

Project Report Appendices

The following section contains the appendices as listed in the Maine and Massachusetts 2015 QL1 and QL2 Project Report.

Appendix A

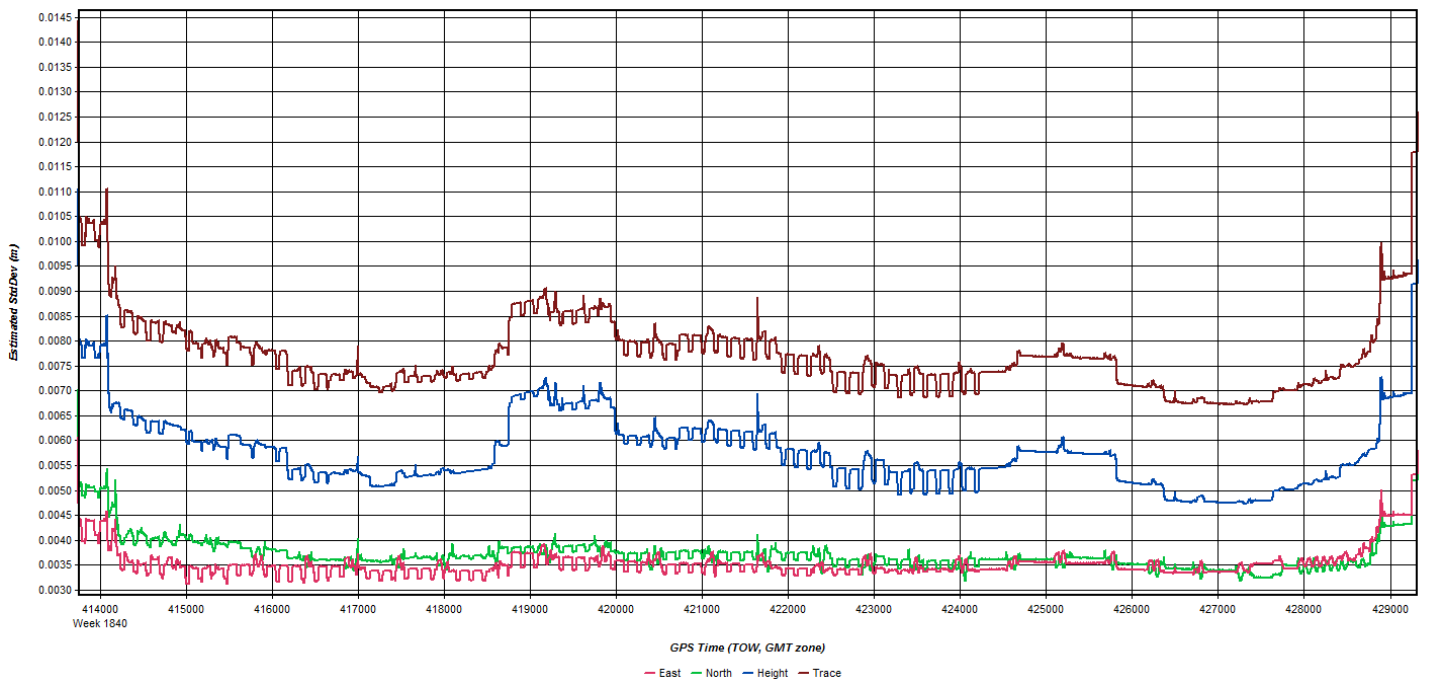
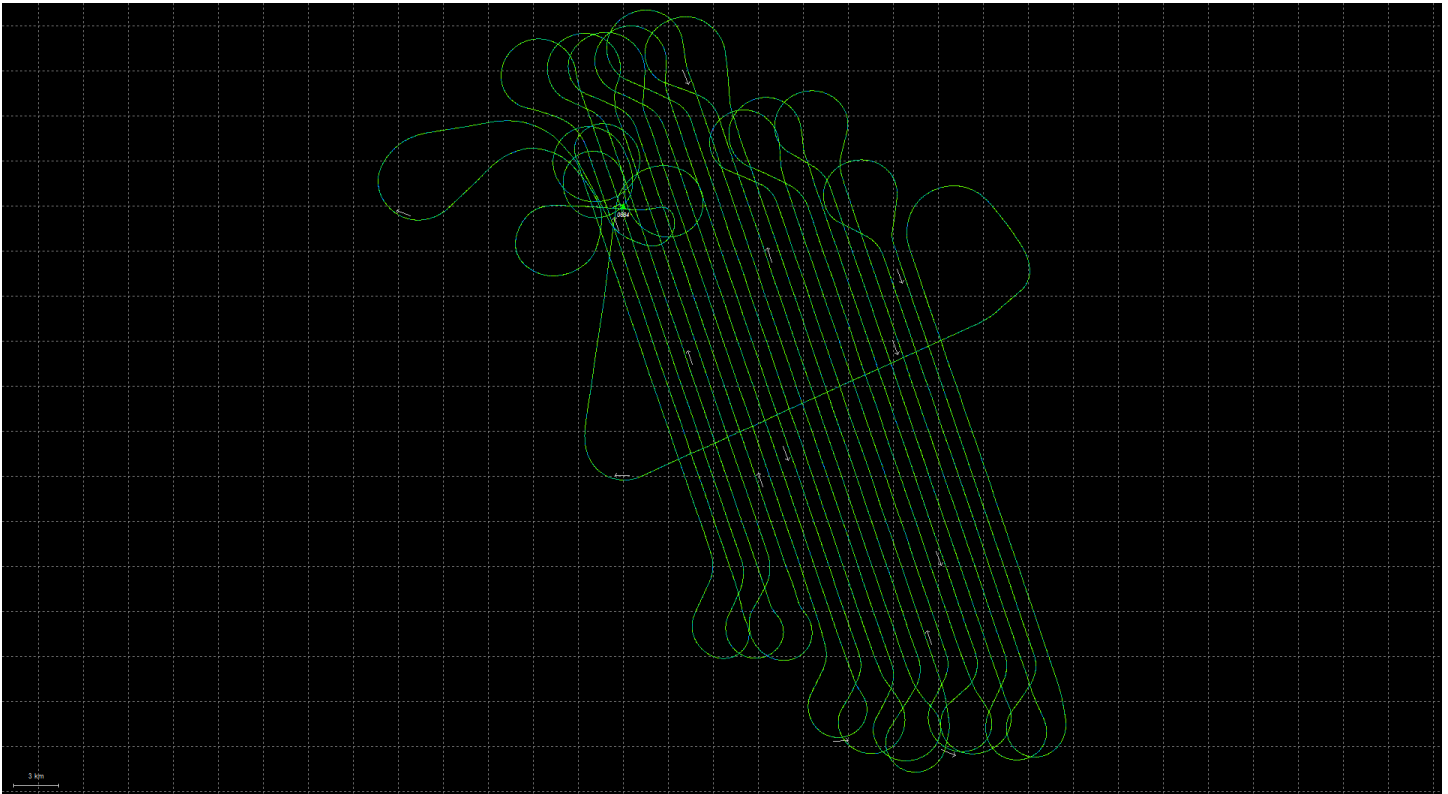
GPS/IMU Processing Statistics Flight Logs Base Station Logs

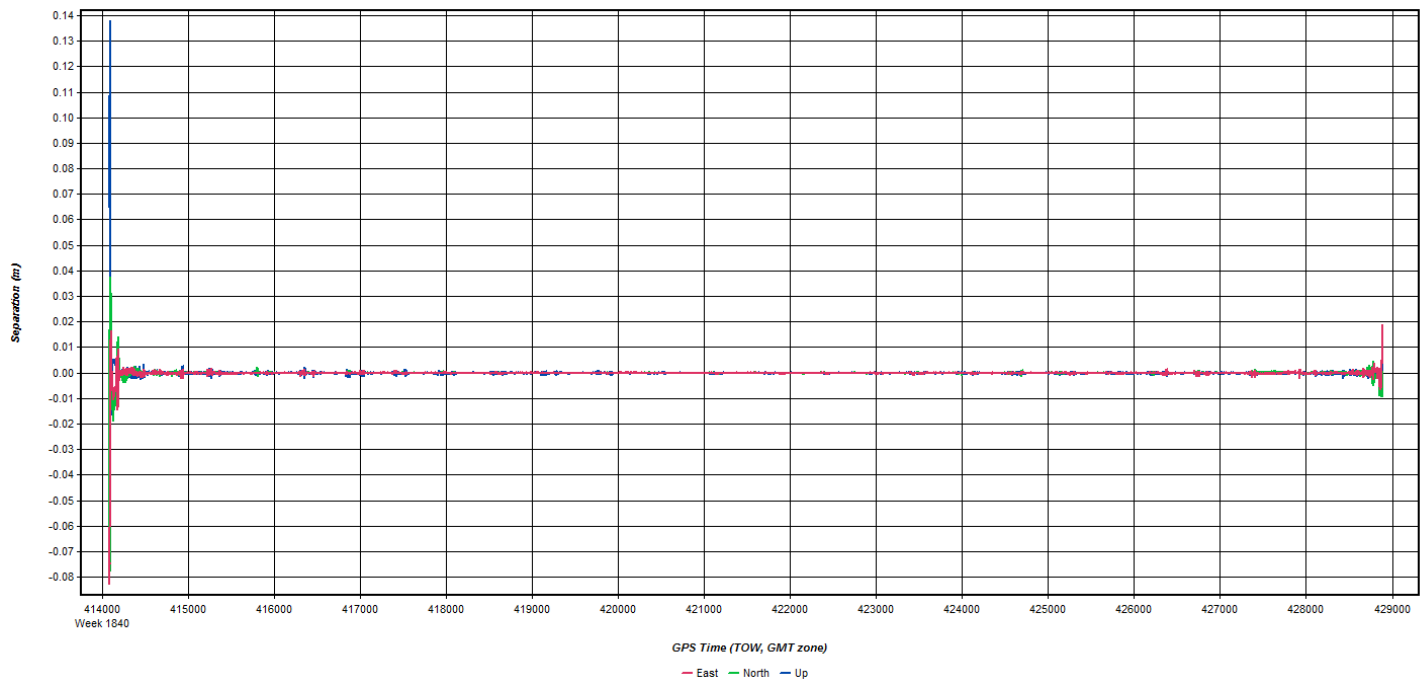
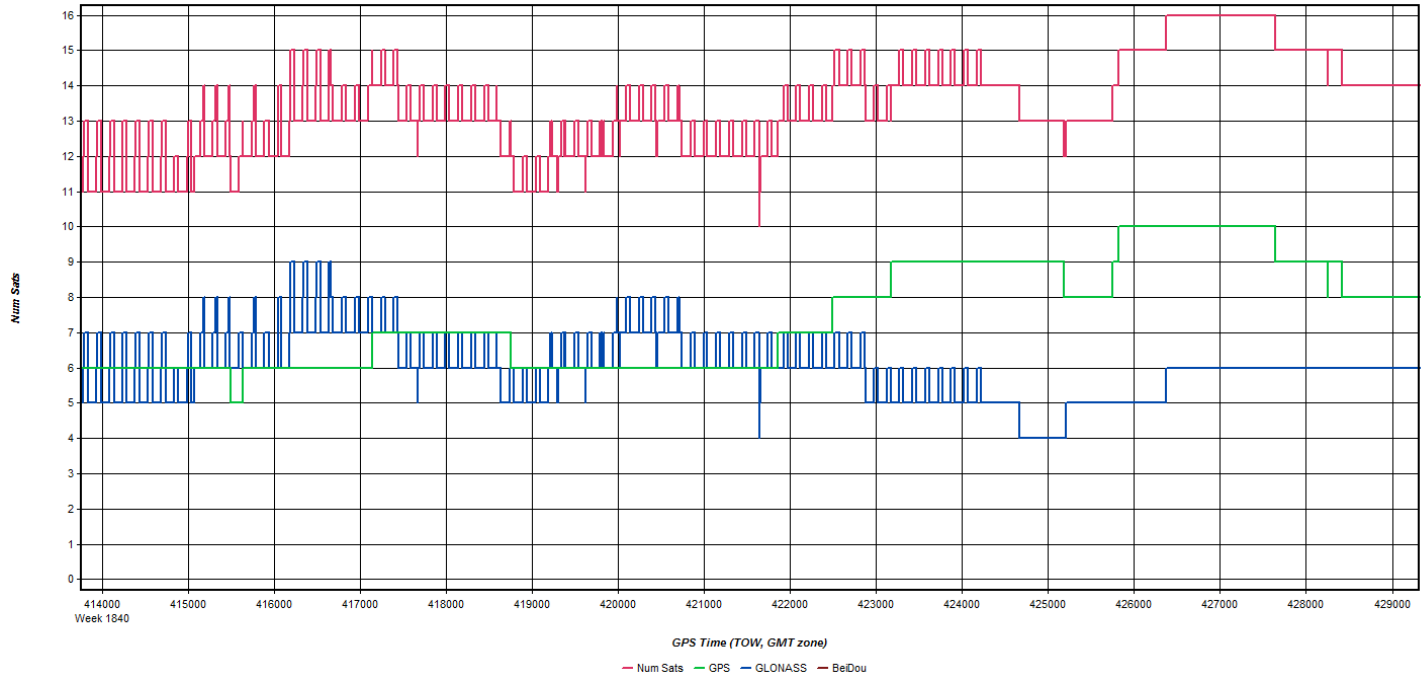
There were sixty-one lifts total. Graph reports generated from processing software are found on the following pages.

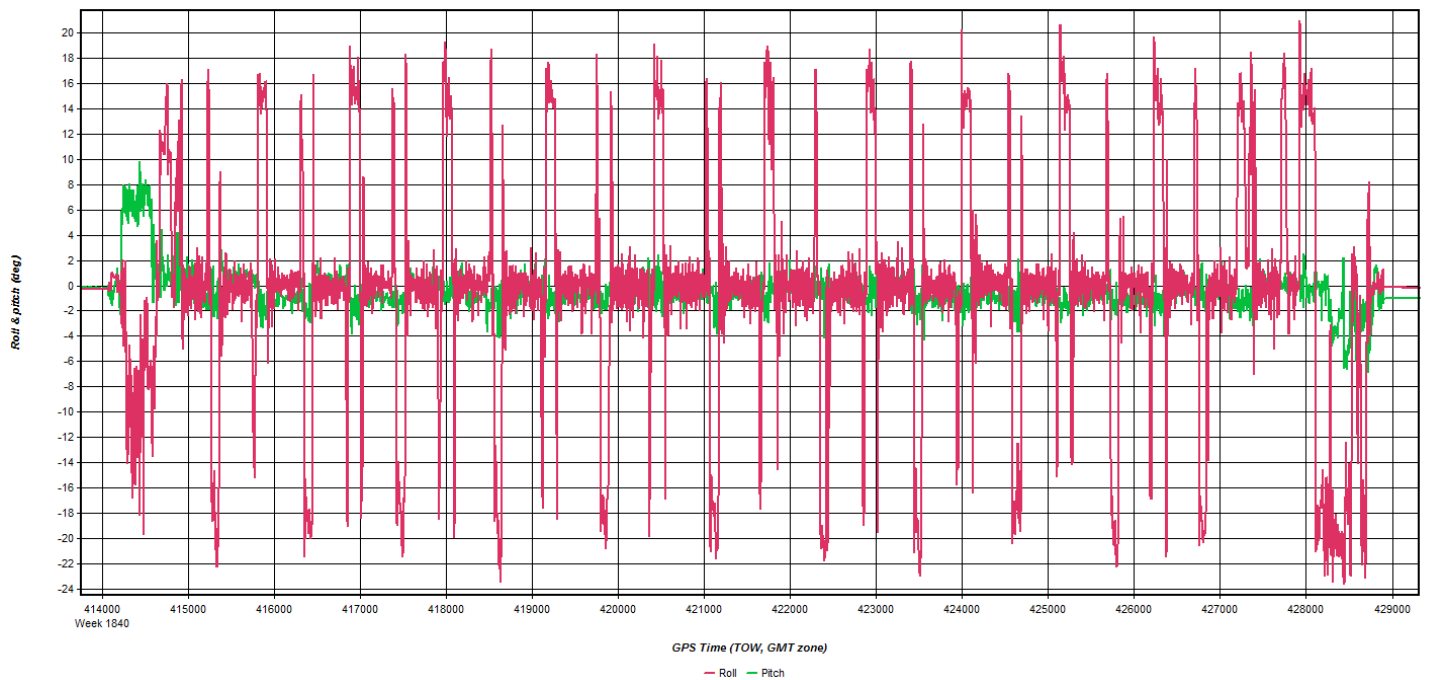
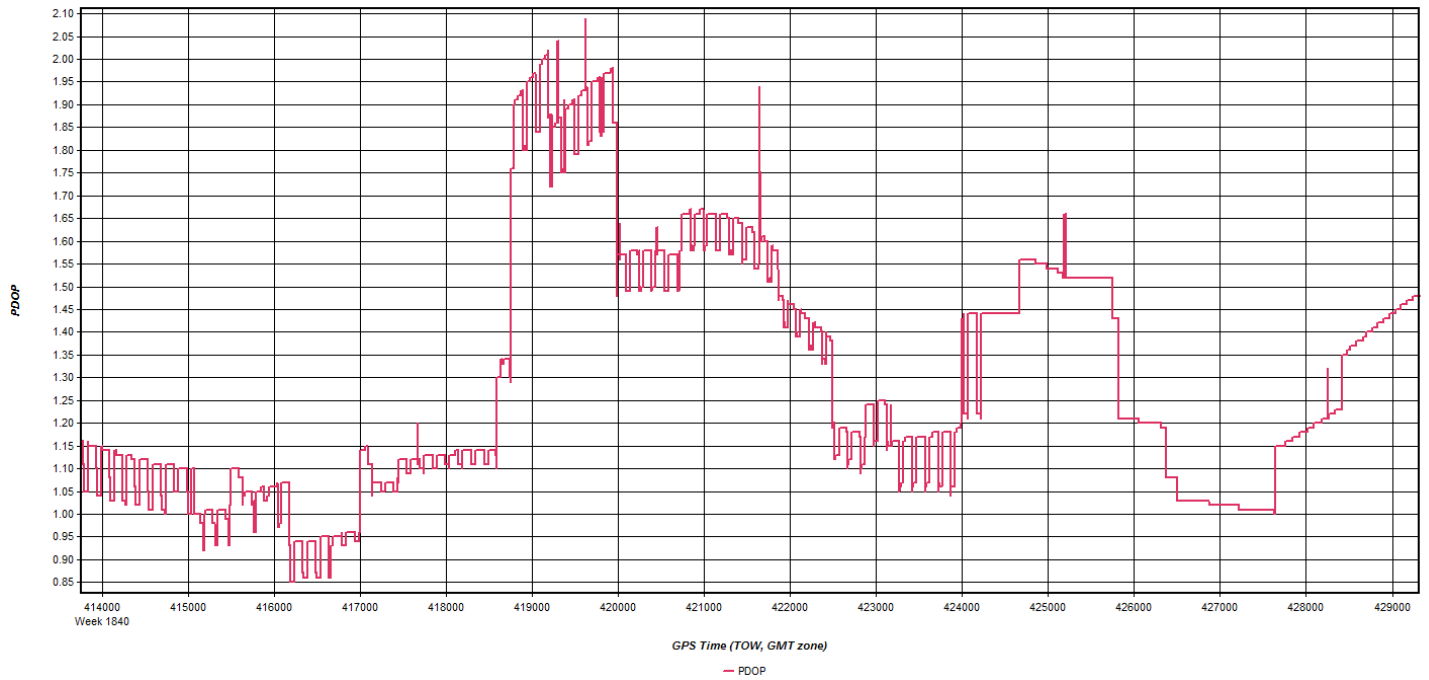
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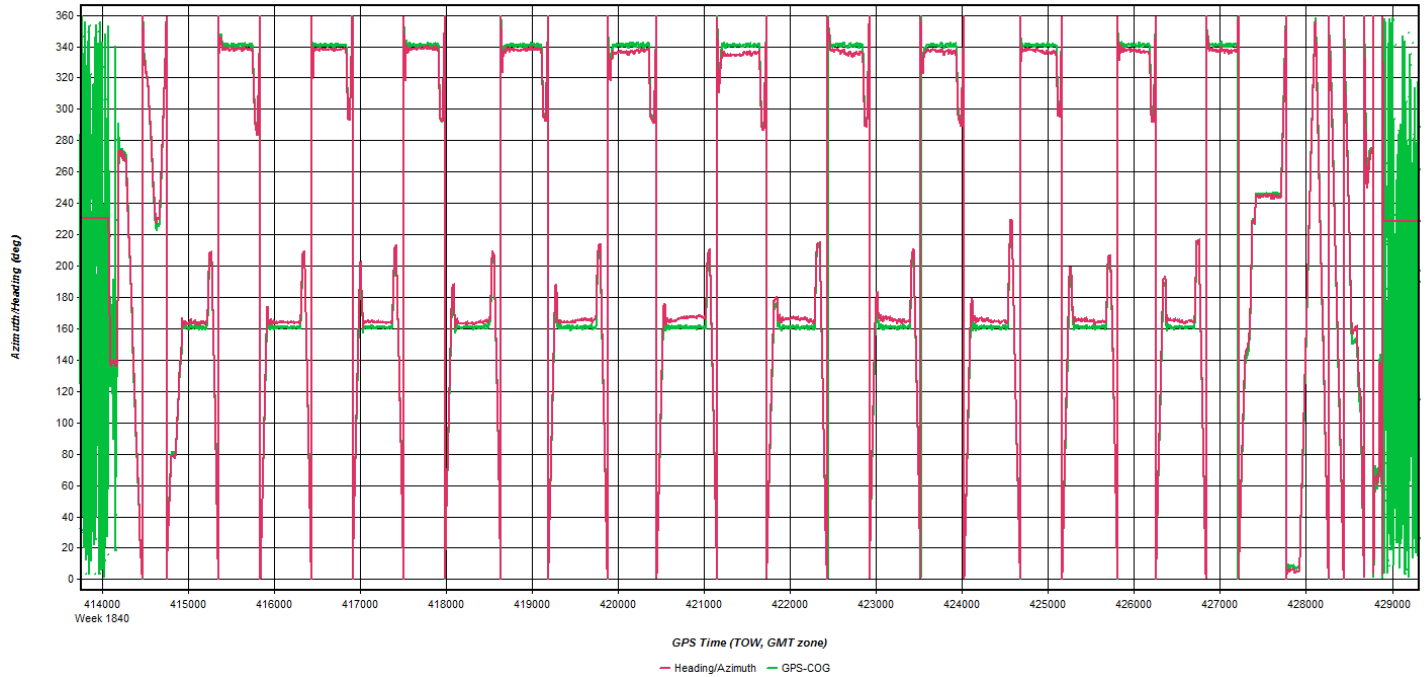
Base Station Log.....	211	Flight Log.....	327
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Apr 16, 2015-A (N262AS, SN7178)









Coordinate/Antenna Settings [?] [X]

Master Remote

Base Station
 1: 0884 Name: 0884 Disabled
 File: E:\Proc\26258_me_ma_q1_q2_baa\L1z1\08841060.gpb

Coordinates
 Latitude: North 42 16 04.13666
 Longitude: West 71 52 10.73775
 Ellipsoidal height: 272.303 m
 Datum: NAD83(2011)

Antenna Height
 From station file: TRM55971.00
 Antenna profile: TRM55971.00
 Measured height: 2.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 2.067 m
 Measured to:
 ARP
 L1 Phase Centre

Flight Log

Scanned by CamScanner

OPERATORS FLIGHT LOG

MISSION: S 150416.185146 DATE: 4-16-15 LEICA ALS-70

PILOT: J BARHAM OPERATOR: M JUST AIRCRAFT: 262AS 7178

PROJECT NUMBER	LINE NO. & Hdg	GND SPEED (KTS)	FREQ Hz	SCAN ANGLE	PRF kHz	FIXED GAIN	ALT (m)	TIME		MM70 DRIVE	REMARKS
								START	STOP		
26258			46	40	288	255					
US65 MA EAST	101 161°	174					6630	1915	1920		
	102 341°	164					6650	1923	1928		
	103 161°	168					6670	1932	1937		
	104 341°	165					6680	1941	1947		
	105 161°	165					6690	1950	1956		
	106 341°	167					6700	1959	2004		
	107 161°	182					6720	2008	2013		
	108 341°	167					6740	2017	2024		
	109 161°	170					6750	2028	2035		
	110 341°	174					6770	2038	2045		
	111 161°	175					6780	2049	2056		
	112 341°	175					6790	2100	2107		
	113 161°	173					6800	2112	2117		
	114 341°	172					6810	2121	2127		
	115 161°	174					6820	2130	2136		
	116 341°	171					6830	2139	2145		
	117 161°	167					6840	2149	2155		
	118 341°	172					6850	2158	2204		
STATUS	TOTAL LINES	FLOWN	LEFT	SITE	AIRCRAFT	FERRY	STATIC	START	STOP	NOTES: LEFT A-PAGE 1	
○	31	22	9	ORH	n/a		5min	2:50	7:00		
○							WX CLEAR				
○											

AERO-METRIC, INC. N.6216 Resource Drive Sheboygan Falls, WI. 53085 PHONE: 920-467-2655 FAX: 888-253-6695 E-Mail: amphoto@aerometric.com

OPERATORS FLIGHT LOG

MISSION: S 150416_185_46 DATE: 4-16-15 LEICA ALS-70

PILOT: J BACHMAN OPERATOR: M AJST AIRCRAFT: 262AS

PROJECT NUMBER: 26258 LINE NO. & Hdg: 119 161° GND SPEED (KTS): 165 ALT (m): 633.0 TIME START: 2208 STOP: 2214 REMARKS: 7178

PROJECT NUMBER	LINE NO. & Hdg	GND SPEED (KTS)	OPERATOR	FREQ HZ	SCAN ANGLE	PRF KHZ	FIXED GAIN	ALT (m)	TIME		REMARKS
									START	STOP	
26258	119 161°	165	M AJST	46	40	288	255	633.0	2208	2214	7178
4565 MVA	120 341°	172						6310	2217	2222	
ERST	121 161°	169						6260	2226	2231	
	122 341°	180						6280	2234	2239	
	130 245°	164						6400	2243	2247	CROSSFLIGHT END LIFT A
								6255	0013	0015	
	129 88°	170						6250	0019	0021	BEGIN LIFT B
	128 268°	165						6270	0025	0027	150416_234027
	127 88°	171						6320	0031	0034	
	26 268°	154						6260	0038	0038	
	125 88°	169						6330	0043	0044	REFLIGHT
	125 268°	160						6300	0048	0049	
	124 88°	172						6350	0051	0055	
	123 268°	164						6280	0059	0101	CROSSFLIGHT END LIFT B
	131 178°	145									

STATUS	TOTAL LINES	FLOWN	LEFT	AIRCRAFT		STATIC	START	STOP	NOTES
				SITE	FERRY				
○	31	22	9	ORH	N/A	5min	2:50	2:00	PAGE 2 LIFT A
○	31	9	0	ORH	N/A	WX			START-7:50pm STOP-9:35 LIFT B

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Scanned by CamScanner

Base Station Log



Station Occupation Report For Airborne GPS

Project: USGS MA EAST BLOCK

Location: KORH - WORCESTER, MA Project Number: 26258
 Completed by: M AUST Date: 4-16-15

Receiver: TRIMBLE R7

Receiver Type: _____

Antenna Type: _____

Station ID: SET POINT

Start -- H.I. (m): ~~XXXXX~~ 2 m

End -- H.I. (m): 2 m

H.I. (ft): ~~XXXX~~ _____

Start Time: 2:15P

End Time: 9:45P

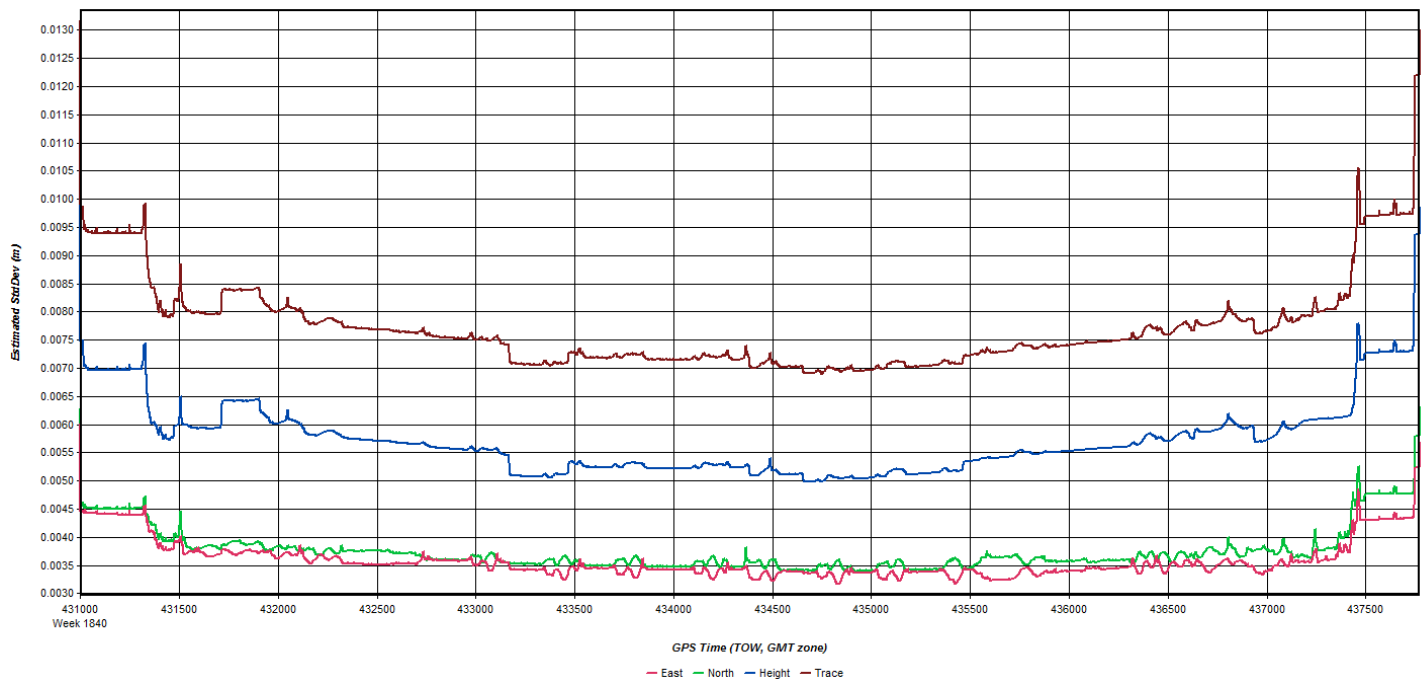
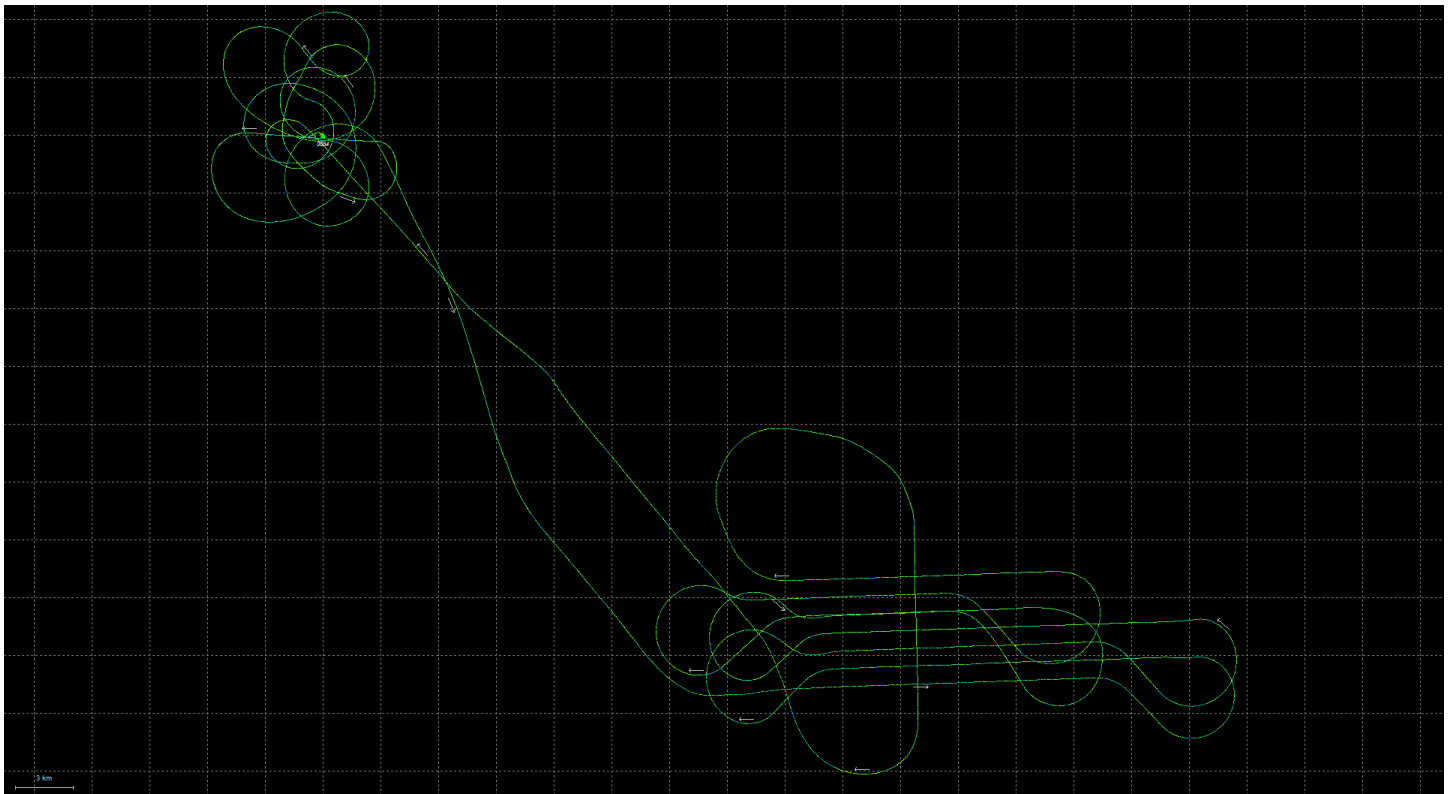
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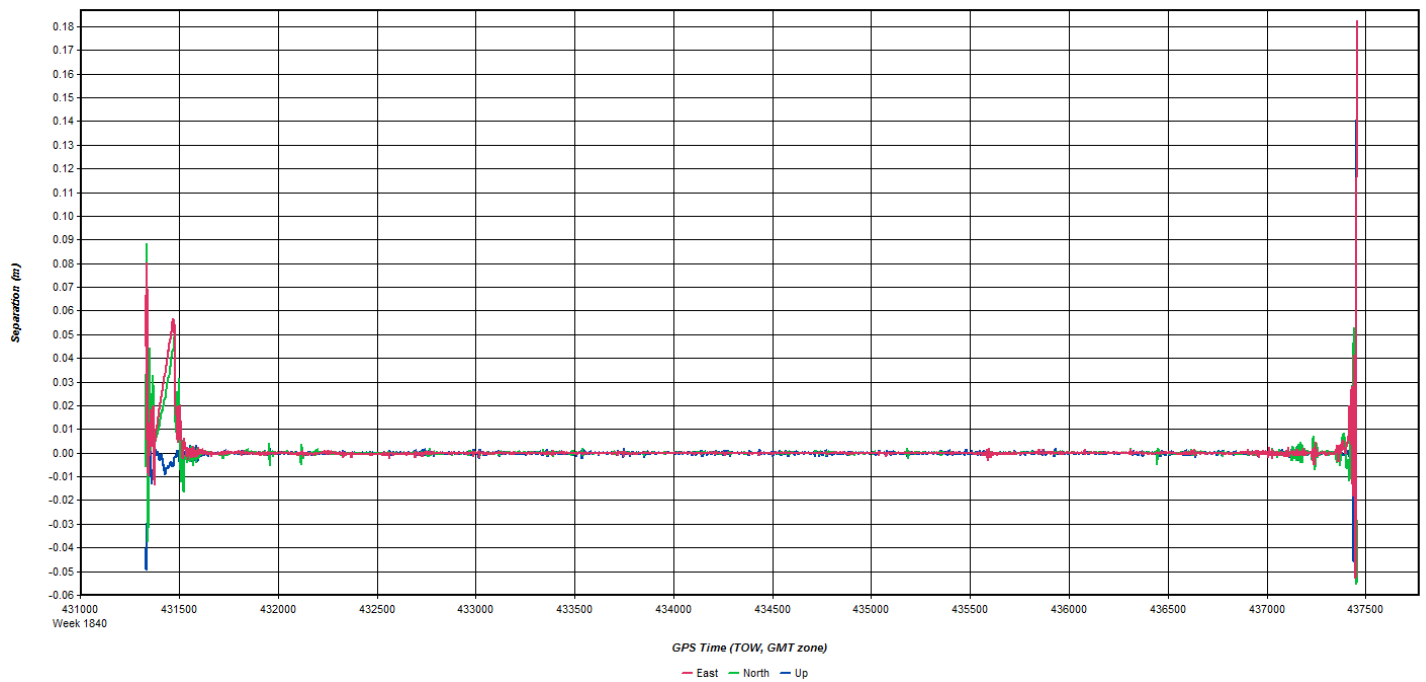
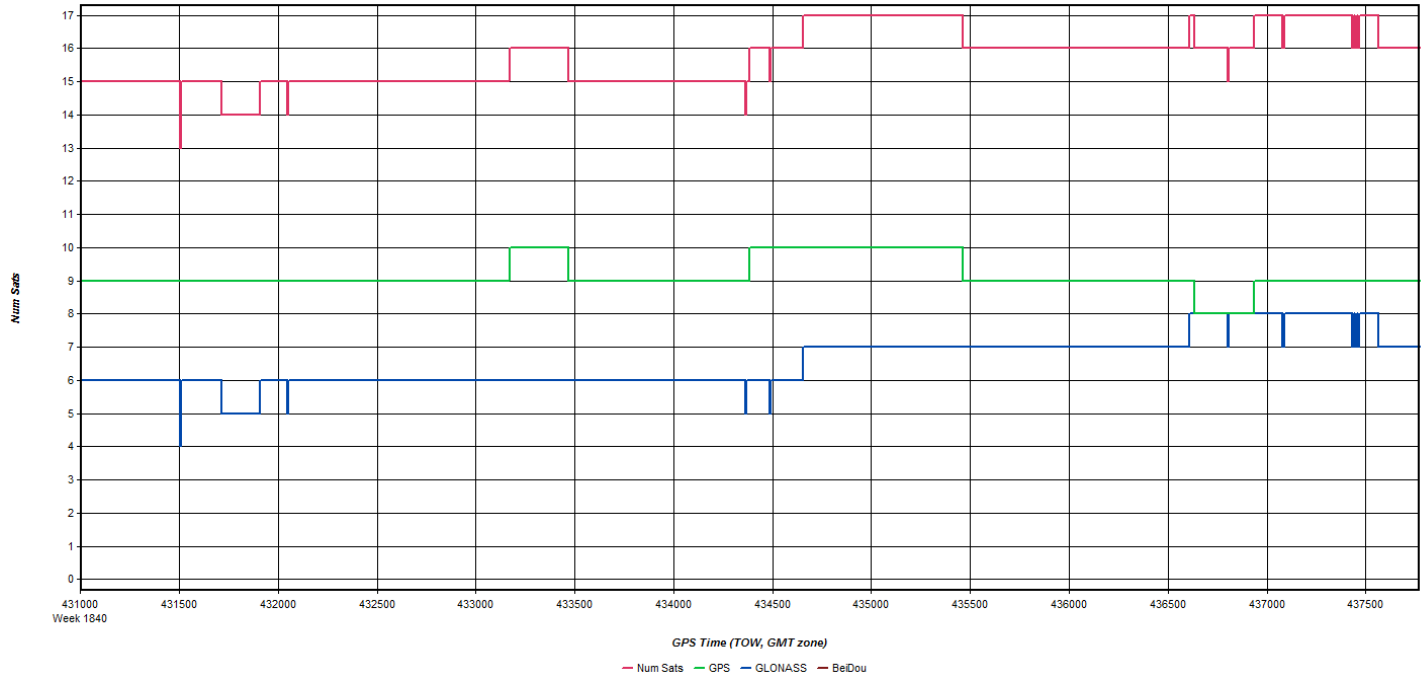
Operator: M AUST

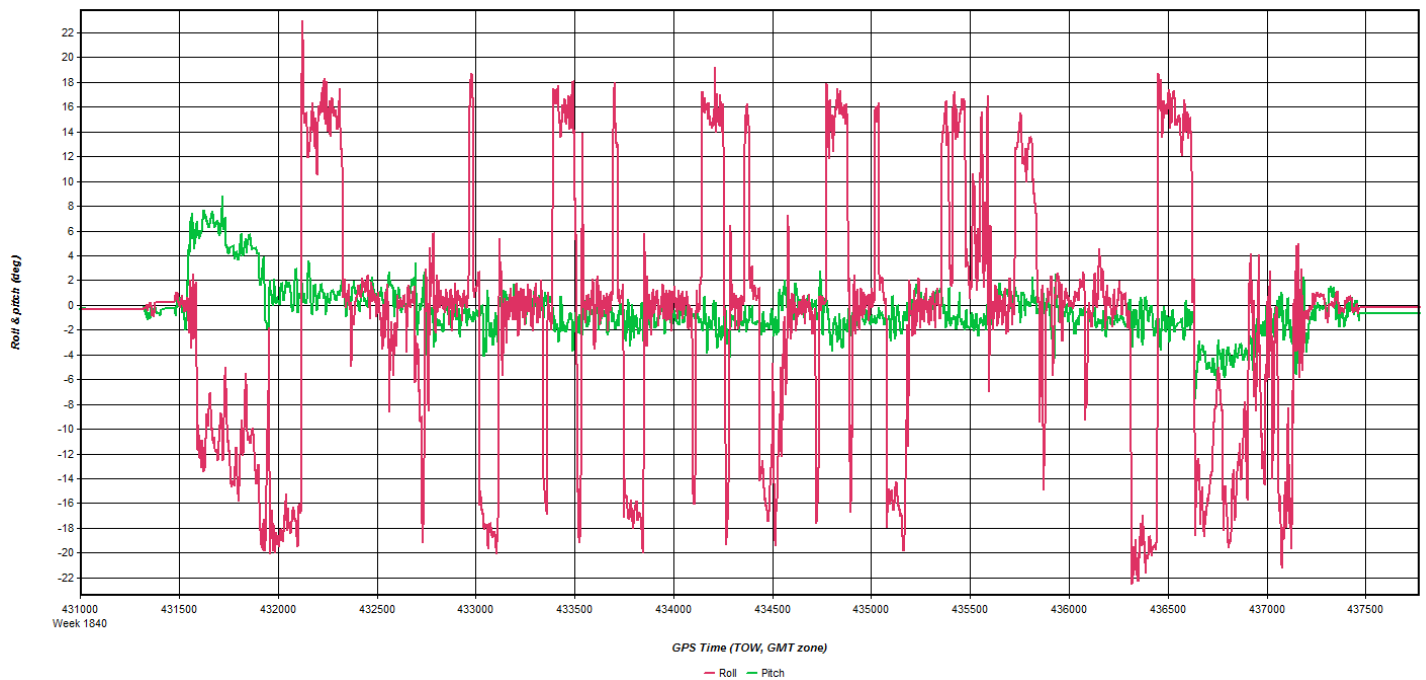
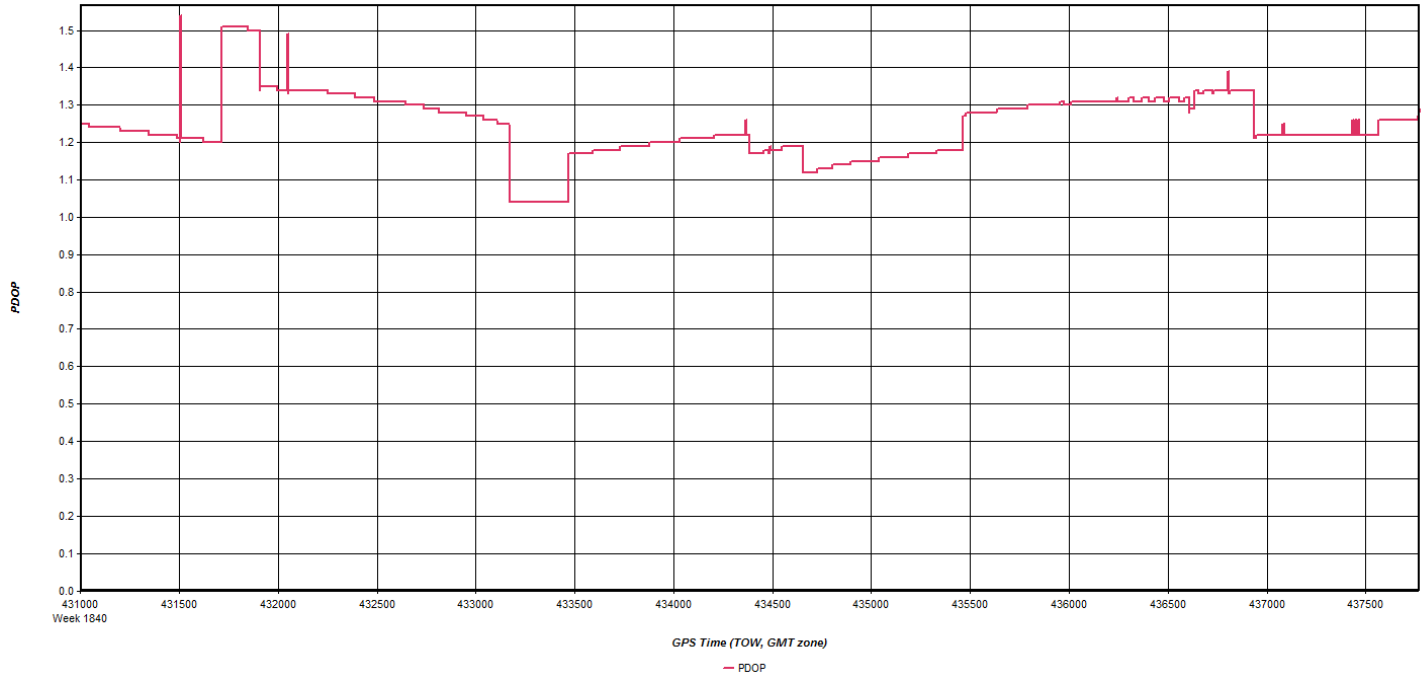
Comments: SET POINT

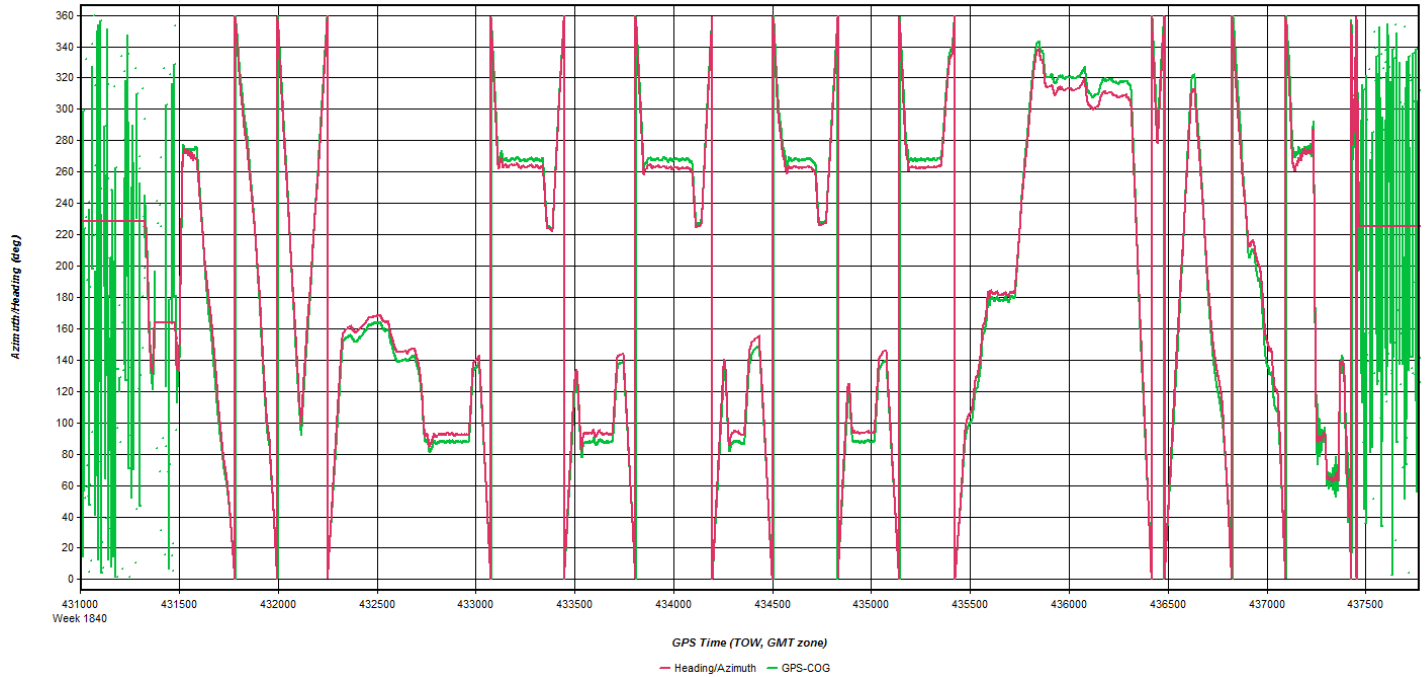


Apr 26, 2015-B (N262AS, SN7178)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: 0884 Name: 0884 Disabled
 File: E:\Proc\26258_me_ma_q1_q2_baa\L1z1\08841060.gpb

Coordinates
 Latitude: North 42 16 04.13666
 Longitude: West 71 52 10.73775
 Ellipsoidal height: 272.303 m
 Datum: NAD83(2011)

Antenna Height
 From station file: TRM55971.00
 Antenna profile: TRM55971.00
 Measured height: 2.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 2.067 m
 Measured to:
 ARP
 L1 Phase Centre

Flight Log

OPERATORS FLIGHT LOG

MISSION: S 150416_185_46 DATE: 4-16-15 LEICA ALS-70

PILOT: J BACHMANN OPERATOR: M AUST AIRCRAFT: 262AS

PROJECT NUMBER: 26258 LINE NO. & Hdg: 119 161° GND SPEED (KTS): 165 SCAN ANGLE: 40 PRF KHZ: 288 FIXED GAIN: 255 ALT (m): 633.0 TIME START: 2208 STOP: 2214 REMARKS: 7178

PROJECT NUMBER	LINE NO. & Hdg	GND SPEED (KTS)	SCAN ANGLE	PRF KHZ	FIXED GAIN	ALT (m)	TIME START	TIME STOP	REMARKS
26258	119 161°	165	40	288	255	633.0	2208	2214	
4565 MA	120 341°	172				6310	2217	2222	
ERST	121 161°	169				6260	2226	2231	
	122 341°	180				6280	2234	2239	
	130 245°	164				6400	2243	2247	CROSSFLIGHT END LIFT A
						6255	0013	0015	
	129 88°	170				6250	0019	0021	BEGIN LIFT B
	128 268°	165				6270	0025	0027	150416_234027
	127 88°	171				6230	0031	0034	
	26 268°	154				6260	0038	0038	
	125 88°	169				6330	0043	0044	REFLIGHT
	124 88°	172				6300	0048	0049	
	123 268°	164				6350	0051	0055	
	131 178°	145				6280	0059	0101	CROSSFLIGHT END LIFT B

STATUS	TOTAL LINES	FLOWN	LEFT	AIRCRAFT		STATIC	START	STOP	NOTES
				SITE	FERRY				
○	31	22	9	ORH	N/A	5min	250	7:00	PAGE 2 LIFT A
○	31	9	0	ORH	N/A	WX			START-7:50pm STOP-9:35 LIFT B

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Scanned by CamScanner

Base Station Log



Station Occupation Report For Airborne GPS

Project: USGS MA EAST BLOCK

Location: KORH - WORCESTER, MA Project Number: 26258
 Completed by: M AUST Date: 4-16-15

Receiver: TRIMBLE R7

Receiver Type: _____

Antenna Type: _____

Station ID: SET POINT

Start -- H.I. (m): ~~XXXXX~~ 2 m

End -- H.I. (m): 2 m

H.I. (ft): ~~XXXX~~ _____

Start Time: 2:15p

End Time: 9:45p

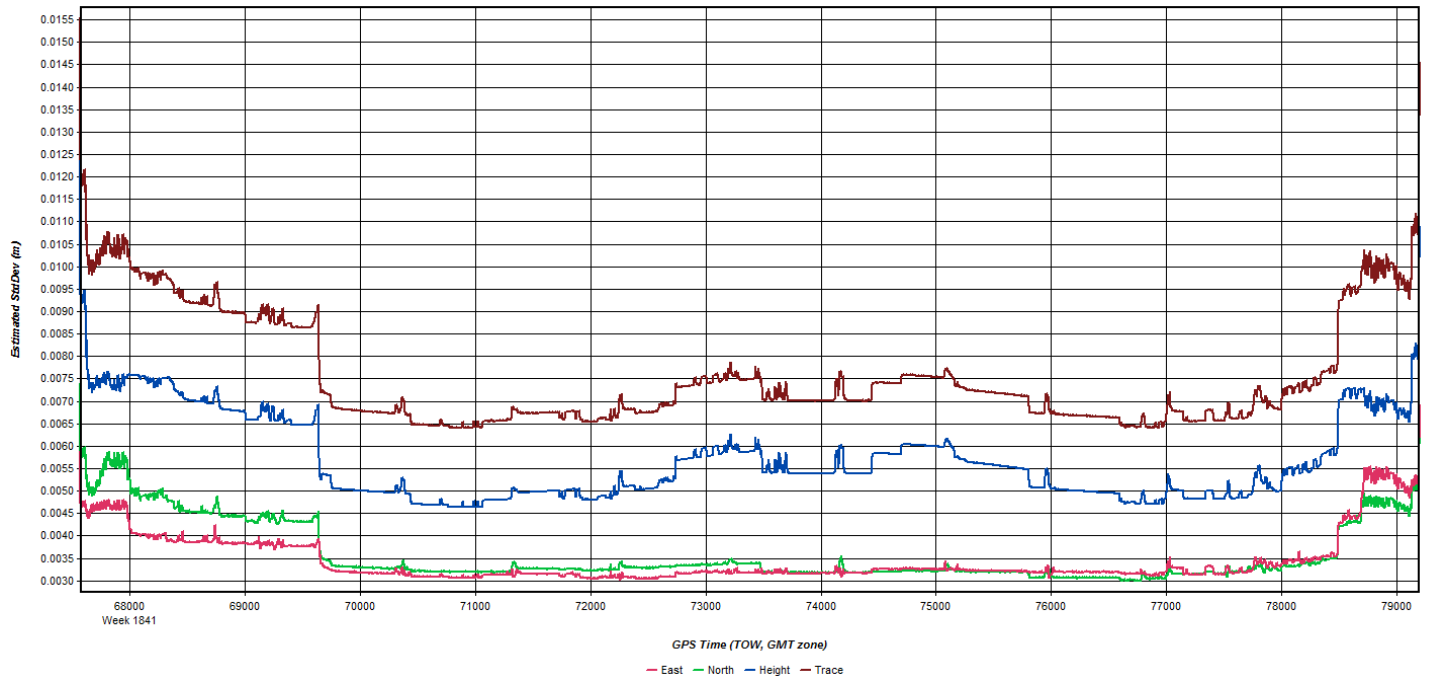
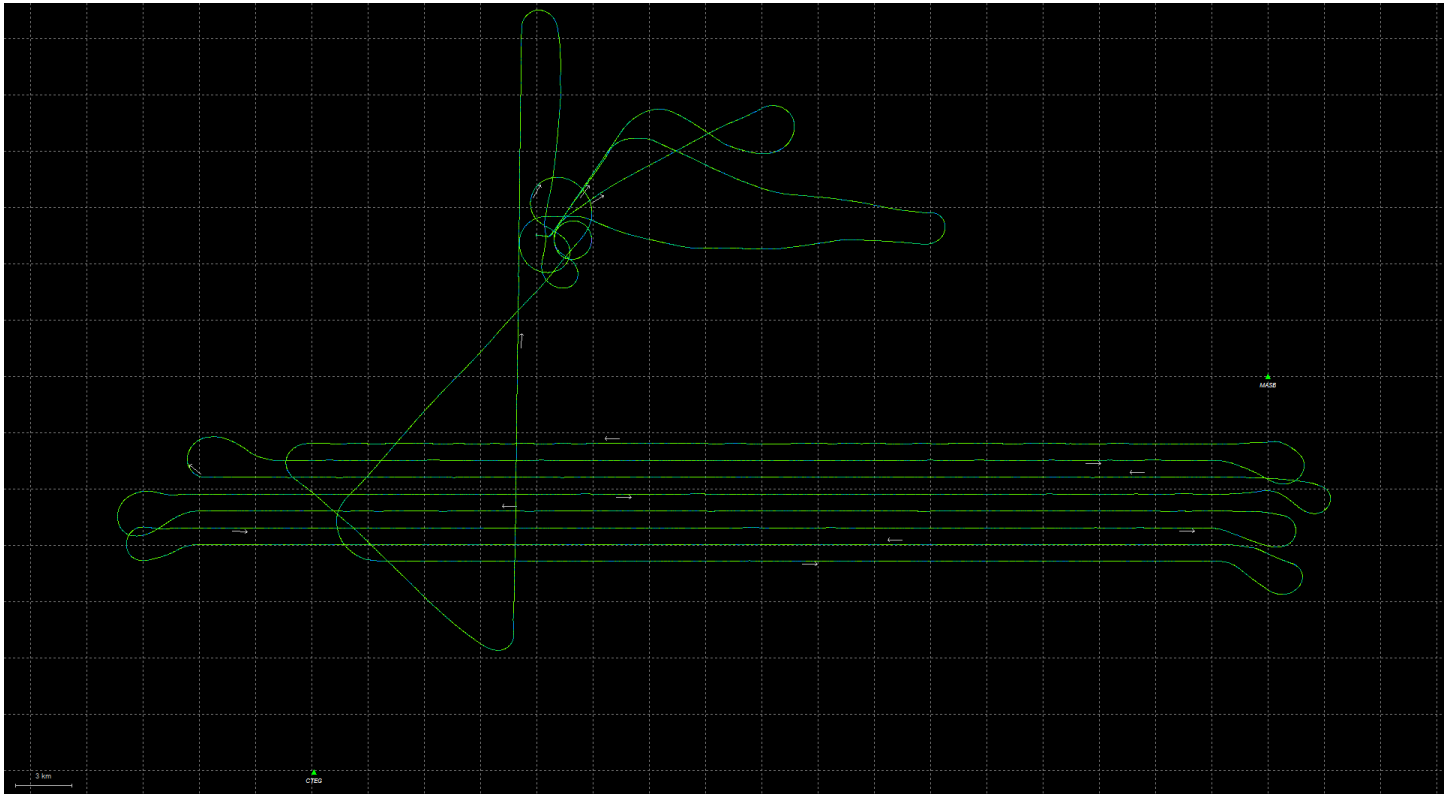
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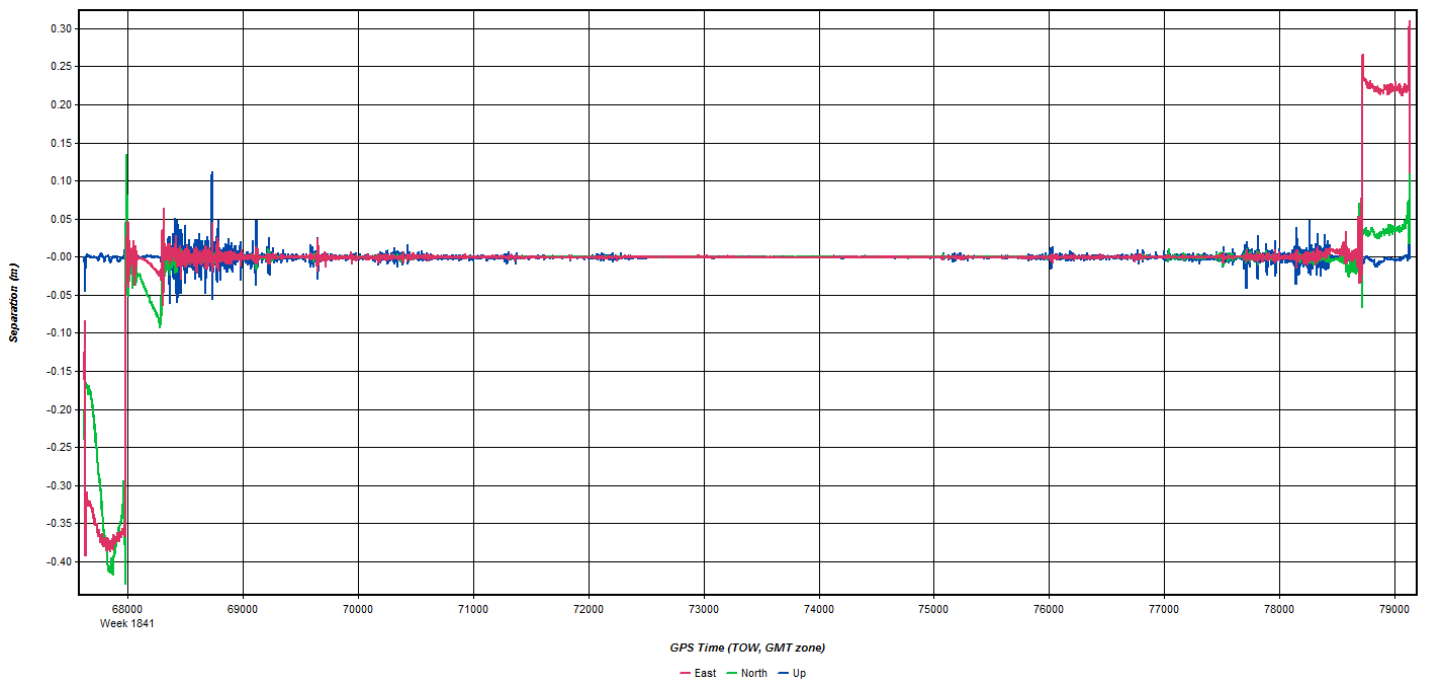
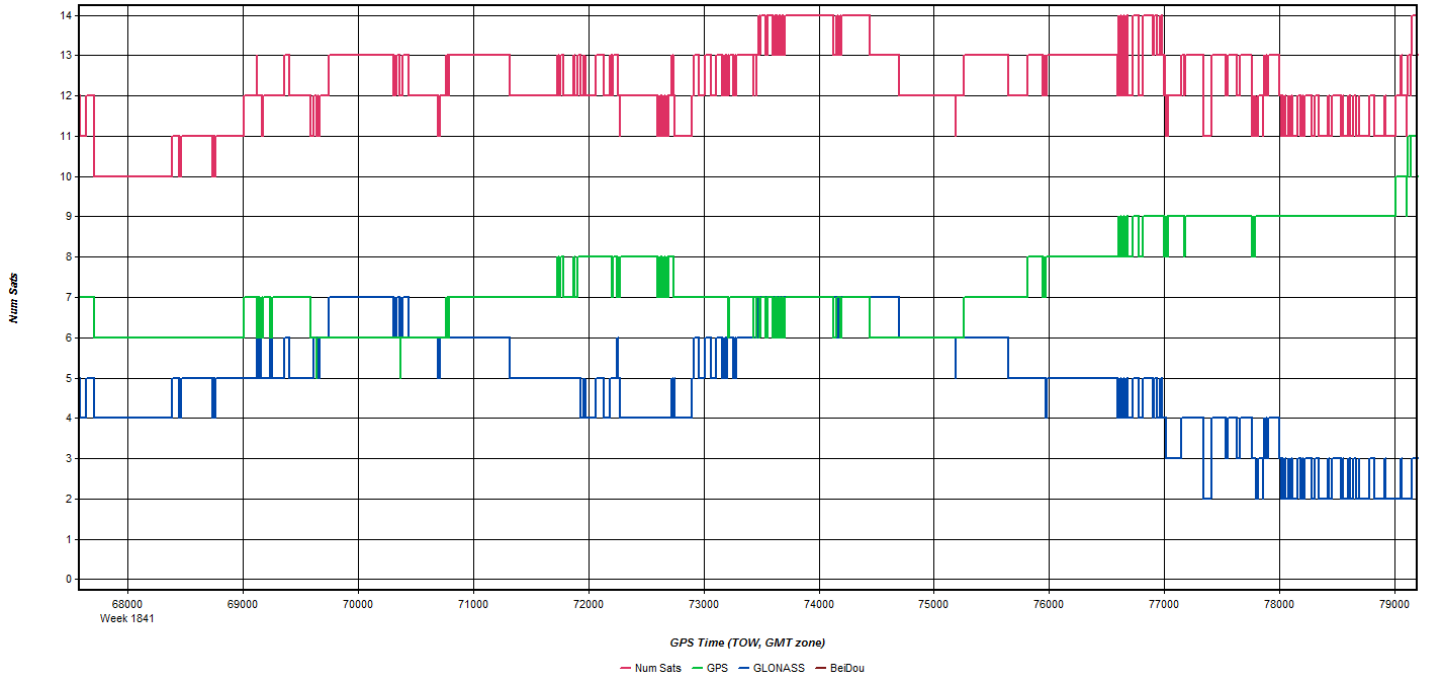
Operator: M AUST

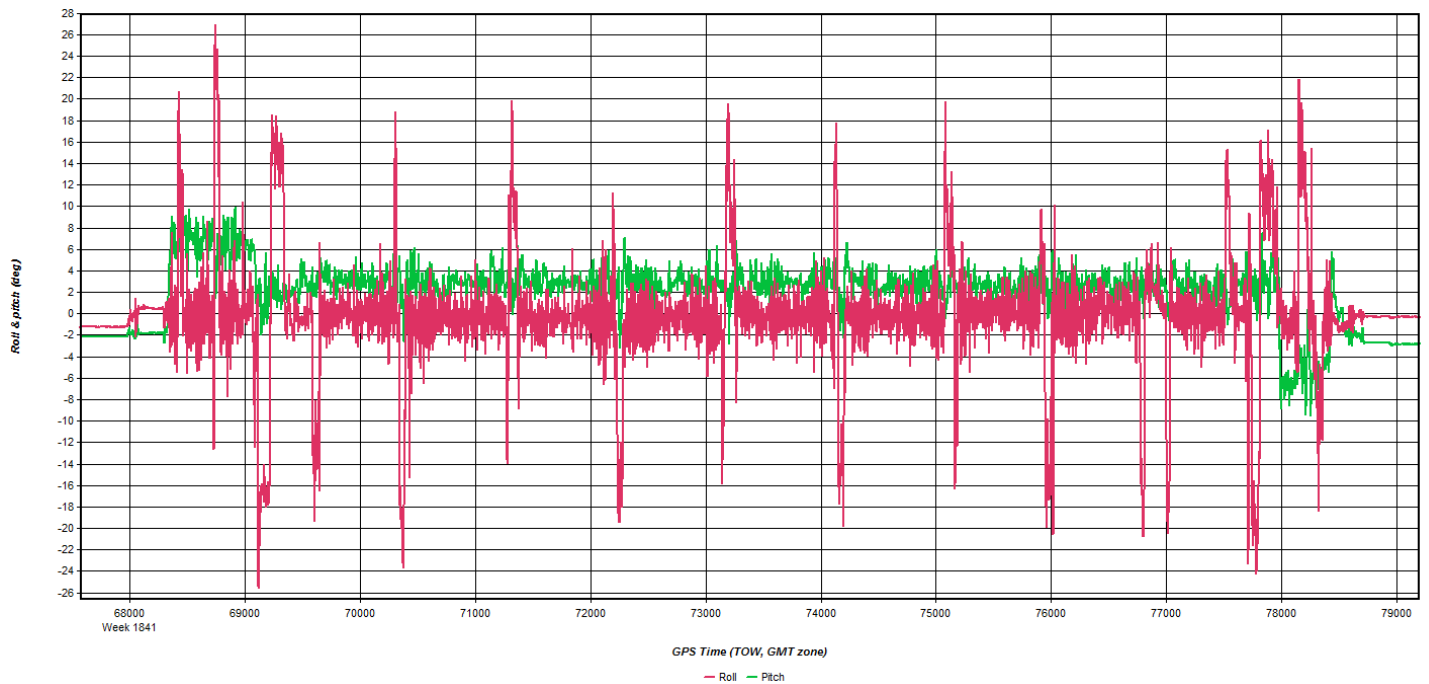
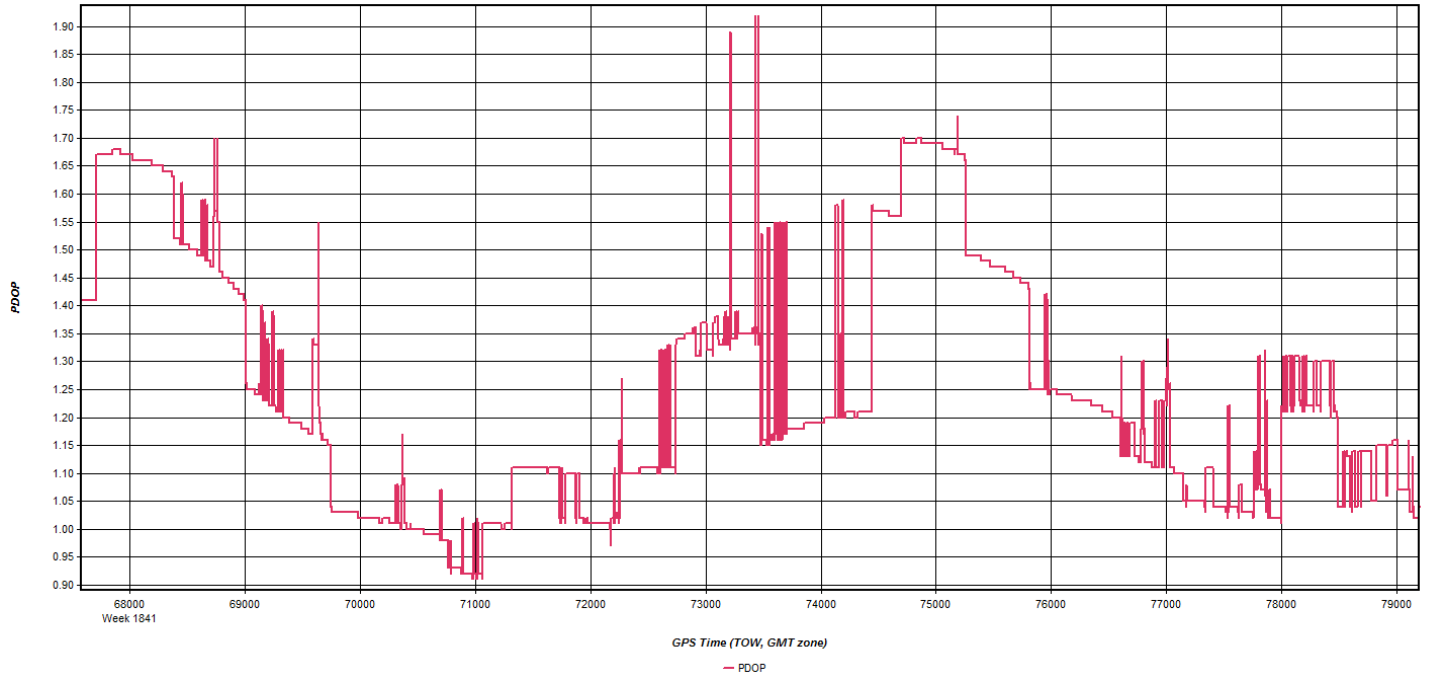
Comments: SET POINT

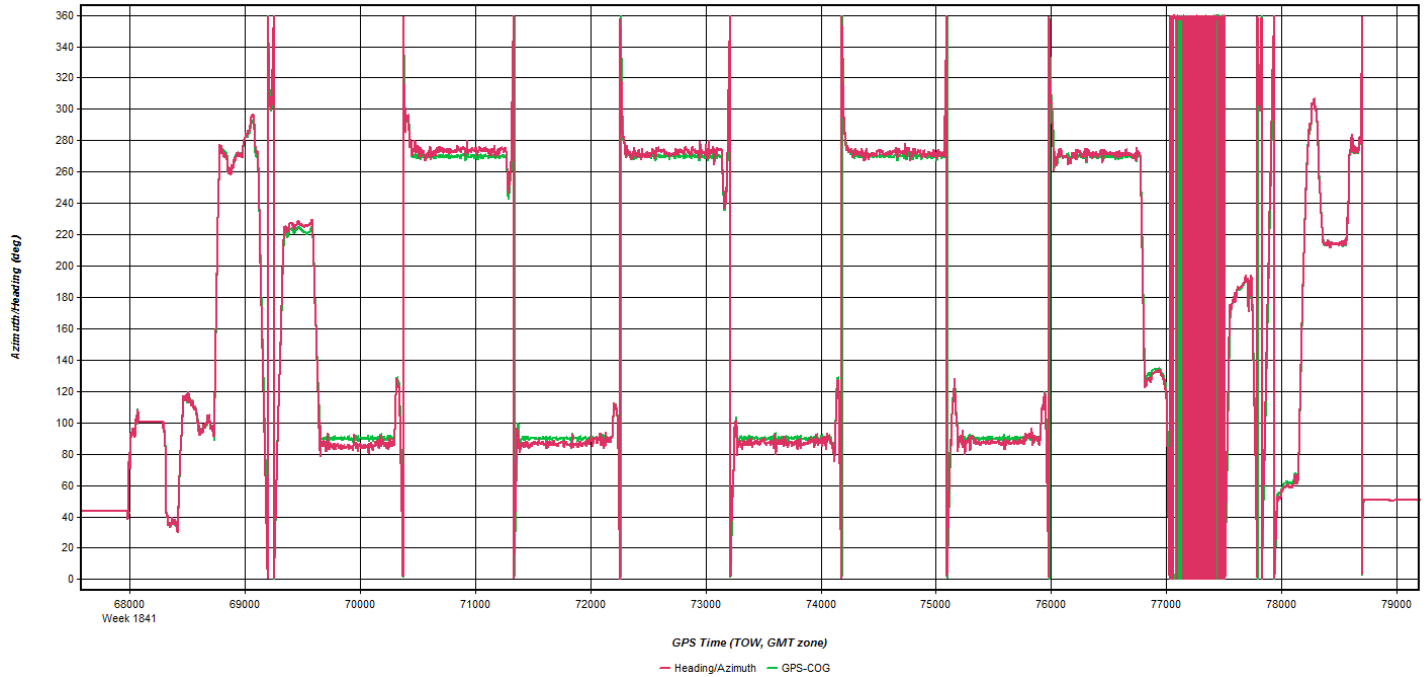


Apr 19, 2015-A (N775MW, SN7123)









Coordinate/Antenna Settings [?] [X]

Master Remote

Base Station
 2: CTEG Name: CTEG Disabled
 File: E:\Proc\BP15-04-229_KCEP\N775MW\ALS\7123_20150419_1\

Coordinates
 Latitude: North 41 55 24.34701
 Longitude: West 72 41 55.88092
 Ellipsoidal height: 30.293 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MASB Name: MASB Disabled
 File: E:\Proc\BP15-04-229_KCEF\N775MW\ALS\7123_20150419_1v

Coordinates
 Latitude: North 42 06 41.08110
 Longitude: West 72 05 13.98571
 Ellipsoidal height: 159.560 m
 Datum: NAD83(2011)

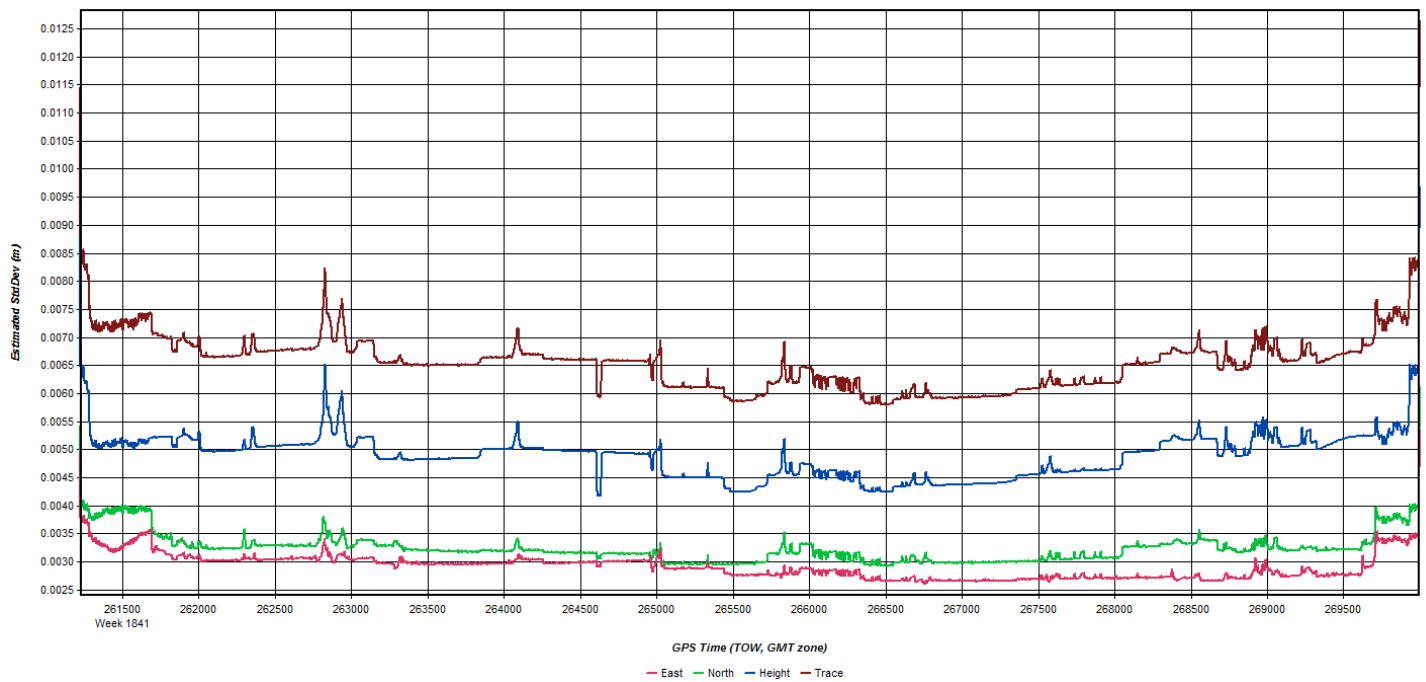
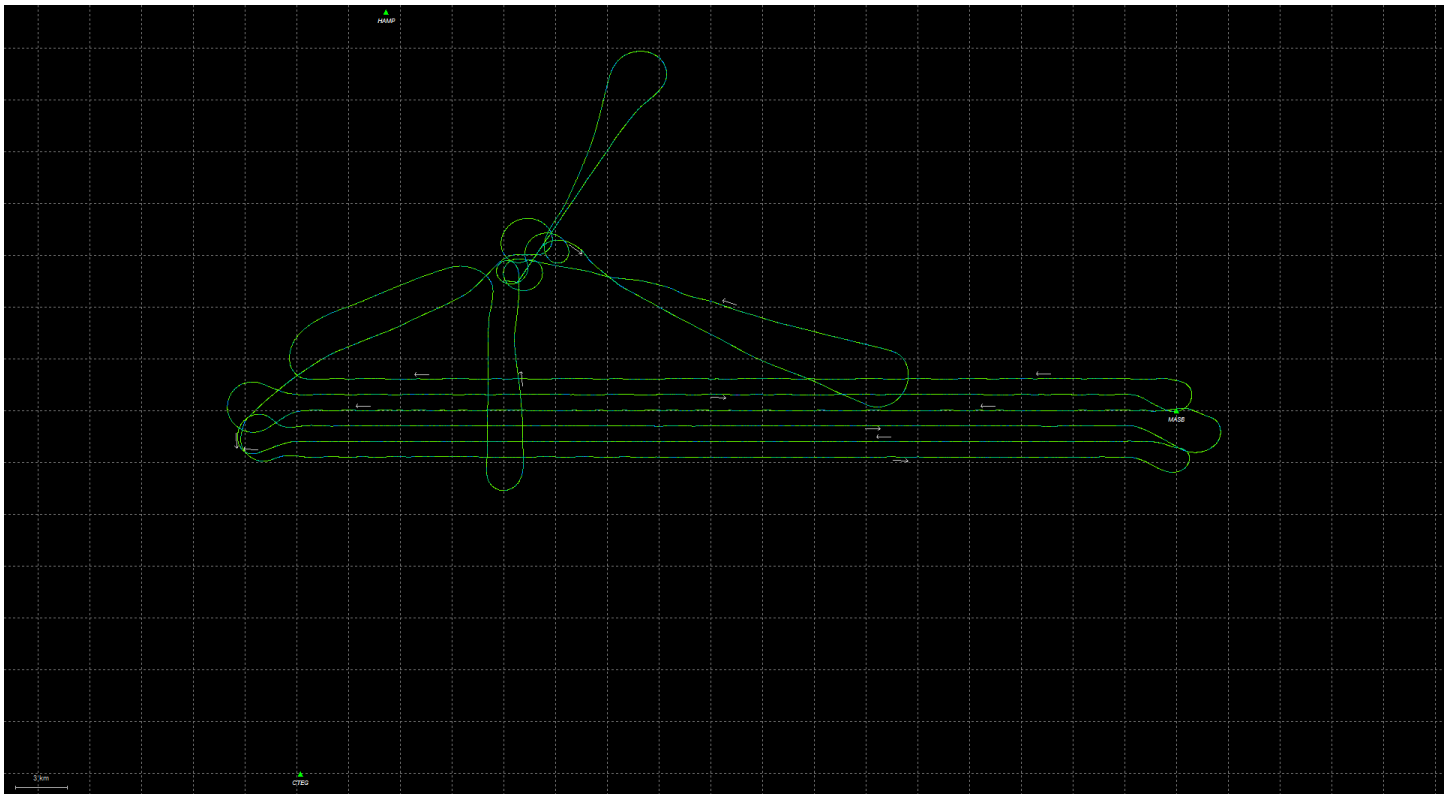
Antenna Height
 From station file: LEIAX1203+GNSS, NONE
 Antenna profile: LEIAX1203+GNSS
 Measured height: 0.000 m
 ARP to L1 offset: 0.058 m
 Applied height: 0.058 m
 Measured to
 ARP
 L1 Phase Centre

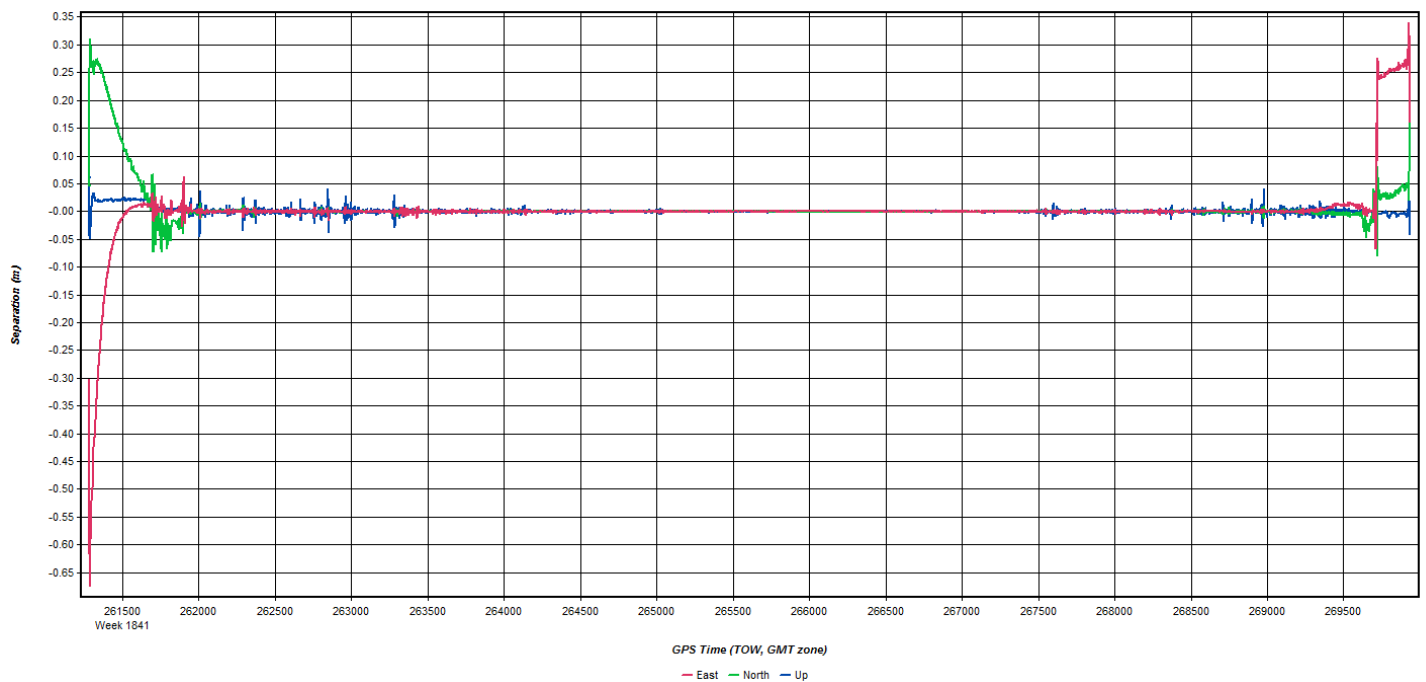
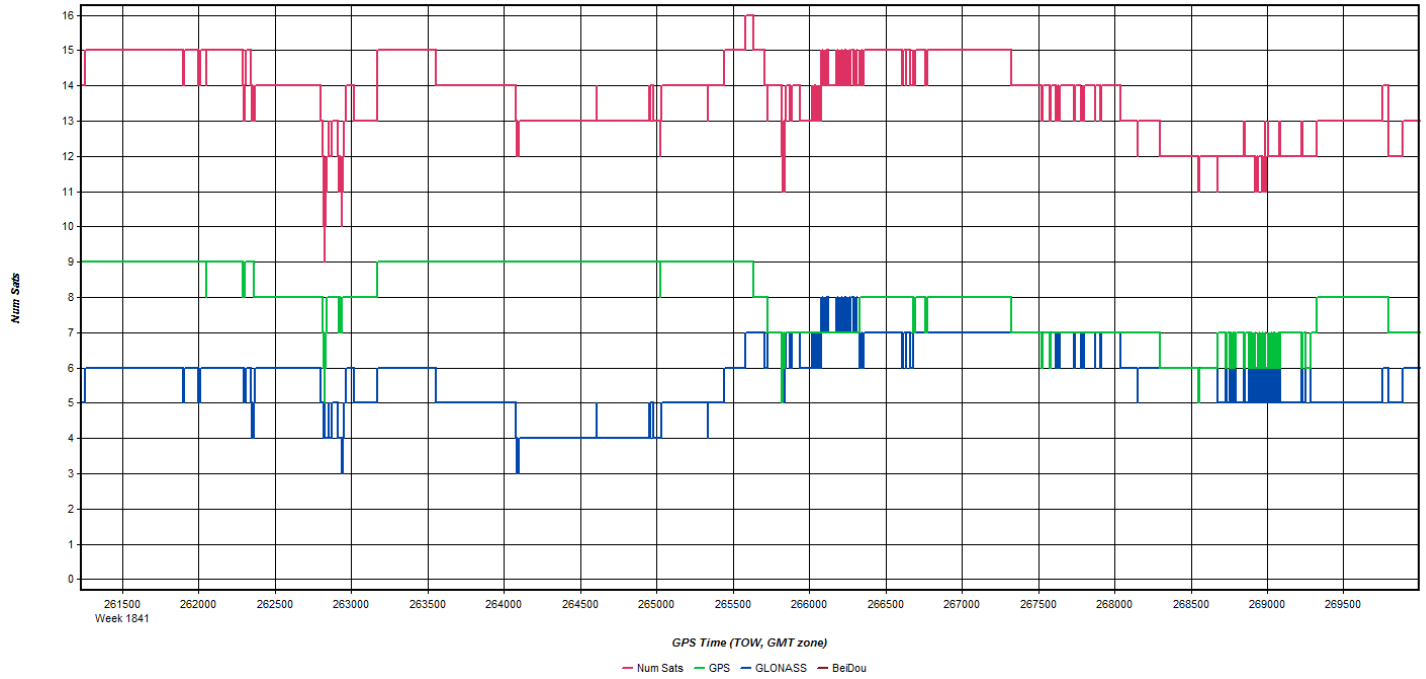
Flight Log

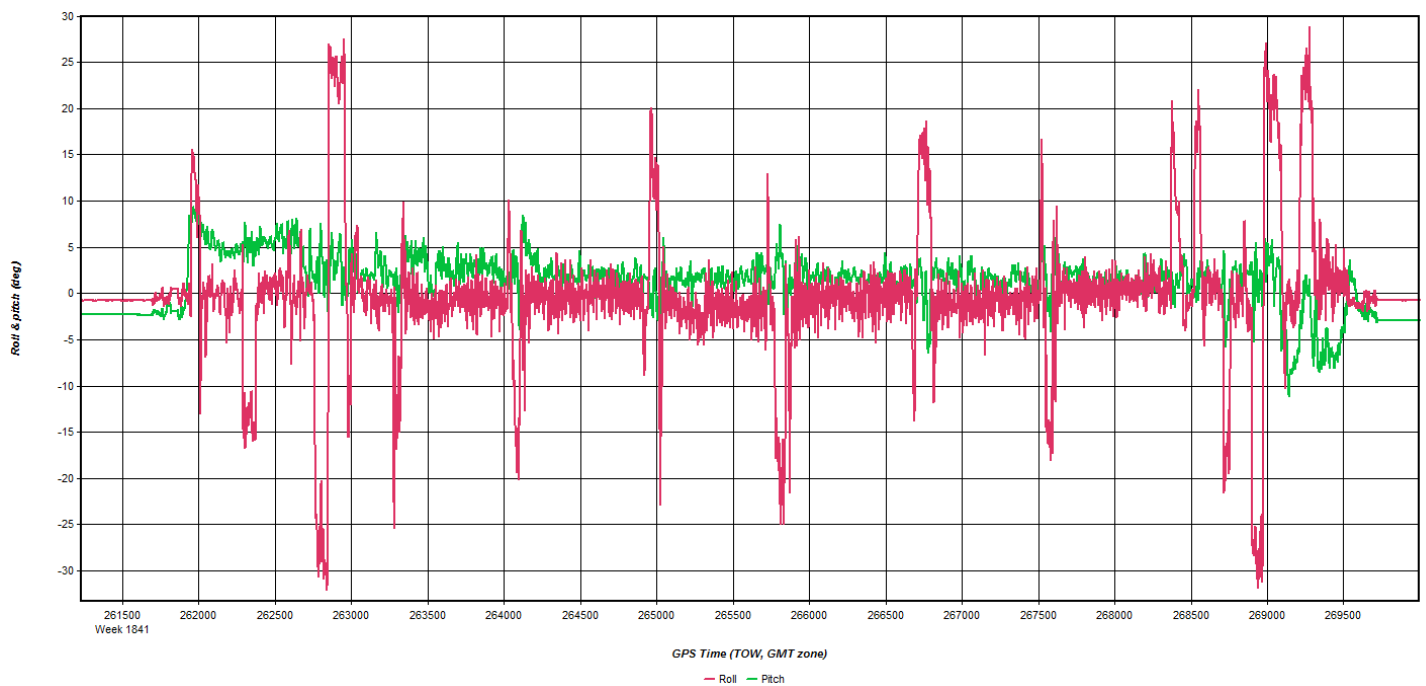
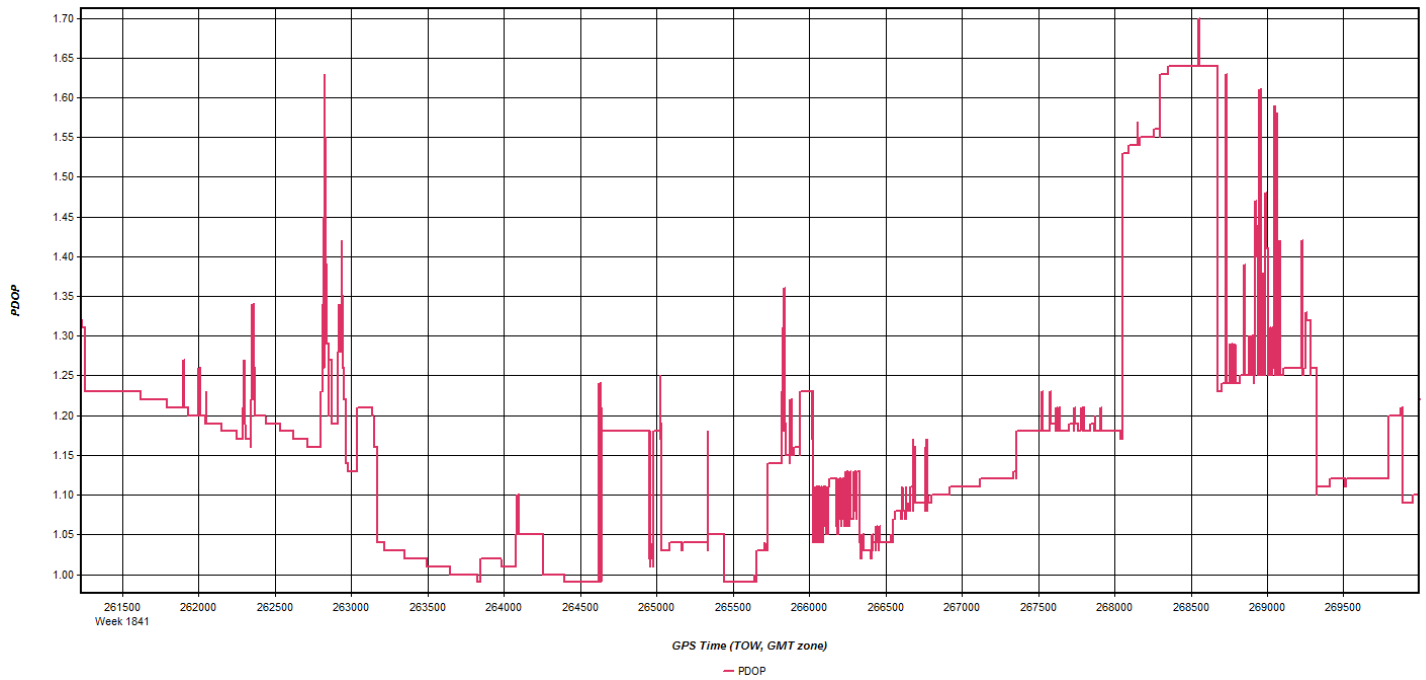
atlantic 2223 S Drake Ave, Suite 200 Huntsville, AL 35895 PH: (256) 971-9991 FX: (256) 971-1154		Project #: BP15-04-229	Tail Number: N775MW	Level Arm				
2223 S Drake Ave, Suite 200, Huntsville, AL 35895		Flight plan name: Quantum_KCEF	Flight Date: 20150419_1 / JD109_1	X	Y	Z		
atlantic		Location: KCEF	Sensor SN: 7123	GPS				
atlantic		Pilot: Shelden	Weather	IMU				
atlantic		Operator: Huey						
atlantic		Sensor: ALS	Base Station	T2	ARP	Start		
atlantic		Hobbs Time Start: 3496.9	SET_1	1.52	1.46	18:16		
atlantic		Hobbs Time Stop: 3500.2		0.00 <td>#NUM!</td> <td>22:09</td>	#NUM!	22:09		
atlantic		Pre-Static: 1845 - 1850		0.00	#NUM!			
atlantic		Post-Static: 212:52 - 21:57						
atlantic		Fwd Lap:						
atlantic		Side Lap:						
Line/Dir	Start	End	Air Speed	Alt(ft)	# Exp	Light Values	GB Size	Comments or errors while online:
36	104	19:21	19:31	129	6819			
35	284	19:34	19:47	135	6754			
34	104	19:50	20:02	137	6799			
33	284	20:05	20:18	127	6804			
32	104	20:21	20:34	132	6816			
31	284	20:38	20:50	131	6865			
30	104	20:53	21:04	136	6802			
29	284	21:07	21:19	132	6785			crossline
37	15	21:24	21:31	133	6821			

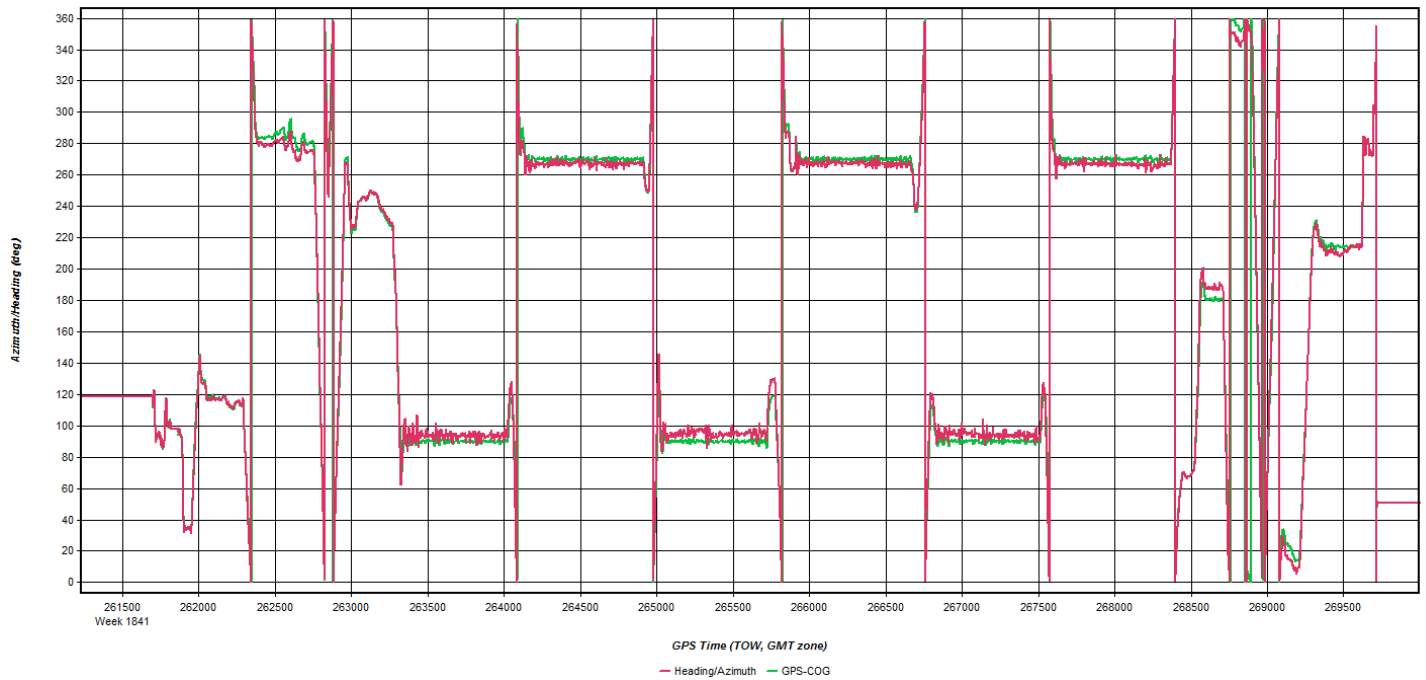
2223 Drake Avenue SW, Suite 200, Huntsville, AL 35895 | 256-971-9991 | www.atlanticfly.com

Apr 21, 2015-A (N775MW, SN7123)









Coordinate/Antenna Settings [?] [X]

Master Remote

Base Station
 2: CTEG Name: CTEG Disabled
 File: [E:\Proc\FROM_TAG\TTT1\BP15-04-229_KCEF\W775MW\ALS\]

Coordinates
 Latitude: North 41 55 24.34701
 Longitude: West 72 41 55.88092
 Ellipsoidal height: 30.293 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
3: HAMP Name: HAMP Disabled
File: E:\Proc\FROM_TAG\TTT1\BP15-04-229_KCEF\W775MW\ALS\

Coordinates
Latitude: North 42 19 03.87277 Compute from PPP
Longitude: West 72 38 22.40329 Enter Grid Values
Ellipsoidal height: 42.355 m Enter MSL Height
Datum: NAD83(2011) 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 Measured to
ARP ARP
L1 Phase Centre L1 Phase Centre
ARP to L1 offset: 0.067 m
Applied height: 0.067 m Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

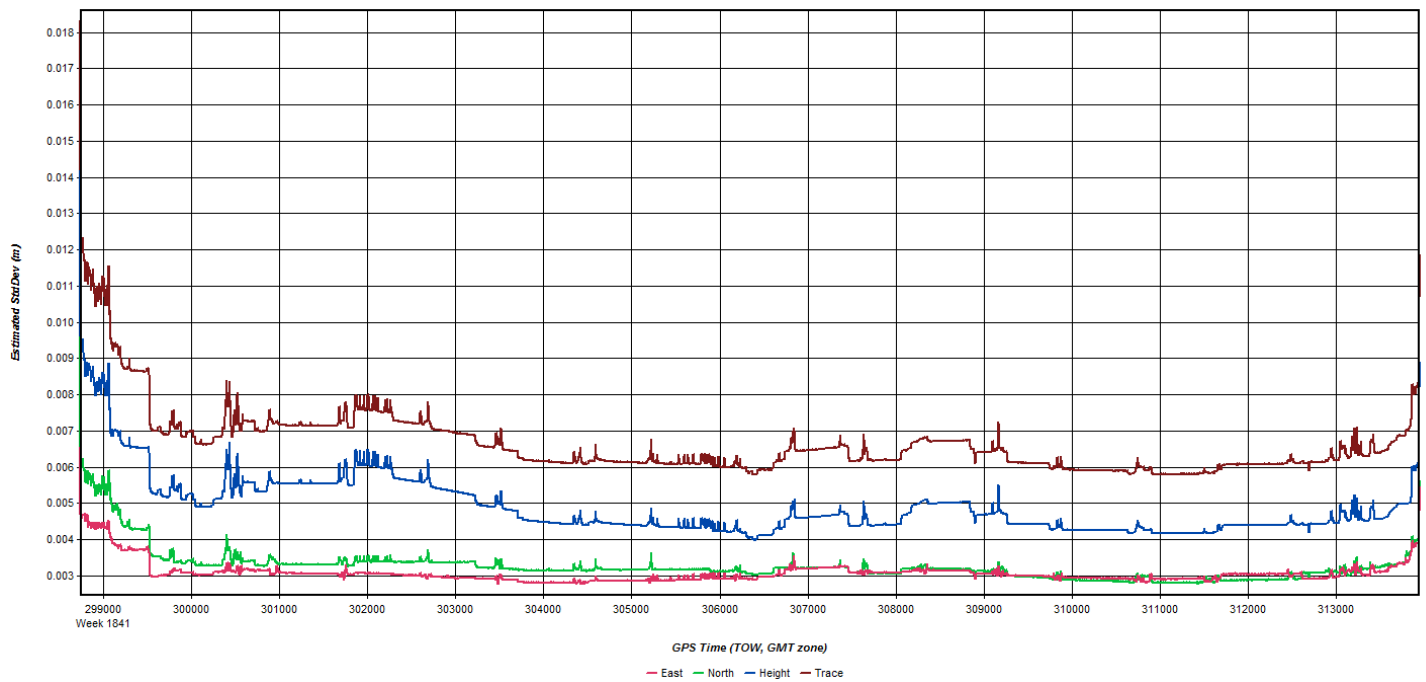
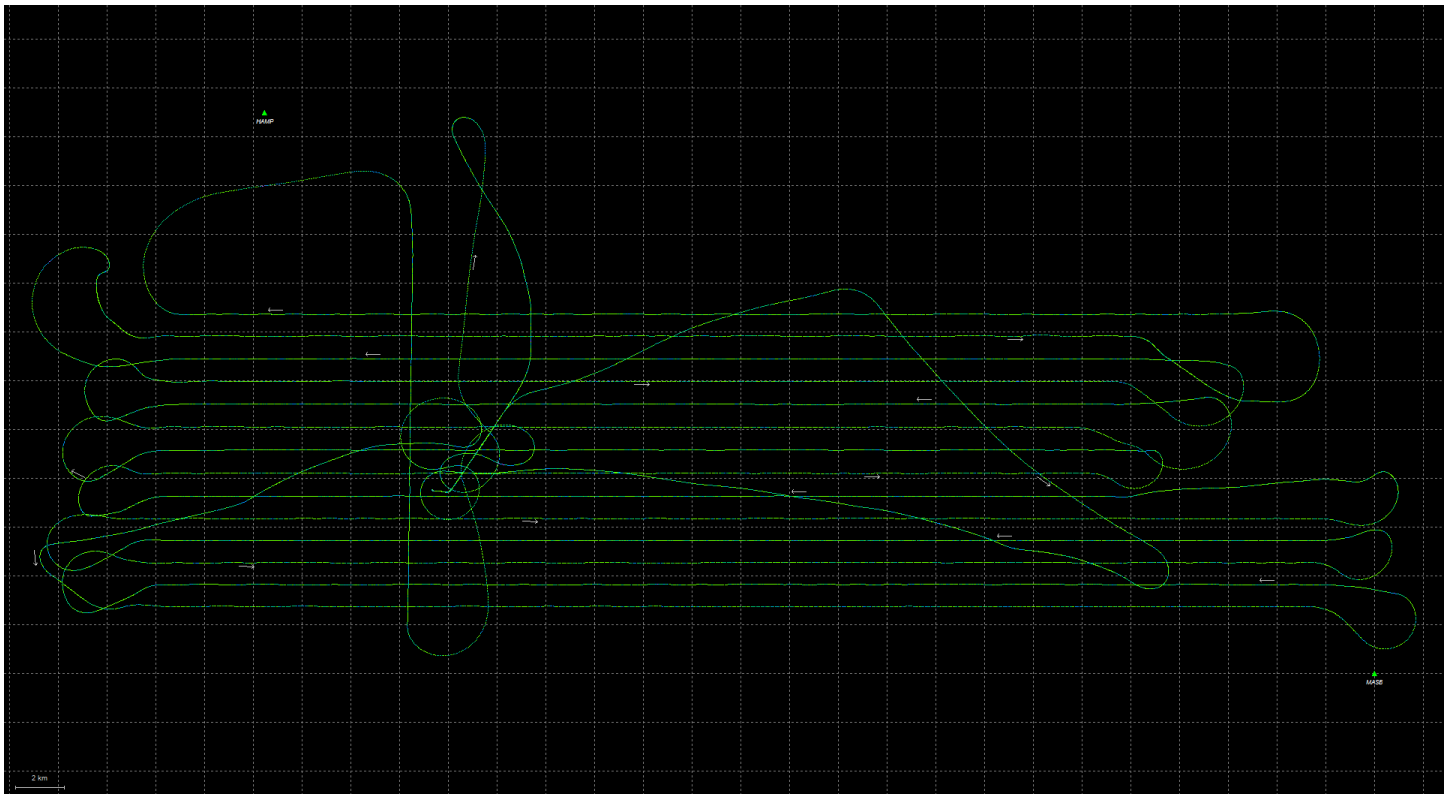
Base Station
1: MASB Name: MASB Disabled
File: E:\Proc\FROM_TAG\TTT1\BP15-04-229_KCEF\W775MW\ALS\

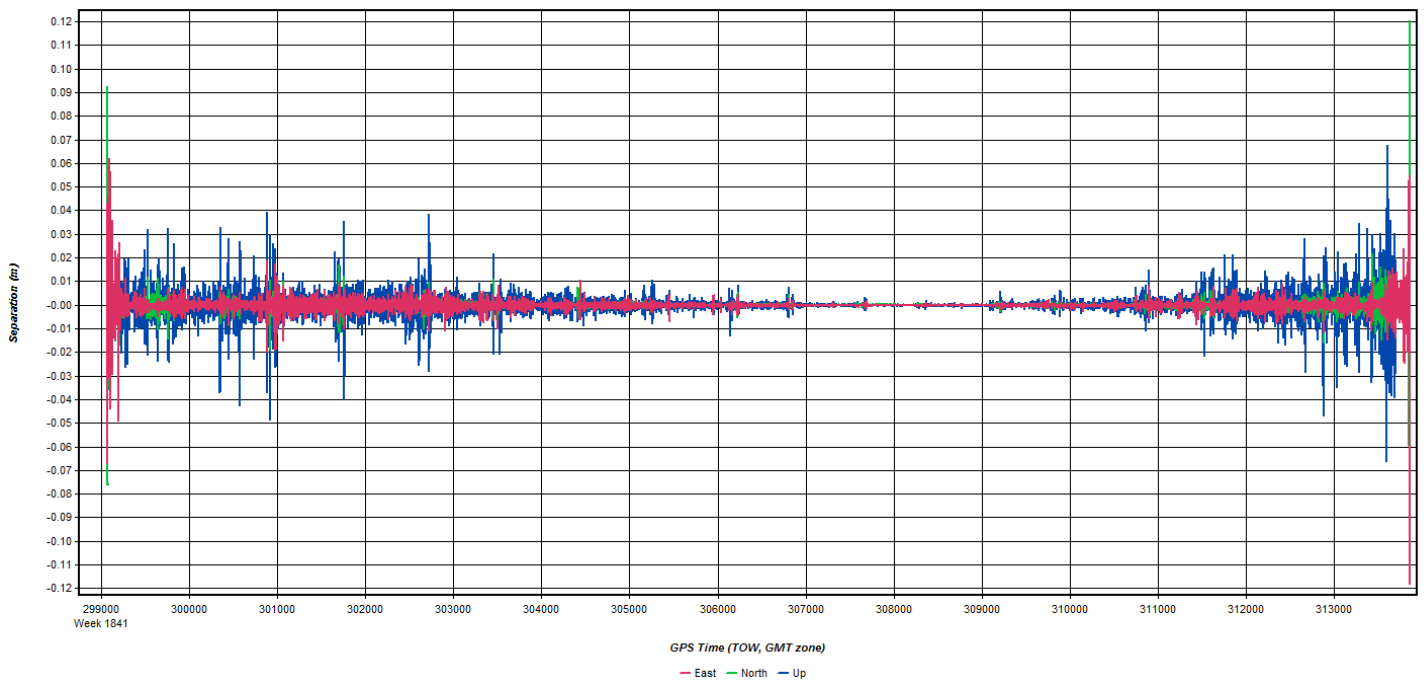
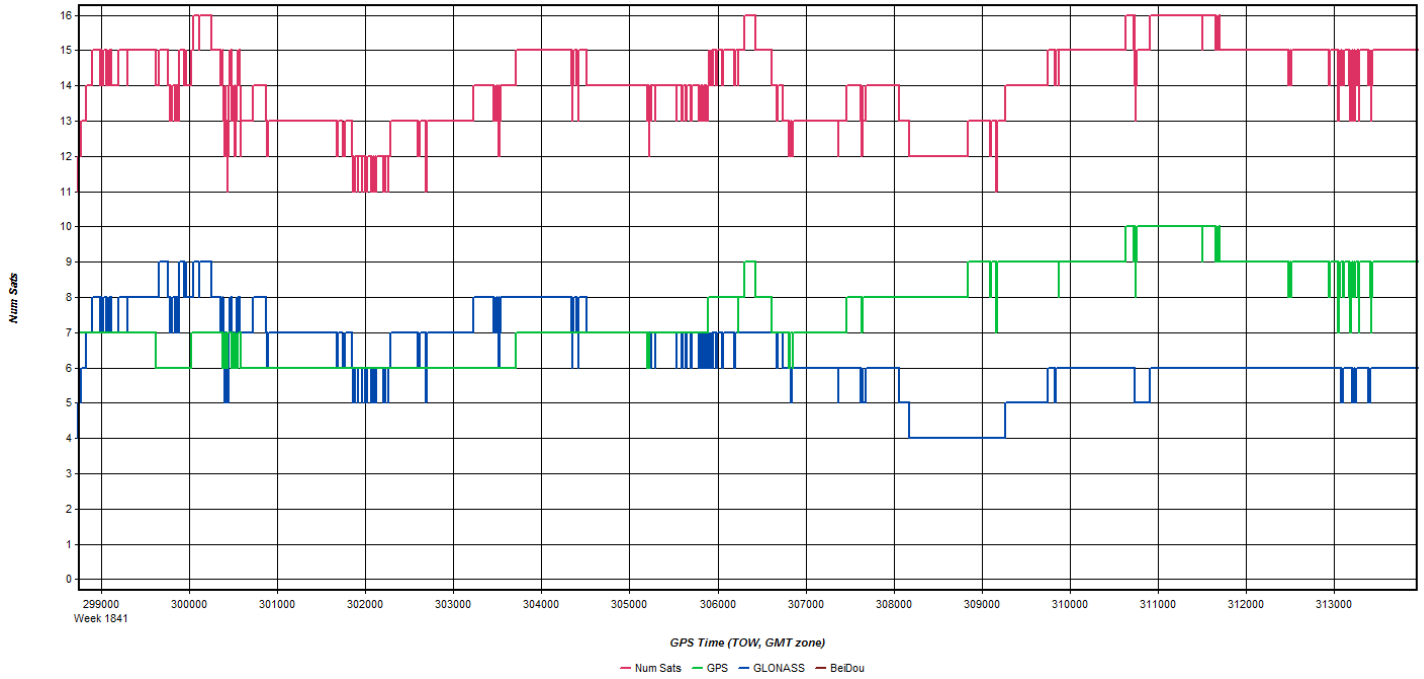
Coordinates
Latitude: North 42 06 41.08110 Compute from PPP
Longitude: West 72 05 13.98571 Enter Grid Values
Ellipsoidal height: 159.560 m Enter MSL Height
Datum: NAD83(2011) Datum Options
Select From Favorites Add To Favorites Use Average Position

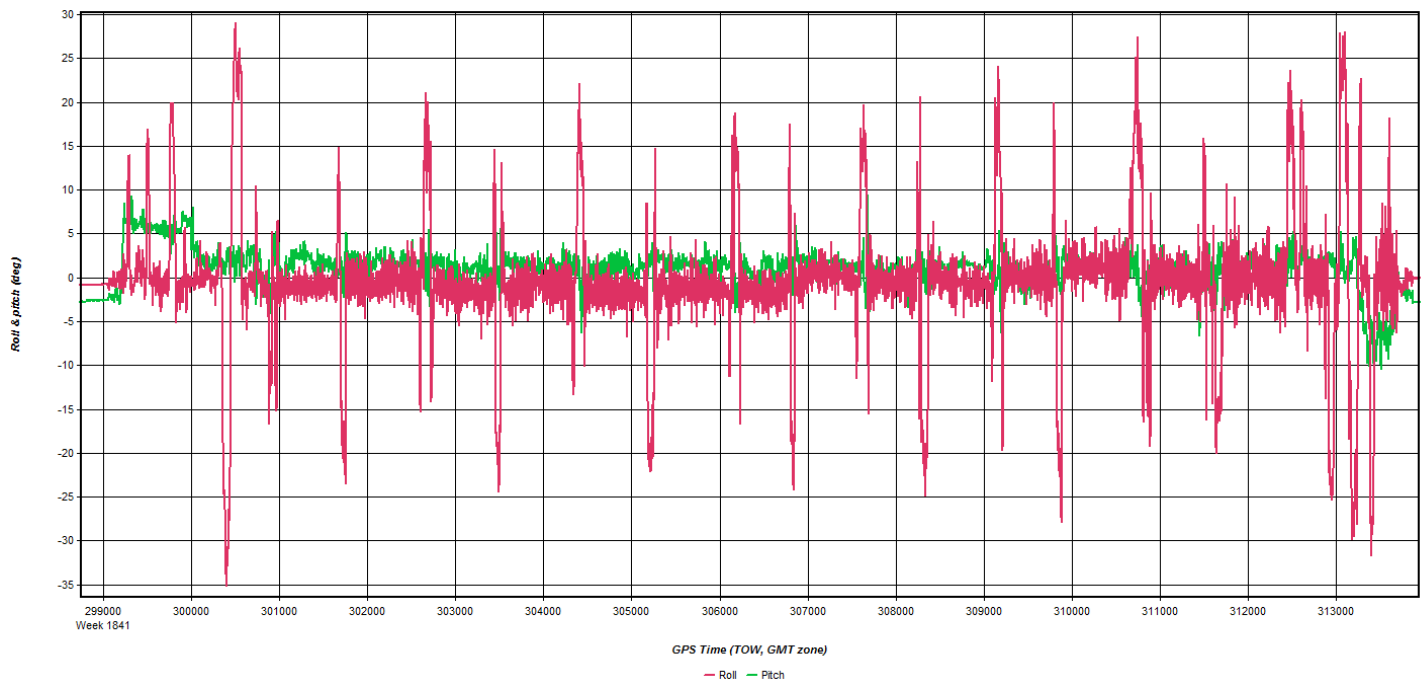
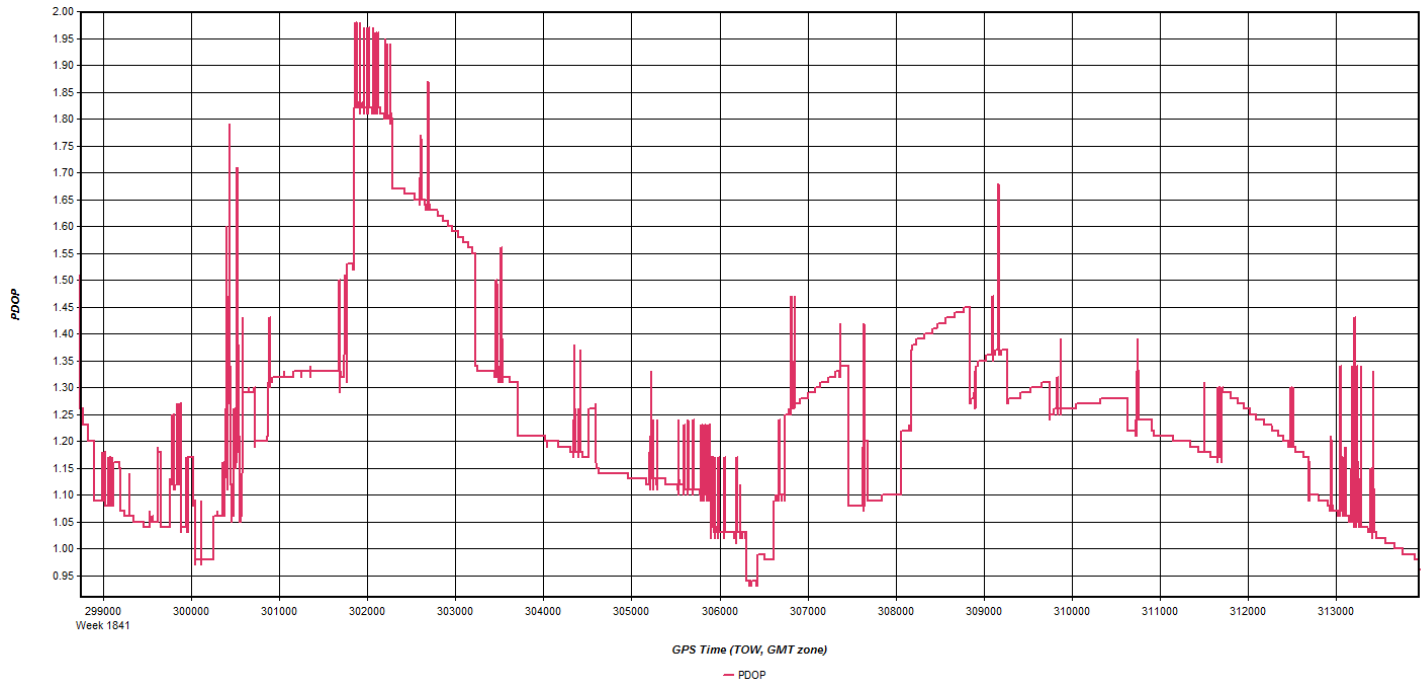
Antenna Height
From station file: LEIAX1203+GNSS, NONE View STA File
Antenna profile: LEIAX1203+GNSS Info
Measured height: 0.000 m Measured to
ARP ARP
L1 Phase Centre L1 Phase Centre
ARP to L1 offset: 0.058 m
Applied height: 0.058 m Compute From Slant

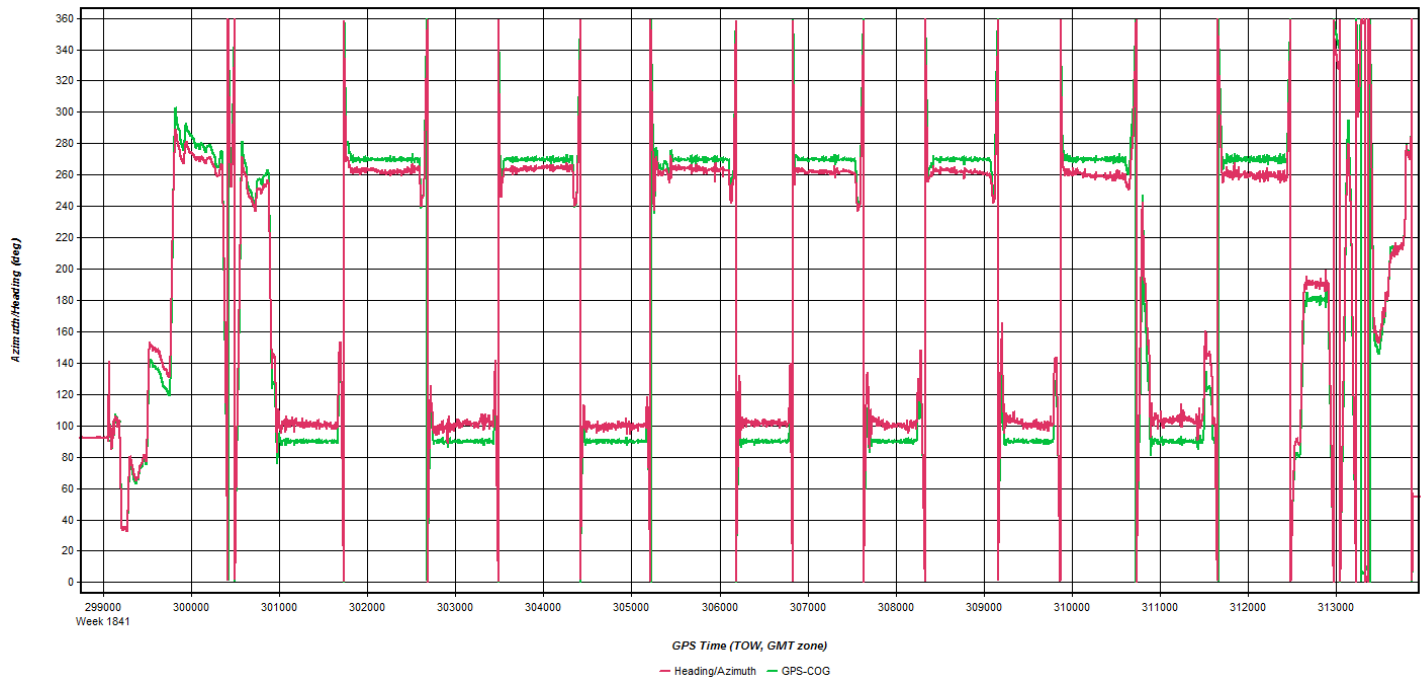
OK Cancel

Apr 22, 2015-A (N775MW, SN7123)









Coordinate/Antenna Settings

Master Remote

Base Station
 2: HAMP Name: HAMP Disabled
 File: E:\Proc\FROM_TAG\TTT1\BP15-04-229_KCEF\W775MW\ALS\

Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
1: MASB Name: MASB Disabled
File: E:\Proc\FROM_TAG\TTT1\BP15-04-229_KCEF\W775MW\ALS\

Coordinates
Latitude: North 42 06 41.08110 Compute from PPP
Longitude: West 72 05 13.98571 Enter Grid Values
Ellipsoidal height: 159.560 m Enter MSL Height
Datum: NAD83(2011) Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: LEIAX1203+GNSS, NONE View STA File
Antenna profile: LEIAX1203+GNSS Info
Measured height: 0.000 m
ARP to L1 offset: 0.058 m
Applied height: 0.058 m
Measured to:
 ARP
 L1 Phase Centre
Compute From Slant

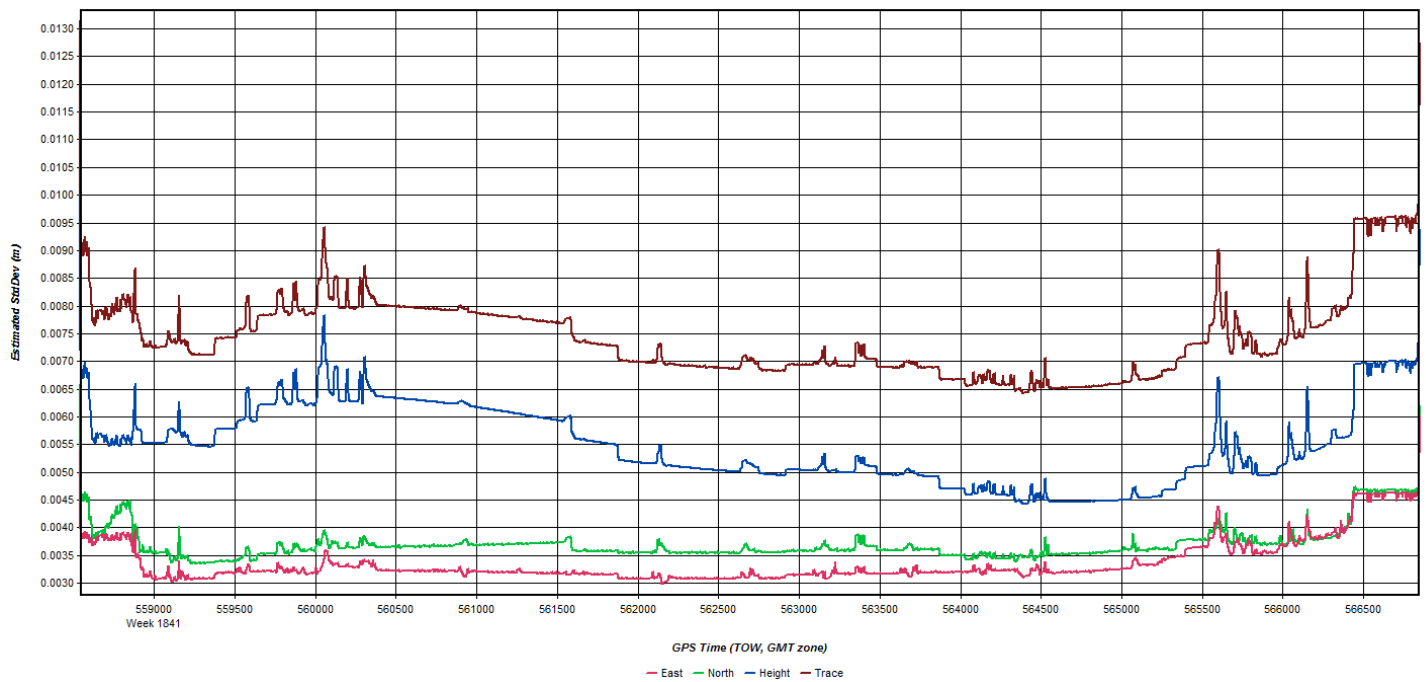
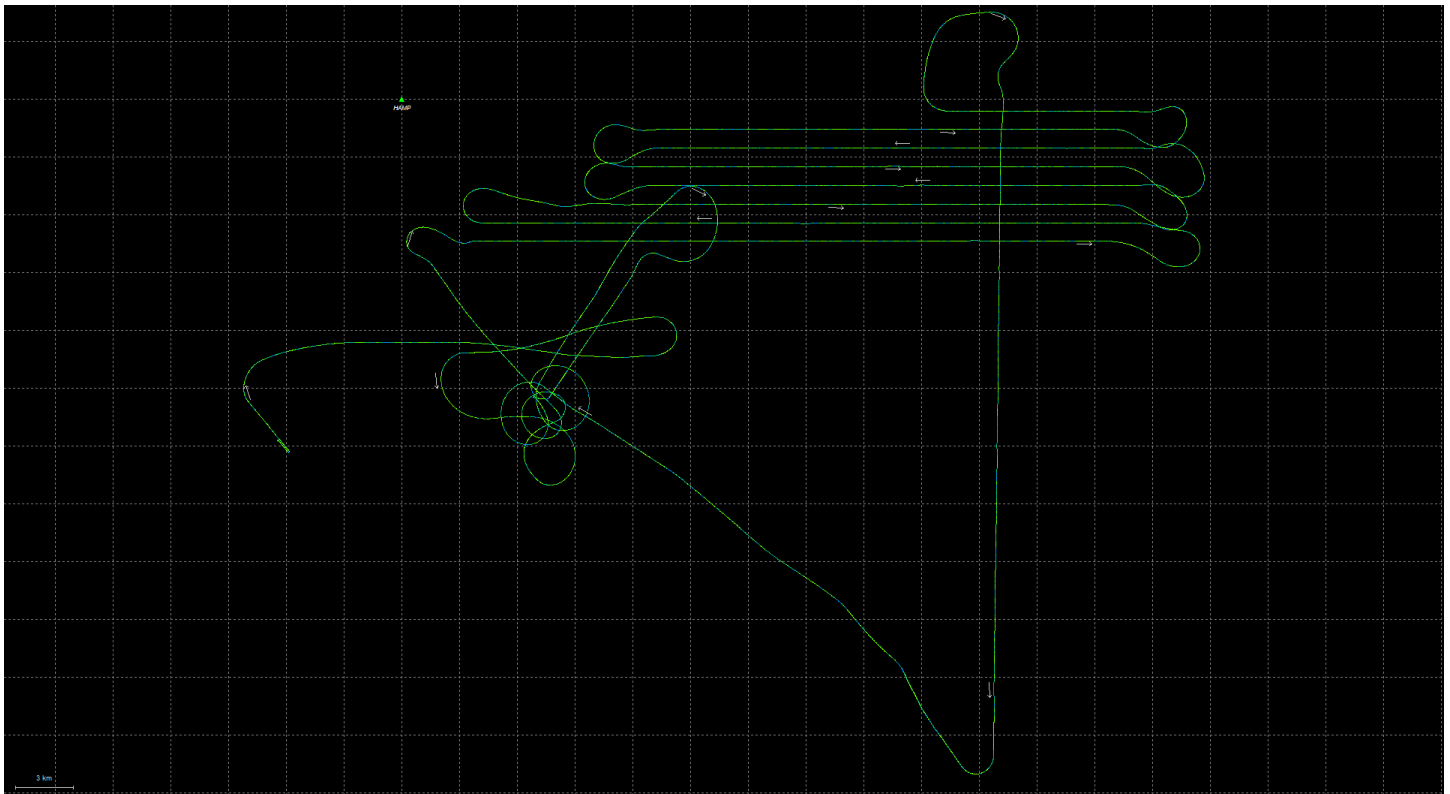
OK Cancel

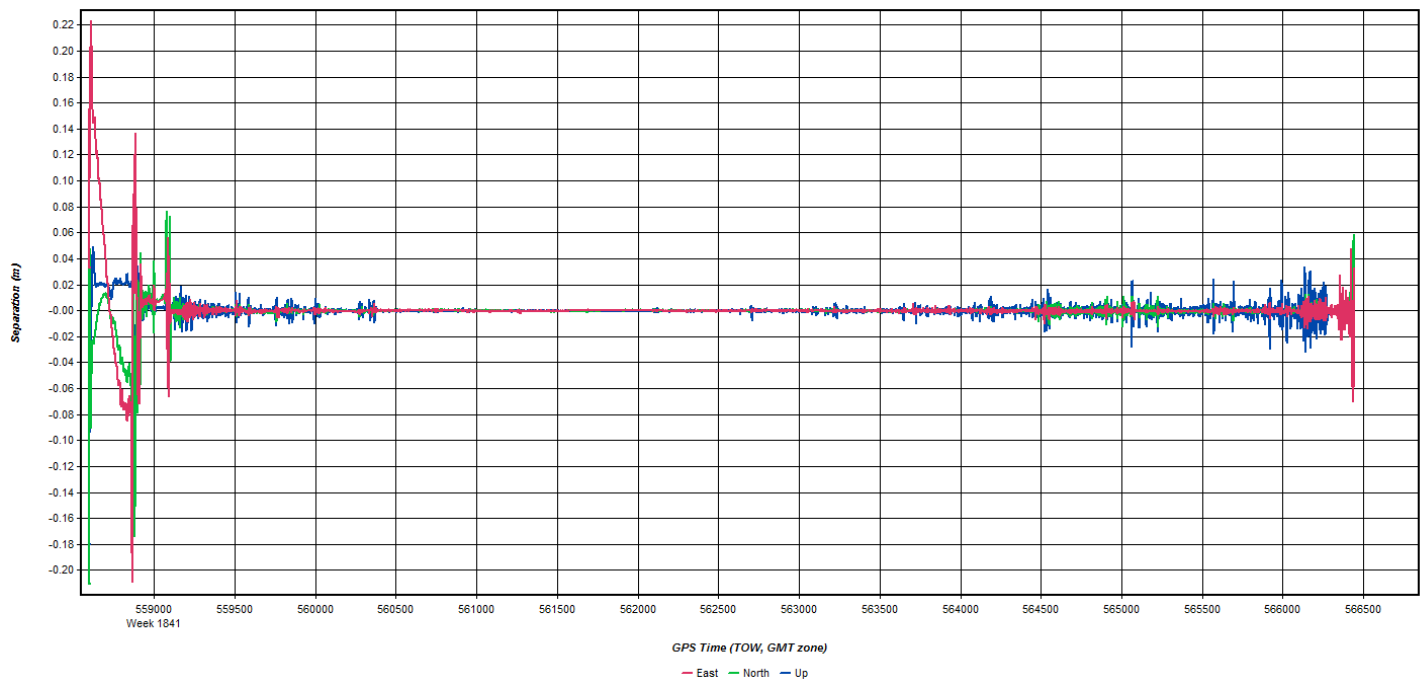
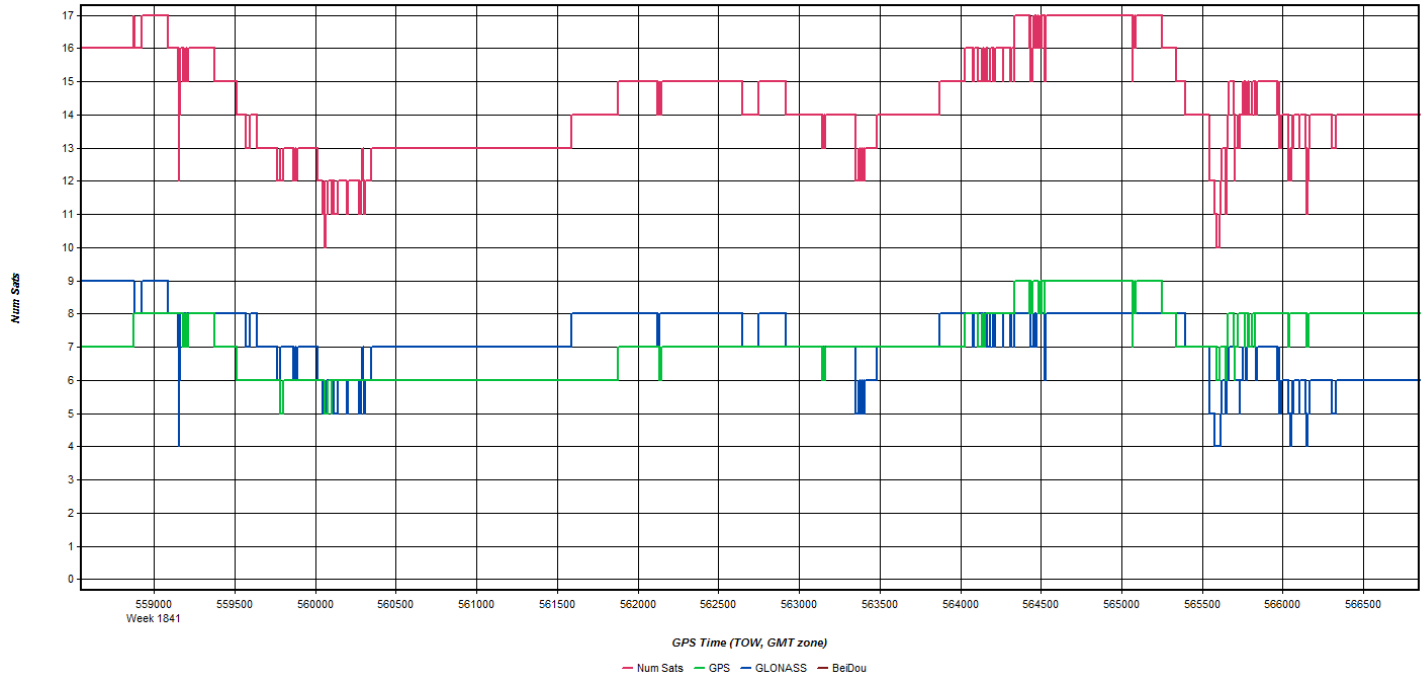
Flight Log

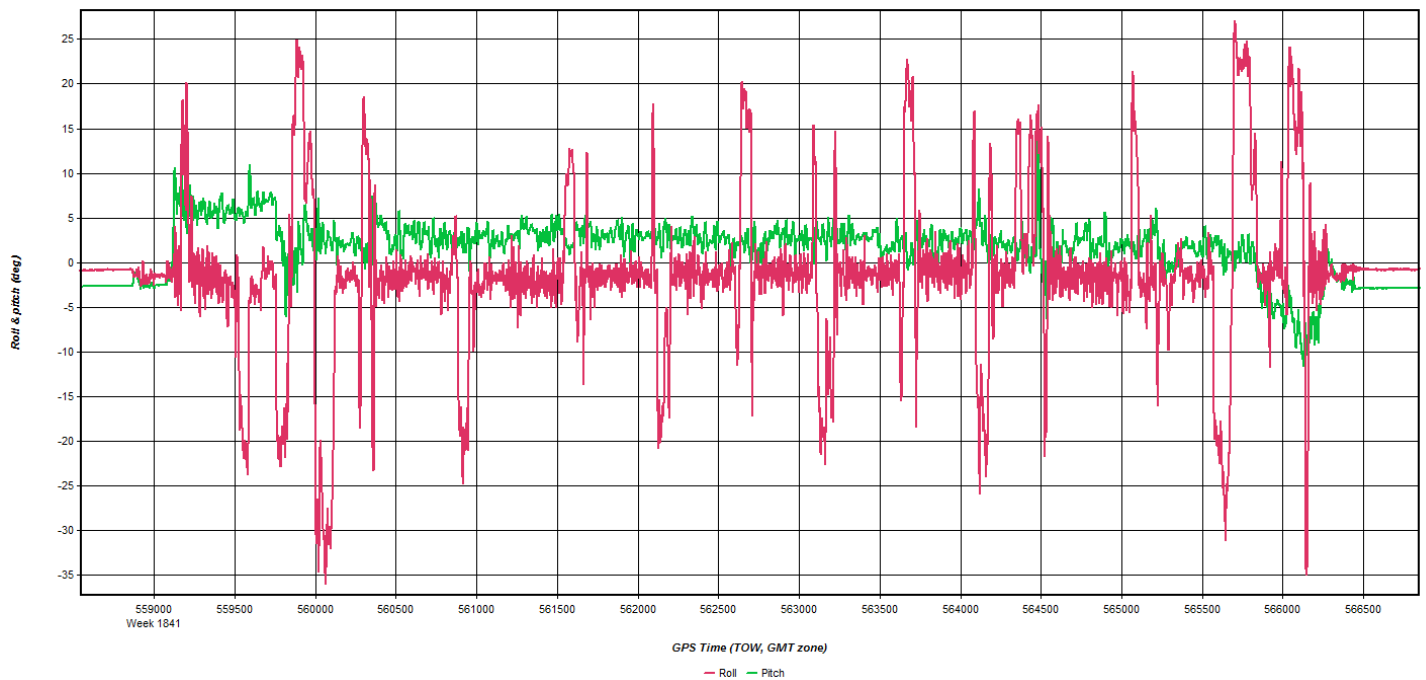
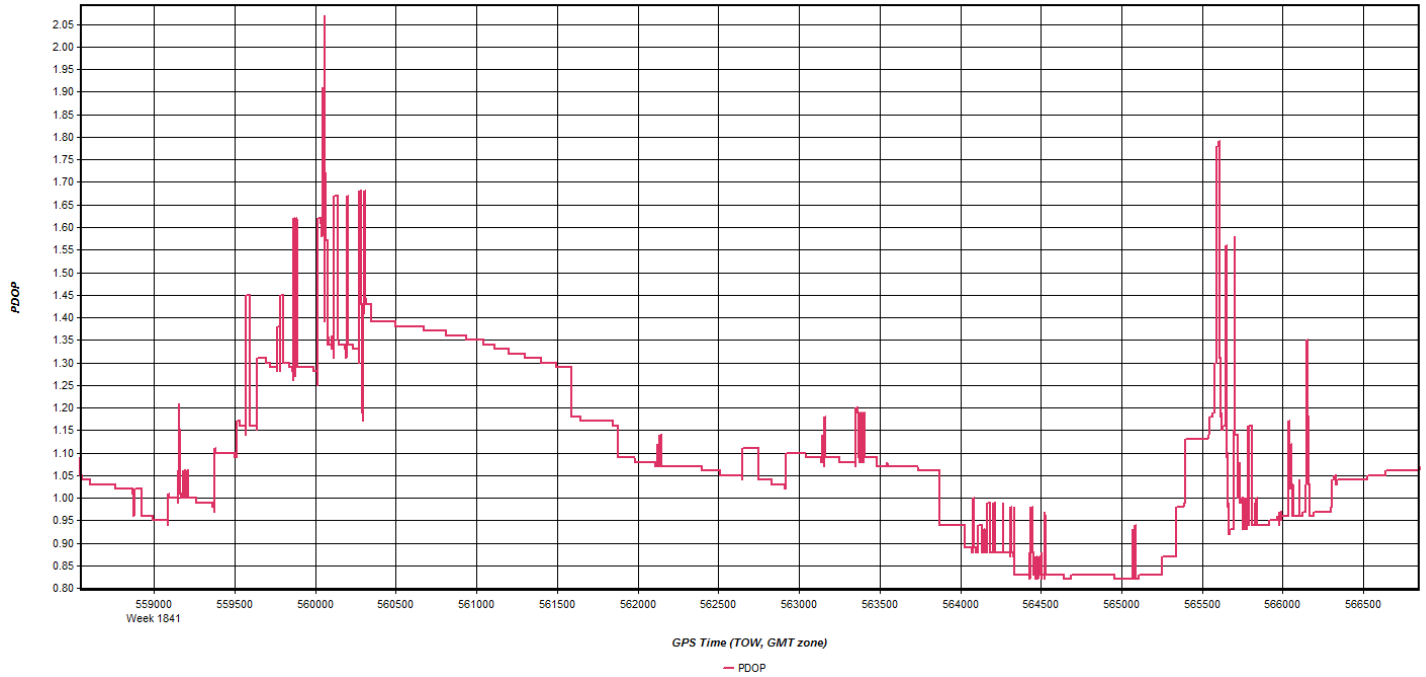
atlantic		Project #: 15129		Tail Number: N775MW		Level Arm			
2223 S Drake Ave, Suite 200 Huntsville, AL 35805 PH: (256) 971-9991 FX: (256) 971-1154		Flight plan name: Quantum_KCEF		Flight Date: 20150422_1 / JD112_1		X	Y	Z	
		Location: KCEF		Sensor SN: 7123		GPS			
		Pilot: Shelden		Weather:		IMU			
		Operator: Huey		Base Station: SET_1		TZ: ARP			Start
Sensor: ALS		Hobbs Time Start: 3502.6		ATIS IN OP - 10 & CLR - 2C - 29.78			1.51	10:20	15:34
Hobbs Time Stop: 3506.2		Pre-Static: 10:28 - 11:03					0.00	#NUM!	
Post-Static: no post static due to brake issue on landing								0.00	#NUM!
Fwd Lap:									
Side Lap:									
Line/DIR	Start	End	Air Speed	Alt(ft)	# Exp	Light Values	GB Size	Comments or errors while online:	
22	104	11:36	11:47	136	6742				
21	284	11:50	12:02	120	6799				
20	104	12:05	12:16	137	6739				
19	284	12:19	12:31	119	6781				
18	104	12:34	12:45	139	6804				
17	284	12:50	13:01	120	6734				
16	104	13:03	13:12	137	6841				
15	284	13:15	13:25	113	6852				
14	104	13:28	13:36	141	6881				
13	284	13:40	13:50	112	6777				
12	104	13:53	14:02	132	6786				
11	284	14:05	14:17	116	6825				
10	104	14:21	14:31	133	6843				
9	284	14:36	14:47	125	6909				
37	195	14:51	14:54	121	6824			partial cross line	
								no post static due to brake issue	

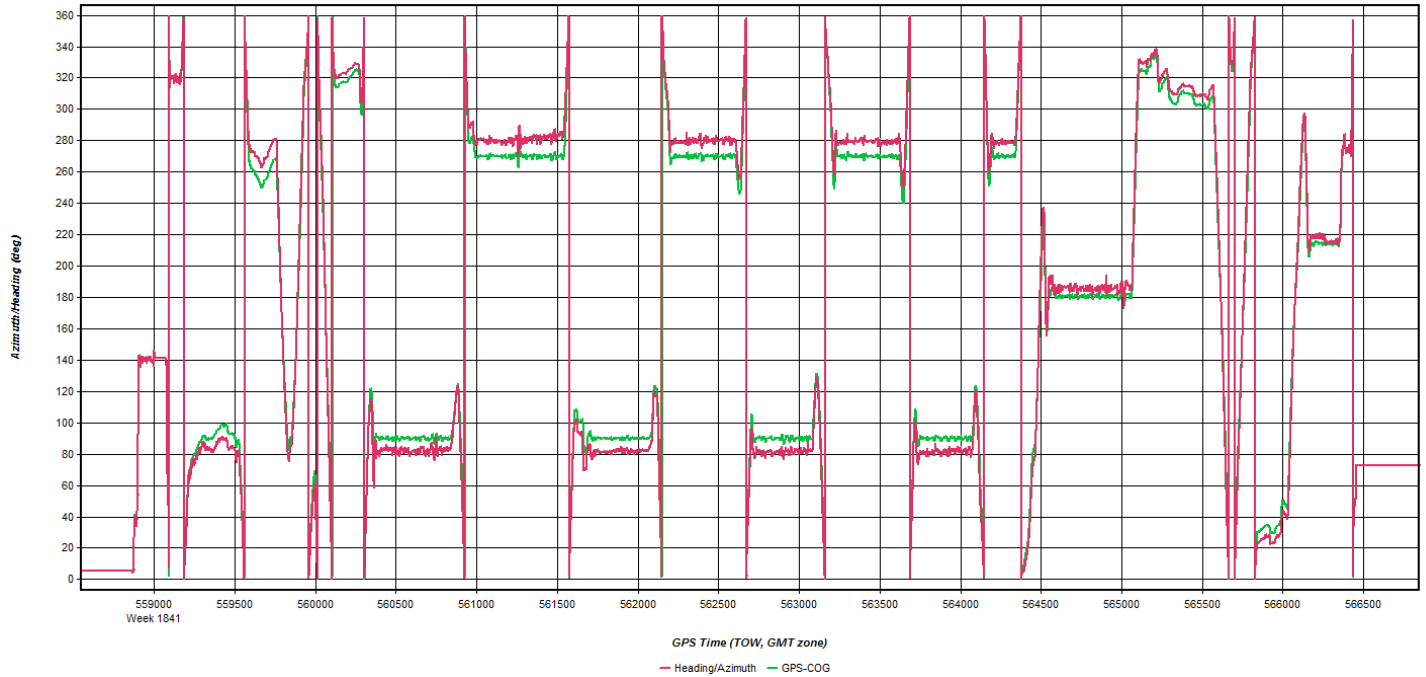
2223 Drake Avenue SW, Suite 200, Huntsville, AL 35805 • 256-971-9991 • 256-971-1154 • www.atlanticfly.com

Apr 25, 2015-A (N775MW, SN7123)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: HAMP Name: HAMP Disabled
 File: E:\Proc\From_TAG\15129_Quantum_KCEF\N775MW\ALS\7123

Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

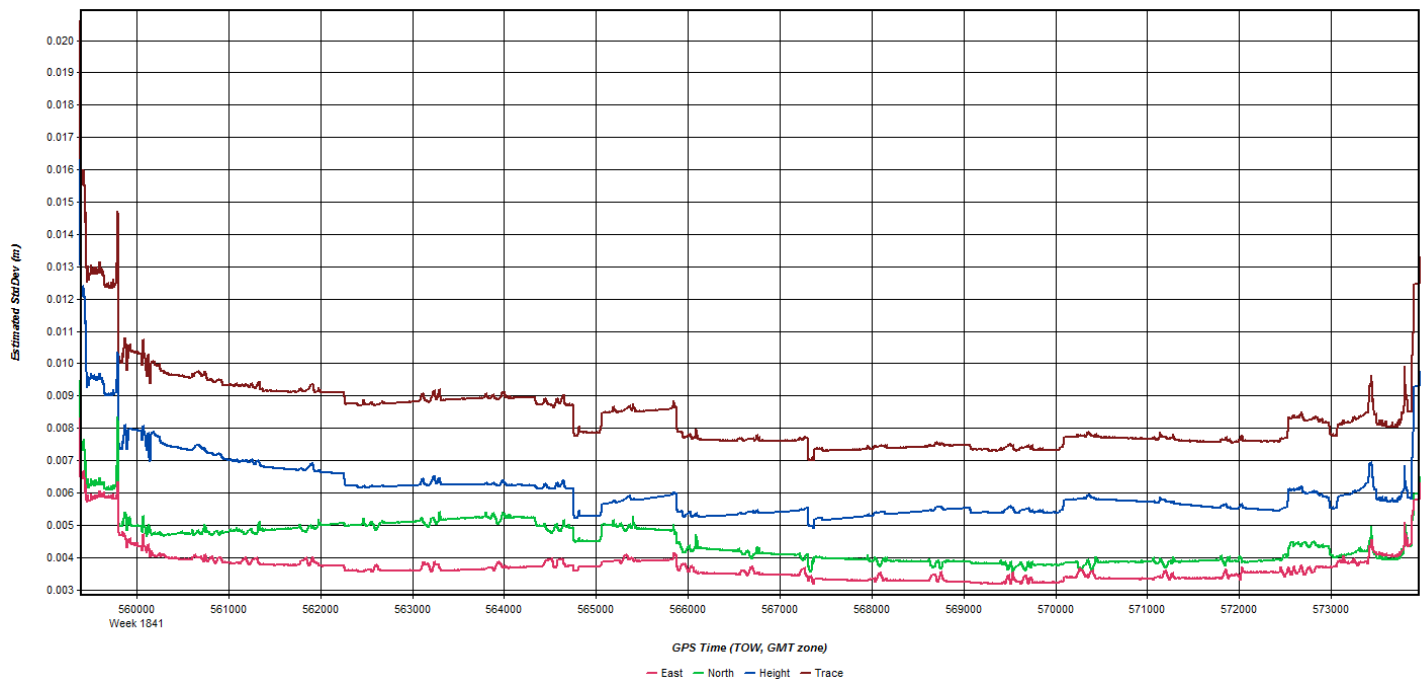
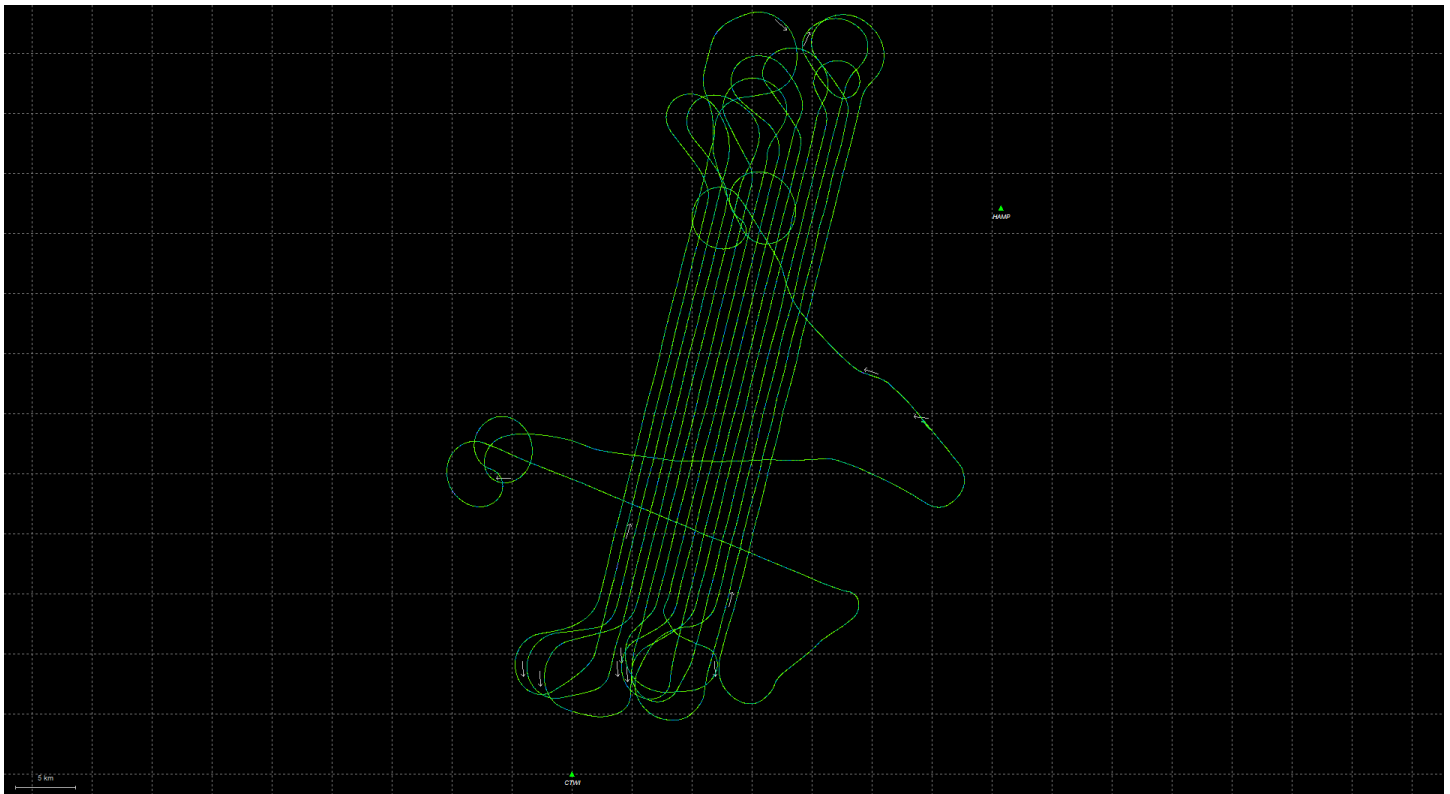
Antenna Height
 From station file: TRM57971.00, NONE
 Antenna profile: TRM57971.00
 Measured height: 0.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 0.067 m
 Measured to:
 ARP
 L1 Phase Centre

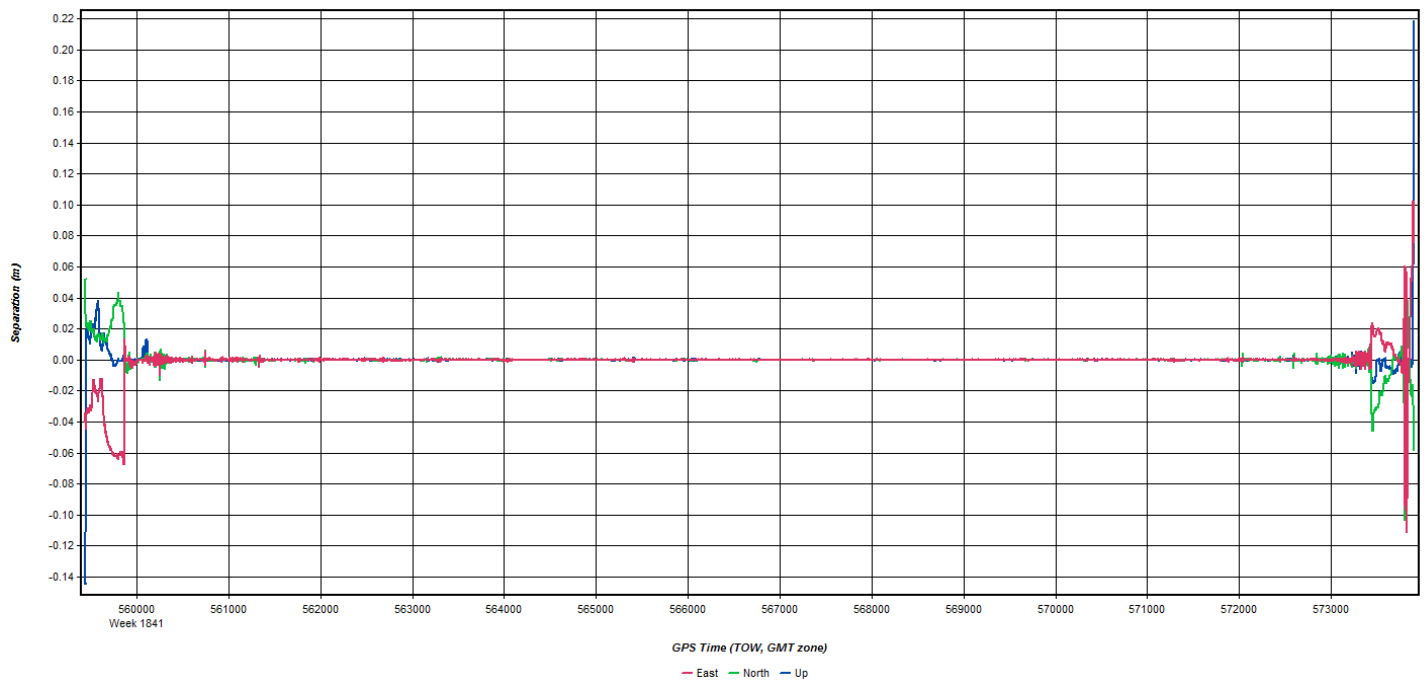
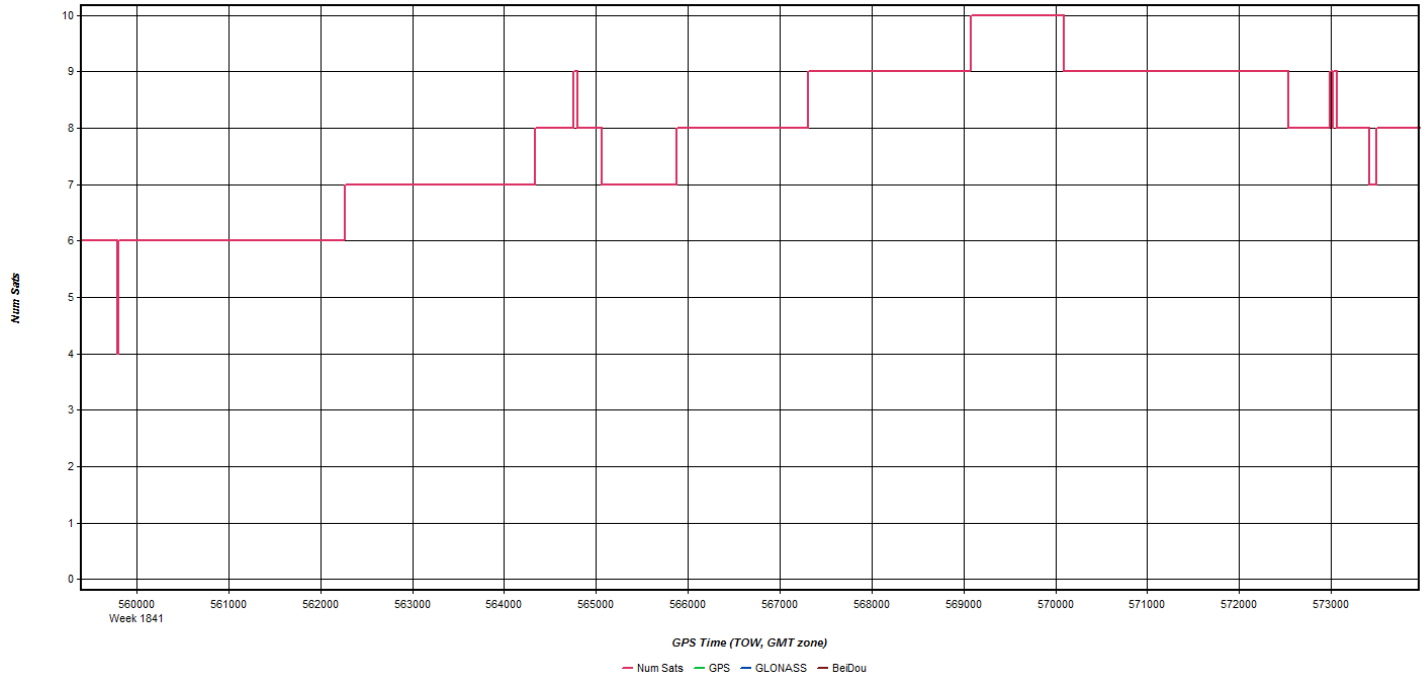
Flight Log

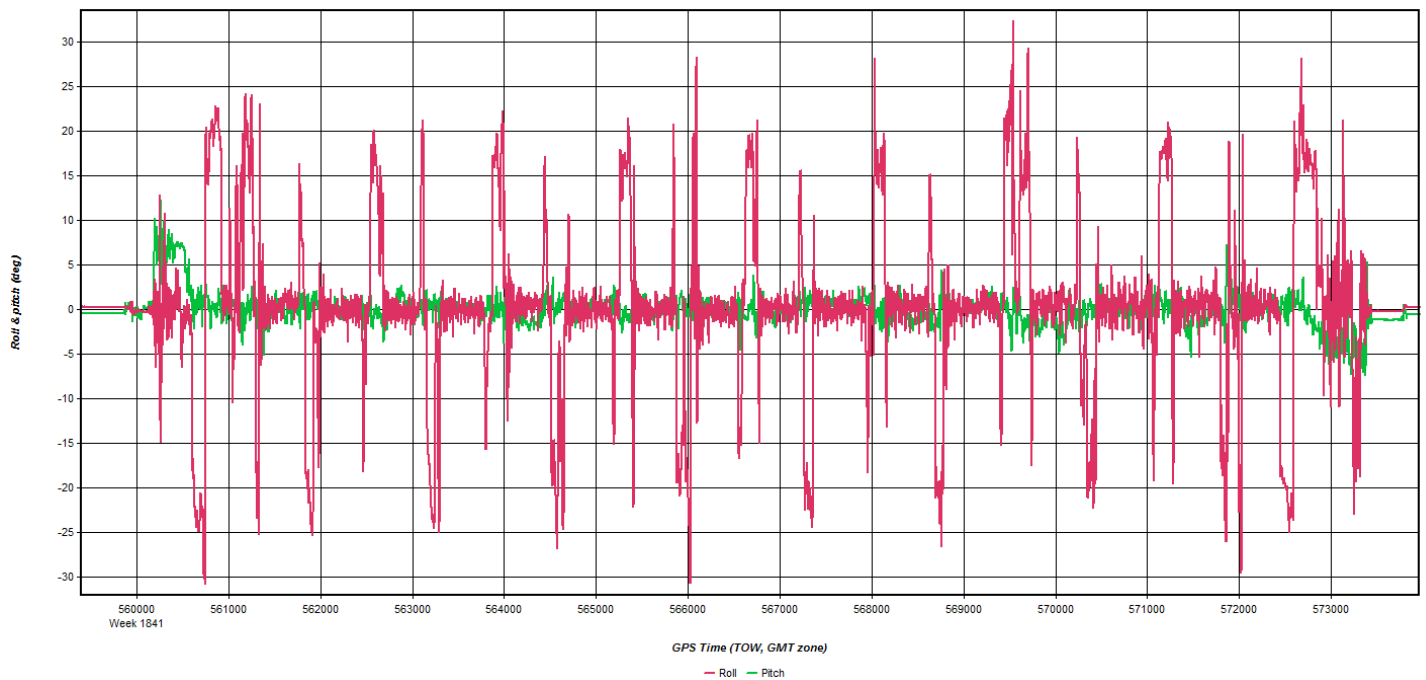
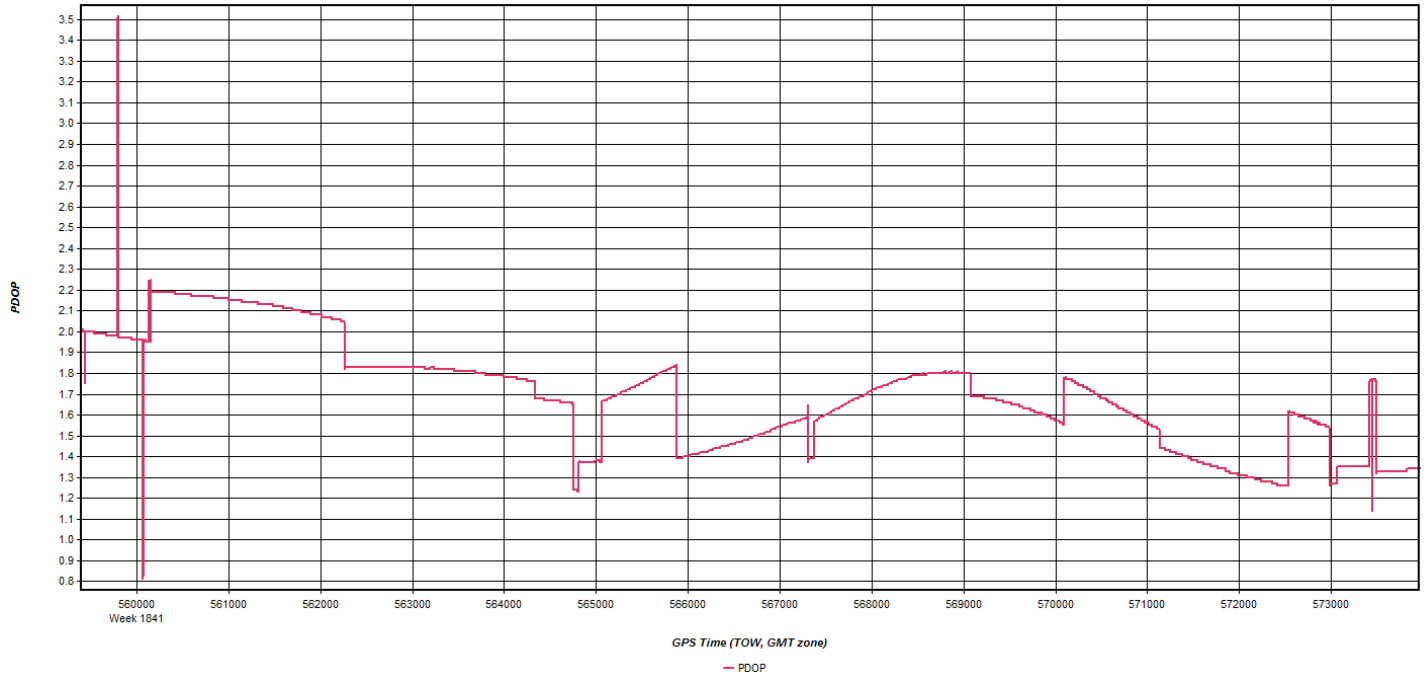
atlantic 2223 S Drake Ave, Suite 200 Huntsville, AL 35805 PH: (256) 971-9991 FX: (256) 971-1154		Project #: 15129	Tail Number: N775MW	Level Arm					
Flight plan name: Quantum_KCEF			Flight Date: 20150425_1 / JD115_1	X	Y				
Location: KBAF			Sensor SN: 7123	GPS					
Pilot: Sniden			Weather:	IMU					
Operator: Huey			Base Station: SET_1	ARP	Start				
Sensor: ALS			320@5 - 10SM - CLR - 01C - 29.81	1.46	10:26				
Hobbs Time Start: 3506.9				0.00	13:35				
Hobbs Time Stop: 3509.1				0.00					
Pre-Static: 11:09 - 11:14				#NUM!					
Post-Static: 13:20 - 13:25				#NUM!					
Fwd Lap:									
Side Lap:									
Line/Dir	Start	End	Air Speed	Alt(ft)	# Exp	Light Values	GB Size	Comments or errors while online:	
8 104	11:39	11:47	137	6915					
7 284	11:50	11:58	124	6966					
6 104	12:02	12:07	130	7063					
5 284	12:10	12:16	125	7035					
4 104	12:18	12:24	131	7005					
3 284	12:27	12:33	126	7107					
2 104	12:35	12:40	136	7065					
1 284	12:43	12:45	133	7217					
38 195	12:48	12:57	125	7132					crossline - sloppy start

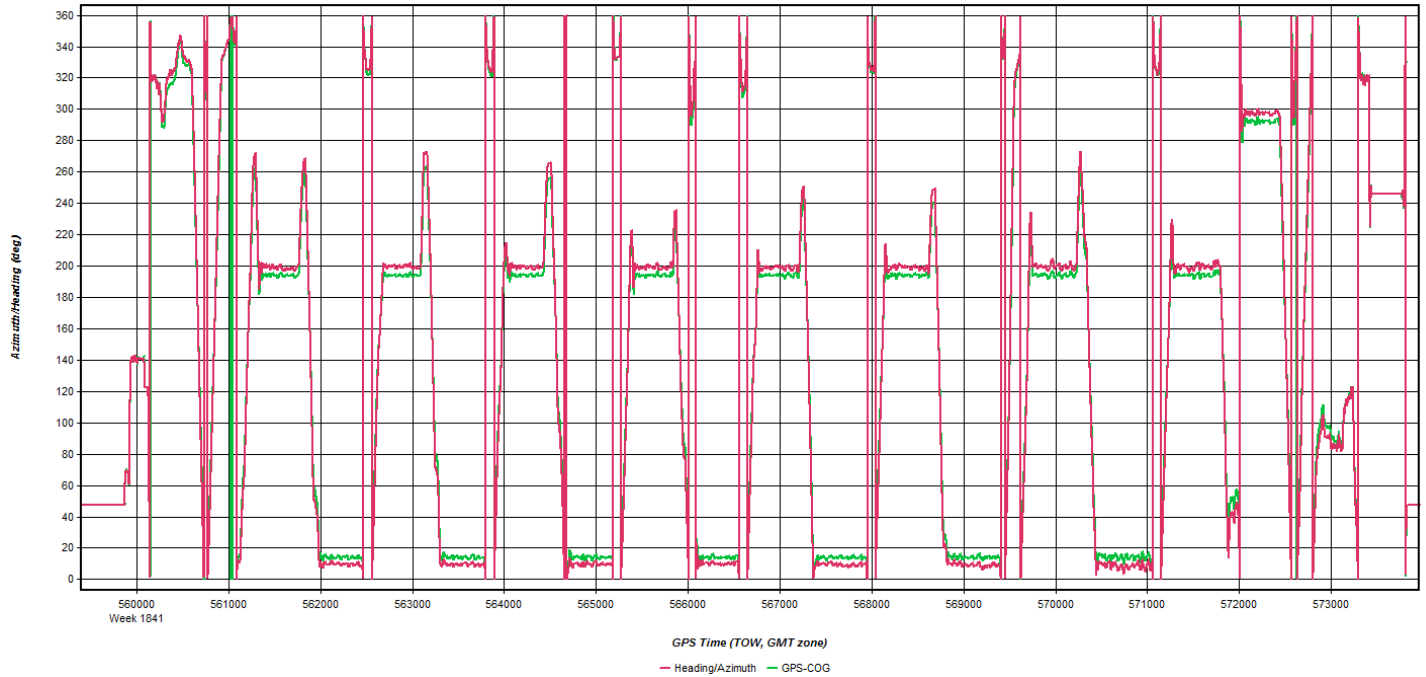
2223 Drake Avenue SW, Suite 200, Huntsville, AL 35805 • 256.971.1154 • www.atlanticfly.com

Apr 25, 2015-A (N262AS, SN7178)









? X

Coordinate/Antenna Settings

Master Remote

Base Station
 1: CTWI Name: CTWI Disabled
 File: E:\Proc\26258_USGS_MA_ME_LiDAR\BAYD\20150425_26258

Coordinates
 Latitude: North 41 53 51.90745
 Longitude: West 73 04 10.96846
 Ellipsoidal height: 192.097 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
2: HAMP Name: HAMP Disabled
File: E:\Proc\26258_USGS_MA_ME_LIDAR\BAYD\20150425_26258

Coordinates
Latitude: North 42 19 03.87277 Compute from PPP
Longitude: West 72 38 22.40329 Enter Grid Values
Ellipsoidal height: 42.355 m Enter MSL Height
Datum: NAD83(2011) 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

OPERATORS FLIGHT LOG										
MISSION: S	150425-11955	OPERATOR: M	415T	DATE: 4-25-15	LEICA ALS-70	7179				
PILOT: B	PHILLIPS	OPERATOR: M	415T	DATE: 4-25-15	LEICA ALS-70	7179				
PROJECT NUMBER	LINE NO. & Hdg	GND SPEED (KTS)	FREQ Hz	SCAN ANGLE	PRF KHZ	FIXED GAIN	ALT (m)	TIME START	TIME STOP	REMARKS
26258			47	40°	288	255				
US65-MA-ME	114 194°	180					6715'	1156	1302	
LIDAR	115 14°	160					6635'	1207	1214	
	116 194°	183					6635'	1218	1224	
	117 14°	156					6655'	1229	1236	
	118 194°	184					6600'	1240	1246	
	119 14°	164					6570'	1252	1259	
	120 194°	165					6500'	1303	1310	
	121 14°	160					6576'	1314	1322	
	122 194°	182					6580'	1326	1333	
	123 14°	154					6530'	1337	1345	
	124 194°	172					6480'	1349	1356	
	125 14°	148					6550'	1401	1409	
	126 194°	185					6430'	1416	1423	
	127 14°	153					6440'	1428	1437	
	128 194°	185					6360'	1441	1448	
	148 292°	159					6680'	1454	1500	CROSSFLIGHT
STATUS	TOTAL LINES	FLOWN	LEFT	AIRCRAFT SITE	FERRY	STATIC	START	STOP	NOTES:	PAGE 1
○	48	16	32	KBARF	N/A	5 min	7:30A	11:25A		
○						WIX CLEAR			SPRING WINDS OUT OF THE NORTH	
○										

AERO-METRIC, INC. N.6216 Resource Drive Sheboygan Falls, WI. 53085 PHONE: 920-467-2655 FAX: 888-253-6695 E-Mail: amphoto@aerometric.com

Base Station Log



Station Occupation Report For Airborne GPS

Project: USGS MA-ME

Location: KBAF Project Number: 26258
 Completed by: M AUST Date: 4-25-15

Receiver: TRIMBLE R7

Receiver Type: _____

Antenna Type: _____

Station ID: SET POINT

Start -- H.I. (m): 2 m

End -- H.I. (m): 2 m

H.I. (ft): _____

Start Time: 7:10A

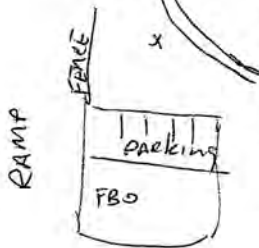
End Time: 11:35A

Time Zone: EST

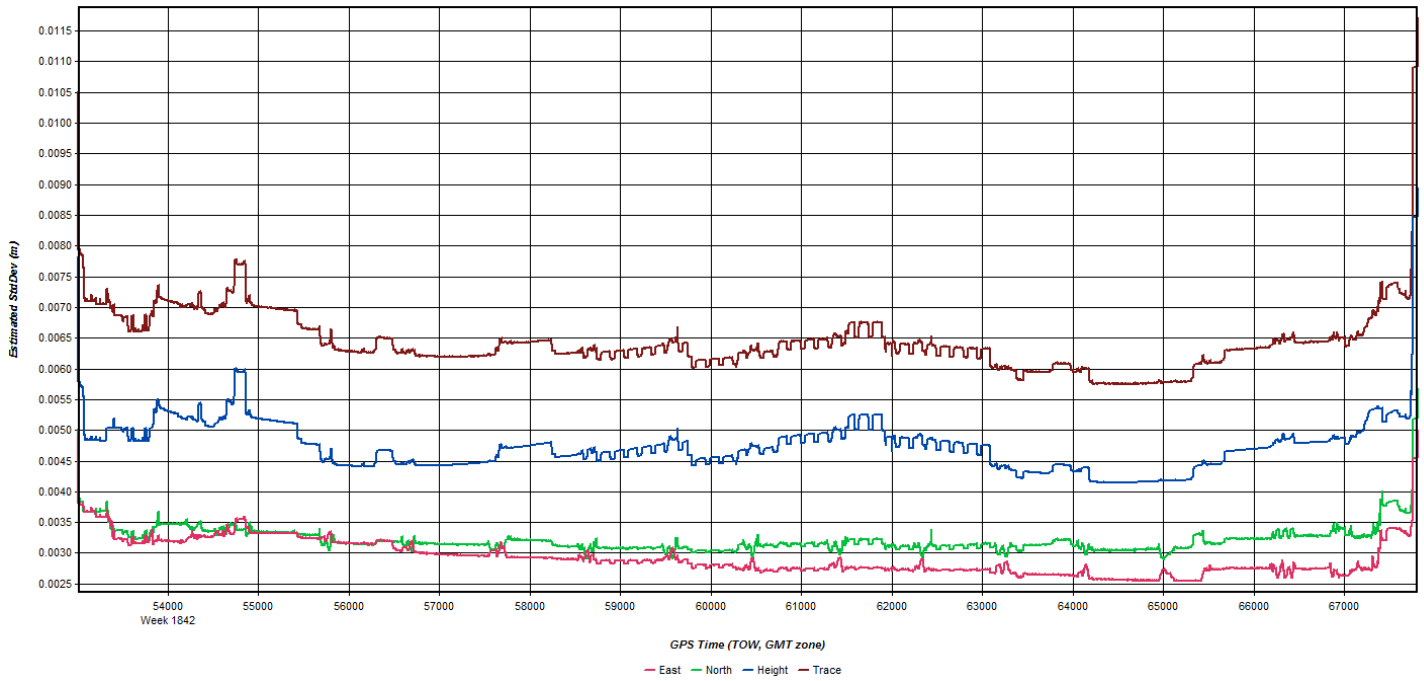
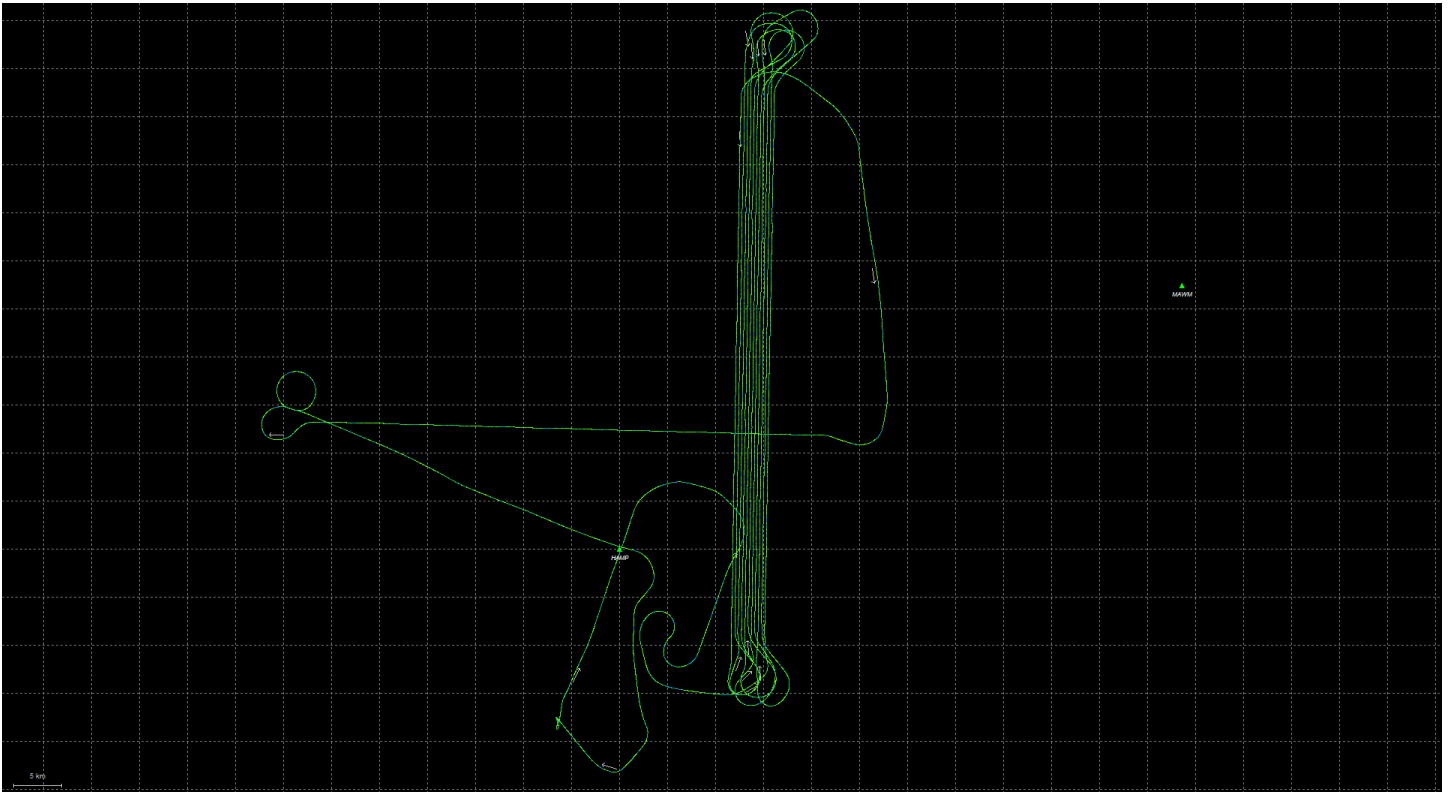
Operator: M AUST

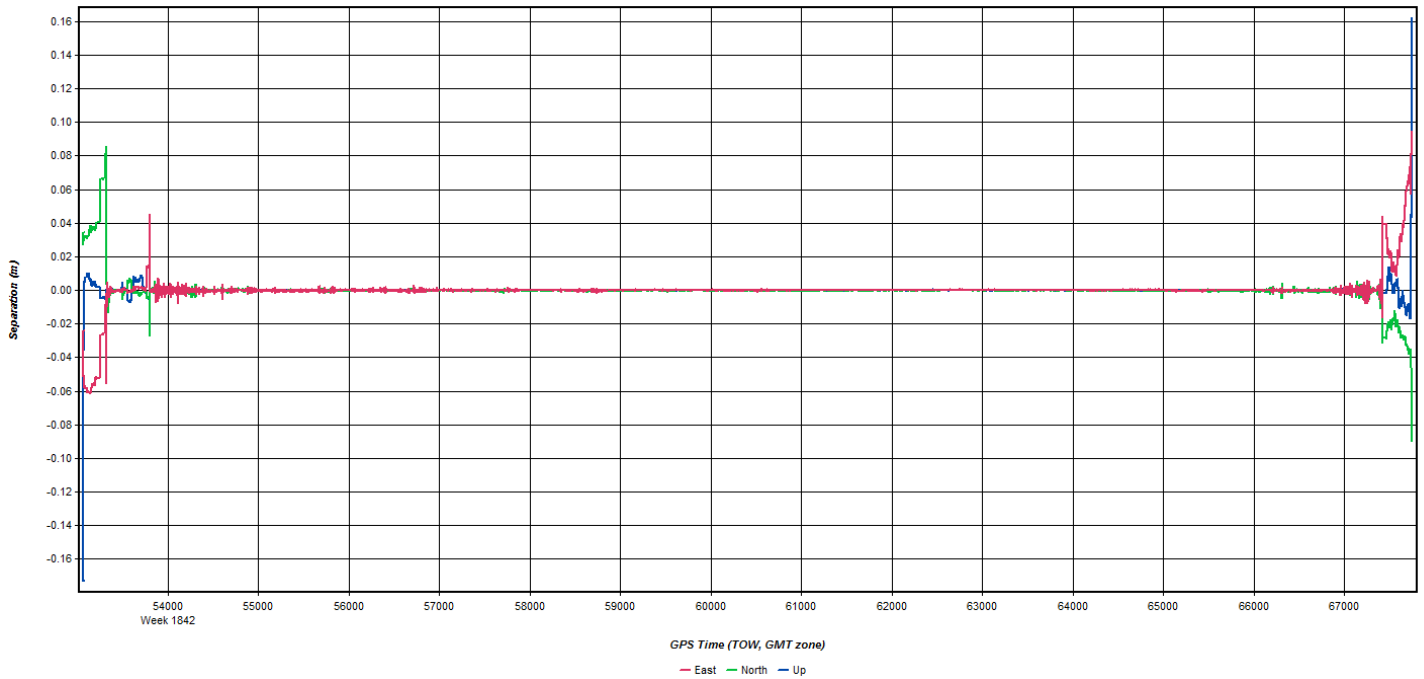
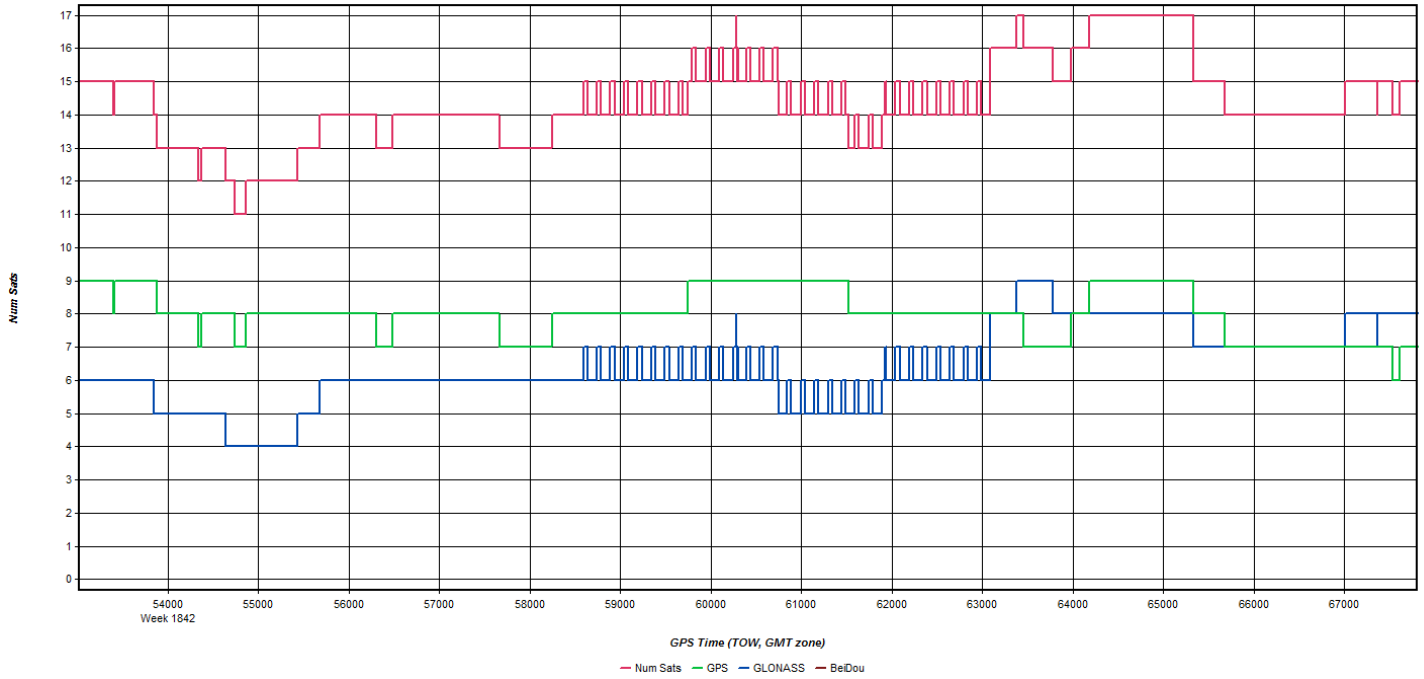


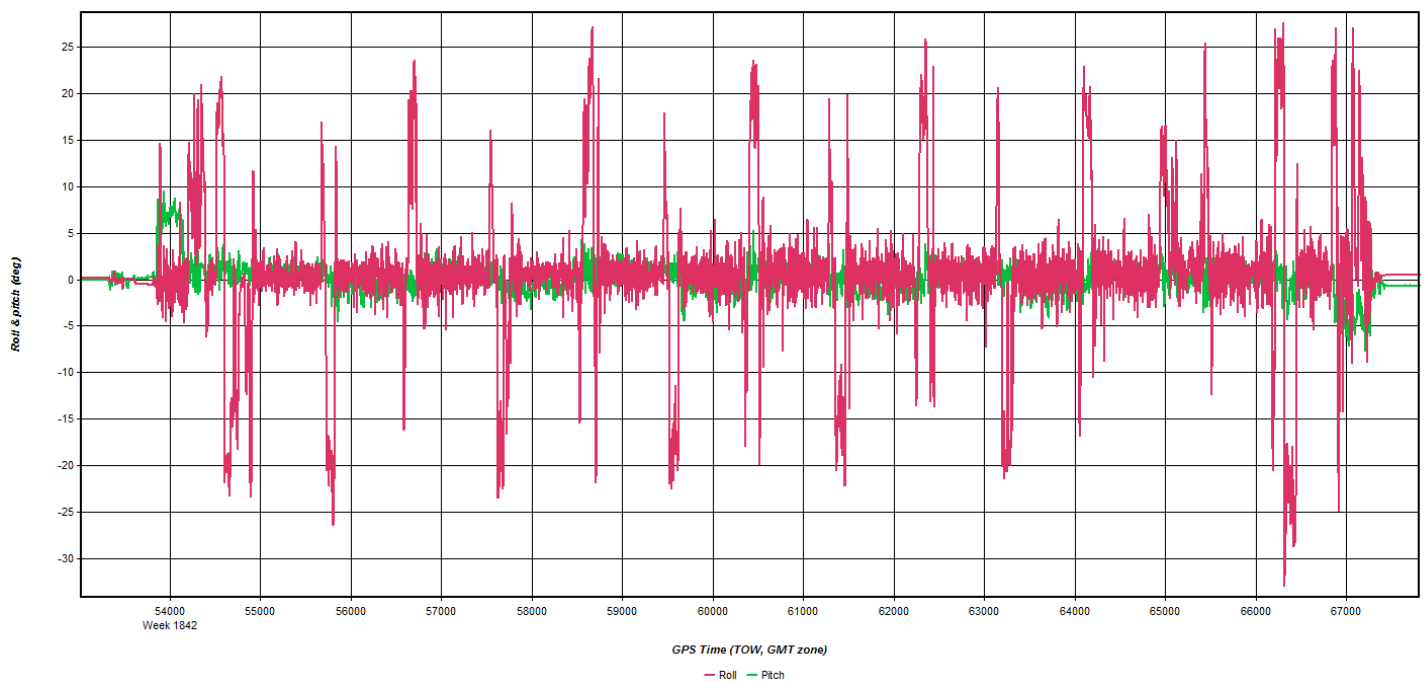
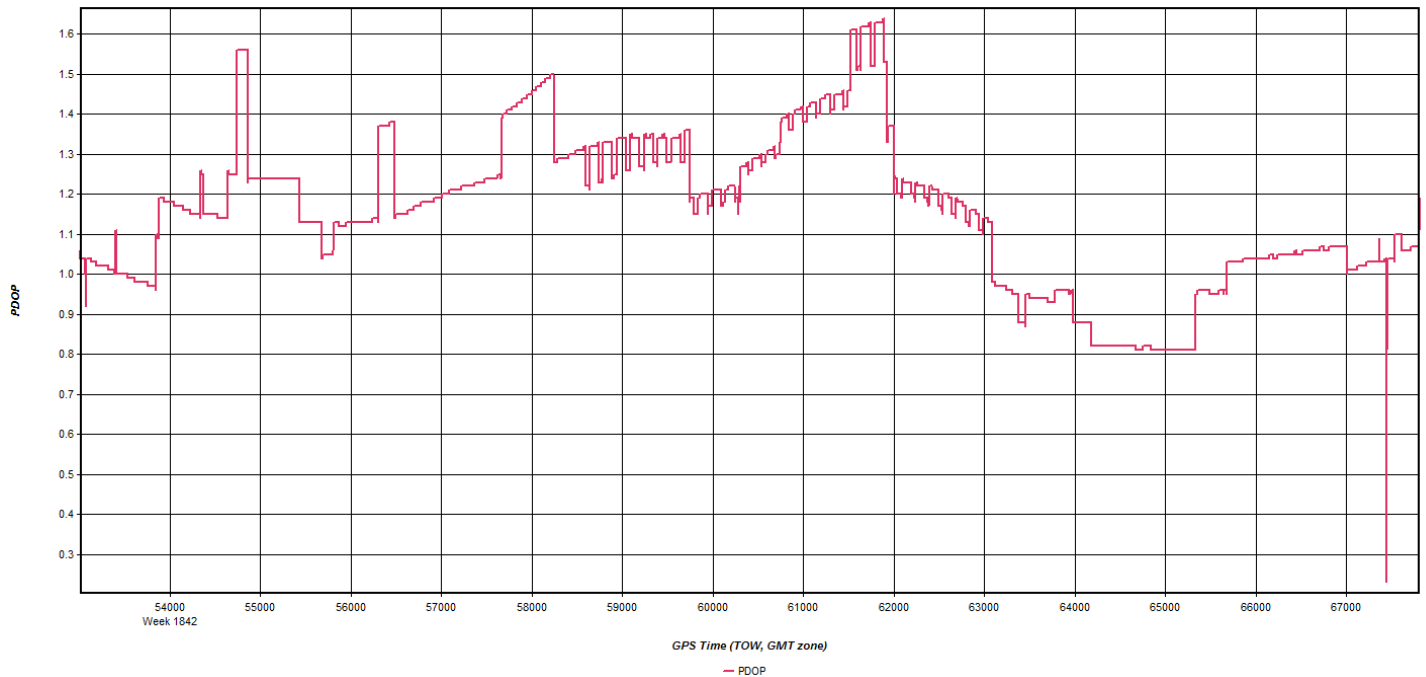
Comments: SET POINT - WESTFIELD-BARNES

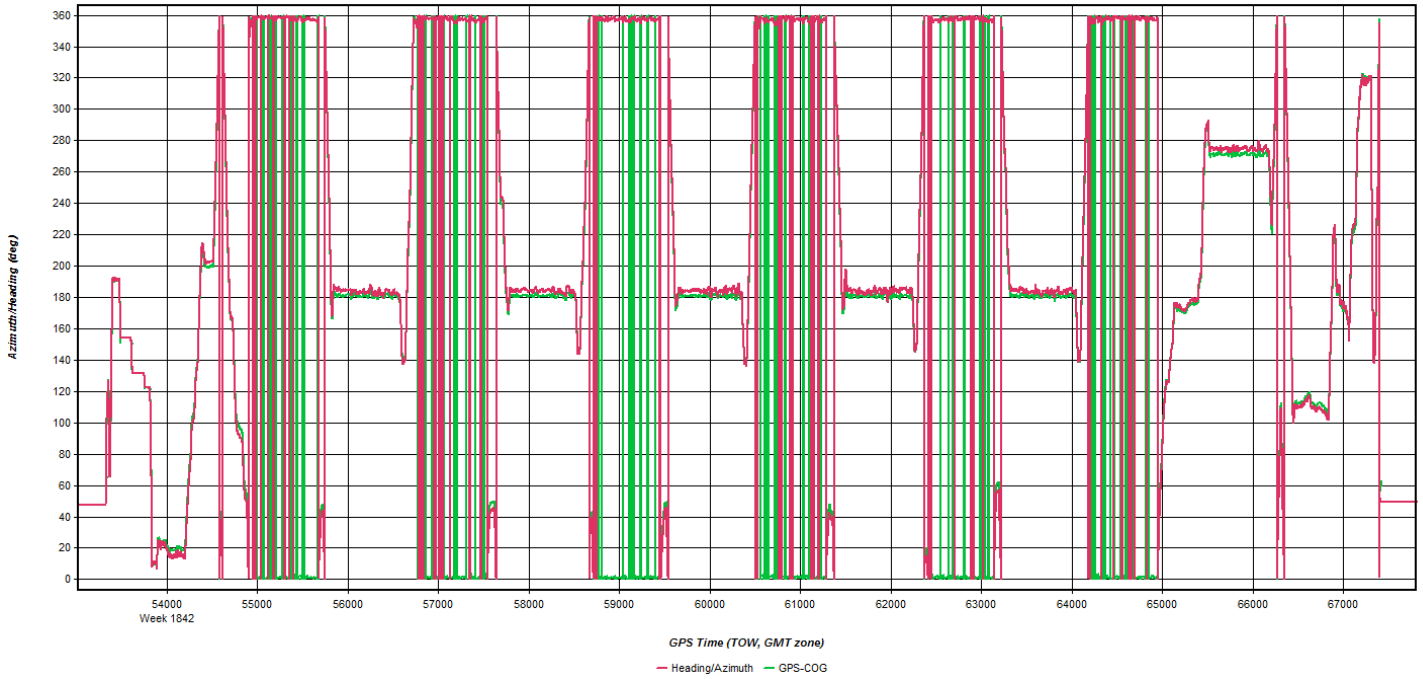


Apr 26, 2015-A (N262AS, SN7178)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: HAMP Name: HAMP Disabled
 File: E:\Proc\26258_USGS_MA_ME_LiDAR\BAYD\20150426_26258

Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
2: MAWM Name: MAWM Disabled
File: E:\Proc\26258_USGS_MA_ME_LIDAR\BAYD\20150426_26258

Coordinates
Latitude: North 42 33 40.62121
Longitude: West 71 55 59.20783
Ellipsoidal height: 317.182 m
Datum: NAD83(2011)

Antenna Height
From station file: LEIAX1203+GNSS, NONE
Antenna profile: LEIAX1203+GNSS
Measured height: 0.000 m
ARP to L1 offset: 0.058 m
Applied height: 0.058 m
Measured to:
 ARP
 L1 Phase Centre

Base Station Log

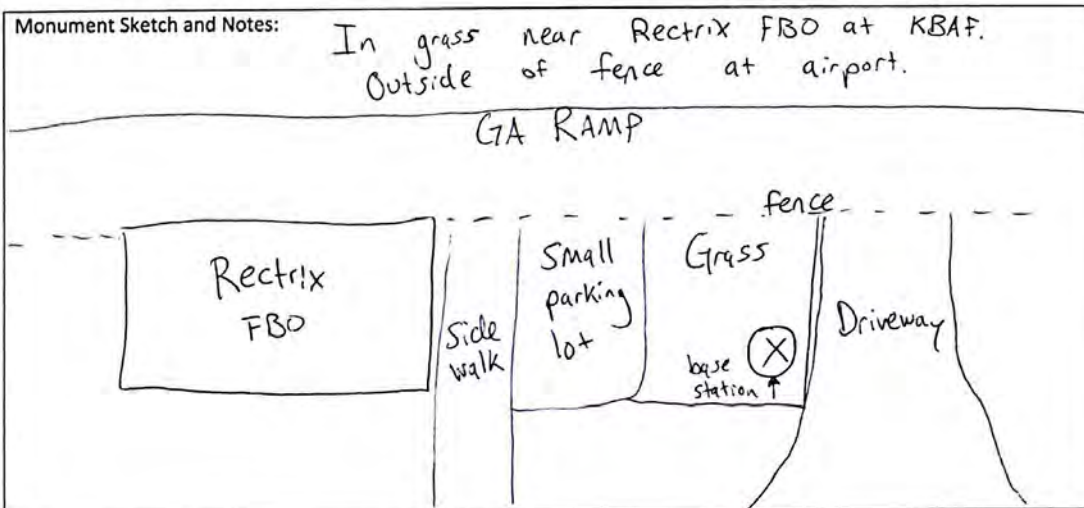
GPS OBSERVATION LOG

Station ID	<u>N/A</u>	Date	<u>4, 26, 15</u>
Project Number	<u>26258</u>	Julian Date	_____
Project Name	<u>USGS-MA-Westfield/Northampton</u>	Start Time	<u>: 11:13: UTC</u>
Revr. Type	<u>Novatel</u>	Stop Time	<u>: 19:38: UTC</u>
Revr. S/N	<u>7-0141149</u>	Revr. File Name	<u>00071160.PDC</u>
Antenna Type	<u>Novatel</u>	Observer	<u>E. Dyrejan</u>
Antenna S/N	<u>01017577</u>		

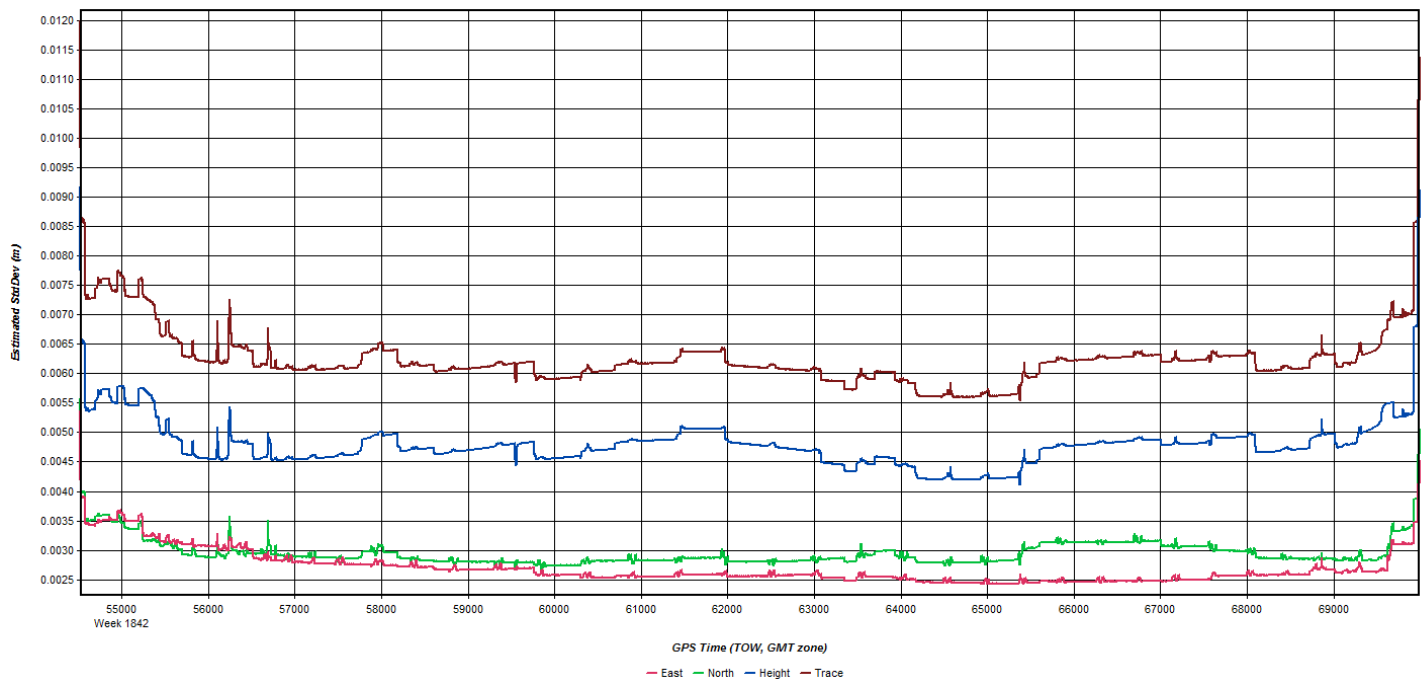
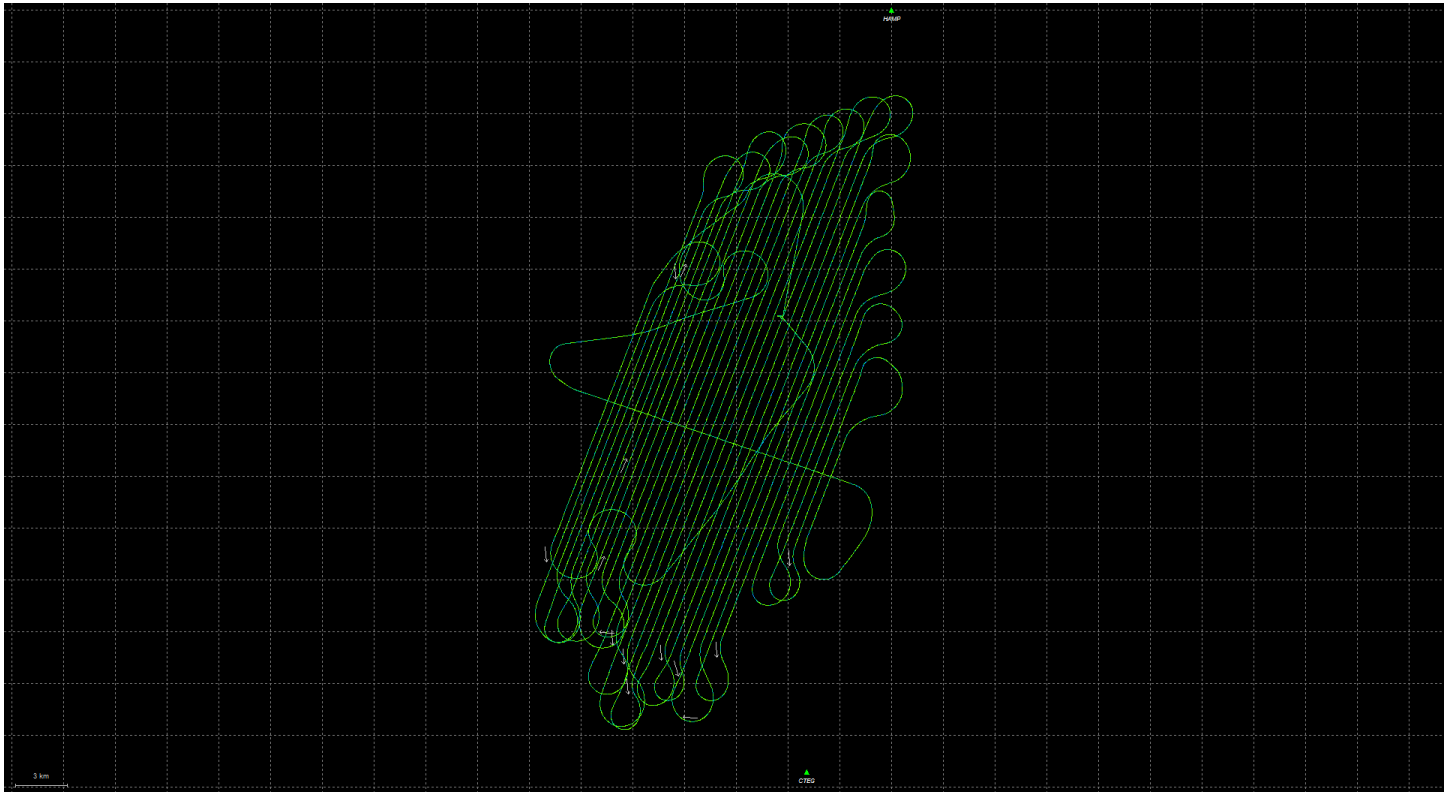
Mission(s) : 20150426-143905-ALS70 New or Existing Mon. New Existing
20150426-150647-ALS80 Photo Taken: Yes No

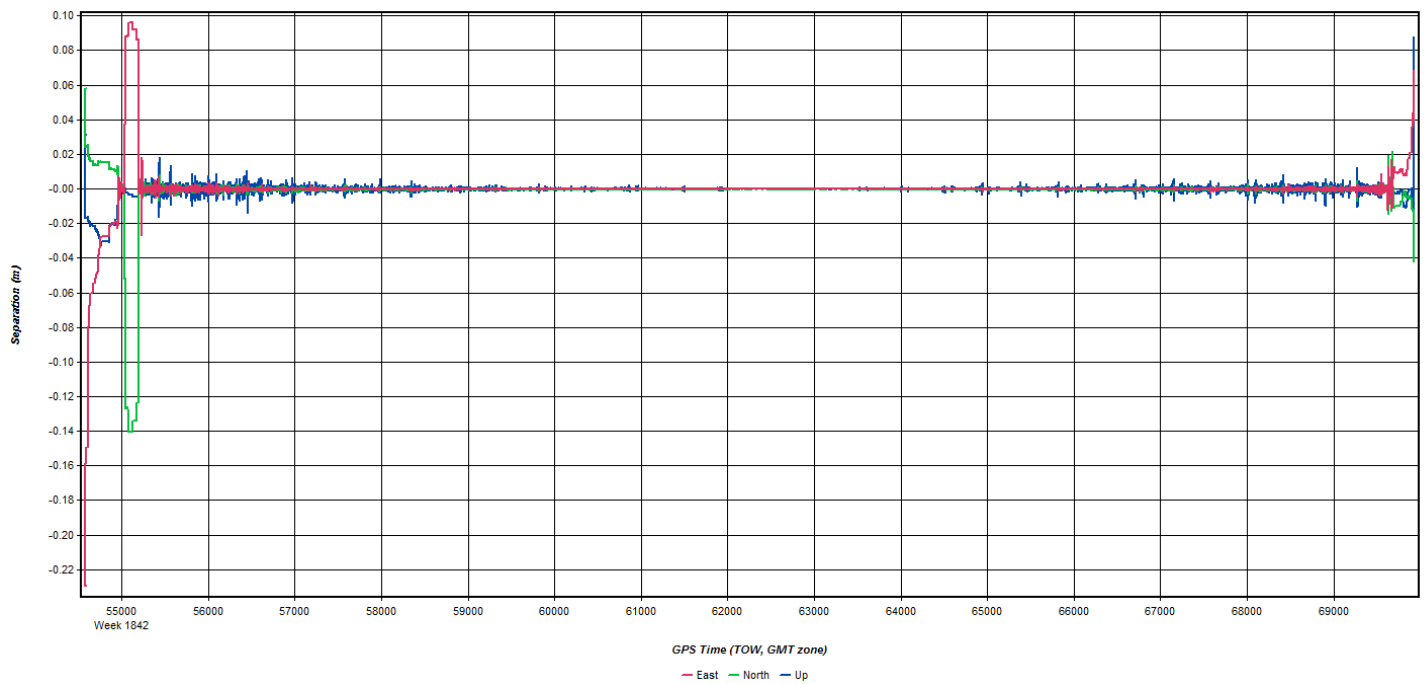
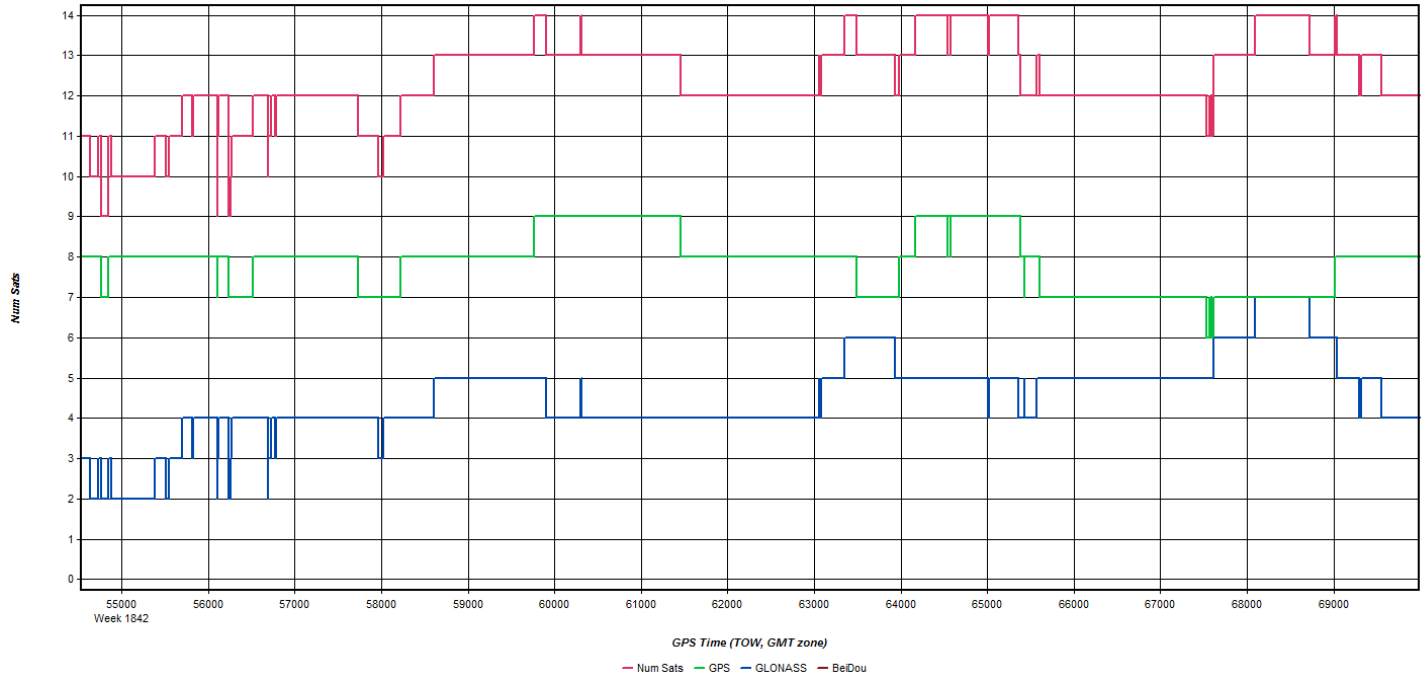
*Note: 22GE and 262AS using same base station for missions today. Monument Type: _____
 Spike PK Nail AM Washer Other Rebar w/pink flag

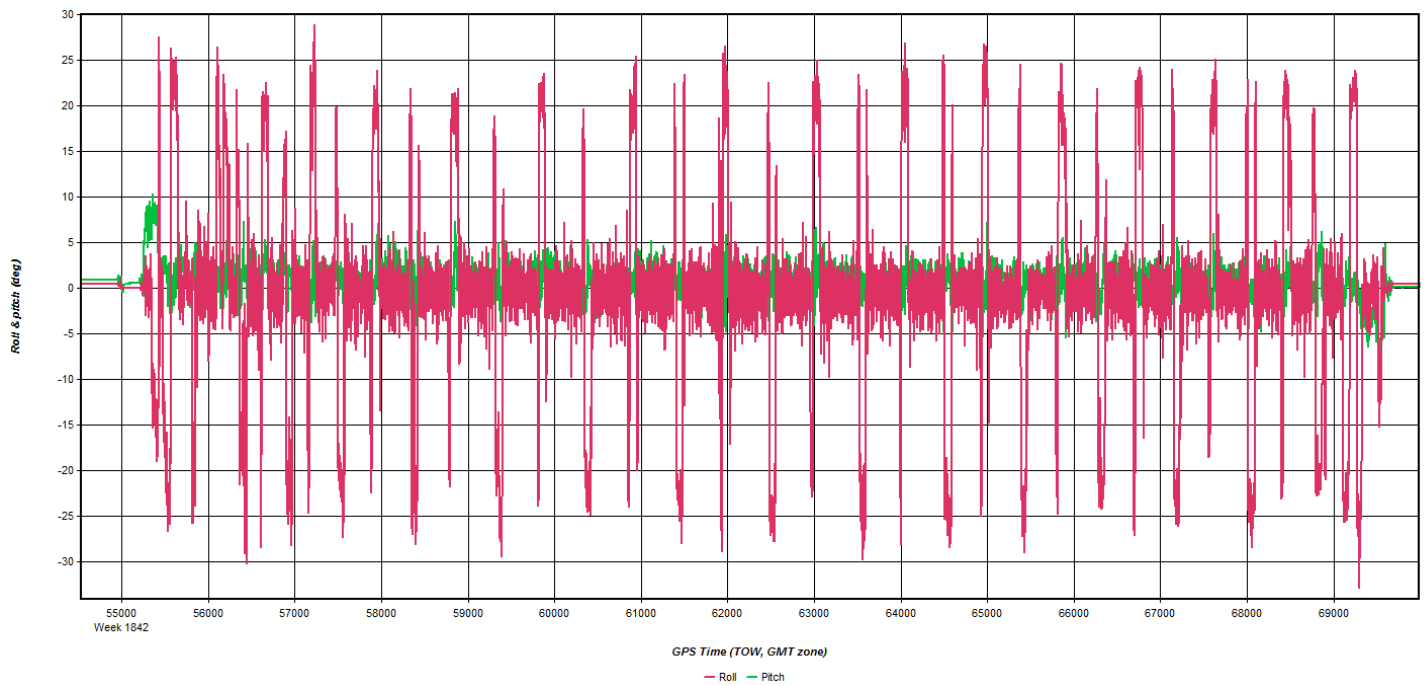
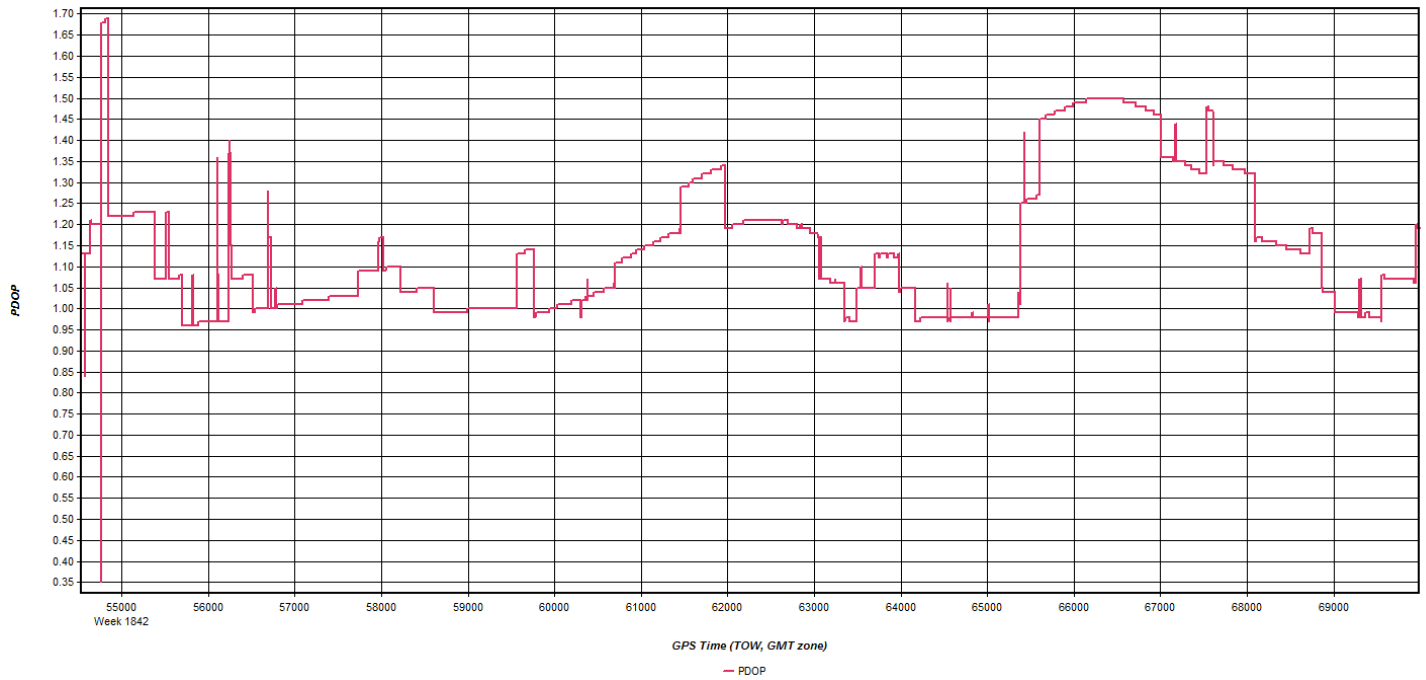
Height Readings:
 (Top of Monument to Bottom of Ground Plane)
 Start 2.0 M. _____ Ft.
 Stop 2.0 M. _____ Ft.
 Mean 2.0 M. _____ Ft.

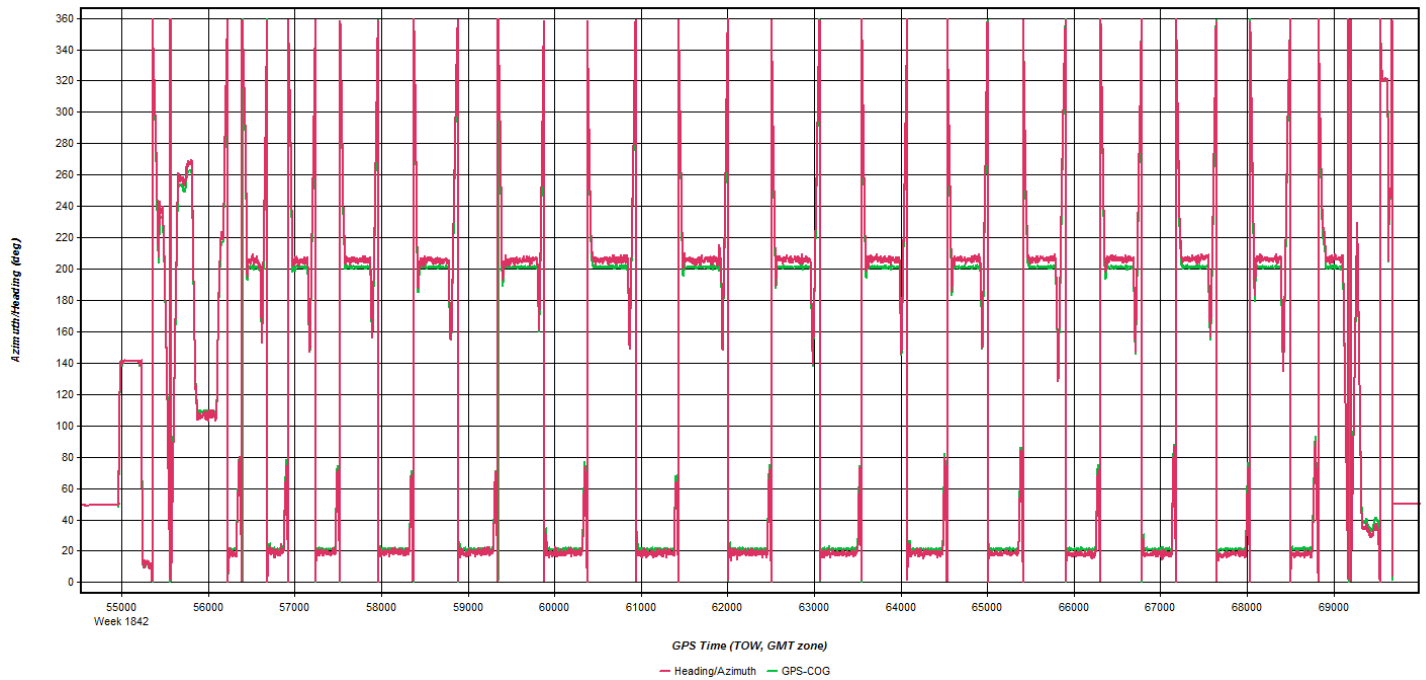


Apr 26, 2015-A (N22GE, SN8239)









? X

Coordinate/Antenna Settings

Master Remote

Base Station
 2: CTEG Name: CTEG Disabled
 File: E:\Proc\26258_USGS_MA_ME_LIDAR\TTK8\26258_USGS_MA

Coordinates
 Latitude: North 41 55 24.34701
 Longitude: West 72 41 55.88092
 Ellipsoidal height: 30.293 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
1: HAMP Name: HAMP Disabled
File: E:\Proc\26258_USGS_MA_ME_LiDAR\TTK8\26258_USGS_MA

Coordinates
Latitude: North 42 19 03.87277 Compute from PPP
Longitude: West 72 38 22.40329 Enter Grid Values
Ellipsoidal height: 42.355 m Enter MSL Height
Datum: NAD83(2011) 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

page 1 of 2

OPERATORS FLIGHT LOG

MISSION: 20150426 - 150647
 PILOT: Mark Yang
 PROJECT NUMBER AND NAME: 26258
 OPERATOR: Emily
 DATE: 4-26-15
 AIRCRAFT: Dyrson
 LEICA MODEL: 11530
 SENSOR: 8239
 REMARKS: BAF → site .2

PROJECT NUMBER AND NAME	LINE No.	Lbl	Hdg	GND SPEED (KTS)	FREQ Hz	SCAN ANGLE	PRF kHz	FIXED GAIN	Flying HL (m)	TIME		REMARKS
										START	STOP	
USGS MA WESTFIELD	116	231	122	138	35	38	487		3600	15:20	15:31	
	246	230	35	146						15:31	15:38	SD3
	245	229	215	140						15:41	15:42	
	294	228	35	144						15:45	15:47	
	293	227	215	146						15:49	15:52	
	292	226	35	141						15:54	15:57	
	291	225	215	138						15:59	16:04	
	290	224	35	140						16:06	16:11	
	289	223	215	148						16:13	16:19	
	288	222	35	142						16:22	16:27	
	287	221	215	138						16:30	16:36	
	286	220	35	145						16:38	16:45	
	285	219	215	150						16:47	16:53	
	284	218	35	140						16:56	17:02	
	283	217	215	152						17:05	17:11	
282	216	35	145						17:14	17:20		
281	215	215	151						17:22	17:29		
280	214	35	144						17:31	17:38		
STATUS	TOTAL LINES	FLOWN	LEFT	SITE	FERRY	STATIC	START	STOP	NOTES: Over base at KBAF			
USGS MA WESTFIELD	31	31	31	3.7	0.3		15:09	15:14	15:25			
					4.0		Slight to mod. turbulence at times					

Quantum Spatial N.6216 Resource Drive Sheboygan Falls, WI. 53085 PHONE: 920-467-2655 FAX: 888-253-6695 E-Mail: amephot@quantumspatial.com

Generated by CamScanner

OPERATORS FLIGHT LOG

MISSION: 20150426 - 150647 YYYYMMDD_TIME(GPS) DATE: 4-26-15 OPERATOR: Emily Dupres AIRCRAFT: N226G LEICA ALS-70- ALS-70 SENSOR: 8239

PROJECT NUMBER AND NAME	LINE No.	Lbl	Hdg	GND SPEED (KTS)	FREQ Hz	SCAN ANGLE	PRF kHz	FIXED GAIN	Flying HL (m)	START	STOP	MM70 DRIVE	REMARKS
USGS MA westfield	219	213	215	150	35	38	487		3600	17:40	17:46	SSD3	
	218	212	35	146						17:48	17:54		
	217	211	215	151						17:56	18:01		
	216	210	35	140						18:05	18:09		
	215	209	215	151						18:11	18:16		
	214	208	35	146						18:18	18:23		
	213	207	215	152						18:26	18:31		
	212	206	35	143						18:33	18:38		
	211	205	215	154						18:40	18:45		
	210	204	35	140						18:48	18:52		
	209	203	215	147						18:55	18:59		
	208	202	35	149						19:02	19:05		
	207	201	215	152						19:08	19:11		
										19:11	19:19		Site -> BAF .1

STATUS	TOTAL LINES	FLOWN	LEFT	AIRCRAFT SITE	AIRCRAFT FERRY	STATIC	START	STOP	NOTES
<input checked="" type="checkbox"/>	31	31	31	3.7	0.3		19:21	19:26	fig. 88 8200 19:13
<input type="checkbox"/>									slight + mod. + turbulence
<input type="checkbox"/>									

Quantum Spatial N.6216 Resource Drive Sheboygan Falls, WI. 53085 PHONE: 920-467-2655 FAX: 888-253-6695 E-Mail: amepho@quantumspatial.com

Generated by CamScanner

Apr 29, 2015-A (N1107Q, SN7108)

Flight Log

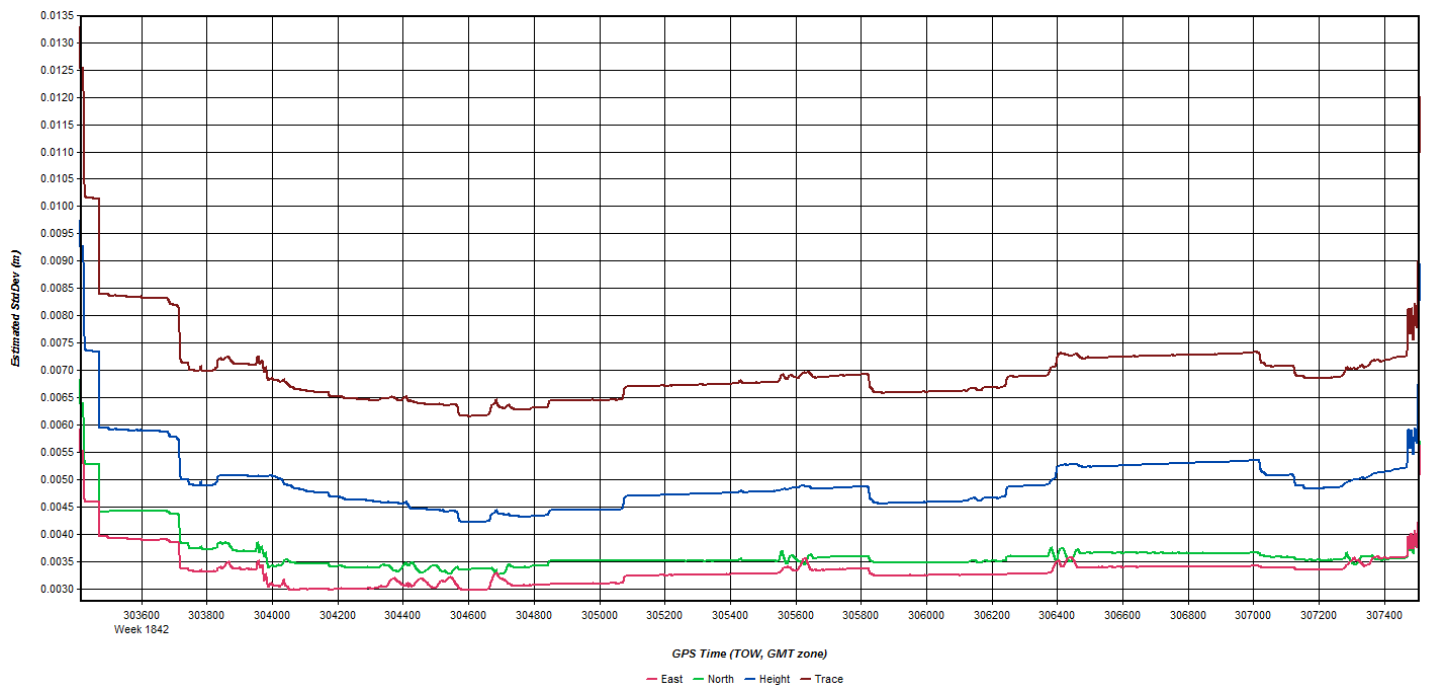
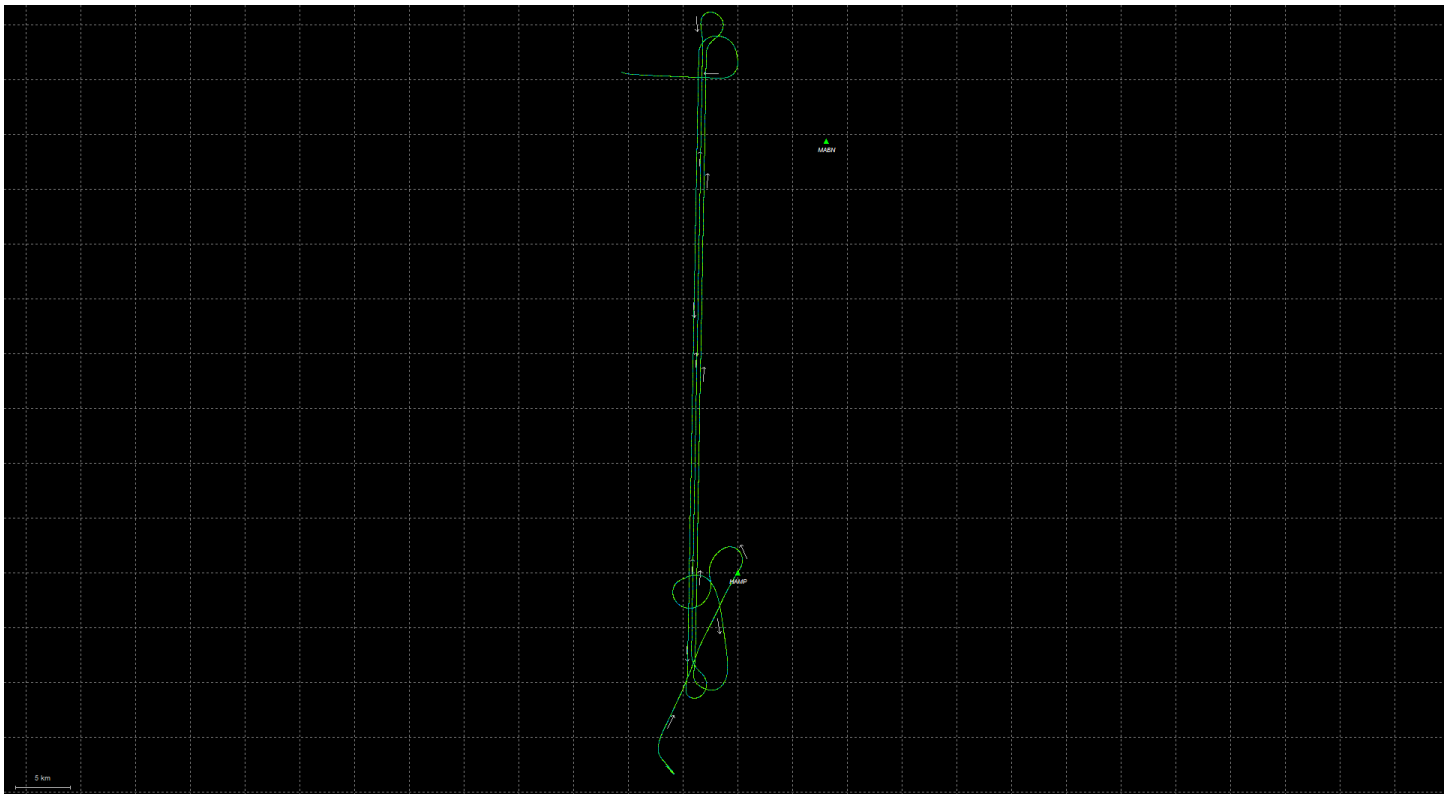
WOOLPERT FLIGHT LOG SHEET #1													
Leica ALS-70		MM/DD/YYYY		Day of Year		Mission Name / Job #							
Operator Annen		4/29/2015		119		Pittsfield South 75500							
Pilot Larocque		Aircraft N475RC N404CP N7079F N475CP N3307Q <input checked="" type="checkbox"/>		Sensor SH-7177 SH-6357 SH-7108 <input checked="" type="checkbox"/>		Hobbs Start 2685.1		Local Start Time 8:15		Zulu Start Time 12:15			
Passengers		Using or Relying on CORS Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		GPS Base #1		Operator Annen		PID KPSF					
Wind Dir/Speed 300/8		Visibility 10		Ceiling clr		Cloud Cover % 0		Temp 10		Dew Point 4			
Pressure 29.7		Haze/Fine/Cloud		Departing ICAO KPSF		Arriving ICAO KPSF							
Scan Angle (FOV) 40		Scan Frequency (Hz) 41		Pulse Rate (kHz) 272		Laser Power % 100		Gain Course/Up Fine/Down		Mode Single <input type="checkbox"/> 2+2 <input type="checkbox"/> Multi <input type="checkbox"/> 4+3 <input type="checkbox"/>			
Air Speed 150 Kts		AGL 7,100 Ft		MSL 7,100 Ft		Threshold /		Waveform Mode @ NS		Pre-Trigger Dist. Ft			
Line #	Dir.	Line Start Time	Line End Time	Time On Line	SV's	HDOP	PDOP	Line Notes/Comments					
Test	n/a			n/a	n/a	n/a	n/a	GPS Began Logging At:					
↑ Times entered are Zulu / GMT ↓								Verify S-Turns Before Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
60	S	12:43:00	12:52:00		18	0.6	1						
61	N	12:55:00	13:06:00										
62	S	13:08:00	13:17:00										
63	N	13:21:00	13:31:00										
64	S	13:34:00	13:43:00										
65	N	13:43:00	13:56:00					Clouds popping everywhere					
↑ Times entered are Zulu / GMT ↑								0:00:00		Total Time On Line		Verify S-Turns After Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Additional Comments: System worked well, no issues.										Drive #			

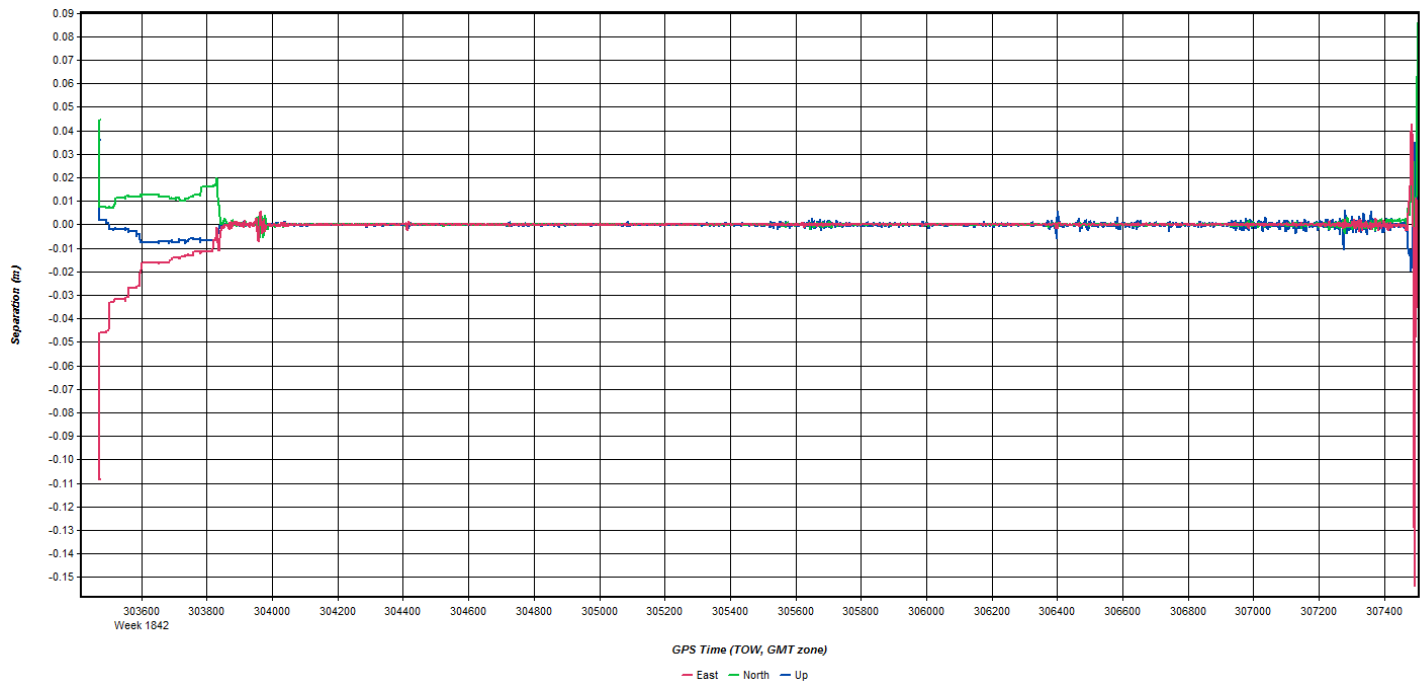
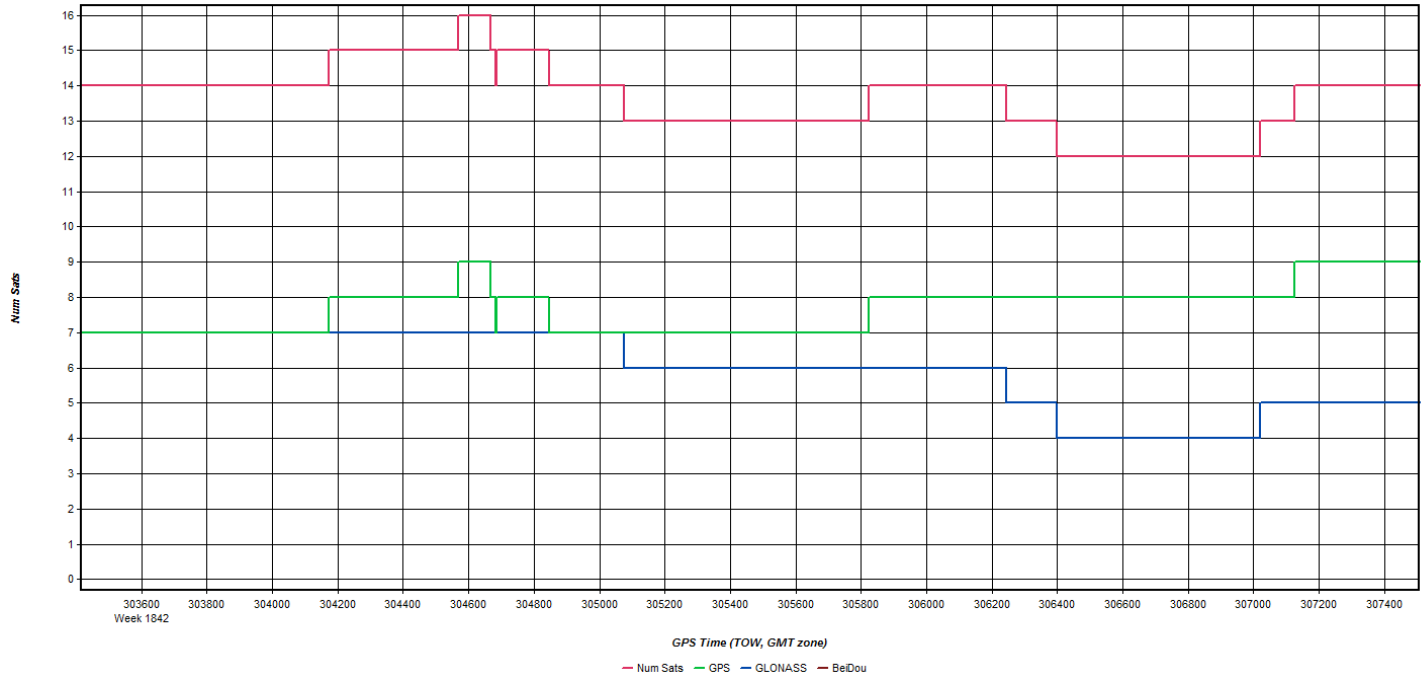
Apr 29, 2015-B (N1107Q, SN7108)

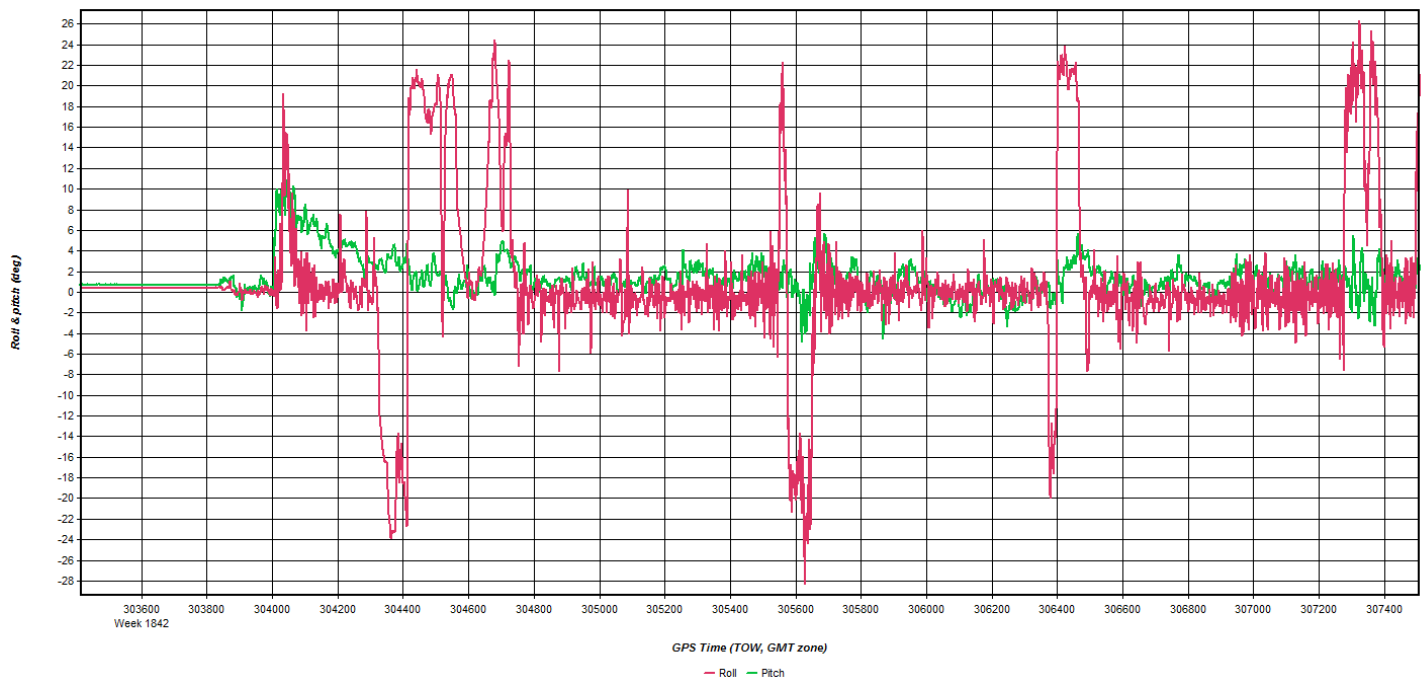
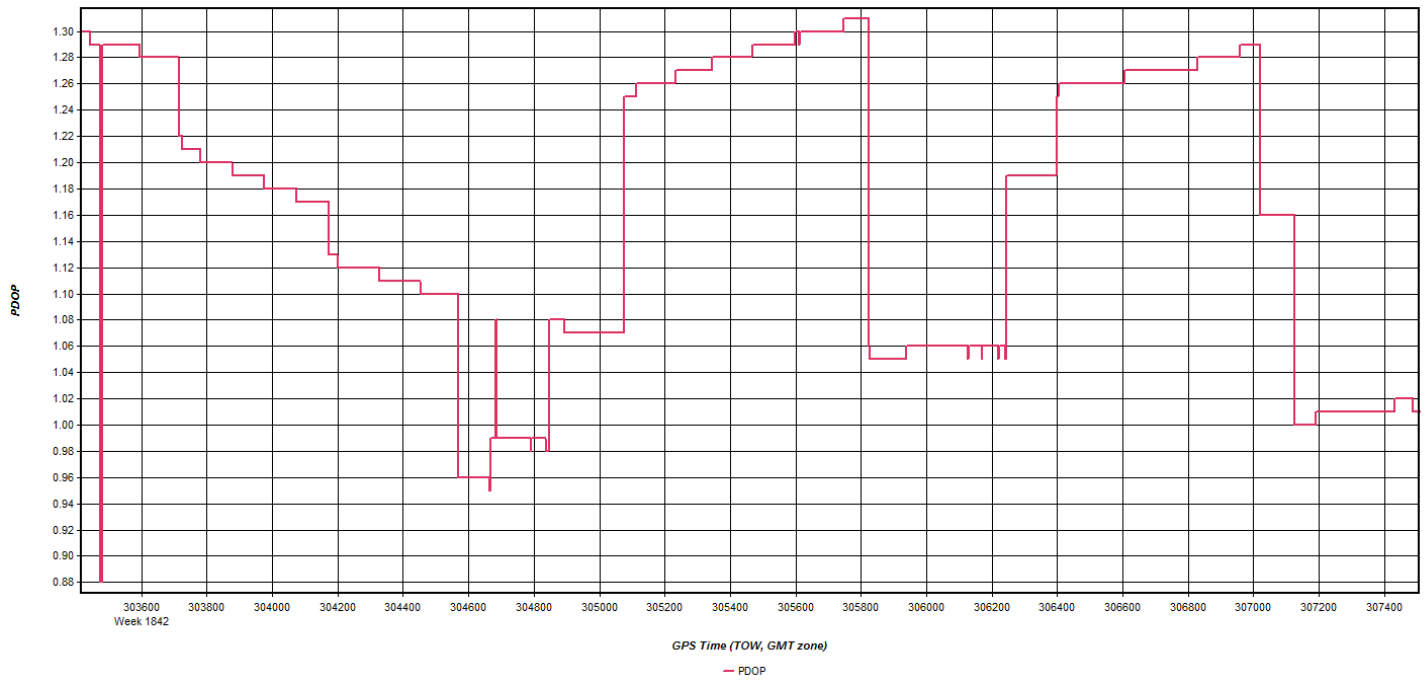
Flight Log

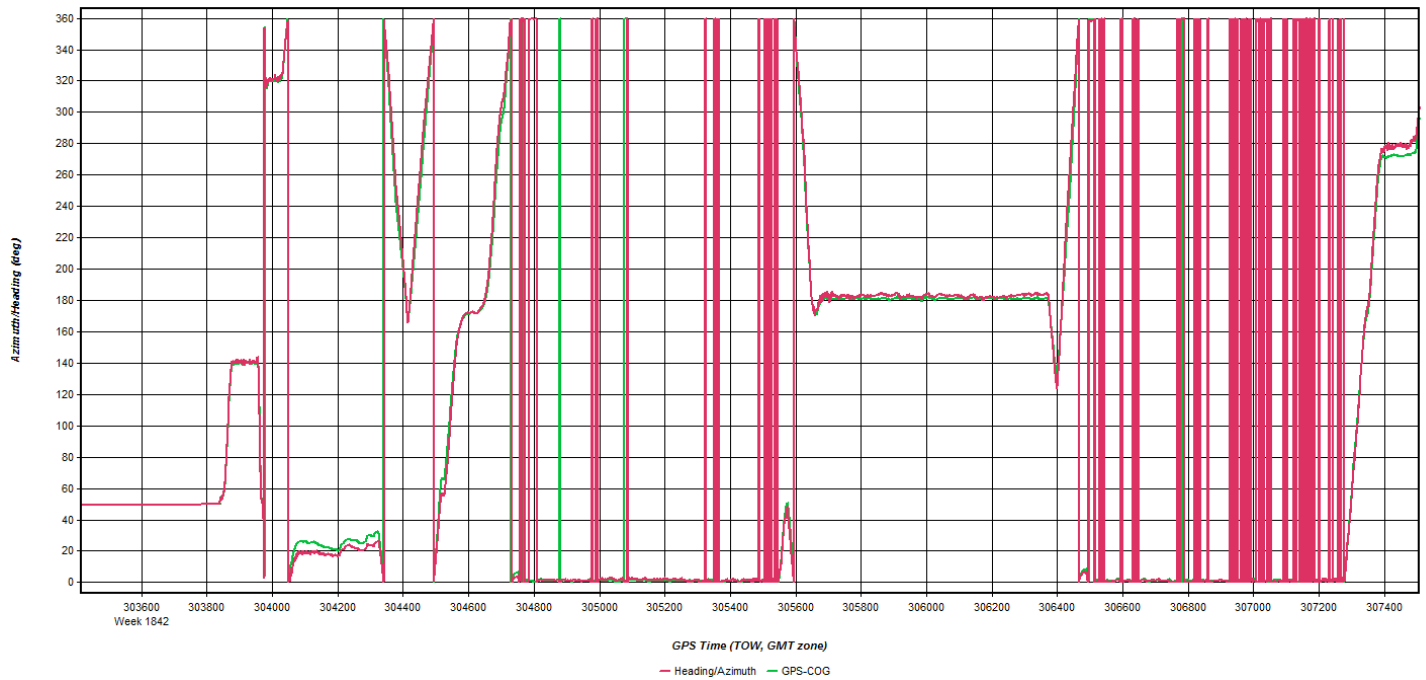
WOOLPERT FLIGHT LOG SHEET #1											
Leica ALS-70			MM/DD/YYYY 4/29/2015		Day of Year 119		Mission Name / Job # Pittsfield South 75500 Flt 2				
Operator Annen			Aircraft N475RC N404CP N7079F N475CP N1107Q <input checked="" type="checkbox"/>		Sensor SH-7177 SH_6157 SH-7108 <input checked="" type="checkbox"/>		Hobbs Start 2687		Local Start Time 17:10		Zulu Start Time 21:10
Pilot Larocque							Hobbs End 2689.7		Local End Time 20:15		Zulu End Time 0:15
Passengers			Using or Relying on CORS Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			GPS Base #1 Operator Annen		PID KPSF			
						GPS Base #2 Operator		PID			
Wind Dir/Speed 340/7		Visibility 10	Ceiling 7,500		Cloud Cover % 90	Temp 19	Dew Point 1	Pressure 29.65		Haze/Fine/Cloud	
								Departing ICAO KPSF		Arriving ICAO KPSF	
Scan Angle (FOV) 40		Scan Frequency (Hz) 41		Pulse Rate (kHz) 272		Laser Power % 100		Gain Course/Up Fine/Down		Mode Single <input type="checkbox"/> 2+2 <input type="checkbox"/> Multi <input type="checkbox"/> 4+3 <input type="checkbox"/>	
Air Speed 150 Kts		AGL 7,100 Ft		MSL 7,100 Ft		Threshold /		Waveform Mode @ NS		Pre-Trigger Dist. Ft	
Line #	Dir.	Line Start Time	Line End Time	Time On Line	SV's	HDOP	PDOP	Line Notes/Comments			
Test	n/a			n/a	n/a	n/a	n/a	GPS Began Logging At:			
↑ Times entered are Zulu / GMT ↓								Verify S-Turns Before Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
66	S	21:29:00	21:39:00		16	0.6	1.3				
67	N	21:42:00	21:52:00								
68	S	21:55:00	22:04:00								
69	N	22:07:00	22:17:00								
70	S	22:20:00	22:29:00								
71	N	22:32:00	22:42:00								
72	S	22:45:00	22:54:00								
73	N	22:57:00	23:06:00								
74	S	23:09:00	23:19:00								
75	N	23:22:00	23:31:00								
76	S	23:34:00	23:43:00								
77	N	23:46:00	23:56:00								
↑ Times entered are Zulu / GMT ↑								Total Time On Line 0:00:00		Verify S-Turns After Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Additional Comments: System worked well, no issues.										Drive #	

Apr 29, 2015-A (N22GE, SN8239)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: HAMP Name: HAMP Disabled
 File: E:\Proc\26258_USGS_MA_ME_LiDAR\1YMJ\26258_USGS_MA

Coordinates
 Latitude: North 42 19 03.87277 Compute from PPP
 Longitude: West 72 38 22.40329 Enter Grid Values
 Ellipsoidal height: 42.355 m Enter MSL Height
 Datum: NAD83(2011) 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 Measured to
 ARP L1 Phase Centre
 ARP to L1 offset: 0.067 m
 Applied height: 0.067 m Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
2: MABN Name: MABN Disabled
File: E:\Proc\26258_USGS_MA_ME_LiDAR\1YMJ\26258_USGS_MA

Coordinates
Latitude: North 42 40 11.99113 Compute from PPP
Longitude: West 72 32 28.64375 Enter Grid Values
Ellipsoidal height: 94.890 m Enter MSL Height
Datum: NAD83(2011) Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: LEIAX1203+GNSS, NONE View STA File
Antenna profile: LEIAX1203+GNSS Info
Measured height: 0.000 m
ARP to L1 offset: 0.058 m
Applied height: 0.058 m
Measured to:
 ARP
 L1 Phase Centre
Compute From Slant

OK Cancel

Flight Log

OPERATORS FLIGHT LOG

MISSION: 20150429 - 121502 DATE: 4-29-15 LEICA ALS-80 ALB-70 SENSOR: 8239

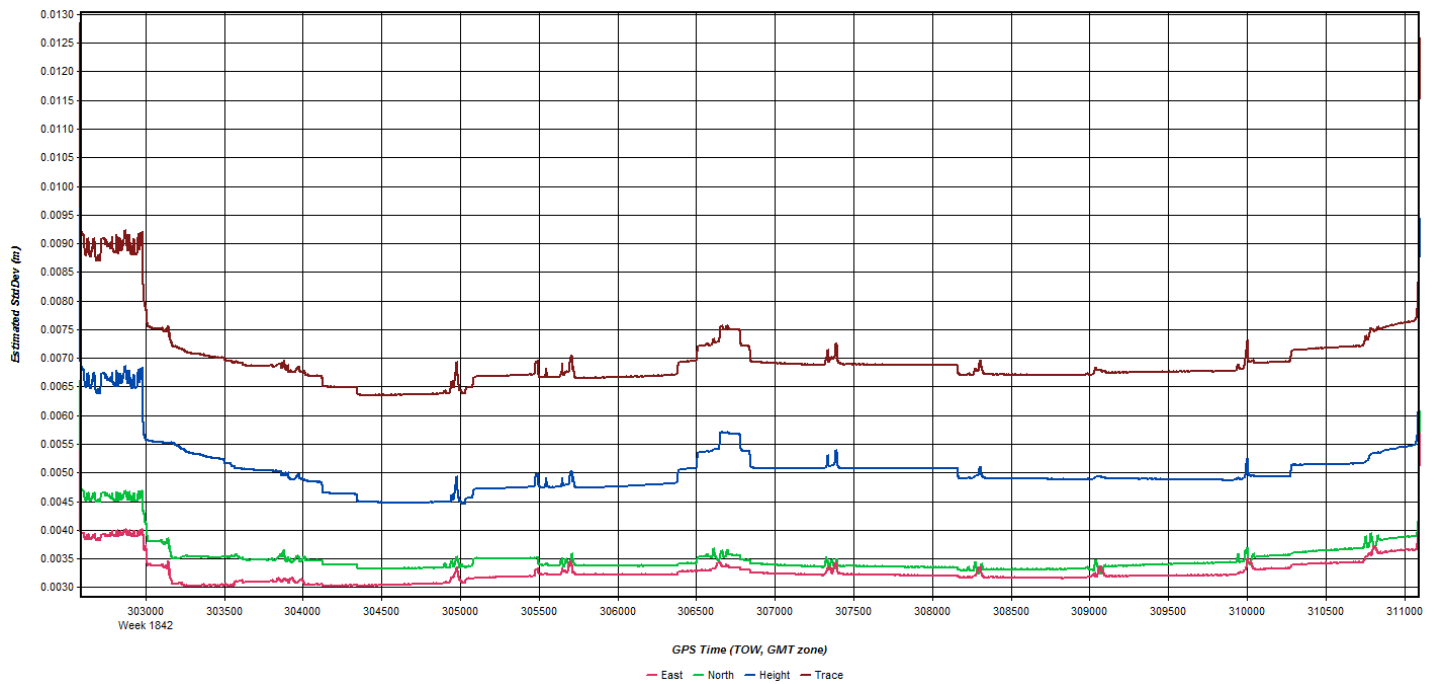
PILOT: Mark Yeung OPERATOR: Emily D'Amico AIRCRAFT: NZ2GE

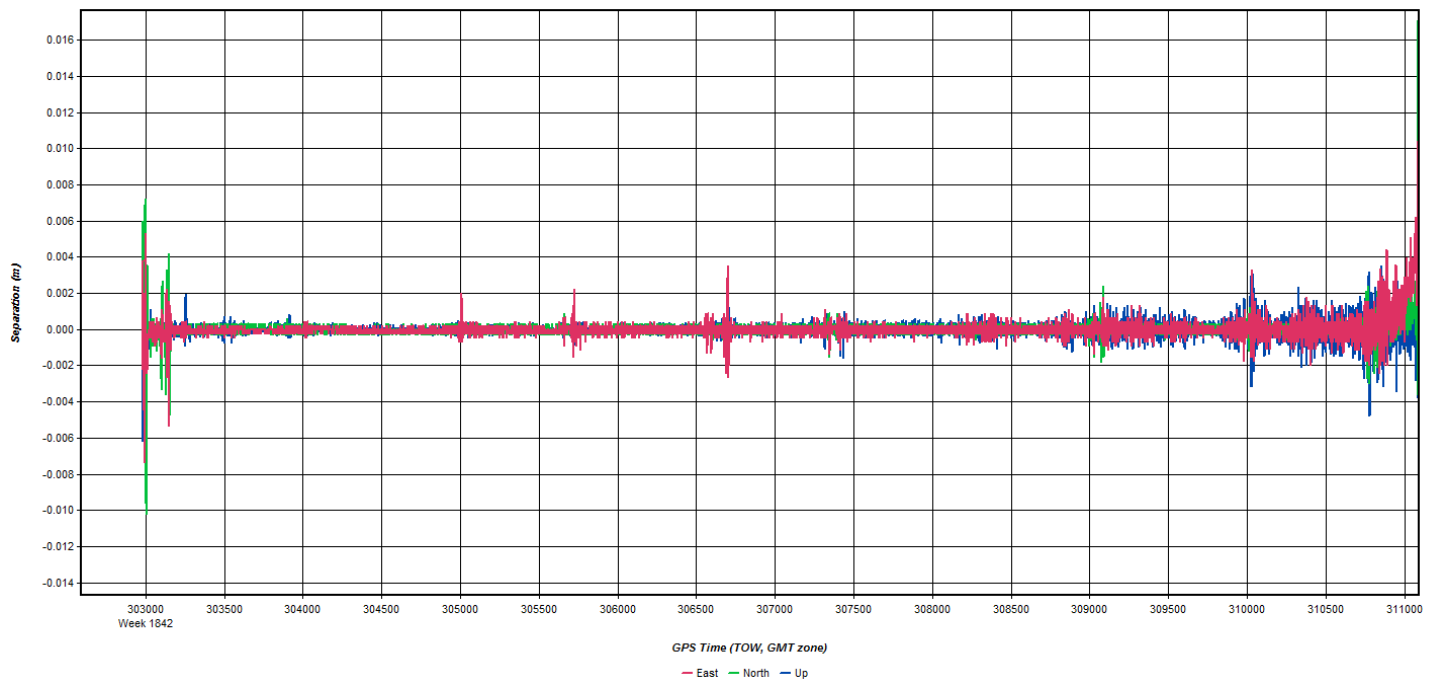
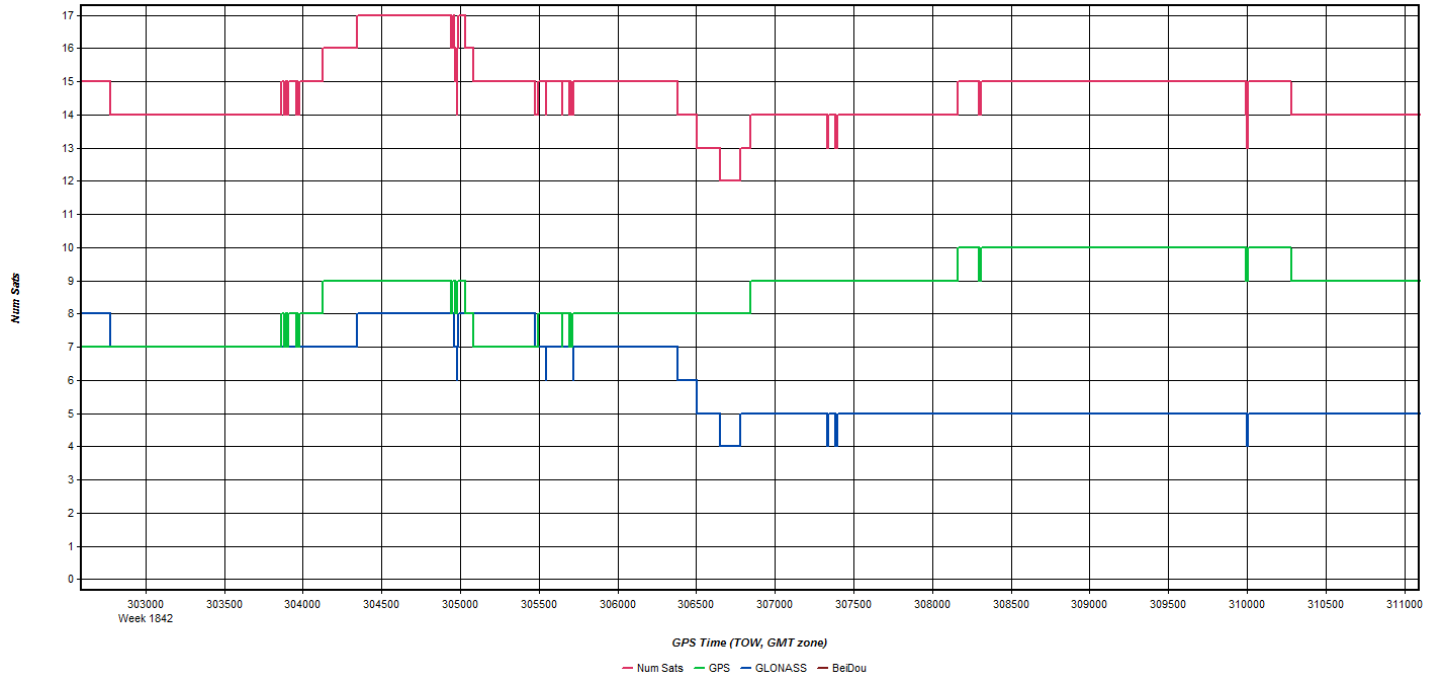
PROJECT NUMBER AND NAME	LINE No.	Lbl	Hdg	GND SPEED (KTS)	FREQ Hz	SCAN ANGLE	PRF kHz	FIXED GAIN	Flying Ht. (m)	TIME		REMARKS
										START	STOP	
26258										12:26	12:39	BAF → site
USGS MA	080	3080	15	134	52	40	356		5000	12:39	12:52	
Northampton	079	3099	195	155						12:54	13:05	
	078	3076	15.	140						13:08	13:20	
	X	26	286	153						13:23	13:24	Cross tie for lines 80-78 Flight pro error - forced to close program in air shutdown
											13:56	back to BAF 8266.2

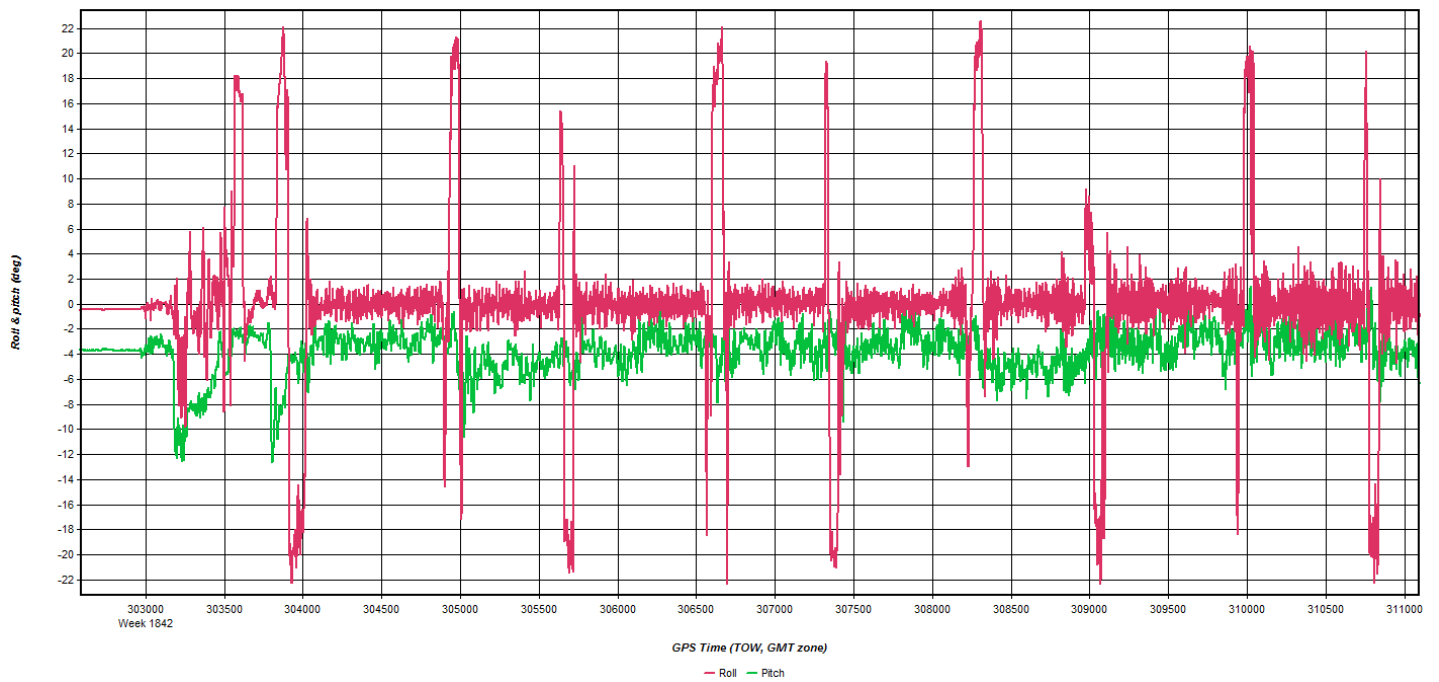
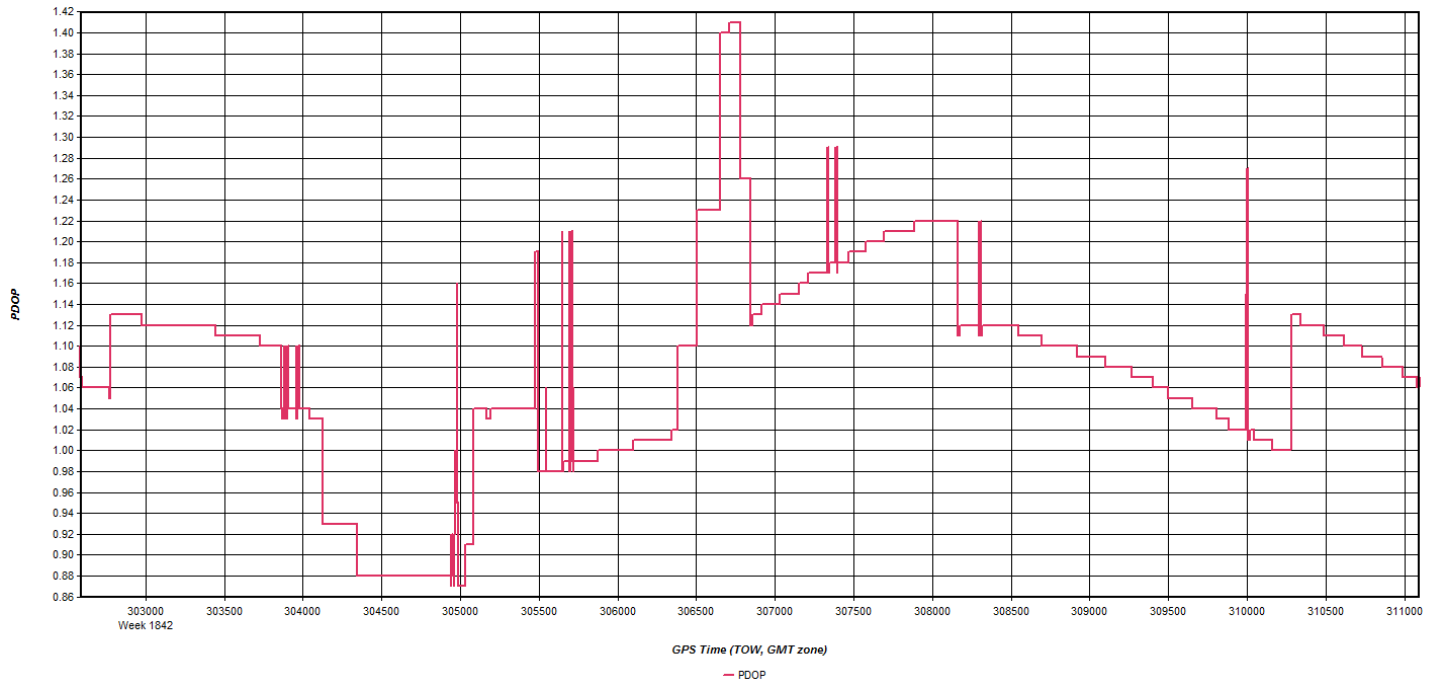
STATUS	TOTAL LINES	FLOWN	LEFT	SITE	AIRCRAFT FERRY	STATIC	START	STOP	NOTES
○	139	3		0.8	0.7		12:17	12:22	CORS: HAMP 12:31, 13:36 13:27 fig.8 KDAF 1340 base station
○					1.5				Slight turbulence on North ends of lines

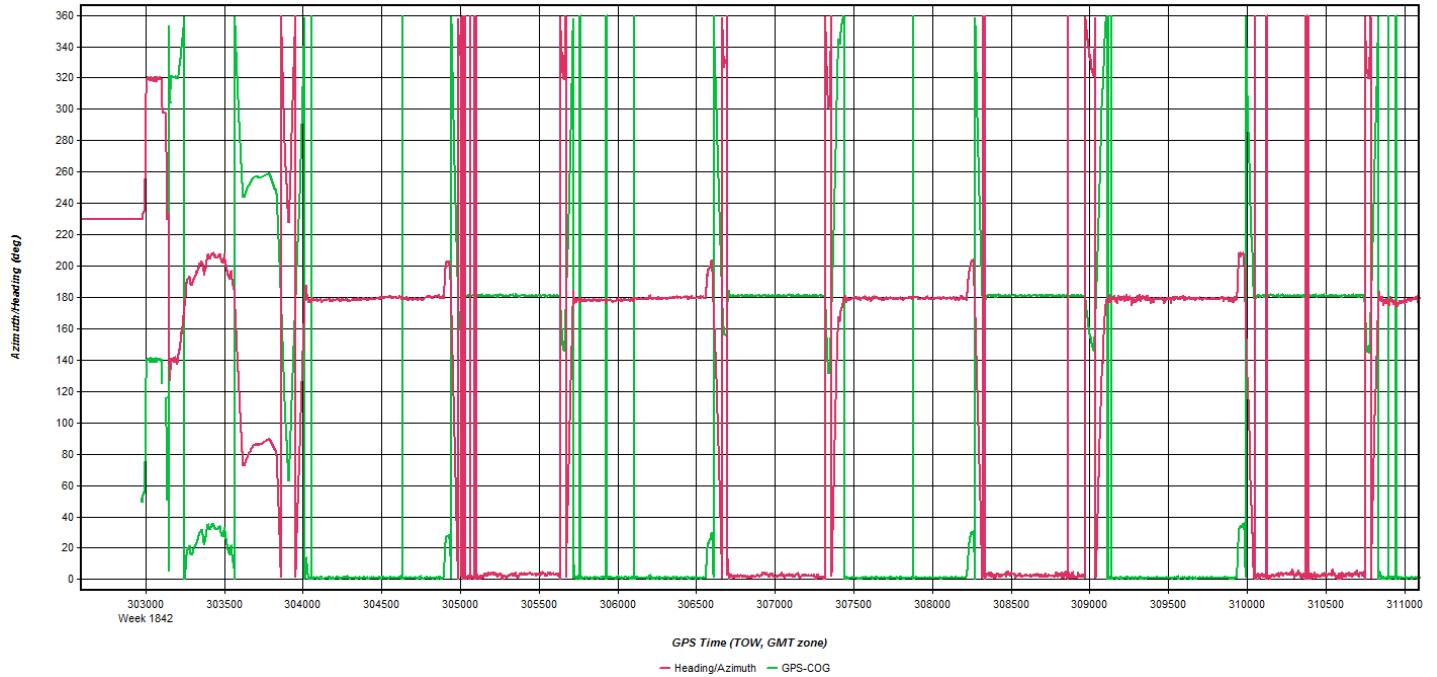
Quantum Spatial N.6218 Resource Drive Sheboygan Falls, WI. 53085 PHONE: 920-467-2655 FAX: 888-253-6695 E-Mail: amepphoto@quantumspatial.com

Apr 29, 2015-A (N269JE, SN7234)









Coordinate/Antenna Settings [?] [X]

Master Remote

Base Station
 1: HAMP Name: HAMP Disabled
 File: E:\Proc\26258_USGS_MA_ME_LiDAR\ZAFH\20150429_115814

Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

Antenna Height
 From station file: TRM57971.00, NONE
 Antenna profile: TRM57971.00
 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

26258 USGS MA/ME		Area Northampton ALS80 150kts				Flight Logs	
FLIGHT LINE	FL MILES	ALTITUDE (feet)	BASE STATION	DATE FLOWN	S/N	FIELD QC	COMMENTS
3040	28.31 4052	5482		4/29/2015	N		122905
3041	28.18 4052	5465					
3042	28.04 4052	5453					
3043	27.90 4052	5499					
3044	27.76 4052	5512					
3045	27.63 4052	5471					
3046	27.49 4052	5459					
3047	27.35 4052	5443					
3048	27.22 4052	5440					
3049	27.03 4052	5419					
3050	29.09 4052	5390					
3051	29.34 4052	5367					
3052	29.59 4052	5337					

 Contact J. Berry
 at 859-277-8200

Flight Logs should be FAXED to 859-277-8901 immediately after each day's flights with lines and other details noted

 Operator Charles Chace
 Pilot Brian Butler

 AIRCRAFT Tail Number 269DE
 Sensor Serial Number SN7334

 Page 4 of 11
 Date 4/29/2015

26258 USGS MA/ME		Area Northampton ALS80 150kts				Flight Logs	
FLIGHT LINE	FL MILES	ALTITUDE (feet)	BASE STATION	DATE FLOWN	S/N	FIELD QC	COMMENTS
3027	30.80 4052	5486	Cars Hamp	4/29/2015	S		160957
3028	30.82 4052	5478			N		155312
3029	30.82 4052	5479			S		153637
3030	30.82 4052	5482			N		152147
3031	30.82 4052	5479			S		150820
3032	30.81 4052	5479			N		142114 c/s configuration saved
3033	30.69 4052	5479			S		140742 c/sly MS340 weather opened through external control full restart required
3034	30.51 4052	5489			N		135213
3035	29.00 4052	5525			S		133858
3036	28.86 4052	5508			N		132404
3037	28.73 4052	5472			S		131128
3038	28.59 4052	5459			N		125611
3039	28.45 4052	5453			S		124325

Flight Logs should be FAXED to 859-277-8901 immediately after each day's flights with lines and other details noted

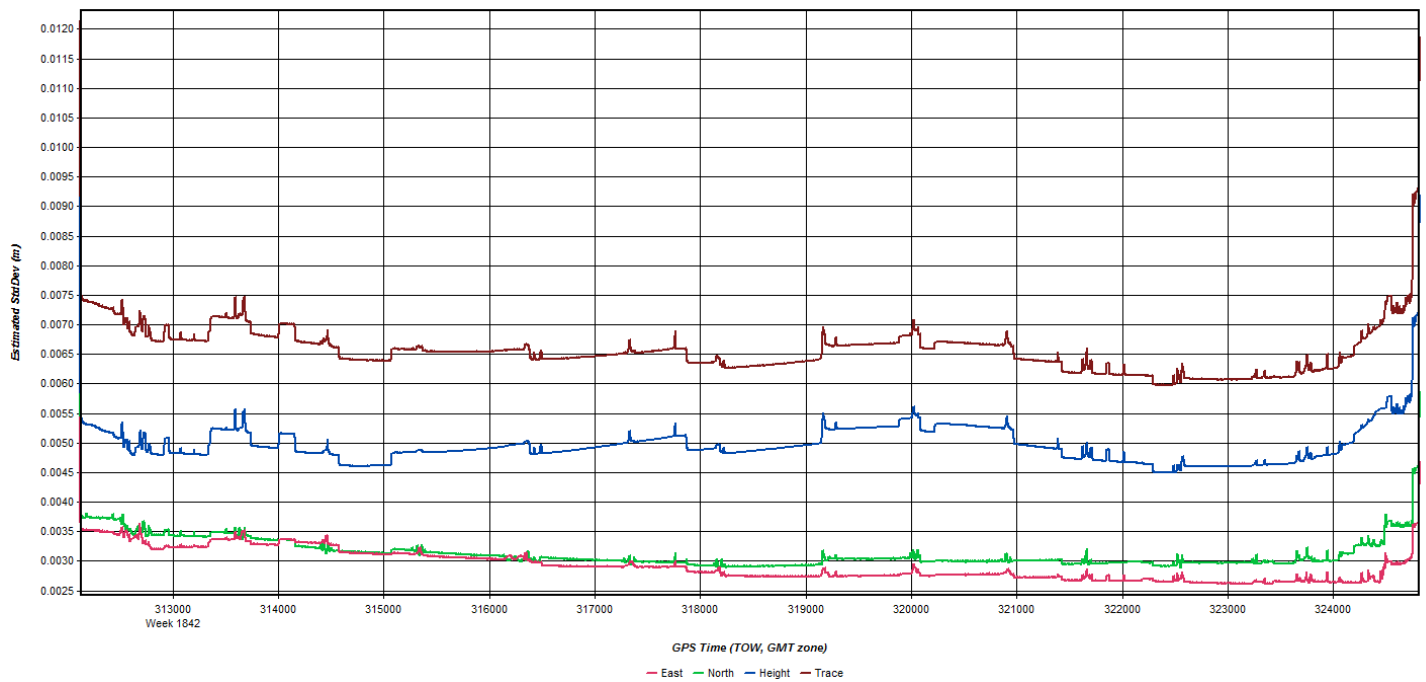
Operator Charles Chaves AIRCRAFT Tail Number 2697E Page 3 of 11
 Pilot Brian Butler Sensor Serial Number SN734 Date 4/29/2015

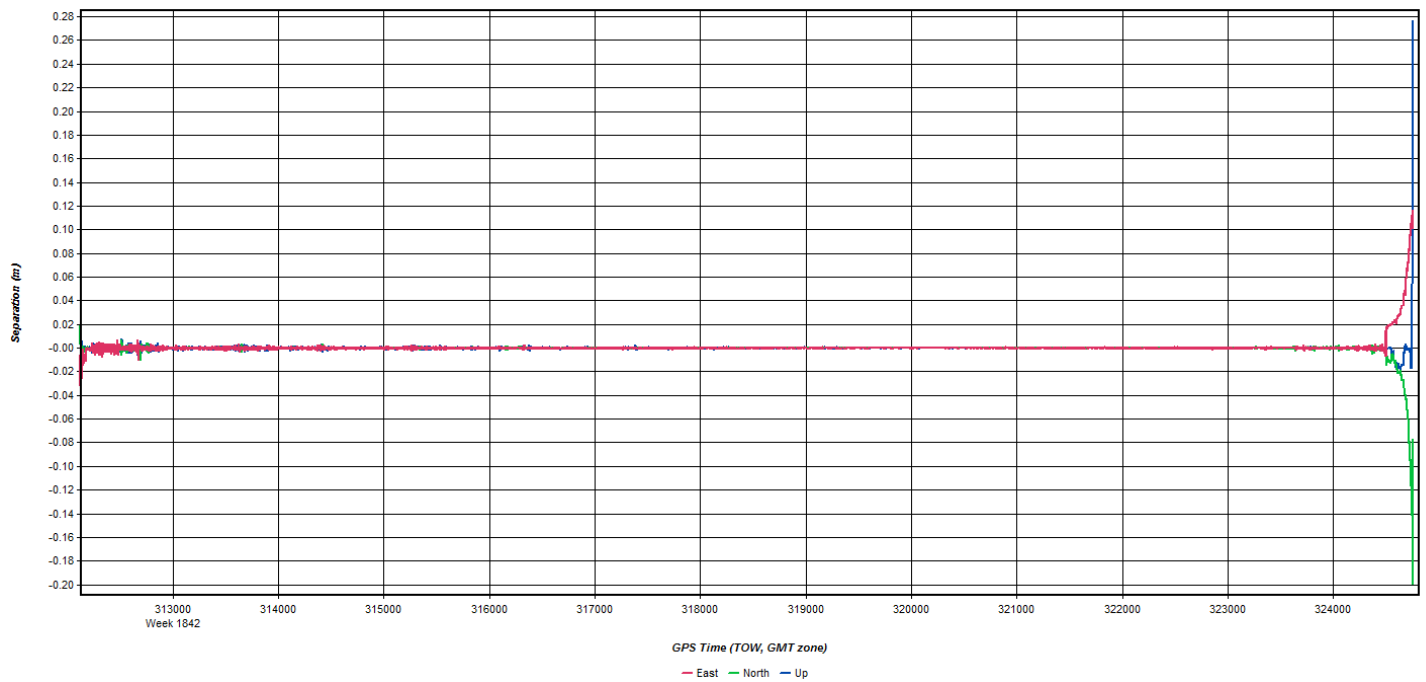
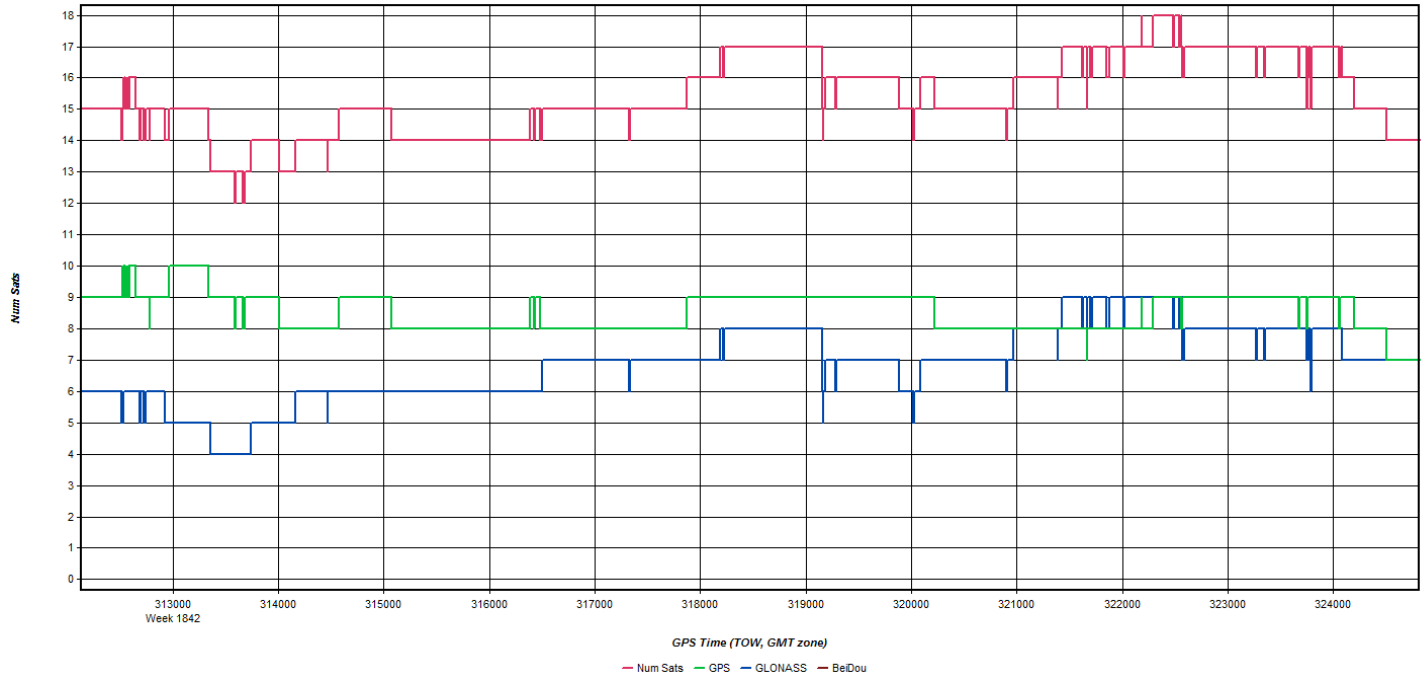
26258 USGS MA/ME		Area Northampton ALS80 150kts				Flight Logs	
FLIGHT LINE	FL MILES	ALTITUDE (feet)	BASE STATION	DATE FLOWN	S/N	FIELD QC	COMMENTS
3014	26.04 4052	5610					
3015	26.14 4052	5623					
3016	26.25 4052	5568					
3017	26.37 4052	5617					
3018	26.43 4052	5630					
3019	26.45 4052	5564					
3020	26.57 4052	5472					
3021	26.68 4052	5472	Cus Hamp	4/12/15	S	173636	175049
3022	26.82 4052	5463			N	172221	
3023	27.08 4052	5449			S	170922	
3024	27.34 4052	5466			N	165448	
3025	27.60 4052	5453			S	164156	
3026	30.78 4052	5491			N	162409	

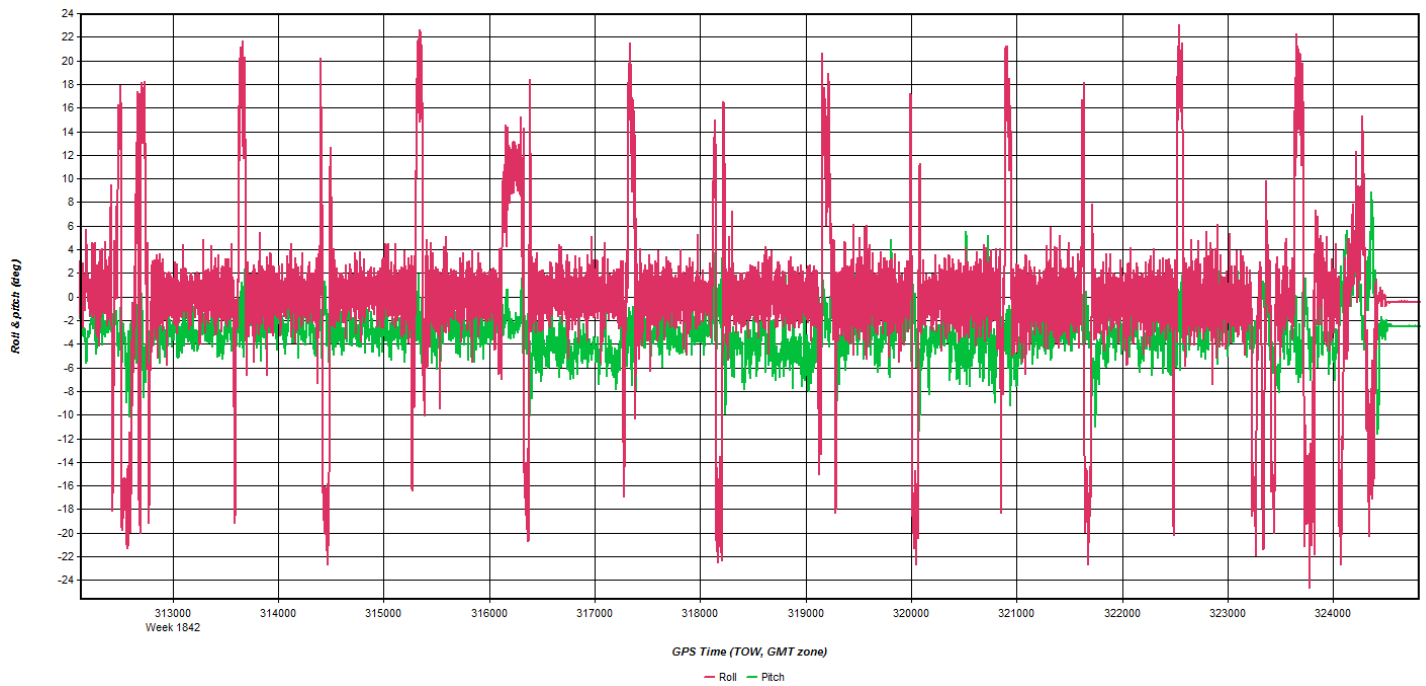
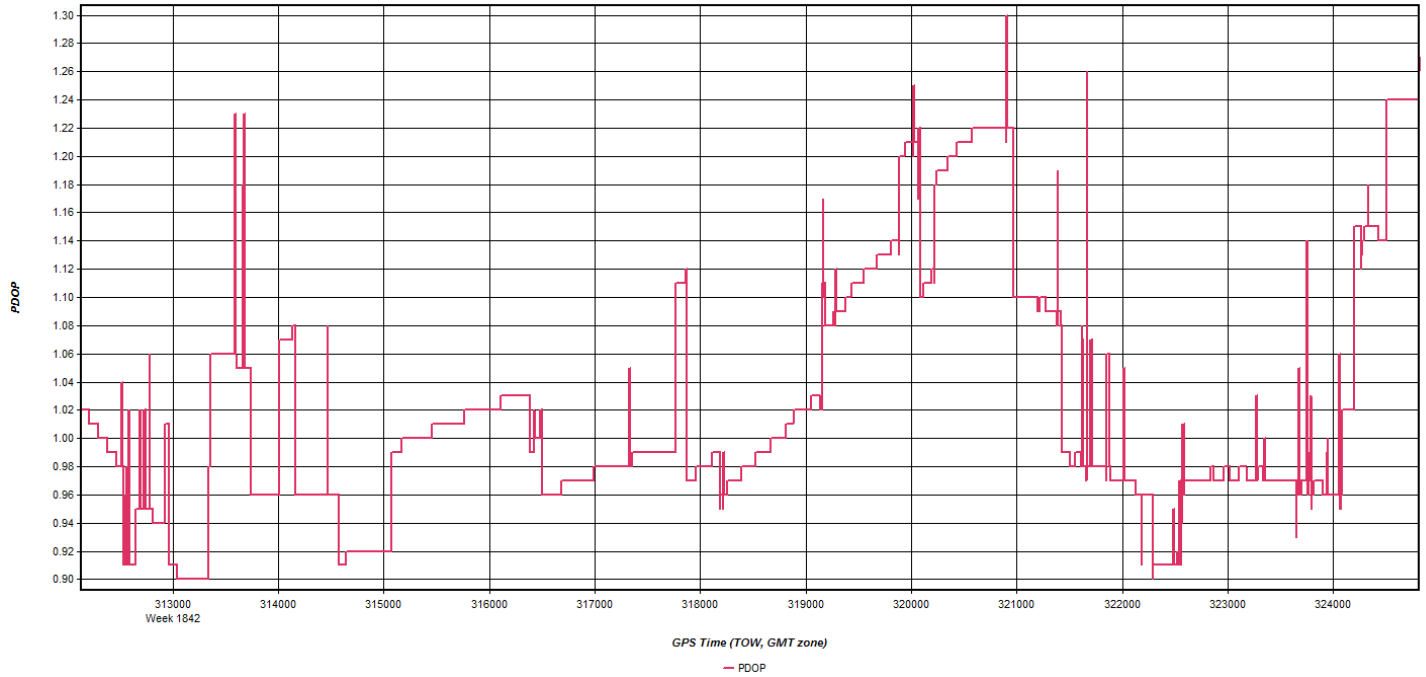
Flight Logs should be FAXED to 859-277-8901 immediately after each day's flights with lines and other details noted

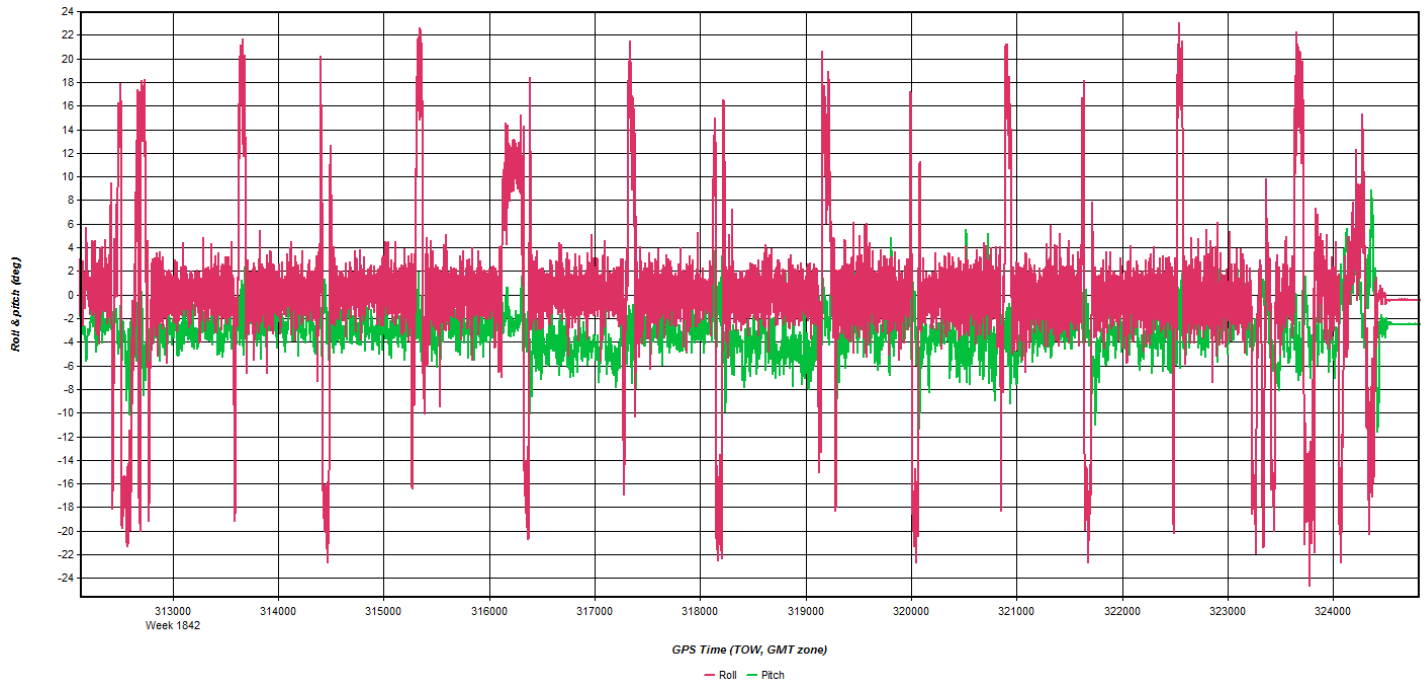
Operator (Last, F. Initial) 264 JT
Pilot Brian Butler
AIRCRAFT Tail Number 3N7234
Sensor Serial Number 3N7234
Date 4/19/15
Page 2 of 11

Apr 29, 2015-B (N269JE, SN7234)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: HAMP Name: HAMP Disabled
 File: E:\Proc\26258_USGS_MA_ME_LiDAR\ZAFH\20150429_143822

Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

Antenna Height
 From station file: TRM57971.00, NONE
 Antenna profile: TRM57971.00
 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

26258 USGS MA/ME		Area Northampton ALS80 150kts				Flight Logs	
FLIGHT LINE	FL MILES	ALTITUDE (feet)	BASE STATION	DATE FLOWN	S/N	FIELD QC	COMMENTS
3040	28.31 4052	5482		4/29/2015	N		122905
3041	28.18 4052	5465					
3042	28.04 4052	5453					
3043	27.90 4052	5489					
3044	27.76 4052	5512					
3045	27.63 4052	5471					
3046	27.49 4052	5459					
3047	27.35 4052	5443					
3048	27.22 4052	5440					
3049	27.03 4052	5419					
3050	29.09 4052	5390					
3051	29.34 4052	5367					
3052	29.59 4052	5337					

Flight Logs should be FAXED to 859-277-8901 immediately after each day's flights with lines and other details noted

Operator Charles Chiles AIRCRAFT Tail Number 2690E Page 4 of 11
Pilot Brian Butler Sensor Serial Number SN7234 Date 4/29/2015

26258 USGS MA/ME Area Northampton ALS80 150kts **Flight Logs**

 Contact J Berry
 # 859-277-8703

FLIGHT LINE	FL MILES	ALTITUDE (feet)	BASE STATION	DATE FLOWN	S/N	FIELD QC	COMMENTS
3027	30.80 4052	5486	Cars Hamp	4/29/2015	S		160957
3028	30.82 4052	5478			N		155312
3029	30.82 4052	5479			S		153637
3030	30.82 4052	5482			N		152147
3031	30.82 4052	5479			S		150820
3032	30.81 4052	5479			N		142114 GIS configuration failed rely N5340 battery opened through external control full restart required
3033	30.69 4052	5479			S		140742
3034	30.51 4052	5489			N		135213
3035	29.00 4052	5525			S		133658
3036	28.86 4052	5508			N		132404
3037	28.73 4052	5472			S		131128
3038	28.59 4052	5459			N		125611
3039	28.45 4052	5453			S		124325

 Flight Logs should be FAXED to 859-277-8901 immediately
 after each day's flights with lines and other details noted

 Operator Charles Orsini
 Pilot Brian Butler

 AIRCRAFT Tail Number 2697E
 Sensor Serial Number SN7324

 Page 3 of 11
 Date 4/29/2015

26258 USGS MA/ME		Area Northampton ALS80 150kts				Flight Logs	
FLIGHT LINE	FL MILES	ALTITUDE (feet)	BASE STATION	DATE FLOWN	S/N	FIELD QC	COMMENTS
3014	26.04 4052	5610					
3015	26.14 4052	5623					
3016	26.25 4052	5568					
3017	26.37 4052	5617					
3018	26.43 4052	5630					
3019	26.45 4052	5564					
3020	26.57 4052	5472					
3021	26.68 4052	5472	Curs Hamp	4/12/15	S		173636 175049
3022	26.82 4052	5463			N		172221
3023	27.08 4052	5449			S		170922
3024	27.34 4052	5466			N		165448
3025	27.60 4052	5453			S		164156
3026	30.78 4052	5491			N		162409

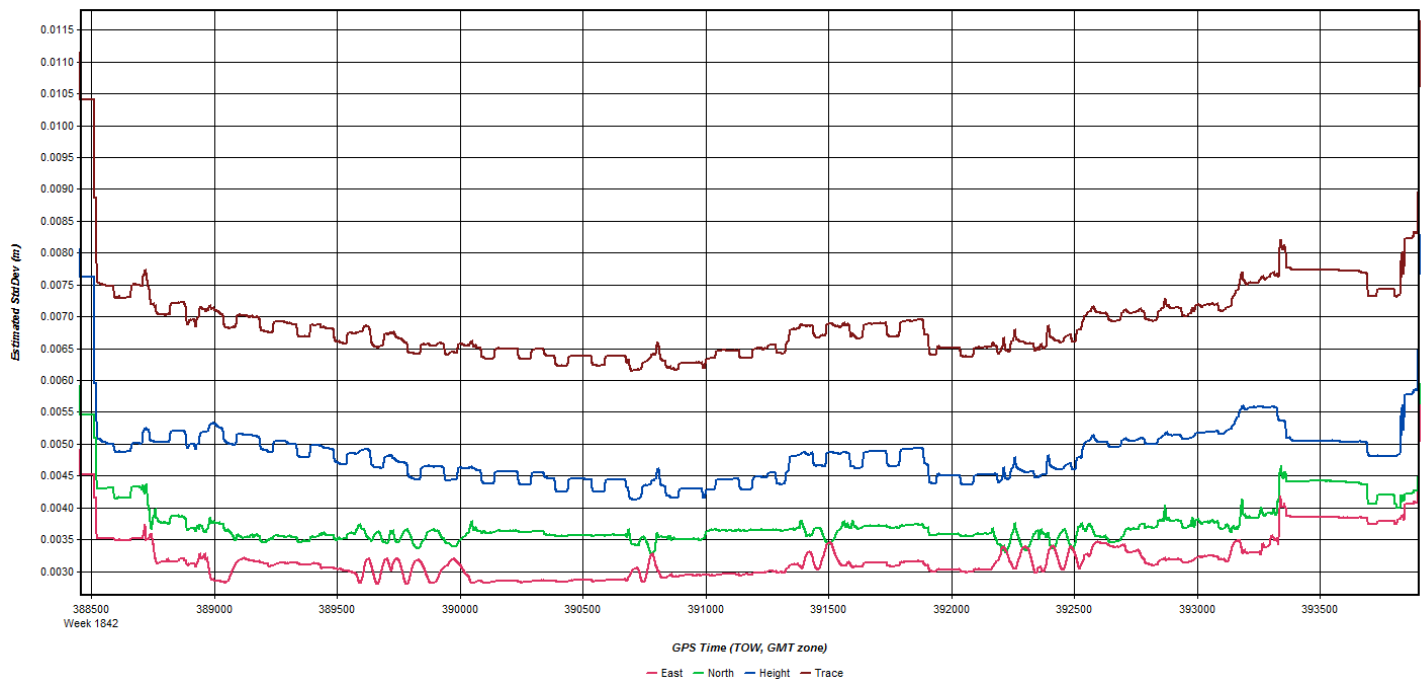
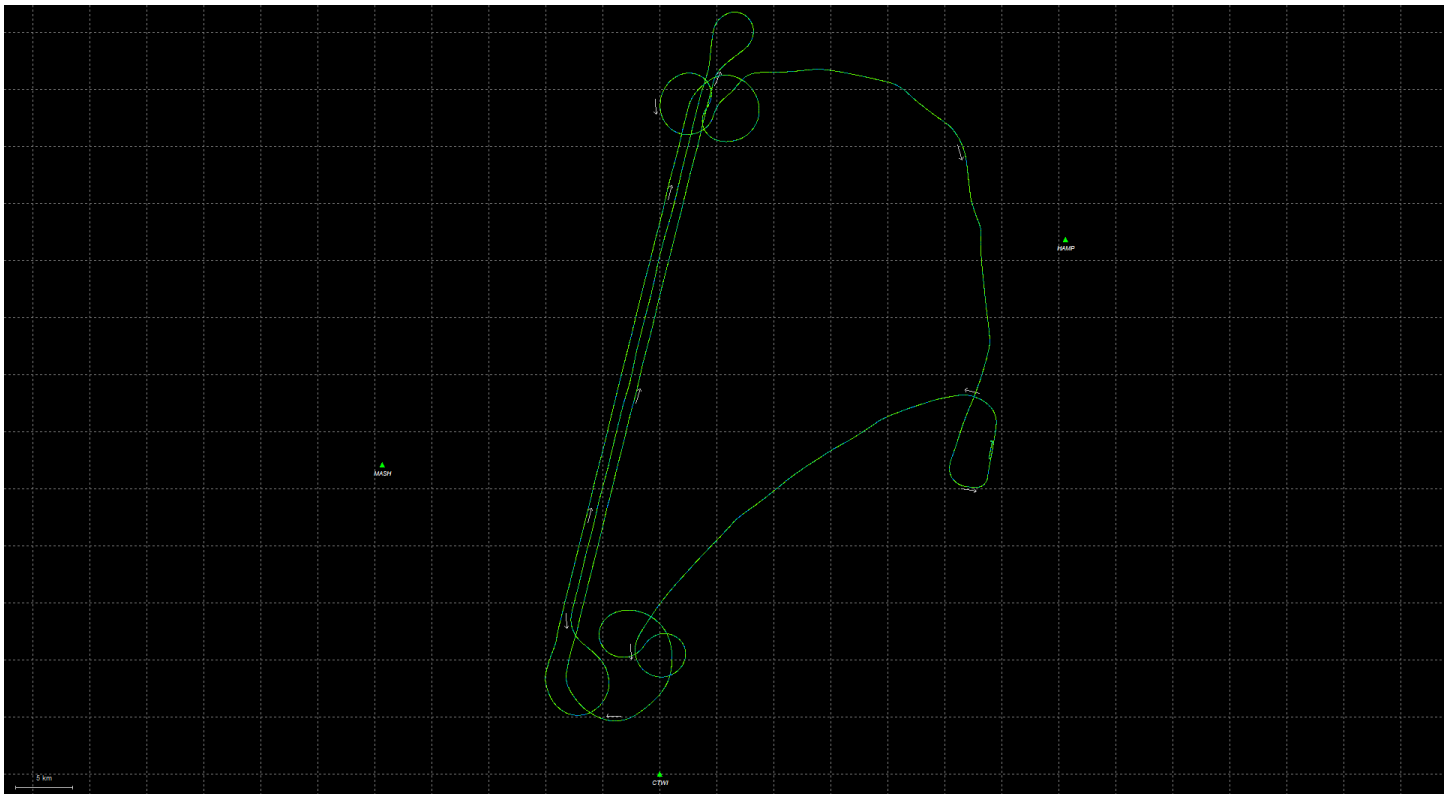
Flight Logs should be FAXED to 859-277-8901 immediately after each day's flights with lines and other details noted
 Operator: Christie Owen AIRCRAFT Tail Number: 269JT
 Pilot: Brian Butler Sensor Serial Number: SN7234
 Date: 4/15/15

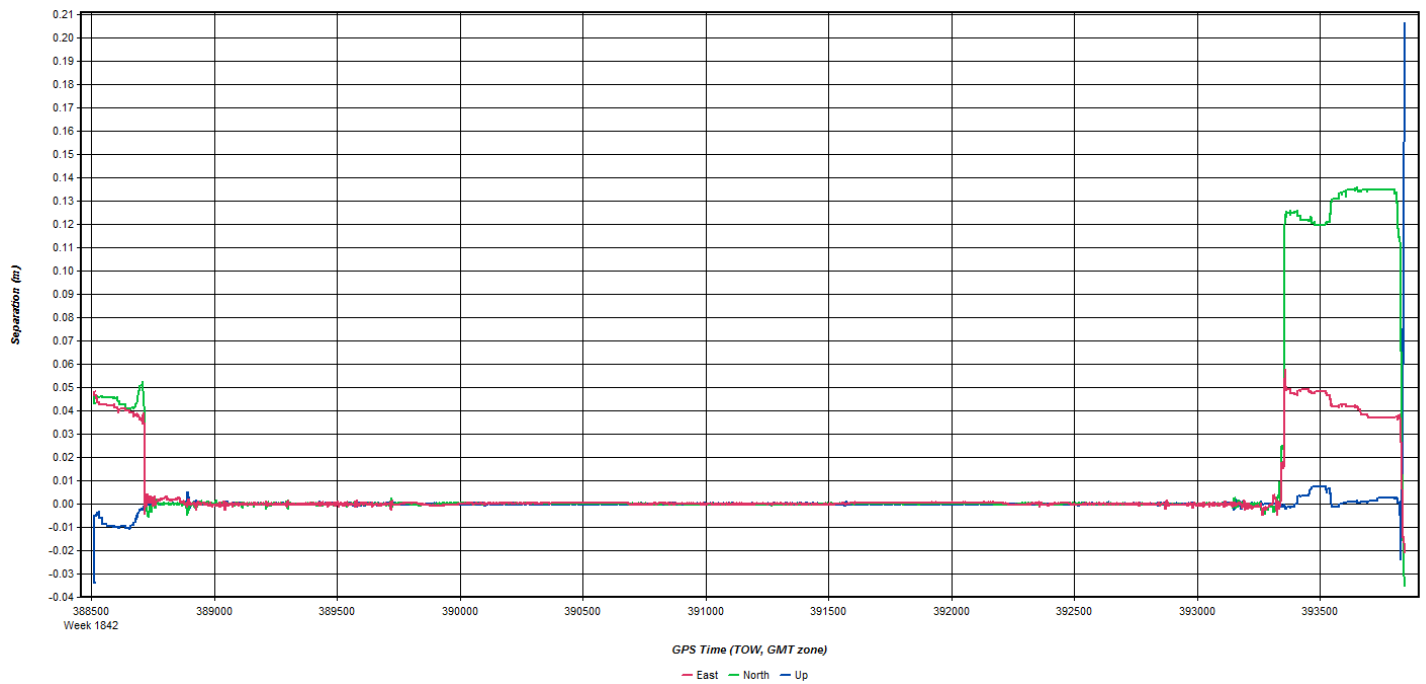
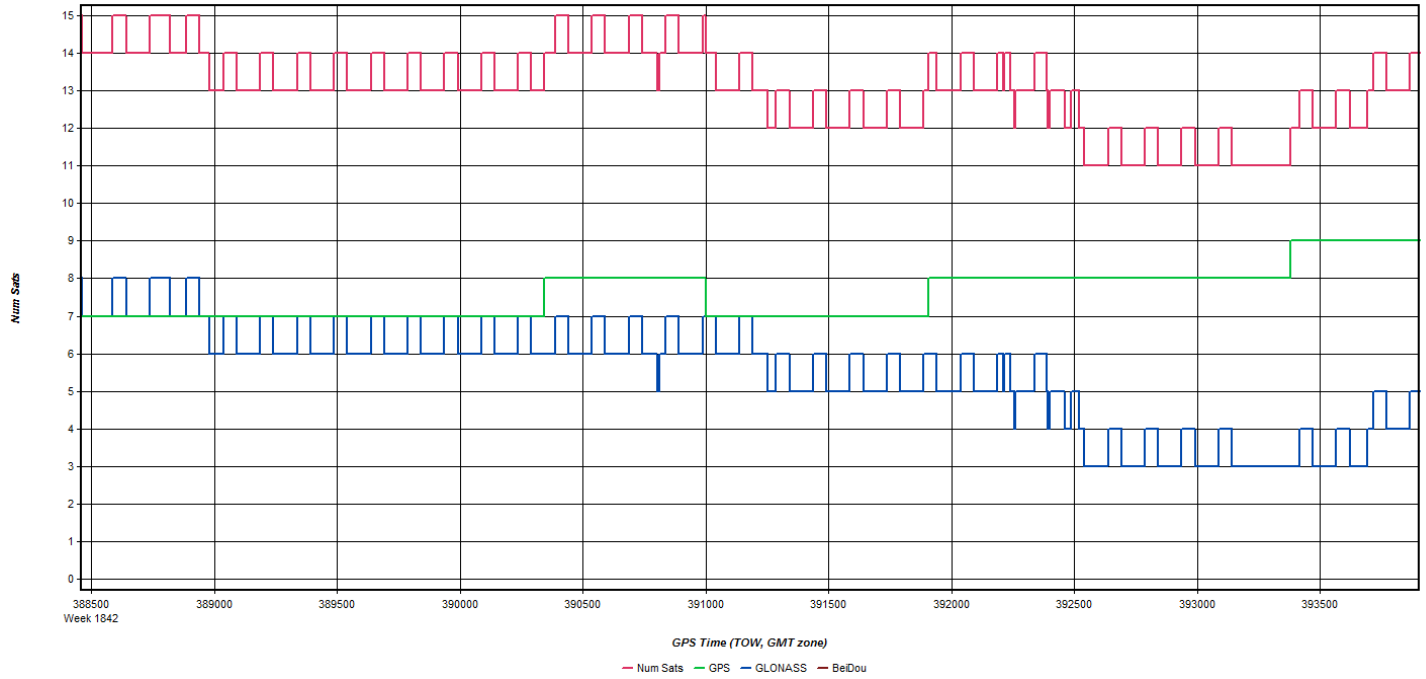
Apr 30, 2015-A (N1107Q, SN7108)

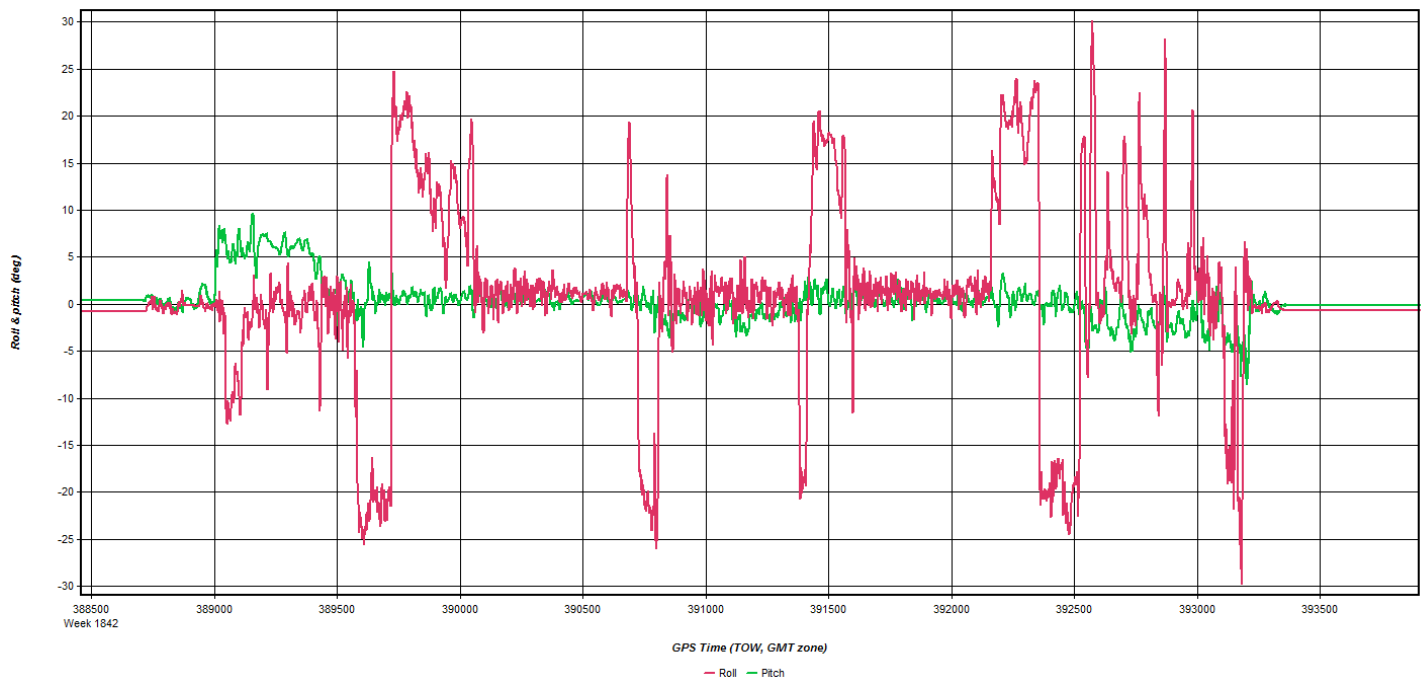
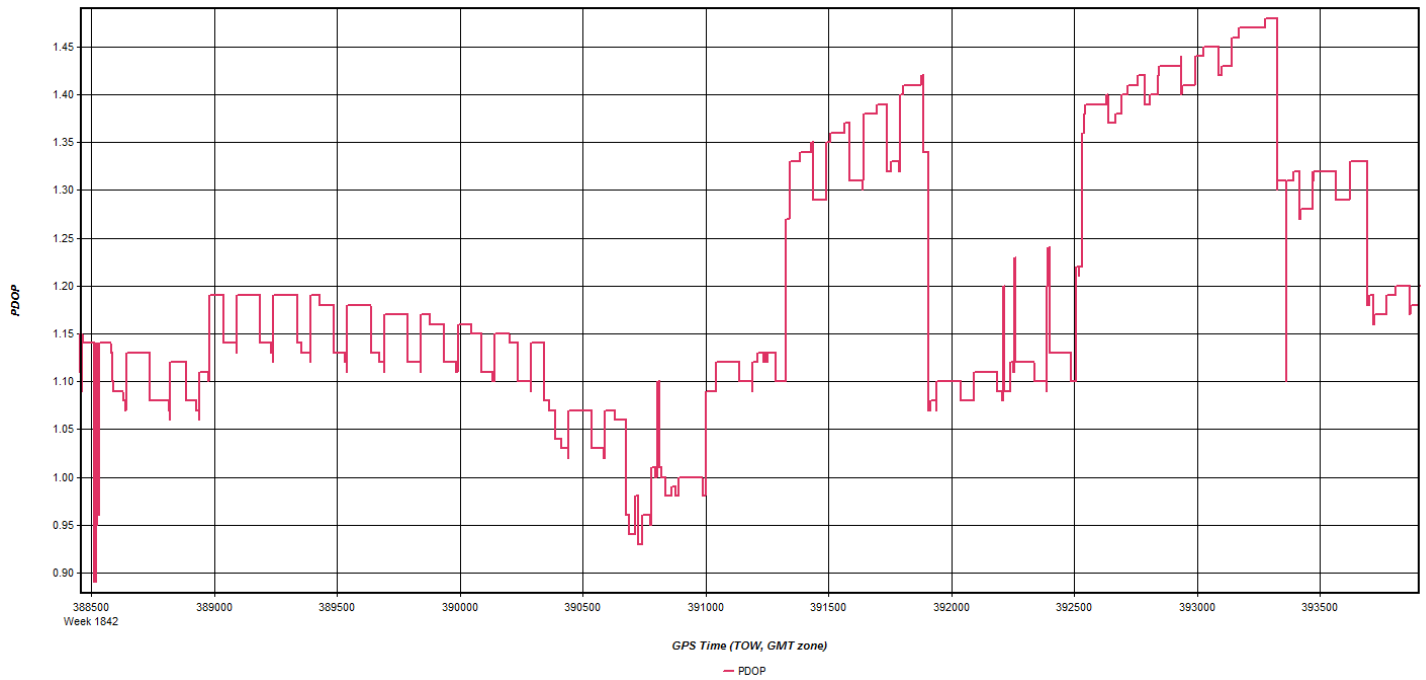
Flight Log

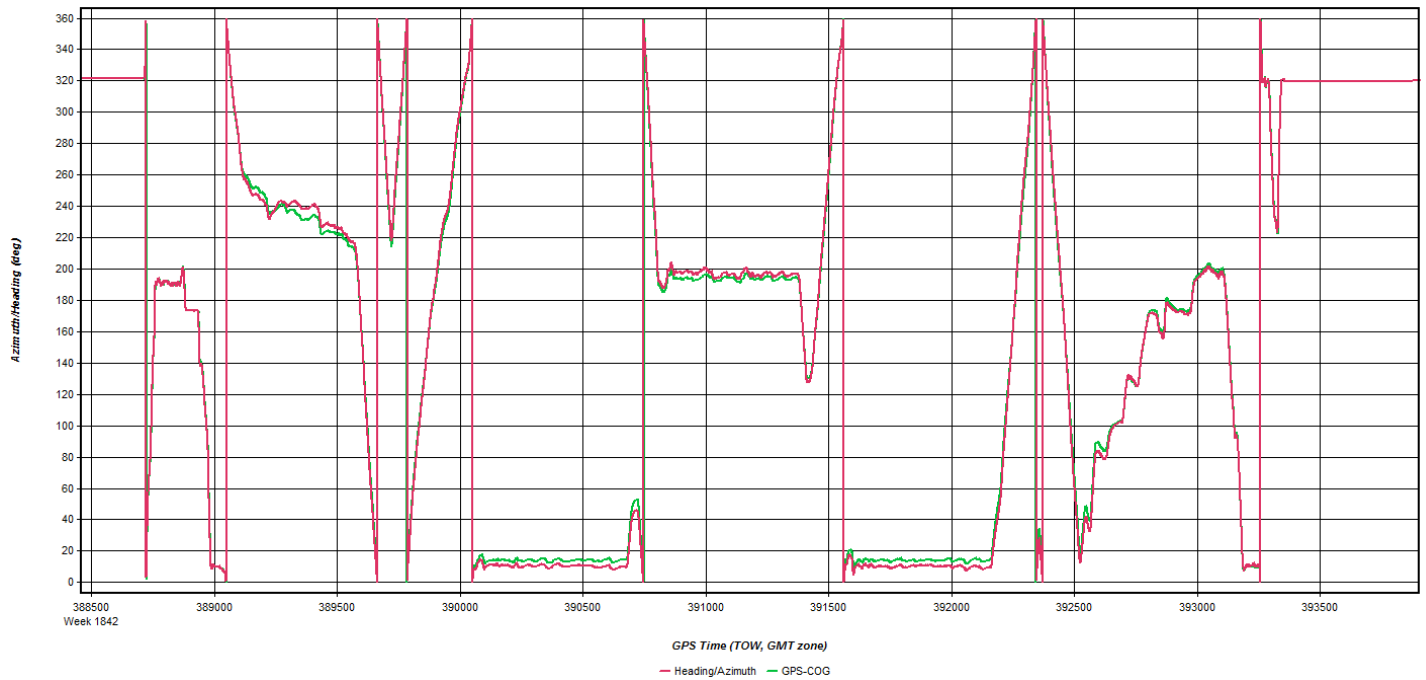
WOOLPERT FLIGHT LOG SHEET #1										
Leica ALS-70		MM/DD/YYYY 4/30/2015		Day of Year 120		Mission Name / Job # Pittsfield South 75500				
Operator Annen		Aircraft N475RC N404CP N7079F N475CP N1107Q <input checked="" type="checkbox"/>		Sensor SH-7177 SH-6157 SH-7108 <input checked="" type="checkbox"/>		Hobbs Start 2689.7		Local Start Time 7:45		Zulu Start Time 11:05
Pilot Larocque						Hobbs End 2691.8		Local End Time 10:00		Zulu End Time 14:00
Passengers		Using or Relying on CORS Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		GPS Base #1 Operator Annen		PID KPSF				
Wind Dir/Speed L/V		Visibility 10		Ceiling clr		Cloud Cover % 0		Temp 5		Dew Point 3
						Pressure 29.78		Haze/Fine/Cloud		Departing ICAO KPSF
										Arriving ICAO KPSF
Scan Angle (FOV) 40		Scan Frequency (Hz) 41		Pulse Rate (kHz) 272		Laser Power % 100		Gain Course/Up Fine/Down		Mode Single <input type="checkbox"/> 2+2 <input type="checkbox"/> Multi <input type="checkbox"/> 4+3 <input type="checkbox"/>
Air Speed 150 Kts		AGL 7,100 Ft		MSL 7,100 Ft		Threshold /		Waveform Mode @ NS		Pre-Trigger Dist. Ft
Line #	Dir.	Line Start Time	Line End Time	Time On Line	SV's	HDOP	PDOP	Line Notes/Comments		
Test	n/a			n/a	n/a	n/a	n/a	GPS Began Logging At:		
		↑ Times entered are Zulu / GMT ↓						Verify S-Turns Before Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
78	S	12:04:00	12:13:00		15	0.6	1.2			
79	N	12:16:00	12:26:00							
80	S	12:28:00	12:38:00							
81	N	12:41:00	12:51:00							
82	S	12:54:00	13:03:00							
83	N	13:06:00	13:16:00							
84	S	13:18:00	13:28:00							
85	N	13:31:00	13:41:00							
		↑ Times entered are Zulu / GMT ↑		0:00:00		Total Time On Line		Verify S-Turns After Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Additional Comments:				System worked well, no issues.				Drive #		

Apr 30, 2015-A (N262AS, SN7178)









Coordinate/Antenna Settings [?] [X]

Master Remote

Base Station
 1: CTWI Name: CTWI Disabled
 File: E:\Proc\26258_USGS_MA_ME_LIDAR\1YMJ\26258_20150430_

Coordinates
 Latitude: North 41 53 51.90745
 Longitude: West 73 04 10.96846
 Ellipsoidal height: 192.097 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
2: HAMP Name: HAMP Disabled
File: E:\Proc\26258_USGS_MA_ME_LiDAR\1YMJ\26258_20150430_

Coordinates
Latitude: North 42 19 03.87277 Compute from PPP
Longitude: West 72 38 22.40329 Enter Grid Values
Ellipsoidal height: 42.355 m Enter MSL Height
Datum: NAD83(2011) 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 Measured to
ARP ARP
L1 Phase Centre L1 Phase Centre
ARP to L1 offset: 0.067 m
Applied height: 0.067 m Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
3: MASH Name: MASH Disabled
File: E:\Proc\26258_USGS_MA_ME_LiDAR\1YMJ\26258_20150430_

Coordinates
Latitude: North 42 08 25.75395 Compute from PPP
Longitude: West 73 21 51.06343 Enter Grid Values
Ellipsoidal height: 175.591 m Enter MSL Height
Datum: NAD83(2011) Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: LEIAX1203+GNSS, NONE View STA File
Antenna profile: LEIAX1203+GNSS Info
Measured height: 0.000 m Measured to
ARP ARP
L1 Phase Centre L1 Phase Centre
ARP to L1 offset: 0.058 m
Applied height: 0.058 m Compute From Slant

OK Cancel

Base Station Log



Station Occupation Report For Airborne GPS

Project: USGS MA-ME LIDAR

Location: KBAF

Project Number: 26258

Completed by: M AUST

Date: 4-30-15

Receiver: TRIMBLE R7

Receiver Type: _____

Antenna Type: _____

Station ID: SET POINT

Start -- H.I. (m): 2m

End -- H.I. (m): 2m

H.I. (ft): _____

Start Time: 7:40A

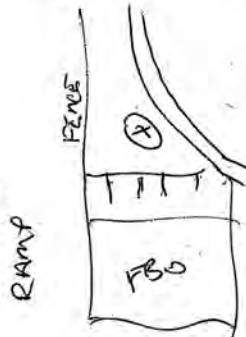
End Time: 9:40A

Time Zone: EST

Operator: M AUST



Comments: SET POINT AT KBAF



May 2, 2015-A (N1107Q, 7108)

Flight Log

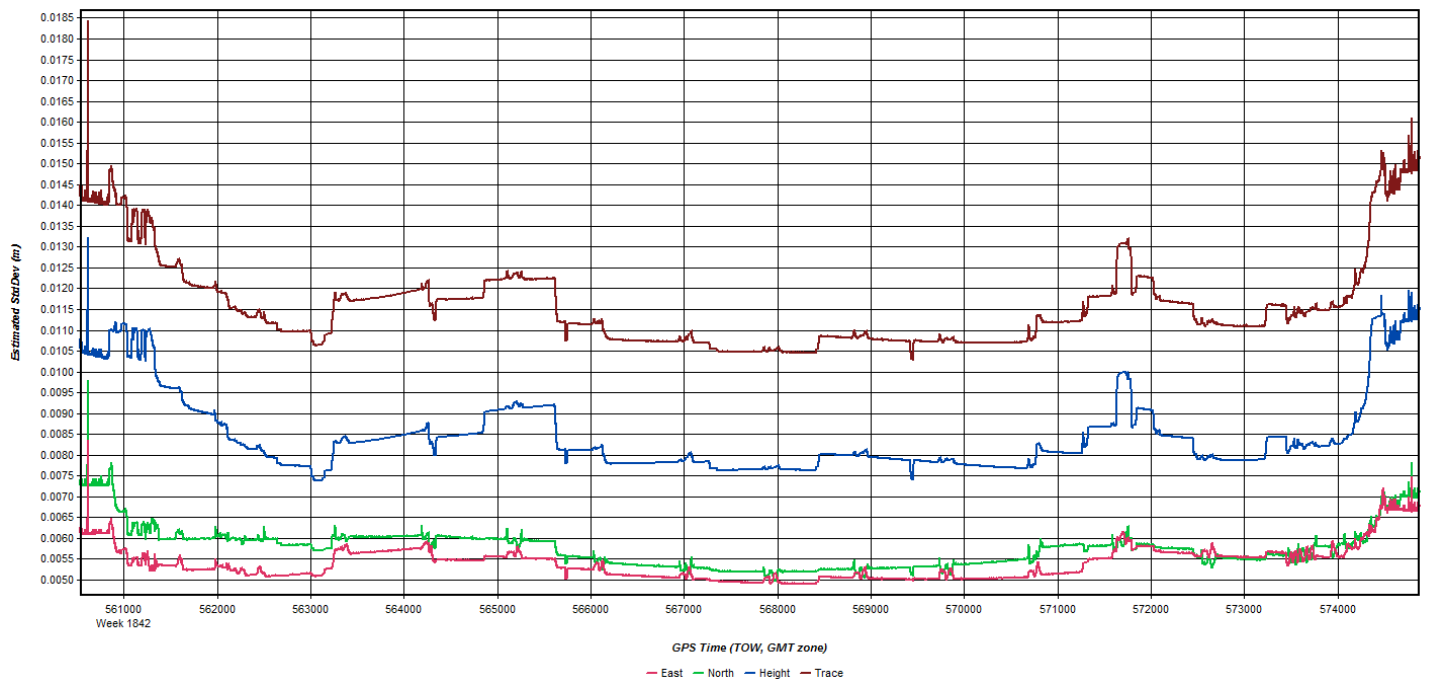
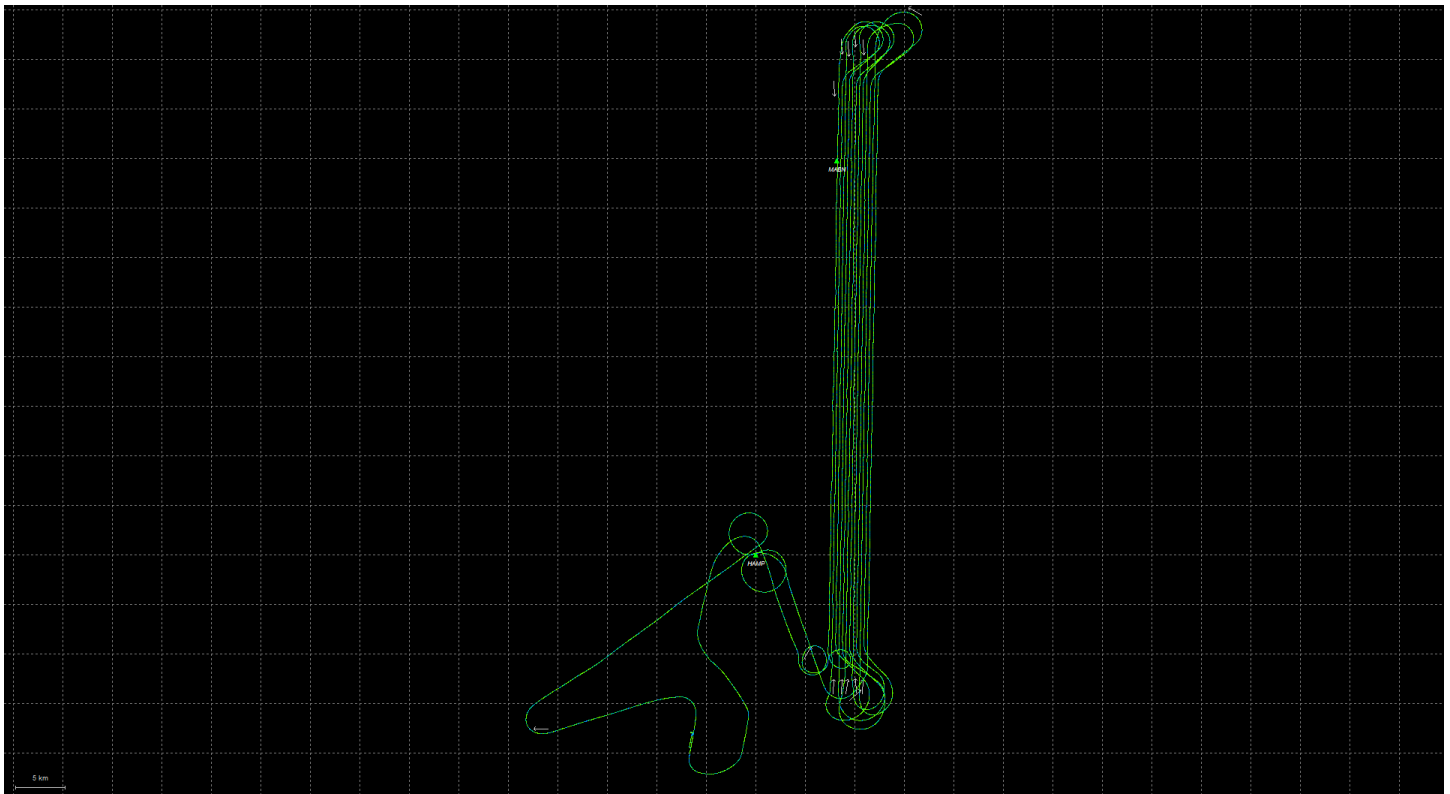
WOOLPERT FLIGHT LOG SHEET #1													
Leica ALS-70			MM/DD/YYYY		Day of Year		Mission Name / Job #						
			5/2/2015		122		Pittsfield North 75500						
Operator Annen			Aircraft		Sensor		Hobbs Start		Local Start Time		Zulu Start Time		
Pilot Larocque			N475RC N404CP N7079F N475CP N1107Q		SH-7177 SH-6157 SH-7108		2691.8		9:00		13:00		
Passengers			Using or Relying on CORS		GPS Base #1		Operator		Annen		PID		
			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		GPS Base #2		Operator				PID		
Wind Dir/Speed		Visibility	Ceiling	Cloud Cover %	Temp	Dew Point	Pressure		Haze/Fine/Cloud		Departing ICAO		
L/V		10	7K	50	12	5	29.97				KPSF		
Scan Angle (FOV)		Scan Frequency (Hz)		Pulse Rate (kHz)		Laser Power %		Gain		Mode			
40		41		272		100		Course/Up Fine/Down		Single <input type="checkbox"/> 2+2 <input type="checkbox"/> Multi <input type="checkbox"/> 4+3 <input type="checkbox"/>			
Air Speed		AGL		MSL		Threshold		Waveform Mode		Pre-Trigger Dist.			
150 Kts		8,000 Ft		8,000 Ft		/		@ NS		Ft			
Line #	Dir.	Line Start Time	Line End Time	Time On Line	SV's	HDOP	PDOP	Line Notes/Comments					
Test	n/a			n/a	n/a	n/a	n/a	GPS Began Logging At:					
↑ Times entered are Zulu / GMT ↓								Verify S-Turns Before Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
55	N	13:54:00	13:56:00		17	0.6	1.4						
54	S	13:59:00	14:01:00										
53	N	14:05:00	14:07:00										
52	S	14:10:00	14:12:00										
51	N	14:16:00	14:18:00										
50	S	14:24:00	17:59:00	xxx				Clouds, will refly entire line.					
↑ Times entered are Zulu / GMT ↑								0:00:00		Total Time On Line		Verify S-Turns After Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Additional Comments:										Drive #			
System worked well, no issues.													

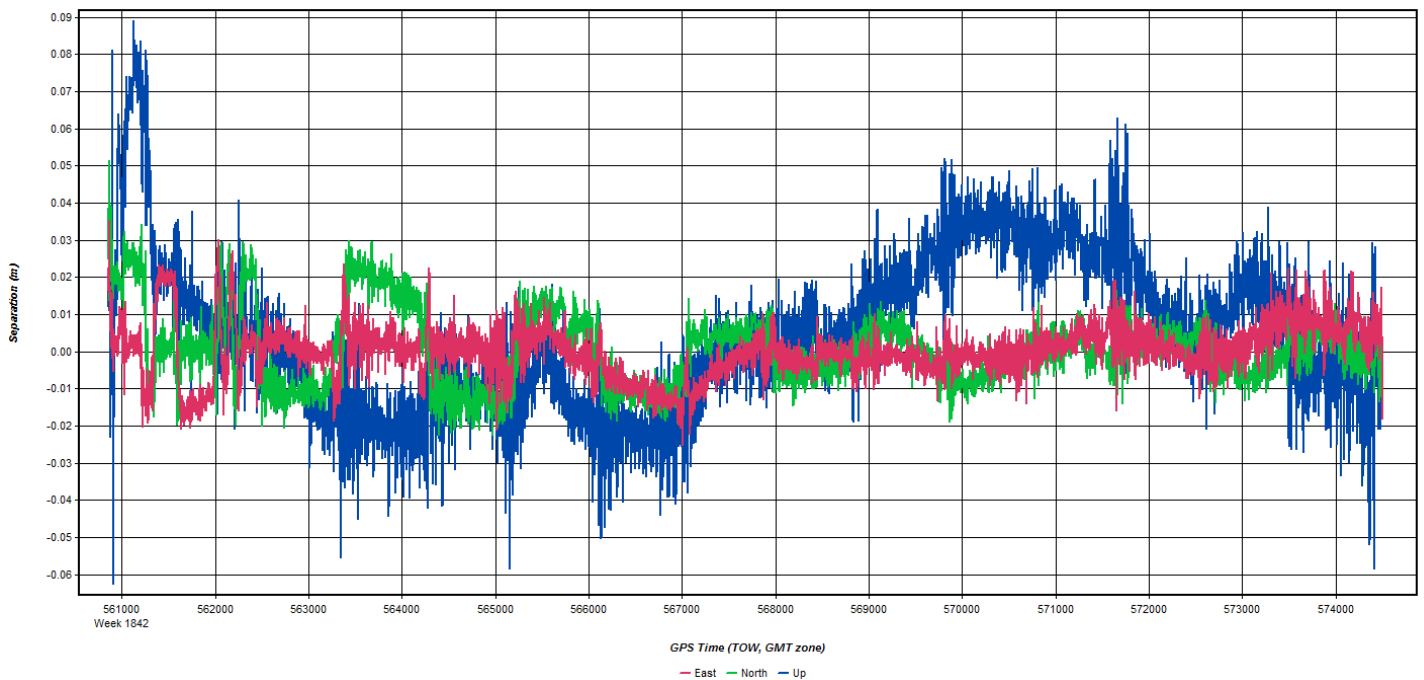
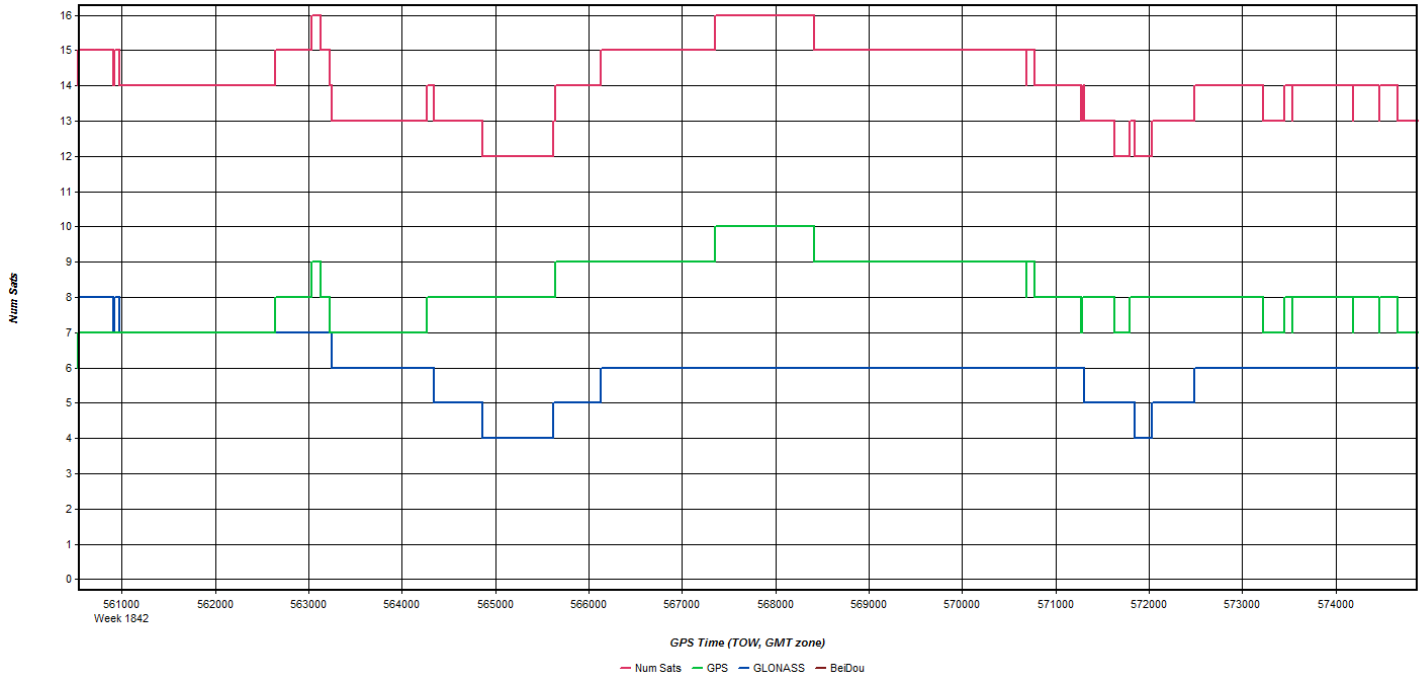
May 2, 2015-B (N1107Q, 7108)

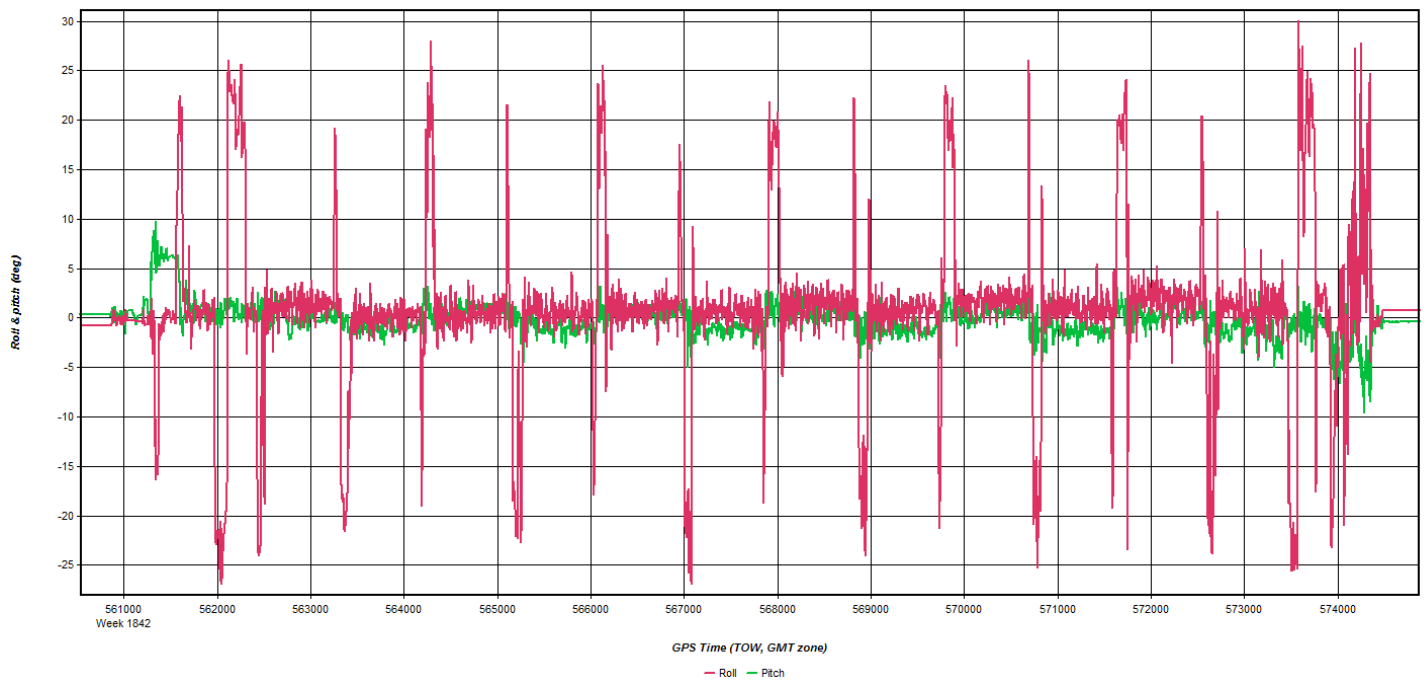
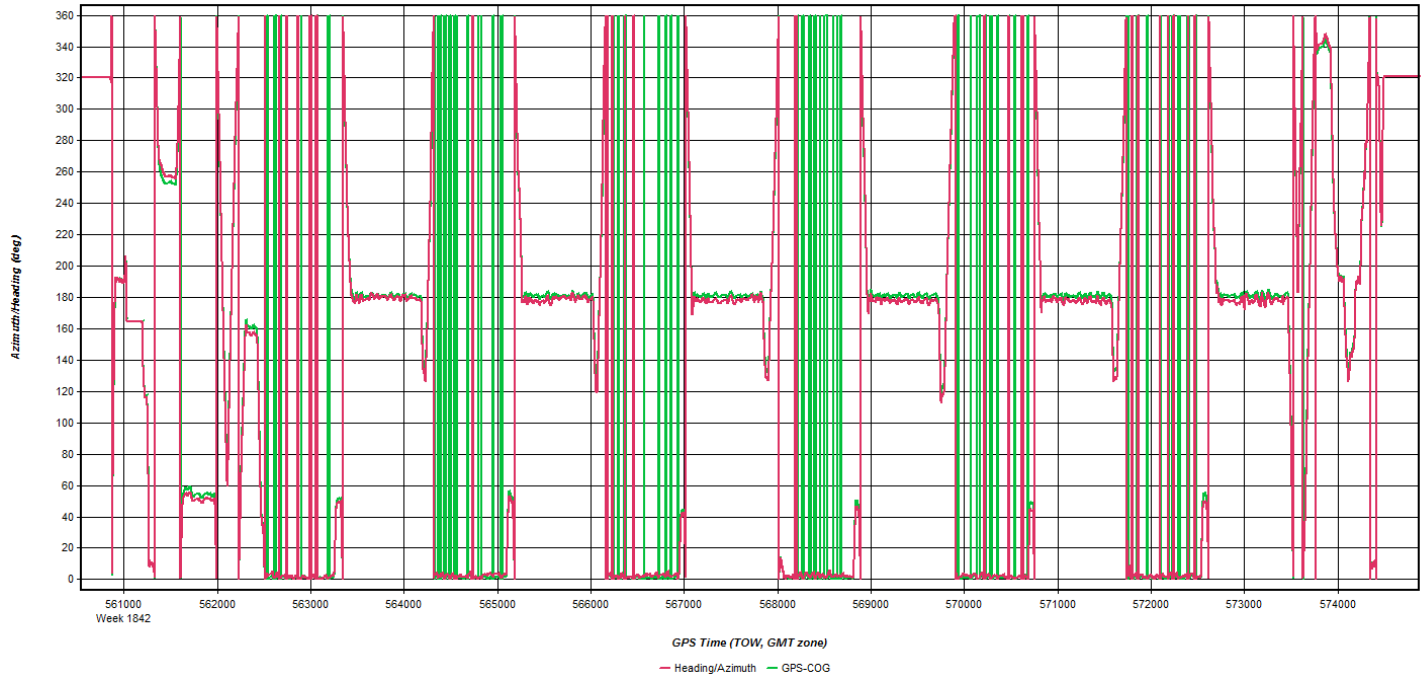
Flight Log

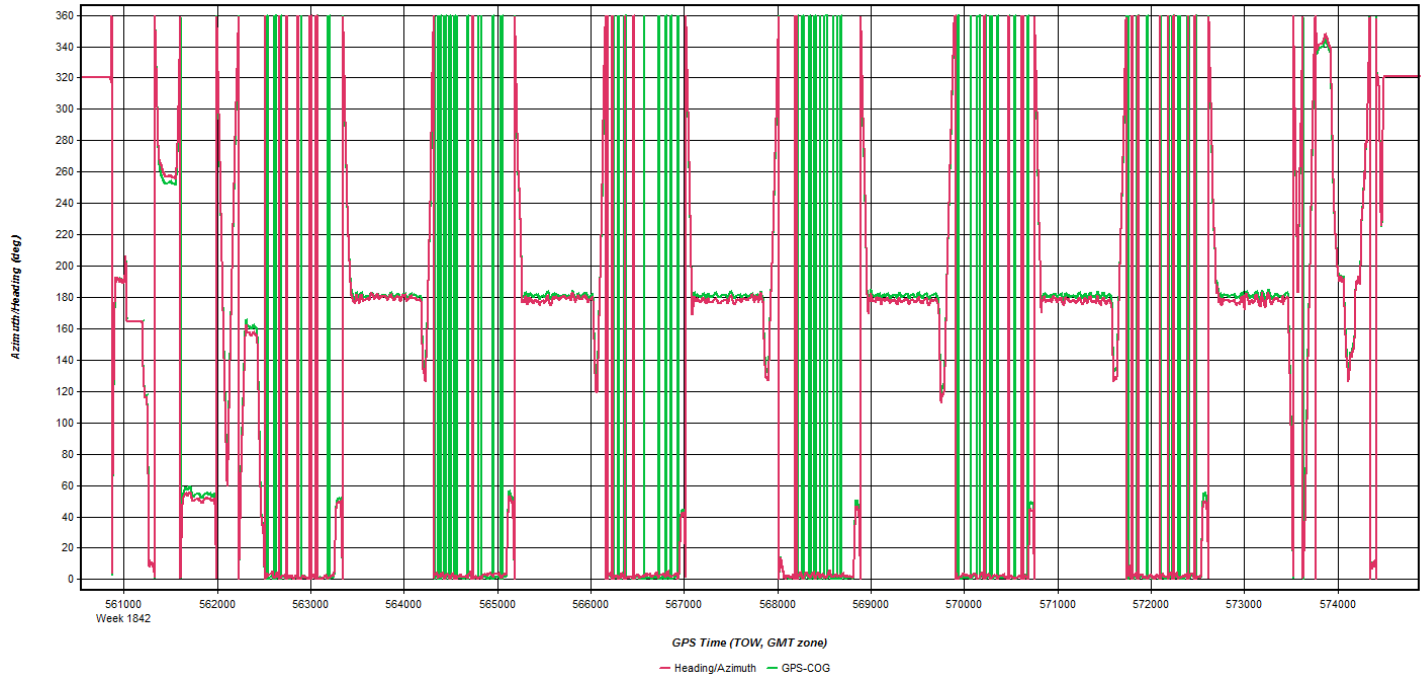
WOOLPERT FLIGHT LOG SHEET #1												
Leica ALS-70		MM/DD/YYYY		Day of Year		Mission Name / Job #						
		5/2/2015		122		Pittsfield South_North 75500						
Operator		Aircraft		Sensor		Hobbs Start		Local Start Time		Zulu Start Time		
Annen		N475RC N404CP N7079F N475CP N1107Q		SH-7177 SH_6157 SH-7108		2692.7		17:15		21:15		
Pilot						Hobbs End		Local End Time		Zulu End Time		
Larocque						2696.7		21:40		1:40		
Passengers		Using or Relying on CORS				GPS Base #1		Operator		PID		
		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						Annen		KPSF		
						GPS Base #2		Operator		PID		
Wind Dir/Speed	Visibility	Ceiling	Cloud Cover %	Temp	Dew Point	Pressure	Haze/Fine/Cloud		Departing ICAO			
340/6	10	8k	80	21	1	29.89			KPSF			
Scan Angle (FOV)			Scan Frequency (Hz)		Pulse Rate (kHz)		Laser Power %		Gain		Mode	
40			41		272		100		Course/Up Fine/Down		Single <input type="checkbox"/> 2+2 <input type="checkbox"/> Multi <input type="checkbox"/> 4+3 <input type="checkbox"/>	
Air Speed		AGL		MSL		Threshold		Waveform Mode		Pre-Trigger Dist.		
150 Kts		7,100 Ft		7,100 Ft		/		@ NS		Ft		
Line #	Dir.	Line Start Time	Line End Time	Time On Line	SV's	HDOP	PDOP	Line Notes/Comments				
Test	n/a			n/a	n/a	n/a	n/a	GPS Began Logging At:				
↑ Times entered are Zulu / GMT ↓								Verify S-Turns Before Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
81R	S	21:38:00	21:41:00					Re-flight 8FSE-15FSE				
86	N	21:46:00	21:56:00									
87	S	21:58:00	22:08:00									
88	N	22:11:00	22:21:00									
89	S	22:23:00	22:32:00									
90	N	22:35:00	22:45:00									
91	S	22:48:00	22:57:00									
92	N	23:00:00	23:10:00									
93	S	23:13:00	23:22:00									
94	N	23:25:00	23:35:00									
49	N	23:38:00	23:40:00					Moved to the NORTH side				
48	S	23:43:00	23:46:00									
47	N	23:49:00	23:52:00									
46	S	23:56:00	23:59:00									
44	N	0:02:00	0:06:00									
45	N	0:09:00	0:10:00									
43	S	0:13:00	0:14:00									
42	S	0:19:00	0:27:00									
41	N	0:30:00	0:38:00									
40	S	0:45:00	0:53:00									
39	N	0:56:00	1:05:00									
38	S	1:08:00	1:18:00									
↑ Times entered are Zulu / GMT ↑				0:00:00		Total Time On Line		Verify S-Turns After Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Additional Comments:						System worked well, no issues.			Drive #			

May 2, 2015-A (N262AS, SN7178)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: HAMP Name: HAMP Disabled
 File: E:\Proc\26258_USGS_MA_ME_LiDAR\Z8H1\26258_20150502_

Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
2: MABN Name: MABN Disabled
File: E:\Proc\26258_USGS_MA_ME_LiDAR\Z8H\26258_20150502_

Coordinates
Latitude: North 42 40 11.99113 Compute from PPP
Longitude: West 72 32 28.64375 Enter Grid Values
Ellipsoidal height: 94.890 m Enter MSL Height
Datum: NAD83(2011) Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: LEIAX1203+GNSS, NONE View STA File
Antenna profile: LEIAX1203+GNSS Info
Measured height: 0.000 m
ARP to L1 offset: 0.058 m
Applied height: 0.058 m
Measured to:
 ARP
 L1 Phase Centre
Compute From Slant

OK Cancel

Flight Log

Scanned by CamScanner

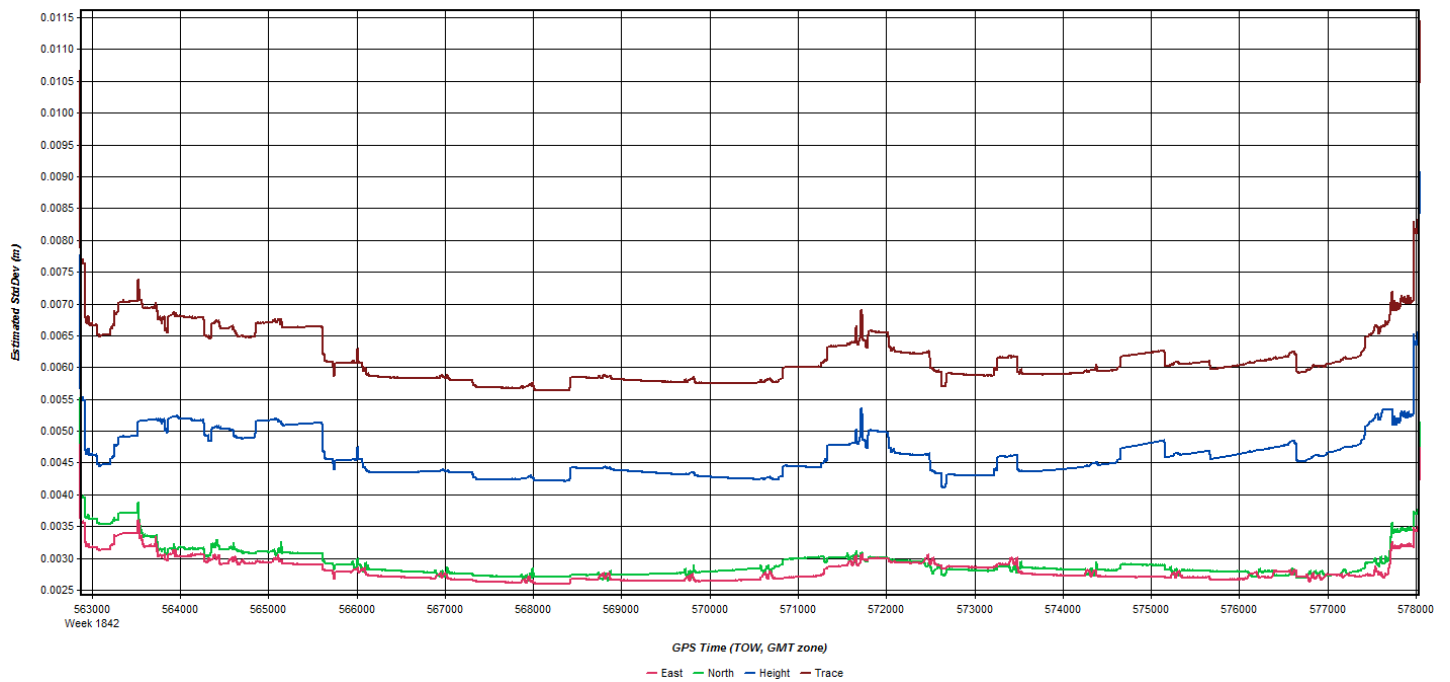
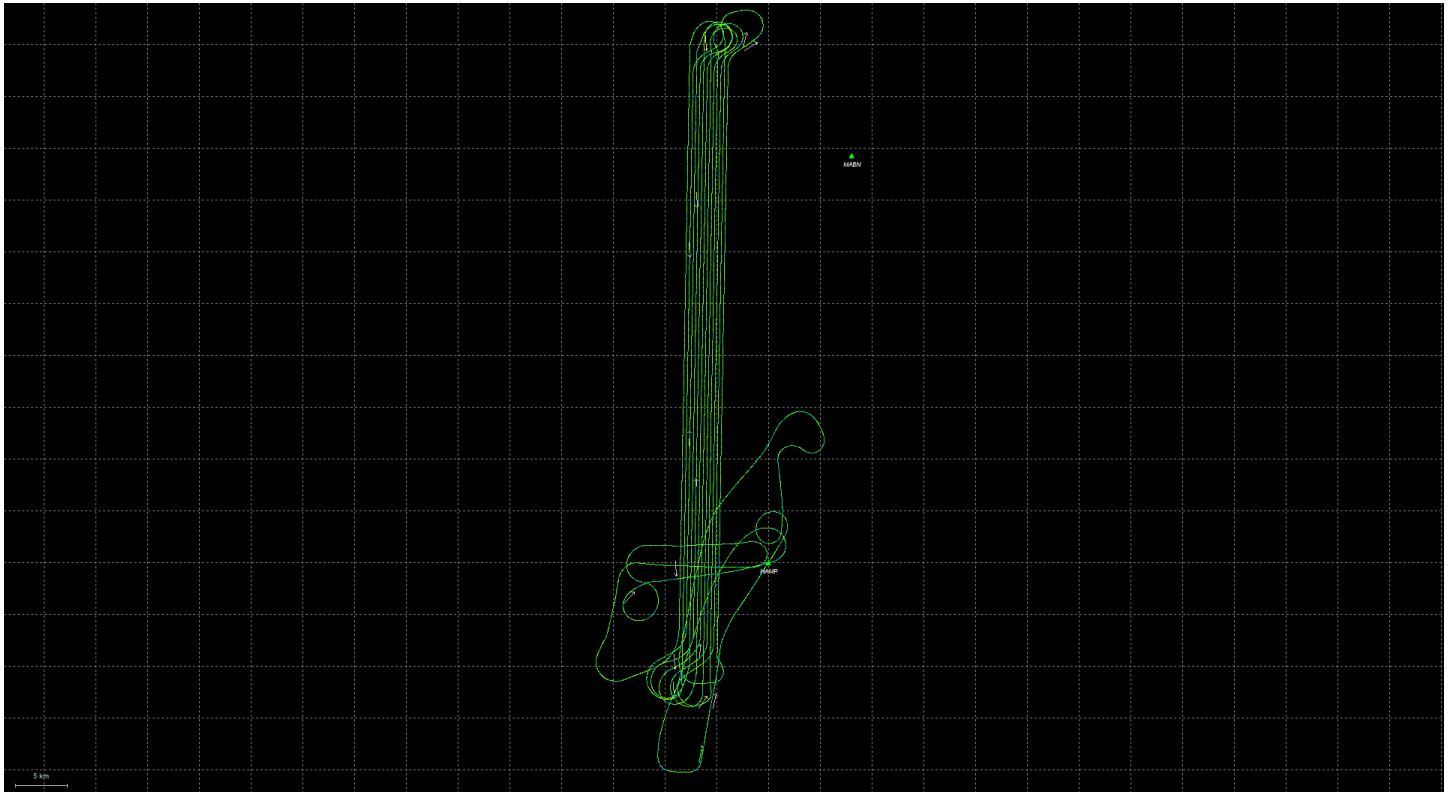
OPERATORS FLIGHT LOG

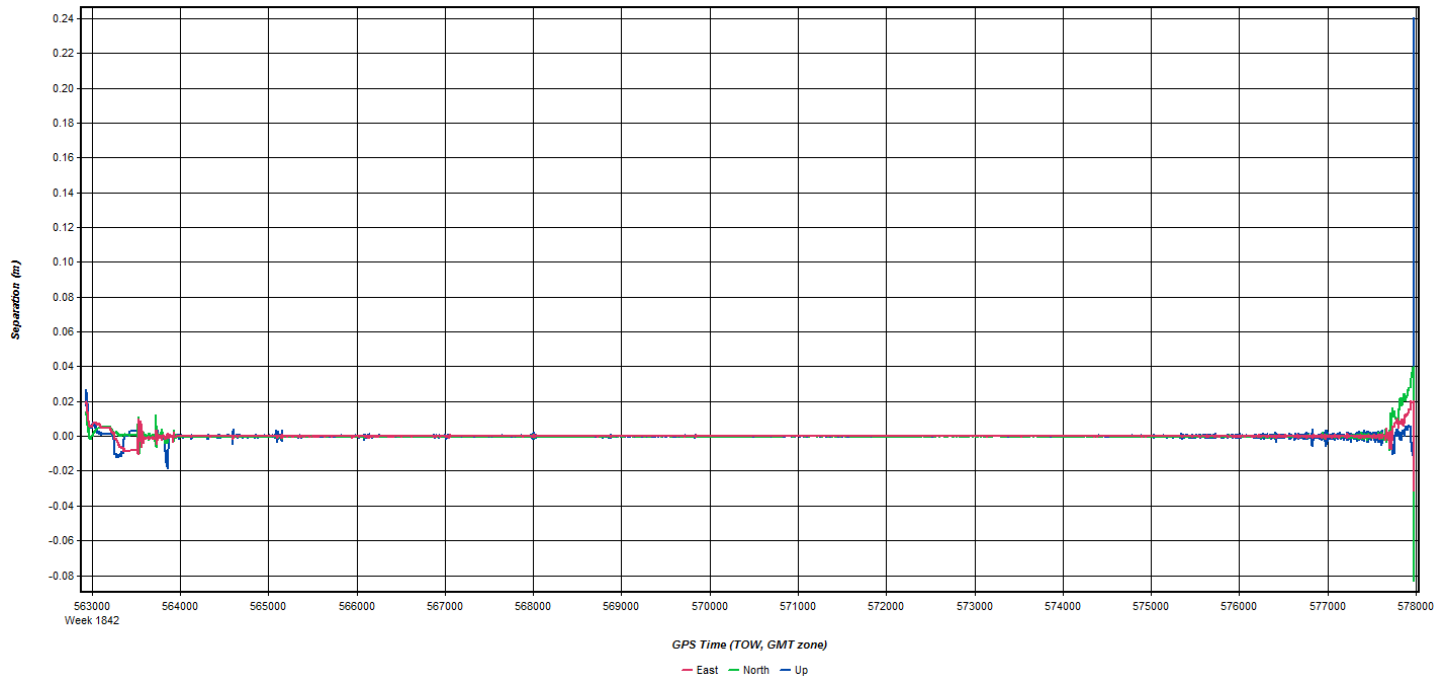
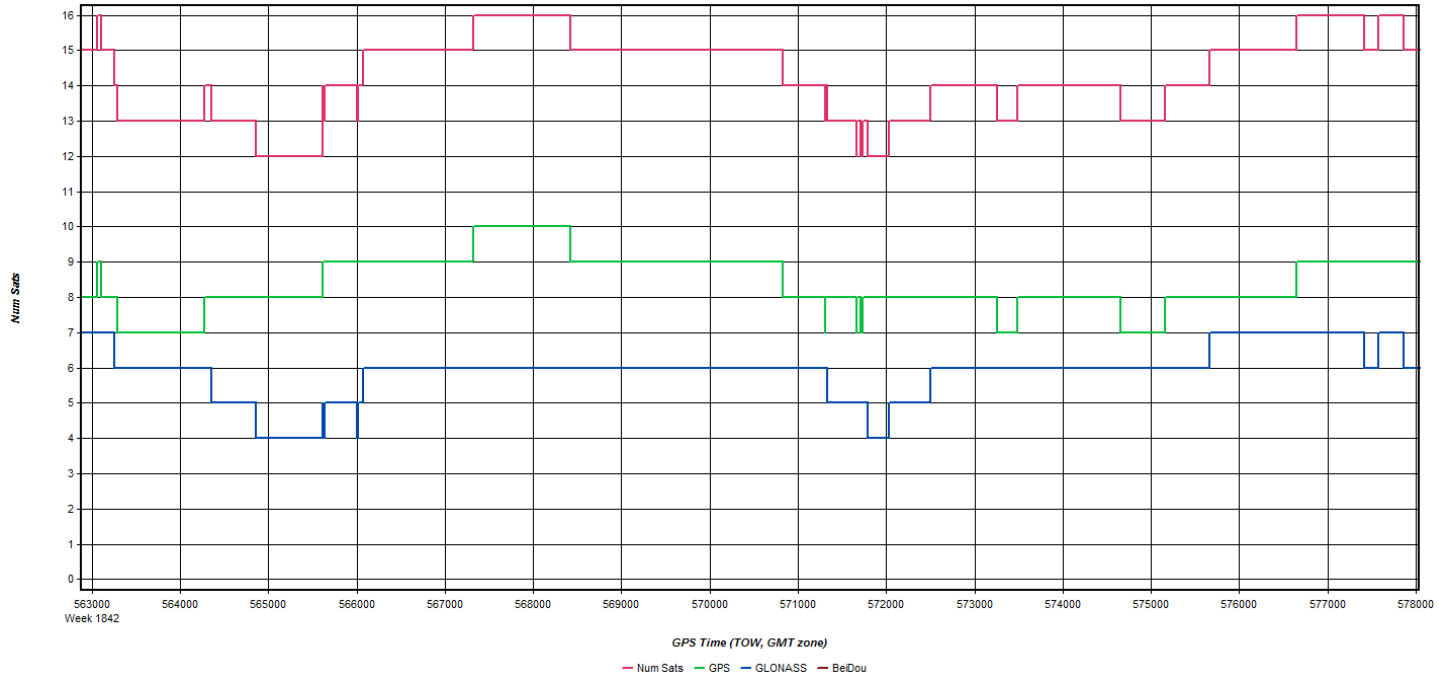
MISSION: S 150502.113936 DATE: 5-2-15 AIRCRAFT: 262AS
 PILOT: B PHILLIPS OPERATOR: M ALST LEICA LS-70

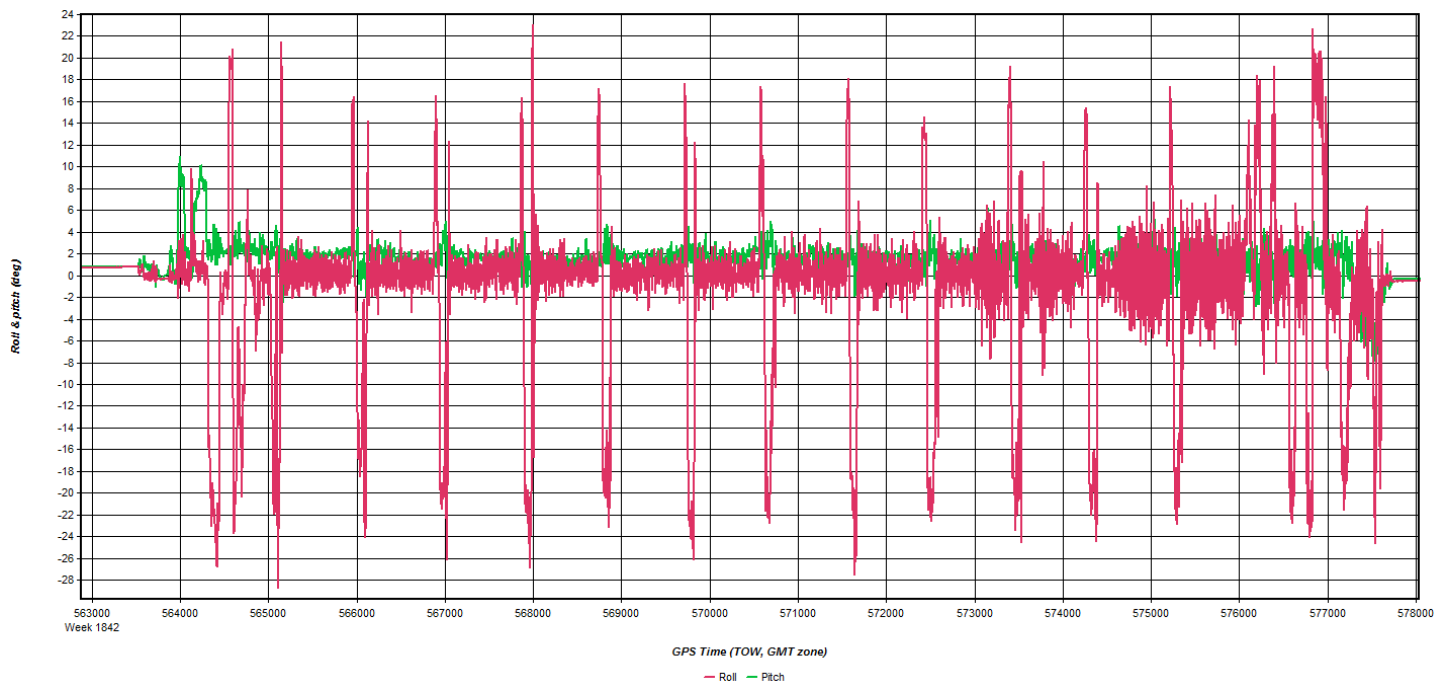
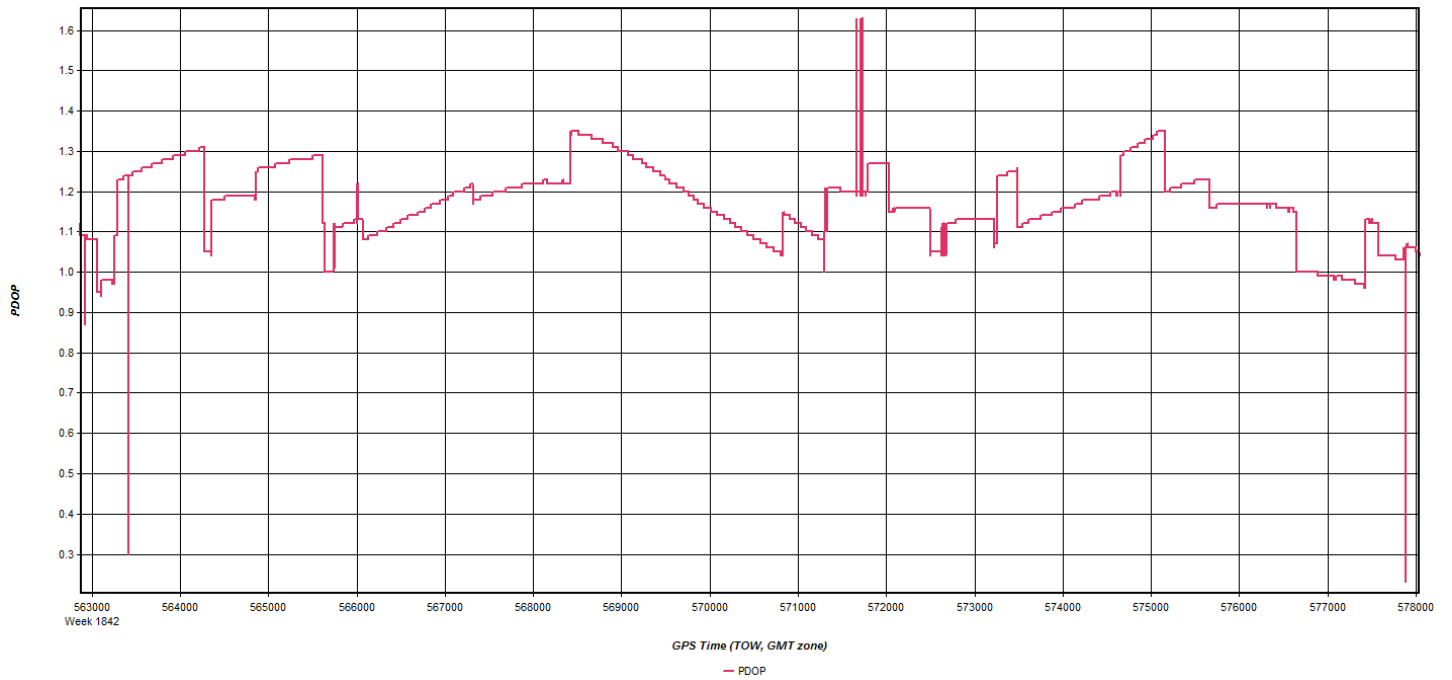
PROJECT NUMBER	LINE NO. & Hdg	GND SPEED (FTS)	FREQ Hz	SCAN ANGLE	PRF KHz	FIXED GAIN	ALT (m)	TIME		REMARKS
								START	STOP	
4565 LIDAR			53	40	360	255				
NORTHARTON	3123 1°	150					4925	1215	1227	
21258	3122 181°	154					4960	1231	1242	
	3121 1°	153					4950	1246	1257	
	3120 181°	148					4945	1301	1313	
	3119 1°	146					5020	1316	1328	
	3118 181°	150					4940	1332	1343	
	3117 1°	152					4950	1348	1400	
	3116 181°	160					4950	1403	1415	
	3115 1°	151					4950	1419	1431	
	3114 181°	148					4905	1434	1446	
	3113 1°	153					4880	1449	1501	
	3112 181°	147					4920	1505	1517	CLOUDS SOUTH END - TRIED TO GET BELOW IT - CLOUDS DIRT
STATUS	TOTAL LINES	FLC	MIN	LEFT	AIRCRAFT		STATIC	START	STOP	NOTES: ALSO USED HAMP CORES
					SITE	FERRY	5 min	7:30	11:40	
					4565	N/A	W/ CLOUDS FLIGHT ABOVE US			

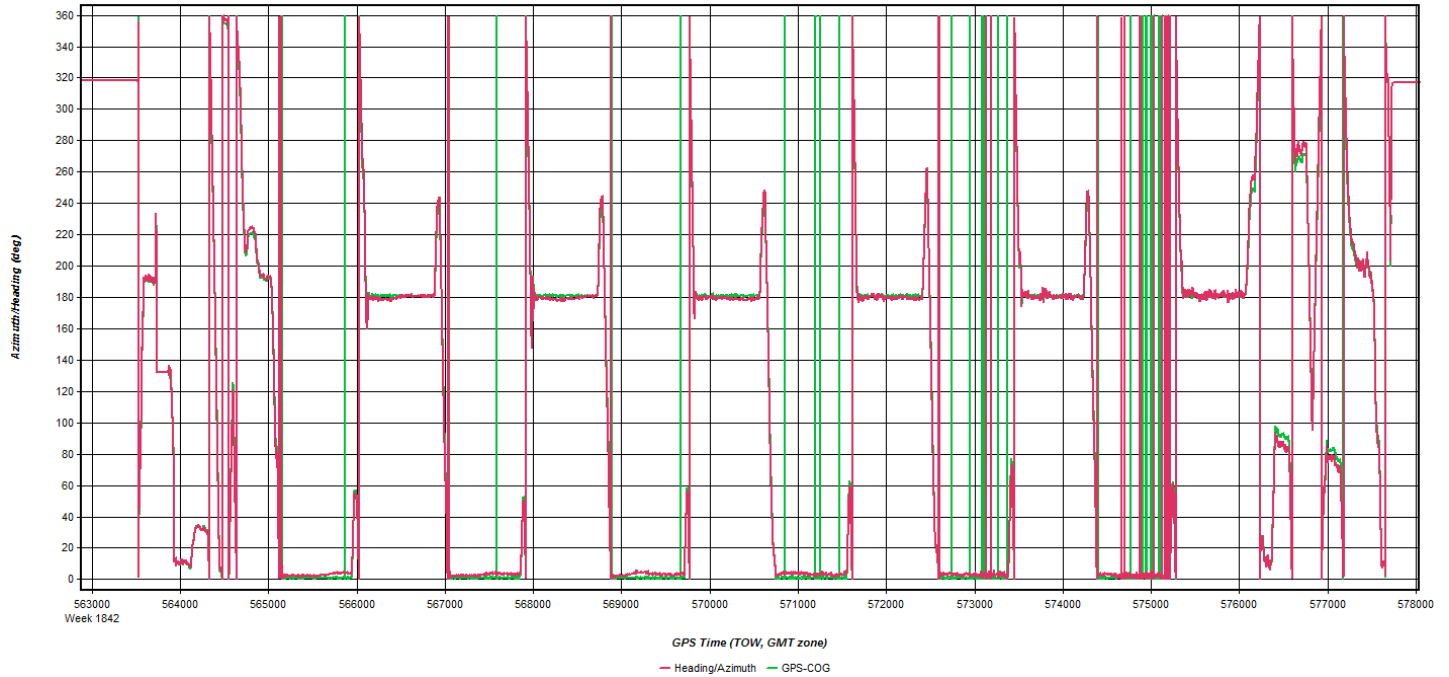
AERO-METRIC, INC. 146216 Pkwy. 100 Drive Shrewsbury Falls, VT 05005 PHONE: 802-487-2655 FAX: 888-253-6695 E-Mail: airmetric@aerometric.com

May 2, 2015-A (N22GE, SN8239)









Coordinate/Antenna Settings [?] [X]

Master Remote

Base Station
 1: HAMP Name: HAMP Disabled
 File: E:\Proc\26258_USGS_MA_ME_LiDAR\T1FB\26258_USGS_MA

Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
2: MABN Name: MABN Disabled
File: E:\Proc\26258_USGS_MA_ME_LiDAR\T1FB\26258_USGS_MA

Coordinates
Latitude: North 42 40 11.99113
Longitude: West 72 32 28.64375
Ellipsoidal height: 94.890 m
Datum: NAD83(2011)

Antenna Height
From station file: LEIAX1203+GNSS, NONE
Antenna profile: LEIAX1203+GNSS
Measured height: 0.000 m
ARP to L1 offset: 0.058 m
Applied height: 0.058 m
Measured to:
 ARP
 L1 Phase Centre

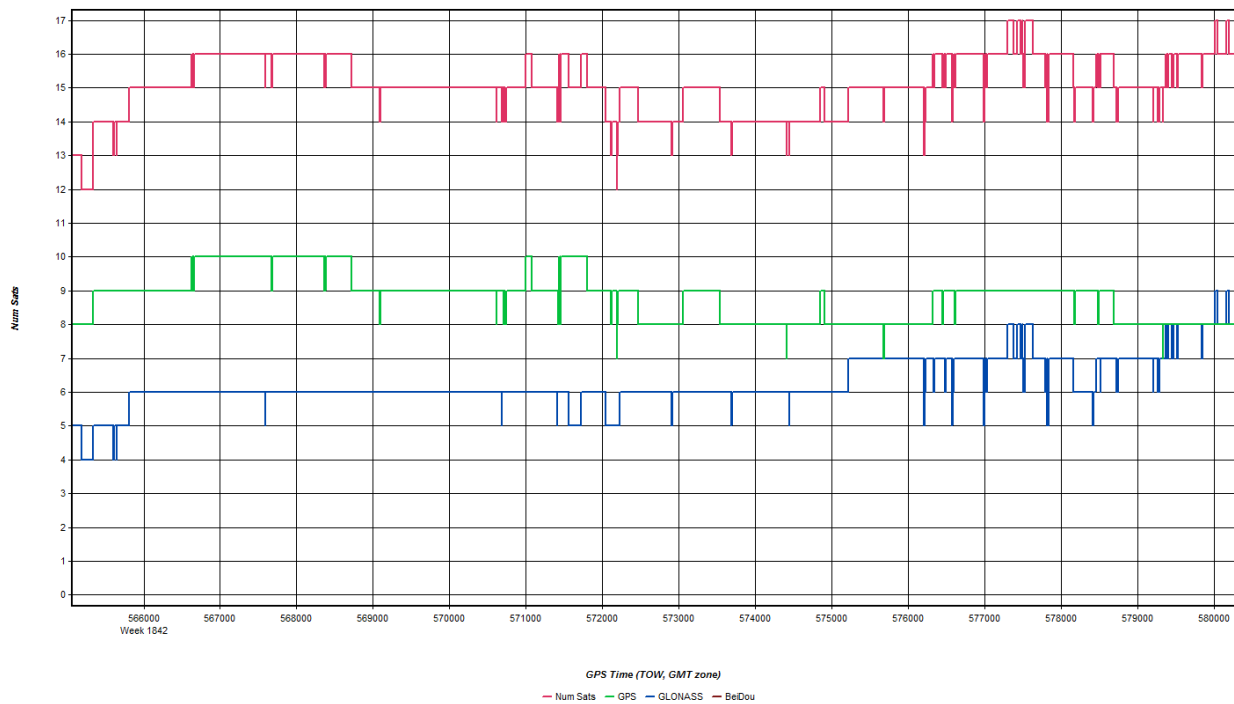
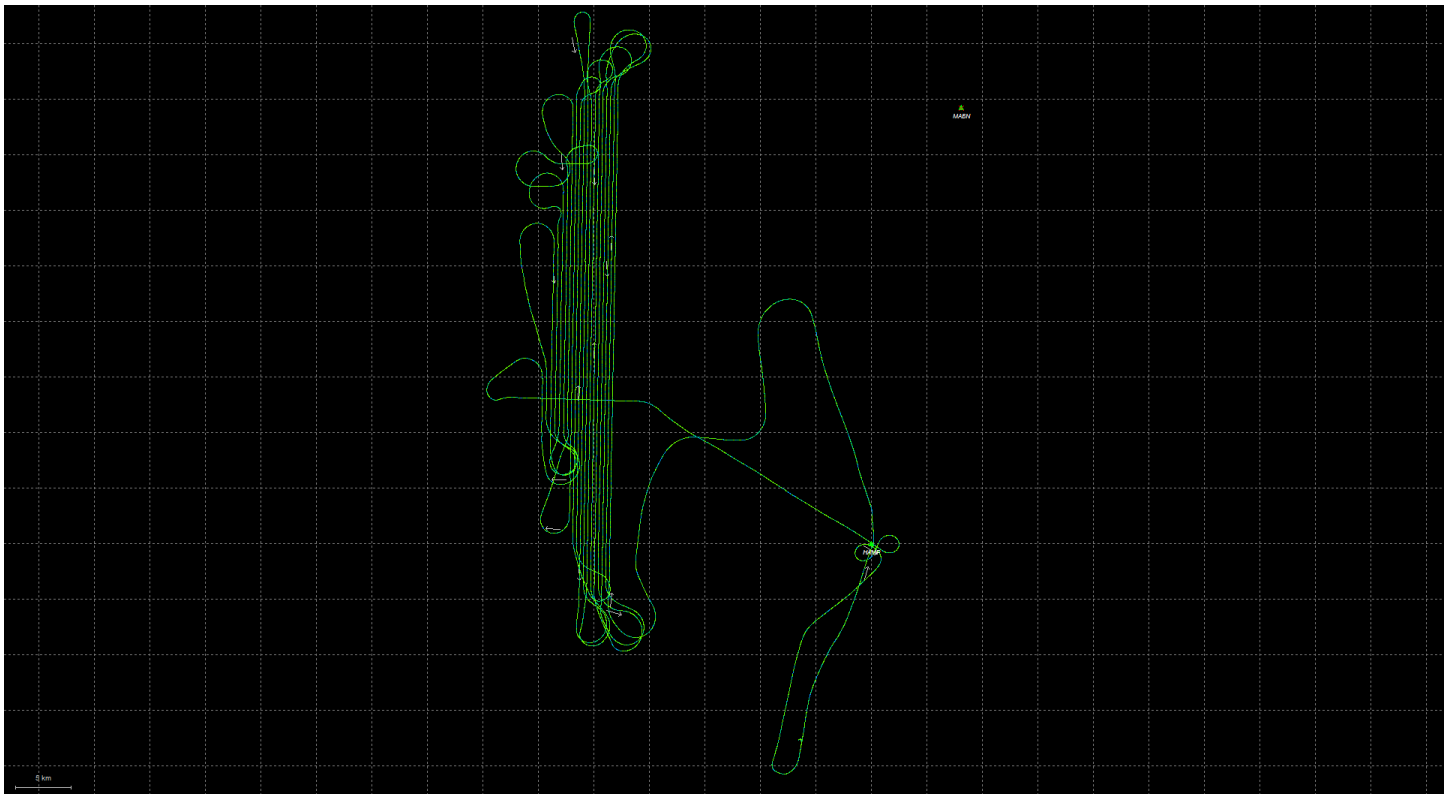
Flight Log

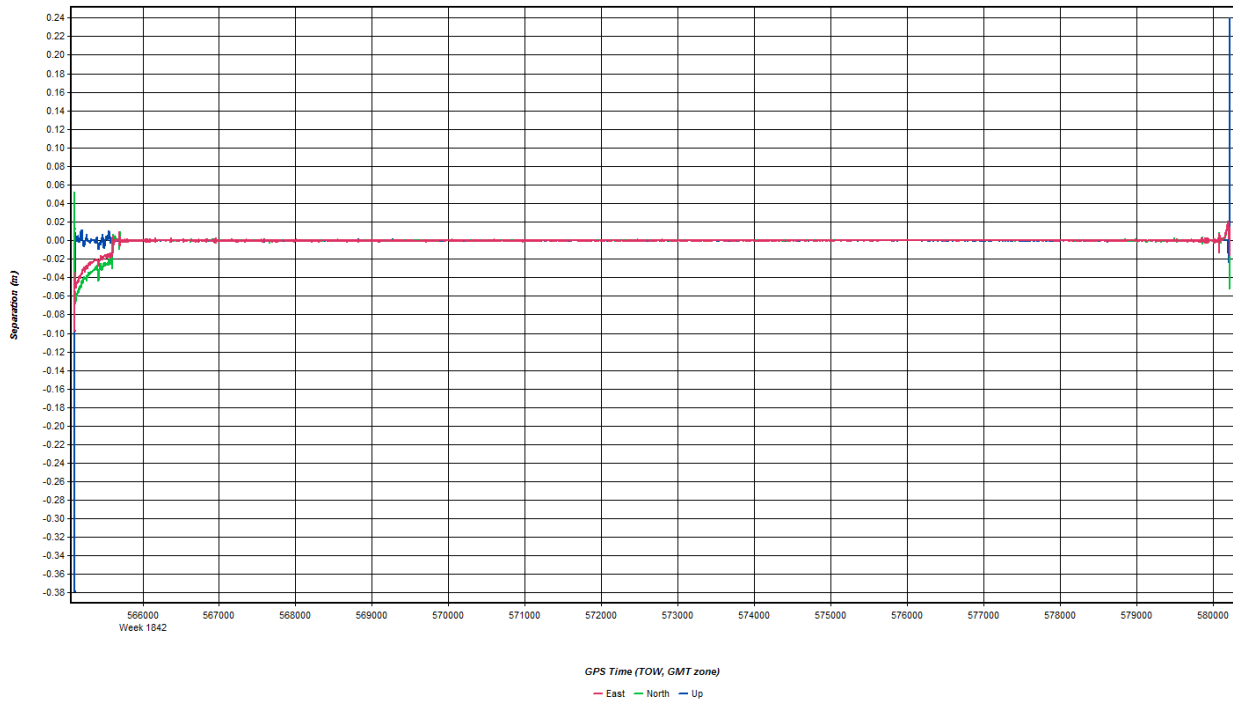
OPERATORS FLIGHT LOG

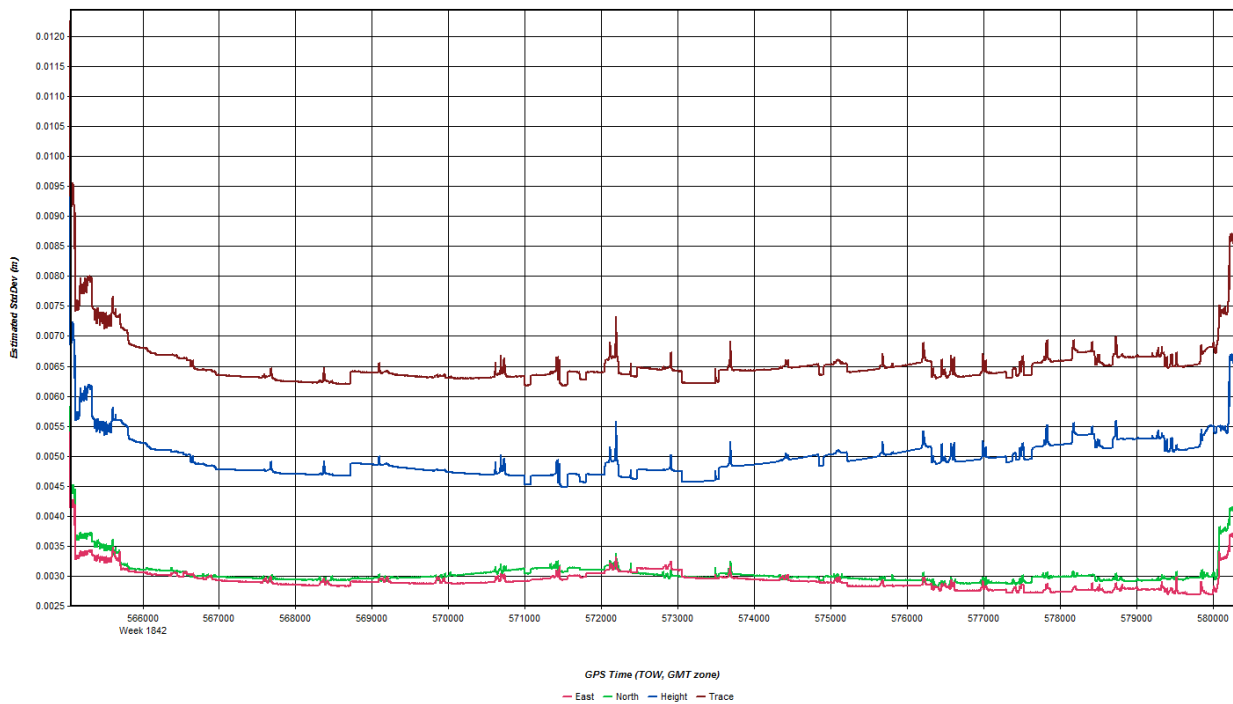
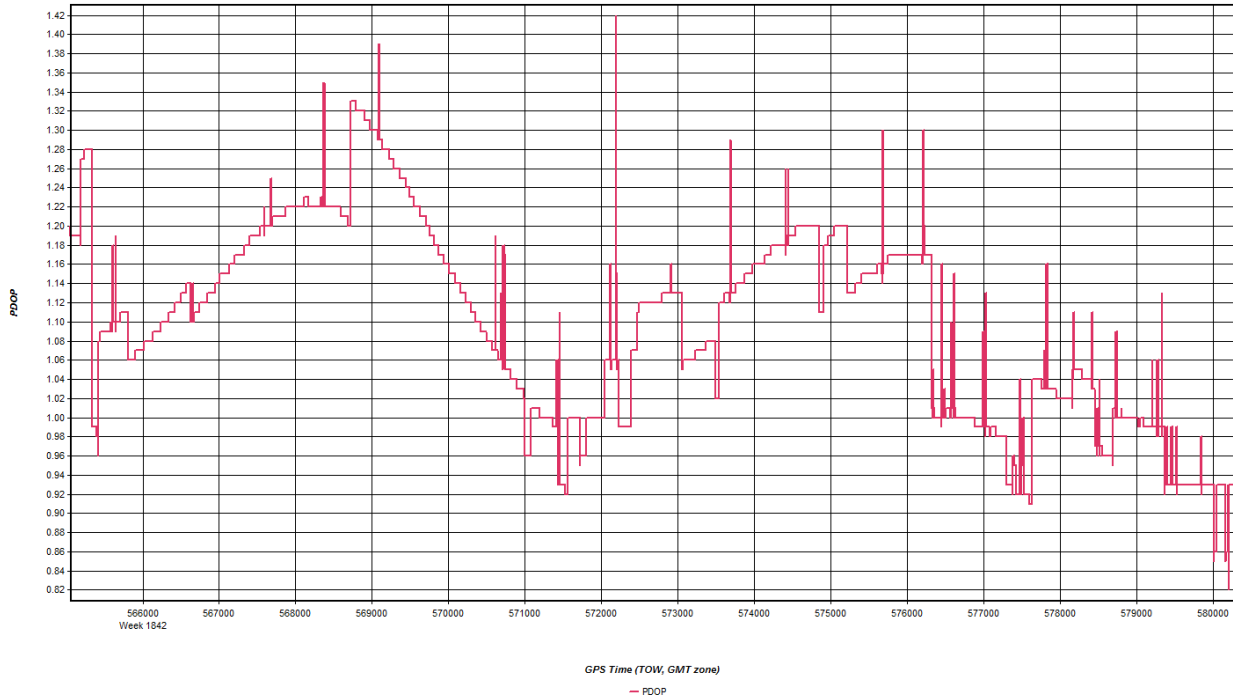
MISSION: 20150502 - 121918		OPERATOR: Emily Drexler			DATE: 5-2-15		LEICA AT5-70		SENSOR: 8239						
PROJECT NUMBER AND NAME	LINE No.	Lht	Hdg	GND SPEED (KTS)	FREQ Hz	SCAN ANGLE	PRF kHz	FIXED GAIN	Flying Ht. (m)	START TIME	STOP TIME	DRIVE	REMARKS	TIME	
														START	STOP
Z6258	019	3017	15	136	52	40	356		5000	12:39	12:59	SD1			
USGS MA Northampton	016	3016	145	145						13:15	13:27				
	015	3015	15	139						13:31	13:43				
	014	3014	145	149						13:46	13:58				
	013	3013	15	140						14:02	14:14				
	012	3012	145	154						14:17	14:29				
	011	3011	15	140						14:33	14:45				
	010	3010	145	149						14:48	14:59				
	069	3069	15	143						15:03	15:16				
	068	3068	145	148						15:18	15:30				Slight turbulence N. end of line ~ 4 min into line - wind pushed off briefly
	067	3067	15	137						15:34	15:46				
	066	3066	145	145						15:49	16:00				
	X	UL	106	135						16:07	16:08				Cross tie for lines 77-66
	X	UL	282	154						16:10	16:12				Cross tie for lines 77-66 (mistake)
										16:12	16:26				Site -> BAF 2 Hobbs 8270.0
STATUS		TOTAL LINES	FLOWN				AIRCRAFT		STATIC	START	STOP	NOTES: CORRS: HAMP - 12:44 Fig. 8			
USGS MA Northampton		139	12				SITE		12:21	12:26	Fig. 8 16:12 CORRS: HAMP - 16:18				
							FERRY		16:28	16:33					
							3.2		0.6						
							3.8		3.8						

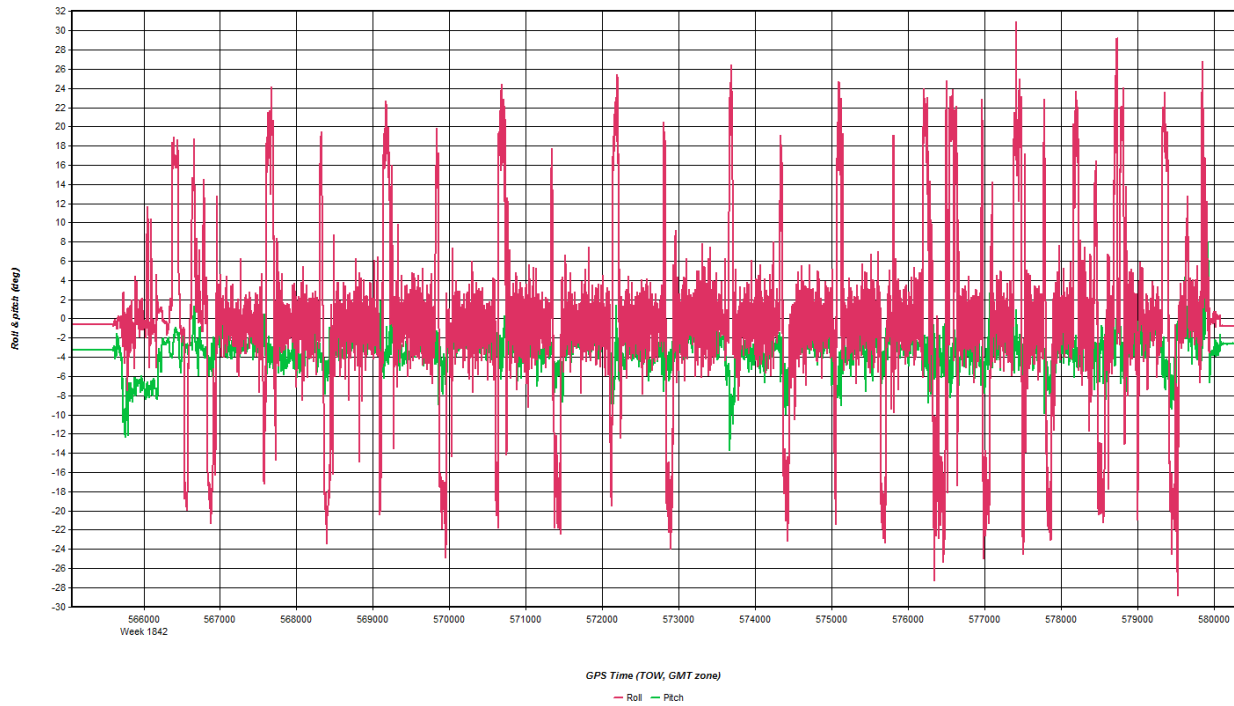
Quantum Spatial N 6216 Resource Drive Sheboygan Falls, WI. 53085 PHONE: 920-467-2655 FAX: 888-253-6695 E-Mail: amphoto@quantumspatial.com

May 2, 2015-A (N269JE, SN7234)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: HAMP Name: HAMP Disabled
 File: E:\Proc\26258_USGS_MA_MENTJ CZ\20150502_125606_SEN7

Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

Antenna Height
 From station file: TRM57971.00, NONE
 Antenna profile: TRM57971.00
 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

26258 USGS MA/ME		Area Northampton ALS80 150kts				Flight Logs	
FLIGHT LINE	FL MILES	ALTITUDE (feet)	BASE STATION	DATE FLOWN	S/N	FIELD QC	COMMENTS
3014	26.04 4052	5610			S-N		144519 ↑ pass by the corner of Northampton
3015	26.14 4052	5623			N-S		143234
3016	26.25 4052	5568			S-N		142029 cloud S end
3017	26.37 4052	5617			N-S		140740 cloud S end of line S400
3018	26.43 4052	5630			S-N		135456 ↓ 1/2 end out of cloud base
3019	26.45 4052	5564			N-S		135209
3020	26.57 4052	5472	1	4/29/15	S-N		150502 - 132925 flown @ S of clouds
3021	26.68 4052	5472	Cross Hamp	4/29/15	S		173036 V1001 175049
3022	26.82 4052	5463			N		172221
3023	27.08 4052	5449			S		170922
3024	27.34 4052	5466			N		145448
3025	27.60 4052	5453			S		164150
3026	30.78 4052	5491			N		162409

Flight Logs should be FAXED to 859-277-8901 immediately after each day's flights with lines and other details noted

Operator Charles O'Brien AIRCRAFT Tail Number 2609JE Page 2 of 11
 Pilot Brian Butler Sensor Serial Number SN7834 Date 4/29/15

Handwritten scribble

26258 USGS MA/ME Area Northampton ALS80 150kts Flight Logs

Contact: J. Berry
952-277-8700

FLIGHT LINE	FL MILES	ALTITUDE (feet)	BASE STATION	DATE FLOWN	S/N	FIELD QC	COMMENTS
3001	30.32 4052	4951		5-2-2015	N-S		Flow N B A S U.L.T 464721
3002	0.89 4052	6473		5-2-2015	S-N		164400 164400 - 164400
3003	1.22 4052	6394		5-2-2015	N-S		163937
3004	9.40 4052	6247		5-2-2015	S-N		163217
3005	10.82 4052	6204		5-2-2015	N-S		162508
3006	12.21 4052	6234		5-2-2015	S-N		161818
3007	13.62 4052	6230		5-2-2015	N-S		161036 (Ready)
3008	16.96 4052	5850		5-2-2015	S-N		155641
3009	21.91 4052	5702		5-2-2015	N-S		154554
3010	22.84 4052	5666		5-2-2015	S-N		153518
3011	23.75 4052	5719		5-2-2014	N-S		152314
3012	24.68 4052	5696		5-2-2015	S-N		150956
3013	25.58 4052	5627		5-2-2015	N-S		145708

Flight Logs should be FAXED to 855-277-8901 immediately after each day's flights with lines and other details noted

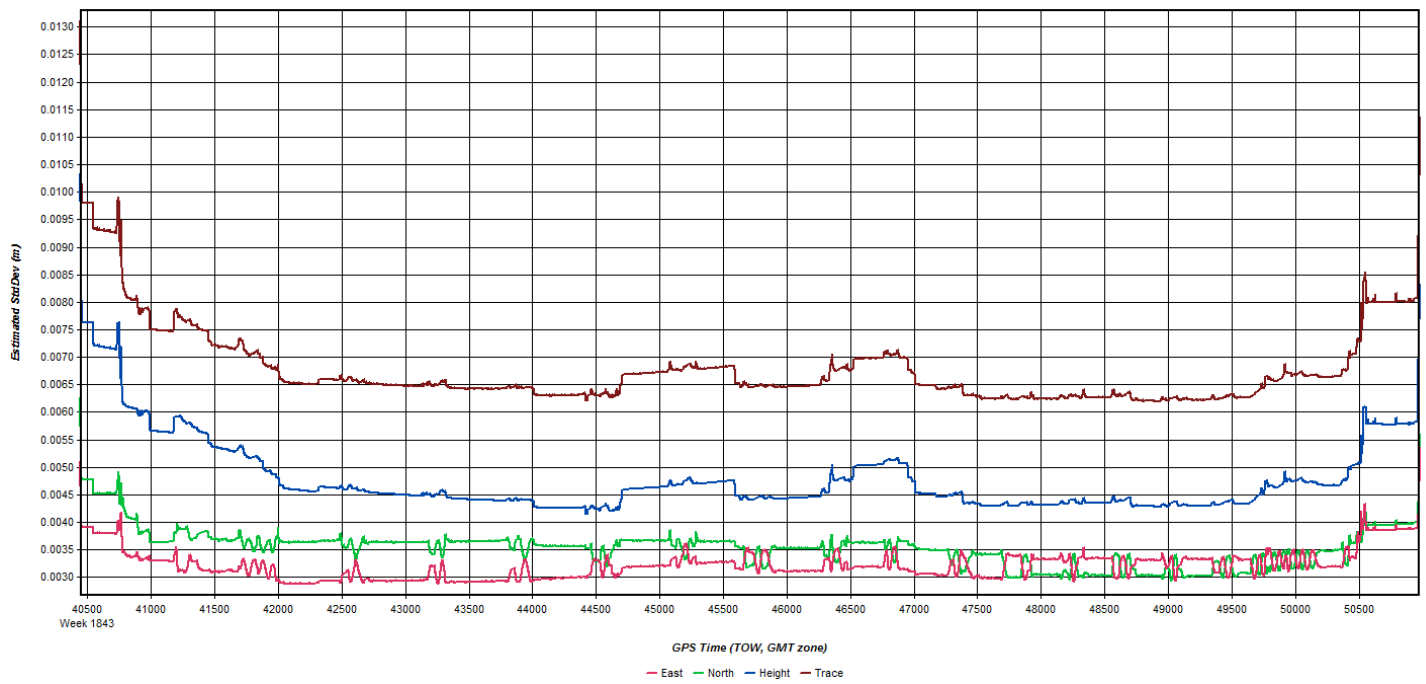
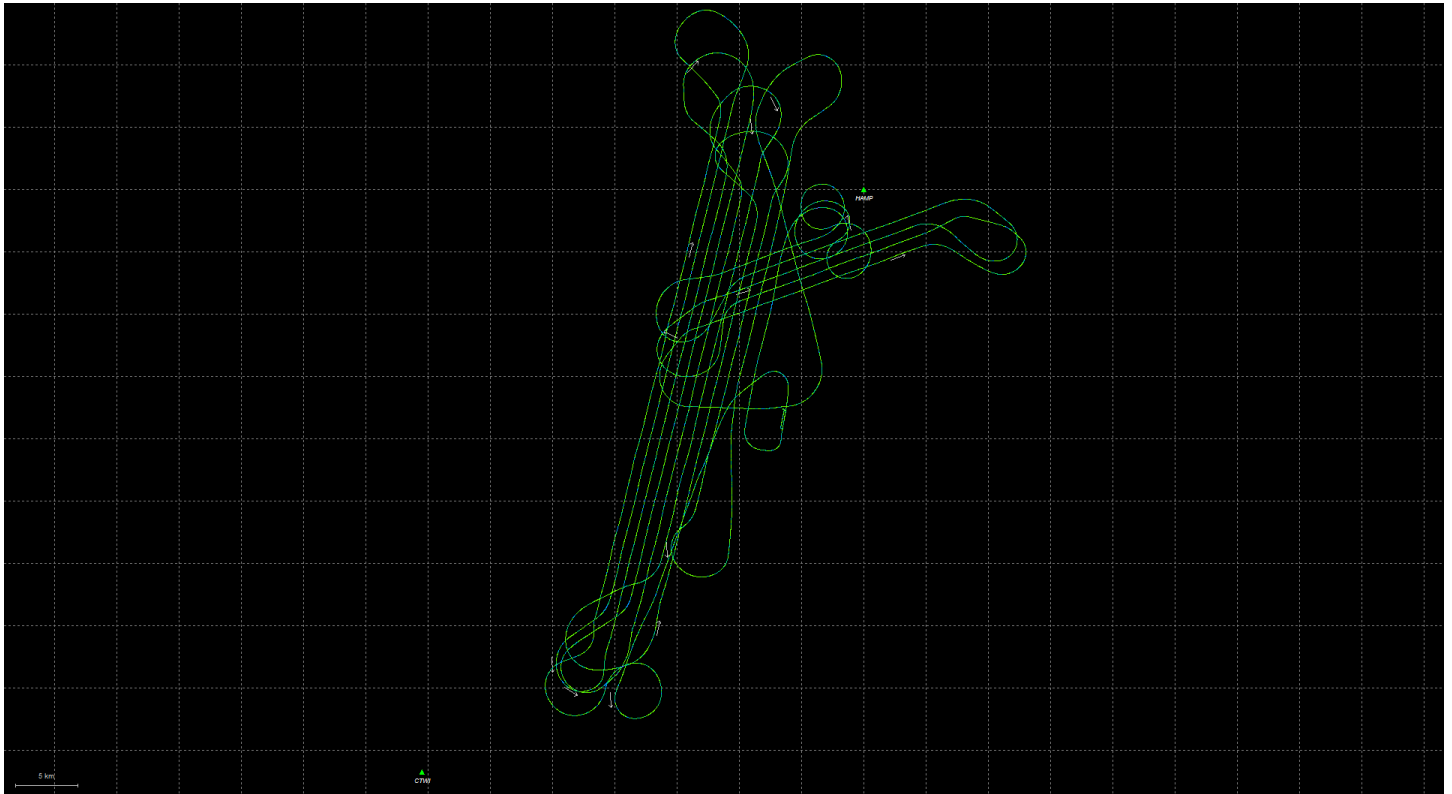
Operator: TOM DRY AIRCRAFT Tail Number: 269JE Page 1 of 11
 Pilot: TYLER CONNORS Sensor Serial Number: 807284 Date: 5-2-2015

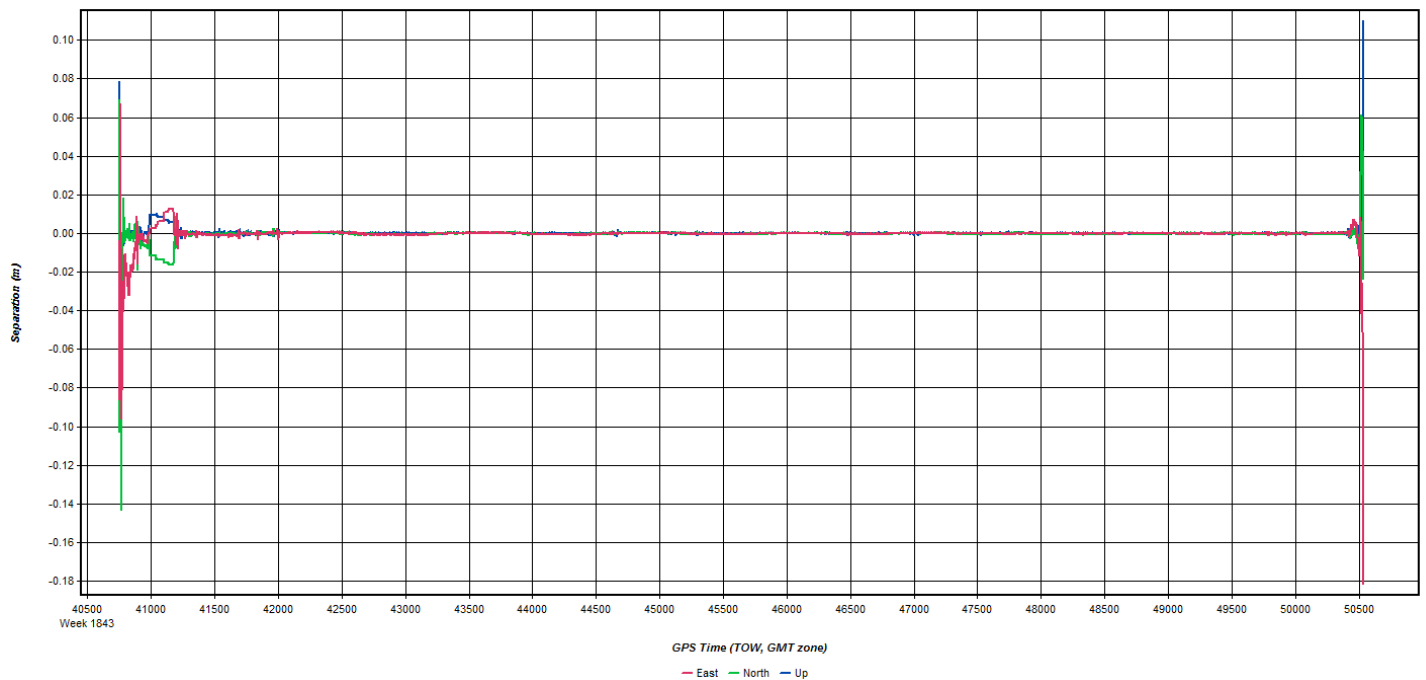
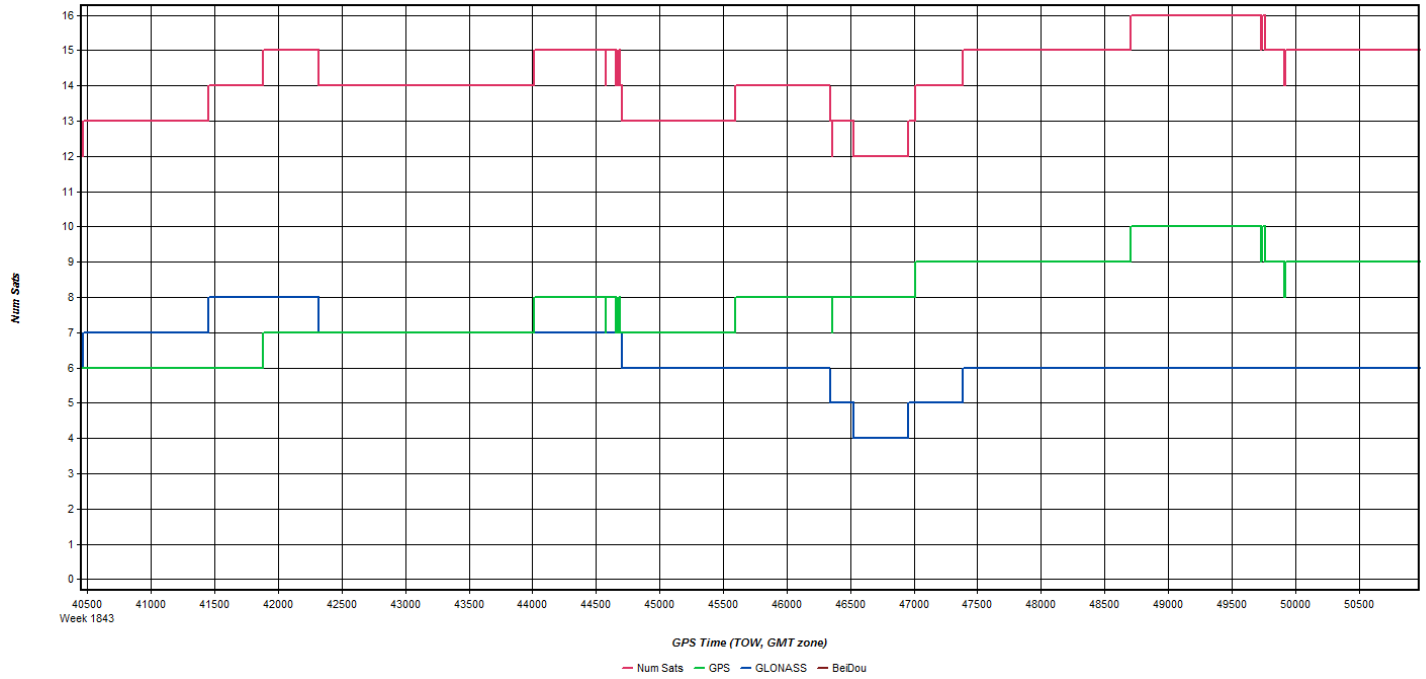
May 3, 2015-A (N1107Q, SN7108)

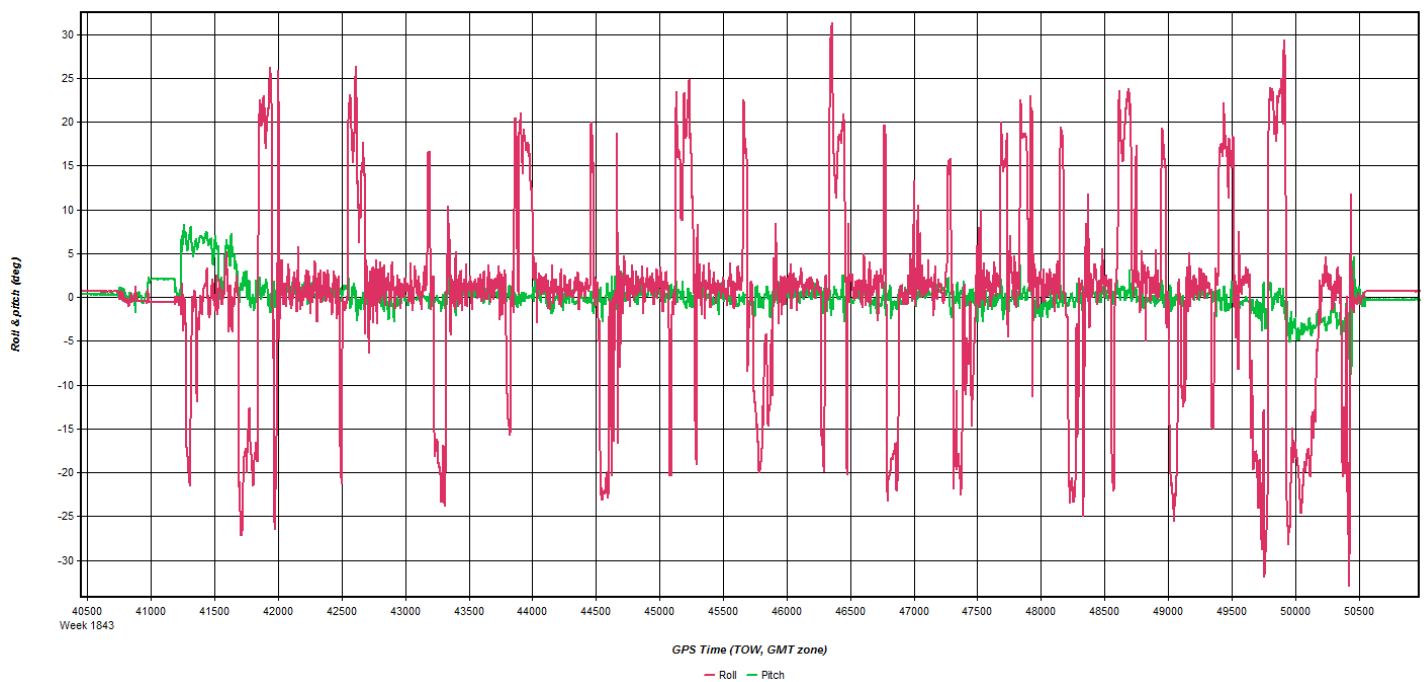
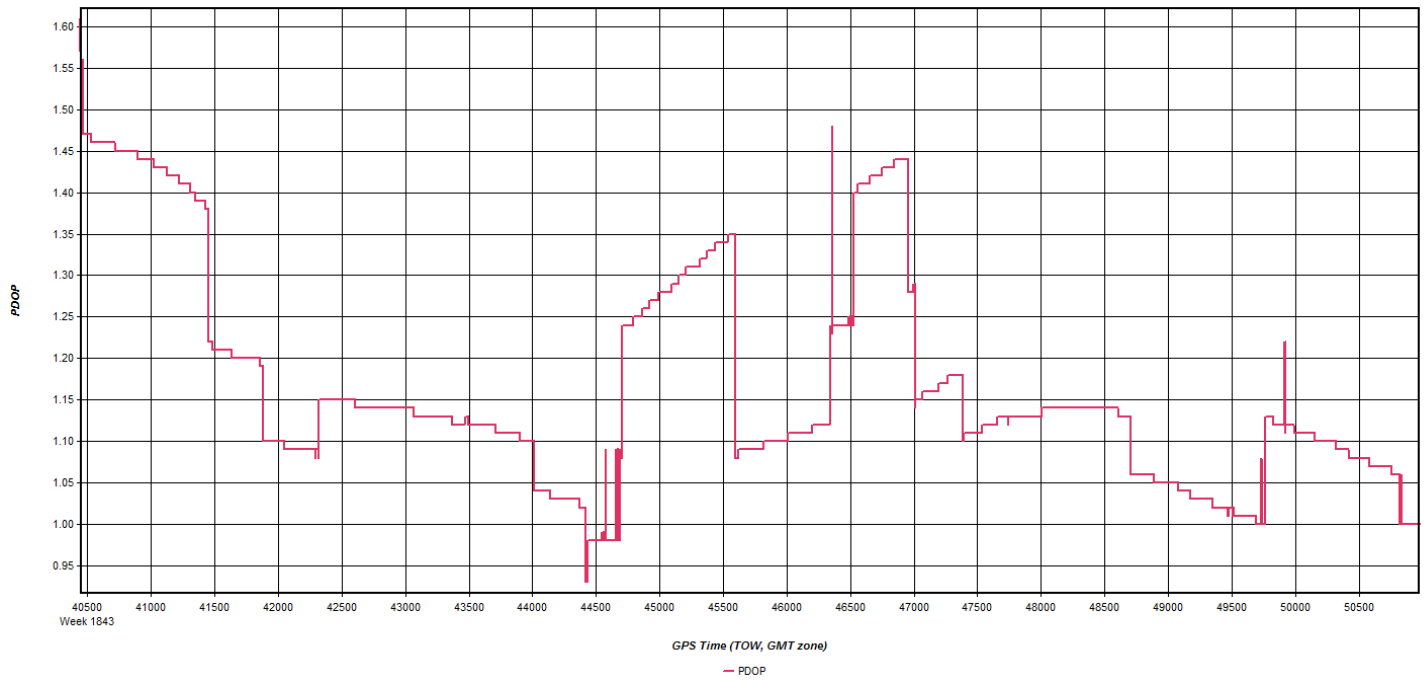
Flight Log

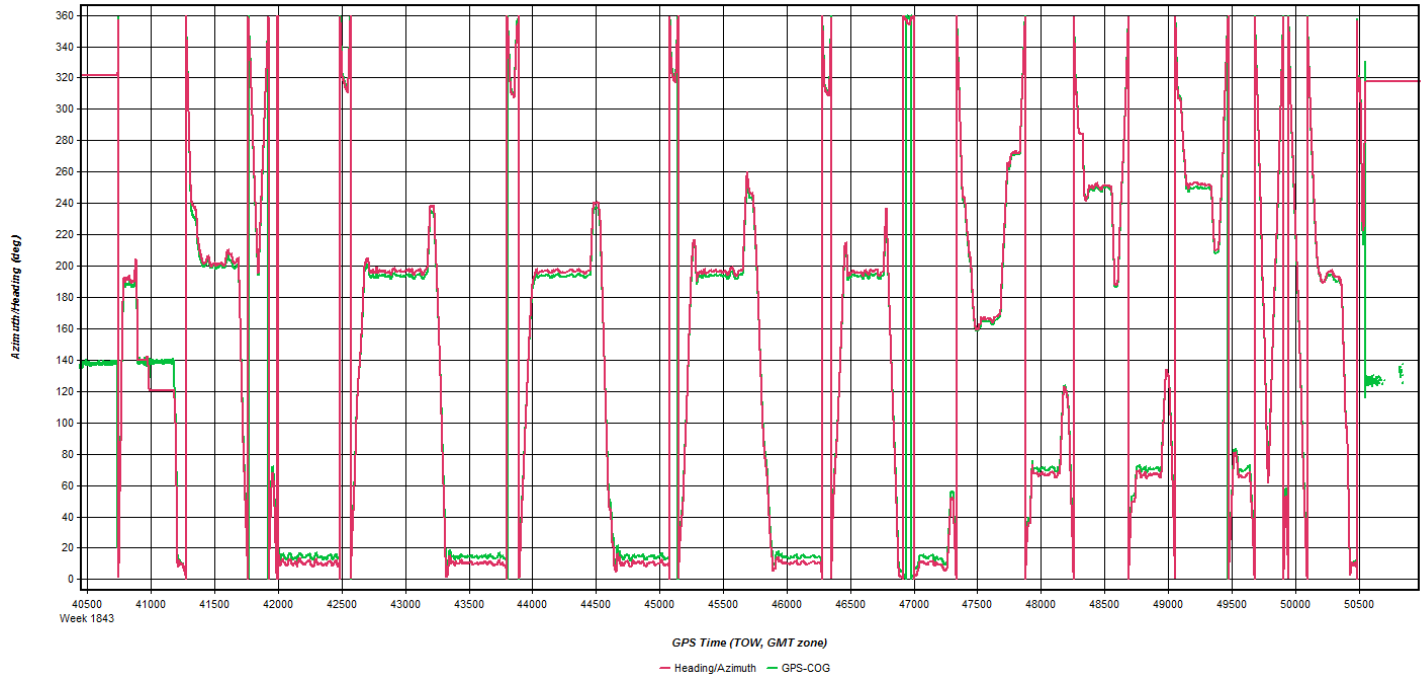
WOOLPERT FLIGHT LOG SHEET #1											
Leica ALS-70		MM/DD/YYYY		Day of Year		Mission Name / Job #					
		5/3/2015		123		Pittsfield North 75500 Flt 1					
Operator		Aircraft		Sensor		Hobbs Start		Local Start Time		Zulu Start Time	
Annen		N475RC N404CP N7079F N475CP N1107Q		SH-7177 SH-6157 SH-7108		2696.7		8:45		12:45	
Pilot						Hobbs End		Local End Time		Zulu End Time	
Larocque						2700.6		12:50		16:50	
Passengers		Using or Relying on CORS		GPS Base #1		Operator		PID		KPSF	
		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				Annen					
Wind Dir/Speed		Visibility		Ceiling		Cloud Cover %		Temp		Dew Point	
L/V		10		Cr		0		11		6	
Pressure		Haze/Fine/Cloud		Departing ICAO		KPSF		Arriving ICAO		KPSF	
30.06											
Scan Angle (FOV)		Scan Frequency (Hz)		Pulse Rate (kHz)		Laser Power %		Gain		Mode	
40		41		272		100		Course/Up Fine/Down		Single <input type="checkbox"/> 2+2 <input type="checkbox"/> Multi <input type="checkbox"/> 4+3 <input type="checkbox"/>	
Air Speed		AGL		MSL		Threshold		Waveform Mode		Pre-Trigger Dist.	
150 Kts		7,100 Ft		7,100 Ft		/		@ NS		Ft	
Line #	Dir.	Line Start Time	Line End Time	Time On Line	SV's	HDOP	PDOP	Line Notes/Comments			
Test	n/a			n/a	n/a	n/a	n/a	GPS Began Logging At:			
		↑ Times entered are Zulu / GMT ↓						Verify S-Turns Before Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
50	N	13:08:00	13:07:00		20	0.6	1	Reflight from earlier mission			
1	S	13:12:00	13:22:00								
2	N	13:24:00	13:33:00								
3	S	13:36:00	13:45:00								
4	N	13:48:00	13:58:00								
5	S	14:01:00	14:11:00								
6	N	14:13:00	14:23:00								
7	S	14:25:00	14:34:00								
8	N	14:37:00	14:47:00								
9	S	14:49:00	14:58:00								
10	N	15:01:00	15:11:00								
11	S	15:13:00	15:23:00								
12	N	15:25:00	15:35:00								
13	S	15:37:00	15:46:00								
14	N	15:49:00	15:58:00								
15	S	16:01:00	16:10:00								
16	N	16:13:00	16:23:00								
17	S	16:25:00	16:34:00								
		↑ Times entered are Zulu / GMT ↑		0:00:00		Total Time On Line		Verify S-Turns After Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Additional Comments:				System worked well, no issues.		Drive #					

May 3, 2015-A (N262AS, SN7178)









Coordinate/Antenna Settings

Master Remote

Base Station
 2: CTWI Name: CTWI Disabled
 File: E:\Proc\26258_USGS_MA_ME_LiDAR\Z8H1\26258_20150503_

Coordinates
 Latitude: North 41 53 51.90745
 Longitude: West 73 04 10.96846
 Ellipsoidal height: 192.097 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
1: HAMP Name: HAMP Disabled
File: E:\Proc\26258_USGS_MA_ME_LiDAR\Z8H1\26258_20150503_

Coordinates
Latitude: North 42 19 03.87277 Compute from PPP
Longitude: West 72 38 22.40329 Enter Grid Values
Ellipsoidal height: 42.355 m Enter MSL Height
Datum: NAD83(2011) 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

Base Station Log



Station Occupation Report For Airborne GPS

Project: USGS MA-ME LIDAR

Location: KBAF Project Number: 26258

Completed by: M AUST Date: 5-3-15

Receiver: TRIMBLE R7

Receiver Type: _____

Antenna Type: _____

Station ID: SET POINT

Start -- H.I. (m): 2m

End -- H.I. (m): 2m

H.I. (ft): _____

Start Time: 7:00A

End Time: 1:00P

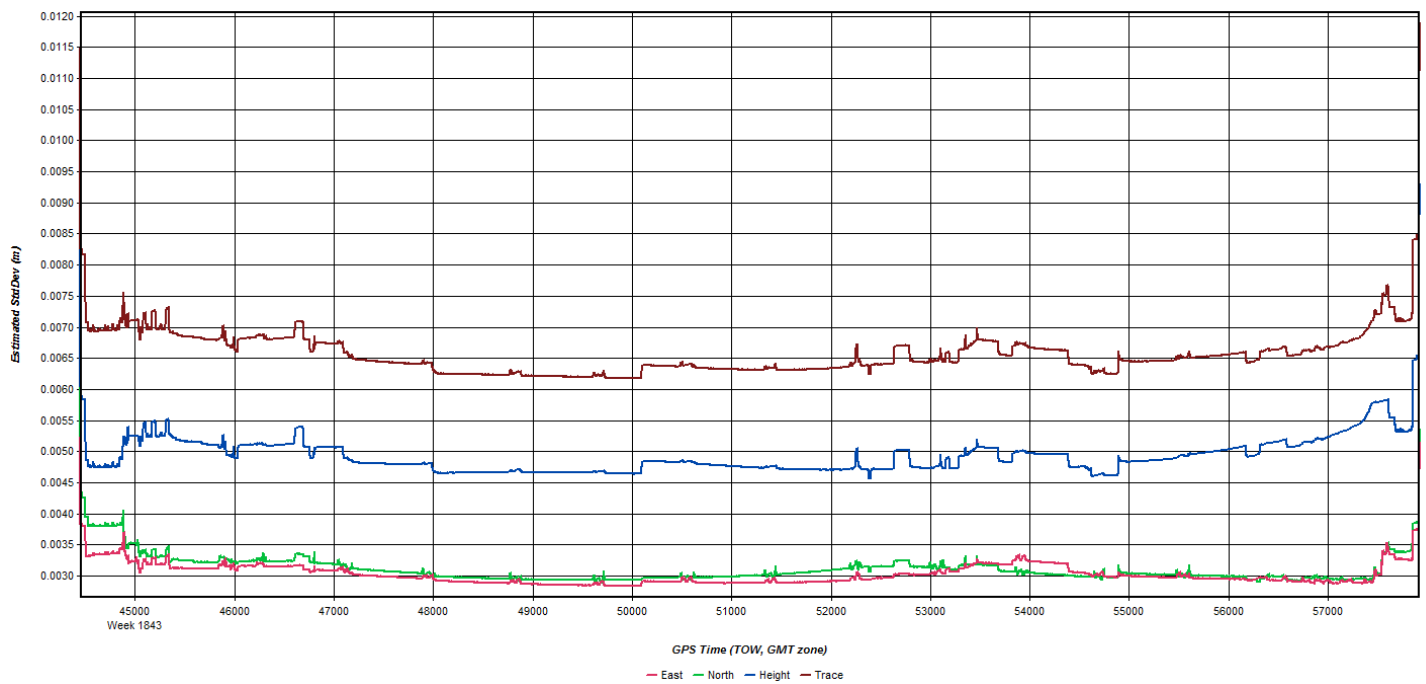
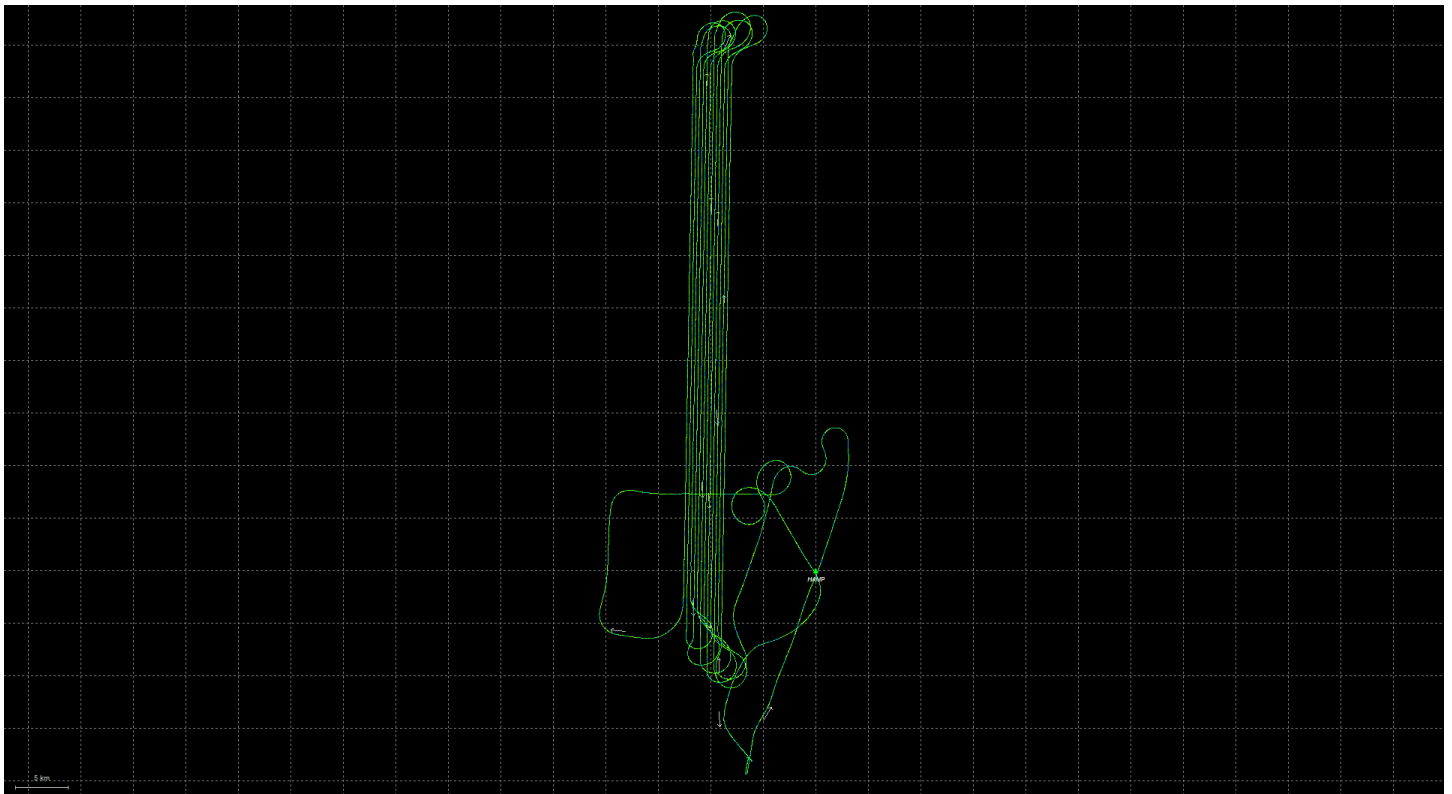
Time Zone: EST

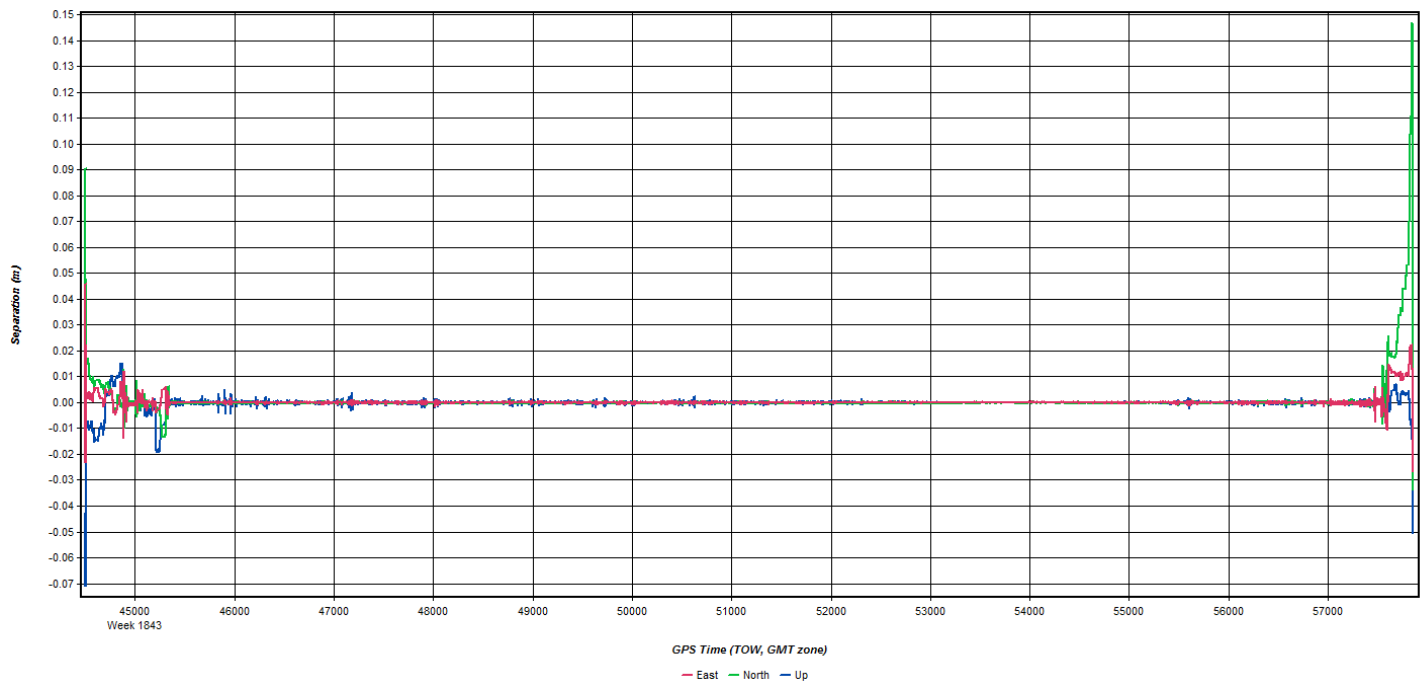
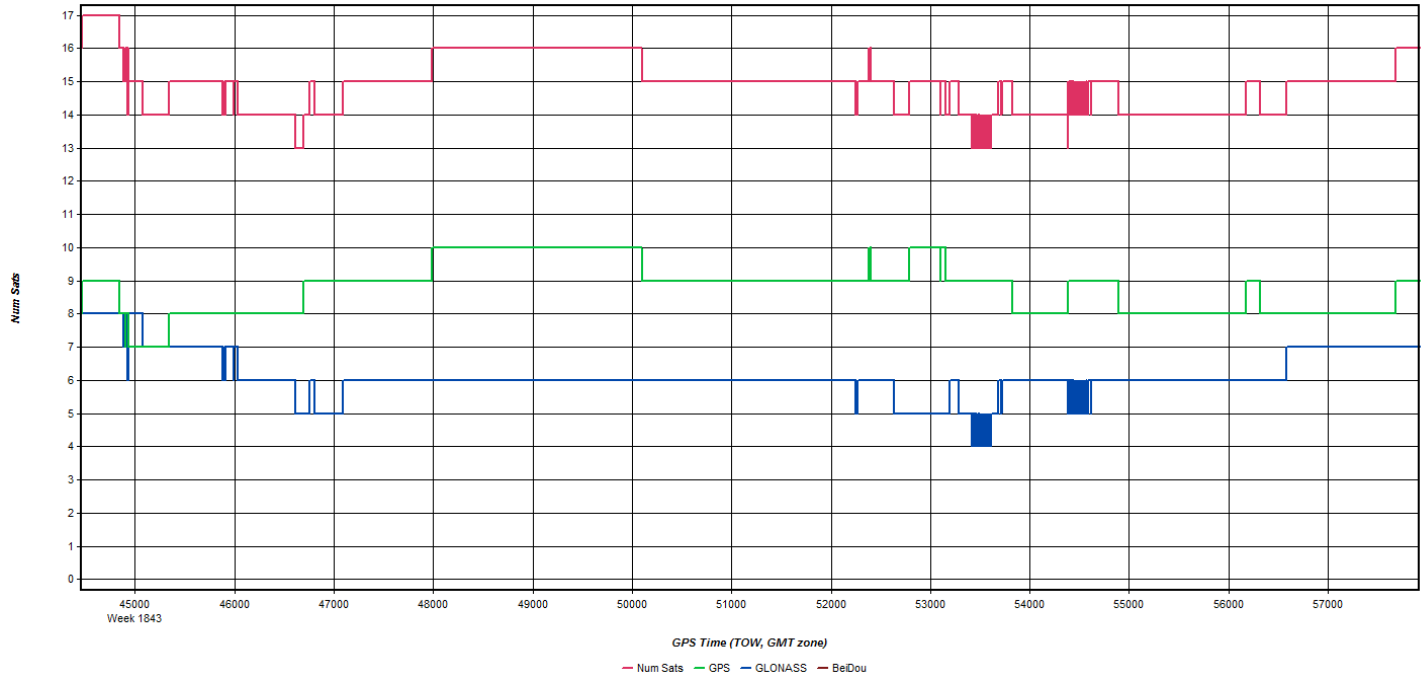
Operator: M AUST

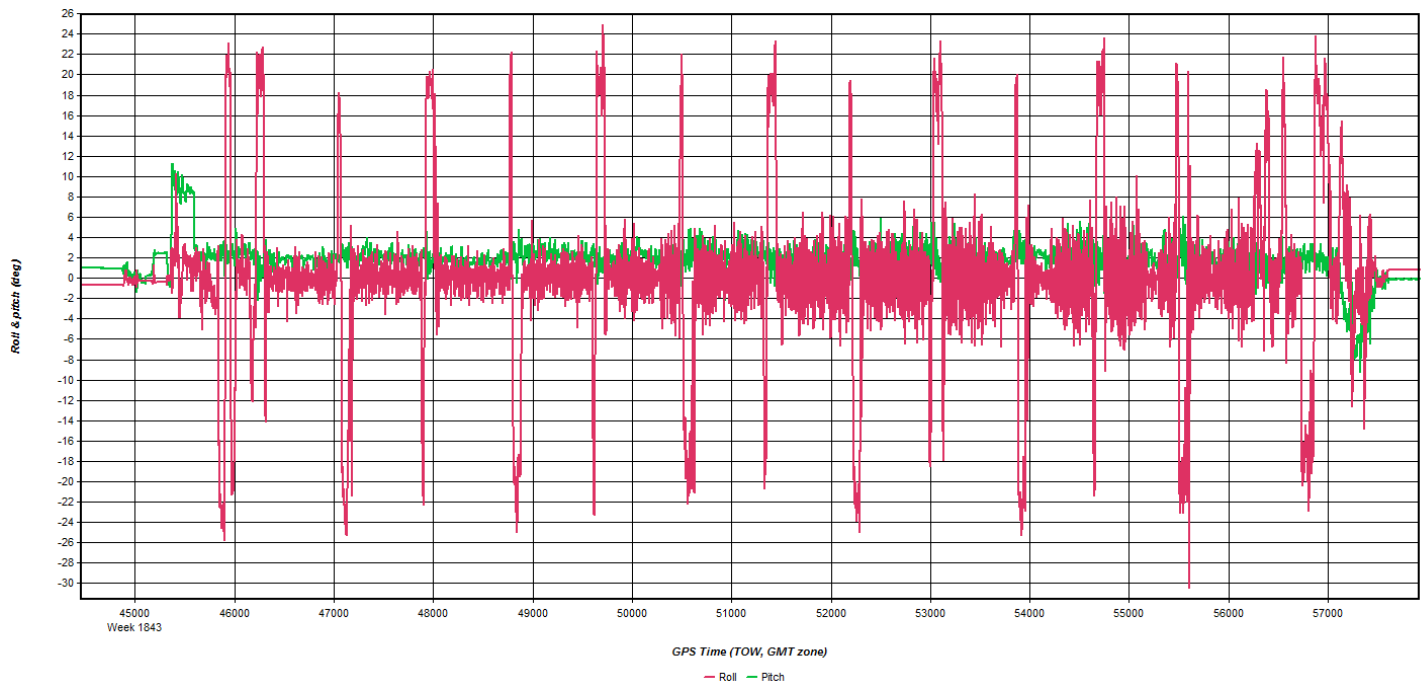
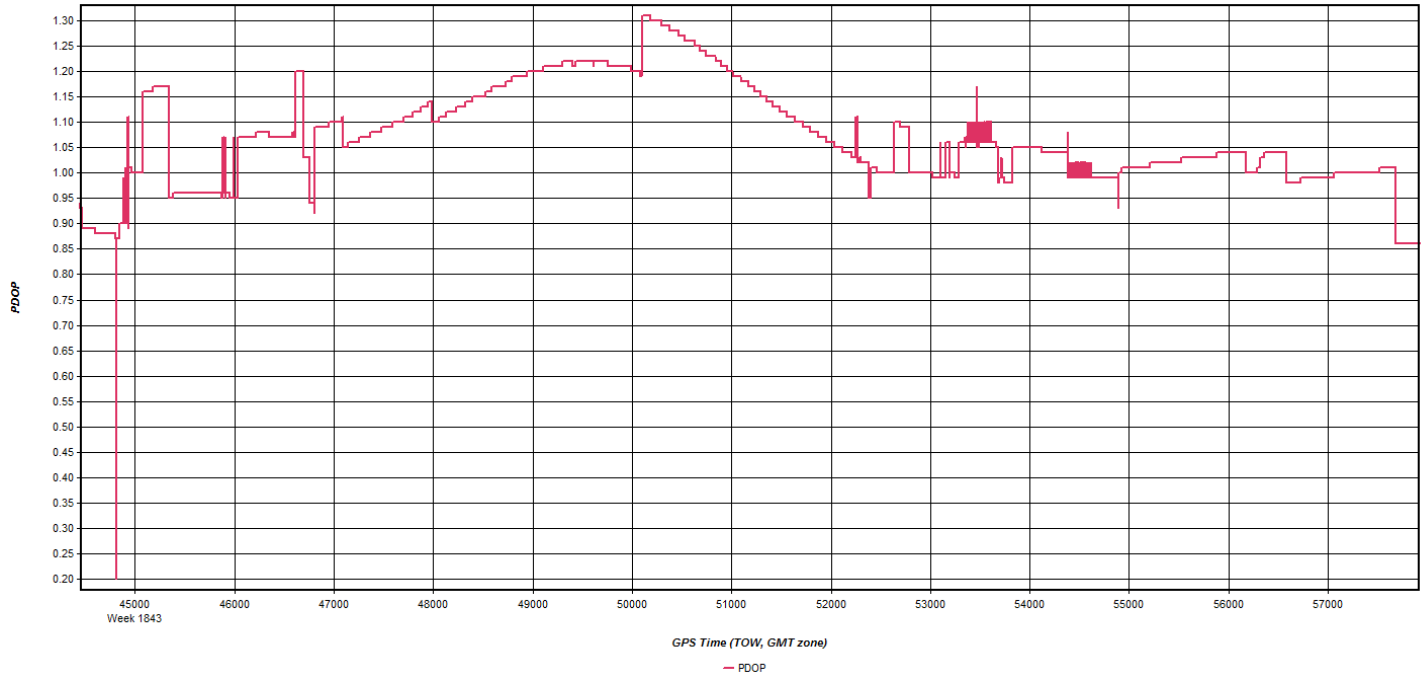


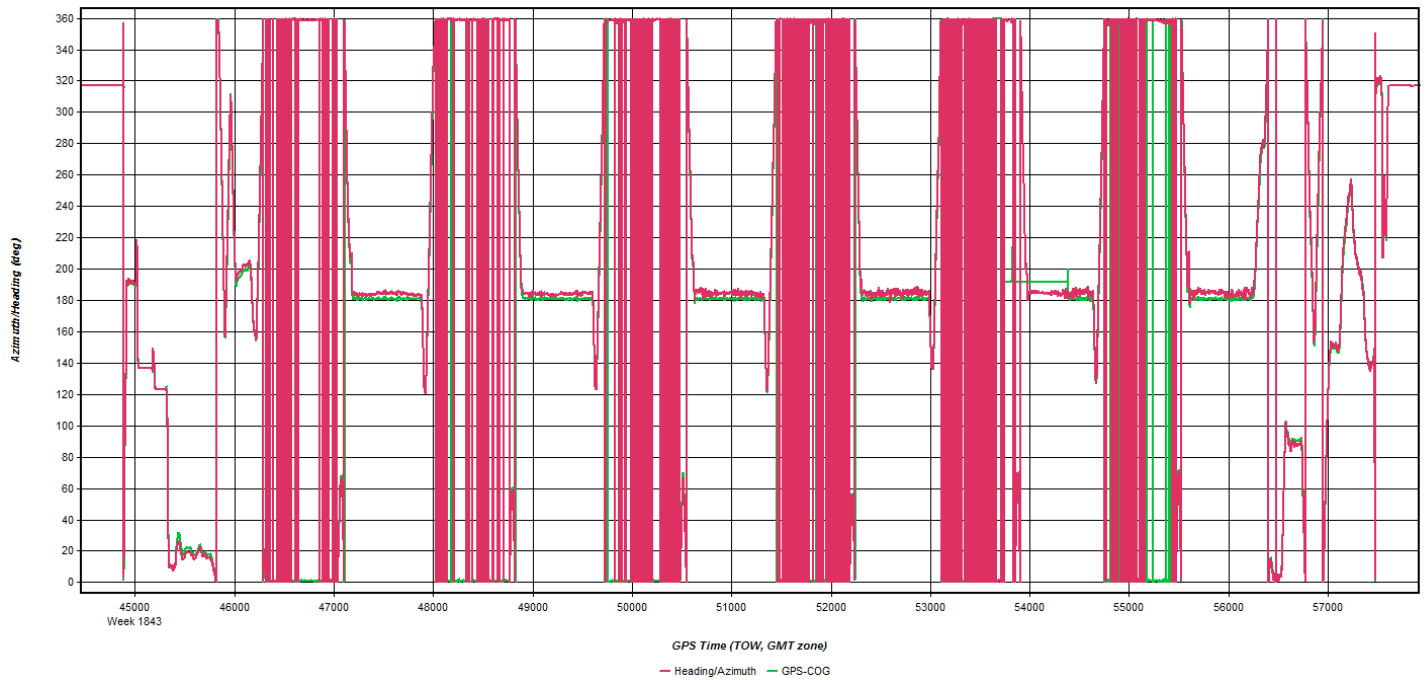
Comments SET POINT @ KBAF

Mar 3, 2015-A (N22GE, SN8239)









Coordinate/Antenna Settings [?] [X]

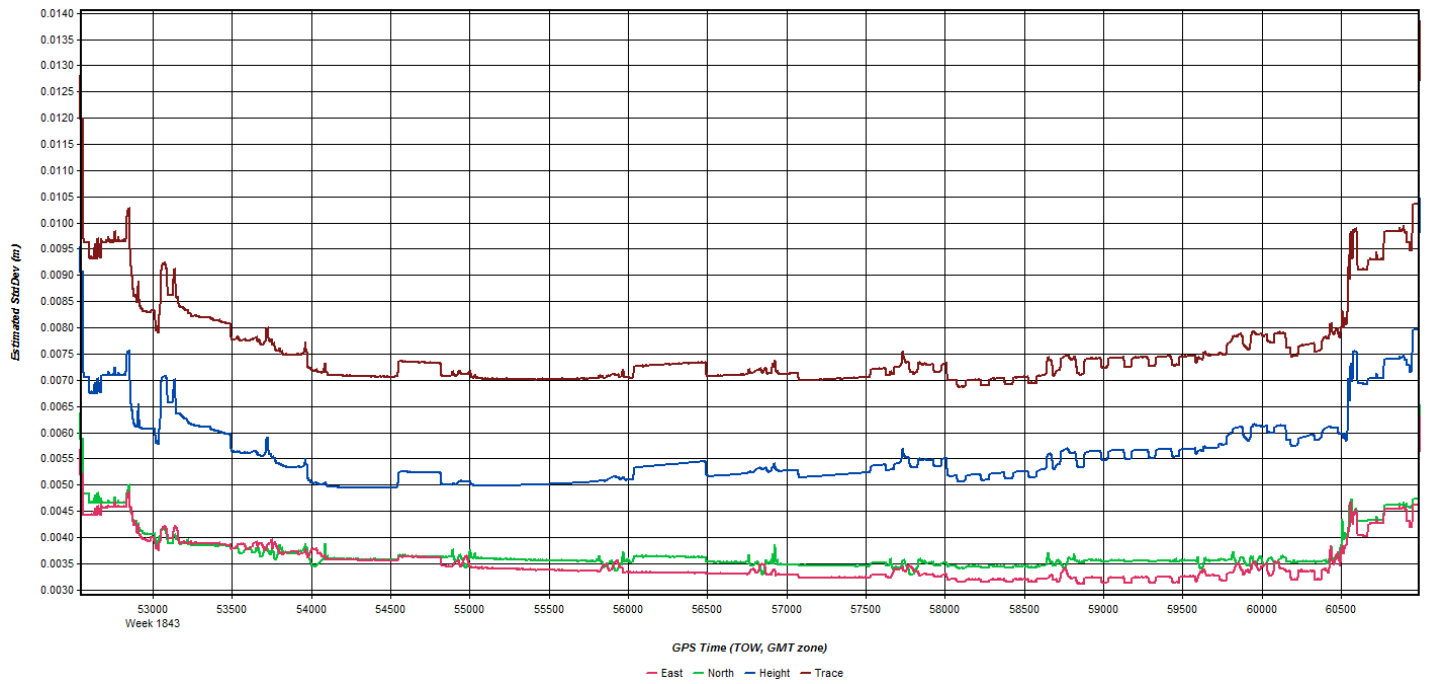
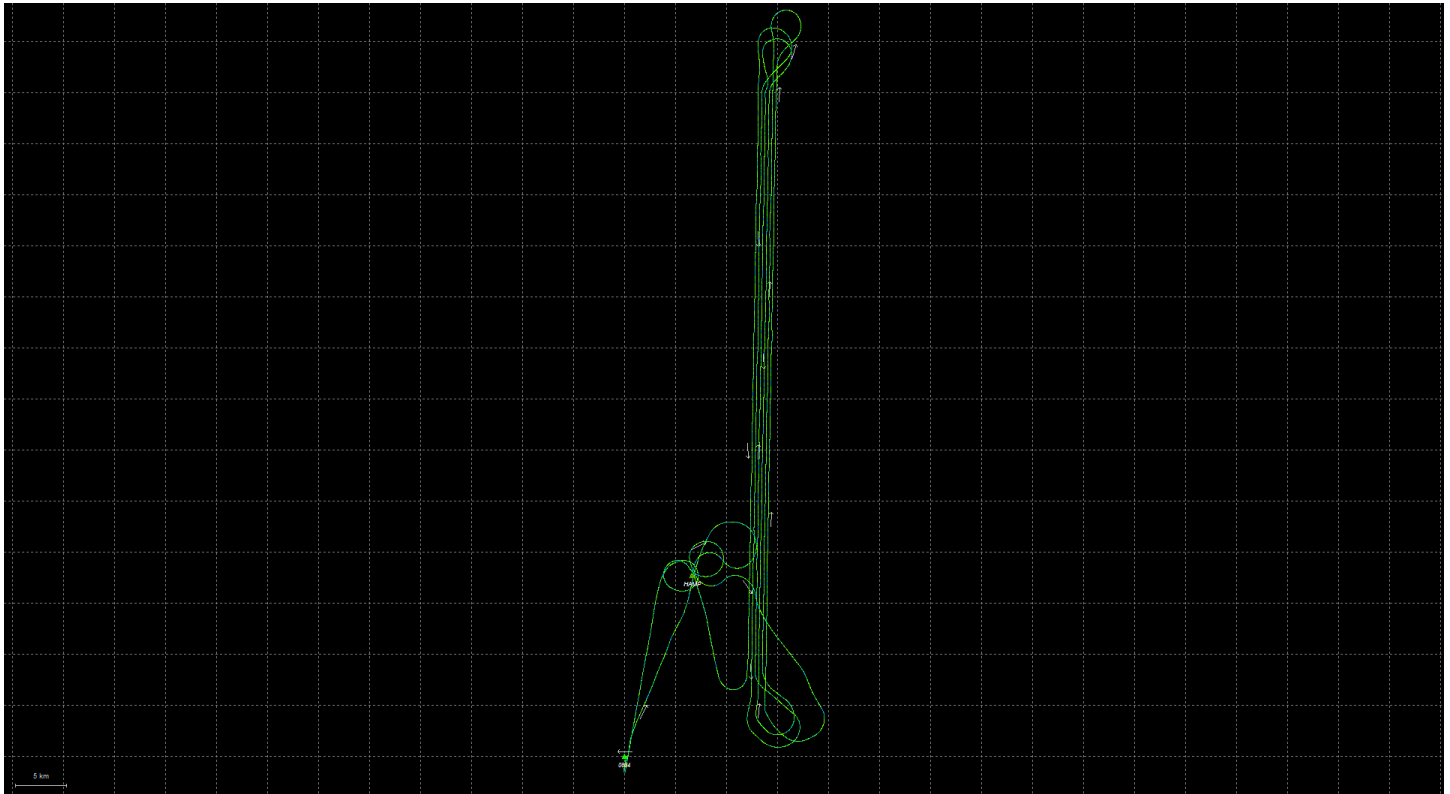
Master Remote

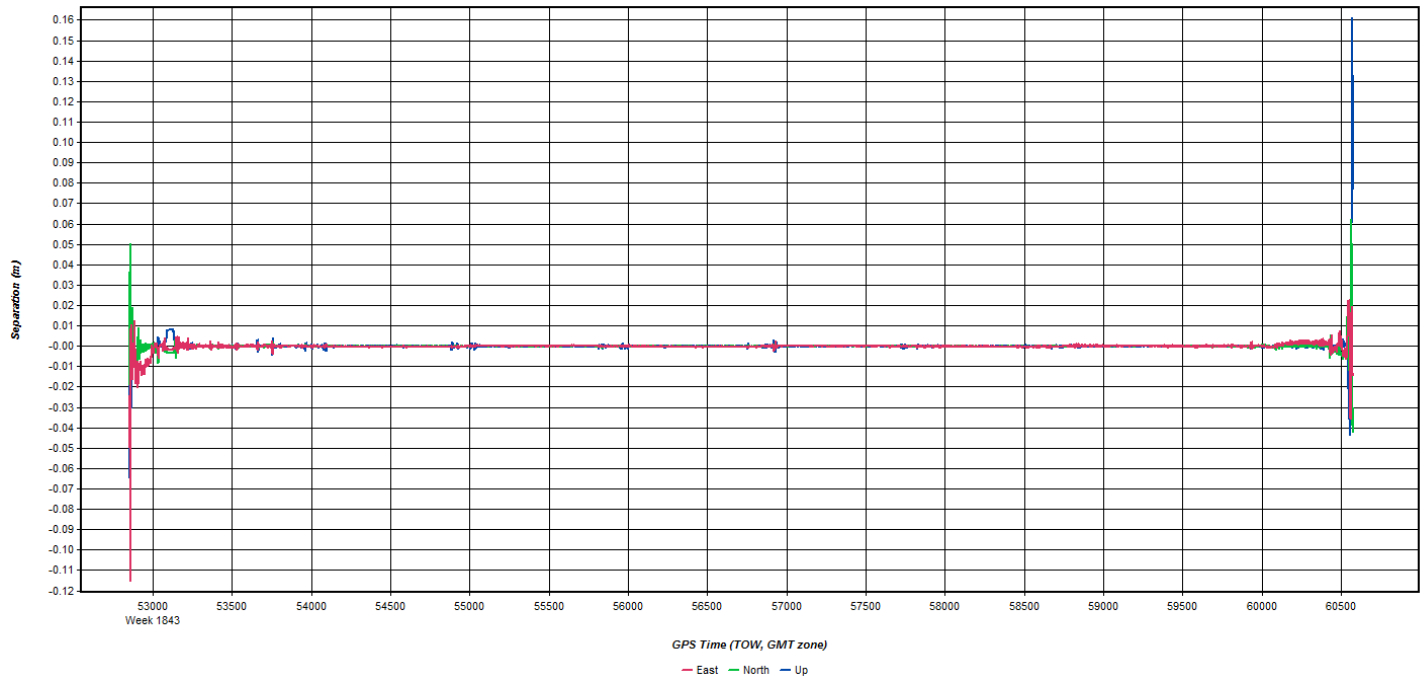
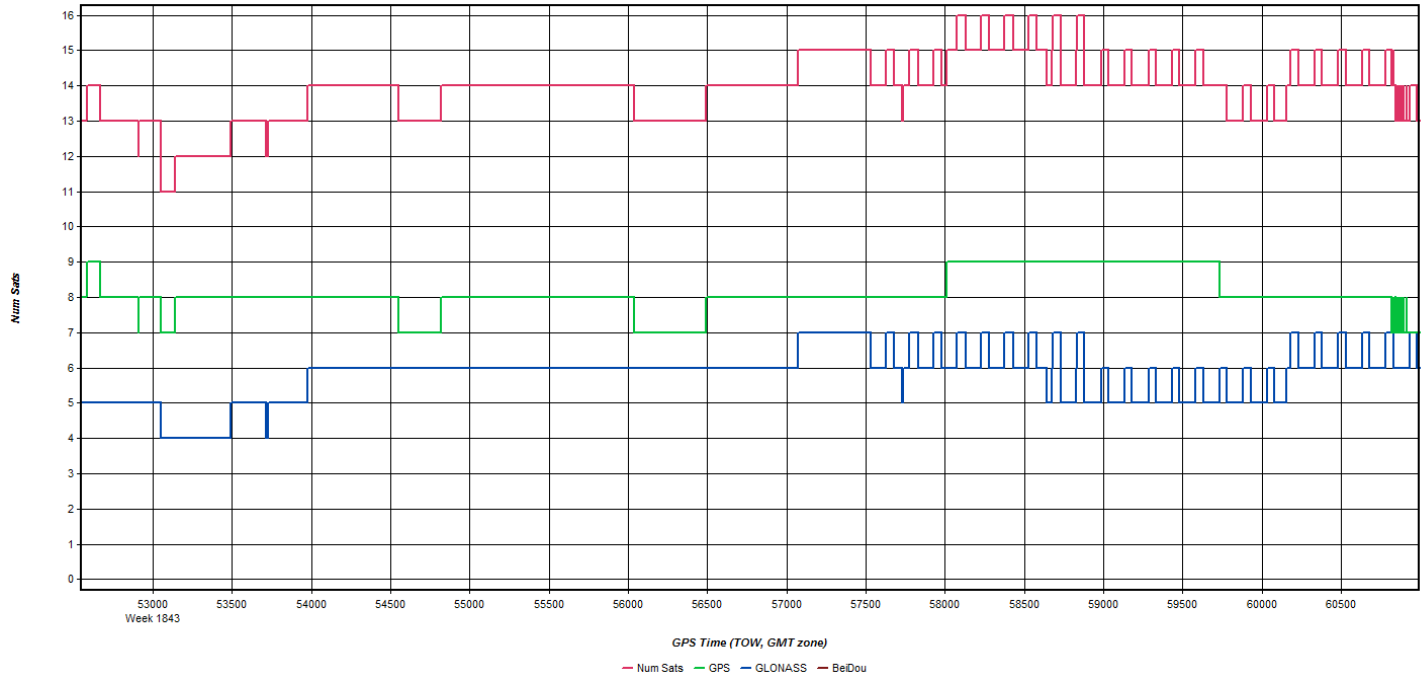
Base Station
 1: HAMP Name: HAMP Disabled
 File: E:\Proc\26258_USGS_MA_ME_LiDAR\T1FB\26258_USGS_MA

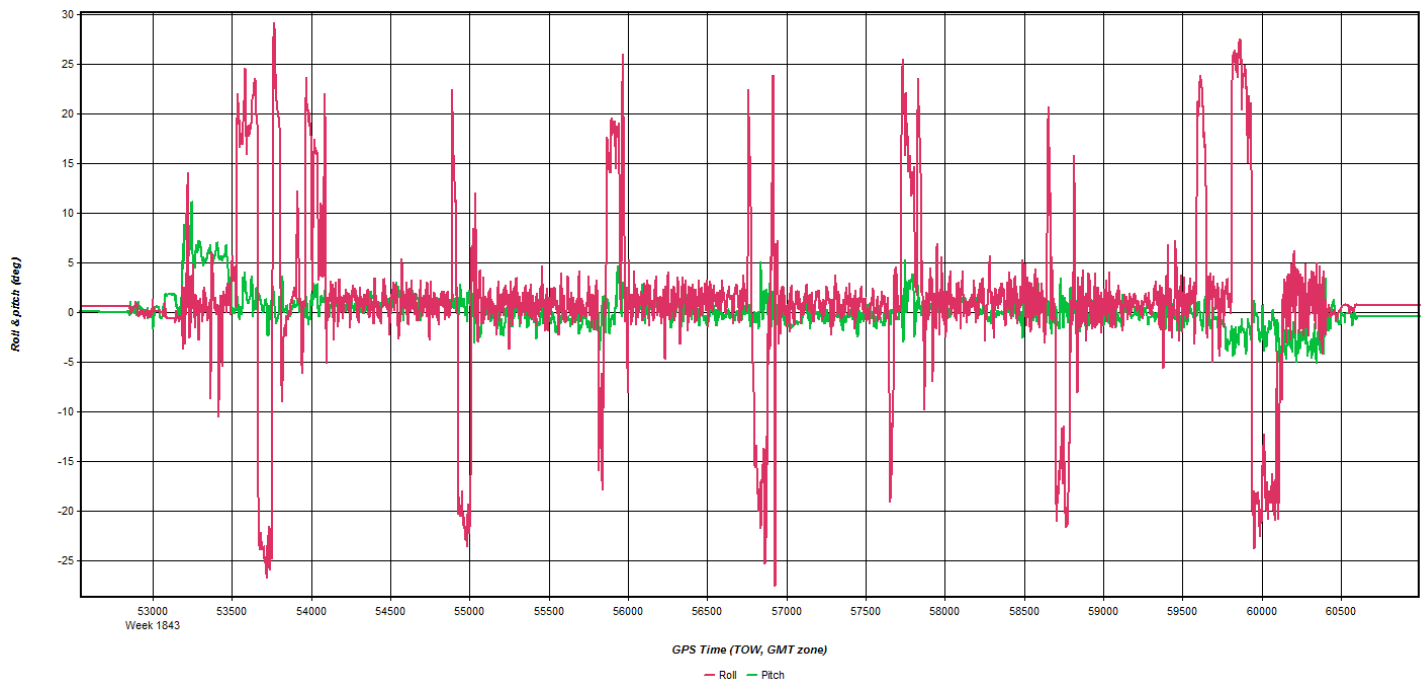
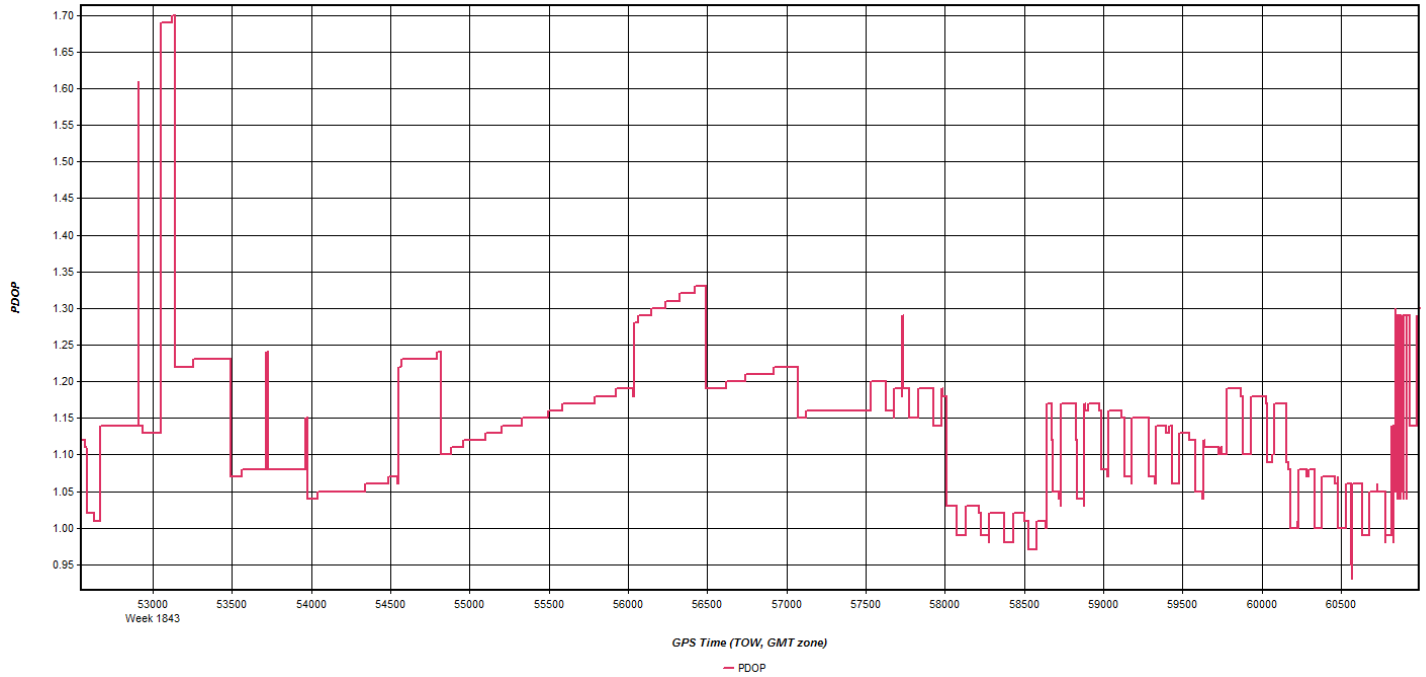
Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

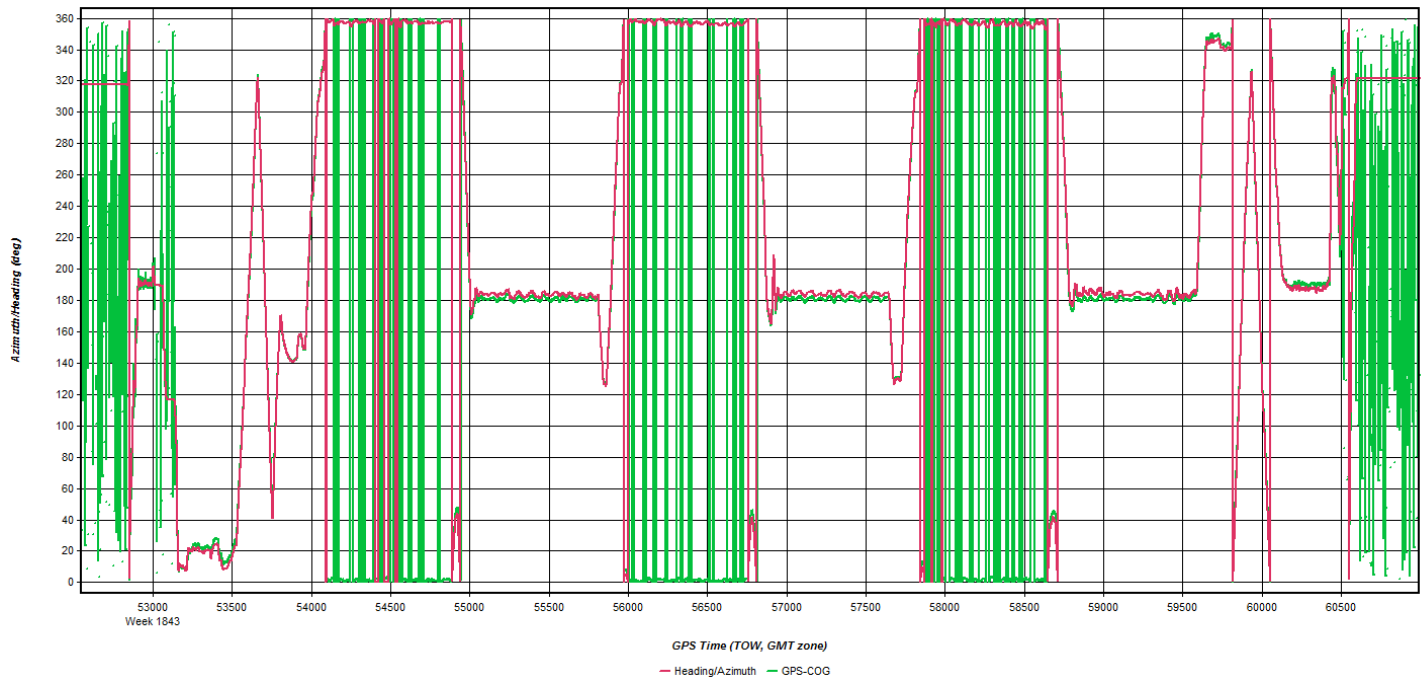
Antenna Height
 From station file: TRM57971.00, NONE
 Antenna profile: TRM57971.00
 Measured height: 0.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 0.067 m
 Measured to:
 ARP
 L1 Phase Centre

May 3, 2015-B (N262AS, SN7178)









Coordinate/Antenna Settings [?] [X]

Master Remote

Base Station
 2: 0884 Name: 0884 Disabled
 File: E:\Proc\26258_USGS_MA_ME_LiDAR\Z8h1\26258_20150503_

Coordinates
 Latitude: North 42 09 33.06429
 Longitude: West 72 43 11.22716
 Ellipsoidal height: 50.620 m
 Datum: NAD83(2011)

Antenna Height
 From station file: TRM55971.00
 Antenna profile: TRM55971.00
 Measured height: 2.000 m
 ARP to L1 offset: 0.067 m
 Applied height: 2.067 m
 Measured to:
 ARP
 L1 Phase Centre

Flight Log

OPERATORS FLIGHT LOG

MISSION: S	YYYYMMDD_TIME(GPS)	150503 143311	OPERATOR: M AWST	DATE: 5-3-15			LIRGAALS-70	7178	AIRCRAFT: 262A5				
				PROJECT NUMBER	LINE NO. & Hdg	GND SPEED (KTS)			FREQ Hz	SCAN ANGLE	PRF KHZ	FIXED GAIN	ALT (m)
26258				53	40°	362	255	4950	1502	1513	LIFT B		
USSS-WA	312	1°	153					4945	1517	1529	REFLIGHT FROM 5-2-15		
LIDAR	311	181°	147					4930	1533	1545			
NORTHAMPTON	310	1°	151					4925	1548	1600			
	309	181°	154					4910	1604	1617			
	308	1°	152					4915	1620	1632			
	307	181°	147										
STATUS	TOTAL LINES	FLYLN	LEFT	AIRCRAFT SITE	FERRY	STATIC START	STATIC STOP	NOTES: ALSO USED HAMP COR					
○				KBAF	N/A	5 min	10:30 12:55						
○						WX HAZE + BUFFING							
○						L.P.							

AERO-METRIC, INC. N.8216 Resource Drive Sheboygan Falls, WI. 53085 PHONE: 920-467-2655 FAX: 888-253-6695 E-Mail: amphoto@aerometric.com

Base Station Log



Station Occupation Report For Airborne GPS

Project: USGS MA-ME LIDAR

Location: KBAF Project Number: 26258

Completed by: M AUST Date: 5-3-15

Receiver: TRIMBLE R7

Receiver Type: _____

Antenna Type: _____

Station ID: SET POINT

Start -- H.I. (m): 2m

End -- H.I. (m): 2m

H.I. (ft): _____

Start Time: 7:00A

End Time: 1:00P

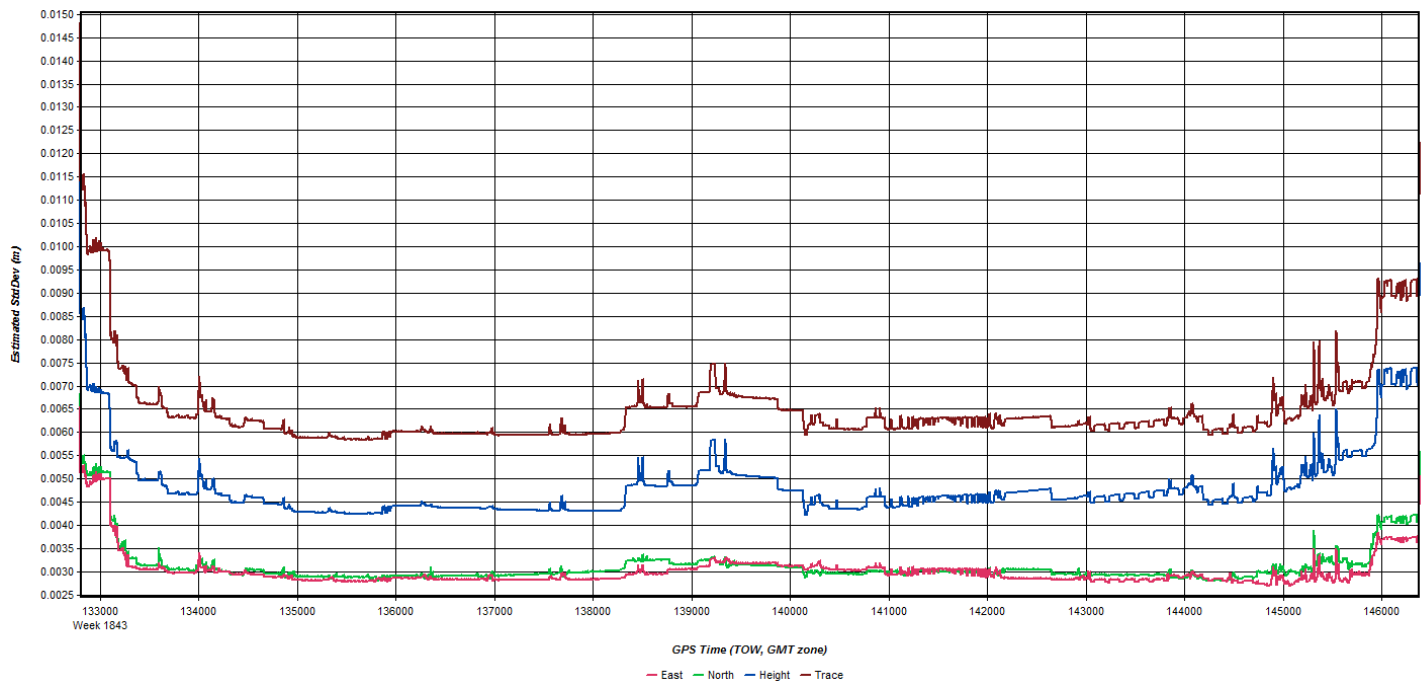
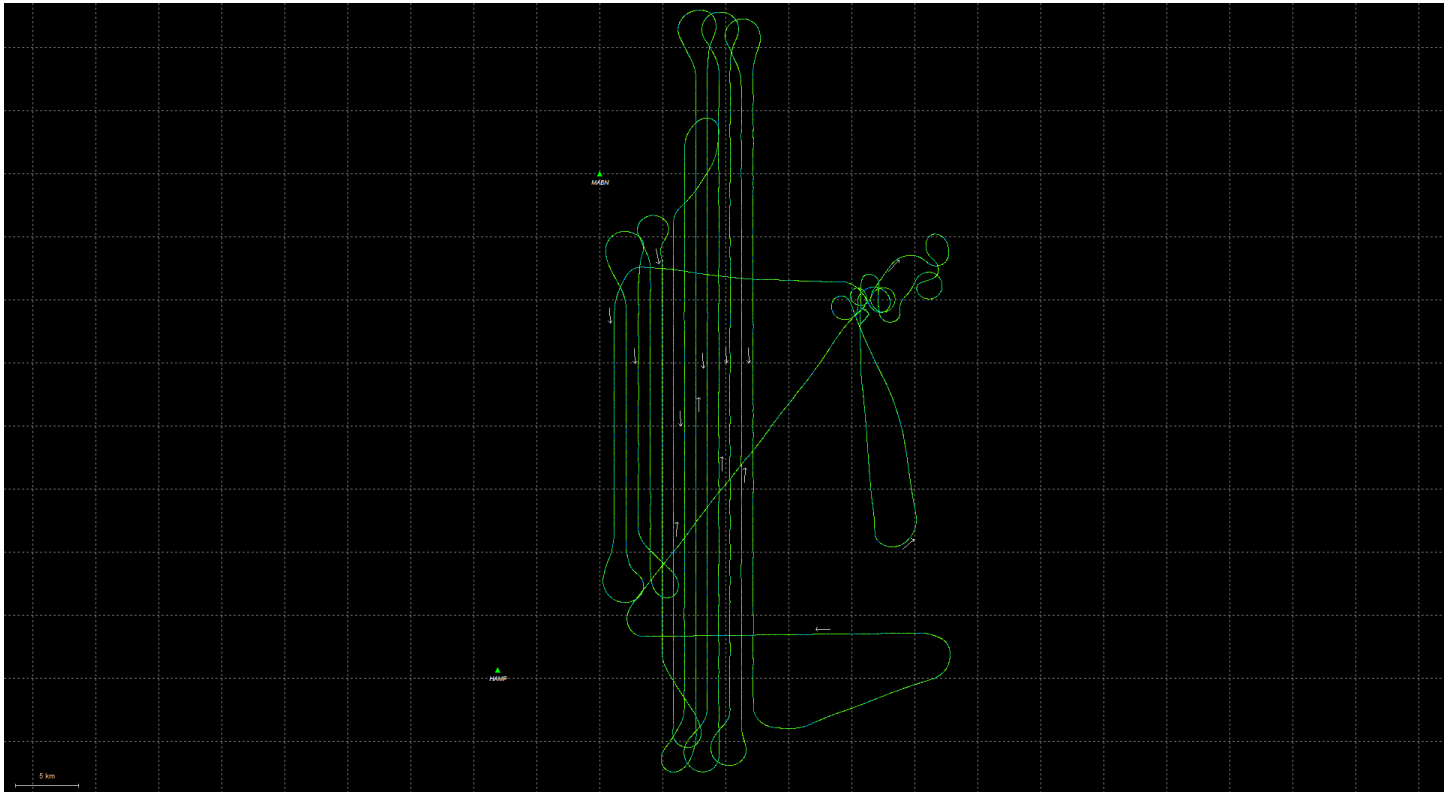
Time Zone: EST

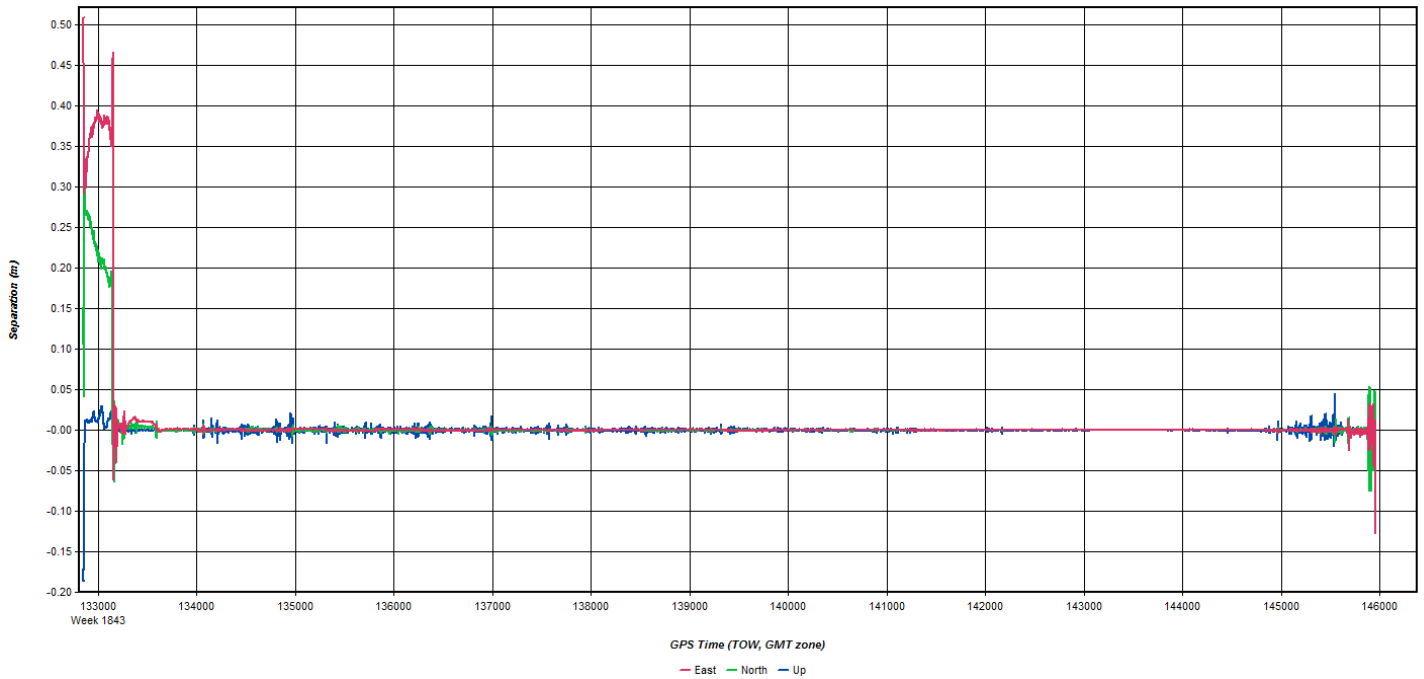
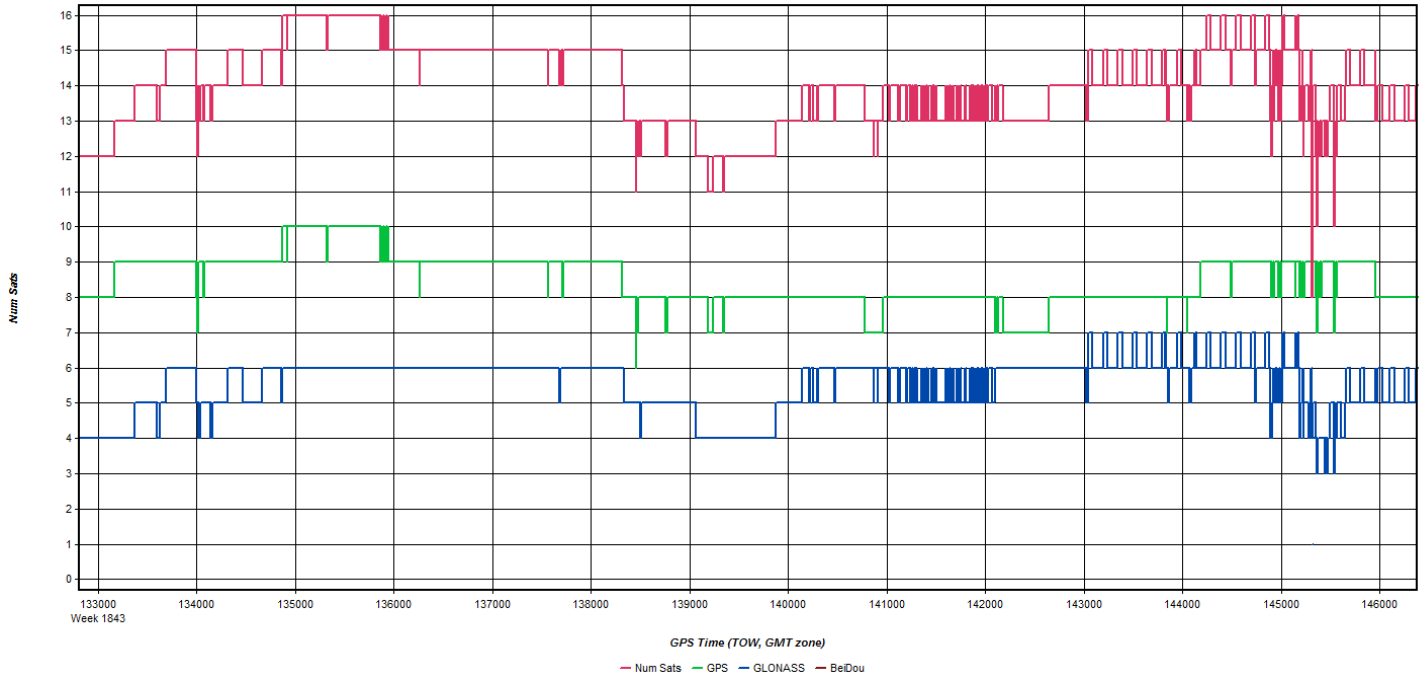
Operator: M AUST

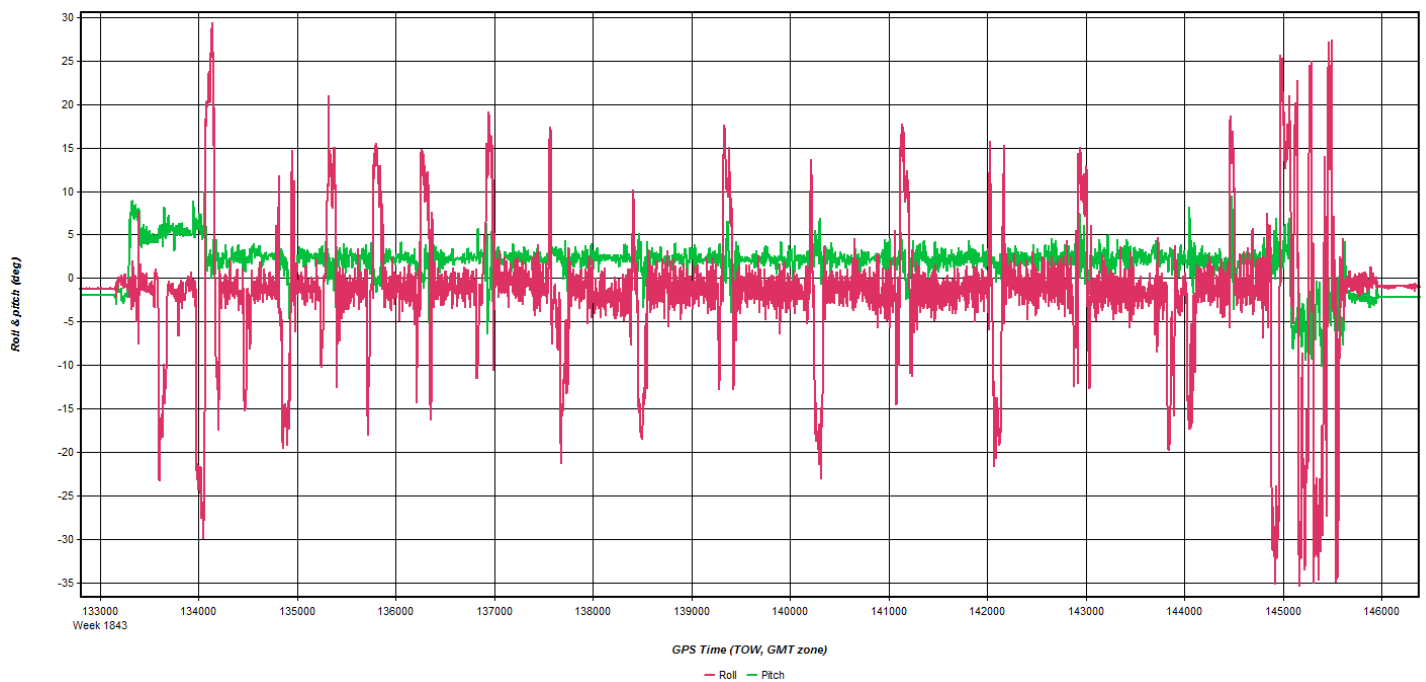
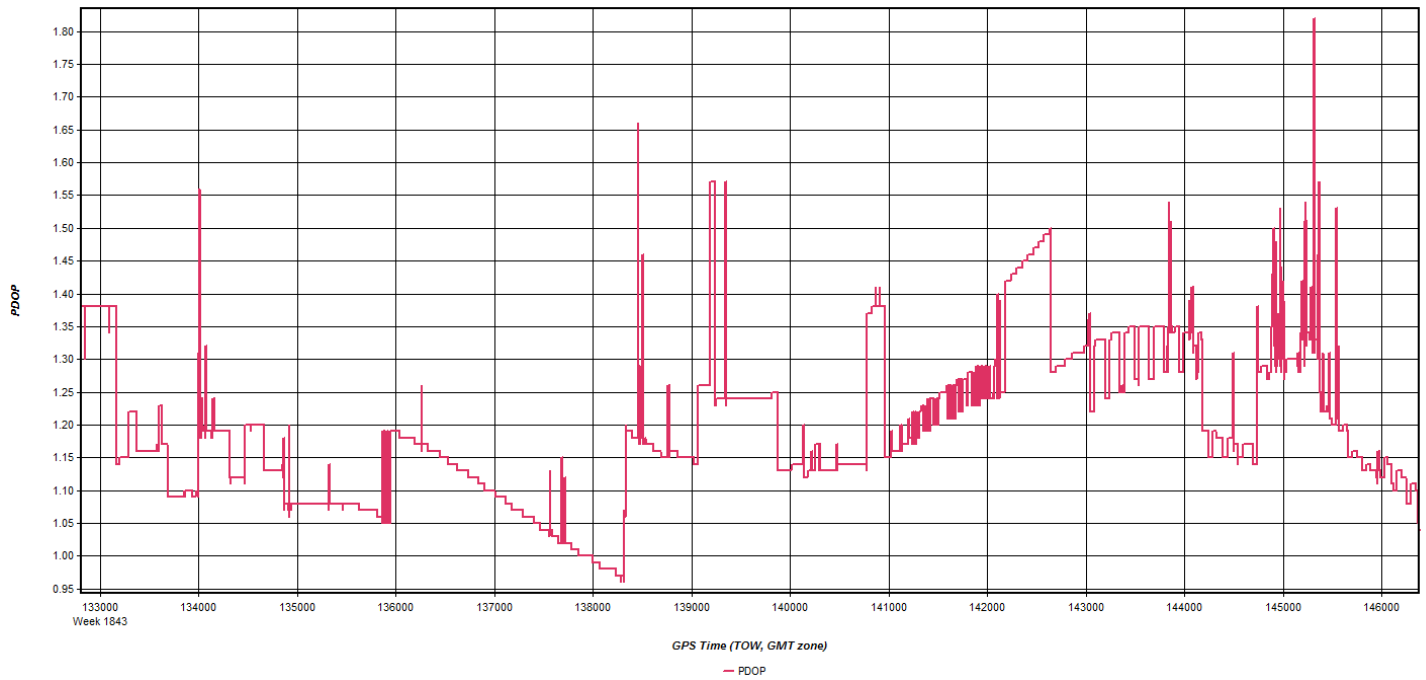


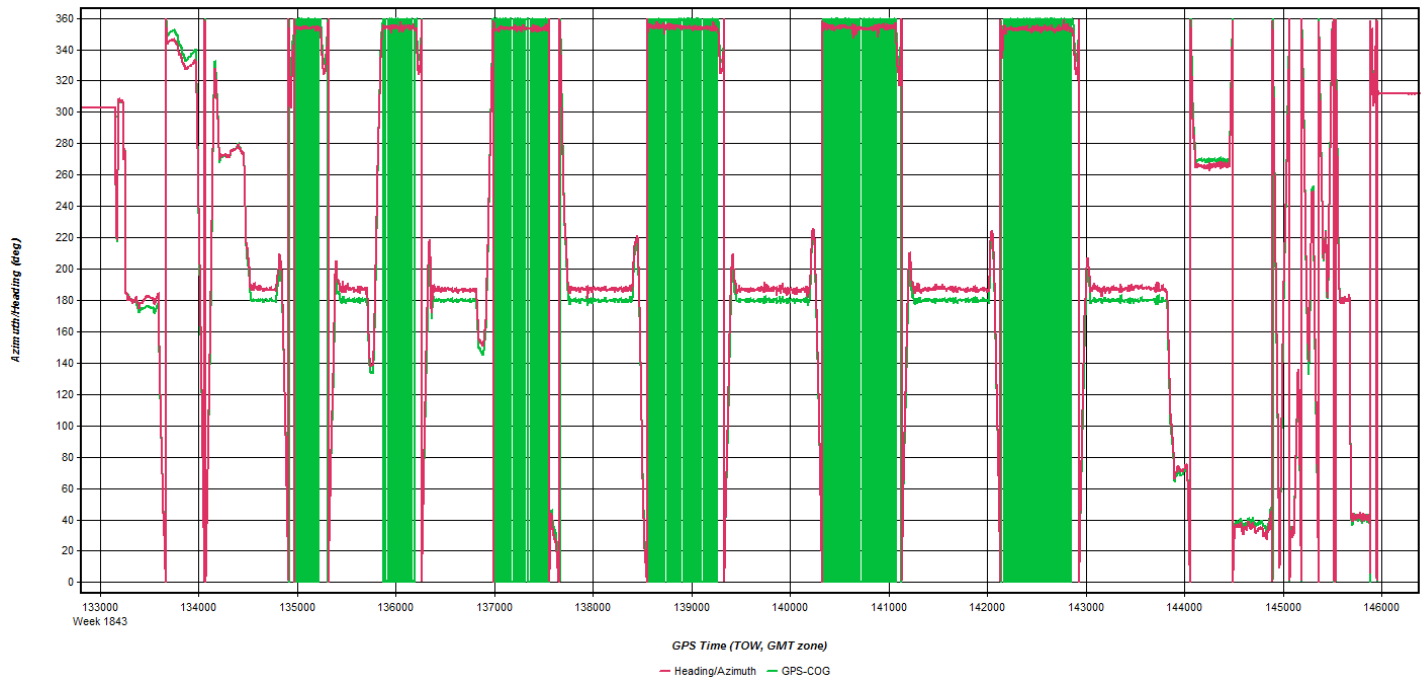
Comments SET POINT @ KBAF

May 4, 2015-A (N775MW, SN7123)









Coordinate/Antenna Settings [?] [X]

Master Remote

Base Station
 2: HAMP Name: HAMP Disabled
 File: E:\Proc\26258_USGS_MA_Northampton\HGST\15129_Quantum

Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
1: MABN Name: MABN Disabled
File: E:\Proc\26258_USGS_MA_Northampton\HGST\15129_Quantum

Coordinates
Latitude: North 42 40 11.99113
Longitude: West 72 32 28.64375
Ellipsoidal height: 94.890 m
Datum: NAD83(2011)

Antenna Height
From station file: LEIAX1203+GNSS, NONE
Antenna profile: LEIAX1203+GNSS
Measured height: 0.000 m
ARP to L1 offset: 0.058 m
Applied height: 0.058 m
Measured to:
 ARP
 L1 Phase Centre

Flight Log

atlantic			Project # 15129			Tail Number: N775MW			Level Arm										
Flight plan name: Quantum_KORE			Location: KORE			Sensor SN 7123			GPS										
Operator: Huey			Pilot: Shelden			Weather: CALM - 105M - CLR			IMU										
Sensor: ALS70			Hobbs Time Start: 3541.5			Base Station: SET1			TZ										
Hobbs Time Stop: 3545.4			Pre-Static: 12:53 - 12:58			14C - 30.20			1.49										
Post-Static: 16:32 - 16:37			Fwd Lap:			ARP			1.43										
Side Lap:			Exp			# NUM1			0.00										
Line/DIR	Start	End	Air Speed	Alt(ft)	# Exp	Light Values	GB Size	Comments or errors while online:											
1	194	13:22	13:26	127	7015														
2	14	13:29	13:33	137	6963														
3	194	13:37	13:41	134	7006														
4	14	13:44	13:49	135	6992														
5	194	13:52	13:59	134	6924														
6	14	14:03	14:12	136	6967														
7	194	14:16	14:26	133	6970														
8	14	14:29	14:40	138	7015														
9	194	14:44	14:56	130	6973														
10	14	14:59	15:10	141	7071														
11	194	15:14	15:26	127	7134														
12	14	15:29	15:40	139	7247														
13	194	15:44	15:56	129	7227														
31	284	16:02	16:07	123	6968														

2433 Drake Avenue SW, Suite 200, Huntsville, AL 35895-2433 www.quantumspatial.com

May 4, 2015-A (N1107Q, SN7108)

Flight Log

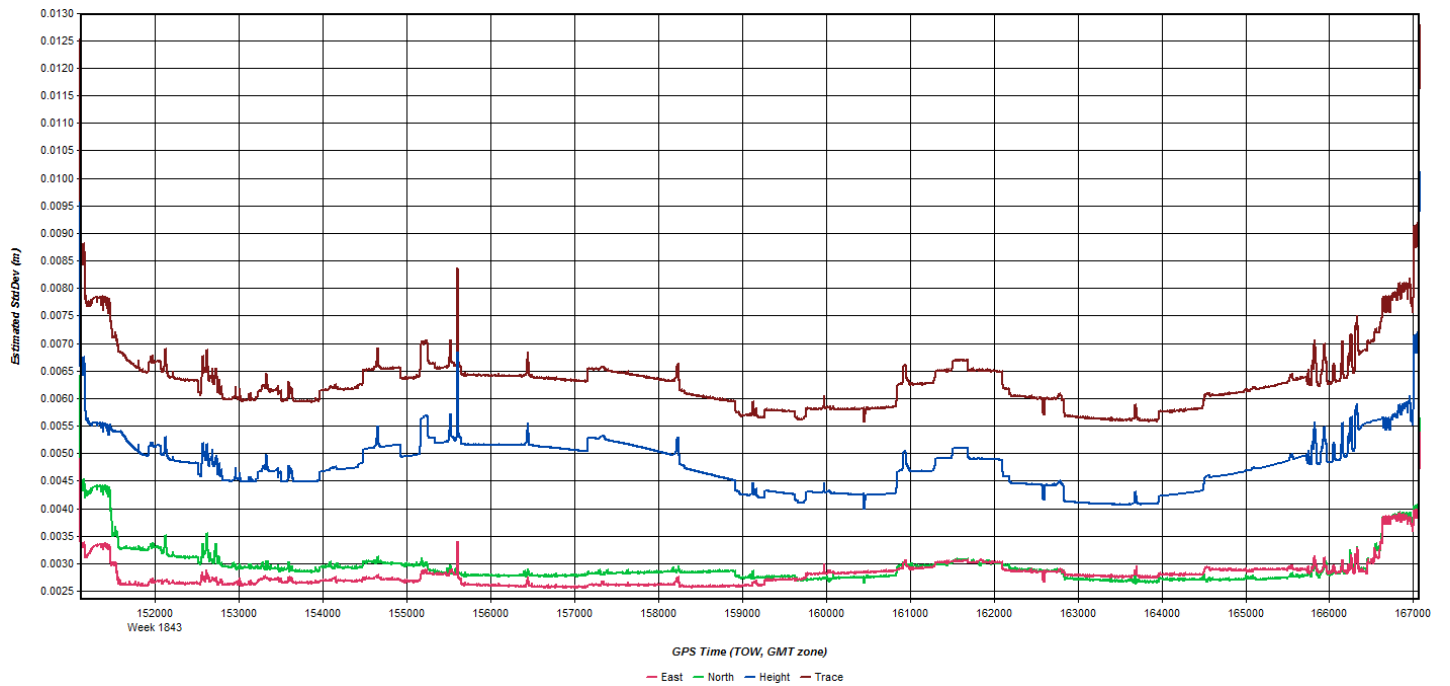
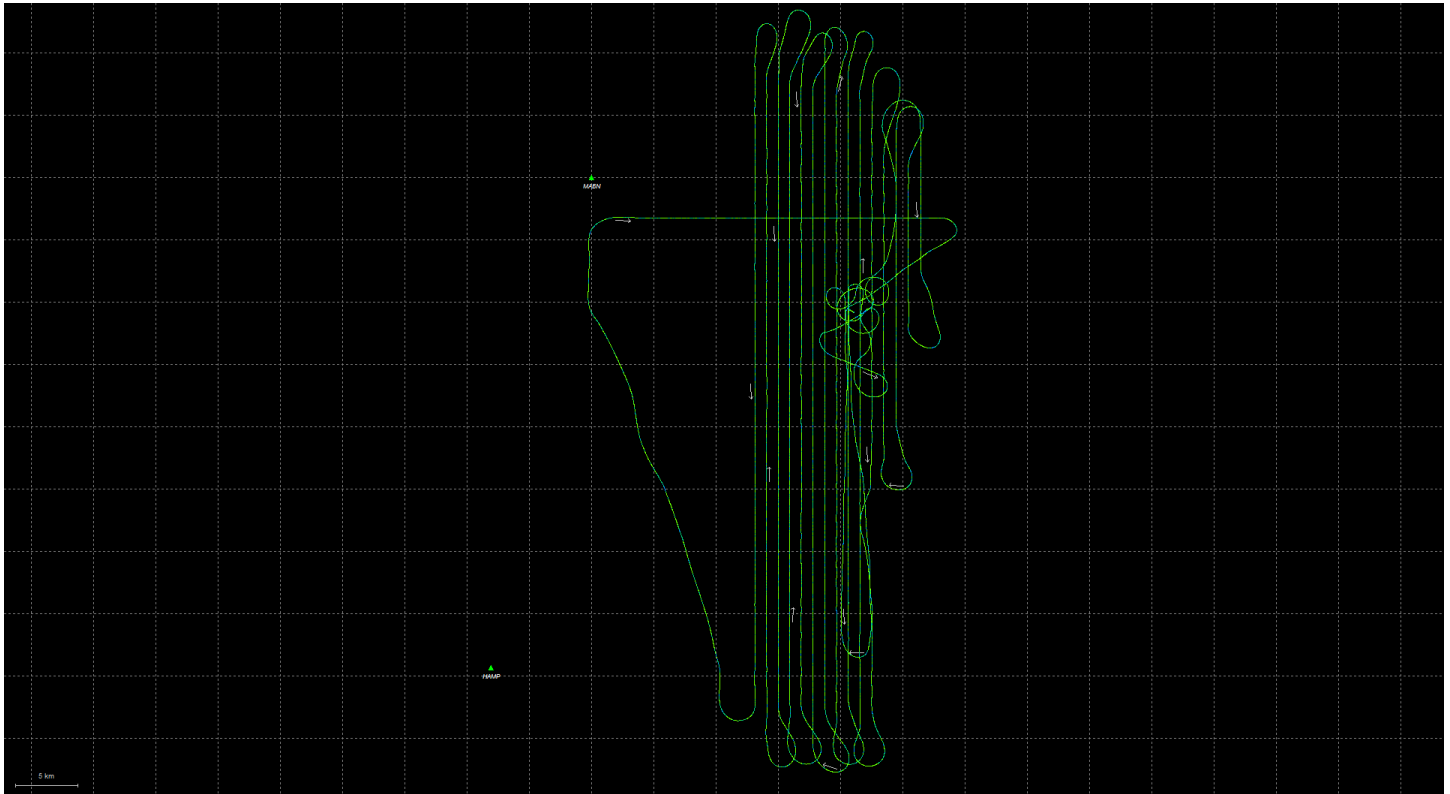
WOOLPERT FLIGHT LOG SHEET #1													
Leica ALS-70		MM/DD/YYYY		Day of Year		Mission Name / Job #							
		5/4/2015		124		Pittsfield North 75500 Flt 1							
Operator		Aircraft		Sensor		Hobbs Start		Local Start Time		Zulu Start Time			
Annen		N475RC N404CP N7079F N475CP N1107Q		SH-7177 SH-6157 SH-7108		2701.2		7:40		11:40			
Pilot						Hobbs End		Local End Time		Zulu End Time			
Larocque						2705		11:40		15:40			
Passengers		Using or Relying on CORS				GPS Base #1		Operator		PID			
		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						Annen		KPSF			
						GPS Base #2		Operator		PID			
Wind Dir/Speed	Visibility	Ceiling	Cloud Cover %	Temp	Dew Point	Pressure	Haze/Fine/Cloud		Departing ICAO				
Calm	10	0	0	11	7	30.19			KPSF				
Scan Angle (FOV)			Scan Frequency (Hz)		Pulse Rate (kHz)		Laser Power %		Gain		Mode		
40			41		272		100		Course/Up Fine/Down		Single <input type="checkbox"/> 2+2 <input type="checkbox"/> Multi <input type="checkbox"/> 4+3 <input type="checkbox"/>		
Air Speed		AGL		MSL		Threshold		Waveform Mode		Pre-Trigger Dist.			
150 Kts		7,100 Ft		7,100 Ft		/		@ NS		Ft			
Line #	Dir.	Line Start Time	Line End Time	Time On Line	SV's	HDOP	PDOP	Line Notes/Comments					
Test	n/a			n/a	n/a	n/a	n/a	GPS Began Logging At:					
↓ Times entered are Zulu / GMT ↓								Verify S-Turns Before Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
59	N	12:02:00	12:03:00		17	0.6	1.1	Flown at 8,800'					
58	S	12:06:00	12:08:00					"					
57	N	14:01:00	12:13:00					"					
56	S	12:16:00	12:18:00										
37	S	12:24:00	12:33:00					Flown at planned alt.					
36	N	12:36:00	12:45:00										
35	S	12:48:00	12:58:00										
34	N	13:01:00	13:10:00										
33	S	13:13:00	13:22:00										
32	N	13:25:00	13:34:00										
31	S	13:37:00	13:46:00										
30	N	13:49:00	13:58:00										
29	S	14:02:00	14:11:00										
28	N	14:14:00	14:23:00										
27	S	14:27:00	14:36:00										
26	N	14:39:00	14:48:00										
25	S	14:51:00	15:01:00										
24	N	15:03:00	15:13:00										
23	S	15:16:00	15:26:00										
↑ Times entered are Zulu / GMT ↑								0:00:00		Total Time On Line		Verify S-Turns After Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Additional Comments:										System worked well, no issues.		Drive #	

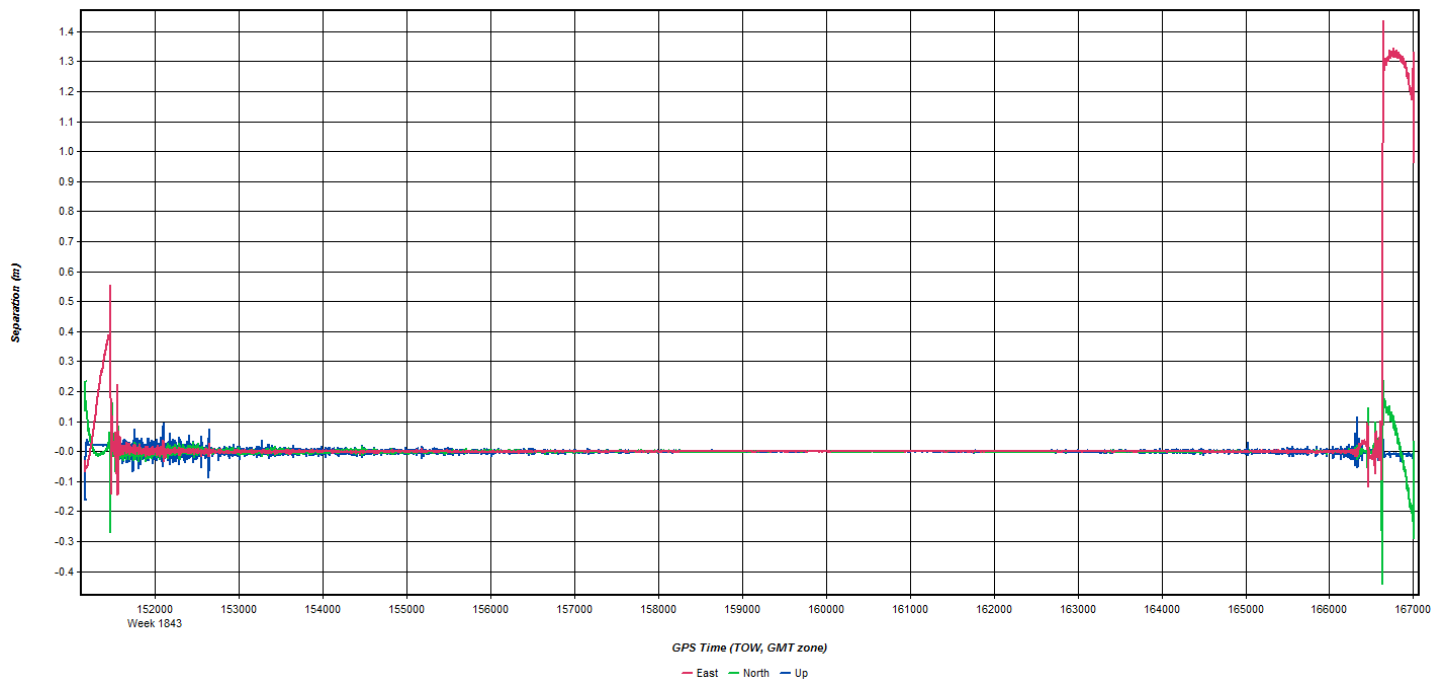
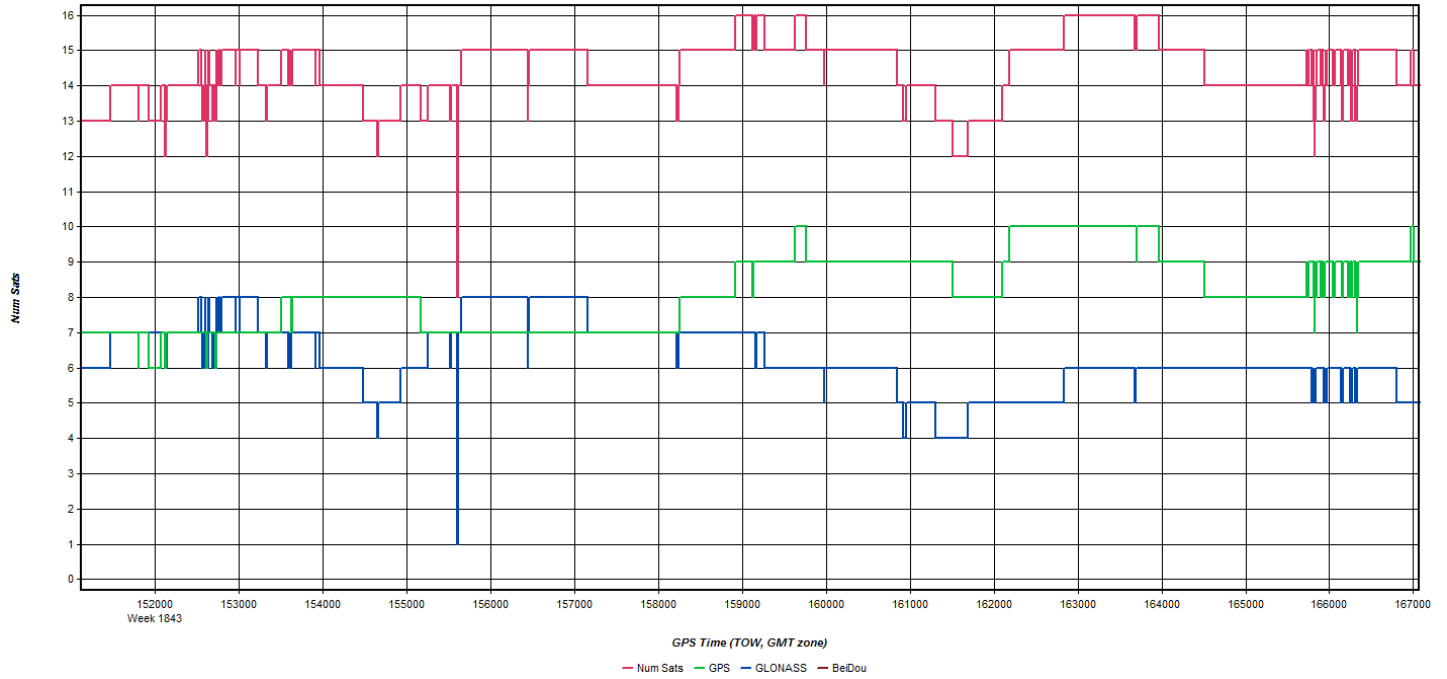
May 4, 2015-B (N1107Q, SN7108)

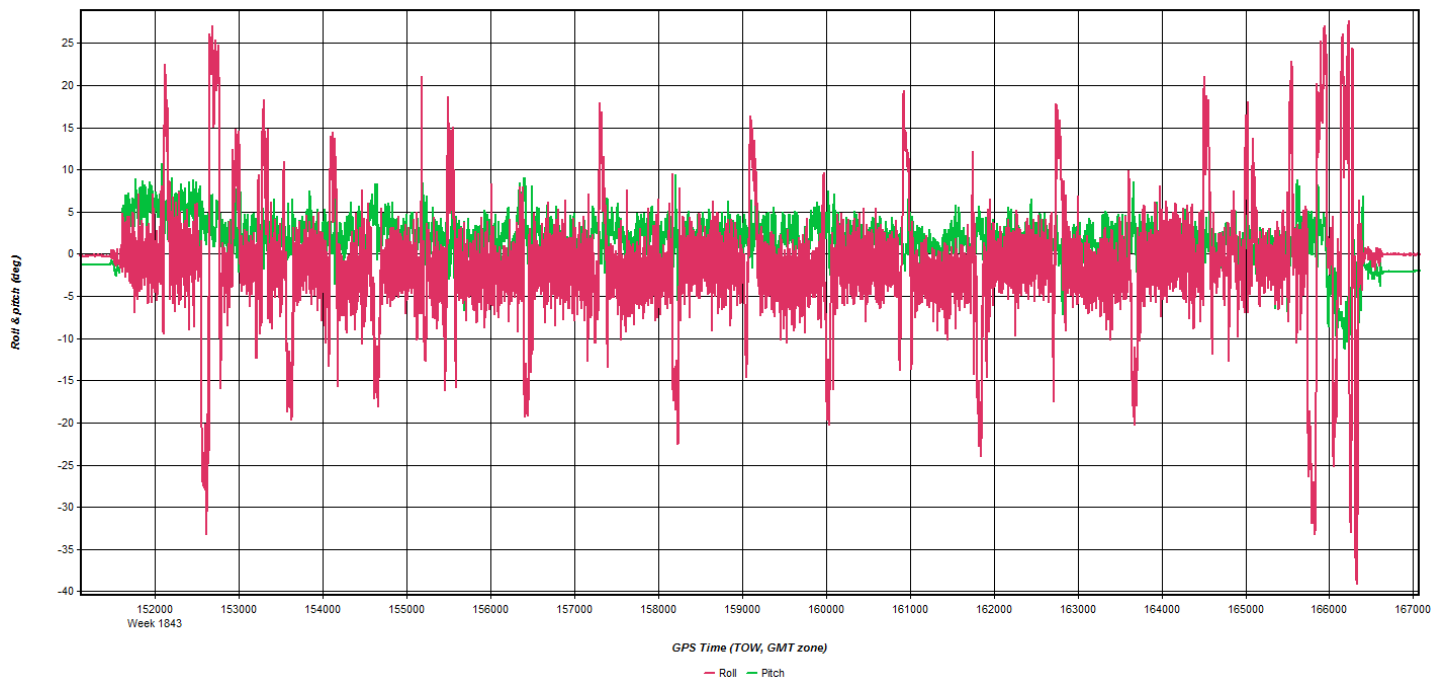
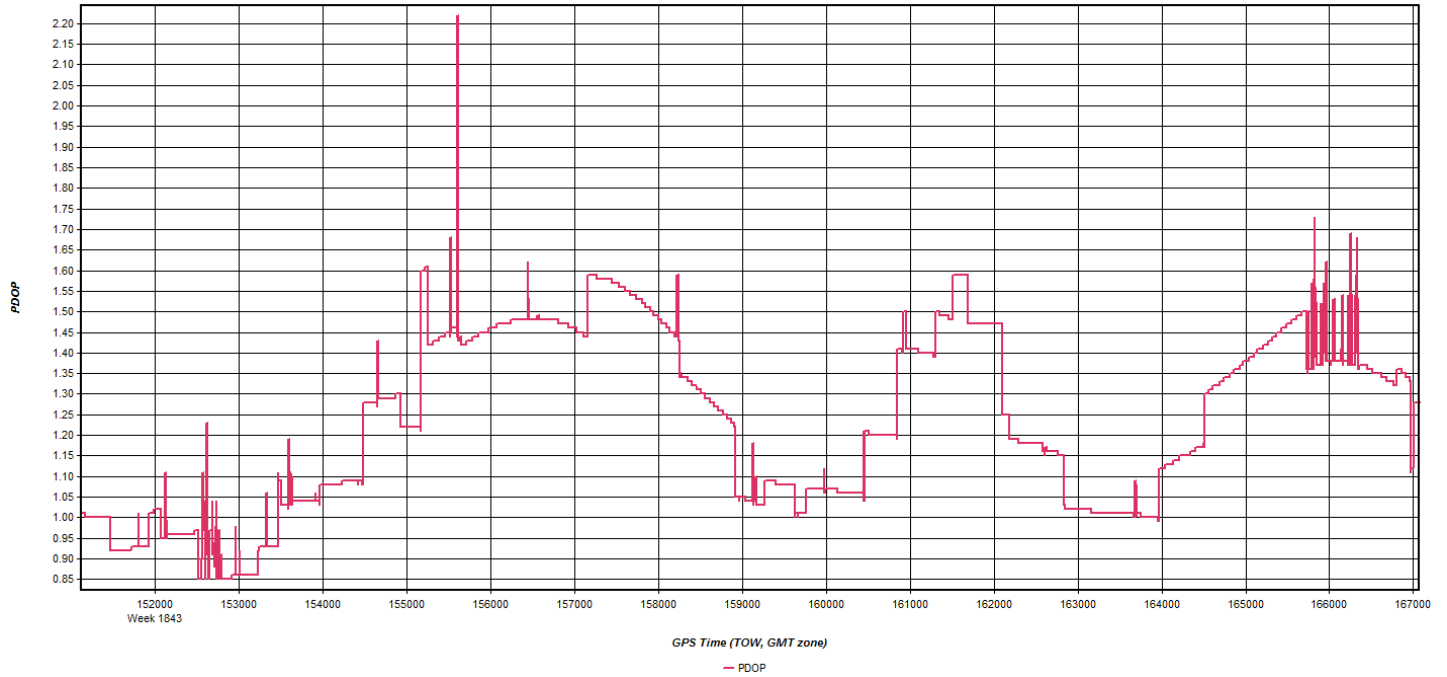
Flight Log

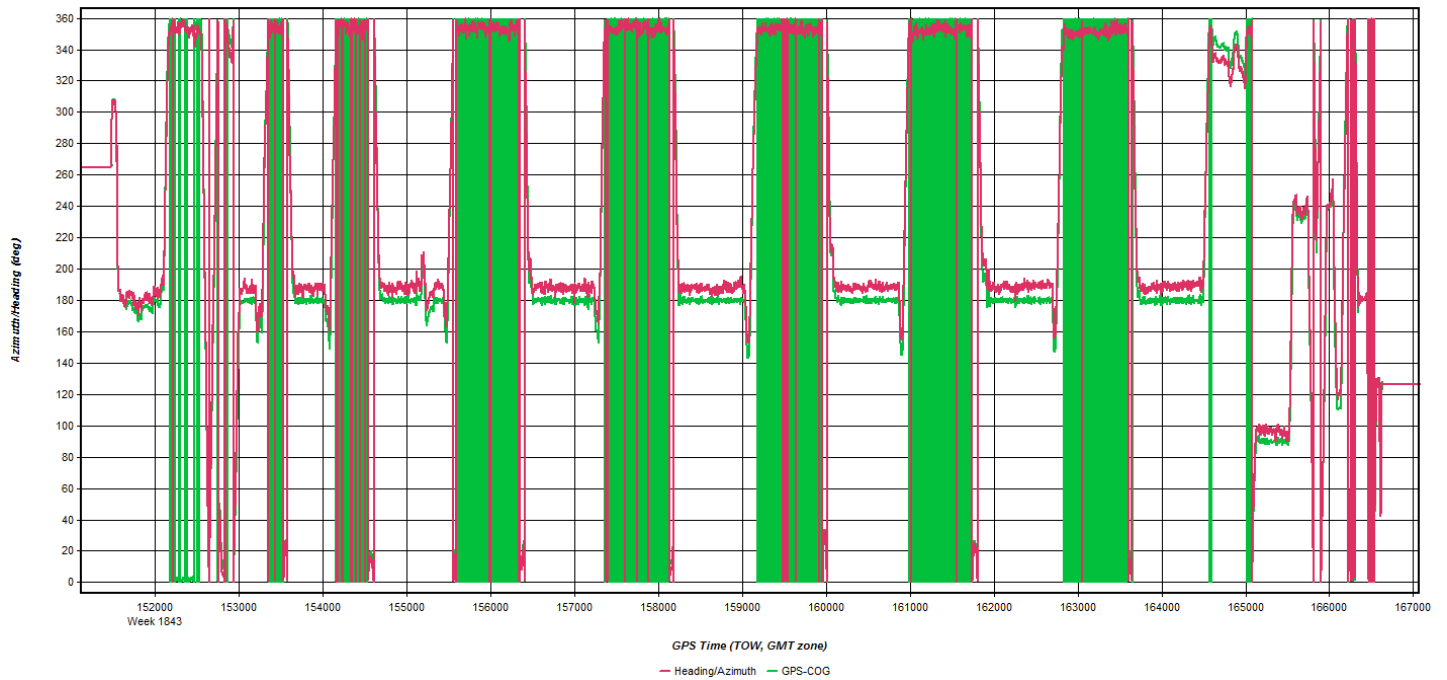
WOOLPERT FLIGHT LOG SHEET #1													
Leica ALS-70			MM/DD/YYYY		Day of Year		Mission Name / Job #						
			5/4/2015		124		Pittsfield North 75500 Flt 2						
Operator Annen			Aircraft		Sensor		Hobbs Start		Local Start Time		Zulu Start Time		
Pilot Larocque			N475RC N404CP N7079F N475CP N1107Q		SH-7177 SH-6157 SH-7108		2701.2		12:30		16:30		
Passengers			Using or Relying on CORS		GPS Base #1		Operator		Annen		PID		
			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		GPS Base #2		Operator				PID		
Wind Dir/Speed		Visibility	Ceiling	Cloud Cover %	Temp	Dew Point	Pressure		Haze/Fine/Cloud		Departing ICAO		
250/11		10	8k	70	26	3	30.15				KPSF		
Scan Angle (FOV)		Scan Frequency (Hz)		Pulse Rate (kHz)		Laser Power %		Gain		Mode			
40		41		272		100		Course/Up Fine/Down		Single <input type="checkbox"/> 2+2 <input type="checkbox"/> Multi <input type="checkbox"/> 4+3 <input type="checkbox"/>			
Air Speed		AGL		MSL		Threshold		Waveform Mode		Pre-Trigger Dist.			
150 Kts		7,100 Ft		7,100 Ft		/		@ NS		Ft			
Line #	Dir.	Line Start Time	Line End Time	Time On Line	SV's	HDOP	PDOP	Line Notes/Comments					
Test	n/a			n/a	n/a	n/a	n/a	GPS Began Logging At:					
↑ Times entered are Zulu / GMT ↓								Verify S-Turns Before Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
22	N	16:49:00	16:58:00		15	0.6	1.5						
21	S	17:01:00	17:11:00										
20	N	17:13:00	17:23:00										
19	S	17:26:00	17:36:00										
18	N	17:38:00	17:47:00										
↑ Times entered are Zulu / GMT ↑								0:00:00		Total Time On Line		Verify S-Turns After Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Additional Comments:										Drive #			
System worked well, no issues.													

May 4, 2015-B (N775MW, SN7123)









Coordinate/Antenna Settings [?] [X]

Master Remote

Base Station
 2: HAMP Name: HAMP Disabled
 File: E:\Proc\26258_USGS_MA_Northampton\HGST\15129_Quantum

Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
1: MABN Name: MABN Disabled
File: E:\Proc\26258_USGS_MA_Northampton\HGST\15129_Quantum

Coordinates
Latitude: North 42 40 11.99113
Longitude: West 72 32 28.64375
Ellipsoidal height: 94.890 m
Datum: NAD83(2011)

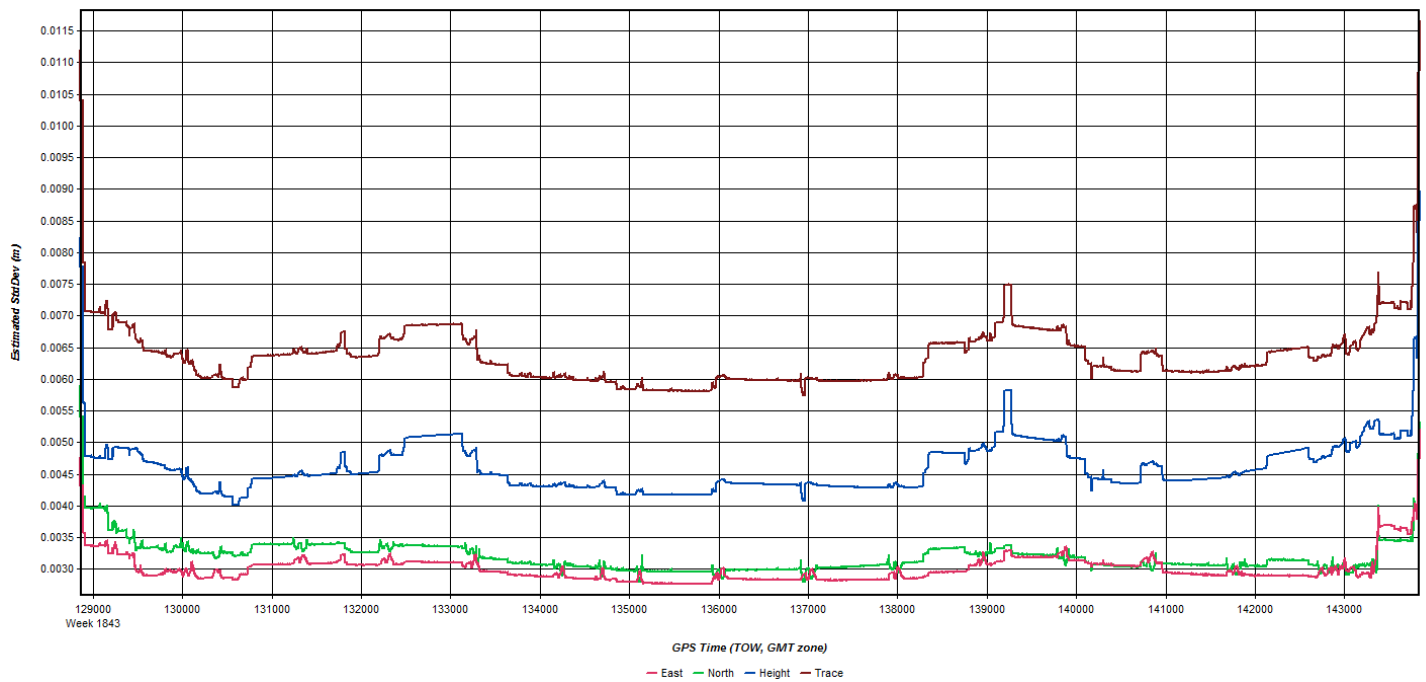
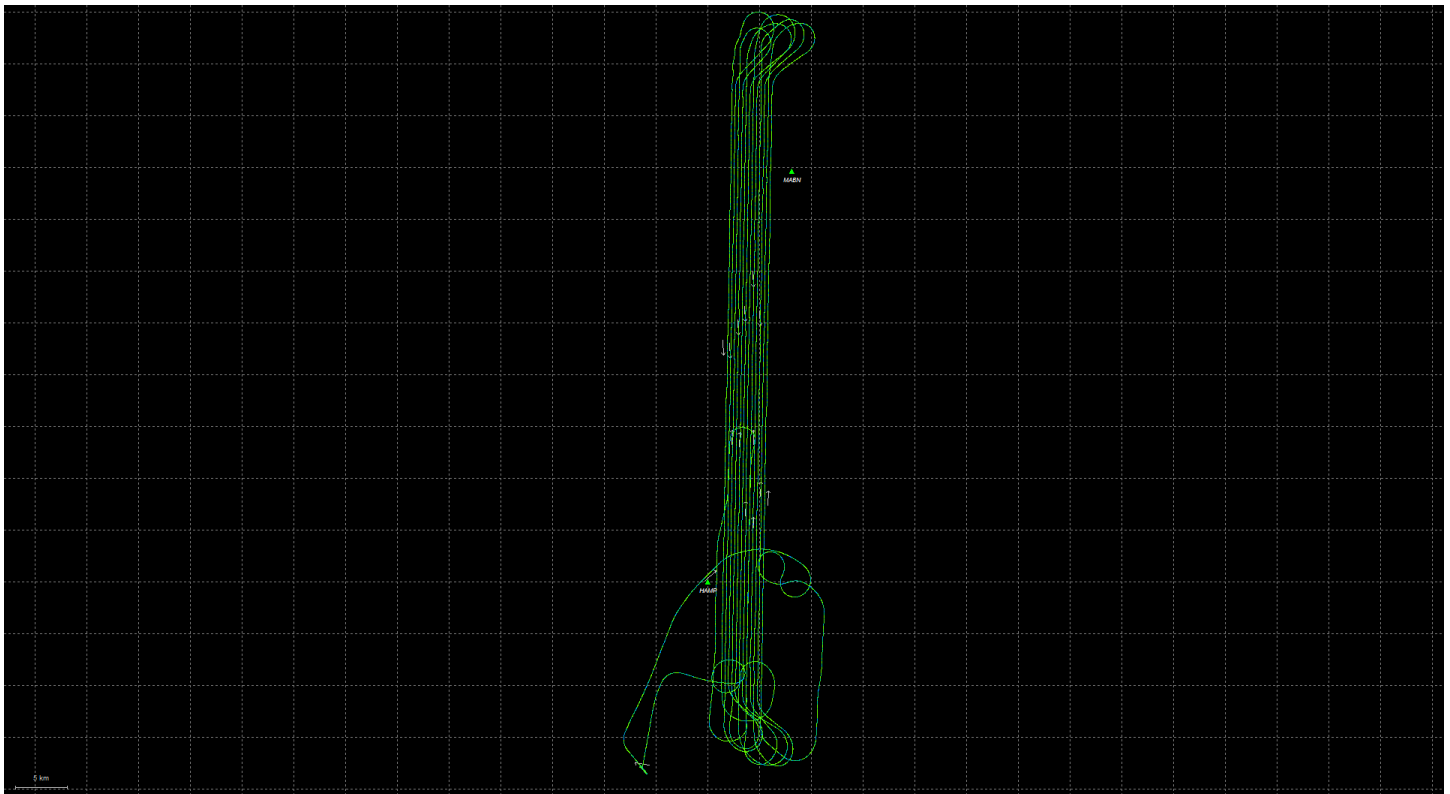
Antenna Height
From station file: LEIAX1203+GNSS, NONE
Antenna profile: LEIAX1203+GNSS
Measured height: 0.000 m
ARP to L1 offset: 0.058 m
Applied height: 0.058 m
Measured to:
 ARP
 L1 Phase Centre

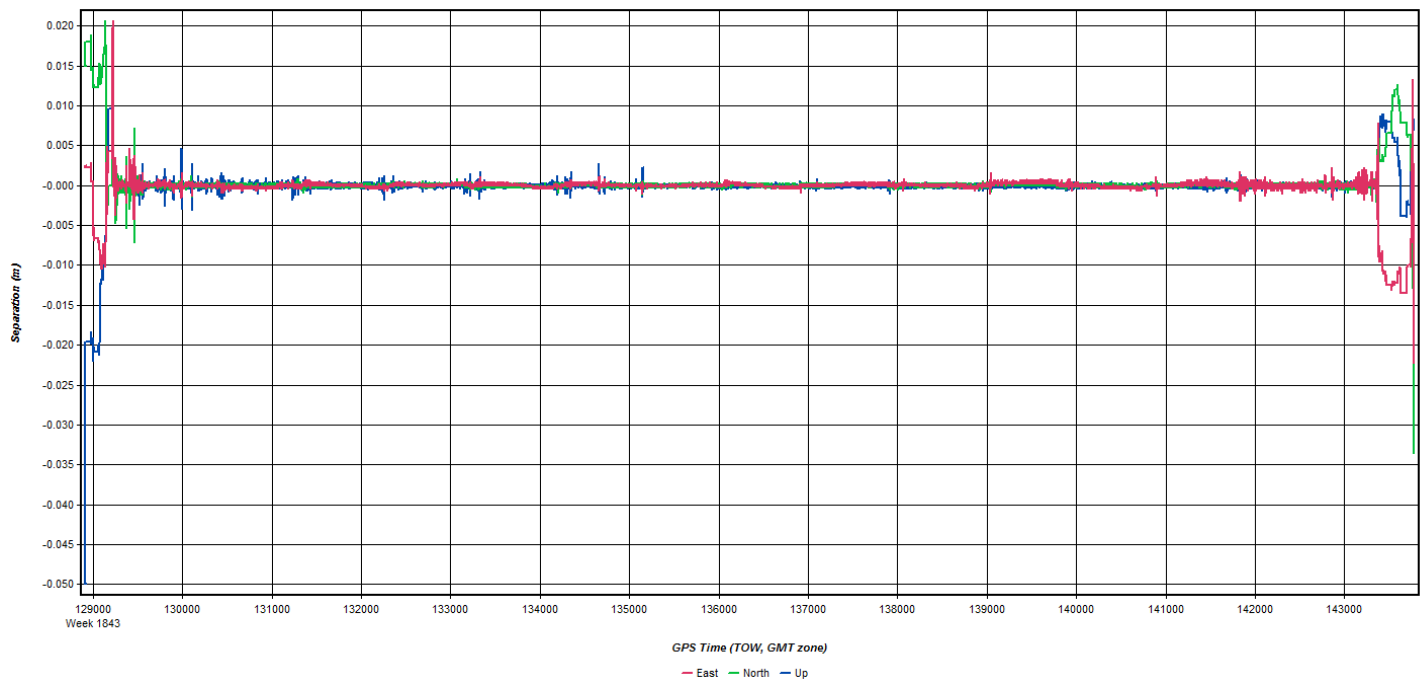
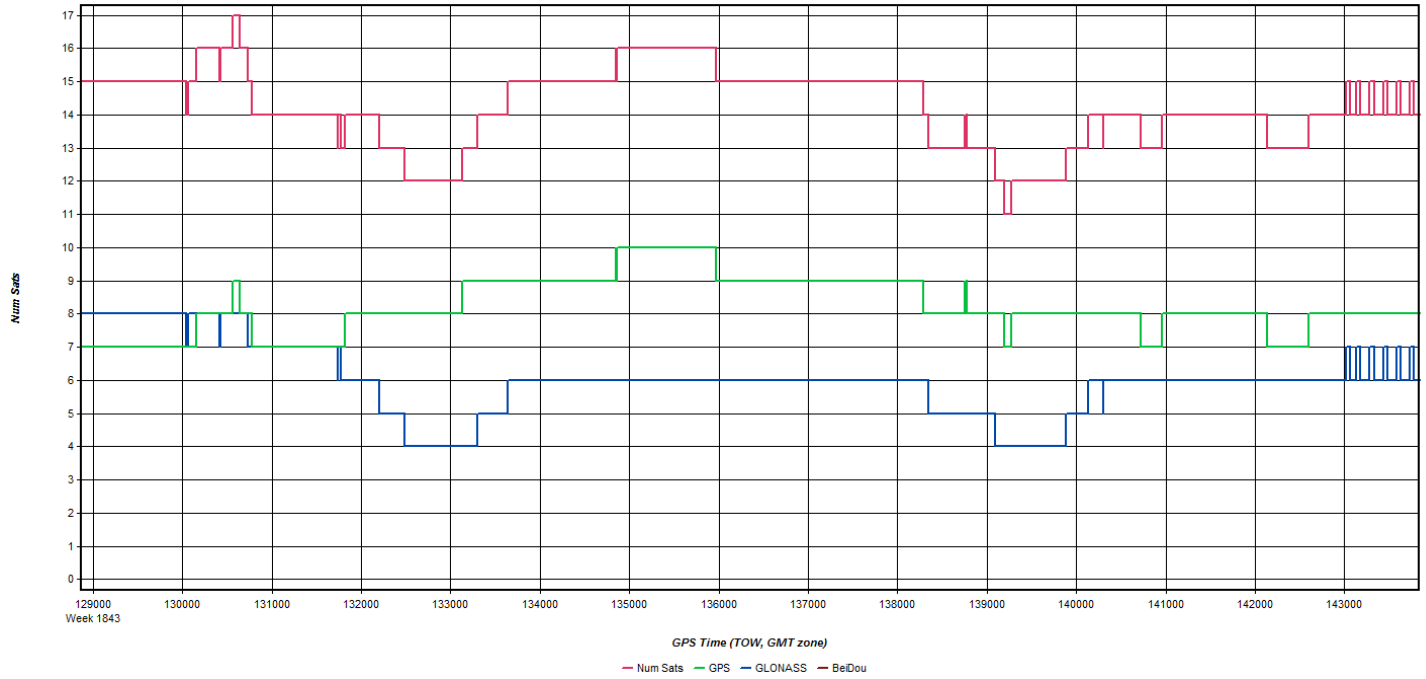
Flight Log

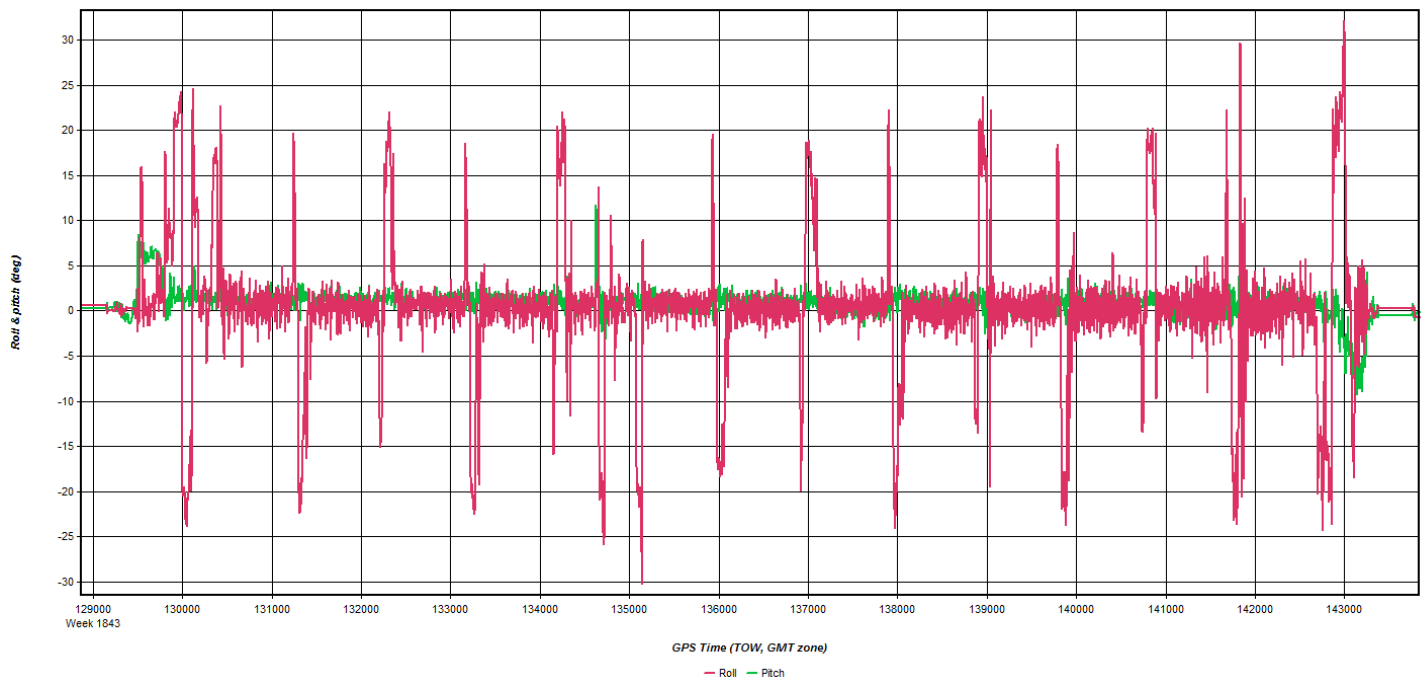
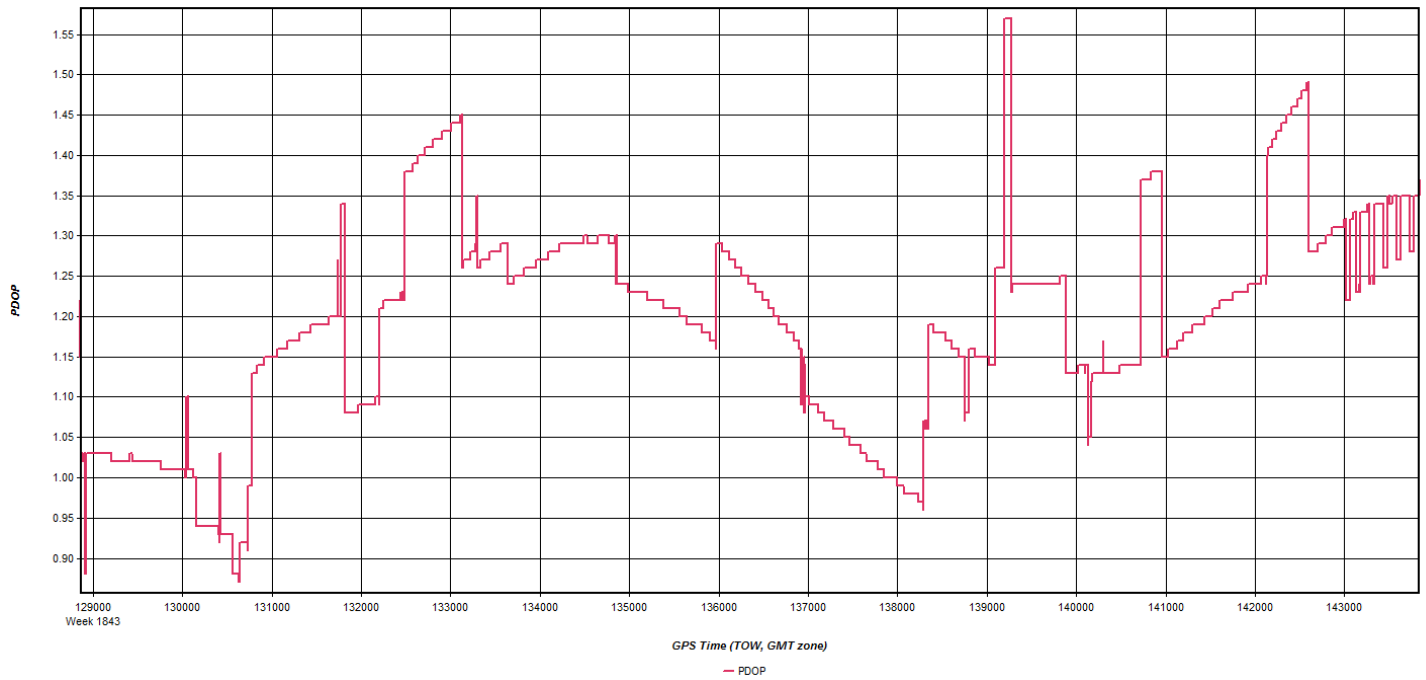
atlantic 2223 S Drake Ave., Suite 200 Huntsville, AL 35805 PH. (256) 971-9991 FX. (256) 971-1154		Project # 15129		Flight Plan name: Quantum_KORE		Tail Number: N775MW		Lever Arm		
		End	Air Speed	Alt(ft)	# Exp	Light Values	GB Size	X	Y	Z
Line/DIR	Start	End	Air Speed	Alt(ft)	# Exp	Light Values	GB Size	Comments or errors while online:		
29	194	18:31	18:33	119	7321					
28	14	18:36	18:38	134	7370					
27	194	18:41	18:46	118	7249					
26	14	18:49	18:55	132	7290					
25	194	18:58	19:05	130	7276					
24	194	19:08	19:10	133	7313					
23	14	19:13	19:25	128	7328					
22	194	19:28	19:40	129	7247					
21	14	19:43	19:55	127	7376					
20	194	19:58	20:10	132	7244					
19	14	20:13	20:25	130	7265					
18	194	20:28	20:40	138	7259					
17	14	20:43	20:55	128	7234					
16	194	20:59	21:11	129	7252					
15	14	21:14	21:26	130	7241					
14	194	21:29	21:41	135	7208					
30	104	21:52	21:58	120	6990					crossline

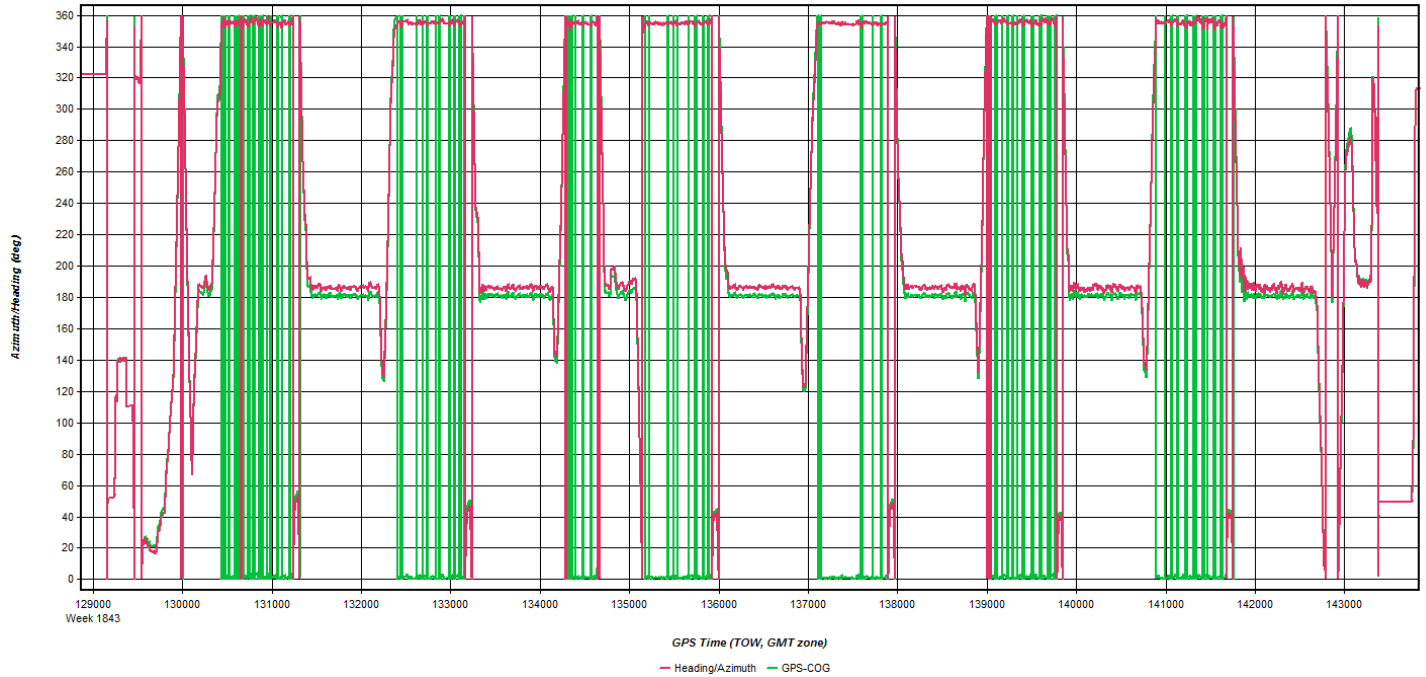
2223 S Drake Ave., Suite 200, Huntsville, AL 35805 - P. 256-971-9991 - www.quantumspatial.com

May 4, 2015-A (N262AS, SN7178)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: HAMP Name: HAMP Disabled
 File: E:\Proc\26258_USGS_MA_Northampton\CJY5\26258_20150504

Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
2: MABN Name: MABN Disabled
File: E:\Proc\26258_USGS_MA_Northampton\CJY5\26258_20150504

Coordinates
Latitude: North 42 40 11.99113 Compute from PPP
Longitude: West 72 32 28.64375 Enter Grid Values
Ellipsoidal height: 94.890 m Enter MSL Height
Datum: NAD83(2011) Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: LEIAX1203+GNSS, NONE View STA File
Antenna profile: LEIAX1203+GNSS Info
Measured height: 0.000 m
ARP to L1 offset: 0.058 m
Applied height: 0.058 m
Measured to:
 ARP
 L1 Phase Centre
Compute From Slant

OK Cancel

Base Station Log



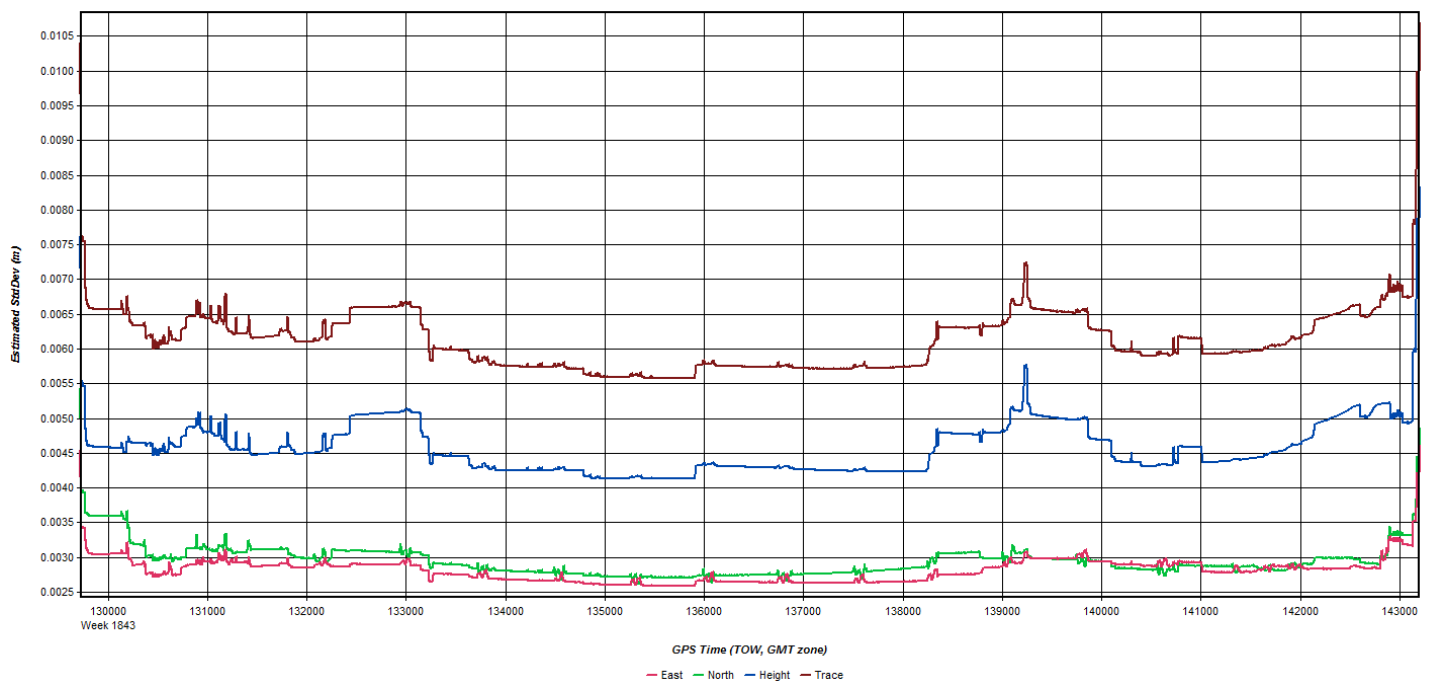
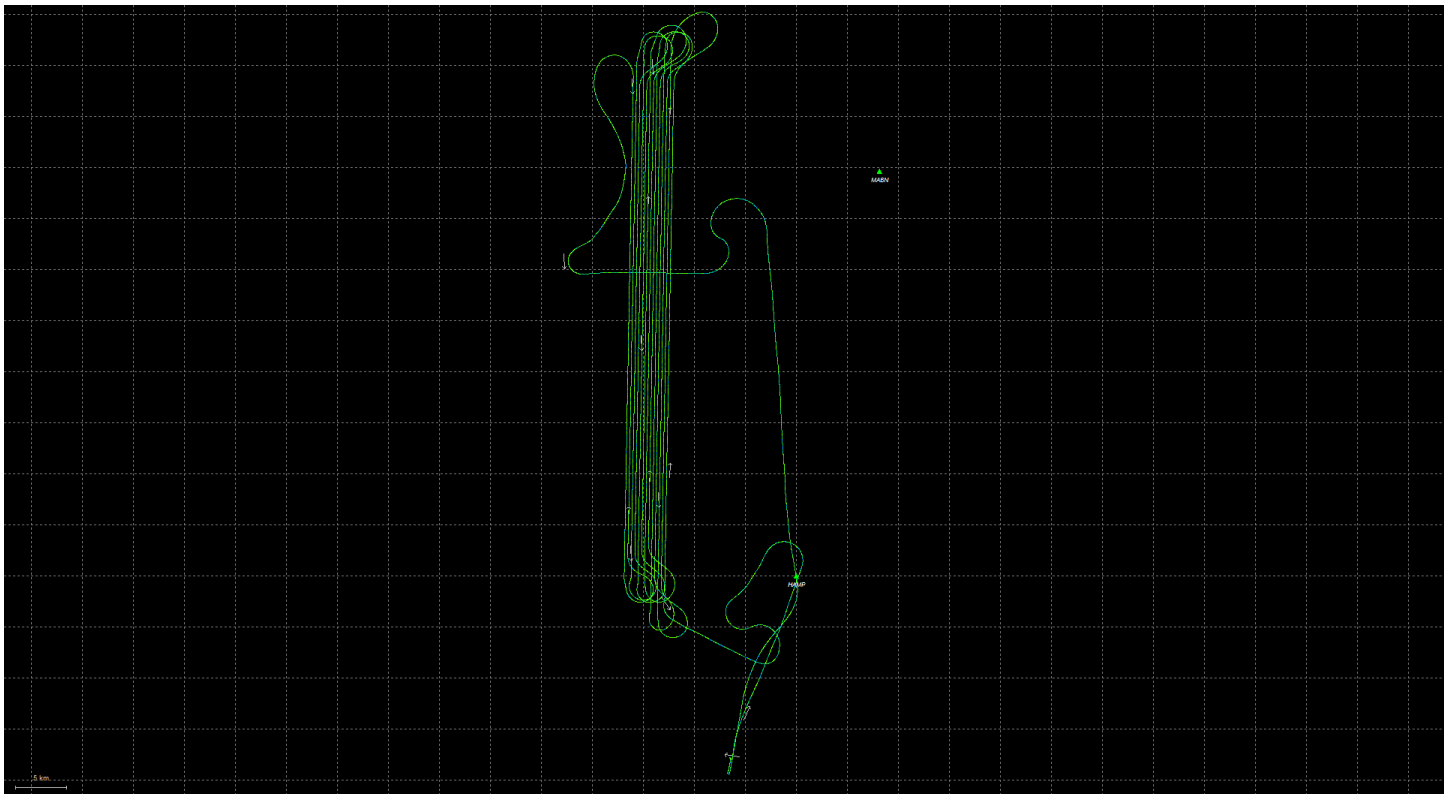
Station Occupation Report For Airborne GPS

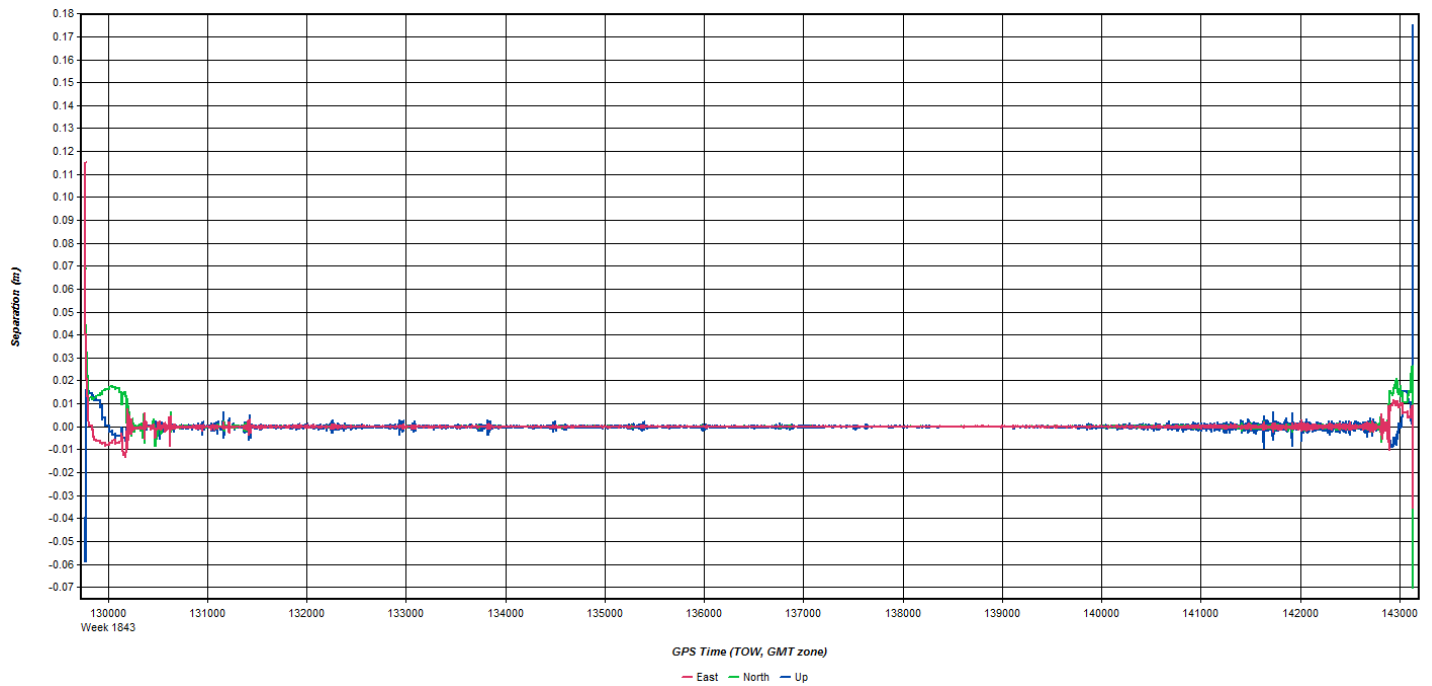
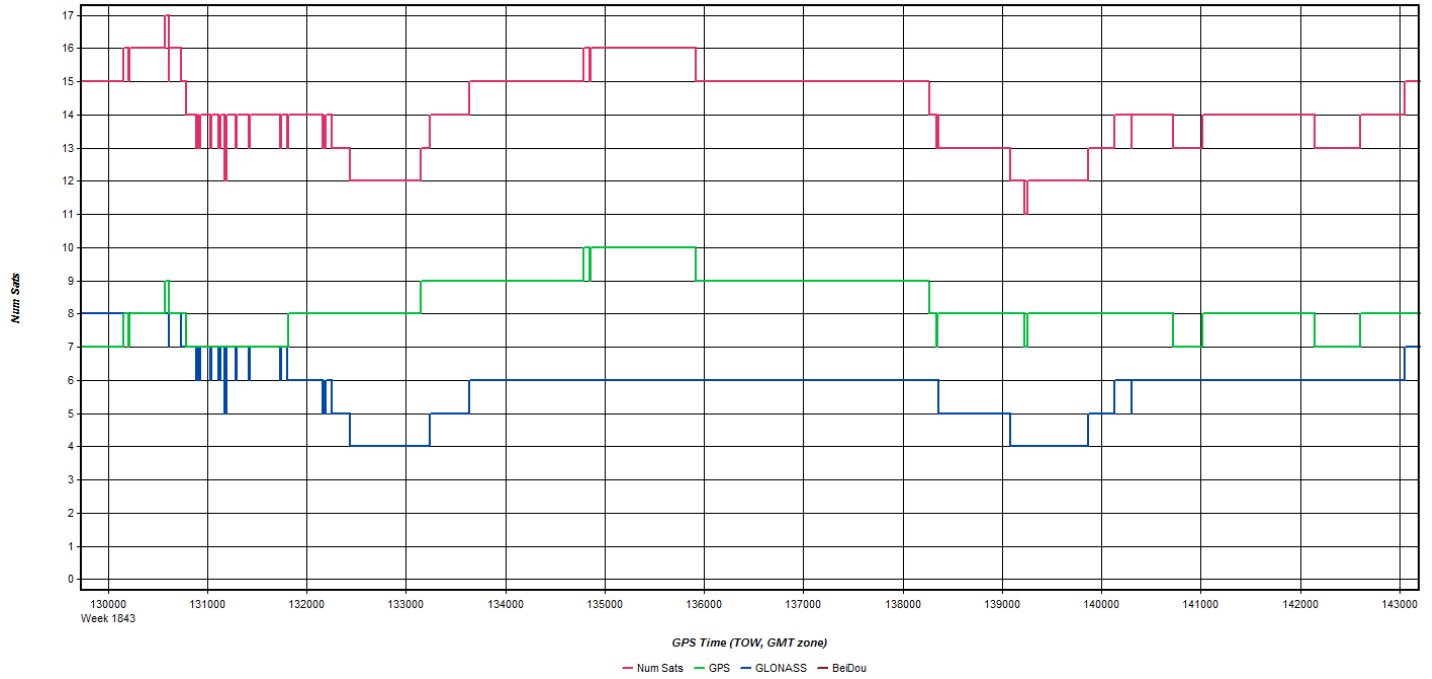
Project: USGS MA-ME LIDAR
Location: KBAF **Project Number:** 26258
Completed by: M. AUST **Date:** 5-4-15
Receiver: TRIMBLE R7
Receiver Type: _____
Antenna Type: _____
Station ID: SET POINT
Start -- H.I. (m): 2m
End -- H.I. (m): 2m
H.I. (ft): _____
Start Time: 7:15A
End Time: 12:10P
Time Zone: EST
Operator: M AUST

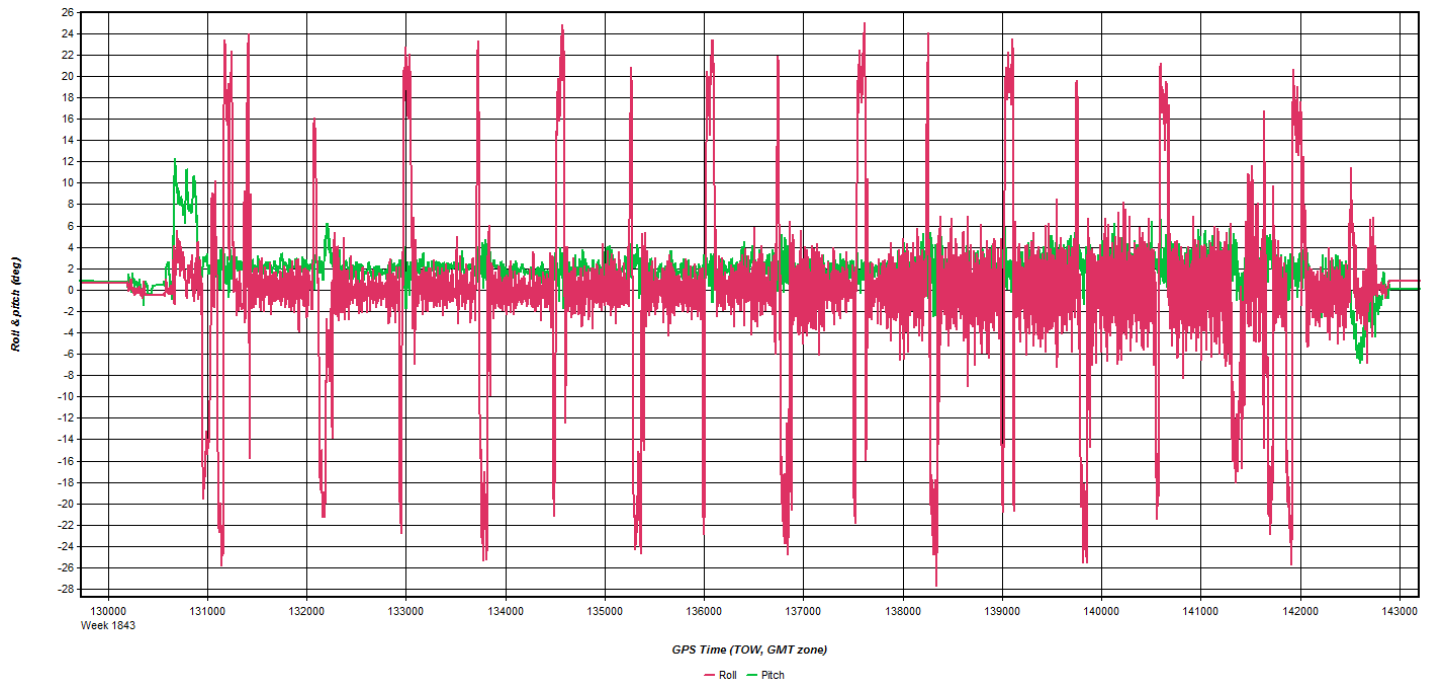
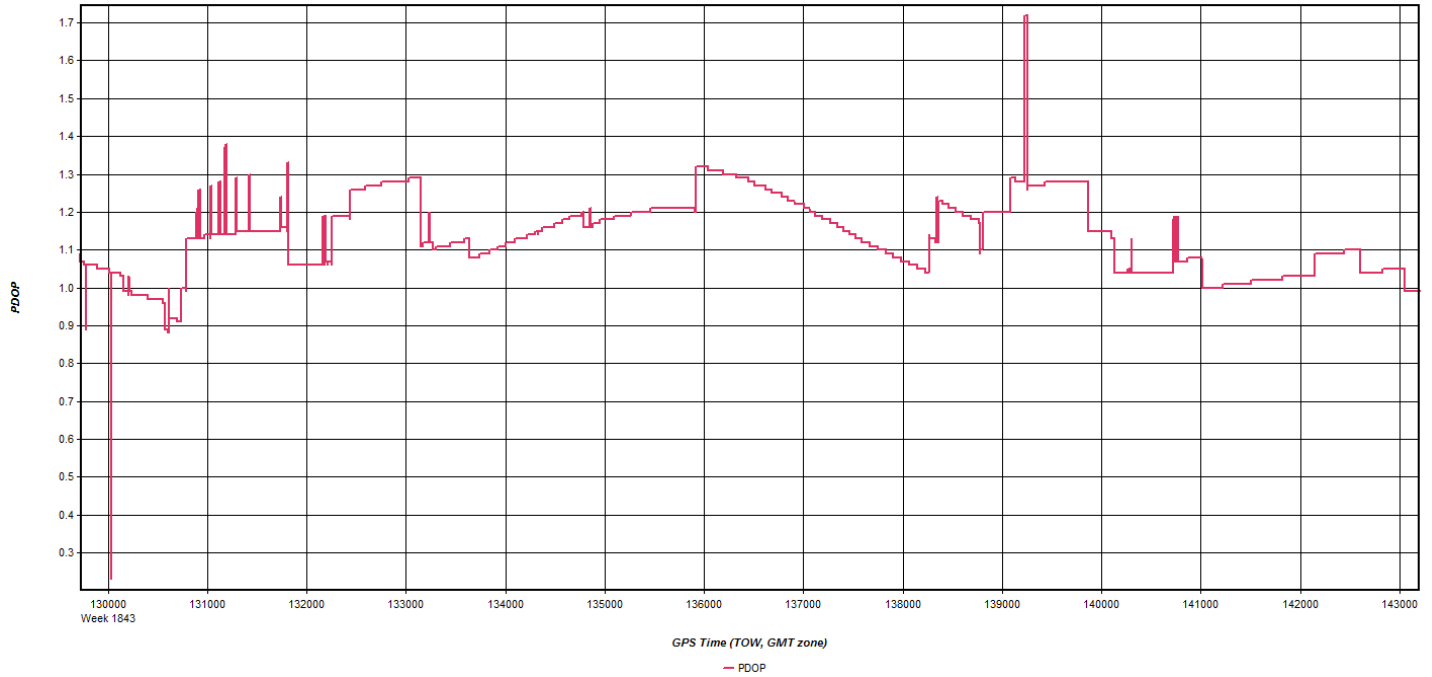


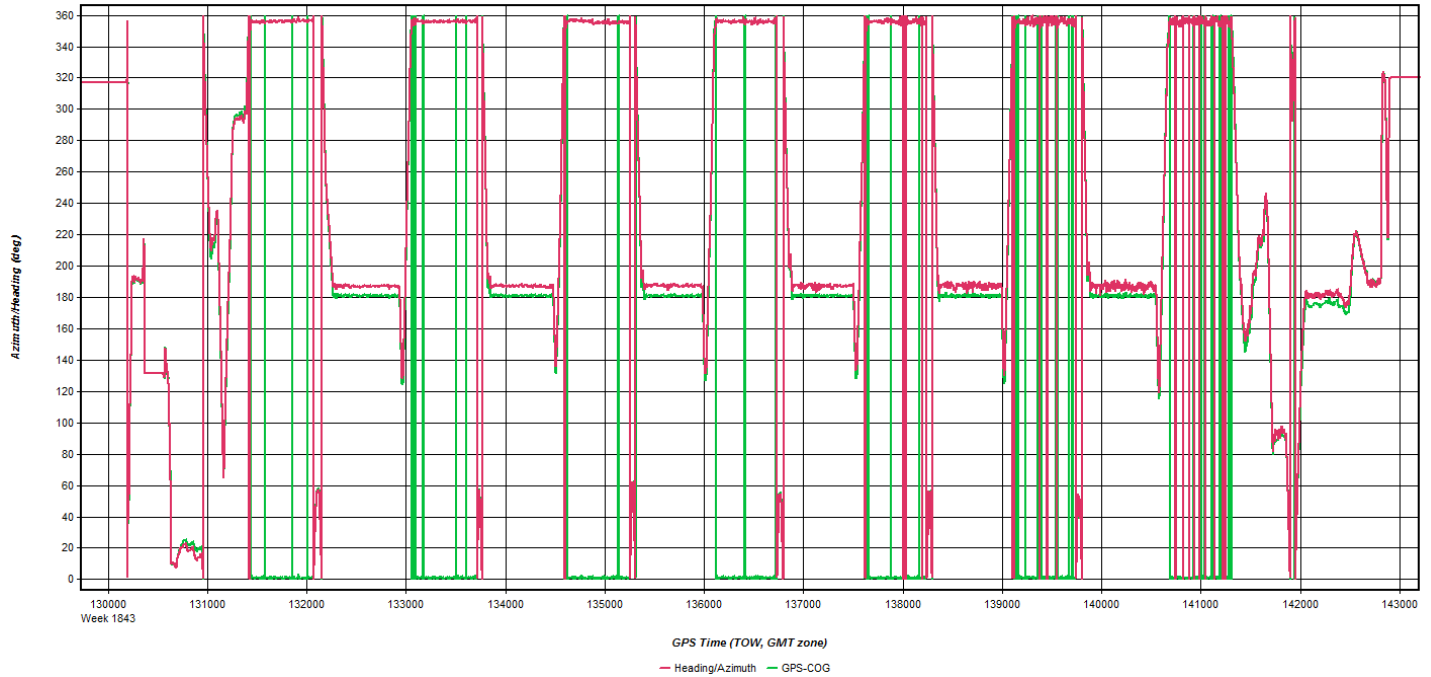
Comments SET POINT @ KBAF

May 4, 2015-A (N22GE, SN8239)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: HAMP Name: HAMP Disabled
 File: E:\Proc\26258_USGS_MA_Northampton\QL25\20150504_12000

Coordinates
 Latitude: North 42 19 03.87277 Compute from PPP
 Longitude: West 72 38 22.40329 Enter Grid Values
 Ellipsoidal height: 42.355 m Enter MSL Height
 Datum: NAD83(2011) 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 Measured to
 ARP to L1 offset: 0.067 m ARP
 Applied height: 0.067 m L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
2: MABN Name: MABN Disabled
File: E:\Proc\26258_USGS_MA_Northampton\QL25\20150504_12000

Coordinates
Latitude: North 42 40 11.99113 Compute from PPP
Longitude: West 72 32 28.64375 Enter Grid Values
Ellipsoidal height: 94.890 m Enter MSL Height
Datum: NAD83(2011) Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: LEIAX1203+GNSS, NONE View STA File
Antenna profile: LEIAX1203+GNSS Info
Measured height: 0.000 m
ARP to L1 offset: 0.058 m
Applied height: 0.058 m
Measured to:
 ARP
 L1 Phase Centre
Compute From Slant

OK Cancel

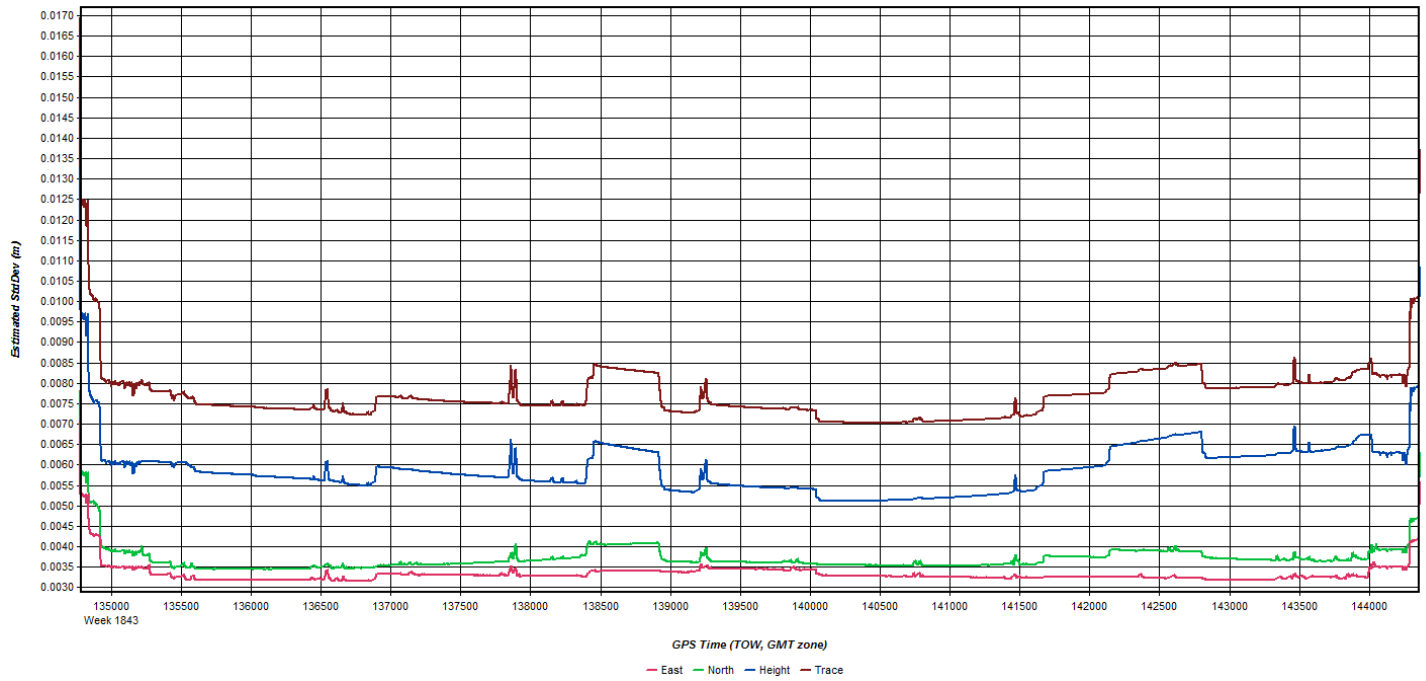
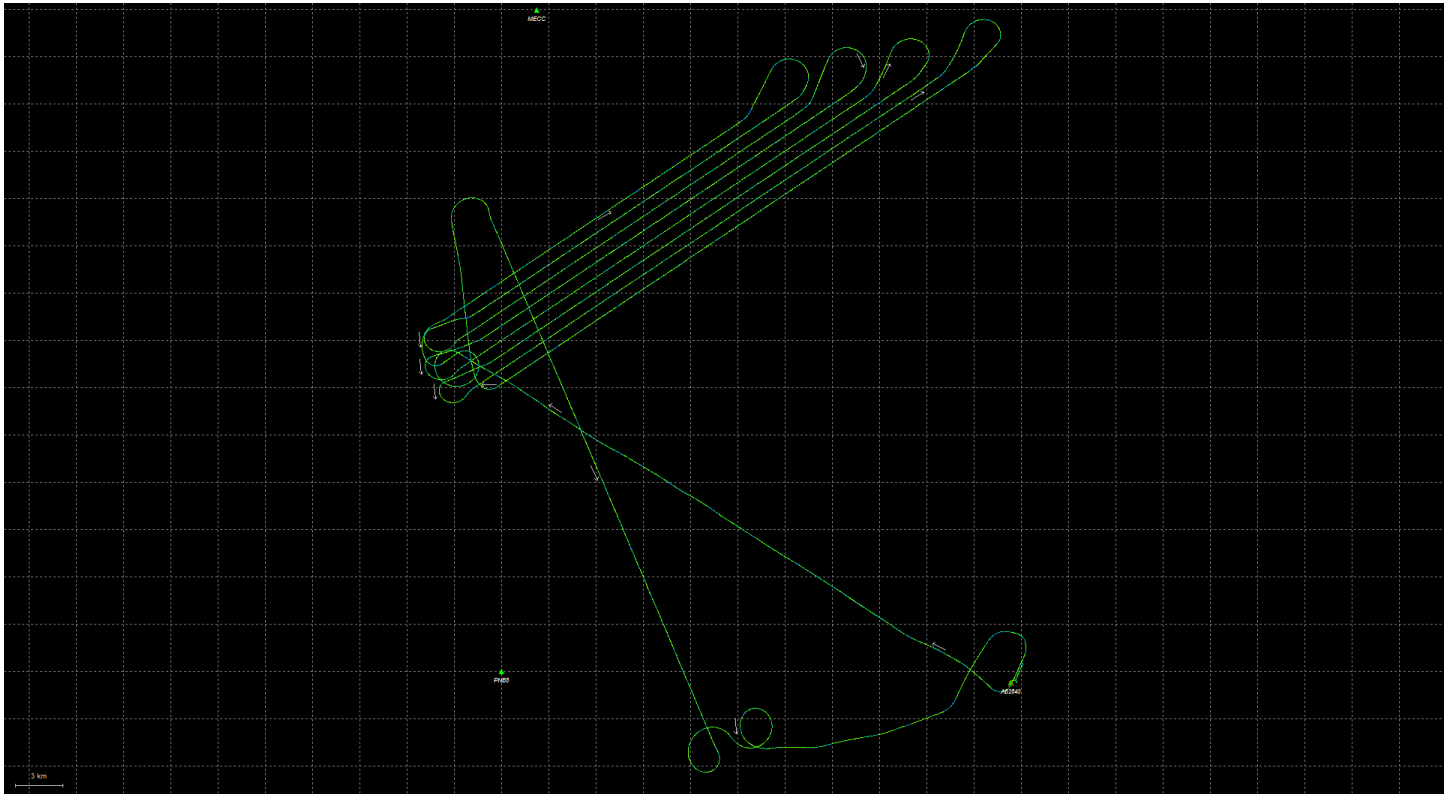
Flight Log

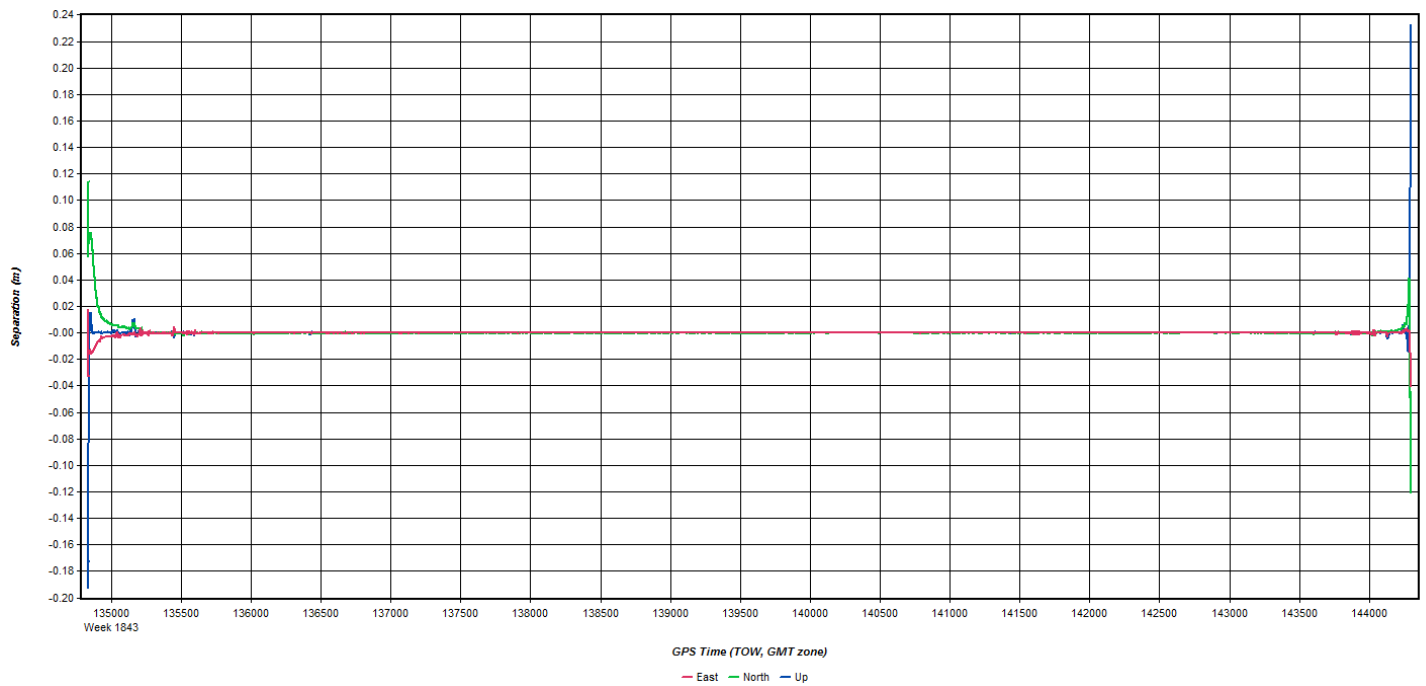
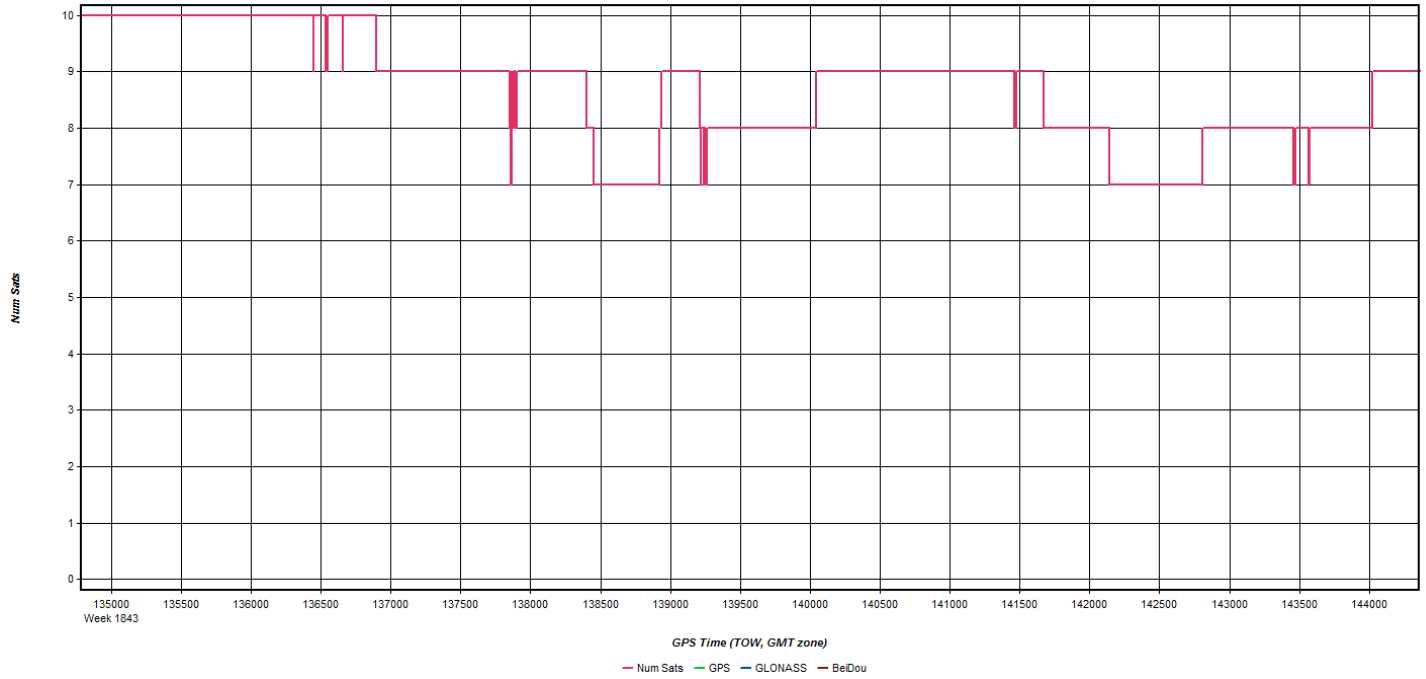
OPERATORS FLIGHT LOG

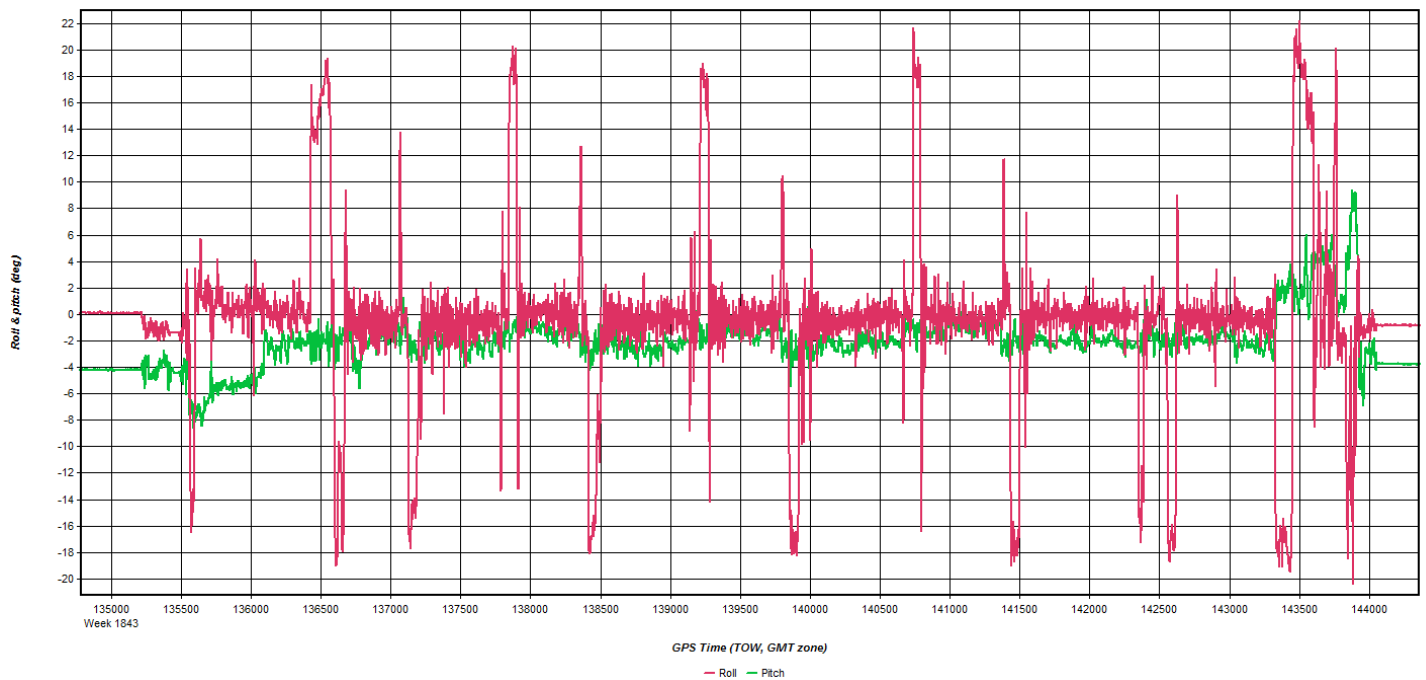
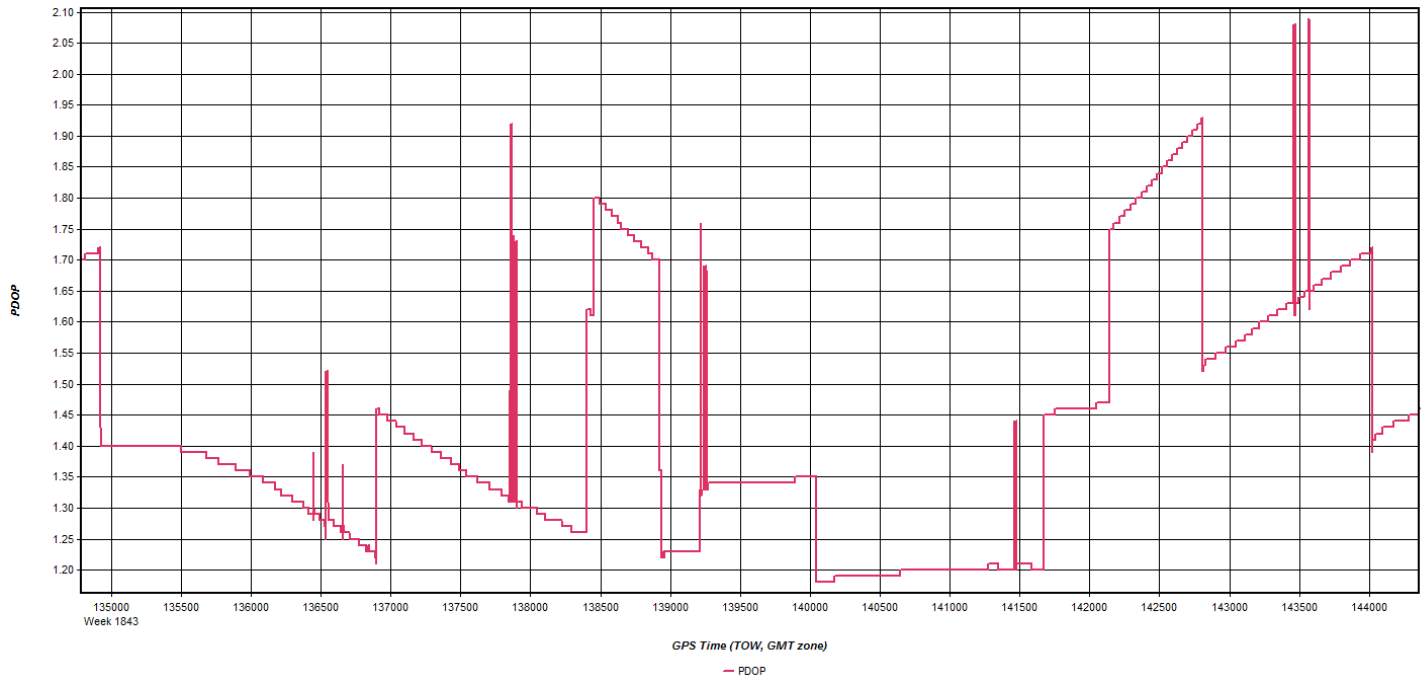
MISSION: 20150504_120008		DATE: 5-4-15		LEICA ALS-70							
PILOT: Bill Swales		OPERATOR: Emily Dyson		AIRCRAFT: M22G							
PROJECT NUMBER AND NAME		LINE No.	Lbl	Hdg	SCAN ANGLE	PRF KHZ	FIXED GAIN	Flying Ht. (m)	START TIME	STOP TIME	REMARKS
	26758								12:17	12:30	BAF → site ?
	USGS MA Northampton	053	3053	15	40	356		5000	12:30	12:40	height and sensor conf. was ANNUAL
		052	3052	145				5300	12:44	12:55	fixed height and sensor Conf. source: ssa
		051	3051	15					12:58	13:08	
		050	3050	145					13:11	13:21	
		049	3049	15					13:24	13:33	
		048	3048	145					13:36	13:46	
		047	3047	15					13:49	13:58	
		046	3046	145					14:01	14:11	
		045	3045	15					14:14	14:23	
		044	3044	145					14:26	14:36	
		043	3043	15					14:38	14:48	
		042	3042	145					14:51	15:02	turbulence causing alt. variances
		041	3041	15					15:04	15:14	
		X	001	103					15:22	15:23	cross tie for lines 53-41
									15:23	15:39	site → BAF 3
											8276.8
											11000
STATUS	TOTAL LINES	FLOWN	LEFT	SITE	AIRCRAFT FERRY	STATIC	START	STOP	NOTES		
⊙ USGS MA Northampton	139	13	2.9	0.5		12:02	12:09		CORS: HAMP-12:22 fig. 8		
⊙				3.4		15:41	15:46		fig. 8 15:25 CORS: HAMP-15:34		
⊙									Slight Maze Occasional turbulence		

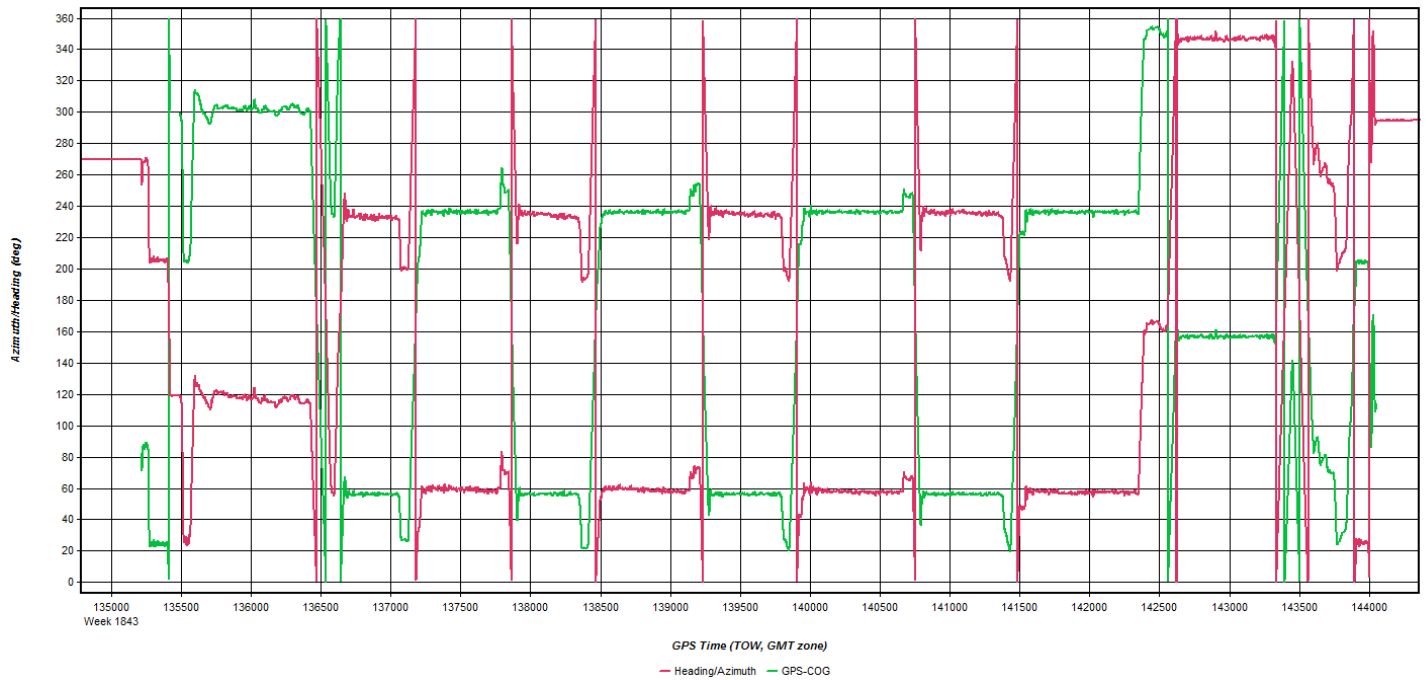
Quantum Spatial N.6216 Resource Drive Sheboygan Falls, WI 53085 PHONE: 920-467-2655 FAX: 888-253-6695 E-Mail: amephot@quantumspatial.com

May 4, 2015
(N799AC, SN7169)









Coordinate/Antenna Settings

Master Remote

Base Station
 2. MECC Name: MECC Disabled
 File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\MT\20150504_

Coordinates
 Latitude: North 44 49 33.21003 Compute from PPP
 Longitude: West 68 44 38.60195 Enter Grid Values
 Ellipsoidal height: 20.586 m Enter MSL Height
 Datum: NAD83(2011) 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 Measured to
 ARP to L1 offset: 0.067 m ARP
 Applied height: 0.067 m L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
1: PNB6 Name: PNB6 Disabled
File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\M1\20150504_

Coordinates
Latitude: North 44 27 07.24711 Compute from PPP
Longitude: West 68 46 19.95840 Enter Grid Values
Ellipsoidal height: 33.462 m Enter MSL Height
Datum: NAD83(2011) Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: TRM41249USCG, SCIT View STA File
Antenna profile: TRM41249USCG, SCIT Info
Measured height: 0.000 m
ARP to L1 offset: 0.063 m
Applied height: 0.063 m
Measured to:
 ARP
 L1 Phase Centre
Compute From Slant


OK Cancel

Flight Log

PAR LLC PRECISION AERIAL RECONNAISSANCE		PROJECT #		PROJECT DESCRIPTION		PROJECT LOCATION		GPS INFORMATION		GPS INFORMATION		GPS INFORMATION	
Flight	Line	DP	Start	Stop	Start	Stop	Start	Stop	Start	Stop	Start	Stop	Start
101	124102004	330000	13:28:20	14:24:20	07:00	07:00	13:28:20	14:24:20	13:28:20	14:24:20	13:28:20	14:24:20	13:28:20
102	124102004	330000	14:24:20	14:24:20	07:00	07:00	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20
103	124102004	330000	14:24:20	14:24:20	07:00	07:00	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20
104	124102004	330000	14:24:20	14:24:20	07:00	07:00	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20
105	124102004	330000	14:24:20	14:24:20	07:00	07:00	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20
106	124102004	330000	14:24:20	14:24:20	07:00	07:00	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20
107	124102004	330000	14:24:20	14:24:20	07:00	07:00	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20
108	124102004	330000	14:24:20	14:24:20	07:00	07:00	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20
109	124102004	330000	14:24:20	14:24:20	07:00	07:00	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20
110	124102004	330000	14:24:20	14:24:20	07:00	07:00	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20	14:24:20

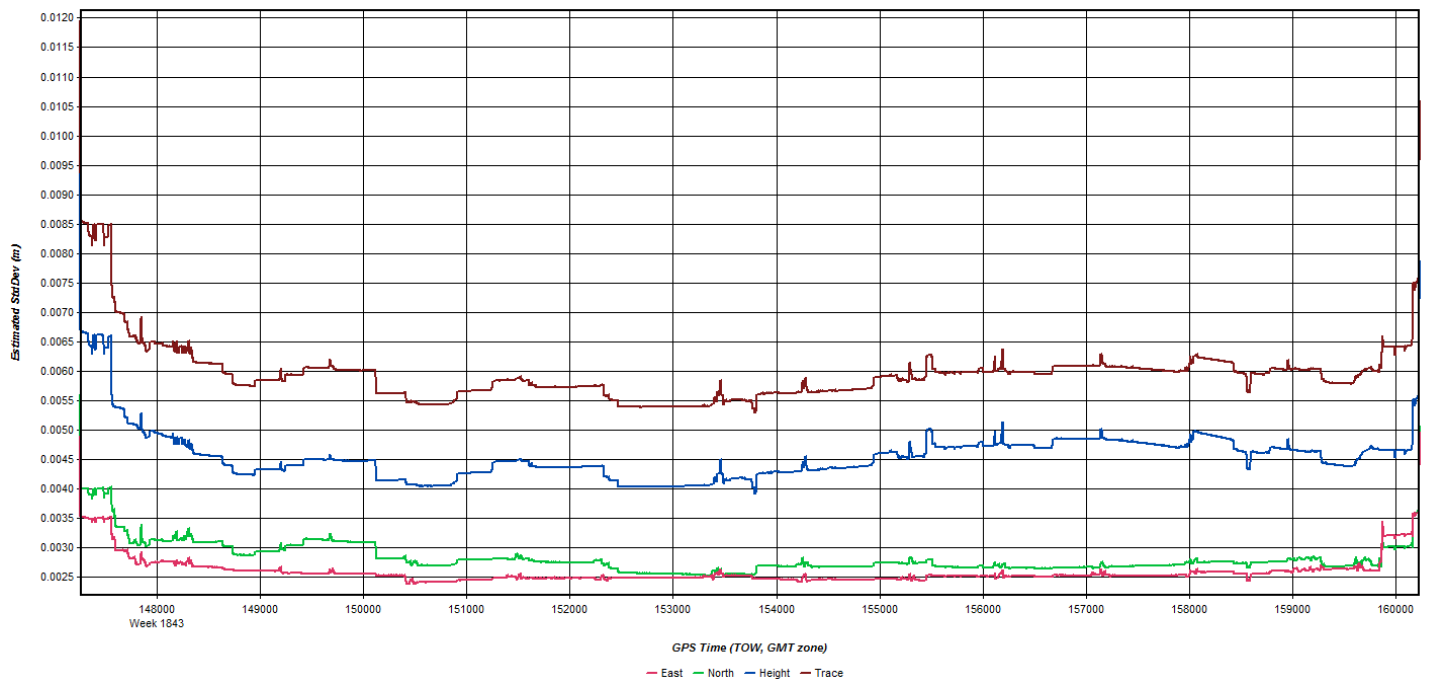
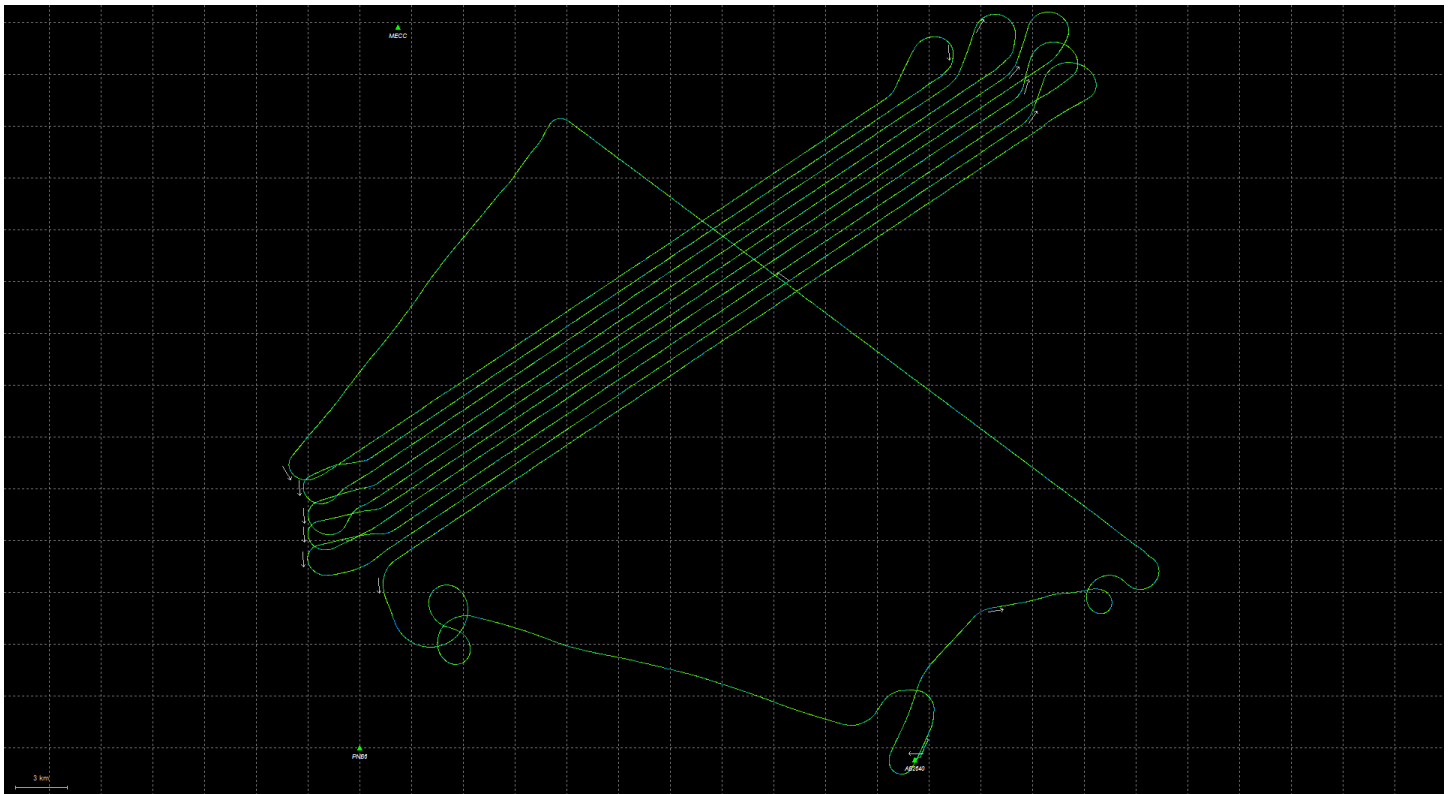
Base Station Log

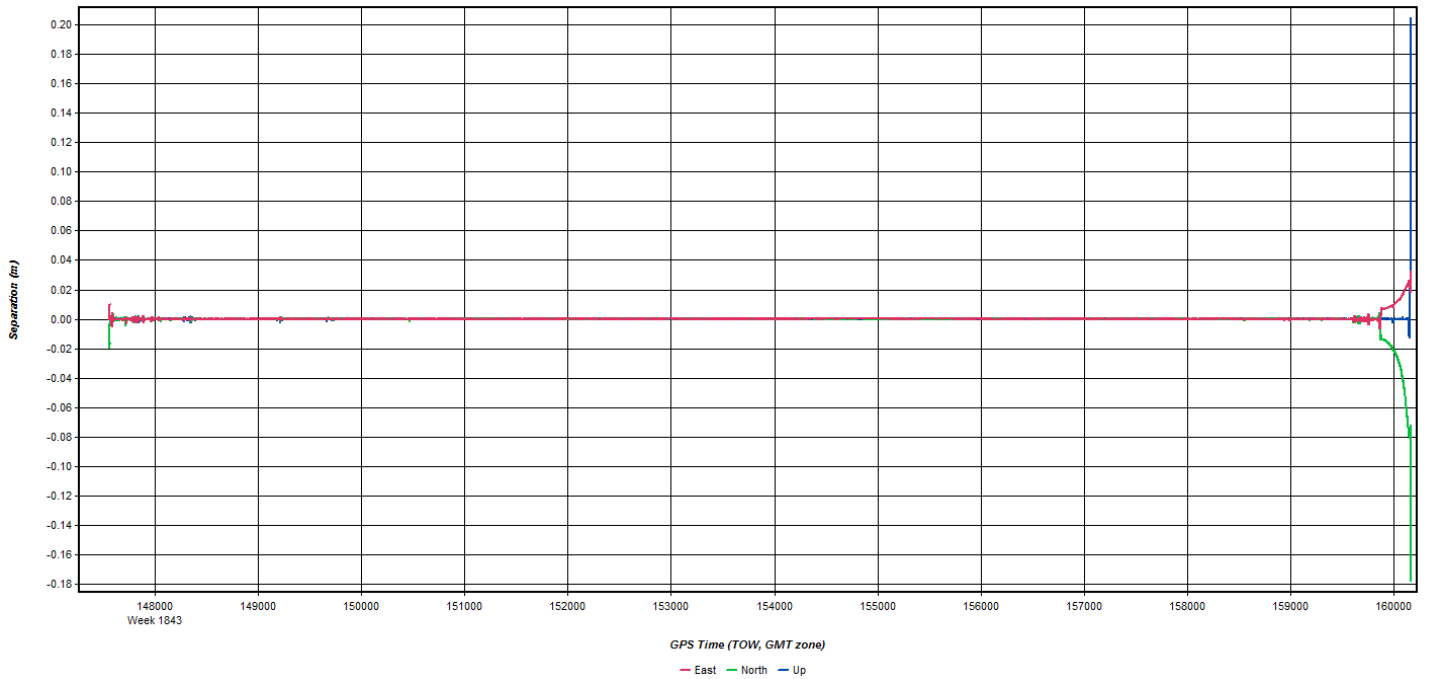
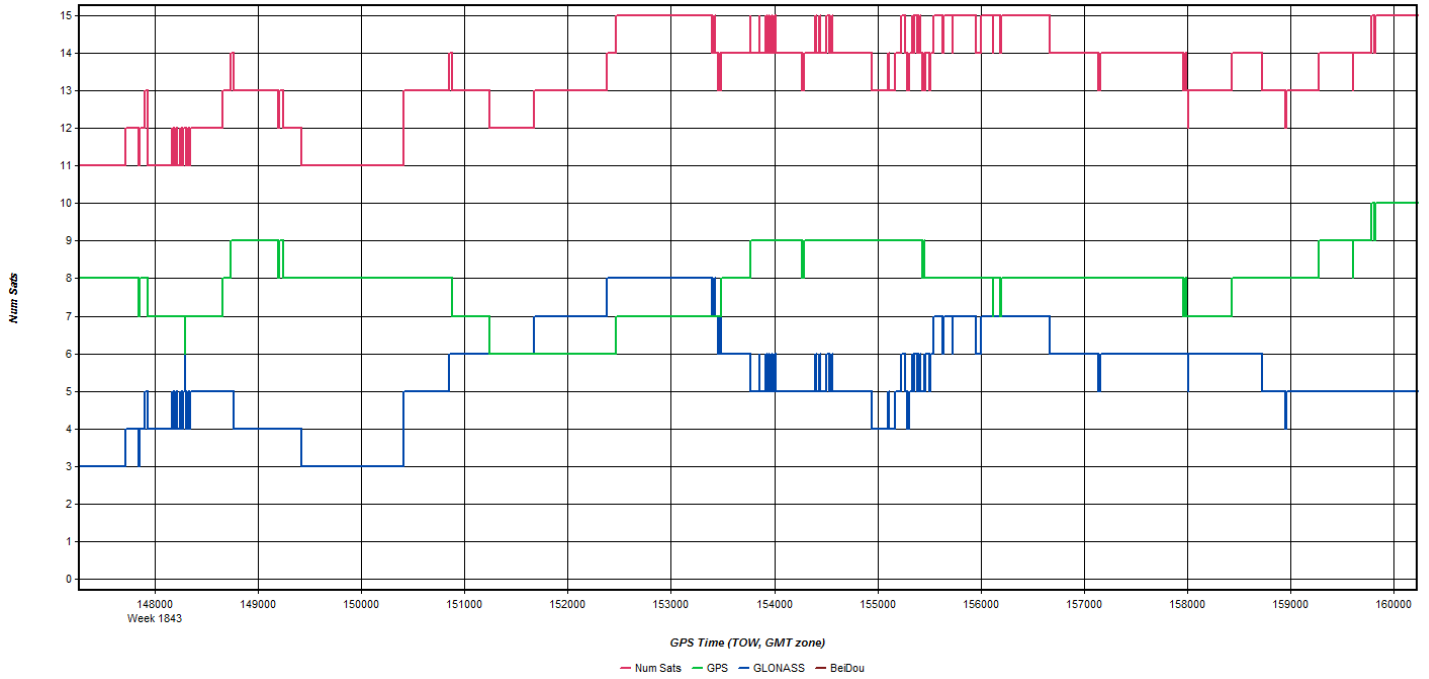
GPS SESSION FORM

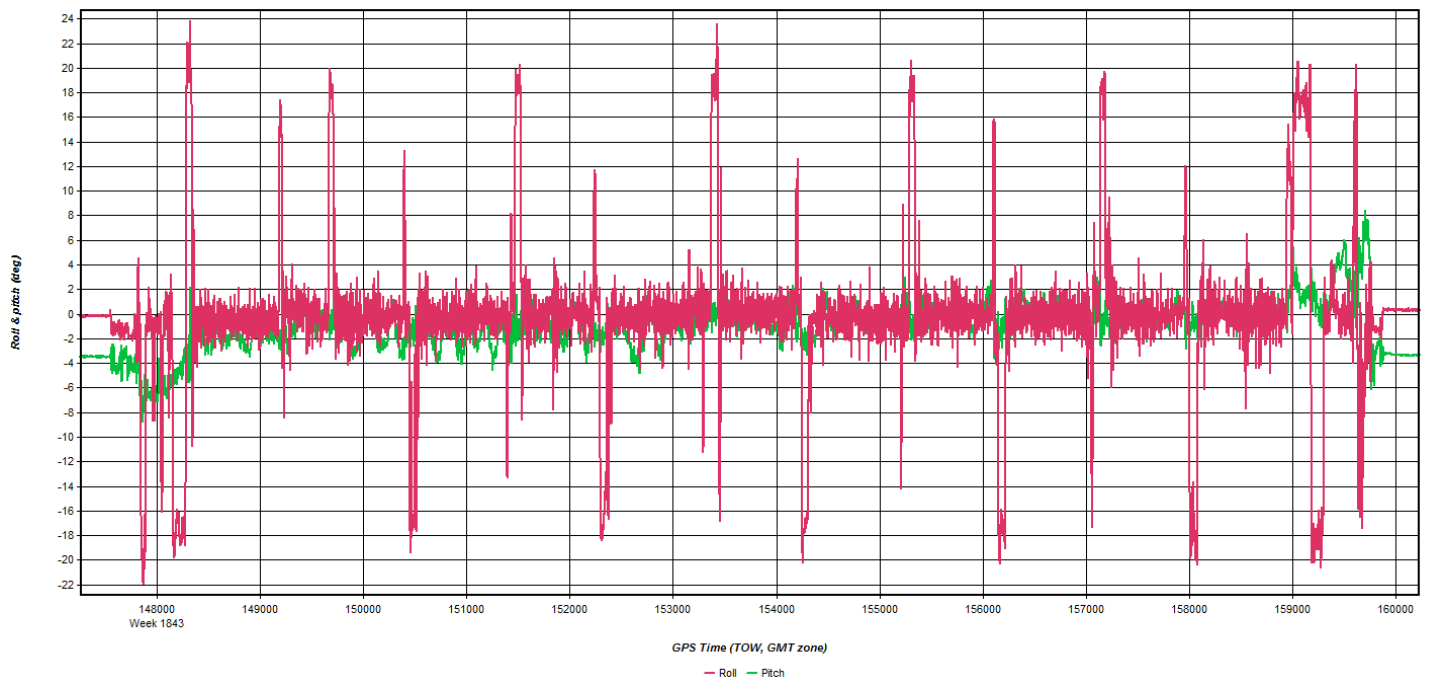
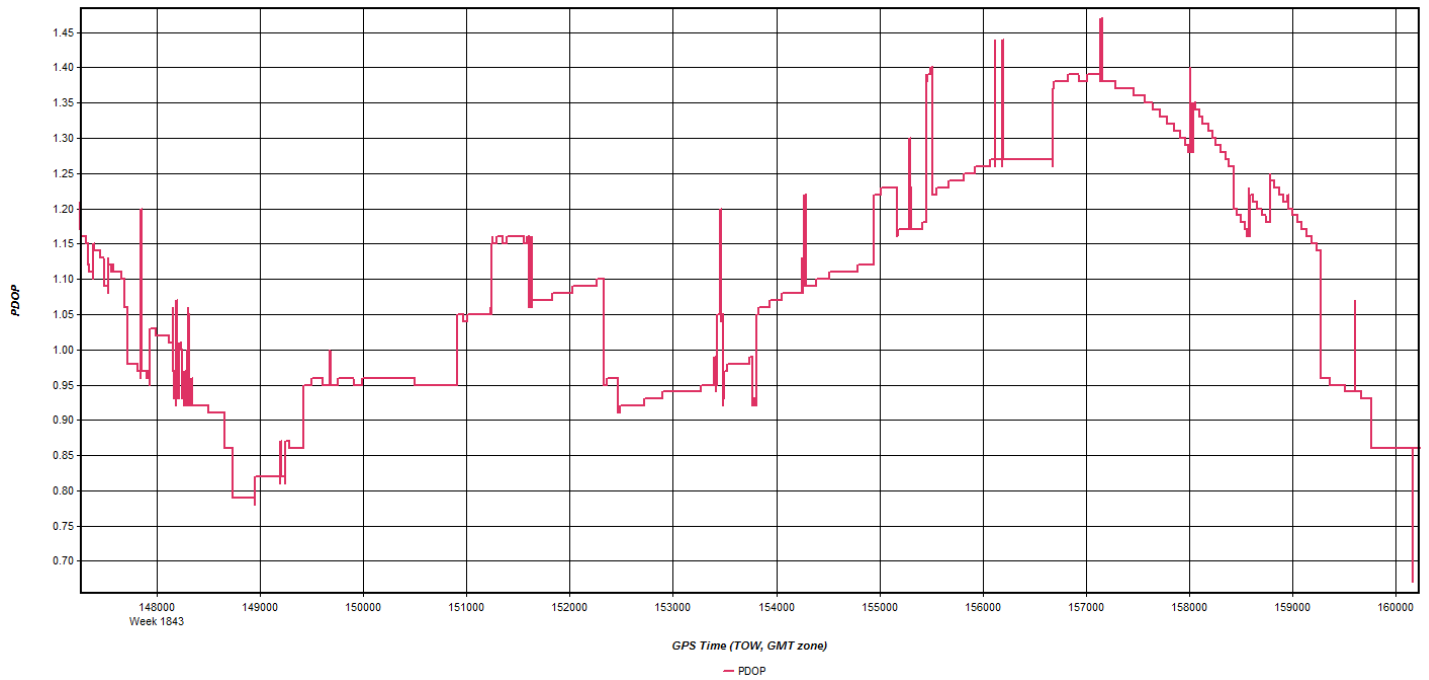
Contract # / TO #		Client / Project Name		Date	
		Quantum: Maine- Hancock		4-May-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
BHB D			BHB D 1995		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
AB2640		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19821241.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 2.050 2.050 2.050 2.050				<input checked="" type="radio"/> TRUE VERTICAL <input checked="" type="radio"/> ARP	
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 2.050 2.050 2.050 2.050				<input checked="" type="radio"/> TRUE VERTICAL <input checked="" type="radio"/> ARP	
Antenna Reference Point (diagram in survey report)					
(Antenna Reference Point = VR + VO + VE2)				ARP to Phase = 168mm	
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
4-May-2015		13:09		44 26 44.53923(N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
4-May-2015		20:40		068 22 02.72882(W)	
Monument is in good condition			Site Diagram\Picture		
Ground Photos					

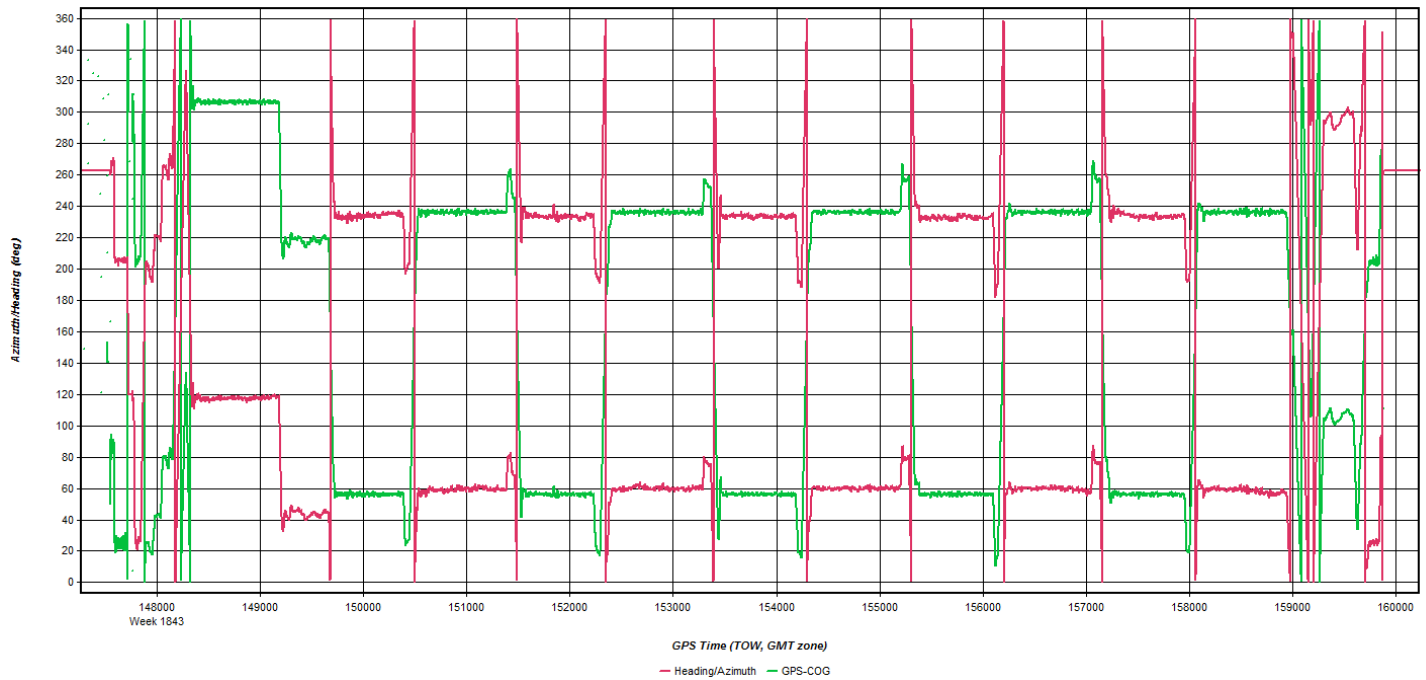


May 4, 2015-B (N779AC, SN7169)









Coordinate/Antenna Settings [?] [X]

Master Remote

Base Station
 3: AB2640 Name: AB2640 Disabled
 File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\M2\base\19821

Coordinates
 Latitude: North 44 26 44.53923
 Longitude: West 68 22 02.72882
 Ellipsoidal height: -2.196 m
 Datum: NAD83(2011)

Antenna Height
 From station file: TRMR10, NONE
 Antenna profile: TRMR10
 Measured height: 2.050 m
 ARP to L1 offset: 0.128 m
 Applied height: 2.178 m
 Measured to:
 ARP
 L1 Phase Centre

Coordinate/Antenna Settings

Master Remote

Base Station
2: MECC Name: MECC Disabled
File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\M2\20150504_

Coordinates
Latitude: North 44 49 33.21003 Compute from PPP
Longitude: West 68 44 38.60195 Enter Grid Values
Ellipsoidal height: 20.586 m Enter MSL Height
Datum: NAD83(2011) 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
1: PNB6 Name: PNB6 Disabled
File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\M2\20150504_

Coordinates
Latitude: North 44 27 07.24711 Compute from PPP
Longitude: West 68 46 19.95840 Enter Grid Values
Ellipsoidal height: 33.462 m Enter MSL Height
Datum: NAD83(2011) Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: TRM41249USCG, SCIT View STA File
Antenna profile: TRM41249USCG, SCIT Info
Measured height: 0.000 m
ARP to L1 offset: 0.063 m
Applied height: 0.063 m
Measured to
 ARP
 L1 Phase Centre
Compute From Slant


OK Cancel

Flight Log

Project #		Project Description		TIA		Survey Area		GPS Data		GPS Data		GPS Data		GPS Data	
20150204_165001		Customer Support		Customer Support		0.210		0.210		0.210		0.210		0.210	
MISSION 2		MISSION 2		MISSION 2		MISSION 2		MISSION 2		MISSION 2		MISSION 2		MISSION 2	
Sensor		Sensor		Sensor		Sensor		Sensor		Sensor		Sensor		Sensor	
AL275		AL275		AL275		AL275		AL275		AL275		AL275		AL275	
Flight Line	DT	Start	Stop	Scan Rate	Point Rate	Repr. Cont.	Altitude (m)	Altitude (ft)	Speed (m/s)	Speed (ft/s)	Roll (deg)	Pitch (deg)	Yaw (deg)	Comments	
1171	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1172	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1173	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1174	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1175	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1176	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1177	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1178	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1179	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1180	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1181	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1182	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1183	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1184	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1185	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1186	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1187	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1188	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1189	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1190	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1191	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1192	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1193	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1194	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1195	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1196	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1197	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1198	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1199	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		
1200	0.5	17:41:05	17:41:05	41.4	7880.0	YES	172.1	564.6	0.0	0.0	0.0	0.0	0.0		

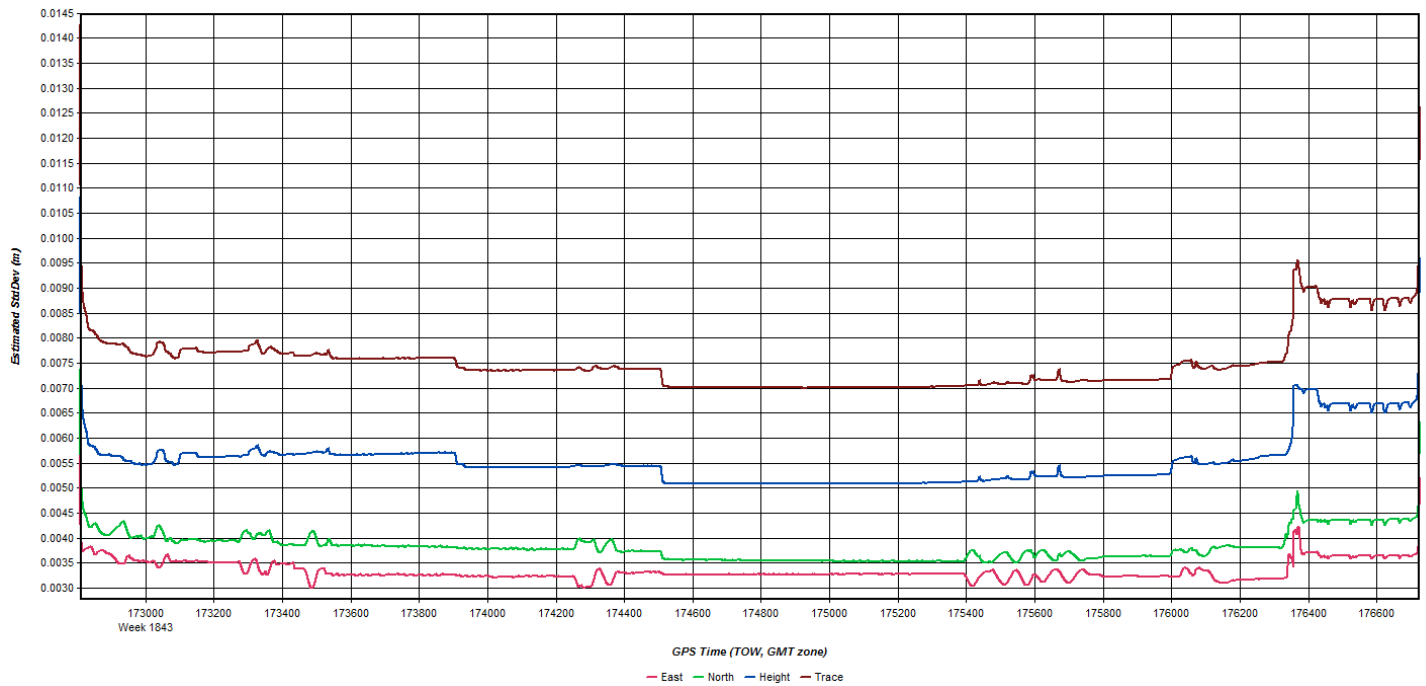
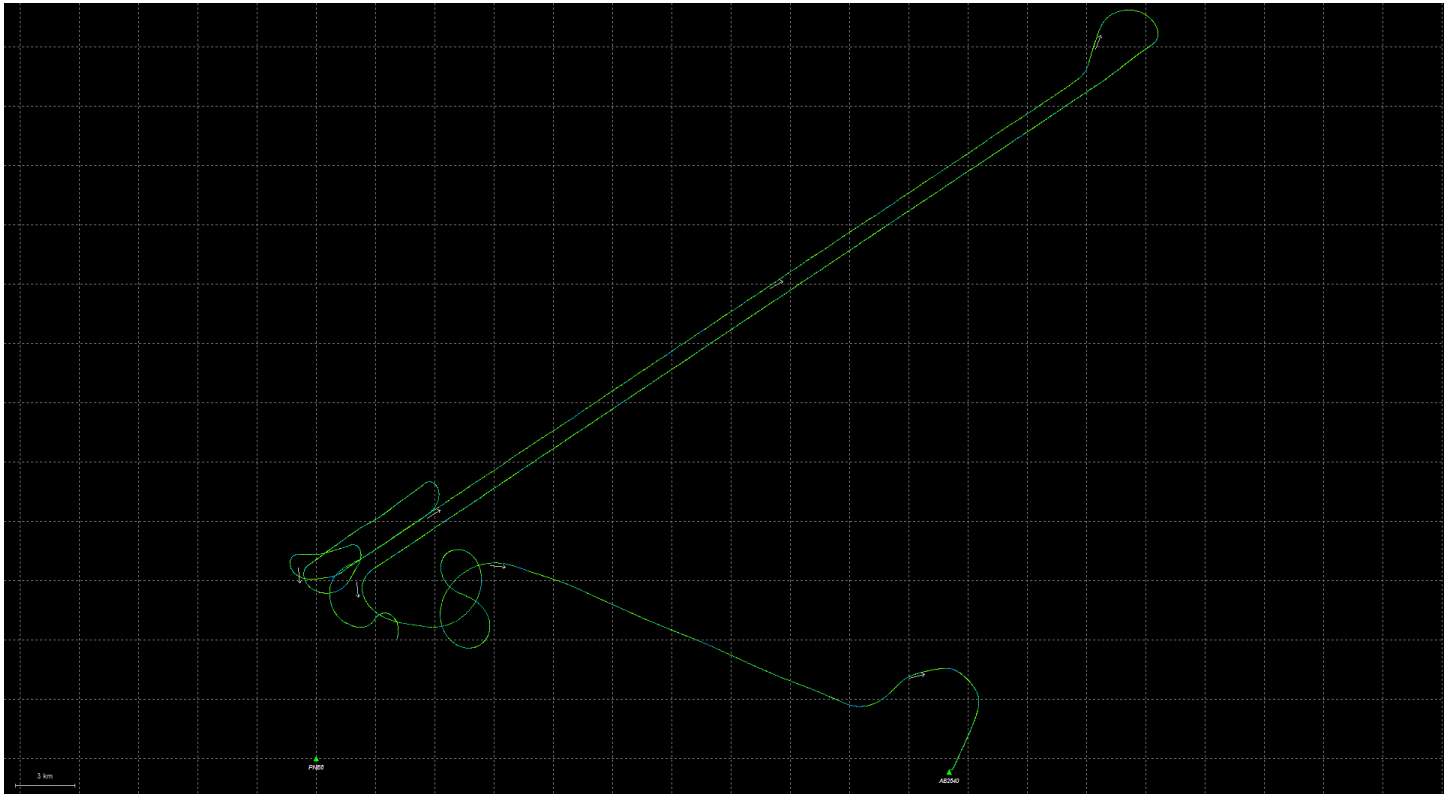
Base Station Log

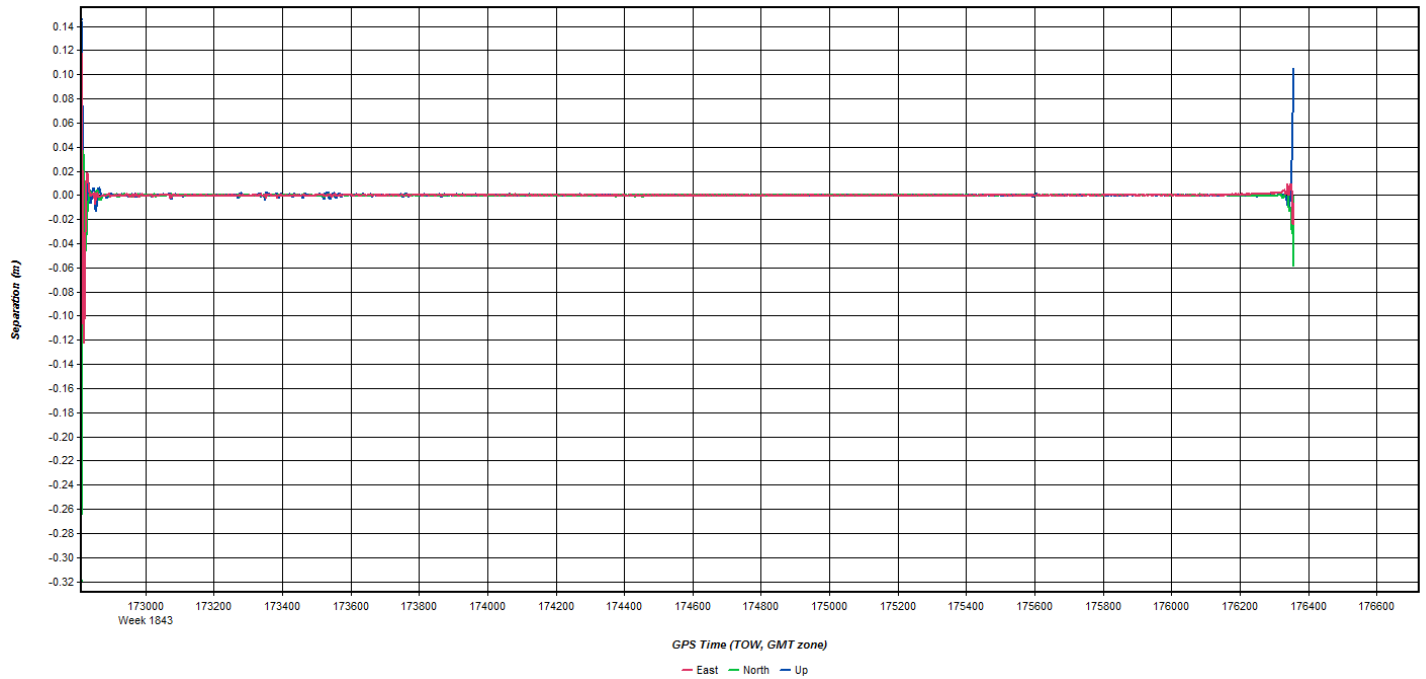
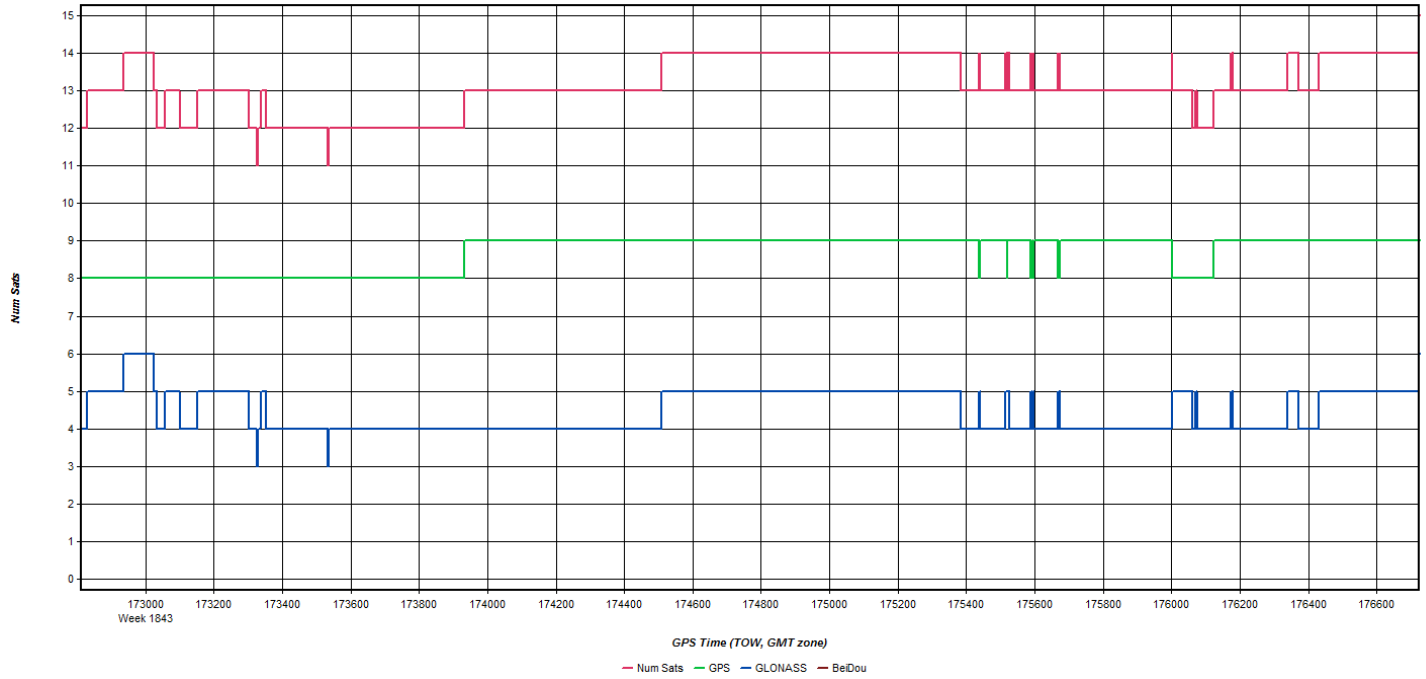
GPS SESSION FORM

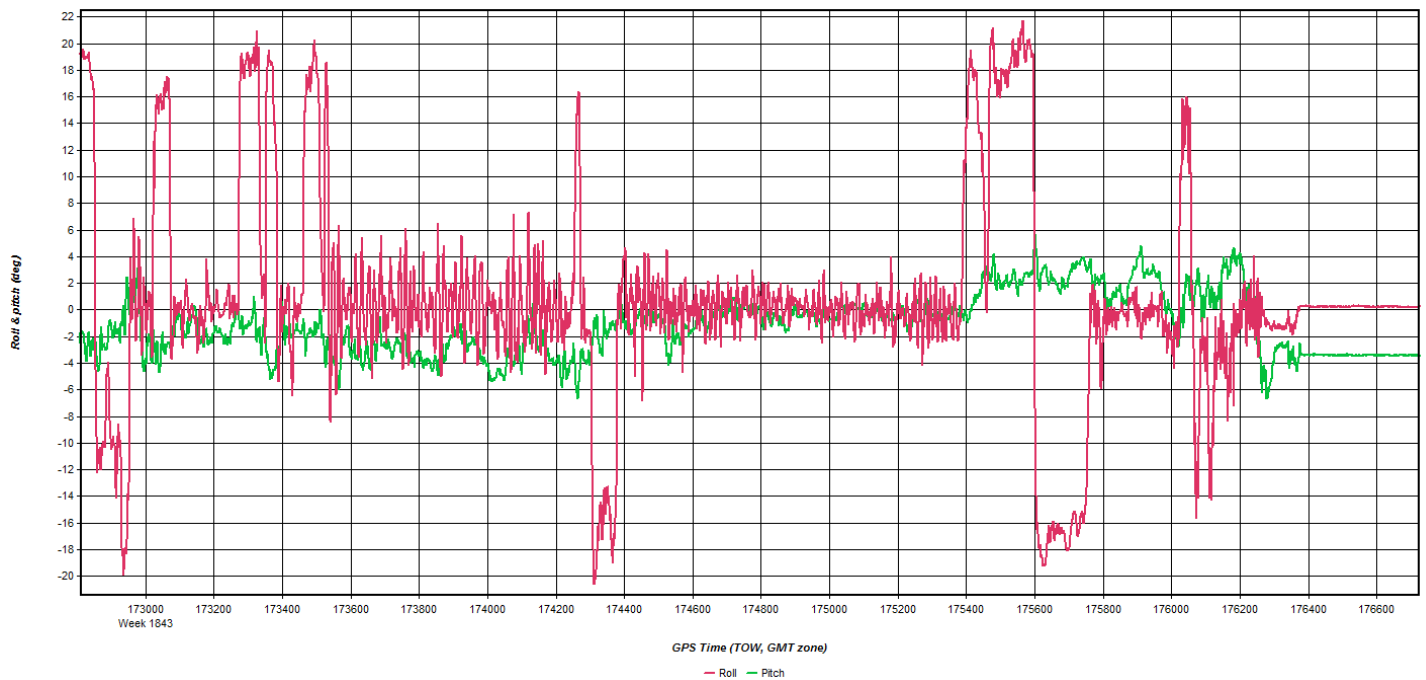
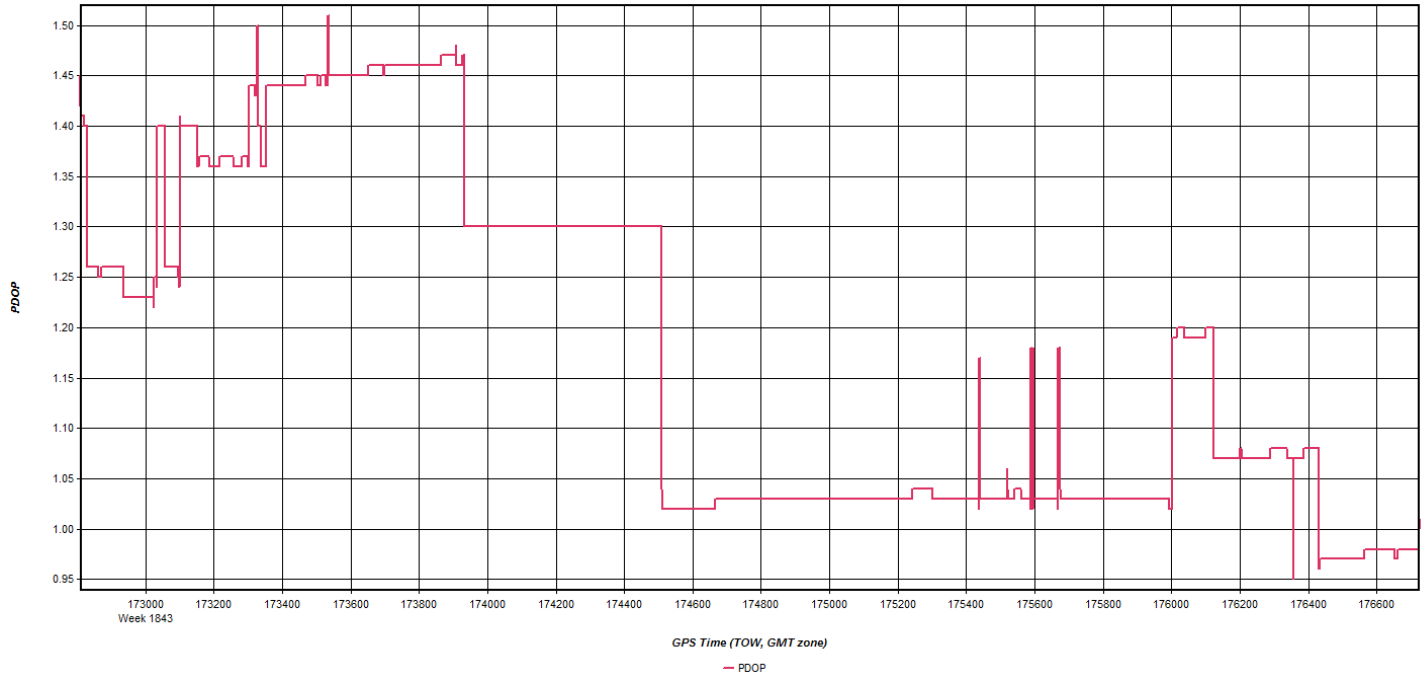
Contract # / TO #		Client / Project Name		Date	
		Quantum: Maine- Hancock		4-May-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping <i>(photo in survey report)</i>		
BHB D			BHB D 1995		
Monument No./PID		Collection Type <i>(circle one)</i>		File Name <i>(receiver generated)</i>	
AB2640		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19821241.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement <i>(circle one)</i>	
1 2 3 AVG 2.050 2.050 2.050 2.050		1 2 3 AVG 2.050 2.050 2.050 2.050		TRUE VERTICAL <input checked="" type="radio"/> ARP	
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement <i>(circle one)</i>	
1 2 3 AVG 2.050 2.050 2.050 2.050		1 2 3 AVG 2.050 2.050 2.050 2.050		TRUE VERTICAL <input checked="" type="radio"/> ARP	
Antenna Reference Point <i>(diagram in survey report)</i> (Antenna Reference Point = VR + VO + VE2) ARP to Phase = 168mm					
Start Date (UTC)		Start Time (UTC)		Approx. Lat. <i>(if available)</i>	
4-May-2015		13:09		44 26 44.53923(N)	
End Date (UTC)		End Time (UTC)		Approx. Long. <i>(if available)</i>	
4-May-2015		20:40		068 22 02.72882(W)	
Monument is in good condition			Site Diagram/Picture		
<input type="checkbox"/> Ground Photos					

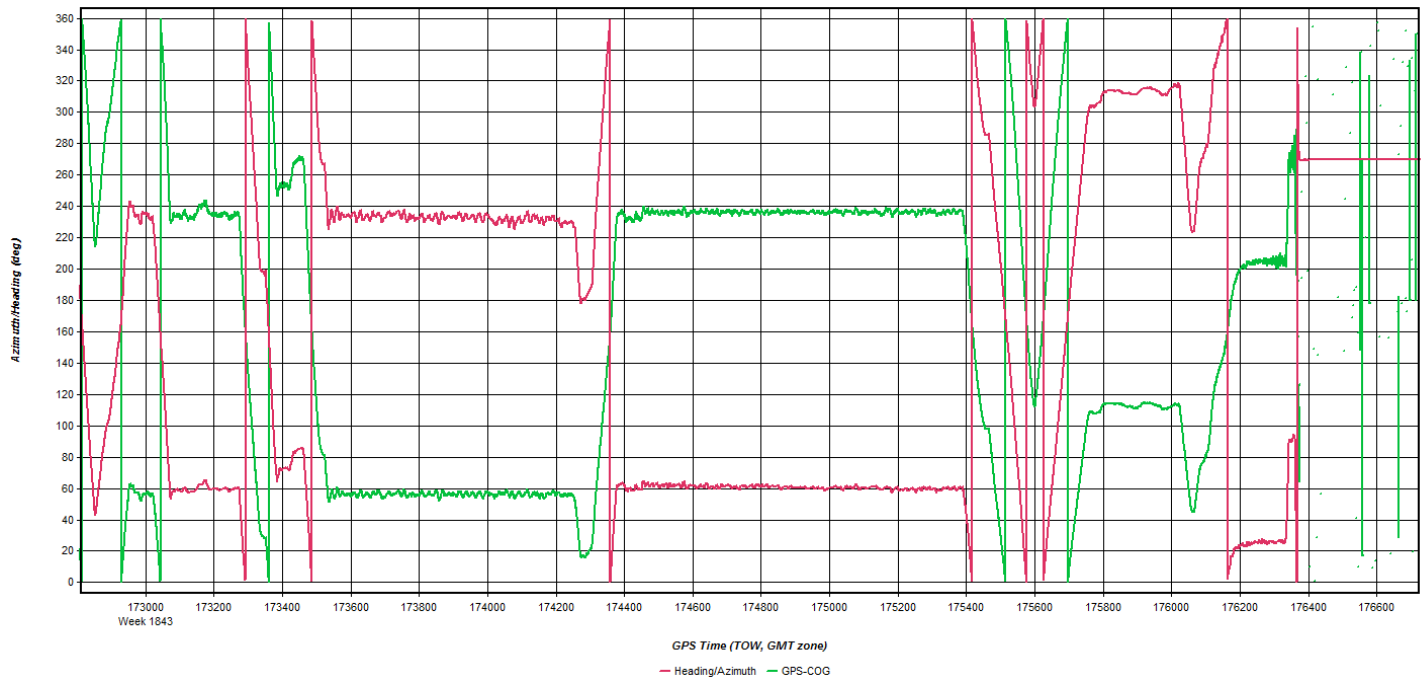


May 4, 2015-C (N799AC, SN7169)









Coordinate/Antenna Settings

Master Remote

Base Station
 2: AB2640 Name: AB2640 Disabled
 File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\3\base\19821

Coordinates
 Latitude: North 44 26 44.53923
 Longitude: West 68 22 02.72882
 Ellipsoidal height: -2.196 m
 Datum: NAD83(2011)

Antenna Height
 From station file: TRMR10, NONE
 Antenna profile: TRMR10
 Measured height: 2.050 m
 ARP to L1 offset: 0.128 m
 Applied height: 2.178 m
 Measured to:
 ARP
 L1 Phase Centre

Coordinate/Antenna Settings

Master Remote


Base Station
1: PNB6 Name: PNB6 Disabled
File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\M3\20150504_1

Coordinates
Latitude: North 44 27 07.24711
Longitude: West 68 46 19.95840
Ellipsoidal height: 33.462 m
Datum: NAD83(2011)

Antenna Height
From station file: TRM41249USCG, SCIT
Antenna profile: TRM41249USCG, SCIT
Measured height: 0.000 m
ARP to L1 offset: 0.063 m
Applied height: 0.063 m
Measured to:
 ARP
 L1 Phase Centre

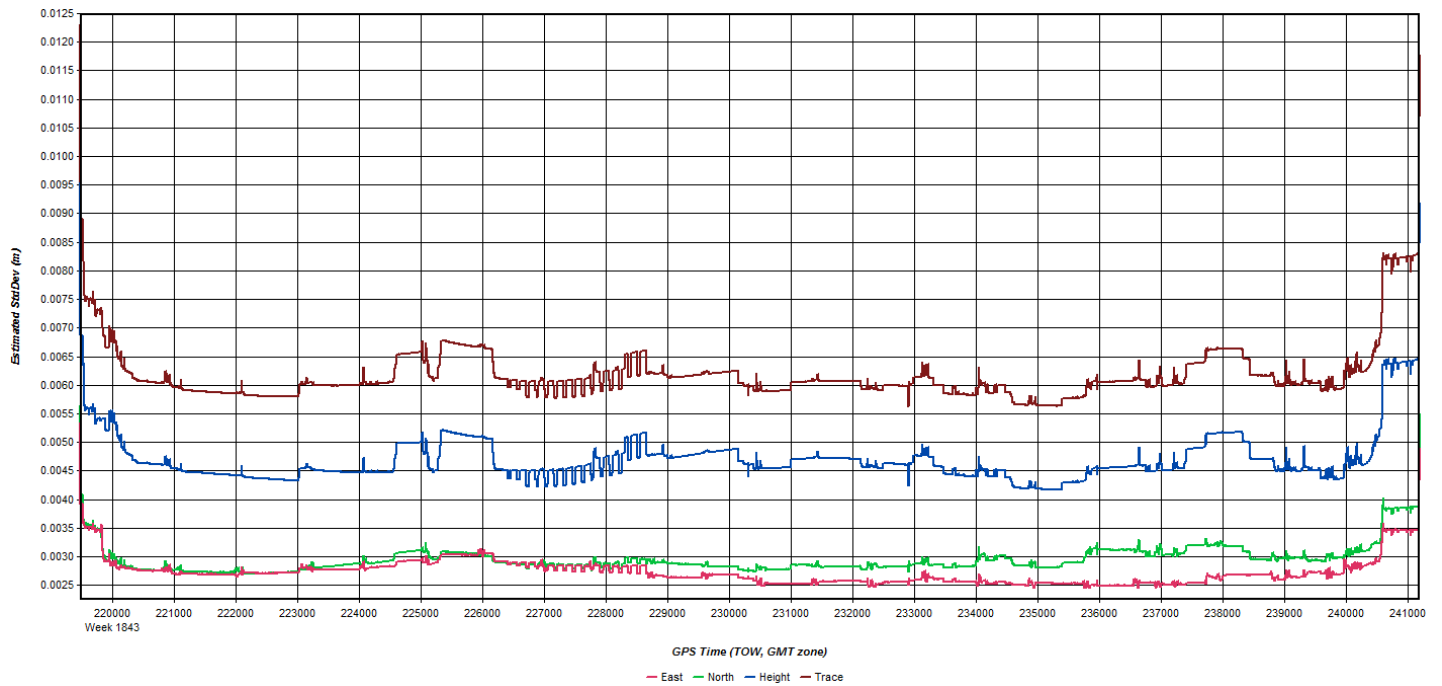
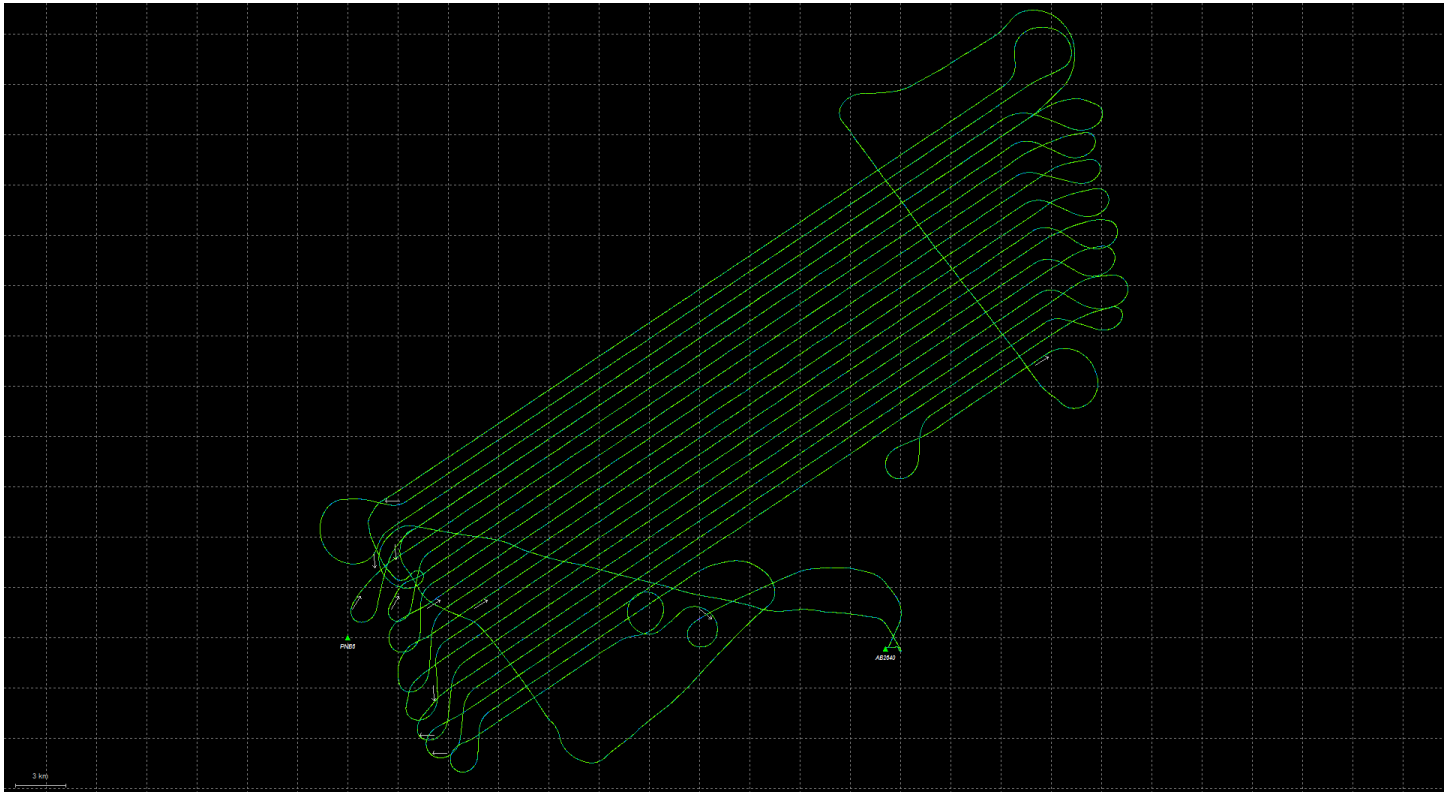
Base Station Log

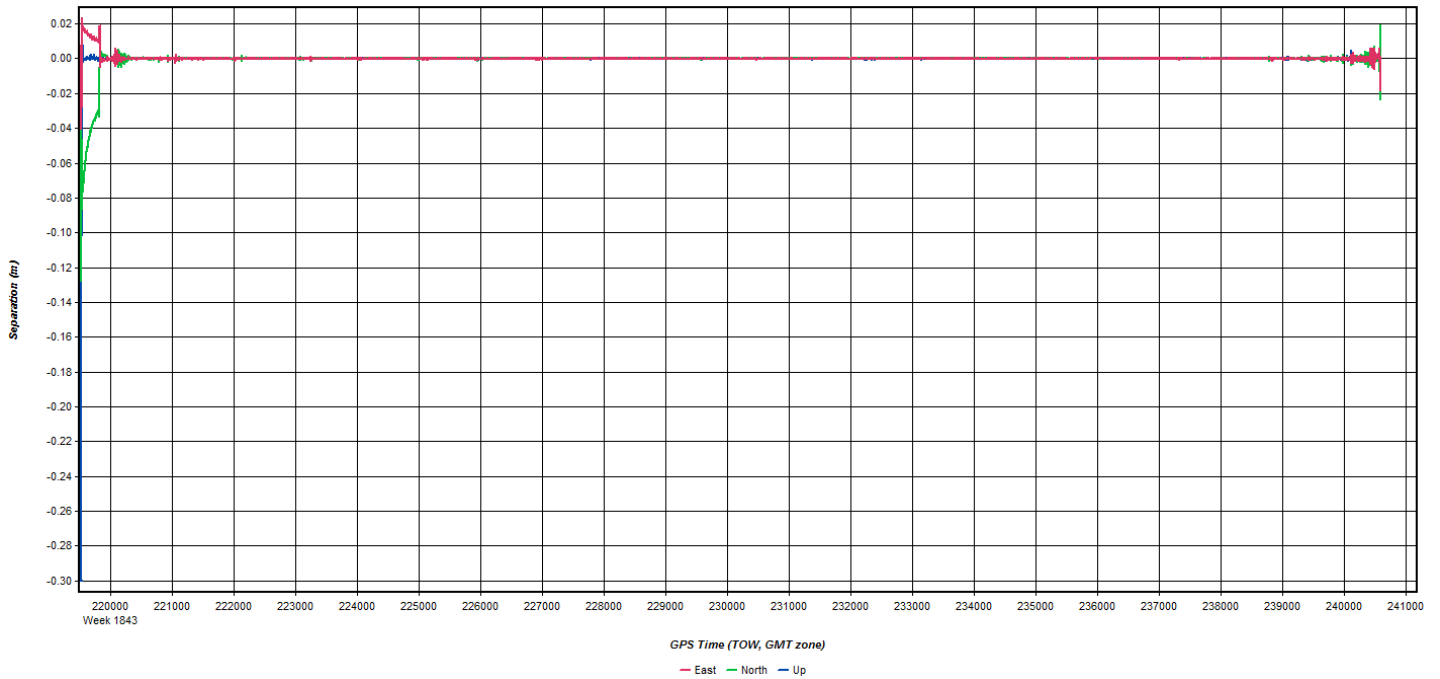
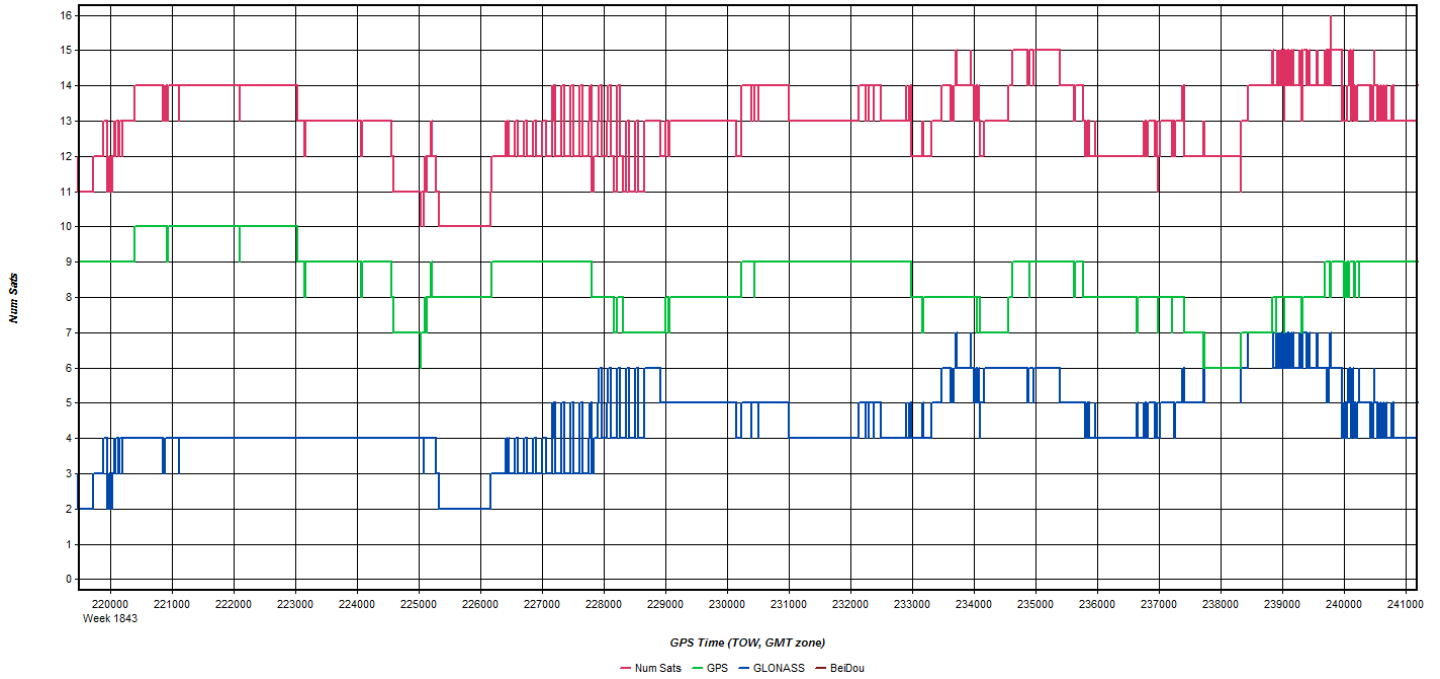
GPS SESSION FORM

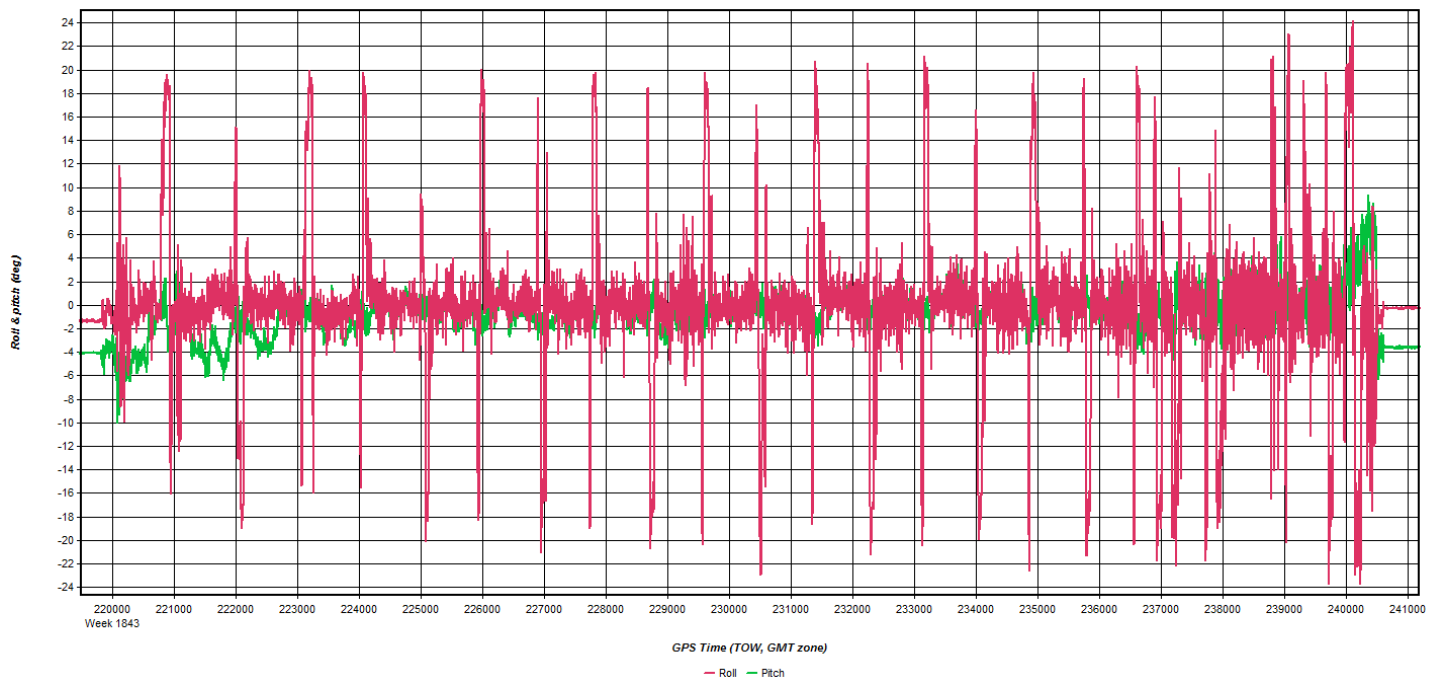
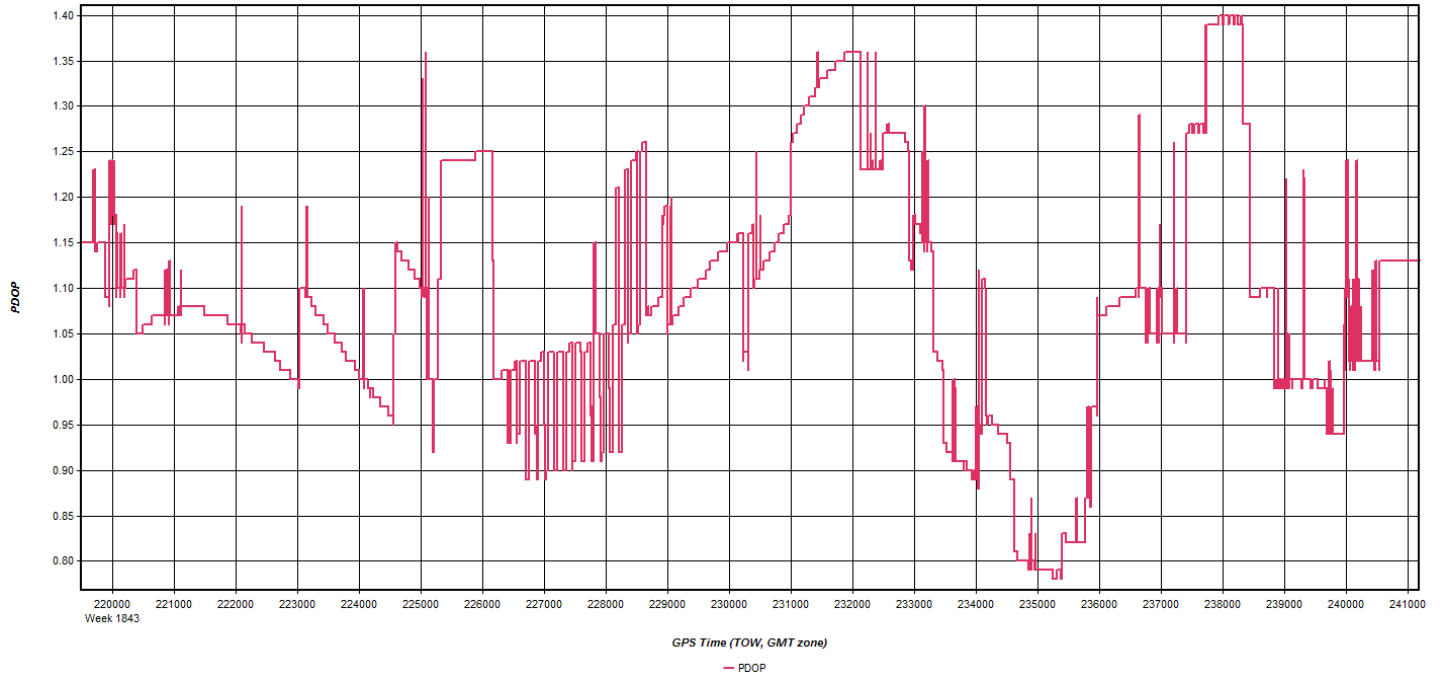
Contract # / TO #		Client / Project Name		Date	
		Quantum: Maine- Hancock		4-May-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
BHB D			BHB D 1995		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
AB2640		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19821242.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 		1 2 3 AVG 2.050 2.050 2.050 2.050		TRUE VERTICAL <input checked="" type="radio"/> ARP	
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 		1 2 3 AVG 2.050 2.050 2.050 2.050		TRUE VERTICAL <input checked="" type="radio"/> ARP	
Antenna Reference Point (diagram in survey report)					
(Antenna Reference Point = VR + VO + VE2)				ARP to Phase = 168mm	
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
4-May-2015		23:24		44 26 44.53923(N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
5-May-2015		1:14		068 22 02.72882(W)	
Monument is in good condition			Site Diagram/Picture		
					
Ground Photos					

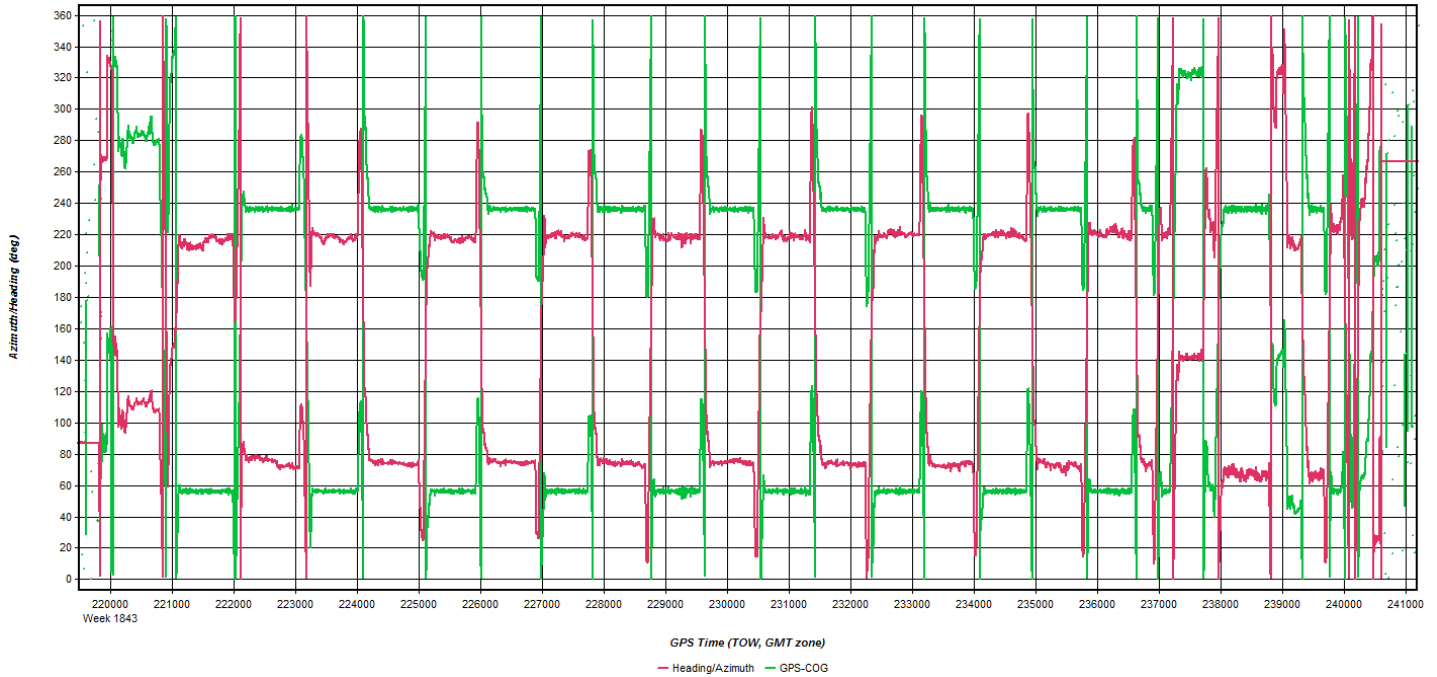


May 5, 2015-A (N799AC, SN7169)









Coordinate/Antenna Settings [?] [X]

Master Remote

Base Station
 2: AB2640 Name: AB2640 Disabled
 File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\IM4\base\19821

Coordinates
 Latitude: North 44 26 44.53923
 Longitude: West 68 22 02.72882
 Ellipsoidal height: -2.196 m
 Datum: NAD83(2011)

Antenna Height
 From station file: TRMR10, NONE
 Antenna profile: TRMR10
 Measured height: 2.050 m
 ARP to L1 offset: 0.128 m
 Applied height: 2.178 m
 Measured to:
 ARP
 L1 Phase Centre

Coordinate/Antenna Settings

Master Remote

Base Station
1: PNB6 Name: PNB6 Disabled
File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\M4\20150505_

Coordinates
Latitude: North 44 27 07.24711 Compute from PPP
Longitude: West 68 46 19.95840 Enter Grid Values
Ellipsoidal height: 33.462 m Enter MSL Height
Datum: NAD83(2011) Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: TRM41249USCG, SCIT View STA File
Antenna profile: TRM41249USCG, SCIT Info
Measured height: 0.000 m
ARP to L1 offset: 0.063 m
Applied height: 0.063 m
Measured to:
 ARP
 L1 Phase Centre
Compute From Slant

OK Cancel

Flight Log

P.O. Box 72387
Boston, MA 02172
PARC
PROFESSIONAL AERIAL COMMUNICATIONS

Flight Date (UTC) 05/09/15
Operator Parke
Plane Puma
Mission Mission 4
Source ALEVO
Sensor ALEVO
Start 13:36:45
Stop 14:05:20
Duration 0:28:35
Run/Lane 135/237

Project ContourScan
Quantum Spatial
Location: Bldg. Ventnor, NJ
BRUSH NAVIGATION FILE NAME: 20150505_125341

PRIME 2
TBA
Project ContourScan
Quantum Spatial
Location: Bldg. Ventnor, NJ
BRUSH NAVIGATION FILE NAME: 20150505_125341

Run/Lane	Line	Dy	Start	Stop	FDW	Scan Rate	Rate Error	Rail Count	Height	Accuracy	Ref. Error	Scale	Height	Accuracy	Ref. Error	Scale	Height	Accuracy	Ref. Error
135/237	135/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
136/237	136/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
137/237	137/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
138/237	138/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
139/237	139/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
140/237	140/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
141/237	141/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
142/237	142/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
143/237	143/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
144/237	144/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
145/237	145/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
146/237	146/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
147/237	147/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
148/237	148/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
149/237	149/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712
150/237	150/237		13:36:45	14:05:20	38.8	47.4	78000	1558	1712	5017	47.4	78000	1558	1712	5017	47.4	78000	1558	1712


Comments: Cloud Cover

DATA COLLECTION
TMI Lines: 0
Elevation to Ground: 0
Elevation Error: 0
Elevation Std Dev: 0
Elevation Units: 0
Elevation Type: 0
Elevation Units: 0
Elevation Type: 0

HEALTH SUMMARY
Health Start: 2015-05-09 13:36:45
Health Stop: 2015-05-09 14:05:20
Health Total: 0:28:35
Mission Status: OK
Mission Error: 0
Mission Warning: 0
Mission Error: 0

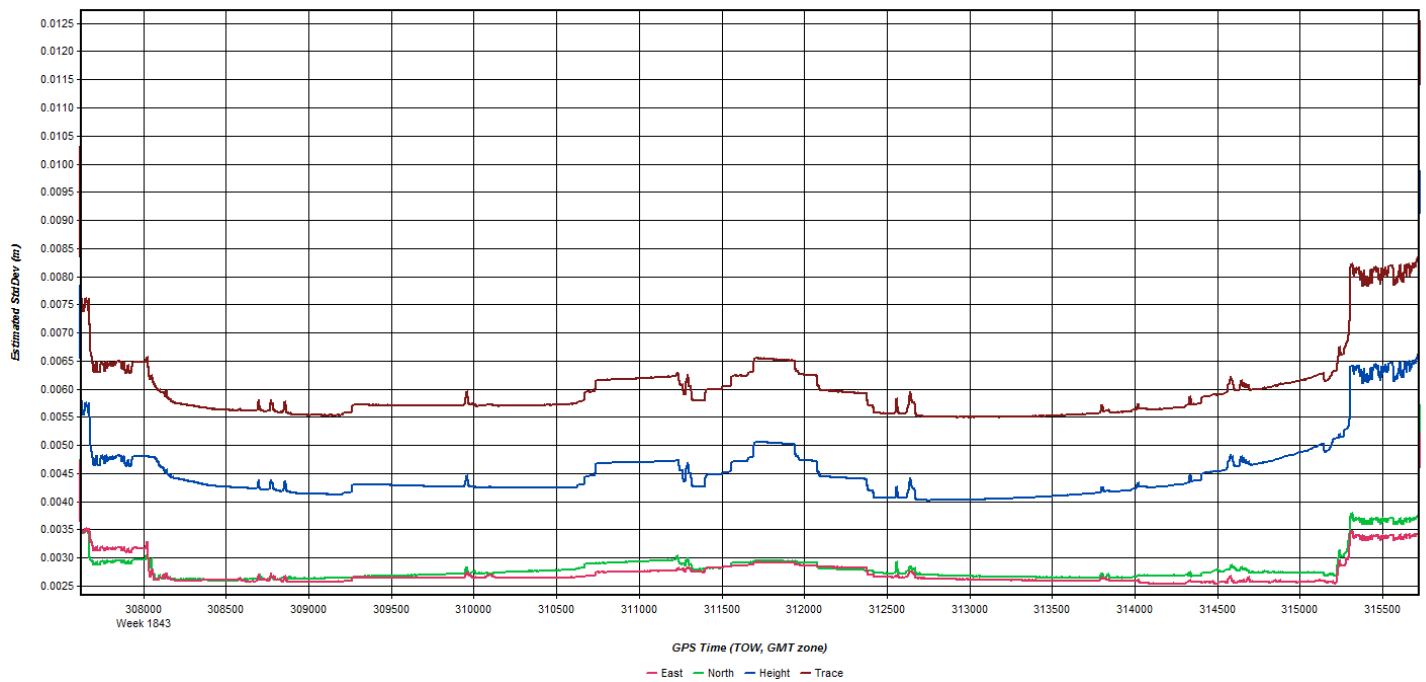
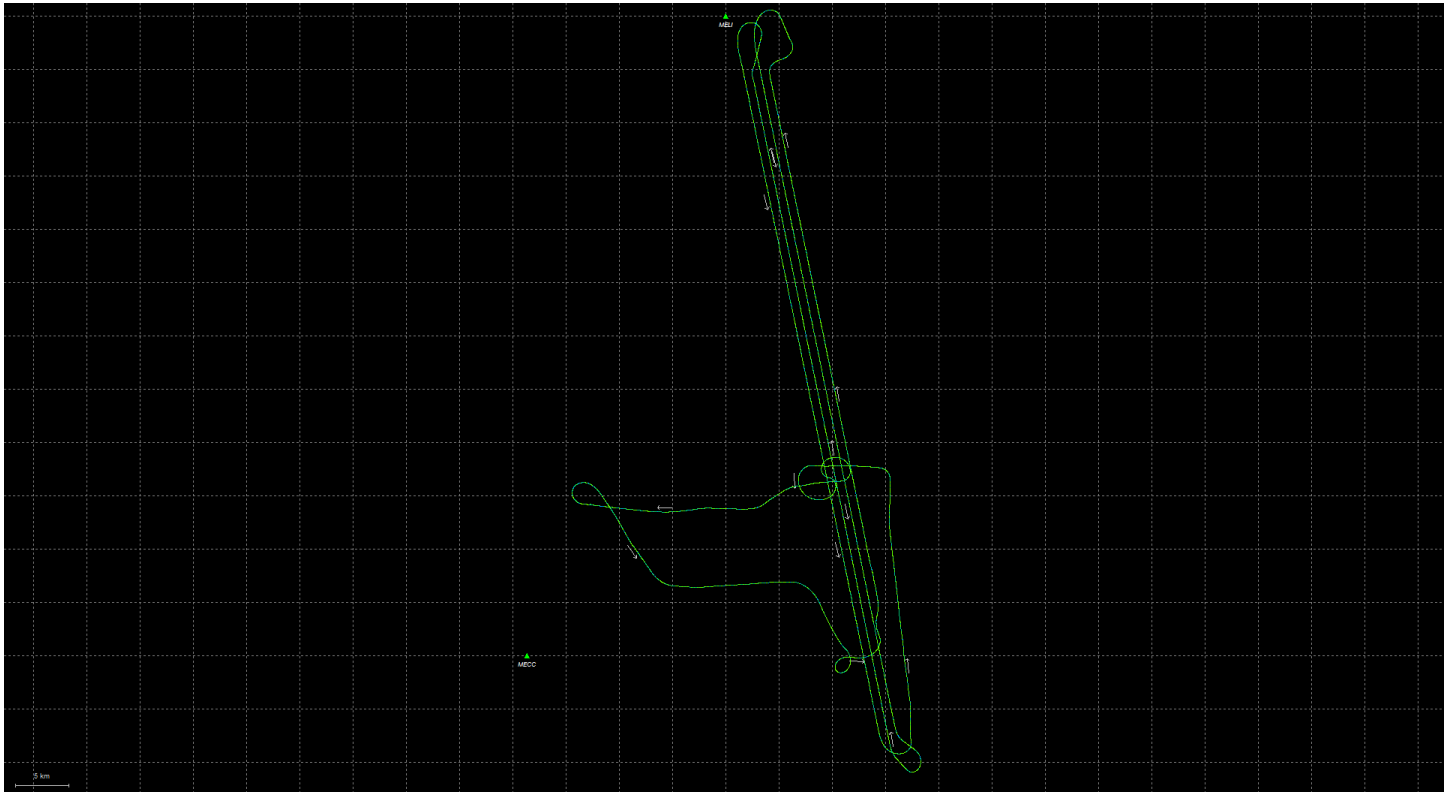
Base Station Log

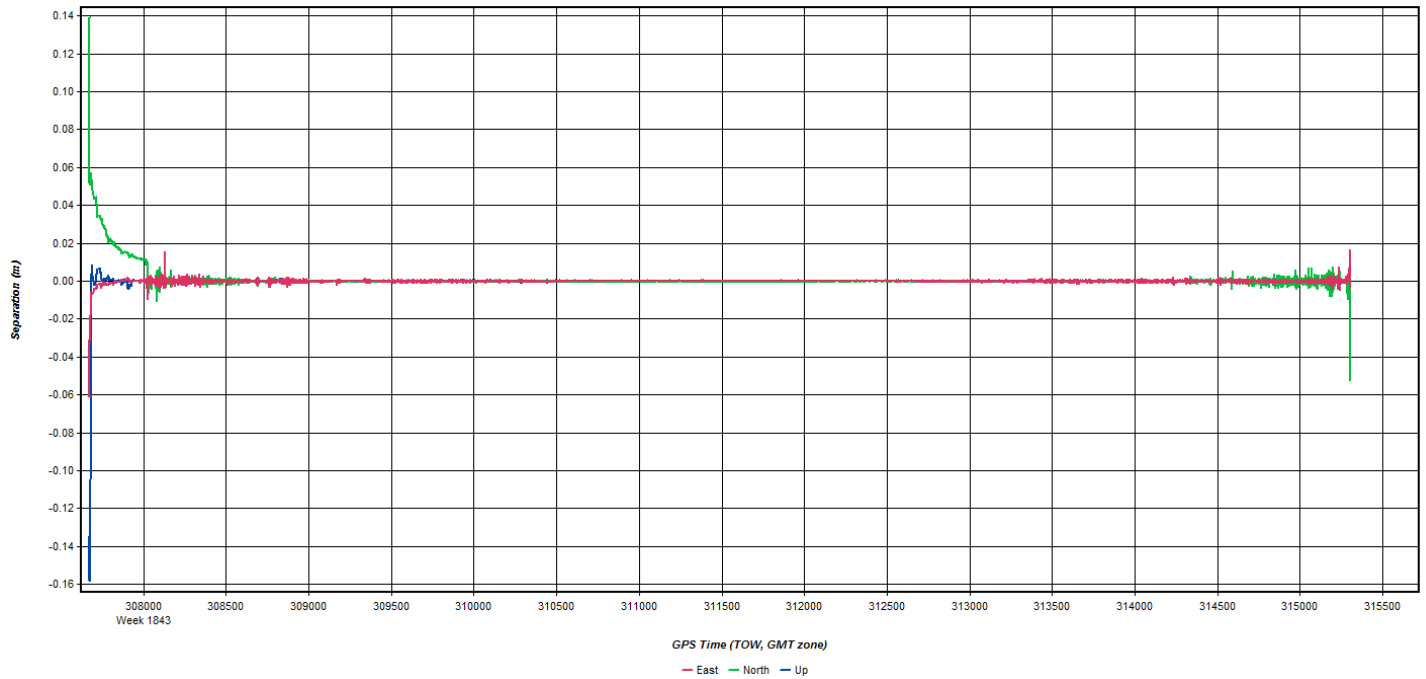
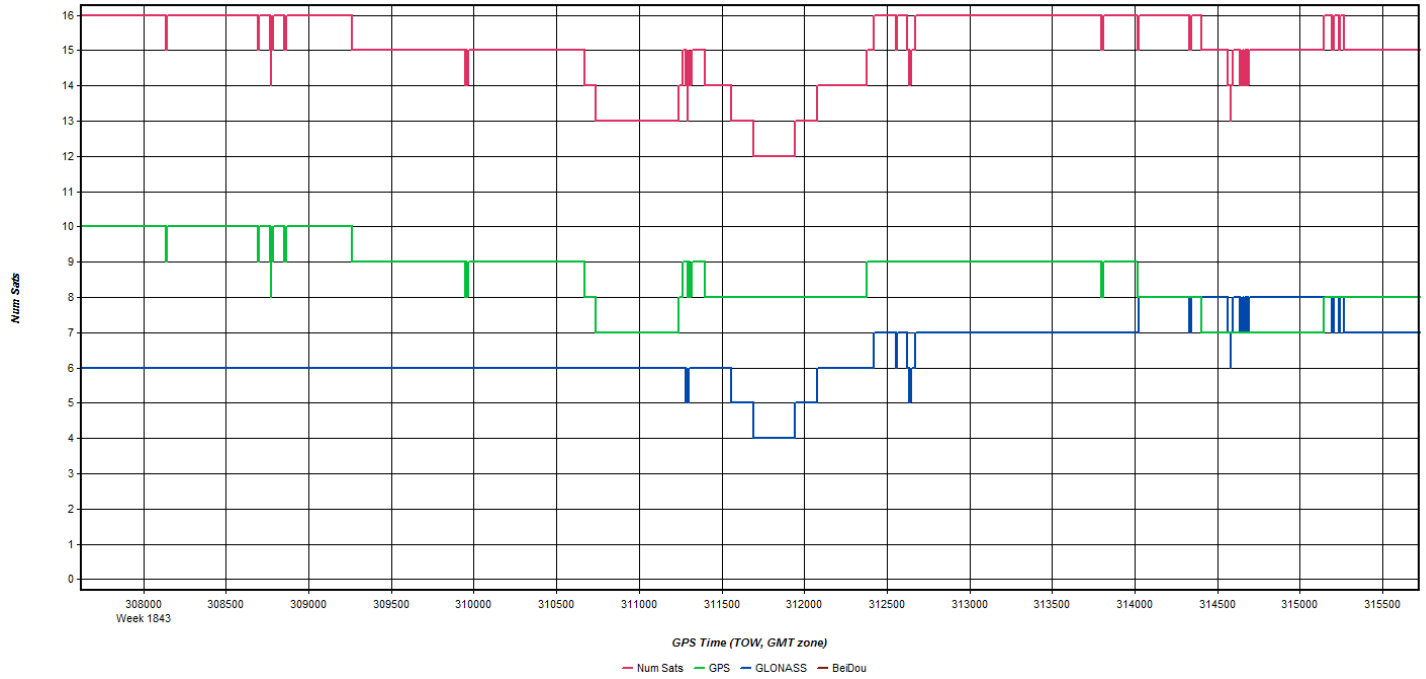
GPS SESSION FORM

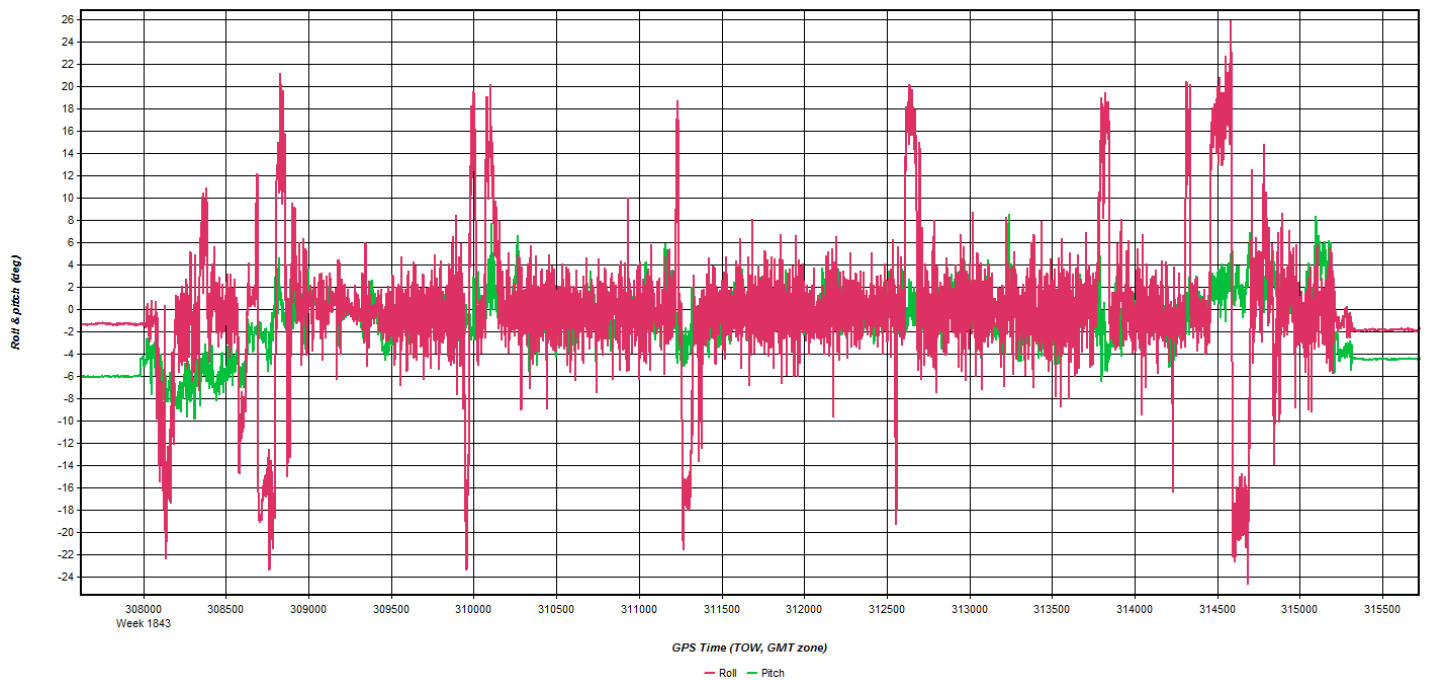
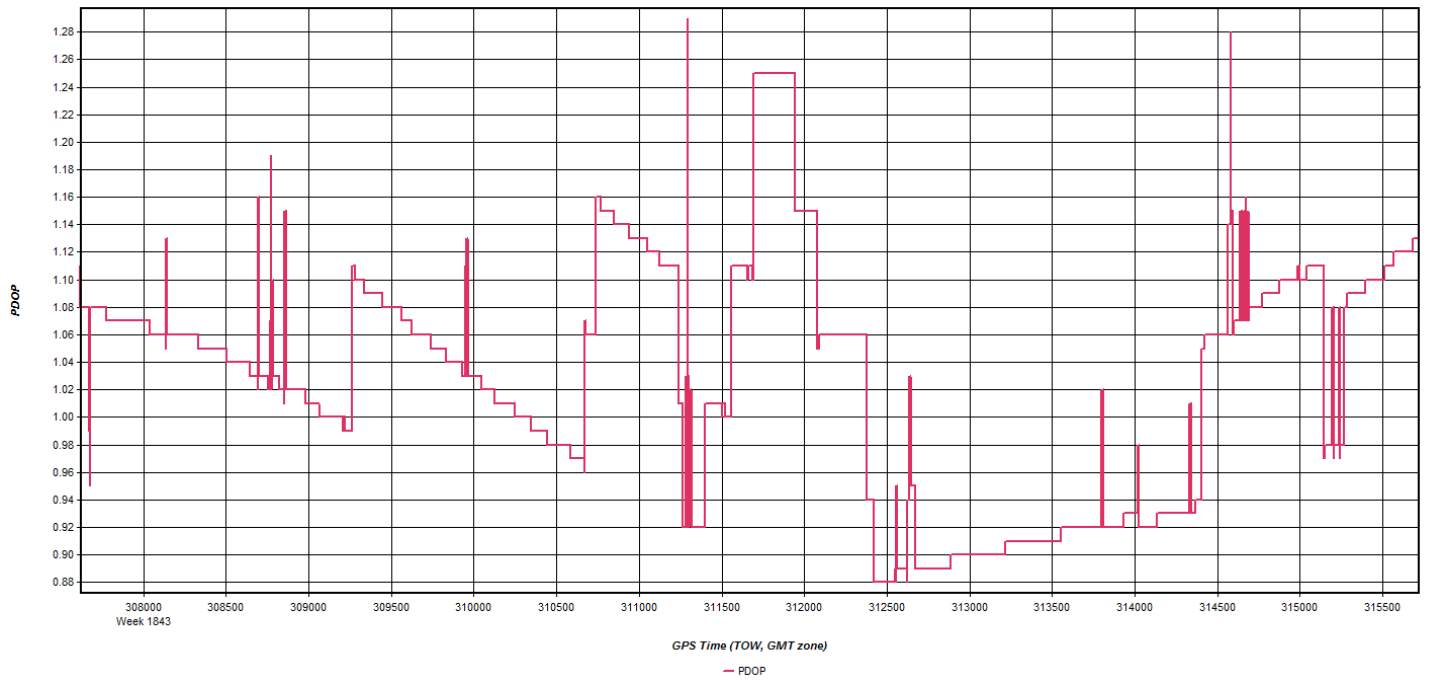
Contract # / TO #		Client / Project Name		Date	
		Quantum: Maine- Hancock		4-May-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
BHB D			BHB D 1995		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
AB2640		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19821252.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 		1 2 3 AVG 		TRUE VERTICAL <input checked="" type="radio"/> ARP	
2.050		2.050		2.050	
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 		1 2 3 AVG 		TRUE VERTICAL <input checked="" type="radio"/> ARP	
2.050		2.050		2.050	
Antenna Reference Point (diagram in survey report) (Antenna Reference Point = VR + VO + VE2) ARP to Phase = 168mm					
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
5-May-2015		12:50		44 26 44.53923(N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
5-May-2015		19:03		068 22 02.72882(W)	
Monument is in good condition Ground Photos			Site Diagram\Picture 		

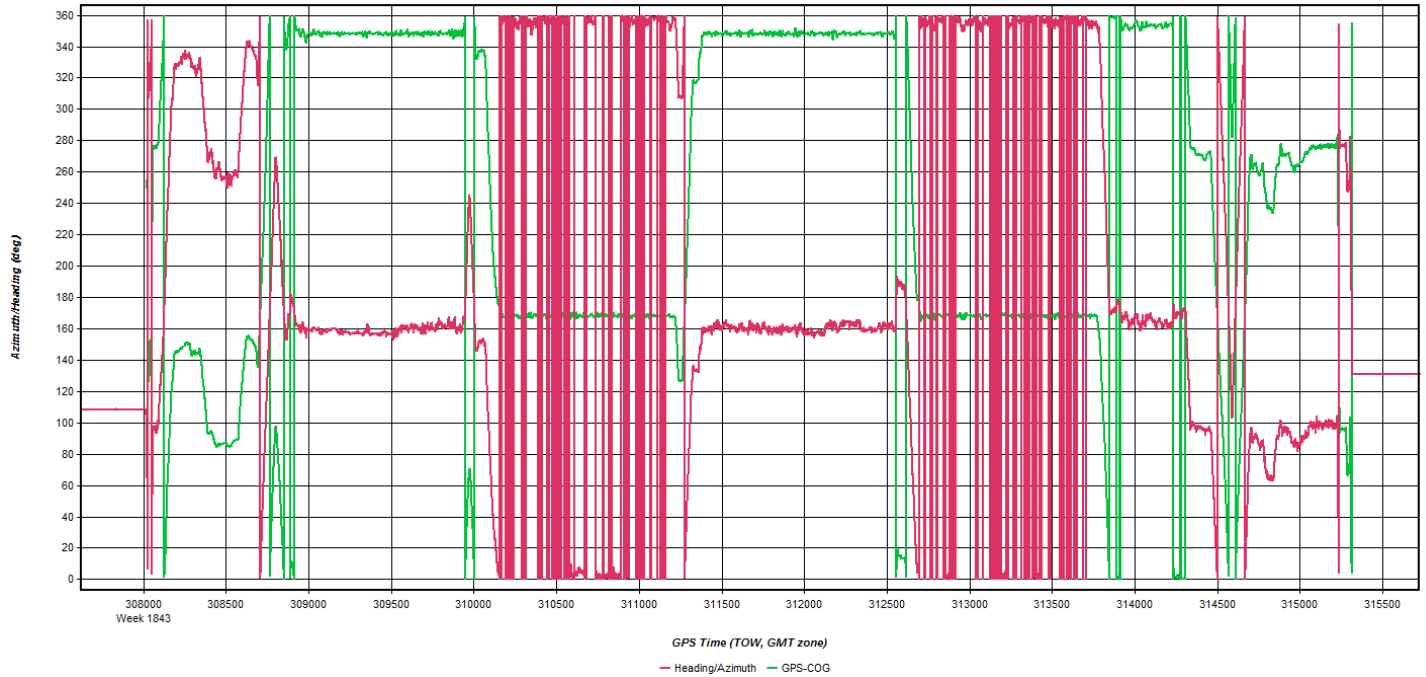


May 6, 2015-A (N799AC, SN7169)









Coordinate/Antenna Settings

Master Remote

Base Station
 2: MECC Name: MECC Disabled
 File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\IM5\20150506_

Coordinates
 Latitude: North 44 49 33.21003
 Longitude: West 68 44 38.60195
 Ellipsoidal height: 20.586 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
1: MELI Name: MELI Disabled
File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\M5\20150506_

Coordinates
Latitude: North 45 21 49.15536 Compute from PPP
Longitude: West 68 30 26.61463 Enter Grid Values
Ellipsoidal height: 54.567 m Enter MSL Height
Datum: NAD83(2011) 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/Client	Date	City	Mission Name	Mission ID	Operator	Weather	GPS/IMU	Laser	Scan Rate	FOV	Return	Red	Green	Blue	IR	Yellow	Magenta	White	Black	Grey	Other		
PAR LLC	2015-03-06	Portland, ME	LIDAR Daily Log	2015-03-06-132230																			
Station 1	Station 2	Station 3	Station 4	Station 5	Station 6	Station 7	Station 8	Station 9	Station 10	Station 11	Station 12	Station 13	Station 14	Station 15	Station 16	Station 17	Station 18	Station 19	Station 20	Station 21	Station 22		
LIDAR FLIGHT SUMMARY												DATA COLLECTION								Comment		Cloud Cover	
Station 1: 13.228 U Station 2: 15.887 V Station 3: Station 4: Station 5: Station 6: Station 7: Station 8: Station 9: Station 10: Station 11: Station 12: Station 13: Station 14: Station 15: Station 16: Station 17: Station 18: Station 19: Station 20: Station 21: Station 22:												Total Lines: 0 # Pruned Lines: 0 # Points: 0 # Meters: 0								Comment: Cloud Cover		Cloud Cover:	

Base Station Log

GPS SESSION FORM

Contract # / TO #		Client / Project Name		Date	
		Quantum: Maine- Old Town		6-May-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
BHB D			BHB D 1995		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
PE2529		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19821261.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 		1 2 3 AVG 2.050 2.050 2.050 2.050		TRUE VERTICAL <input checked="" type="radio"/> ARP	
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 		1 2 3 AVG 2.050 2.050 2.050 2.050		TRUE VERTICAL <input checked="" type="radio"/> ARP	
Antenna Reference Point (diagram in survey report) (Antenna Reference Point = VR + VO + VE2) ARP to Phase = 168mm					
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
6-May-2015		13:09		44 26 44.53923(N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
6-May-2015		16:20		068 22 02.72882(W)	
Monument is in good condition			Site Diagram/Picture		
Ground Photos					



May 7, 2015-A (N1107Q, SN7108)

Flight Log

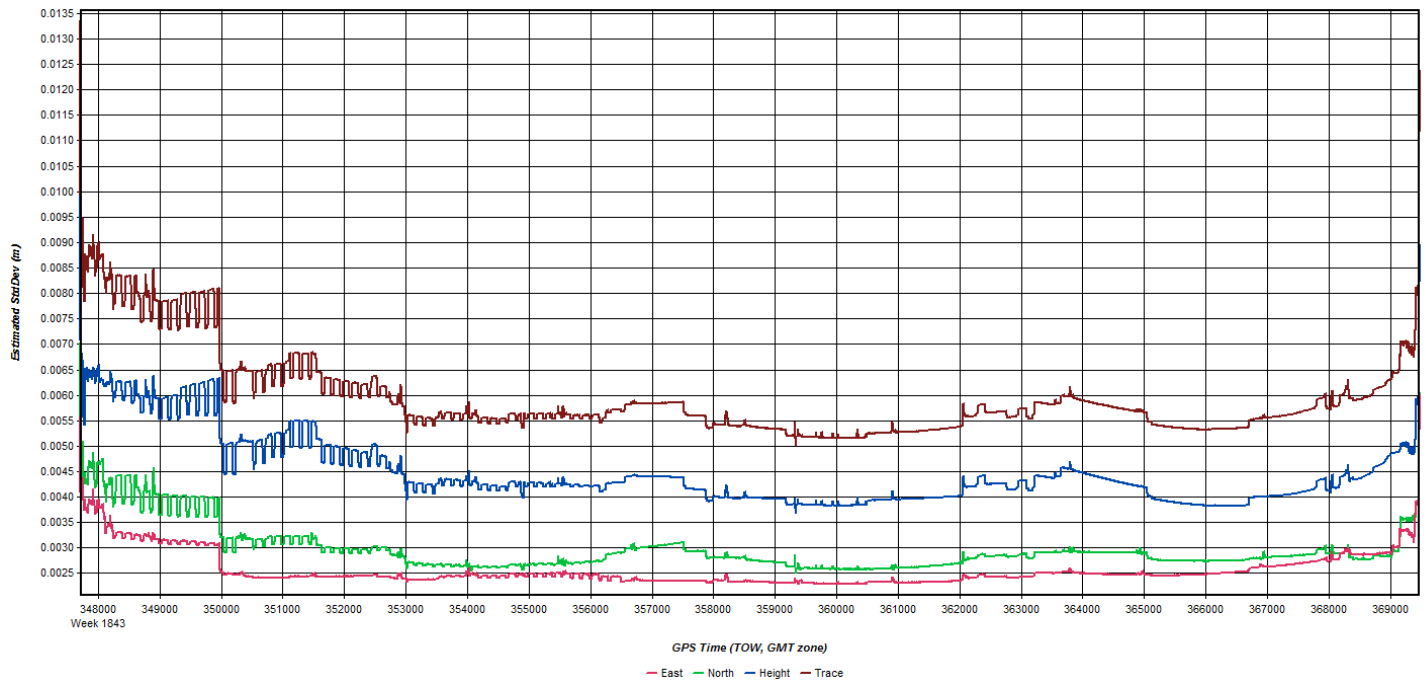
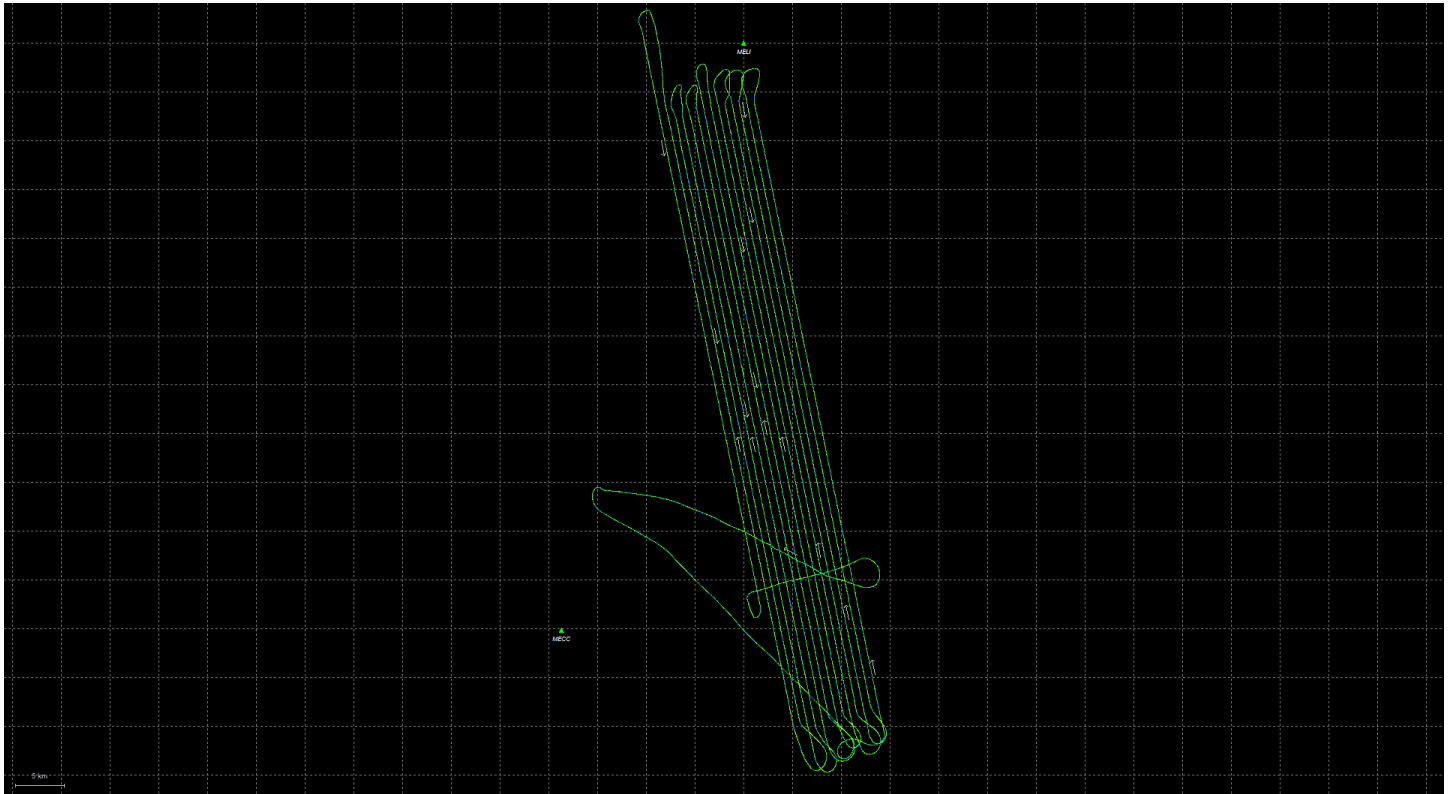
WOOLPERT FLIGHT LOG SHEET #1											
Leica ALS-70			MM/DD/YYYY 5/7/2015		Day of Year 127		Mission Name / Job # Norridgewock Maine 75538				
Operator Annen			Aircraft N475RC N404CP N7079F N475CP N1107Q <input checked="" type="checkbox"/>		Sensor SH-7177 SH-6157 SH-7108 <input checked="" type="checkbox"/>		Hobbs Start 2712.9		Local Start Time 7:20		Zulu Start Time 11:20
Pilot Larocque							Hobbs End 2716.6		Local End Time 11:25		Zulu End Time 15:25
Passengers			Using or Relying on CORS Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>			GPS Base #1 Operator Annen		PID KAUG			
						GPS Base #2 Operator		PID MEFR			
Wind Dir/Speed 310/5		Visibility 10	Ceiling clear		Cloud Cover % 0	Temp 14	Dew Point 2	Pressure 30.15		Haze/Fine/Cloud	
								Departing ICAO KAUG		Arriving ICAO KAUG	
Scan Angle (FOV) 40		Scan Frequency (Hz) 41		Pulse Rate (kHz) 272		Laser Power % 100		Gain Course/Up Fine/Down		Mode Single <input type="checkbox"/> 2+2 <input type="checkbox"/> Multi <input type="checkbox"/> 4+3 <input type="checkbox"/>	
Air Speed 150 Kts		AGL 6,300 Ft		MSL 6,300 Ft		Threshold /		Waveform Mode @ NS		Pre-Trigger Dist. Ft	
Line #	Dir.	Line Start Time	Line End Time	Time On Line	SV's	HDOP	PDOP	Line Notes/Comments			
Test	n/a			n/a	n/a	n/a	n/a	GPS Began Logging At:			
↑ Times entered are Zulu / GMT ↓								Verify S-Turns Before Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
1	N	11:54:00	12:06:00		16	0.6	1.2				
2	S	12:15:00	12:26:00								
3	N	12:29:00	12:41:00								
4	S	12:44:00	12:55:00								
5	N	12:58:00	13:12:00								
6	S	13:13:00	13:25:00								
7	N	13:28:00	13:40:00								
8	S	13:43:00	13:54:00								
9	N	13:57:00	14:10:00								
10	S	14:12:00	14:24:00					Turbulence			
11	N	14:27:00	14:39:00					Turbulence			
12	S	14:43:00	14:54:00					Turbulence			
↑ Times entered are Zulu / GMT ↑								Total Time On Line 0:00:00		Verify S-Turns After Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Additional Comments: System worked well, no issues.										Drive #	

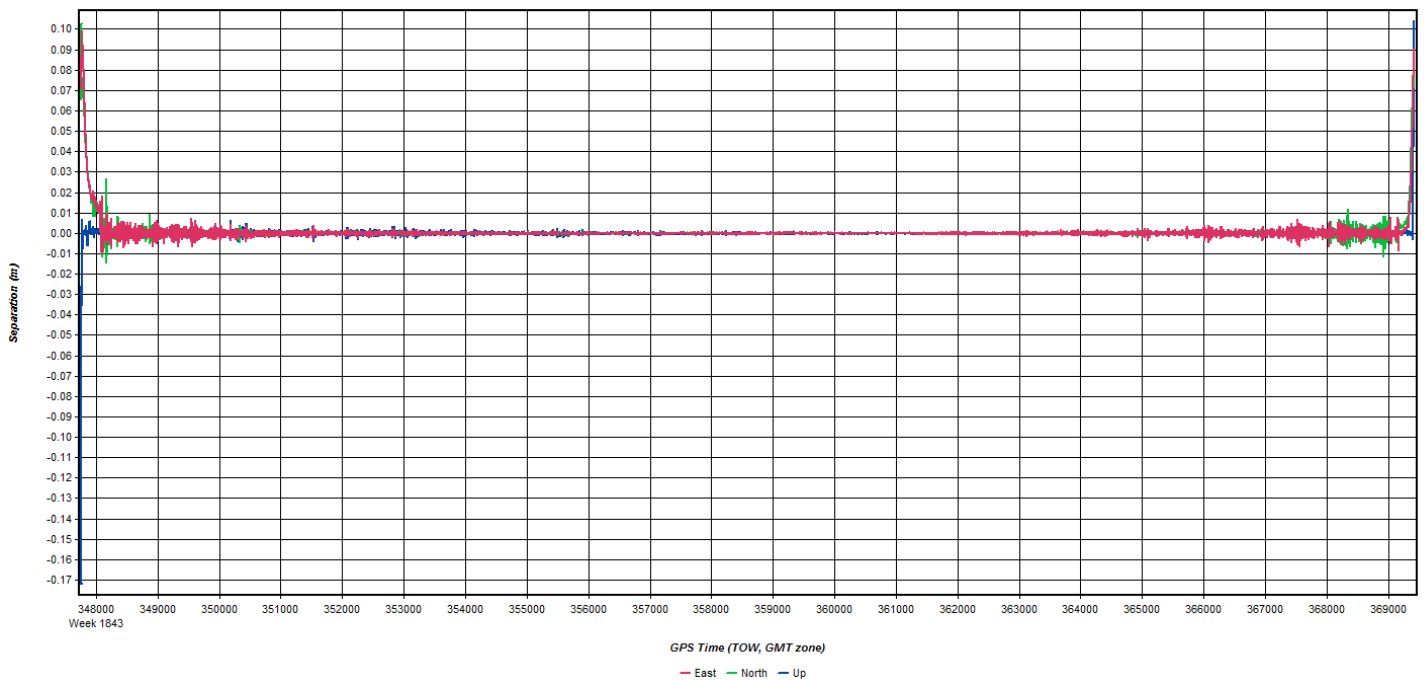
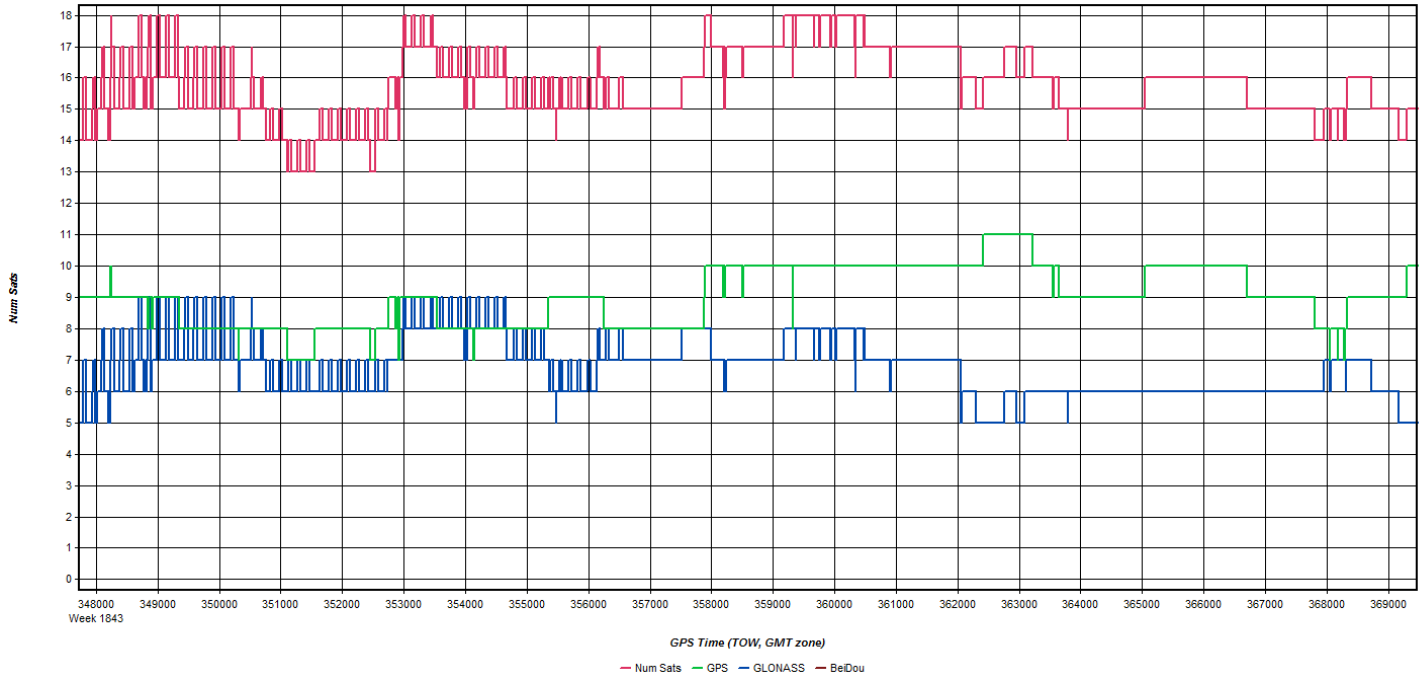
May 7, 2015-B (N1107Q, SN7108)

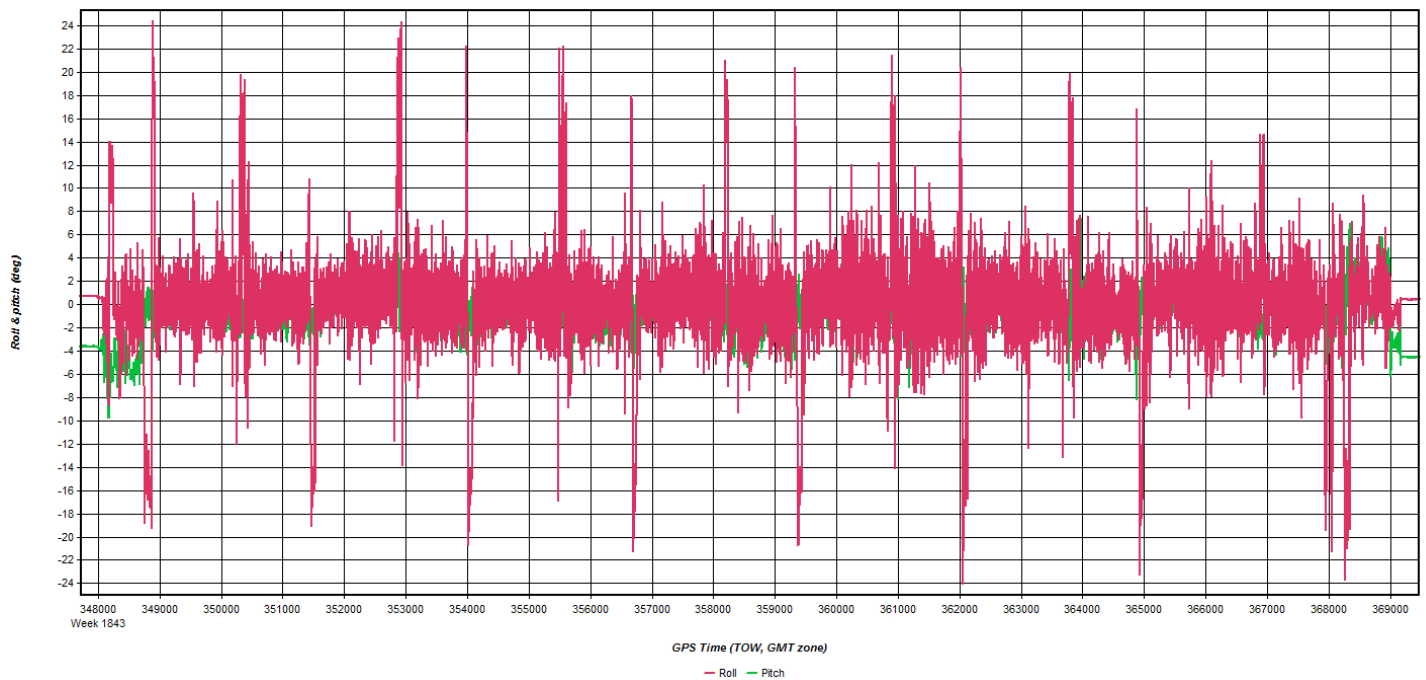
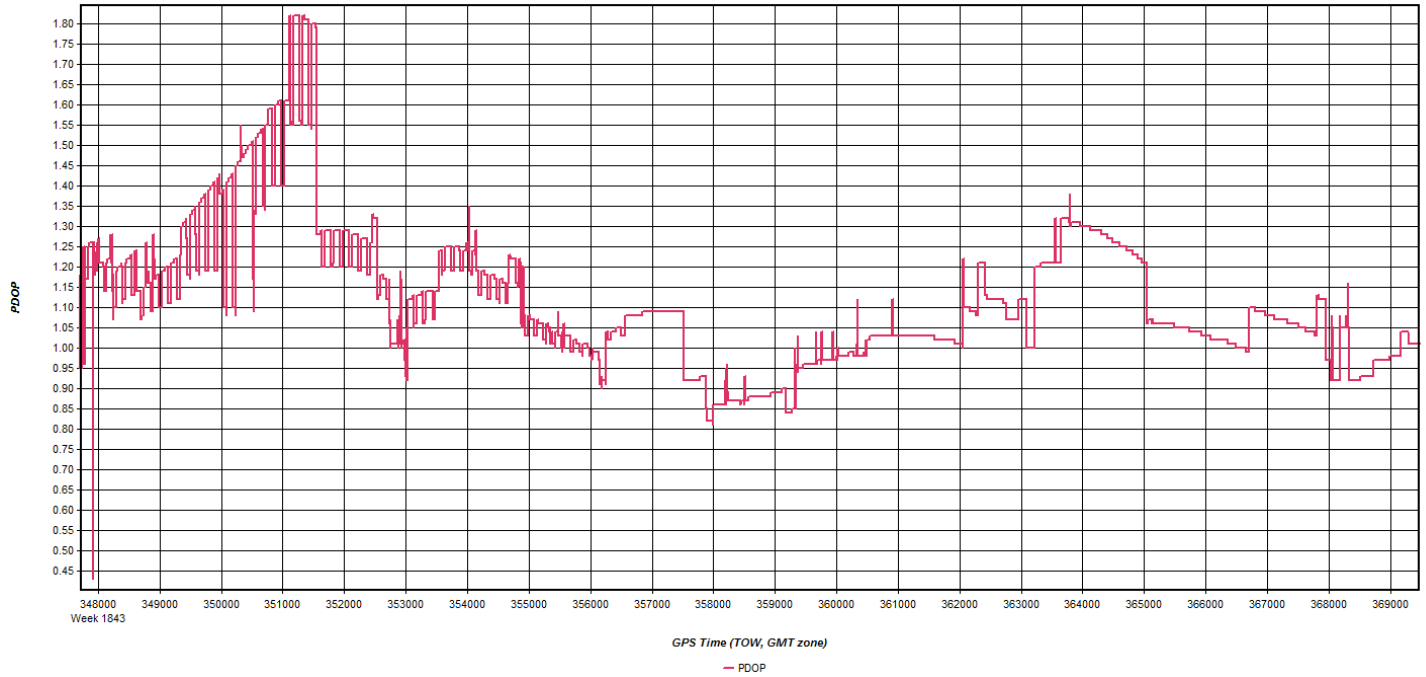
Flight Log

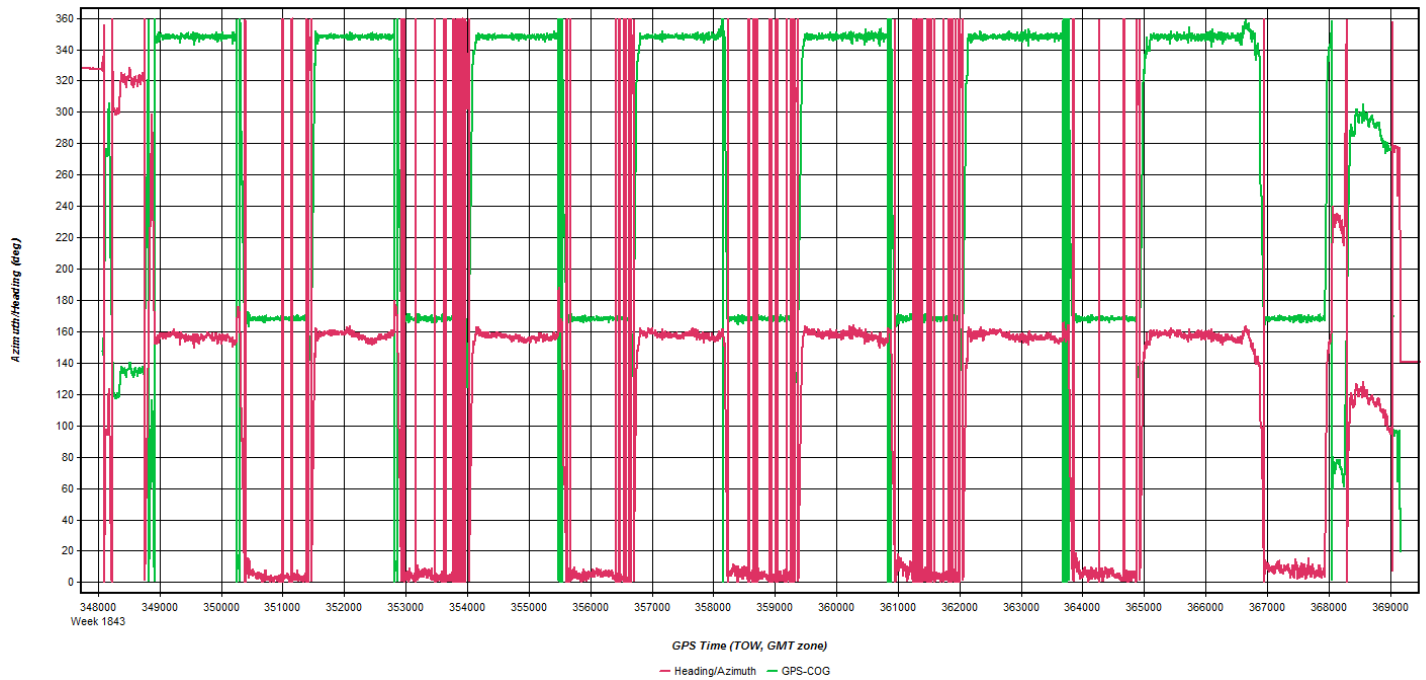
WOOLPERT FLIGHT LOG SHEET #1											
Leica ALS-70			MM/DD/YYYY 5/7/2015		Day of Year 127		Mission Name / Job # Norridgewock Maine 75538				
Operator Annen			Aircraft N475RC N404CP N7079F N475CP N1107Q <input checked="" type="checkbox"/>		Sensor SH-7177 SH-6157 SH-7108 <input checked="" type="checkbox"/>		Hobbs Start 2716.6		Local Start Time 16:35		Zulu Start Time 20:35
Pilot Larocque							Hobbs End 2720.7		Local End Time 21:10		Zulu End Time 1:10
Passengers			Using or Relying on CORS Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			GPS Base #1 Operator Annen		PID KAUG			
						GPS Base #2 Operator		PID MEFR			
Wind Dir/Speed 310/13		Visibility 10	Ceiling 0	Cloud Cover % 0	Temp 28	Dew Point -1	Pressure 30.03		Haze/Fine/Cloud		Departing ICAO KAUG
										Arriving ICAO KAUG	
Scan Angle (FOV) 40		Scan Frequency (Hz) 41		Pulse Rate (kHz) 272		Laser Power % 100		Gain Course/Up Fine/Down		Mode Single <input type="checkbox"/> 2+2 <input type="checkbox"/> Multi <input type="checkbox"/> 4+3 <input type="checkbox"/>	
Air Speed 150 Kts		AGL 6,300 Ft		MSL 6,300 Ft		Threshold /		Waveform Mode @ NS		Pre-Trigger Dist. Ft	
Line #	Dir.	Line Start Time	Line End Time	Time On Line	SV's	HDOP	PDOP	Line Notes/Comments			
Test	n/a			n/a	n/a	n/a	n/a	GPS Began Logging At:			
↑ Times entered are Zulu / GMT ↓								Verify S-Turns Before Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
13	N	21:10:00	21:22:00		15	0.6	1.2				
14	S	21:24:00	21:36:00								
15	N	21:39:00	21:51:00								
16	S	21:54:00	22:06:00								
17	N	22:09:00	22:21:00								
18	S	22:24:00	22:35:00								
19	N	22:39:00	22:51:00								
20	S	22:54:00	23:06:00								
21	N	23:08:00	23:21:00								
22	S	23:23:00	23:35:00								
23	N	23:38:00	23:50:00								
24	S	23:53:00	0:04:00								
25	N	0:07:00	0:20:00								
26	S	0:22:00	0:34:00								
↑ Times entered are Zulu / GMT ↑								Total Time On Line 0:00:00		Verify S-Turns After Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Additional Comments: System worked well, no issues.										Drive #	

May 7, 2015-A (N799AC, SN7169)









Coordinate/Antenna Settings [?] [X]

Master Remote

Base Station
 2. MECC Name: MECC Disabled
 File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\MG\20150507_...

Coordinates
 Latitude: North 44 49 33.21003
 Longitude: West 68 44 38.60195
 Ellipsoidal height: 20.586 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
1: MELI Name: MELI Disabled
File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\M6\20150507_1

Coordinates
Latitude: North 45 21 49.15536 Compute from PPP
Longitude: West 68 30 26.61463 Enter Grid Values
Ellipsoidal height: 54.567 m Enter MSL Height
Datum: NAD83(2011) 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

PAR LLC		PROJECT INFORMATION		MISSION #		GPS INFORMATION		LIDAR DAILY LOG		GPS INFORMATION		METEOROLOGICAL DATA	
Flight Log	Date	Start	Stop	Start	Stop	Start Time	Total Time	FOV	Scan Rate	Field Rate	Scan Code	Mean Pulse Amp (µV)	Altitude (ft)
201503180001	03/18/2015	07:30:00	08:15:00	07:30:00	08:15:00	07:30:00	08:15:00	30.0	40.0	0.5000	0000	15.00	5000
201503180002	03/18/2015	08:15:00	09:00:00	08:15:00	09:00:00	08:15:00	09:00:00	30.0	40.0	0.5000	0000	15.00	5000
201503180003	03/18/2015	09:00:00	09:45:00	09:00:00	09:45:00	09:00:00	09:45:00	30.0	40.0	0.5000	0000	15.00	5000
201503180004	03/18/2015	09:45:00	10:30:00	09:45:00	10:30:00	09:45:00	10:30:00	30.0	40.0	0.5000	0000	15.00	5000
201503180005	03/18/2015	10:30:00	11:15:00	10:30:00	11:15:00	10:30:00	11:15:00	30.0	40.0	0.5000	0000	15.00	5000
201503180006	03/18/2015	11:15:00	12:00:00	11:15:00	12:00:00	11:15:00	12:00:00	30.0	40.0	0.5000	0000	15.00	5000
201503180007	03/18/2015	12:00:00	12:45:00	12:00:00	12:45:00	12:00:00	12:45:00	30.0	40.0	0.5000	0000	15.00	5000
201503180008	03/18/2015	12:45:00	13:30:00	12:45:00	13:30:00	12:45:00	13:30:00	30.0	40.0	0.5000	0000	15.00	5000
201503180009	03/18/2015	13:30:00	14:15:00	13:30:00	14:15:00	13:30:00	14:15:00	30.0	40.0	0.5000	0000	15.00	5000
201503180010	03/18/2015	14:15:00	15:00:00	14:15:00	15:00:00	14:15:00	15:00:00	30.0	40.0	0.5000	0000	15.00	5000
201503180011	03/18/2015	15:00:00	15:45:00	15:00:00	15:45:00	15:00:00	15:45:00	30.0	40.0	0.5000	0000	15.00	5000
201503180012	03/18/2015	15:45:00	16:30:00	15:45:00	16:30:00	15:45:00	16:30:00	30.0	40.0	0.5000	0000	15.00	5000
201503180013	03/18/2015	16:30:00	17:15:00	16:30:00	17:15:00	16:30:00	17:15:00	30.0	40.0	0.5000	0000	15.00	5000
201503180014	03/18/2015	17:15:00	18:00:00	17:15:00	18:00:00	17:15:00	18:00:00	30.0	40.0	0.5000	0000	15.00	5000
201503180015	03/18/2015	18:00:00	18:45:00	18:00:00	18:45:00	18:00:00	18:45:00	30.0	40.0	0.5000	0000	15.00	5000
201503180016	03/18/2015	18:45:00	19:30:00	18:45:00	19:30:00	18:45:00	19:30:00	30.0	40.0	0.5000	0000	15.00	5000
201503180017	03/18/2015	19:30:00	20:15:00	19:30:00	20:15:00	19:30:00	20:15:00	30.0	40.0	0.5000	0000	15.00	5000
201503180018	03/18/2015	20:15:00	21:00:00	20:15:00	21:00:00	20:15:00	21:00:00	30.0	40.0	0.5000	0000	15.00	5000
201503180019	03/18/2015	21:00:00	21:45:00	21:00:00	21:45:00	21:00:00	21:45:00	30.0	40.0	0.5000	0000	15.00	5000
201503180020	03/18/2015	21:45:00	22:30:00	21:45:00	22:30:00	21:45:00	22:30:00	30.0	40.0	0.5000	0000	15.00	5000
201503180021	03/18/2015	22:30:00	23:15:00	22:30:00	23:15:00	22:30:00	23:15:00	30.0	40.0	0.5000	0000	15.00	5000
201503180022	03/18/2015	23:15:00	24:00:00	23:15:00	24:00:00	23:15:00	24:00:00	30.0	40.0	0.5000	0000	15.00	5000
201503180023	03/18/2015	24:00:00	24:45:00	24:00:00	24:45:00	24:00:00	24:45:00	30.0	40.0	0.5000	0000	15.00	5000
201503180024	03/18/2015	24:45:00	25:30:00	24:45:00	25:30:00	24:45:00	25:30:00	30.0	40.0	0.5000	0000	15.00	5000
201503180025	03/18/2015	25:30:00	26:15:00	25:30:00	26:15:00	25:30:00	26:15:00	30.0	40.0	0.5000	0000	15.00	5000
201503180026	03/18/2015	26:15:00	27:00:00	26:15:00	27:00:00	26:15:00	27:00:00	30.0	40.0	0.5000	0000	15.00	5000
201503180027	03/18/2015	27:00:00	27:45:00	27:00:00	27:45:00	27:00:00	27:45:00	30.0	40.0	0.5000	0000	15.00	5000
201503180028	03/18/2015	27:45:00	28:30:00	27:45:00	28:30:00	27:45:00	28:30:00	30.0	40.0	0.5000	0000	15.00	5000
201503180029	03/18/2015	28:30:00	29:15:00	28:30:00	29:15:00	28:30:00	29:15:00	30.0	40.0	0.5000	0000	15.00	5000
201503180030	03/18/2015	29:15:00	30:00:00	29:15:00	30:00:00	29:15:00	30:00:00	30.0	40.0	0.5000	0000	15.00	5000
201503180031	03/18/2015	30:00:00	30:45:00	30:00:00	30:45:00	30:00:00	30:45:00	30.0	40.0	0.5000	0000	15.00	5000
201503180032	03/18/2015	30:45:00	31:30:00	30:45:00	31:30:00	30:45:00	31:30:00	30.0	40.0	0.5000	0000	15.00	5000
201503180033	03/18/2015	31:30:00	32:15:00	31:30:00	32:15:00	31:30:00	32:15:00	30.0	40.0	0.5000	0000	15.00	5000
201503180034	03/18/2015	32:15:00	33:00:00	32:15:00	33:00:00	32:15:00	33:00:00	30.0	40.0	0.5000	0000	15.00	5000
201503180035	03/18/2015	33:00:00	33:45:00	33:00:00	33:45:00	33:00:00	33:45:00	30.0	40.0	0.5000	0000	15.00	5000
201503180036	03/18/2015	33:45:00	34:30:00	33:45:00	34:30:00	33:45:00	34:30:00	30.0	40.0	0.5000	0000	15.00	5000
201503180037	03/18/2015	34:30:00	35:15:00	34:30:00	35:15:00	34:30:00	35:15:00	30.0	40.0	0.5000	0000	15.00	5000
201503180038	03/18/2015	35:15:00	36:00:00	35:15:00	36:00:00	35:15:00	36:00:00	30.0	40.0	0.5000	0000	15.00	5000
201503180039	03/18/2015	36:00:00	36:45:00	36:00:00	36:45:00	36:00:00	36:45:00	30.0	40.0	0.5000	0000	15.00	5000
201503180040	03/18/2015	36:45:00	37:30:00	36:45:00	37:30:00	36:45:00	37:30:00	30.0	40.0	0.5000	0000	15.00	5000
201503180041	03/18/2015	37:30:00	38:15:00	37:30:00	38:15:00	37:30:00	38:15:00	30.0	40.0	0.5000	0000	15.00	5000
201503180042	03/18/2015	38:15:00	39:00:00	38:15:00	39:00:00	38:15:00	39:00:00	30.0	40.0	0.5000	0000	15.00	5000
201503180043	03/18/2015	39:00:00	39:45:00	39:00:00	39:45:00	39:00:00	39:45:00	30.0	40.0	0.5000	0000	15.00	5000
201503180044	03/18/2015	39:45:00	40:30:00	39:45:00	40:30:00	39:45:00	40:30:00	30.0	40.0	0.5000	0000	15.00	5000
201503180045	03/18/2015	40:30:00	41:15:00	40:30:00	41:15:00	40:30:00	41:15:00	30.0	40.0	0.5000	0000	15.00	5000
201503180046	03/18/2015	41:15:00	42:00:00	41:15:00	42:00:00	41:15:00	42:00:00	30.0	40.0	0.5000	0000	15.00	5000
201503180047	03/18/2015	42:00:00	42:45:00	42:00:00	42:45:00	42:00:00	42:45:00	30.0	40.0	0.5000	0000	15.00	5000
201503180048	03/18/2015	42:45:00	43:30:00	42:45:00	43:30:00	42:45:00	43:30:00	30.0	40.0	0.5000	0000	15.00	5000
201503180049	03/18/2015	43:30:00	44:15:00	43:30:00	44:15:00	43:30:00	44:15:00	30.0	40.0	0.5000	0000	15.00	5000
201503180050	03/18/2015	44:15:00	45:00:00	44:15:00	45:00:00	44:15:00	45:00:00	30.0	40.0	0.5000	0000	15.00	5000

Base Station Log

GPS SESSION FORM

Contract # / TO #		Client / Project Name		Date	
		Quantum: Maine- Old Town		6-May-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
BHB D			BHB D 1995		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
PE2529		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19821271.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 		1 2 3 AVG 2.050 2.050 2.050 2.050		TRUE VERTICAL <input checked="" type="radio"/> ARP	
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 		1 2 3 AVG 2.050 2.050 2.050 2.050		TRUE VERTICAL <input checked="" type="radio"/> ARP	
Antenna Reference Point (diagram in survey report) (Antenna Reference Point = VR + VO + VE2) ARP to Phase = 168mm					
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
7-May-2015		0:18		44 26 44.53923(N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
7-May-2015		6:45		068 22 02.72882(W)	
Monument is in good condition			Site Diagram\Picture		
Ground Photos					



May 8, 2015-A (N1107Q, SN7108)

Flight Log

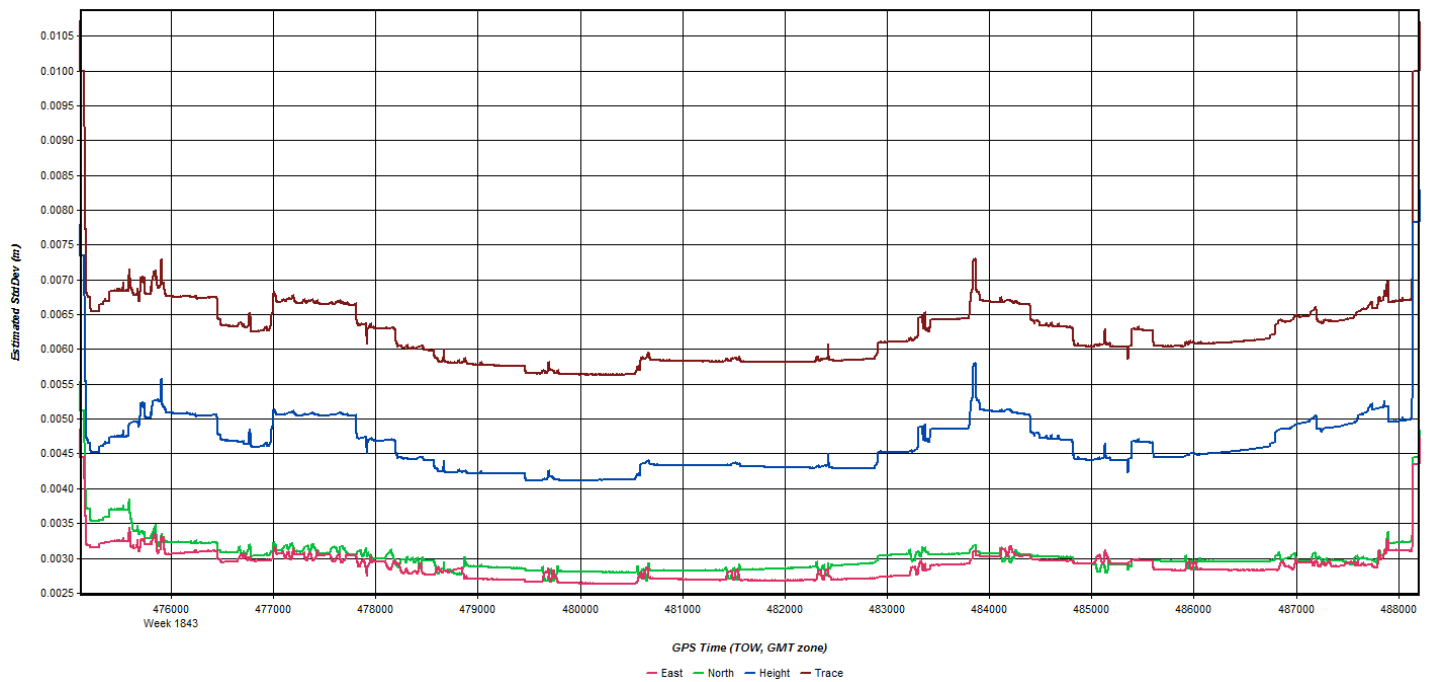
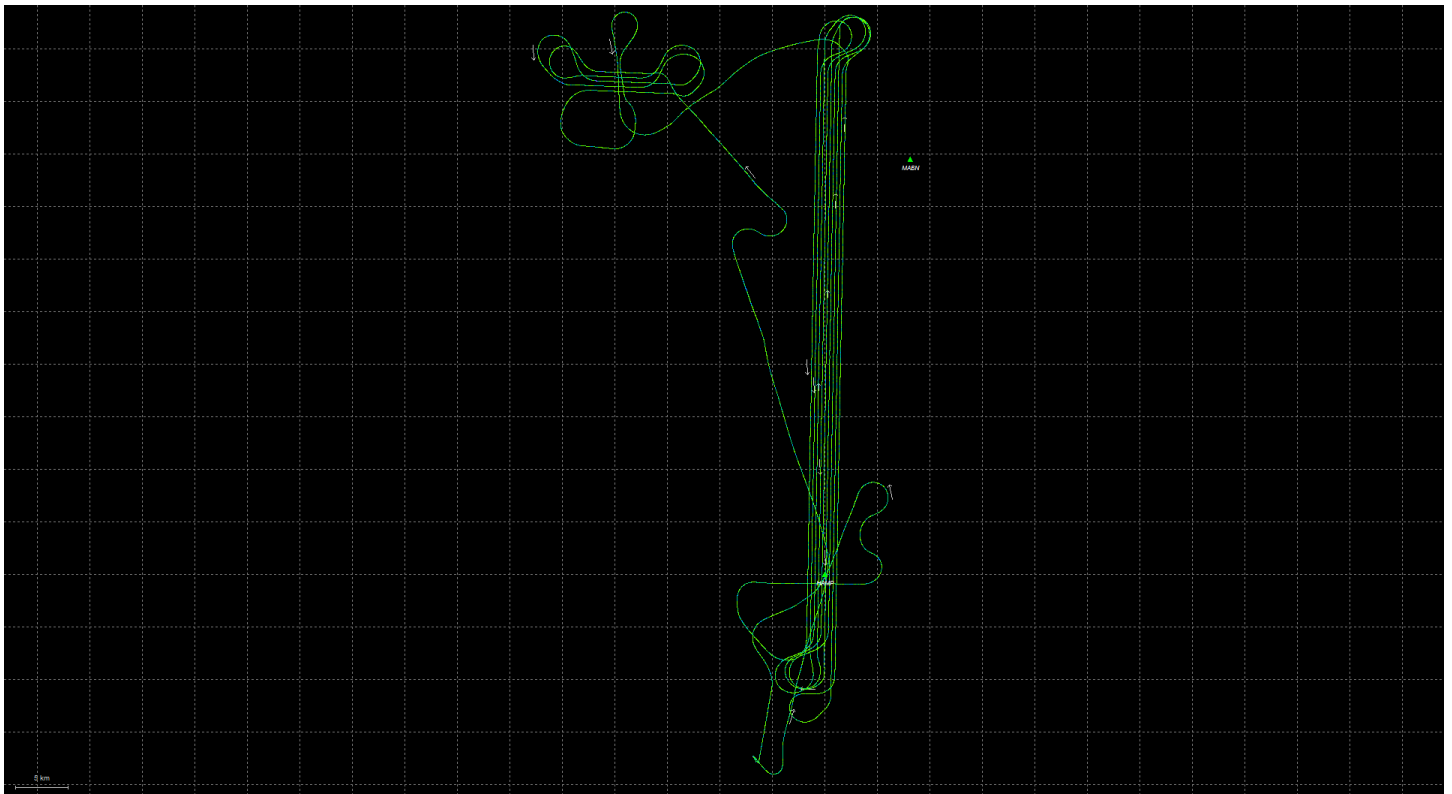
WOOLPERT FLIGHT LOG SHEET #1											
Leica ALS-70			MM/DD/YYYY 5/8/2015		Day of Year 128		Mission Name / Job # Norridgewock Maine 75538				
Operator Annen			Aircraft N475RC N404CP N7079F N475CP N1107Q <input checked="" type="checkbox"/>		Sensor SH-7177 SH-6157 SH-7108 <input checked="" type="checkbox"/>		Hobbs Start 2720.7		Local Start Time 7:15		Zulu Start Time 11:15
Pilot Larocque							Hobbs End 2725.3		Local End Time 12:10		Zulu End Time 16:10
Passengers			Using or Relying on CORS Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			GPS Base #1 Operator Annen		PID KAUG			
						GPS Base #2 Operator		PID MEJD			
Wind Dir/Speed 040/9		Visibility 10	Ceiling 0	Cloud Cover % 0	Temp 11	Dew Point -3	Pressure 30.2		Haze/Fine/Cloud		Departing ICAO KAUG
										Arriving ICAO KAUG	
Scan Angle (FOV) 40		Scan Frequency (Hz) 41		Pulse Rate (kHz) 272		Laser Power % 100		Gain Course/Up Fine/Down		Mode Single <input type="checkbox"/> 2+2 <input type="checkbox"/> Multi <input type="checkbox"/> 4+3 <input type="checkbox"/>	
Air Speed 150 Kts		AGL 6,300 Ft		MSL 6,300 Ft		Threshold /		Waveform Mode @ NS		Pre-Trigger Dist. Ft	
Line #	Dir.	Line Start Time	Line End Time	Time On Line	SV's	HDOP	PDOP	Line Notes/Comments			
Test	n/a			n/a	n/a	n/a	n/a	GPS Began Logging At:			
† Times entered are Zulu / GMT † Verify S-Turns Before Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>											
27	N	11:42:00	11:55:00		16	0.6	1.3				
28	S	11:57:00	12:10:00								
29	N	12:12:00	12:24:00								
30	S	12:27:00	12:39:00								
31	N	12:42:00	12:54:00								
32	S	12:57:00	13:09:00								
33	N	13:12:00	13:24:00								
34	S	13:27:00	13:39:00								
35	N	13:42:00	13:54:00								
36	S	13:57:00	14:09:00								
37	N	14:12:00	14:24:00								
38	S	14:27:00	14:39:00								
39	N	14:42:00	14:55:00								
40	S	14:57:00	15:10:00								
41	N	15:13:00	15:26:00								
42	S	15:29:00	15:42:00								
† Times entered are Zulu / GMT † Total Time On Line: 0:00:00 Verify S-Turns After Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>											
Additional Comments: System worked well, no issues.										Drive #	

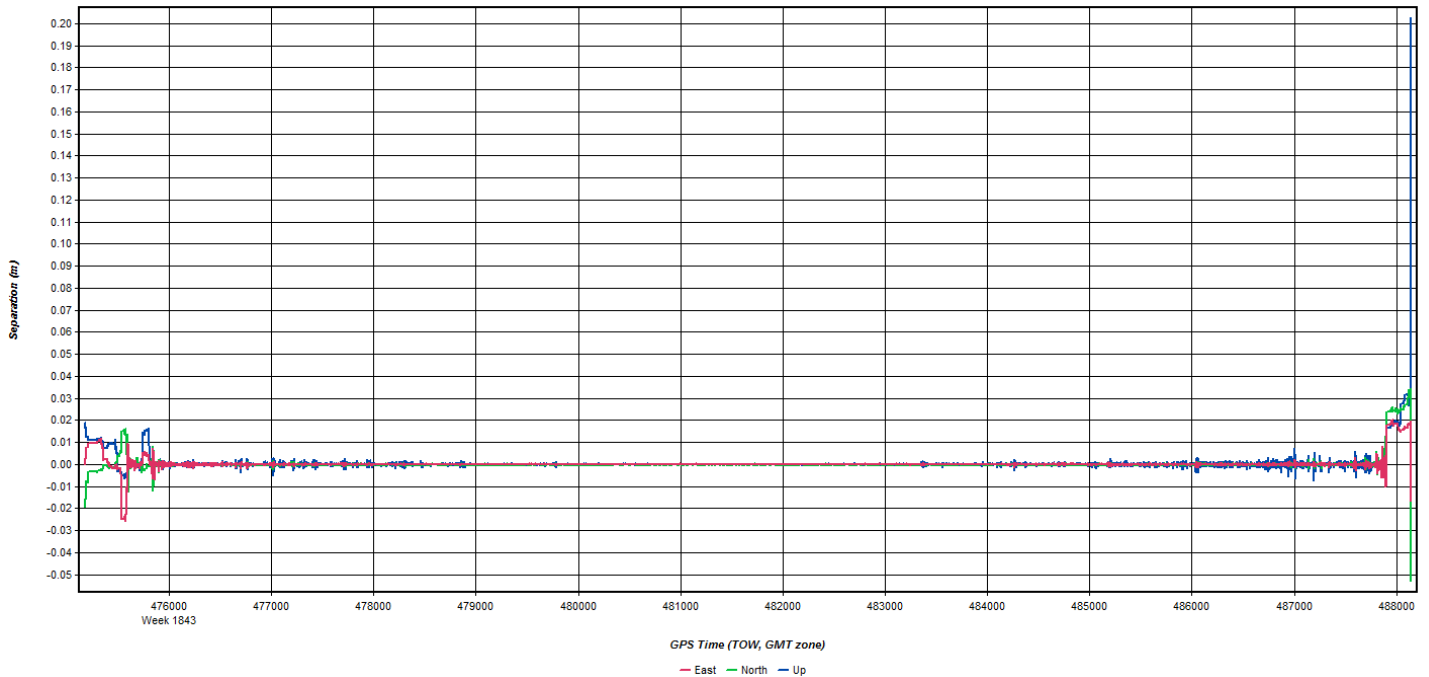
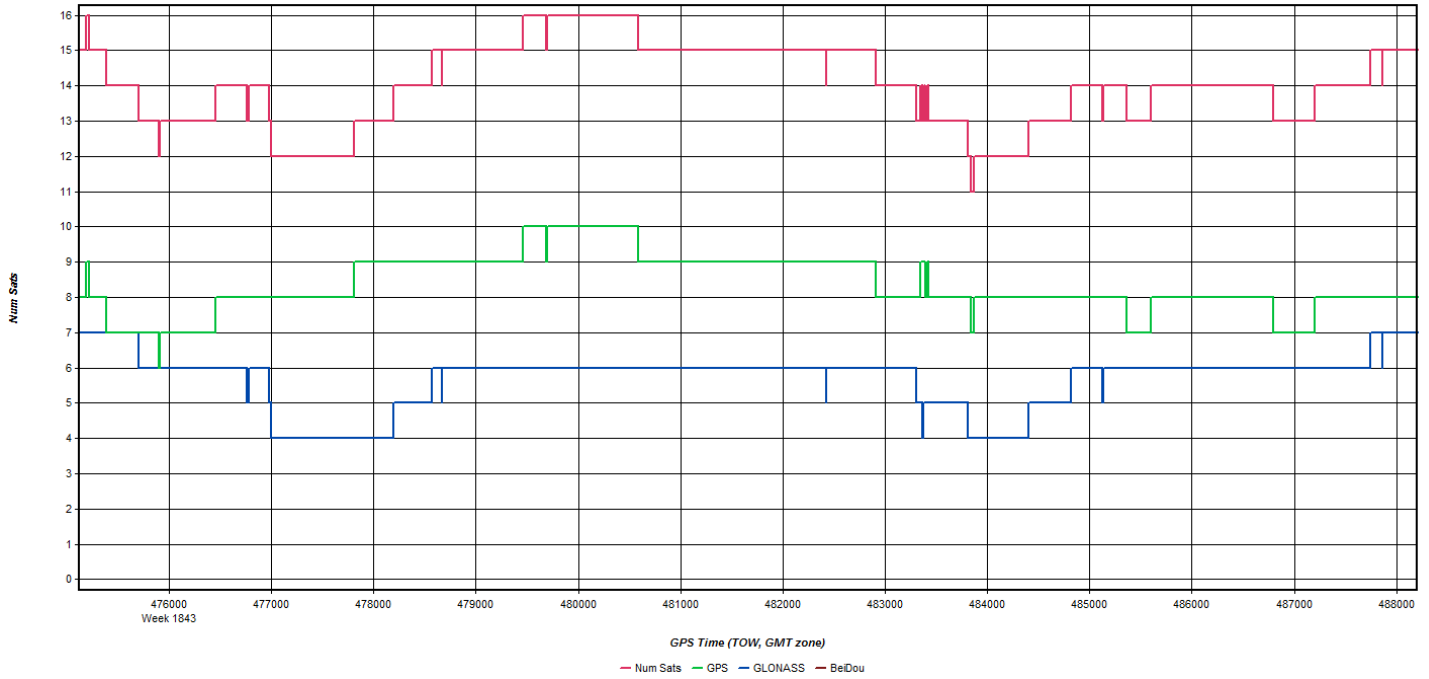
May 8, 2015-B (N1107Q, SN7108)

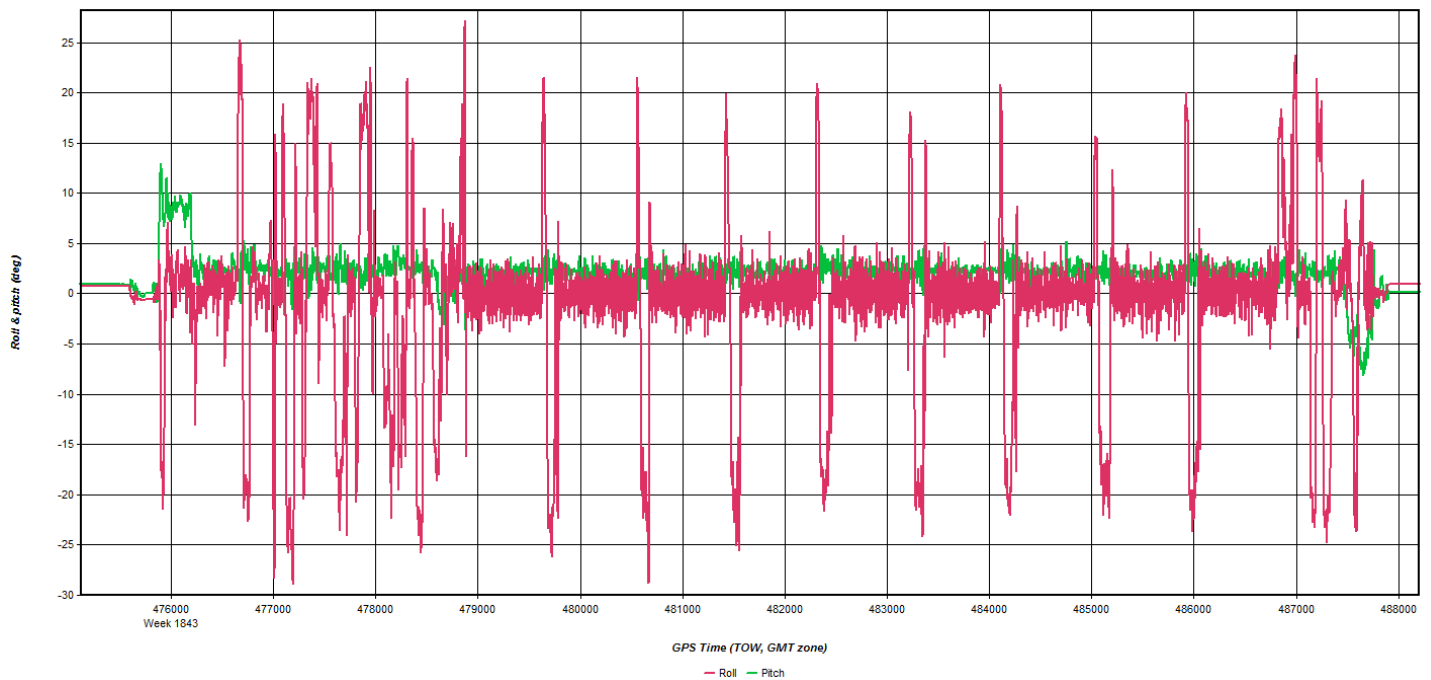
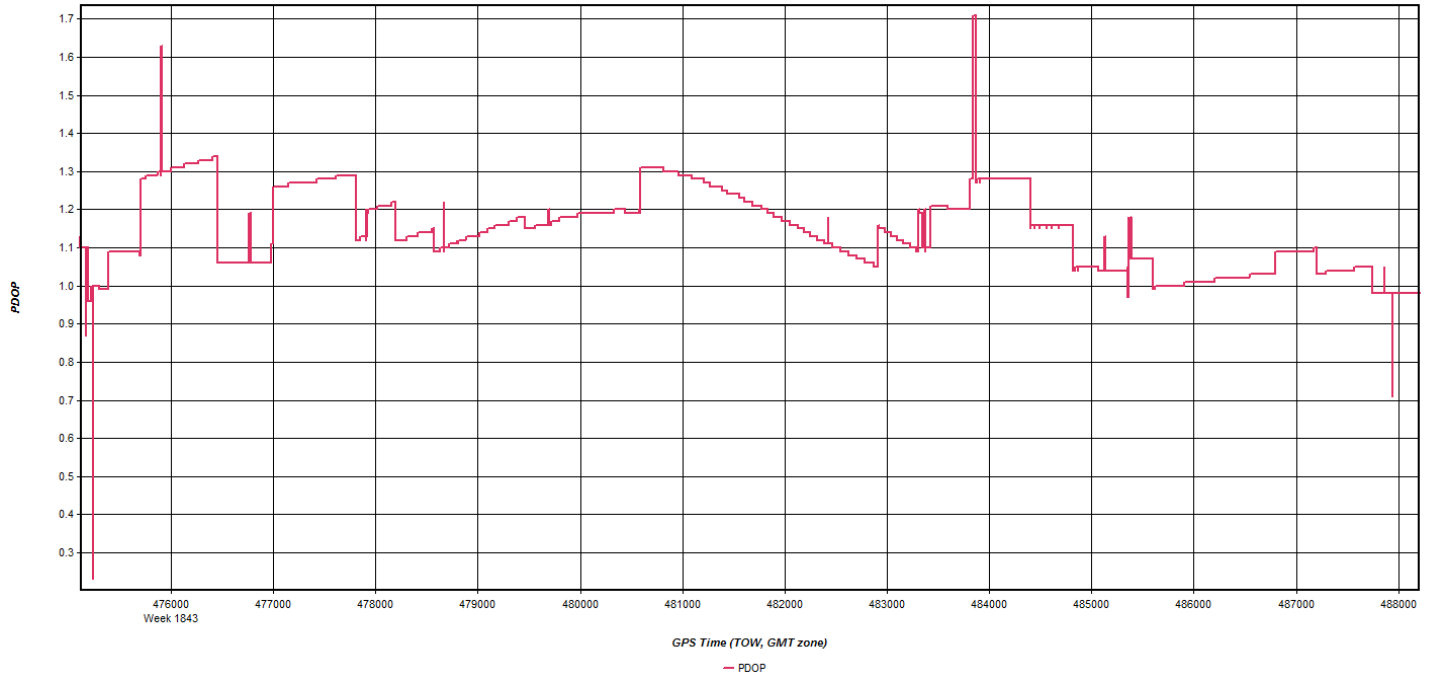
Flight Log

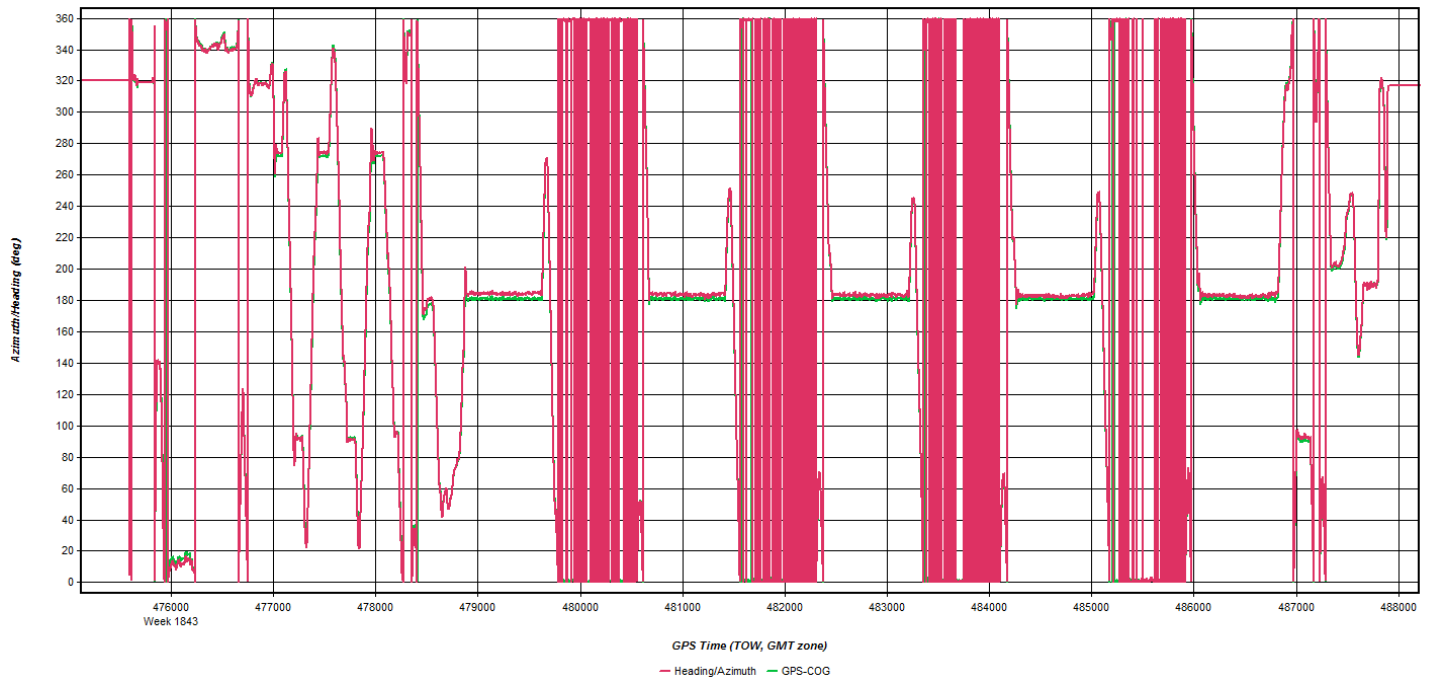
WOOLPERT FLIGHT LOG SHEET #1										
Leica ALS-70		MM/DD/YYYY 5/8/2015		Day of Year 128		Mission Name / Job # Norridgewock Maine 75538				
Operator Annen		Aircraft N475RC N404CP N7079F N475CP N1107Q <input checked="" type="checkbox"/>		Sensor SH-7177 SH-6157 SH-7108 <input checked="" type="checkbox"/>		Hobbs Start 2725.3		Local Start Time 13:50		Zulu Start Time 17:50
Pilot Larocque						Hobbs End 2729.1		Local End Time 18:00		Zulu End Time 22:00
Passengers		Using or Relying on CORS Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		GPS Base #1 Operator Annen		PID KAUG		GPS Base #2 Operator		PID MEJD
Wind Dir/Speed 180/18	Visibility 10	Ceiling 0	Cloud Cover % 0	Temp 14	Dew Point -1	Pressure 30.29		Haze/Fine/Cloud		Departing ICAO KAUG
Scan Angle (FOV) 40		Scan Frequency (Hz) 41		Pulse Rate (kHz) 272		Laser Power % 100		Gain Course/Up Fine/Down		Mode Single <input type="checkbox"/> 2+2 <input type="checkbox"/> Multi <input type="checkbox"/> 4+3 <input type="checkbox"/>
Air Speed 150 Kts	AGL 6,300 Ft		MSL 6,300 Ft		Threshold /		Waveform Mode @ NS		Pre-Trigger Dist. Ft	
Line #	Dir.	Line Start Time	Line End Time	Time On Line	SV's	HDOP	PDOP	Line Notes/Comments		
Test	n/a			n/a	n/a	n/a	n/a	GPS Began Logging At:		
		↑ Times entered are Zulu / GMT ↓						Verify S-Turns Before Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
58	W	18:29:00	18:32:00		17	0.6	1	8,300'		
59	E	18:35:00	18:39:00					8,300'		
43	S	18:43:00	18:56:00							
44	N	18:58:00	19:12:00							
45	S	19:14:00	19:26:00							
46	N	19:29:00	19:40:00							
47	S	19:43:00	19:53:00							
48	N	19:56:00	20:06:00							
49	S	20:09:00	20:19:00							
50	N	20:22:00	20:32:00							
51	S	20:35:00	20:45:00							
52	N	20:48:00	20:59:00							
53	S	21:01:00	21:10:00							
54	N	21:13:00	21:20:00							
55	S	21:22:00	21:28:00							
56	N	21:31:00	21:35:00							
57	S	21:37:00	21:39:00							
		↑ Times entered are Zulu / GMT ↑		0:00:00		Total Time On Line		Verify S-Turns After Mission Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Additional Comments:		System worked well, no issues.							Drive #	

May 8, 2015-A (N22GE, SN8239)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: HAMP Name: HAMP Disabled
 File: E:\Proc\26258_USGS_MA_MEVASH\20150508_115640\26258

Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
2: MABN Name: MABN Disabled
File: E:\Proc\26258_USGS_MA_ME\ASH7\20150508_115640\26258

Coordinates
Latitude: North 42 40 11.99113 Compute from PPP
Longitude: West 72 32 28.64375 Enter Grid Values
Ellipsoidal height: 94.890 m Enter MSL Height
Datum: NAD83(2011) Datum Options
Select From Favorites Add To Favorites Use Average Position

Antenna Height
From station file: LEIAX1203+GNSS, NONE View STA File
Antenna profile: LEIAX1203+GNSS Info
Measured height: 0.000 m
ARP to L1 offset: 0.058 m
Applied height: 0.058 m
Measured to:
 ARP
 L1 Phase Centre
Compute From Slant

OK Cancel

Flight Log

OPERATORS FLIGHT LOG

MISSION: 20150508 - 15640
 PILOT: Bill Snelser
 PROJECT NUMBER AND NAME: 26258 USGS MA Northampton

OPERATOR: Emily Driscoll
 DATE: 5-8-15
 AIRCRAFT: N22GE
 SENSOR: 8239
 REMARKS: BAF → site 3

LEICA ALS-70
 ALS-80
 MMR70 DRIVE

LINE	No.	Lbl	Hdg	GND SPEED (KTS)	FREQ HZ	SCAN ANGLE	PRF KHZ	FIXED GAIN	Flying Ht. (m)	TIME		REMARKS
										START	STOP	
135	3135	286		145	52	40	356		6500	12:11	12:30	SSD1
136	3136	106		157						12:33	12:34	
137	3137	286		138						12:37	12:38	
138	3138	106		159						12:42	12:43	
139	3139	286		142						12:46	12:47	
X	VL	001								12:51		Cross tie for lines 135-139 (in site)
X	VL	004	191	151						12:54	12:55	cross tie for lines 135-139
094	3094	195		151					4900	13:01	13:13	
093	3093	15		147						13:16	13:28	
092	3092	195		145						13:31	13:43	
091	3091	15		148						13:46	13:58	
090	3090	195		140						14:01	14:13	
089	3089	15		150						14:16	14:28	
088	3088	195		140						14:31	14:43	
087	3087	15		152						14:46	14:58	
086	3086	195		140						15:01	15:13	
X	VL	006	104	150						15:17	15:18	Cross tie for lines 94-86
										15:18	15:29	site → BAF ² 8280.1 Hubbs
										AIRCRAFT		
										SITE	FERRY	
										LEFT		
										FLOWN		
										TOTAL LINES		
										STATUS		
										USGS MA		
										Northampton		
										STATIC		
										START	STOP	
										11:59	12:04	NOTES: CORS: HAMP-12:16 fig. 8
										15:31	15:36	fig. 8 15:19 CORS: HAMP-15:24
										Wx Haze		
										3.3		

Quantum Spatial N 6216 Resource Drive Sheboygan Falls, WI. 53085 PHONE: 920-467-2655 FAX: 888-253-6695 E-Mail: amephot@quantumspatial.com

Generated by CamScanner

Base Station Log

GPS OBSERVATION LOG

Station ID <u>N/A</u>	Date <u>5, 8, 15</u>
Project Number <u>26258</u>	Julian Date _____
Project Name <u>USGS-MA</u>	Start Time <u>:11:39: UTC</u>
Rcvr. Type <u>Novatel</u>	Stop Time <u>:15:45: UTC</u>
Rcvr. S/N <u>7-0141149</u>	Rcvr. File Name <u>00071281.PDC</u>
Antenna Type <u>Novatel</u>	Observer <u>E. Dyreson</u>
Antenna S/N <u>01017577</u>	

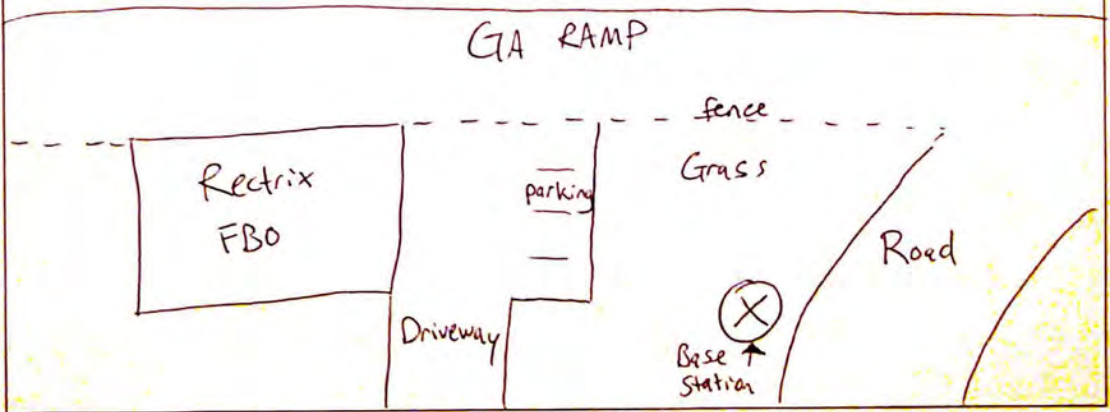
Mission(s): 20150508_115640 ALS-80

New or Existing Mon. New Existing
 Photo Taken: Yes No
 Monument Type: _____
 Spike PK Nail AM Washer
 Other Rebar set point

Height Readings:
 (Top of Monument to Bottom of Ground Plane)

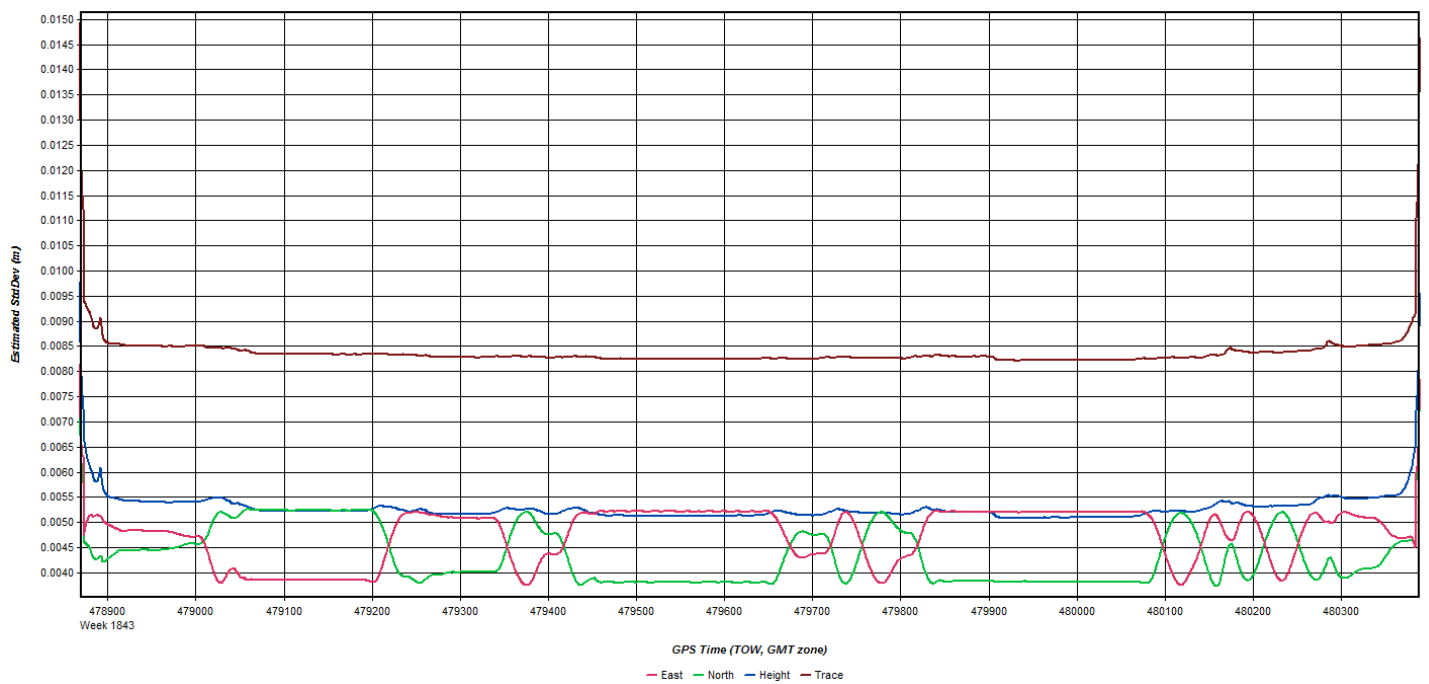
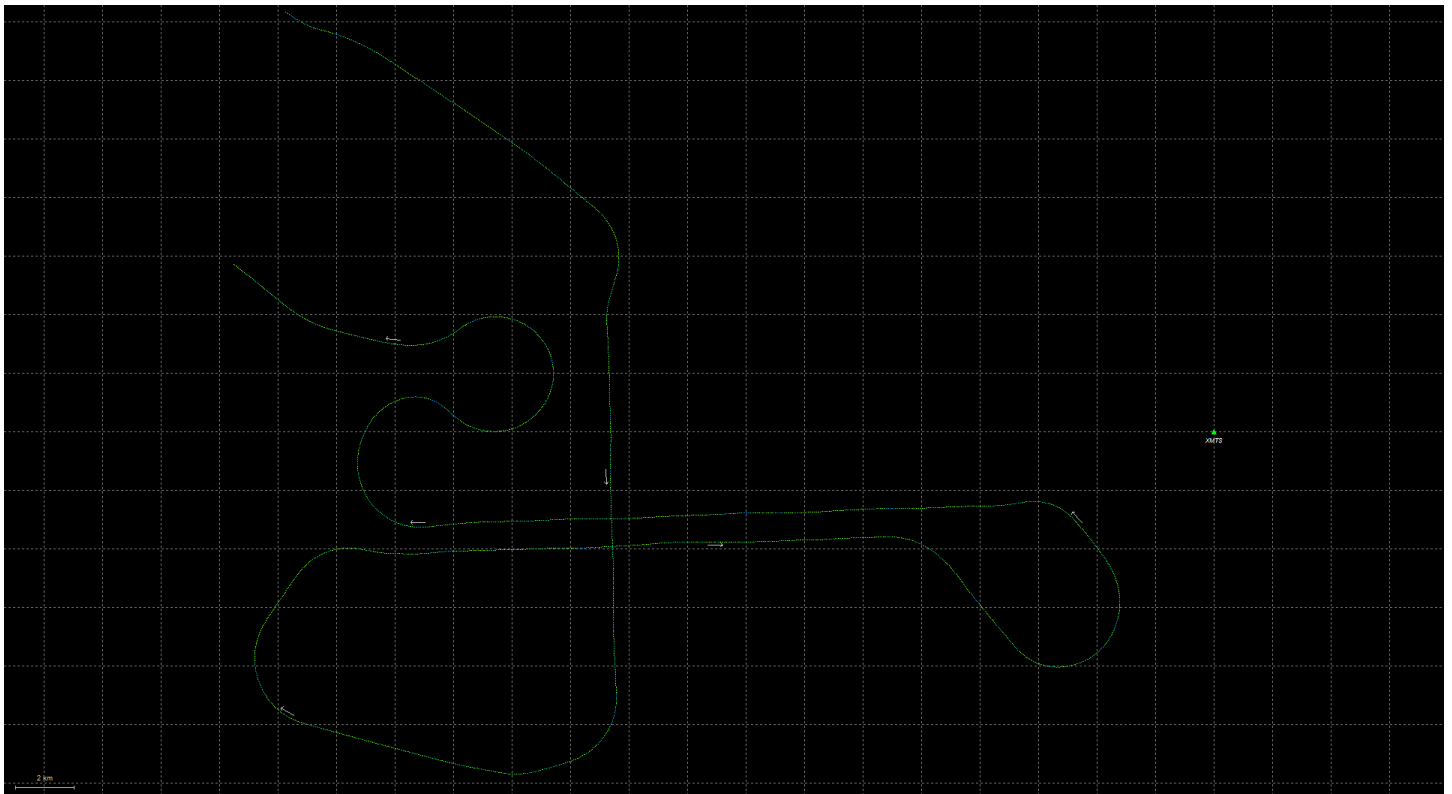
Start	<u>2.0</u>	M.	_____	Ft.
Stop	<u>2.0</u>	M.	_____	Ft.
Mean	<u>2.0</u>	M.	_____	Ft.

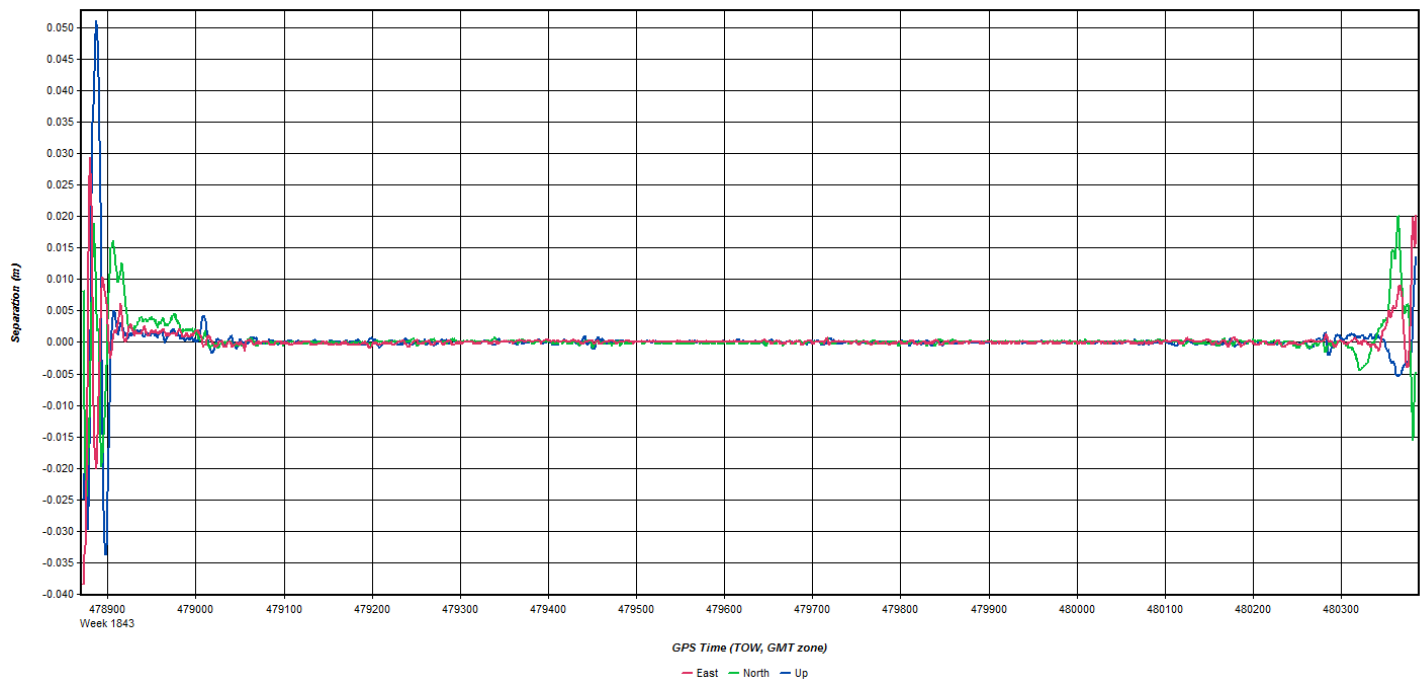
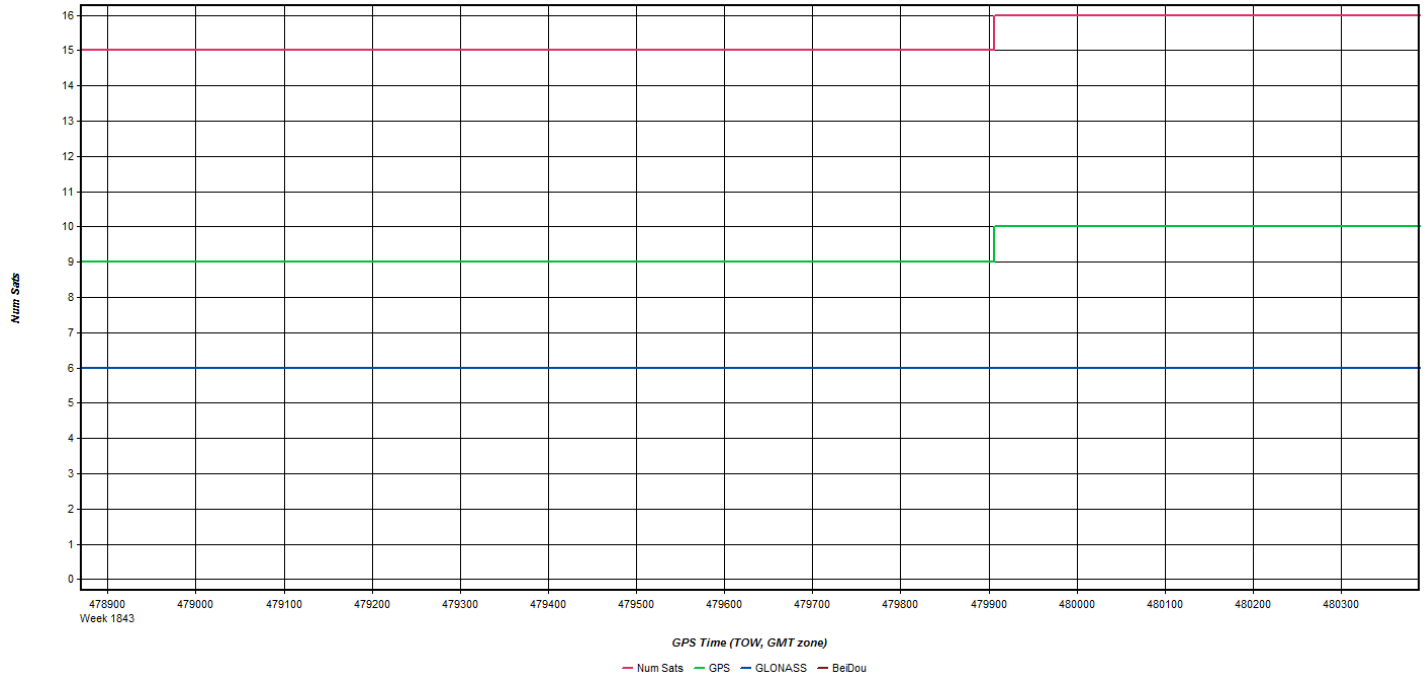
Monument Sketch and Notes: Base Station in grass near Rectrix FBO at KBAF. Outside of fence at airport.

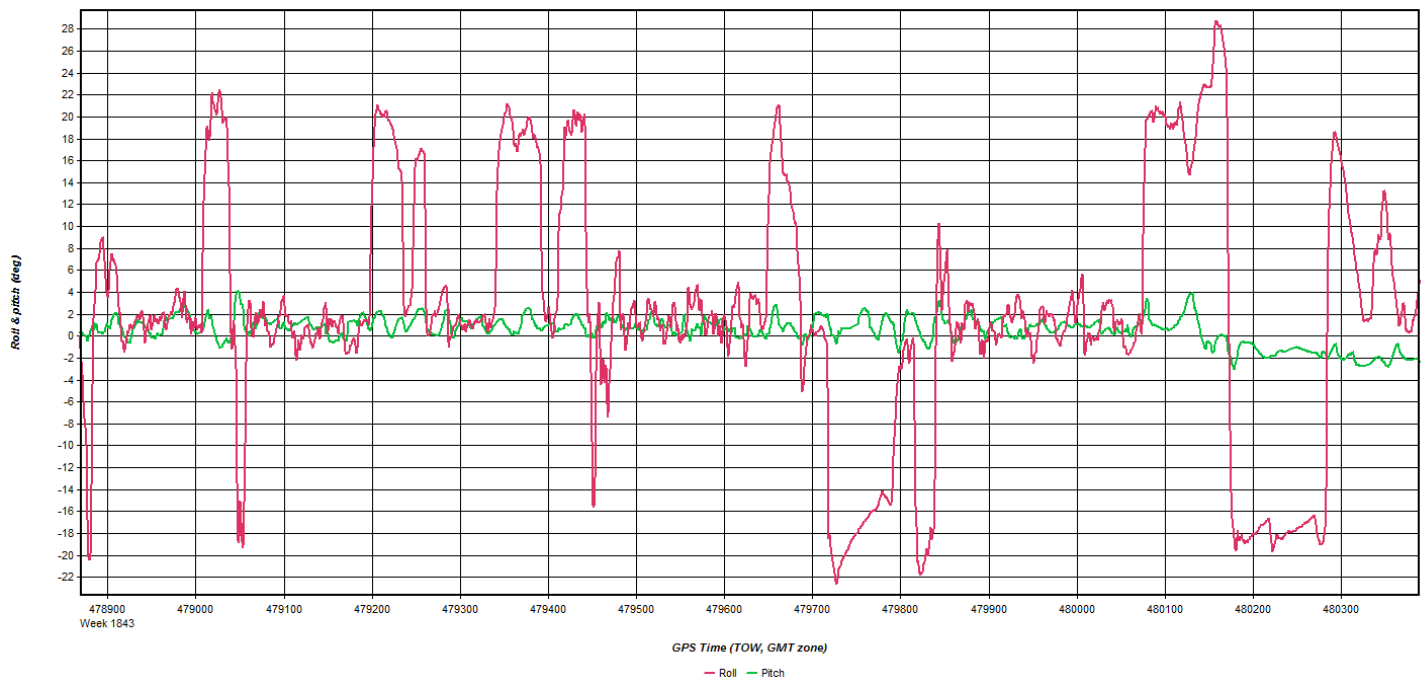
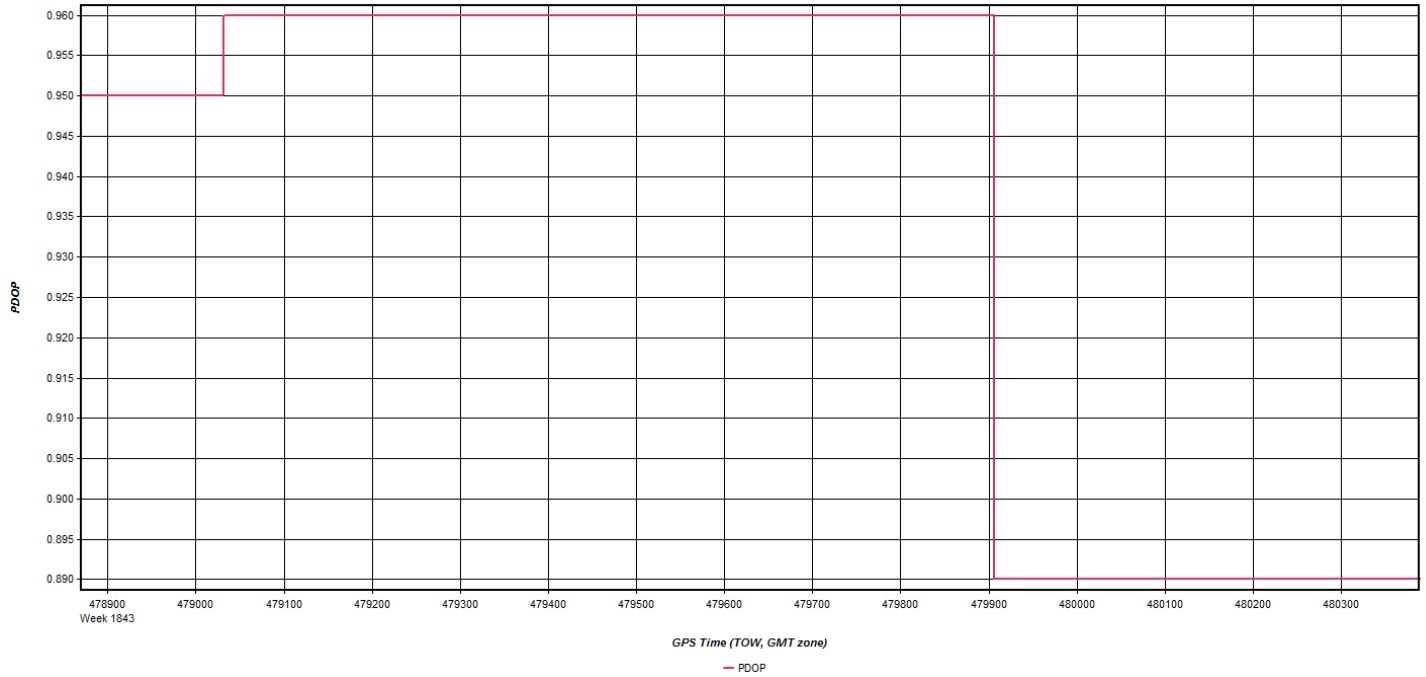


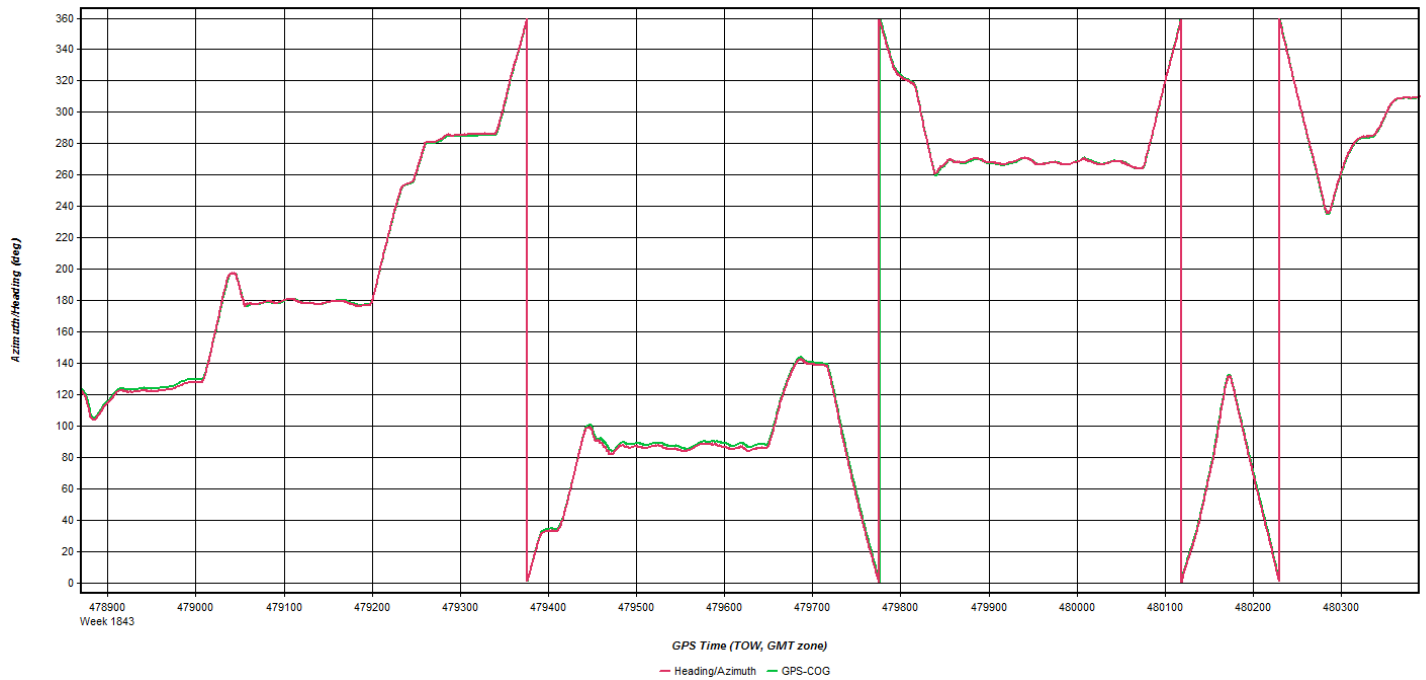
Generated by CamScanner

May 8, 2015-A (N262AS, SN7178)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: XMTS Name: XMTS Disabled
 File: E:\Proc\26258_USGS_MA_Northampton\29V4\150508a-7178\2\

Coordinates
 Latitude: North 42 03 50.01851 Compute from PPP
 Longitude: West 71 15 01.66913 Enter Grid Values
 Ellipsoidal height: 67.953 m Enter MSL Height
 Datum: NAD83(2011) Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: LEIAX1202, NONE View STA File
 Antenna profile: LEIAX1202 Info
 Measured height: 0.000 m Measured to: ARP
 ARP to L1 offset: 0.064 m L1 Phase Centre
 Applied height: 0.064 m Compute From Slant

OK Cancel

Flight Log

20150508 a - 7178
1410 Indian Trail Rd. · Norcross, GA · 30093 · 770 844 8443 · www.photoscience.com

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LIDAR MISSION RECORD SHEET

Date Flown	5/8/2015	Field Elev.	
Takeoff Time	17:48 Z	Aircraft	CRA
Landing Time	18:32 Z	Aircraft	CRA

Pilot	BP
Tech	DA
Aircraft	N252AS

IPAS File Name	20150508_17316
From/To	000 -> 009
LIDAR Unit #	sin 7178
HD #	SSDA

Project's Scanning Requirements	SPIA ?
FOV (degrees)	40%
Scan Rate (Hz)	45.8
Pulse Rate (Hz)	13.9k
Ground Speed (kts)	170
Laser Current (%)	100
Altitude AGL (ft)	1009'
Range Gate (m)	1233-2616

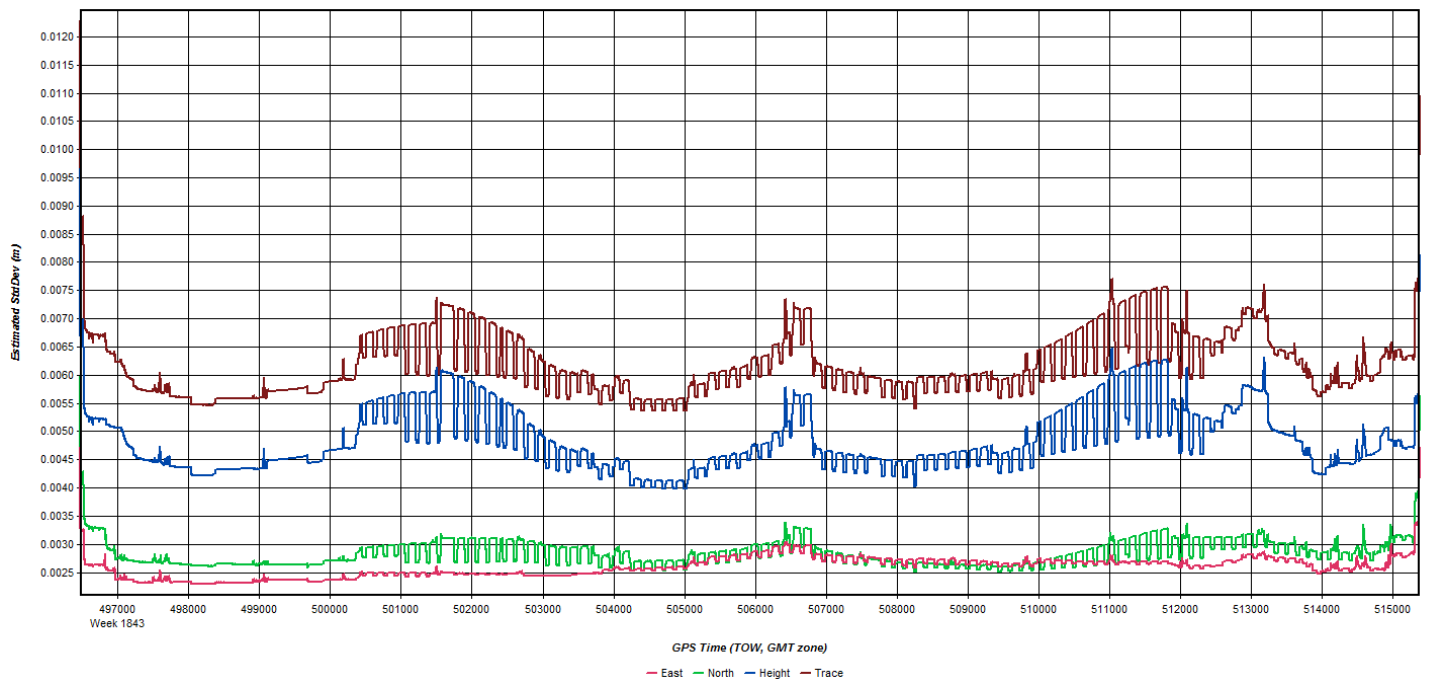
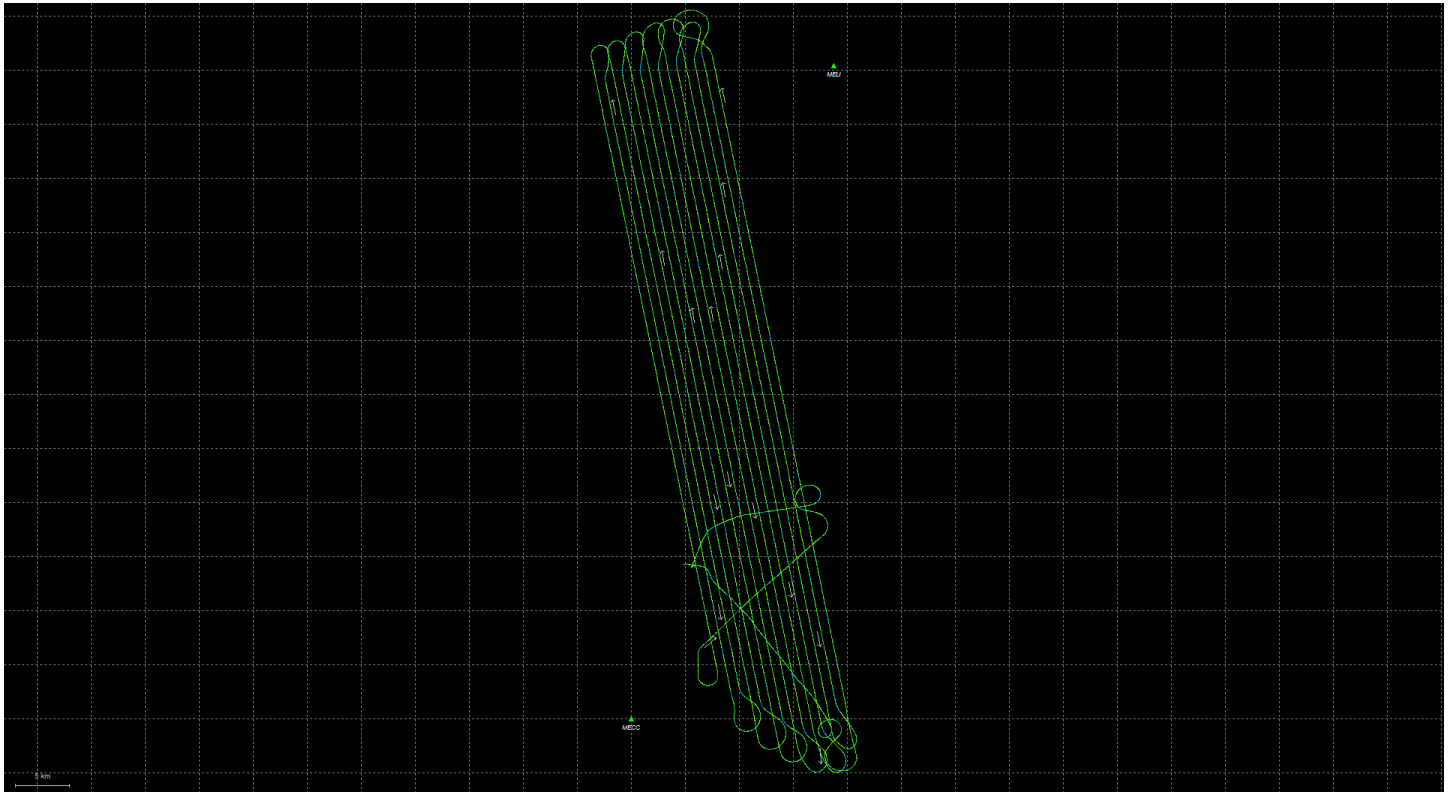
FMS File Name	20150508_12316
GPS Base Location(s)	SET POINT @ KORH
Static or Flyover?	STATIC
Laser On Time & Off Times	12:45 Z 113:41 Z

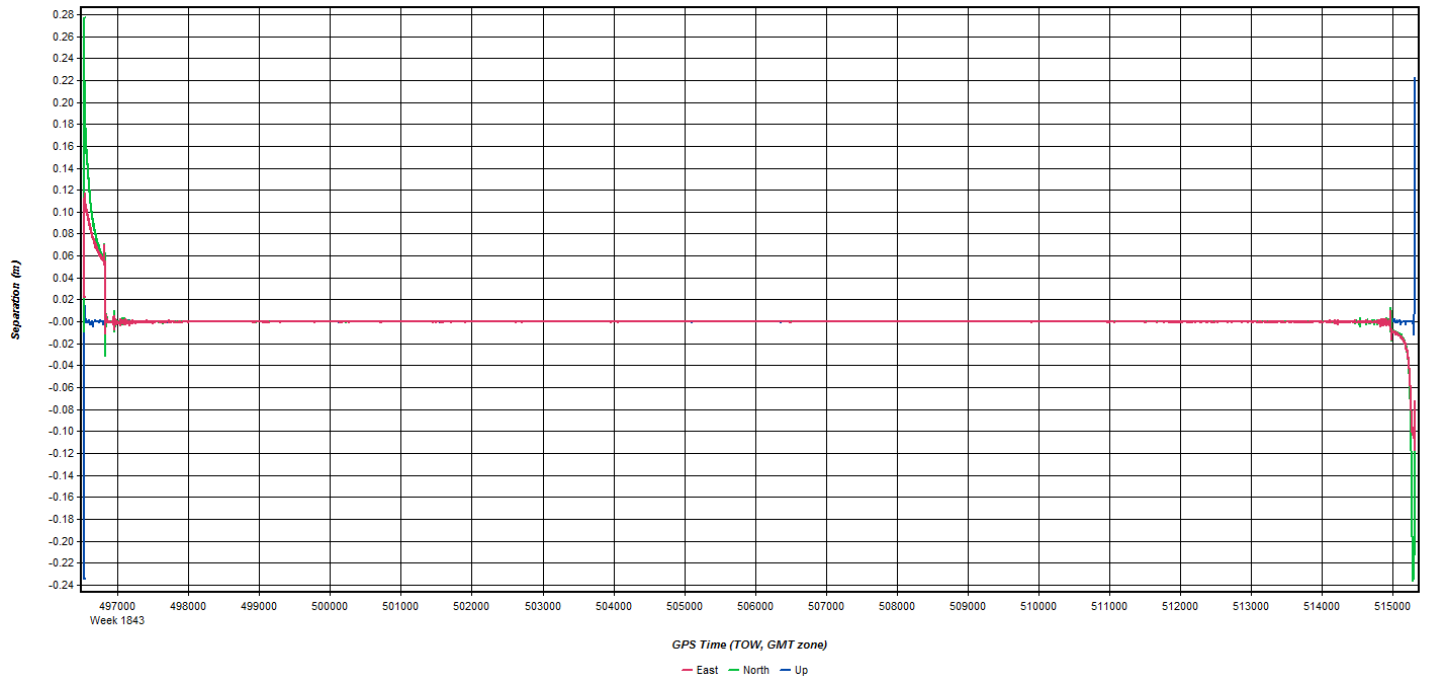
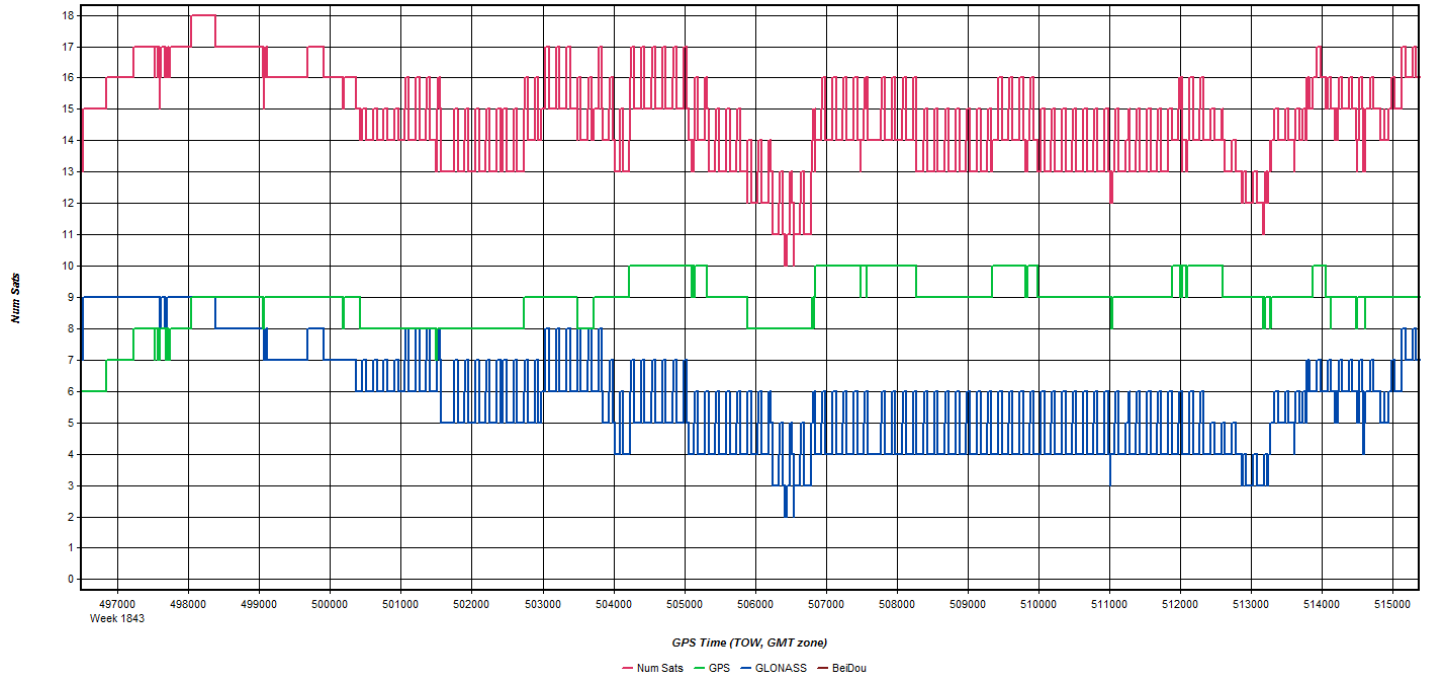
start
BASE: 12:25 Z
ABGPS: 12:40 Z
HOBBS: 5854.4

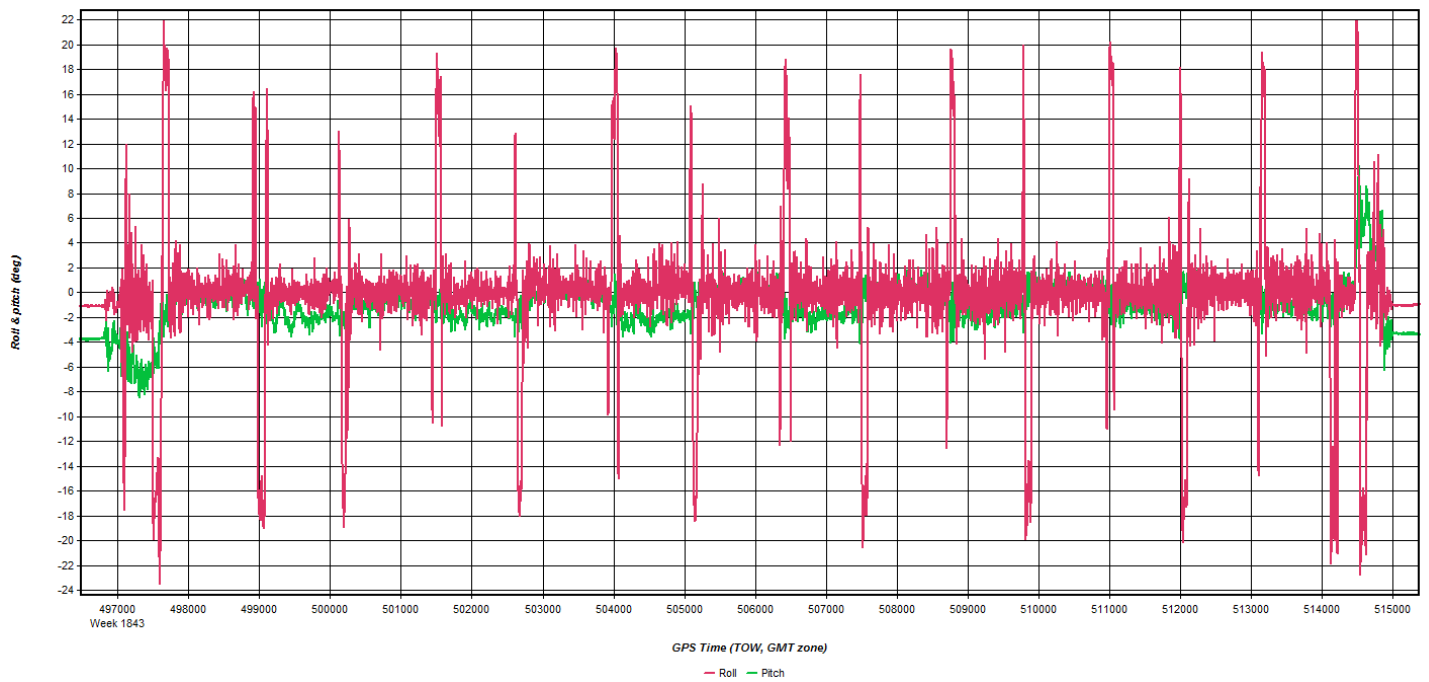
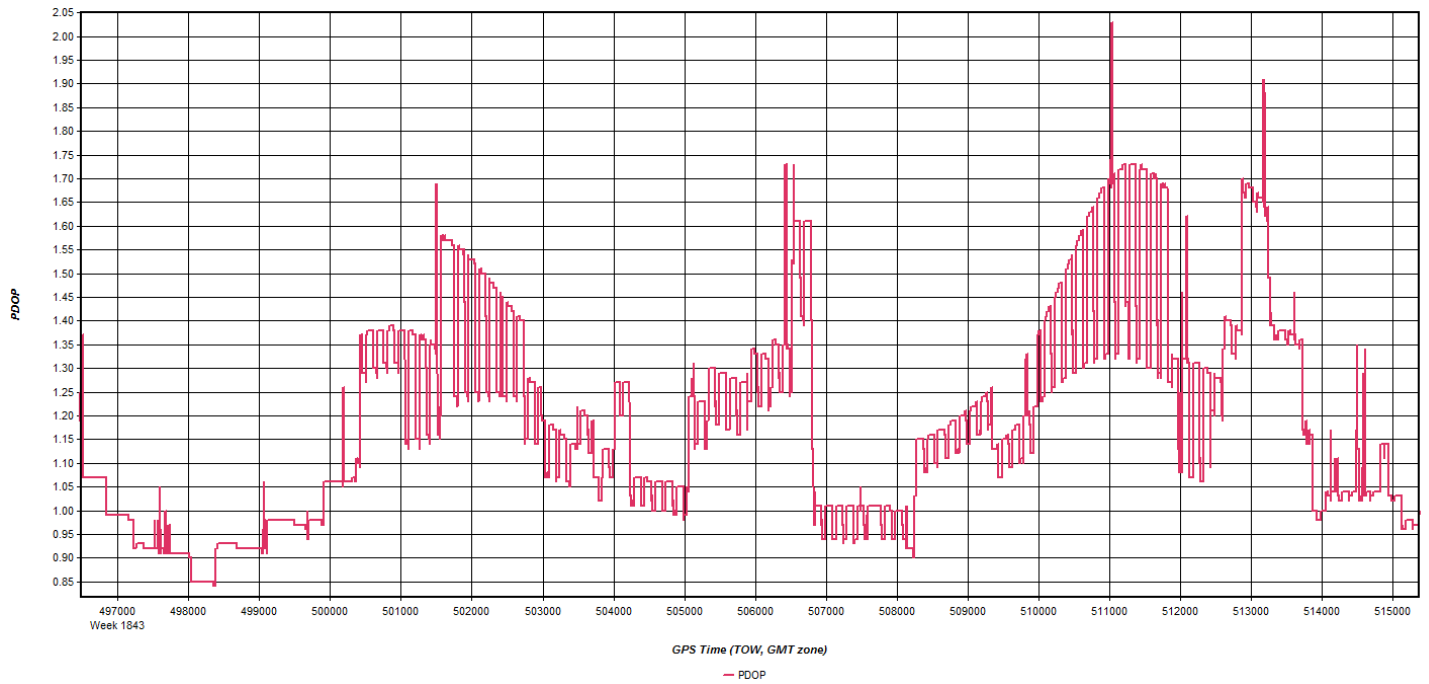
stop
14:26 Z
13:42 Z
5855.1

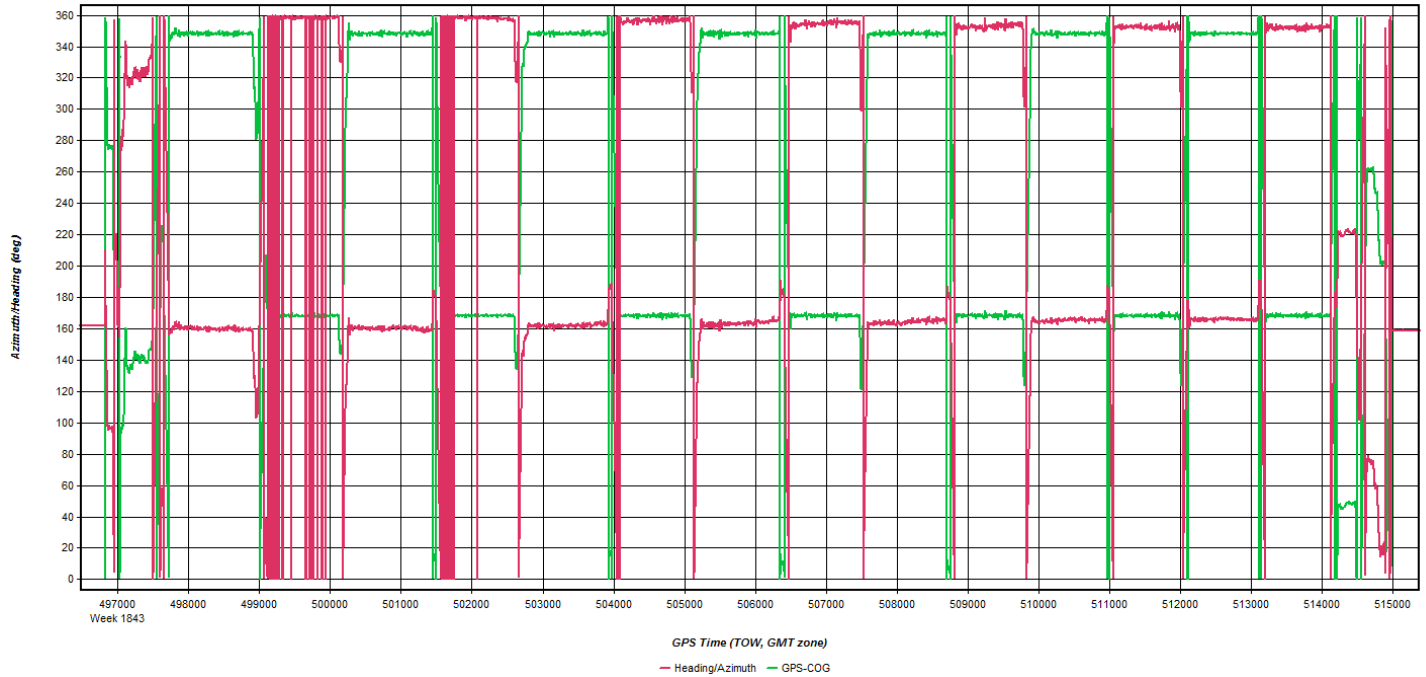
FILE	FL #	Alt. (AMSL)	Heading	Speed	Returns	Crab	PDOF	NOTES
150508_130423	131	6250	179	16.9	95%	1	1.3	SMOOTH KIDE
150508_131114	127	6299	88	16.7	94%	1	1.3	
150508_131800	126	6299	268	16.5	100%	1	1.3	
					%			
					%			
					%			
					%			
					%			
					%			
					%			
					%			
					%			
					%			
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					%			
					%			
					%			
					%			
					%			
					%			
					%			
					%			
					%			

May 8, 2015-A (N799AC, SN7169)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: MECC Name: MECC Disabled
 File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\07\20150508_

Coordinates
 Latitude: North 44 49 33.21003 Compute from PPP
 Longitude: West 68 44 38.60195 Enter Grid Values
 Ellipsoidal height: 20.586 m Enter MSL Height
 Datum: NAD83(2011) 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 Measured to
 ARP to L1 offset: 0.067 m ARP
 Applied height: 0.067 m L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote


Base Station
 2: MELI Name: MELI Disabled
 File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\M7\20150508_

Coordinates
 Latitude: North 45 21 49.15536 Compute from PPP
 Longitude: West 68 30 26.61463 Enter Grid Values
 Ellipsoidal height: 54.567 m Enter MSL Height
 Datum: NAD83(2011) 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

Flight Log	Date	Time	Altitude	Speed	Heading	Roll	Pitch	Yaw	GPS	IMU	Other
 <p>PAR LLC 20160118001 20160118002</p>											
<p>Field Crew: [Blank] Station: [Blank] Project: [Blank]</p> <p>Instrument: [Blank] Software: [Blank]</p> <p>Operator: [Blank] Date: [Blank] Time: [Blank]</p>											
Lat	42.322	71.110	1000	10	180	0	0	0	1	0	0
Lon	-71.110	42.322	1000	10	180	0	0	0	1	0	0
Alt	1000	10	180	0	0	0	0	0	1	0	0
Speed	10	180	0	0	0	0	0	0	1	0	0
Heading	180	0	0	0	0	0	0	0	1	0	0
Roll	0	0	0	0	0	0	0	0	1	0	0
Pitch	0	0	0	0	0	0	0	0	1	0	0
Yaw	0	0	0	0	0	0	0	0	1	0	0
GPS	1	0	0	0	0	0	0	0	1	0	0
IMU	0	0	0	0	0	0	0	0	1	0	0
Other	0	0	0	0	0	0	0	0	1	0	0

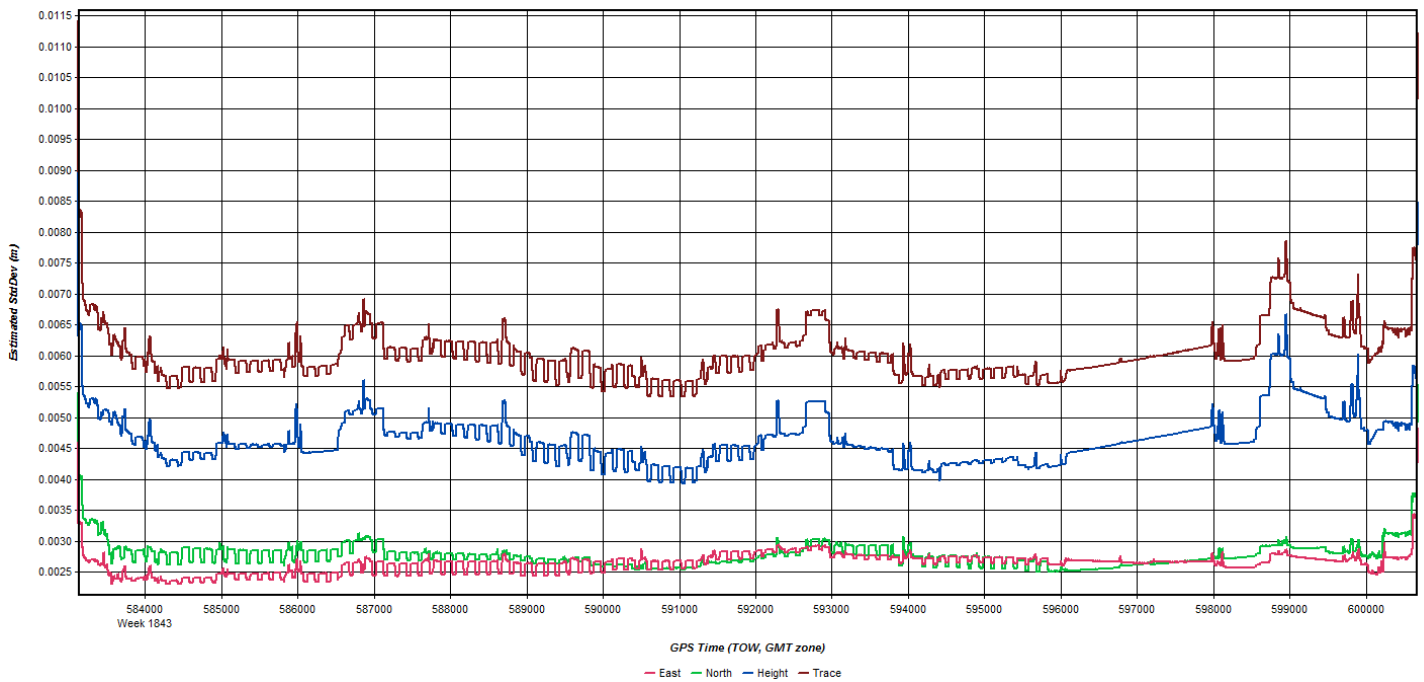
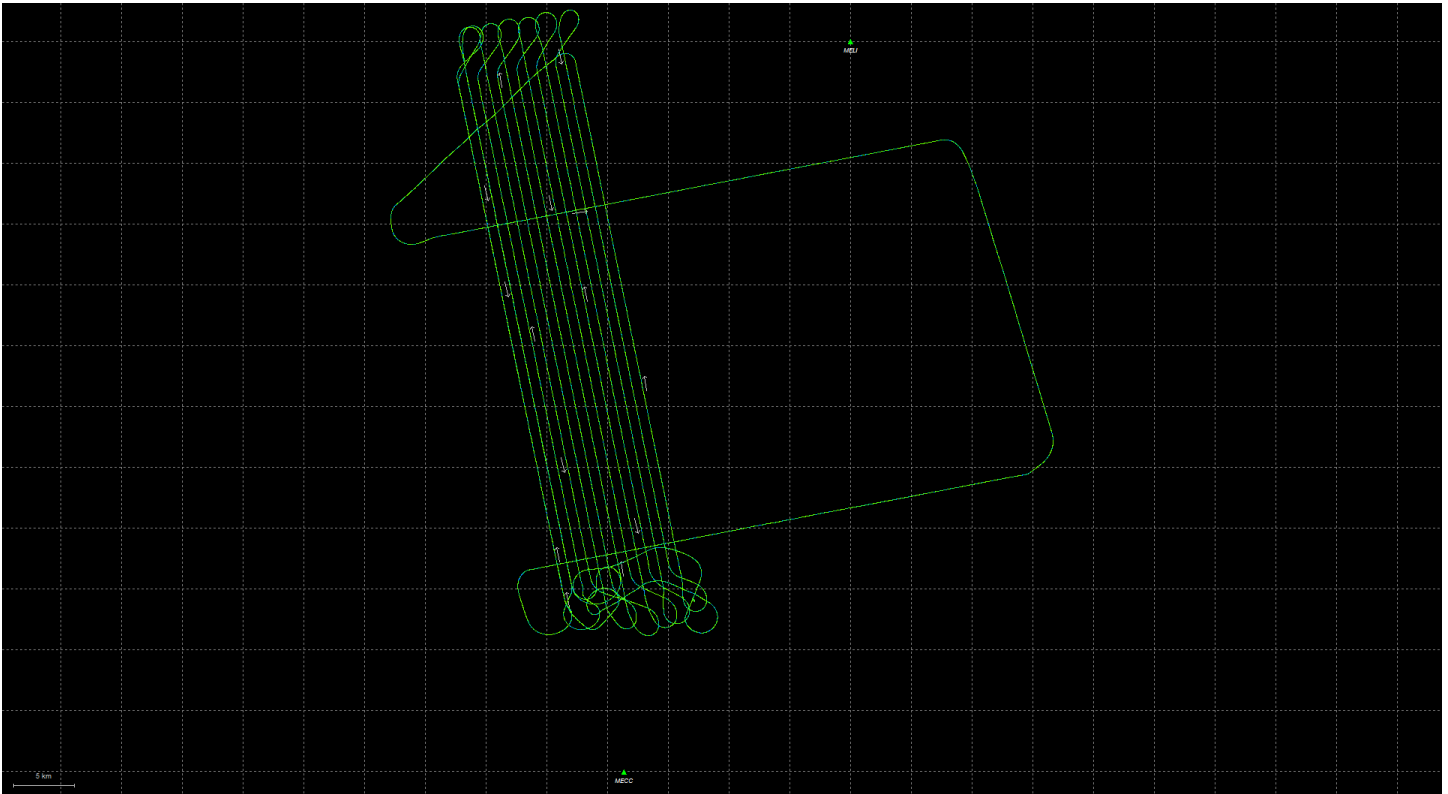
Base Station Log

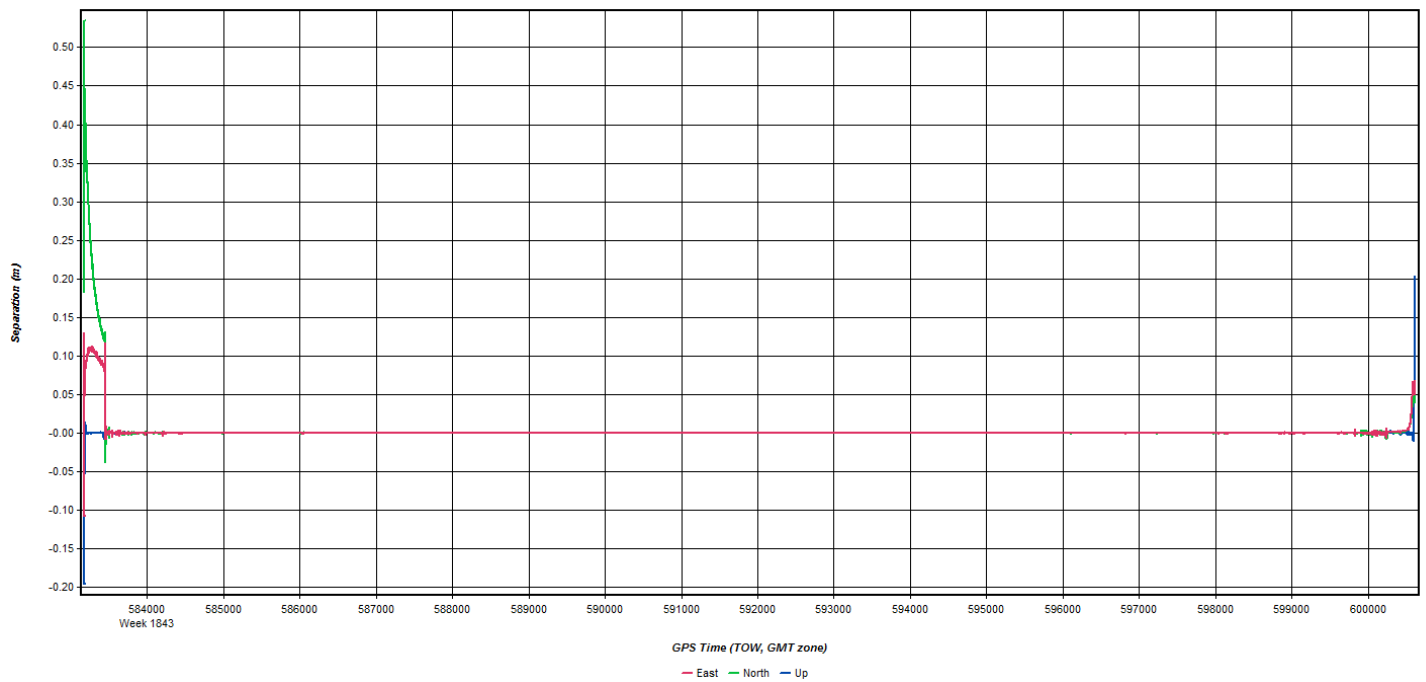
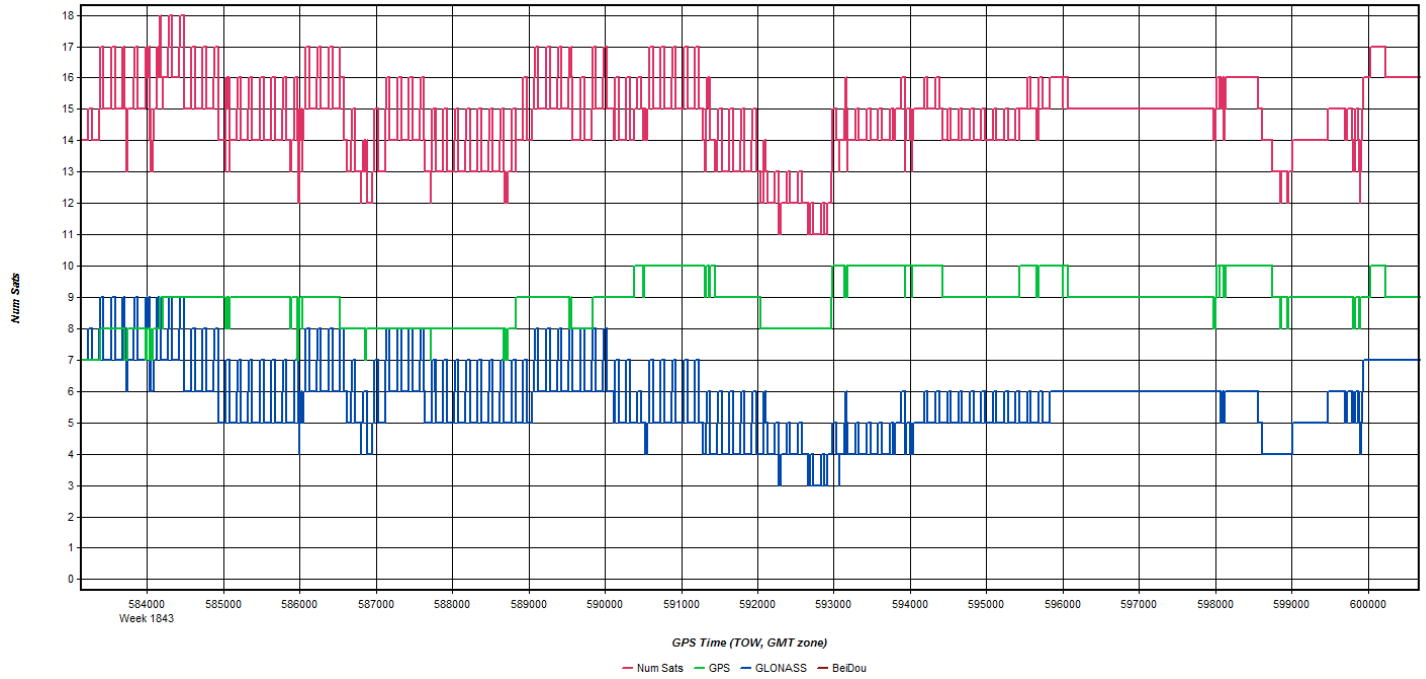
GPS SESSION FORM

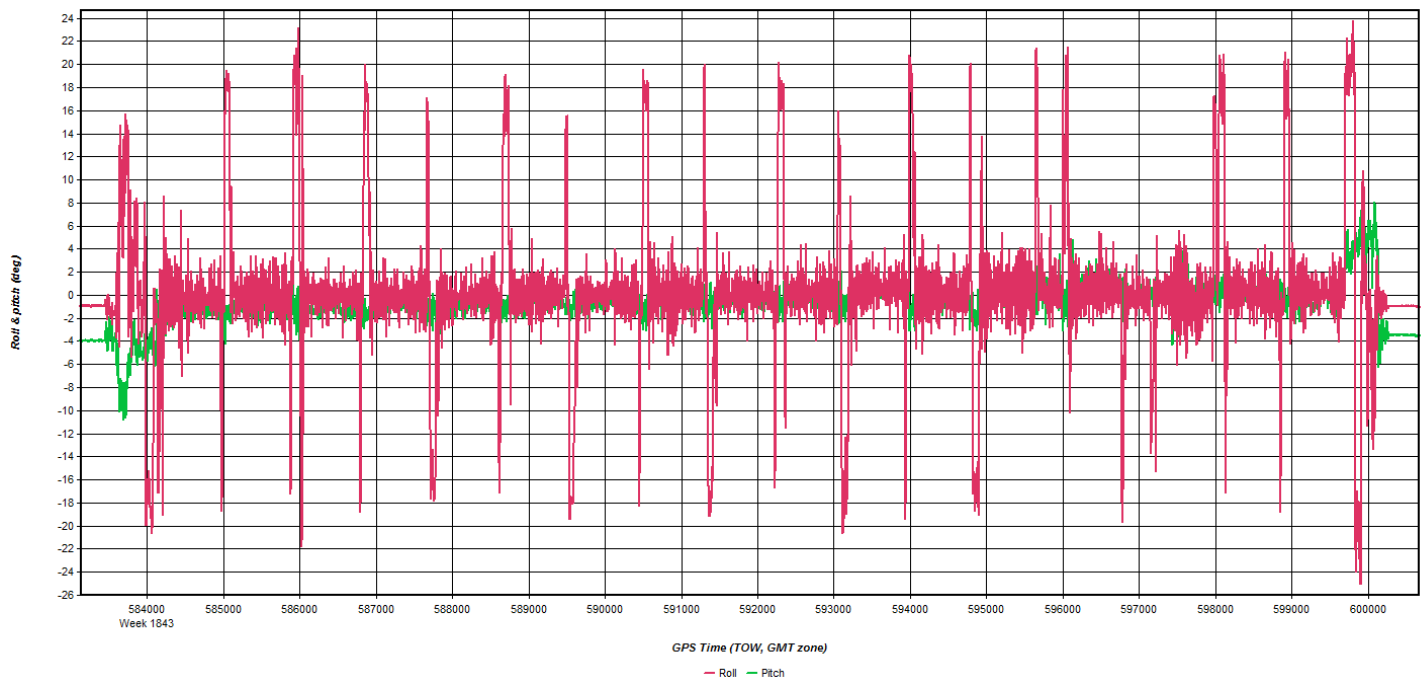
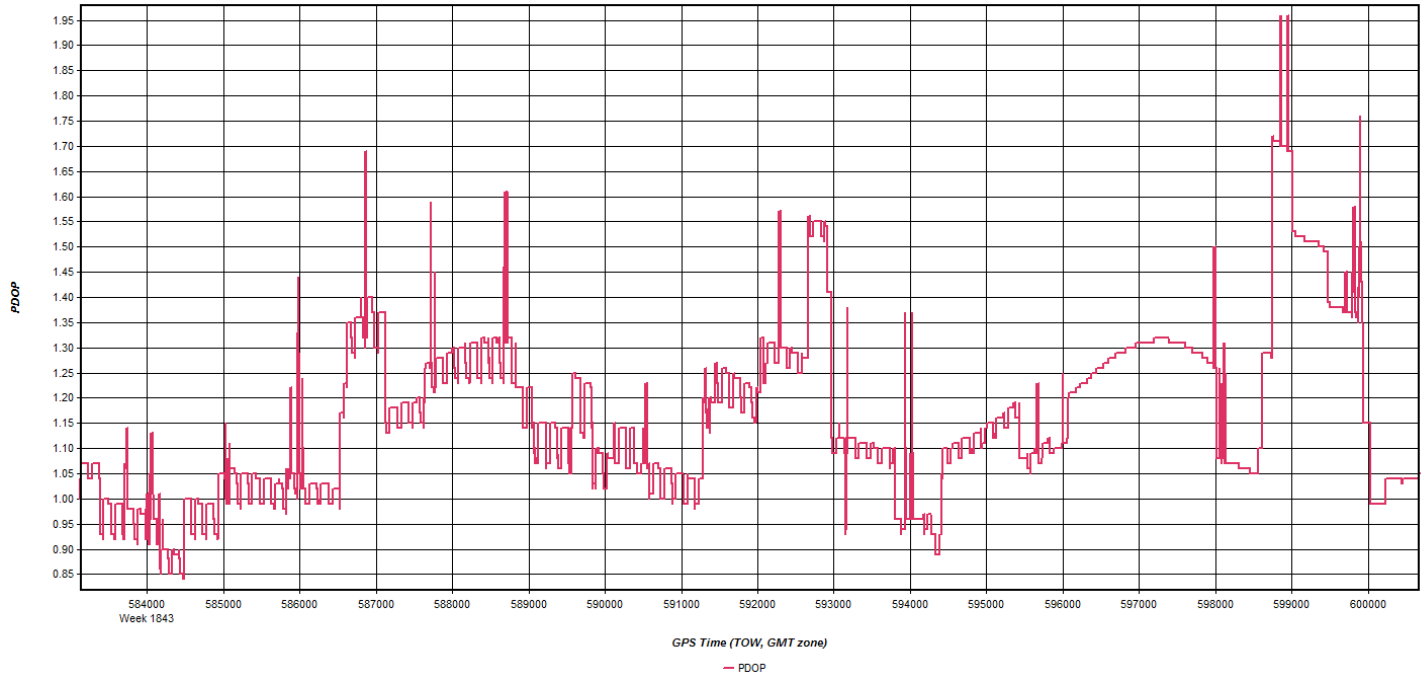
Contract # / TO #		Client / Project Name		Date	
		Quantum: Maine- Old Town		8-May-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
BHB D			BHB D 1995		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
PE2529		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19821283.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG		1 2 3 AVG		TRUE VERTICAL <input checked="" type="radio"/> ARP	
2.050 2.050 2.050 2.050		2.050 2.050 2.050 2.050			
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG		1 2 3 AVG		TRUE VERTICAL <input checked="" type="radio"/> ARP	
2.050 2.050 2.050 2.050		2.050 2.050 2.050 2.050			
Antenna Reference Point (diagram in survey report)					
(Antenna Reference Point = VR + VO + VE2)				ARP to Phase = 168mm	
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
8-May-2015		17:30		44 26 44.53923(N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
8-May-2015		1:29		068 22 02.72882(W)	
Monument is in good condition		Site Diagram/Picture			
					
Ground Photos					

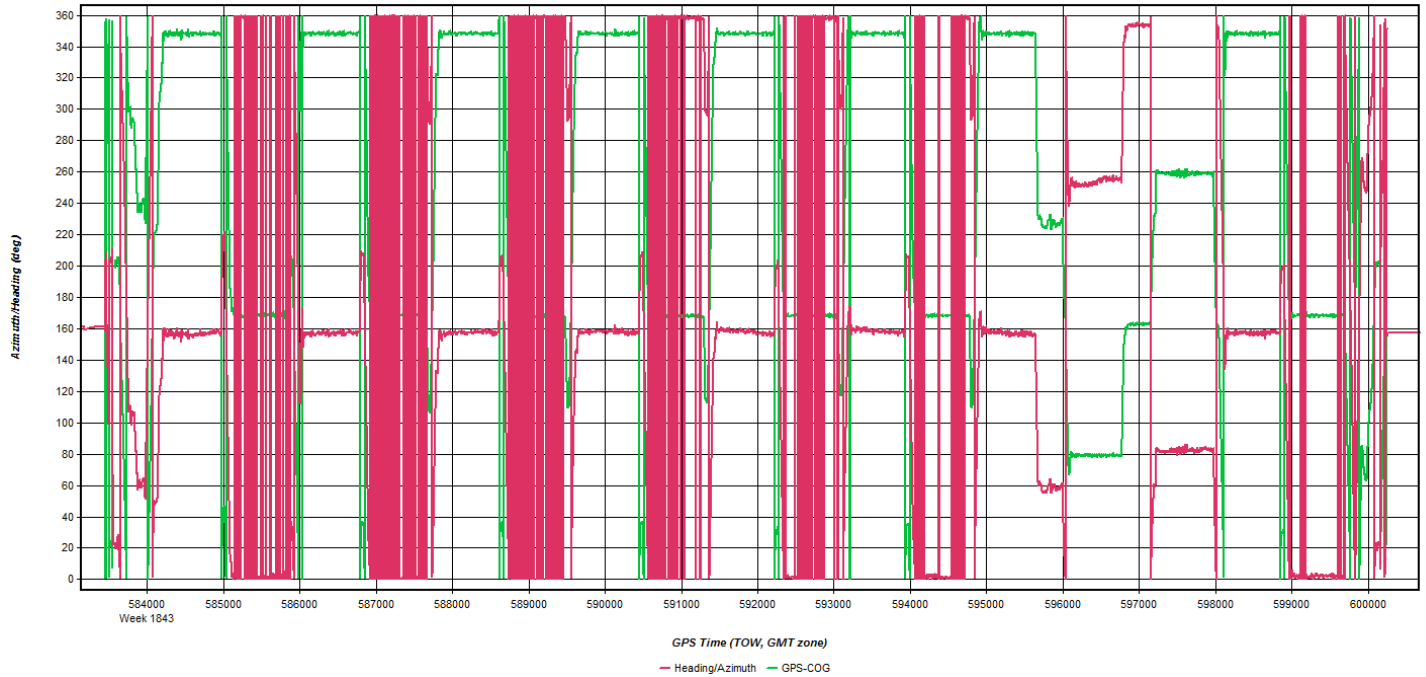


May 9, 2015-A (N799AC, SN7169)









Coordinate/Antenna Settings

Master Remote

Base Station
 2. MECC Name: MECC Disabled
 File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\MB\20150509_

Coordinates
 Latitude: North 44 49 33.21003
 Longitude: West 68 44 38.60195
 Ellipsoidal height: 20.586 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
1: MELI Name: MELI Disabled
File: E:\Proc\26258_Maine_PAR\Hancock_OldTown\MB\20150509_

Coordinates
Latitude: North 45 21 49.15536 Compute from PPP
Longitude: West 68 30 26.61463 Enter Grid Values
Ellipsoidal height: 54.567 m Enter MSL Height
Datum: NAD83(2011) 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

PAR LLC P.O. Box 72817 Portland City, ME 04222 RECORDER/CONTROL/TELECOMMUNICATIONS										LIDAR Daily Log								GPS Information			IMU Information			
PROJECT # 20150205				GPS Description				JOB #				JOB DATE				PROJECT #			PROJECT DATE			PROJECT TIME		
SPONSOR NAVIGATION FILE NAME				SPONSOR NAVIGATION FILE NAME				SPONSOR NAVIGATION FILE NAME				SPONSOR NAVIGATION FILE NAME				PROJECT #			PROJECT DATE			PROJECT TIME		
MISSION E		MISSION E		MISSION E		MISSION E		MISSION E		MISSION E		MISSION E		PROJECT #			PROJECT DATE			PROJECT TIME				
Start		Stop		Start		Stop		Start		Stop		Start		PROJECT #			PROJECT DATE			PROJECT TIME				
Date		Time		Date		Time		Date		Time		Date		PROJECT #			PROJECT DATE			PROJECT TIME				
20150205	07:00:00	20150205	08:00:00	20150205	08:00:00	20150205	09:00:00	20150205	09:00:00	20150205	10:00:00	20150205	10:00:00											
20150205	08:00:00	20150205	09:00:00	20150205	09:00:00	20150205	10:00:00	20150205	10:00:00	20150205	11:00:00	20150205	11:00:00											
20150205	09:00:00	20150205	10:00:00	20150205	10:00:00	20150205	11:00:00	20150205	11:00:00	20150205	12:00:00	20150205	12:00:00											
20150205	10:00:00	20150205	11:00:00	20150205	11:00:00	20150205	12:00:00	20150205	12:00:00	20150205	13:00:00	20150205	13:00:00											
20150205	11:00:00	20150205	12:00:00	20150205	12:00:00	20150205	13:00:00	20150205	13:00:00	20150205	14:00:00	20150205	14:00:00											
20150205	12:00:00	20150205	13:00:00	20150205	13:00:00	20150205	14:00:00	20150205	14:00:00	20150205	15:00:00	20150205	15:00:00											
20150205	13:00:00	20150205	14:00:00	20150205	14:00:00	20150205	15:00:00	20150205	15:00:00	20150205	16:00:00	20150205	16:00:00											
20150205	14:00:00	20150205	15:00:00	20150205	15:00:00	20150205	16:00:00	20150205	16:00:00	20150205	17:00:00	20150205	17:00:00											
20150205	15:00:00	20150205	16:00:00	20150205	16:00:00	20150205	17:00:00	20150205	17:00:00	20150205	18:00:00	20150205	18:00:00											
20150205	16:00:00	20150205	17:00:00	20150205	17:00:00	20150205	18:00:00	20150205	18:00:00	20150205	19:00:00	20150205	19:00:00											
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20150205	18:00:00	20150205	19:00:00	20150205	19:00:00	20150205	20:00:00	20150205	20:00:00	20150205	21:00:00	20150205	21:00:00											
20150205	19:00:00	20150205	20:00:00	20150205	20:00:00	20150205	21:00:00	20150205	21:00:00	20150205	22:00:00	20150205	22:00:00											
20150205	20:00:00	20150205	21:00:00	20150205	21:00:00	20150205	22:00:00	20150205	22:00:00	20150205	23:00:00	20150205	23:00:00											
20150205	21:00:00	20150205	22:00:00	20150205	22:00:00	20150205	23:00:00	20150205	23:00:00	20150205	00:00:00	20150205	00:00:00											
20150205	22:00:00	20150205	23:00:00	20150205	23:00:00	20150205	00:00:00	20150205	00:00:00	20150205	01:00:00	20150205	01:00:00											
20150205	23:00:00	20150205	00:00:00	20150205	00:00:00	20150205	01:00:00	20150205	01:00:00	20150205	02:00:00	20150205	02:00:00											
20150205	00:00:00	20150205	01:00:00	20150205	01:00:00	20150205	02:00:00	20150205	02:00:00	20150205	03:00:00	20150205	03:00:00											
20150205	01:00:00	20150205	02:00:00	20150205	02:00:00	20150205	03:00:00	20150205	03:00:00	20150205	04:00:00	20150205	04:00:00											
20150205	02:00:00	20150205	03:00:00	20150205	03:00:00	20150205	04:00:00	20150205	04:00:00	20150205	05:00:00	20150205	05:00:00											

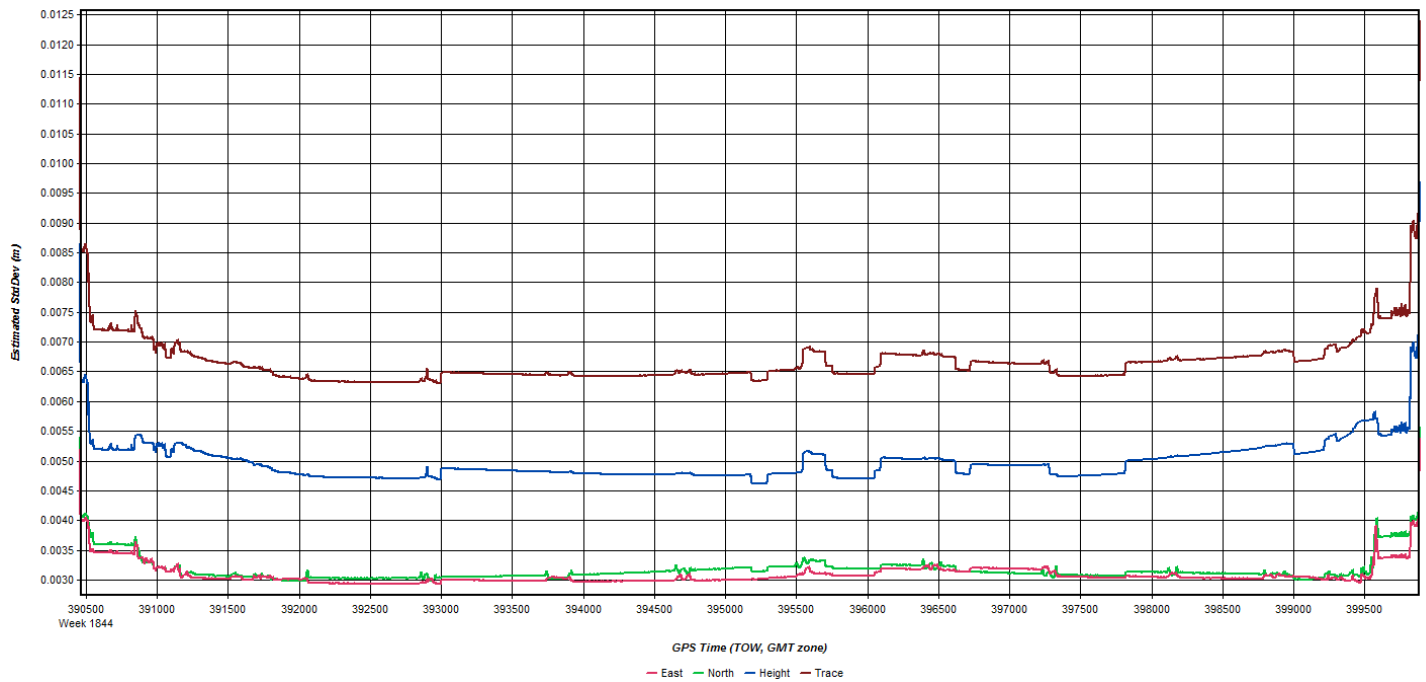
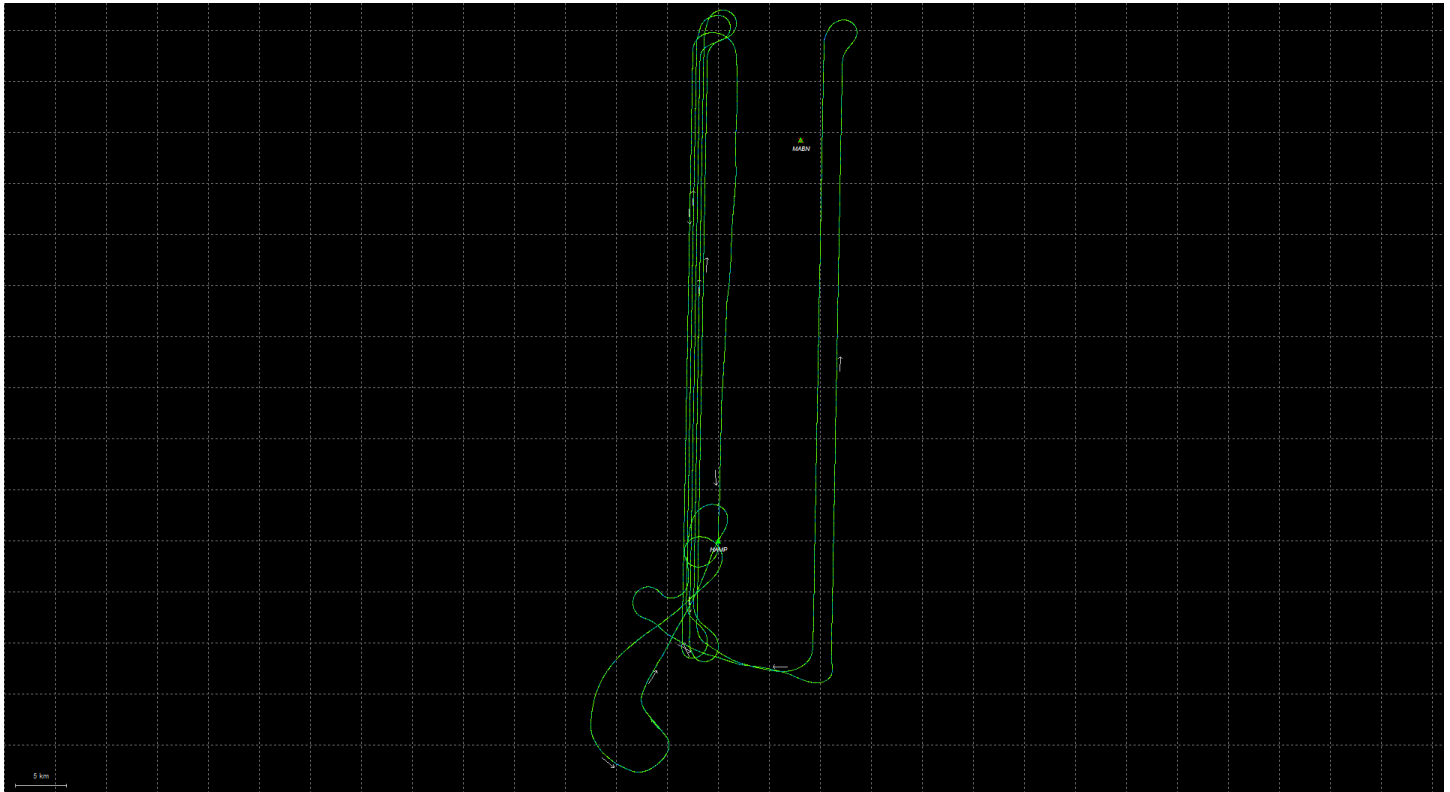
Base Station Log

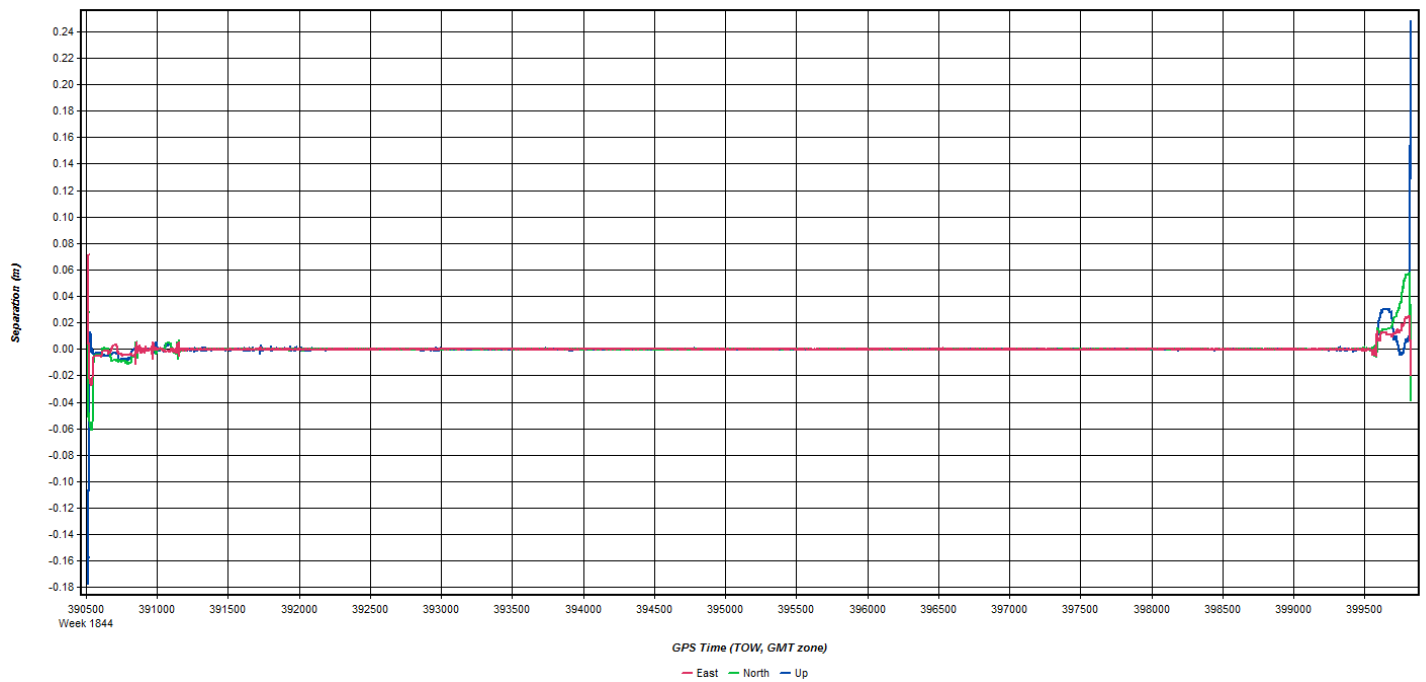
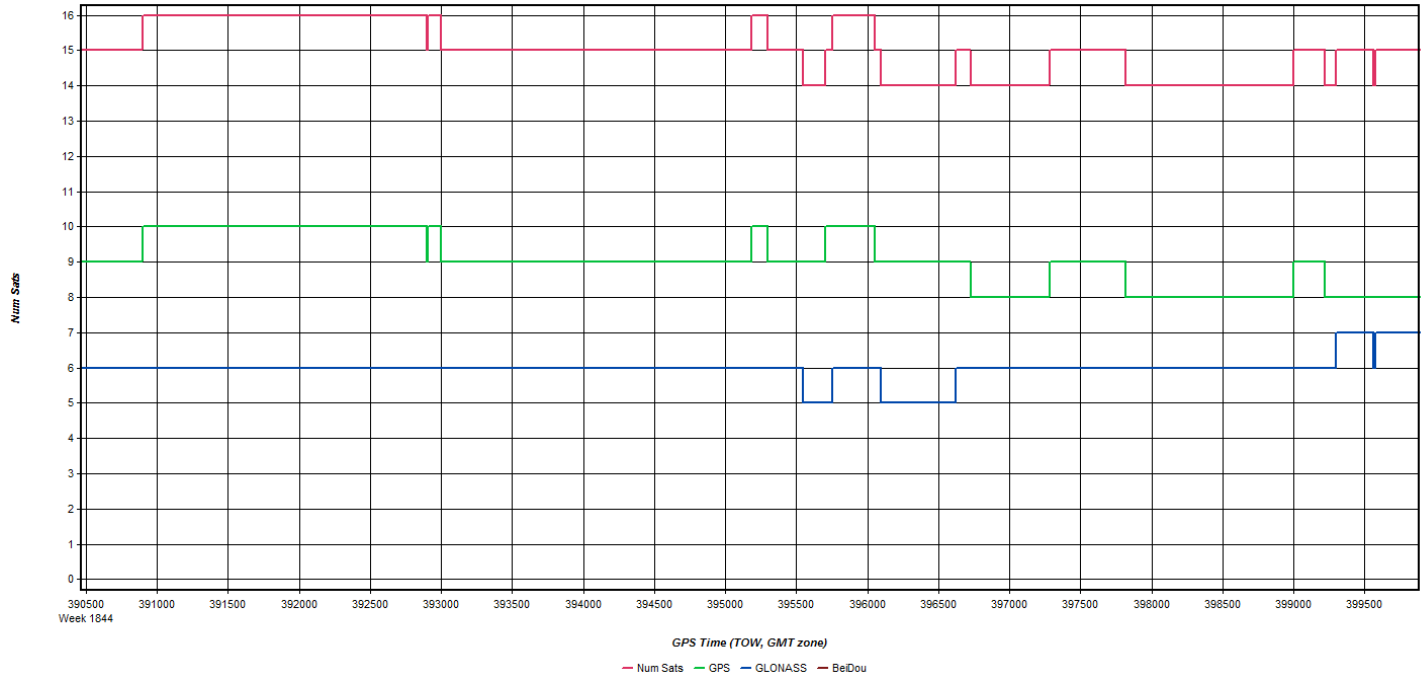
GPS SESSION FORM

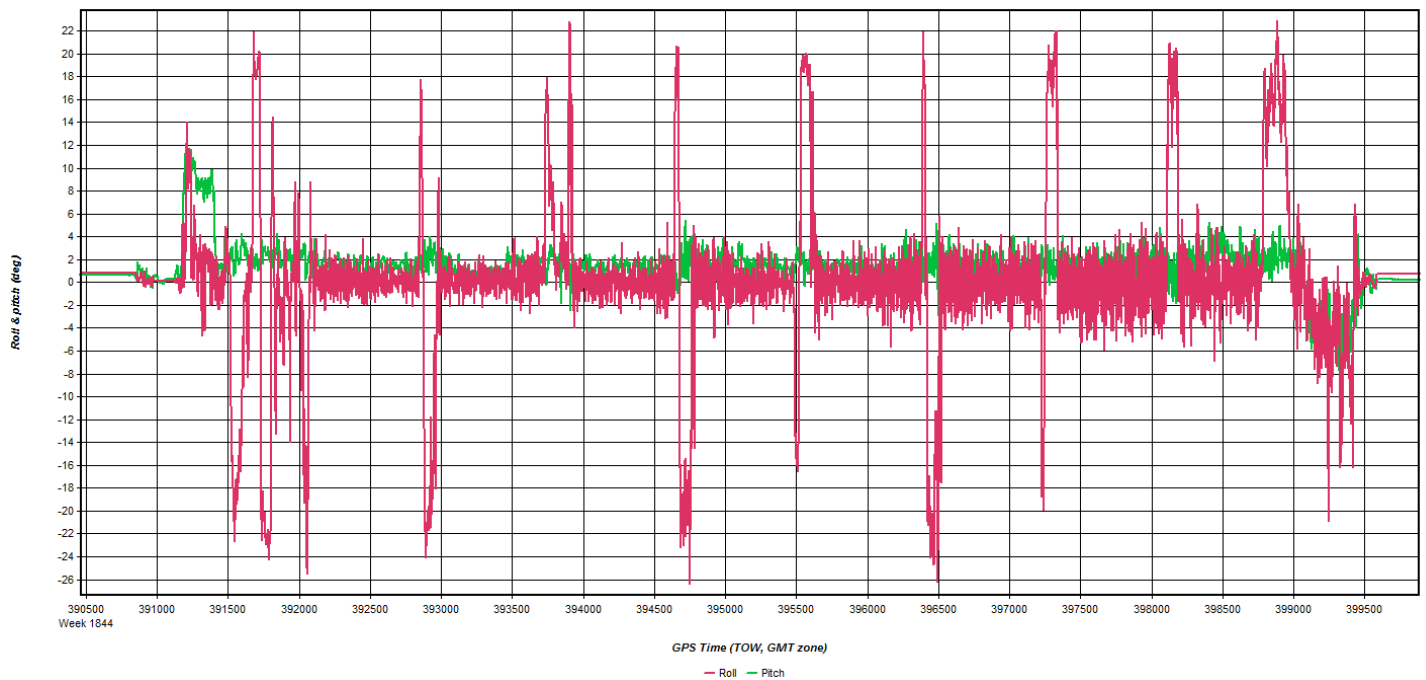
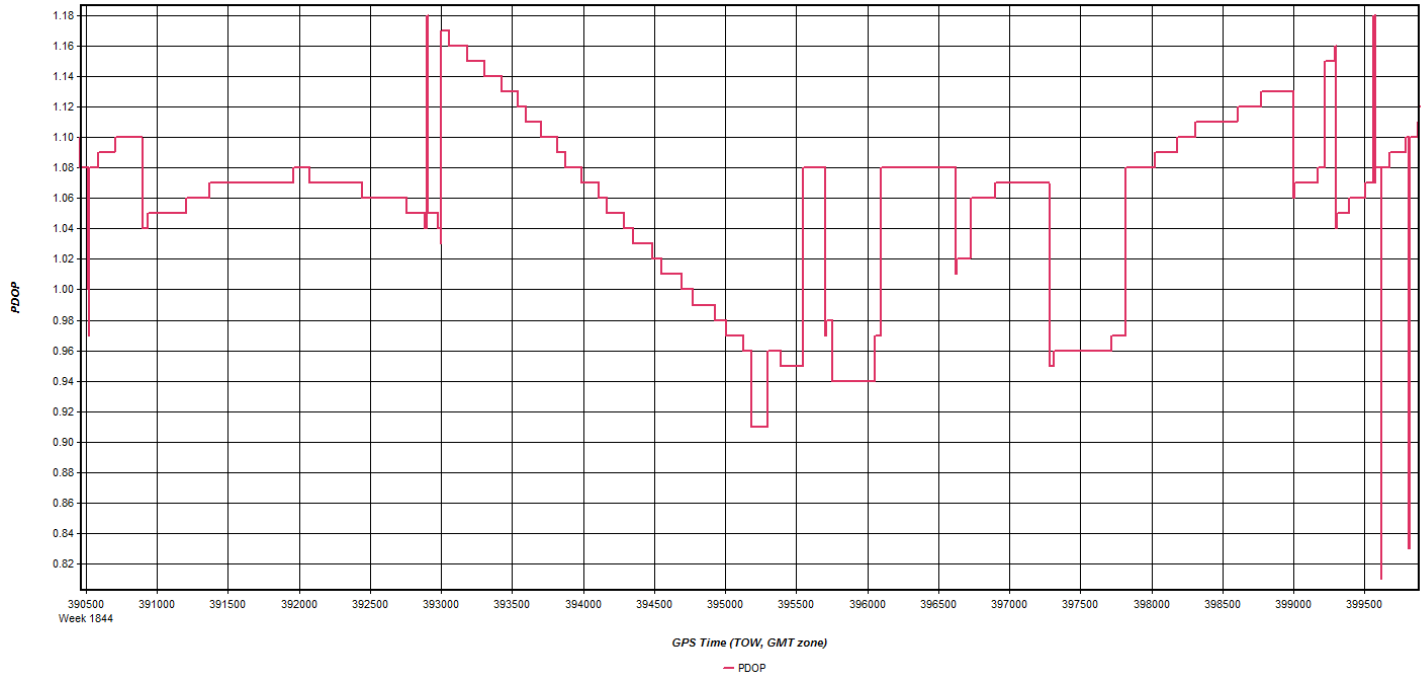
Contract # / TO #		Client / Project Name		Date	
		Quantum: Maine- Old Town		9-May-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
BHB D			BHB D 1995		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
PE2529		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19821291.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 2.050 2.050 2.050 2.050		1 2 3 AVG 2.050 2.050 2.050 2.050		TRUE VERTICAL <input checked="" type="radio"/> ARP	
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 2.050 2.050 2.050 2.050		1 2 3 AVG 2.050 2.050 2.050 2.050		TRUE VERTICAL <input checked="" type="radio"/> ARP	
Antenna Reference Point (diagram in survey report)					
(Antenna Reference Point = VR + VO + VE2)				ARP to Phase = 168mm	
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
9-May-2015		17:52		44 26 44.53923(N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
9-May-2015		23:02		068 22 02.72882(W)	
Monument is in good condition		Site Diagram/Picture			
Ground Photos					

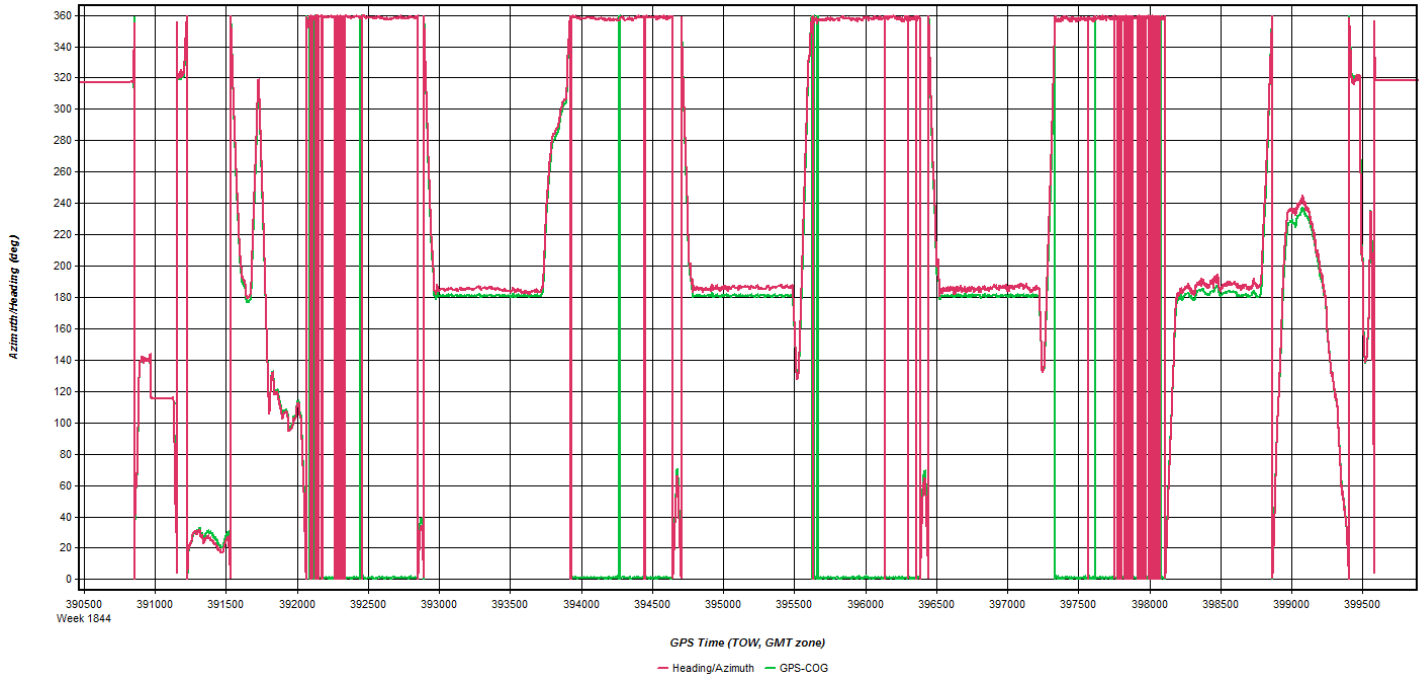


May 14, 2015-A (N22GE, SN8239)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: HAMP Name: HAMP Disabled
 File: E:\Proc\26258_20150514_8239_22GE\20150514_122556\2625

Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

Antenna Height
 From station file: TRM57971.00, NONE
 Antenna profile: TRM57971.00
 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

Scanned by CamScanner

OPERATORS FLIGHT LOG

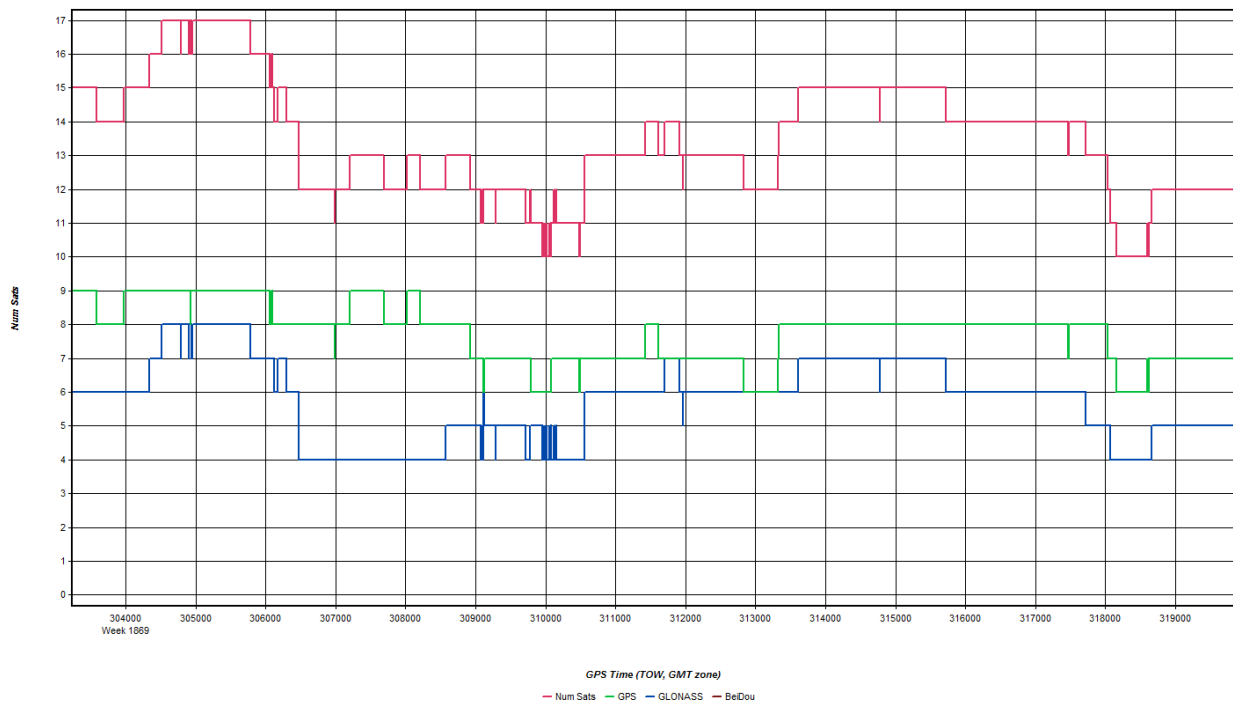
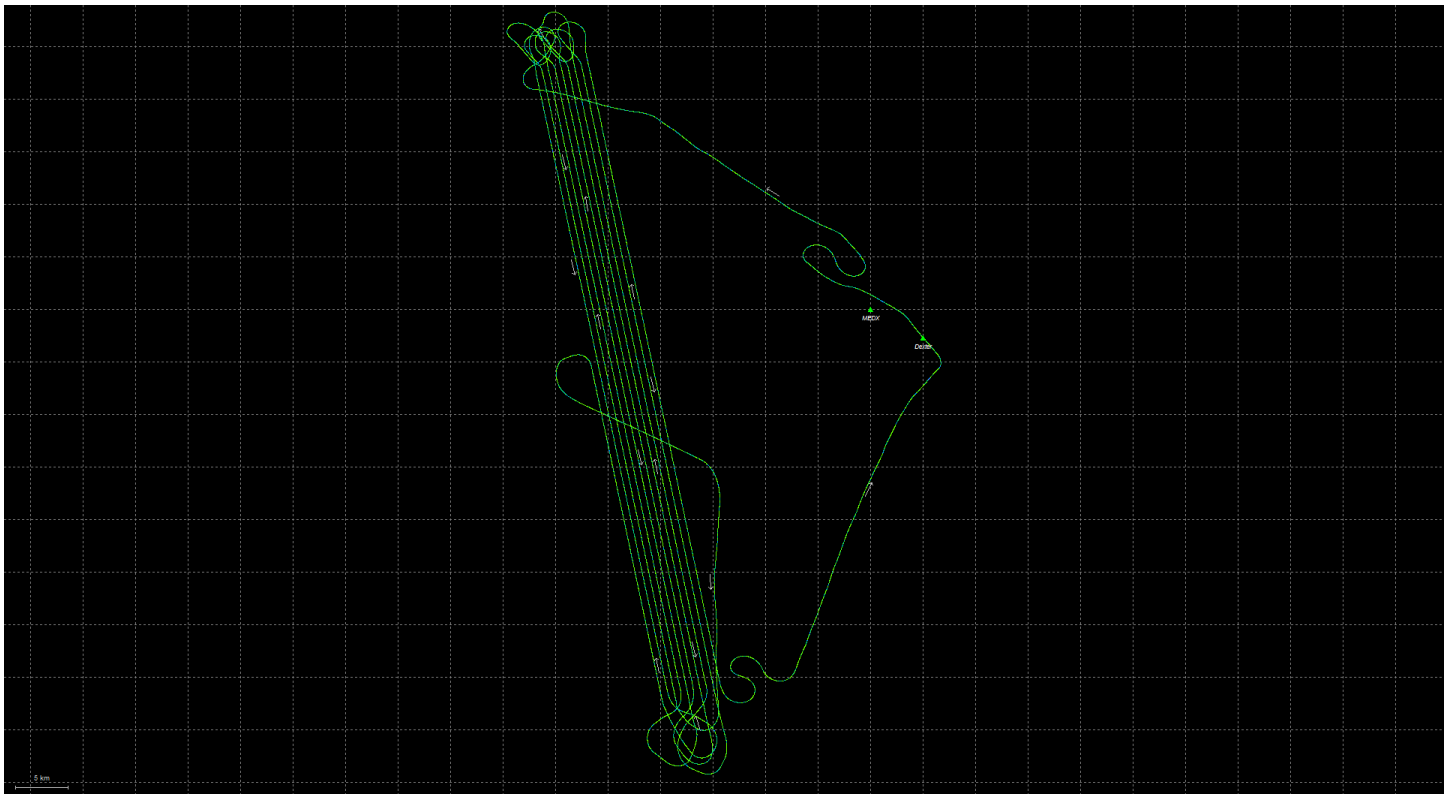
MISSION: S 20150514.122.556 DATE: 5-14-15 LEICA ALC-208
 PILOT: R SWELGER OPERATOR: M AUGST AIRCRAFT: SURE
 PROJECT NUMBER 26258 LINE NO. & TAG 3123 15° 150 FREQ HZ 52 SCAN ANGLE 40 376

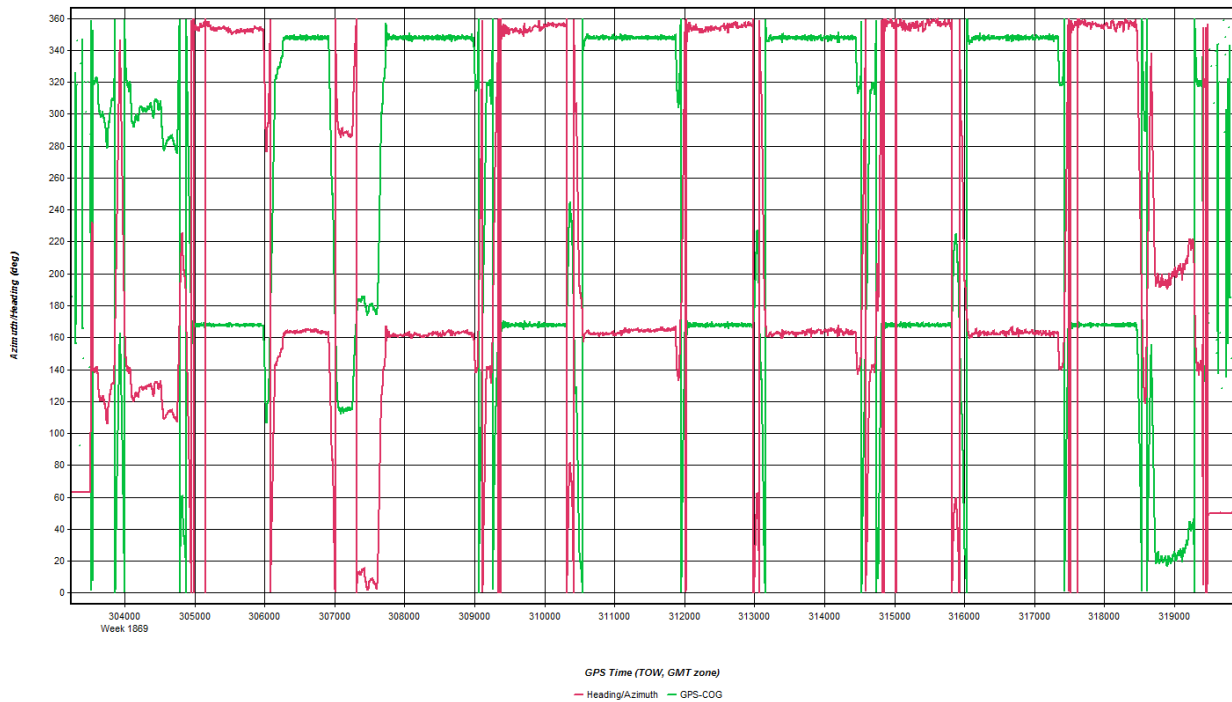
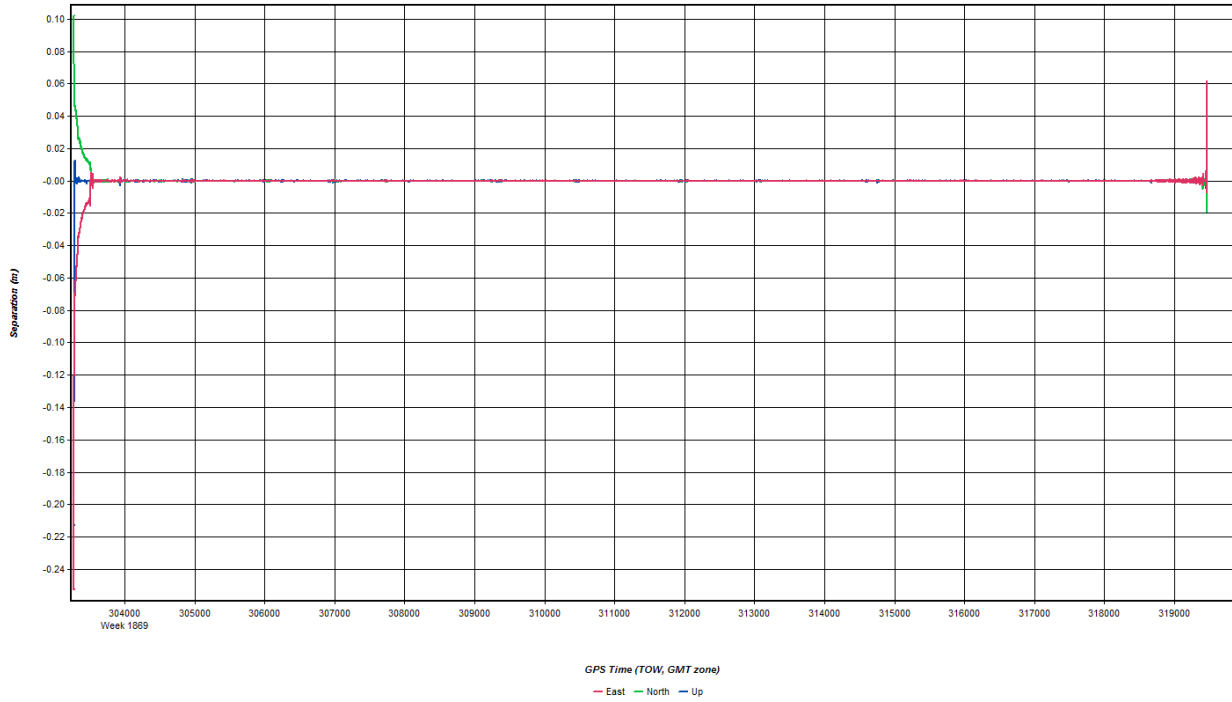
PROJECT NUMBER	LINE NO. & TAG	GND SPEED (KTS)	PRF KHZ	FIXED GAIN	ALT (m)	TIME		REMARKS
						START	STOP	
26258	3123 15°	150	376		4980	1355	1357	REF FLIGHT
	3118 195°	180			5020	1309	1321	REF FLIGHT
	3085 15°	151			5040	1325	1337	
	3081 195°	156			4970	1337	1353	Bump F
	3083 15°	143			5010	1354	1406	ROUGH
	3082 195°	156			4765	1408	1420	ROUGH
	3081 15°	140			4980	1423	1434	ROUGH

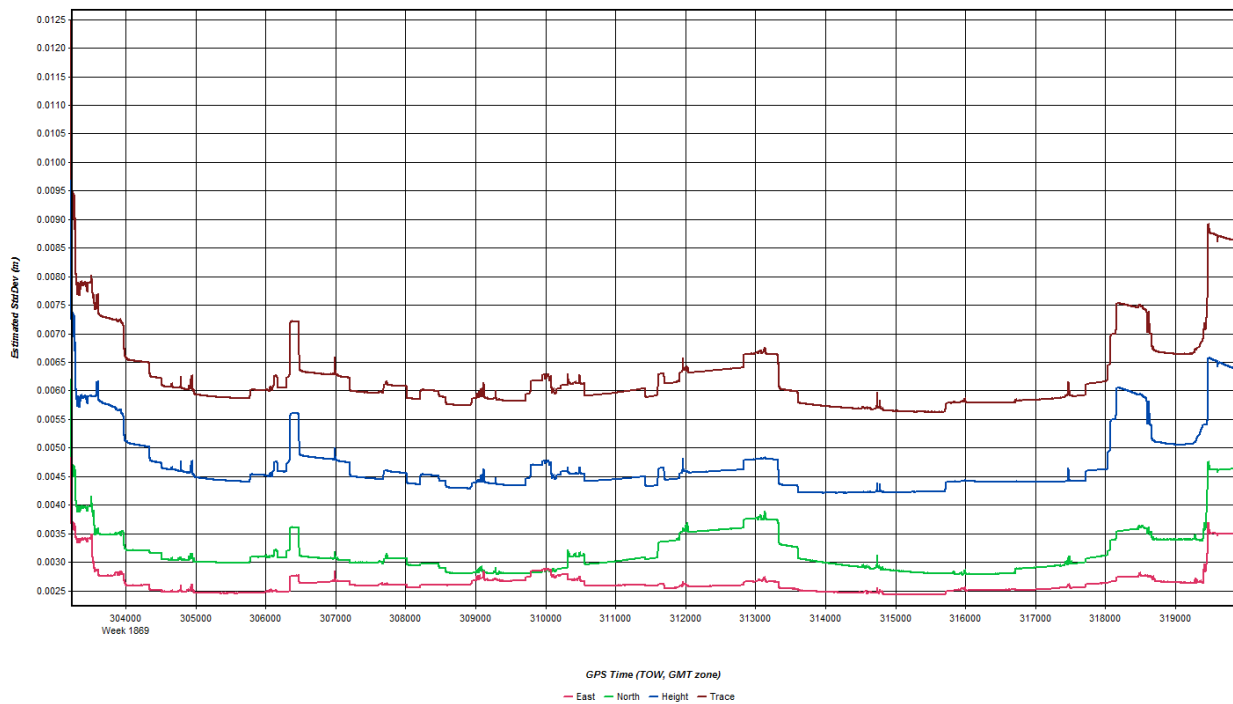
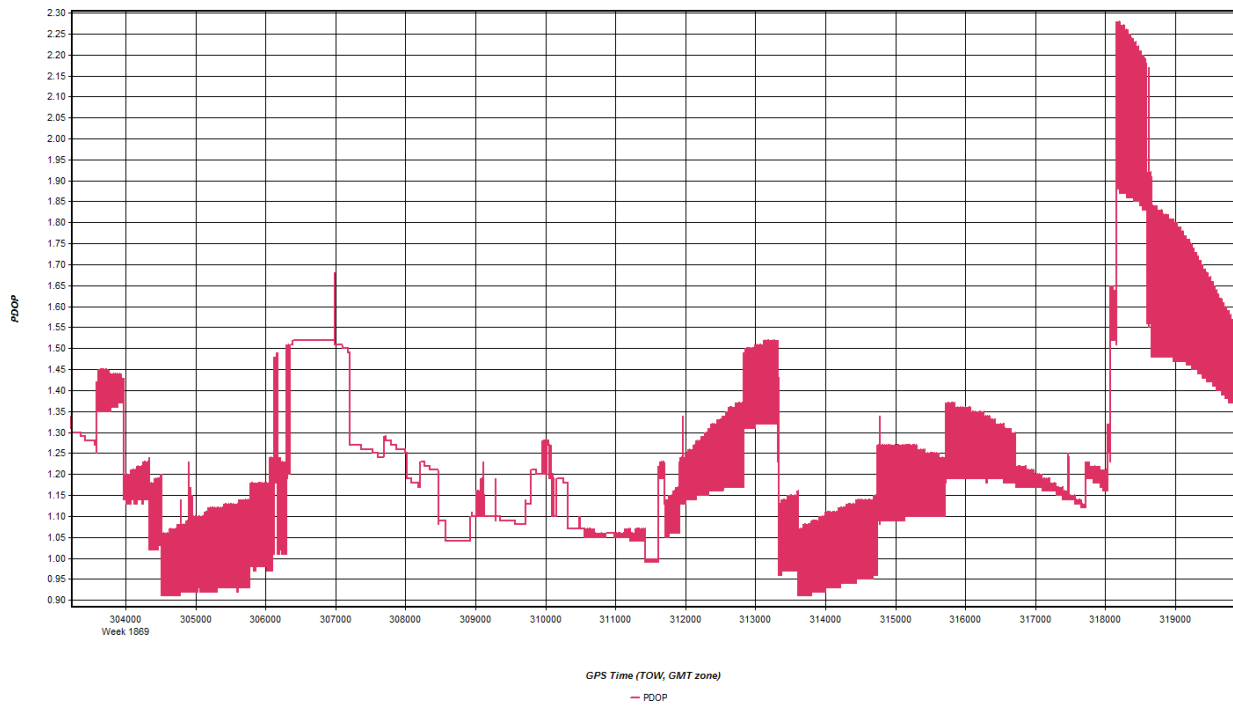
STATUS	TOTAL LINES	FLOWN	LEFT	AIRCRAFT		STATIC START	STATIC STOP	NOTES
				SITE	FERRY			
○				KRAF	N/A	5 m	8:00	11:00
○						W/ GEAR		
○						TURBULENCE		

AERO-METRIC, INC. N. 6216 Resource Drive Sheboygan Falls, WI. 53085 PHONE: 920-467-2655 FAX: 888-253-6695 E-Mail: amphoto@aerometric.com

Nov 4, 2015-A (N799AC, SN7169)









Coordinate/Antenna Settings

Master Remote

Base Station
 2: Dexter Name: Dexter Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\D

Coordinates
 Latitude: North 45 00 08.34552 Compute from PPP
 Longitude: West 69 14 04.15427 Enter Grid Values
 Ellipsoidal height: 134.080 m Enter MSL Height
 Datum: NAD83(2011) Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRMR10, NONE View STA File
 Antenna profile: TRMR10 Info
 Measured height: 2.050 m Measured to
 ARP to L1 offset: 0.128 m ARP
 Applied height: 2.178 m L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
 1: MEDX Name: MEDX Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\ND

Coordinates
 Latitude: North 45 01 34.90790 Compute from PPP
 Longitude: West 69 17 49.08401 Enter Grid Values
 Ellipsoidal height: 141.203 m Enter MSL Height
 Datum: NAD83(2011) 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


FIELD CREW						PROJECT INFO				OPERATIONAL DATA				GPS / IMU DATA				BATCH INFORMATION	
Project #	Project Description	District	Location	Operator	Date	Start Time	End Time	Scan Rate	Filter	Altitude (m)	Horizontal Accuracy (m)	Vertical Accuracy (m)	Scale	GPX File	IMU File	Batch Name	Batch Date		
1010001	MAINE DEPOT RECONSTRUCTION	MAINE	MAINE DEPOT	Operator	10/18/16	12:00:00	13:00:00	1000	High	15.0	0.05	0.10	1:50,000	1010001.gpx	1010001.imu	1010001	10/18/16		
1010002	MAINE DEPOT RECONSTRUCTION	MAINE	MAINE DEPOT	Operator	10/19/16	12:00:00	13:00:00	1000	High	15.0	0.05	0.10	1:50,000	1010002.gpx	1010002.imu	1010002	10/19/16		
1010003	MAINE DEPOT RECONSTRUCTION	MAINE	MAINE DEPOT	Operator	10/20/16	12:00:00	13:00:00	1000	High	15.0	0.05	0.10	1:50,000	1010003.gpx	1010003.imu	1010003	10/20/16		

Line	Dr	Start	Stop	Roll	Pitch	Yaw	Altitude (m)	Horizontal Accuracy (m)	Vertical Accuracy (m)	Scale	GPX File	IMU File	Batch Name	Batch Date
301		12:00:00	12:01:00	0.0	0.0	0.0	15.0	0.05	0.10	1:50,000	1010003.gpx	1010003.imu	1010003	10/20/16
302		12:01:00	12:02:00	0.0	0.0	0.0	15.0	0.05	0.10	1:50,000	1010003.gpx	1010003.imu	1010003	10/20/16

LIDAR FLIGHT SUMMARY		
Start Time	12:00:00	
End Time	13:00:00	
Scan Rate	1000	
Filter	High	
Altitude (m)	15.0	
Horizontal Accuracy (m)	0.05	
Vertical Accuracy (m)	0.10	
Scale	1:50,000	

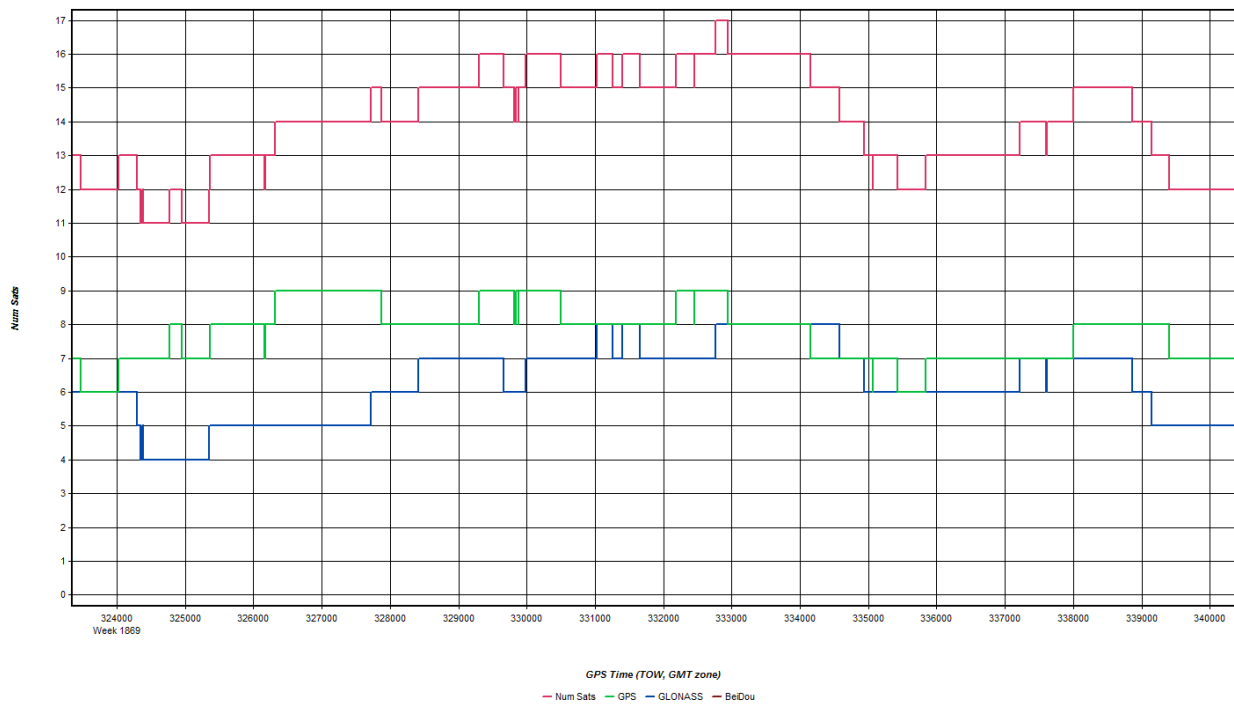
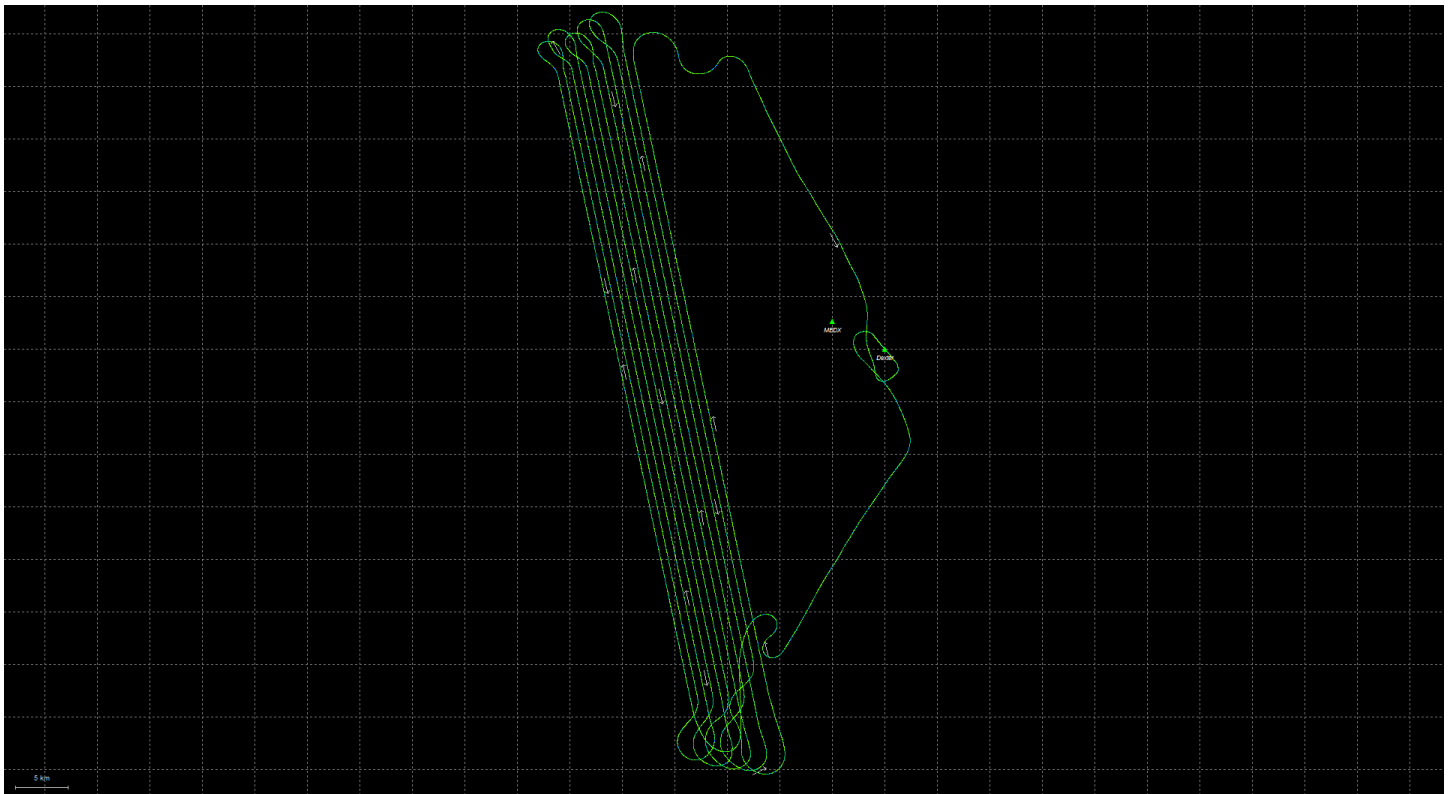
Base Station Log

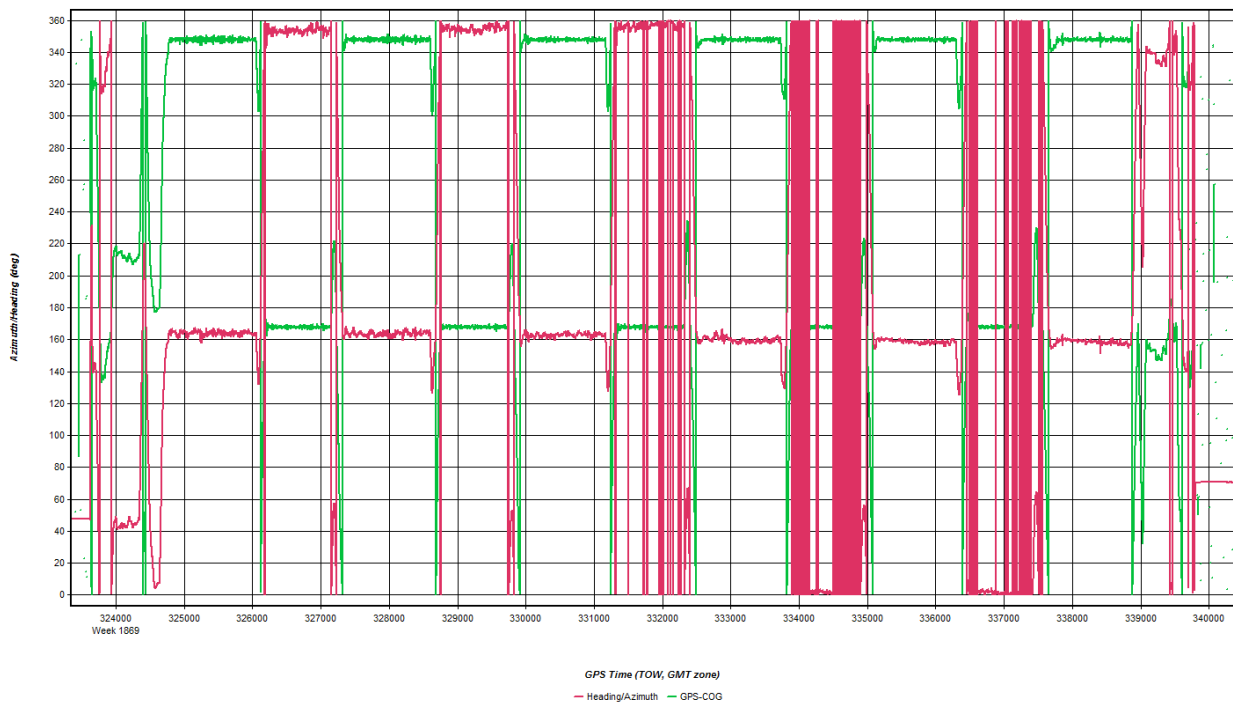
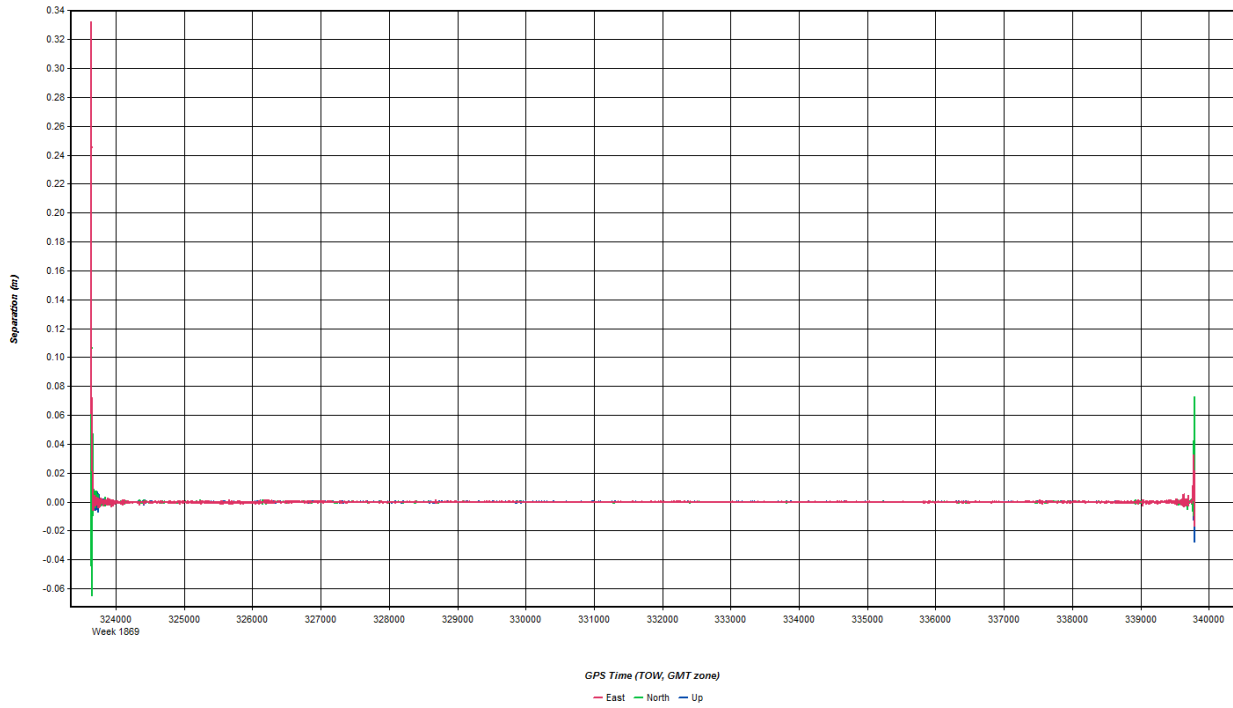
GPS SESSION FORM

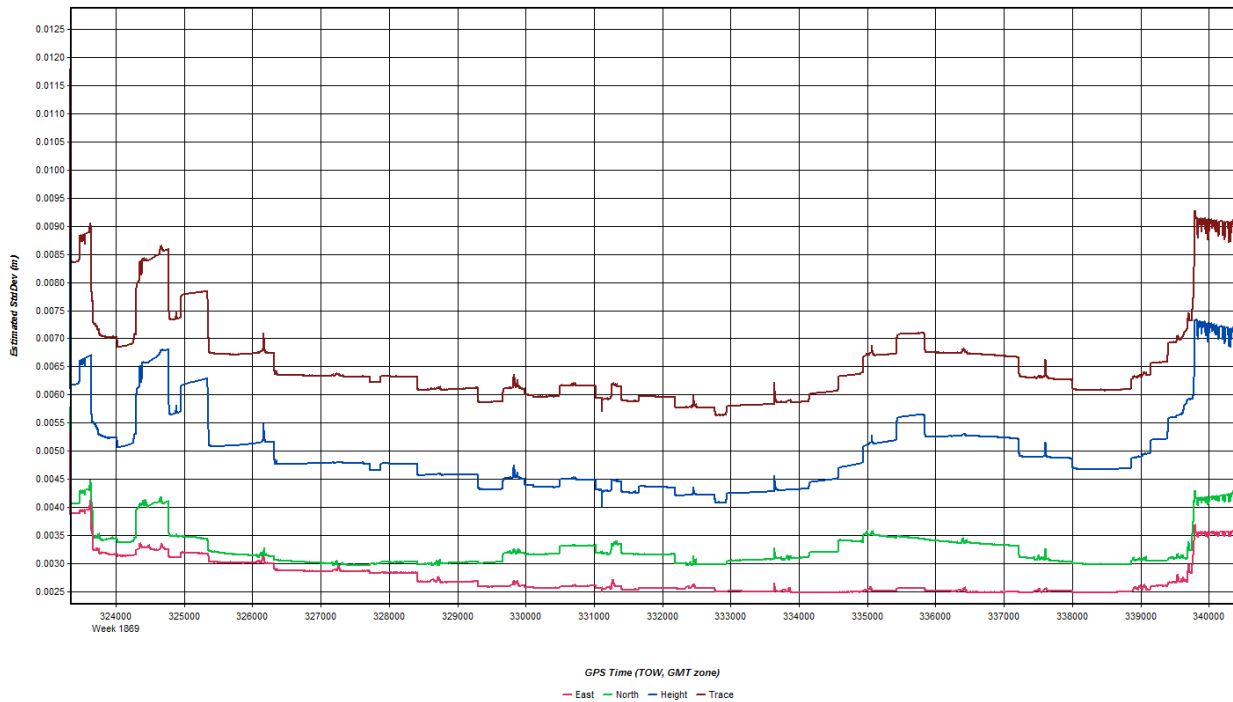
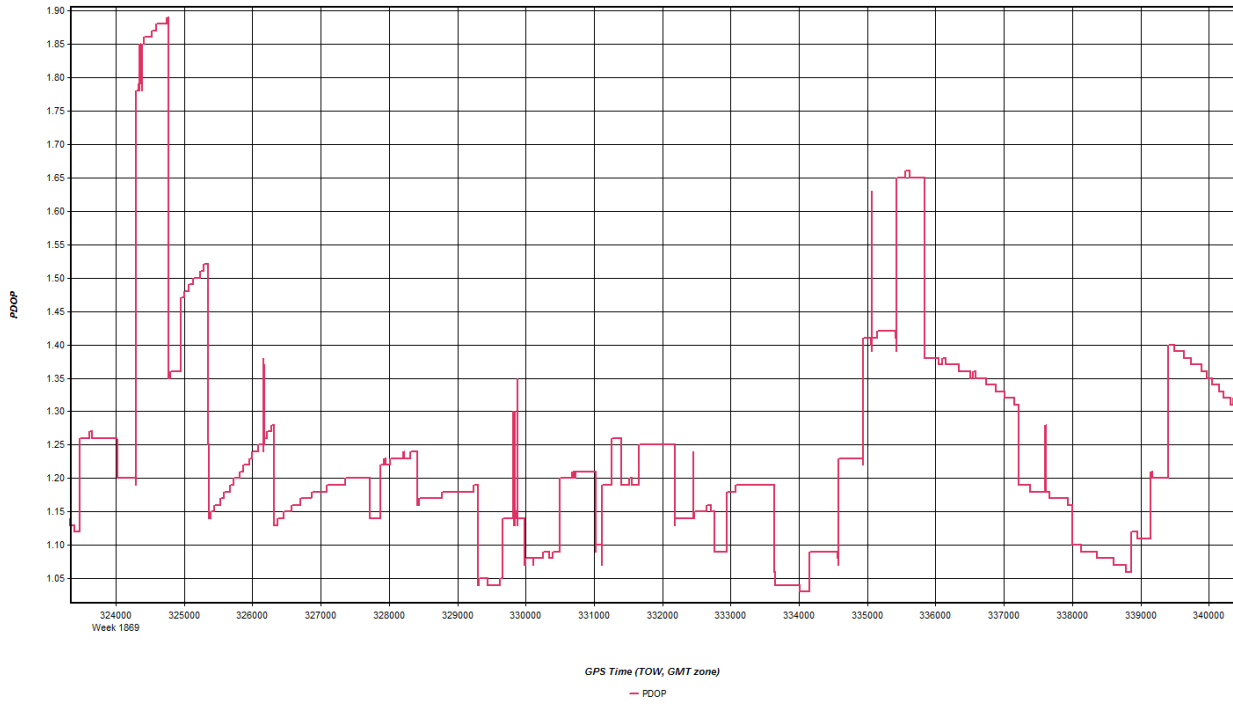
Contract # / TO #		Client / Project Name		Date	
		Quantum- Dexter, ME		4-Nov-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping <i>(photo in survey report)</i>		
Dexter_Nail			N/A		
Monument No./PID		Collection Type <i>(circle one)</i>		File Name <i>(receiver generated)</i>	
N/A		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19823080.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement <i>(circle one)</i>	
1 2 3 AVG 		1 2 3 AVG 2.050 2.050 2.050 2.050		TRUE VERTICAL <input checked="" type="radio"/> ARP	
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement <i>(circle one)</i>	
1 2 3 AVG 		1 2 3 AVG 2.050 2.050 2.050 2.050		TRUE VERTICAL <input checked="" type="radio"/> ARP	
Antenna Reference Point <i>(diagram in survey report)</i>					
<i>(Antenna Reference Point = VR + VO + VE2)</i>					
ARP to Phase = 168mm					
Start Date (UTC)		Start Time (UTC)		Approx. Lat. <i>(if available)</i>	
4-Nov-2015		11:52		45 0 8.34538 (N)	
End Date (UTC)		End Time (UTC)		Approx. Long. <i>(if available)</i>	
5-Nov-2015		4:19		69 14 4.15451 (W)	
Monument is in good condition			Site Diagram/Picture		
					
Ground Photos					

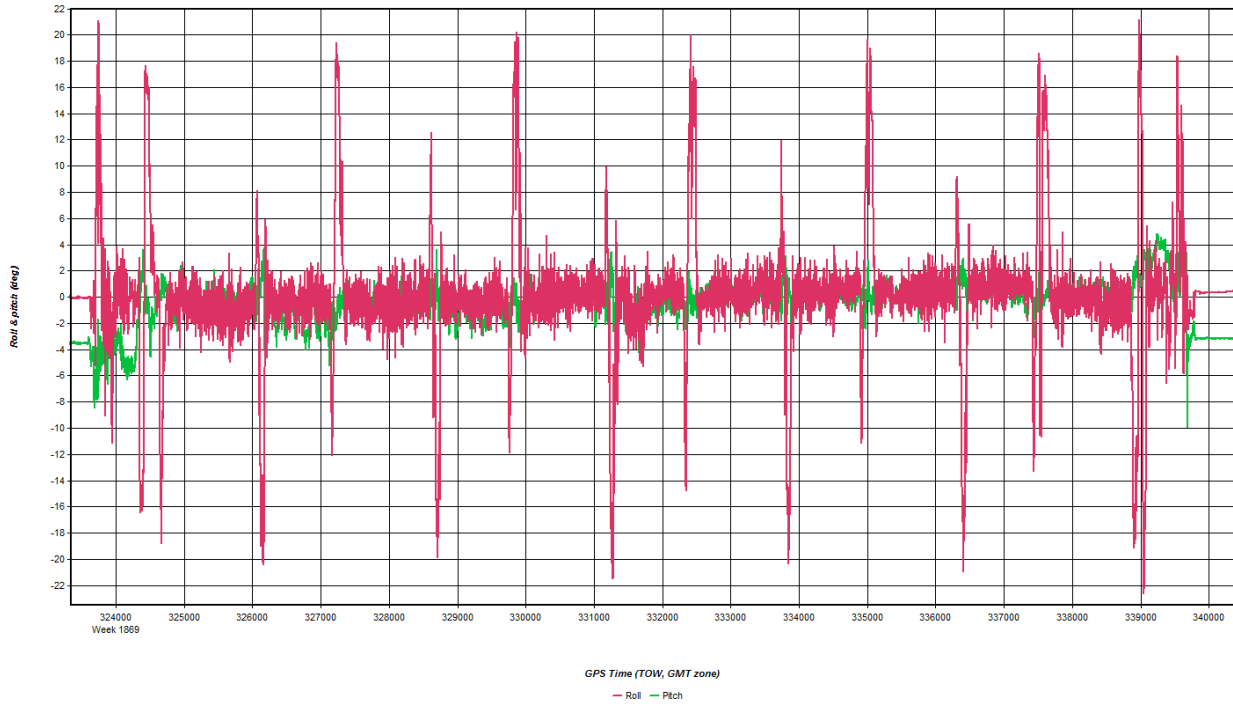


Nov 4, 2015-B (N799AC, SN7169)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: Dexter Name: Dexter Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\D

Coordinates
 Latitude: North 45 00 08.34552
 Longitude: West 69 14 04.15427
 Ellipsoidal height: 134.080 m
 Datum: NAD83(2011)

Antenna Height
 From station file: TRMR10, NONE
 Antenna profile: TRMR10
 Measured height: 2.050 m
 ARP to L1 offset: 0.128 m
 Applied height: 2.178 m
 Measured to:
 ARP
 L1 Phase Centre

Coordinate/Antenna Settings

Master Remote

Base Station
2: MEDX Name: MEDX Disabled
File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\D

Coordinates
Latitude: North 45 01 34.90790 Compute from PPP
Longitude: West 69 17 49.08401 Enter Grid Values
Ellipsoidal height: 141.203 m Enter MSL Height
Datum: NAD83(2011) 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

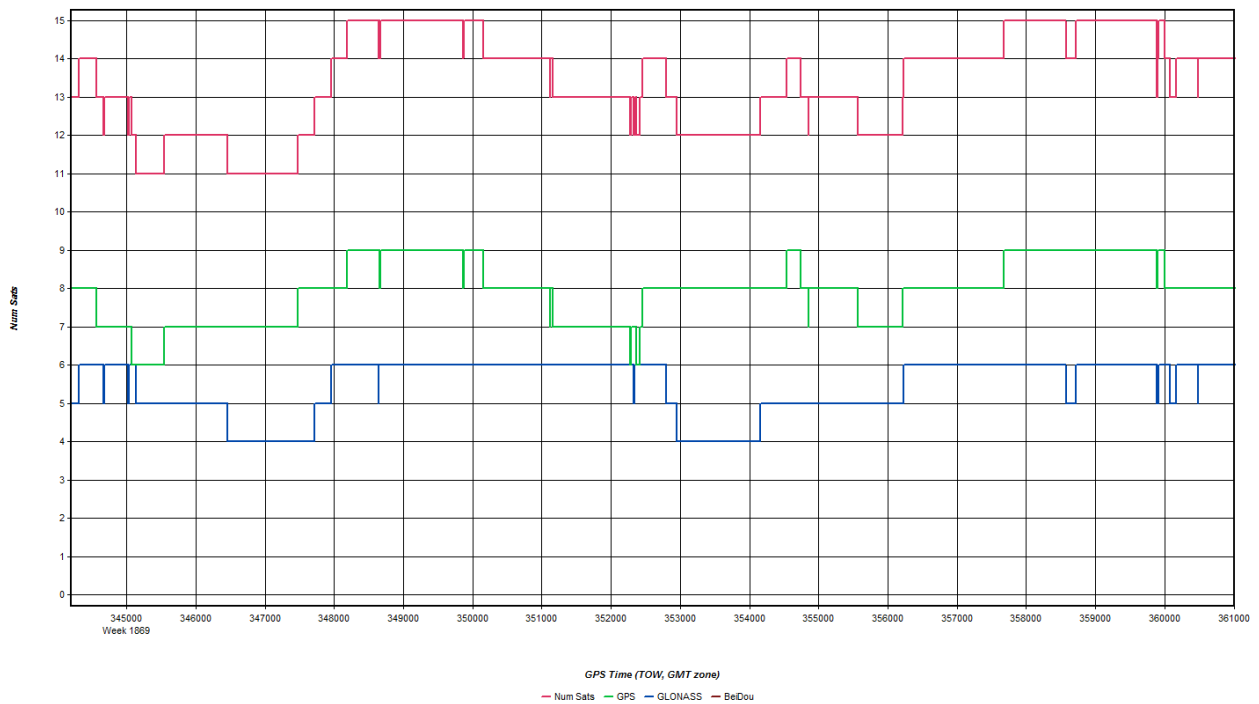
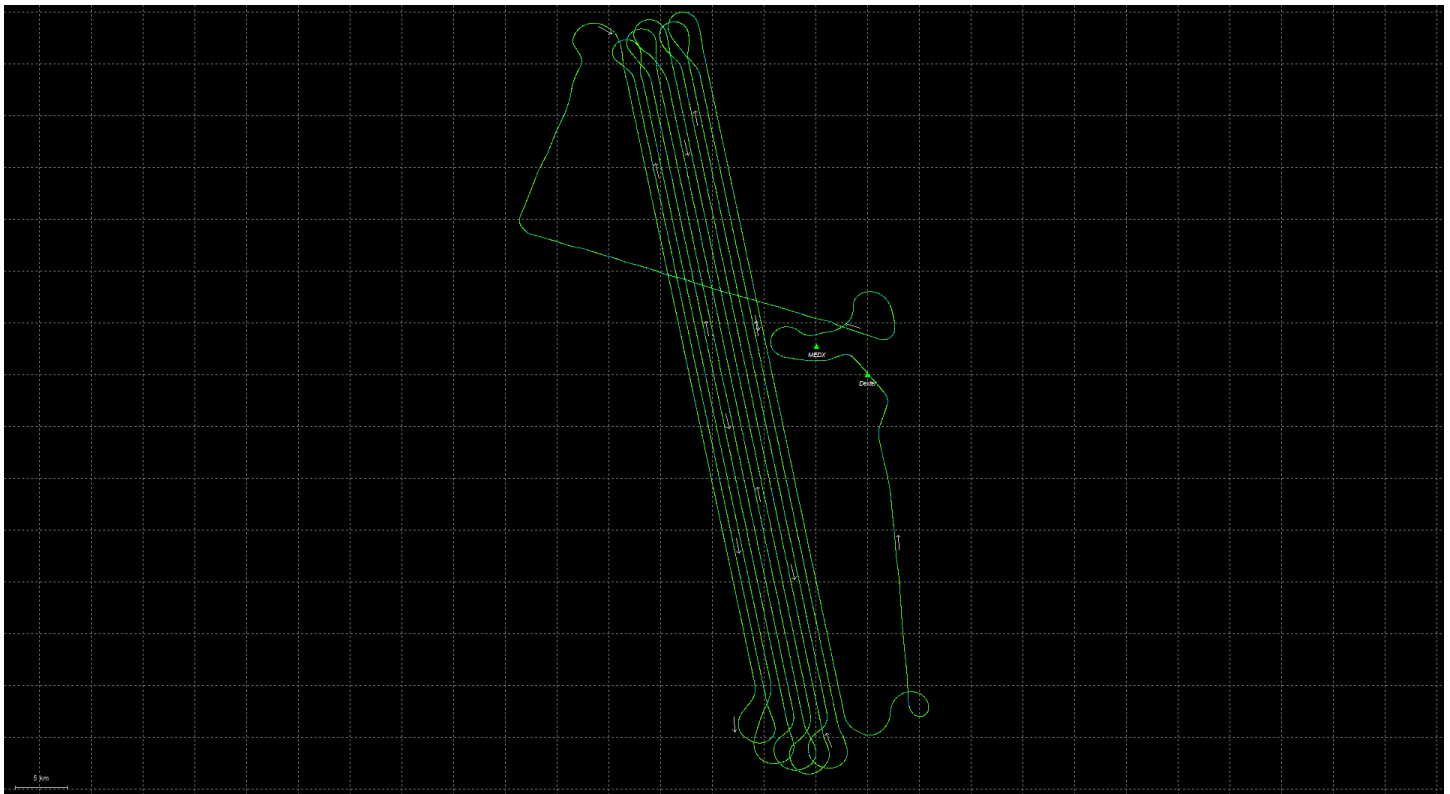
Base Station Log

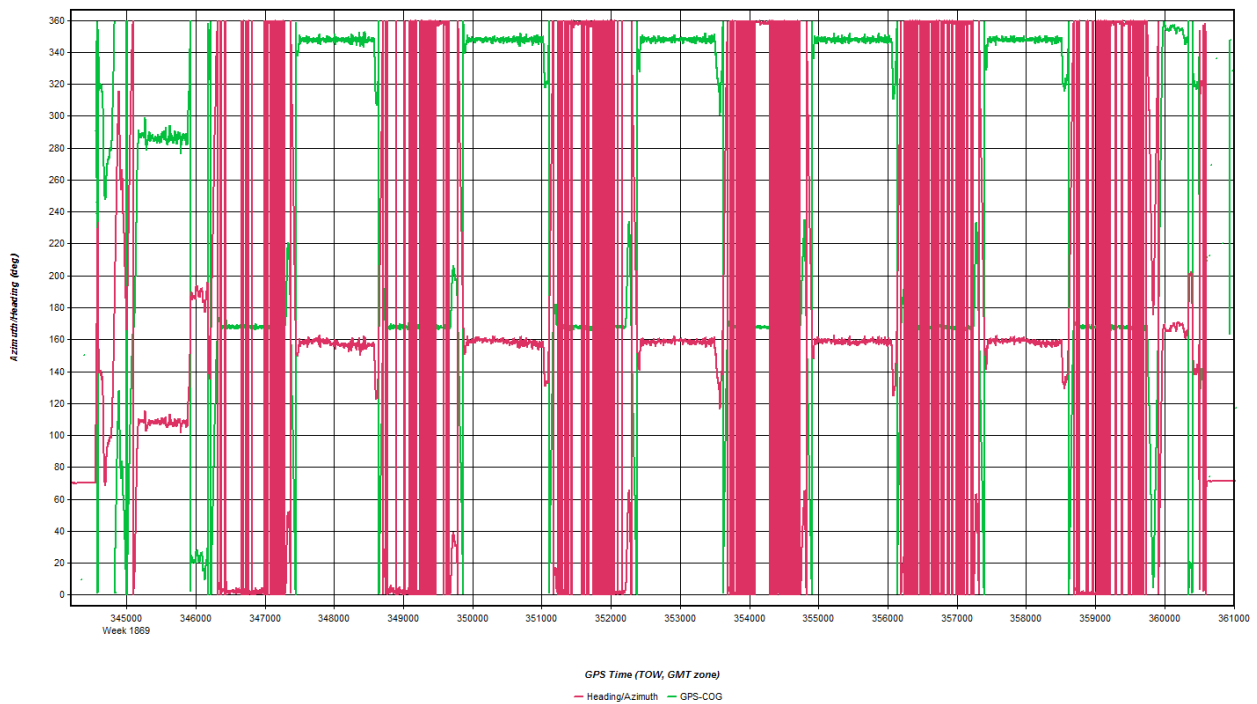
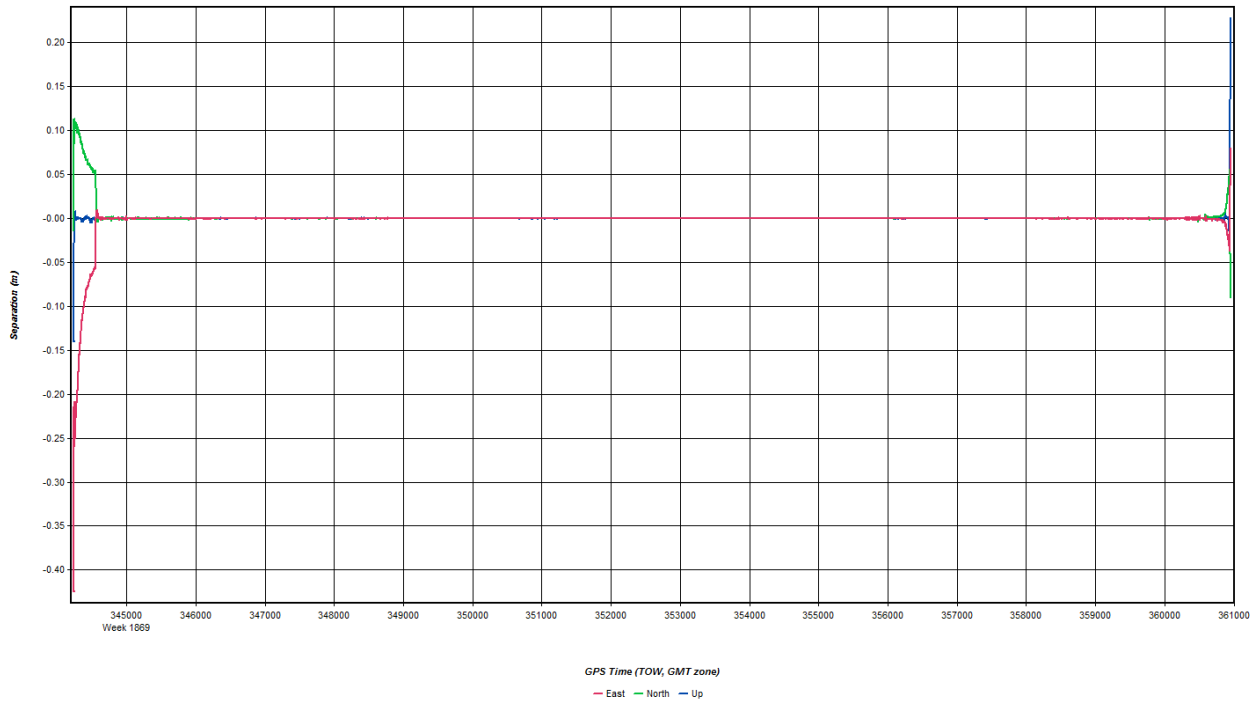
GPS SESSION FORM

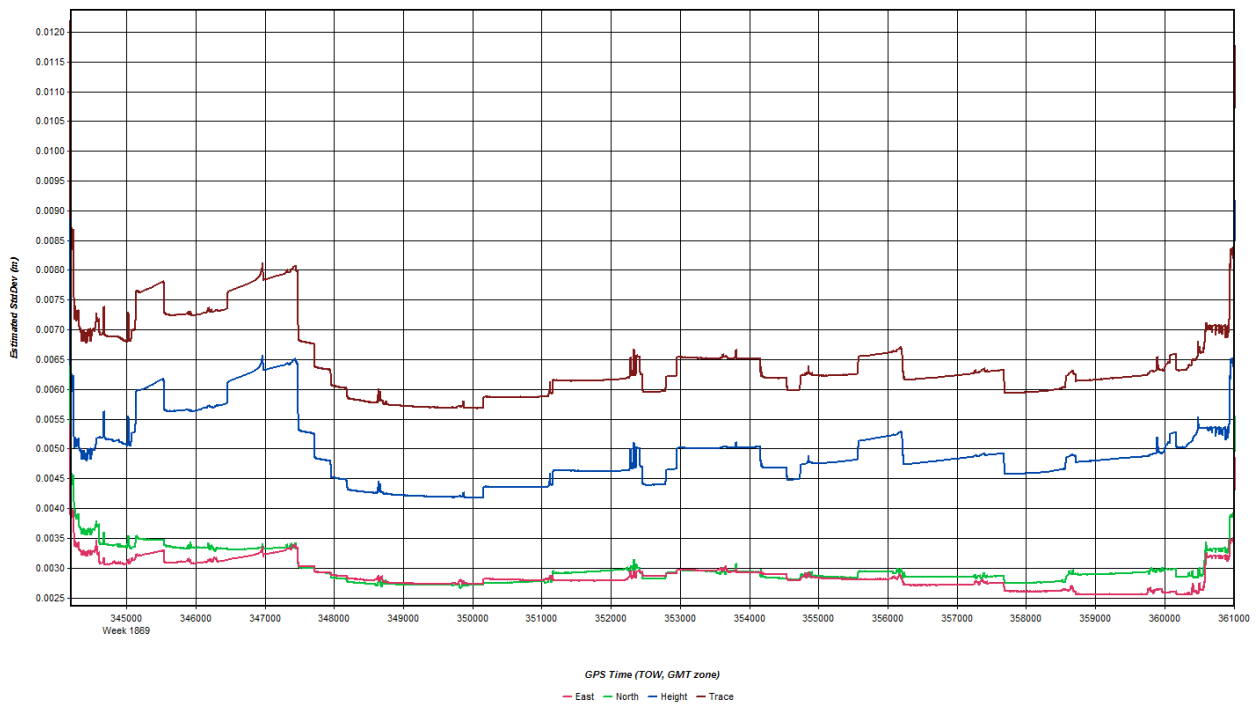
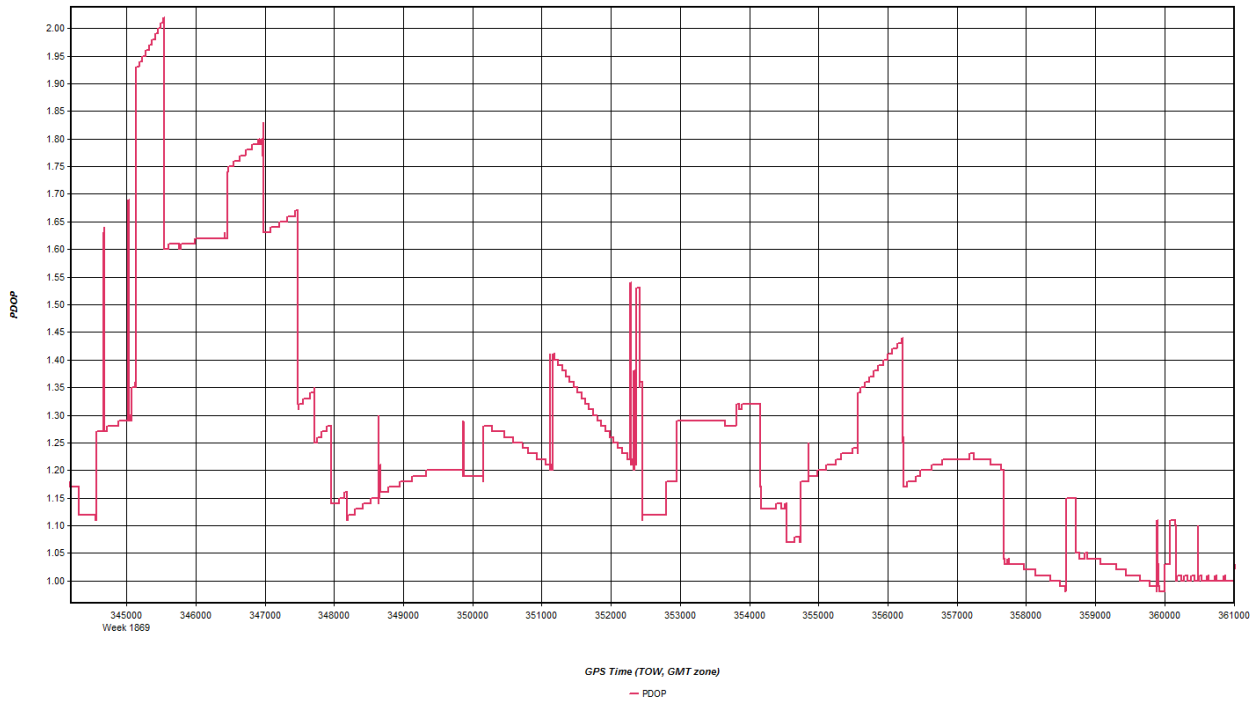
Contract # / TO #		Client / Project Name		Date	
		Quantum- Dexter, ME		4-Nov-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
Dexter_Nail			N/A		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
N/A		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19823080.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 2.050 2.050 2.050 2.050				TRUE VERTICAL <input checked="" type="radio"/> ARP	
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 2.050 2.050 2.050 2.050				TRUE VERTICAL <input checked="" type="radio"/> ARP	
Antenna Reference Point (diagram in survey report)					
(Antenna Reference Point = VR + VO + VE2) ARP to Phase = 168mm					
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
4-Nov-2015		11:52		45 0 8.34538 (N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
5-Nov-2015		4:19		69 14 4.15451 (W)	
Monument is in good condition			Site Diagram/Picture		
					
Ground Photos					

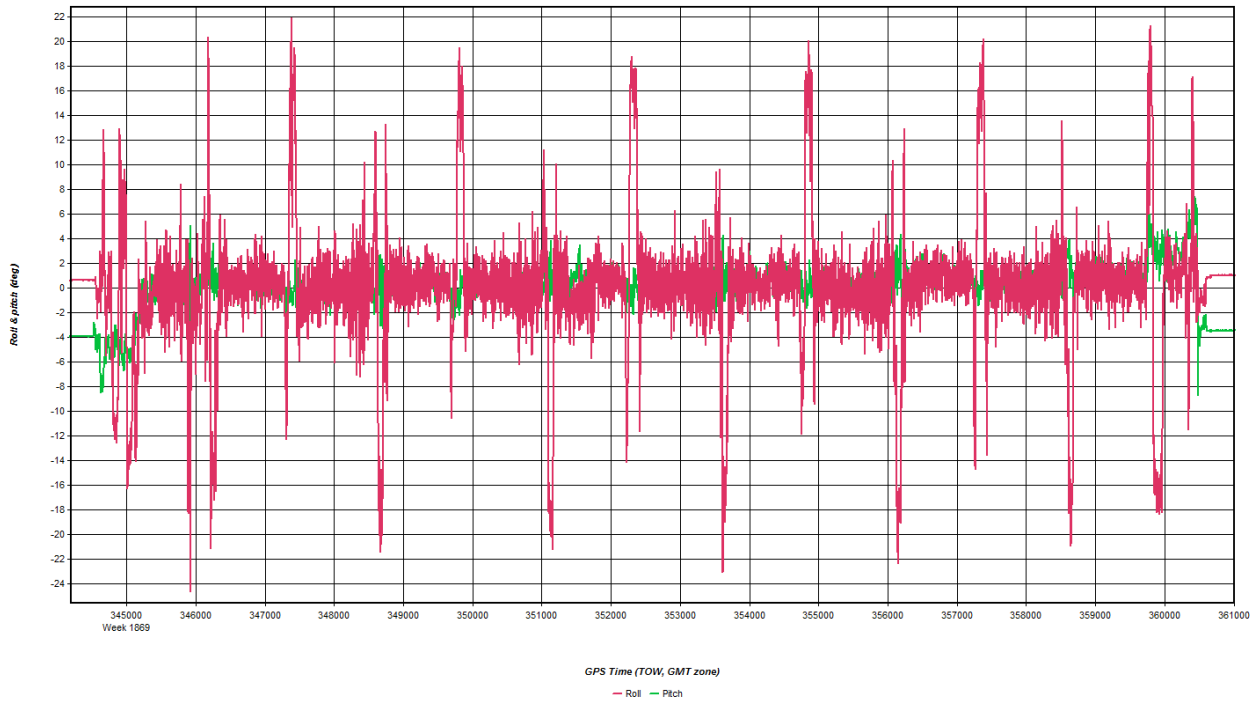


Nov 4, 2015-C (N799AC, SN7169)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: Dexter Name: Dexter Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\D

Coordinates
 Latitude: North 45 00 08.34552 Compute from PPP
 Longitude: West 69 14 04.15427 Enter Grid Values
 Ellipsoidal height: 134.080 m Enter MSL Height
 Datum: NAD83(2011) Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRMR10, NONE View STA File
 Antenna profile: TRMR10 Info
 Measured height: 2.050 m Measured to
 ARP to L1 offset: 0.128 m ARP
 Applied height: 2.178 m L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
2: MEDX Name: MEDX Disabled
File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\D

Coordinates
Latitude: North 45 01 34.90790 Compute from PPP
Longitude: West 69 17 49.08401 Enter Grid Values
Ellipsoidal height: 141.203 m Enter MSL Height
Datum: NAD83(2011) 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 Info			Project Name		Project Description		Location		Mission		GPS		IMU		Weather		Remarks		
P.O. Box 72387 Denver CO, 80231			20151101_201524		20151101_201524		Denver, ME		MISSION 3		GPS (m)		IMU (m)		Wind (m/s)		Remarks		
Pilot Name			Operator		Sensor Model / File Name		Sensor ID		Sensor ID		Speed		Altitude		Altitude		Comments		
Pilot Name			Operator		Sensor Model / File Name		Sensor ID		Sensor ID		Speed		Altitude		Altitude		Comments		
Pilot Name			Operator		Sensor Model / File Name		Sensor ID		Sensor ID		Speed		Altitude		Altitude		Comments		
18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00	18:05:00
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18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00	18:07:00
18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00	18:08:00
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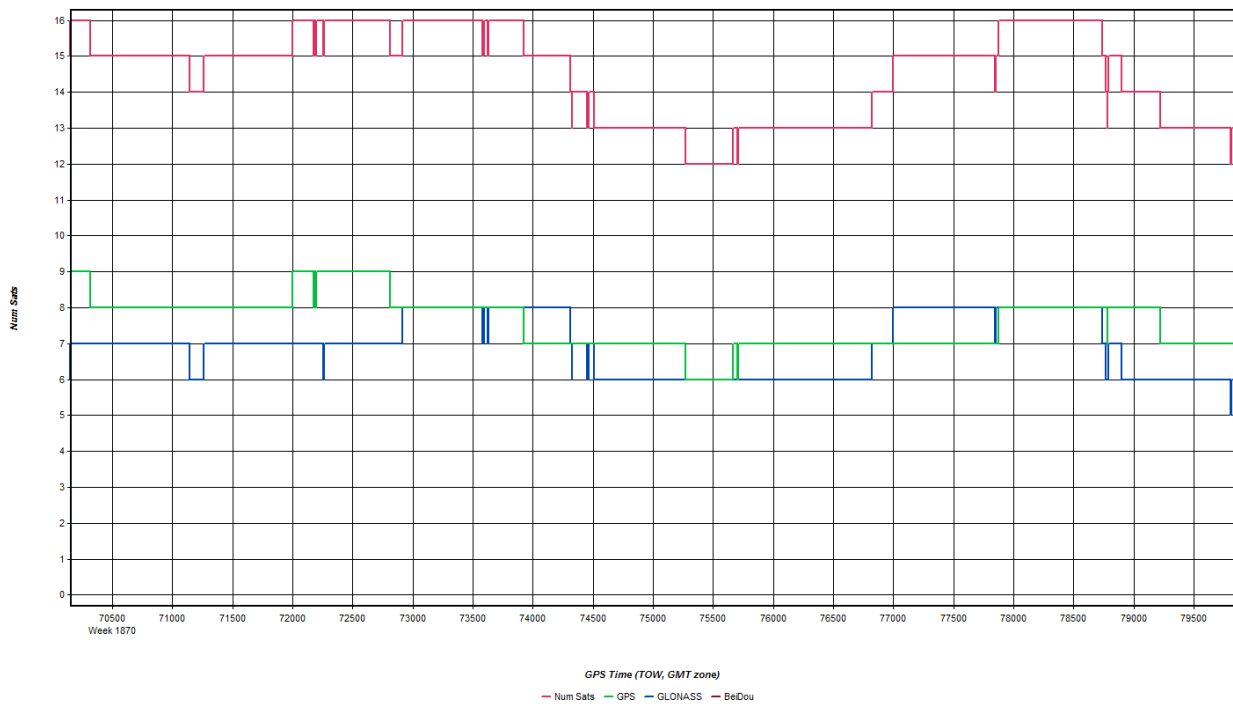
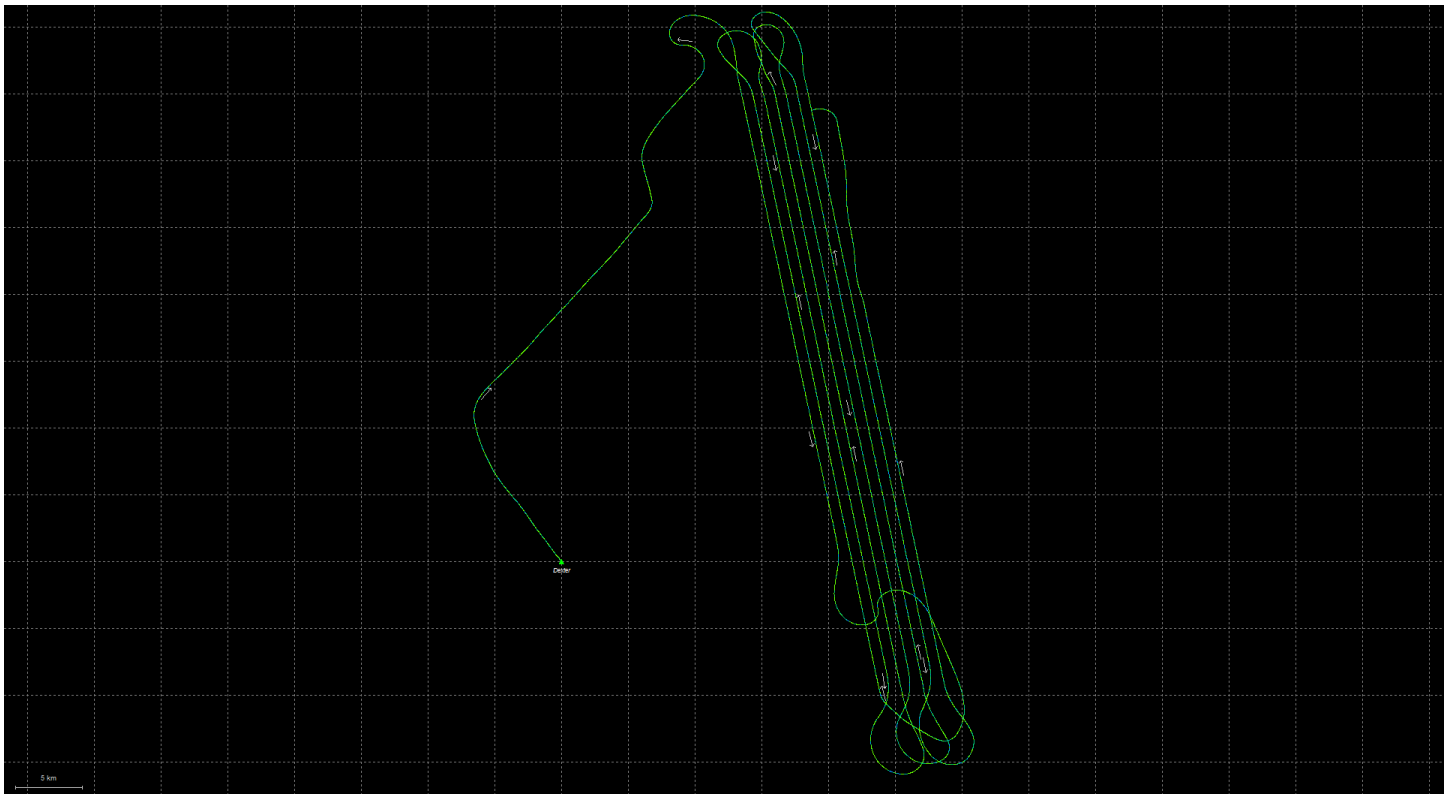
Base Station Log

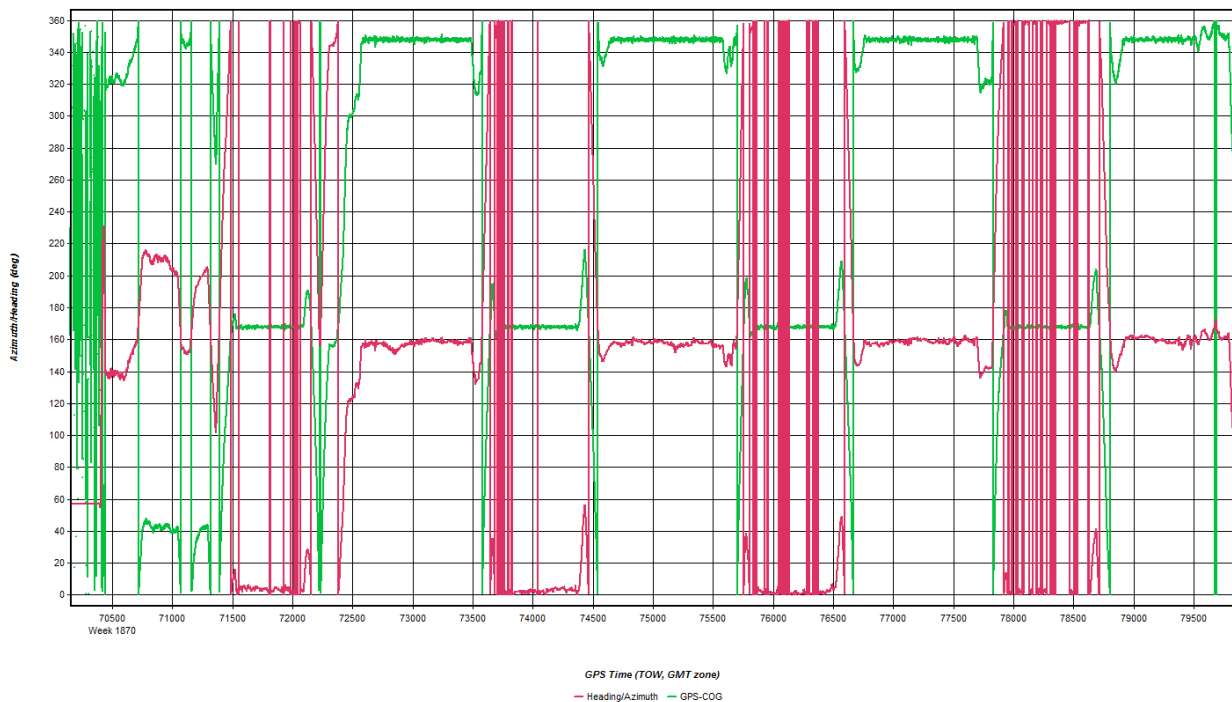
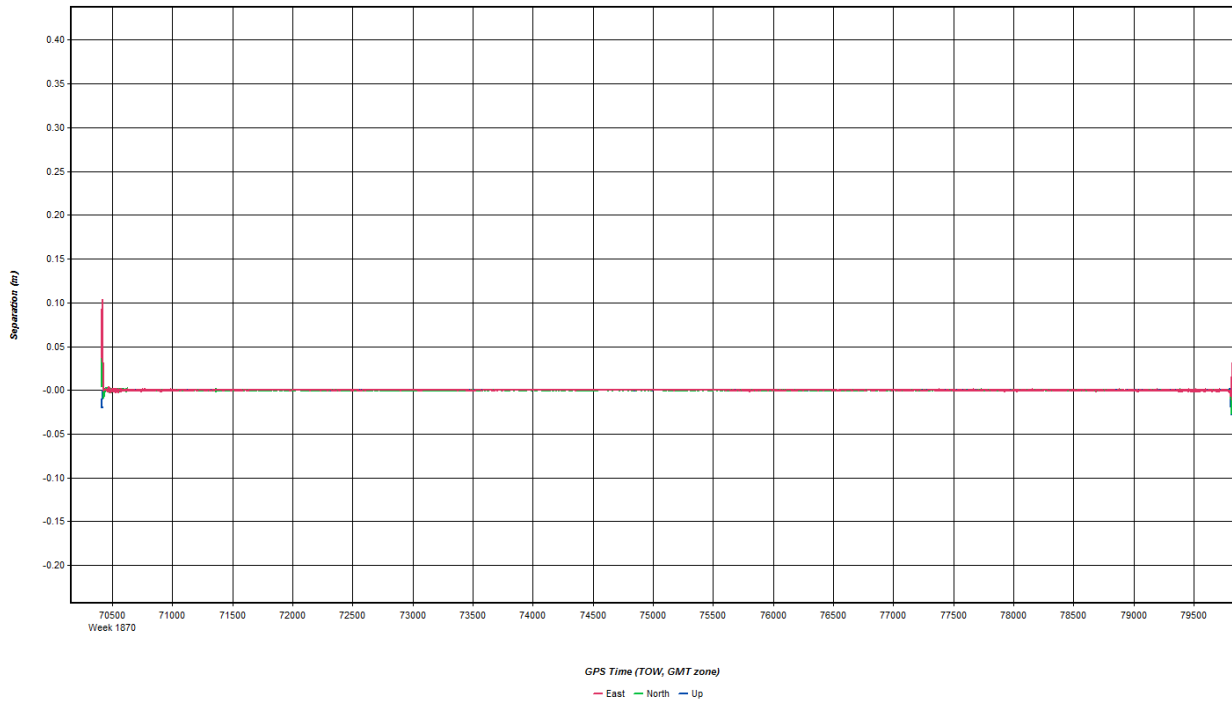
GPS SESSION FORM

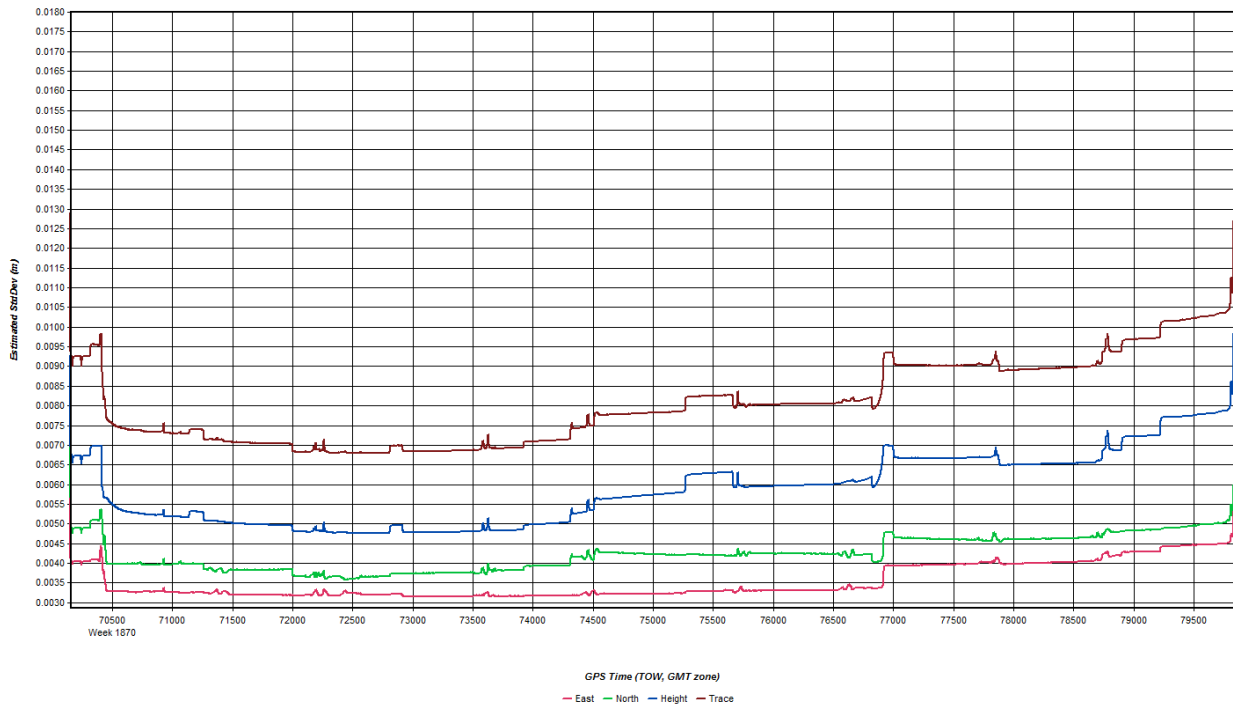
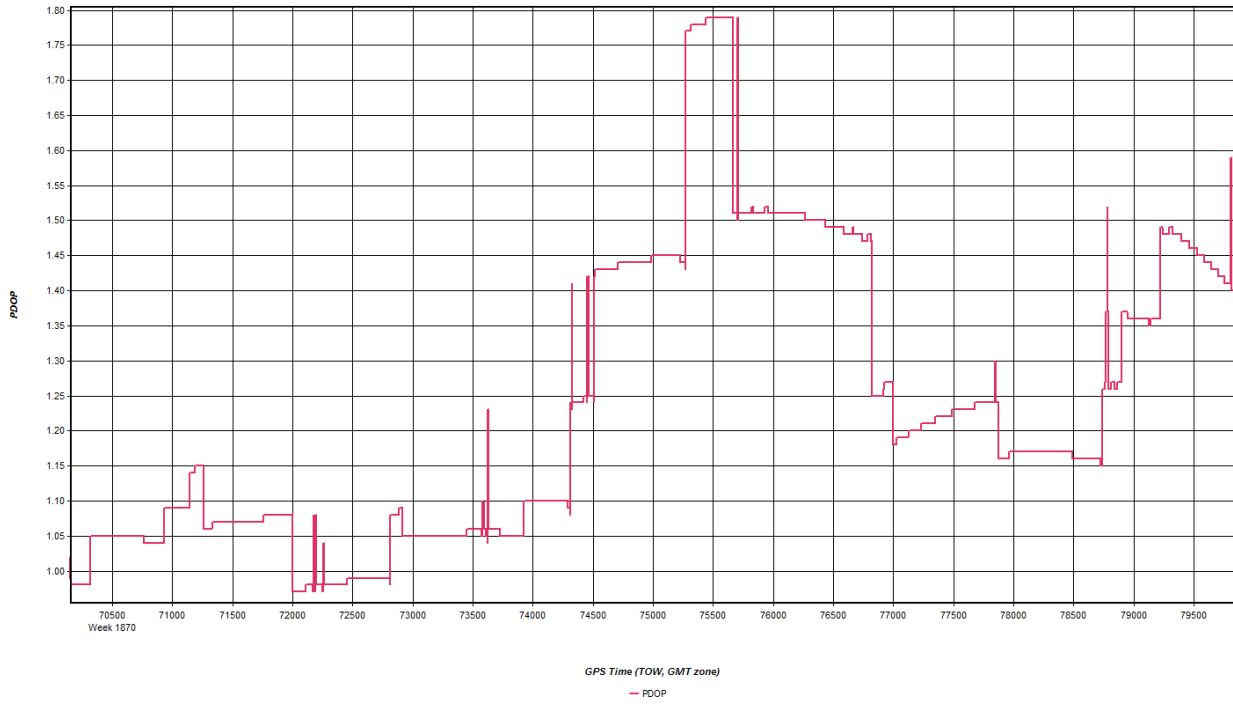
Contract # / TO #		Client / Project Name		Date	
		Quantum- Dexter, ME		4-Nov-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
Dexter_Nail			N/A		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
N/A		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19823080.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 2.050 2.050 2.050 2.050		1 2 3 AVG 2.050 2.050 2.050 2.050		TRUE VERTICAL <input checked="" type="radio"/> ARP	
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 2.050 2.050 2.050 2.050		1 2 3 AVG 2.050 2.050 2.050 2.050		TRUE VERTICAL <input checked="" type="radio"/> ARP	
Antenna Reference Point (diagram in survey report)					
(Antenna Reference Point = VR + VO + VE2) ARP to Phase = 168mm					
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
4-Nov-2015		11:52		45 0 8.34538 (N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
5-Nov-2015		4:19		69 14 4.15451 (W)	
Monument is in good condition			Site Diagram\Picture		
					
Ground Photos					

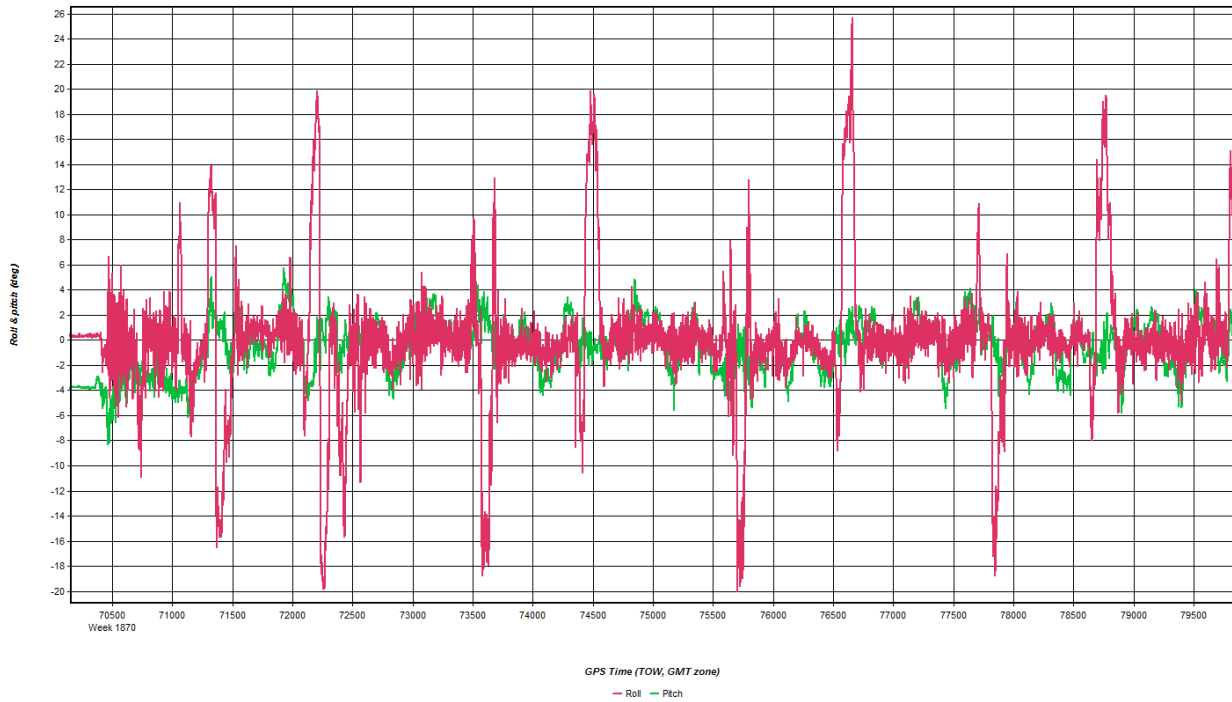


Nov 8, 2015-A (N799AC, SN7169)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: Dexter Name: Dexter Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\D

Coordinates
 Latitude: North 45 00 08.34552 Compute from PPP
 Longitude: West 69 14 04.15427 Enter Grid Values
 Ellipsoidal height: 134.080 m Enter MSL Height
 Datum: NAD83(2011) Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRMR10, NONE View STA File
 Antenna profile: TRMR10 Info
 Measured height: 2.050 m
 ARP to L1 offset: 0.128 m
 Applied height: 2.178 m
 Measured to:
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Flight Log

Mission E		Mission E			Mission E			Mission E			Mission E			Mission E			Mission E			Mission E		
Project #	Site	Operator	Vehicle	Altitude	Speed	Altitude	Speed	Altitude	Speed	Altitude	Speed	Altitude	Speed	Altitude	Speed	Altitude	Speed	Altitude	Speed	Altitude	Speed	
2015108	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	
2015108	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	162508	

PAR LLC
1000 Main Street
Portland, ME 04101

PROJECT # 2015108
SITE 162508
OPERATOR [Name]
VEHICLE [Type]
ALTITUDE [m]
SPEED [m/s]


MISSION E
START TIME [hh:mm:ss]
STOP TIME [hh:mm:ss]
TOTAL TIME [hh:mm:ss]

GPS DATA COLLECTION
TOTAL LINES [Count]
AVERAGE SPEED [m/s]
MAX ALTITUDE [m]

OPERATOR [Name]
VEHICLE [Type]
GPS DATA COLLECTION
TOTAL LINES [Count]
AVERAGE SPEED [m/s]
MAX ALTITUDE [m]

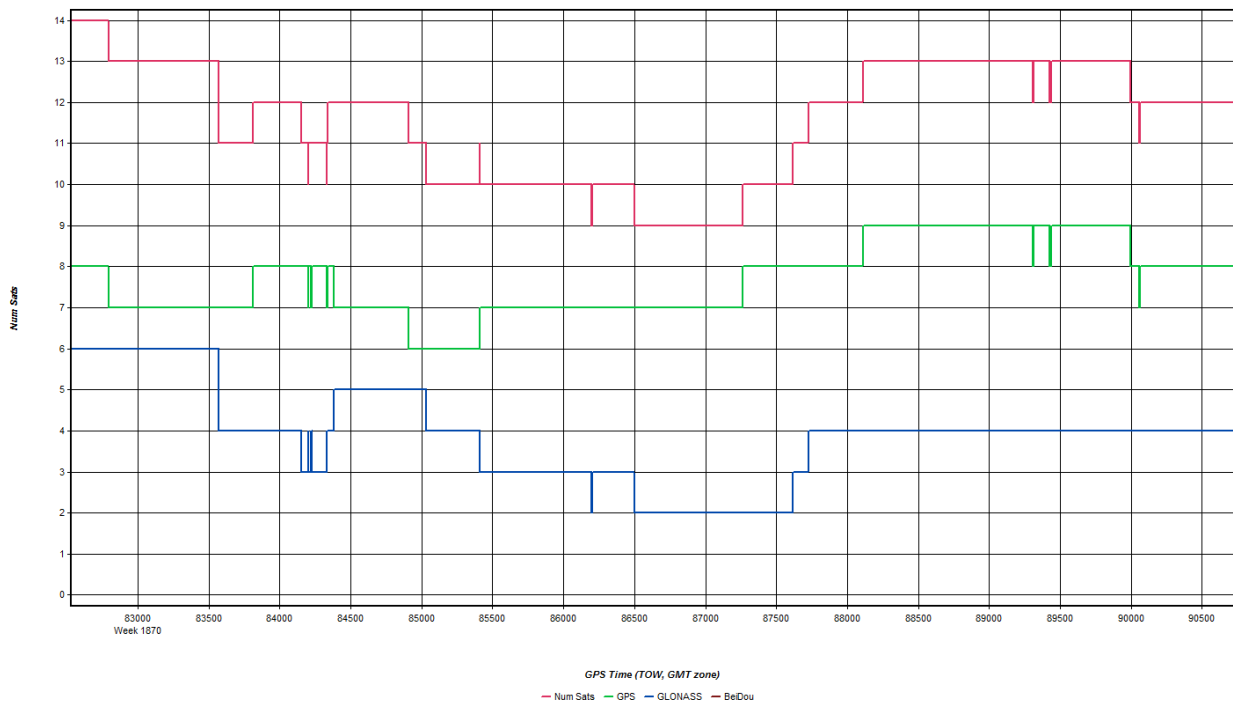
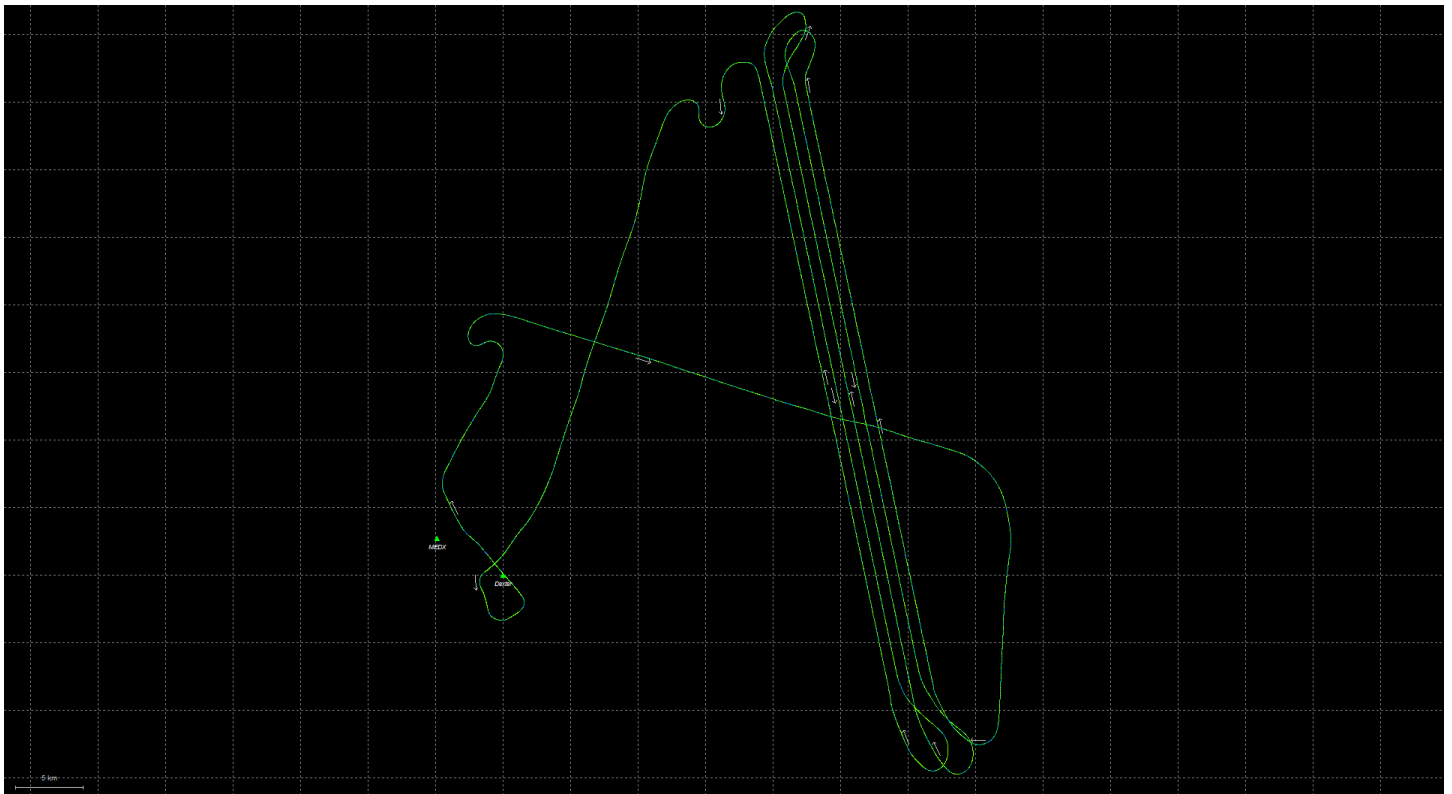
Base Station Log

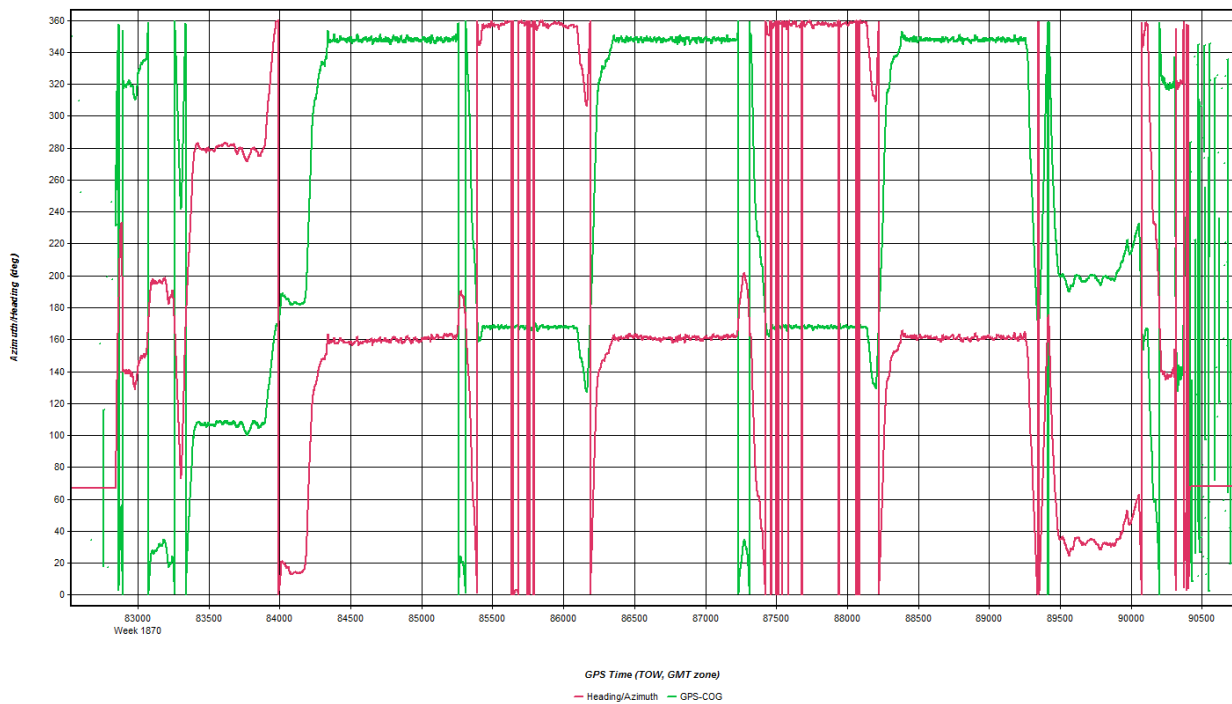
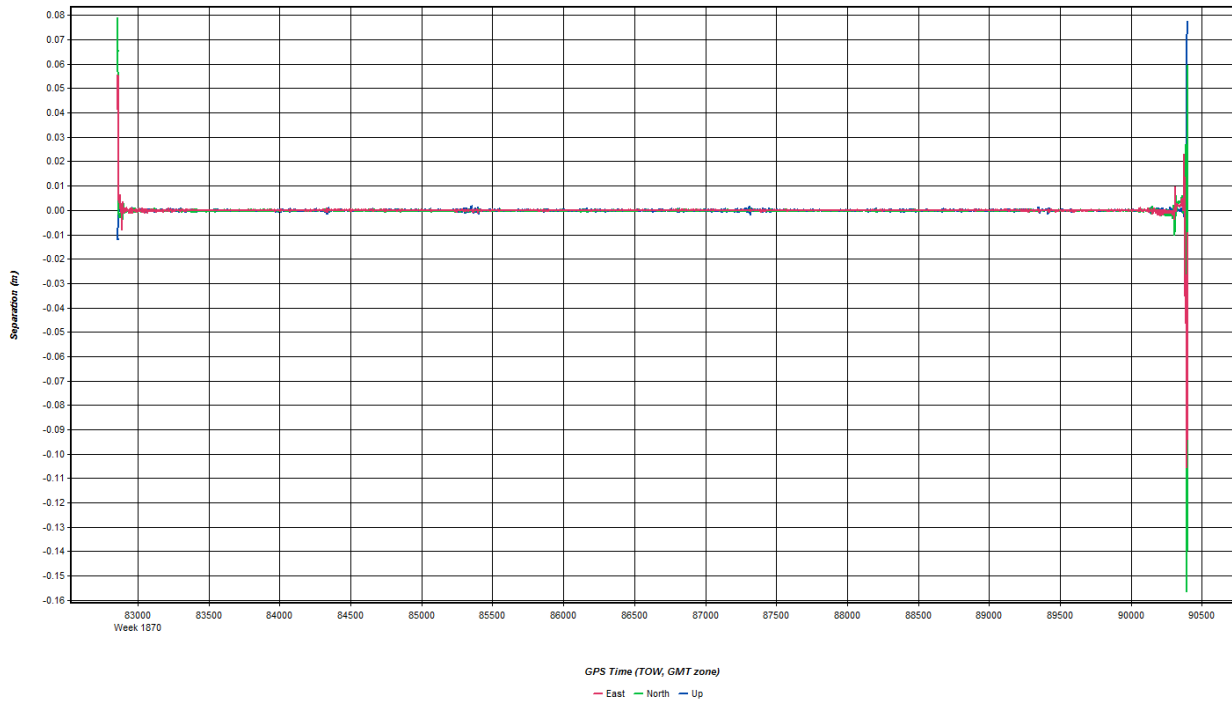
GPS SESSION FORM

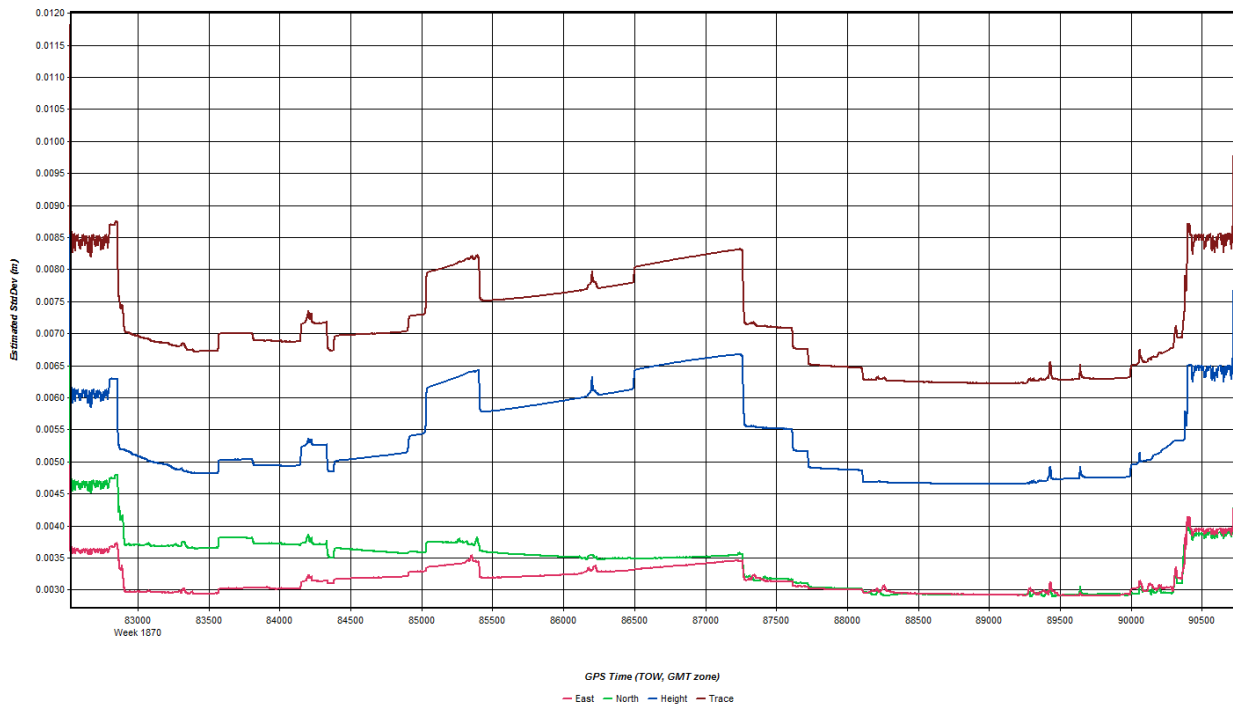
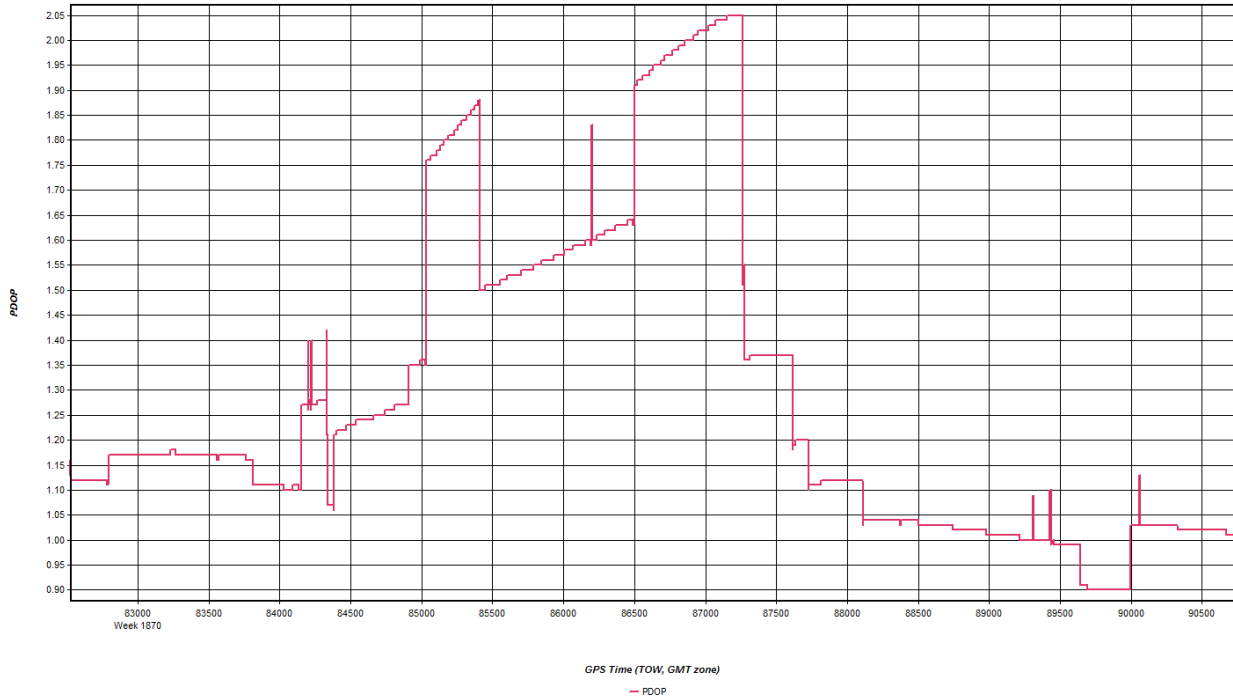
Contract # / TO #		Client / Project Name		Date	
		Quantum- Dexter, ME		8-Nov-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
Dexter_Nail			N/A		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
N/A		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19823121.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 		1 2 3 AVG 		<input type="radio"/> TRUE VERTICAL <input checked="" type="radio"/> ARP	
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 		1 2 3 AVG 		<input type="radio"/> TRUE VERTICAL <input checked="" type="radio"/> ARP	
Antenna Reference Point (diagram in survey report) (Antenna Reference Point = VR + VO + VE2) ARP to Phase = 168mm					
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
8-Nov-2015		12:20		45 0 8.34538 (N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
9-Nov-2015		1:22		69 14 4.15451 (W)	
Monument is in good condition			Site Diagram/Picture		
					
Ground Photos					

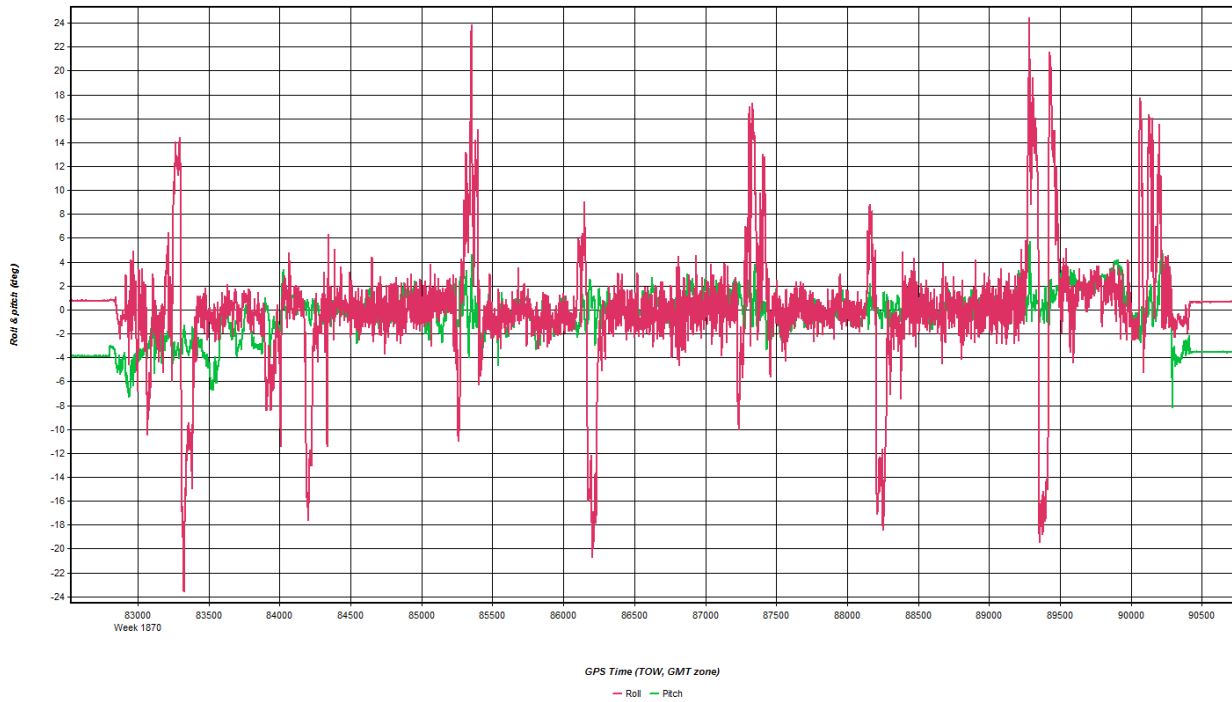


Nov 8, 2015-B (N799AC, SN7169)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: Dexter Name: Dexter Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\D

Coordinates
 Latitude: North 45 00 08.34552 Compute from PPP
 Longitude: West 69 14 04.15427 Enter Grid Values
 Ellipsoidal height: 134.080 m Enter MSL Height
 Datum: NAD83(2011) Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRMR10, NONE View STA File
 Antenna profile: TRMR10 Info
 Measured height: 2.050 m Measured to
 ARP to L1 offset: 0.128 m ARP
 Applied height: 2.178 m L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
2: MEDX Name: MEDX Disabled
File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\ND

Coordinates
Latitude: North 45 01 34.90790 Compute from PPP
Longitude: West 69 17 49.08401 Enter Grid Values
Ellipsoidal height: 141.203 m Enter MSL Height
Datum: NAD83(2011) 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 Overview		Project Description		City/Town		Client		LIDAR Daily Log				GPS / IMU Data		Weather / Conditions		Operator		Remarks																																																																								
Project #	Client	City	State	Project Name	Date	Project Manager	Contact	Start Time	End Time	Operator	GPS Accuracy	IMU Accuracy	Temp	Humidity	Wind	Clouds	Operator 1	Operator 2	Notes	Other																																																																						
20151106_225142	PAR LLC	Maine	US	Maine and Massachusetts 2015 QL1 and QL2 LiDAR Project	2015-11-18	Quantum Spatial		07:00	11:30	Paul	3.0m	0.15m	45F	70%	10 mph	20%	Paul	Paul	Cloud Cover	0%																																																																						
<p>LIDAR FLIGHT SUMMARY</p> <table border="1"> <tr> <th>Flight Line</th> <th>Start</th> <th>Stop</th> <th>Area</th> <th>Point Count</th> <th>Scan Rate</th> <th>Speed</th> <th>Altitude</th> <th>IMU Accuracy</th> <th>GPS Accuracy</th> <th>Temp</th> <th>Humidity</th> <th>Wind</th> <th>Clouds</th> </tr> <tr> <td>01</td> <td>07:00</td> <td>08:00</td> <td>1.00</td> <td>50000</td> <td>400</td> <td>10 mph</td> <td>1500</td> <td>0.15m</td> <td>3.0m</td> <td>45F</td> <td>70%</td> <td>10 mph</td> <td>20%</td> </tr> <tr> <td>02</td> <td>08:00</td> <td>09:00</td> <td>1.00</td> <td>50000</td> <td>400</td> <td>10 mph</td> <td>1500</td> <td>0.15m</td> <td>3.0m</td> <td>45F</td> <td>70%</td> <td>10 mph</td> <td>20%</td> </tr> <tr> <td>03</td> <td>09:00</td> <td>10:00</td> <td>1.00</td> <td>50000</td> <td>400</td> <td>10 mph</td> <td>1500</td> <td>0.15m</td> <td>3.0m</td> <td>45F</td> <td>70%</td> <td>10 mph</td> <td>20%</td> </tr> <tr> <td>04</td> <td>10:00</td> <td>11:30</td> <td>1.00</td> <td>50000</td> <td>400</td> <td>10 mph</td> <td>1500</td> <td>0.15m</td> <td>3.0m</td> <td>45F</td> <td>70%</td> <td>10 mph</td> <td>20%</td> </tr> </table>																					Flight Line	Start	Stop	Area	Point Count	Scan Rate	Speed	Altitude	IMU Accuracy	GPS Accuracy	Temp	Humidity	Wind	Clouds	01	07:00	08:00	1.00	50000	400	10 mph	1500	0.15m	3.0m	45F	70%	10 mph	20%	02	08:00	09:00	1.00	50000	400	10 mph	1500	0.15m	3.0m	45F	70%	10 mph	20%	03	09:00	10:00	1.00	50000	400	10 mph	1500	0.15m	3.0m	45F	70%	10 mph	20%	04	10:00	11:30	1.00	50000	400	10 mph	1500	0.15m	3.0m	45F	70%	10 mph	20%
Flight Line	Start	Stop	Area	Point Count	Scan Rate	Speed	Altitude	IMU Accuracy	GPS Accuracy	Temp	Humidity	Wind	Clouds																																																																													
01	07:00	08:00	1.00	50000	400	10 mph	1500	0.15m	3.0m	45F	70%	10 mph	20%																																																																													
02	08:00	09:00	1.00	50000	400	10 mph	1500	0.15m	3.0m	45F	70%	10 mph	20%																																																																													
03	09:00	10:00	1.00	50000	400	10 mph	1500	0.15m	3.0m	45F	70%	10 mph	20%																																																																													
04	10:00	11:30	1.00	50000	400	10 mph	1500	0.15m	3.0m	45F	70%	10 mph	20%																																																																													

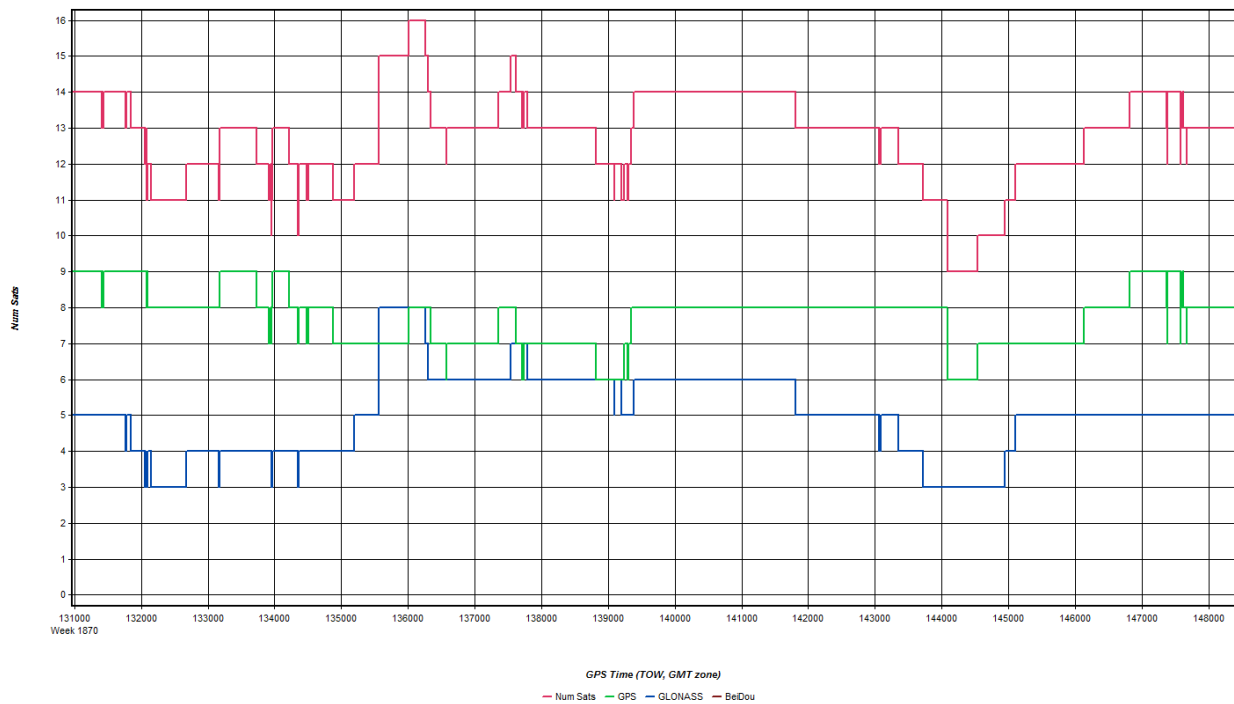
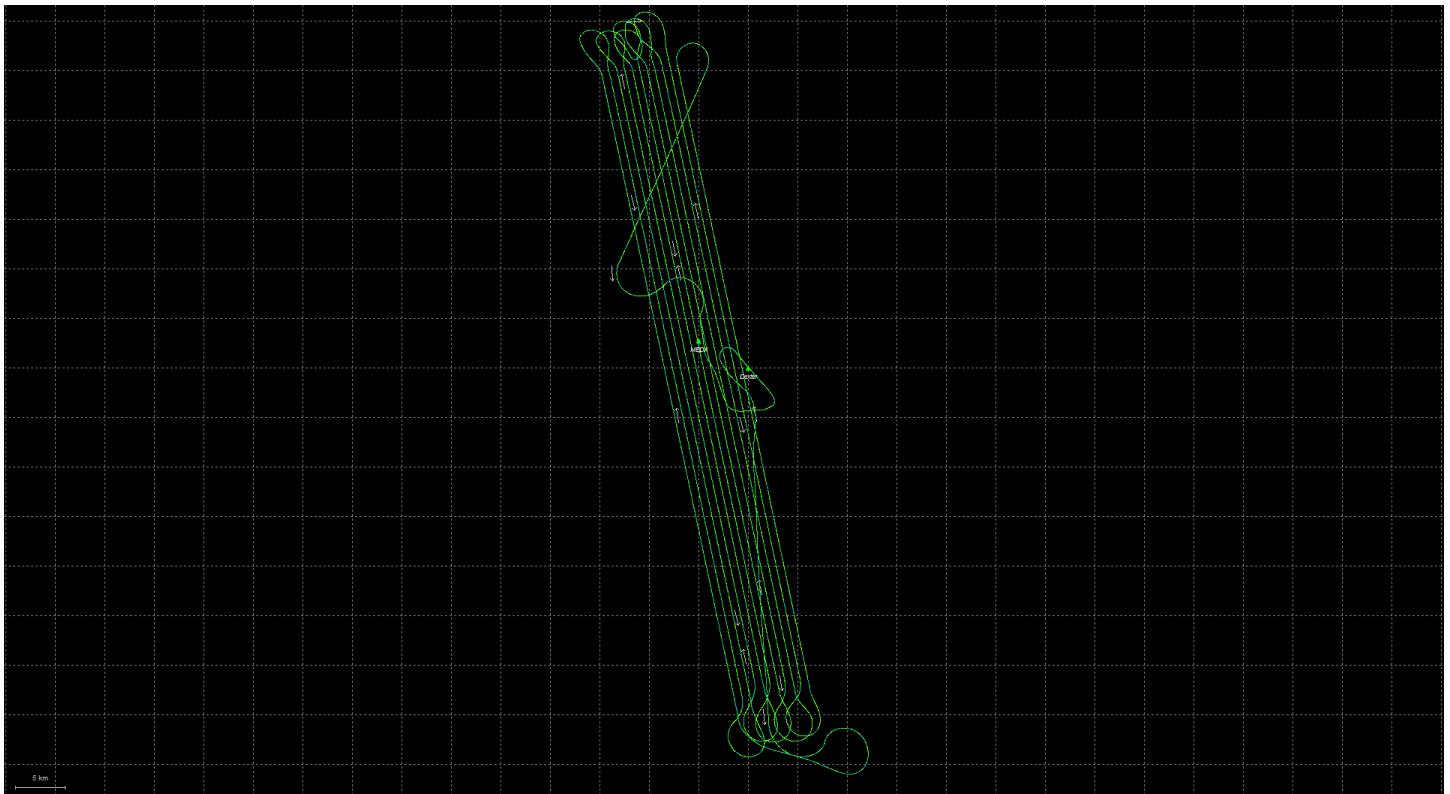
Base Station Log

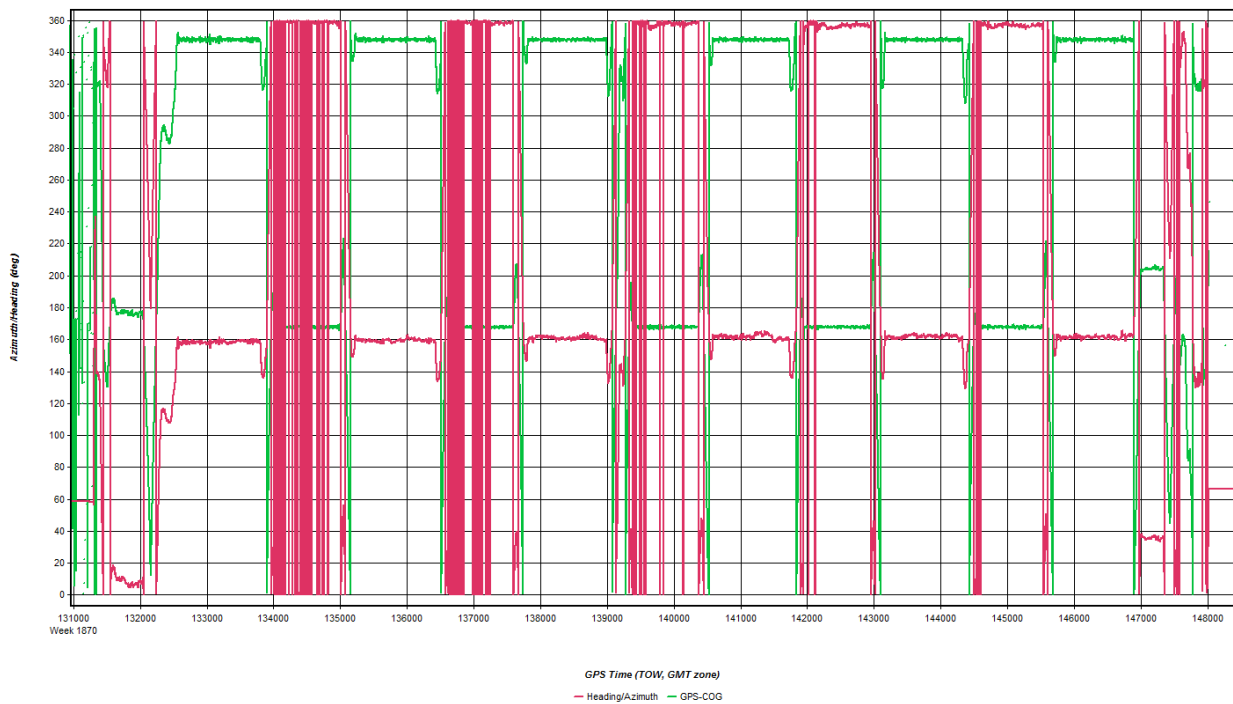
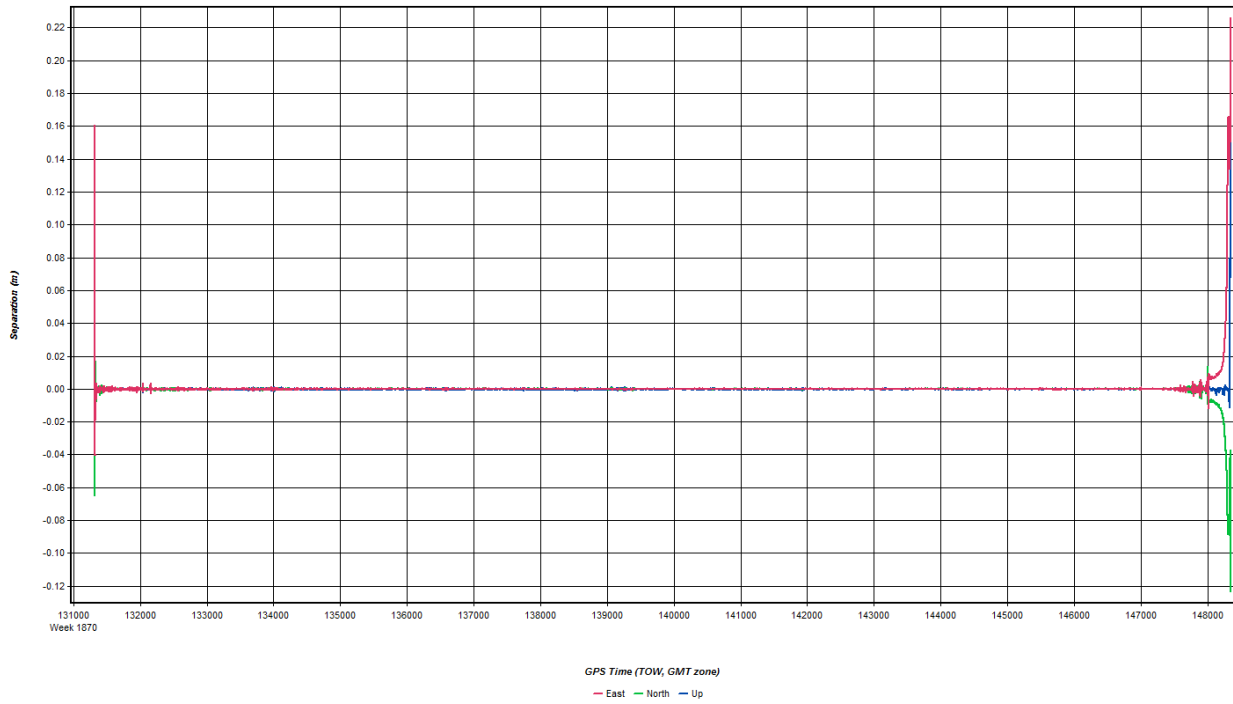
GPS SESSION FORM

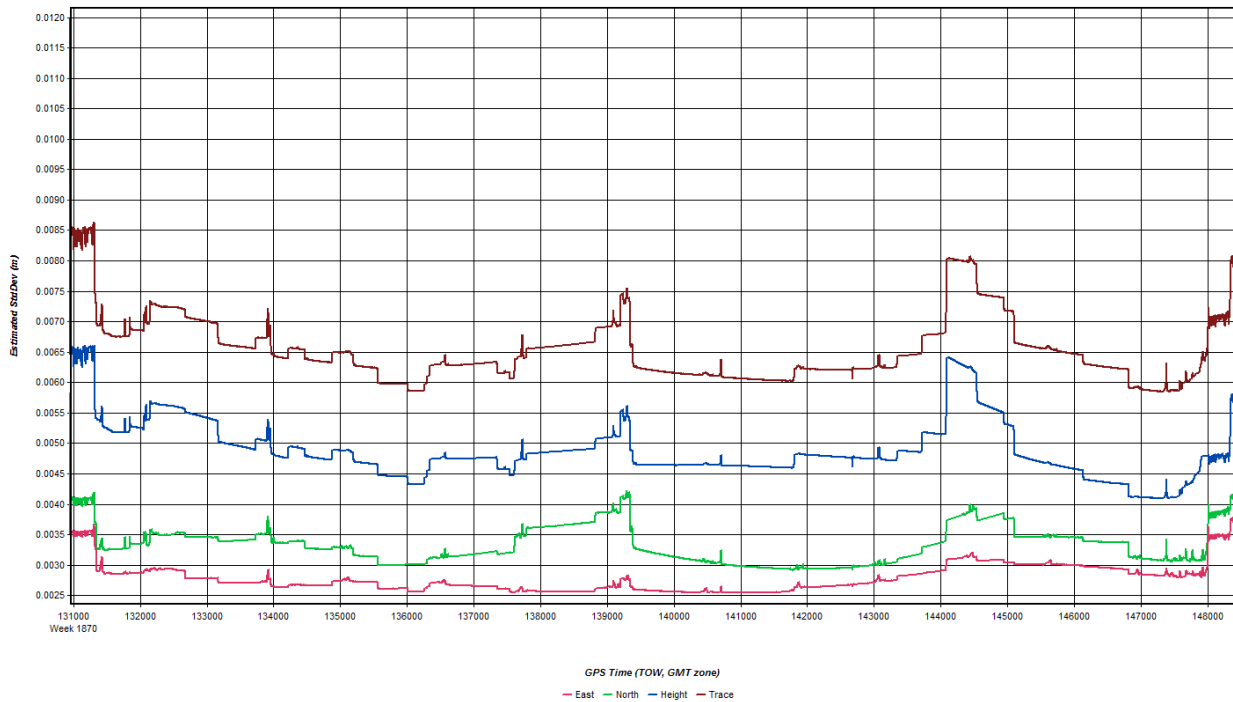
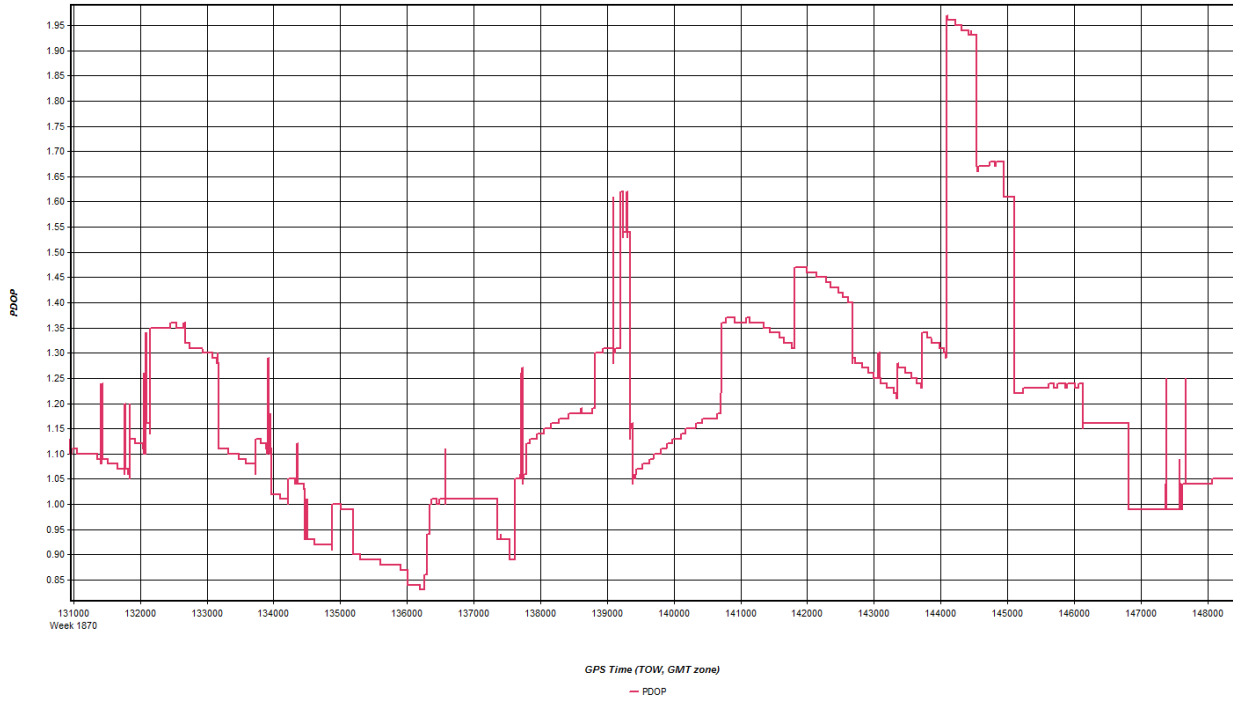
Contract # / TO #		Client / Project Name		Date	
		Quantum- Dexter, ME		8-Nov-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
Dexter_Nail			N/A		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
N/A		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19823121.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 2.050 2.050 2.050 2.050		1 2 3 AVG 2.050 2.050 2.050 2.050		<input type="radio"/> TRUE VERTICAL <input checked="" type="radio"/> ARP	
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 2.050 2.050 2.050 2.050		1 2 3 AVG 2.050 2.050 2.050 2.050		<input type="radio"/> TRUE VERTICAL <input checked="" type="radio"/> ARP	
Antenna Reference Point (diagram in survey report)					
(Antenna Reference Point = VR + VO + VE2)				ARP to Phase = 168mm	
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
8-Nov-2015		12:20		45 0 8.34538 (N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
9-Nov-2015		1:22		69 14 4.15451 (W)	
Monument is in good condition			Site Diagram/Picture		
Ground Photos					

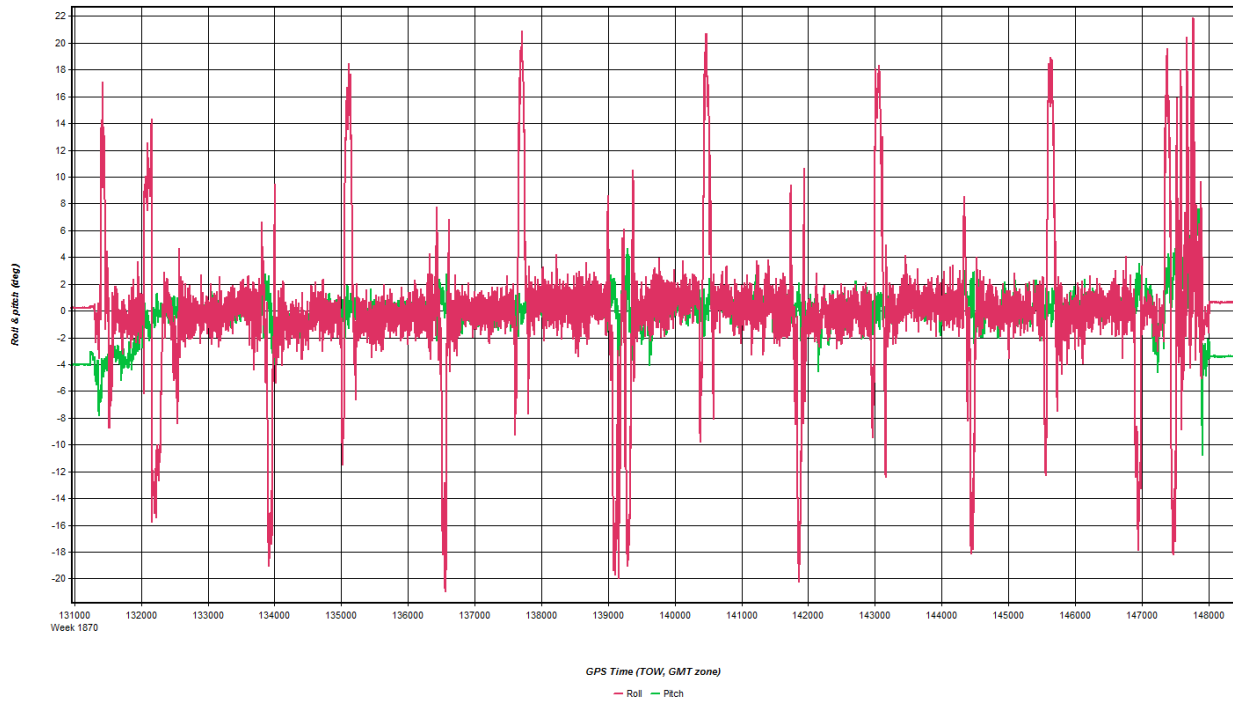


Nov 9, 2015-A (N799AC, SN7169)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: Dexter Name: Dexter Disabled
 File: S:\LIDAR\26258_MA_ME_QL1andQL2\RawData\PAR_TTT1\D

Coordinates
 Latitude: North 45 00 08.34552 Compute from PPP
 Longitude: West 69 14 04.15427 Enter Grid Values
 Ellipsoidal height: 134.080 m Enter MSL Height
 Datum: NAD83(2011) Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRMR10, NONE View STA File
 Antenna profile: TRMR10 Info
 Measured height: 2.050 m Measured to
 ARP to L1 offset: 0.128 m ARP
 Applied height: 2.178 m L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
2: MEDX Name: MEDX Disabled
File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\ND


Coordinates
Latitude: North 45 01 34.90790 Compute from PPP
Longitude: West 69 17 49.08401 Enter Grid Values
Ellipsoidal height: 141.203 m Enter MSL Height
Datum: NAD83(2011) 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

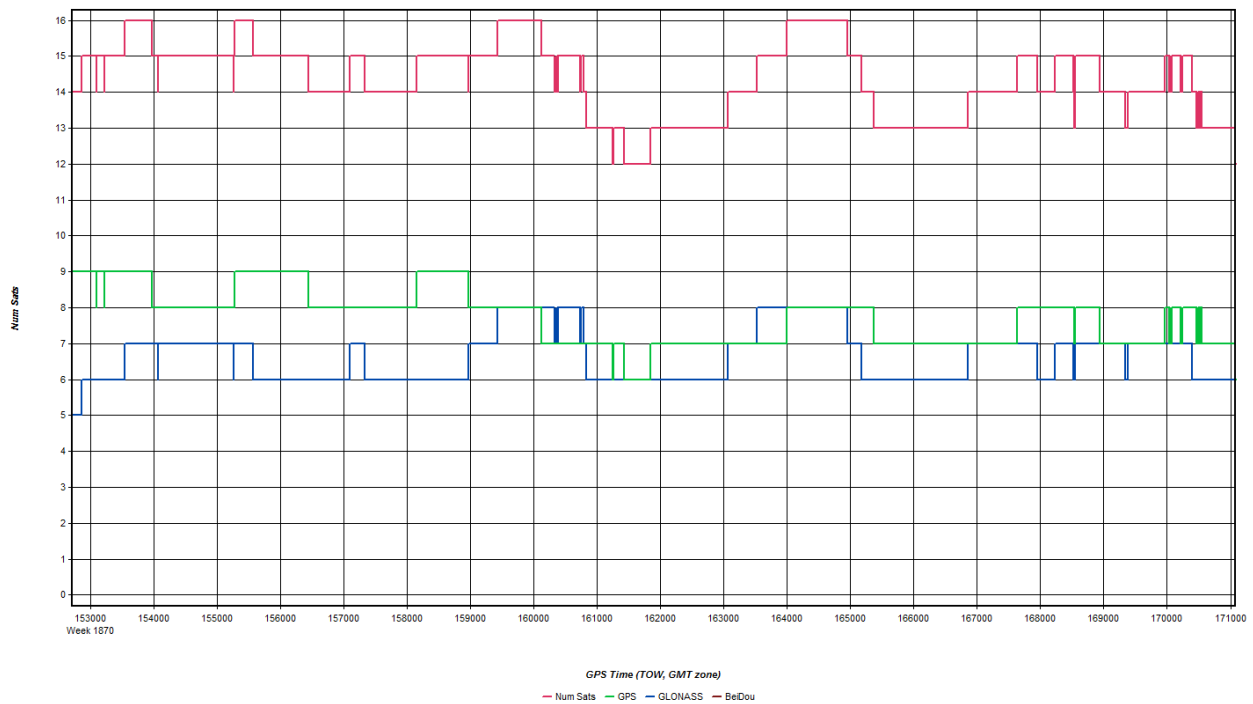
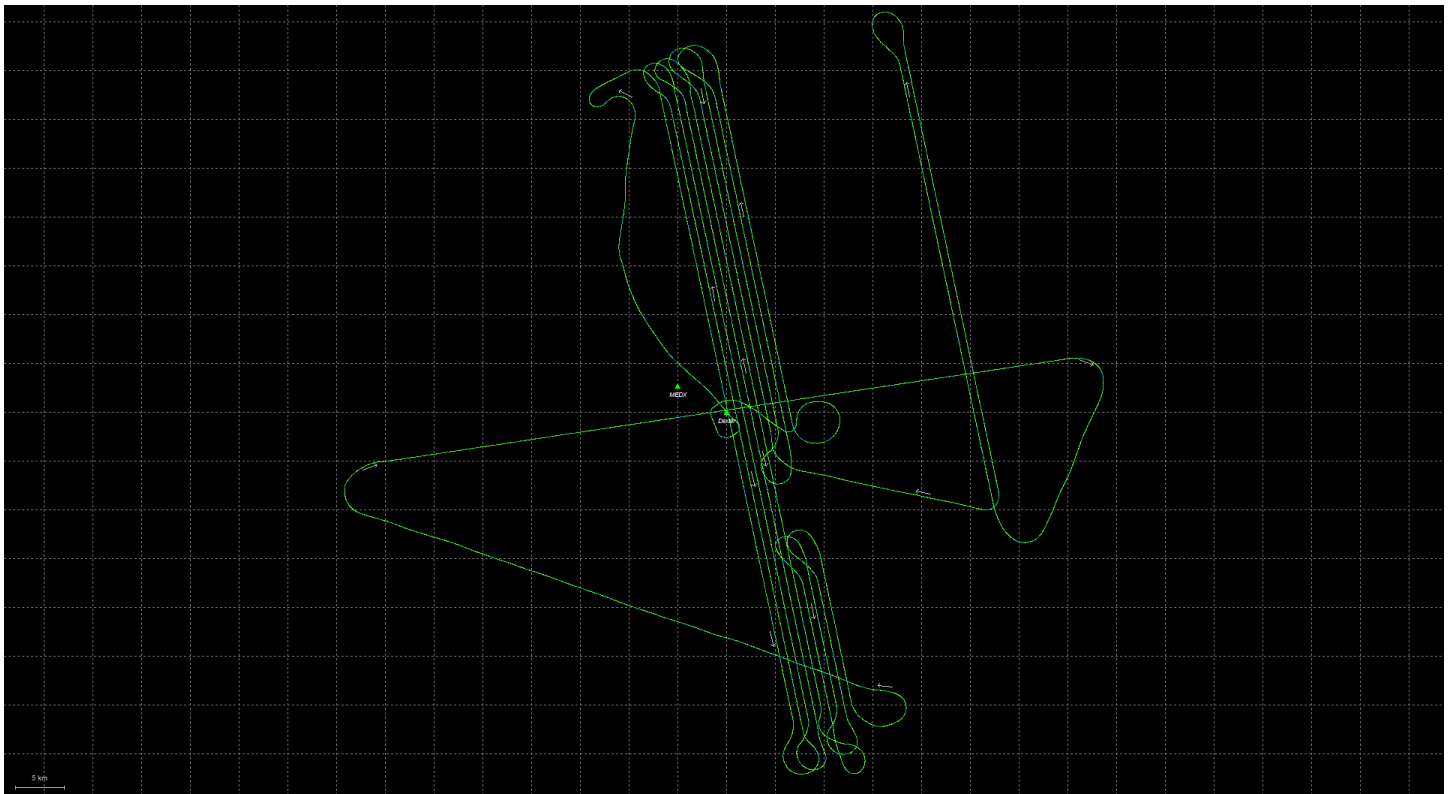
Base Station Log

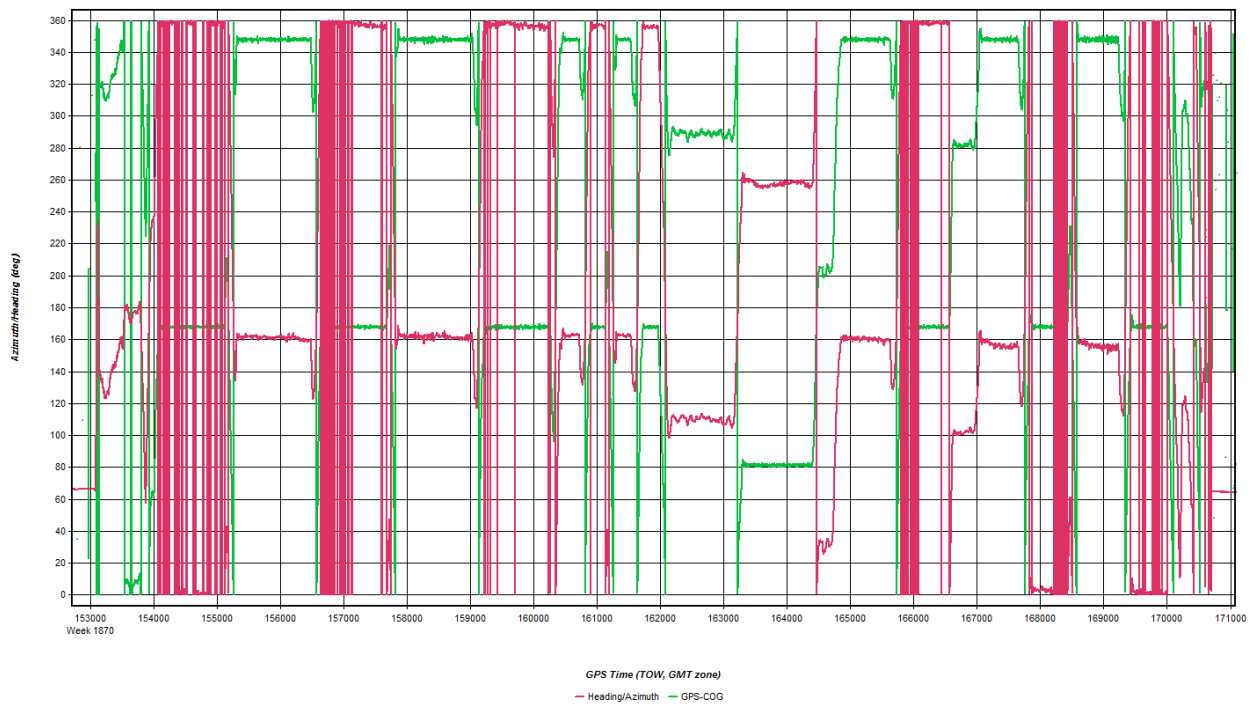
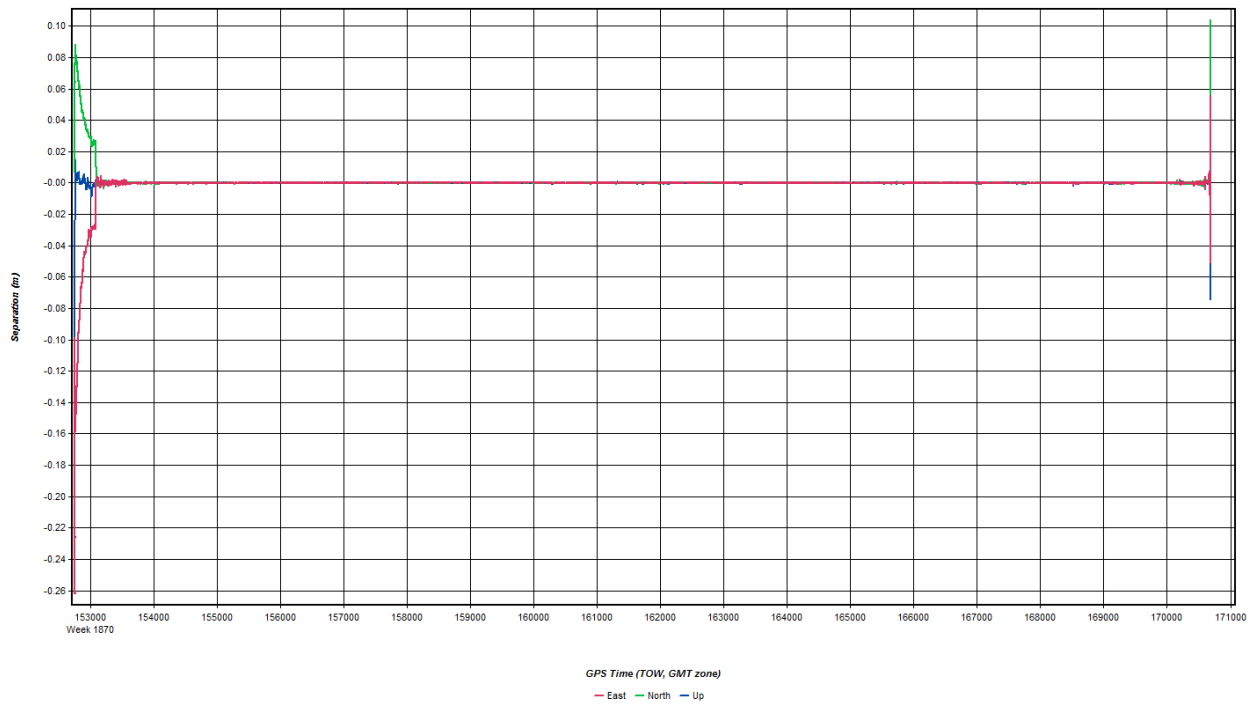
GPS SESSION FORM

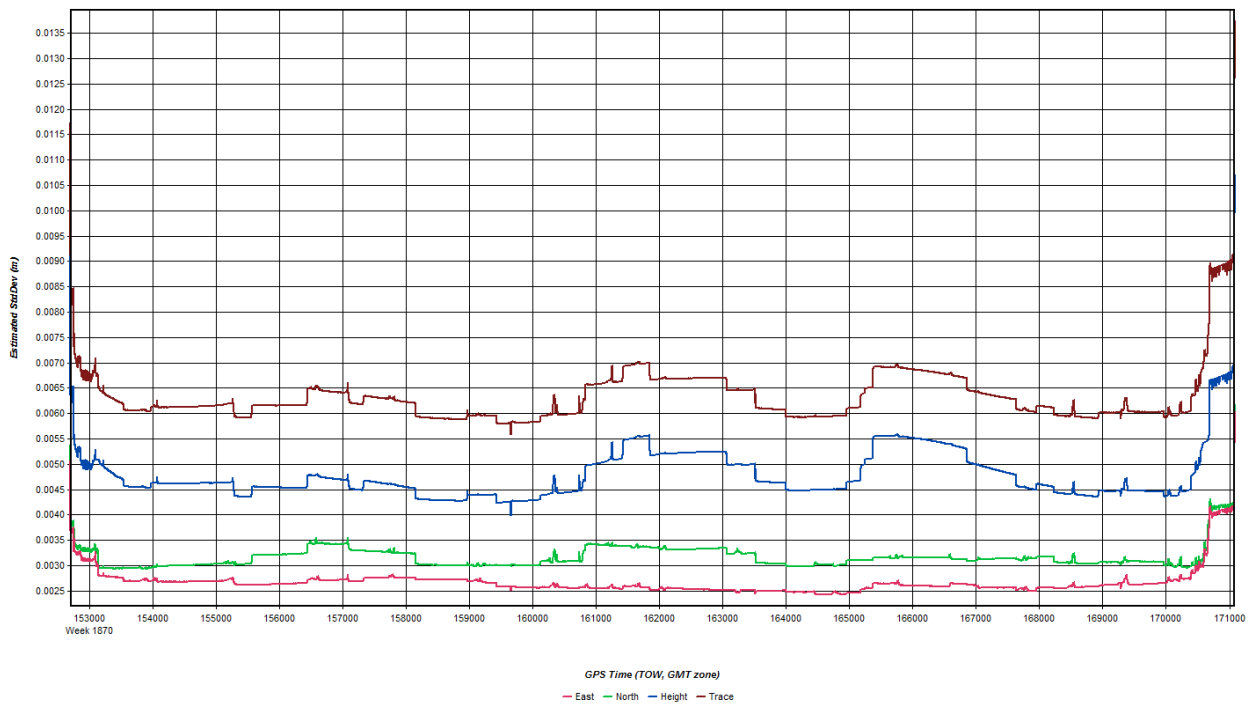
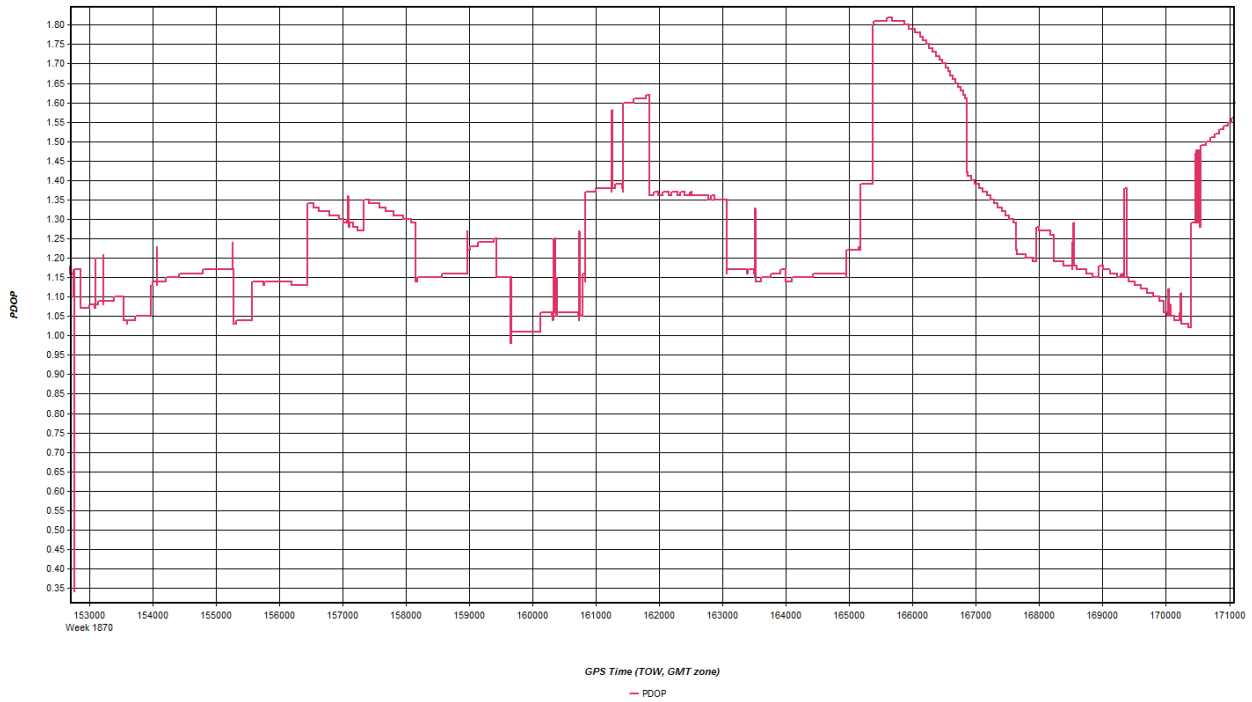
Contract # / TO #		Client / Project Name		Date	
		Quantum- Dexter, ME		9-Nov-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
Dexter_Nail			N/A		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
N/A		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19823135.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG		1 2 3 AVG		TRUE VERTICAL <input checked="" type="radio"/> ARP	
2.050 2.050 2.050 2.050		2.050 2.050 2.050 2.050			
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG		1 2 3 AVG		TRUE VERTICAL <input checked="" type="radio"/> ARP	
2.050 2.050 2.050 2.050		2.050 2.050 2.050 2.050			
Antenna Reference Point (diagram in survey report)					
(Antenna Reference Point = VR + VO + VE2) ARP to Phase = 168mm					
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
9-Nov-2015		11:57		45 0 8.34538 (N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
9-Nov-2015		17:21		69 14 4.15451 (W)	
Monument is in good condition			Site Diagram/Picture		
					
Ground Photos					

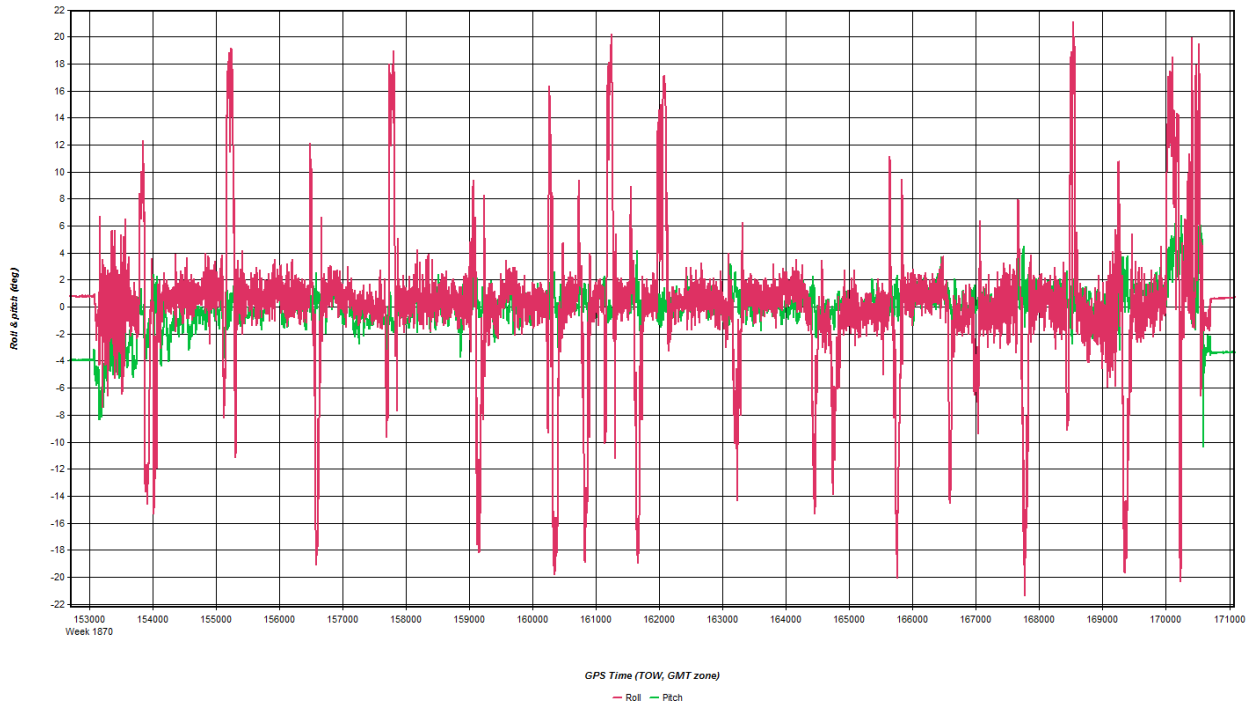


Nov 9, 2015-B (N799AC, SN7169)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: Dexter Name: Dexter Disabled
 File: S:\LIDAR\26258_MA_ME_QL1andQL2\RawData\PAR_TTT1\D

Coordinates
 Latitude: North 45 00 08.34552 Compute from PPP
 Longitude: West 69 14 04.15427 Enter Grid Values
 Ellipsoidal height: 134.080 m Enter MSL Height
 Datum: NAD83(2011) Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRMR10, NONE View STA File
 Antenna profile: TRMR10 Info
 Measured height: 2.050 m
 ARP to L1 offset: 0.128 m
 Applied height: 2.178 m
 Measured to
 ARP
 L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
2: MEDX Name: MEDX Disabled
File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\ND


Coordinates
Latitude: North 45 01 34.90790 Compute from PPP
Longitude: West 69 17 49.08401 Enter Grid Values
Ellipsoidal height: 141.203 m Enter MSL Height
Datum: NAD83(2011) 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

LIDAR Daily Log

 P.O. Box 72327 Denver, CO, IA 72327 780-2236 (MAPLE RECOGNIZABLE)				Project # : Project Description : Date(s) : Location :				State : City : Country :						
Point Cloud: RGD B DRIVE 01	Mission #: 1903016	Mission Name: DRIVE 01	Date: 20151102	Time: 18:40:00	Location: 41.1	Altitude: 10,445.0	Temperature: 10,445.0	Humidity: 10,445.0	Pressure: 10,445.0	Wind Speed: 10,445.0	Wind Dir: 10,445.0	Air Temp: 10,445.0	Dew Point: 10,445.0	Cloud Cover: 10,445.0
Sensor Information File Name: 20151102_102125														
Start: 18:40:00	Stop: 22:02:00	Scan Rate: 41.1	Pulse Rate: 10,000	Range: 150.0	Beam Angle: 1.0	Average Height: 10,000	Minimum Height: 10,000	Maximum Height: 10,000	Mean Slope: 10,000	Standard Deviation: 10,000	Minimum Slope: 10,000	Maximum Slope: 10,000	Sensor Check Status: 0	Cloud Cover: 0
Sensor Check Status: 0														
Sensor Check Error: 0														
Sensor Check Error Code: 0														

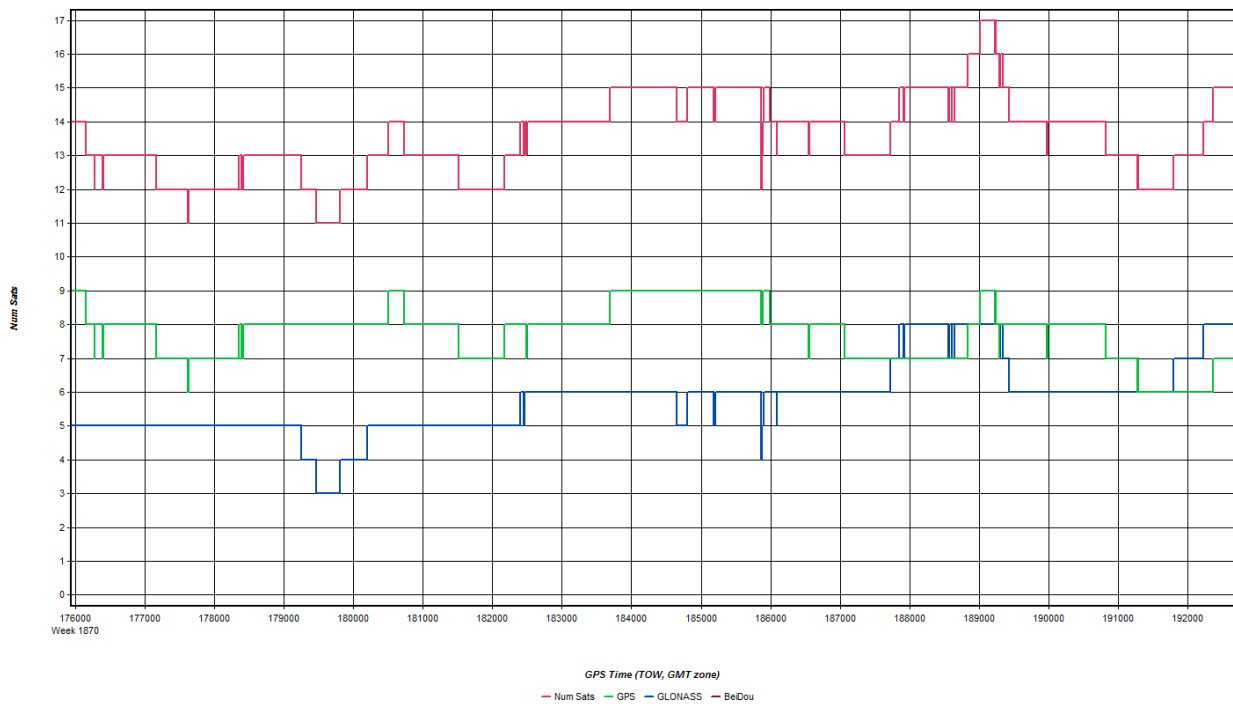
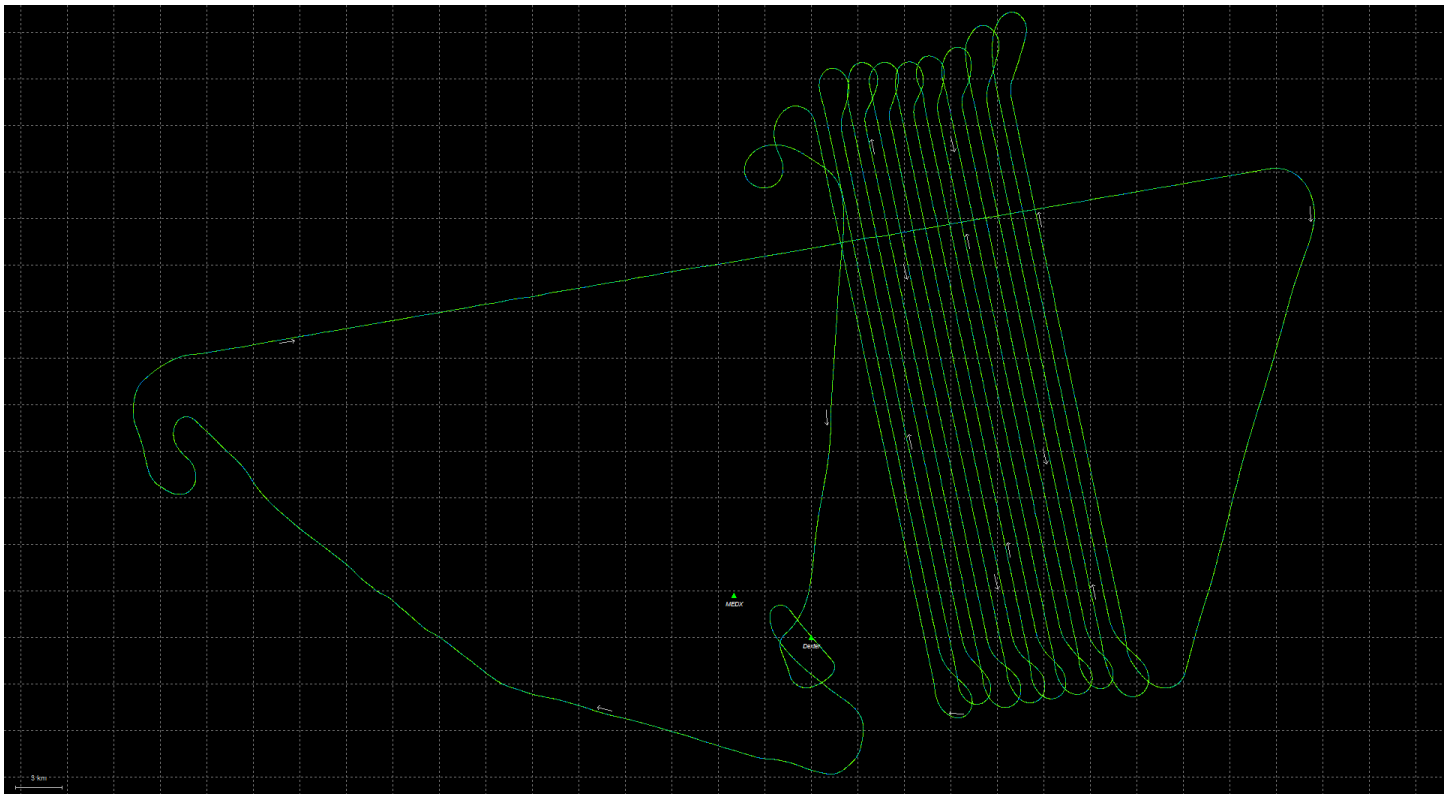
Base Station Log

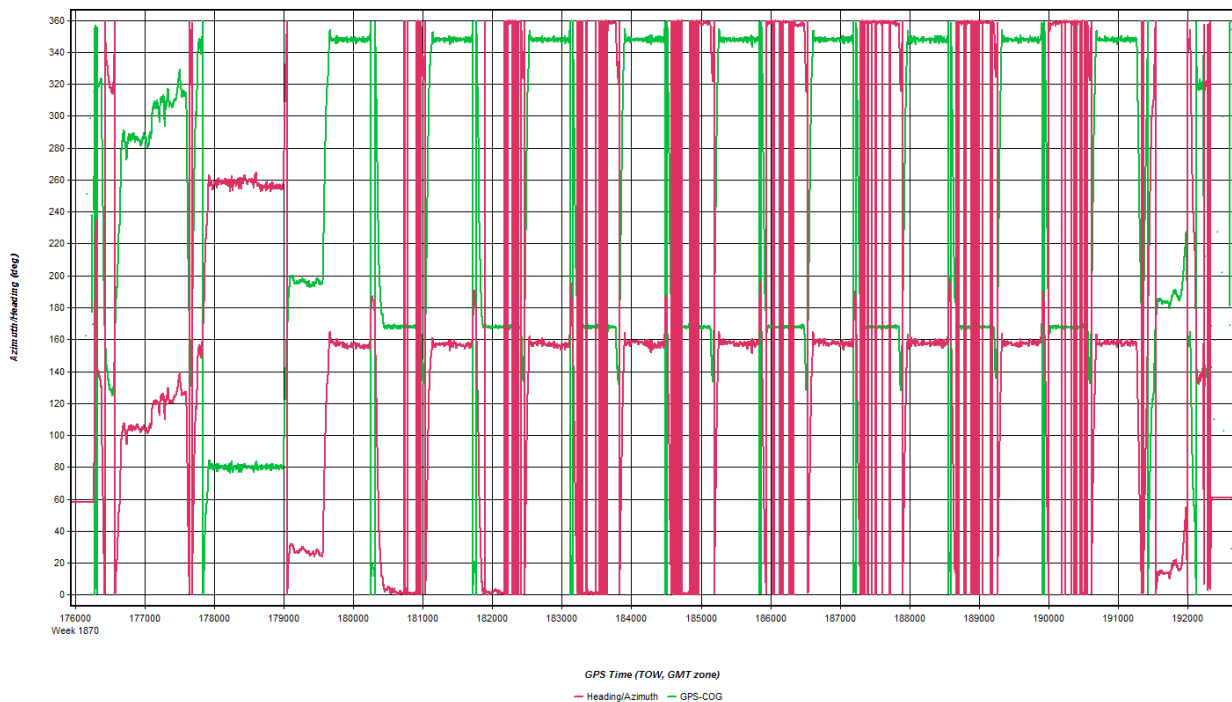
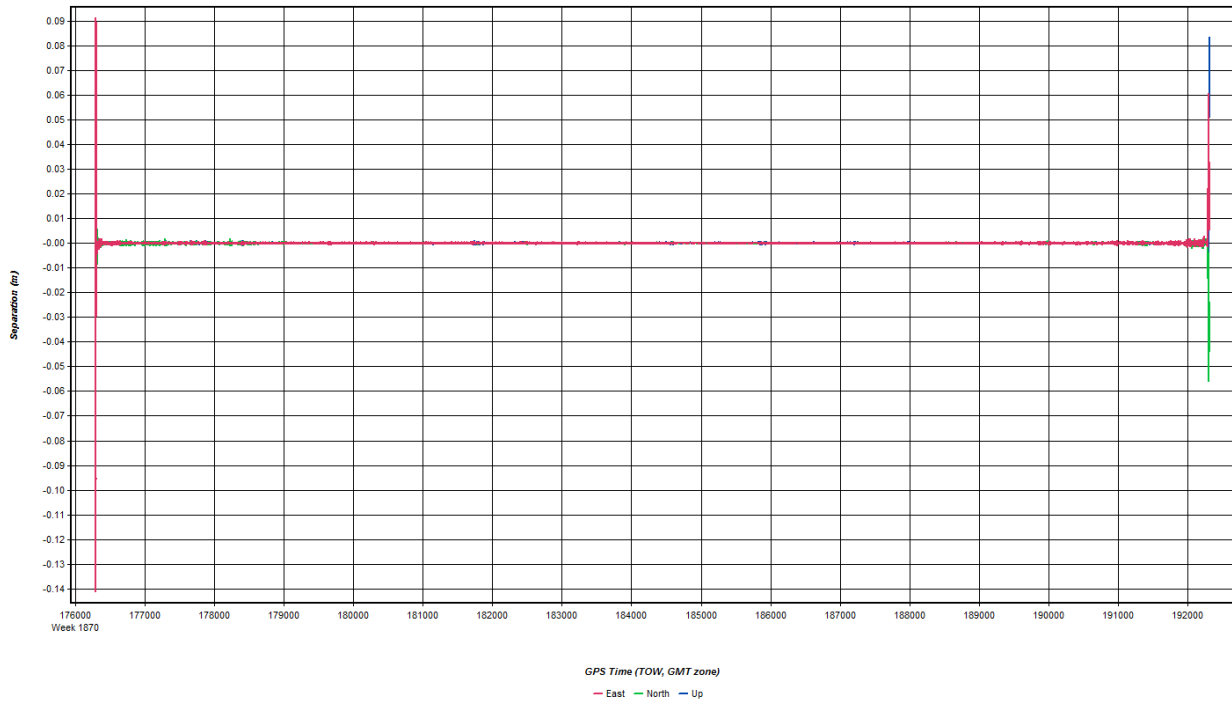
GPS SESSION FORM

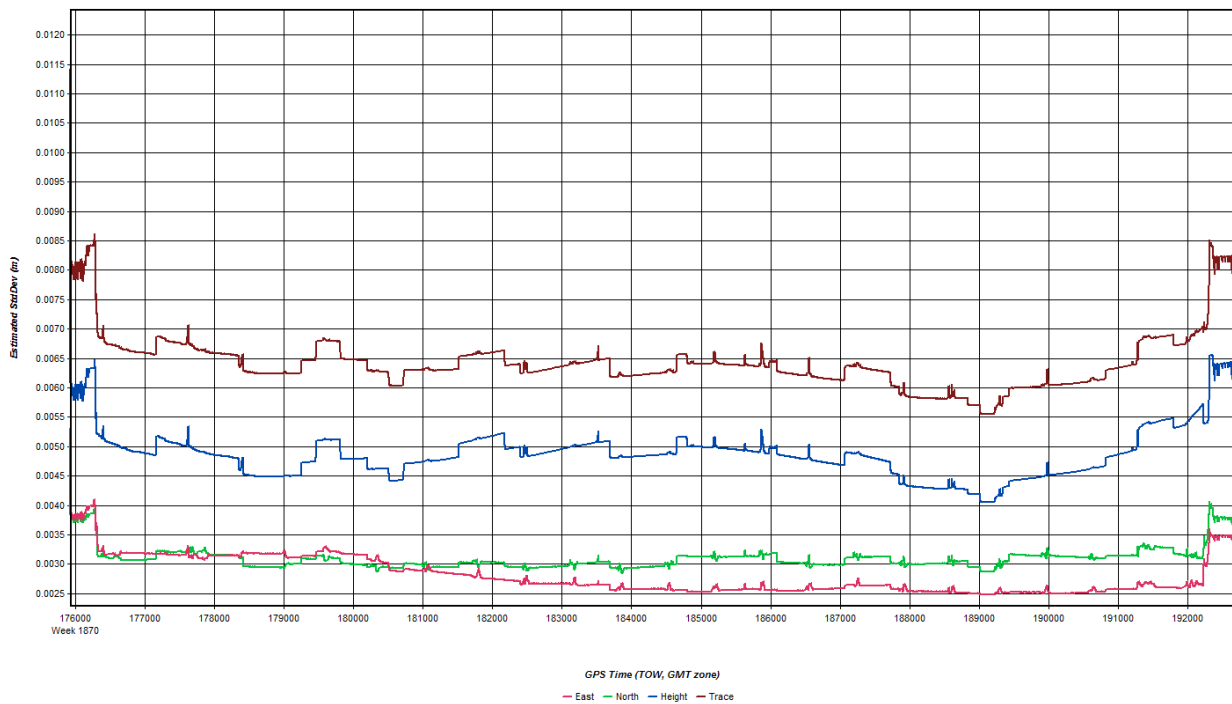
Contract # / TO #		Client / Project Name		Date	
		Quantum- Dexter, ME		9-Nov-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
Dexter_Nail			N/A		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
N/A		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19823136.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 2.050 2.050 2.050 2.050				TRUE VERTICAL <input checked="" type="radio"/> ARP	
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 2.050 2.050 2.050 2.050				TRUE VERTICAL <input checked="" type="radio"/> ARP	
Antenna Reference Point (diagram in survey report)					
(Antenna Reference Point = VR + VO + VE2) ARP to Phase = 168mm					
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
9-Nov-2015		17:57		45 0 8.34538 (N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
9-Nov-2015		23:40		69 14 4.15451 (W)	
Monument is in good condition			Site Diagram/Picture		
Ground Photos					

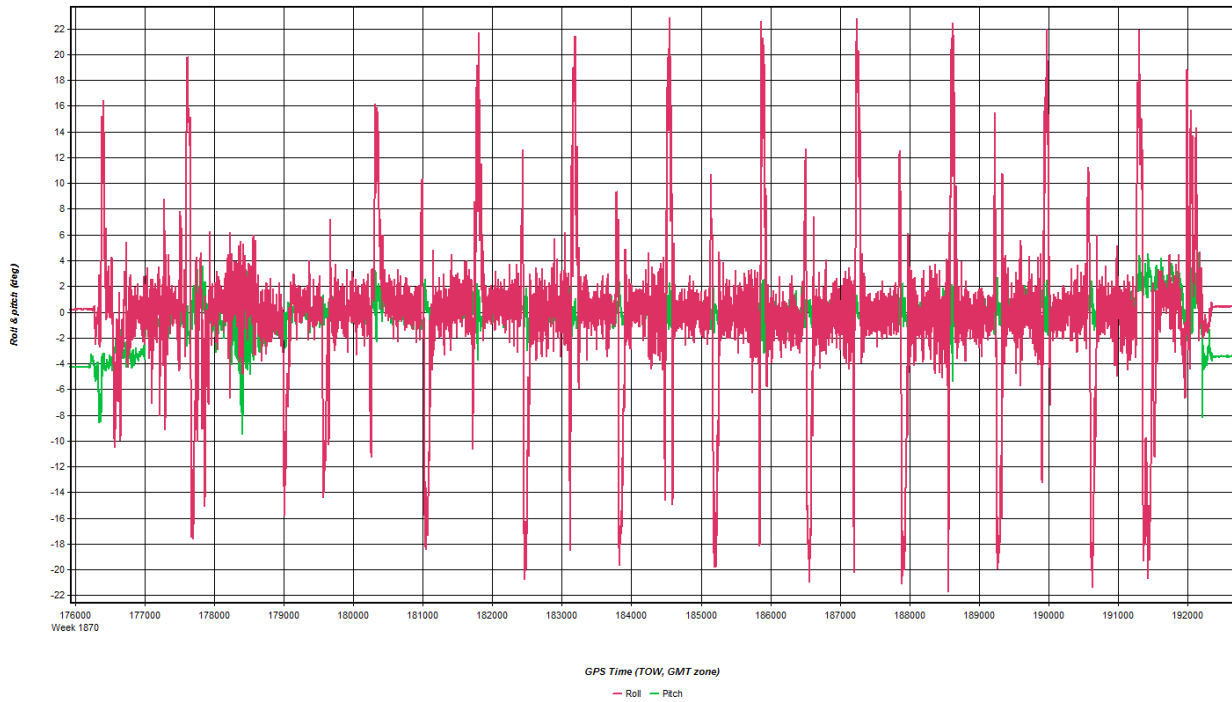


Nov 10, 2015-A (N799AC, SN7169)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: Dexter Name: Dexter Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\D

Coordinates
 Latitude: North 45 00 08.34552 Compute from PPP
 Longitude: West 69 14 04.15427 Enter Grid Values
 Ellipsoidal height: 134.080 m Enter MSL Height
 Datum: NAD83(2011) Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRMR10, NONE View STA File
 Antenna profile: TRMR10 Info
 Measured height: 2.050 m Measured to
 ARP to L1 offset: 0.128 m ARP
 Applied height: 2.178 m L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
2: MEDX Name: MEDX Disabled
File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\ND

Coordinates
Latitude: North 45 01 34.90790 Compute from PPP
Longitude: West 69 17 49.08401 Enter Grid Values
Ellipsoidal height: 141.203 m Enter MSL Height
Datum: NAD83(2011) 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 Details		Mission #		Flight Dates		Operator		Weather		GPS / IMU		Cloud Cover	
Project Name	PAR-LIC	Mission #	20151110_004837	Flight Dates	11/02/15	Operator	Operator	Weather	Cloud Cover	GPS Accuracy	IMU Accuracy	Cloud Cover	Cloud Cover
Project Description	PAR-LIC	Start Time	08:00:00	End Time	08:30:00	Start Date	11/02/15	End Date	11/02/15	Horizontal Accuracy	Vertical Accuracy	Cloud Cover	Cloud Cover
Project Location	PAR-LIC	Start Altitude	1000	End Altitude	1000	Start Time	08:00:00	End Time	08:30:00	Horizontal Accuracy	Vertical Accuracy	Cloud Cover	Cloud Cover
Flight Line	01	Start	08:00:00	End	08:05:00	Start Altitude	1000	End Altitude	1000	Horizontal Accuracy	Vertical Accuracy	Cloud Cover	Cloud Cover
Flight Line	02	Start	08:05:00	End	08:10:00	Start Altitude	1000	End Altitude	1000	Horizontal Accuracy	Vertical Accuracy	Cloud Cover	Cloud Cover
Flight Line	03	Start	08:10:00	End	08:15:00	Start Altitude	1000	End Altitude	1000	Horizontal Accuracy	Vertical Accuracy	Cloud Cover	Cloud Cover
Flight Line	04	Start	08:15:00	End	08:20:00	Start Altitude	1000	End Altitude	1000	Horizontal Accuracy	Vertical Accuracy	Cloud Cover	Cloud Cover
Flight Line	05	Start	08:20:00	End	08:25:00	Start Altitude	1000	End Altitude	1000	Horizontal Accuracy	Vertical Accuracy	Cloud Cover	Cloud Cover
Flight Line	06	Start	08:25:00	End	08:30:00	Start Altitude	1000	End Altitude	1000	Horizontal Accuracy	Vertical Accuracy	Cloud Cover	Cloud Cover

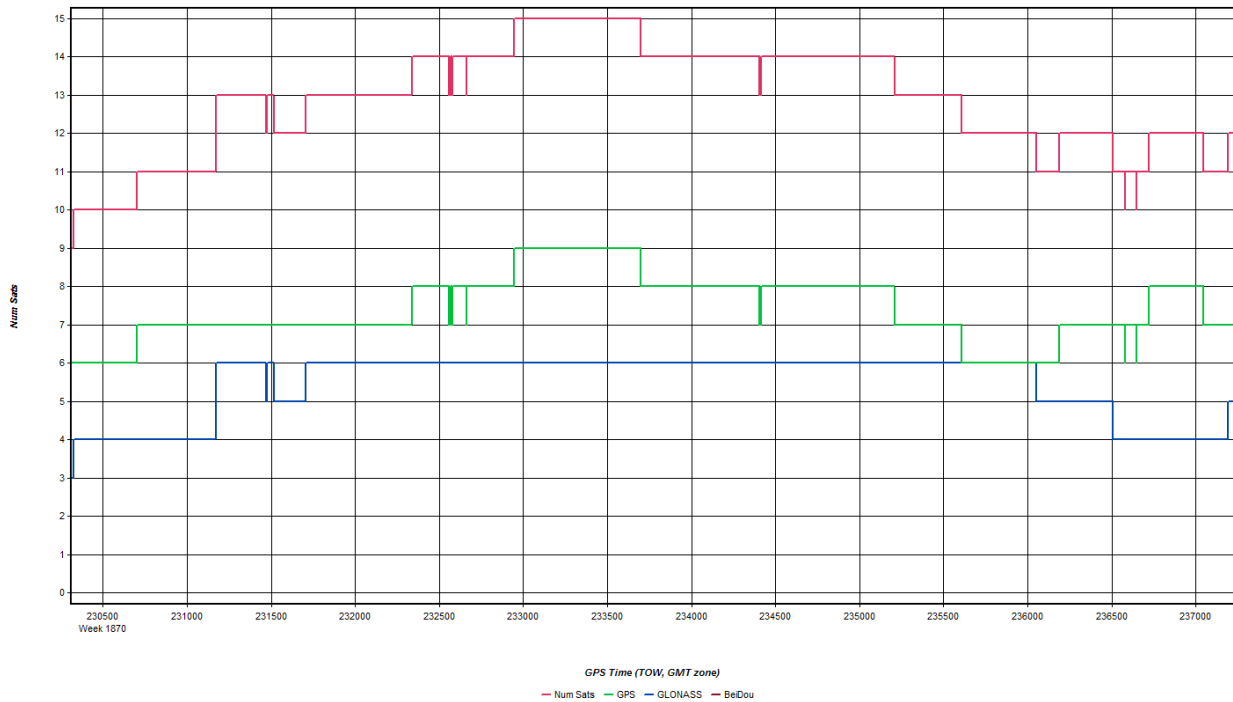
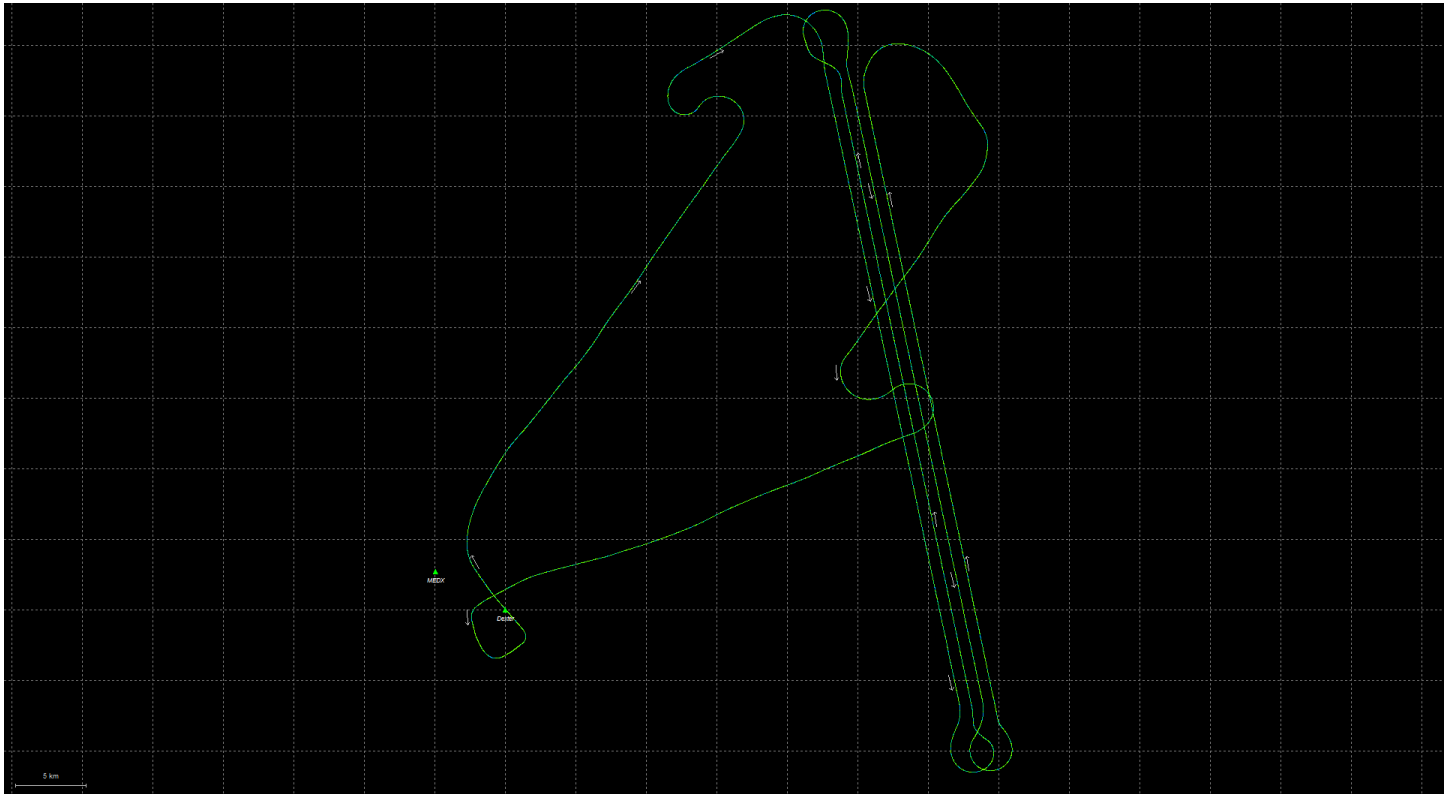
Base Station Log

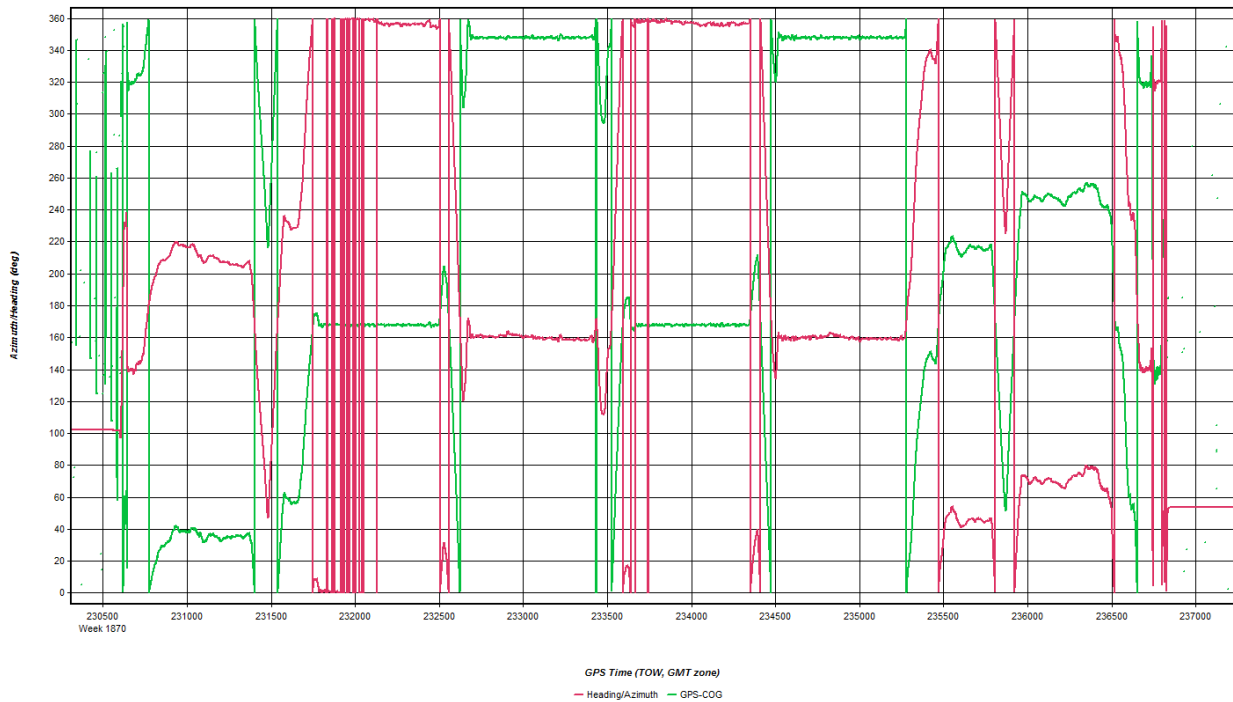
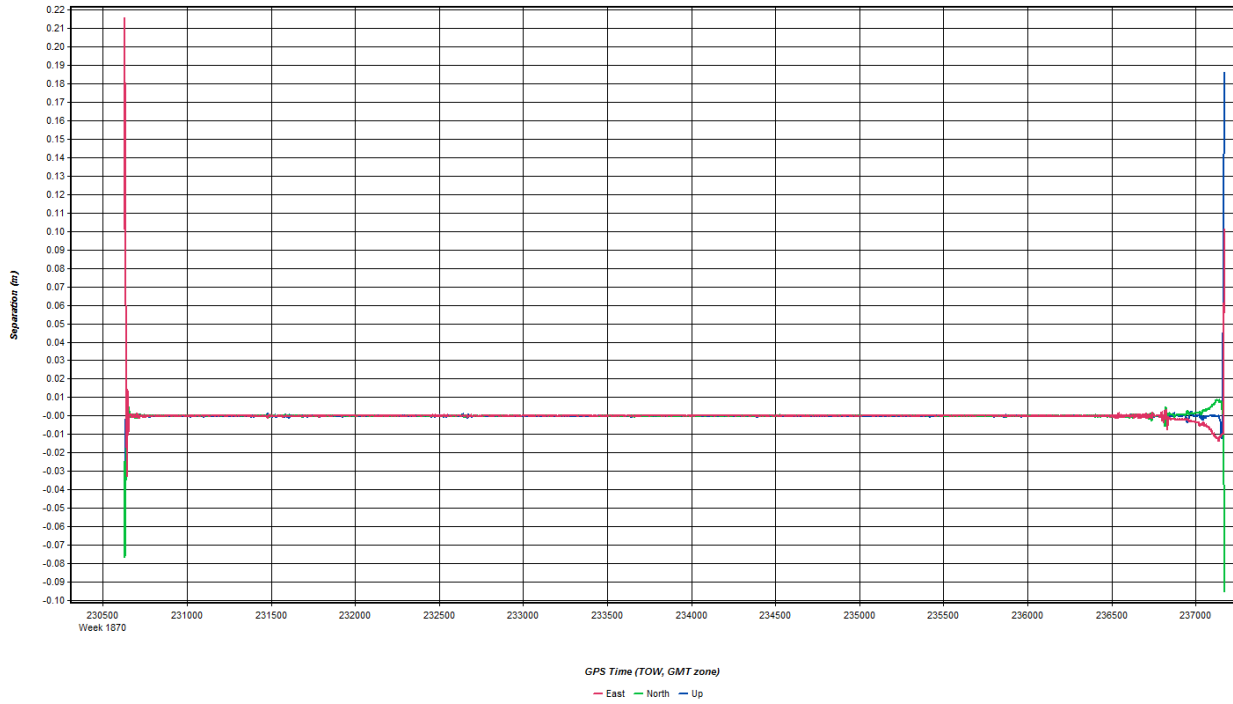
GPS SESSION FORM

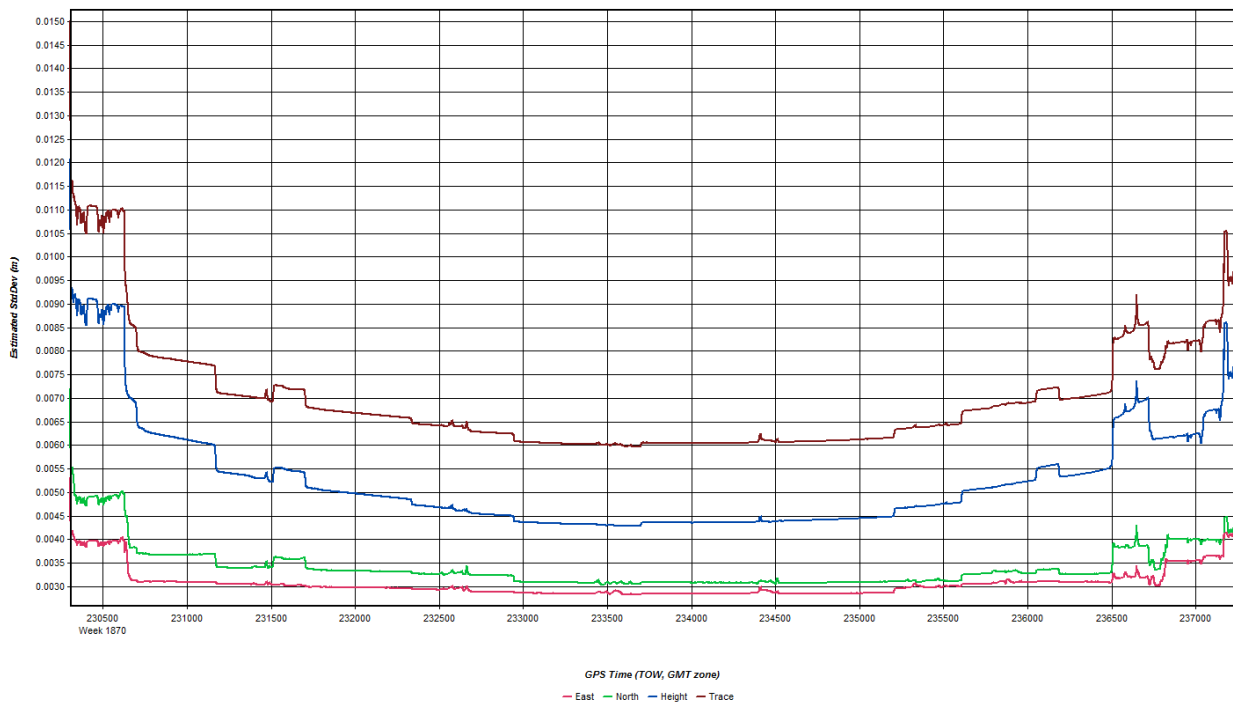
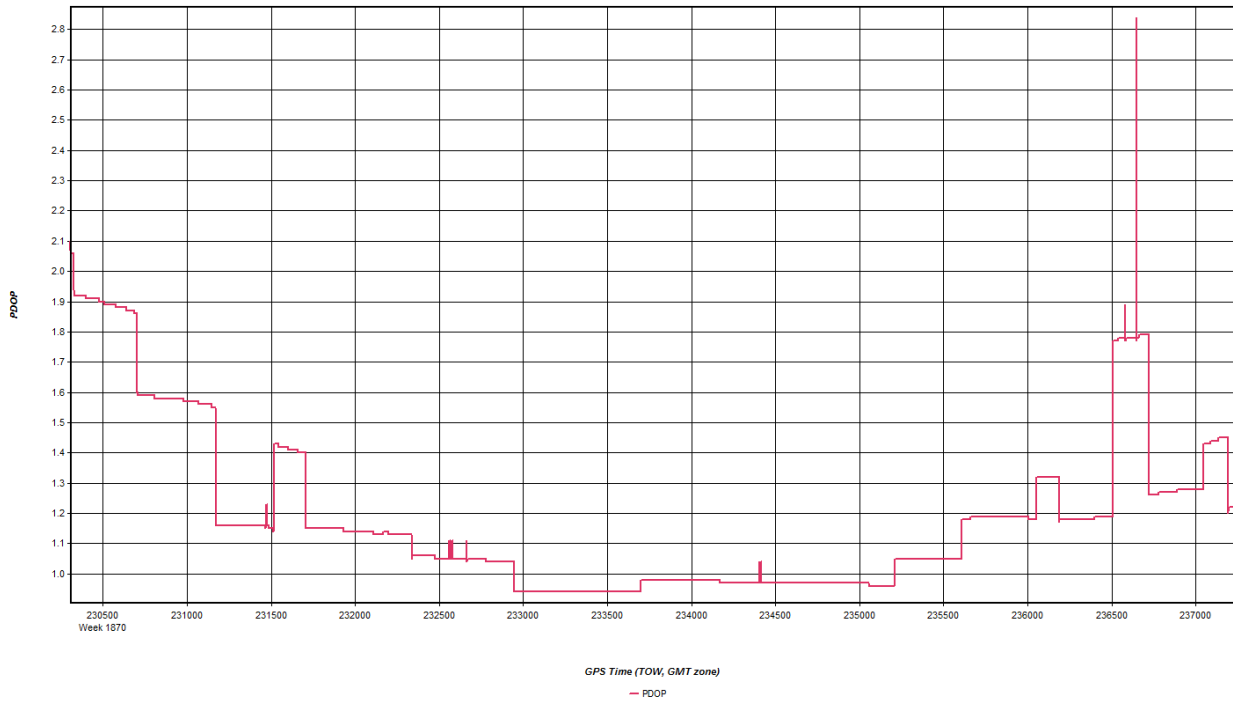
Contract # / TO #		Client / Project Name		Date	
		Quantum- Dexter, ME		9-Nov-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
Dexter_Nail			N/A		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
N/A		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19823146.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 		1 2 3 AVG 		<input type="radio"/> TRUE VERTICAL <input checked="" type="radio"/> ARP	
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG 		1 2 3 AVG 		<input type="radio"/> TRUE VERTICAL <input checked="" type="radio"/> ARP	
Antenna Reference Point (diagram in survey report)					
(Antenna Reference Point = VR + VO + VE2) ARP to Phase = 168mm					
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
10-Nov-2015		0:34		45 0 8.34538 (N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
10-Nov-2015		5:41		69 14 4.15451 (W)	
Monument is in good condition			Site Diagram\Picture		
					
Ground Photos					

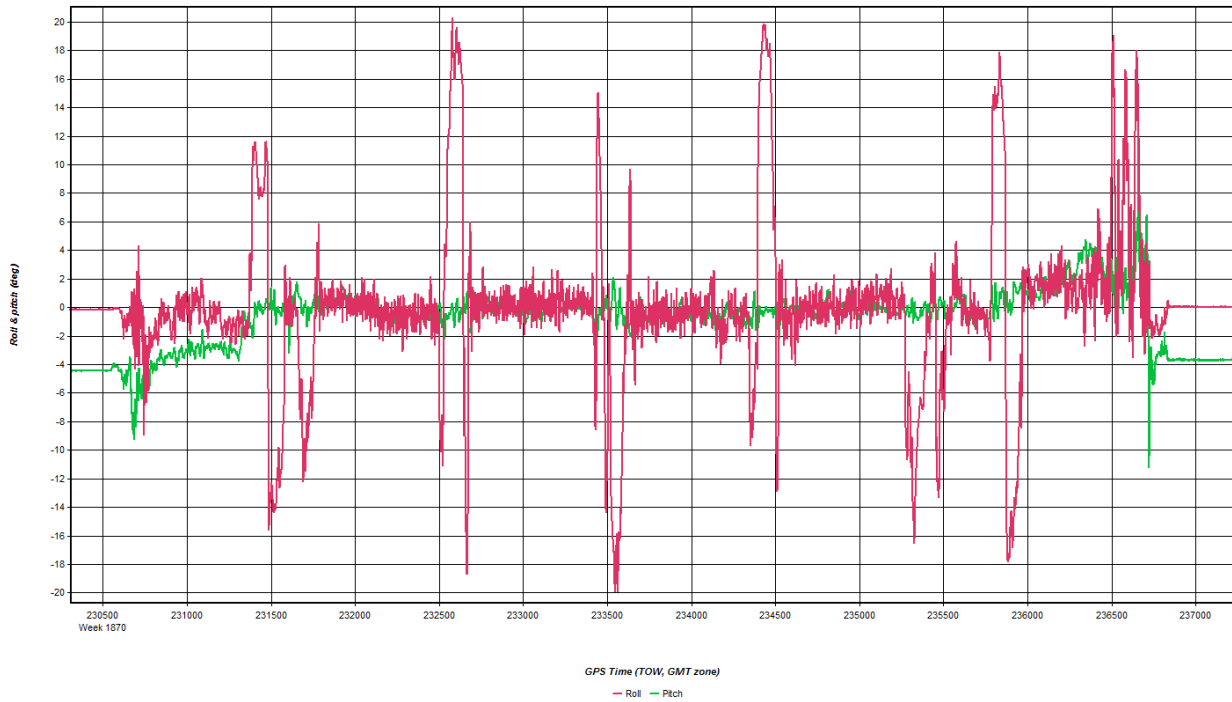


Nov 10, 2015-B (N799AC, SN7169)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: Dexter Name: Dexter Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\D

Coordinates
 Latitude: North 45 00 08.34552 Compute from PPP
 Longitude: West 69 14 04.15427 Enter Grid Values
 Ellipsoidal height: 134.080 m Enter MSL Height
 Datum: NAD83(2011) Datum Options
 Select From Favorites Add To Favorites Use Average Position

Antenna Height
 From station file: TRMR10, NONE View STA File
 Antenna profile: TRMR10 Info
 Measured height: 2.050 m Measured to: ARP
 ARP to L1 offset: 0.128 m L1 Phase Centre
 Applied height: 2.178 m Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
2: MEDX Name: MEDX Disabled
File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\PAR_TTT1\ND

Coordinates
Latitude: North 45 01 34.90790 Compute from PPP
Longitude: West 69 17 49.08401 Enter Grid Values
Ellipsoidal height: 141.203 m Enter MSL Height
Datum: NAD83(2011) 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

PAR LLC Aerial LiDAR Systems		Flight Date (GGG)		Flight Date (MM/DD)		Mission ID		Mission Name		Mission Description		Mission Location		Mission Altitude		Mission Duration		Mission Status		Mission Comments	
Project	Client	Operator	Pilot	Time	Altitude	Speed	Altitude	Altitude	Altitude	Altitude	Altitude	Altitude	Altitude	Altitude	Altitude	Altitude	Altitude	Altitude	Altitude	Altitude	Altitude
11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015
11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015	11/06/2015

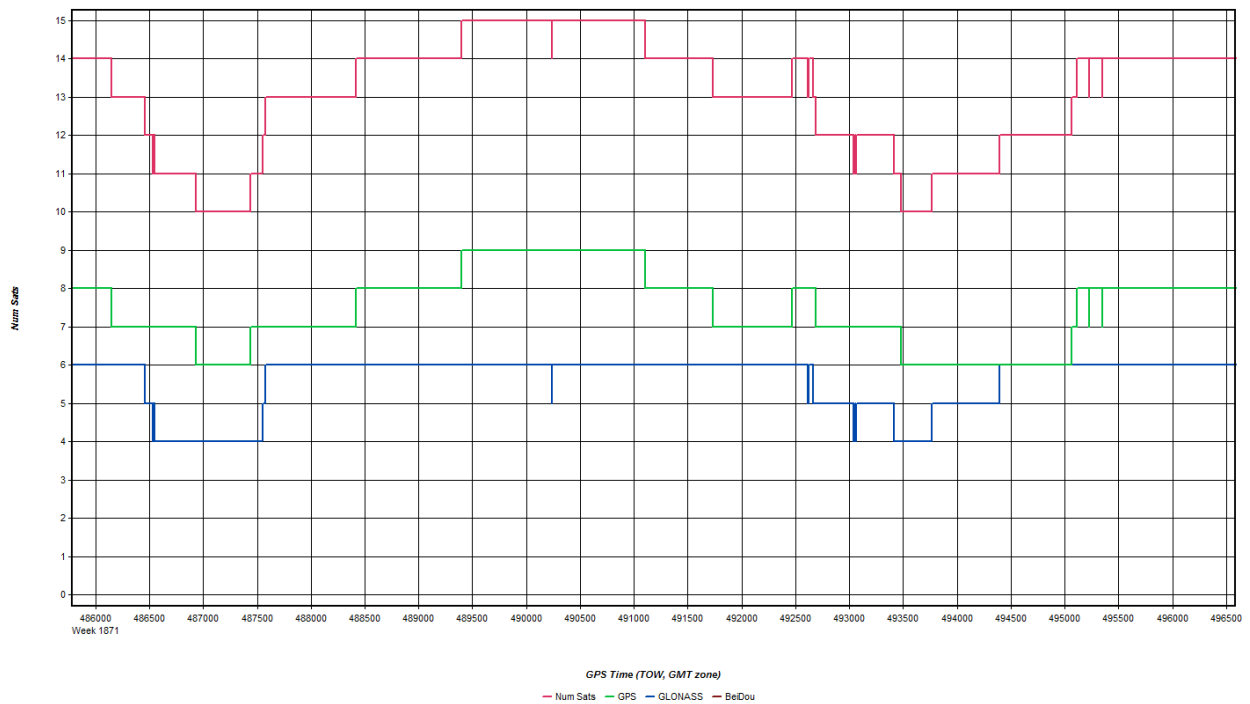
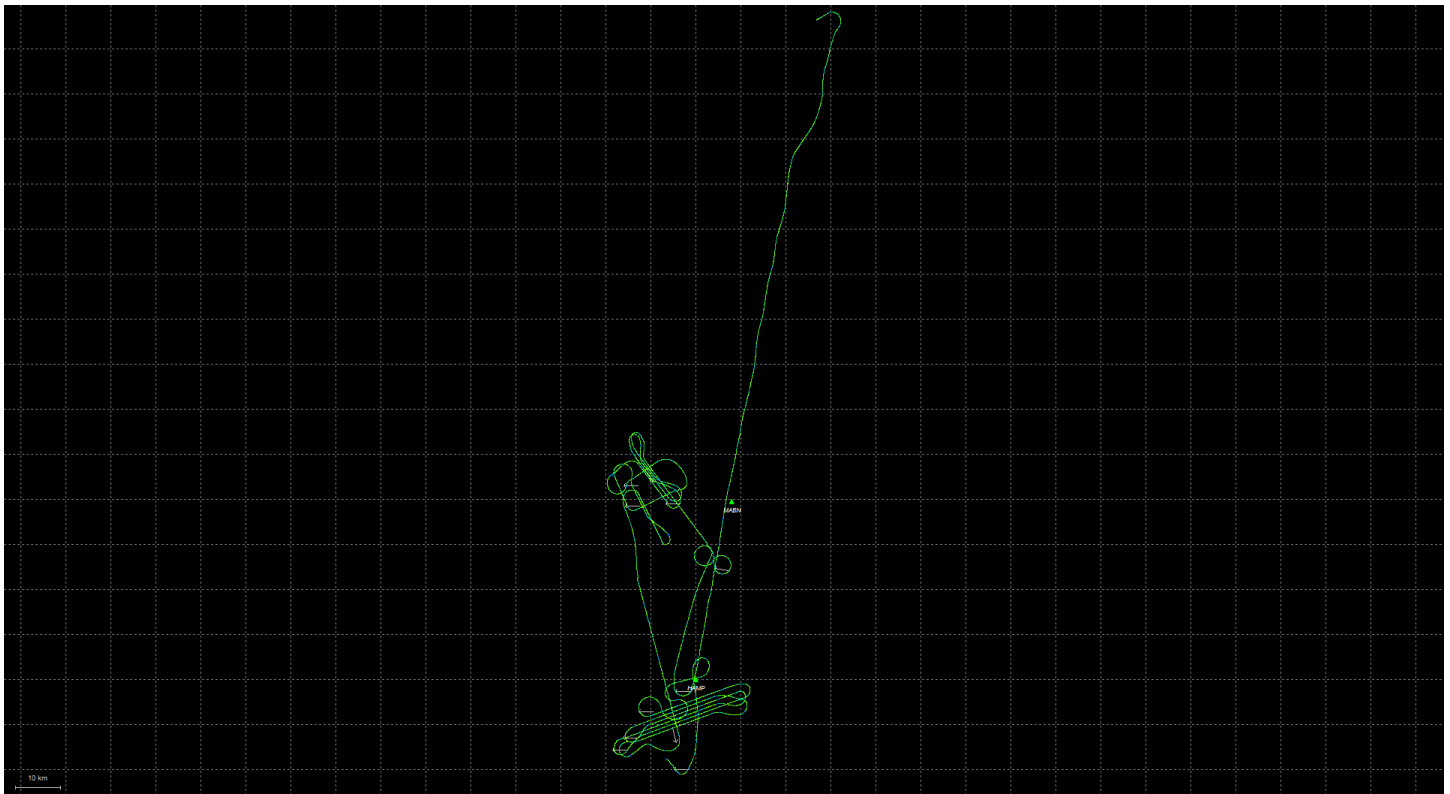
Base Station Log

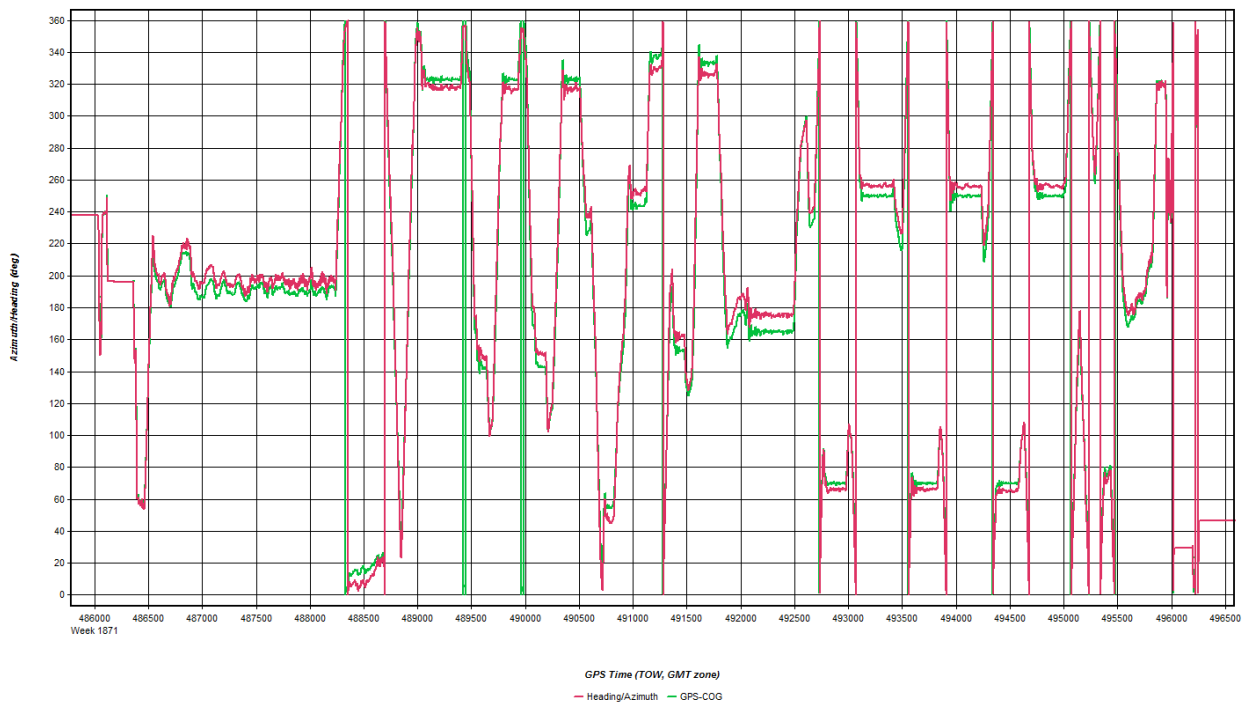
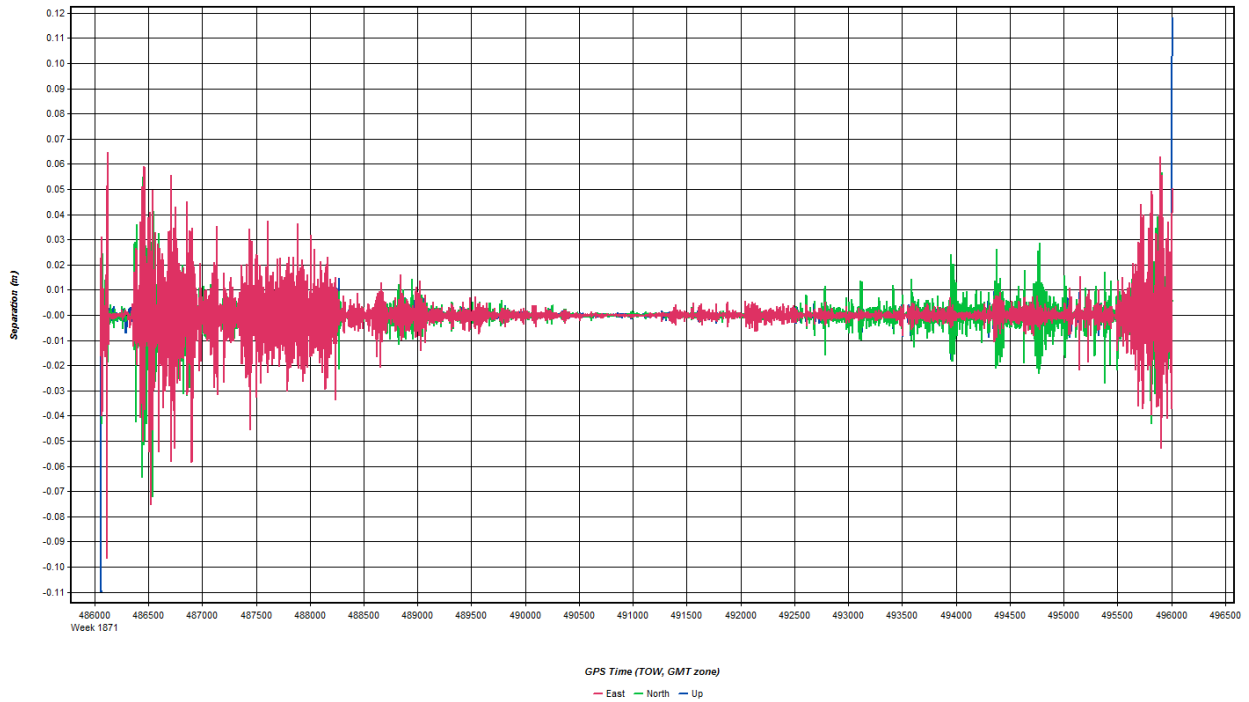
GPS SESSION FORM

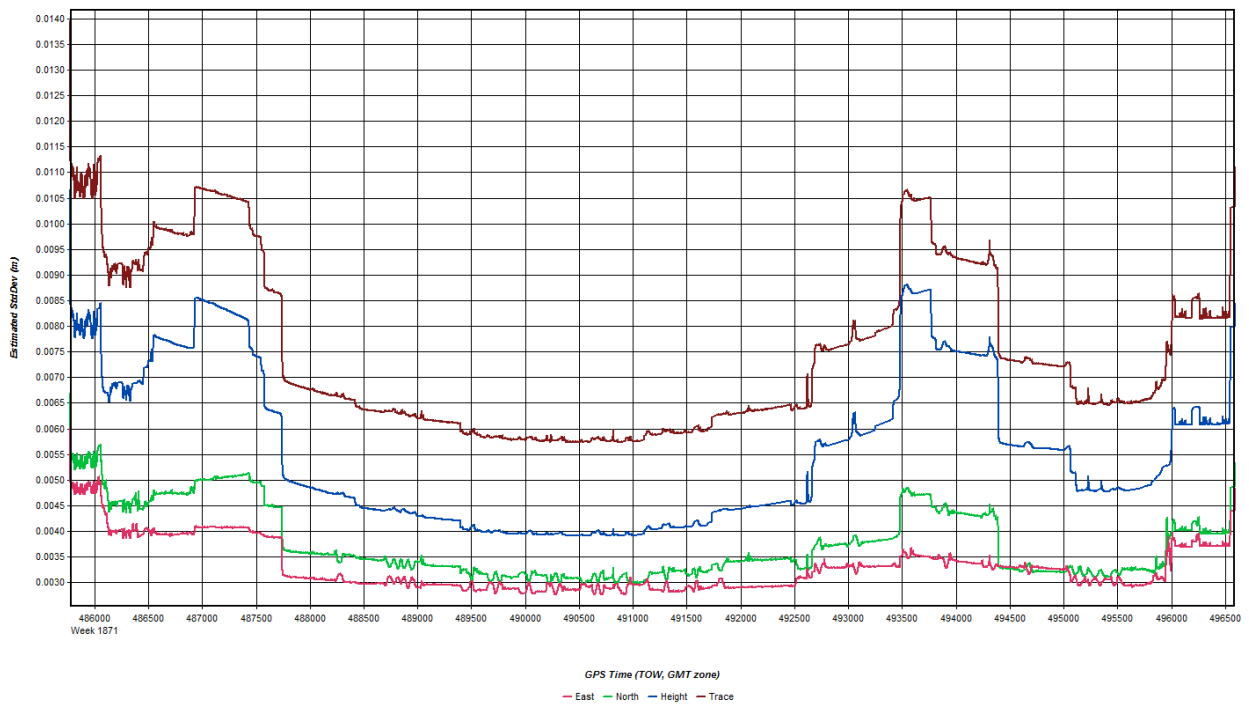
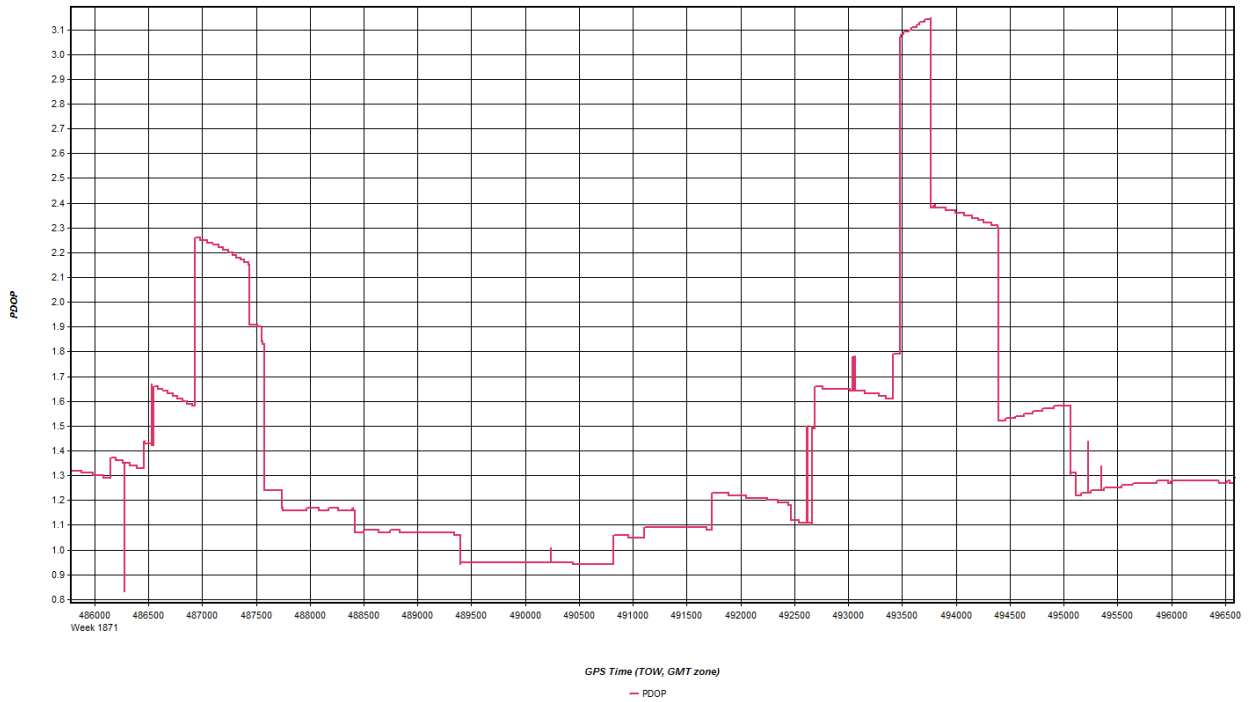
Contract # / TO #		Client / Project Name		Date	
		Quantum- Dexter, ME		10-Nov-2015	
PAR Project No.		Survey Firm		Operator Name	
		PAR, LLC		Parker	
Monument Name/Designation			Exact Stamping (photo in survey report)		
Dexter_Nail			N/A		
Monument No./PID		Collection Type (circle one)		File Name (receiver generated)	
N/A		<input checked="" type="radio"/> ABGPS <input type="radio"/> STATIC <input type="radio"/> RTK		19823147.T02	
Receiver Manufacturer		Receiver Model		Receiver Serial No.	
Trimble		R10		5252421982	
Data Collector Manufacturer		Data Collector Model		Data Collector Serial No.	
Trimble		Ranger/TSC3		354114046299449	
Antenna Part No.		Antenna Model		Antenna Serial No.	
Starting Antenna Height in Feet		Starting Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG		1 2 3 AVG		TRUE VERTICAL <input checked="" type="radio"/> ARP	
2.050 2.050 2.050 2.050					
Ending Antenna Height in Feet		Ending Antenna Height in Meters		Type of Measurement (circle one)	
1 2 3 AVG		1 2 3 AVG		TRUE VERTICAL <input checked="" type="radio"/> ARP	
2.050 2.050 2.050 2.050					
Antenna Reference Point (diagram in survey report)					
(Antenna Reference Point = VR + VO + VE2) ARP to Phase = 168mm					
Start Date (UTC)		Start Time (UTC)		Approx. Lat. (if available)	
10-Nov-2015		15:25		45 0 8.34538 (N)	
End Date (UTC)		End Time (UTC)		Approx. Long. (if available)	
10-Nov-2015		18:05		69 14 4.15451 (W)	
Monument is in good condition			Site Diagram/Picture		
					
Ground Photos					

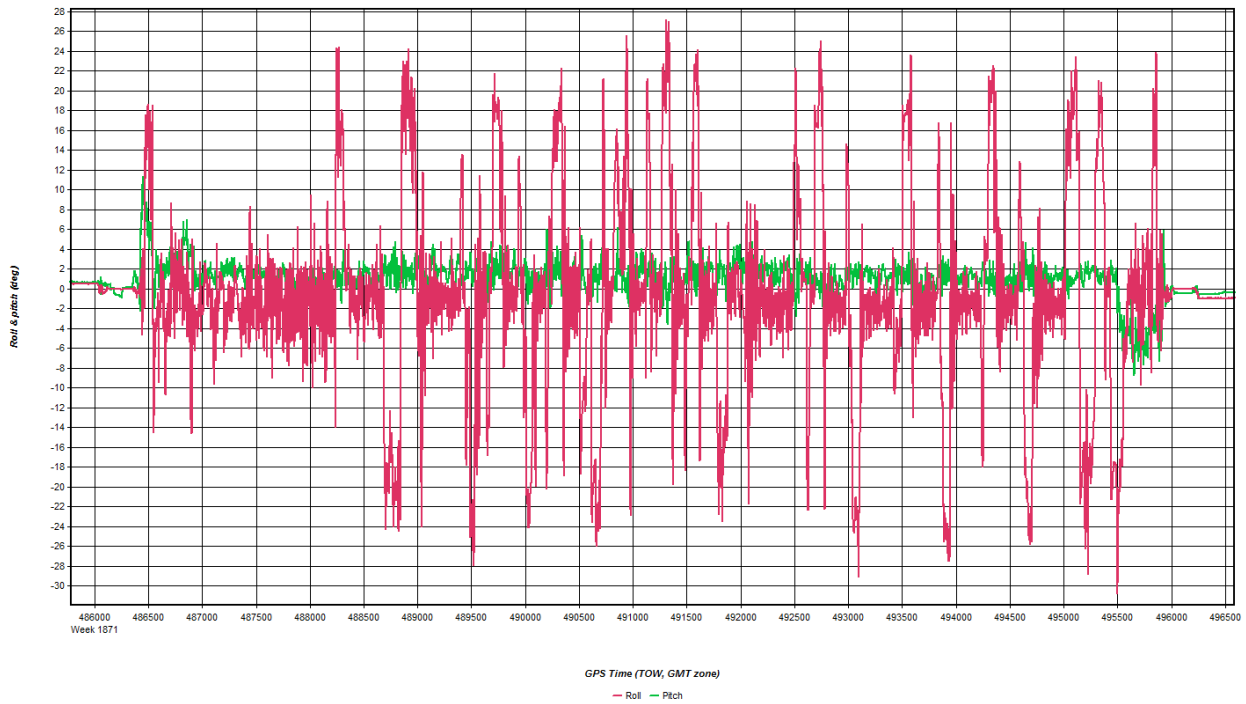


Nov 20, 2015-A (N22GE, SN7178)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: HAMP Name: HAMP Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\5271\2015112

Coordinates
 Latitude: North 42 19 03.87277 Compute from PPP
 Longitude: West 72 38 22.40329 Enter Grid Values
 Ellipsoidal height: 42.355 m Enter MSL Height
 Datum: NAD83(2011) 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: MABN Name: MABN Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\5271\20151112

Coordinates
 Latitude: North 42 40 11.99113
 Longitude: West 72 32 28.64375
 Ellipsoidal height: 94.890 m
 Datum: NAD83(2011)

Antenna Height
 From station file: LEIAX1203+GNSS, NONE
 Antenna profile: LEIAX1203+GNSS
 Measured height: 0.000 m
 ARP to L1 offset: 0.058 m
 Applied height: 0.058 m
 Measured to:
 ARP
 L1 Phase Centre

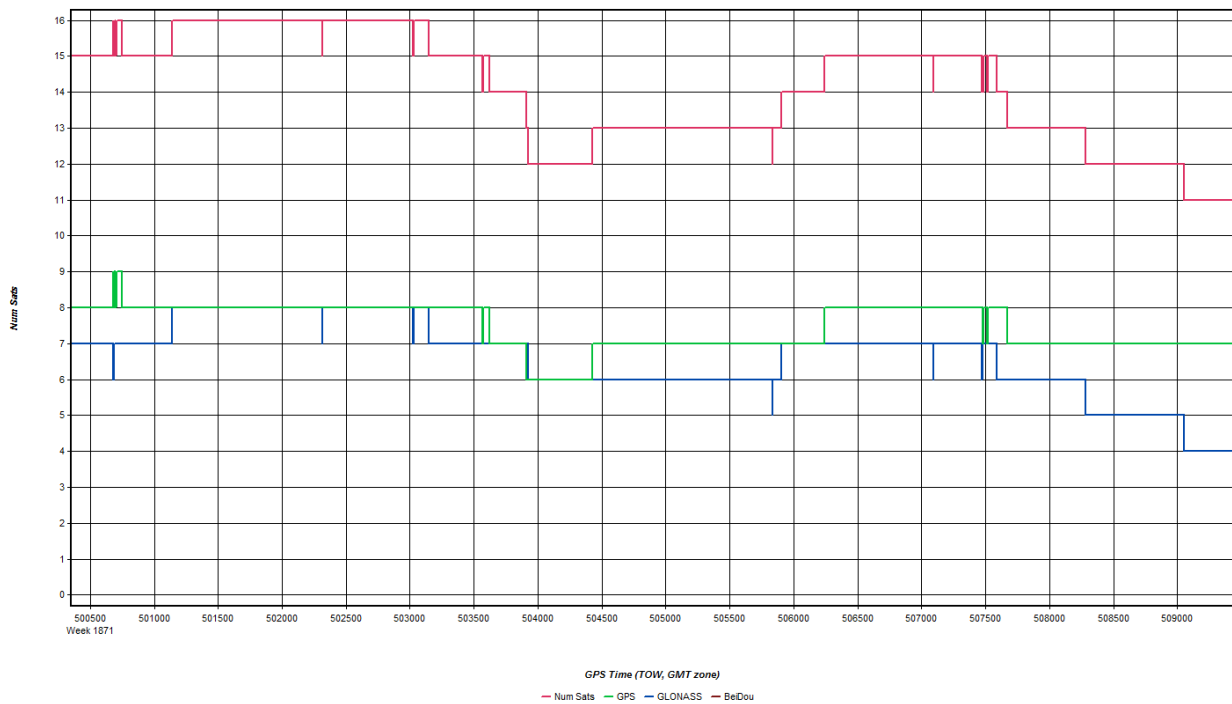
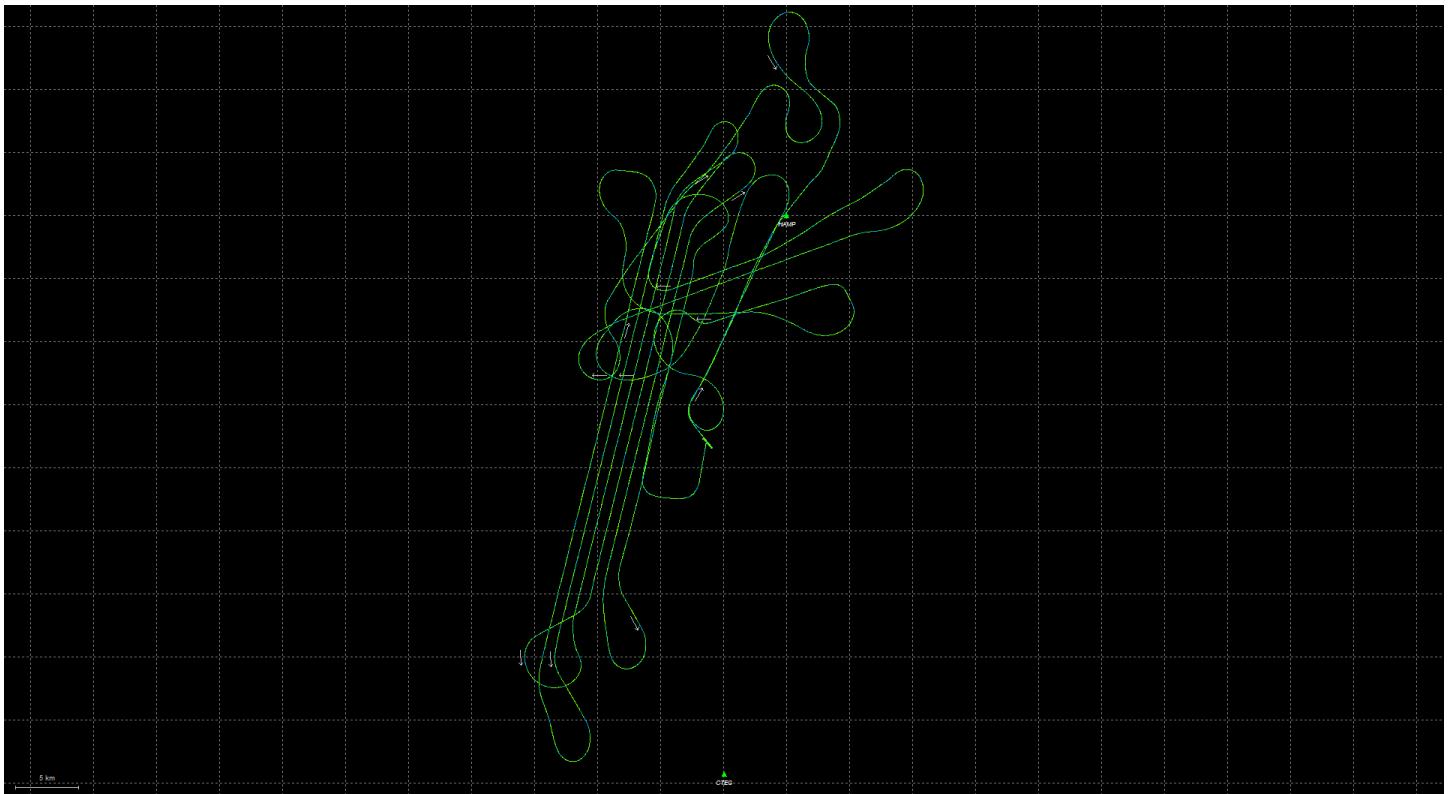
Flight Log

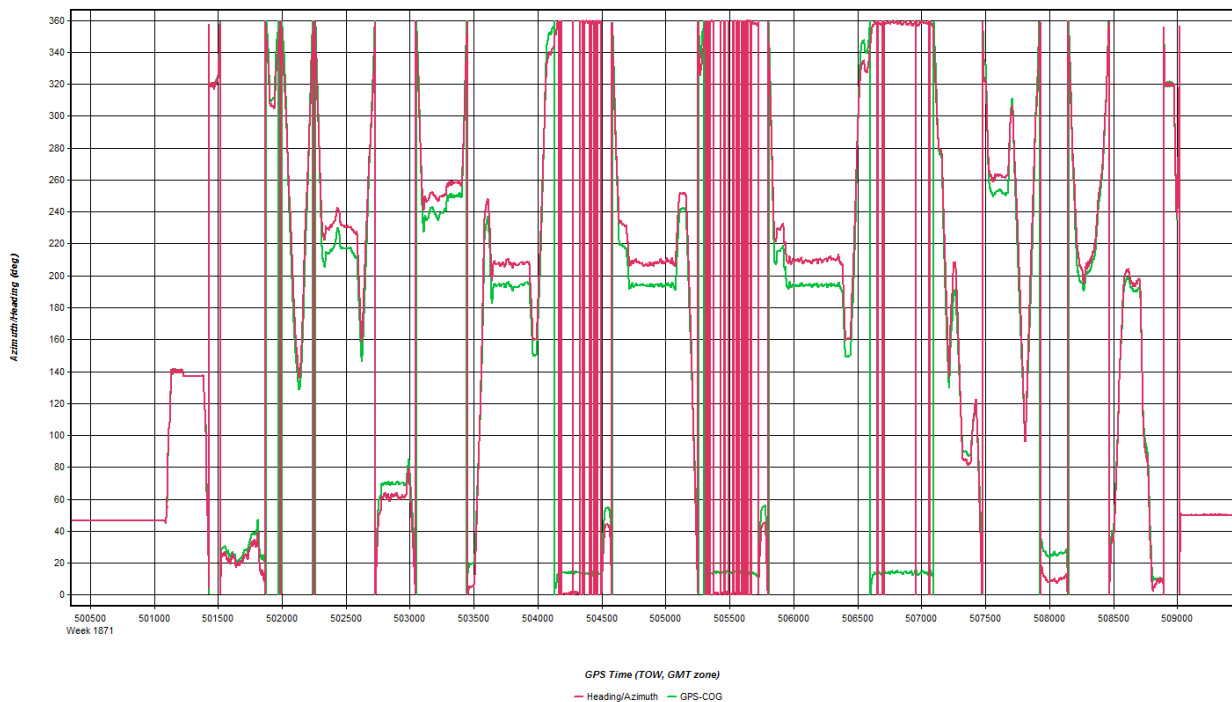
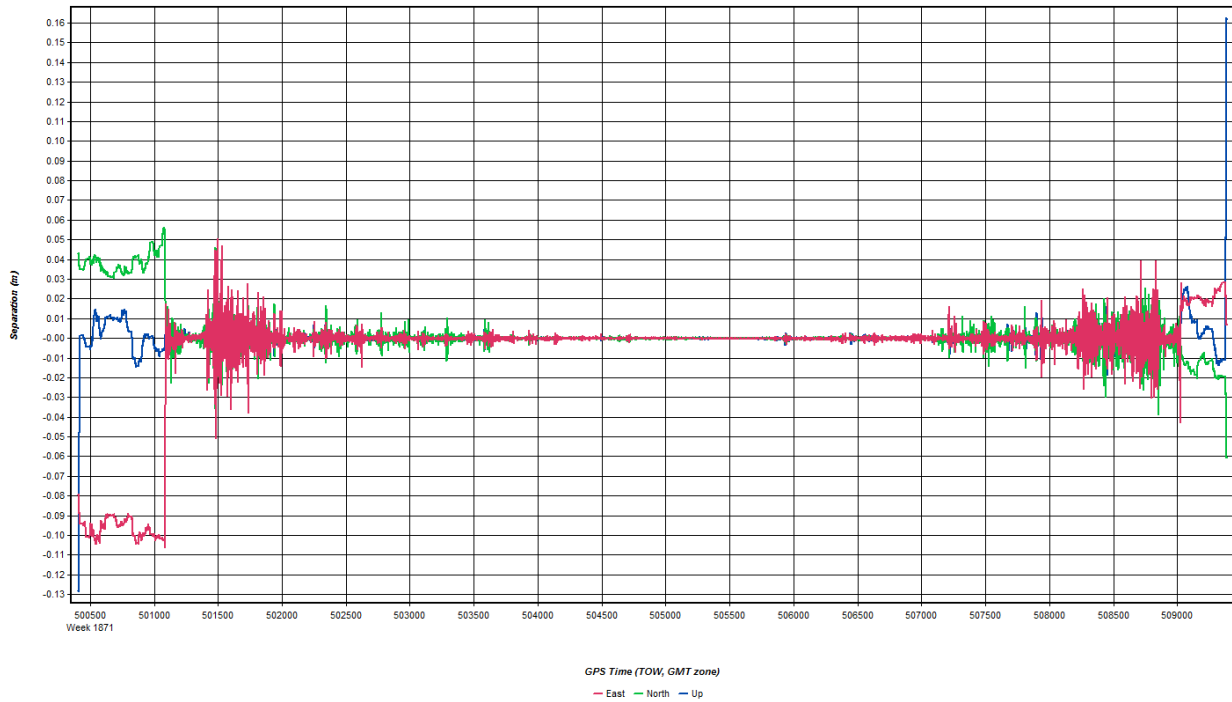
Scanned by CamScanner

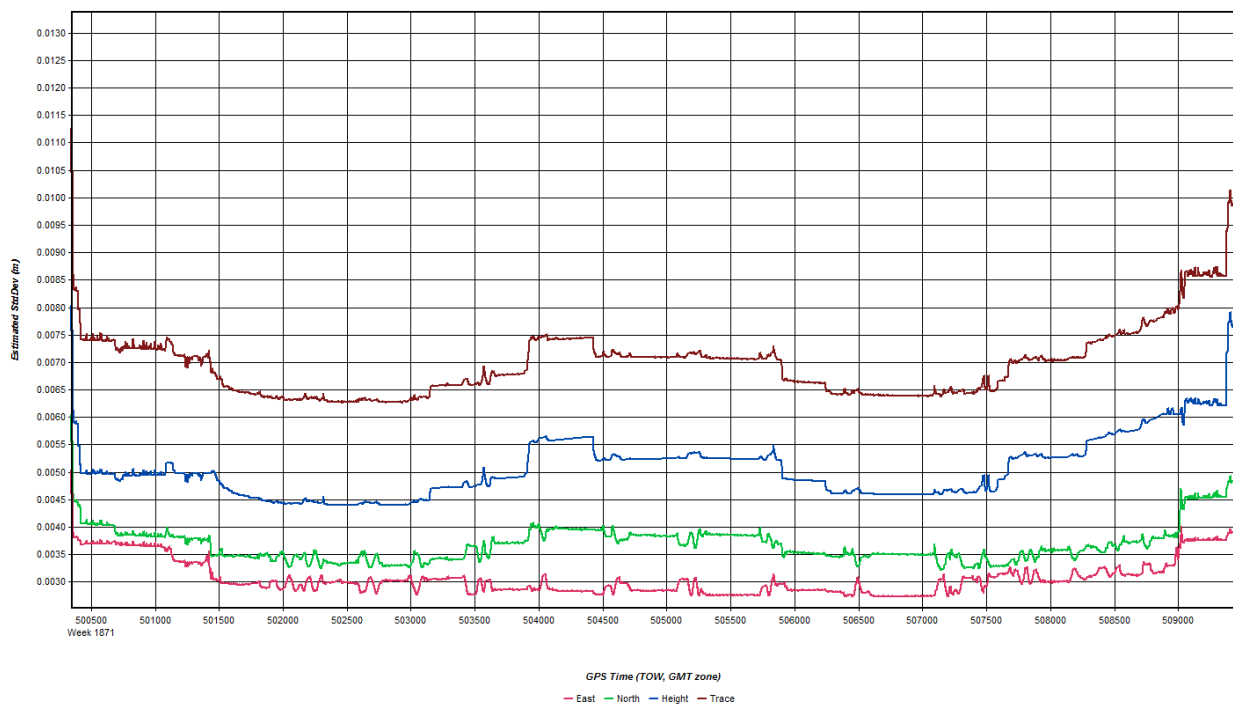
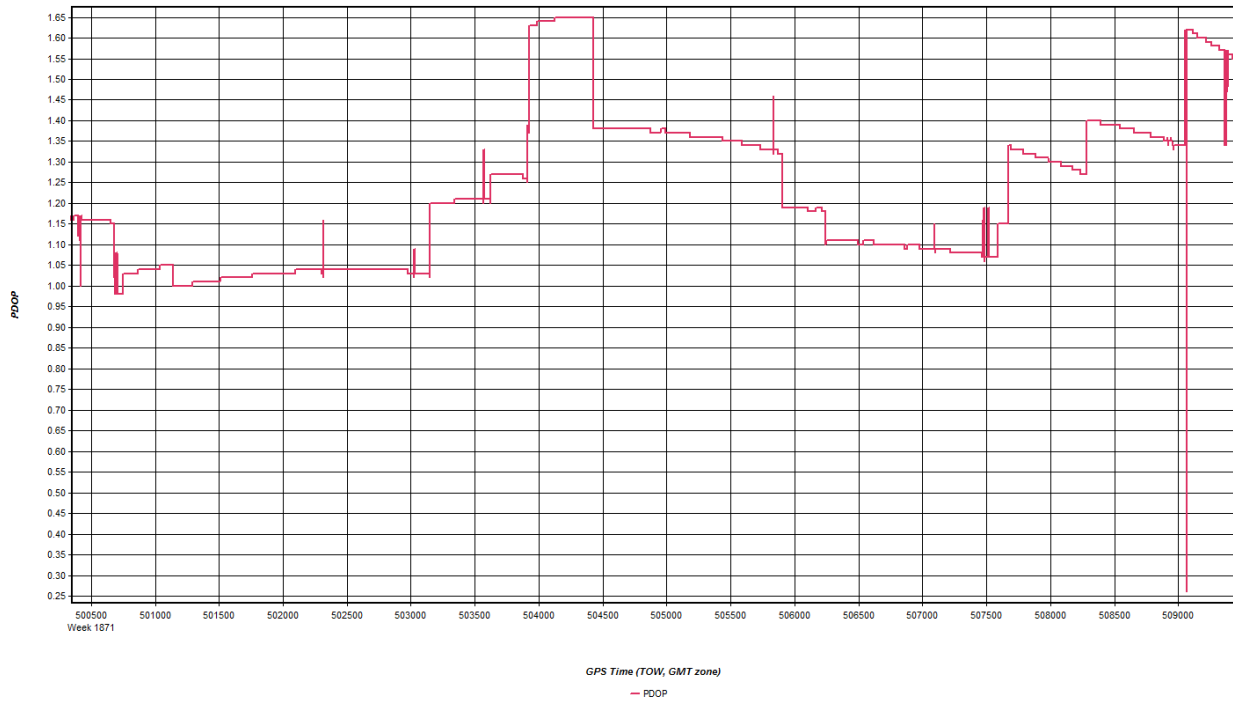
OPERATORS FLIGHT LOG													
MISSION:			DATE: 11-20-15			LEICA ALS-70			SENSOR: 7178				
PILOT: M. CASHY		OPERATOR: M. AKST		AIRPLANE: MIM70		DRIVE		REMARKS					
PROJECT NUMBER AND NAME	LINE No.	Lbl	Hdg	GND SPEED (KTS)	FREQ Hz	SCAN ANGLE	PRF KHZ	FIXED GAIN	Flying Ht. (m)	TIME START	TIME STOP		
26258	152	523°	140	61	28	28	429	255	5200	1555	1556	VERY ROUGH	
USS MAS	155	143°	175							1559	1600		
	154	323°	158							1604	1605		
	153	143°	155							1608	1609		
	152	323°	133							1613	1614		
	157	55°	140							1619	1619	CROSSFLIGHT	
	151	243°	123							1624	1624	CROSSFLIGHT	
	149	153°	140							1630	1631		
	150	333°	126							1634	1635		
	146	144°	170			47	40	208	6300	1645	1647	CROSSFLIGHT	
	145	70°	179							1653	1655		
	144	250°	139							1659	1703		
	143	70°	175							1704	1710		
	142	250°	145							1713	1716		
	141	70°	180							1720	1722		
	140	250°	143							1726	1729		
STATUS		TOTAL LINES		FLOWN		LEFT		AIRPLANE		FERRY		NOTES: CORS → HAM P	
		57						K6D → KSAF		START STOP		9:50 1:00	
								W CLEAR BWT		START STOP		TUESDAY	

Quantum Spatial N 6216 Resource Drive Sheboygan Falls, WI 53085 PHONE: 920-467-2655 FAX: 888-253-6695 E-Mail: amephot@quantumspatial.com

Nov 20, 2015-B (N22GE, SN7178)









Coordinate/Antenna Settings

Master Remote

Base Station
 2: CTEG Name: CTEG Disabled
 File: [S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\CJY5\201511;

Coordinates
 Latitude: North 41 55 24.34701 Compute from PPP
 Longitude: West 72 41 55.88092 Enter Grid Values
 Ellipsoidal height: 30.293 m Enter MSL Height
 Datum: NAD83(2011) 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 Measured to
 ARP to L1 offset: 0.067 m ARP
 Applied height: 0.067 m L1 Phase Centre
 Compute From Slant

OK Cancel

Coordinate/Antenna Settings

Master Remote

Base Station
1: HAMP Name: HAMP Disabled
File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\CJY5\2015111

Coordinates
Latitude: North 42 19 03.87277 Compute from PPP
Longitude: West 72 38 22.40329 Enter Grid Values
Ellipsoidal height: 42.355 m Enter MSL Height
Datum: NAD83(2011) 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

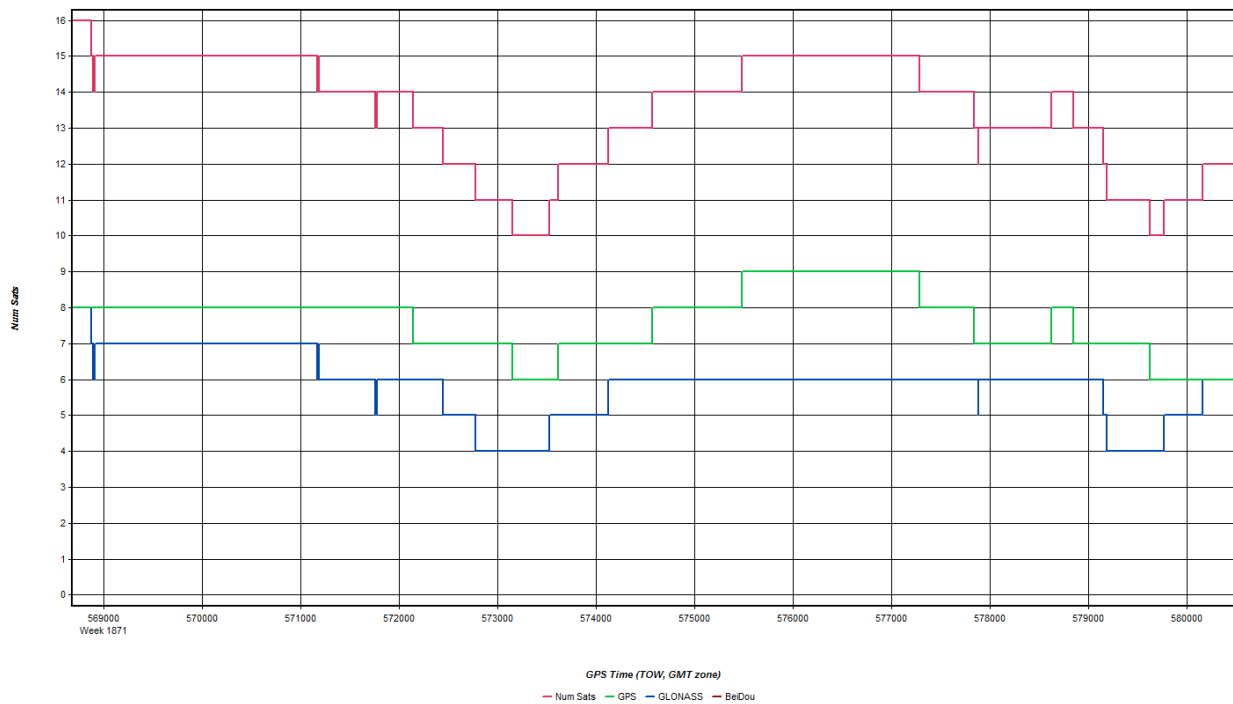
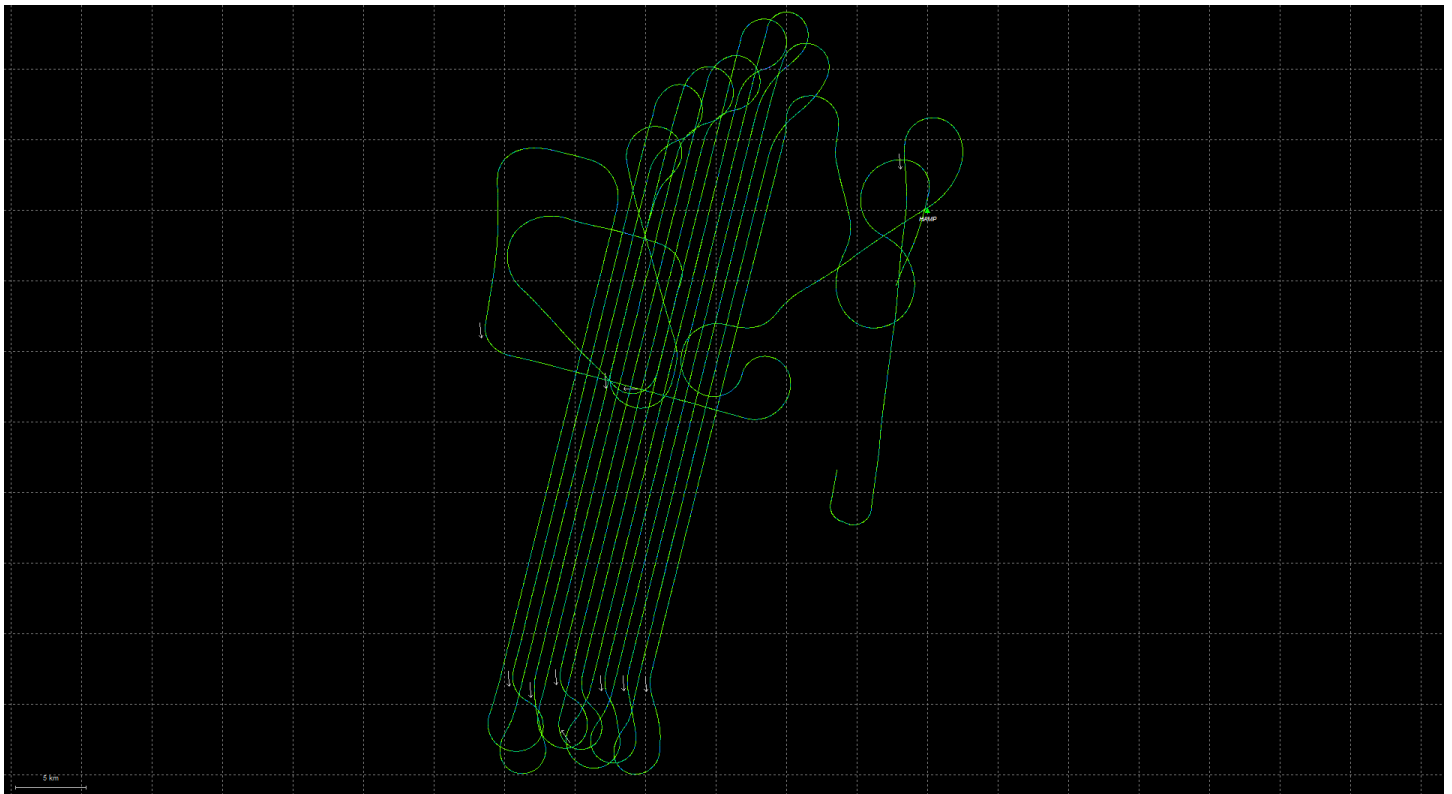
DATE: 11/20/2015

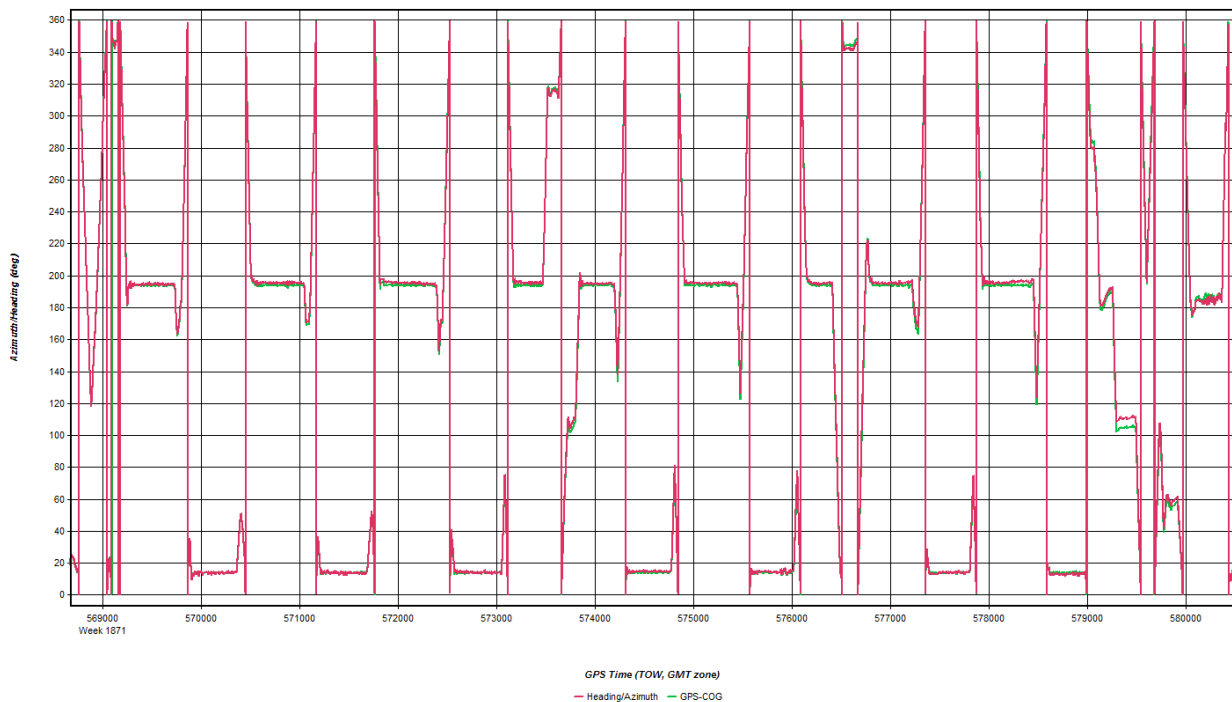
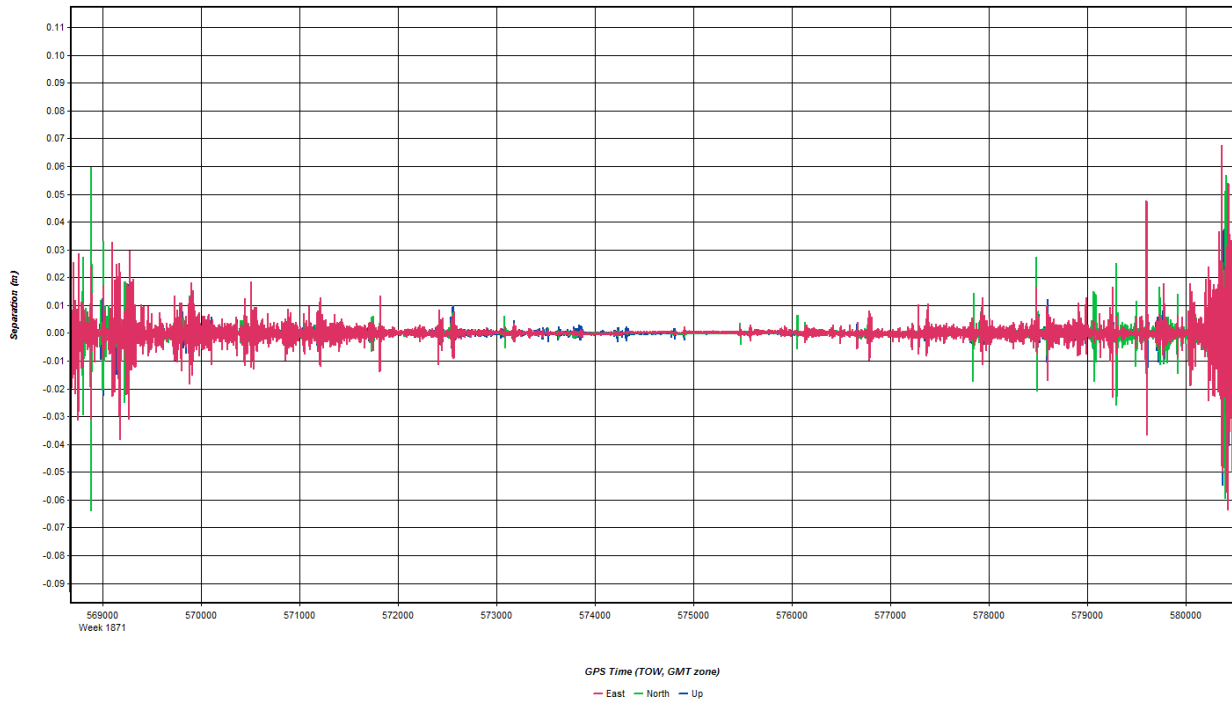
PILOT: CARL

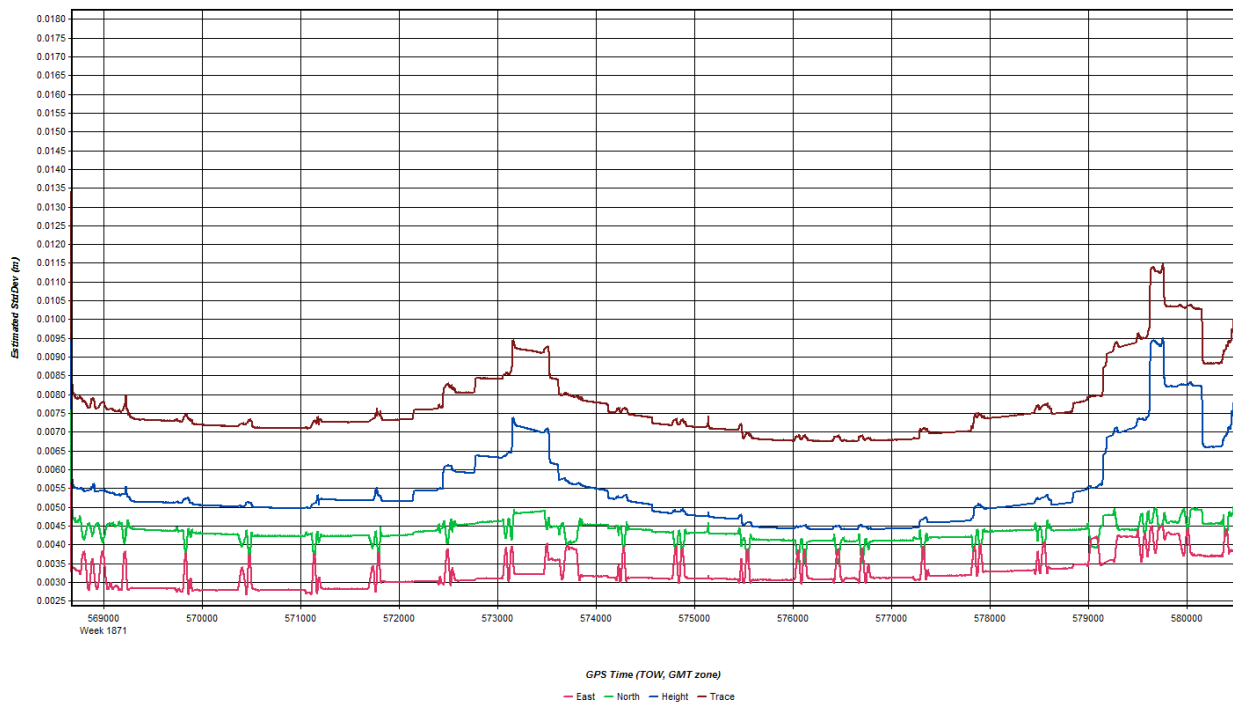
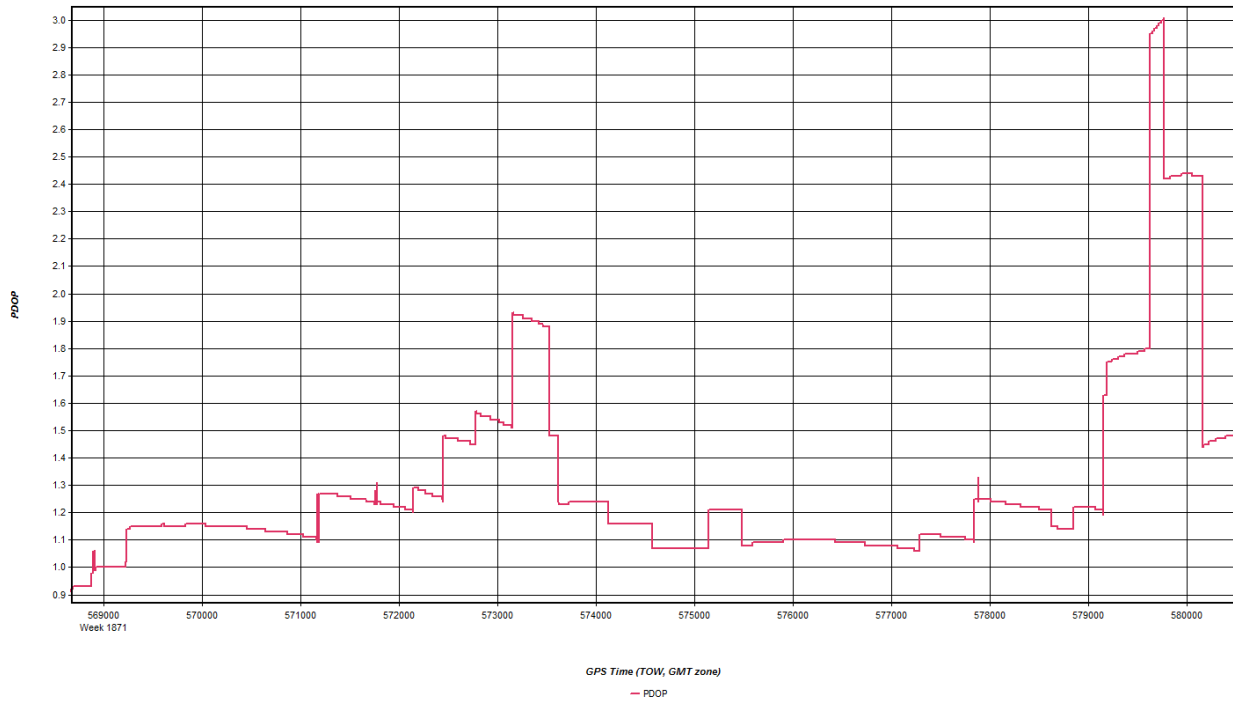
7178

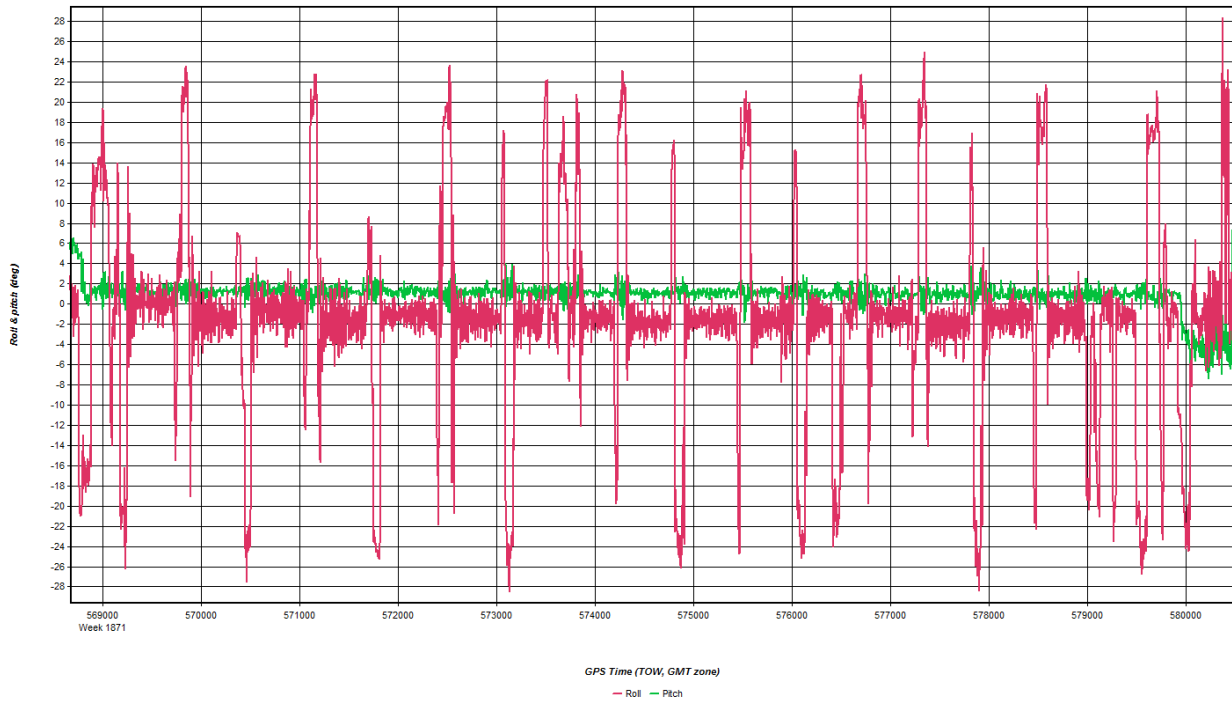
										S	E
(010) HEND	039	139	47Hz	40°	288 kHz	6233 Ft	175	175	1940	1942	
(250)	038	138	47	40°	288	6283 Ft	175	175	1948	1950	
(014.0)	037	137	47	40°	288	6329 Ft	175	175	1953	1955	
	036	136	47	40	288	6312	175	175	2003	2007	
	035	135	47	40	288	6312	175	175	2012	2014	
	034	134	47	40	↓	↓	↓	↓	2022	2027	
	033	133	"	"	↓	↓	↓	↓	2032	2039	
	032	132	↓	↓	↓	↓	↓	↓	2044		

Nov 21, 2015-A (N22GE, SN7178)









Coordinate/Antenna Settings

Master Remote

Base Station
 1: HAMP Name: HAMP Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\5271\2015112

Coordinates
 Latitude: North 42 19 03.87277 Compute from PPP
 Longitude: West 72 38 22.40329 Enter Grid Values
 Ellipsoidal height: 42.355 m Enter MSL Height
 Datum: NAD83(2011) 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 Measured to
 ARP to L1 offset: 0.067 m ARP
 Applied height: 0.067 m L1 Phase Centre
 Compute From Slant

OK Cancel

Flight Log

Scanned by CamScanner

OPERATORS FLIGHT LOG

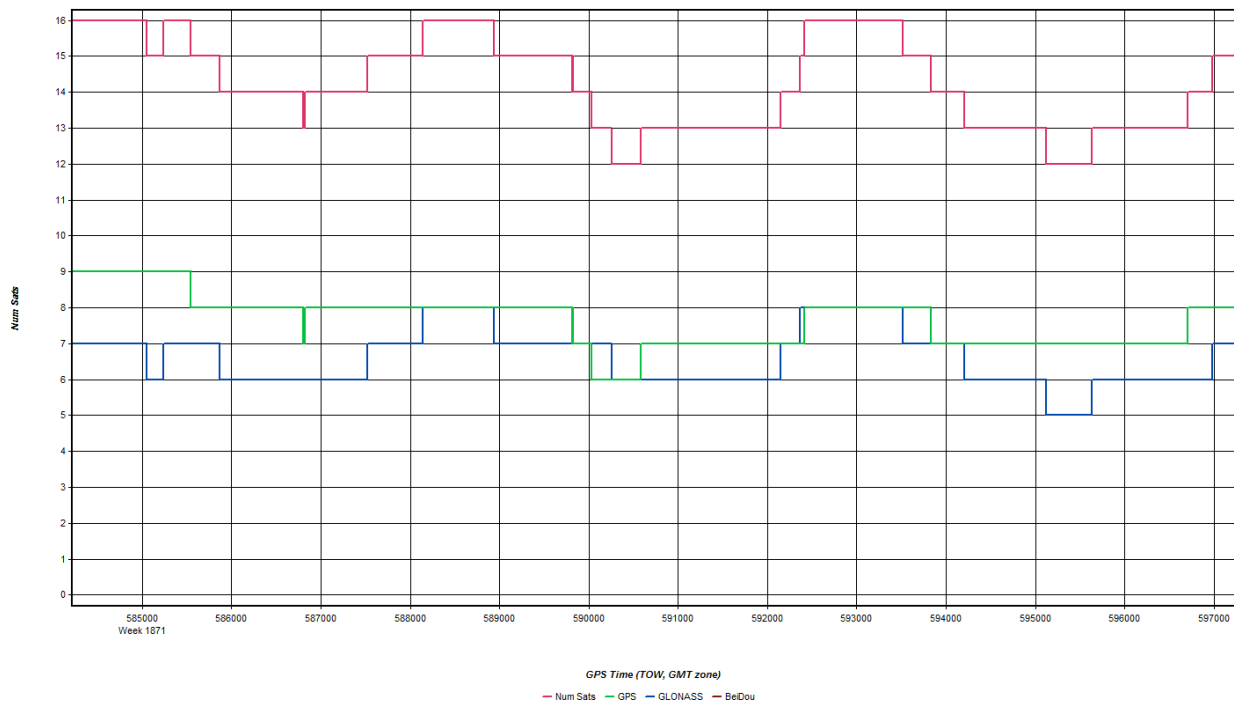
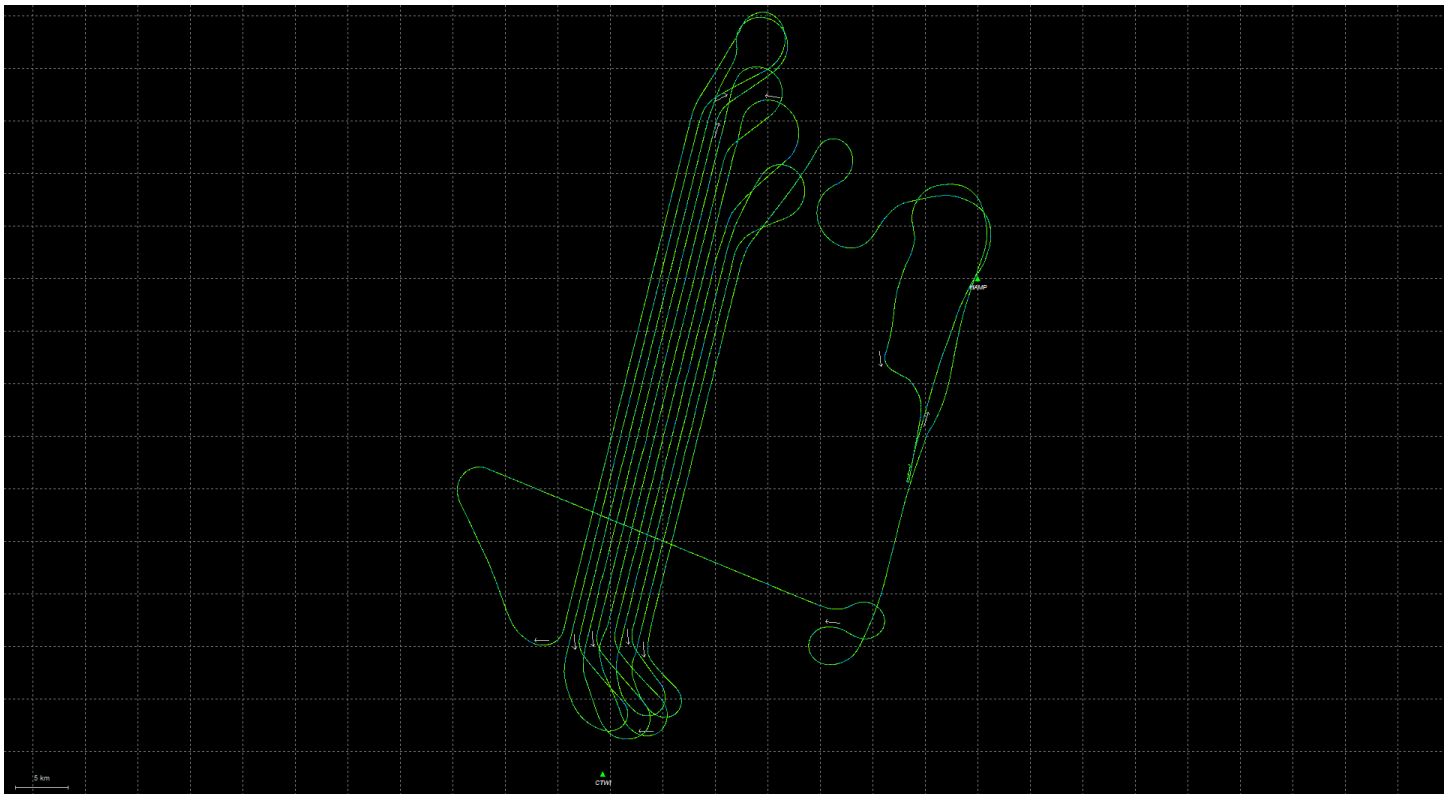
MISSION: 20151121_134012 DATE: 11-21-15 LEICA ALS-70 SENSOR: 7178

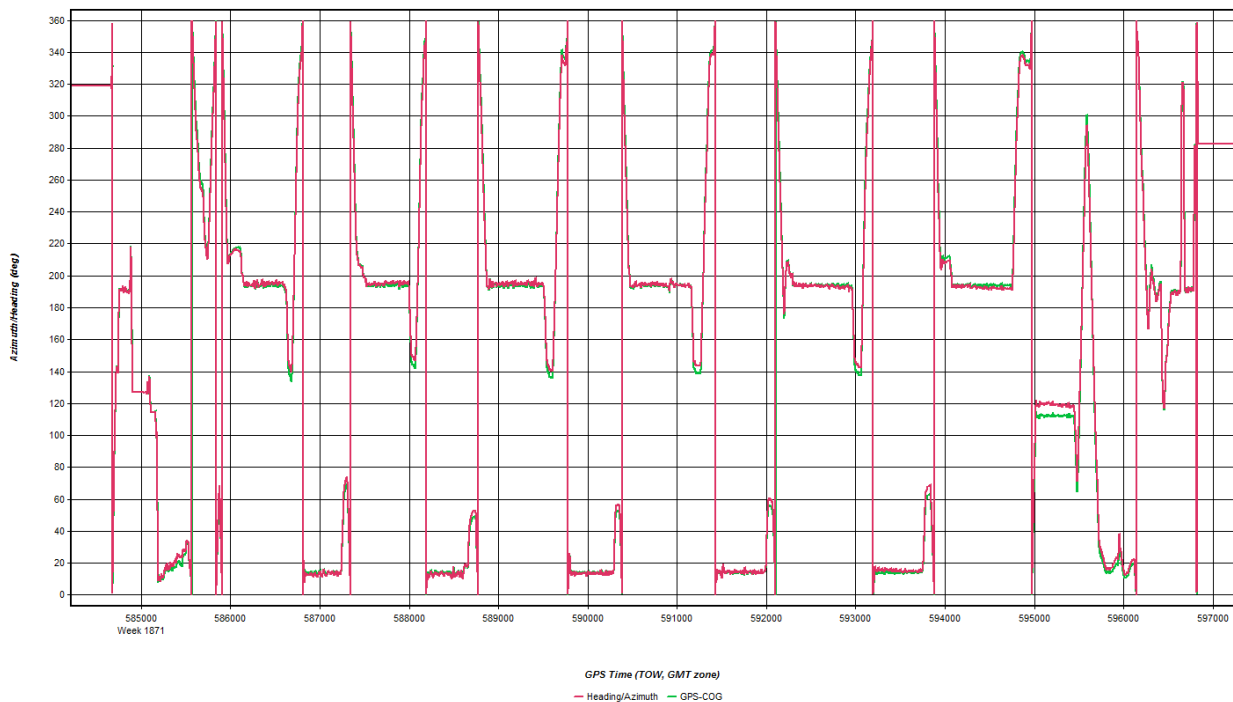
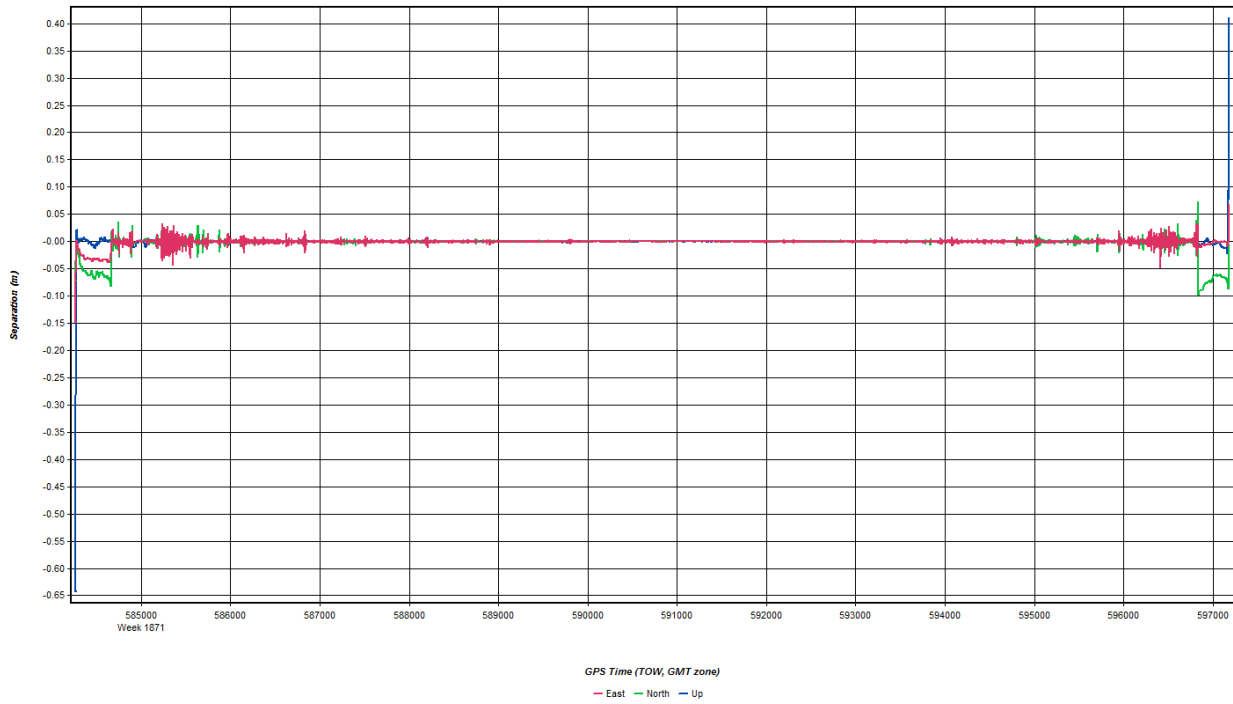
PROJECT AND NAME: 26258 LUSGS MIA OPERATOR: M ALST AIRCRAFT: M206 MM70 DRIVE

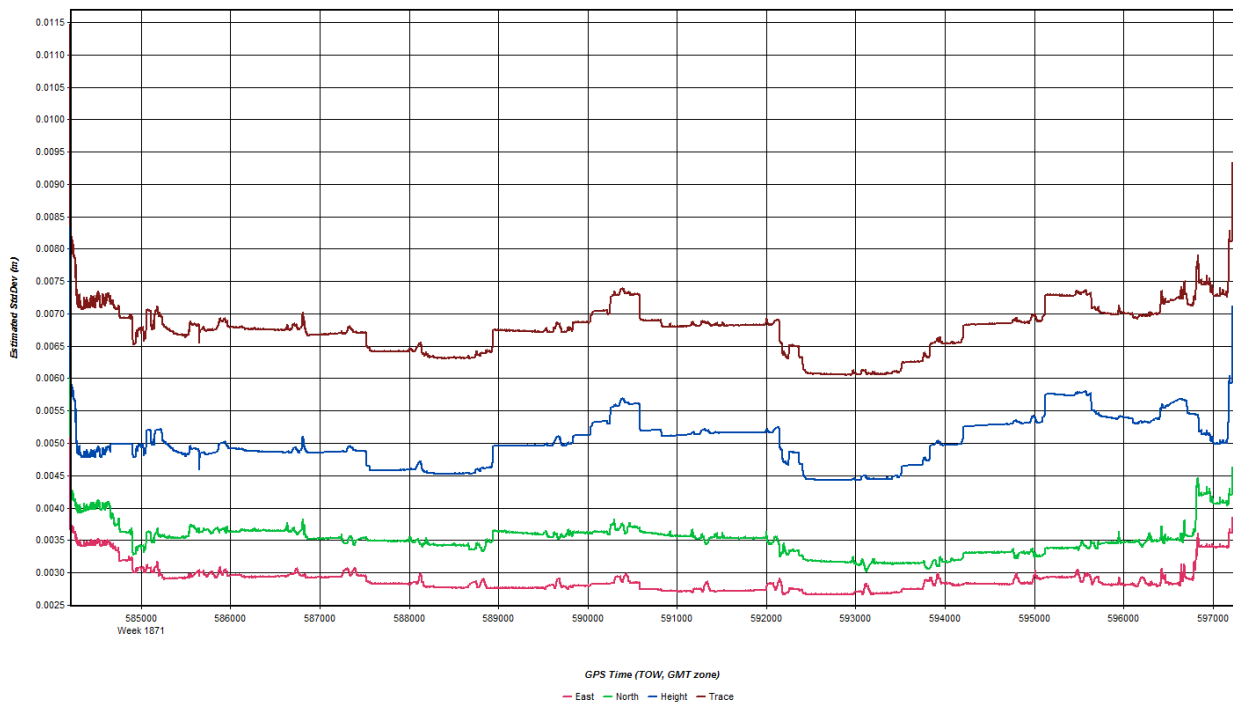
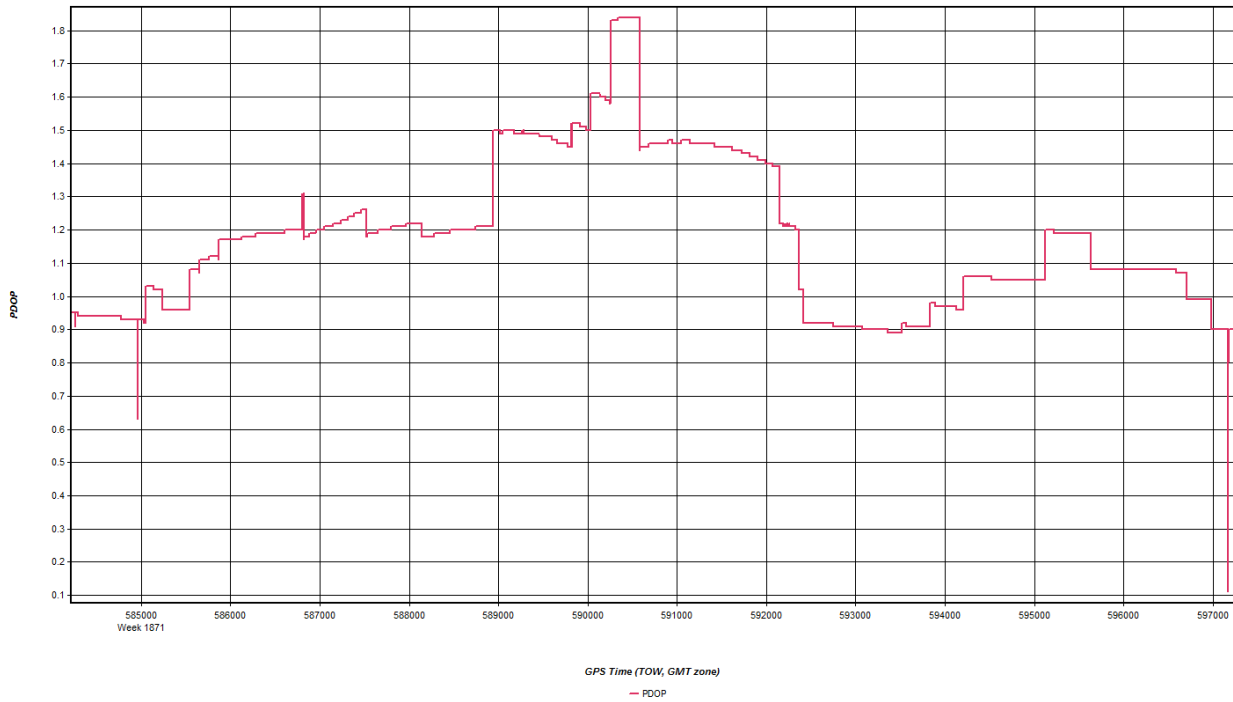
LINE No.	LINE Lbl	Hdg	GND SPEED (KTS)	FREQ Hz	SCAN ANGLE	PRF KHz	FIXED GAIN	Flying Ht. (m)	TIME		REMARKS																																
									START	STOP																																	
131	S	159	47	46	288	2.5	6.5	1408	1415																																		
130	N	170	159					1418	1425																																		
129	S	160						1429	1437																																		
128	N	174						1440	1447																																		
127	S	157						1457	1457																																		
126	N	176						1502	1510																																		
125	S	158						1513	1517	ABOUT FOR TRAFFIC																																	
125	S	160						1524	1529	RESUME LINE																																	
124	N	176						1532	1539																																		
123	S	159						1542	1550																																		
122	N	180						1553	1600																																		
121	S	155						1603	1606	ABOUT FOR TRAFFIC																																	
121	S	155						1615	1620	RESUME LINE																																	
120	N	182						1623	1629																																		
119	S	156						1633	1640																																		
118	N	180						1643	1649																																		
		E						1655	1657	MINIMAL CROSSFLIGHT																																	
<table border="1" style="width: 100%;"> <thead> <tr> <th rowspan="2">STATUS</th> <th rowspan="2">TOTAL LINES</th> <th rowspan="2">FLOWN</th> <th rowspan="2">LEFT</th> <th colspan="2">AIRCRAFT</th> <th rowspan="2">STATIC</th> <th rowspan="2">START</th> <th rowspan="2">STOP</th> <th rowspan="2">NOTES</th> </tr> <tr> <th>SITE</th> <th>FERRY</th> </tr> </thead> <tbody> <tr> <td></td> <td>57</td> <td></td> <td></td> <td>KBAF</td> <td></td> <td>5 MIN</td> <td>8:45</td> <td>12:15</td> <td>LOS → HAMP</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>WX</td> <td>SOME HIGH CLOUDS</td> <td></td> <td>TAKING IN WE LOST COMMUNICATION WITH THE ALS DATA LOGGER</td> </tr> </tbody> </table>												STATUS	TOTAL LINES	FLOWN	LEFT	AIRCRAFT		STATIC	START	STOP	NOTES	SITE	FERRY		57			KBAF		5 MIN	8:45	12:15	LOS → HAMP							WX	SOME HIGH CLOUDS		TAKING IN WE LOST COMMUNICATION WITH THE ALS DATA LOGGER
STATUS	TOTAL LINES	FLOWN	LEFT	AIRCRAFT		STATIC	START	STOP	NOTES																																		
				SITE	FERRY																																						
	57			KBAF		5 MIN	8:45	12:15	LOS → HAMP																																		
						WX	SOME HIGH CLOUDS		TAKING IN WE LOST COMMUNICATION WITH THE ALS DATA LOGGER																																		

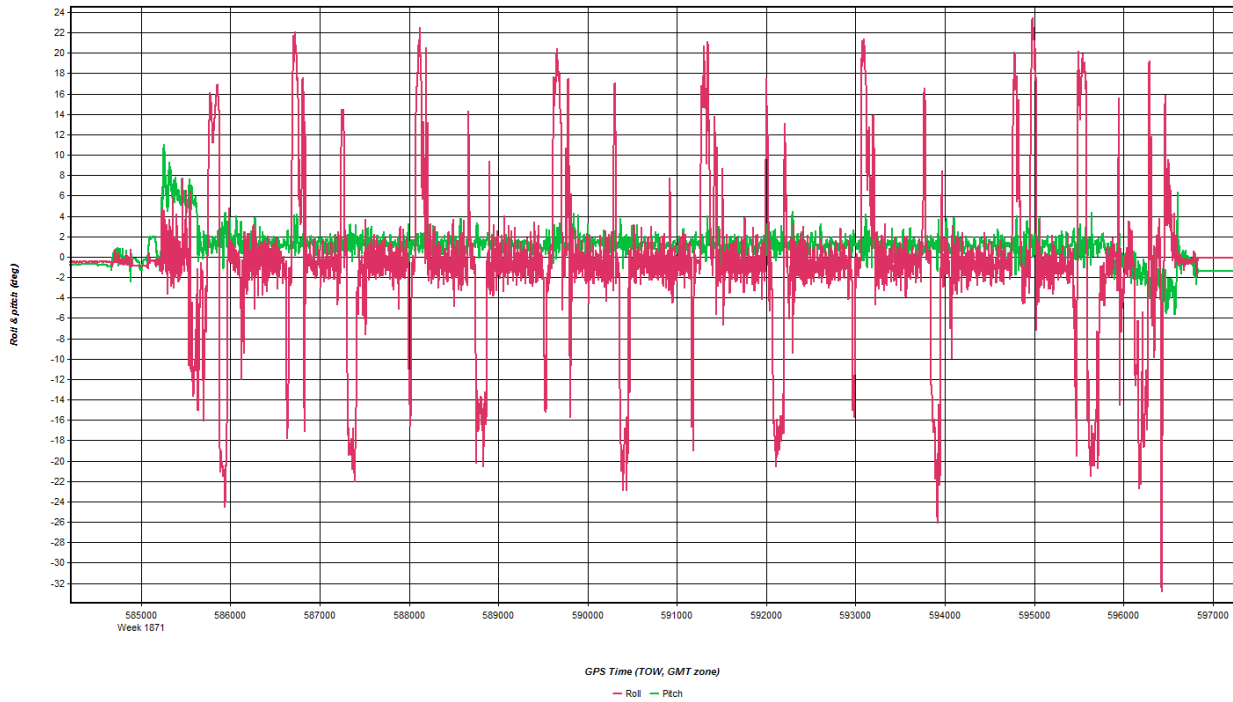
Quantum Spatial N 6216 Resource Drive Sheboygan Falls, WI 53085 PHONE: 920-467-2655 FAX: 888-253-6695 E-Mail: amephot@quantumspatial.com

Nov 21, 2015-A (N22GE, SN7178)









Coordinate/Antenna Settings

Master Remote

Base Station
 2: CTWI Name: CTWI Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\CJY5\201511;

Coordinates
 Latitude: North 41 53 51.90745
 Longitude: West 73 04 10.96846
 Ellipsoidal height: 192.097 m
 Datum: NAD83(2011)

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

Coordinate/Antenna Settings

Master Remote

Base Station
1: HAMP Name: HAMP Disabled
File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\CJY5\2015111

Coordinates
Latitude: North 42 19 03.87277 Compute from PPP
Longitude: West 72 38 22.40329 Enter Grid Values
Ellipsoidal height: 42.355 m Enter MSL Height
Datum: NAD83(2011) 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

Base Station Log

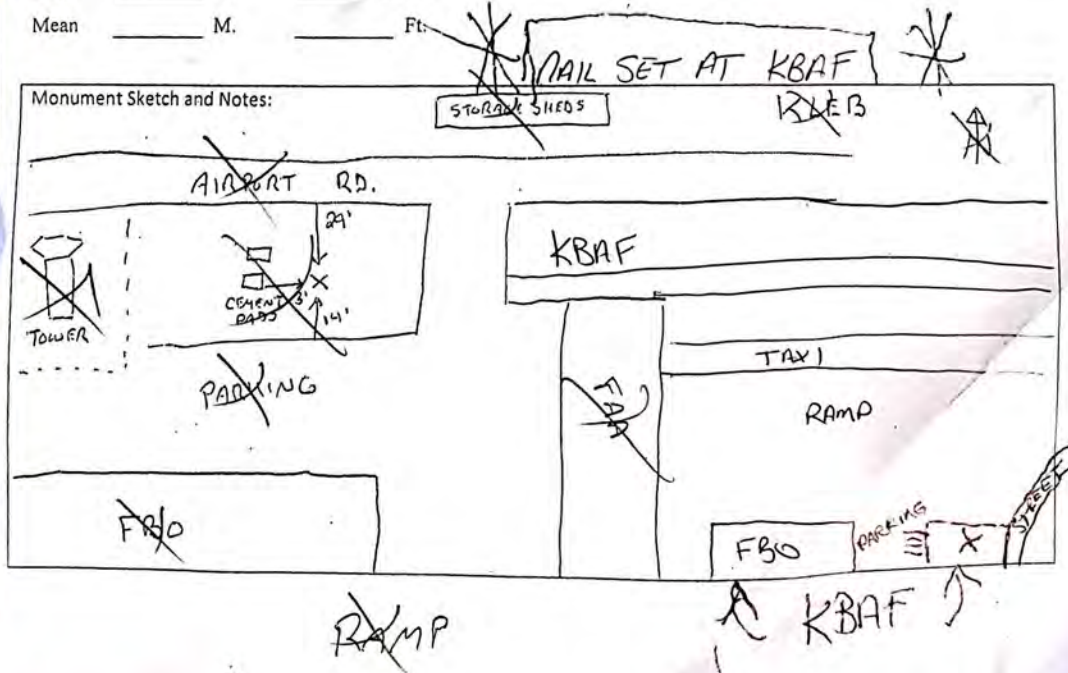
GPS OBSERVATION LOG

Station ID KBAF Date 11 / 21 / 2015
 Project Number ~~26258~~ 26258 Julian Date _____
 Project Name USGS ~~AT RIVER~~ MASS Start Time 7:15:A :
 Rcvr. Type NovAtel DL-V3-L1L2 Stop Time 4:45:P :
 Rcvr. S/N 7-0141418 Rcvr. File Name _____
 Antenna Type NovAtel Observer J. Hollaway II
 Antenna S/N NAE12110035

New or Existing Mon. New Existing
 Photo Taken: Yes No
 Monument Type: _____
 Spike PK Nail AM Washer
 Other _____

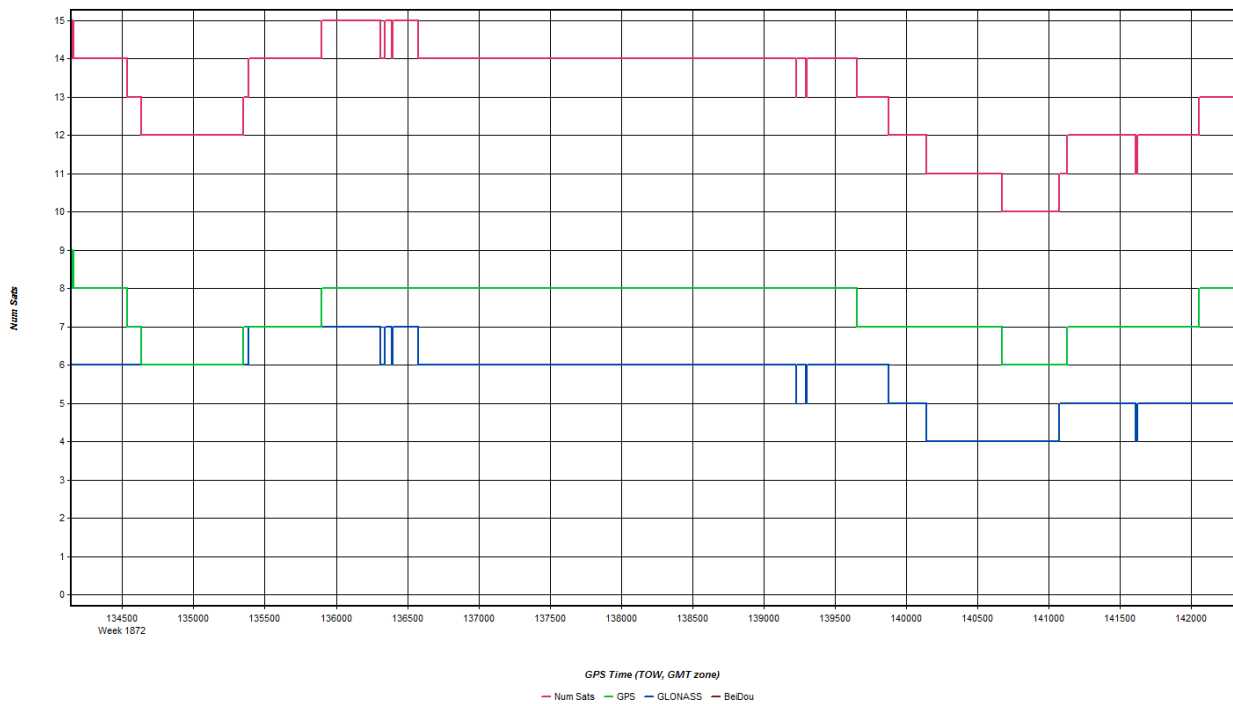
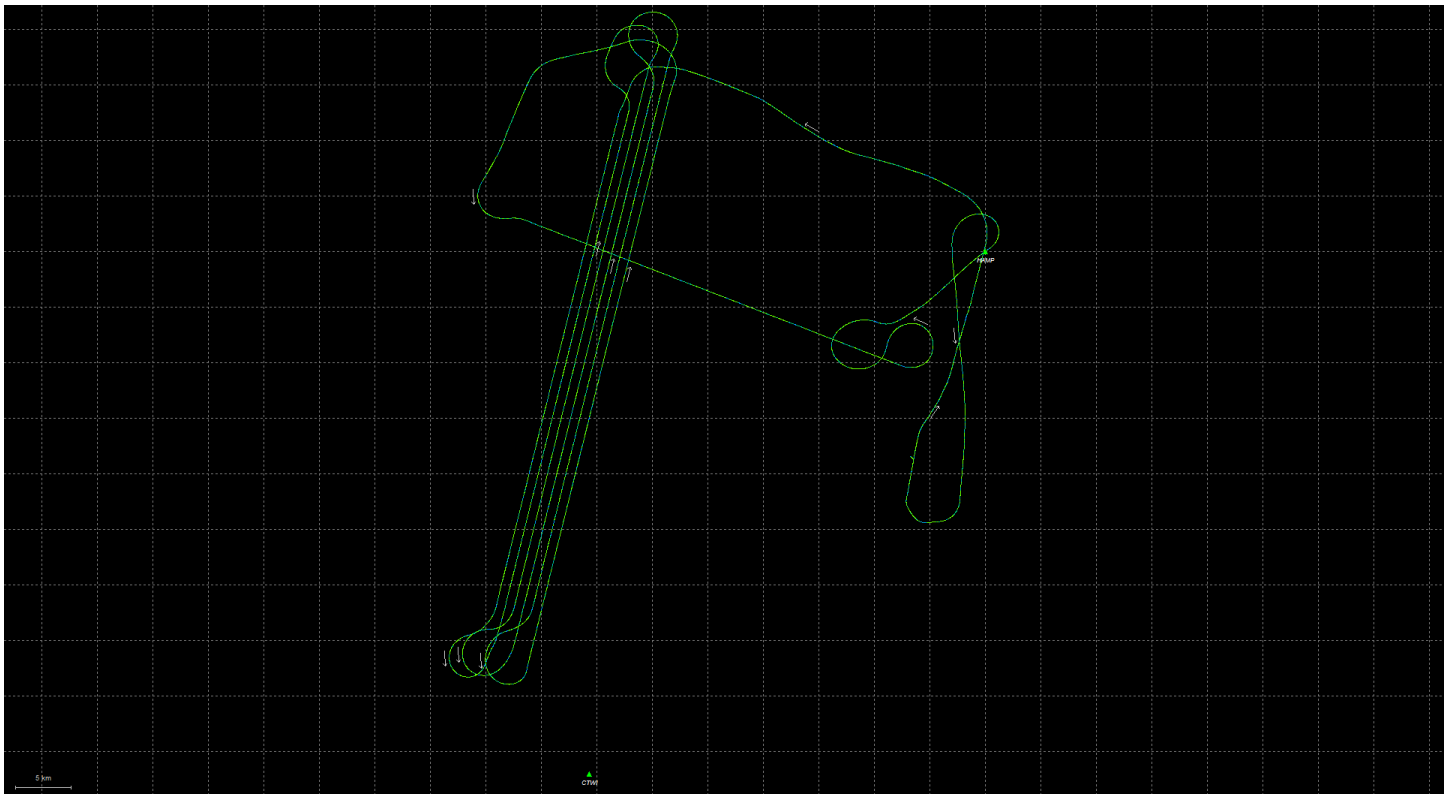
Height Readings:
 (Top of Monument to Bottom of Ground Plane)

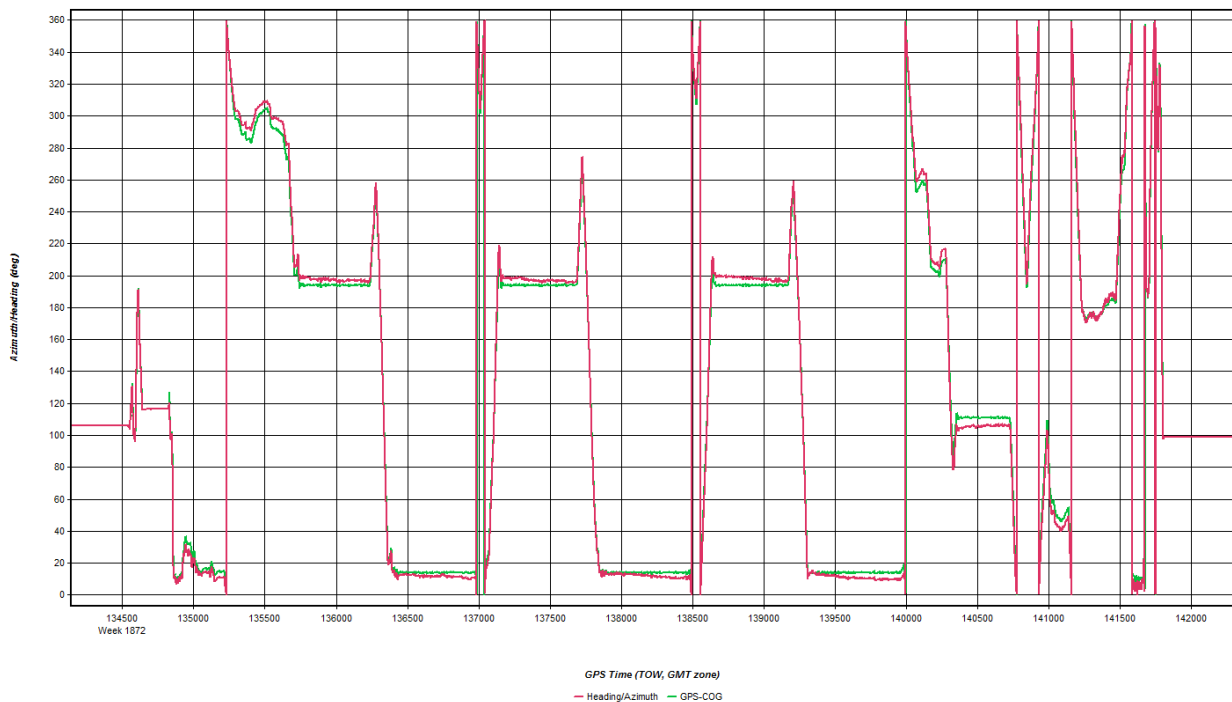
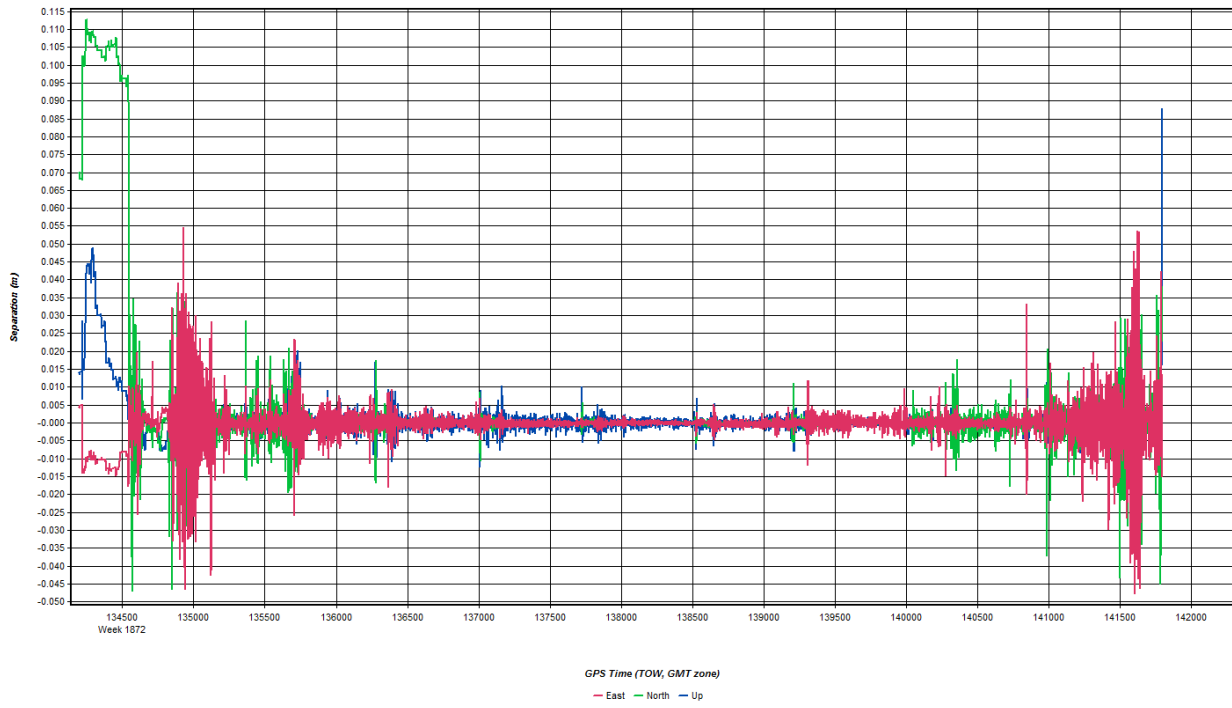
Start _____ M. _____ Ft.
 Stop _____ M. _____ Ft.
 Mean _____ M. _____ Ft.

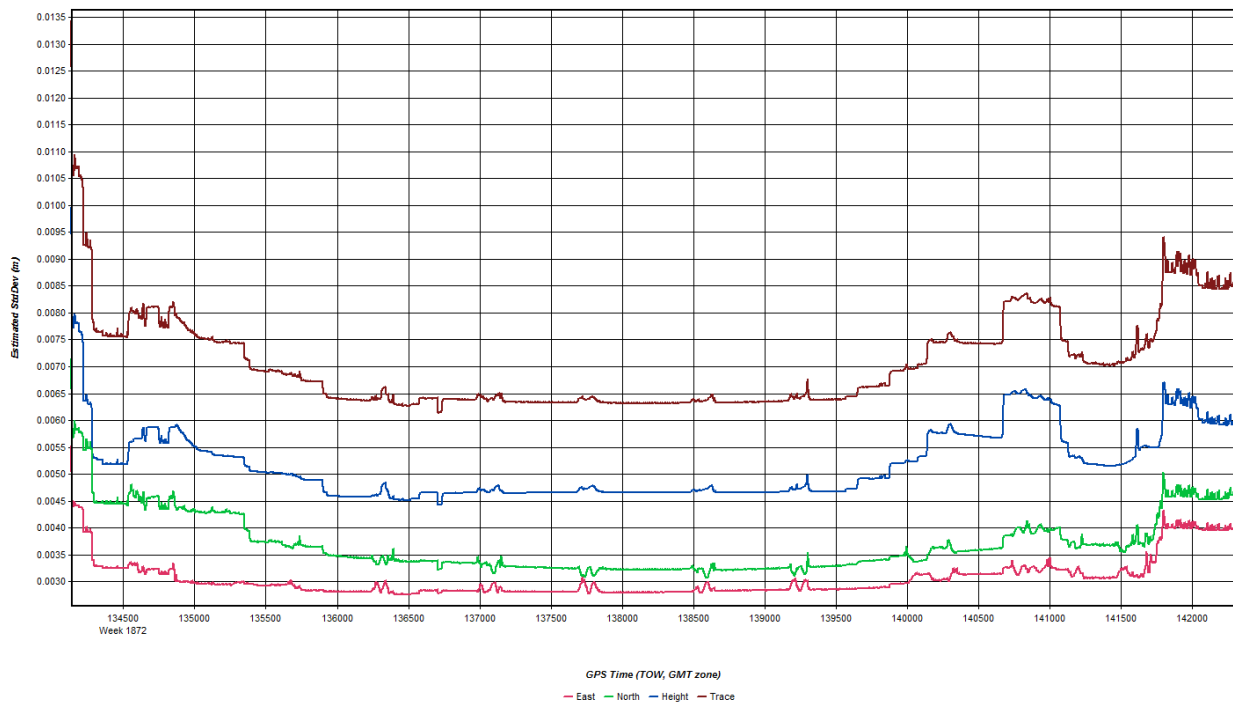
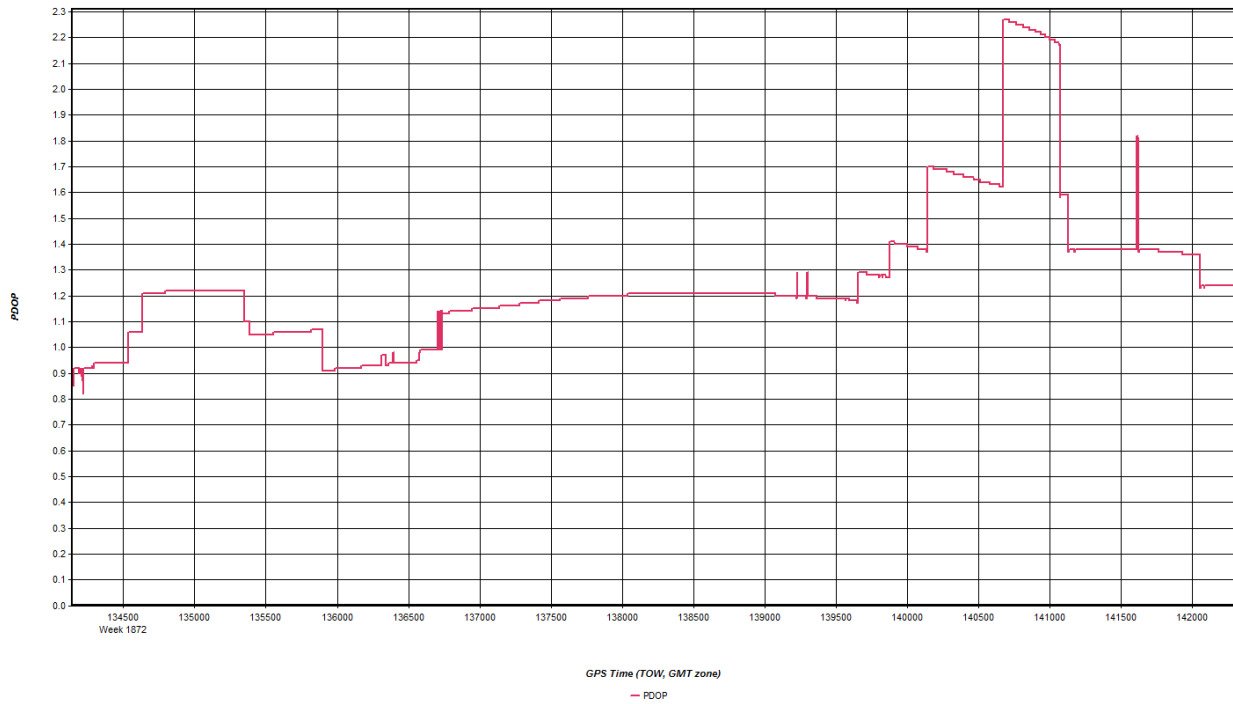


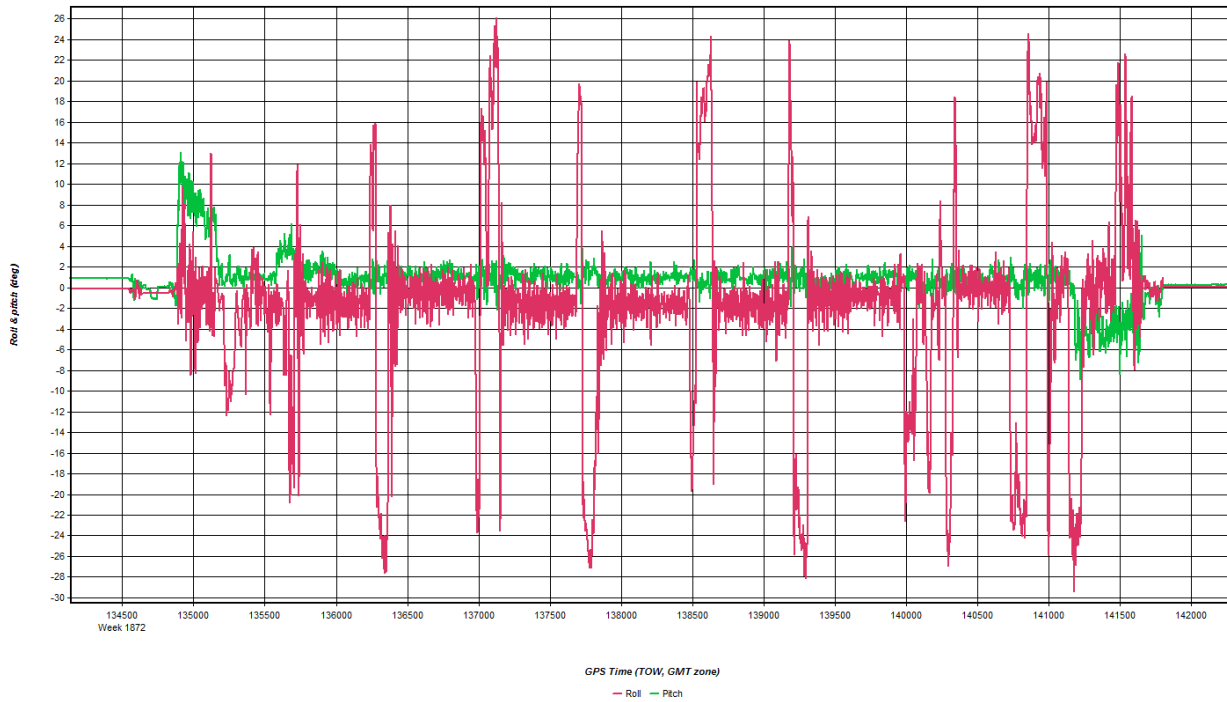
Scanned by CamScanner

Nov 23, 2015-A (N22GE, SN7178)









Coordinate/Antenna Settings

Master Remote

Base Station
 2: CTWI Name: CTWI Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\CJY5\201511\

Coordinates
 Latitude: North 41 53 51.90745 Compute from PPP
 Longitude: West 73 04 10.96846 Enter Grid Values
 Ellipsoidal height: 192.097 m Enter MSL Height
 Datum: NAD83(2011) 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: HAMP Name: HAMP Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\CJY5\2015111

Coordinates
 Latitude: North 42 19 03.87277 Compute from PPP
 Longitude: West 72 38 22.40329 Enter Grid Values
 Ellipsoidal height: 42.355 m Enter MSL Height
 Datum: NAD83(2011) 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

MISSION: 26258 PILOT: FORGOT F100R2 8

PROJECT NUMBER AND NAME: .

DATE: 2015-11-23 LEICA ALS-70 SENSOR: 7178

OPERATOR: AIRCRAFT: M70 DRIVE

LINE No.	Lbl	Hdg	OPERATOR:		SCAN ANGLE	PRF kHz	FIXED GAIN	Flying Ht. (m)	TIME		REMARKS
			OND SPEED (KTS)	FREQ Hz					START	STOP	
01	101	191	175	47	40°	288		7277	1342	1350	CALM CONDITIONS
02	102	04.0	↓	↓	↓	↓	7224	1354	1402		
03	103	141	↓	↓	↓	↓	↓	1407	1414		
04	104	018	↓	↓	↓	↓	7109	1417	1427		
05	105	141	↓	↓	↓	↓	7041	1431	1439		
06	106	040	↓	↓	↓	↓	6991	1442	1452		
47	147	116	↓	↓	↓	↓	6456	1459			

STATUS	TOTAL LINES		FLOWN		AIRCRAFT		NOTES:
	FLOWN	LEFT	SITE	FERRY	STATIC START	STOP	

Quantum Spatial N 6216 Resource Drive Sheboygan Falls, WI. 53085 PHONE: 920-467-2655 FAX: 920-467-2656

Base Station Log

GPS OBSERVATION LOG

Station ID _____	Date <u>11 / 23 / 2015</u>
Project Number <u>20258 20258</u>	Julian Date _____
Project Name <u>USGS CT. RIVER</u>	Start Time <u>7:20 AM</u>
Rcvr. Type <u>NovAtel DL-V3-L1L2</u>	Stop Time <u>11:20 AM</u>
Rcvr. S/N <u>7-0141418</u>	Rcvr. File Name _____
Antenna Type <u>NovAtel</u>	Observer <u>JOE HOWELL</u>
Antenna S/N <u>NAE12110035</u>	

New or Existing Mon. New Existing
 Photo Taken: Yes No
 Monument Type: FIXED
 Spike PK Nail AM Washer
 Other _____

Height Readings:
 (Top of Monument to Bottom of Ground Plane)

Start	<u>2.0</u>	M.	_____	Ft.
Stop	<u>2.0</u>	M.	_____	Ft.
Mean	<u>2.0</u>	M.	_____	Ft.

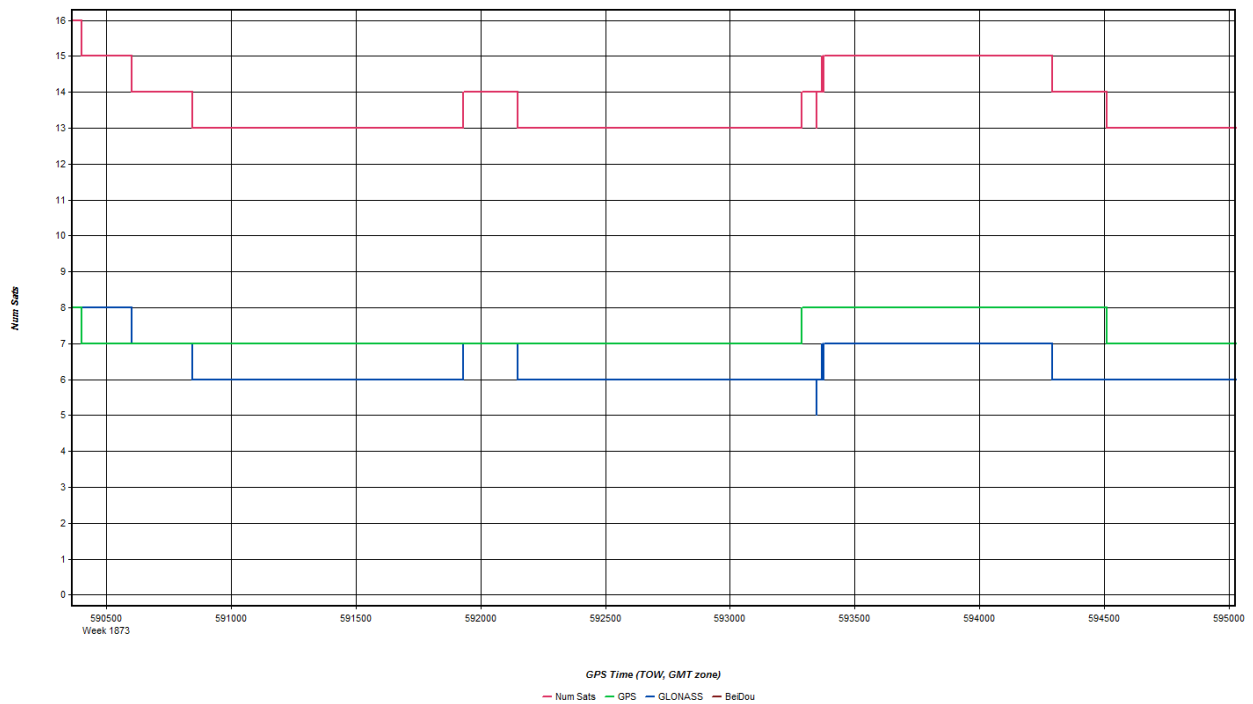
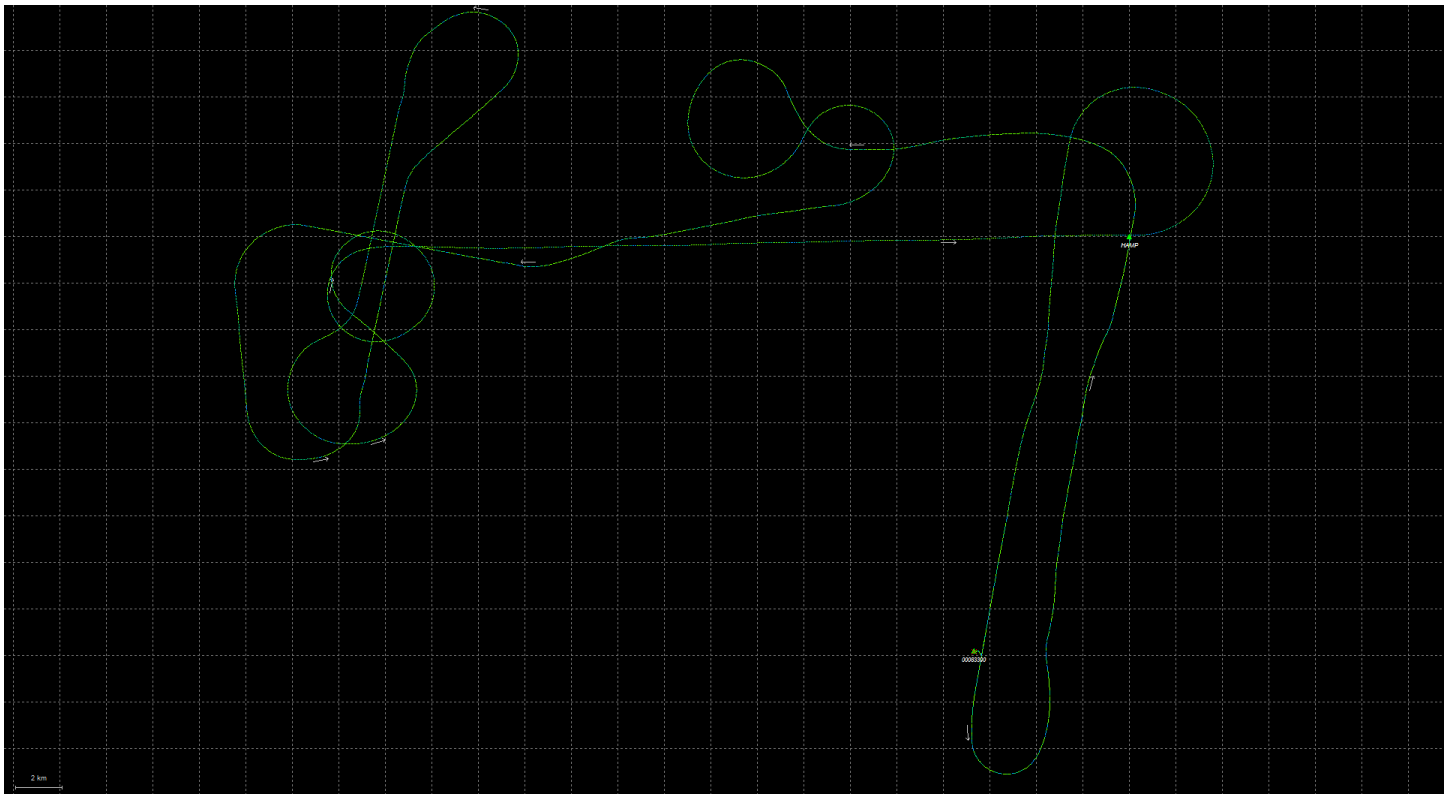
↙ N/A

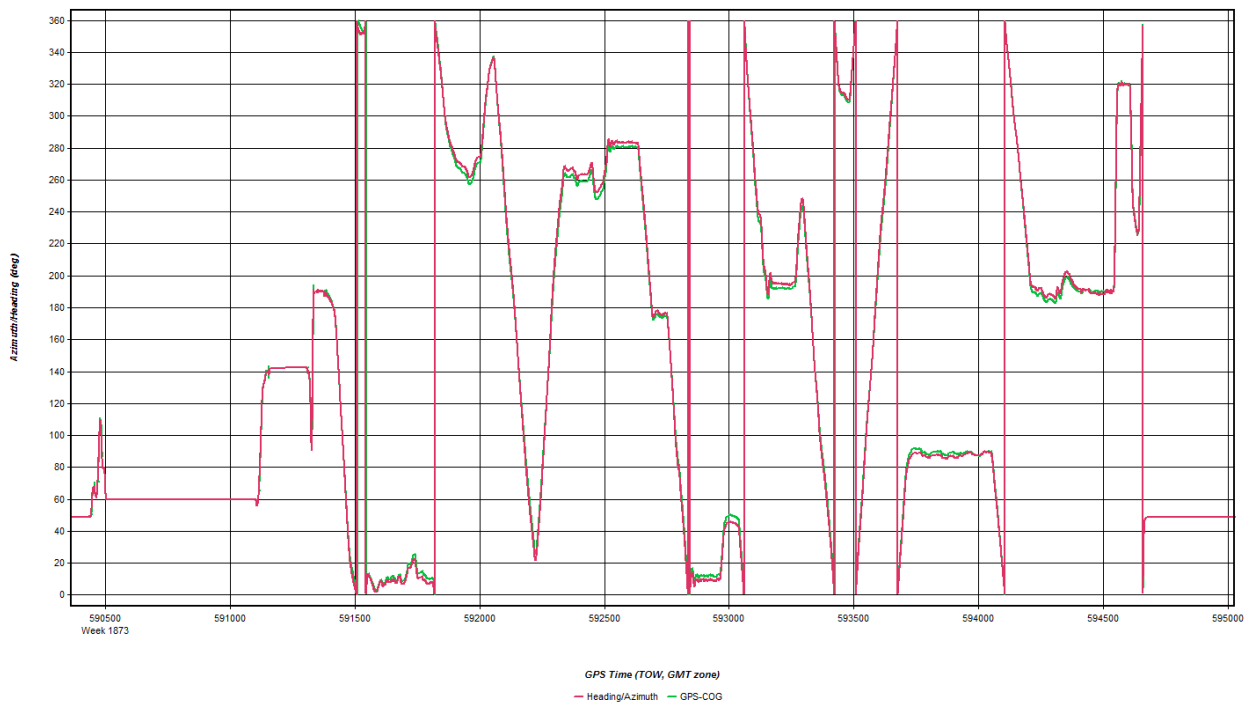
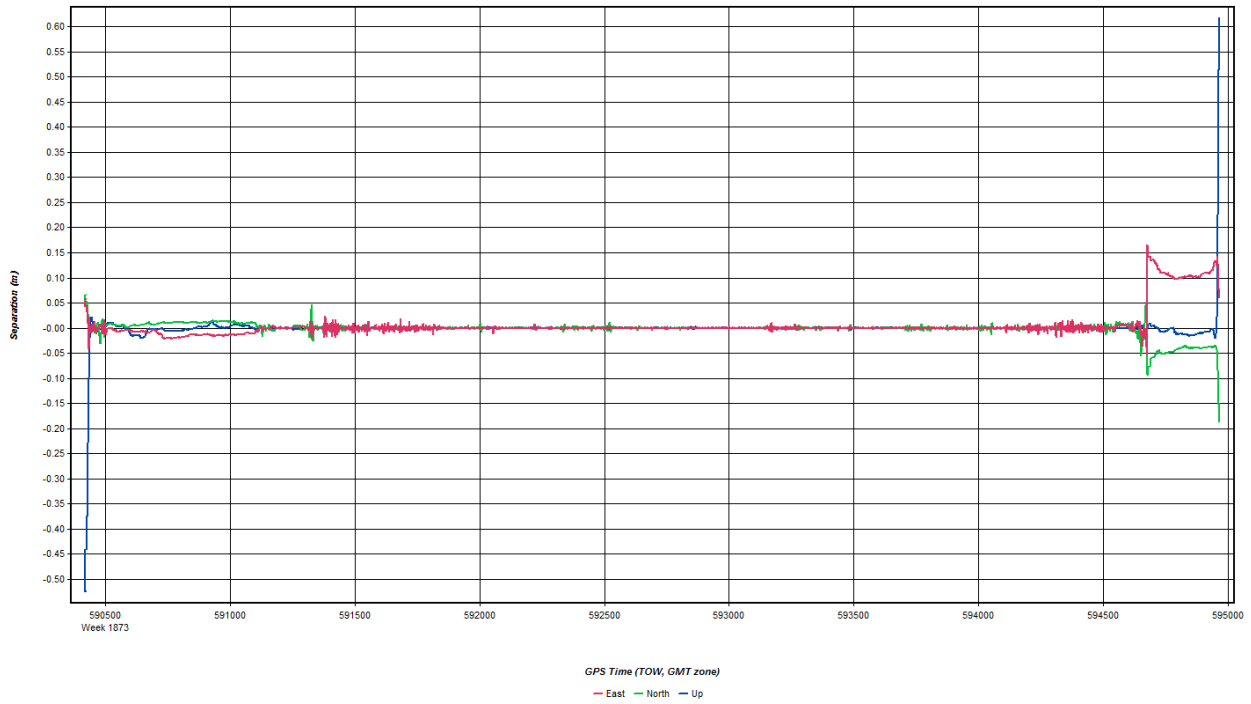
Monument Sketch and Notes: STORAGE SHEDS KLEB

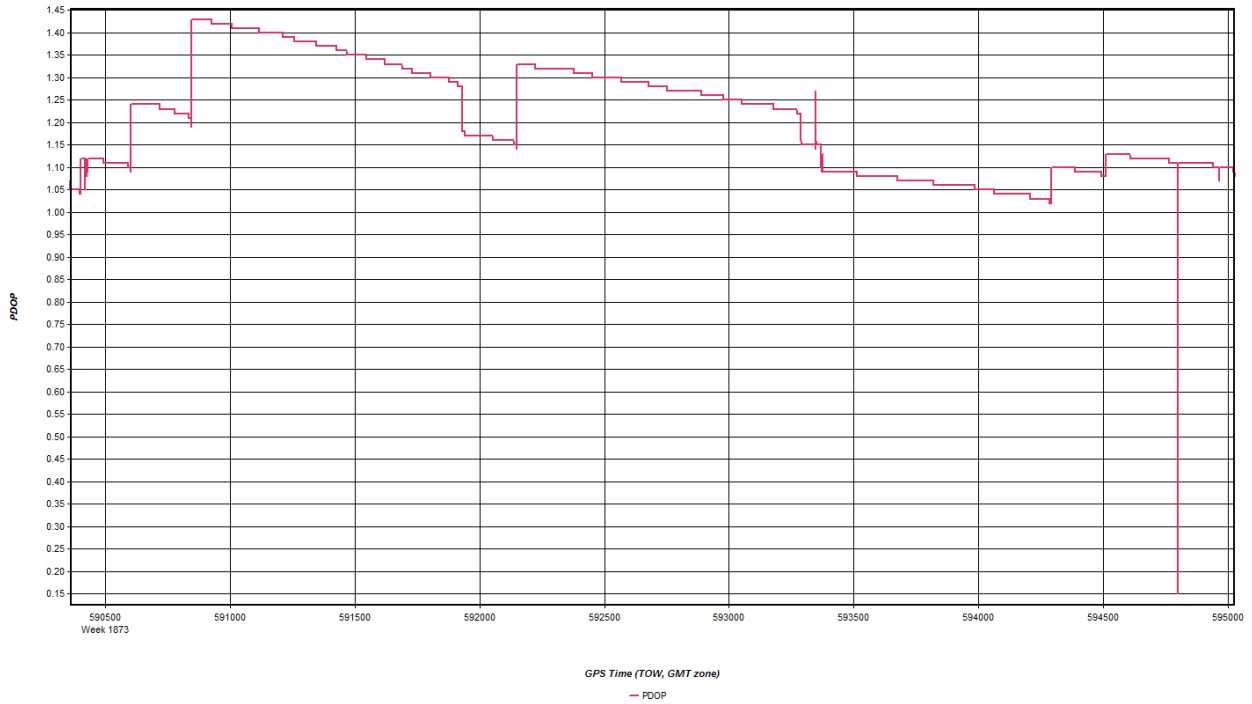
↑ N

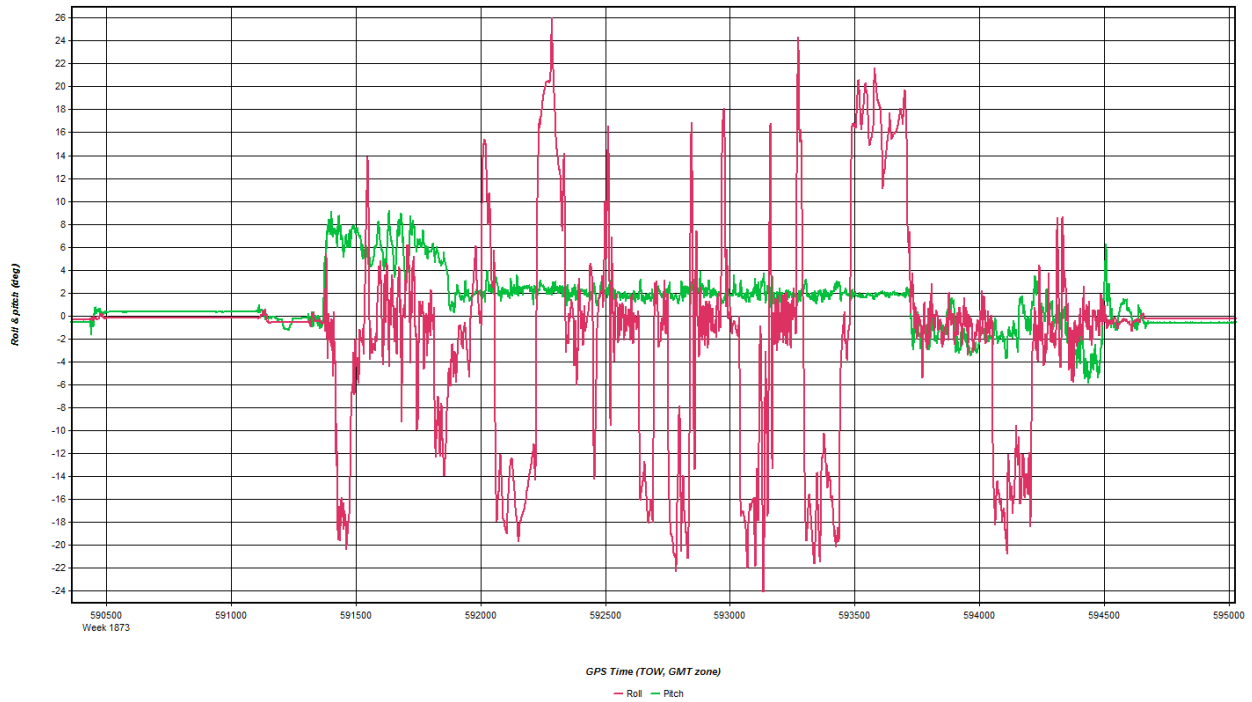
Scanned by CamScanner

Dec 5, 2015-A (N22GE, SN7178)









Coordinate/Antenna Settings

Master Remote

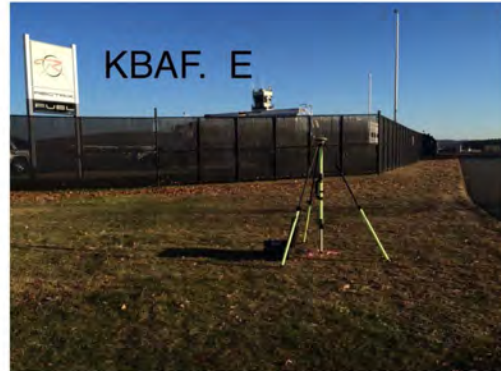
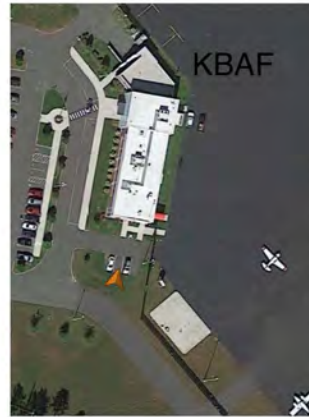
Base Station
 1: HAMP Name: HAMP Disabled
 File: S:\LIDAR\26258_MA_ME_QL1amdQL2\RawData\F1RR\201512

Coordinates
 Latitude: North 42 19 03.87277
 Longitude: West 72 38 22.40329
 Ellipsoidal height: 42.355 m
 Datum: NAD83(2011)

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

Base Station Log

KBAF-MA



Appendix B

Massachusetts Survey Report



August 26, 2015

Survey Report of
LiDAR Ground Control & Quality Control
Points

Western Massachusetts QL2 LiDAR USGS
Contract: G10PC00026
USGS Task Order: G15PD00316

Presented to:



Presented By:





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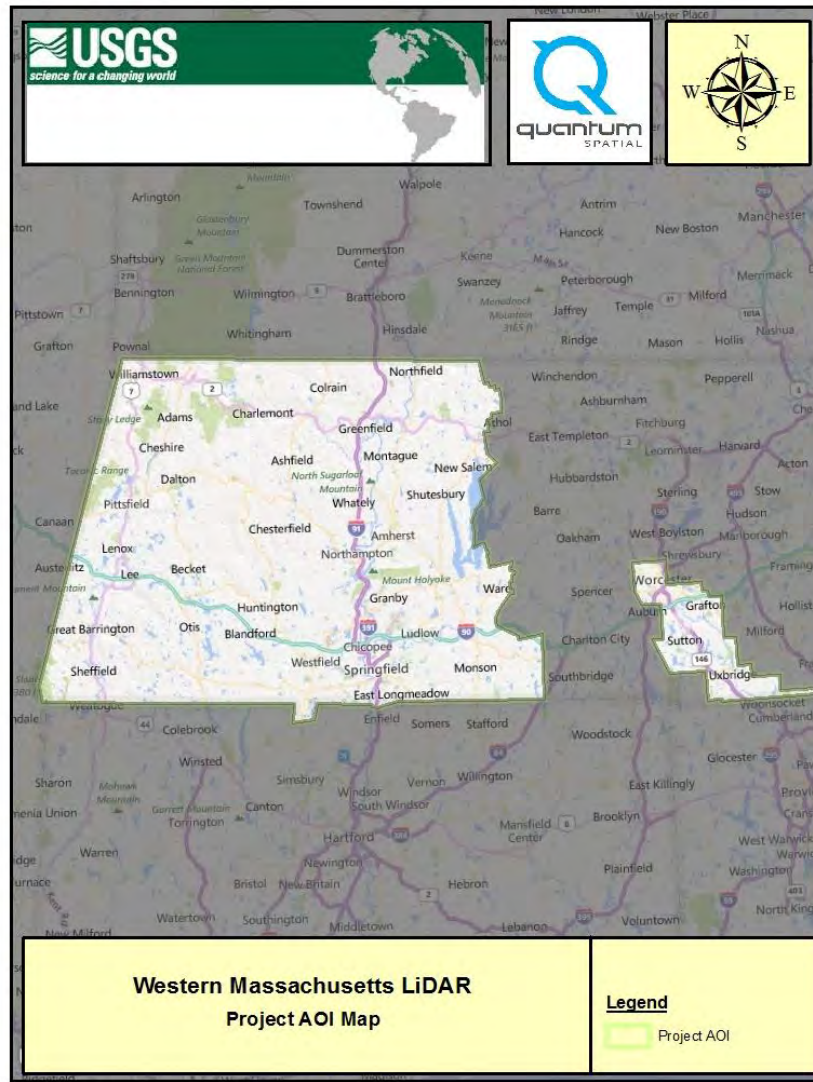


Introduction

Quantum Spatial, Inc. was contracted by USGS under task order G15PD00316 to Survey LiDAR calibration and quality control points in support of Western Massachusetts. This is the report of the technical approach used and detail of each point surveyed.

Project Area

The Project Area, shown in the figure below, consists of approximately 7,942 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 98 Non-Vegetated Vertical Assessment (NVA) and 67 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	11	Tall Weeds/Crops	19
Urban Area	77	Swamp/Marsh	10
		Forested	38

Given that approximately 1/2 of the NVA check points should also be used for horizontal accuracy testing, but that it is commonly understood that good vertical check points do not generally make for good horizontal check points, Quantum Spatial has required that 44 horizontal check points shall be used for this project, whether they are used for NVA validation, or are entirely separate. These locations have been reported under their own chapter in this report.

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 be better than 3 centimeters, both horizontally and vertically, and that VVA points be better than 5 centimeters, 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. The accuracy of each point is reported at the 95% confidence level, meaning that if the point were measured 20 times, statistically it would fall within the reported accuracy 19 times.

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:

April 07, 2015 – July 3, 2015

Equipment Used:

Trimble R7, R8, and/or R10 dual frequency GNSS receivers and a Trimble M3 2" Total Station

GNSS Methodology:

Each calibration point was measured using the real time adjusted network provided by Key Net. Each point was measured twice, for at least 8 minutes, separated by a 20 minute static session to ensure variance in the observed satellite constellations. The static base station data was post processed referencing NGS continuously operating reference stations and a weighted adjustment was performed to obtain base station coordinates. The adjustment was performed using Trimble Business Center.

The majority of the QC points were established with calibration point locations occupied by a static base station broadcasting real time kinematic corrections to a rover from which multiple measurements were taken.

For forested points, a secondary control point with line of sight to another point was established so that the resulting pair could be occupied with a total station.

**Variations from the stated GNSS methodology:**

When cellular network signals were unavailable, points were observed with static GNSS for no less than 1 hour and were post processed referencing NGS continuously operating reference stations and a weighted adjustment was performed to obtain base station coordinates. The adjustment was performed using Trimble Business Center.

Total Station Methodology:

Angles and distances to forested points were doubled and the final point accuracy was determined by adding the calculated error, estimated procedural errors, and manufacturer stated instrument error to the reported error of the point over which the total station was placed.

Overall Project Accuracy Statement

All point coordinates have been reported in the North American Datum of 1983 (NAD83 2011), UTM Zone 18 or 19 respectively in meters. Elevations are relative to the North American Vertical Datum of 1988 (NAVD 88) which were derived using the Geoid 12A model and are reported in meters.

Calibration Points

Average Horizontal RMSE at the 95% confidence level is 0.013 meter.
Average Elevation RMSE at the 95% confidence level is 0.014 meter.
Average 3 dimensional RMSE at the 95% confidence level is 0.019 meter.

NVA Points

Average Horizontal RMSE at the 95% confidence level is 0.013 meter.
Average Elevation RMSE at the 95% confidence level is 0.013 meter.
Average 3 dimensional RMSE at the 95% confidence level is 0.018 meter.

VVA Points

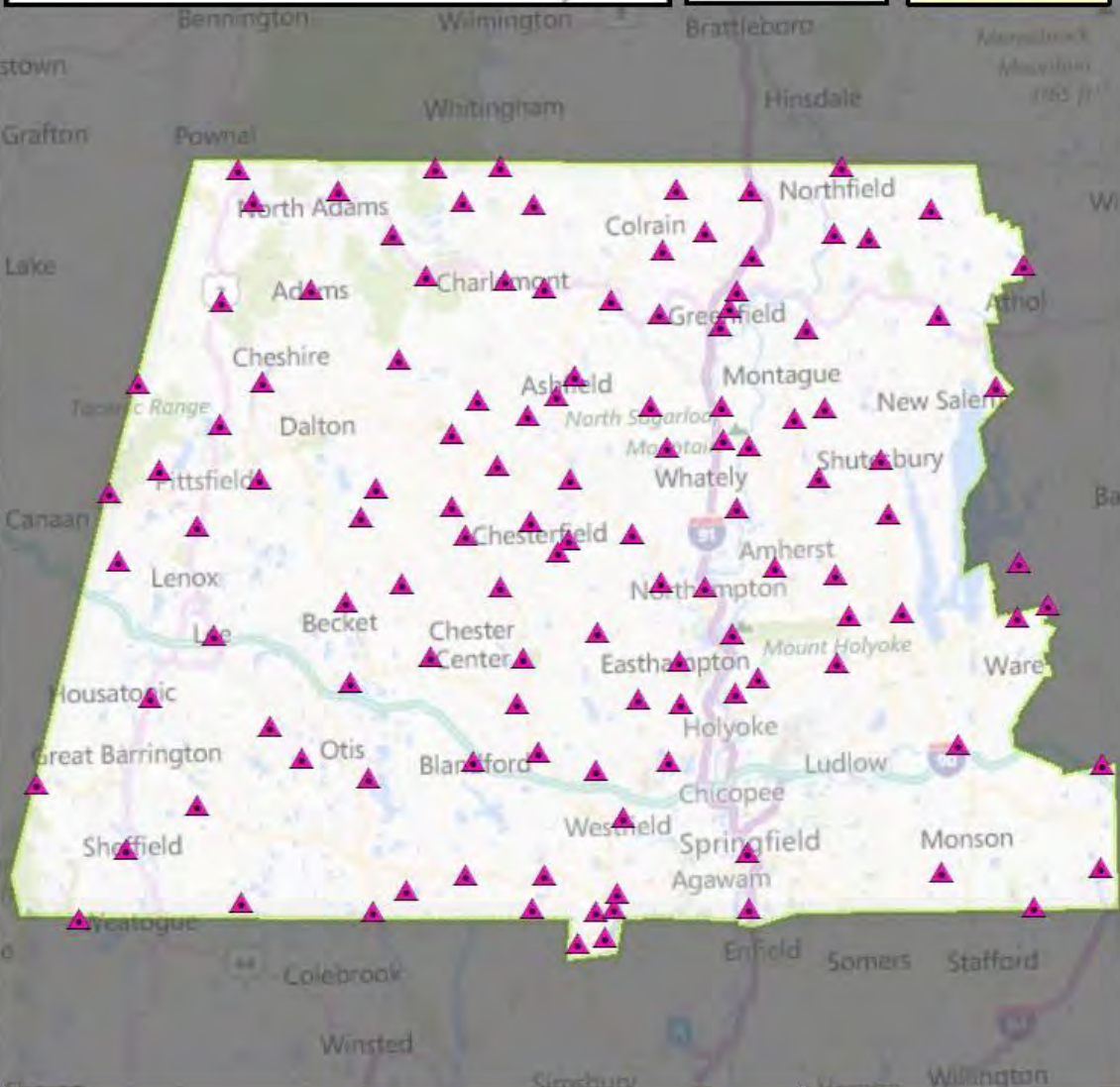
Average Horizontal RMSE at the 95% confidence level is 0.015 meter.
Average Elevation RMSE at the 95% confidence level is 0.014 meter.
Average 3 dimensional RMSE at the 95% confidence level is 0.021 meter.



UTM 18 - PROJECT AREA





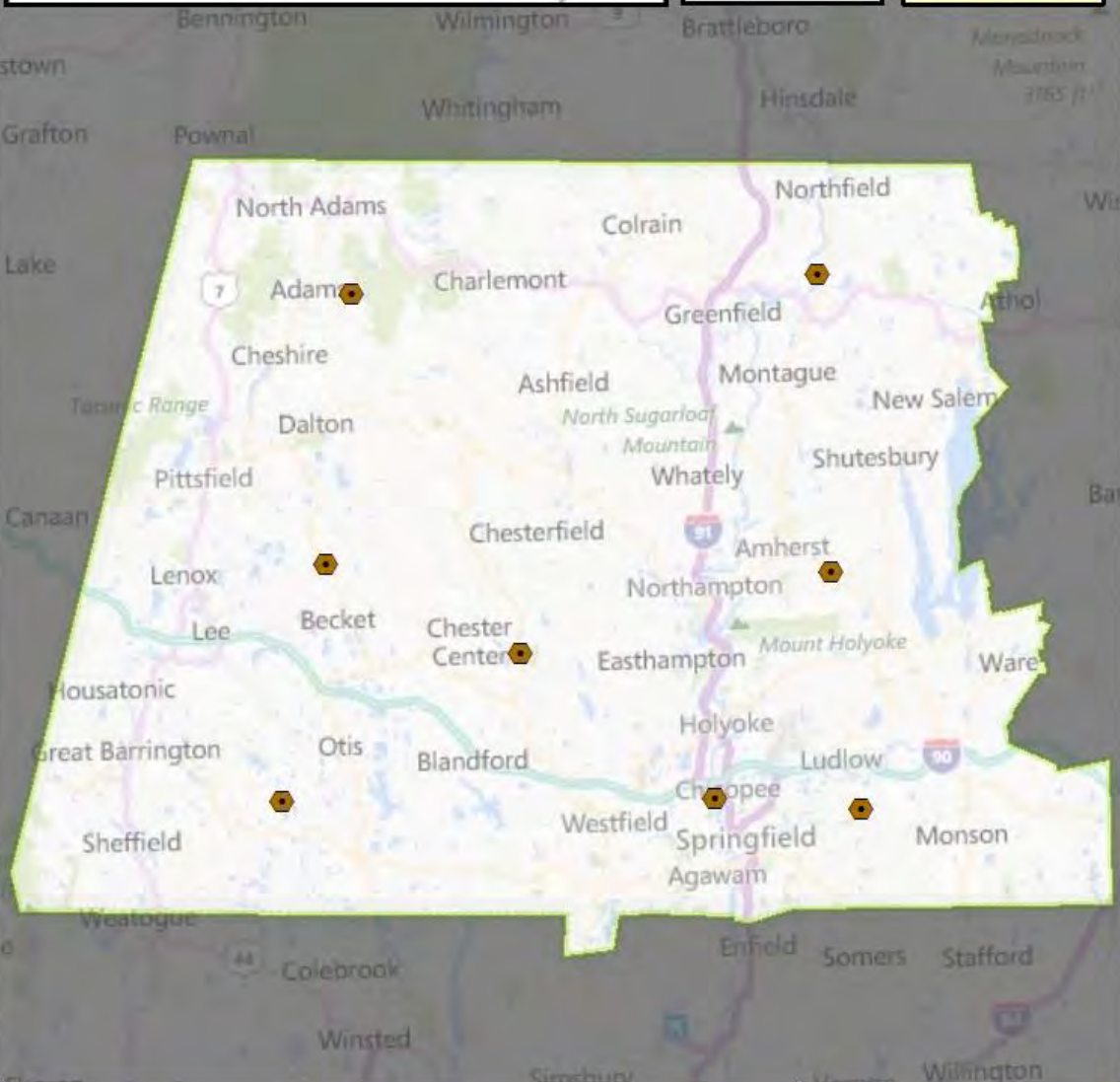
PROJECT AOI & POINT MAPS FOR UTM 18



Western Massachusetts LiDAR
UTM 18
Project AOI & Calibration Point Map

Legend

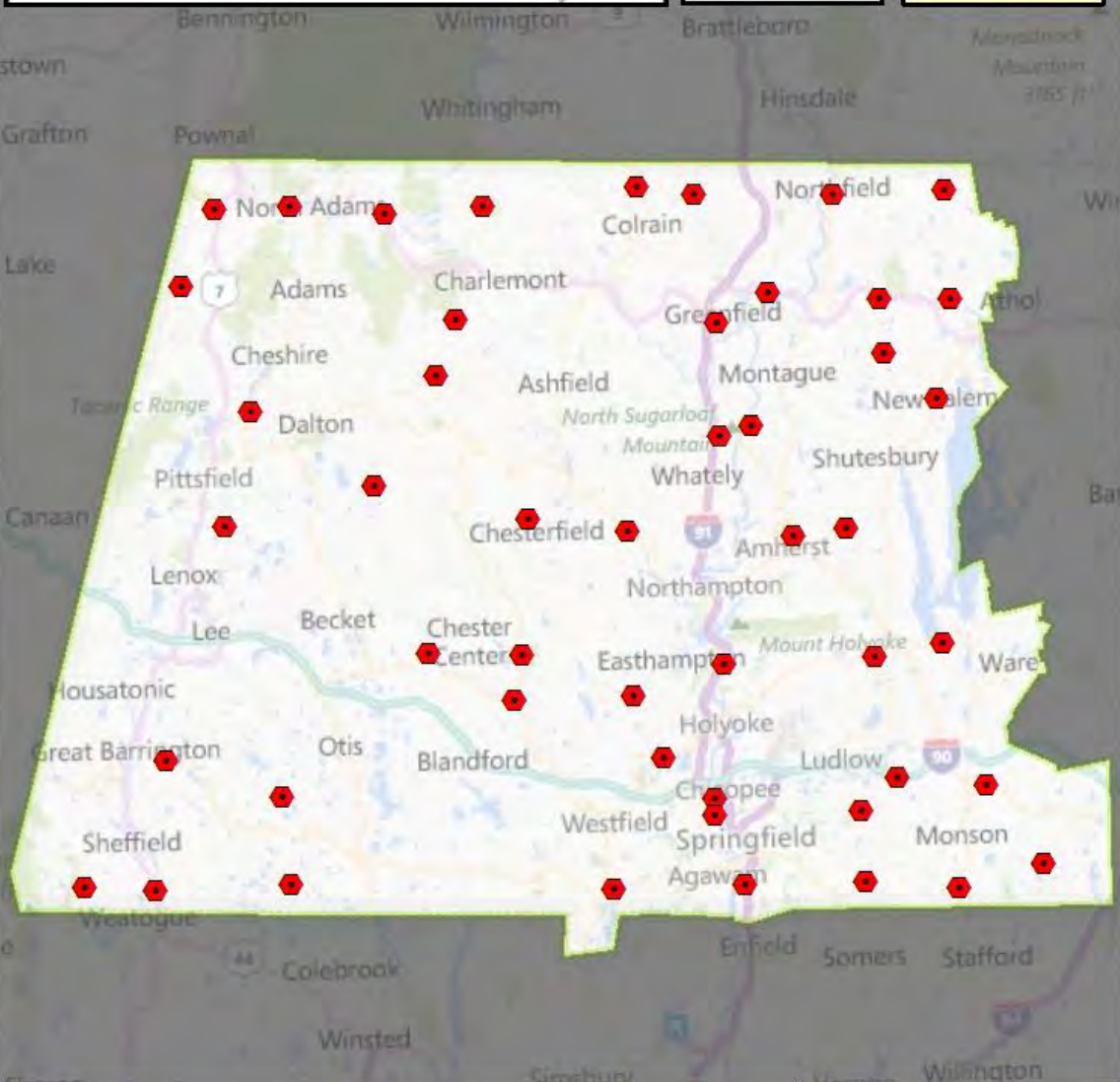
-  Calibration Point
-  Project AOI



Western Massachusetts LiDAR
UTM 18
Project AOI & Bare Earth Point Map



Legend

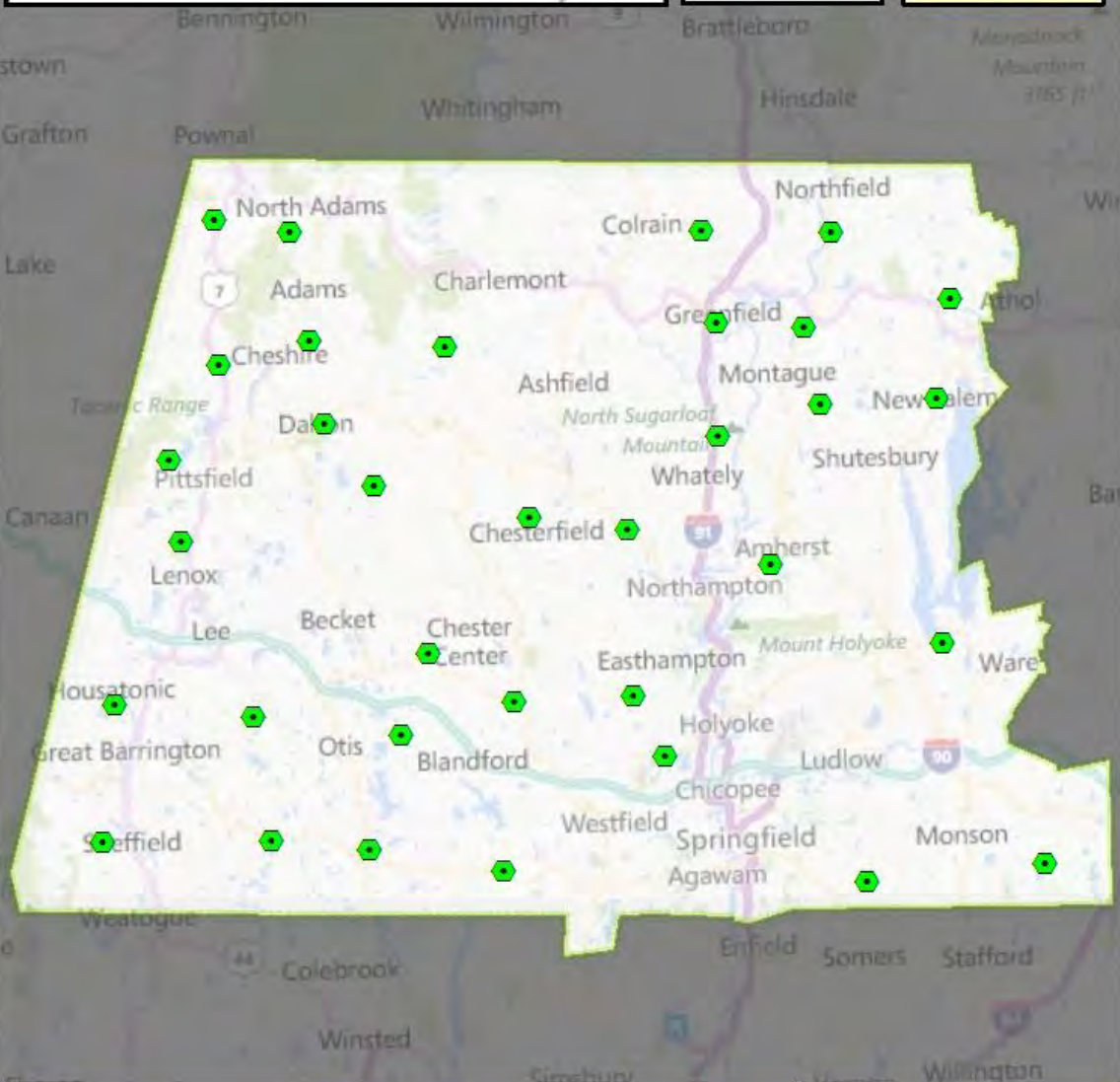
-  Bare Earth Point
-  Project AOI



Western Massachusetts LiDAR
UTM 18
Project AOI & Urban Area Point Map

Legend

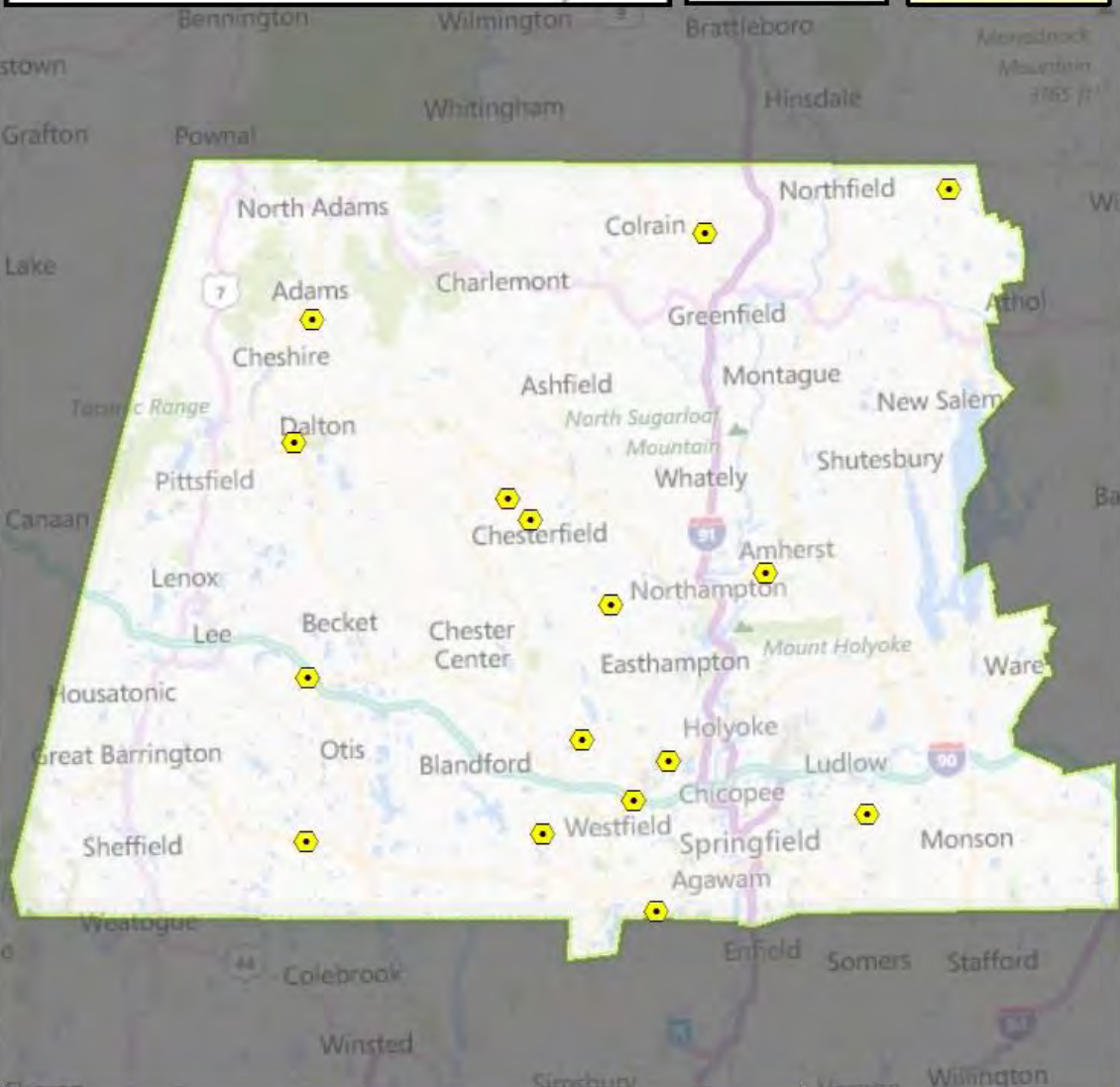
-  Urban Area Point
-  Project AOI



Western Massachusetts LiDAR
UTM 18
Project AOI & Forested Point Map

Legend

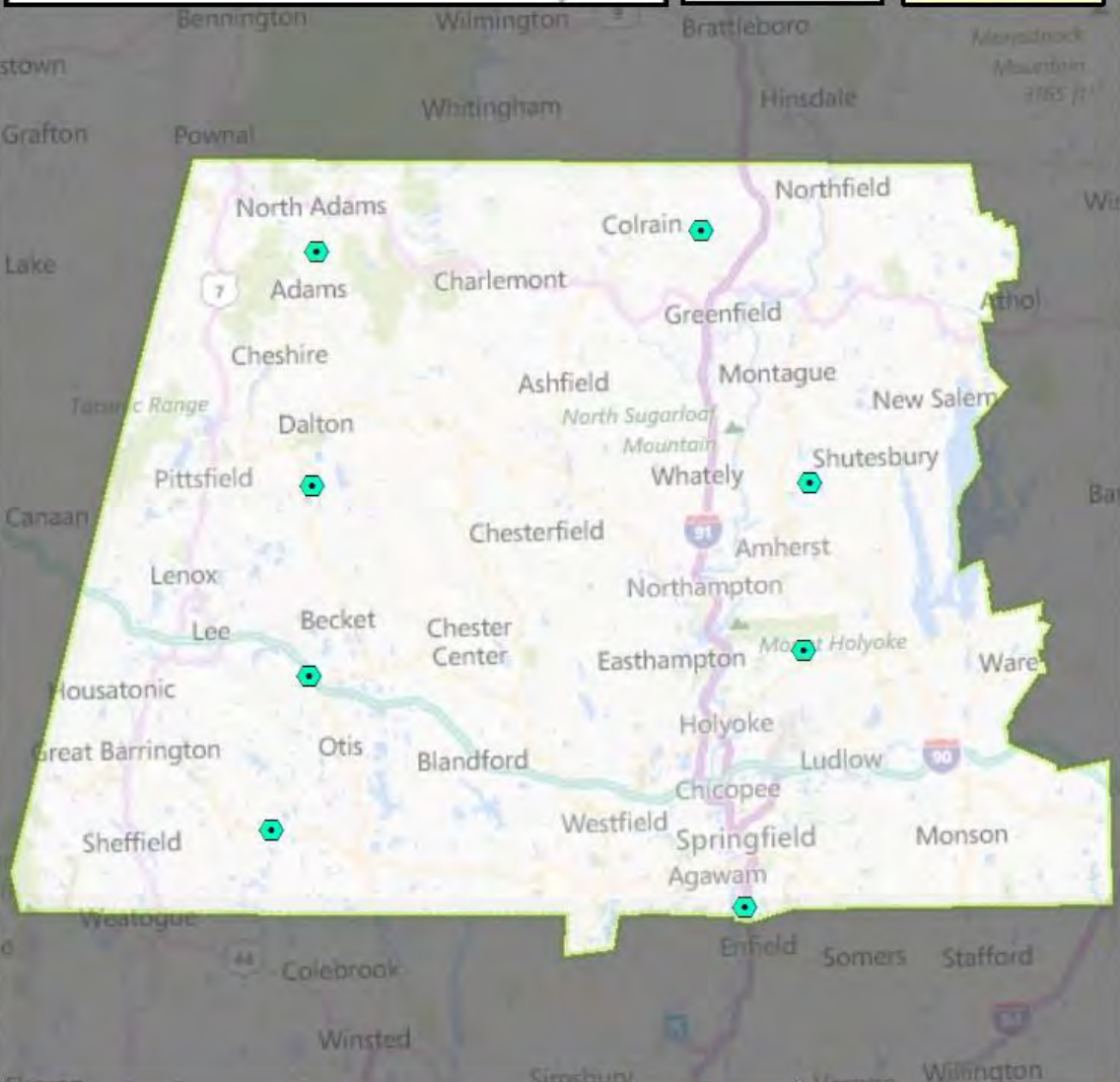
-  Forested Point
-  Project AOI



Western Massachusetts LiDAR
UTM 18
Project AOI & Tall Weeds Point Map

Legend

-  Tall Weeds Point
-  Project AOI



Western Massachusetts LiDAR
UTM 18
Project AOI & Wetlands Point Map

Legend

-  Wetlands Point
-  Project AOI



Western Massachusetts LiDAR
UTM 18
Project AOI & Horizontal Check Point Map

Legend

- Horizontal Check Point
- Project AOI



FINAL POINT COORDINATES FOR UTM 18



CALIBRATION POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 18N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation
CP001	4732941.056	646791.672	187.669
CP002	4729766.698	648364.550	191.699
CP003	4730847.836	656973.731	285.762
CP004	4733105.544	667076.080	594.887
CP005	4733322.884	673694.050	584.353
CP006	4724664.447	690491.967	295.680
CP007	4730912.712	691911.857	262.991
CP008	4730836.105	699469.989	133.570
CP009	4733305.360	708928.121	78.613
CP010	4729006.257	718085.627	285.480
CP012	4720618.597	654290.322	242.18
CP013	4726238.412	662705.368	572.757
CP014	4722150.266	666125.553	304.45
CP015	4729793.976	669895.481	488.117
CP016	4729393.539	677195.420	442.436
CP017	4726537.638	694868.994	214.628
CP018	4726452.058	708123.453	83.168
CP019	4725956.471	711709.979	350.096
CP020	4723182.401	727537.325	184.141
CP021	4719387.672	645021.503	349.515
CP022	4711161.278	649208.411	297.534
CP024	4713443.879	663350.078	541.748
CP025	4721615.528	674242.435	167.804
CP029	4716914.481	696359.472	81.096
CP030	4718876.583	697242.094	76.826
CP031	4716614.382	705329.843	99.399
CP032	4718036.885	718923.489	179.301
CP033	4710977.691	636512.628	298.873
CP034	4706851.845	644811.613	339.051
CP035	4705249.590	696625.751	61.434
CP036	4705864.984	668818.177	345.944
CP037	4709221.375	671435.935	504.263
CP041	4704671.915	699384.286	42.164
CP042	4707391.915	703963.452	120.440



CP043	4708545.790	707114.748	165.889
CP044	4703245.474	712961.790	373.269
CP045	4710735.799	724767.590	172.628
CP046	4699823.408	633519.05	436.765
CP047	4702072.975	638601.047	356.092
CP048	4701248.346	648904.771	323.409
CP049	4697334.251	659338.887	559.908
CP050	4720784.043	678332.098	161.912
CP051	4682901.247	666600.474	183.224
CP052	4696869.192	676930.749	427.177
CP053	4695596.178	687270.947	156.128
CP054	4698172.349	698094.492	39.548
CP055	4701271.976	706590.348	106.364
CP056	4697574.392	713640.901	348.288
CP057	4692708.031	634369.513	318.055
CP058	4696307.798	642589.639	347.33
CP061	4711853.403	681410.407	373.223
CP065	4690036.599	694742.056	44.409
CP066	4692107.763	701931.003	49.340
CP067	4692548.215	727052.982	238.551
CP068	4685168.565	644194.361	269.775
CP069	4680228.989	658373.115	534.139
CP074	4678126.914	675493.123	113.680
CP076	4682486.656	692136.151	55.092
CP077	4685233.355	697684.483	41.021
CP078	4680720.888	700328.774	63.537
CP079	4691306.501	708248.203	117.627
CP080	4687128.288	709688.867	106.431
CP081	4687387.058	715038.297	263.299
CP082	4686935.269	726910.308	170.717
CP083	4688249.633	730127.413	166.306
CP084	4678654.742	637697.397	264.033
CP085	4675663.172	650076.384	286.481
CP086	4670505.716	660176.347	444.707
CP087	4672153.64	670964.931	453.733
CP088	4671160.355	683544.680	111.904
CP089	4678510.410	687877.441	84.920
CP091	4678071.633	692290.746	79.659
CP092	4679123.889	697883.589	72.656
CP093	4682314.749	708391.729	83.612
CP095	4673920.394	720874.864	109.846
CP096	4671901.700	735655.016	247.604
CP097	4669857.84	625970.011	311.056
CP098	4667591.81	642532.294	306.076
CP099	4690398.280	663548.940	512.130



CP100	4672206.281	691025.492	82.452
CP103	4655960.188	630435.292	230.107
CP104	4663127.487	635158.807	207.147
CP105	4657699.022	647073.781	389.844
CP106	4658913.585	664089.588	412.406
CP107	4656731.588	660694.703	238.579
CP108	4660403.01	670083.494	359.711
CP111	4660437.930	678324.356	178.381
CP112	4657079.608	677015.938	202.483
CP113	4656764.873	683551.734	71.684
CP114	4653380.020	681715.890	118.468
CP115	4654093.287	684533.020	71.255
CP116	4656996.659	685464.559	73.758
CP117	4658618.185	685814.437	70.986
CP119	4657018.604	699306.848	15.856
CP120	4660743.569	719214.373	214.093
CP121	4657185.207	728655.996	260.696
CP122	4661271.519	735585.396	209.556
CP200	4719554.291	685162.990	149.262
CP201	4718240.241	690121.511	203.160
CP202	4724123.930	699694.665	105.742
CP203	4708651.620	696532.127	69.376
CP204	4708599.692	689226.916	168.830
CP205	4707752.091	676505.678	393.997
CP206	4709781.364	679592.310	499.474
CP207	4702638.646	673493.627	304.331
CP208	4698421.942	668803.814	502.675
CP209	4690120.180	673741.369	288.946
CP210	4685342.121	683658.010	188.646
CP211	4701094.863	680915.688	443.654
CP212	4688567.812	657785.646	366.842
CP213	4666428.176	686381.386	42.496
CP214	4673030.126	677653.325	82.869
CP215	4672413.741	653341.908	445.676
CP216	4662772.058	699200.235	17.001
CP217	4694853.643	680831.038	376.847
CP218	4693708.067	679656.651	339.820
CP219	4695463.911	670112.730	430.031
CP220	4682784.122	676068.961	138.408
CP221	4690587.554	690301.830	81.353
CP223	4704415.880	690837.815	232.733
CP224	4720479.107	698125.428	81.560



BARE EARTH POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 18N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation
BE002	4722087.332	706840.732	59.548
BE004	4691340.649	708277.690	118.592
BE006	4666772.270	711410.582	79.221
BE3	4692107.374	655926.808	406.22
BE5	4667666.388	651386.954	523.056
BE13	4720109.323	658547.589	632.31
BE317	4667869.041	696283.977	18.486
BE320	4682862.507	676059.029	138.963



URBAN AREA POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 18N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation
UA01	4728824.014	644372.331	368.477
UA02	4729036.119	652175.503	198.478
UA03	4728349.051	662077.41	669.069
UA04	4729071.171	672233.673	409.290
UA05	4731537.106	678948.280	417.015
UA06	4731061.784	688086.027	221.415
UA07	4730337.923	694010.726	300.504
UA08	4729053.759	700924.473	111.722
UA09	4730326.273	708462.451	94.544
UA10	4730894.658	719886.005	310.867
UA11	4720825.529	641044.932	325.357
UA12	4720003.018	653742.93	252.16
UA13	4719131.381	660314.805	633.058
UA14	4717407.329	669354.058	293.565
UA15	4722088.443	674750.615	198.419
UA17	4717039.740	696365.353	80.219
UA18	4720281.681	701663.048	58.306
UA19	4719650.672	713151.966	142.415
UA20	4719573.703	720575.026	204.948
UA21	4711399.856	638150.002	316.424
UA22	4707869.199	648133.302	301.839
UA24	4711631.639	667283.469	521.72
UA27	4705326.196	696670.307	61.543
UA28	4706474.358	699992.302	49.150
UA29	4713965.443	713742.676	354.982
UA30	4709253.992	719147.402	312.658
UA31	4697784.394	637010.059	347.106
UA318	4667861.513	696249.397	18.795
UA319	4682700.981	676168.176	139.586
UA32	4695966.313	645455.413	300.045
UA33	4695956.62	657025.593	487.703



UA34	4700201.997	660929.653	612.869
UA35	4696770.154	676938.156	425.681
UA36	4695624.633	687196.206	156.410
UA37	4694192.378	697239.159	42.778
UA38	4695097.669	704328.394	86.915
UA39	4695816.517	709873.362	172.680
UA40	4692081.796	713884.412	288.313
UA41	4680242.213	633608.579	231.475
UA42	4683714.327	643540.603	276.554
UA43	4680214.43	654870.782	448.918
UA44	4682868.227	666617.263	182.338
UA45	4678089.066	675461.873	114.915
UA46	4678559.430	687830.804	86.012
UA47	4681796.655	697179.939	40.824
UA48	4681496.001	704905.513	102.263
UA49	4682648.281	712775.729	148.504
UA50	4683956.653	719799.509	120.928
UA51	4671469.459	630979.582	227.85
UA52	4671865.099	639454.734	298.474
UA53	4668064.548	651504.003	515.213
UA54	4667445.904	663388.698	444.601
UA56	4672198.174	690950.627	81.925
UA57	4666156.523	696179.450	22.588
UA58	4666757.120	711434.563	78.984
UA59	4670063.678	715049.537	107.651
UA60	4669339.427	724353.259	120.065
UA61	4658649.13	630973.453	230.066
UA62	4658482.634	638306.262	206.274
UA63	4658969.74	652321.113	429.518
UA64	4656999.135	662555.03	278.786
UA65	4658277.408	674579.181	345.858
UA66	4658529.738	685786.385	72.113
UA67	4659004.463	699343.241	17.145
UA68	4659303.925	711869.632	76.136
UA69	4658735.784	721450.372	198.385
UA70	4661235.379	730288.864	282.836



FORESTED POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 18N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation
FO01	4727755.168	644382.273	292.01
FO02	4726389.366	652265.686	424.289
FO05	4726566.368	694881.725	216.870
FO06	4726449.651	708165.693	83.100
FO08	4712752.869	644848.295	372.596
FO09	4715167.56	654201.124	427.737
FO10	4714547.981	668309.788	415.966
FO11	4717061.665	696382.193	81.211
FO13	4716584.170	705352.106	98.289
FO14	4719590.541	720505.513	203.068
FO15	4702859.322	639775.285	354.141
FO16	4706643.447	655777.974	493.739
FO20	4705329.198	696591.402	60.153
FO21	4708603.384	707116.997	166.985
FO22	4709313.693	719113.931	314.278
FO23	4694458.386	641038.028	372.454
FO25	4700177.133	660922.880	613.017
FO26	4682956.990	666562.982	183.810
FO27	4695666.859	687145.802	156.237
FO29	4683931.248	719765.409	119.817
FO31	4676302.597	648450.401	307.01
FO315	4696988.481	676948.399	426.424
FO32	4674520.498	663735.819	512.202
FO33	4677606.133	634093.575	227.707
FO33	4677606.133	634093.573	227.705
FO34	4678499.078	687858.204	83.186
FO37	4663349.811	632853.357	211.915
FO38	4663537.888	650404.825	519.787
FO39	4662657.156	660472.365	418.149
FO40	4660430.658	674349.704	366.562
FO41	4672252.149	691003.362	82.174
FO43	4661249.765	730385.683	282.686
FO45	4659308.252	711969.213	76.136
FO46	4692050.696	701944.007	49.762



TALL WEEDS POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 18N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation
TW01	4717563.054	654456.145	344.705
TW02	4730903.648	719910.008	310.782
TW03	4704914.787	652528.996	353.052
TW04	4726513.408	694843.551	215.878
TW05	4680771.995	653938.924	420.311
TW06	4691430.402	701079.687	44.419
TW07	4663829.253	653761.116	480.292
TW08	4666712.292	711444.577	77.232
TW303	4668098.508	687482.013	69.403
TW314	4696956.307	676937.139	427.050
TW316	4672176.431	691009.299	82.371
TW321	4699206.378	674563.045	415.823
TW322	4688234.091	685154.815	163.112
TW323	4674278.738	682214.982	242.788
TW324	4656689.168	689816.636	64.055
TW325	4664637.816	678168.081	199.107



SWAMP POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 18N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation
SW01	4724440.778	655008.277	221.315
SW02	4726546.551	694853.661	213.732
SW03	4700291.919	654601.353	438.516
SW04	4700513.897	706039.316	99.851
SW05	4680614.779	654292.837	411.252
SW06	4683253.791	705492.533	76.090
SW07	4664680.339	650345.532	496.55
SW08	4656620.086	699298.163	15.078



PHOTO POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 18N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation	Description
PP001	4716627.580	705439.317	Hz Only	PARKING STRIPE INTERSECTION
PP002	4716386.764	705365.368	Hz Only	CL END OF STOP BAR
PP003	4719650.983	713172.332	Hz Only	CL END OF STOP BAR
PP004	4719627.614	713266.400	Hz Only	CORNER OF SIDEWALK
PP005	4709260.971	719145.414	Hz Only	CORNER OF ASPHALT
PP006	4661224.799	730293.929	Hz Only	CORNER OF ASPHALT
PP007	4661232.422	730280.414	Hz Only	CORNER OF ASPHALT
PP008	4659368.121	711942.923	Hz Only	CORNER OF ASPHALT
PP009	4692115.018	701959.449	Hz Only	CORNER OF SIDEWALK
PP010	4682625.839	712730.568	Hz Only	CORNER OF SIDEWALK
PP011	4670017.938	715045.199	Hz Only	CORNER OF SIDEWALK
PP012	4666744.645	711453.433	Hz Only	CORNER OF ASPHALT
PP013	4729080.974	672177.279	Hz Only	CORNER OF ASPHALT
PP300	4659450.722	677114.787	Hz Only	END OF PARKING STRIPE
PP301	4663181.150	698301.441	Hz Only	CL END OF STOP BAR
PP302	4665488.957	686112.607	Hz Only	TIP OF ARROW
PP304	4720592.298	698250.986	Hz Only	CL END OF STOP BAR
PP305	4720969.416	684581.954	Hz Only	CORNER OF SIDEWALK
PP306	4721631.214	674255.419	Hz Only	CORNER OF CROSSWALK
PP307	4703217.804	672719.659	Hz Only	CL END OF STOP BAR
PP308	4710058.826	682142.655	Hz Only	CL END OF STOP BAR
PP309	4705173.918	696121.823	Hz Only	TIP OF ARROW
PP310	4685430.309	683550.939	Hz Only	CORNER OF ASPHALT
PP311	4690945.032	690593.892	Hz Only	CORNER OF CROSSWALK
PP312	4692901.205	672076.541	Hz Only	CORNER OF ASPHALT
PP313	4688323.196	657842.570	Hz Only	CL END OF STOP BAR
UA05	4731537.106	678948.280	417.015	CL OF RD @ EOP



UA08	4729053.759	700924.473	111.722	CL END OF STOP BAR
UA12	4720003.018	653742.930	252.160	CORNER OF GORE
UA13	4719131.381	660314.805	633.058	CL OF RD @ EOP
UA15	4722088.443	674750.615	198.419	RD CL INTERSECTION
UA21	4711399.856	638150.002	316.424	CL END OF STOP BAR
UA31	4697784.394	637010.059	347.106	TURN LANE PIAANT STRIPE INTERSECTION
UA33	4695956.620	657025.593	487.703	RD CL INTERSECTION
UA37	4694192.378	697239.159	42.778	CL END OF STOP BAR
UA40	4692081.796	713884.412	288.313	CL END OF STOP BAR
UA41	4680242.213	633608.579	231.475	CORNER OF CONCRETE
UA42	4683714.327	643540.603	276.554	RD CL INTERSECTION
UA43	4680214.430	654870.782	448.918	CL END OF STOP BAR
UA48	4681496.001	704905.513	102.263	CL END OF STOP BAR
UA51	4671469.459	630979.582	227.850	CL END OF STOP BAR
UA54	4667445.904	663388.698	444.601	RD CL INTERSECTION
UA64	4656999.135	662555.030	278.786	RD CL INTERSECTION
UA65	4658277.408	674579.181	345.858	CL END OF STOP BAR



POINT DATA & ACCURACY LOG SHEETS



CALIBRATION POINT DATA SHEETS



Point ID	CP001
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Williamstown

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4732941.056	646791.672	187.669

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-11-2015
RMSE Hz	0.004
RMSE Z	0.013
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP002
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Williamstown

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4729766.698	648364.55	191.699

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-11-2015
RMSE Hz	0.002
RMSE Z	0.0
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP003
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Williamstown

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4730847.836	656973.731	285.762

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-11-2015
RMSE Hz	0.001
RMSE Z	0.005
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP004
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Rowe

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4733105.544	667076.080	594.887

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05/14/2015
RMSE Hz	0.010
RMSE Z	0.012
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP006
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Colrain

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4724664.447	690491.967	295.680

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/25/2015
RMSE Hz	0.014
RMSE Z	0.017
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP007
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Colrain

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4730912.712	691911.857	262.991

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2015
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP008
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Bernardston

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4730836.105	699469.989	133.570

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2015
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP009
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Northfield

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4733305.360	708928.121	78.613

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-29-2015
RMSE Hz	0.010
RMSE Z	0.013
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP010
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Mount Grace

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

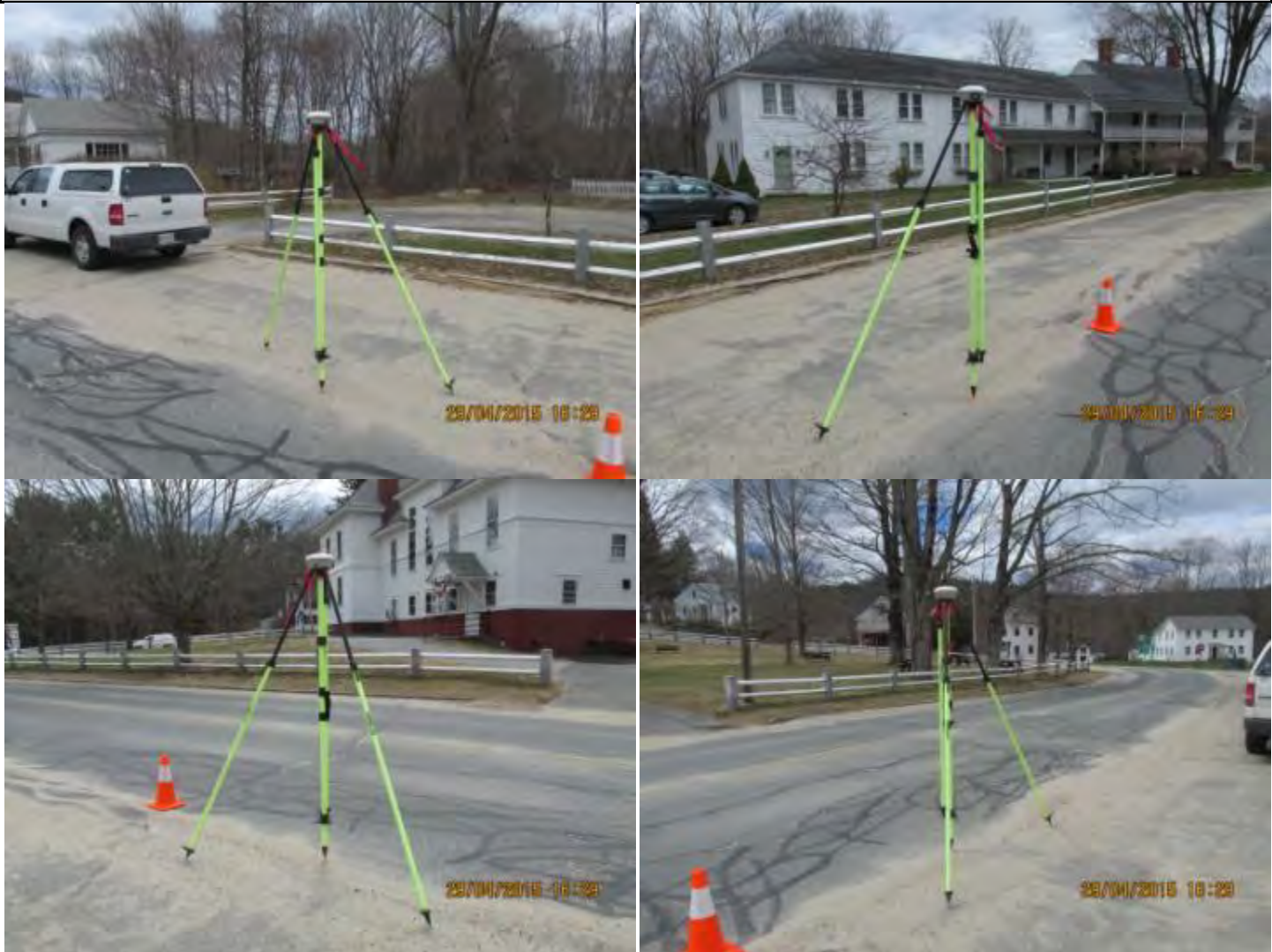
Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4729006.257	718085.627	285.480

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-29-2015
RMSE Hz	0.006
RMSE Z	0.009
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP012
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Windsor

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4720618.597	654290.322	242.18

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-09-2015
RMSE Hz	0.016
RMSE Z	0.013
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP013
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	North Adams

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4726238.412	662705.368	572.757

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-13-2015
RMSE Hz	0.024
RMSE Z	0.019
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP014
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Rowe

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4722150.266	666125.553	304.45

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-13-2015
RMSE Hz	0.024
RMSE Z	0.018
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP015
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Rowe

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4729793.976	669895.481	488.117

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-14-2015
RMSE Hz	0.010
RMSE Z	0.017
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP016
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4729393.539	677195.420	442.436

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-14-2015
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP017
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Bernardston

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4726537.638	694868.994	214.628

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2015
RMSE Hz	0.009
RMSE Z	0.011
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP018
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Northfield

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4726452.058	708123.453	83.168

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2015
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP019
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Northfield

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4725956.471	711709.979	350.096

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-29-2015
RMSE Hz	0.010
RMSE Z	0.011
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP020
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Royalston

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4723182.401	727537.325	184.141

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-02-2015
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP021
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Cheshire

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4719387.672	645021.503	349.515

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-12-2015
RMSE Hz	0.011
RMSE Z	0.012
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP022
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Cheshire

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4711161.278	649208.411	297.534

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-08-2015
RMSE Hz	0.023
RMSE Z	0.016
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP024
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Windsor

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4713443.879	663350.078	541.748

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-14-2015
RMSE Hz	0.021
RMSE Z	0.015
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP025
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Rowe

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4721615.528	674242.435	167.804

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-13-2015
RMSE Hz	0.023
RMSE Z	0.017
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP029
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Greenfield

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4716914.481	696359.472	81.096

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/25/2015
RMSE Hz	0.016
RMSE Z	0.017
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP030
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Greenfield

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4718876.583	697242.094	76.826

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2015
RMSE Hz	0.008
RMSE Z	0.011
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP031
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Millers Falls

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4716614.382	705329.843	99.399

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2015
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP032
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Orange

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4718036.885	718923.489	179.301

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2015
RMSE Hz	0.011
RMSE Z	0.013
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP033
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Hancock

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4710977.691	636512.628	298.873

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-08-2015
RMSE Hz	0.016
RMSE Z	0.011
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP034
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Cheshire

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4706851.845	644811.613	339.051

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-08-2015
RMSE Hz	0.021
RMSE Z	0.015
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP035
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Mount Toby

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4705249.590	696625.751	61.434

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/25/2015
RMSE Hz	0.016
RMSE Z	0.015
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP036
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Worthington

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4705864.984	668818.177	345.944

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/27/2015
RMSE Hz	0.016
RMSE Z	0.019
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP037
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Plainfield

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4709221.375	671435.935	504.263

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-14-2015
RMSE Hz	0.021
RMSE Z	0.015
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP041
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Mount Toby

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4704671.915	699384.286	42.164

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2015
RMSE Hz	0.011
RMSE Z	0.012
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP042
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Mount Toby

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4707391.915	703963.452	120.440

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-14-2015
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP043
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Millers Falls

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4708545.790	707114.748	165.889

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2015
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP044
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Shutesbury

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4703245.474	712961.790	373.269

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2015
RMSE Hz	0.008
RMSE Z	0.011
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP045
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Orange

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4710735.799	724767.590	172.628

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2015
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP046
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Canaan

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4699823.408	633519.05	436.765

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-06-2015
RMSE Hz	0.024
RMSE Z	0.018
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP047
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Pittsfield West

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4702072.975	638601.047	356.092

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-06-2015
RMSE Hz	0.023
RMSE Z	0.017
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP048
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Pittsfield East

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4701248.346	648904.771	323.409

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-08-2015
RMSE Hz	0.023
RMSE Z	0.016
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP049
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Berkshire
Quad	Peru

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4697334.251	659338.887	559.908

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.025
RMSE Z	0.019
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP050
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Ashfield

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4720784.043	678332.098	161.912

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/25/2015
RMSE Hz	0.017
RMSE Z	0.023
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP051
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Chester

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4682901.247	666600.474	183.224

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.013
RMSE Z	0.014
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP052
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Goshen

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4696869.192	676930.749	427.177

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.016
RMSE Z	0.016
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP053
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Williamsburg

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4695596.178	687270.947	156.128

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.015
RMSE Z	0.014
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP054
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Mount Toby

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4698172.349	698094.492	39.548

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2015
RMSE Hz	0.011
RMSE Z	0.013
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP055
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Shutesbury

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4701271.976	706590.348	106.364

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2015
RMSE Hz	0.011
RMSE Z	0.013
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP056
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Shutesbury

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4697574.392	713640.901	348.288

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-06-2015
RMSE Hz	0.010
RMSE Z	0.012
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP057
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Pittsfield West

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4692708.031	634369.513	318.055

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-06-2015
RMSE Hz	0.021
RMSE Z	0.016
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP058
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Pittsfield West

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4696307.798	642589.639	347.33

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-01-2015
RMSE Hz	0.020
RMSE Z	0.014
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP061
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Ashfield

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4711853.403	681410.407	373.223

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/28/2015
RMSE Hz	0.016
RMSE Z	0.022
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP065
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Easthampton

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4690036.599	694742.056	44.409

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-10-2015
RMSE Hz	0.010
RMSE Z	0.010
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP066
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Mount Holoke

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4692107.763	701931.003	49.340

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-10-2015
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP067
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Ware

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4692548.215	727052.982	238.551

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5407453971
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-08-2015
RMSE Hz	0.009
RMSE Z	0.012
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP068
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Stockbridge

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4685168.565	644194.361	269.775

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-01-2015
RMSE Hz	0.021
RMSE Z	0.016
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP069
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Becket

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4680228.989	658373.115	534.139

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-31-2015
RMSE Hz	0.020
RMSE Z	0.017
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP074
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Woronoco

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4678126.914	675493.123	113.680

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.016
RMSE Z	0.019
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP076
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Easthampton

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4682486.656	692136.151	55.092

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-11-2015
RMSE Hz	0.008
RMSE Z	0.011
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP077
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Mount Holyoke

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4685233.355	697684.483	41.021

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-11-2015
RMSE Hz	0.008
RMSE Z	0.011
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP078
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Mount Holyoke

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4680720.888	700328.774	63.537

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-11-2015
RMSE Hz	0.006
RMSE Z	0.011
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP079
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Belchertown

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4691306.501	708248.203	117.627

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-07-2015
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP80
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Belchertown

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4687128.288	709688.867	106.431

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-07-2015
RMSE Hz	0.011
RMSE Z	0.014
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP081
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Belchertown

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4687387.058	715038.297	263.299

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-07-2015
RMSE Hz	0.007
RMSE Z	0.011
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP082
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Ware

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4686935.269	726910.308	170.717

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-08-2015
RMSE Hz	0.008
RMSE Z	0.013
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP083
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Ware

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4688249.633	730127.413	166.306

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-08-2015
RMSE Hz	0.007
RMSE Z	0.011
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP084
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Great Barrington

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4678654.742	637697.397	264.033

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-27-2015
RMSE Hz	0.011
RMSE Z	0.008
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP085
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Monterey

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4675663.172	650076.384	286.481

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-31-2015
RMSE Hz	0.024
RMSE Z	0.018
GPS Method	Static

PHOTOS:





Point ID	CP086
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Otis

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4670505.716	660176.347	444.707

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-02-2015
RMSE Hz	0.027
RMSE Z	0.020
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP087
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Blandford

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4672153.64	670964.931	453.733

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-02-2015
RMSE Hz	0.027
RMSE Z	0.019
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP088
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Woronoco

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4671160.355	683544.680	111.904

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.016
RMSE Z	0.017
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP089
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Mount Tom

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4678510.410	687877.441	84.920

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.016
RMSE Z	0.015
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP091
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Mount Tom

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4678071.633	692290.746	79.659

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-11-2015
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP092
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Springfield North

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4679123.889	697883.589	72.656

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-11-2015
RMSE Hz	0.008
RMSE Z	0.011
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP093
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Belchertown

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4682314.749	708391.729	83.612

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-11-2015
RMSE Hz	0.006
RMSE Z	0.010
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP095
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Palmer

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4673920.394	720874.864	109.846

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-13-2015
RMSE Hz	0.008
RMSE Z	0.013
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP096
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Warren

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4671901.700	735655.016	247.604

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-08-2015
RMSE Hz	0.007
RMSE Z	0.013
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP097
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Egremont

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4669857.84	625970.011	311.056

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-23-2015
RMSE Hz	0.017
RMSE Z	0.014
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP098
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Great Barrington

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4667591.81	642532.294	306.076

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-23-2015
RMSE Hz	0.017
RMSE Z	0.014
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP099
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Becket

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4671901.700	735655.016	247.604

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.016
RMSE Z	0.017
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP100
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Mount Tom

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4672206.281	691025.492	82.452

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/22/2015
RMSE Hz	0.016
RMSE Z	0.016
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP103
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Connecticut
County	Litchfield
Quad	Bash Bish Falls

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4655960.188	630435.292	230.107

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-22-2015
RMSE Hz	0.020
RMSE Z	0.033
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP104
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Ashley Falls

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4663127.487	635158.807	207.147

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-22-2015
RMSE Hz	0.016
RMSE Z	0.013
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP105
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	South Sandisfield

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4657699.022	647073.781	389.844

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-29-2015
RMSE Hz	0.024
RMSE Z	0.017
GPS Method	Static

PHOTOS:





Point ID	CP106
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Tolland Center

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4658913.585	664089.588	412.406

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-04-2015
RMSE Hz	0.025
RMSE Z	0.020
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP107
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Tolland Center

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

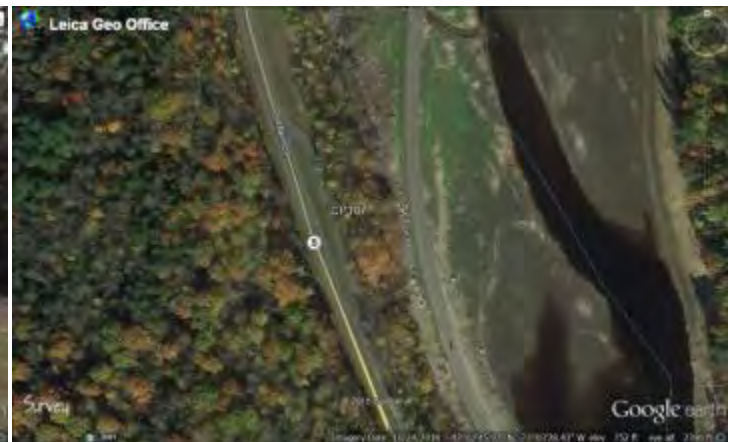
Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4656731.588	660694.703	238.579

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-29-2015
RMSE Hz	0.024
RMSE Z	0.017
GPS Method	Static

PHOTOS:





Point ID	CP108
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	West Granville

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

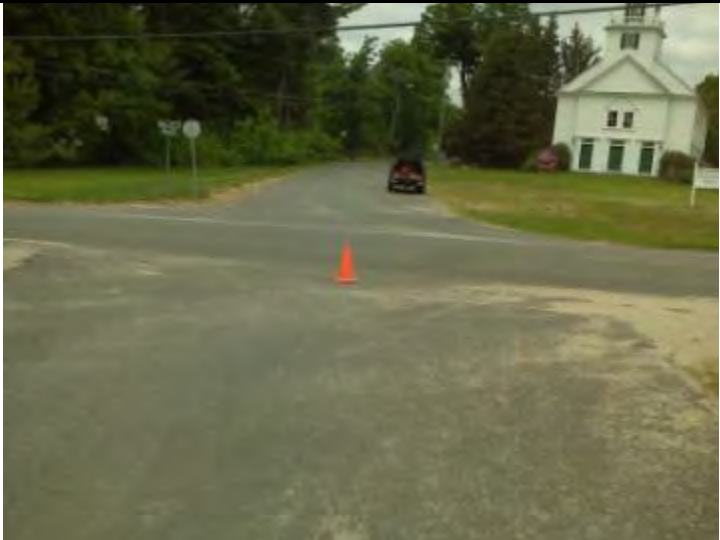
Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4660403.01	670083.494	359.711

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-04-2015
RMSE Hz	0.025
RMSE Z	0.019
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	CP111
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Southwick

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4660437.930	678324.356	178.381

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/21/2015
RMSE Hz	0.016
RMSE Z	0.021
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP112
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Southwick

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4657079.608	677015.938	202.483

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/21/2015
RMSE Hz	0.018
RMSE Z	0.024
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP113
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Southwick

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4656764.873	683551.734	71.684

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/22/2015
RMSE Hz	0.016
RMSE Z	0.019
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP114
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Southwick

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4653380.020	681715.890	118.468

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/21/2015
RMSE Hz	0.016
RMSE Z	0.021
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP115
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Southwick

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4654093.287	684533.020	71.255

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/21/2015
RMSE Hz	0.016
RMSE Z	0.019
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP116
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Southwick

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4656996.659	685464.559	73.758

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/21/2015
RMSE Hz	0.00016
RMSE Z	0.021
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP117
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	West Springfield

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4658618.185	685814.437	70.986

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/22/2015
RMSE Hz	0.016
RMSE Z	0.019
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP119
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Springfield South

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4657018.604	699306.848	15.856

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/27/2015
RMSE Hz	0.016
RMSE Z	0.020
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP120
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Monson

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4660743.569	719214.373	214.093

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-09-2015
RMSE Hz	0.006
RMSE Z	0.013
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP121
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Wales

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4657185.207	728655.996	260.696

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-09-2015
RMSE Hz	0.006
RMSE Z	0.014
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP122
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Wales

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4661271.519	735585.396	209.556

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-08-2015
RMSE Hz	0.007
RMSE Z	0.014
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP200
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Shelburne Falls

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4719554.291	685162.990	149.262

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/25/2015
RMSE Hz	0.017
RMSE Z	0.018
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP201
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Shelburne Falls

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4718240.241	690121.511	203.160

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/25/2015
RMSE Hz	0.017
RMSE Z	0.019
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP202
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Bernardston

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4724123.930	699694.665	105.742

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/25/2015
RMSE Hz	0.017
RMSE Z	0.018
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP203
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Greenfield

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4708651.620	696532.127	69.376

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/25/2015
RMSE Hz	0.016
RMSE Z	0.016
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP204
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Shelburne Falls

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4708599.692	689226.916	168.830

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/27/2015
RMSE Hz	0.016
RMSE Z	0.017
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP205
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Ashfield

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4707752.091	676505.678	393.997

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/27/2015
RMSE Hz	0.016
RMSE Z	0.017
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP206
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Ashfield

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4709781.364	679592.310	499.474

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/27/2015
RMSE Hz	0.013
RMSE Z	0.014
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP207
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Worthington

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4702638.646	673493.627	304.331

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/26/2015
RMSE Hz	0.013
RMSE Z	0.014
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP208
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Worthington

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4698421.942	668803.814	502.675

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/26/2015
RMSE Hz	0.017
RMSE Z	0.021
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP209
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Chester

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4690120.180	673741.369	288.946

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/27/2015
RMSE Hz	0.016
RMSE Z	0.016
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP210
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Westhampton

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4685342.121	683658.010	188.646

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/26/2015
RMSE Hz	0.015
RMSE Z	0.014
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP211
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Goshen

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4701094.863	680915.688	443.654

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/26/2015
RMSE Hz	0.016
RMSE Z	0.016
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP212
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Berkshire
Quad	Becket

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4690120.180	673741.369	288.946

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/27/2015
RMSE Hz	0.016
RMSE Z	0.019
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP213
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Mount Tom

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4666428.176	686381.386	42.496

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/26/2015
RMSE Hz	0.016
RMSE Z	0.018
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP214
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Woronoco

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4673030.126	677653.325	82.869

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/26/2015
RMSE Hz	0.016
RMSE Z	0.017
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP215
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Berkshire
Quad	Monterey

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4672413.741	653341.908	445.676

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/27/2015
RMSE Hz	0.013
RMSE Z	0.016
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP216
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Springfield South

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4662772.058	699200.235	17.001

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/27/2015
RMSE Hz	0.017
RMSE Z	0.019
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP217
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Goshen

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4694853.643	680831.038	376.847

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/26/2015
RMSE Hz	0.016
RMSE Z	0.015
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP218
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Westhampton

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4693708.067	679656.651	339.820

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/26/2015
RMSE Hz	0.016
RMSE Z	0.016
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP219
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Worthington

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4695463.911	670112.730	430.031

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/26/2015
RMSE Hz	0.013
RMSE Z	0.014
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP220
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Westhampton

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4682784.122	676068.961	138.408

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/26/2015
RMSE Hz	0.016
RMSE Z	0.015
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP221
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Easthampton

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4690587.554	690301.830	81.353

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/26/2015
RMSE Hz	0.014
RMSE Z	0.014
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP223
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Williamsburg

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4704415.880	690837.815	232.733

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/27/2015
RMSE Hz	0.013
RMSE Z	0.014
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP224
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Greenfield

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4720479.107	698125.428	81.560

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/25/2015
RMSE Hz	0.013
RMSE Z	0.015
GPS Method	KEYNET STATIC

PHOTOS:





NON-VEGETATION POINT DATA SHEETS



BARE EARTH POINT DATA SHEETS



Point ID	BE02
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Millers Falls

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4722087.332	706840.732	59.548

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2015
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	KEY NET STATIC

PHOTOS:





Point ID	BE3
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Beckett

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4692107.374	655926.808	406.22

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-07-2015
RMSE Hz	0.030
RMSE Z	0.021
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	BE4
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Belchertown

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4691340.649	708277.690	118.592

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-07-2015
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	KEY NET STATIC

PHOTOS:





Point ID	BE5
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Monterrey

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4667666.388	651386.954	523.056

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-26-2015
RMSE Hz	0.013
RMSE Z	0.009
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	BE6
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Hampden

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4666772.270	711410.582	79.221

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-13-2015
RMSE Hz	0.008
RMSE Z	0.012
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	BE13
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Windsor

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4720109.323	658547.589	632.31

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-09-2015
RMSE Hz	0.018
RMSE Z	0.014
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	BE317
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Springfield North

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4667869.041	696283.977	18.486

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	07/02/2015
RMSE Hz	0.007
RMSE Z	0.011
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	BE320
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	HAMPSHIRE
Quad	WEST HAMPTON

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4682862.507	676059.029	138.963

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	07/03/2015
RMSE Hz	0.009
RMSE Z	0.012
GPS Method	KEYNET STATIC

PHOTOS:





URBAN AREA POINT DATA SHEETS



Point ID	UA01
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Williamstown

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4728824.014	644372.331	368.477

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-11-2015
RMSE Hz	0.020
RMSE Z	0.019
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA02
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Williamstown

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4729036.119	652175.503	198.478

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-11-2015
RMSE Hz	0.016
RMSE Z	0.004
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA03
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	North Adams

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4728349.051	662077.41	669.069

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-13-2015
RMSE Hz	0.024
RMSE Z	0.018
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA04
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Rowe

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4729071.171	672233.673	409.290

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-14-2015
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	STATIC

PHOTOS:





Point ID	UA05
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Heath

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4731537.106	678948.280	417.015

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-14-2015
RMSE Hz	0.009
RMSE Z	0.011
Network Ties	STATIC

PHOTOS:





Point ID	UA06
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Colrain

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4731061.784	688086.027	221.415

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/25/2015
RMSE Hz	0.016
RMSE Z	0.019
GPS Method	STATIC

PHOTOS:





Point ID	UA07
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Colrain

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4661249.765	730385.683	282.686

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2015
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	STATIC

PHOTOS:





Point ID	UA08
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Bernardston

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4729053.759	700924.473	111.722

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2015
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	STATIC

PHOTOS:





Point ID	UA09
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Northfield

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4730326.273	708462.451	94.544

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-29-2015
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	STATIC

PHOTOS:





Point ID	UA10
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Mount Grace

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4730894.658	719886.005	310.867

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5407453971
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-29-2015
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	STATIC

PHOTOS:





Point ID	UA11
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Berlin

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4720825.529	641044.932	325.357

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-12-2015
RMSE Hz	0.011
RMSE Z	0.009
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA12
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Cheshire

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4720003.018	653742.93	252.16

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-09-2015
RMSE Hz	0.018
RMSE Z	0.014
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA13
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Windsor

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4719131.381	660314.805	633.058

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-09-2015
RMSE Hz	0.018
RMSE Z	0.013
GPS Method	Static

PHOTOS:





Point ID	UA14
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Plainfield

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4717407.329	669354.058	293.565

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-13-2015
RMSE Hz	0.028
RMSE Z	0.021
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA15
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Heath

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4722088.443	674750.615	198.419

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-13-2015
RMSE Hz	0.024
RMSE Z	0.019
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA17
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Greenfield

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4717039.740	696365.353	80.219

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/25/2015
RMSE Hz	0.013
RMSE Z	0.014
GPS Method	STATIC

PHOTOS:





Point ID	UA18
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Greenfield

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4720281.681	701663.048	58.306

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2015
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	STATIC

PHOTOS:





Point ID	UA19
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Millers Falls

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4719650.672	713151.966	142.415

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2015
RMSE Hz	0.006
RMSE Z	0.008
GPS Method	STATIC

PHOTOS:





Point ID	UA20
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Orange

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4719573.703	720575.026	204.948

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-02-2015
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	STATIC

PHOTOS:





Point ID	UA21
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Hancock

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4711399.856	638150.002	316.424

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-08-2015
RMSE Hz	0.027
RMSE Z	0.019
GPS Method	Static

PHOTOS:





Point ID	UA22
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Cheshire

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4707869.199	648133.302	301.839

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-08-2015
RMSE Hz	0.023
RMSE Z	0.016
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA24
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Plainfield

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4711631.639	667283.469	521.72

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-14-2015
RMSE Hz	0.020
RMSE Z	0.014
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA27
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Mount Toby

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4705326.196	696670.307	61.543

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/25/2015
RMSE Hz	0.016
RMSE Z	0.016
GPS Method	STATIC

PHOTOS:





Point ID	UA28
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Mount Toby

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4706474.358	699992.302	49.150

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2015
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	STATIC

PHOTOS:





Point ID	UA29
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Orange

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4713965.443	713742.676	354.982

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2015
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	STATIC

PHOTOS:





Point ID	UA30
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Orange

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4709253.992	719147.402	312.658

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2015
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	STATIC

PHOTOS:





Point ID	UA31
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Pittsfield West

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4697784.394	637010.059	347.106

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-06-2015
RMSE Hz	0.024
RMSE Z	0.018
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA32
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Pittsfield East

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4695966.313	645455.413	300.045

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-01-2015
RMSE Hz	0.023
RMSE Z	0.018
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA33
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Peru

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4695956.62	657025.593	487.703

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-07-2015
RMSE Hz	0.025
RMSE Z	0.019
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA34
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Berkshire
Quad	Pero

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4700201.997	660929.653	612.869

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.013
RMSE Z	0.015
GPS Method	STATIC

PHOTOS:





Point ID	UA35
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Goshen

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4696770.154	676938.156	425.681

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.013
RMSE Z	0.014
GPS Method	STATIC

PHOTOS:





Point ID	UA36
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Williamsburg

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4695624.633	687196.206	156.410

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.015
RMSE Z	0.014
GPS Method	STATIC

PHOTOS:





Point ID	UA37
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Mount Holyoke

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4694192.378	697239.159	42.778

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-10-2015
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	STATIC

PHOTOS:





Point ID	UA38
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Mount Toby

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4695097.669	704328.394	86.915

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-07-2015
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	STATIC

PHOTOS:





Point ID	UA39
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Shutesbury

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4695816.517	709873.362	172.680

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-07-2015
RMSE Hz	0.008
RMSE Z	0.011
GPS Method	STATIC

PHOTOS:





Point ID	UA40
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Belchertown

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4692081.796	713884.412	288.313

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-06-2015
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	STATIC

PHOTOS:





Point ID	UA41
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	State Line

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4680242.213	633608.579	231.475

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-26-2015
RMSE Hz	0.016
RMSE Z	0.012
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA42
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Stockbridge

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4683714.327	643540.603	276.554

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-01-2015
RMSE Hz	0.021
RMSE Z	0.016
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA43
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Becket

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4680214.43	654870.782	448.918

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-31-2015
RMSE Hz	0.020
RMSE Z	0.015
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA44
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Chester

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4682868.227	666617.263	182.338

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.016
RMSE Z	0.018
GPS Method	STATIC

PHOTOS:





Point ID	UA45
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Woronoco

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4678089.066	675461.873	114.915

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.013
RMSE Z	0.014
GPS Method	STATIC

PHOTOS:





Point ID	UA46
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Mount Tom

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4678559.430	687830.804	86.012

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.016
RMSE Z	0.015
GPS Method	STATIC

PHOTOS:





Point ID	UA47
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Mount Holyoke

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4681796.655	697179.939	40.824

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-11-2015
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	STATIC

PHOTOS:





Point ID	UA48
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Mount Holyoke

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4681496.001	704905.513	102.263

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-11-2015
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	STATIC

PHOTOS:





Point ID	UA49
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Belchertown

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4682648.281	712775.729	148.504

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-11-2015
RMSE Hz	0.007
RMSE Z	0.011
GPS Method	STATIC

PHOTOS:





Point ID	UA50
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Winsor Dam

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4683956.653	719799.509	120.928

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-07-2015
RMSE Hz	0.007
RMSE Z	0.011
GPS Method	STATIC

PHOTOS:





Point ID	UA51
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Egremont

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4671469.459	630979.582	227.85

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-23-2015
RMSE Hz	0.016
RMSE Z	0.013
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA52
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Great Barrington

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4671865.099	639454.734	298.474

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-23-2015
RMSE Hz	0.016
RMSE Z	0.013
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA53
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Monterrey

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4668064.548	651504.003	515.213

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-26-2015
RMSE Hz	0.016
RMSE Z	0.012
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA54
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Otis

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4667445.904	663388.698	444.601

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-02-2015
RMSE Hz	0.027
RMSE Z	0.020
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA56
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Mount Tom

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4672198.174	690950.627	81.925

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/24/2015
RMSE Hz	0.015
RMSE Z	0.015
GPS Method	STATIC

PHOTOS:





Point ID	UA57
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	West Springfield

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4666156.523	696179.450	22.588

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/22/2015
RMSE Hz	0.016
RMSE Z	0.018
GPS Method	STATIC

PHOTOS:





Point ID	UA58
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Hampden

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4666757.120	711434.563	78.984

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-13-2015
RMSE Hz	0.007
RMSE Z	0.012
GPS Method	STATIC

PHOTOS:





Point ID	UA59
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Ludlow

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4670063.678	715049.537	107.651

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-13-2015
RMSE Hz	0.007
RMSE Z	0.012
GPS Method	STATIC

PHOTOS:





Point ID	UA60
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Palmer

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4669339.427	724353.259	120.065

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-13-2015
RMSE Hz	0.009
RMSE Z	0.014
GPS Method	STATIC

PHOTOS:





Point ID	UA61
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Bash Bish Falls

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4658649.13	630973.453	230.066

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-22-2015
RMSE Hz	0.018
RMSE Z	0.021
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA62
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Ashley Falls

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4658482.634	638306.262	206.274

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-22-2015
RMSE Hz	0.016
RMSE Z	0.014
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA63
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	South Sandisfield

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4658969.74	652321.113	429.518

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-29-2015
RMSE Hz	0.024
RMSE Z	0.017
GPS Method	Static

PHOTOS:





Point ID	UA64
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Tolland Center

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4656999.135	662555.03	278.786

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-04-2015
RMSE Hz	0.025
RMSE Z	0.021
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA65
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	West Granville

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4658277.408	674579.181	345.858

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-04-2015
RMSE Hz	0.030
RMSE Z	0.021
GPS Method	Static

PHOTOS:





Point ID	UA66
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	West Springfield

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4658529.738	685786.385	72.113

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/22/2015
RMSE Hz	0.016
RMSE Z	0.018
GPS Method	STATIC

PHOTOS:





Point ID	UA67
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Springfield South

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4659004.463	699343.241	17.145

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/22/2015
RMSE Hz	0.016
RMSE Z	0.019
GPS Method	STATIC

PHOTOS:





Point ID	UA68
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Hampden

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4659303.925	711869.632	76.136

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-09-2015
RMSE Hz	0.006
RMSE Z	0.012
GPS Method	STATIC

PHOTOS:





Point ID	UA69
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Monson

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4658735.784	721450.372	198.385

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-09-2015
RMSE Hz	0.010
RMSE Z	0.017
GPS Method	STATIC

PHOTOS:





Point ID	UA70
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Wales

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4661235.379	730288.864	282.836

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-09-2015
RMSE Hz	0.008
RMSE Z	0.014
GPS Method	STATIC

PHOTOS:





Point ID	UA318
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Mount Tom

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4667861.513	696249.397	18.795

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	07/02/2015
RMSE Hz	0.008
RMSE Z	0.012
GPS Method	STATIC

PHOTOS:





Point ID	UA319
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	HAMPSHIRE
Quad	WEST HAMPTON

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4682700.981	676168.176	139.586

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	07/03/2015
RMSE Hz	0.016
RMSE Z	0.018
GPS Method	STATIC

PHOTOS:





VEGETATION POINT DATA SHEETS



FORESTED POINT DATA SHEETS



Point ID	FO01
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Williamstown

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4727755.168	644382.273	292.01

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-11-2015
RMSE Hz	0.014
RMSE Z	0.013
GPS Method	Static

PHOTOS:





Point ID	FO02
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Williamstown

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4726389.366	652265.686	424.289

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-11-2015
RMSE Hz	0.025
RMSE Z	0.024
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	FO05
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Bernardston

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4726566.368	694881.725	216.870

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	05-01-2015
Occupy PT	CP017
Back Sight PT	TW04
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO06
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Northfield

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4726449.651	708165.693	83.100

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	04-30-2015
Occupy PT	CP018
Back Sight PT	FO06BS
RMSE Hz	
RMSE Z	

PHOTOS:





Point ID	FO08
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Cheshire

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4712752.869	644848.295	372.596

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-08-2015
RMSE Hz	0.020
RMSE Z	0.015
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	FO09
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Windsor

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4715167.56	654201.124	427.737

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-10-2015
RMSE Hz	0.018
RMSE Z	0.016
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	FO10
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Plainfield

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4714547.981	668309.788	415.966

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-14-2015
RMSE Hz	0.001
RMSE Z	0.001
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	FO11
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Greenfield

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4717061.665	696382.193	81.211

Operator	Zeke Ingram
Instrument Model	Trimble
Date (MM-DD-YYYY)	07-01-2015
Occupy PT	UA17
Back Sight PT	CP029
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO13
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Millers Falls

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4716584.170	705352.106	98.289

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	04-30-2015
Occupy PT	CP031
Back Sight PT	FO13BS
RMSE Hz	
RMSE Z	

PHOTOS:





Point ID	FO14
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Orange

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4719590.541	720505.513	203.068

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	05-02-2015
Occupy PT	UA20
Back Sight PT	FO14BS
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO15
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Pittsfield West

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4702859.322	639775.285	354.141

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-06-2015
RMSE Hz	0.036
RMSE Z	0.019
GPS Method	Static

PHOTOS:





Point ID	FO16
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Peru

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4706643.447	655777.974	493.739

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-07-2015
RMSE Hz	0.004
RMSE Z	0.004
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	FO20
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Mount Toby

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4705329.198	696591.402	60.153

Operator	Zeke Ingram
Instrument Model	Trimble
Date (MM-DD-YYYY)	07-01-2015
Occupy PT	UA27
Back Sight PT	CP035
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO21
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Millers Falls

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4708603.384	707116.997	166.985

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	05-05-2015
Occupy PT	CP043
Back Sight PT	FO21BS
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO22
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Orange

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4709313.693	719113.931	314.278

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	05-05-2015
Occupy PT	UA30
Back Sight PT	FO22BS
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO23
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Pittsfield West

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4694458.386	641038.028	372.454

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-01-2015
RMSE Hz	0.023
RMSE Z	0.021
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	FO25
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Berkshire
Quad	Peru

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4700177.133	660922.880	613.017

Operator	Zeke Ingram
Instrument Model	Trimble
Date (MM-DD-YYYY)	07-01-2015
Occupy PT	UA34
Back Sight PT	CP049
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO26
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Chester

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4682956.990	666562.982	183.810

Operator	Zeke Ingram
Instrument Model	Trimble
Date (MM-DD-YYYY)	07-01-2015
Occupy PT	CP051
Back Sight PT	UA44
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO27
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Williamsburg

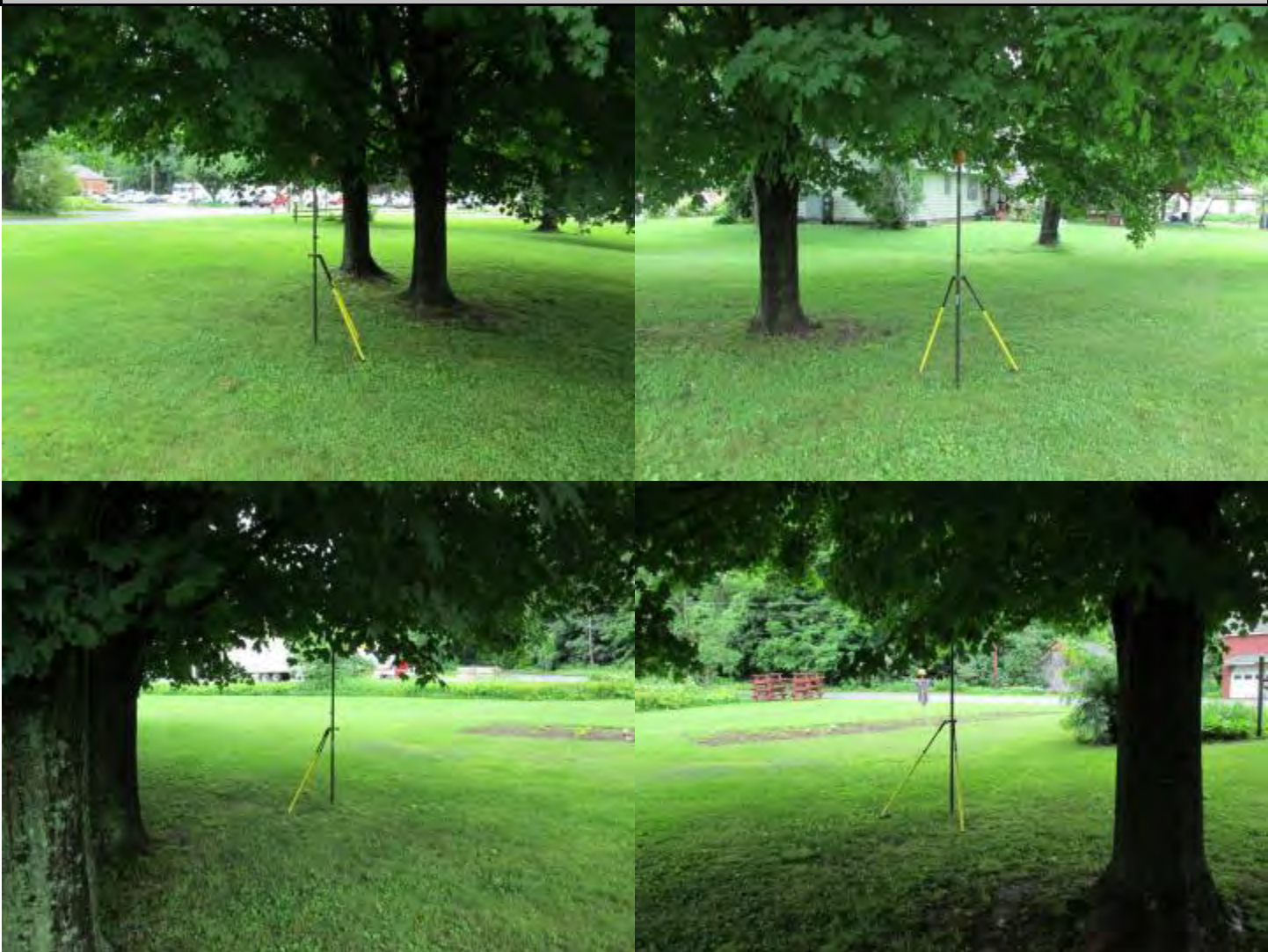
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4695666.859	687145.802	156.237

Operator	Zeke Ingram
Instrument Model	Trimble
Date (MM-DD-YYYY)	07-01-2015
Occupy PT	UA36
Back Sight PT	CP053
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO29
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Winsor Dam

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4683931.248	719765.409	119.817

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	05-07-2015
Occupy PT	FO29TP
Back Sight PT	UA50
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO31
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Monterey

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4676302.597	648450.401	307.01

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-31-2015
RMSE Hz	0.028
RMSE Z	0.019
GPS Method	Static

PHOTOS:





Point ID	FO32
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Otis

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4674520.498	663735.819	512.202

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-02-2015
RMSE Hz	0.027
RMSE Z	0.021
GPS Method	Static

PHOTOS:





Point ID	FO33
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Wonoroco

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4677606.133	634093.575	227.707

Operator	Zeke Ingram
Instrument Model	Trimble
Date (MM-DD-YYYY)	07-02-2015
Occupy PT	UA45
Back Sight PT	CO074
RMSE Hz	0.016
RMSE Z	0.015

PHOTOS:





Point ID	FO34
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Mount Tom

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4677606.133	634093.573	227.705

Operator	Zeke Ingram
Instrument Model	Trimble
Date (MM-DD-YYYY)	07-02-2015
Occupy PT	CP089
Back Sight PT	UA46
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO37
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Bash Bish Falls

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4663349.811	632853.357	211.915

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-22-2015
RMSE Hz	0.018
RMSE Z	0.018
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	FO38
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	South Sandisfield

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4663537.888	650404.825	519.787

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-29-2015
RMSE Hz	0.018
RMSE Z	0.015
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	FO39
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Tolland Center

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4662657.156	660472.365	418.149

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-29-2015
RMSE Hz	0.026
RMSE Z	0.036
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	FO40
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	West Granville

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4660430.658	674349.704	366.562

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-04-2015
RMSE Hz	0.030
RMSE Z	0.021
GPS Method	Static

PHOTOS:





Point ID	FO41
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Mount Tom

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4672252.149	691003.362	82.174

Operator	Zeke Ingram
Instrument Model	Trimble
Date (MM-DD-YYYY)	07-02-2015
Occupy PT	CP100
Back Sight PT	UA56
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO43
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Wales

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4661249.765	730385.683	282.686

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	05-09-2015
Occupy PT	FO43TP
Back Sight PT	UA70
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO45
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester South

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4659308.252	711969.213	76.136

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	04-26-2015
Occupy PT	CP127
Back Sight PT	TW11
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO46
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Milford

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4692050.696	701944.007	49.762

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	04-25-2015
Occupy PT	FO46TP
Back Sight PT	CP130
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO315
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Goshen

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4696988.481	676948.399	426.424

Operator	Zeke Ingram
Instrument Model	Trimble
Date (MM-DD-YYYY)	07-02-2015
Occupy PT	CP052
Back Sight PT	UA35
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





SWAMP/MARSH POINT DATA SHEETS



Point ID	SW01
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	North Adams

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4724440.778	655008.277	221.315

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-10-2015
RMSE Hz	0.014
RMSE Z	0.011
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	SW02
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Bernardston

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4726546.551	694853.661	213.732

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5407453971
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2015
RMSE Hz	0.016
RMSE Z	0.018
GPS Method	STATIC

PHOTOS:





Point ID	SW03
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Peru

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4700291.919	654601.353	438.516

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-07-2015
RMSE Hz	0.025
RMSE Z	0.019
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	SW04
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Shutesbury

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4700513.897	706039.316	99.851

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2015
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	STATIC

PHOTOS:





Point ID	SW05
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	East Lee

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4680614.779	654292.837	411.252

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-31-2015
RMSE Hz	0.020
RMSE Z	0.015
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	SW06
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Mount Holyoke

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4683253.791	705492.533	76.090

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-11-2015
RMSE Hz	0.009
RMSE Z	0.012
GPS Method	STATIC

PHOTOS:





Point ID	SW07
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	South Sandisfield

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4664680.339	650345.532	496.55

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-29-2015
RMSE Hz	0.018
RMSE Z	0.014
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	SW08
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Springfield South

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4656620.086	699298.163	15.078

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/22/2015
RMSE Hz	0.014
RMSE Z	0.017
GPS Method	STATIC

PHOTOS:





TALL WEED POINT DATA SHEETS



Point ID	TW01
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Windsor

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4717563.054	654456.145	344.705

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-09-2015
RMSE Hz	0.018
RMSE Z	0.014
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	TW02
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Mount Grace

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4730903.648	719910.008	310.782

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-29-2015
RMSE Hz	0.009
RMSE Z	0.011
GPS Method	STATIC

PHOTOS:





Point ID	TW03
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Pittsfield East

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4704914.787	652528.996	353.052

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-07-2015
RMSE Hz	0.021
RMSE Z	0.016
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	TW04
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Bernardston

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4726513.408	694843.551	215.878

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5407453971
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2015
RMSE Hz	0.016
RMSE Z	0.016
GPS Method	STATIC

PHOTOS:





Point ID	TW05
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	East Lee

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4680771.995	653938.924	420.311

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-31-2015
RMSE Hz	0.020
RMSE Z	0.015
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	TW06
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Mount Holyoke

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4691430.402	701079.687	44.419

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-10-2015
RMSE Hz	0.009
RMSE Z	0.011
GPS Method	STATIC

PHOTOS:





Point ID	TW07
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	South Sandisfield

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4663829.253	653761.116	480.292

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-29-2015
RMSE Hz	0.018
RMSE Z	0.014
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	TW08
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Hampden

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4666712.292	711444.577	77.232

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-13-2015
RMSE Hz	0.014
RMSE Z	0.017
GPS Method	STATIC

PHOTOS:





Point ID	TW303
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Mount Tom

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4668098.508	687482.013	69.403

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/29/2015
RMSE Hz	0.011
RMSE Z	0.012
GPS Method	STATIC

PHOTOS:





Point ID	TW314
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Goshen

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4696956.307	676937.139	427.050

Operator	Zeke Ingram
Instrument Model	Trimble
Date (MM-DD-YYYY)	07-02-2015
Occupy PT	CP052
Back Sight PT	UA35
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	TW316
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Mount Tom

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4672176.431	691009.299	82.371

Operator	Zeke Ingram
Instrument Model	Trimble
Date (MM-DD-YYYY)	07-02-2015
Occupy PT	CP100
Back Sight PT	UA56
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	TW321
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	HAMPSHIRE
Quad	WORTHINGTON

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4699206.378	674563.045	415.823

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	07/03/2015
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	STATIC

PHOTOS:





Point ID	TW322
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	HAMPSHIRE
Quad	WEST HAMPTON

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4688234.091	685154.815	163.112

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	07/03/2015
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	STATIC

PHOTOS:





Point ID	TW323
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	WORONOCO
Quad	HAMPDEN

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4674278.738	682214.982	242.788

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	07/03/2015
RMSE Hz	0.010
RMSE Z	0.012
GPS Method	STATIC

PHOTOS:





Point ID	TW324
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	WORONOCO
Quad	WEST SPRINGFIELD

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4656689.168	689816.636	64.055

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	07/03/2015
RMSE Hz	0.008
RMSE Z	0.012
GPS Method	STATIC

PHOTOS:





Point ID	TW325
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	WORONOCO
Quad	SOUTHWICK

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4664637.816	678168.081	199.107

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	07/03/2015
RMSE Hz	0.010
RMSE Z	0.012
GPS Method	STATIC

PHOTOS:





HORIZONTAL CHECK POINT DATA SHEETS



Point ID	PP001
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Millers Falls

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4716627.580	705439.317	Hz Only

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2015
RMSE Hz	0.014
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP002
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Millers Falls

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4716386.764	705365.368	Hz Only

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2015
RMSE Hz	0.015
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP003
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Millers Falls

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4719650.983	713172.332	Hz Only

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2015
RMSE Hz	0.014
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP004
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Millers Falls

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4719627.614	713266.400	Hz Only

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2015
RMSE Hz	0.016
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP005
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Shutesbury

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4709260.971	719145.414	Hz Only

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5407453971
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2015
RMSE Hz	0.013
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP006
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Wales

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4661224.799	730293.929	Hz Only

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-09-2015
RMSE Hz	0.016
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP007
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Wales

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4661232.422	730280.414	Hz Only

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-09-2015
RMSE Hz	0.014
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP008
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Hampden

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4659368.121	711942.923	Hz Only

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-09-2015
RMSE Hz	0.015
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP009
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Mount Holyoke

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4692115.018	701959.449	Hz Only

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-10-2015
RMSE Hz	0.015
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP010
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Belchertown

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4661232.422	730280.414	Hz Only

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-11-2015
RMSE Hz	0.015
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP011
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Ludlow

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4670017.938	715045.199	Hz Only

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-13-2015
RMSE Hz	0.014
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP012
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Hampden

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4666744.645	711453.433	Hz Only

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-13-2015
RMSE Hz	0.016
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP013
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Rowe

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4729080.974	672177.279	Hz Only

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-14-2015
RMSE Hz	0.016
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP300
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Southwick

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4659450.722	677114.787	Hz Only

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/29/2015
RMSE Hz	0.016
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP301
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	Springfield South

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4663181.150	698301.441	Hz Only

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/29/2015
RMSE Hz	0.015
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP302
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampden
Quad	West Springfield

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4665488.957	686112.607	Hz Only

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/29/2015
RMSE Hz	0.014
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP304
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Greenfield

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4720592.298	698250.986	Hz Only

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/30/2015
RMSE Hz	0.013
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP305
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Shelburne Falls

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4720969.416	684581.954	Hz Only

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/30/2015
RMSE Hz	0.016
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP306
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Heath

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4721631.214	674255.419	Hz Only

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/30/2015
RMSE Hz	0.017
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP307
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Worthington

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4721631.214	674255.419	Hz Only

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/30/2015
RMSE Hz	0.015
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP308
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Ashfield

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4710058.826	682142.655	Hz Only

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/30/2015
RMSE Hz	0.010
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP309
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Franklin
Quad	Mount Toby

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4705173.918	696121.823	Hz Only

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/30/2015
RMSE Hz	0.014
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP310
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Westhampton

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4685430.309	683550.939	Hz Only

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/30/2015
RMSE Hz	0.013
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP311
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Easthampton

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4690945.032	690593.892	Hz Only

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/30/2015
RMSE Hz	0.013
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP312
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Hampshire
Quad	Chester

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4692901.205	672076.541	Hz Only

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/30/2015
RMSE Hz	0.011
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	PP313
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR
State	Massachusetts
County	Berkshire
Quad	Becket

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4688323.196	657842.570	Hz Only

Operator	Kevin Chapman
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	06/30/2015
RMSE Hz	0.015
RMSE Z	N/A
GPS Method	STATIC

PHOTOS:





Point ID	UA05
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Heath

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4731537.106	678948.280	417.015

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-14-2015
RMSE Hz	0.009
RMSE Z	0.011
Network Ties	STATIC

PHOTOS:





Point ID	UA08
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Franklin
Quad	Bernardston

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4729053.759	700924.473	111.722

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2015
RMSE Hz	0.007
RMSE Z	0.009
Network Ties	

PHOTOS:





Point ID	UA12
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Cheshire

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4720003.018	653742.93	252.16

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-09-2015
RMSE Hz	0.018
RMSE Z	0.014
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA13
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Windsor

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4719131.381	660314.805	633.058

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-09-2015
RMSE Hz	0.018
RMSE Z	0.013
GPS Method	Static

PHOTOS:





Point ID	UA15
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Heath

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4722088.443	674750.615	198.419

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-13-2015
RMSE Hz	0.024
RMSE Z	0.019
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA21
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Hancock

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4711399.856	638150.002	316.424

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-08-2015
RMSE Hz	0.027
RMSE Z	0.019
GPS Method	Static

PHOTOS:





Point ID	UA31
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Pittsfield West

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4697784.394	637010.059	347.106

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-06-2015
RMSE Hz	0.024
RMSE Z	0.018
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA33
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Peru

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4695956.62	657025.593	487.703

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-07-2015
RMSE Hz	0.025
RMSE Z	0.019
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA37
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Mount Holyoke

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4694192.378	697239.159	42.778

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-10-2015
RMSE Hz	0.008
RMSE Z	0.010
Network Ties	

PHOTOS:





Point ID	UA40
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampshire
Quad	Belchertown

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4692081.796	713884.412	288.313

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-06-2015
RMSE Hz	0.007
RMSE Z	0.010
Network Ties	

PHOTOS:





Point ID	UA41
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	State Line

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4680242.213	633608.579	231.475

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-26-2015
RMSE Hz	0.016
RMSE Z	0.012
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA42
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Stockbridge

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4683714.327	643540.603	276.554

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-01-2015
RMSE Hz	0.021
RMSE Z	0.016
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA43
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Becket

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4680214.43	654870.782	448.918

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-31-2015
RMSE Hz	0.020
RMSE Z	0.015
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA51
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Berkshire
Quad	Egremont

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

Coordinate System
NAD83(2011)
UTM – Zone 18N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4671469.459	630979.582	227.85

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	05-23-2015
RMSE Hz	0.016
RMSE Z	0.013
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA54
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Otis

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4667445.904	663388.698	444.601

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-02-2015
RMSE Hz	0.027
RMSE Z	0.020
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA64
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	Tolland Center

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

Coordinate System	
NAD83(2011)	
UTM – Zone 18N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4656999.135	662555.03	278.786

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-04-2015
RMSE Hz	0.025
RMSE Z	0.021
GPS Method	RTK w/ Leica Base

PHOTOS:





Point ID	UA65
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Hampden
Quad	West Granville

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

Coordinate System	NAD83(2011)
	UTM – Zone 18N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4658277.408	674579.181	345.858

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	06-04-2015
RMSE Hz	0.030
RMSE Z	0.021
GPS Method	Static

PHOTOS:

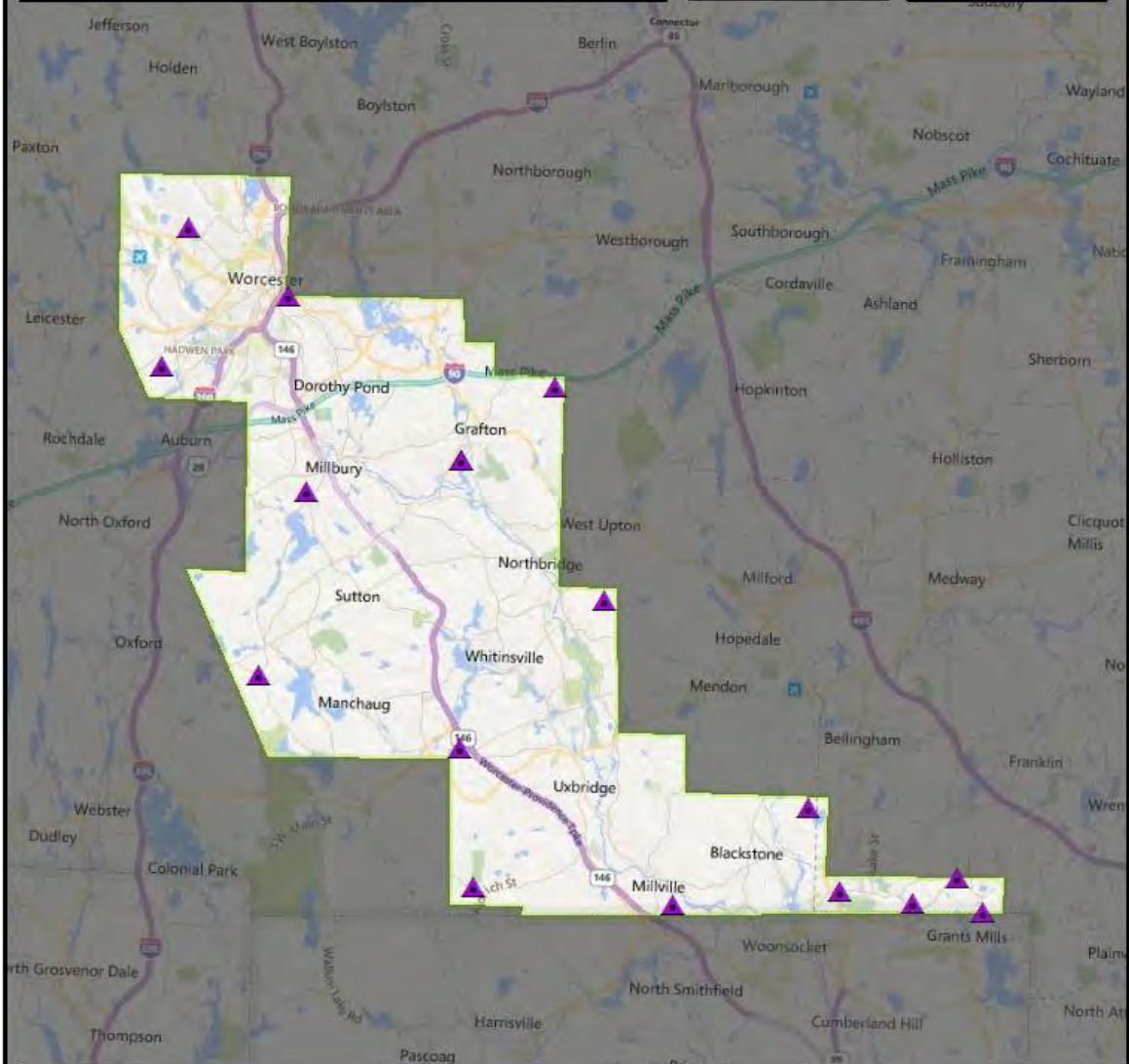




UTM 19 - PROJECT AREA





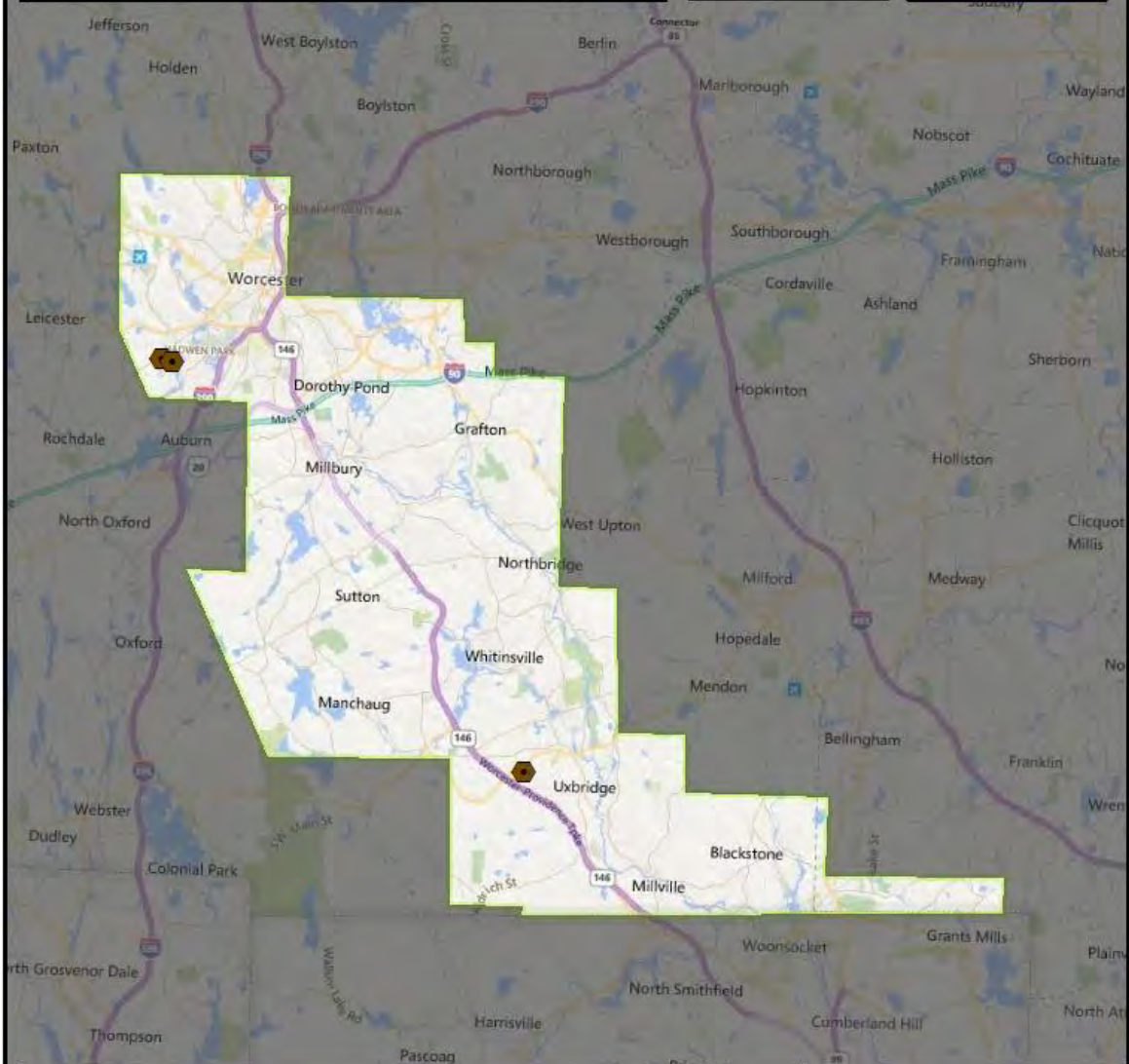
PROJECT AOI & POINT MAPS FOR UTM 19



Western Massachusetts LiDAR
UTM 19
Project AOI & Calibration Point Map

Legend

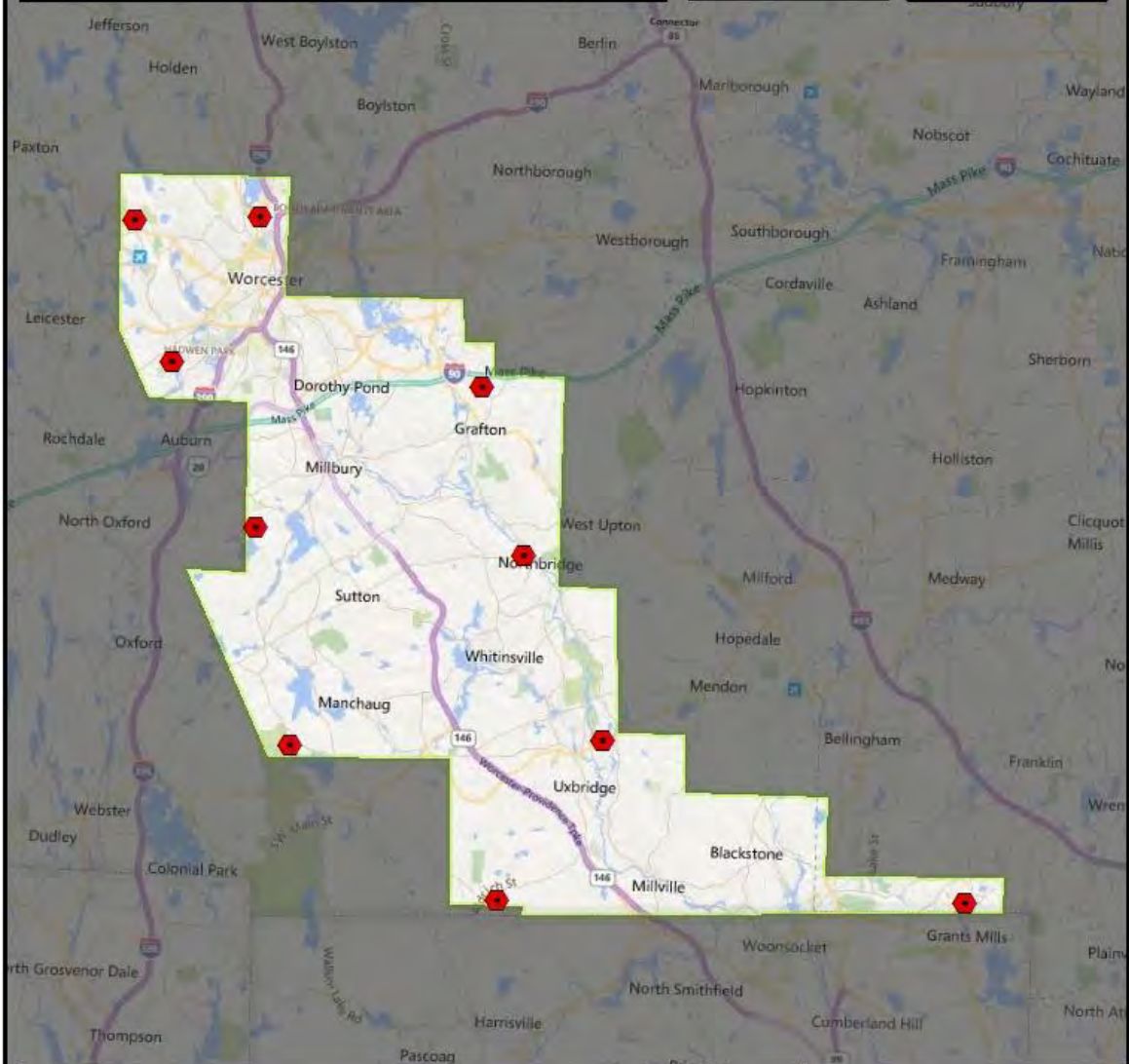
-  Calibration Point
-  Project AOI



Western Massachusetts LiDAR
UTM 19
Project AOI & Bare Earth Point Map



Legend

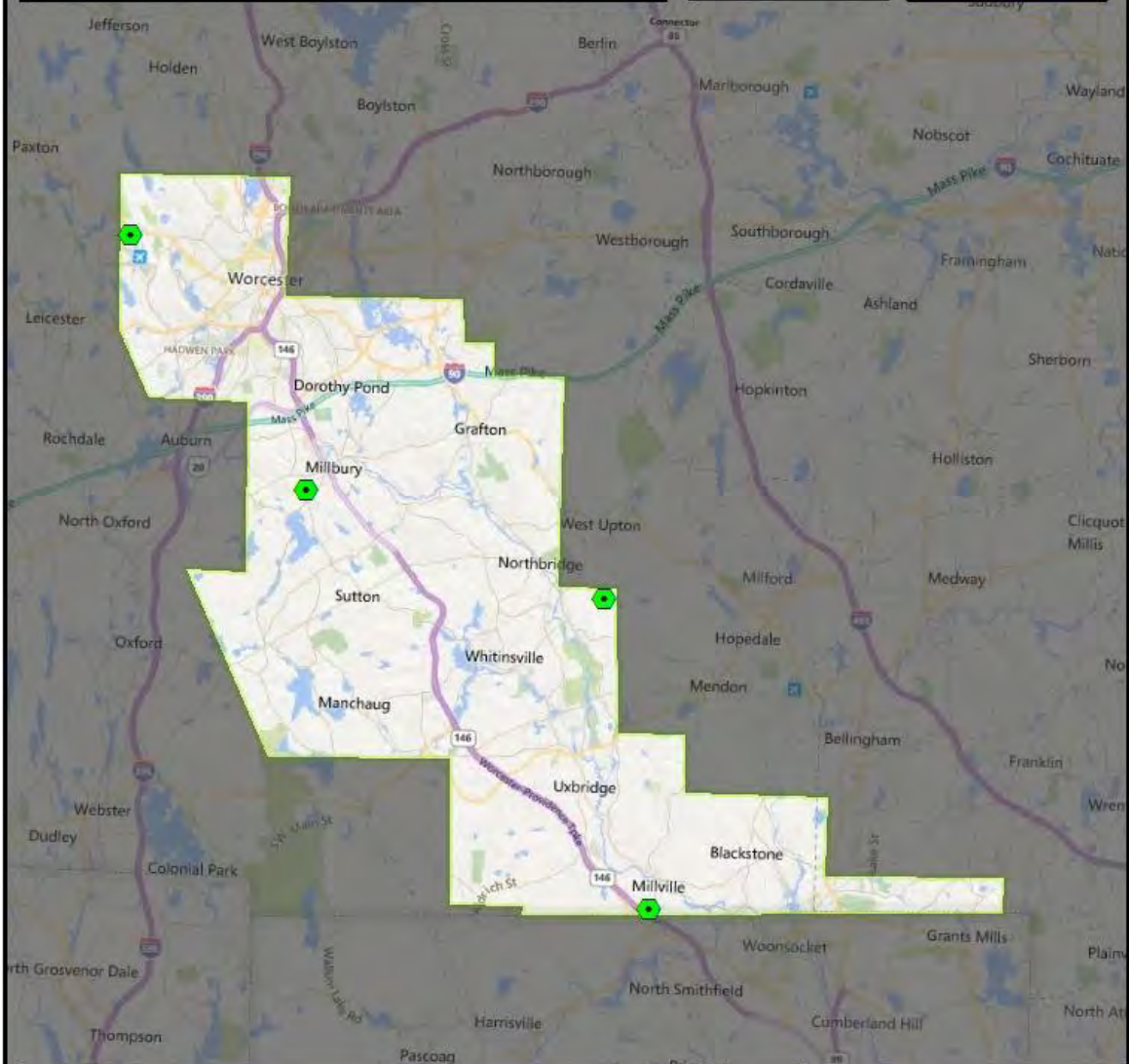
-  Bare Earth Point
-  Project AOI



Western Massachusetts LiDAR
UTM 19
Project AOI & Urban Area Point Map

Legend

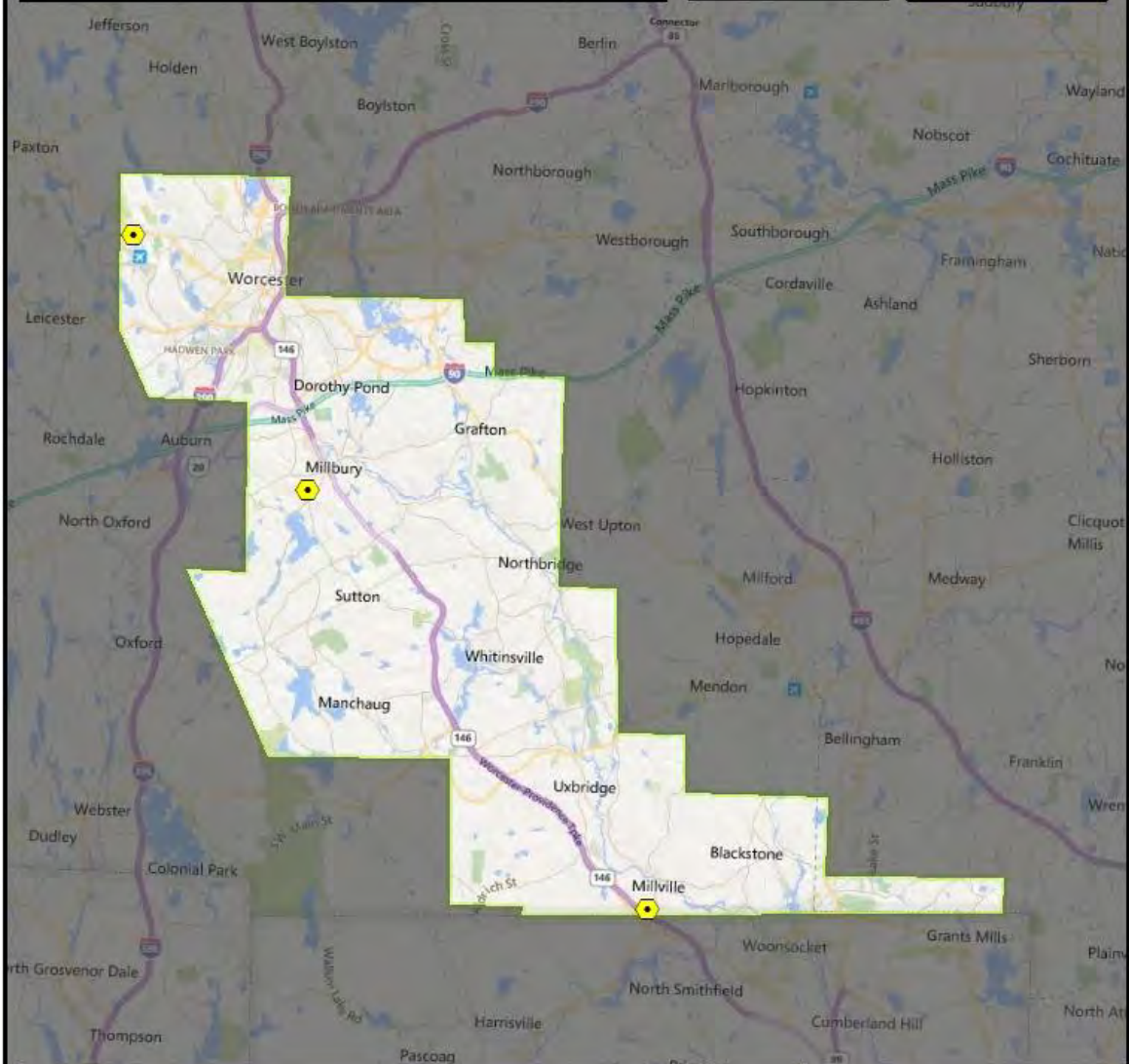
-  Urban Area Point
-  Project AOI



Western Massachusetts LiDAR
UTM 19
Project AOI & Forested Point Map

Legend

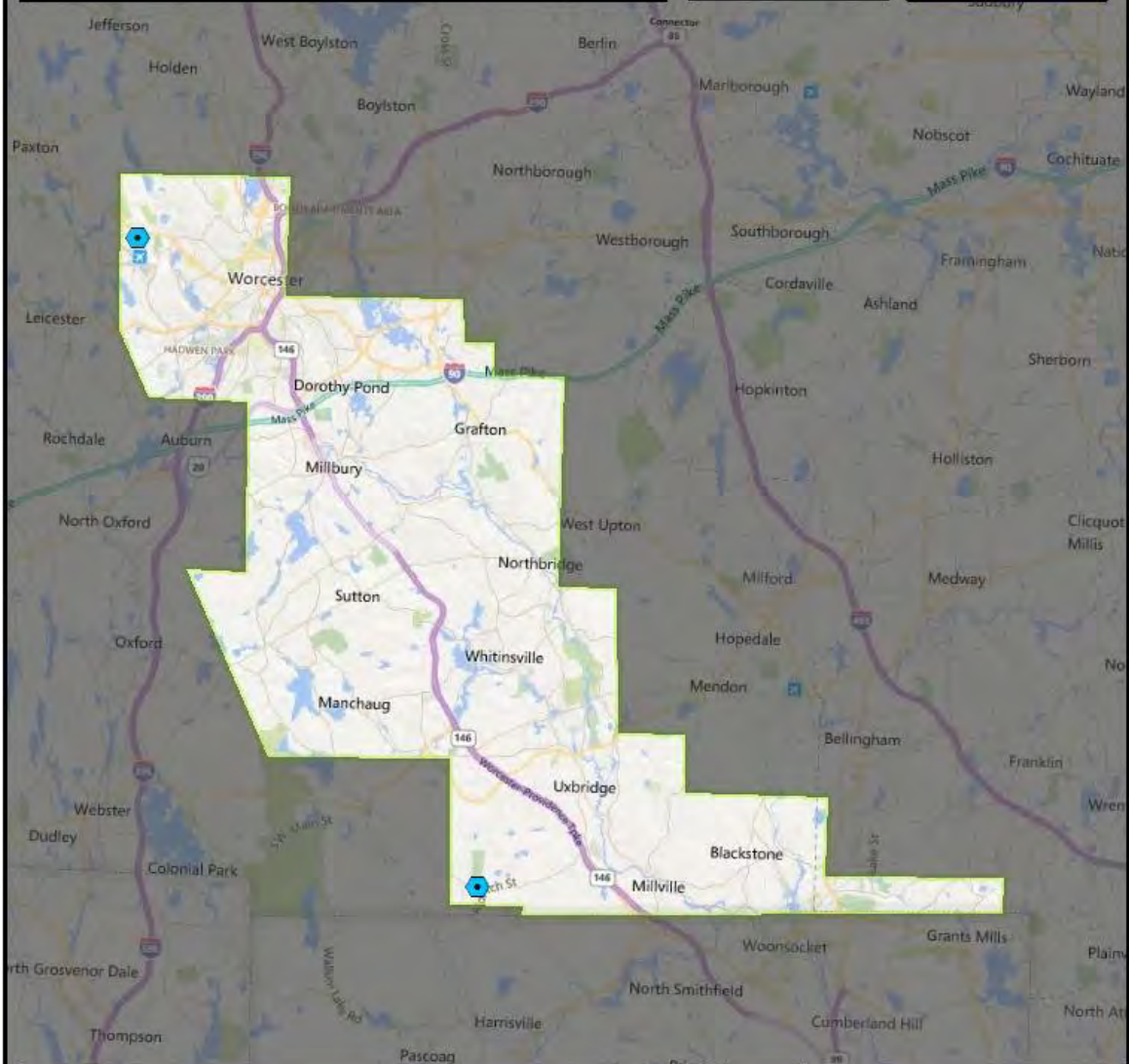
-  Forested Point
-  Project AOI



Western Massachusetts LiDAR
UTM 19
Project AOI & Tall Weeds Point Map

Legend

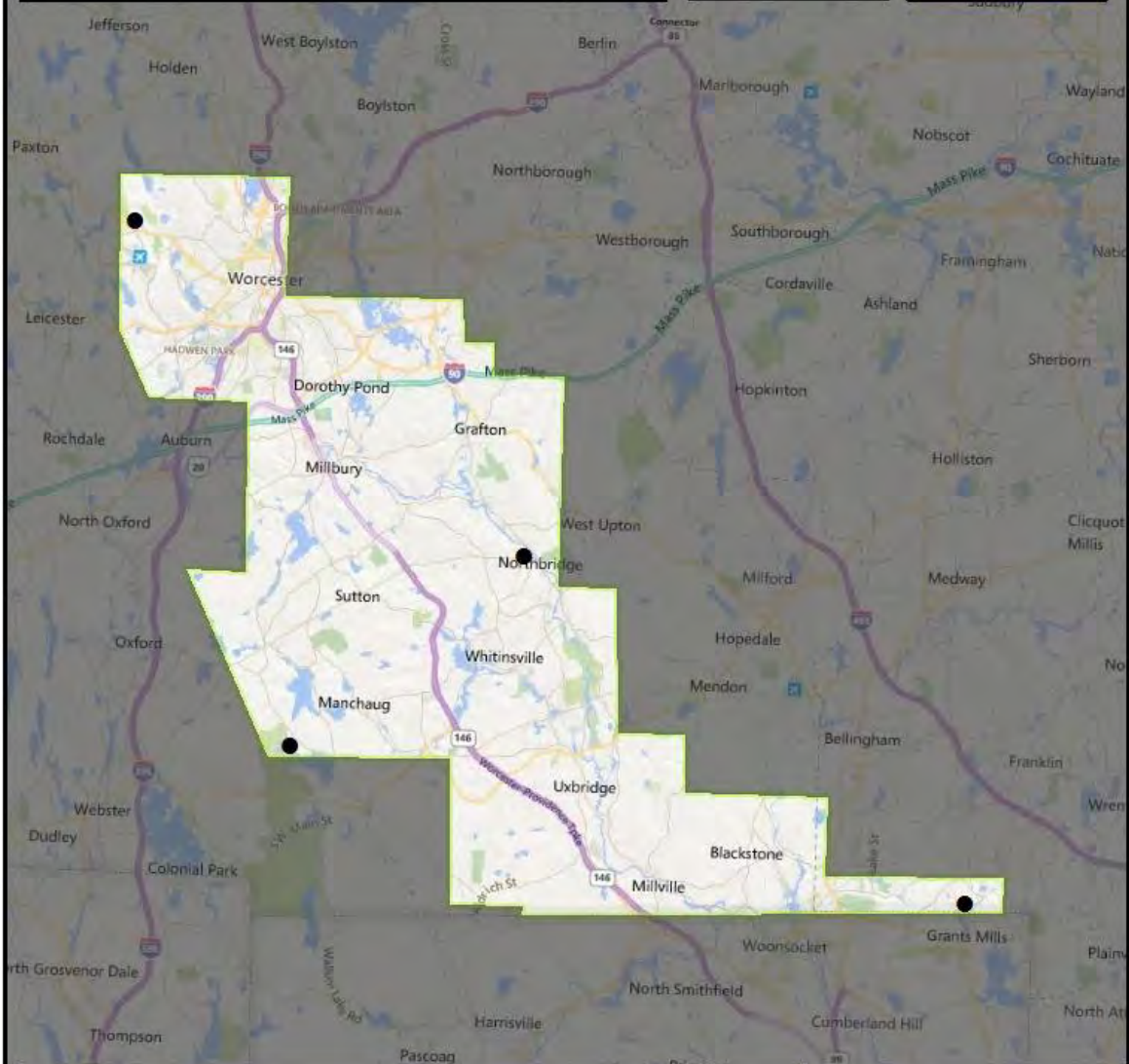
- Tall Weeds Point
- Project AOI



**Western Massachusetts LiDAR
UTM 19
Project AOI & Wetlands Point Map**

Legend

- Wetlands Point
- Project AOI



Western Massachusetts LiDAR
UTM 19
Project AOI & Horizontal Check Point Map

Legend

- Horizontal Check Point
- Project AOI



FINAL POINT COORDINATES FOR UTM 19



CALIBRATION POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 19N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation
CP123	4685053.631	265428.326	251.855
CP124	4682016.482	269850.045	155.662
CP125	4678877.807	264209.039	203.655
CP126	4674703.342	277539.125	92.280
CP127	4673362.543	270667.293	162.597
CP128	4677996.385	281706.516	160.018
CP129	4665182.329	268548.057	235.993
CP130	4668491.245	283875.342	86.076
CP131	4661992.271	277453.589	106.499
CP132	4659281.590	292917.837	78.903
CP133	4655810.749	278062.520	162.153
CP134	4654987.654	286895.631	81.991
CP135	4655596.220	294331.263	58.155
CP136	4656224.493	299581.587	92.466
CP137	4655068.163	297582.139	84.872
CP138	4654668.318	300695.328	119.626



BARE EARTH POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 19N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation
BE7	4679218.207	264202.073	208.160
BE8	4660899.971	280280.977	116.726
BE9	4679110.422	264656.328	163.174

URBAN AREA POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 19N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation
UA71	4685378.152	263039.209	291.610
UA72	4685542.311	268593.241	155.350
UA73	4679117.091	264671.918	163.546
UA74	4677985.004	278475.939	134.786
UA75	4671782.339	268364.845	194.116
UA76	4670508.694	280301.411	95.979
UA77	4662093.626	269936.046	202.187
UA78	4662273.982	283823.850	73.793
UA79	4655199.967	279094.110	170.465
UA80	4655089.210	299897.103	120.648



FORESTED POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 19N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation
FO44	4684699.356	262861.560	265.850
FO45	4673403.810	270657.358	163.076
FO46	4668603.585	283887.629	78.018
FO47	4654842.120	285861.988	88.732

SWAMP POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 19N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation
SW09	4684620.971	263131.252	261.249
SW10	4655817.777	278265.097	148.496

TALL WEEDS POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 19N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation
TW09	4684693.891	262946.905	263.556
TW10	4654793.665	285818.419	92.211
TW11	4673405.853	270727.357	161.188



HORIZONTAL CHECK POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 19N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation	Description
UA71	4685378.152	263039.209	Hz Only	Center of Cul-De-Sac
UA76	4670508.694	280301.411	Hz Only	Center of Cul-De-Sac
UA77	4662093.626	269936.046	Hz Only	Center of Cul-De-Sac
UA80	4655089.210	299897.103	Hz Only	Center of Cul-De-Sac



POINT DATA & ACCURACY LOG SHEETS



CALIBRATION POINT DATA SHEETS



Point ID	CP123
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester North

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

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4685053.631	265428.326	251.855

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/27/2015
RMSE Hz	0.005
RMSE Z	0.005
Network Ties	

PHOTOS:





Point ID	CP124
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester North

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4682016.482	269850.045	155.662

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/27/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	CP125
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester North

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4678877.807	264209.039	203.655

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/27/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	CP126
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Grafton

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4674703.342	277539.125	92.280

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/26/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	CP127
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester South

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4673362.543	270667.293	162.597

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/26/2015
RMSE Hz	0.005
RMSE Z	0.005
Network Ties	

PHOTOS:





Point ID	CP128
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Grafton

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

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4677996.385	281706.516	160.018

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/26/2015
RMSE Hz	0.006
RMSE Z	0.006
Network Ties	

PHOTOS:





Point ID	CP129
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Oxford

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4665182.329	268548.057	235.993

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/25/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	CP130
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Milford

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4668491.245	283875.342	86.076

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5407453971
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-25-2015
RMSE Hz	0.004
RMSE Z	0.004
GPS Method	KEYNET STATIC

PHOTOS:





Point ID	CP131
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Uxbridge

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4661992.271	277453.589	106.499

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/25/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	CP132
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Blackstone

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4659281.590	292917.837	78.903

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/24/2015
RMSE Hz	0.005
RMSE Z	0.005
Network Ties	

PHOTOS:





Point ID	CP133
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Uxbridge

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4655810.749	278062.520	162.153

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/24/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	CP134
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Uxbridge

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4654987.654	286895.631	81.991

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/24/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	CP135
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Norfolk
Quad	Franklin

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4655596.220	294331.263	58.155

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/24/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	CP136
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Norfolk
Quad	Franklin

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

Coordinate System	
	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4656224.493	299581.587	92.466

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/24/2015
RMSE Hz	0.006
RMSE Z	0.006
Network Ties	

PHOTOS:





Point ID	CP137
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Norfolk
Quad	Franklin

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4655068.163	297582.139	84.872

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/24/2015
RMSE Hz	0.005
RMSE Z	0.005
Network Ties	

PHOTOS:





Point ID	CP138
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Norfolk
Quad	Franklin

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4654668.318	300695.328	119.626

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/24/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





NON-VEGETATION POINT DATA SHEETS



BARE EARTH POINT DATA SHEETS



Point ID	BE7
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester North

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4679218.207	264202.073	208.160

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/27/2015
RMSE Hz	0.006
RMSE Z	0.006
Network Ties	

PHOTOS:





Point ID	BE8
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Uxbridge

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

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4660899.971	280280.977	116.726

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/25/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	BE9
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester North

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4679110.422	264656.328	163.174

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/27/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





URBAN AREA POINT DATA SHEETS



Point ID	UA71
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester North

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4685378.152	263039.209	291.610

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/26/2015
RMSE Hz	0.006
RMSE Z	0.006
Network Ties	

PHOTOS:





Point ID	UA72
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester North

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4685542.311	268593.241	155.350

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/26/2015
RMSE Hz	0.005
RMSE Z	0.006
Network Ties	

PHOTOS:





Point ID	UA73
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester North

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4679117.091	264671.918	163.546

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/27/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	UA74
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Grafton

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4677985.004	278475.939	134.786

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/26/2015
RMSE Hz	0.006
RMSE Z	0.006
Network Ties	

PHOTOS:





Point ID	UA75
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester South

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4671782.339	268364.845	194.116

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/25/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	UA76
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Grafton

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4670508.694	280301.411	95.979

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/25/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	UA77
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Oxford

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4662093.626	269936.046	202.187

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/25/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	UA78
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Blackstone

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4662273.982	283823.850	73.793

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/25/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	UA79
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Uxbridge

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4655199.967	279094.110	170.465

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/24/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	UA80
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Norfolk
Quad	Franklin

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4655089.210	299897.103	120.648

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/24/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





VEGETATION POINT DATA SHEETS



FORESTED POINT DATA SHEETS



Point ID	FO44
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester North

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

Coordinate System	NAD83(2011)
	UTM - Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4684699.356	262861.560	265.850

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	04-27-2015
Occupy PT	TW09
Back Sight PT	SW09
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO45
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester South

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

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4673403.810	270657.358	163.076

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	04-26-2015
Occupy PT	CP127
Back Sight PT	TW11
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO46
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Milford

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4668603.585	283887.629	78.018

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	04-25-2015
Occupy PT	FO46TP
Back Sight PT	CP130
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





Point ID	FO47
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Blackstone

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

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4654842.120	285861.988	88.732

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	04-26-2015
Occupy PT	FO47TP
Back Sight PT	TW10
RMSE Hz	N/A
RMSE Z	N/A

PHOTOS:





SWAMP/MARSH POINT DATA SHEETS



Point ID	SW09
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester North

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4684620.971	263131.252	261.249

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/27/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	SW10
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Uxbridge

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4655817.777	278265.097	148.496

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-24-2015
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	KEYNET STATIC

PHOTOS:





TALL WEED POINT DATA SHEETS



Point ID	TW09
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester North

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4684693.891	262946.905	263.556

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/27/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	TW10
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Blackstone

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4654793.665	285818.419	92.211

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/24/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	TW11
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester South

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4673405.853	270727.357	161.188

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/26/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





HORIZONTAL POINT DATA SHEETS



Point ID	UA71
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Worcester North

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4685378.152	263039.209	291.610

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/26/2015
RMSE Hz	0.006
RMSE Z	0.006
Network Ties	

PHOTOS:





Point ID	UA76
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Grafton

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4670508.694	280301.411	95.979

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/25/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	UA77
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Worcester
Quad	Oxford

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4662093.626	269936.046	202.187

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/25/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:





Point ID	UA80
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Massachusetts
County	Norfolk
Quad	Franklin

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4655089.210	299897.103	120.648

Operator	Rick Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5329440824
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04/24/2015
RMSE Hz	0.004
RMSE Z	0.004
Network Ties	

PHOTOS:



Appendix C

Maine Survey Report



October 20, 2015

Survey Report of
LiDAR Calibration & Quality Control Points

Central Maine QL1 & QL2 LiDAR BAA
USGS Contract: G10PC00026
USGS Task Order: G15PD00248

Presented to:



Presented By:



Together With:



As Sub Consultant to Quantum Spatial



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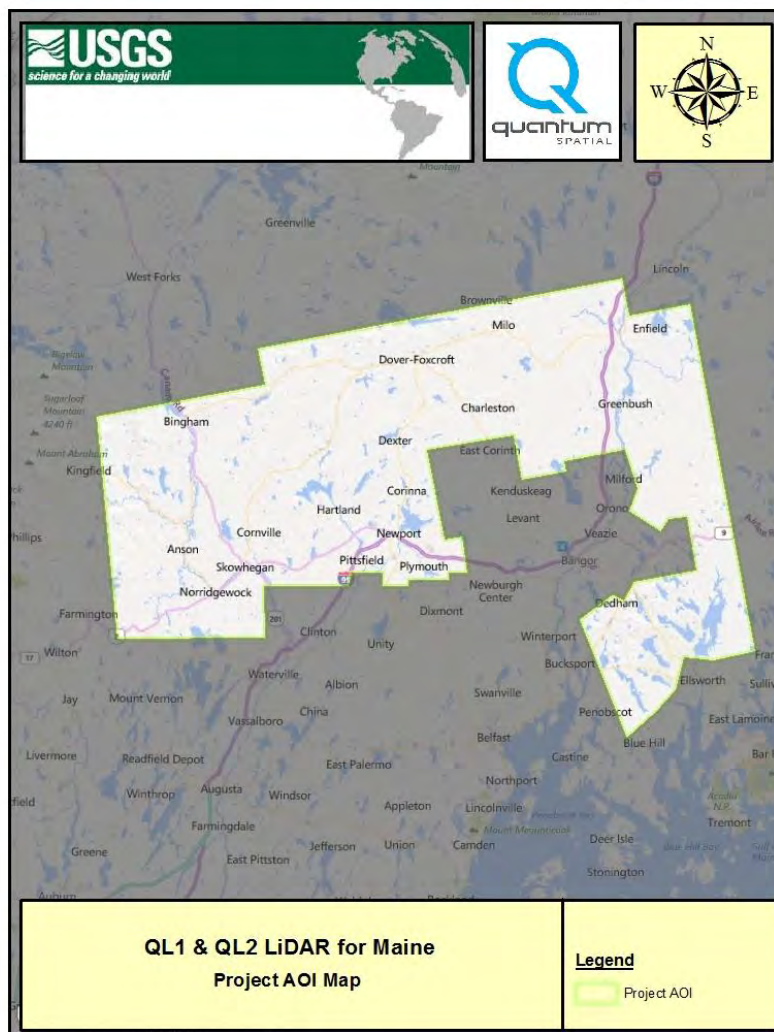


Introduction

Quantum Spatial, Inc. was contracted by USGS under task order G15PD00248 to Survey LiDAR calibration and quality control points in support of MA & ME QL1 & QL2 LiDAR BAA. Subsequently, Quantum Spatial contracted Sewall to perform the field surveys and provide the resulting point coordinates for Maine. This is the report of the technical approach used and detail of each point surveyed for the Maine portion of this project.

Project Area

The Project Area, shown in the figure below, consists of approximately 2331 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 85 Non-Vegetated Vertical Assessment (NVA) and 66 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	13	Tall Weeds/Crops	10
Urban Area	72	Forested	42
		Swamp/Marsh	14

Given that approximately 1/2 of the NVA check points should also be used for horizontal accuracy testing, but that it is commonly understood that good vertical check points do not generally make for good horizontal check points, Quantum Spatial has required that 41 horizontal check points shall be used for this project, whether they are used for NVA validation, or are entirely separate. These locations have been reported under their own chapter in this report.

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 be better than 3 centimeters, both horizontally and vertically, and that VVA points be better than 5 centimeters, 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. The accuracy of each point is reported at the 95% confidence level, meaning that if the point were measured 20 times, statistically it would fall within the reported accuracy 19 times.

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.

Survey Quality Control

The following bullet points outline the survey quality control procedures utilized when initiating and reviewing the work of survey sub-consultants.

- The survey methodology is reviewed prior to commencing the survey so that all parties are aware of the accuracy requirements.
 - Both calibration and quality control points are selected by Quantum Spatial and shared with the sub consultant. Any deviation from this plan is discussed.
 - Each picture of the representative land cover classes is reviewed by Quantum Spatial for assurance that the surveyor has adequately identified the appropriate vegetative cover.
 - The final surveyor's report is provided to Quantum Spatial and is thoroughly reviewed for compliance to the specifications outlined in this chapter.
-



Variations from Survey Control Plan

During our quality control review, it was determined that the planned QC point distribution was not sufficient to meet the specification, so QSI crews were dispatched to obtain supplemental points. The following are the methodologies used for our supplemental work.

Date Range:

March 24th - April 19th, 2015

Equipment Used:

Leica GS15 dual frequency GNSS receivers and a Trimble M3 2" Total Station

GNSS Methodology:

Each QC point was measured using the real time adjusted network provided by Key Net. Each point was measured three times, for at least 8 seconds, where the third occupation was taken at least 4 hours after the first two to ensure variance in the observed satellite constellations.

For forested points, a secondary control point with line of sight to another point was established so that the resulting pair could be occupied with a total station.

Variations from the stated GNSS methodology:

When cellular network signals were unavailable, points were observed with static GNSS for no less than 1 hour and were post processed referencing NGS continuously operating reference stations and a weighted adjustment was performed to obtain base station coordinates. The adjustment was performed using Leica Geo Office.

Total Station Methodology:

Angles and distances to forested points were doubled and the final point accuracy was determined through network adjustment using Trimble Business Center or by adding the calculated error, estimated procedural errors, and manufacturer stated instrument error to the reported error of the point over which the total station was placed.



QSI Field Work 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 12A model and are reported in meters.

NVA Points

Average Horizontal RMSE at the 95% confidence level is 0.008 meter.

Average Elevation RMSE at the 95% confidence level is 0.010 meter.

Average 3 dimensional RMSE at the 95% confidence level is 0.013 meter.

VVA Points

Average Horizontal RMSE at the 95% confidence level is 0.009 meter.

Average Elevation RMSE at the 95% confidence level is 0.012 meter.

Average 3 dimensional RMSE at the 95% confidence level is 0.015 meter.

Report Note

In the data sheet section of this report, points located by QSI are distinguished by the standard QSI page header.

**USGS – ME & MA QL2 & QL2 LiDAR BAA
Maine Portion
LiDAR and Check Point Control Surveys for USGS Task Order G15PD00281**

Sewall performed survey work to establish and collect vertical and horizontal quality control points throughout the project area. The project included collecting 71 LiDAR calibration points, 87 non-vegetated (NVA) check points, 44 horizontal check points, 66 vegetated check points (VVA) and 5 published control points. Pairs of control points (102 total points) were also collected to be used with traditional surveying equipment. A total of 375 points were collected for this project.

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 12 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 57 points were collected using this method.

All of the GPS information was downloaded, processed and analyzed using Topcon Tools processing software. Our final horizontal coordinates are shown in UTM – Zone 19N, NAD83 (2011) Epoch 2010, meters. The final elevations refer to NAVD 88 (GEOID12b), meters.




PROJECT AOI & POINT LOCATION MAPS



**QL1 & QL2 LiDAR for Maine
Project AOI and Calibration Point Map**

Legend

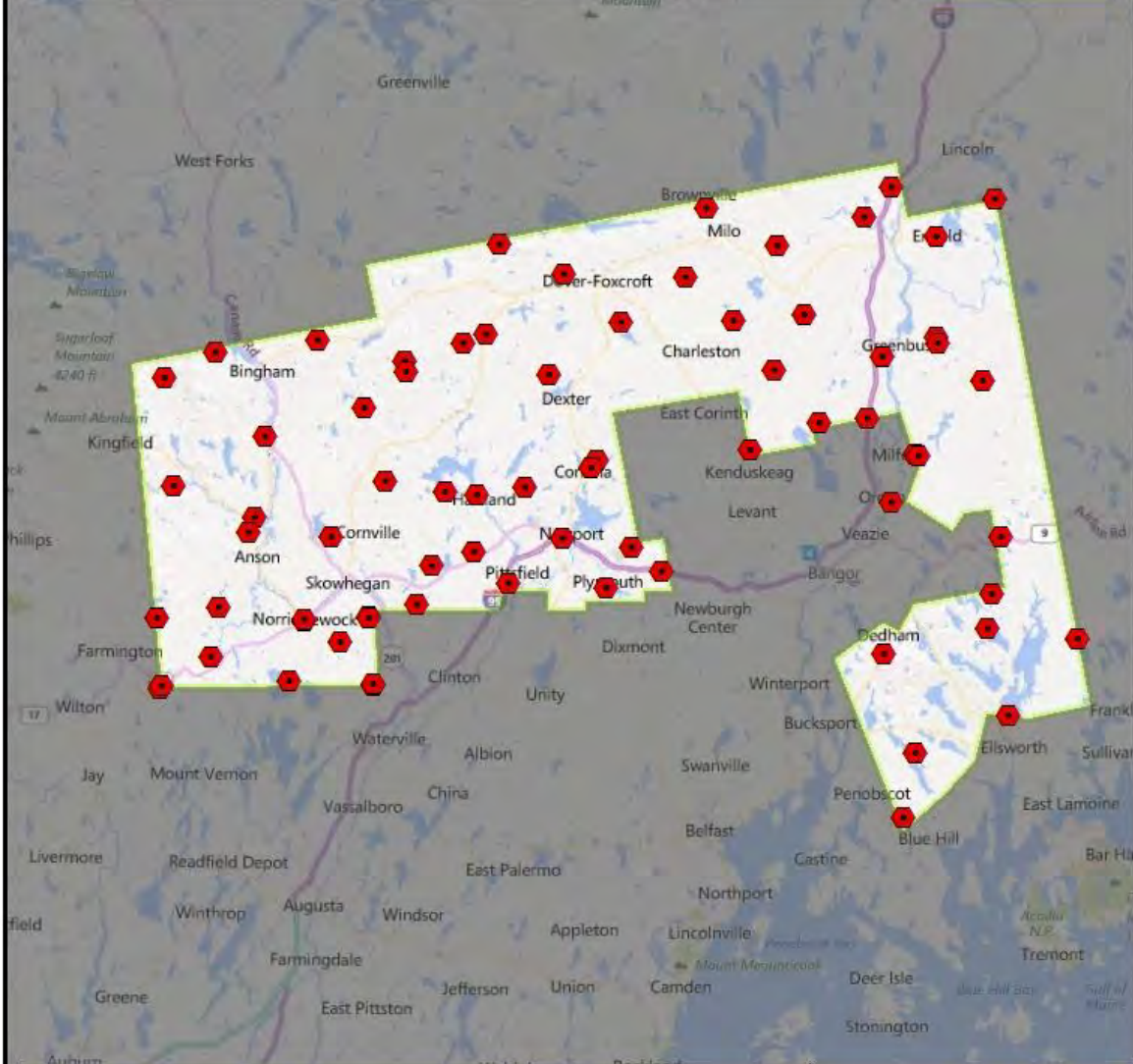
-  Calibration
-  Project AOI



**QL1 & QL2 LiDAR for Maine
Project AOI and Bare Earth Point Map**



Legend

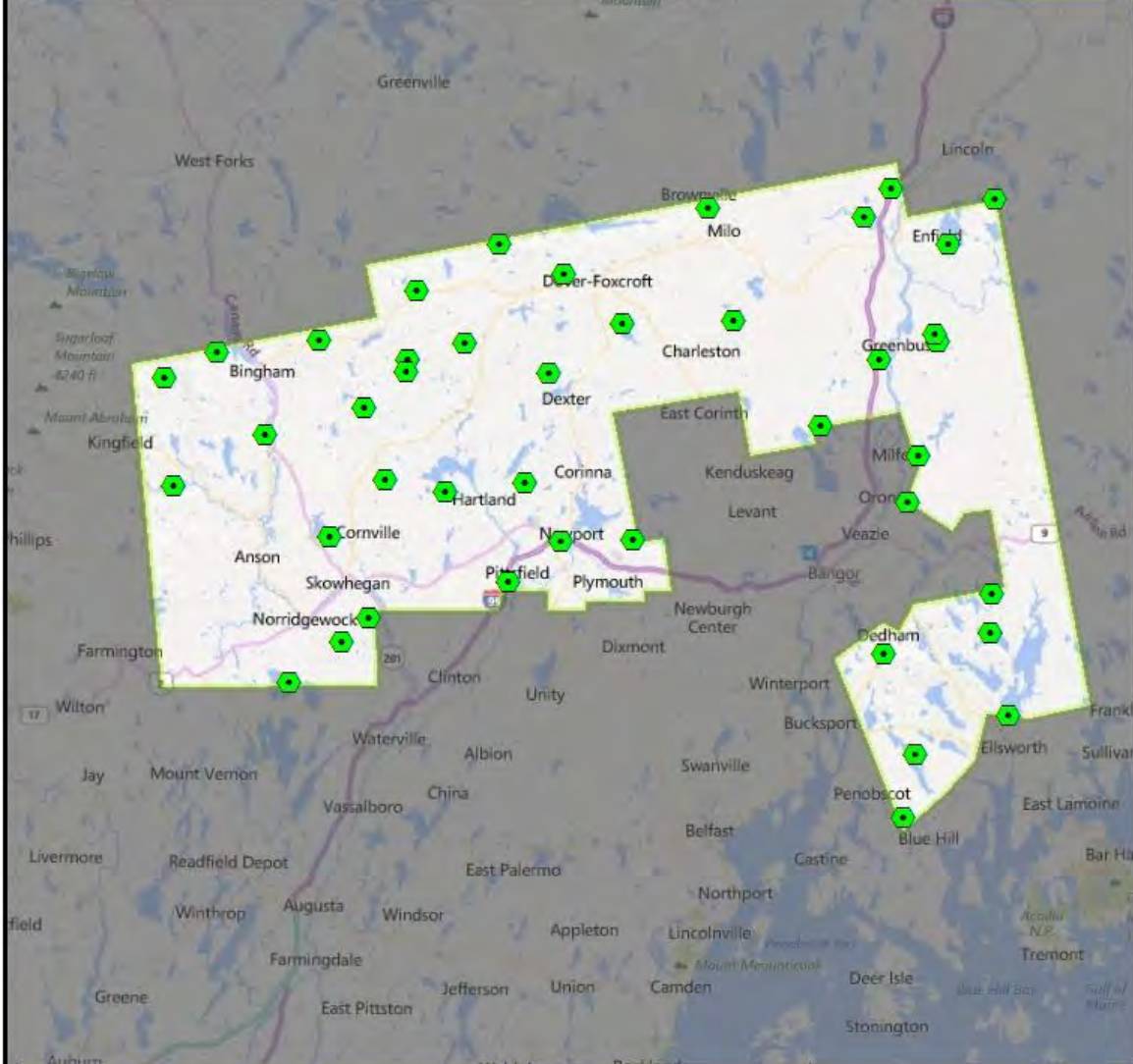
-  Bare Earth
-  Project AOI



**QL1 & QL2 LiDAR for Maine
Project AOI and Urban Area Point Map**



Legend

-  Urban Area
-  Project AOI



**QL1 & QL2 LiDAR for Maine
Project AOI and Forested Point Map**



Legend

-  Forested
-  Project AOI



**QL1 & QL2 LiDAR for Maine
Project AOI and Tall Weeds Point Map**

Legend

-  Tall Weeds
-  Project AOI



**QL1 & QL2 LiDAR for Maine
Project AOI and Wetlands Point Map**

Legend

-  Wetlands
-  Project AOI



**QL1 & QL2 LiDAR for Maine
Project AOI and Horizontal Check Point Map**

Legend

- Horizontal Check
- Project AOI

FINAL POINT COORDINATES

CALIBRATION POINT COORDINATES

Horizontal Datum - NAD83(2011)
 SPCS UTM-Zone 19N
 Vertical Datum - NAVD 88
 Geoid - GEOID12A
 Units – Meters

Point ID	Northing	Easting	Elevation
CAL1	4991623.420	452701.410	329.730
CAL2	4961997.280	462847.380	123.100
CAL3	4963962.250	476524.650	76.340
CAL4	4963831.190	487267.030	76.060
CAL5	4954389.790	487304.740	97.450
CAL6	4957267.800	468121.100	60.170
CAL7	4956510.870	482861.020	130.980
CAL8	4944504.970	518587.650	126.820
CAL9	4932811.280	523006.730	25.580
CAL10	4918537.330	530547.840	47.970
CAL11	4938129.630	557806.820	30.190
CAL12	4948641.050	555569.800	87.780
CAL13	4966953.140	553045.340	106.790
CAL14	4981266.180	549635.520	103.070
CAL15	4964387.660	543998.820	172.710
CAL16	4946424.270	525921.970	48.000
CAL17	4931041.870	530741.070	85.890
CAL18	4937167.320	544883.540	32.720
CAL19	4949662.160	542235.880	90.450
CAL20	4955644.620	542549.360	131.270
CAL21	5016263.710	542860.480	108.590
CAL22	5024788.560	530558.540	60.400
CAL23	5004608.940	445073.720	389.120
CAL24	5011549.770	463566.080	240.500
CAL25	5013210.610	481059.030	149.000
CAL26	5016828.340	496792.840	135.570
CAL27	5020624.240	516792.680	103.340
CAL28	4962748.620	537301.840	78.190
CAL29	4969605.350	529299.160	44.890
CAL30	4981362.940	516267.160	37.050
CAL31	4977651.930	504017.660	62.520
CAL32	4984296.860	494059.780	99.210
CAL33	4981816.230	522610.570	42.420
CAL34	4971180.980	458408.840	86.260

CAL35	4972574.120	470817.000	135.970
CAL36	4975714.750	481939.790	117.940
CAL37	4984218.260	446049.090	252.100
CAL38	4994076.180	461139.380	258.830
CAL39	4989110.730	474362.170	196.270
CAL40	4997272.880	485443.810	148.050
CAL41	5004299.700	495414.540	108.520
CAL42	4997510.800	502893.790	102.130
CAL43	4990094.810	509021.370	75.550
CAL44	5008322.670	510161.940	143.660
CAL45	4998156.030	513728.200	79.830
CAL46	5013529.720	522992.170	55.000
CAL47	5010379.010	534028.980	58.840
CAL48	4988447.050	540990.880	125.140
CAL49	4976796.830	531320.750	34.290
CAL50	4991432.500	525148.120	42.980
CAL51	4994328.440	534170.790	47.640
CAL52	5004704.700	476775.040	175.210
CAL53	4951960.440	414348.730	171.620
CAL54	4953412.160	423533.060	84.410
CAL55	4951551.200	436844.210	68.880
CAL56	4951966.690	446790.020	99.190
CAL57	4941226.090	414791.740	104.860
CAL5A	4941485.390	447354.420	105.380
CAL59	4942104.130	434448.130	83.000
CAL60	4946062.720	422734.130	98.230
CAL61	4948119.160	442477.620	69.730
CAL62	4953966.330	453991.710	49.610
CAL63	4959846.710	456353.390	93.730
CAL64	4988673.290	415242.360	201.620
CAL65	4992769.670	423259.450	344.000
CAL66	4994551.430	439024.760	416.570
CAL67	4972130.240	416825.680	130.990
CAL68	4965129.630	428401.030	126.910
CAL69	4964304.750	440860.870	122.110
CAL70	4973028.420	449218.580	124.360
CAL71	4979830.440	430719.080	122.860

BARE EARTH POINT COORDINATES

Horizontal Datum - NAD83(2011)
 SPCS UTM-Zone 19N
 Vertical Datum - NAVD 88
 Geoid - GEOID12A
 Units – Meters

Point ID	Northing	Easting	Elevation
BE1	4962014.010	462846.940	123.250
BE3	4931040.760	530758.010	86.240
BE6	4997482.440	502902.230	102.080
BE7	5008332.250	510154.450	143.270
BE8	4995078.480	534284.290	46.250
BE9	4973009.530	449219.690	123.710
BE10	4984217.740	446032.520	251.560
BE11	4975451.360	480768.420	80.650
BE14	4989145.290	474344.780	195.970
BE15	4941153.230	414702.350	105.660
BE15-1	4988683.490	415270.940	202.040
BE205	4944008.133	550164.036	41.665
BE208	5002084.904	454257.989	290.041

URBAN AREA POINT COORDINATES

Horizontal Datum - NAD83(2011)
 SPCS UTM-Zone 19N
 Vertical Datum - NAVD 88
 Geoid - GEOID12A
 Units – Meters

Point ID	Northing	Easting	Elevation
UA1	4971209.740	458396.020	85.330
UA2	4964054.710	476544.120	75.450
UA4	4967252.510	429111.540	91.430
UA6	4991452.370	452285.670	338.530
UA7	4950337.500	541856.080	102.220
UA8	4955617.300	542566.370	130.990
UA10	4981779.020	515911.990	41.090
UA12	4982574.470	523329.390	43.140
UA13	4976157.500	481895.770	114.560
UA14	4989163.740	474370.700	196.690
UA15	4997272.880	485443.810	148.050
UA16	4989959.150	509049.150	74.510
UA17	4997548.200	502863.550	102.160
UA18	4998530.720	513533.470	80.320
UA19	4991925.740	525677.880	38.800
UA20	4995033.290	533822.150	56.670
UA21	5004824.990	476740.900	175.990
UA22	4952142.990	446672.450	103.130
UA23	4941159.370	414692.530	105.350
UA24	4941502.040	447350.010	105.580
UA25	4964348.440	543944.520	173.790
UA27	4931031.560	530732.900	86.210
UA28	4936994.610	544980.280	31.300
UA30	4948638.620	555556.360	87.540
UA33	4988447.700	540982.170	124.920
UA34	5009130.010	509498.640	166.560
UA35	5004309.370	495419.480	108.520
UA37	4946411.770	525950.500	47.210
UA42	5013576.600	522899.540	56.240
UA43	4969745.930	527026.650	22.470
UA43-1	5010394.920	534022.450	59.240
UA44	5016241.160	542867.240	108.510
UA45	4977148.560	530727.340	34.610
UA45-1	4994186.860	534182.910	41.700

UA46	4976834.070	531236.260	34.040
UA47	4974871.330	480792.720	84.270
UA47-1	4957242.210	468114.530	60.380
UA48	4970714.050	463287.650	99.550
UA49	4962135.810	462838.280	123.320
UA50	4989721.700	452588.010	274.990
UA51	4995531.120	464709.430	164.340
UA52	4988721.840	415280.750	204.090
UA53	4992724.740	423302.660	339.010
UA54	4994582.620	439015.100	415.940
UA55	4951976.600	414329.810	171.750
UA56	4984219.300	446061.600	252.410
UA57	4979841.390	430720.500	122.770
UA58	4972145.290	416827.750	131.180
UA60	4953423.050	423571.680	85.140
UA61	4945936.120	422513.190	95.420
UA62	4964283.090	440872.220	122.210
UA63	4942112.890	434415.670	83.190
UA64	4951531.160	436918.460	69.050
UA65	4948131.310	442456.160	69.840
UA66	4941726.390	447470.770	106.860
UA67	4951867.590	446811.810	98.400
UA68	4953863.930	454124.210	56.080
UA69	4960049.010	456376.280	96.420
UA70	4965113.310	428391.350	127.100
UA71	4951559.350	436806.480	69.030
UA91	4962710.210	487025.360	78.410
UA92	4956549.830	483113.130	104.820
UA93	4972004.280	470734.740	147.880
UA94	4994134.330	461302.010	265.750
UA95	4973001.880	449220.830	123.620
UA200	4941485.056	414940.014	105.807
UA202	4921140.891	528924.951	109.036
UA210	5009236.629	466836.380	151.862
UA212	5014859.191	498750.795	139.426
UA214	5017999.736	526945.522	71.308
UA219	4959153.124	491668.768	91.956
UA220	4977651.999	505271.998	55.094

FORESTED POINT COORDINATES

Horizontal Datum - NAD83(2011)
 SPCS UTM-Zone 19N
 Vertical Datum - NAVD 88
 Geoid - GEOID12A
 Units – Meters

Point ID	Northing	Easting	Elevation
F1	4988713.250	415313.710	209.990
F2	4952001.580	446739.720	102.010
F4	4971229.380	458395.270	84.110
F5	4963718.120	476364.320	76.370
F7	4991648.020	452699.770	331.850
F8	4963867.060	487254.750	77.630
F9	4948144.960	442498.700	70.260
F15	4946302.130	525867.780	43.620
F16	4931011.640	530784.660	86.170
F17	4936960.380	545021.880	32.070
F18	4949629.330	542185.980	88.900
F19	4955687.100	542543.750	135.730
F22	4969691.600	529564.400	42.190
F23	4981390.900	516276.640	35.510
F25	4994150.710	461397.250	259.510
F26	4989391.260	474378.140	186.310
F27	4997059.930	485647.740	150.950
F28	4997515.740	502848.080	105.610
F29	4991484.570	525233.510	41.260
F30	4994343.100	534128.140	44.570
F31	5004678.330	476735.700	173.380
F39	5013522.540	522929.700	54.800
F40	5009343.550	535724.730	104.110
F41	5016286.870	542864.780	108.990
F42	4995576.120	533600.800	60.130
F43	4976791.010	531245.390	34.160
F44	4957347.680	468107.640	58.950
F45	4972552.120	470841.200	134.990
F46	4989758.980	452599.830	276.500
F47	4994598.920	439031.350	413.280
F48	4992658.070	423337.870	333.960
F49	4984233.590	446012.270	253.340
F50	4979956.480	430732.800	118.650

F51	4972113.340	416755.090	131.140
F52	4964316.340	440839.320	121.360
F53	4942014.340	434566.180	90.810
F54	4973131.340	449217.500	128.100
FO203	4921158.006	528912.806	107.471
FO209	5002093.050	454233.733	289.906
FO211	5009273.343	466816.100	149.282
FO213	5014791.088	498777.065	143.534
FO215	5017967.876	526920.812	72.105

TALL WEEDS POINT COORDINATES

Horizontal Datum - NAD83(2011)
SPCS UTM-Zone 19N
Vertical Datum - NAVD 88
Geoid - GEOID12A
Units – Meters

Point ID	Northing	Easting	Elevation
TW1	4963973.320	476498.730	75.800
TW2	4956548.380	483089.940	106.030
TW3	4991616.410	452734.700	328.670
TW7	5013545.370	522888.060	54.770
TW9	4994561.400	439067.770	414.230
TW10	4984210.540	446016.390	250.690
TW11	4972140.390	416783.310	130.660
TW12	4965088.120	428402.710	127.500
TW13	4953406.110	423518.210	84.440
TW201	4941468.803	414949.257	105.177

WETLAND POINT COORDINATES

Horizontal Datum - NAD83(2011)
 SPCS UTM-Zone 19N
 Vertical Datum - NAVD 88
 Geoid - GEOID12A
 Units – Meters

POINT_ID	Northing	Easting	Elevation
W1	4971174.660	458283.320	84.200
W2	4981420.480	516129.640	35.800
W3	4995038.580	534521.170	40.590
W4	4951946.420	414341.560	169.670
W5	4956482.340	483918.470	81.670
W8	5005831.120	493756.190	85.030
W10	5009626.050	466332.590	123.320
W12	5016247.390	542848.490	107.470
W13	4994199.780	534208.100	37.960
W14	4976681.170	531309.330	30.320
W15	4969707.910	529705.940	40.600
W16	4994565.140	439076.100	413.770
W204	4943408.127	549971.580	36.906

HORIZONTAL POINT COORDINATES

Horizontal Datum - NAD83(2011)

SPCS UTM-Zone 19N

Vertical Datum - NAVD 88

Geoid - GEOID12A

Units – Meters

POINT_ID	Northing	Easting	Elevation	Terrain
H2	4984271.550	494082.050	0.000	CNRCONC
H3	4975854.020	481584.830	0.000	SEAM
H5	4994141.960	461303.910	0.000	CNRGRASS
H6	4997551.890	502858.540	0.000	PAVEMENT
H7	4990016.490	509043.620	0.000	CNRDRIVE
H8	4998542.980	513527.820	0.000	CNRDRIVE
H9	4992027.240	525700.870	0.000	CONCWALL
H10	4995627.040	533623.100	0.000	LAWN
H11	5004836.920	476754.910	0.000	CNRPAVEMENT
H12	4951965.250	414283.250	0.000	CNRPAVEMENT
H13	4953394.680	423576.910	0.000	CNRPAVEMENT
H14	4951561.610	436799.480	0.000	CNRDRIVE
H15	4951875.190	446799.480	0.000	CNRDRIVE
H17	4941680.750	447438.520	0.000	CNRDRIVE
H18	4942108.970	434408.420	0.000	CNRPAVEMENT
H20	4970725.480	463289.440	0.000	CNRWALK
H21	4980277.370	430992.000	0.000	CONCPAD
H22	4984218.360	446070.610	0.000	STRIPE
H23	4964371.380	543937.780	0.000	CNRPAVEMENT
H25	4931119.560	530712.500	0.000	GRASS
H26	4937037.130	544945.690	0.000	GRAVEL
H28	4948637.160	555573.200	0.000	GRASS
H30	4988444.800	540982.810	0.000	GRASS
H31	5009136.750	509478.570	0.000	TOPPIER
H32	5004310.300	495413.390	0.000	CNRDRIVE
H34	4946480.690	525946.510	0.000	CNRDRIVE
H35	4994060.800	461145.840	0.000	CNRGRASS
H37	4962715.070	487044.790	0.000	TARGET
H39	4956539.630	483109.100	0.000	CNRGRASS
H40	4962142.820	462826.990	0.000	PAVESEAM
H41	4974988.290	480851.290	0.000	CNRPAVEMENT
H45	5013556.250	522936.310	0.000	CNRGRASS

H46	5010354.420	534001.400	0.000	TARGET
H47	4992632.130	423325.790	0.000	CNRPAVEMENT
H48	4982574.460	523329.390	0.000	STRIPE
H51	4989166.120	474366.630	0.000	CNRPAVEMENT
H52	4974871.330	480792.720	0.000	HCPPAINT
H53	4995531.120	464709.440	0.000	STOPBAR
Hz206	4944424.399	549286.586	0.000	CULDESAC CNTR
Hz207	4921251.376	529206.331	0.000	CNRDRIVE
Hz217	5017973.414	526967.543	0.000	CNRPAVEMENT
Hz218	5003713.714	464353.418	0.000	CNRPAVEMENT



POINT DATA & ACCURACY LOG SHEETS



CALIBRATION POINT DATA SHEETS

Point ID	CAL1
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4991623.42	452701.41	329.72

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	CAL2
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4961997.28	462847.38	123.10

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

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL3
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

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
4963962.25	476524.65	76.35

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	CAL4
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
4963831.19	487267.02	76.07

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

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL5
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4954389.80	487304.74	97.45

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	CAL6
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4957267.80	468121.10	60.17

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

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.002
RMSE Z	0.003
Method	RTK GPS

PHOTOS:



Point ID	CAL7
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4956510.87	482861.03	130.98

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	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL8
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4944504.97	518587.65	126.82

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

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL9
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

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
4932811.27	523006.73	25.58

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

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL10
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4918537.33	530547.84	47.97

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.006
RMSE Z	0.017
Method	Fast Static GPS

PHOTOS:



Point ID	CAL11
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4938129.63	557806.82	30.19

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.003
RMSE Z	0.008
Method	Fast Static GPS

PHOTOS:



Point ID	CAL12
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4948641.06	555569.80	87.78

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

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.002
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL13
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4966953.14	553045.34	106.79

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

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL14
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4981266.18	549635.52	103.07

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/12/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	Fast Static GPS

PHOTOS:



Point ID	CAL15
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

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

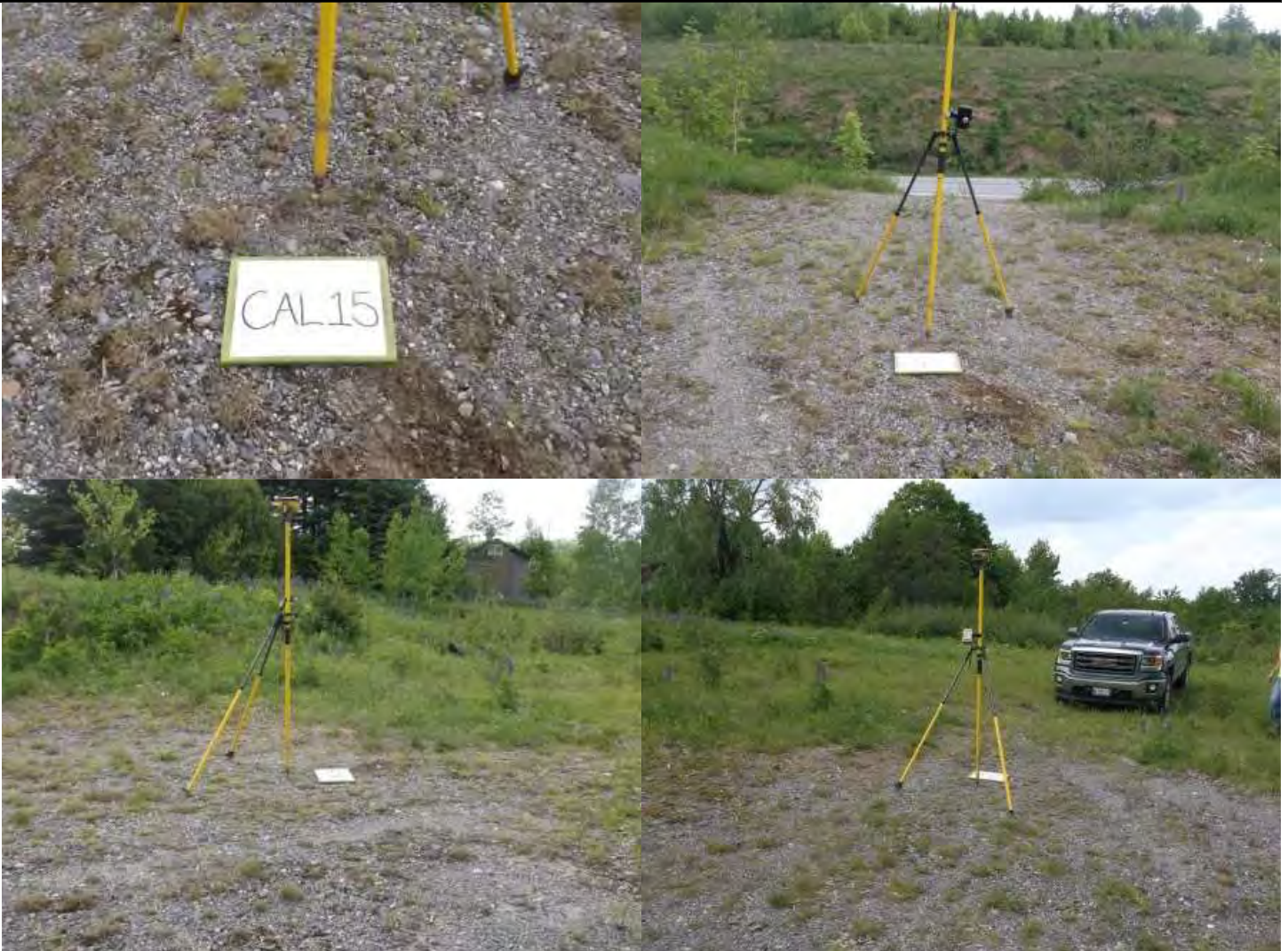
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4964387.65	543998.81	172.71

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

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL16
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4946424.27	525921.97	48.00

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

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL17
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4931041.87	530741.07	85.89

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

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL18
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

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
4937167.33	544883.54	32.72

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

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL19
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

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

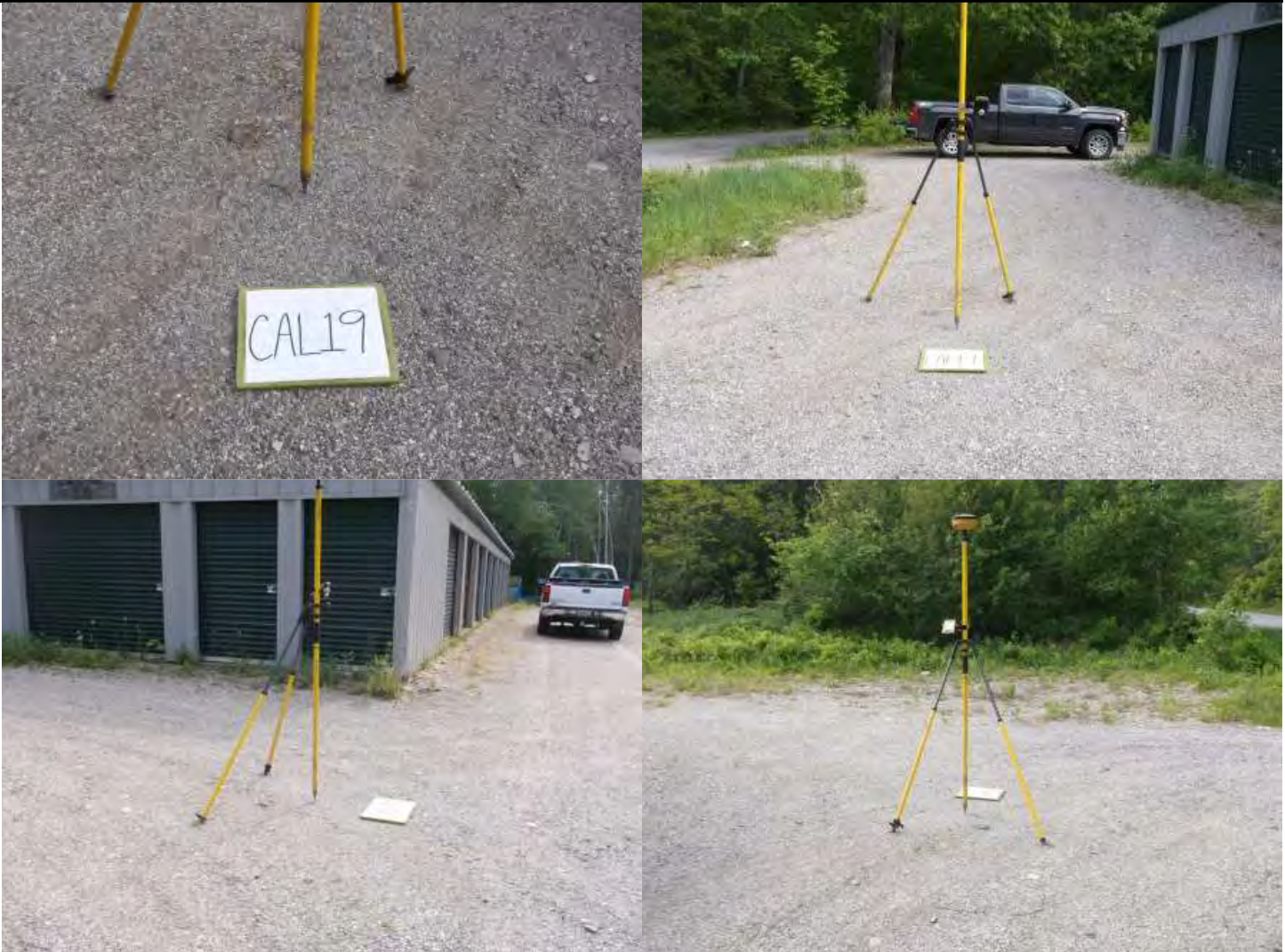
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4949662.16	542235.88	90.45

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

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL20
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4955644.62	542549.36	131.27

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

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL21
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
5016263.72	542860.48	108.59

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

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL22
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5024788.56	530558.54	60.40

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

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL23
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
5004608.94	445073.72	389.12

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.004
RMSE Z	0.005
Method	Fast Static GPS

PHOTOS:



Point ID	CAL24
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5011549.77	463566.08	240.50

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

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL25
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5013210.61	481059.03	149.00

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

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL26
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

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
5016828.34	496792.84	135.57

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

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL27
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5020624.24	516792.68	103.34

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

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL28
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4962748.62	537301.84	78.19

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

Date (MM-DD-YYYY)	6/12/2015
RMSE Hz	0.002
RMSE Z	0.003
Method	RTK GPS

PHOTOS:



Point ID	CAL29
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4969605.34	529299.17	44.89

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

Date (MM-DD-YYYY)	6/12/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL30
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4981362.94	516267.16	37.05

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

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL31
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4977651.94	504017.66	62.52

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

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL32
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4984296.86	494059.78	99.21

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

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL33
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4981816.23	522610.57	42.42

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

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL34
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4971180.99	458408.84	86.26

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

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL35
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4972574.13	470817.00	135.97

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	CAL36
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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

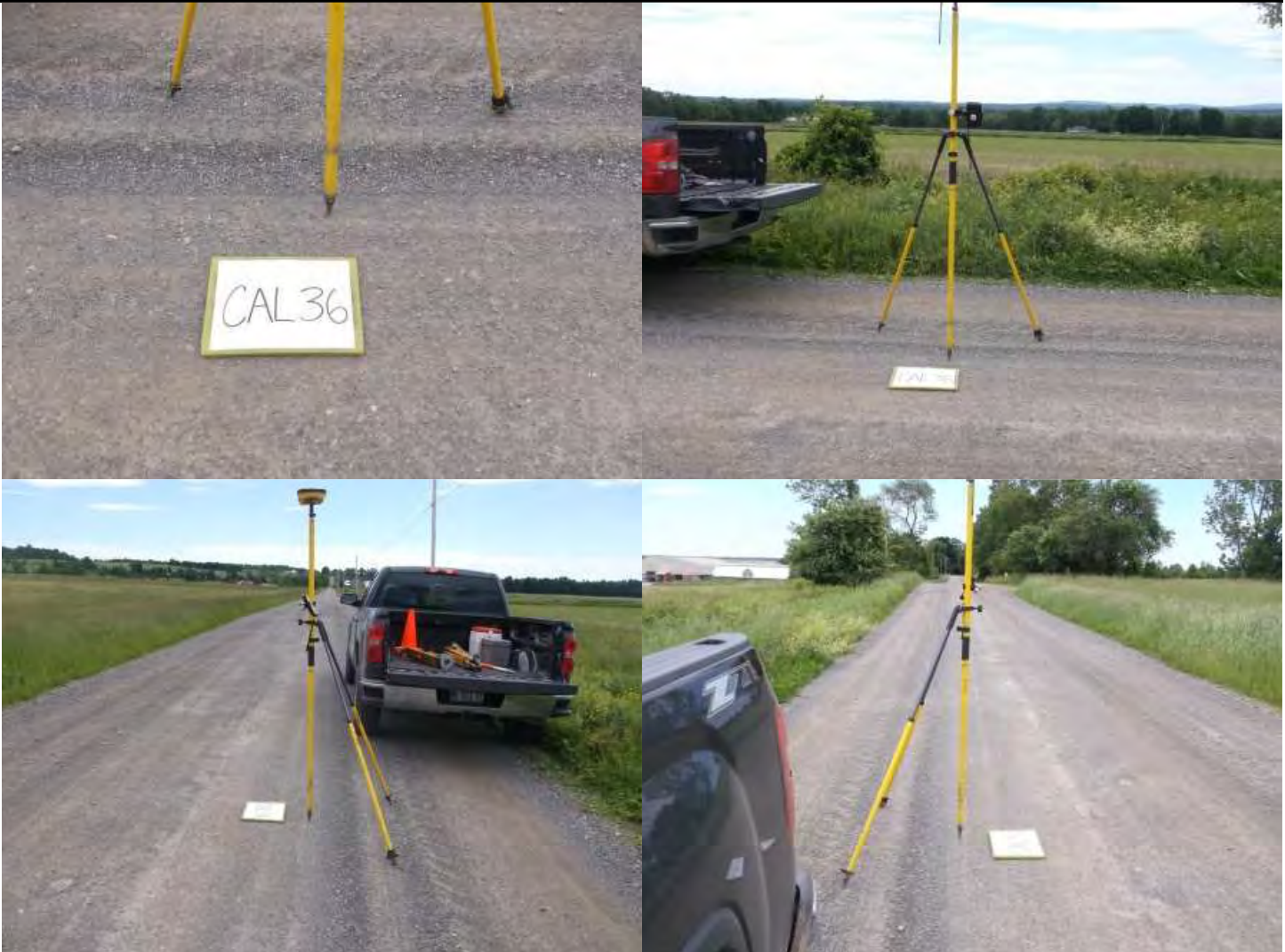
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4975714.74	481939.80	117.94

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

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL37
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4984218.26	446049.09	252.10

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	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL38
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4994076.18	461139.38	258.83

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	0.003
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL39
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4989110.74	474362.16	196.27

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

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL40 – UA15
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4997272.88	485443.81	148.05

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

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.003
RMSE Z	0.003
Method	RTK GPS

PHOTOS:



Point ID	CAL41
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5004299.70	495414.54	108.52

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

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL42
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4997510.80	502893.79	102.13

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

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL43
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4990094.81	509021.38	75.55

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

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL44
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

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

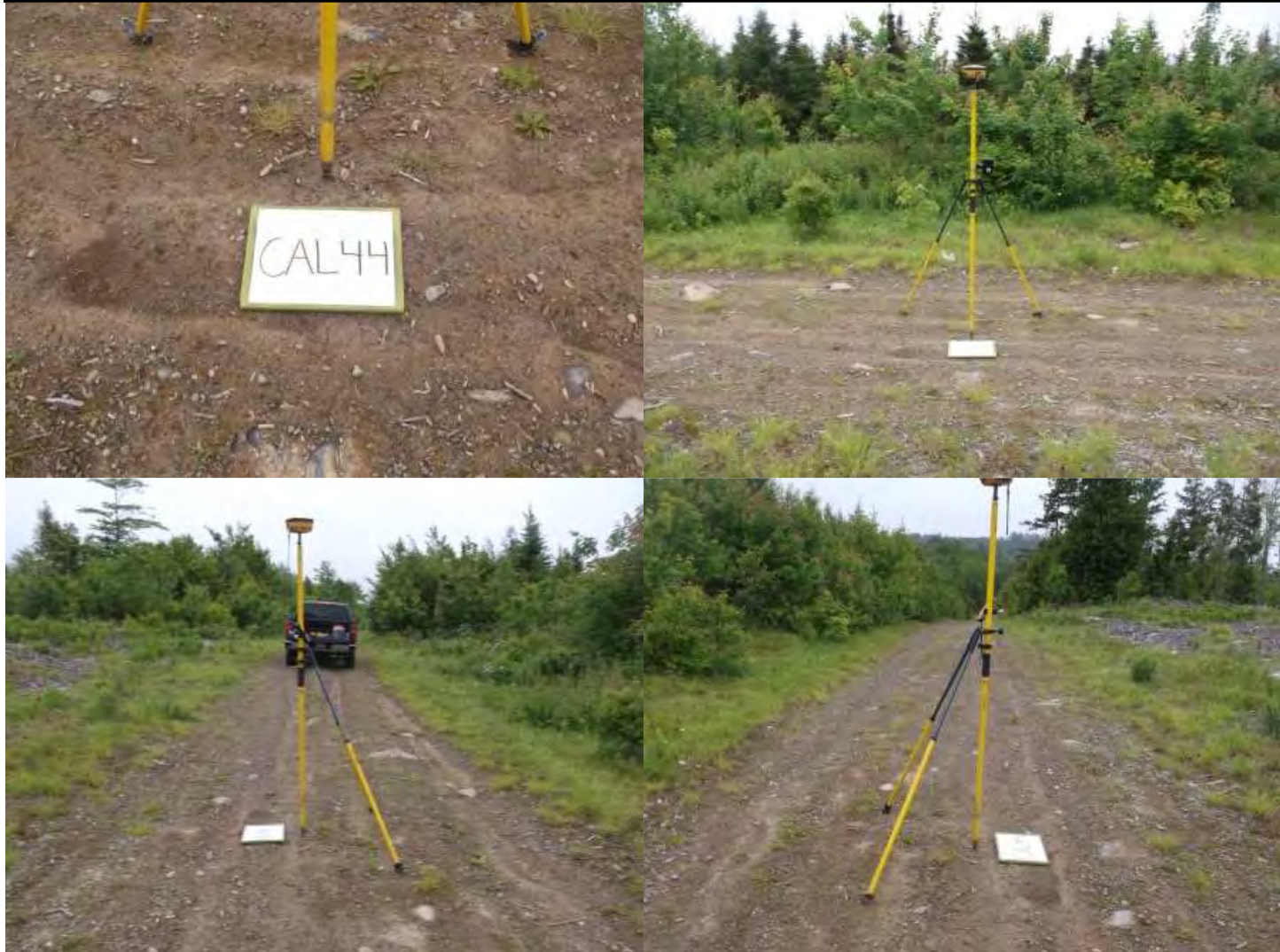
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5008322.68	510161.95	143.66

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

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL45
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4998156.03	513728.20	79.83

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

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL46
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5013529.72	522992.17	55.00

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

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL47
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
5010379.01	534028.98	58.84

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

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL48
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
4988447.04	540990.88	125.14

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

Date (MM-DD-YYYY)	6/12/2015
RMSE Hz	0.003
RMSE Z	0.003
Method	RTK GPS

PHOTOS:



Point ID	CAL49
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4976796.83	531320.75	34.29

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

Date (MM-DD-YYYY)	6/12/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL50
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4991432.51	525148.12	42.98

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

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL51
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4994328.43	534170.80	47.64

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

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL52
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5004704.70	476775.04	175.21

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

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL53
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	

	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
4951960.43	414348.73	171.62

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

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL54
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4953412.15	423533.06	84.41

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

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL55
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

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
4951551.21	436844.21	68.88

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

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL56
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4951966.68	446790.02	99.19

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

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL57
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	

	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
4941226.08	414791.74	104.86

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

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL58
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4941485.39	447354.42	105.38

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

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL59
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4942104.13	434448.13	83.00

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

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL60
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	

	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
4946062.73	422734.13	98.23

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

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL61
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4948119.16	442477.62	69.73

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

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	CAL62
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4953966.33	453991.70	49.61

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

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL63
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4959846.71	456353.39	93.73

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

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL64
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4988673.29	415242.36	201.62

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.003
Method	Fast Static GPS

PHOTOS:



Point ID	CAL65
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4992769.67	423259.45	344.00

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

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL66
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4994551.43	439024.76	416.57

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	Fast Static GPS

PHOTOS:



Point ID	CAL67
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4972130.24	416825.68	130.99

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

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL68
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4965129.63	428401.02	126.91

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

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL69
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4964304.75	440860.87	122.11

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

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL70
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4973028.42	449218.58	124.36

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

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	CAL71
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4979830.44	430719.08	122.86

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

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:





NON-VEGETATION POINT DATA SHEETS



BARE EARTH POINT DATA SHEETS

Point ID	BE1
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4692014.01	462846.94	123.25

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE2
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4918581.13	530570.98	51.18

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.006
RMSE Z	0.014
Method	RTK GPS

PHOTOS:



Point ID	BE3
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4931040.76	530758.01	86.24

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE3-1
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
5004633.45	445080.84	388.70

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.004
RMSE Z	0.005
Method	Fast Static GPS

PHOTOS:



Point ID	BE4
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

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
5013208.76	481058.94	148.92

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.006
RMSE Z	0.006
Method	RTK GPS

PHOTOS:



Point ID	BE5
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4984214.90	494129.36	97.81

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE6
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

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

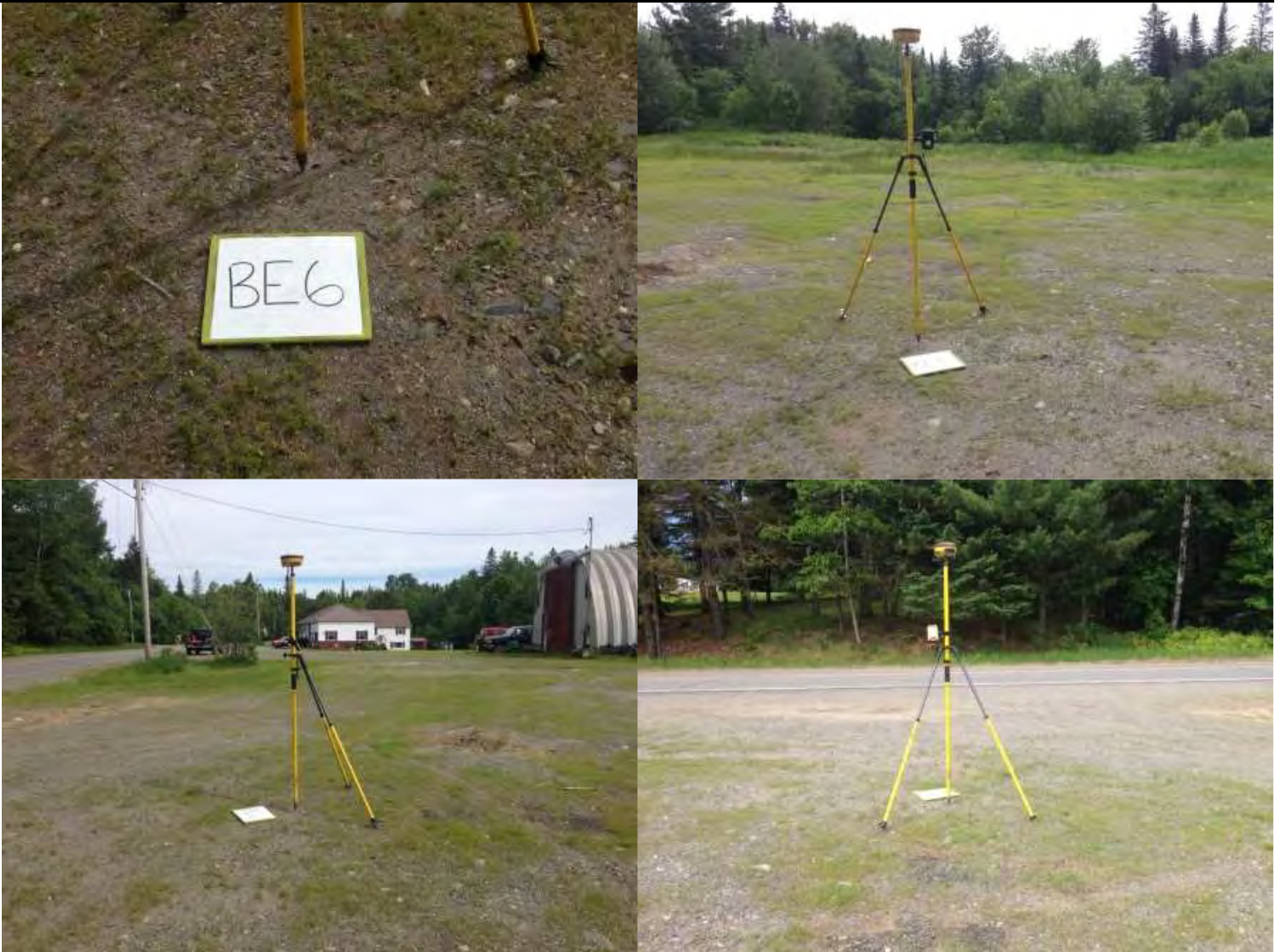
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4997482.44	502902.23	102.08

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE7
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

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

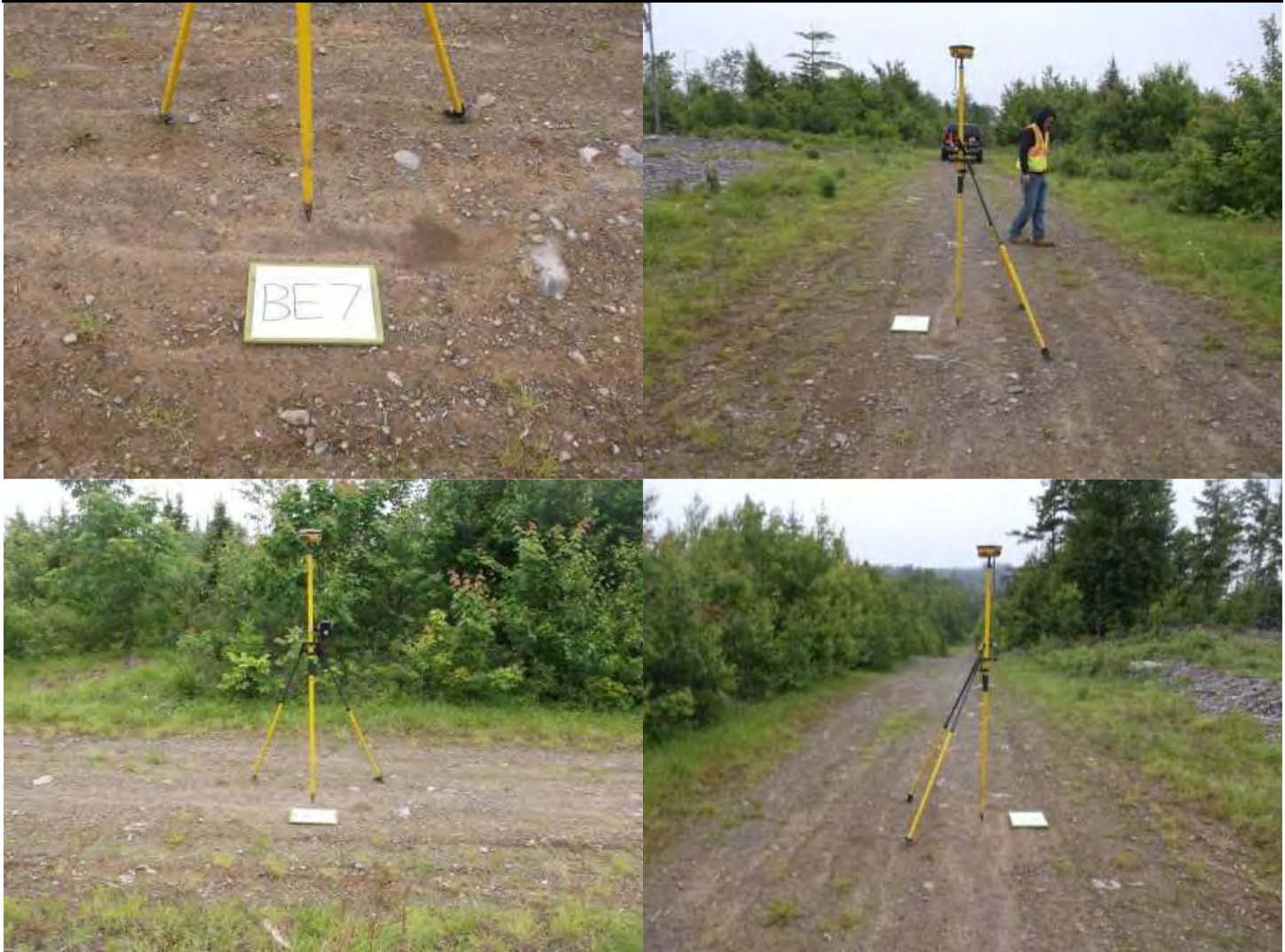
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5008332.25	510154.45	143.27

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE8
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
4995078.48	534284.29	46.25

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE9
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

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
4973009.53	449219.69	123.71

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE10
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4984217.74	446032.52	251.56

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/19/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE11
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
4975451.36	480768.42	80.65

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE12
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5024766.10	530567.95	60.68

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE13
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4938111.65	557784.10	29.80

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.003
RMSE Z	0.008
Method	Fast Static GPS

PHOTOS:



Point ID	BE14
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4989145.29	474344.78	195.97

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	BE15
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	

	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
4941153.23	414702.35	105.66

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	BE15-1
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4988683.49	415270.94	202.04

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.003
Method	Fast Static GPS

PHOTOS:





Point ID	BE205
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	Eastbrook

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

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4944008.133	550164.036	41.665

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	09-16-2015
RMSE Hz	0.000
RMSE Z	0.000
GPS Method	RTK KeyNet RTN

PHOTOS:





Point ID	BE208
Project No.	26258
Project Name	ME USGS
State	Maine
County	Piscataquis
Quad	Whetstone Pond

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
5002084.904	454257.989	290.041

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	09-15-2015
RMSE Hz	0.000
RMSE Z	0.000
GPS Method	RTK KeyNet RTN

PHOTOS:





URBAN AREA POINT DATA SHEETS

Point ID	UA1
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

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
4971209.74	458396.02	85.33

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA2
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4964054.71	476544.12	75.45

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
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	UA3
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4954387.73	487244.69	97.22

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
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	UA4
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4967252.51	429111.54	91.43

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA5
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

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
4932821.94	522937.84	28.43

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA6
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4991452.37	452285.67	338.53

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
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	UA7
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4950337.50	541856.08	102.22

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA8
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

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
4955617.30	542566.37	130.99

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA9
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
4962621.30	537212.56	75.21

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/12/2015
RMSE Hz	0.002
RMSE Z	0.003
Method	RTK GPS

PHOTOS:



Point ID	UA10
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
4981779.02	515911.99	41.09

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA11
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4977682.41	504006.66	62.76

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA12
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4982574.47	523329.39	43.14

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA13
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4976157.50	481895.77	114.56

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA14
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4989163.74	474370.70	196.69

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA15
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4997272.88	485443.81	148.05

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

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA16
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
4989959.15	509049.15	74.51

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA17
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4997548.20	502863.55	102.16

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA18
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4998530.72	513533.47	80.32

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.003
RMSE Z	0.003
Method	RTK GPS

PHOTOS:



Point ID	UA19
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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

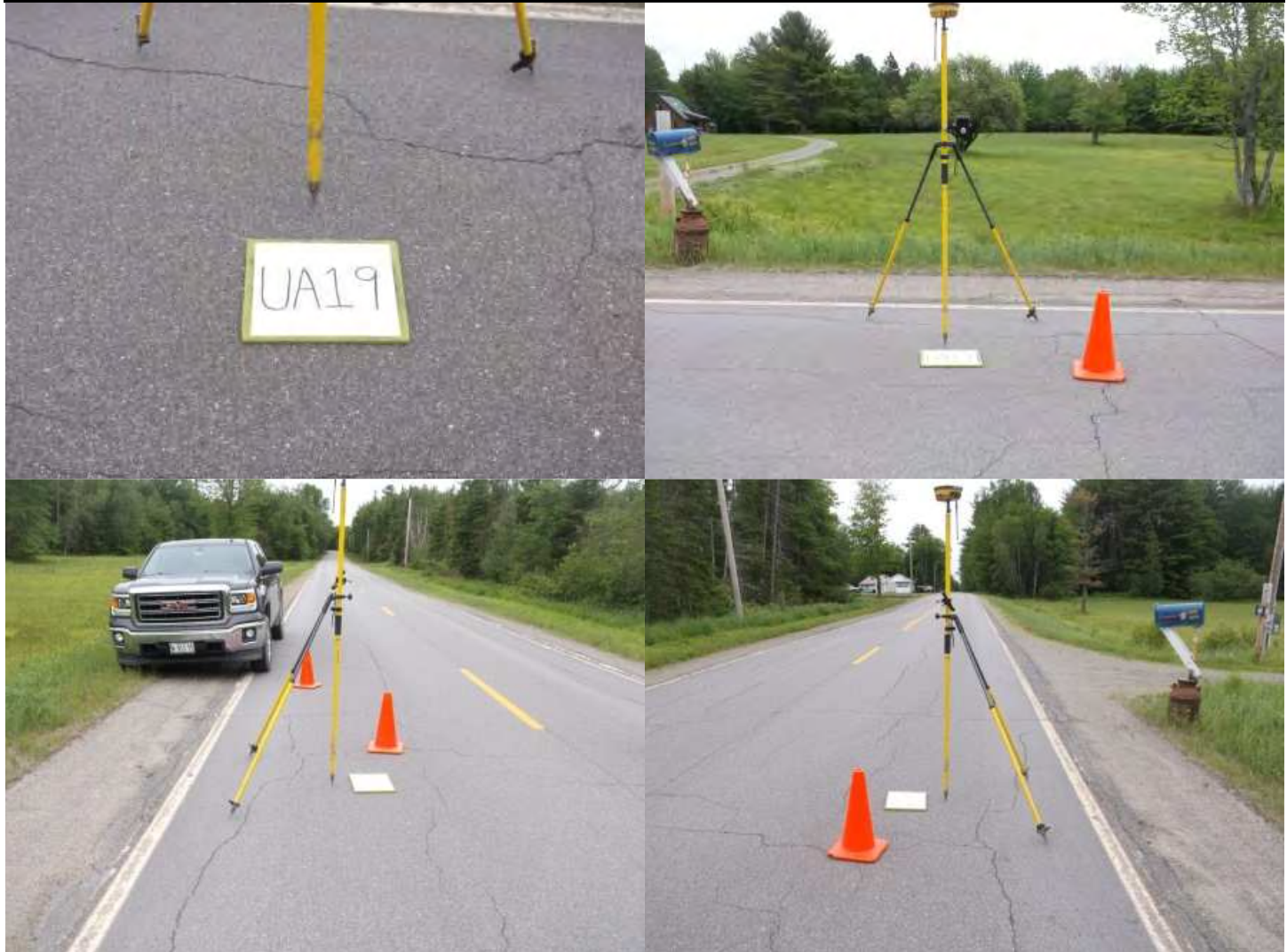
Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4991925.74	525677.88	38.80

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA20
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4995033.29	533822.15	56.67

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA21
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5004824.99	476740.90	175.99

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA22
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4952142.99	446672.45	103.13

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA23
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	

	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
4941159.37	414692.53	105.35

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.003
RMSE Z	0.003
Method	RTK GPS

PHOTOS:



Point ID	UA24
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4941502.04	447350.01	105.58

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA25
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4964348.44	543944.52	173.79

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA26
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4918555.05	530507.76	48.50

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.007
RMSE Z	0.008
Method	Fast Static GPS

PHOTOS:



Point ID	UA27
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4931031.56	530732.90	86.21

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA28
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4936994.61	544980.28	31.30

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA29
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4937955.19	558014.59	31.91

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.007
RMSE Z	0.014
Method	Fast Static GPS

PHOTOS:



Point ID	UA30
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4948638.62	555556.36	87.54

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA31
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4967202.14	553113.82	101.99

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA32
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4981326.12	549608.40	104.42

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/12/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	Fast Static GPS

PHOTOS:



Point ID	UA33
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4988447.70	540982.17	124.92

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/12/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA34
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5009130.01	509498.64	166.56

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA35
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5004309.37	495419.48	108.52

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA36
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4944547.88	518213.91	107.51

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA37
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4946411.77	525950.50	47.21

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA38
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4984225.73	494149.68	97.55

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA39
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

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

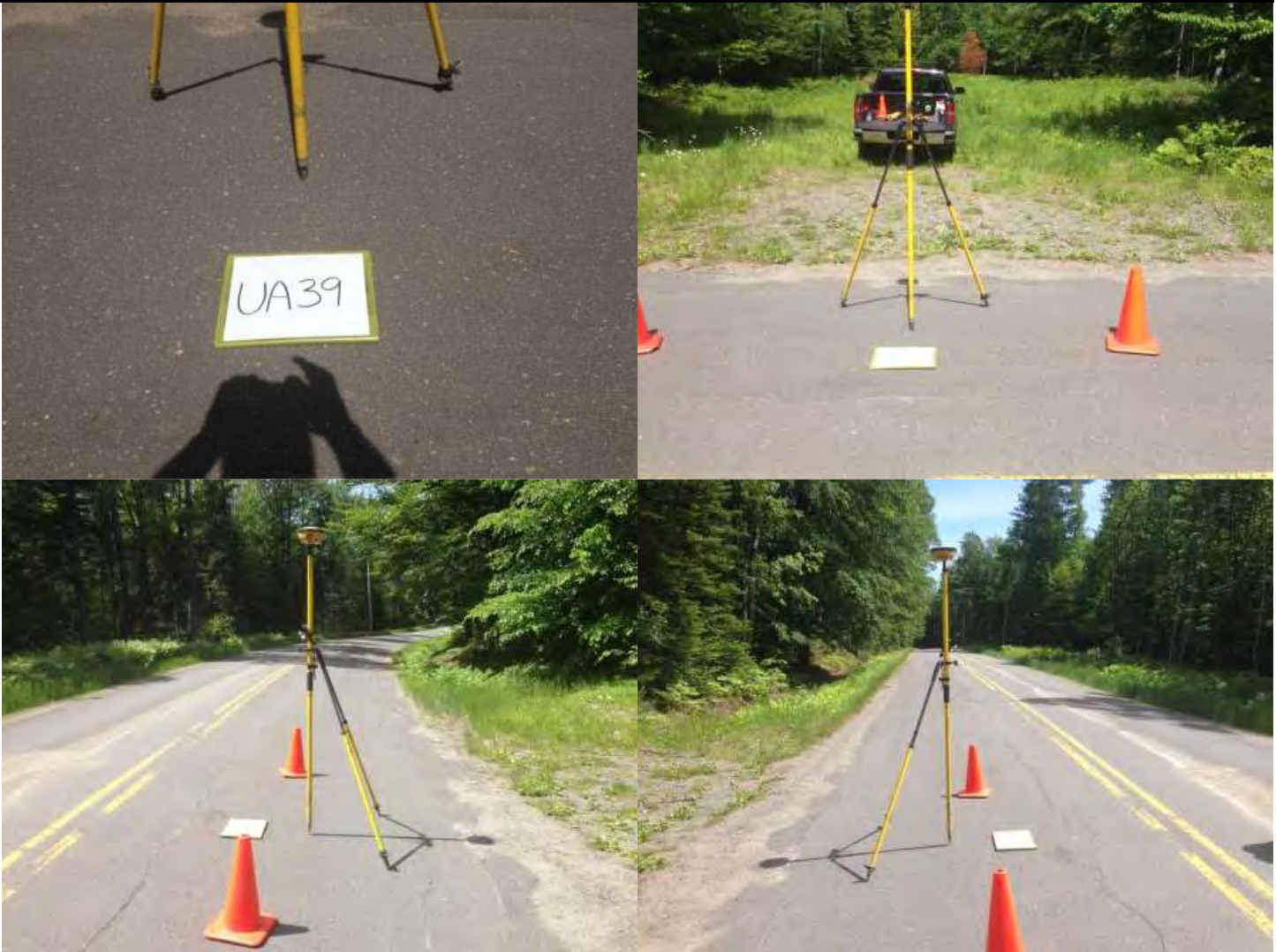
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
5013207.54	481055.47	148.95

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA40
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5016825.10	496801.78	135.12

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA40-1
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
5004619.91	445077.93	389.00

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/20/2015
Occupy PT	980
Back Sight PT	979
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	UA41
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5024769.03	530555.44	61.02

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA42
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5013576.60	522899.54	56.24

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA43
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4969745.93	527026.65	22.47

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/12//2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA43-1
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5010394.92	534022.45	59.24

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	UA44
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5016241.16	542867.24	108.51

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA45
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4977148.56	530727.34	34.61

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/12/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA45-1
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4994186.86	534182.91	41.70

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	UA46
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4976834.07	531236.26	34.04

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/12/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA46-1
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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

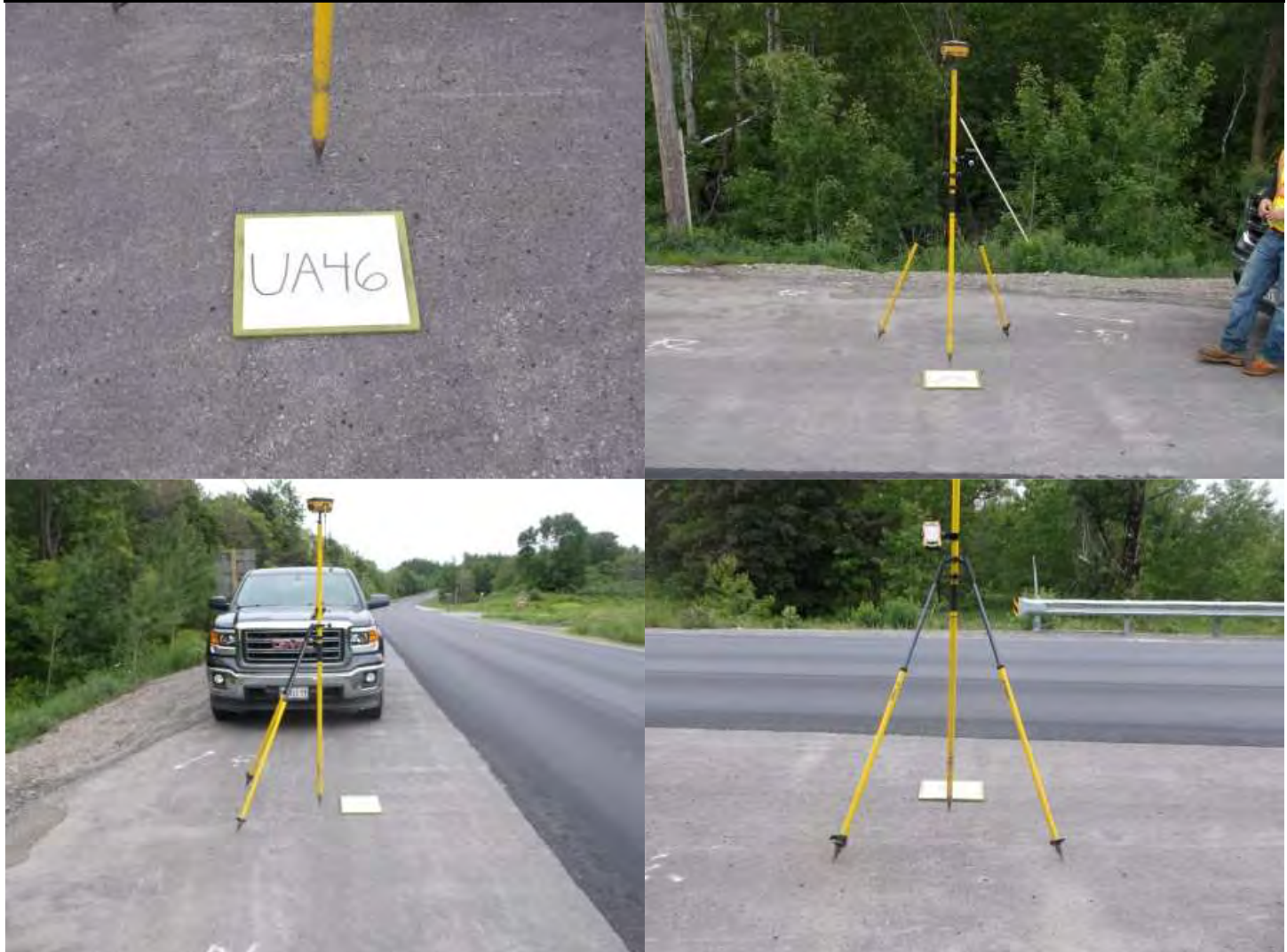
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4982373.13	523565.07	44.94

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA47
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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

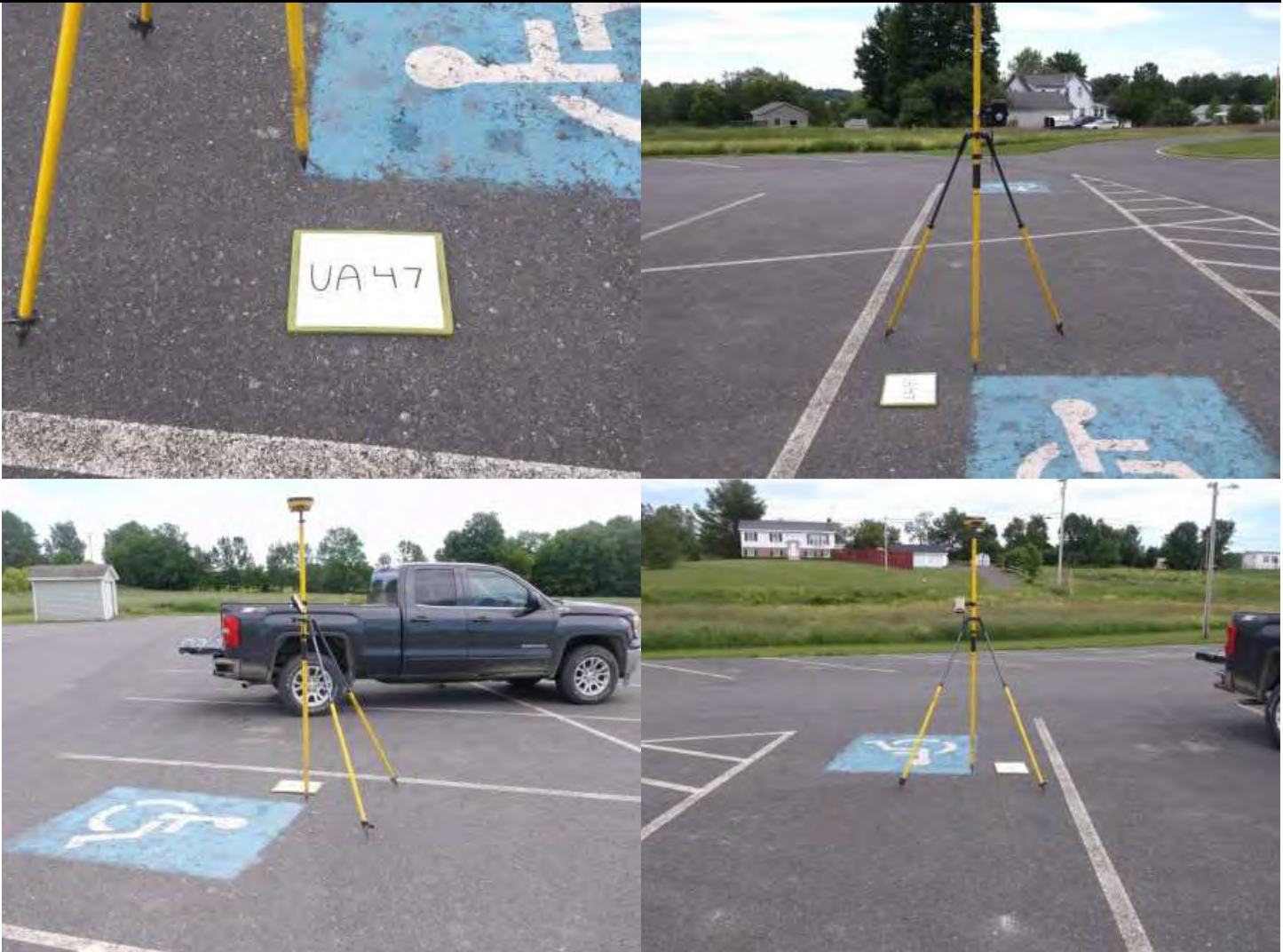
Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
4974871.33	480792.72	84.27

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18//2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA47-1
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4957242.21	468114.53	60.38

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA48
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4970714.05	463287.65	99.55

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA49
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4962135.81	462838.28	123.32

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA50
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4989721.70	452588.01	274.99

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
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	UA51
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

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
4995531.12	464709.43	164.34

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
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	UA52
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4988721.84	415280.75	204.09

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/23/2015
Occupy PT	1001
Back Sight PT	1000
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	UA53
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4992724.74	423302.66	339.01

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA54
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4994582.62	439015.10	415.94

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	Fast Static GPS

PHOTOS:



Point ID	UA55
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	

	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
4951976.60	414329.81	171.75

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA56
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4984219.30	446061.60	252.41

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/19/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA57
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4979841.39	430720.50	122.77

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA58
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

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
4972145.29	416827.75	131.18

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA60
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4953423.05	423571.68	85.14

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA61
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	

	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
4945936.12	422513.19	95.42

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA62
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4964283.09	440872.22	122.21

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA63
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4942112.89	434415.67	83.19

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA64
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4951531.16	436918.46	69.05

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA65
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4948131.31	442456.16	69.84

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA66
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

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
4941726.39	447470.77	106.86

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.000
RMSE Z	0.000
Method	RTK GPS

PHOTOS:



Point ID	UA67
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4951867.59	446811.81	98.40

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA68
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4953863.93	454124.21	56.08

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA69
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4960049.01	456376.28	96.42

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA70
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4965113.31	428391.35	127.10

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA71
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4951559.35	436806.48	69.03

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA90
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

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

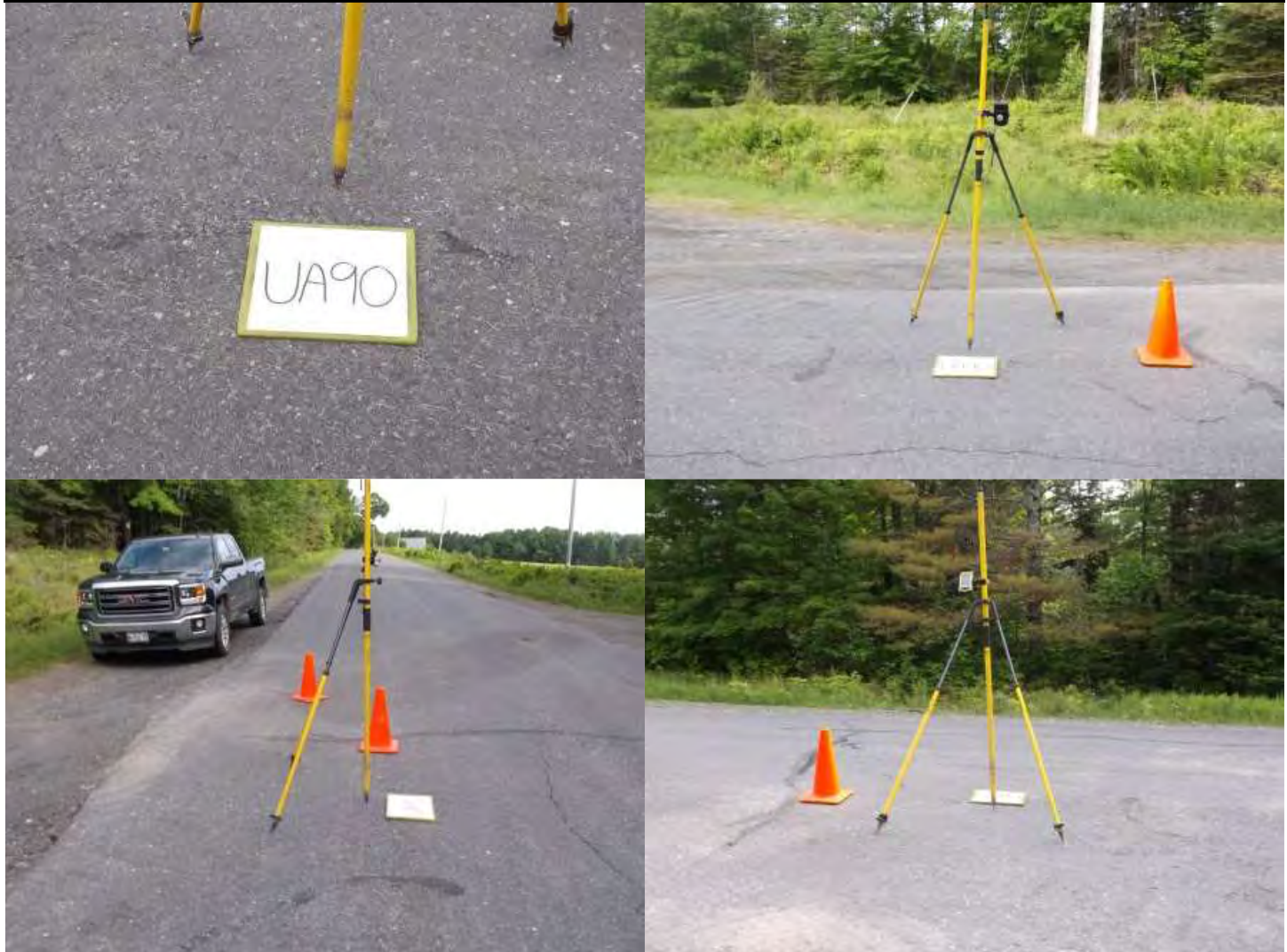
Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5011169.72	463879.98	212.10

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18//2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	UA91
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4962710.21	487025.36	78.41

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.002
RMSE Z	0.003
Method	RTK GPS

PHOTOS:



Point ID	UA92
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4956549.83	483113.13	104.82

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/19/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	UA93
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4972004.28	470734.74	147.88

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
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	UA94
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4994134.33	461302.01	265.75

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
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	UA95
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4973001.88	449220.83	123.62

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:





Point ID	UA200
Project No.	26258
Project Name	ME USGS
State	Maine
County	Franklin
Quad	Farmington Falls

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

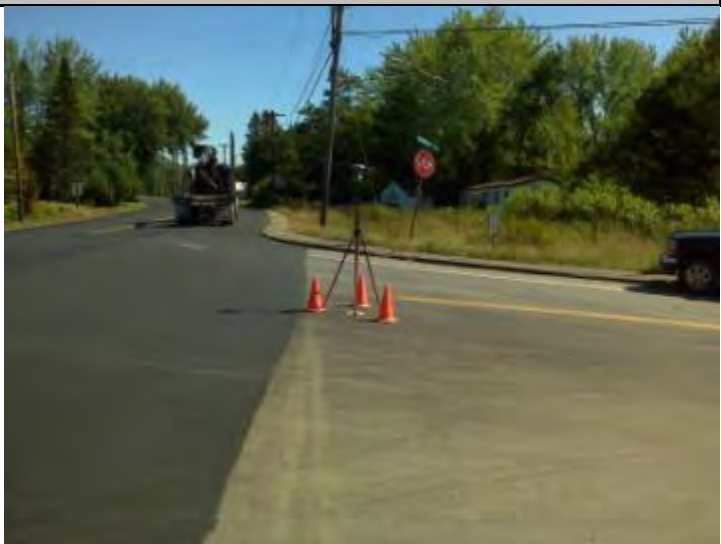
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4941485.056	414940.014	105.807

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	09-15-2015
RMSE Hz	0.008
RMSE Z	0.005
GPS Method	RTK KeyNet RTN

PHOTOS:





Point ID	UA202
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	Penobscot

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

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
4921140.891	528924.951	109.036

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	09-16-2015
RMSE Hz	0.005
RMSE Z	0.005
GPS Method	RTK KeyNet RTN

PHOTOS:





Point ID	UA210
Project No.	26258
Project Name	ME USGS
State	Maine
County	Piscataquis
Quad	Guilford

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
5009236.629	466836.380	151.862

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	09-10-2015
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	Static

PHOTOS:





Point ID	UA212
Project No.	26258
Project Name	ME USGS
State	Maine
County	Piscataquis
Quad	Brownville Junction

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
5014859.191	498750.795	139.426

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	09-10-2015
RMSE Hz	0.010
RMSE Z	0.019
GPS Method	RTK KeyNet RTN

PHOTOS:





Point ID	UA214
Project No.	26258
Project Name	ME USGS
State	Maine
County	Penobscot
Quad	Saboeis

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

Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12A	
Meters	

Northing	Easting	Elevation
5017999.736	526945.522	71.308

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510881
Antenna Height	1.595 Meters

Date (MM-DD-YYYY)	09-10-2015
RMSE Hz	0.012
RMSE Z	0.018
GPS Method	Static and RTK KeyNet RTN

PHOTOS:





Point ID	UA219
Project No.	26258
Project Name	ME USGS
State	Maine
County	Penobscot
Quad	Carmel

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

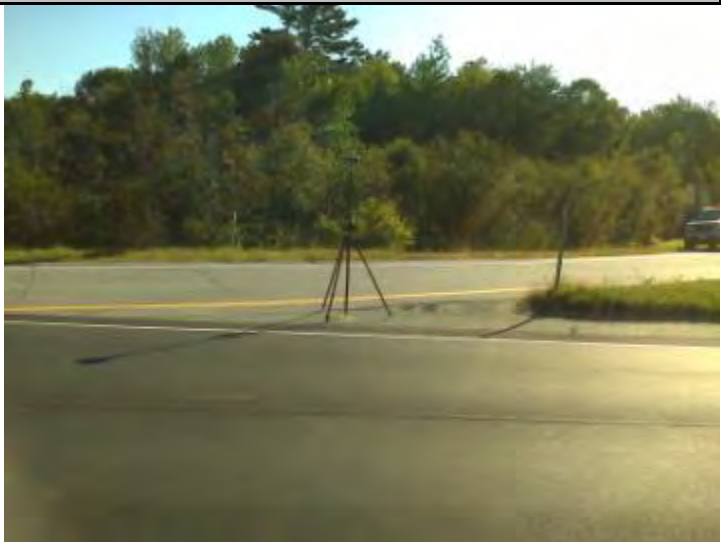
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4959153.124	491668.768	91.956

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	09-15-2015
RMSE Hz	0.005
RMSE Z	0.005
GPS Method	RTK KeyNet RTN

PHOTOS:





Point ID	UA220
Project No.	26258
Project Name	ME USGS
State	Maine
County	Penebscot
Quad	Kenduskeag

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4977651.999	505271.998	55.094

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	09-13-2015
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	RTK KeyNet RTN

PHOTOS:





VEGETATION POINT DATA SHEETS



FORESTED POINT DATA SHEETS

Point ID	F1
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4988713.25	415313.71	209.99

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/23/2015
Occupy PT	STN 1001
Back Sight PT	STN 1000
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F2
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4952001.58	446739.72	102.01

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/22/2015
Occupy PT	STN 986
Back Sight PT	STN 985
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F3
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4918507.48	530529.99	47.00

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/10/2015
Occupy PT	STN 905
Back Sight PT	STN 904
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F4
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4971229.38	458395.27	84.11

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/20/2015
Occupy PT	STN 974
Back Sight PT	STN 973
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F5
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4963718.12	476364.32	76.37

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/19/2015
Occupy PT	STN 962
Back Sight PT	STN 961
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F6
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4954391.13	487381.65	97.24

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/19/2015
Occupy PT	STN 960
Back Sight PT	STN 959
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F7
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4991648.02	452699.77	331.85

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/19/2015
Occupy PT	STN 970
Back Sight PT	STN 969
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F8
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4963867.06	487254.75	77.63

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/18/2015
Occupy PT	STN 958
Back Sight PT	STN 957
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F9
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4948144.96	442498.70	70.26

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/22/2015
Occupy PT	STN 990
Back Sight PT	STN 989
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F10
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4938084.07	557792.97	28.61

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/11/2015
Occupy PT	STN 911
Back Sight PT	STN 910
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F11
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4981357.95	549621.37	103.60

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/12/2015
Occupy PT	STN 925
Back Sight PT	STN 924
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F13
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4932673.55	523023.93	22.66

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/10/2015
Occupy PT	STN 903
Back Sight PT	STN 902
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F14
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4948158.56	556135.97	47.70

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/11/2015
Occupy PT	STN 913
Back Sight PT	STN 912
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F15
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4946302.13	525867.78	43.62

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/10/2015
Occupy PT	STN 901
Back Sight PT	STN 900
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F16
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4931011.64	530784.66	86.17

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/10/2015
Occupy PT	STN 907
Back Sight PT	STN 906
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F17
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4936960.38	545021.88	32.07

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/17/2015
Occupy PT	STN 909
Back Sight PT	STN 908
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F18
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4949629.33	542185.98	88.90

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/11/2015
Occupy PT	STN 917
Back Sight PT	STN 916
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F19
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4955687.10	542543.75	135.73

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/11/2015
Occupy PT	STN 915
Back Sight PT	STN 914
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F20
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5011189.33	463899.11	209.54

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/18/2015
Occupy PT	STN 950
Back Sight PT	STN 949
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F21
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4962802.62	537349.67	76.37

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/12/2015
Occupy PT	STN 919
Back Sight PT	STN 918
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F22
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4969691.60	529564.40	42.19

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/22/2015
Occupy PT	STN 921
Back Sight PT	STN 920
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F23
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4981390.90	516276.64	35.51

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/16/2015
Occupy PT	STN 944
Back Sight PT	STN 943
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F24
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4981770.68	522674.00	41.74

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/16/2015
Occupy PT	STN 942
Back Sight PT	STN 941
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F25
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4994150.71	461397.25	259.51

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/19/2015
Occupy PT	STN 966
Back Sight PT	STN 965
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F26
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4989391.26	474378.14	186.31

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/18/2015
Occupy PT	STN 956
Back Sight PT	STN 955
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F27
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4997059.93	485647.74	150.95

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/18/2015
Occupy PT	STN 954
Back Sight PT	STN 953
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F28
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4997571.74	502848.08	105.61

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/17/2015
Occupy PT	STN 946
Back Sight PT	STN 945
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F29
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4991484.57	525233.51	41.26

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/18/2015
Occupy PT	STN 940
Back Sight PT	STN 939
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F30
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4994343.10	534128.14	44.57

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/15/2015
Occupy PT	STN 927
Back Sight PT	STN 926
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F31
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5004678.33	476735.70	173.38

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/18/2015
Occupy PT	STN 952
Back Sight PT	STN 951
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F32
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4941499.92	447328.54	104.26

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/22/2015
Occupy PT	STN 988
Back Sight PT	STN 987
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F34
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
5004604.20	445053.61	387.91

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/20/2015
Occupy PT	STN 980
Back Sight PT	STN 979
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F35
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5011182.31	463833.73	216.73

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/18/2015
Occupy PT	STN 950
Back Sight PT	STN 949
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F36
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5013225.94	481138.41	153.11

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/17/2015
Occupy PT	STN 947
Back Sight PT	STN 948
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F37
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5020512.97	516809.87	100.56

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/16/2015
Occupy PT	STN 938
Back Sight PT	STN 937
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F38
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5024801.20	530490.40	58.09

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/15/2015
Occupy PT	STN 934
Back Sight PT	STN 933
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F39
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5013522.54	522929.70	54.80

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/15/2015
Occupy PT	STN 936
Back Sight PT	STN 935
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F40
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5009343.55	535724.73	104.11

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/15/2015
Occupy PT	STN 931
Back Sight PT	STN 930
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F41
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5016286.87	542864.78	108.99

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	Penobscot
Occupy PT	STN 999
Back Sight PT	STN 932
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F42
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4995576.12	533600.80	60.13

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/15/2015
Occupy PT	STN 929
Back Sight PT	STN 928
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F43
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4976791.01	531245.39	34.16

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/12/2015
Occupy PT	STN 923
Back Sight PT	STN 922
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F44
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4957347.68	468107.64	58.95

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/22/2015
Occupy PT	STN 984
Back Sight PT	STN 983
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F45
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4972552.12	470841.20	134.99

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/19/2015
Occupy PT	STN 964
Back Sight PT	STN 963
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F46
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4989758.98	452599.83	276.50

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/19/2015
Occupy PT	STN 968
Back Sight PT	STN 967
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F47
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4994598.92	439031.35	413.28

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/20/2015
Occupy PT	STN 978
Back Sight PT	STN 977
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F48
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4992658.07	423337.87	333.96

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/20/2015
Occupy PT	STN 982
Back Sight PT	STN 981
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F49
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4984233.59	446012.27	253.34

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/19/2015
Occupy PT	STN 972
Back Sight PT	STN 971
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F50
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4979956.48	430732.80	118.65

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/23/2015
Occupy PT	STN 996
Back Sight PT	STN 995
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F51
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4972113.34	416755.09	131.14

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/23/2015
Occupy PT	STN 994
Back Sight PT	STN 993
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F52
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4964316.34	440839.32	121.36

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/23/2015
Occupy PT	STN 998
Back Sight PT	STN 997
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F53
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4942014.34	434566.18	90.81

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/22/2015
Occupy PT	STN 992
Back Sight PT	STN 991
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	F54
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4973131.34	449217.50	128.10

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/19/2015
Occupy PT	STN 976
Back Sight PT	STN 975
RMSE Hz	
RMSE Z	

PHOTOS:





Point ID	FO203
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	Penobscot

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4921158.006	528912.806	107.471

Operator	Rick Ingram
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	09-16-2015
Occupy PT	UA202
Back Sight PT	FO203BS
RMSE Hz	0.010
RMSE Z	0.021

PHOTOS:





Point ID	FO209
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	Whetstone Pond

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
5002093.050	454233.733	289.906

Operator	Bill Neville
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	05-05-2015
Occupy PT	FO209TP
Back Sight PT	BE208
RMSE Hz	0.006
RMSE Z	0.008

PHOTOS:





Point ID	FO211
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	Guilford

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
5009273.343	466816.100	149.282

Operator	Bill Neville
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	09-13-2015
Occupy PT	FO211TP
Back Sight PT	UA210
RMSE Hz	0.012
RMSE Z	0.013

PHOTOS:





Point ID	FO213
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	Brownville Junction

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
5014791.088	498777.065	143.534

Operator	Bill Neville
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	09-12-2015
Occupy PT	FO213TP
Back Sight PT	UA212
RMSE Hz	0.010
RMSE Z	0.019

PHOTOS:





Point ID	FO215
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	Seboeis

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
5017967.876	526920.812	72.105

Operator	Bill Neville
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	09-12-2015
Occupy PT	UA214
Back Sight PT	FO215BS
RMSE Hz	0.012
RMSE Z	0.018

PHOTOS:





SWAMP/MARSH POINT DATA SHEETS

Point ID	W1
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

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
4971174.66	458283.32	84.20

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	W2
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4981420.48	516129.64	35.80

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	W3
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4995038.58	534521.17	40.59

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	W4
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	

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
4951946.42	414341.56	169.67

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	W5
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4956482.34	483918.47	81.67

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
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	W6
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

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
4932742.02	522979.31	21.94

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	W7
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4948272.69	556236.95	41.66

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	W8
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5005831.12	493756.19	85.03

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	W9
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
5004594.83	445087.82	387.69

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/20/2015
Occupy PT	980
Back Sight PT	979
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	W10
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

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

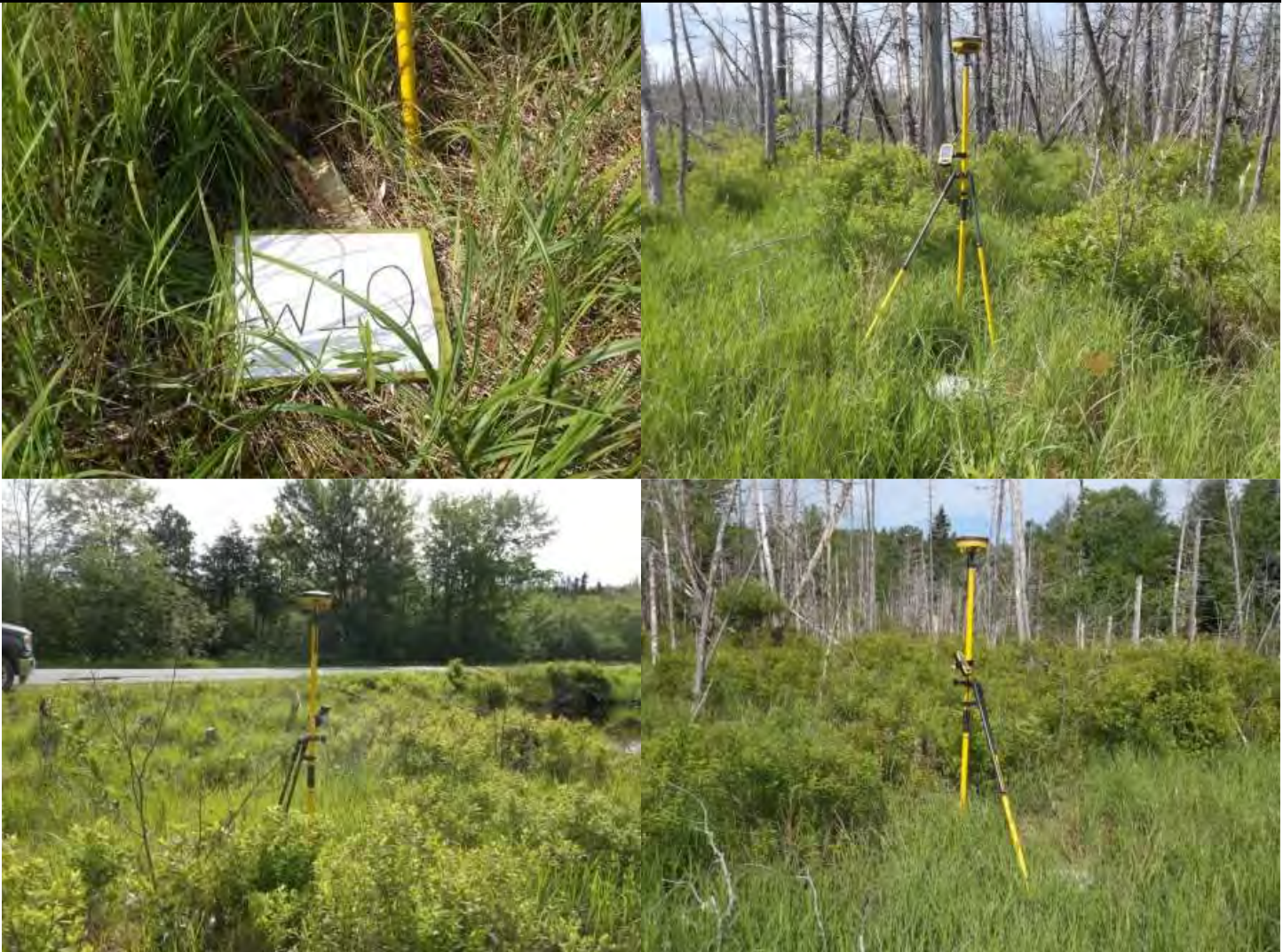
Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12B
	Meters

Northing	Easting	Elevation
5009626.05	466332.59	123.32

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	W11
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5024810.69	530545.85	59.03

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	W12
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5016247.39	542848.49	107.47

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	W13
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4994199.78	534208.10	37.96

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	W14
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
4976681.17	531309.33	30.32

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/12/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	W15
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4969707.91	529705.94	40.60

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/12/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	W16
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4994565.14	439076.10	413.77

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	6/20/2015
Occupy PT	978
Back Sight PT	977
RMSE Hz	
RMSE Z	

PHOTOS:





Point ID	SW204
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	Eastbrook

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

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12A
Meters

Northing	Easting	Elevation
4943408.127	549971.580	36.906

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	09-16-2015
RMSE Hz	0.006
RMSE Z	0.008
GPS Method	RTK KeyNet RTN

PHOTOS:





TALL WEED POINT DATA SHEETS

Point ID	TW1
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

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
4963973.32	476498.73	75.80

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
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	TW2
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
4956548.38	483089.94	106.03

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
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	TW3
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4991616.41	452734.70	328.67

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
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	TW4
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

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
5011205.00	463866.74	212.81

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	TW5
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5020512.97	516834.81	101.15

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	TW6
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5024607.28	530833.15	59.16

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	TW7
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
5013545.37	522888.06	54.77

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	TW9
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4994561.40	439067.77	414.23

Operator	John Allen
Instrument Model	Topcon GTS300
Date (MM-DD-YYYY)	978
Occupy PT	977
Back Sight PT	
RMSE Hz	
RMSE Z	

PHOTOS:



Point ID	TW10
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

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
4984210.54	446016.39	250.69

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/19/2015
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



Point ID	TW11
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

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
4972140.39	416783.31	130.66

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	TW12
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4965088.12	428402.71	127.50

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



Point ID	TW13
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4953406.11	423518.21	84.44

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:





Point ID	TW201
Project No.	26258
Project Name	ME USGS
State	Maine
County	Franklin
Quad	Farmington Falls

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4941468.803	414949.257	105.177

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	09-15-2015
RMSE Hz	0.006
RMSE Z	0.001
GPS Method	RTK KeyNet RTN

PHOTOS:





HORIZONTAL CHECK POINT DATA SHEETS

Point ID	H1
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4977701.34	504000.43	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H2
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4984271.55	494082.05	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H3
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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

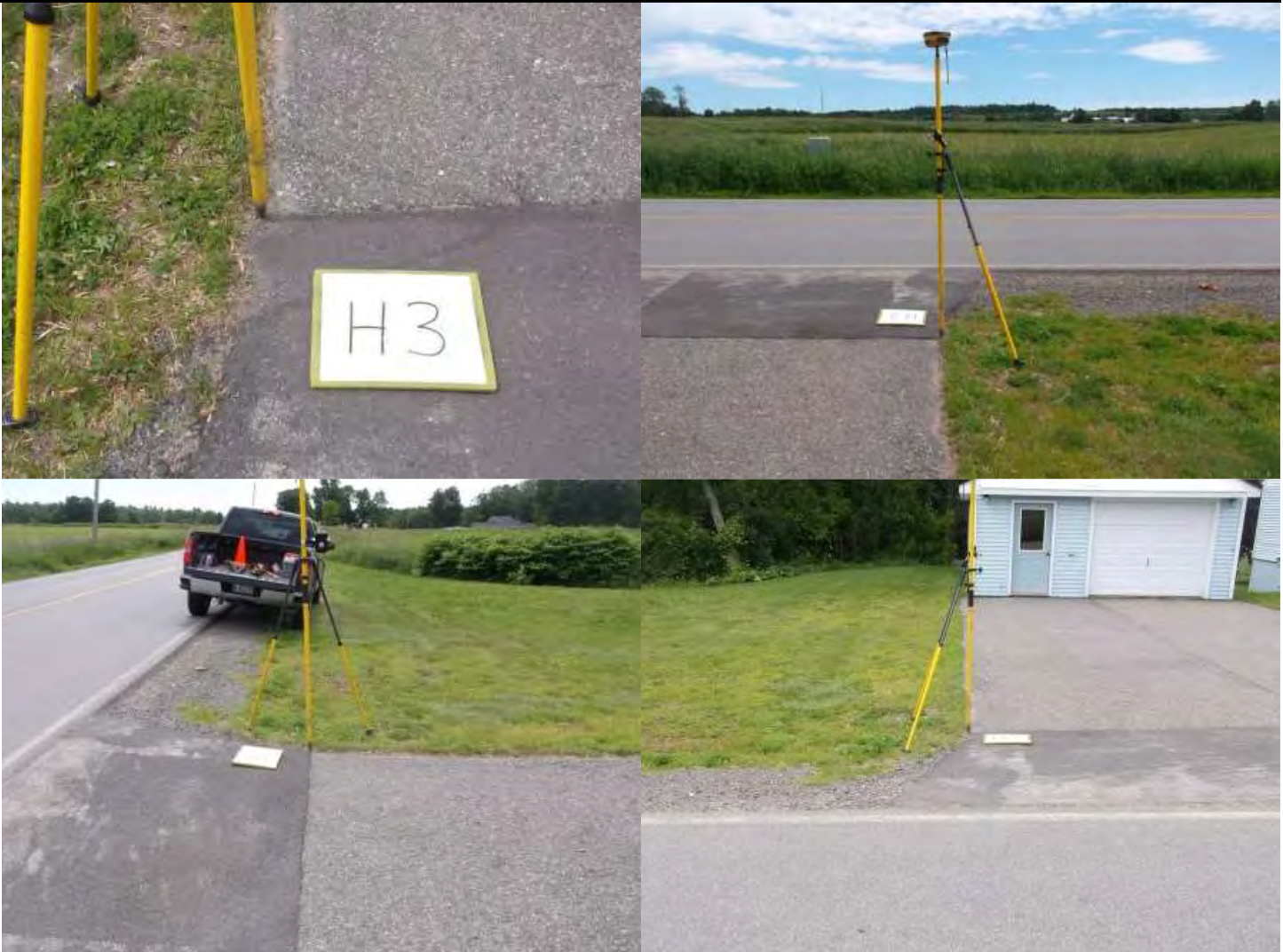
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4975854.02	481584.83	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H5
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4994141.96	461303.91	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/19/2015
RMSE Hz	0.002
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H6
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

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
4997551.89	502858.54	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H7
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4990016.49	509043.62	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H8
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
4998542.98	513527.82	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.002
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H9
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
4992027.24	525700.87	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H10
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4995627.04	533623.10	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H11
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5004836.92	476754.91	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H12
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	

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
4951965.25	414283.25	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H13
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4953394.68	423576.91	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H14
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4951561.61	436799.43	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H15
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4951875.19	446799.48	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H16
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	

	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
4941235.40	414760.95	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.002
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H17
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4941680.75	447438.52	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H18
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

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
4942108.97	434408.42	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H20
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4970725.48	463289.44	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H21
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

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
4980277.37	430992.00	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/23/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H22
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

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

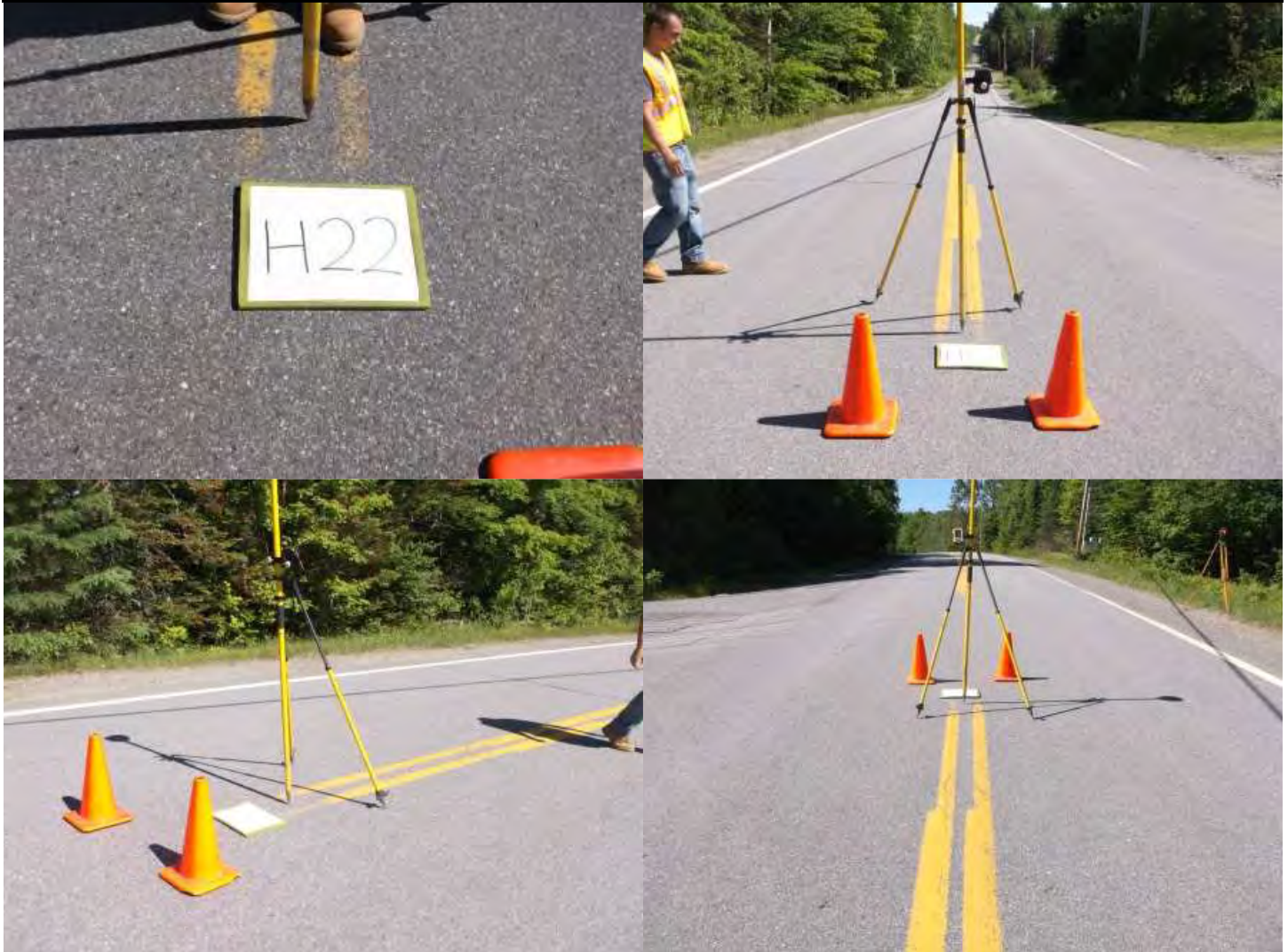
Coordinate System	
NAD83(2011)	
UTM – Zone 19N	
NAVD88	
GEOID12B	
Meters	

Northing	Easting	Elevation
4984218.36	446070.61	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/19/2015
RMSE Hz	0.002
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H23
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4964371.38	543937.78	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H24
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

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
4918671.01	530367.48	

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.001
RMSE Z	
Method	Fast Static GPS

PHOTOS:



Point ID	H25
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4931119.56	530712.50	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H26
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4937037.13	544945.69	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H27
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4937947.68	558023.98	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.005
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H28
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

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
4948637.16	555573.20	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H29
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4966731.33	552983.97	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/11/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H30
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4988444.80	540982.81	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/12/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H31
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5009136.75	509478.57	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H32
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
5004310.30	495413.39	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H33
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

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
4944422.18	518141.77	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H34
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Hancock
Quad	

	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
4946480.69	525946.51	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/10/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H35
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4994060.80	461145.84	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/19/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H37
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4962715.07	487044.79	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H38
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4969743.19	527024.83	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/12/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H39
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4956539.63	483109.10	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/19/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H40
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

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
4962142.82	462826.99	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/22/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H41
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4974988.29	480851.29	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H42
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

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
5016823.47	496803.30	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/17/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H43
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
5020599.30	516790.89	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H44
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5024771.68	530734.96	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H45
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5013556.25	522936.31	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H46
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
5010354.42	534001.40	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/15/2015
RMSE Hz	0.002
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H47
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Somerset
Quad	

	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
4992632.13	423325.79	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/20/2015
RMSE Hz	0.002
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H48
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4982574.46	523329.39	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/16/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H51
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

	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
4989166.12	474366.63	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H52
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Penobscot
Quad	

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
4974871.33	480792.72	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/18/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:



Point ID	H53
Project No.	26258
Project Name	USGS ME & MA QL2 & QL2 LiDAR BAA
State	Maine
County	Piscataquis
Quad	

	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
4995531.12	464709.44	

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-00160
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	6/19/2015
RMSE Hz	0.001
RMSE Z	
Method	RTK GPS

PHOTOS:





Point ID	Hz206
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	Beach Hill Pond

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4944424.399	549286.586	Hz ONLY

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	09-16-2015
RMSE Hz	0.009
RMSE Z	0.017
GPS Method	RTK KeyNet RTN

PHOTOS:





Point ID	Hz207
Project No.	26258
Project Name	ME & MA QL1 & QL2 LiDAR BAA
State	Maine
County	Franklin
Quad	Penobscot

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
4921251.376	529206.331	Hz ONLY

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	09-16-2015
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	RTK KeyNet RTN

PHOTOS:





Point ID	Hz217
Project No.	26258
Project Name	ME USGS
State	Maine
County	Penobscot
Quad	Saboeis

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
5017973.414	526967.543	Hz ONLY

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	09-12-2015
RMSE Hz	0.004
RMSE Z	0.003
GPS Method	RTK KeyNet RTN

PHOTOS:





Point ID	Hz218
Project No.	26258
Project Name	ME USGS
State	Maine
County	Piscataquis
Quad	Guilford

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

Coordinate System	NAD83(2011)
	UTM – Zone 19N
	NAVD88
	GEOID12A
	Meters

Northing	Easting	Elevation
5003713.714	464353.418	Hz ONLY

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	09-10-2015
RMSE Hz	0.009
RMSE Z	0.016
GPS Method	RTK KeyNet RTN

PHOTOS:

