13	115.18

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/10/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA21
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Bingham

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5009428.18	422158.46	170.47

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/25/2016
RMSE Hz	0.003
RMSE Z	0.008
Method	Fast Static GPS

PHOTOS:



Point ID	UA22
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	The Forks

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5021121.95	423926.09	177.93

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.003
RMSE Z	0.005
Method	RTK GPS

PHOTOS:



Point ID	UA23
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Little Bigelow Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4992230.48	404582.38	255.78

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA24
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Attean

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5054528.50	401529.69	357.70

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	Fast Static GPS

PHOTOS:



Point ID	UA25
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Fryeburg

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4901236.37	355399.80	182.70

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA26
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4917593.83	342932.94	218.38

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA27
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4928782.36	403358.60	121.68

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/13/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA28
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bryant Pond

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4928459.10	365314.32	194.23

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:





Tall Weeds Point Log Sheets

Point ID	TW1
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Brassua Lake

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5041730.49	439173.11	324.51

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00107
Antenna Height	2.100 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.013
RMSE Z	0.024
Method	Fast Static GPS

PHOTOS:



Point ID	TW2
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Pierce Pond

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5018326.81	403708.54	335.64

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00107
Antenna Height	2.100 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	Fast Static GPS

PHOTOS:



Point ID	TW3
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Phillips

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4972724.34	399210.38	263.81

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	TW4
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4920154.11	356541.25	197.24

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/12/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:





Forest Point Log Sheets

Point ID	FO1
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4875578.70	376640.46	162.40

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/10/2016
Occupy PT	STN 901
Back Sight PT	STN CA 95
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO2
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4879481.52	375328.29	144.85

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/10/2016
Occupy PT	STN 901
Back Sight PT	STN CA 95
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO3
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Poland

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4882892.81	381287.80	126.93

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/11/2016
Occupy PT	STN CA 97
Back Sight PT	STN BE 3
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO4
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Cumberland
Quad	Norway

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4882620.78	371445.75	102.20

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/10/2016
Occupy PT	STN CA 96
Back Sight PT	STN BE 2
RMSE Hz	0.030
RMSE Z	0.030

*Mislabeled Photo Board

PHOTOS:



Point ID	FO5
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Poland

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4887936.58	382859.62	96.33

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/11/2016
Occupy PT	STN BE 5
Back Sight PT	STN CA 2
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO6
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Poland

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4894733.62	386912.78	163.43

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/11/2016
Occupy PT	STN 906
Back Sight PT	STN BE 87
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO7
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4897348.27	378688.89	126.89

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/10/2016
Occupy PT	STN 904
Back Sight PT	STN 905
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO8
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4897879.61	369291.75	165.86

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/10/2016
Occupy PT	STN BE 7
Back Sight PT	STN CA 9
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO9
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Norway

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4891135.53	362714.18	132.11

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/10/2016
Occupy PT	STN 903
Back Sight PT	STN CA 4
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO10
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Fryeburg

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4882810.09	353302.36	239.90

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/12/2016
Occupy PT	STN 910
Back Sight PT	STN CA 94
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO11
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Fryeburg

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4887517.34	348953.34	126.89

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/12/2016
Occupy PT	STN 911
Back Sight PT	STN BE 6
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO12
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Fryeburg

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4891597.54	341211.81	131.23

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/12/2016
Occupy PT	STN BE 76
Back Sight PT	STN CA 6
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO13
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Gorham

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4901951.97	339689.12	165.00

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/12/2016
Occupy PT	STN BE 84
Back Sight PT	STN 912
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO14
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4901318.19	355291.84	192.17

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/12/2016
Occupy PT	STN CA 10
Back Sight PT	STN UA 25
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO15
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4904978.60	391287.72	102.67

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/11/2016
Occupy PT	STN 907
Back Sight PT	STN UA 10
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO16
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4903620.15	385384.46	275.25

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/11/2016
Occupy PT	STN CA 13
Back Sight PT	STN 909
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO17
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bryand Pond

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4905714.40	377701.51	135.33

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/11/2016
Occupy PT	STN CA 14
Back Sight PT	STN BE 9
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO18
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bryant Pond

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4909816.99	375905.27	140.81

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/11/2016
Occupy PT	STN 908
Back Sight PT	STN UA 9
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO19
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4909441.87	358928.02	195.56

Operator	John Allen
Instrument Model	Topcon Hiper II RTK GPS
Date (MM-DD-YYYY)	5/12/2016
Occupy PT	NA
Back Sight PT	NA
RMSE Hz	0.001
RMSE Z	0.001

PHOTOS:



Point ID	FO20
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4917338.73	342789.44	221.76

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/12/2016
Occupy PT	STN 913
Back Sight PT	STN BE 15
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO21
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4918313.34	352032.24	205.90

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/12/2016
Occupy PT	STN BE 14
Back Sight PT	STN CA 17
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO22
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bryant Pond

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4917581.62	364427.90	220.84

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/12/2016
Occupy PT	STN BE 13
Back Sight PT	STN CA 18
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO23
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4913793.93	383313.27	185.67

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/11/2016
Occupy PT	STN CA 19
Back Sight PT	STN BE 12
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO24
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4911420.85	396627.02	140.47

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/11/2016
Occupy PT	STN CA 20
Back Sight PT	STN BE 11
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO25
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Bethel

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4927505.29	357897.04	192.25

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/17/2016
Occupy PT	STN BE 16
Back Sight PT	STN CA 24
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO26
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4929430.18	366653.27	191.24

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/17/2016
Occupy PT	STN 918
Back Sight PT	STN BE 74
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO27
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Dixfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4951423.80	398130.26	330.87

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/19/2016
Occupy PT	STN BE 22
Back Sight PT	STN CA 92
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO28
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Buckfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4926779.91	382325.07	152.12

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/17/2016
Occupy PT	STN 917
Back Sight PT	STN BE 75
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO29
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4928117.33	414349.38	175.95

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/13/2016
Occupy PT	STN CA 98
Back Sight PT	STN 915
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO30
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4933667.21	413786.76	119.87

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/13/2016
Occupy PT	STN BE 80
Back Sight PT	STN 914
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO31
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Kingfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4961829.46	411251.77	185.31

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/18/2016
Occupy PT	STN BE 23
Back Sight PT	STN CA 33
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO32
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Dixfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4936773.94	394652.09	177.26

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/13/2016
Occupy PT	STN BE 18
Back Sight PT	STN CA 28
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO33
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Milan

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4934798.85	339185.04	487.42

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/17/2016
Occupy PT	STN BE 21
Back Sight PT	STN CA 93
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO34
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Old Speck Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4938467.43	346257.79	458.09

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/17/2016
Occupy PT	STN CA 25
Back Sight PT	STN 919
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO35
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4943907.34	361441.72	199.53

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/17/2016
Occupy PT	STN CA 26
Back Sight PT	STN BE 20
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO36
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4942196.76	374676.71	173.96

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/18/2016
Occupy PT	STN CA 27
Back Sight PT	STN BE 19
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO37
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Rangeley

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4983341.10	380868.67	467.55

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/19/2016
Occupy PT	STN BE 72
Back Sight PT	STN CA 39
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	F038
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4950557.65	373110.93	227.45

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/18/2016
Occupy PT	STN CA 91
Back Sight PT	STN 920
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO39
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Dixfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4950448.36	387292.41	226.61

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/18/2016
Occupy PT	STN CA 32
Back Sight PT	STN UA 15
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO40
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4946513.96	408774.27	104.22

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/13/2016
Occupy PT	STN 916
Back Sight PT	STN CA 31
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO41
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Little Bigelow Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4992249.40	404510.83	260.61

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/19/2016
Occupy PT	STN 921
Back Sight PT	STN UA 23
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO42
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Stratton

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4996696.56	390996.59	365.93

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/19/2016
Occupy PT	STN CA 40
Back Sight PT	STN BE 27
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO43
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Little Bigelow Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4995407.33	409043.63	386.62

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/19/2016
Occupy PT	STN BE 28
Back Sight PT	STN CA 43
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO44
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Bingham

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4996198.11	425497.17	167.23

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/25/2016
Occupy PT	STN 923
Back Sight PT	STN CA 44
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO45
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Bingham

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4998722.99	437051.26	317.57

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/25/2016
Occupy PT	STN BE 29
Back Sight PT	STN CA 45
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO46
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Kingbury

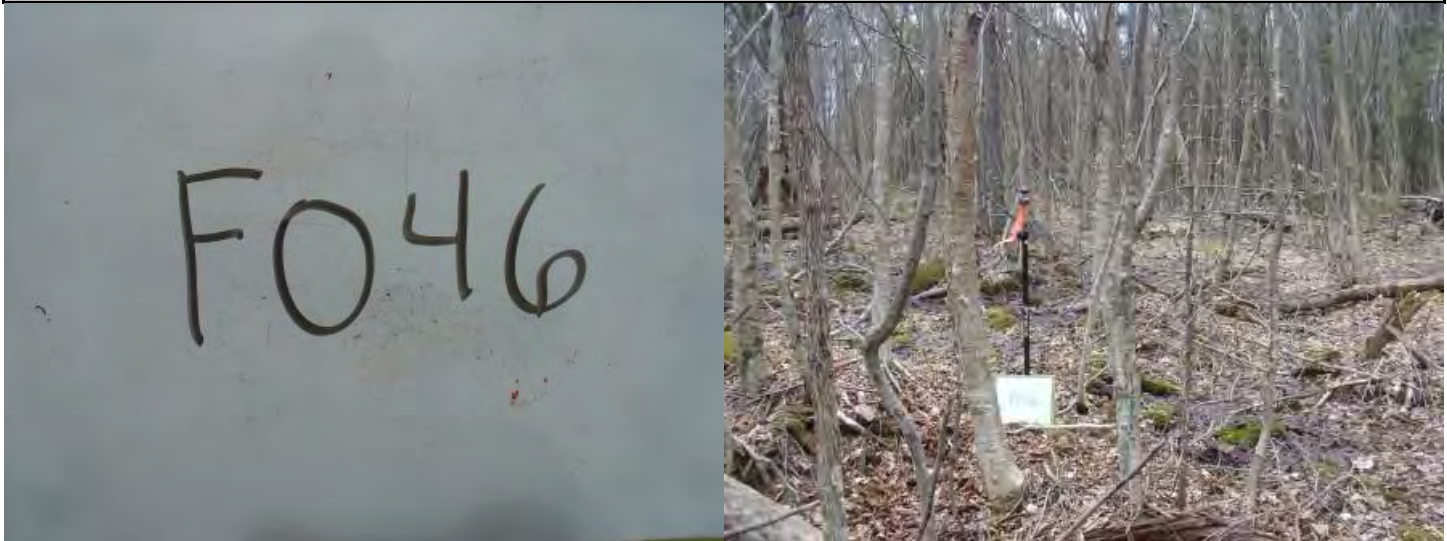
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4999992.37	447857.35	481.78

Operator	Daniel Livingstone
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/17/2016
Occupy PT	STN GPS A
Back Sight PT	STN CA 46
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO47
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Kingsbury

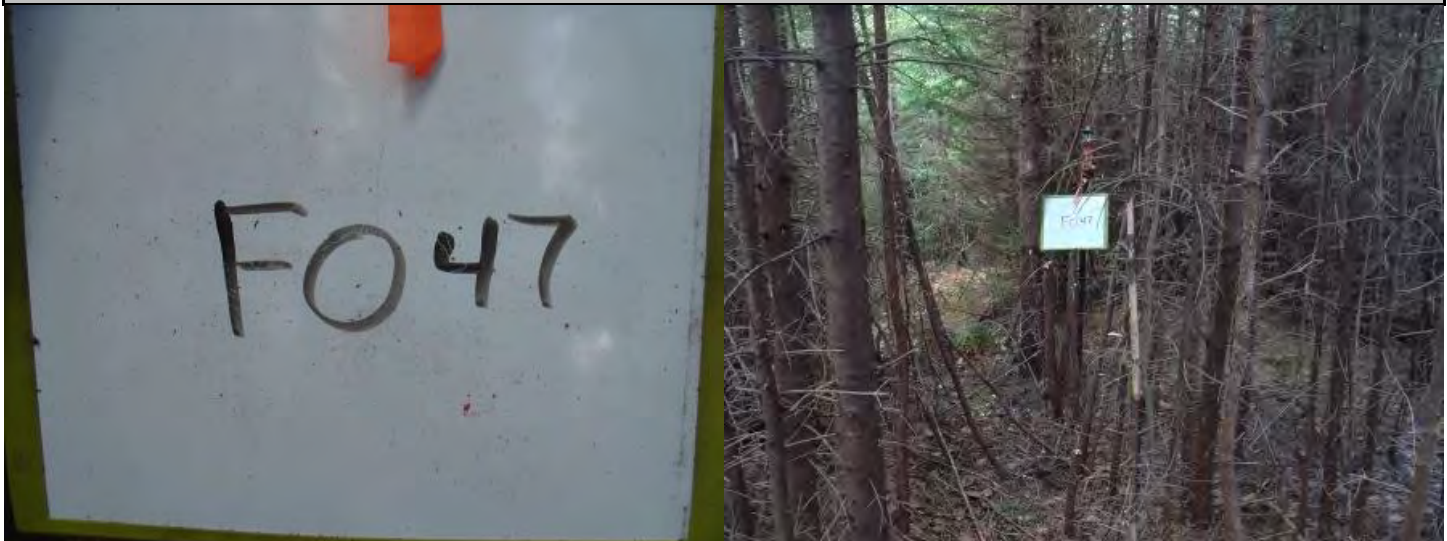
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5008535.11	446266.77	403.06

Operator	Daniel Livingstone
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/17/2016
Occupy PT	STN CA 47
Back Sight PT	STN BE 30
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO48
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Bingham

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5008375.89	435501.20	301.64

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/25/2016
Occupy PT	STN BE 31
Back Sight PT	STN CA 56
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO49
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Bingham

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5009783.49	421820.86	158.48

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/25/2016
Occupy PT	STN CA 55
Back Sight PT	STN BE 32
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO50
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Chain Lakes

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5026082.08	381798.21	723.16

Operator	Robert Prescott
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/26/2016
Occupy PT	STN CA 65
Back Sight PT	STN BE 45
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	F051
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Chain Lakes

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5031587.28	376945.98	677.86

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/20/2016
Occupy PT	STN BE 47
Back Sight PT	STN CA 64
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO52
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Chain Lakes

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5017608.31	374218.25	389.21

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/20/2016
Occupy PT	STN BE 46
Back Sight PT	STN CA 63
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO53
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Sebec

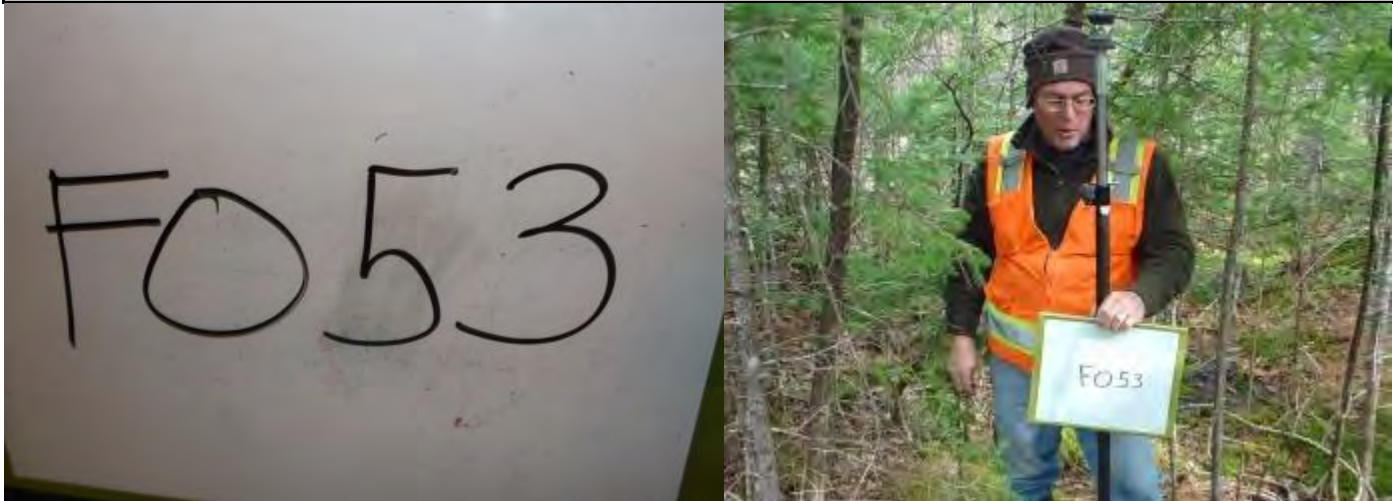
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5022657.59	481601.11	214.23

Operator	Daniel Livingstone
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/17/2016
Occupy PT	STN CA 52
Back Sight PT	STN BE 41
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO54
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Sebec Lake

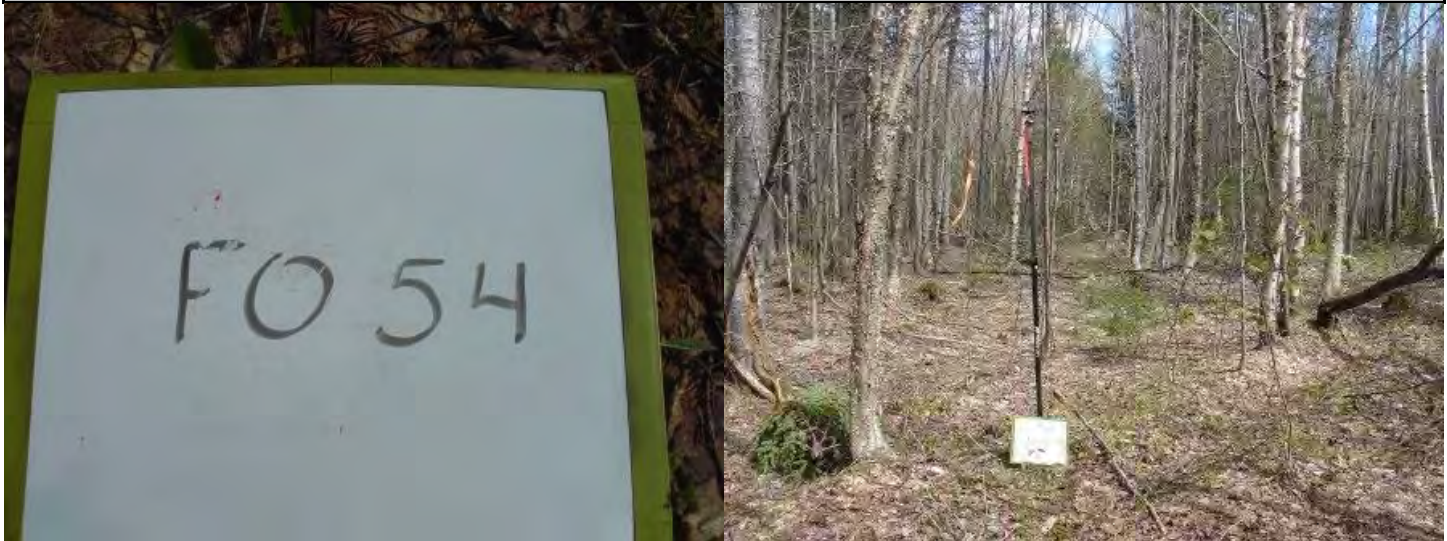
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5036742.89	472964.52	418.52

Operator	Daniel Livingstone
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/18/2016
Occupy PT	STN BE 58
Back Sight PT	STN CA 61
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO55
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Greenville

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5027188.01	443046.05	383.67

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/24/2016
Occupy PT	STN BE 42
Back Sight PT	STN CA 60
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	F056
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	The Forks

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5021099.48	423991.81	177.04

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/24/2016
Occupy PT	STN 922
Back Sight PT	STN UA 22
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	F057
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Skinner

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5039905.10	371165.48	516.11

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/20/2016
Occupy PT	STN BE 48
Back Sight PT	STN CA 71
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	F058
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Skinner

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5053261.38	378549.92	442.15

Operator	Robert Prescott
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/25/2016
Occupy PT	STN CA 78
Back Sight PT	STN GPS I
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO59
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Attean

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5060948.47	386612.62	544.04

Operator	Robert Prescott
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/25/2016
Occupy PT	STN CA 79
Back Sight PT	STN GPS H
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO60
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Attean

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5063550.64	399484.95	430.13

Operator	Robert Prescott
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/24/2016
Occupy PT	STN CA 80
Back Sight PT	STN BE 51
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO61
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Seboomook Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5086668.80	422817.55	347.51

Operator	Daniel Livingstone
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/20/2016
Occupy PT	STN CA 86
Back Sight PT	STN BE 68
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO62
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Seboomook Lake

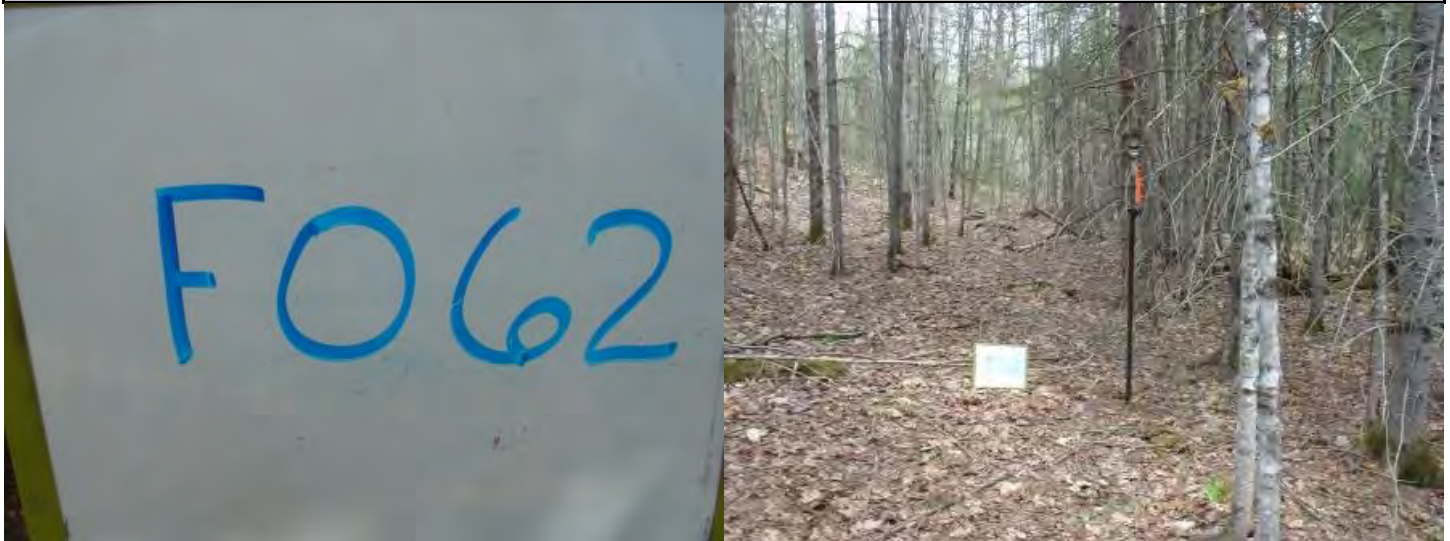
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5088437.29	437116.61	344.90

Operator	Daniel Livingstone
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/20/2016
Occupy PT	STN GPS E
Back Sight PT	STN CA 87
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO63
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	North East Carry

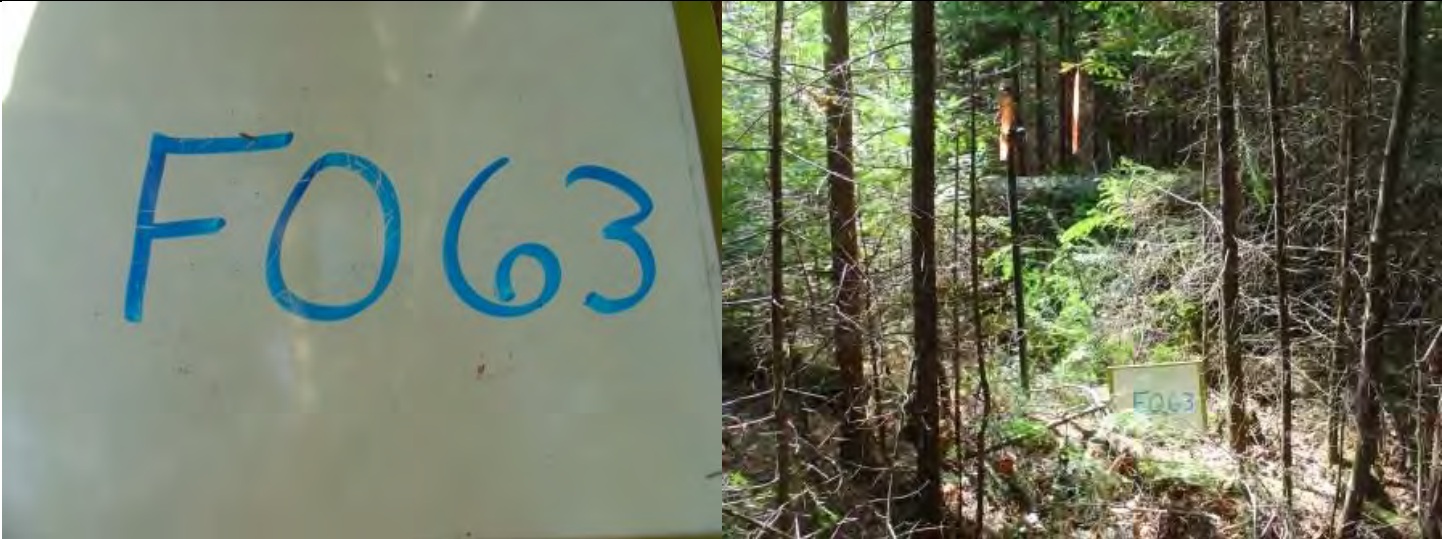
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5086170.33	449217.04	312.75

Operator	Daniel Livingstone
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/20/2016
Occupy PT	STN CA 88
Back Sight PT	STN BE 70
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO64
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	North East Carry

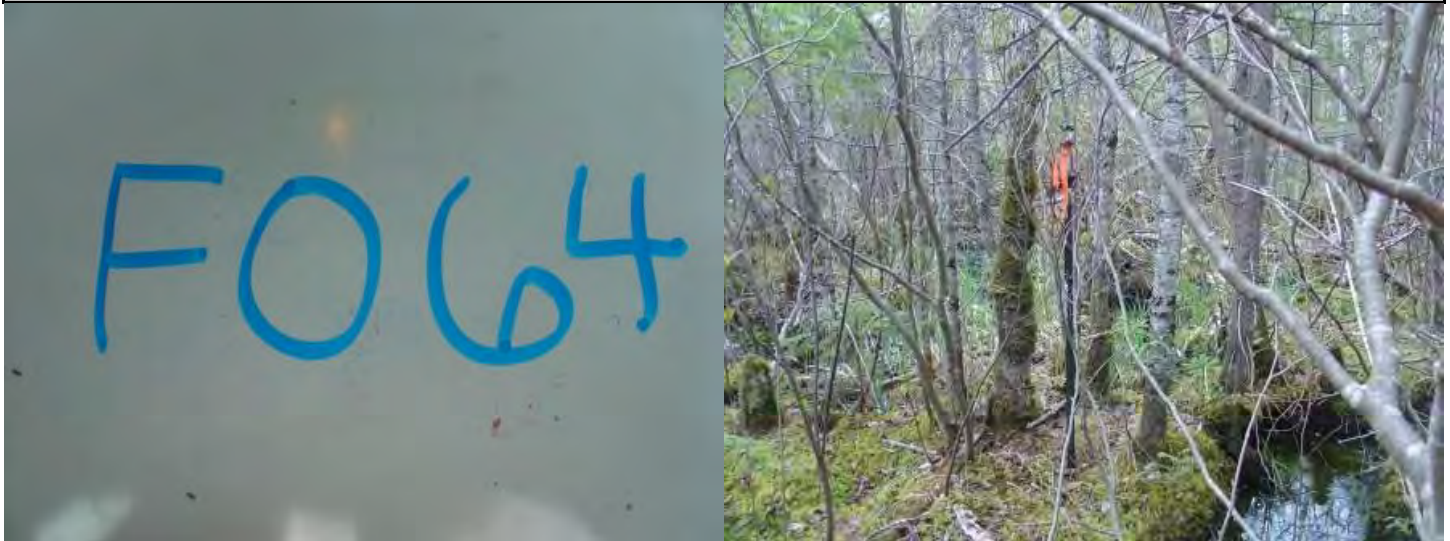
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5082170.90	456101.08	295.34

Operator	Daniel Livingstone
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/19/2016
Occupy PT	STN CA 89
Back Sight PT	STN BE 65
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO65
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Ragged Lake

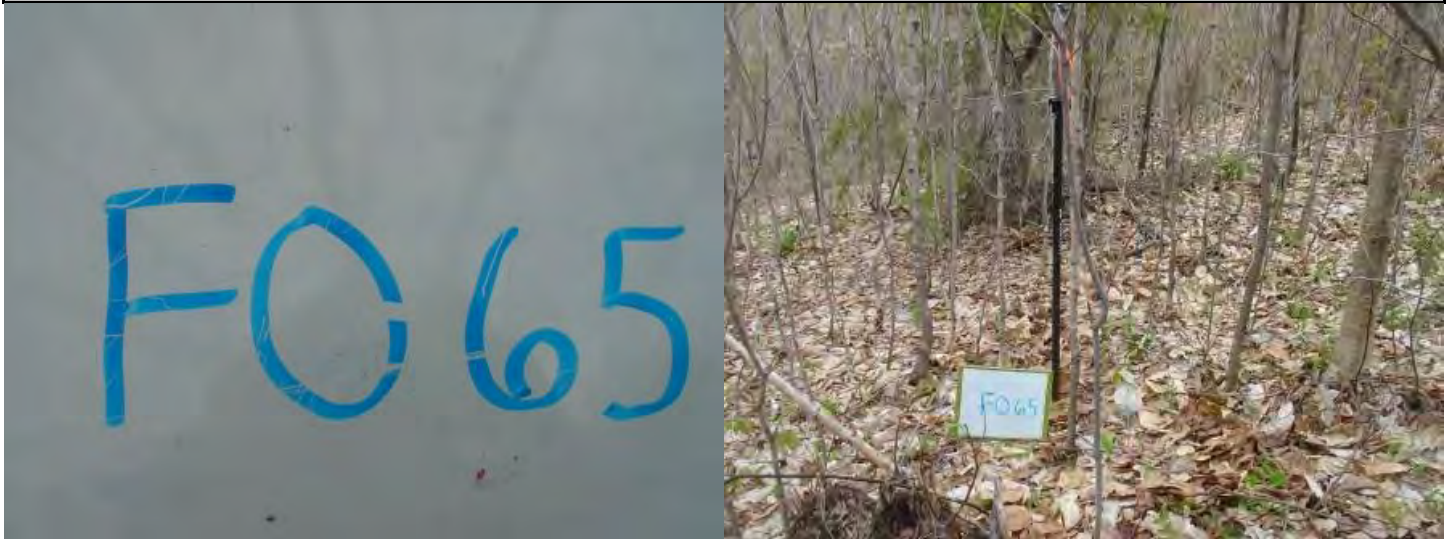
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5079768.30	473050.08	309.48

Operator	Daniel Livingstone
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/19/2016
Occupy PT	STN CA 90
Back Sight PT	STN BE 64
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO66
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Moosehead Lake

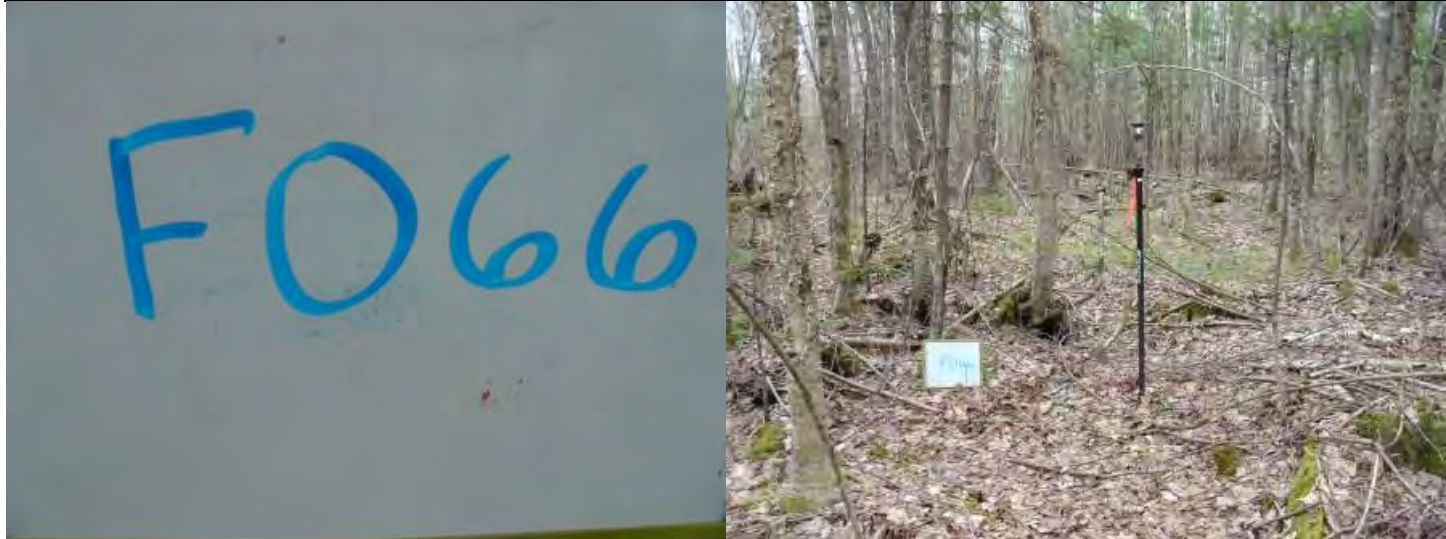
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5065783.06	457764.28	341.29

Operator	Daniel Livingstone
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/19/2016
Occupy PT	STN CA 83
Back Sight PT	STN BE 62
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO67
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Seboomook Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5072112.61	436311.95	320.97

Operator	Robert Prescott
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/23/2016
Occupy PT	STN BE 66
Back Sight PT	STN CA 91
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO68
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Brassua Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5058799.33	439370.03	318.95

Operator	Robert Prescott
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/23/2016
Occupy PT	STN UA 8
Back Sight PT	STN CA 75
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO69
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	First Roach Pond

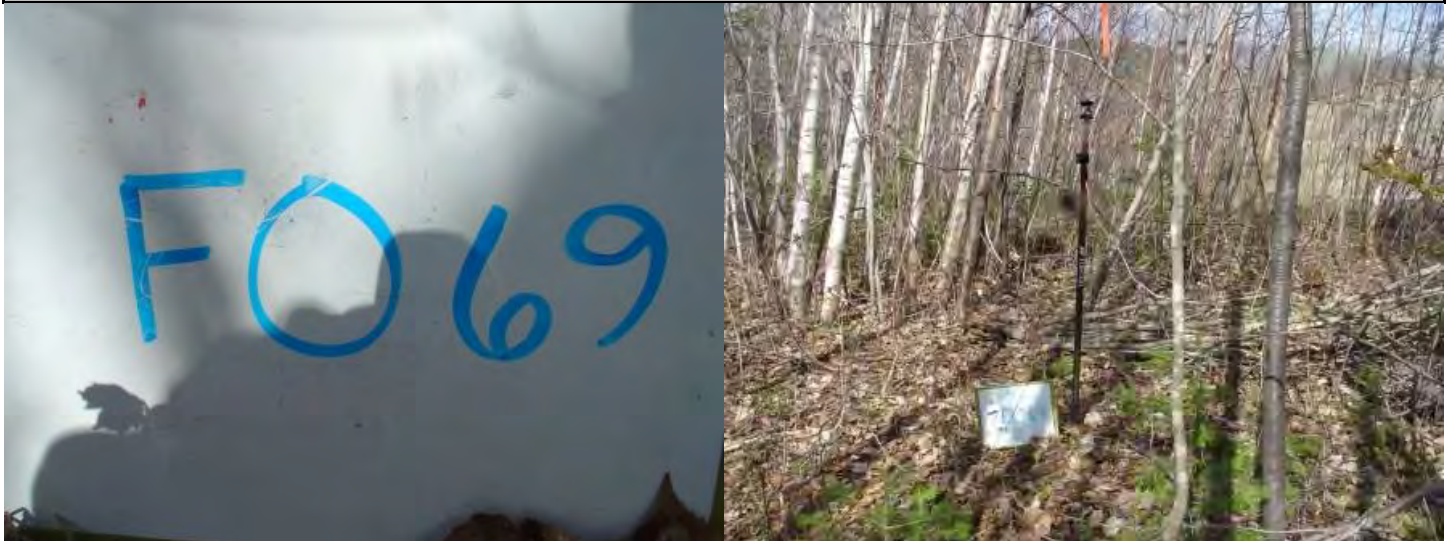
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5050776.93	474581.81	396.35

Operator	Daniel Livingstone
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/18/2016
Occupy PT	STN CA 70
Back Sight PT	STN BE 59
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	F070
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Moosehead Lake

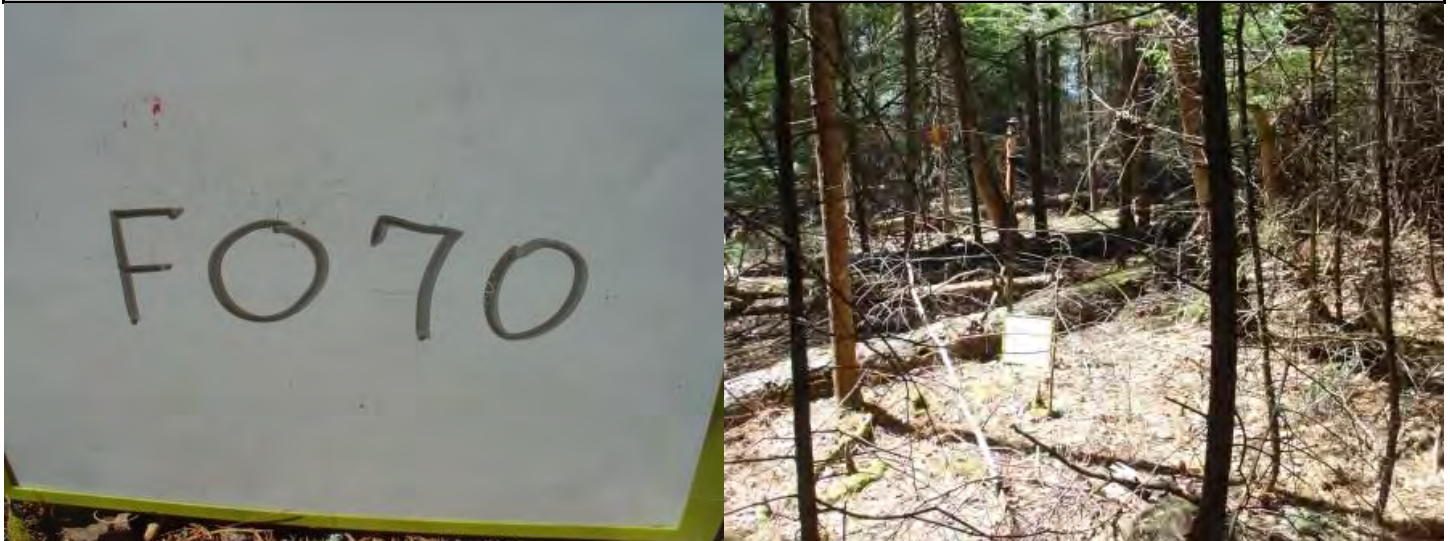
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5046449.19	455868.68	315.99

Operator	Daniel Livingstone
Instrument Model	Topcon DA 203 A6
Date (MM-DD-YYYY)	5/18/2016
Occupy PT	STN CA 69
Back Sight PT	STN BE 55
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	F071
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Moosehead Lake

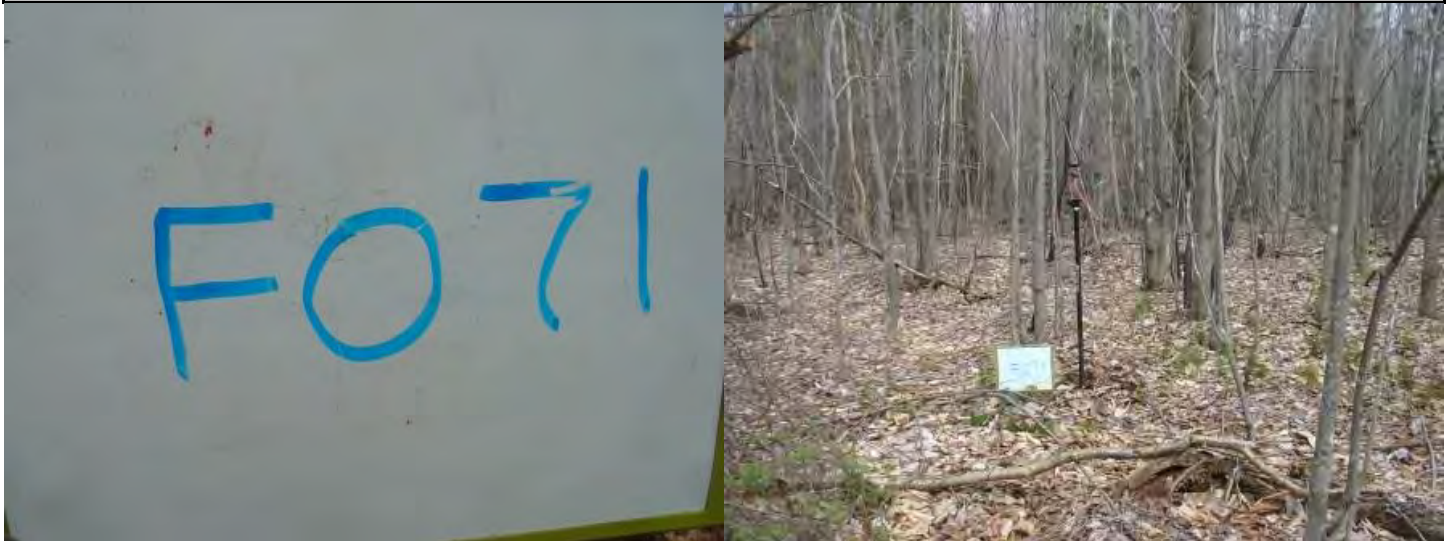
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5056937.46	456604.81	368.10

Operator	Daniel Livingstone
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/18/2016
Occupy PT	STN CA 76
Back Sight PT	STN BE 61
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	FO72
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Pierce Pond

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5035588.54	416690.79	519.14

Operator	Robert Prescott
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/24/2016
Occupy PT	STN BE 43
Back Sight PT	STN CA 67
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	F073
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Spencer Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5035390.69	398786.81	343.52

Operator	Robert Prescott
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/24/2016
Occupy PT	STN CA 66
Back Sight PT	STN BE44
RMSE Hz	0.030
RMSE Z	0.030

*Mislabeled Photo Board

PHOTOS:





Brushland Point Log Sheets

Point ID	SH1
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Brassua Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5058708.69	426234.63	337.53

Operator	Robert Prescott
Instrument Model	Topcon DS 203 A6
Date (MM-DD-YYYY)	5/24/2016
Occupy PT	STN CA 82
Back Sight PT	STN BE 54
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	SH2
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Long Pond

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5048412.34	407815.75	606.63

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/24/2016
RMSE Hz	0.004
RMSE Z	0.006
Method	Fast Static GPS

PHOTOS:



Point ID	SH3
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	Greenville

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

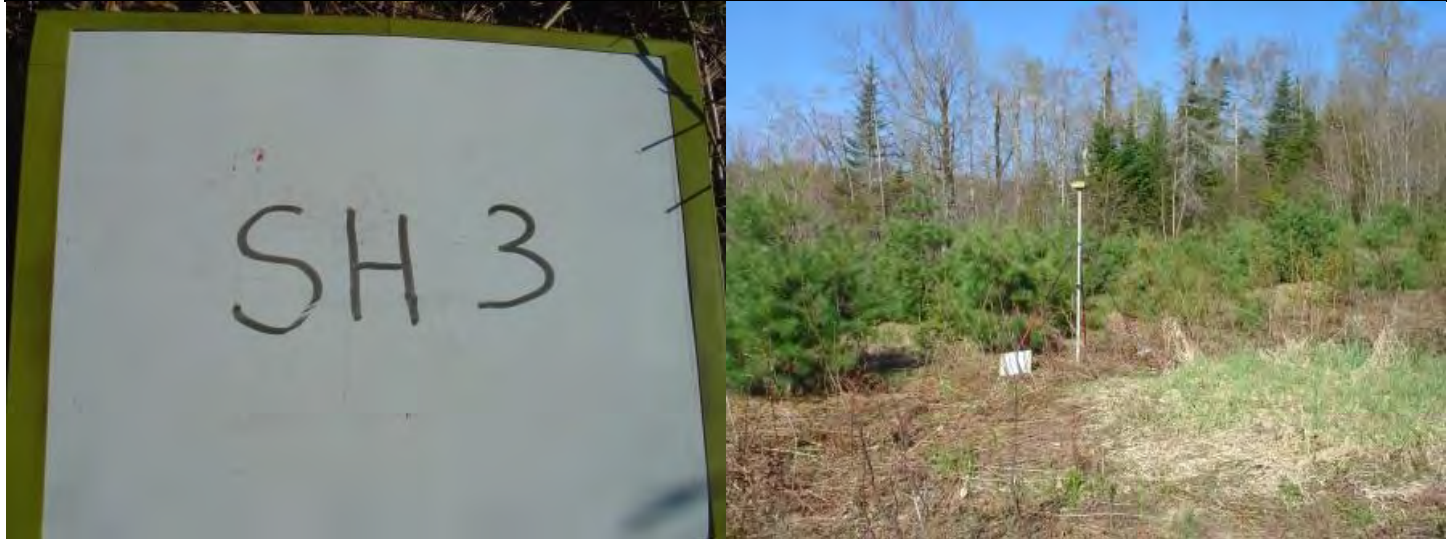
Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5018183.96	458158.04	336.80

Operator	Robert Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.009
RMSE Z	0.015
Method	Fast Static GPS

PHOTOS:



Point ID	SH4
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Somerset
Quad	Stratton

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5011062.48	388176.84	422.94

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/20/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	SH5
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Oxford
Quad	Rumford

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4944265.42	365837.18	231.88

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/17/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	SH6
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Farmington

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4941824.03	414593.37	104.54

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/13/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	SH7
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Skinner

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5039922.60	371195.08	515.56

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	5/20/2016
Occupy PT	STN BE 48
Back Sight PT	STN CA 71
RMSE Hz	0.030
RMSE Z	0.030

PHOTOS:



Point ID	SH8
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Little Bigelow Mountain

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4986165.30	407735.94	227.84

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	SH9
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Franklin
Quad	Phillips

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4971551.55	386930.93	297.99

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00106
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/18/2016
RMSE Hz	0.013
RMSE Z	0.023
Method	Fast Static GPS

PHOTOS:



Point ID	SH10
Project No.	27146
Project Name	USGS Western Maine 3DEP BAA QL2
State	Maine
County	Piscataquis
Quad	North East Carry

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5076729.66	455158.38	327.81

Operator	Daniel Livingstone
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5/19/2016
RMSE Hz	0.001
RMSE Z	0.002
Method	Fast Static GPS

PHOTOS:

