Project Report Appendices

The following section contains the appendices as listed in the Ouachita, Arkansas 2017 QL2 Project Report.

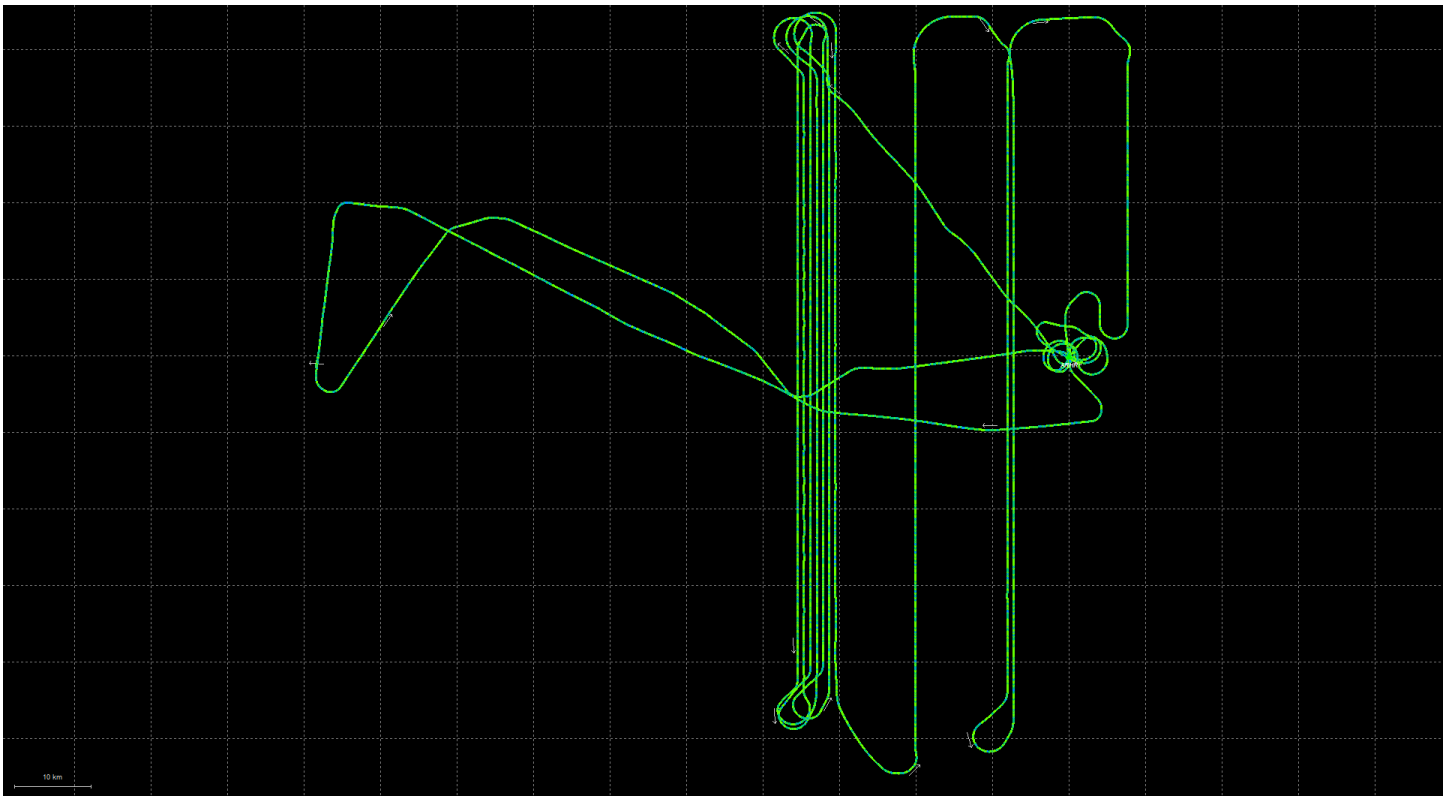
Appendix A

GPS/IMU Processing Statistics
Flight Logs

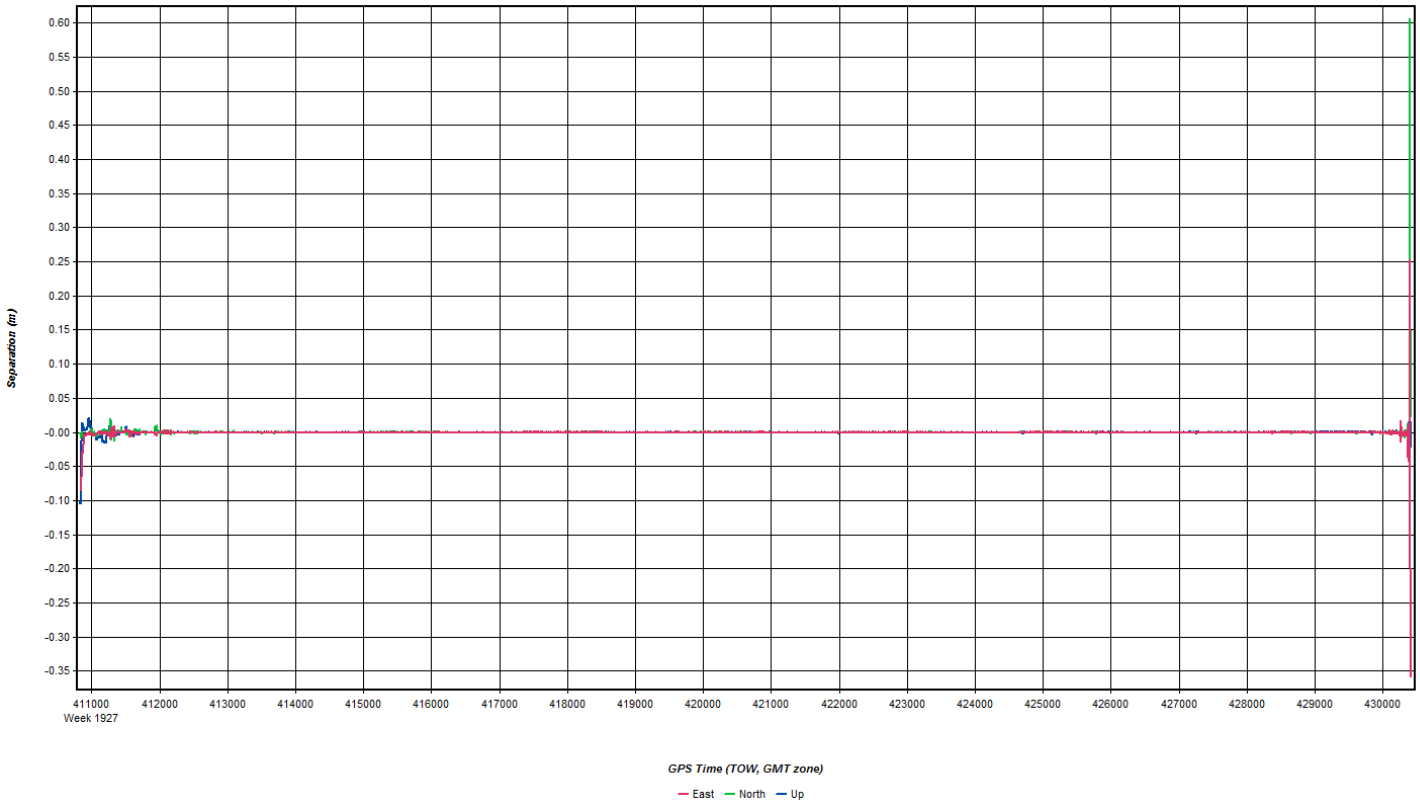
There were 53 total lifts. Graph reports generated from processing software and flight logs are found on the following pages.

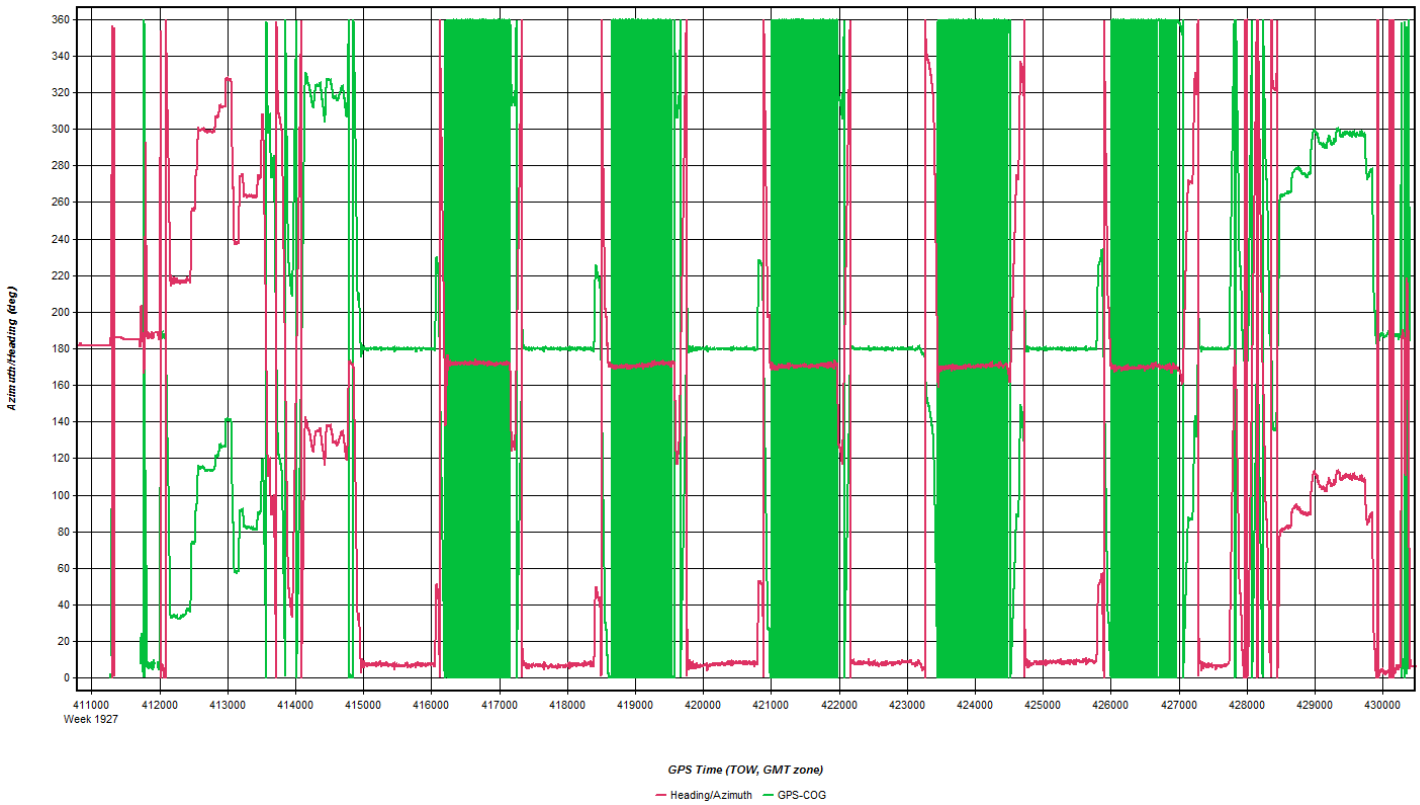
Dec 15, 2016-A (C-FVZM, SN7229)..... 2
Flight Log 9
Dec 15, 2016-A (C-GKSI, SN7207) 10
Flight Log 18
Dec 18, 2016-A1 (C-FVZM, SN7229) 19
Flight Log 26
Dec 18, 2016-A2 (C-FVZM, SN7229) 27
Flight Log 34
Dec 18, 2016-A (C-GKSI, SN7207) 35
Flight Log 43
Dec 19, 2016-A1 (C-FVZM, SN7229) 45
Flight Log 52
Dec 19, 2016-A2 (C-FVZM, SN7229) 53
Flight Log 61
Dec 19, 2016-A (C-GKSI, SN7207) 62
Flight Log 70
Dec 20, 2016-A (C-FVZM, SN7229) 72
Flight Log 79
Dec 20, 2016-A (C-GKSI, SN7207) 80
Flight Log 88
Dec 21, 2016-A (C-GKSI, SN7207) 89
Flight Log 97
Dec 21, 2016-A (C-GKSI, SN7229) 99
Flight Log 106
Dec 22, 2016-A (C-GKSI, SN7229)..... 107
Flight Log 114
Jan 4, 2017-A (C-GKSI, SN7229)..... 115
Flight Log 122
Jan 6, 2017-A (C-FVZM, SN7207).....123
Flight Log 131
Jan 6, 2017-A (C-GKSI, SN7229).....132
Flight Log 139
Jan 7, 2017-A (C-GKSI, SN7229).....140
Flight Log 147
Jan 7, 2017-B (C-GKSI, SN7229) 148
Flight Log 155
Jan 8, 2017-A1 (C-GKSI, SN7229) 156
Flight Log 163
Jan 8, 2017-A2 (C-GKSI, SN7229) 164
Flight Log 171
Jan 10, 2017-A (N4181T, SN354) 172
Jan 10, 2017-B (N4181T, SN354).....176
Jan 10, 2017-C (N4181T, SN354) 180
Jan 16, 2017-A (N4181T, SN354)..... 184
Jan 17, 2017-A (N4181T, SN354).....188
Jan 20, 2017-A (C-FVZM, SN7229) 192
Flight Log 199
Jan 20, 2017-A (N4181T, SN354) 200
Jan 20, 2017-B (N4181T, SN354)..... 204
Jan 21, 2017-A (C-FVZM, SN7229) 208
Flight Log 215
Jan 21, 2017-A (C-GKSI, SN7207) 216
Flight Log 223
Jan 21, 2017-B (C-GKSI, SN7207) 225
Flight Log 233
Jan 23, 2017-A (C-GKSI, SN7207) 234
Flight Log 242
Jan 23, 2017-A (N4181T, SN354)..... 244
Jan 24, 2017-A1 (C-FVZM, SN7229).....248
Flight Log 256
Jan 24, 2017-A2 (C-FVZM, SN7229) 257
Flight Log 265
Jan 24, 2017-A (C-GKSI, SN7207) 266
Flight Log 274
Jan 24, 2017-A (N4181T, SN354).....276
Flight Log 280
Jan 24, 2017-B (C-GKSI, SN7207) 281
Flight Log 289
Jan 25, 2017-A (C-FVZM, SN7229)..... 290
Flight Log 298
Jan 25, 2017-A (C-GKSI, SN7207) 299
Flight Log 307
Jan 25, 2017-A (N4181T, SN354)..... 309
Jan 25, 2017-B (N4181T, SN354) 313
Jan 26, 2017-A (N4181T, SN354).....317
Jan 26, 2017-B (N4181T, SN354) 321
Jan 27, 2017-A1 (C-FVZM, SN7229) 325
Flight Log 333
Jan 27, 2017-A2 (C-FVZM, SN7229) 334
Flight Log 342
Jan 27, 2017-A (N4181T, SN354).....343
Jan 27, 2017-B (N4181T, SN354) 347
Jan 27, 2017-C (N4181T, SN354) 351
Jan 28, 2017-A1 (C-FVZM, SN7229) 355
Flight Log 363
Jan 28, 2017-A2 (C-FVZM, SN7229) 364
Flight Log 372
Jan 28, 2017-A (N4181T, SN354).....373
Feb 24, 2017-A (C-FVZM, SN7229).....377
Flight Log 384

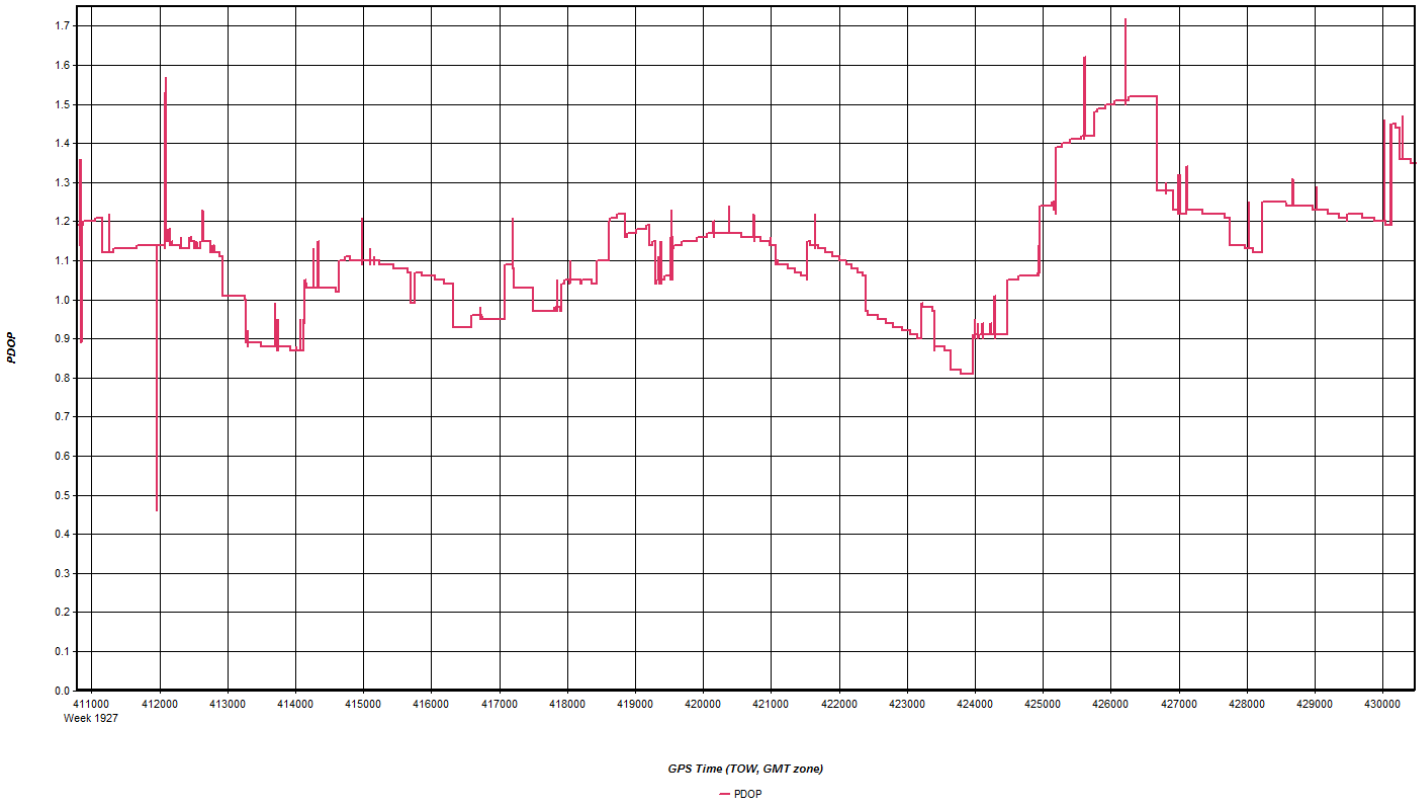
Dec 15, 2016-A (C-FVZM, SN7229)

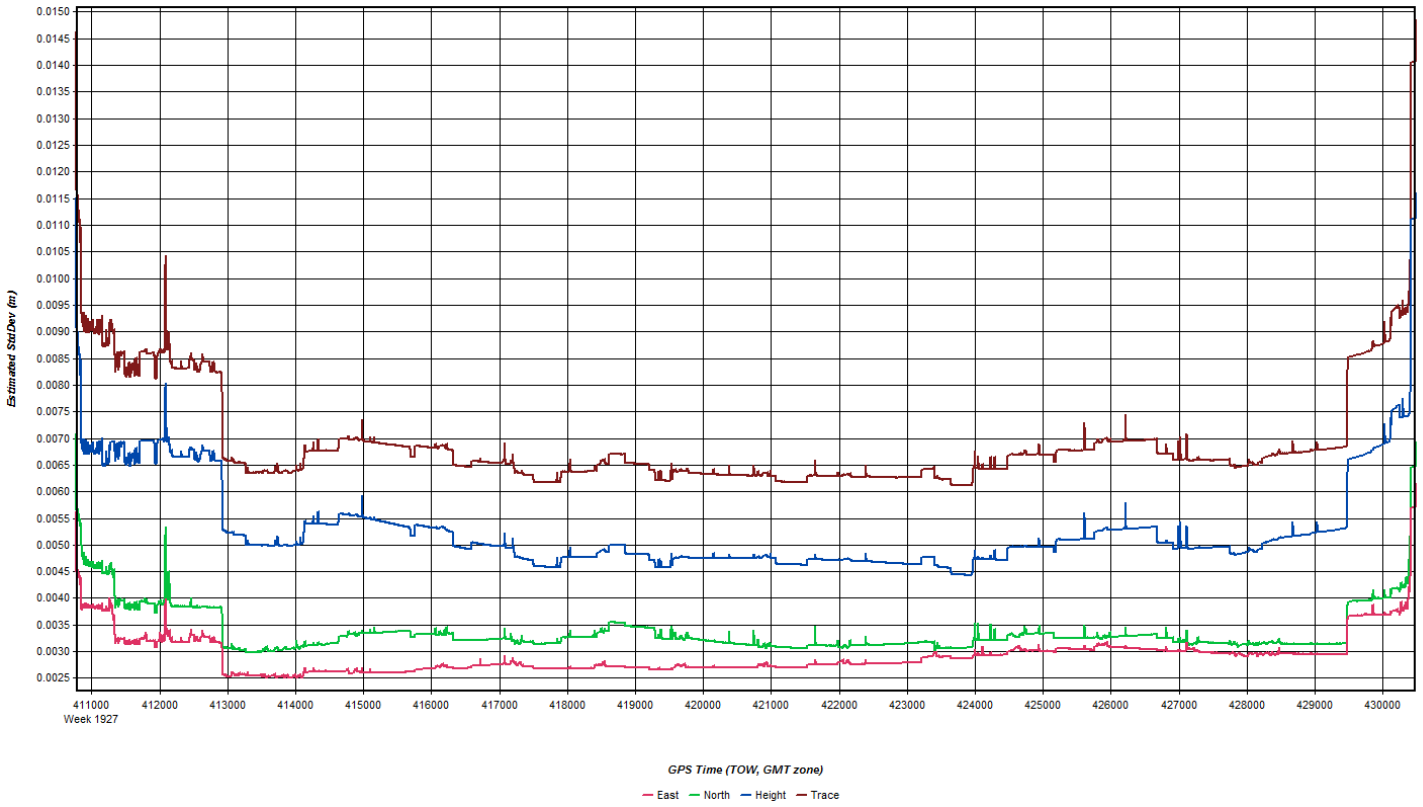

10 km

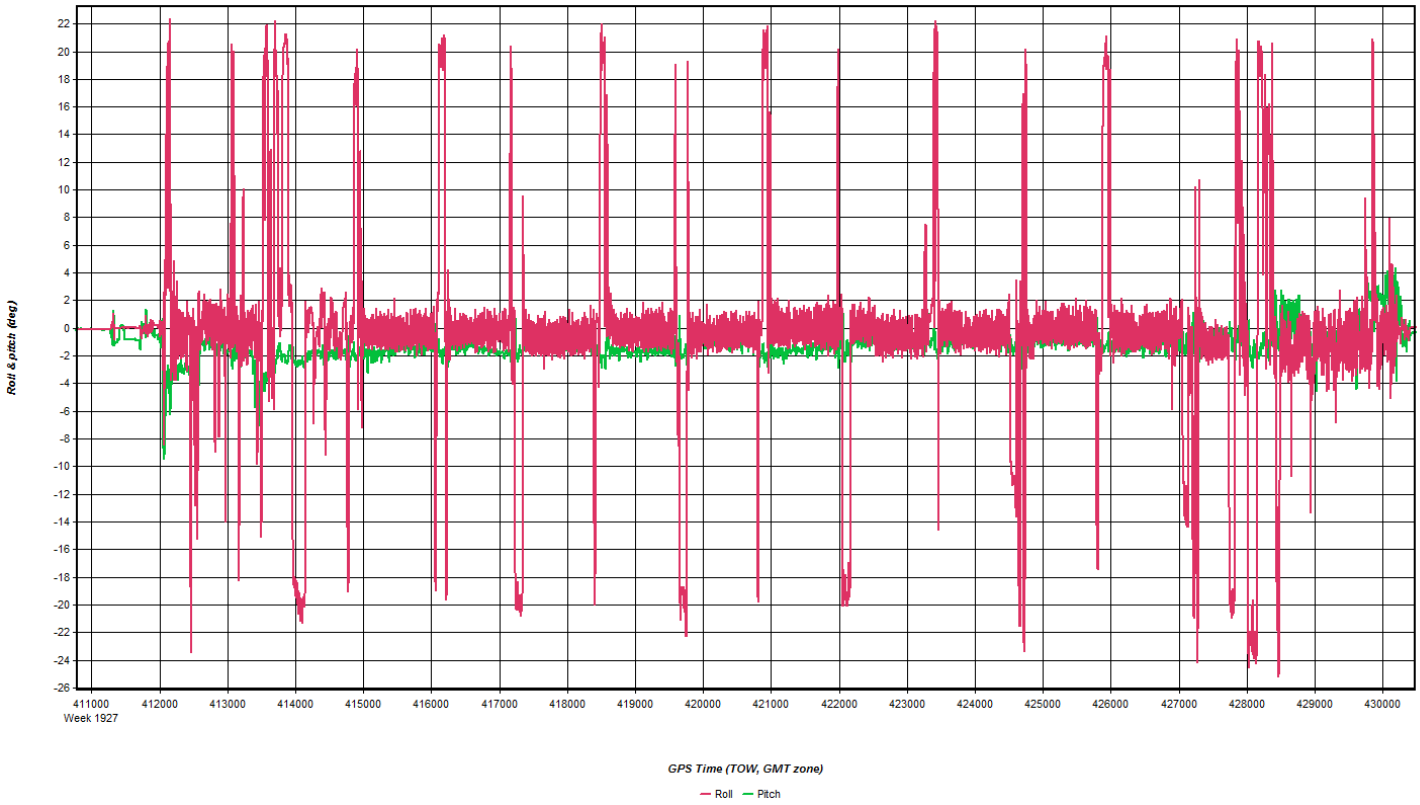

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
411000
Week 1927
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

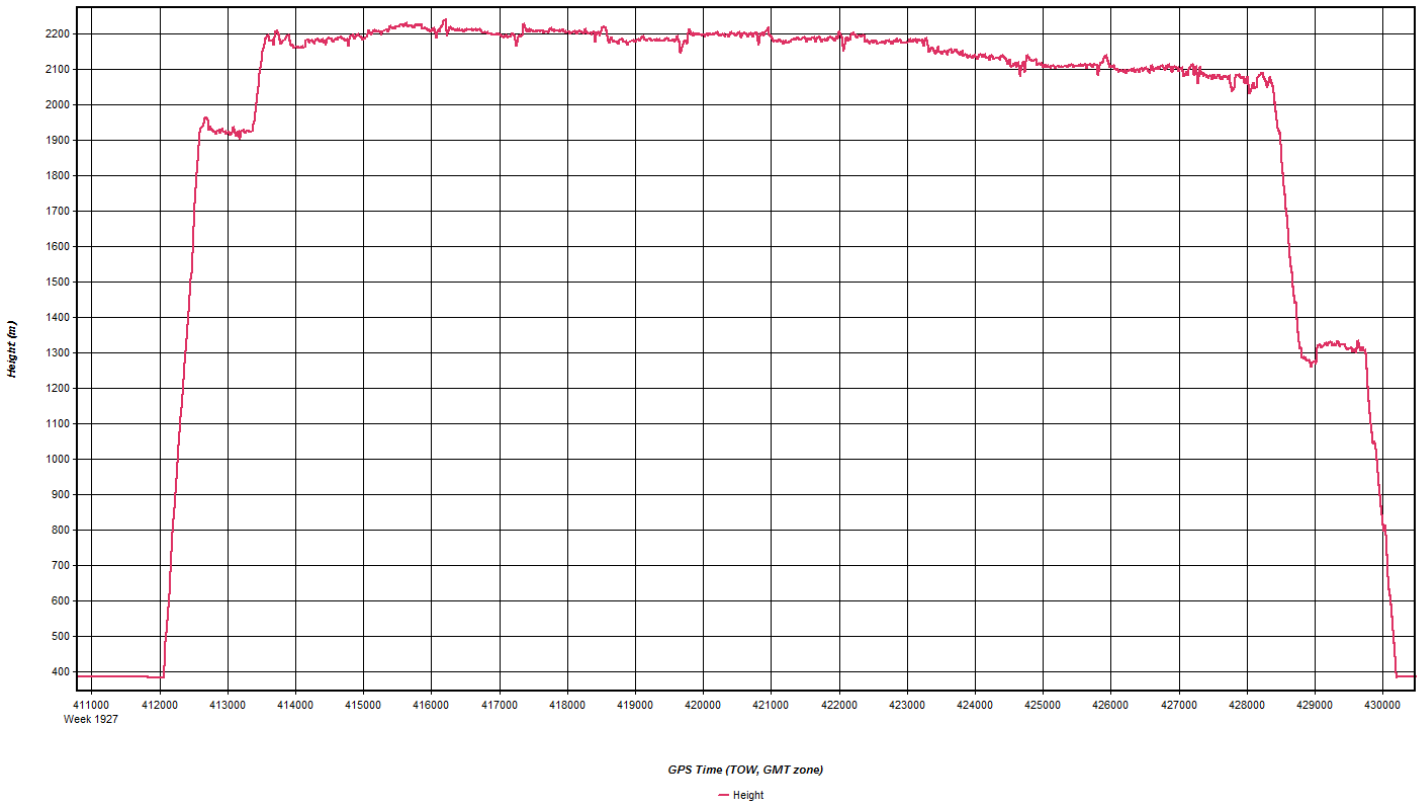

Separation (m)
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
-0.00
-0.05
-0.10
-0.15
-0.20
-0.25
-0.30
-0.35
411000
Week 1927
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
GPS Time (TOW, GMT zone)
East
North
Up

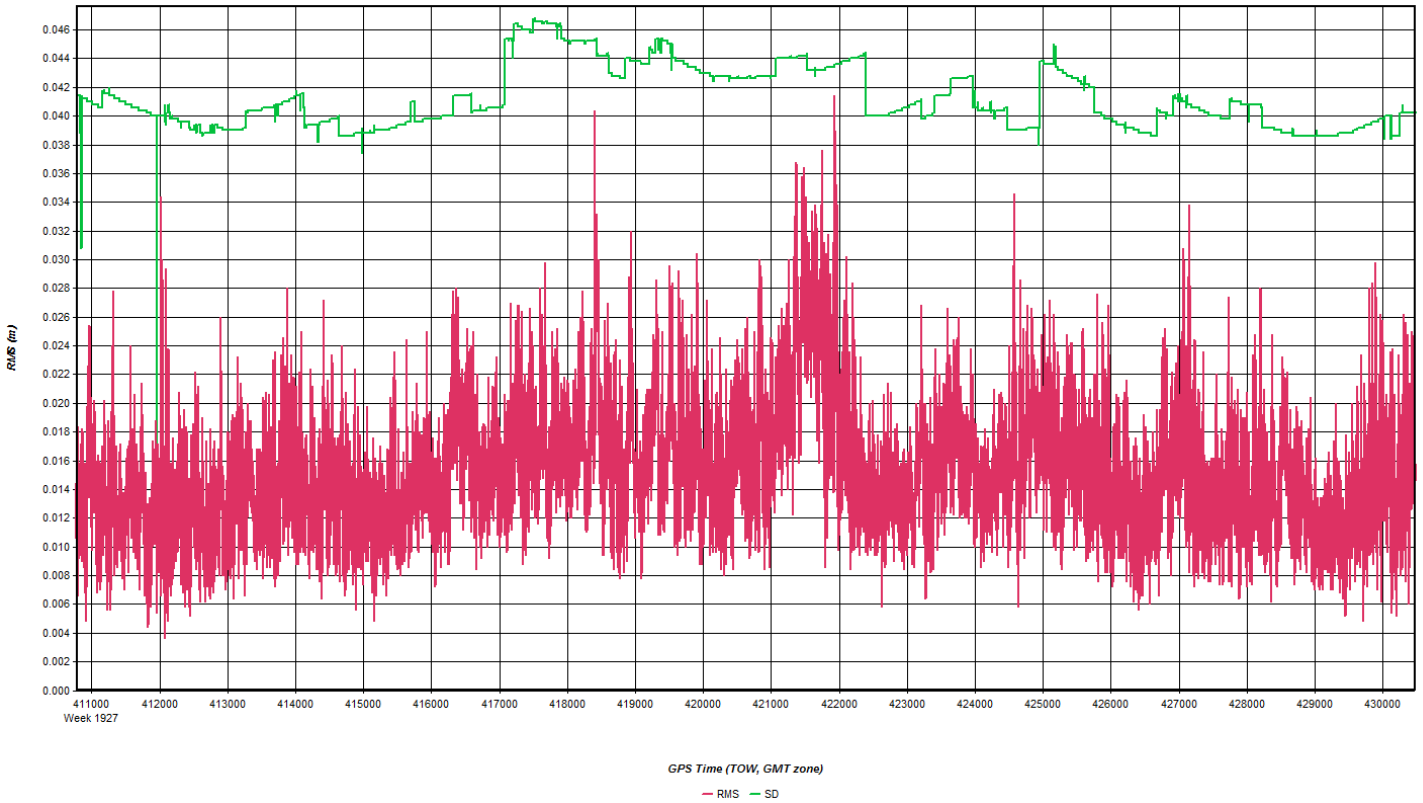

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
411000
Week 1927
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

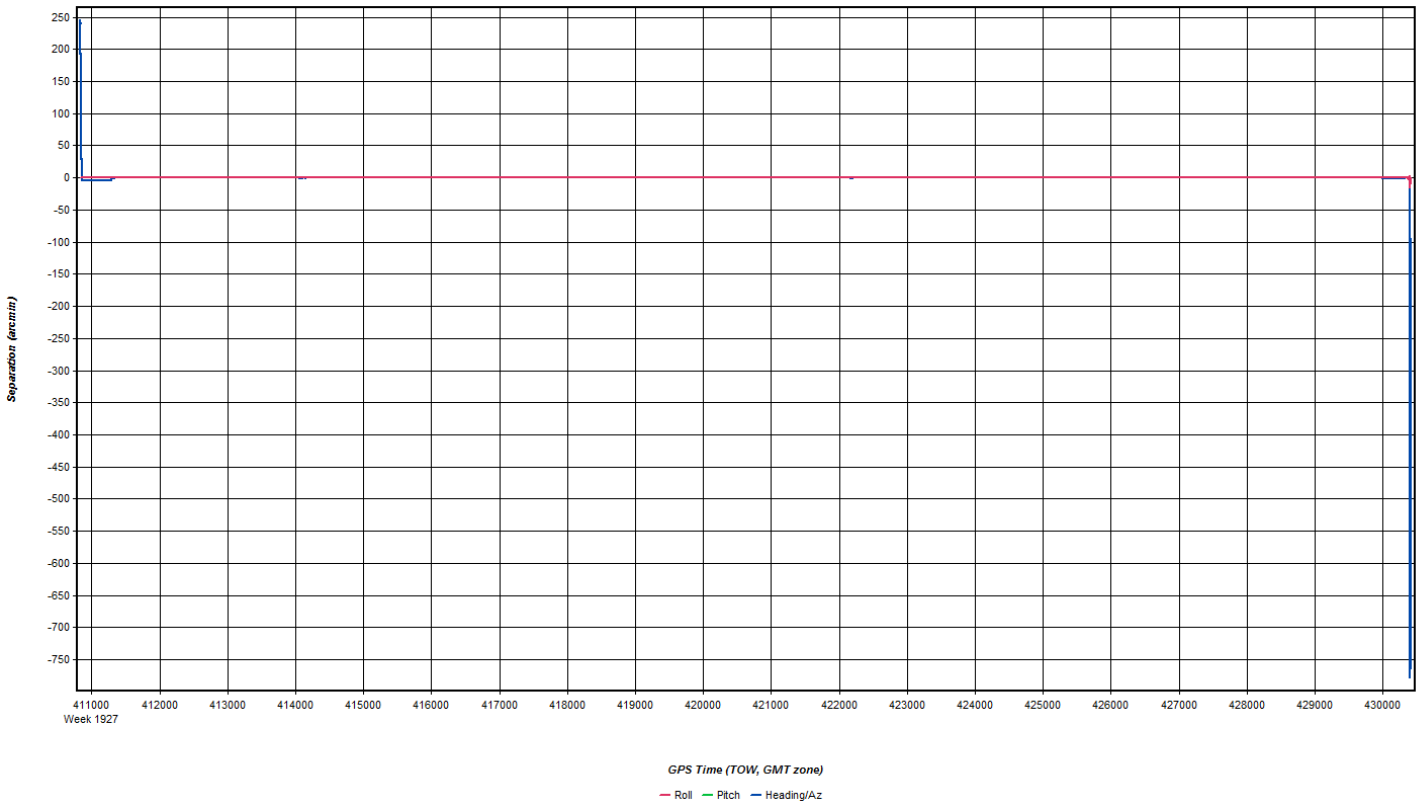

PDOP
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
411000
Week 1927
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
GPS Time (TOW, GMT zone)
PDOP

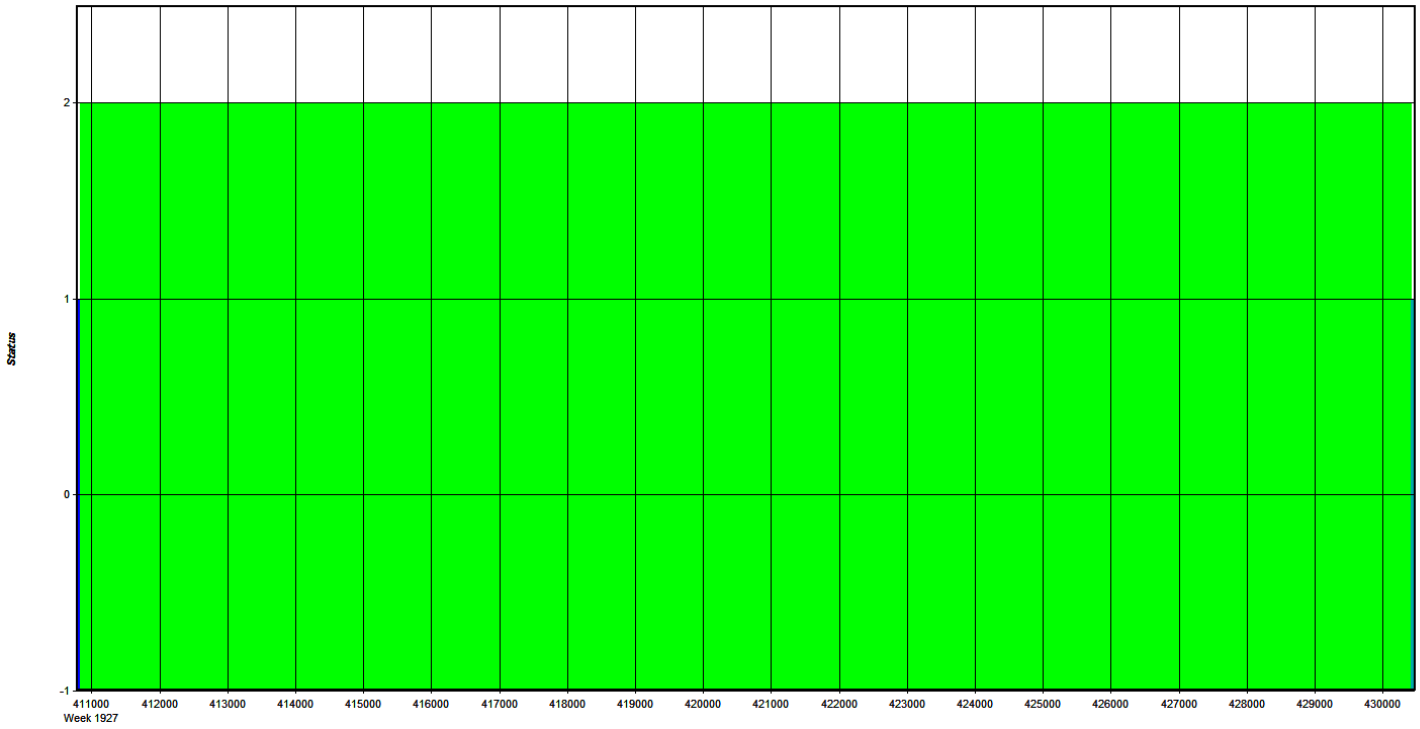

Estimated StdDev (m)
0.0150
0.0145
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
411000
Week 1927
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

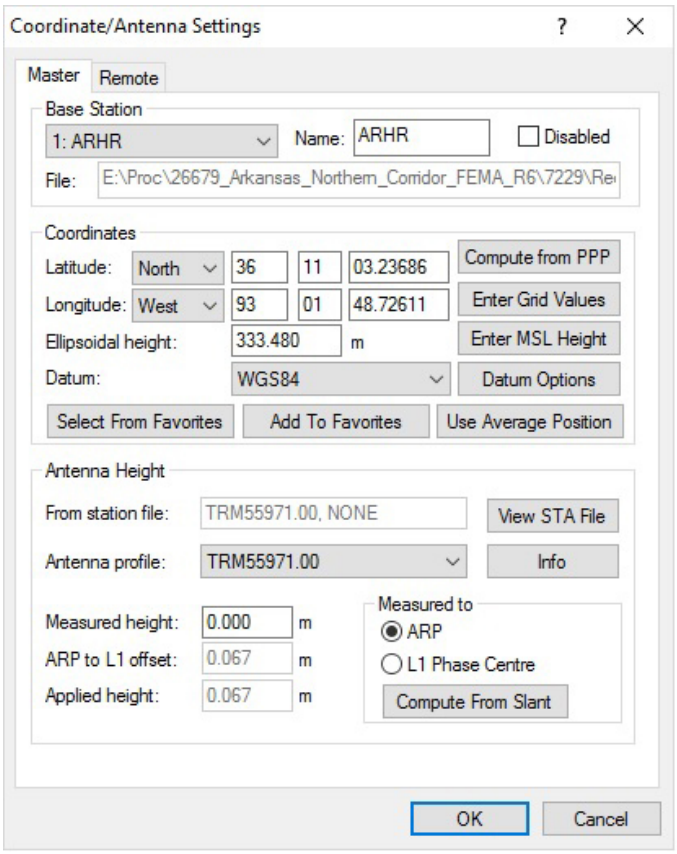

Roll & pitch (deg)
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
411000
Week 1927
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
411000
Week 1927
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
411000
Week 1927
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
-500
-550
-600
-650
-700
-750
411000
Week 1927
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
411000
Week 1927
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARHR
Name:
ARHR
Disabled
File:
E:\Proc\26679_Arkansas_Northern_Corridor_FEMA_R6\7229\Re
Coordinates
Latitude:
North
36
11
03.23686
Compute from PPP
Longitude:
West
93
01
48.72611
Enter Grid Values
Ellipsoidal height:
333.480
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM55971.00, NONE
View STA File
Antenna profile:
TRM55971.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.067
m
Applied height:
0.067
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

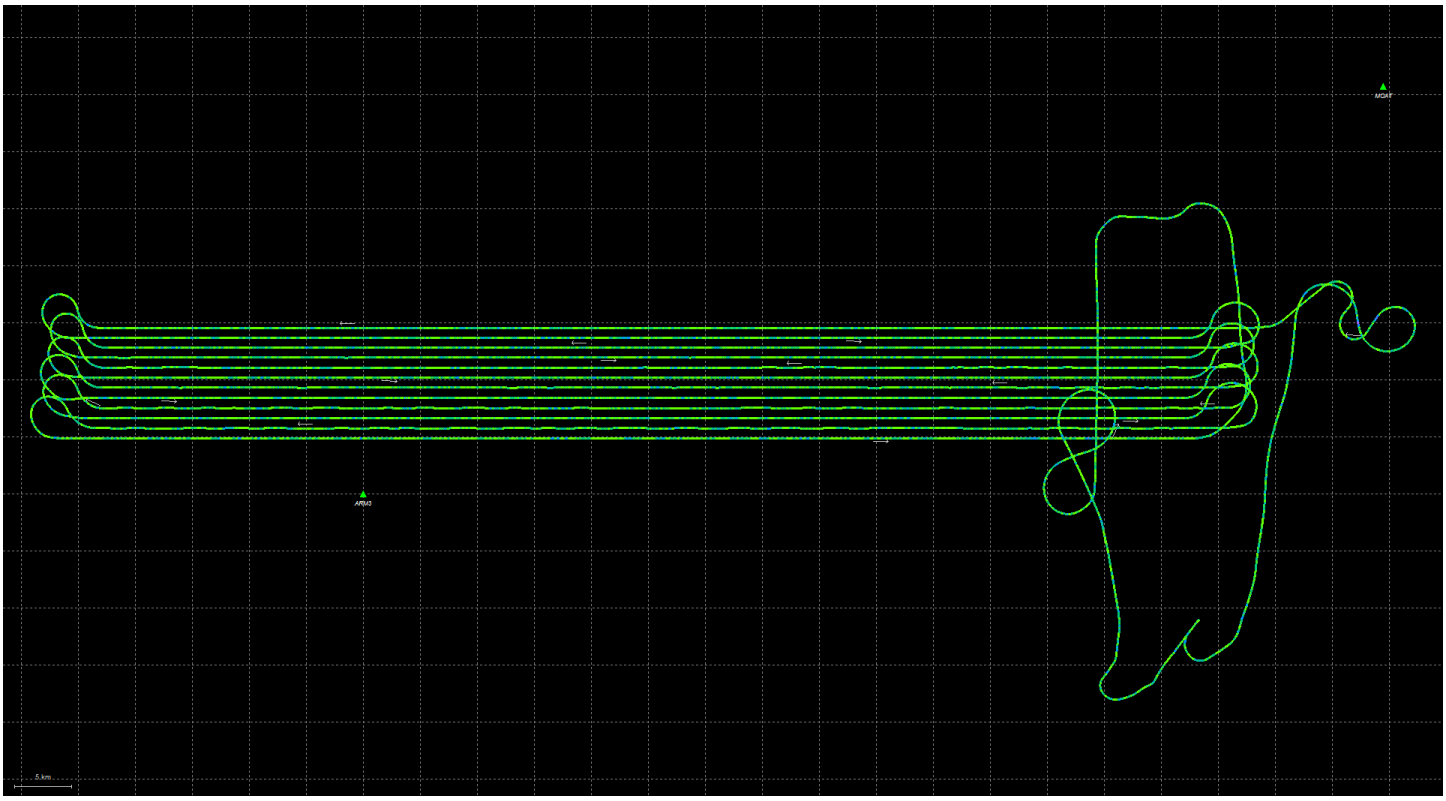
PROJECT NAME	Q.S. Arkansas	DATE	15/12/2016
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Bob Harrity	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310	ABGPS	IPAS-CUS6
AIRBASE	Springdale	DATA DRIVES	LiDar #1

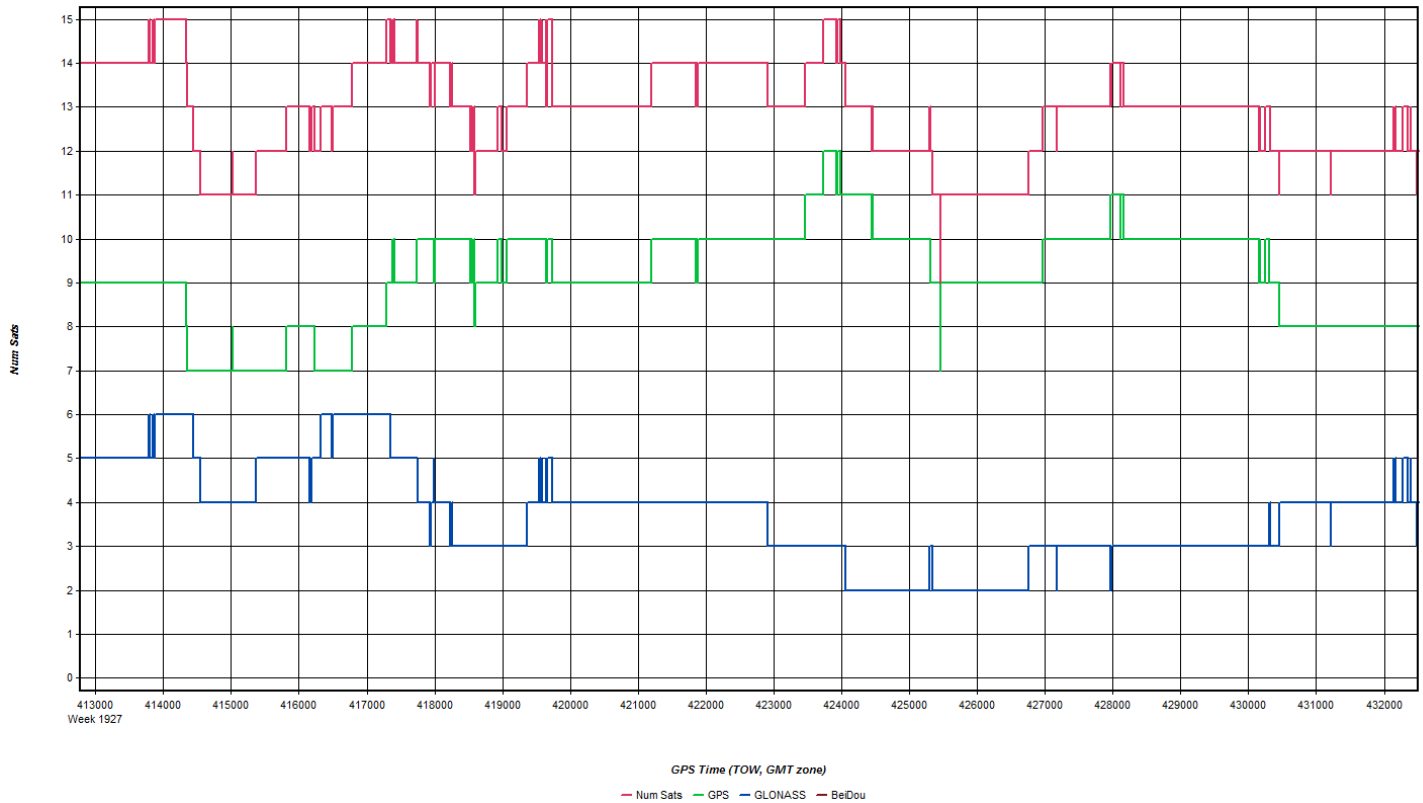
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	17:58:00	Takeoff:	17:25:00	AGL Height:	1800 m	Pulse Rate:	284 KHz		START	END
Engine Off:	23:38:00	Landing:	23:30:00	Speed:	160 kts	Scan Rate:	53 Hz	Pre-Mission	18:54:30	19:06:20
TOTAL:	5.42 hrs	TOTAL:	5.08 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	22:55:21	23:04:46

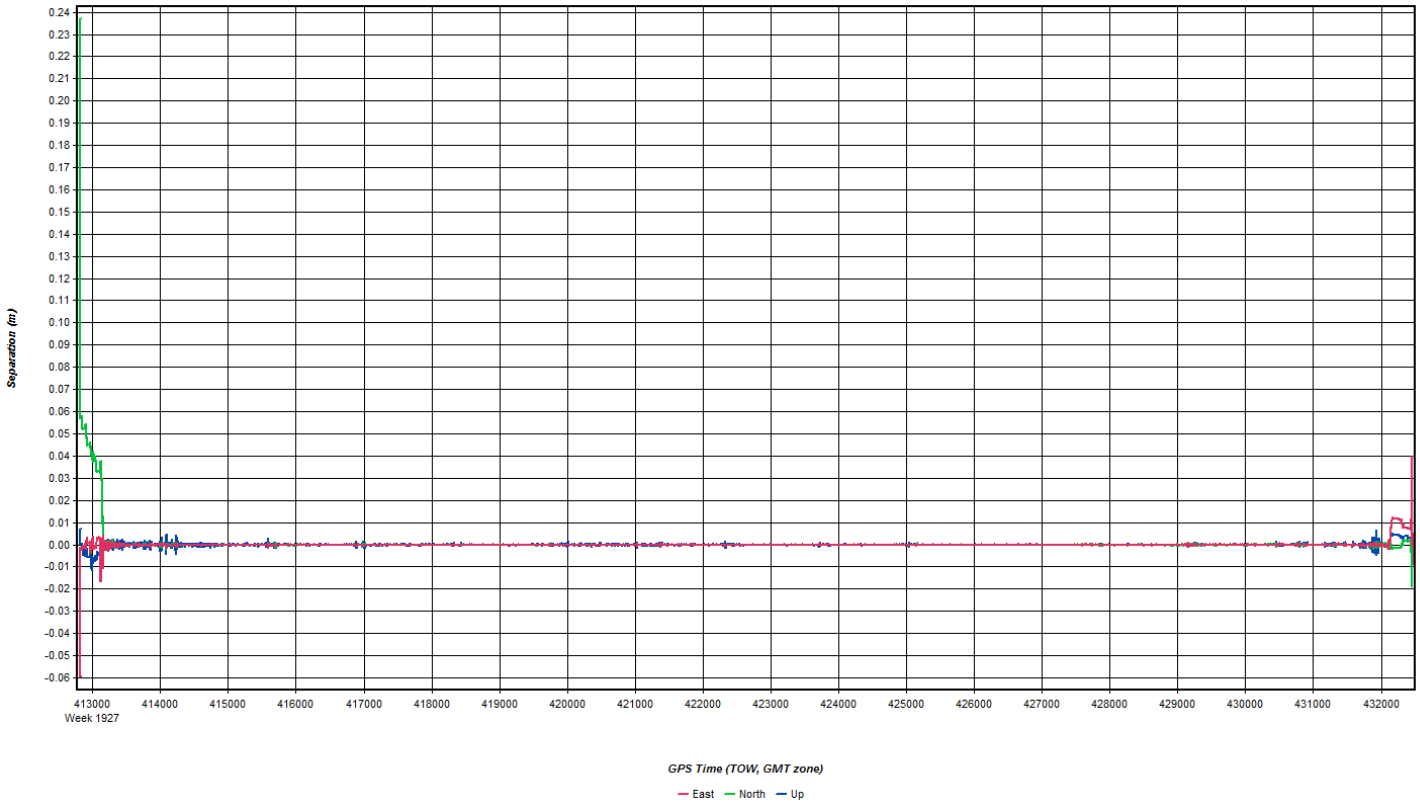
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS	"S" TURN
61		South	161215_191635	19:16:36	19:33:54	Complete line	
62		North	161215_193707	19:37:09	19:52:22	Complete line	
63		South	161215_195639	19:56:41	20:12:54	Complete line	
64		North	161215_201713	20:17:14	20:32:36	Complete line	
65		South	161215_203704	20:37:03	20:52:56	Complete line	
66		North	161215_205707	20:57:07	21:12:35	Complete line	
67		South	161215_211717	21:17:17	21:33:01	Complete line	
80		North	161215_213940	21:39:41	21:54:25	Complete line	
95		South	161215_215926	21:59:25	22:16:08	Complete line	
96		North	161215_222209	22:22:08	22:34:21	9 miles from North end not acquired	
115		South	161215_224159	22:41:59	22:48:22	31 miles from South end not acquired	

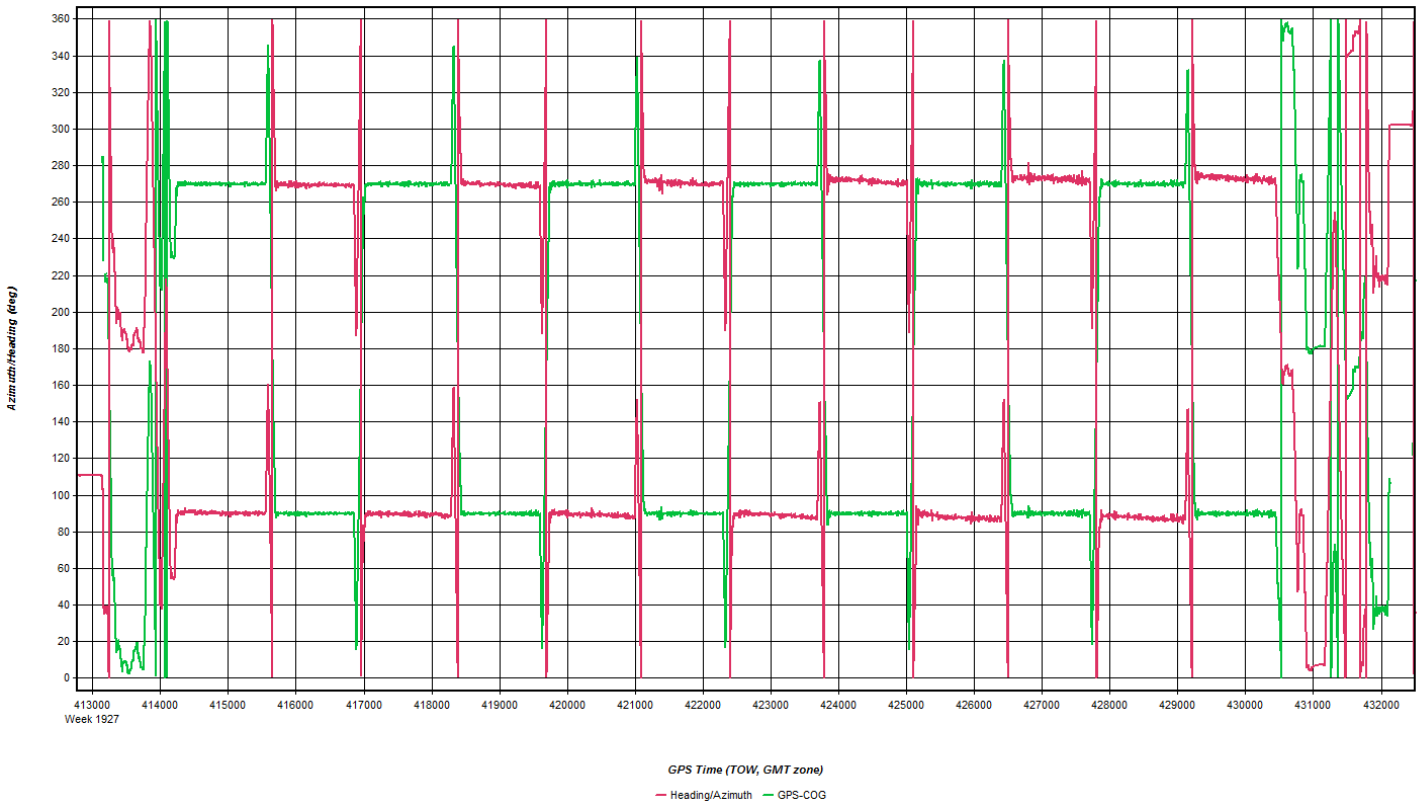
SUN ANGLE	ADDTIONAL NOTES: At the start Sats. 20, PDop 1.0. Mid flight Sats. 17 PDops 1.2. End of flight sats. 16 PDops 1.3. Clear sky's at the start but clouds quickly rolled in from the west and eventually overtook our location. CORS station (ARSR) SE of Harrison AR was used for the flight.
@Start:	
@End:	
@Peak:	

Dec 15, 2016-A (C-GKSI, SN7207)

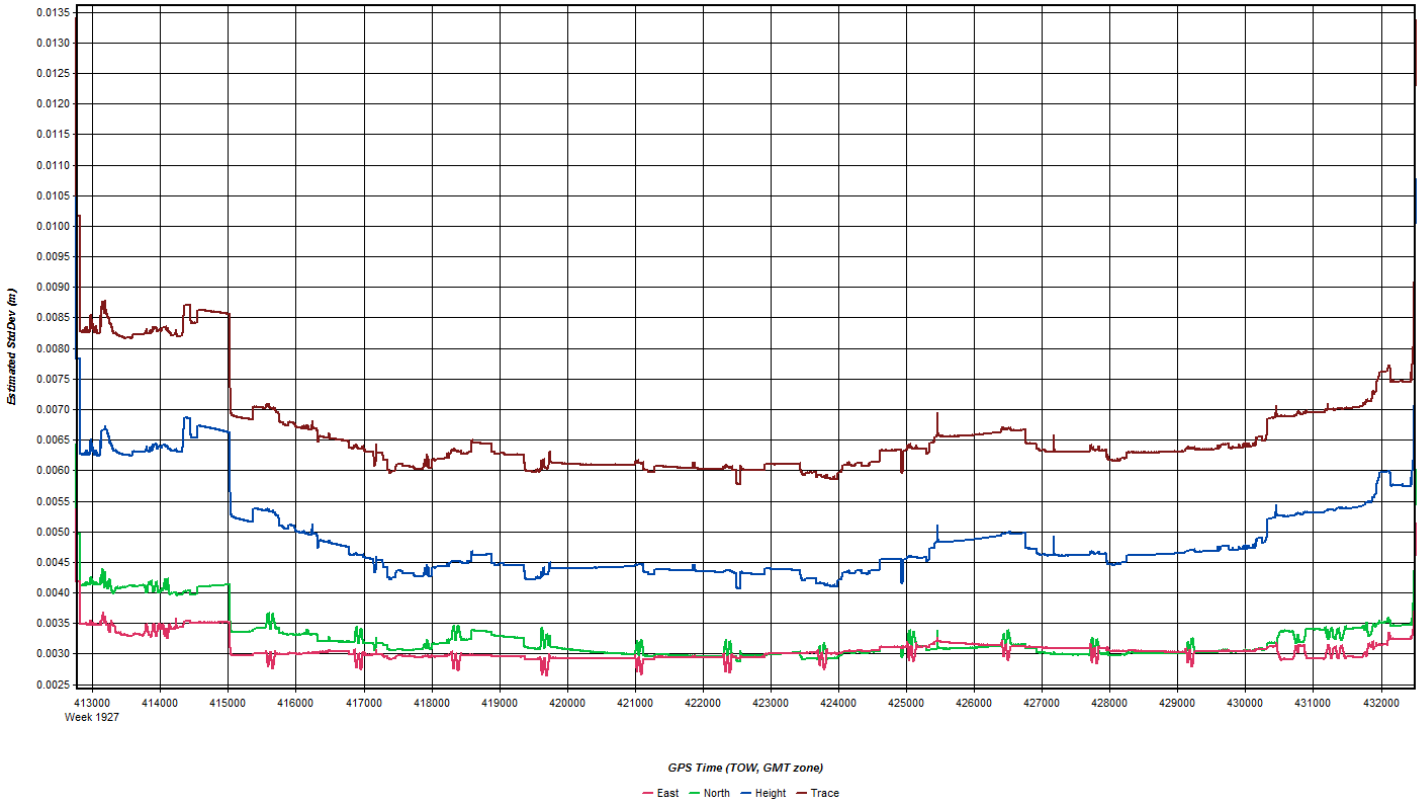



Num Sats
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
413000
Week 1927
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
431000
432000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

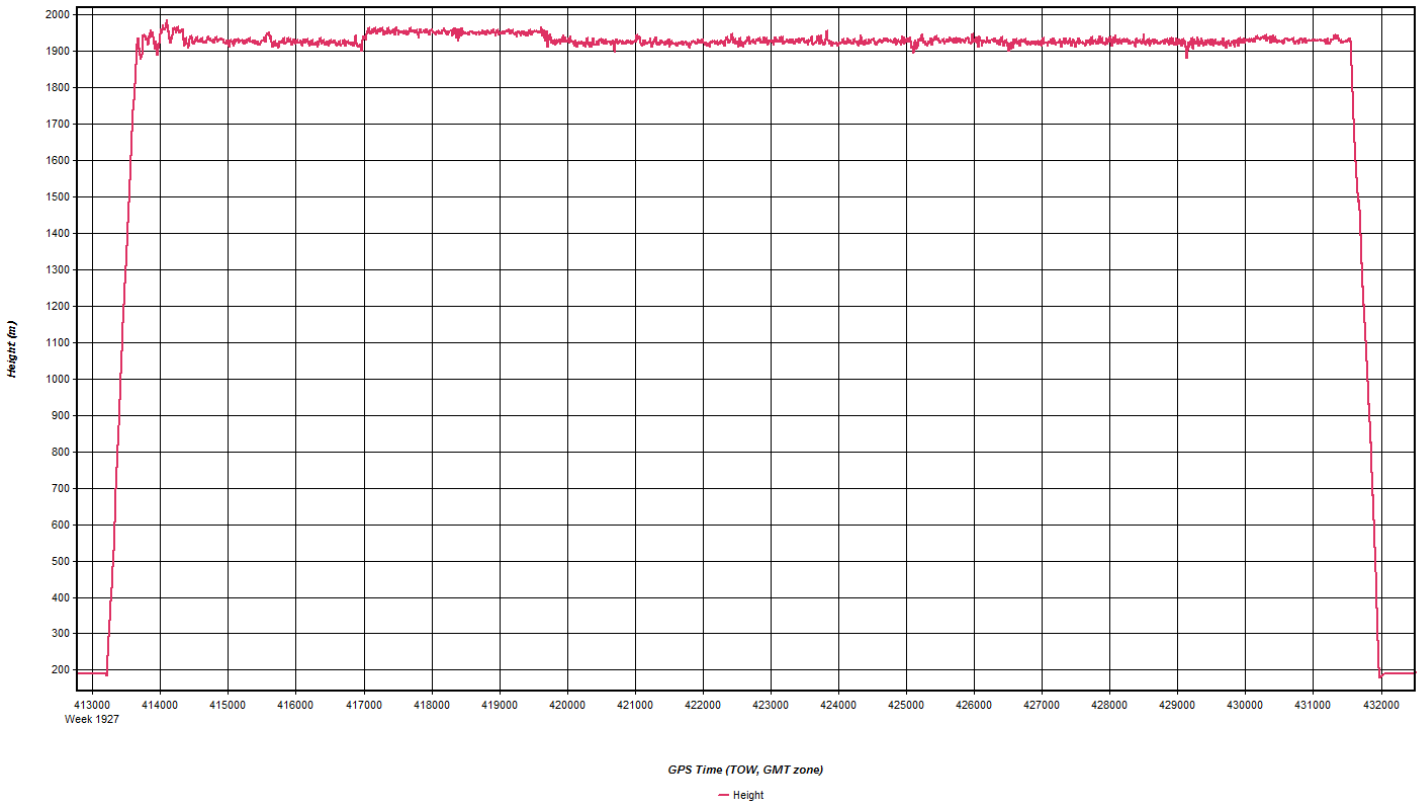

Separation (m)
0.24
0.23
0.22
0.21
0.20
0.19
0.18
0.17
0.16
0.15
0.14
0.13
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
413000
Week 1927
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
431000
432000
GPS Time (TOW, GMT zone)
East
North
Up

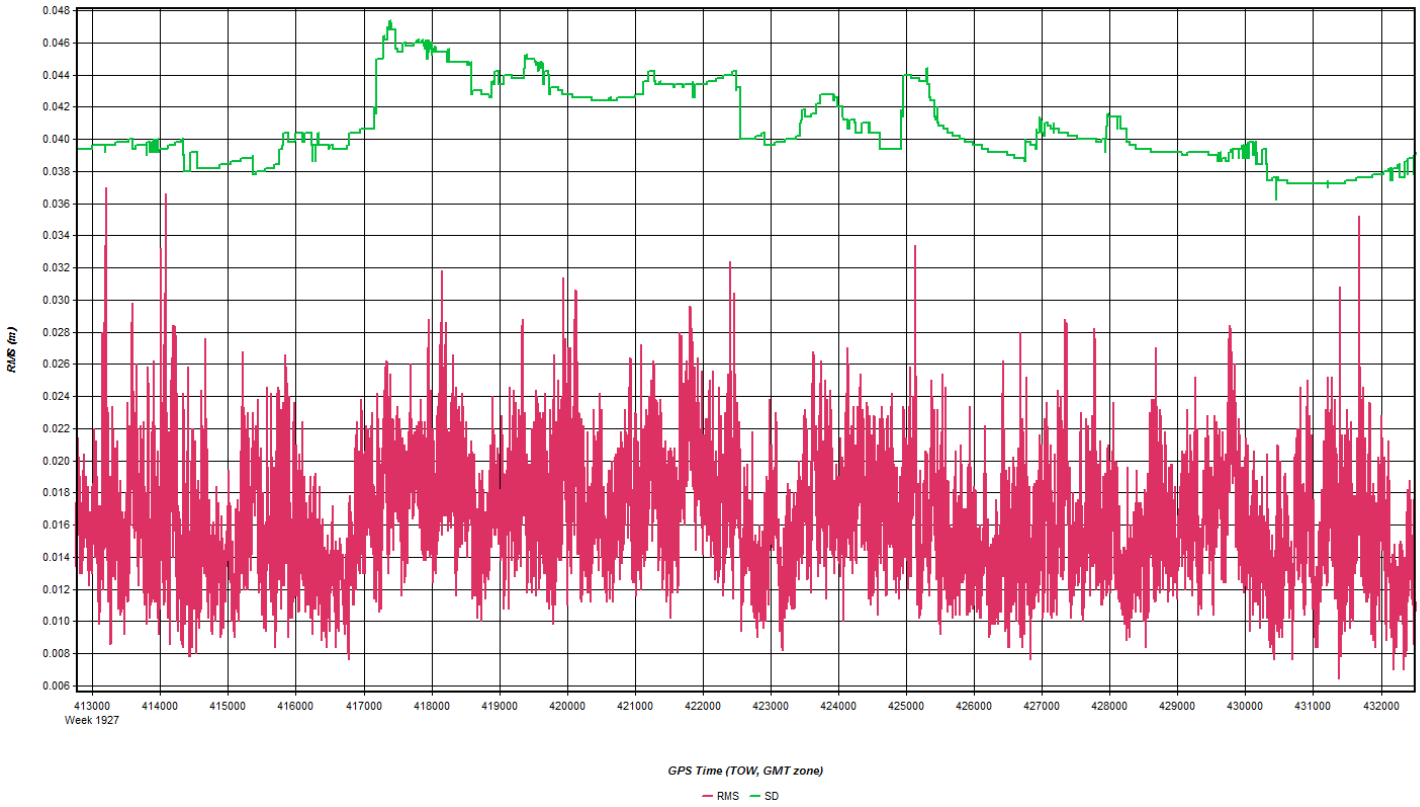

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
413000
Week 1927
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
431000
432000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

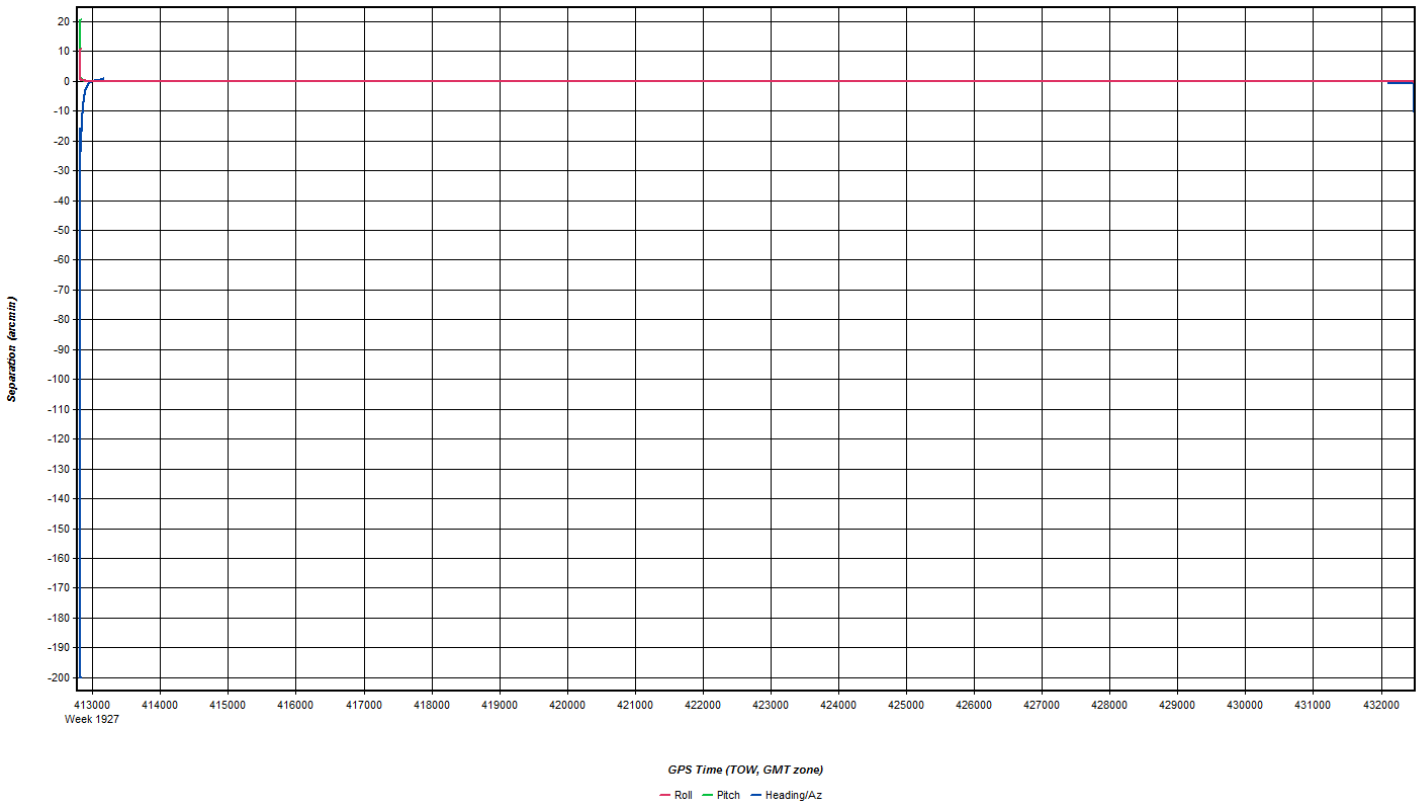

PDOP
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
413000
Week 1927
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
431000
432000
GPS Time (TOW, GMT zone)
PDOP

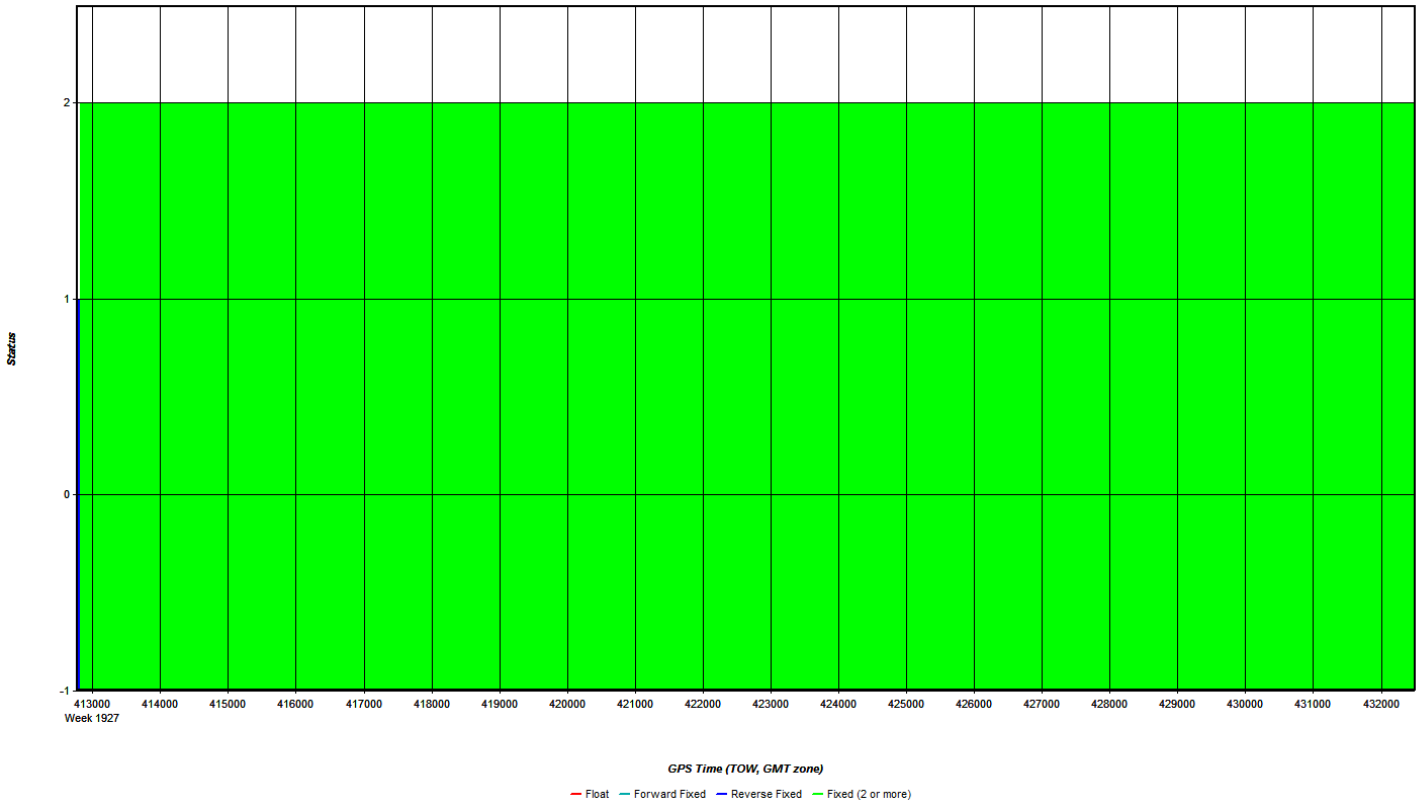

Estimated StdDev (m)
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
413000
Week 1927
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
431000
432000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

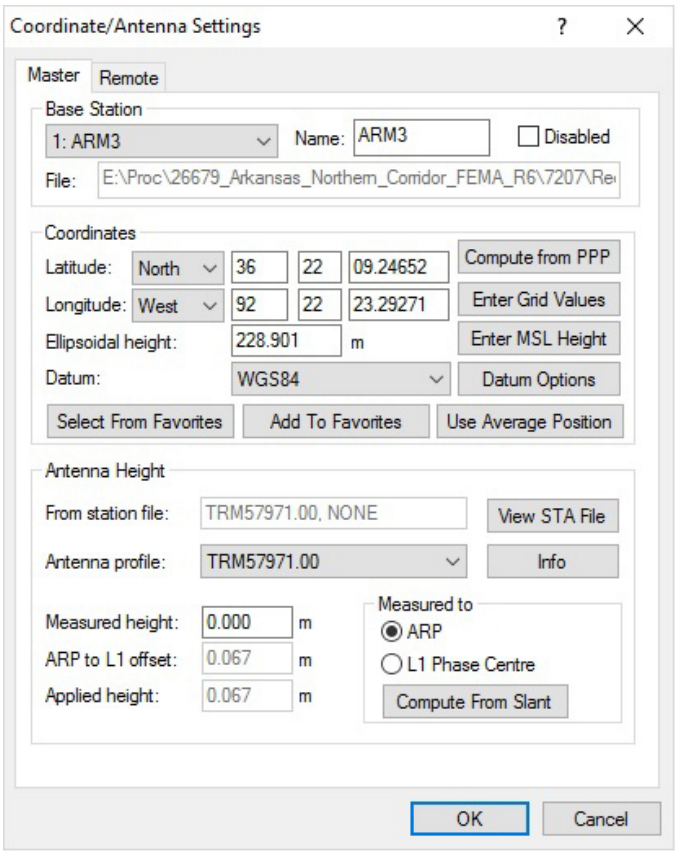

Roll & pitch (deg)
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
413000
Week 1927
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
431000
432000
GPS Time (TOW, GMT zone)
Roll
Pitch

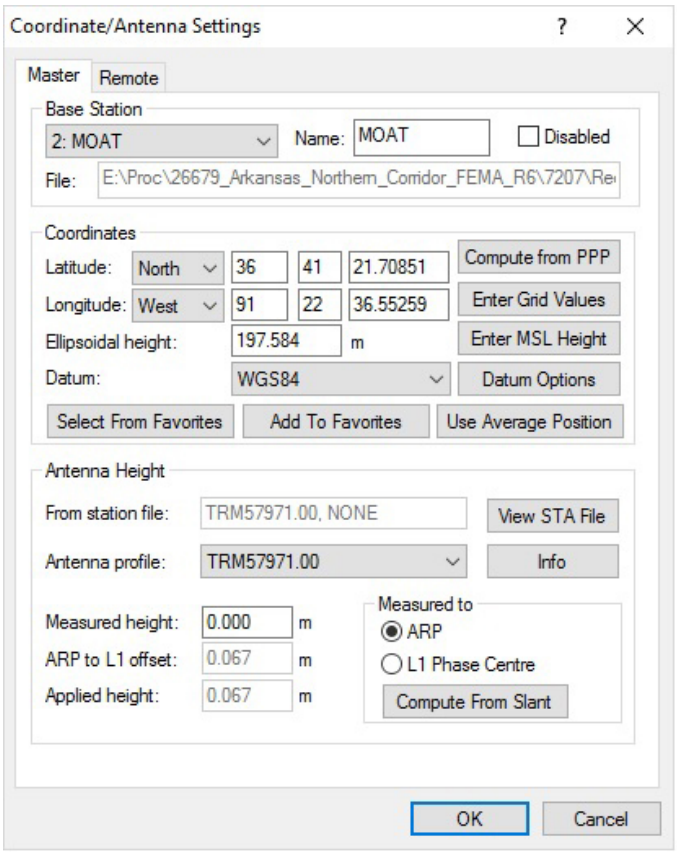

Height (m)
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
413000
Week 1927
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
431000
432000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.048
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
413000
Week 1927
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
431000
432000
GPS Time (TOW, GMT zone)
RMS
SD

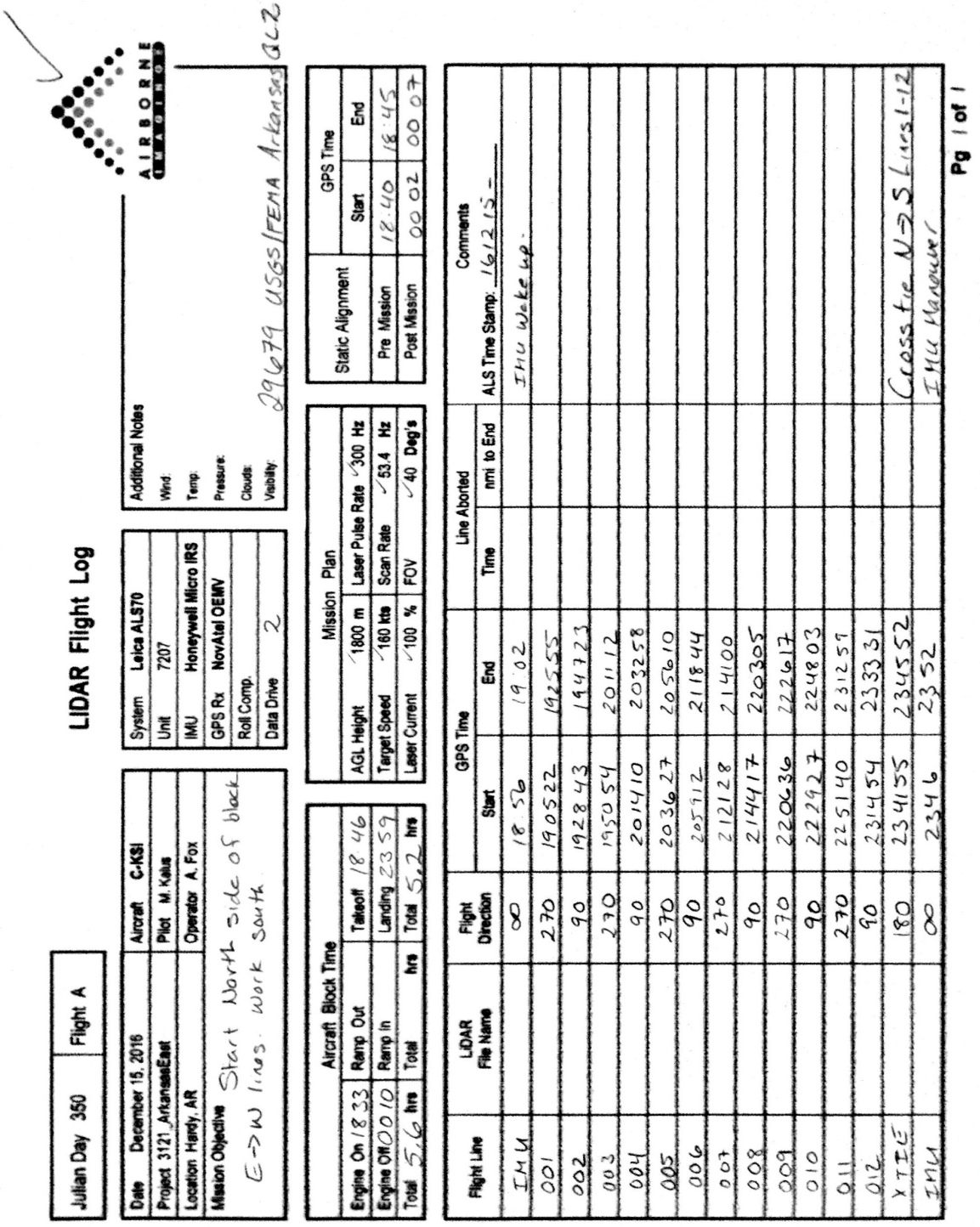

Separation (arcmin)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
-110
-120
-130
-140
-150
-160
-170
-180
-190
-200
413000
Week 1927
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
431000
432000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
413000
Week 1927
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
425000
426000
427000
428000
429000
430000
431000
432000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARM3
Name:
ARM3
Disabled
File:
E:\Proc\26679_Arkansas_Northern_Corridor_FEMA_R6\7207\Re
Coordinates
Latitude:
North
36
22
09.24652
Compute from PPP
Longitude:
West
92
22
23.29271
Enter Grid Values
Ellipsoidal height:
228.901
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM57971.00, NONE
View STA File
Antenna profile:
TRM57971.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.067
m
Applied height:
0.067
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: MOAT
Name:
MOAT
Disabled
File:
E:\Proc\26679_Arkansas_Northern_Corridor_FEMA_R6\7207\Re
Coordinates
Latitude:
North
36
41
21.70851
Compute from PPP
Longitude:
West
91
22
36.55259
Enter Grid Values
Ellipsoidal height:
197.584
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM57971.00, NONE
View STA File
Antenna profile:
TRM57971.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.067
m
Applied height:
0.067
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log



LIDAR Flight Log

AIRBORNE IMAGING

Julian Day 350 | Flight A

Date December 15, 2016	Aircraft C-KSI
Project 3121_ArkansasEast	Pilot M. Kaus
Location Hardy, AR	Operator A. Fox
Mission Objective Start North side of block E->W lines. work south.	

System Leica ALS70	
Unit 7207	
IMU Honeywell Micro IRS	
GPS Rx NovAtel OEMV	
Roll Comp.	
Data Drive 2	

Additional Notes
Wind:
Temp:
Pressure:
Clouds:
Visibility: 29679 USGS/FEMA Arkansas QL2

Aircraft Block Time		
Engine On 1833	Ramp Out	Takeoff 1846
Engine Off 0010	Ramp In	Landing 2359
Total 5.6 hrs	Total hrs	Total 5.2 hrs

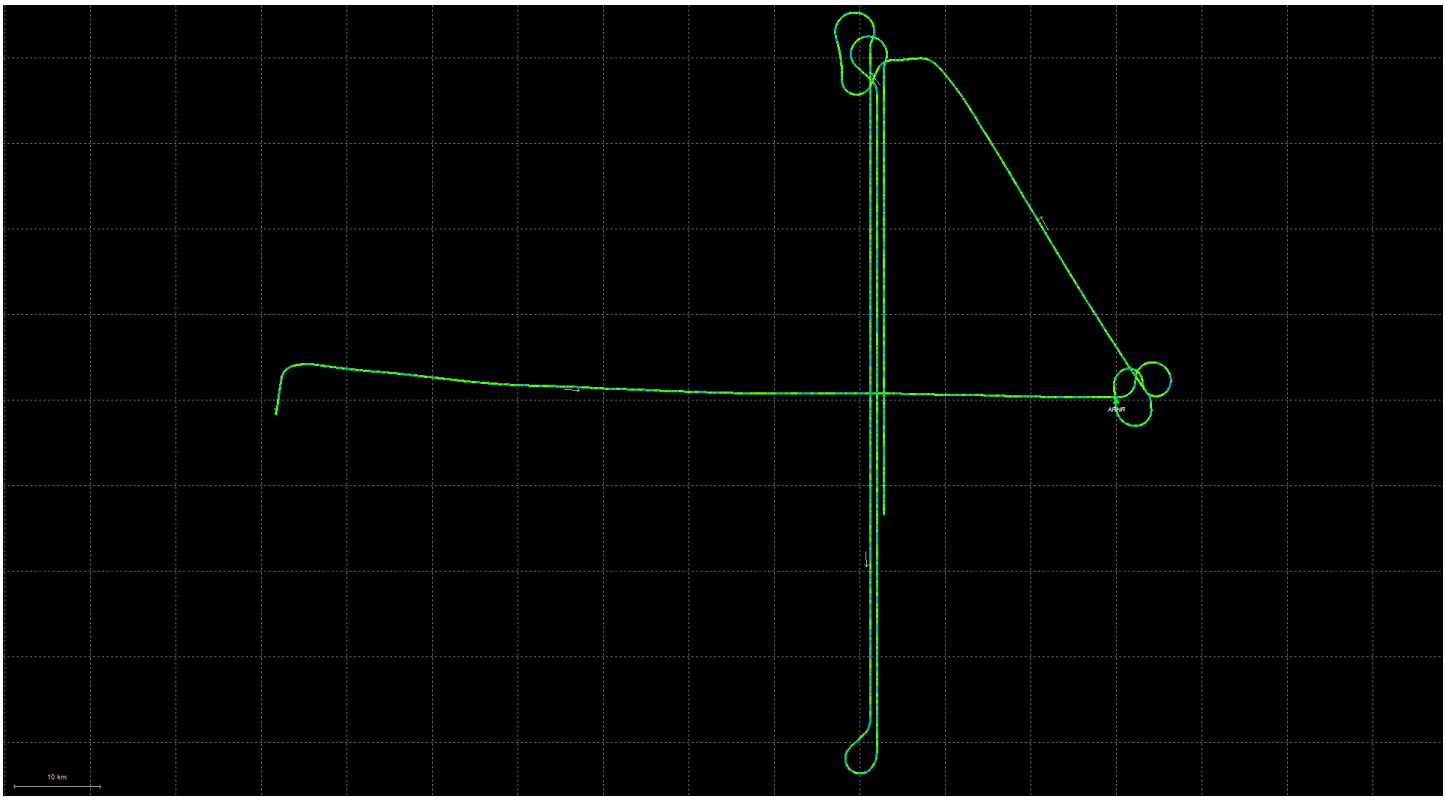
Mission Plan			
AGL Height ✓1800 m	Laser Pulse Rate ✓300 Hz		
Target Speed ✓160 kts	Scan Rate ✓53.4 Hz		
Laser Current ✓100 %	FOV ✓40 Deg's		

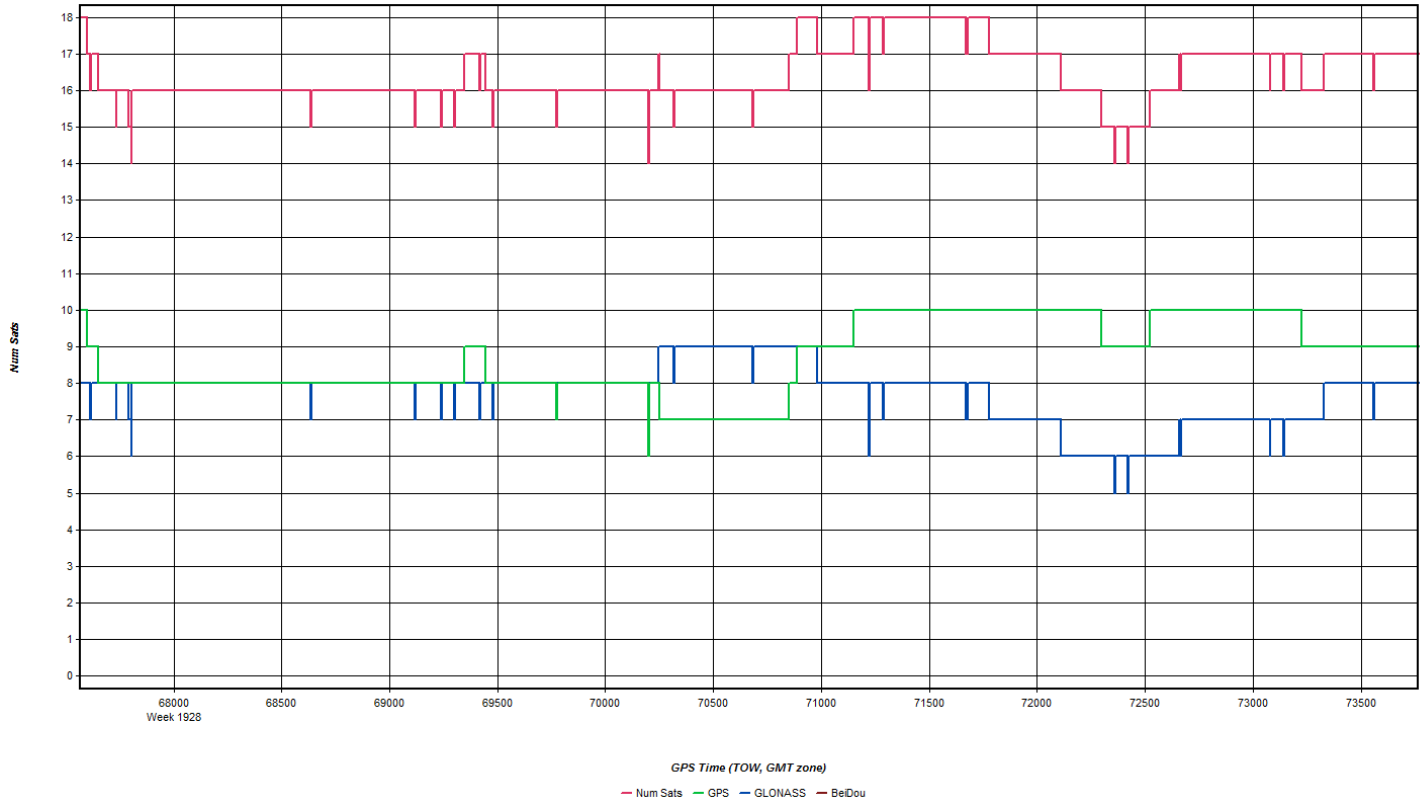
Static Alignment	GPS Time	
	Start	End
Pre Mission	1840	1845
Post Mission	0002	0007

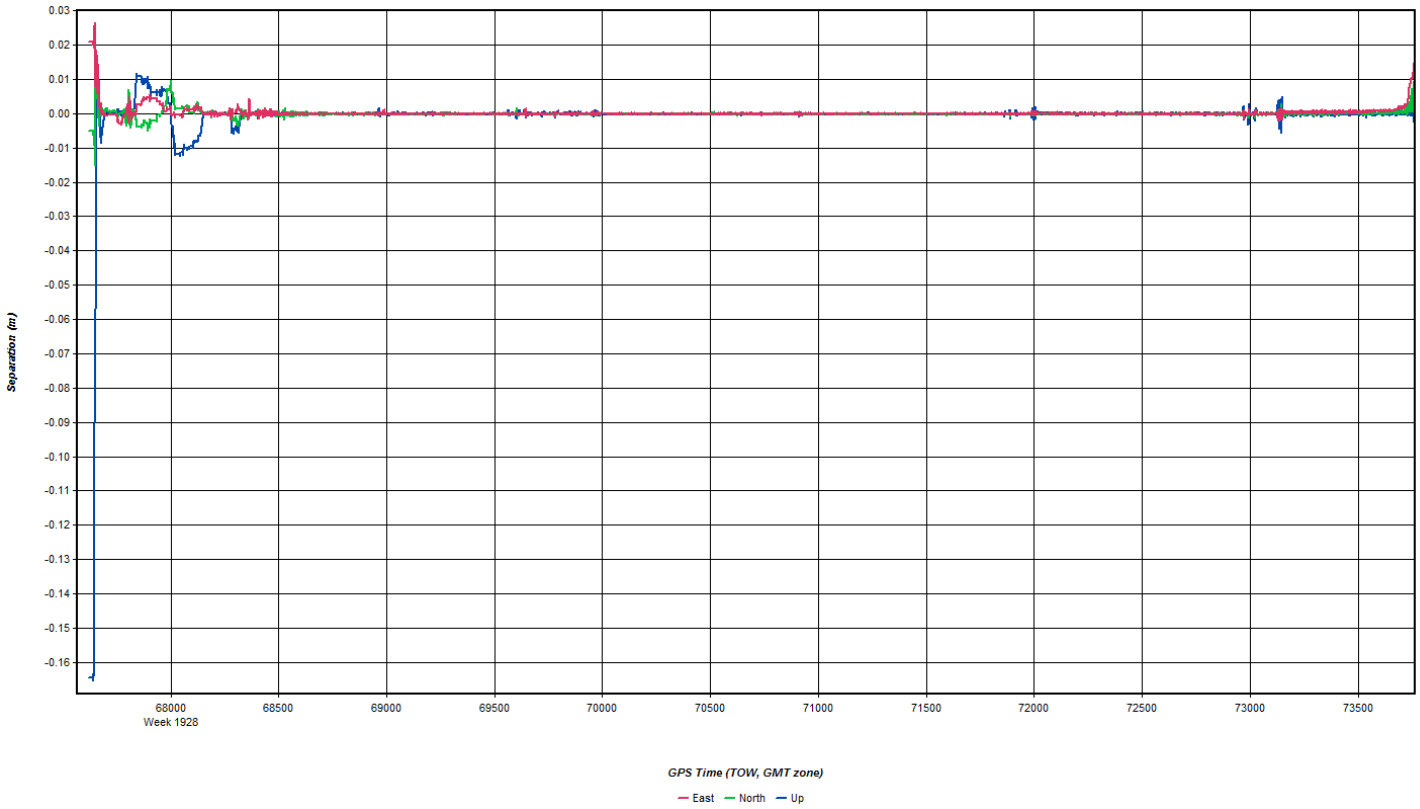
Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 161213
IMU		∞	1856	1902			IMU wake up.
001		270	190522	192555			
002		90	192843	194723			
003		270	195054	201112			
004		90	201410	203258			
005		270	203627	205610			
006		90	205912	211844			
007		270	212128	214100			
008		90	214417	220305			
009		270	220636	222617			
010		90	222927	224803			
011		270	225140	231259			
012		90	231454	233331			
XTIE		180	234135	234552			Cross tie N-S Lines 1-12
IMU		∞	2346	2352			IMU Maneuver

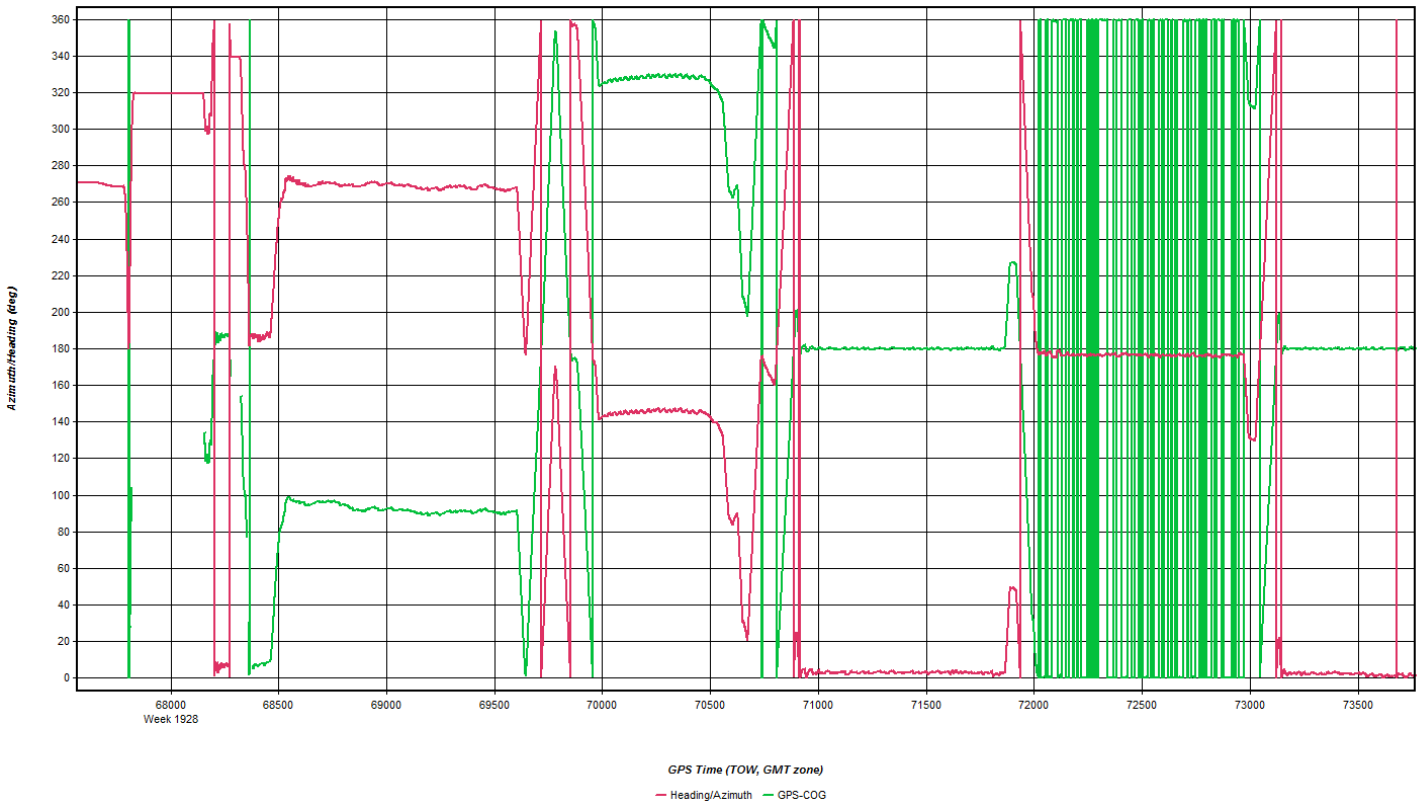
Pg 1 of 1

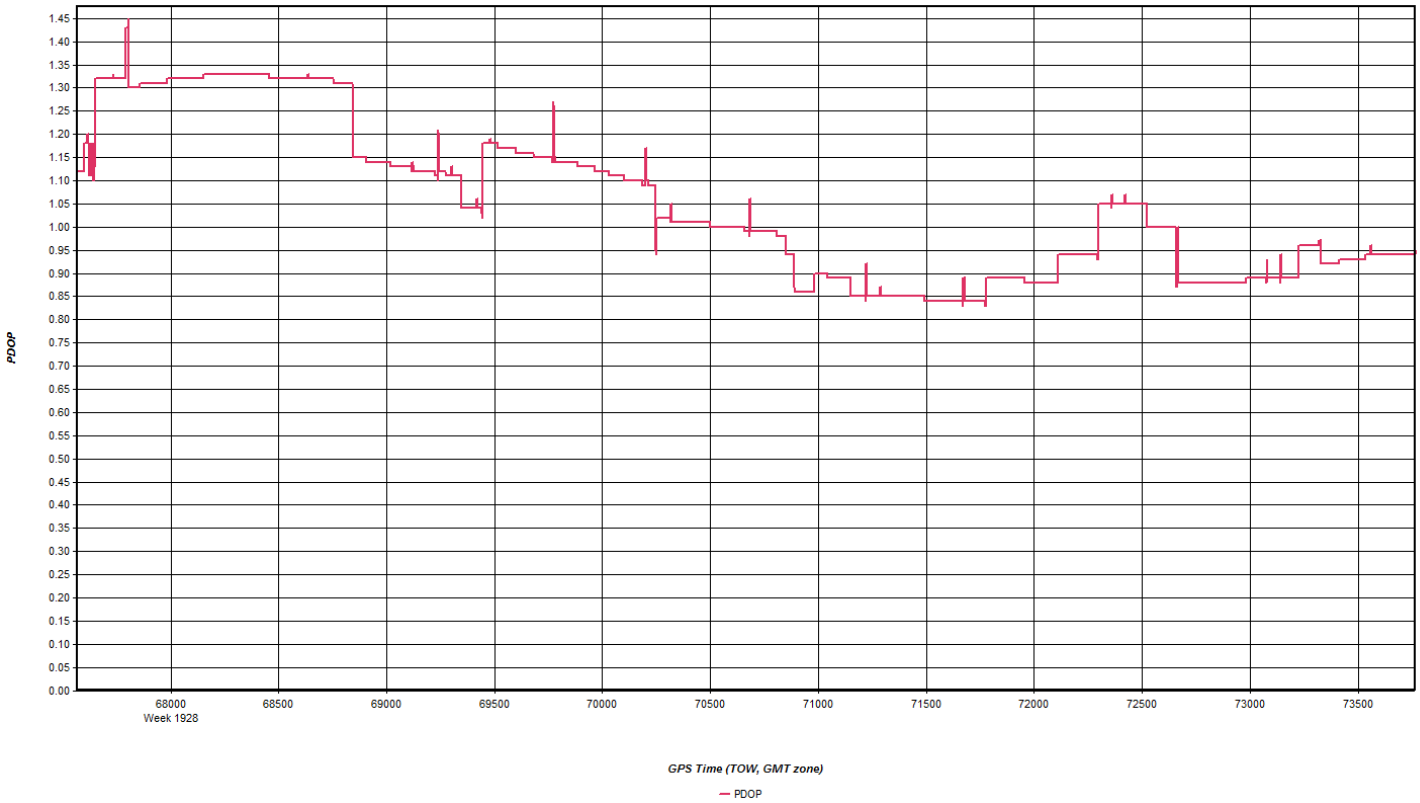
Dec 18, 2016-A1 (C-FVZM, SN7229)

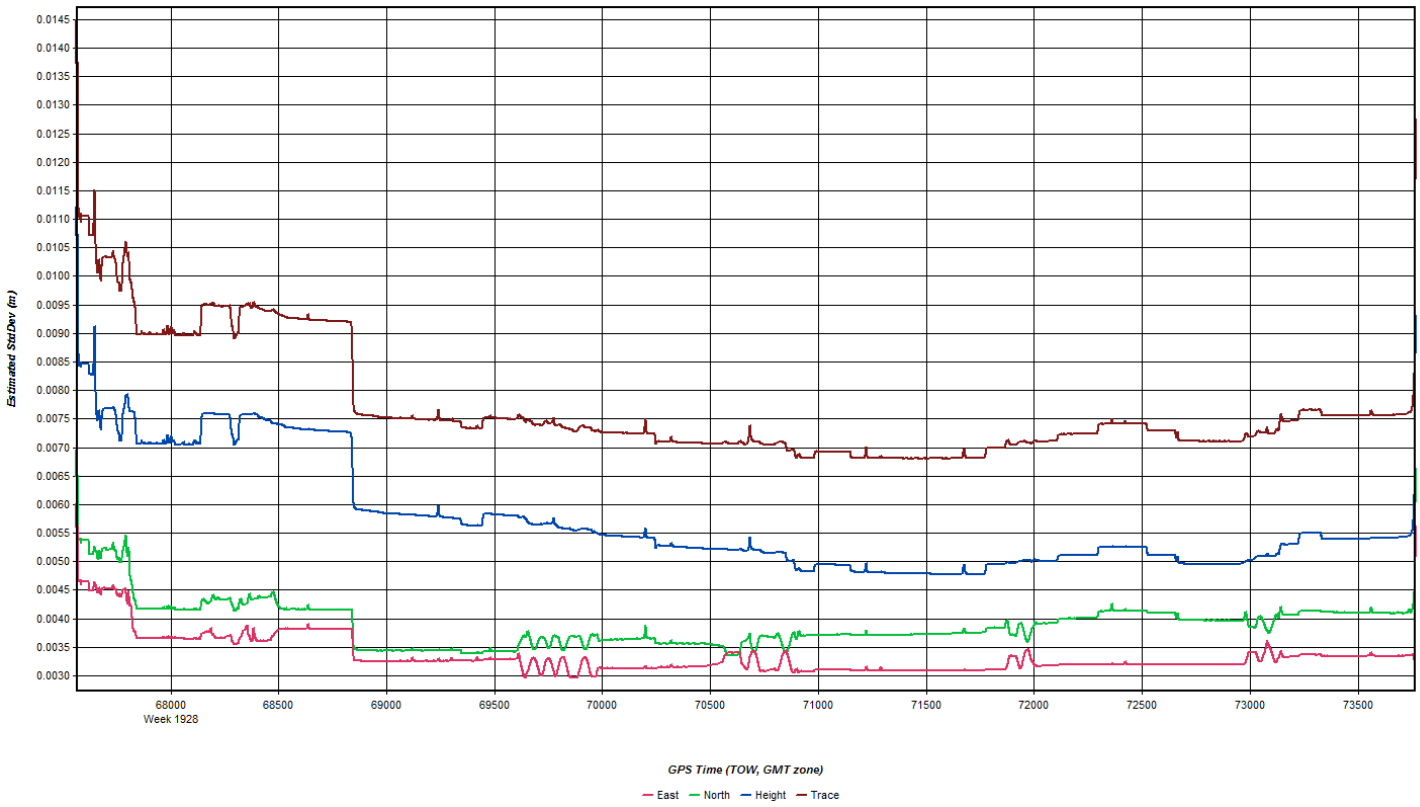

10 km

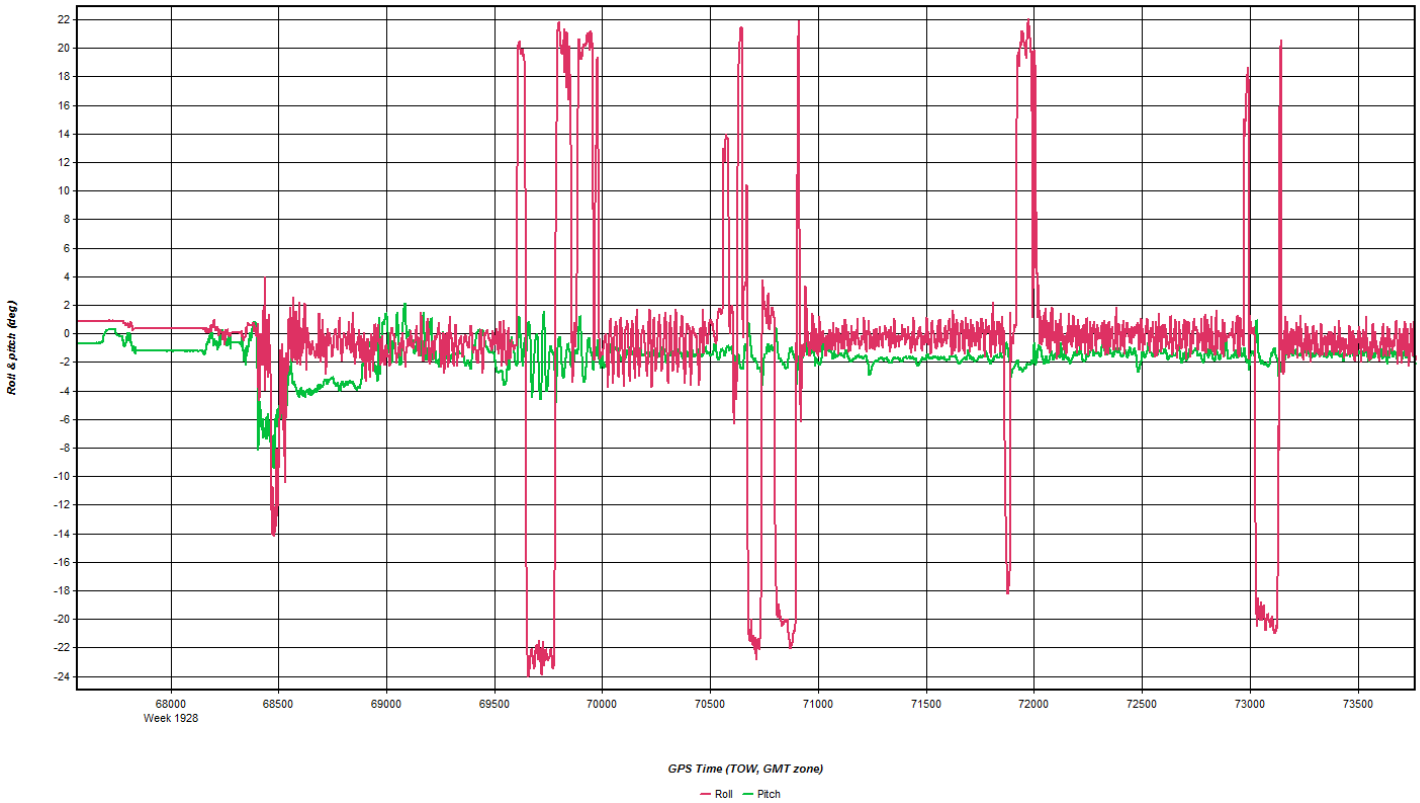

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
68000
Week 1928
68500
69000
69500
70000
70500
71000
71500
72000
72500
73000
73500
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

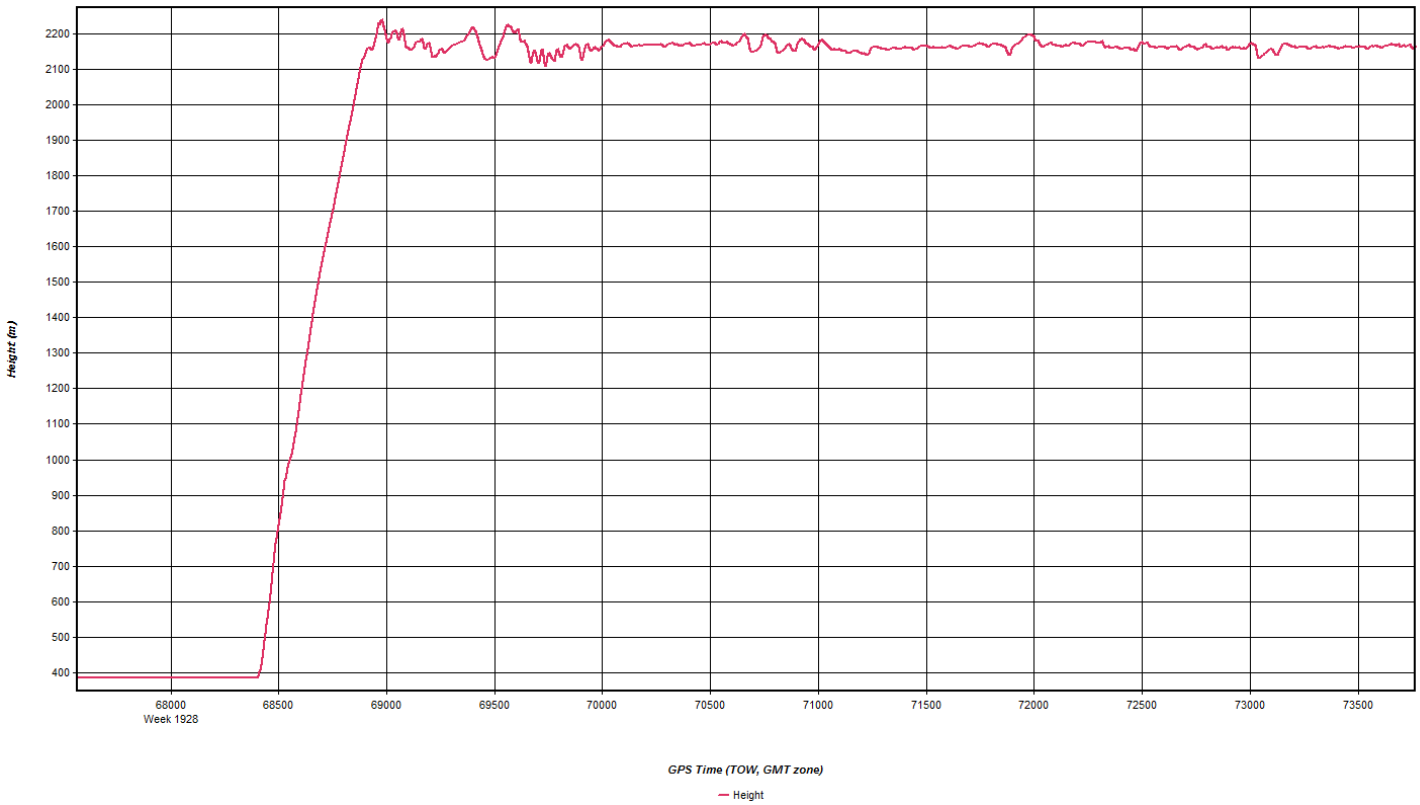

Separation (m)
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
-0.09
-0.10
-0.11
-0.12
-0.13
-0.14
-0.15
-0.16
68000
Week 1928
68500
69000
69500
70000
70500
71000
71500
72000
72500
73000
73500
GPS Time (TOW, GMT zone)
East
North
Up


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
68000
Week 1928
68500
69000
69500
70000
70500
71000
71500
72000
72500
73000
73500
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

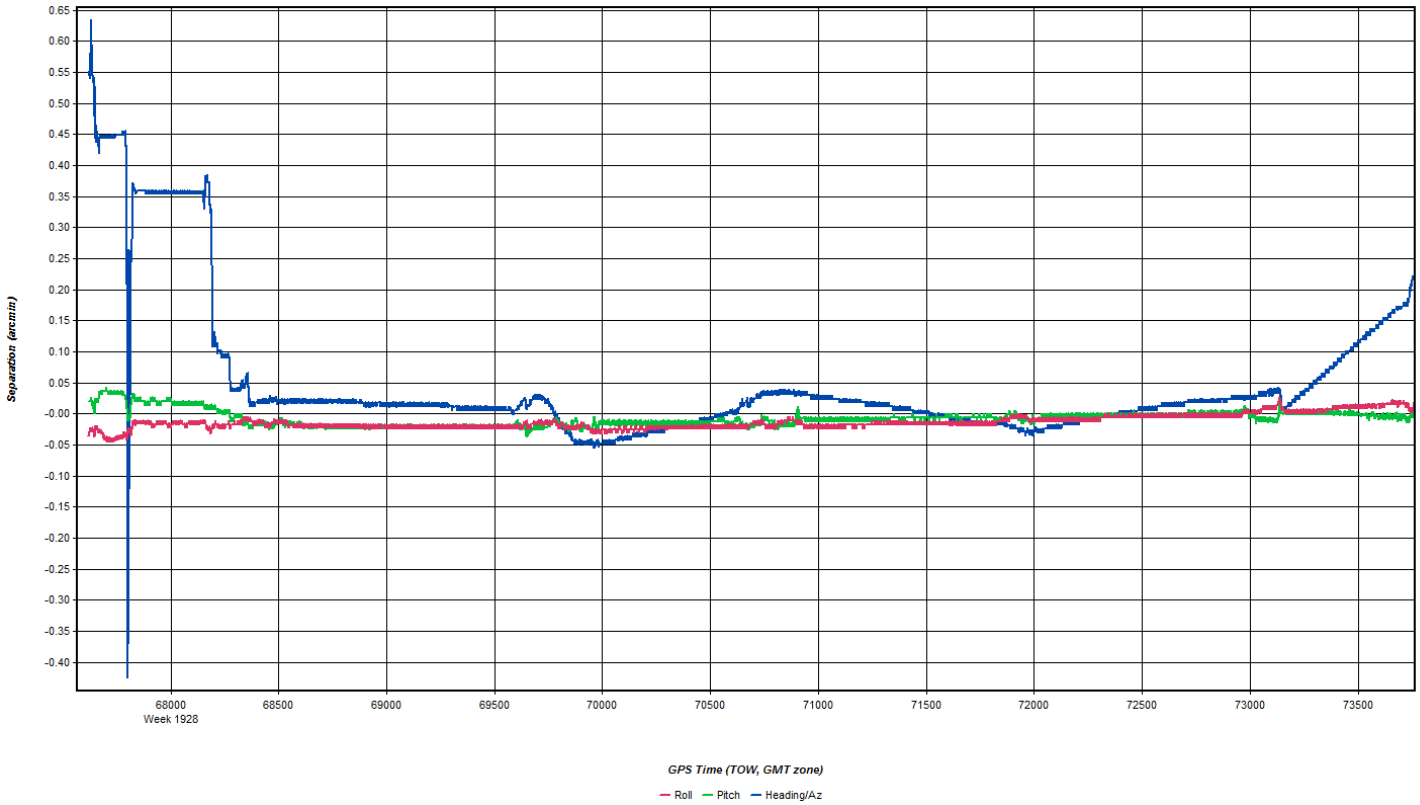

PDOP
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
68000
Week 1928
68500
69000
69500
70000
70500
71000
71500
72000
72500
73000
73500
GPS Time (TOW, GMT zone)
PDOP

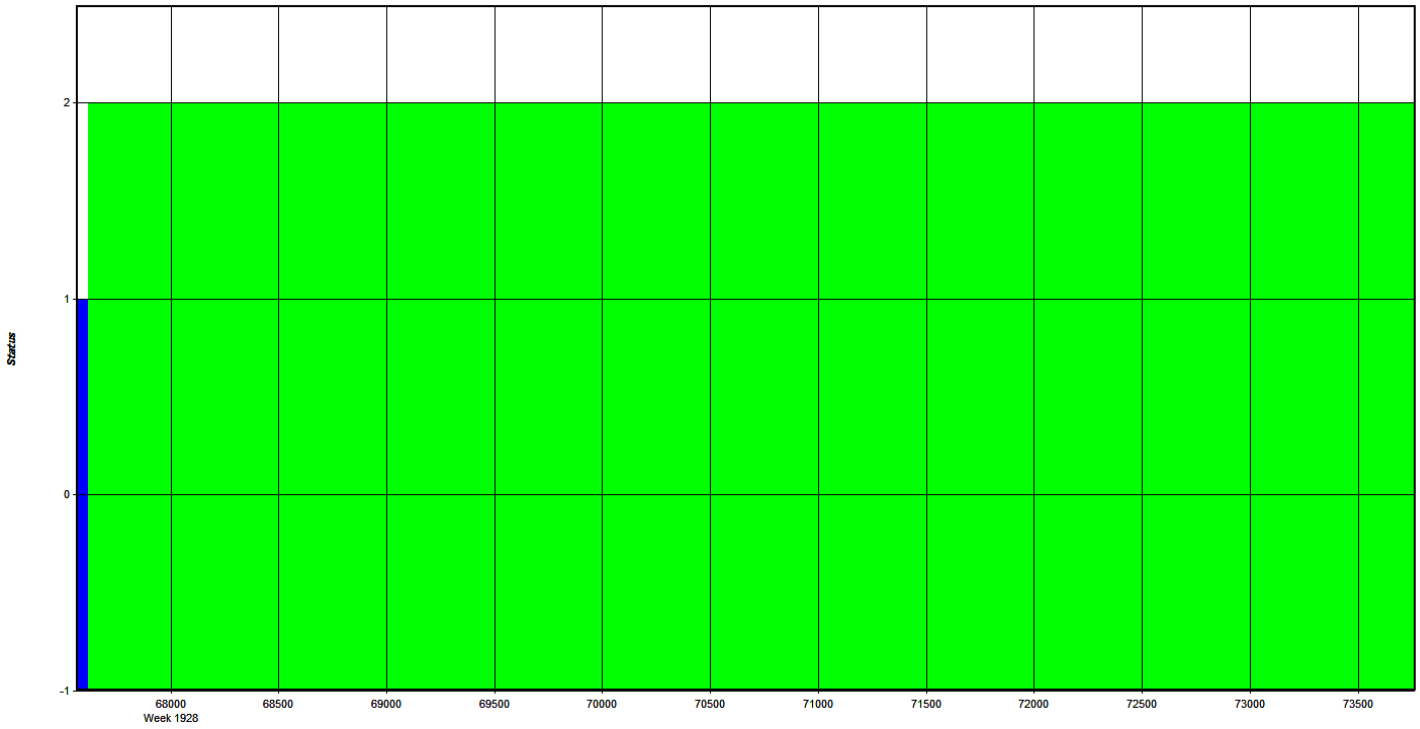

Estimated StdDev (m)
0.0145
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
68000
Week 1928
68500
69000
69500
70000
70500
71000
71500
72000
72500
73000
73500
GPS Time (TOW, GMT zone)
East
North
Height
Trace

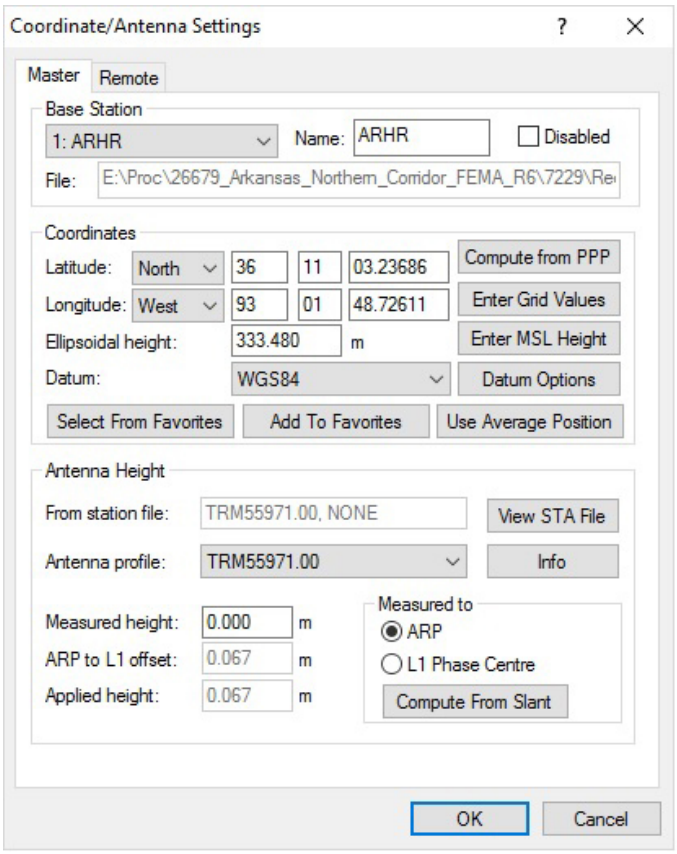

Roll & pitch (deg)
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
68000
Week 1928
68500
69000
69500
70000
70500
71000
71500
72000
72500
73000
73500
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
68000
Week 1928
68500
69000
69500
70000
70500
71000
71500
72000
72500
73000
73500
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.048
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
68000
Week 1928
68500
69000
69500
70000
70500
71000
71500
72000
72500
73000
73500
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
-0.00
-0.05
-0.10
-0.15
-0.20
-0.25
-0.30
-0.35
-0.40
68000
Week 1928
68500
69000
69500
70000
70500
71000
71500
72000
72500
73000
73500
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
68000
Week 1928
68500
69000
69500
70000
70500
71000
71500
72000
72500
73000
73500
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARHR
Name: ARHR
Disabled
File: E:\Proc\26679_Arkansas_Northern_Corridor_FEMA_R6\7229\Re
Coordinates
Latitude: North 36 11 03.23686
Longitude: West 93 01 48.72611
Ellipsoidal height: 333.480 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM55971.00, NONE
View STA File
Antenna profile: TRM55971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

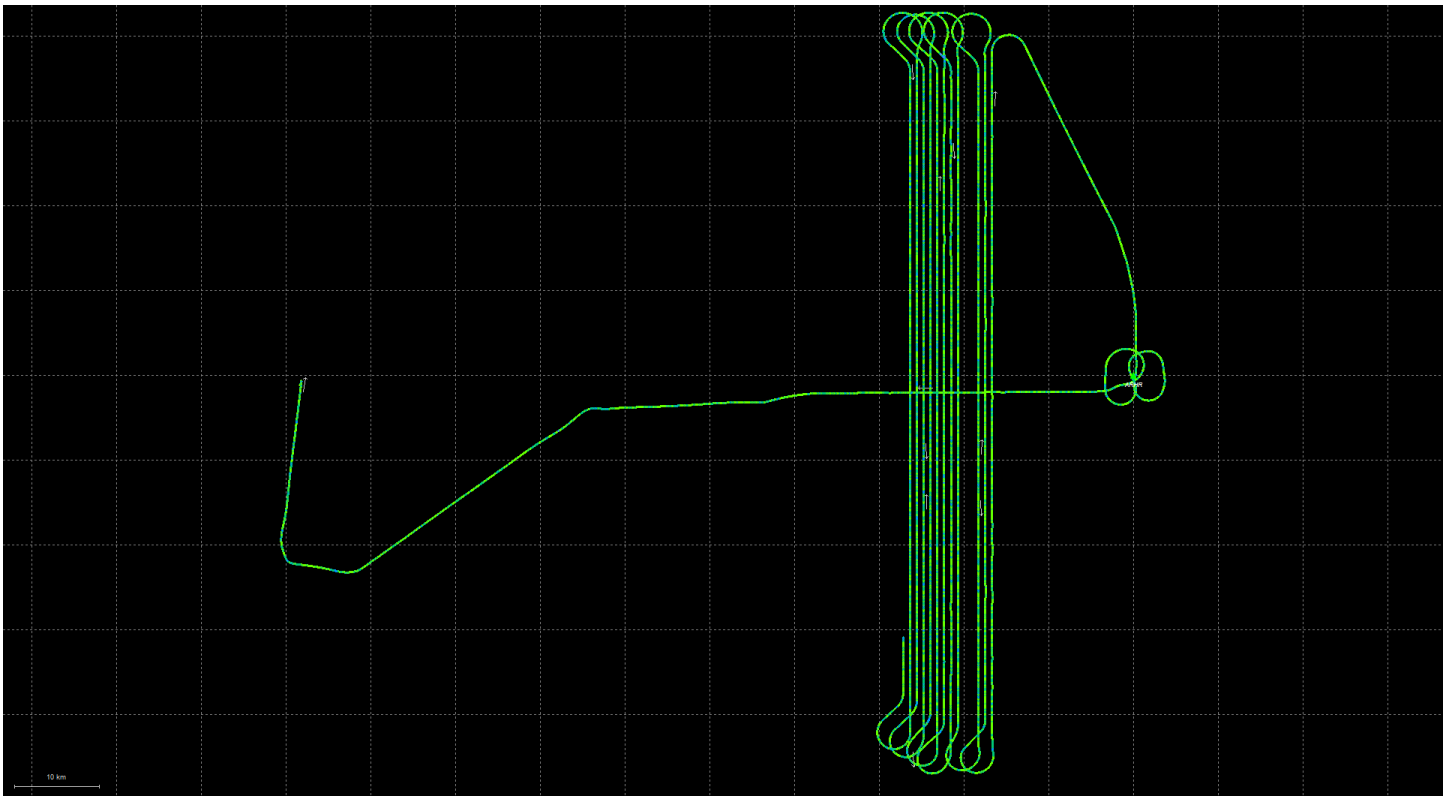
PROJECT NAME	Q.S. Arkansas	DATE	18/12/2016
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Bob Harrity	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310	ABGPS	IPAS-CUS6
AIRBASE	Springdale	DATA DRIVES	LiDar #1

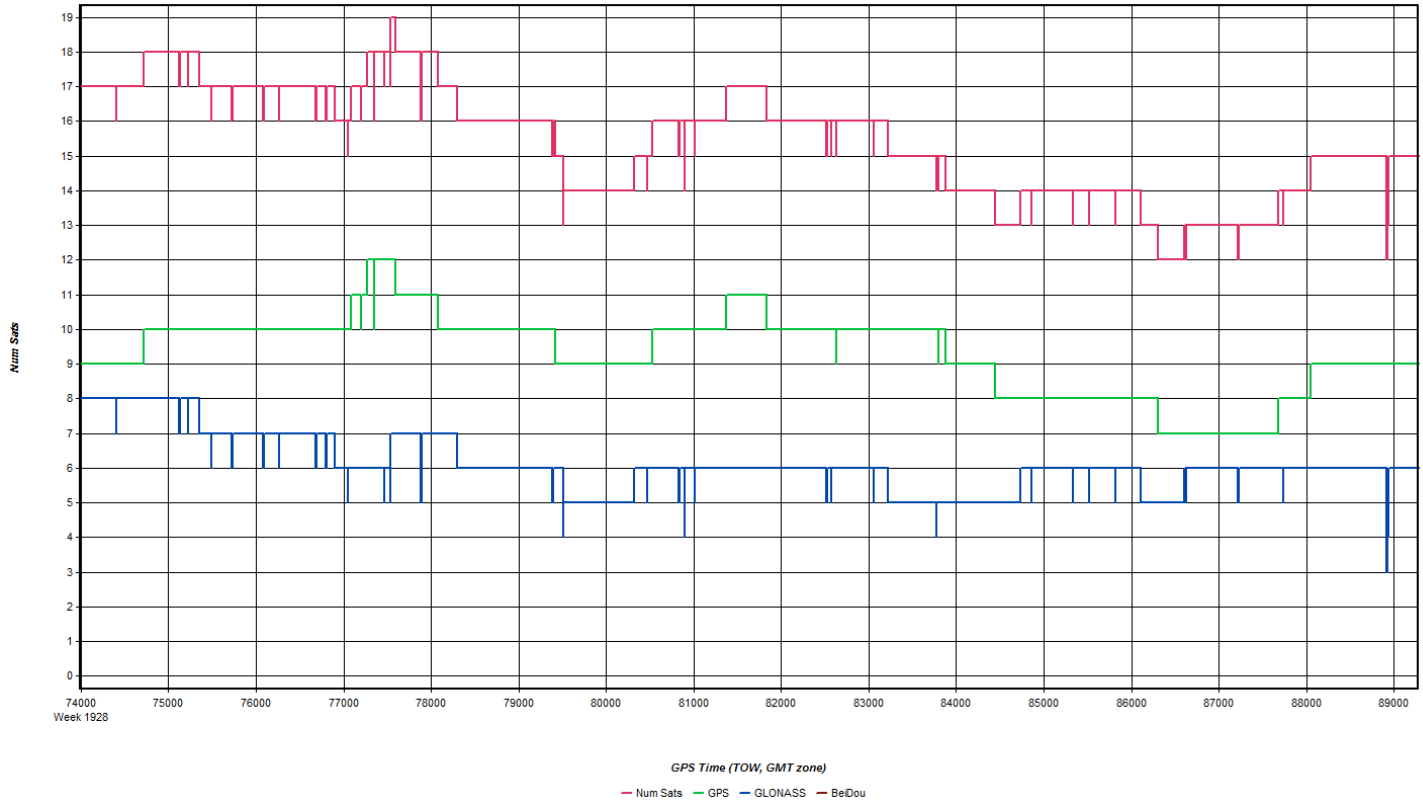
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	18:31:00	Takeoff:	18:59:00	AGL Height:	1800 m	Pulse Rate:	277 KHz		START	END
Engine Off:	00:51:00	Landing:	00:43:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	19:19:00	19:26:00
TOTAL:	6.33 hrs	TOTAL:	5.72 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	00:07:00	00:15:00

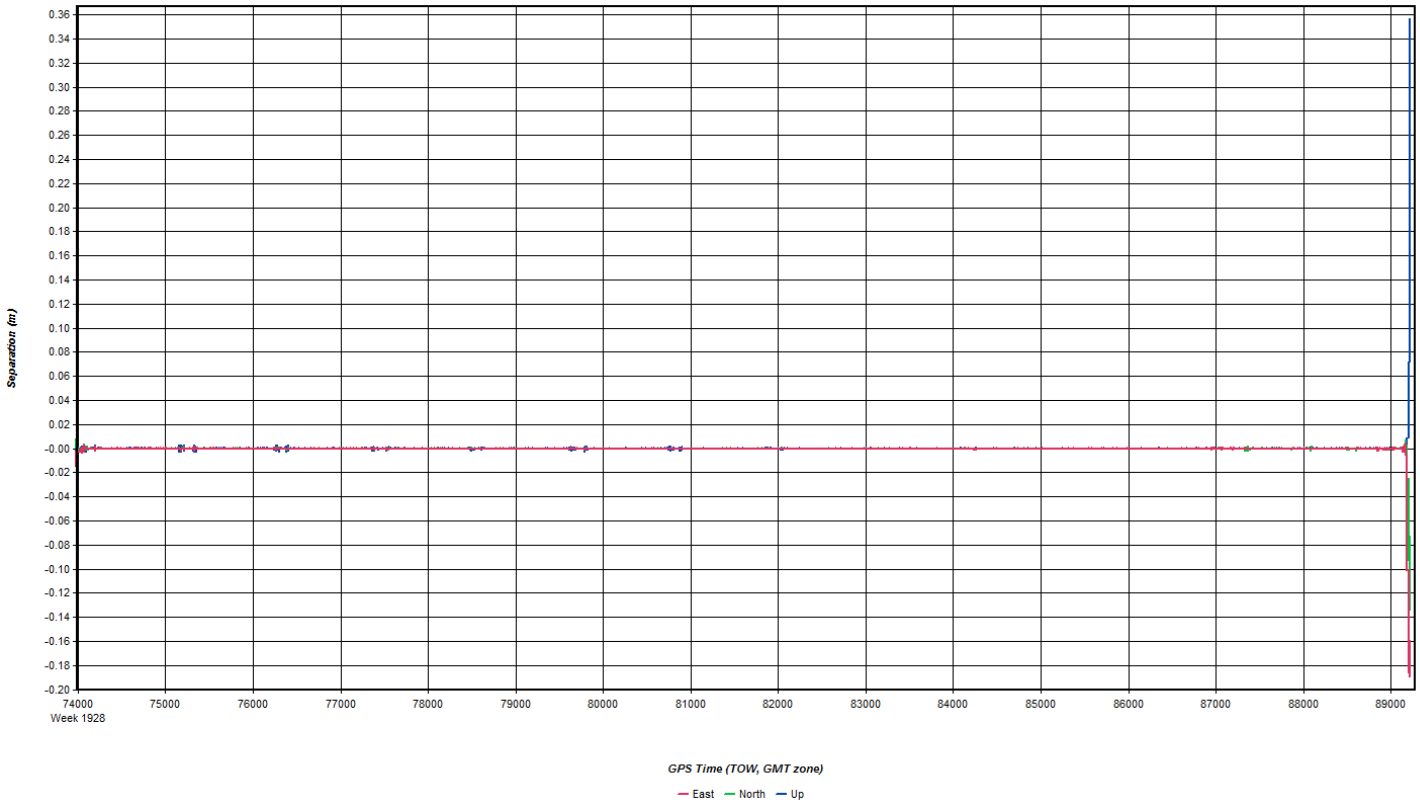
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS	"S" TURN
69		South	161218_194232	19:42:35	19:57:27	Complete line	
70		North	161218_200043	20:00:44	20:15:52	Complete line	
71		South	161218_201918	20:19:20	20:33:51	Imu data gap 7nm from south. Warning Cleared	
72		North	161218_203713	20:37:14	20:52:19	Complete line	
73		South	161218_205552	20:55:53	21:10:23	Complete line	
74		North	161218_211342	21:13:44	21:29:10	Complete line	
75		South	161218_213233	21:32:35	21:47:29	Complete line	
76		North	161218_215039	21:50:38	22:06:39	Complete line	
77		South	161218_221016	22:10:18	22:25:23	Complete line	
78		North	161218_222841	22:28:43	22:43:58	Complete line	
79		South	161218_224733	22:47:35	23:02:49	Complete line	
82		Norht	161218_230547	23:05:48	23:20:48	Complete line	
83		South	161218_232419	23:24:20	23:39:48	Complete line	
84		North	161218_234300	23:43:01	23:57:54	Complete line	
CL		West	161218_001802	00:18:06	00:22:49	Complete line	

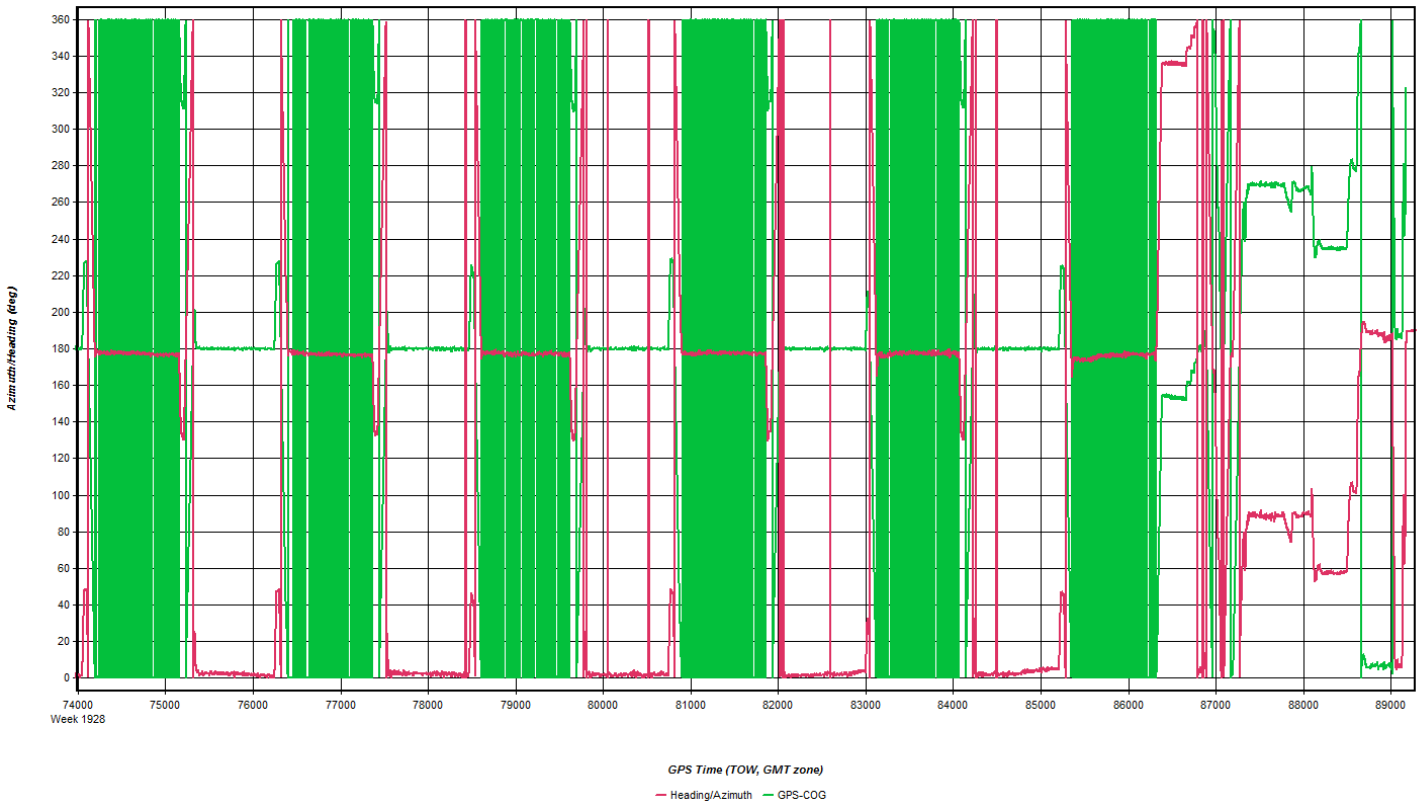
SUN ANGLE @Start: @End: @Peak:	ADDTIONAL NOTES: At the start Sats. 20, PDop 1.0. Mid flight Sats. 18 PDops 1.1. End of flight sats. 15 PDops 1.5. Clear skies and calm wind. -9C @ start and -11C @ end. System failed to initialize on the first try. AGL height ranged from 1550m to 1850m Skipped lines 68 and 81 because we were approaching from the direction, need to fly them later.

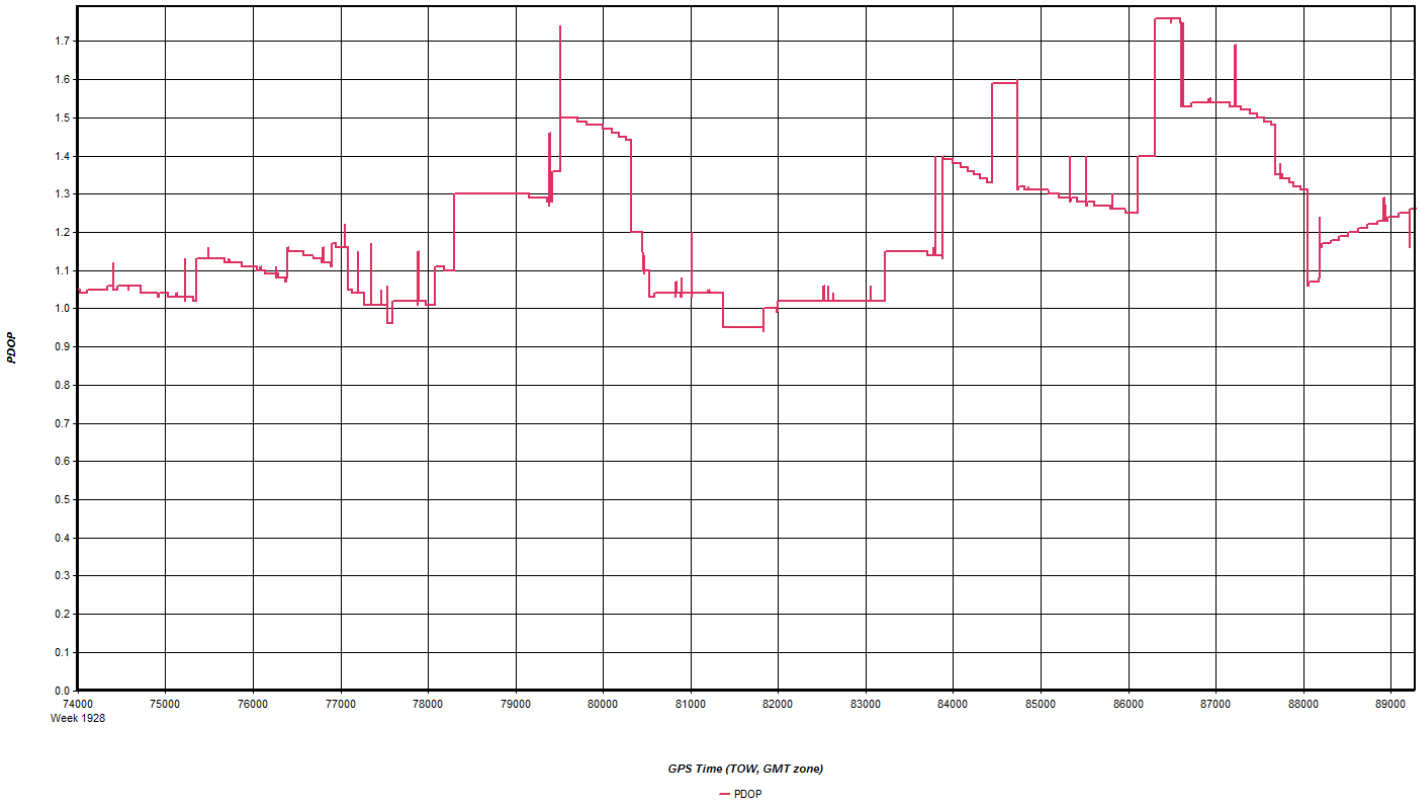
Dec 18, 2016-A2 (C-FVZM, SN7229)

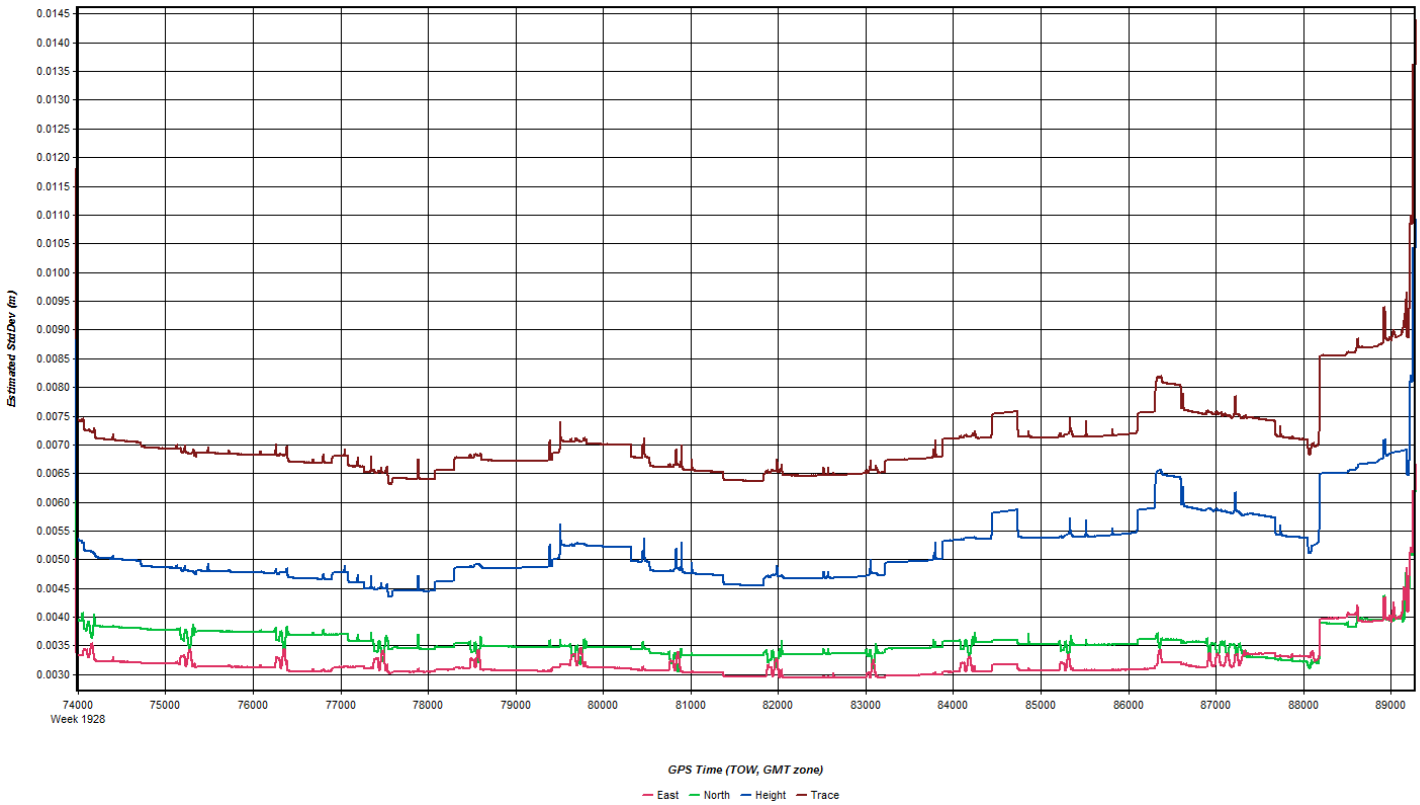

10 km

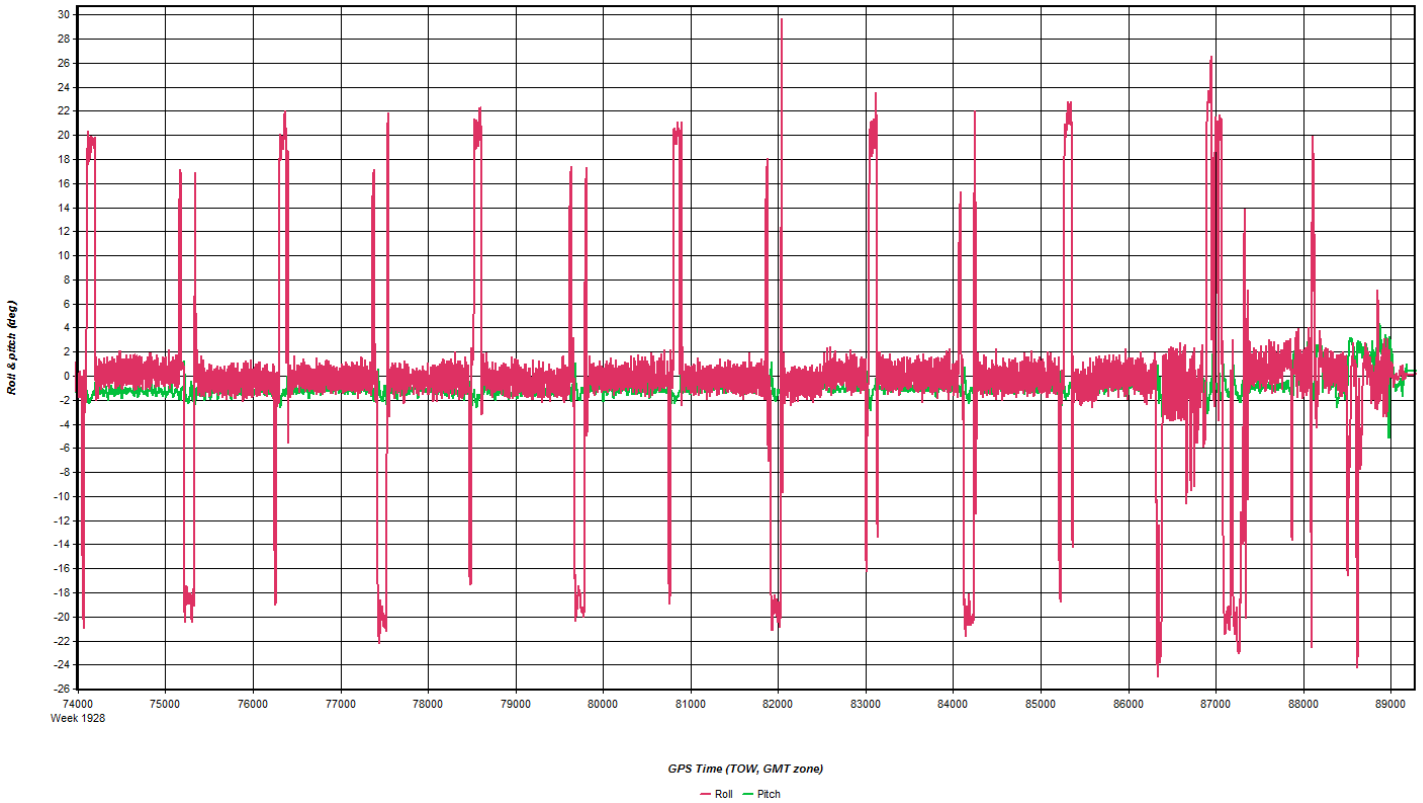

Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
74000
Week 1928
75000
76000
77000
78000
79000
80000
81000
82000
83000
84000
85000
86000
87000
88000
89000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

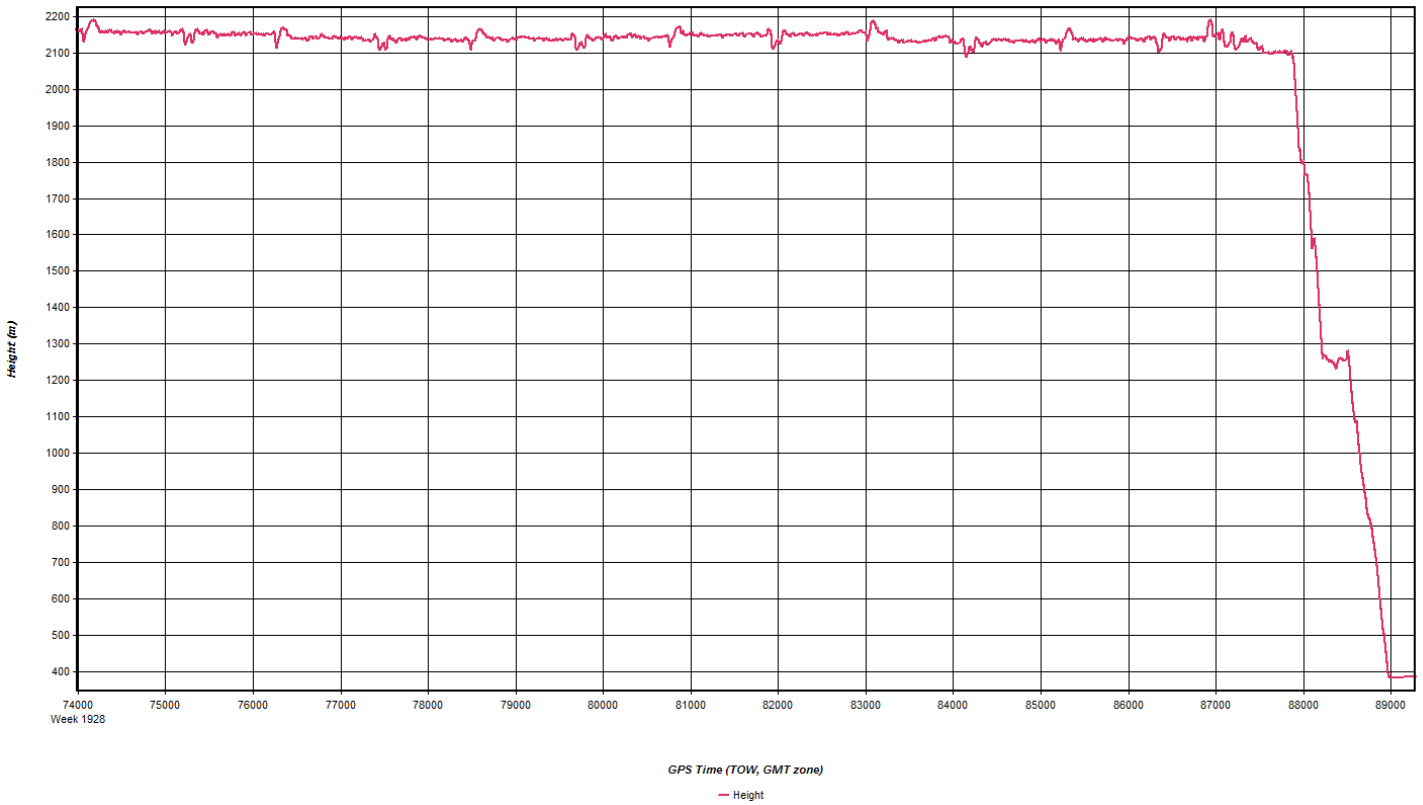

Separation (m)
0.36
0.34
0.32
0.30
0.28
0.26
0.24
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
-0.00
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
-0.16
-0.18
-0.20
74000
Week 1928
75000
76000
77000
78000
79000
80000
81000
82000
83000
84000
85000
86000
87000
88000
89000
GPS Time (TOW, GMT zone)
East
North
Up

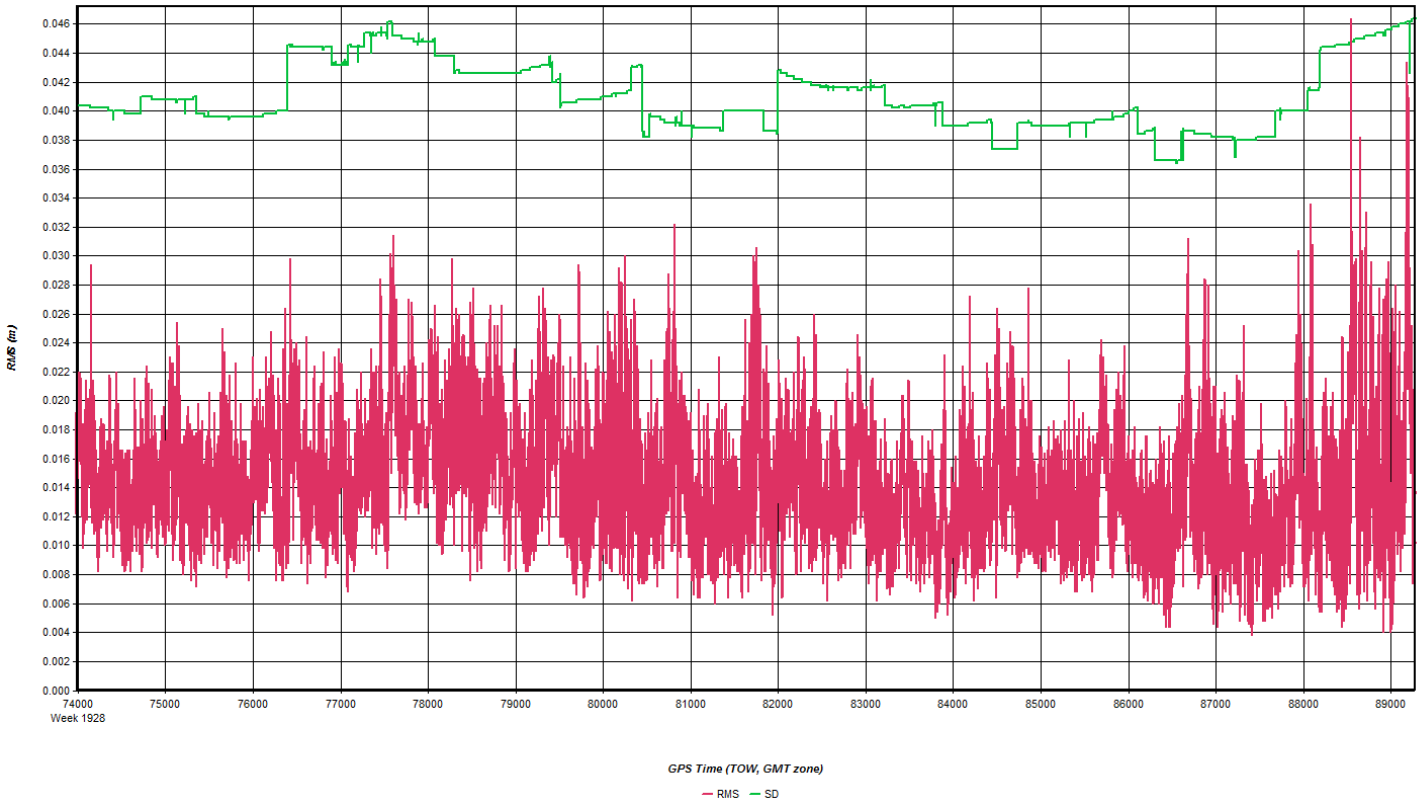

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
74000
Week 1928
75000
76000
77000
78000
79000
80000
81000
82000
83000
84000
85000
86000
87000
88000
89000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

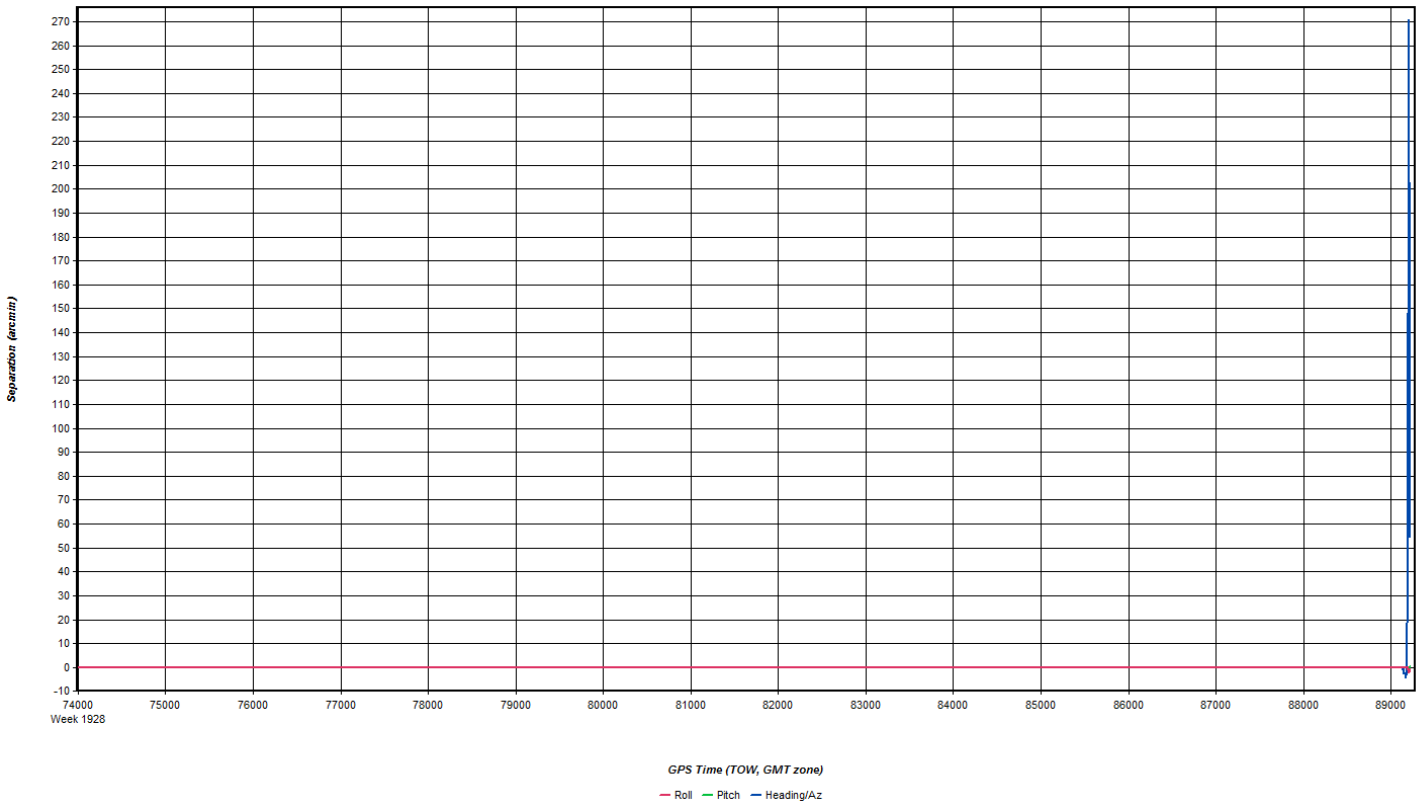

PDOP
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
74000
Week 1928
75000
76000
77000
78000
79000
80000
81000
82000
83000
84000
85000
86000
87000
88000
89000
GPS Time (TOW, GMT zone)
PDOP

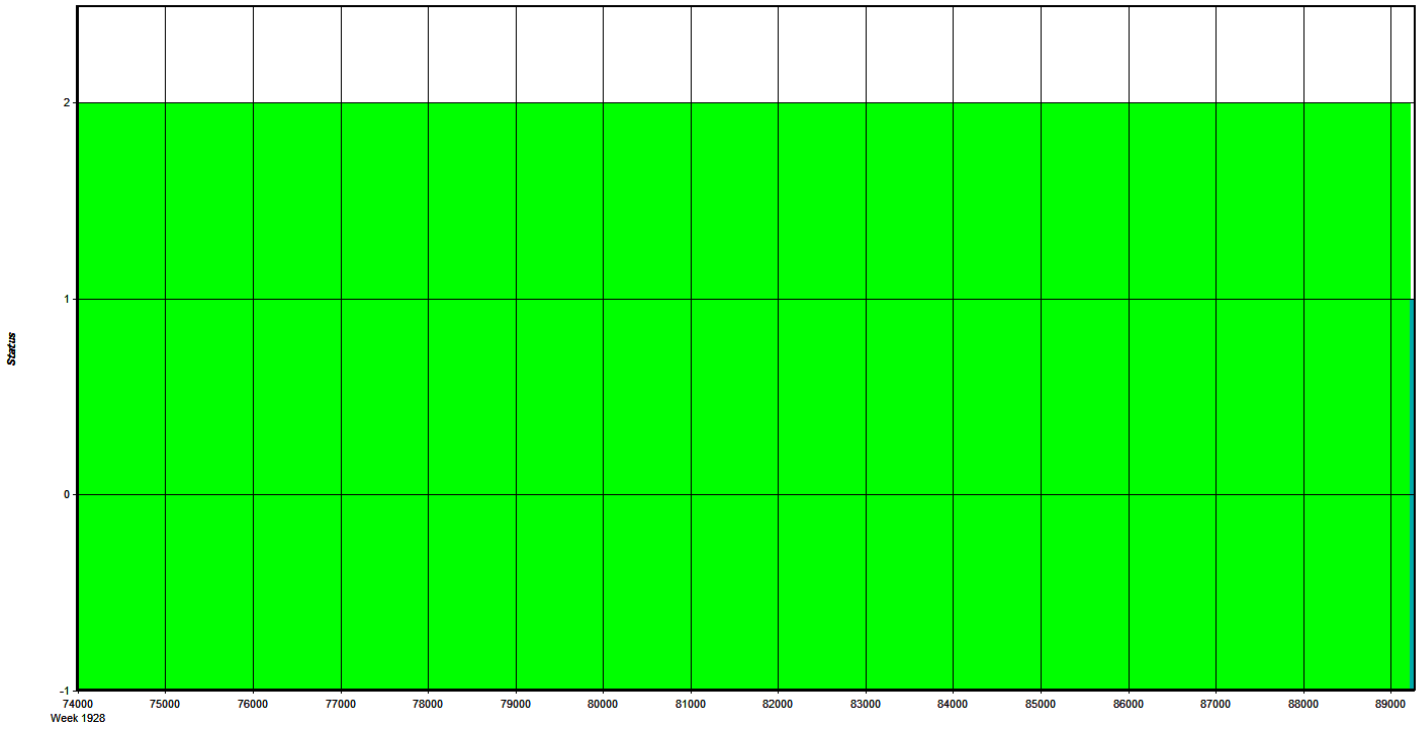

Estimated StdDev (m)
0.0145
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
74000
Week 1928
75000
76000
77000
78000
79000
80000
81000
82000
83000
84000
85000
86000
87000
88000
89000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

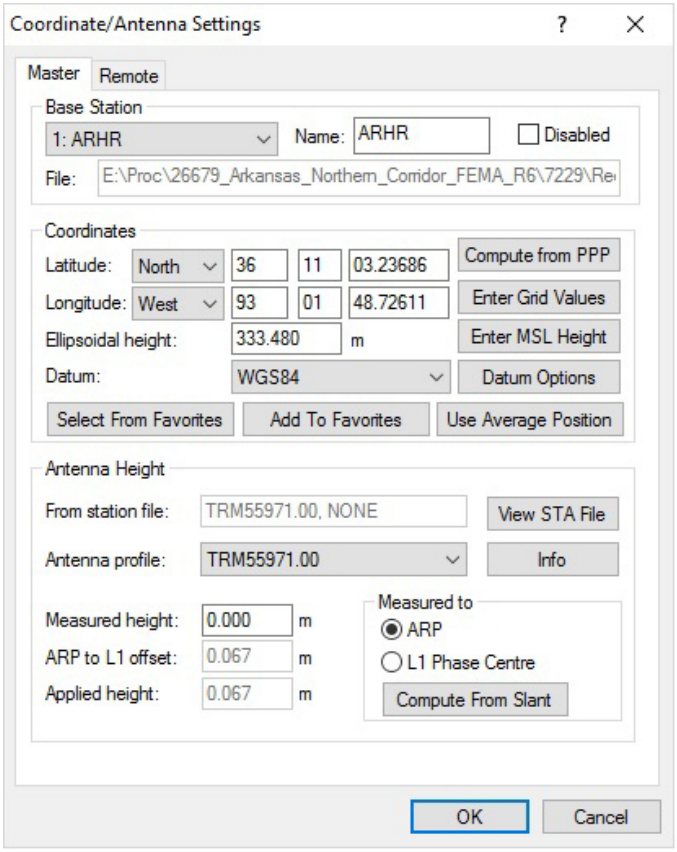

Roll & pitch (deg)
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
74000
Week 1928
75000
76000
77000
78000
79000
80000
81000
82000
83000
84000
85000
86000
87000
88000
89000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
74000
Week 1928
75000
76000
77000
78000
79000
80000
81000
82000
83000
84000
85000
86000
87000
88000
89000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
74000
Week 1928
75000
76000
77000
78000
79000
80000
81000
82000
83000
84000
85000
86000
87000
88000
89000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
270
260
250
240
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
74000
Week 1928
75000
76000
77000
78000
79000
80000
81000
82000
83000
84000
85000
86000
87000
88000
89000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
74000
Week 1928
75000
76000
77000
78000
79000
80000
81000
82000
83000
84000
85000
86000
87000
88000
89000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARHR
Name:
ARHR
Disabled
File:
E:\Proc\26679_Arkansas_Northern_Corridor_FEMA_R6\7229\Re
Coordinates
Latitude:
North
36
11
03.23686
Compute from PPP
Longitude:
West
93
01
48.72611
Enter Grid Values
Ellipsoidal height:
333.480
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM55971.00, NONE
View STA File
Antenna profile:
TRM55971.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.067
m
Applied height:
0.067
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

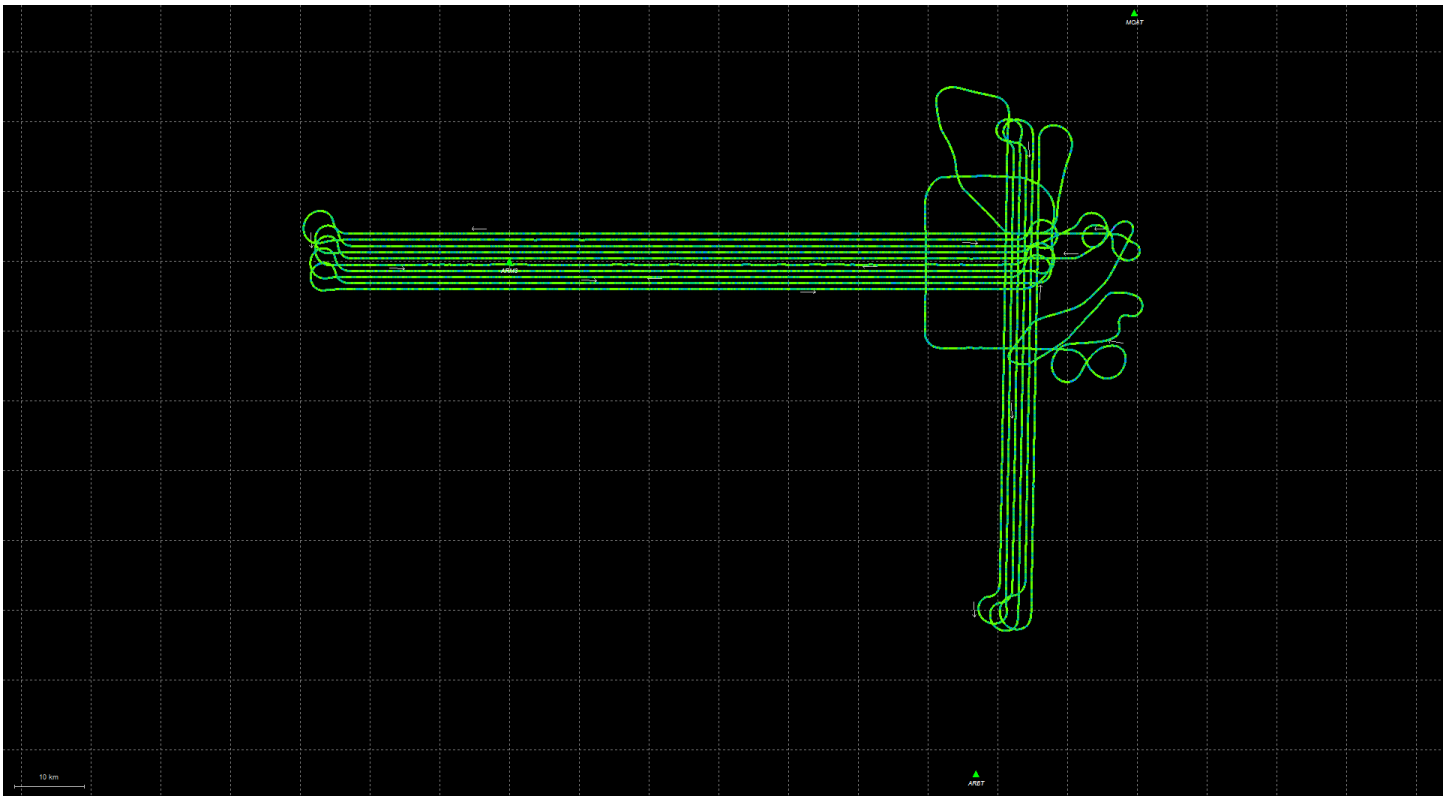
PROJECT NAME	Q.S. Arkansas	DATE	18/12/2016
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Bob Harrity	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310	ABGPS	IPAS-CUS6
AIRBASE	Springdale	DATA DRIVES	LiDar #1

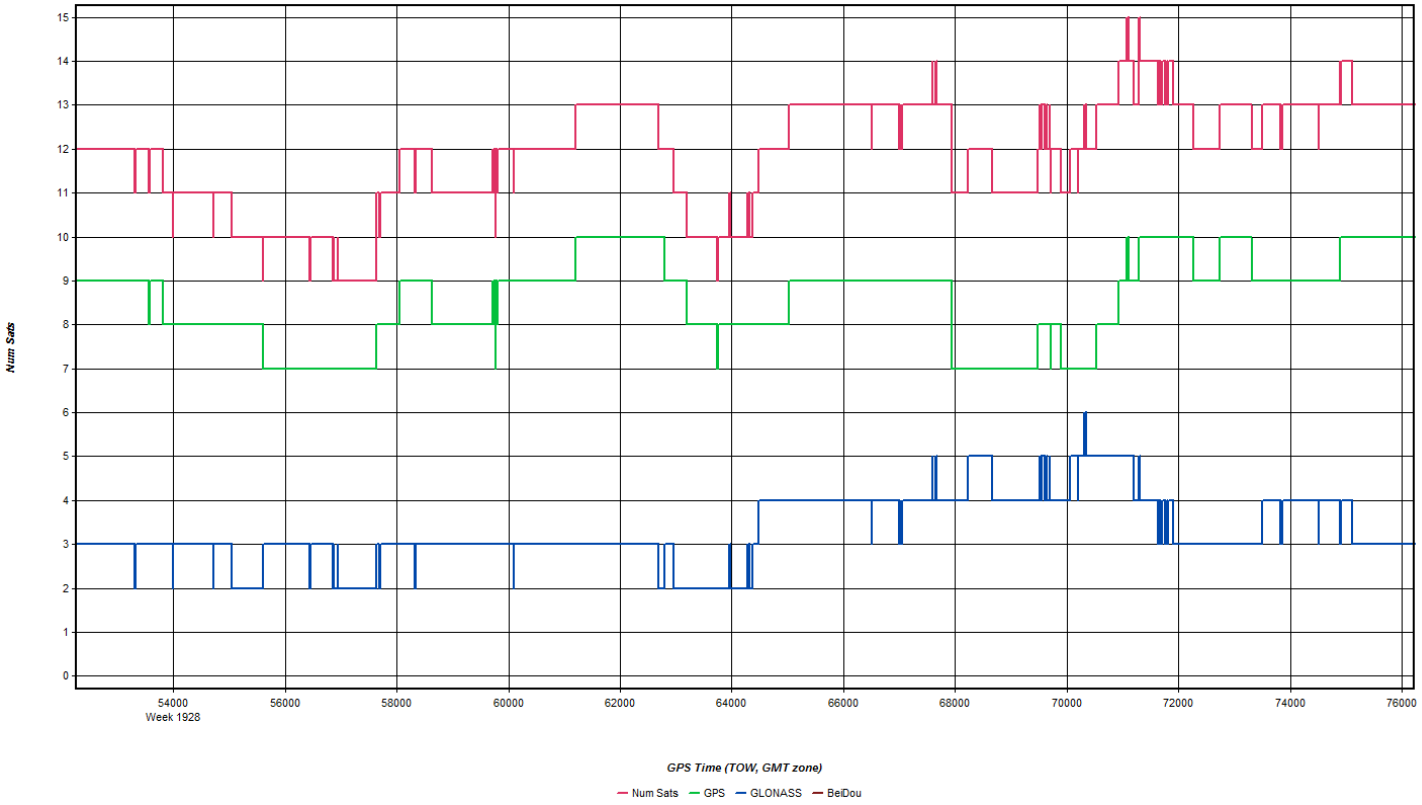
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	18:31:00	Takeoff:	18:59:00	AGL Height:	1800 m	Pulse Rate:	277 KHz		START	END
Engine Off:	00:51:00	Landing:	00:43:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	19:19:00	19:26:00
TOTAL:	6.33 hrs	TOTAL:	5.72 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	00:07:00	00:15:00

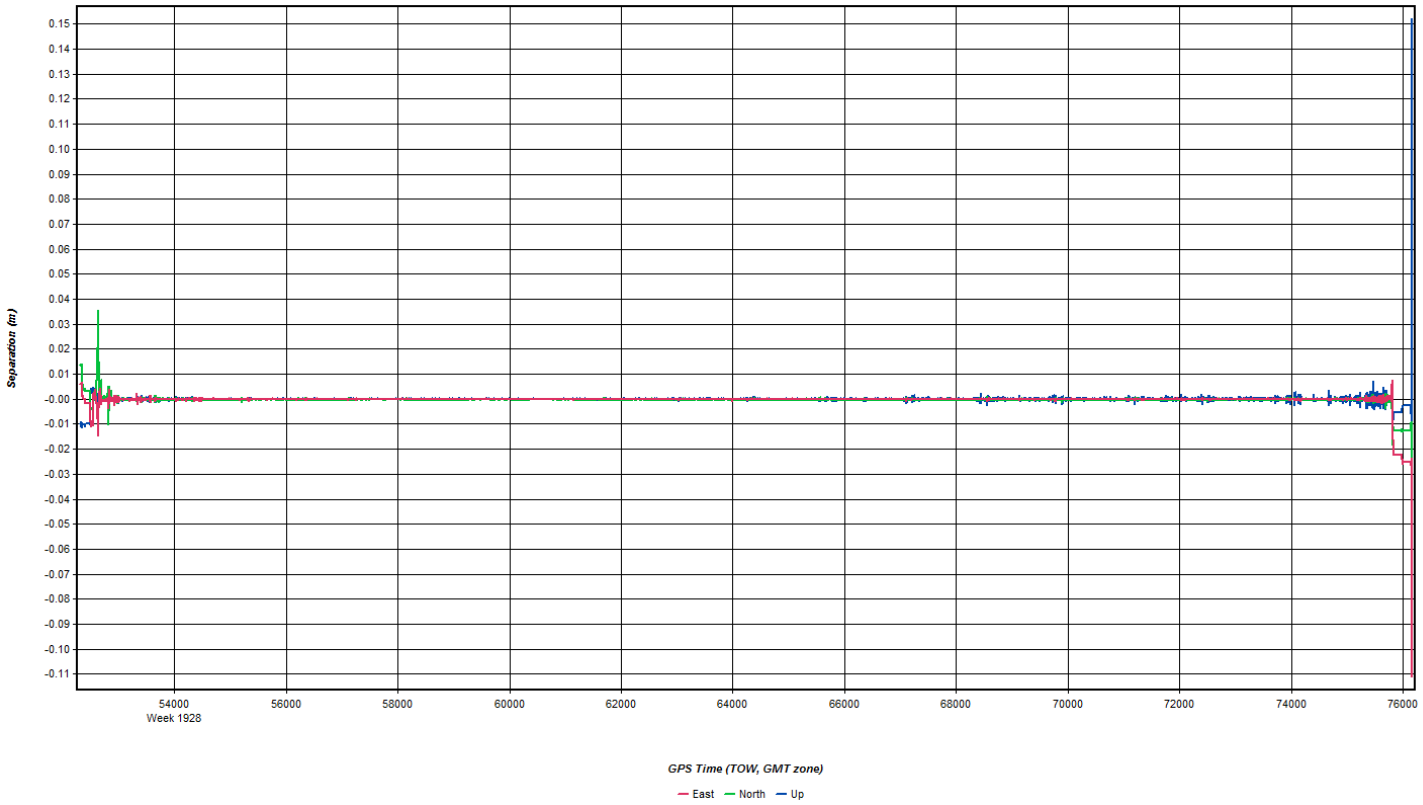
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS	"S" TURN
69		South	161218_194232	19:42:35	19:57:27	Complete line	
70		North	161218_200043	20:00:44	20:15:52	Complete line	
71		South	161218_201918	20:19:20	20:33:51	Imu data gap 7nm from south. Warning Cleared	
72		North	161218_203713	20:37:14	20:52:19	Complete line	
73		South	161218_205552	20:55:53	21:10:23	Complete line	
74		North	161218_211342	21:13:44	21:29:10	Complete line	
75		South	161218_213233	21:32:35	21:47:29	Complete line	
76		North	161218_215039	21:50:38	22:06:39	Complete line	
77		South	161218_221016	22:10:18	22:25:23	Complete line	
78		North	161218_222841	22:28:43	22:43:58	Complete line	
79		South	161218_224733	22:47:35	23:02:49	Complete line	
82		Norht	161218_230547	23:05:48	23:20:48	Complete line	
83		South	161218_232419	23:24:20	23:39:48	Complete line	
84		North	161218_234300	23:43:01	23:57:54	Complete line	
CL		West	161218_001802	00:18:06	00:22:49	Complete line	

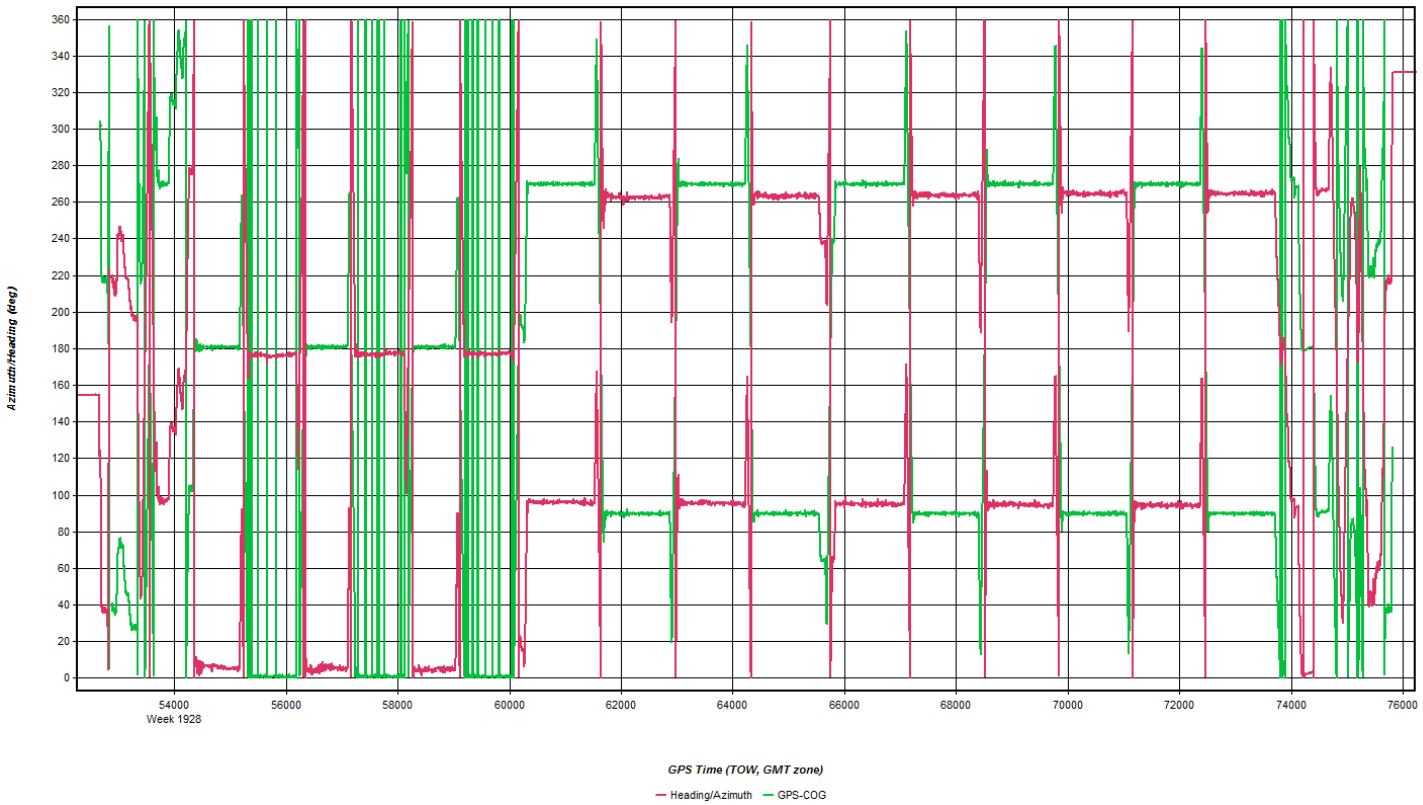
SUN ANGLE @Start: @End: @Peak:	ADDTIONAL NOTES: At the start Sats. 20, PDop 1.0. Mid flight Sats. 18 PDops 1.1. End of flight sats. 15 PDops 1.5. Clear skies and calm wind. -9C @ start and -11C @ end. System failed to initialize on the first try. AGL height ranged from 1550m to 1850m Skipped lines 68 and 81 because we were approaching from the direction, need to fly them later.

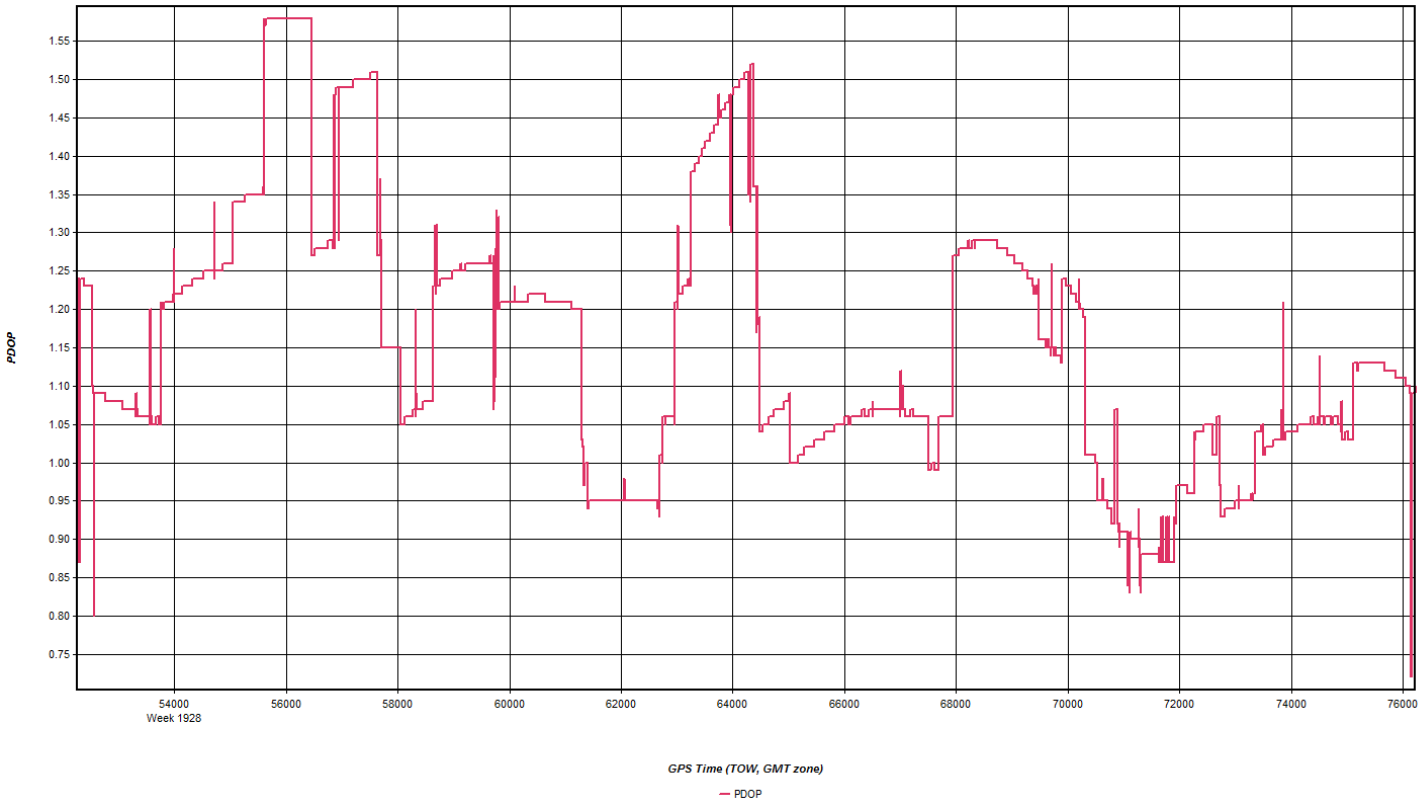
Dec 18, 2016-A (C-GKSI, SN7207)

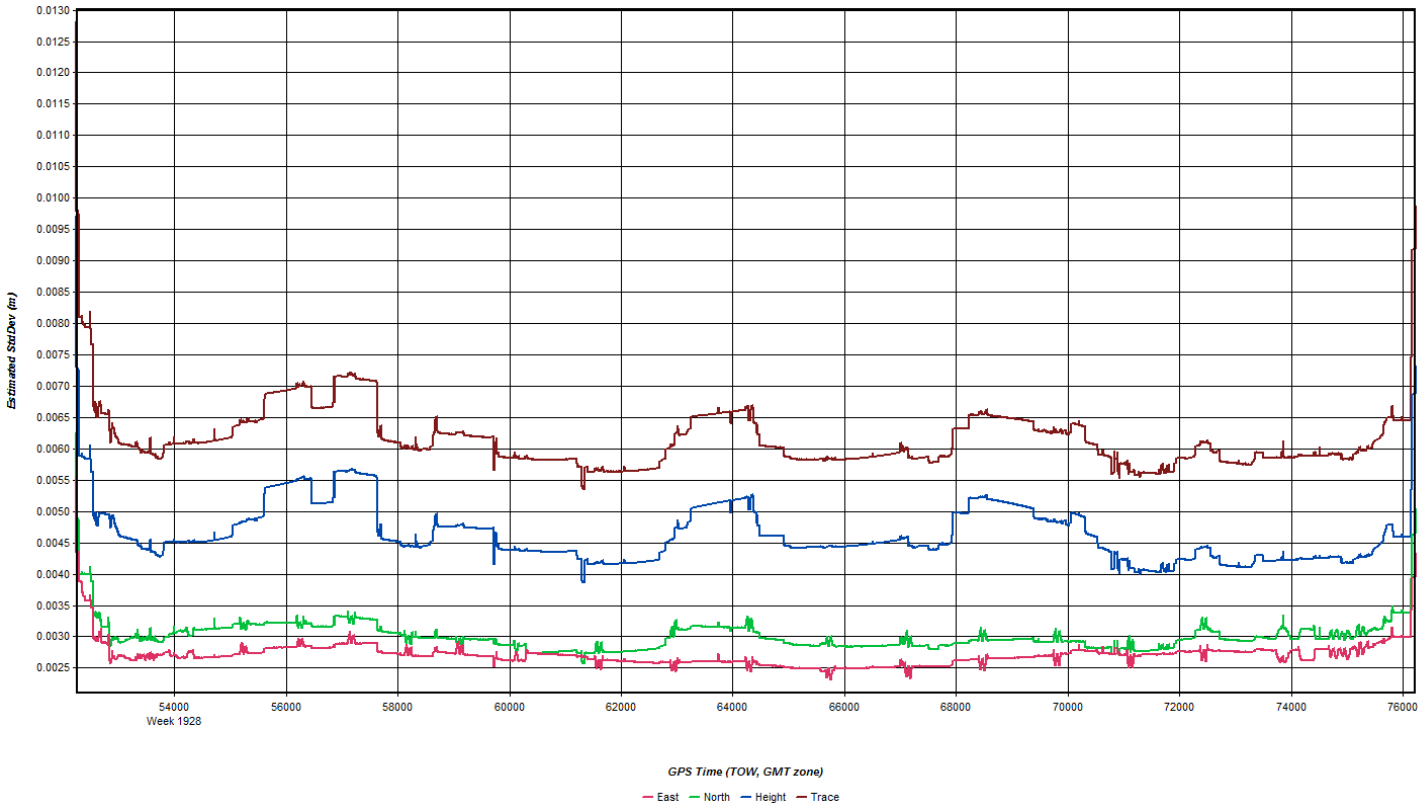

MOAT
ARBT
10 km

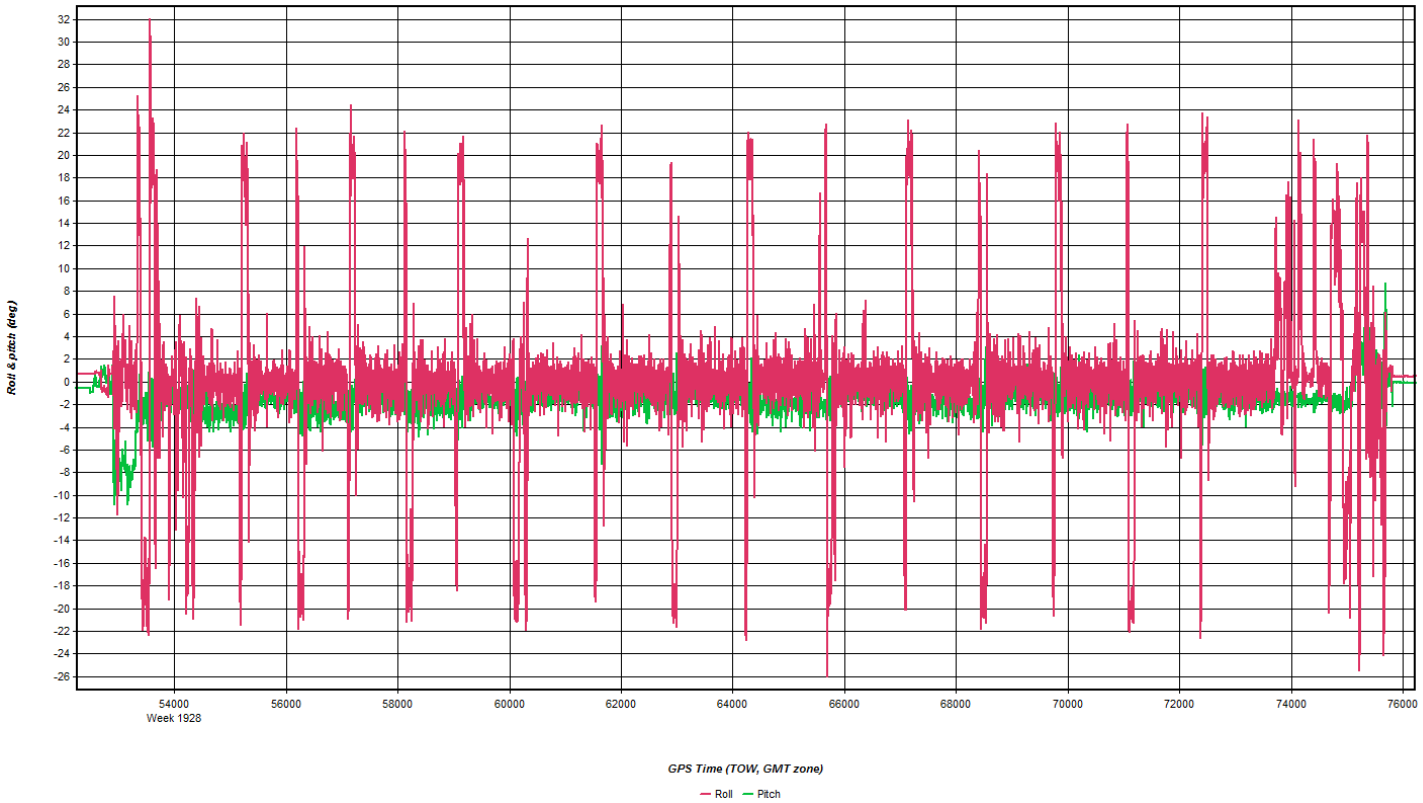

Num Sats
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
54000
Week 1928
56000
58000
60000
62000
64000
66000
68000
70000
72000
74000
76000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

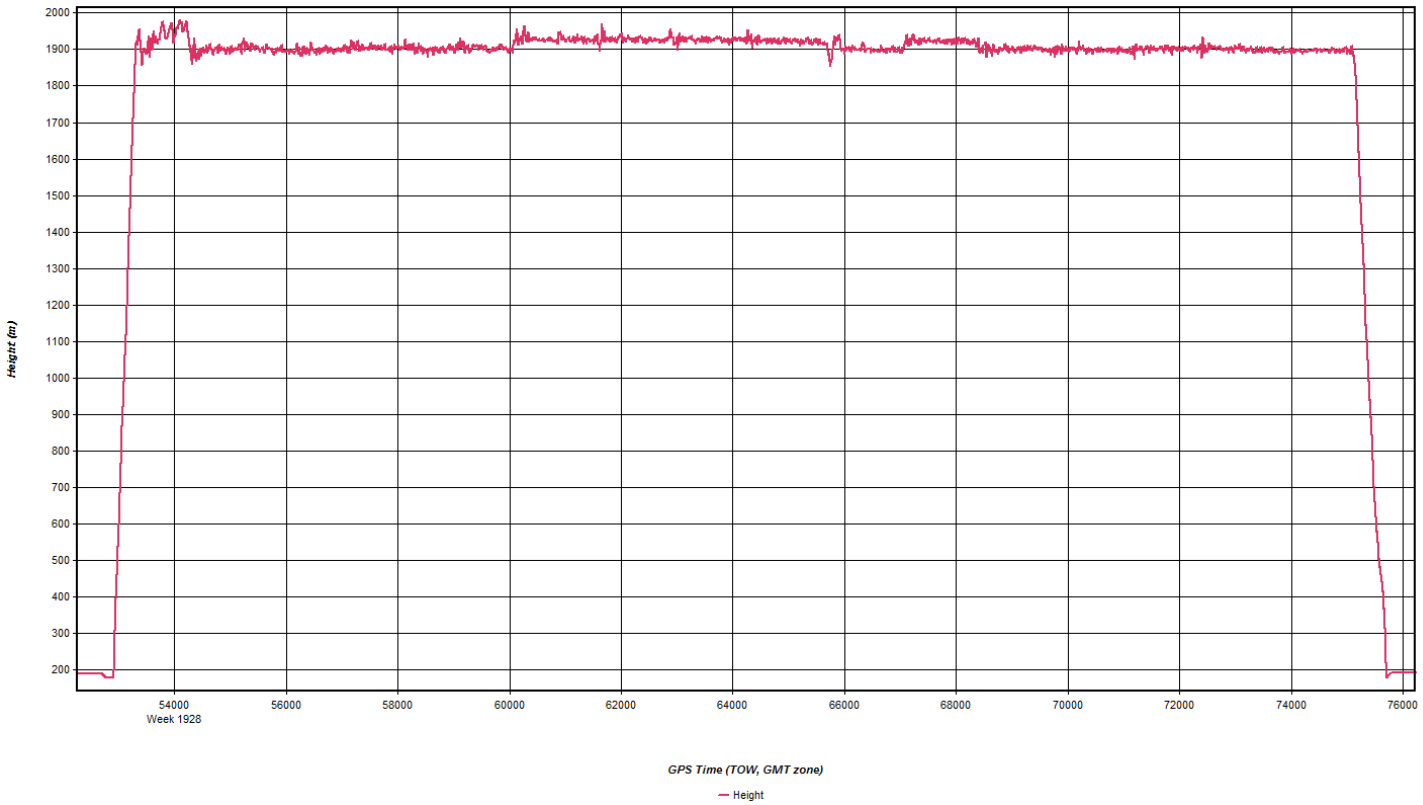

Separation (m)
0.15
0.14
0.13
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
-0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
-0.09
-0.10
-0.11
54000
Week 1928
56000
58000
60000
62000
64000
66000
68000
70000
72000
74000
76000
GPS Time (TOW, GMT zone)
East
North
Up

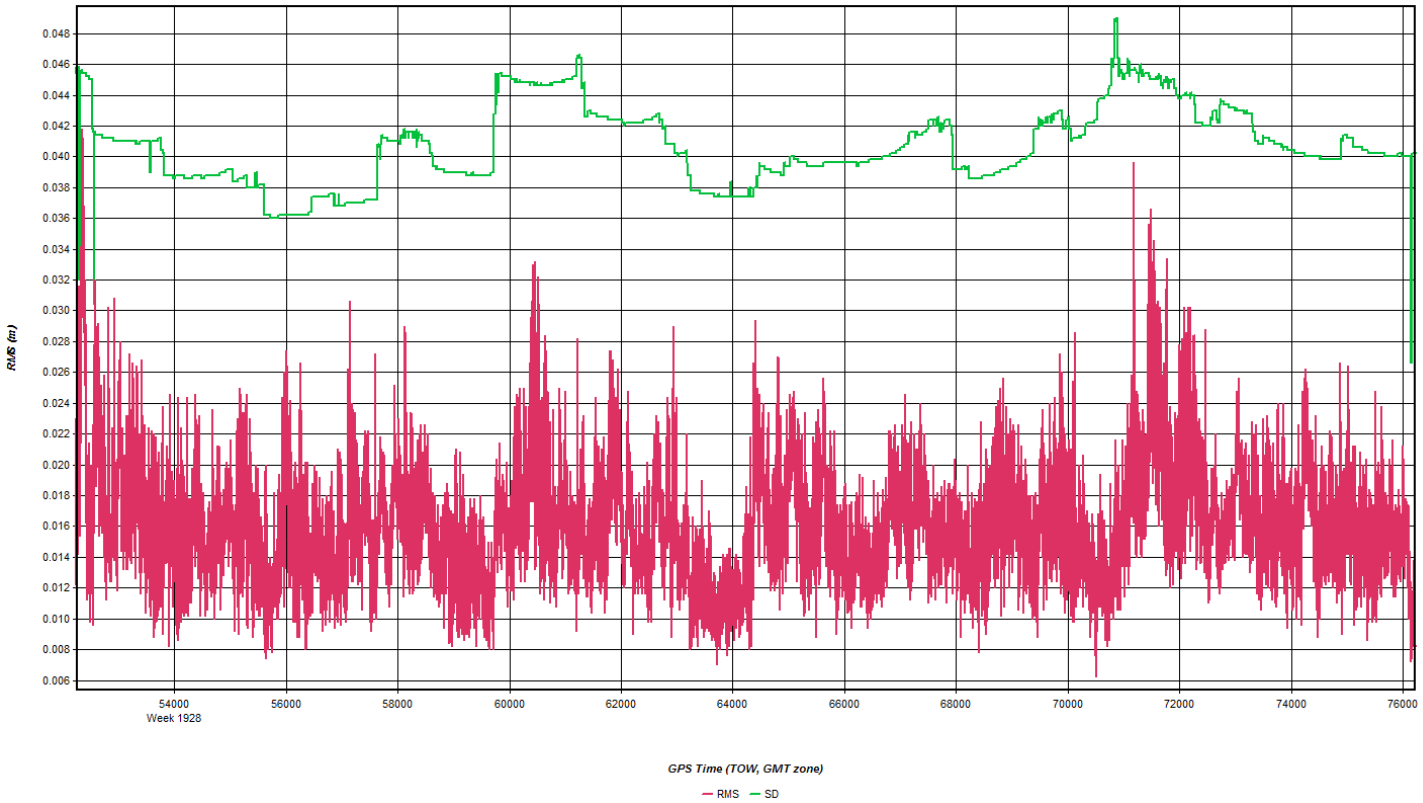

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
54000
Week 1928
56000
58000
60000
62000
64000
66000
68000
70000
72000
74000
76000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

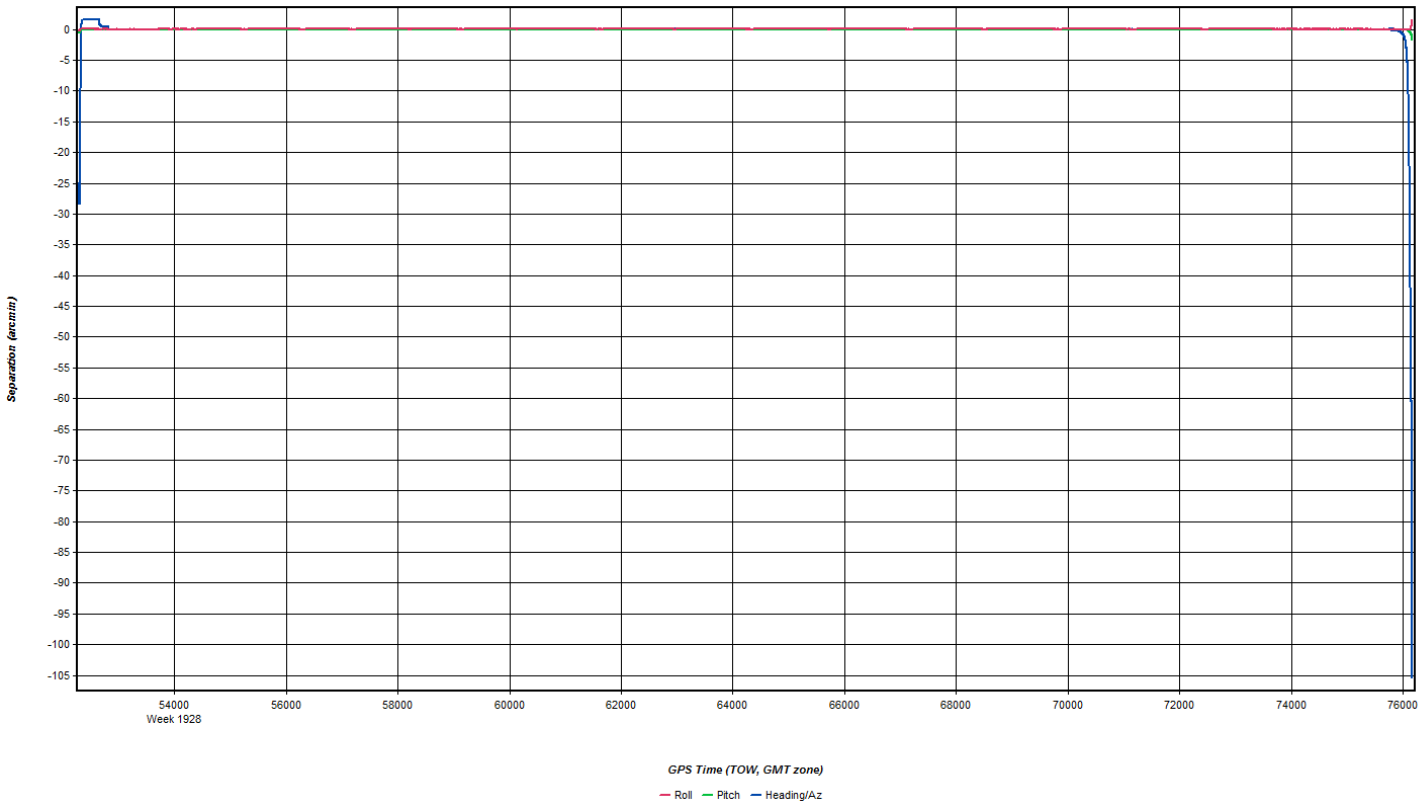

PDOP
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
54000
Week 1928
56000
58000
60000
62000
64000
66000
68000
70000
72000
74000
76000
GPS Time (TOW, GMT zone)
PDOP

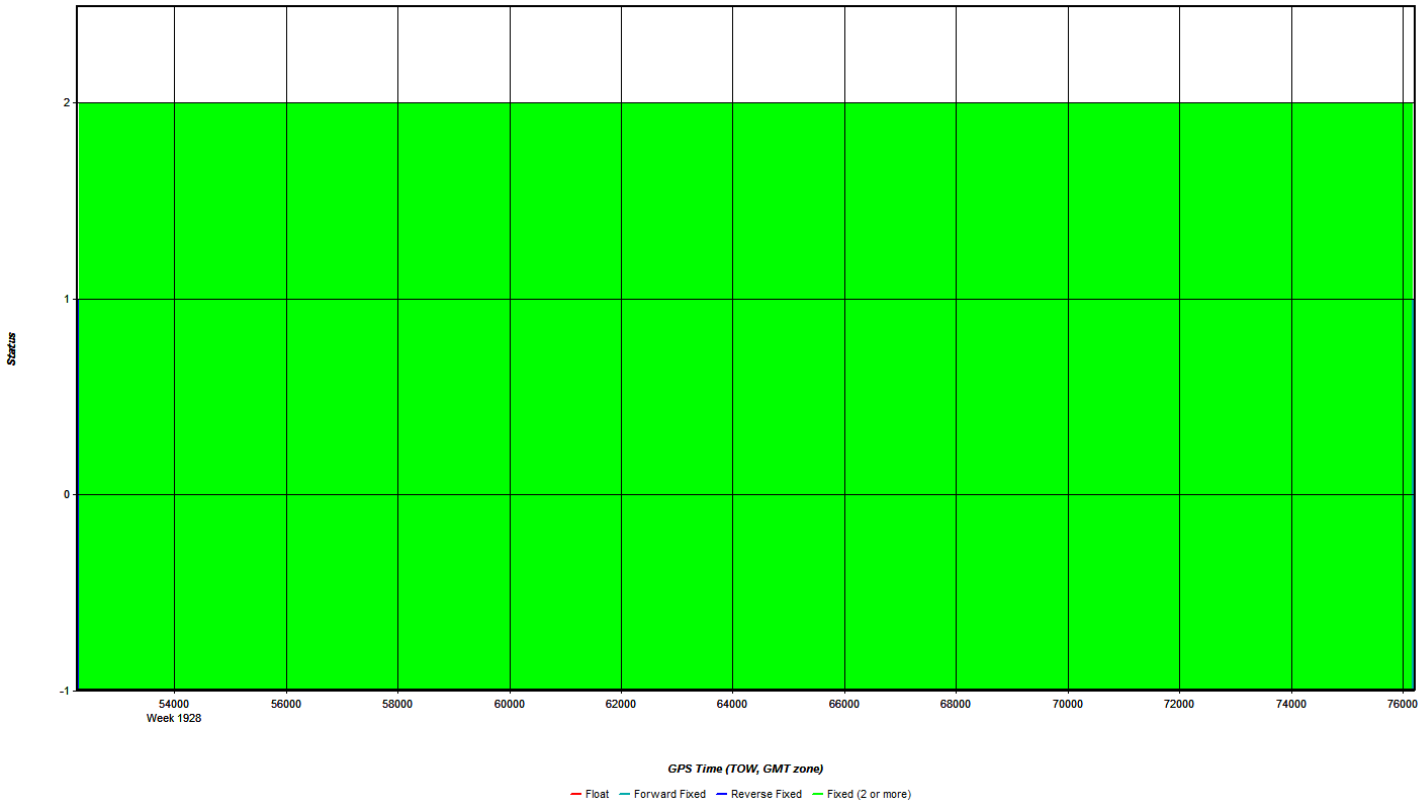

Estimated StdDev (m)
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
54000
Week 1928
56000
58000
60000
62000
64000
66000
68000
70000
72000
74000
76000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

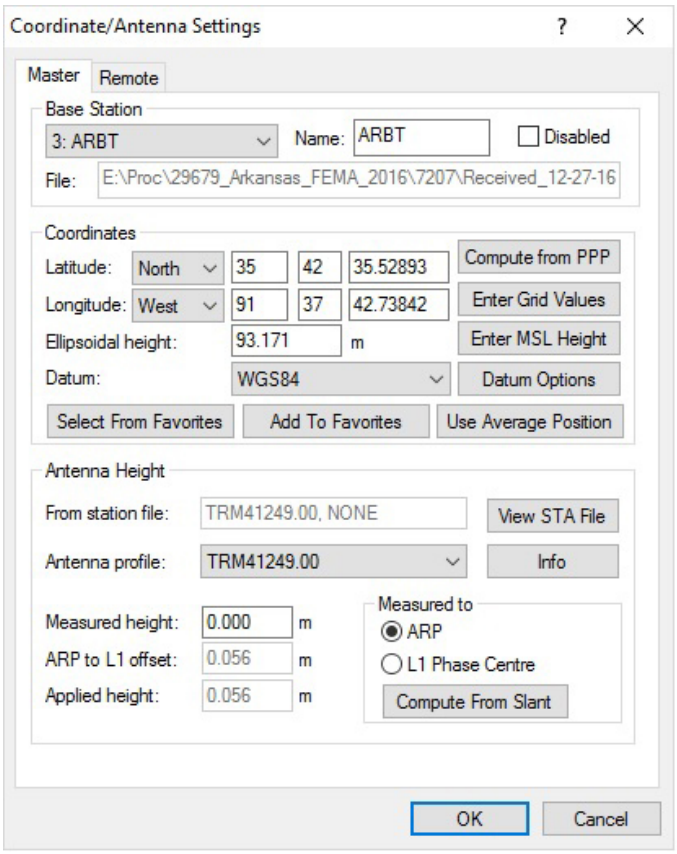

Roll & pitch (deg)
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
54000
Week 1928
56000
58000
60000
62000
64000
66000
68000
70000
72000
74000
76000
GPS Time (TOW, GMT zone)
Roll
Pitch

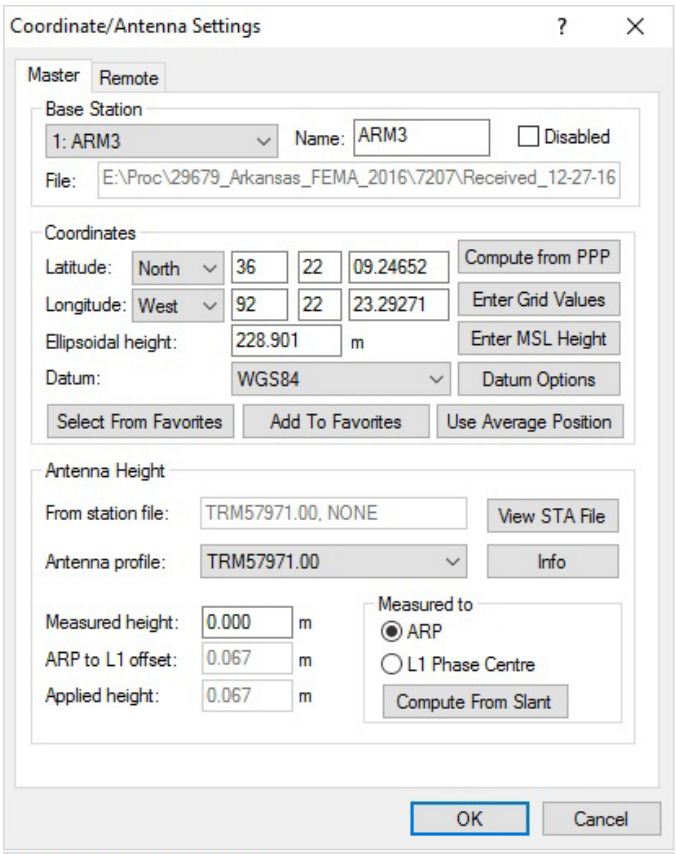

Height (m)
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
54000
Week 1928
56000
58000
60000
62000
64000
66000
68000
70000
72000
74000
76000
GPS Time (TOW, GMT zone)
Height

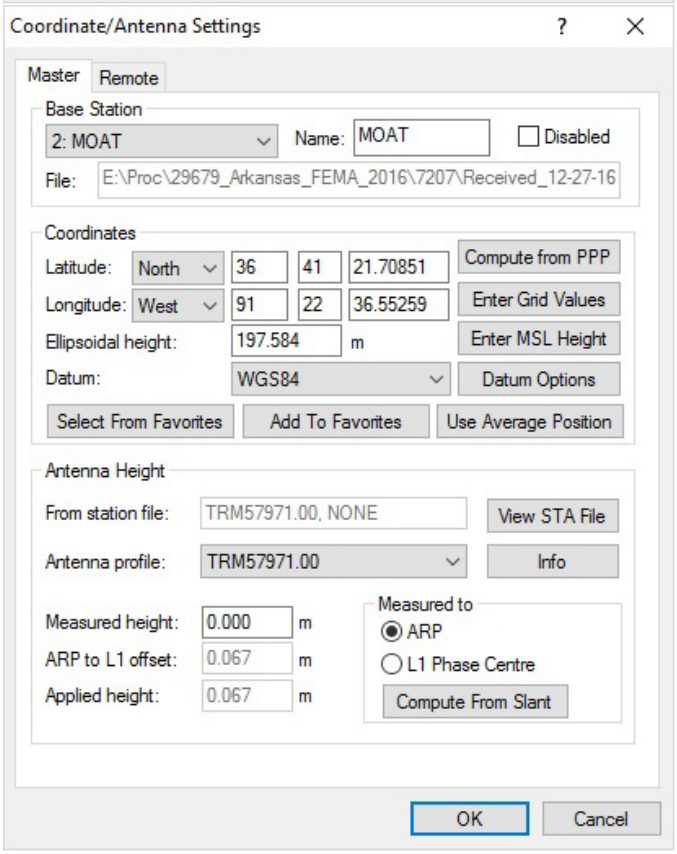

RMS (m)
0.048
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
54000
Week 1928
56000
58000
60000
62000
64000
66000
68000
70000
72000
74000
76000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
-55
-60
-65
-70
-75
-80
-85
-90
-95
-100
-105
54000
Week 1928
56000
58000
60000
62000
64000
66000
68000
70000
72000
74000
76000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
54000
Week 1928
56000
58000
60000
62000
64000
66000
68000
70000
72000
74000
76000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
3: ARBT
Name:
ARBT
Disabled
File:
E:\Proc\29679_Arkansas_FEMA_2016\7207\Received_12-27-16
Coordinates
Latitude:
North
35
42
35.52893
Compute from PPP
Longitude:
West
91
37
42.73842
Enter Grid Values
Ellipsoidal height:
93.171
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM41249.00, NONE
View STA File
Antenna profile:
TRM41249.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.056
m
Applied height:
0.056
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARM3
Name: ARM3
Disabled
File: E:\Proc\29679_Arkansas_FEMA_2016\7207\Received_12-27-16
Coordinates
Latitude: North 36 22 09.24652
Longitude: West 92 22 23.29271
Ellipsoidal height: 228.901 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM57971.00, NONE
Antenna profile: TRM57971.00
View STA File
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: MOAT
Name: MOAT
Disabled
File: E:\Proc\29679_Arkansas_FEMA_2016\7207\Received_12-27-16
Coordinates
Latitude: North 36 41 21.70851
Longitude: West 91 22 36.55259
Ellipsoidal height: 197.584 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM57971.00, NONE
Antenna profile: TRM57971.00
View STA File
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

Julian Day 353	Flight A

LIDAR Flight Log

Date December 18, 2016	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot M. Kalus
Location Hardy, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System **Leica ALS70**	
Unit 7207	
IMU **Honeywell Micro IRS**	
GPS Rx **NovAtel OEMV**	
Roll Comp.	
Data Drive 3	

Additional Notes
Wind:
Temp:
Pressure:
Clouds:
Visibility:

Aircraft Block Time		
Engine On 14:25	Ramp Out	Takeoff 14:40
Engine Off 21:11	Ramp In	Landing 21:01
Total 6.8 **hrs**	Total **hrs**	Total 6.4 **hrs**

Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

Static Alignment	GPS Time	
	Start	End
Pre Mission	14:31	14:36
Post Mission	21:04	21:09

Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 161218_____
IMU		Figure 8	14:49	14:54			IMU Wake Up
013		270	14:58:10		1458		Clouds in the way – changing to N-S lines AOI 2
139		181	15:07:00	15:19:04			
140		001	15:22:40	15:36:00			
141		181	15:39:02	15:51:05			
142		001	15:55:00	16:08:26			
143		181	16:11:26	16:23:34			
144		001	16:27:21	16:40:29			
013		270	16:45:54	17:04:56			Clouds cleared – moved back to AOI 1
014		090	17:08:36	17:27:24			
015		270	17:31:04	17:50:03			
016		090	17:53:08	18:12:00			
017		270	18:18:51	18:37:41			
018		090	18:40:43	18:59:36			
019		270	19:03:07	19:21:53			

Pg 1 of 2

Julian Day 353	Flight A

LIDAR Flight Log

AIRBORNE IMAGING

Date December 18, 2016	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot M. Kalus
Location Hardy, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System	**Leica ALS70**
Unit	7207
IMU	**Honeywell Micro IRS**
GPS Rx	**NovAtel OEMV**
Roll Comp.	
Data Drive	3

Additional Notes
Wind:
Temp:
Pressure:
Clouds:
Visibility:

Aircraft Block Time		
Engine On 14:25	Ramp Out	Takeoff 14:40
Engine Off 21:11	Ramp In	Landing 21:01
Total 6.8 **hrs**	Total **hrs**	Total 6.4 **hrs**

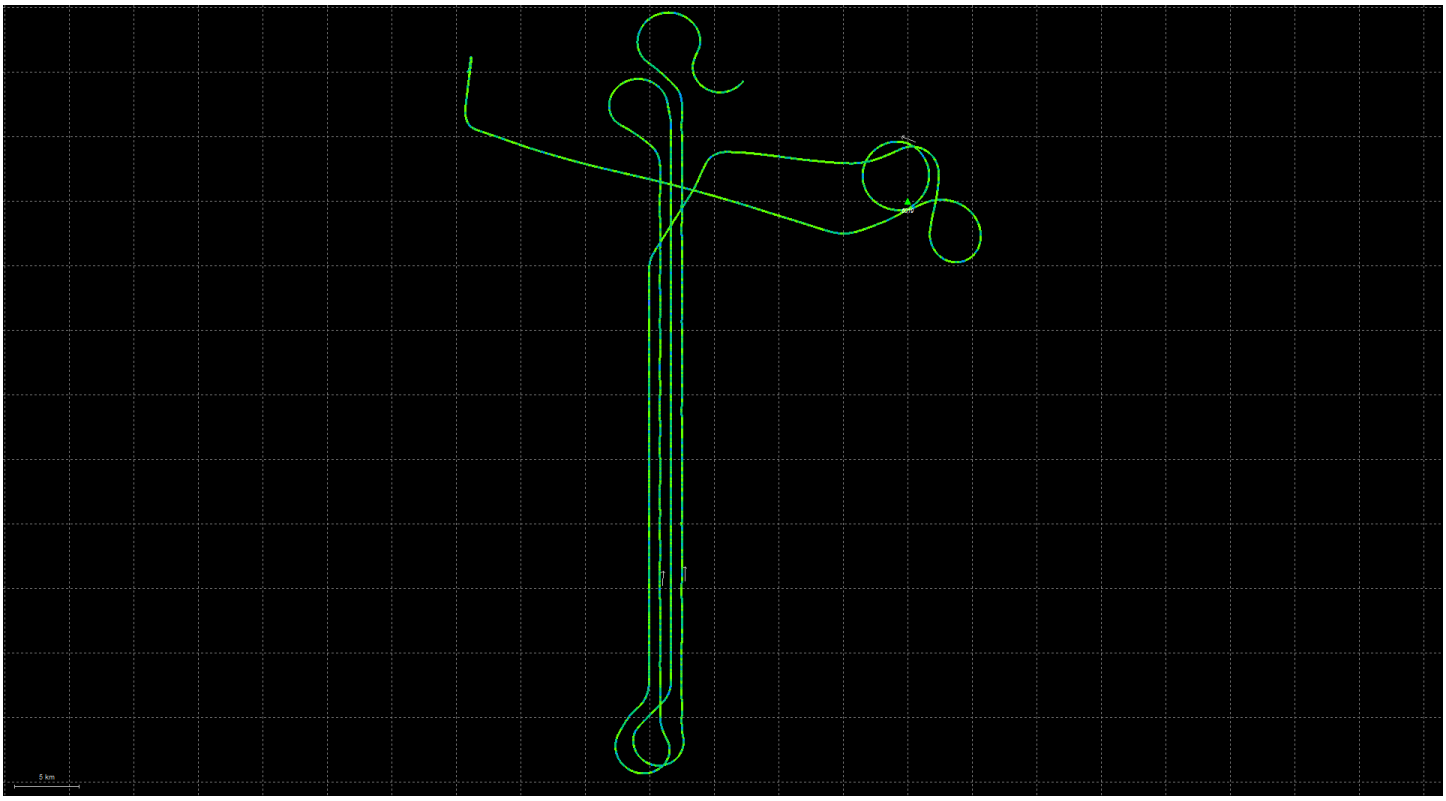
Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

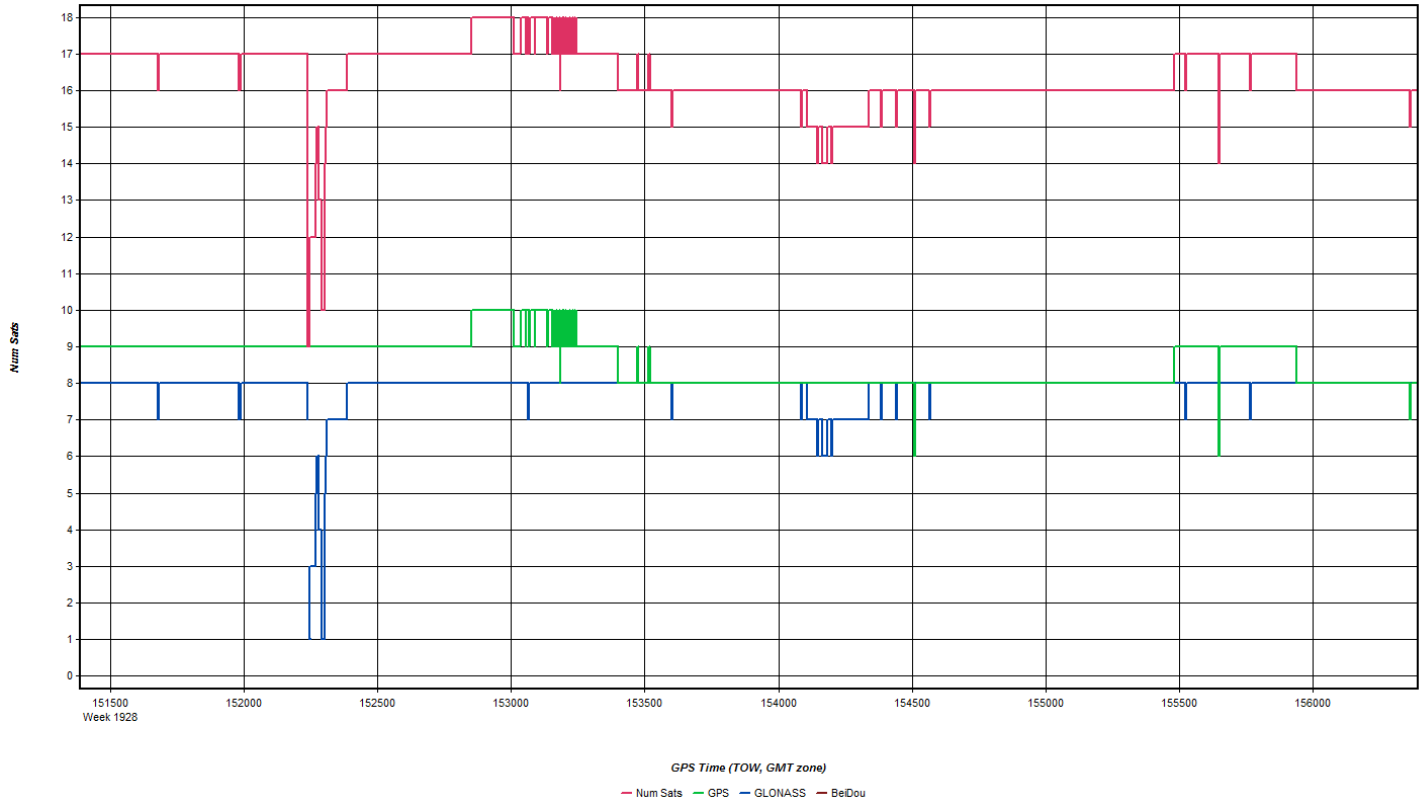
Static Alignment	GPS Time	
	Start	End
Pre Mission	14:31	14:36
Post Mission	21:04	21:09

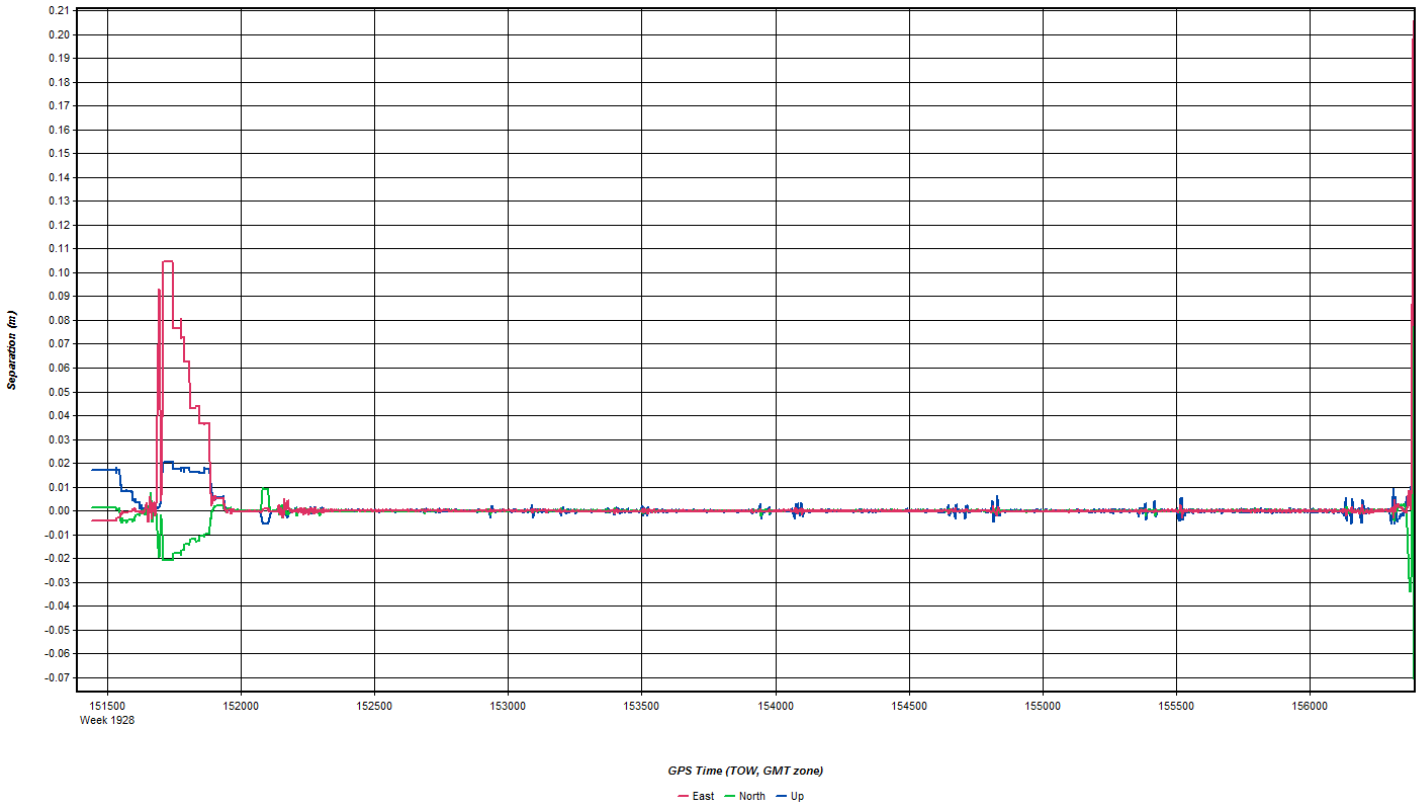
Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 161218_____
020		090	19:25:15	19:43:57			
021		270	19:47:12	20:05:44			
022		090	20:08:59	20:27:53			
Xtie AOI1		180	20:36:28	20:39:32			Cross tie N-->S for AOI 1 lines 013 to 022
Xtie AOI2		090	20:40:52	20:44:19			Cross tie E-->W for AOI 2 lines 139 to 144
IMU		Figure 8	20:44	20:51			

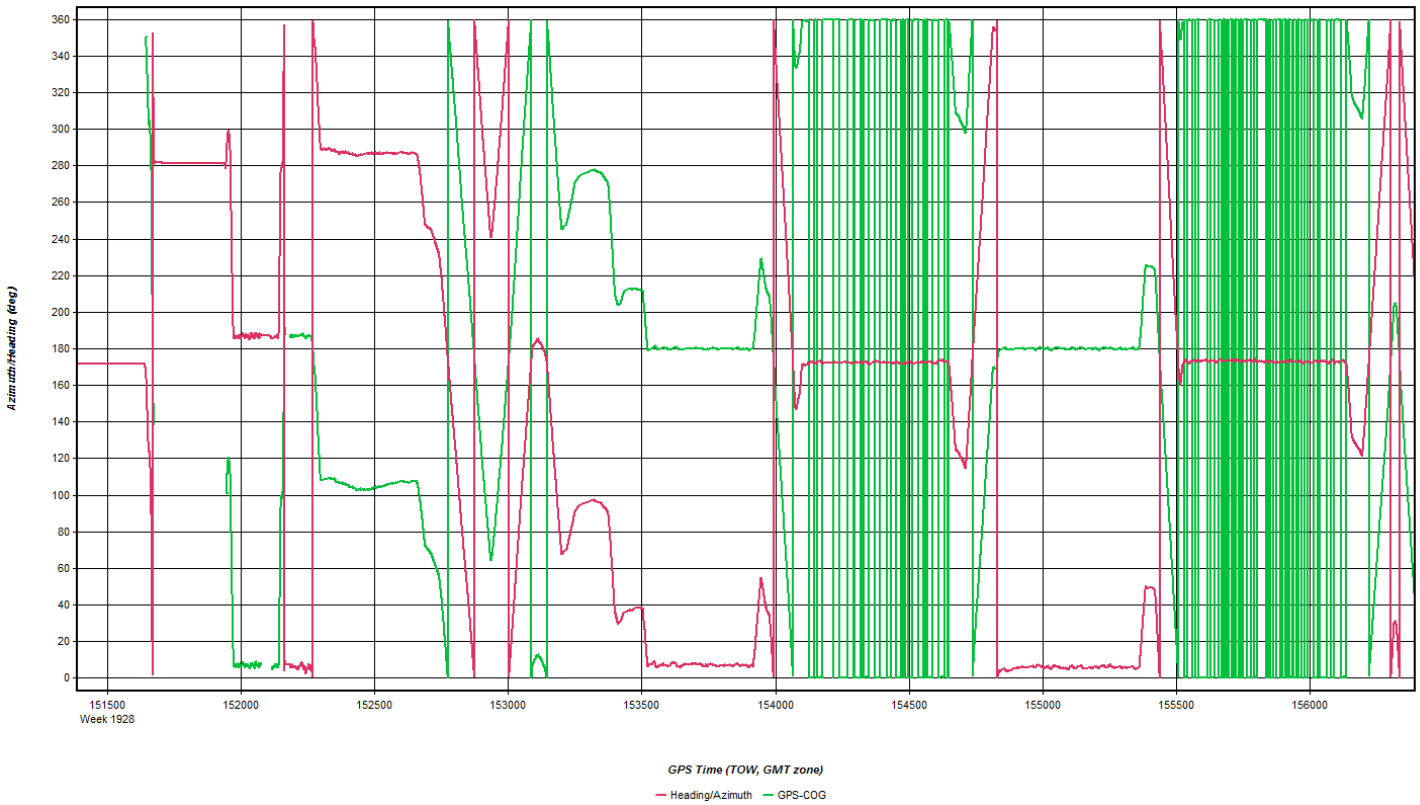
Pg 2 of 2

Dec 19, 2016-A1 (C-FVZM, SN7229)



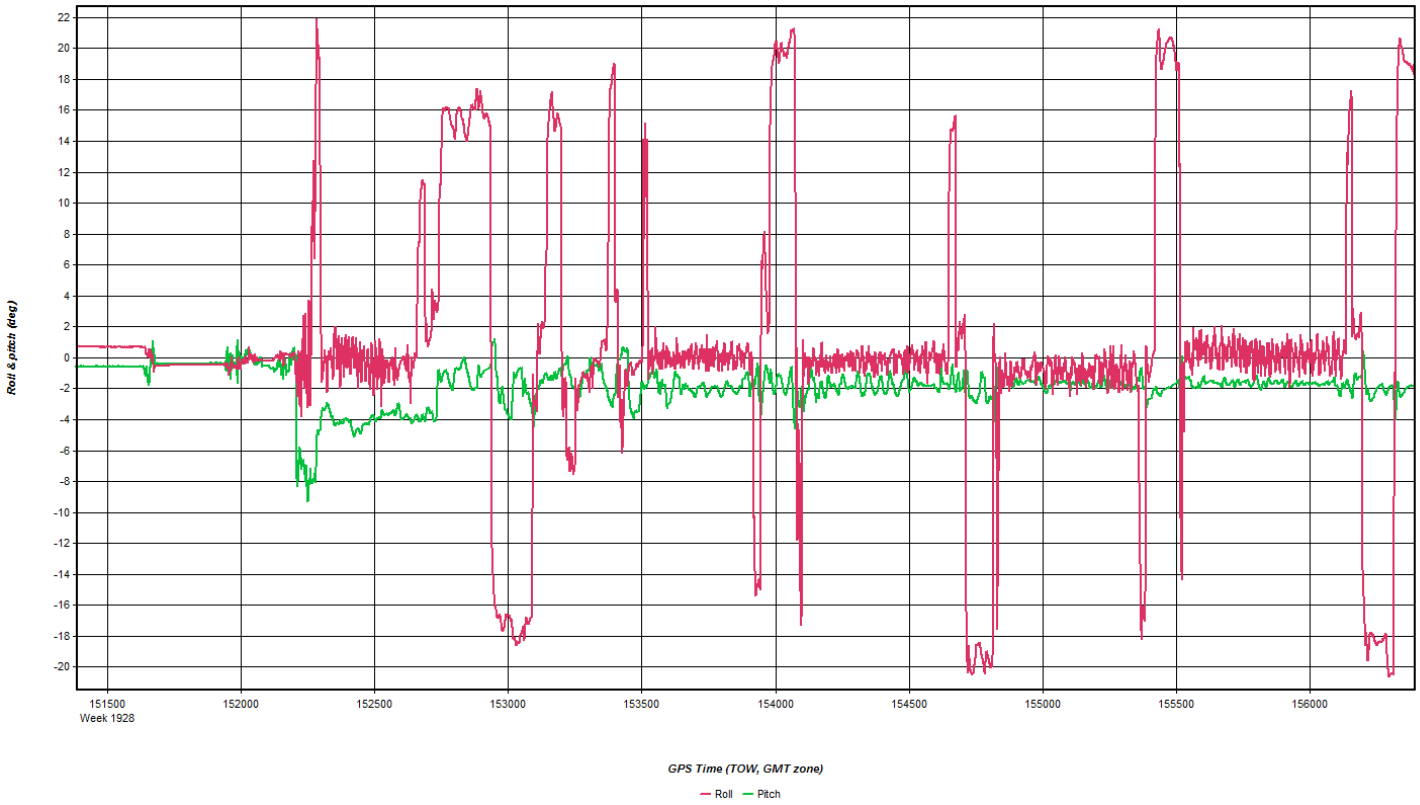

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
151500
Week 1928
152000
152500
153000
153500
154000
154500
155000
155500
156000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

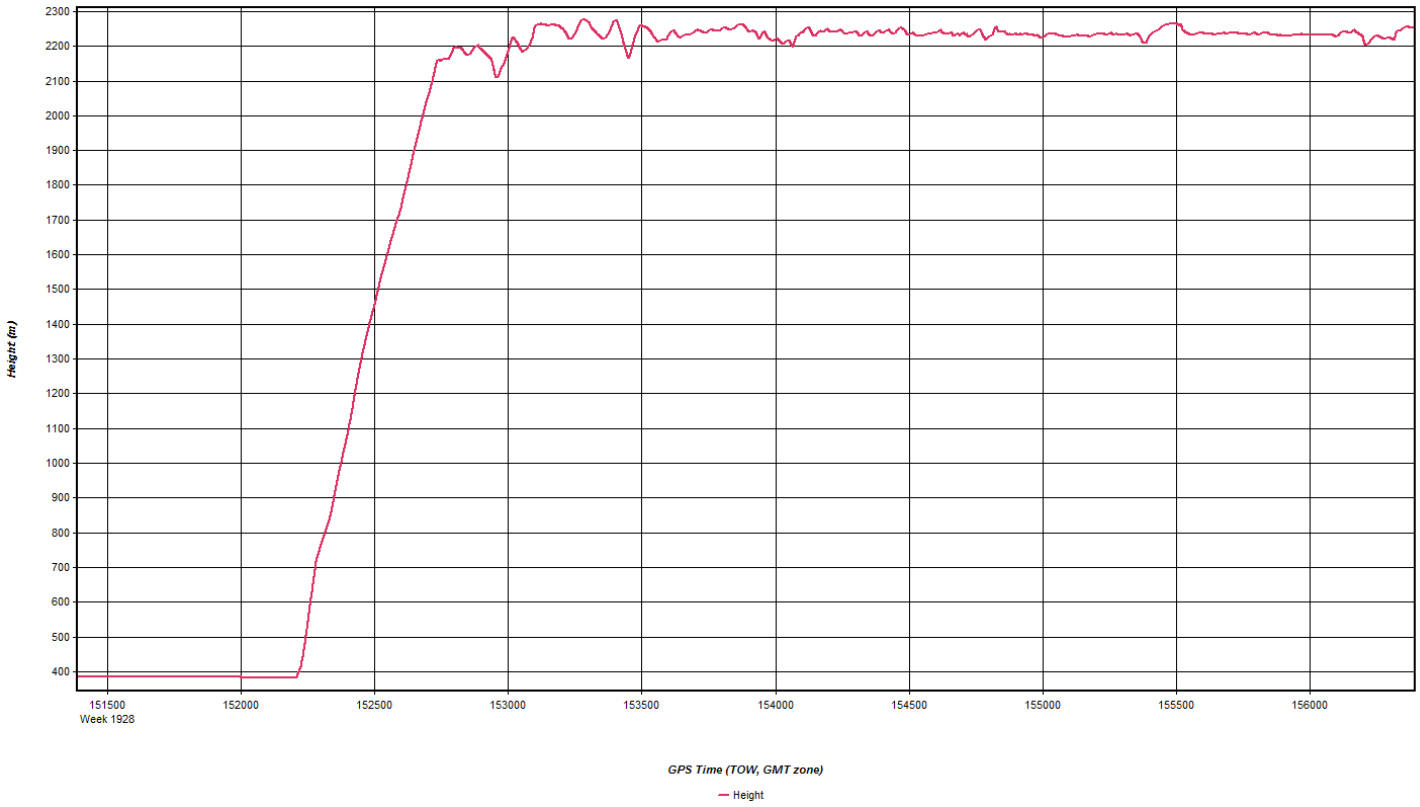

Separation (m)
0.21
0.20
0.19
0.18
0.17
0.16
0.15
0.14
0.13
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
151500
Week 1928
152000
152500
153000
153500
154000
154500
155000
155500
156000
GPS Time (TOW, GMT zone)
East
North
Up


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
151500
Week 1928
152000
152500
153000
153500
154000
154500
155000
155500
156000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

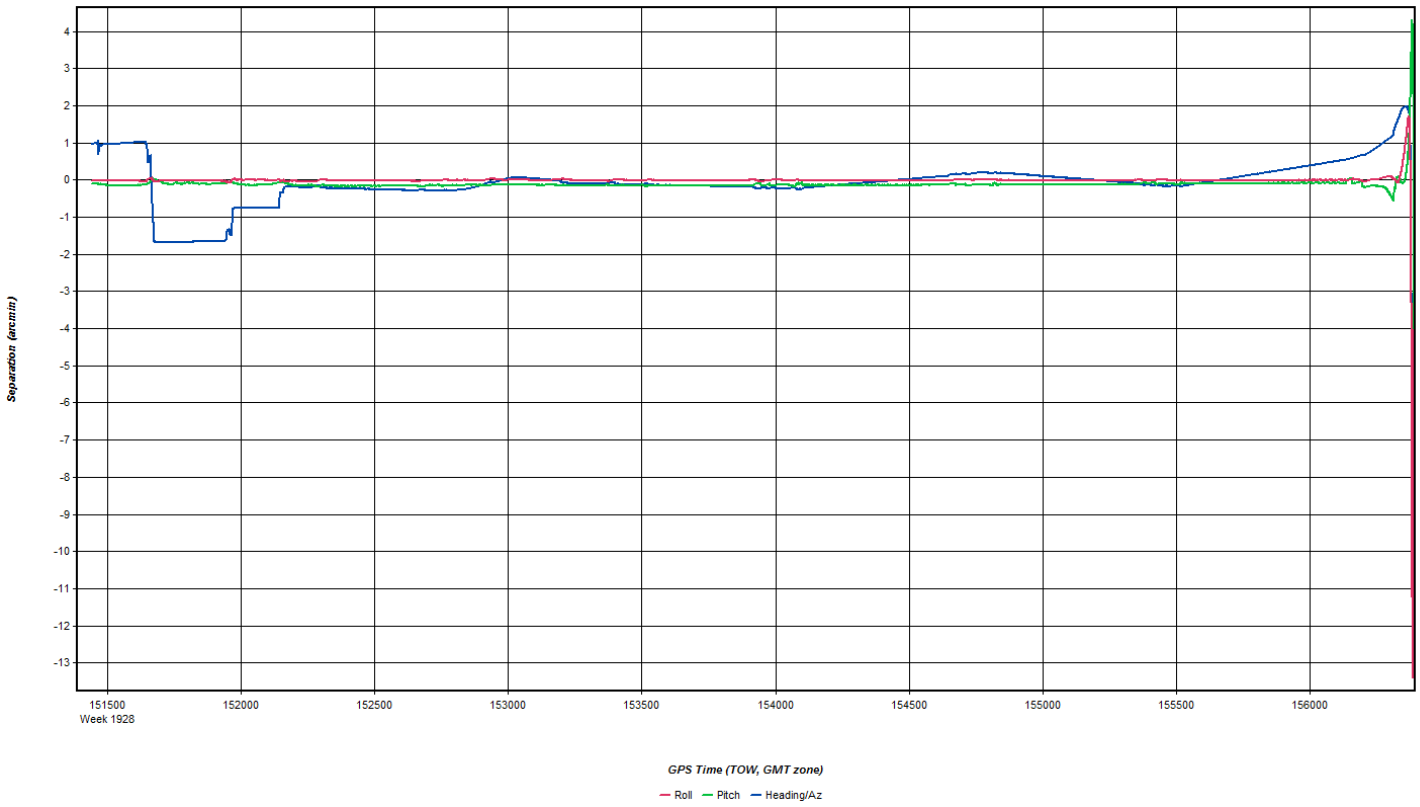

PDOP
1.48
1.46
1.44
1.42
1.40
1.38
1.36
1.34
1.32
1.30
1.28
1.26
1.24
1.22
1.20
1.18
1.16
1.14
1.12
1.10
1.08
1.06
1.04
1.02
1.00
0.98
0.96
0.94
0.92
0.90
0.88
0.86
0.84
0.82
151500
Week 1928
152000
152500
153000
153500
154000
154500
155000
155500
156000
GPS Time (TOW, GMT zone)
PDOP

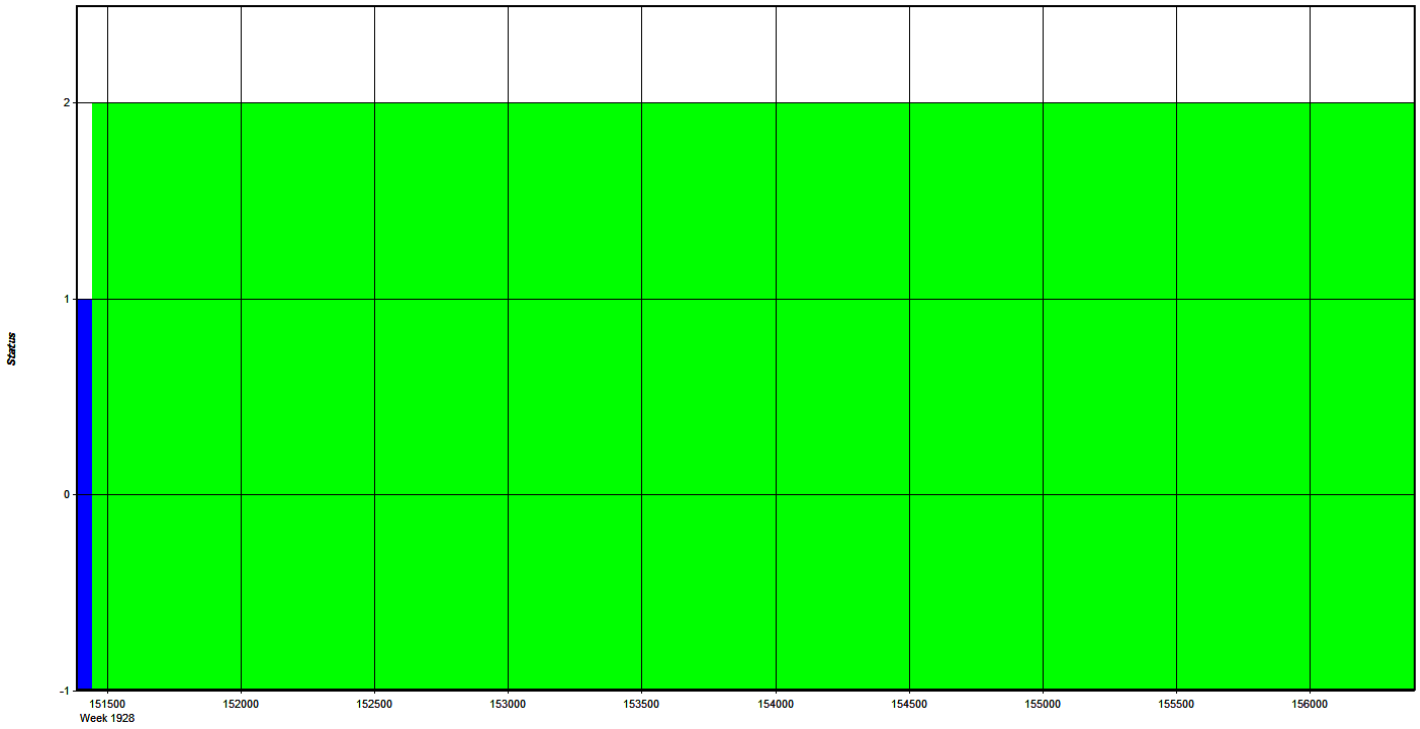

Estimated StdDev (m)
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
151500
Week 1928
152000
152500
153000
153500
154000
154500
155000
155500
156000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

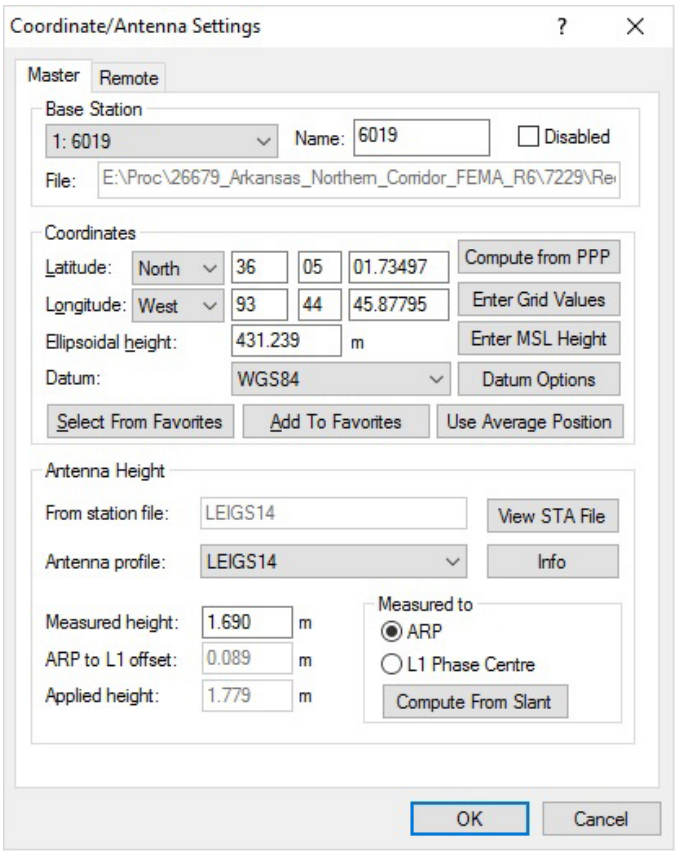

Roll & pitch (deg)
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
151500
Week 1928
152000
152500
153000
153500
154000
154500
155000
155500
156000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
151500
Week 1928
152000
152500
153000
153500
154000
154500
155000
155500
156000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
151500
Week 1928
152000
152500
153000
153500
154000
154500
155000
155500
156000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
4
3
2
1
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-12
-13
151500
Week 1928
152000
152500
153000
153500
154000
154500
155000
155500
156000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
151500
Week 1928
152000
152500
153000
153500
154000
154500
155000
155500
156000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: 6019
Name: 6019
Disabled
File: E:\Proc\26679_Arkansas_Northern_Corridor_FEMA_R6\7229\Re
Coordinates
Latitude: North 36 05 01.73497
Longitude: West 93 44 45.87795
Ellipsoidal height: 431.239 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: LEIGS14
View STA File
Antenna profile: LEIGS14
Info
Measured height: 1.690 m
ARP to L1 offset: 0.089 m
Applied height: 1.779 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

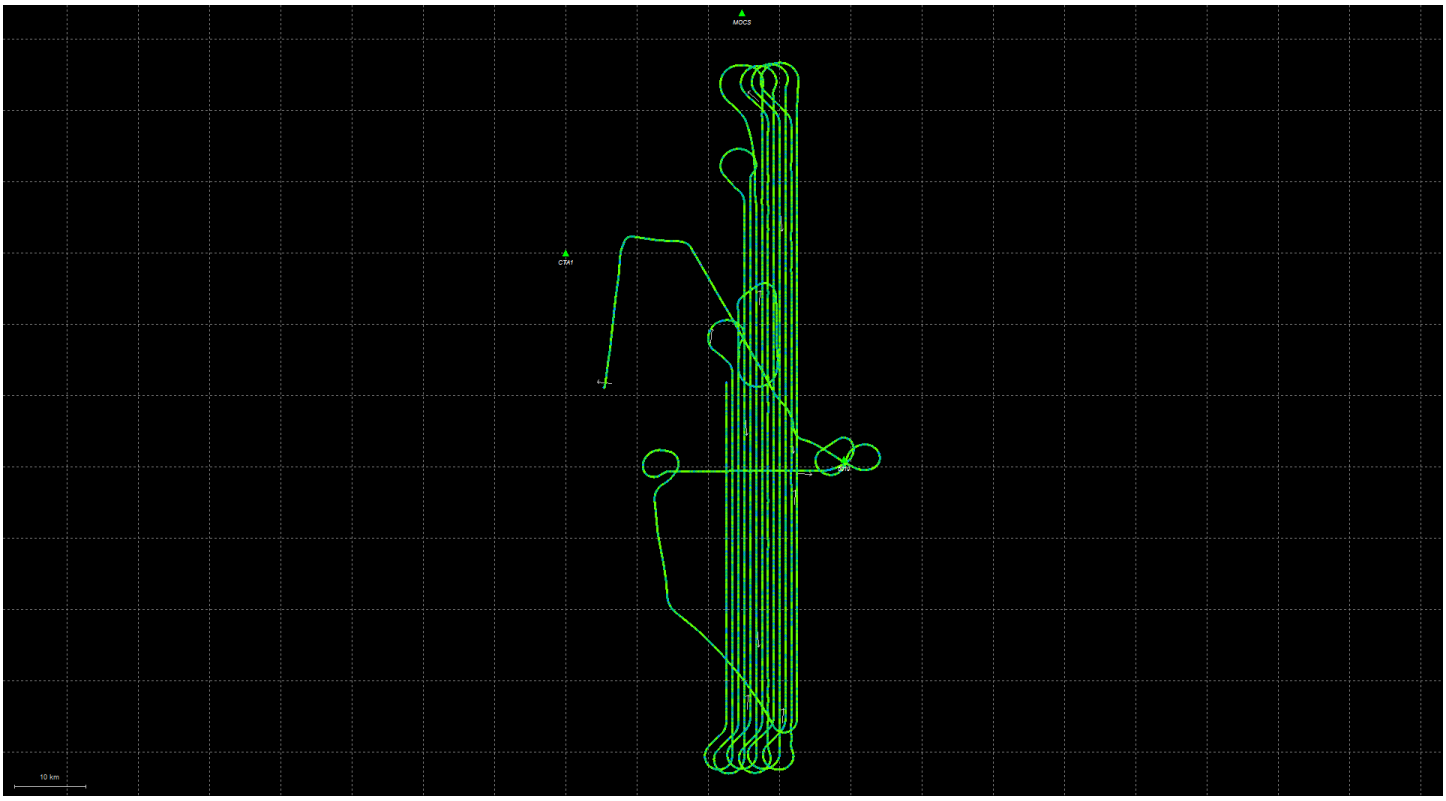
PROJECT NAME	Q.S. Arkansas	DATE	19/12/2016
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Bob Harrity	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Springdale AR	DATA DRIVES	LiDar #1

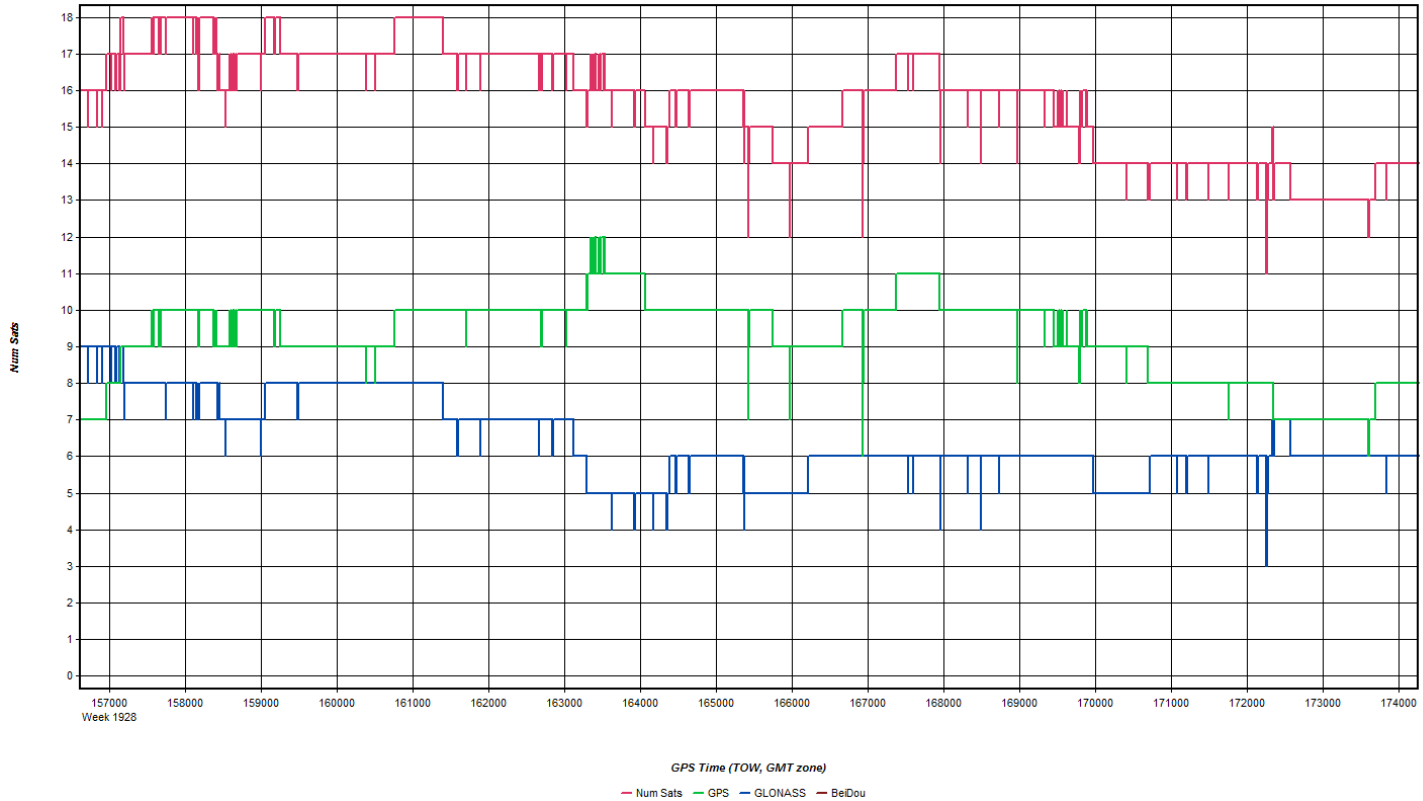
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	17:47:00	Takeoff:	18:14:00	AGL Height:	1800 m	Pulse Rate:	277 KHz		START	END
Engine Off:	00:29:00	Landing:	00:20:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	18:24:00	18:32:00
TOTAL:	6.7 hrs	TOTAL:	6.1 hrs	Laser Power:	100%	FOV:	40 o	Post Mission	23:56:00	00:05:00

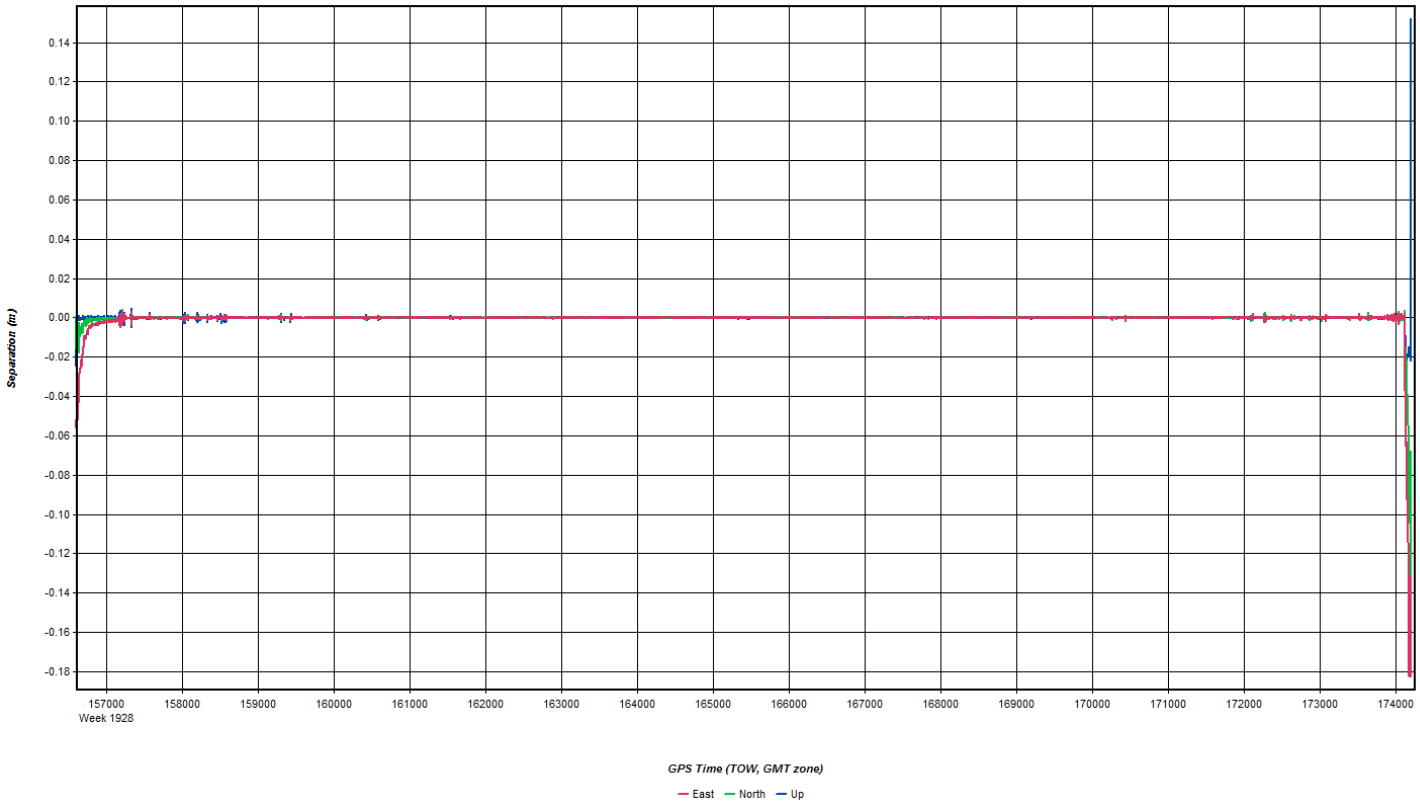
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
1		South	161219_184019	18:40:21	18:44:57	Complete line
2		North	161219_184840	18:48:41	18:57:08	Complete line
3		South	161219_190026	19:00:27	19:09:00	Complete line
4		North	161219_191229	19:12:31	19:21:57	Complete line
5		South	161219_192952	19:29:53	19:39:29	IMU gap on turn into line
6		North	161219_194300	19:43:00	19:53:24	Complete line
7		South	161219_200403	20:04:02	20:14:23	Complete line
8		North	161219_201805	20:18:05	20:33:09	Complete line
9		South	161219_203707	20:37:07	20:51:38	Complete line
10		North	161219_205520	20:55:21	21:10:20	Complete line
11		South	161219_211639	21:16:40	21:33:29	Complete line
12		North	161219_213725	21:37:26	21:54:13	Complete line
13		South	161219_215829	21:58:30	21:15:15	Complete line
14		North	161219_221901	22:19:03	22:35:44	Complete line
15		South	161219_224005	22:40:04	22:56:51	Complete line
16		North	161219_230033	23:00:34	23:17:16	Complete line
17		South	161219_232141	23:21:42	23:38:26	Complete line
CL		East	161219_235141	23:51:42	23:55:02	Complete line

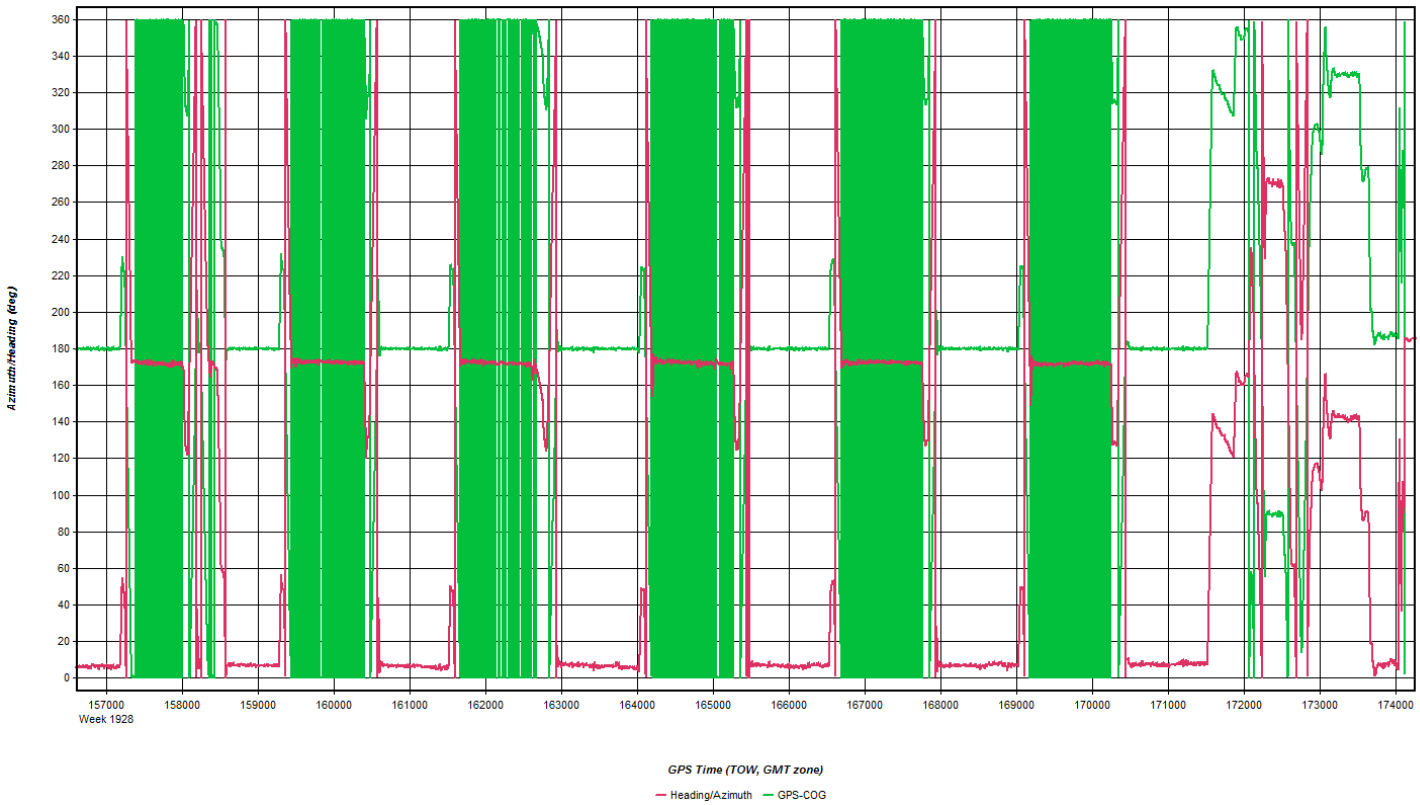
SUN ANGLE	ADDTIONAL NOTES: At the start Sats. 18, PDop 1.2. Mid flight Sats. 18 PDops 1.2. End of flight sats. 17 PDops 1.1.
@Start:	Clear skies and 20knot winds from the NW. Temp. overnight was -14C and at take off it was -2C.
@End:	AGL height ranged from 1540m to 1880m
@Peak:	Four restarts for system to initialize

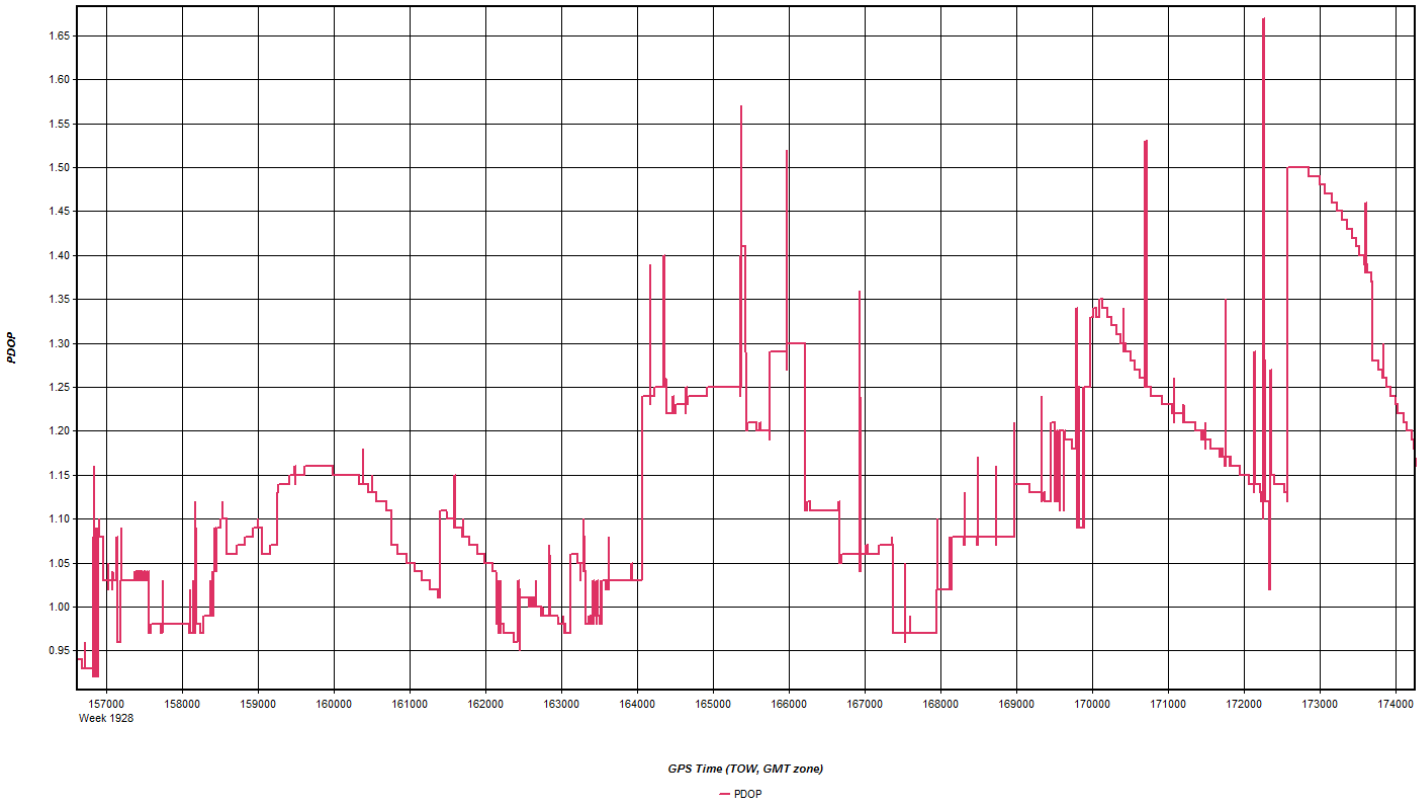
Dec 19, 2016-A2 (C-FVZM, SN7229)

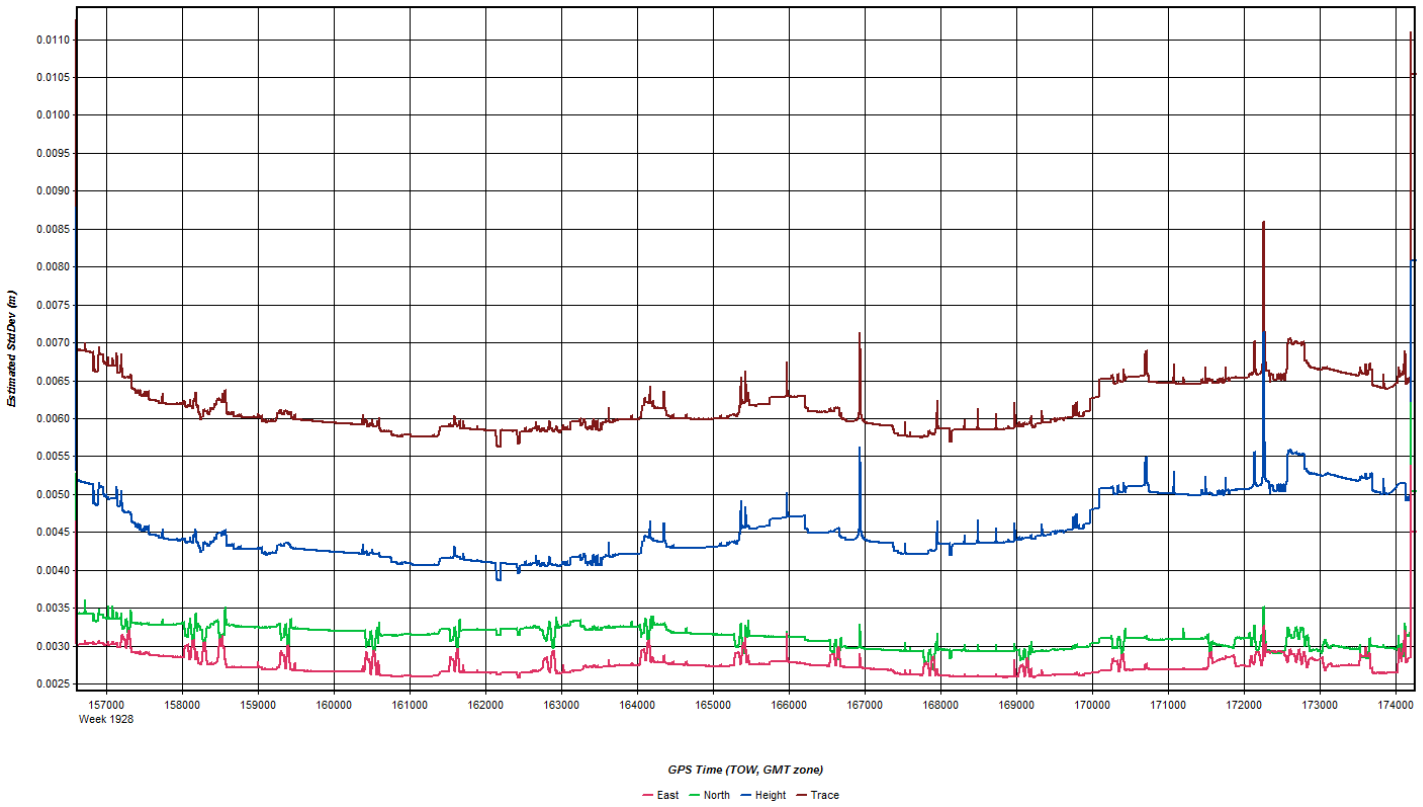

MOCS
CTAT
10 km

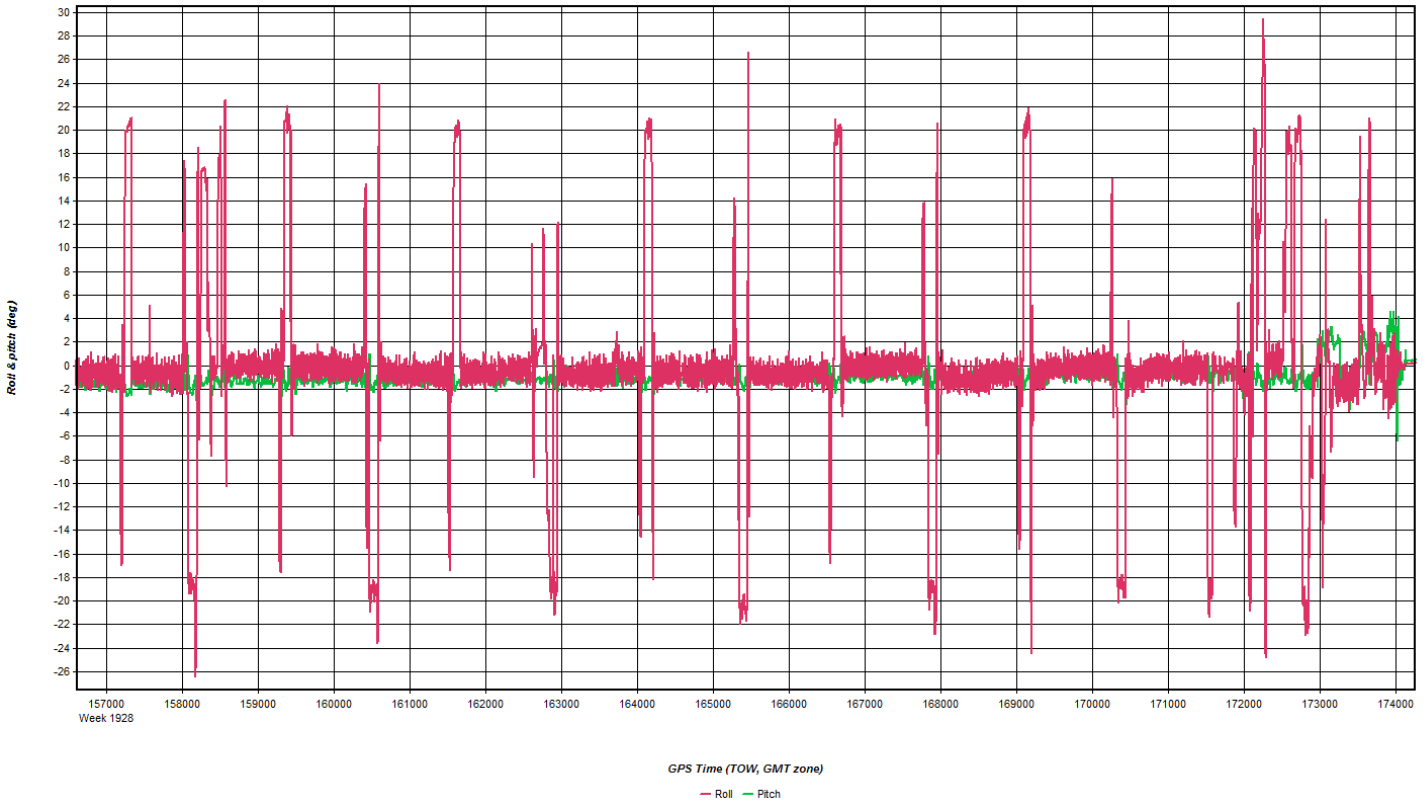

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
157000
Week 1928
158000
159000
160000
161000
162000
163000
164000
165000
166000
167000
168000
169000
170000
171000
172000
173000
174000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

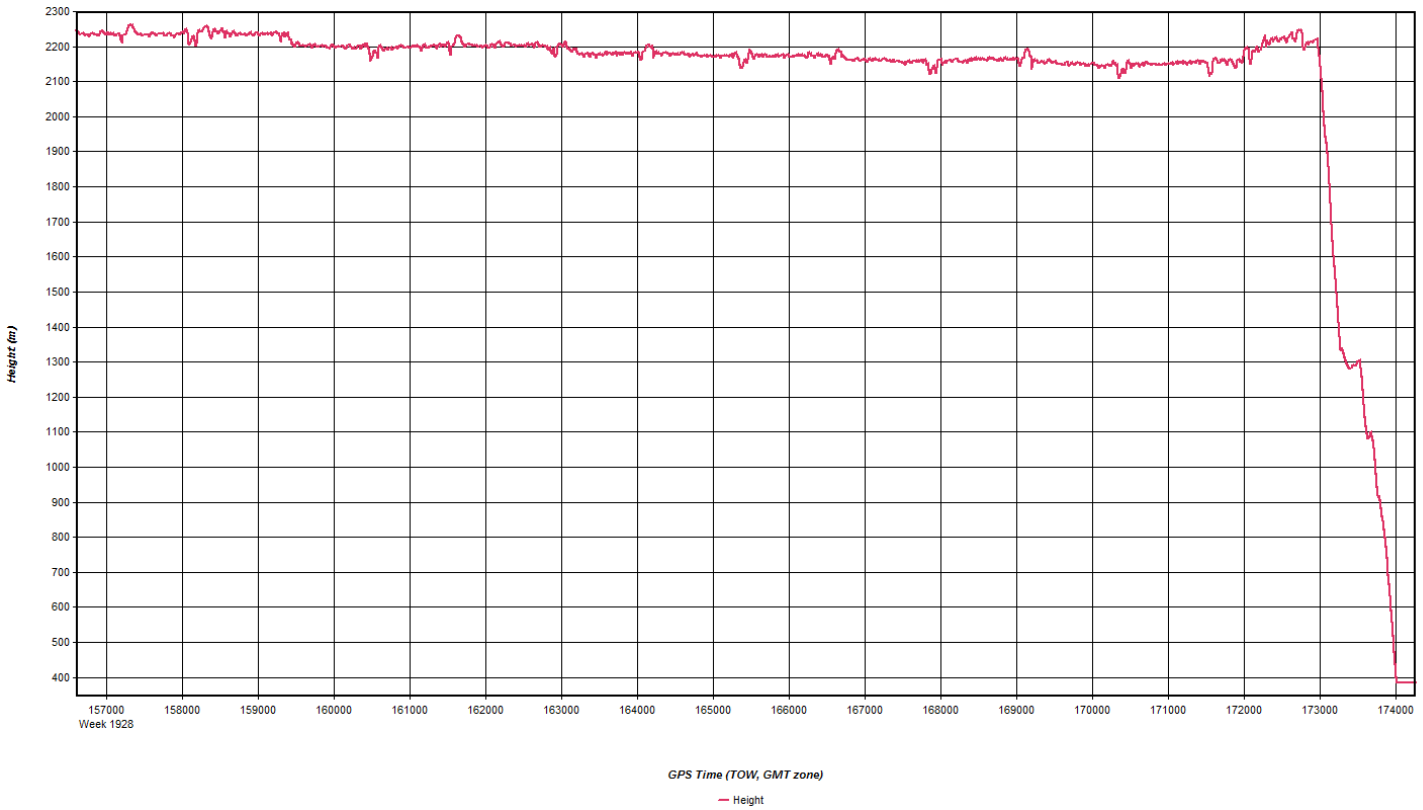

Separation (m)
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
-0.16
-0.18
157000
Week 1928
158000
159000
160000
161000
162000
163000
164000
165000
166000
167000
168000
169000
170000
171000
172000
173000
174000
GPS Time (TOW, GMT zone)
East
North
Up

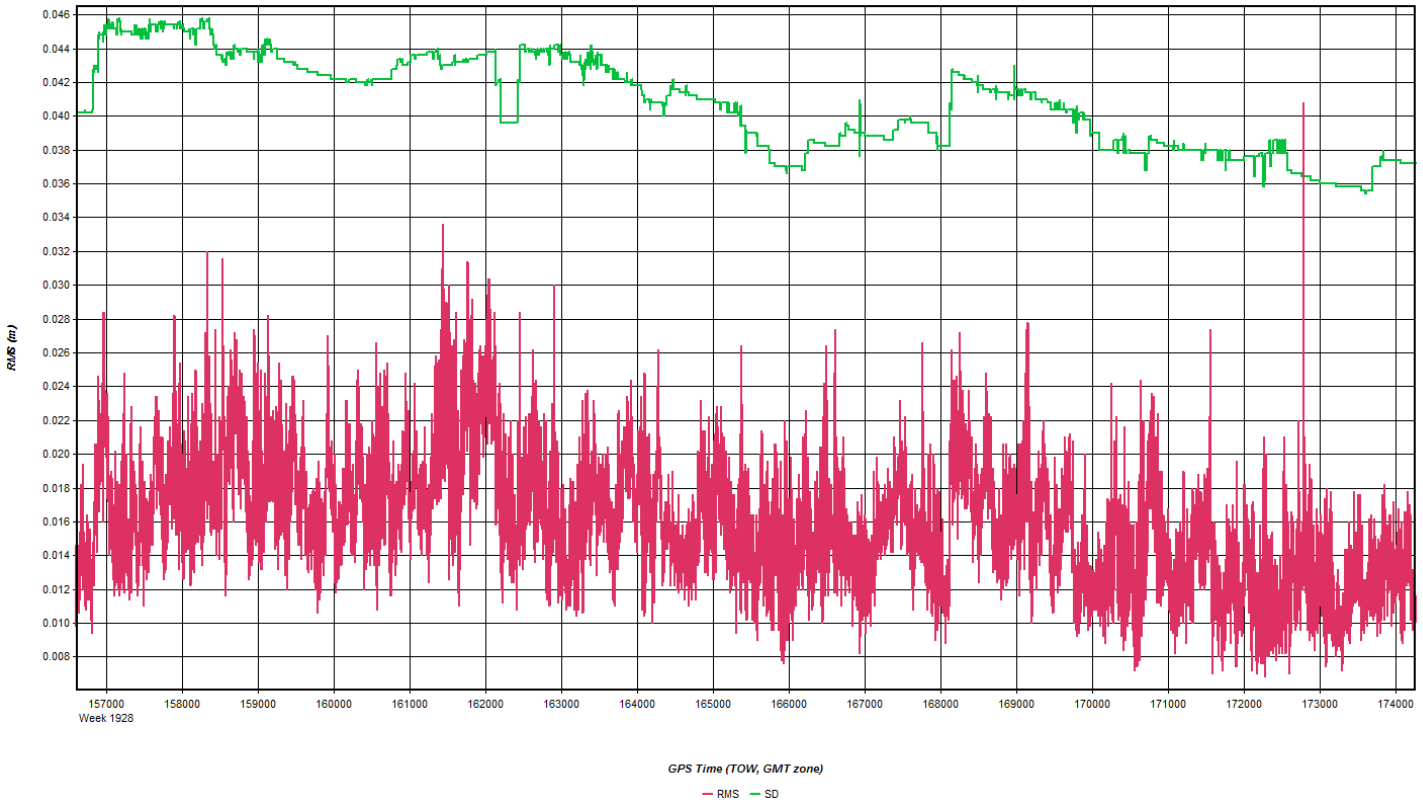

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
157000
Week 1928
158000
159000
160000
161000
162000
163000
164000
165000
166000
167000
168000
169000
170000
171000
172000
173000
174000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

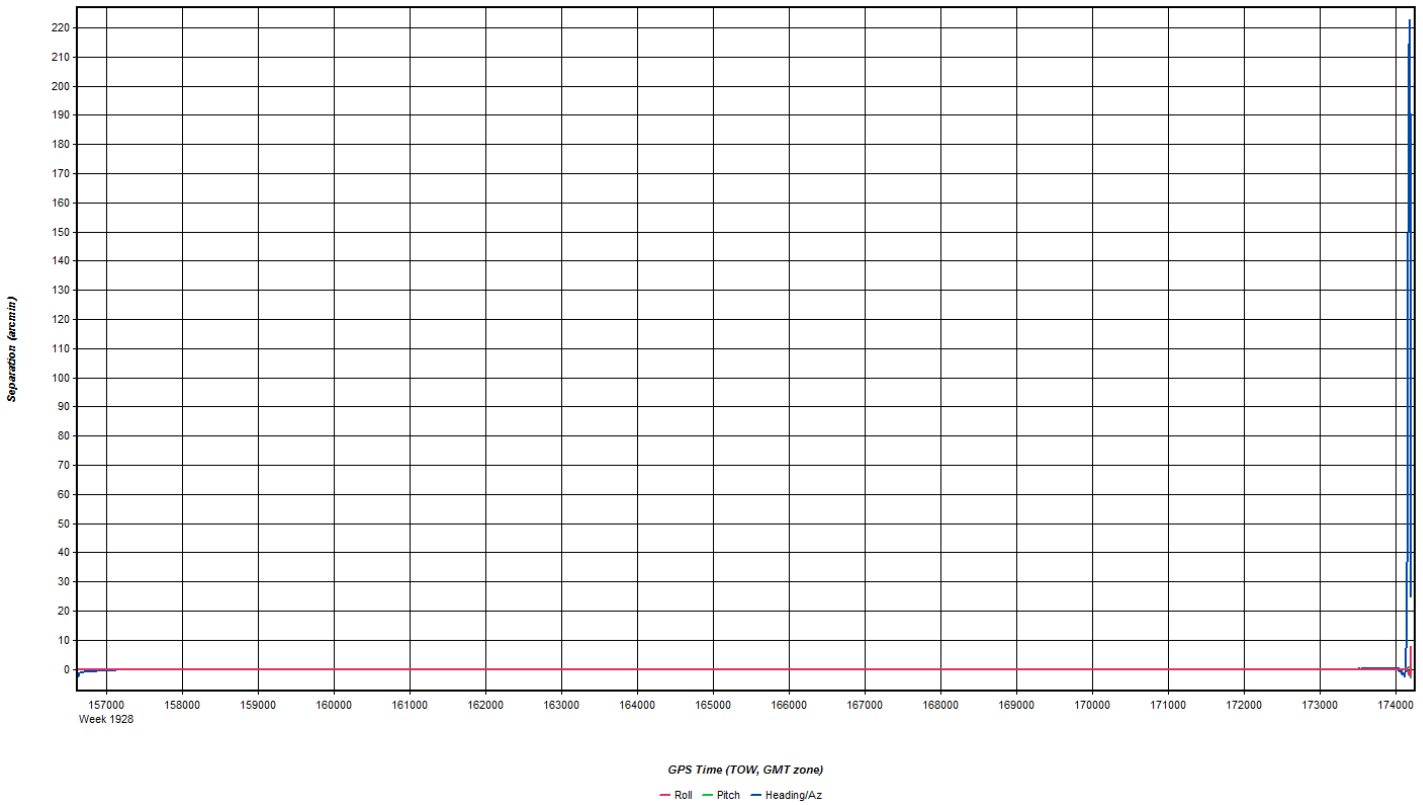

PDOP
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
157000
Week 1928
158000
159000
160000
161000
162000
163000
164000
165000
166000
167000
168000
169000
170000
171000
172000
173000
174000
GPS Time (TOW, GMT zone)
PDOP

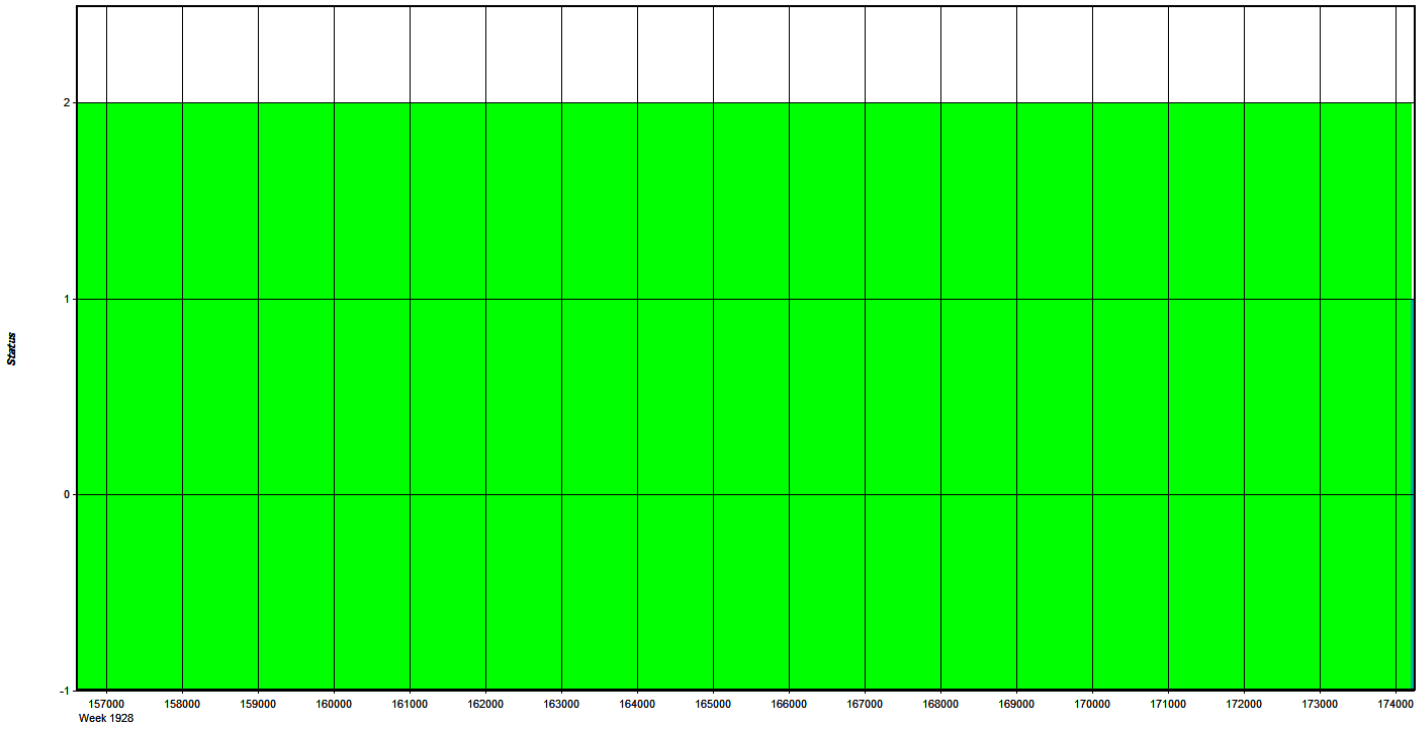

Estimated StdDev (m)
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
157000
Week 1928
158000
159000
160000
161000
162000
163000
164000
165000
166000
167000
168000
169000
170000
171000
172000
173000
174000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

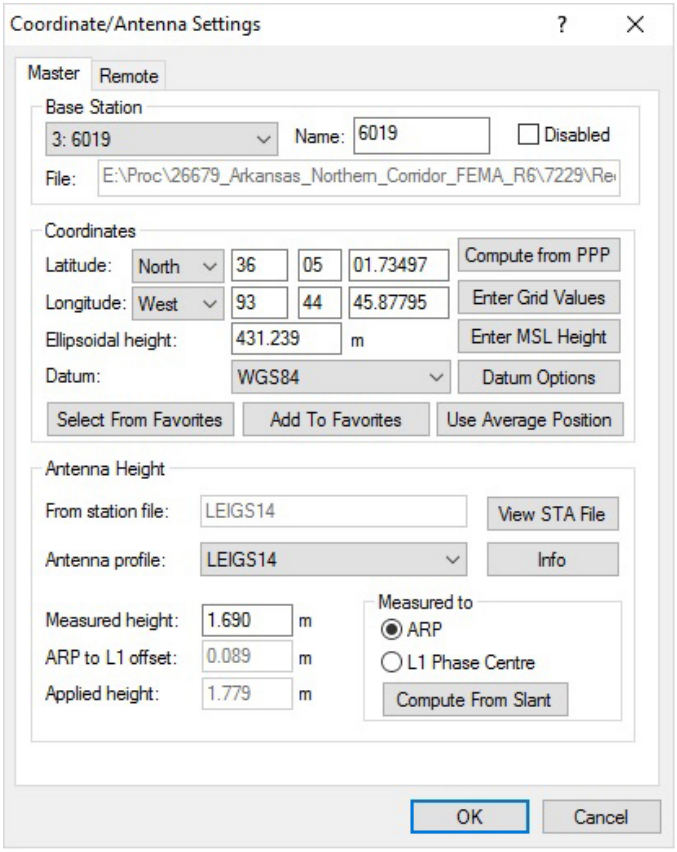

Roll & pitch (deg)
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
157000
Week 1928
158000
159000
160000
161000
162000
163000
164000
165000
166000
167000
168000
169000
170000
171000
172000
173000
174000
GPS Time (TOW, GMT zone)
Roll
Pitch

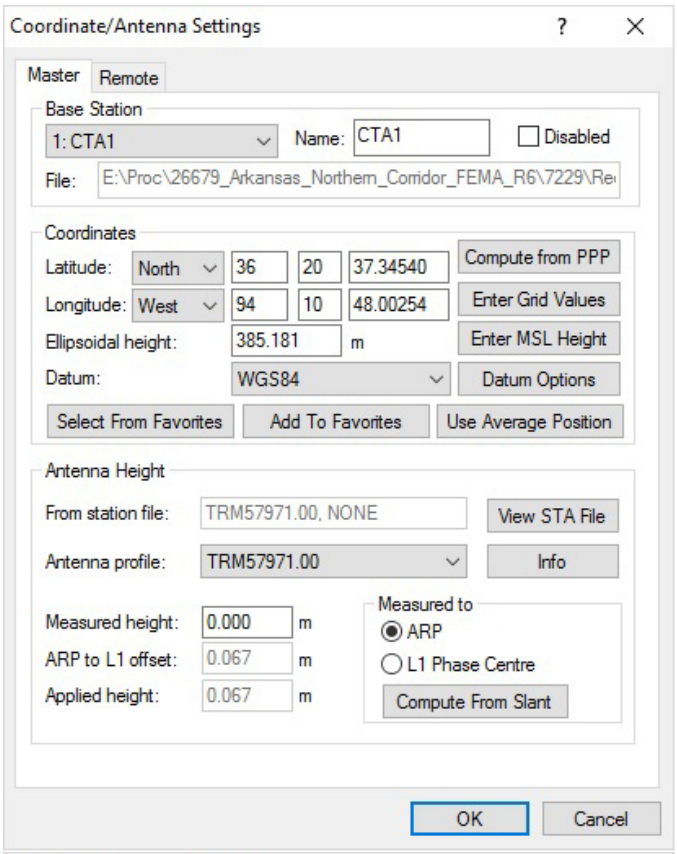

Height (m)
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
157000
Week 1928
158000
159000
160000
161000
162000
163000
164000
165000
166000
167000
168000
169000
170000
171000
172000
173000
174000
GPS Time (TOW, GMT zone)
Height

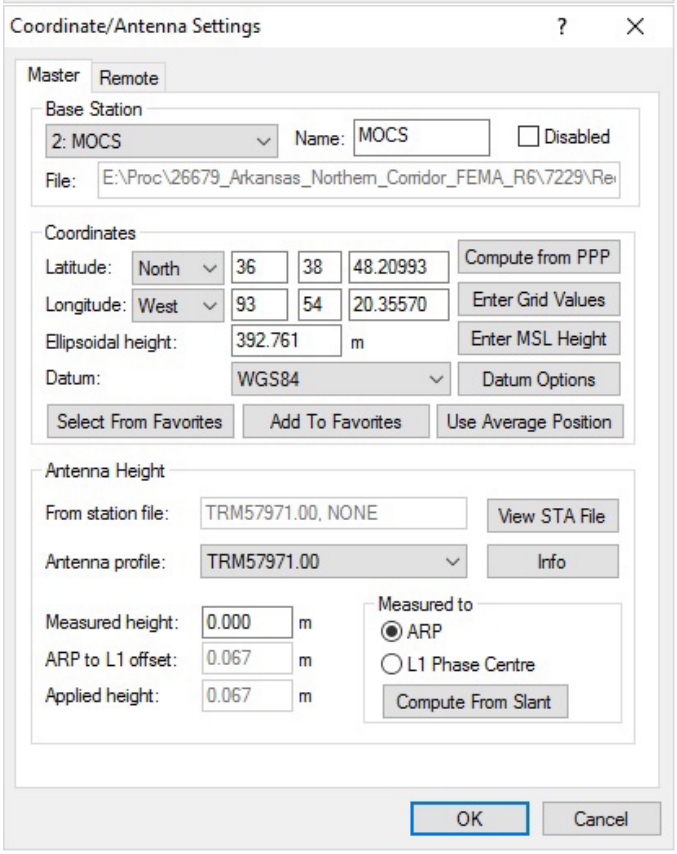

RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
157000
Week 1928
158000
159000
160000
161000
162000
163000
164000
165000
166000
167000
168000
169000
170000
171000
172000
173000
174000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
157000
Week 1928
158000
159000
160000
161000
162000
163000
164000
165000
166000
167000
168000
169000
170000
171000
172000
173000
174000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
157000
Week 1928
158000
159000
160000
161000
162000
163000
164000
165000
166000
167000
168000
169000
170000
171000
172000
173000
174000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
3: 6019
Name: 6019
Disabled
File: E:\Proc\26679_Arkansas_Northern_Corridor_FEMA_R6\7229\Re
Coordinates
Latitude: North 36 05 01.73497
Longitude: West 93 44 45.87795
Ellipsoidal height: 431.239 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: LEIGS14
View STA File
Antenna profile: LEIGS14
Info
Measured height: 1.690 m
ARP to L1 offset: 0.089 m
Applied height: 1.779 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: CTA1
Name: CTA1
Disabled
File: E:\Proc\26679_Arkansas_Northern_Corridor_FEMA_R6\7229\Re
Coordinates
Latitude: North 36 20 37.34540
Longitude: West 94 10 48.00254
Ellipsoidal height: 385.181 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM57971.00, NONE
Antenna profile: TRM57971.00
View STA File
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: MOCS
Name: MOCS
Disabled
File: E:\Proc\26679_Arkansas_Northern_Corridor_FEMA_R6\7229\Re
Coordinates
Latitude: North 36 38 48.20993
Longitude: West 93 54 20.35570
Ellipsoidal height: 392.761 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM57971.00, NONE
Antenna profile: TRM57971.00
View STA File
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 & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

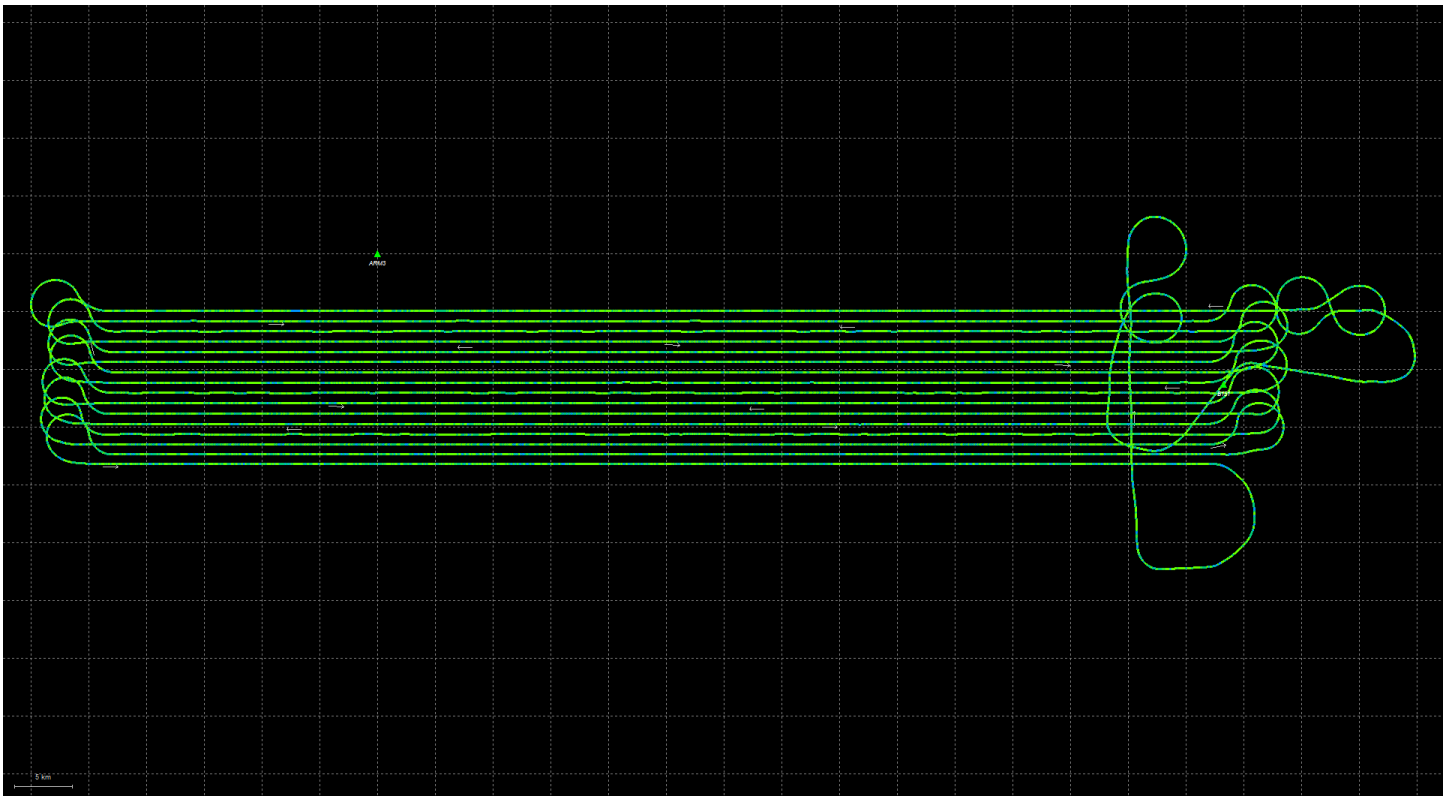
PROJECT NAME	Q.S. Arkansas	DATE	19/12/2016
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Bob Harrity	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Springdale AR	DATA DRIVES	LiDar #1

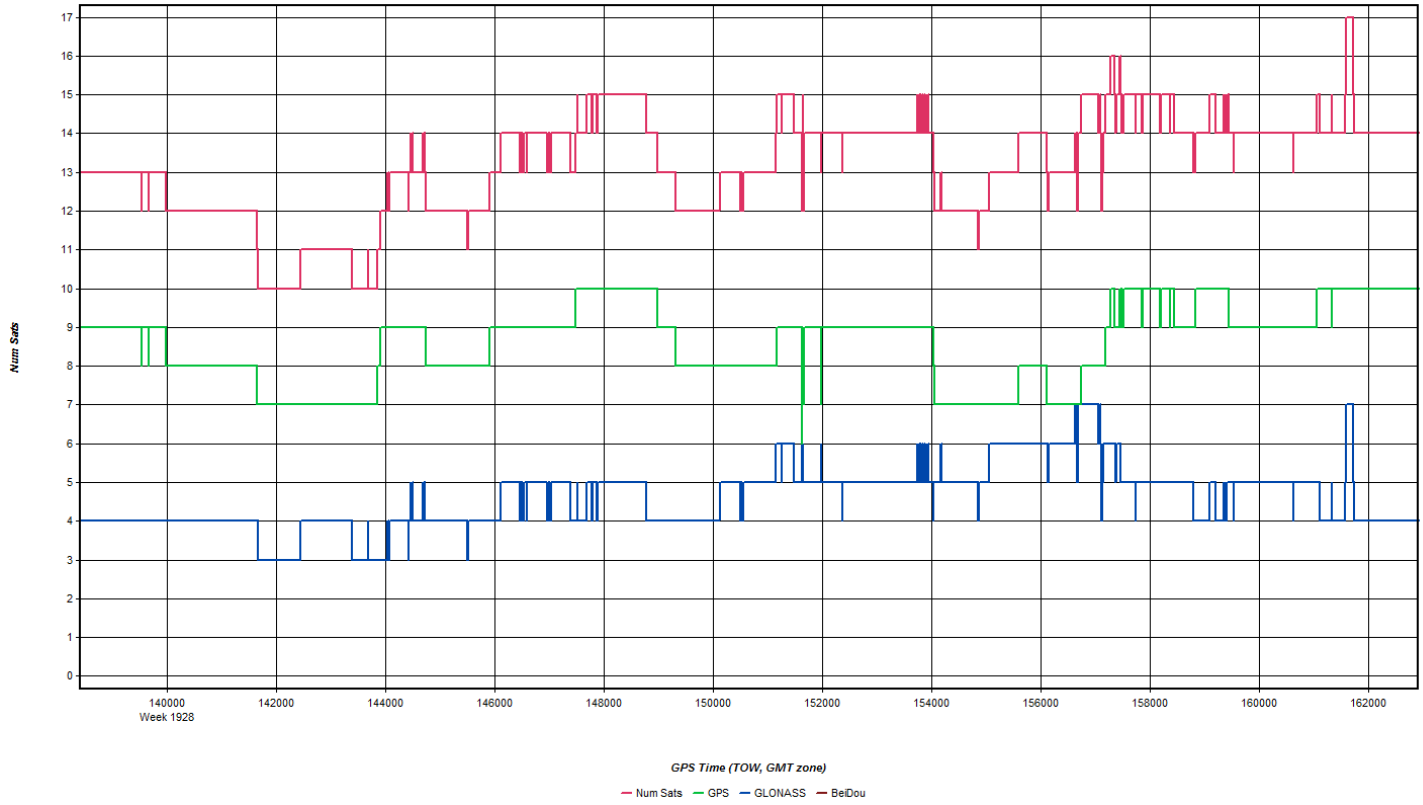
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	17:47:00	Takeoff:	18:14:00	AGL Height:	1800 m	Pulse Rate:	277 KHz		START	END
Engine Off:	00:29:00	Landing:	00:20:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	18:24:00	18:32:00
TOTAL:	6.7 hrs	TOTAL:	6.1 hrs	Laser Power:	100%	FOV:	40 °	Post Mission	23:56:00	00:05:00

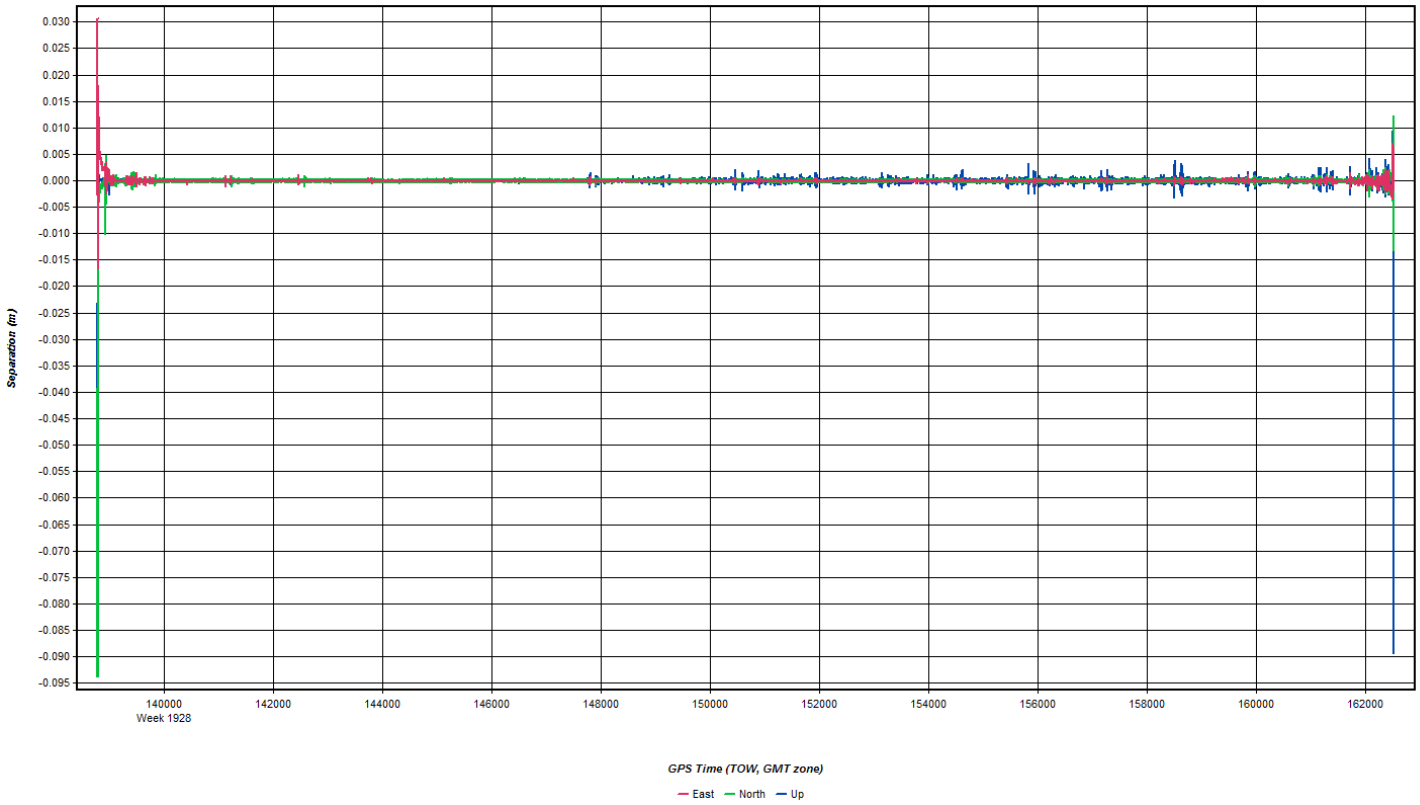
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
1		South	161219_184019	18:40:21	18:44:57	Complete line
2		North	161219_184840	18:48:41	18:57:08	Complete line
3		South	161219_190026	19:00:27	19:09:00	Complete line
4		North	161219_191229	19:12:31	19:21:57	Complete line
5		South	161219_192952	19:29:53	19:39:29	IMU gap on turn into line
6		North	161219_194300	19:43:00	19:53:24	Complete line
7		South	161219_200403	20:04:02	20:14:23	Complete line
8		North	161219_201805	20:18:05	20:33:09	Complete line
9		South	161219_203707	20:37:07	20:51:38	Complete line
10		North	161219_205520	20:55:21	21:10:20	Complete line
11		South	161219_211639	21:16:40	21:33:29	Complete line
12		North	161219_213725	21:37:26	21:54:13	Complete line
13		South	161219_215829	21:58:30	21:15:15	Complete line
14		North	161219_221901	22:19:03	22:35:44	Complete line
15		South	161219_224005	22:40:04	22:56:51	Complete line
16		North	161219_230033	23:00:34	23:17:16	Complete line
17		South	161219_232141	23:21:42	23:38:26	Complete line
CL		East	161219_235141	23:51:42	23:55:02	Complete line

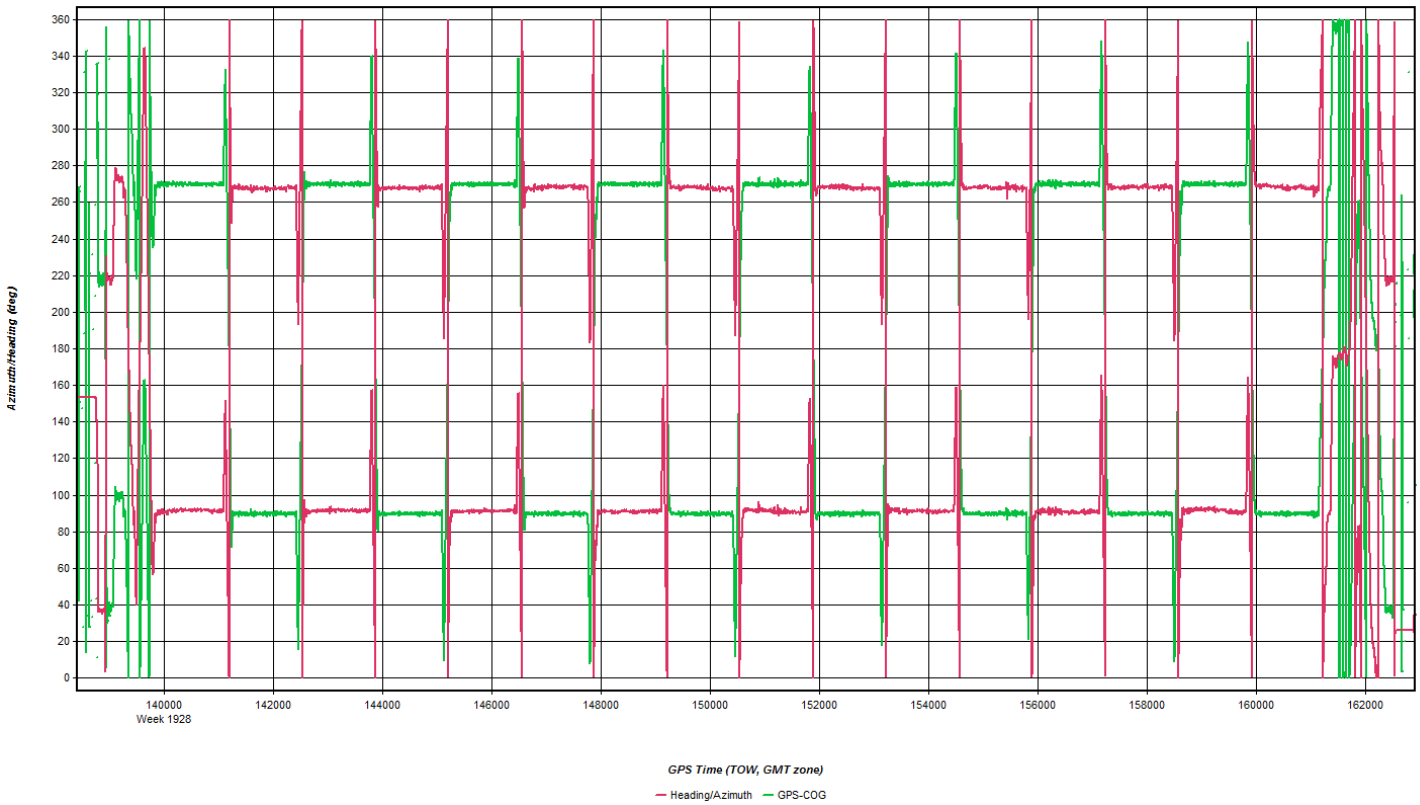
SUN ANGLE	ADDTIONAL NOTES: At the start Sats. 18, PDop 1.2. Mid flight Sats. 18 PDops 1.2. End of flight sats. 17 PDops 1.1.
@Start:	Clear skies and 20knot winds from the NW. Temp. overnight was -14C and at take off it was -2C.
@End:	AGL height ranged from 1540m to 1880m
@Peak:	Four restarts for system to initialize

Dec 19, 2016-A (C-GKSI, SN7207)

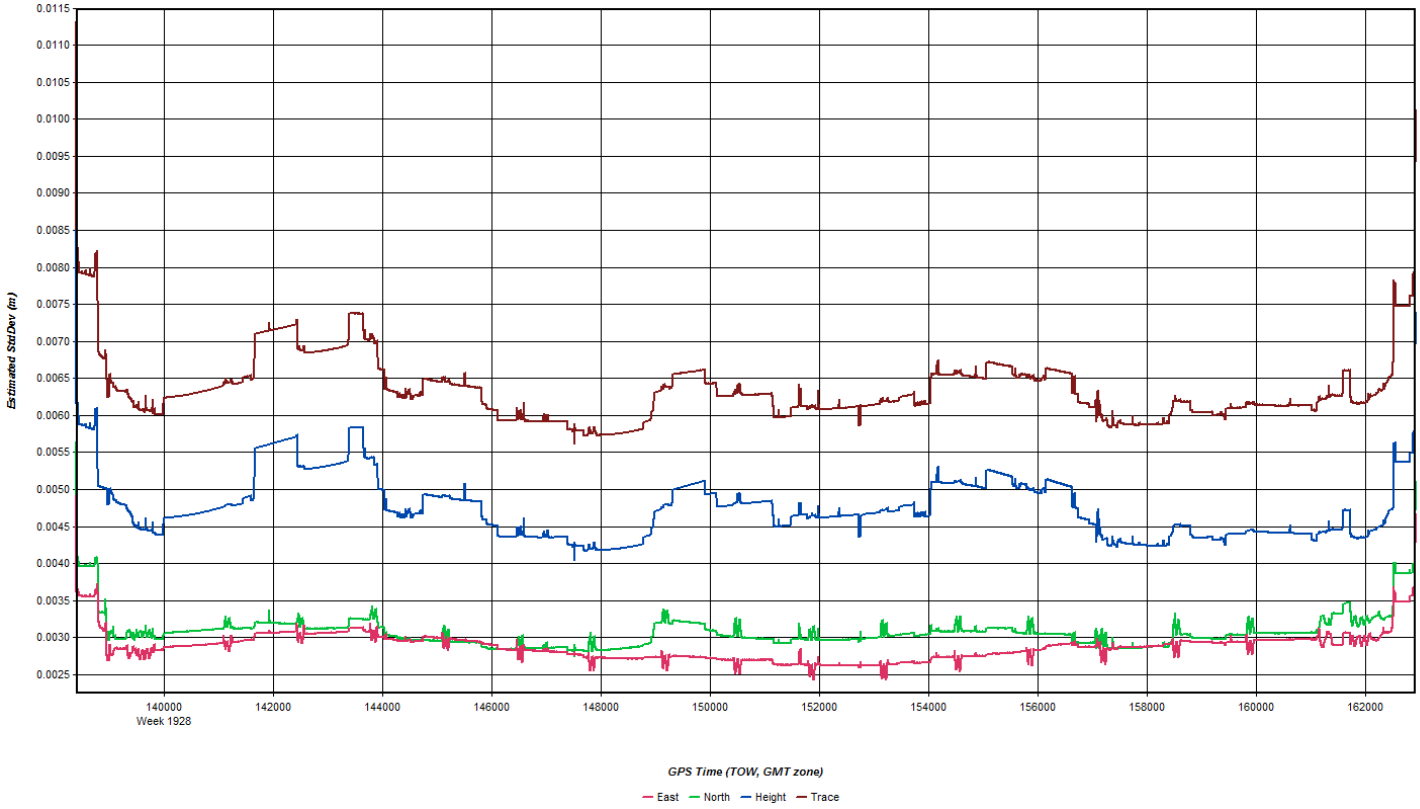


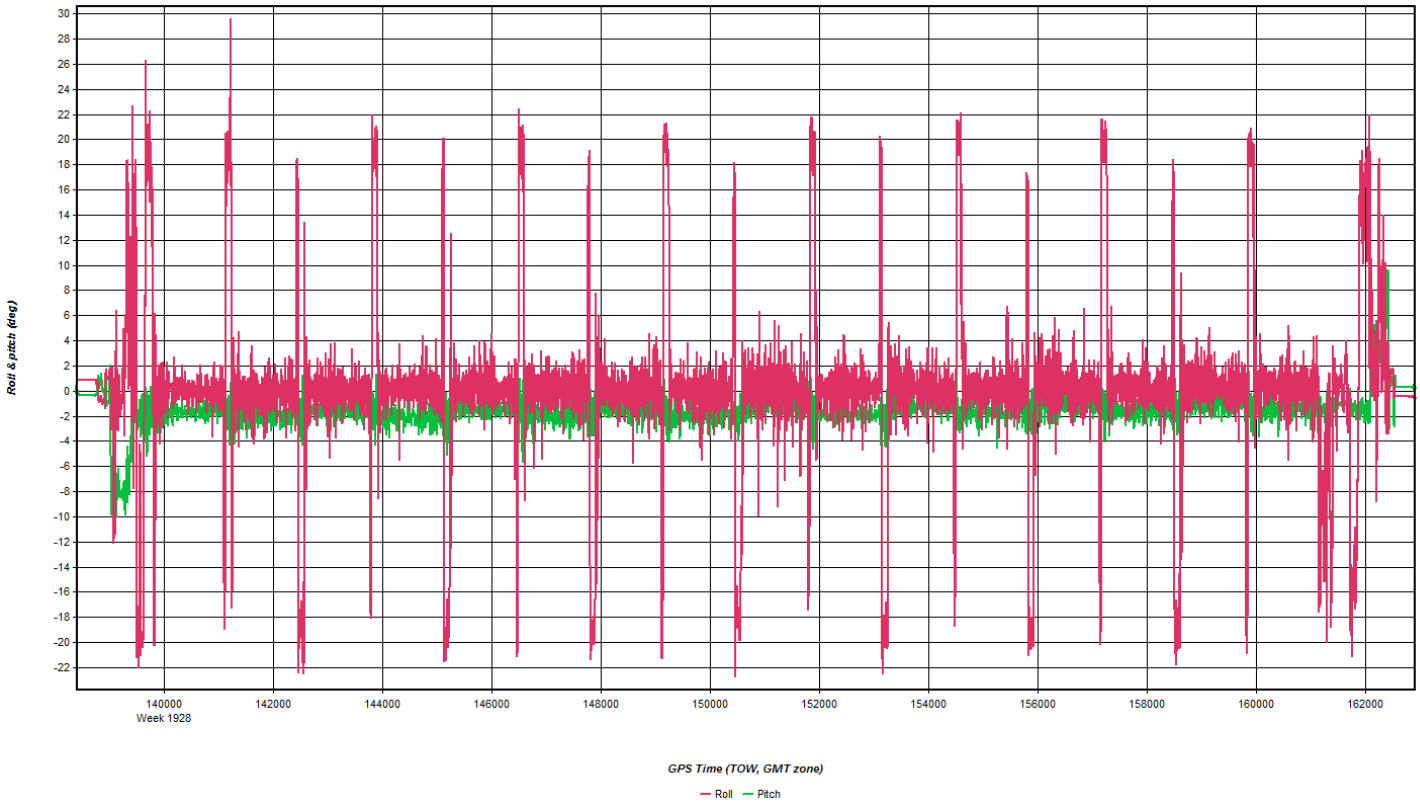

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
140000
Week 1928
142000
144000
146000
148000
150000
152000
154000
156000
158000
160000
162000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

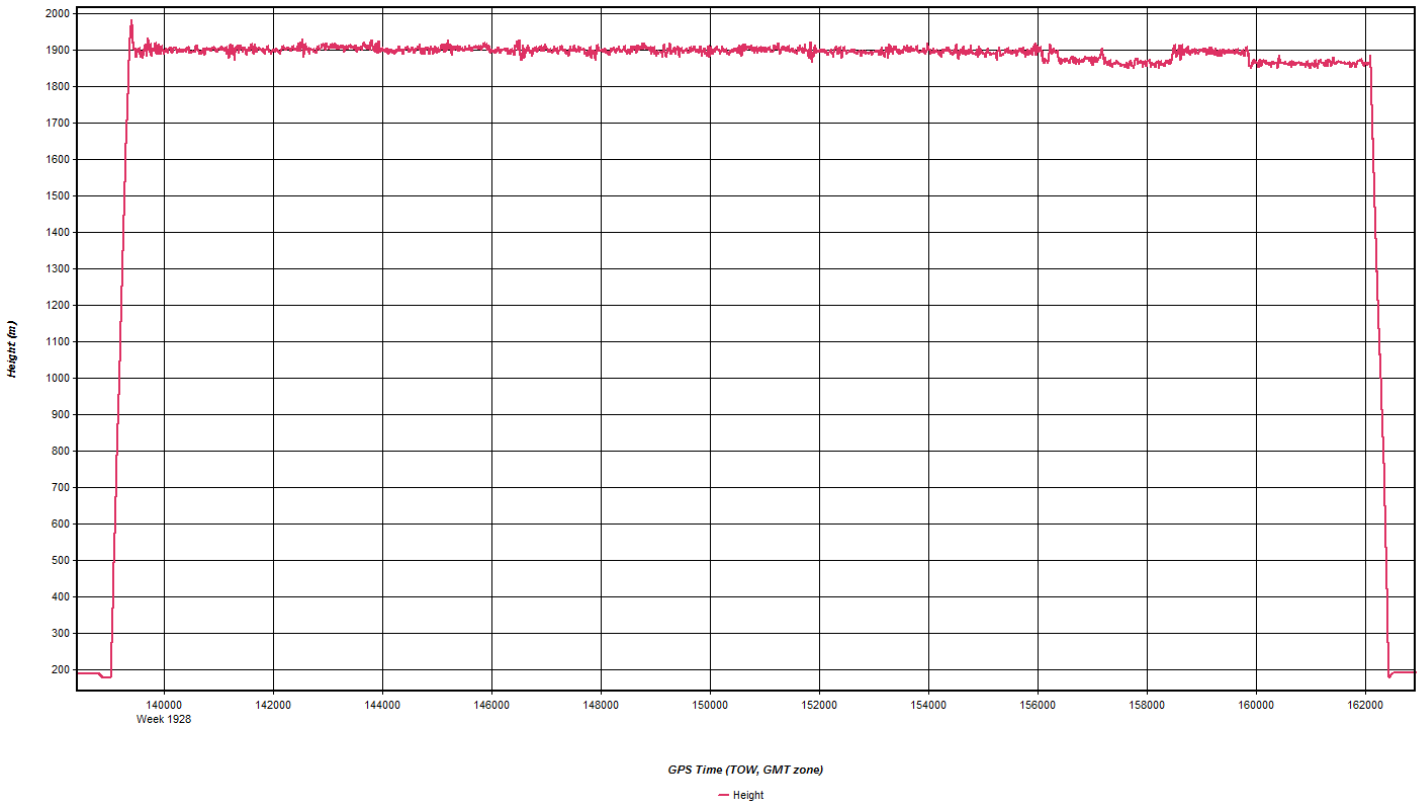

Separation (m)
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
-0.055
-0.060
-0.065
-0.070
-0.075
-0.080
-0.085
-0.090
-0.095
140000
Week 1928
142000
144000
146000
148000
150000
152000
154000
156000
158000
160000
162000
GPS Time (TOW, GMT zone)
East
North
Up

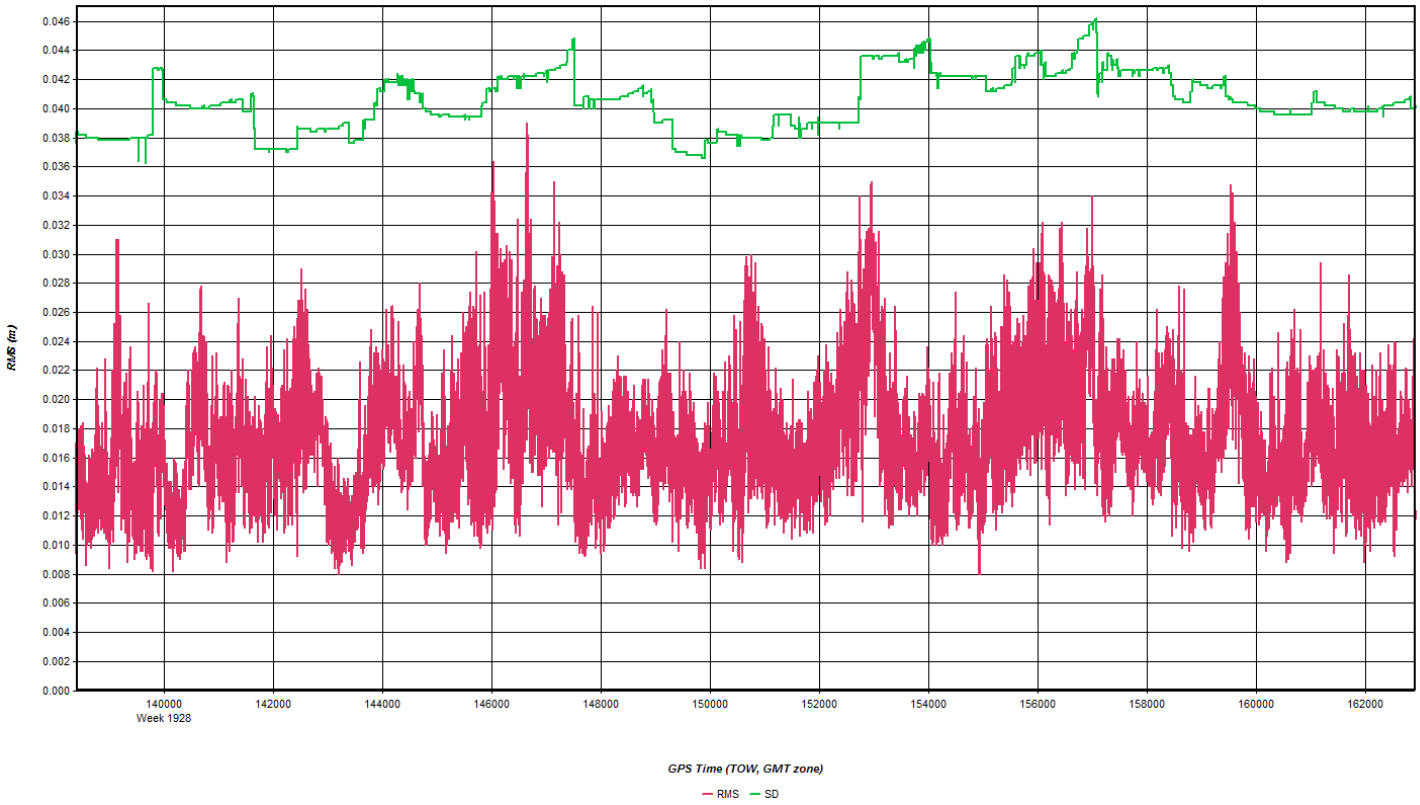

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
140000
Week 1928
142000
144000
146000
148000
150000
152000
154000
156000
158000
160000
162000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

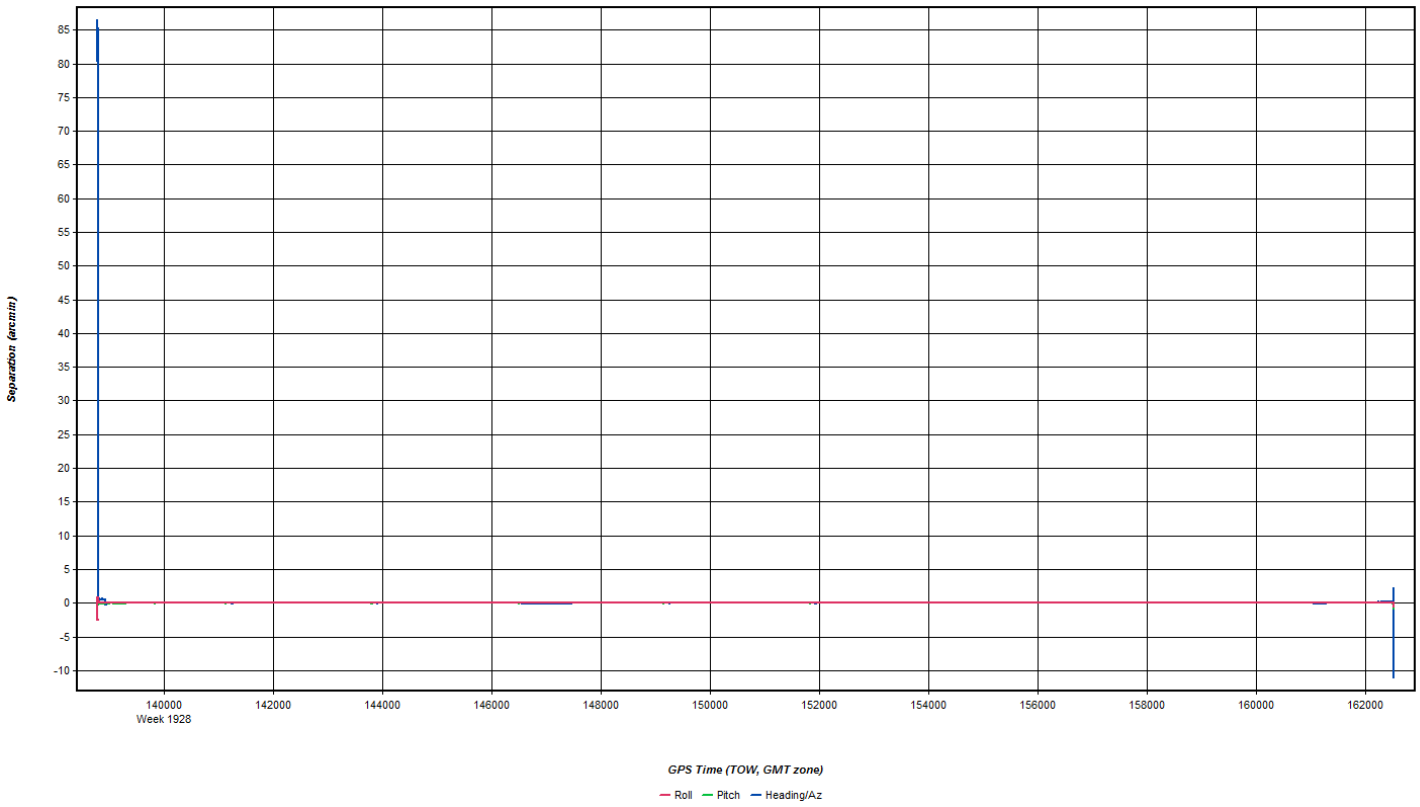

PDOP
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
140000
Week 1928
142000
144000
146000
148000
150000
152000
154000
156000
158000
160000
162000
GPS Time (TOW, GMT zone)
PDOP

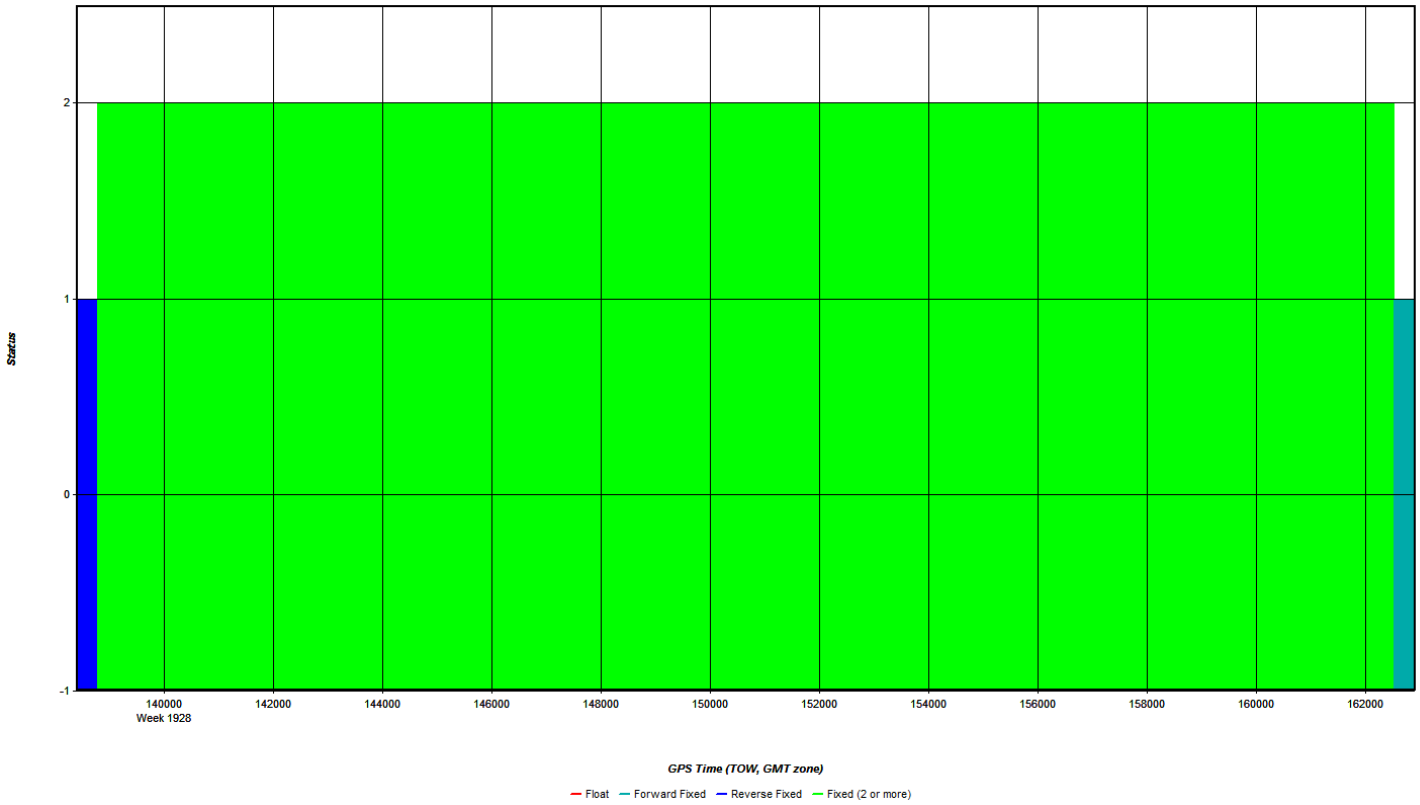

Estimated StdDev (m)
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
140000
Week 1928
142000
144000
146000
148000
150000
152000
154000
156000
158000
160000
162000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

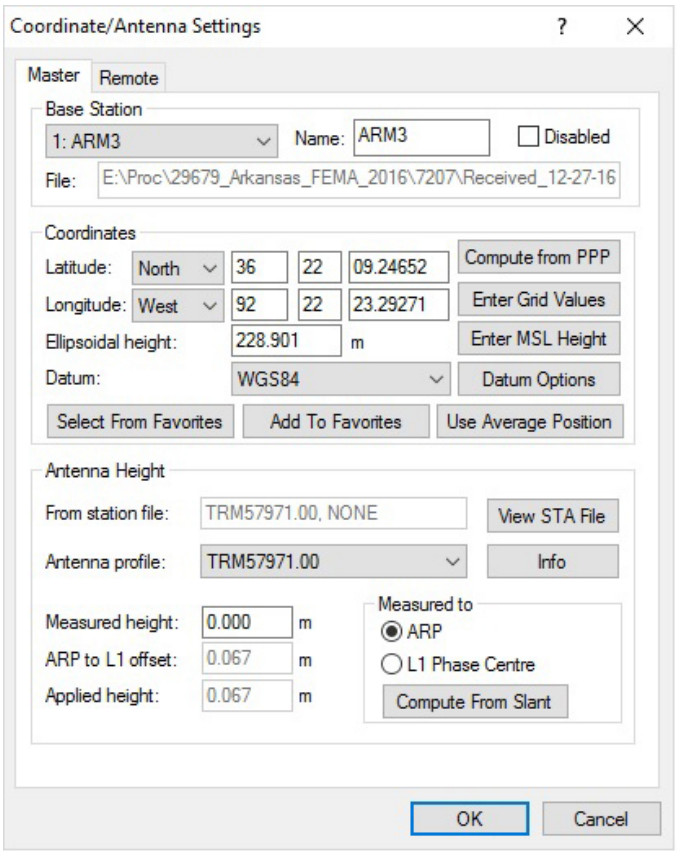

Roll & pitch (deg)
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
140000
Week 1928
142000
144000
146000
148000
150000
152000
154000
156000
158000
160000
162000
GPS Time (TOW, GMT zone)
Roll
Pitch

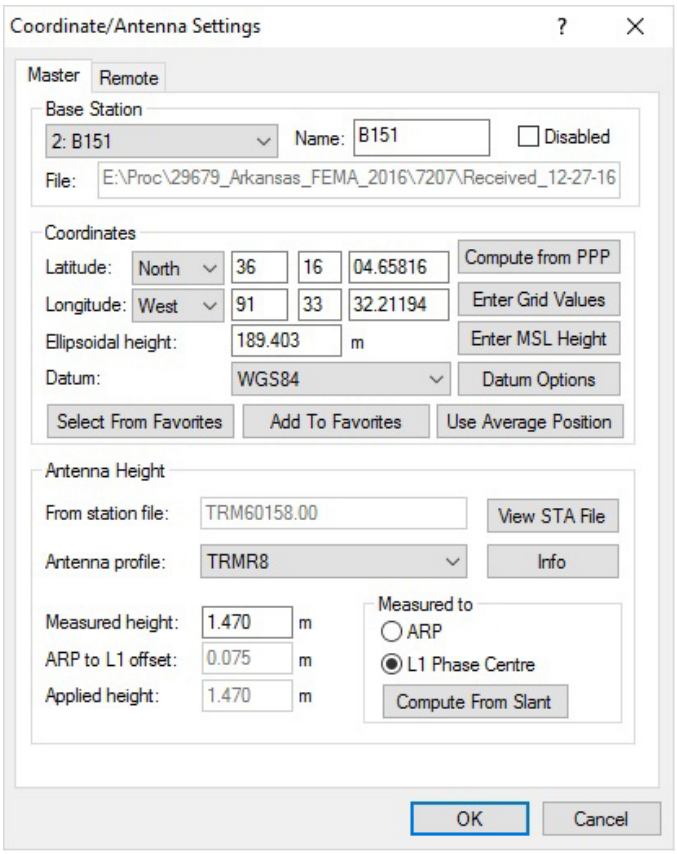

Height (m)
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
140000
Week 1928
142000
144000
146000
148000
150000
152000
154000
156000
158000
160000
162000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
140000
Week 1928
142000
144000
146000
148000
150000
152000
154000
156000
158000
160000
162000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
-5
-10
140000
Week 1928
142000
144000
146000
148000
150000
152000
154000
156000
158000
160000
162000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
140000
Week 1928
142000
144000
146000
148000
150000
152000
154000
156000
158000
160000
162000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARM3
Name:
ARM3
Disabled
File:
E:\Proc\29679_Arkansas_FEMA_2016\7207\Received_12-27-16
Coordinates
Latitude:
North
36
22
09.24652
Compute from PPP
Longitude:
West
92
22
23.29271
Enter Grid Values
Ellipsoidal height:
228.901
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM57971.00, NONE
View STA File
Antenna profile:
TRM57971.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.067
m
Applied height:
0.067
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: B151
Name: B151
Disabled
File: E:\Proc\29679_Arkansas_FEMA_2016\7207\Received_12-27-16
Coordinates
Latitude: North 36 16 04.65816
Longitude: West 91 33 32.21194
Ellipsoidal height: 189.403 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM60158.00
View STA File
Antenna profile: TRMR8
Info
Measured height: 1.470 m
ARP to L1 offset: 0.075 m
Applied height: 1.470 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Julian Day 354	Flight A

LIDAR Flight Log

Date December 19, 2016	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot M. Kalus
Location Hardy, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System **Leica ALS70**	
Unit 7207	
IMU **Honeywell Micro IRS**	
GPS Rx **NovAtel OEMV**	
Roll Comp.	
Data Drive 3	

Additional Notes
Wind:
Temp:
Pressure:
Clouds: none
Visibility: severe clear

Aircraft Block Time		
Engine On 14:20	Ramp Out	Takeoff 14:35
Engine Off 21:16	Ramp In	Landing 21:07
Total 6.9 **hrs**	Total **hrs**	Total 6.5 **hrs**

Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

Static Alignment	GPS Time	
	Start	End
Pre Mission	14:27	14:32
Post Mission	21:09	21:14

Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 161219_
IMU		Figure 8	14:44	14:50			IMU Wake Up
023		270	14:52:00	15:10:54			
024		90	15:14:37	15:32:19			
025		270	15:36:42	15:55:56			
026		090	15:58:57	16:17:41			
027		270	16:21:27	16:40:29			
028		090	16:43:42	17:02:38			
029		270	17:05:54	17:24:48			
030		090	17:27:40	17:46:40			
031		270	17:50:35	18:09:28			
032		090	18:12:51	18:31:36			
033		270	18:35:05	18:54:07			
034		090	18:57:27	19:16:54			40m offline to the south 15.5 nmi from the end
035		270	19:19:44	19:38:44			Flew slightly higher at offline spot for coverage
036		090	19:41:56	20:00:42			

Pg 1 of 2

Julian Day 354	Flight A

LIDAR Flight Log

AIRBORNE IMAGING INC

Date December 19 2016	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot M. Kalus
Location Hardy, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System	**Leica ALS70**
Unit	7207
IMU	**Honeywell Micro IRS**
GPS Rx	**NovAtel OEMV**
Roll Comp.	
Data Drive	3

Additional Notes

Wind:

Temp:

Pressure:

Clouds:

Visibility:

Aircraft Block Time		
Engine On 14:20	Ramp Out	Takeoff 14:35
Engine Off 21:16	Ramp In	Landing 21:07
Total 6.9 **hrs**	Total **hrs**	Total 6.5 **hrs**

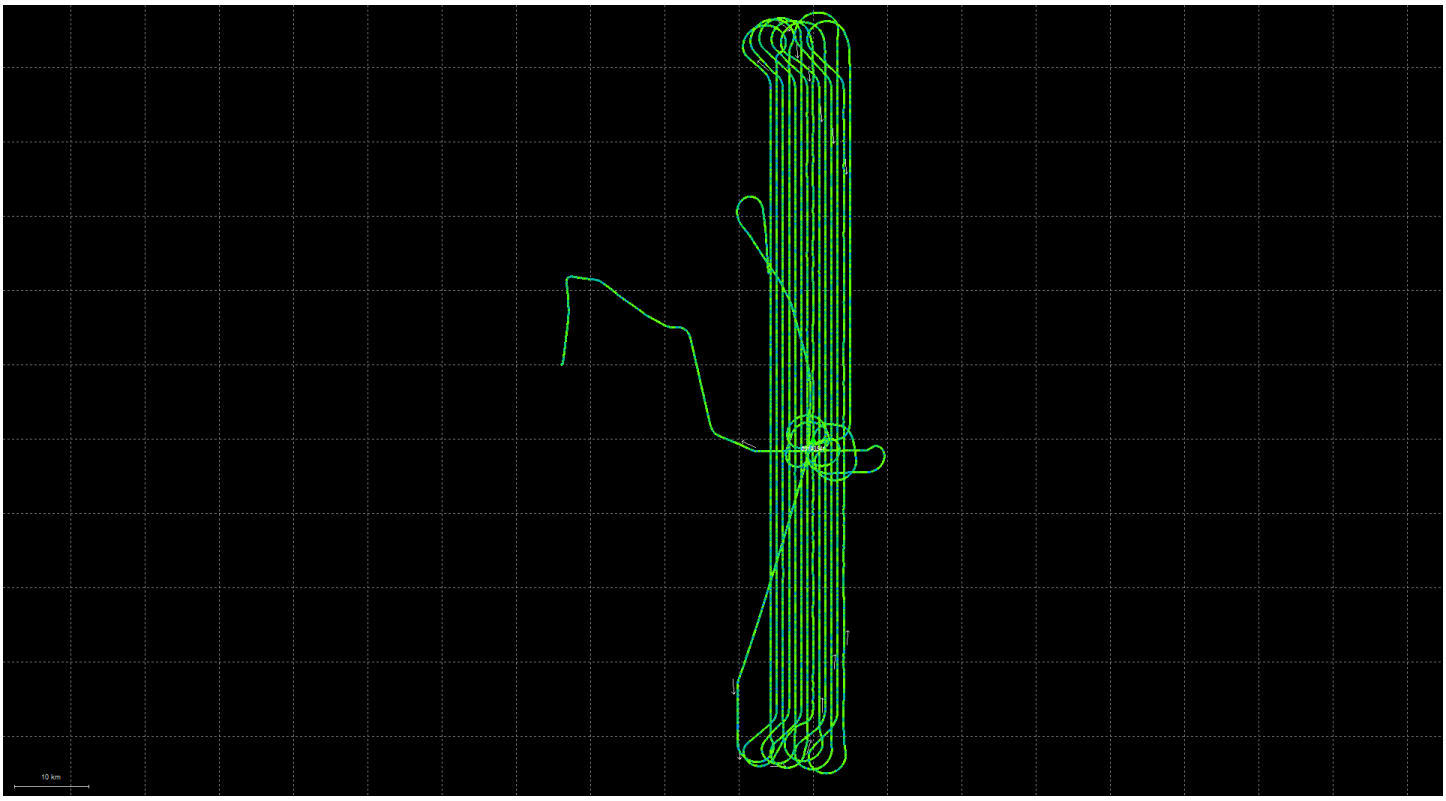
Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

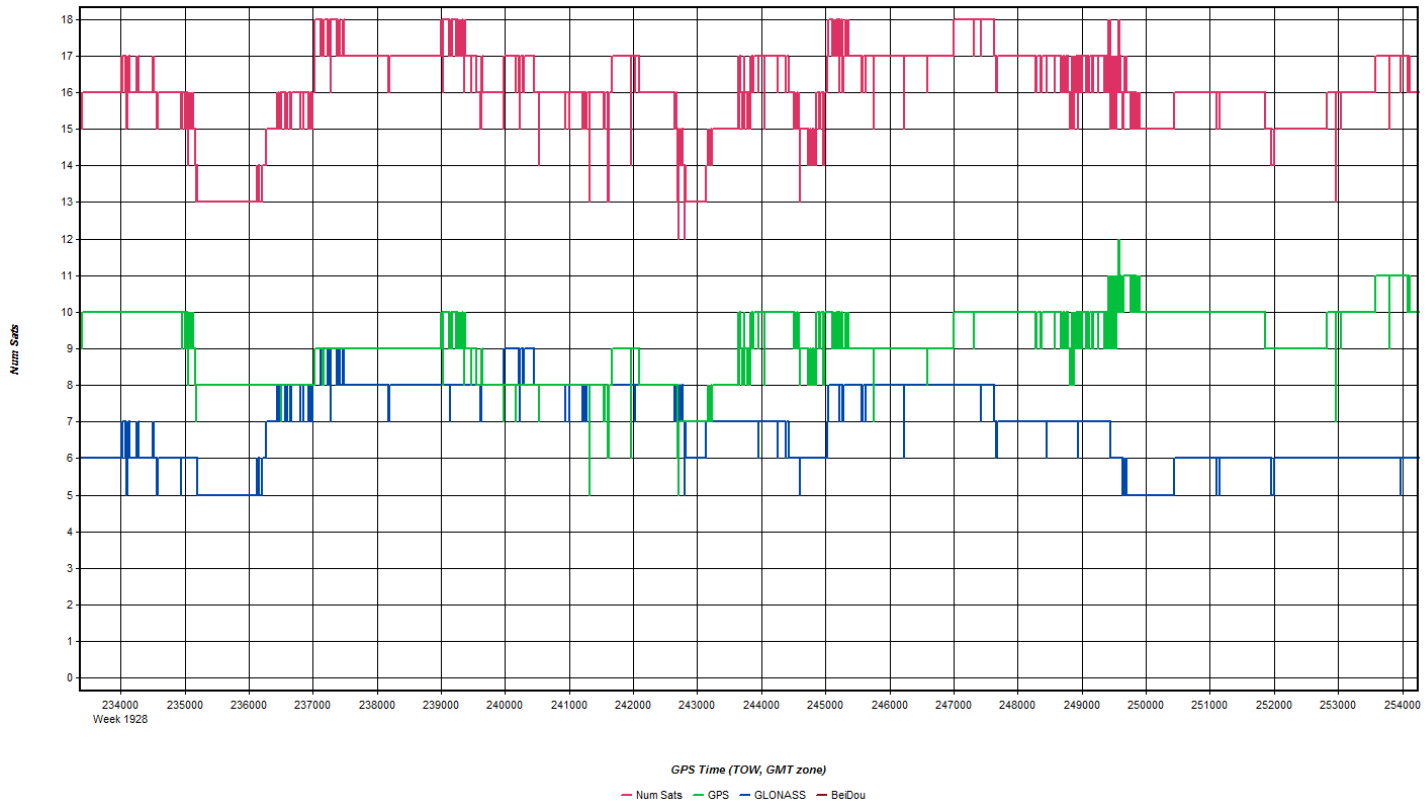
Static Alignment	GPS Time	
	Start	End
Pre Mission	14:27	14:32
Post Mission	21:09	21:14

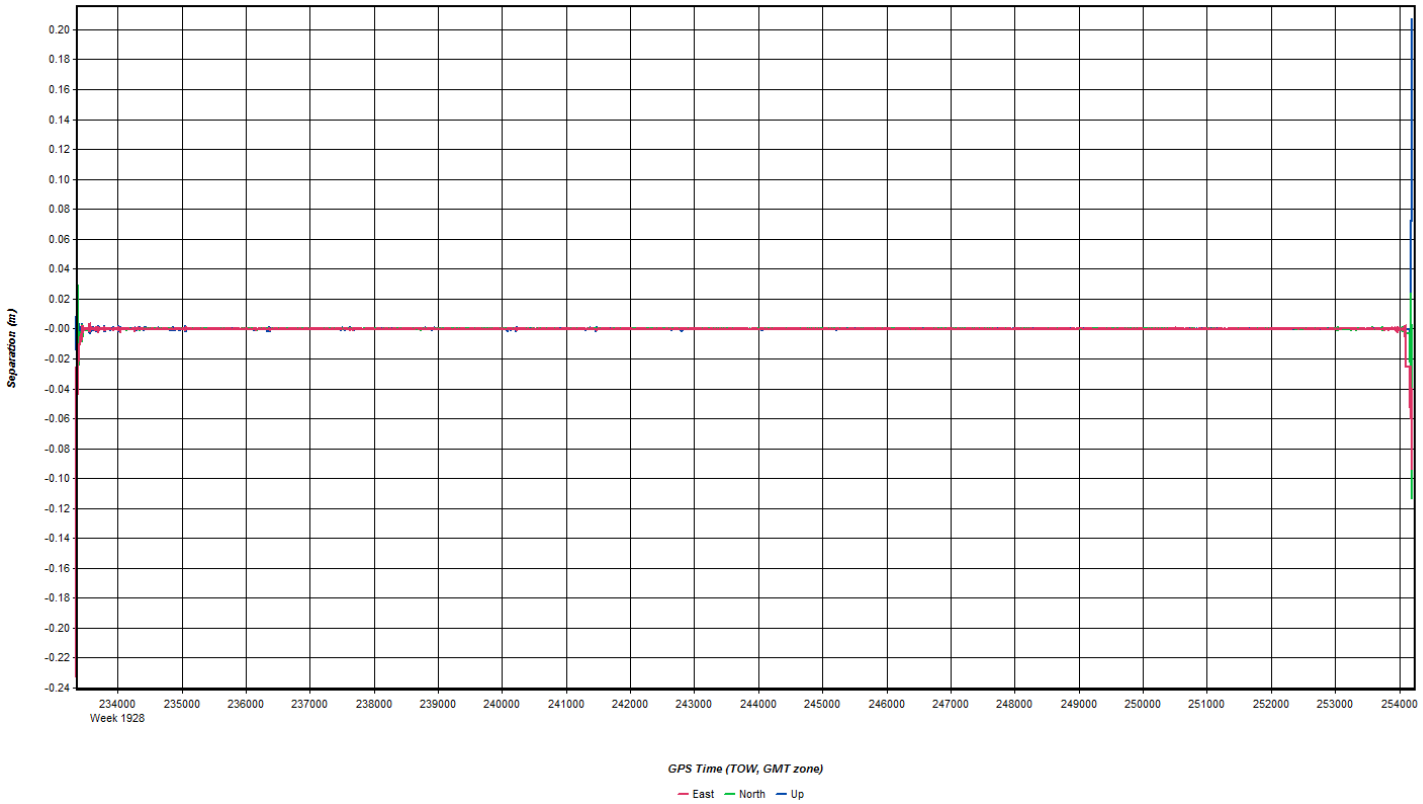
Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 161219_
037		270	20:04:31	20:23:22			
038		090	20:26:40	20:45:48			
Xtie AOI1		001	20:50:39	20:55:45			Cross tie S-->N for AOI 1 lines 023 to 038
IMU		Figure 8	20:56	20:01			IMU maneuver

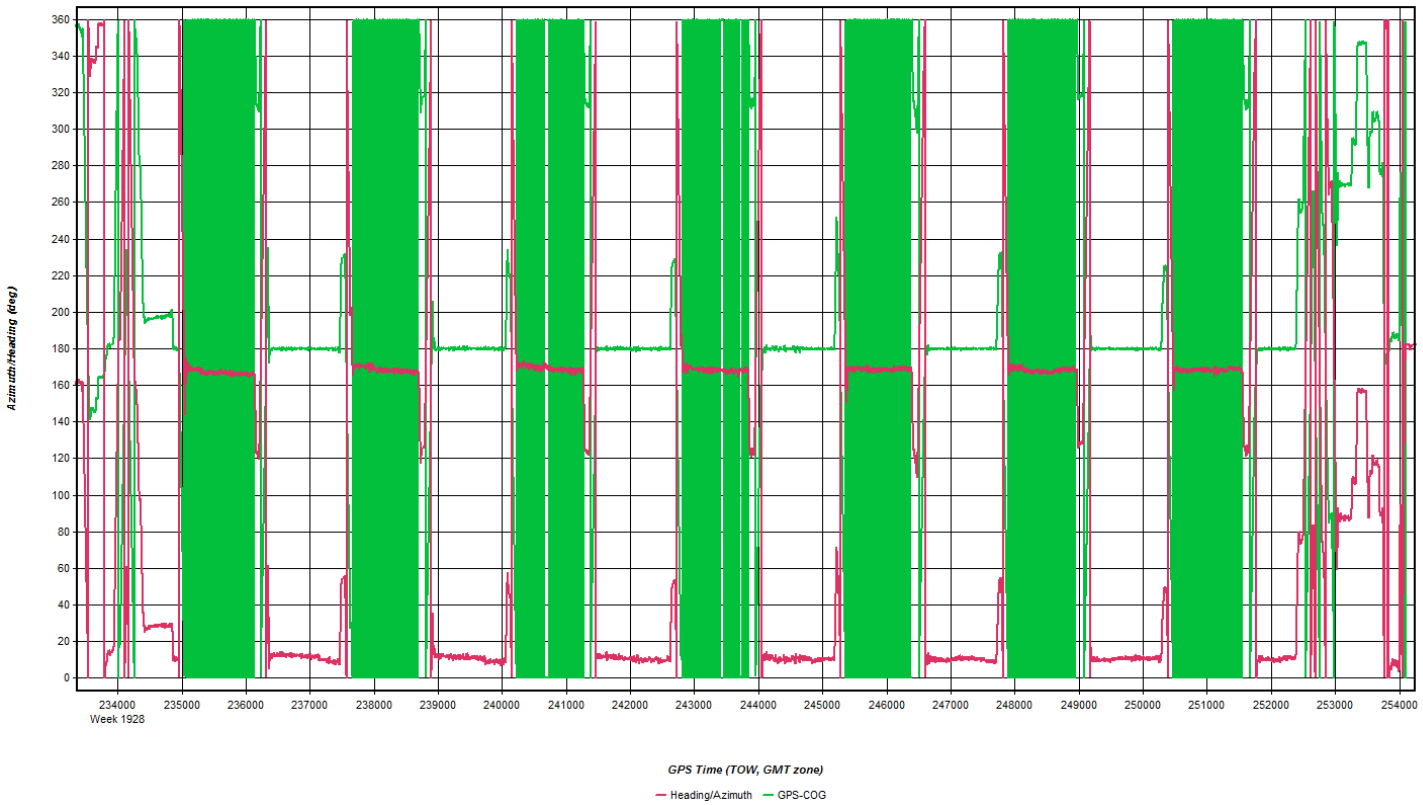
Pg 2 of 2

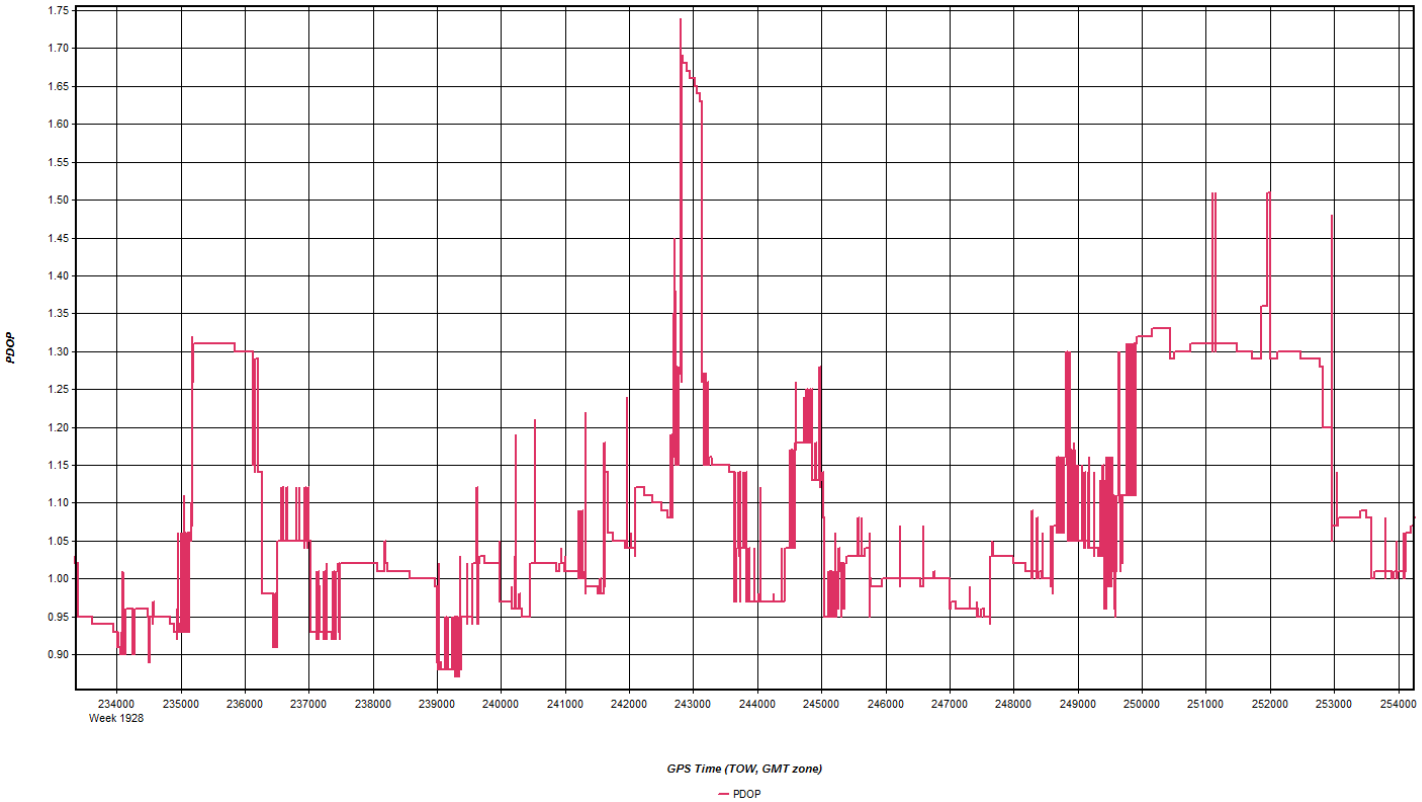
Dec 20, 2016-A (C-FVZM, SN7229)

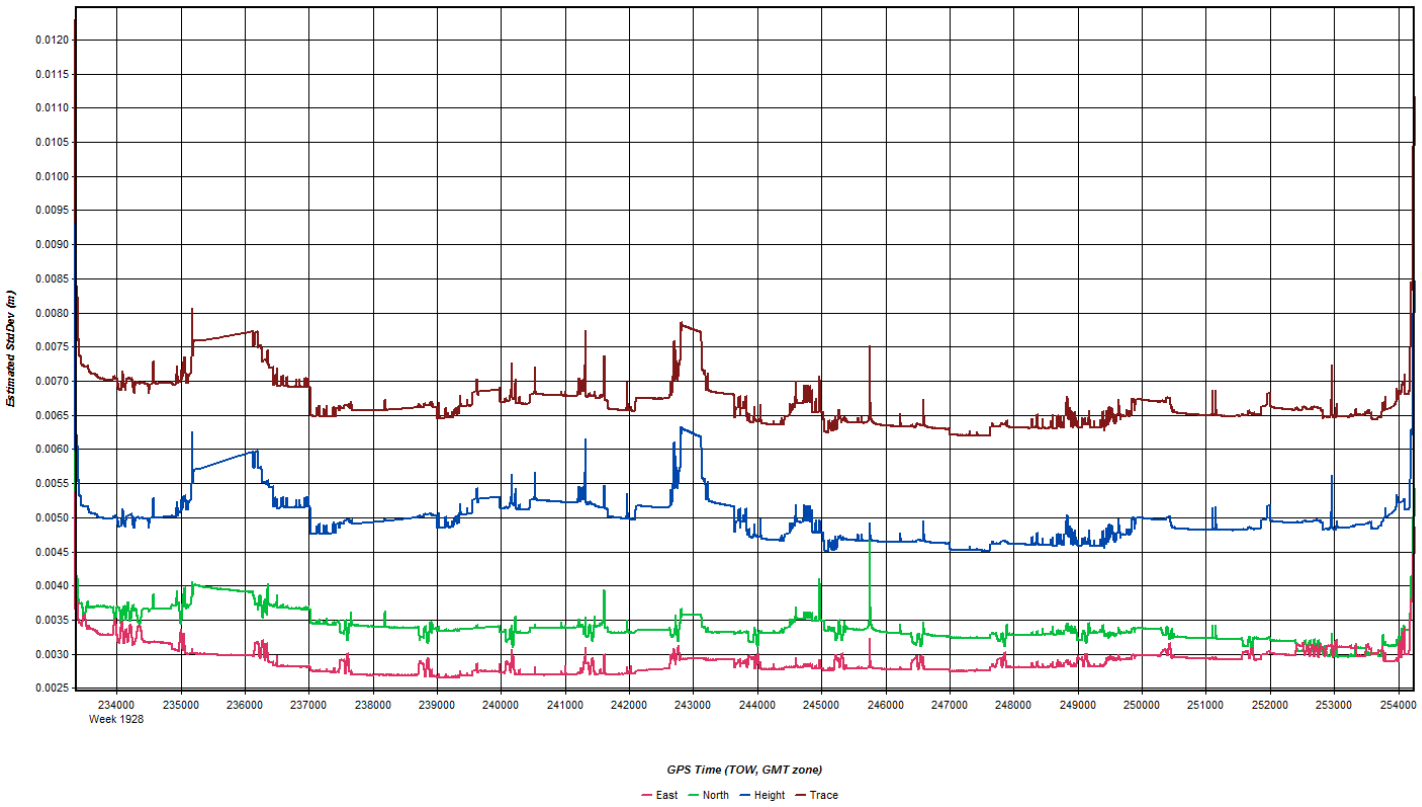

10 km

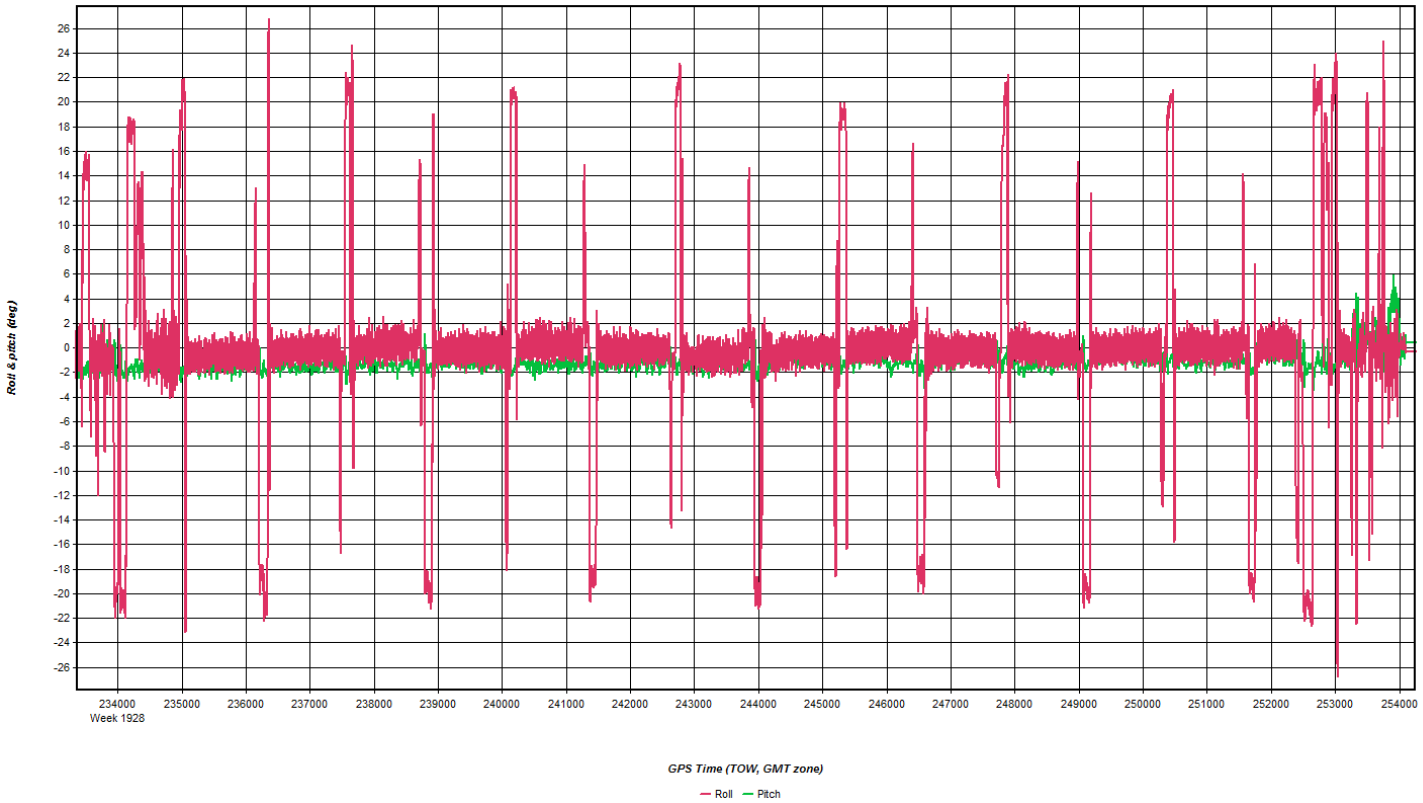

Num Sats
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
234000
Week 1928
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
251000
252000
253000
254000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

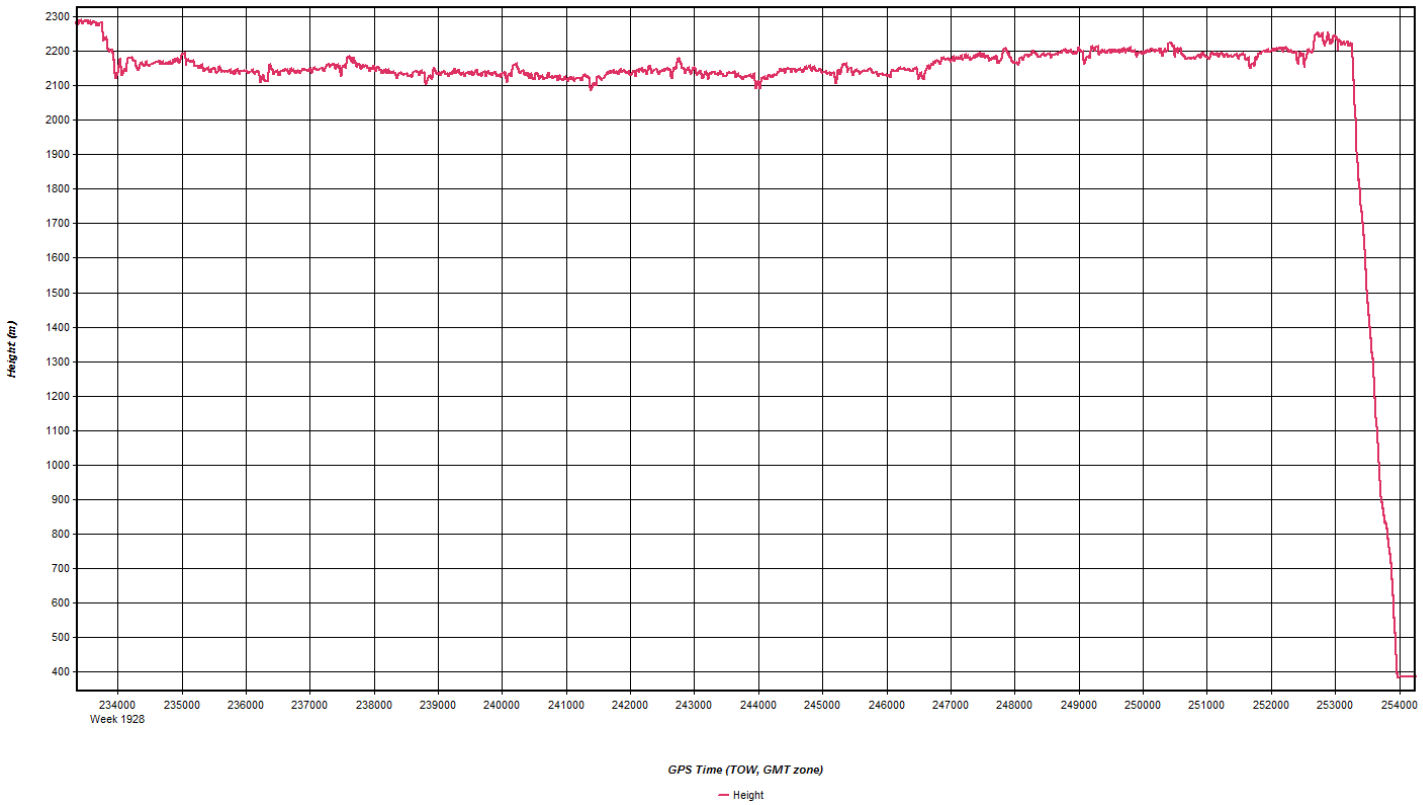

Separation (m)
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
-0.00
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
-0.16
-0.18
-0.20
-0.22
-0.24
234000
Week 1928
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
251000
252000
253000
254000
GPS Time (TOW, GMT zone)
East
North
Up

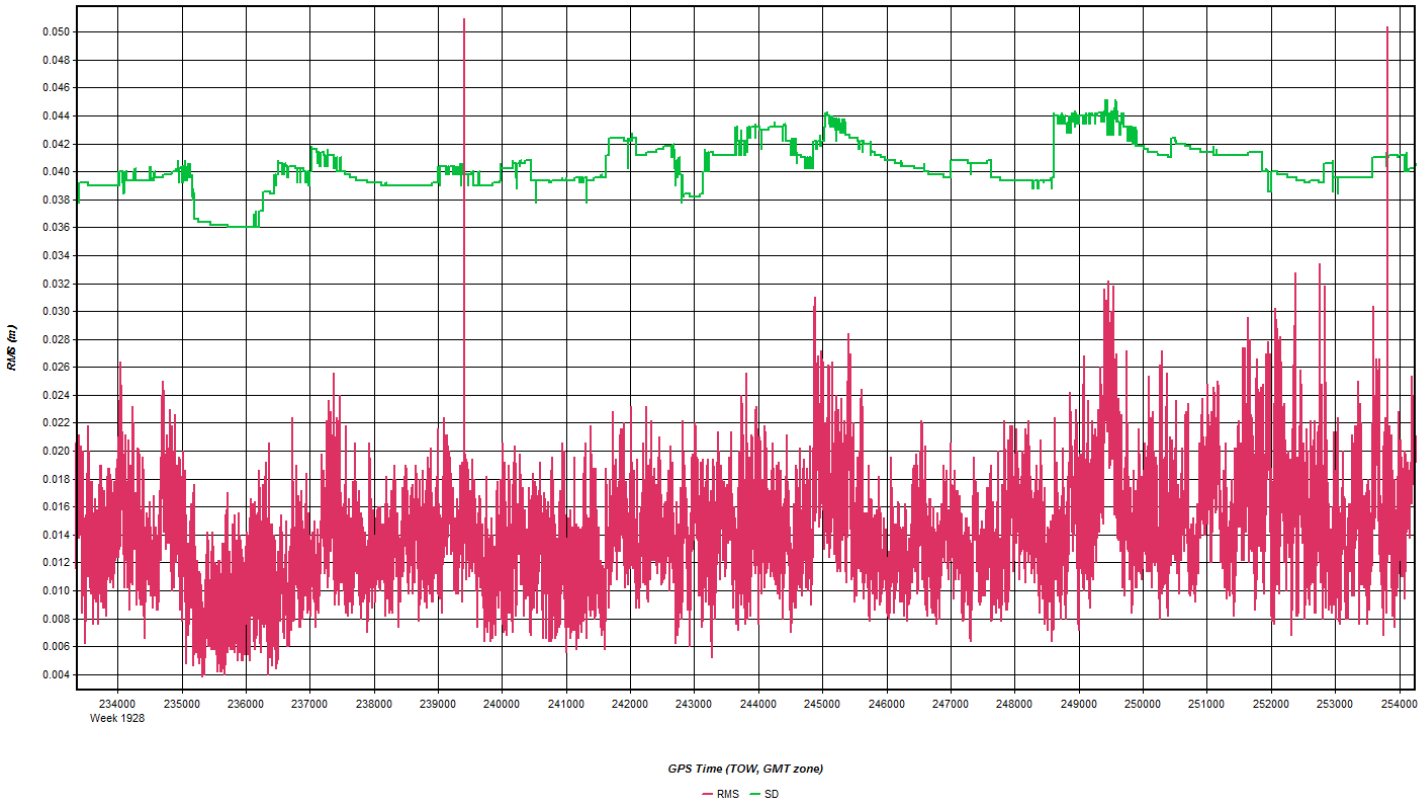

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
234000
Week 1928
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
251000
252000
253000
254000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

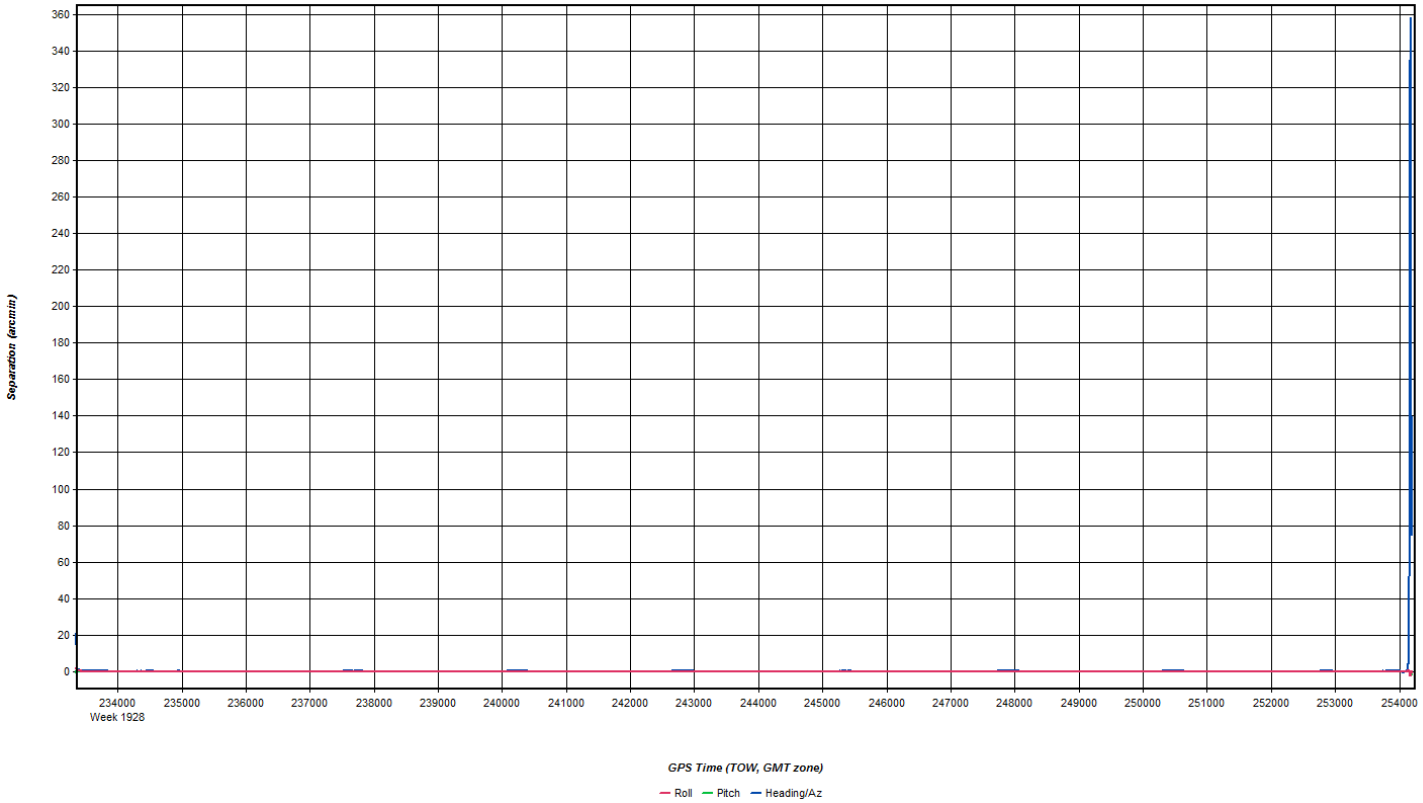

PDOP
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
234000
Week 1928
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
251000
252000
253000
254000
GPS Time (TOW, GMT zone)
PDOP

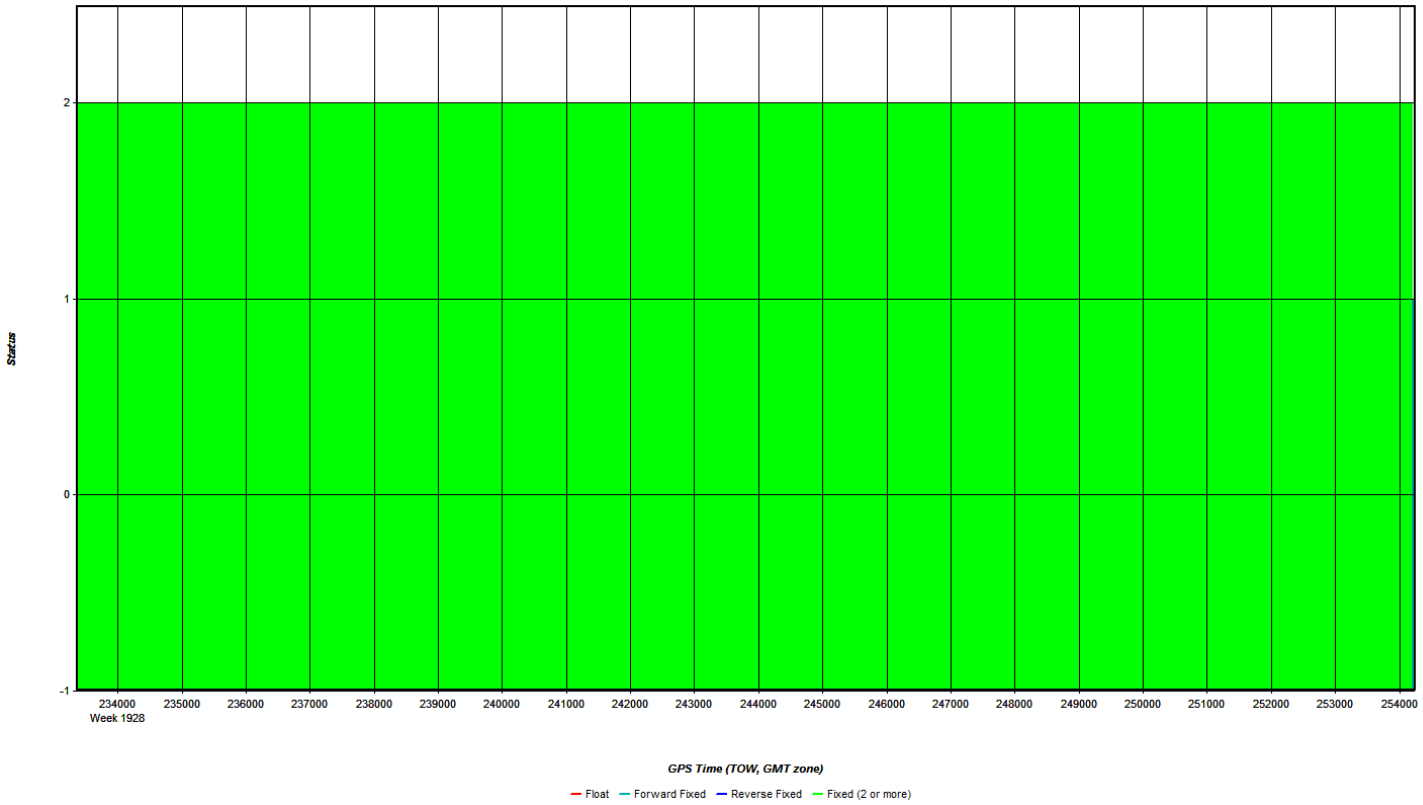

Estimated StdDev (m)
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
234000
Week 1928
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
251000
252000
253000
254000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

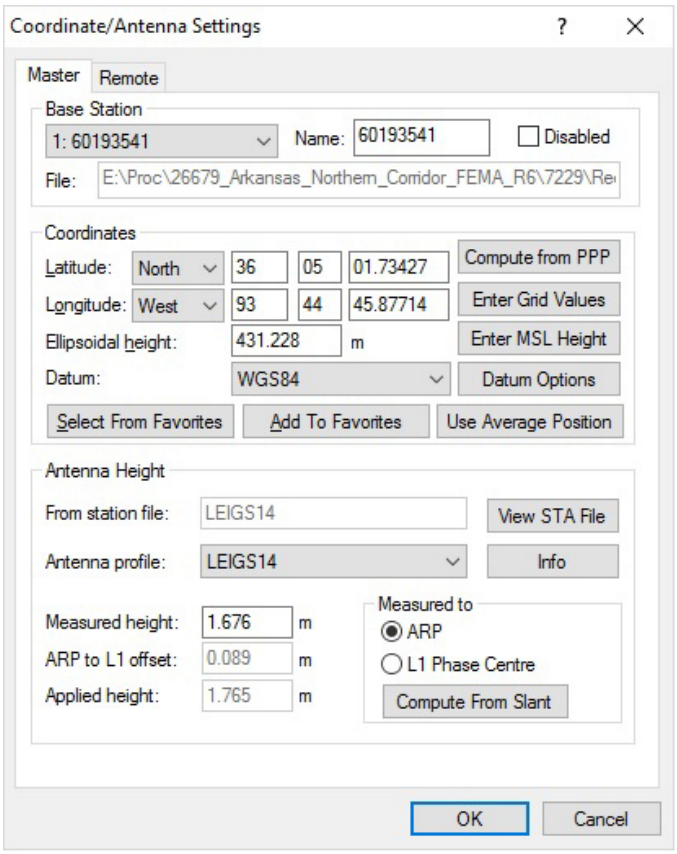

Roll & pitch (deg)
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
234000
Week 1928
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
251000
252000
253000
254000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
234000
Week 1928
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
251000
252000
253000
254000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.050
0.048
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
234000
Week 1928
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
251000
252000
253000
254000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
234000
Week 1928
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
251000
252000
253000
254000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
234000
Week 1928
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
251000
252000
253000
254000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: 60193541
Name: 60193541
Disabled
File: E:\Proc\26679_Arkansas_Northern_Corridor_FEMA_R6\7229\Re
Coordinates
Latitude: North 36 05 01.73427
Longitude: West 93 44 45.87714
Ellipsoidal height: 431.228 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: LEIGS14
View STA File
Antenna profile: LEIGS14
Info
Measured height: 1.676 m
ARP to L1 offset: 0.089 m
Applied height: 1.765 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

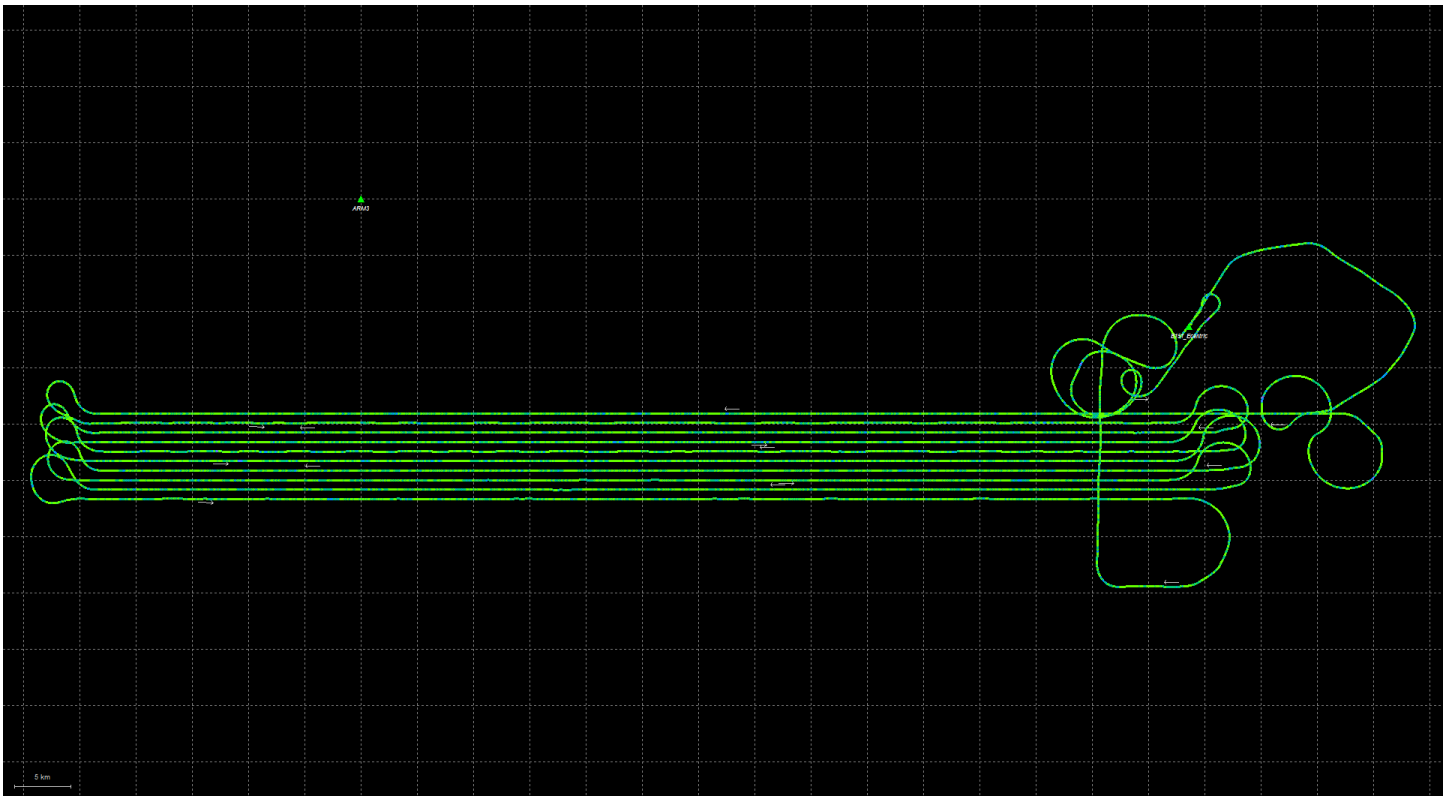
PROJECT NAME	Q.S. Arkansas	DATE	20/12/2016
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Bob Harrity	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Springdale AR	DATA DRIVES	LiDar #1

AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	15:53:00	Takeoff:	16:10:00	AGL Height:	1750 m	Pulse Rate:	277 KHz		START	END
Engine Off:	22:41:00	Landing:	22:33:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	16:58:00	17:07:00
TOTAL:	6.8 hrs	TOTAL:	6.38 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	22:07:00	22:14:00

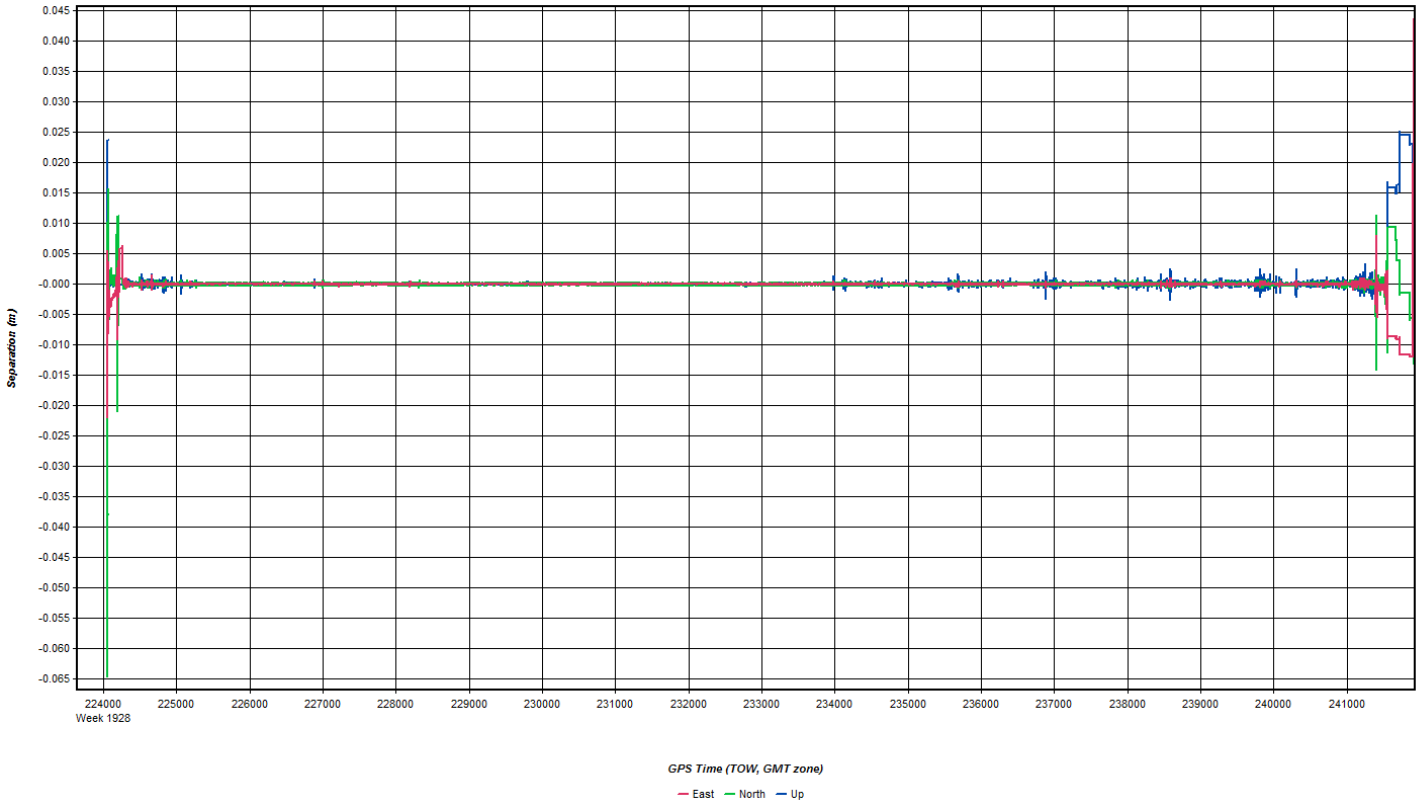
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
18		North	161220_163554	16:35:56		System failed, started with imu data gap and then failure
18		North	161220_163554	17:18:09	17:35:17	Complete line
19		South	161220_163554	17:39:54	17:57:25	Complete line
20		North	161220_163554	18:01:31	18:18:02	Complete line
21		South	161220_163554	18:22:56	18:40:37	Complete line
22		North	161220_163554	18:44:24	19:00:48	Complete line
23		South	161220_163554	19:05:46	19:23:22	Complete line
24		North	161220_163554	19:27:26	19:43:42	Complete line
25		South	161220_163554	19:48:41	20:06:08	Complete line
26		North	161220_163554	20:09:58	20:26:11	Complete line
27		South	161220_163554	20:31:06	20:48:13	Complete line
28		North	161220_163554	20:52:23	21:09:10	Complete line
29		South	161220_163554	21:24:11	21:31:04	Complete line
30		North	161220_163554	21:35:23	21:52:19	Complete line
31		South	161220_163554	21:57:02	22:06:38	21nm from south needs to be aquired
CL		West	161220_163554	22:17:48	22:20:28	Complete line

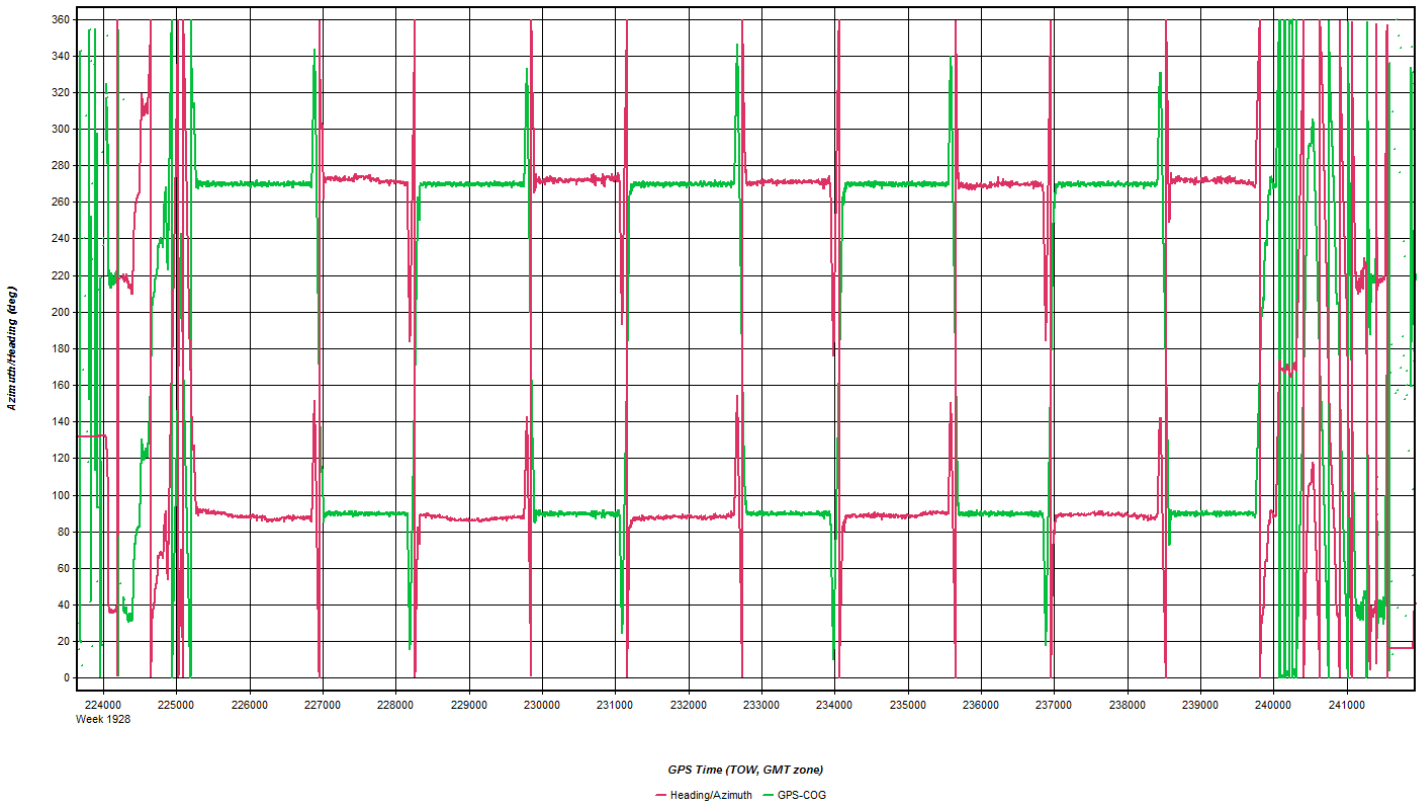
SUN ANGLE @Start: @End: @Peak:	ADDTIONAL NOTES: At the start Sats. 1.6 PDop 1.1. Mid flight Sats. 17 PDops 1.2. End of flight sats. 18 PDops 1.3. Clear skies and 28knot winds from the SW. Temperature was 2C at take off. AGL height ranged from 1520m to 1850m The system failure occurred half way up the first line, started with an IMU data gap and then the system lost alignment. Rebooted the system at 16:50 and started production at 17:18.

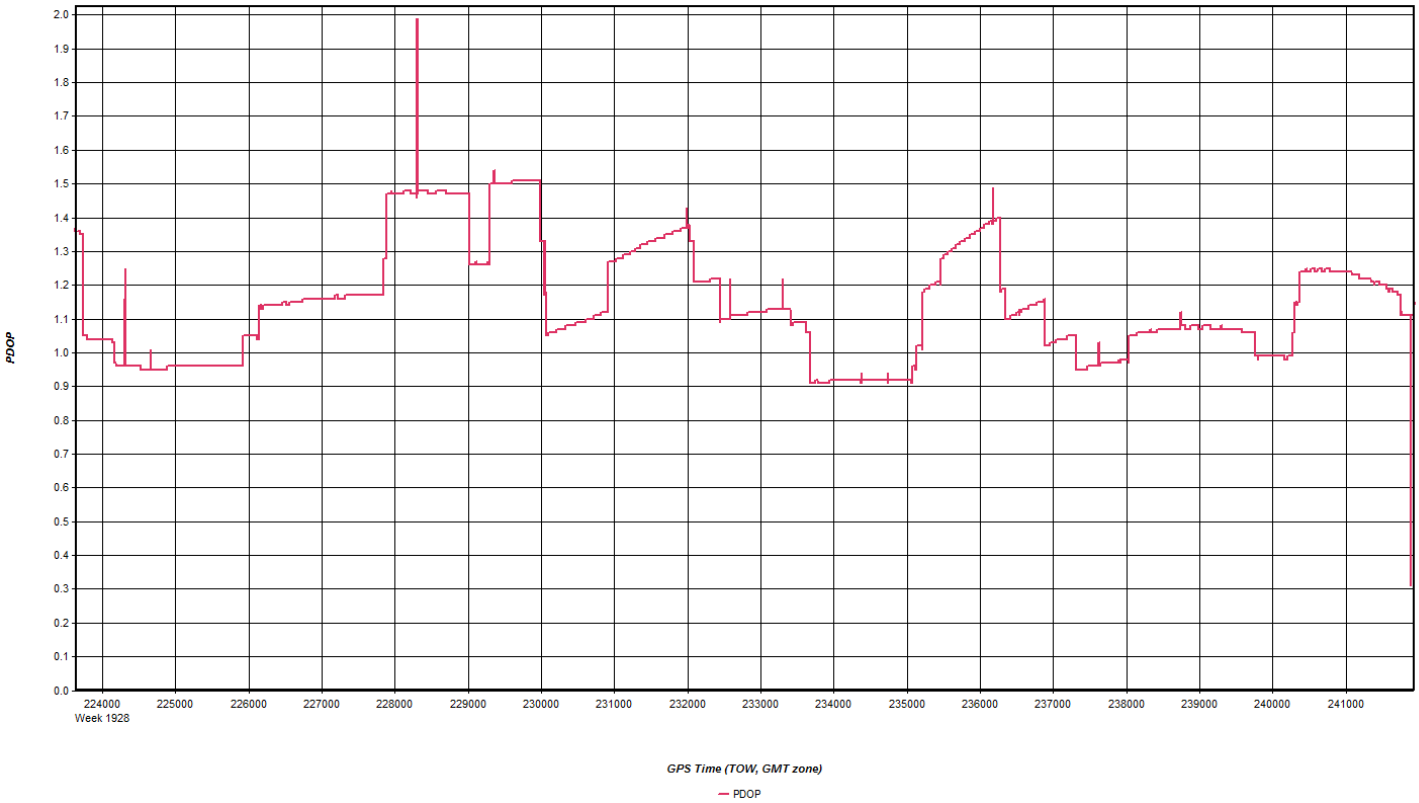
Dec 20, 2016-A (C-GKSI, SN7207)

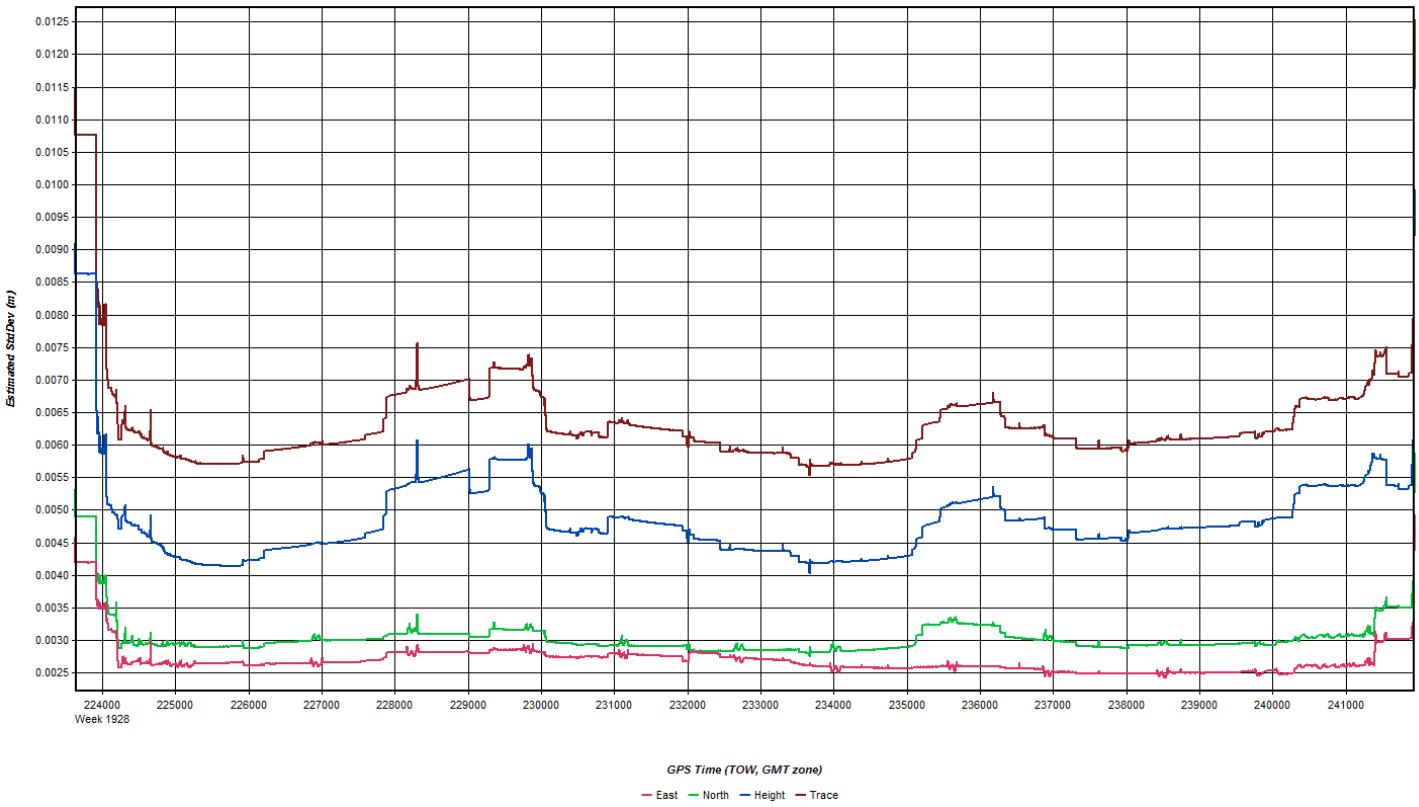

ARM3
5 km

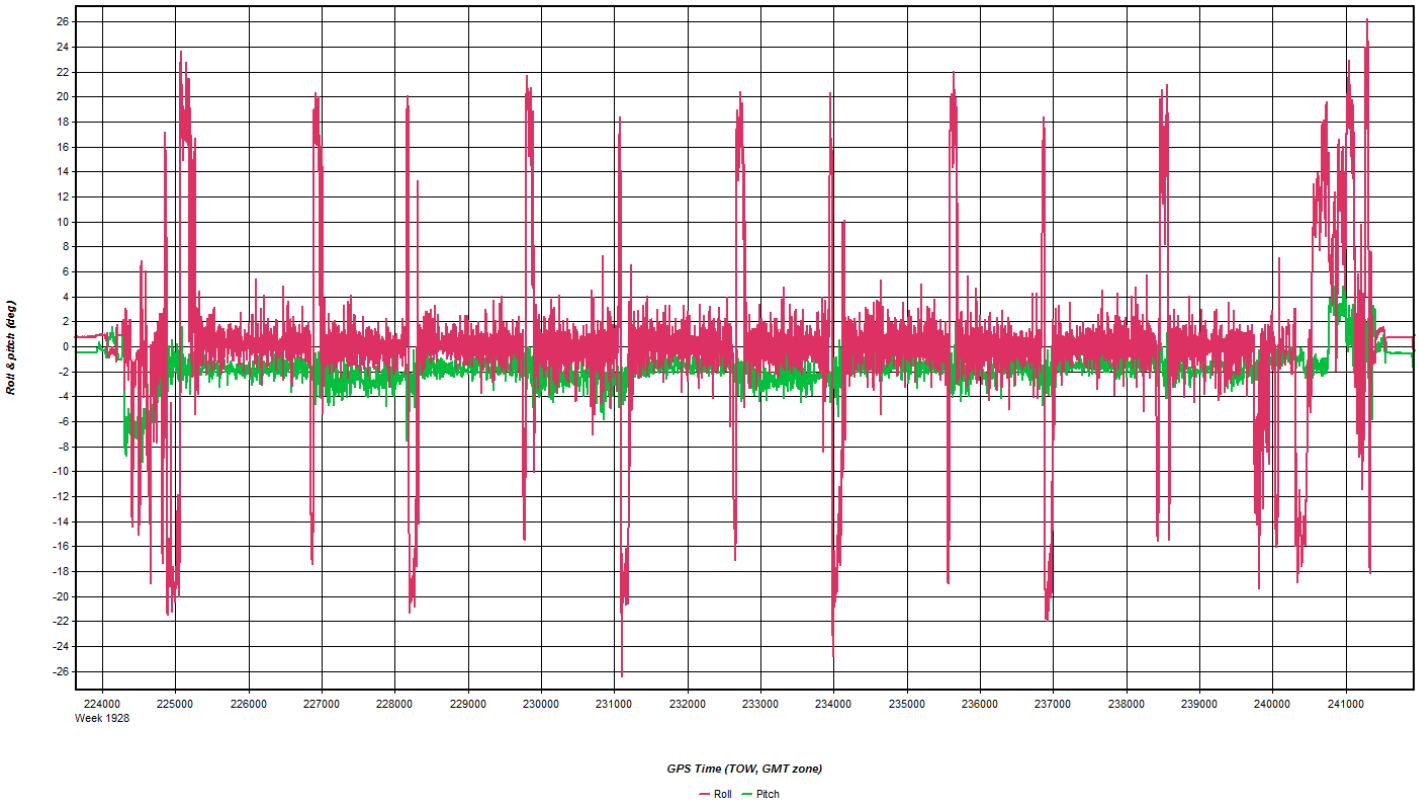

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
224000
Week 1928
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

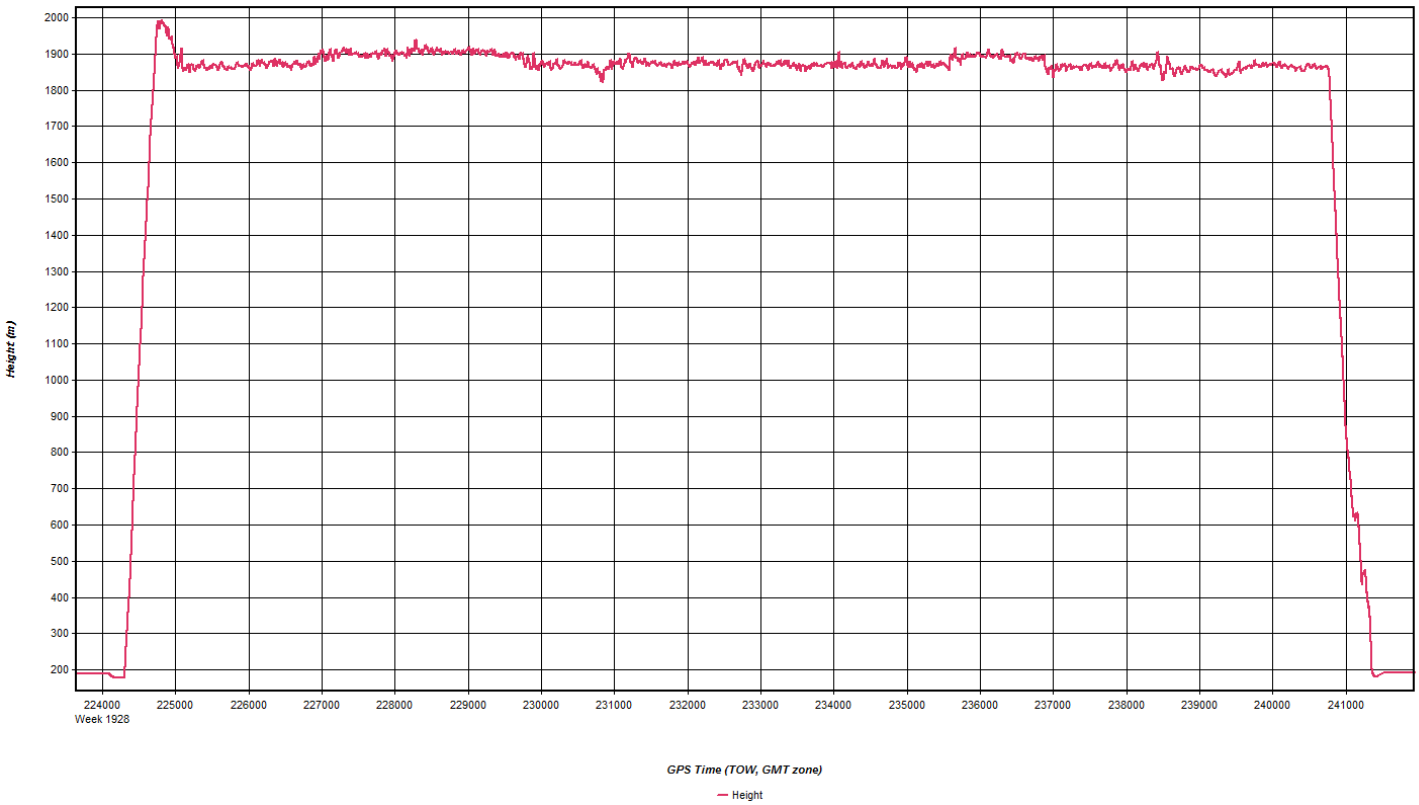

Separation (m)
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
-0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
-0.055
-0.060
-0.065
224000
Week 1928
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
GPS Time (TOW, GMT zone)
East
North
Up

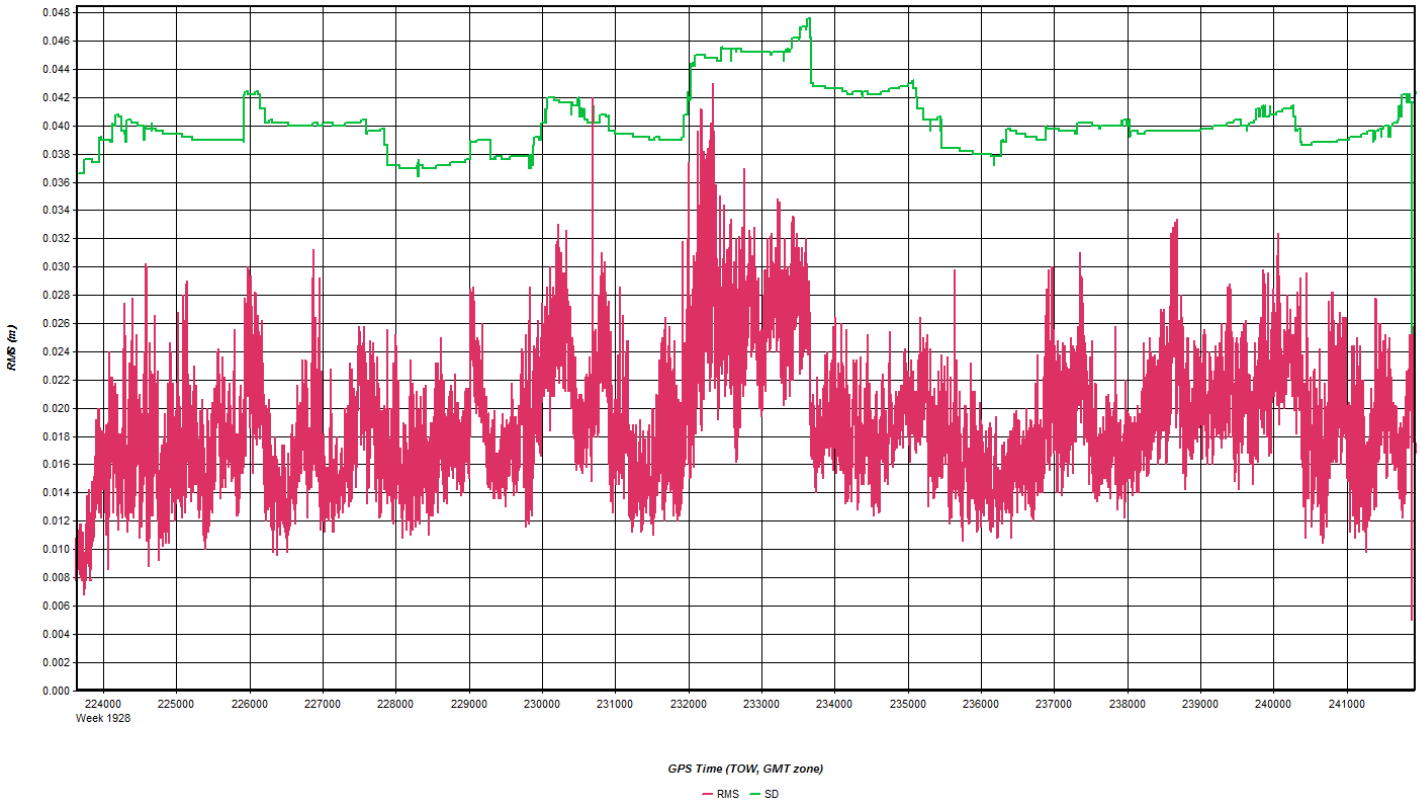

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
224000
Week 1928
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

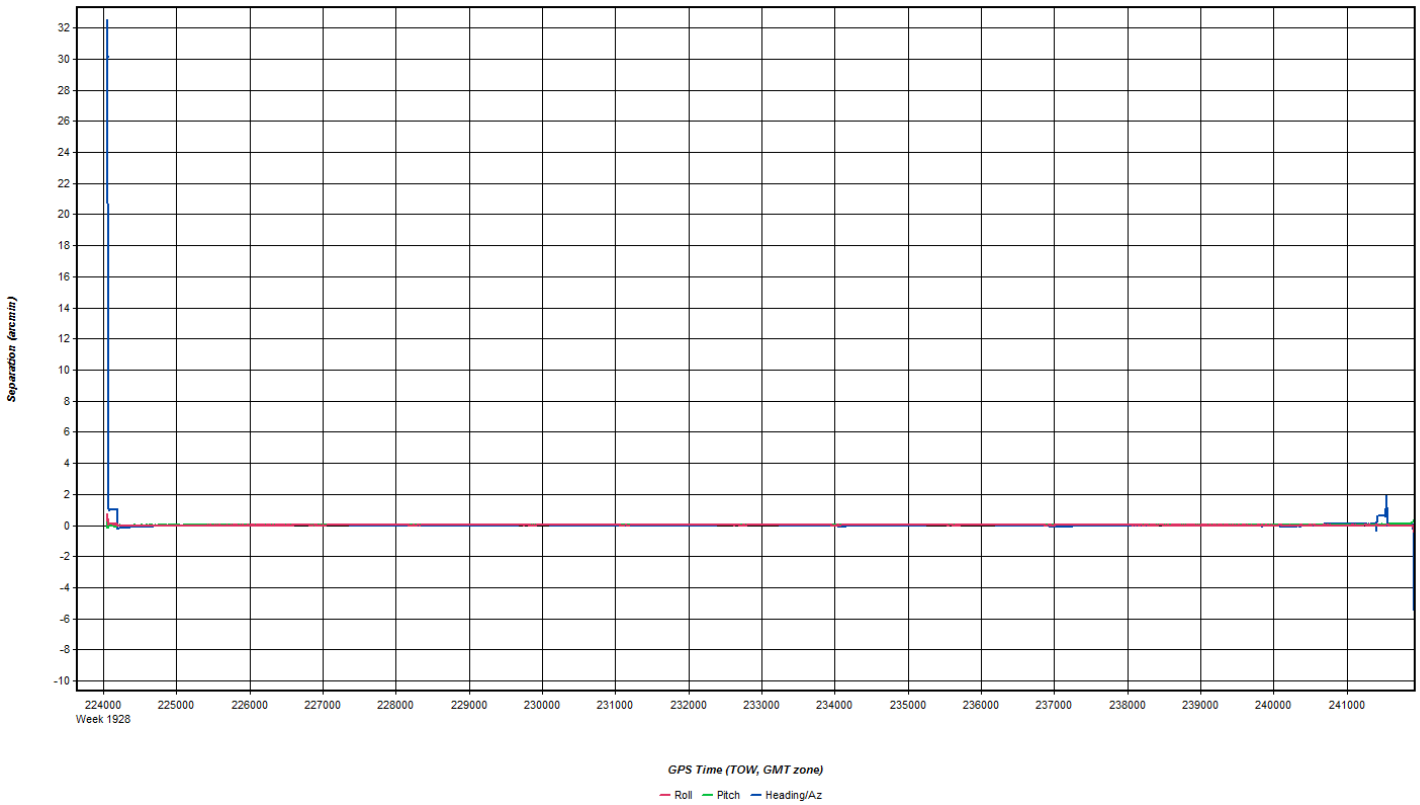

PDOP
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
224000
Week 1928
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
GPS Time (TOW, GMT zone)
PDOP

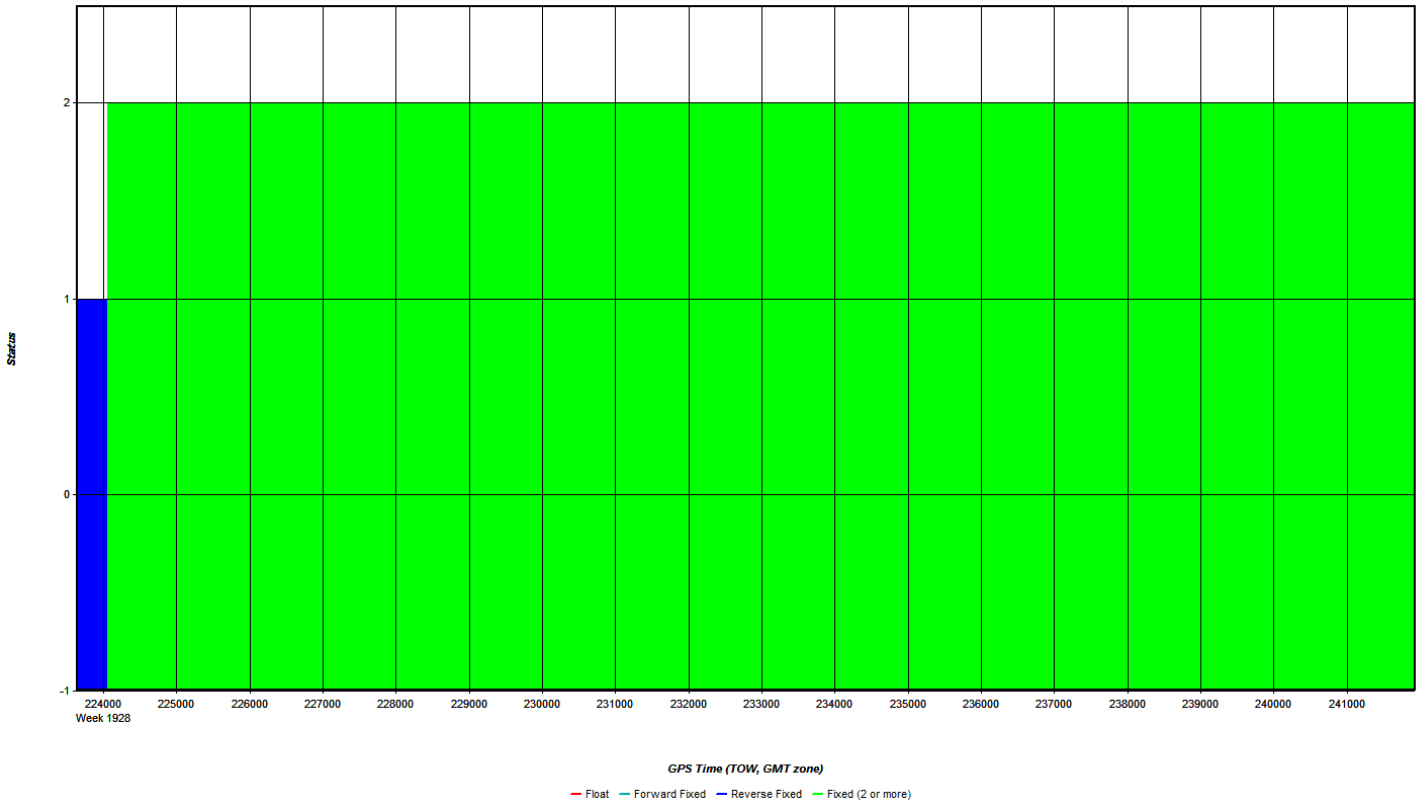

Estimated StdDev (m)
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
224000
Week 1928
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

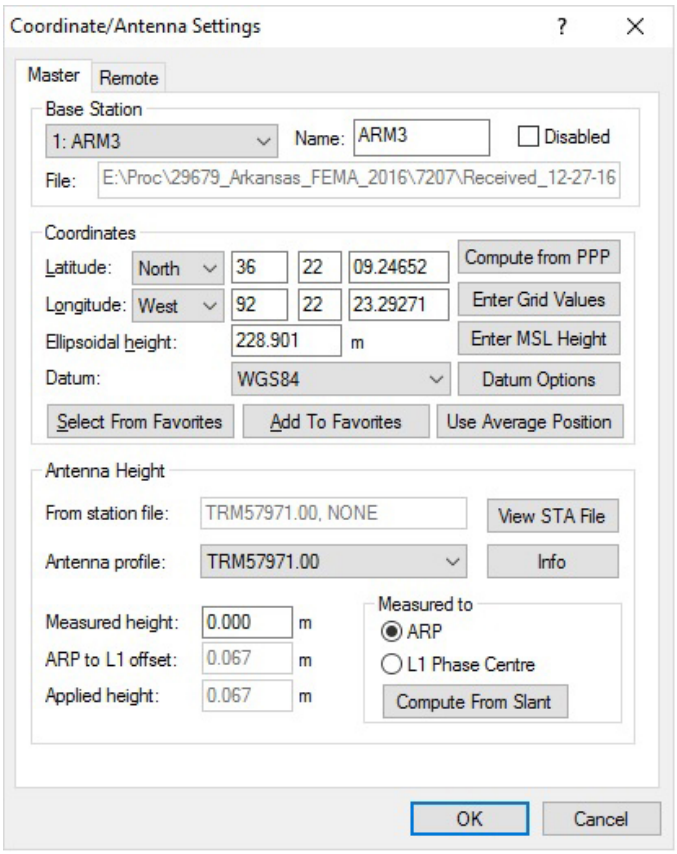

Roll & pitch (deg)
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
224000
Week 1928
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
GPS Time (TOW, GMT zone)
Roll
Pitch

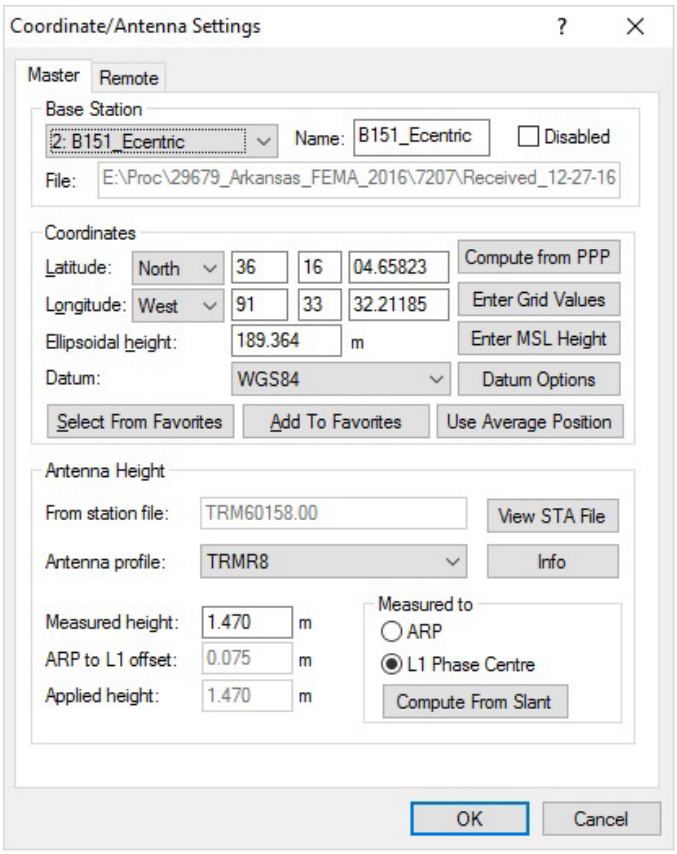

Height (m)
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
224000
Week 1928
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.048
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
224000
Week 1928
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
224000
Week 1928
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
224000
Week 1928
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARM3
Name:
ARM3
Disabled
File:
E:\Proc\29679_Arkansas_FEMA_2016\7207\Received_12-27-16
Coordinates
Latitude:
North
36
22
09.24652
Compute from PPP
Longitude:
West
92
22
23.29271
Enter Grid Values
Ellipsoidal height:
228.901
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM57971.00, NONE
View STA File
Antenna profile:
TRM57971.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.067
m
Applied height:
0.067
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: B151_Ecentric
Name: B151_Ecentric
Disabled
File: E:\Proc\29679_Arkansas_FEMA_2016\7207\Received_12-27-16
Coordinates
Latitude: North 36 16 04.65823
Longitude: West 91 33 32.21185
Ellipsoidal height: 189.364 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM60158.00
View STA File
Antenna profile: TRMR8
Info
Measured height: 1.470 m
ARP to L1 offset: 0.075 m
Applied height: 1.470 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Julian Day 355	Flight A

LIDAR Flight Log

Date December 20, 2016	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot M. Kalus
Location Hardy, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System	**Leica ALS70**
Unit	7207
IMU	**Honeywell Micro IRS**
GPS Rx	**NovAtel OEMV**
Roll Comp.	
Data Drive	1

Additional Notes

Wind:

Temp:

Pressure:

Clouds:

Visibility:

Aircraft Block Time		
Engine On 14:01	Ramp Out	Takeoff 14:16
Engine Off 19:13	Ramp In	Landing 19:02
Total 5.2 **hrs**	Total **hrs**	Total 4.8 **hrs**

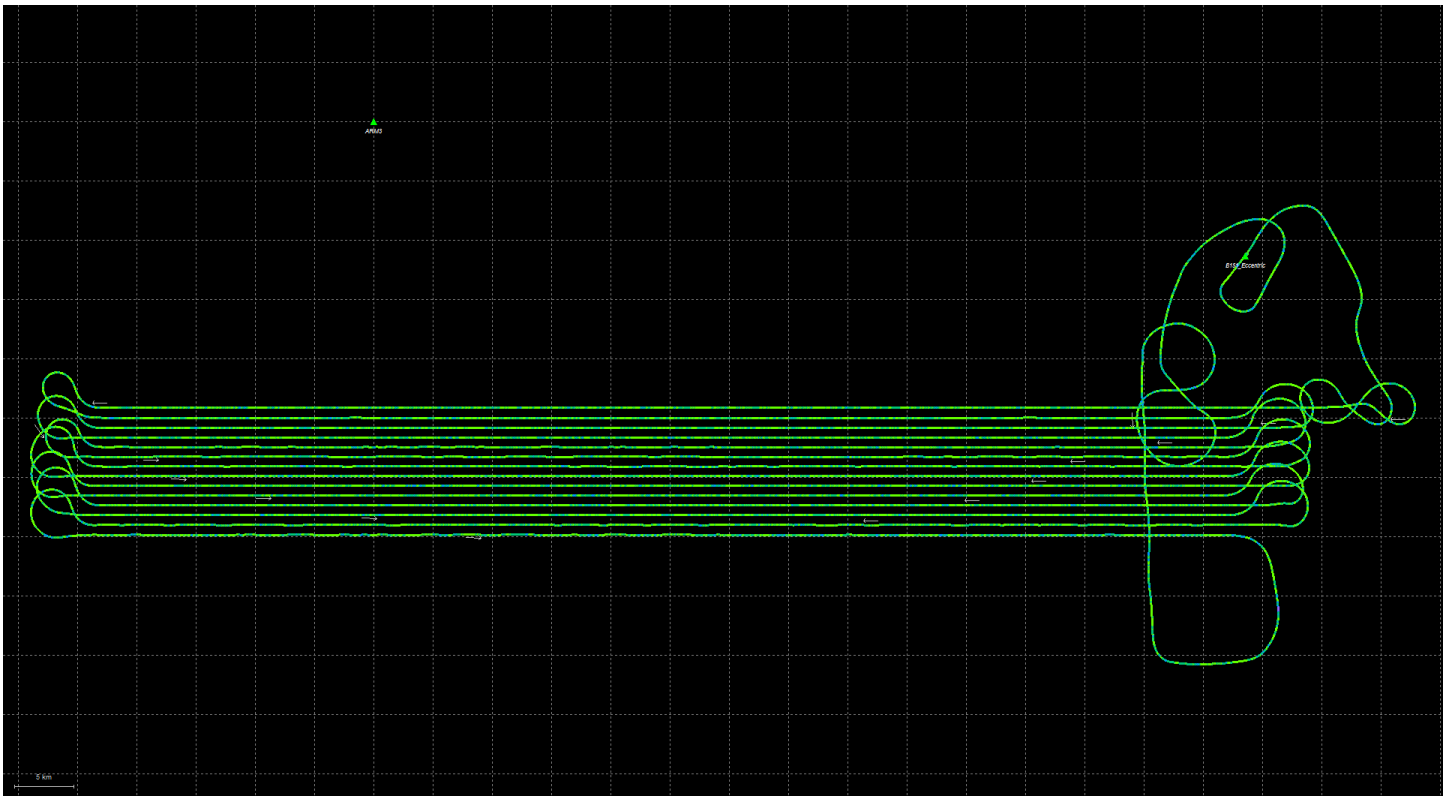
Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

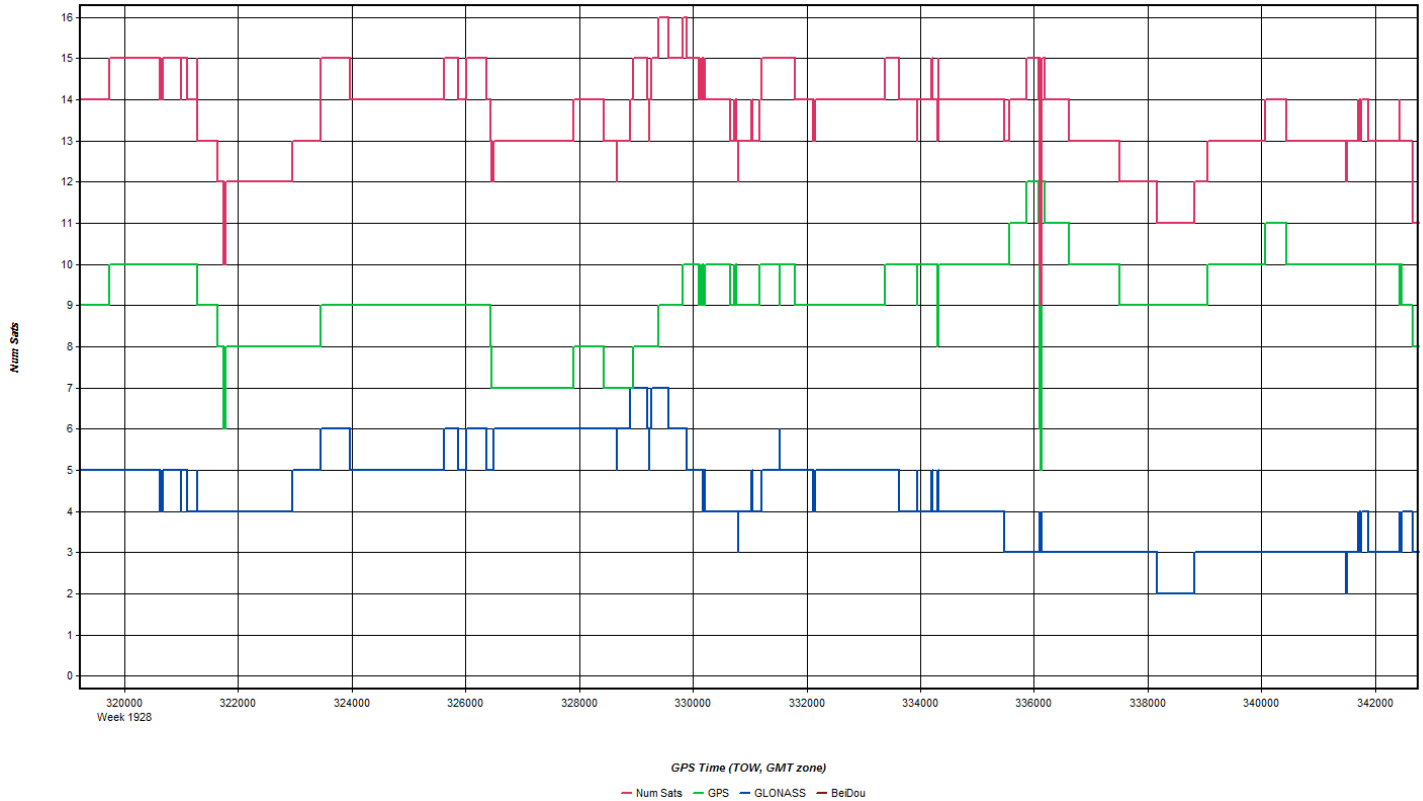
Static Alignment	GPS Time	
	Start	End
Pre Mission	14:07	14:12
Post Mission	19:06	19:11

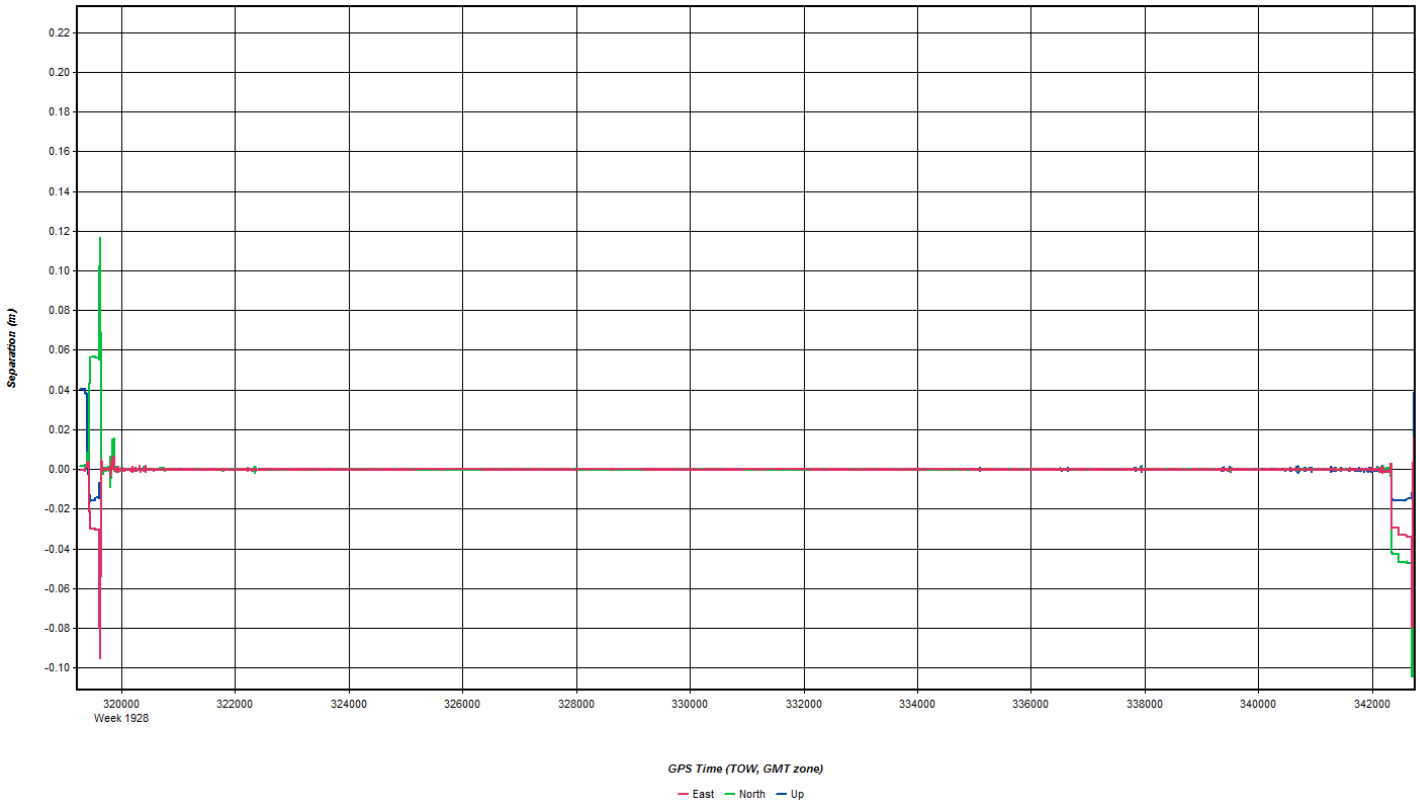
Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 161220_
IMU		Figure 8	14:27	14:34			IMU Wake Up
039		270	14:37:51	15:00:22			Strong headwind – 31knts on the nose
040		090	15:03:27	15:22:15			
041		270	15:26:08	15:48:56			
042		090	15:51:50	16:10:37			
043		270	16:14:21	16:36:44			
044		090	16:39:49	16:58:35			
045		270	17:30:08	17:25:32			
046		090	17:28:22	17:47:06			
047		270	17:51:08	18:13:05			Error message: Calculated fov 6 is less than planned 40
048		090	18:16:40	18:35:20			Mission ended to determine FOV issue
Xtie AOI1		001	18:41:59	18:44:53			Cross tie S-->N for AOI 1 lines 039 to 048
IMU		Figure 8	18:45	18:52			IMU maneuver
							- lines needing reflight will be indicated on next flight
							loghseet.

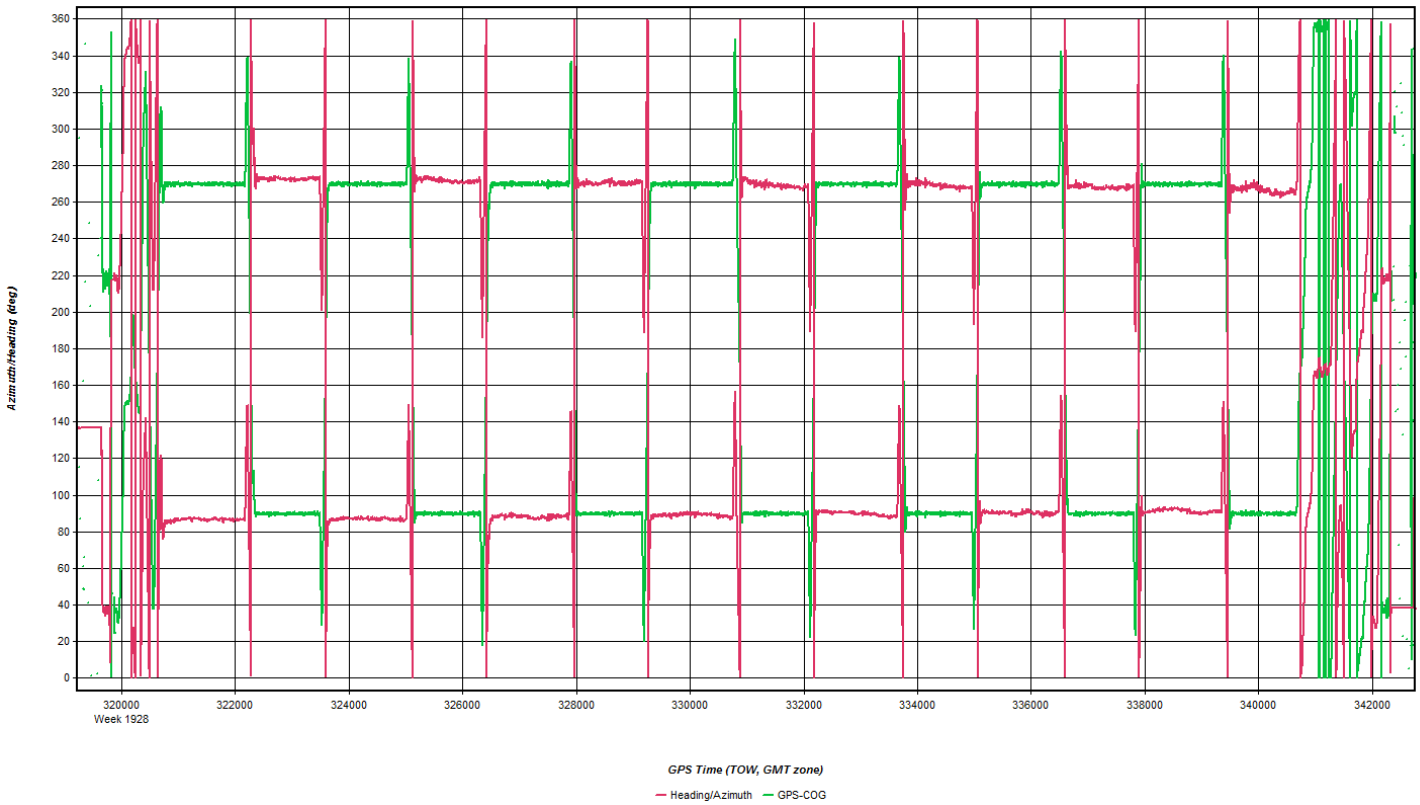
Pg 1 of 1

Dec 21, 2016-A (C-GKSI, SN7207)

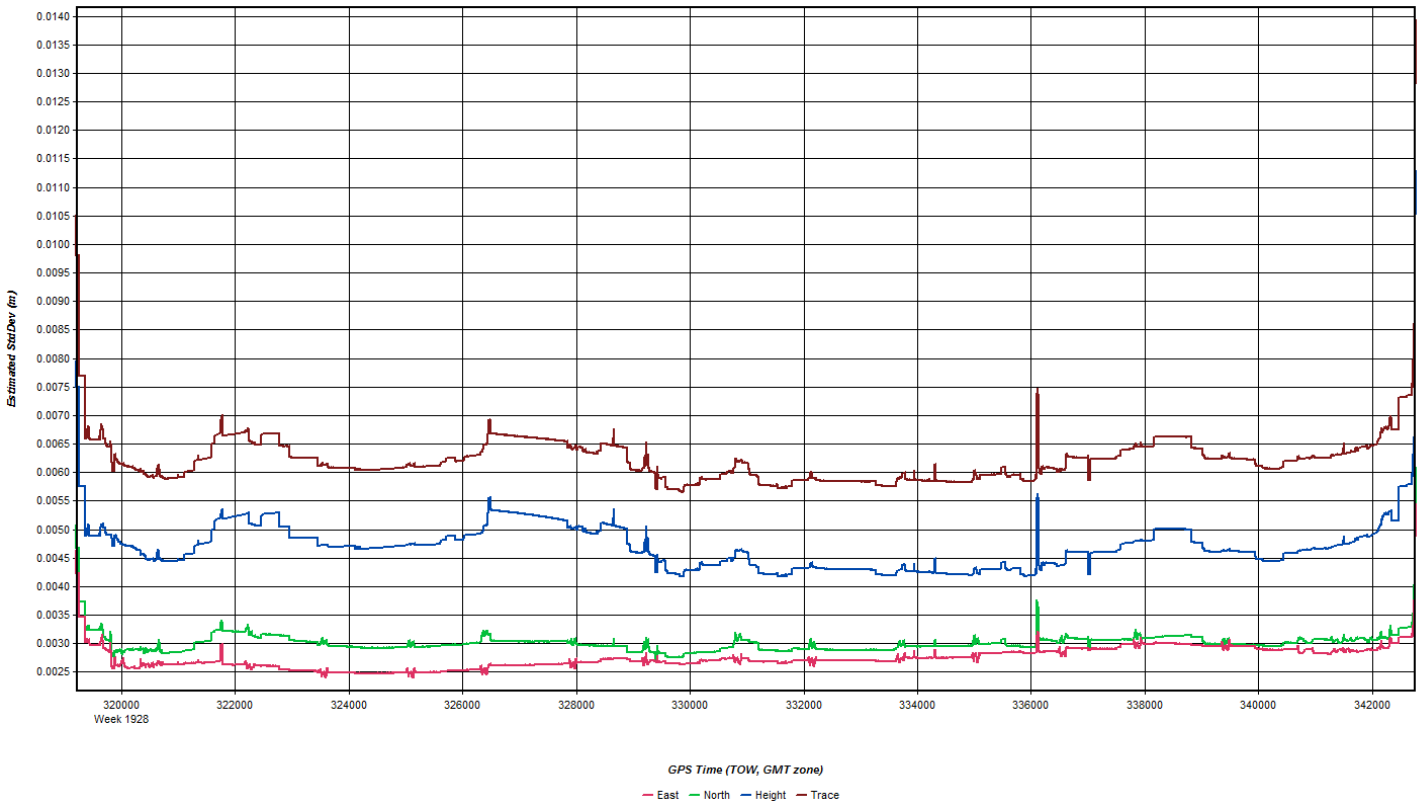

ARM
BASE_Eccentric
5 km

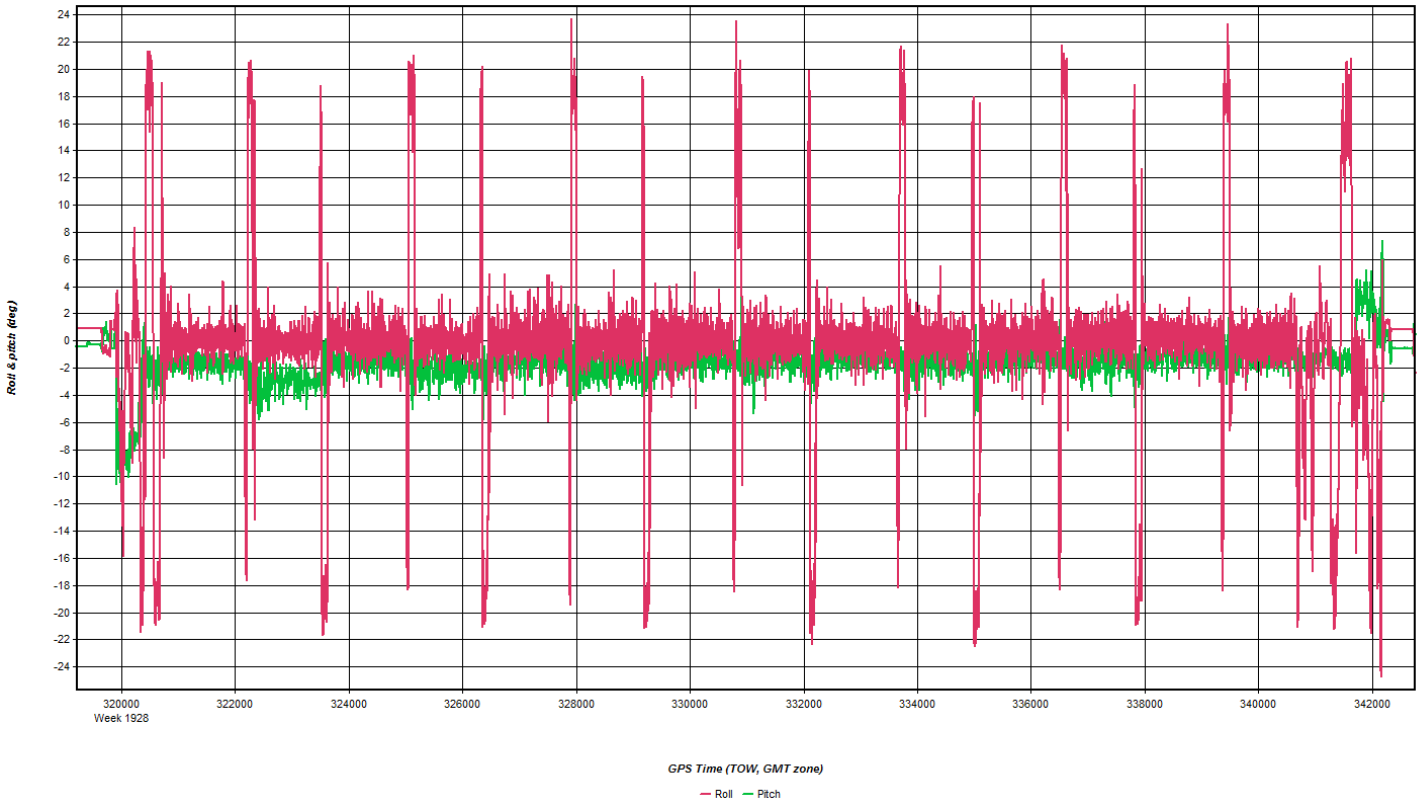

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
320000
Week 1928
322000
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

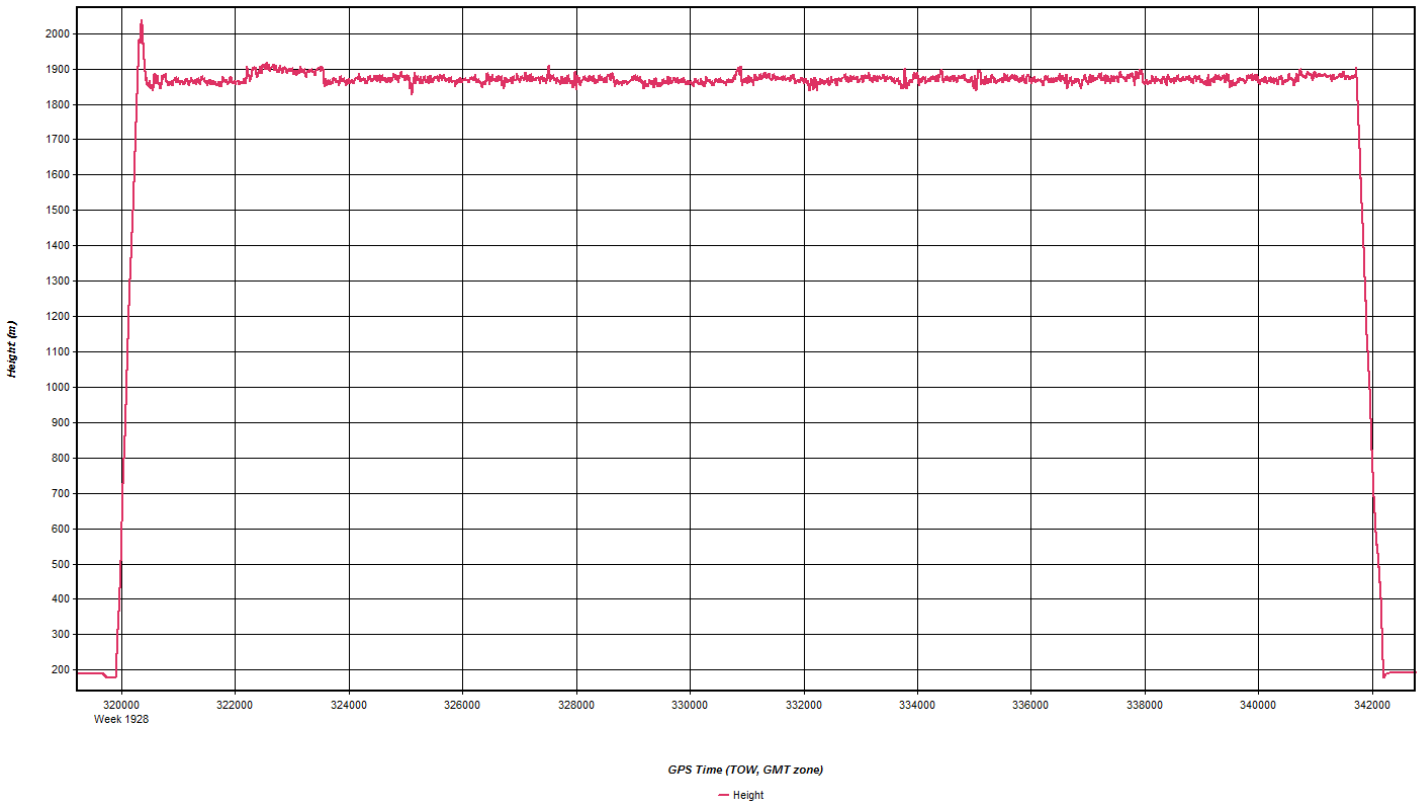

Separation (m)
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
-0.06
-0.08
-0.10
320000
Week 1928
322000
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
East
North
Up

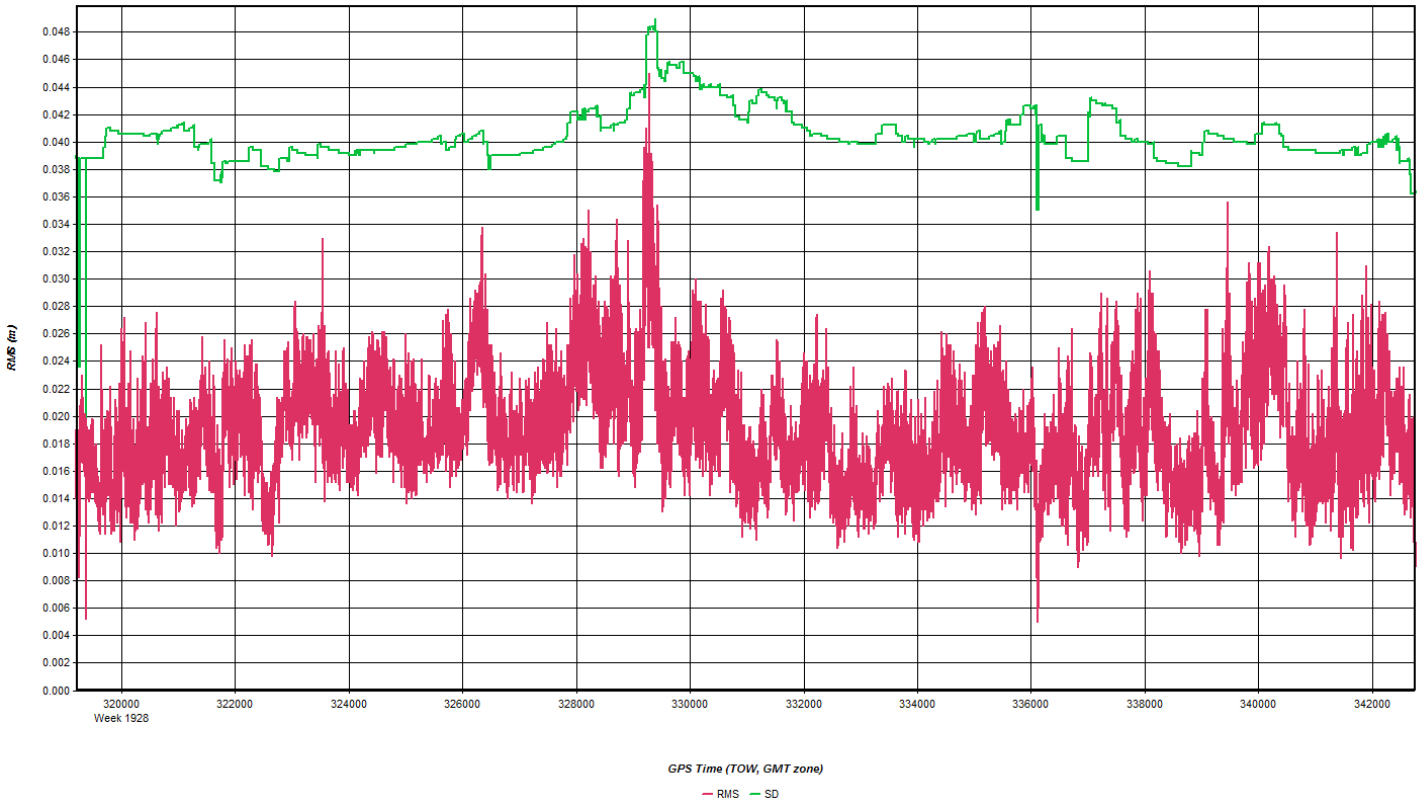

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
320000
Week 1928
322000
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

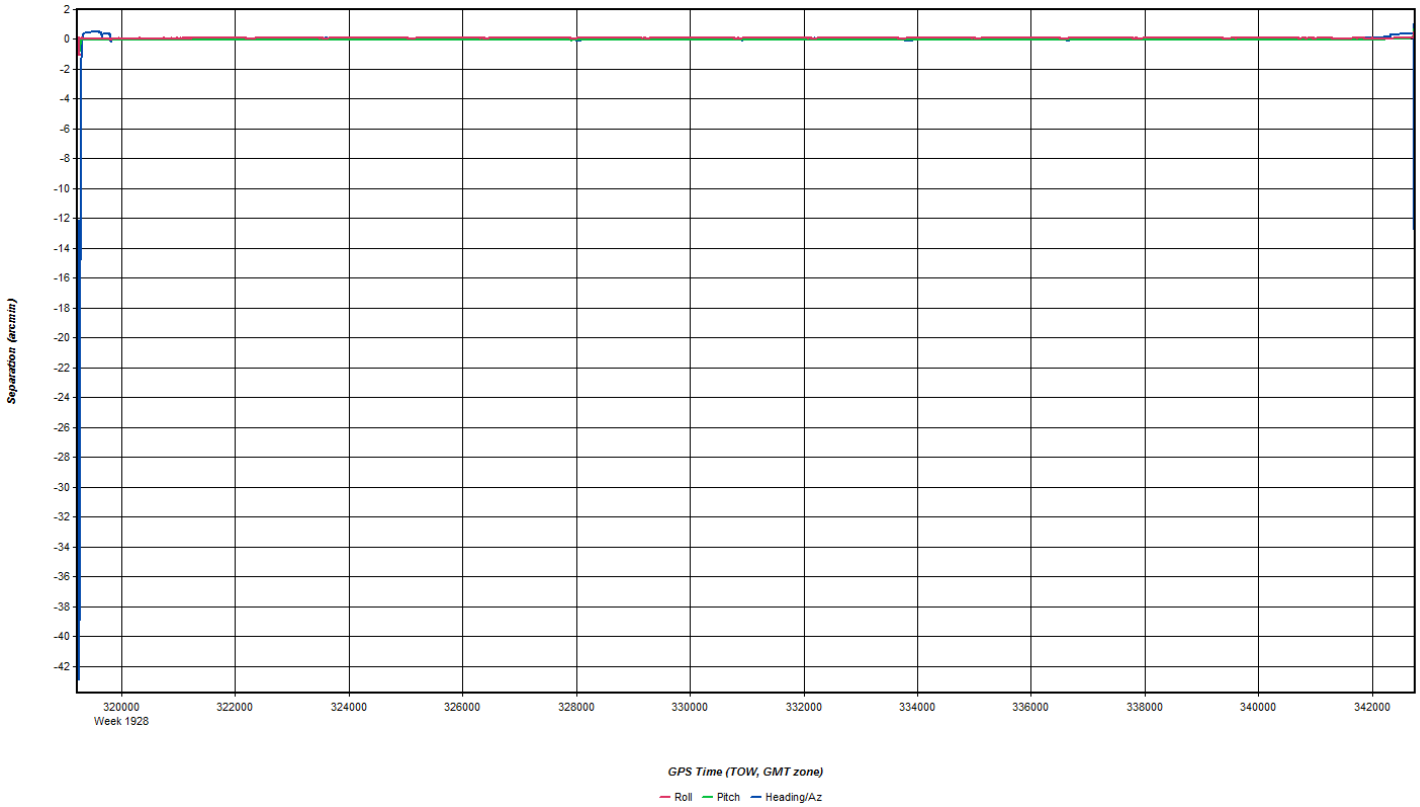

PDOP
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
320000
Week 1928
322000
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
PDOP

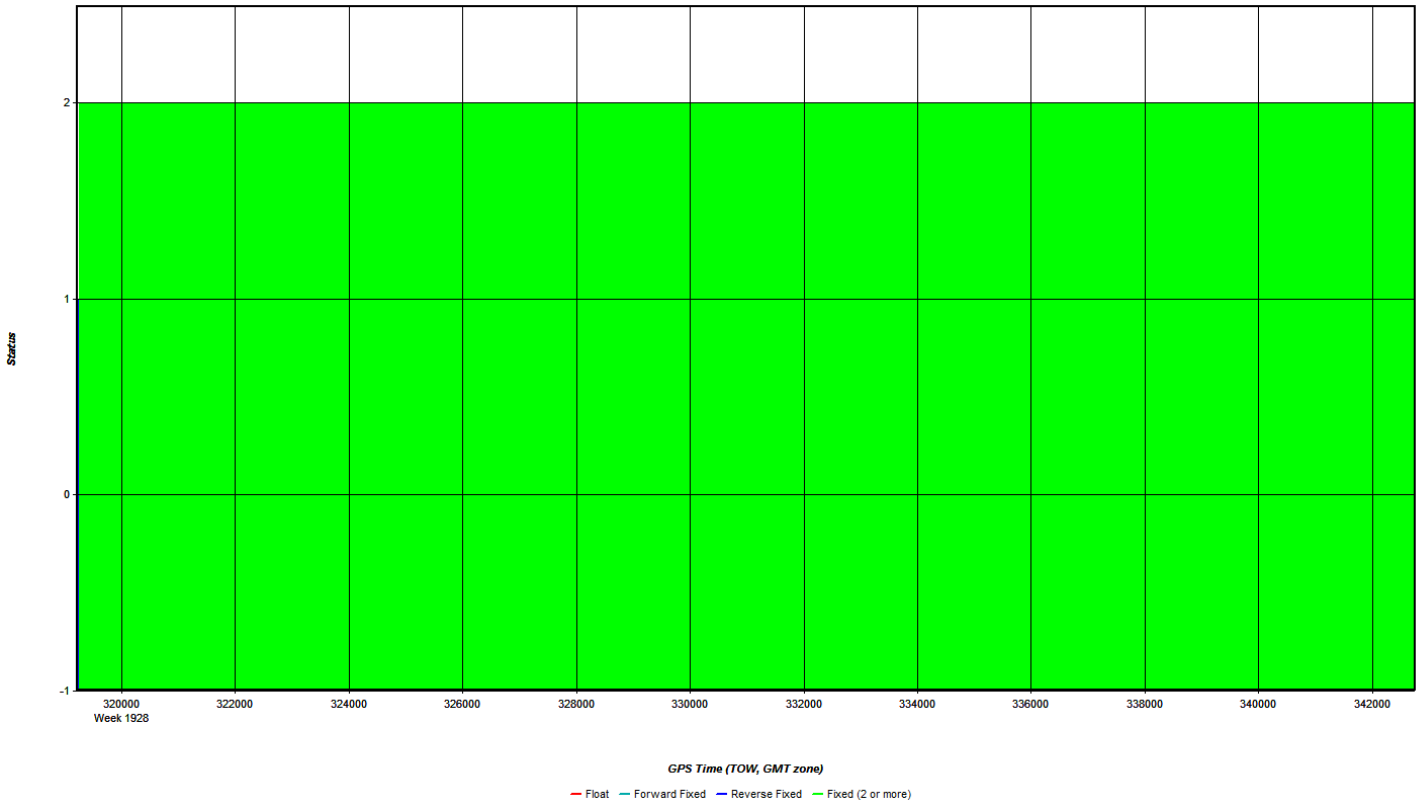

Estimated StdDev (m)
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
320000
Week 1928
322000
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

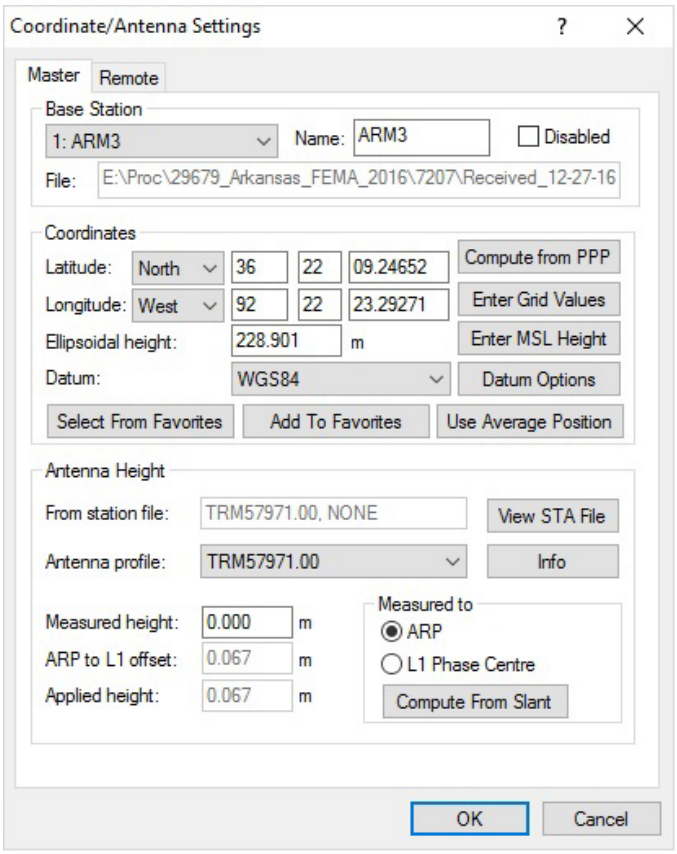

Roll & pitch (deg)
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
320000
Week 1928
322000
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
Roll
Pitch

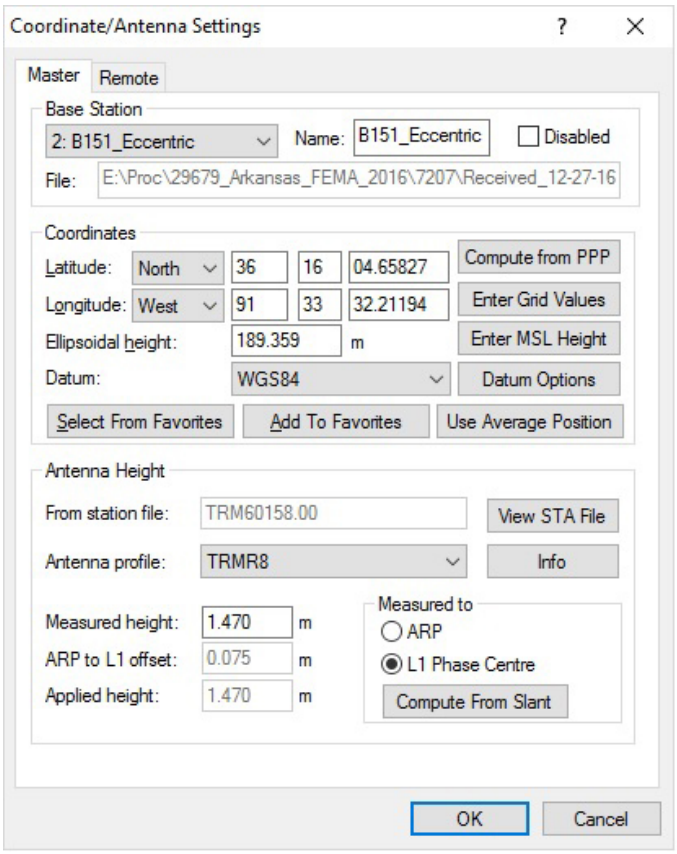

Height (m)
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
320000
Week 1928
322000
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.048
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
320000
Week 1928
322000
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
-32
-34
-36
-38
-40
-42
320000
Week 1928
322000
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
320000
Week 1928
322000
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARM3
Name:
ARM3
Disabled
File:
E:\Proc\29679_Arkansas_FEMA_2016\7207\Received_12-27-16
Coordinates
Latitude:
North
36
22
09.24652
Compute from PPP
Longitude:
West
92
22
23.29271
Enter Grid Values
Ellipsoidal height:
228.901
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM57971.00, NONE
View STA File
Antenna profile:
TRM57971.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.067
m
Applied height:
0.067
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: B151_Eccentric
Name:
B151_Eccentric
Disabled
File:
E:\Proc\29679_Arkansas_FEMA_2016\7207\Received_12-27-16
Coordinates
Latitude:
North
36
16
04.65827
Compute from PPP
Longitude:
West
91
33
32.21194
Enter Grid Values
Ellipsoidal height:
189.359
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM60158.00
View STA File
Antenna profile:
TRMR8
Info
Measured height:
1.470
m
ARP to L1 offset:
0.075
m
Applied height:
1.470
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Julian Day 356	Flight A

LIDAR Flight Log

Date December 21, 2016	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot M. Kalus
Location Hardy, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System	**Leica ALS70**
Unit	7207
IMU	**Honeywell Micro IRS**
GPS Rx	**NovAtel OEMV**
Roll Comp.	
Data Drive	1

Additional Notes
Wind:
Temp:
Pressure:
Clouds:
Visibility:

Aircraft Block Time		
Engine On 16:33	Ramp Out	Takeoff 16:50
Engine Off 23:14	Ramp In	Landing 23:03
Total 6.7 **hrs**	Total **hrs**	Total 6.2 **hrs**

Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

Static Alignment	GPS Time	
	Start	End
Pre Mission	16:41	16:46
Post Mission	23:06	23:11

Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 161221_
IMU		Figure 8	17:00	17:05			IMU Wake Up
045		270	17:07:40	17:29:13			RE-FLIGHT – from mission 0716355a
046		090	17:32:11	17:51:02			RE-FLIGHT - from mission 0716355a
047		270	17:54:55	18:16:38			RE-FLIGHT - from mission 0716355a
048		090	18:19:34	18:38:12			RE-FLIGHT - from mission 0716355a
049		270	18:41:59	19:04:15			
050		090	19:06:50	19:25:32			
051		270	19:29:25	19:52:10			
052		090	19:55:34	20:14:16			
053		270	20:18:05	20:41:57			
054		090	20:43:33	21:03:19			
055		270	21:05:58	21:27:52			
056		090	21:30:51	21:49:41			
057		270	21:53:24	22:15:24			
058		090	22:18:31	22:37:25			

Pg 1 of 2

Julian Day 356	Flight A

LIDAR Flight Log

Date December 21, 2016	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot M. Kalus
Location Hardy, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System	**Leica ALS70**
Unit	7207
IMU	**Honeywell Micro IRS**
GPS Rx	**NovAtel OEMV**
Roll Comp.	
Data Drive	1

Additional Notes

Wind:

Temp:

Pressure:

Clouds:

Visibility:

Aircraft Block Time		
Engine On 16:33	Ramp Out	Takeoff 16:50
Engine Off 23:14	Ramp In	Landing 23:03
Total 6.7 **hrs**	Total **hrs**	Total 6.2 **hrs**

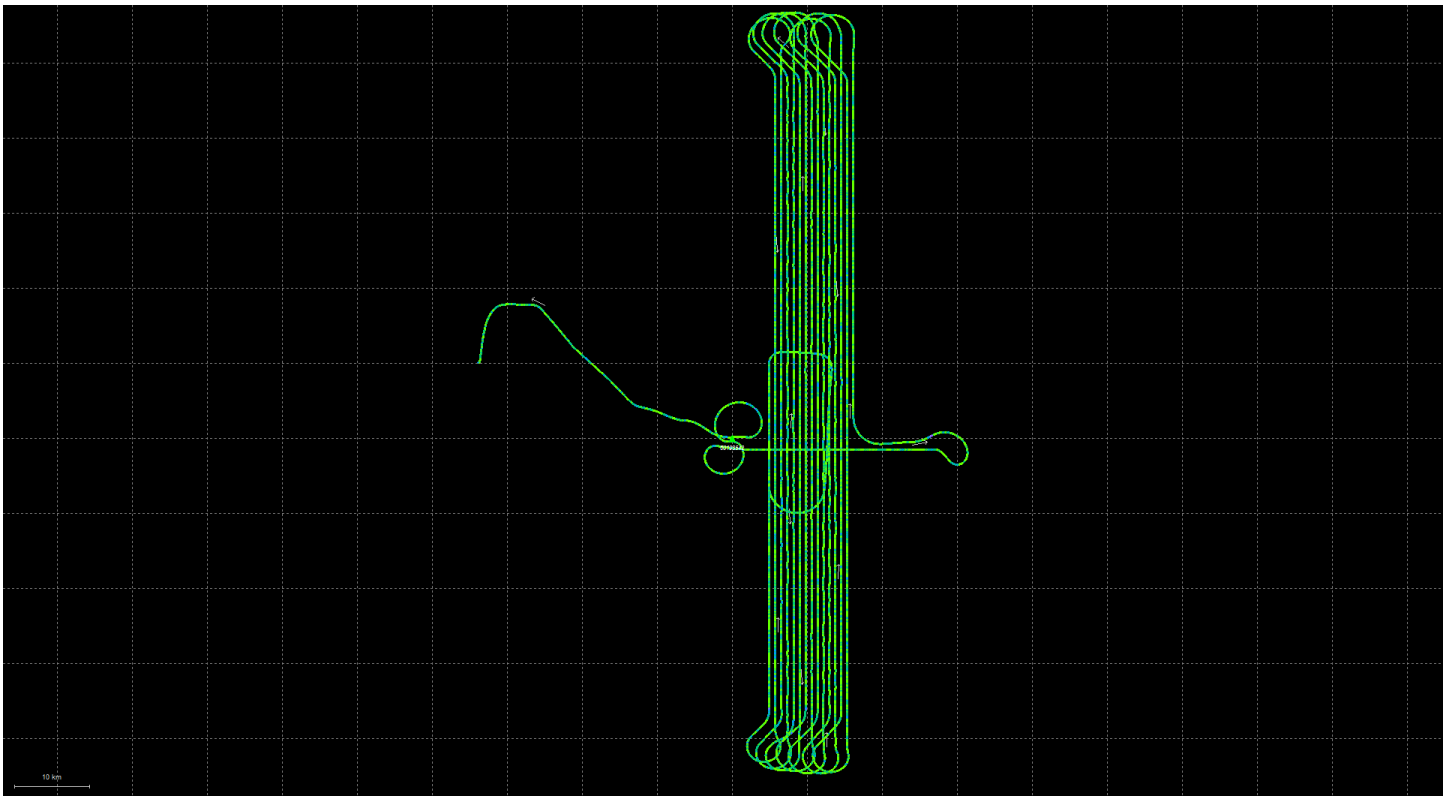
Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

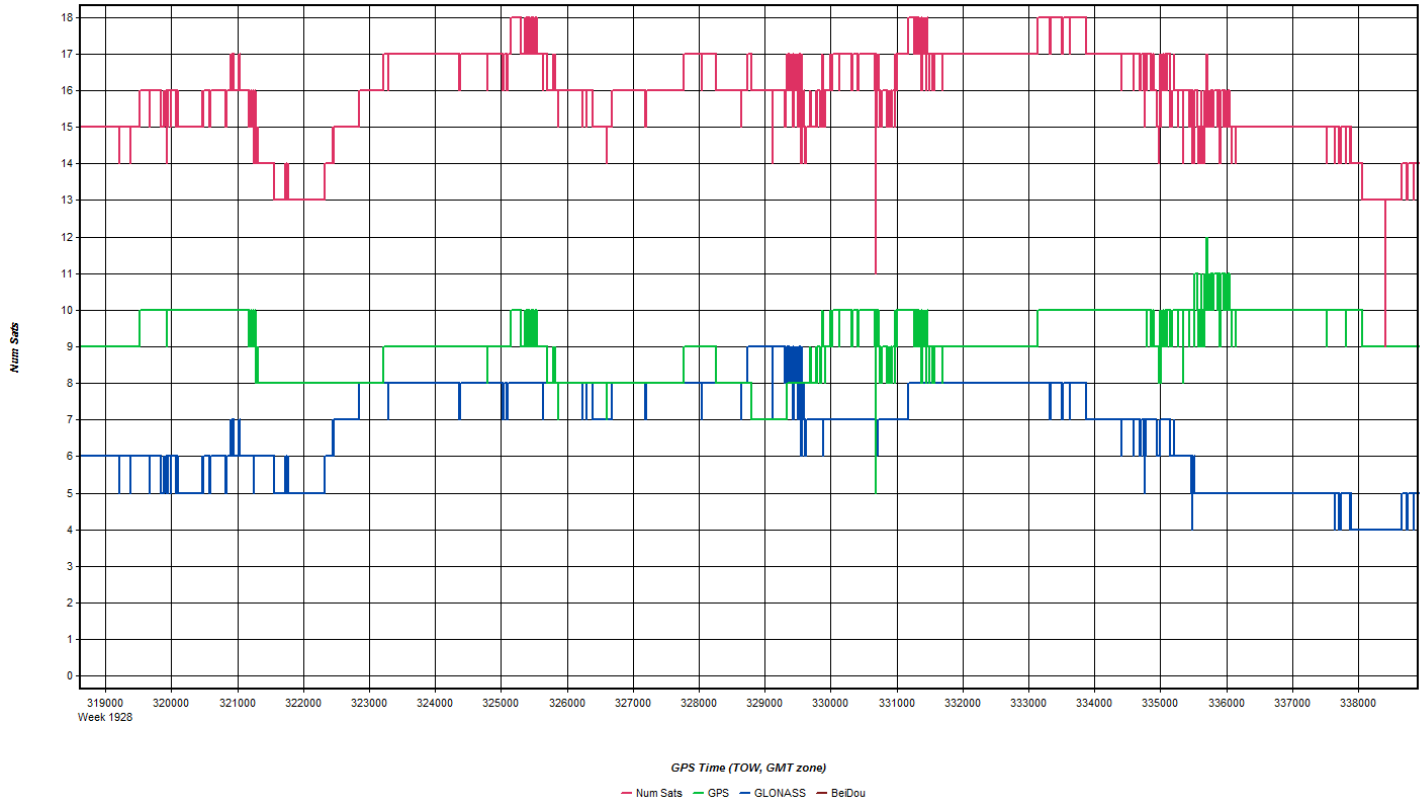
Static Alignment	GPS Time	
	Start	End
Pre Mission	16:41	16:46
Post Mission	23:06	23:11

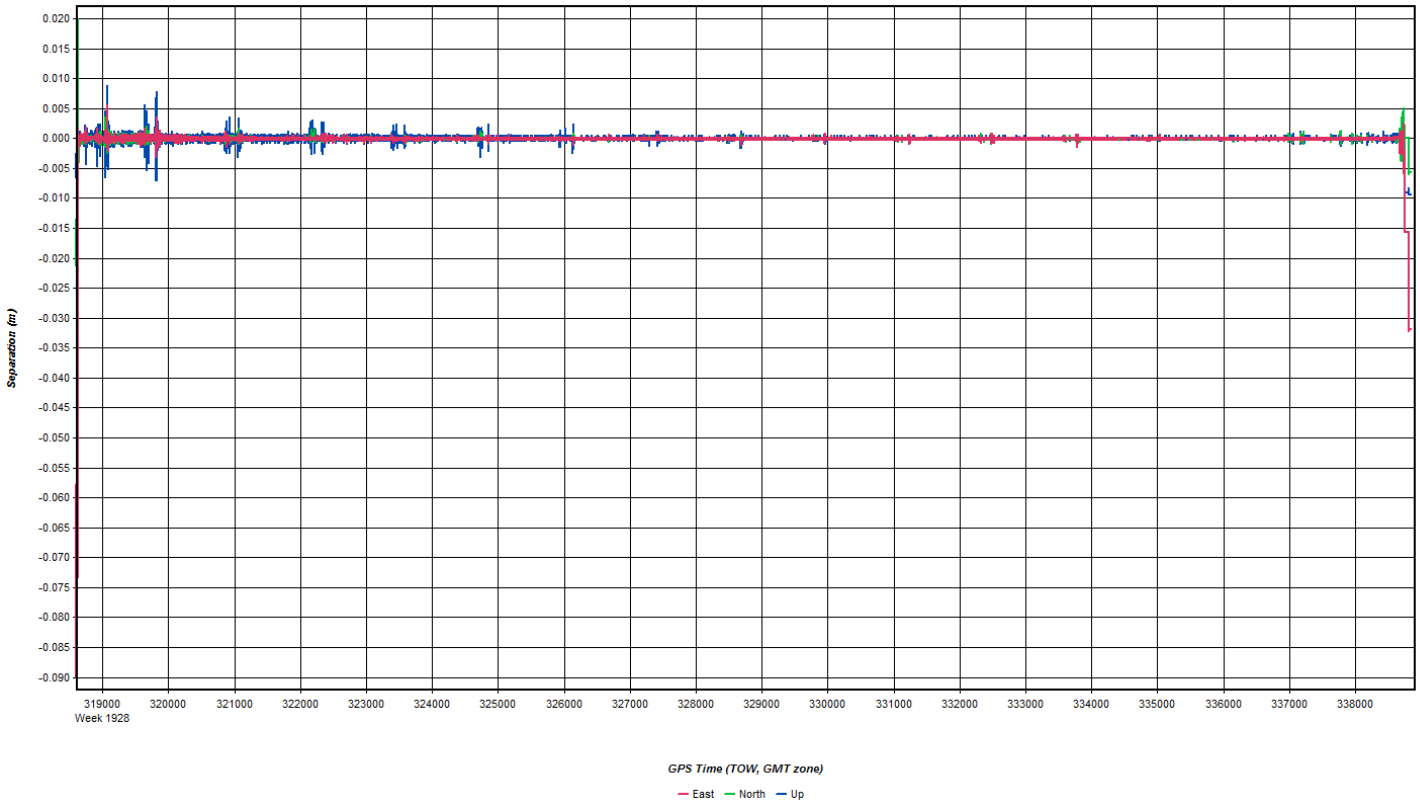
Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 161221_
Xtie AOI1		001	22:43:50	22:47:37			Cross tie S-->N for AOI 1 lines 045 to 058
IMU		Figure 8	22:48	22:55			IMU maneuver
							MERRY CHRISTMAS & HAPPY NEW YEAR!!

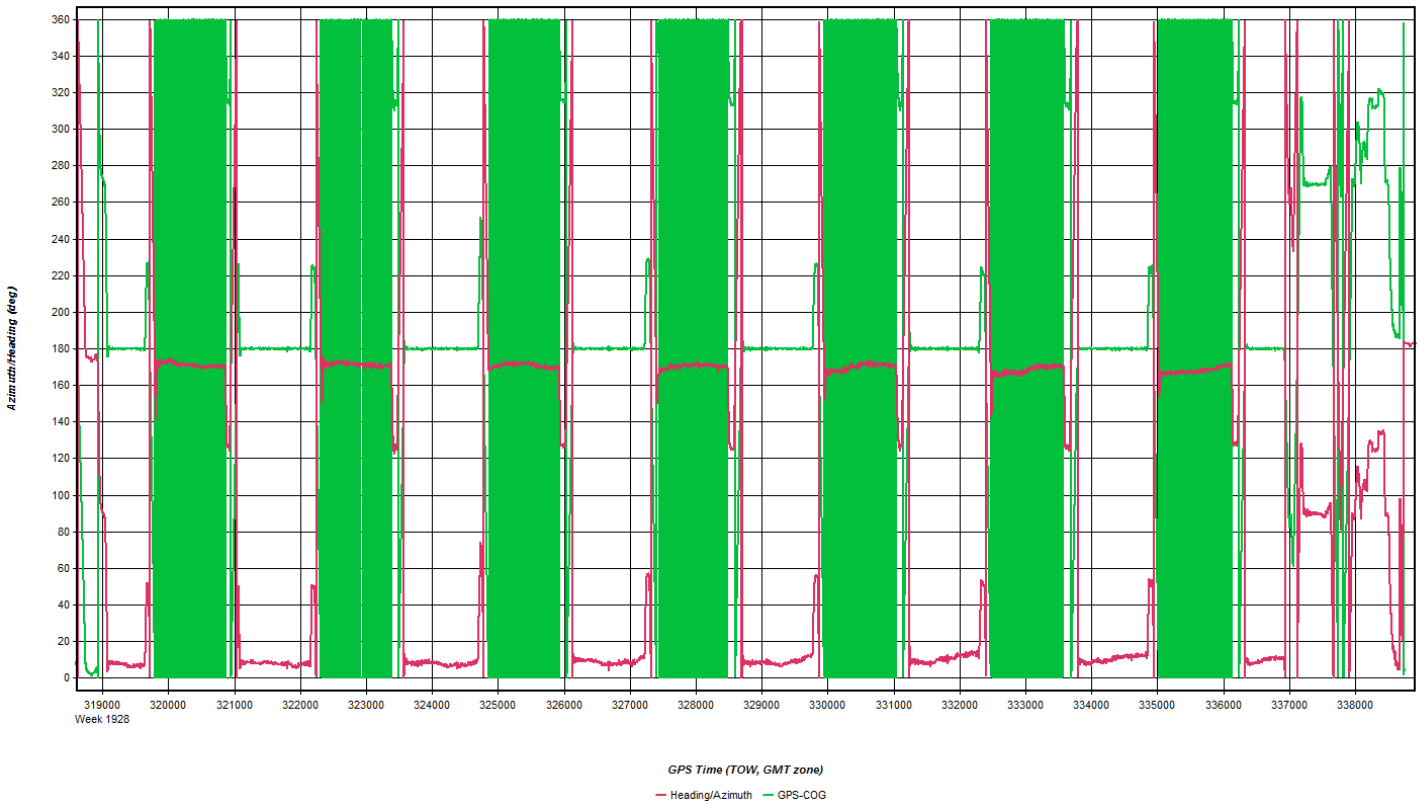
Pg 2 of 2

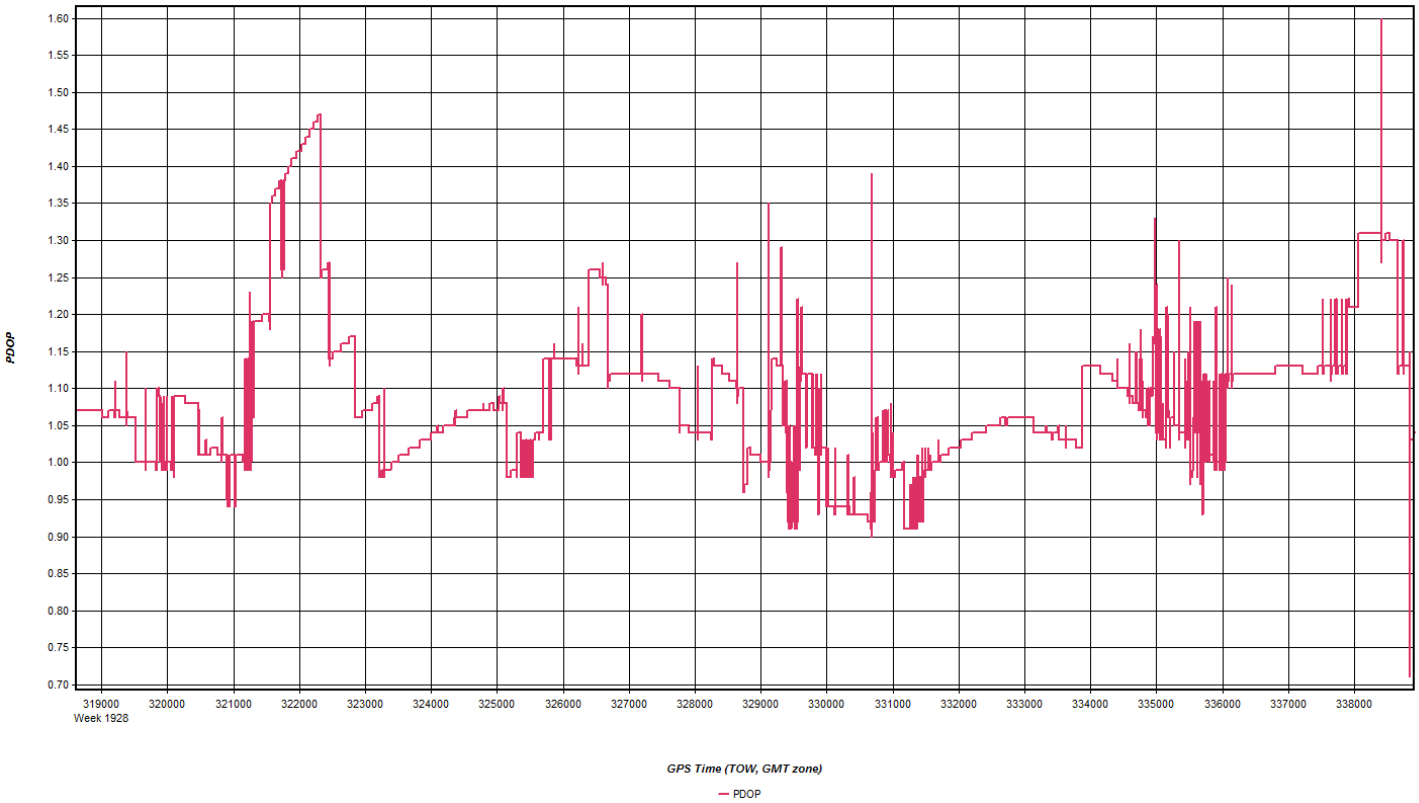
Dec 21, 2016-A (C-GKSI, SN7229)

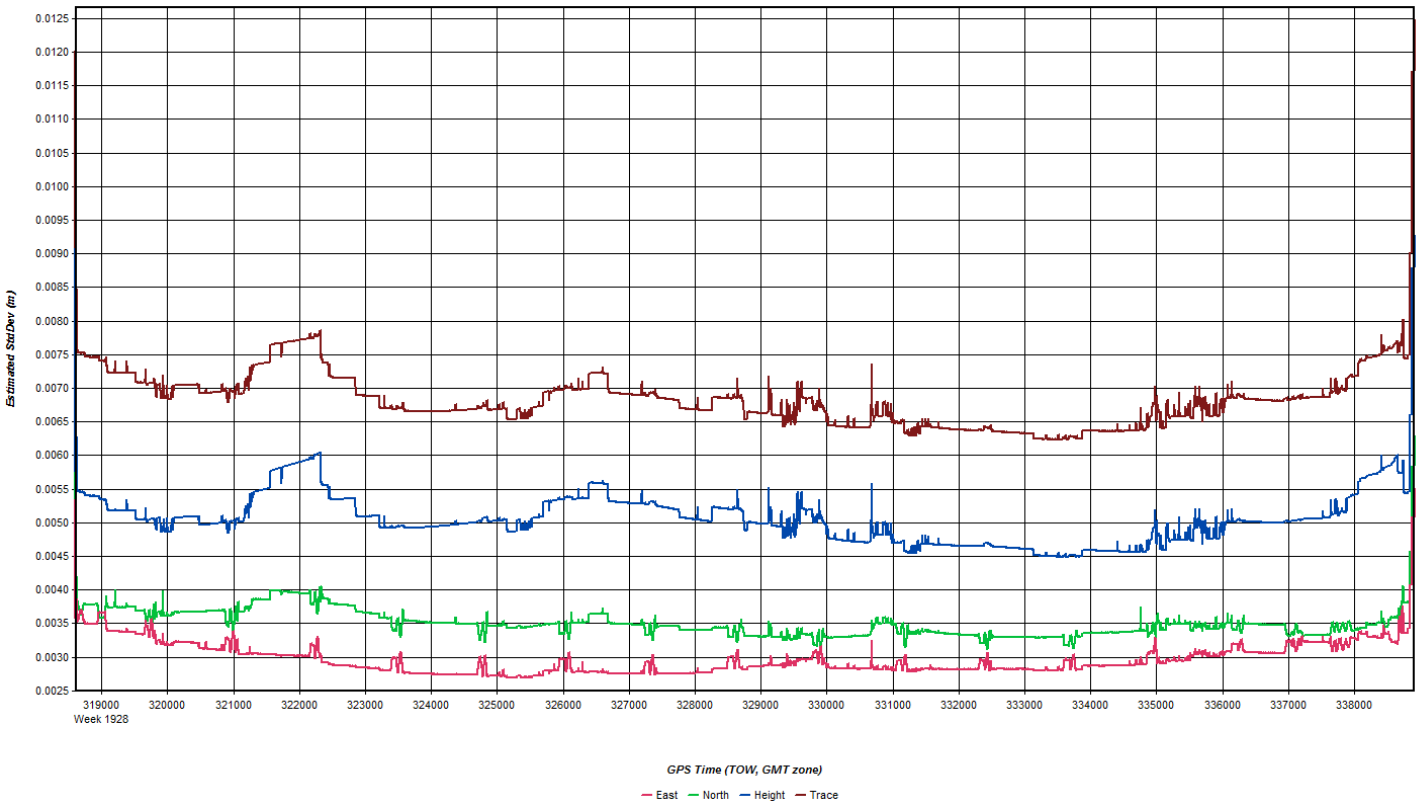


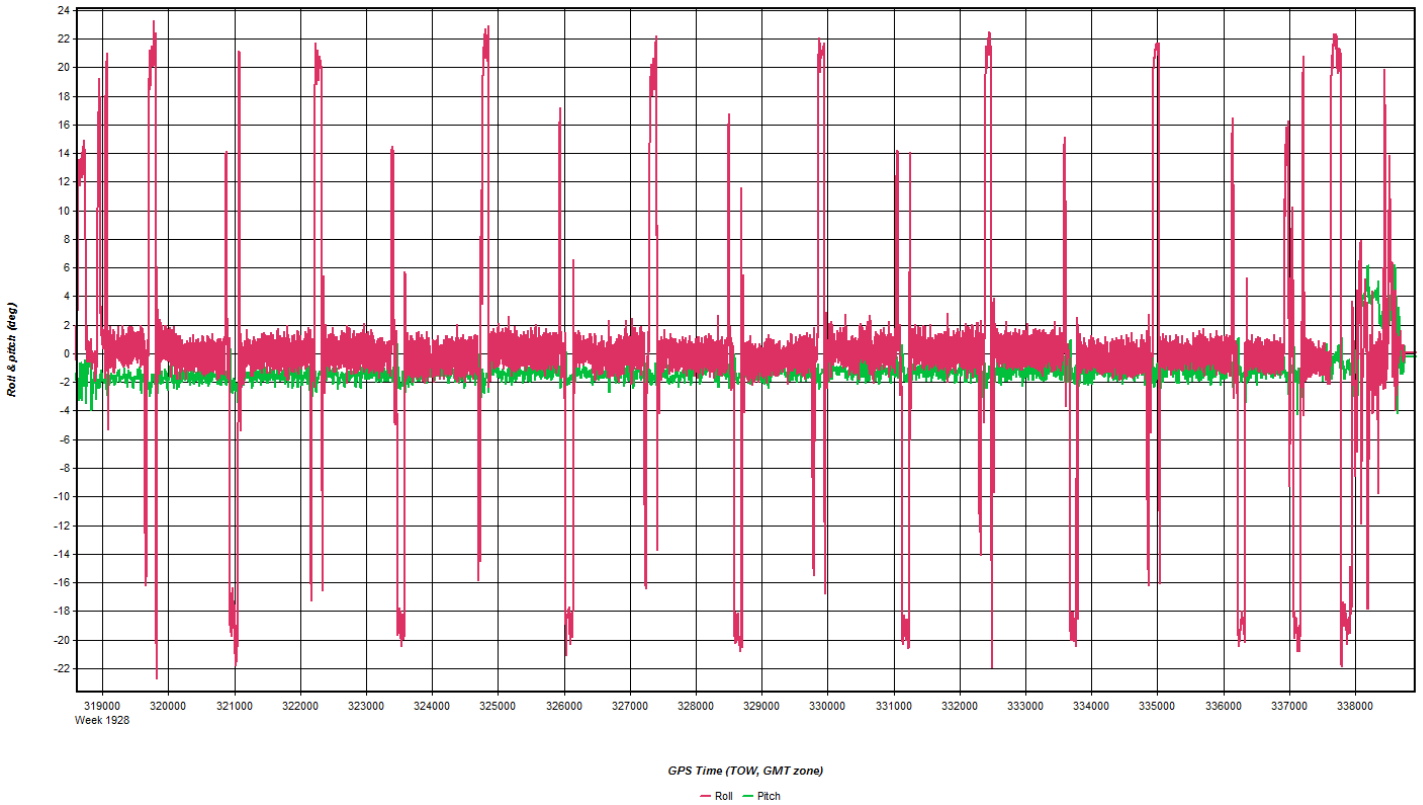

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
319000
Week 1928
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
336000
337000
338000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

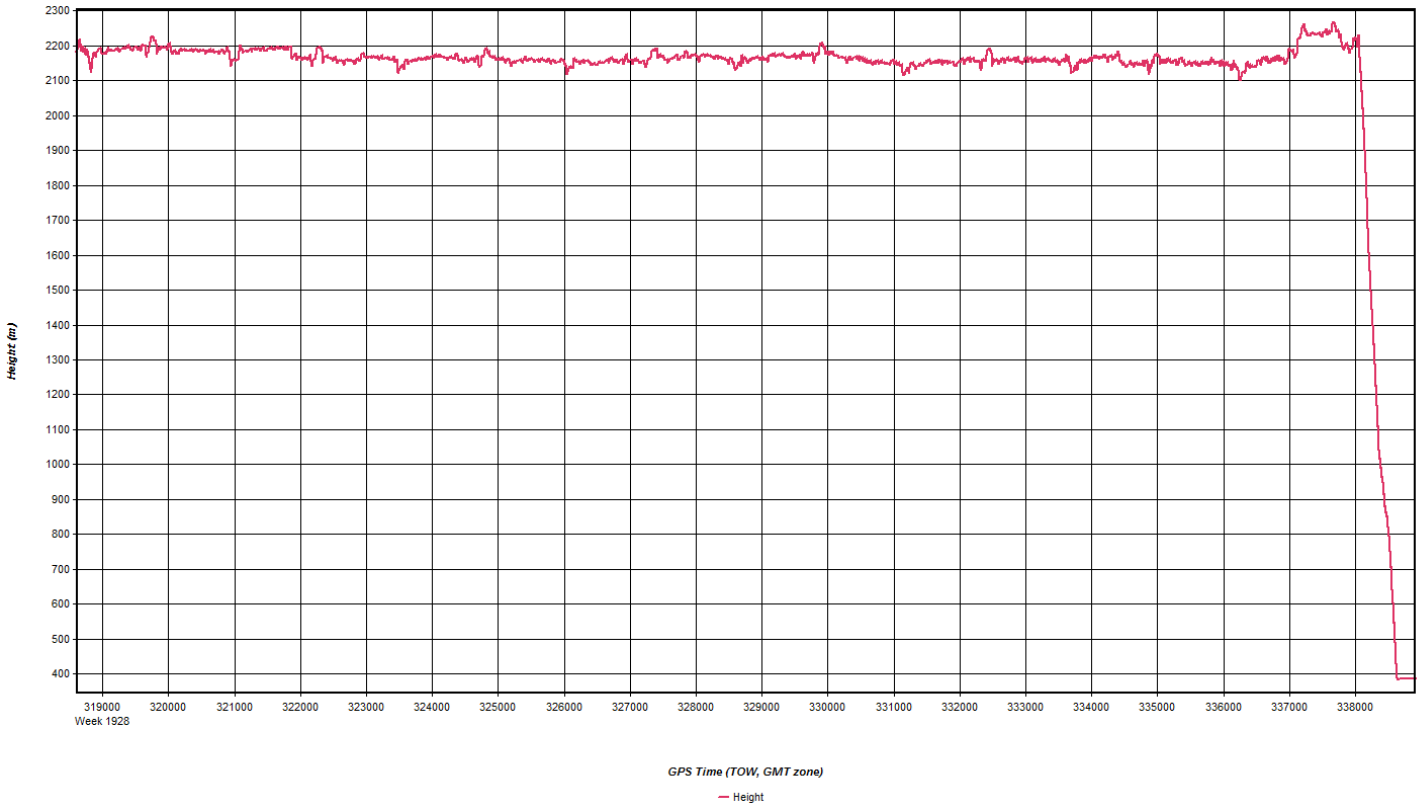

Separation (m)
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
-0.055
-0.060
-0.065
-0.070
-0.075
-0.080
-0.085
-0.090
319000
Week 1928
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
336000
337000
338000
GPS Time (TOW, GMT zone)
East
North
Up

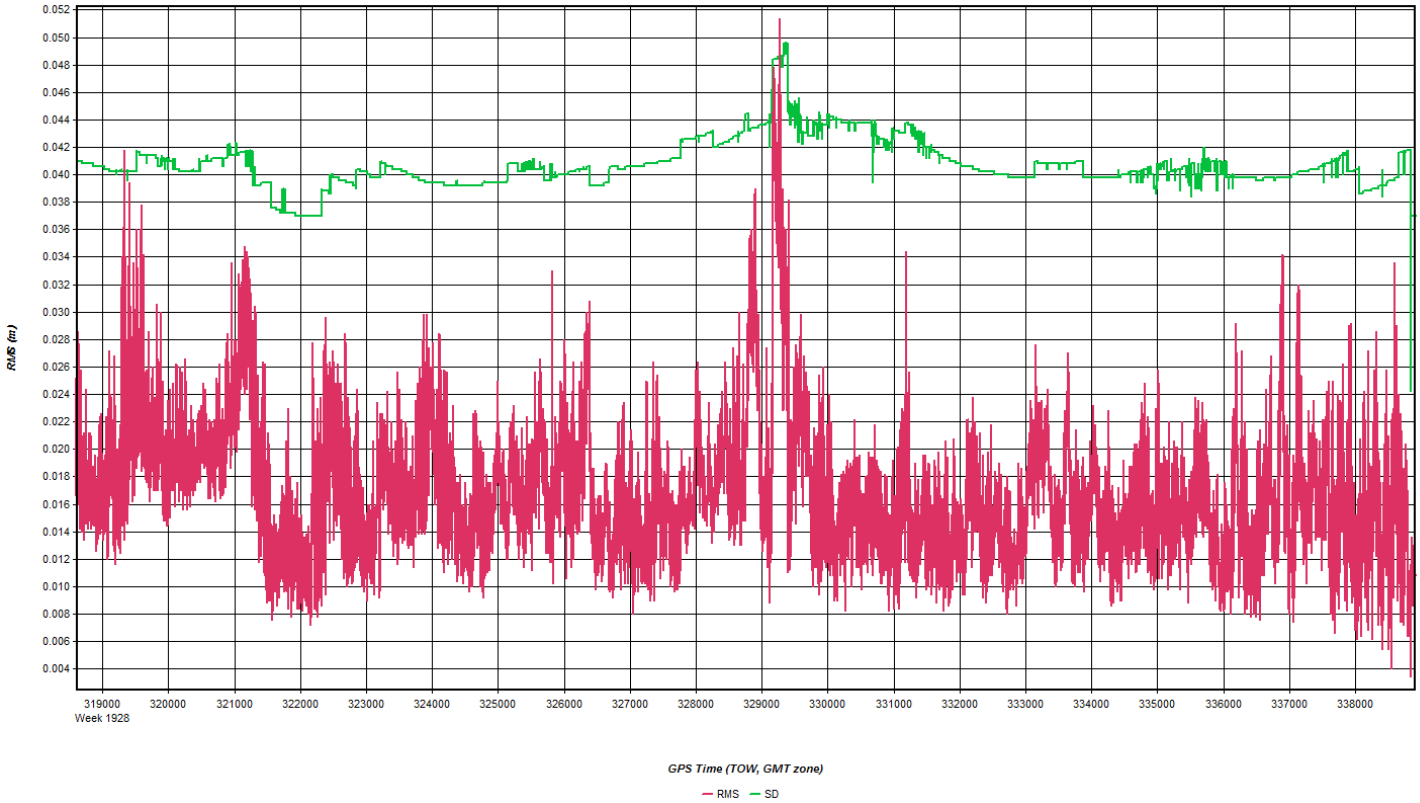

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
319000
Week 1928
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
336000
337000
338000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

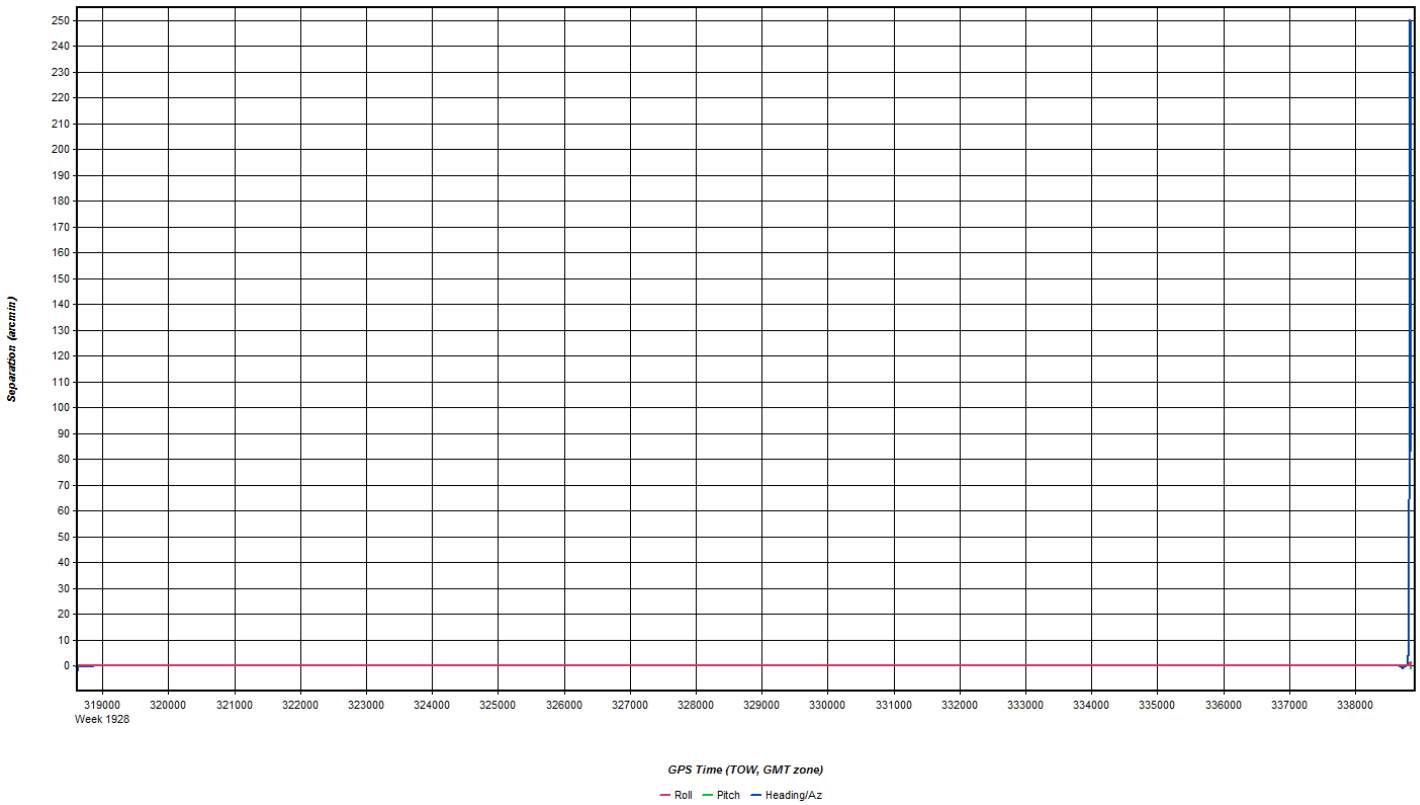

PDOP
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
0.70
319000
Week 1928
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
336000
337000
338000
GPS Time (TOW, GMT zone)
PDOP

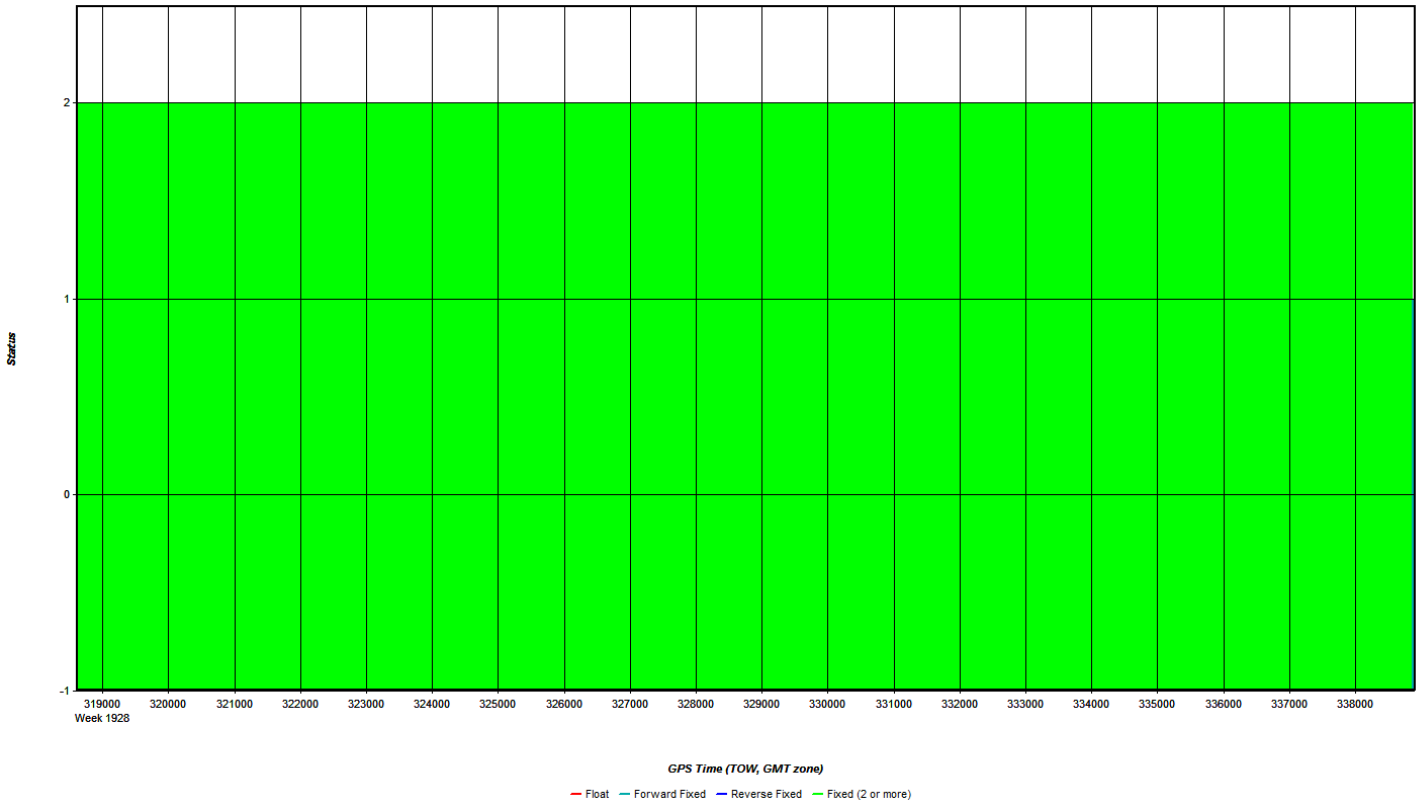

Estimated StdDev (m)
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
319000
Week 1928
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
336000
337000
338000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

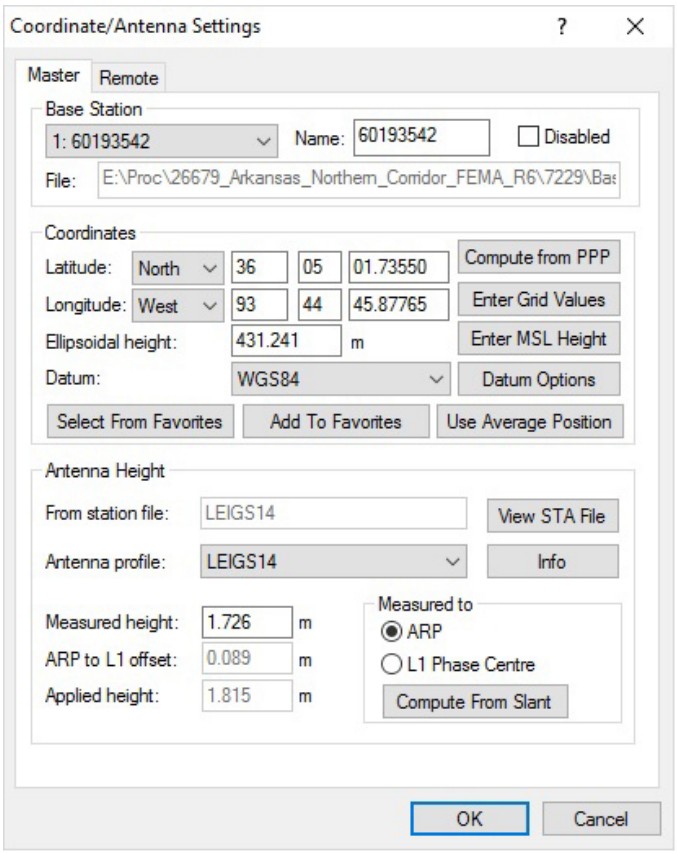

Roll & pitch (deg)
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
319000
Week 1928
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
336000
337000
338000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
319000
Week 1928
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
336000
337000
338000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.052
0.050
0.048
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
319000
Week 1928
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
336000
337000
338000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
250
240
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
319000
Week 1928
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
336000
337000
338000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
319000
Week 1928
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
336000
337000
338000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: 60193542
Name: 60193542
Disabled
File: E:\Proc\26679_Arkansas_Northern_Corridor_FEMA_R6\7229\Bas
Coordinates
Latitude: North 36 05 01.73550
Longitude: West 93 44 45.87765
Ellipsoidal height: 431.241 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: LEIGS14
View STA File
Antenna profile: LEIGS14
Info
Measured height: 1.726 m
ARP to L1 offset: 0.089 m
Applied height: 1.815 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

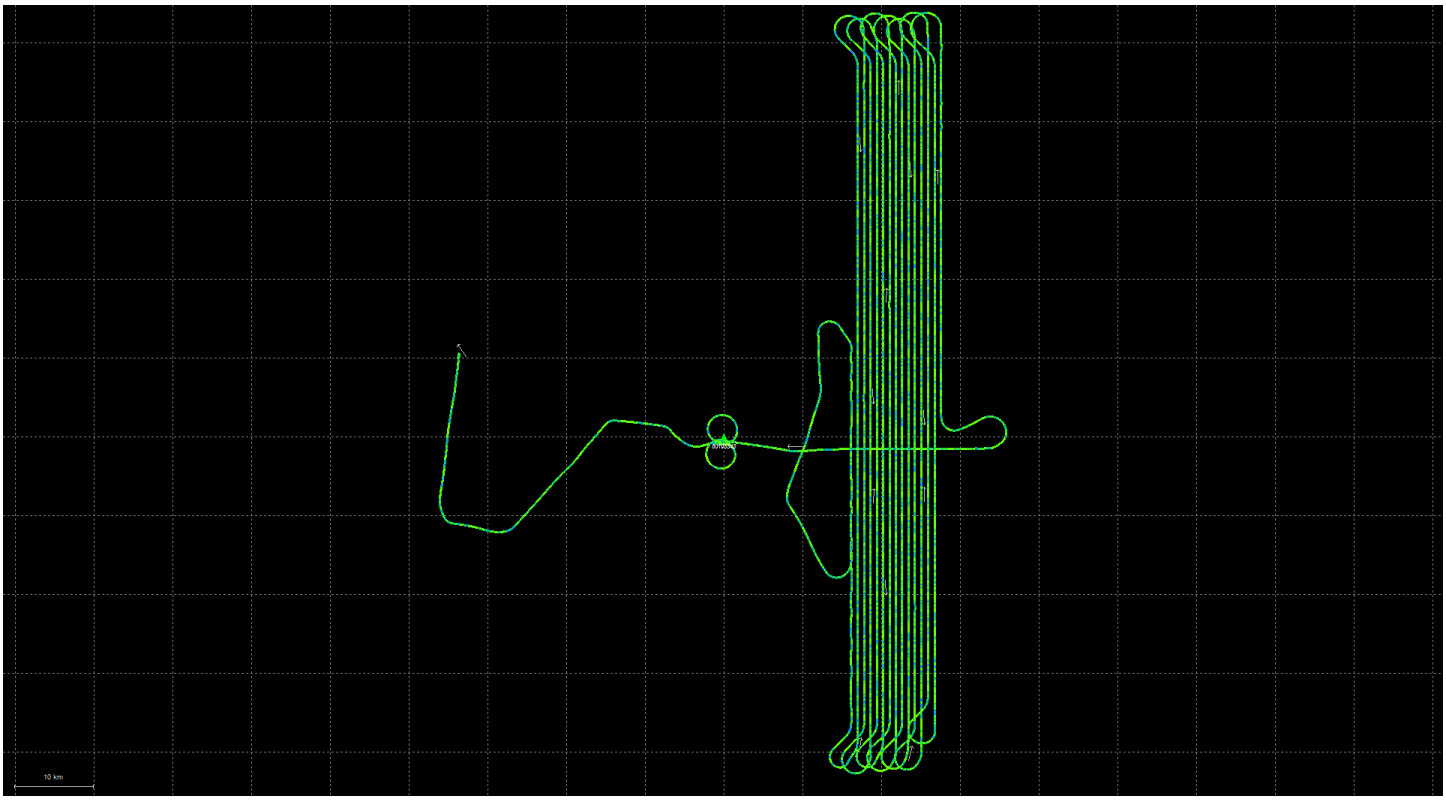
PROJECT NAME	Q.S. Arkansas	DATE	21/12/2016
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Bob Harrity	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Springdale AR	DATA DRIVES	LiDar #2

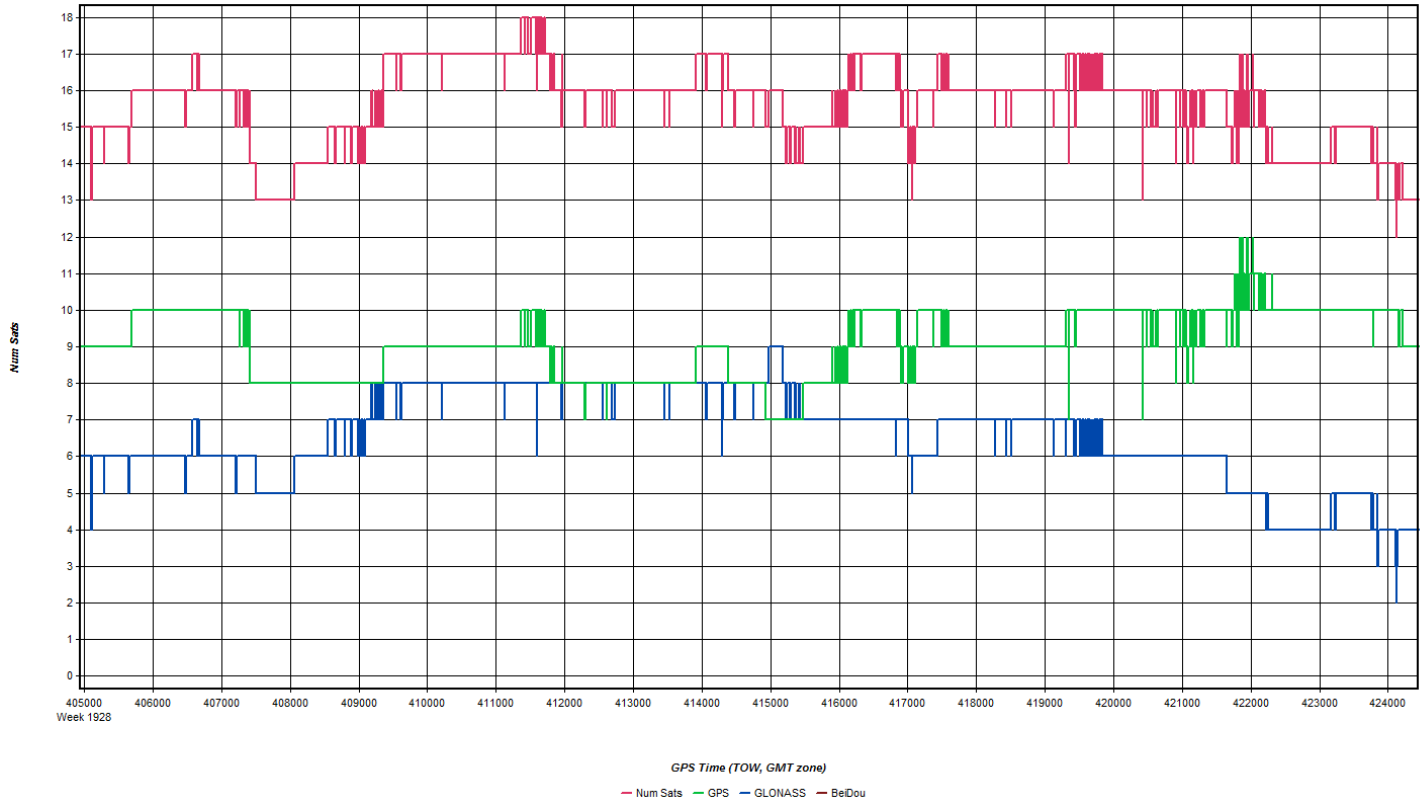
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	15:50:00	Takeoff:	16:07:00	AGL Height:	1750 m	Pulse Rate:	277 KHz		START	END
Engine Off:	22:12:00	Landing:	22:04:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	16:15:00	16:21:00
TOTAL:	6:37 hrs	TOTAL:	5.95 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	21:46:00	21:53:00

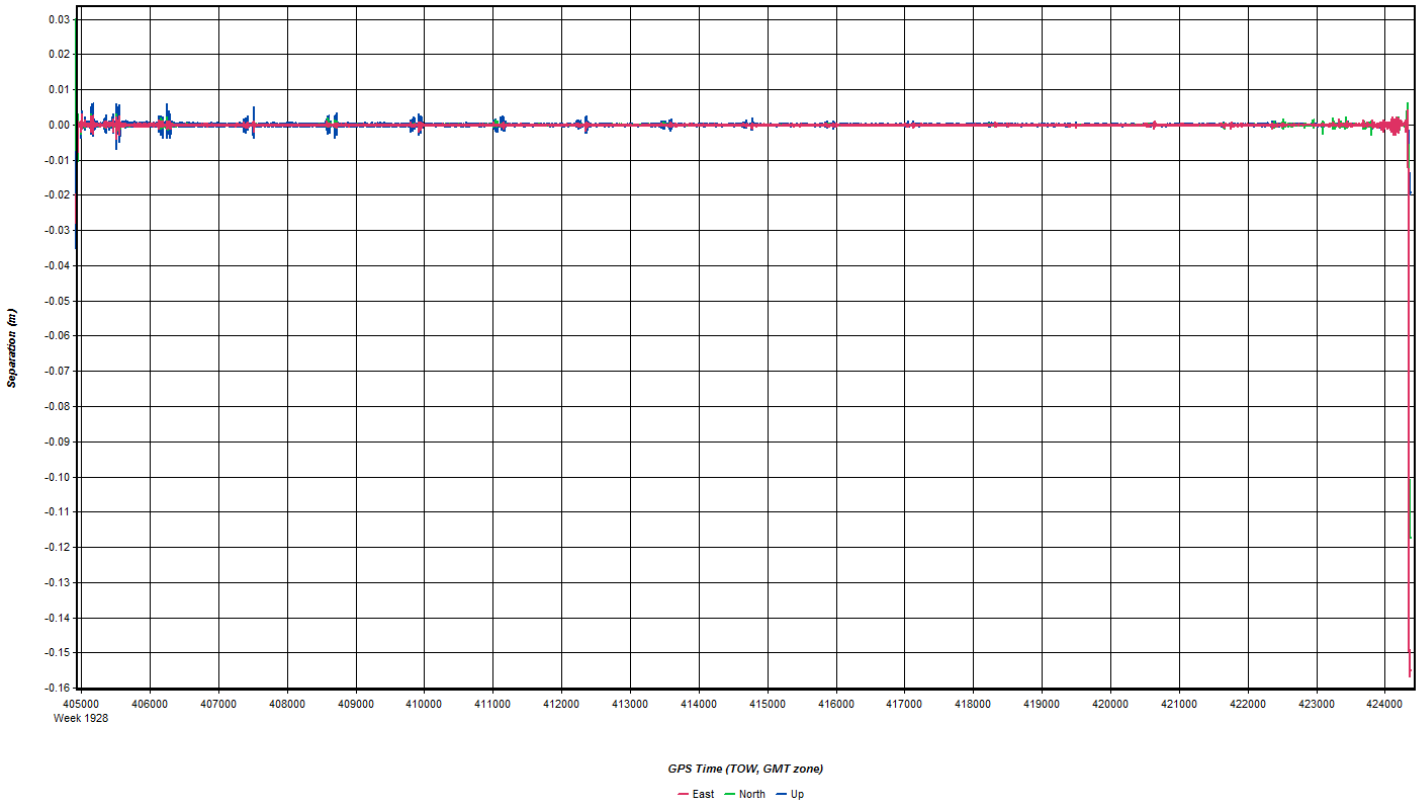
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
31		South	161221_162726	16:27:27		Imu gap warning after 3 minutes. Restarted the line
31		South	161221_163824	16:38:26	16:47:05	22nm from south. Complete line
32		North	161221_165036	16:50:38	17:07:22	Complete line
33		South	161221_171153	17:11:56	17:29:00	Complete line
34		North	161221_1	18:22:56	17:49:18	Complete line
35		South	161221_175407	17:54:09	18:10:59	Complete line
36		North	161221_181506	18:15:07	18:31:47	Complete line
37		South	161221_183640	18:36:41	18:52:21	Complete line
38		North	161221_185735	18:57:36	19:14:22	Complete line
39		South	161221_191916	19:19:17	19:35:52	Complete line
40		North	161221_194007	19:40:08	19:57:04	Complete line
41		South	161221_200130	20:01:32	20:17:56	Complete line
42		North	161221_202214	20:22:16	20:39:18	Complete line
43		South	161221_204408	20:44:09	21:00:26	Complete line
44		North	161221_210439	21:04:40	21:21:51	Complete line
45		South	161221_212632	21:26:33	21:35:10	21nm from south needs to be acquired
CL		West	161221_214224	21:42:25	21:45:27	Complete line

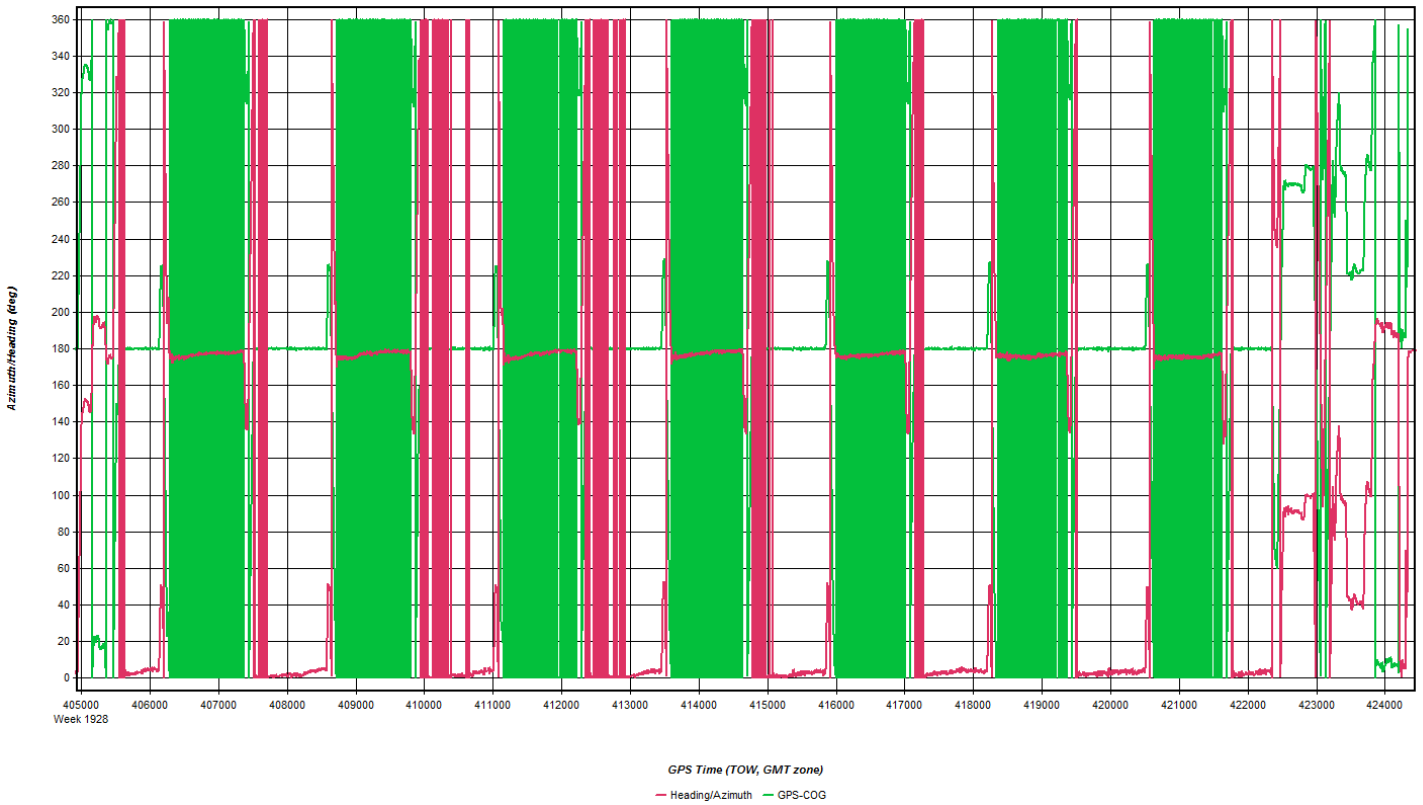
SUN ANGLE @Start: @End: @Peak:	ADDTIONAL NOTES: At the start Sats. 1.7 PDop 1.1. Mid flight Sats. 19 PDops 1.2. End of flight sats. 17 PDops 1.2. broken overcast skies. Temperature was 2C at take off. AGL height ranged from 1500m to 1860m We had an IMU gap warning 3 minutes into the first line. Restarted the line and the system ran great for the rest of the flight.

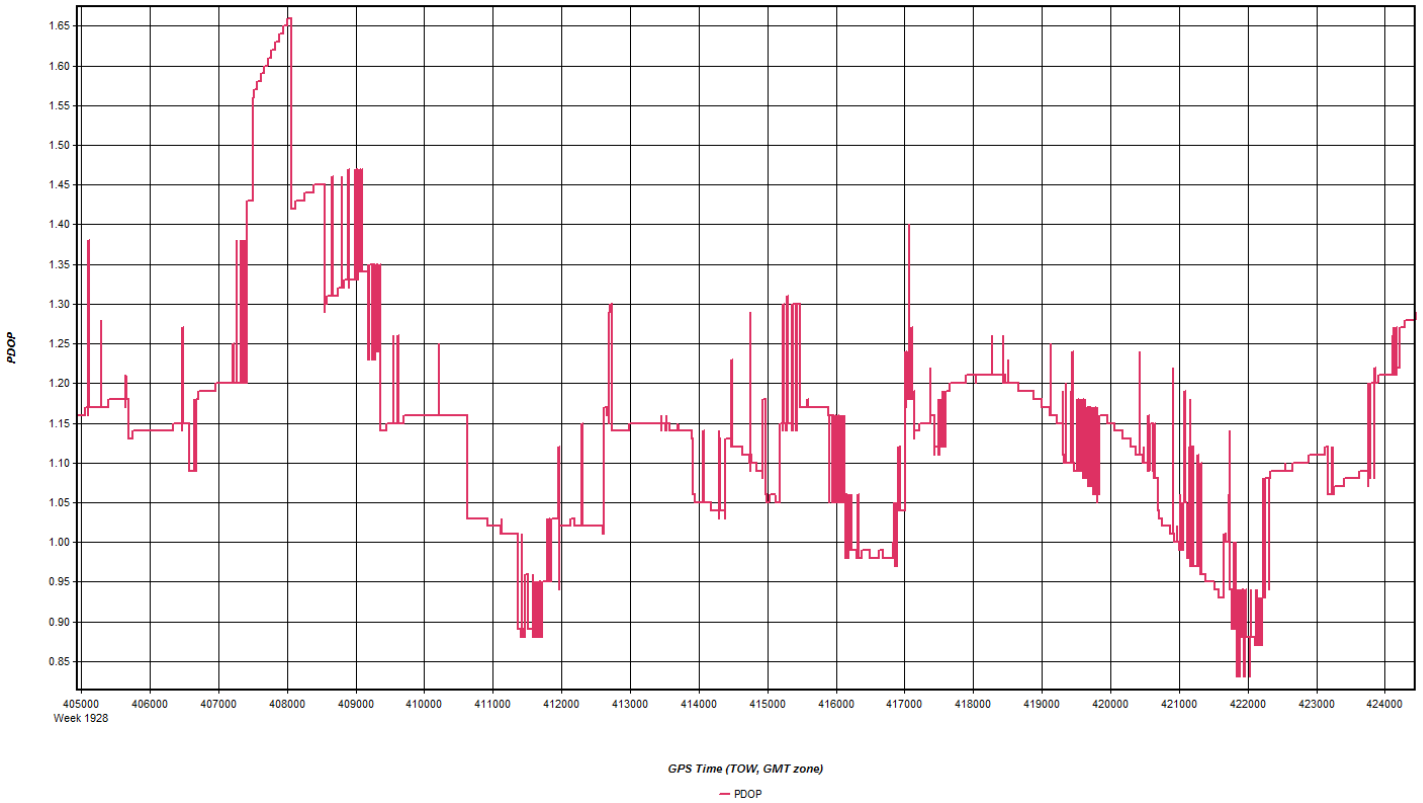
Dec 22, 2016-A (C-GKSI, SN7229)

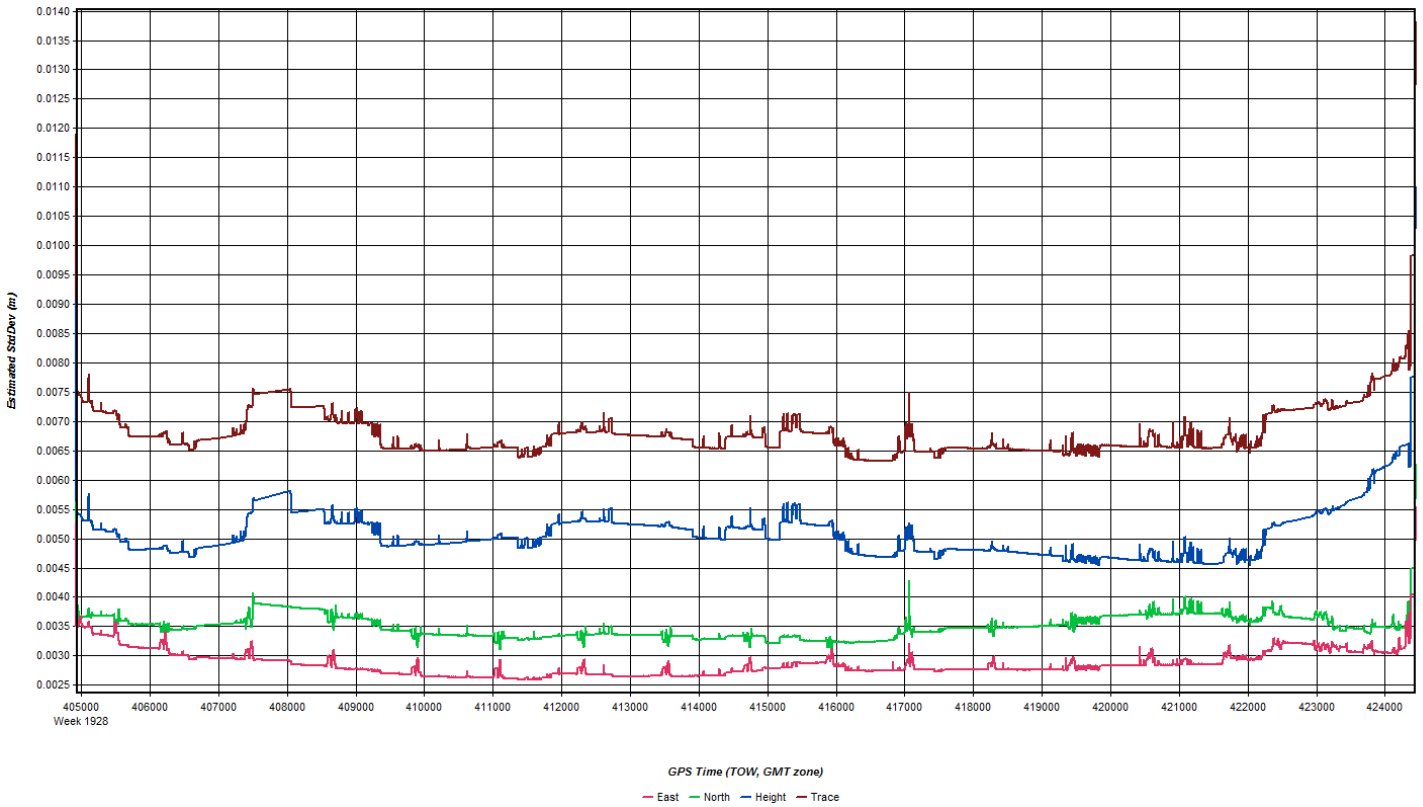

10 km

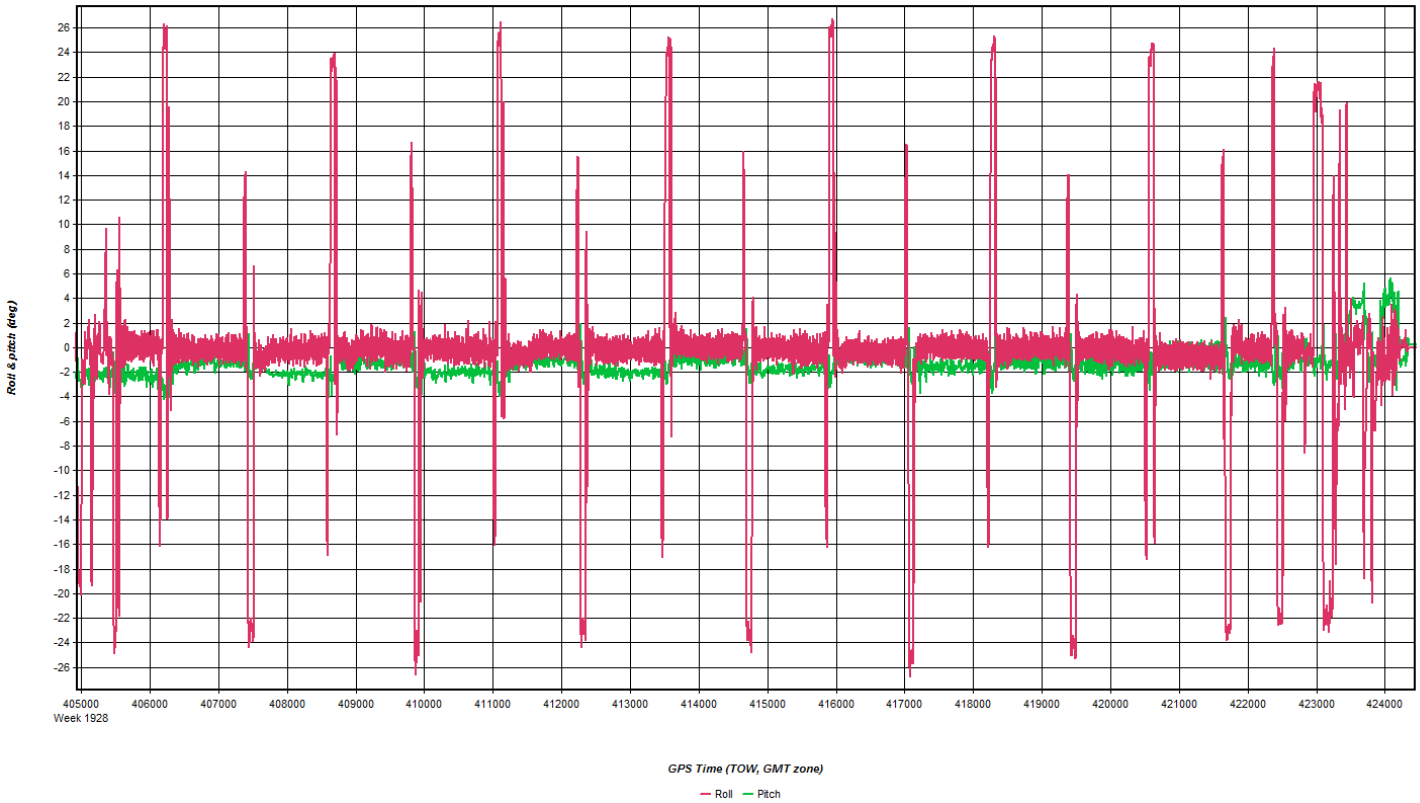

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
405000
Week 1928
406000
407000
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

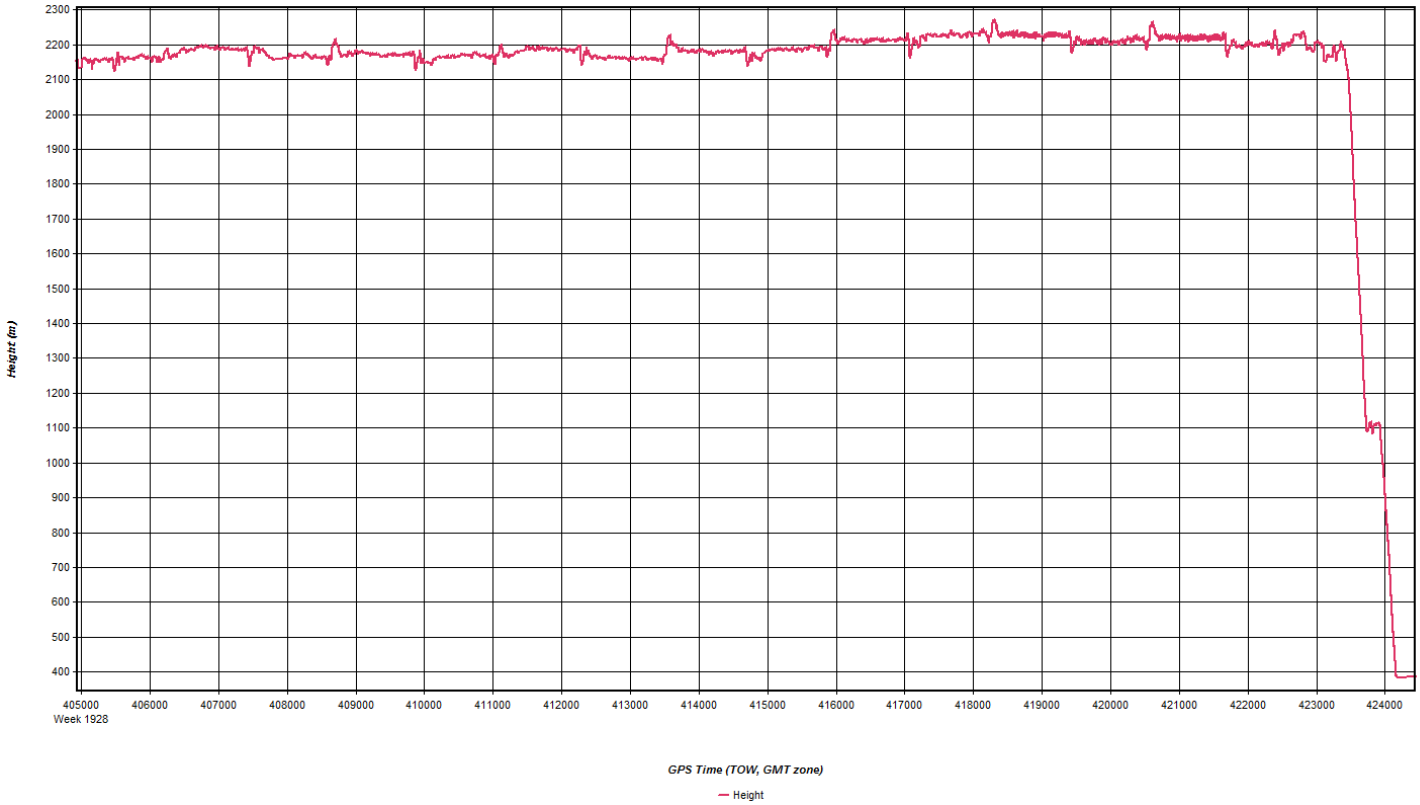

Separation (m)
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
-0.09
-0.10
-0.11
-0.12
-0.13
-0.14
-0.15
-0.16
405000
Week 1928
406000
407000
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
GPS Time (TOW, GMT zone)
East
North
Up

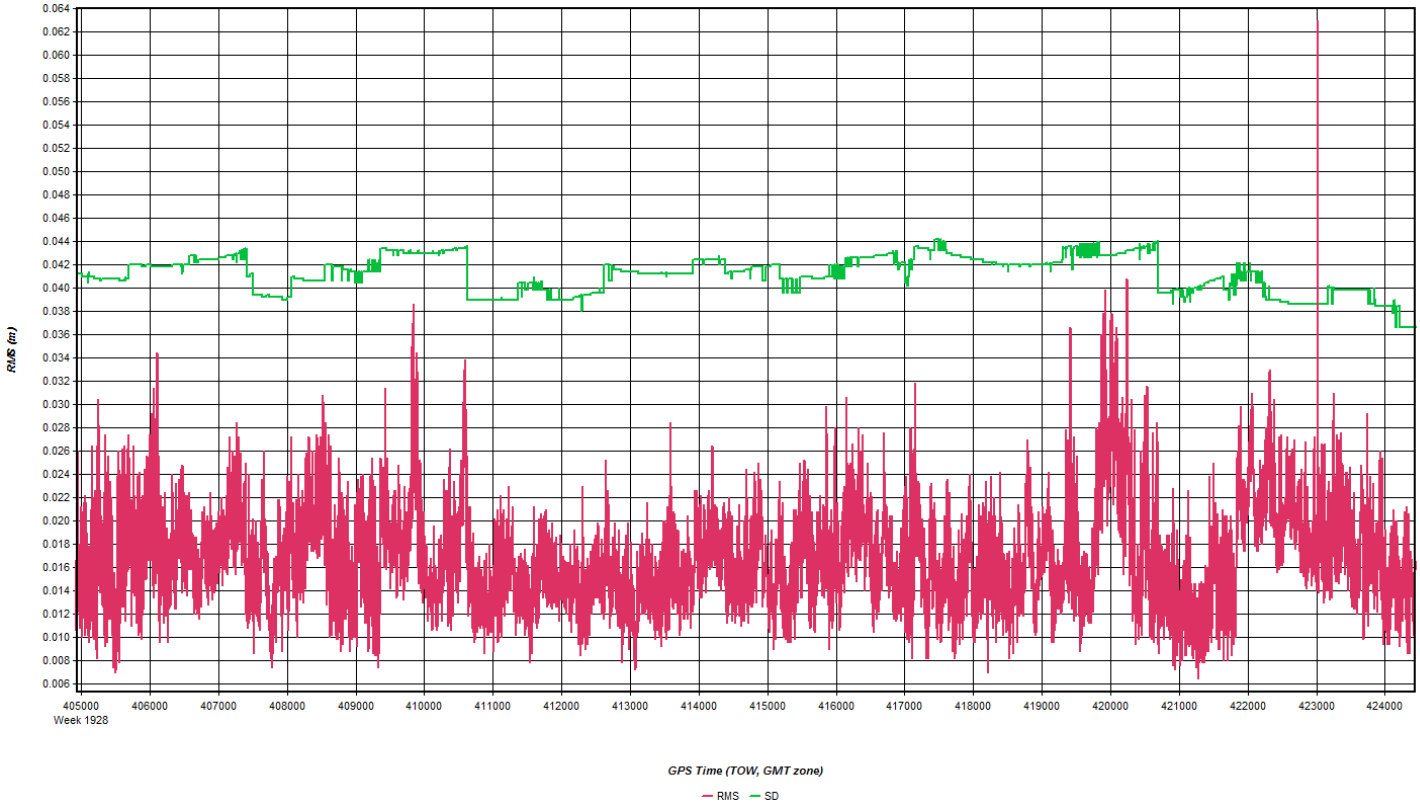

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
405000
Week 1928
406000
407000
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

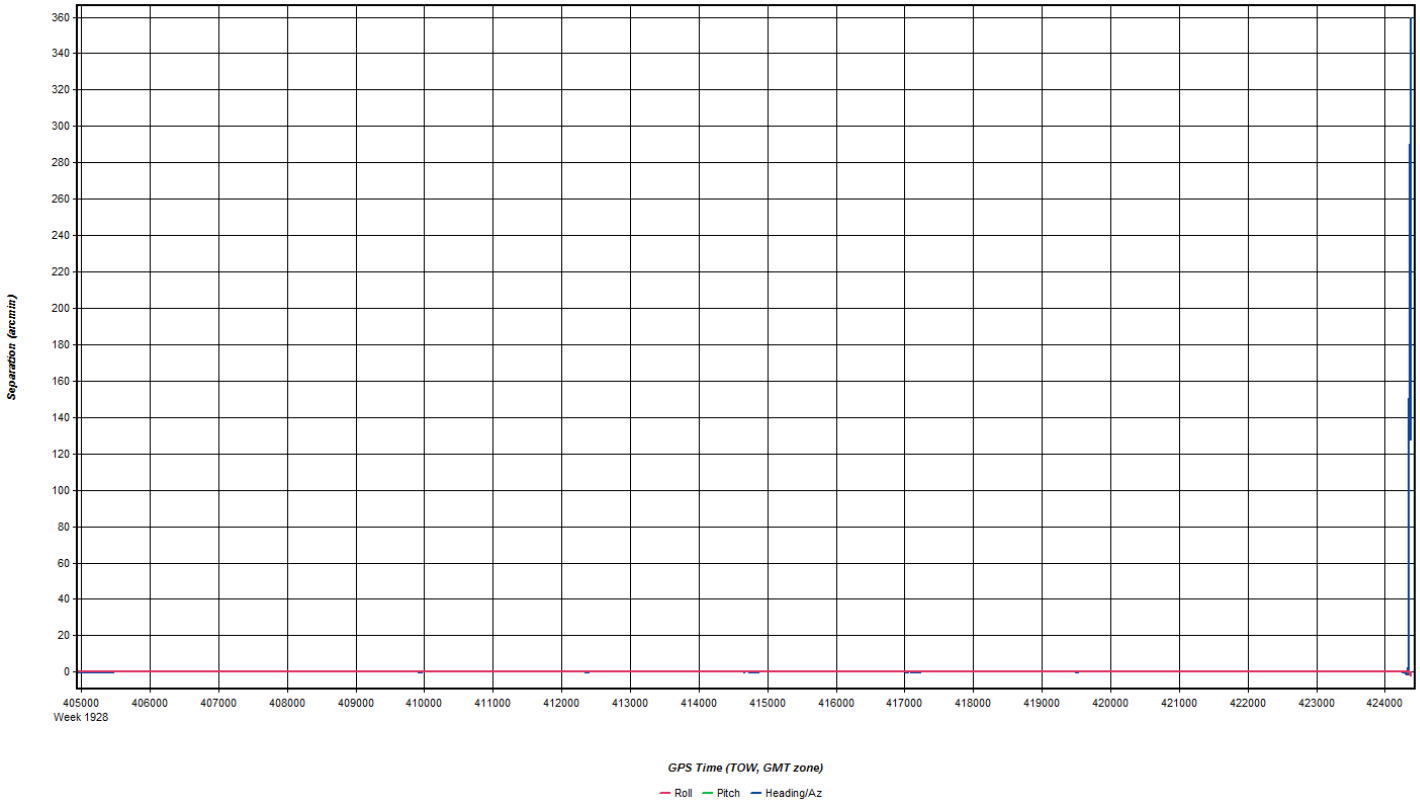

PDOP
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
405000
Week 1928
406000
407000
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
GPS Time (TOW, GMT zone)
PDOP

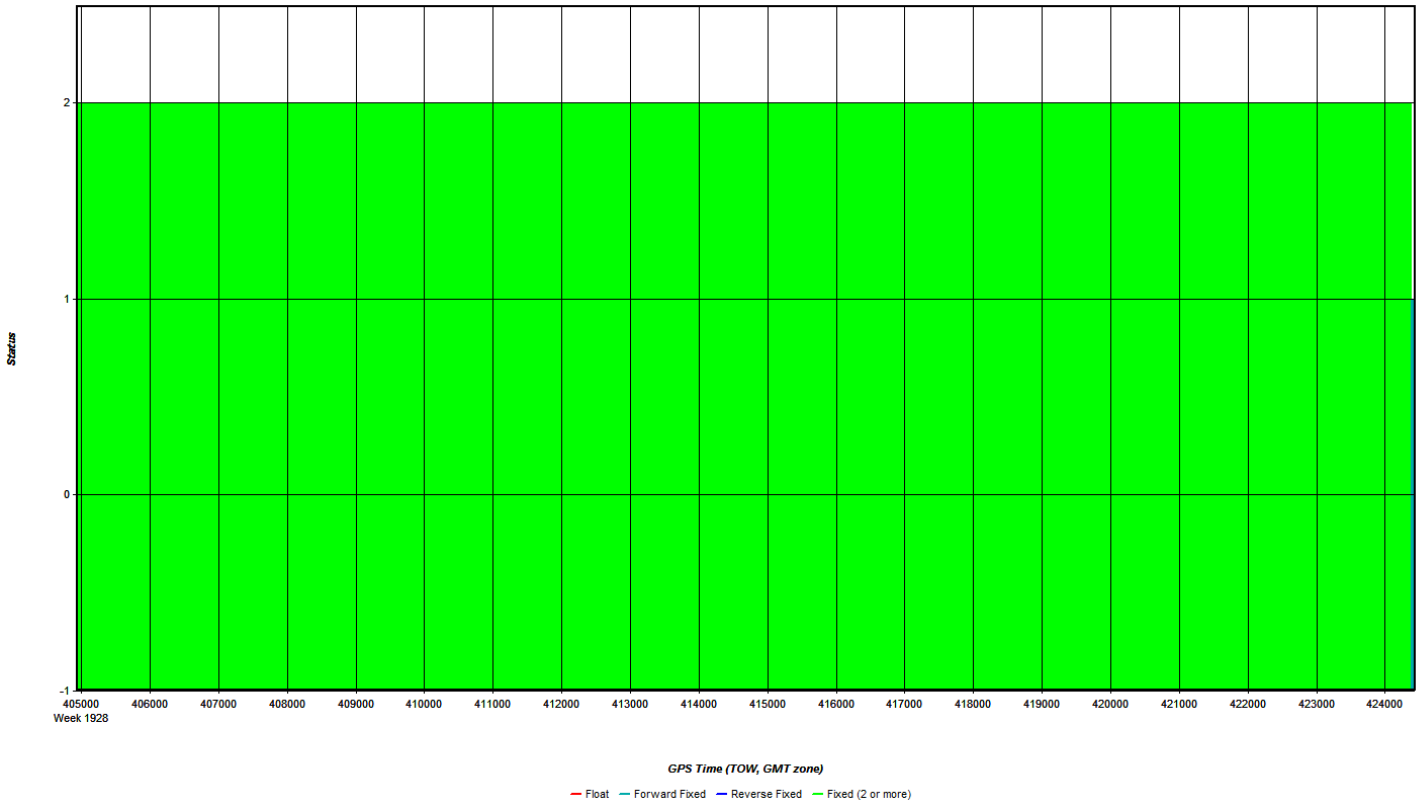

Estimated StdDev (m)
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
405000
Week 1928
406000
407000
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

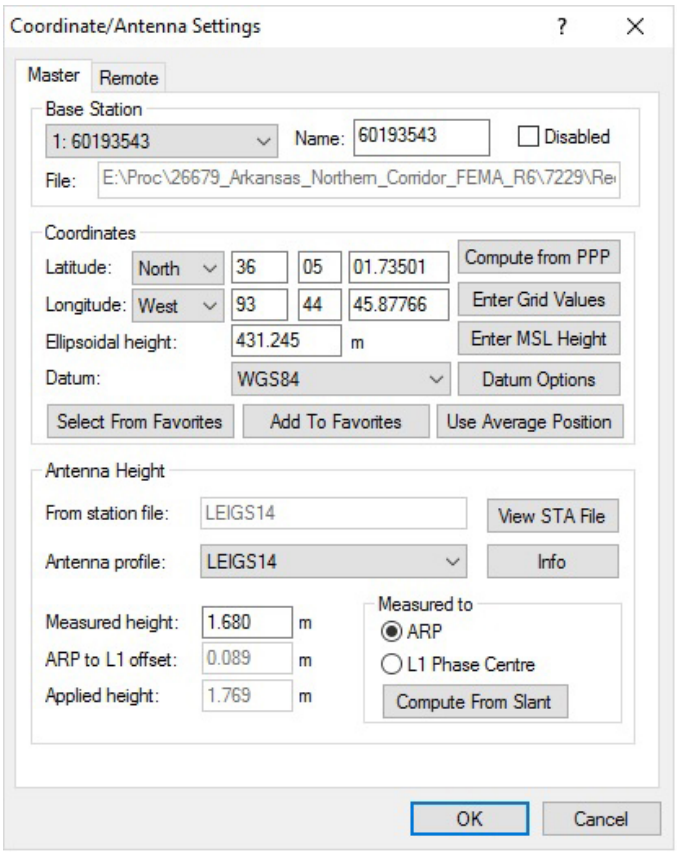

Roll & pitch (deg)
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
405000
Week 1928
406000
407000
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
405000
Week 1928
406000
407000
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.064
0.062
0.060
0.058
0.056
0.054
0.052
0.050
0.048
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
405000
Week 1928
406000
407000
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
405000
Week 1928
406000
407000
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
405000
Week 1928
406000
407000
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
422000
423000
424000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: 60193543
Name: 60193543
Disabled
File: E:\Proc\26679_Arkansas_Northern_Corridor_FEMA_R6\7229\Re
Coordinates
Latitude: North 36 05 01.73501
Longitude: West 93 44 45.87766
Ellipsoidal height: 431.245 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: LEIGS14
View STA File
Antenna profile: LEIGS14
Info
Measured height: 1.680 m
ARP to L1 offset: 0.089 m
Applied height: 1.769 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

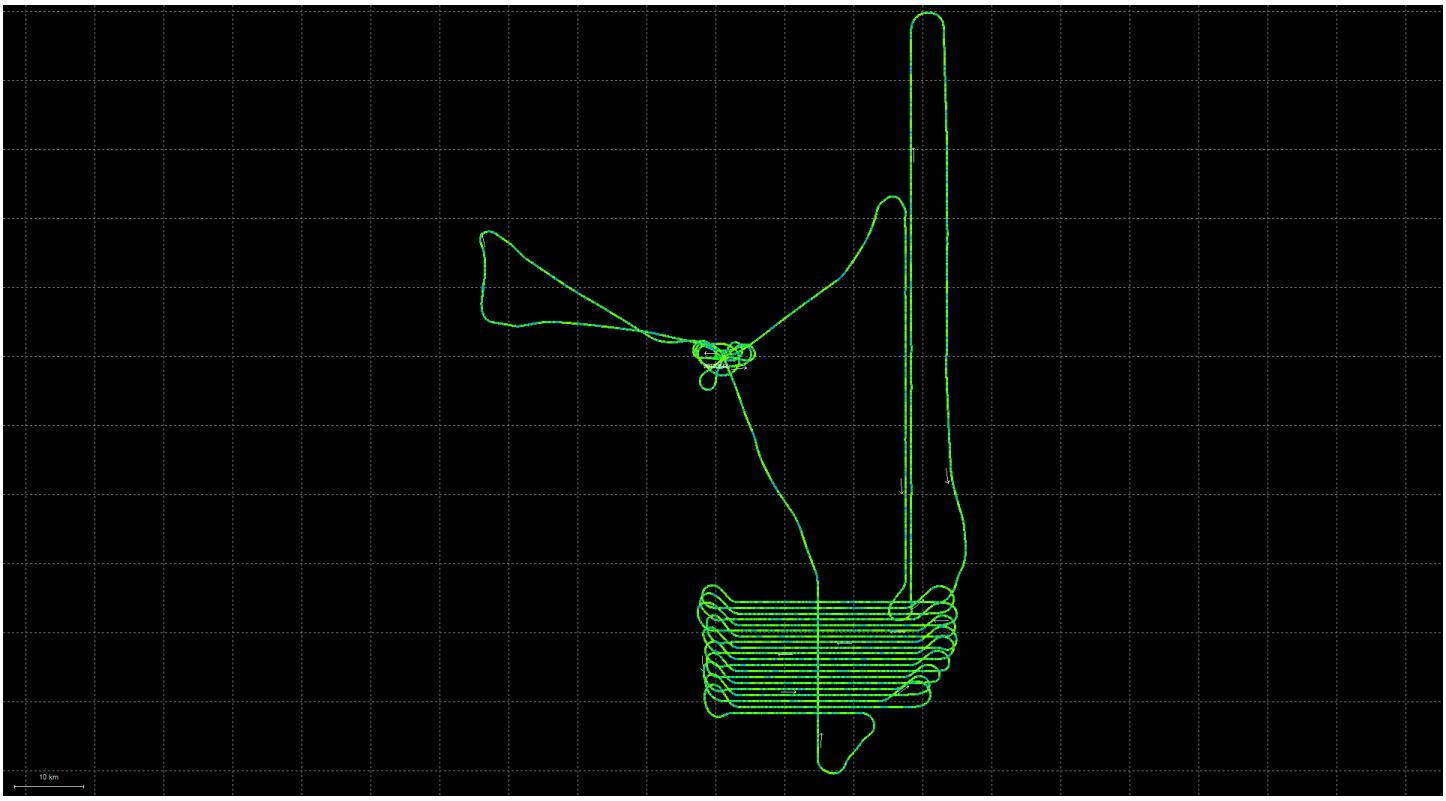
PROJECT NAME	Q.S. Arkansas	DATE	22/12/2016
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Bob Harrity	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Springdale AR	DATA DRIVES	LiDar #2

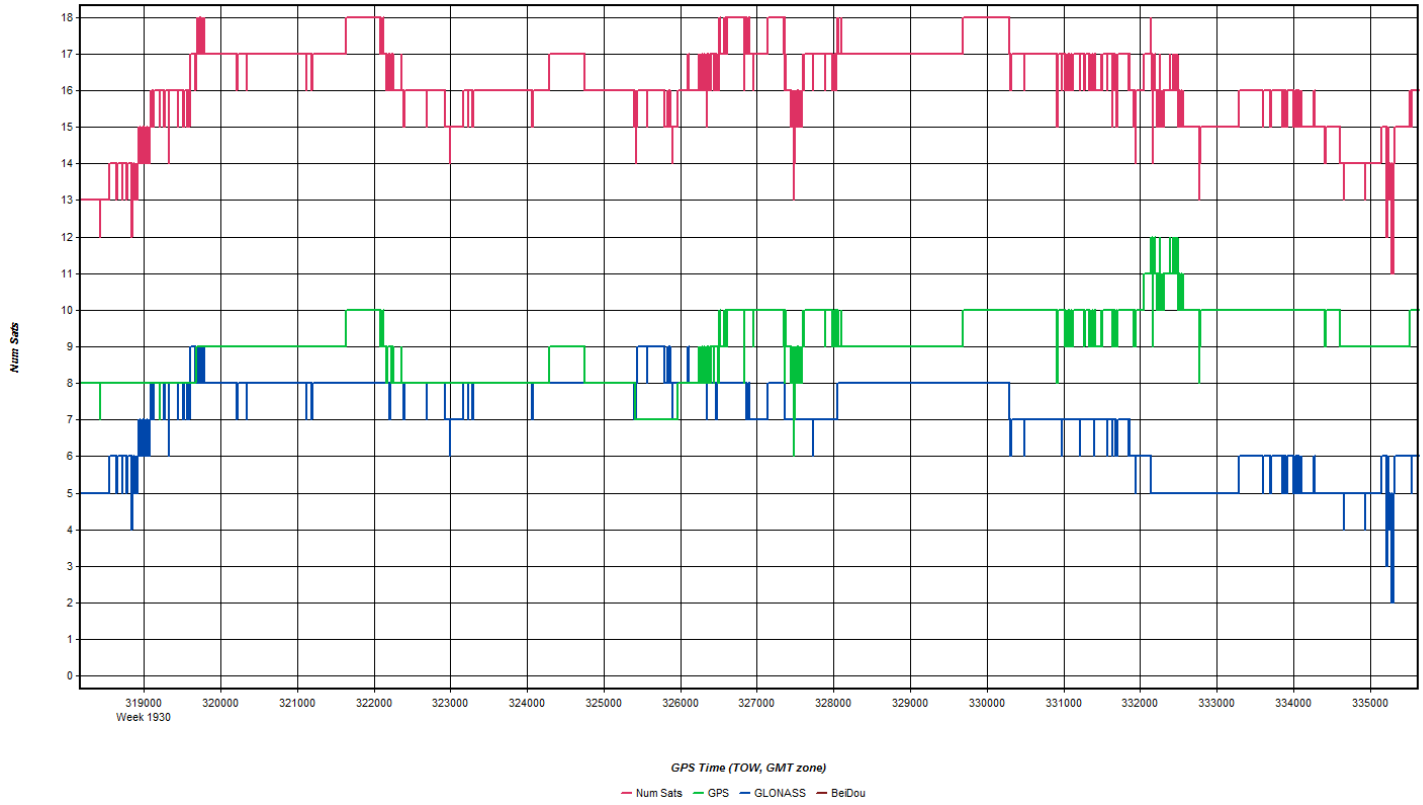
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	15:44:00	Takeoff:	16:01:00	AGL Height:	1750 m	Pulse Rate:	277 KHz		START	END
Engine Off:	22:12:00	Landing:	21:49:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	16:10:00	16:17:00
TOTAL:	6:47 hrs	TOTAL:	5.8 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	21:28:00	21:34:00

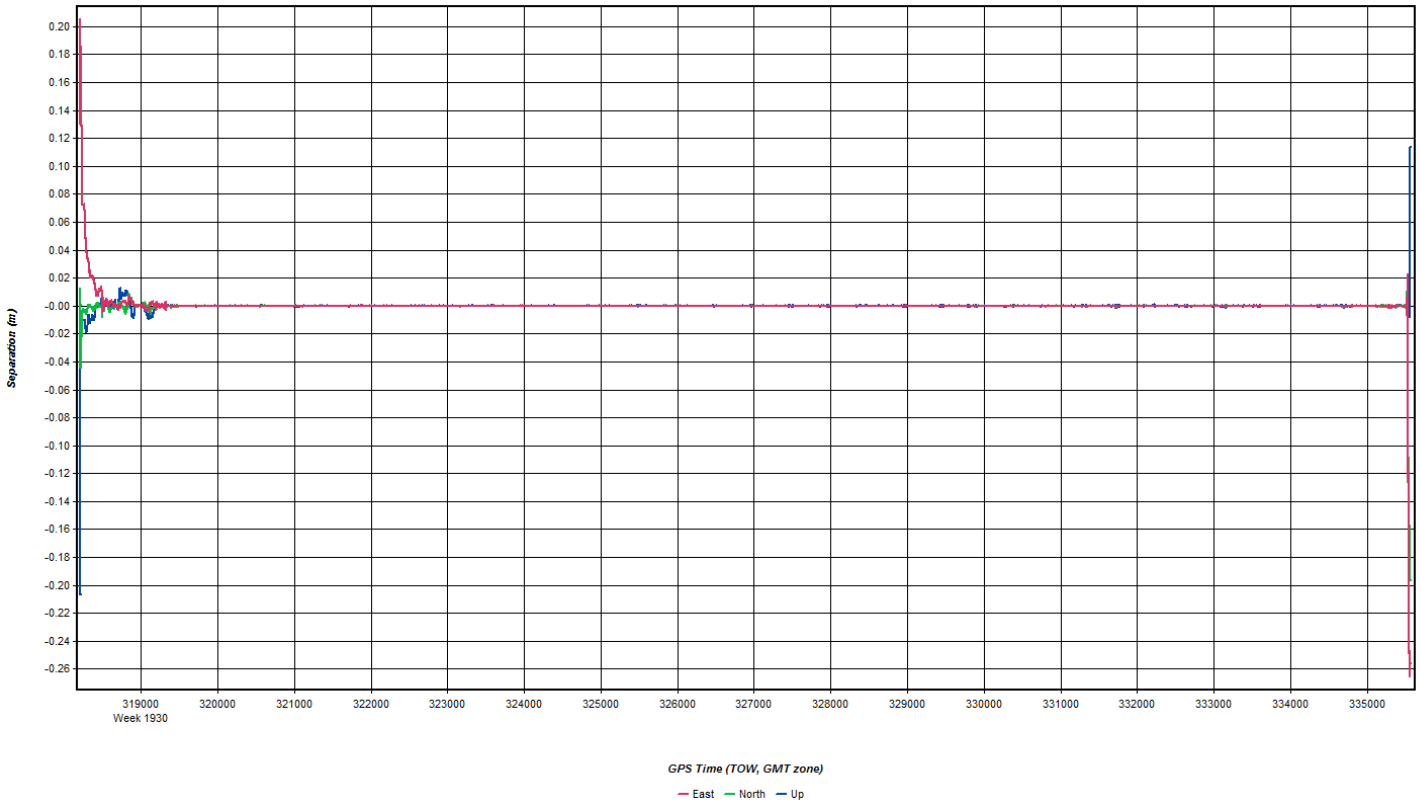
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
45		South	161222_162412	16:24:13		Imu gap warning after 5 minutes. Restarted the line
45		South	161222_163933	16:39:34	16:48:36	22nm from south. Complete line
46		North	161222_165418	16:51:49	17:09:14	Complete line
47		South	161222_171222	17:12:22	17:29:13	Complete line
48		North	161222_173234	17:32:35	17:49:47	Complete line
49		South	161222_175246	17:52:47	18:07:50	Complete line
50		North	161222_181256	18:12:58	18:30:00	Complete line
51		South	161222_183316	18:33:17	18:50:38	Complete line
52		North	161222_185343	18:53:44	19:10:24	Complete line
53		South	161222_191333	18:13:34	19:30:32	Complete line
54		North	161222_193324	19:33:25	19:49:56	Complete line
55		South	161222_195251	19:52:51	20:09:42	Complete line
56		North	161222_201240	20:12:41	20:29:03	Complete line
57		South	161222_203219	20:32:20	20:48:03	Complete line
58		North	161222_205107	20:50:08	21:06:44	Complete line
59		South	161222_211000	21:10:01	21:18:52	22nm from south needs to be acquired
CI		West	161222_212235	21:22:35	21:25:36	Complete line

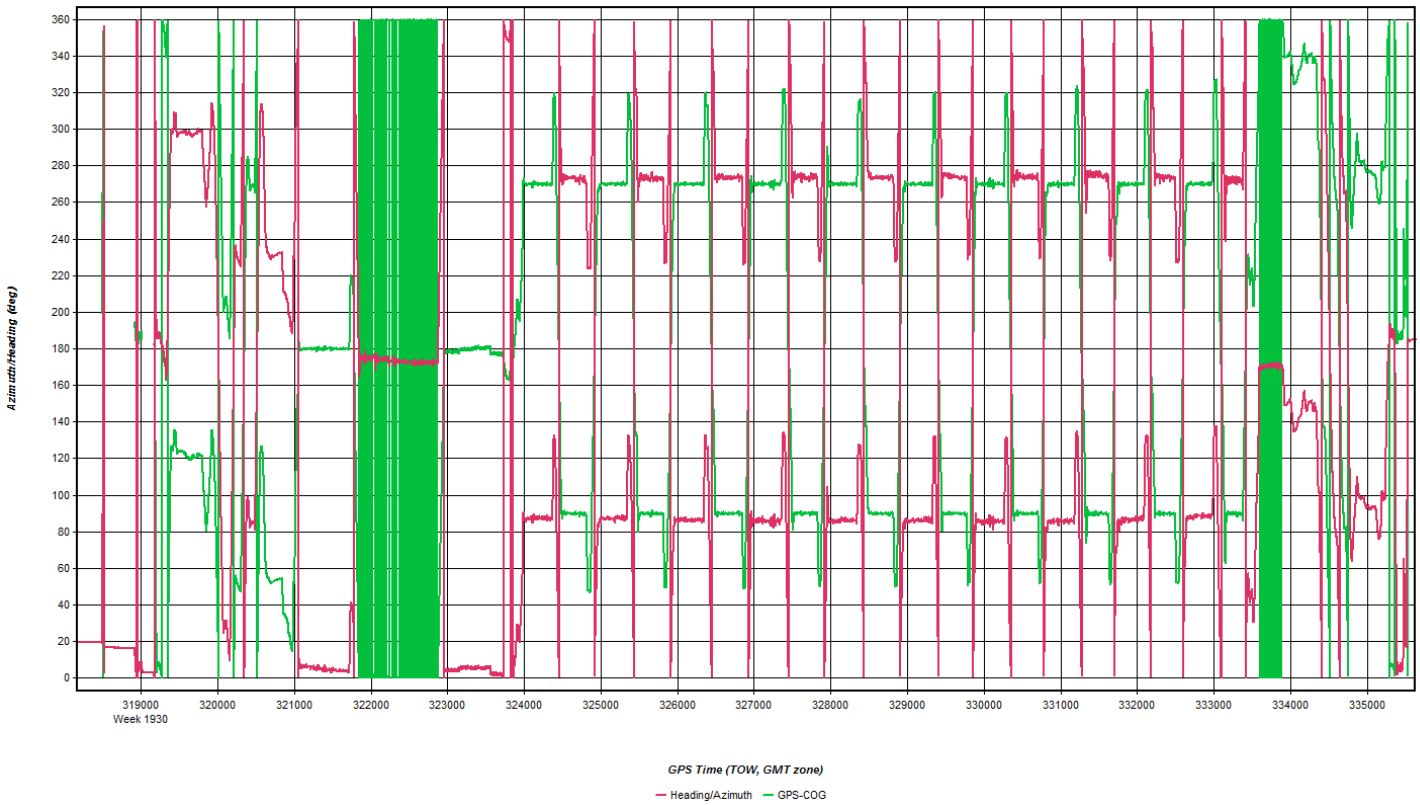
SUN ANGLE	ADDTIONAL NOTES: At the start Sats. 18 PDop 1.2. Mid flight Sats. 18 PDops 1.3. End of flight sats. 17 PDops 1.3.
@Start:	Clear skies in the morning and broken overcast in the afternoon. Temperature was 4C at take off.
@End:	AGL height ranged from 1520m to 1850m
@Peak:	We had an IMU gap warning 5 minutes into the first line. Restarted the line and the system ran great for the rest of the flight.

Jan 4, 2017-A (C-GKSI, SN7229)

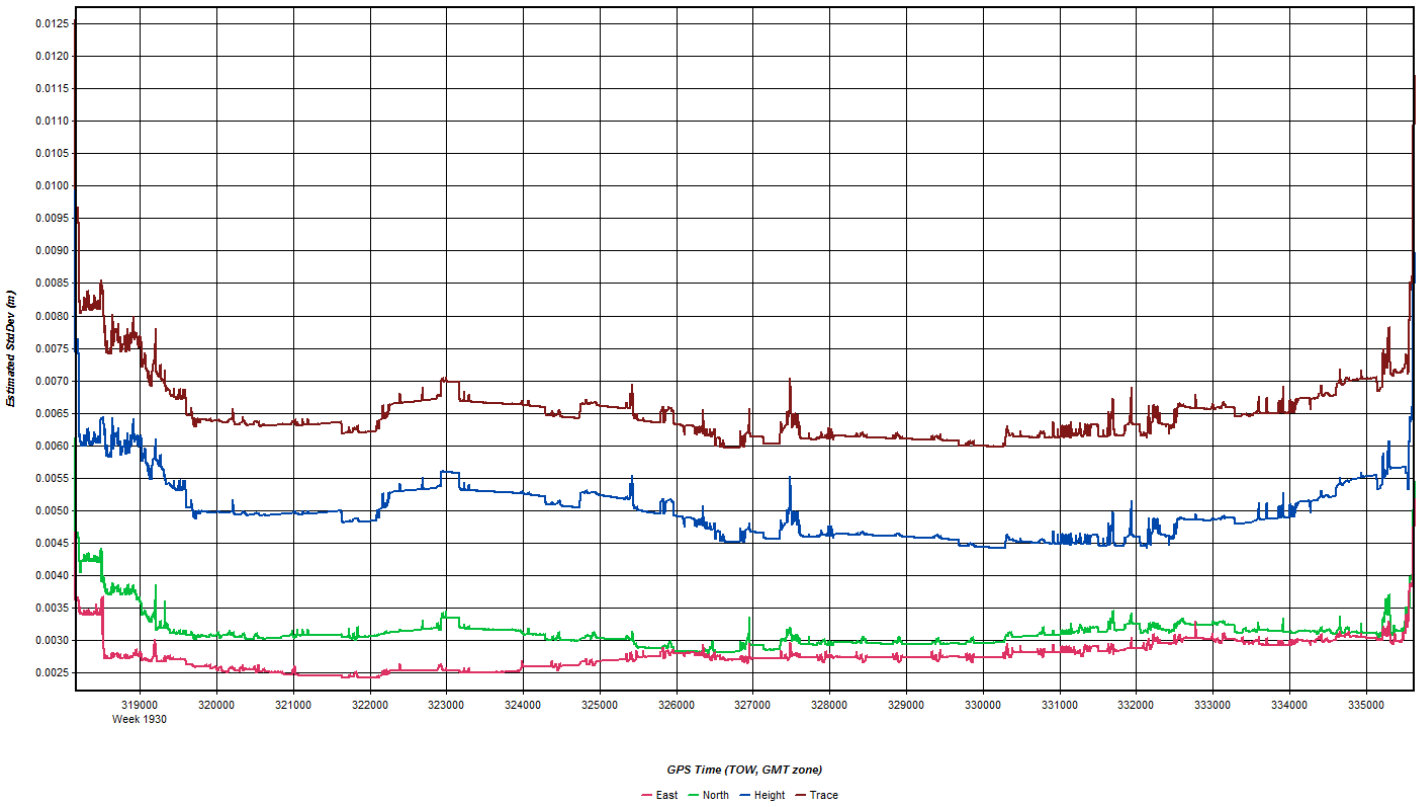

10 km

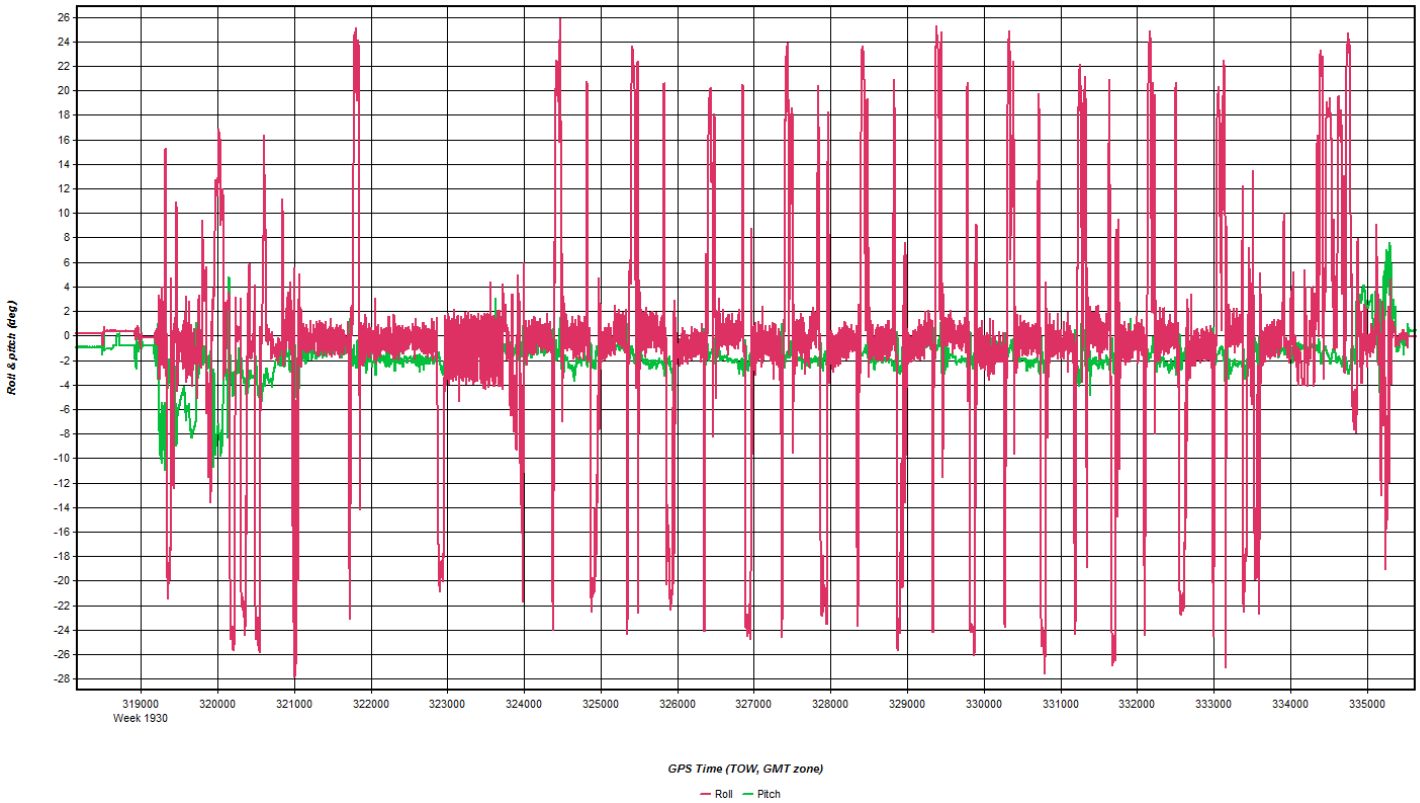

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
319000
Week 1930
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

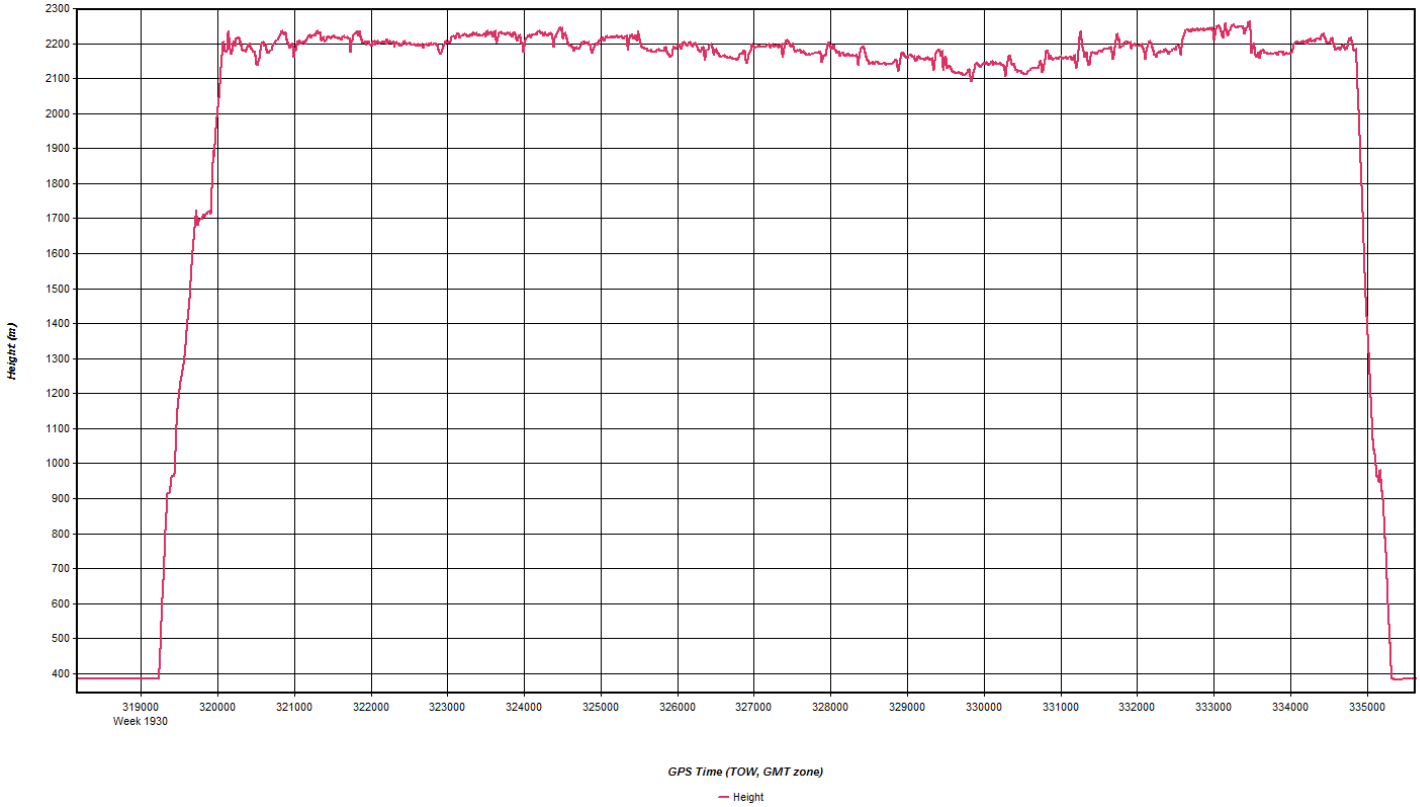

Separation (m)
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
-0.00
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
-0.16
-0.18
-0.20
-0.22
-0.24
-0.26
319000
Week 1930
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
East
North
Up

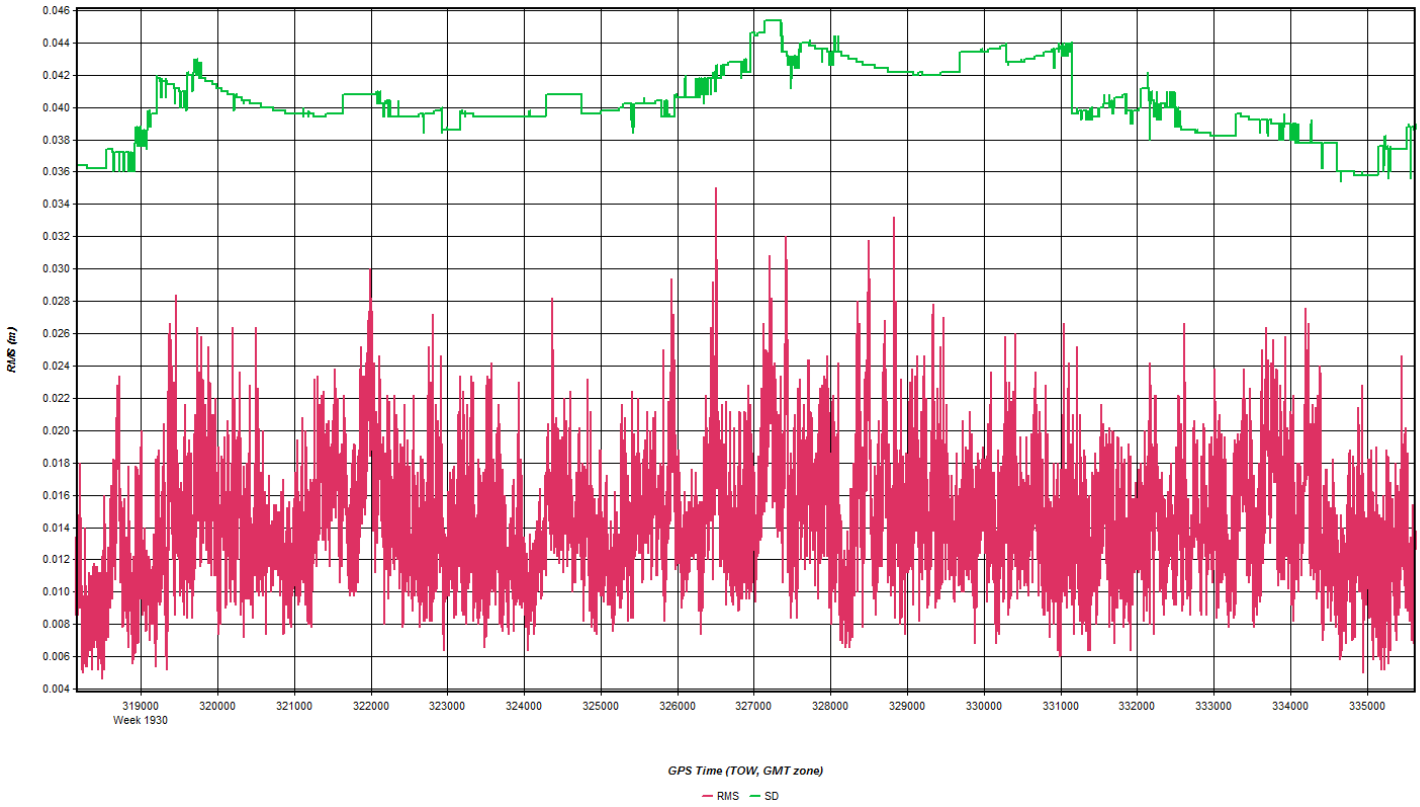

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
319000
Week 1930
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

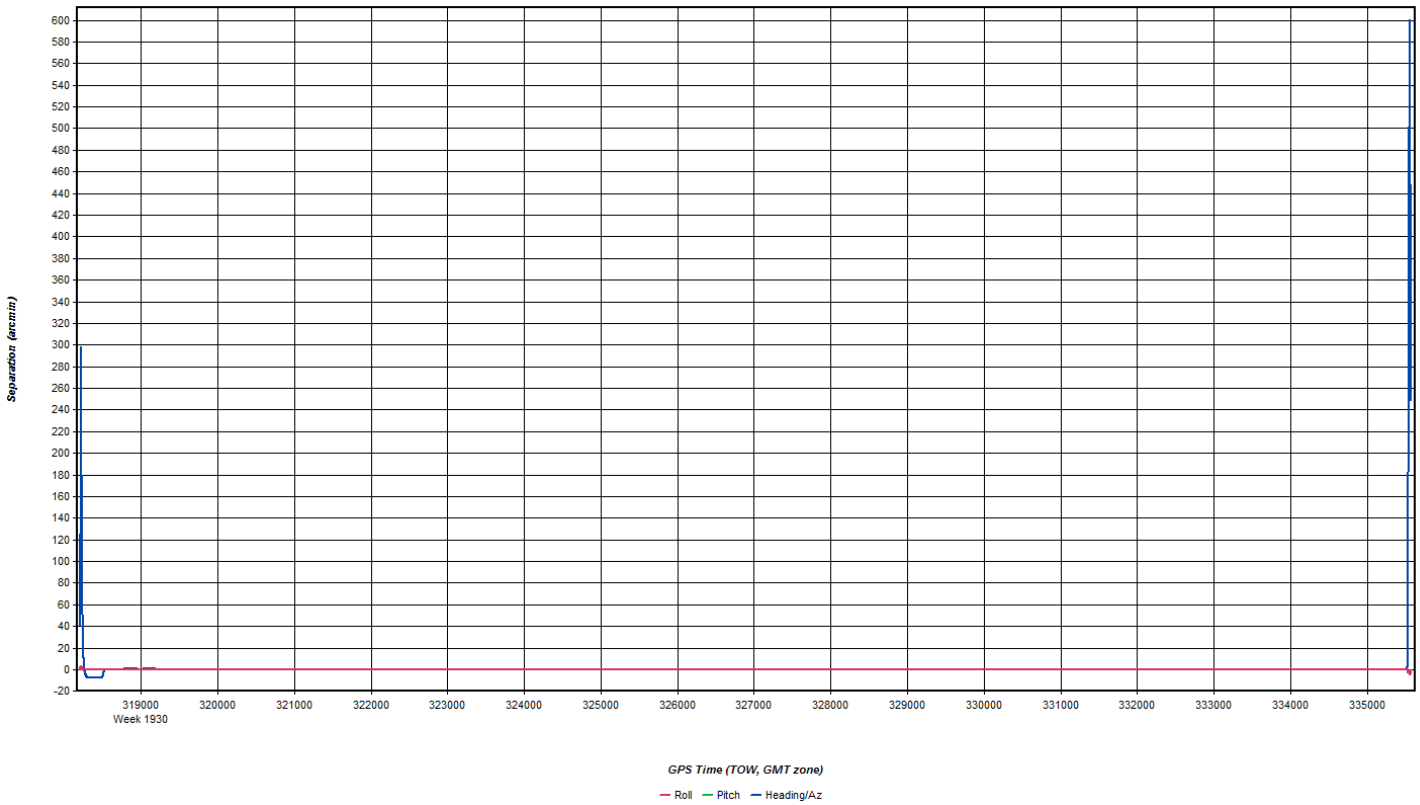

PDOP
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
319000
Week 1930
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
PDOP

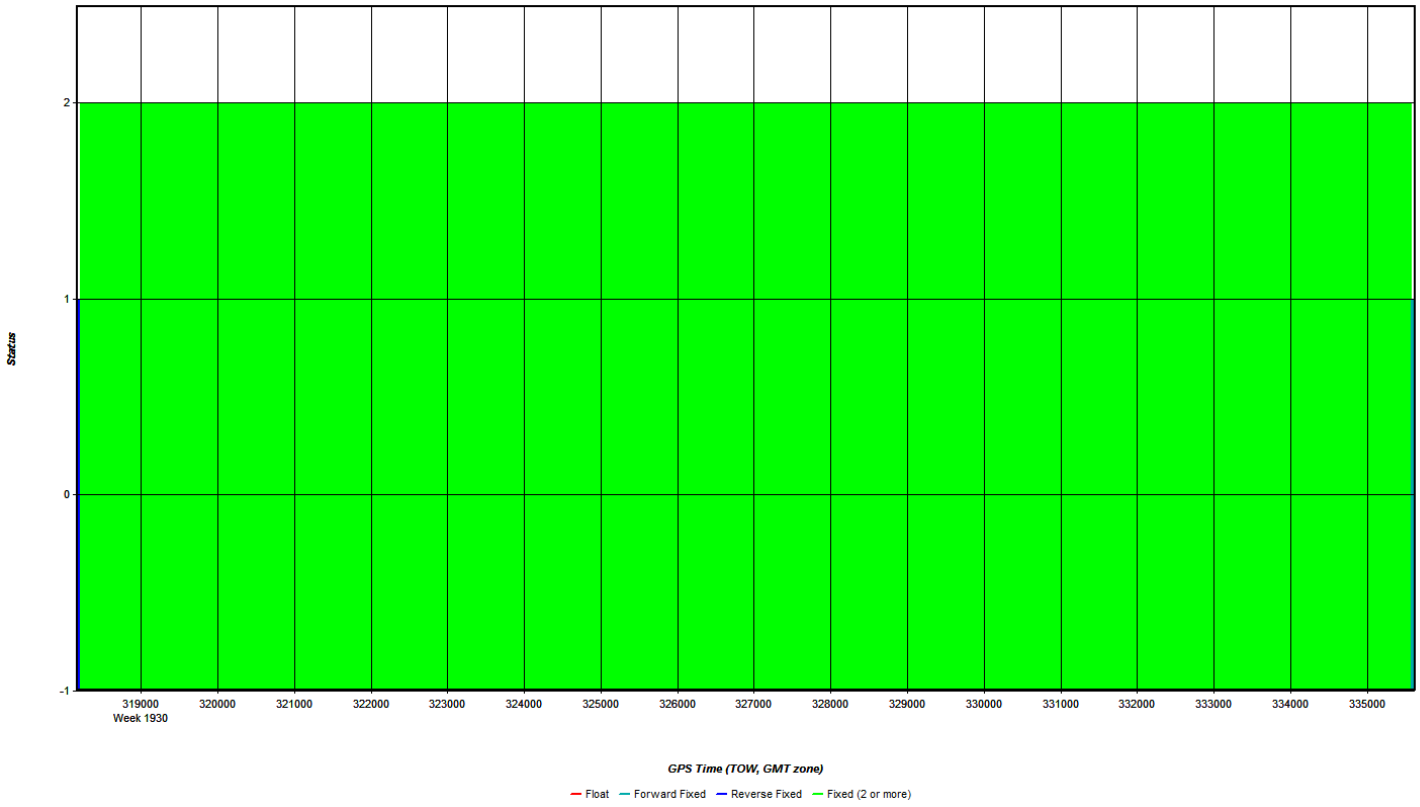

Estimated StdDev (m)
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
319000
Week 1930
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

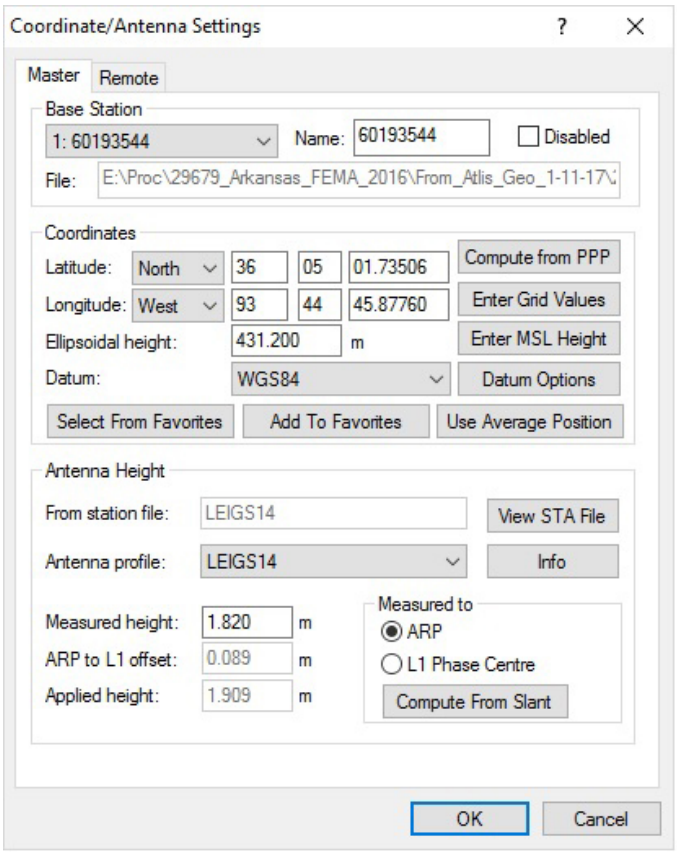

Roll & pitch (deg)
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
319000
Week 1930
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
319000
Week 1930
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
319000
Week 1930
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
600
580
560
540
520
500
480
460
440
420
400
380
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
319000
Week 1930
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
319000
Week 1930
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: 60193544
Name: 60193544
Disabled
File: E:\Proc\29679_Arkansas_FEMA_2016\From_Atlis_Geo_1-11-17\
Coordinates
Latitude: North 36 05 01.73506
Longitude: West 93 44 45.87760
Ellipsoidal height: 431.200 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: LEIGS14
Antenna profile: LEIGS14
View STA File
Info
Measured height: 1.820 m
ARP to L1 offset: 0.089 m
Applied height: 1.909 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

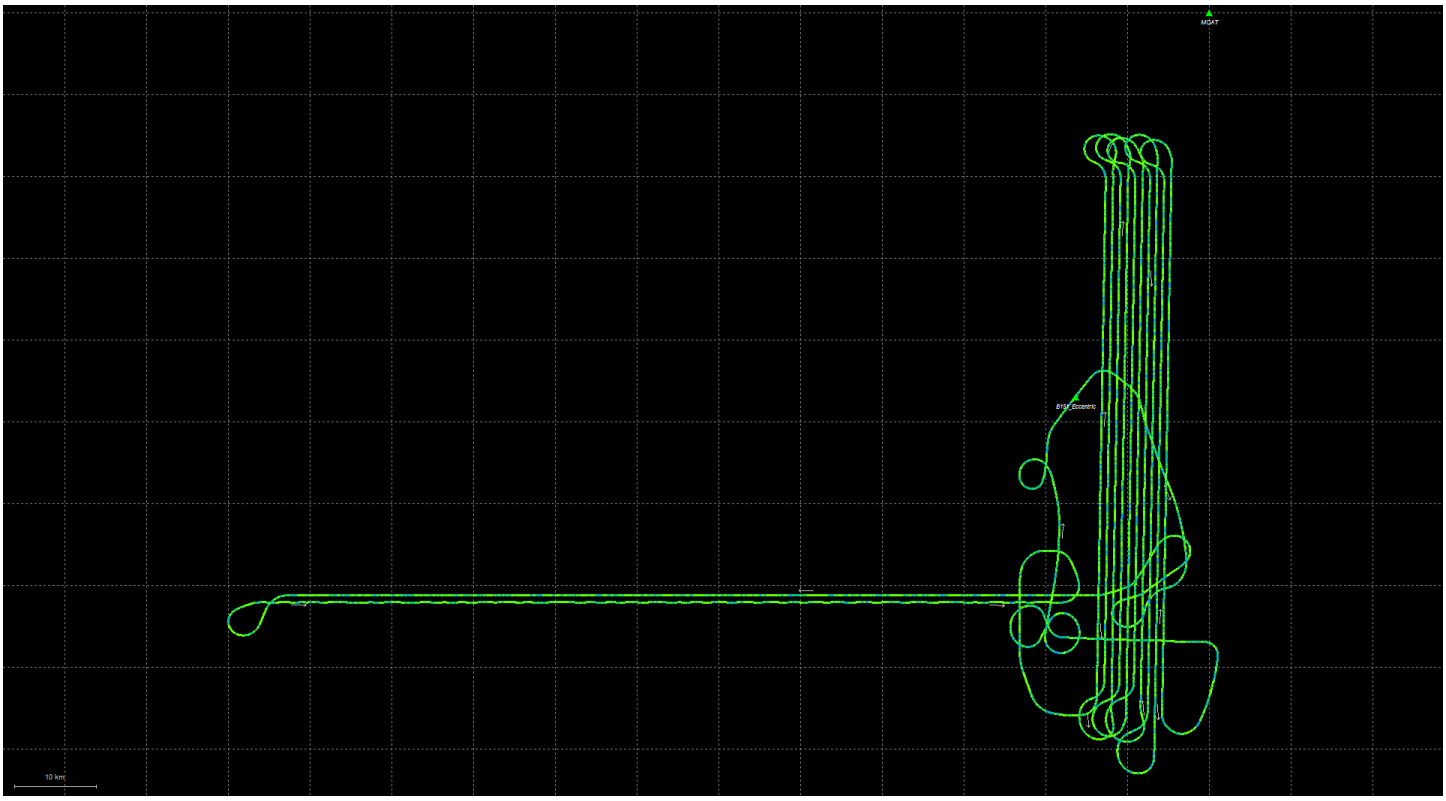
PROJECT NAME	Q.S. Arkansas	DATE	04/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Springdale AR	DATA DRIVES	LiDar #2

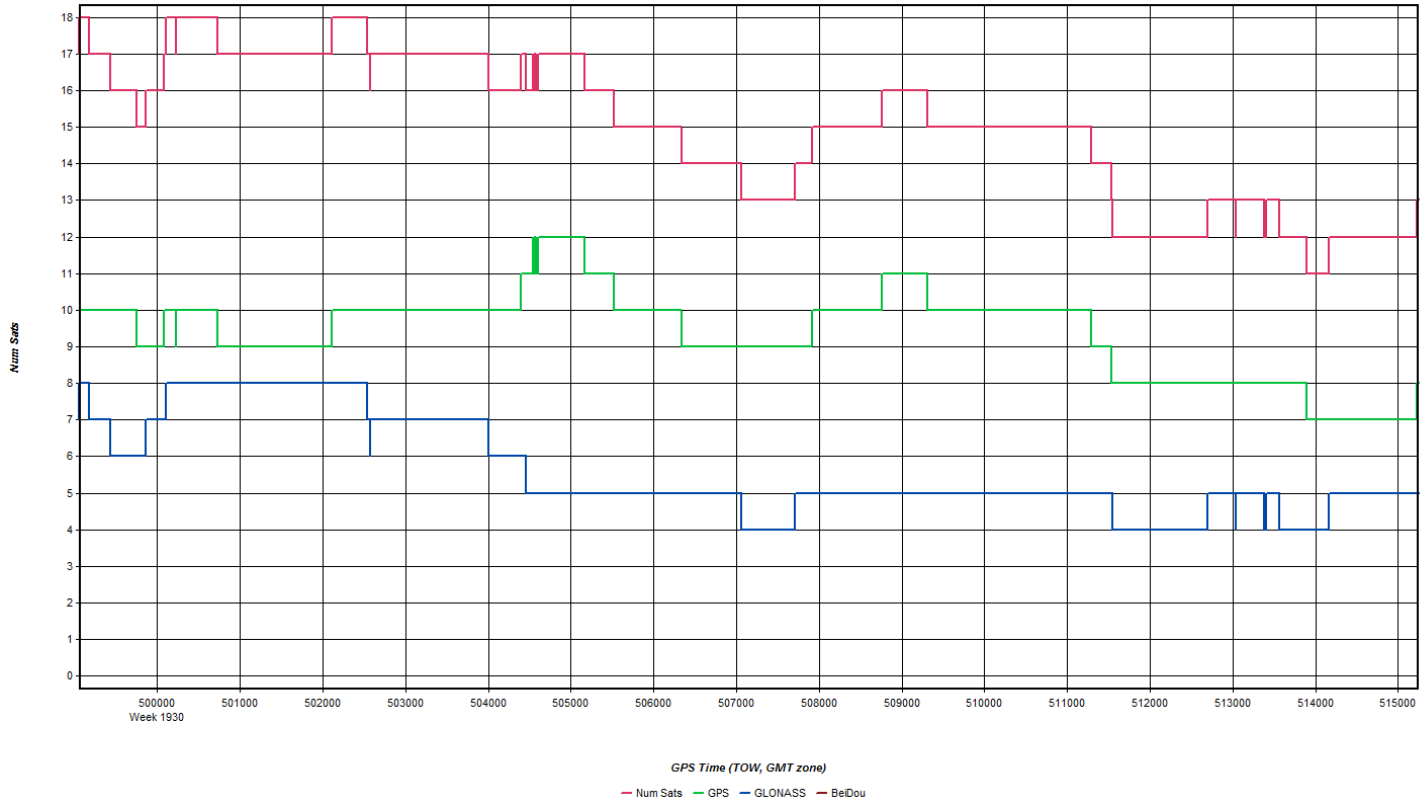
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	16:16:00	Takeoff:	16:40:00	AGL Height:	1700 m	Pulse Rate:	277 KHz		START	END
Engine Off:	21:15:00	Landing:	21:08:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	16:50:00	17:03:00
TOTAL:	5.98 hrs	TOTAL:	5.47 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	20:52:00	21:00:00

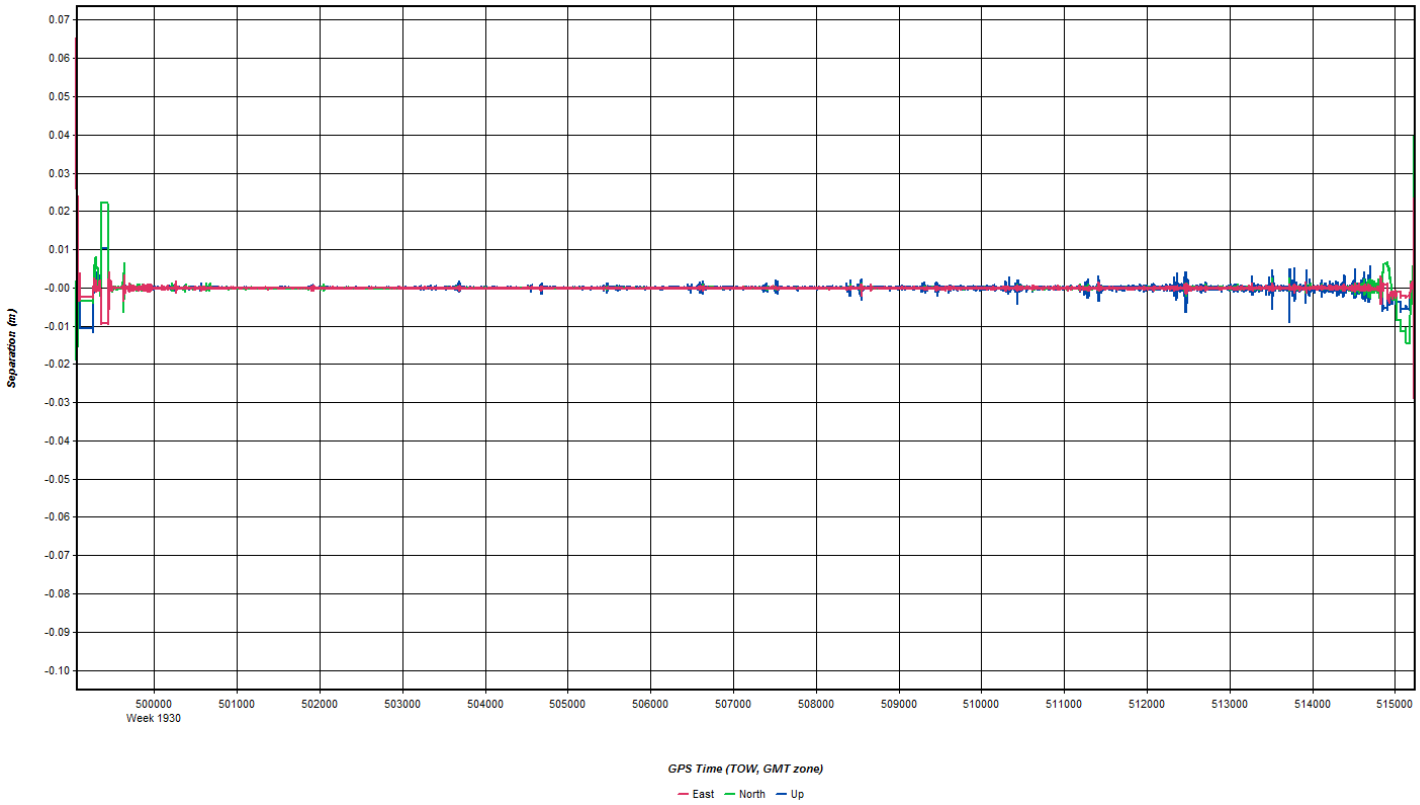
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
59		South	170104_171216	17:12:17	17:21:35	South 24nm of line
60		North	170104_172444	17:24:45	17:40:45	Complete line
1		West	170104_180053	18:00:54	18:05:41	Complete line
2		East	170104_180824	18:08:25	18:13:06	Complete line
3		West	170104_181653	18:16:53	18:21:55	Complete line
4		East	170104_182459	18:25:00	18:29:49	Complete line
5		West	170104_183316	18:33:17	18:38:40	Complete line
6		East	170104_184200	18:42:01	18:47:05	Complete line
7		West	170104_185004	18:50:05	18:55:35	Complete line
8		East	170104_185829	18:58:30	19:03:28	Complete line
9		West	170104_190638	19:06:40	19:12:01	Complete line
10		East	170104_191458	19:14:59	19:19:58	Complete line
11		West	170104_192305	19:23:06	19:28:24	Complete line
12		East	170104_193057	19:30:58	19:35:53	Complete line
13		West	170104_193900	19:39:00	19:44:02	Complete line
14		East	170104_194646	19:46:46	19:51:23	Complete line
15		West	170104_195421	19:54:21	19:59:17	Complete line
16		East	170104_200221	20:02:22	20:06:49	Complete line
17		West	170104_200936	20:09:37	20:14:29	Complete line
18		East	170104_201717	20:17:19	20:21:15	Complete line
19		West	170104_202519	20:25:20	20:29:26	Complete line
20		East	170104_203235	20:32:36	20:35:52	Complete line
CL		North	170104_204039	20:40:40	20:46:30	Complete line

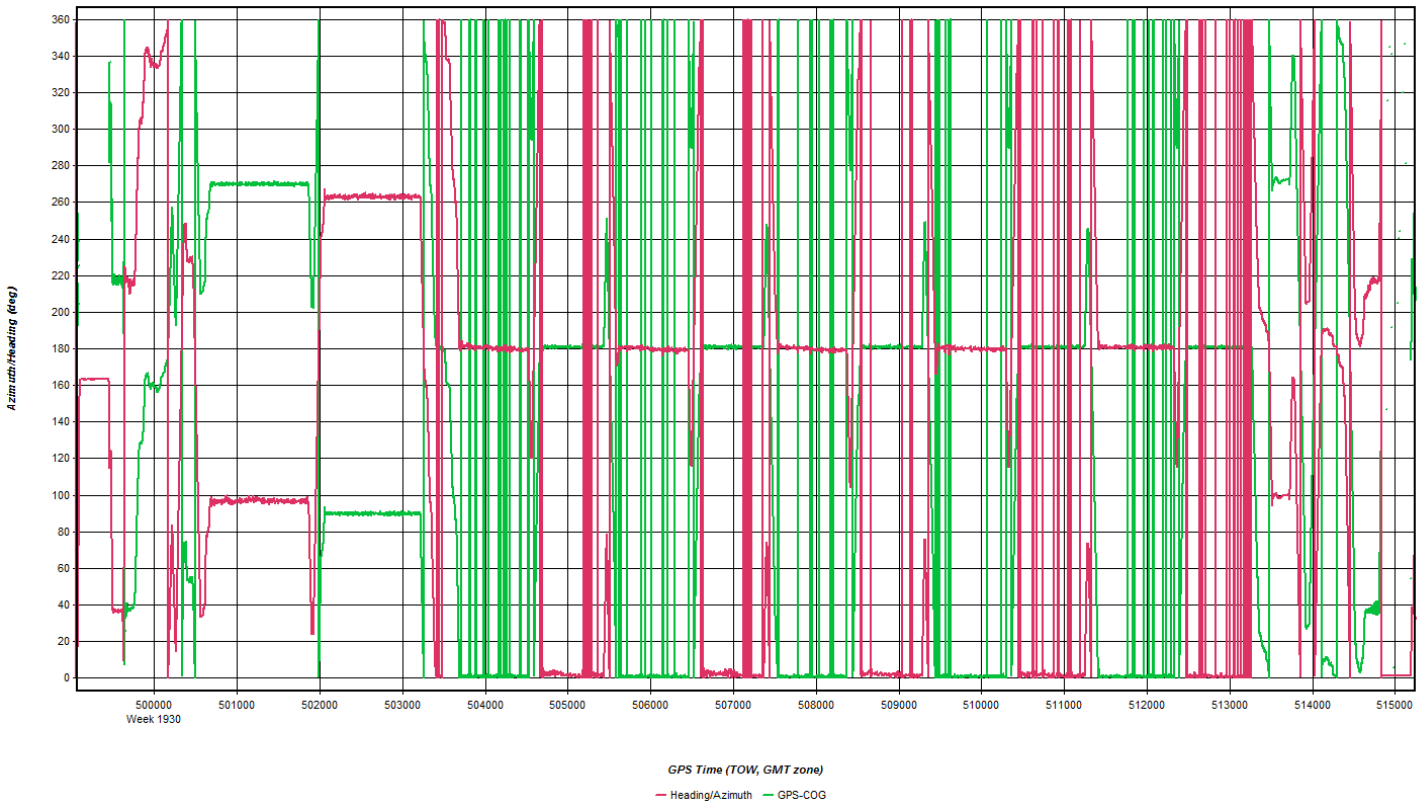
SUN ANGLE	NO IMU GAPS!!
@Start:	Clear skies, 24 knot winds. Temp. at take off was -6C and 0C when landing.
@End:	Sats and DOPS averaged 19 and 1.1.
@Peak:	Flying height range was 1650 to 1880m AGL
	Base Station from Huntsville was used, antenna height was 1.82 to ARP. 6019_0104_070045.

Jan 6, 2017-A (C-FVZM, SN7207)

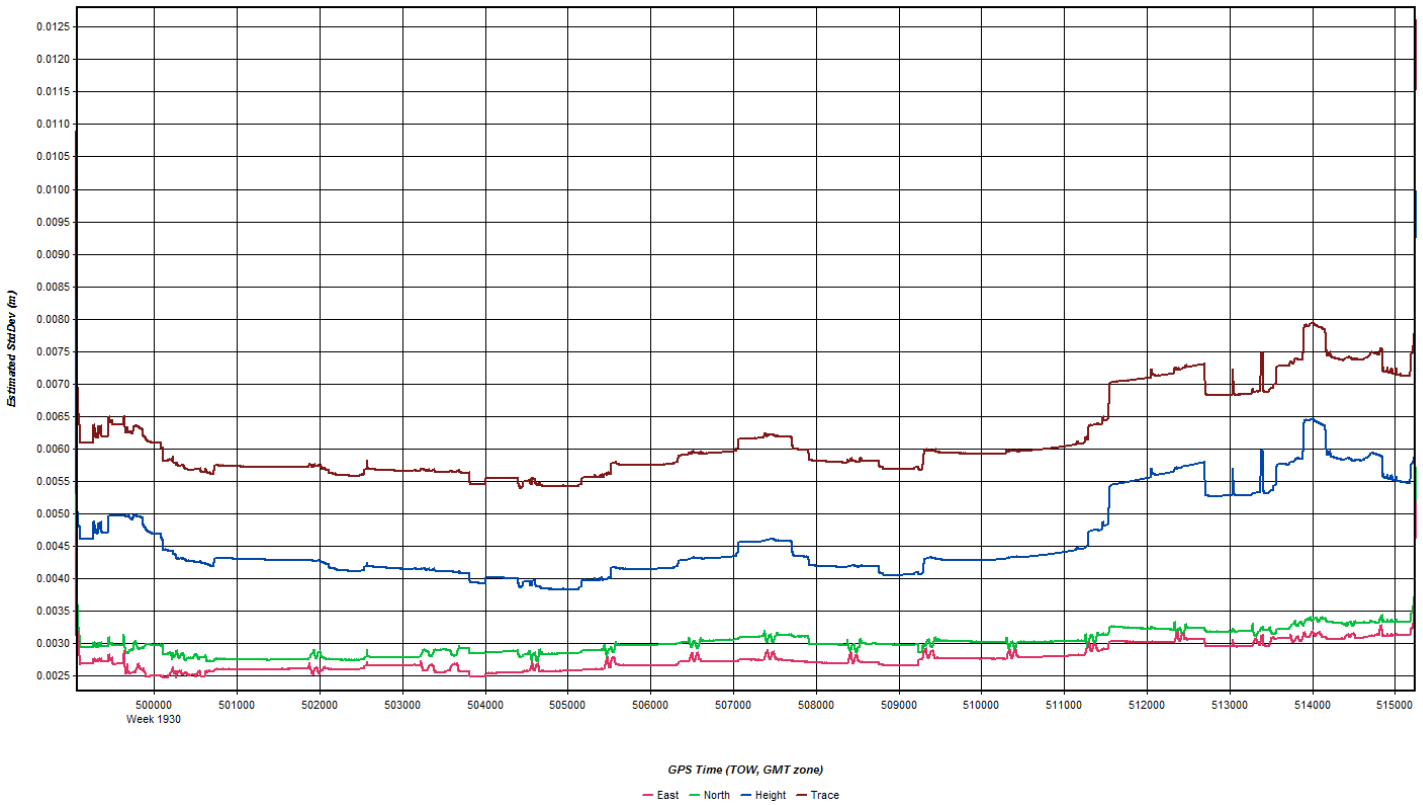

MOAT
BASE_Eccentric
10 km

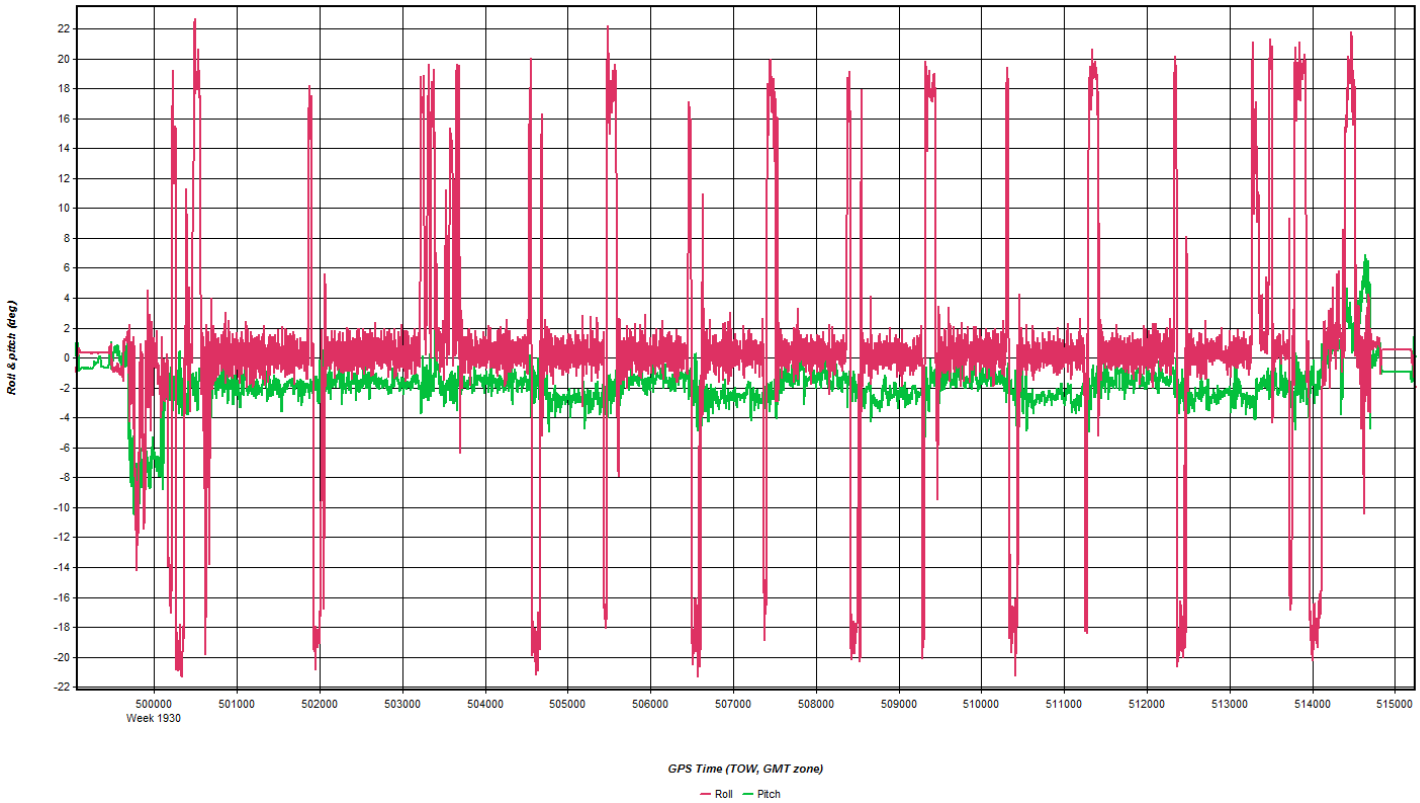

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
500000
Week 1930
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

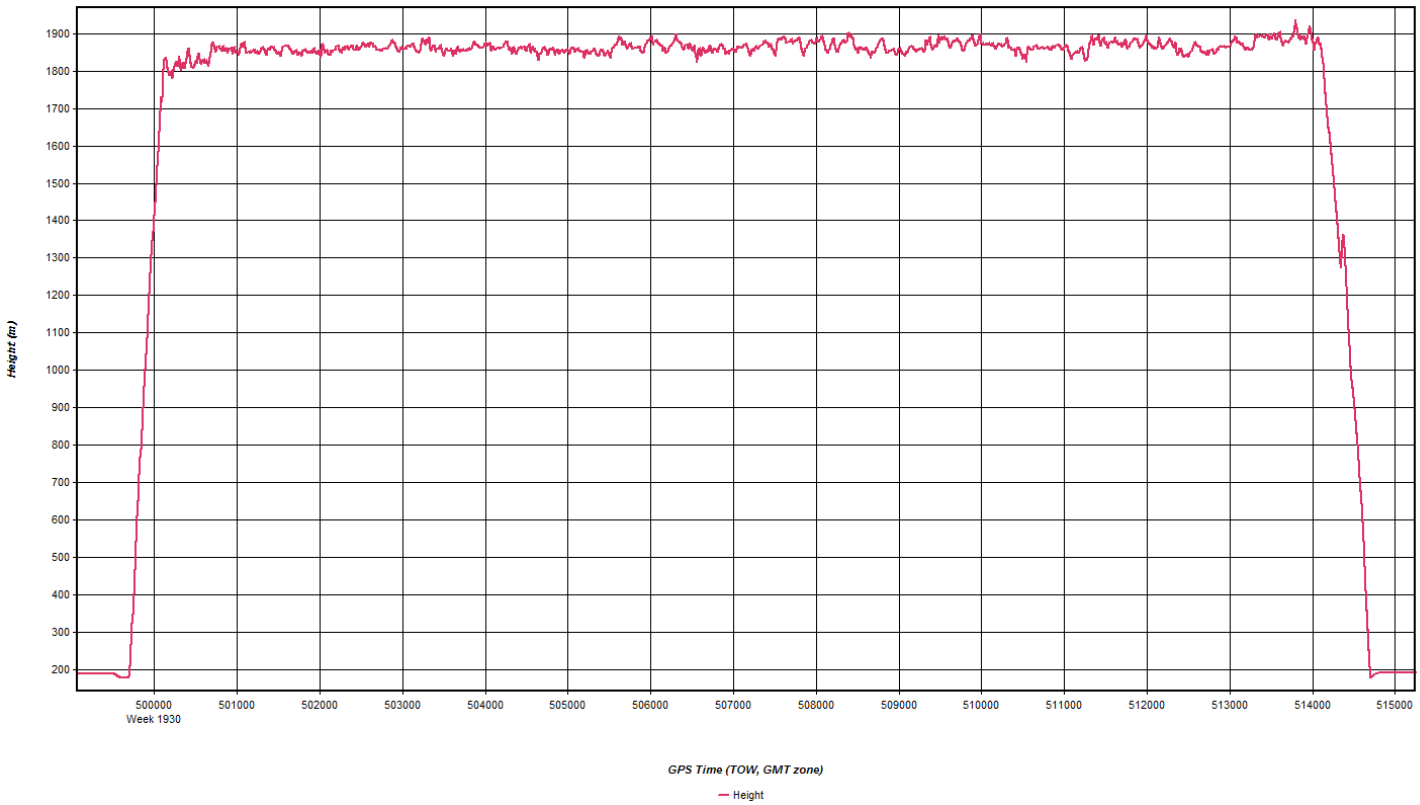

Separation (m)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
-0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
-0.09
-0.10
500000
Week 1930
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
GPS Time (TOW, GMT zone)
East
North
Up

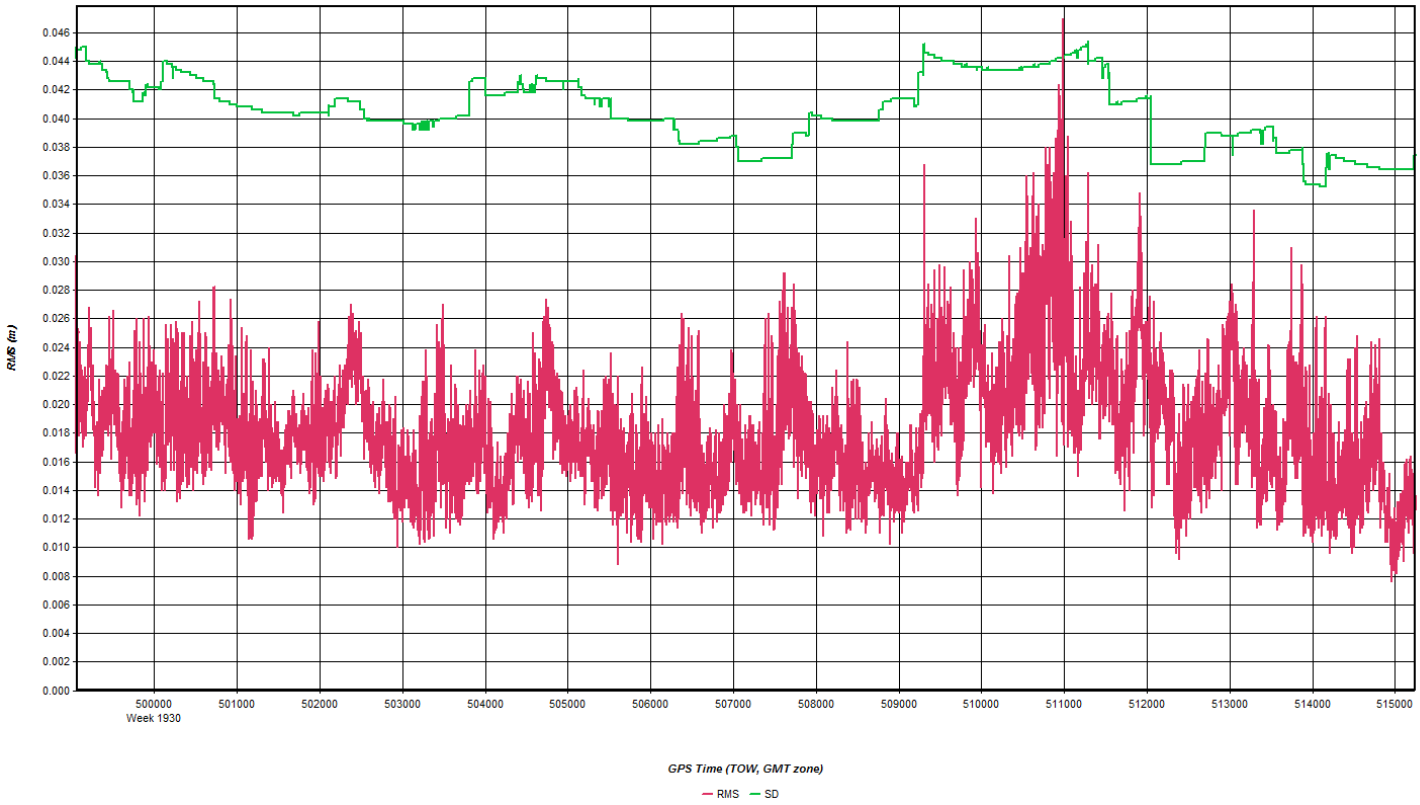

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
500000
Week 1930
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

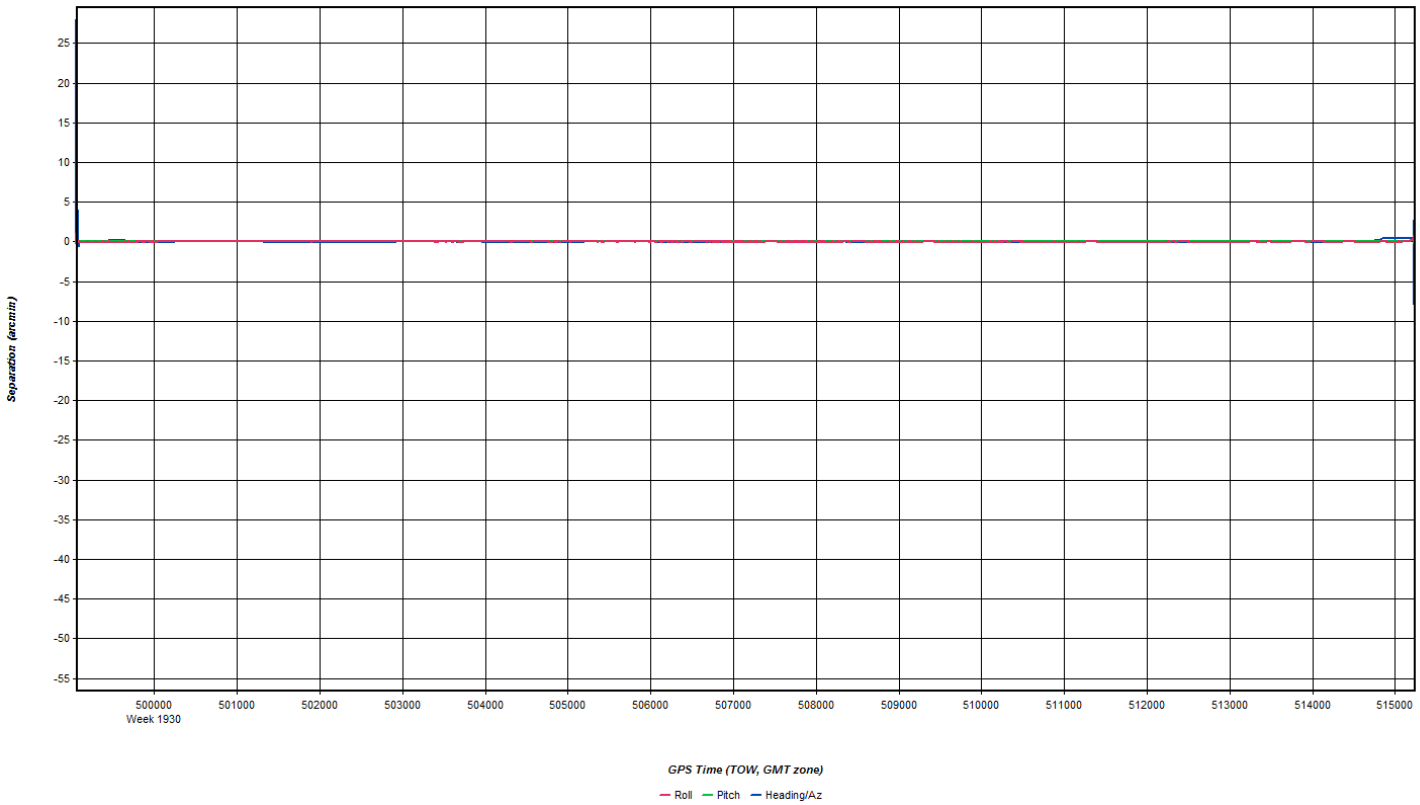

PDOP
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
500000
Week 1930
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
GPS Time (TOW, GMT zone)
PDOP

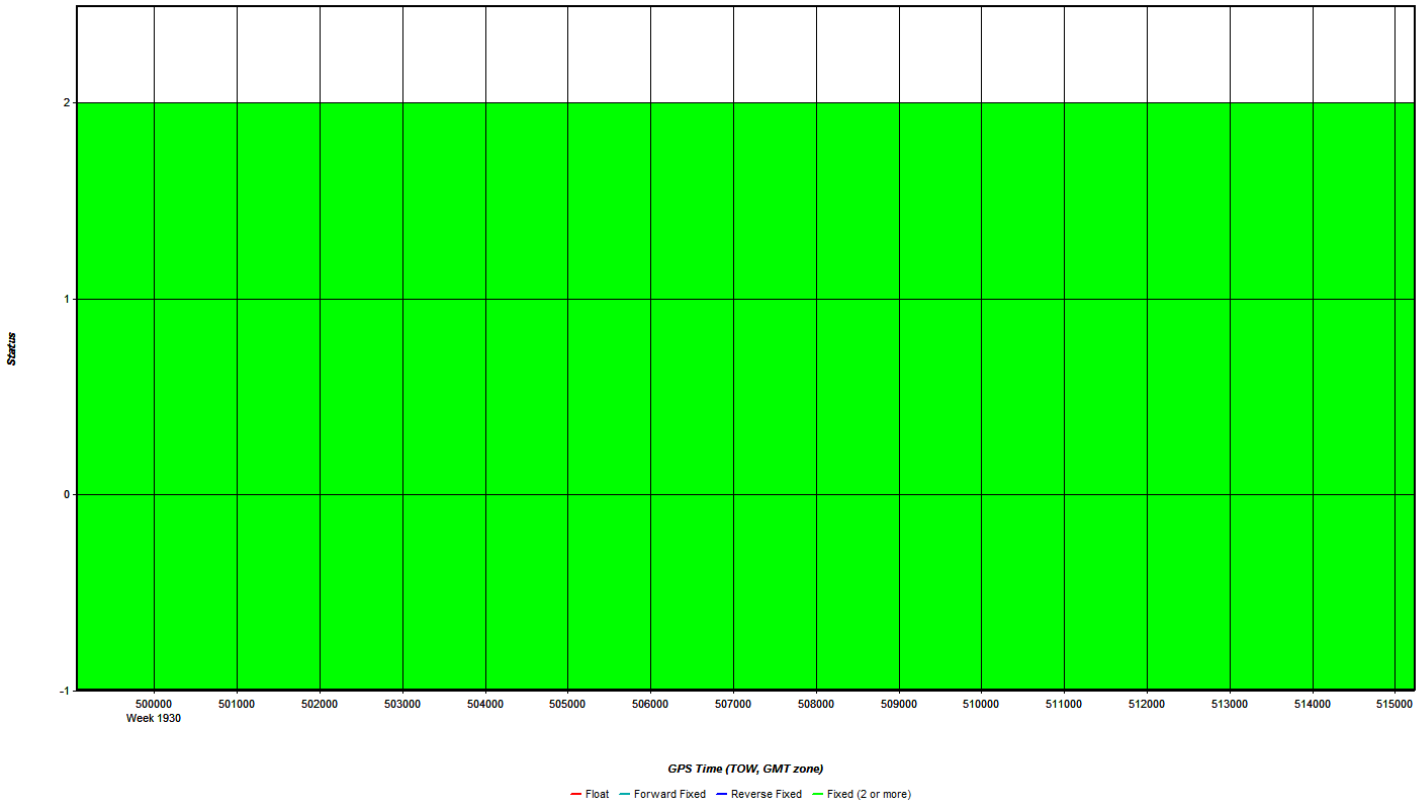

Estimated StdDev (m)
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
500000
Week 1930
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

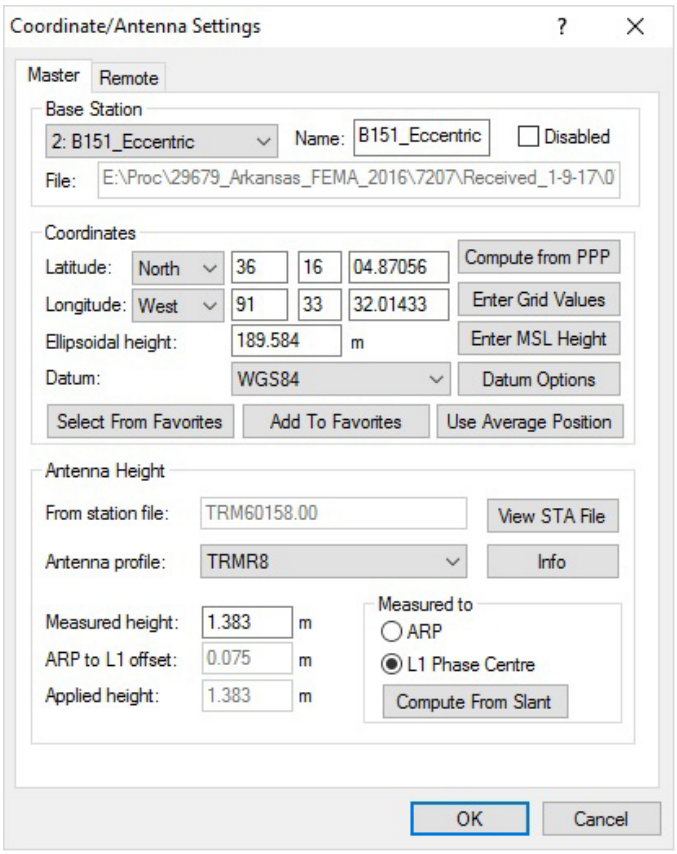

Roll & pitch (deg)
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
500000
Week 1930
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
GPS Time (TOW, GMT zone)
Roll
Pitch

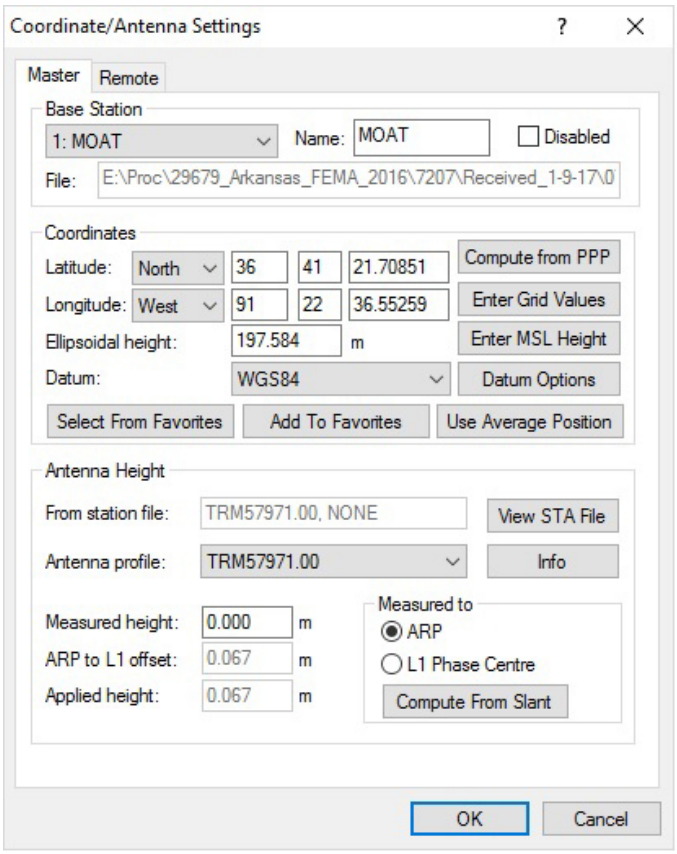

Height (m)
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
500000
Week 1930
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
500000
Week 1930
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
-55
500000
Week 1930
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
500000
Week 1930
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
2: B151_Eccentric
Name:
B151_Eccentric
Disabled
File:
E:\Proc\29679_Arkansas_FEMA_2016\7207\Received_1-9-17\0
Coordinates
Latitude:
North
36
16
04.87056
Compute from PPP
Longitude:
West
91
33
32.01433
Enter Grid Values
Ellipsoidal height:
189.584
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM60158.00
View STA File
Antenna profile:
TRMR8
Info
Measured height:
1.383
m
ARP to L1 offset:
0.075
m
Applied height:
1.383
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MOAT
Name:
MOAT
Disabled
File:
E:\Proc\29679_Arkansas_FEMA_2016\7207\Received_1-9-17\0
Coordinates
Latitude:
North
36
41
21.70851
Compute from PPP
Longitude:
West
91
22
36.55259
Enter Grid Values
Ellipsoidal height:
197.584
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM57971.00, NONE
View STA File
Antenna profile:
TRM57971.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.067
m
Applied height:
0.067
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Julian Day 006	Flight A

LIDAR Flight Log

Date January 6, 2017	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot M. Kalus/O. Kamerman
Location Hardy, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System **Leica ALS70**	
Unit 7207	
IMU **Honeywell Micro IRS**	
GPS Rx **NovAtel OEMV**	
Roll Comp.	
Data Drive 2	

Additional Notes
Wind:
Temp:
Pressure:
Clouds:
Visibility:

Aircraft Block Time		
Engine On 18:33	Ramp Out	Takeoff 18:47
Engine Off 23:08	Ramp In	Landing 22:58
Total 4.3 **hrs**	Total **hrs**	Total 4.2 **hrs**

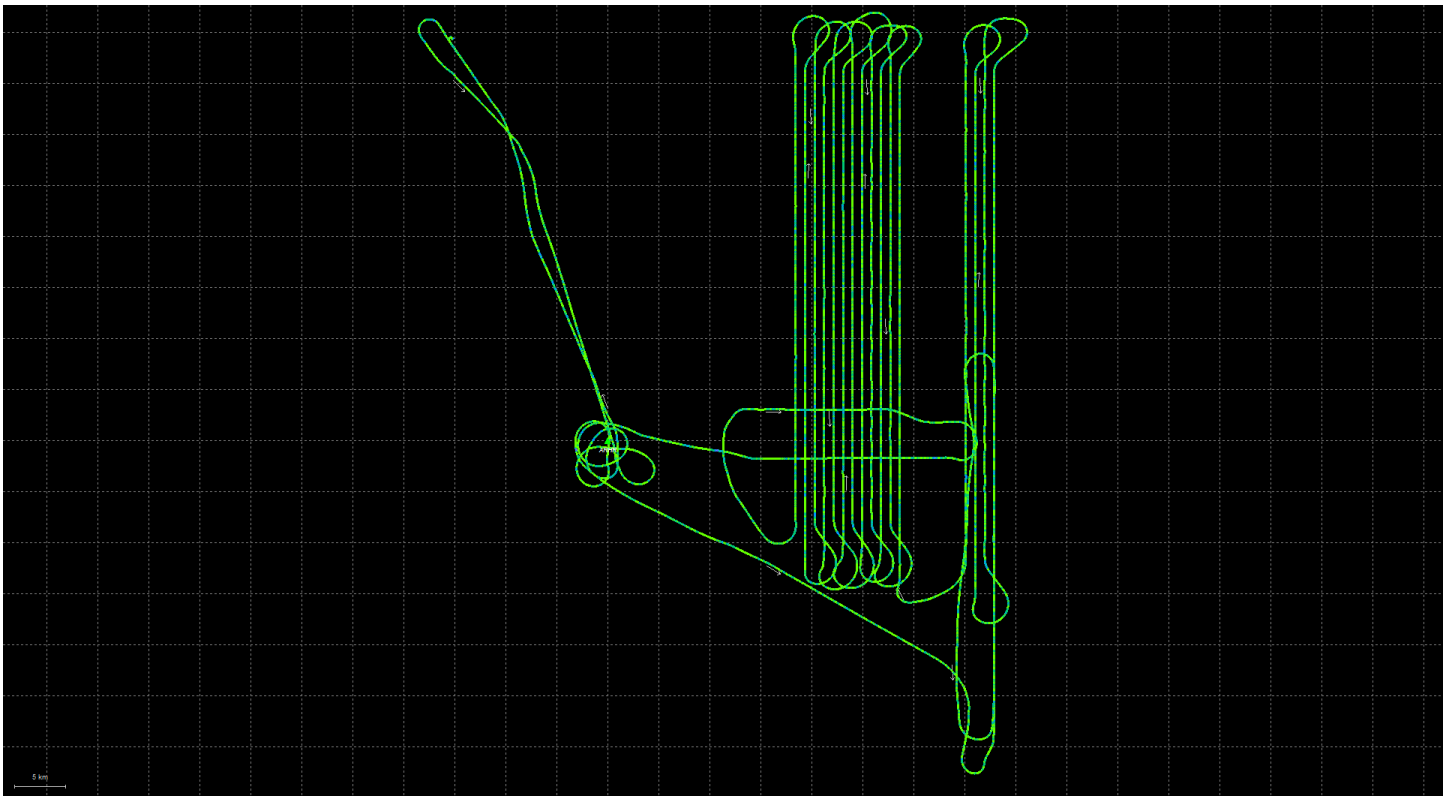
Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

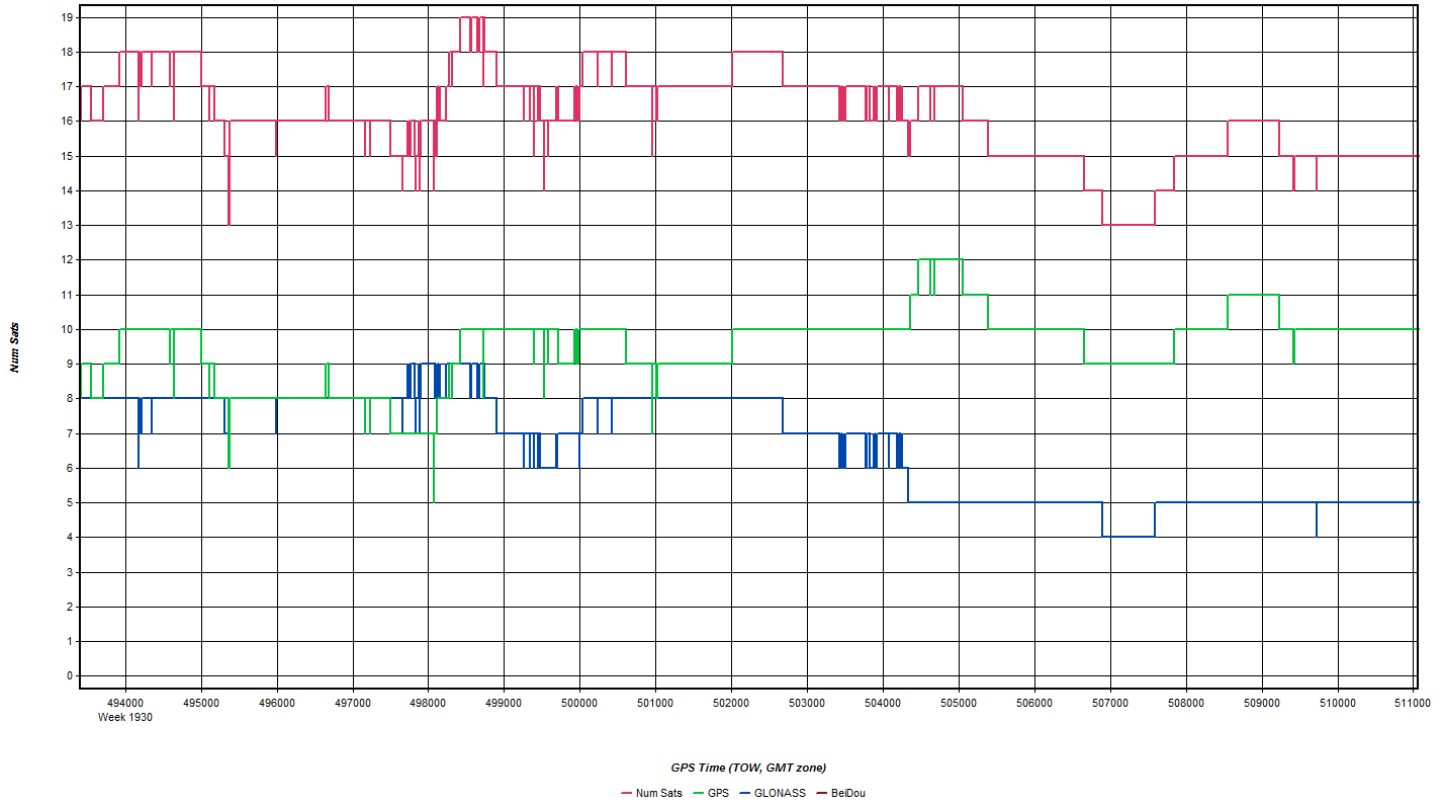
Static Alignment	GPS Time	
	Start	End
Pre Mission	18:38	18:43
Post Mission	23:01	23:06

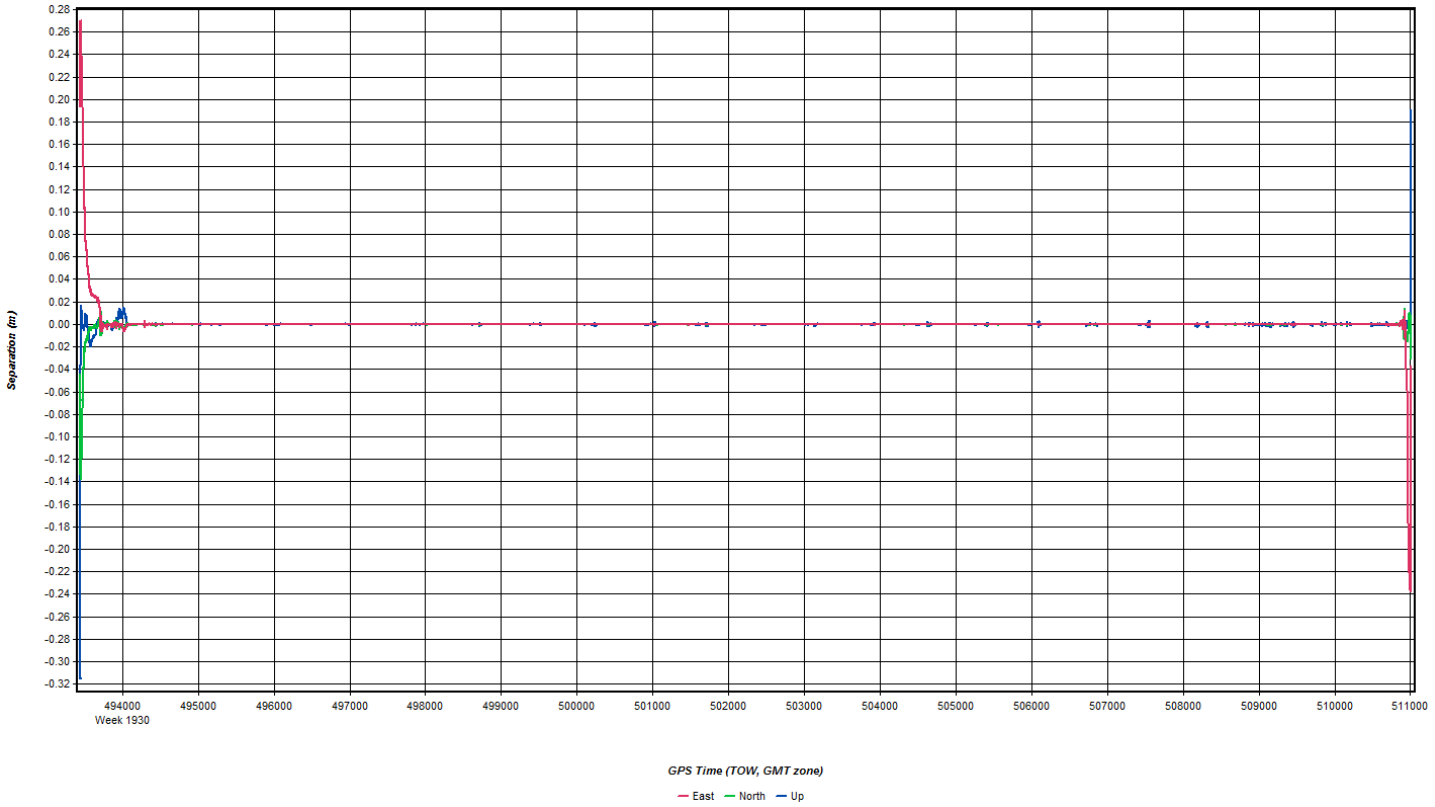
Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 170106_
IMU		Figure 8	18:57	19:04			IMU Wake Up
059		270	19:05:09	19:24:07			
060		090	19:27:56	19:46:31			
XTie		180	19:49:53	19:50:56			Cross tie lies 059-060 north to south
145		001	19:55:04	20:08:27			
146		181	20:11:24	20:23:33			
147		001	20:27:23	20:40:30			
148		181	20:43:44	20:55:41			
149		001	20:59:35	21:12:39			
150		181	21:15:41	21:27:39			
151		001	21:31:36	21:44:31			
152		181	21:47:45	22:00:22			
153		001	22:04:36	22:18:34			
154		181	22:21:22	22:34:01			
XTie		270	22:38:39	22:41:50			Cross tie lines 145-154 East to West
IMU		Figure 8	22:42	22:48			IMU maneuver

Pg 1 of 1

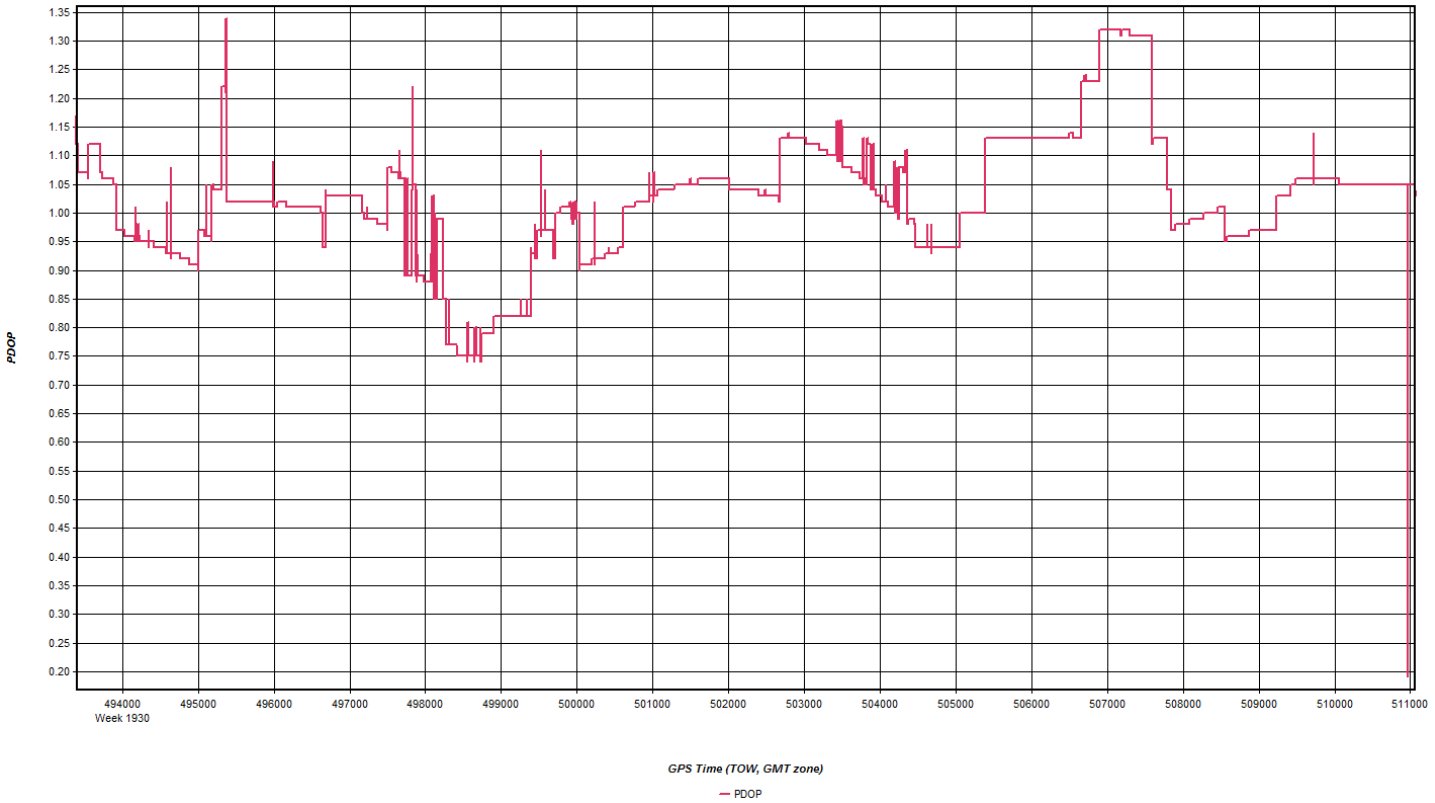
Jan 6, 2017-A (C-GKSI, SN7229)

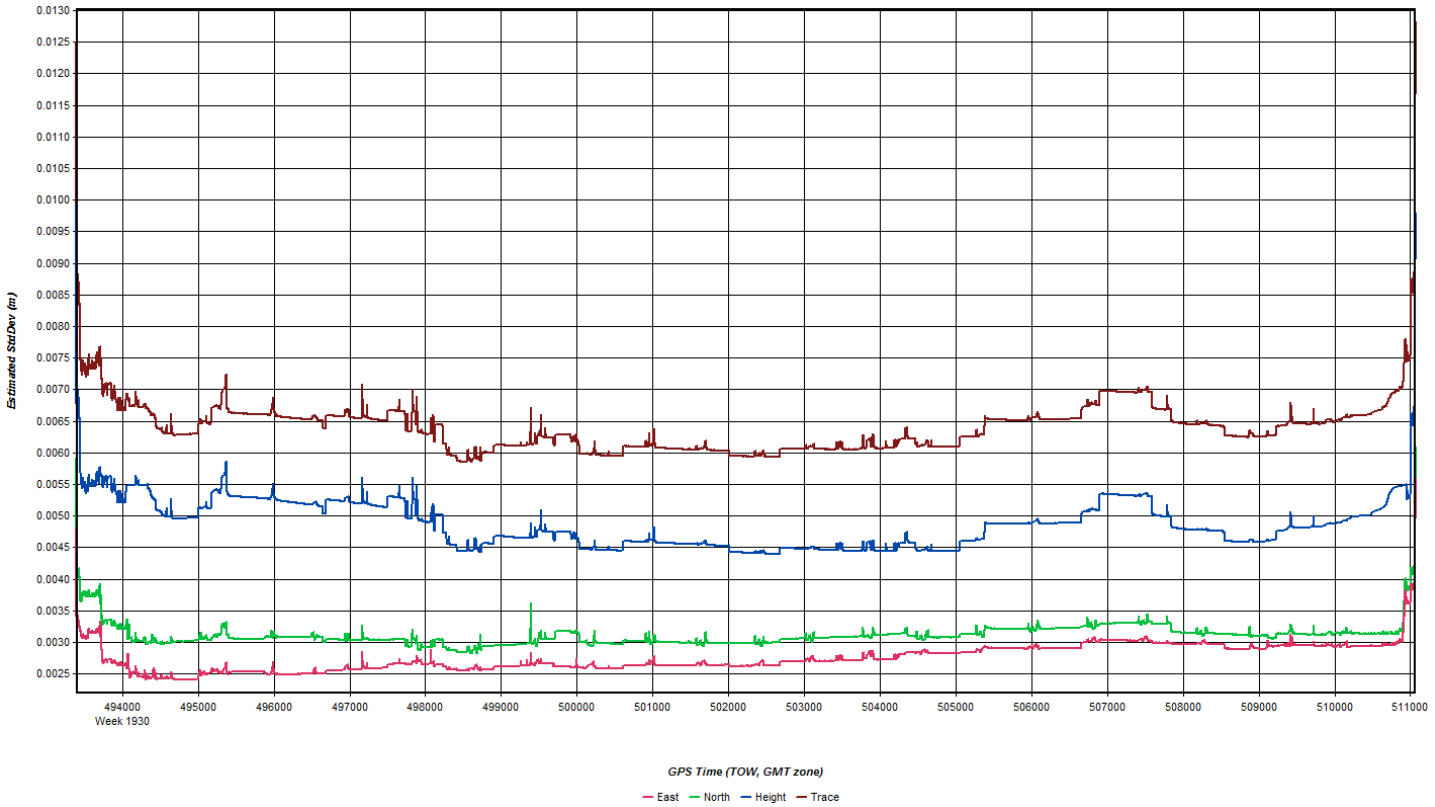


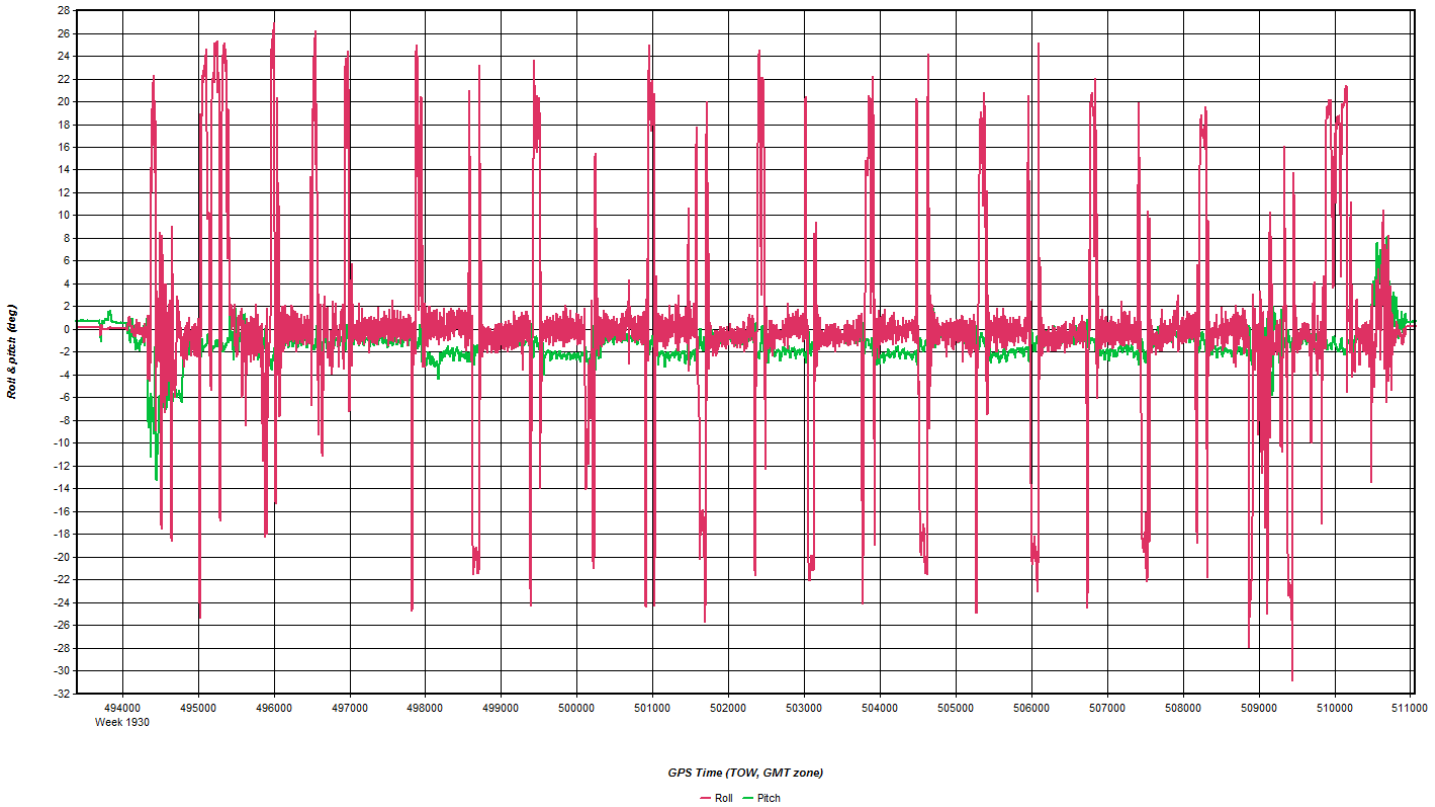

Num Sats
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
494000
Week 1930
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

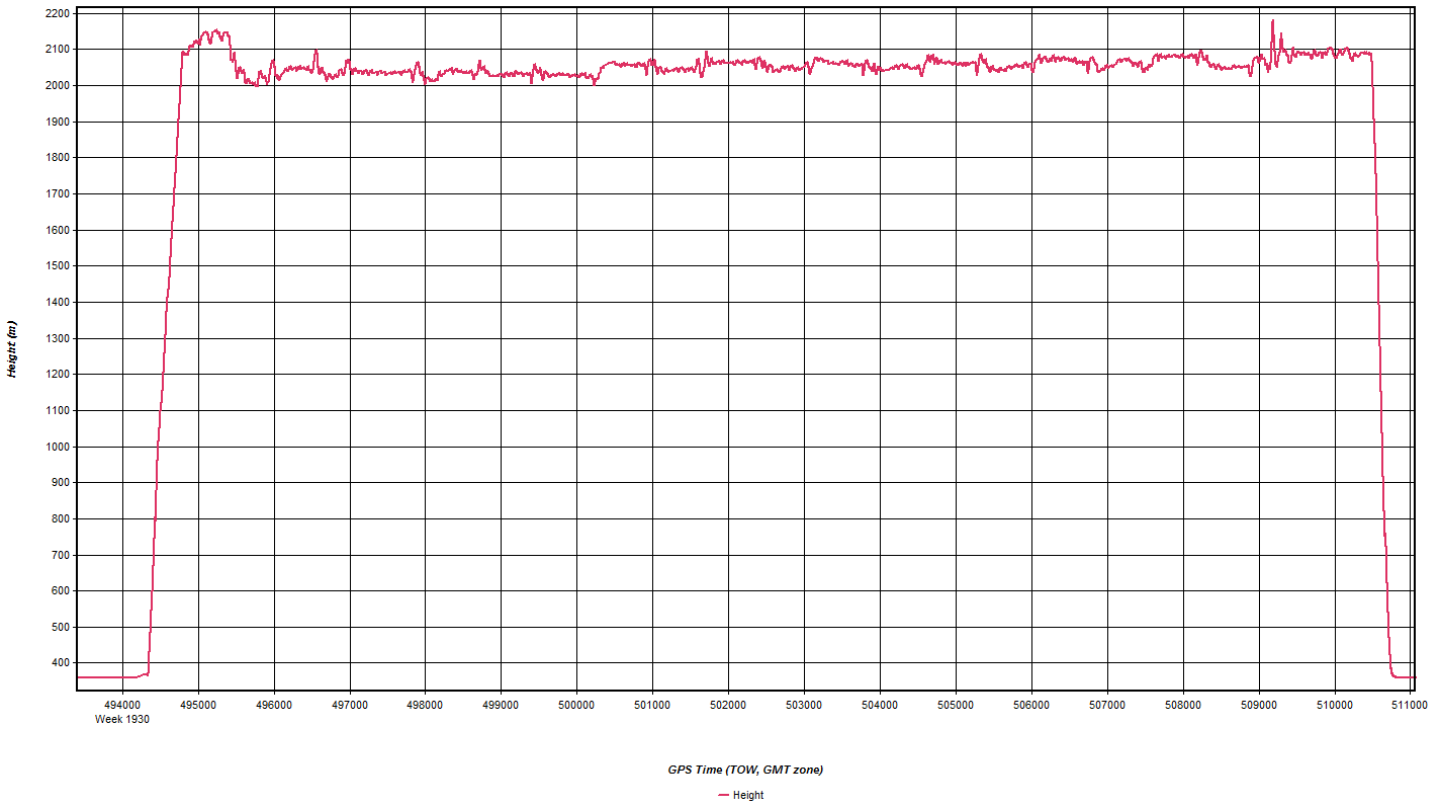

Separation (m)
0.28
0.26
0.24
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
-0.16
-0.18
-0.20
-0.22
-0.24
-0.26
-0.28
-0.30
-0.32
494000
Week 1930
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
GPS Time (TOW, GMT zone)
East
North
Up

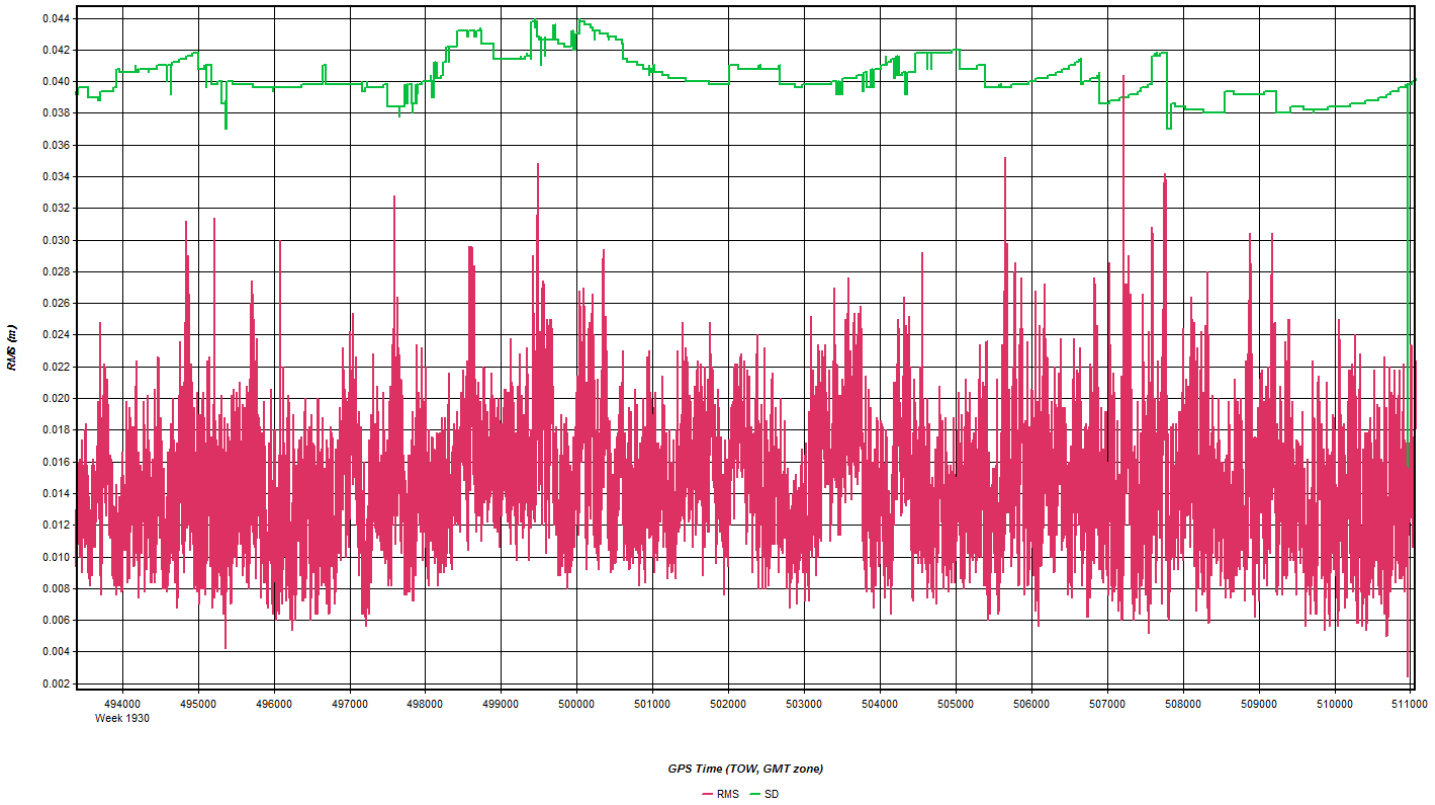

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
494000
Week 1930
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

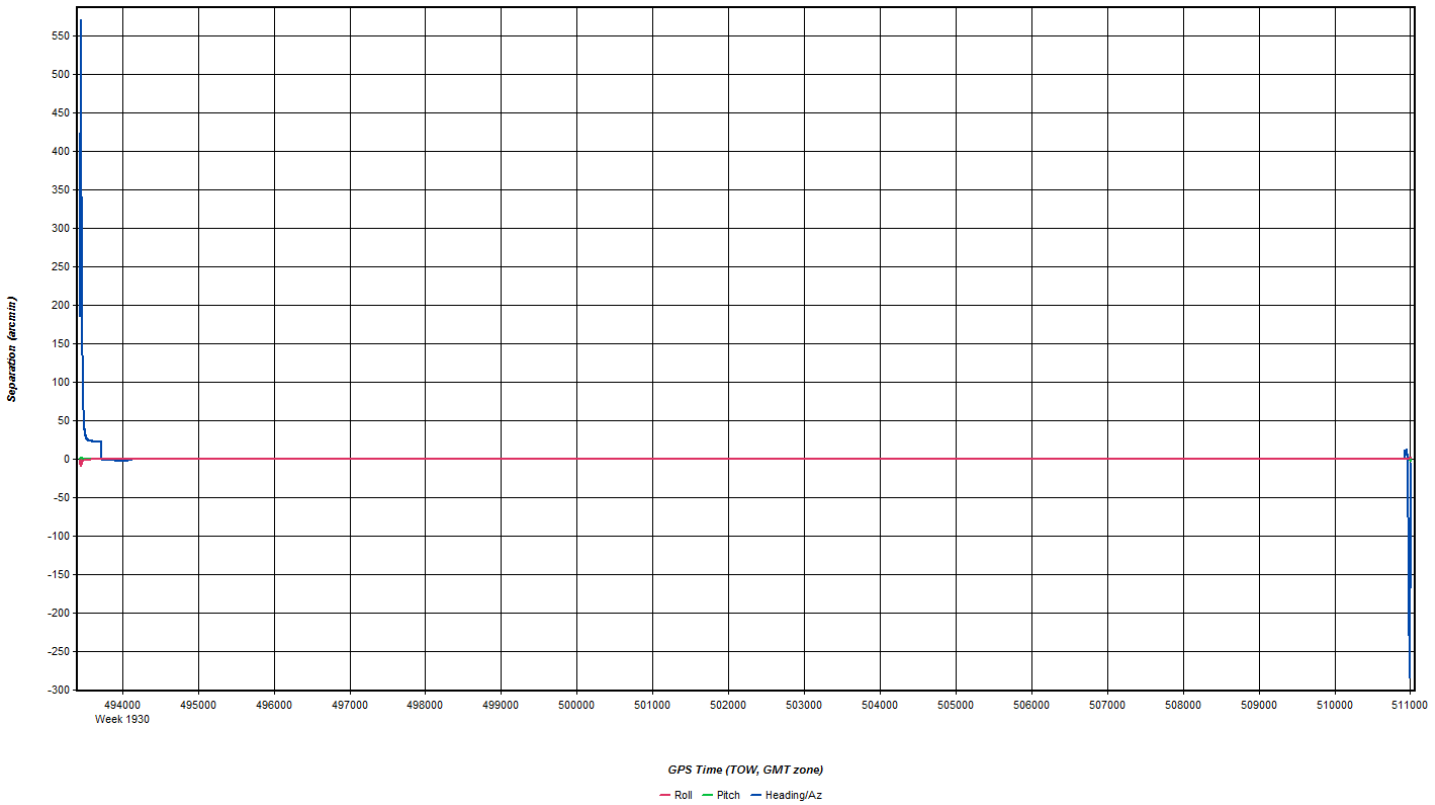

PDOP
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
494000
Week 1930
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
GPS Time (TOW, GMT zone)
PDOP

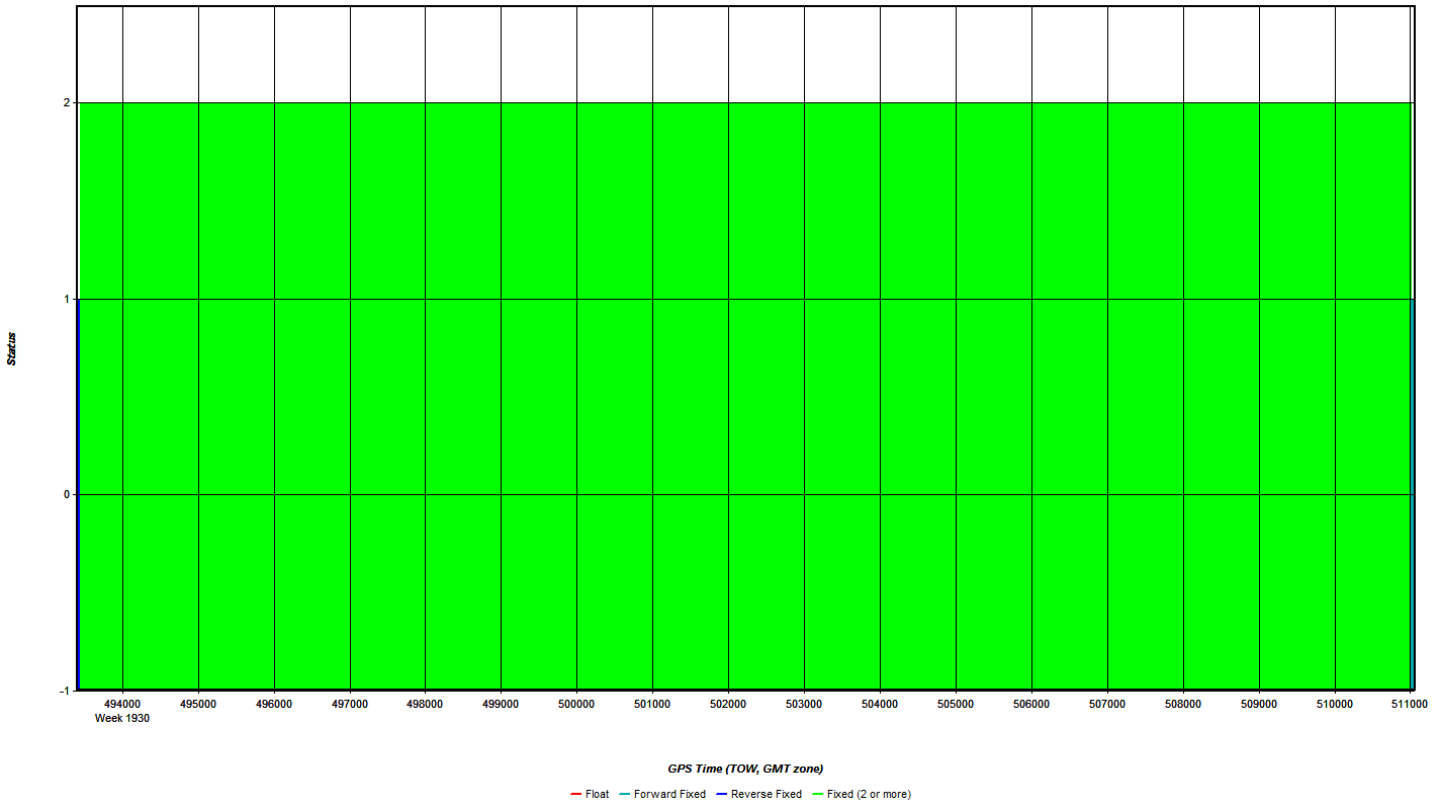

Estimated StdDev (m)
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
494000
Week 1930
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

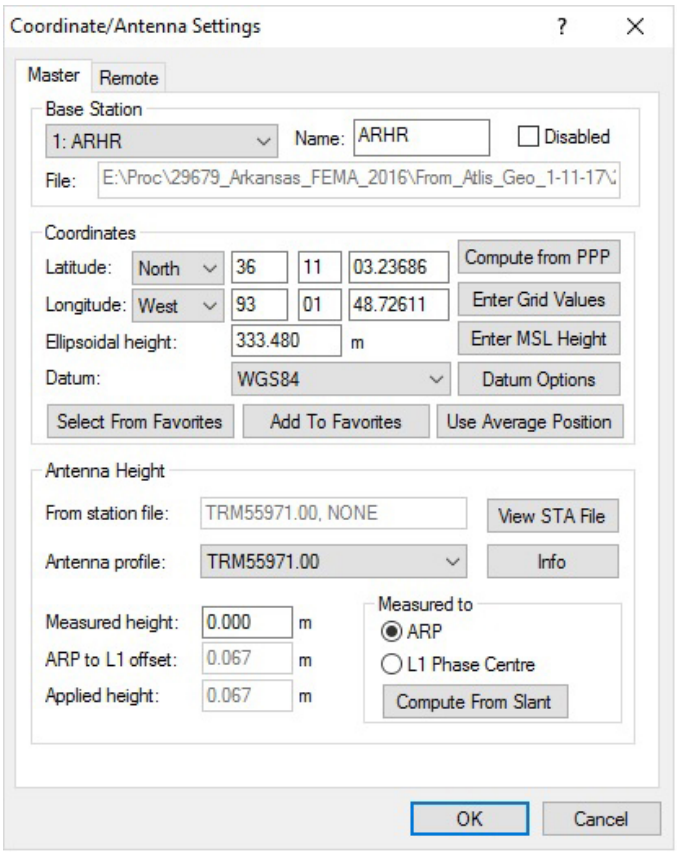

Roll & pitch (deg)
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
-32
494000
Week 1930
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
494000
Week 1930
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
494000
Week 1930
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
550
500
450
400
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
494000
Week 1930
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
494000
Week 1930
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARHR
Name:
ARHR
Disabled
File:
E:\Proc\29679_Arkansas_FEMA_2016\From_Atlis_Geo_1-11-17\
Coordinates
Latitude:
North
36
11
03.23686
Compute from PPP
Longitude:
West
93
01
48.72611
Enter Grid Values
Ellipsoidal height:
333.480
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM55971.00, NONE
View STA File
Antenna profile:
TRM55971.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.067
m
Applied height:
0.067
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

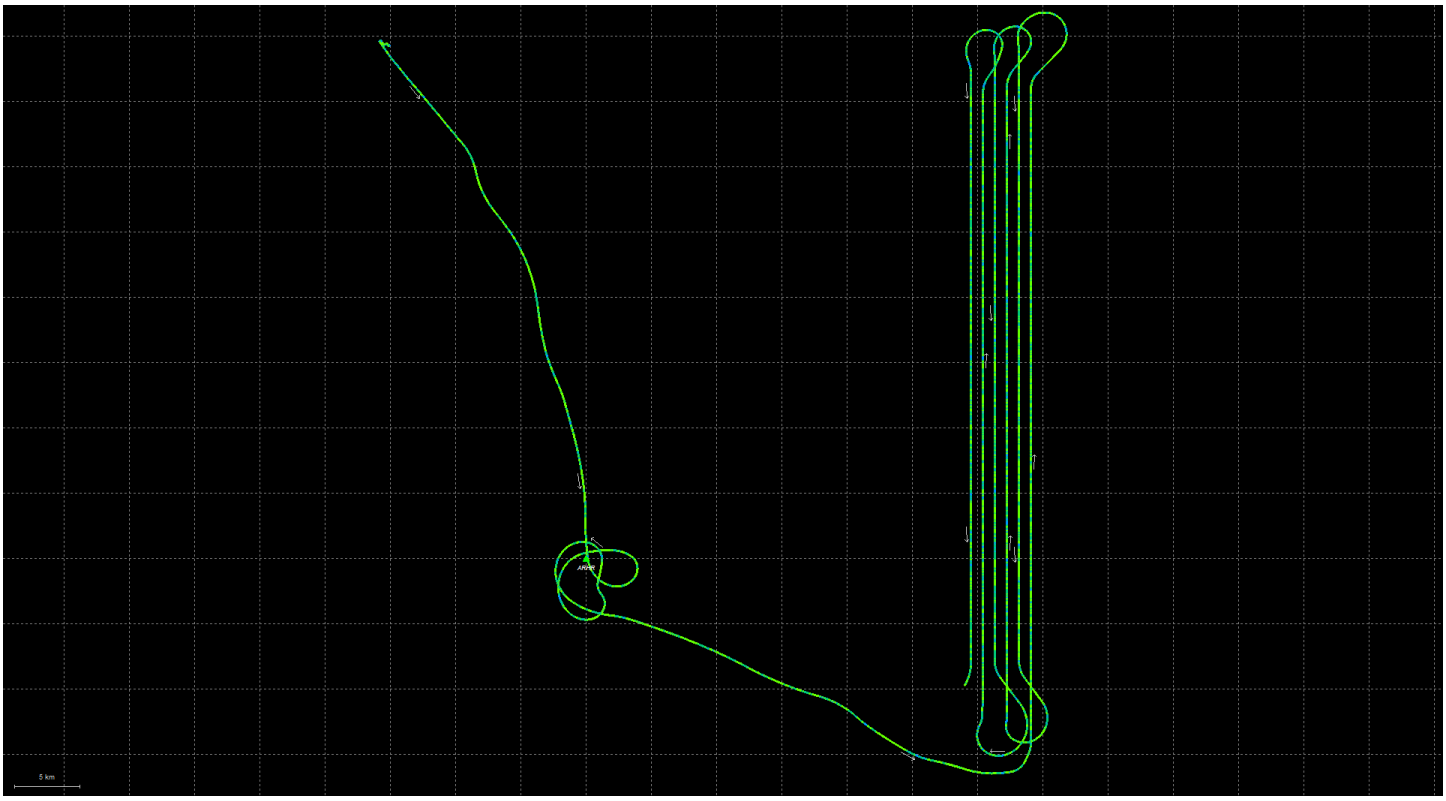
PROJECT NAME	Q.S. Arkansas	DATE	06/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Springdale AR	DATA DRIVES	LiDar #2

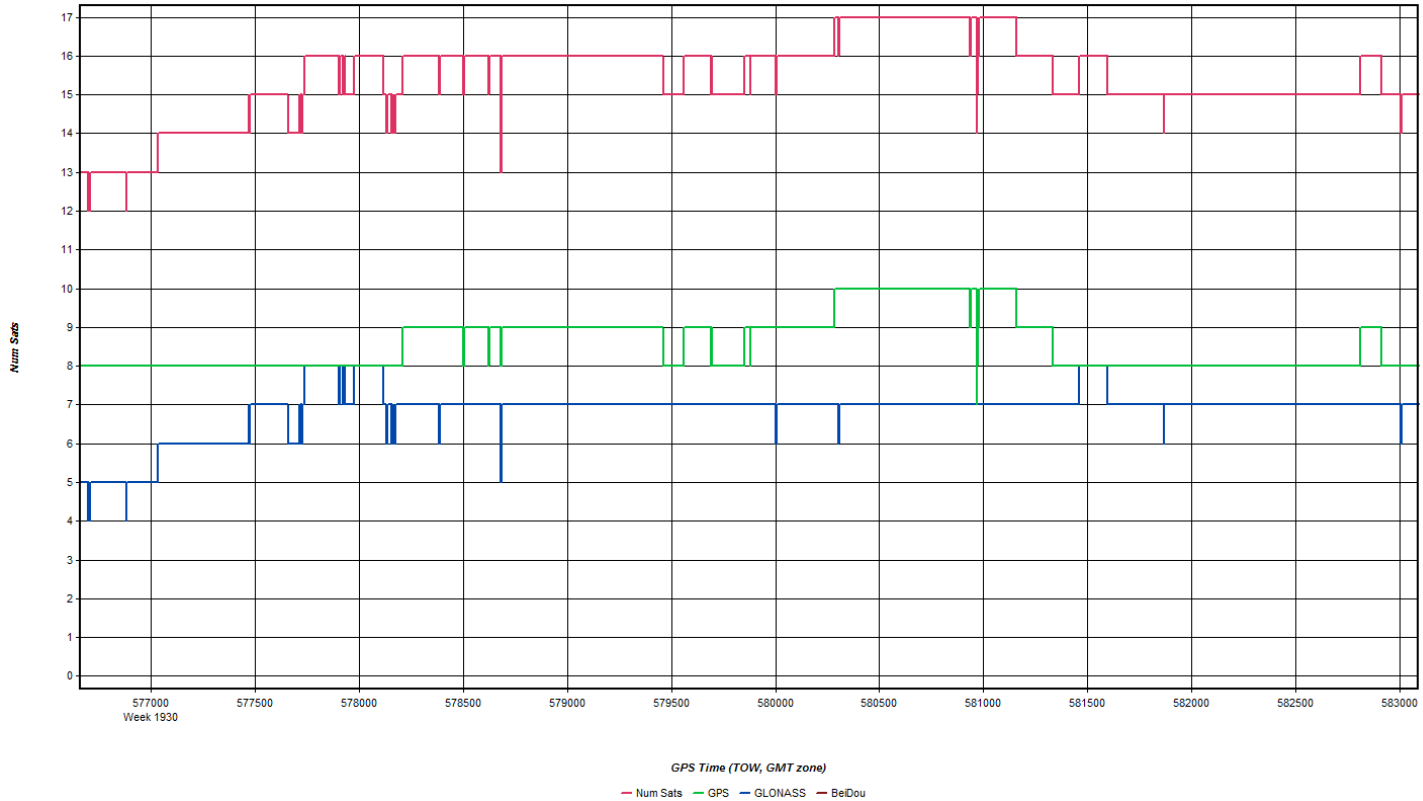
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	17:00:00	Takeoff:	16:18:00	AGL Height:	1800 m	Pulse Rate:	277 KHz		START	END
Engine Off:	22:01:00	Landing:	21:53:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	17:30:00	17:37:00
TOTAL:	5.02 hrs	TOTAL:	5.58 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	21:37:00	21:43:00

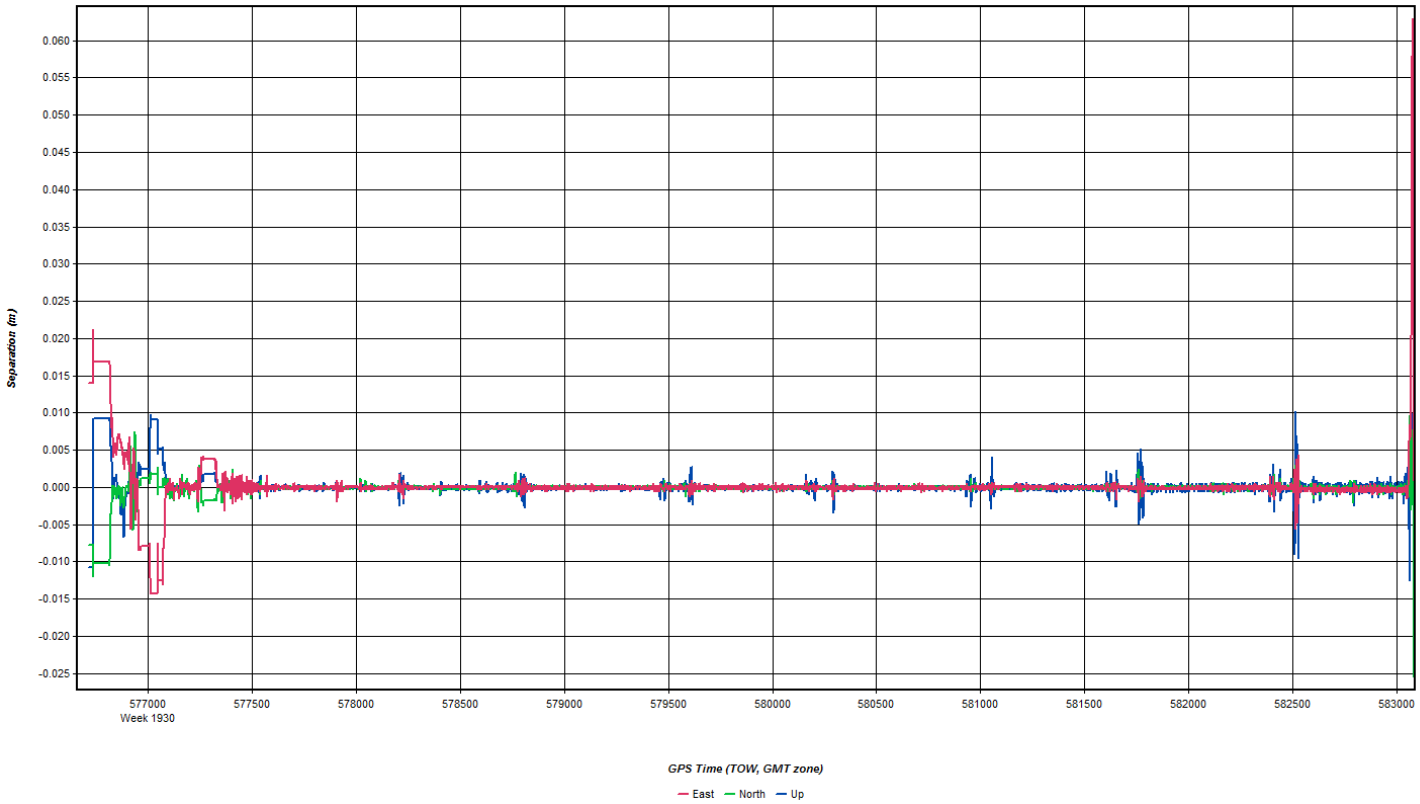
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
149		North	170106_174833	17:48:33		Went off line, restarted
149		North	170106_180252	18:04:01	18:16:36	6nm from south not flown due to snow
148		South	170106_181942	18:19:44	18:28:41	6nm from south not flown due to snow
147		North	170106_183228	18:32:29	18:42:07	6nm from south not flown due to snow
146		South	170106_184519	18:45:20	18:54:55	6nm from south not flown due to snow
139		North	170106_195744	19:57:45	19:08:00	Skipped 6 lines to provide buffer between us and Airborne/6nm from south not flown due to snow
138		South	170106_191032	19:10:33	19:19:08	8nm from south not flown due to snow
137		North	170106_192230	19:22:30	19:32:00	8nm from south not flown due to snow
136		South	170106_193446	19:34:46	19:43:09	8nm from south not flown due to snow
135		North	170106_194613	19:46:13	19:55:43	8nm from south not flown due to snow
134		South	170106_195901	19:59:02	20:07:37	8nm from south not flown due to snow
133		North	170106_201104	20:11:05	20:20:43	8nm from south not flown due to snow
132		South	170106_202333	20:02:33	20:32:12	8nm from south not flown due to snow
131		North	170106_203536	20:35:36	20:45:06	8nm from south not flown due to snow
130		South	170106_204752	20:47:53	20:56:28	8nm from south not flown due to snow
129		North	170106_205948	20:59:49	21:09:08	8nm from south not flown due to snow
128		South	170106_211208	21:12:08	21:20:45	8nm from south not flown due to snow
CL		East	170106_213129	21:31:30	21:34:10	

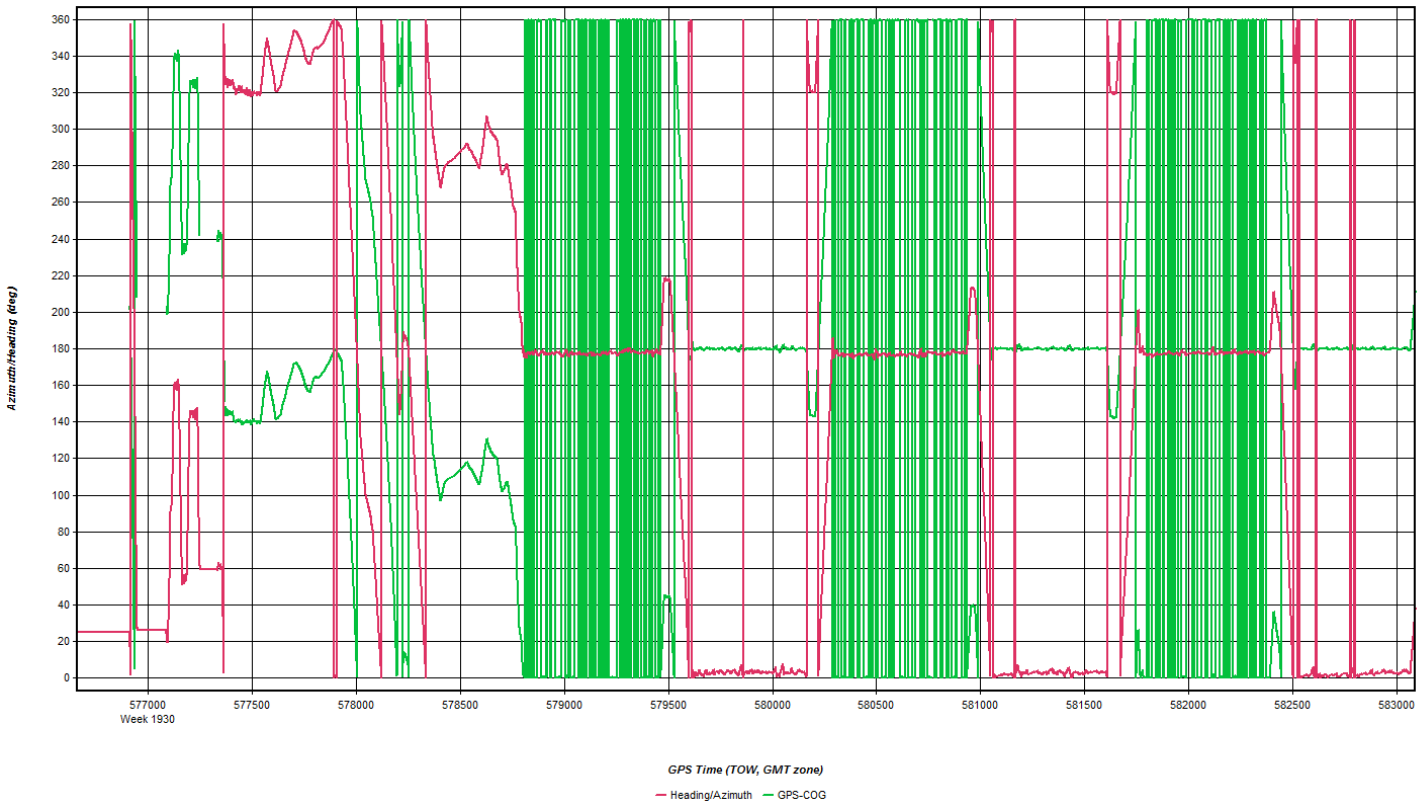
SUN ANGLE @Start: @End: @Peak:	High overcast, 24 knot winds, Temp. at take off was -10C and -9C when landing. Sats and DOPS averaged 18 and 1.2. Flying height range was 1750 to 1900m AGL CORS station ARHR was used for this flight. The areas not flown will be covered by extending the lines from the south, AOI_3.

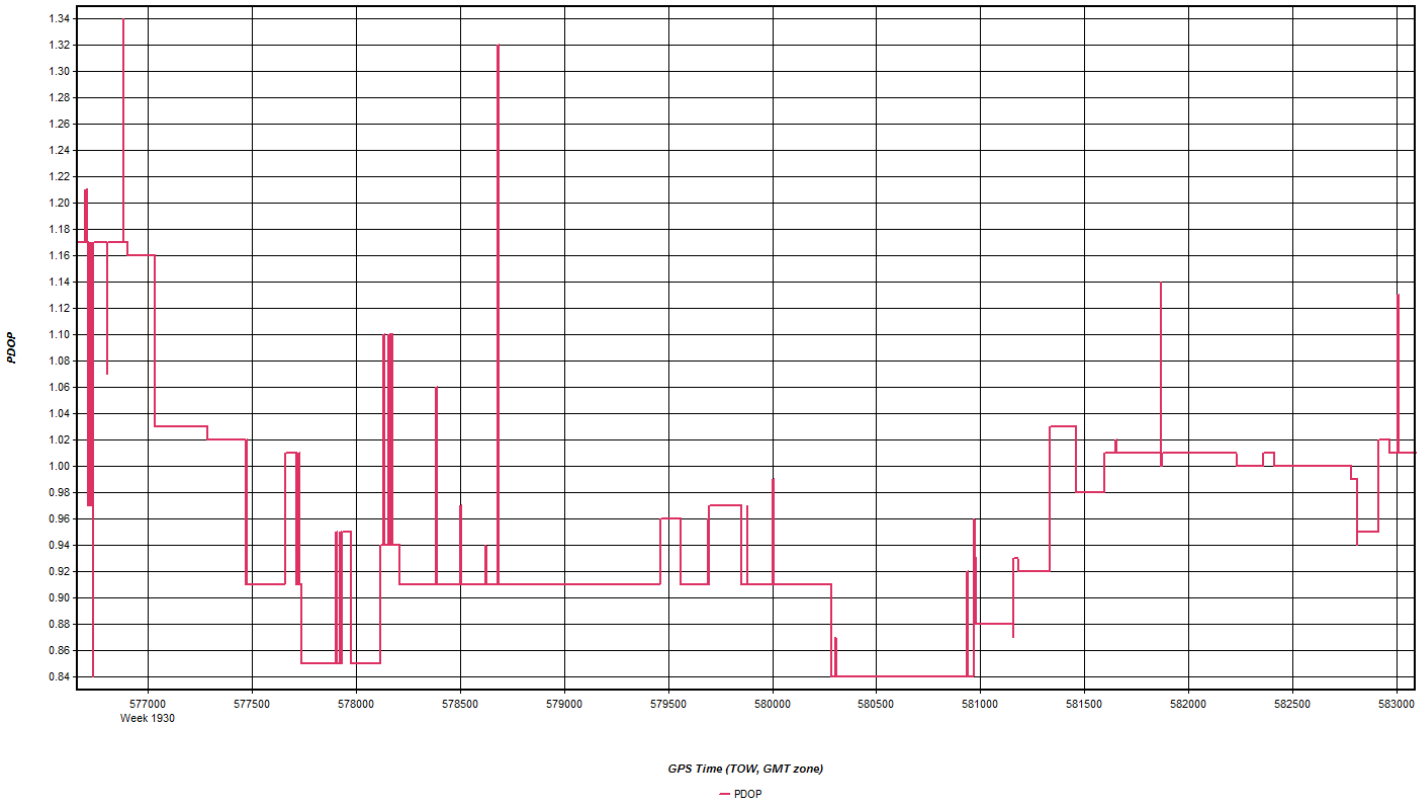
Jan 7, 2017-A (C-GKSI, SN7229)

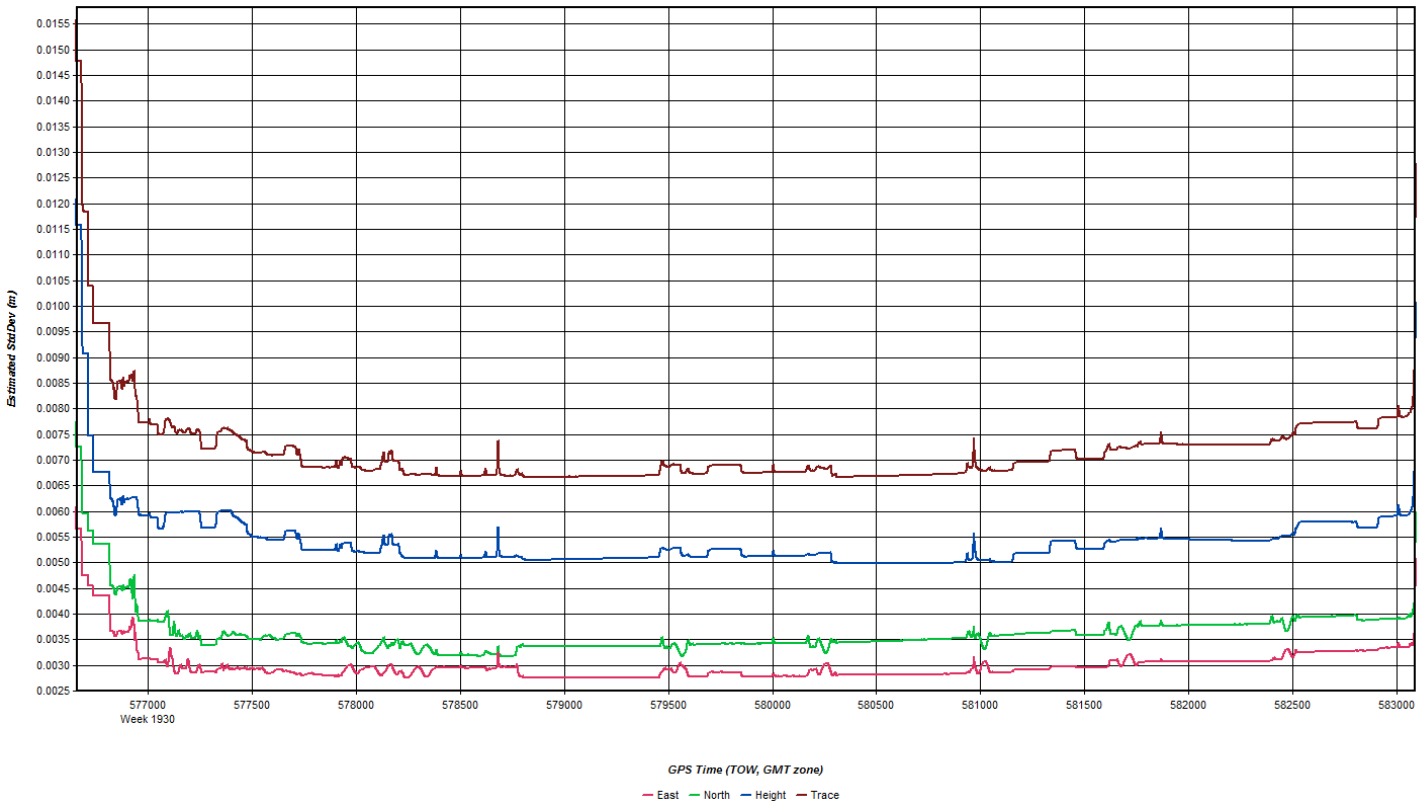

5 km

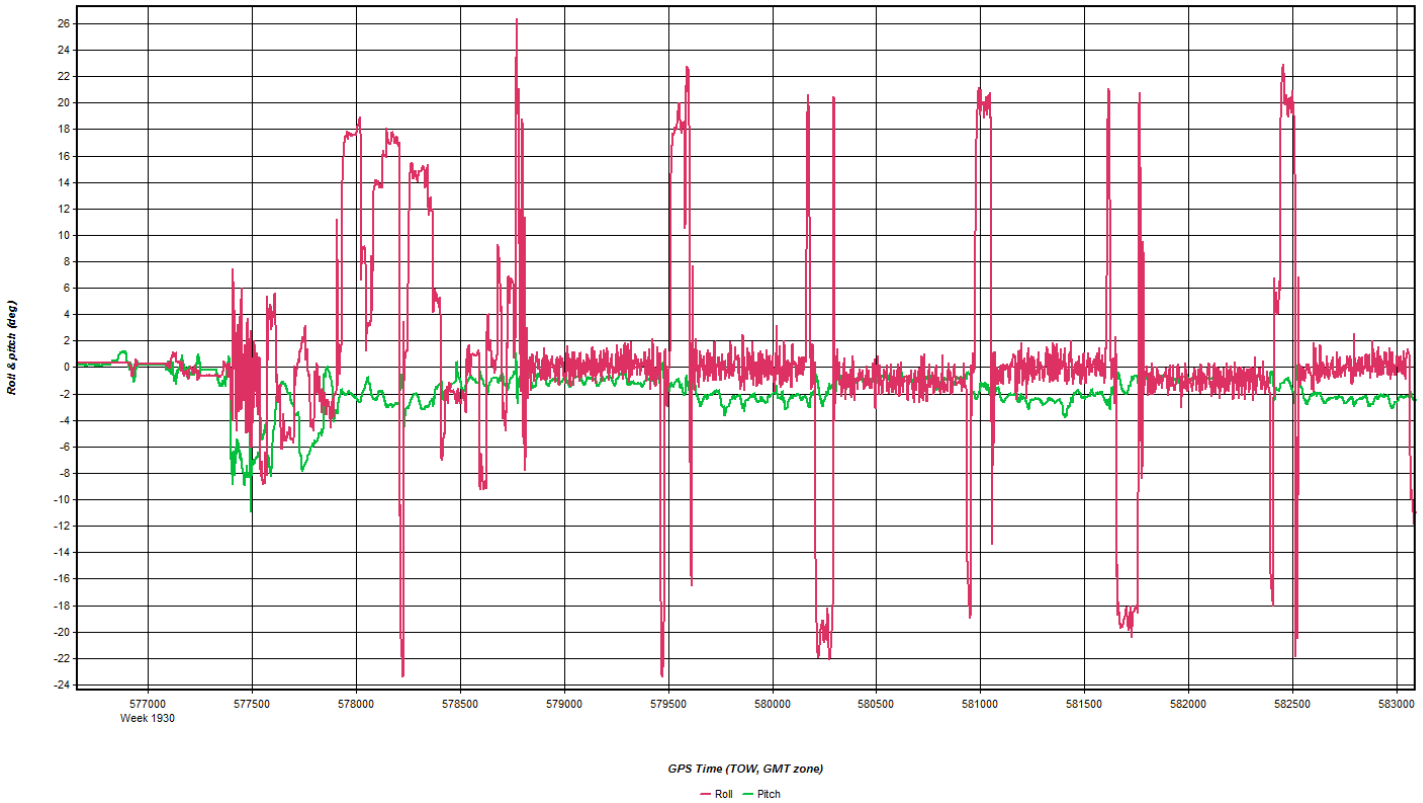

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
577000
Week 1930
577500
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

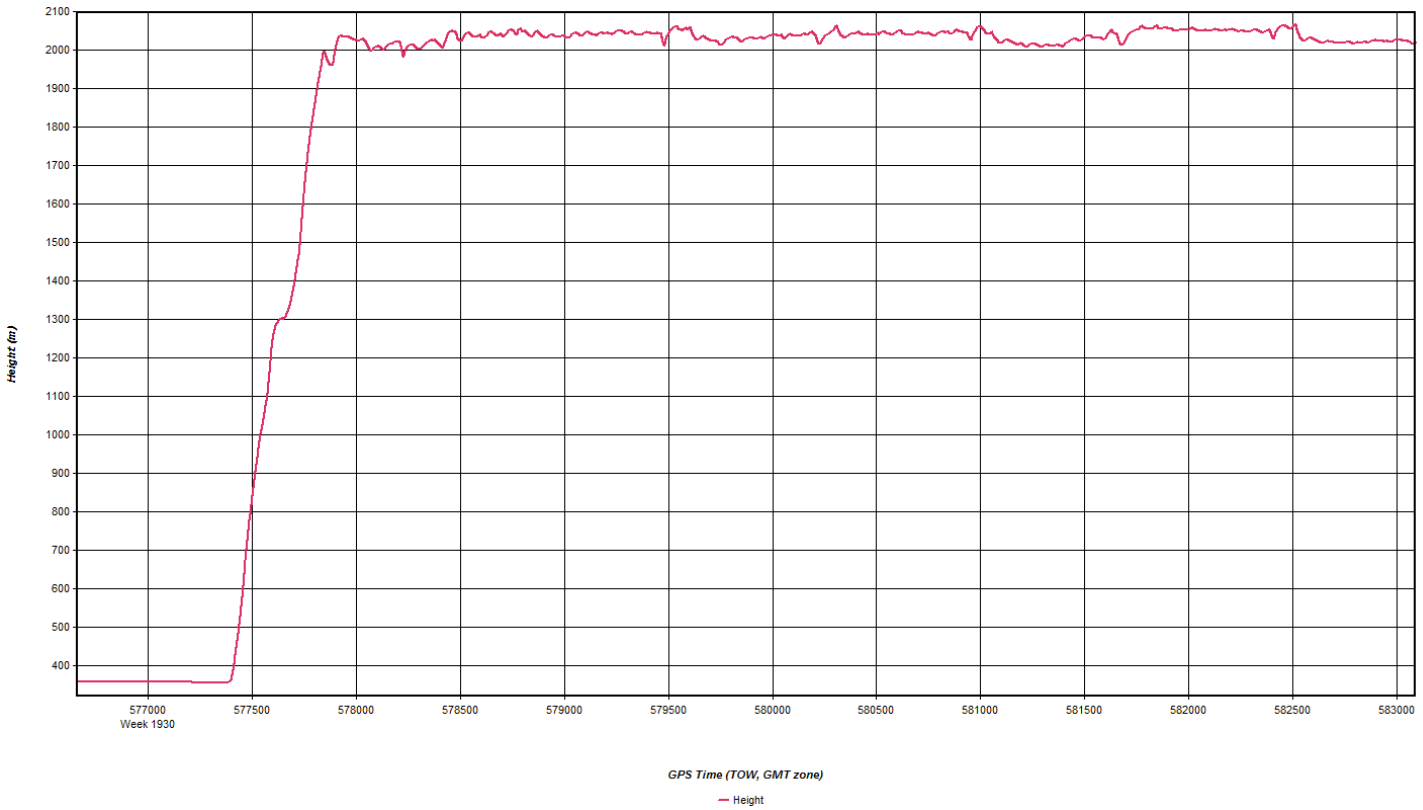

Separation (m)
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
577000
Week 1930
577500
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
GPS Time (TOW, GMT zone)
East
North
Up


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
577000
Week 1930
577500
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

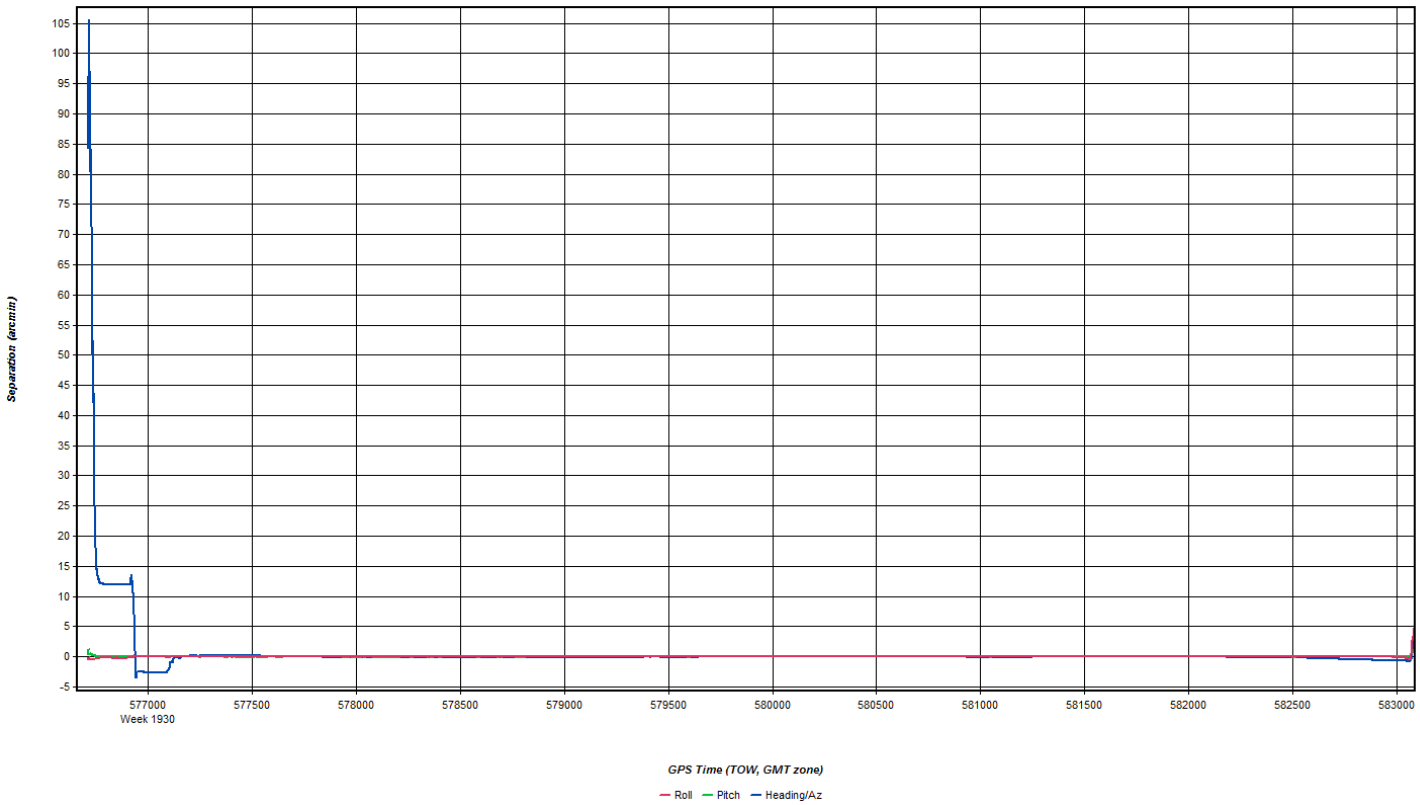

PDOP
1.34
1.32
1.30
1.28
1.26
1.24
1.22
1.20
1.18
1.16
1.14
1.12
1.10
1.08
1.06
1.04
1.02
1.00
0.98
0.96
0.94
0.92
0.90
0.88
0.86
0.84
577000
Week 1930
577500
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
GPS Time (TOW, GMT zone)
PDOP

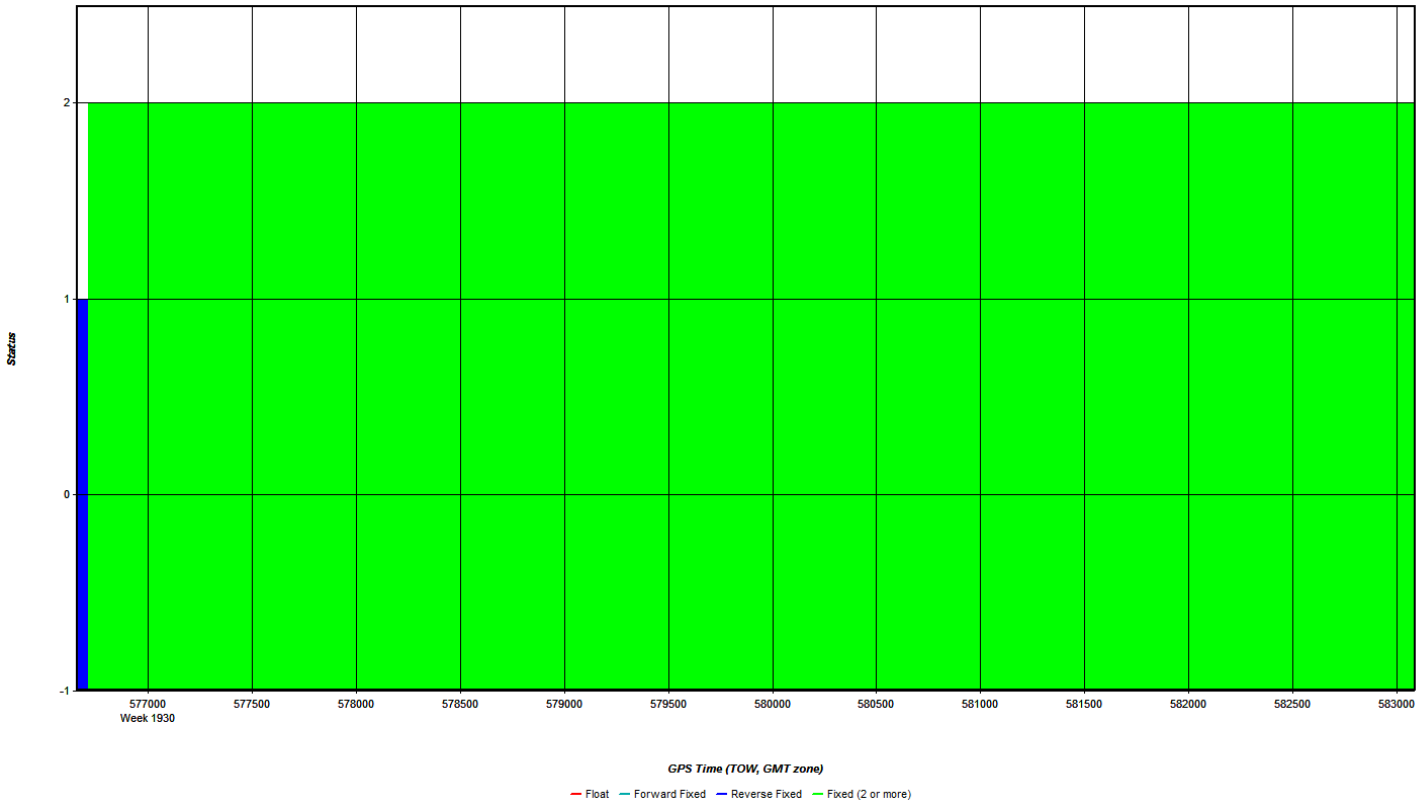

Estimated StdDev (m)
0.0155
0.0150
0.0145
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
577000
Week 1930
577500
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

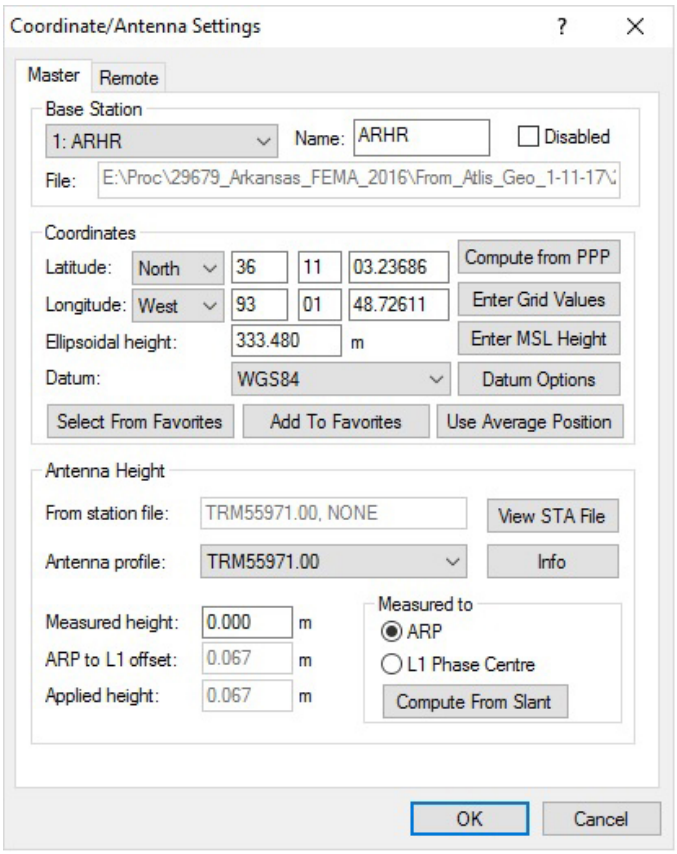

Roll & pitch (deg)
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
577000
Week 1930
577500
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
577000
Week 1930
577500
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
577000
Week 1930
577500
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
105
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
-5
577000
Week 1930
577500
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
577000
Week 1930
577500
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARHR
Name: ARHR
Disabled
File: E:\Proc\29679_Arkansas_FEMA_2016\From_Atlis_Geo_1-11-17\
Coordinates
Latitude: North 36 11 03.23686
Longitude: West 93 01 48.72611
Ellipsoidal height: 333.480 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM55971.00, NONE
View STA File
Antenna profile: TRM55971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

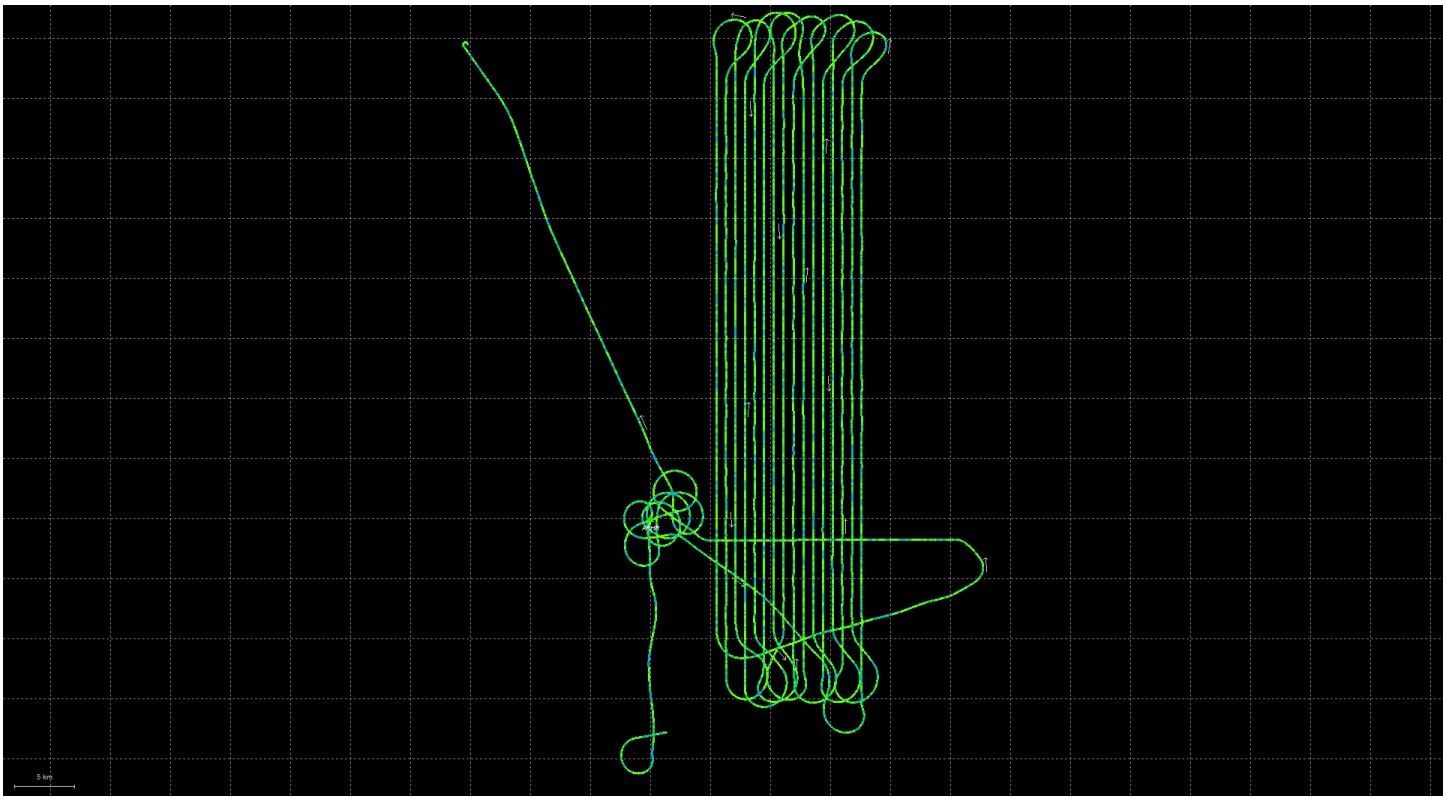
PROJECT NAME	Q.S. Arkansas	DATE	07/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Branson MO	DATA DRIVES	LiDar #1

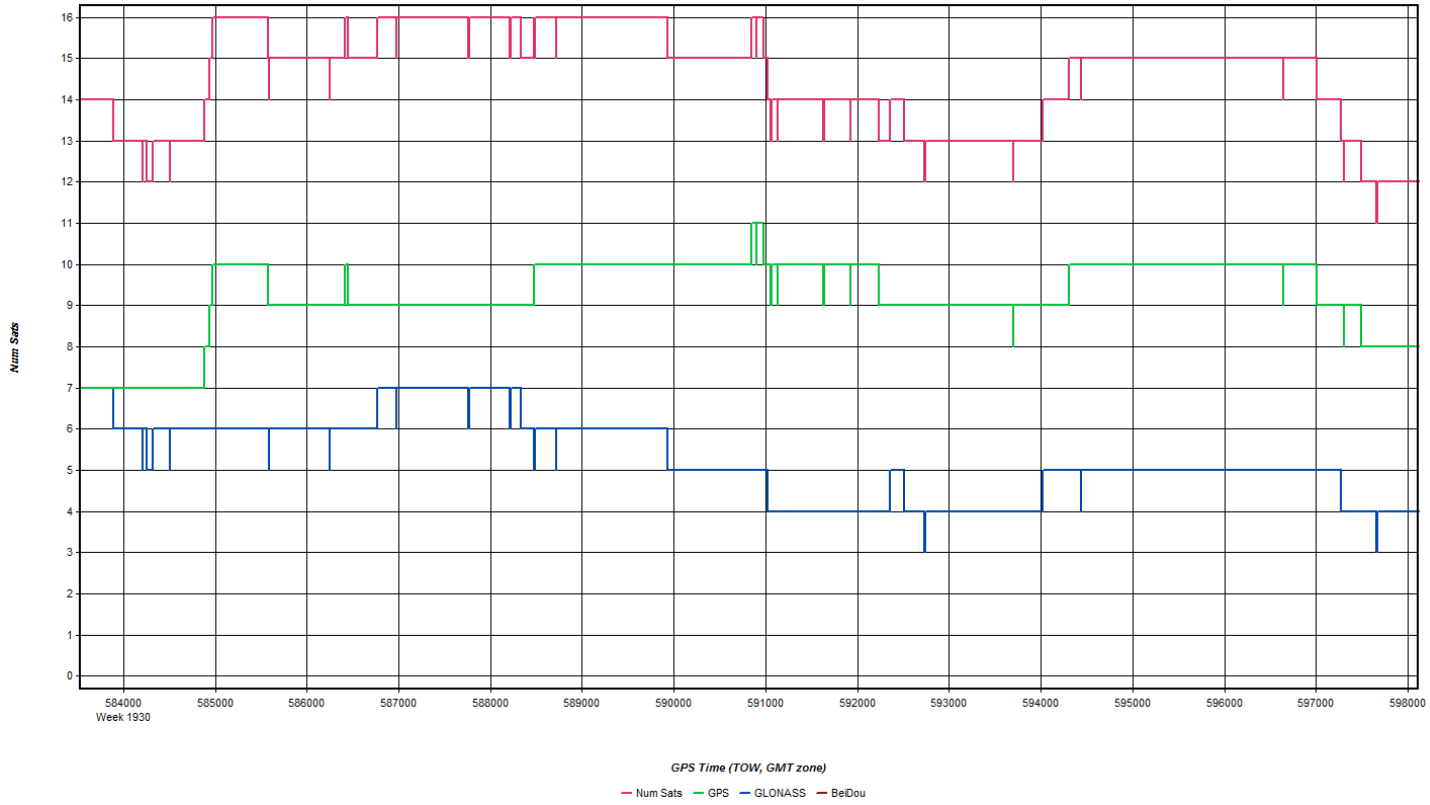
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	16:05:00	Takeoff:	16:21:00	AGL Height:	1800 m	Pulse Rate:	277 KHz		START	END
Engine Off:	22:10:00	Landing:	22:04:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	16:31:30 /18:11	16:39:45/ 18:18
TOTAL:	6.08 hrs	TOTAL:	5.68 hrs	Laser Power:	100%	FOV:	40 O	Post Mission	21:47:00	21:55:00

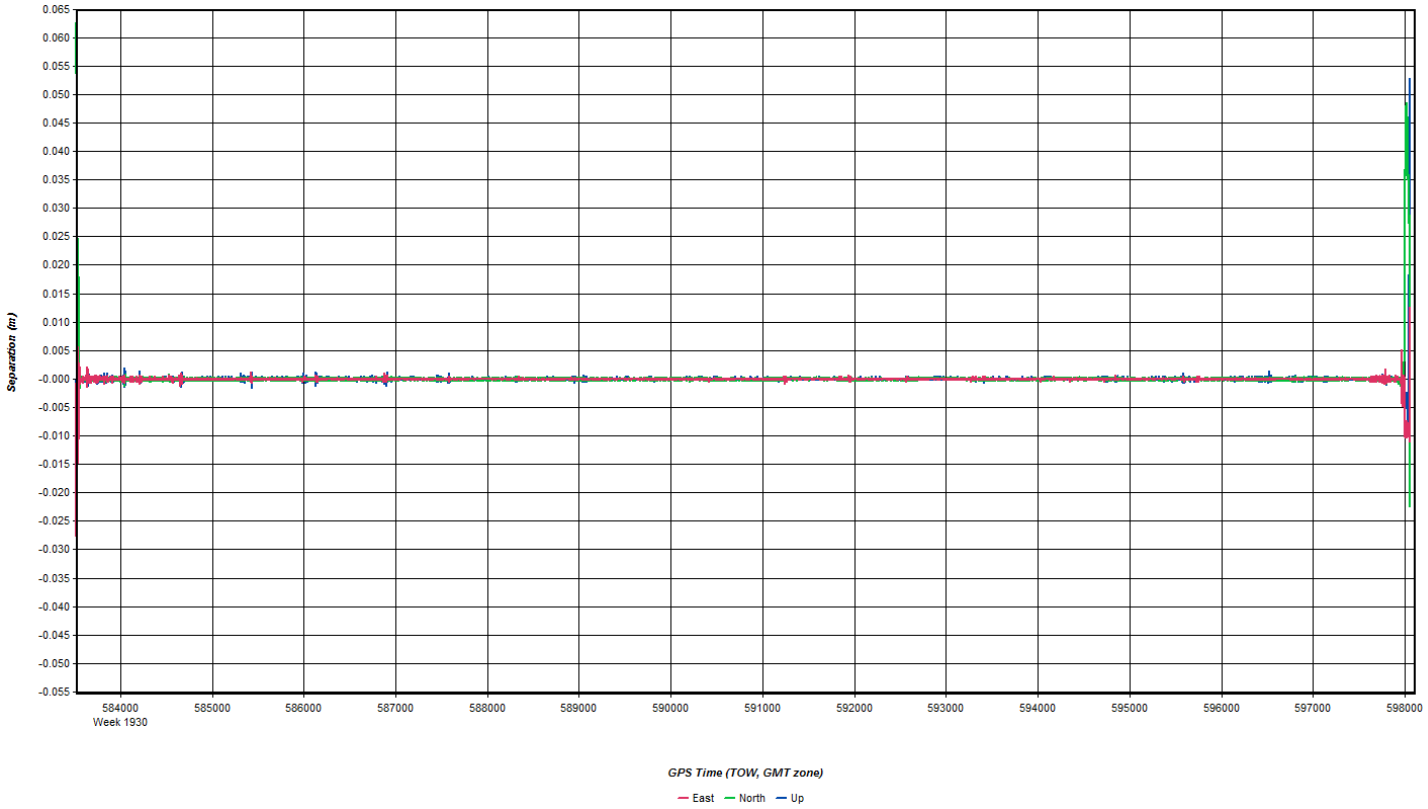
145		North	170107_164656	16:46:57	16:57:18	8nm from south not flown due to snow
144		South	170107_170026	17:00:27	17:09:03	8nm from south not flown due to snow
143		North	170107_171215	17:12:16	17:21:50	8nm from south not flown due to snow
142		South	170107_172427	17:24:28	17:33:08	8nm from south not flown due to snow
141		North	170107_173644	17:36:46	17:46:13	8nm from south not flown due to snow
140		South	170107_174840	17:48:42	17:57:25	8nm from south not flown due to snow
127		North	170107_182522	18:25:23	18:34:52	22nm from south not flown due to snow
126		South	170107_183716	18:37:18	18:46:10	22nm from south not flown due to snow
125		North	170107_184925	18:49:25	18:58:49	22nm from south not flown due to snow
124		South	170107_190140	19:01:41	19:10:29	22nm from south not flown due to snow
123		North	170107_191339	19:13:39	19:23:02	22nm from south not flown due to snow
122		South	170107_192606	19:26:07	19:35:01	22nm from south not flown due to snow
120		North	170107_193808	19:38:08	19:47:27	22nm from south not flown due to snow
119		South	170107_195028	19:50:28	19:59:15	22nm from south not flown due to snow
121		North	170107_200208	20:02:10	20:11:53	22nm from south not flown due to snow
118		South	170107_201422	20:14:24	20:23:13	22nm from south not flown due to snow
117		North	170107_202616	20:26:17	20:35:43	22nm from south not flown due to snow
116		South	170107_203844	20:38:44	20:47:31	22nm from south not flown due to snow
115		North	170107_205109	20:51:11	21:00:10	22nm from south not flown due to snow
114		South	170107_210253	21:02:54	21:11:19	22nm from south not flown due to snow
113		North	170107_211509	21:15:10	21:24:01	22nm from south not flown due to snow
112		South	170107_212641	21:26:42	21:35:40	22nm from south not flown due to snow
CL		West	170107_214243	21:42:44	21:45:53	22nm from south not flown due to snow

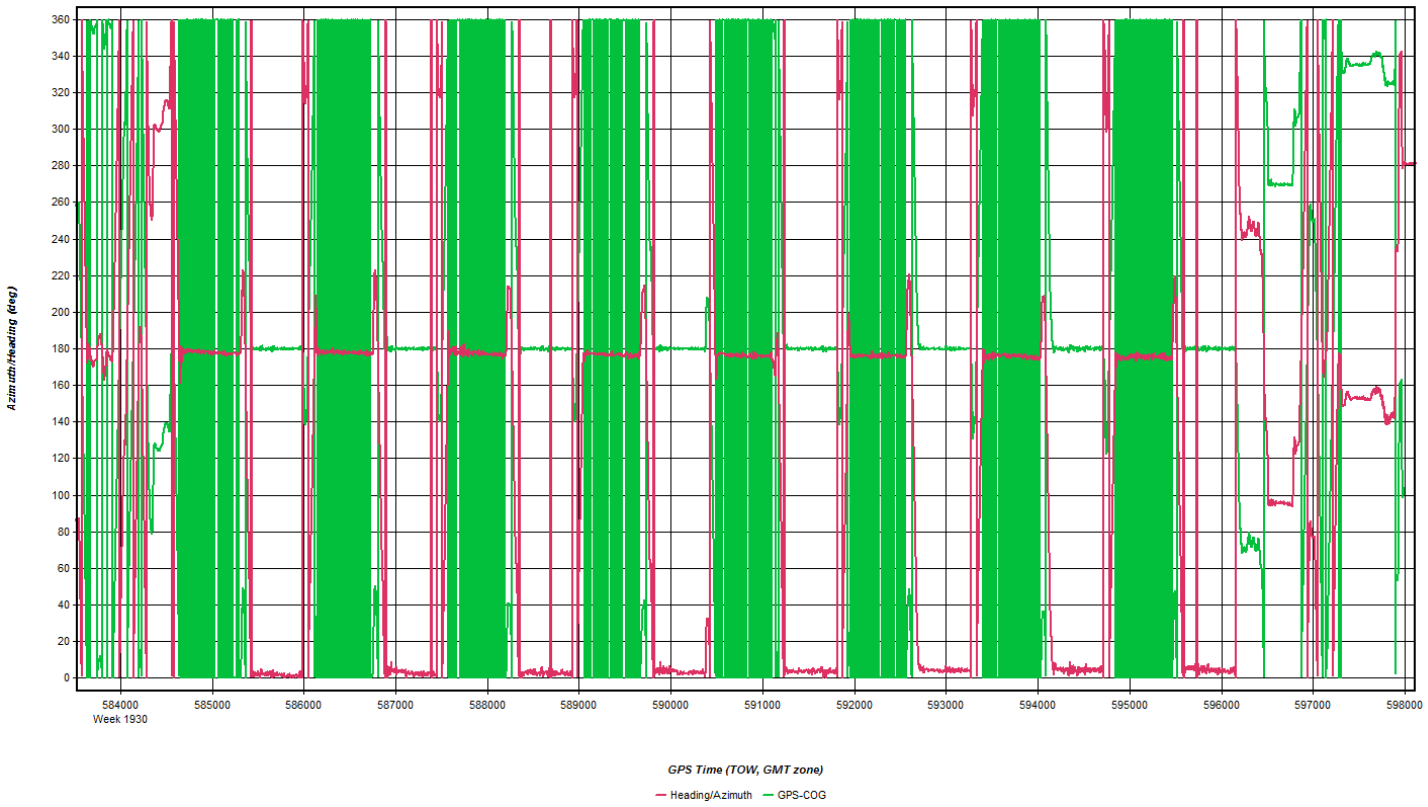
SUN ANGLE @Start: @End: @Peak:	Clear skies, -10C at take off and -1C when landing. Sats and DOPs averaged 18 and 1.2 The cors station ARHR was used for this flight In between lines at 17:58, I had an IMU gap followed my a system failure. Restarted the system and initialized at 18:05.

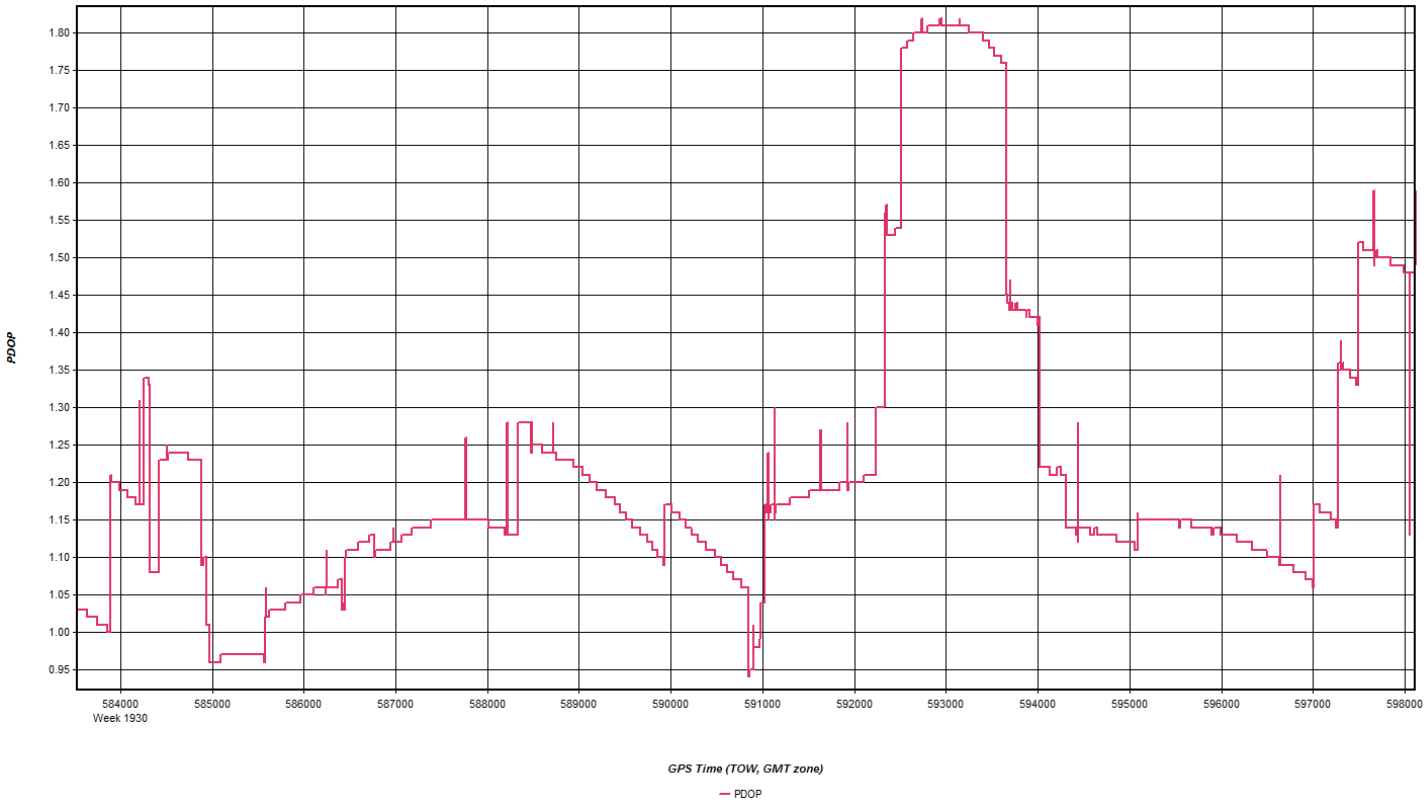
Jan 7, 2017-B (C-GKSI, SN7229)

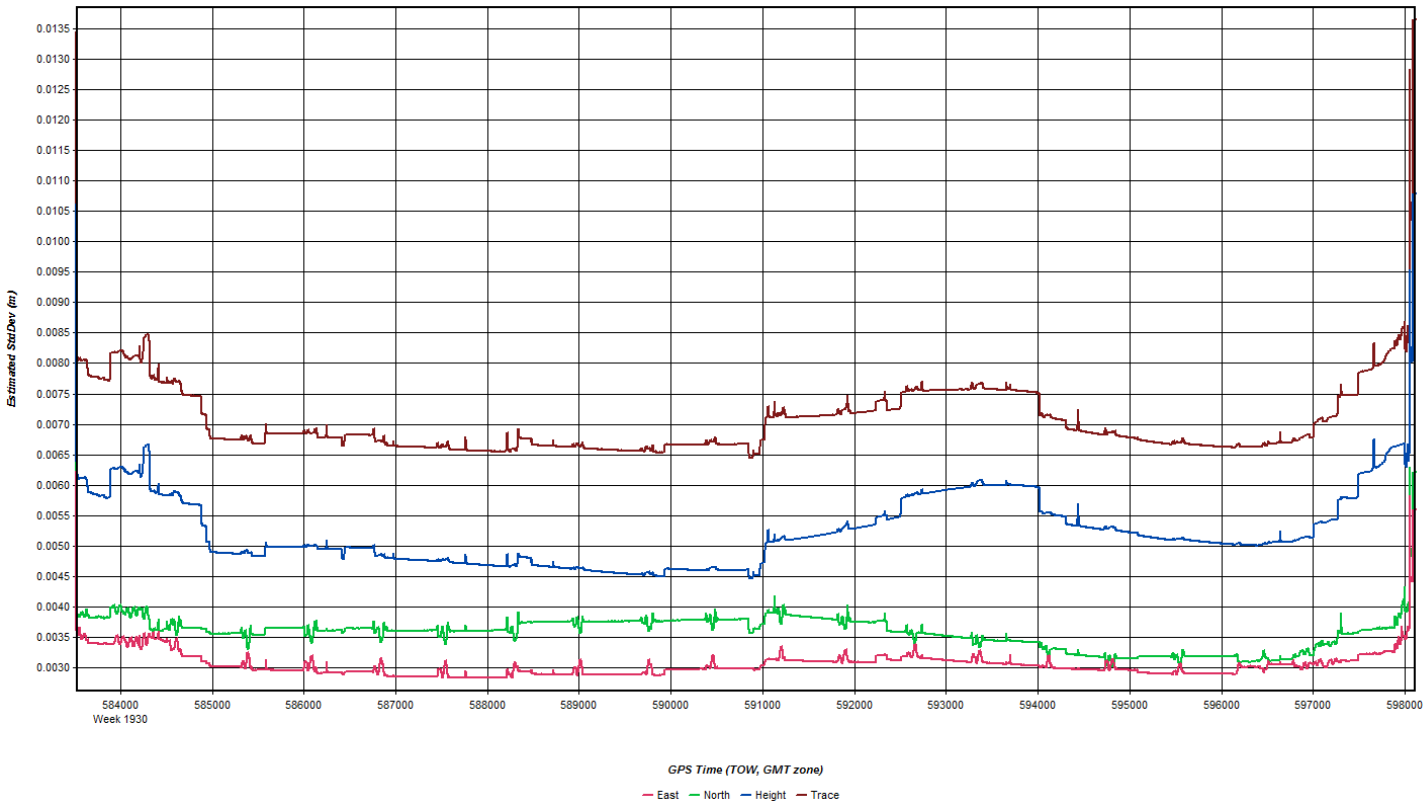

5 km

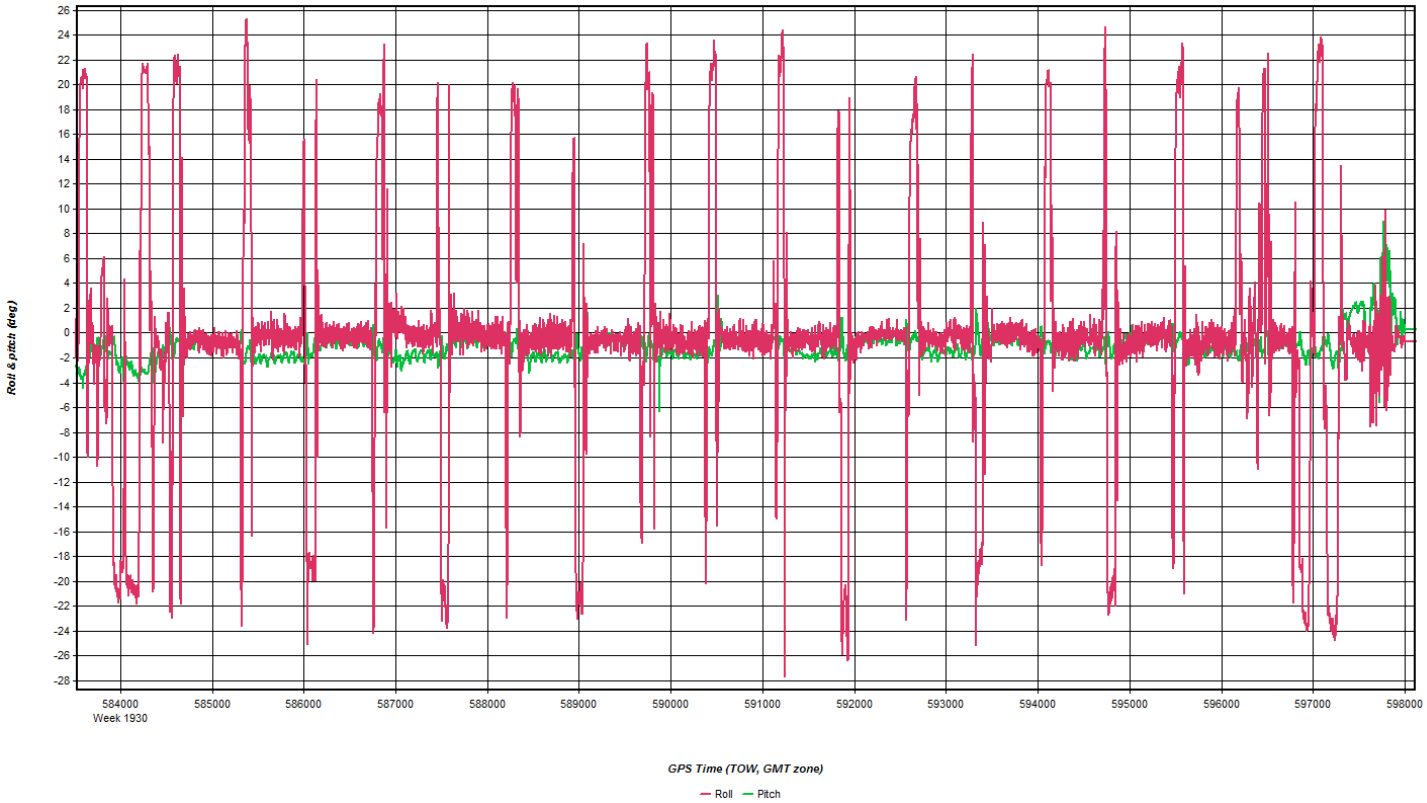

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
584000
Week 1930
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
598000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

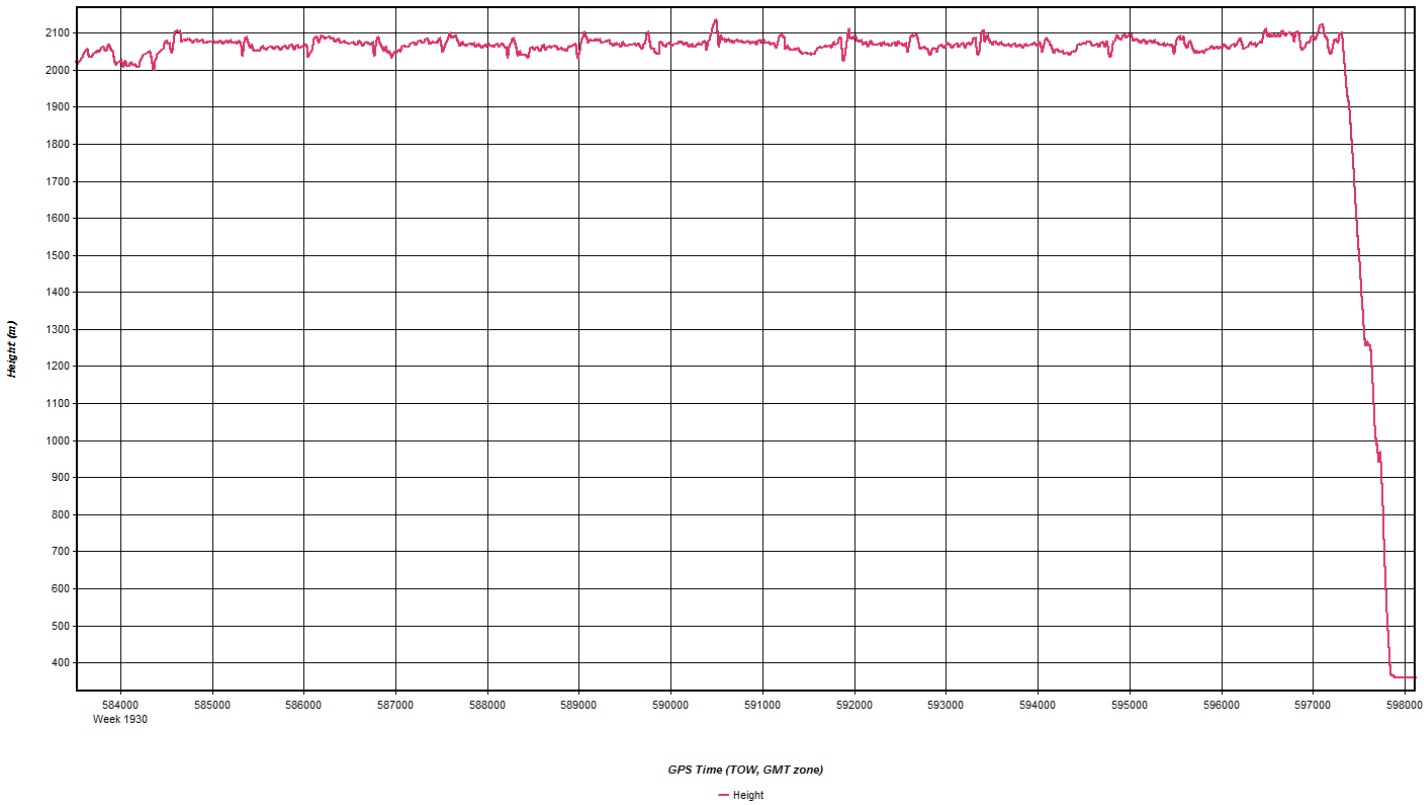

Separation (m)
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
-0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
-0.055
584000
Week 1930
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
598000
GPS Time (TOW, GMT zone)
East
North
Up

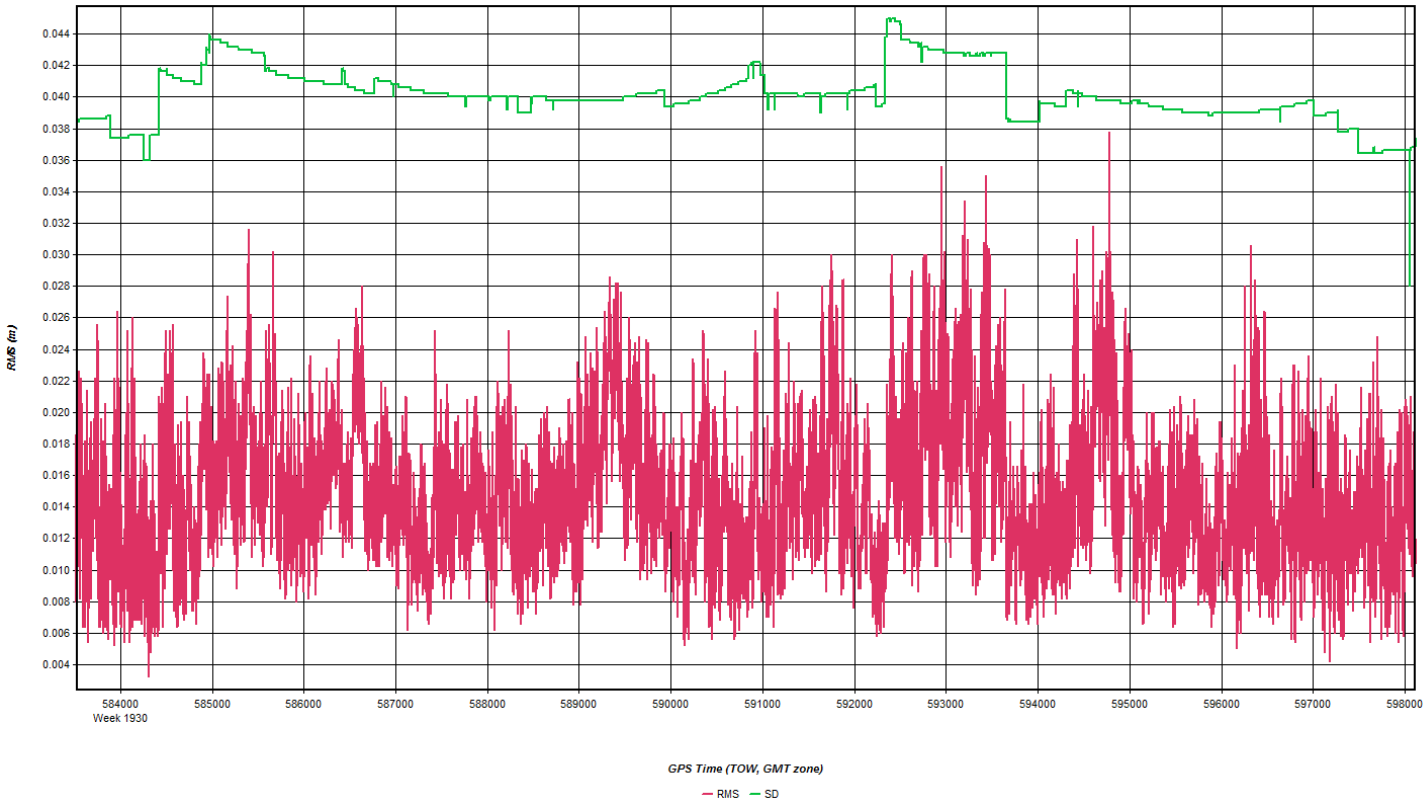

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
584000
Week 1930
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
598000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

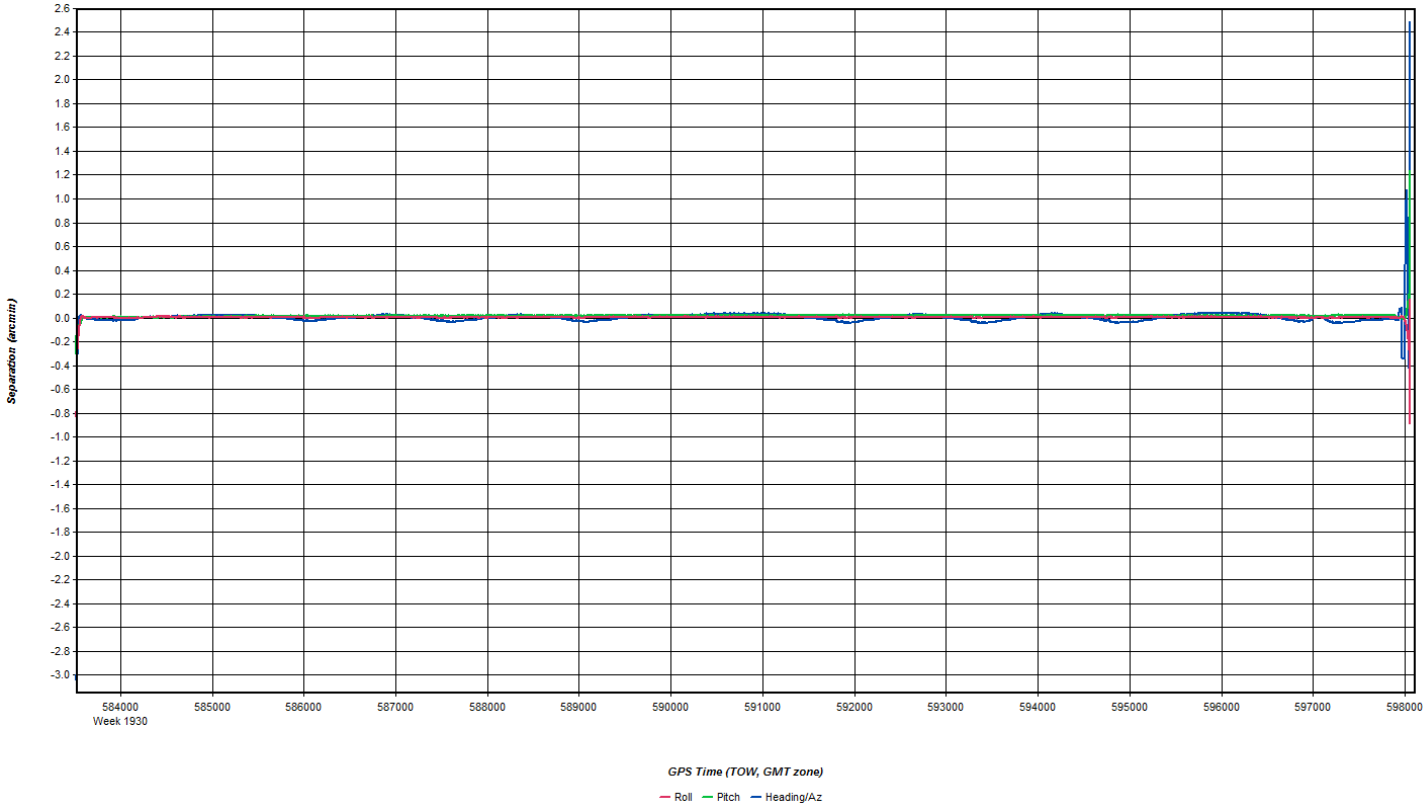

PDOP
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
584000
Week 1930
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
598000
GPS Time (TOW, GMT zone)
PDOP

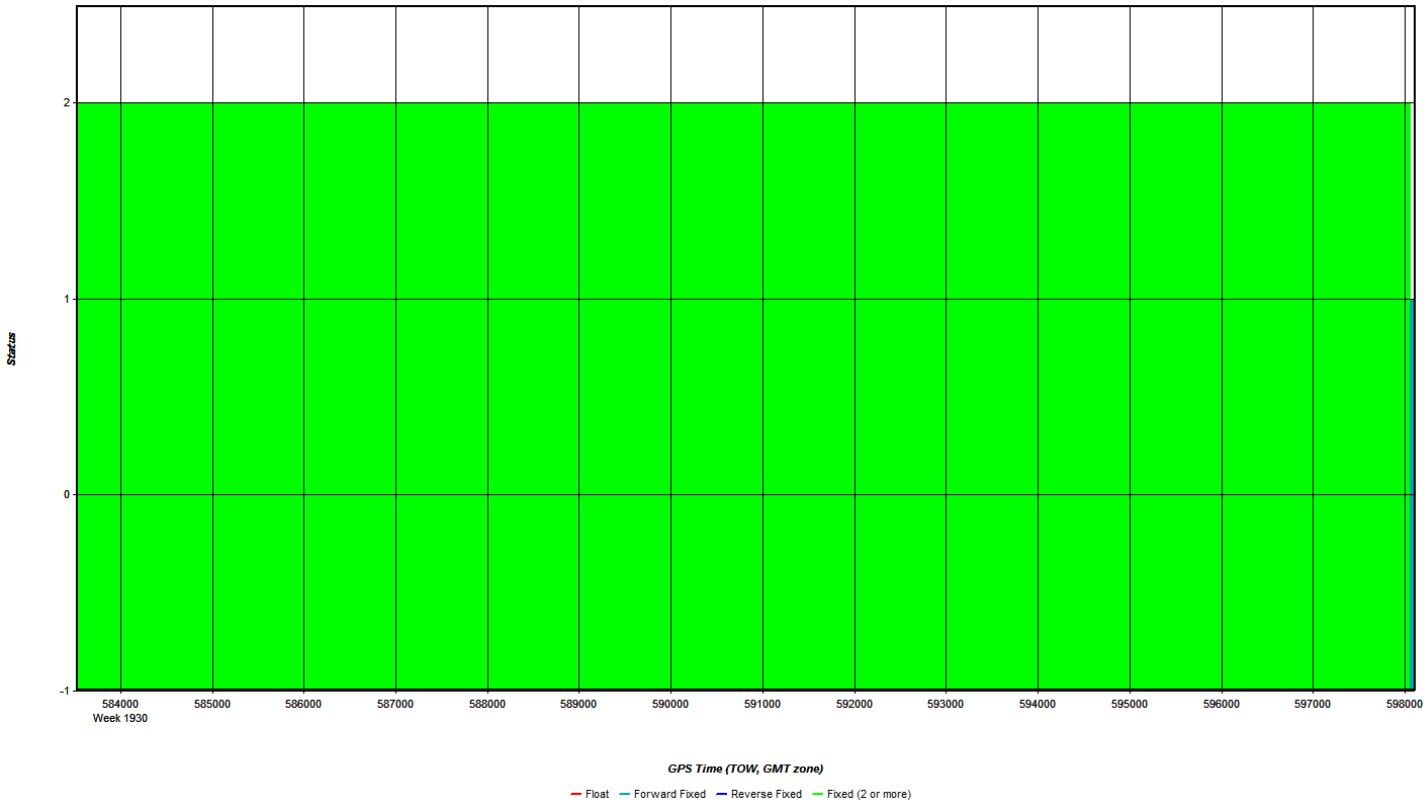

Estimated StdDev (m)
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
584000
Week 1930
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
598000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

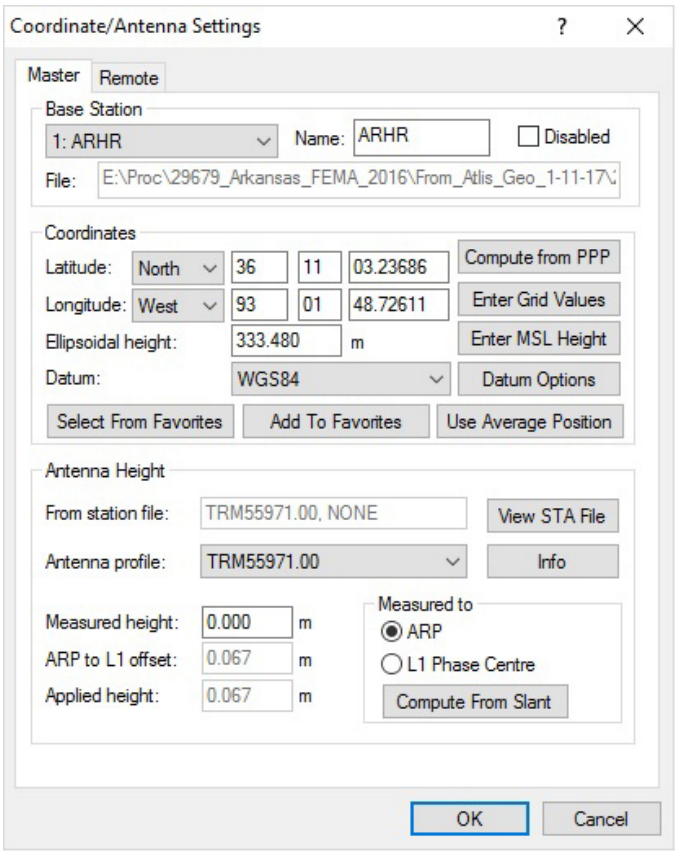

Roll & pitch (deg)
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
584000
Week 1930
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
598000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
584000
Week 1930
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
598000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
584000
Week 1930
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
598000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
-1.4
-1.6
-1.8
-2.0
-2.2
-2.4
-2.6
-2.8
-3.0
584000
Week 1930
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
598000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
584000
Week 1930
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
598000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARHR
Name: ARHR
Disabled
File: E:\Proc\29679_Arkansas_FEMA_2016\From_Atlis_Geo_1-11-17\
Coordinates
Latitude: North 36 11 03.23686
Longitude: West 93 01 48.72611
Ellipsoidal height: 333.480 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM55971.00, NONE
View STA File
Antenna profile: TRM55971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

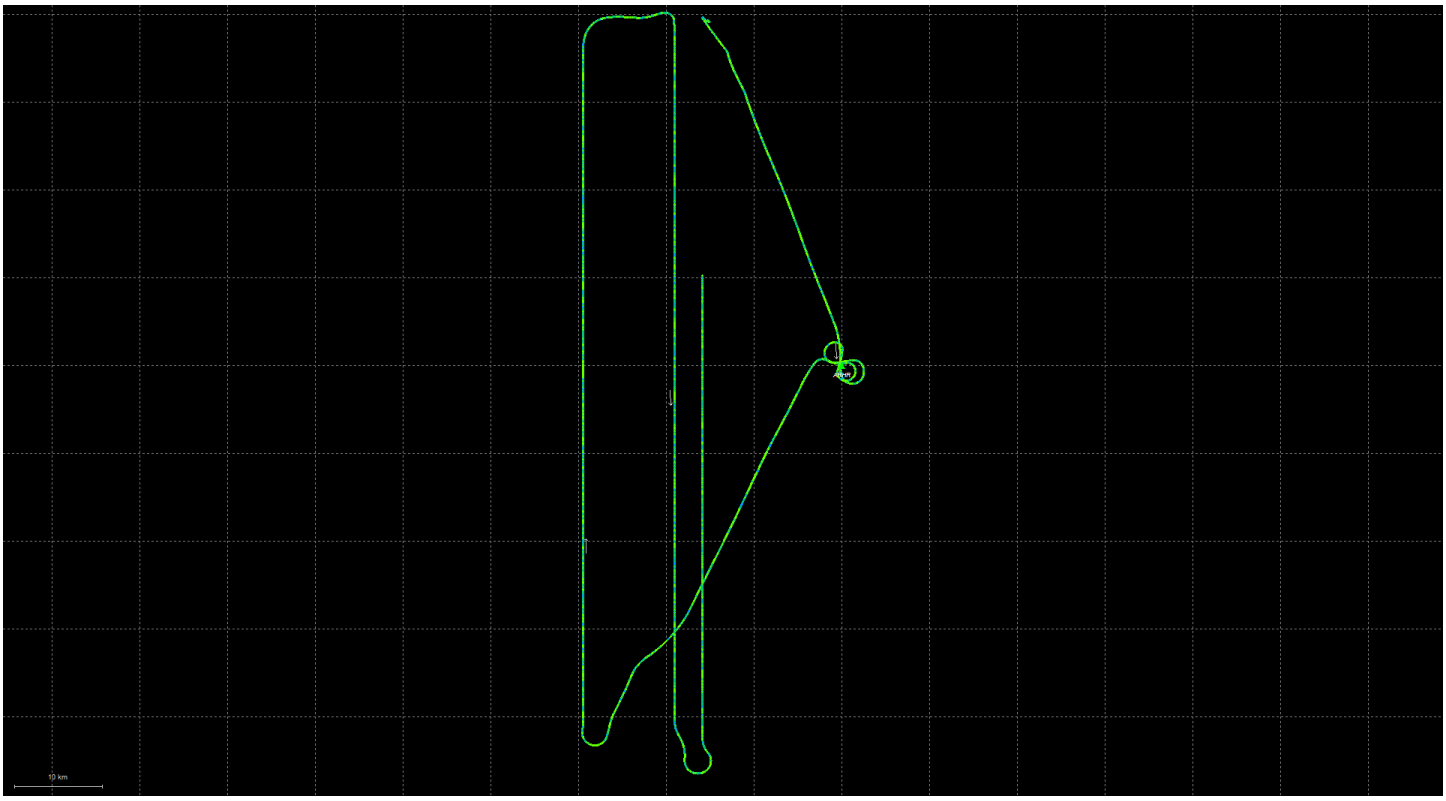
PROJECT NAME	Q.S. Arkansas	DATE	07/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Branson MO	DATA DRIVES	LiDar #1

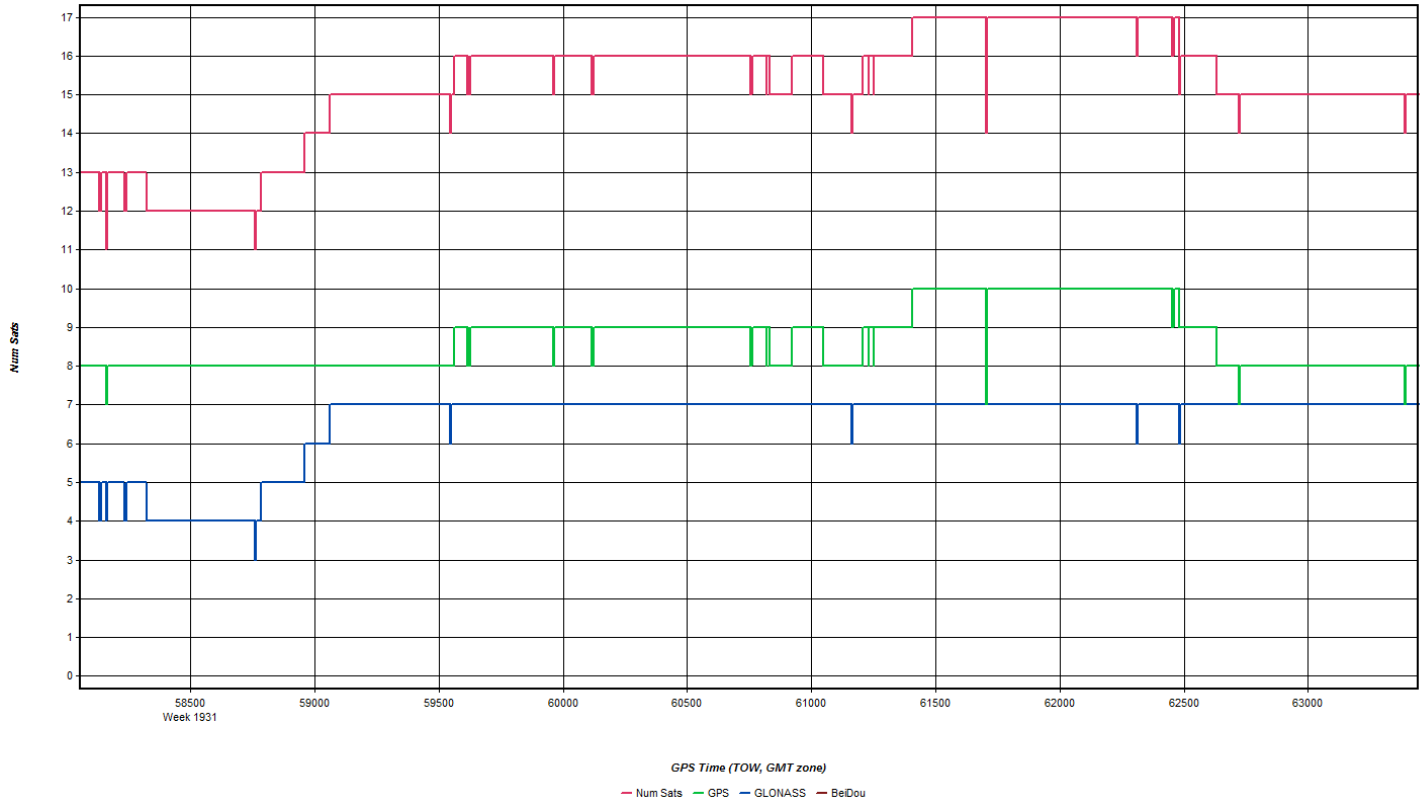
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	16:05:00	Takeoff:	16:21:00	AGL Height:	1800 m	Pulse Rate:	277 KHz		START	END
Engine Off:	22:10:00	Landing:	22:04:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	16:31:30 /18:11	16:39:45/ 18:18
TOTAL:	6.08 hrs	TOTAL:	5.68 hrs	Laser Power:	100%	FOV:	40 O	Post Mission	21:47:00	21:55:00

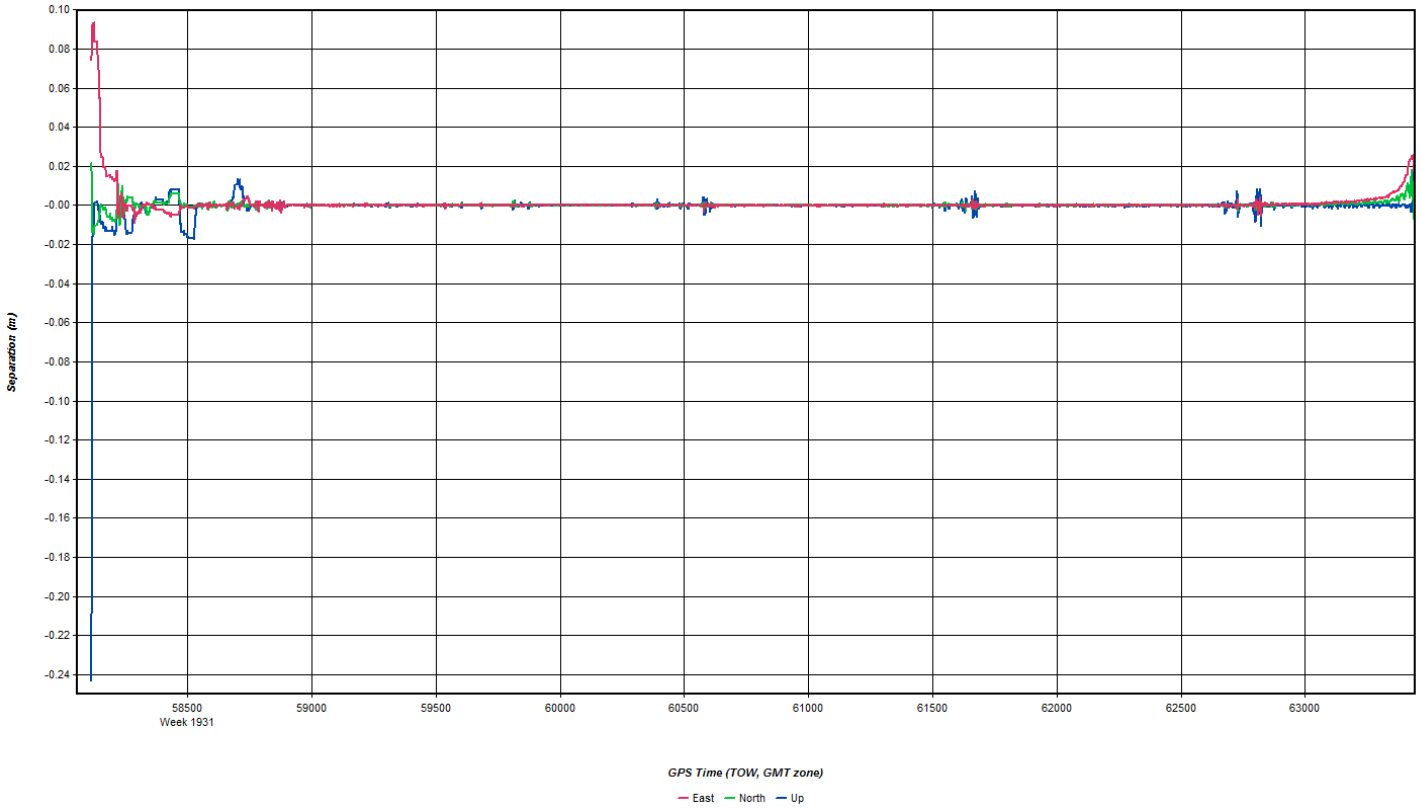
145		North	170107_164656	16:46:57	16:57:18	8nm from south not flown due to snow
144		South	170107_170026	17:00:27	17:09:03	8nm from south not flown due to snow
143		North	170107_171215	17:12:16	17:21:50	8nm from south not flown due to snow
142		South	170107_172427	17:24:28	17:33:08	8nm from south not flown due to snow
141		North	170107_173644	17:36:46	17:46:13	8nm from south not flown due to snow
140		South	170107_174840	17:48:42	17:57:25	8nm from south not flown due to snow
127		North	170107_182522	18:25:23	18:34:52	22nm from south not flown due to snow
126		South	170107_183716	18:37:18	18:46:10	22nm from south not flown due to snow
125		North	170107_184925	18:49:25	18:58:49	22nm from south not flown due to snow
124		South	170107_190140	19:01:41	19:10:29	22nm from south not flown due to snow
123		North	170107_191339	19:13:39	19:23:02	22nm from south not flown due to snow
122		South	170107_192606	19:26:07	19:35:01	22nm from south not flown due to snow
120		North	170107_193808	19:38:08	19:47:27	22nm from south not flown due to snow
119		South	170107_195028	19:50:28	19:59:15	22nm from south not flown due to snow
121		North	170107_200208	20:02:10	20:11:53	22nm from south not flown due to snow
118		South	170107_201422	20:14:24	20:23:13	22nm from south not flown due to snow
117		North	170107_202616	20:26:17	20:35:43	22nm from south not flown due to snow
116		South	170107_203844	20:38:44	20:47:31	22nm from south not flown due to snow
115		North	170107_205109	20:51:11	21:00:10	22nm from south not flown due to snow
114		South	170107_210253	21:02:54	21:11:19	22nm from south not flown due to snow
113		North	170107_211509	21:15:10	21:24:01	22nm from south not flown due to snow
112		South	170107_212641	21:26:42	21:35:40	22nm from south not flown due to snow
CL		West	170107_214243	21:42:44	21:45:53	22nm from south not flown due to snow

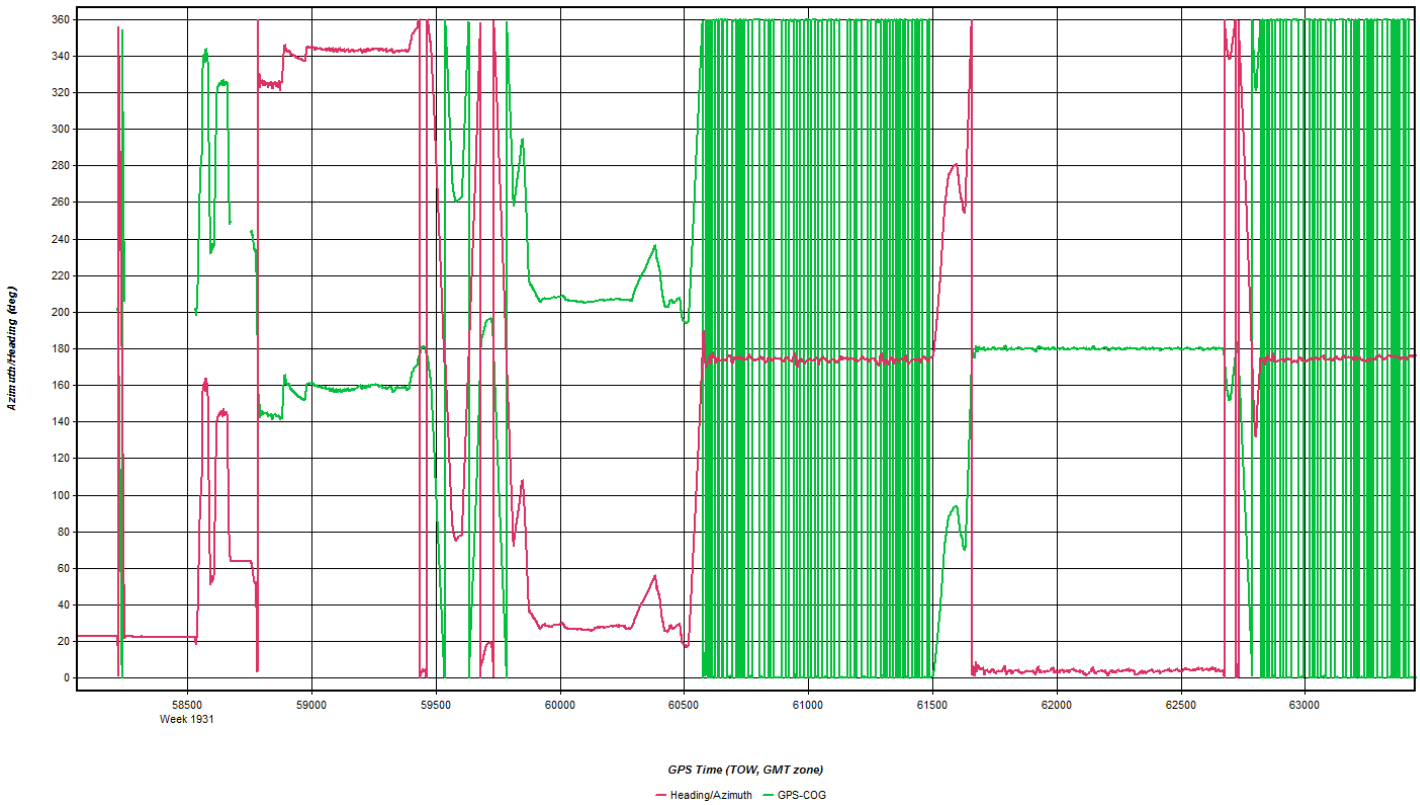
SUN ANGLE @Start: @End: @Peak:	Clear skies, -10C at take off and -1C when landing. Sats and DOPs averaged 18 and 1.2 The cors station ARHR was used for this flight In between lines at 17:58, I had an IMU gap followed my a system failure. Restarted the system and initialized at 18:05.

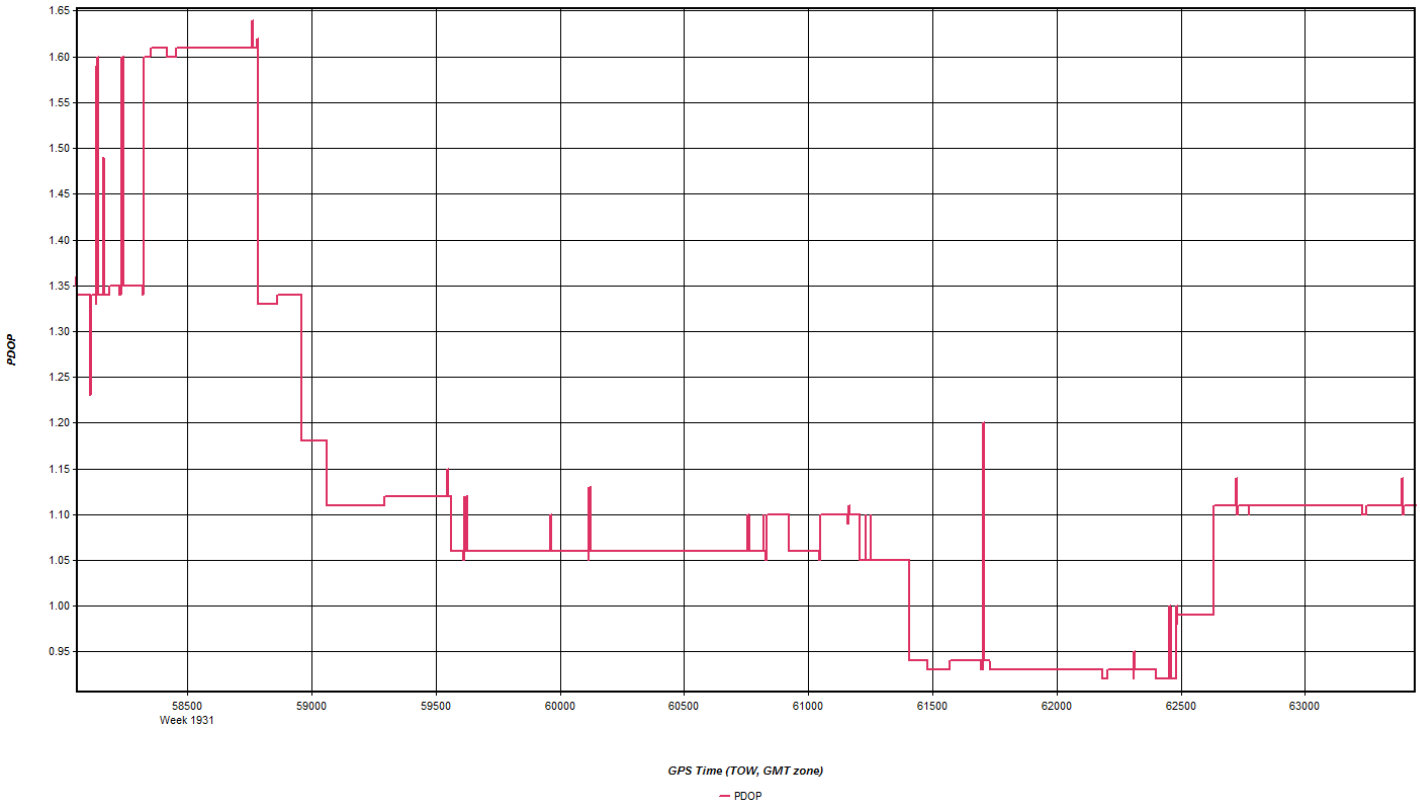
Jan 8, 2017-A1 (C-GKSI, SN7229)

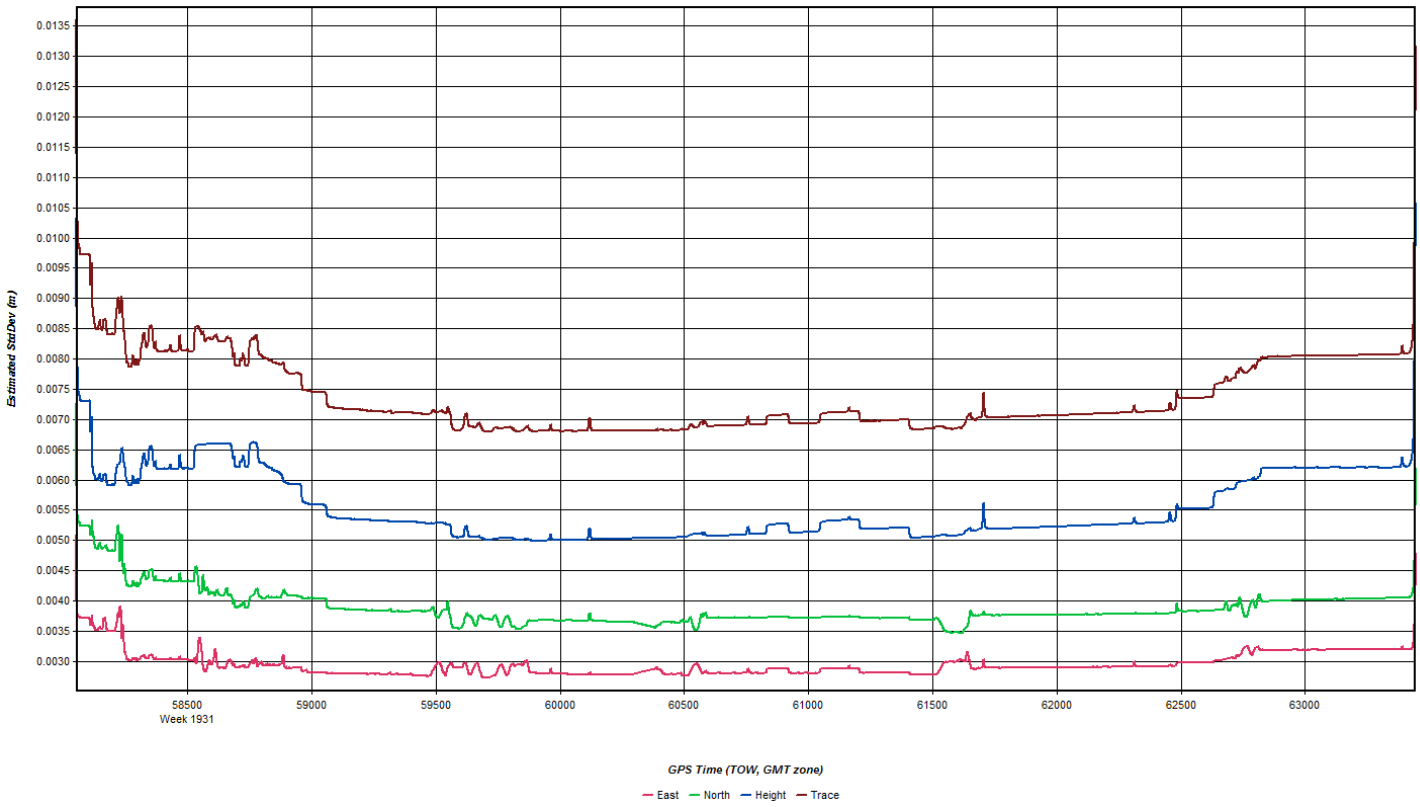


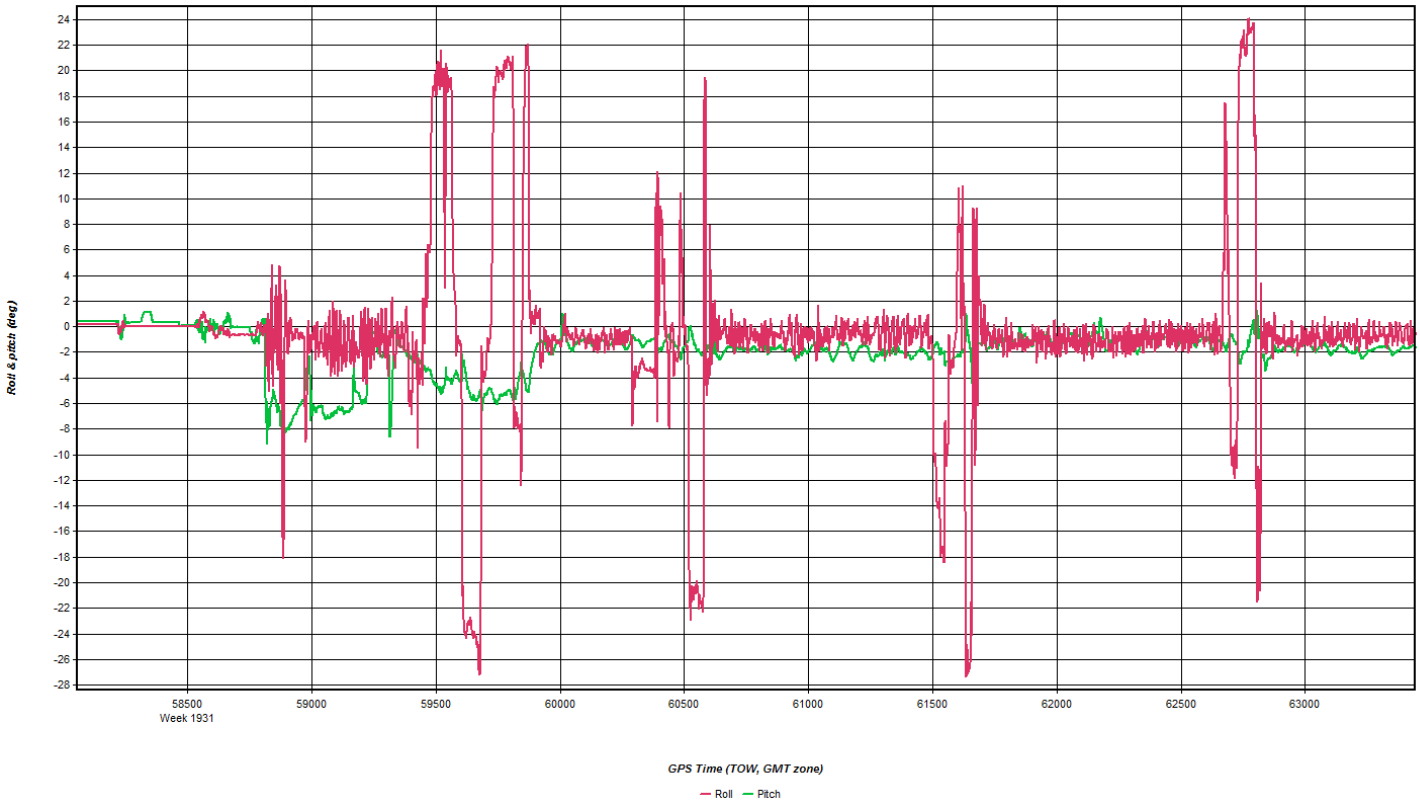

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
58500
Week 1931
59000
59500
60000
60500
61000
61500
62000
62500
63000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

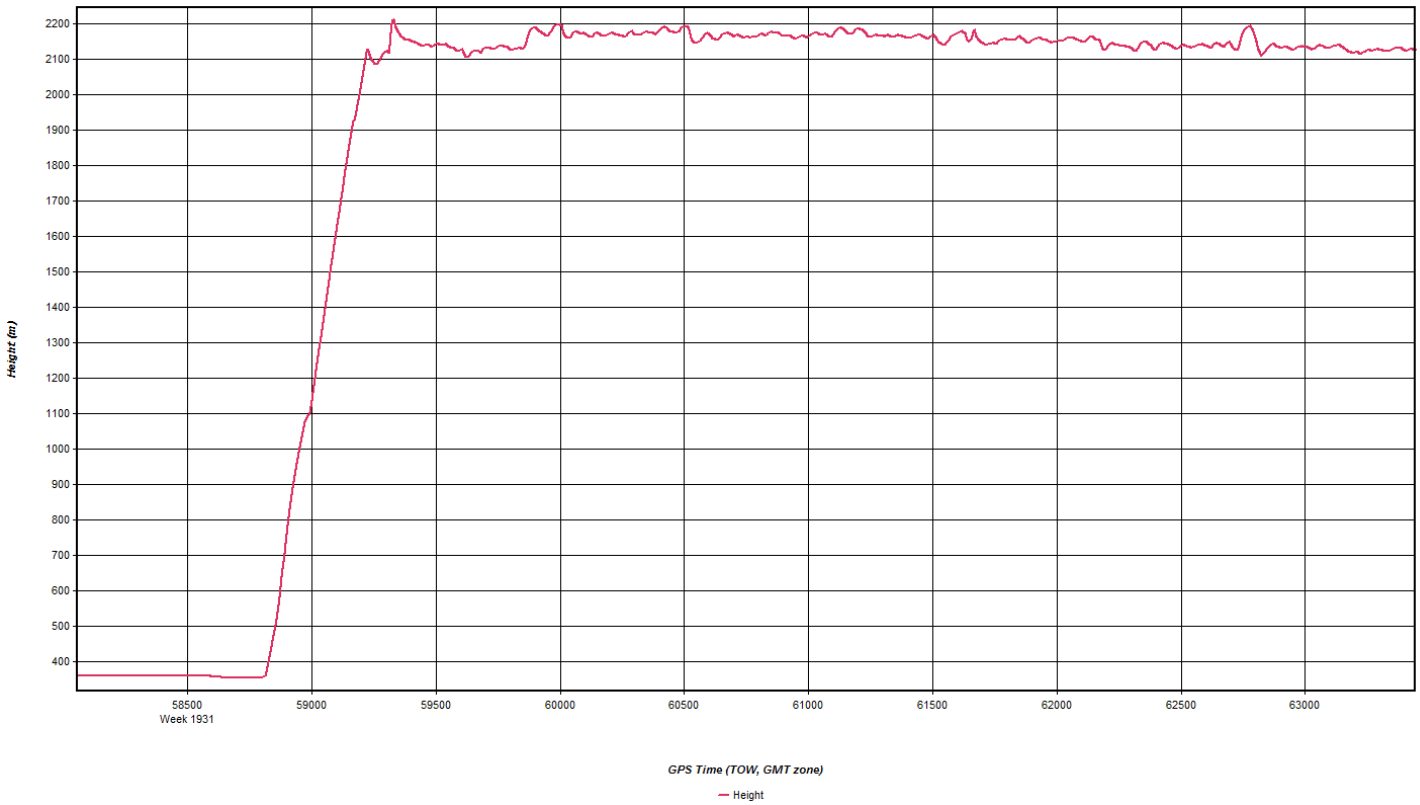

Separation (m)
0.10
0.08
0.06
0.04
0.02
-0.00
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
-0.16
-0.18
-0.20
-0.22
-0.24
58500
Week 1931
59000
59500
60000
60500
61000
61500
62000
62500
63000
GPS Time (TOW, GMT zone)
East
North
Up

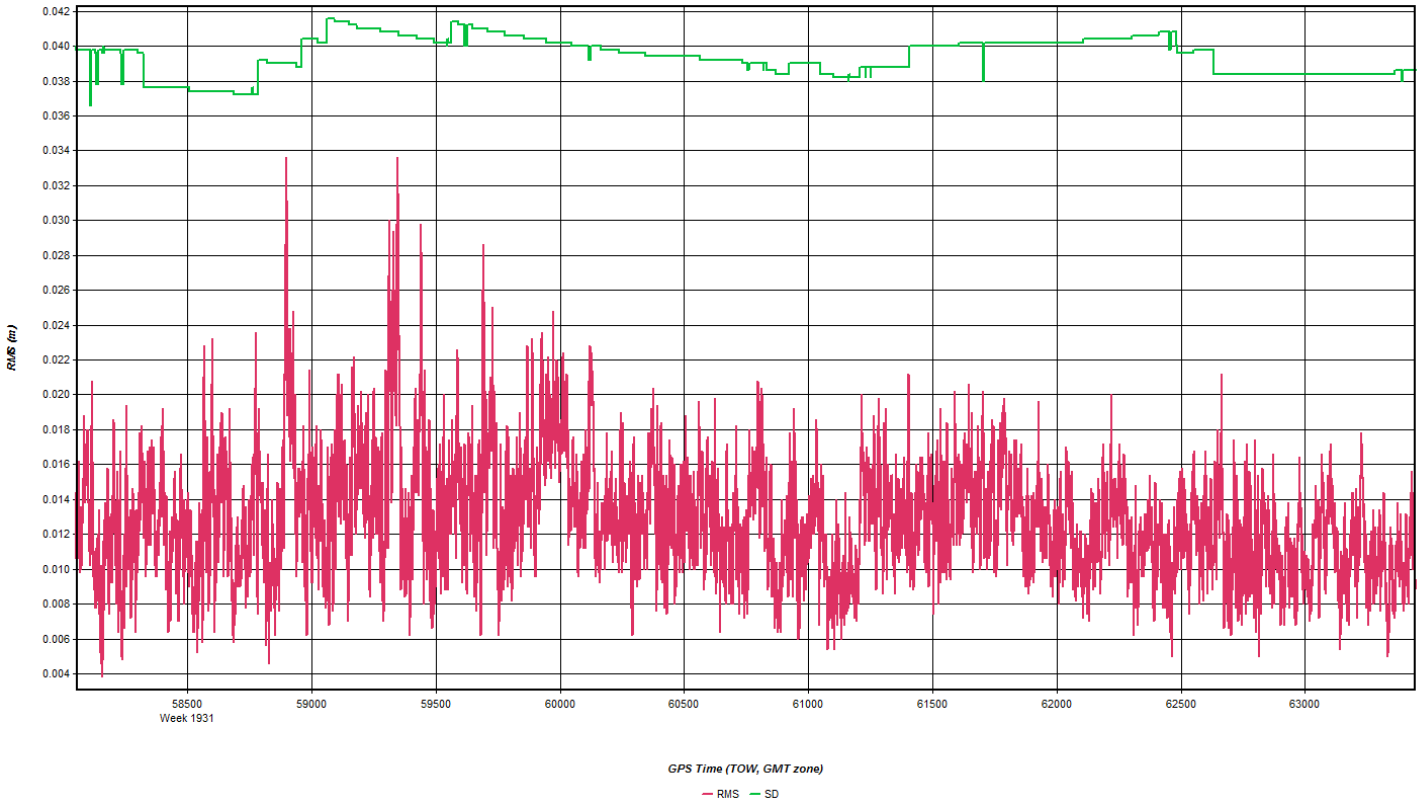

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
58500
Week 1931
59000
59500
60000
60500
61000
61500
62000
62500
63000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

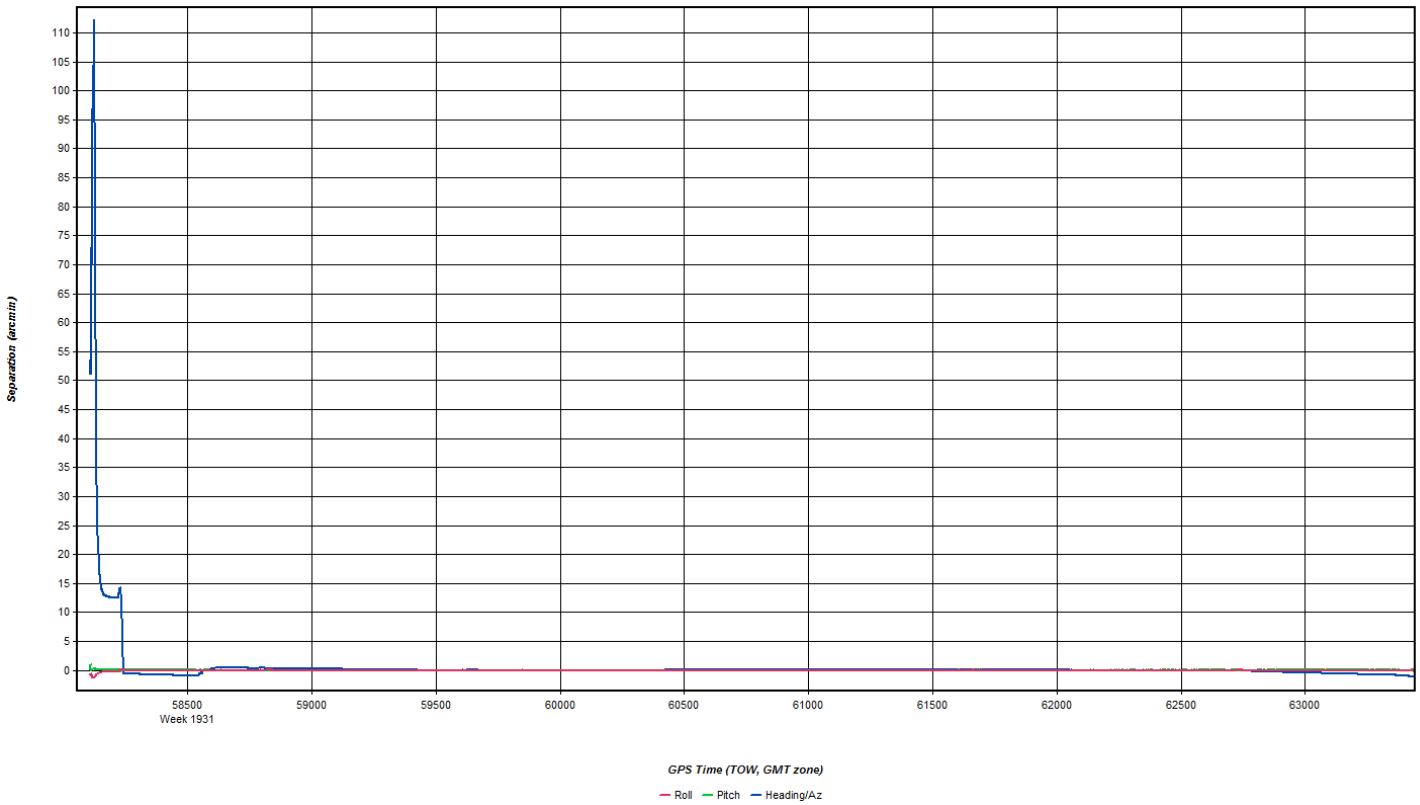

PDOP
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
58500
Week 1931
59000
59500
60000
60500
61000
61500
62000
62500
63000
GPS Time (TOW, GMT zone)
PDOP

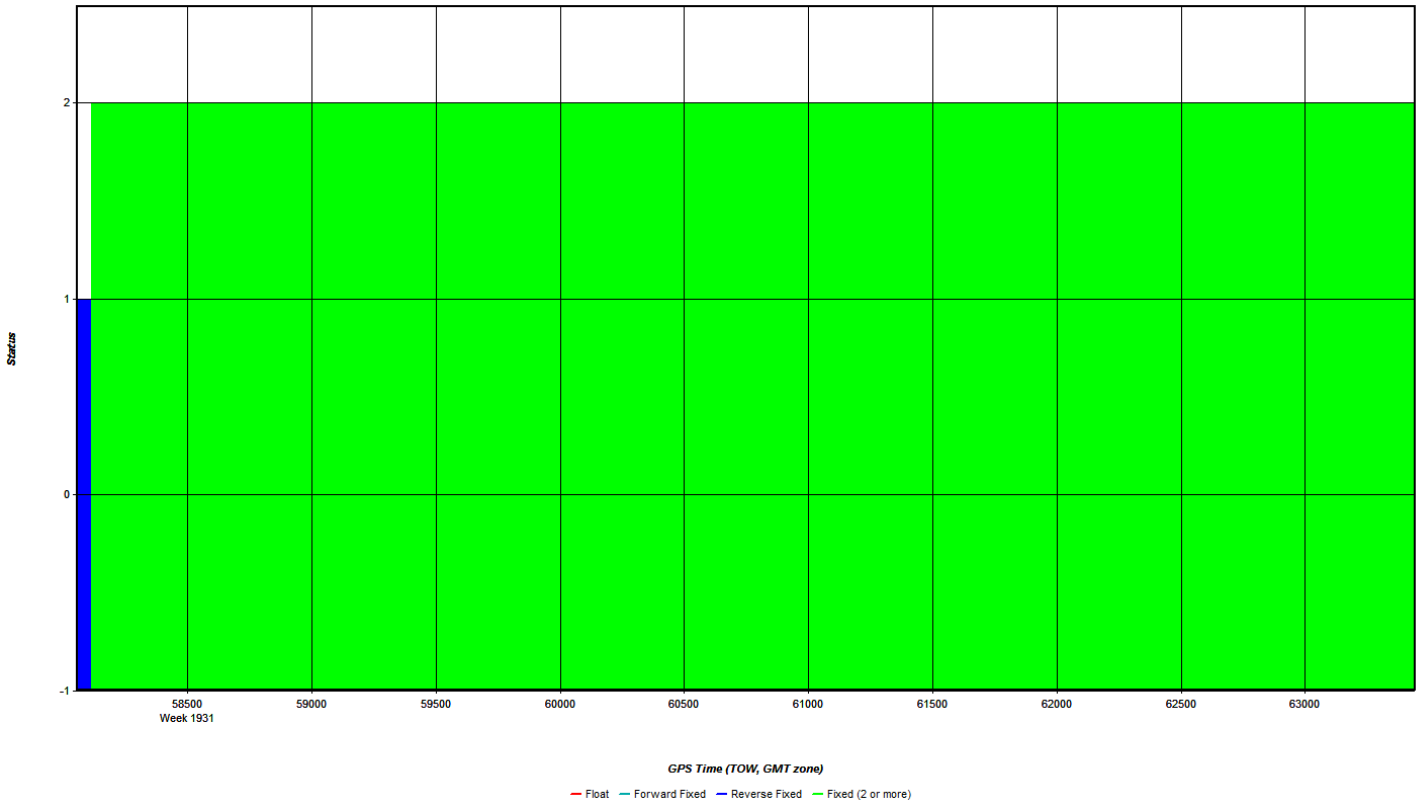

Estimated StdDev (m)
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
58500
Week 1931
59000
59500
60000
60500
61000
61500
62000
62500
63000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

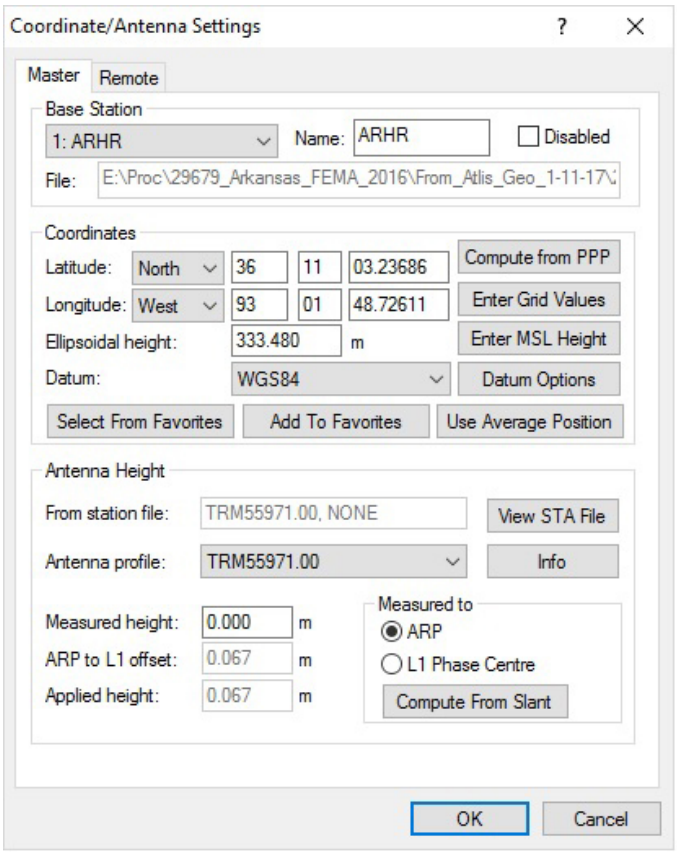

Roll & pitch (deg)
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
58500
Week 1931
59000
59500
60000
60500
61000
61500
62000
62500
63000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
58500
Week 1931
59000
59500
60000
60500
61000
61500
62000
62500
63000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
58500
Week 1931
59000
59500
60000
60500
61000
61500
62000
62500
63000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
110
105
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
58500
Week 1931
59000
59500
60000
60500
61000
61500
62000
62500
63000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
58500
Week 1931
59000
59500
60000
60500
61000
61500
62000
62500
63000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARHR
Name: ARHR
Disabled
File: E:\Proc\29679_Arkansas_FEMA_2016\From_Atlis_Geo_1-11-17\
Coordinates
Latitude: North 36 11 03.23686
Longitude: West 93 01 48.72611
Ellipsoidal height: 333.480 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM55971.00, NONE
View STA File
Antenna profile: TRM55971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

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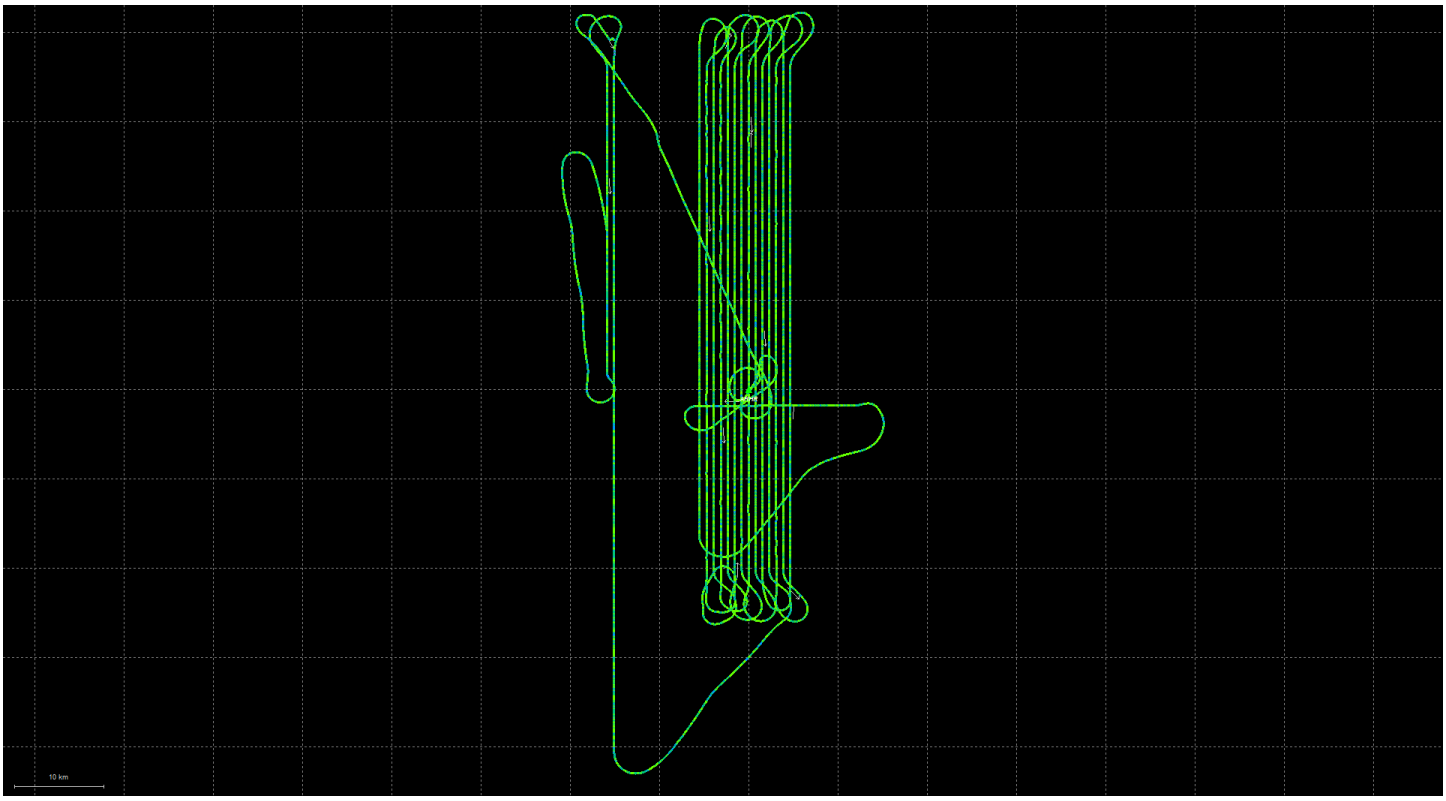
PROJECT NAME	Q.S. Arkansas	DATE	08/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Branson MO.	DATA DRIVES	LiDar #1

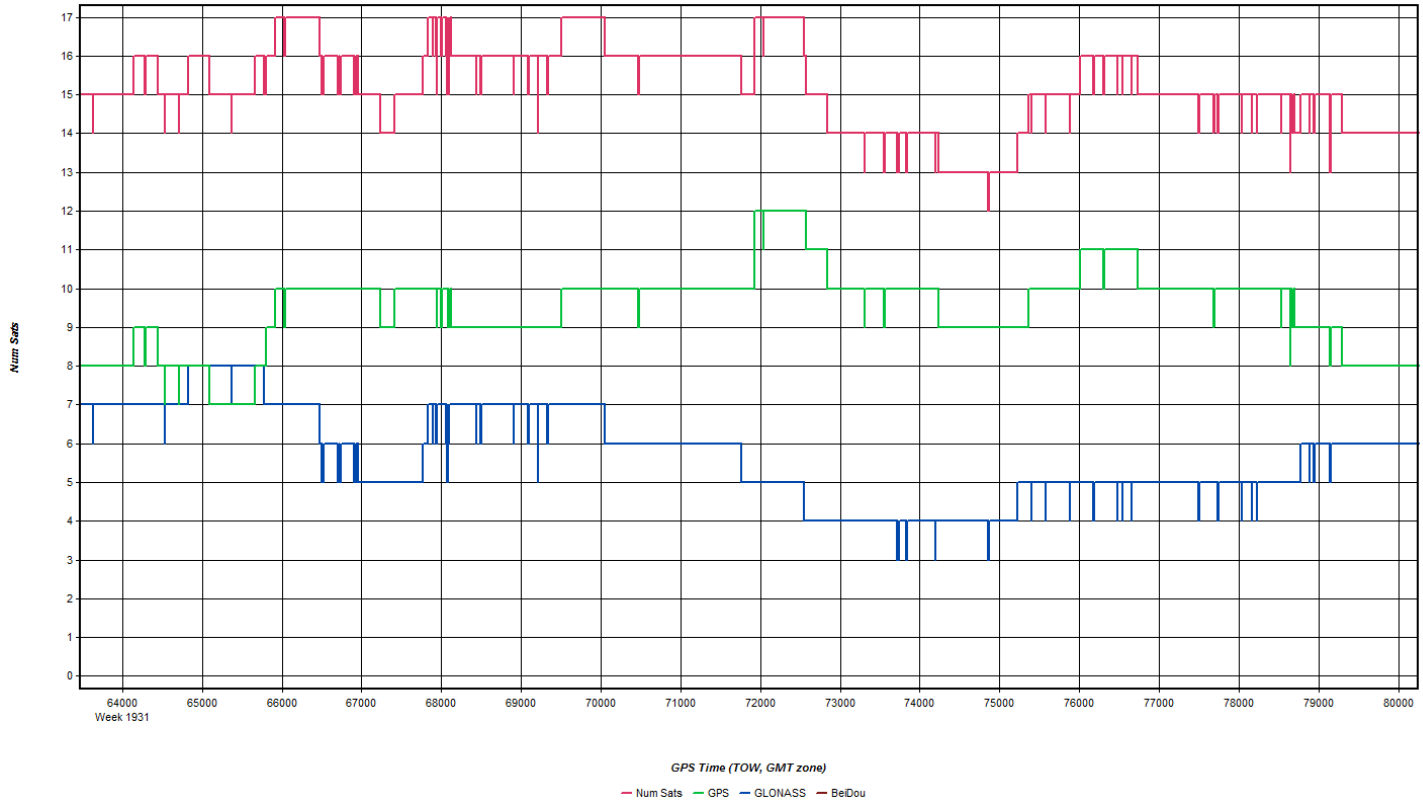
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	16:04:00	Takeoff:	16:18:00	AGL Height:	1800 m	Pulse Rate:	277 KHz		START	END
Engine Off:	22:19:00	Landing:	22:14:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	16:30:00	16:37:00
TOTAL:	6.25 hrs	TOTAL:	5.93 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	21:55:00	22:03:00

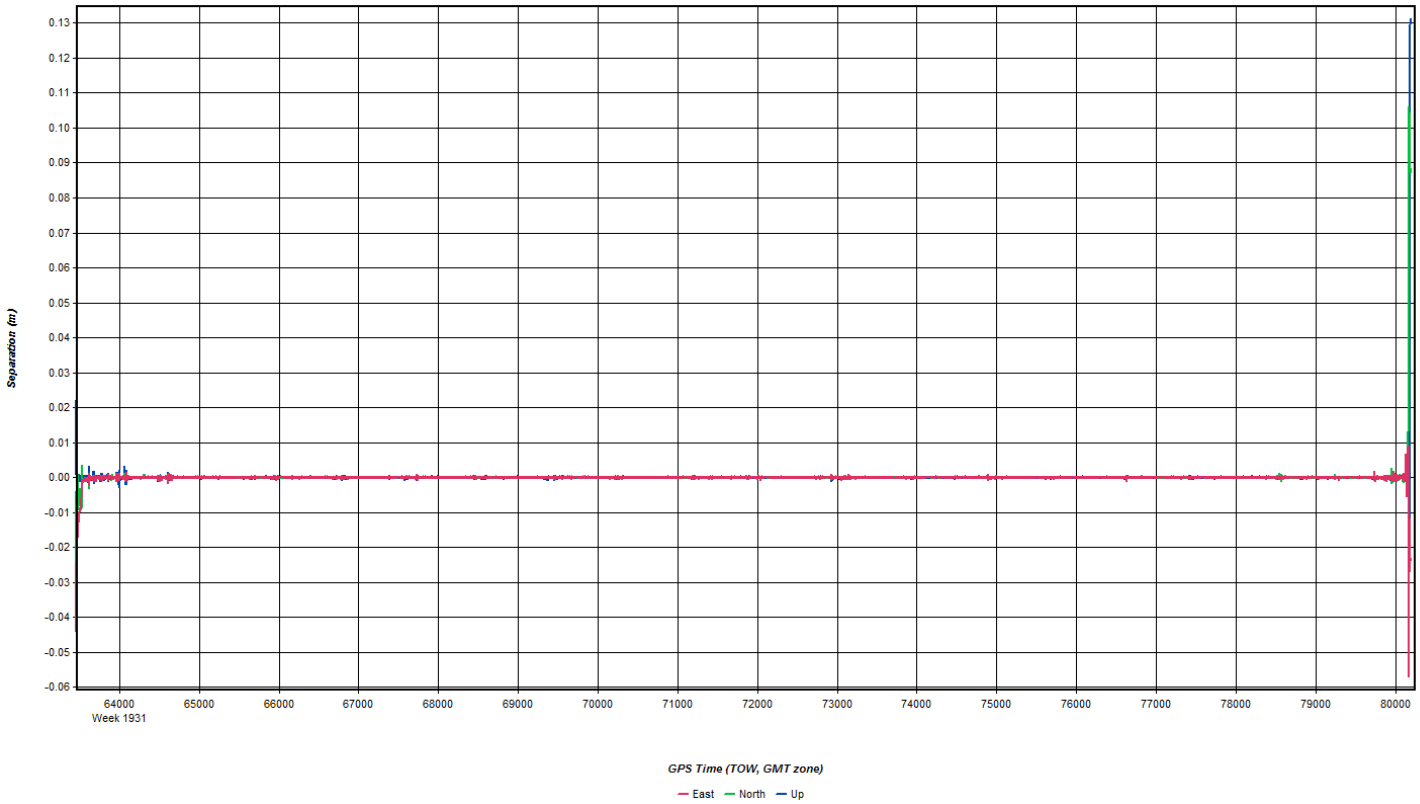
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
68		North	170108_165005	16:50:06	17:04:34	Line complete
81		South	170108_170809	17:08:10	17:24:10	Line complete
85		North	170108_172705	17:27:06	17:38:15	28nm from south, IMU gap
85		North	170108_174814	17:48:15	17:54:21	Restarted the line at 24nm from south
86		South	170108_175731	17:57:32	18:13:35	Line complete
111		North	170108_181956	18:19:57	18:30:59	16nm from south not flown b/c of snow
110		South	170108_183416	18:34:16	18:46:00	16nm from south not flown b/c of snow
109		North	170108_184906	18:49:07	19:00:14	16nm from south not flown b/c of snow
108		South	170108_190330	19:02:30	19:15:15	16nm from south not flown b/c of snow
107		North	170108_191745	19:17:46	19:28:47	16nm from south not flown b/c of snow
106		South	170108_193141	19:31:42	19:43:39	16nm from south not flown b/c of snow
105		North	170108_194636	19:46:38	19:57:40	16nm from south not flown b/c of snow
104		South	170108_200040	20:00:41	20:12:43	16nm from south not flown b/c of snow
103		North	170108_201918	20:19:19	20:30:15	16nm from south not flown b/c of snow
102		South	170108_203325	20:33:26	20:45:47	16nm from south not flown b/c of snow
101		North	170108_204820	20:48:21	20:59:23	16nm from south not flown b/c of snow
100		South	170108_210157	21:01:58	21:14:34	16nm from south not flown b/c of snow
99		North	170108_211716	21:17:16	21:28:15	16nm from south not flown b/c of snow
98		South	170108_213112	21:31:13	21:43:04	16nm from south not flown b/c of snow
CL		West	170108_215006	21:50:07	21:53:04	

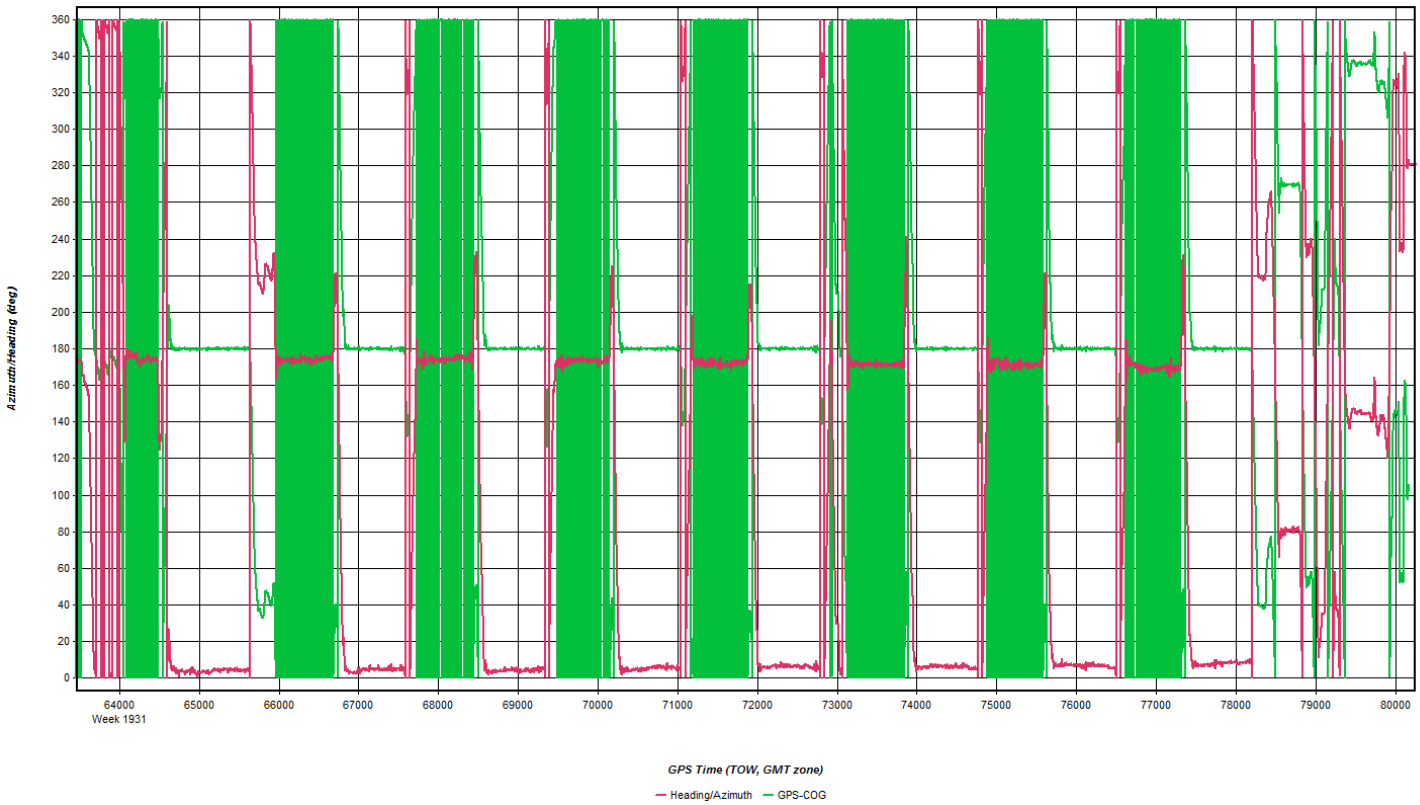
SUN ANGLE	
@Start:	Broken Overcast, -6C at take off and 0C when landing
@End:	Sats. And PDOPS averaged 19 and 1.2
@Peak:	The CORS station ARHR was used for this flight
	On line 28 we experienced and brief IMU gap 28nm from the south. We restarted the line 24nm from the south.

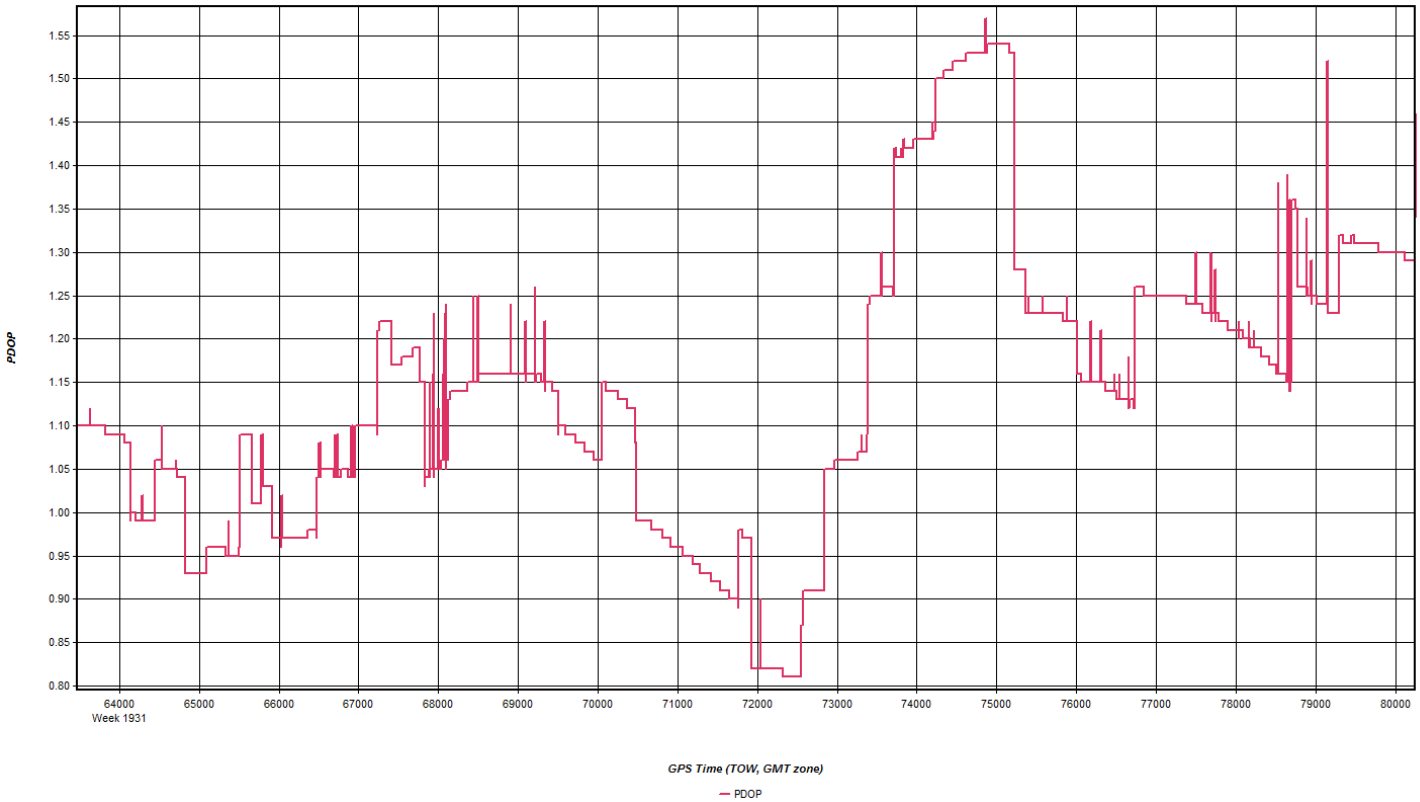
Jan 8, 2017-A2 (C-GKSI, SN7229)

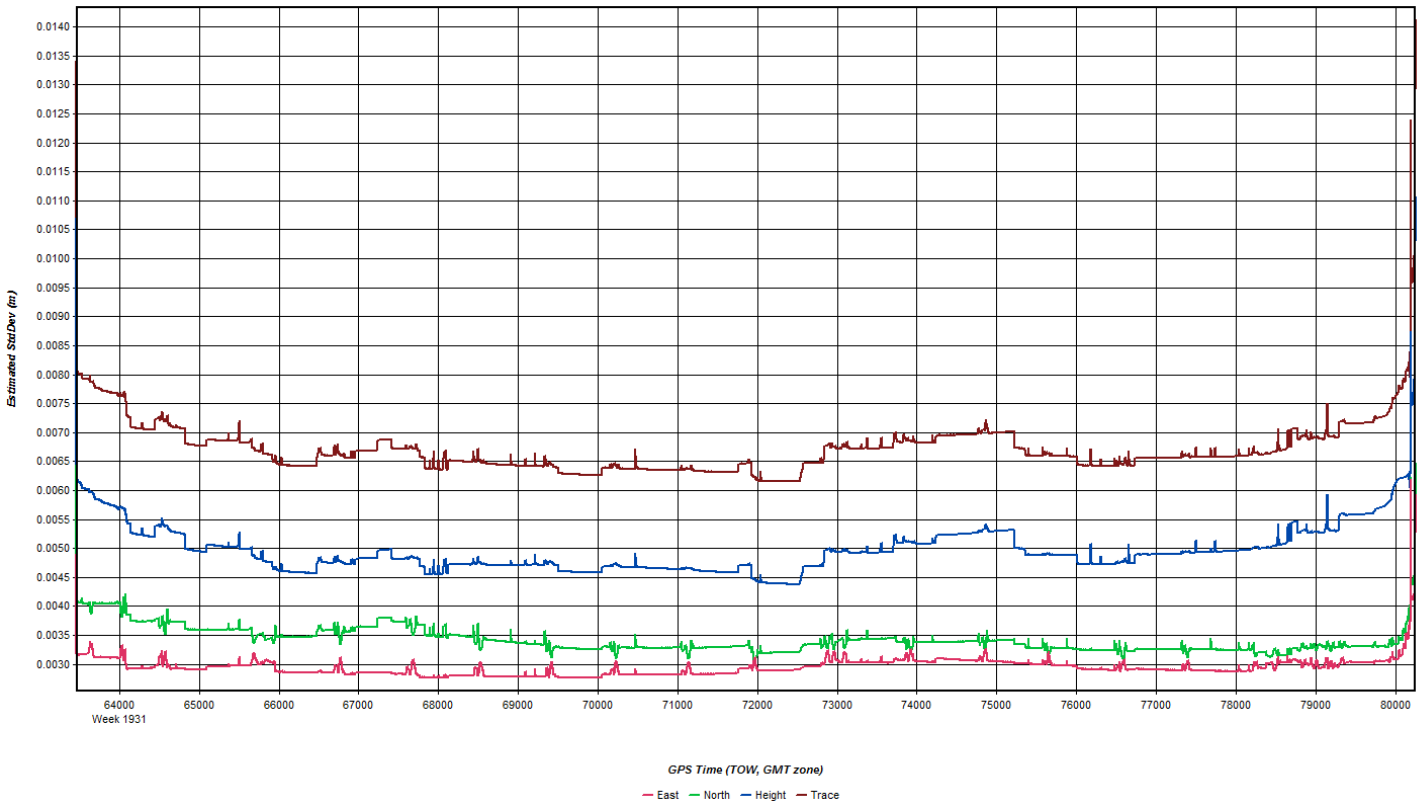

10 km

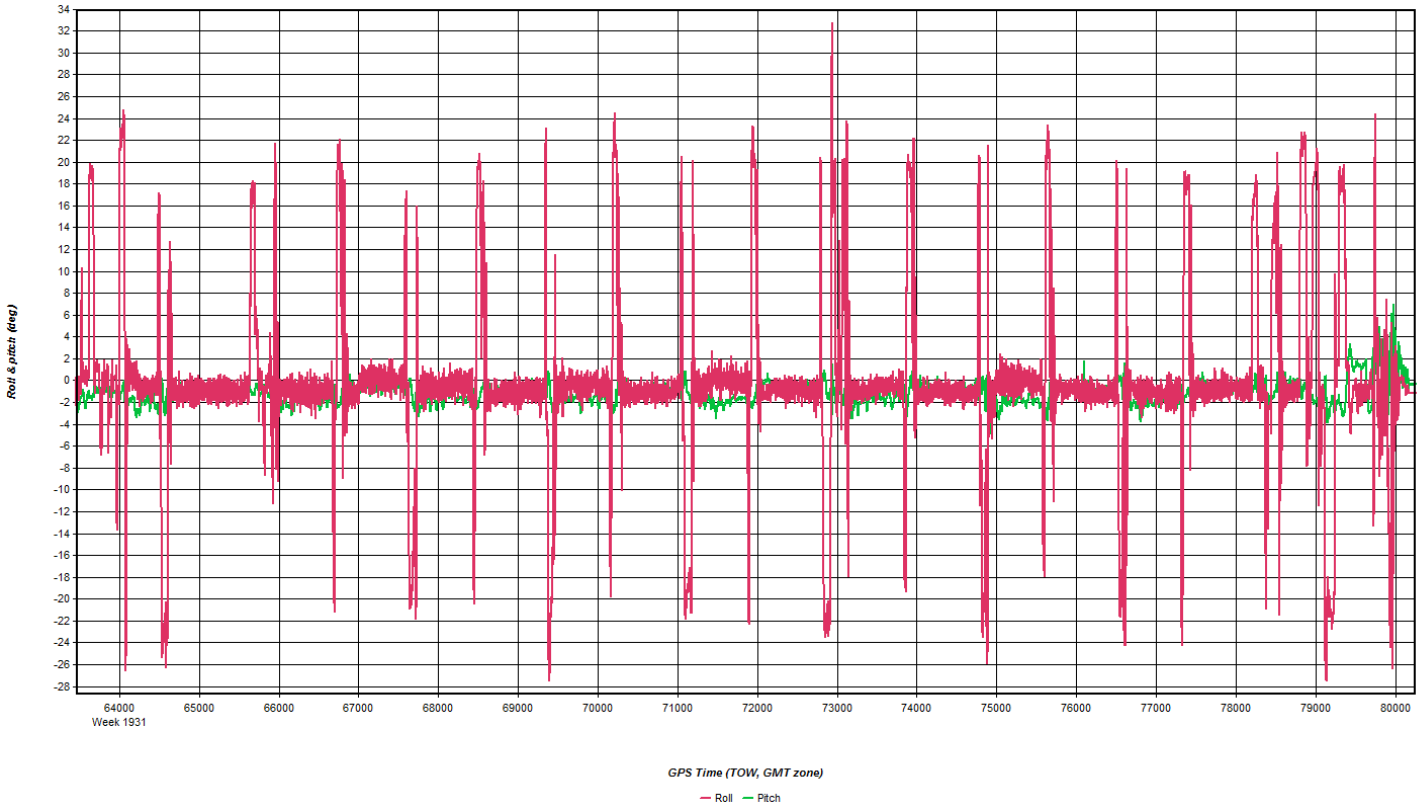

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
64000
Week 1931
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
77000
78000
79000
80000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

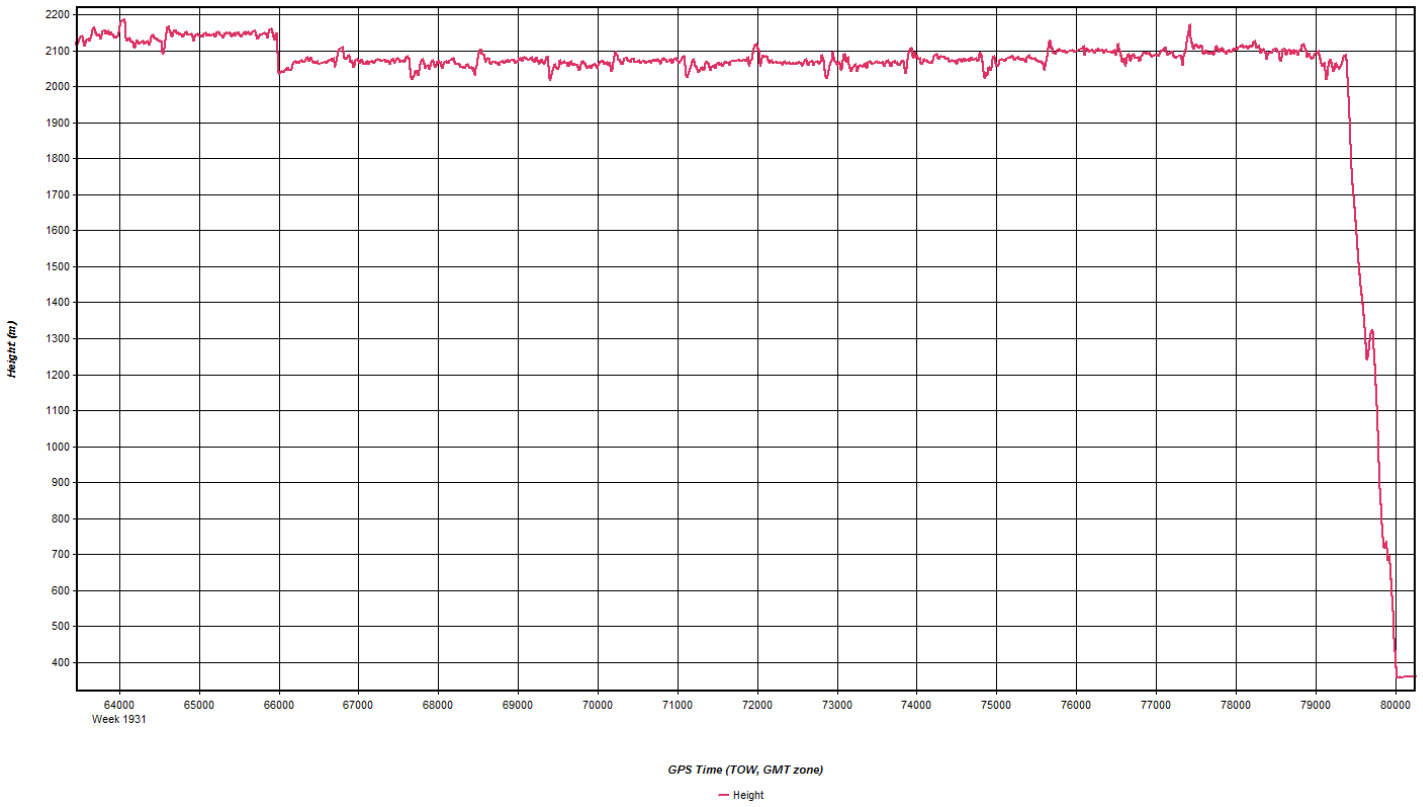

Separation (m)
0.13
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
64000
Week 1931
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
77000
78000
79000
80000
GPS Time (TOW, GMT zone)
East
North
Up

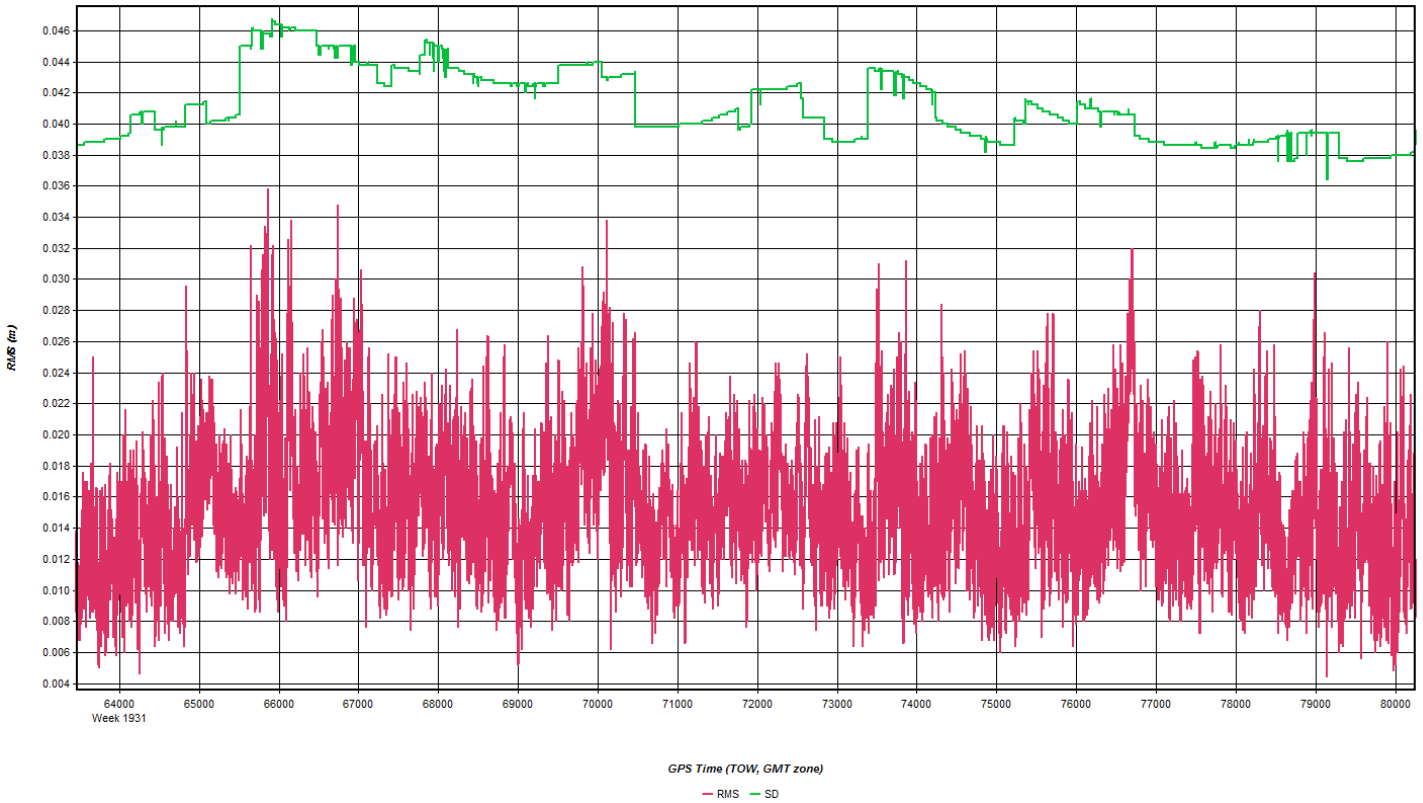

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
64000
Week 1931
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
77000
78000
79000
80000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

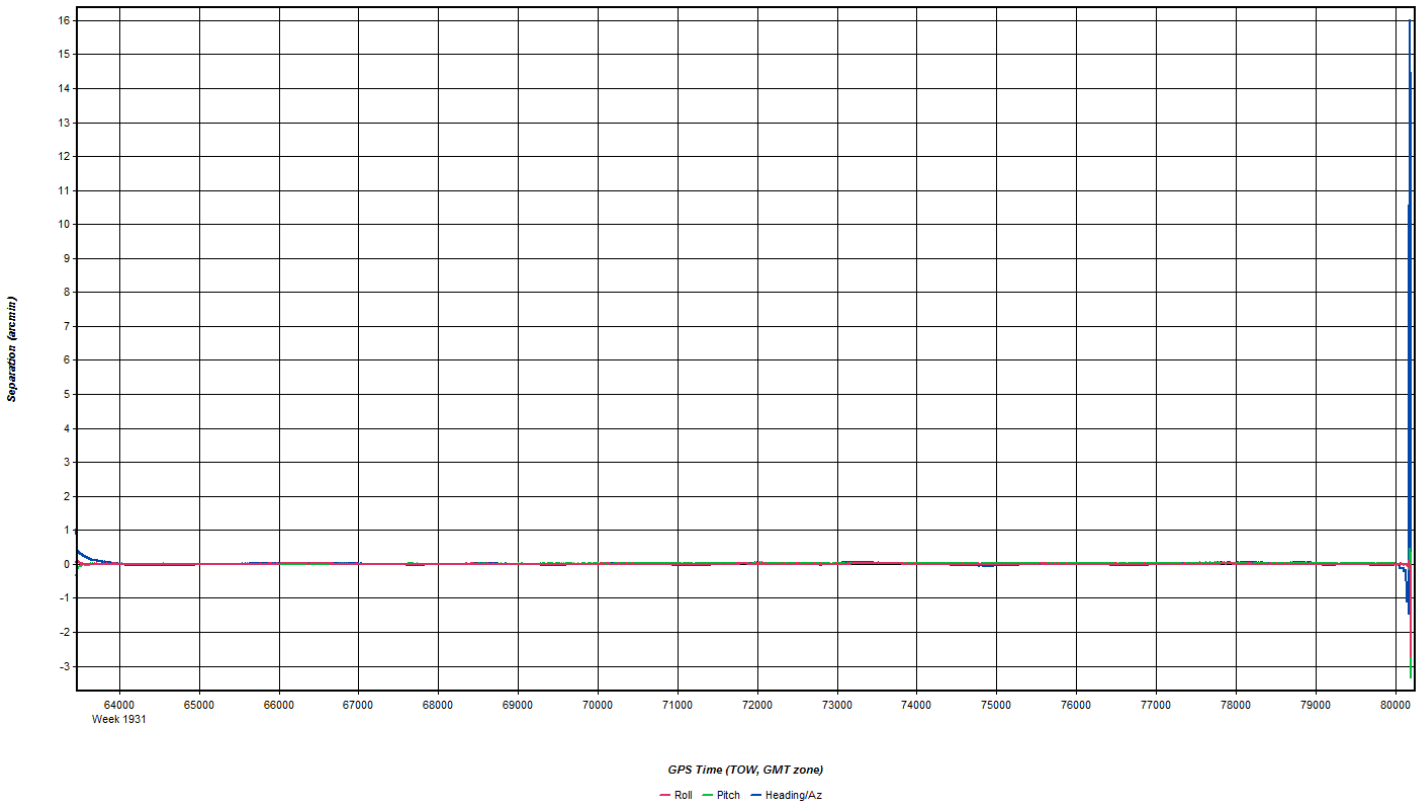

PDOP
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
64000
Week 1931
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
77000
78000
79000
80000
GPS Time (TOW, GMT zone)
PDOP

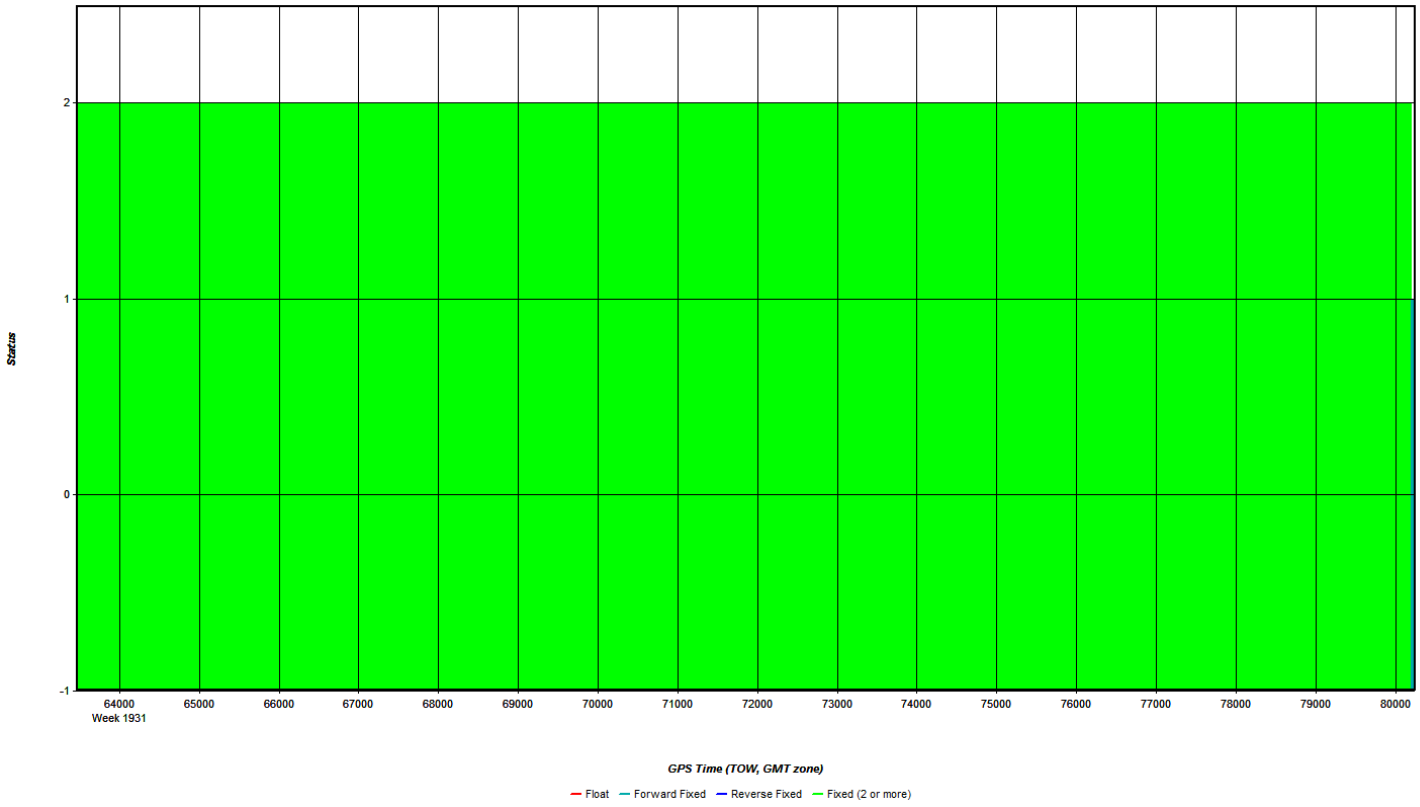

Estimated StdDev (m)
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
64000
Week 1931
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
77000
78000
79000
80000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

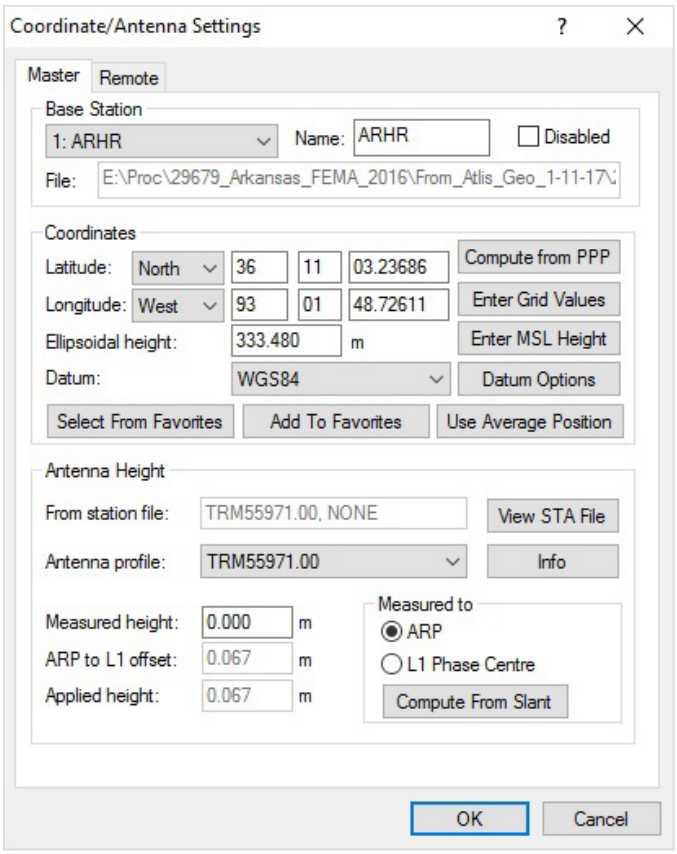

Roll & pitch (deg)
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
64000
Week 1931
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
77000
78000
79000
80000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
64000
Week 1931
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
77000
78000
79000
80000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
64000
Week 1931
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
77000
78000
79000
80000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
64000
Week 1931
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
77000
78000
79000
80000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
64000
Week 1931
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
77000
78000
79000
80000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARHR
Name:
ARHR
Disabled
File:
E:\Proc\29679_Arkansas_FEMA_2016\From_Atlis_Geo_1-11-17\
Coordinates
Latitude:
North
36
11
03.23686
Compute from PPP
Longitude:
West
93
01
48.72611
Enter Grid Values
Ellipsoidal height:
333.480
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM55971.00, NONE
View STA File
Antenna profile:
TRM55971.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.067
m
Applied height:
0.067
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

PROJECT NAME	Q.S. Arkansas	DATE	08/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Branson MO.	DATA DRIVES	LiDar #1

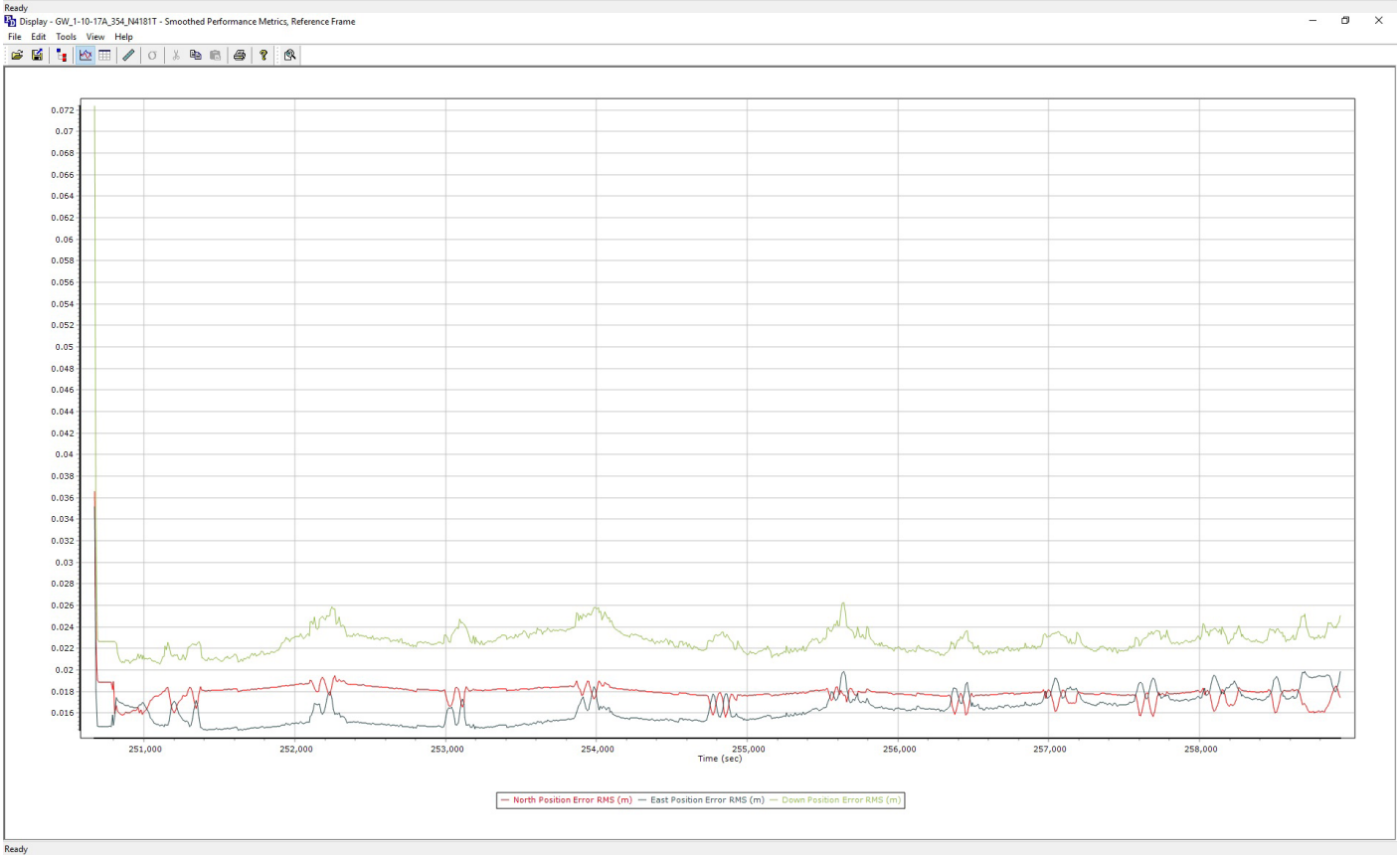
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	16:04:00	Takeoff:	16:18:00	AGL Height:	1800 m	Pulse Rate:	277 KHz		START	END
Engine Off:	22:19:00	Landing:	22:14:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	16:30:00	16:37:00
TOTAL:	6.25 hrs	TOTAL:	5.93 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	21:55:00	22:03:00

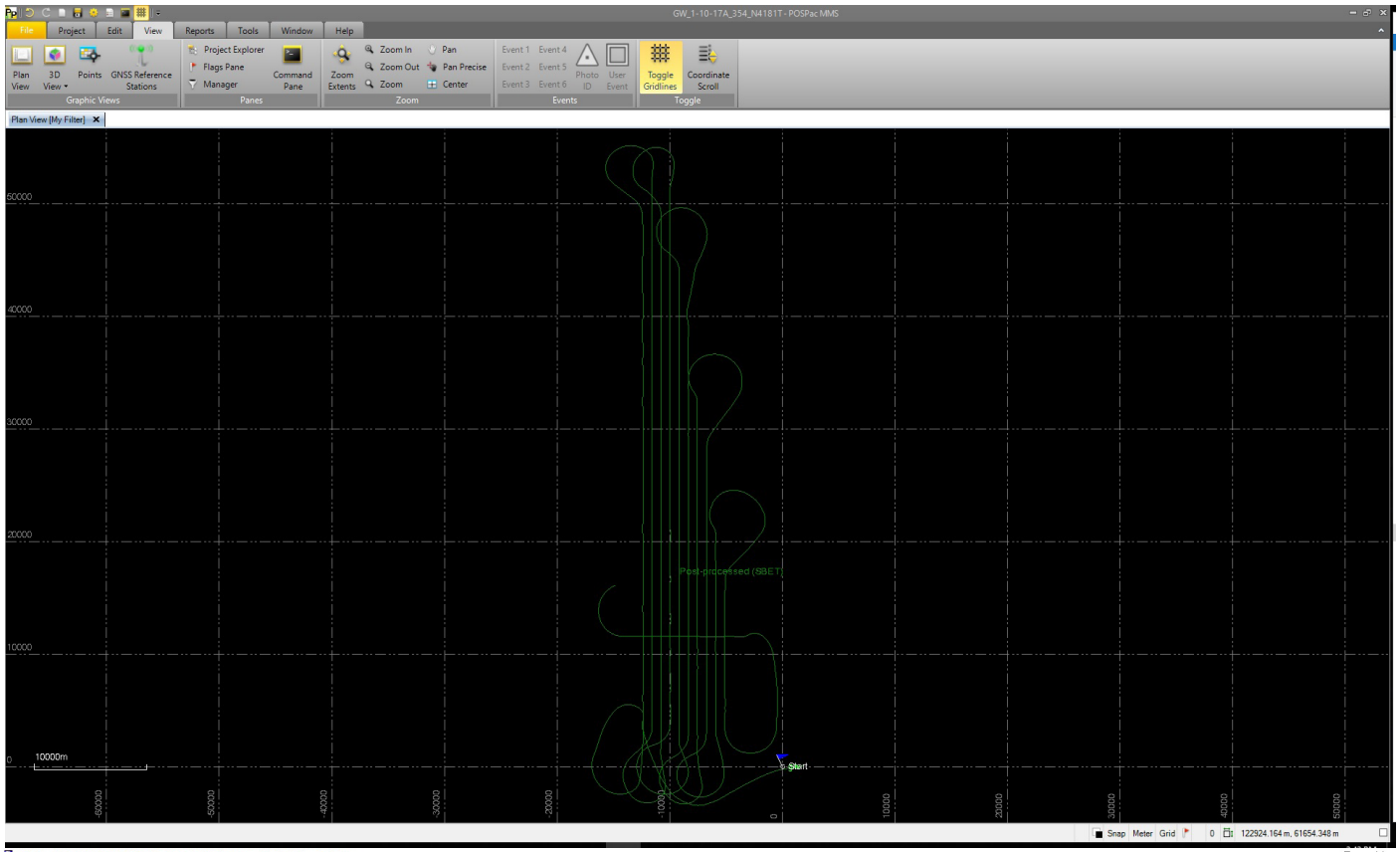
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
68		North	170108_165005	16:50:06	17:04:34	Line complete
81		South	170108_170809	17:08:10	17:24:10	Line complete
85		North	170108_172705	17:27:06	17:38:15	28nm from south, IMU gap
85		North	170108_174814	17:48:15	17:54:21	Restarted the line at 24nm from south
86		South	170108_175731	17:57:32	18:13:35	Line complete
111		North	170108_181956	18:19:57	18:30:59	16nm from south not flown b/c of snow
110		South	170108_183416	18:34:16	18:46:00	16nm from south not flown b/c of snow
109		North	170108_184906	18:49:07	19:00:14	16nm from south not flown b/c of snow
108		South	170108_190330	19:02:30	19:15:15	16nm from south not flown b/c of snow
107		North	170108_191745	19:17:46	19:28:47	16nm from south not flown b/c of snow
106		South	170108_193141	19:31:42	19:43:39	16nm from south not flown b/c of snow
105		North	170108_194636	19:46:38	19:57:40	16nm from south not flown b/c of snow
104		South	170108_200040	20:00:41	20:12:43	16nm from south not flown b/c of snow
103		North	170108_201918	20:19:19	20:30:15	16nm from south not flown b/c of snow
102		South	170108_203325	20:33:26	20:45:47	16nm from south not flown b/c of snow
101		North	170108_204820	20:48:21	20:59:23	16nm from south not flown b/c of snow
100		South	170108_210157	21:01:58	21:14:34	16nm from south not flown b/c of snow
99		North	170108_211716	21:17:16	21:28:15	16nm from south not flown b/c of snow
98		South	170108_213112	21:31:13	21:43:04	16nm from south not flown b/c of snow
CL		West	170108_215006	21:50:07	21:53:04	

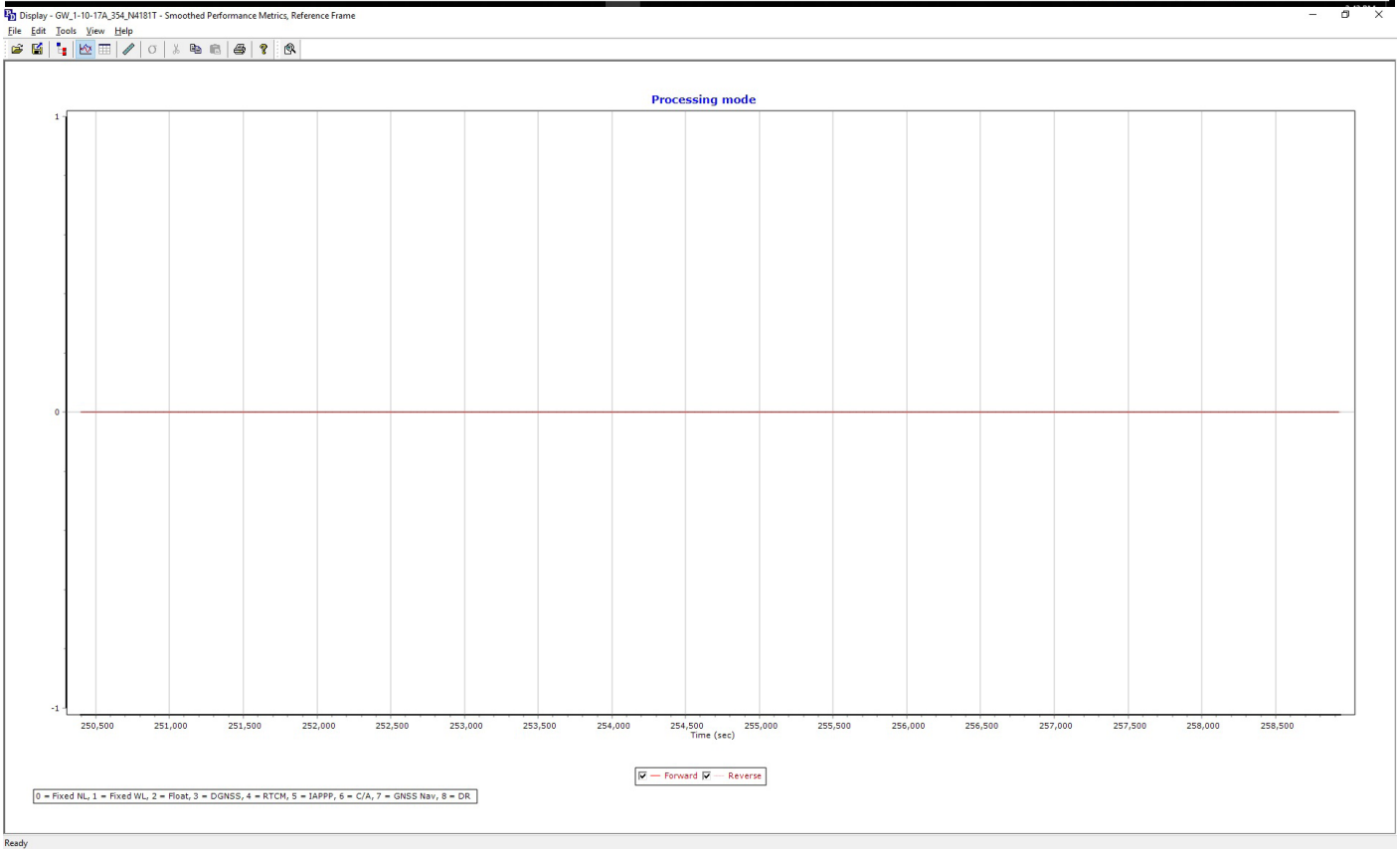
SUN ANGLE	
@Start:	Broken Overcast, -6C at take off and 0C when landing
@End:	Sats. And PDOPS averaged 19 and 1.2
@Peak:	The CORS station ARHR was used for this flight
	On line 28 we experienced and brief IMU gap 28nm from the south. We restarted the line 24nm from the south.

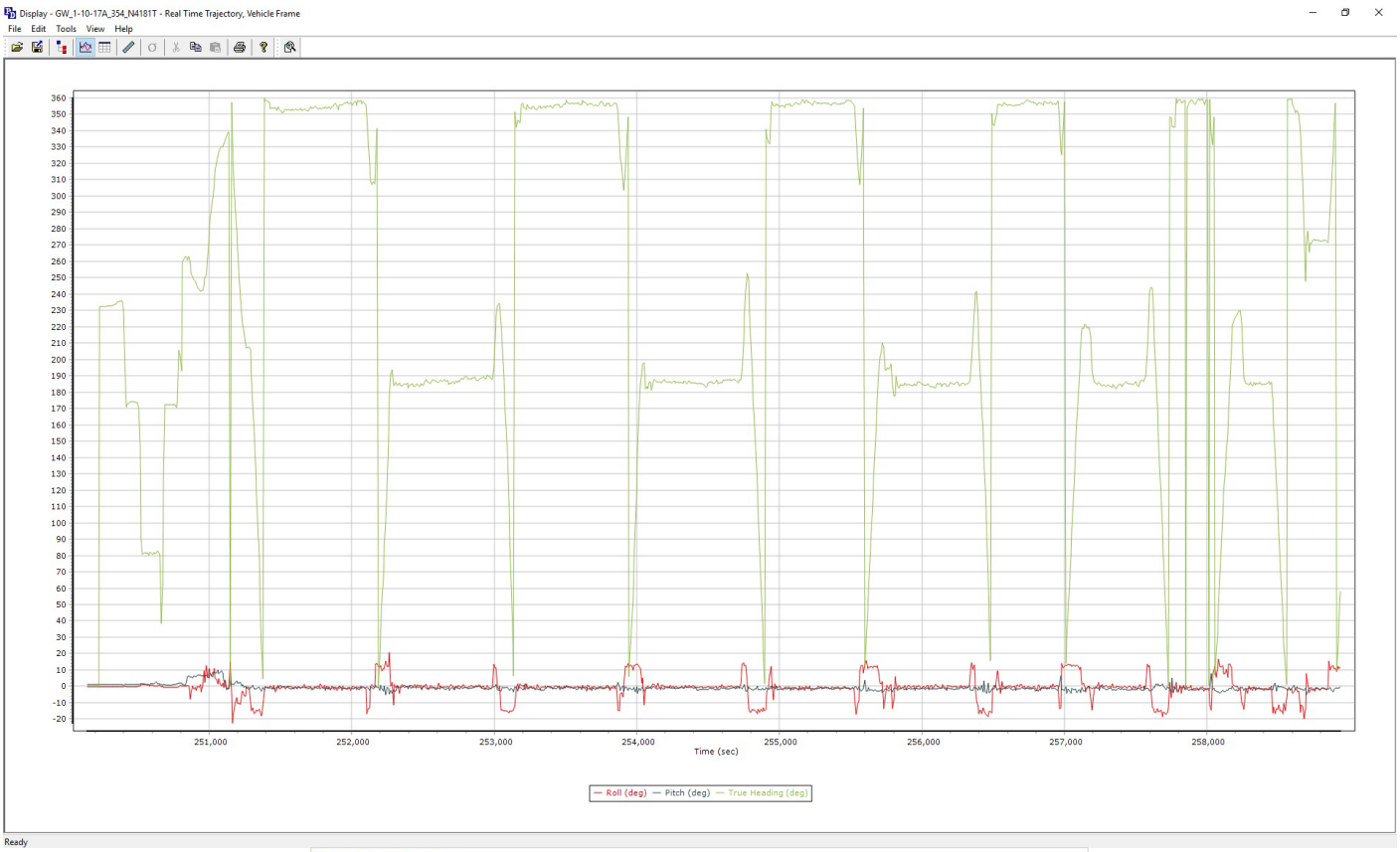
Jan 10, 2017-A (N4181T, SN354)

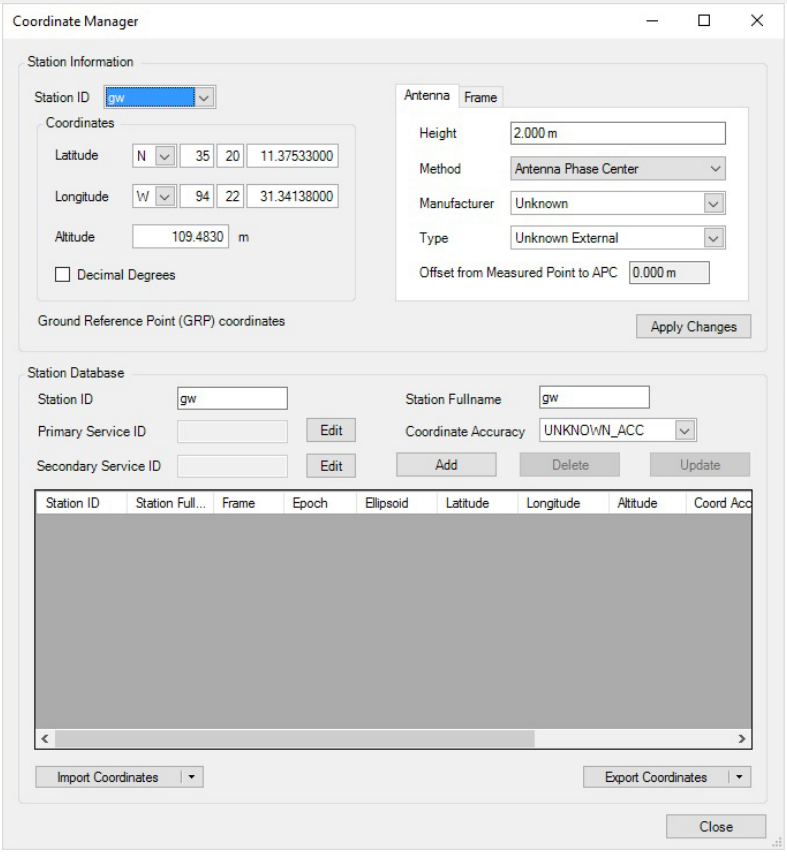

Display - GW_1-10-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_1-10-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready

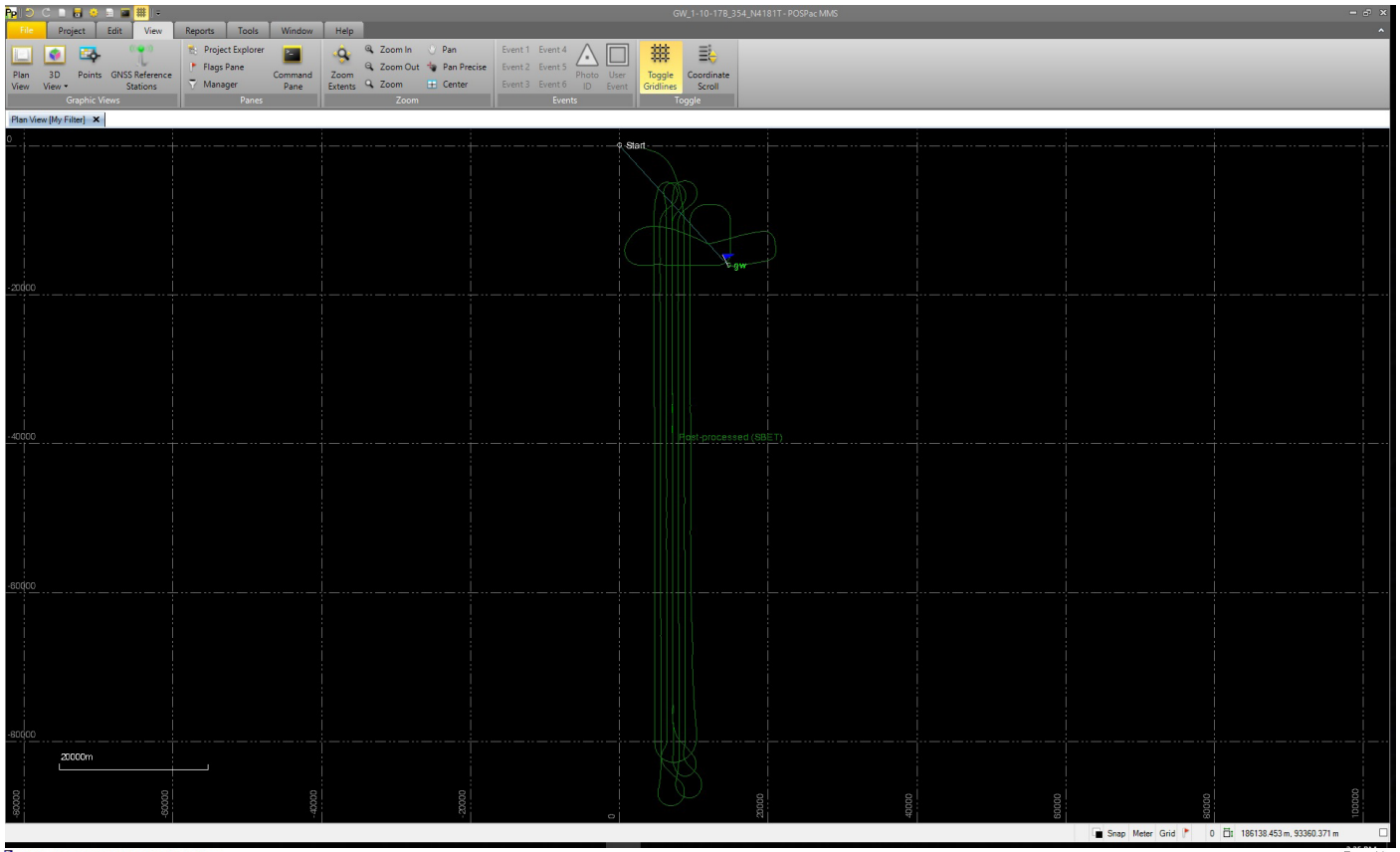

GW_1-10-17A_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom Extents
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
Post-processed (SBET)
10000m
Start
Snap
Meter
Grid
122924.164 m, 61654.348 m

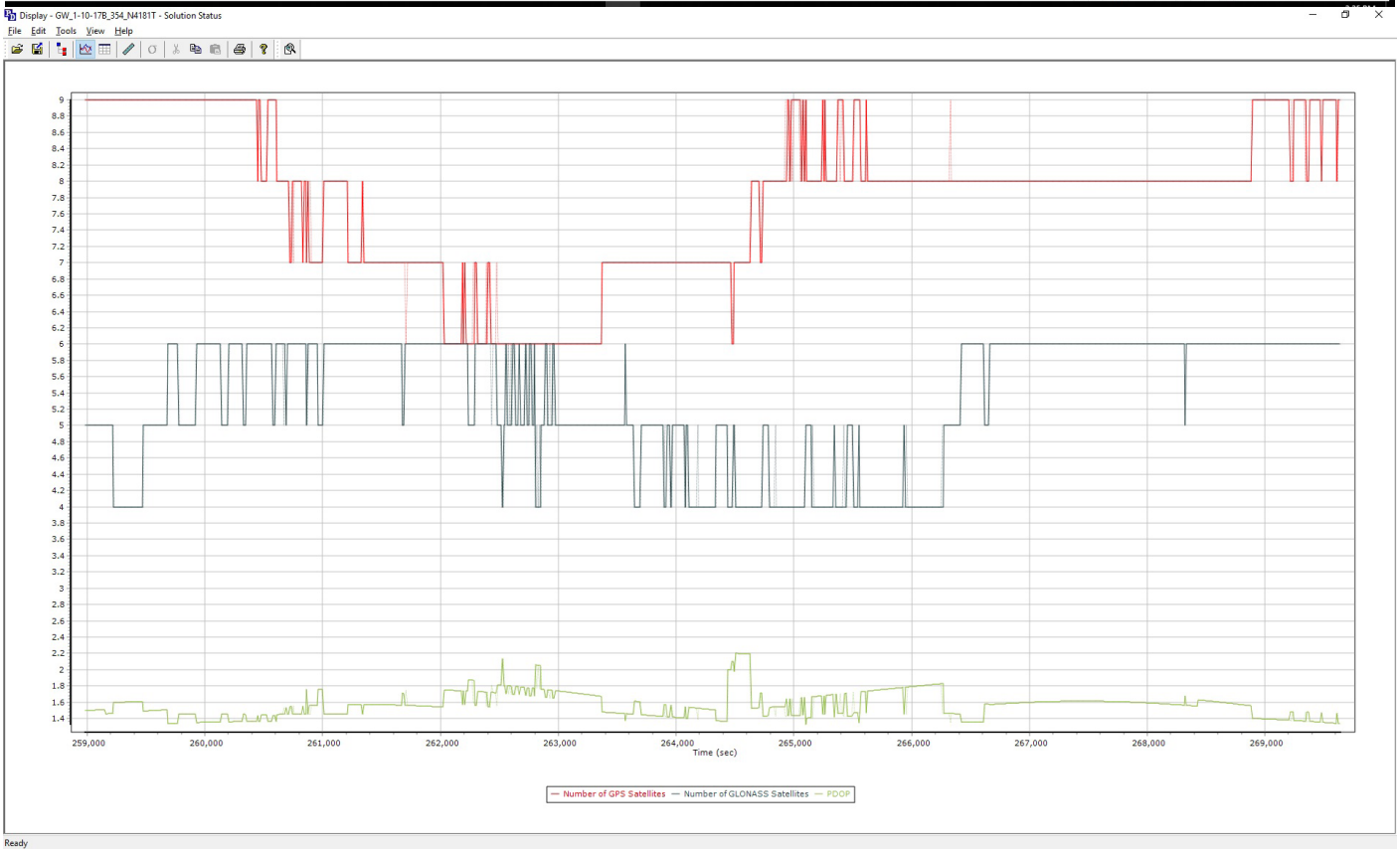

Display - GW_1-10-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready

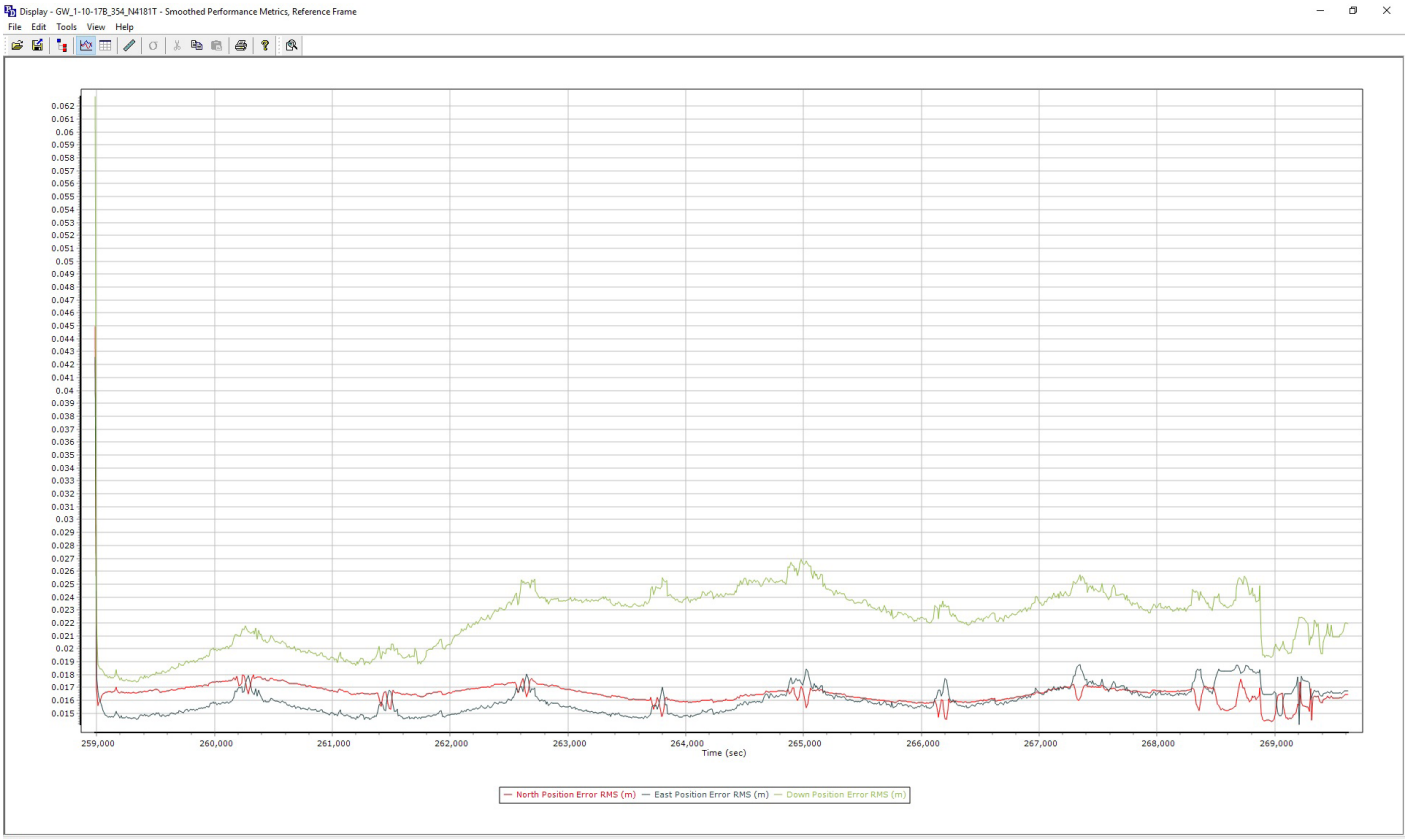

Display - GW_1-10-17A_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready

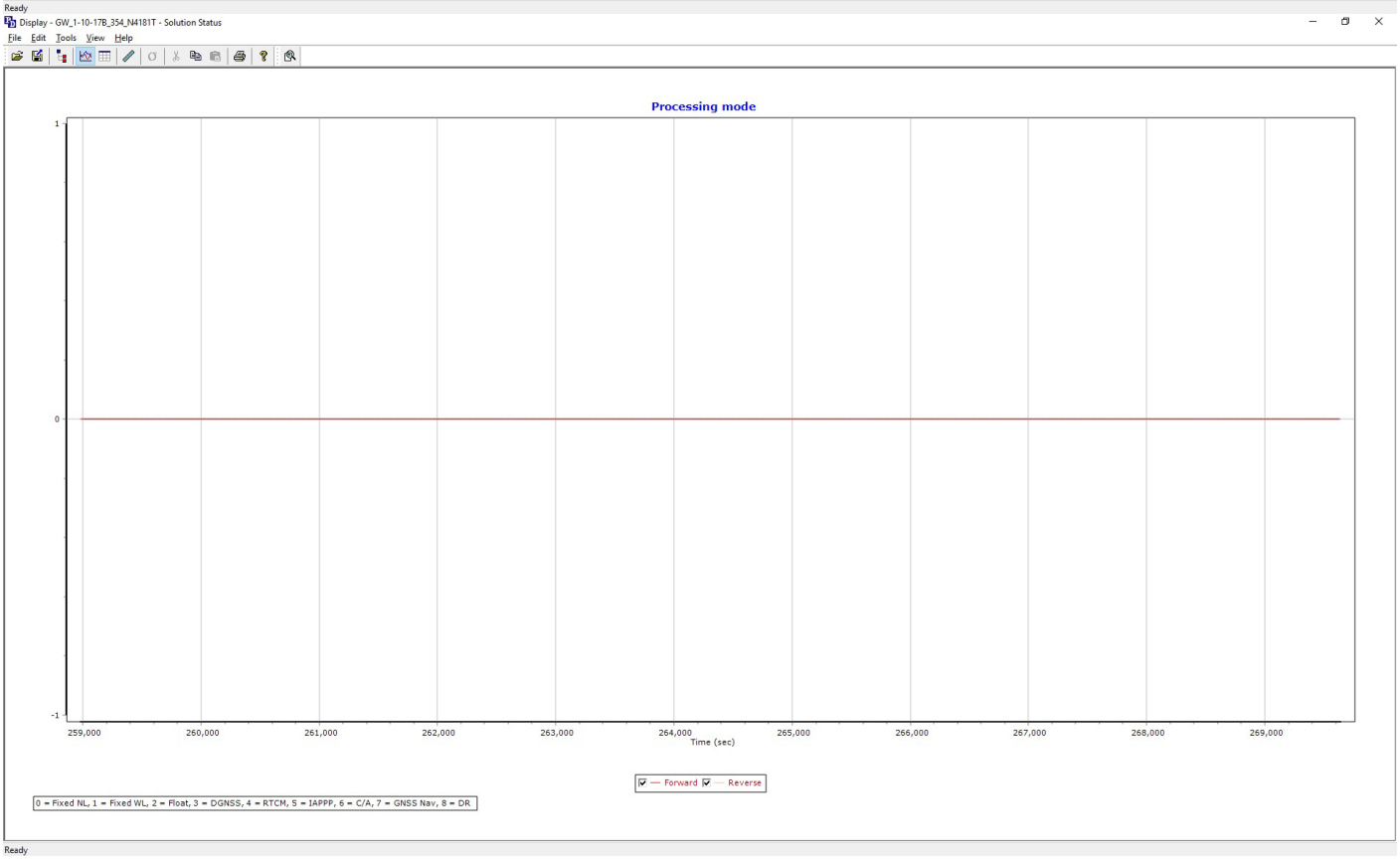

Coordinate Manager
Station Information
Station ID
gw
Coordinates
Latitude
N
35
20
11.37533000
Longitude
W
94
22
31.34138000
Altitude
109.4830
m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna
Frame
Height
2.000 m
Method
Antenna Phase Center
Manufacturer
Unknown
Type
Unknown External
Offset from Measured Point to APC
0.000 m
Apply Changes
Station Database
Station ID
gw
Station Fullname
gw
Primary Service ID
Edit
Coordinate Accuracy
UNKNOWN_ACC
Secondary Service ID
Edit
Add
Delete
Update
Station ID
Station Full...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Acc
Import Coordinates
Export Coordinates
Close

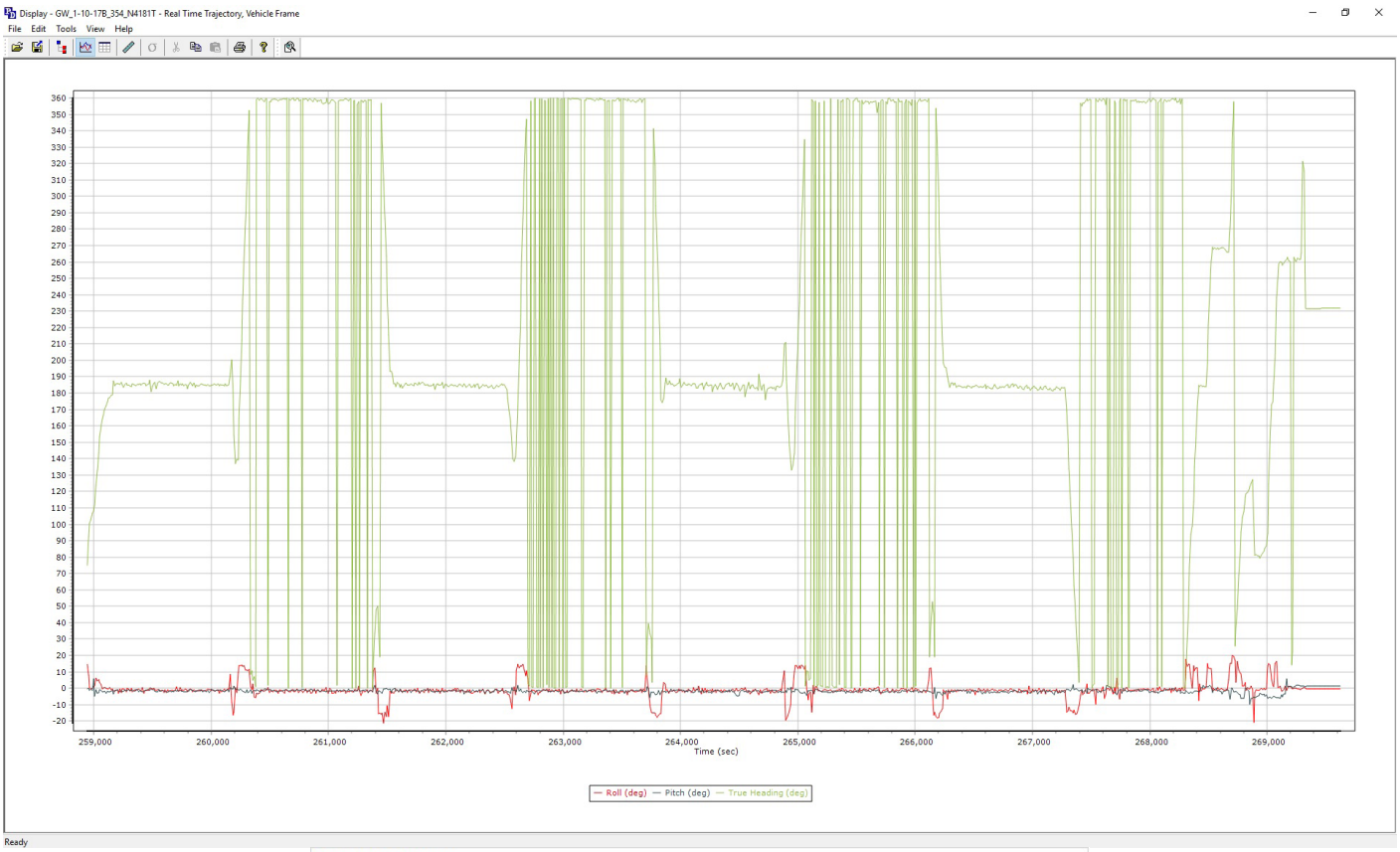
Jan 10, 2017-B (N4181T, SN354)

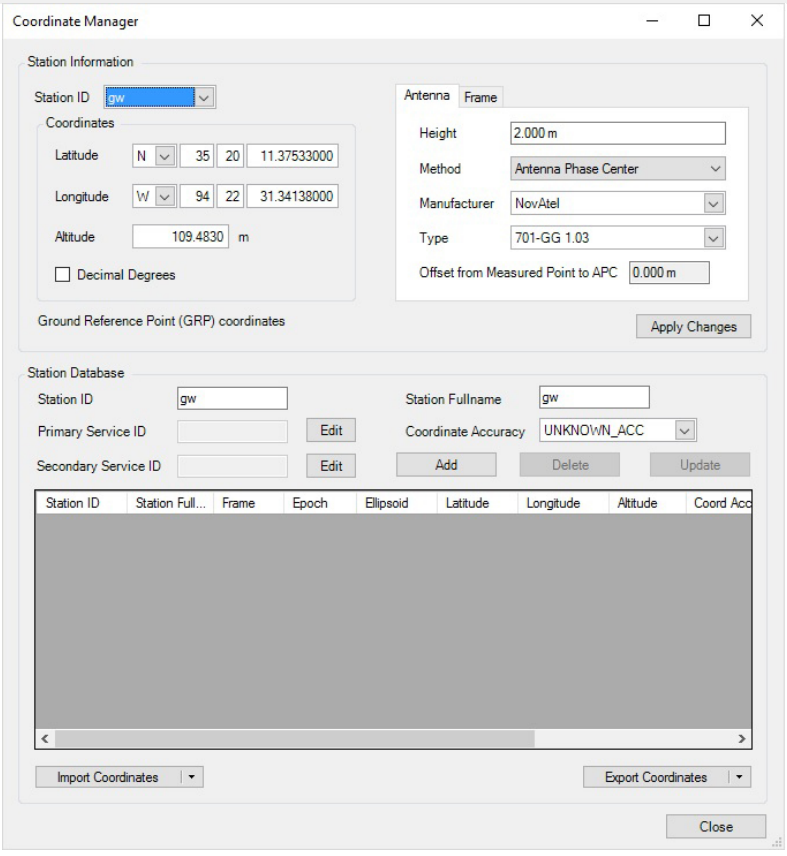

GW_1-10-17B_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom Extents
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
Start
gw
Post-processed (SBET)
20000m
Snap
Meter
Grid
186138.453 m, 93360.371 m


Display - GW_1-10-17B_354_N4181T - Solution Status
File
Edit
Tools
View
Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready

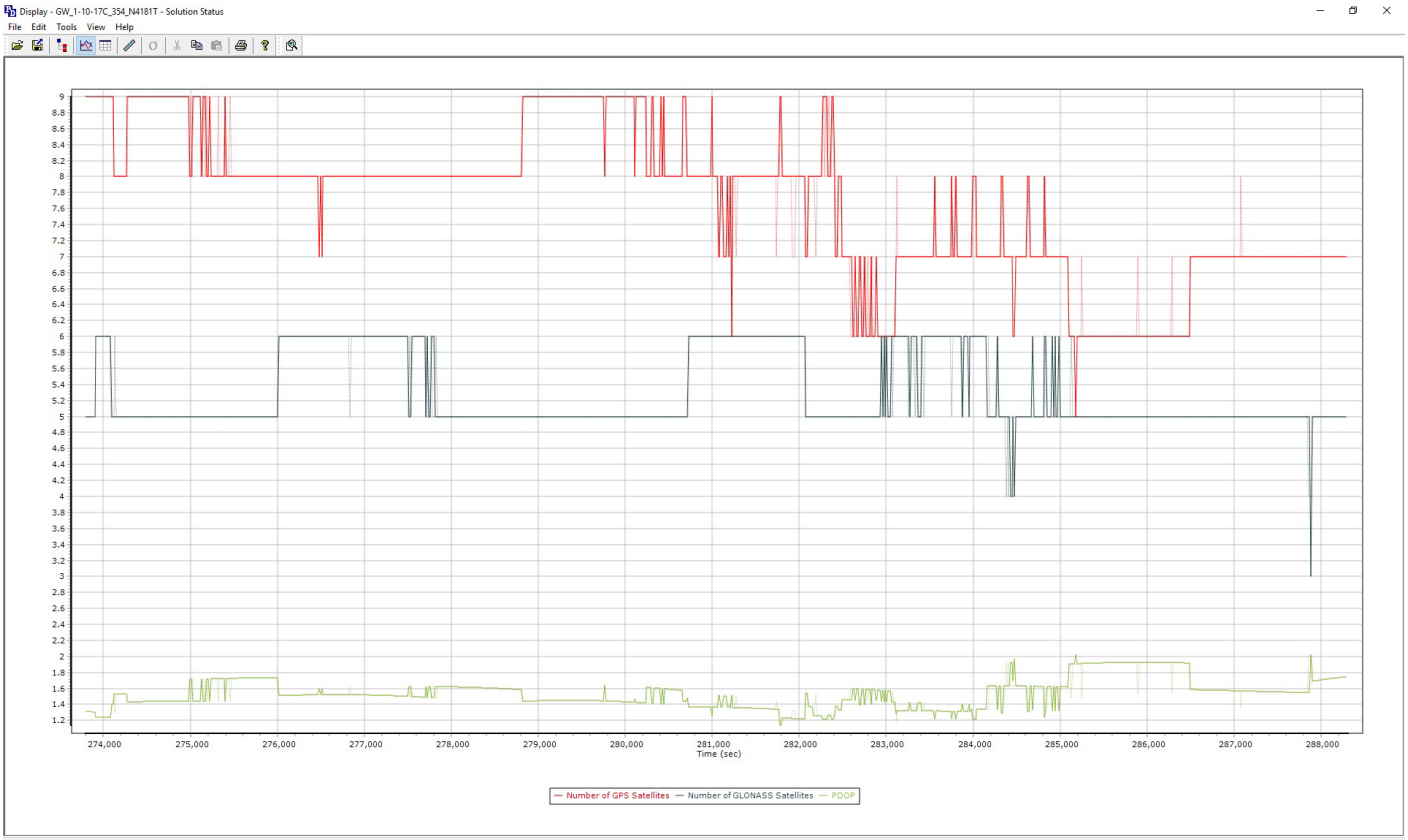

Display - GW_1-10-17B_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready

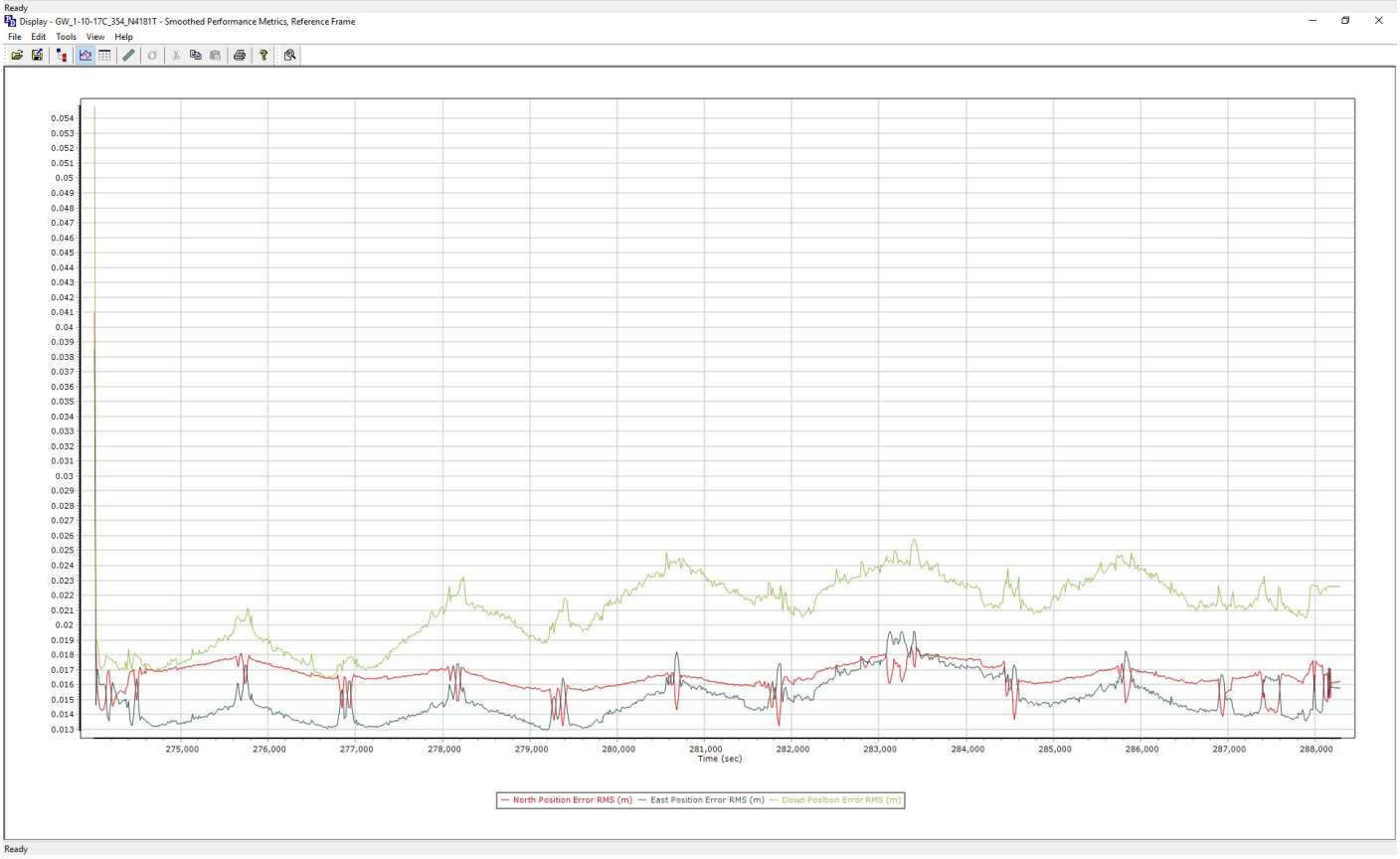

Display - GW_1-10-17B_354_N4181T - Solution Status
File Edit Tools View Help
Processing mode
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
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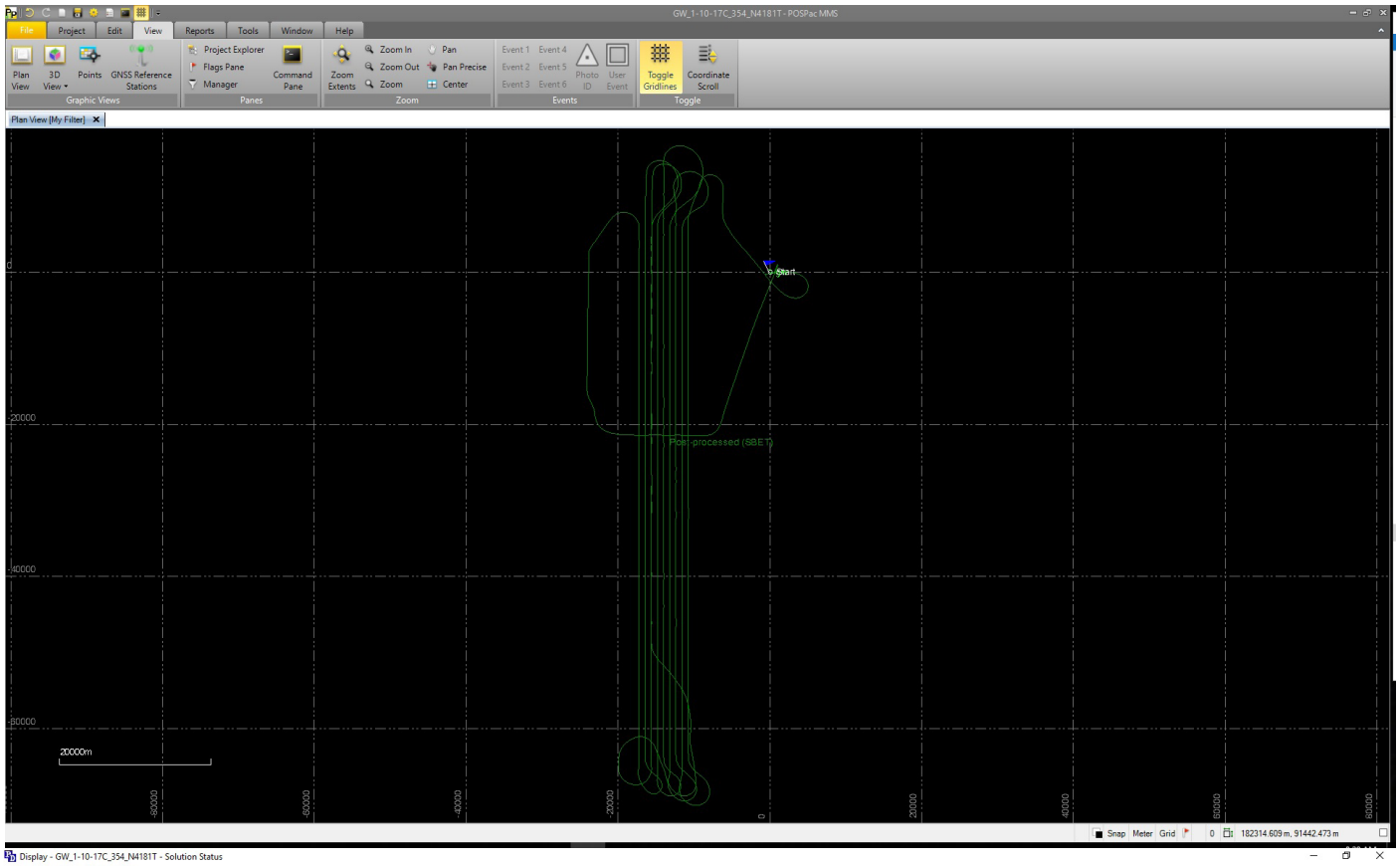

Display - GW_1-10-17B_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready

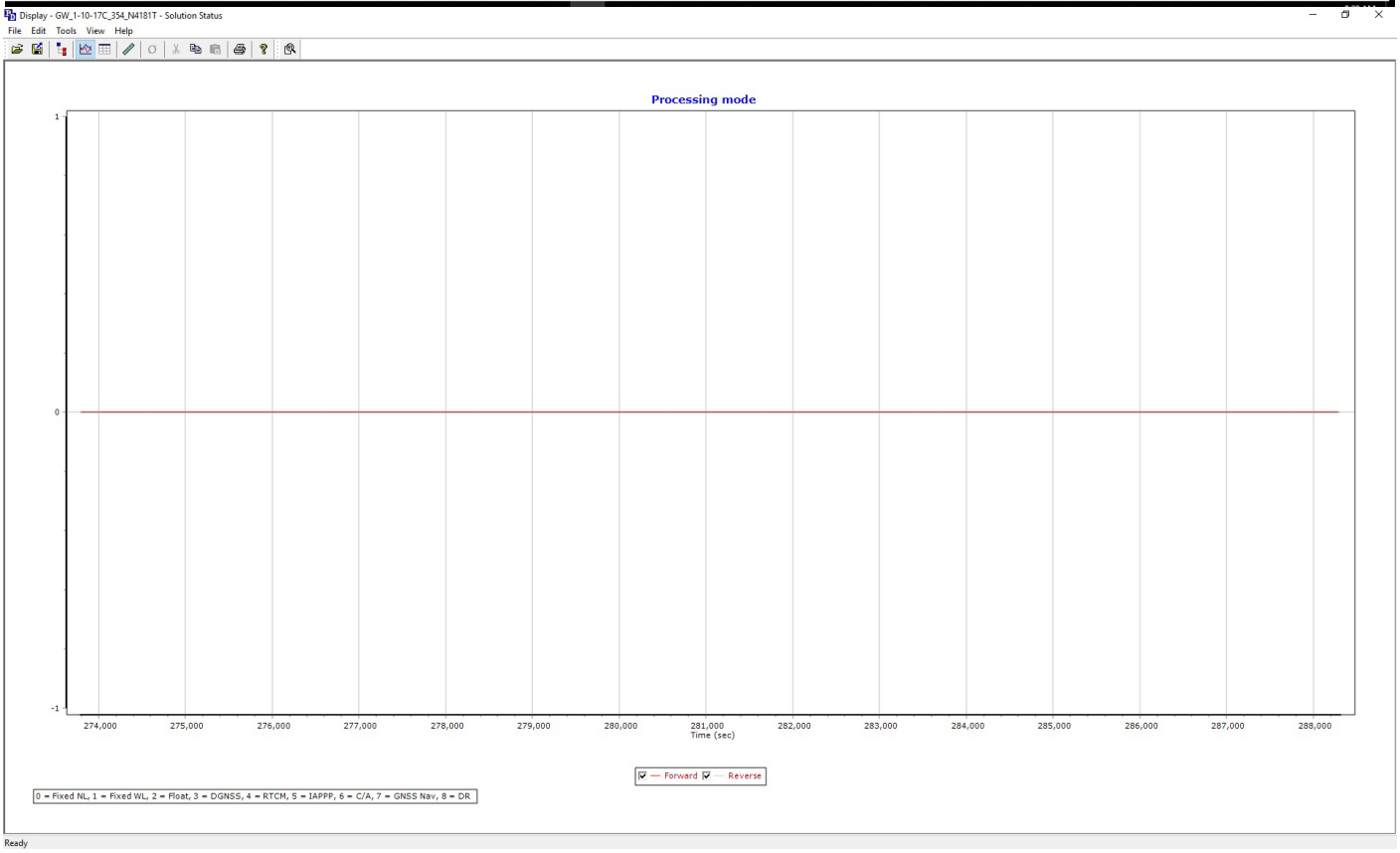

Coordinate Manager
Station Information
Station ID
gw
Coordinates
Latitude
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35
20
11.37533000
Longitude
W
94
22
31.34138000
Altitude
109.4830
m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna
Frame
Height
2.000 m
Method
Antenna Phase Center
Manufacturer
NovAtel
Type
701-GG 1.03
Offset from Measured Point to APC
0.000 m
Apply Changes
Station Database
Station ID
gw
Station Fullname
gw
Primary Service ID
Edit
Coordinate Accuracy
UNKNOWN_ACC
Secondary Service ID
Edit
Add
Delete
Update
Station ID
Station Full...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Acc
Import Coordinates
Export Coordinates
Close

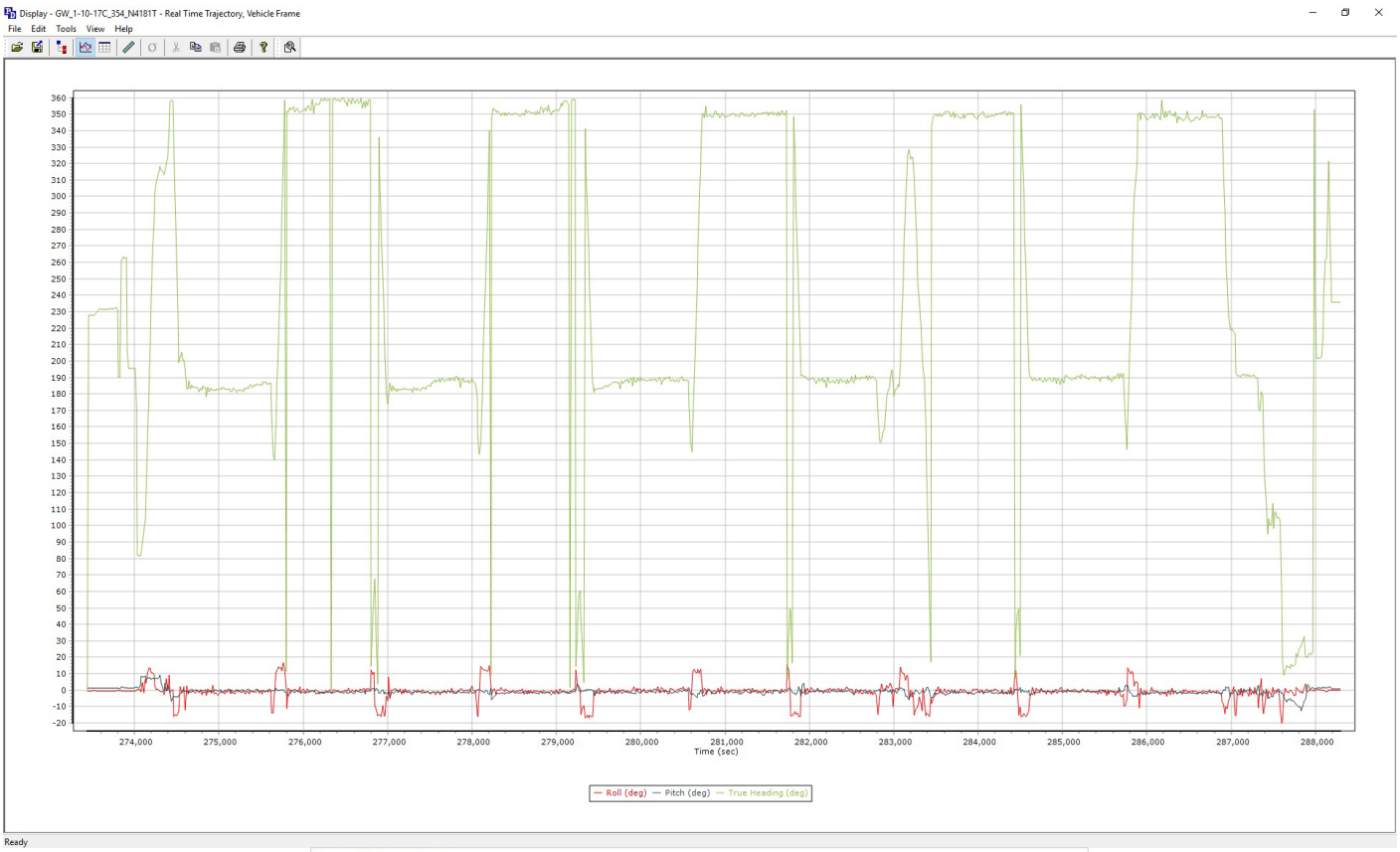
Jan 10, 2017-C (N4181T, SN354)

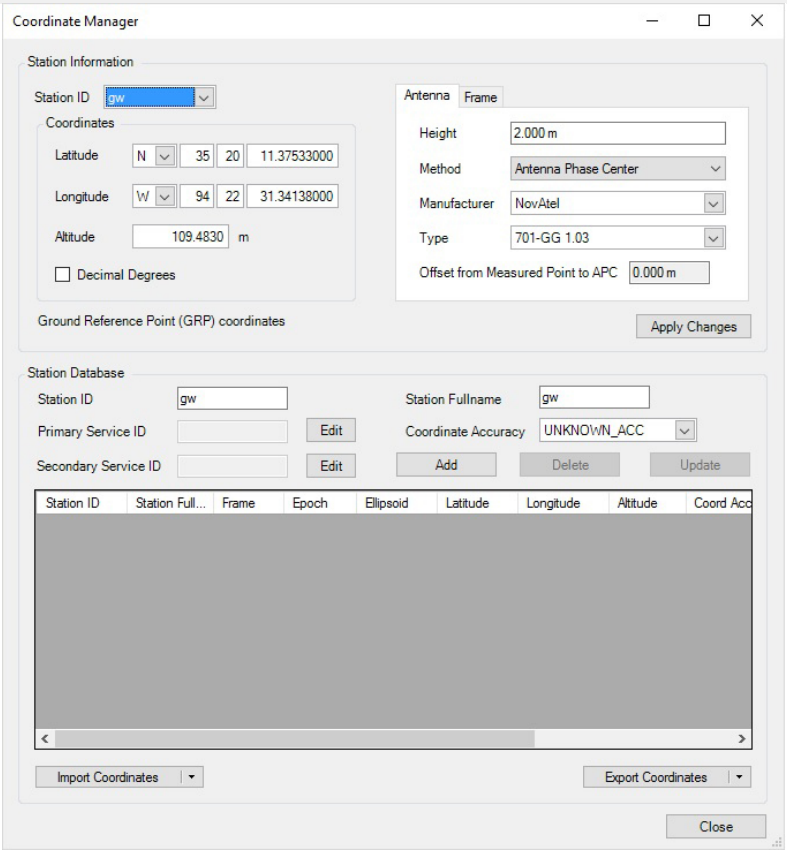

Display - GW_1-10-17C_354_N4181T - Solution Status
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_1-10-17C_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready


GW_1-10-17C_354_N4181T - POSPac MMS
File
Project
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Panes
Zoom In
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Pan Precise
Center
Zoom Extents
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
Start
Post-processed (SBET)
20000m
Snap
Meter
Grid

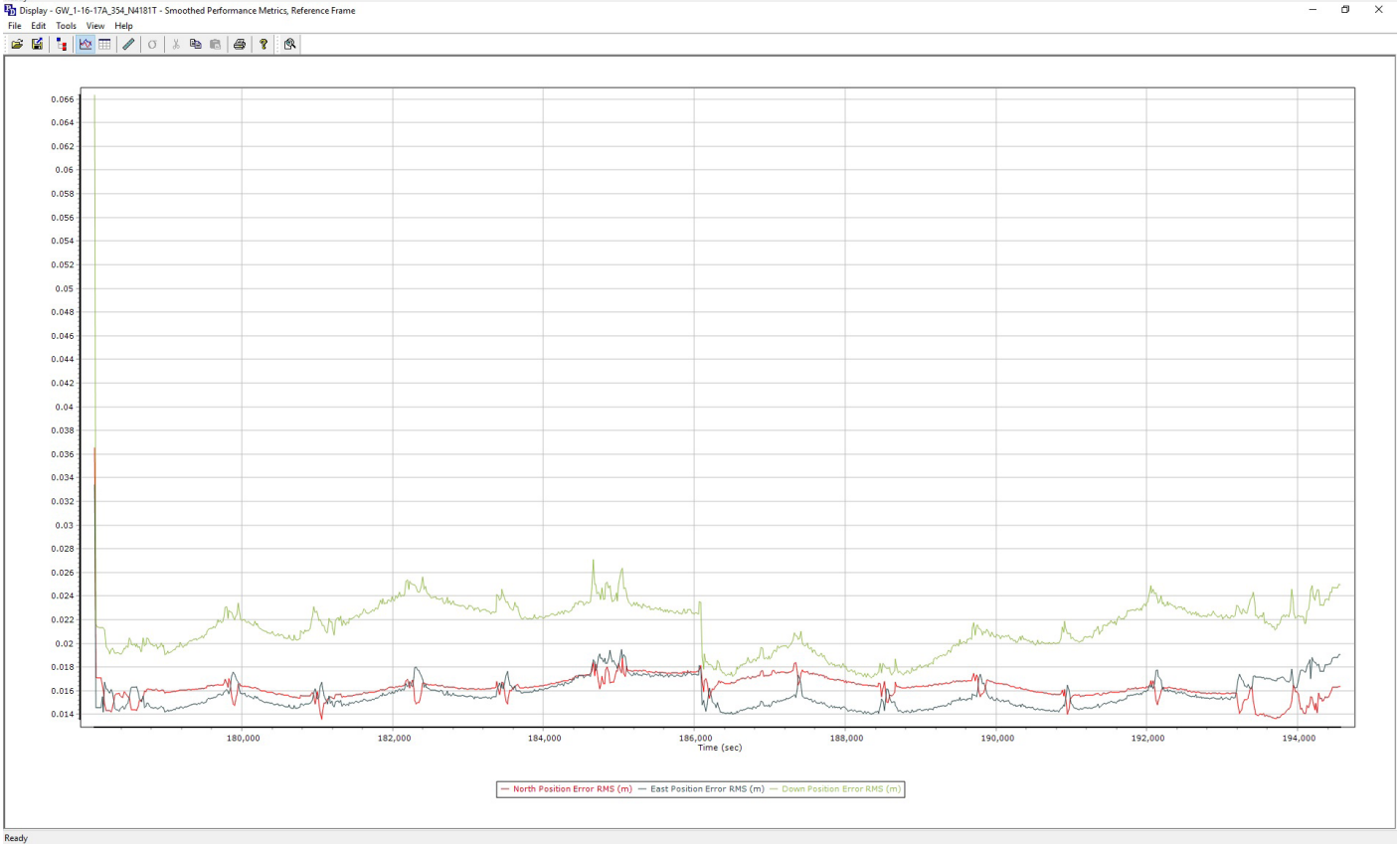

Display - GW_1-10-17C_354_N4181T - Solution Status
File
Edit
Tools
View
Help
Processing mode
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready

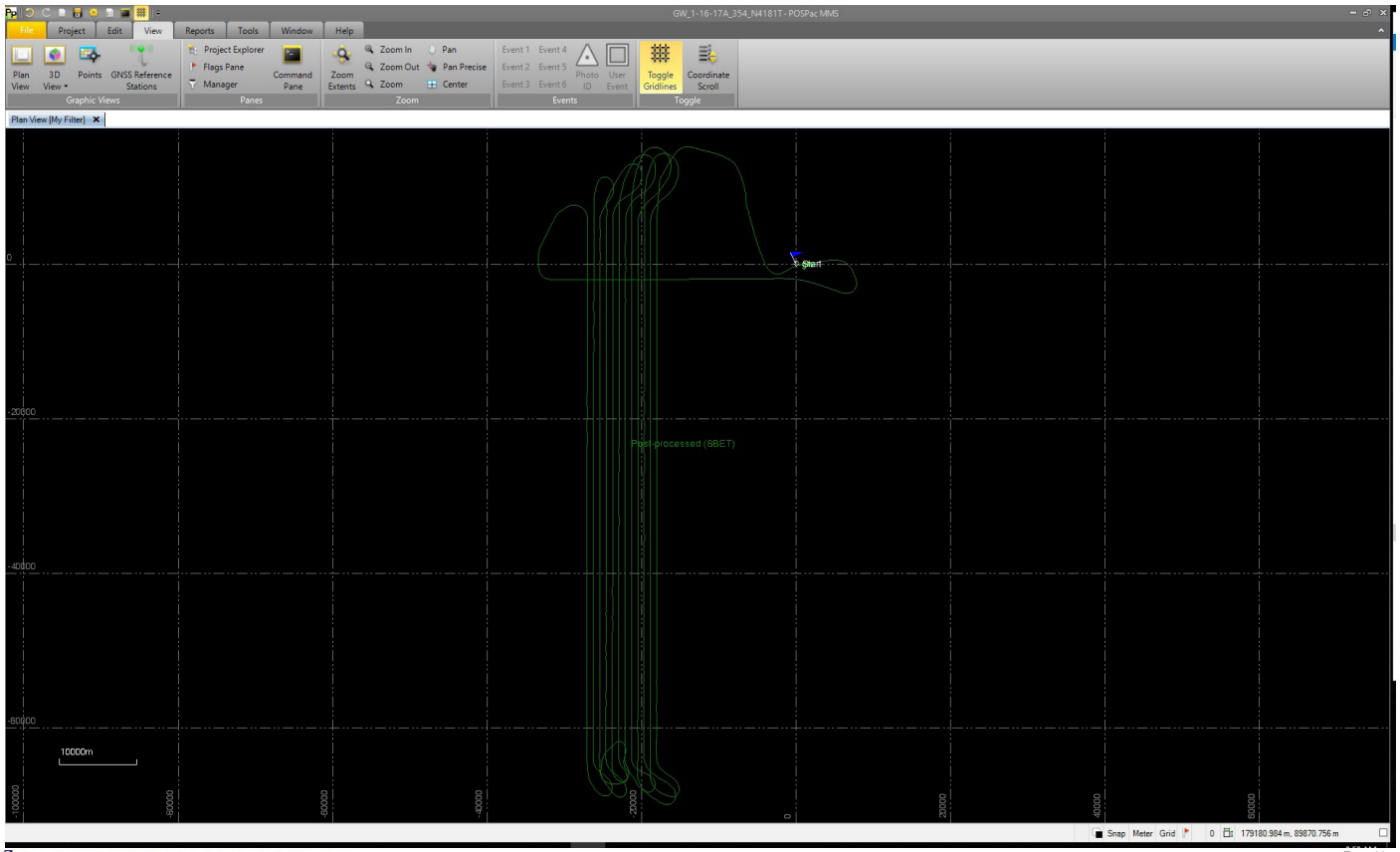

Display - GW_1-10-17C_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready

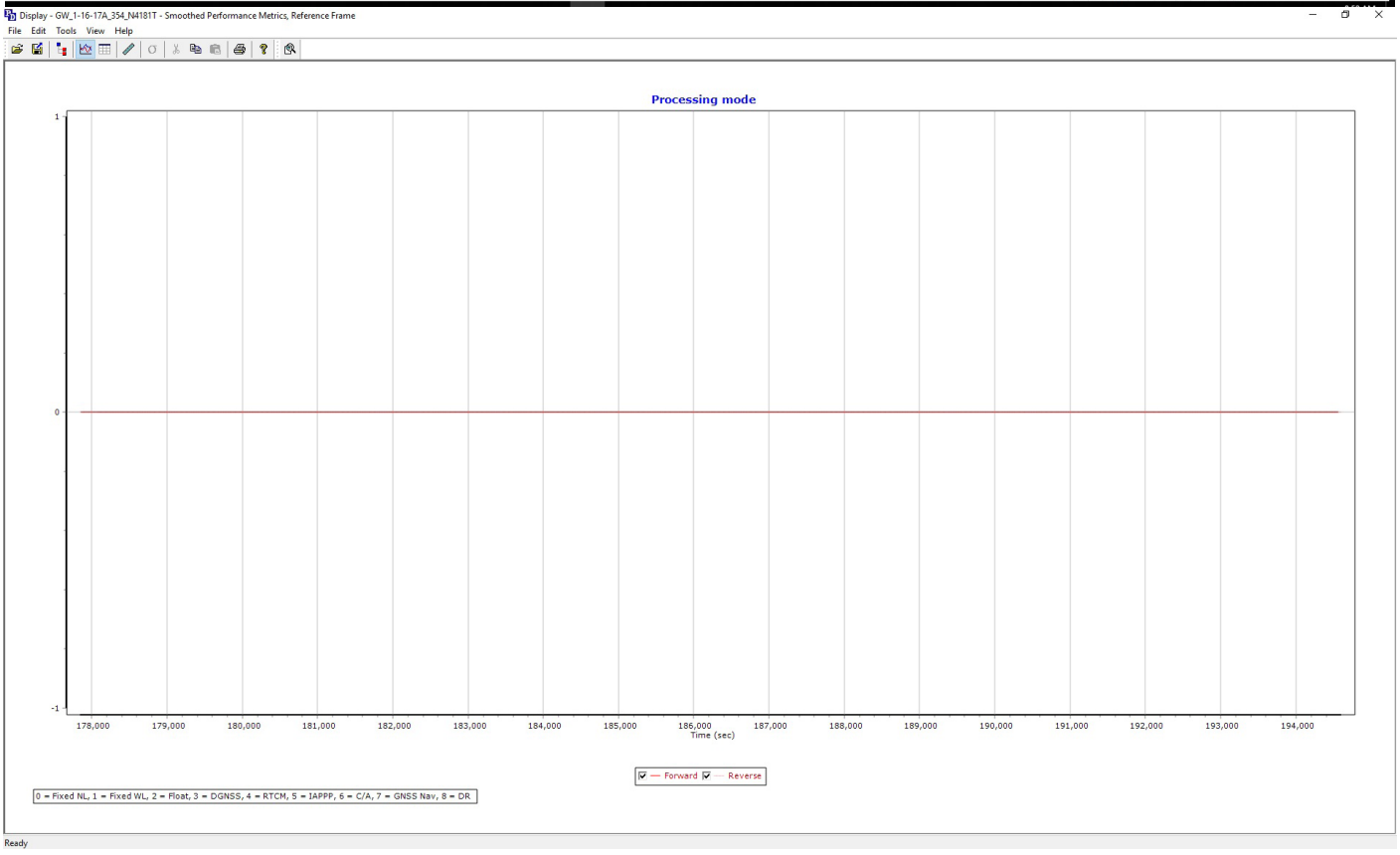

Coordinate Manager
Station Information
Station ID gw
Coordinates
Latitude N 35 20 11.37533000
Longitude W 94 22 31.34138000
Altitude 109.4830 m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna Frame
Height 2.000 m
Method Antenna Phase Center
Manufacturer NovAtel
Type 701-GG 1.03
Offset from Measured Point to APC 0.000 m
Apply Changes
Station Database
Station ID gw
Station Fullname gw
Primary Service ID Edit
Secondary Service ID Edit
Coordinate Accuracy UNKNOWN_ACC
Add Delete Update
Station ID Station Full... Frame Epoch Ellipsoid Latitude Longitude Altitude Coord Acc
Import Coordinates
Export Coordinates
Close

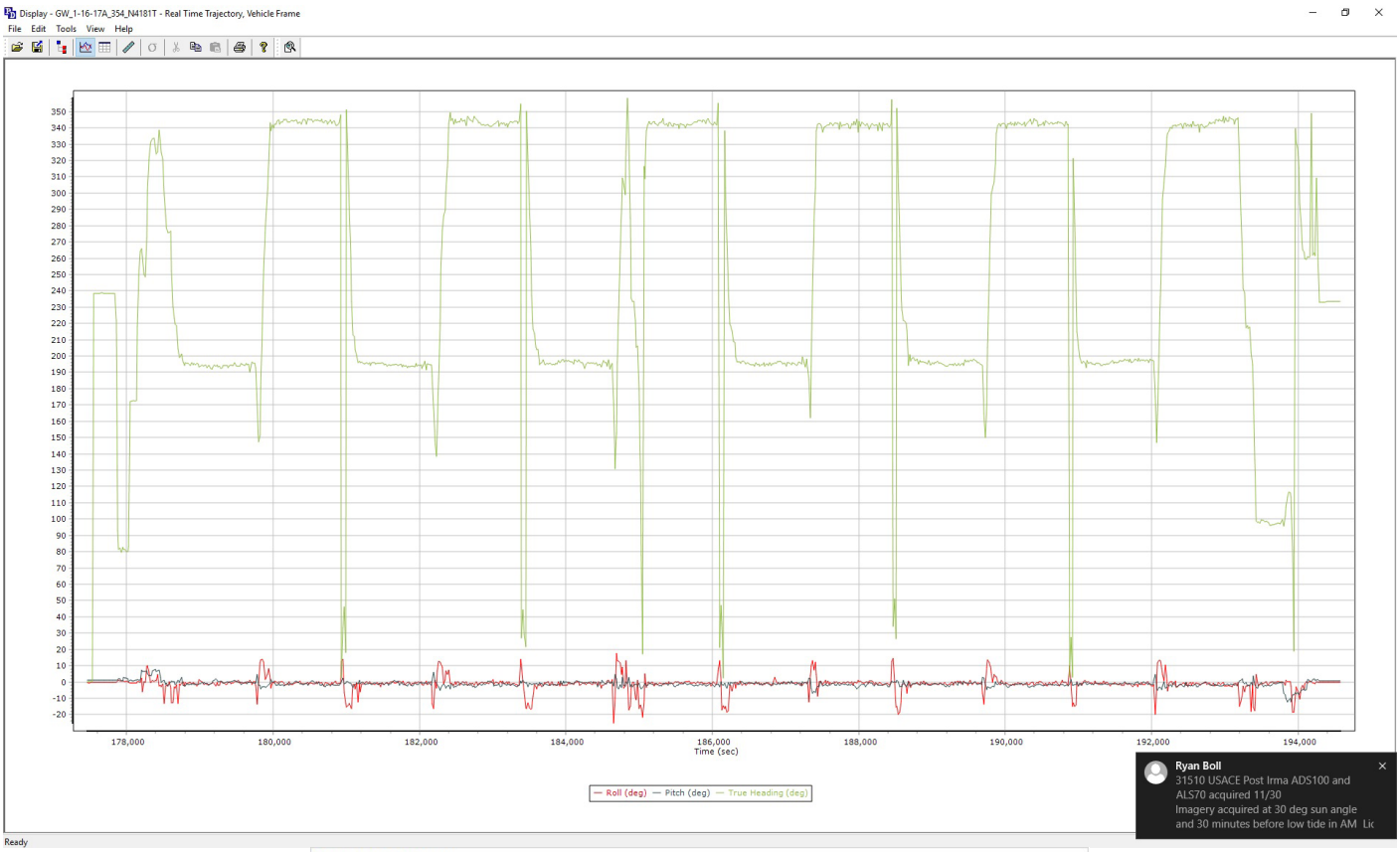
Jan 16, 2017-A (N4181T, SN354)

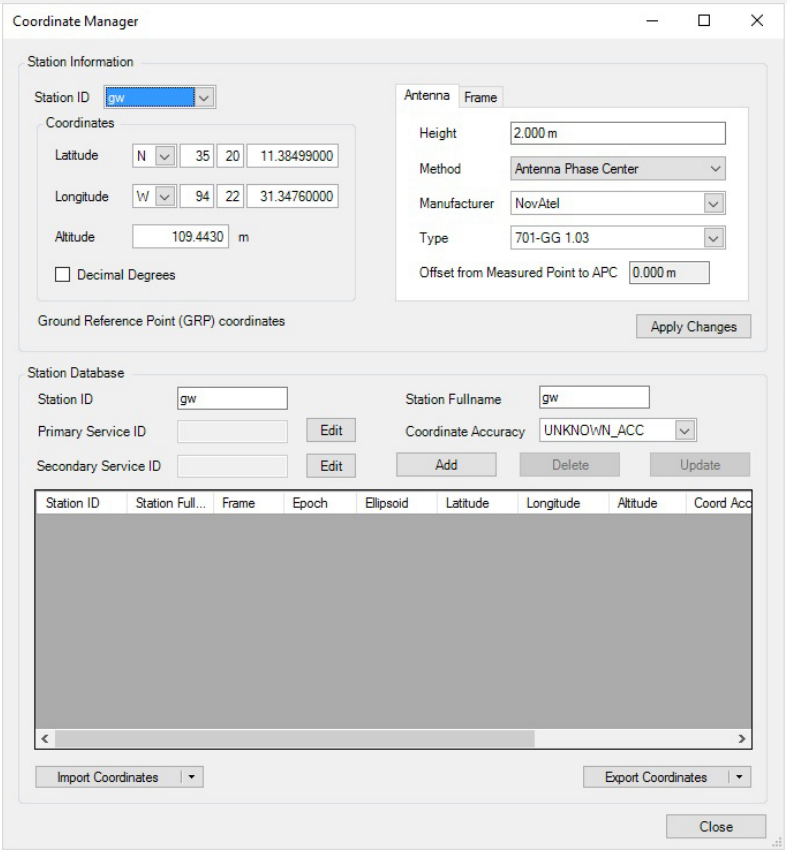

Display - GW_1-16-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_1-16-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready


GW_1-16-17A_354_N4181T - POSPac MMS
File
Project
Edit
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Reports
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Plan View
3D View
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Graphic Views
Project Explorer
Flags Pane
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Command Pane
Panes
Zoom Extents
Zoom In
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Center
Zoom
Event 1
Event 2
Event 3
Event 4
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Event 6
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Start
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10000m
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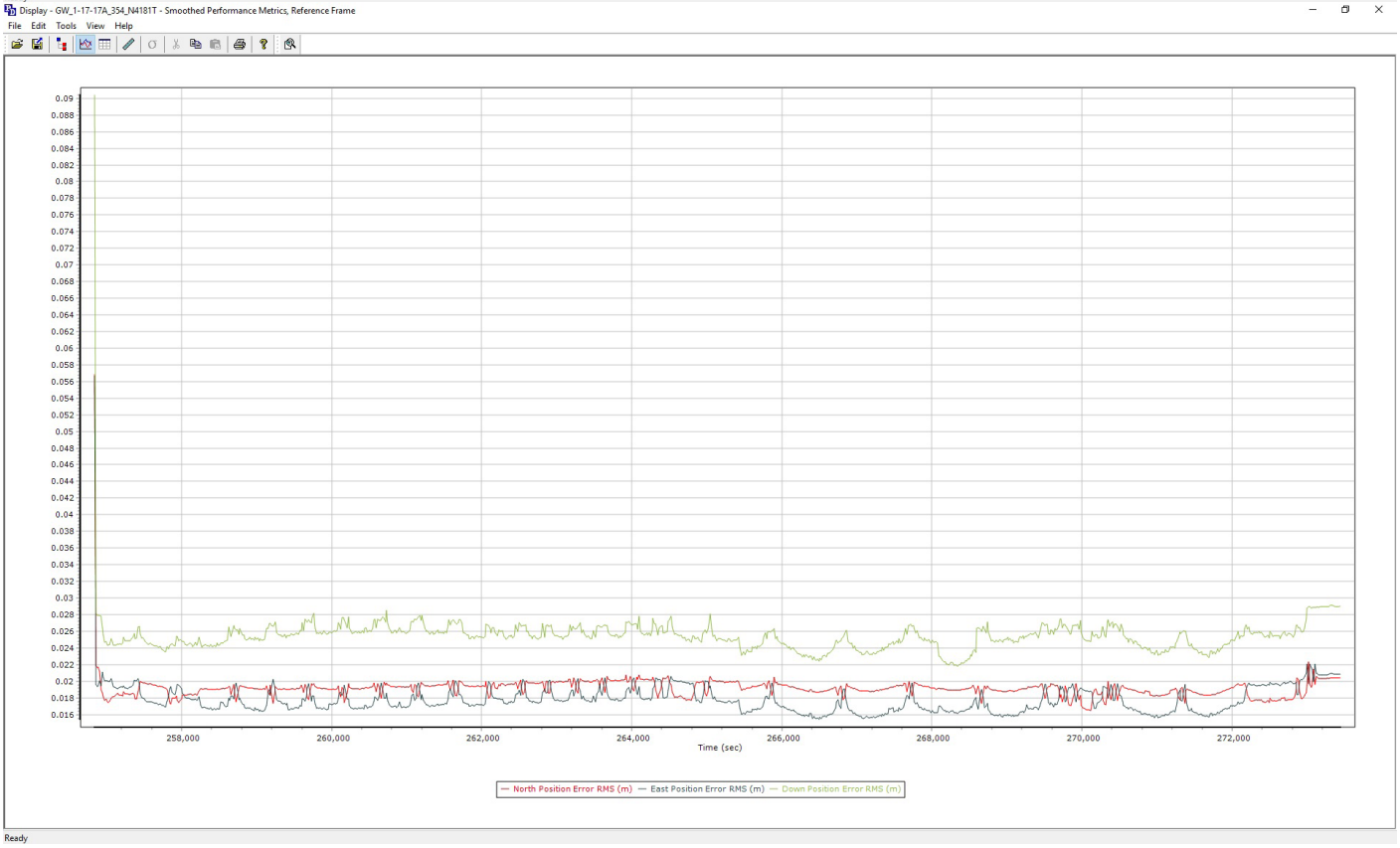

Display - GW_1-16-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
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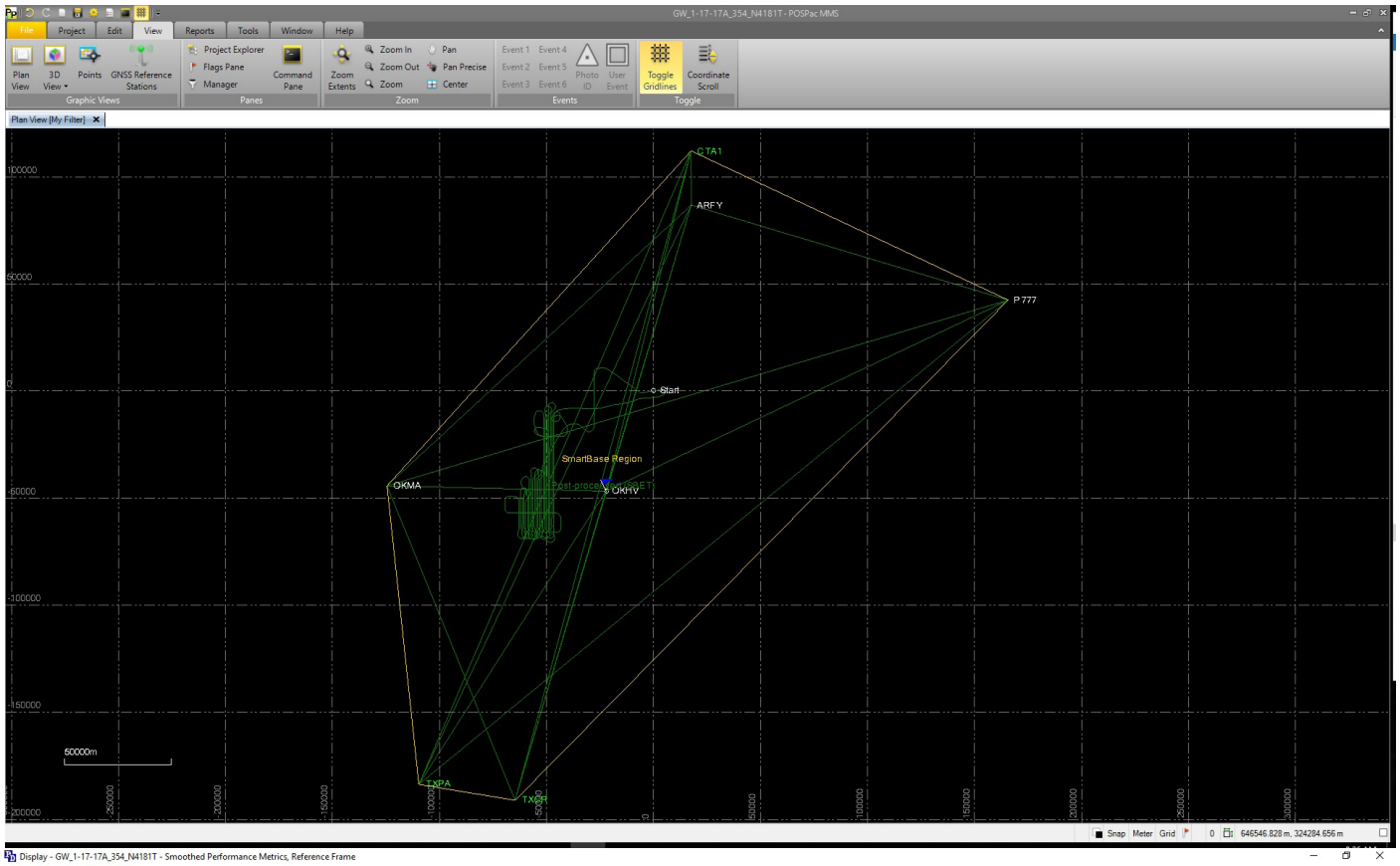

Display - GW_1-16-17A_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ryan Boll
31510 USACE Post Irma ADS100 and ALS70 acquired 11/30
Imagery acquired at 30 deg sun angle and 30 minutes before low tide in AM
Ready

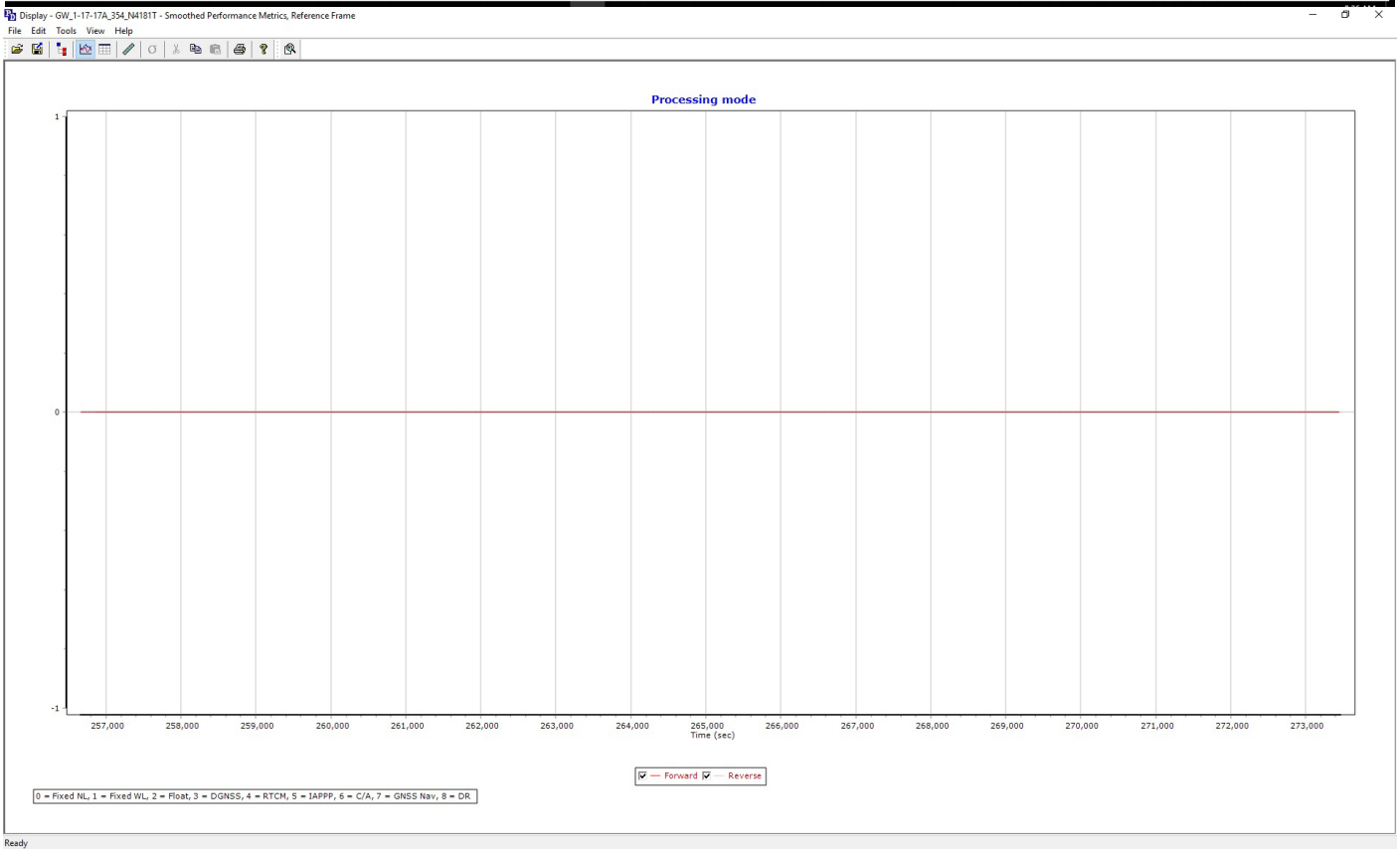

Coordinate Manager
Station Information
Station ID gw
Coordinates
Latitude N 35 20 11.38499000
Longitude W 94 22 31.34760000
Altitude 109.4430 m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna Frame
Height 2.000 m
Method Antenna Phase Center
Manufacturer NovAtel
Type 701-GG 1.03
Offset from Measured Point to APC 0.000 m
Apply Changes
Station Database
Station ID gw
Station Fullname gw
Primary Service ID
Secondary Service ID
Edit
Edit
Coordinate Accuracy UNKNOWN_ACC
Add
Delete
Update
Station ID
Station Full...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Acc
Import Coordinates
Export Coordinates
Close

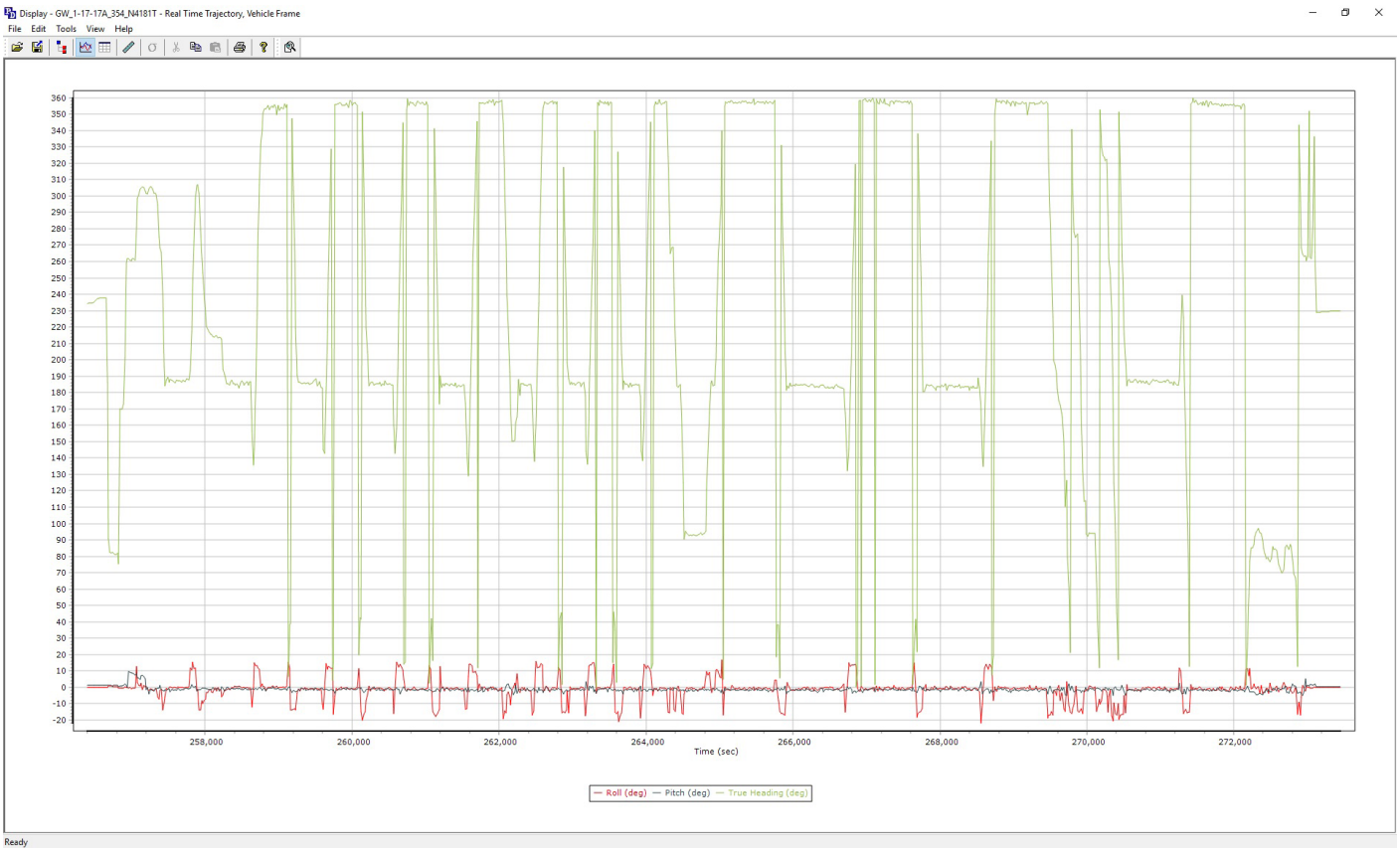
Jan 17, 2017-A (N4181T, SN354)

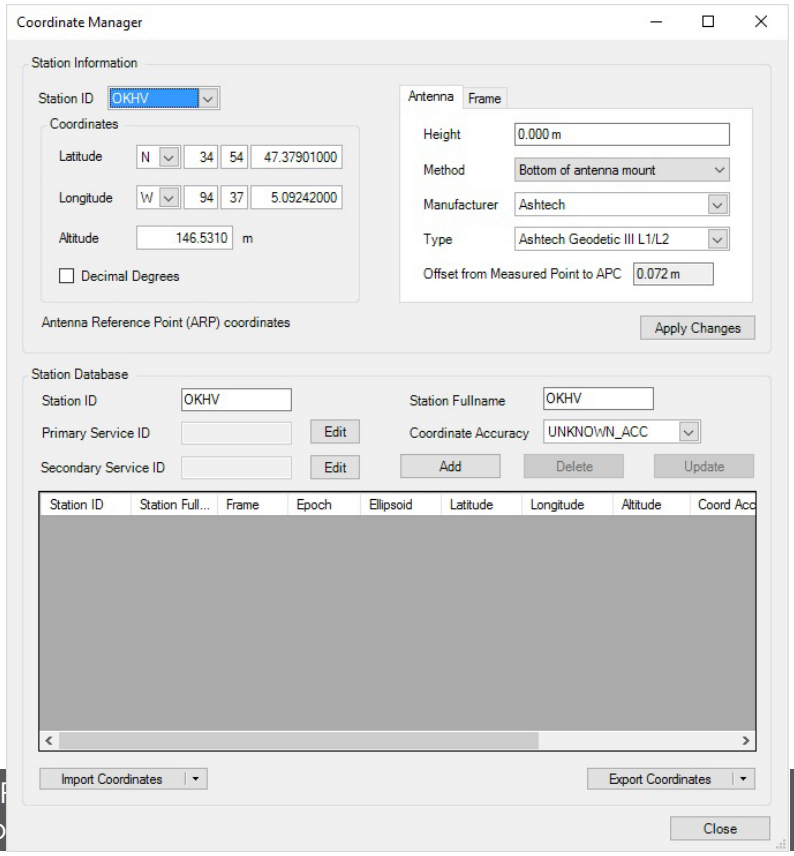

Display - GW_1-17-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_1-17-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready

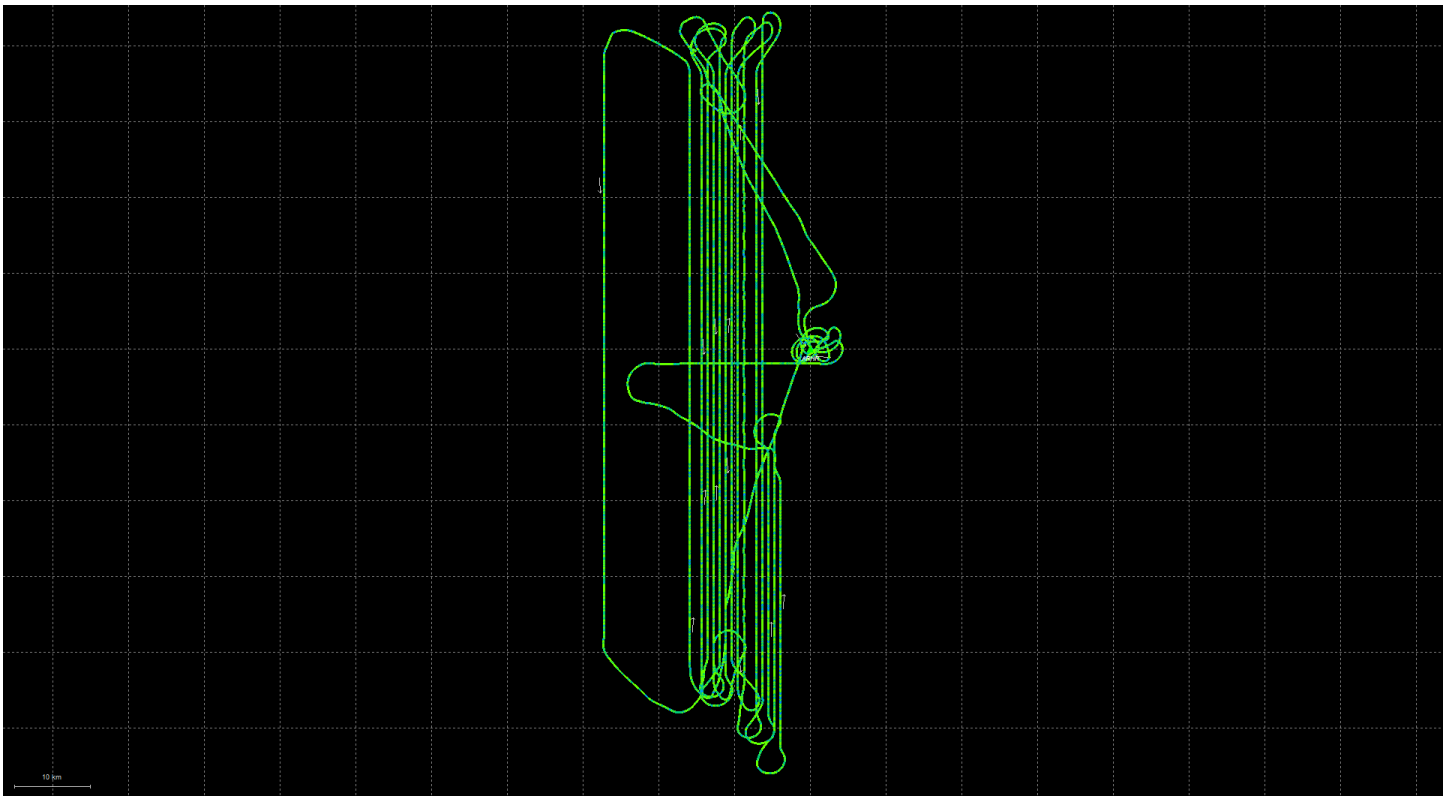

GW_1-17-17A_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom Extents
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
CTA1
ARFY
P777
Start
SmartBase Region
OKMA
OKHV
TXPA
TXSH
50000m
Snap
Meter
Grid

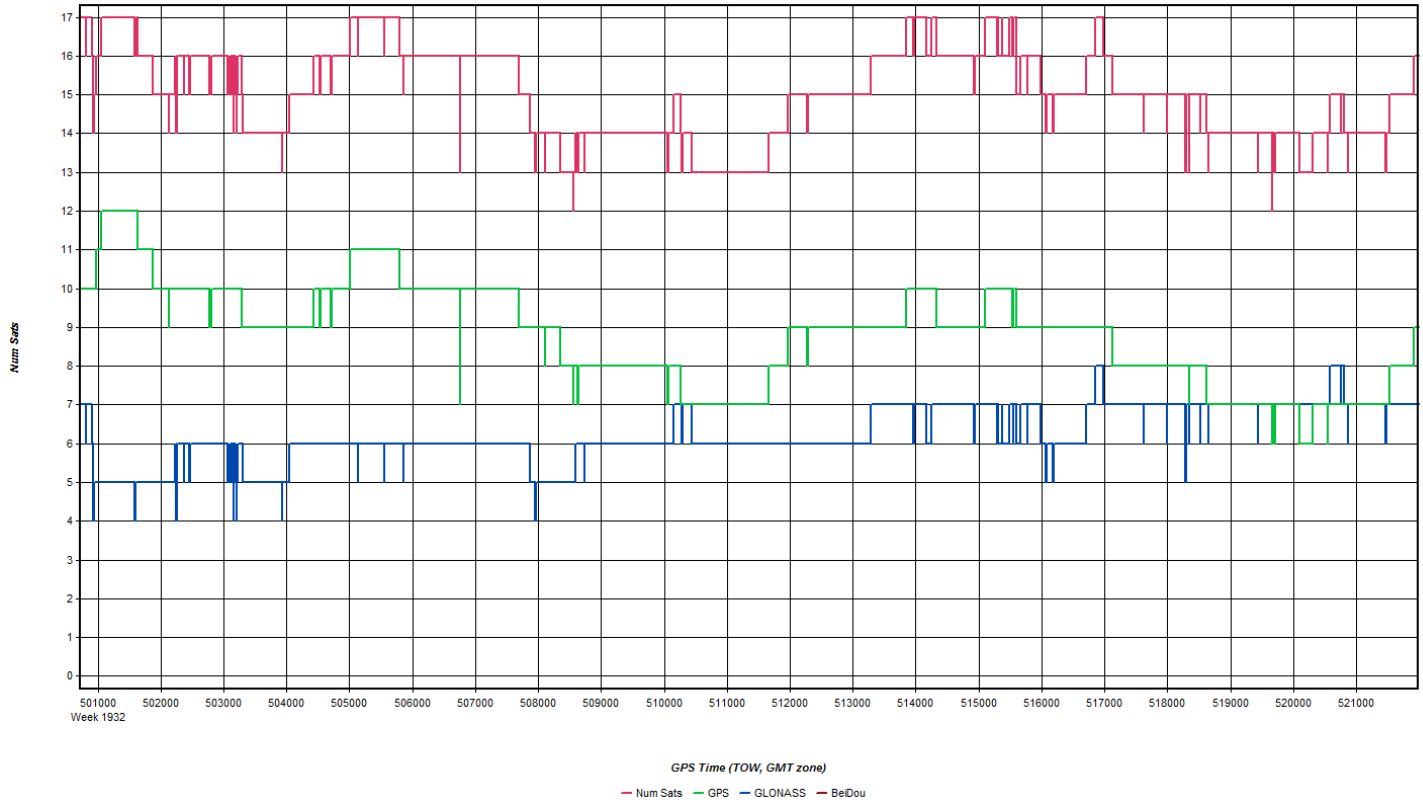

Display - GW_1-17-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
1
0
-1
257,000
258,000
259,000
260,000
261,000
262,000
263,000
264,000
265,000
266,000
267,000
268,000
269,000
270,000
271,000
272,000
273,000
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready

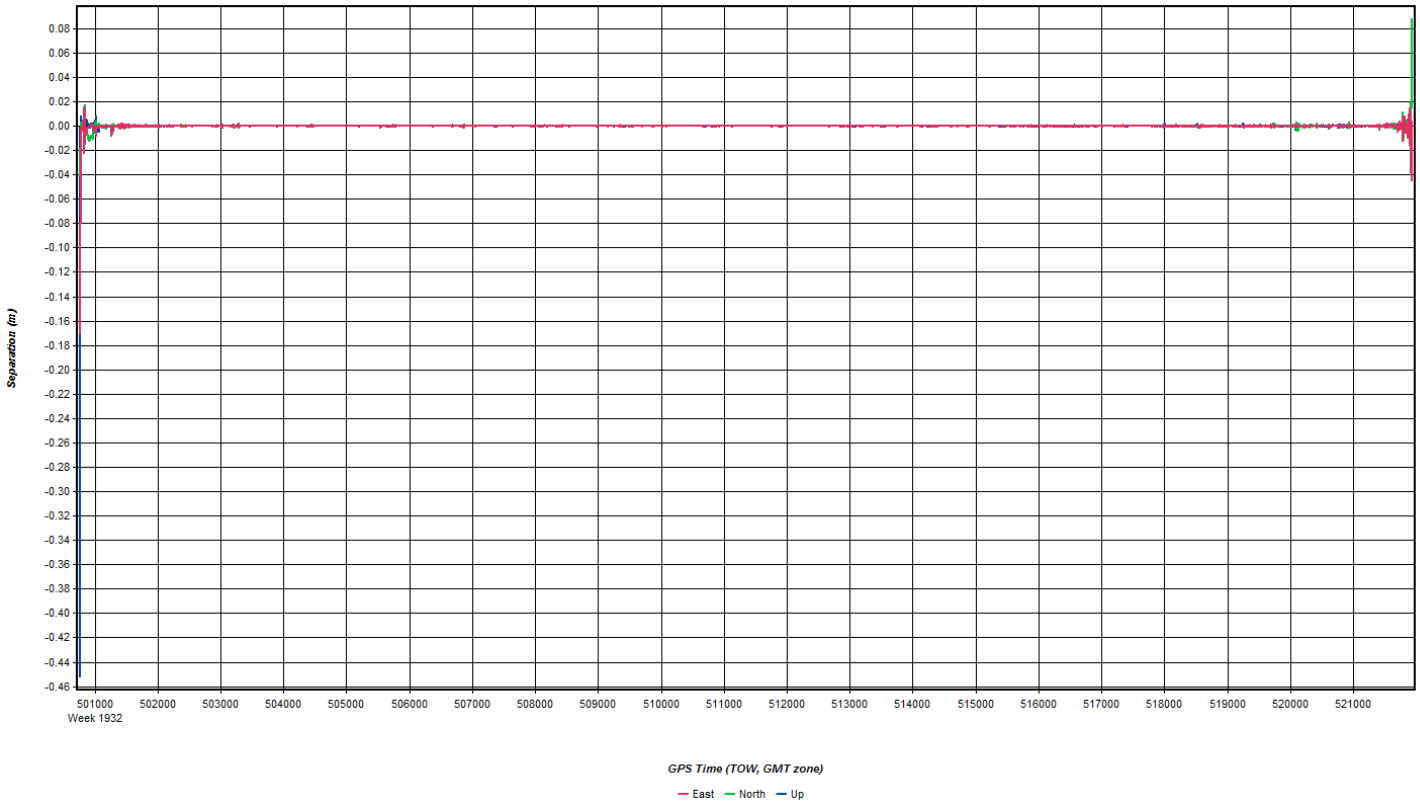

Display - GW_1-17-17A_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready

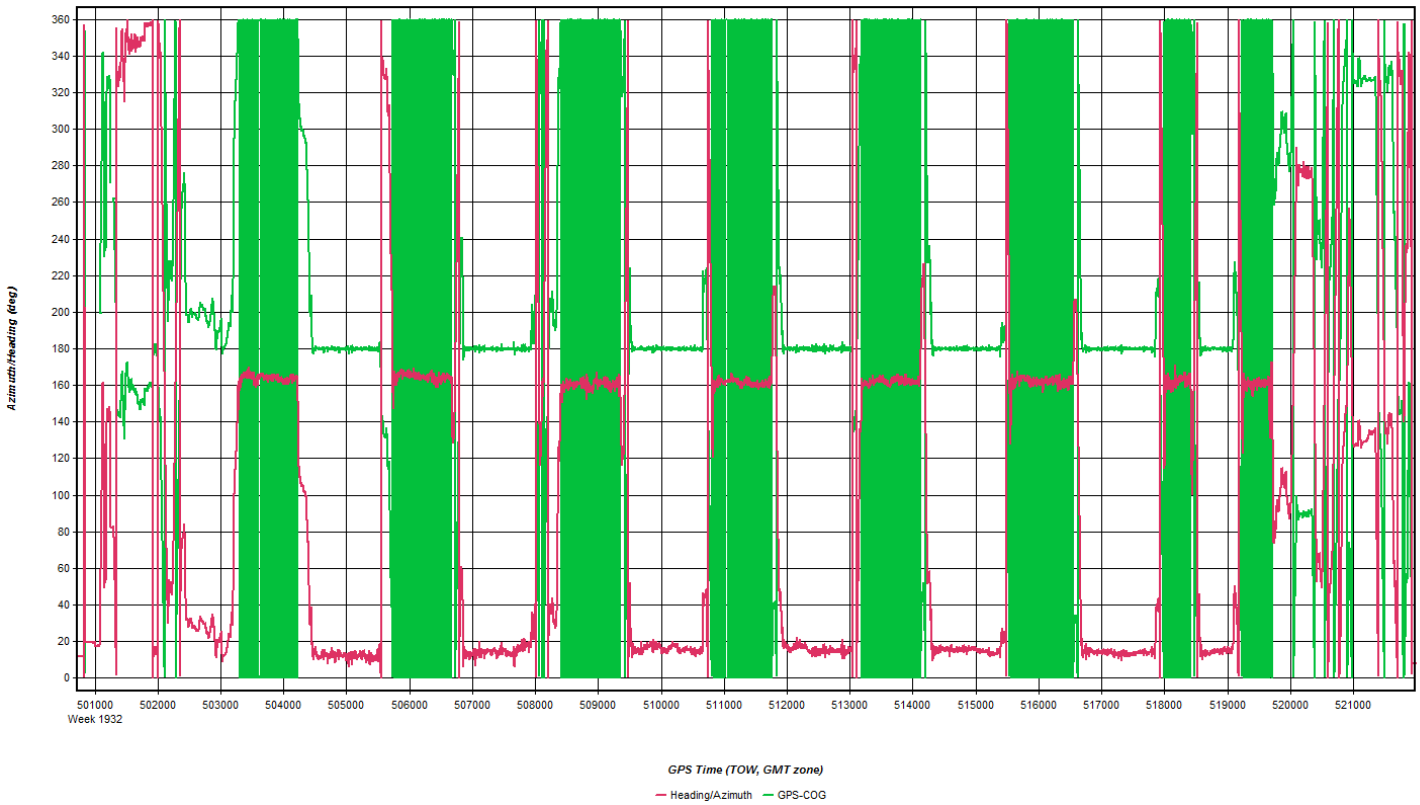

Coordinate Manager
Station Information
Station ID OKHV
Coordinates
Latitude N 34 54 47.37901000
Longitude W 94 37 5.09242000
Altitude 146.5310 m
Decimal Degrees
Antenna Reference Point (ARP) coordinates
Antenna Frame
Height 0.000 m
Method Bottom of antenna mount
Manufacturer Ashtech
Type Ashtech Geodetic III L1/L2
Offset from Measured Point to APC 0.072 m
Apply Changes
Station Database
Station ID OKHV
Station Fullname OKHV
Primary Service ID
Secondary Service ID
Edit
Edit
Coordinate Accuracy UNKNOWN_ACC
Add
Delete
Update
Station ID
Station Full...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Acc
Import Coordinates
Export Coordinates
Close

Jan 20, 2017-A (C-FVZM, SN7229)

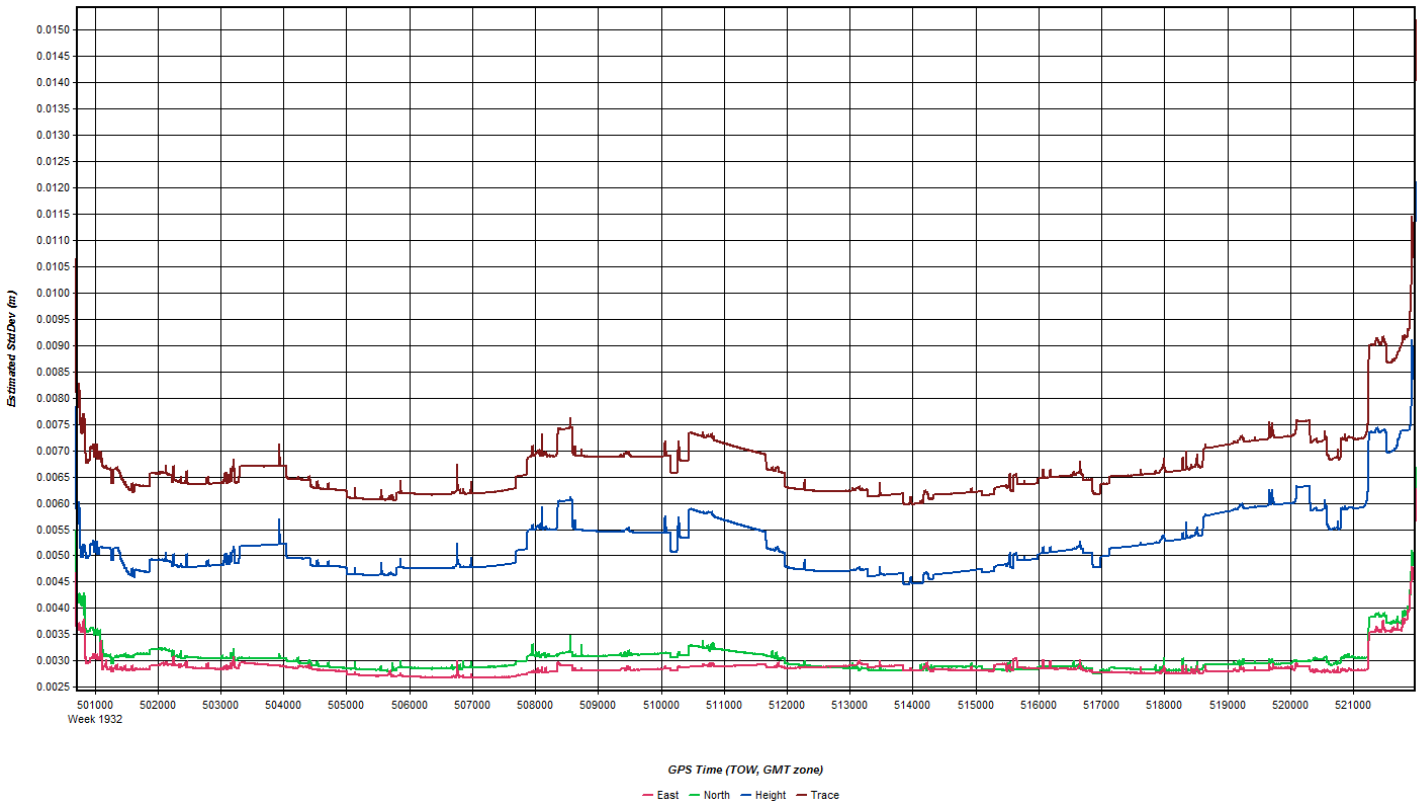

10 km

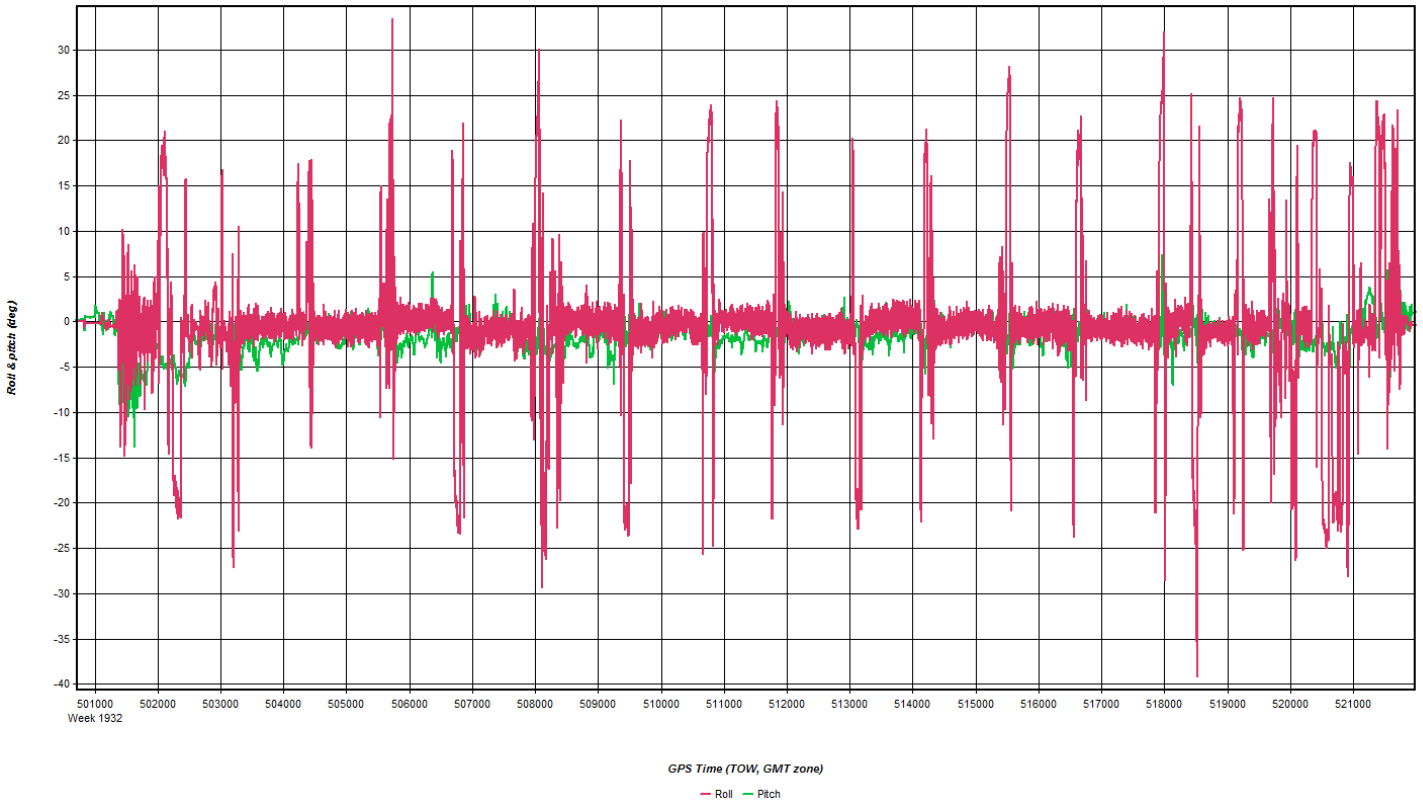

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
501000
Week 1932
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
516000
517000
518000
519000
520000
521000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

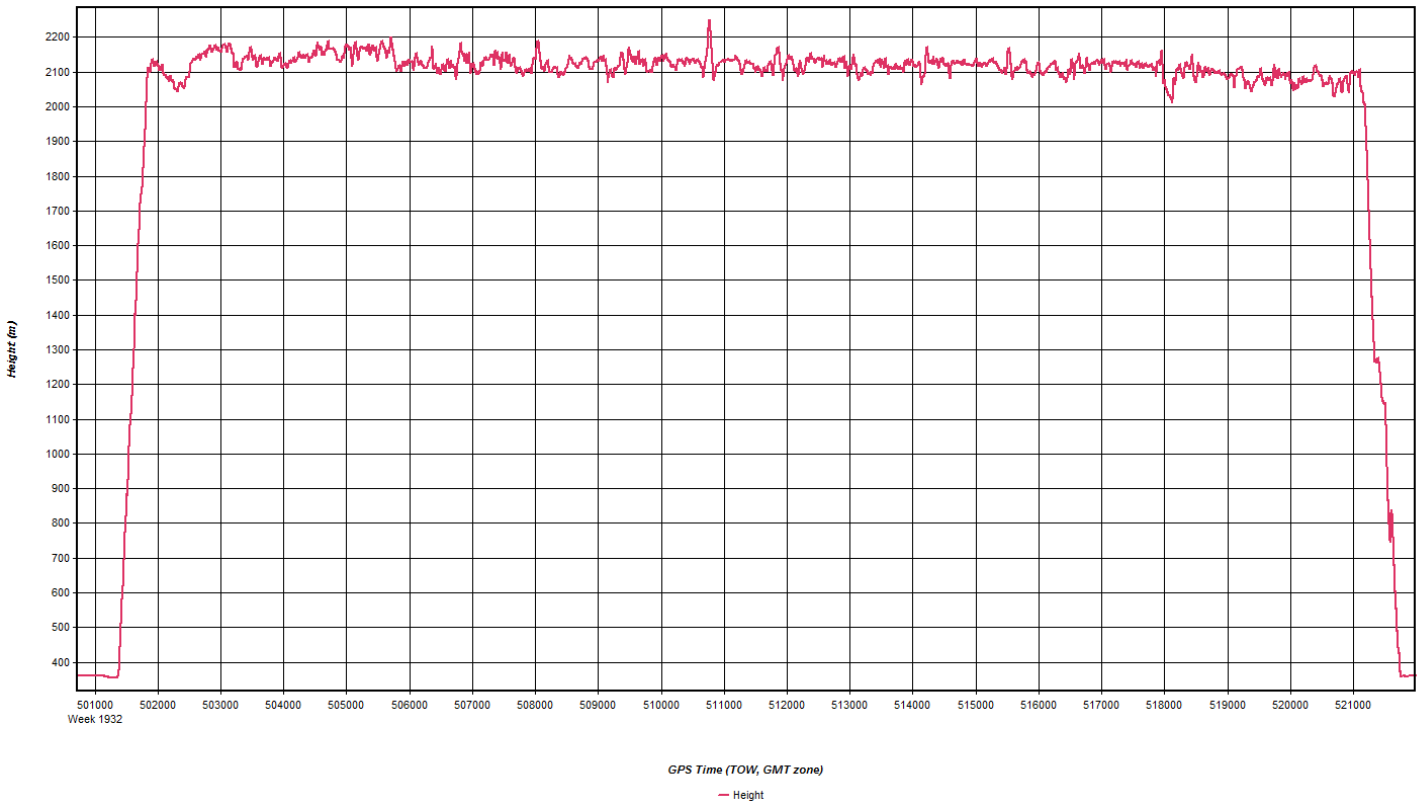

Separation (m)
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
-0.16
-0.18
-0.20
-0.22
-0.24
-0.26
-0.28
-0.30
-0.32
-0.34
-0.36
-0.38
-0.40
-0.42
-0.44
-0.46
501000
Week 1932
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
516000
517000
518000
519000
520000
521000
GPS Time (TOW, GMT zone)
East
North
Up

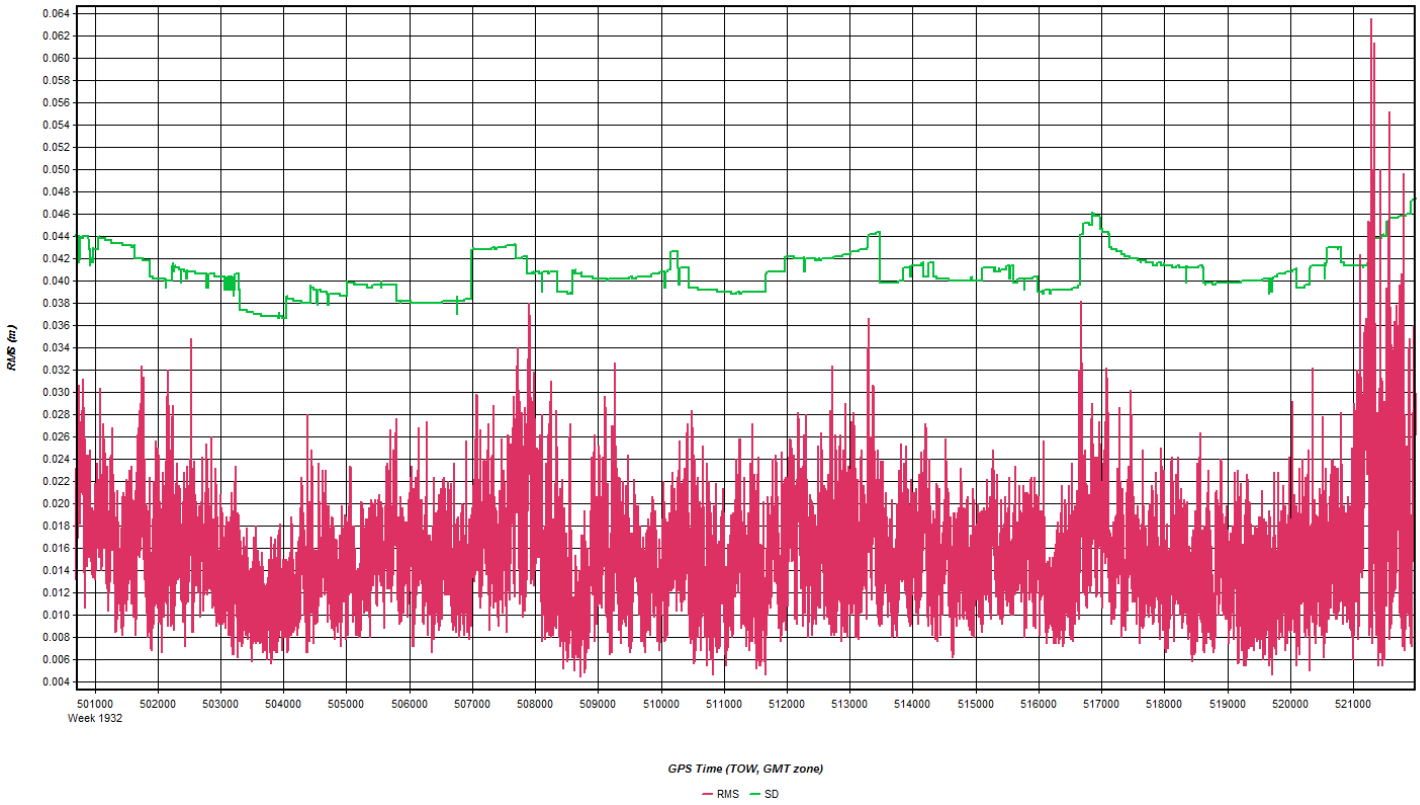

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
501000
Week 1932
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
516000
517000
518000
519000
520000
521000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

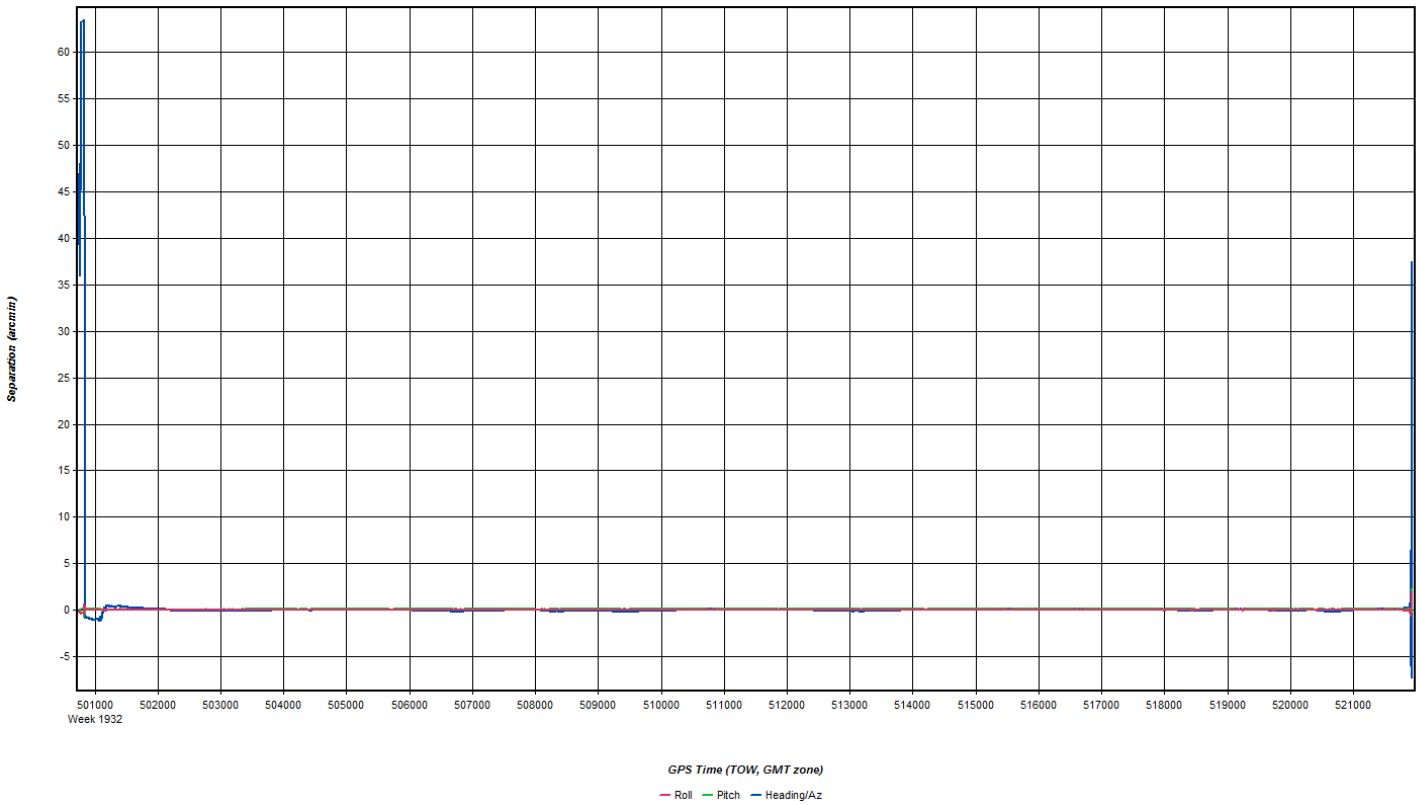

PDOP
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
501000
Week 1932
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
516000
517000
518000
519000
520000
521000
GPS Time (TOW, GMT zone)
PDOP

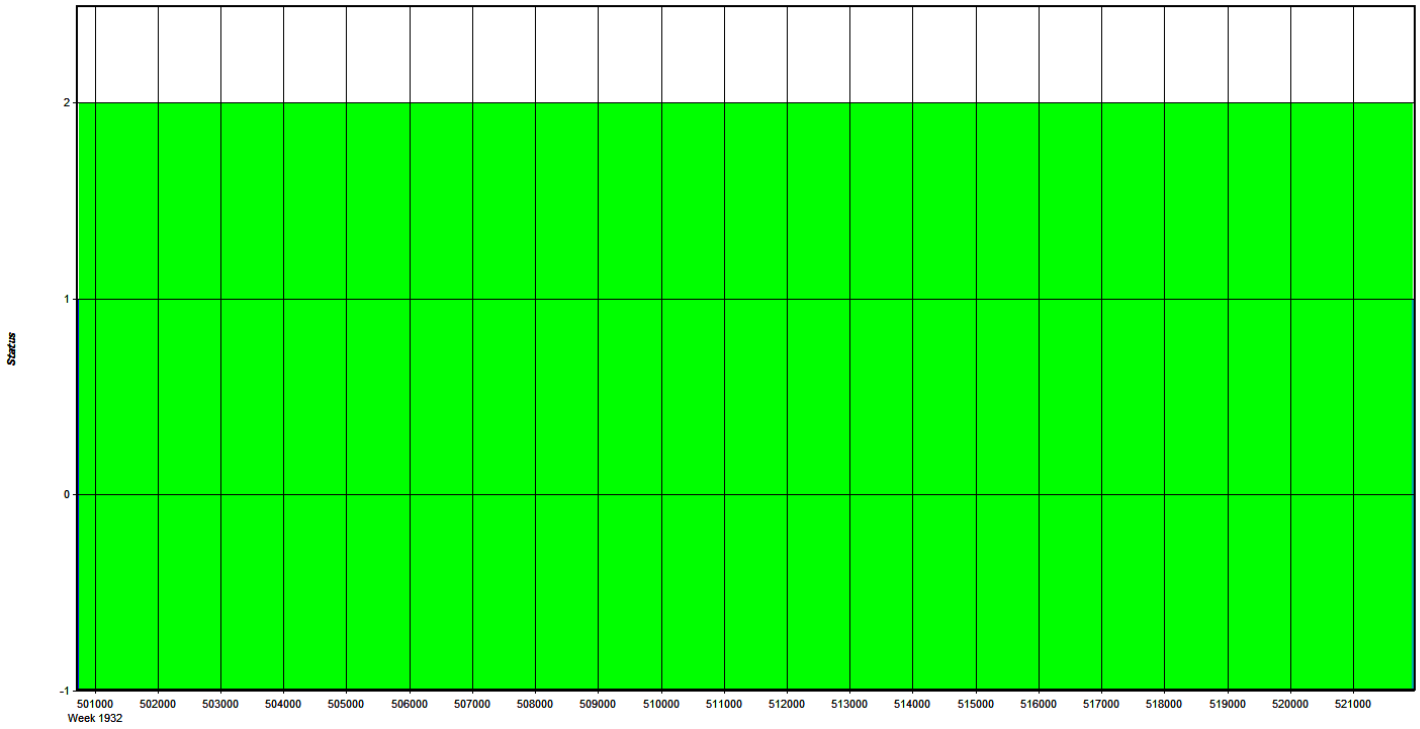

Estimated StdDev (m)
0.0150
0.0145
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
501000
Week 1932
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
516000
517000
518000
519000
520000
521000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

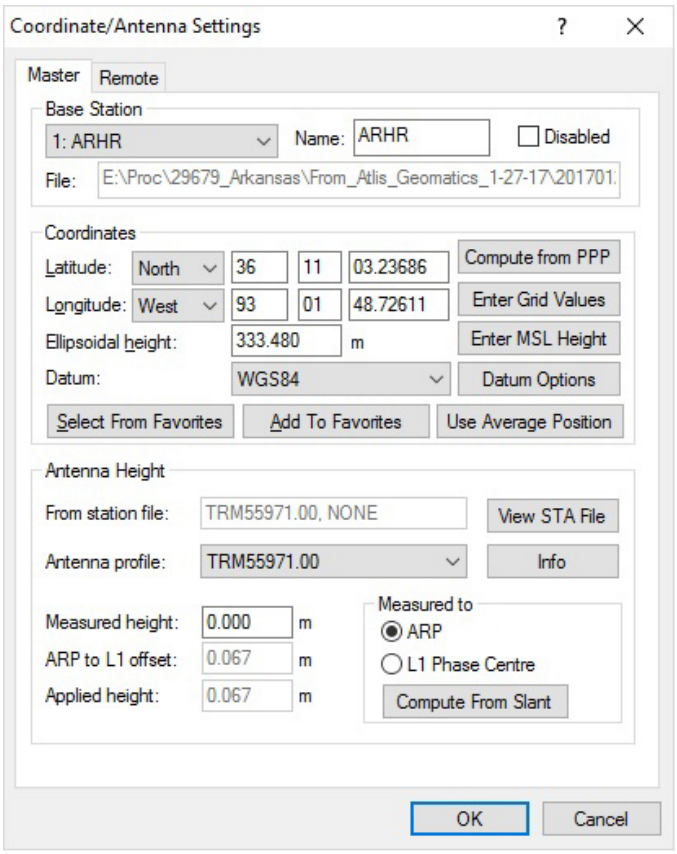

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
501000
Week 1932
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
516000
517000
518000
519000
520000
521000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
501000
Week 1932
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
516000
517000
518000
519000
520000
521000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.064
0.062
0.060
0.058
0.056
0.054
0.052
0.050
0.048
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
501000
Week 1932
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
516000
517000
518000
519000
520000
521000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
60
55
50
45
40
35
30
25
20
15
10
5
0
-5
501000
Week 1932
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
516000
517000
518000
519000
520000
521000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
501000
Week 1932
502000
503000
504000
505000
506000
507000
508000
509000
510000
511000
512000
513000
514000
515000
516000
517000
518000
519000
520000
521000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARHR
Name:
ARHR
Disabled
File:
E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-27-17\201701
Coordinates
Latitude:
North
36
11
03.23686
Compute from PPP
Longitude:
West
93
01
48.72611
Enter Grid Values
Ellipsoidal height:
333.480
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM55971.00, NONE
View STA File
Antenna profile:
TRM55971.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.067
m
Applied height:
0.067
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE ATLIS
LIDAR + IMAGERY + GEOMATICS

PROJECT NAME	Q.S. Arkansas	DATE	20/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Branson MO.	DATA DRIVES	LiDar #2

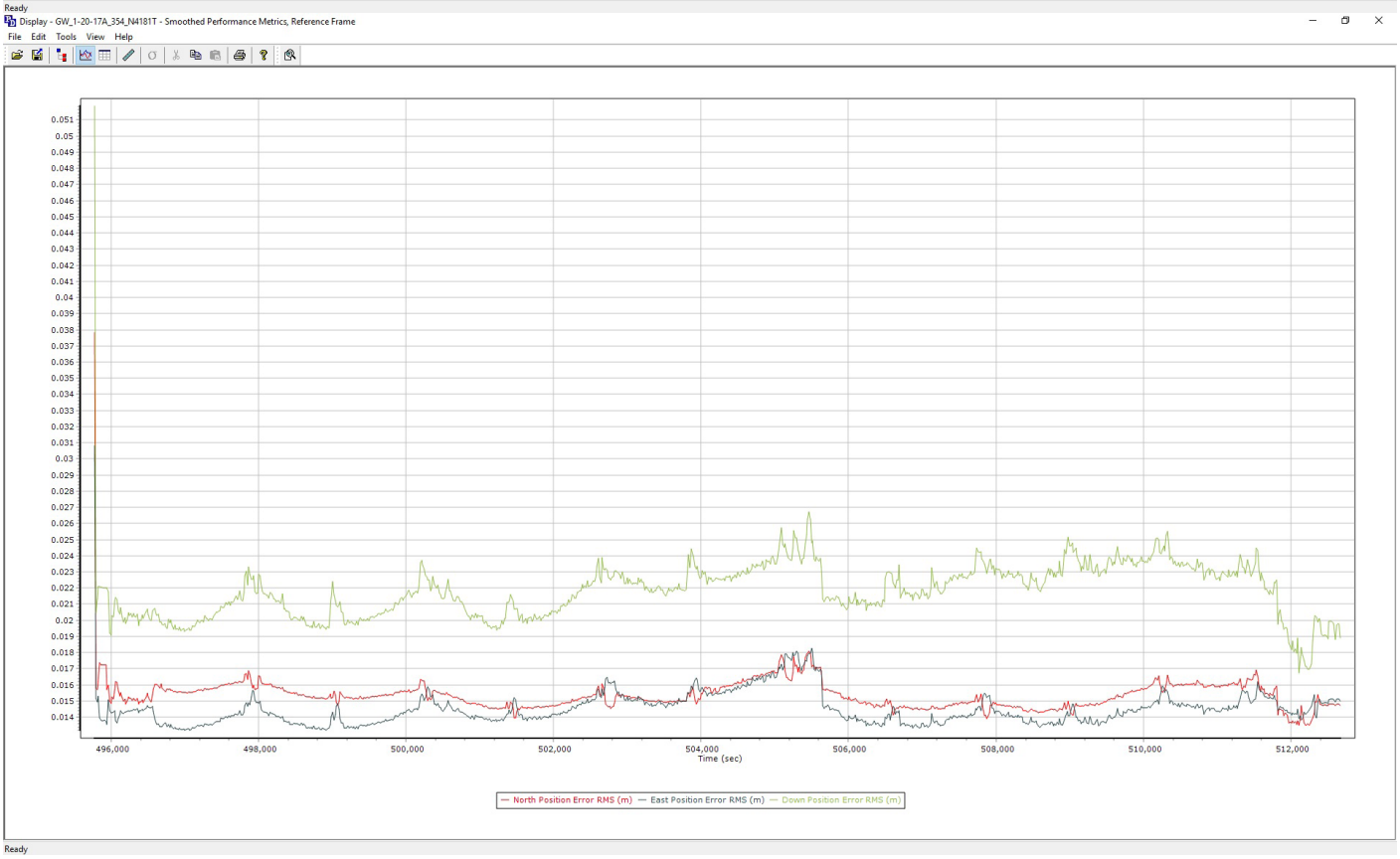
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	18:58:00	Takeoff:	19:15:00	AGL Height:	1800 m	Pulse Rate:	277 KHz		START	END
Engine Off:	01:01:00	Landing:	00:56:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	19:27:00	19:34:00
TOTAL:	6.05 hrs	TOTAL:	5.68 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	00:32:00	00:41:00

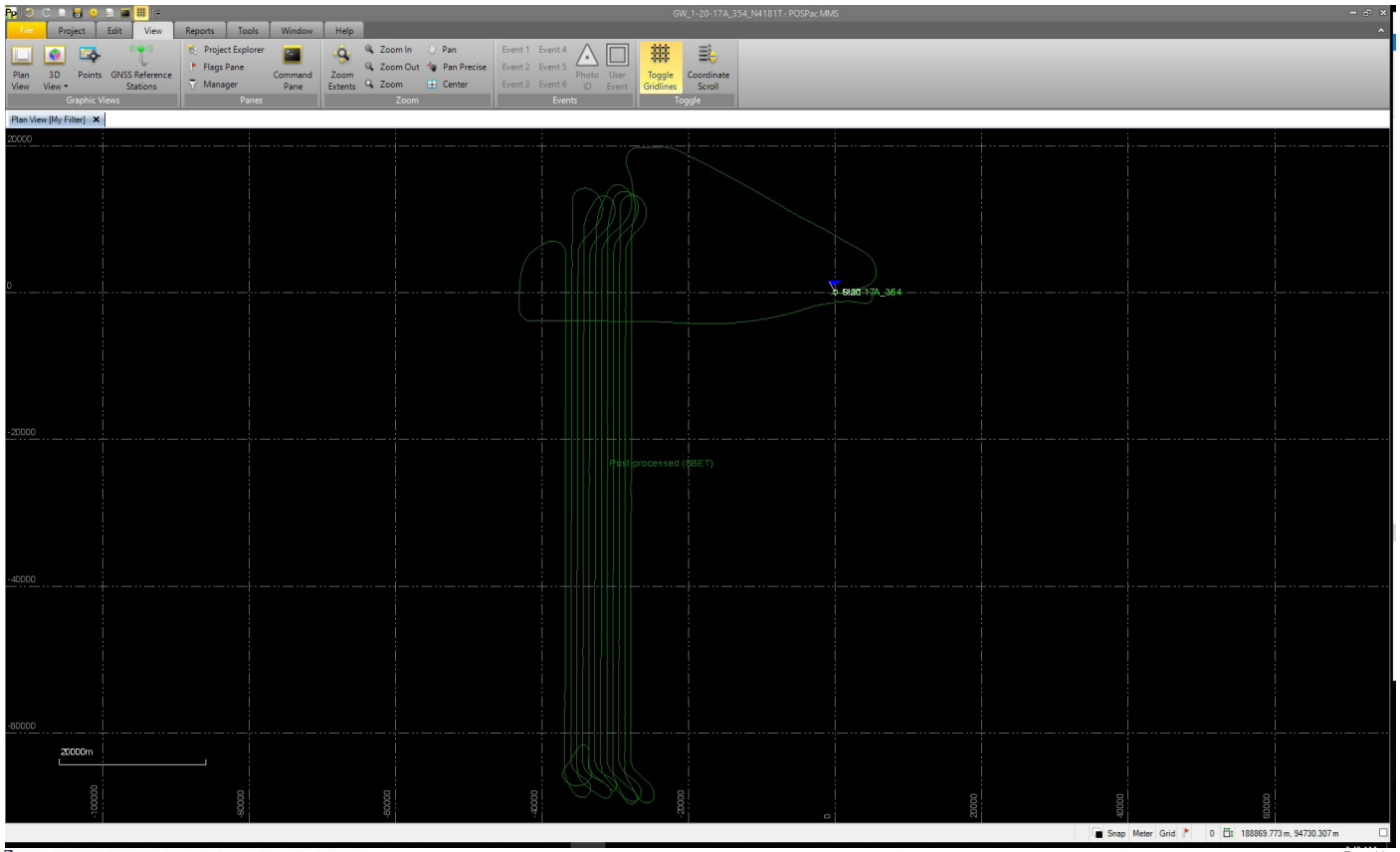
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
85		North	170120_194806	19:48:08	20:03:17	All Complete
71		South	170120_200756	20:07:58	20:24:52	All Complete
87		North	170120_202930	20:29:31	20:44:14	All Complete
88		South	170120_204744	20:47:45	21:05:11	All Complete
89		North	170120_211350	21:13:51	21:28:49	All Complete
90		South	170120_213238	21:32:39	21:50:21	All Complete
91		North	170120_215403	21:54:05	22:08:45	All Complete
92		South	170120_221307	22:13:08	22:30:26	All Complete
93		North	170120_223340	22:33:41	22:48:20	All Complete
94		South	170120_225214	22:52:16	23:09:14	All Complete
96		North	170120_231258	23:12:59	23:28:48	All Complete
97		South	170120_233244	23:32:46	23:50:19	All Complete
98		North	170120_235341	23:53:42	23:59:58	16.8nm from South to complete the line
99		South	170120_000353	00:03:55	00:11:08	16.8nm from South to complete the line
100		North	170120_001422	00:14:23	00:20:36	16.8nm from South to complete the line
CL		East	170120_002843	00:28:49	00:31:27	

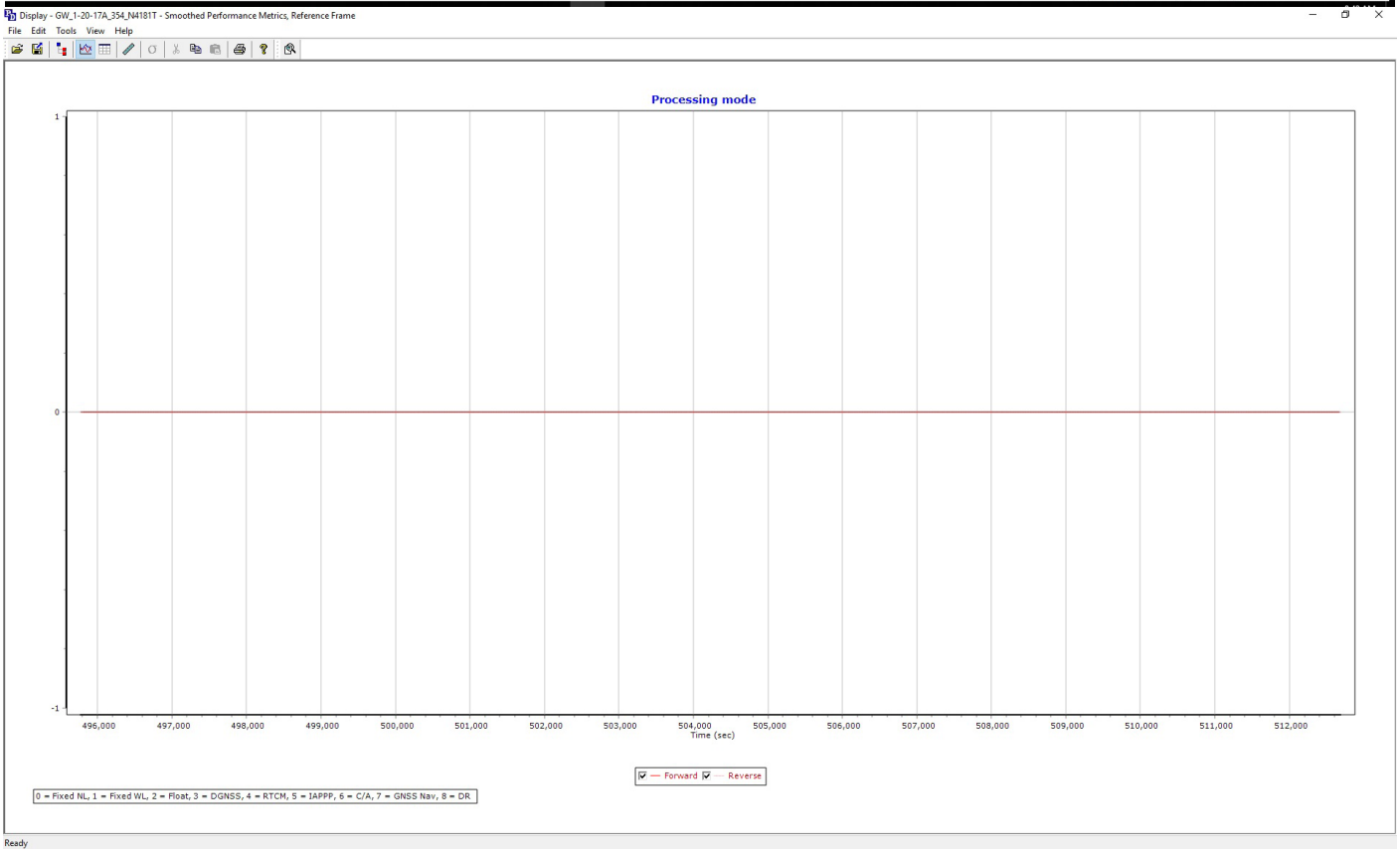
SUN ANGLE	
@Start: @End: @Peak:	Clear Skies. Temp at take off was 17C and 12C when landing Sats. And PDOPS averaged 18 and 1.2 The CORS station ARHR was used for this flight The system was good all day, no IMU gaps.

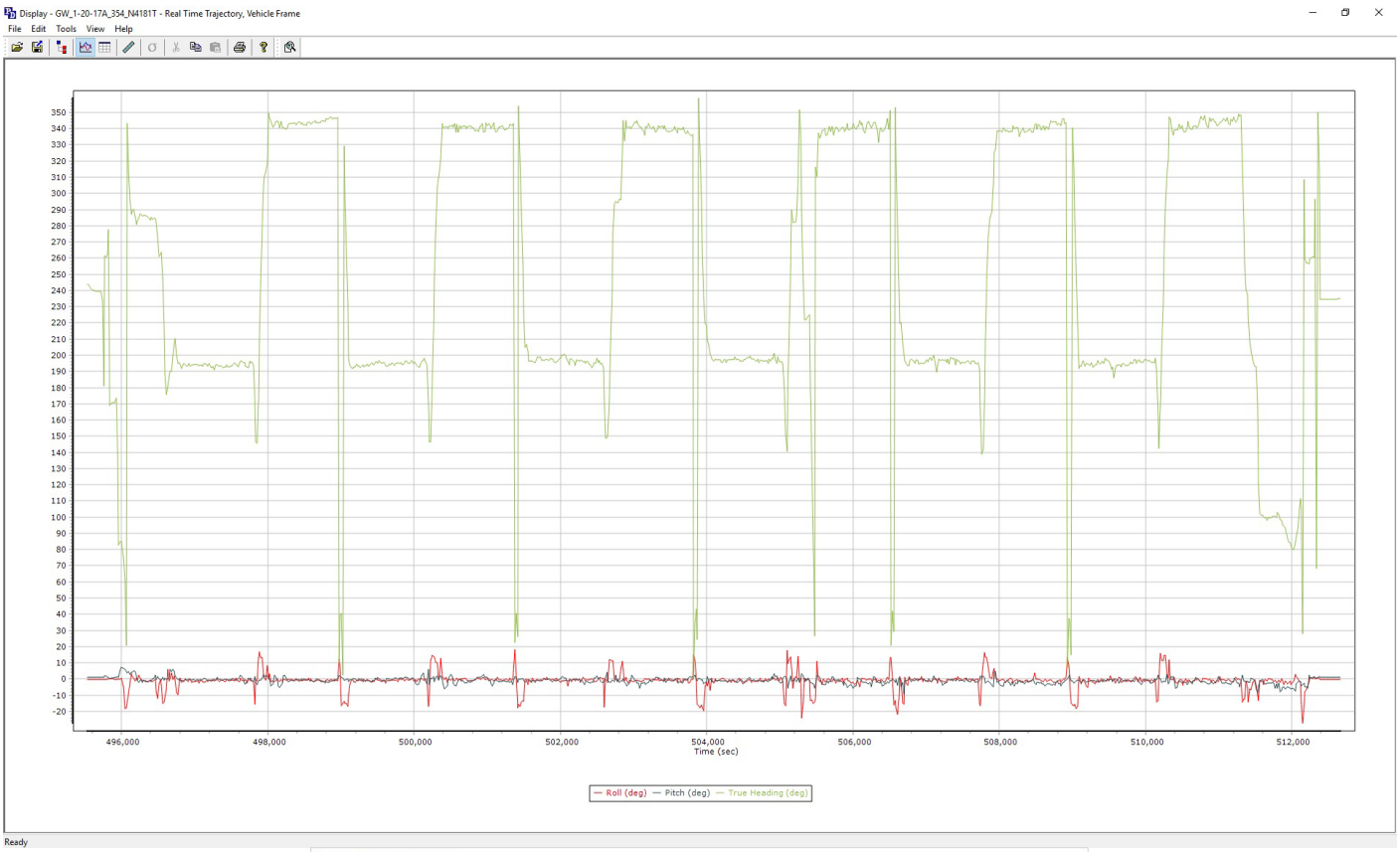
Jan 20, 2017-A (N4181T, SN354)

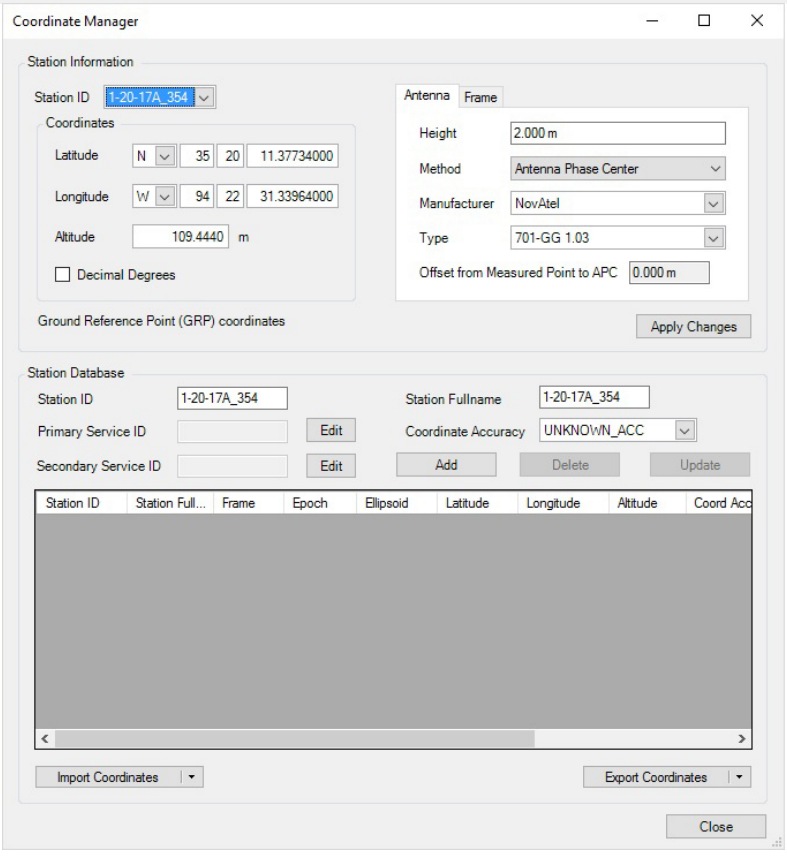

Display - GW_1-20-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_1-20-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready

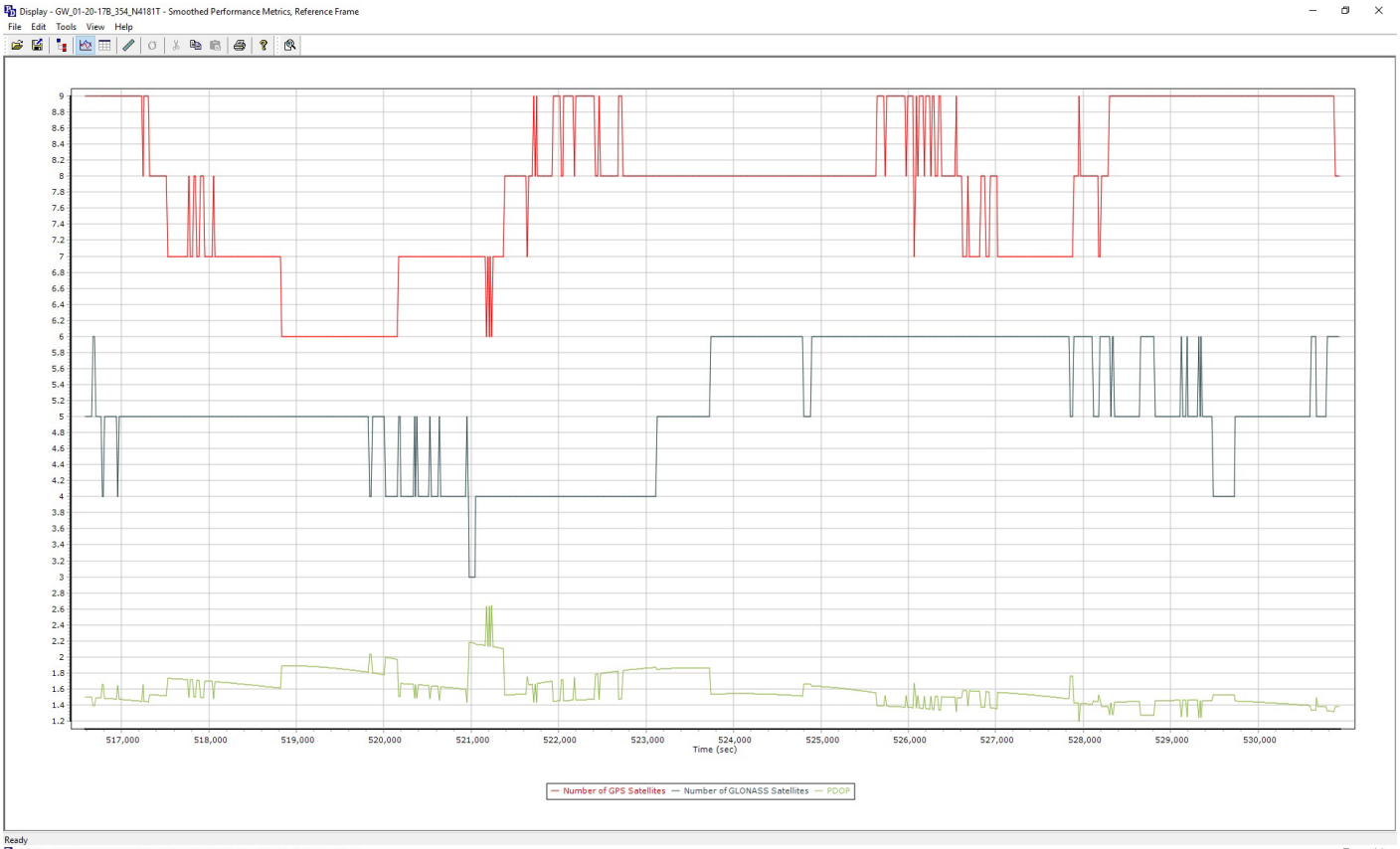

GW_1-20-17A_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom Extents
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
20000
0
-20000
-40000
-60000
Start 17A_364
Postprocessed (SBET)
20000m
-100000
-80000
-60000
-40000
-20000
0
20000
40000
60000
Snap
Meter
Grid
188869.773 m, 94730.307 m

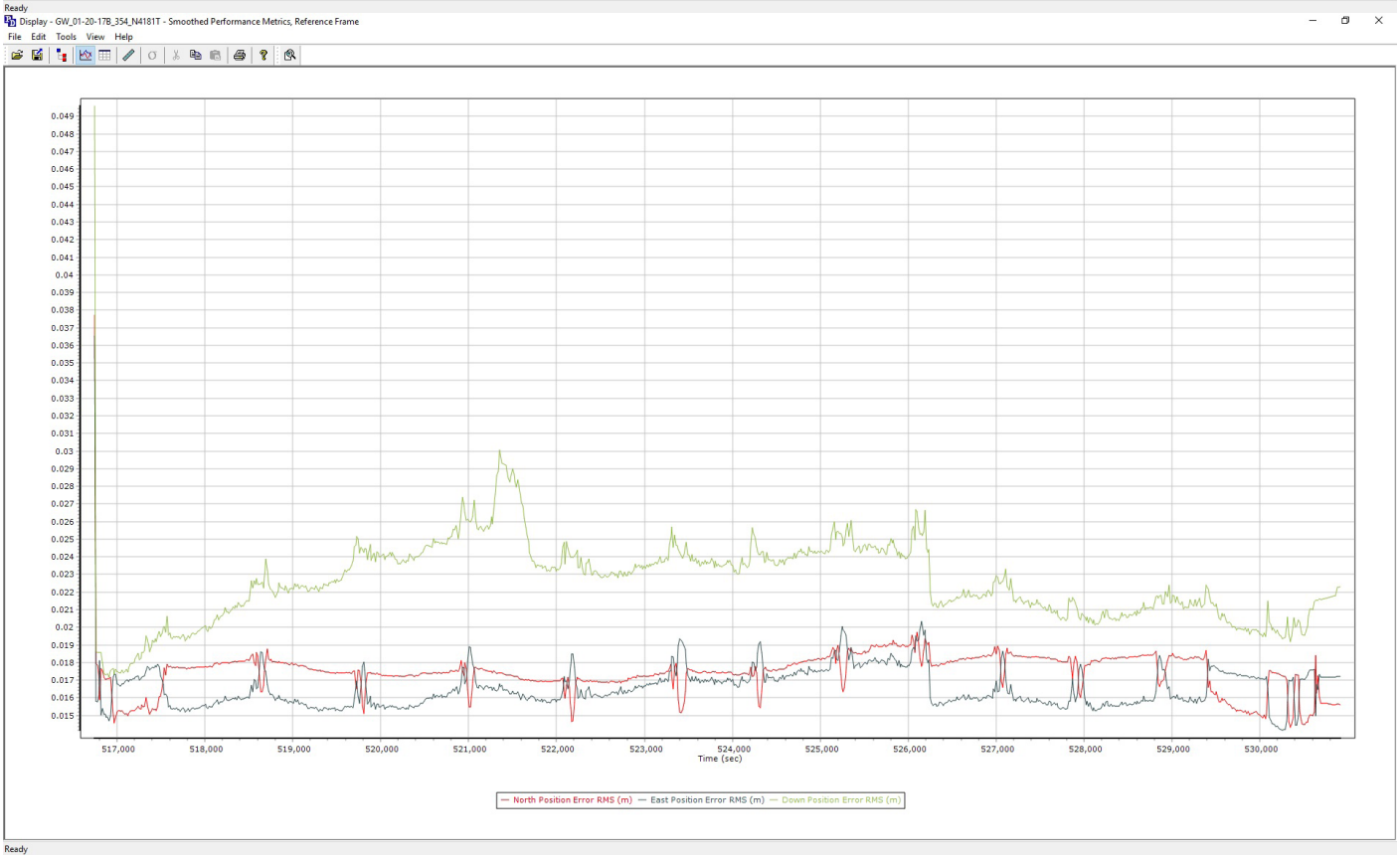

Display - GW_1-20-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
1
0
-1
496,000
497,000
498,000
499,000
500,000
501,000
502,000
503,000
504,000
505,000
506,000
507,000
508,000
509,000
510,000
511,000
512,000
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready

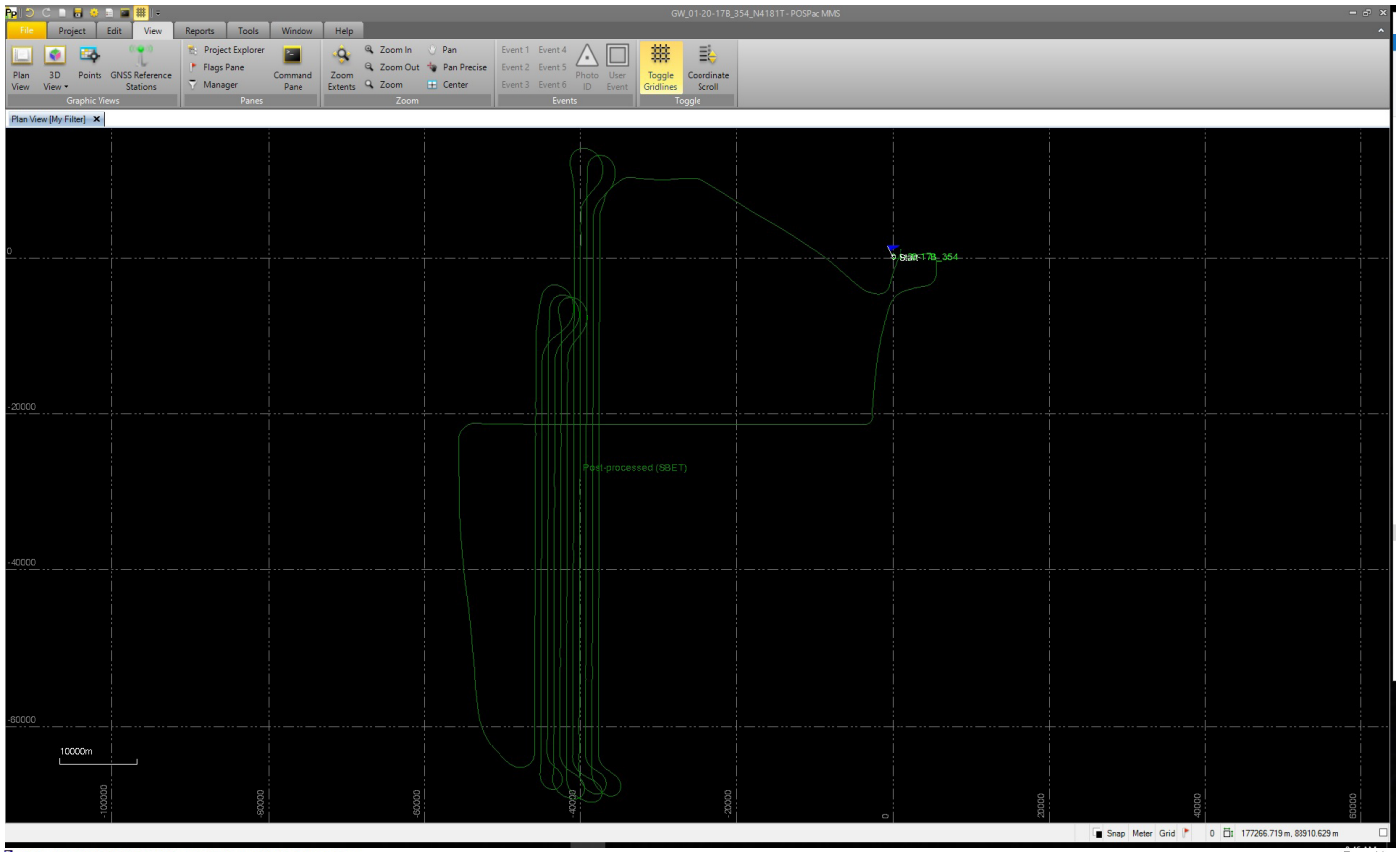

Display - GW_1-20-17A_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready

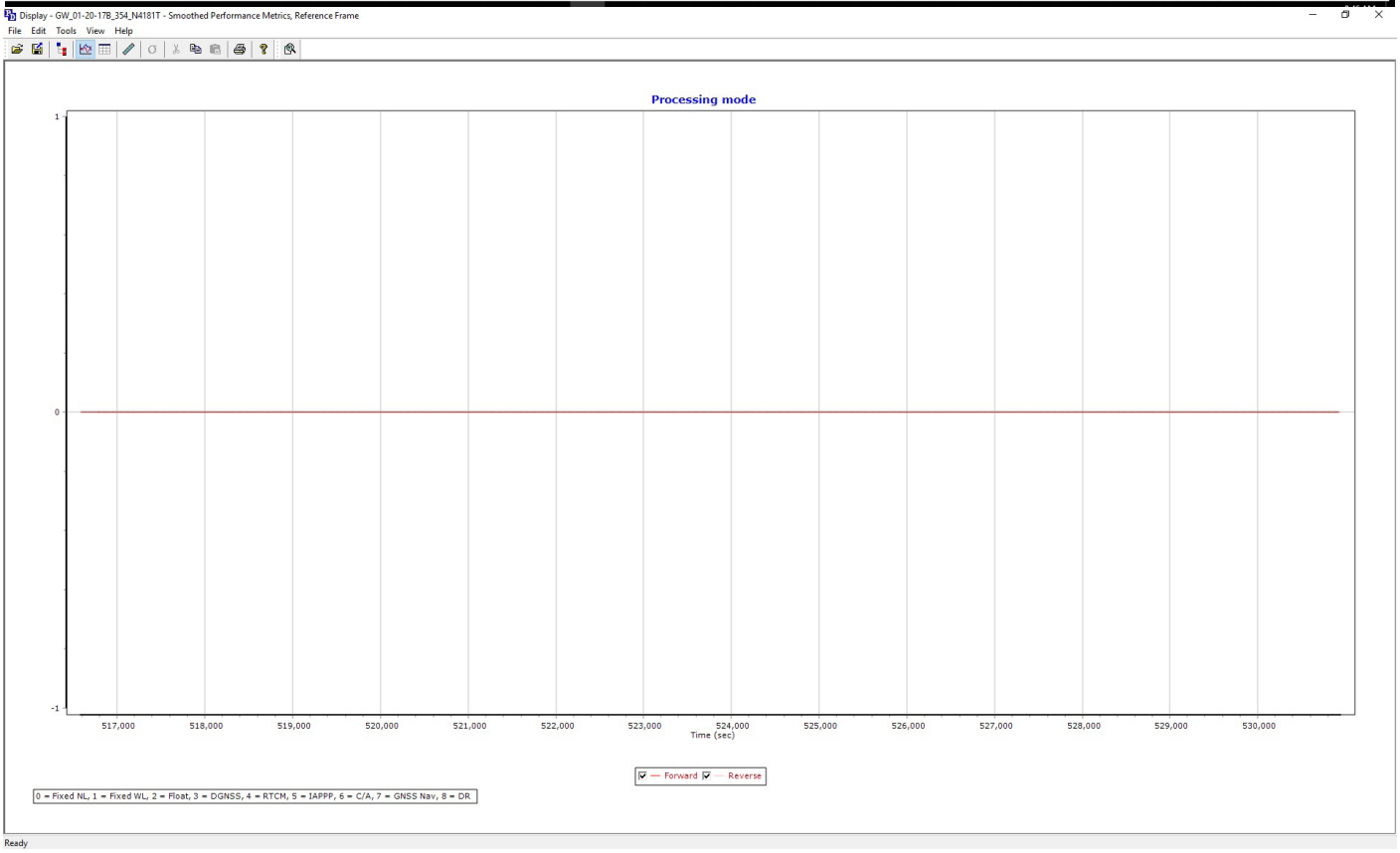

Coordinate Manager
Station Information
Station ID 1-20-17A_354
Coordinates
Latitude N 35 20 11.37734000
Longitude W 94 22 31.33964000
Altitude 109.4440 m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna Frame
Height 2.000 m
Method Antenna Phase Center
Manufacturer NovAtel
Type 701-GG 1.03
Offset from Measured Point to APC 0.000 m
Apply Changes
Station Database
Station ID 1-20-17A_354
Primary Service ID
Secondary Service ID
Edit
Edit
Station Fullname 1-20-17A_354
Coordinate Accuracy UNKNOWN_ACC
Add
Delete
Update
Station ID
Station Full...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Acc
Import Coordinates
Export Coordinates
Close

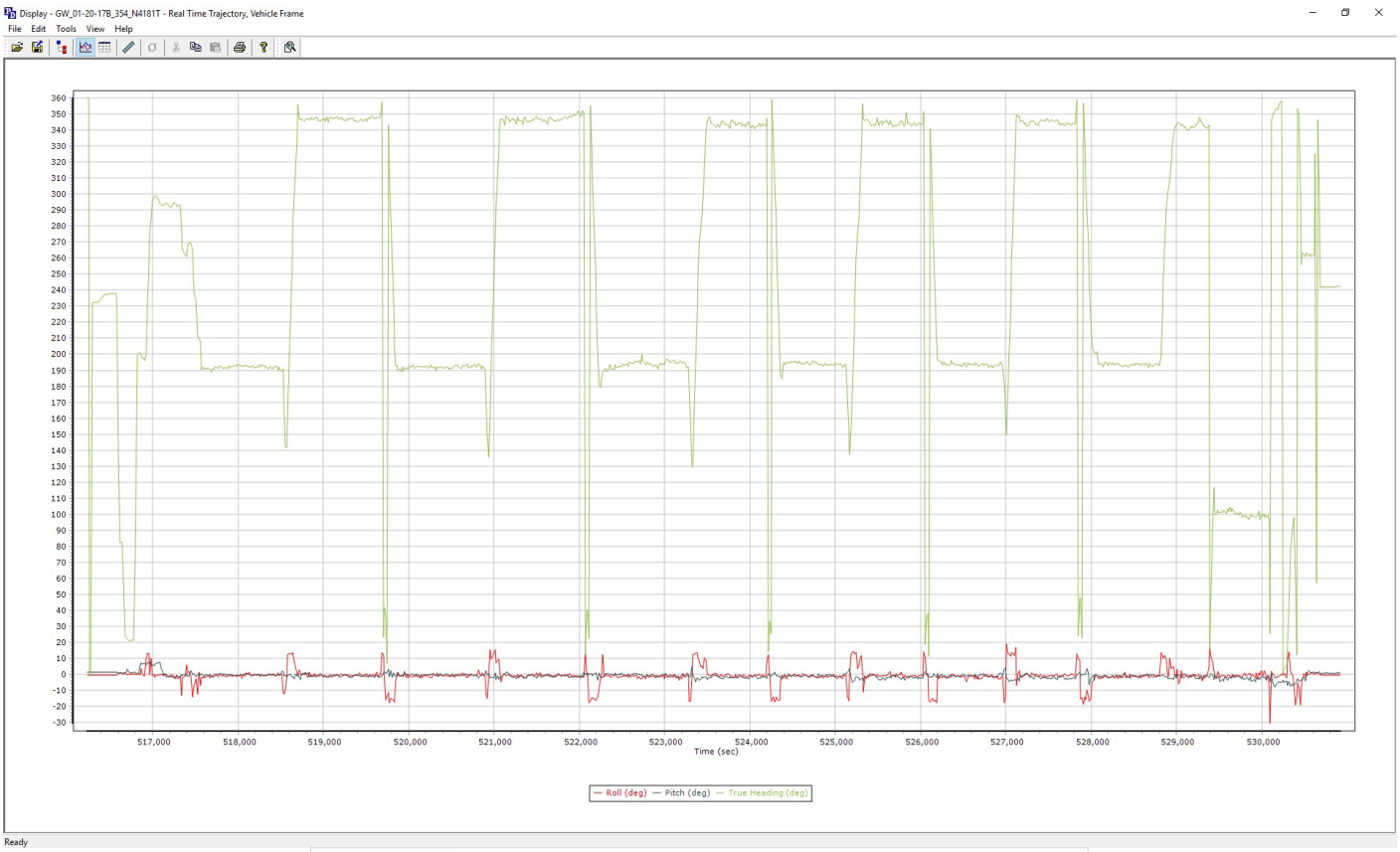
Jan 20, 2017-B (N4181T, SN354)

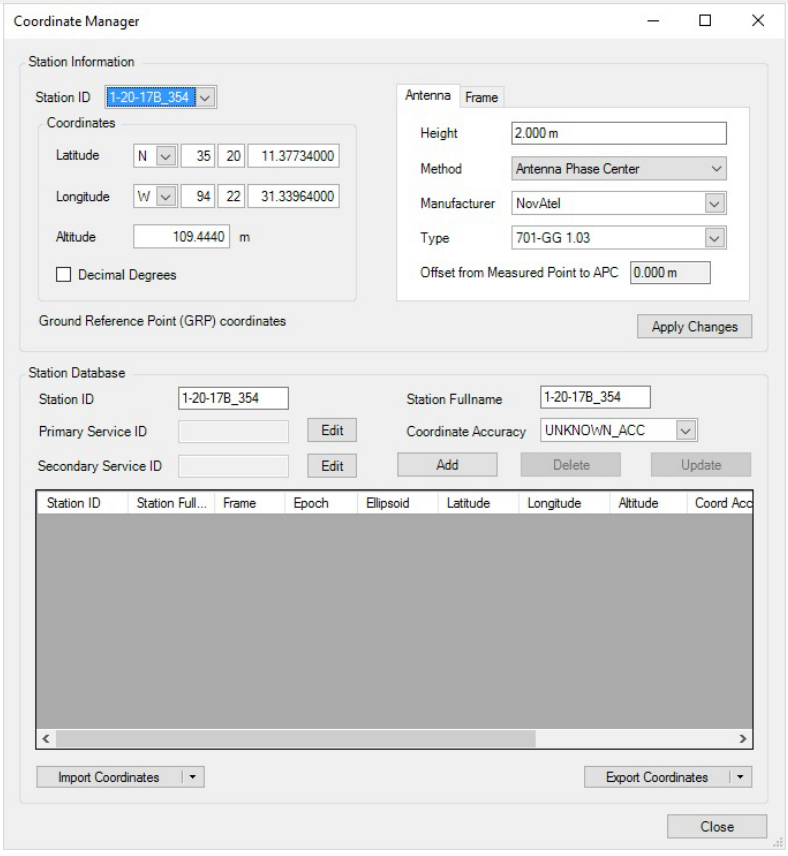

Display - GW_01-20-17B_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_01-20-17B_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready

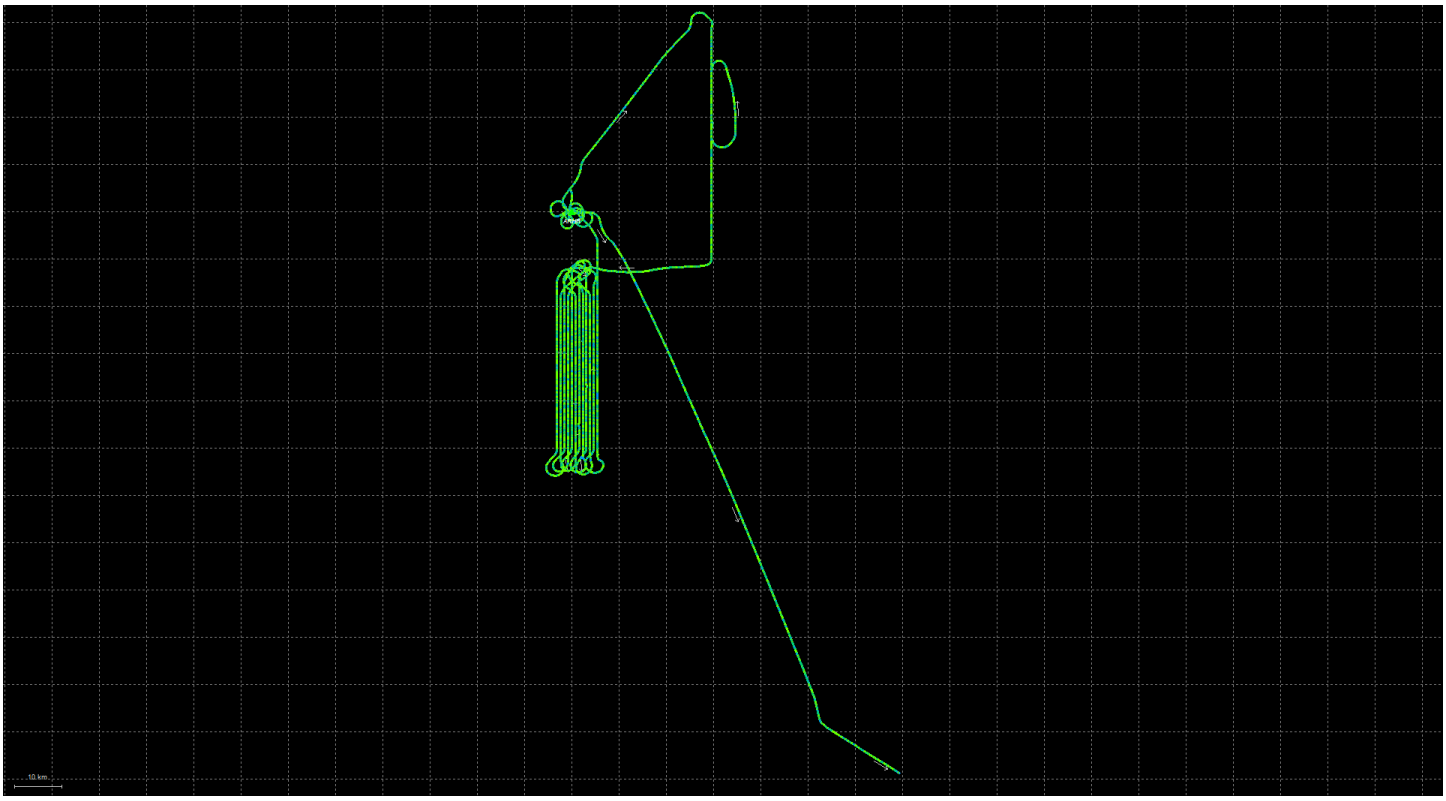

GW_01-20-17B_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom Extents
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
Start-17B_354
Post-processed (SBET)
10000m
Snap
Meter
Grid
177266.719 m, 88910.629 m

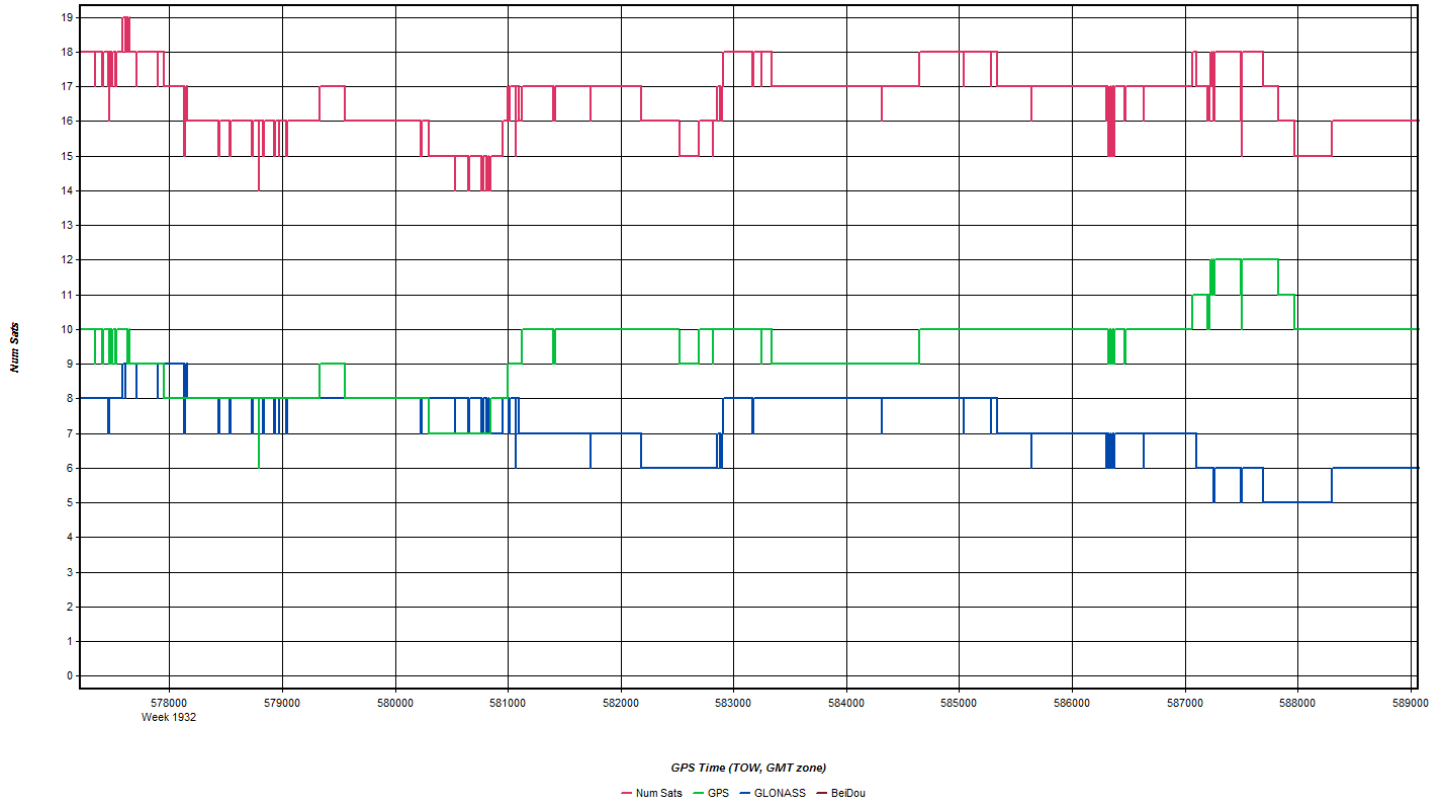

Display - GW_01-20-17B_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready

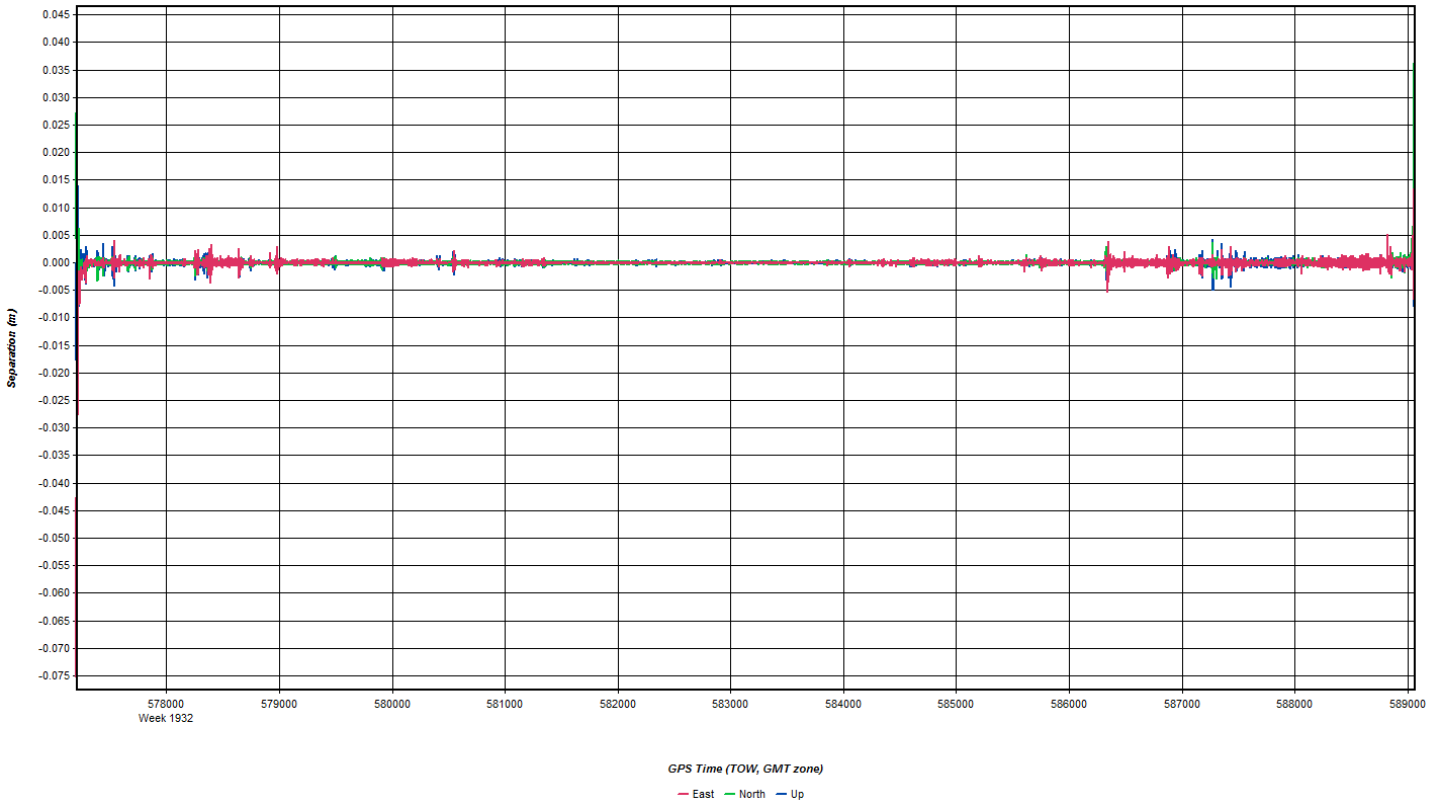

Display - GW_01-20-17B_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready

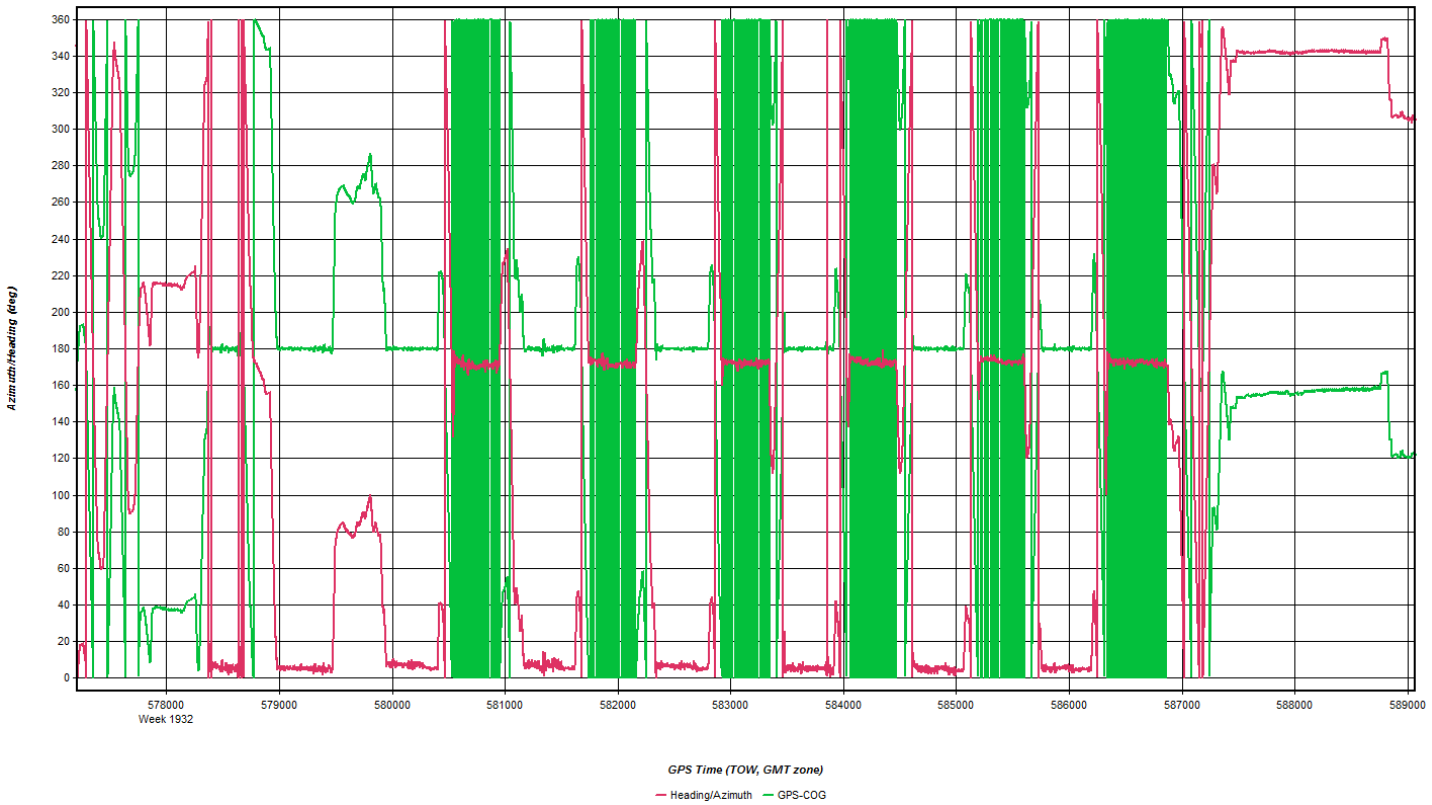

Coordinate Manager
Station Information
Station ID 1-20-17B_354
Coordinates
Latitude N 35 20 11.37734000
Longitude W 94 22 31.33964000
Altitude 109.4440 m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna Frame
Height 2.000 m
Method Antenna Phase Center
Manufacturer NovAtel
Type 701-GG 1.03
Offset from Measured Point to APC 0.000 m
Apply Changes
Station Database
Station ID 1-20-17B_354
Primary Service ID
Secondary Service ID
Edit
Edit
Station Fullname 1-20-17B_354
Coordinate Accuracy UNKNOWN_ACC
Add
Delete
Update
Station ID
Station Full...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Acc
Import Coordinates
Export Coordinates
Close

Jan 21, 2017-A (C-FVZM, SN7229)

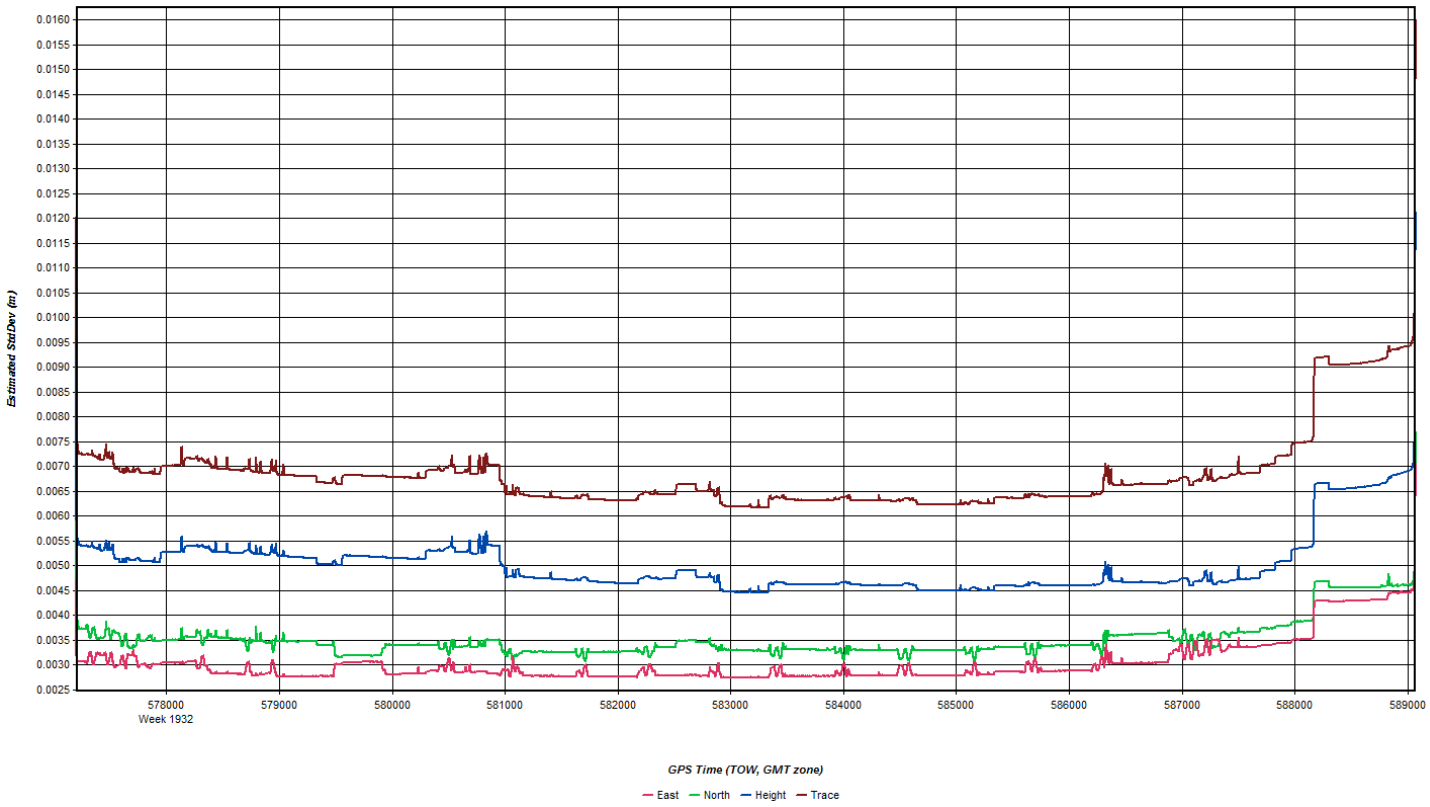


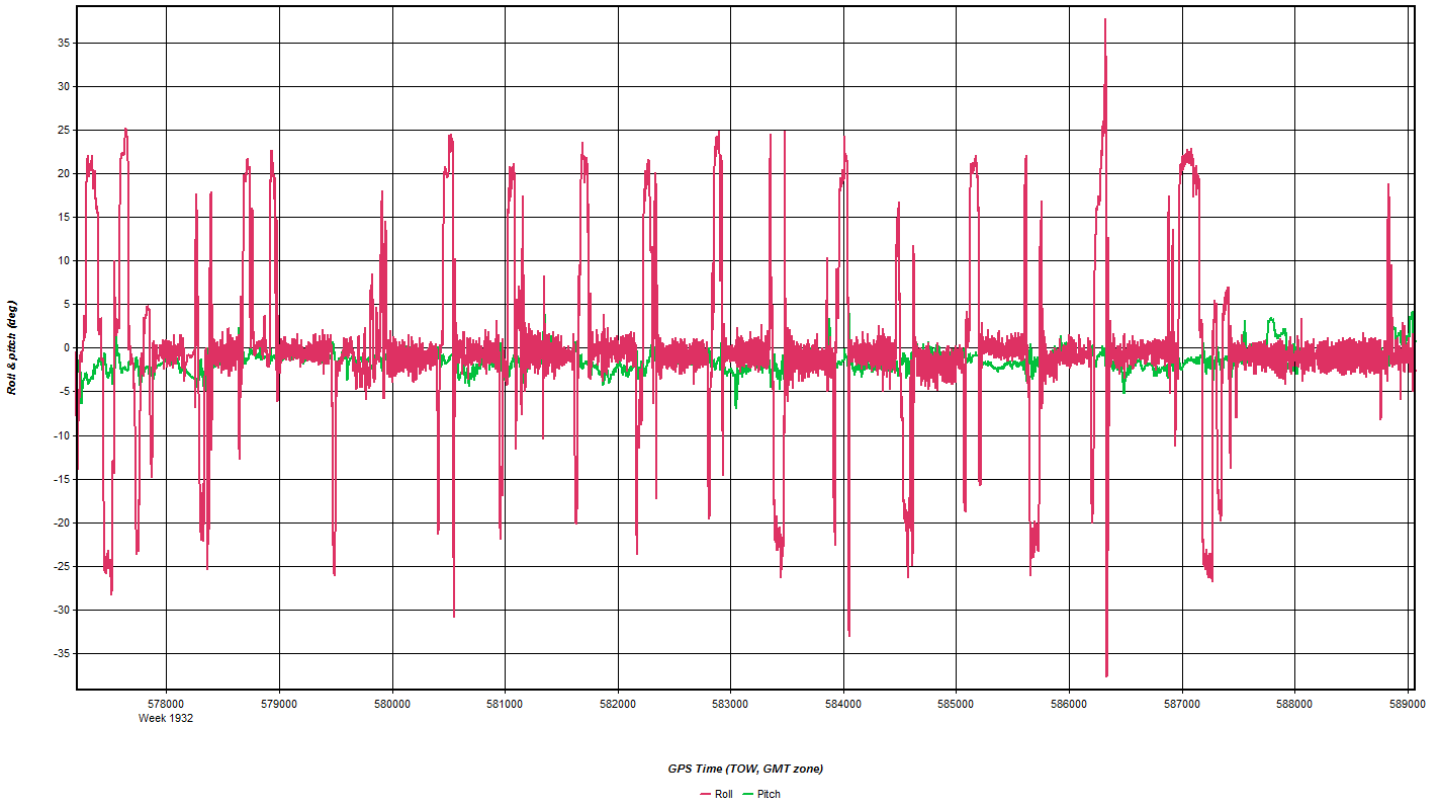

Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
578000
Week 1932
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
589000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

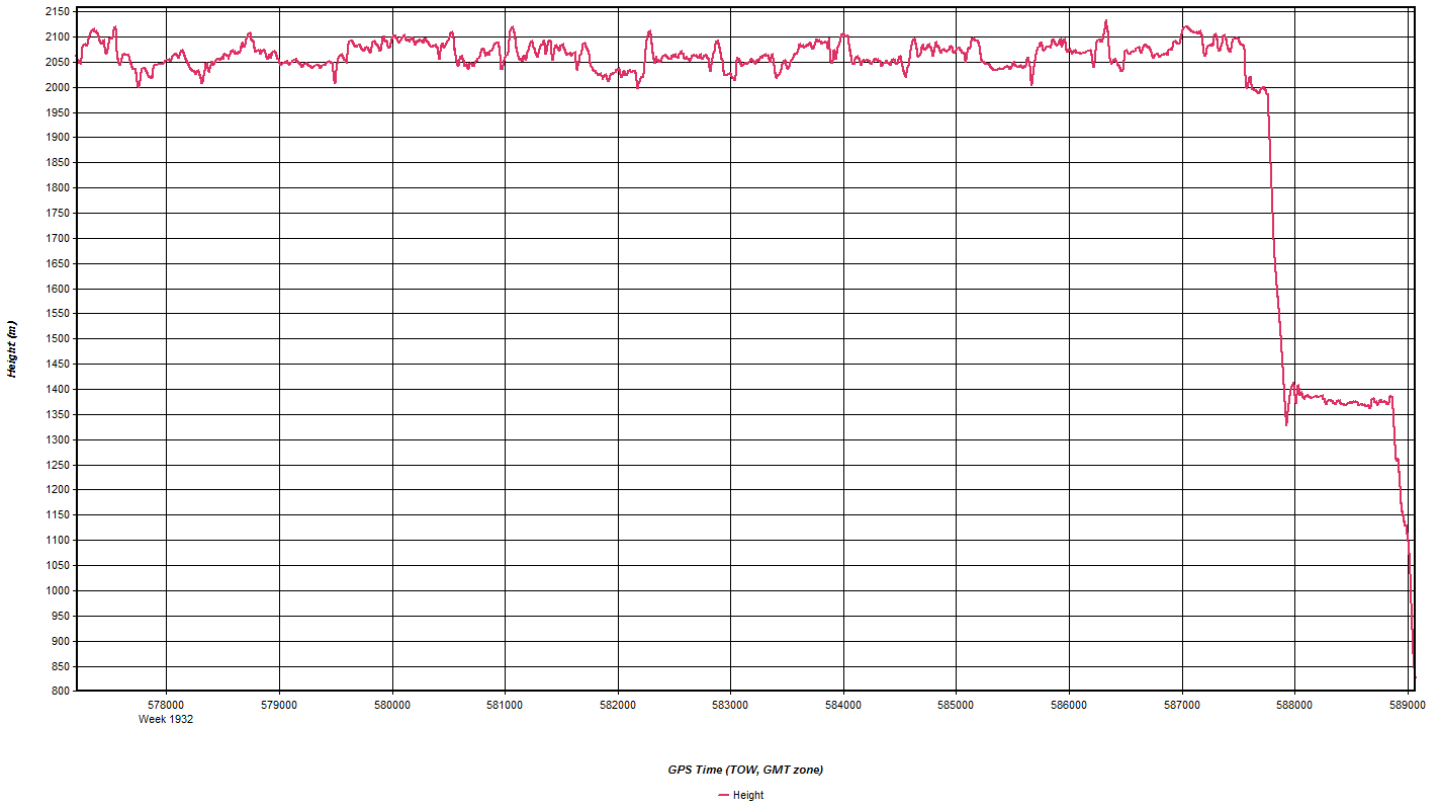

Separation (m)
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
-0.055
-0.060
-0.065
-0.070
-0.075
578000
Week 1932
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
589000
GPS Time (TOW, GMT zone)
East
North
Up

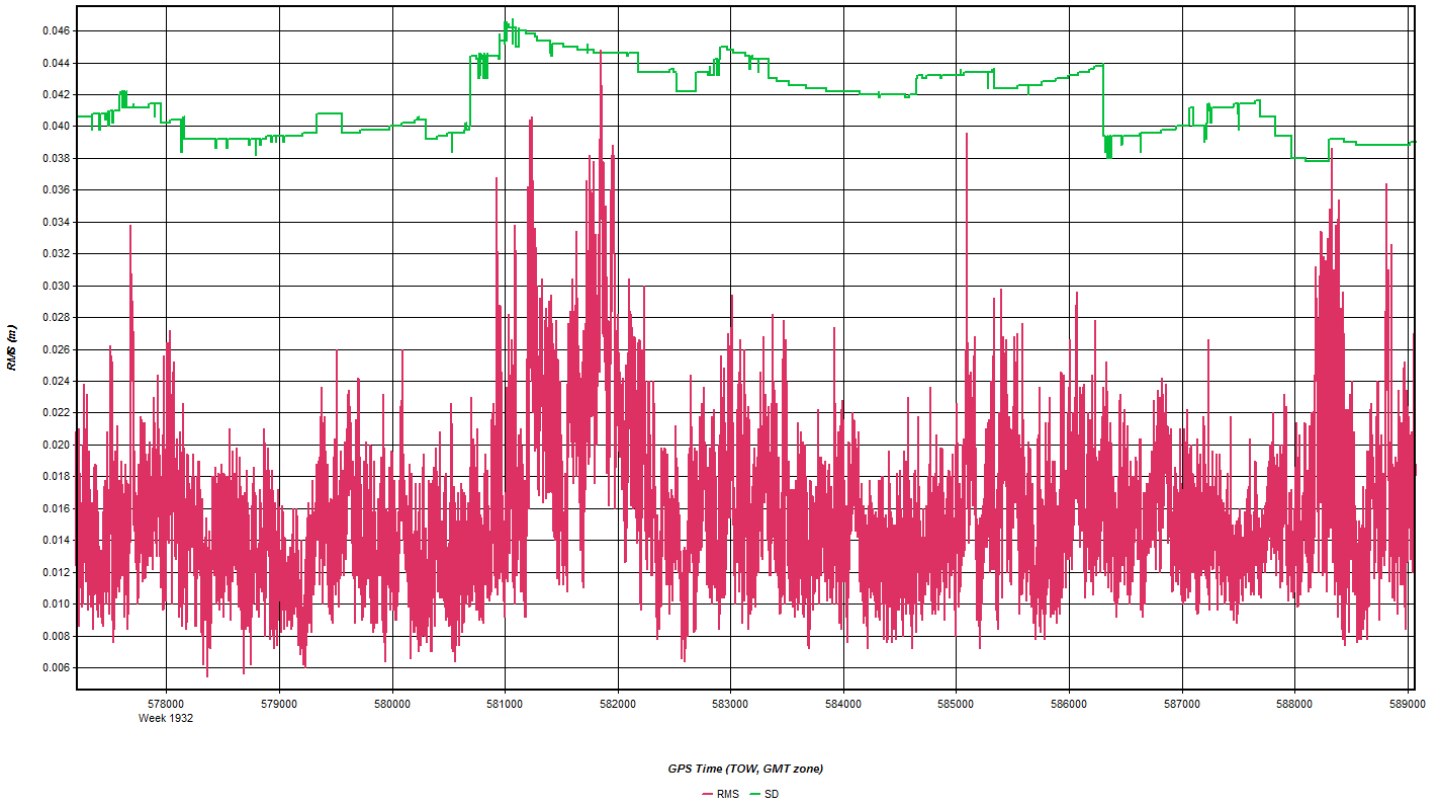

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
578000
Week 1932
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
589000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

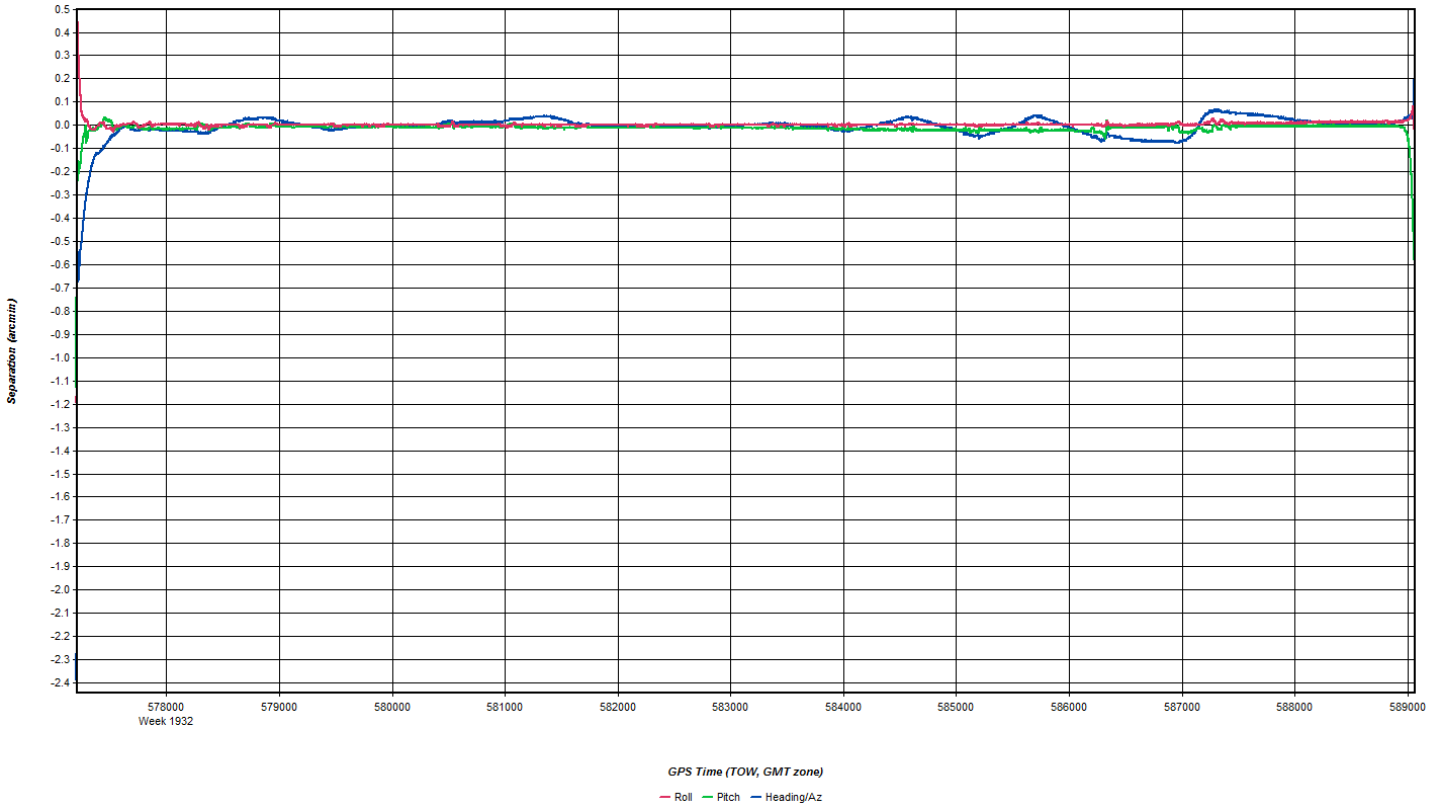

PDOP
1.36
1.34
1.32
1.30
1.28
1.26
1.24
1.22
1.20
1.18
1.16
1.14
1.12
1.10
1.08
1.06
1.04
1.02
1.00
0.98
0.96
0.94
0.92
0.90
0.88
0.86
0.84
0.82
0.80
0.78
578000
Week 1932
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
589000
GPS Time (TOW, GMT zone)
PDOP

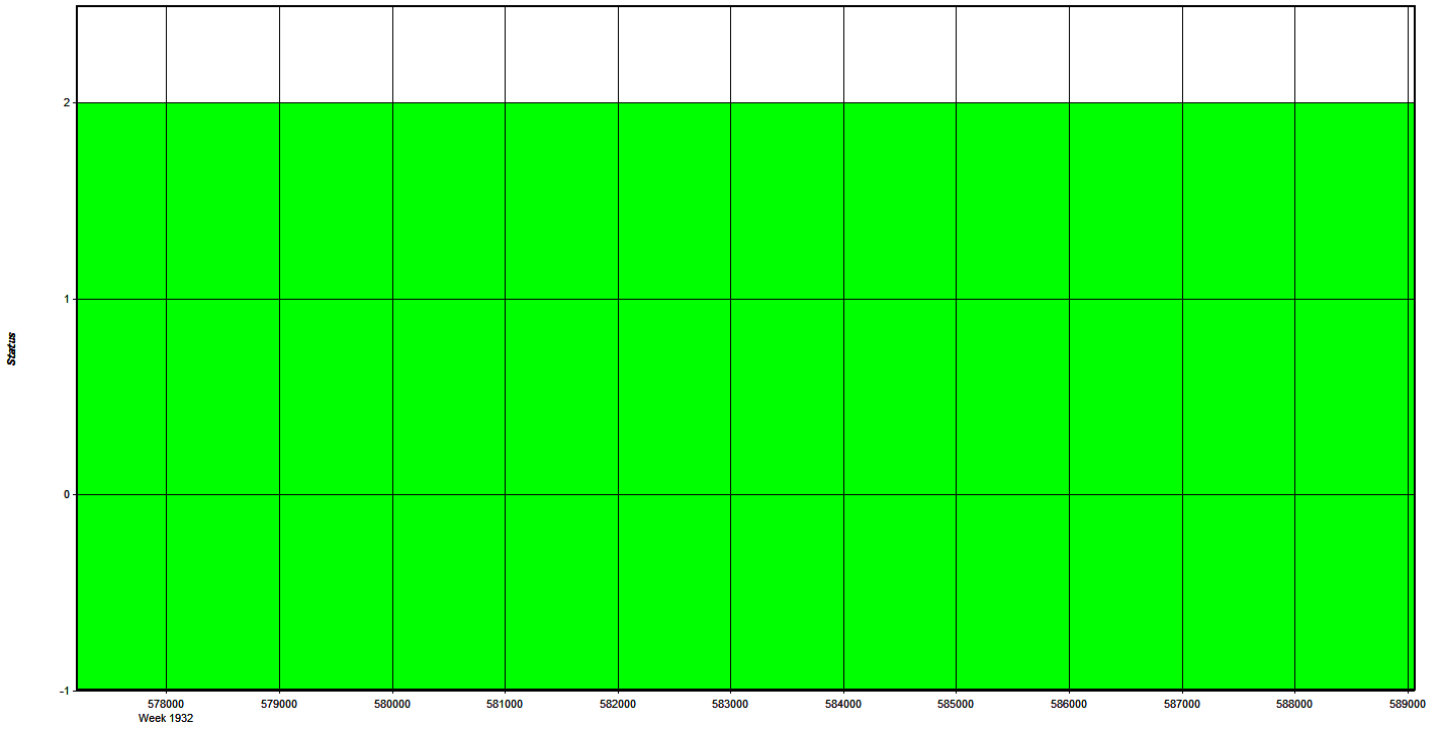

Estimated StdDev (m)
0.0160
0.0155
0.0150
0.0145
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
578000
Week 1932
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
589000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

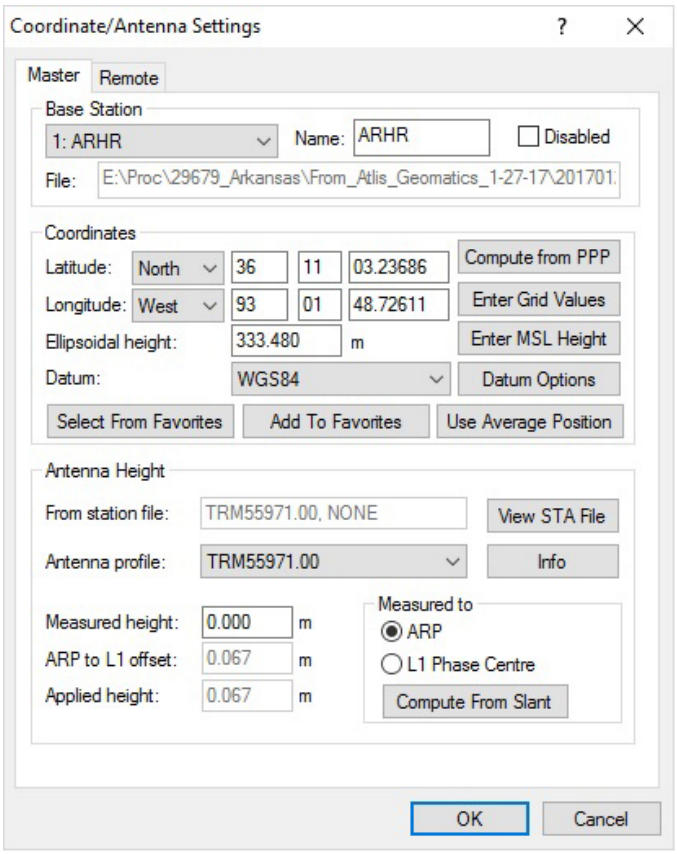

Roll & pitch (deg)
35
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
578000
Week 1932
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
589000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2150
2100
2050
2000
1950
1900
1850
1800
1750
1700
1650
1600
1550
1500
1450
1400
1350
1300
1250
1200
1150
1100
1050
1000
950
900
850
800
578000
Week 1932
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
589000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
578000
Week 1932
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
589000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
-0.2
-0.3
-0.4
-0.5
-0.6
-0.7
-0.8
-0.9
-1.0
-1.1
-1.2
-1.3
-1.4
-1.5
-1.6
-1.7
-1.8
-1.9
-2.0
-2.1
-2.2
-2.3
-2.4
578000
Week 1932
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
589000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
578000
Week 1932
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
589000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARHR
Name: ARHR
Disabled
File: E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-27-17\201701
Coordinates
Latitude: North 36 11 03.23686
Longitude: West 93 01 48.72611
Ellipsoidal height: 333.480 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM55971.00, NONE
View STA File
Antenna profile: TRM55971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

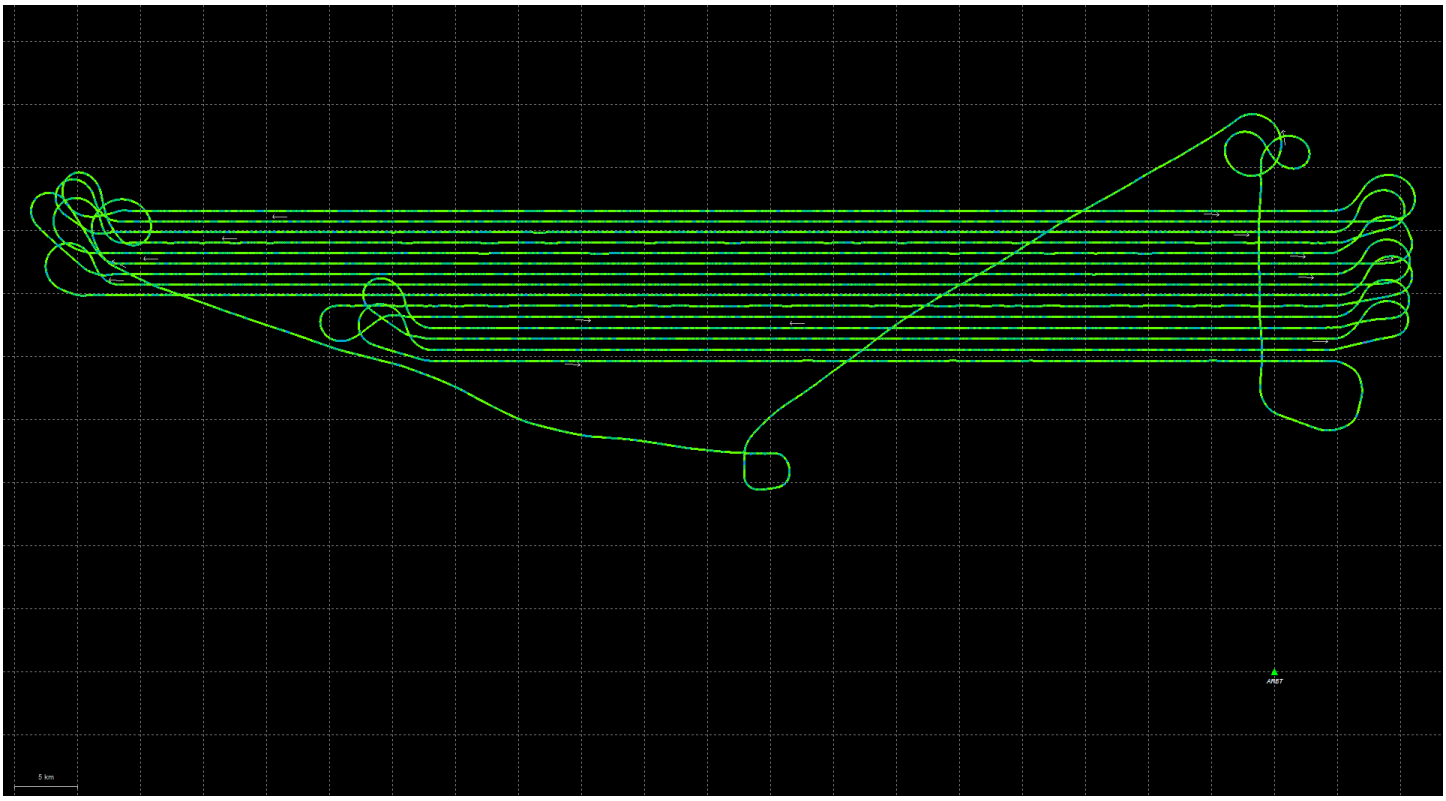
PROJECT NAME	Q.S. Arkansas	DATE	21/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Branson MO.	DATA DRIVES	LiDar #2

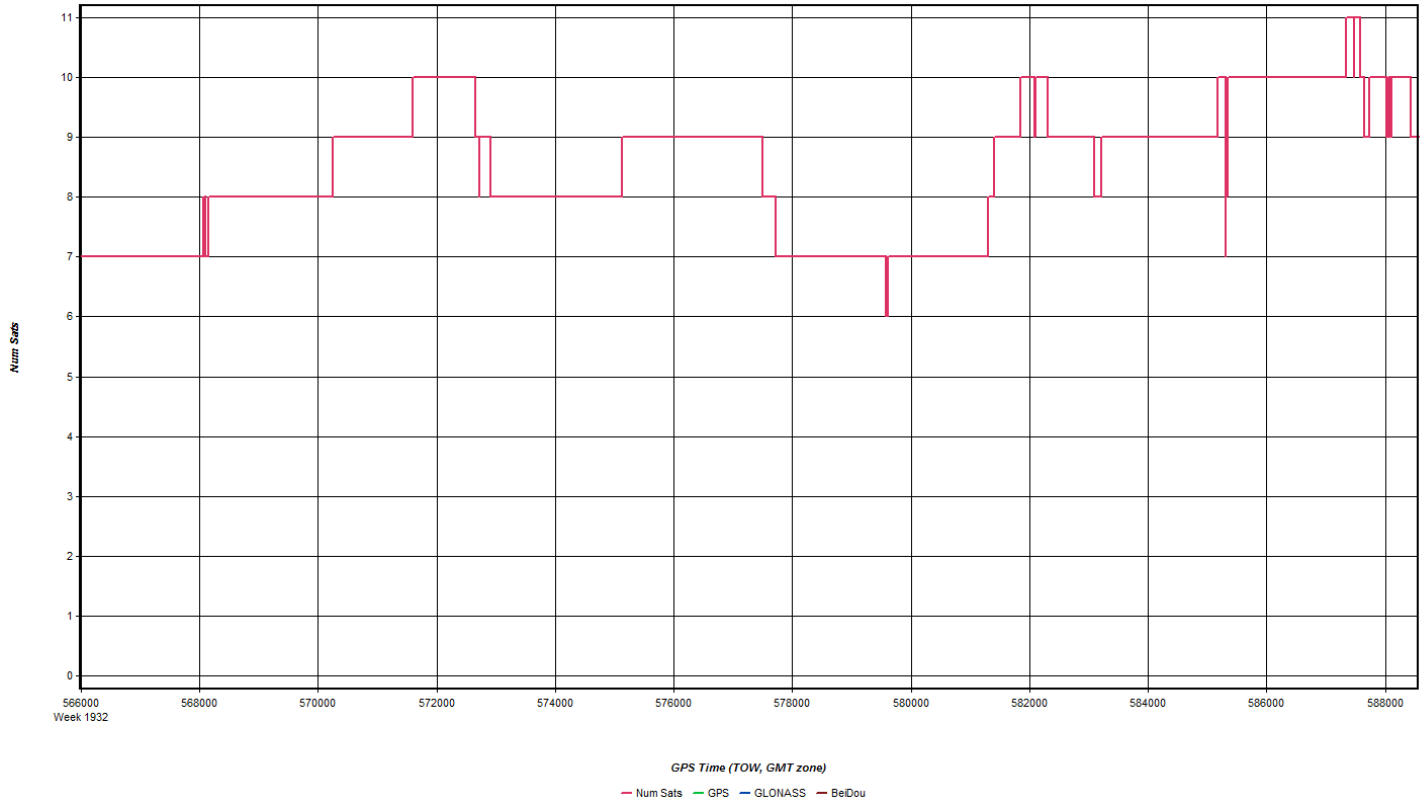
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	15::58:00	Takeoff:	16:13:00	AGL Height:	1800 m	Pulse Rate:	277 KHz		START	END
Engine Off:	19:55:00	Landing:	19:48:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	16:20:00	16:29:00
TOTAL:	3.95 hrs	TOTAL:	3.58 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	19:02:00	19:08:00

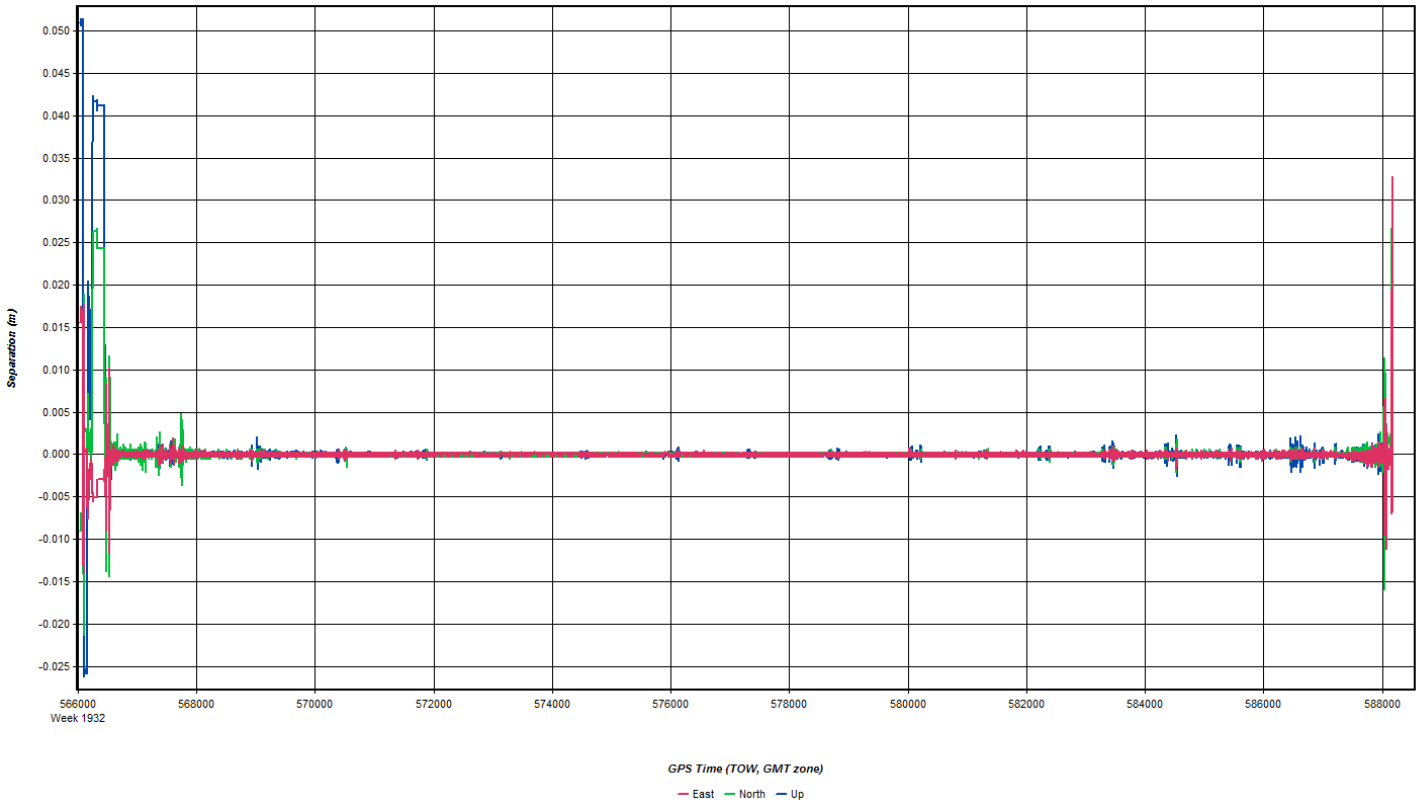
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
140		South	170121_164014	16:40:14	16:44:00	Offline 23nm from South
140		South	170121_165029	16:50:30	16:58:10	Restarted line 25 nm from south
101		South	170121_170612	17:06:12	17:13:02	16.8nm from south to complete the line
102		North	170121_171601	17:16:02	17:22:12	16.8nm from south to complete the line
103		South	170121_172630	17:26:31	17:33:18	16.8nm from south to complete the line. 12nm from south 40m offline, check data
104		North	170121_173559	17:35:59	17:42:21	16.8nm from south to complete the line
105		South	170121_174622	17:46:24	17:53:01	16.8nm from south to complete the line
106		North	170121_175537	17:55:38	18:02:01	16.8nm from south to complete the line
107		South	170121_180511	18:05:12	18:11:32	16.8nm from south to complete the line
108		North	170121_181416	18:14:17	18:20:38	16.8nm from south to complete the line
109		South	170121_182419	18:24:21	18:30:45	16.8nm from south to complete the line
110		North	170121_183335	18:33:36	18:39:43	16.8nm from south to complete the line
111		South	170121_184250	18:42:50	18:49:34	16.8nm from south to complete the line
112		North	170121_185224	18:52:25	19:00:45	22.7nm from south to complete the line

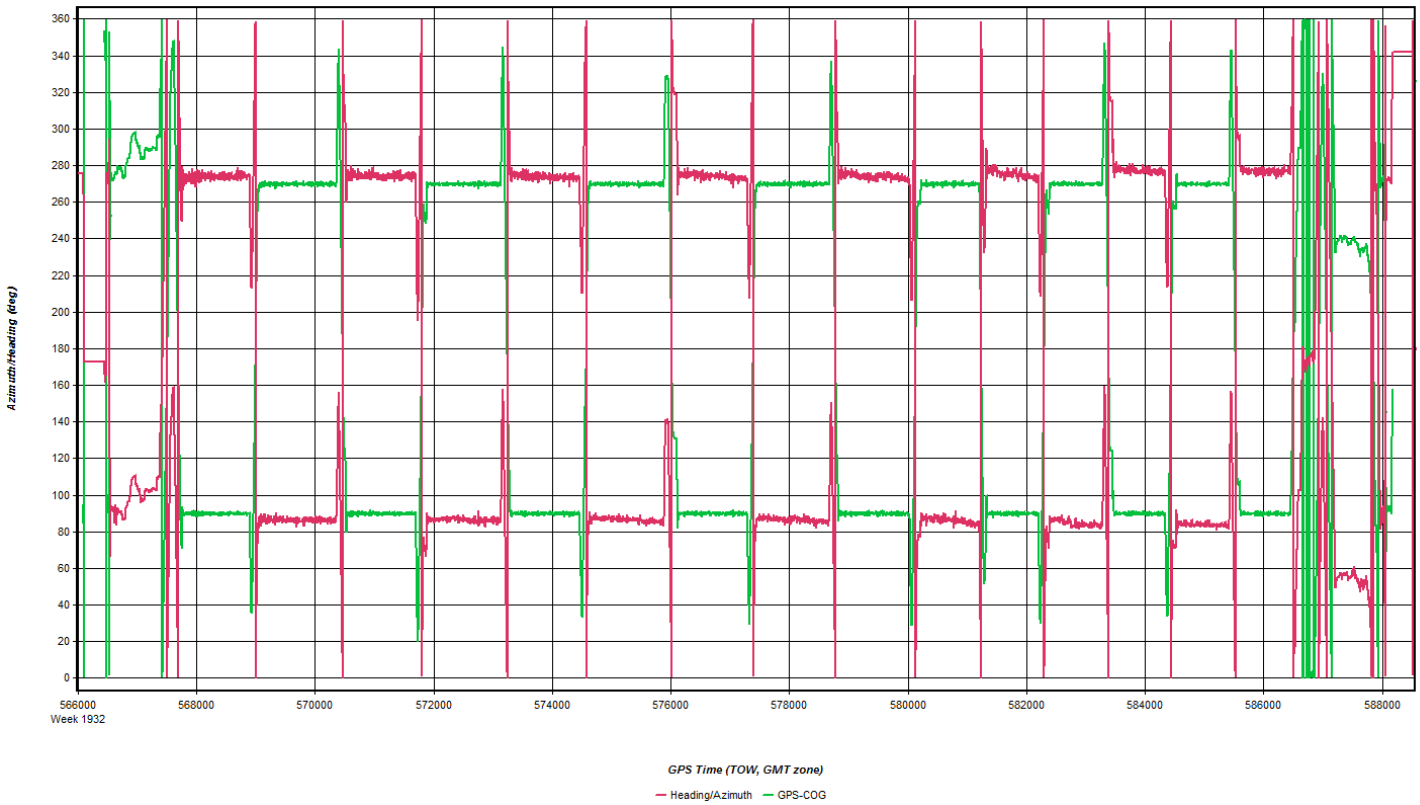
SUN ANGLE	
@Start:	Broken overcast, temp 15C at take off
@End:	Sats. And Dops averaged 19 and 1.1
@Peak:	CORS station ARHR was used for this flight.
	Flight was cut short due to weather moving in from the south.

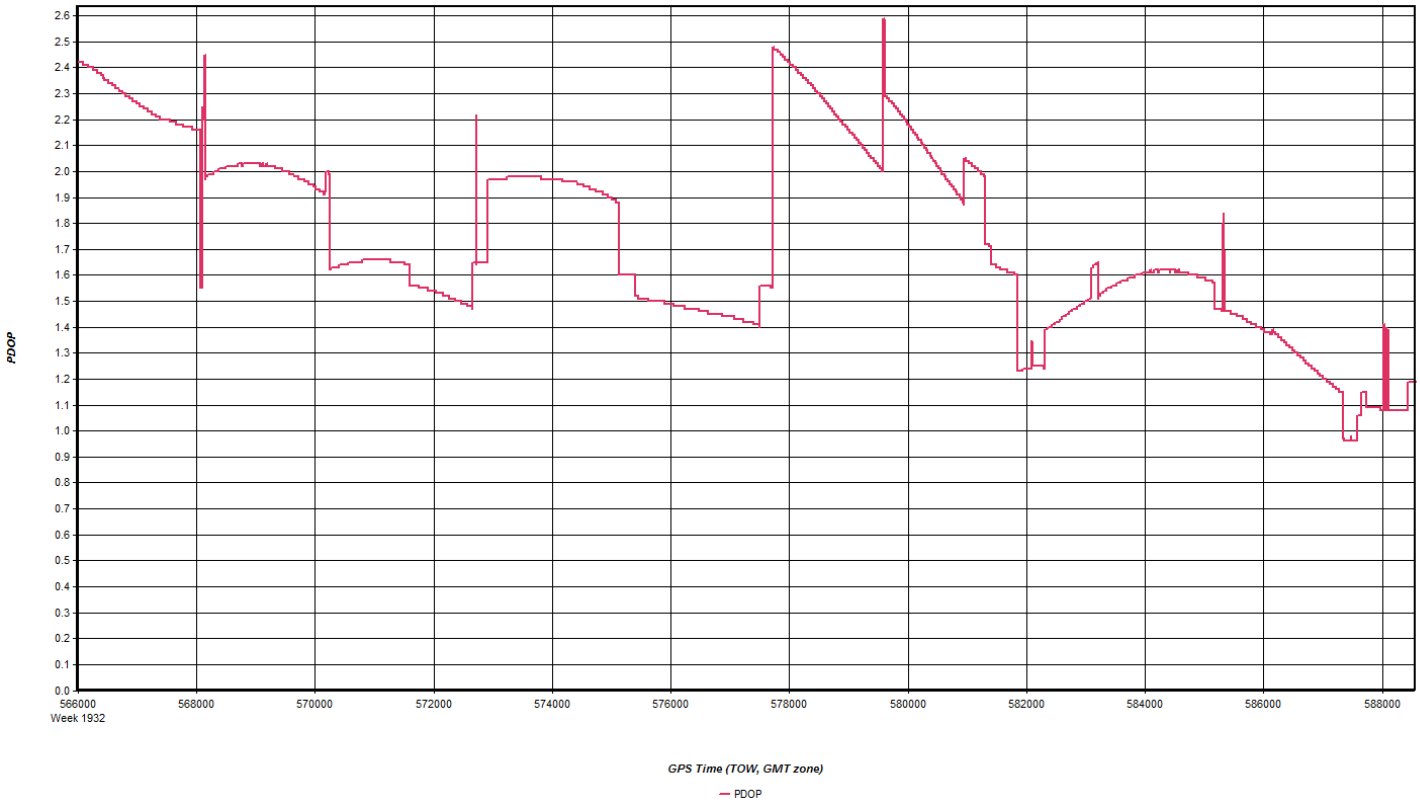
Jan 21, 2017-A (C-GKSI, SN7207)

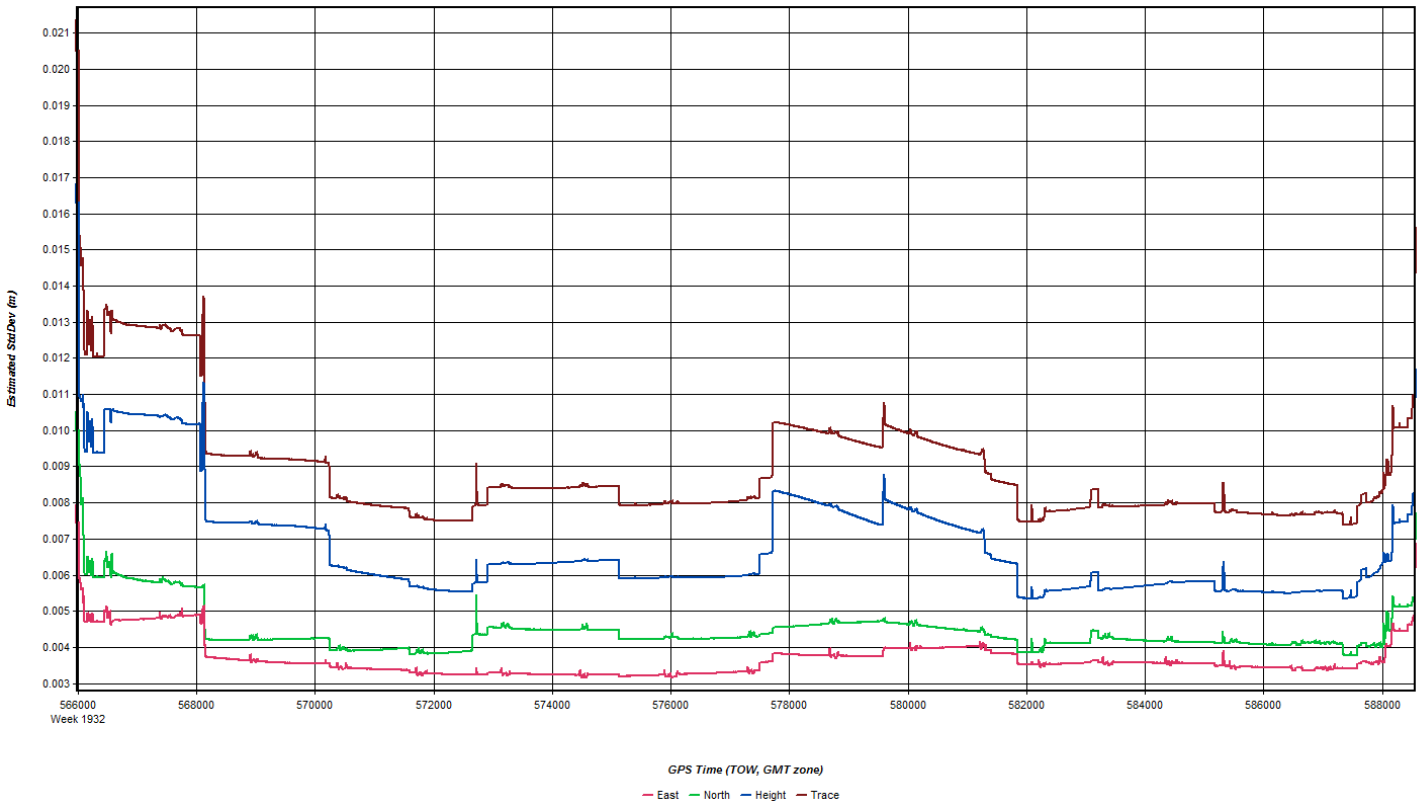

5 km

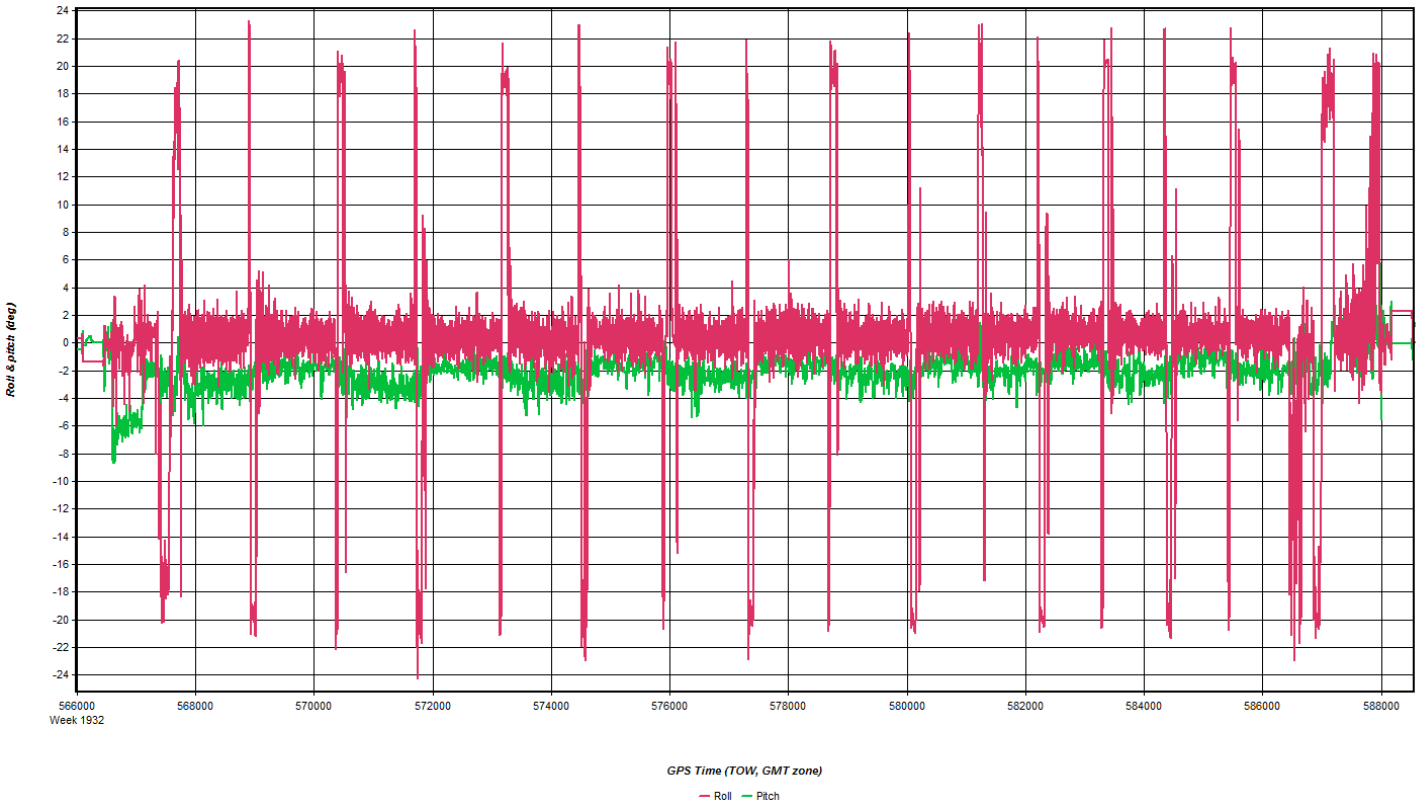

Num Sats
11
10
9
8
7
6
5
4
3
2
1
0
566000
Week 1932
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

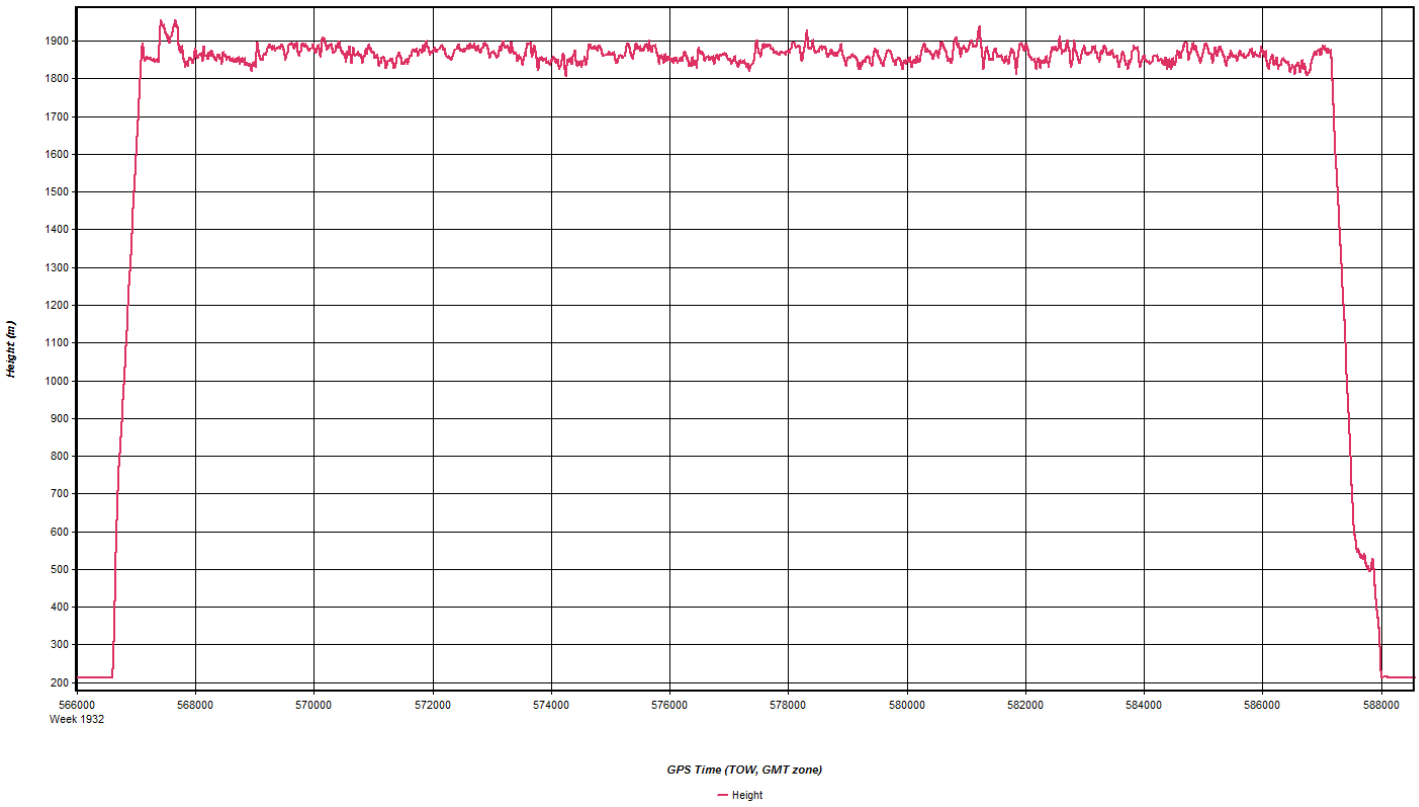

Separation (m)
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
566000
Week 1932
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
East
North
Up

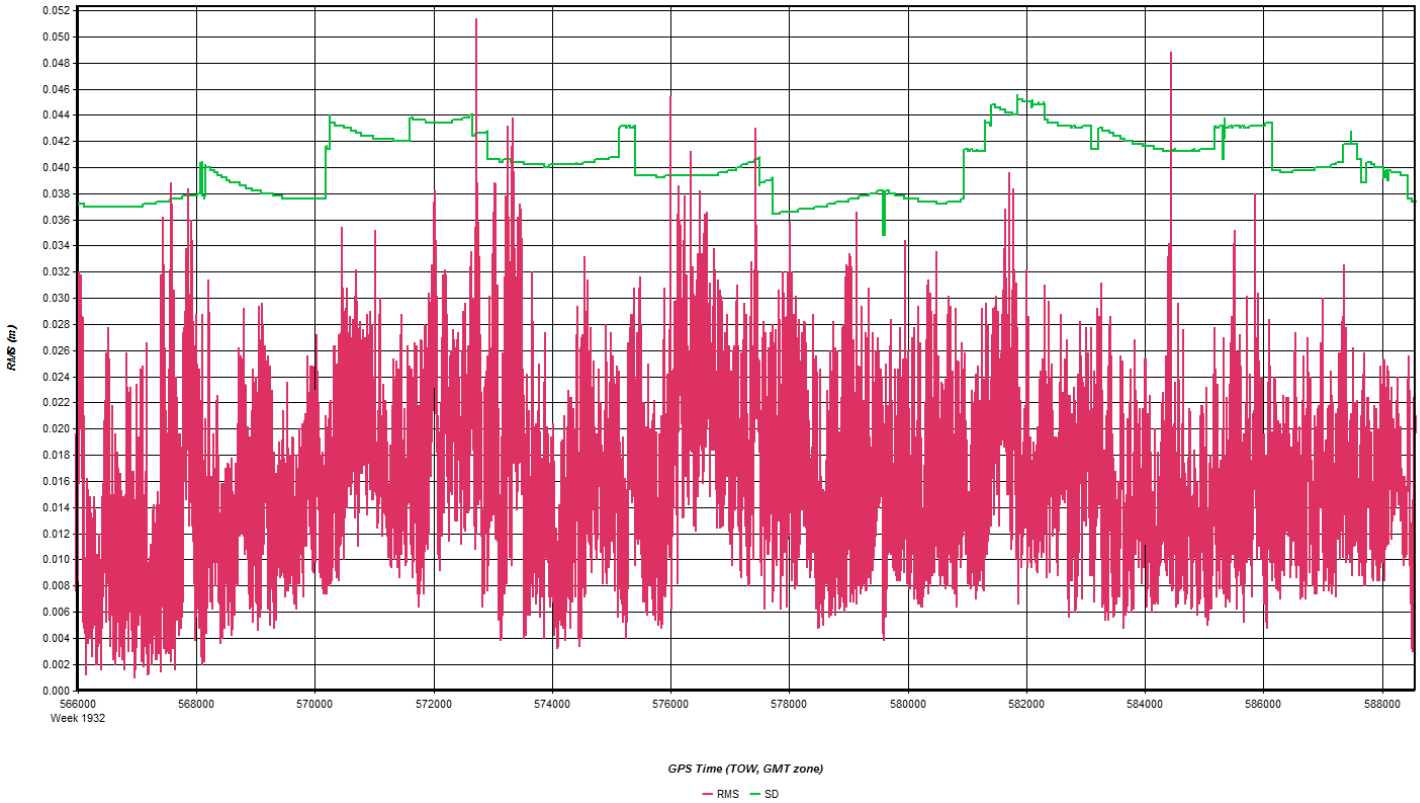

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
566000
Week 1932
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

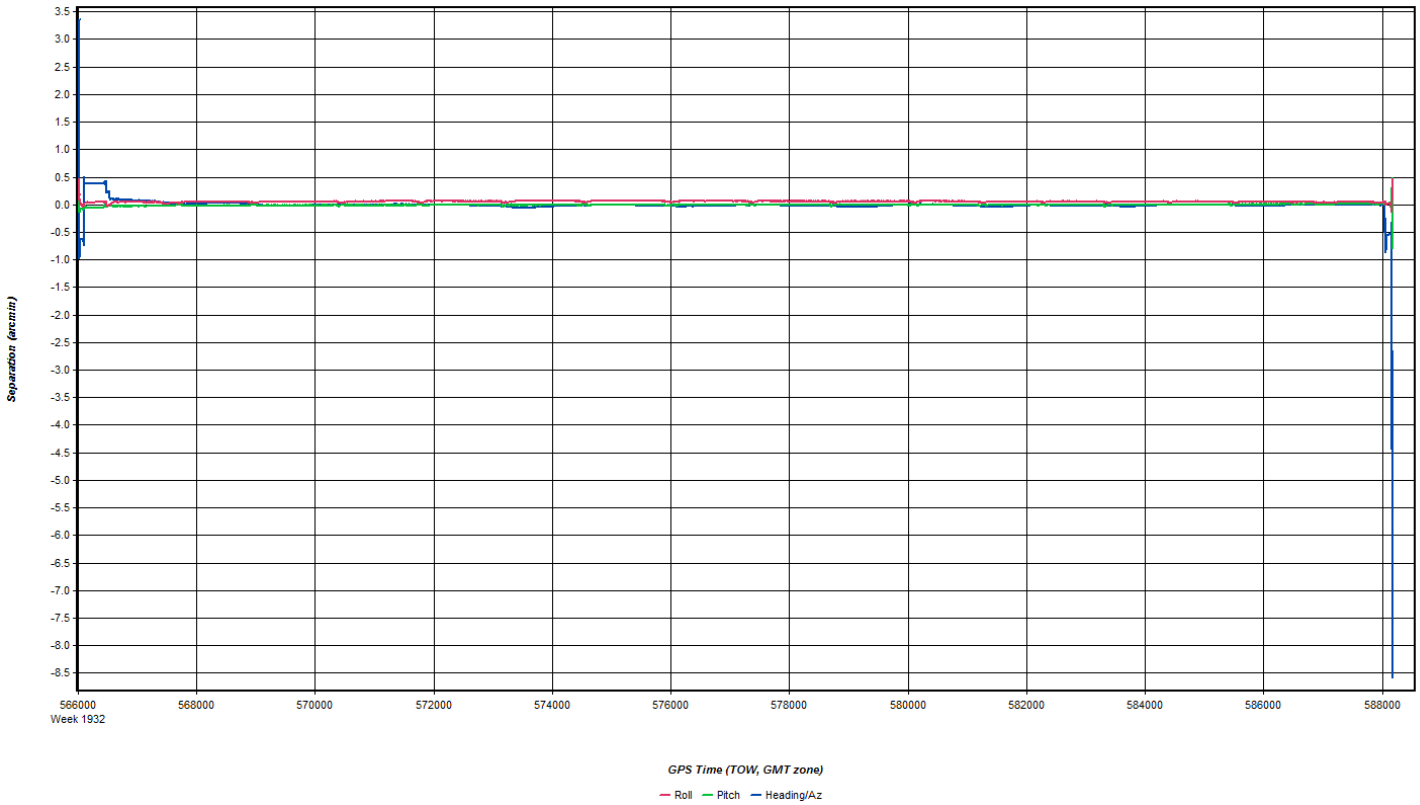

PDOP
2.6
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
566000
Week 1932
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
PDOP

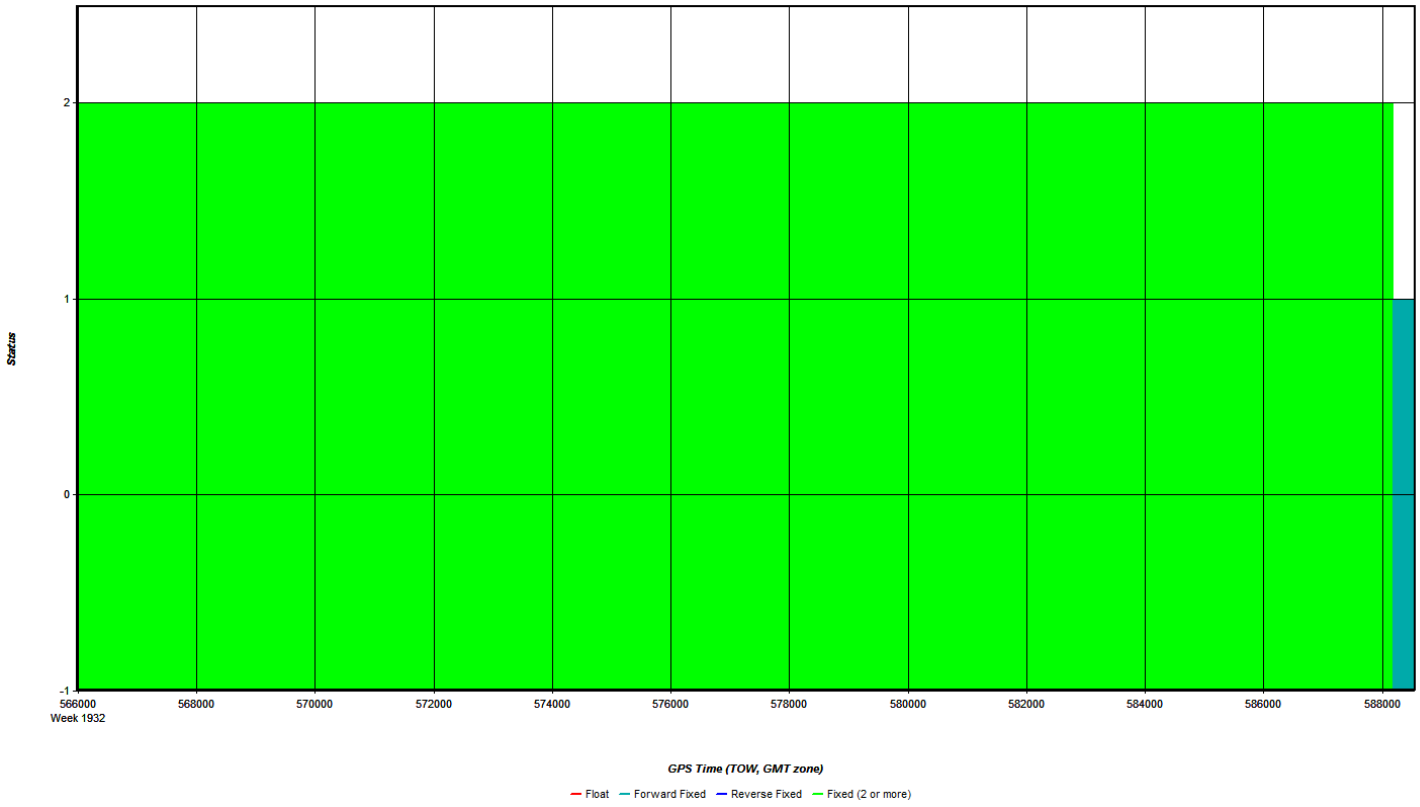

Estimated StdDev (m)
0.021
0.020
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
0.004
0.003
566000
Week 1932
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

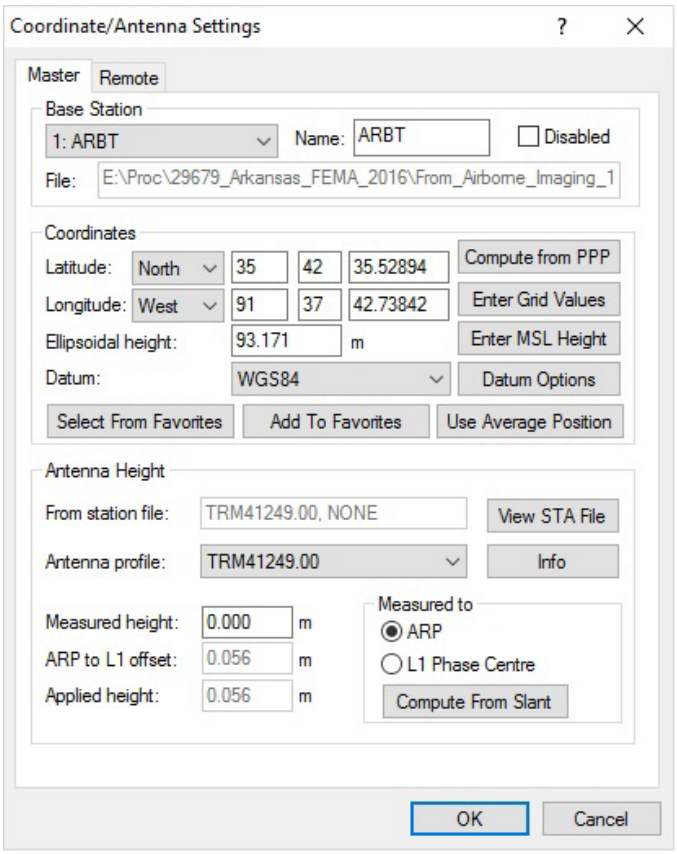

Roll & pitch (deg)
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
566000
Week 1932
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
566000
Week 1932
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.052
0.050
0.048
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
566000
Week 1932
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
-3.0
-3.5
-4.0
-4.5
-5.0
-5.5
-6.0
-6.5
-7.0
-7.5
-8.0
-8.5
566000
Week 1932
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
566000
Week 1932
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARBT
Name:
ARBT
Disabled
File:
E:\Proc\29679_Arkansas_FEMA_2016\From_Airborne_Imaging_1
Coordinates
Latitude:
North
35
42
35.52894
Compute from PPP
Longitude:
West
91
37
42.73842
Enter Grid Values
Ellipsoidal height:
93.171
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM41249.00, NONE
View STA File
Antenna profile:
TRM41249.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.056
m
Applied height:
0.056
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Julian Day 021	Flight A

LIDAR Flight Log

Date January 21 2017	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot O. Kamerman
Location Mountain View, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System **Leica ALS70**	
Unit 7207	
IMU **Honeywell Micro IRS**	
GPS Rx **NovAtel OEMV**	
Roll Comp.	
Data Drive 2	

Additional Notes
Wind:
Temp:
Pressure:
Clouds:
Visibility:

Aircraft Block Time		
Engine On 13:08	Ramp Out	Takeoff 13:23
Engine Off 19:30	Ramp In	Landing 19:19
Total 6.4 **hrs**	Total **hrs**	Total 5.9 **hrs**

Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

Static Alignment	GPS Time	
	Start	End
Pre Mission	13:15	13:20
Post Mission	19:23	19:28

Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 170121_
IMU		Figure 8	13:36	13:42			IMU Wake Up
061		090	13:42:20	14:01:13			
062		270	14:04:41	14:25:36			
063		090	14:28:47	14:47:54			
064		270	14:51:18	15:11:51			
065		090	15:15:02	15:34:01			
066		270	15:37:37	15:57:37			
067		090	16:01:55	16:21:02			
068		270	16:24:27	16:44:08			
069		090	16:47:26	17:06:37			
070		270	17:10:08	17:26:41			
071		090	17:29:04	17:42:52			
072		270	17:46:20	18:00:54			
073		090	18:04:22	18:18:34			
074		270	18:21:58	18:36:31			

Pg 1 of 2

Julian Day 021	Flight A

LIDAR Flight Log

Date January 21 2017	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot O. Kamerman
Location Mountain View, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System	**Leica ALS70**
Unit	7207
IMU	**Honeywell Micro IRS**
GPS Rx	**NovAtel OEMV**
Roll Comp.	
Data Drive	2

Additional Notes

Wind:

Temp:

Pressure:

Clouds:

Visibility:

Aircraft Block Time		
Engine On 13:08	Ramp Out	Takeoff 13:23
Engine Off 19:30	Ramp In	Landing 19:19
Total 6.4 **hrs**	Total **hrs**	Total 5.9 **hrs**

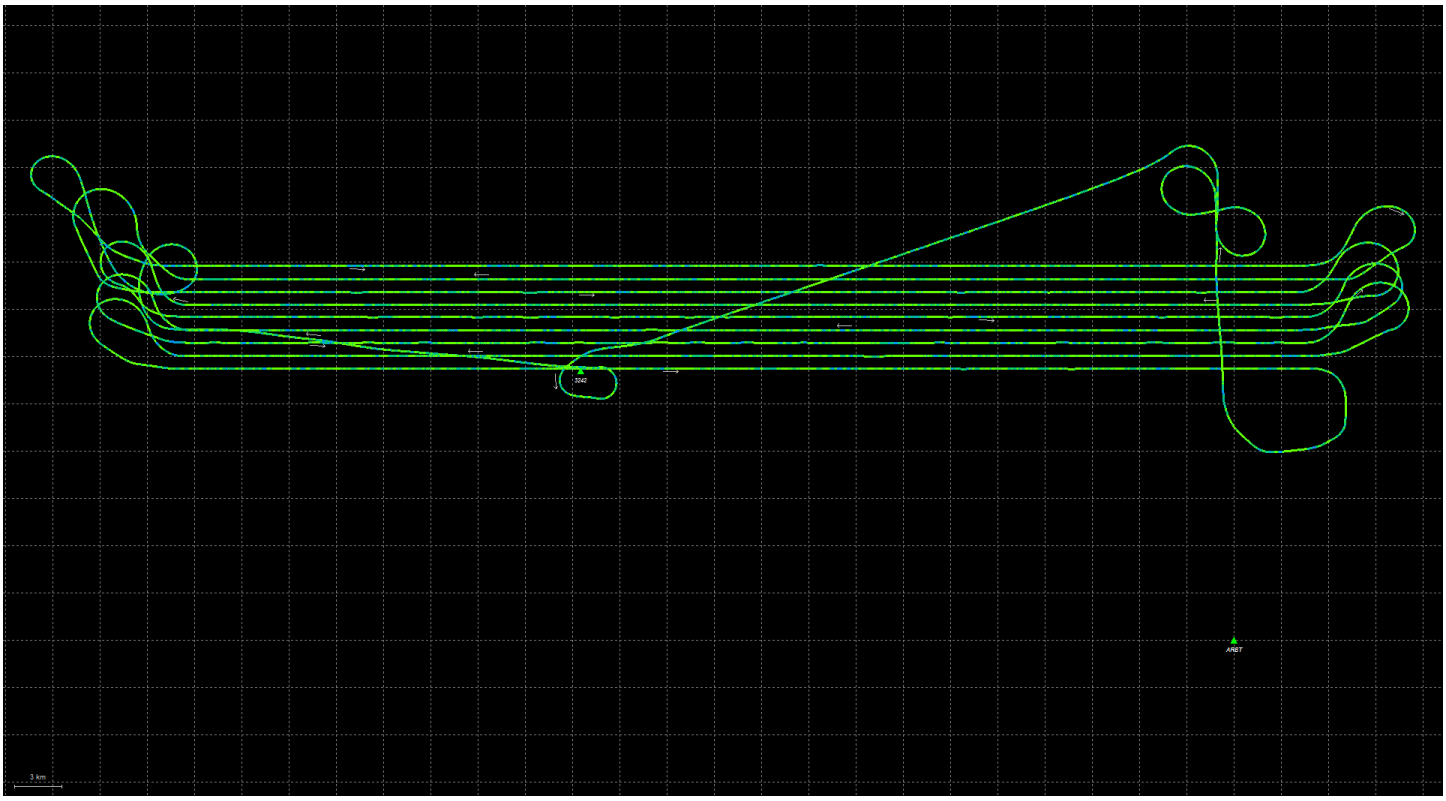
Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

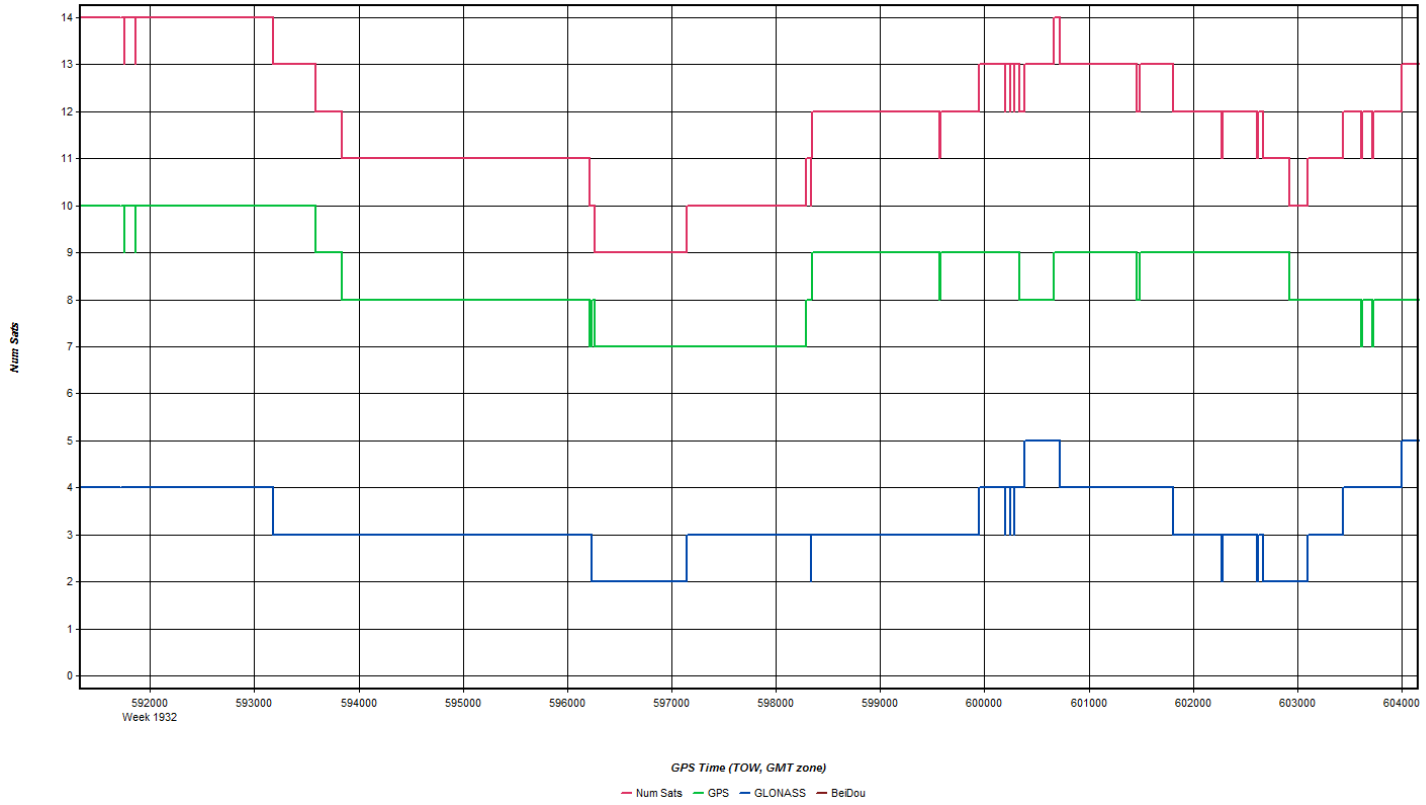
Static Alignment	GPS Time	
	Start	End
Pre Mission	13:15	13:20
Post Mission	19:23	19:28

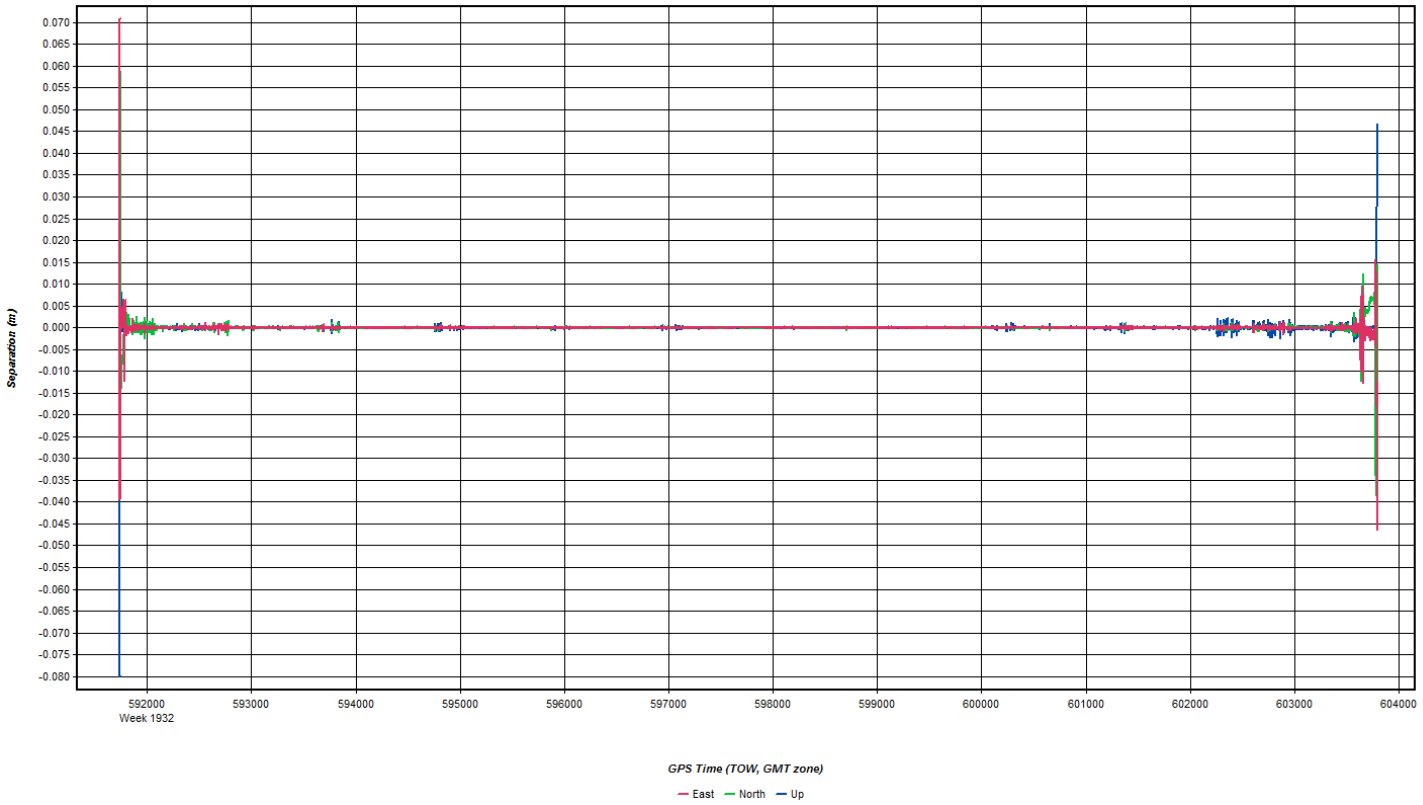
Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 170121_
075		090	18:39:56	18:53:51			
X-Tie		001	18:57:31	19:00:20			Cross Tie lines 075-061 south to north
IMU		Figure 8	19:01	19:06			IMU Maneuver
							Clouds and ceilings continuing to hold – will attempt
							a second flight.

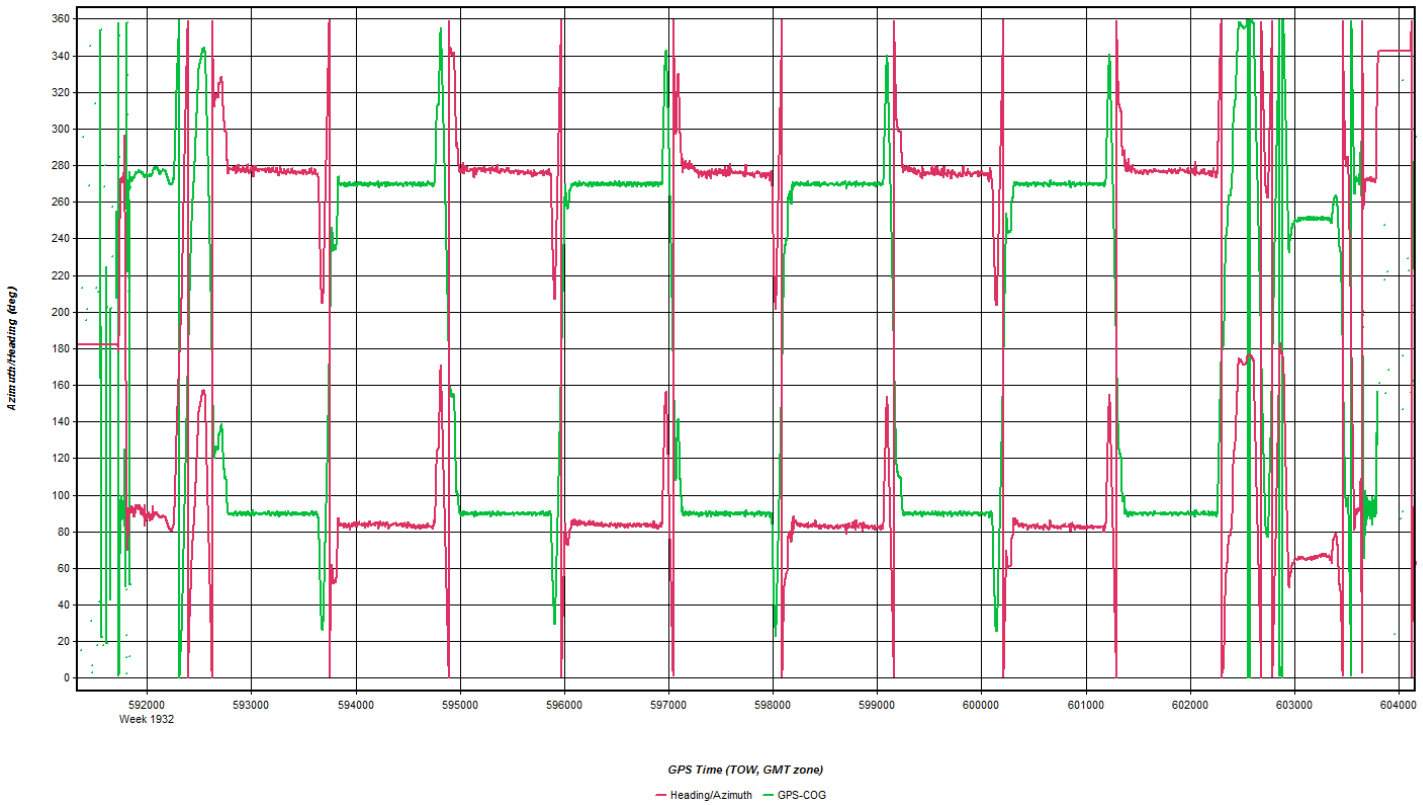
Pg 2 of 2

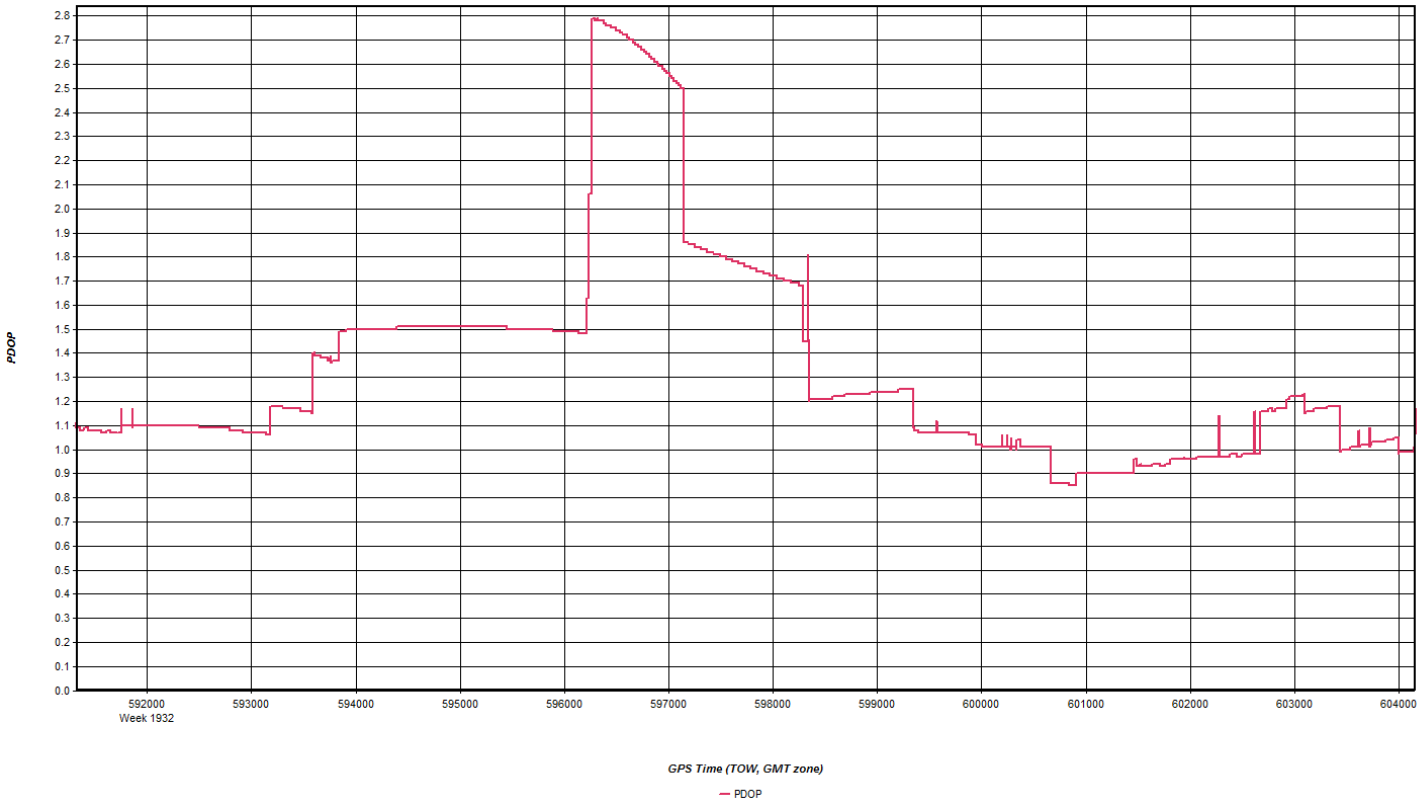
Jan 21, 2017-B (C-GKSI, SN7207)

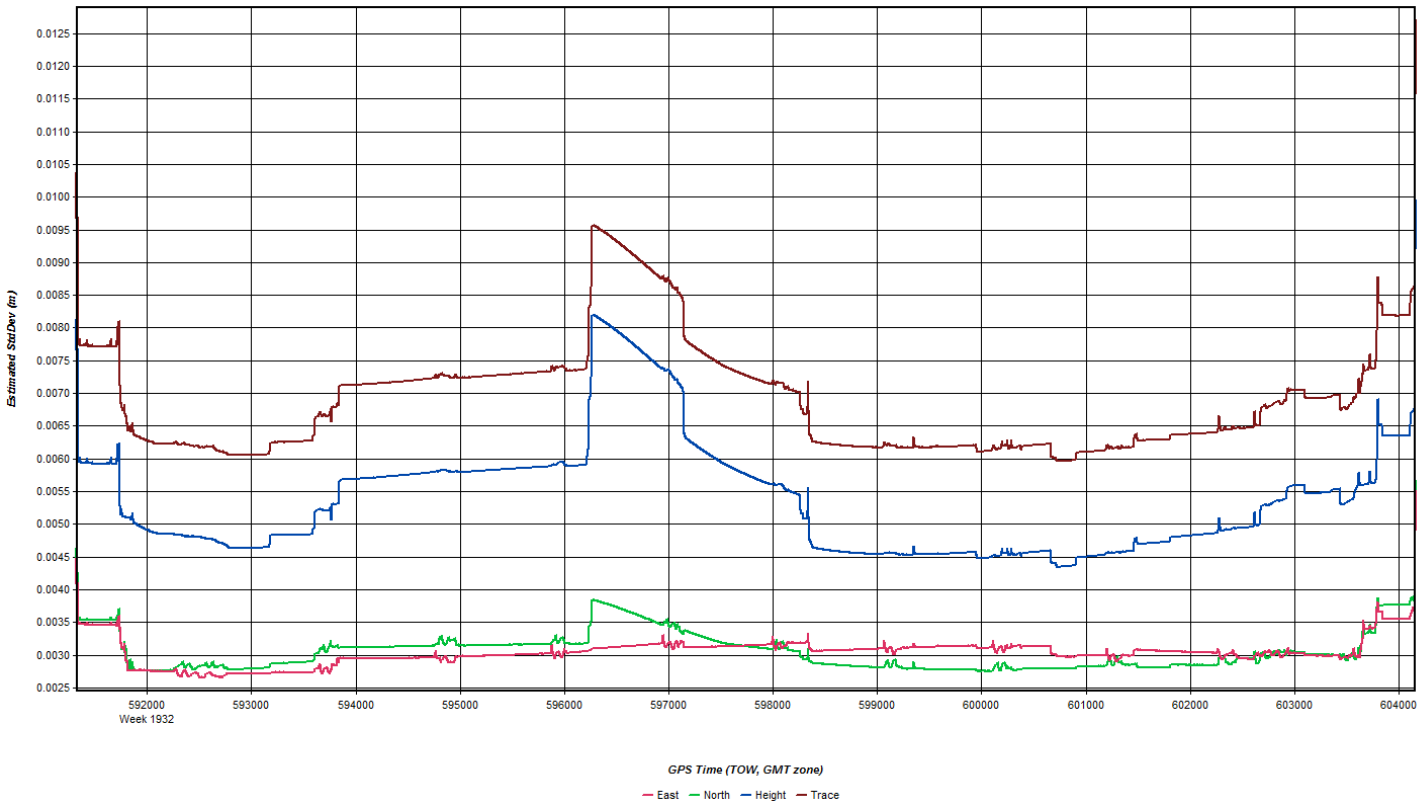

3342
AR87
3 km

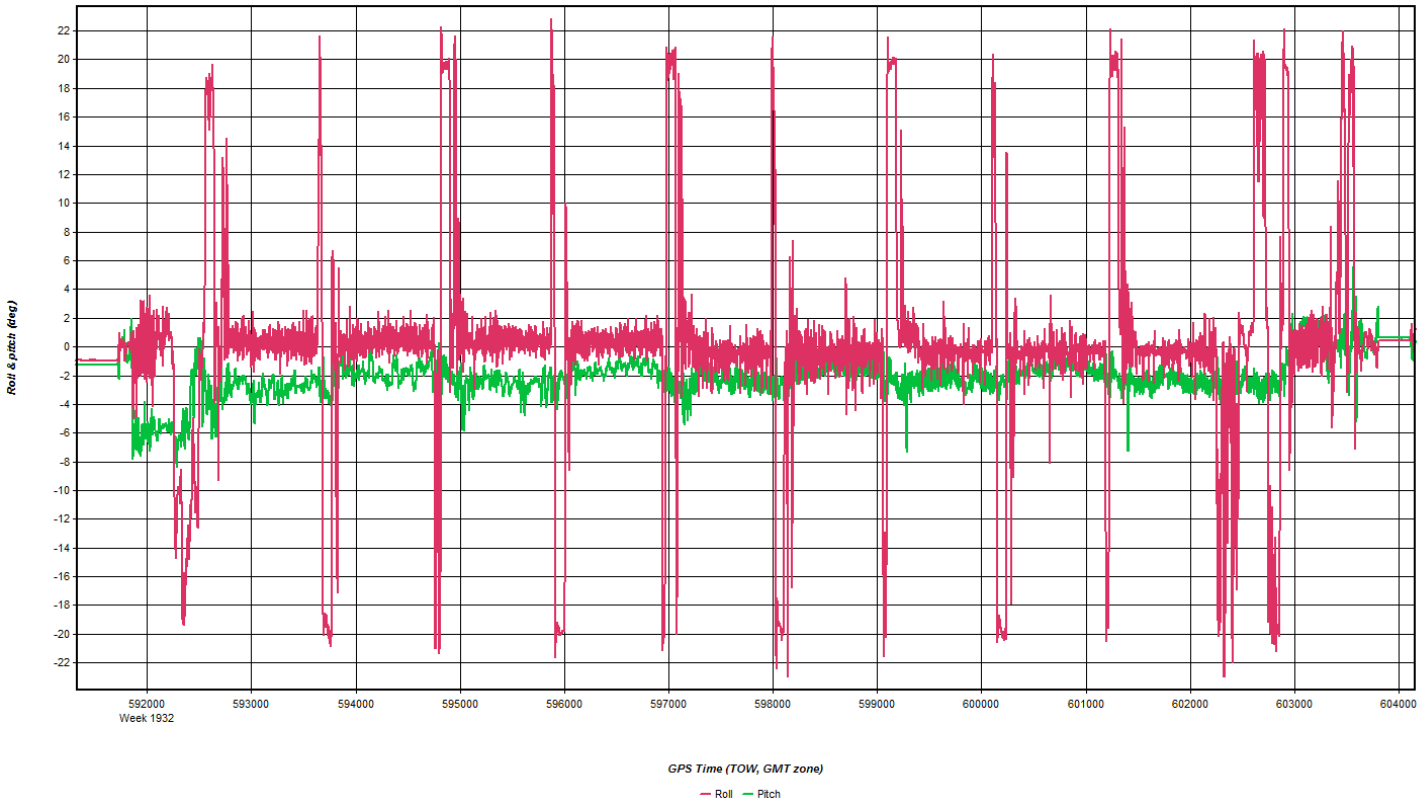

Num Sats
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
592000
Week 1932
593000
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

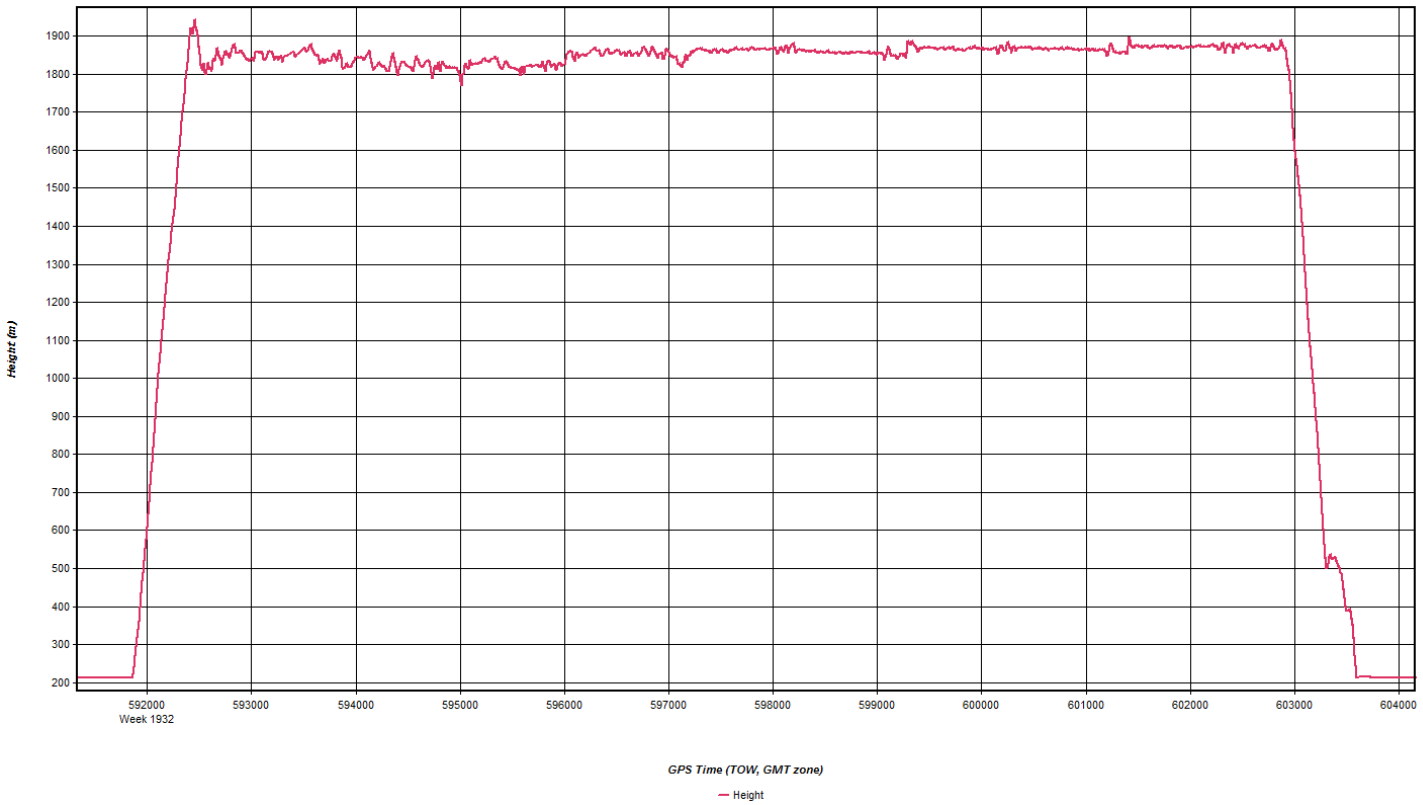

Separation (m)
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
-0.055
-0.060
-0.065
-0.070
-0.075
-0.080
592000
Week 1932
593000
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
GPS Time (TOW, GMT zone)
East
North
Up


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
592000
Week 1932
593000
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

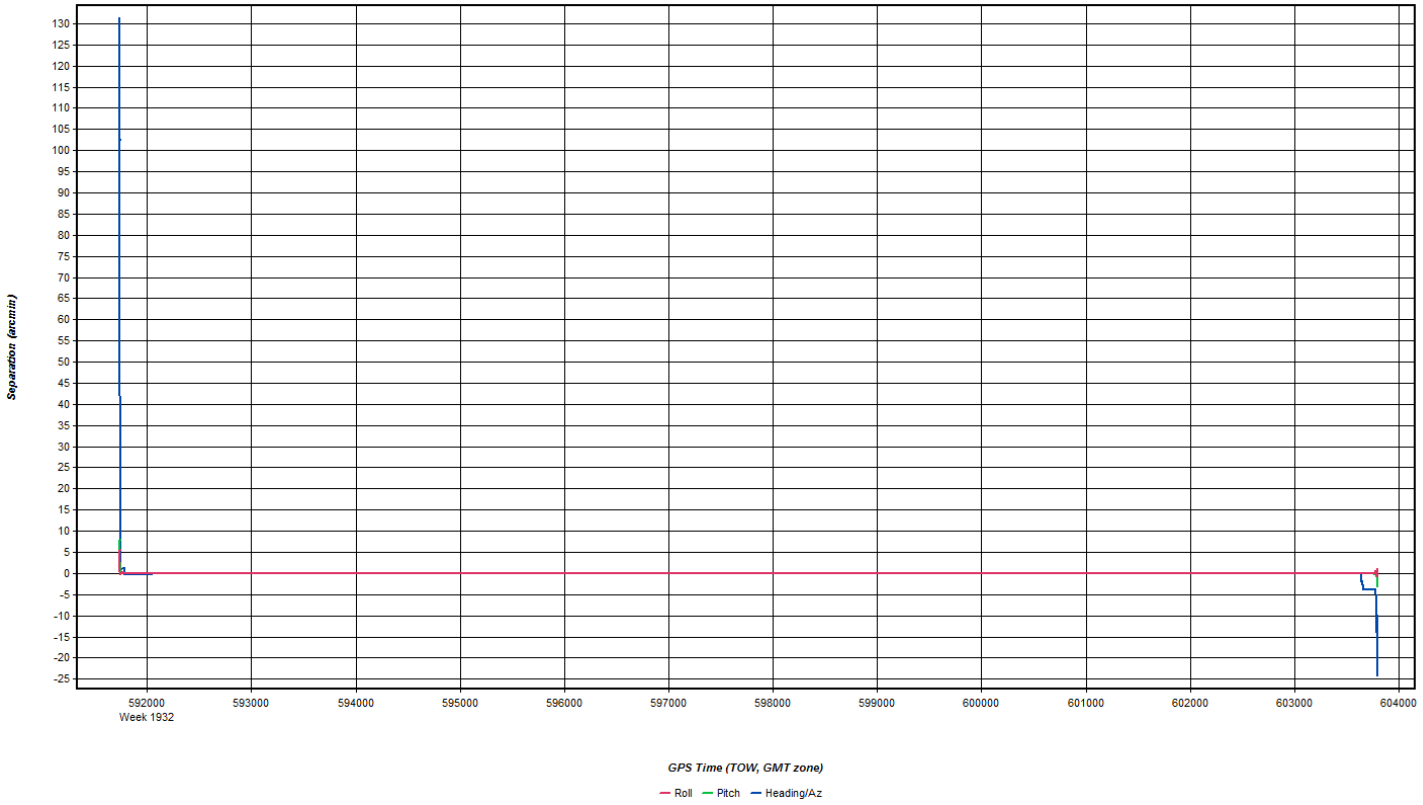

PDOP
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
592000
Week 1932
593000
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
GPS Time (TOW, GMT zone)
PDOP

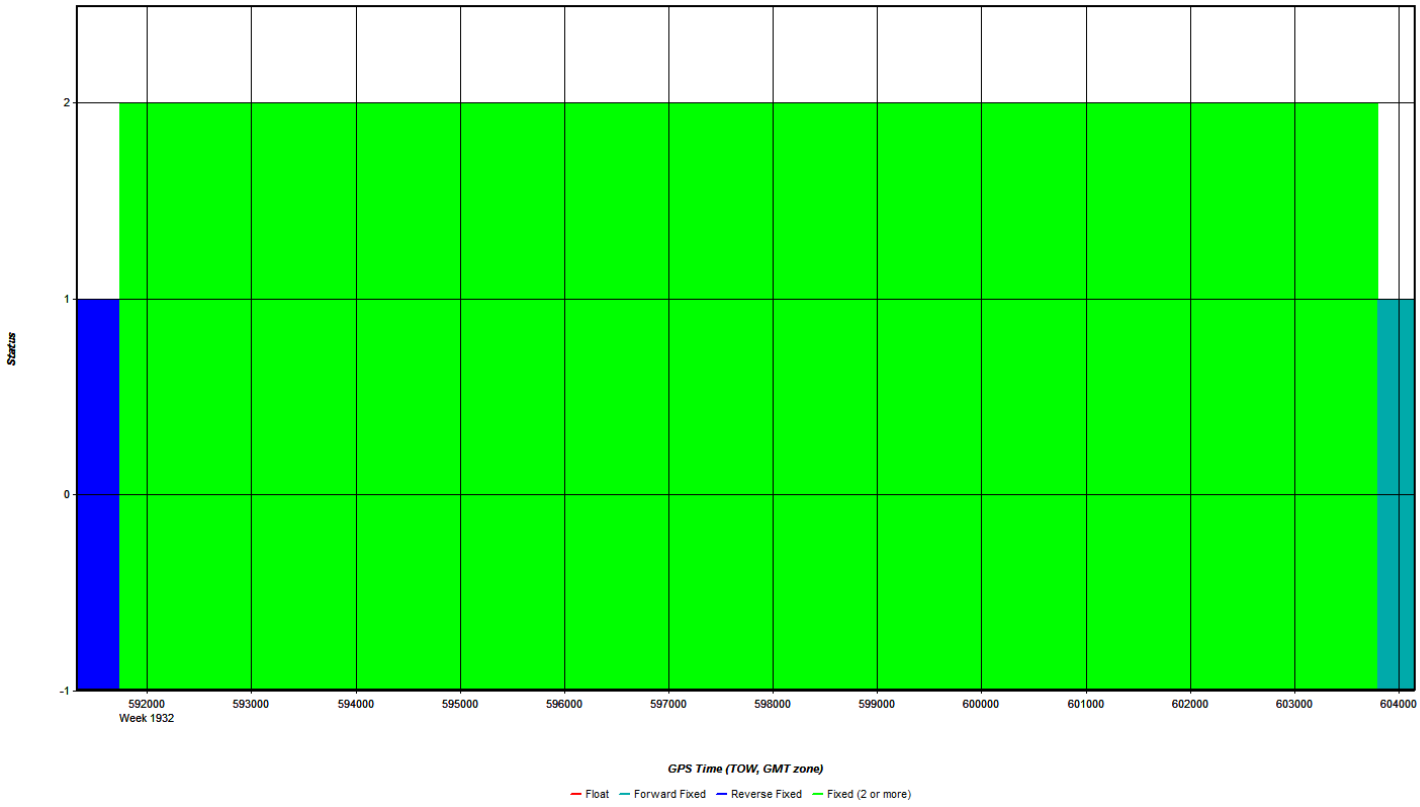

Estimated StdDev (m)
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
592000
Week 1932
593000
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

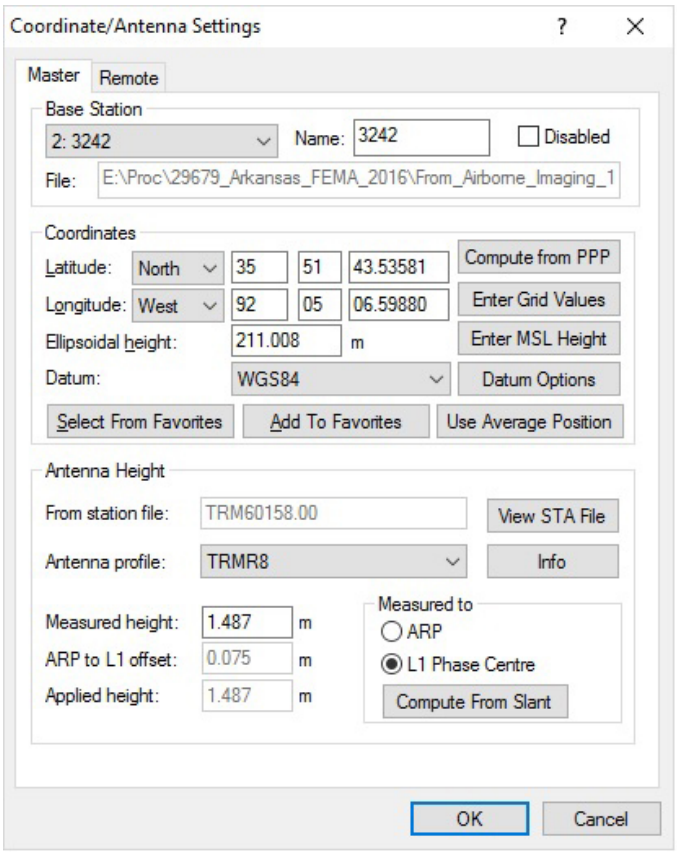

Roll & pitch (deg)
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
592000
Week 1932
593000
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
GPS Time (TOW, GMT zone)
Roll
Pitch

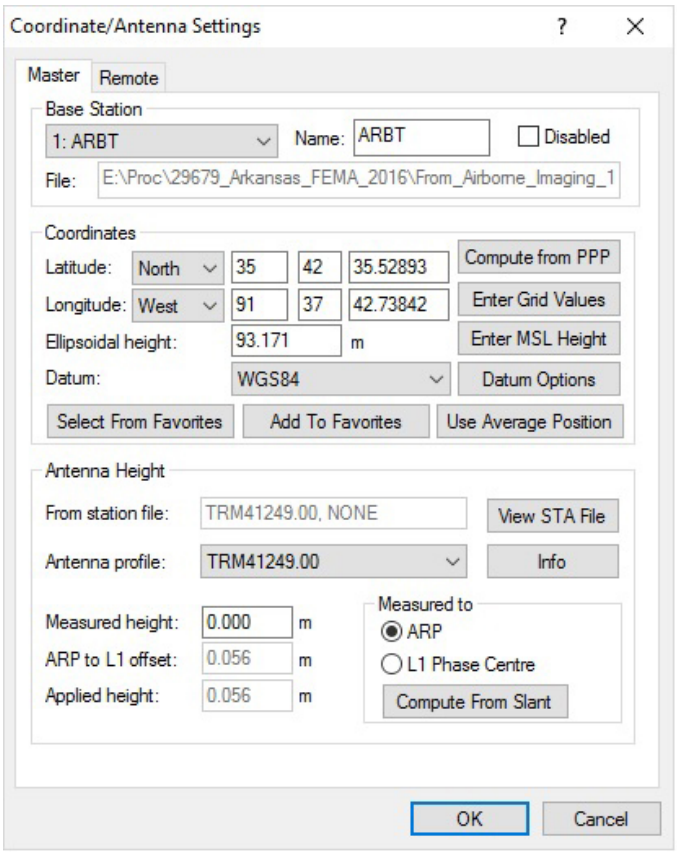

Height (m)
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
592000
Week 1932
593000
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
592000
Week 1932
593000
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
130
125
120
115
110
105
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
592000
Week 1932
593000
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
592000
Week 1932
593000
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
2: 3242
Name: 3242
Disabled
File: E:\Proc\29679_Arkansas_FEMA_2016\From_Airborne_Imaging_1
Coordinates
Latitude: North 35 51 43.53581
Longitude: West 92 05 06.59880
Ellipsoidal height: 211.008 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM60158.00
View STA File
Antenna profile: TRMR8
Info
Measured height: 1.487 m
ARP to L1 offset: 0.075 m
Applied height: 1.487 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARBT
Name: ARBT
Disabled
File: E:\Proc\29679_Arkansas_FEMA_2016\From_Airborne_Imaging_1
Coordinates
Latitude: North 35 42 35.52893
Longitude: West 91 37 42.73842
Ellipsoidal height: 93.171 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM41249.00, NONE
View STA File
Antenna profile: TRM41249.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.056 m
Applied height: 0.056 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Julian Day 021	Flight B

LIDAR Flight Log

Date January 21 2017	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot O. Kamerman
Location Mountain View, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System **Leica ALS70**	
Unit 7207	
IMU **Honeywell Micro IRS**	
GPS Rx **NovAtel OEMV**	
Roll Comp.	
Data Drive 3	

Additional Notes

Wind:

Temp:

Pressure:

Clouds:

Visibility:

Aircraft Block Time		
Engine On 20:10	Ramp Out	Takeoff 20:24
Engine Off 23:50	Ramp In	Landing 23:42
Total 3.7 **hrs**	Total **hrs**	Total 3.3 **hrs**

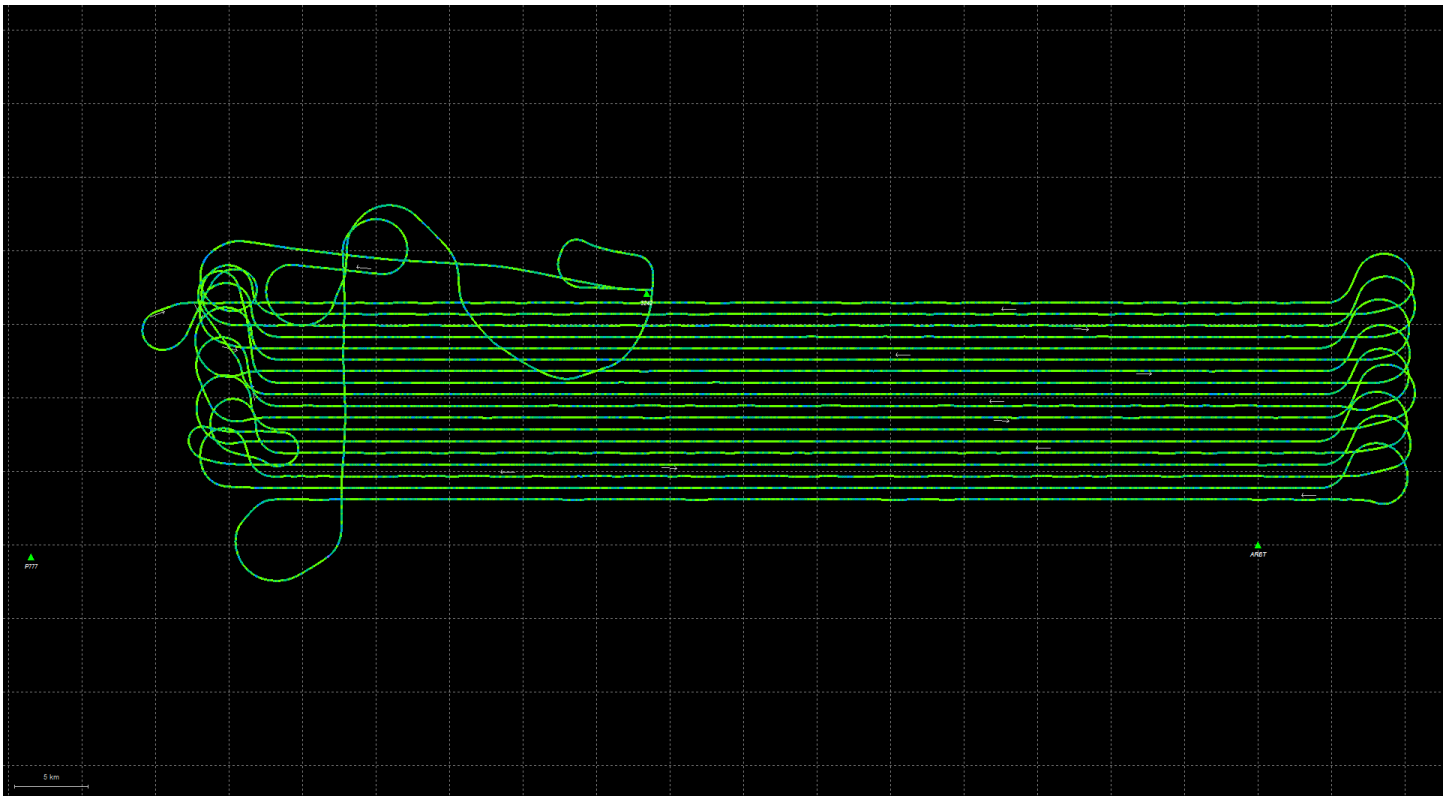
Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

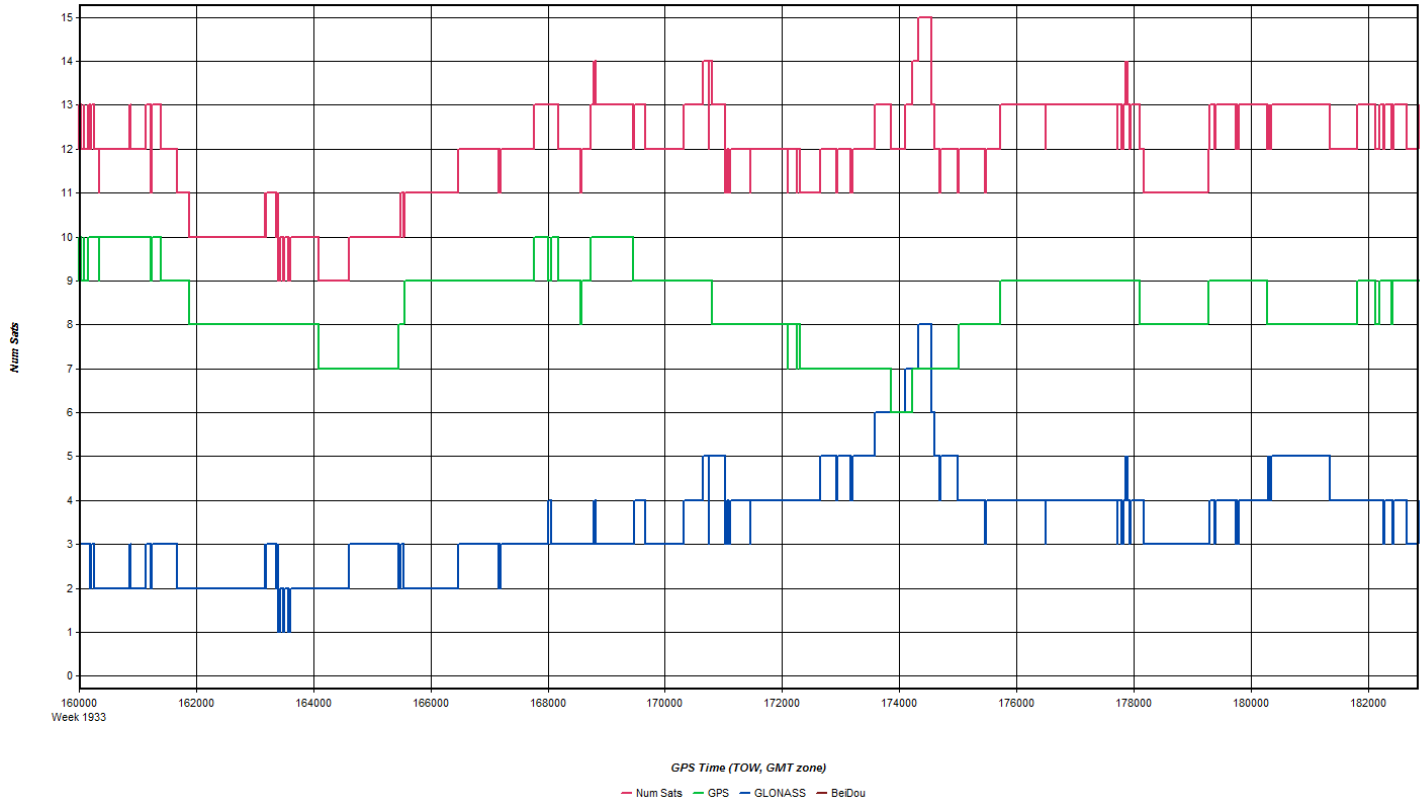
Static Alignment	GPS Time	
	Start	End
Pre Mission	20:16	20:21
Post Mission	23:43	23:48

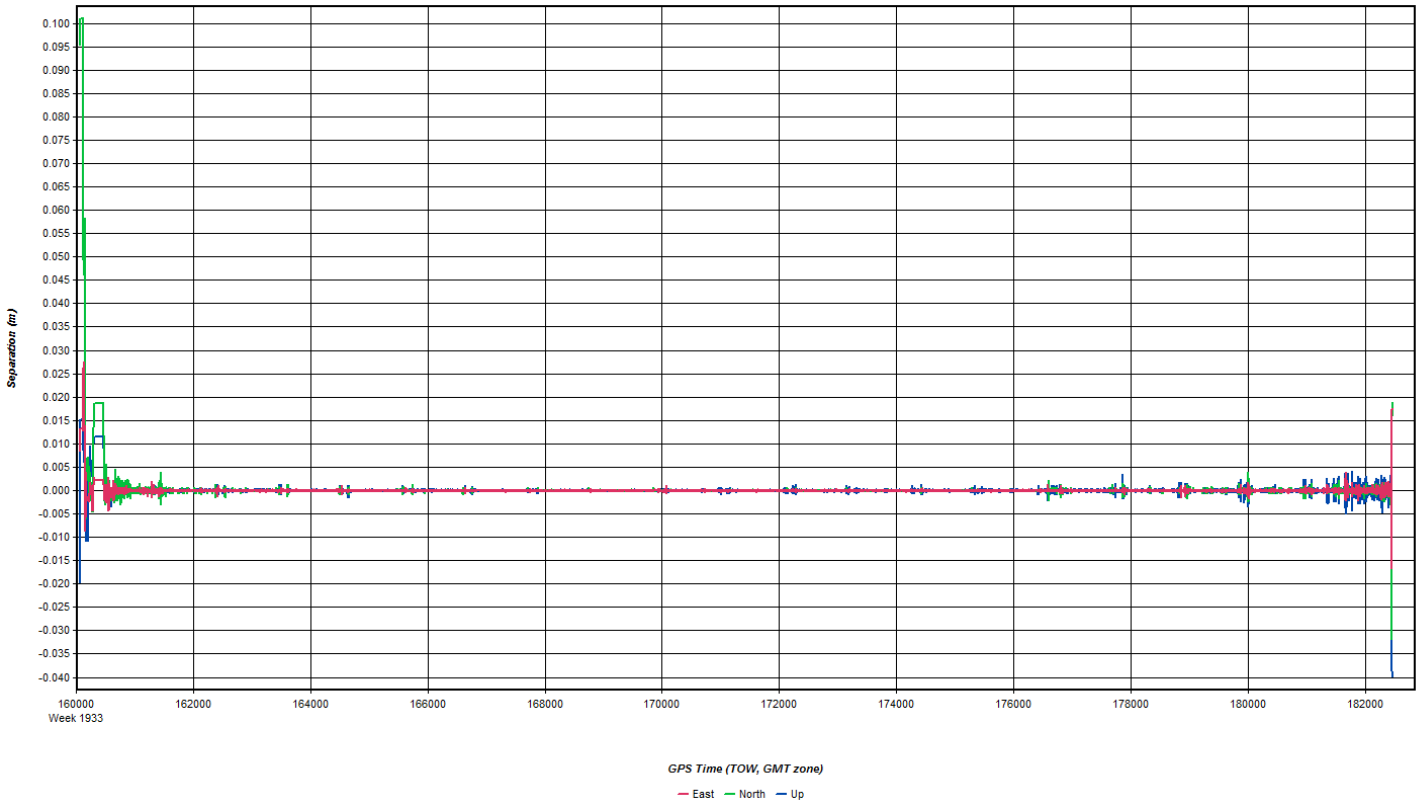
Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 170121_
IMU		Figure 8	20:31	20:38			IMU Wake Up
076		090	20:39:35	20:53:35			
077		270	20:57:31	21:12:17			
078		090	21:16:47	21:30:51			
079		270	21:34:14	21:48:35			
080		090	21:52:01	22:06:03			
081		270	22:09:41	22:23:57			
082		090	22:27:13	22:41:17			
083		270	22:45:04	22:59:26			
084		090	23:02:53	23:17:07			
XTie		001	23:20:58	23:23:02			Cross tie lines 084-076 south to north
IMU		Figure 8	23:23	23:28			IMU Manouver

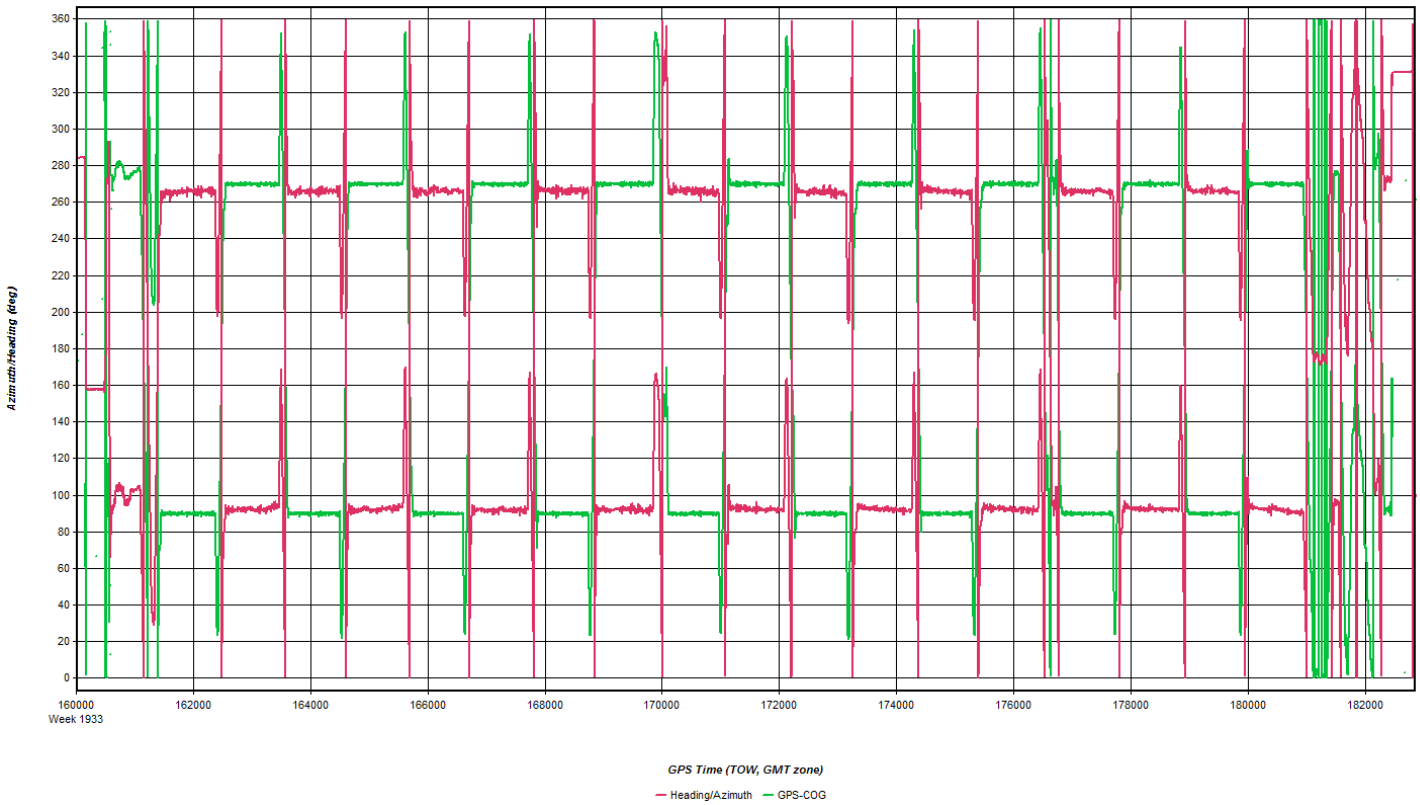
Pg 1 of 1

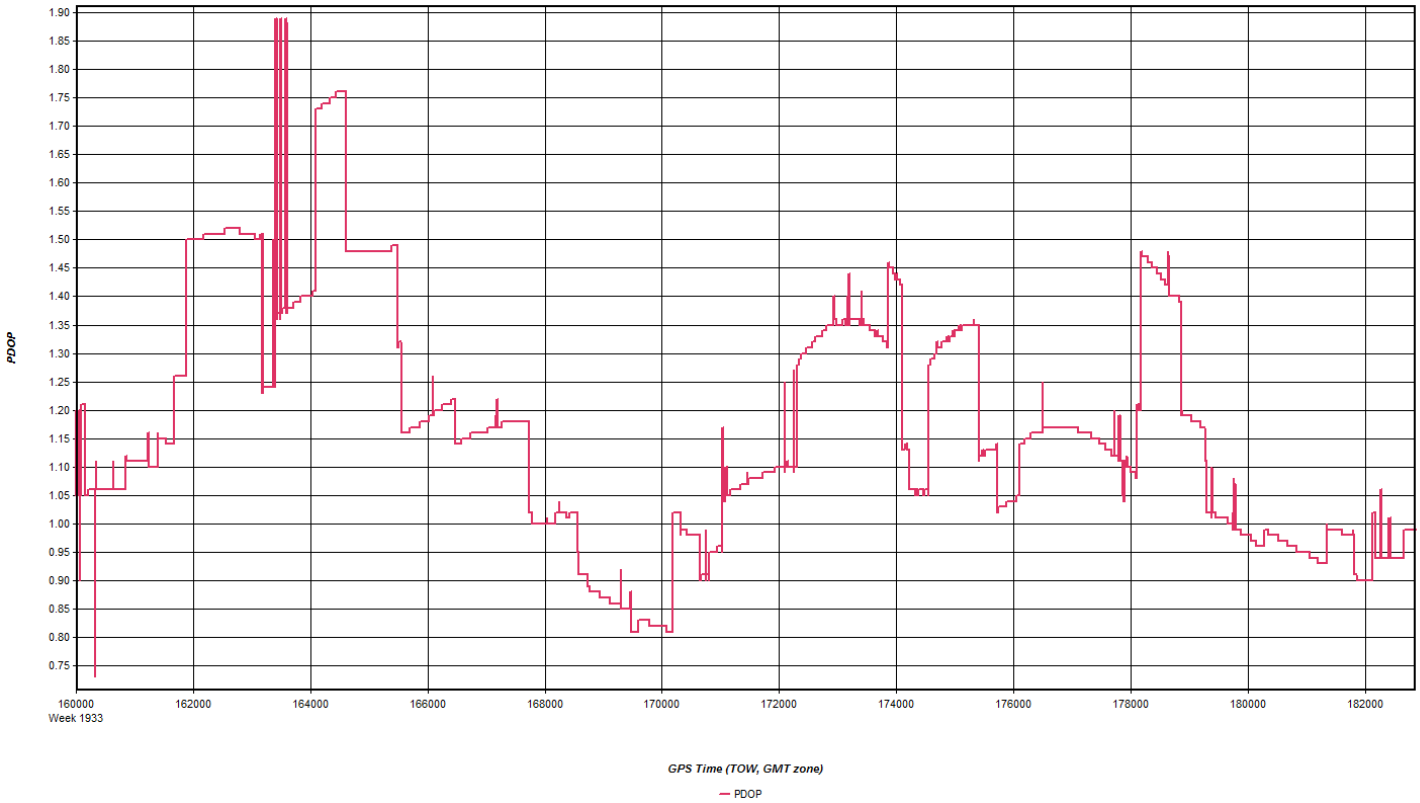
Jan 23, 2017-A (C-GKSI, SN7207)

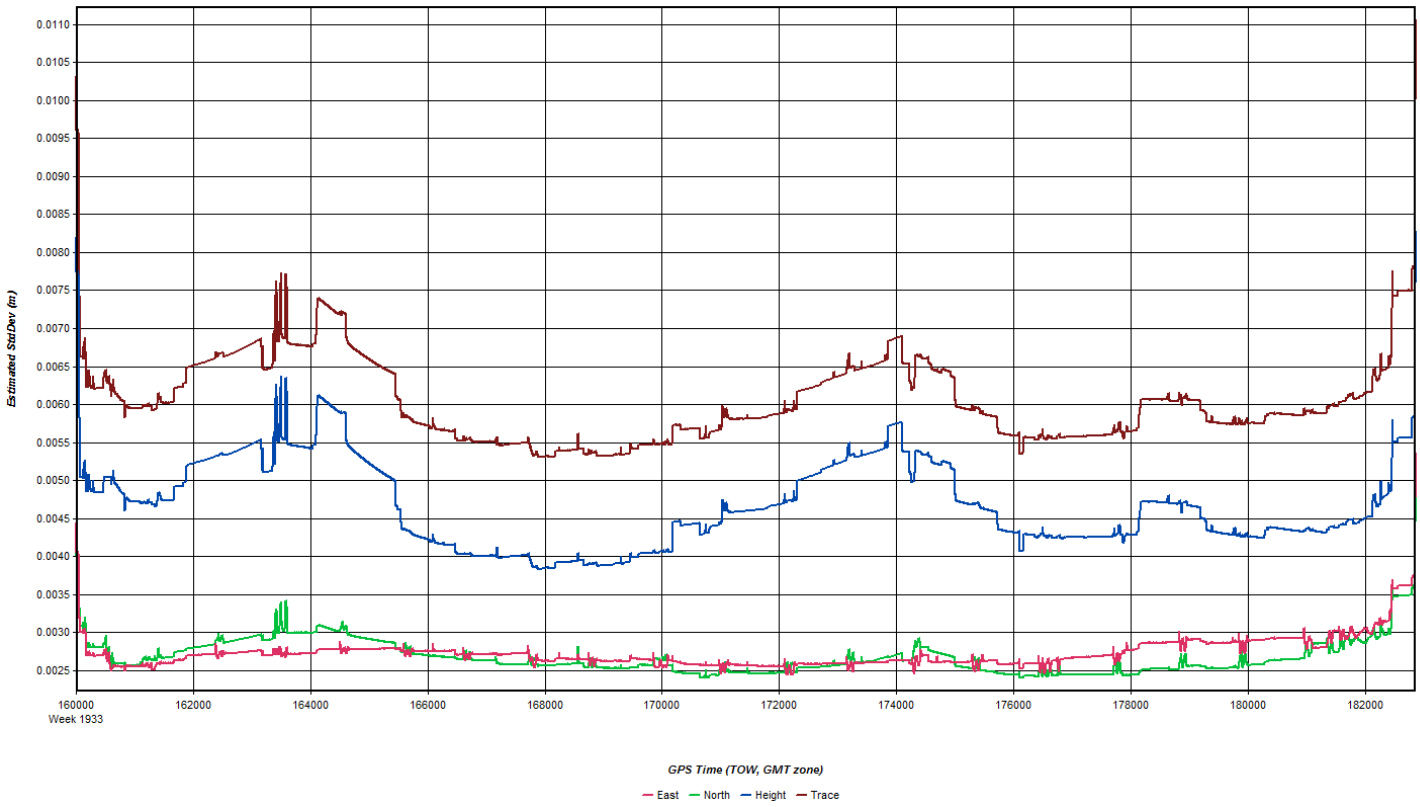

PT77
ARET
5 km

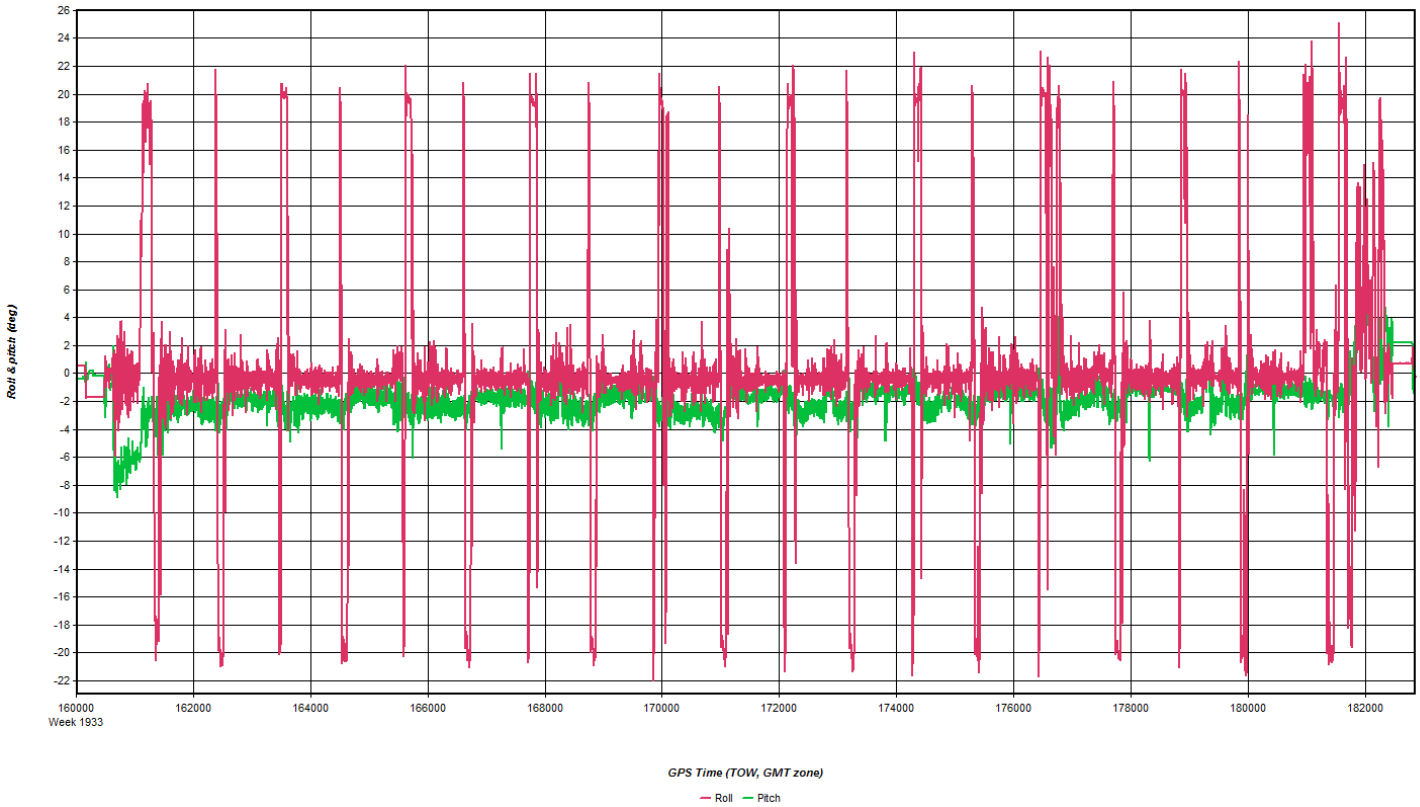

Num Sats
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
160000
Week 1933
162000
164000
166000
168000
170000
172000
174000
176000
178000
180000
182000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

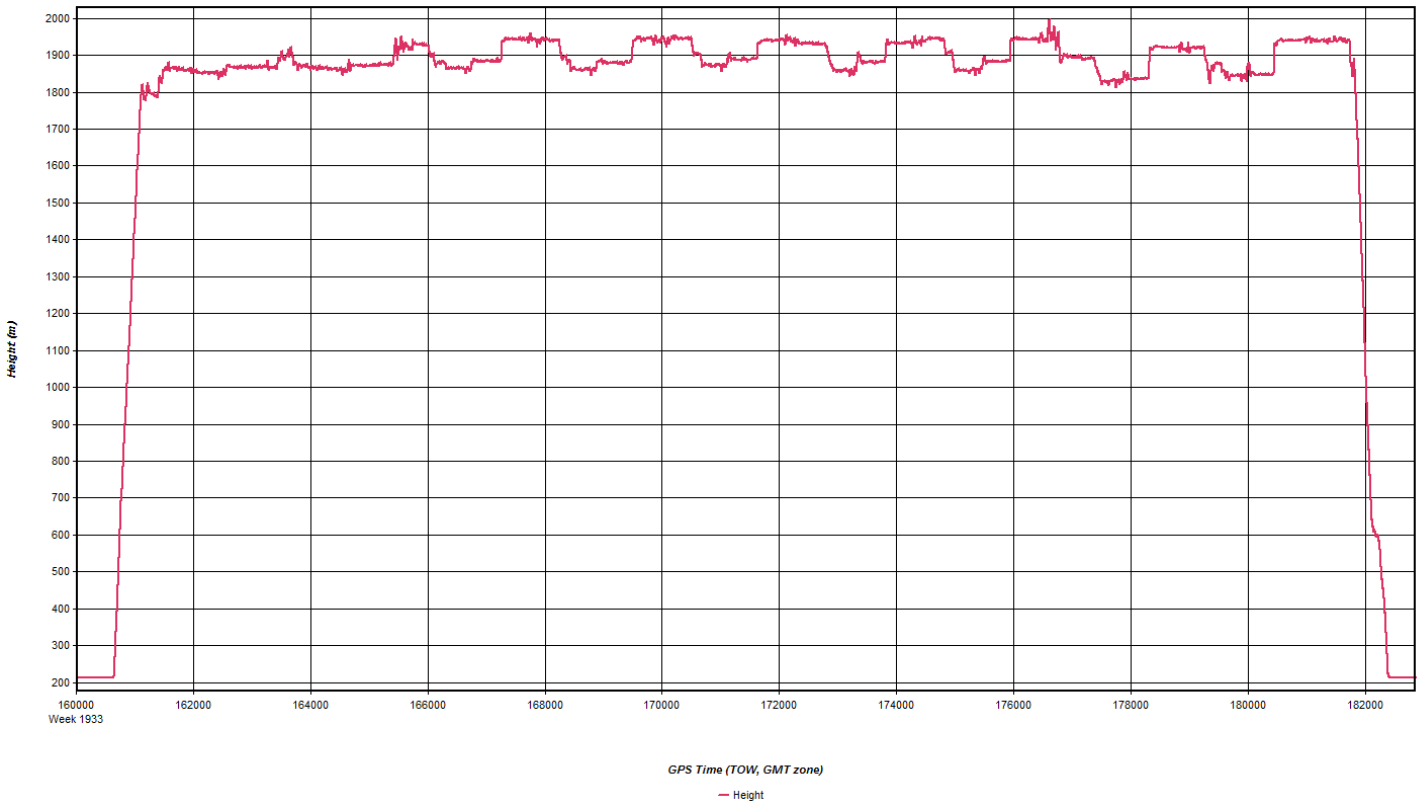

Separation (m)
0.100
0.095
0.090
0.085
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
160000
Week 1933
162000
164000
166000
168000
170000
172000
174000
176000
178000
180000
182000
GPS Time (TOW, GMT zone)
East
North
Up

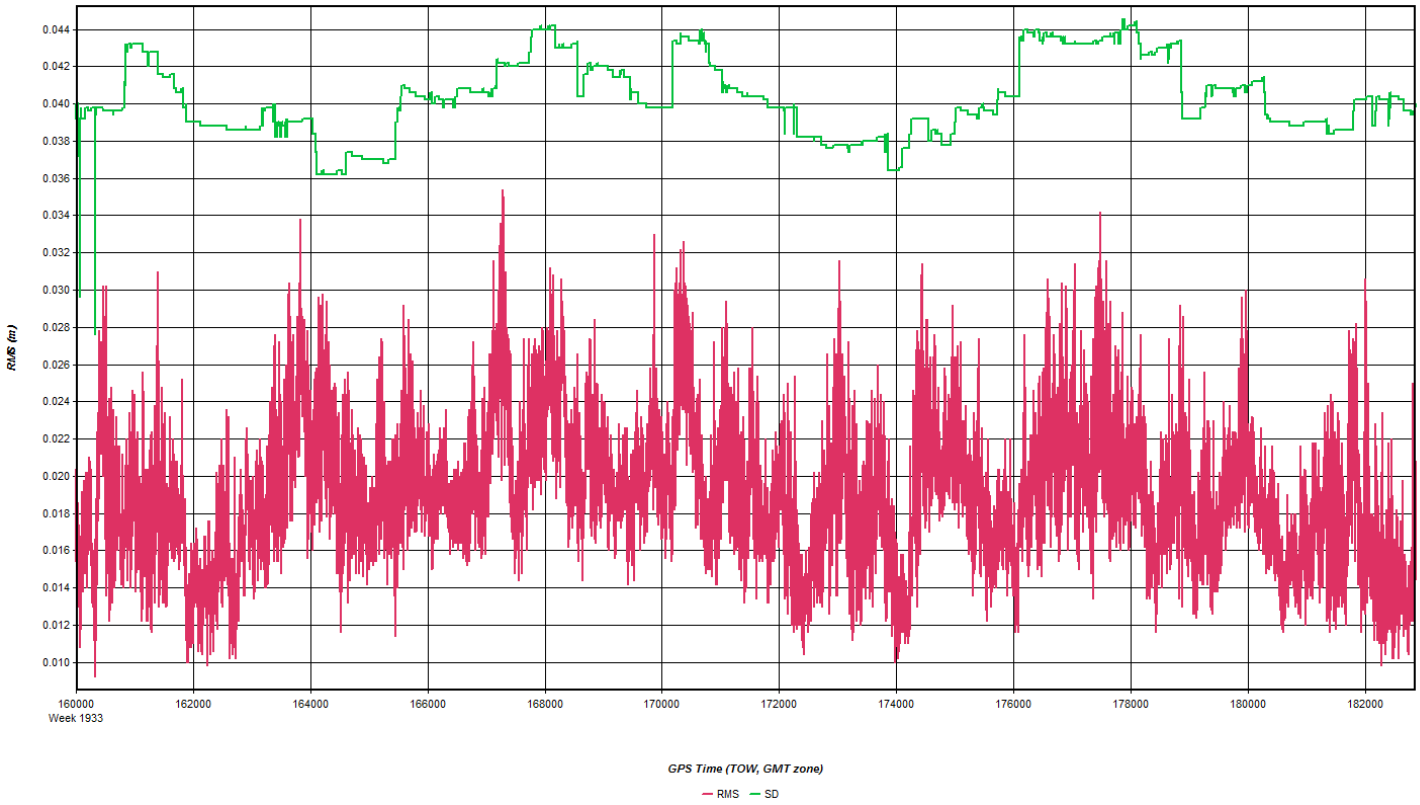

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
160000
Week 1933
162000
164000
166000
168000
170000
172000
174000
176000
178000
180000
182000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


PDOP
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
160000
Week 1933
162000
164000
166000
168000
170000
172000
174000
176000
178000
180000
182000
GPS Time (TOW, GMT zone)
PDOP

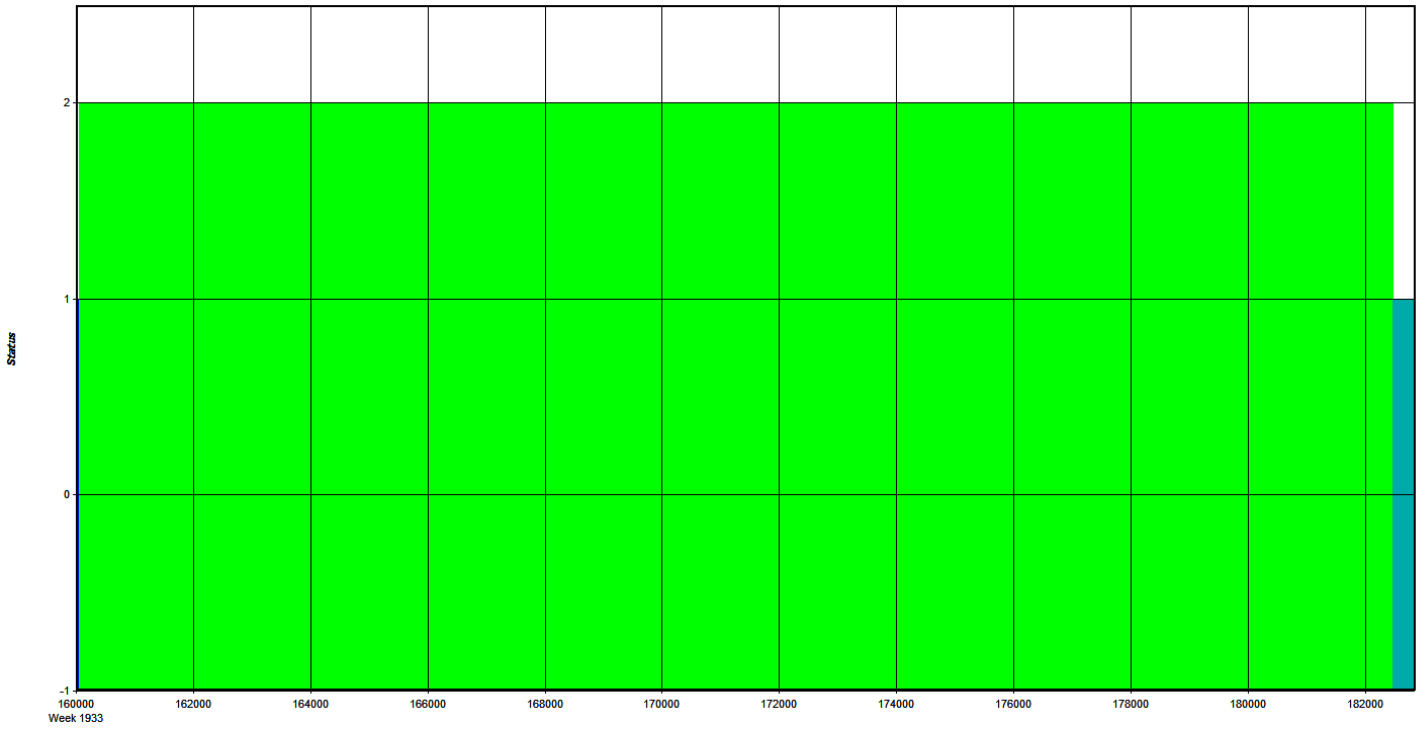

Estimated StdDev (m)
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
160000
Week 1933
162000
164000
166000
168000
170000
172000
174000
176000
178000
180000
182000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

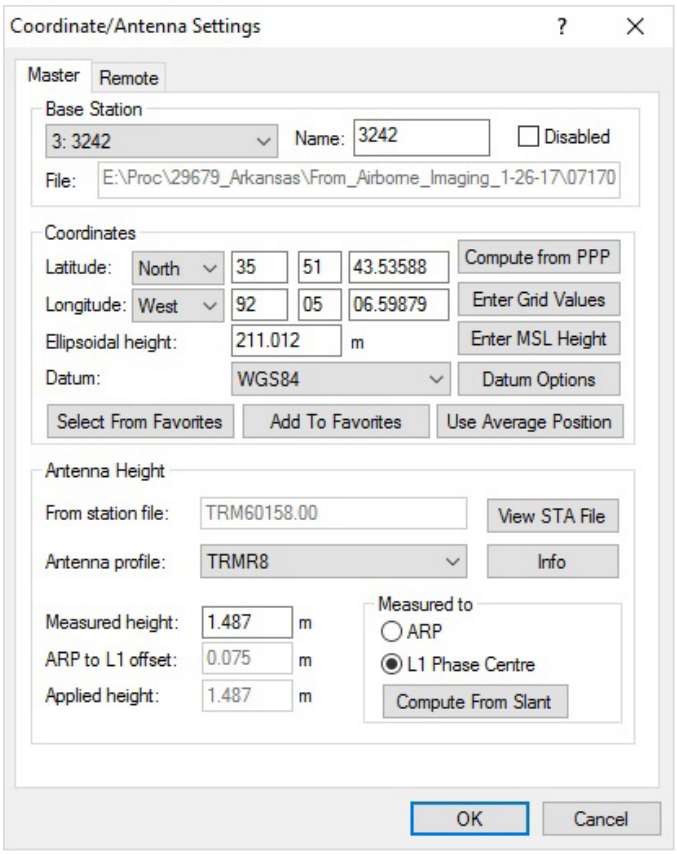

Roll & pitch (deg)
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
160000
Week 1933
162000
164000
166000
168000
170000
172000
174000
176000
178000
180000
182000
GPS Time (TOW, GMT zone)
Roll
Pitch

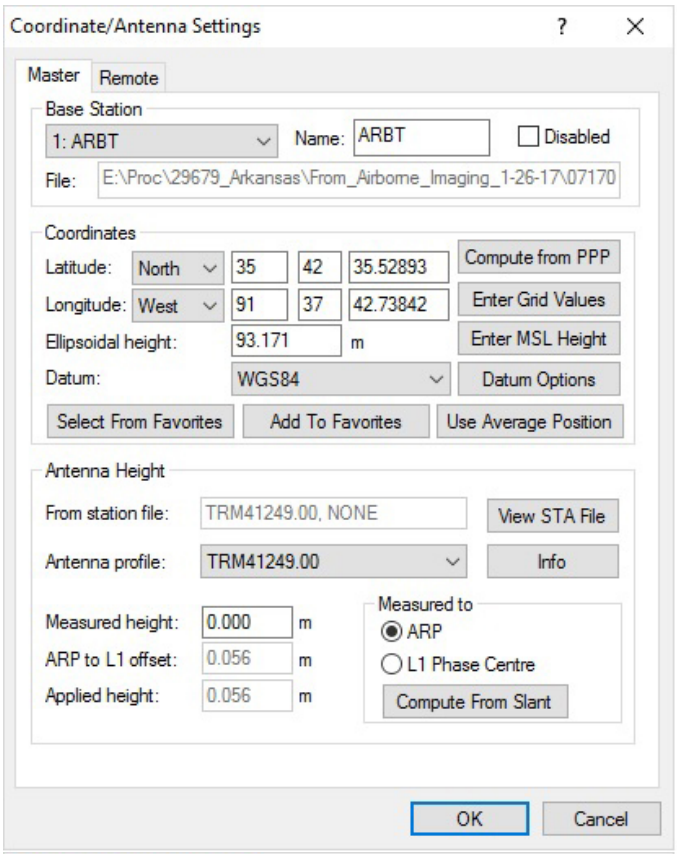

Height (m)
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
160000
Week 1933
162000
164000
166000
168000
170000
172000
174000
176000
178000
180000
182000
GPS Time (TOW, GMT zone)
Height

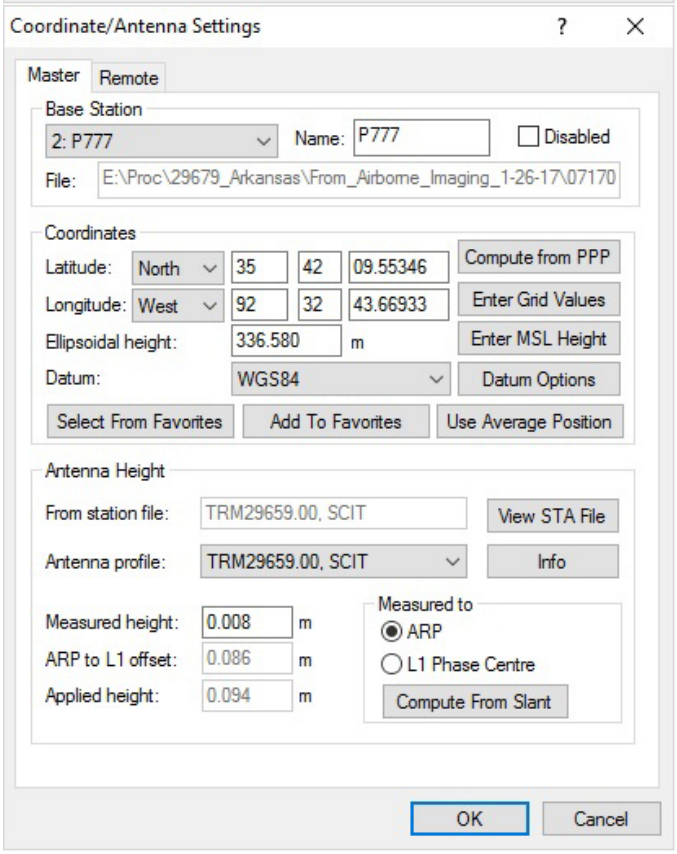

RMS (m)
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
160000
Week 1933
162000
164000
166000
168000
170000
172000
174000
176000
178000
180000
182000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
120
115
110
105
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
-5
-10
-15
-20
160000
Week 1933
162000
164000
166000
168000
170000
172000
174000
176000
178000
180000
182000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
160000
Week 1933
162000
164000
166000
168000
170000
172000
174000
176000
178000
180000
182000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
3: 3242
Name: 3242
Disabled
File: E:\Proc\29679_Arkansas\From_Airborne_Imaging_1-26-17\07170
Coordinates
Latitude: North 35 51 43.53588
Longitude: West 92 05 06.59879
Ellipsoidal height: 211.012 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM60158.00
View STA File
Antenna profile: TRMR8
Info
Measured height: 1.487 m
ARP to L1 offset: 0.075 m
Applied height: 1.487 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARBT
Name: ARBT
Disabled
File: E:\Proc\29679_Arkansas\From_Airborne_Imaging_1-26-17\07170
Coordinates
Latitude: North 35 42 35.52893
Longitude: West 91 37 42.73842
Ellipsoidal height: 93.171 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM41249.00, NONE
Antenna profile: TRM41249.00
View STA File
Info
Measured height: 0.000 m
ARP to L1 offset: 0.056 m
Applied height: 0.056 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: P777
Name: P777
Disabled
File: E:\Proc\29679_Arkansas\From_Airborne_Imaging_1-26-17\07170
Coordinates
Latitude: North 35 42 09.55346
Longitude: West 92 32 43.66933
Ellipsoidal height: 336.580 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM29659.00, SCIT
Antenna profile: TRM29659.00, SCIT
View STA File
Info
Measured height: 0.008 m
ARP to L1 offset: 0.086 m
Applied height: 0.094 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Julian Day 023	Flight A

LIDAR Flight Log

Date January 23 2017	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot O. Kamerman
Location Mountain View, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System **Leica ALS70**	
Unit 7207	
IMU **Honeywell Micro IRS**	
GPS Rx **NovAtel OEMV**	
Roll Comp.	
Data Drive 1	

Additional Notes
Wind:
Temp:
Pressure:
Clouds:
Visibility:

Aircraft Block Time		
Engine On 20:22	Ramp Out	Takeoff 20:36
Engine Off 02:48	Ramp In	Landing 02:39
Total 6.4 **hrs**	Total **hrs**	Total 6.1 **hrs**

Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

Static Alignment	GPS Time	
	Start	End
Pre Mission	20:29	20:34
Post Mission	02:41	02:46

Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 170123_
IMU		Figure 8	20:44	20:50			IMU Wake Up
085		090	20:51:58	21:05:57			
086		270	21:09:34	21:24:06			
087		090	21:27:16	21:41:14			
088		270	21:44:50	21:59:20			
089		090	22:02:36	22:16:22			
090		270	22:19:50	22:34:46			
091		090	22:38:03	22:51:53			
092		270	22:55:24	22:10:24			
093		090	23:15:01	23:29:09			
094		270	23:32:35	23:47:38			
095		090	23:51:21	00:05:20			
096		270	00:09:00	00:23:59			170124_ timestamp
097		090	00:27:16	00:41:05			
098		270	00:44:39	00:59:55			

Julian Day 023	Flight A

LIDAR Flight Log

Date January 23 2017	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot O. Kamerman
Location Mountain View, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System	**Leica ALS70**
Unit	7207
IMU	**Honeywell Micro IRS**
GPS Rx	**NovAtel OEMV**
Roll Comp.	
Data Drive	1

Additional Notes

Wind:

Temp:

Pressure:

Clouds:

Visibility:

Aircraft Block Time		
Engine On 20:22	Ramp Out	Takeoff 20:36
Engine Off 02:48	Ramp In	Landing 02:39
Total 6.4 **hrs**	Total **hrs**	Total 6.1 **hrs**

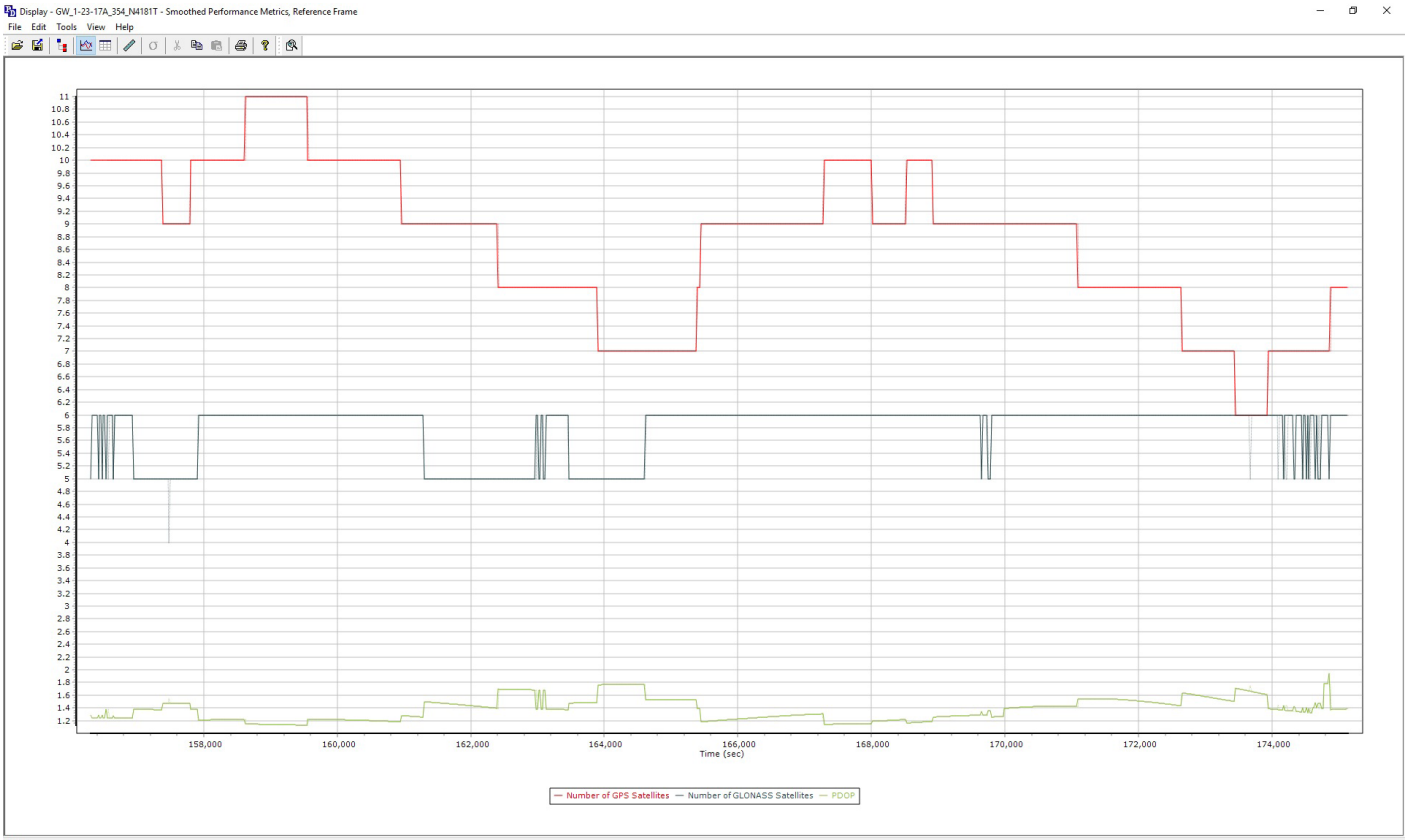
Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

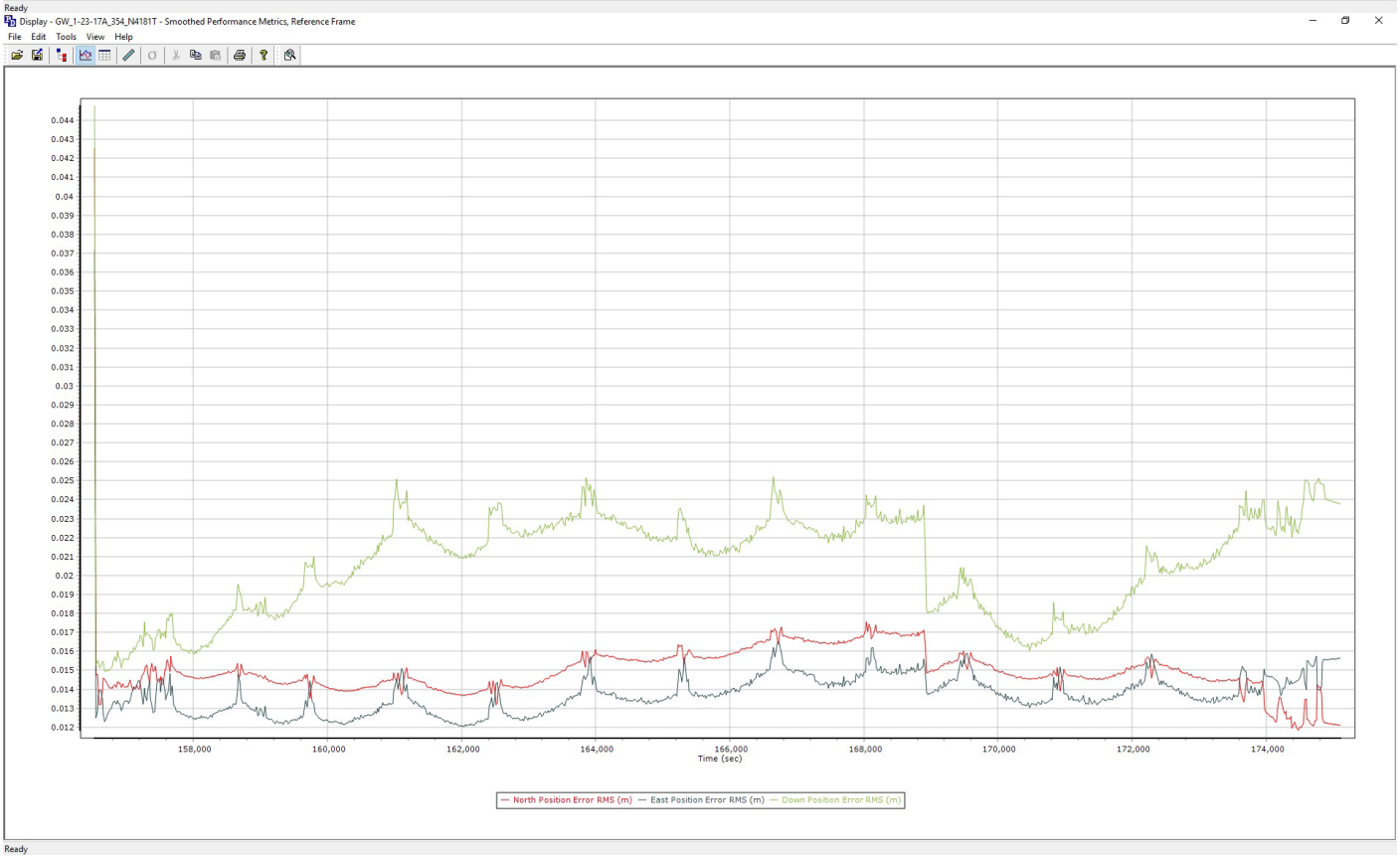
Static Alignment	GPS Time	
	Start	End
Pre Mission	20:29	20:34
Post Mission	02:41	02:46

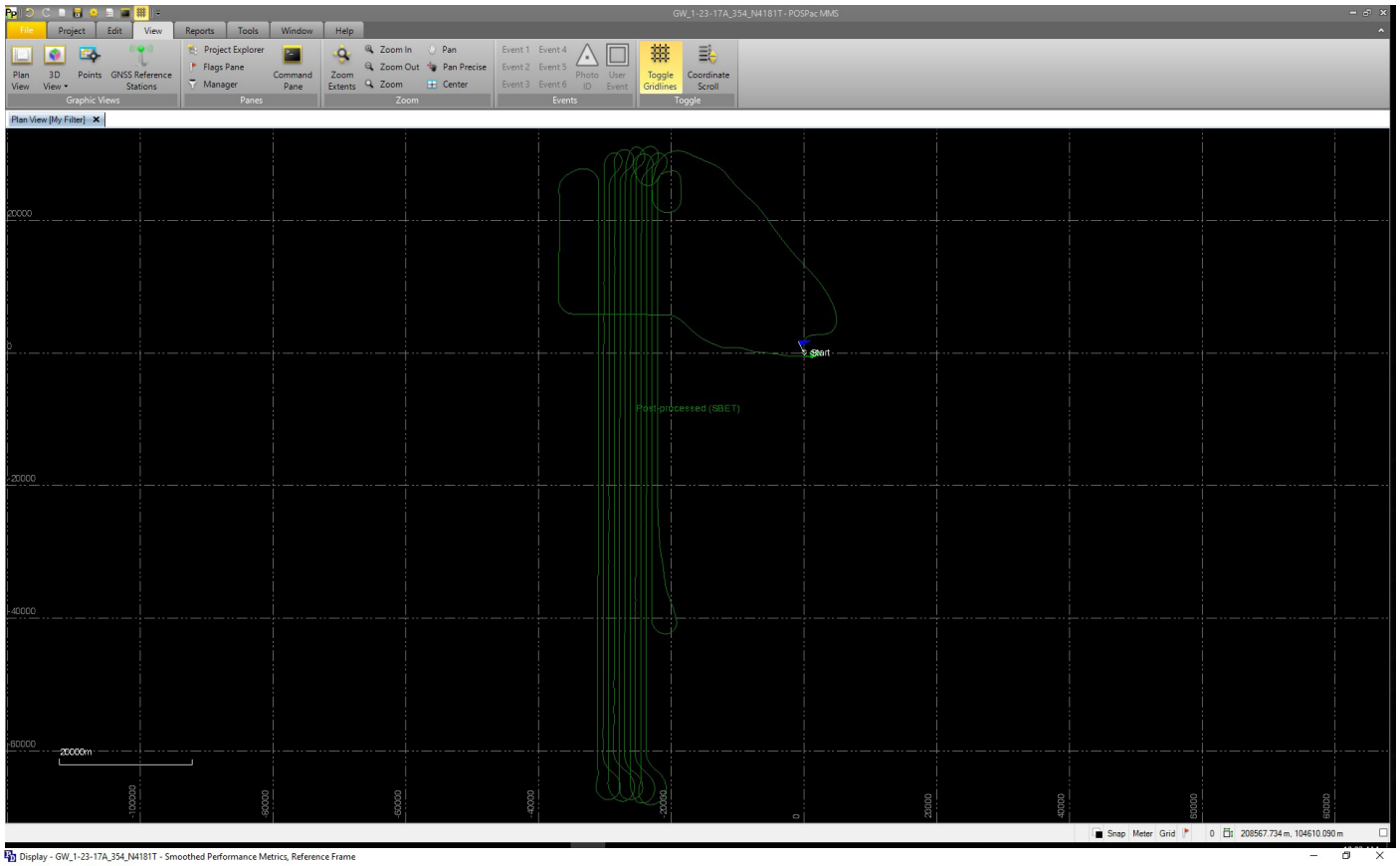
Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 170123_
099		090	01:02:57		01:03:00		Hit IP but not online at start – ignore file
--		--	01:03:46		01:04:00		Laser on in error – ignore file
099		090	01:07:15	01:21:03			
100		270	01:24:44	01:39:46			
101		090	01:42:57	01:56:54			
102		270	01:59:59	02:15:17			
XTie		001	02:18:19	02:22:02			Cross tie lines 102-085 south to north
IMU		Figure 8	02:22	02:27			IMU Maneuver

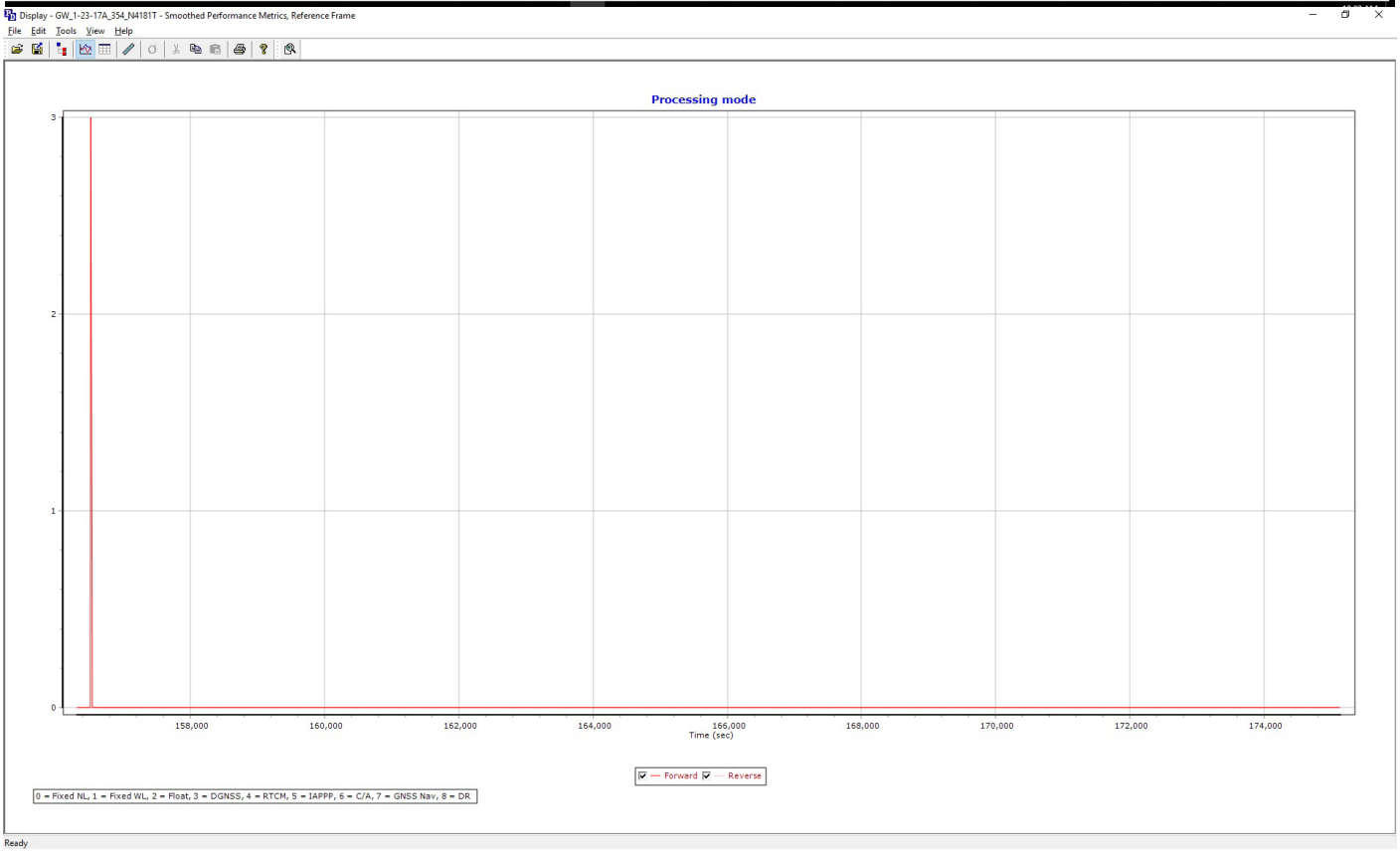
Pg 2 of 2

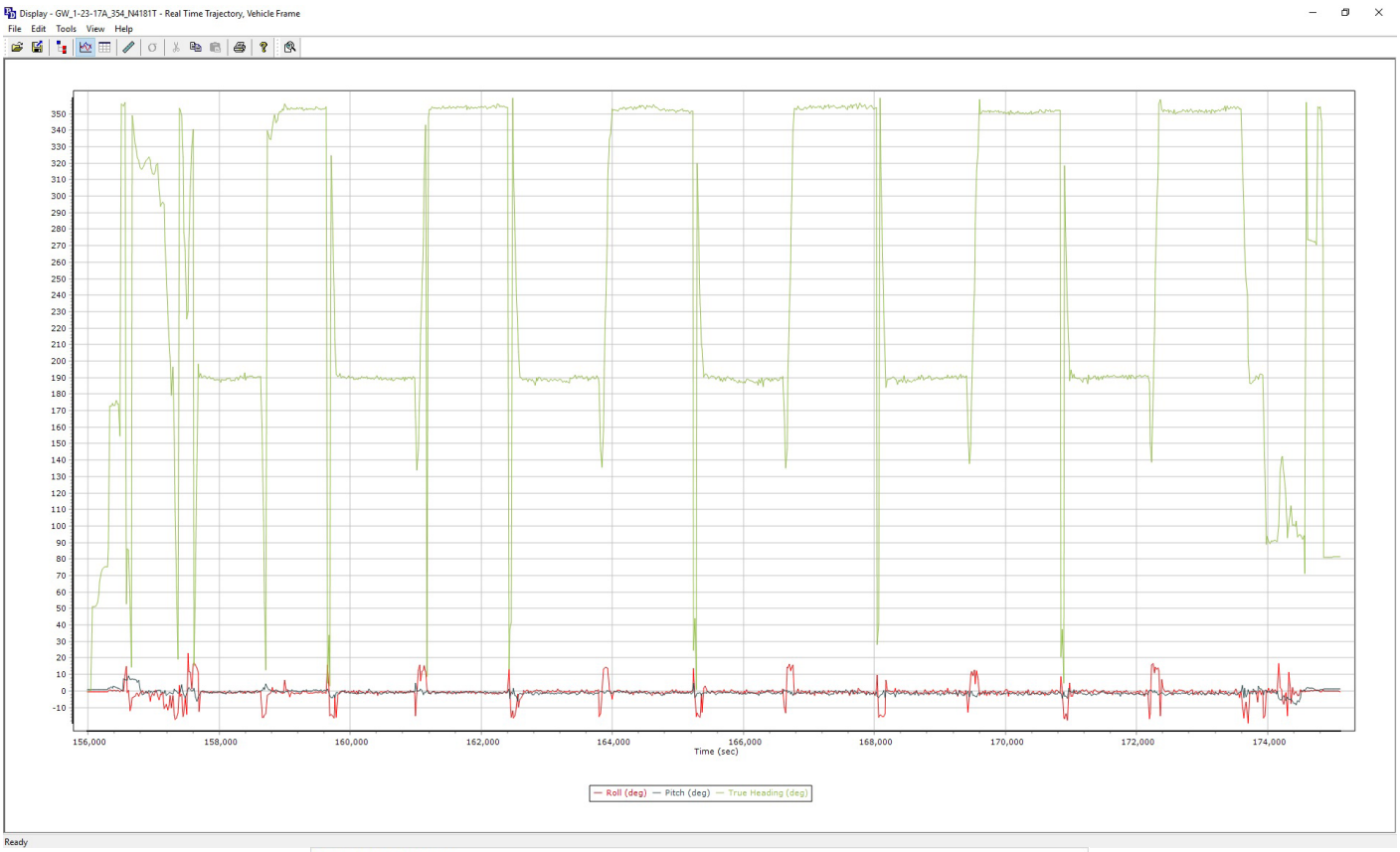
Jan 23, 2017-A (N4181T, SN354)

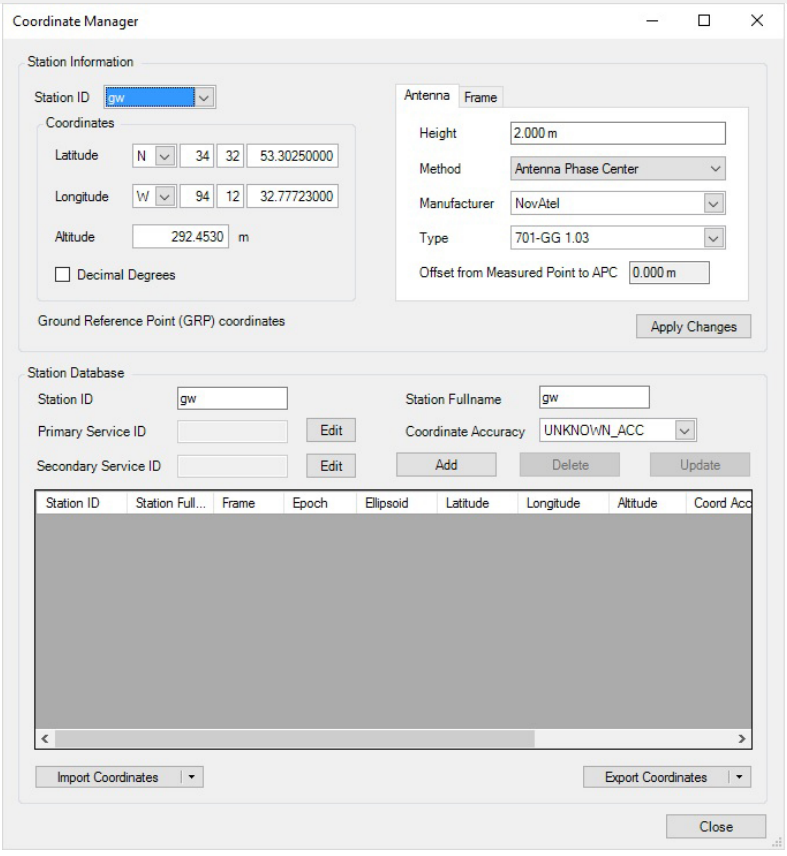

Display - GW_1-23-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_1-23-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready

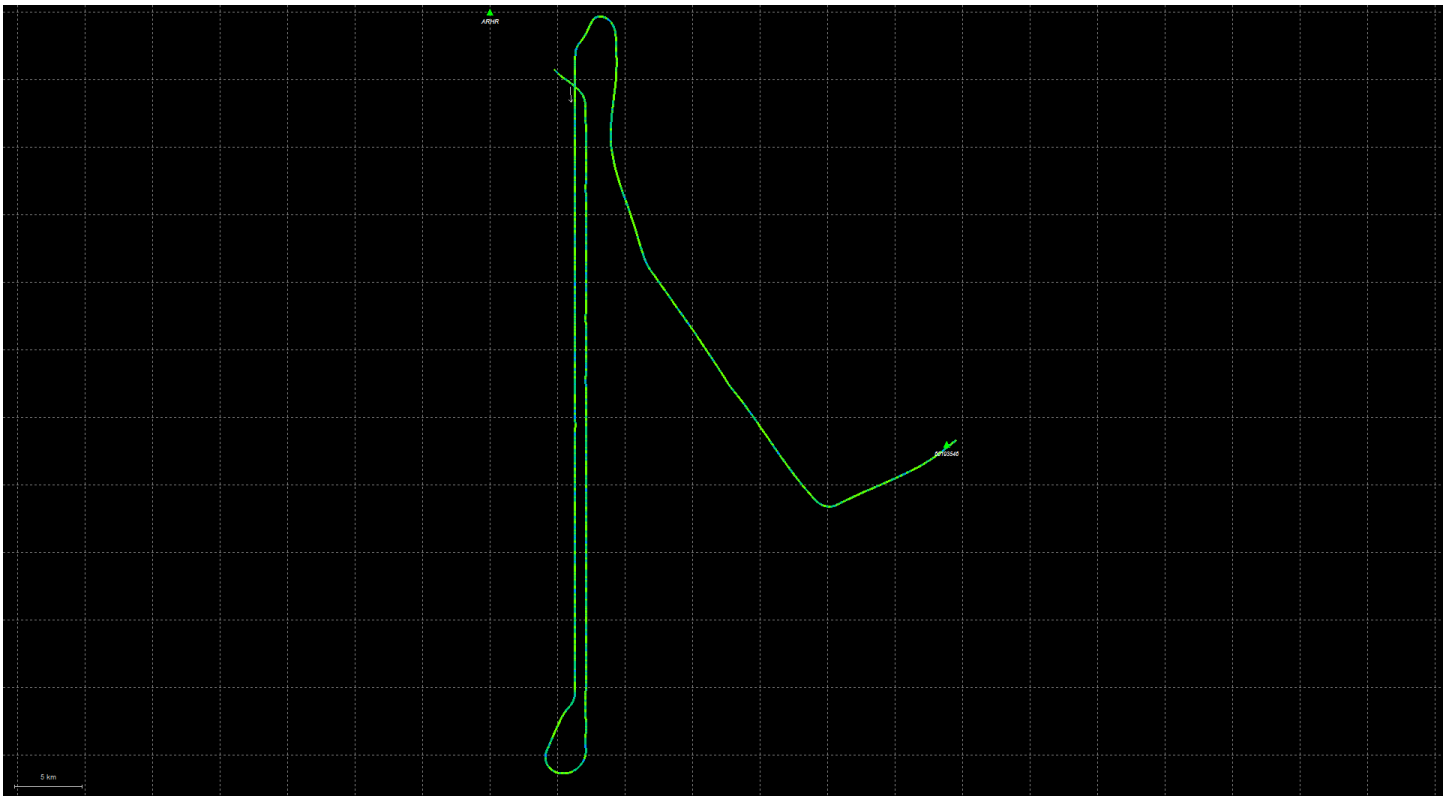

GW_1-23-17A_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom Extents
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
Start
Postprocessed (SBET)
20000m
Snap
Meter
Grid

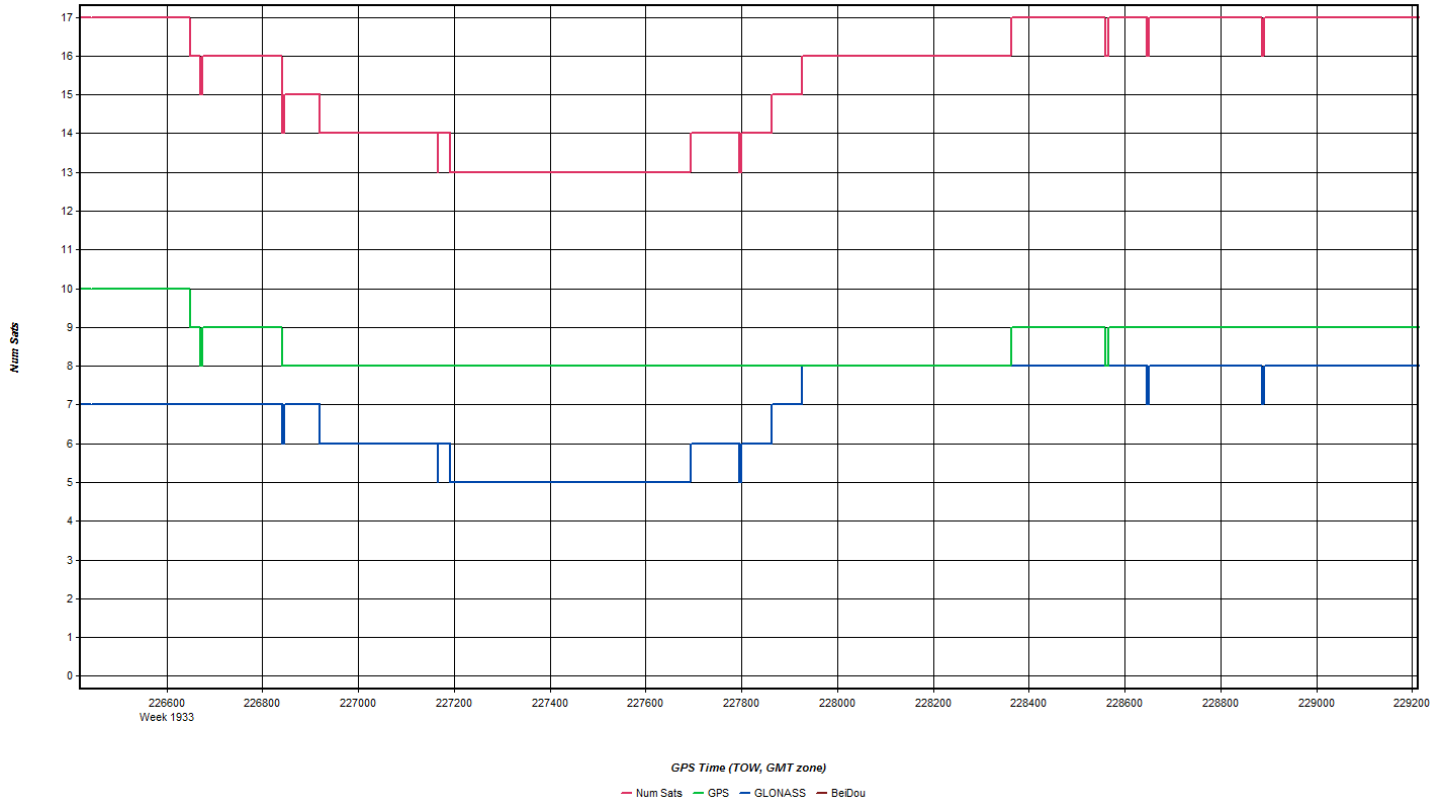

Display - GW_1-23-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready

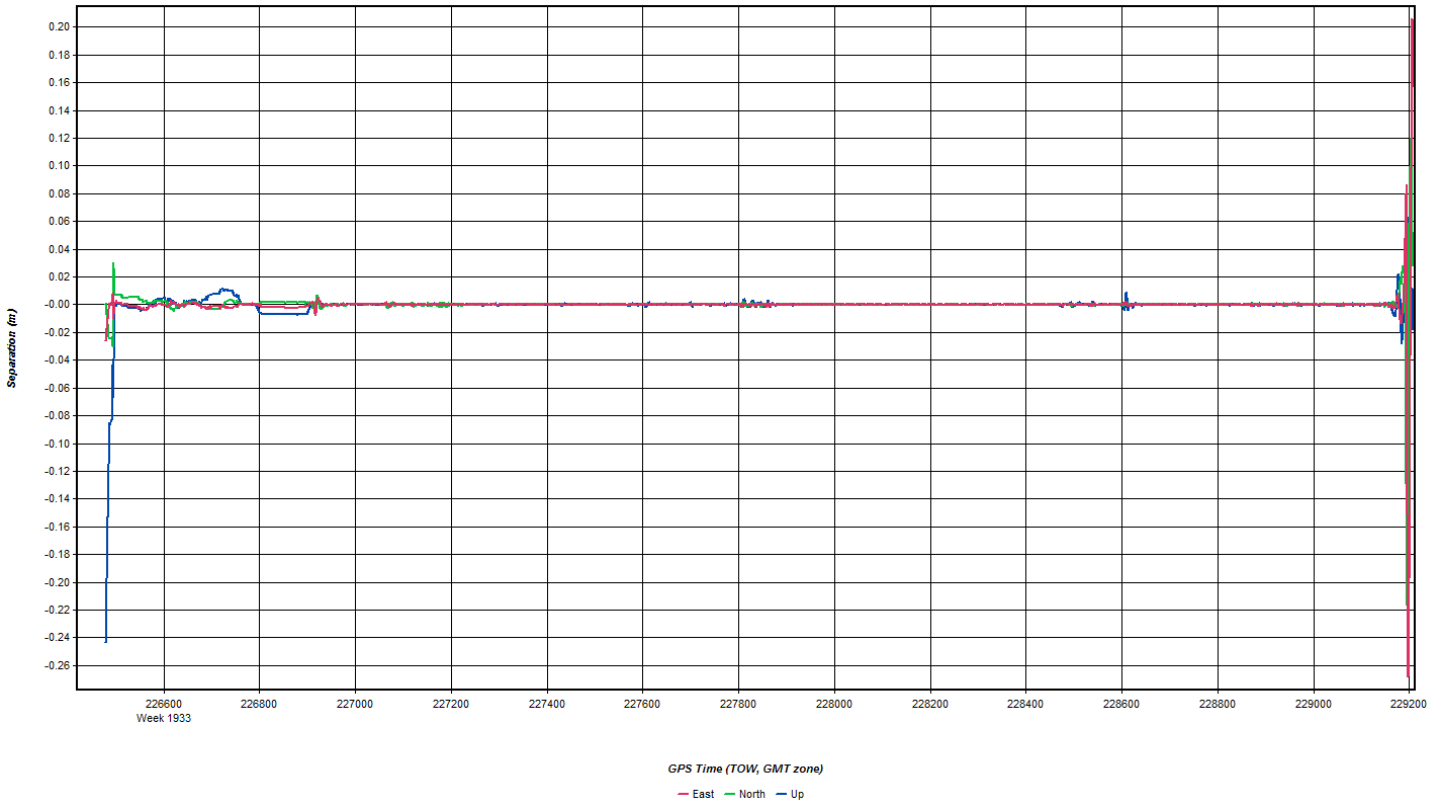

Display - GW_1-23-17A_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready

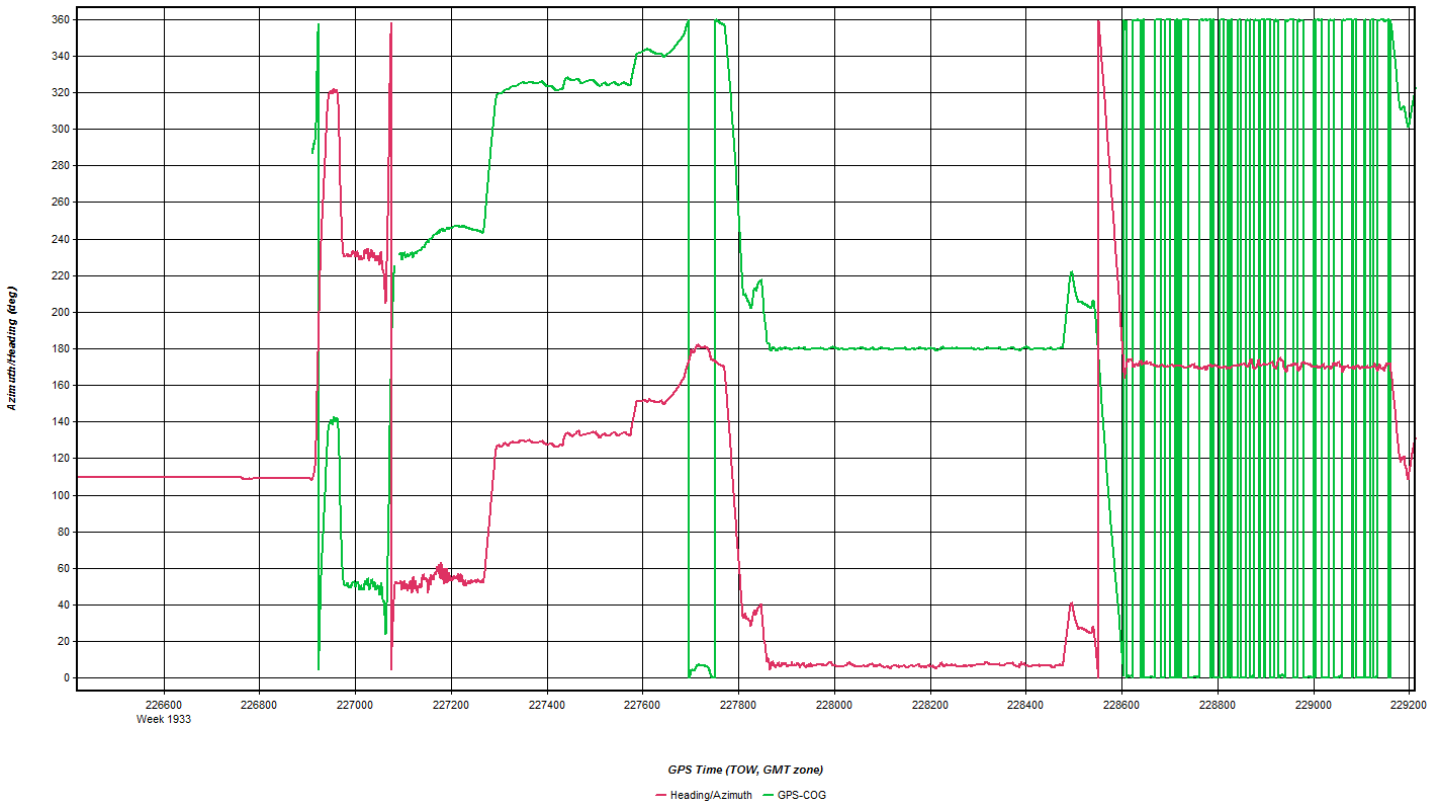

Coordinate Manager
Station Information
Station ID gw
Coordinates
Latitude N 34 32 53.30250000
Longitude W 94 12 32.77723000
Altitude 292.4530 m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna Frame
Height 2.000 m
Method Antenna Phase Center
Manufacturer NovAtel
Type 701-GG 1.03
Offset from Measured Point to APC 0.000 m
Apply Changes
Station Database
Station ID gw
Station Fullname gw
Primary Service ID Edit
Secondary Service ID Edit
Coordinate Accuracy UNKNOWN_ACC
Add Delete Update
Station ID Station Full... Frame Epoch Ellipsoid Latitude Longitude Altitude Coord Acc
Import Coordinates
Export Coordinates
Close

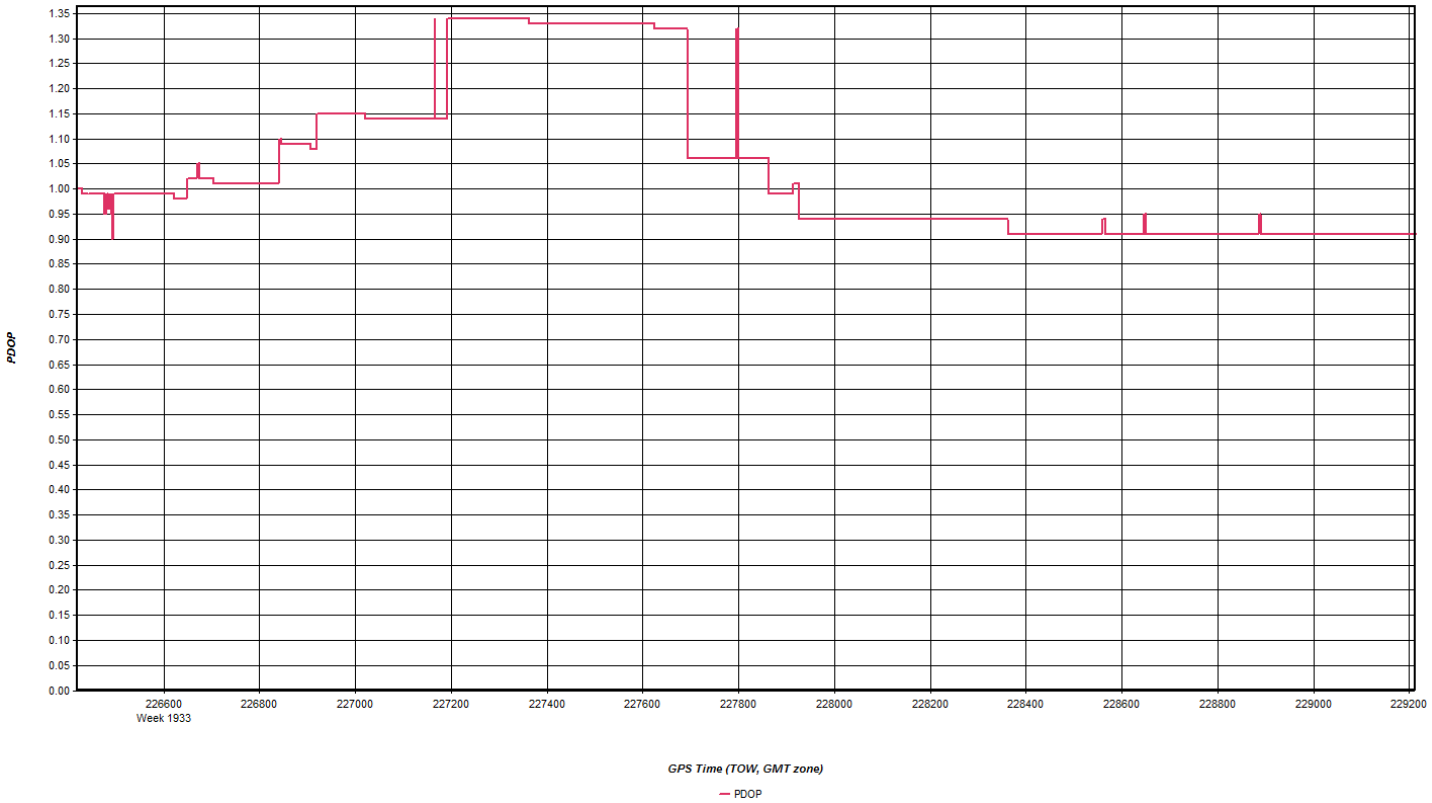
Jan 24, 2017-A1 (C-FVZM, SN7229)

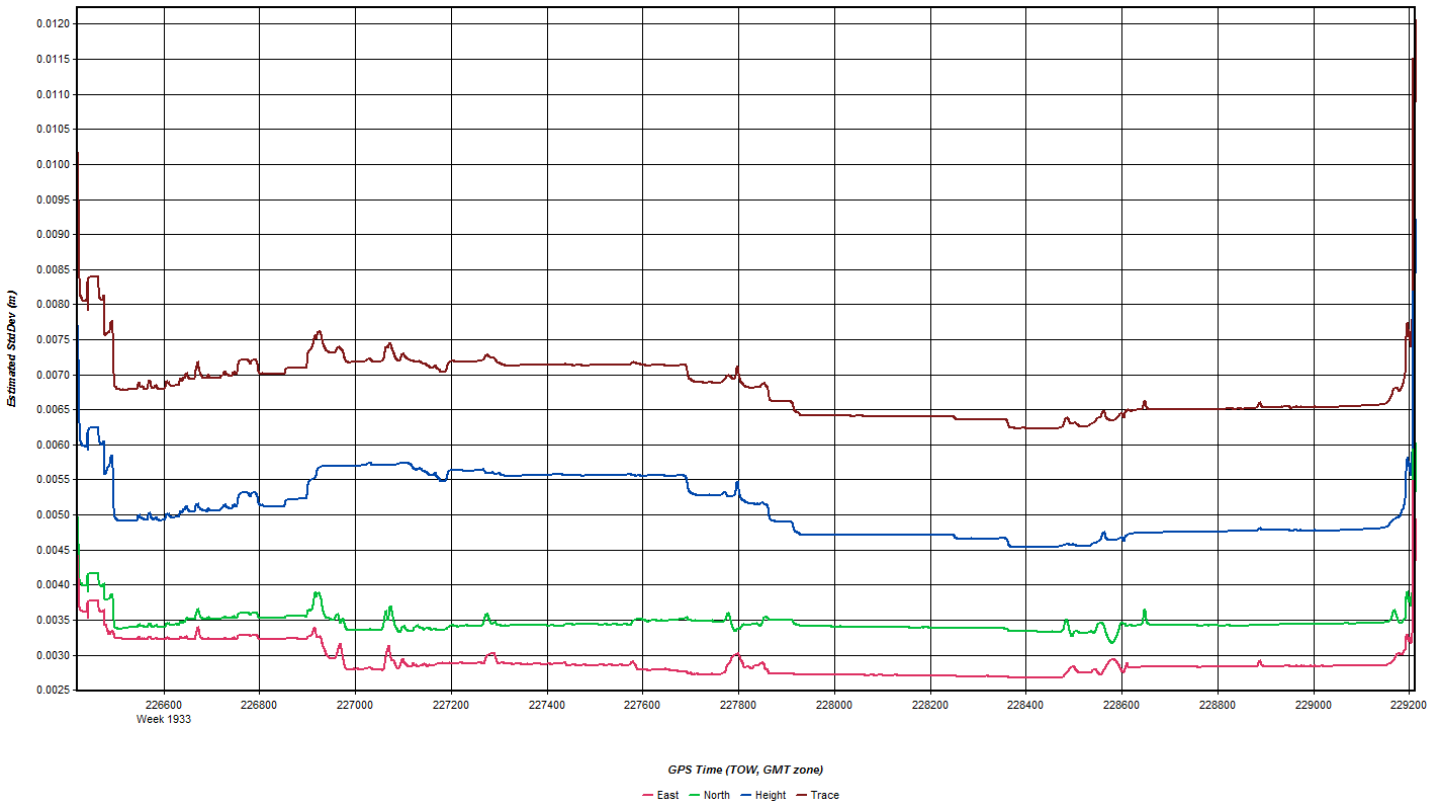

ARHR
5 km

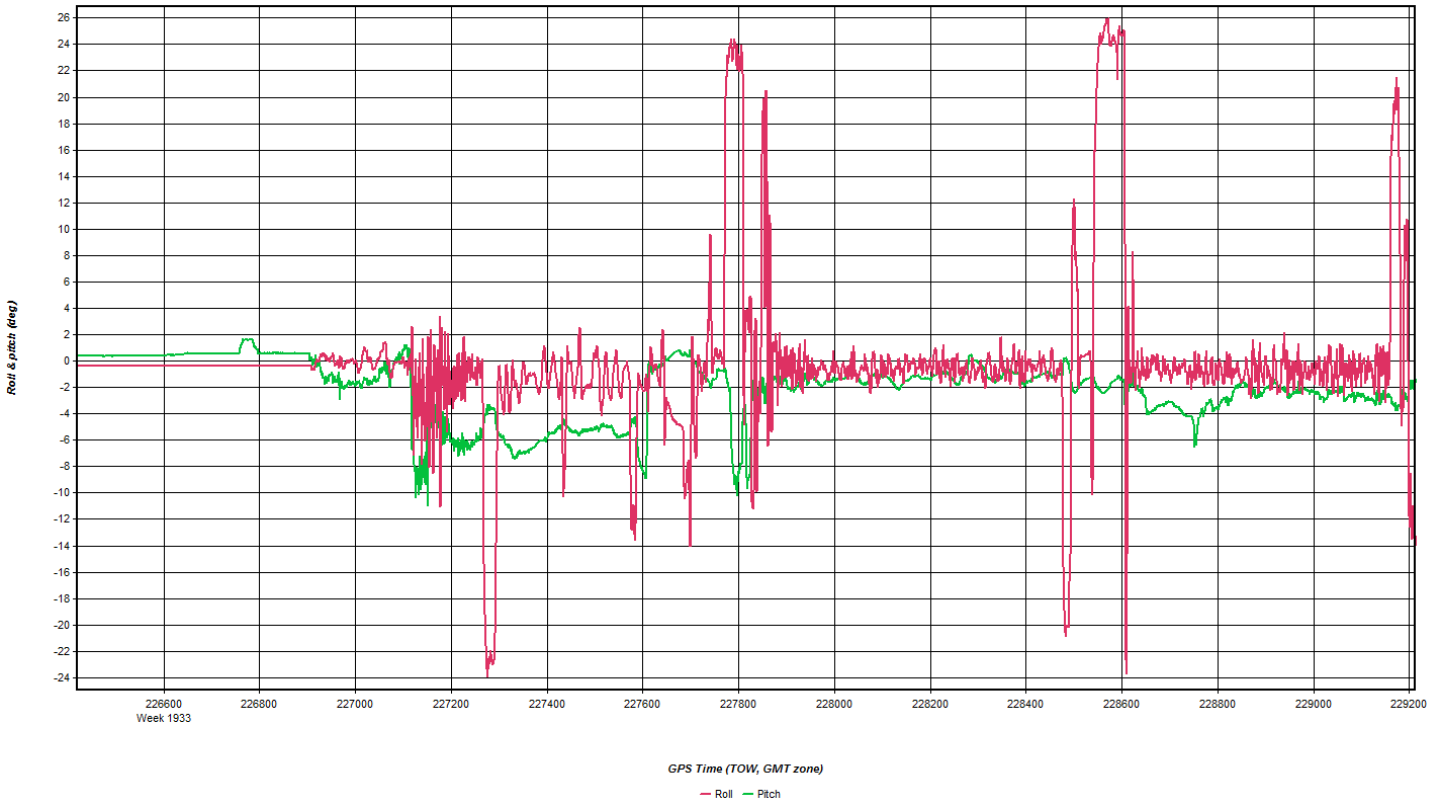

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
226600
Week 1933
226800
227000
227200
227400
227600
227800
228000
228200
228400
228600
228800
229000
229200
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

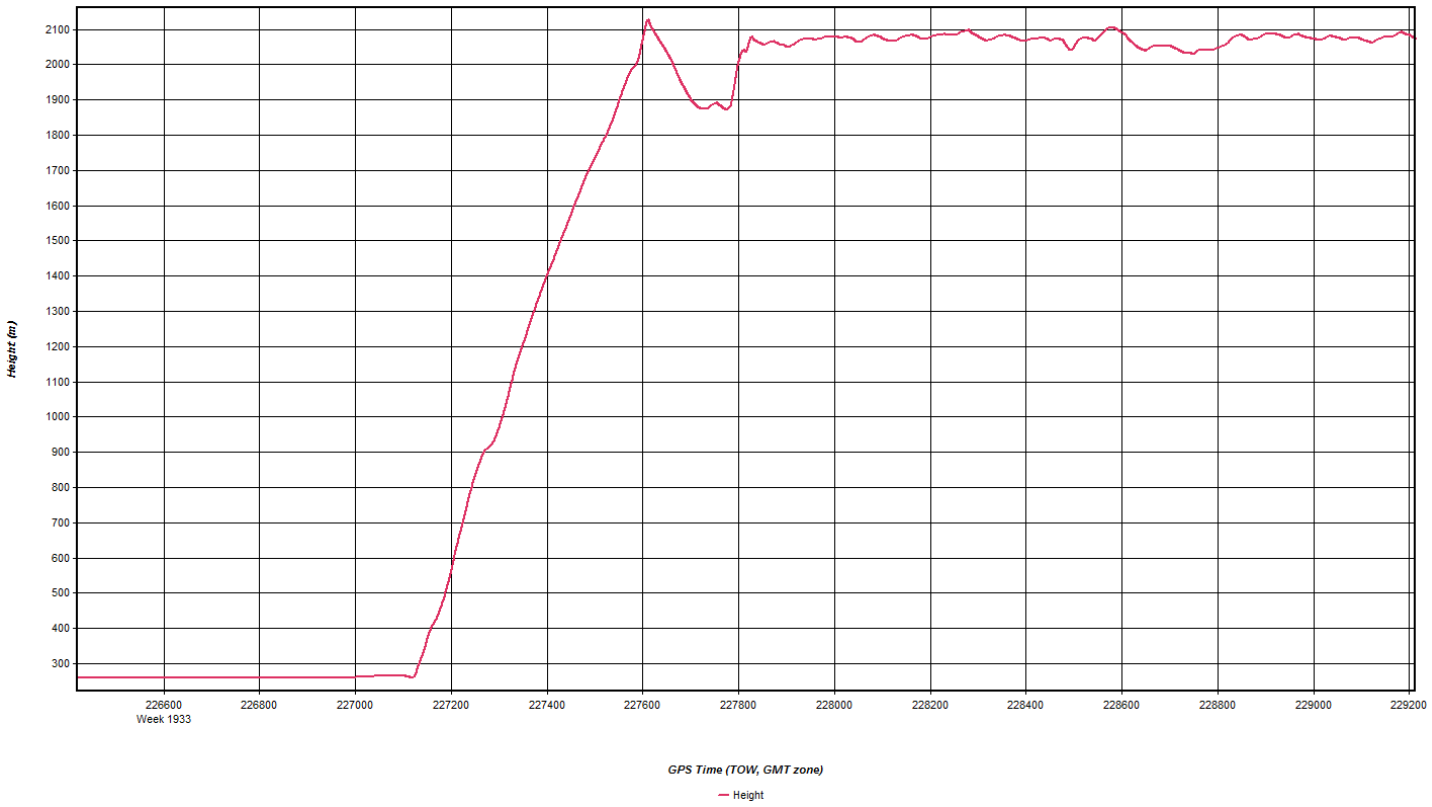

Separation (m)
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
-0.00
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
-0.16
-0.18
-0.20
-0.22
-0.24
-0.26
226600
Week 1933
226800
227000
227200
227400
227600
227800
228000
228200
228400
228600
228800
229000
229200
GPS Time (TOW, GMT zone)
East
North
Up

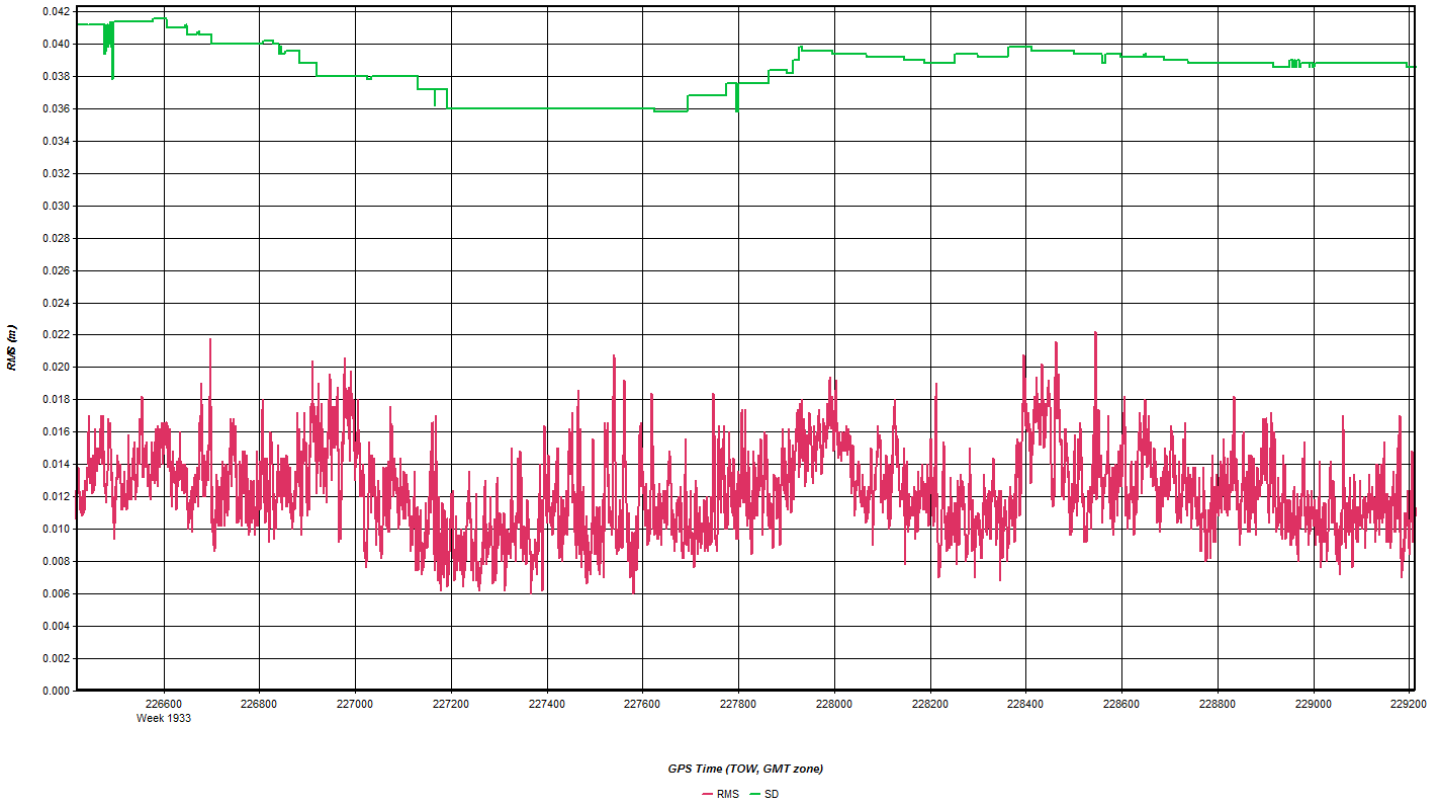

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
226600
Week 1933
226800
227000
227200
227400
227600
227800
228000
228200
228400
228600
228800
229000
229200
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

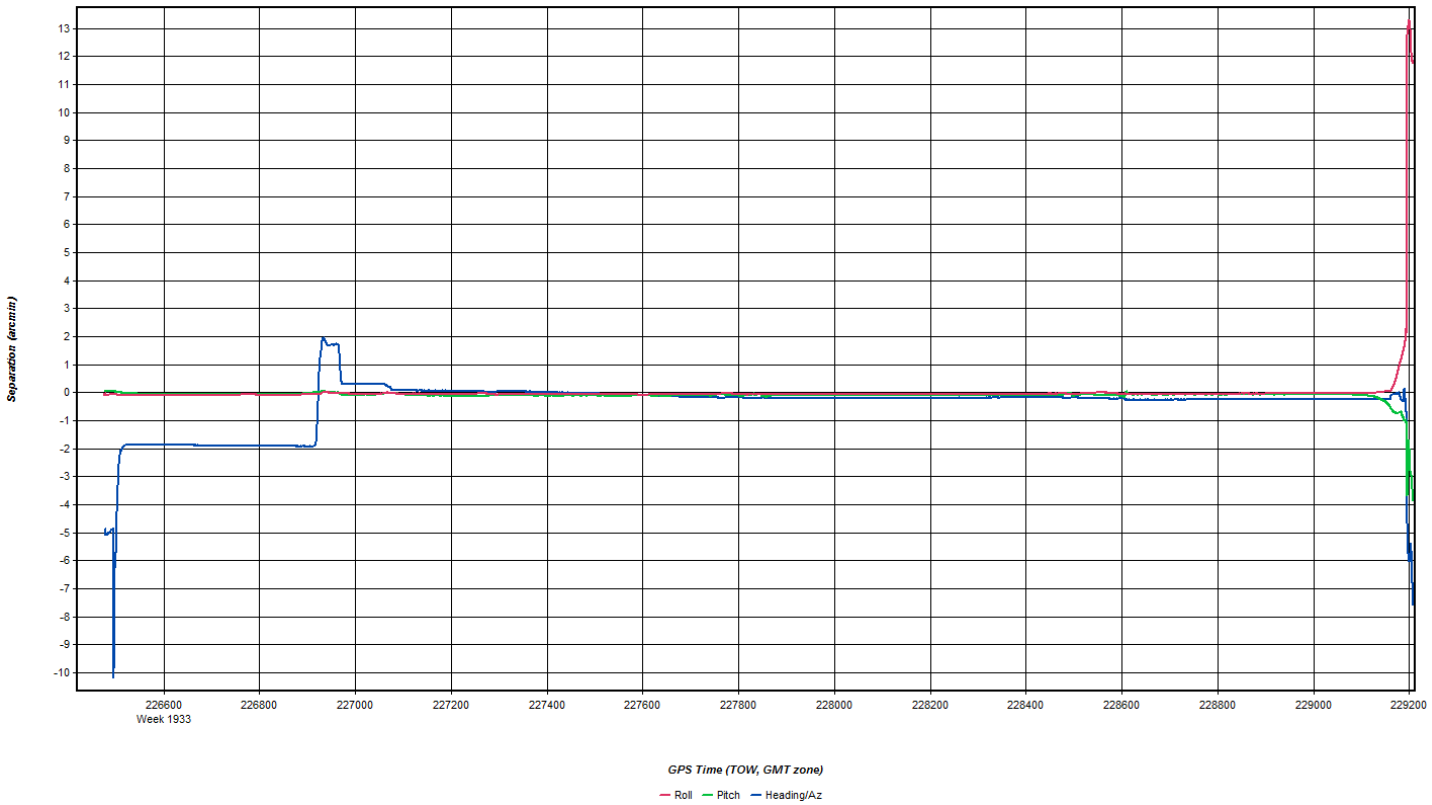

PDOP
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
226600
Week 1933
226800
227000
227200
227400
227600
227800
228000
228200
228400
228600
228800
229000
229200
GPS Time (TOW, GMT zone)
PDOP

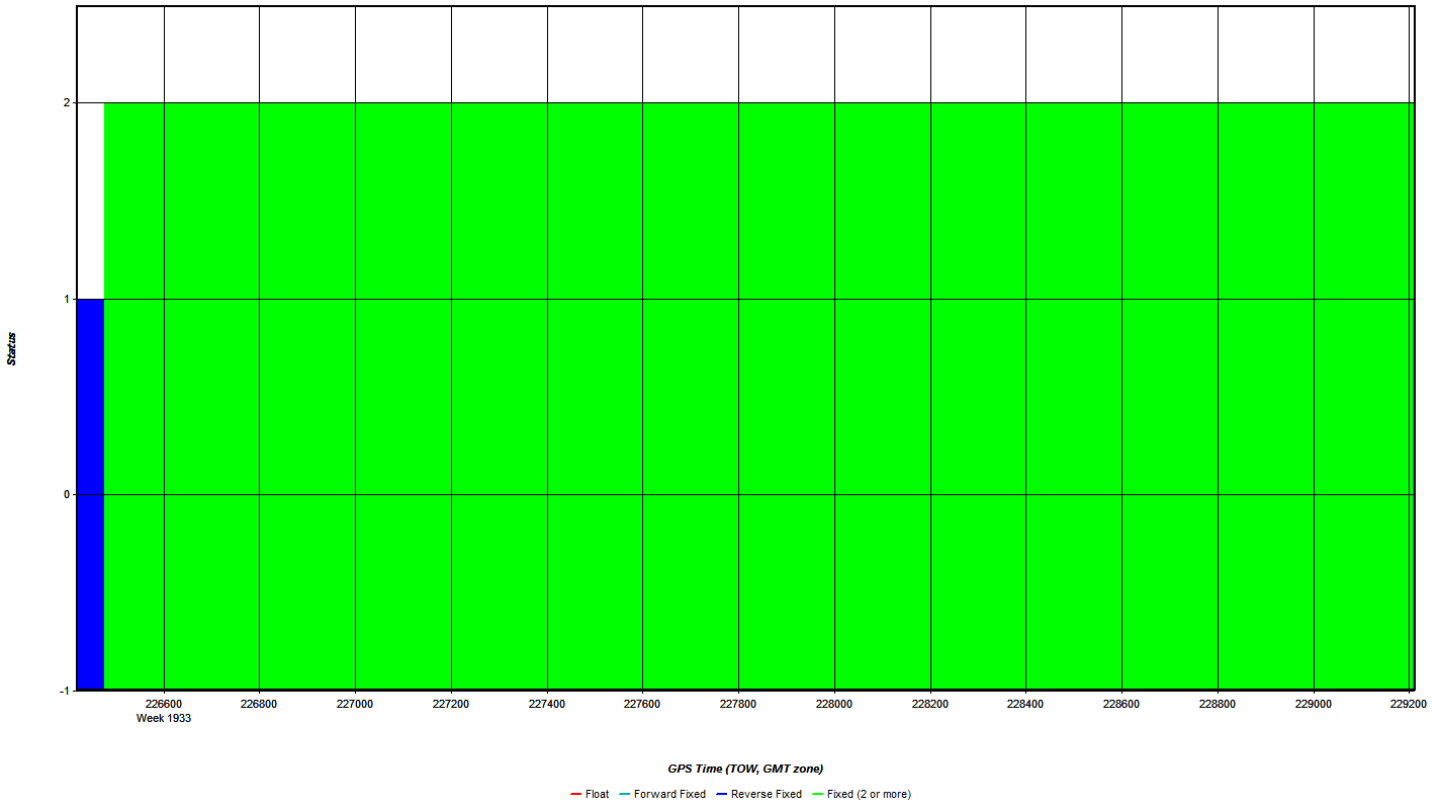

Estimated StdDev (m)
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
226600
Week 1933
226800
227000
227200
227400
227600
227800
228000
228200
228400
228600
228800
229000
229200
GPS Time (TOW, GMT zone)
East
North
Height
Trace

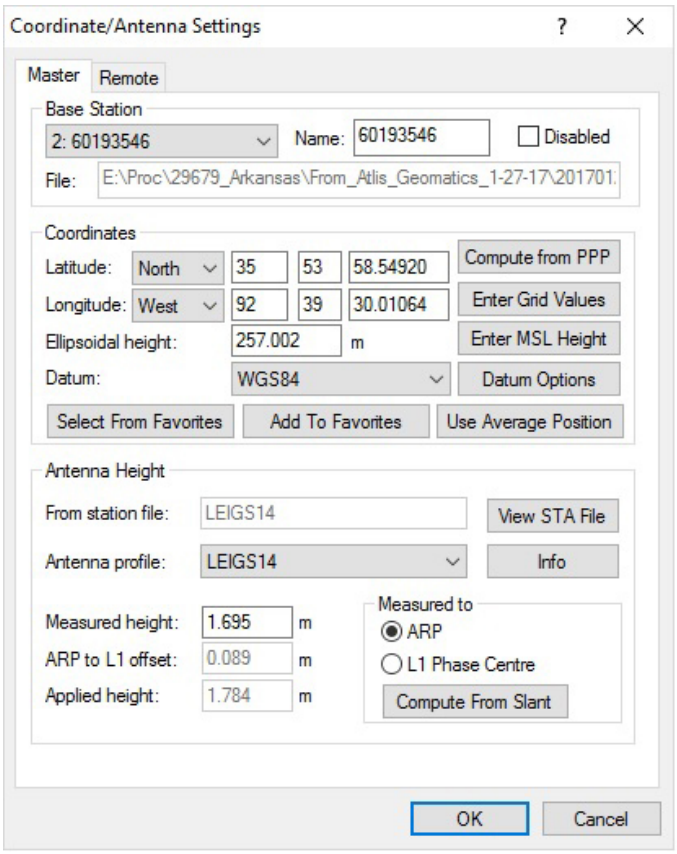

Roll & pitch (deg)
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
226600
Week 1933
226800
227000
227200
227400
227600
227800
228000
228200
228400
228600
228800
229000
229200
GPS Time (TOW, GMT zone)
Roll
Pitch

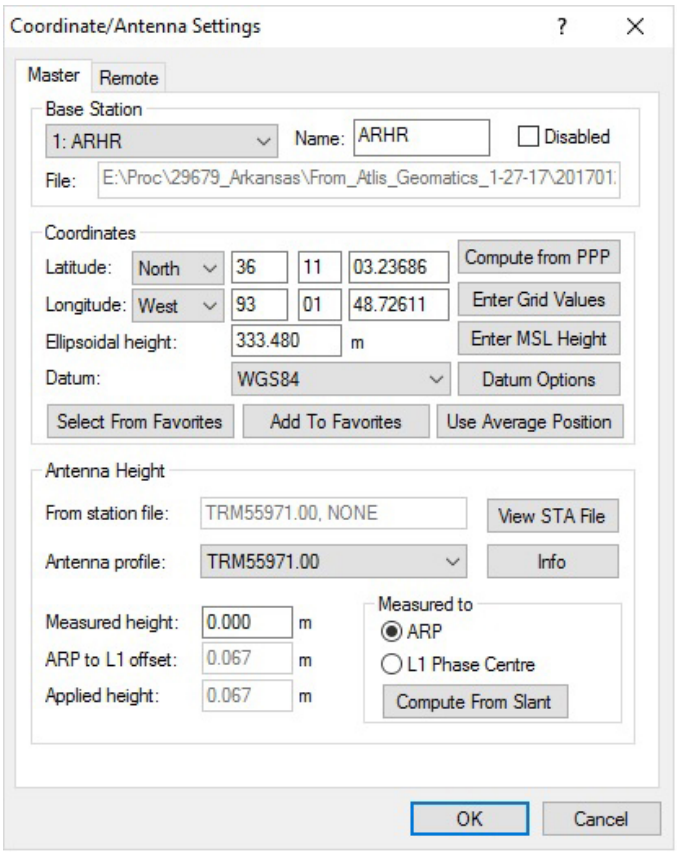

Height (m)
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
226600
Week 1933
226800
227000
227200
227400
227600
227800
228000
228200
228400
228600
228800
229000
229200
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
226600
Week 1933
226800
227000
227200
227400
227600
227800
228000
228200
228400
228600
228800
229000
229200
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
226600
Week 1933
226800
227000
227200
227400
227600
227800
228000
228200
228400
228600
228800
229000
229200
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
226600
Week 1933
226800
227000
227200
227400
227600
227800
228000
228200
228400
228600
228800
229000
229200
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
2: 60193546
Name: 60193546
Disabled
File: E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-27-17\201701
Coordinates
Latitude: North 35 53 58.54920
Longitude: West 92 39 30.01064
Ellipsoidal height: 257.002 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: LEIGS14
View STA File
Antenna profile: LEIGS14
Info
Measured height: 1.695 m
ARP to L1 offset: 0.089 m
Applied height: 1.784 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARHR
Name:
ARHR
Disabled
File:
E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-27-17\201701
Coordinates
Latitude:
North
36
11
03.23686
Compute from PPP
Longitude:
West
93
01
48.72611
Enter Grid Values
Ellipsoidal height:
333.480
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM55971.00, NONE
View STA File
Antenna profile:
TRM55971.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.067
m
Applied height:
0.067
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

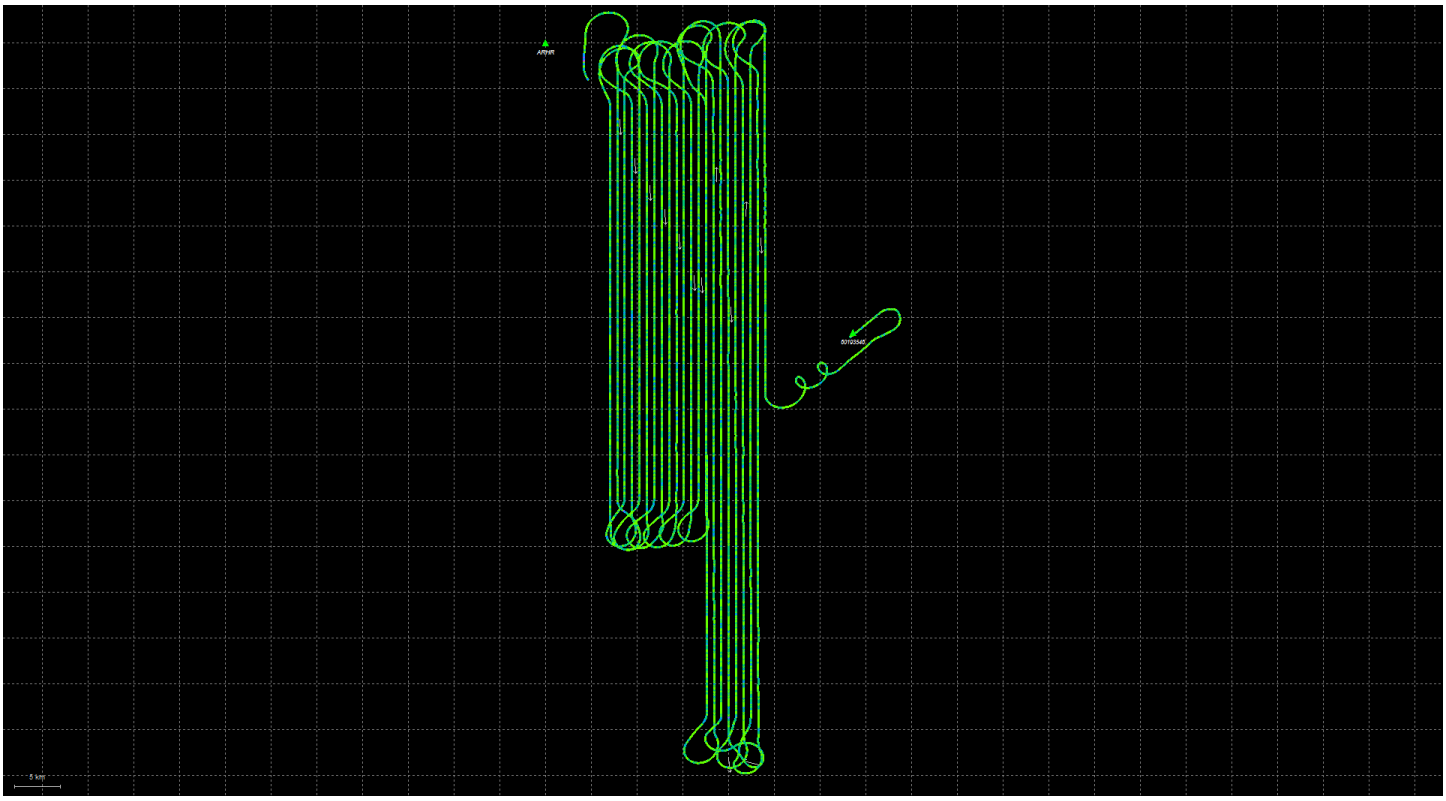
PROJECT NAME	Q.S. Arkansas	DATE	24/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Marshall AR.	DATA DRIVES	LiDar #2

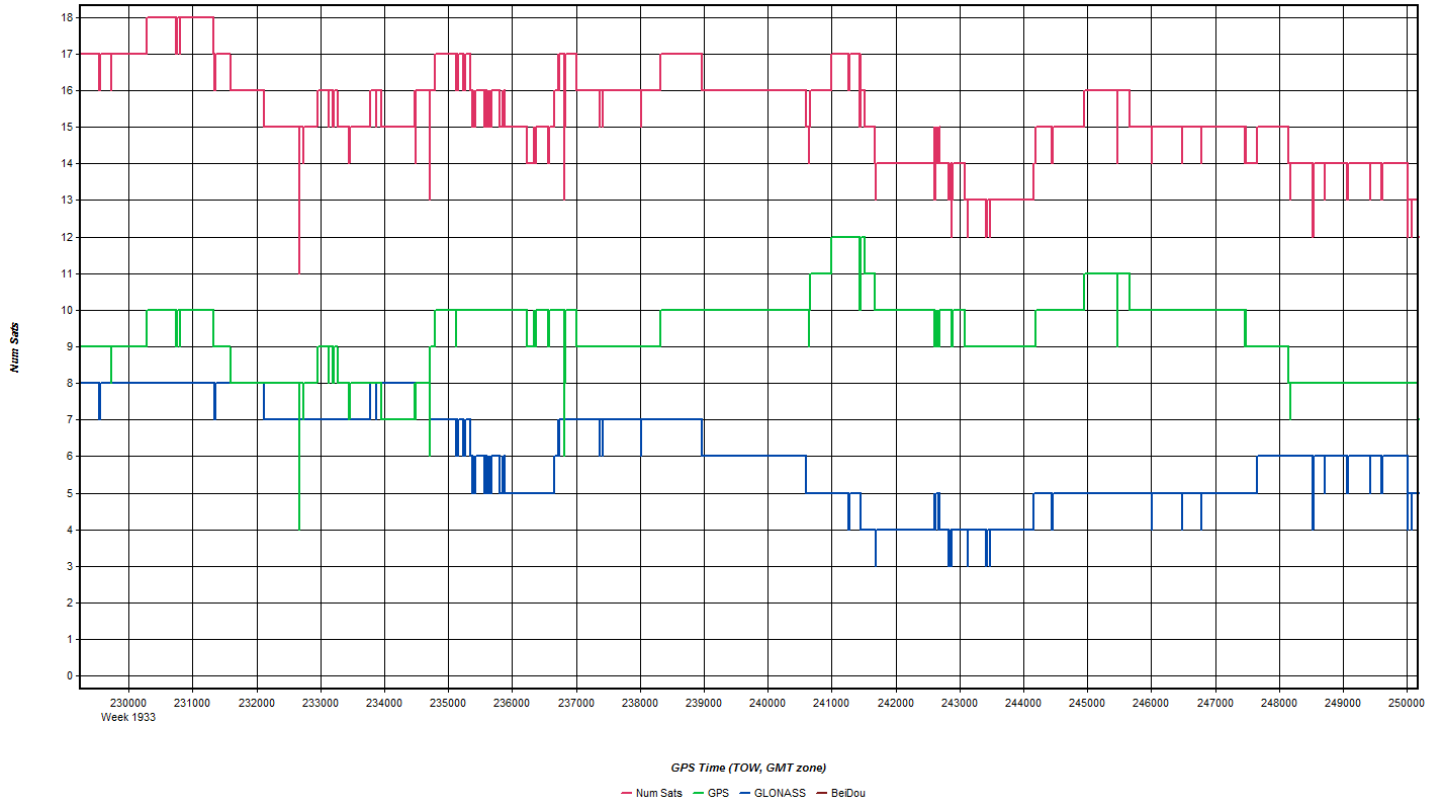
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	14::50:00	Takeoff:	15:05:00	AGL Height:	1750 m	Pulse Rate:	277 KHz		START	END
Engine Off:	21:32:00	Landing:	21:20:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	14:54:00	15:02:00
TOTAL:	6.70 hrs	TOTAL:	6.25 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	21:22:00	21:29:00

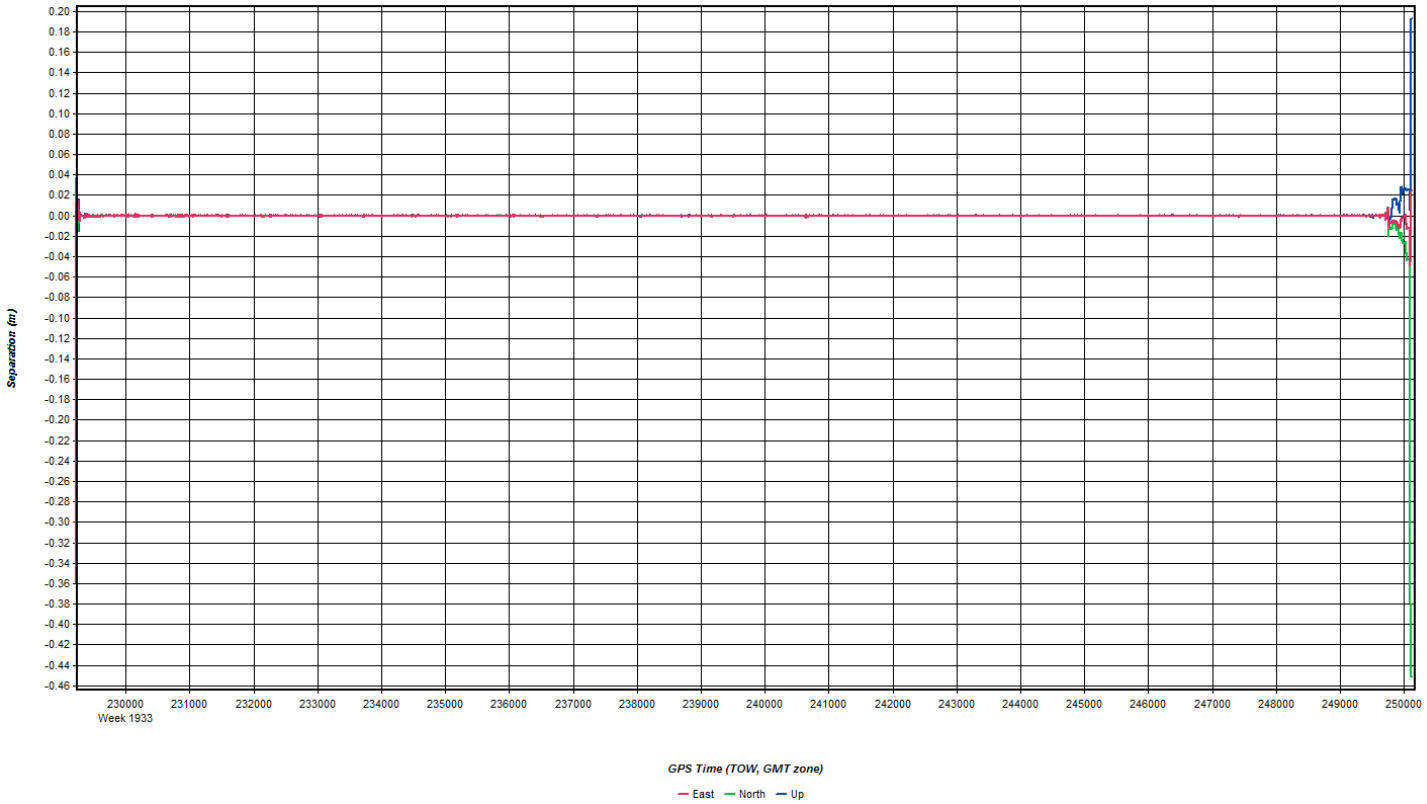
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
113		South	170124_151814	15:18:16	15:27:37	22.7nm from south to complete line
114		North	170124_153034	15:30:36	15:38:02	Imu gap after the line was complete
115		South	170124_154357	15:43:58	15:53:16	22.7nm from south to complete line
114		North	170124_155610	15:56:11	16:04:27	22.7nm from south to complete line
116		South	170124_1607	16:07:40	16:17:00	22.7nm from south to complete line
117		North	170124_161958	16:19:49	16:28:10	22.7nm from south to complete line
118		South	170124_163144	16:31:46	16:41:01	22.7nm from south to complete line
119		North	170124_164404	16:44:06	16:52:20	22.7nm from south to complete line
120		South	170124_165618	16:56:18	17:05:37	22.7nm from south to complete line
121		North	170124_170822	17:08:23	17:16:43	22.7nm from south to complete line
122		South	170124_172027	17:20:29	17:29:40	22.7nm from south to complete line
123		North	170124_173228	17:32:30	17:40:42	22.7nm from south to complete line
124		South	170124_174438	17:44:39	17:53:46	22.7nm from south to complete line
125		North	170124_175629	17:56:30	18:04:47	22.7nm from south to complete line
126		South	170124_180825	18:08:26	18:17:36	22.7nm from south to complete line
127		North	170124_182010	18:20:10	18:28:51	22.7nm from south to complete line
1		South	170124_183228	18:32:29	18:47:47	Line extended 9nm to the north
2		North	170124_185042	18:50:43	19:03:57	Line extended 9nm to the north
3		South	170124_190745	19:07:50	19:24:00	Line extended 9nm to the north
4		North	170124_192810	19:28:11	19:41:23	Line extended 9nm to the north
5		South	170124_194528	19:45:29	20:01:21	Line extended 9nm to the north
6		North	170124_200526	20:05:27	20:18:58	Line extended 9nm to the north
7		South	170124_202259	20:23:01	20:40:26	Line extended 9nm to the north
8		North	170124_204404	20:44:06	20:57:32	Line extended 9nm to the north

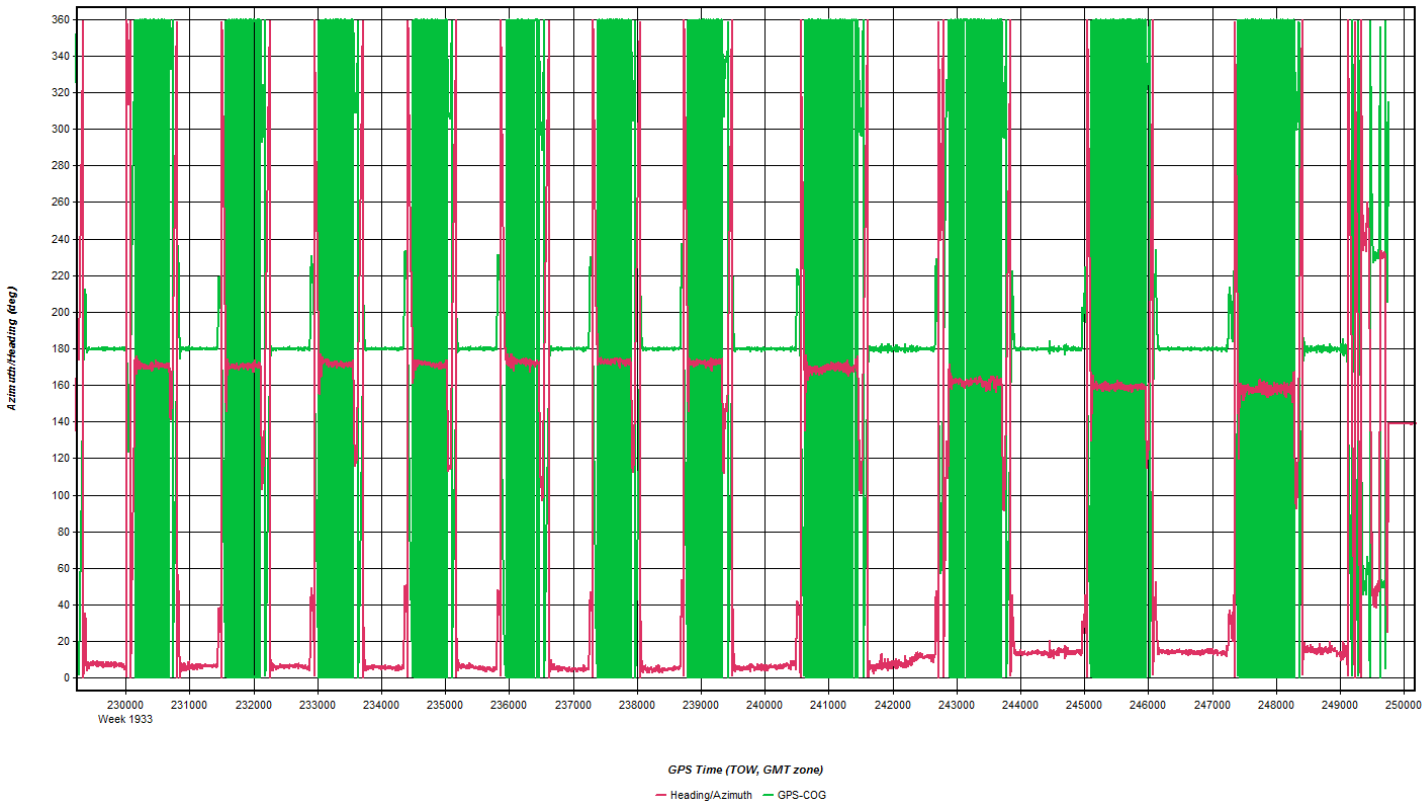
SUN ANGLE @Start: @End: @Peak:	At take off temperature was 5C and 18C when landing. Broken overcast to clear skies. Wind 48 to 62 knots from the Sw. Sats and PDOPS averaged 18 and 1.2 IMU gap @ 15:39, on a turn. Re-flew line 114 The base station was set at the Marshall Airport. 14:22 to 21:35. Antenna height was 1.695 to ARP.

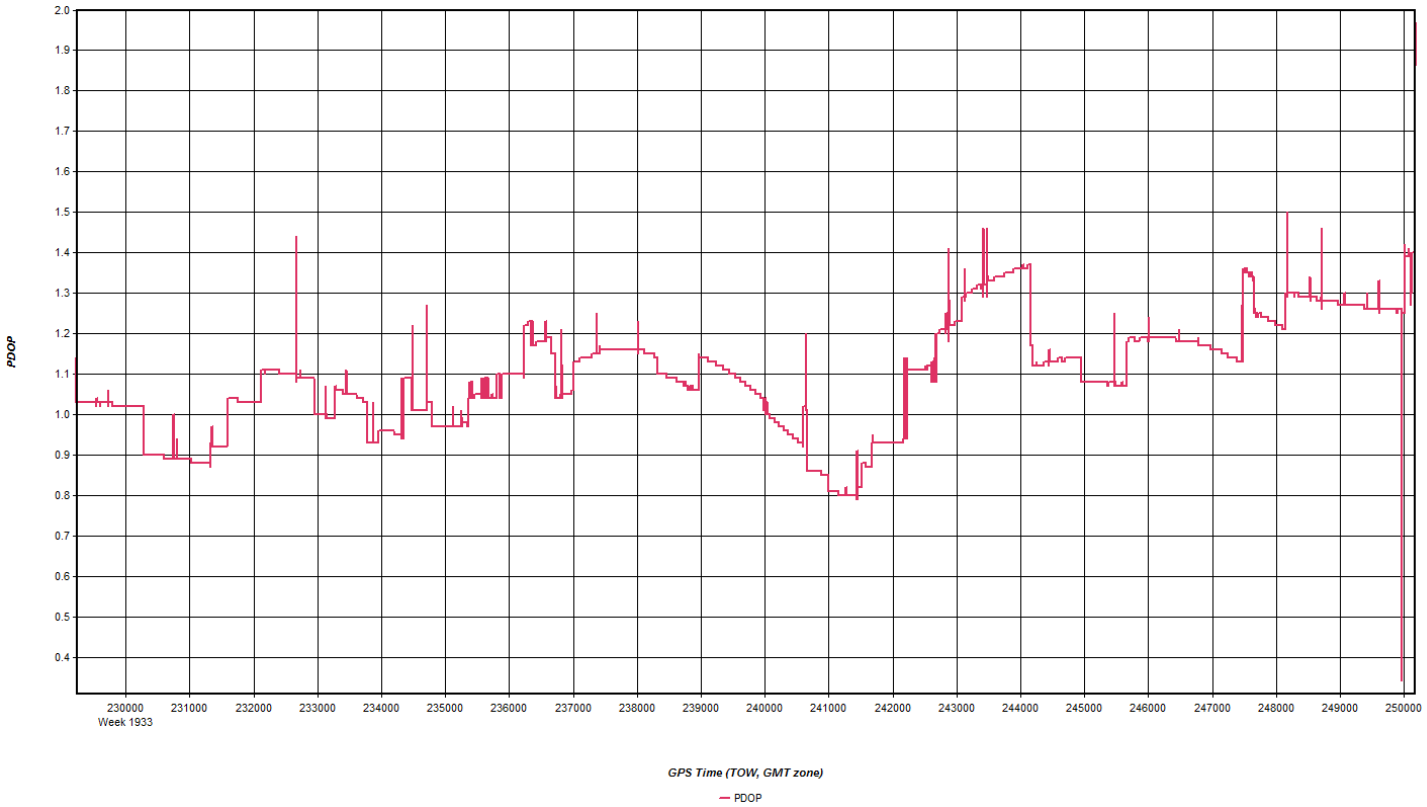
Jan 24, 2017-A2 (C-FVZM, SN7229)

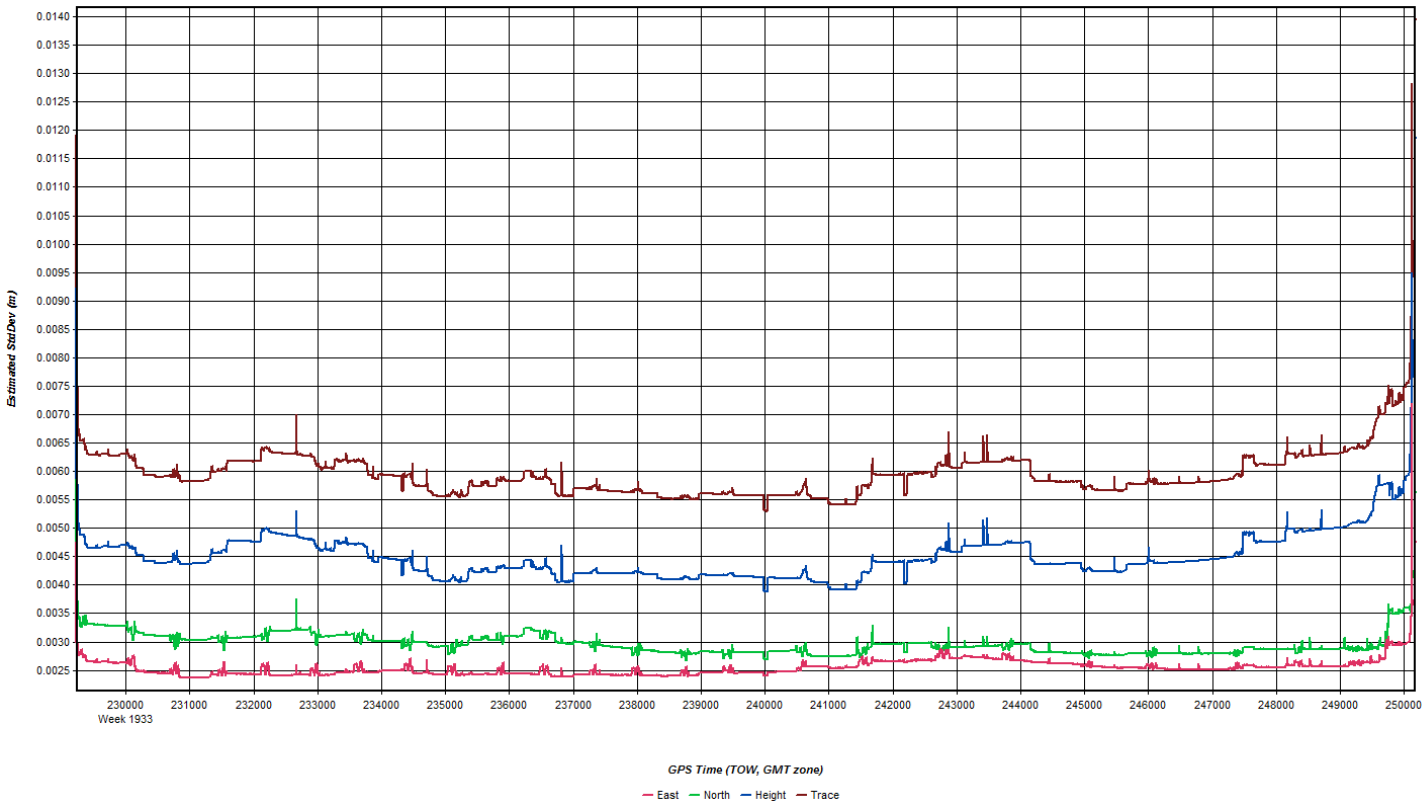


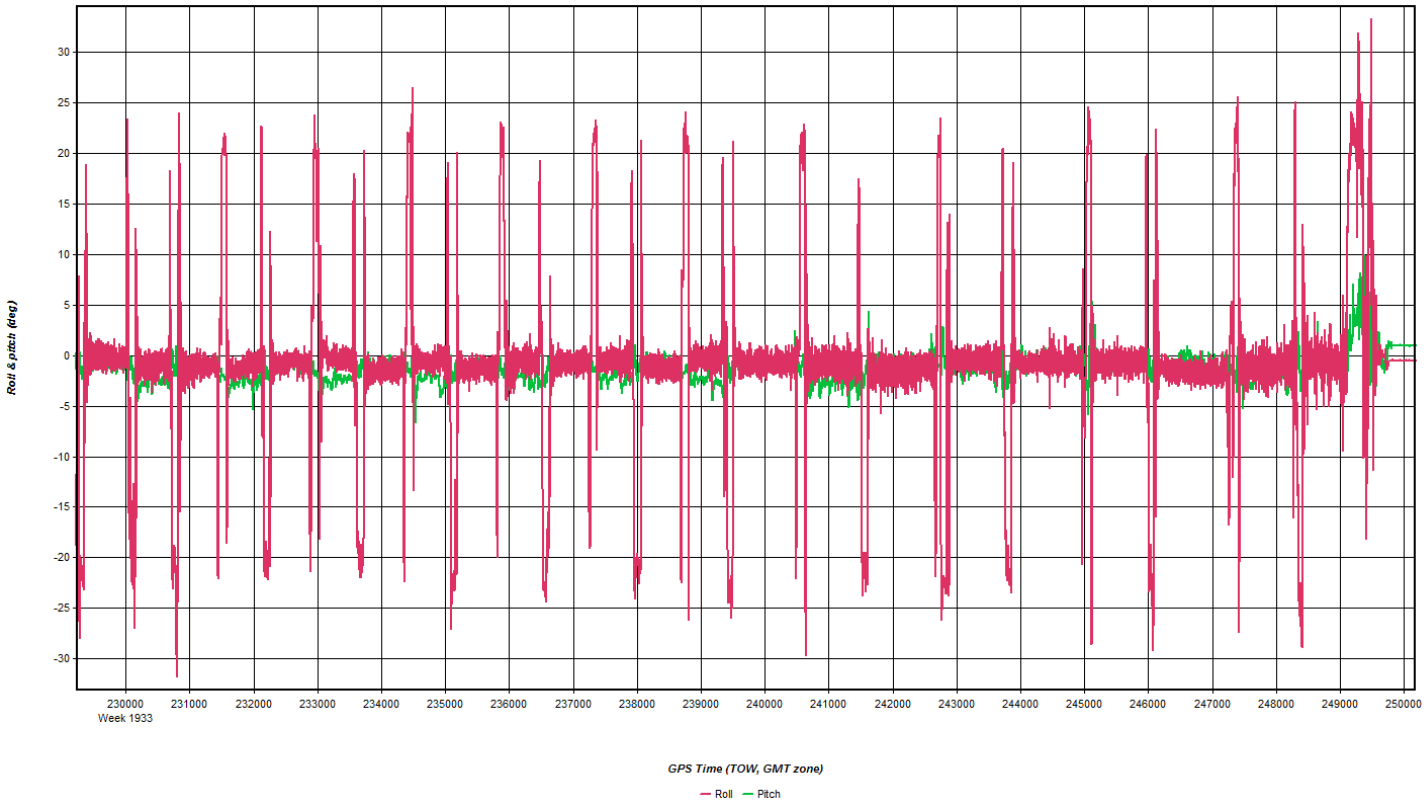

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
230000
Week 1933
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

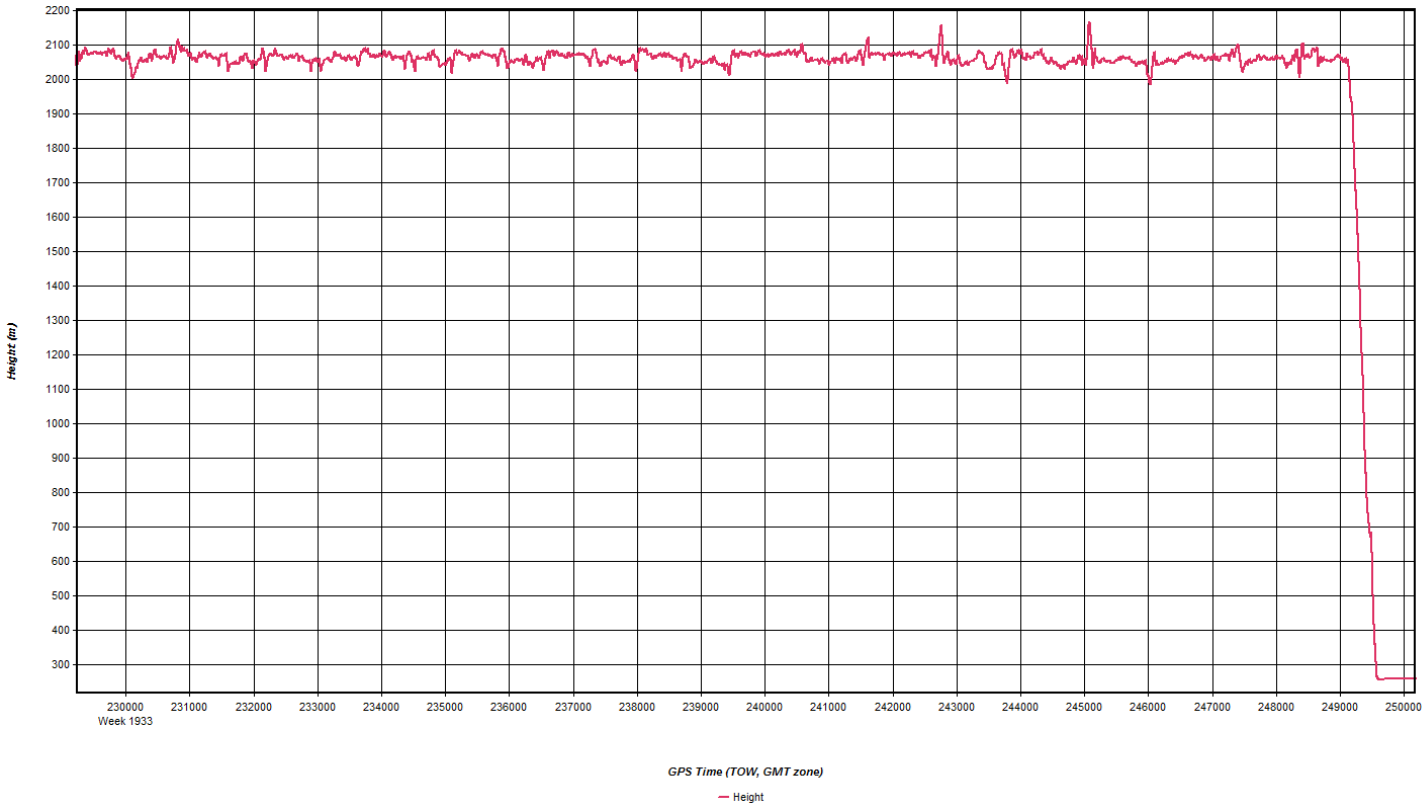

Separation (m)
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
-0.16
-0.18
-0.20
-0.22
-0.24
-0.26
-0.28
-0.30
-0.32
-0.34
-0.36
-0.38
-0.40
-0.42
-0.44
-0.46
230000
Week 1933
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
GPS Time (TOW, GMT zone)
East
North
Up

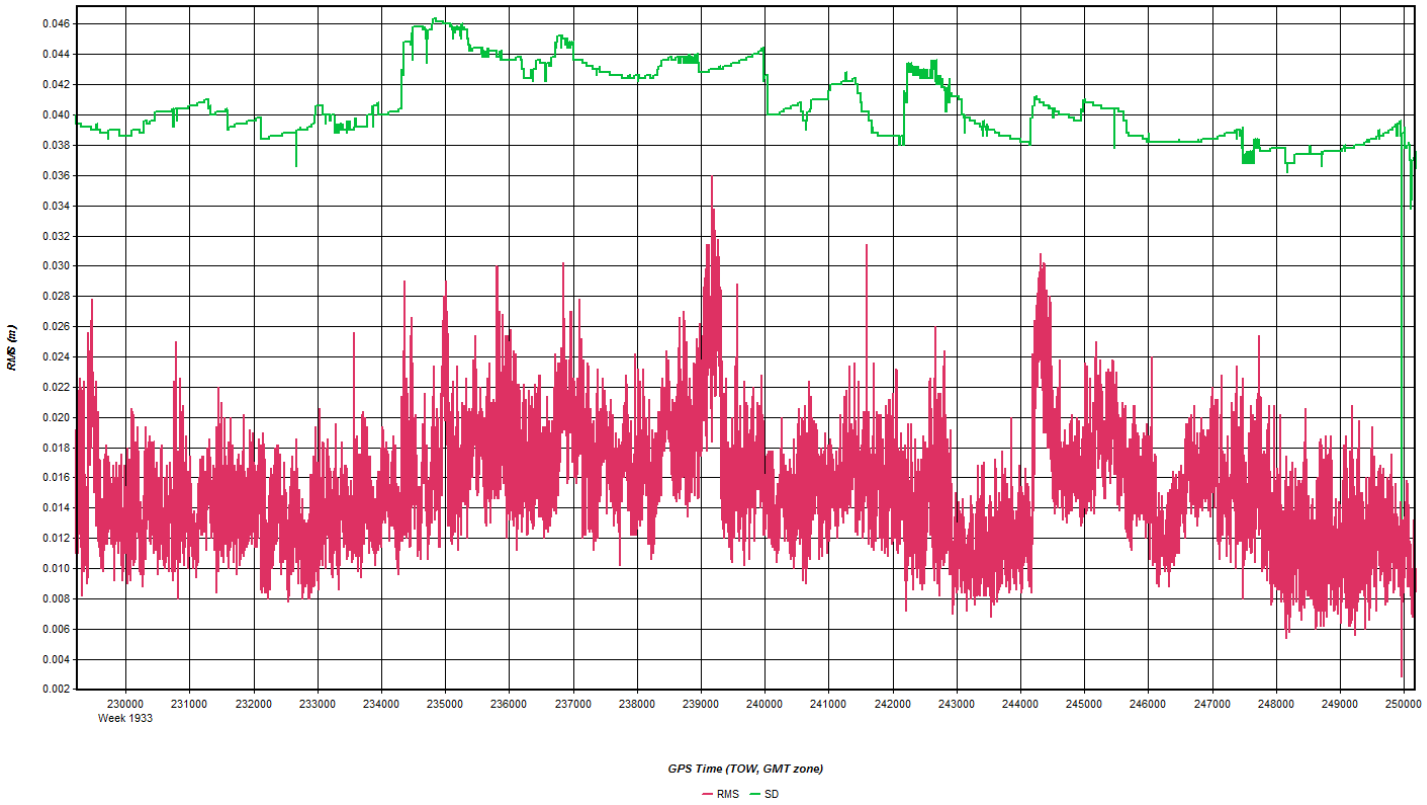

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
230000
Week 1933
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

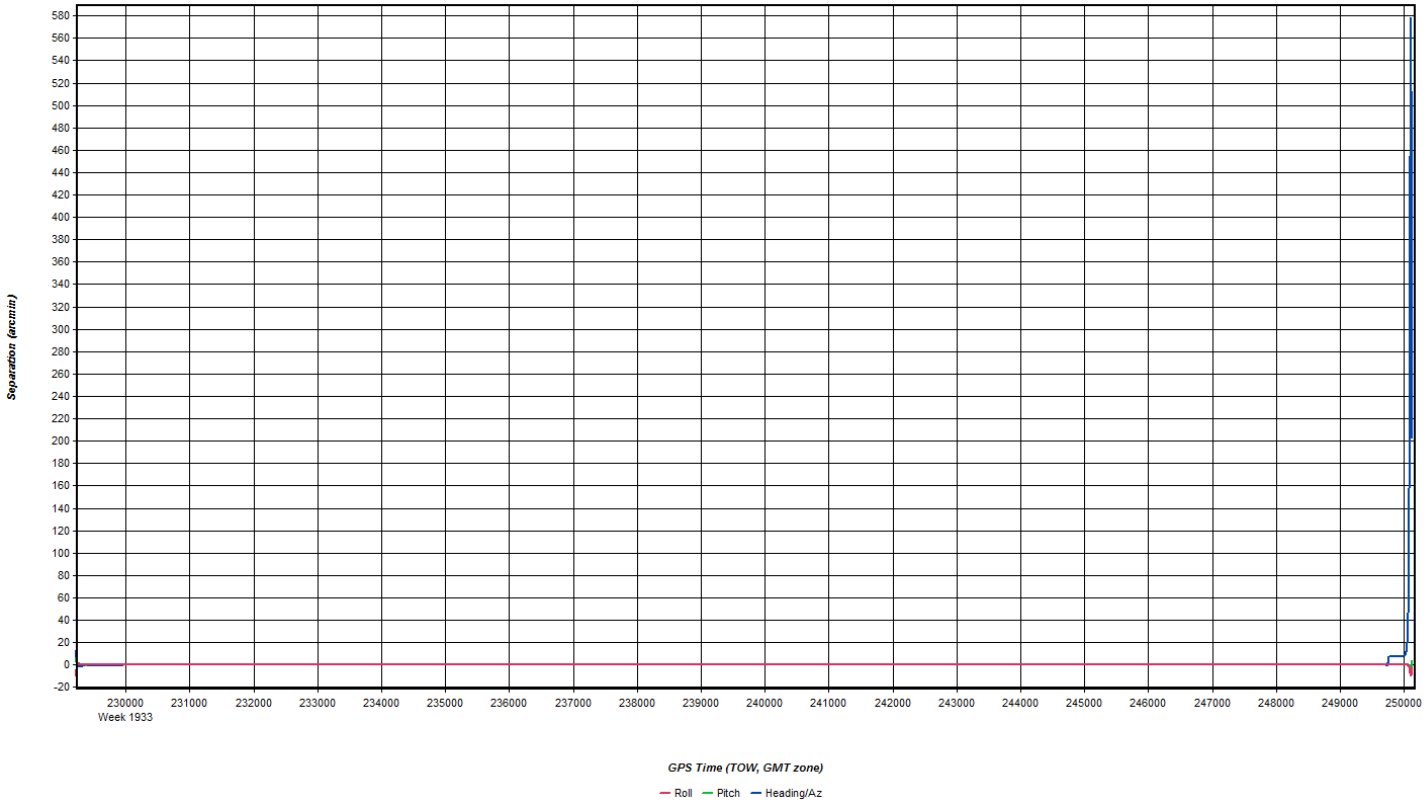

PDOP
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
230000
Week 1933
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
GPS Time (TOW, GMT zone)
PDOP

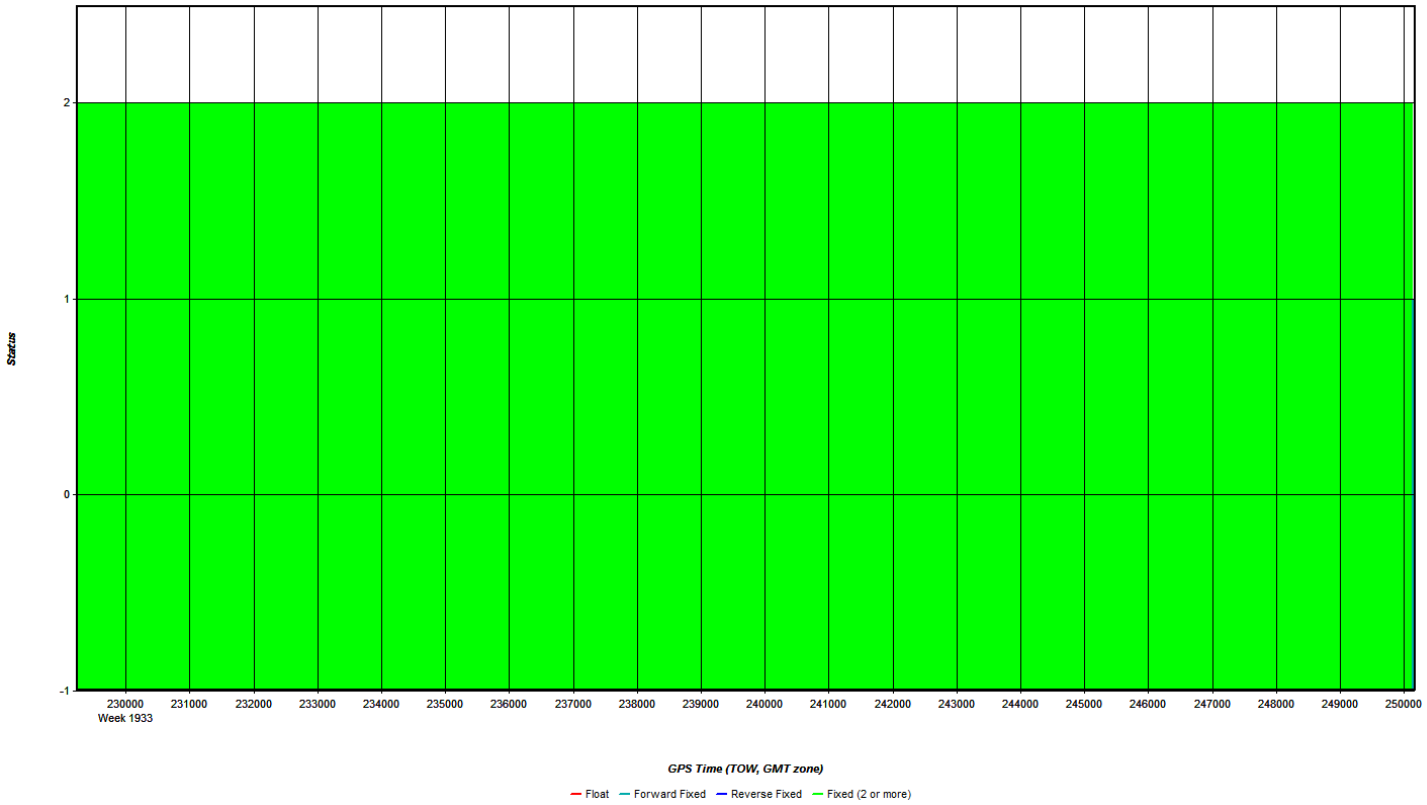

Estimated StdDev (m)
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
230000
Week 1933
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

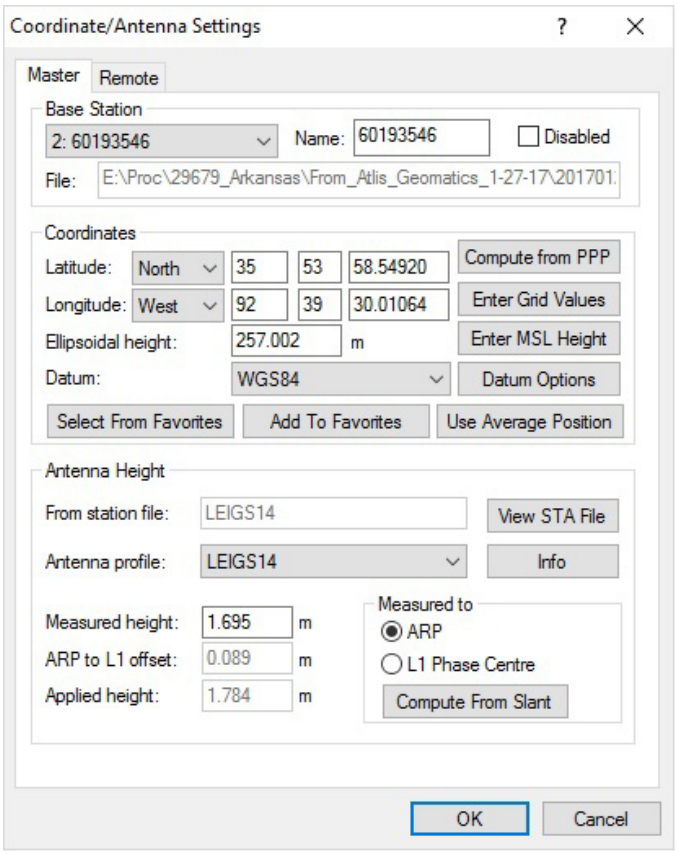

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
230000
Week 1933
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
GPS Time (TOW, GMT zone)
Roll
Pitch

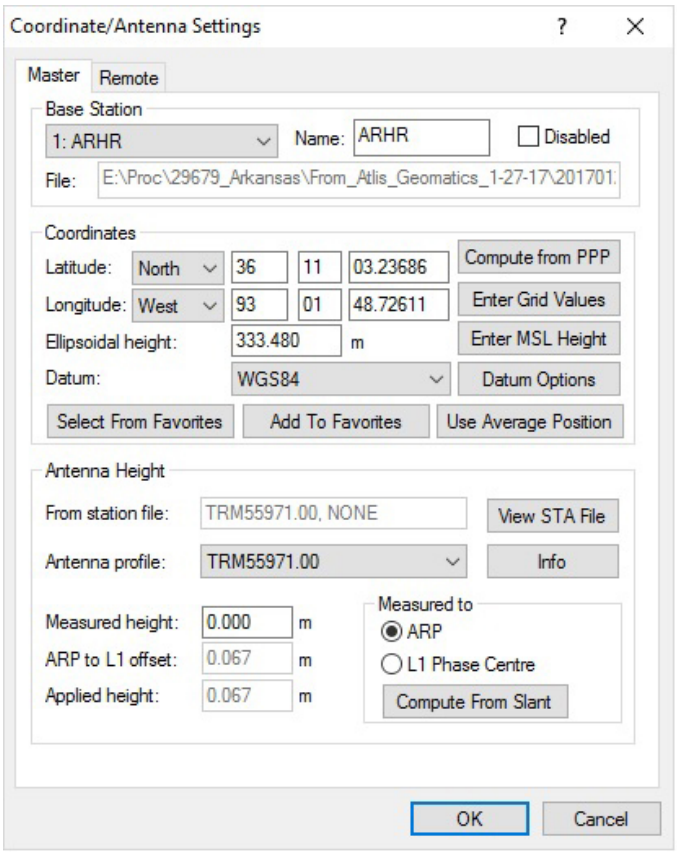

Height (m)
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
230000
Week 1933
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
230000
Week 1933
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
580
560
540
520
500
480
460
440
420
400
380
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
230000
Week 1933
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
230000
Week 1933
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
244000
245000
246000
247000
248000
249000
250000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
2: 60193546
Name: 60193546
Disabled
File: E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-27-17\201701
Coordinates
Latitude: North 35 53 58.54920
Longitude: West 92 39 30.01064
Ellipsoidal height: 257.002 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: LEIGS14
View STA File
Antenna profile: LEIGS14
Info
Measured height: 1.695 m
ARP to L1 offset: 0.089 m
Applied height: 1.784 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARHR
Name: ARHR
Disabled
File: E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-27-17\201701
Coordinates
Latitude: North 36 11 03.23686
Longitude: West 93 01 48.72611
Ellipsoidal height: 333.480 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM55971.00, NONE
View STA File
Antenna profile: TRM55971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

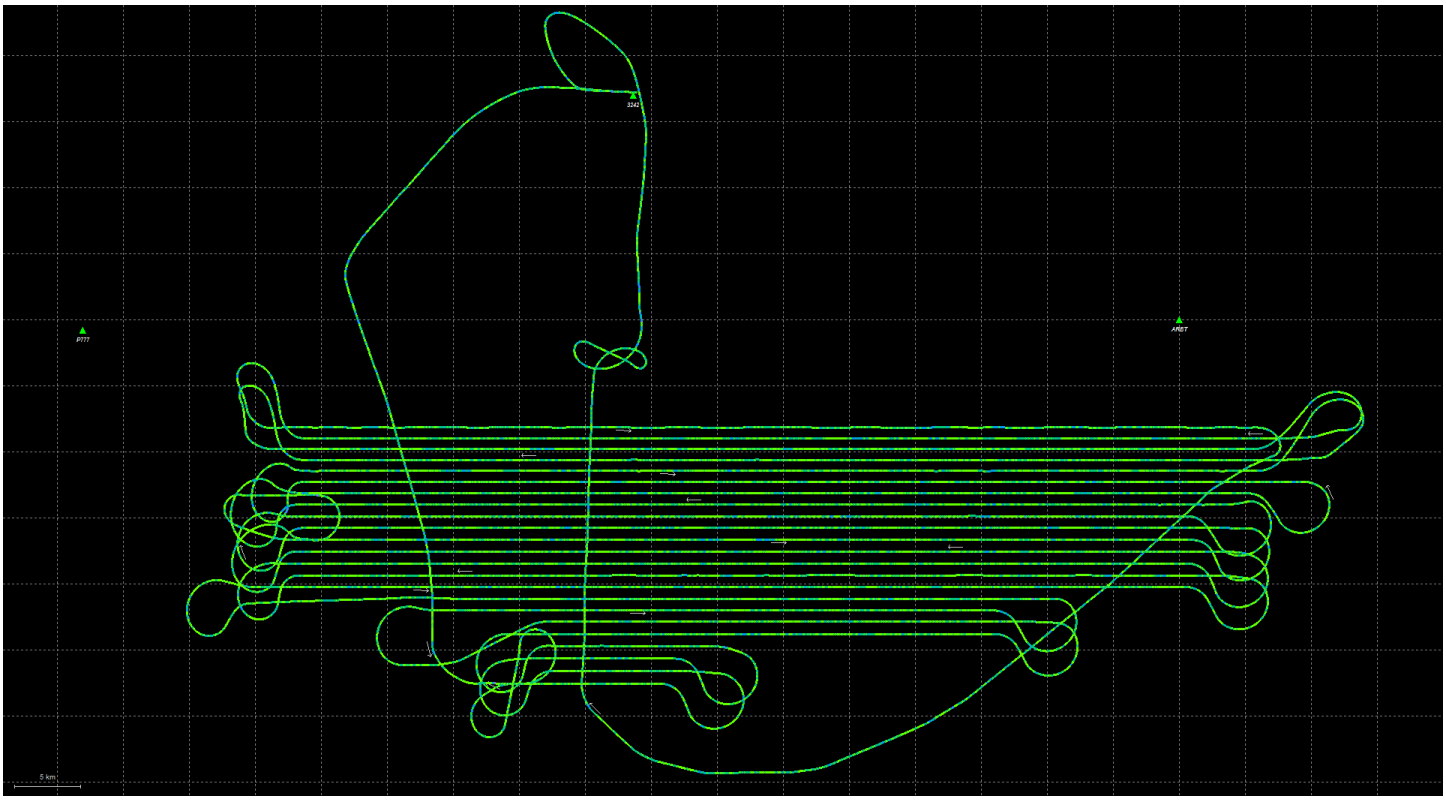
PROJECT NAME	Q.S. Arkansas	DATE	24/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Marshall AR.	DATA DRIVES	LiDar #2

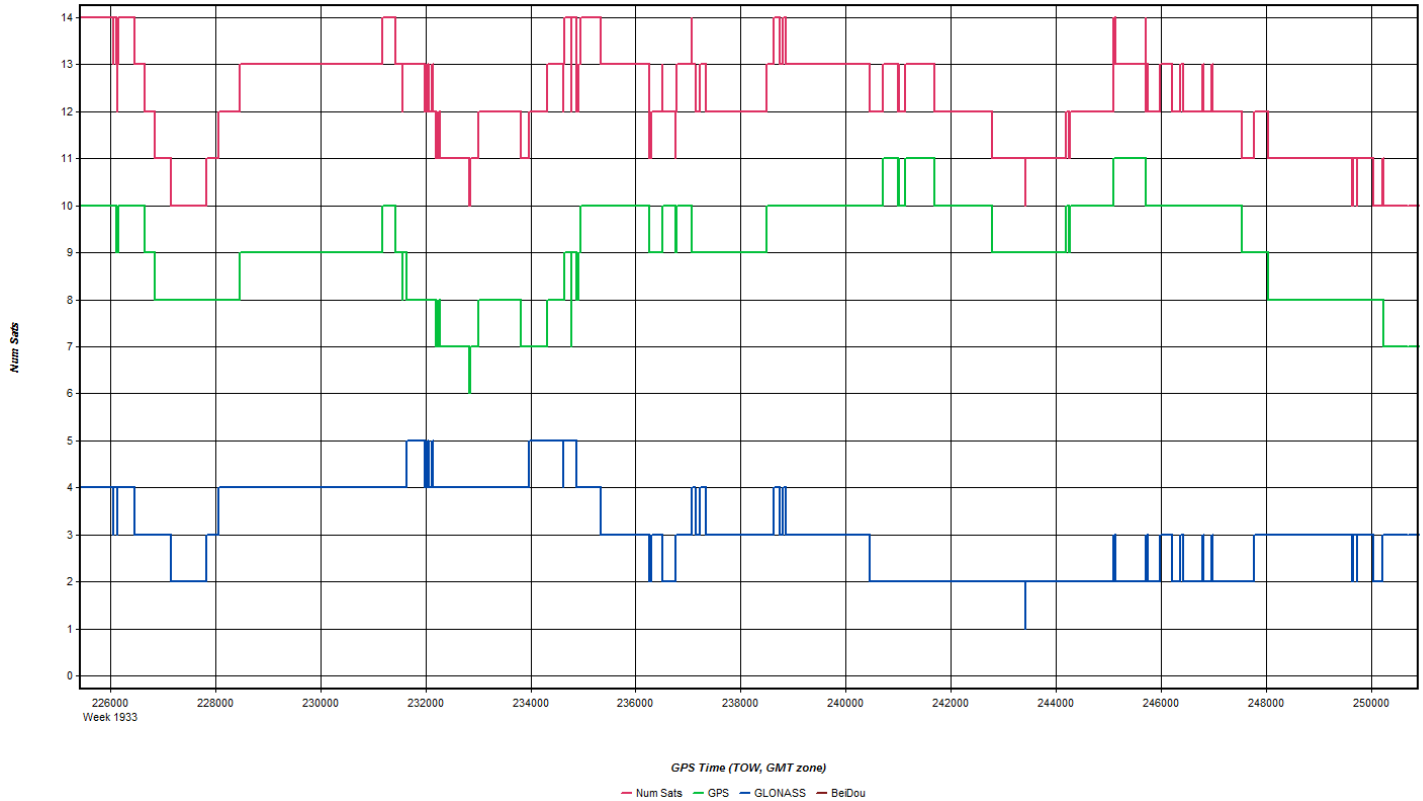
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	14::50:00	Takeoff:	15:05:00	AGL Height:	1750 m	Pulse Rate:	277 KHz		START	END
Engine Off:	21:32:00	Landing:	21:20:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	14:54:00	15:02:00
TOTAL:	6.70 hrs	TOTAL:	6.25 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	21:22:00	21:29:00

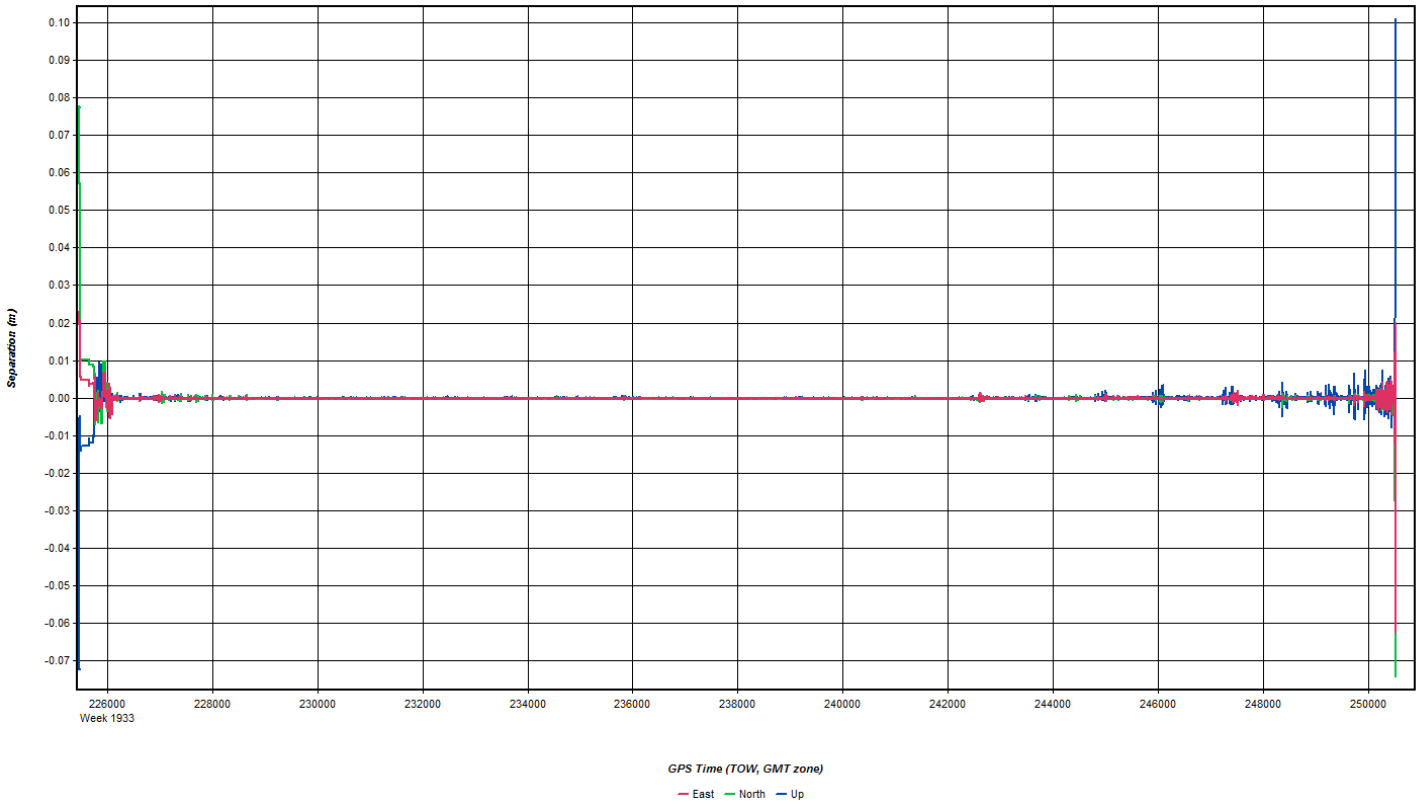
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
113		South	170124_151814	15:18:16	15:27:37	22.7nm from south to complete line
114		North	170124_153034	15:30:36	15:38:02	Imu gap after the line was complete
115		South	170124_154357	15:43:58	15:53:16	22.7nm from south to complete line
114		North	170124_155610	15:56:11	16:04:27	22.7nm from south to complete line
116		South	170124_1607	16:07:40	16:17:00	22.7nm from south to complete line
117		North	170124_161958	16:19:49	16:28:10	22.7nm from south to complete line
118		South	170124_163144	16:31:46	16:41:01	22.7nm from south to complete line
119		North	170124_164404	16:44:06	16:52:20	22.7nm from south to complete line
120		South	170124_165618	16:56:18	17:05:37	22.7nm from south to complete line
121		North	170124_170822	17:08:23	17:16:43	22.7nm from south to complete line
122		South	170124_172027	17:20:29	17:29:40	22.7nm from south to complete line
123		North	170124_173228	17:32:30	17:40:42	22.7nm from south to complete line
124		South	170124_174438	17:44:39	17:53:46	22.7nm from south to complete line
125		North	170124_175629	17:56:30	18:04:47	22.7nm from south to complete line
126		South	170124_180825	18:08:26	18:17:36	22.7nm from south to complete line
127		North	170124_182010	18:20:10	18:28:51	22.7nm from south to complete line
1		South	170124_183228	18:32:29	18:47:47	Line extended 9nm to the north
2		North	170124_185042	18:50:43	19:03:57	Line extended 9nm to the north
3		South	170124_190745	19:07:50	19:24:00	Line extended 9nm to the north
4		North	170124_192810	19:28:11	19:41:23	Line extended 9nm to the north
5		South	170124_194528	19:45:29	20:01:21	Line extended 9nm to the north
6		North	170124_200526	20:05:27	20:18:58	Line extended 9nm to the north
7		South	170124_202259	20:23:01	20:40:26	Line extended 9nm to the north
8		North	170124_204404	20:44:06	20:57:32	Line extended 9nm to the north

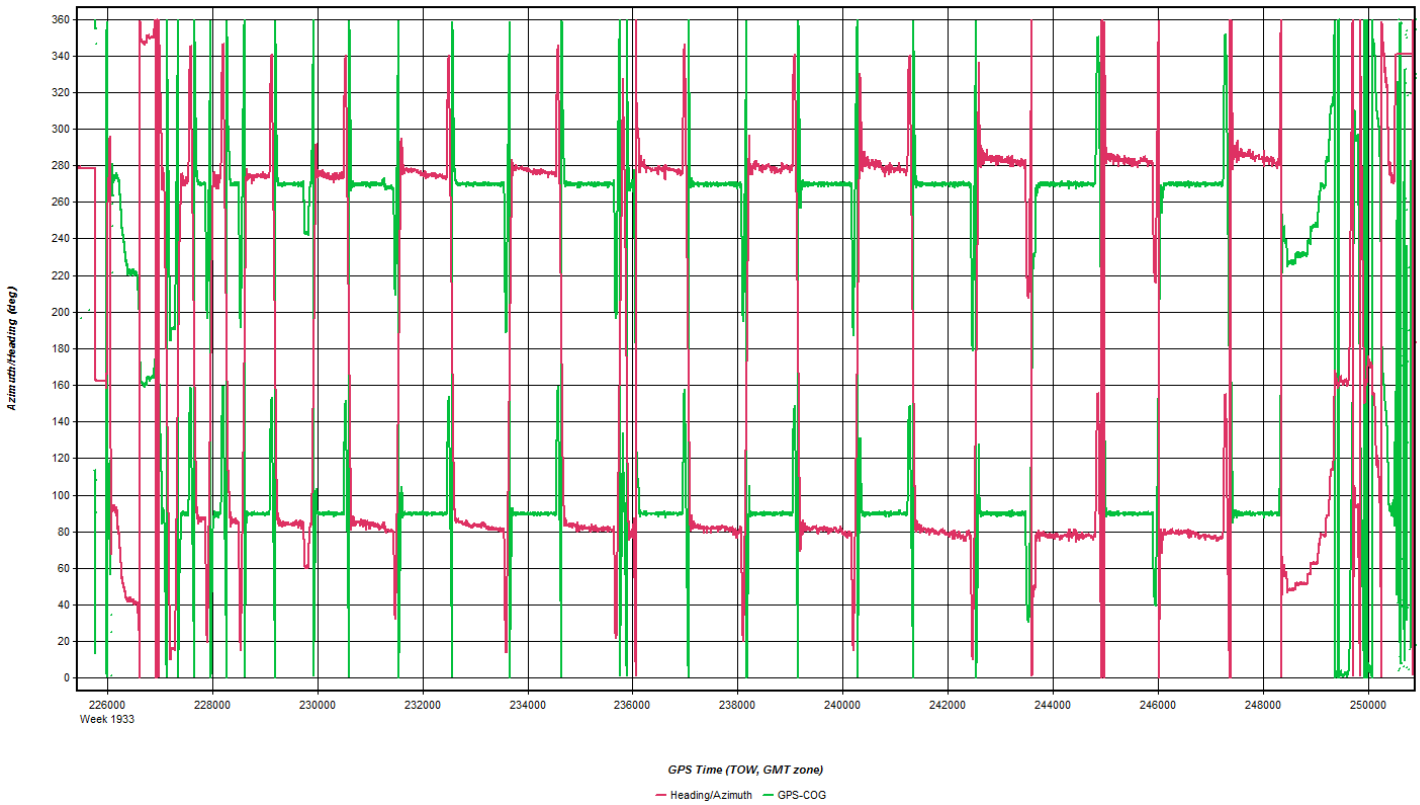
SUN ANGLE @Start: @End: @Peak:	At take off temperature was 5C and 18C when landing. Broken overcast to clear skies. Wind 48 to 62 knots from the Sw. Sats and PDOPS averaged 18 and 1.2 IMU gap @ 15:39, on a turn. Re-flew line 114 The base station was set at the Marshall Airport. 14:22 to 21:35. Antenna height was 1.695 to ARP.

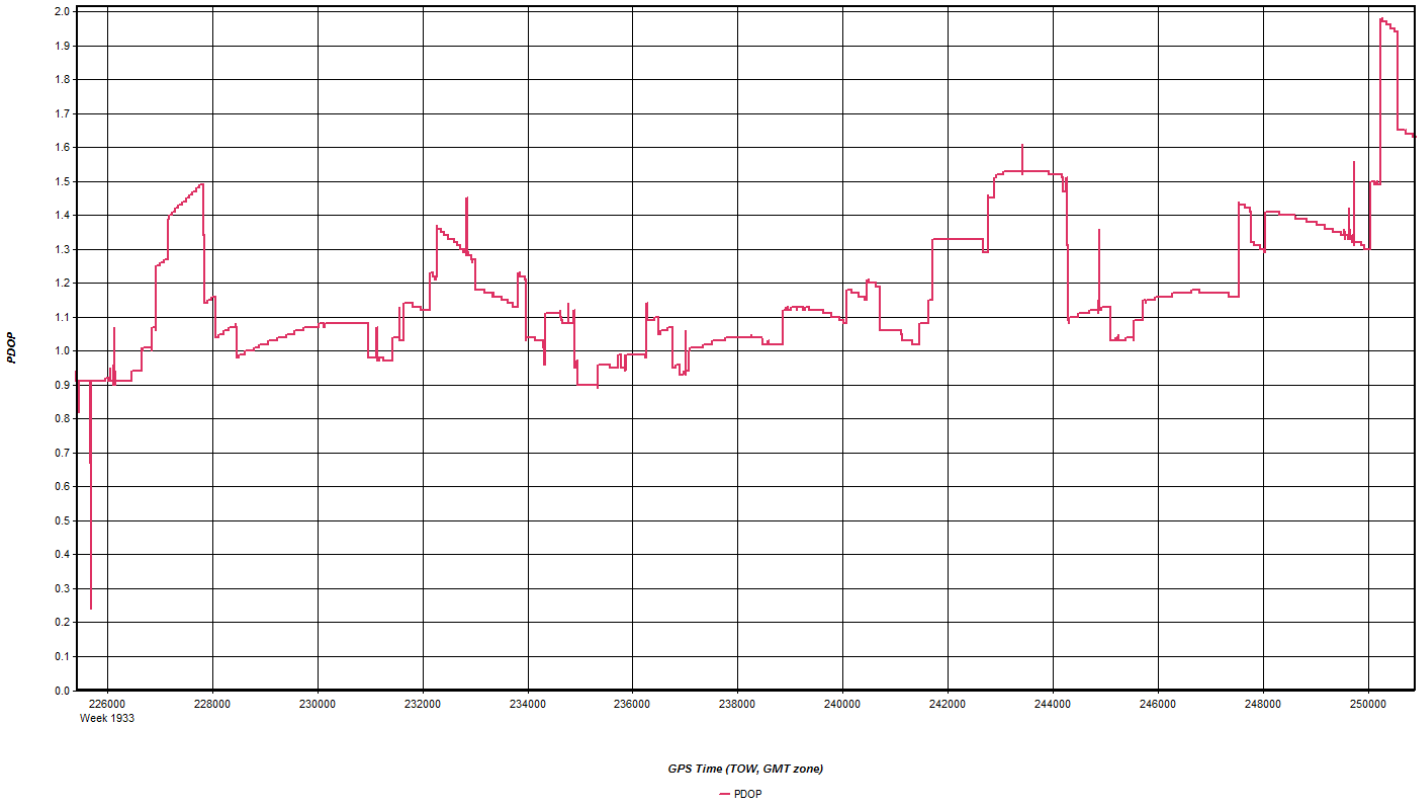
Jan 24, 2017-A (C-GKSI, SN7207)

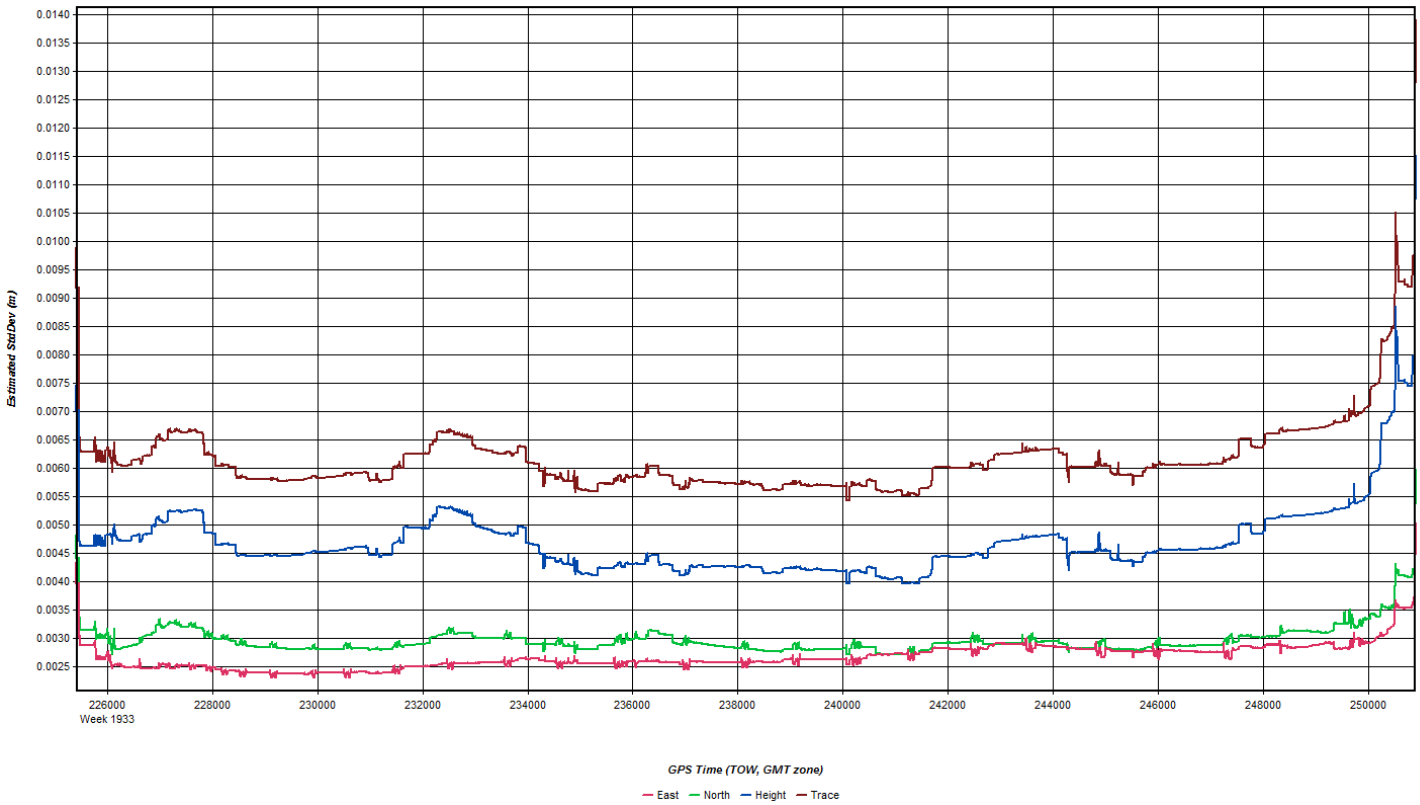

3343
PITT
ARST
5 km

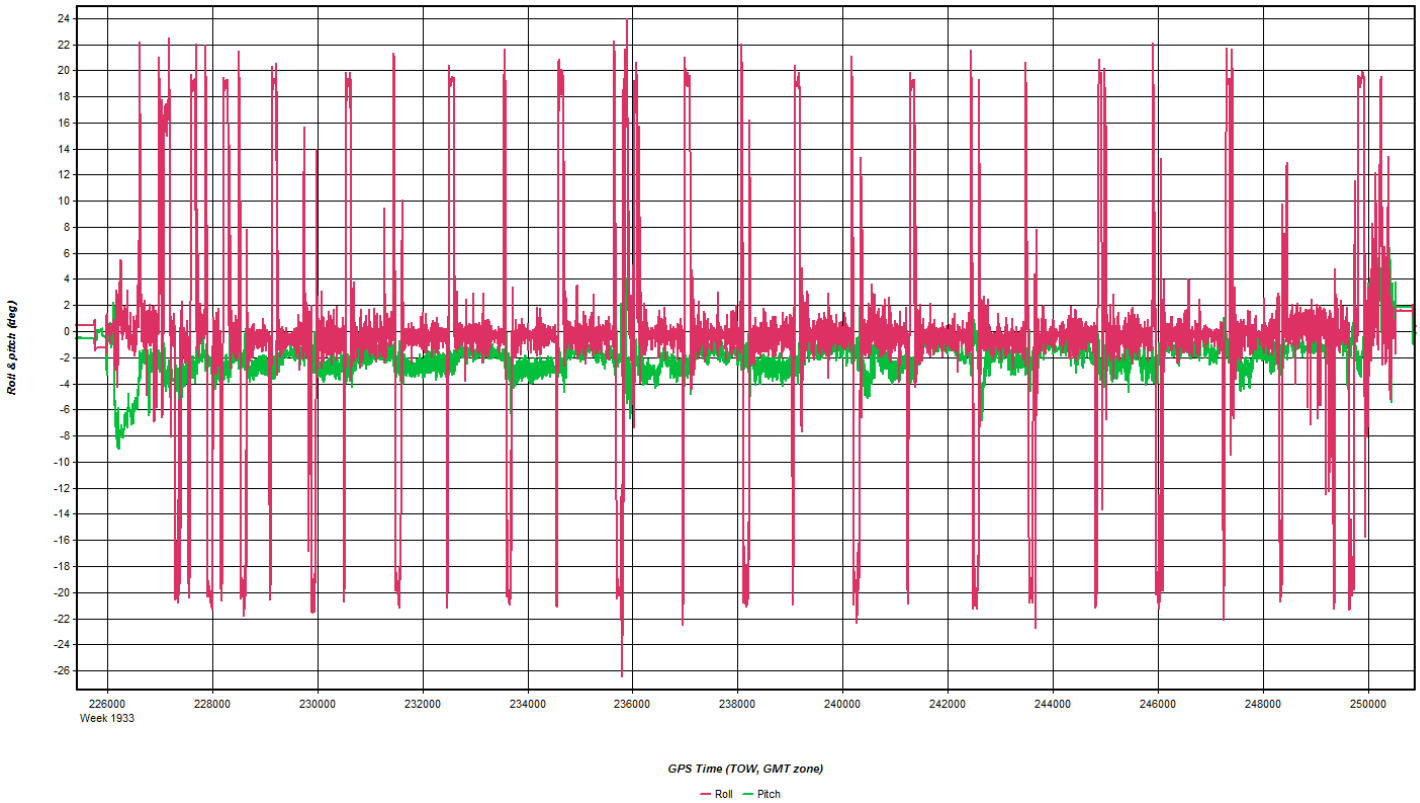

Num Sats
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
226000
Week 1933
228000
230000
232000
234000
236000
238000
240000
242000
244000
246000
248000
250000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

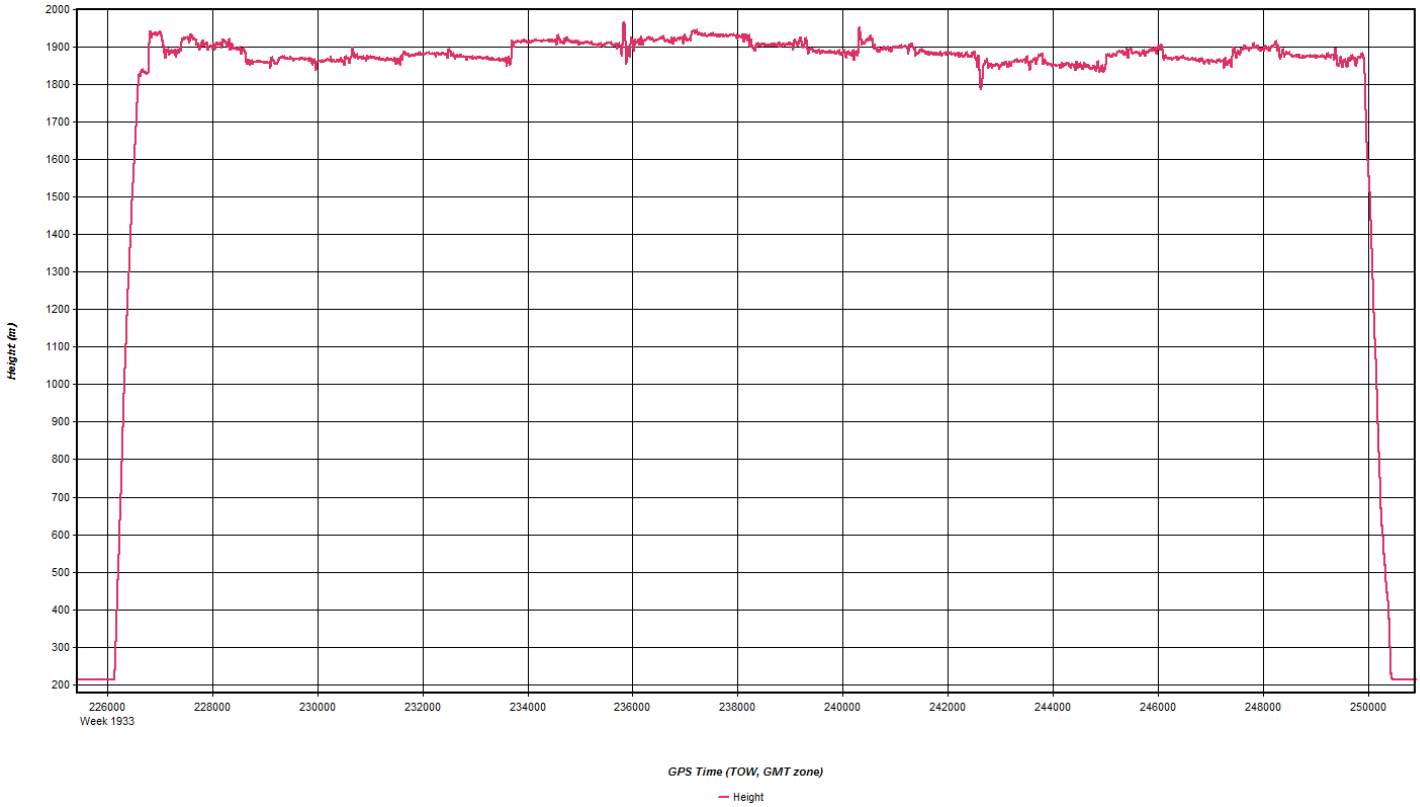

Separation (m)
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
226000
Week 1933
228000
230000
232000
234000
236000
238000
240000
242000
244000
246000
248000
250000
GPS Time (TOW, GMT zone)
East
North
Up


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
226000
Week 1933
228000
230000
232000
234000
236000
238000
240000
242000
244000
246000
248000
250000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

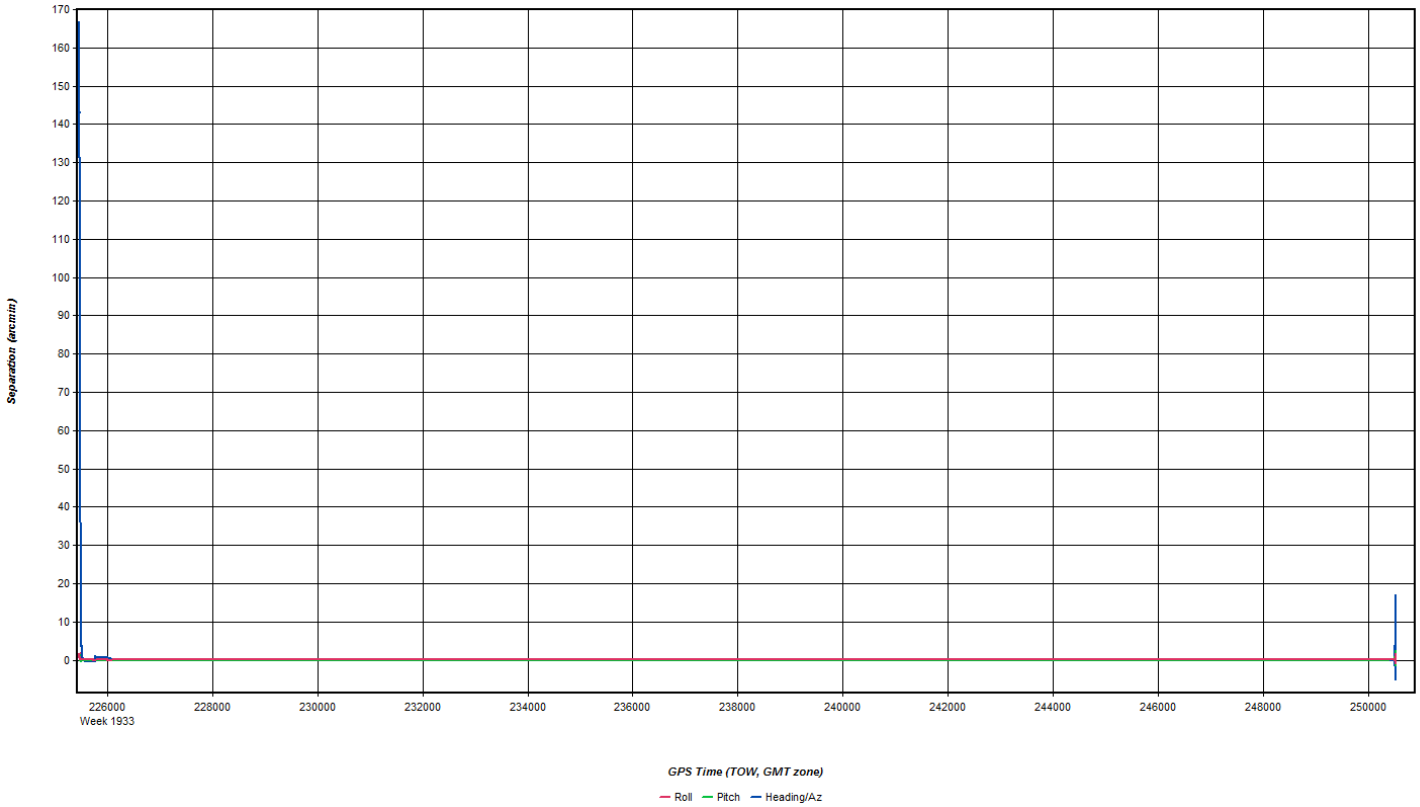

PDOP
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
226000
Week 1933
228000
230000
232000
234000
236000
238000
240000
242000
244000
246000
248000
250000
GPS Time (TOW, GMT zone)
PDOP

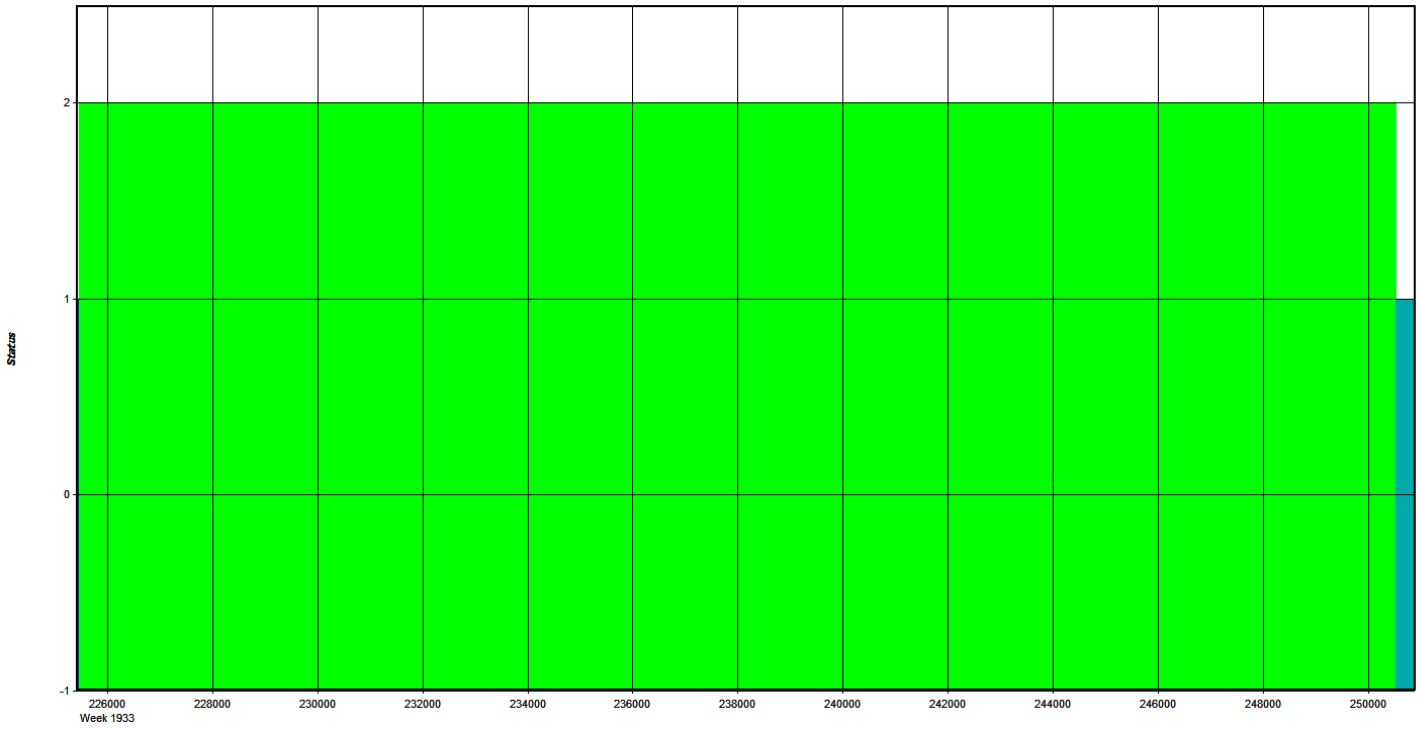

Estimated StdDev (m)
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
226000
Week 1933
228000
230000
232000
234000
236000
238000
240000
242000
244000
246000
248000
250000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

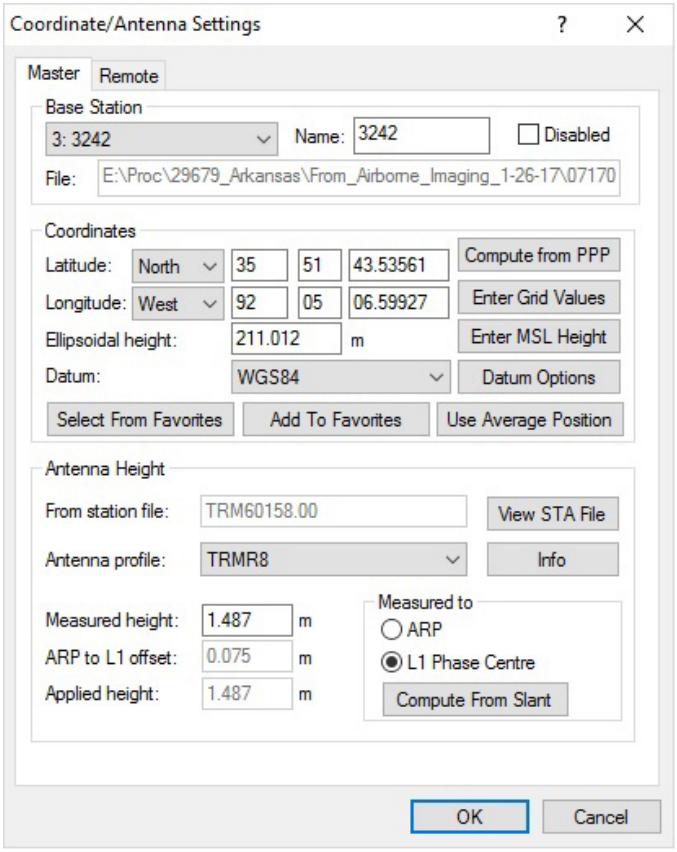

Roll & pitch (deg)
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
226000
Week 1933
228000
230000
232000
234000
236000
238000
240000
242000
244000
246000
248000
250000
GPS Time (TOW, GMT zone)
Roll
Pitch

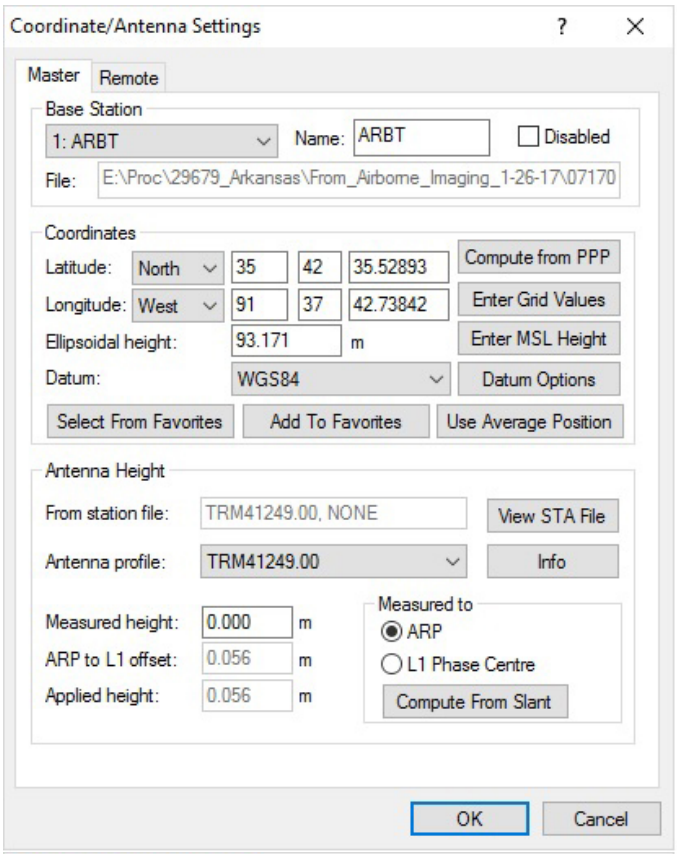

Height (m)
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
226000
Week 1933
228000
230000
232000
234000
236000
238000
240000
242000
244000
246000
248000
250000
GPS Time (TOW, GMT zone)
Height

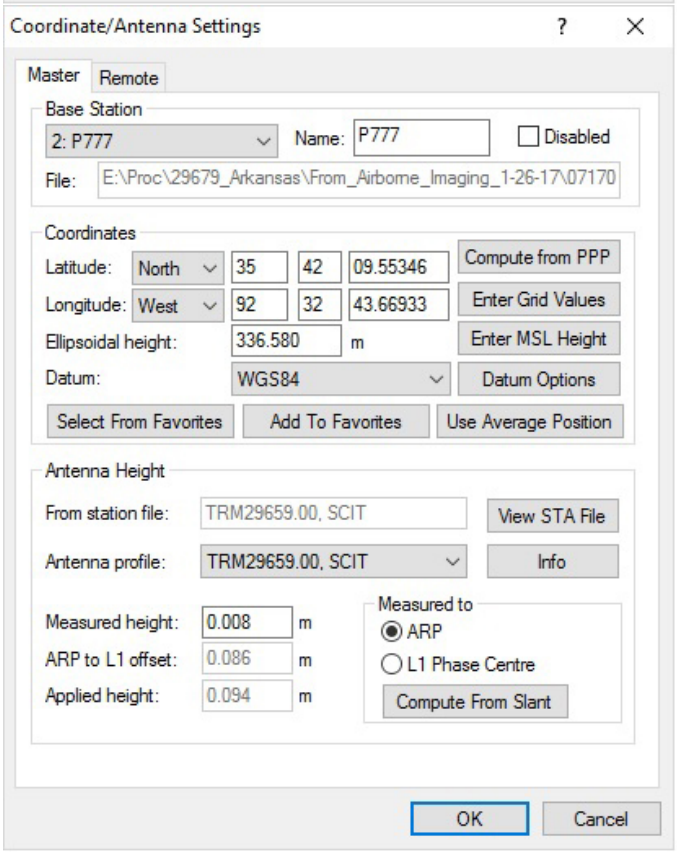

RMS (m)
0.048
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
226000
Week 1933
228000
230000
232000
234000
236000
238000
240000
242000
244000
246000
248000
250000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
226000
Week 1933
228000
230000
232000
234000
236000
238000
240000
242000
244000
246000
248000
250000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
226000
Week 1933
228000
230000
232000
234000
236000
238000
240000
242000
244000
246000
248000
250000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
3: 3242
Name: 3242
Disabled
File: E:\Proc\29679_Arkansas\From_Airborne_Imaging_1-26-17\07170
Coordinates
Latitude: North 35 51 43.53561
Longitude: West 92 05 06.59927
Ellipsoidal height: 211.012 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM60158.00
View STA File
Antenna profile: TRMR8
Info
Measured height: 1.487 m
ARP to L1 offset: 0.075 m
Applied height: 1.487 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARBT
Name: ARBT
Disabled
File: E:\Proc\29679_Arkansas\From_Airborne_Imaging_1-26-17\07170
Coordinates
Latitude: North 35 42 35.52893
Longitude: West 91 37 42.73842
Ellipsoidal height: 93.171 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM41249.00, NONE
Antenna profile: TRM41249.00
View STA File
Info
Measured height: 0.000 m
ARP to L1 offset: 0.056 m
Applied height: 0.056 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: P777
Name: P777
Disabled
File: E:\Proc\29679_Arkansas\From_Airborne_Imaging_1-26-17\07170
Coordinates
Latitude: North 35 42 09.55346
Longitude: West 92 32 43.66933
Ellipsoidal height: 336.580 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM29659.00, SCIT
Antenna profile: TRM29659.00, SCIT
View STA File
Info
Measured height: 0.008 m
ARP to L1 offset: 0.086 m
Applied height: 0.094 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Julian Day 024	Flight A

LIDAR Flight Log

Date January 24 2017	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot O. Kamerman
Location Mountain View, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System **Leica ALS70**	
Unit 7207	
IMU **Honeywell Micro IRS**	
GPS Rx **NovAtel OEMV**	
Roll Comp.	
Data Drive 2	

Additional Notes

Wind:

Temp:

Pressure:

Clouds:

Visibility:

Aircraft Block Time		
Engine On 14:32	Ramp Out	Takeoff 14:48
Engine Off 21:42	Ramp In	Landing 21:33
Total 7.2 **hrs**	Total **hrs**	Total 6.8 **hrs**

Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

Static Alignment	GPS Time	
	Start	End
Pre Mission	14:36	14:42
Post Mission	21:35	21:40

Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 170124_
IMU		Figure 8	15:02	15:09			IMU Wake Up
138		090	15:10:32	15:11:42			
137		270	15:15:54	15:17:27			
136		090	15:20:37	15:22:02			
135		270	15:26:03	15:27:57			
134		090	15:31:16	15:37:46			
133		270	15:41:28	15:49:00			
132		090	15:53:29	16:01:16			
131		270	16:04:56	16:13:27			
130		090	16:20:52	16:33:57			
129		270	16:37:38	16:52:07			
128		090	16:55:17	17:08:33			
127		270	17:12:19	17:26:57			Headwind this direction – 140-145 knts
126		090	17:30:20	17:30:40			Missed start – circled round – ignore file
126		090	17:35:25	17:48:47			

Pg 1 of 2

Julian Day 024	Flight A

LIDAR Flight Log

Date January 24 2017	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot O. Kamerman
Location Mountain View, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System	**Leica ALS70**
Unit	7207
IMU	**Honeywell Micro IRS**
GPS Rx	**NovAtel OEMV**
Roll Comp.	
Data Drive	2

Additional Notes

Wind:

Temp:

Pressure:

Clouds:

Visibility:

Aircraft Block Time		
Engine On 14:32	Ramp Out	Takeoff 14:48
Engine Off 21:42	Ramp In	Landing 21:33
Total 7.2 **hrs**	Total **hrs**	Total 6.8 **hrs**

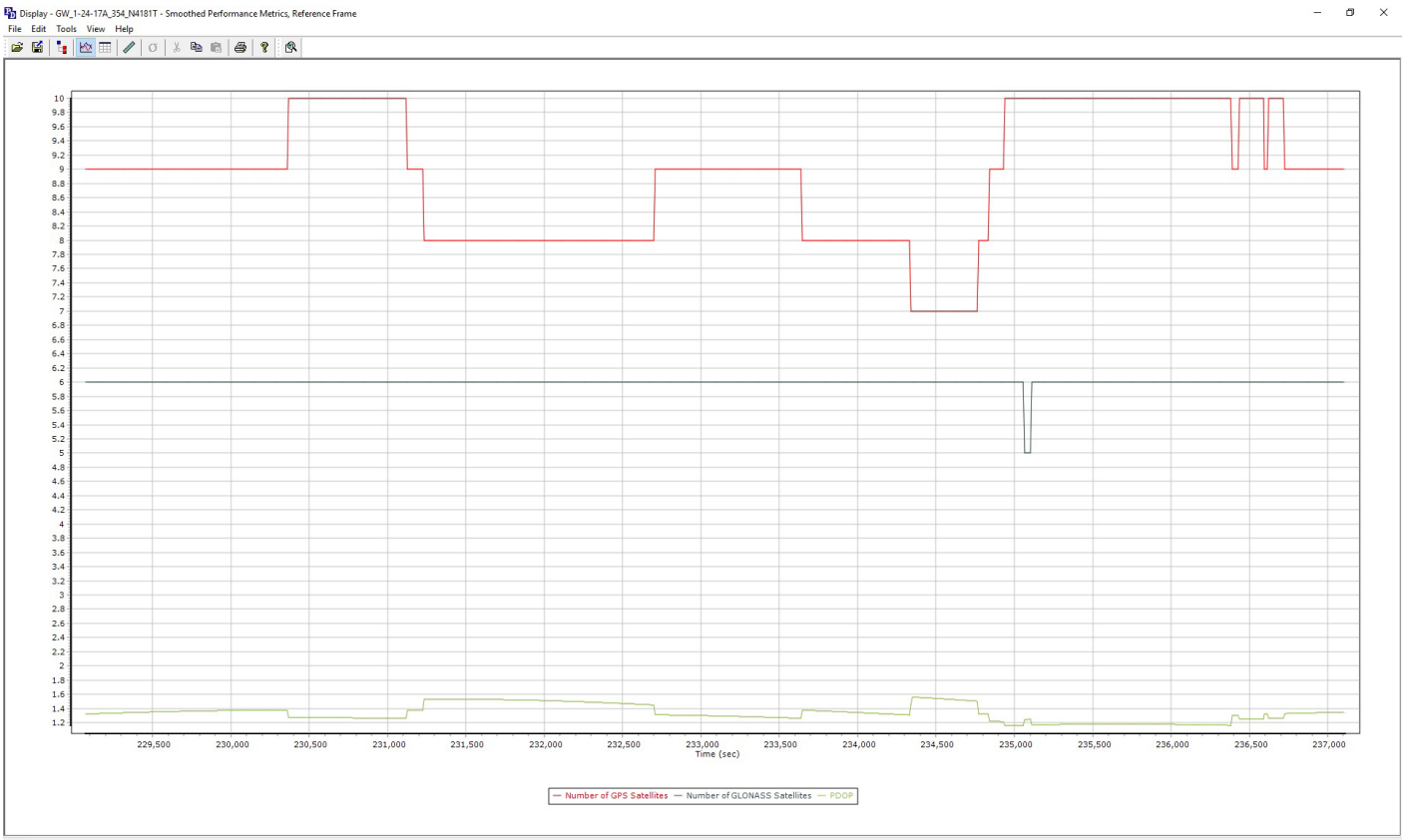
Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

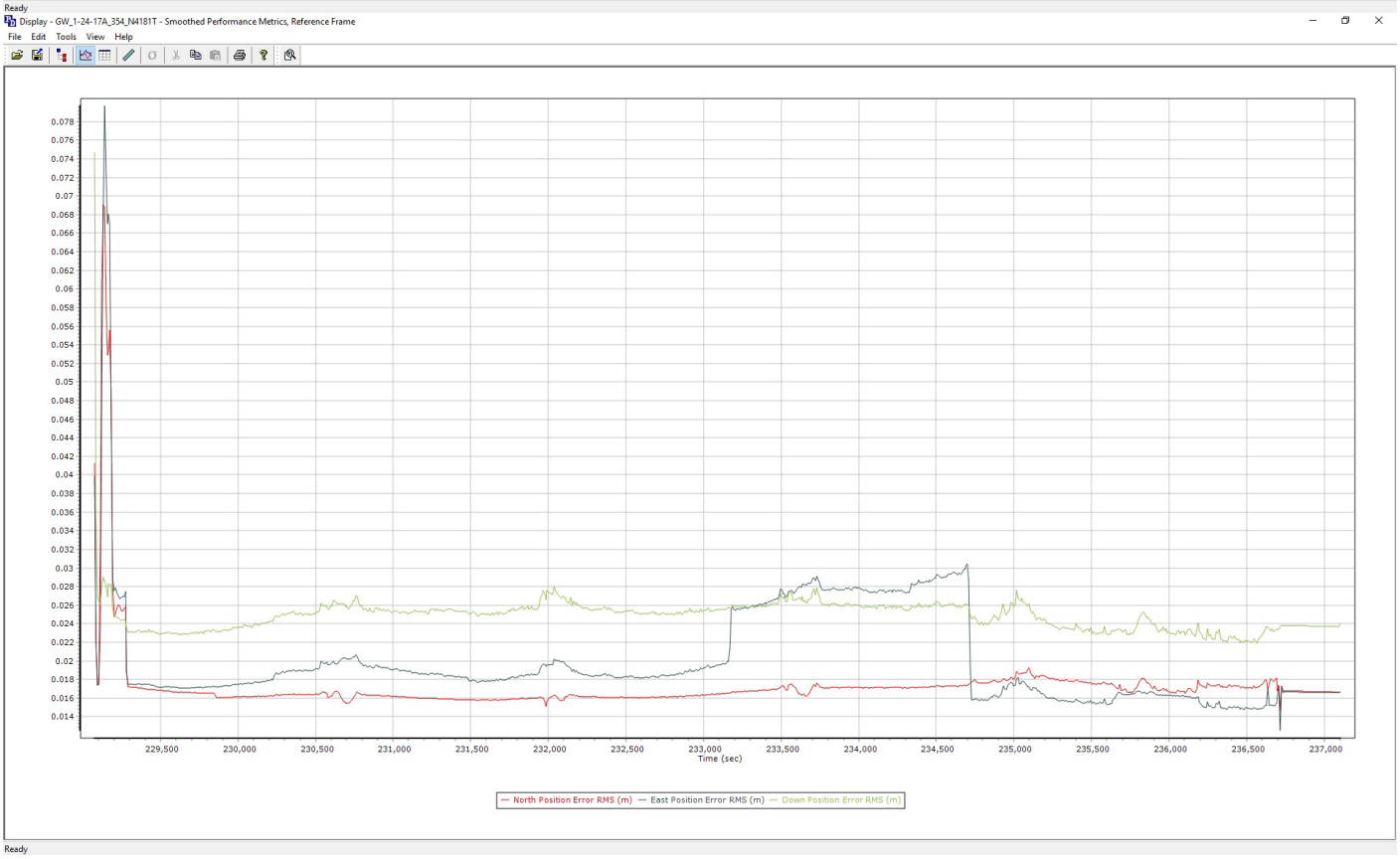
Static Alignment	GPS Time	
	Start	End
Pre Mission	14:36	14:42
Post Mission	21:35	21:40

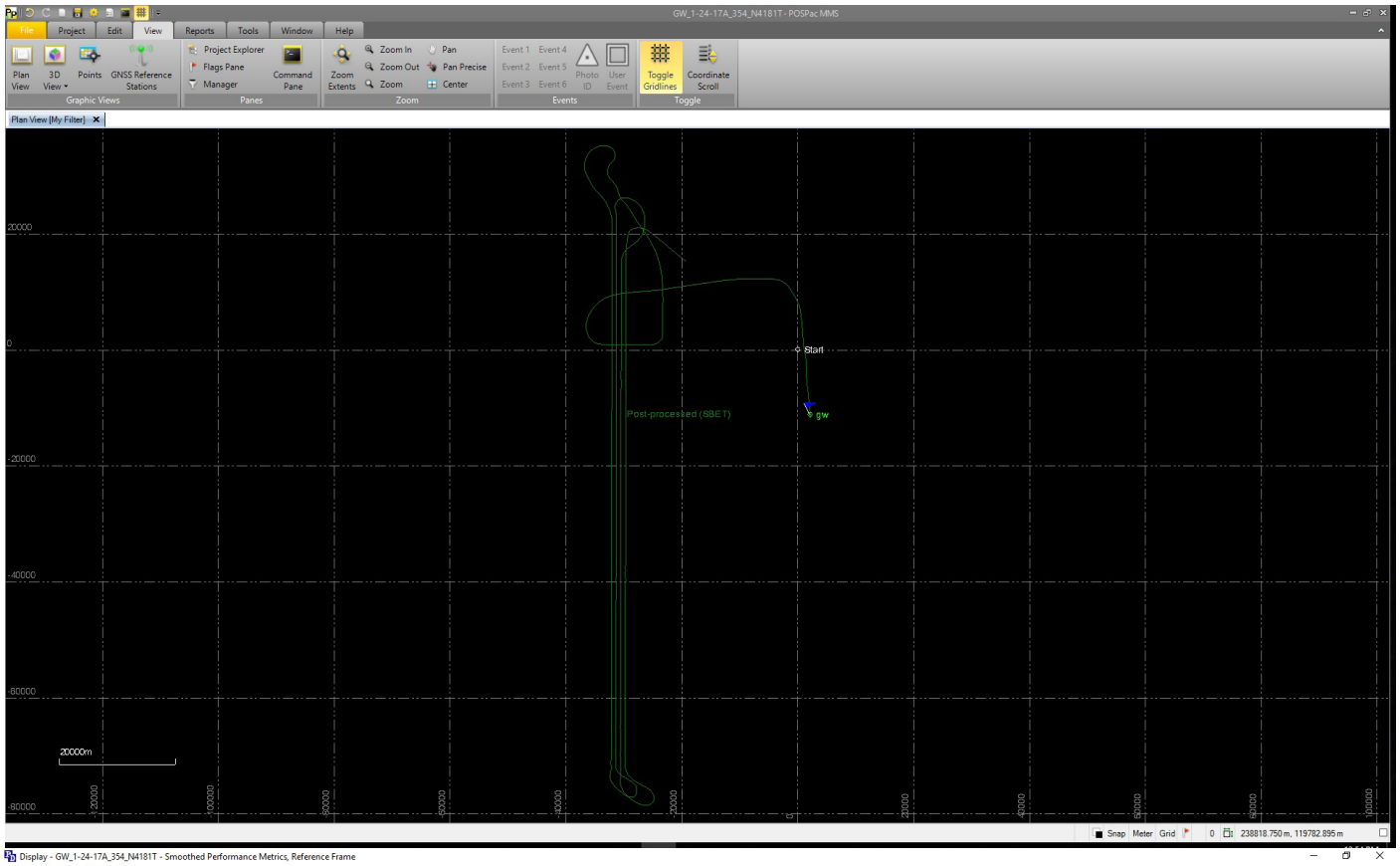
Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 170124_
125		270	17:52:30	18:0703			
124		090	18:10:27	18:23:33			
123		270	18:27:00	18:42:13			
122		090	18:45:49	19:00:08			
121		270	19:03:52	19:20:08			33knt headwind continuing
120		090	19:23:12	19:37:28			45knt cross wind
119		270	19:42:17	19:59:40			
118		090	20:03:37	20:17:49			
117		270	20:22:14	20:40:16			
116		090	20:43:49	20:57:59			
XTie		001	21:15:44	21:20:05			Cross tie lines 138-116 a south to north
IMU		Figure 8	21:20	21:25			IMU Maneuver – crazy winds!!

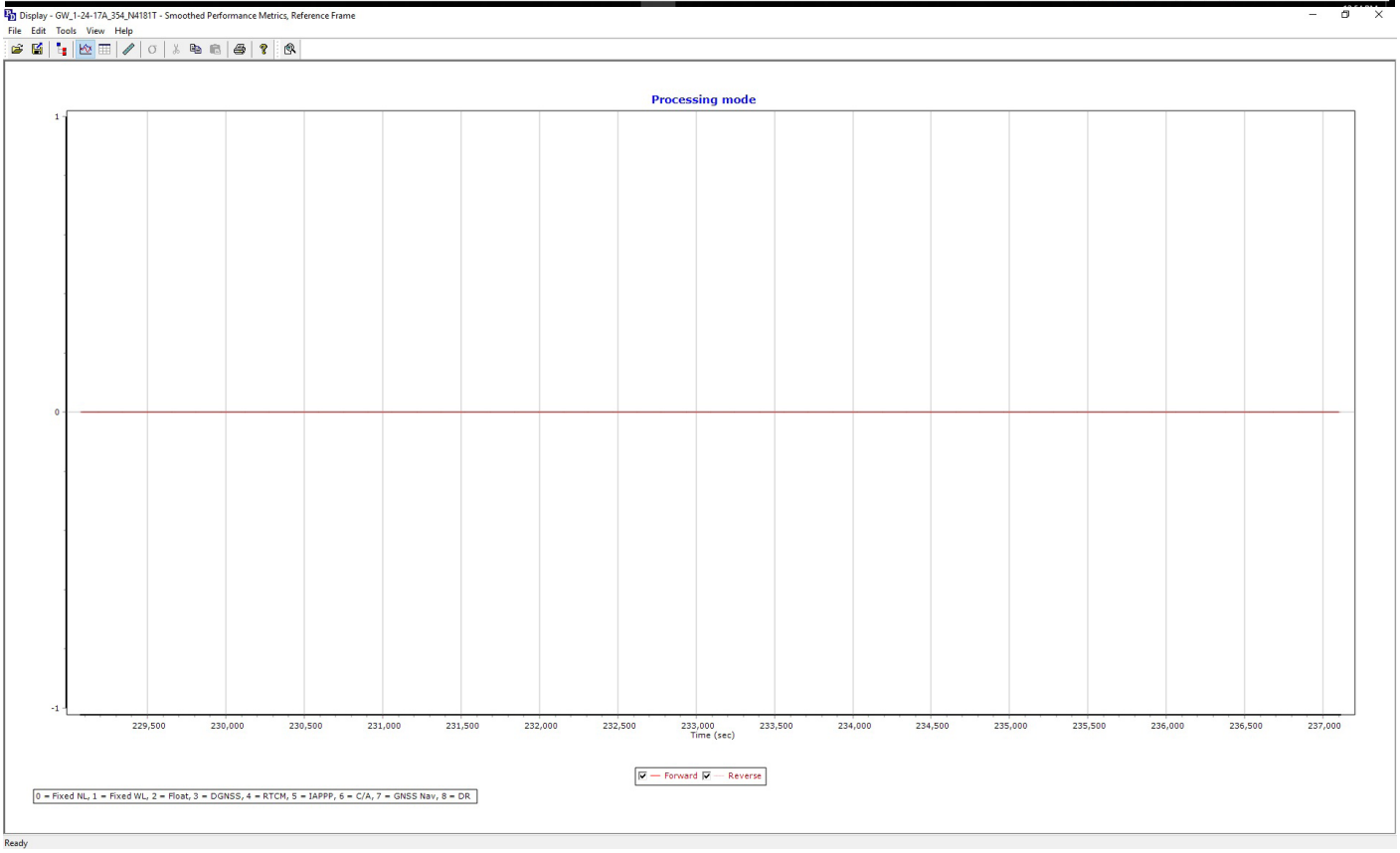
Pg 2 of 2

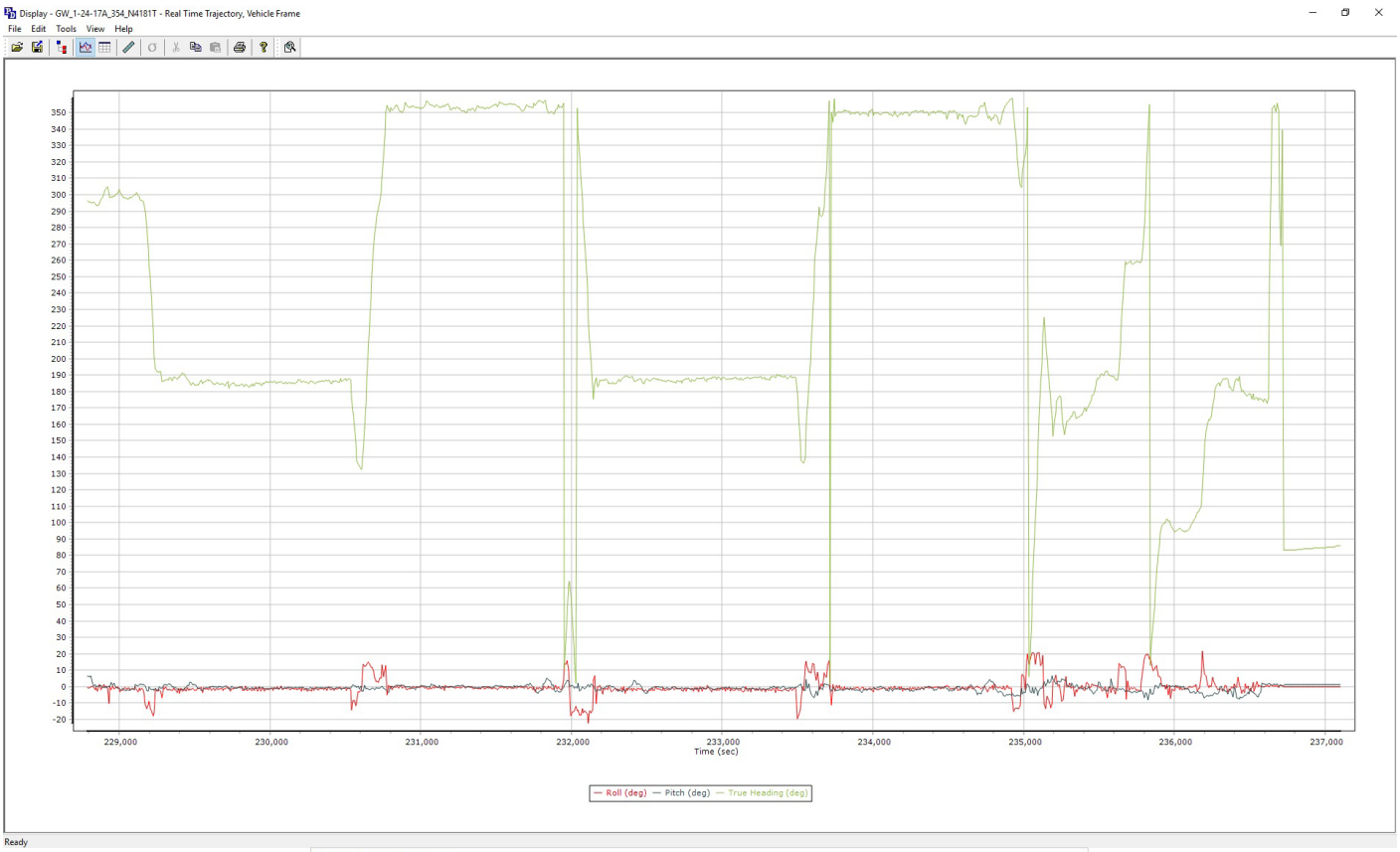
Jan 24, 2017-A (N4181T, SN354)

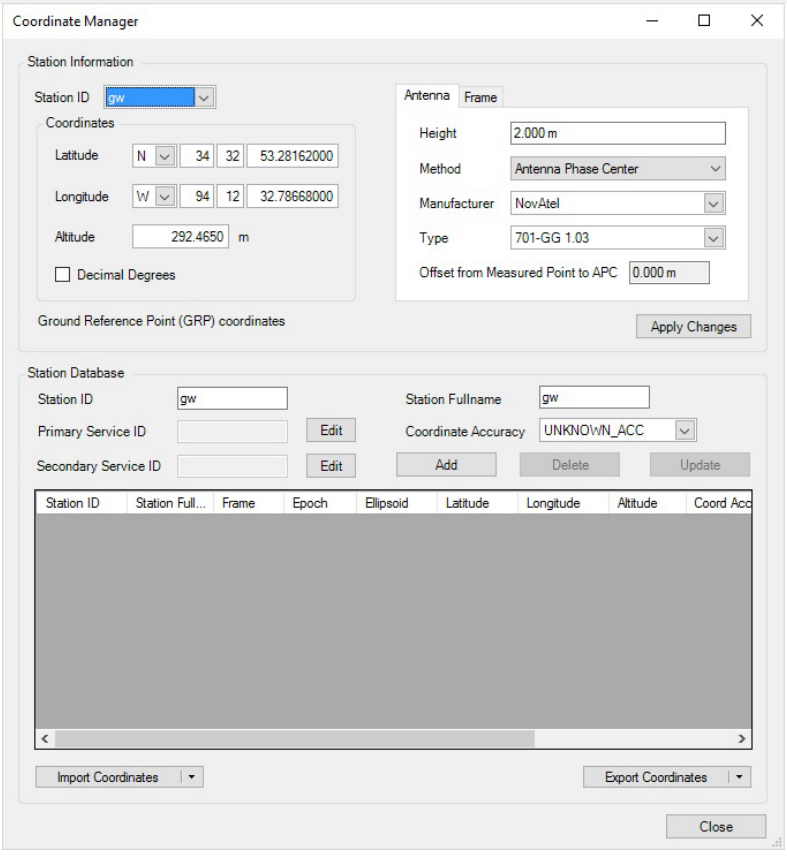

Display - GW_1-24-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_1-24-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready


GW_1-24-17A_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom Extents
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
Start
gw
Post-processed (SBET)
20000m
Snap
Meter
Grid


Display - GW_1-24-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready


Display - GW_1-24-17A_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready


Coordinate Manager
Station Information
Station ID
gw
Coordinates
Latitude
N
34
32
53.28162000
Longitude
W
94
12
32.78668000
Altitude
292.4650
m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna
Frame
Height
2.000 m
Method
Antenna Phase Center
Manufacturer
NovAtel
Type
701-GG 1.03
Offset from Measured Point to APC
0.000 m
Apply Changes
Station Database
Station ID
gw
Station Fullname
gw
Primary Service ID
Edit
Coordinate Accuracy
UNKNOWN_ACC
Secondary Service ID
Edit
Add
Delete
Update
Station ID
Station Full...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Acc
Import Coordinates
Export Coordinates
Close

Flight Log

Keystone Aerial Surveys, Inc. - LIDAR FLIGHT REPORT - v1.2

KEYSTONE AERIAL SURVEYS

Date: 1 / 24 / 2017 Pilot: KK

Project: 16PA-1072_South Operator: MLM

Aircraft: N4181T

Sensor: 5060354 HD: B

POS/AV Filename: Jan24

Flight Plan		Weather	
Roll Comp:	On	Pressure (gnd):	
Scan Rate:	52	Temperature (gnd):	
Pulse Rate:	250	Temperature (air):	
Scan Angle:	41	Dew Point:	
Desired Range:	1572	Turbulence:	
Planned GPS:	135	Visibility:	

Line #	Start Time	End Time	HDG	Range	PDOP	SV	Speed (kts)	Flight Notes
13	1542	1601	S	1629	1.0	18	122	Strong headwinds
14	1606	1625	N	1794	1.0	18	144	Strong tailwinds
15	1631	1651	S	1608	1.1	17	134	Strong headwinds
16	1655	1714	N	1830	1.0	18	148	Strong tailwinds
Tie	1728	1729	W	1619	1.0	17	146	

Base Station

Point ID:_____

Position Type: Autonomous

Antenna Height: 2 Meters

Latitude:_____

Longitude:_____

Location: MEZ
Time On(UTC): 1445
Time Off(UTC): 1805
PDOP: 1.0
SV's 17

Airborne Station

Time On: 1519 UTC

Kinematic On: 1525 UTC

Kinematic Off: 1745 UTC

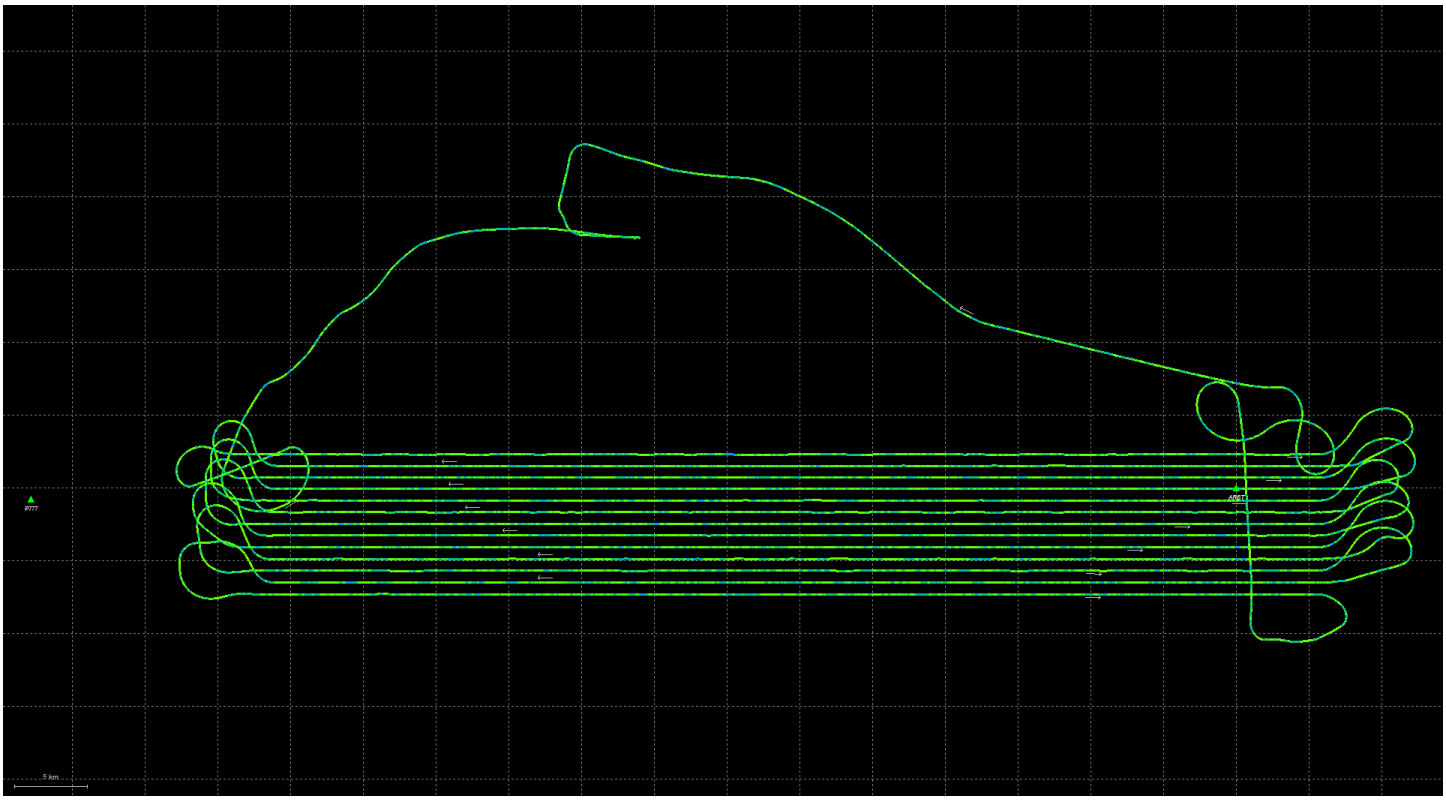
Time Off: 1755 UTC

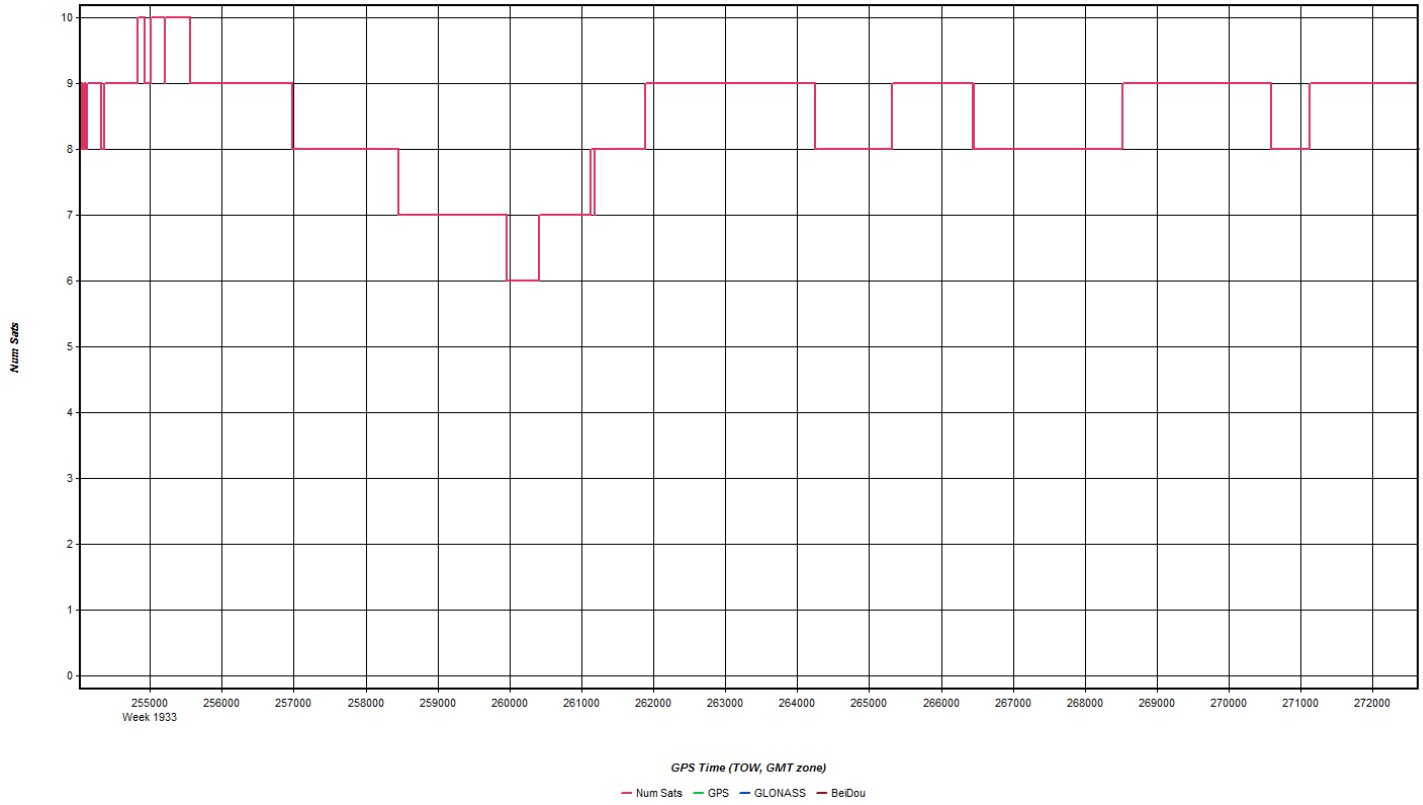
Engine Start(24HR LCL): 0905_____ Hobbs Start:_____

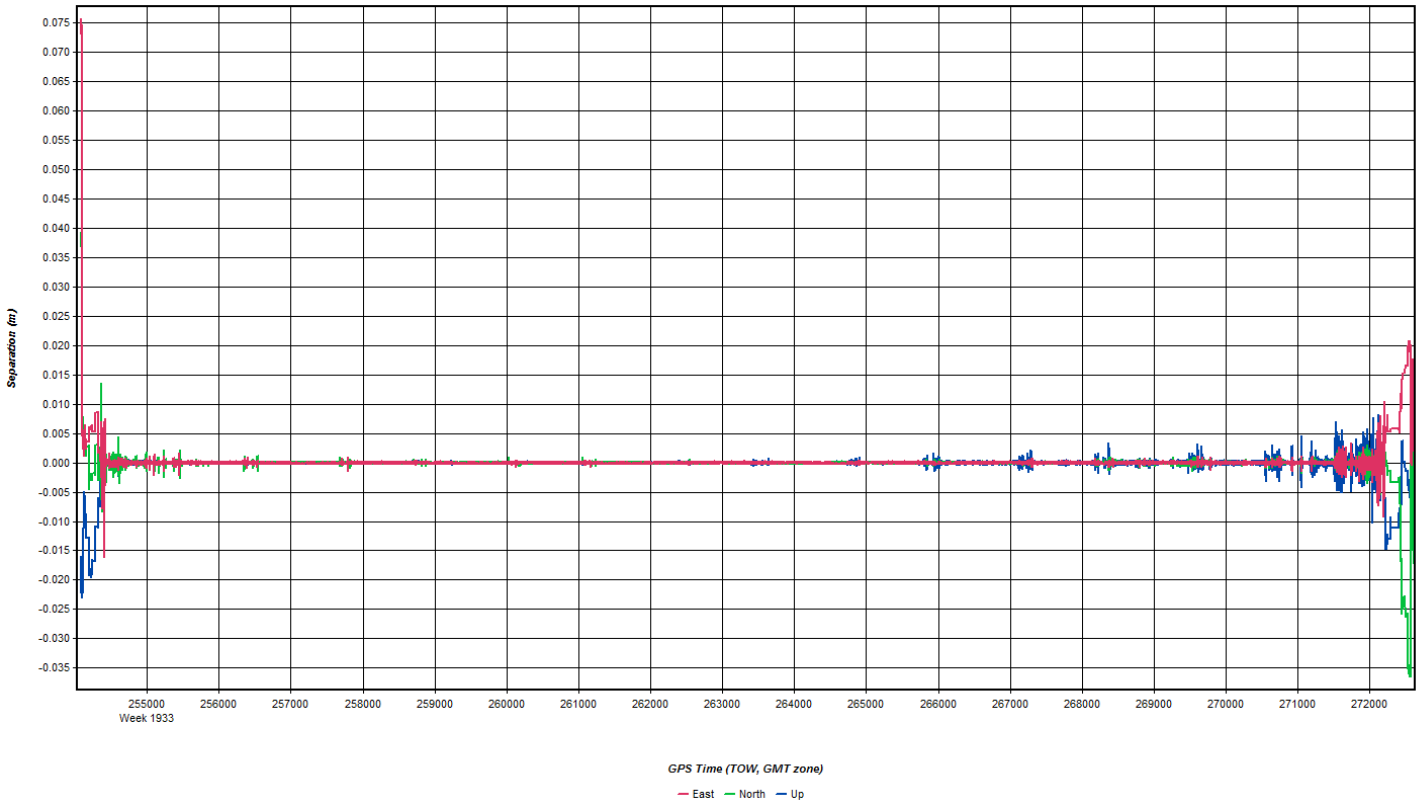
Engine Stop(24HR LCL): 1151_____ Hobbs Stop:_____

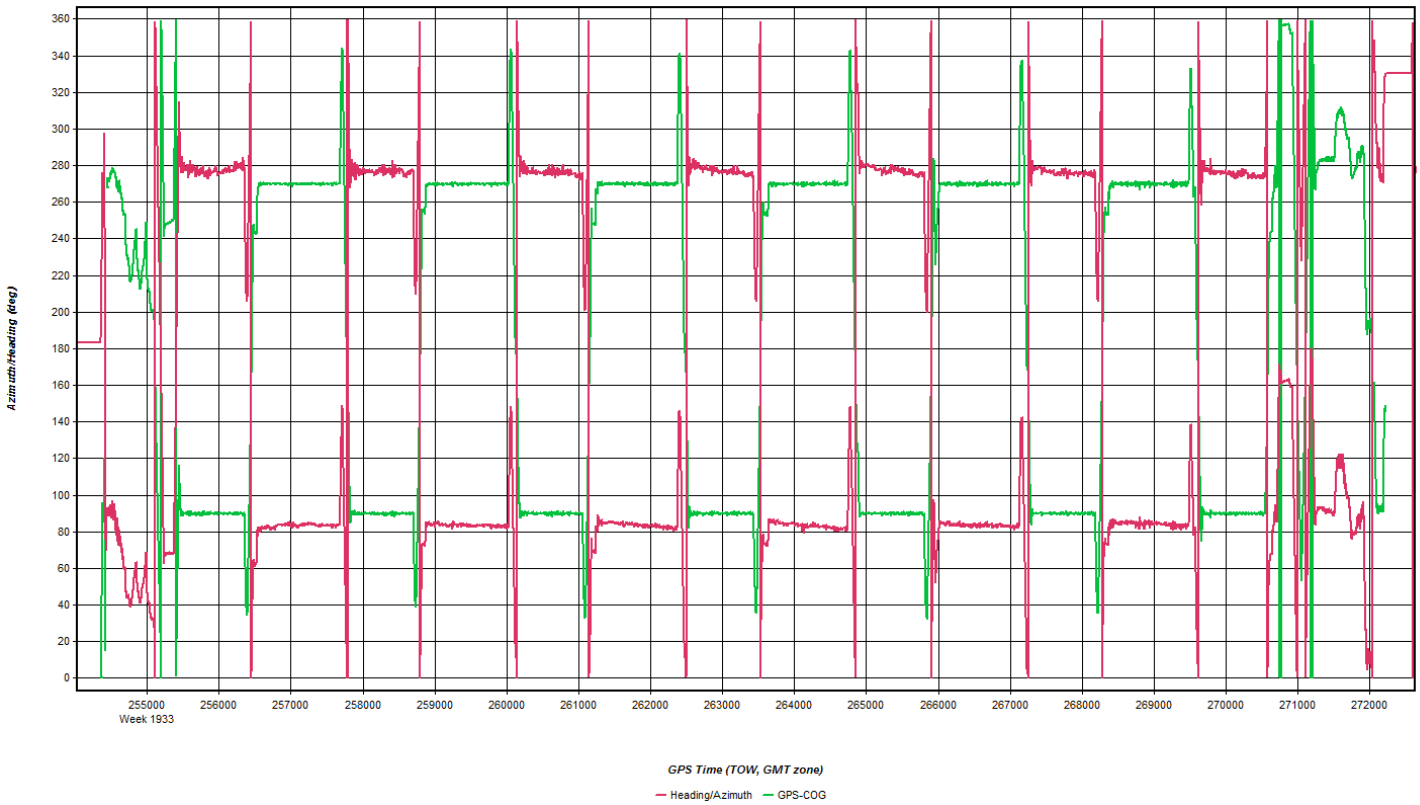
Page _____of_____

Jan 24, 2017-B (C-GKSI, SN7207)

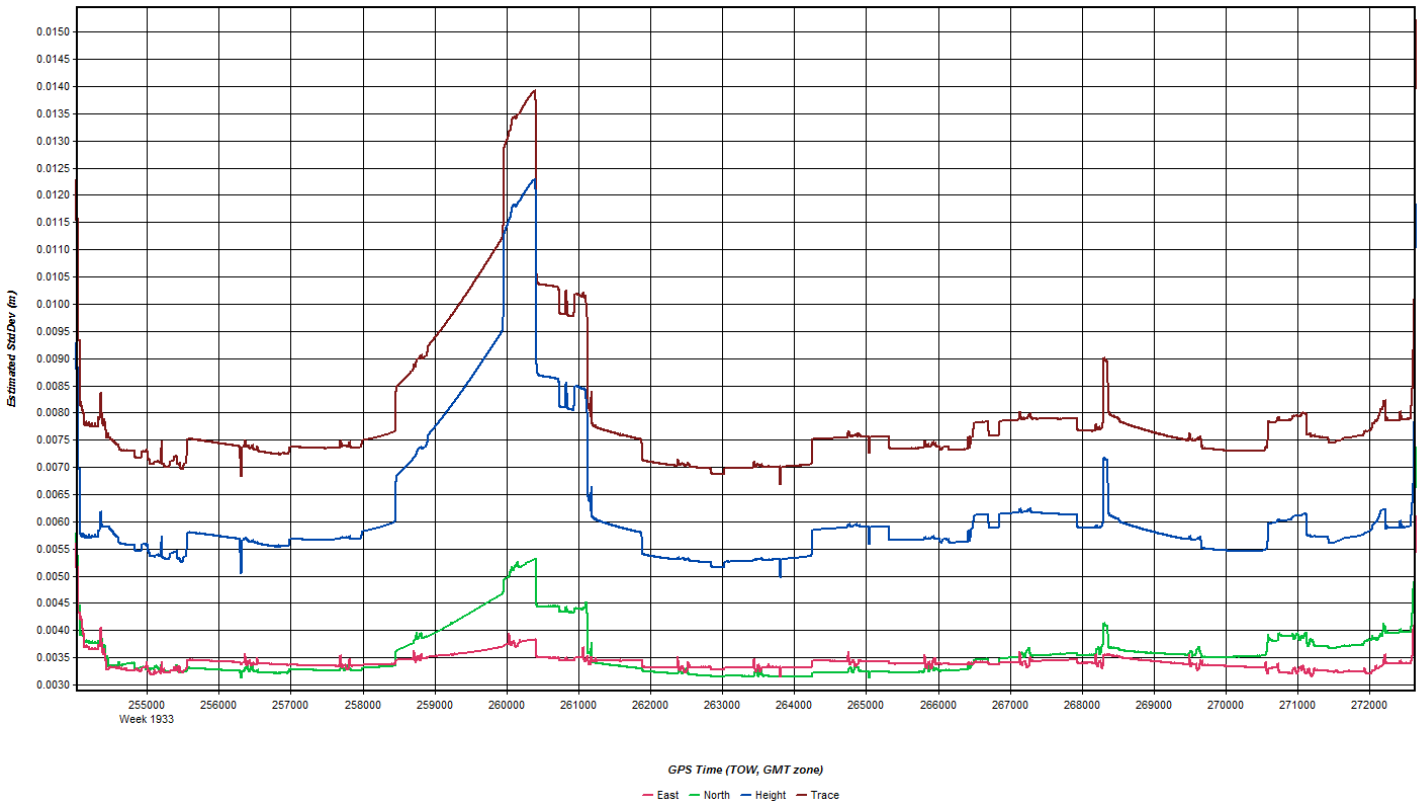

PT7
ARK1
5 km

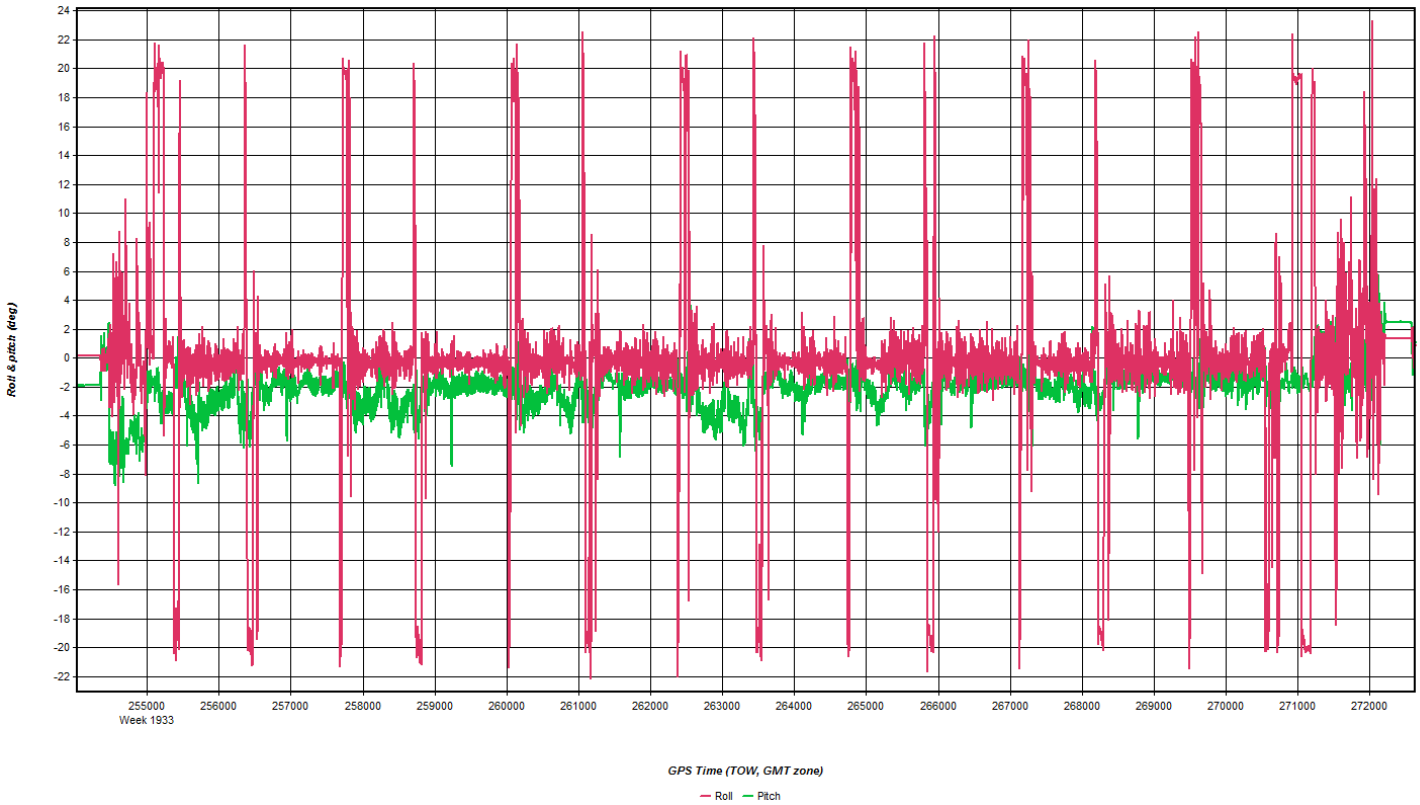

Num Sats
10
9
8
7
6
5
4
3
2
1
0
255000
Week 1933
256000
257000
258000
259000
260000
261000
262000
263000
264000
265000
266000
267000
268000
269000
270000
271000
272000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

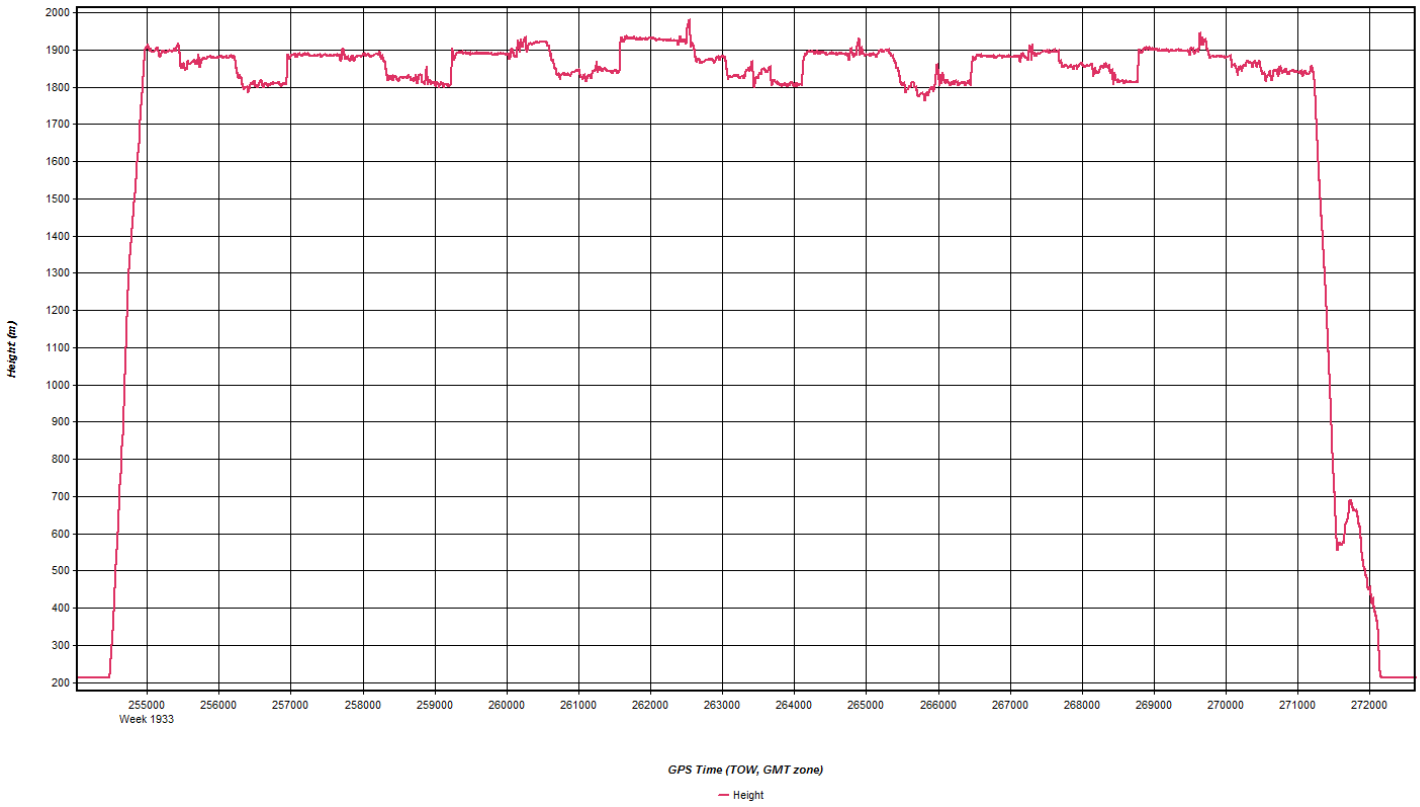

Separation (m)
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
255000
Week 1933
256000
257000
258000
259000
260000
261000
262000
263000
264000
265000
266000
267000
268000
269000
270000
271000
272000
GPS Time (TOW, GMT zone)
East
North
Up

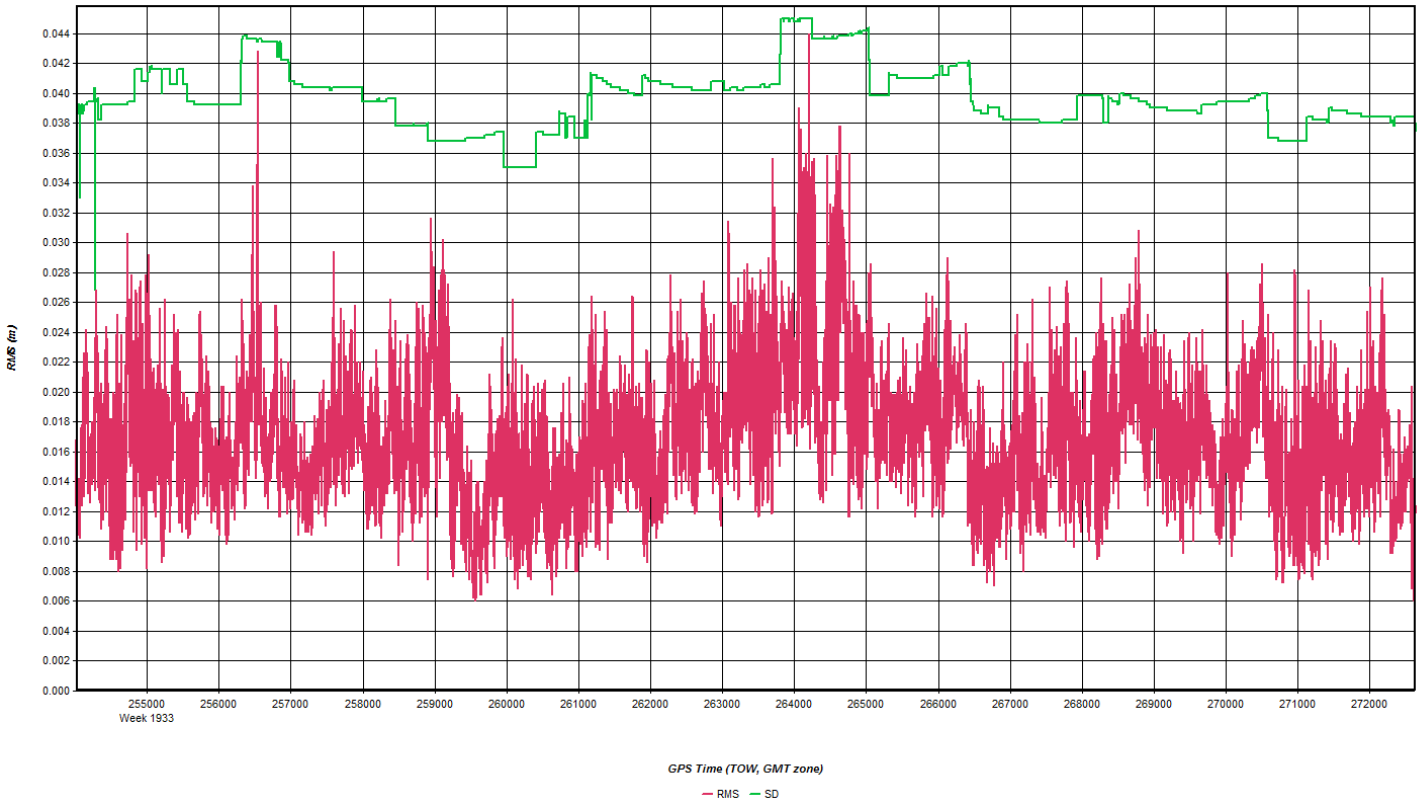

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
255000
Week 1933
256000
257000
258000
259000
260000
261000
262000
263000
264000
265000
266000
267000
268000
269000
270000
271000
272000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

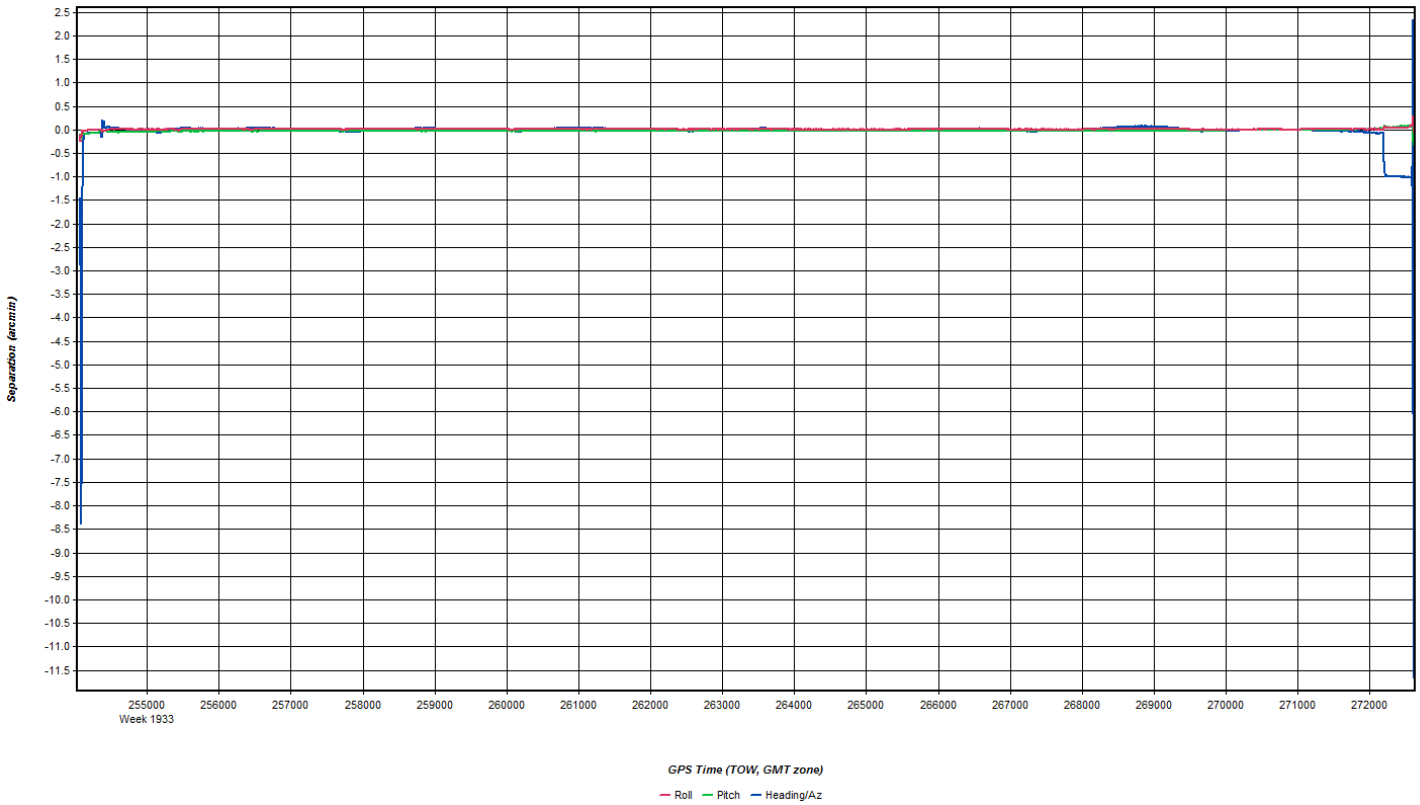

PDOP
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
255000
Week 1933
256000
257000
258000
259000
260000
261000
262000
263000
264000
265000
266000
267000
268000
269000
270000
271000
272000
GPS Time (TOW, GMT zone)
PDOP

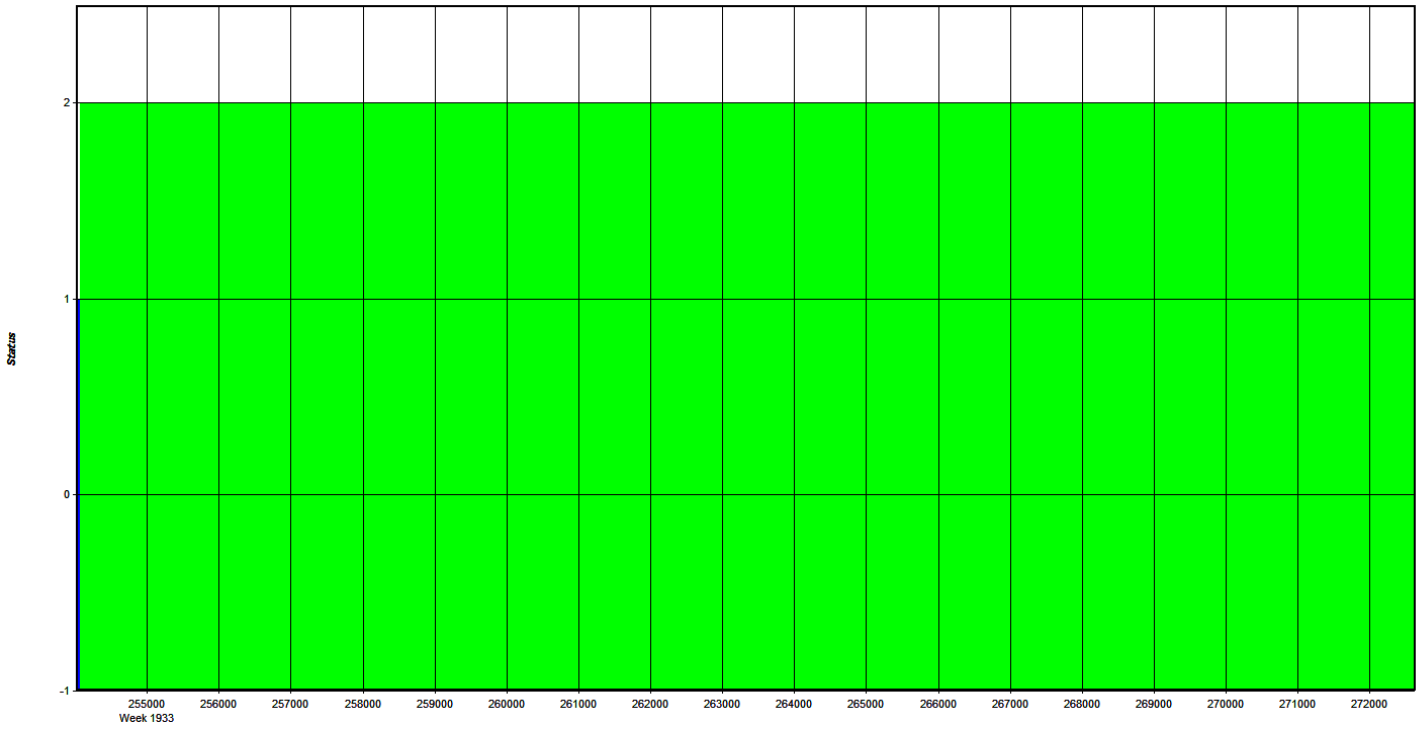

Estimated StdDev (m)
0.0150
0.0145
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
255000
Week 1933
256000
257000
258000
259000
260000
261000
262000
263000
264000
265000
266000
267000
268000
269000
270000
271000
272000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

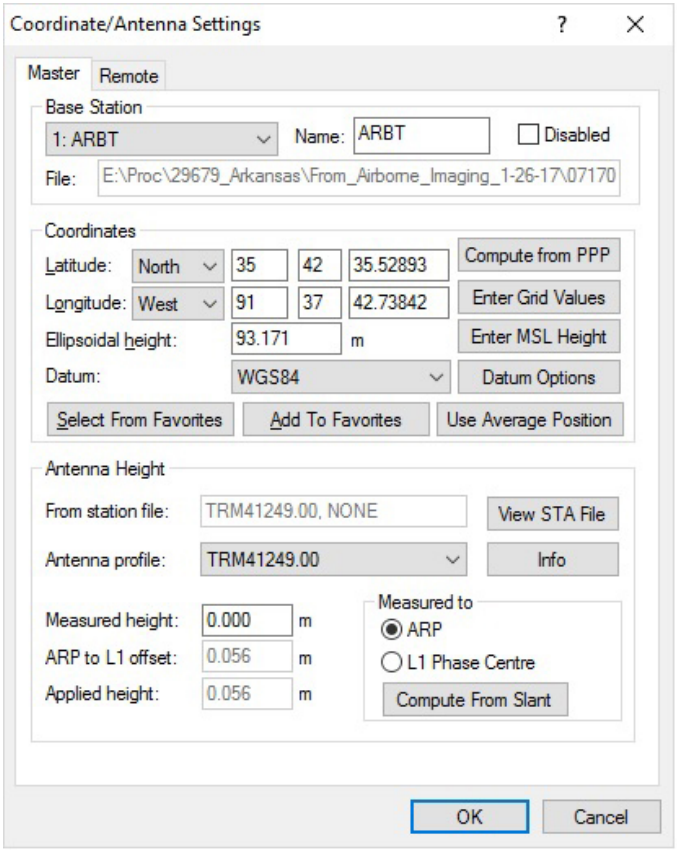

Roll & pitch (deg)
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
255000
Week 1933
256000
257000
258000
259000
260000
261000
262000
263000
264000
265000
266000
267000
268000
269000
270000
271000
272000
GPS Time (TOW, GMT zone)
Roll
Pitch

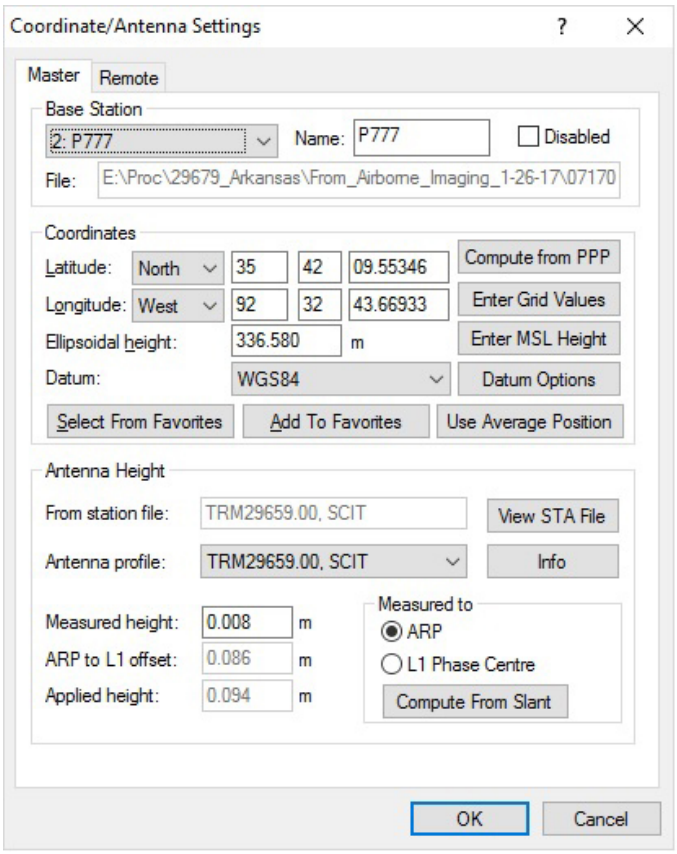

Height (m)
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
255000
Week 1933
256000
257000
258000
259000
260000
261000
262000
263000
264000
265000
266000
267000
268000
269000
270000
271000
272000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
255000
Week 1933
256000
257000
258000
259000
260000
261000
262000
263000
264000
265000
266000
267000
268000
269000
270000
271000
272000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
-3.0
-3.5
-4.0
-4.5
-5.0
-5.5
-6.0
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
-10.0
-10.5
-11.0
-11.5
255000
Week 1933
256000
257000
258000
259000
260000
261000
262000
263000
264000
265000
266000
267000
268000
269000
270000
271000
272000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
255000
Week 1933
256000
257000
258000
259000
260000
261000
262000
263000
264000
265000
266000
267000
268000
269000
270000
271000
272000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARBT
Name:
ARBT
Disabled
File:
E:\Proc\29679_Arkansas\From_Airborne_Imaging_1-26-17\07170
Coordinates
Latitude:
North
35
42
35.52893
Compute from PPP
Longitude:
West
91
37
42.73842
Enter Grid Values
Ellipsoidal height:
93.171
m
Enter MSL Height
Datum:
WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file:
TRM41249.00, NONE
View STA File
Antenna profile:
TRM41249.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.056
m
Applied height:
0.056
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: P777
Name: P777
Disabled
File: E:\Proc\29679_Arkansas\From_Airborne_Imaging_1-26-17\07170
Coordinates
Latitude: North 35 42 09.55346
Longitude: West 92 32 43.66933
Ellipsoidal height: 336.580 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM29659.00, SCIT
View STA File
Antenna profile: TRM29659.00, SCIT
Info
Measured height: 0.008 m
ARP to L1 offset: 0.086 m
Applied height: 0.094 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Julian Day 024	Flight B

LIDAR Flight Log

Date January 24 2017	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot O. Kamerman
Location Mountain View, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System **Leica ALS70**	
Unit 7207	
IMU **Honeywell Micro IRS**	
GPS Rx **NovAtel OEMV**	
Roll Comp.	
Data Drive 3	

Additional Notes

Wind:

Temp:

Pressure:

Clouds:

Visibility:

Aircraft Block Time		
Engine On 22:28	Ramp Out	Takeoff 22:41
Engine Off 03:44	Ramp In	Landing 03:35
Total 5.3 **hrs**	Total **hrs**	Total 4.9 **hrs**

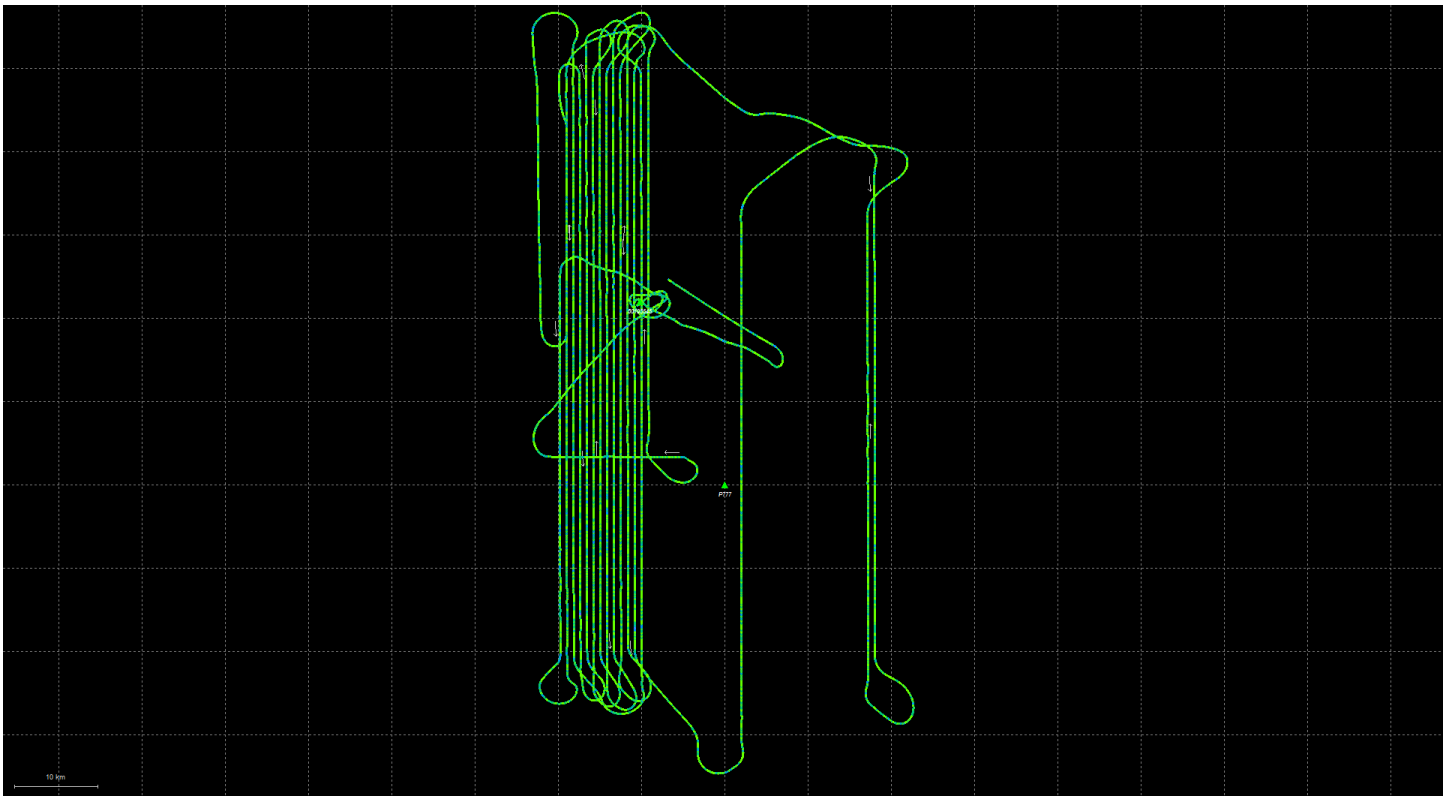
Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

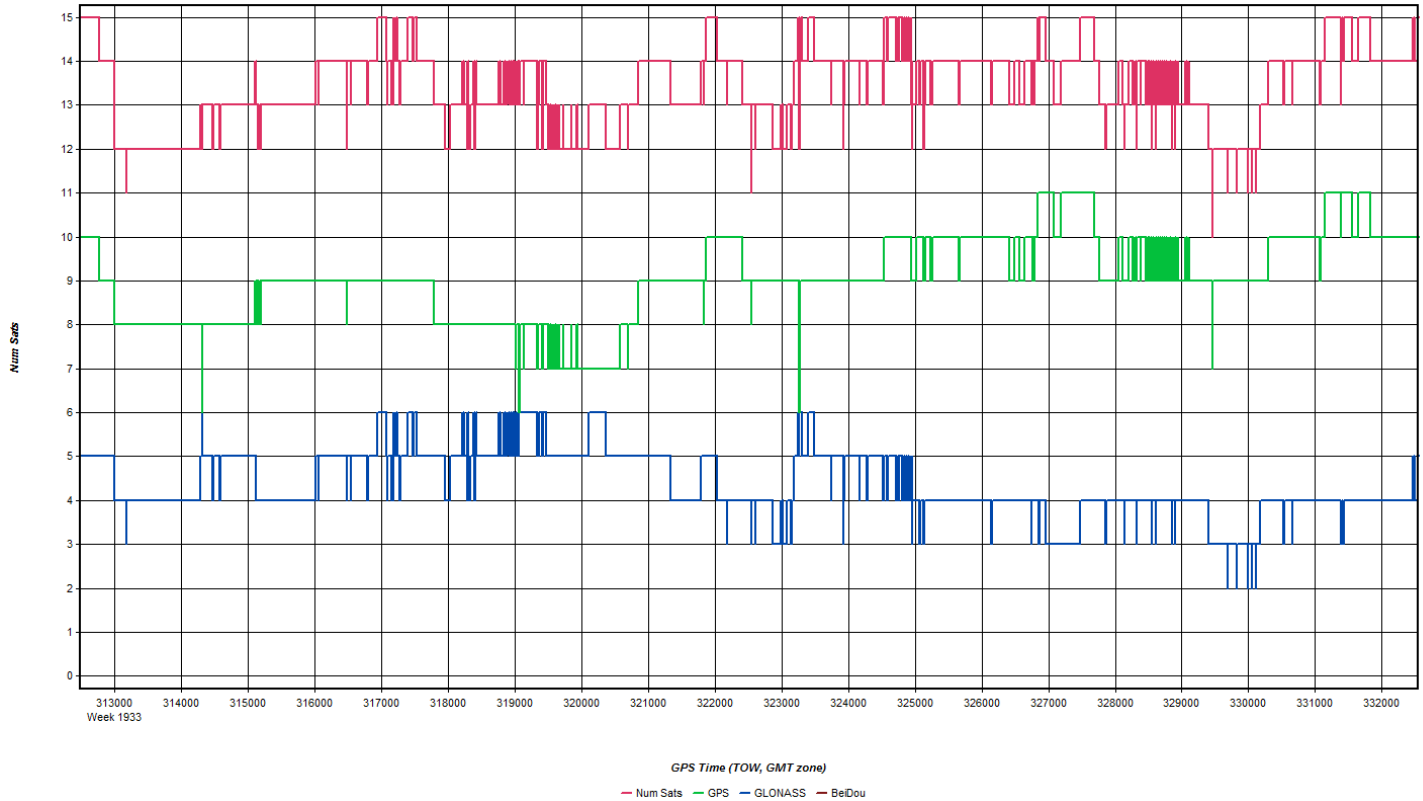
Static Alignment	GPS Time	
	Start	End
Pre Mission	22:34	22:39
Post Mission	03:37	03:42

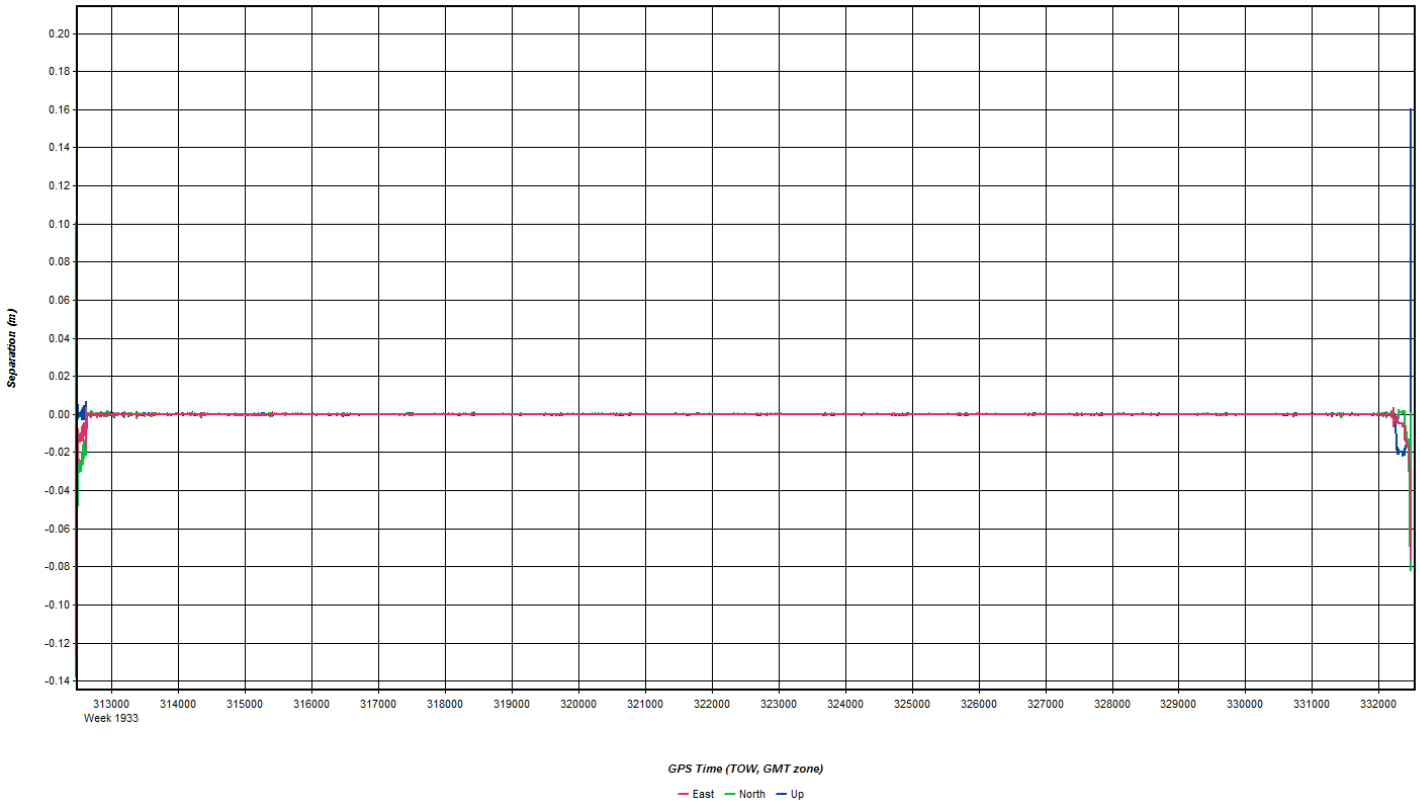
Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 170124_
IMU		Figure 8	22:50	22:56			IMU Wake Up
103		090	22:58:00	23:12:12			
104		270	23:15:57	23:34:44			Strong headwind 42 knts this direction
105		090	23:37:10	23:51:22			
106		270	23:55:01	00:13:21			
107		090	00:16:28	00:31:00			170125_ time stamp
108		270	00:34:13	00:52:33			
109		090	00:55:44	01:10:12			
110		270	01:13:54	01:31:58			
111		090	01:35:16	01:49:39			
112		270	01:53:35	02:11:36			
113		090	02:15:03	02:29:19			
114		270	02:33:07	02:51:03			
115		090	02:54:41	03:08:51			
XTie		001	03:12:20	03:14:55			Cross tie lines 115 – 103 south to north
IMU		Figure 8	03:15	03:20			IMU Maneuver

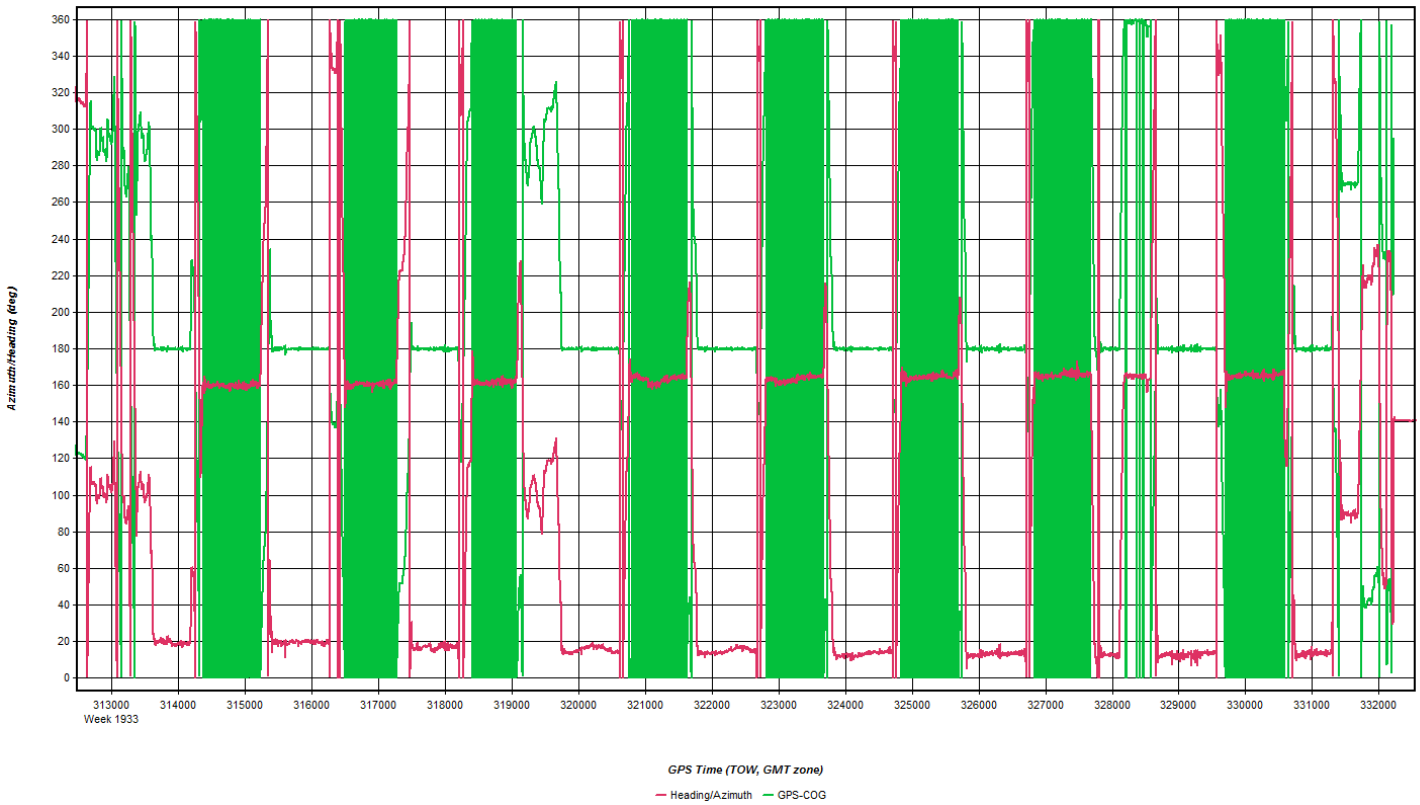
Pg 1 of 1

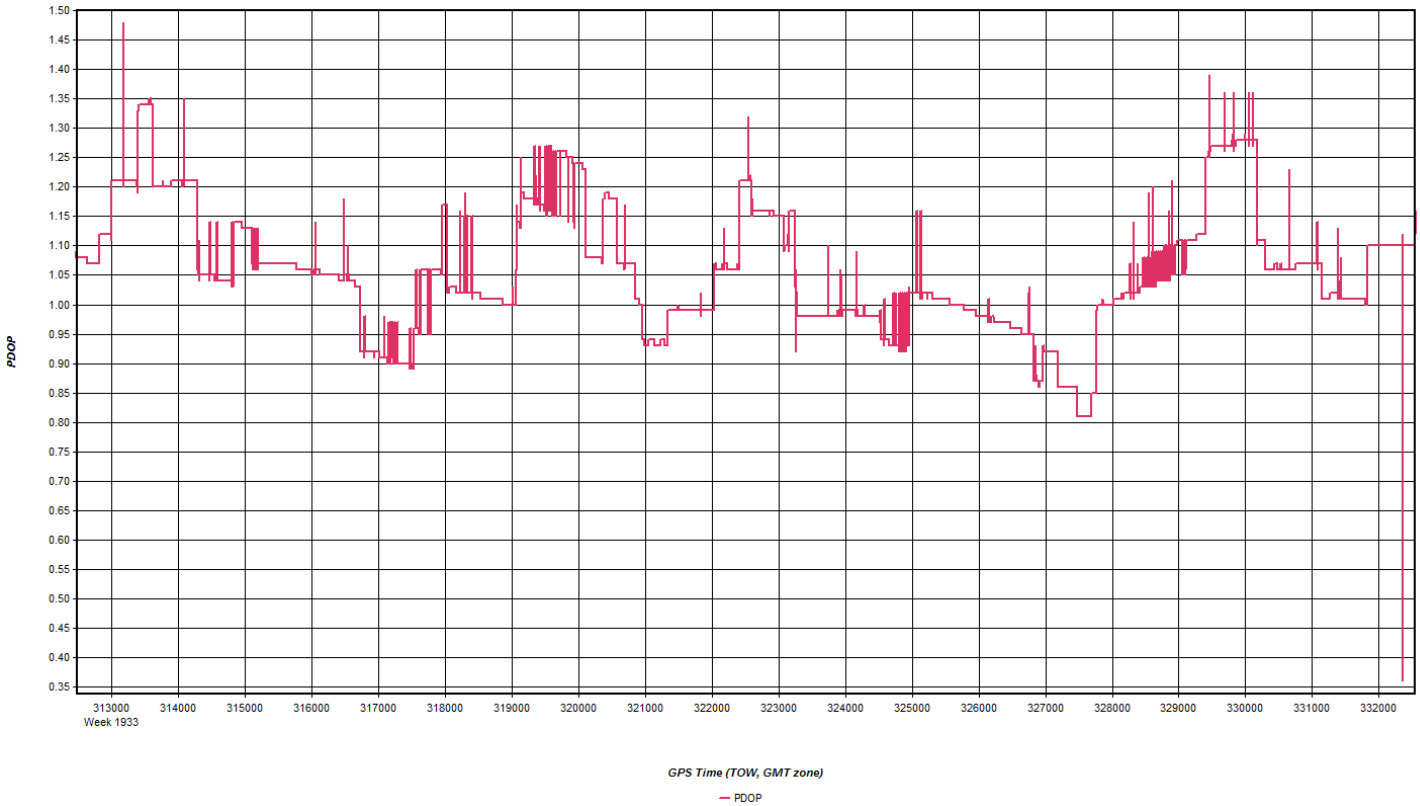
Jan 25, 2017-A (C-FVZM, SN7229)

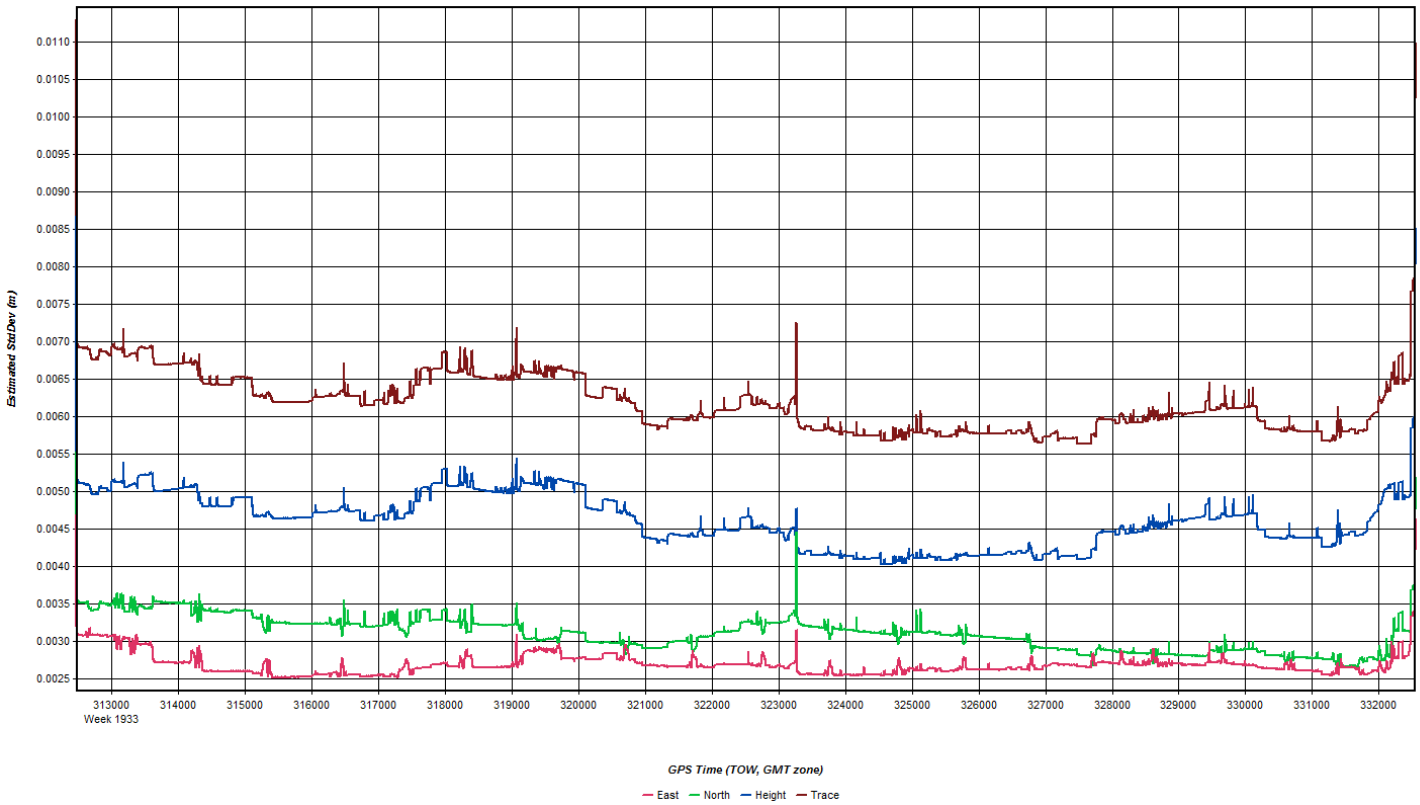

PTT
10 km

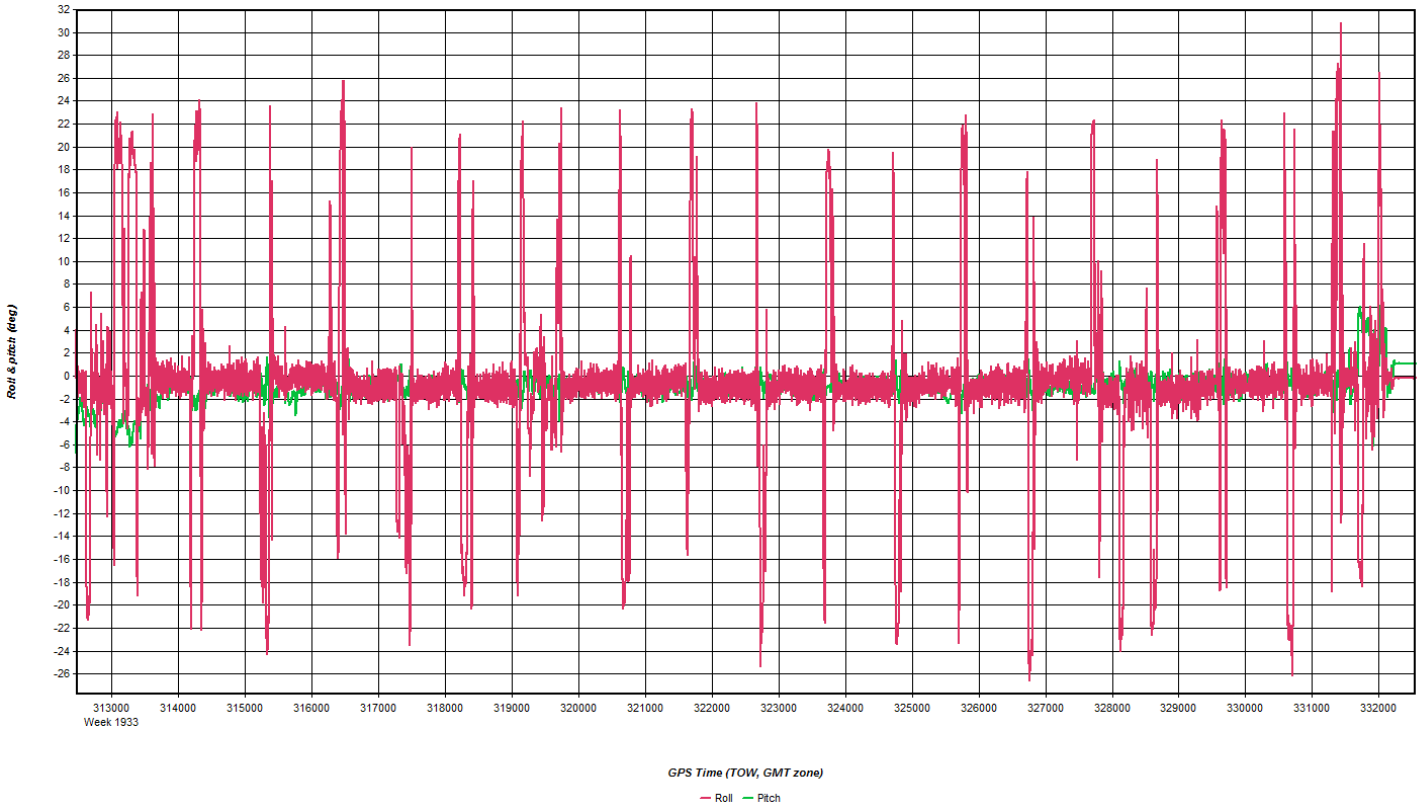

Num Sats
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
313000
Week 1933
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

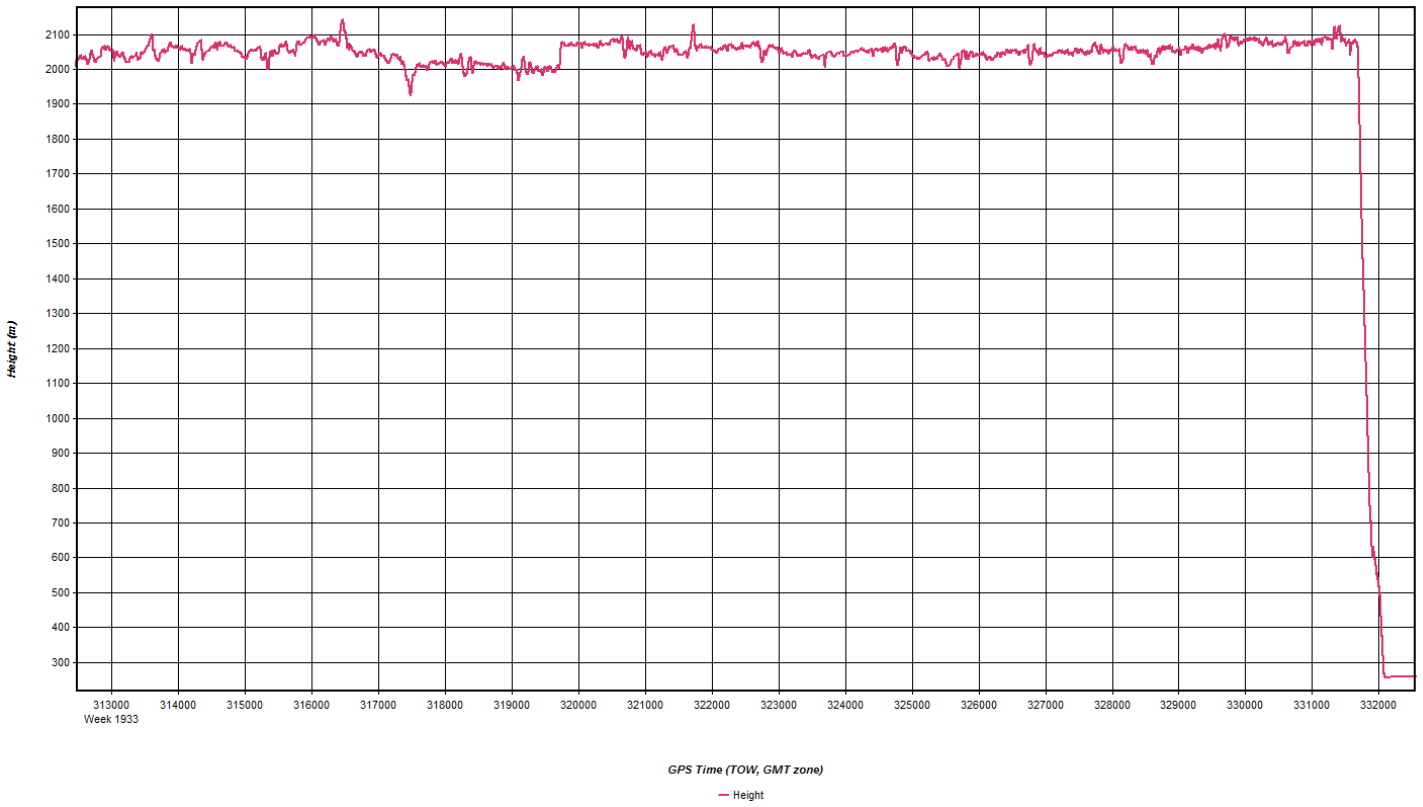

Separation (m)
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
313000
Week 1933
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
GPS Time (TOW, GMT zone)
East
North
Up

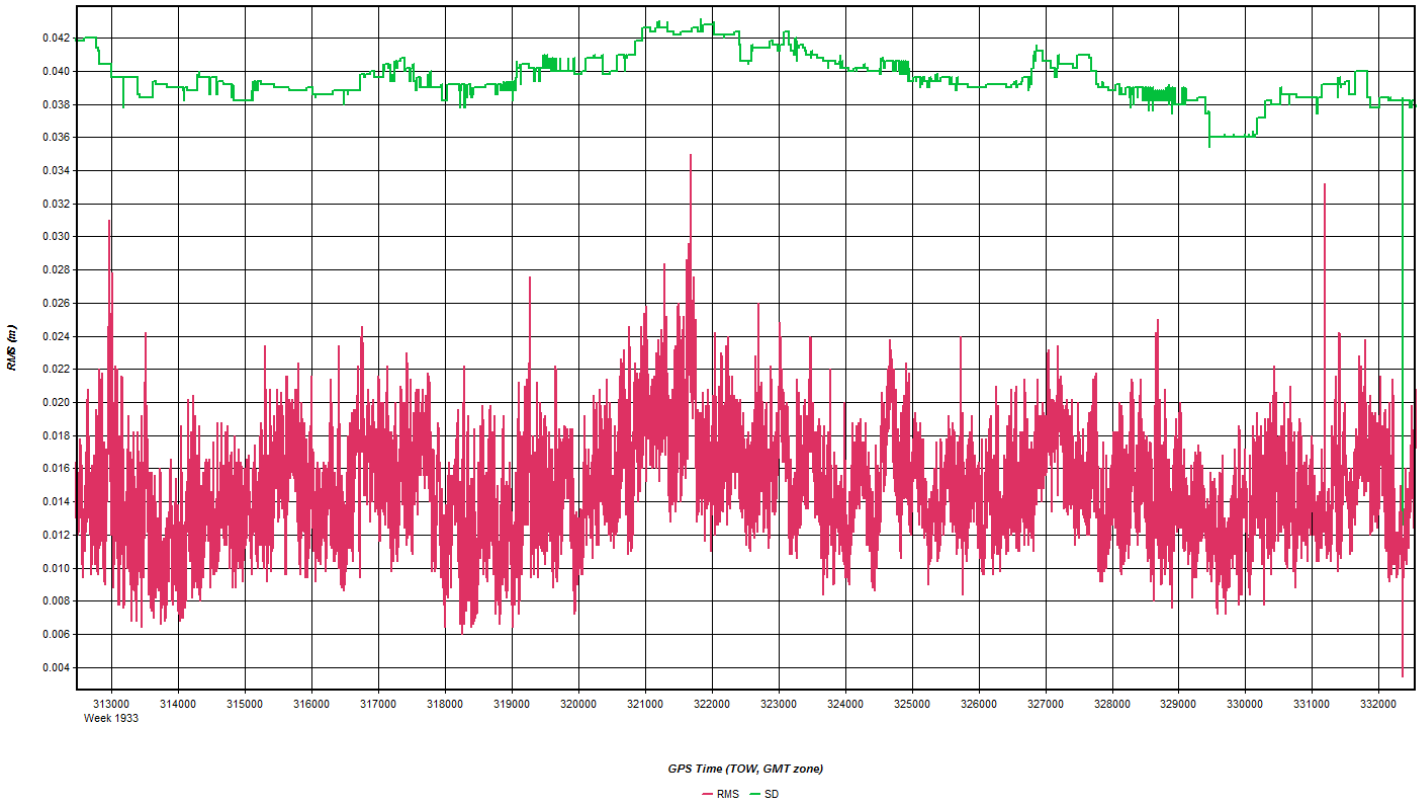

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
313000
Week 1933
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

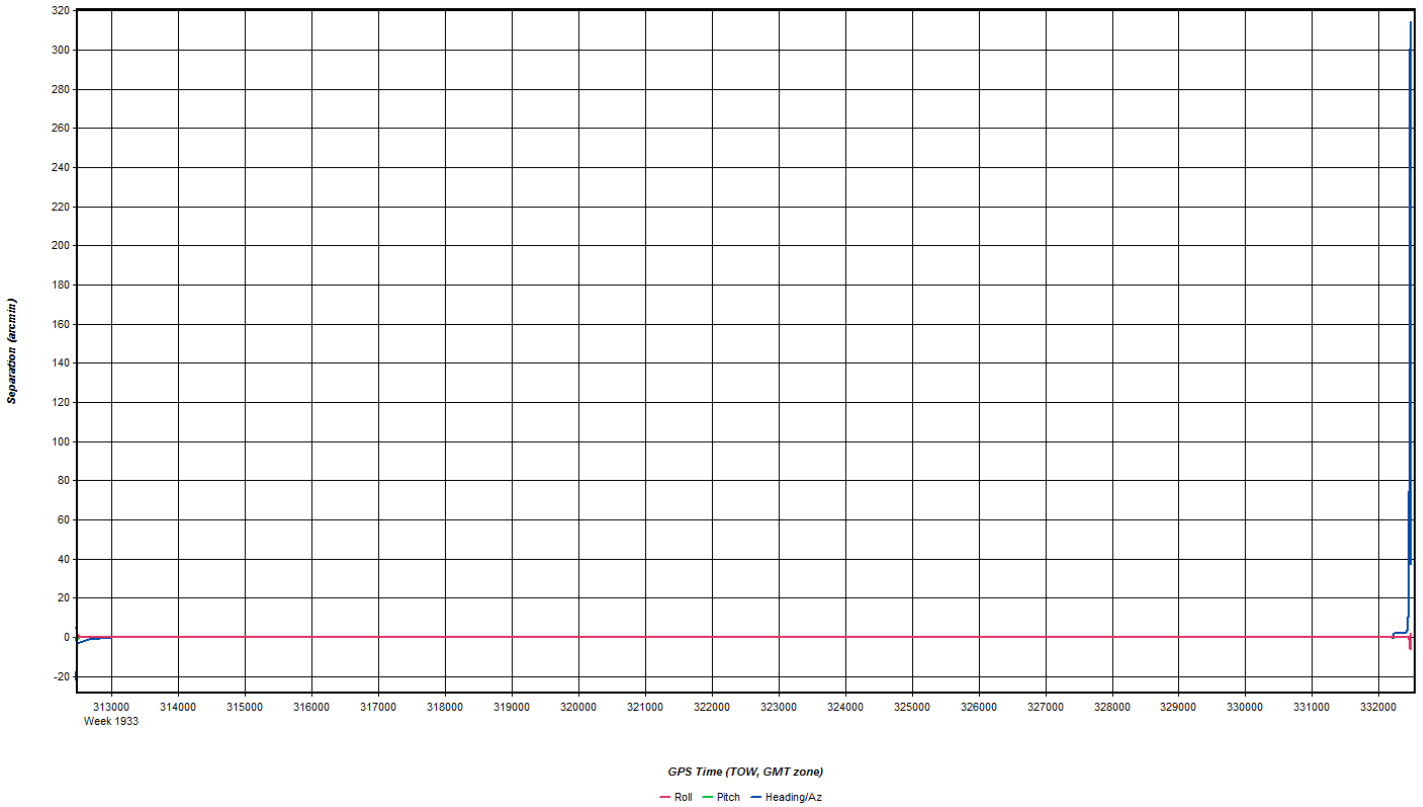

PDOP
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
313000
Week 1933
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
GPS Time (TOW, GMT zone)
PDOP

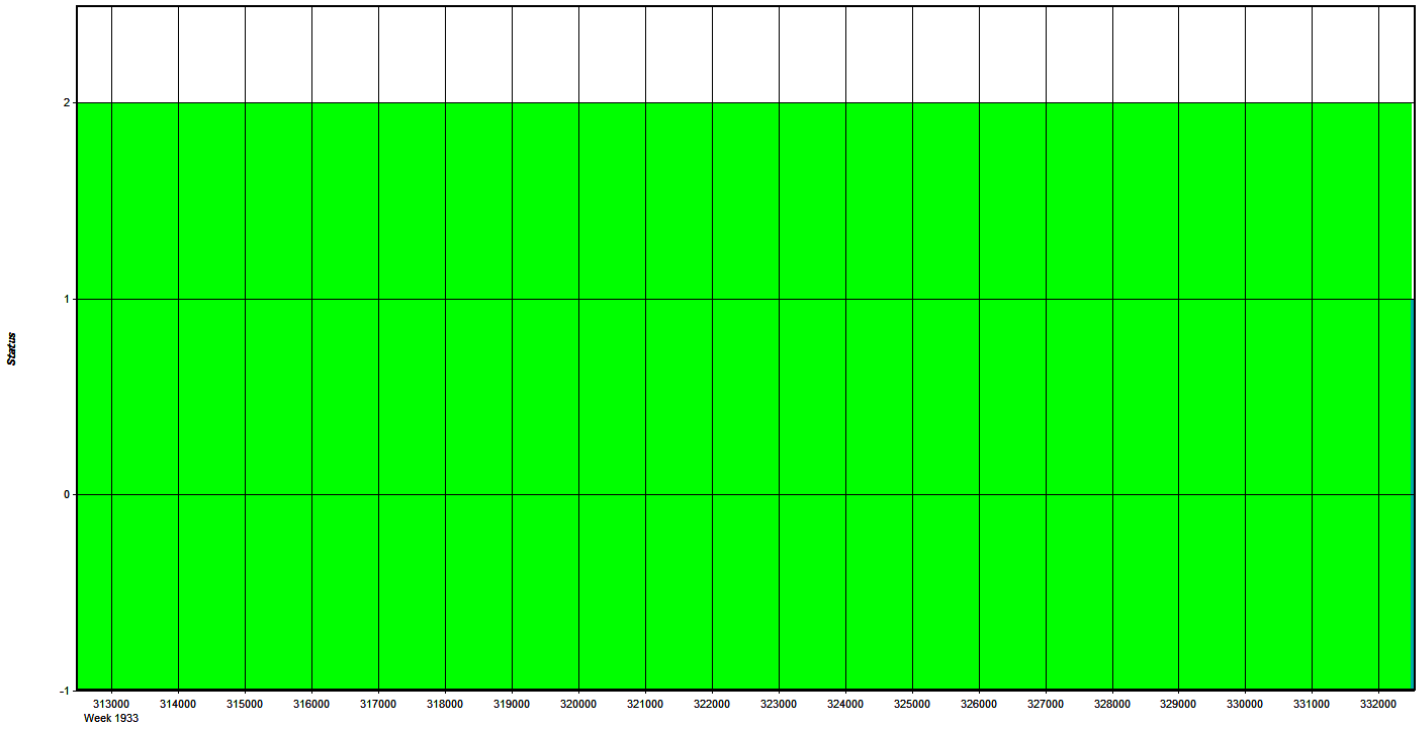

Estimated StdDev (m)
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
313000
Week 1933
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

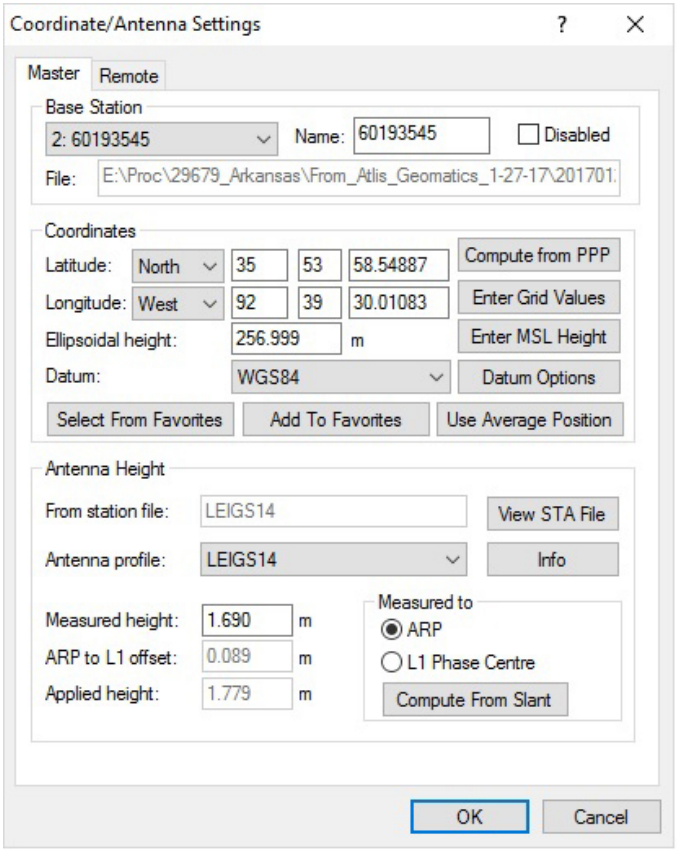

Roll & pitch (deg)
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
313000
Week 1933
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
GPS Time (TOW, GMT zone)
Roll
Pitch

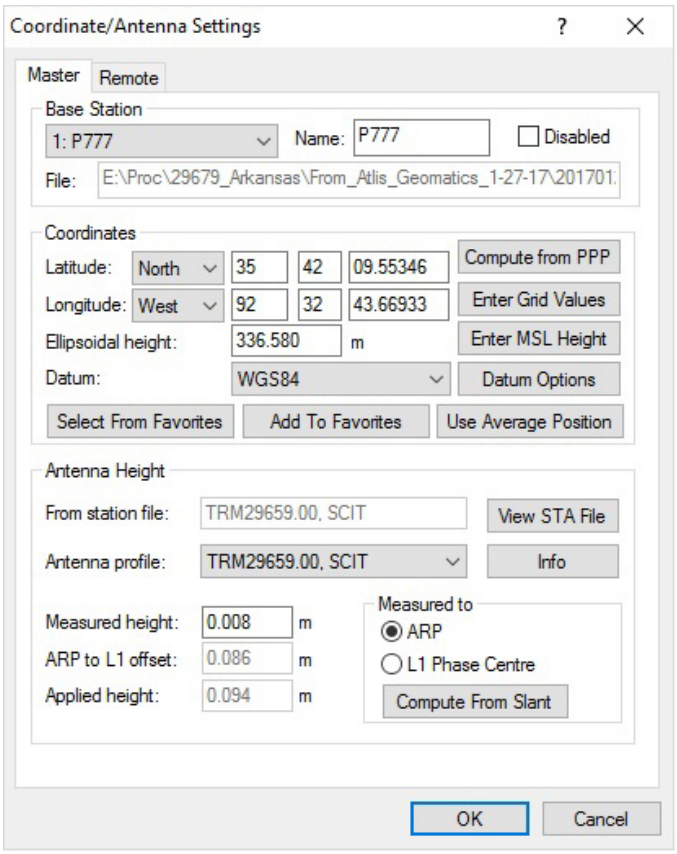

Height (m)
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
313000
Week 1933
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
313000
Week 1933
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
313000
Week 1933
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
313000
Week 1933
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
324000
325000
326000
327000
328000
329000
330000
331000
332000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
2: 60193545
Name: 60193545
Disabled
File: E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-27-17\201701
Coordinates
Latitude: North 35 53 58.54887
Compute from PPP
Longitude: West 92 39 30.01083
Enter Grid Values
Ellipsoidal height: 256.999 m
Enter MSL Height
Datum: WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: LEIGS14
View STA File
Antenna profile: LEIGS14
Info
Measured height: 1.690 m
ARP to L1 offset: 0.089 m
Applied height: 1.779 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: P777
Name: P777
Disabled
File: E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-27-17\201701
Coordinates
Latitude: North 35 42 09.55346
Longitude: West 92 32 43.66933
Ellipsoidal height: 336.580 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM29659.00, SCIT
View STA File
Antenna profile: TRM29659.00, SCIT
Info
Measured height: 0.008 m
ARP to L1 offset: 0.086 m
Applied height: 0.094 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

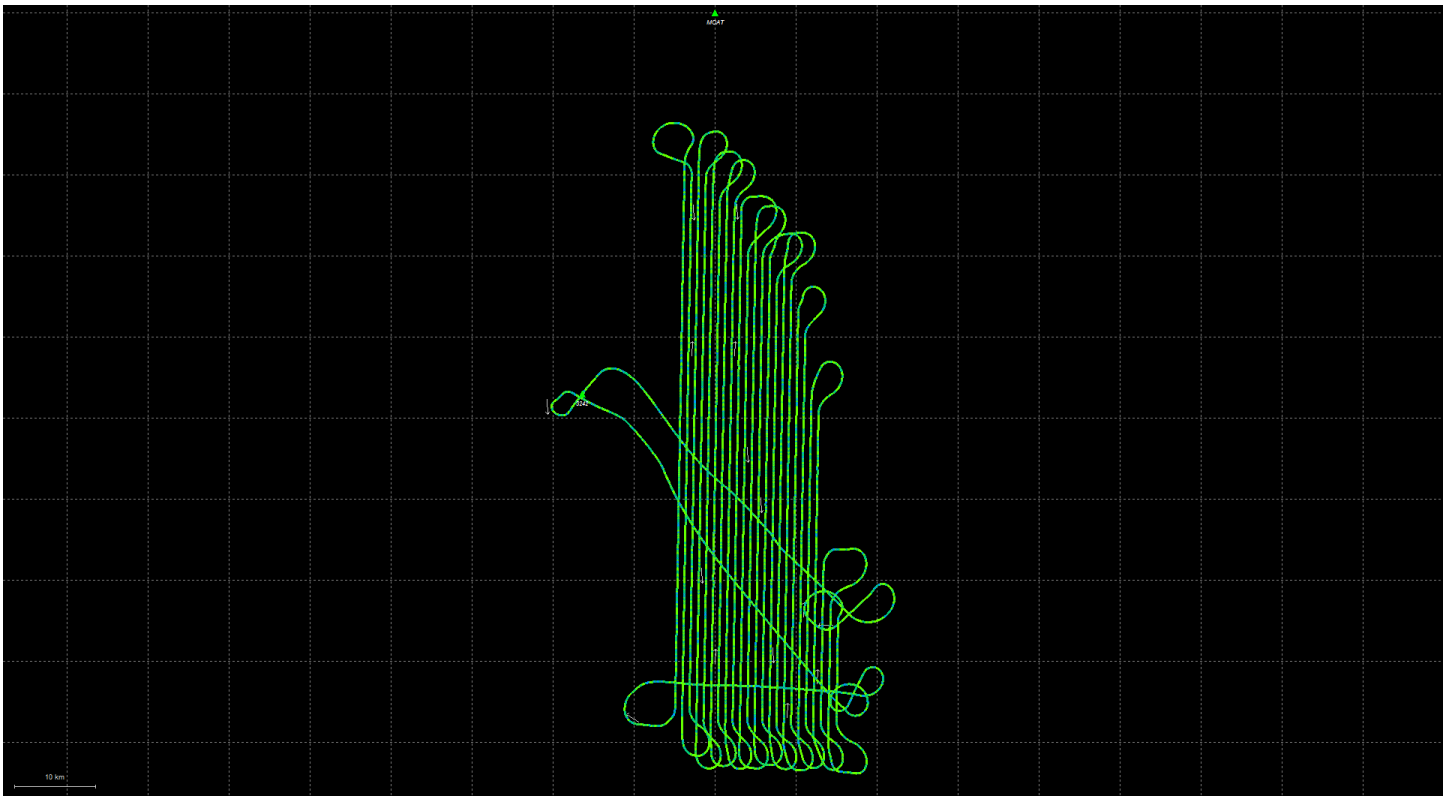
PROJECT NAME	Q.S. Arkansas	DATE	25/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Marshall AR.	DATA DRIVES	LiDar #2

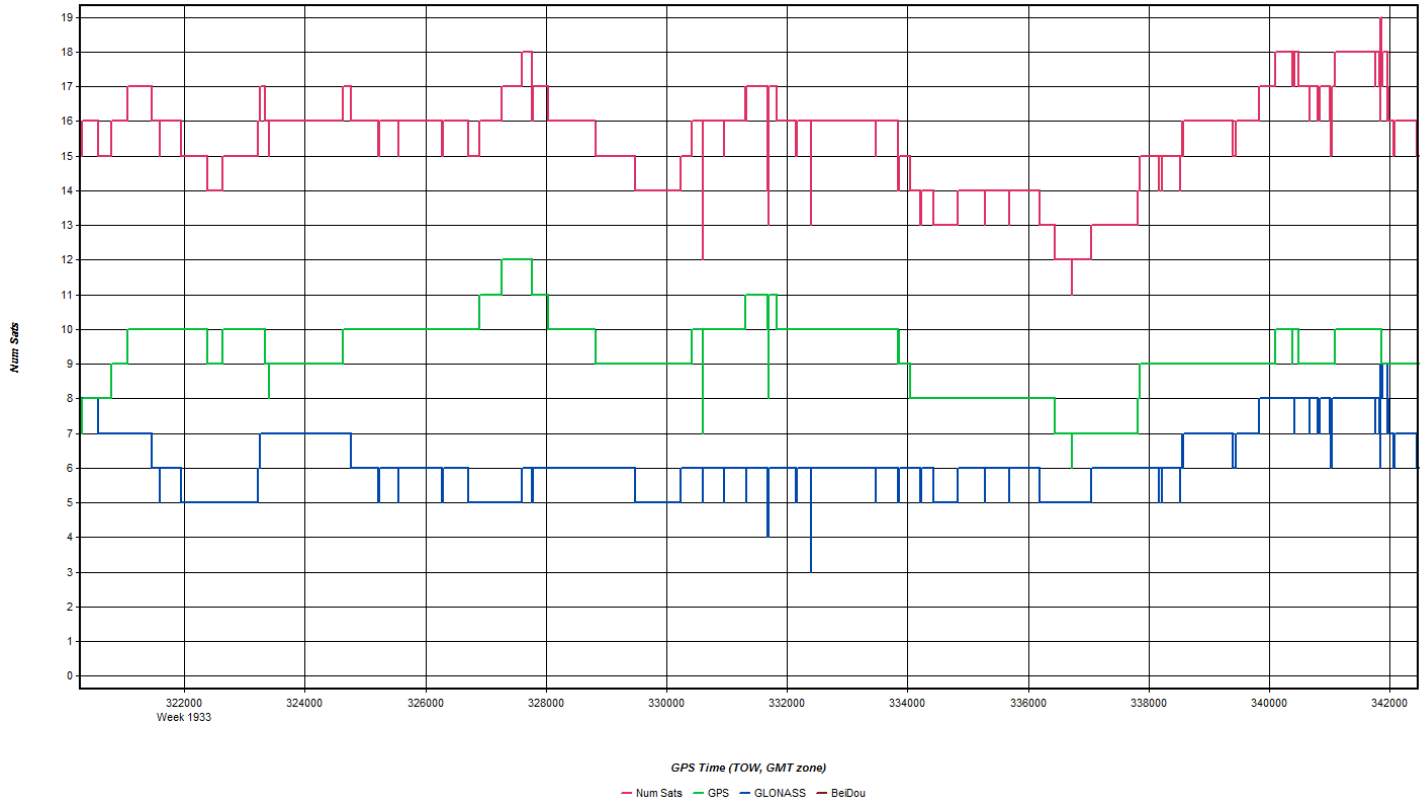
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	14:14:00	Takeoff:	14:33:00	AGL Height:	1750 m	Pulse Rate:	277 KHz		START	END
Engine Off:	20:24:00	Landing:	20:15:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	14:56:00	15:03:00
TOTAL:	6.17 hrs	TOTAL:	5.7 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	20:16:00	20:22:00

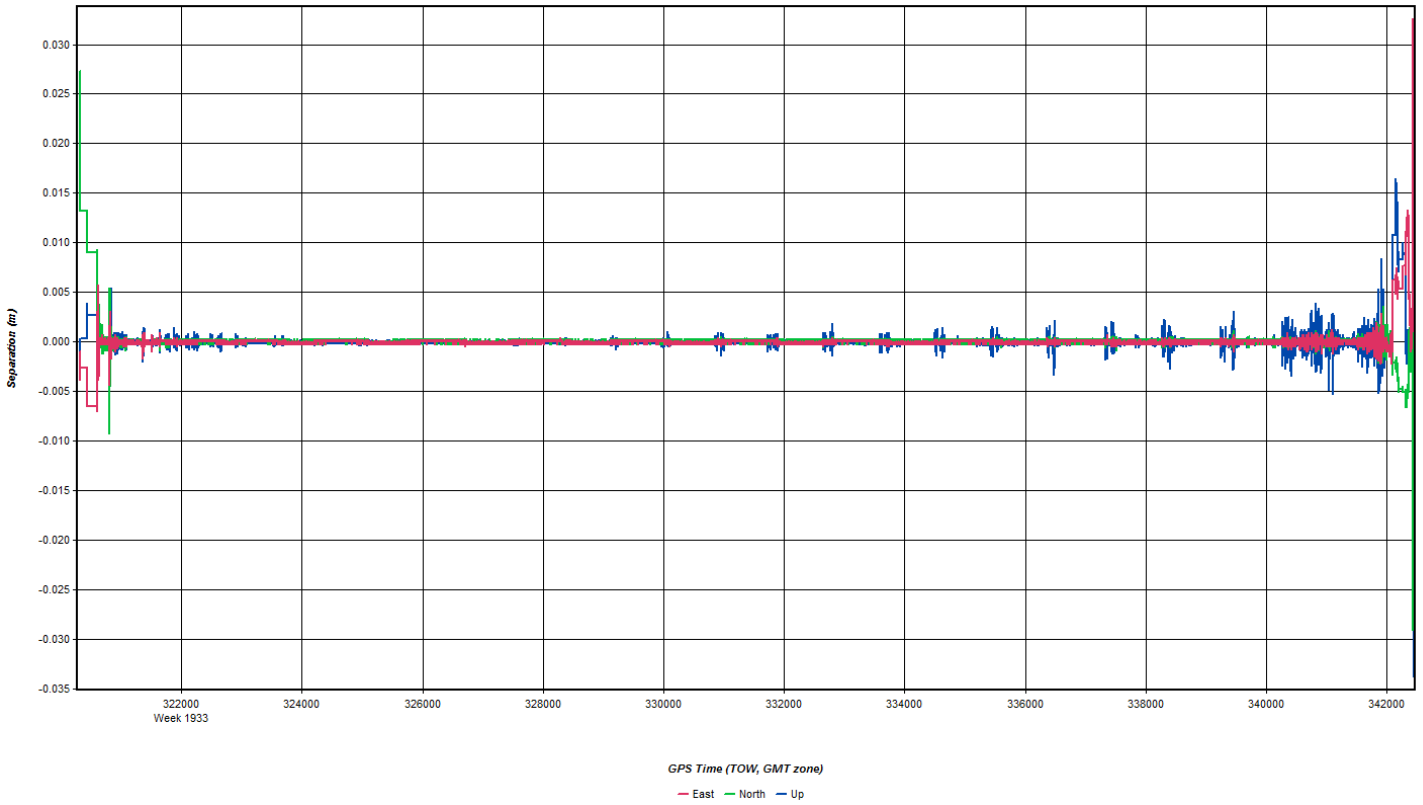
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
9		South	170125_150719	15:07:20	15:15:57	Extended 9nm from the north
10		North	170125_151932	15:19:33	15:30:41	Extended 9nm from the north, low clouds in the north
20		South	170125_153627	15:36:27	15:50:33	Extended 9nm from the north, low clouds in the north
35		North	170125_155537	15:55:38	16:02:20	All complete
54		South	170125_161229	16:12:31	16:22:52	All complete
53		North	170125_162719	16:27:19	16:36:20	All complete
19		South	170125_164939	16:49:41	17:03:10	Extended 9nm from the north
18		North	170125_170626	17:06:27	17:19:51	Extended 9nm from the north
17		South	170125_172344	17:23:45	17:37:28	Extended 9nm from the north
16		North	170125_174045	17:40:46	17:54:14	Extended 9nm from the north
15		South	170125_175338	17:53:39	18:11:27	Extended 9nm from the north
14		North	170125_181429	18:14:30	18:27:53	Extended 9nm from the north
13		South	170125_183046	18:30:46	18:44:46	Extended 9nm from the north
12		North	170125_184727	18:47:28	19:01:03	Extended 9nm from the north
10		South	170125_190439	19:04:40	19:08:02	Re-flight in area that had clouds
11		South	170125_191828	19:18:29	19:32:17	Extended 9nm from the north
21		North	170125_193542	19:35:43	19:49:18	Extended 9nm from the north
22		South	170125_195237	19:52:38	20:01:15	Half the line complete
CL		West	170125_200438	20:04:39	20:07:51	

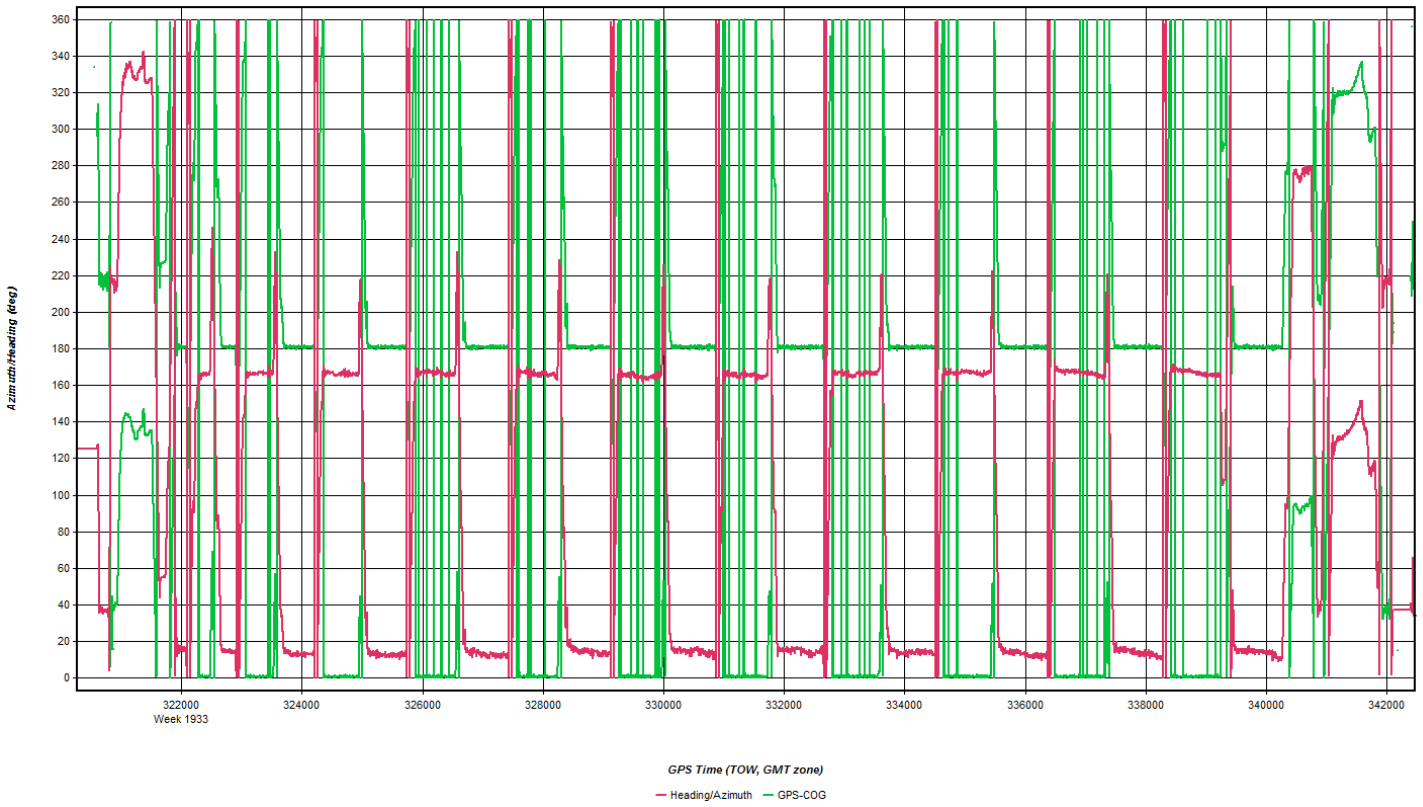
SUN ANGLE @Start: @End: @Peak:	Temp @ take off was 7C, broken overcast to clear skies. Sats and PDOPS averaged 19 and 1.2 Base station was set at the Marshall airport 13:45 to 20:30. Ant height is 1.69 to ARP. A statics was done on the ground but the system failed before reaching the first line so the system was rebooted and an air start was done.

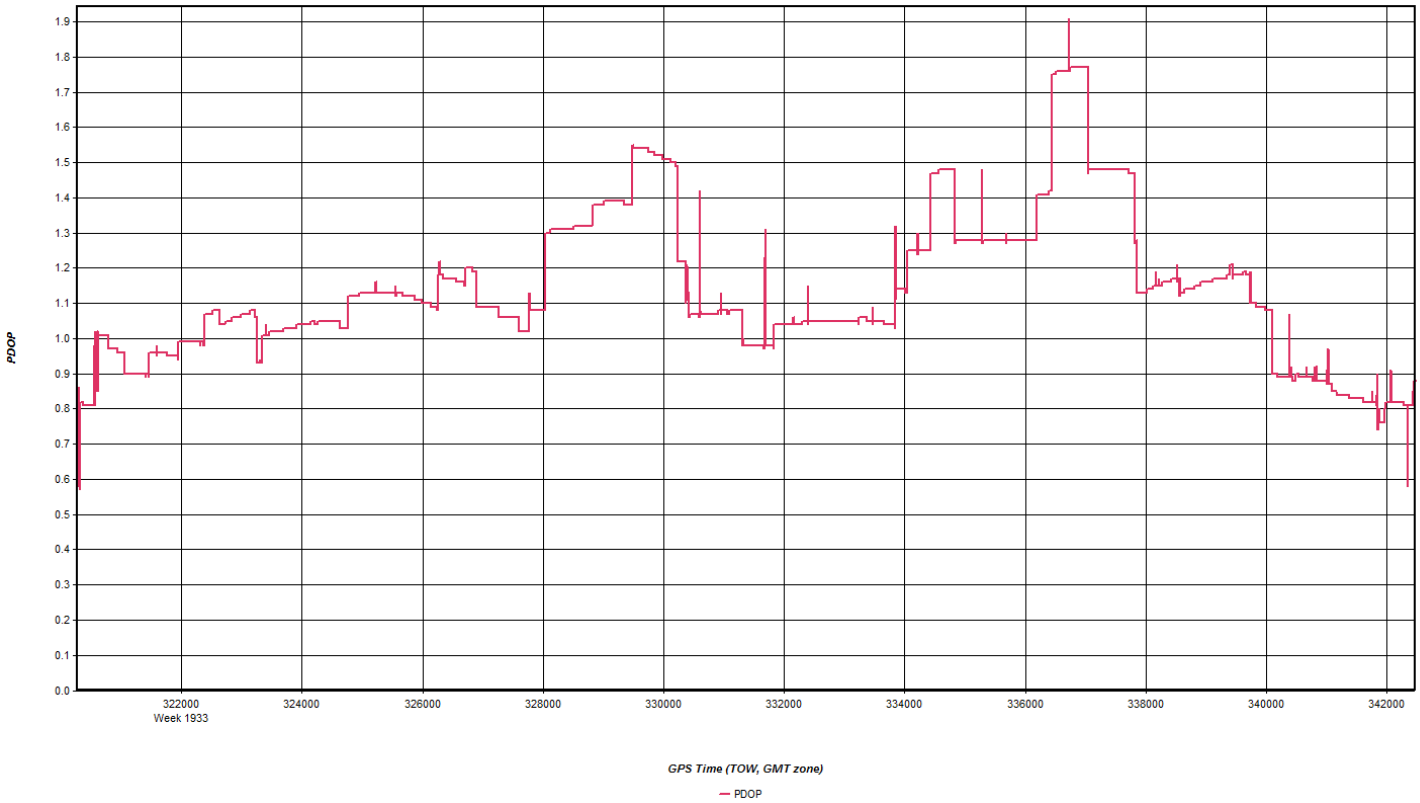
Jan 25, 2017-A (C-GKSI, SN7207)

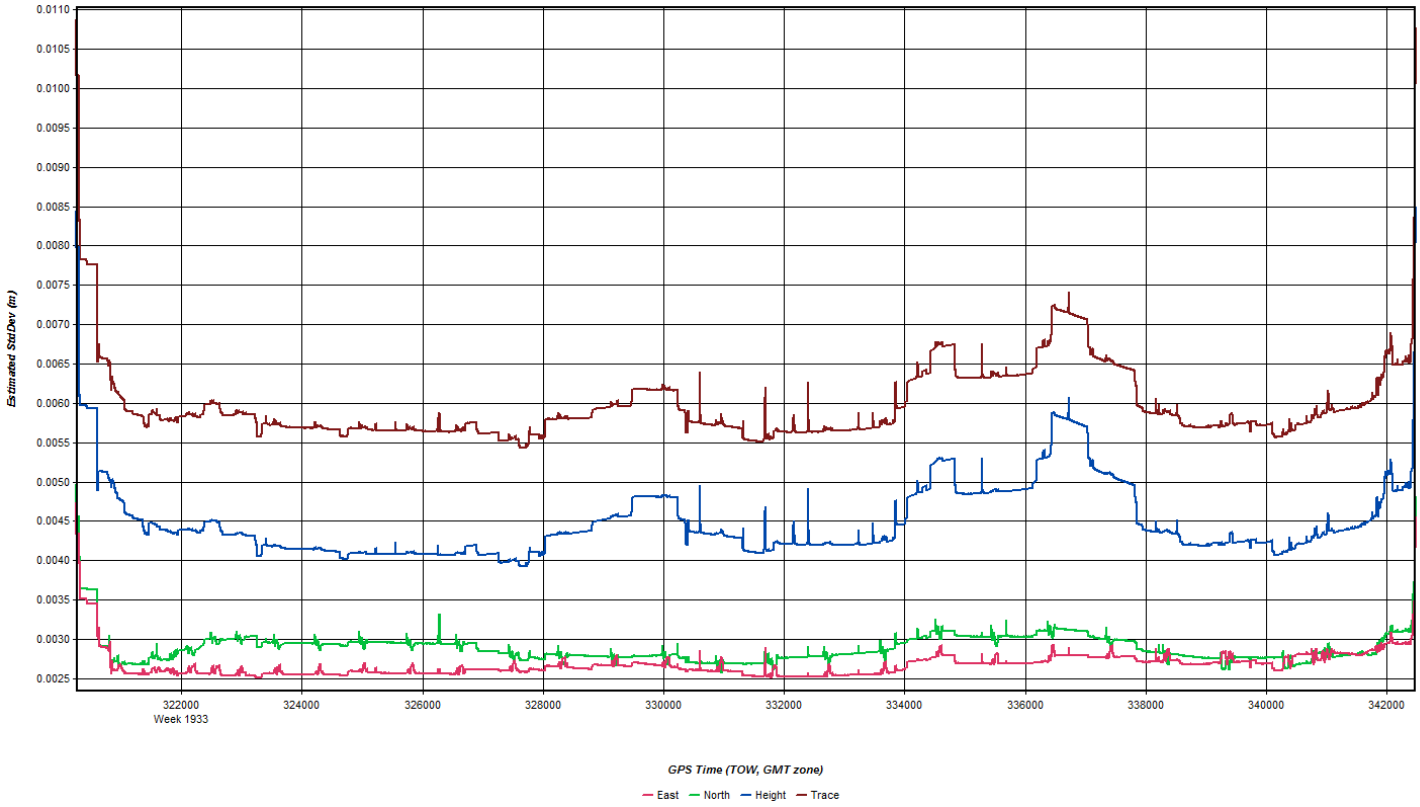

MOAT
10 km

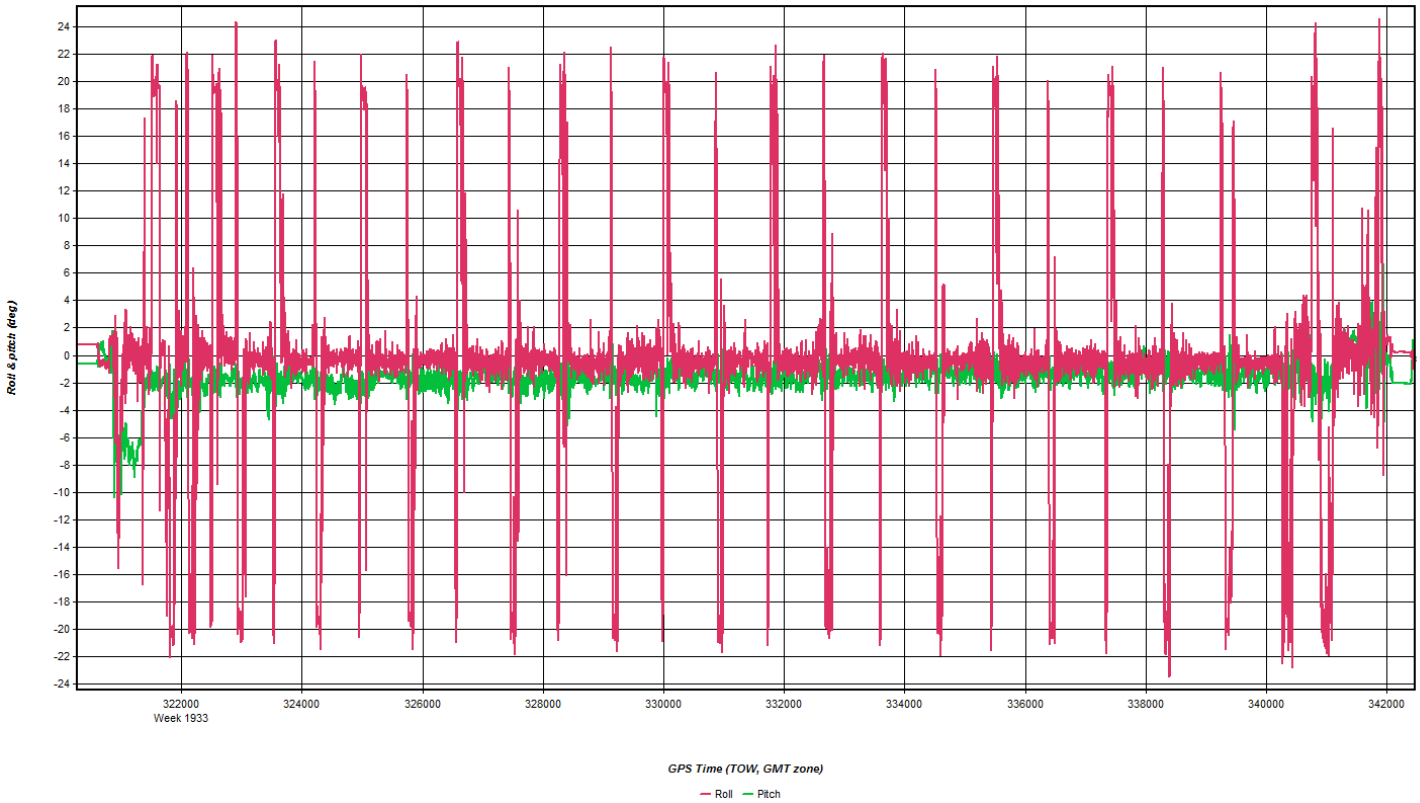

Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
322000
Week 1933
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

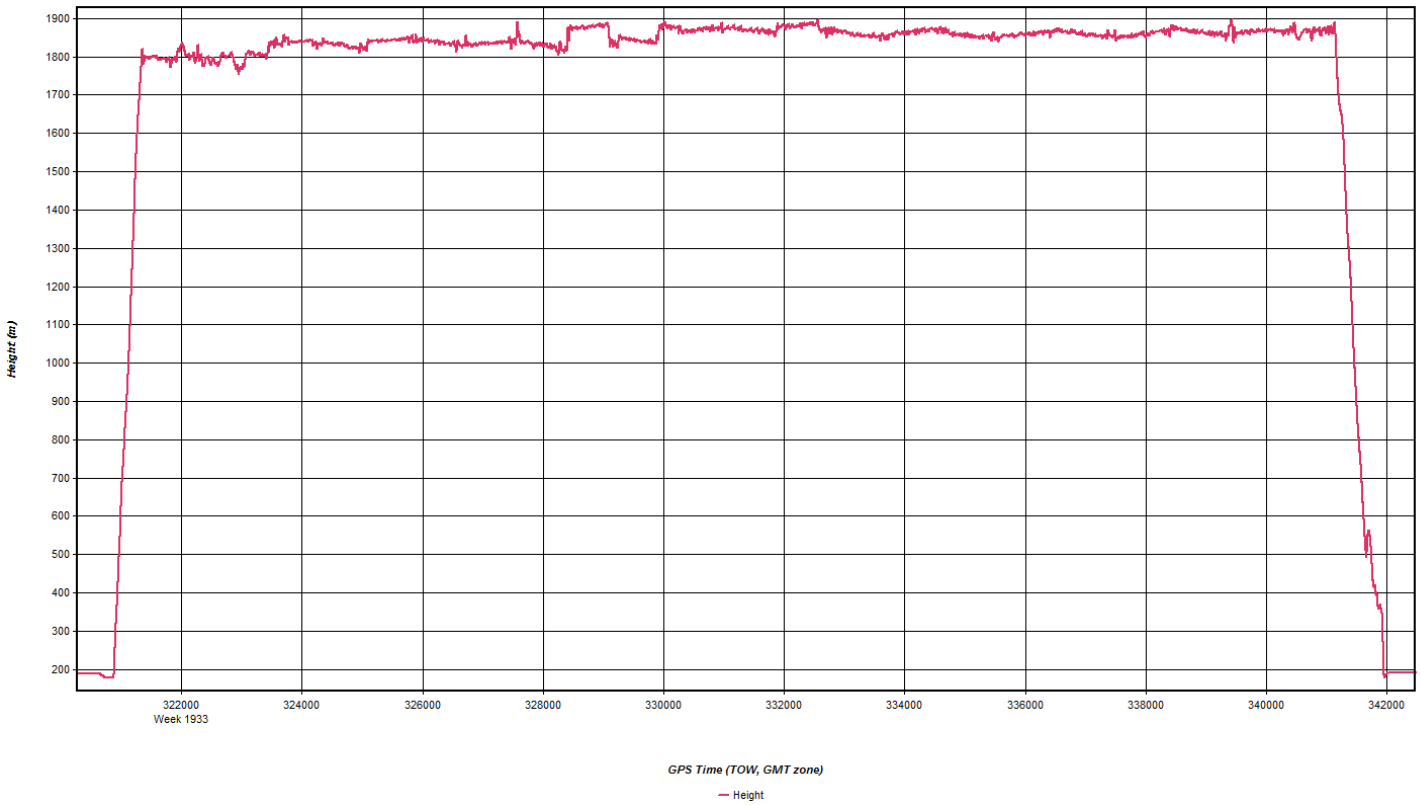

Separation (m)
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
322000
Week 1933
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
East
North
Up


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
322000
Week 1933
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

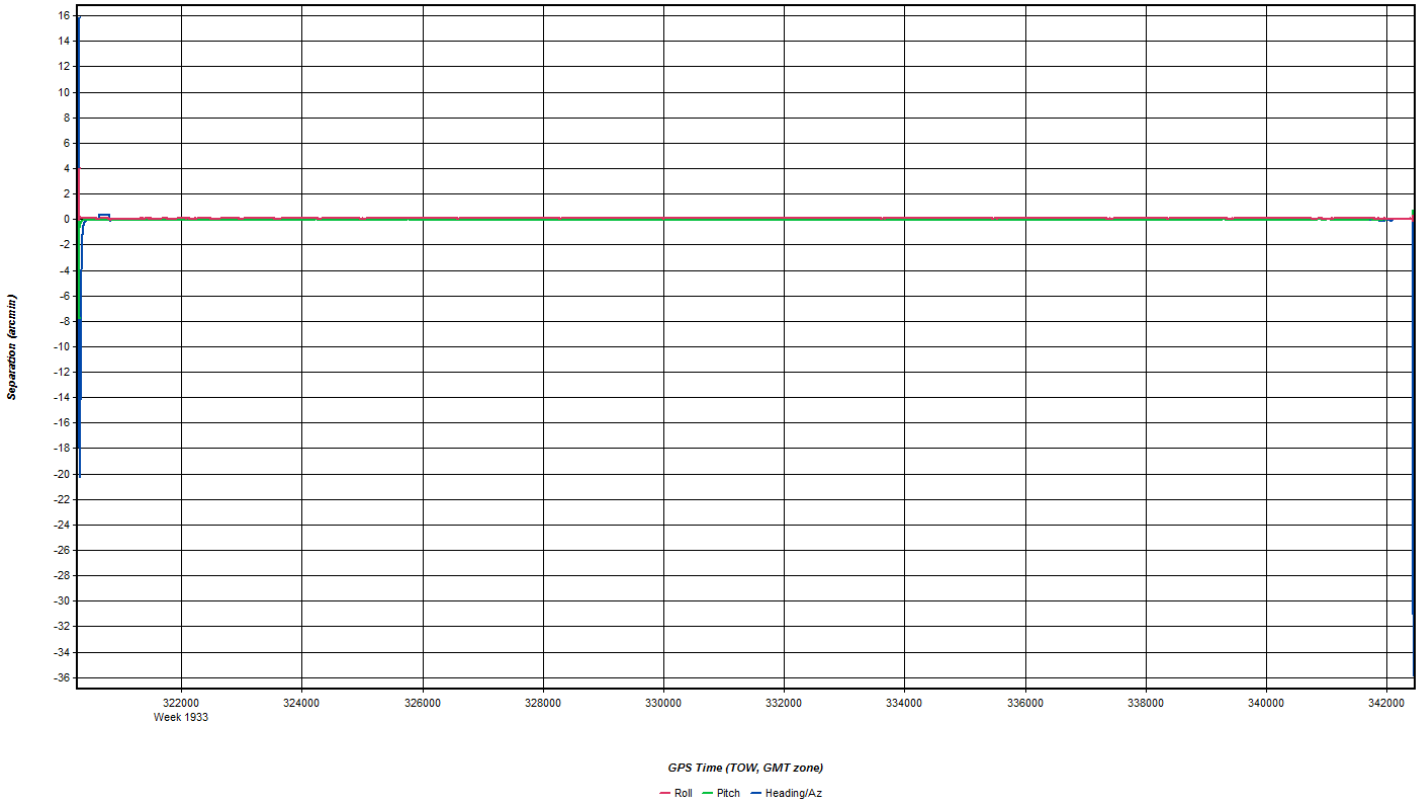

PDOP
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
322000
Week 1933
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
PDOP

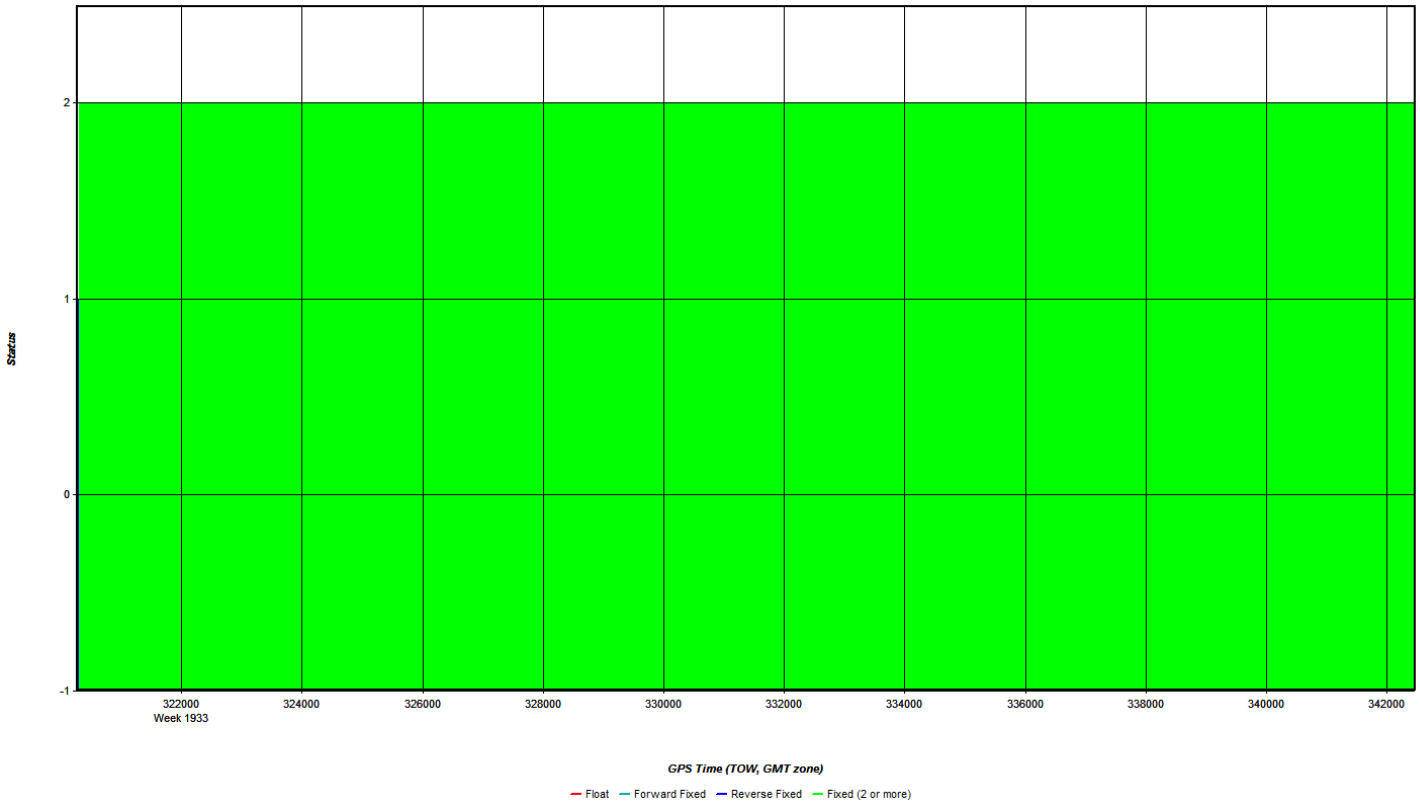

Estimated StdDev (m)
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
322000
Week 1933
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

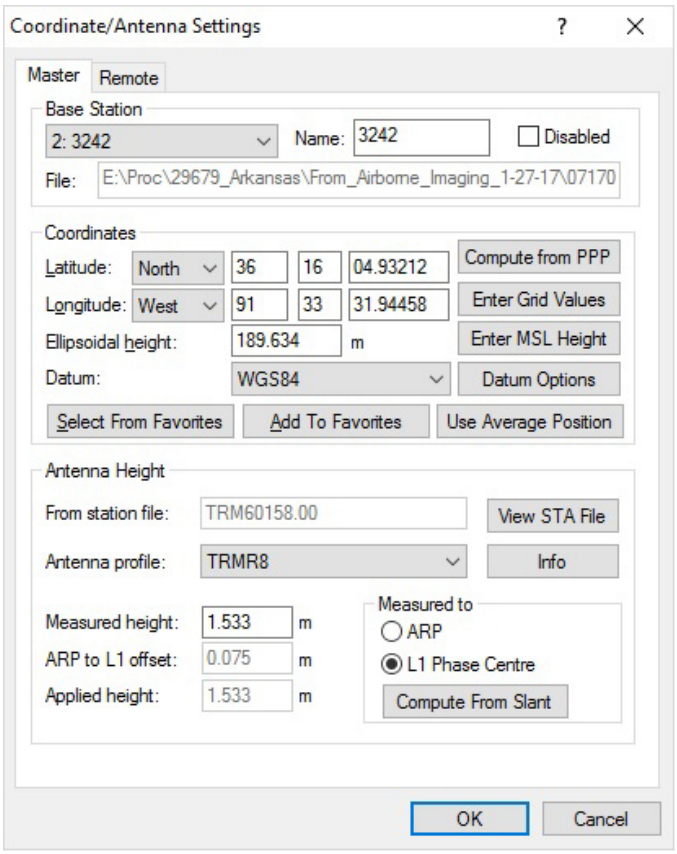

Roll & pitch (deg)
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
322000
Week 1933
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
Roll
Pitch

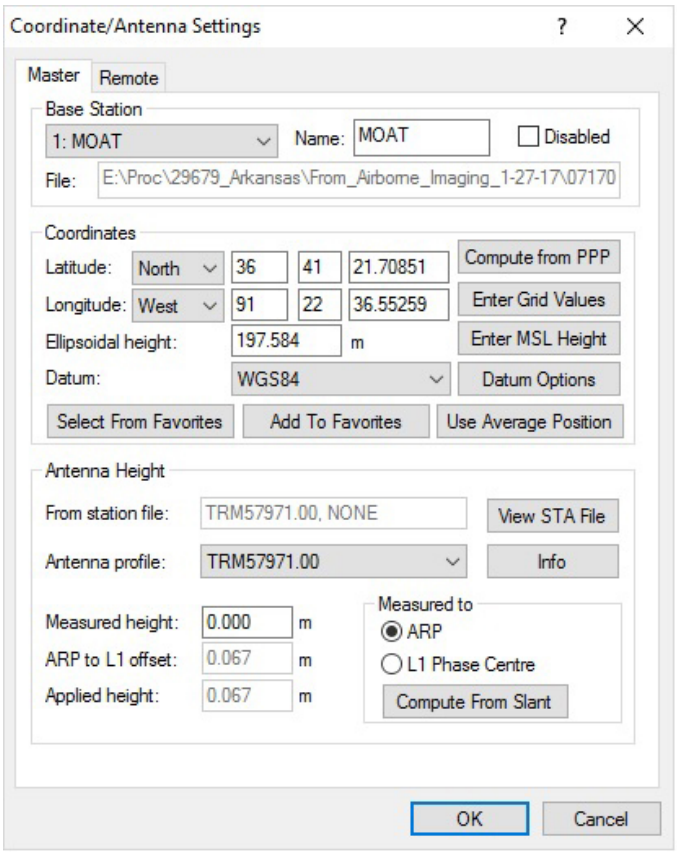

Height (m)
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
322000
Week 1933
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
322000
Week 1933
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
-32
-34
-36
322000
Week 1933
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
322000
Week 1933
324000
326000
328000
330000
332000
334000
336000
338000
340000
342000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
2: 3242
Name: 3242
Disabled
File: E:\Proc\29679_Arkansas\From_Airborne_Imaging_1-27-17\07170
Coordinates
Latitude: North 36 16 04.93212
Compute from PPP
Longitude: West 91 33 31.94458
Enter Grid Values
Ellipsoidal height: 189.634 m
Enter MSL Height
Datum: WGS84
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM60158.00
View STA File
Antenna profile: TRMR8
Info
Measured height: 1.533 m
ARP to L1 offset: 0.075 m
Applied height: 1.533 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MOAT
Name: MOAT
Disabled
File: E:\Proc\29679_Arkansas\From_Airborne_Imaging_1-27-17\07170
Coordinates
Latitude: North 36 41 21.70851
Longitude: West 91 22 36.55259
Ellipsoidal height: 197.584 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
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

Julian Day 025	Flight A

LIDAR Flight Log

Date January 24 2017	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot O. Kamerman
Location Hardy/Sharp Co, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System **Leica ALS70**	
Unit 7207	
IMU **Honeywell Micro IRS**	
GPS Rx **NovAtel OEMV**	
Roll Comp.	
Data Drive 1	

Additional Notes
Wind:
Temp:
Pressure:
Clouds:
Visibility:

Aircraft Block Time		
Engine On 16:51	Ramp Out	Takeoff 17:07
Engine Off 23:09	Ramp In	Landing 22:59
Total 6.3 **hrs**	Total **hrs**	Total 5.9 **hrs**

Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

Static Alignment	GPS Time	
	Start	End
Pre Mission	16:58	17:03
Post Mission	23:01	23:06

Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 170125_
IMU		Figure 8	17:18	17:24			IMU Wake Up
177		181	17:26:59	17:27:41			
176		001	17:31:40	17:34:18			
175		181	17:38:34	17:41:20			
174		001	17:44:34	17:51:42			
173		181	17:55:16	18:03:02			
172		001	18:06:05	18:15:22			
171		181	18:18:39	18:28:32			
170		001	18:31:43	18:42:05			
169		181	18:45:34	18:56:40			
168		001	18:59:50	19:10:30			
167		181	19:13:57	19:26:03			
166		001	19:27:57	19:39:06			
165		181	19:42:33	19:53:59			
164		001	19:57:13	20:08:21			
163		181	20:11:44	20:23:48			

Pg 1 of 2

Julian Day 025	Flight A

LIDAR Flight Log

Date January 24 2017	Aircraft **C-GKSI**
Project 3121_ArkansasEast	Pilot O. Kamerman
Location Hardy/Sharp Co, AR	Operator A. Fox
Mission Objective 29679 USGS/FEMA Arkansas QL2	

System	**Leica ALS70**
Unit	7207
IMU	**Honeywell Micro IRS**
GPS Rx	**NovAtel OEMV**
Roll Comp.	
Data Drive	1

Additional Notes

Wind:

Temp:

Pressure:

Clouds:

Visibility:

Aircraft Block Time		
Engine On 16:51	Ramp Out	Takeoff 17:07
Engine Off 23:09	Ramp In	Landing 22:59
Total 6.3 **hrs**	Total **hrs**	Total 5.9 **hrs**

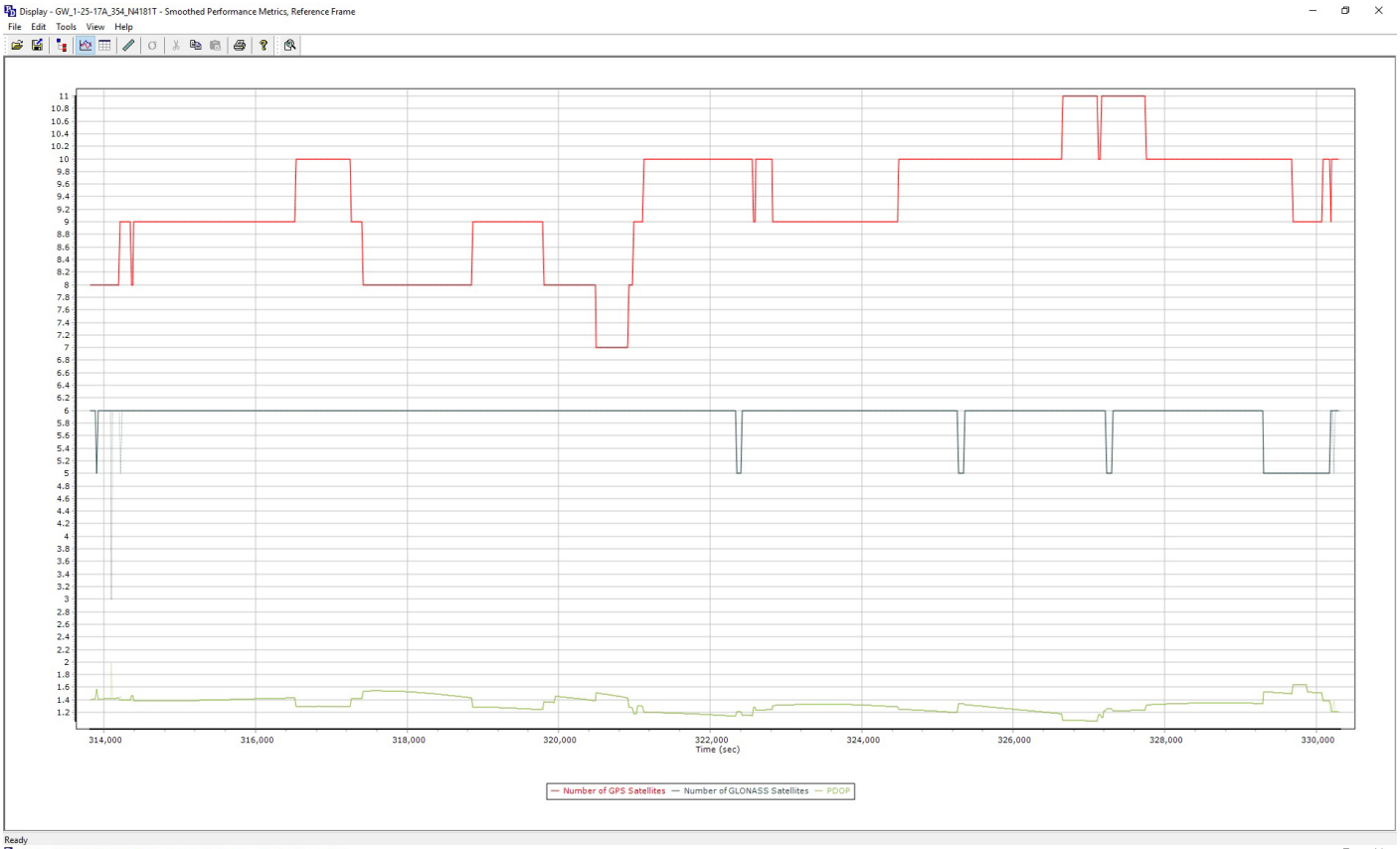
Mission Plan			
AGL Height	1800 **m**	Laser Pulse Rate	300 **Hz**
Target Speed	160 **kts**	Scan Rate	53.4 **Hz**
Laser Current	100 **%**	FOV	40 **Deg's**

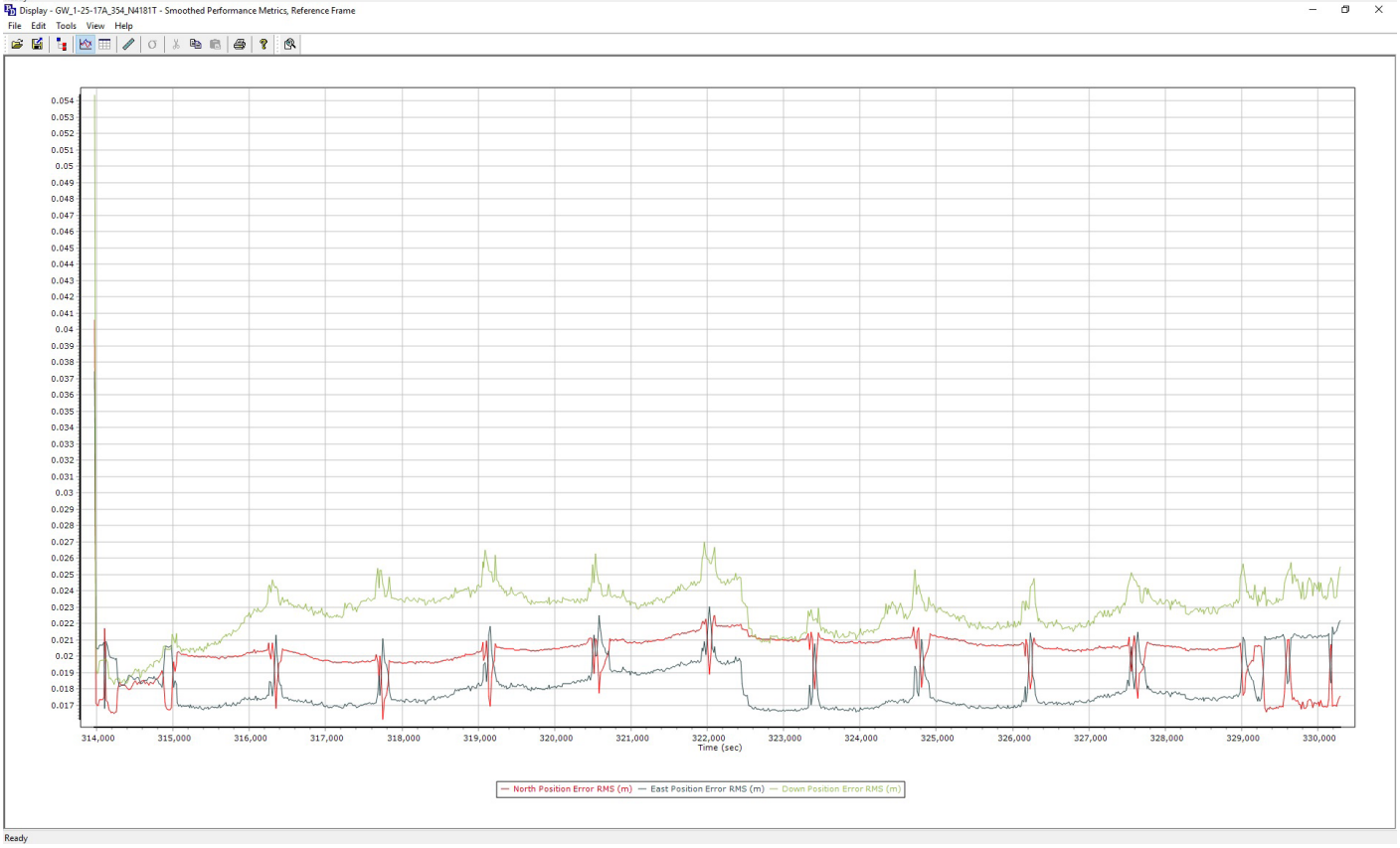
Static Alignment	GPS Time	
	Start	End
Pre Mission	16:58	17:03
Post Mission	23:01	23:06

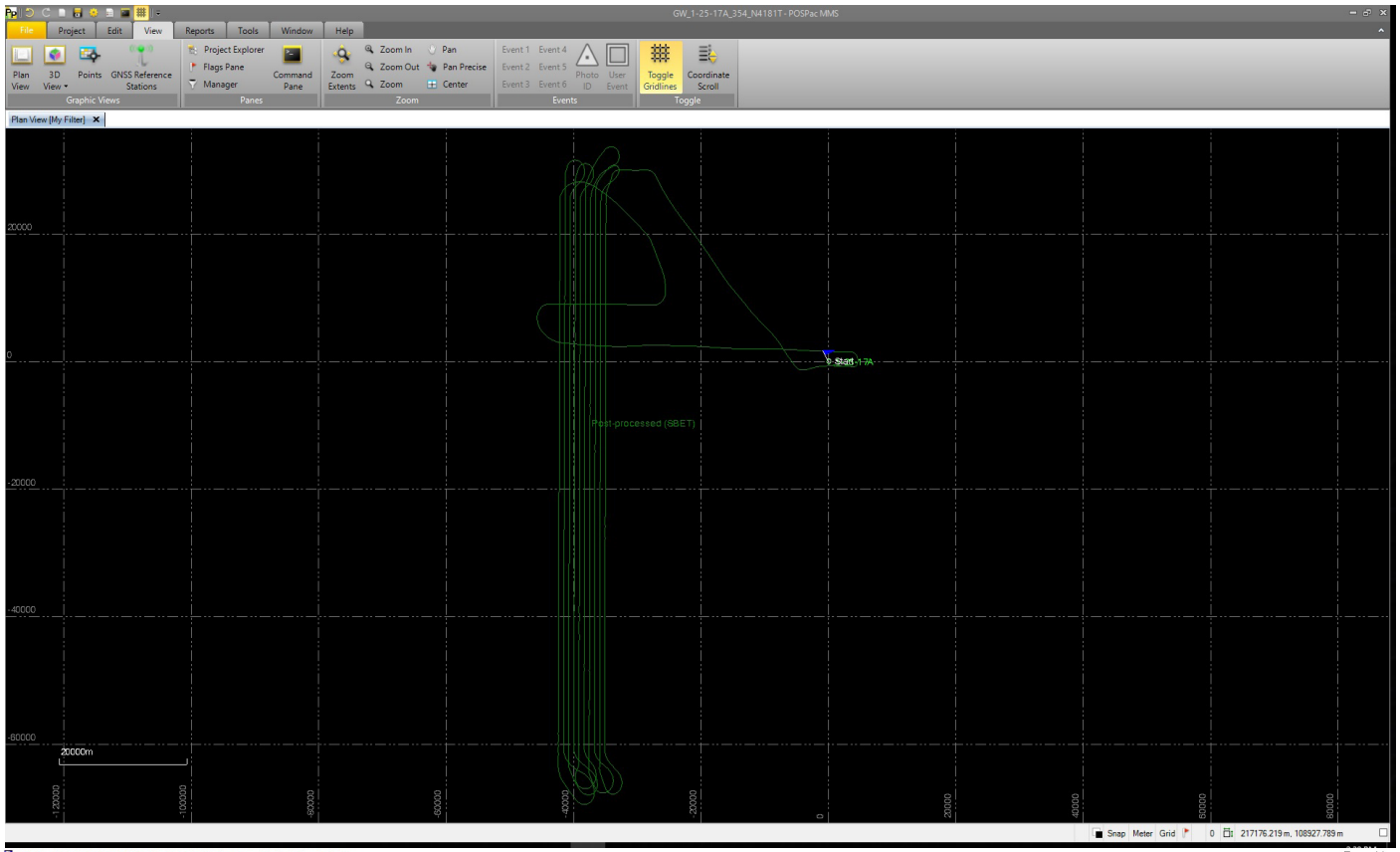
Flight Line	LiDAR File Name	Flight Direction	GPS Time		Line Aborted		Comments
			Start	End	Time	nmi to End	ALS Time Stamp: 170125_
162		001	20:26:57	20:38:46			
161		181	20:42:19	20:54:43			
160		001	20:57:42	21:10:02			
159		181	21:13:24	21:25:41			
158		001	21:28:44	21:41:53			
157		181	21:44:56	21:57:29			
156		001	22:00:40	22:13:31			
155		181	22:17:57	22:30:40			
XTie		090	22:34:09	22:38:44			Cross tie lines 155-177 west to east
IMU		Figure 8	22:39	22:44			IMU Maneuver
							PROJECT COMPLETE 🙂🎉

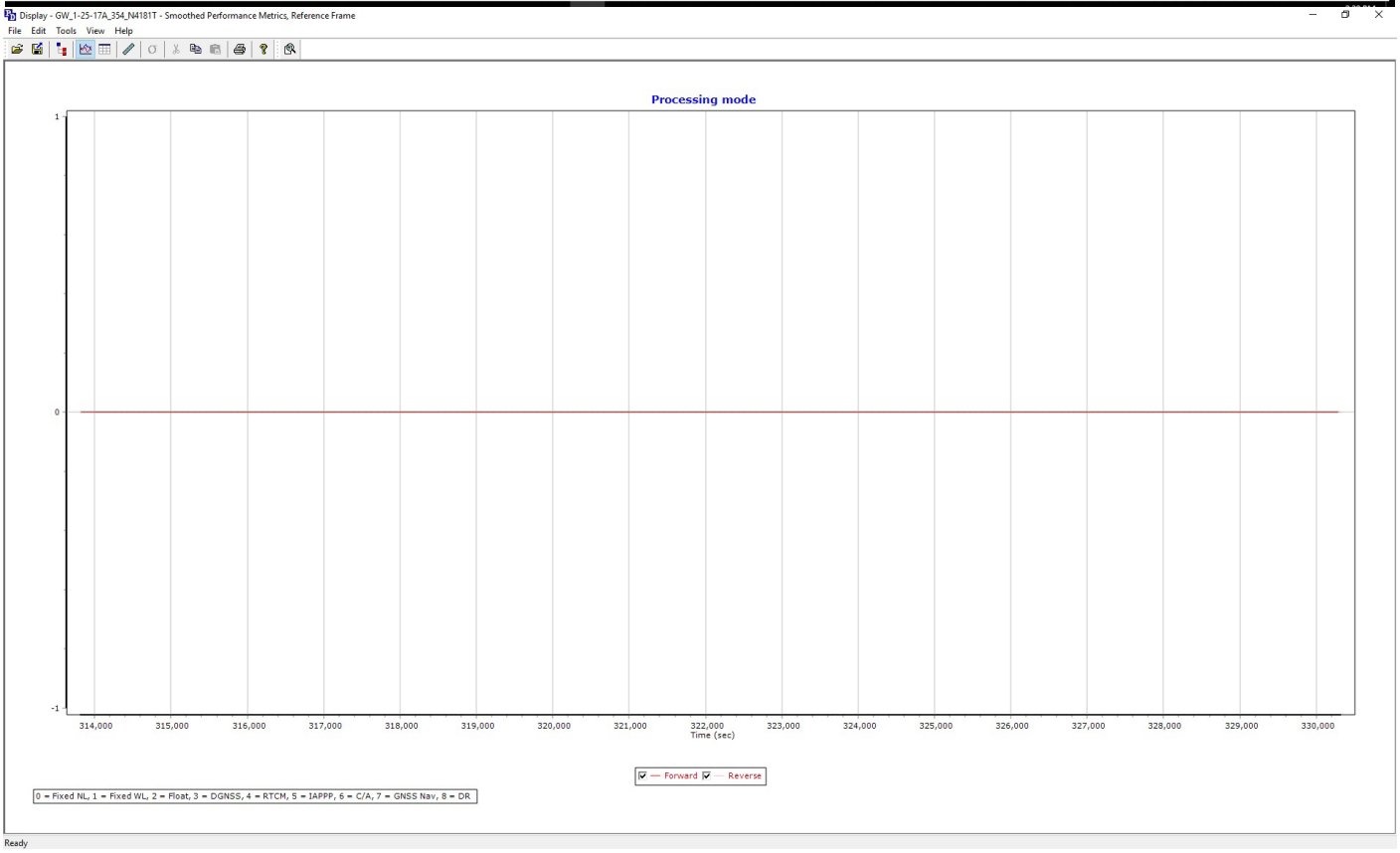
Pg 1 of 2

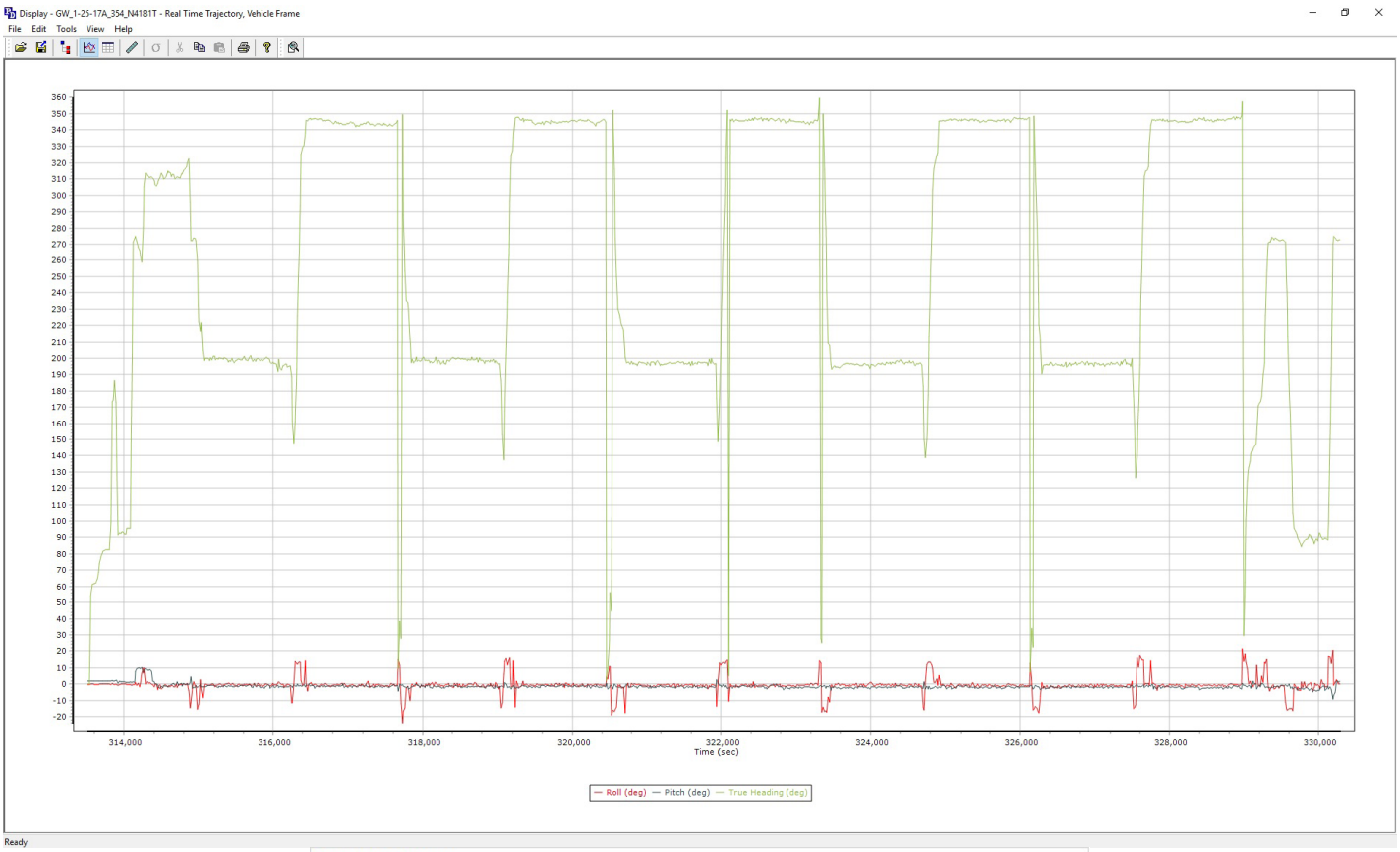
Jan 25, 2017-A (N4181T, SN354)

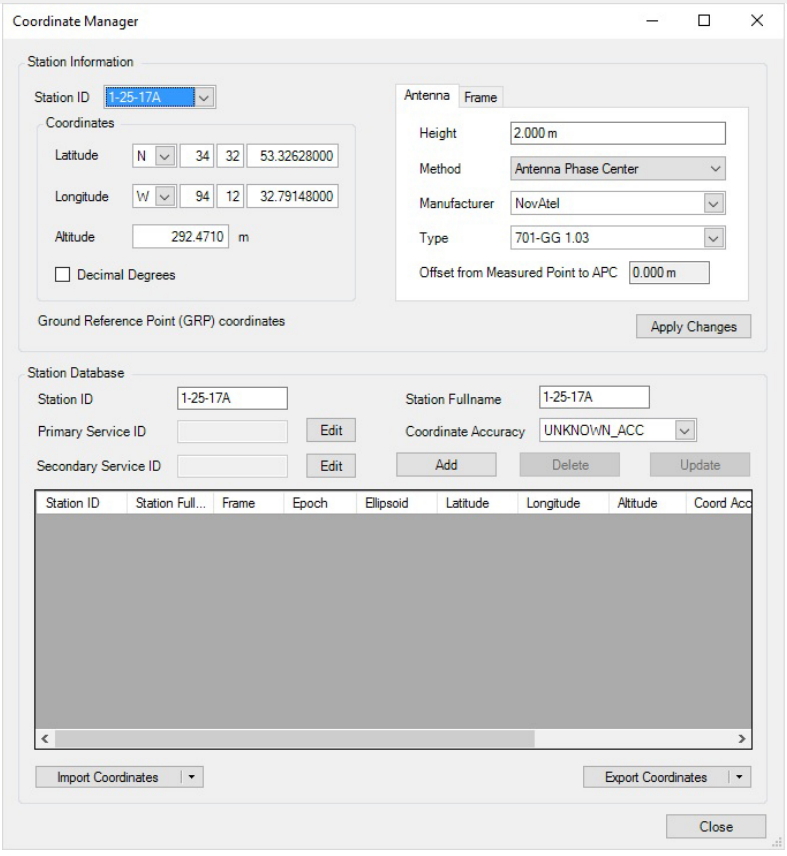

Display - GW_1-25-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_1-25-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready

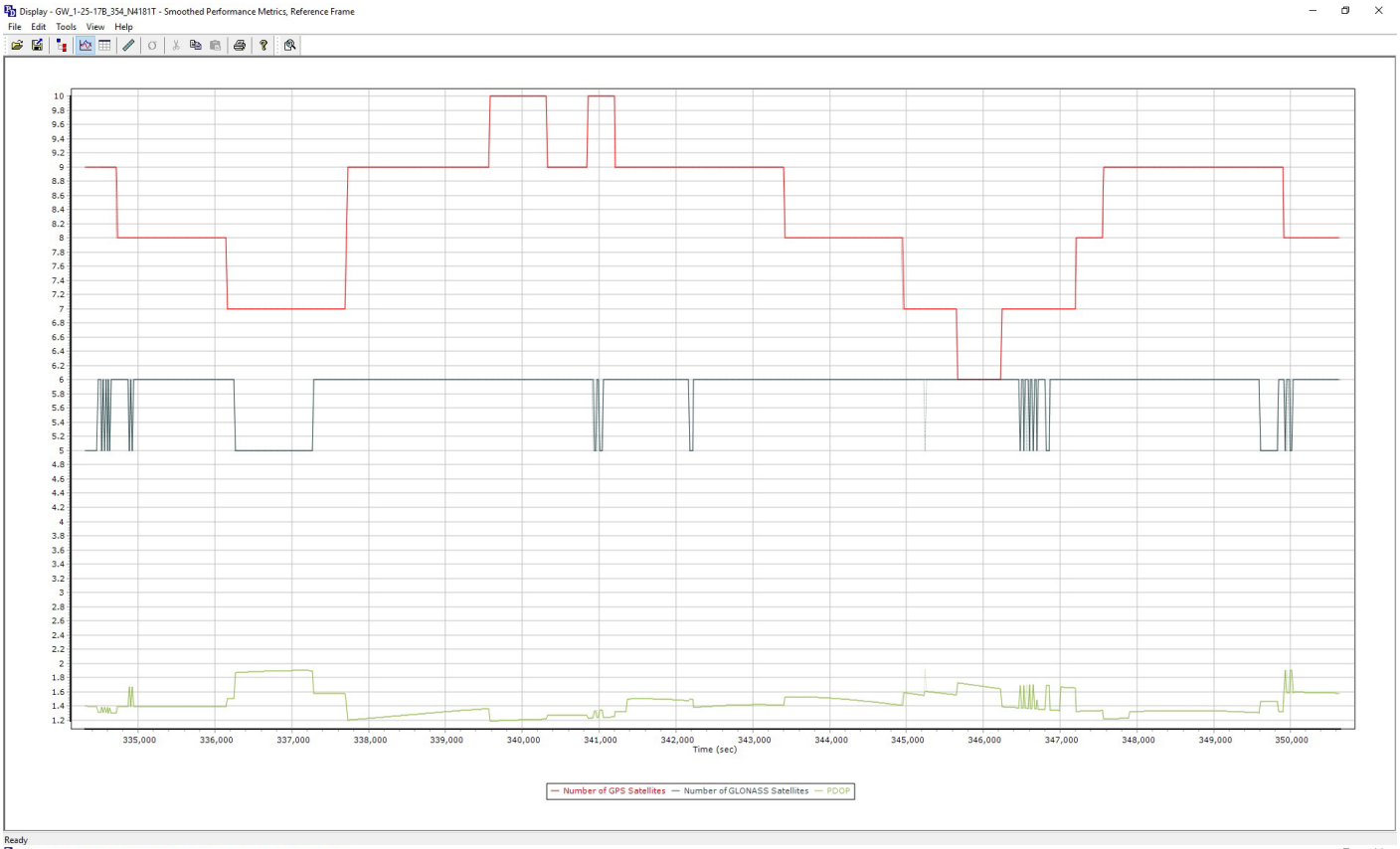

GW_1-25-17A_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom Extents
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
Start 17A
Post-processed (SBET)
20000m
Snap
Meter
Grid

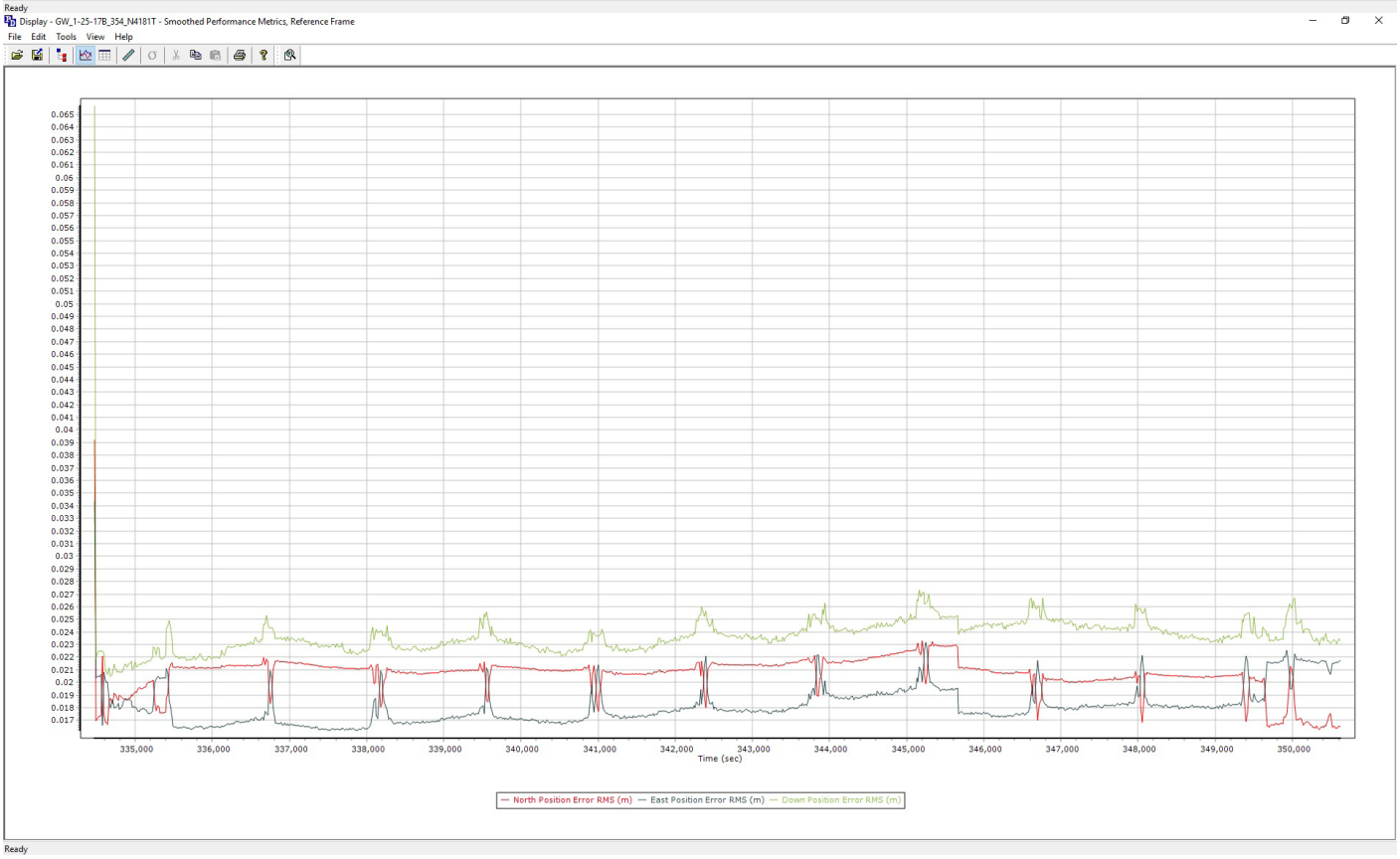

Display - GW_1-25-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready

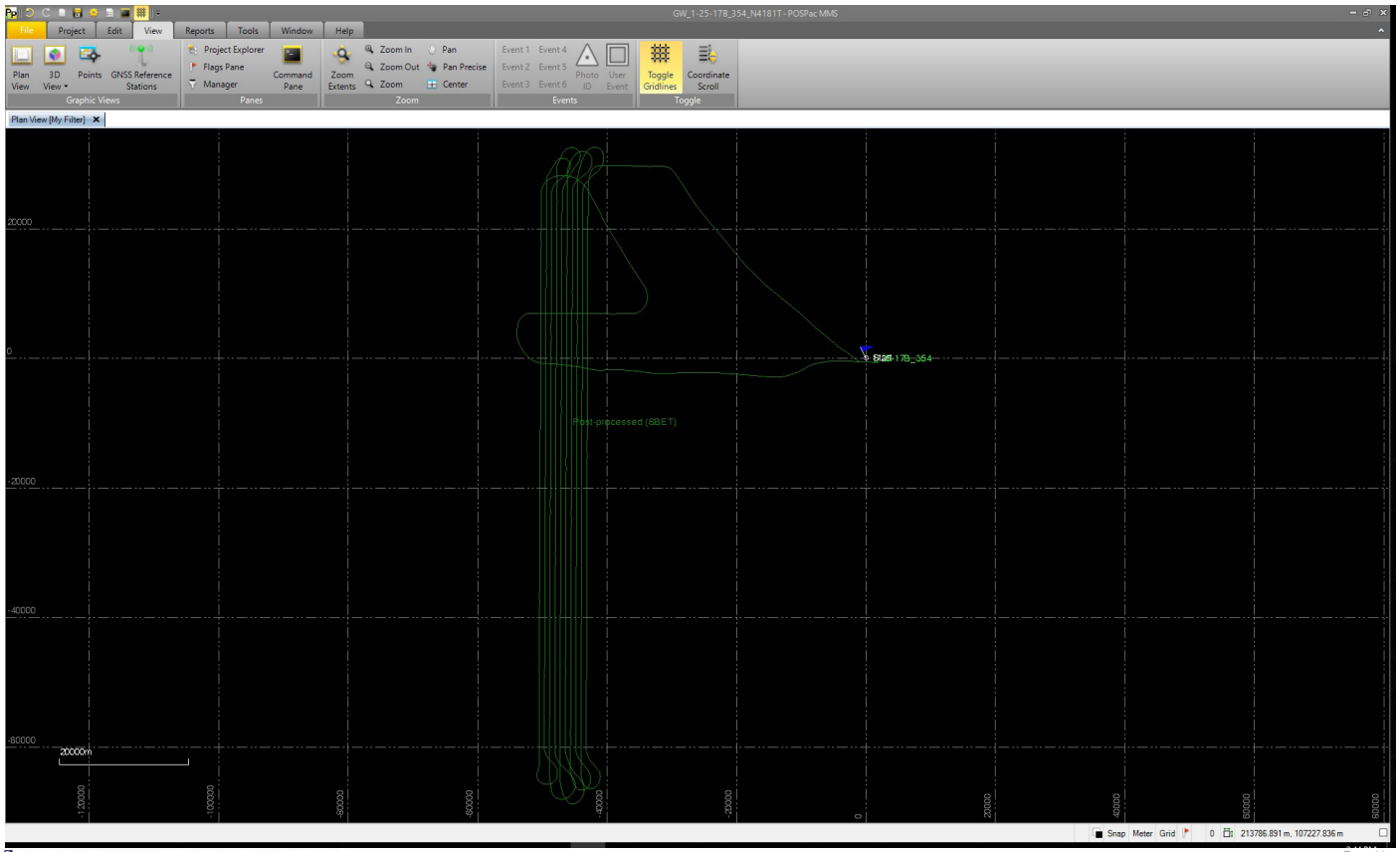

Display - GW_1-25-17A_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready

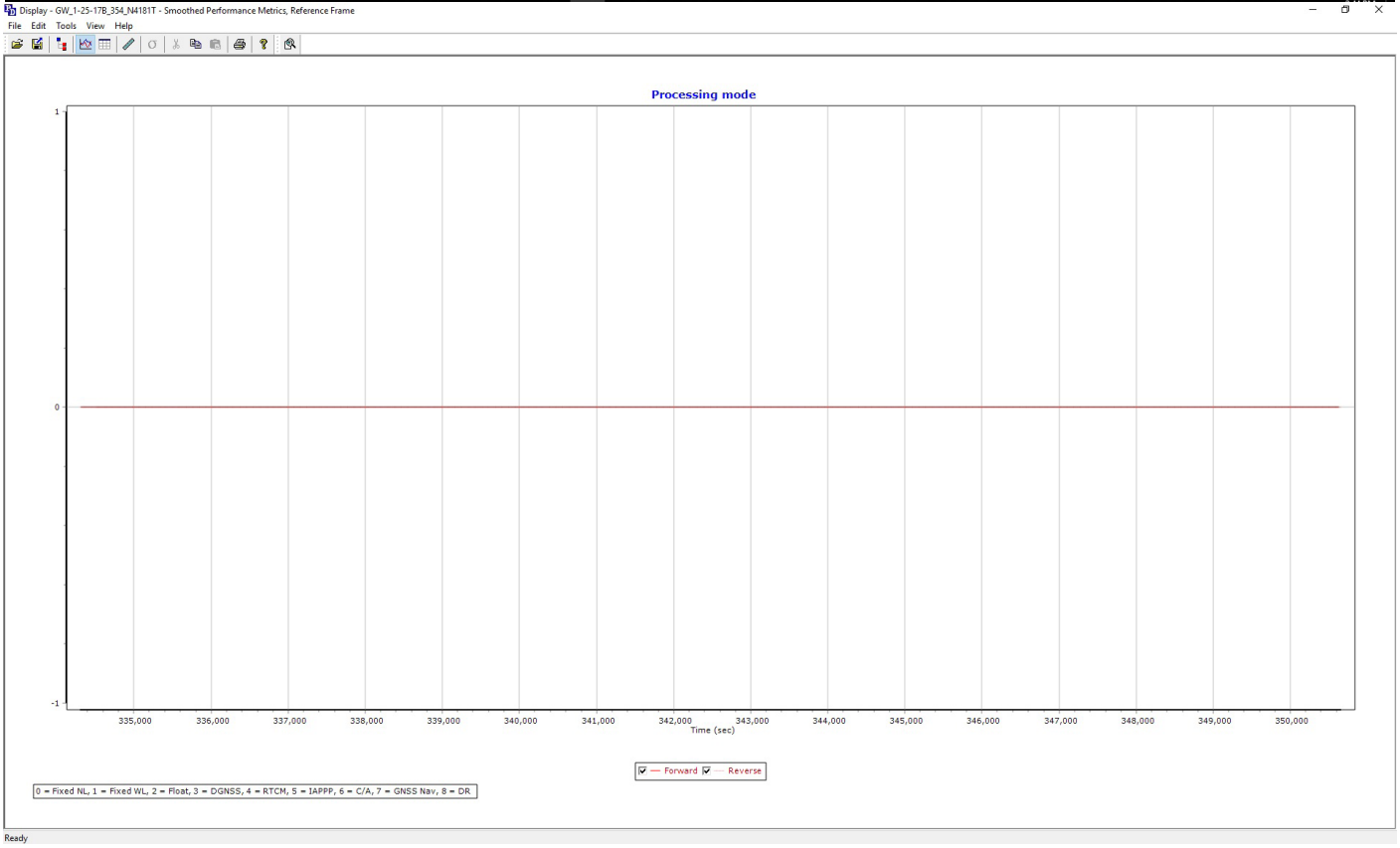

Coordinate Manager
Station Information
Station ID 1-25-17A
Coordinates
Latitude N 34 32 53.32628000
Longitude W 94 12 32.79148000
Altitude 292.4710 m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna Frame
Height 2.000 m
Method Antenna Phase Center
Manufacturer NovAtel
Type 701-GG 1.03
Offset from Measured Point to APC 0.000 m
Apply Changes
Station Database
Station ID 1-25-17A
Primary Service ID
Secondary Service ID
Edit
Edit
Station Fullname 1-25-17A
Coordinate Accuracy UNKNOWN_ACC
Add
Delete
Update
Station ID
Station Full...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Acc
Import Coordinates
Export Coordinates
Close

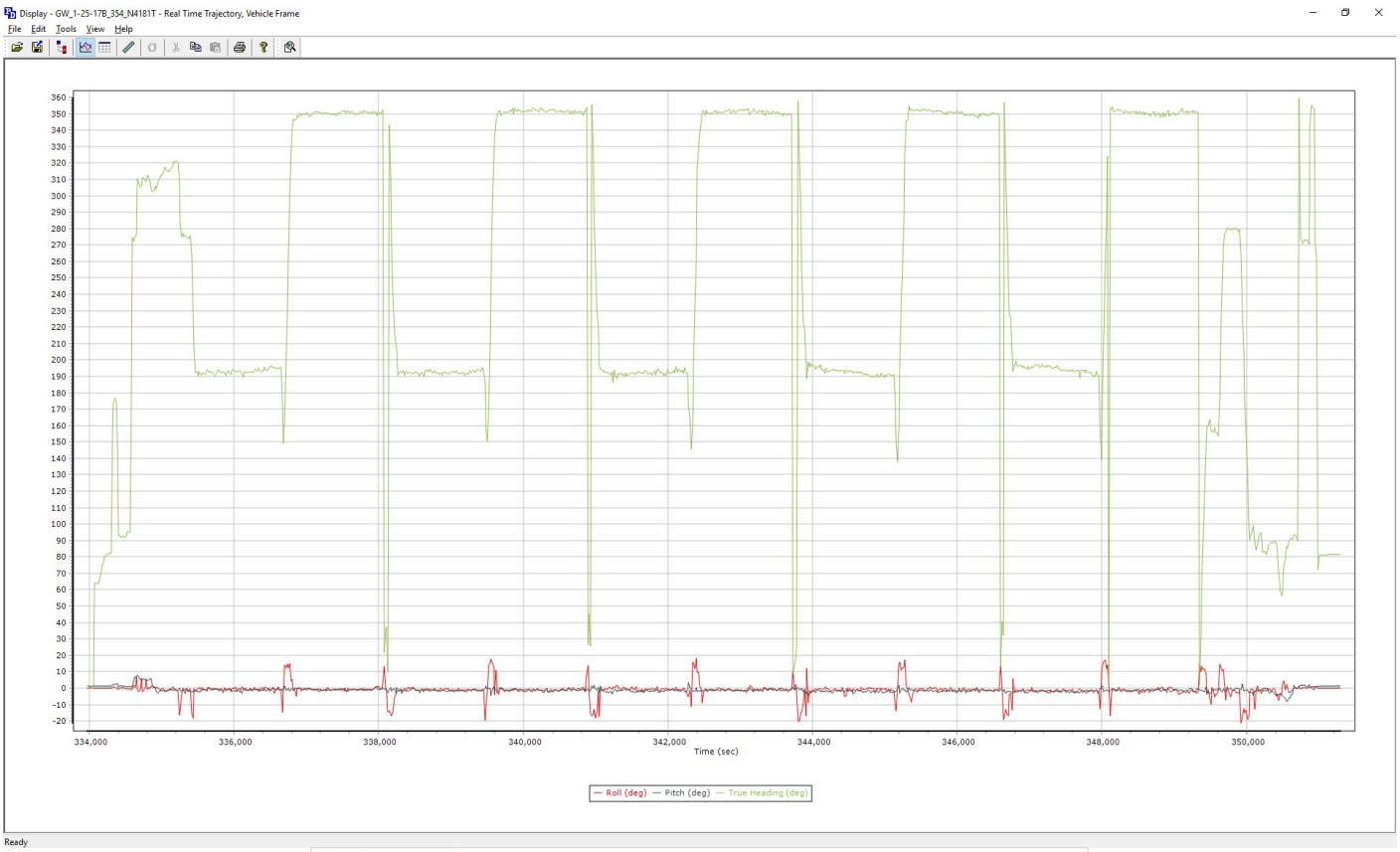
Jan 25, 2017-B (N4181T, SN354)

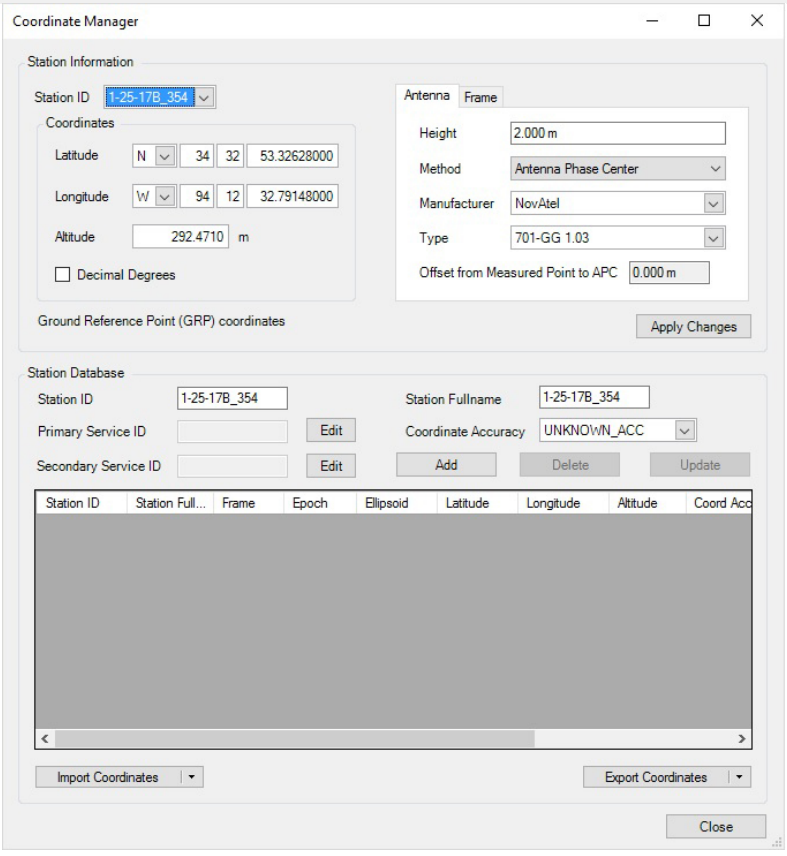

Display - GW_1-25-17B_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_1-25-17B_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready

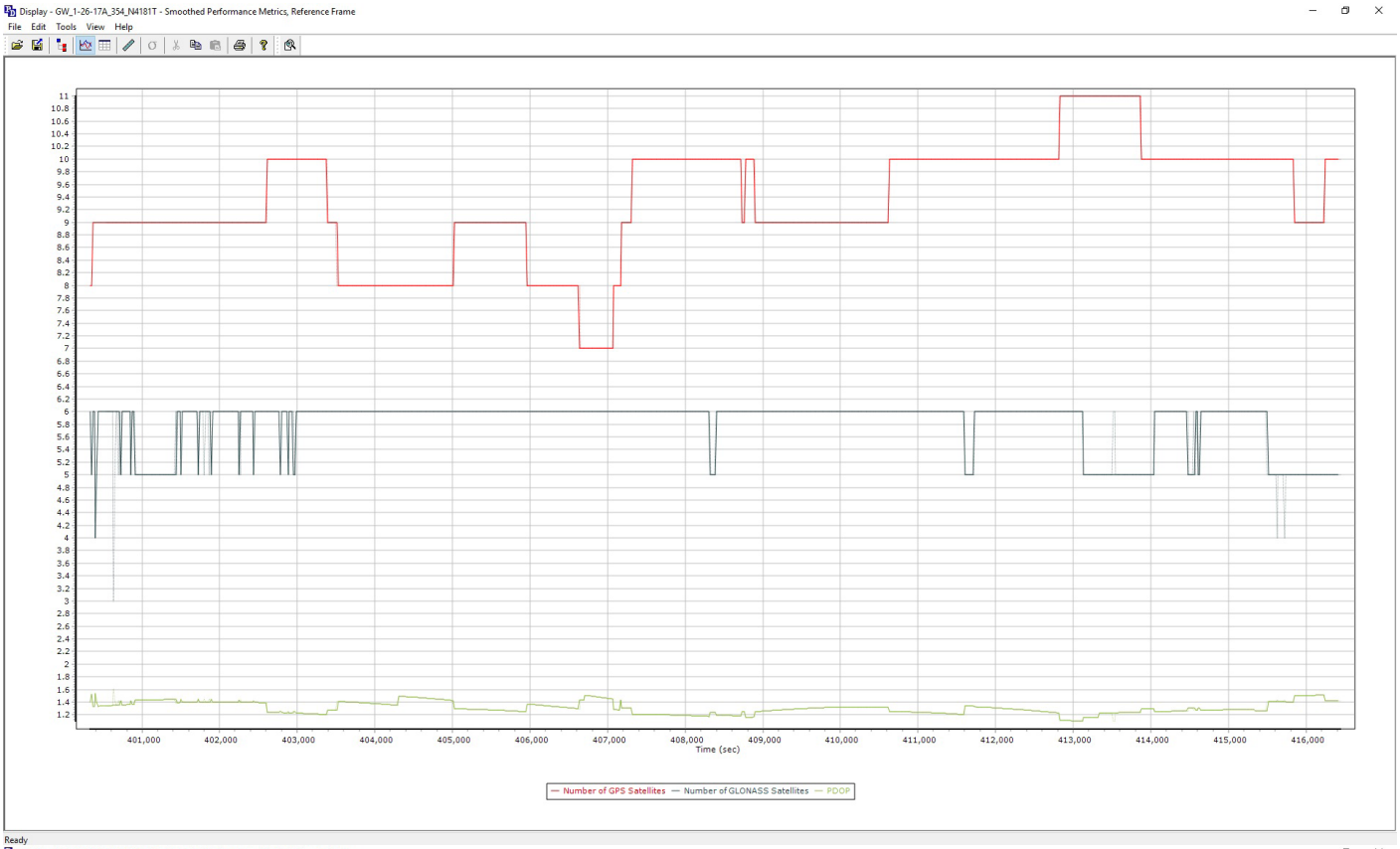

GW_1-25-17B_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom Extents
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
20000
0
-20000
-40000
-60000
20000m
Post-processed (SBET)
Snap
Meter
Grid
213786.891 m, 107227.836 m

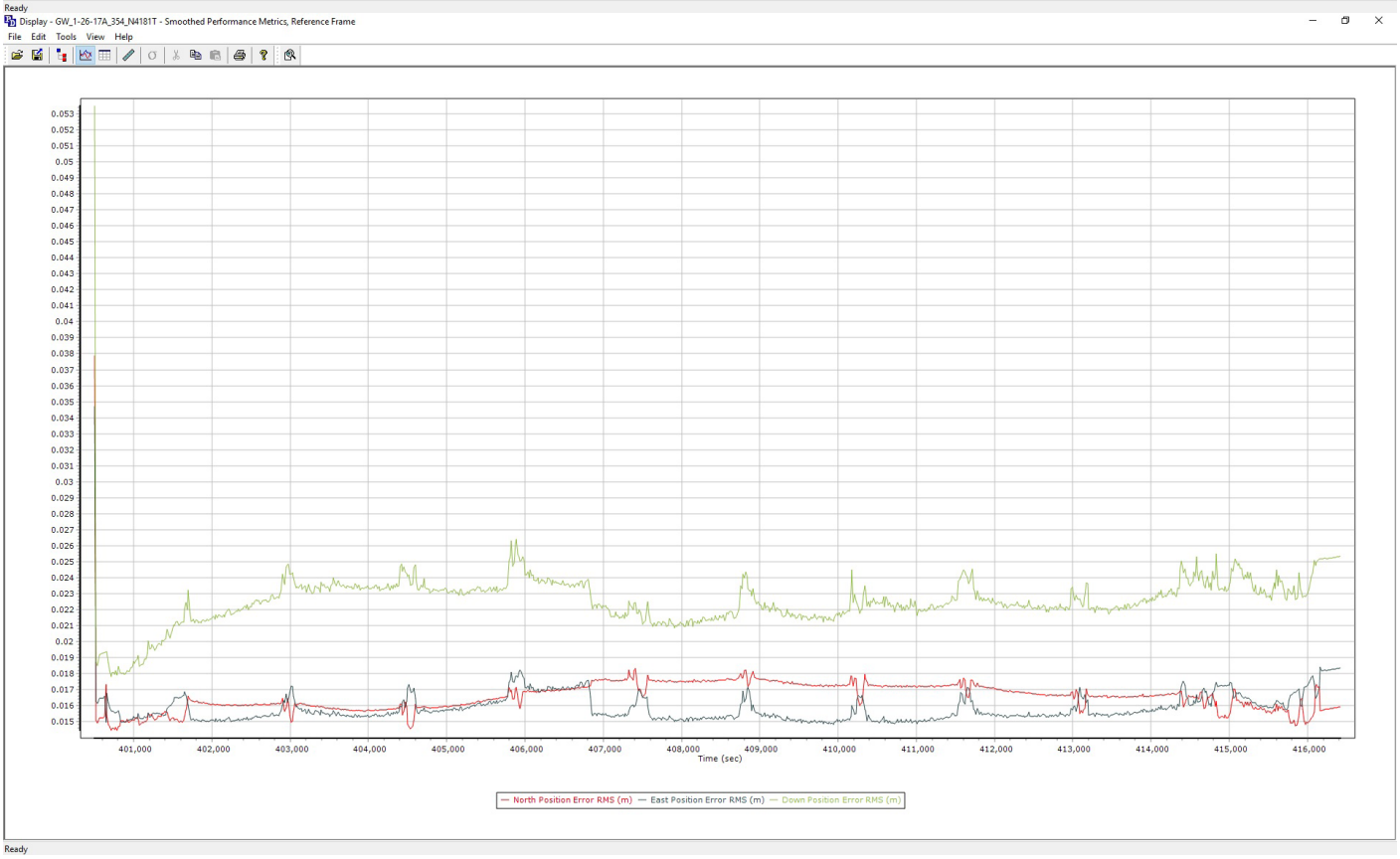

Display - GW_1-25-17B_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
1
0
-1
335,000
336,000
337,000
338,000
339,000
340,000
341,000
342,000
343,000
344,000
345,000
346,000
347,000
348,000
349,000
350,000
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready

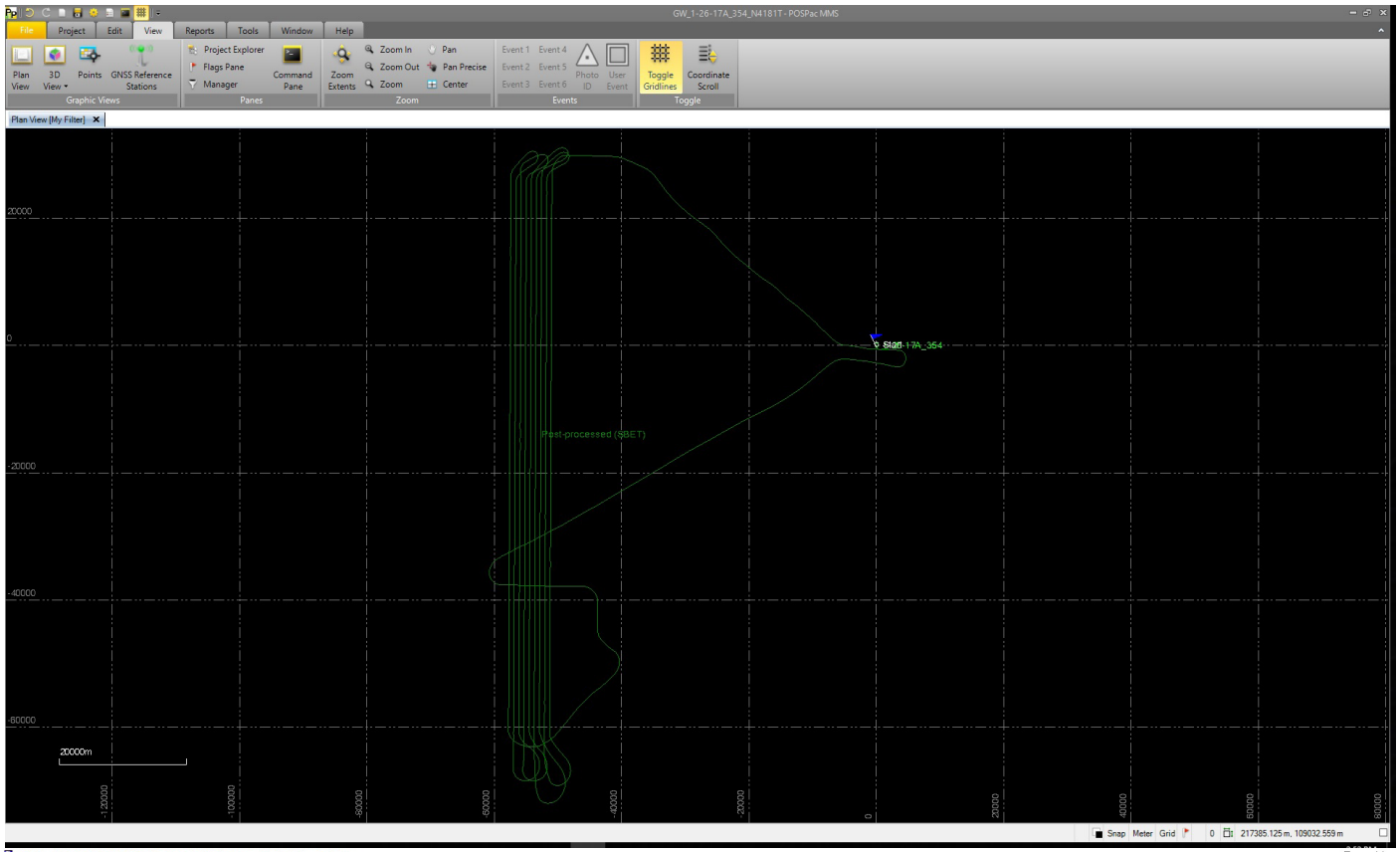

Display - GW_1-25-17B_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready

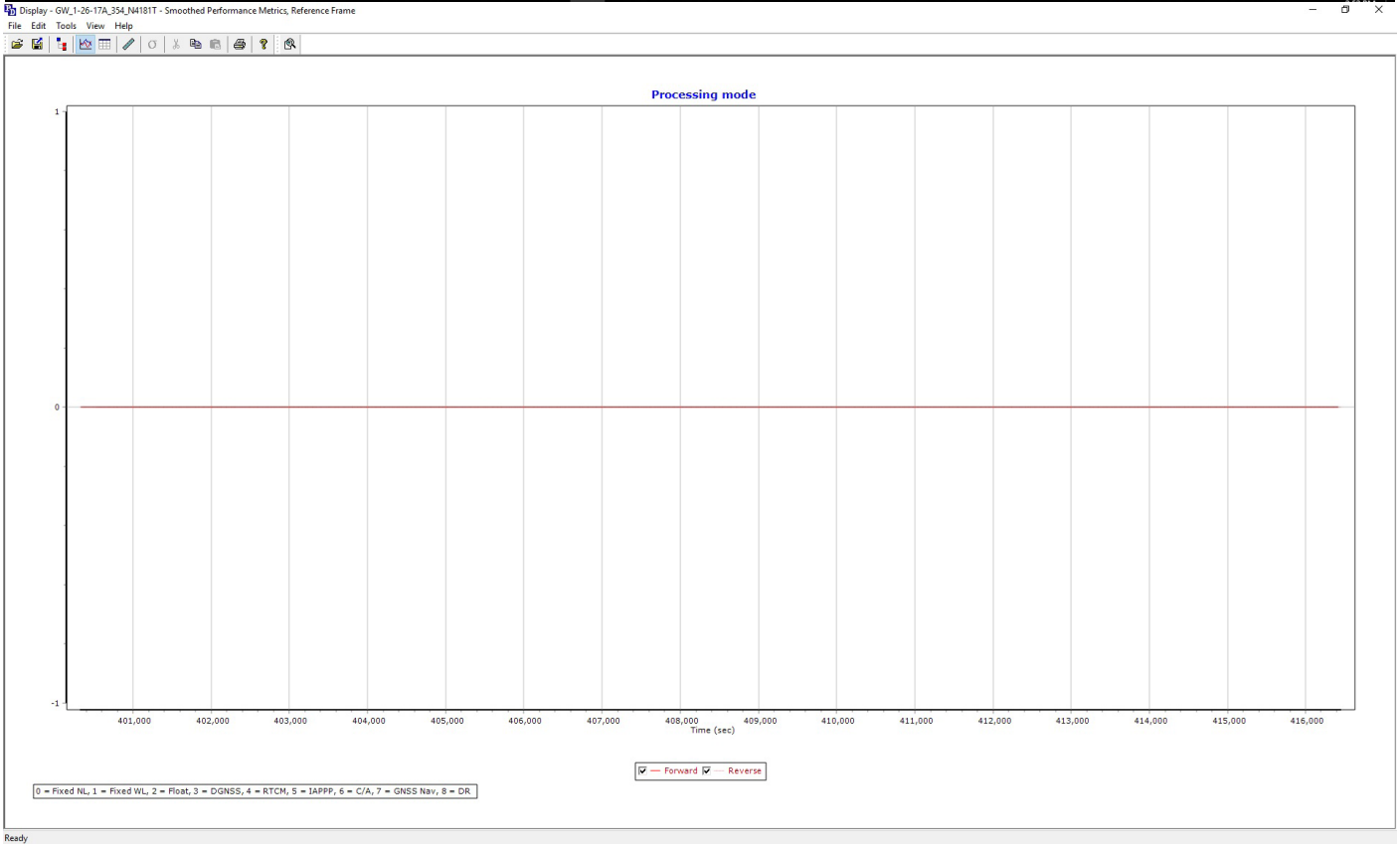

Coordinate Manager
Station Information
Station ID 1-25-17B_354
Coordinates
Latitude N 34 32 53.32628000
Longitude W 94 12 32.79148000
Altitude 292.4710 m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna Frame
Height 2.000 m
Method Antenna Phase Center
Manufacturer NovAtel
Type 701-GG 1.03
Offset from Measured Point to APC 0.000 m
Apply Changes
Station Database
Station ID 1-25-17B_354
Primary Service ID
Secondary Service ID
Edit
Edit
Station Fullname 1-25-17B_354
Coordinate Accuracy UNKNOWN_ACC
Add
Delete
Update
Station ID
Station Full...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Acc
Import Coordinates
Export Coordinates
Close

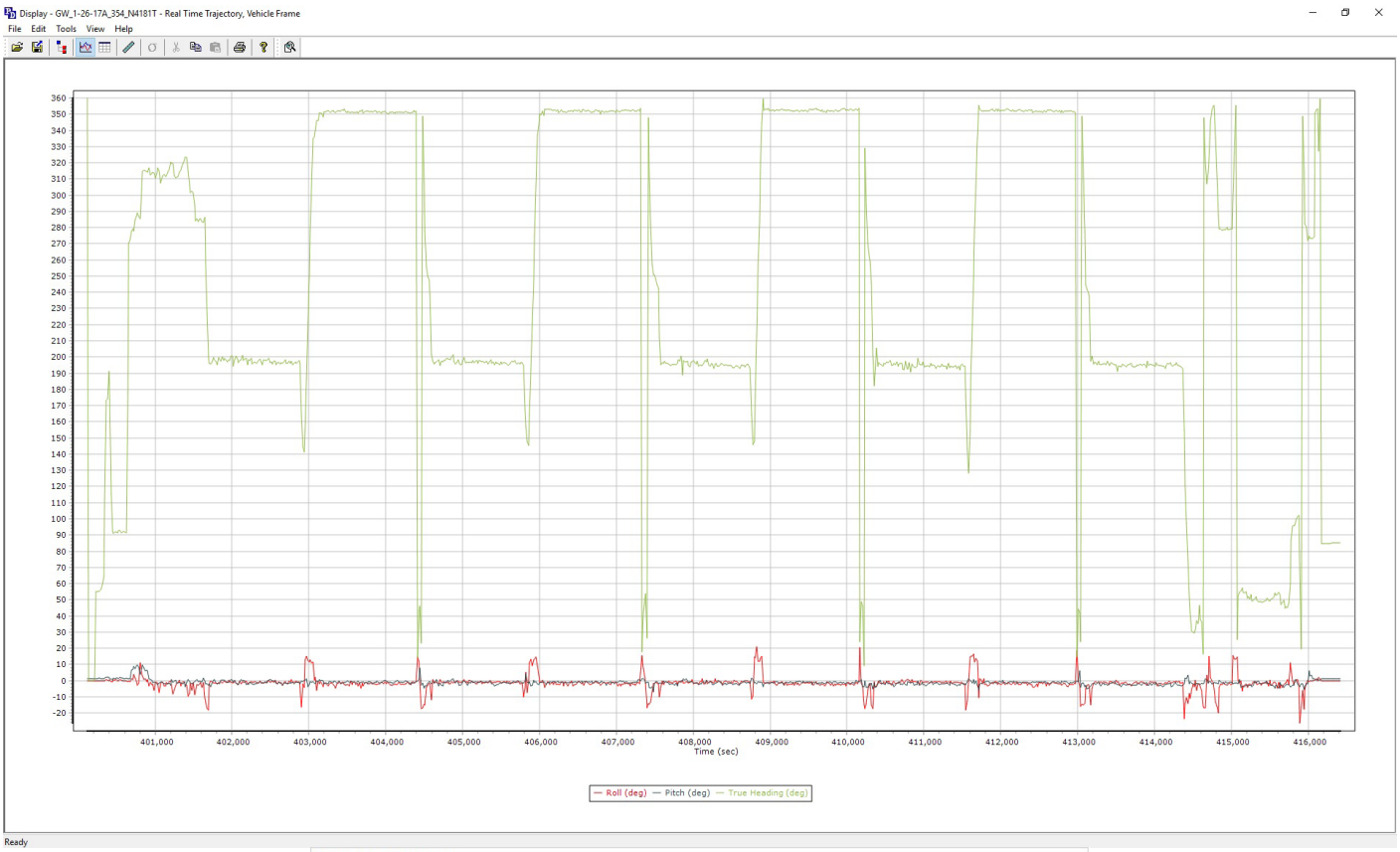
Jan 26, 2017-A (N4181T, SN354)

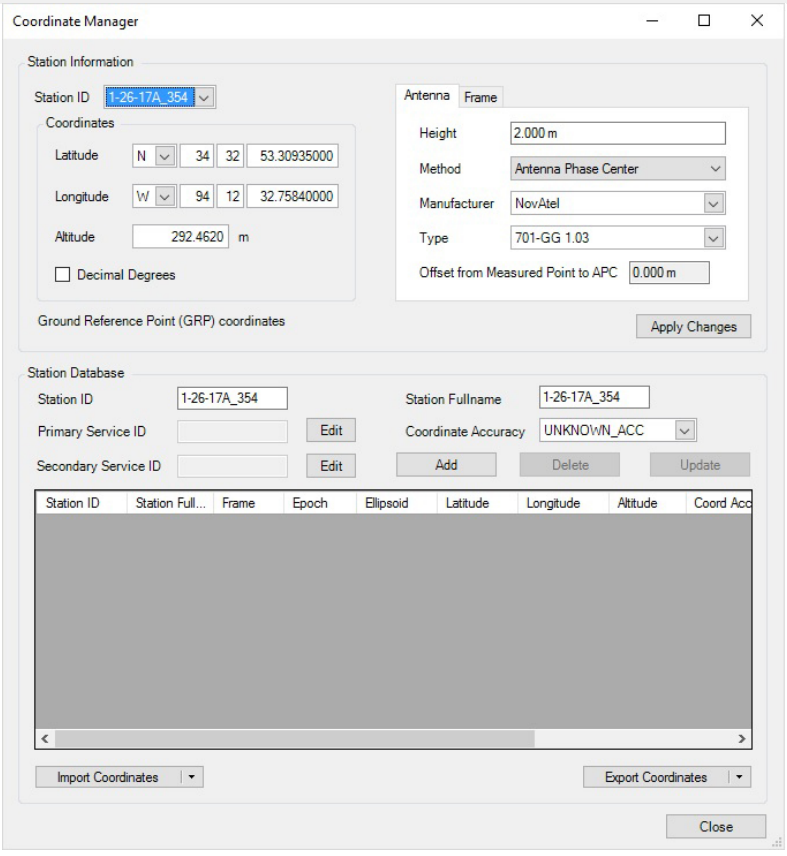

Display - GW_1-26-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_1-26-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready


GW_1-26-17A_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom Extents
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
Start 17A_354
Post-processed (SBET)
20000m
Snap
Meter
Grid

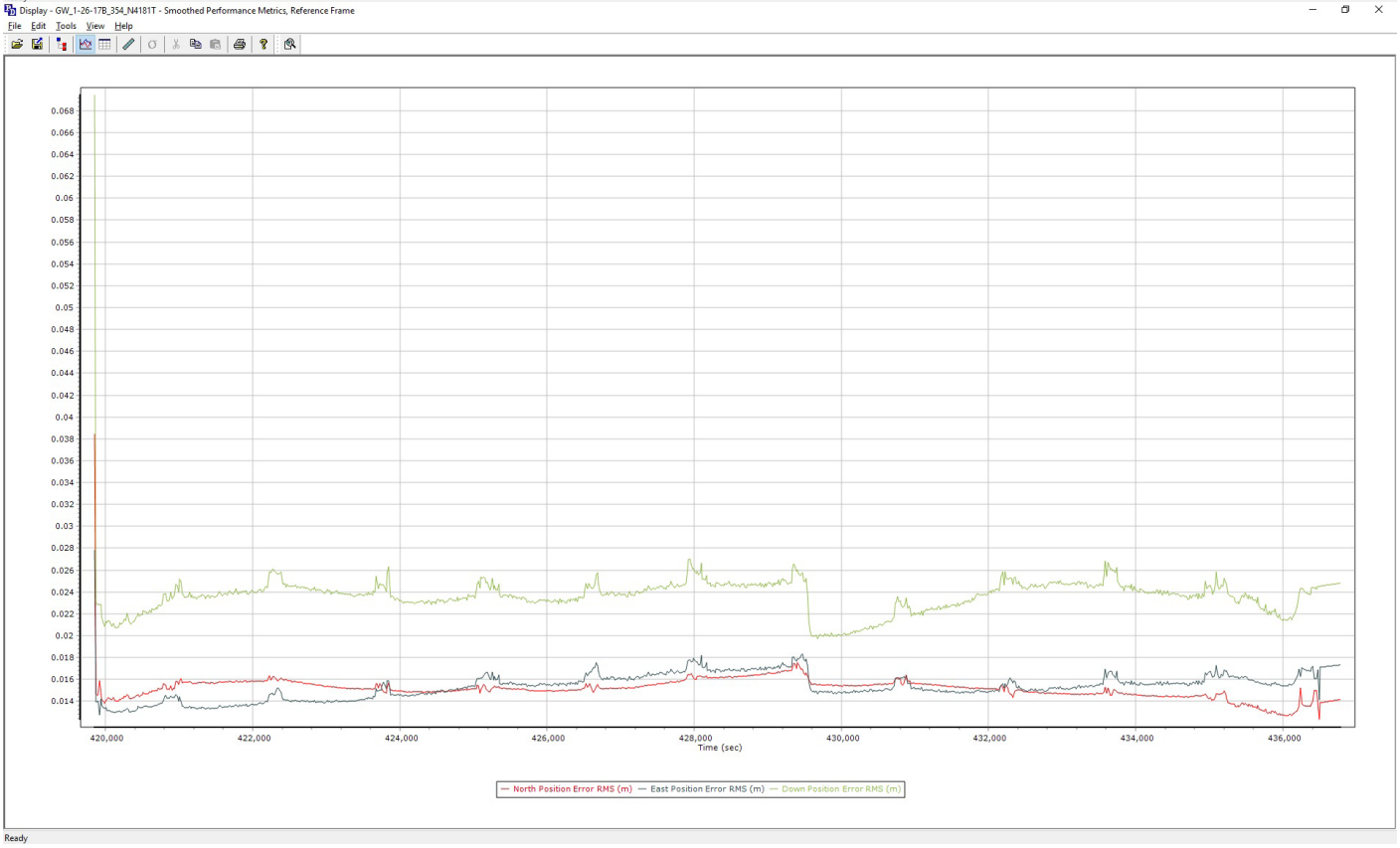

Display - GW_1-26-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready

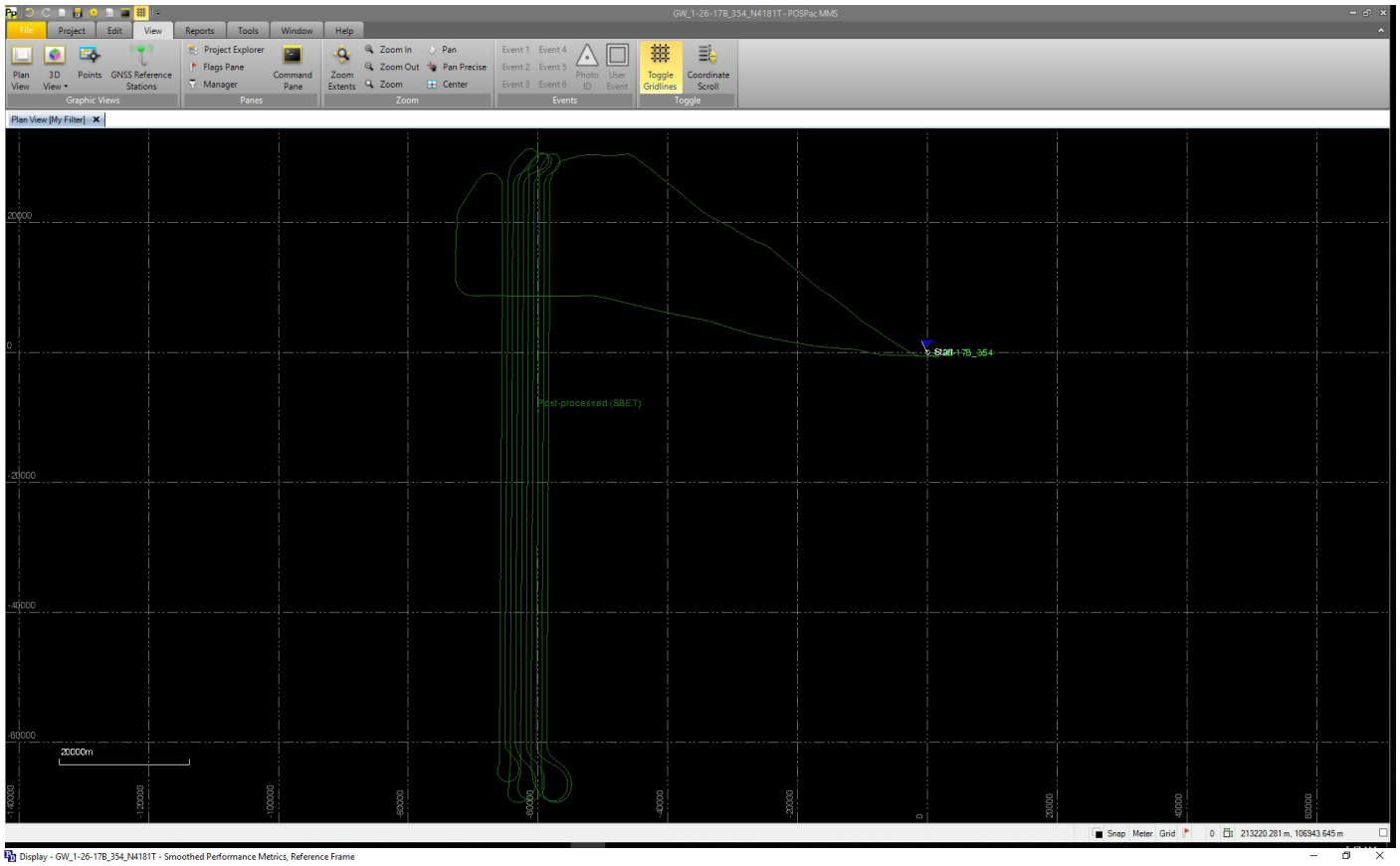

Display - GW_1-26-17A_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready

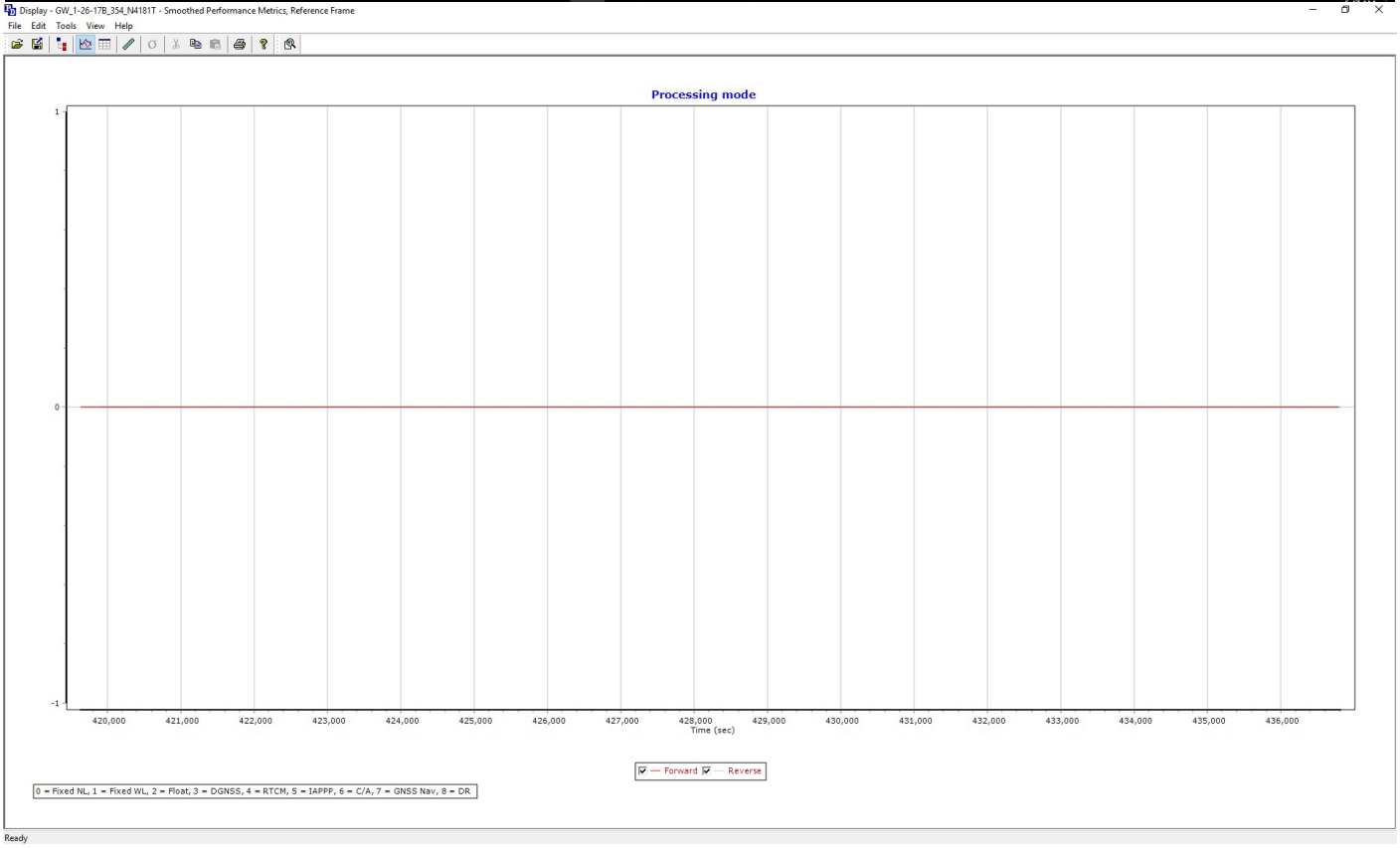

Coordinate Manager
Station Information
Station ID 1-26-17A_354
Coordinates
Latitude N 34 32 53.30935000
Longitude W 94 12 32.75840000
Altitude 292.4620 m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna Frame
Height 2.000 m
Method Antenna Phase Center
Manufacturer NovAtel
Type 701-GG 1.03
Offset from Measured Point to APC 0.000 m
Apply Changes
Station Database
Station ID 1-26-17A_354
Station Fullname 1-26-17A_354
Primary Service ID Edit
Secondary Service ID Edit
Coordinate Accuracy UNKNOWN_ACC
Add Delete Update
Station ID Station Full... Frame Epoch Ellipsoid Latitude Longitude Altitude Coord Acc
Import Coordinates
Export Coordinates
Close

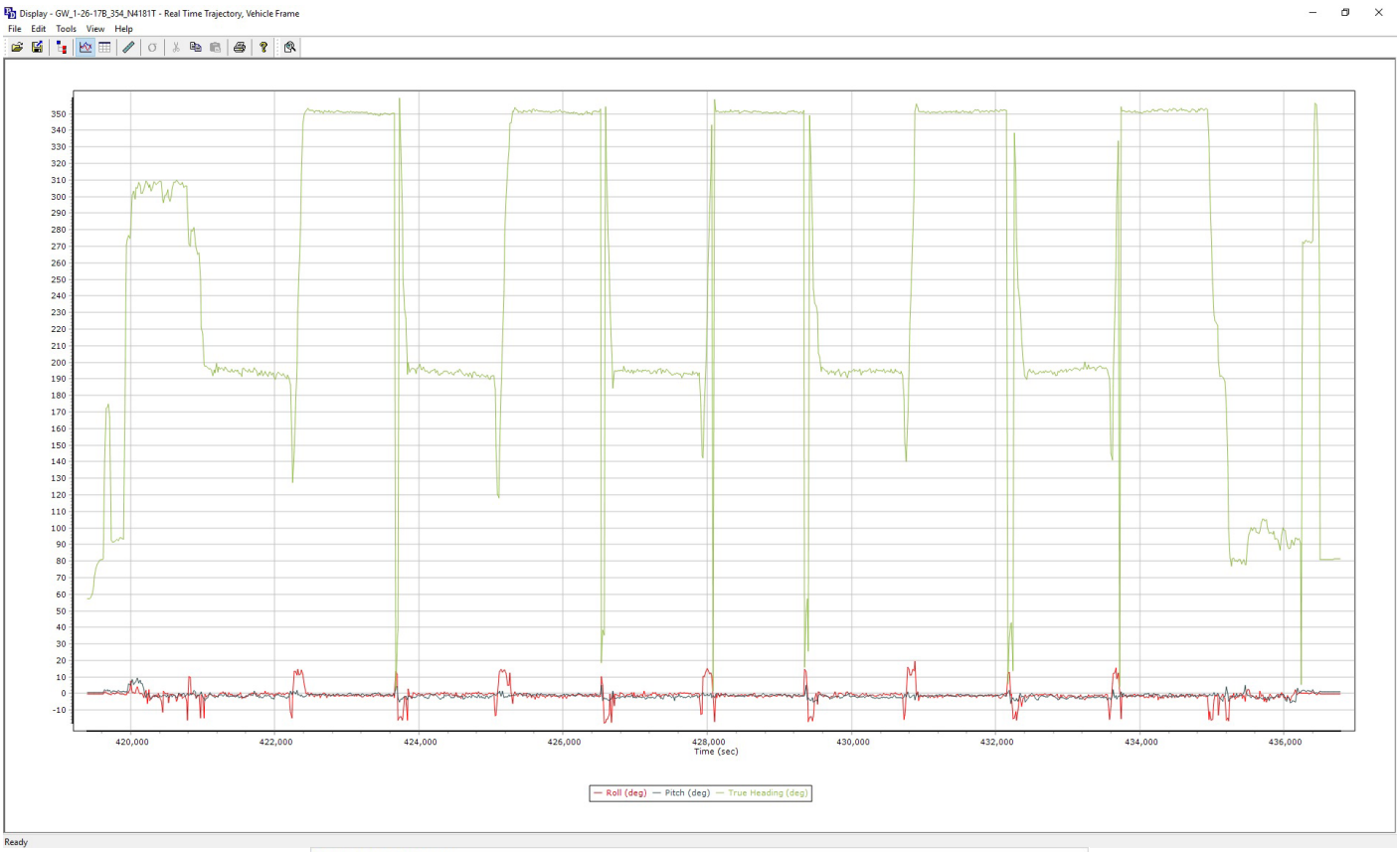
Jan 26, 2017-B (N4181T, SN354)

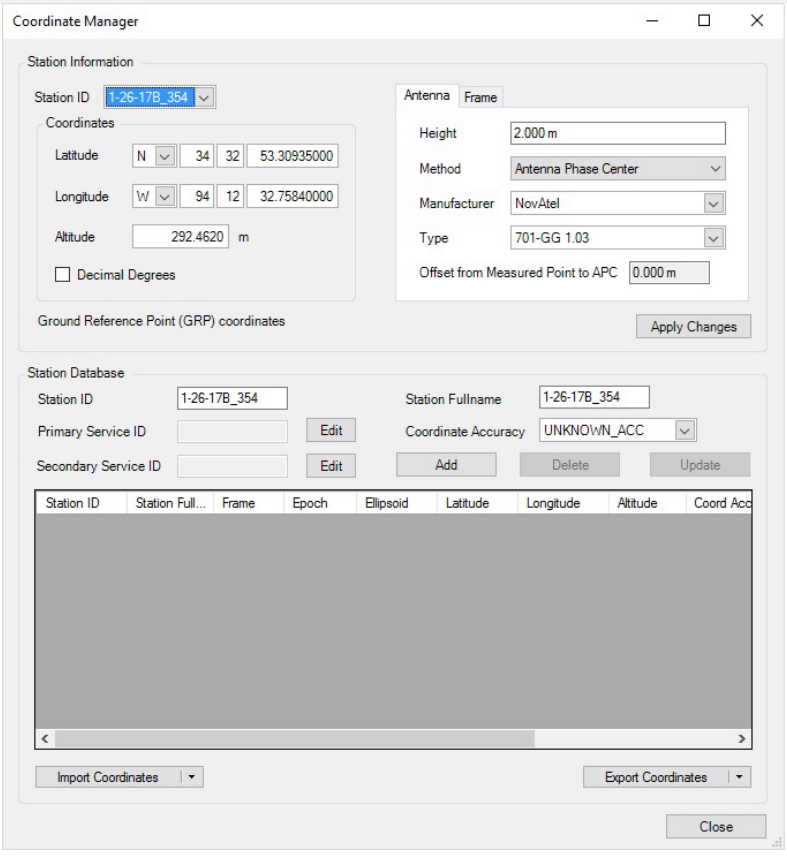

Display - GW_1-26-17B_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_1-26-17B_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready

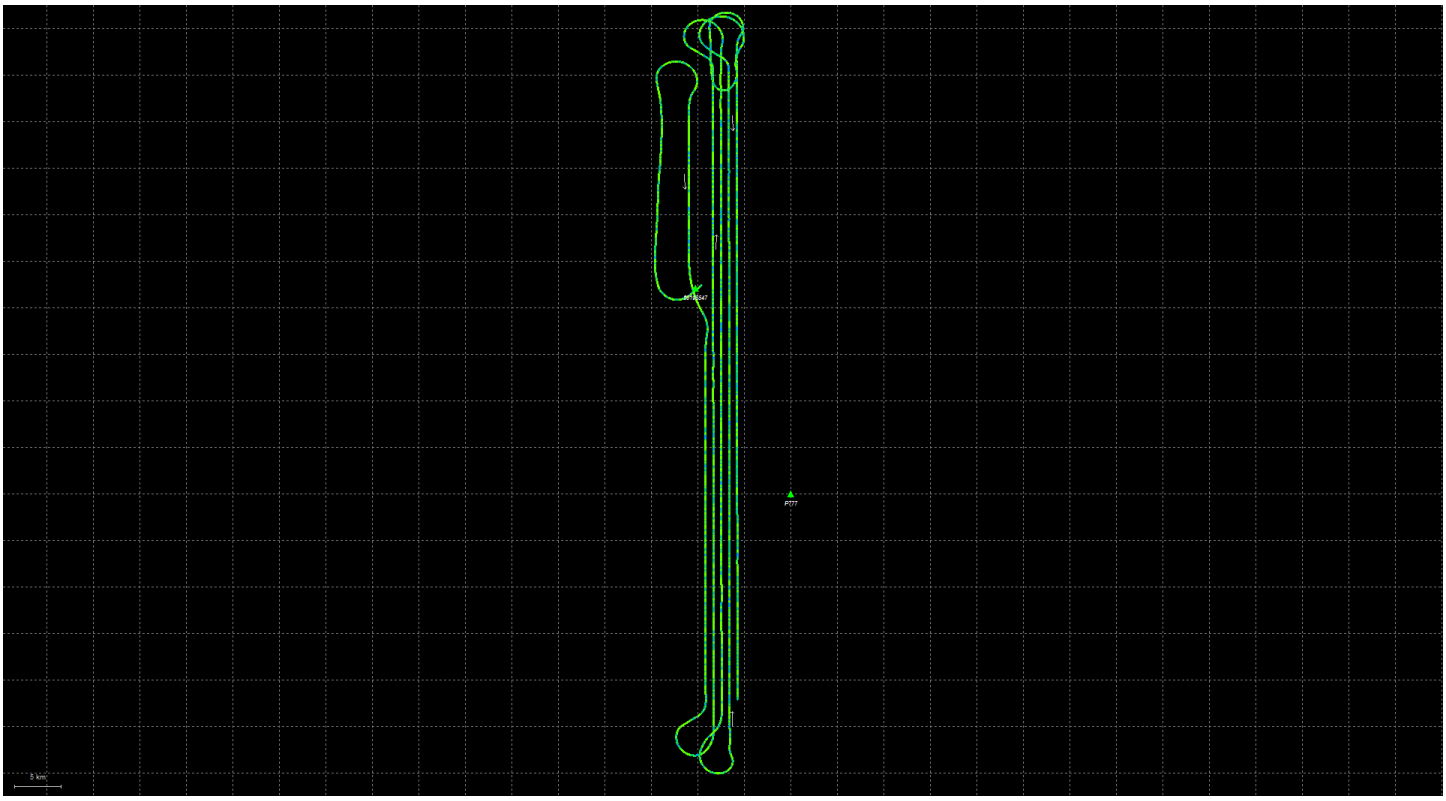

GW_1-26-17B_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom Extents
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
Start 17B_354
Post-processed (SBET)
20000m
Snap
Meter
Grid
213220.281 m, 106943.645 m

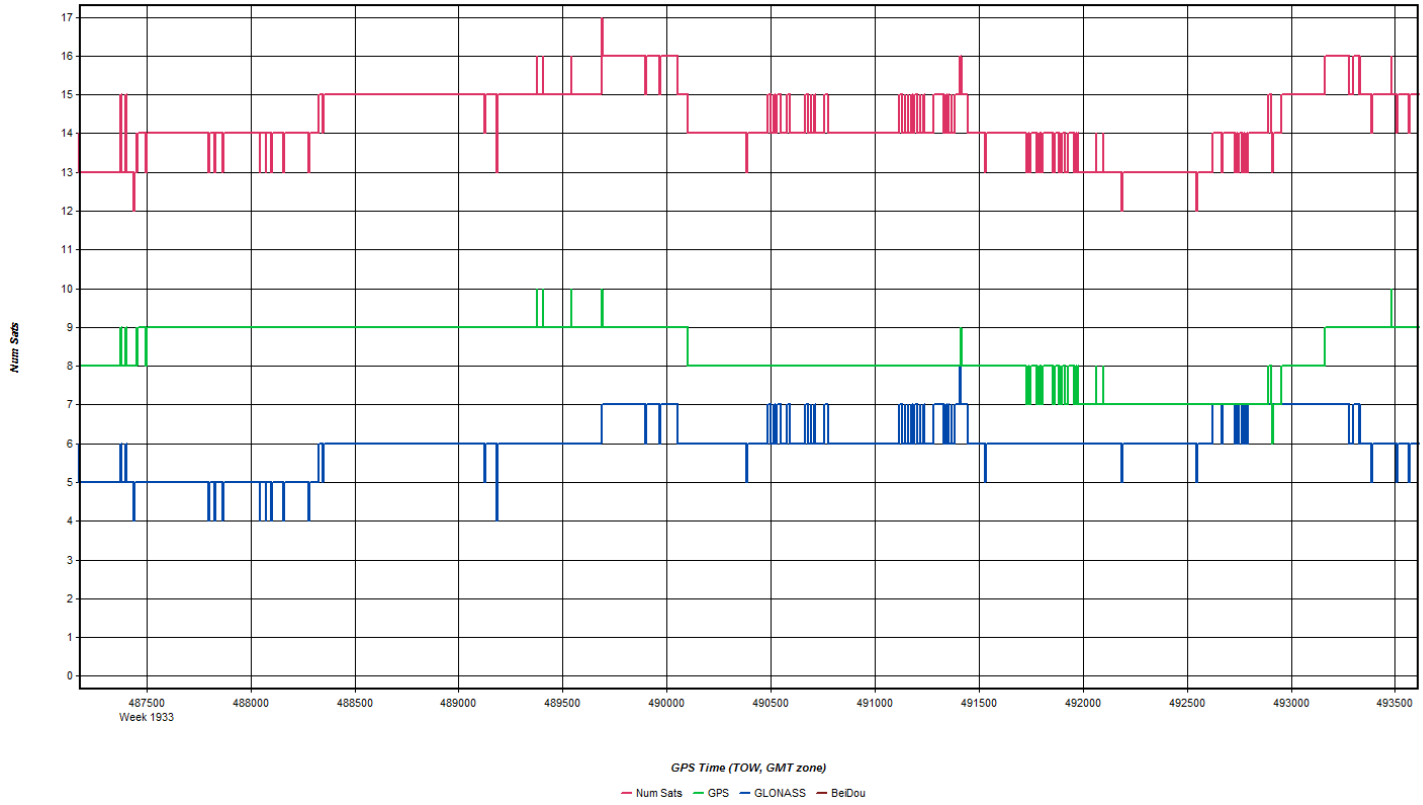

Display - GW_1-26-17B_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready

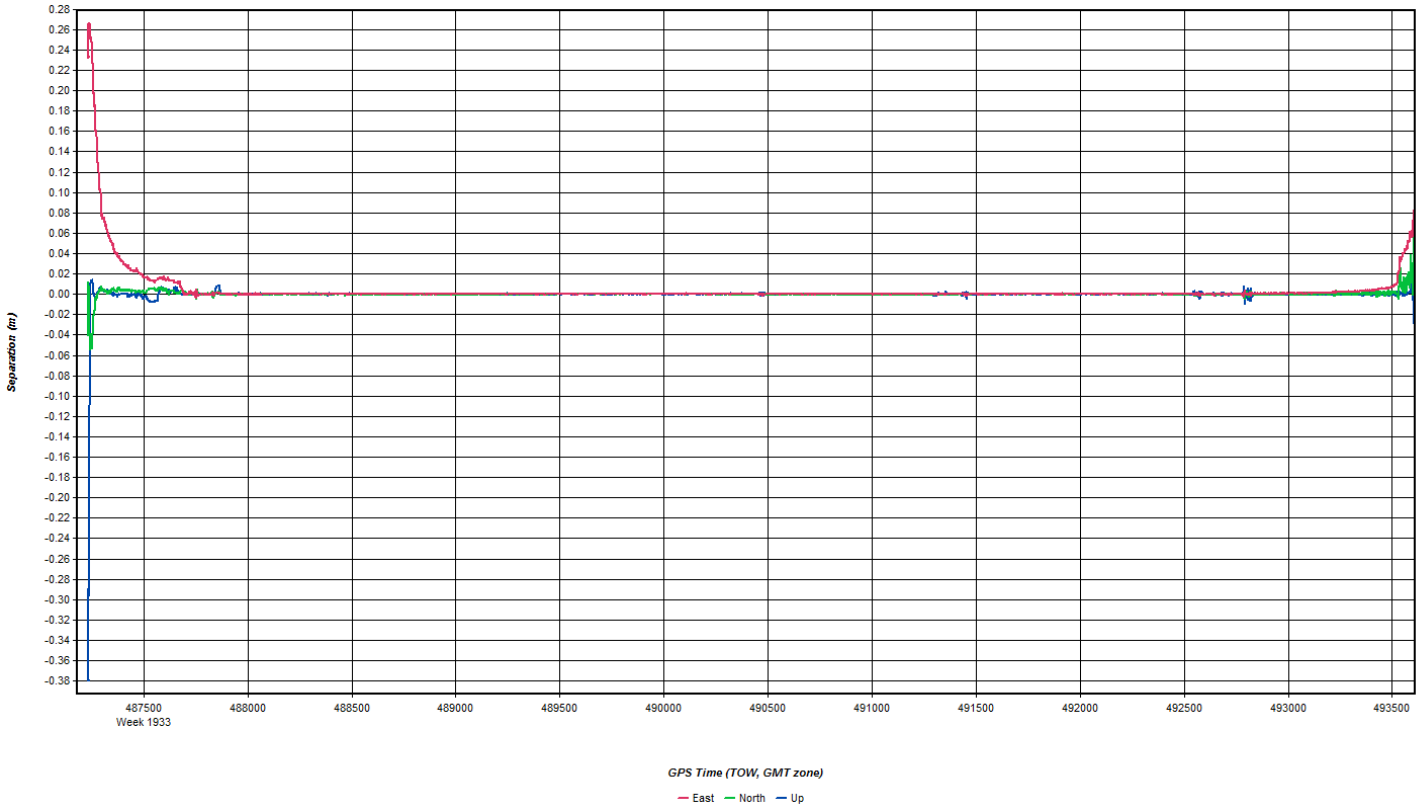

Display - GW_1-26-17B_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready

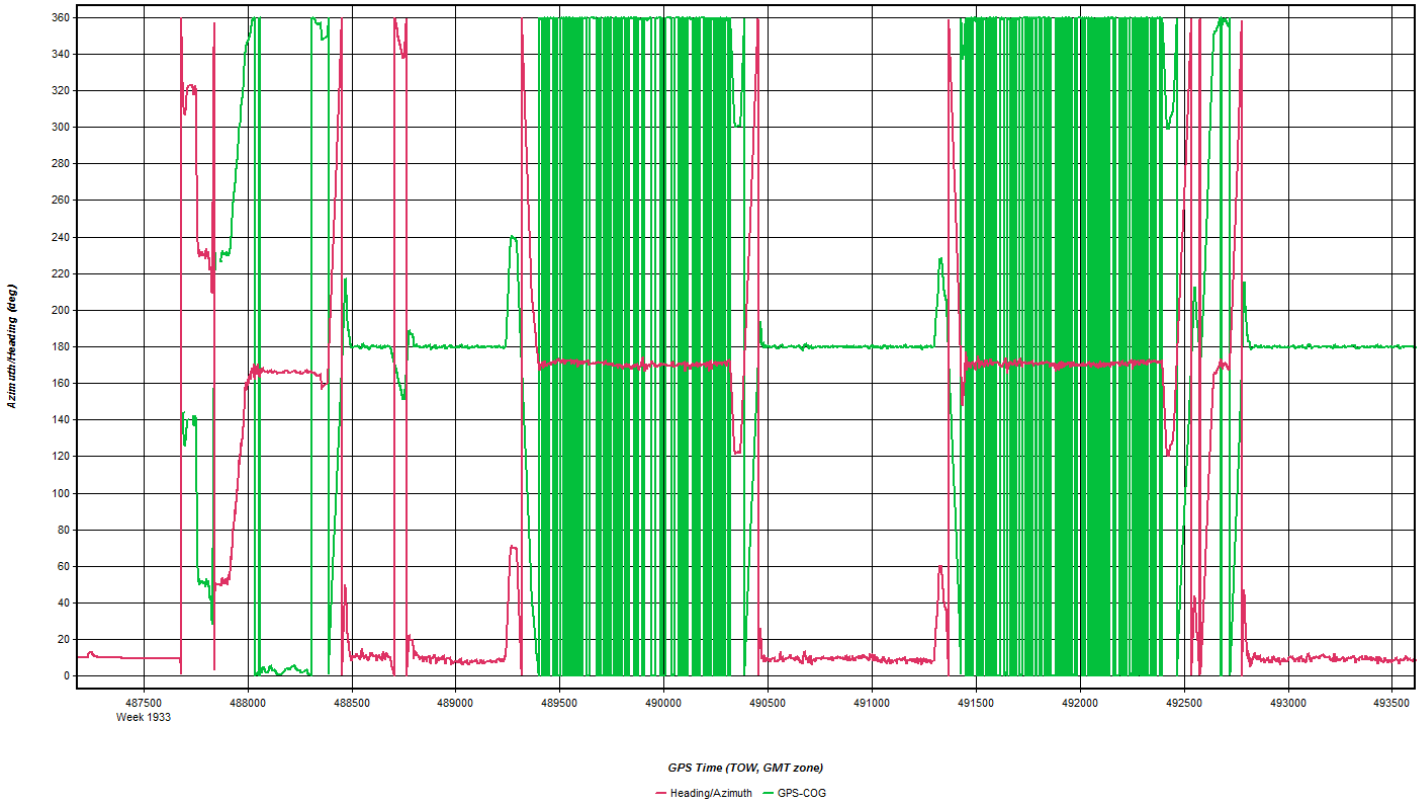

Coordinate Manager
Station Information
Station ID 1-26-17B_354
Coordinates
Latitude N 34 32 53.30935000
Longitude W 94 12 32.75840000
Altitude 292.4620 m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna Frame
Height 2.000 m
Method Antenna Phase Center
Manufacturer NovAtel
Type 701-GG 1.03
Offset from Measured Point to APC 0.000 m
Apply Changes
Station Database
Station ID 1-26-17B_354
Station Fullname 1-26-17B_354
Primary Service ID
Secondary Service ID
Edit
Edit
Coordinate Accuracy UNKNOWN_ACC
Add
Delete
Update
Station ID
Station Full...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Acc
Import Coordinates
Export Coordinates
Close

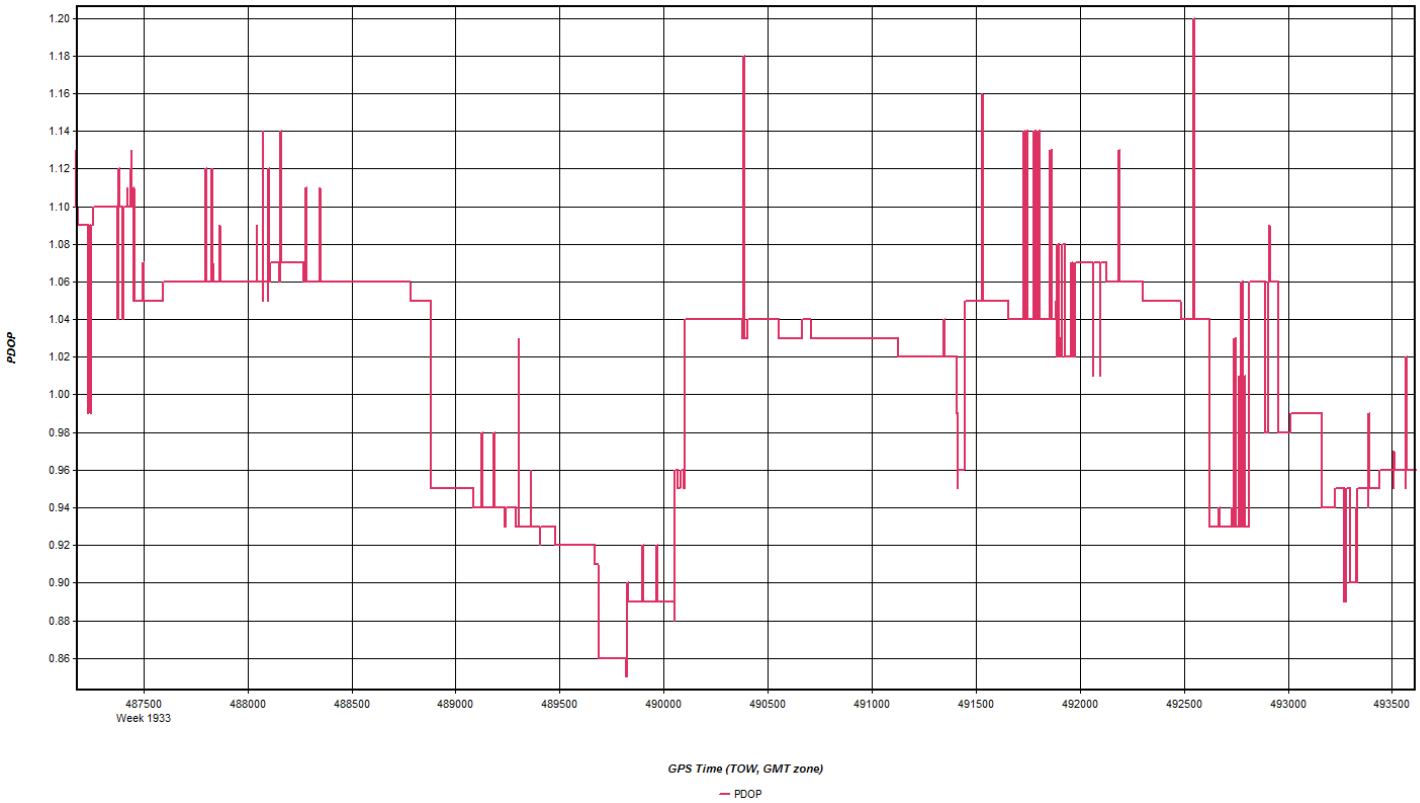
Jan 27, 2017-A1 (C-FVZM, SN7229)

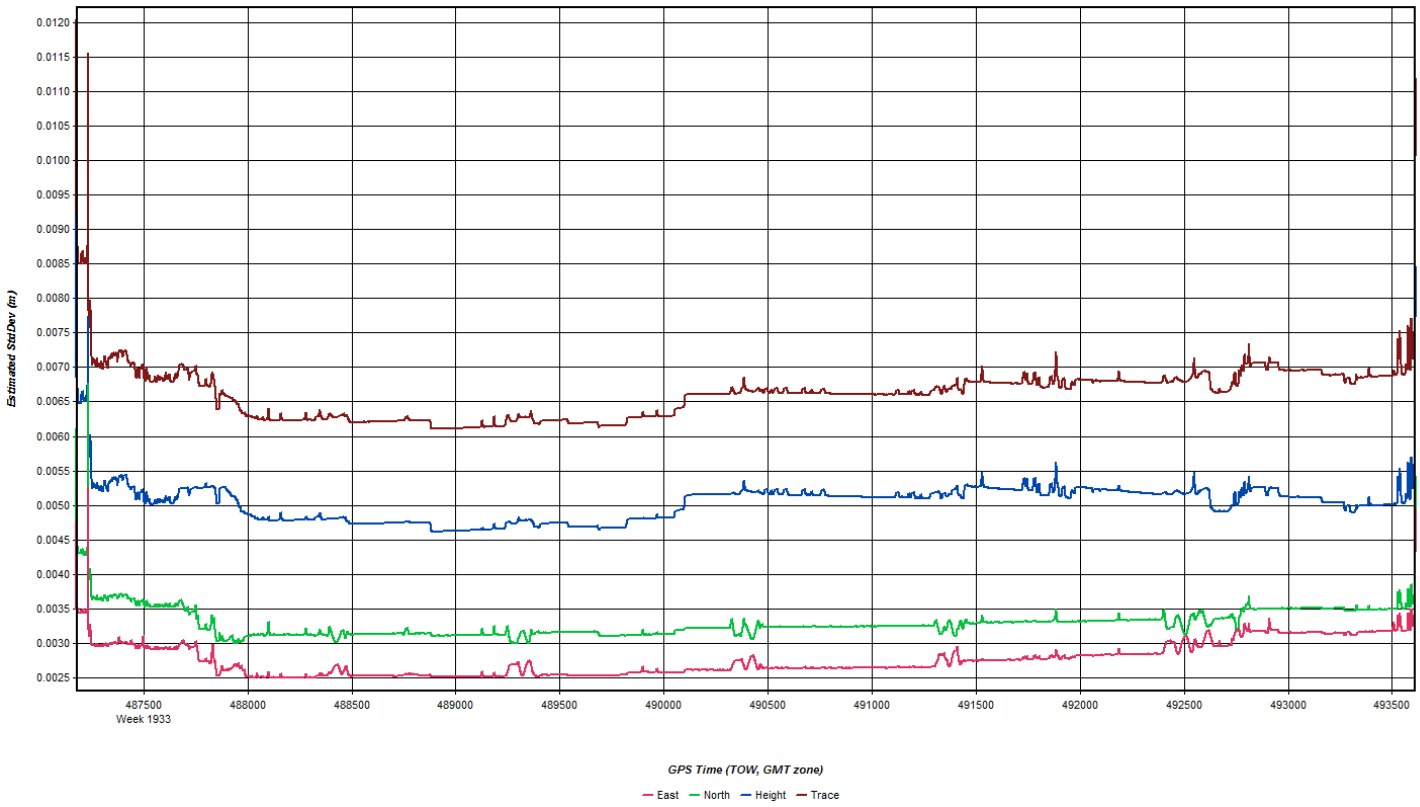

P777
5 km

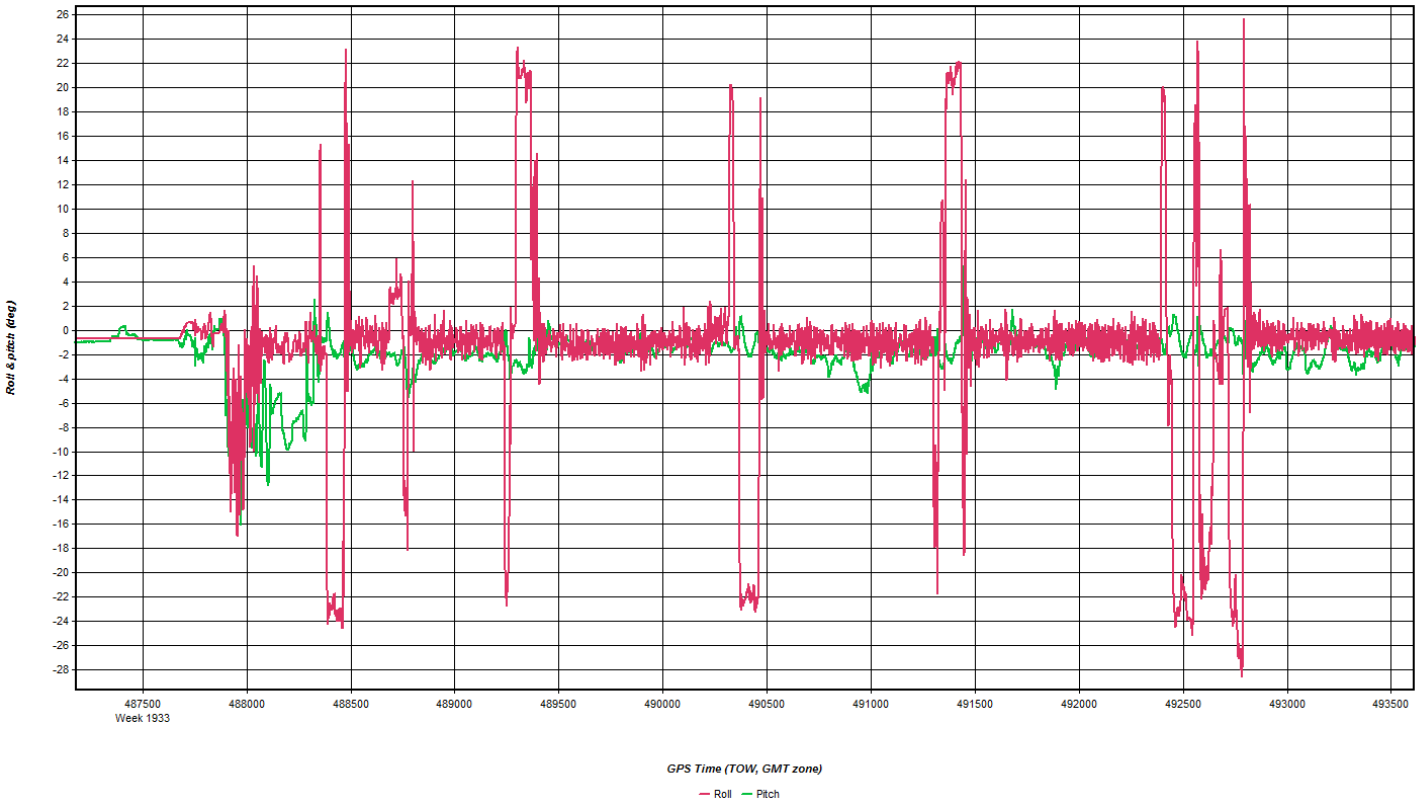

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
487500
Week 1933
488000
488500
489000
489500
490000
490500
491000
491500
492000
492500
493000
493500
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

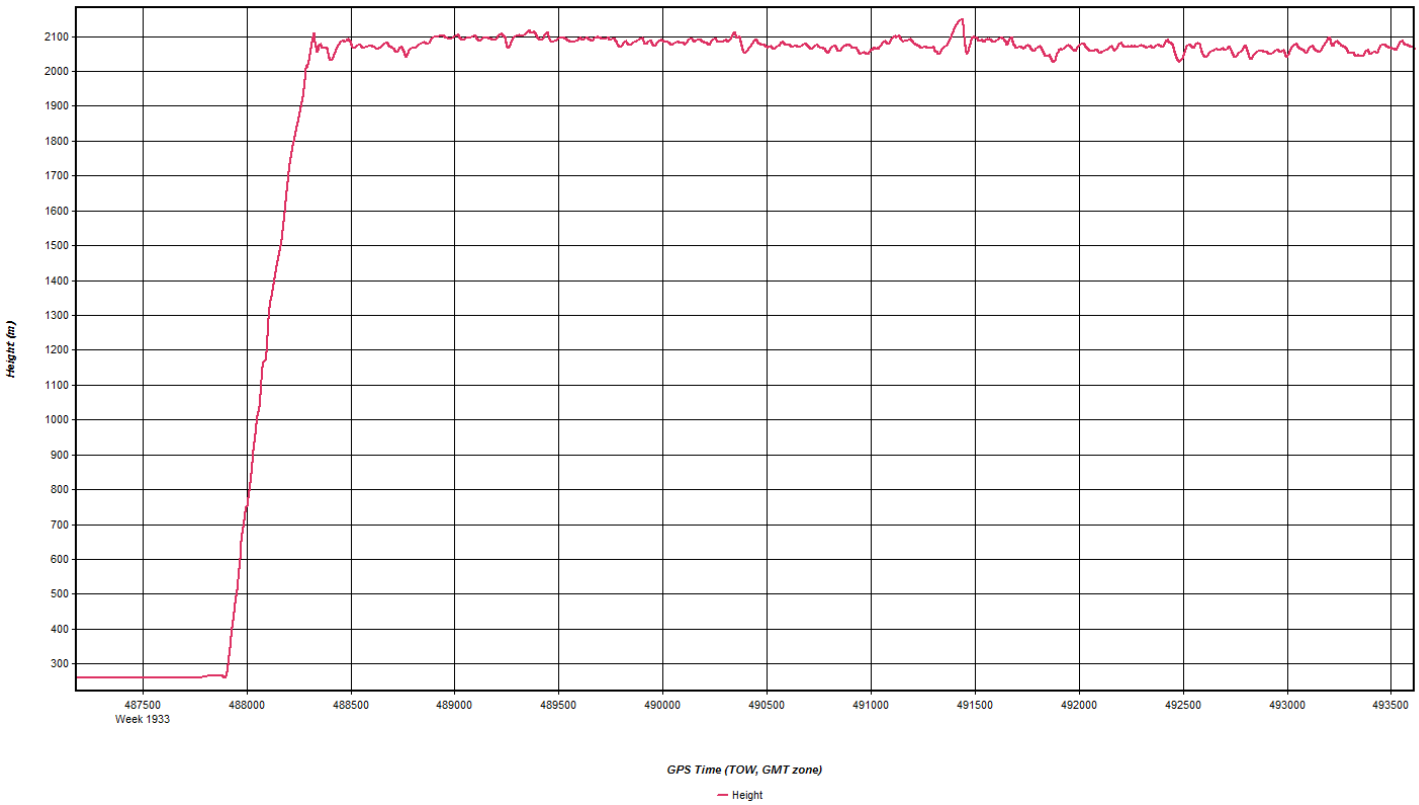

Separation (m)
0.28
0.26
0.24
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
-0.16
-0.18
-0.20
-0.22
-0.24
-0.26
-0.28
-0.30
-0.32
-0.34
-0.36
-0.38
487500
Week 1933
488000
488500
489000
489500
490000
490500
491000
491500
492000
492500
493000
493500
GPS Time (TOW, GMT zone)
East
North
Up

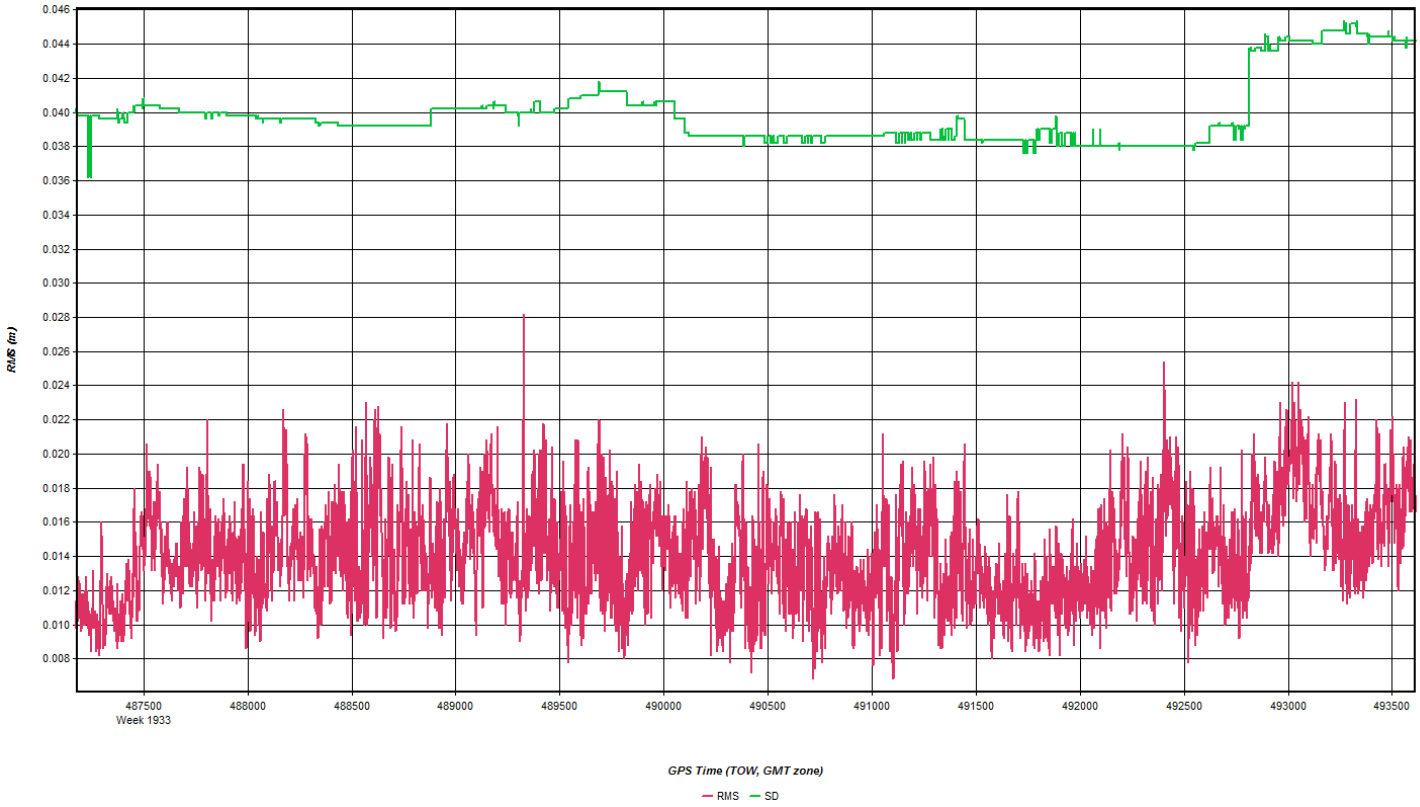

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
487500
Week 1933
488000
488500
489000
489500
490000
490500
491000
491500
492000
492500
493000
493500
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

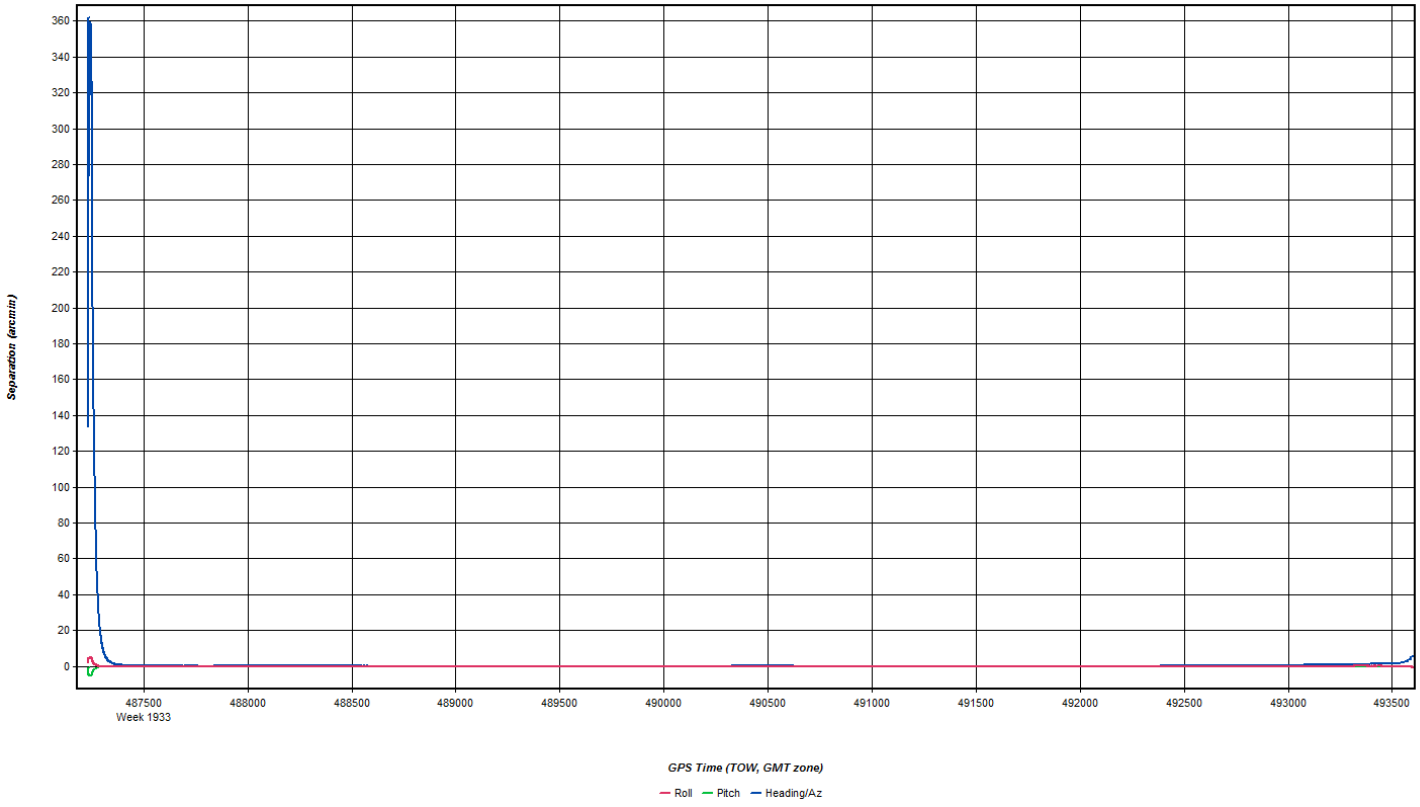

PDOP
1.20
1.18
1.16
1.14
1.12
1.10
1.08
1.06
1.04
1.02
1.00
0.98
0.96
0.94
0.92
0.90
0.88
0.86
487500
Week 1933
488000
488500
489000
489500
490000
490500
491000
491500
492000
492500
493000
493500
GPS Time (TOW, GMT zone)
PDOP

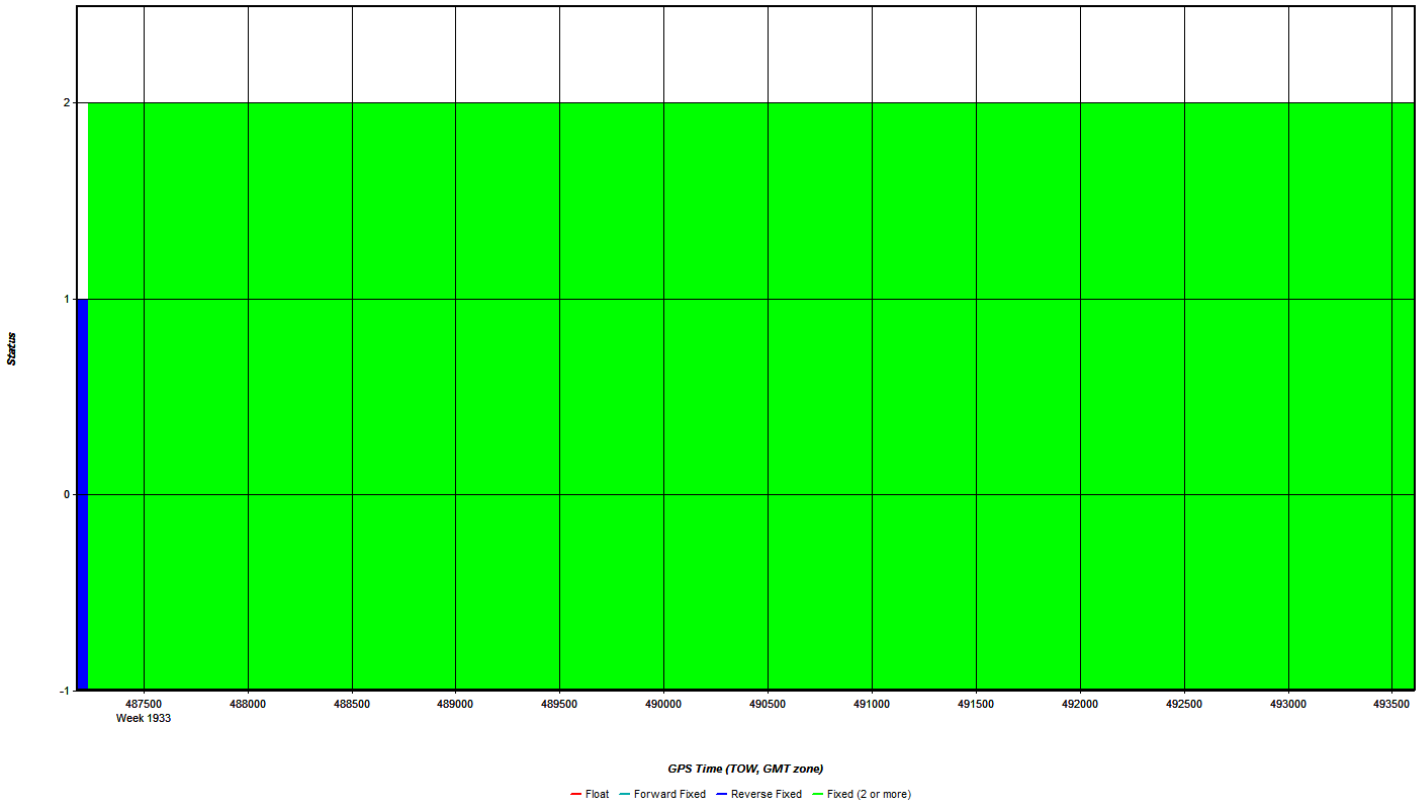

Estimated StdDev (m)
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
487500
Week 1933
488000
488500
489000
489500
490000
490500
491000
491500
492000
492500
493000
493500
GPS Time (TOW, GMT zone)
East
North
Height
Trace

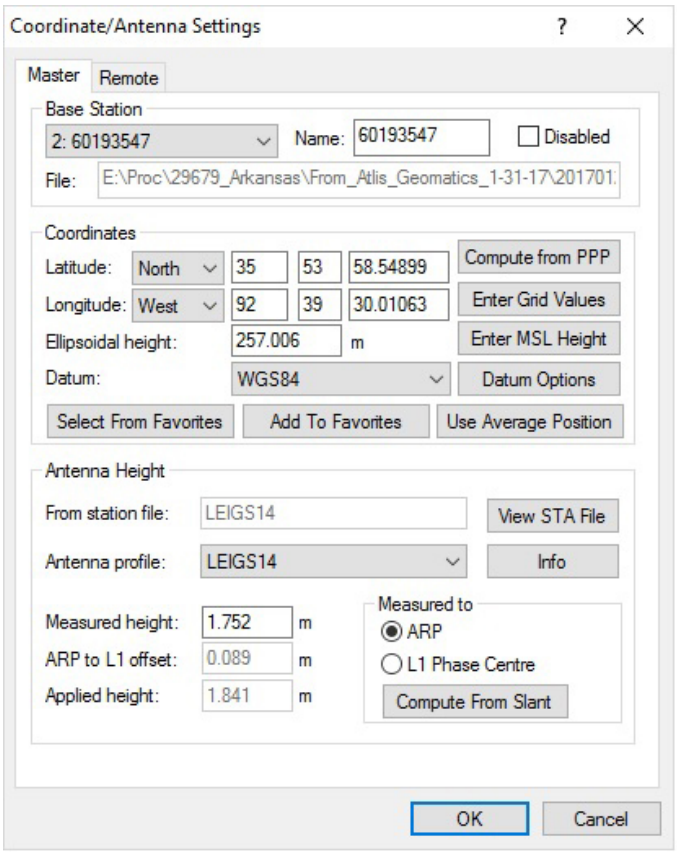

Roll & pitch (deg)
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
487500
Week 1933
488000
488500
489000
489500
490000
490500
491000
491500
492000
492500
493000
493500
GPS Time (TOW, GMT zone)
Roll
Pitch

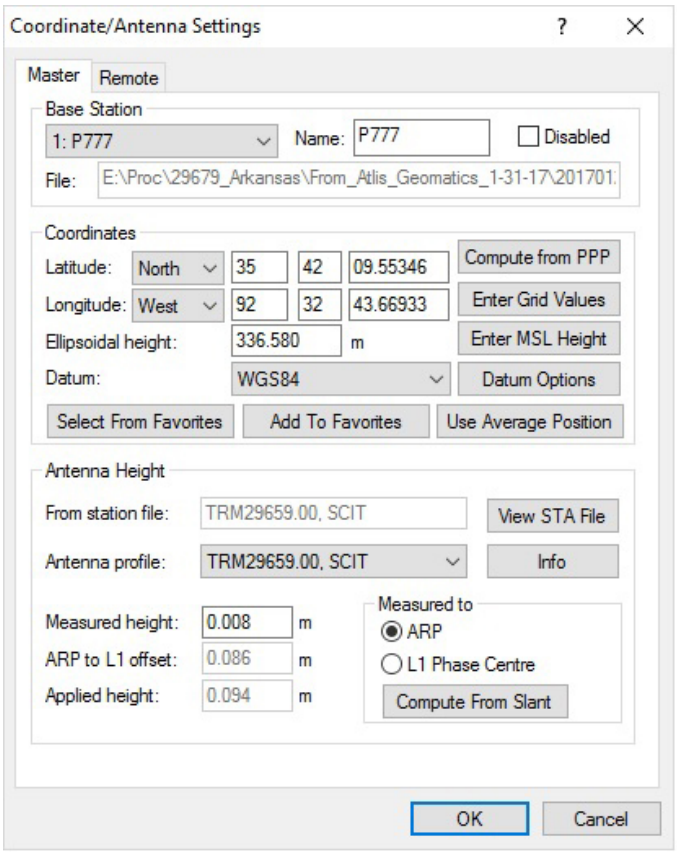

Height (m)
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
487500
Week 1933
488000
488500
489000
489500
490000
490500
491000
491500
492000
492500
493000
493500
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
487500
Week 1933
488000
488500
489000
489500
490000
490500
491000
491500
492000
492500
493000
493500
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
487500
Week 1933
488000
488500
489000
489500
490000
490500
491000
491500
492000
492500
493000
493500
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
487500
Week 1933
488000
488500
489000
489500
490000
490500
491000
491500
492000
492500
493000
493500
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
2: 60193547
Name: 60193547
Disabled
File: E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-31-17\201701
Coordinates
Latitude: North 35 53 58.54899
Longitude: West 92 39 30.01063
Ellipsoidal height: 257.006 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: LEIGS14
Antenna profile: LEIGS14
View STA File
Info
Measured height: 1.752 m
ARP to L1 offset: 0.089 m
Applied height: 1.841 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: P777
Name: P777
Disabled
File: E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-31-17\201701
Coordinates
Latitude: North 35 42 09.55346
Longitude: West 92 32 43.66933
Ellipsoidal height: 336.580 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM29659.00, SCIT
View STA File
Antenna profile: TRM29659.00, SCIT
Info
Measured height: 0.008 m
ARP to L1 offset: 0.086 m
Applied height: 0.094 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

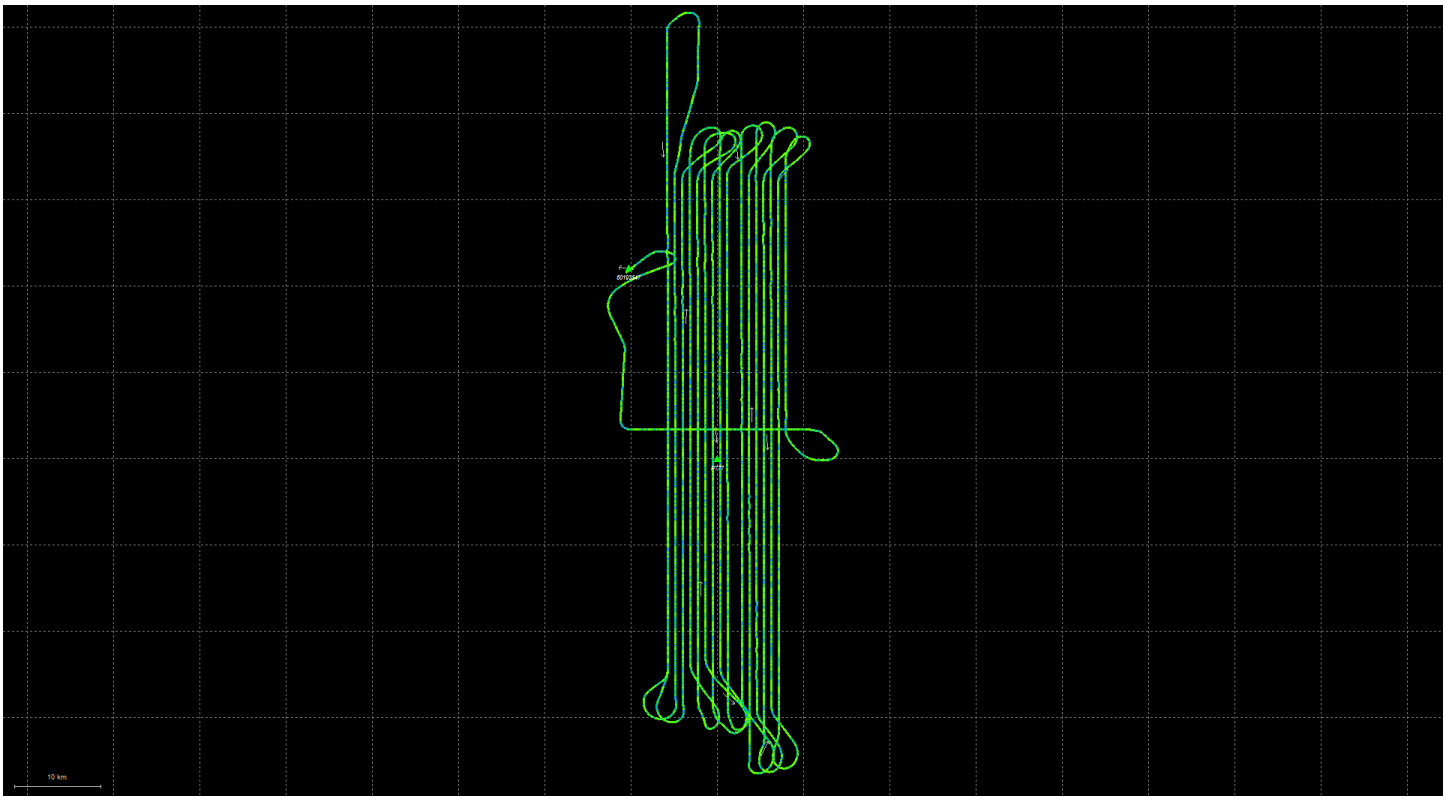
PROJECT NAME	Q.S. Arkansas	DATE	27/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Marshall AR.	DATA DRIVES	LiDar #1

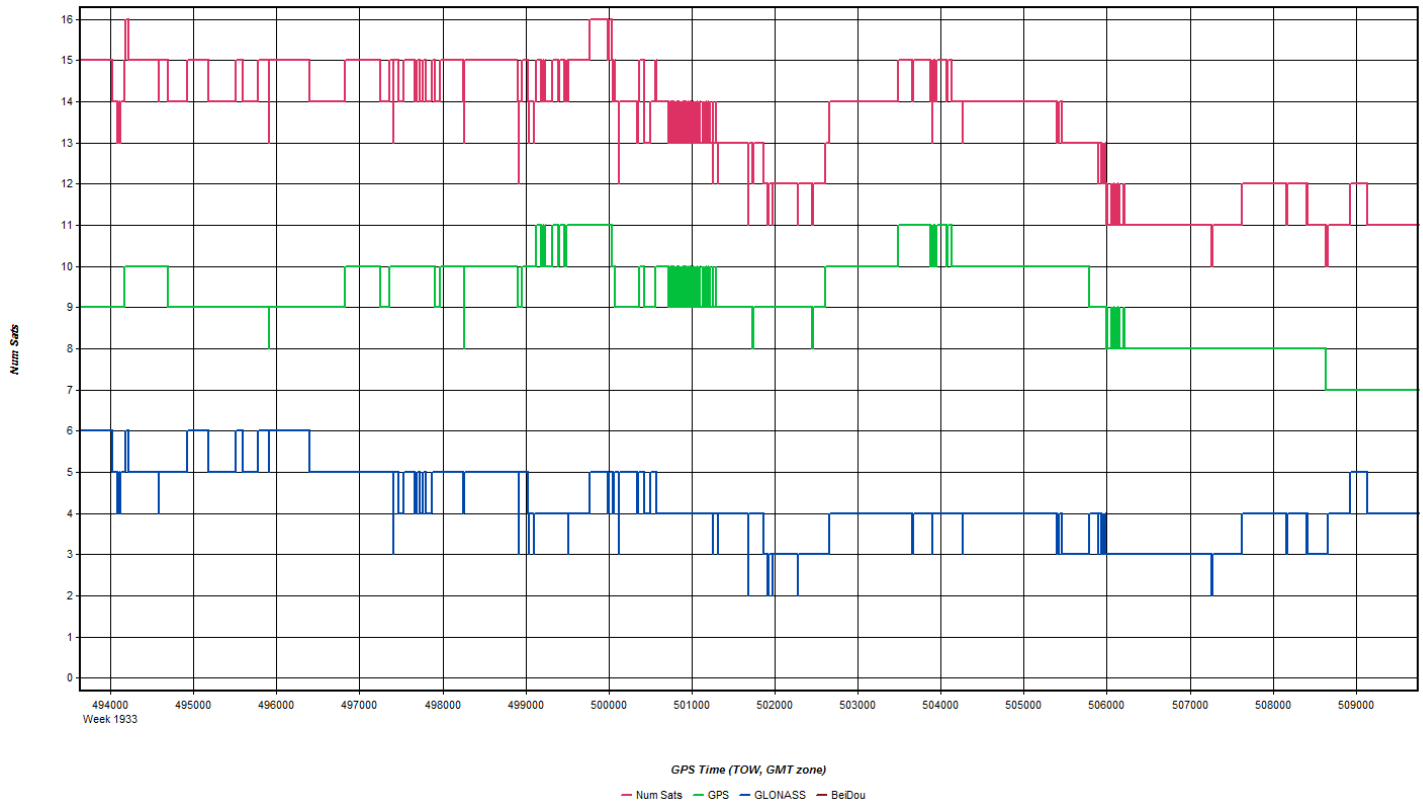
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	15:16:00	Takeoff:	15:30:00	AGL Height:	1750 m	Pulse Rate:	277 KHz		START	END
Engine Off:	21:38:00	Landing:	21:27:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	15:20:00	15:28:00
TOTAL:	6.37 hrs	TOTAL:	5.95 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	21:30:00	21:35:00

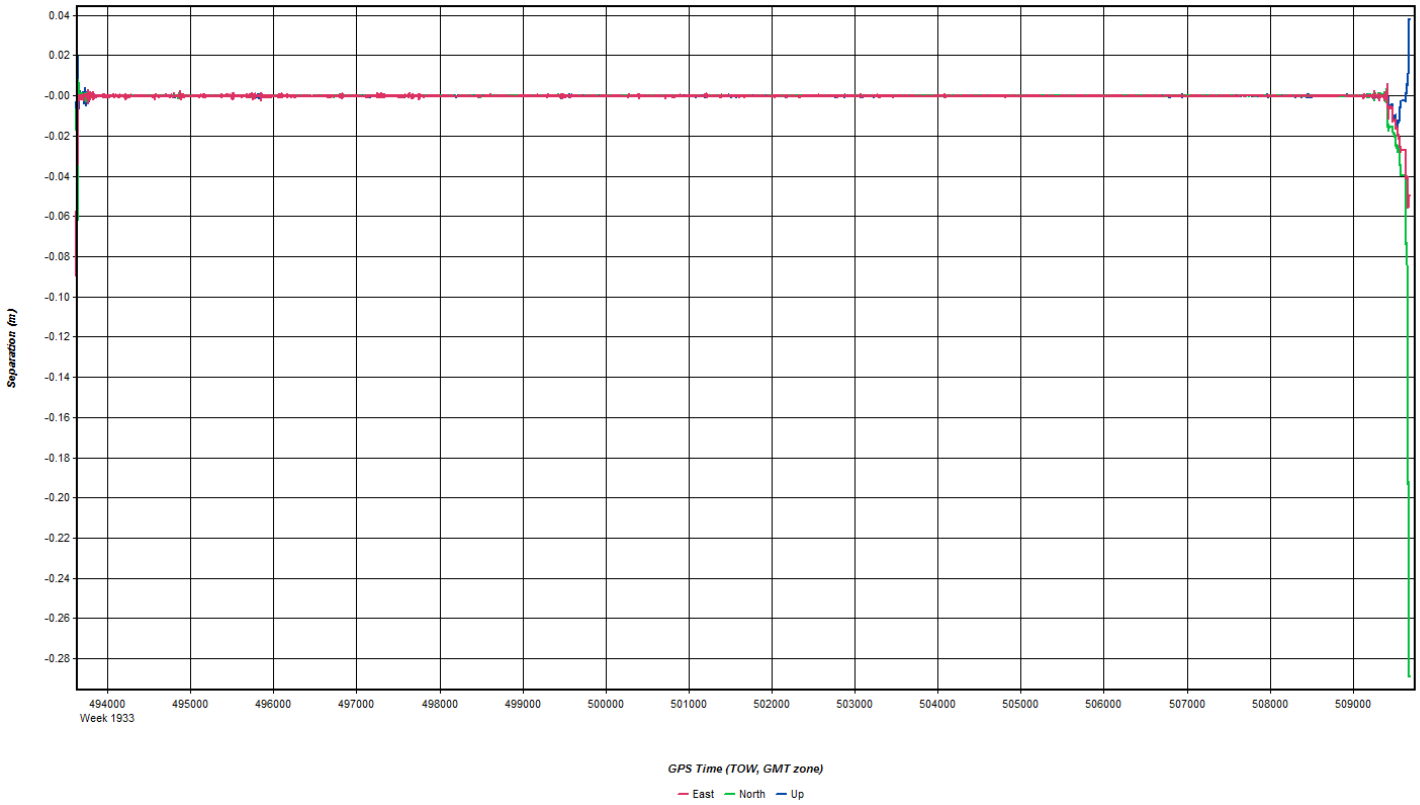
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
20		South	170127_154128	15:41:30	15:44:30	Partial re-flight due to concern of clouds on previous flight
22		South	170127_154725	15:47:27	15:57:25	Started 17nm from South to complete the line
23		North	170127_155652	15:56:53	16:11:35	Extended line 9nm to north
24		South	170127_161434	16:14:35	16:27:57	Extended line 9nm to north
25		North	170127_163114	16:31:15	16:46:13	Extended line 7nm to north
26		South	170127_165333	16:53:35	17:05:52	IMU gap at the end of the line, will refly
27		North	170127_171014	17:10:15	17:22:22	Extended line 7nm to north
26		South	170127_172822	17:28:23	17:41:46	Extended line 7nm to north
28		North	170127_174450	17:44:51	17:57:15	Extended line 7nm to north
29		South	170127_180034	18:00:36	18:11:20	Complete Line
30		North	170127_181527	18:15:29	18:27:23	Complete Line
31		South	170127_183034	18:30:35	18:41:11	Complete Line
32		North	170127_184542	18:46:44	18:57:25	Complete Line
33		South	170127_190012	19:00:13	19:11:00	Complete Line
34		North	170127_191420	19:14:21	19:26:48	Complete Line
36		South	170127_192958	19:29:58	19:41:37	Complete Line
37		North	170127_194539	19:45:39	19:58:53	Complete Line
38		South	170127_200202	20:02:03	20:13:55	Complete Line
39		North	170127_201725	20:17:21	20:30:58	Complete Line
40		South	170127_203409	20:34:10	20:46:14	Complete Line
41		North	170127_204948	20:49:49	21:03:58	Complete Line
42		South	170127_210601	21:06:02	21:11:13	17nm from the south not flown
CI		West	170127_211446	21:14:47	21:19:19	

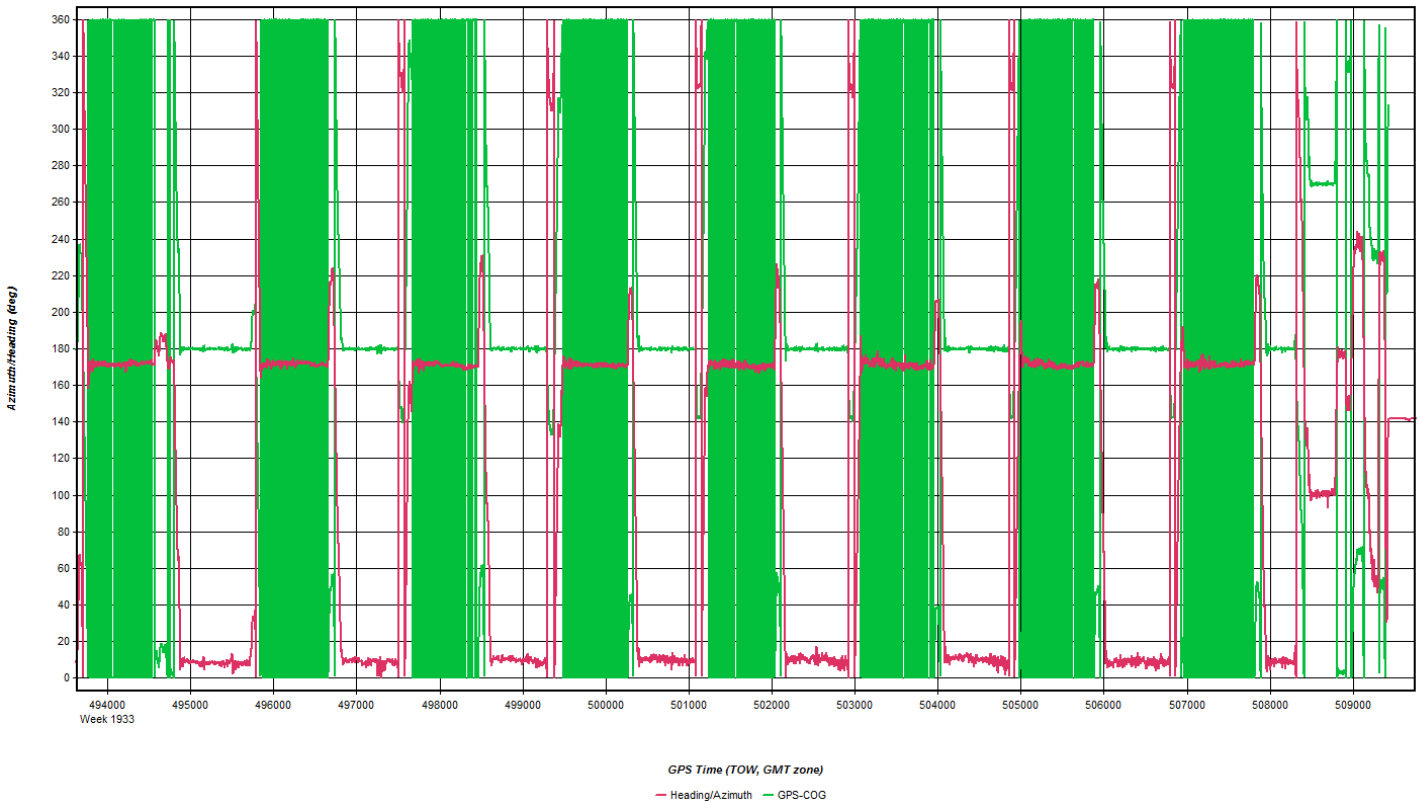
SUN ANGLE @Start: @End: @Peak:	Temp @ take off was 1C, clear skies. Sats and PDOPS averaged 19 and 1.2 Base station was set at the Marshall airport 14:40 to 21:42. Ant height is 1.752 to the ARP We had an IMU gap at the end of line 26, the line was re-flown

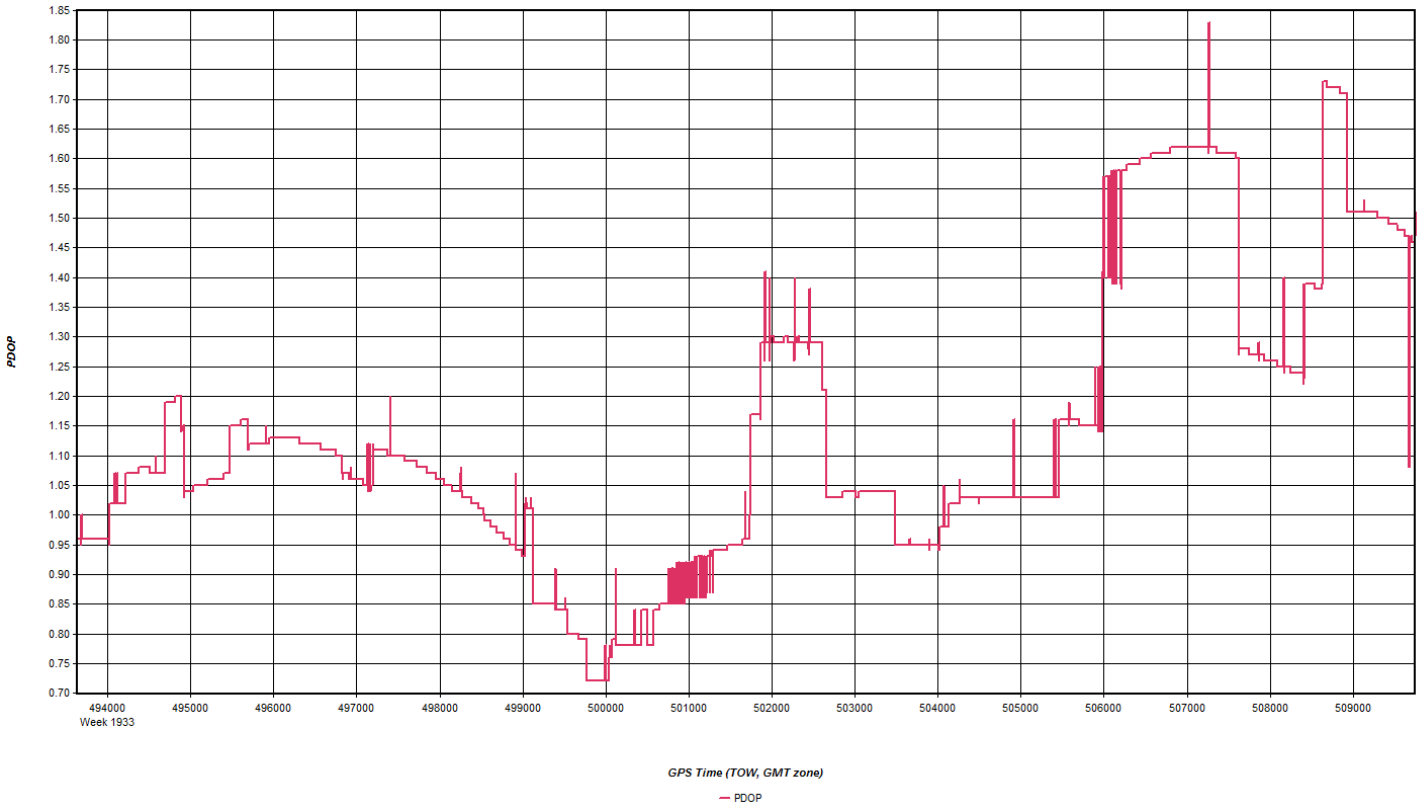
Jan 27, 2017-A2 (C-FVZM, SN7229)

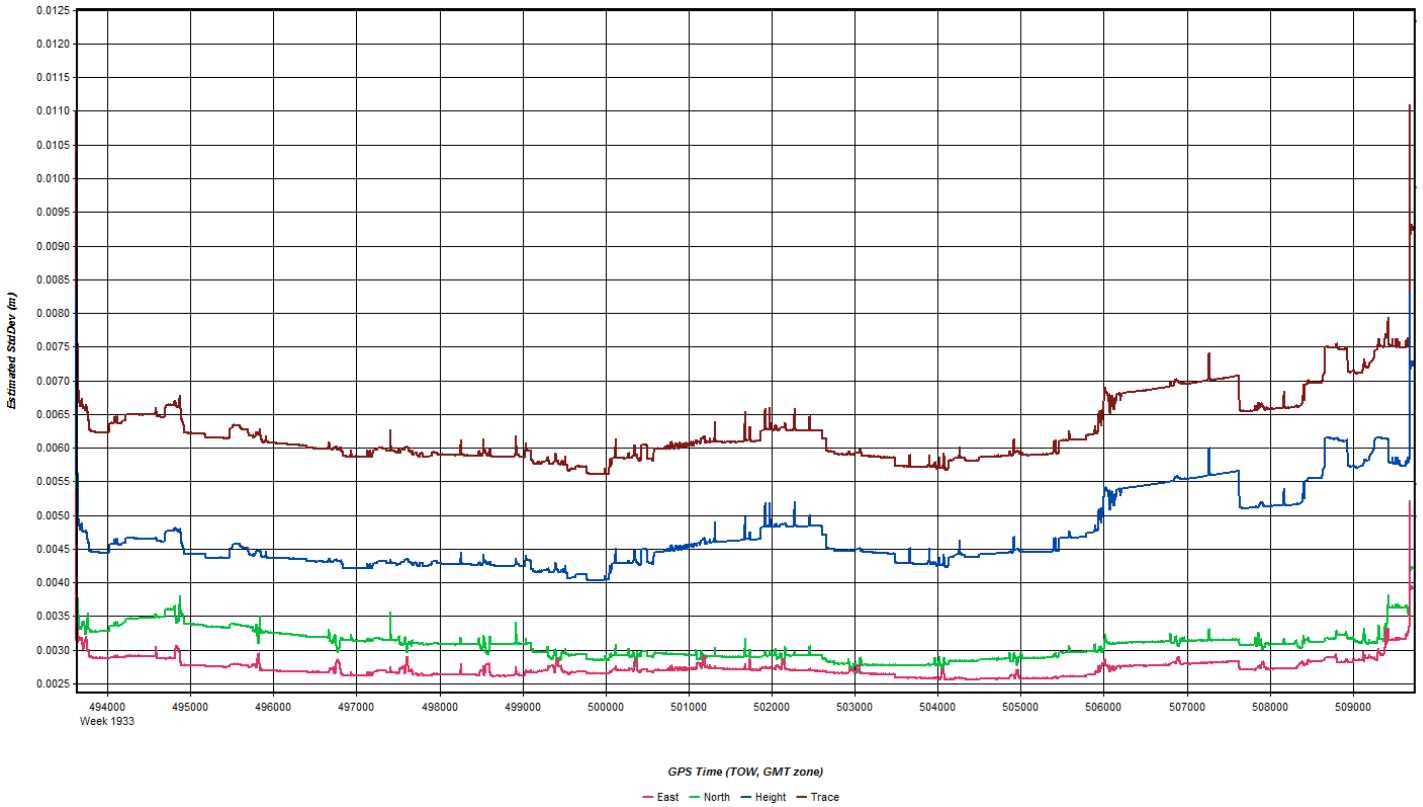

10 km

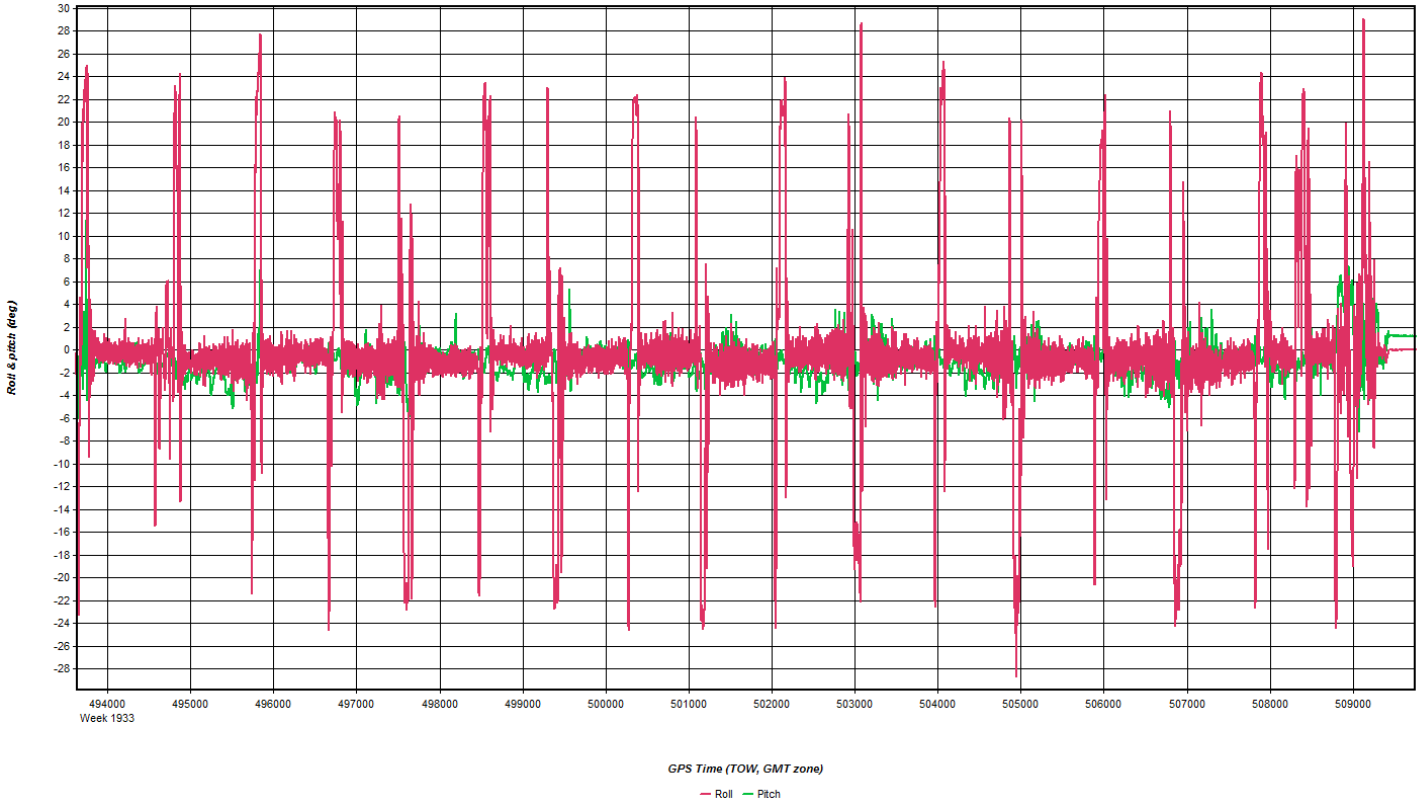

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
494000
Week 1933
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

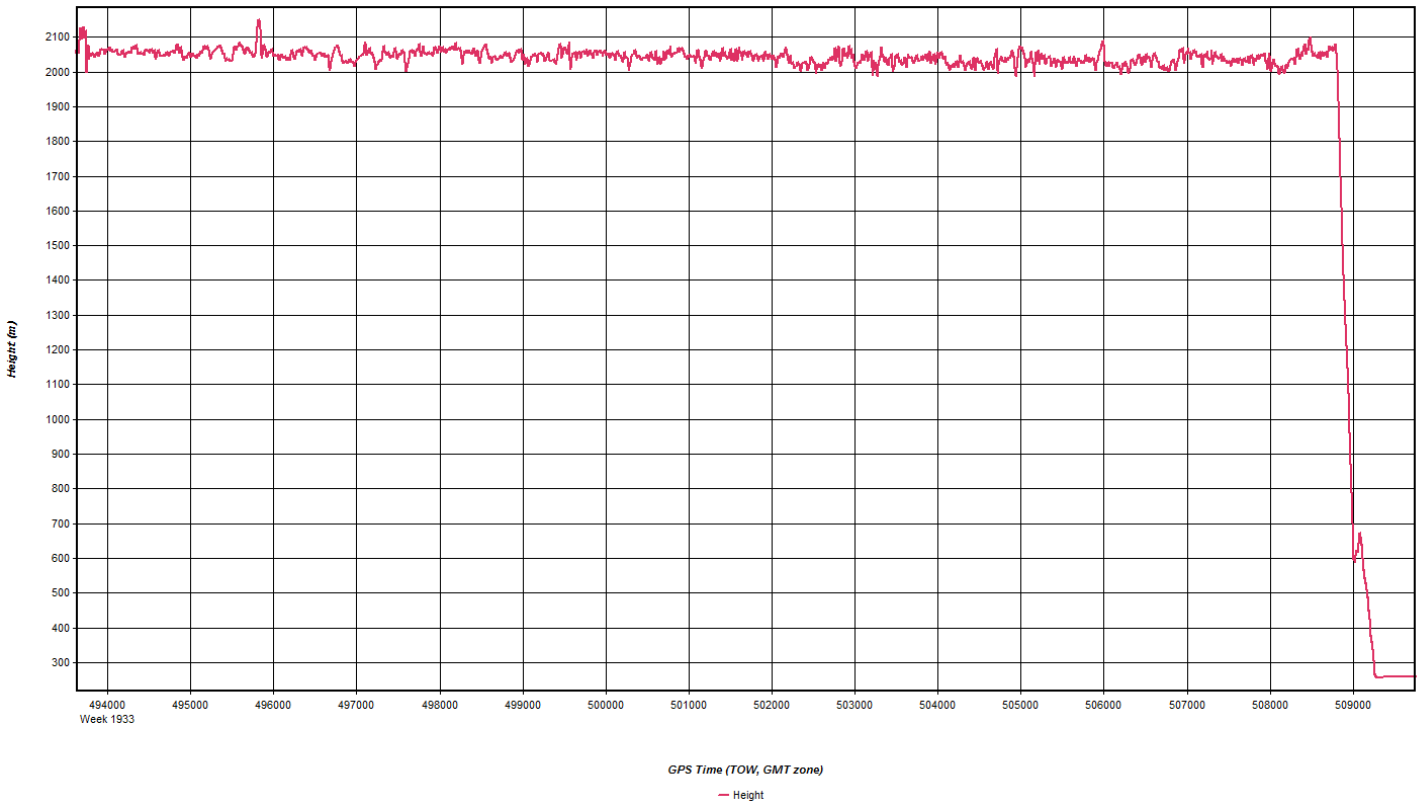

Separation (m)
0.04
0.02
-0.00
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
-0.16
-0.18
-0.20
-0.22
-0.24
-0.26
-0.28
494000
Week 1933
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
GPS Time (TOW, GMT zone)
East
North
Up

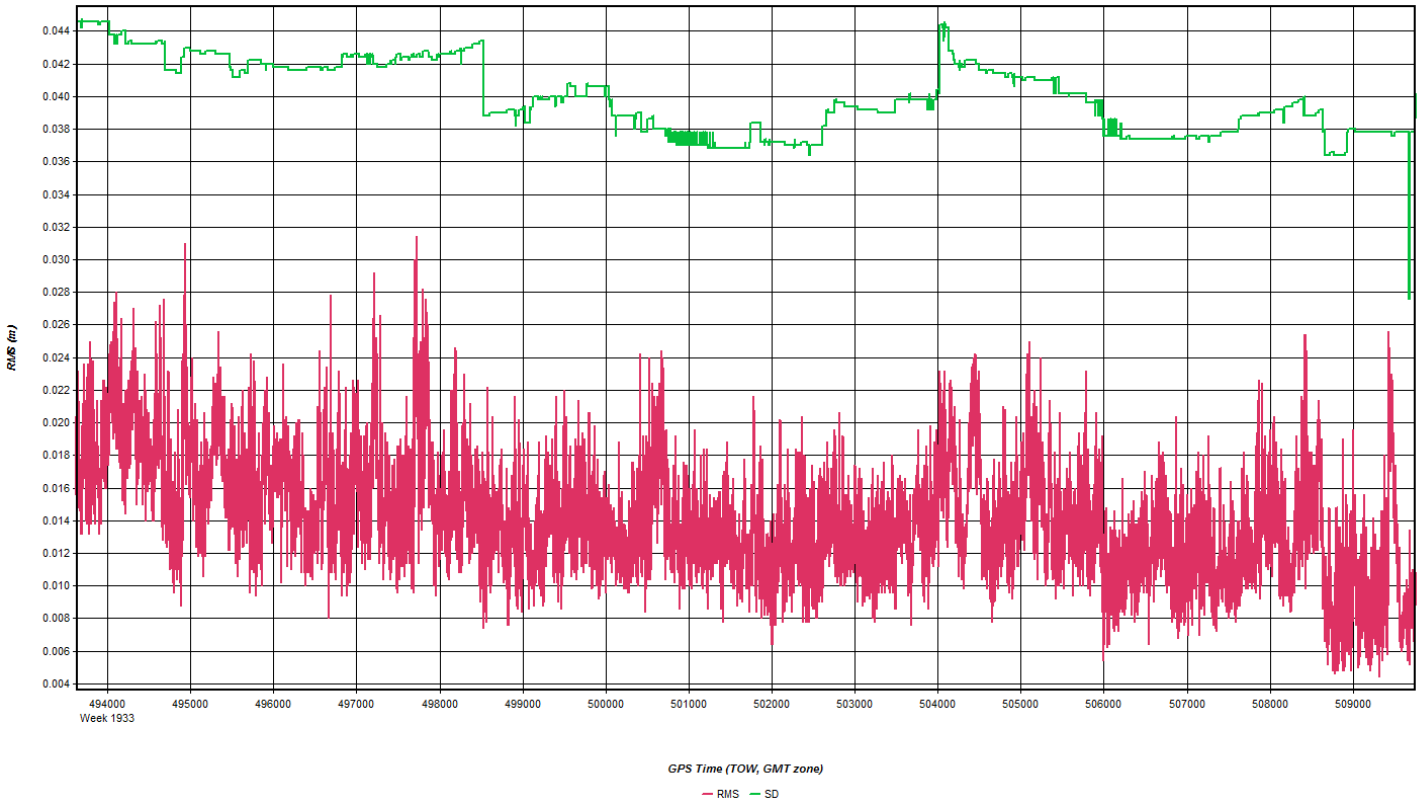

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
494000
Week 1933
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

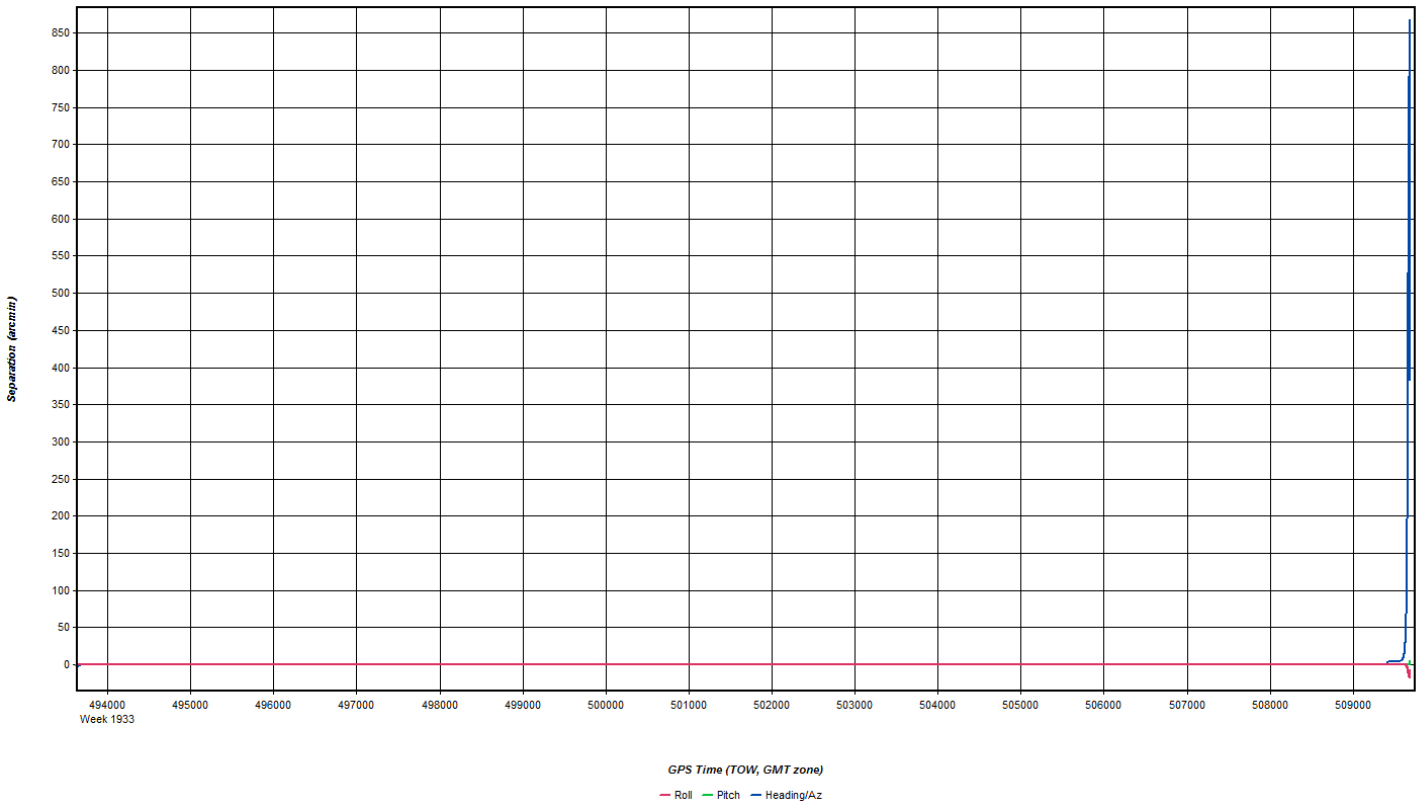

PDOP
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
0.70
494000
Week 1933
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
GPS Time (TOW, GMT zone)
PDOP

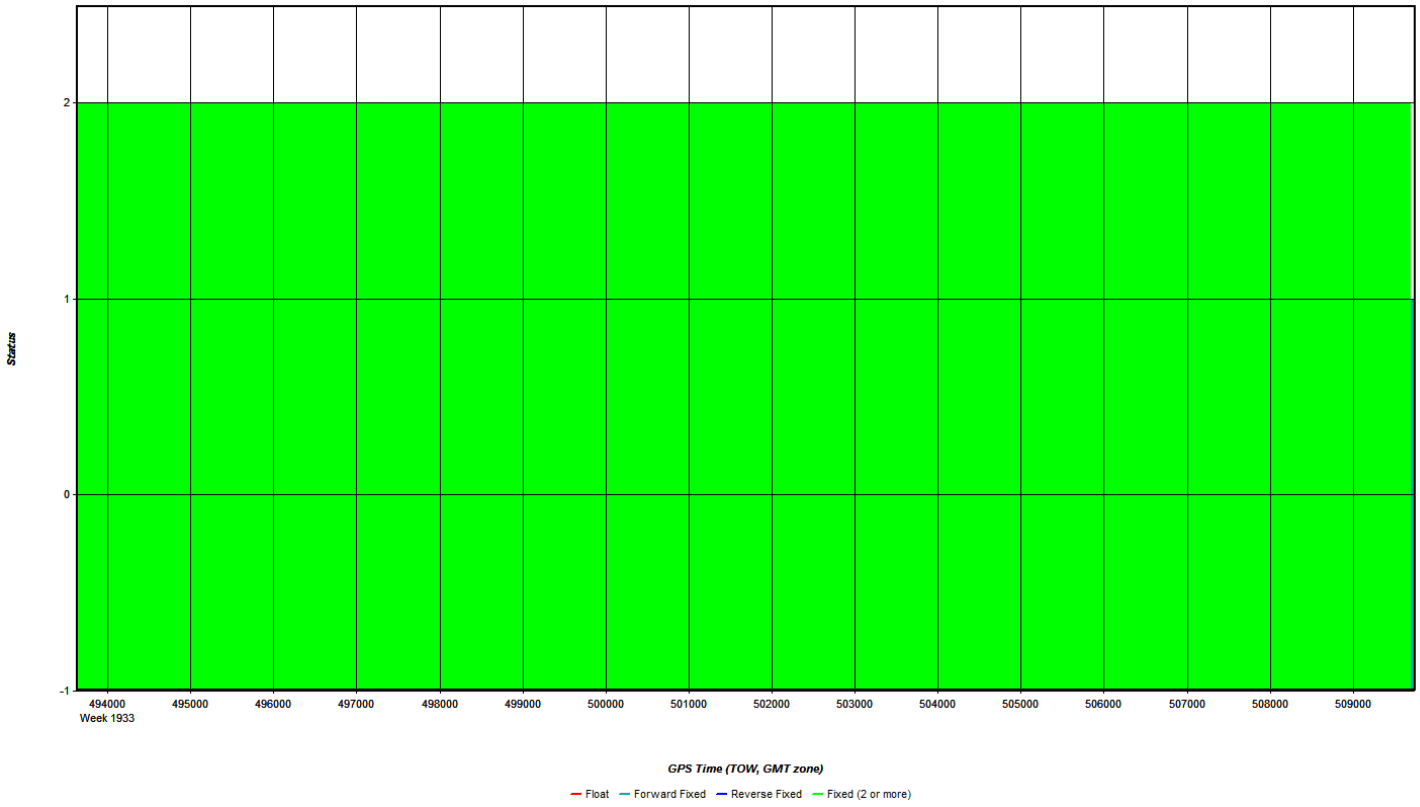

Estimated StdDev (m)
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
494000
Week 1933
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

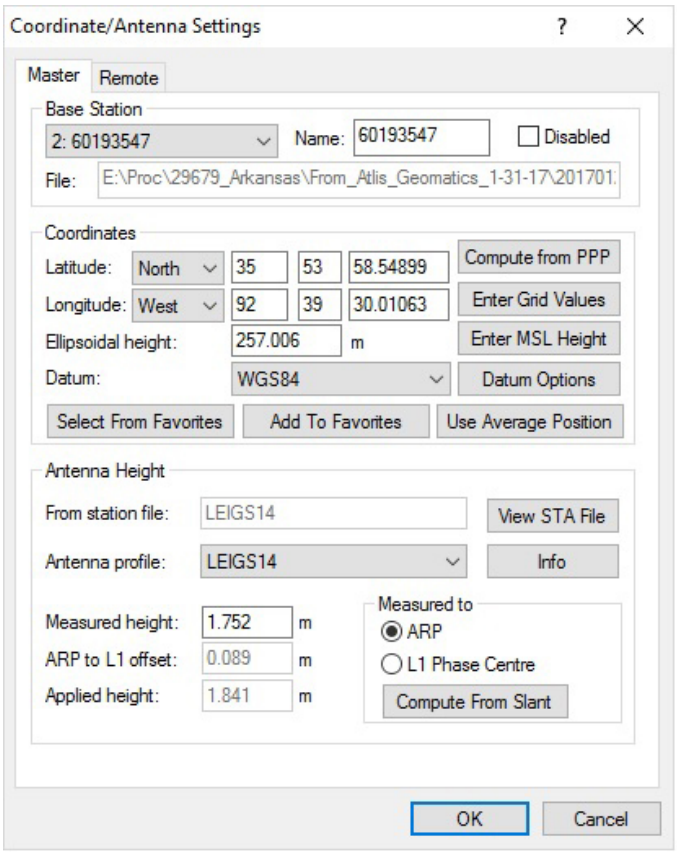

Roll & pitch (deg)
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
494000
Week 1933
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
GPS Time (TOW, GMT zone)
Roll
Pitch

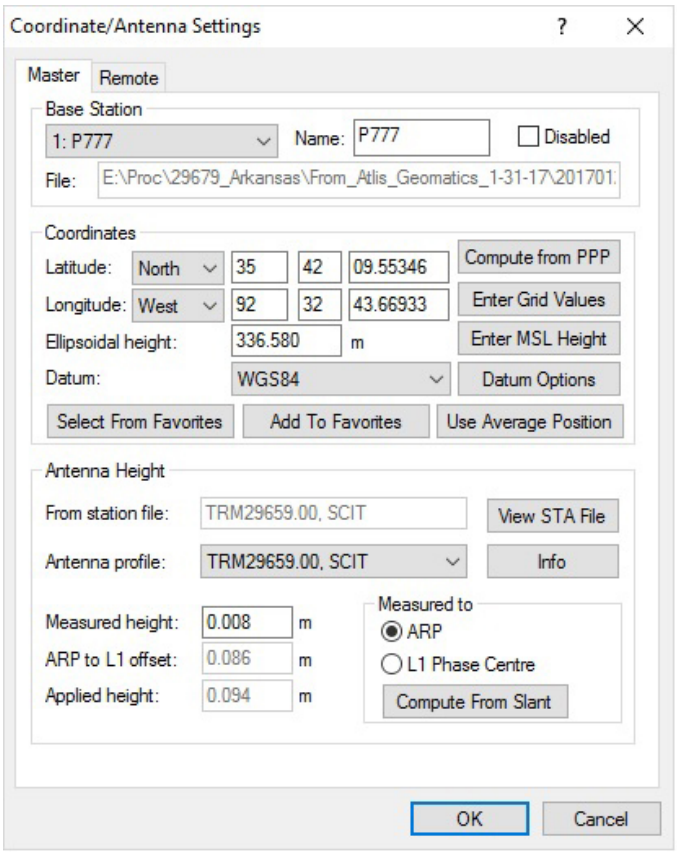

Height (m)
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
494000
Week 1933
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
494000
Week 1933
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
850
800
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
494000
Week 1933
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
494000
Week 1933
495000
496000
497000
498000
499000
500000
501000
502000
503000
504000
505000
506000
507000
508000
509000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
2: 60193547
Name: 60193547
Disabled
File: E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-31-17\201701
Coordinates
Latitude: North 35 53 58.54899
Longitude: West 92 39 30.01063
Ellipsoidal height: 257.006 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: LEIGS14
View STA File
Antenna profile: LEIGS14
Info
Measured height: 1.752 m
ARP to L1 offset: 0.089 m
Applied height: 1.841 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: P777
Name: P777
Disabled
File: E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-31-17\201701
Coordinates
Latitude: North 35 42 09.55346
Longitude: West 92 32 43.66933
Ellipsoidal height: 336.580 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM29659.00, SCIT
View STA File
Antenna profile: TRM29659.00, SCIT
Info
Measured height: 0.008 m
ARP to L1 offset: 0.086 m
Applied height: 0.094 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

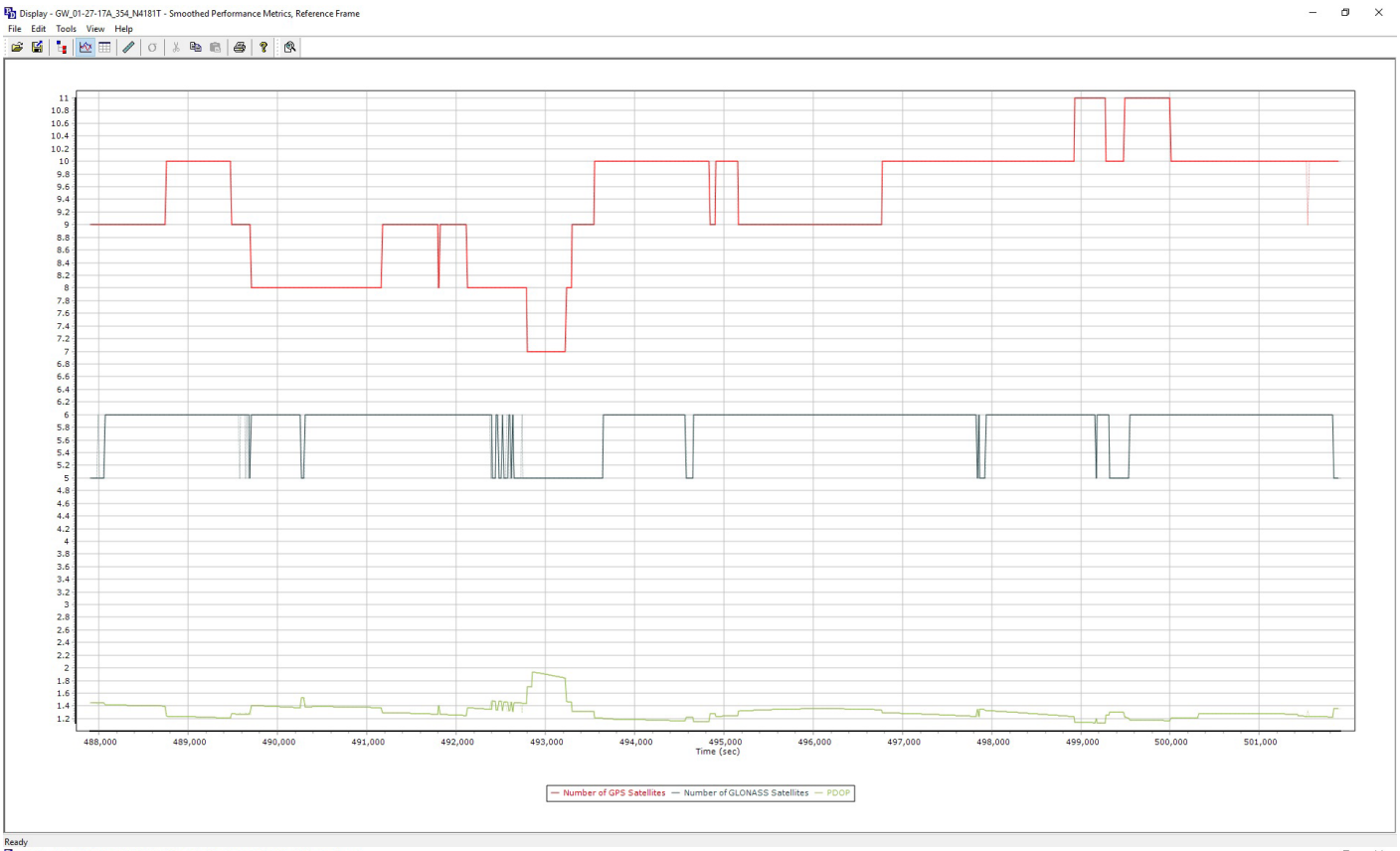
PROJECT NAME	Q.S. Arkansas	DATE	27/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Marshall AR.	DATA DRIVES	LiDar #1

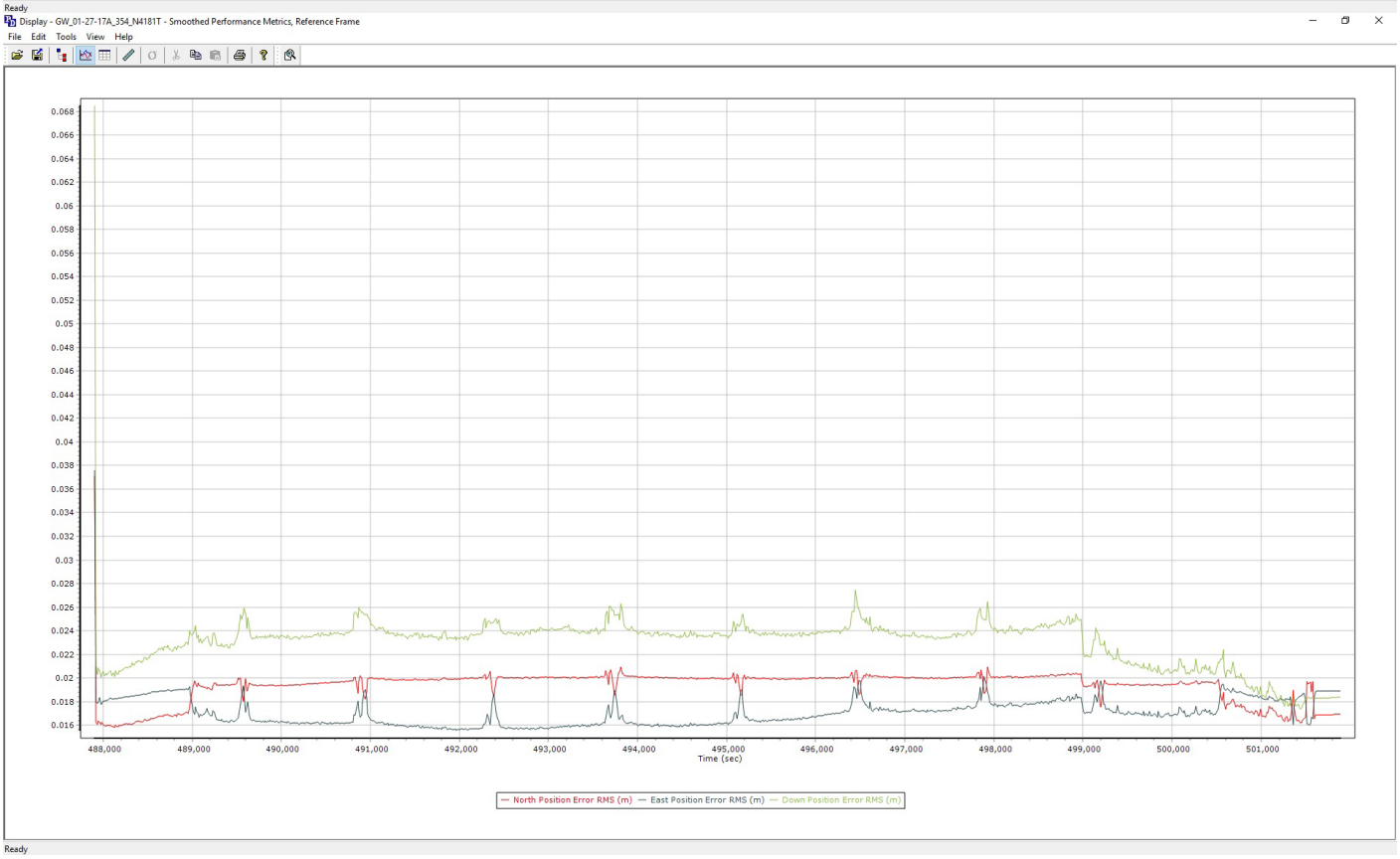
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	15:16:00	Takeoff:	15:30:00	AGL Height:	1750 m	Pulse Rate:	277 KHz		START	END
Engine Off:	21:38:00	Landing:	21:27:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	15:20:00	15:28:00
TOTAL:	6.37 hrs	TOTAL:	5.95 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	21:30:00	21:35:00

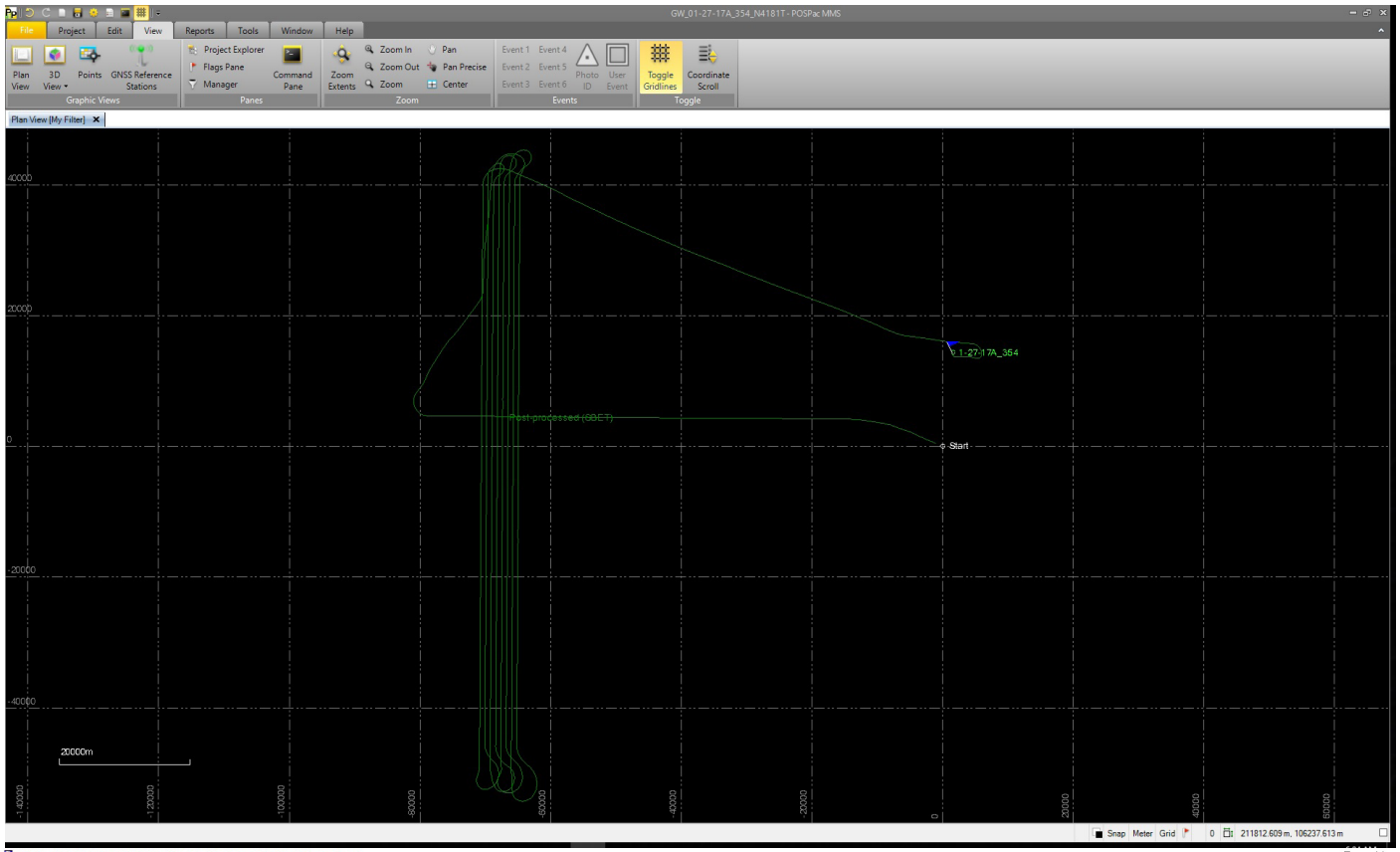
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
20		South	170127_154128	15:41:30	15:44:30	Partial re-flight due to concern of clouds on previous flight
22		South	170127_154725	15:47:27	15:57:25	Started 17nm from South to complete the line
23		North	170127_155652	15:56:53	16:11:35	Extended line 9nm to north
24		South	170127_161434	16:14:35	16:27:57	Extended line 9nm to north
25		North	170127_163114	16:31:15	16:46:13	Extended line 7nm to north
26		South	170127_165333	16:53:35	17:05:52	IMU gap at the end of the line, will refly
27		North	170127_171014	17:10:15	17:22:22	Extended line 7nm to north
26		South	170127_172822	17:28:23	17:41:46	Extended line 7nm to north
28		North	170127_174450	17:44:51	17:57:15	Extended line 7nm to north
29		South	170127_180034	18:00:36	18:11:20	Complete Line
30		North	170127_181527	18:15:29	18:27:23	Complete Line
31		South	170127_183034	18:30:35	18:41:11	Complete Line
32		North	170127_184542	18:46:44	18:57:25	Complete Line
33		South	170127_190012	19:00:13	19:11:00	Complete Line
34		North	170127_191420	19:14:21	19:26:48	Complete Line
36		South	170127_192958	19:29:58	19:41:37	Complete Line
37		North	170127_194539	19:45:39	19:58:53	Complete Line
38		South	170127_200202	20:02:03	20:13:55	Complete Line
39		North	170127_201725	20:17:21	20:30:58	Complete Line
40		South	170127_203409	20:34:10	20:46:14	Complete Line
41		North	170127_204948	20:49:49	21:03:58	Complete Line
42		South	170127_210601	21:06:02	21:11:13	17nm from the south not flown
CI		West	170127_211446	21:14:47	21:19:19	

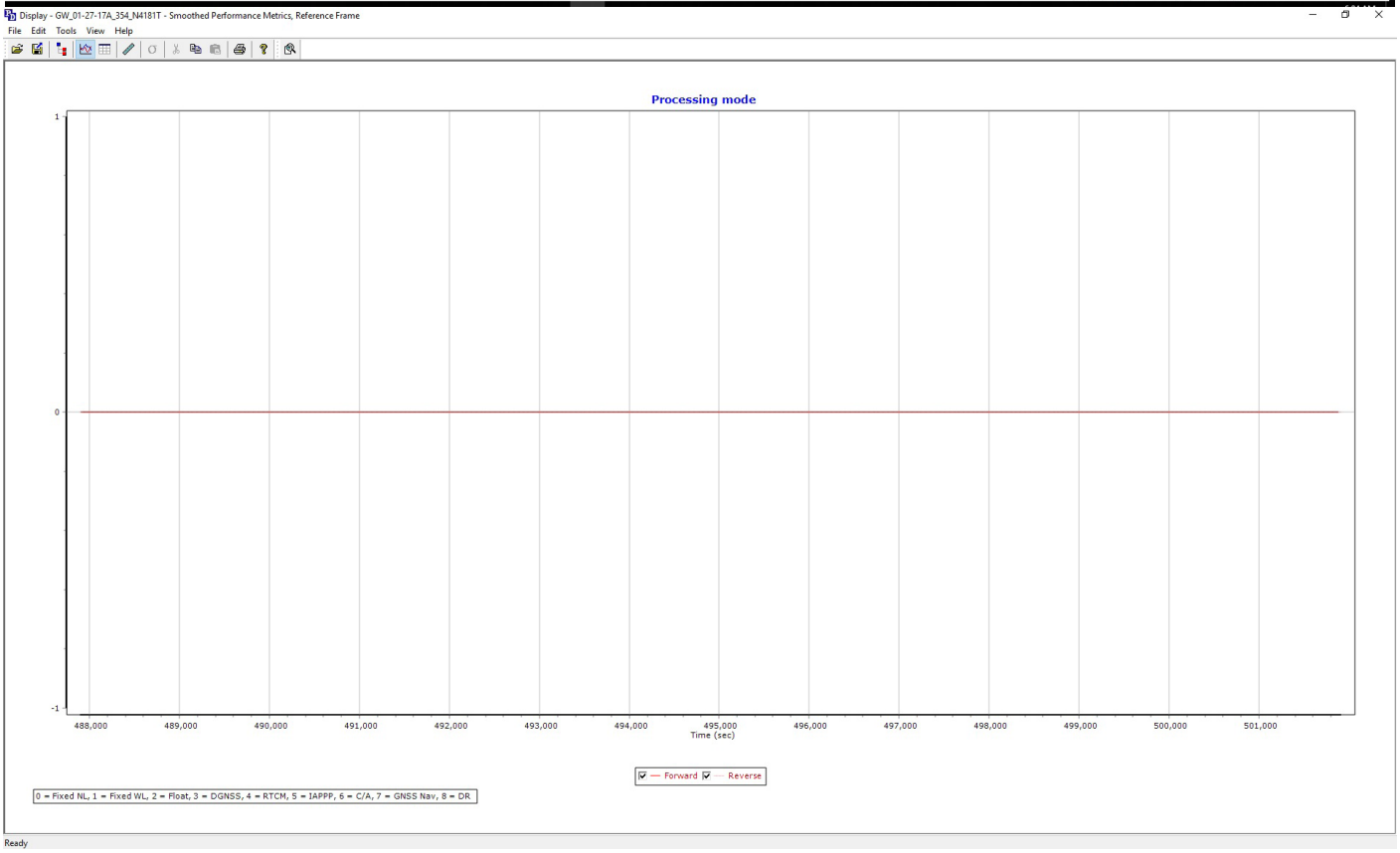
SUN ANGLE @Start: @End: @Peak:	Temp @ take off was 1C, clear skies. Sats and PDOPS averaged 19 and 1.2 Base station was set at the Marshall airport 14:40 to 21:42. Ant height is 1.752 to the ARP We had an IMU gap at the end of line 26, the line was re-flown

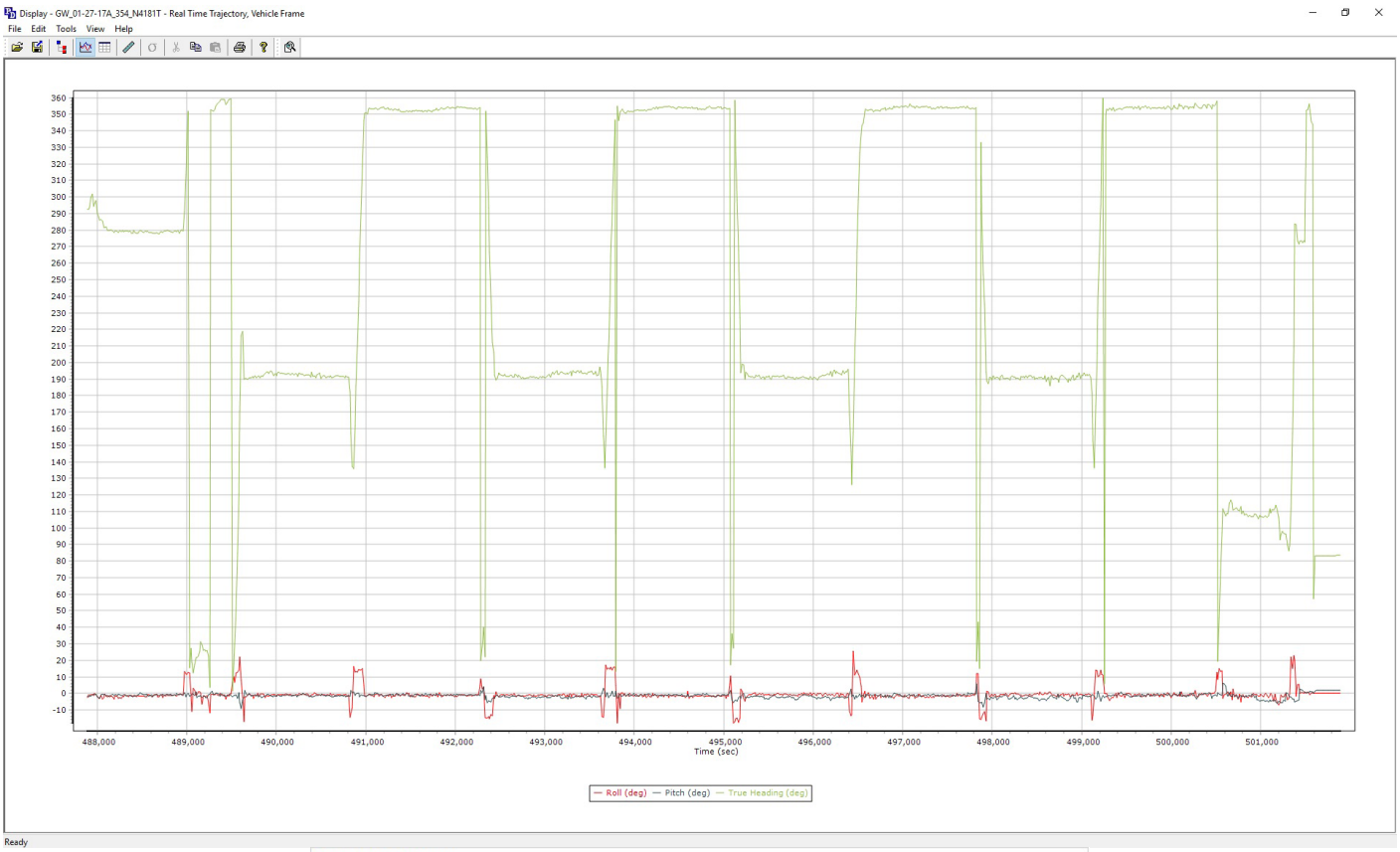
Jan 27, 2017-A (N4181T, SN354)

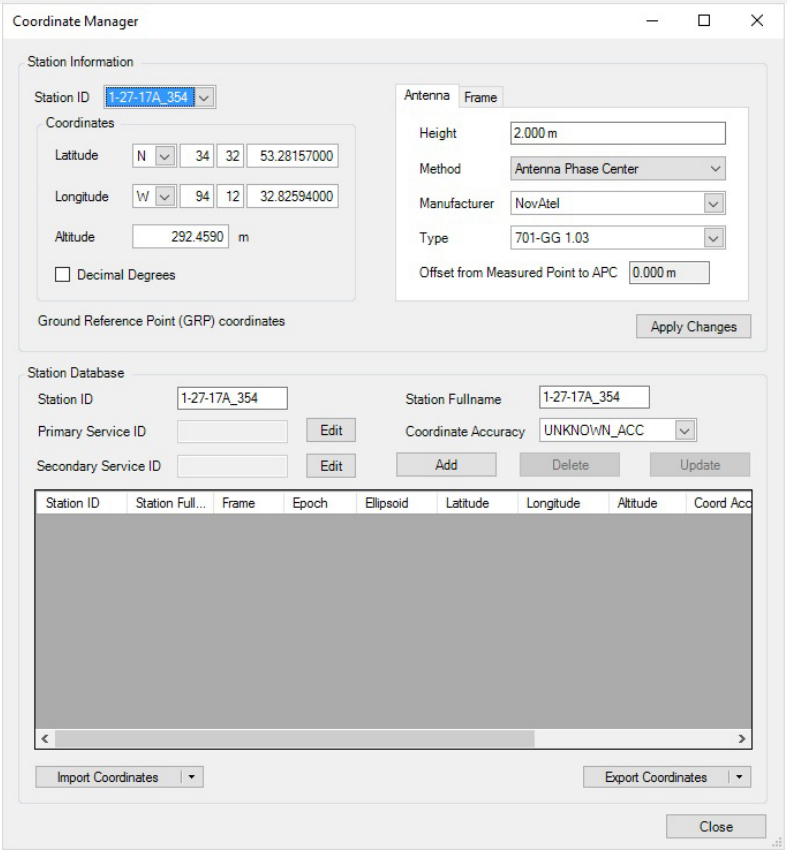

Display - GW_01-27-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_01-27-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready

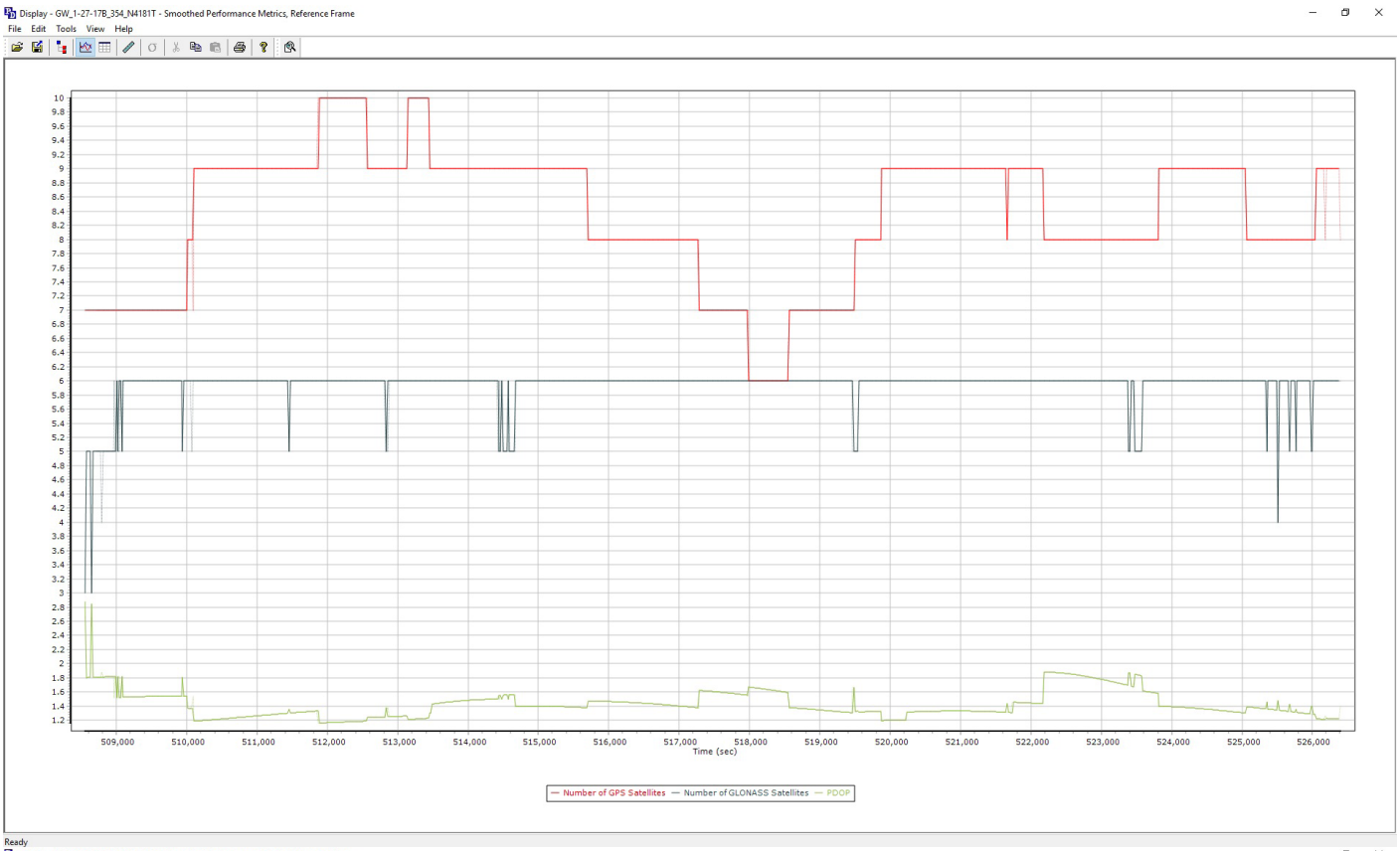

GW_01-27-17A_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom Extents
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
40000
20000
0
-20000
-40000
Post-processed (GNSS)
Start
20000m
-140000
-120000
-100000
-80000
-60000
-40000
-20000
0
20000
40000
60000
Snap
Meter
Grid
211812.609 m, 106237.613 m

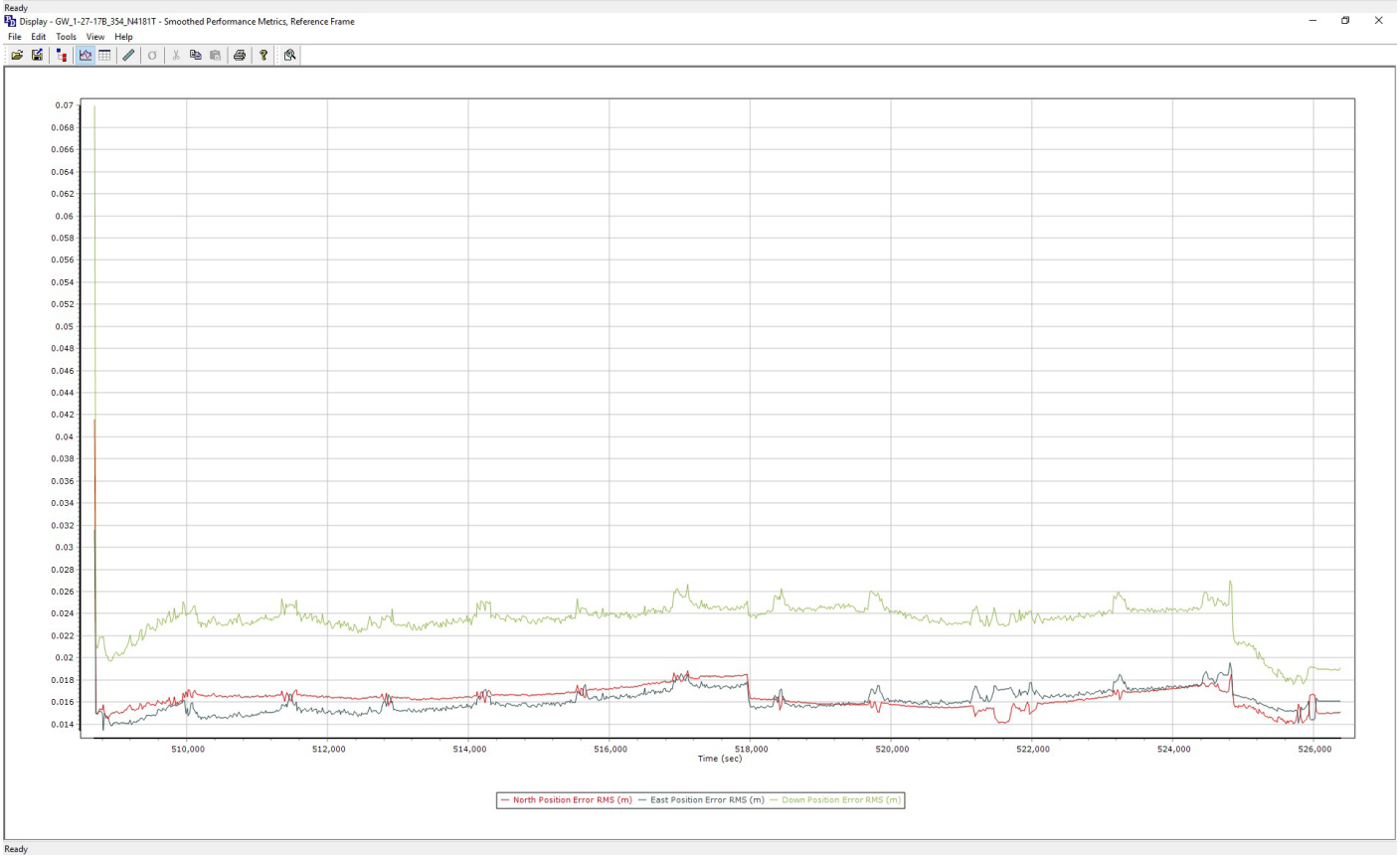

Display - GW_01-27-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
1
0
-1
488,000
489,000
490,000
491,000
492,000
493,000
494,000
495,000
496,000
497,000
498,000
499,000
500,000
501,000
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready

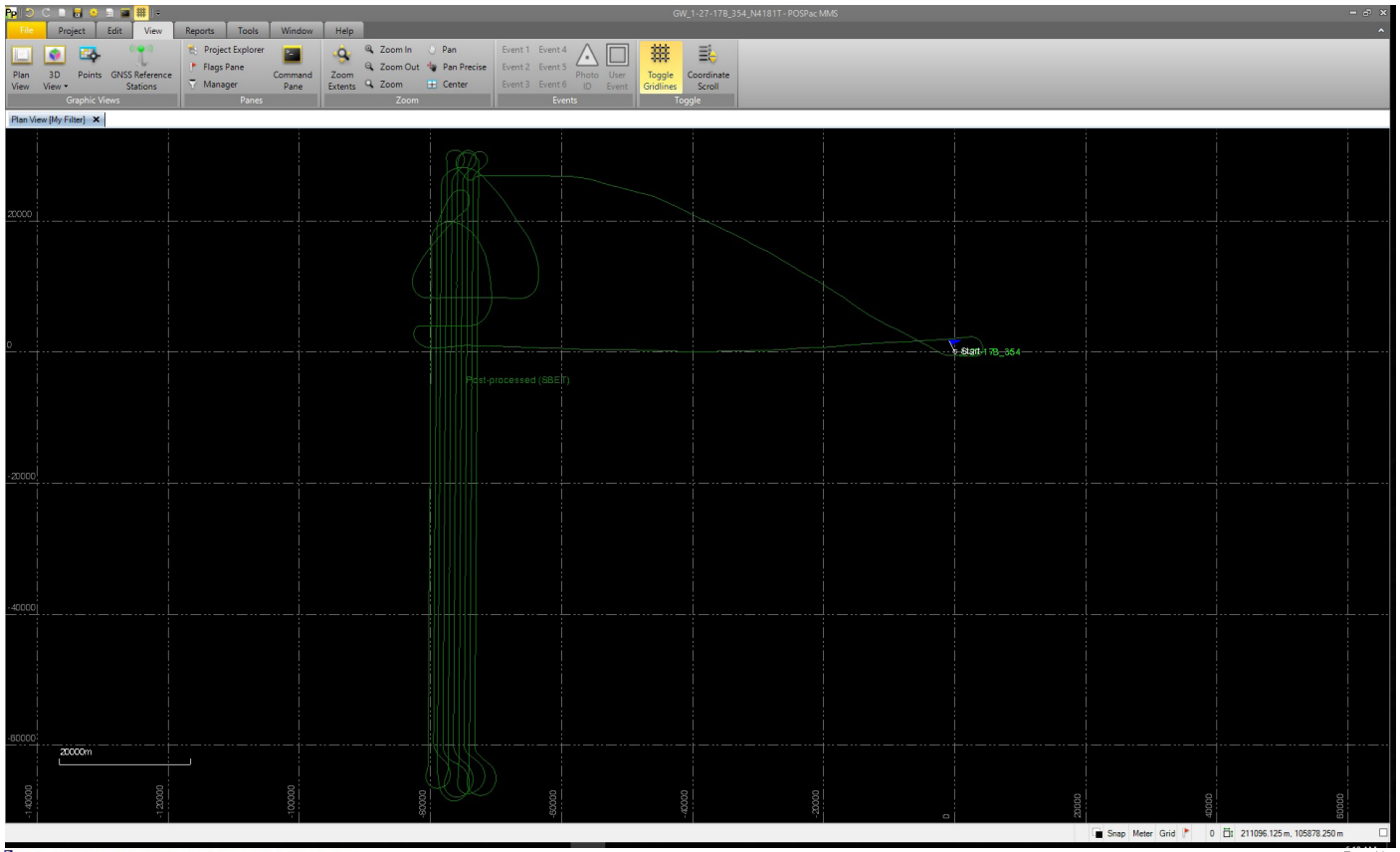

Display - GW_01-27-17A_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready

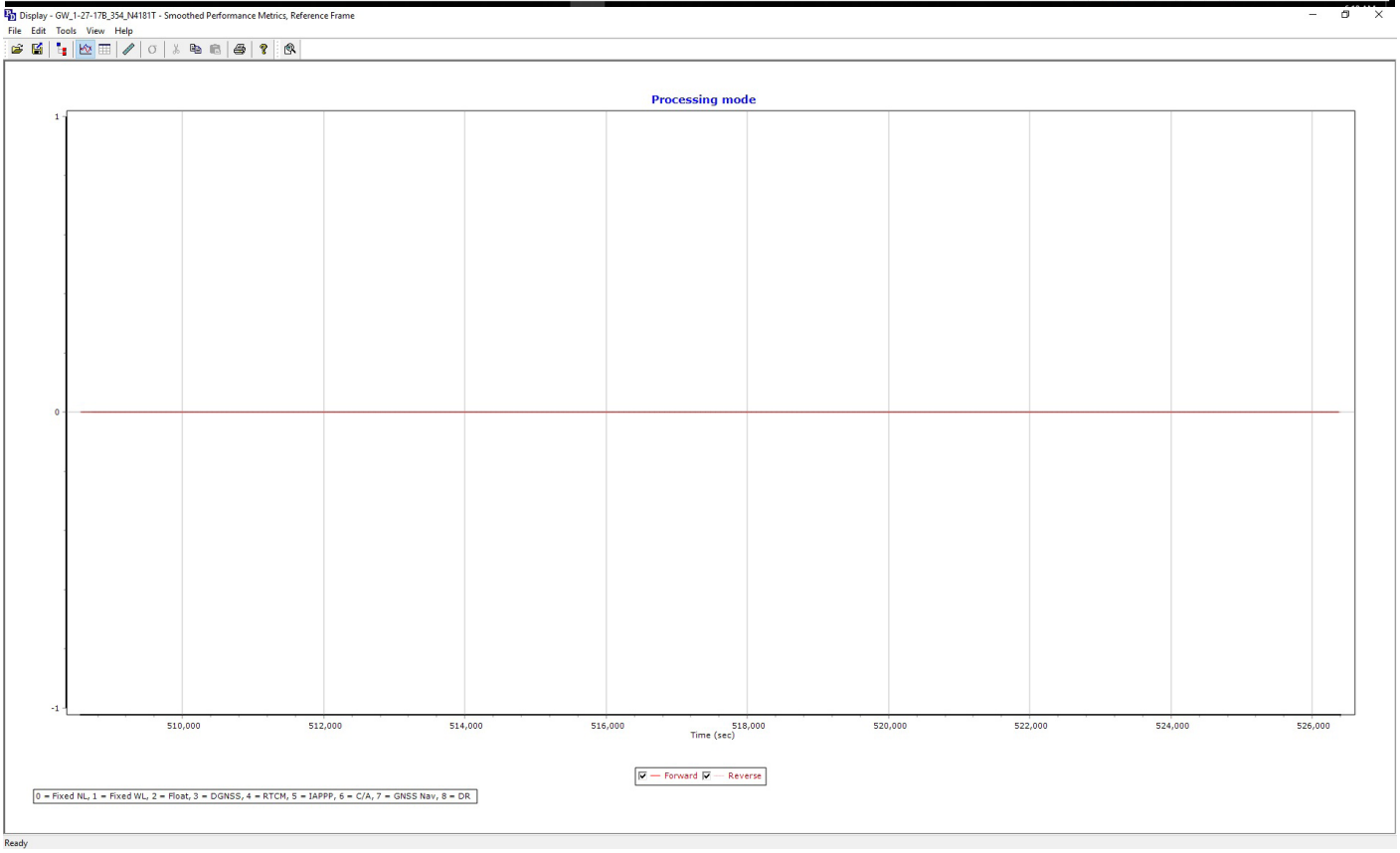

Coordinate Manager
Station Information
Station ID 1-27-17A_354
Coordinates
Latitude N 34 32 53.28157000
Longitude W 94 12 32.82594000
Altitude 292.4590 m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna Frame
Height 2.000 m
Method Antenna Phase Center
Manufacturer NovAtel
Type 701-GG 1.03
Offset from Measured Point to APC 0.000 m
Apply Changes
Station Database
Station ID 1-27-17A_354
Primary Service ID
Secondary Service ID
Edit
Edit
Station Fullname 1-27-17A_354
Coordinate Accuracy UNKNOWN_ACC
Add
Delete
Update
Station ID
Station Full...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Acc
Import Coordinates
Export Coordinates
Close

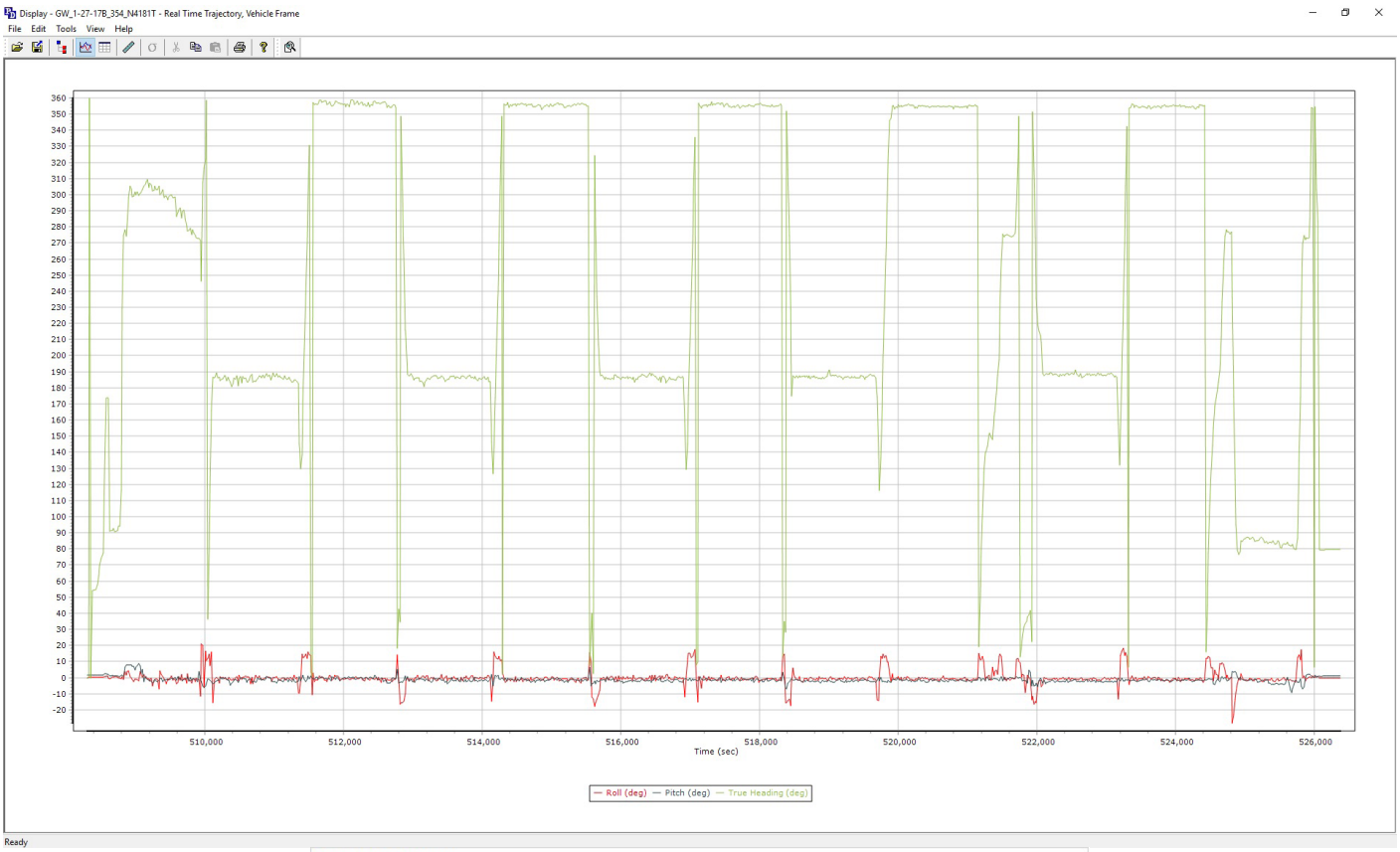
Jan 27, 2017-B (N4181T, SN354)

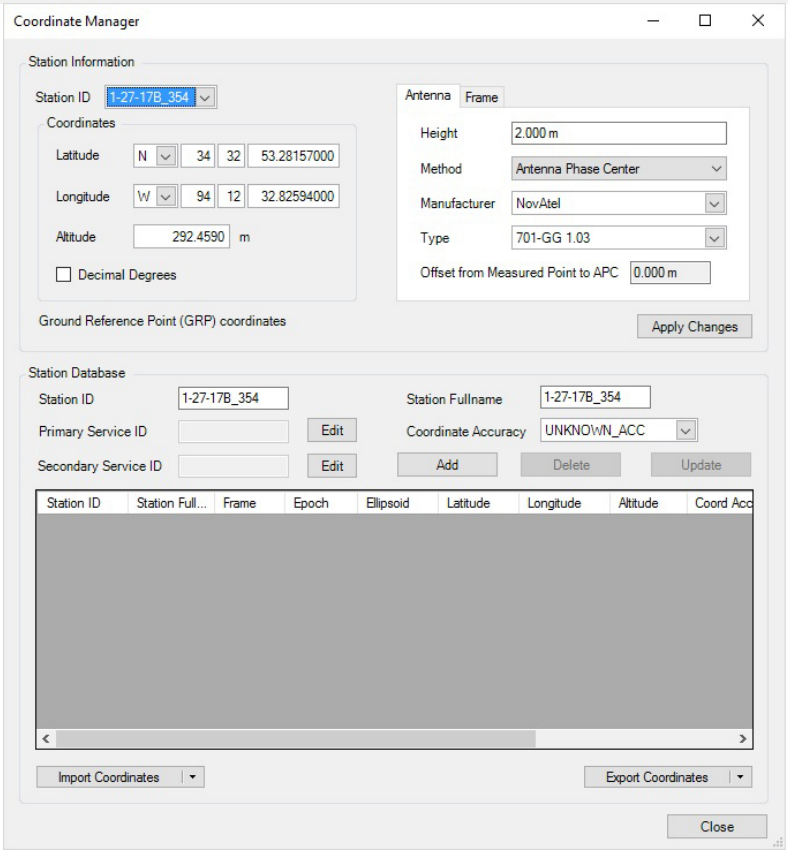

Display - GW_1-27-17B_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_1-27-17B_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready


GW_1-27-17B_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom Extents
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
Post-processed (BBF)
20000m
Snap
Meter
Grid
211096.125 m, 105878.250 m


Display - GW_1-27-17B_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready

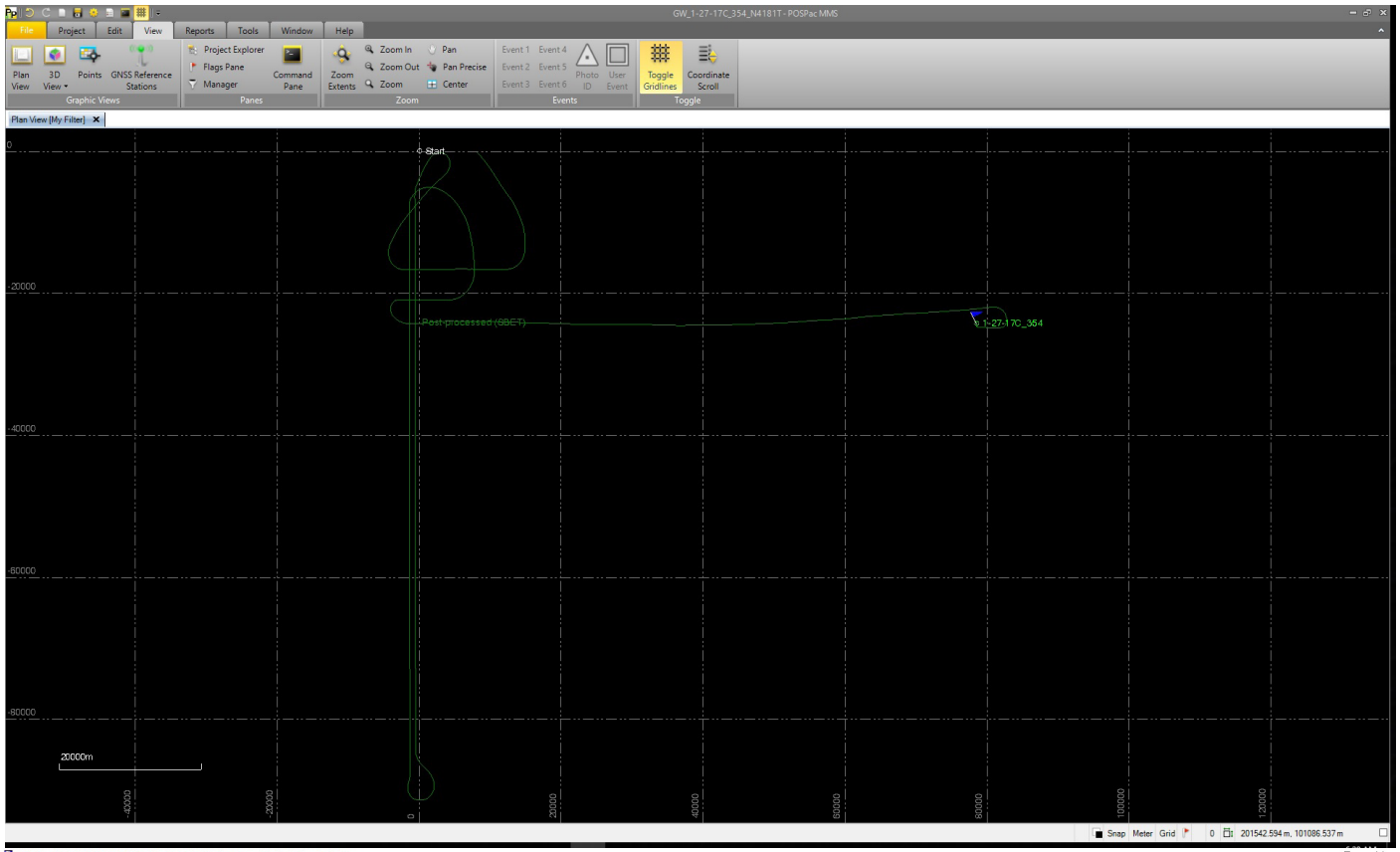

Display - GW_1-27-17B_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready


Coordinate Manager
Station Information
Station ID 1-27-17B_354
Coordinates
Latitude N 34 32 53.28157000
Longitude W 94 12 32.82594000
Altitude 292.4590 m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna Frame
Height 2.000 m
Method Antenna Phase Center
Manufacturer NovAtel
Type 701-GG 1.03
Offset from Measured Point to APC 0.000 m
Apply Changes
Station Database
Station ID 1-27-17B_354
Station Fullname 1-27-17B_354
Primary Service ID Edit
Secondary Service ID Edit
Coordinate Accuracy UNKNOWN_ACC
Add Delete Update
Station ID Station Full... Frame Epoch Ellipsoid Latitude Longitude Altitude Coord Acc
Import Coordinates
Export Coordinates
Close

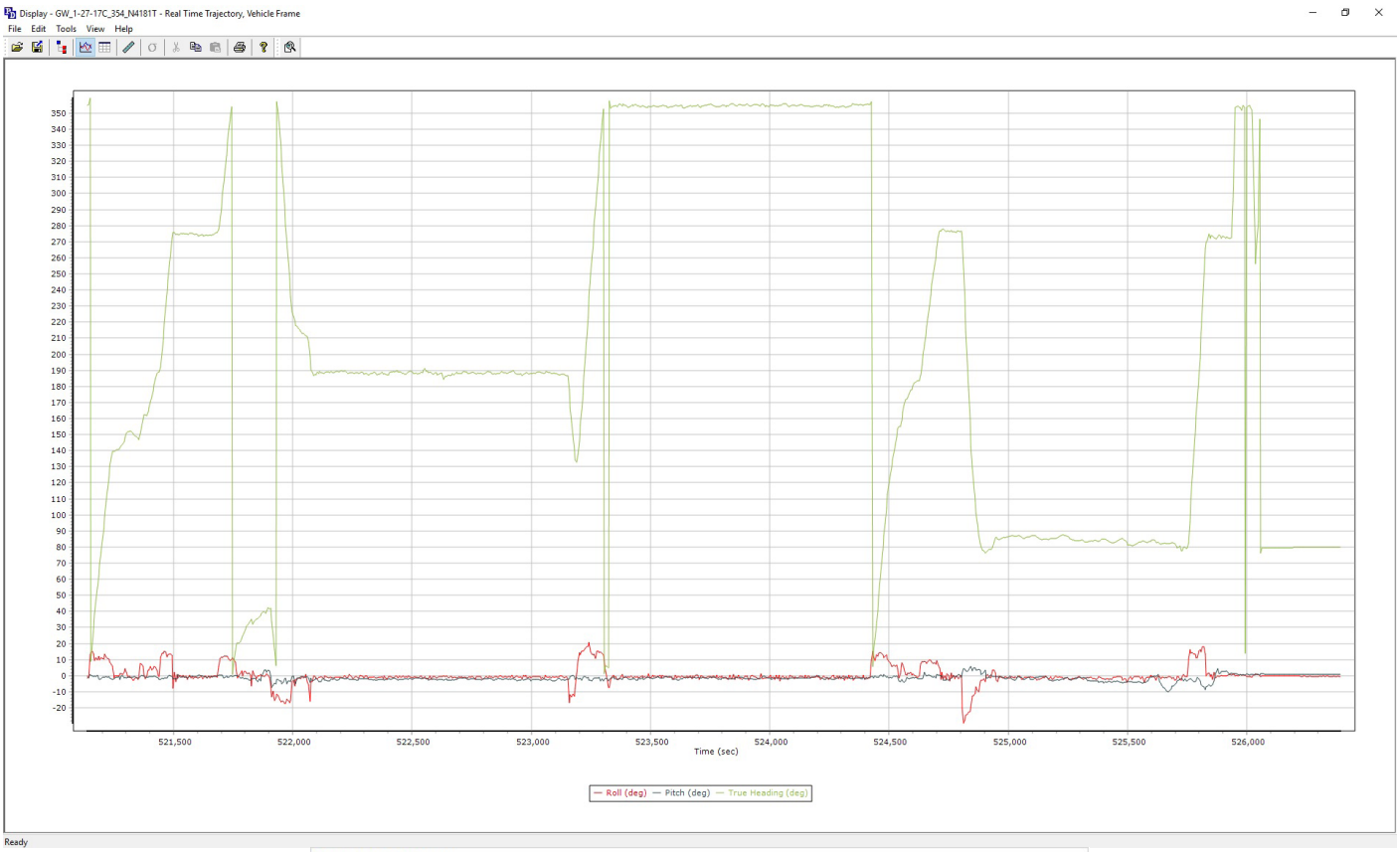
Jan 27, 2017-C (N4181T, SN354)

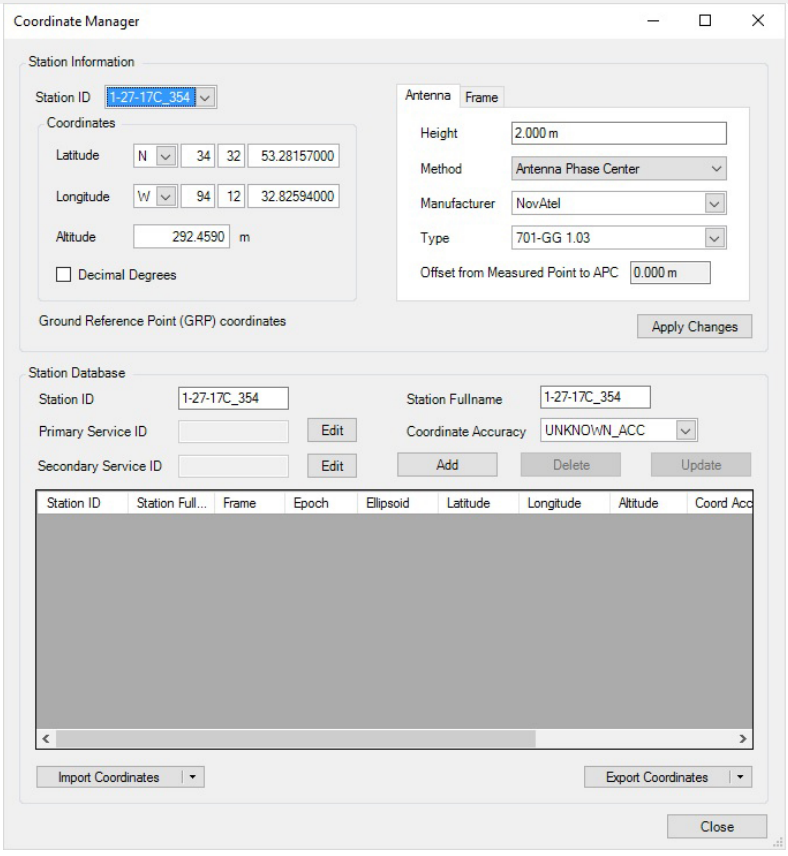

Display - GW_1-27-17C_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_1-27-17C_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready

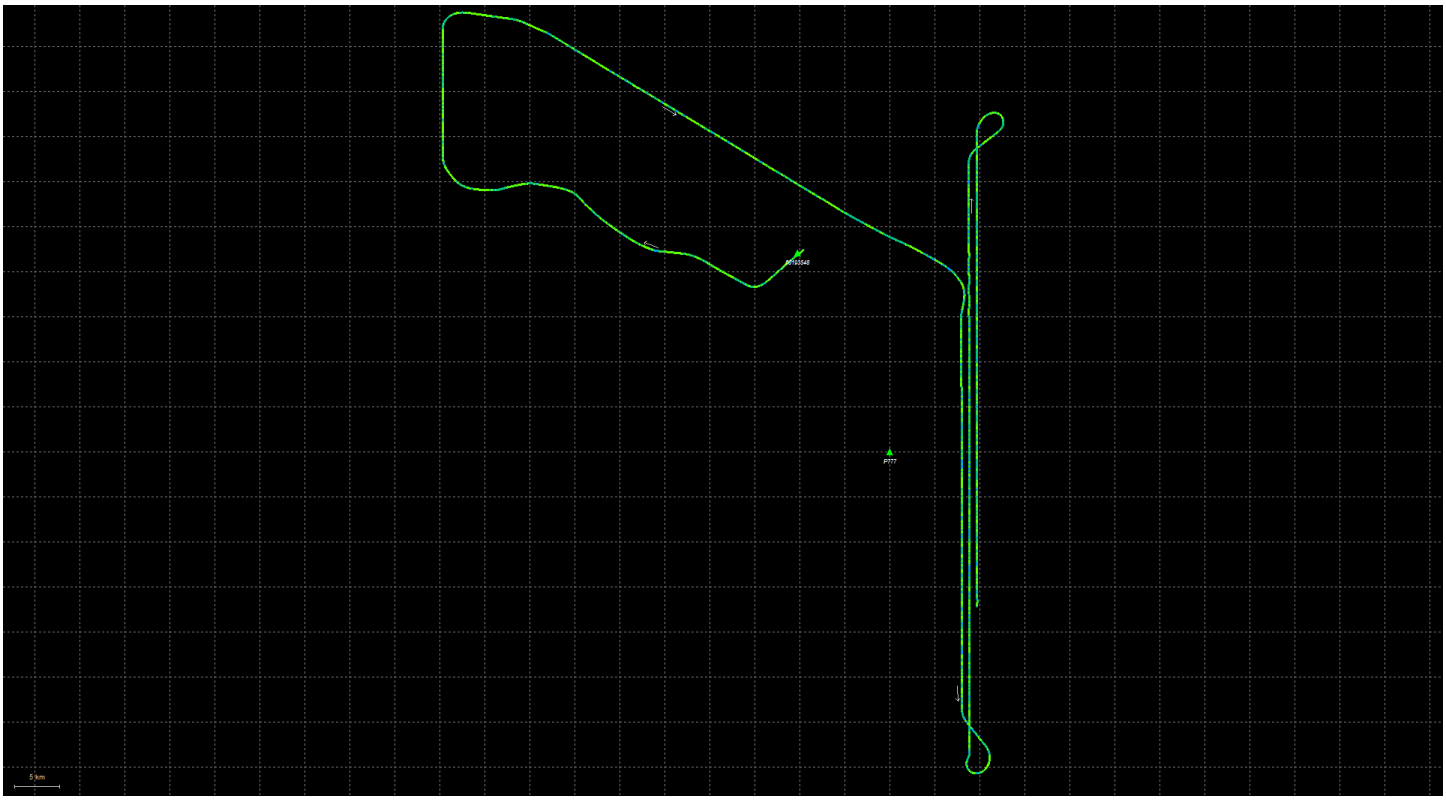

GW_1-27-17C_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom Extents
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
Start
Post-processed (SBET)
1-27-17C_354
20000m
Snap
Meter
Grid

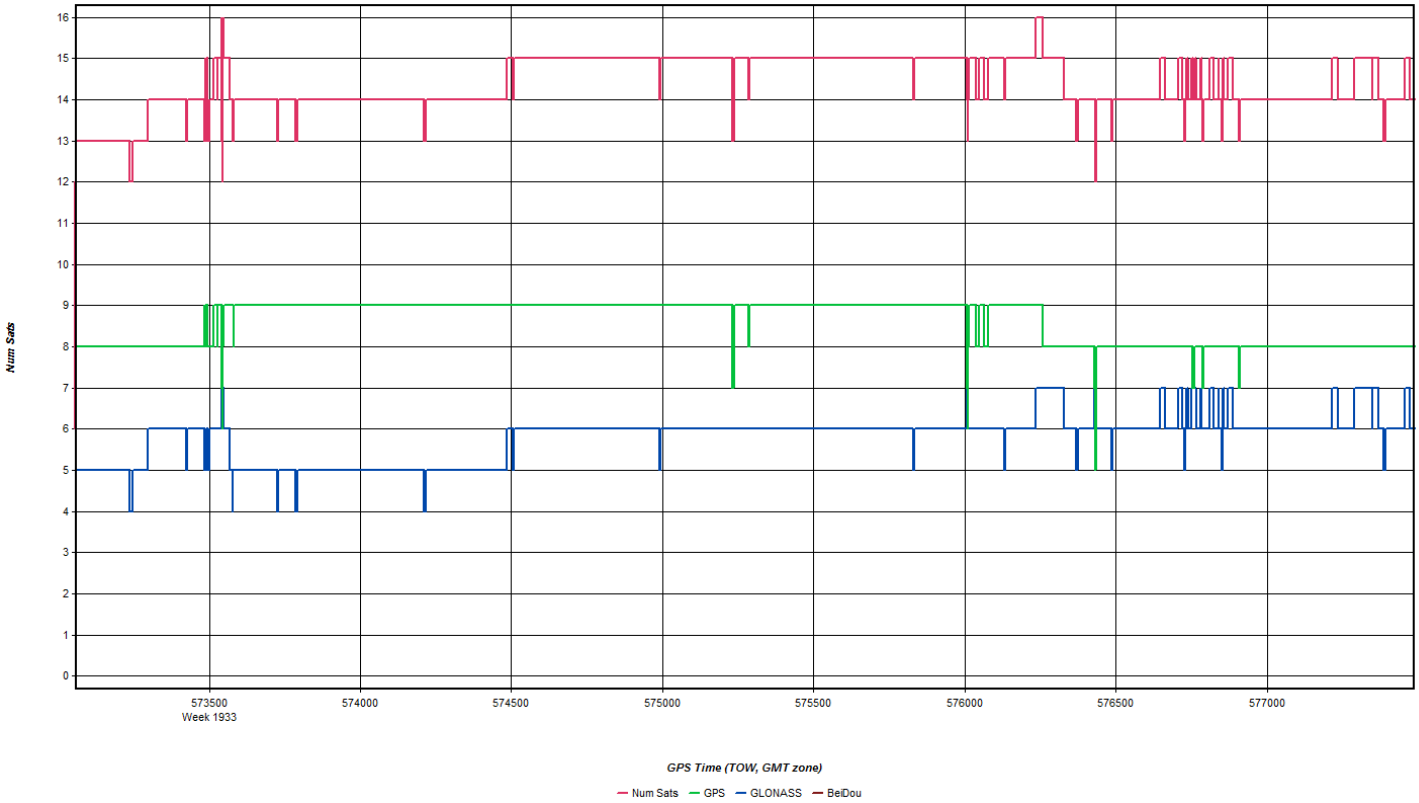

Display - GW_1-27-17C_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready

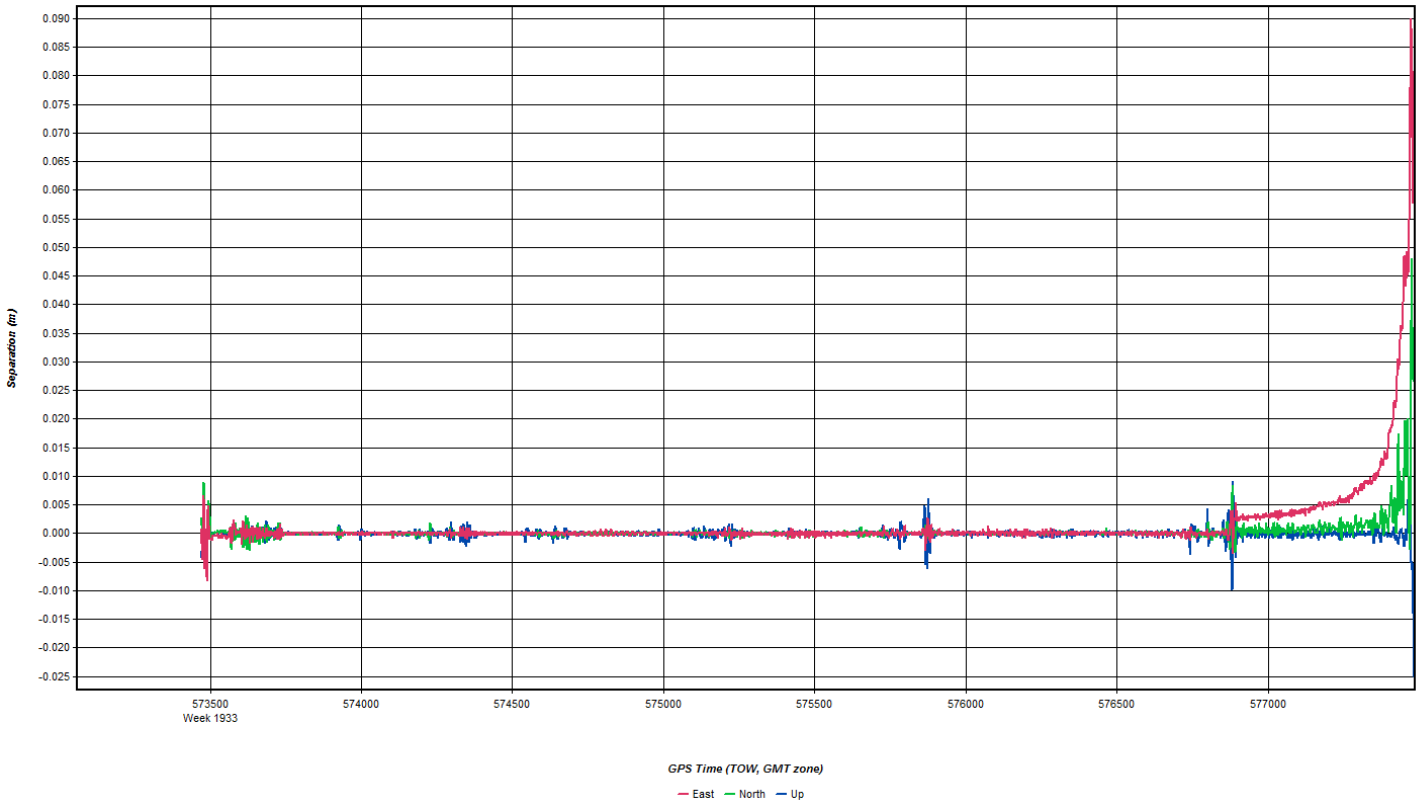

Display - GW_1-27-17C_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready

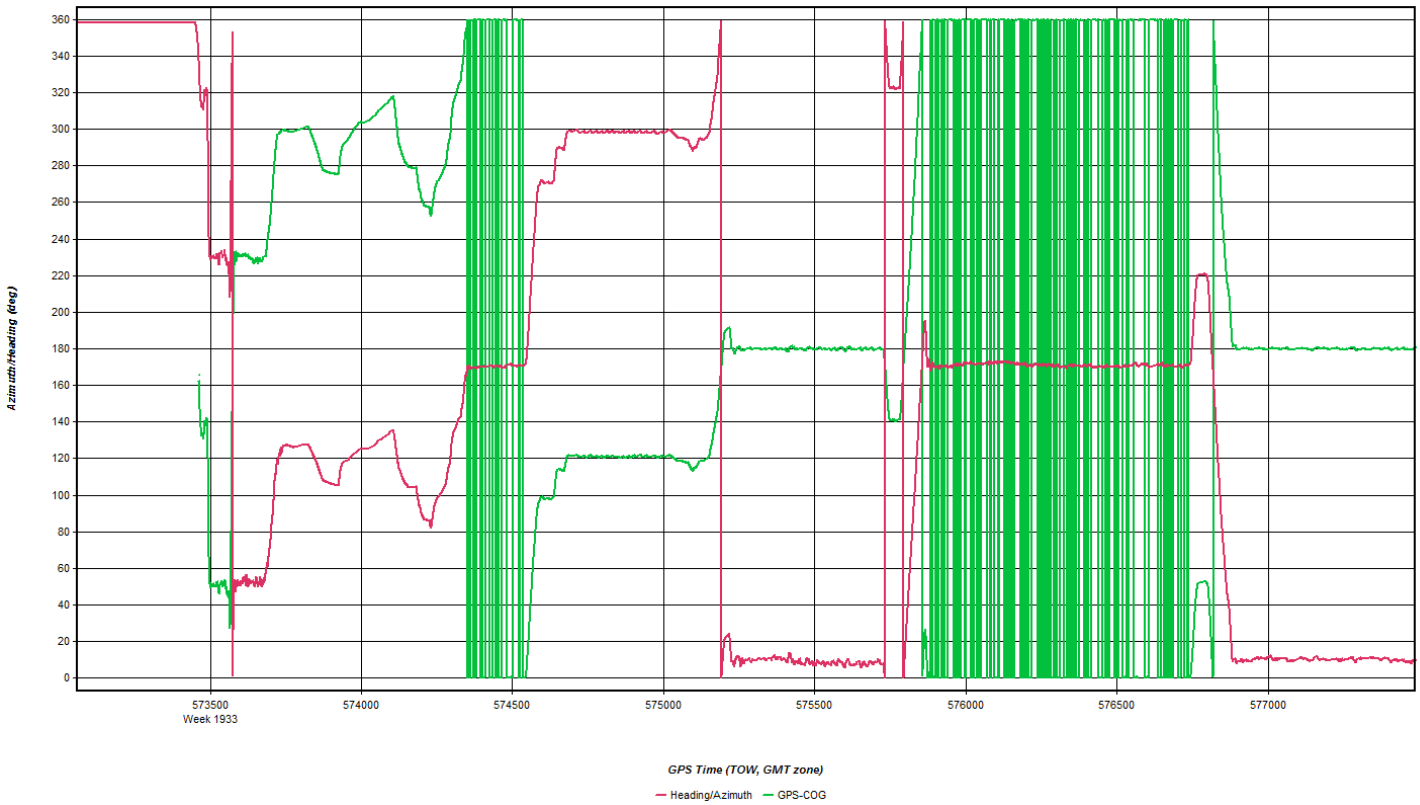

Coordinate Manager
Station Information
Station ID 1-27-17C_354
Coordinates
Latitude N 34 32 53.28157000
Longitude W 94 12 32.82594000
Altitude 292.4590 m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna Frame
Height 2.000 m
Method Antenna Phase Center
Manufacturer NovAtel
Type 701-GG 1.03
Offset from Measured Point to APC 0.000 m
Apply Changes
Station Database
Station ID 1-27-17C_354
Primary Service ID
Secondary Service ID
Edit
Edit
Station Fullname 1-27-17C_354
Coordinate Accuracy UNKNOWN_ACC
Add
Delete
Update
Station ID
Station Full...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Acc
Import Coordinates
Export Coordinates
Close

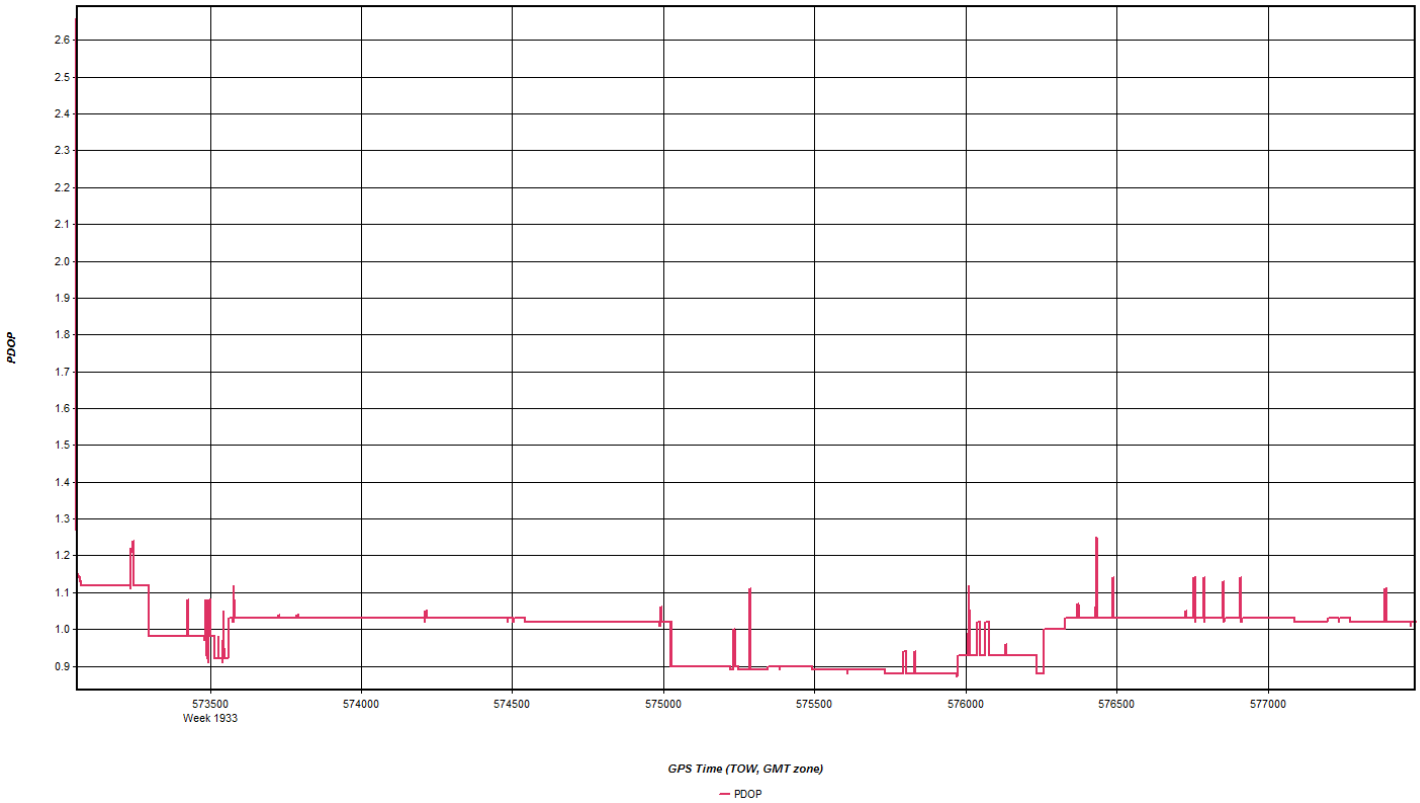
Jan 28, 2017-A1 (C-FVZM, SN7229)

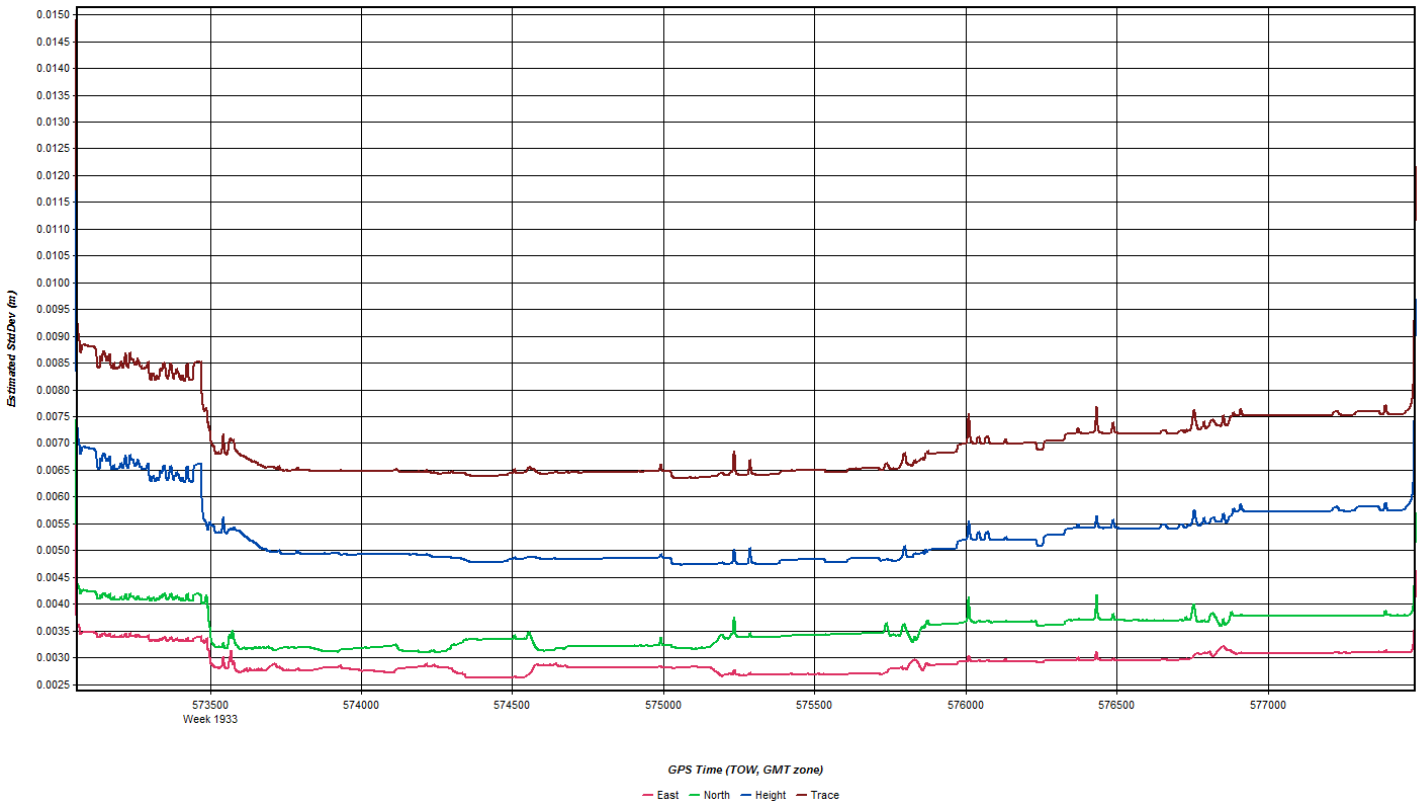

P777
5 km

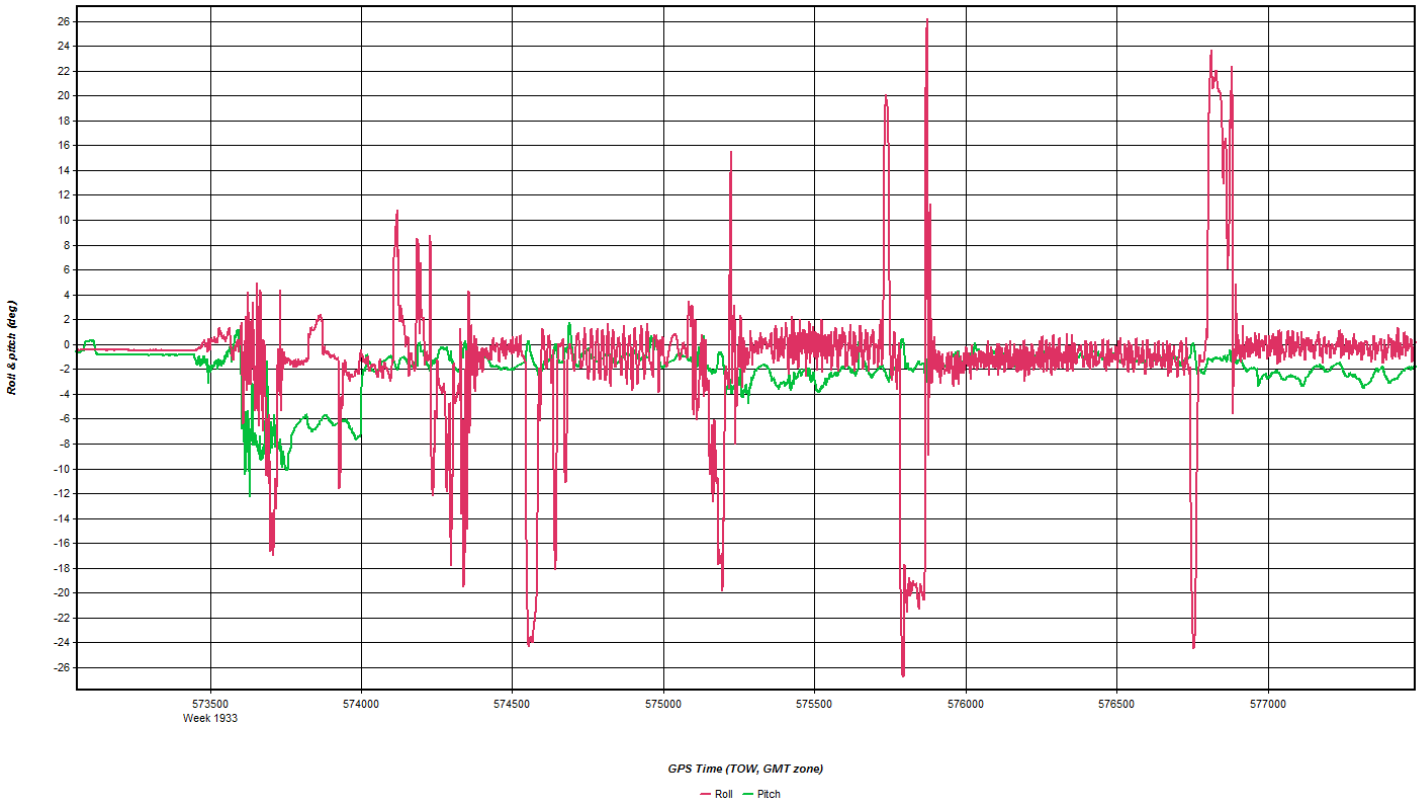

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
573500
Week 1933
574000
574500
575000
575500
576000
576500
577000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

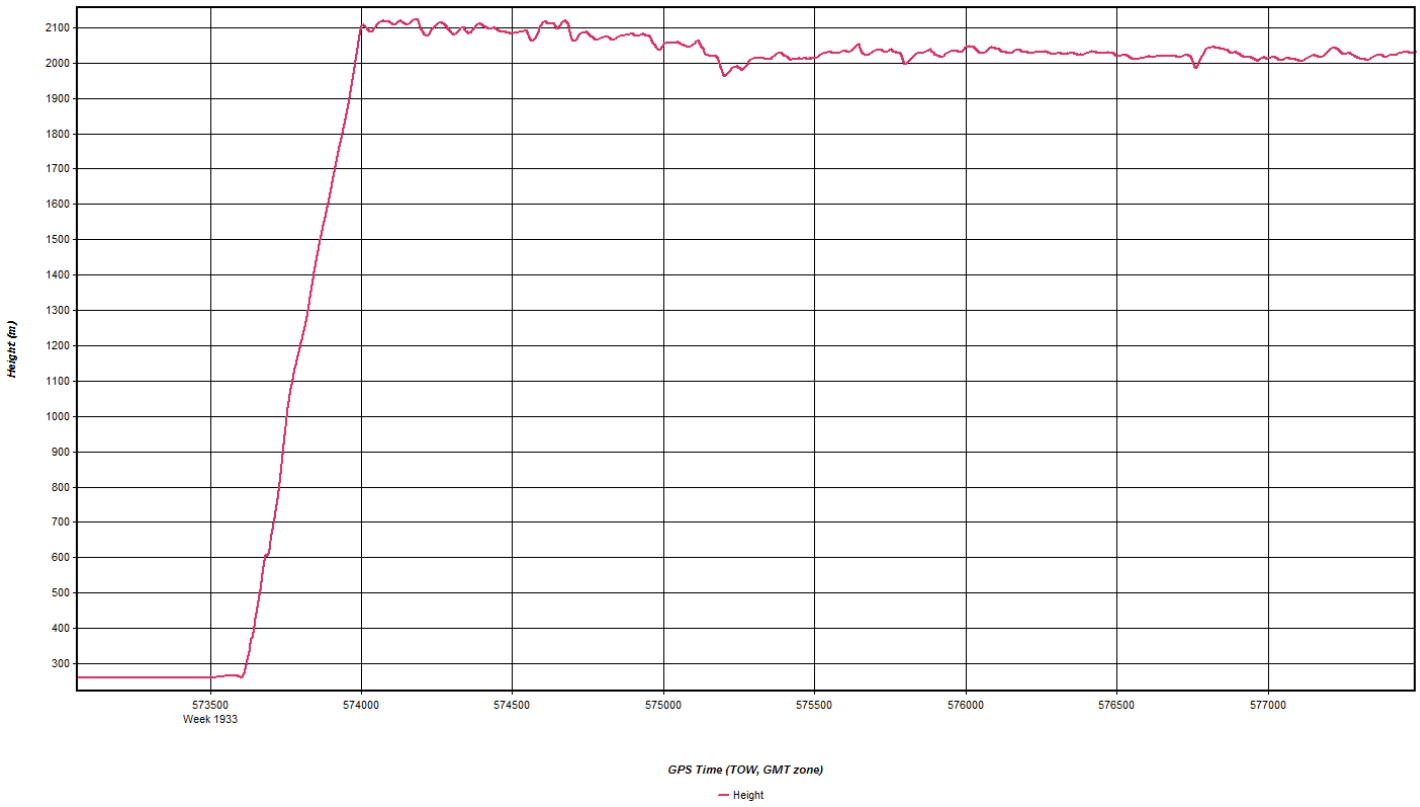

Separation (m)
0.090
0.085
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
573500
Week 1933
574000
574500
575000
575500
576000
576500
577000
GPS Time (TOW, GMT zone)
East
North
Up


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
573500
Week 1933
574000
574500
575000
575500
576000
576500
577000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

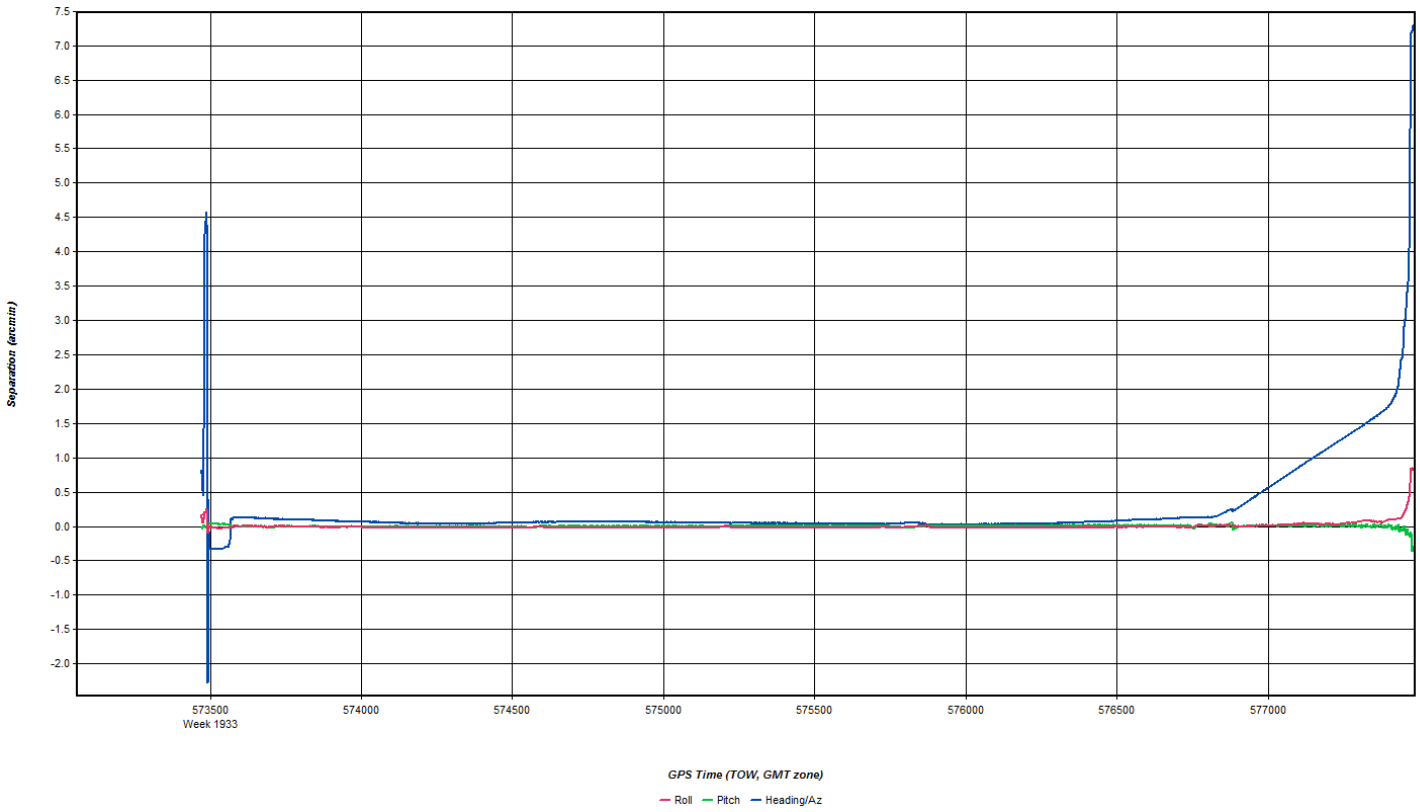

PDOP
2.6
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
573500
Week 1933
574000
574500
575000
575500
576000
576500
577000
GPS Time (TOW, GMT zone)
PDOP

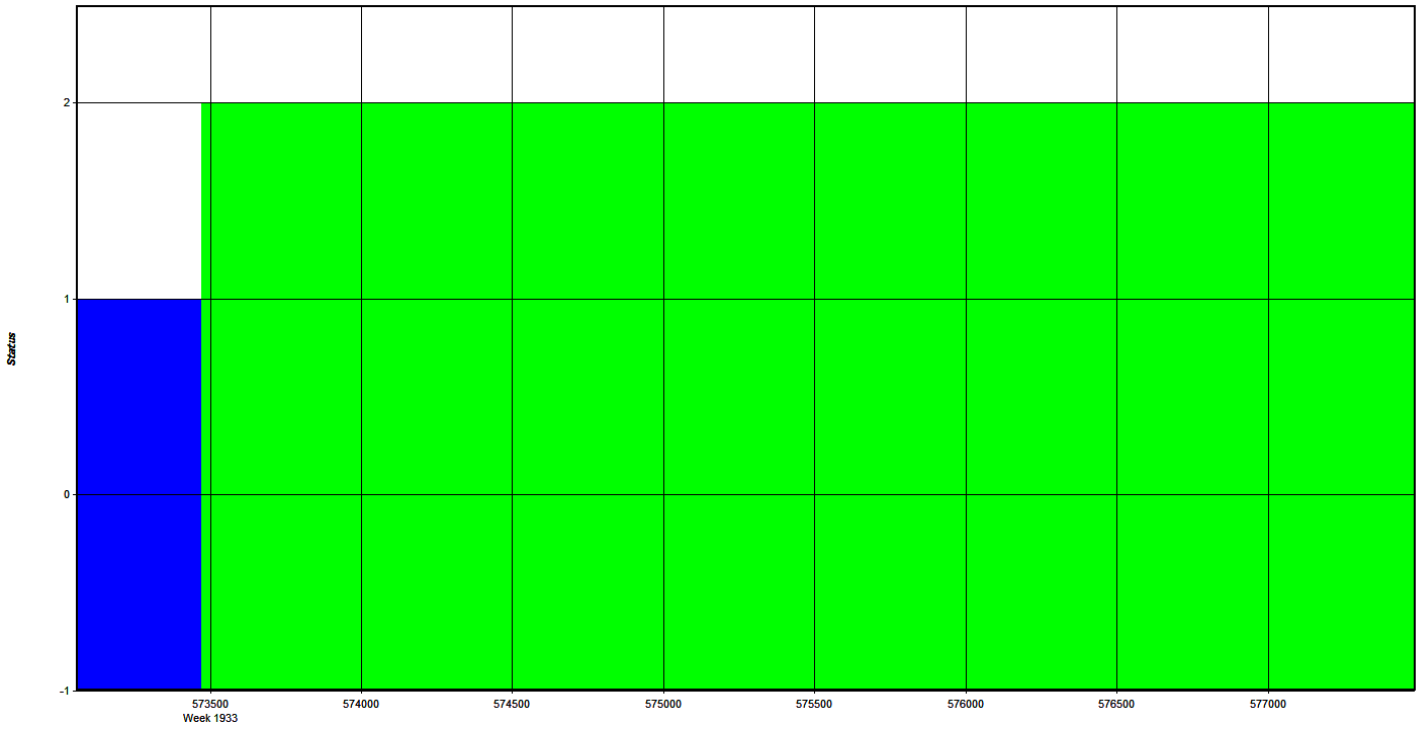

Estimated StdDev (m)
0.0150
0.0145
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
573500
Week 1933
574000
574500
575000
575500
576000
576500
577000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

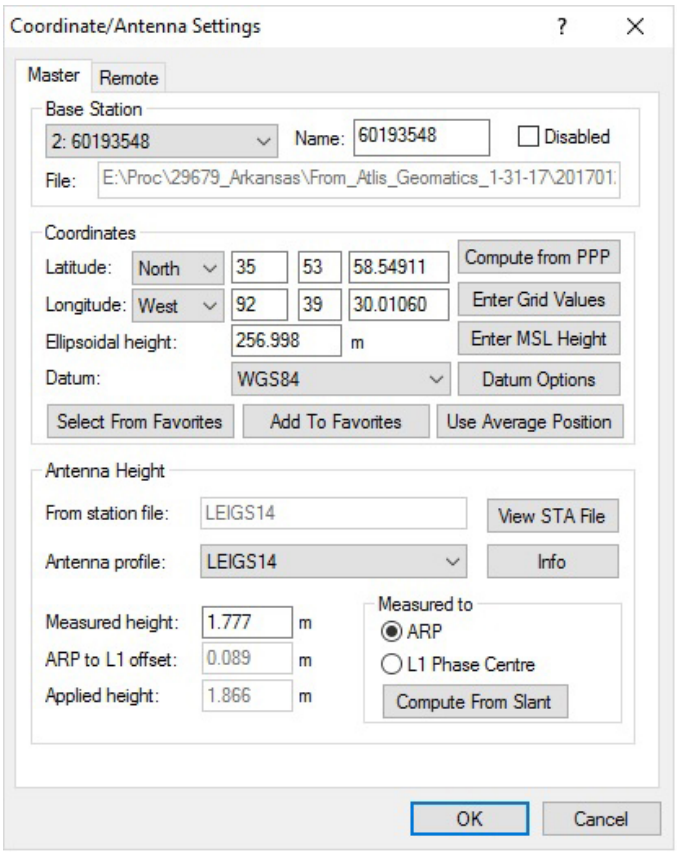

Roll & pitch (deg)
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
573500
Week 1933
574000
574500
575000
575500
576000
576500
577000
GPS Time (TOW, GMT zone)
Roll
Pitch

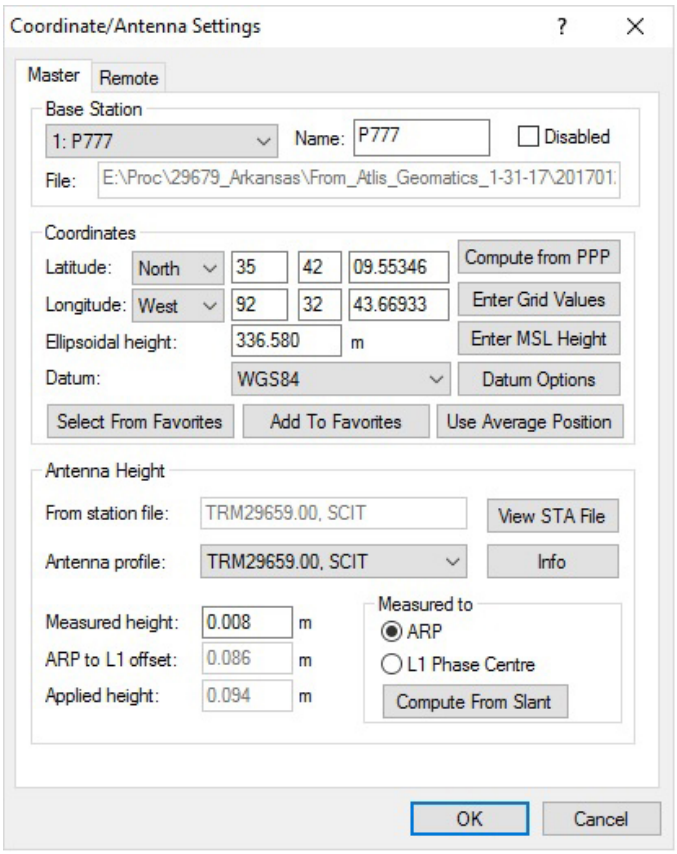

Height (m)
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
573500
Week 1933
574000
574500
575000
575500
576000
576500
577000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
573500
Week 1933
574000
574500
575000
575500
576000
576500
577000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
573500
Week 1933
574000
574500
575000
575500
576000
576500
577000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
573500
Week 1933
574000
574500
575000
575500
576000
576500
577000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
2: 60193548
Name: 60193548
Disabled
File: E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-31-17\201701
Coordinates
Latitude: North 35 53 58.54911
Longitude: West 92 39 30.01060
Ellipsoidal height: 256.998 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: LEIGS14
View STA File
Antenna profile: LEIGS14
Info
Measured height: 1.777 m
ARP to L1 offset: 0.089 m
Applied height: 1.866 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: P777
Name: P777
Disabled
File: E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-31-17\201701
Coordinates
Latitude: North 35 42 09.55346
Longitude: West 92 32 43.66933
Ellipsoidal height: 336.580 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM29659.00, SCIT
View STA File
Antenna profile: TRM29659.00, SCIT
Info
Measured height: 0.008 m
ARP to L1 offset: 0.086 m
Applied height: 0.094 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

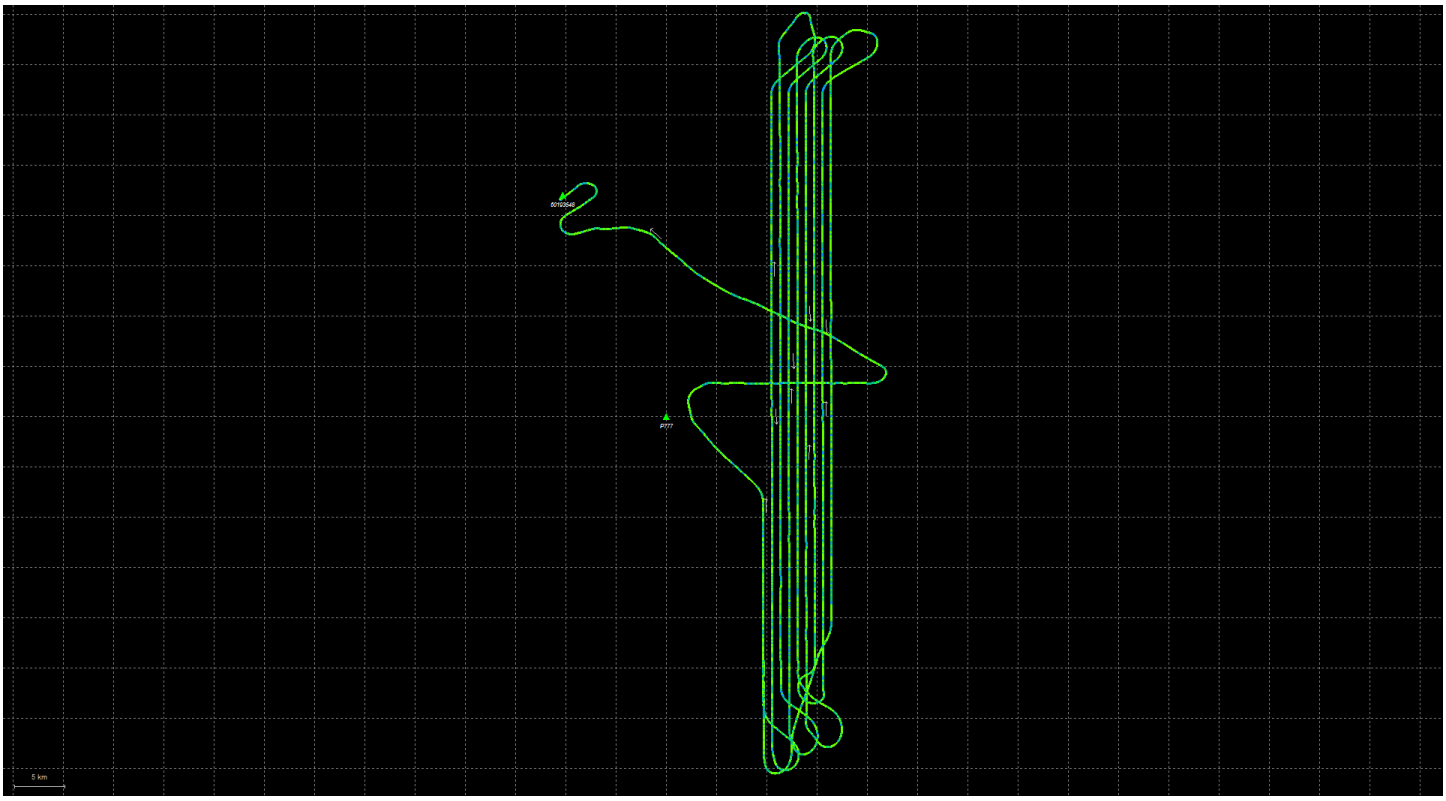
PROJECT NAME	Q.S. Arkansas	DATE	28/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Marshall AR.	DATA DRIVES	LiDar #1

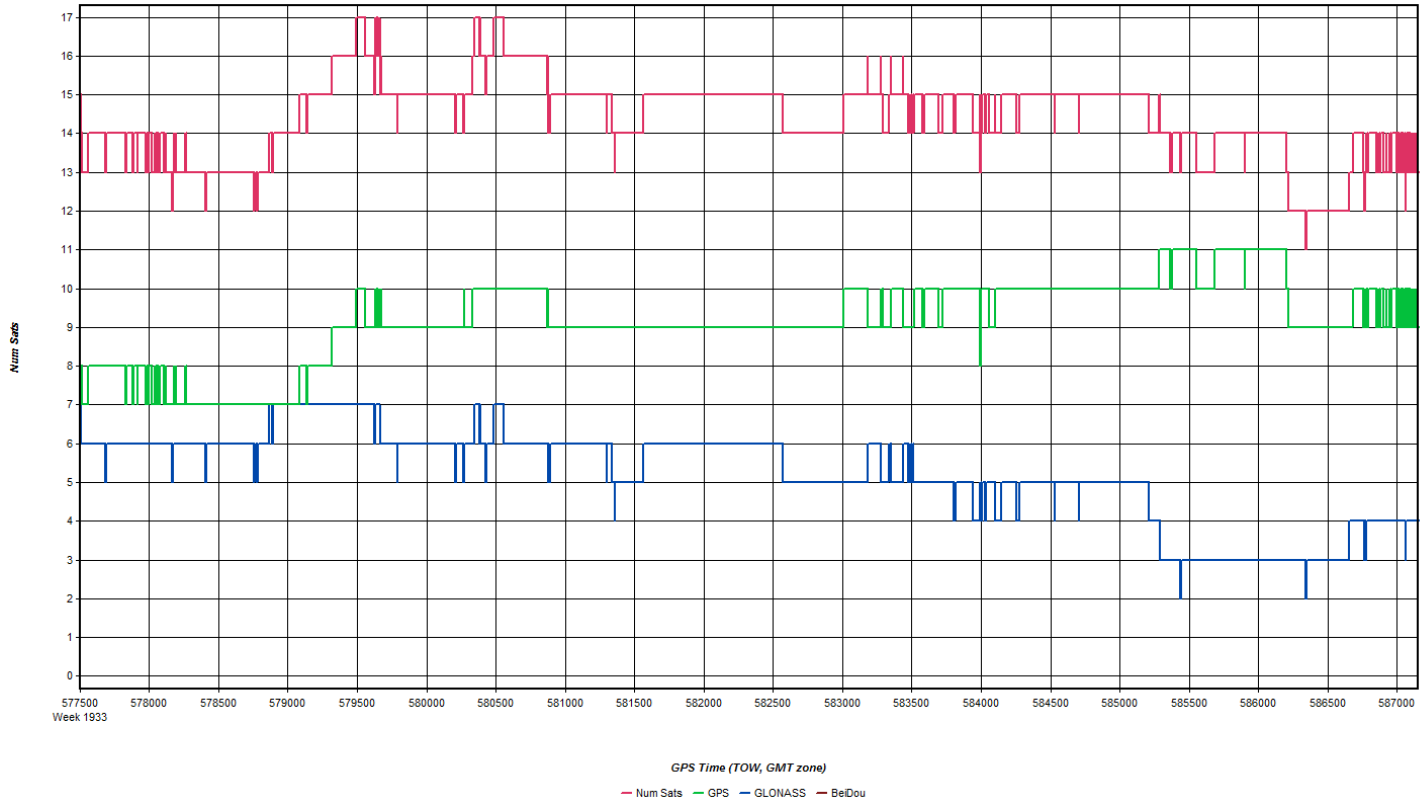
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	15:06:00	Takeoff:	15:19:00	AGL Height:	1750 m	Pulse Rate:	277 KHz		START	END
Engine Off:	19:08:00	Landing:	18:58:00	Speed:	160 kts	Scan Rate:	43 Hz	Pre-Mission	15:11:00	15:17:00
TOTAL:	4.03 hrs	TOTAL:	3.65 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	19:00:00	19:05:00

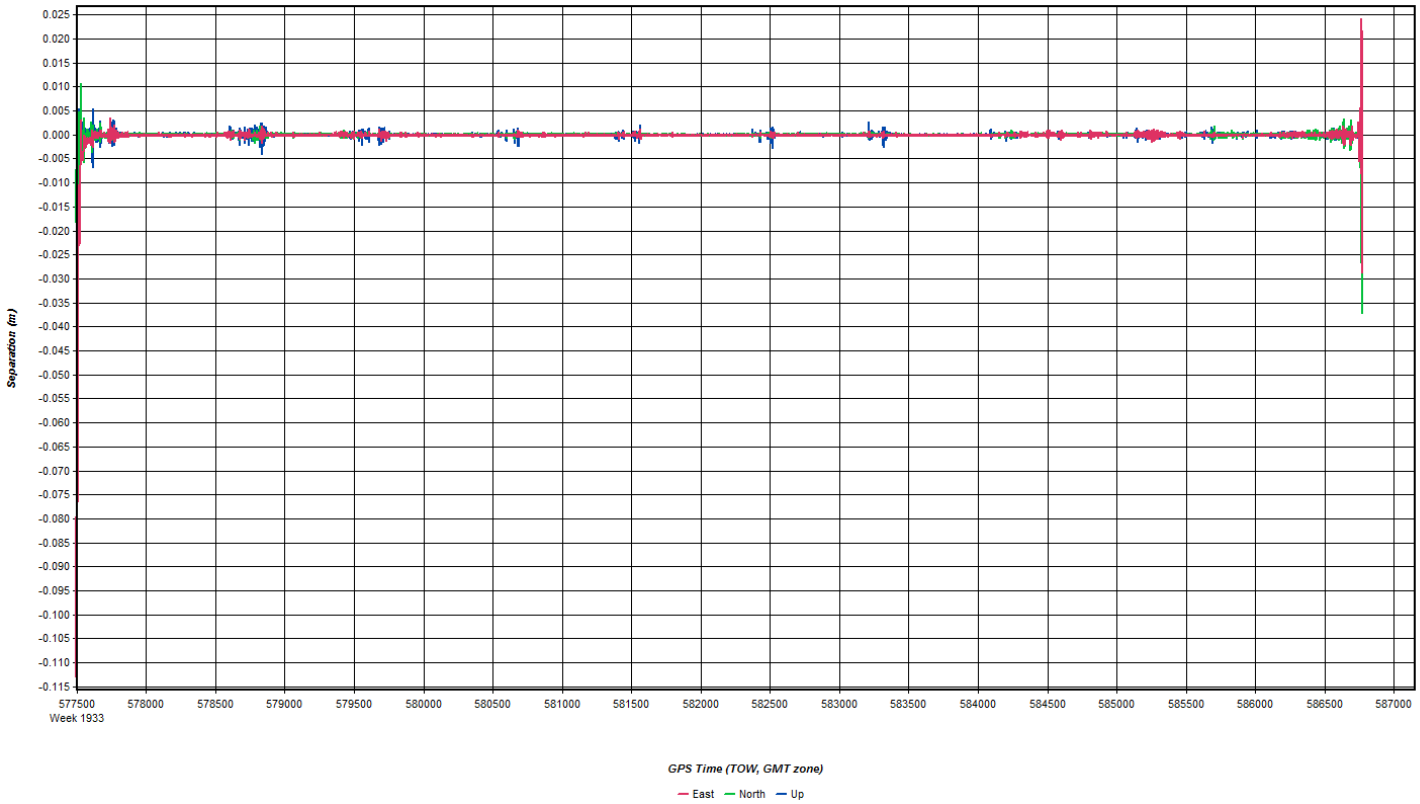
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
98		North	170128_153314	15:33:15	15:35:23	16 to 12 nm from south to fill hole
42		South	170128_154746	15:47:47	15:55:07	Started 20nm from South to complete line
43		North	170128_155843	15:58:44	16:12:04	Complete line
44		South	170128_161458	16:14:59	16:26:33	Complete line
45		North	170128_163009	16:30:10	16:43:10	Complete line
46		South	170128_164749	16:47:51	16:58:58	Complete line
47		North	170128_170246	17:02:48	17:15:20	Complete line
48		South	170128_171820	17:18:21	17:29:25	Complete line
49		North	170128_173348	17:33:49	17:45:52	Complete line
50		South	170128_174849	17:48:50	17:59:41	Complete line
51		North	170128_180515	18:03:16	18:14:30	Complete line
52		South	170128_181813	18:18:14	18:28:28	Complete line
44		North	170128_183322	18:33:23	18:37:23	Got low on the first attempt so re-flew in the south, maybe not required
CL		East	170128_184139	18:41:40	18:43:54	

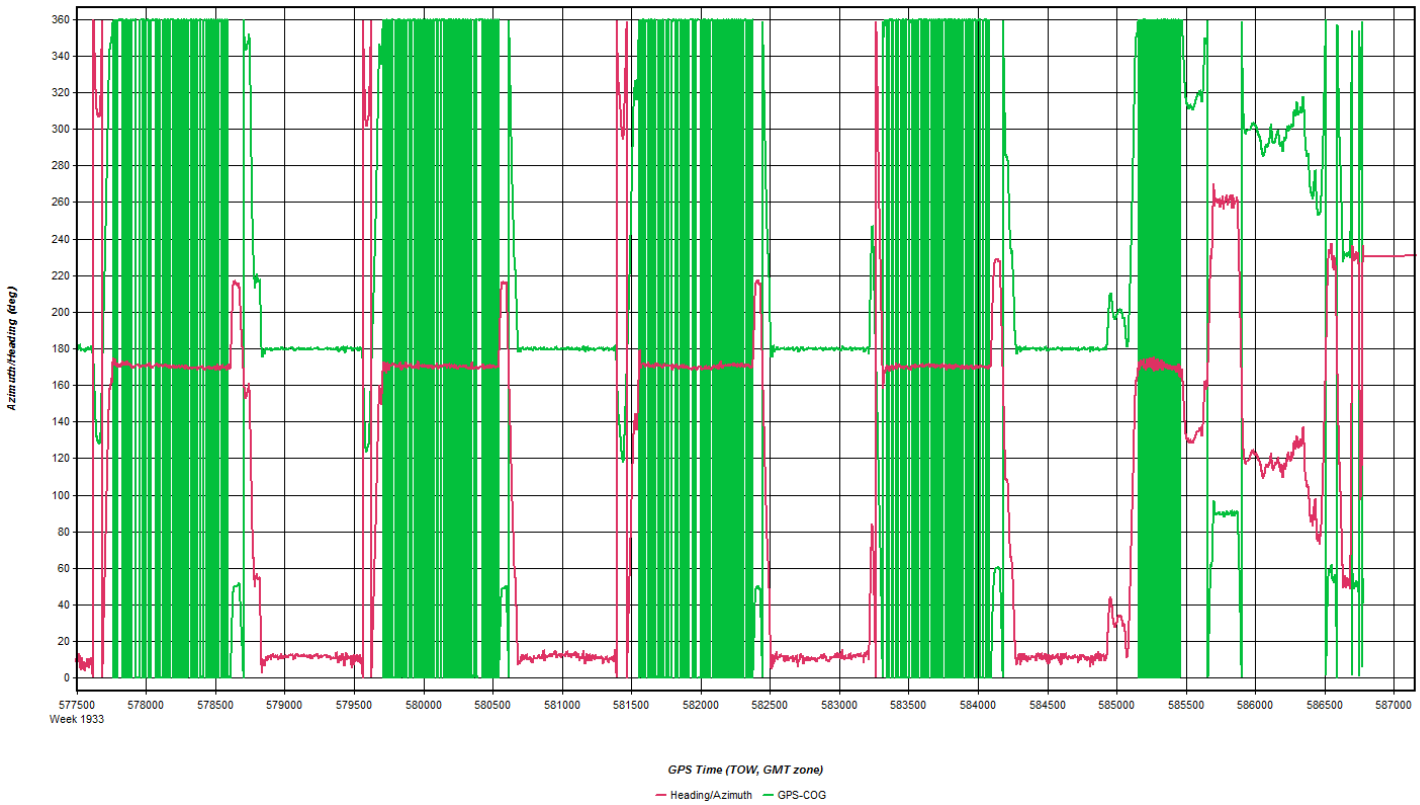
SUN ANGLE @Start: @End: @Peak:	Temp @ take off was -4C, clear skies. Sats and PDOPS averaged 19 and 1.1 Base station was set at the Marshall airport 14:20 to 19:15. Ant height is 1.777 to the ARP

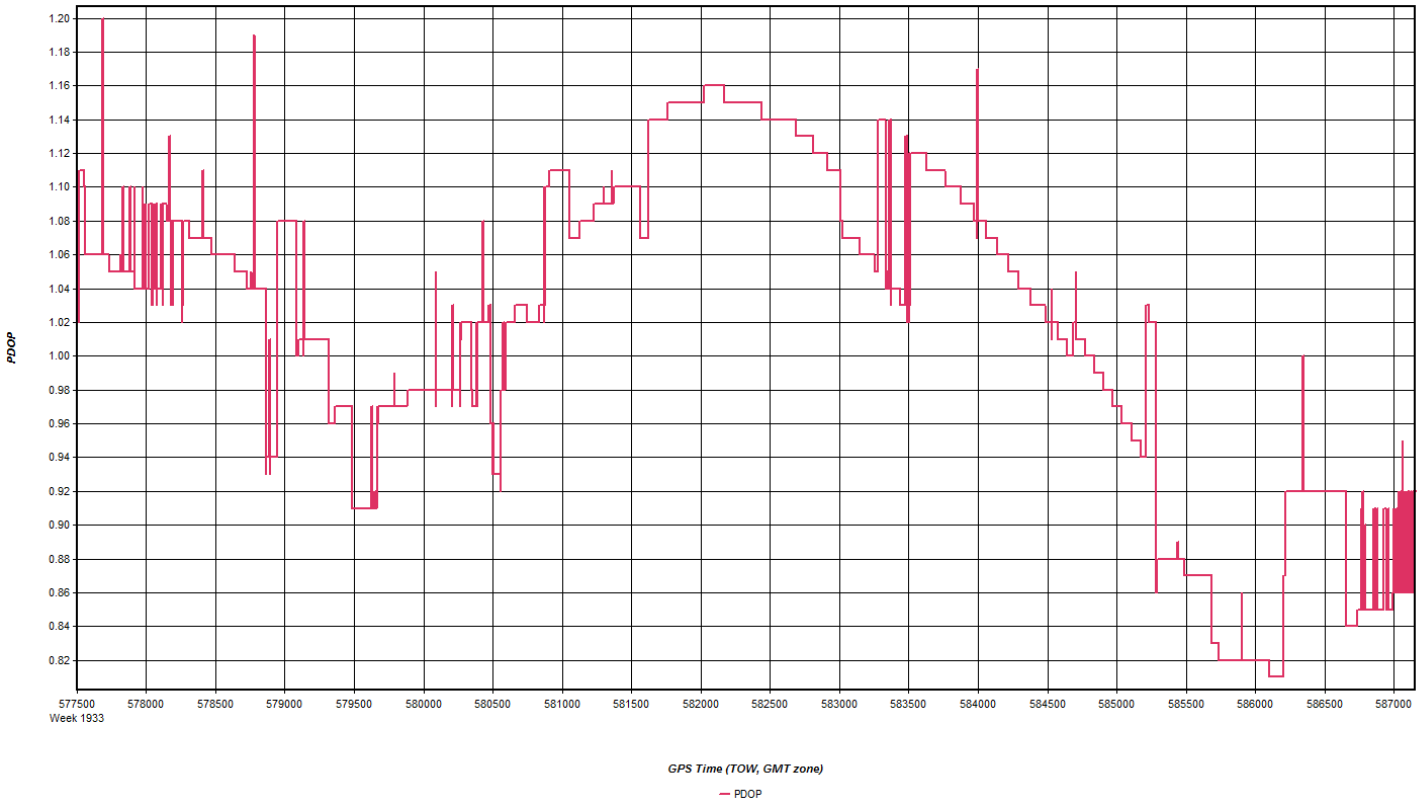
Jan 28, 2017-A2 (C-FVZM, SN7229)

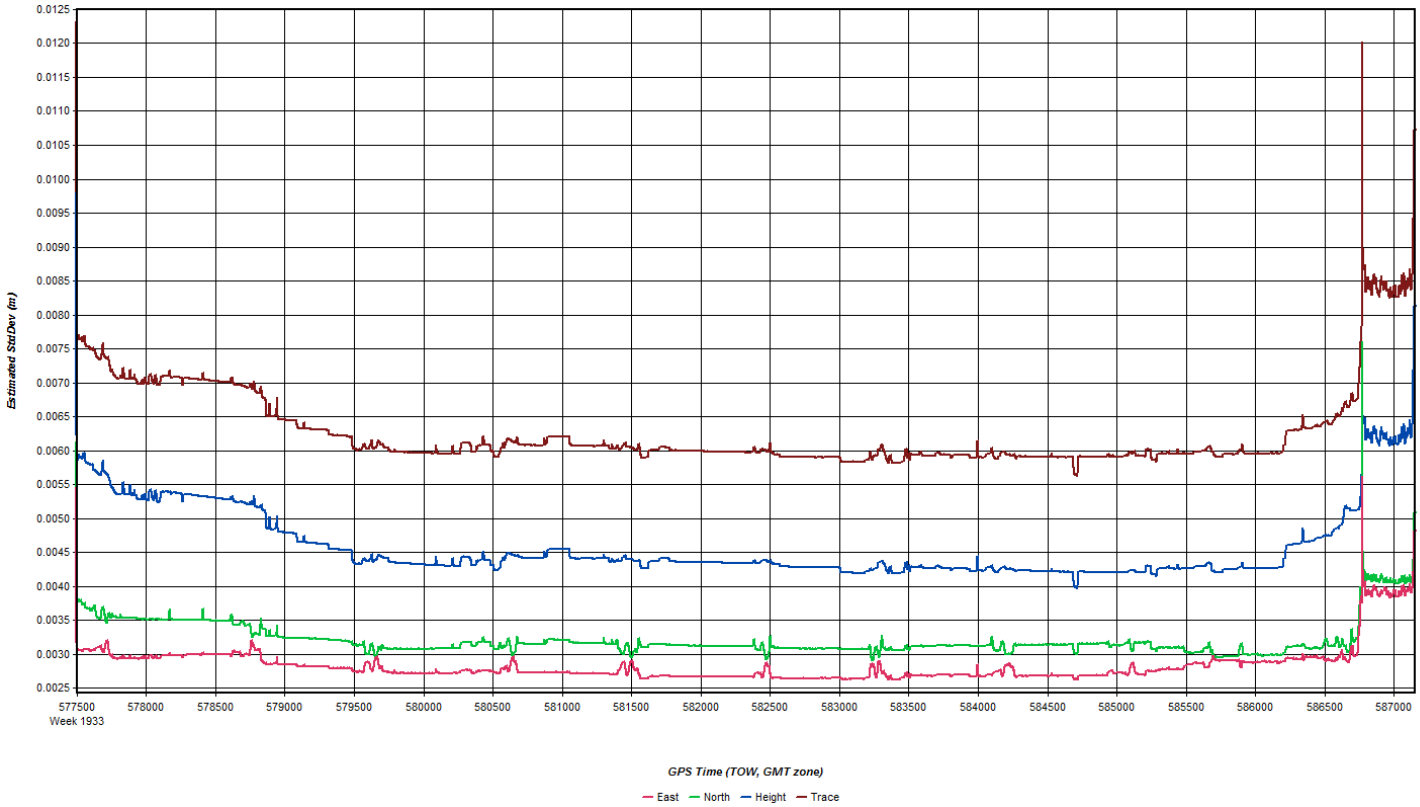


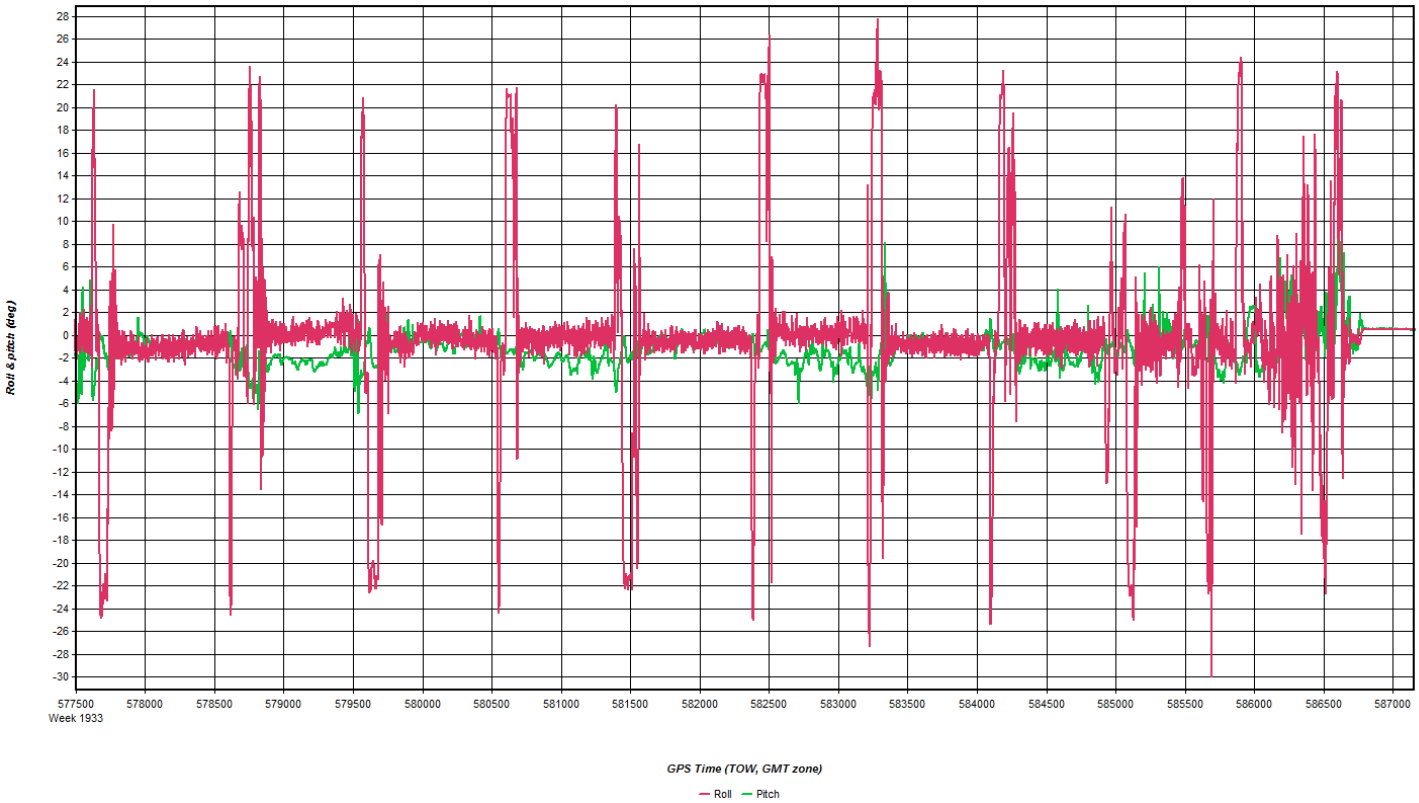

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
577500
Week 1933
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
583500
584000
584500
585000
585500
586000
586500
587000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

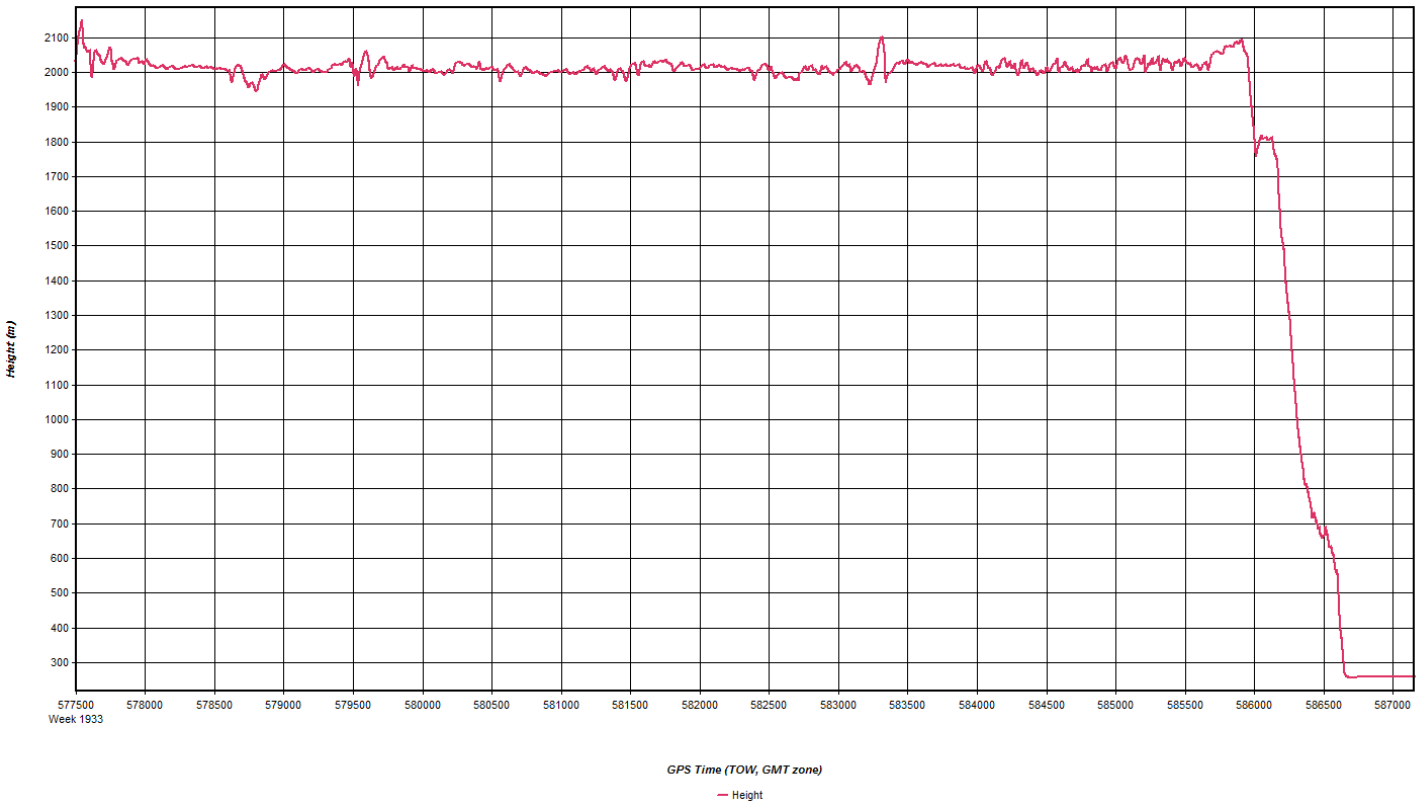

Separation (m)
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
-0.055
-0.060
-0.065
-0.070
-0.075
-0.080
-0.085
-0.090
-0.095
-0.100
-0.105
-0.110
-0.115
577500
Week 1933
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
583500
584000
584500
585000
585500
586000
586500
587000
GPS Time (TOW, GMT zone)
East
North
Up

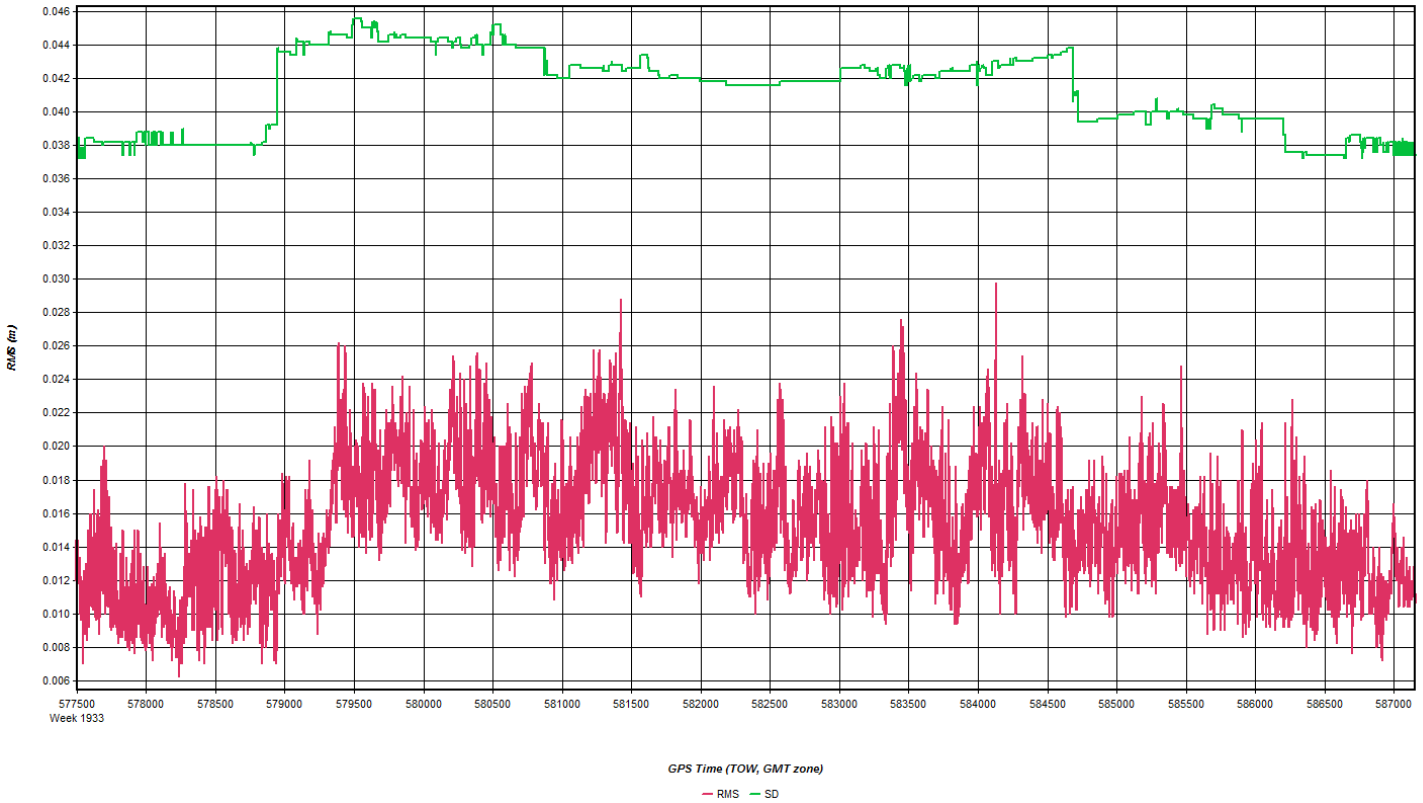

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
577500
Week 1933
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
583500
584000
584500
585000
585500
586000
586500
587000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

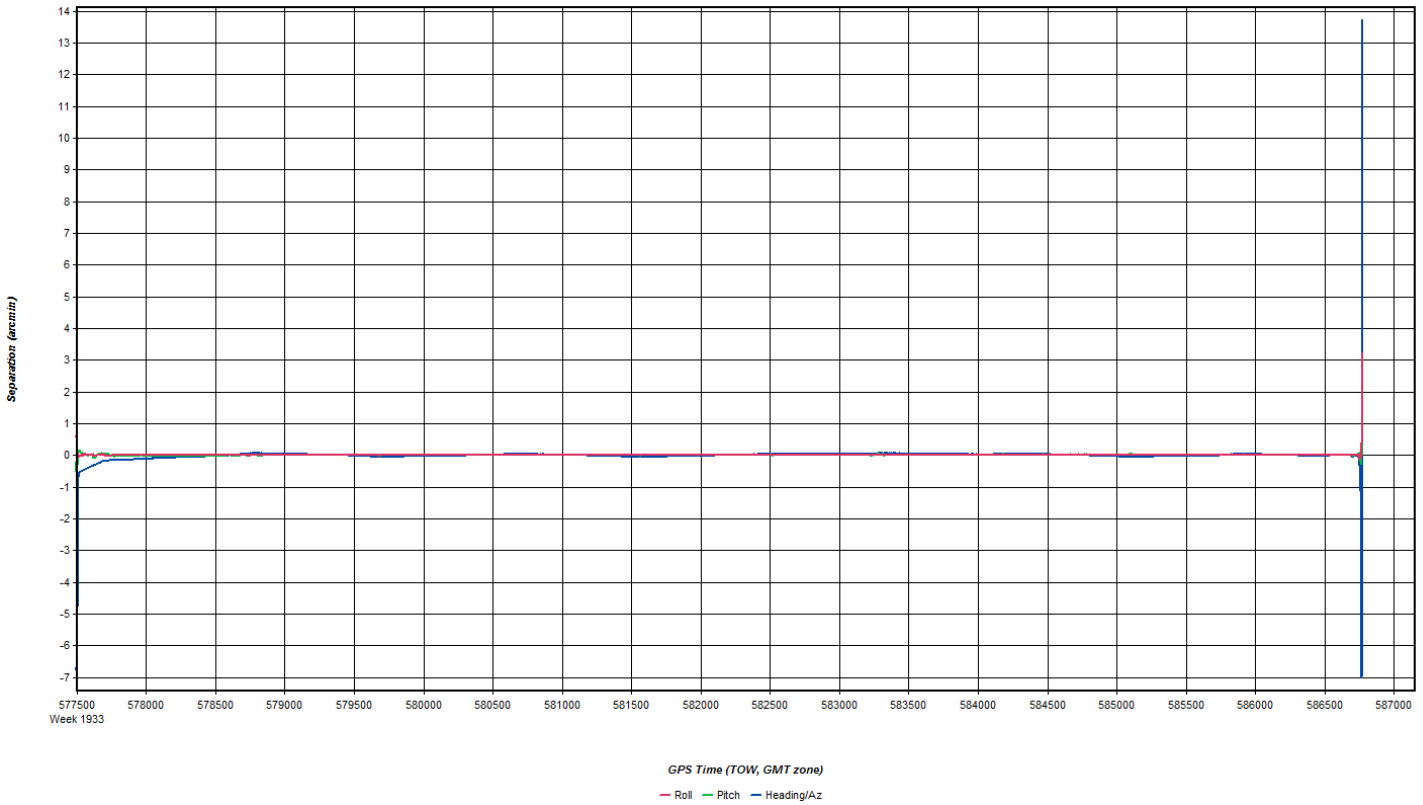

PDOP
1.20
1.18
1.16
1.14
1.12
1.10
1.08
1.06
1.04
1.02
1.00
0.98
0.96
0.94
0.92
0.90
0.88
0.86
0.84
0.82
577500
Week 1933
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
583500
584000
584500
585000
585500
586000
586500
587000
GPS Time (TOW, GMT zone)
PDOP

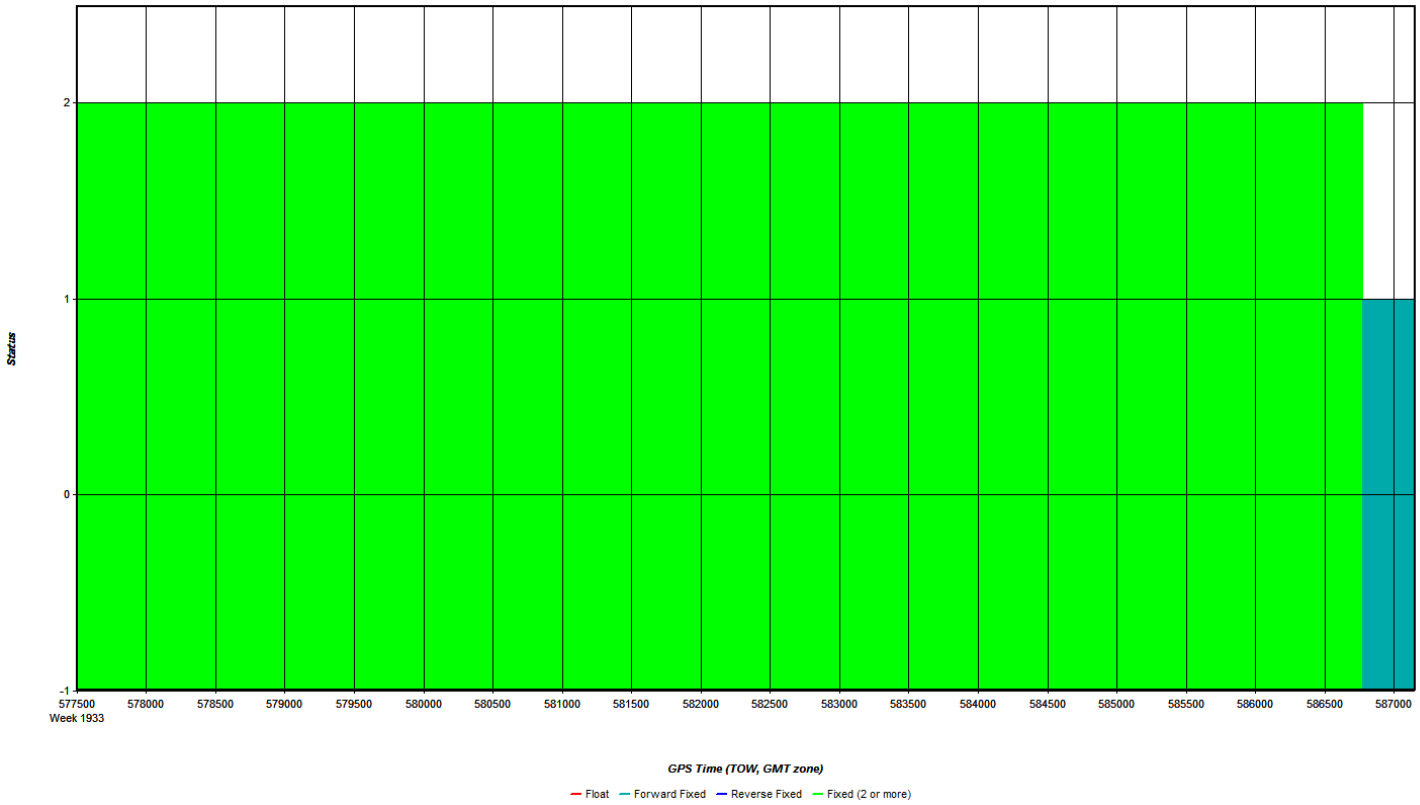

Estimated StdDev (m)
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
577500
Week 1933
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
583500
584000
584500
585000
585500
586000
586500
587000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

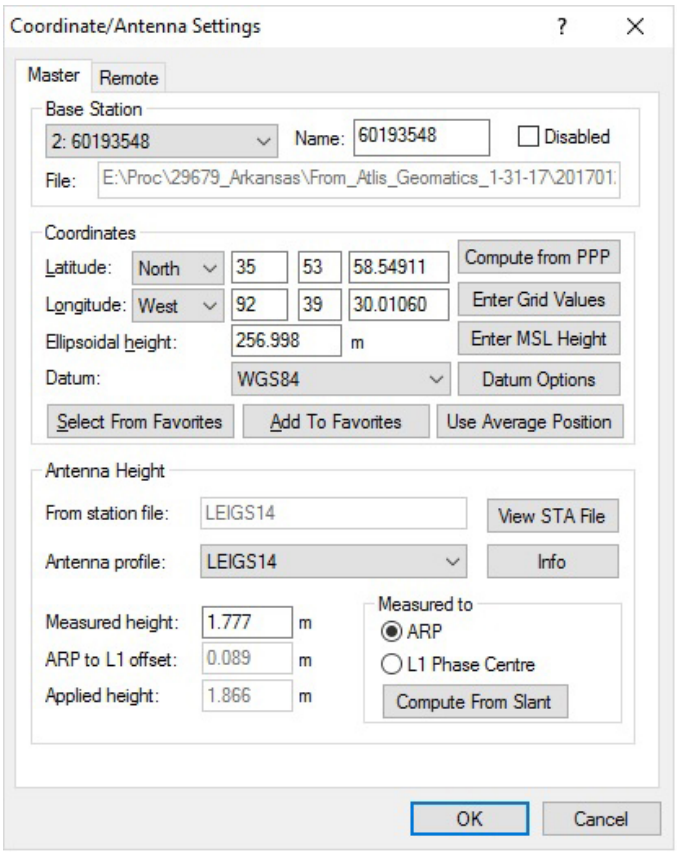

Roll & pitch (deg)
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
577500
Week 1933
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
583500
584000
584500
585000
585500
586000
586500
587000
GPS Time (TOW, GMT zone)
Roll
Pitch

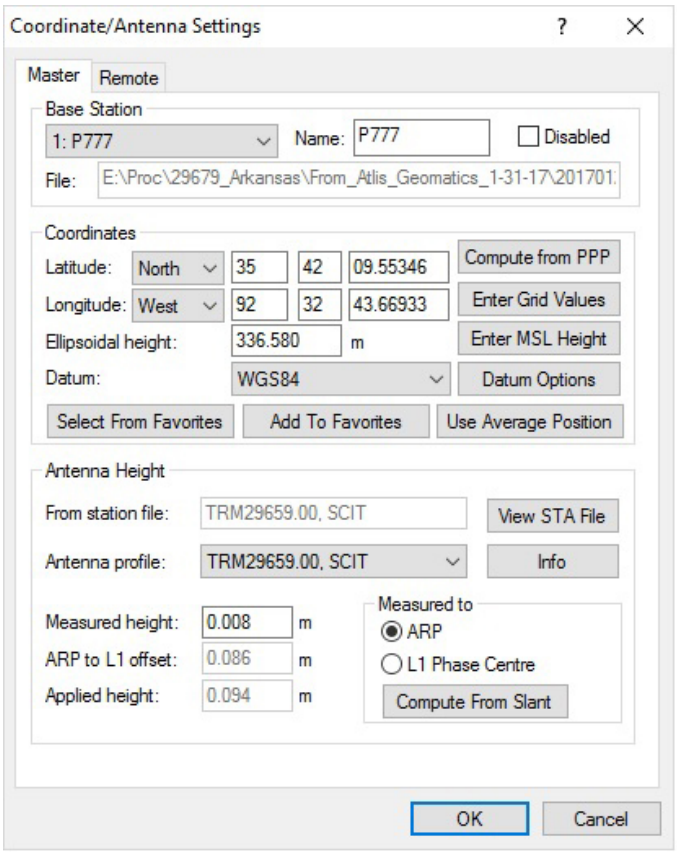

Height (m)
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
577500
Week 1933
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
583500
584000
584500
585000
585500
586000
586500
587000
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
577500
Week 1933
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
583500
584000
584500
585000
585500
586000
586500
587000
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arcmin)
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
-4
-5
-6
-7
577500
Week 1933
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
583500
584000
584500
585000
585500
586000
586500
587000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
577500
Week 1933
578000
578500
579000
579500
580000
580500
581000
581500
582000
582500
583000
583500
584000
584500
585000
585500
586000
586500
587000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
2: 60193548
Name: 60193548
Disabled
File: E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-31-17\201701
Coordinates
Latitude: North 35 53 58.54911
Longitude: West 92 39 30.01060
Ellipsoidal height: 256.998 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: LEIGS14
View STA File
Antenna profile: LEIGS14
Info
Measured height: 1.777 m
ARP to L1 offset: 0.089 m
Applied height: 1.866 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: P777
Name: P777
Disabled
File: E:\Proc\29679_Arkansas\From_Atlis_Geomatics_1-31-17\201701
Coordinates
Latitude: North 35 42 09.55346
Longitude: West 92 32 43.66933
Ellipsoidal height: 336.580 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM29659.00, SCIT
View STA File
Antenna profile: TRM29659.00, SCIT
Info
Measured height: 0.008 m
ARP to L1 offset: 0.086 m
Applied height: 0.094 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

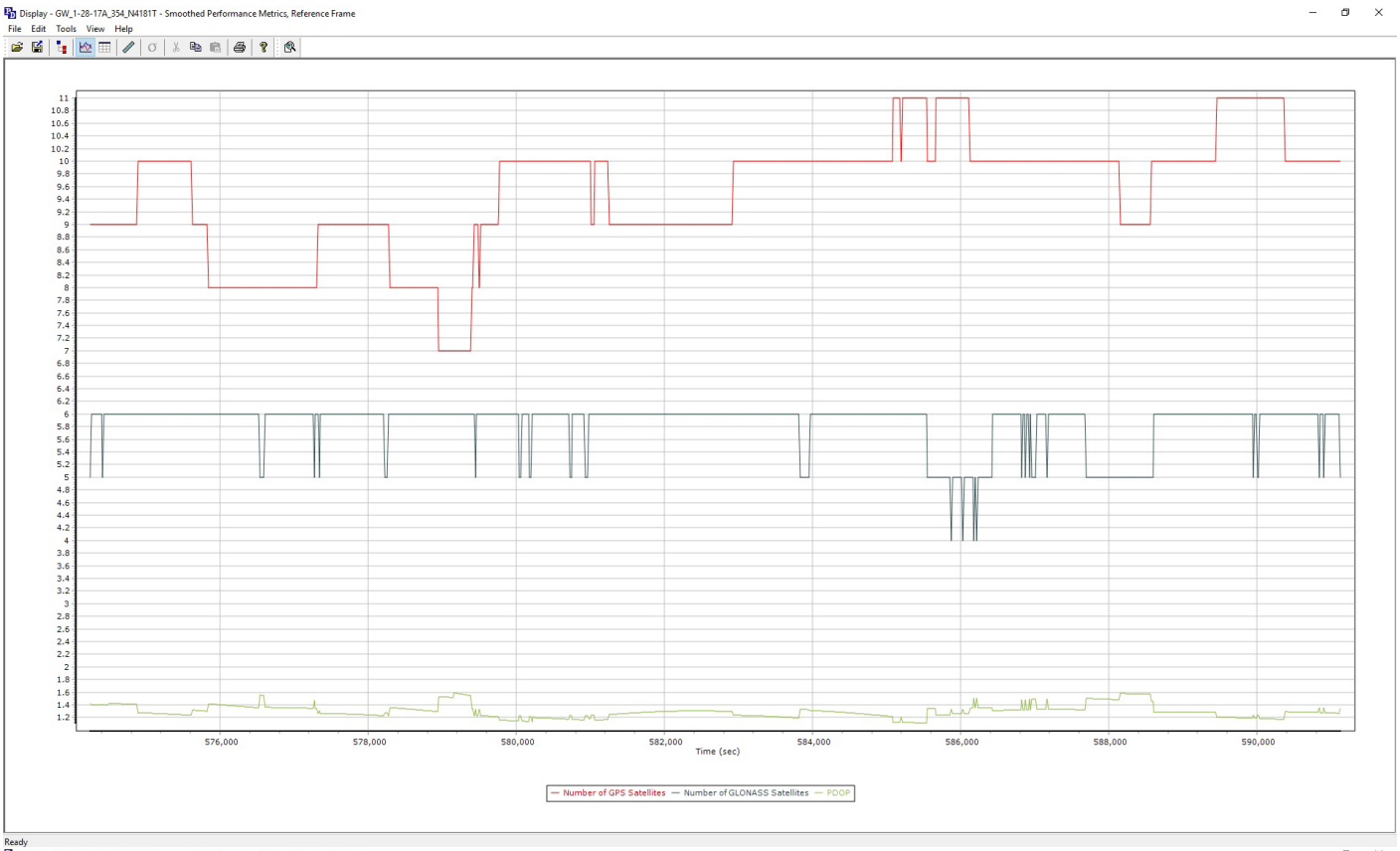
PROJECT NAME	Q.S. Arkansas	DATE	28/01/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel	IMU	Honeywell uIRS
AIRCRAFT	Navajo 310 C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Marshall AR.	DATA DRIVES	LiDar #1

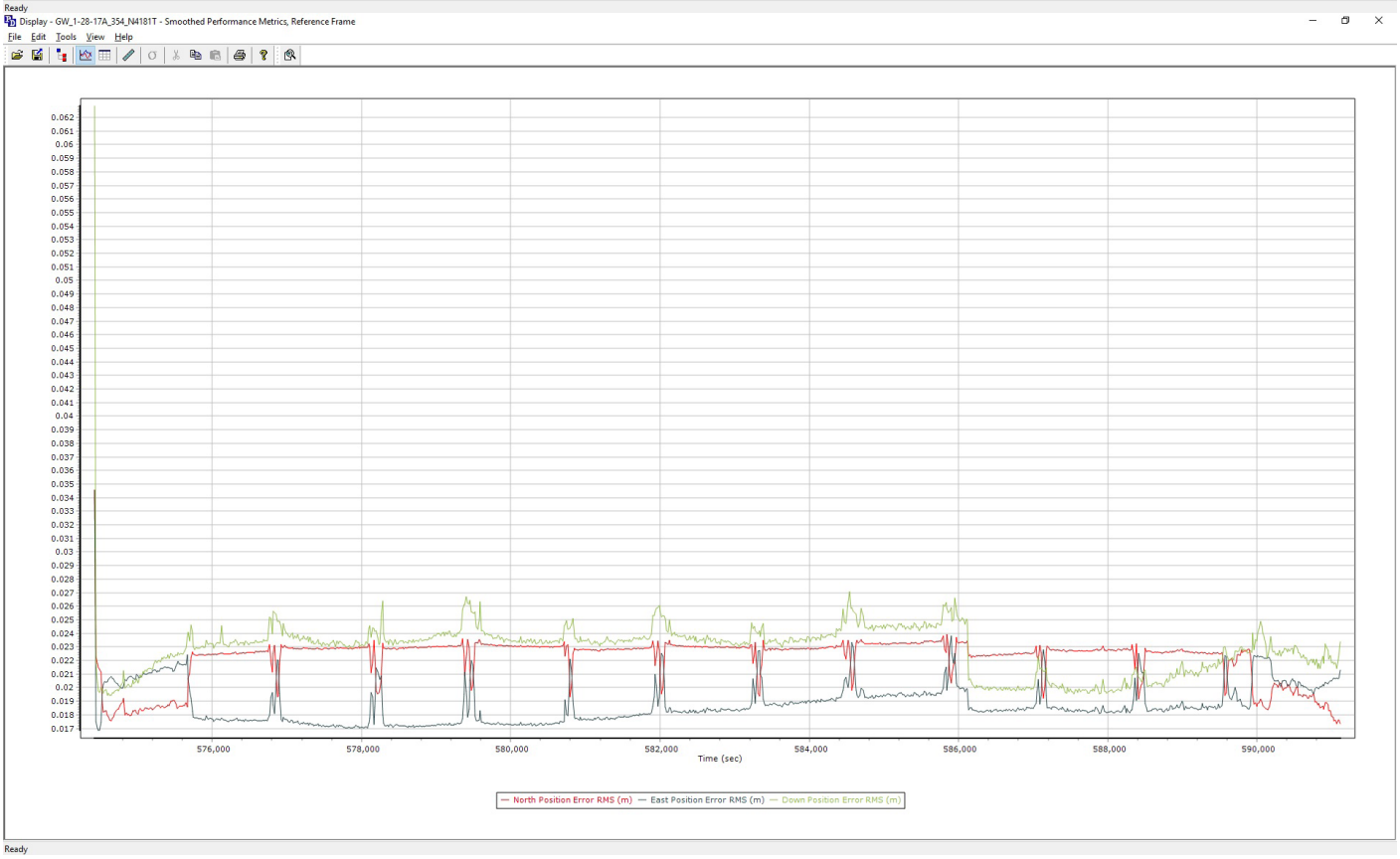
AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
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TOTAL:	4.03 hrs	TOTAL:	3.65 hrs	Laser Power:	100%	FOV:	40 D	Post Mission	19:00:00	19:05:00

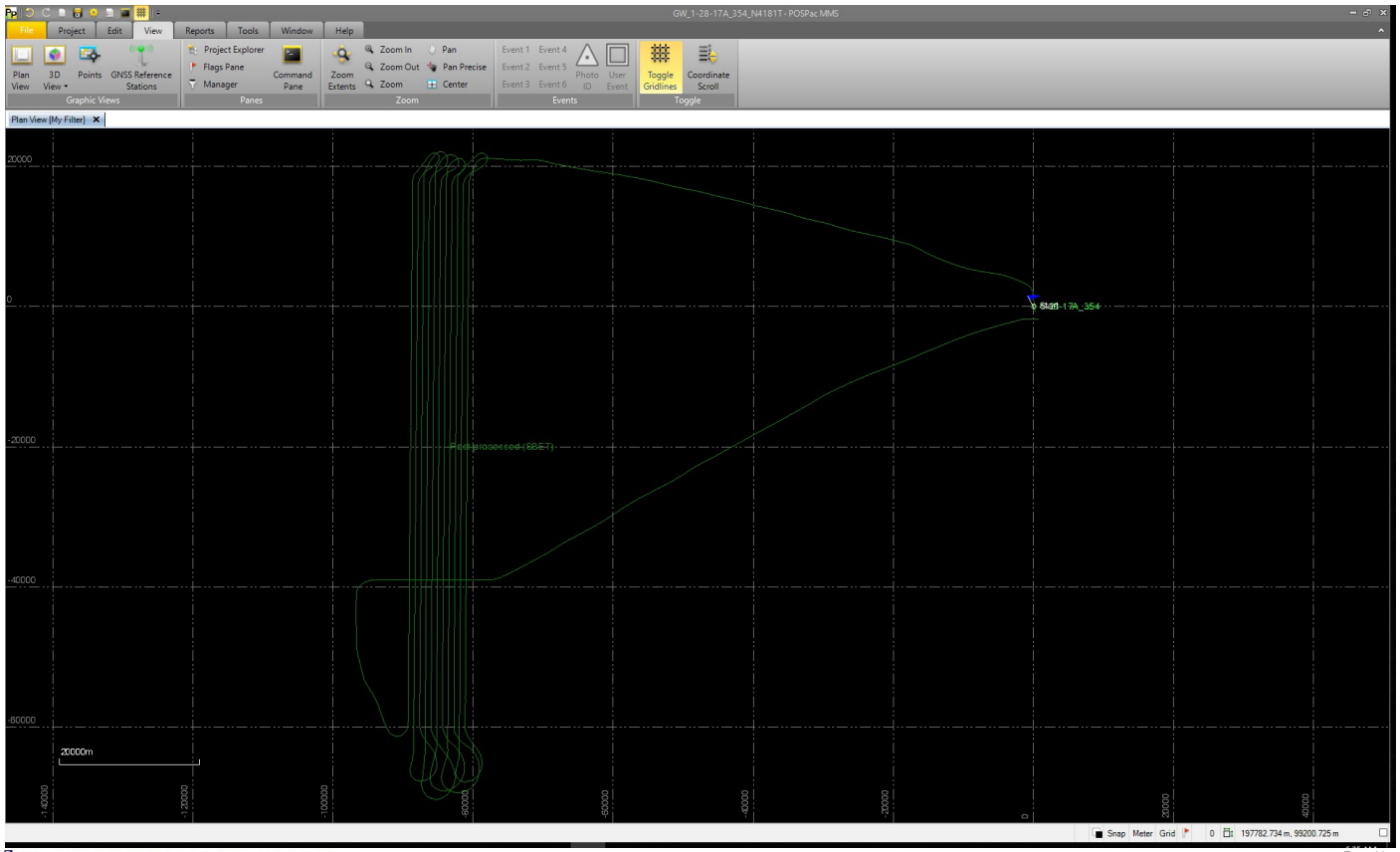
FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
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44		South	170128_161458	16:14:59	16:26:33	Complete line
45		North	170128_163009	16:30:10	16:43:10	Complete line
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50		South	170128_174849	17:48:50	17:59:41	Complete line
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CL		East	170128_184139	18:41:40	18:43:54	

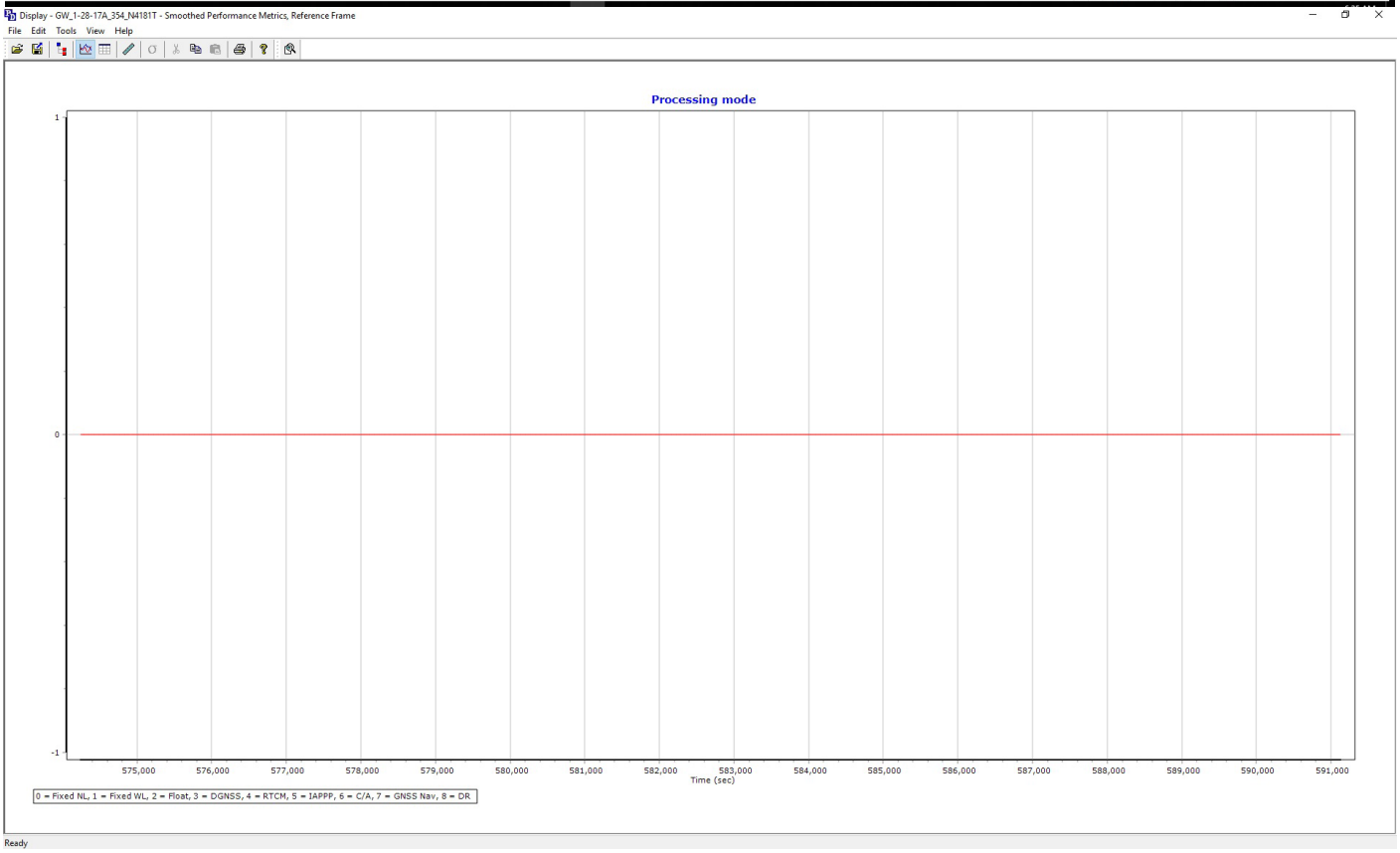
SUN ANGLE @Start: @End: @Peak:	Temp @ take off was -4C, clear skies. Sats and PDOPS averaged 19 and 1.1 Base station was set at the Marshall airport 14:20 to 19:15. Ant height is 1.777 to the ARP

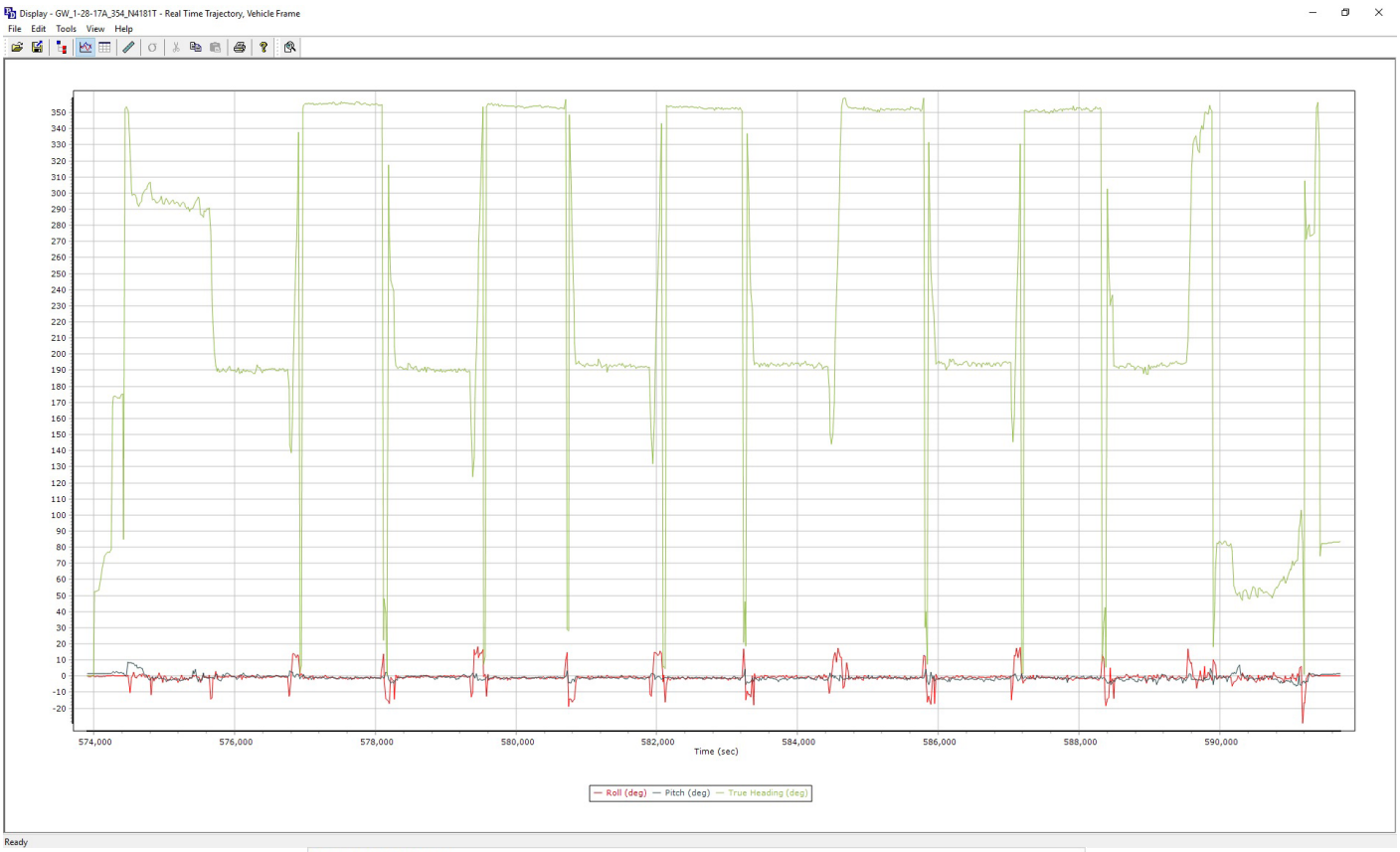
Jan 28, 2017-A (N4181T, SN354)

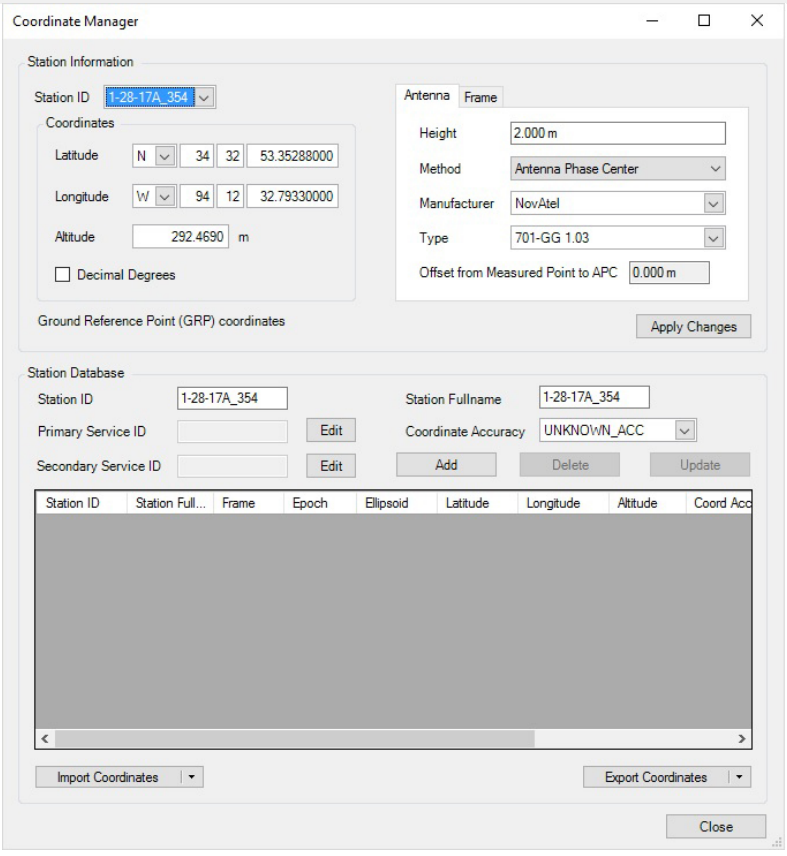

Display - GW_1-28-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
Number of GPS Satellites
Number of GLONASS Satellites
PDOP
Ready


Display - GW_1-28-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File Edit Tools View Help
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)
Ready

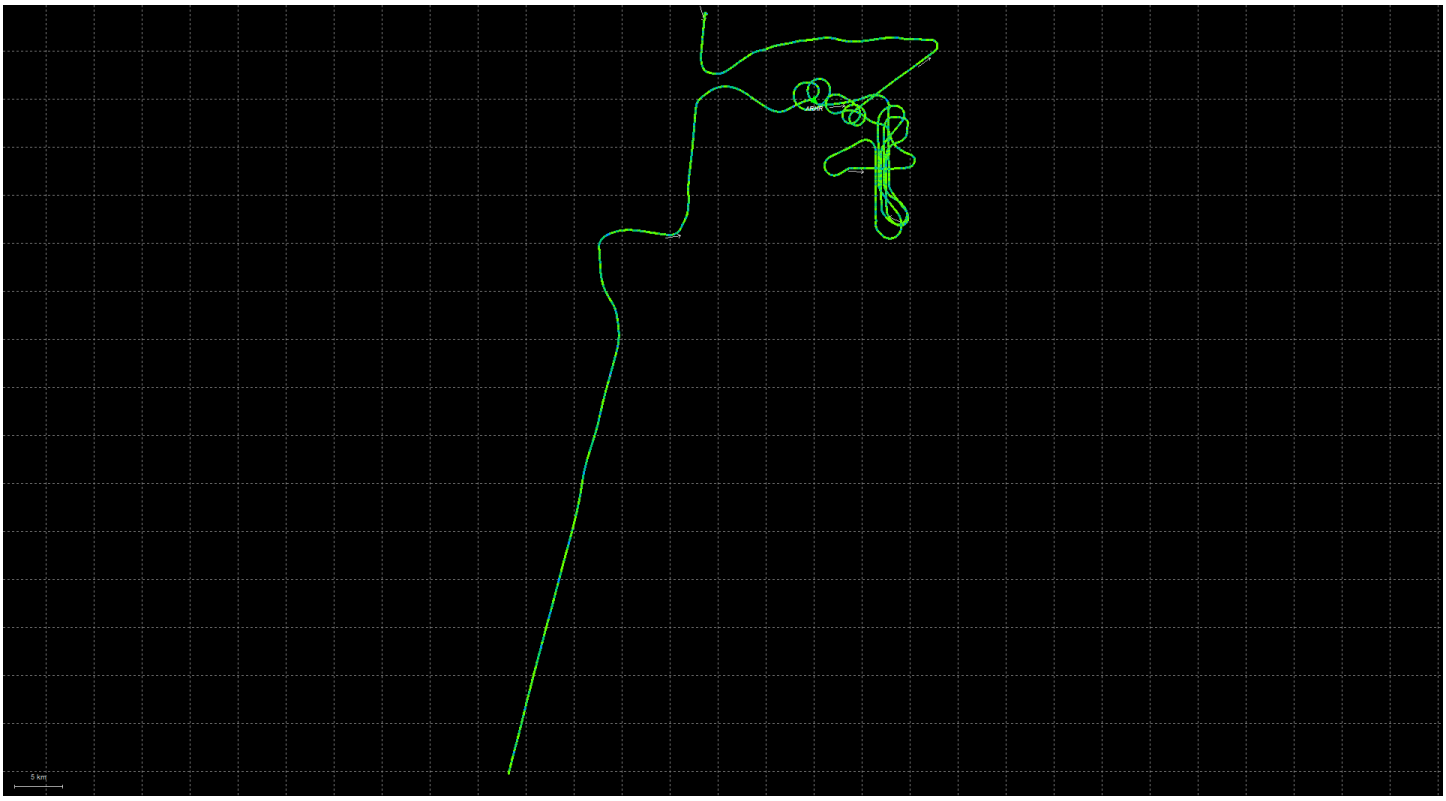

GW_1-28-17A_354_N4181T - POSPac MMS
File
Project
Edit
View
Reports
Tools
Window
Help
Plan View
3D View
Points
GNSS Reference Stations
Graphic Views
Project Explorer
Flags Pane
Manager
Command Pane
Panes
Zoom Extents
Zoom In
Zoom Out
Zoom
Pan
Pan Precise
Center
Zoom
Event 1
Event 2
Event 3
Event 4
Event 5
Event 6
Photo ID
User Event
Events
Toggle Gridlines
Coordinate Scroll
Toggle
Plan View [My Filter]
20000
0
-20000
-40000
-60000
20000m
Snap
Meter
Grid
197782.734 m, 99200.725 m

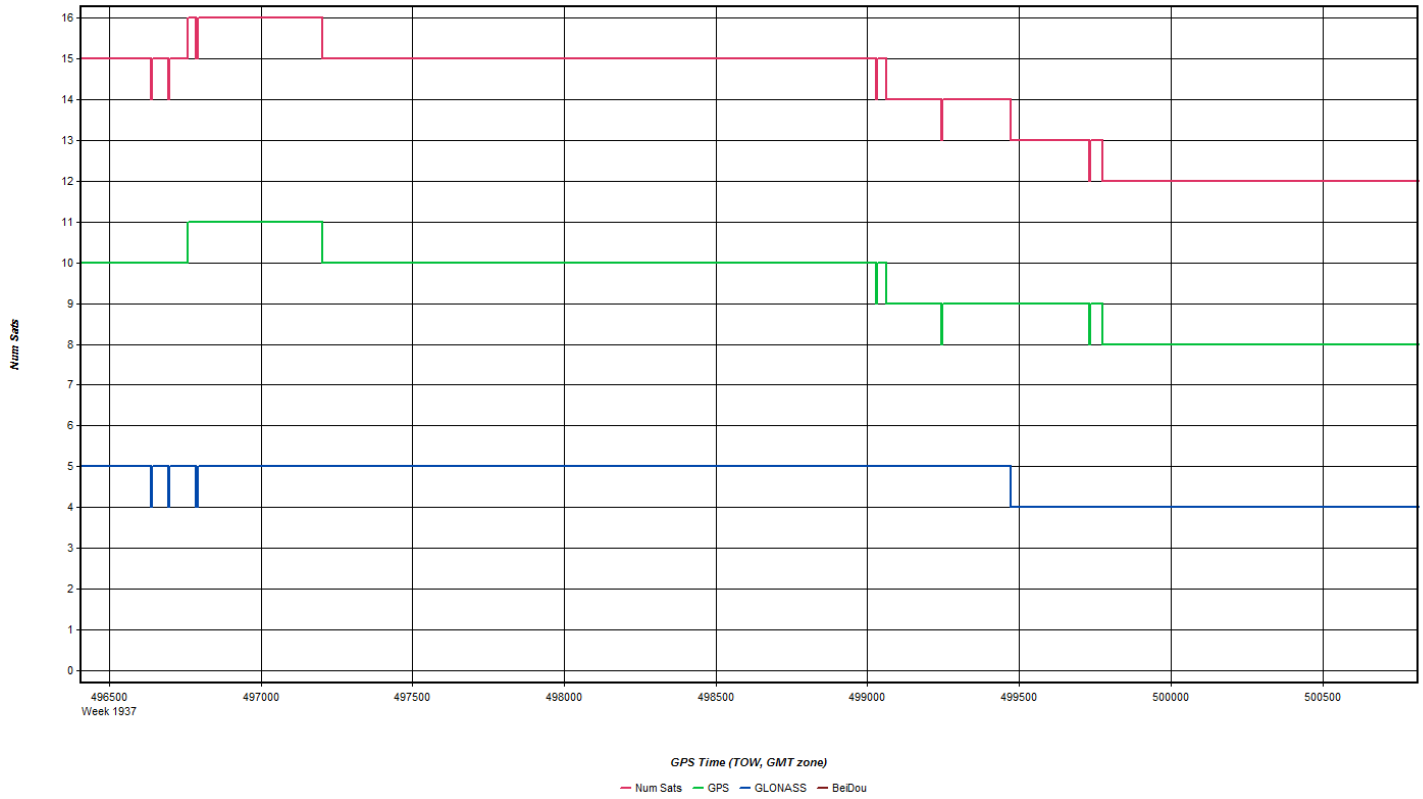

Display - GW_1-28-17A_354_N4181T - Smoothed Performance Metrics, Reference Frame
File
Edit
Tools
View
Help
Processing mode
1
0
-1
575,000
576,000
577,000
578,000
579,000
580,000
581,000
582,000
583,000
584,000
585,000
586,000
587,000
588,000
589,000
590,000
591,000
Time (sec)
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR
Ready

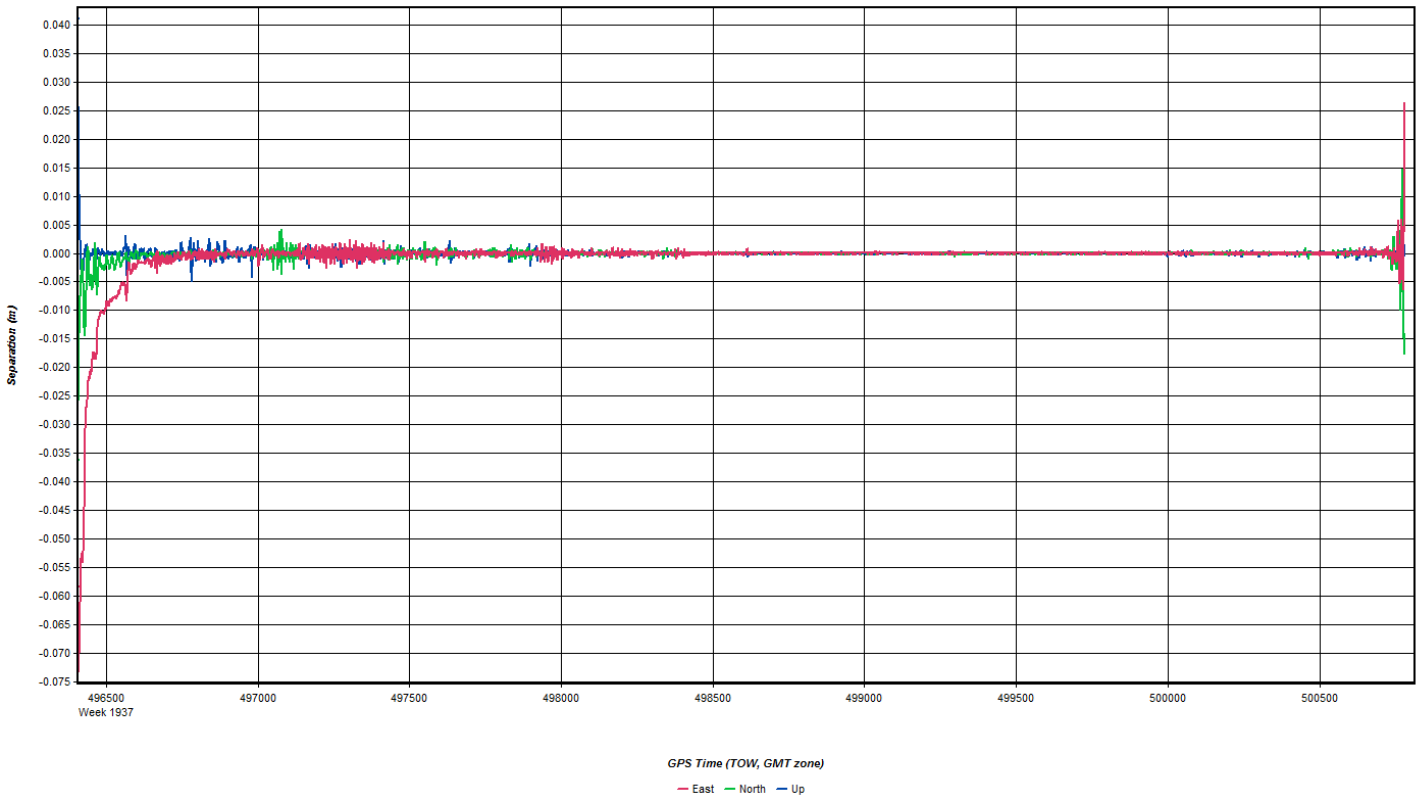

Display - GW_1-28-17A_354_N4181T - Real Time Trajectory, Vehicle Frame
File Edit Tools View Help
Time (sec)
Roll (deg) Pitch (deg) True Heading (deg)
Ready

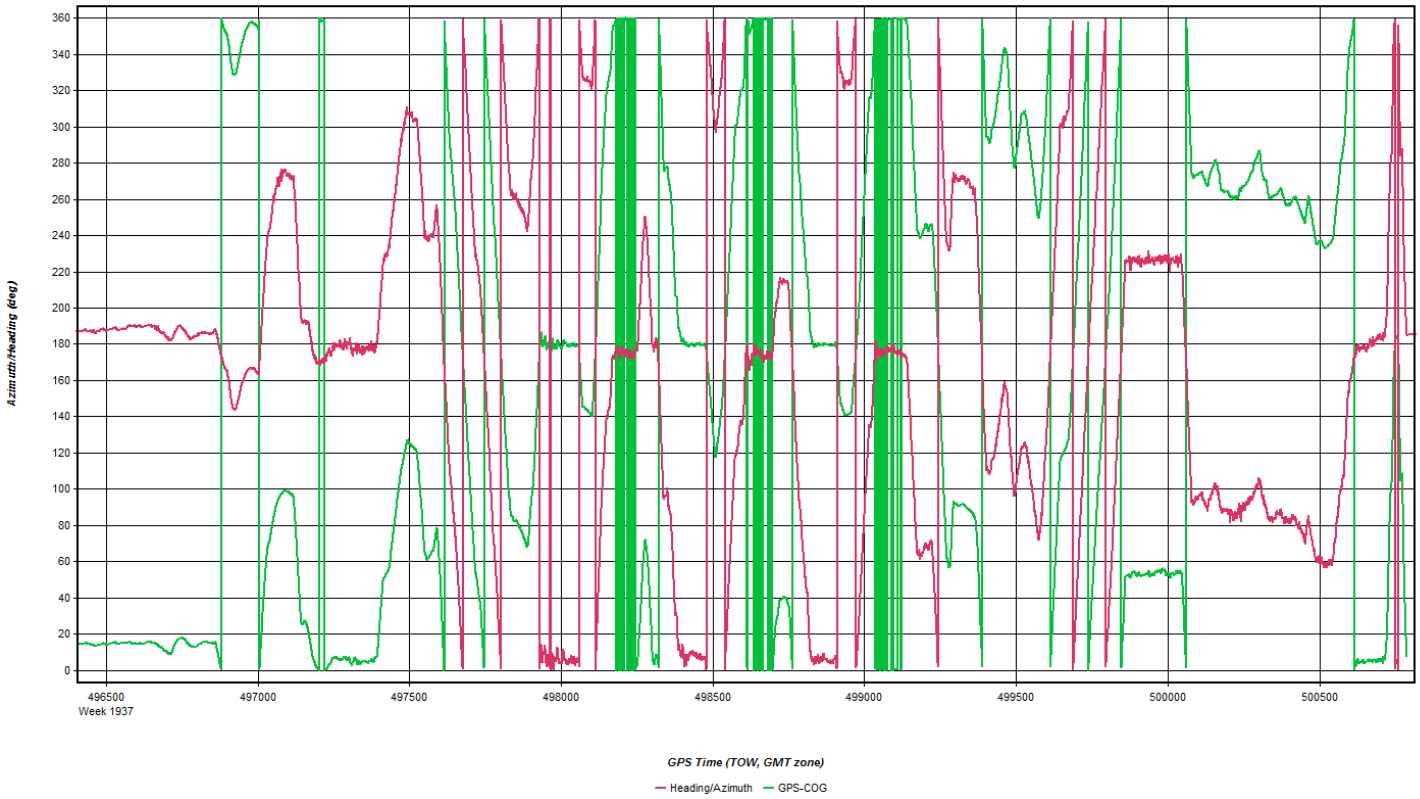

Coordinate Manager
Station Information
Station ID 1-28-17A_354
Coordinates
Latitude N 34 32 53.35288000
Longitude W 94 12 32.79330000
Altitude 292.4690 m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna Frame
Height 2.000 m
Method Antenna Phase Center
Manufacturer NovAtel
Type 701-GG 1.03
Offset from Measured Point to APC 0.000 m
Apply Changes
Station Database
Station ID 1-28-17A_354
Primary Service ID Edit
Secondary Service ID Edit
Station Fullname 1-28-17A_354
Coordinate Accuracy UNKNOWN_ACC
Add Delete Update
Station ID Station Full... Frame Epoch Ellipsoid Latitude Longitude Altitude Coord Acc
Import Coordinates
Export Coordinates
Close

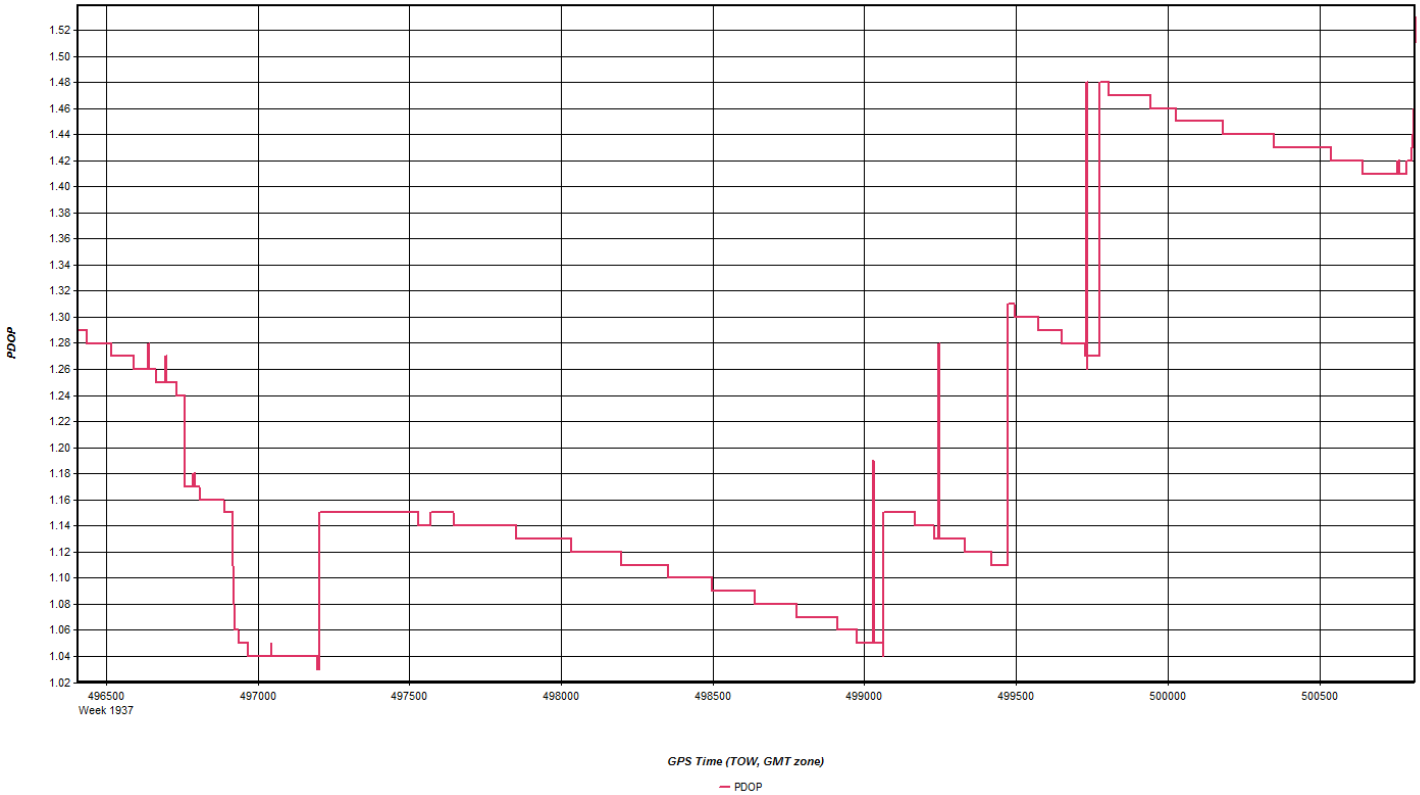
Feb 24, 2017-A (C-FVZM, SN7229)

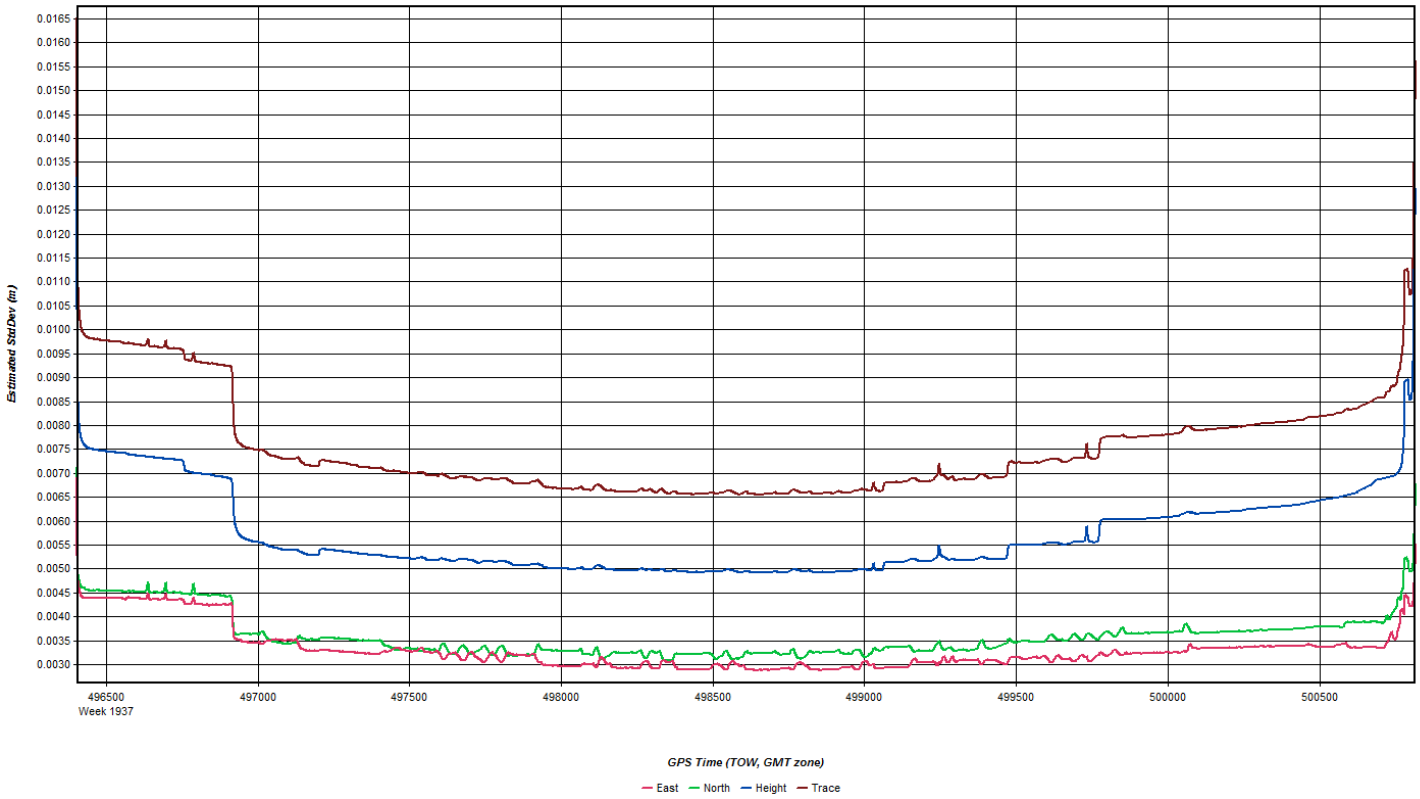


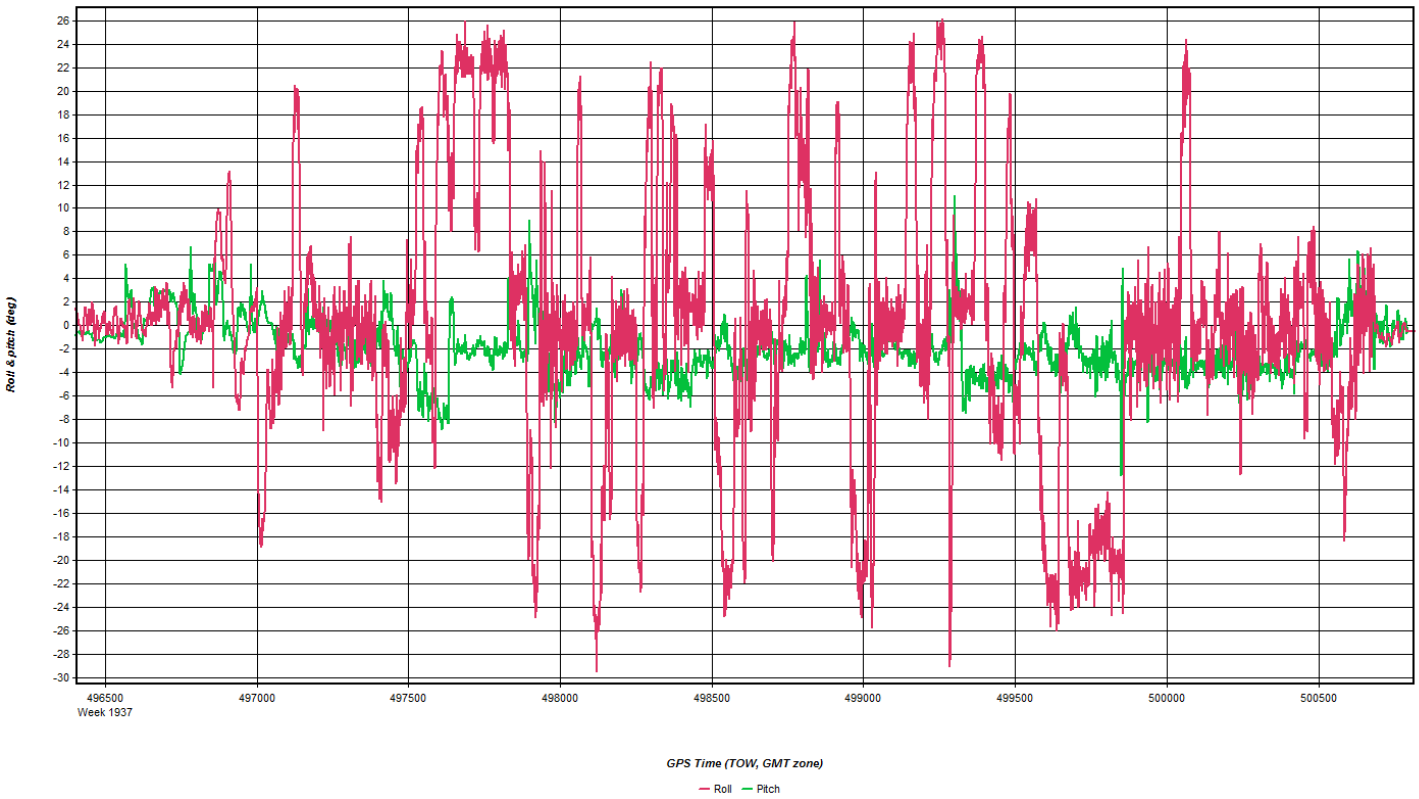

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
496500
Week 1937
497000
497500
498000
498500
499000
499500
500000
500500
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

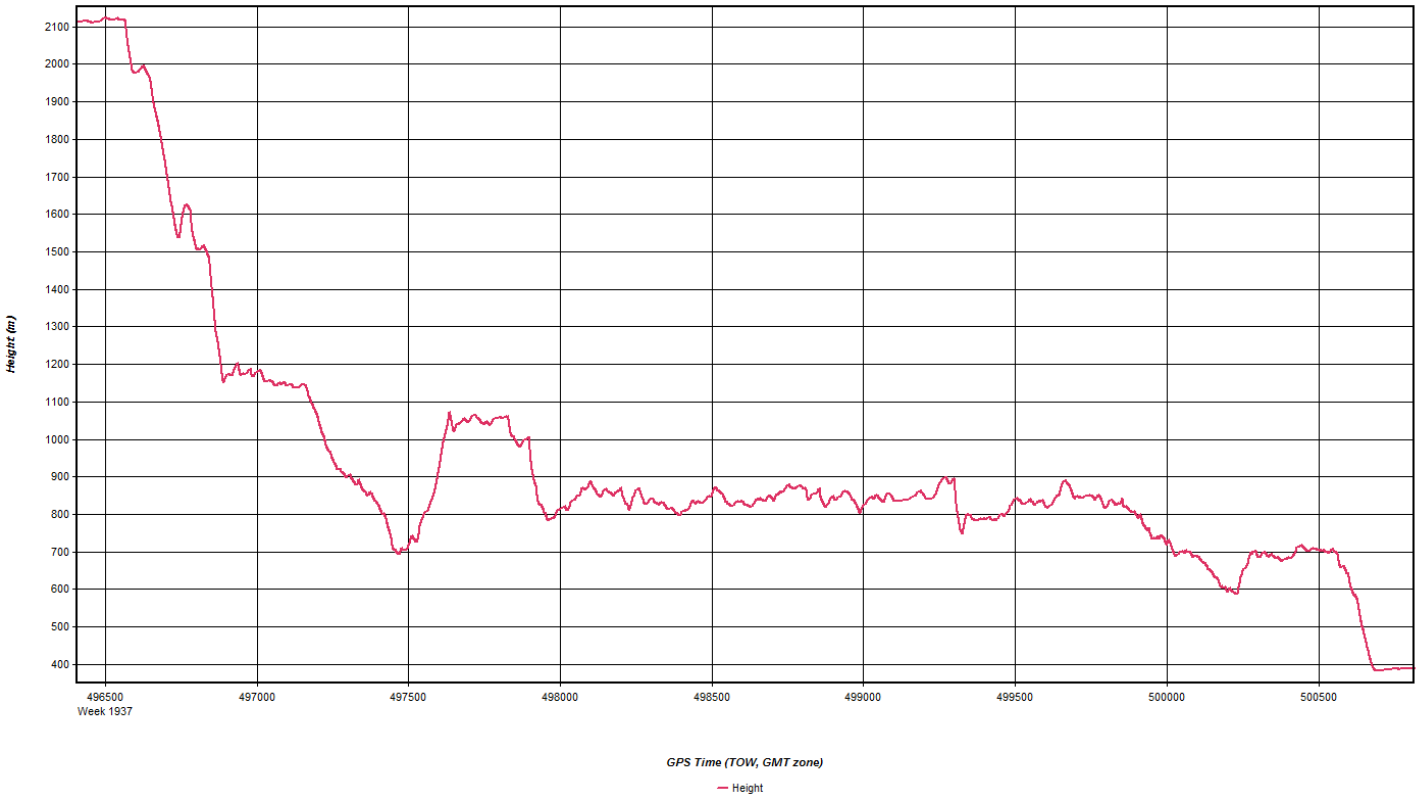

Separation (m)
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
-0.055
-0.060
-0.065
-0.070
-0.075
496500
Week 1937
497000
497500
498000
498500
499000
499500
500000
500500
GPS Time (TOW, GMT zone)
East
North
Up

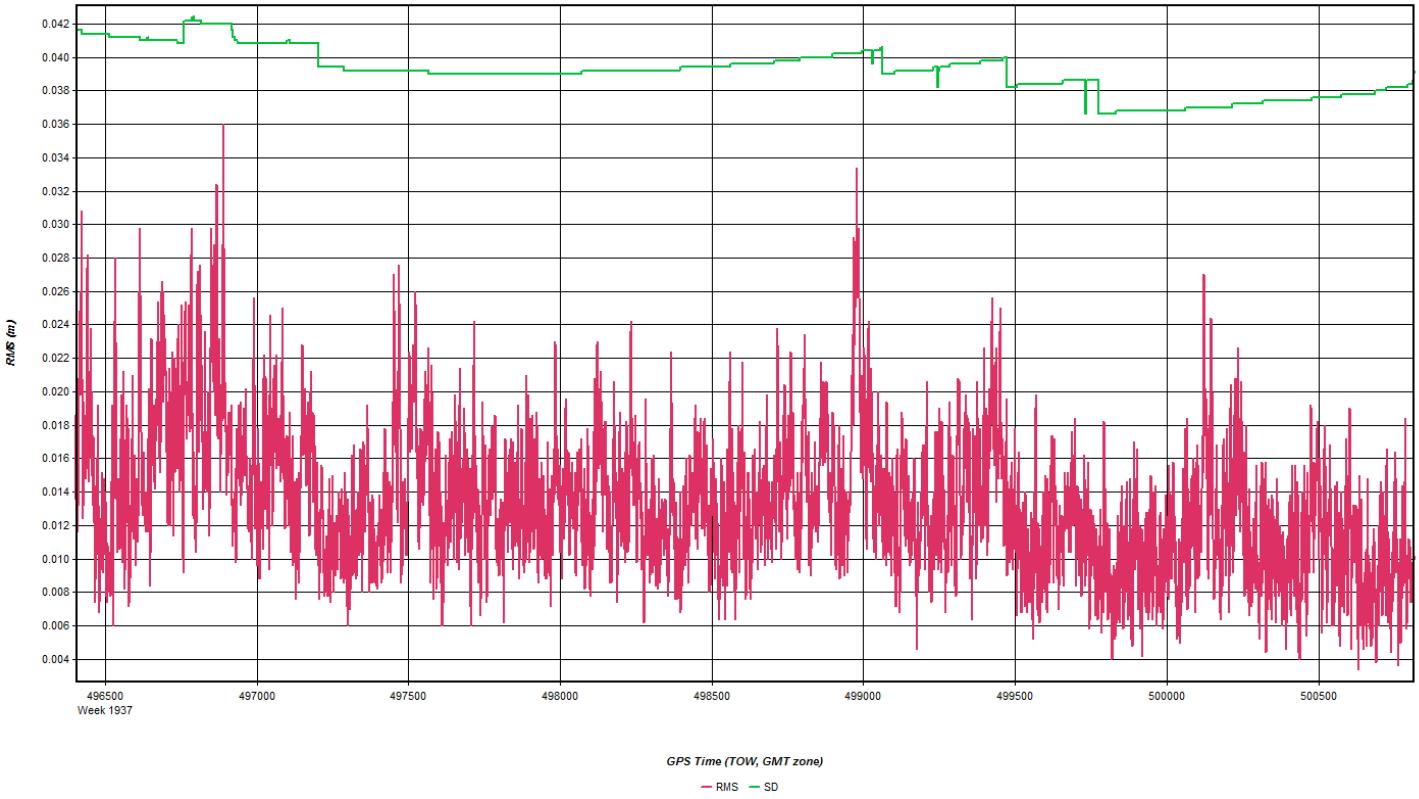

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
496500
Week 1937
497000
497500
498000
498500
499000
499500
500000
500500
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

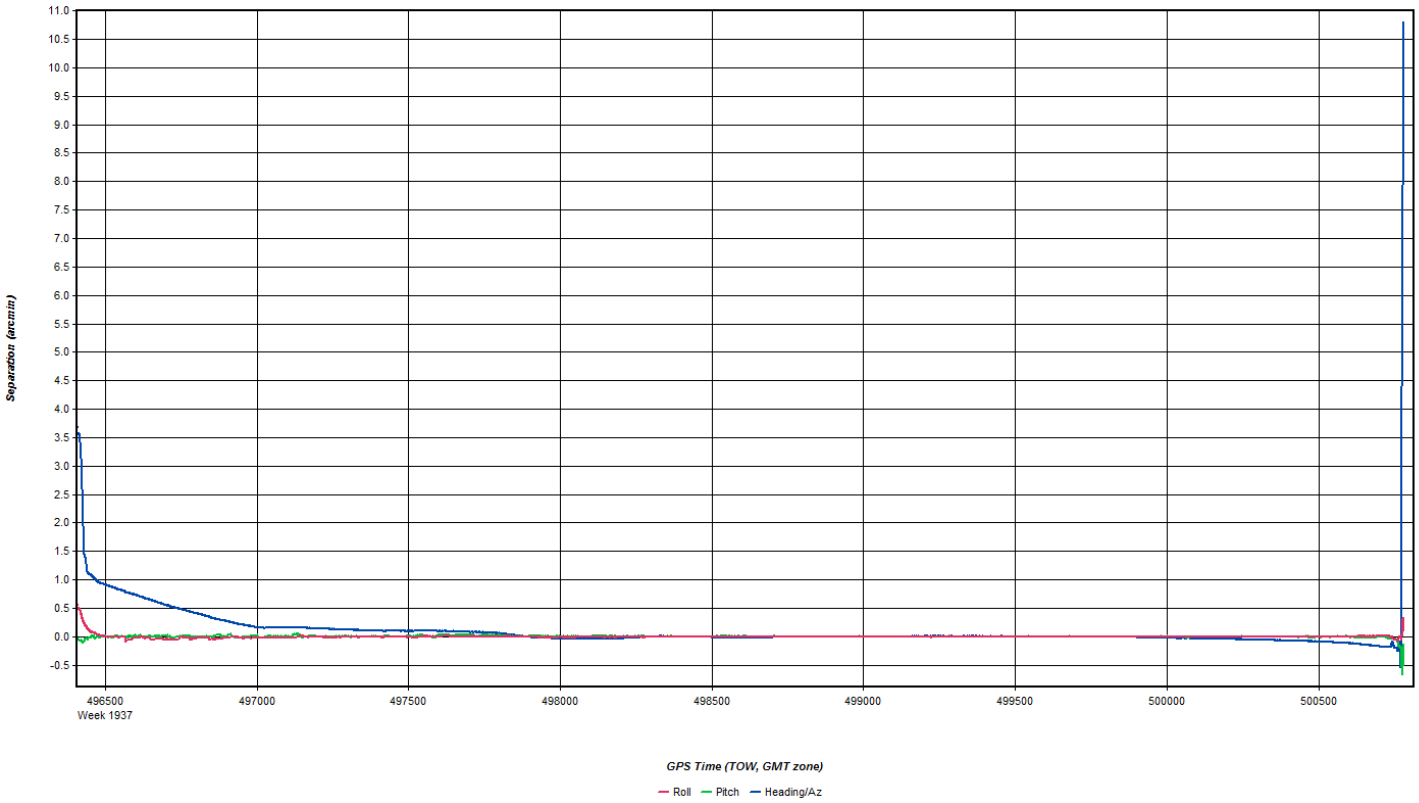

PDOP
1.52
1.50
1.48
1.46
1.44
1.42
1.40
1.38
1.36
1.34
1.32
1.30
1.28
1.26
1.24
1.22
1.20
1.18
1.16
1.14
1.12
1.10
1.08
1.06
1.04
1.02
496500
Week 1937
497000
497500
498000
498500
499000
499500
500000
500500
GPS Time (TOW, GMT zone)
PDOP

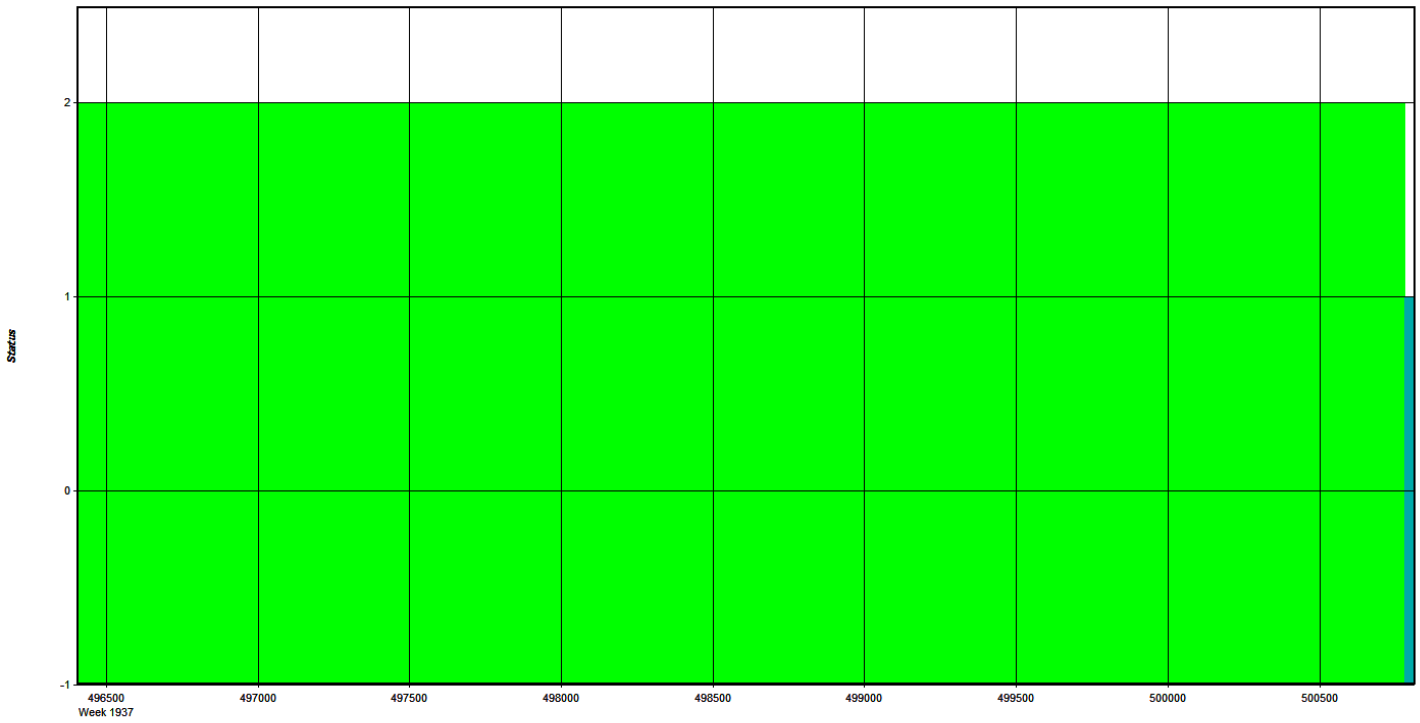

Estimated StdDev (m)
0.0165
0.0160
0.0155
0.0150
0.0145
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
496500
Week 1937
497000
497500
498000
498500
499000
499500
500000
500500
GPS Time (TOW, GMT zone)
East
North
Height
Trace

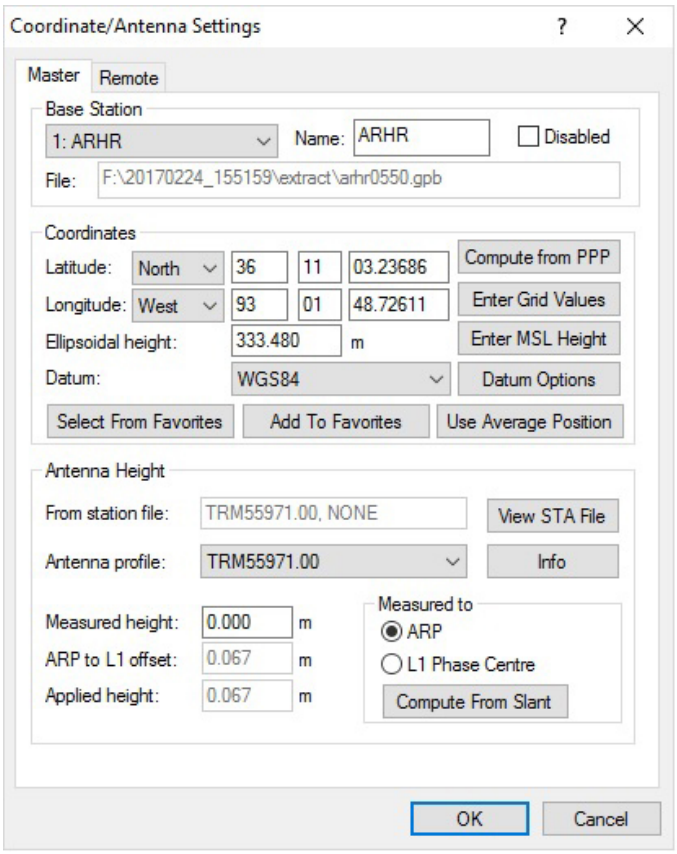

Roll & pitch (deg)
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
496500
Week 1937
497000
497500
498000
498500
499000
499500
500000
500500
GPS Time (TOW, GMT zone)
Roll
Pitch


Height (m)
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
496500
Week 1937
497000
497500
498000
498500
499000
499500
500000
500500
GPS Time (TOW, GMT zone)
Height


RMS (m)
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
496500
Week 1937
497000
497500
498000
498500
499000
499500
500000
500500
GPS Time (TOW, GMT zone)
RMS
SD


Separation (arc:min)
11.0
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
496500
Week 1937
497000
497500
498000
498500
499000
499500
500000
500500
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Status
2
1
0
-1
496500
Week 1937
497000
497500
498000
498500
499000
499500
500000
500500
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Coordinate/Antenna Settings
Master
Remote
Base Station
1: ARHR
Name: ARHR
Disabled
File: F:\20170224_155159\extract\arhr0550.gpb
Coordinates
Latitude: North 36 11 03.23686
Longitude: West 93 01 48.72611
Ellipsoidal height: 333.480 m
Datum: WGS84
Compute from PPP
Enter Grid Values
Enter MSL Height
Datum Options
Select From Favorites
Add To Favorites
Use Average Position
Antenna Height
From station file: TRM55971.00, NONE
View STA File
Antenna profile: TRM55971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

LIDAR & AERIAL PHOTO FLIGHT LOG

20 YEARS OF EXCELLENCE — ATLIS — LIDAR + IMAGERY + GEOMATICS

PROJECT NAME	QS. Arkansas	DATE	24/02/2017
SENSOR OPERATOR	Michael Kettridge	SENSOR(S)	ALS70-HP / RCD30
PILOT	Daniel Thibeault	IMU	Honeywell uIRS
AIRCRAFT	Navajo C-FVZM	ABGPS	IPAS-CUS6
AIRBASE	Harrison, AR	DATA DRIVES	LiDar#3

AIRCRAFT BLOCK TIME				MISSION DETAILS				STATIC ALIGNMENT	GPS TIME	
Engine On:	14:35:00	Takeoff:	14:43:00	AGL Height:	550m	Pulse Rate:	471		START	END
Engine Off:	19:09:00	Landing:	19:05:00	Speed:	140 kt	Scan Rate:	53	Pre-Mission	18:12:00	18:17:00
TOTAL:	4.6 hr	TOTAL:	4.4 hr	Laser Power:	100.00%	FOV:	40	Post Mission	18:45:00	18:50:00

FLIGHT LINE #	SET HISTO	DIRECTION	LiDAR File Name	GPS TIME START	GPS TIME END	COMMENTS
6		South	170224_181953	18:19:54	18:20:35	All Complete
5		North	170224_182312	18:23:14	18:24:00	All Complete
4		South	170224_182655	18:26:56	18:27:36	All Complete
3		North	170224_183024	18:30:37	18:31:15	All Complete
2		South	170224_183408	18:34:09	18:34:48	All Complete
1		North	170224_183756	18:37:57	18:38:34	All Complete
CL		East	170224_184634	18:41:34	18:42:03	All Complete

SUN ANGLE @Start: @End: @Peak:	Low over cast, clouds were at 3000 feet Sats and DOPS averaged 18 and 1.2 The CORS station ARHR was used for this flight. Because the clouds were low the fight was done at 550m agl so 6 lines were required to cover the data void.

Appendix B

Survey Report

May 19, 2017

Survey Report of
LiDAR Calibration & Quality Control Points

USGS Contract: G16PC00016

AR_North Corridor FEMA R6
LiDAR_2016_D17

USGS Task Order: G17PD00009

Presented to:

USGS
science for a changing world

Presented By:

Contents of Report

Project Procedure Summary.....1

Area of Interest & Point Location Maps.....5

- Calibration Points.....6
- NVA – Bare Earth Points.....7
- NVA - Urban Area Points.....8
- VVA - Tall Weed Points.....9
- VVA - Forest Points.....10
- VVA – Brushland Points.....11

Final Point Coordinates.....12

- Calibration Points.....13
- NVA – Bare Earth Points.....19
- NVA - Urban Area Points.....24
- VVA - Tall Weed Points.....26
- VVA - Forest Points.....28
- VVA – Brushland Points.....32

Point Location & Accuracy Data Sheets.....33

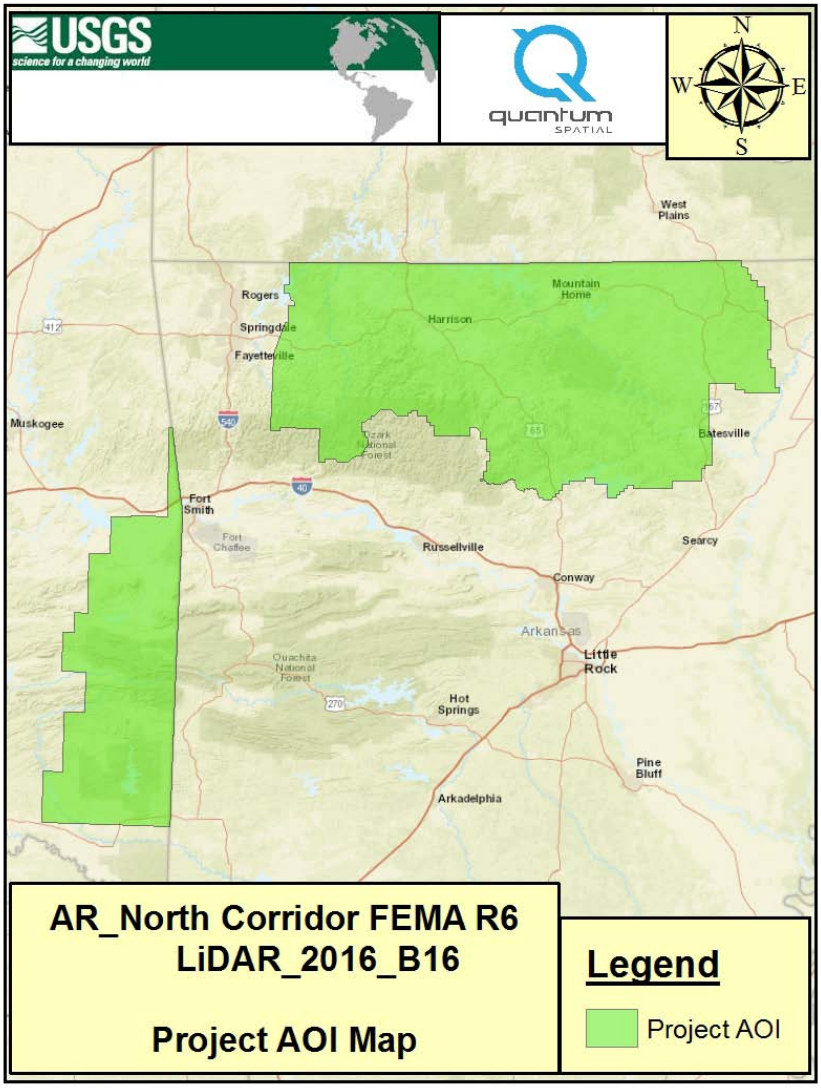
- Calibration Points.....34
- NVA – Bare Earth Points.....260
- NVA - Urban Area Points.....435
- VVA - Tall Weed Points.....482
- VVA - Forest Points.....526
- VVA – Brushland Points.....640

Introduction

Quantum Spatial, Inc. was contracted by USGS under task order G16PD00009 to Survey LiDAR calibration and quality control points in support of AR_North Corridor FEMA R6 LiDAR_2016_D17. This is the report of the technical approach used and detail of each point surveyed.

Project Area

The Project Areas, shown in the figure below, consists of approximately 11,421 square miles.



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 220 Non-Vegetated Vertical Assessment (NVA) and 162 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:

NVA Class	# of Points
Bare Earth	174
Urban Area	46

VVA Class	# of Points
Forested	113
Tall Weeds/Crops	43
Brushland/Trees	6

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

Survey Accuracy Requirements

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

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

Field Survey Methodology

Date Range: January 19, 2017 – May 6, 2017

Equipment Used:

Field crews used Trimble R8 dual frequency GNSS receivers as base stations and rovers.

GNSS Methodology:

A combination of fast static GPS and traditional surveying methods were used during this project. The fast static GPS method consisted of collecting a minimum 26 minutes of static data. The data was downloaded and baselines processed to NGS CORS and virtual Trimble VRSNow base stations. The network was adjusted holding the CORS as control.

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 total station to survey the forested check points. Multiple observations were collected at each check point and the coordinates were compared and averaged.

All of the GPS information was downloaded, processed and analyzed using Trimble Business Center processing software.

Overall Project Accuracy Statement

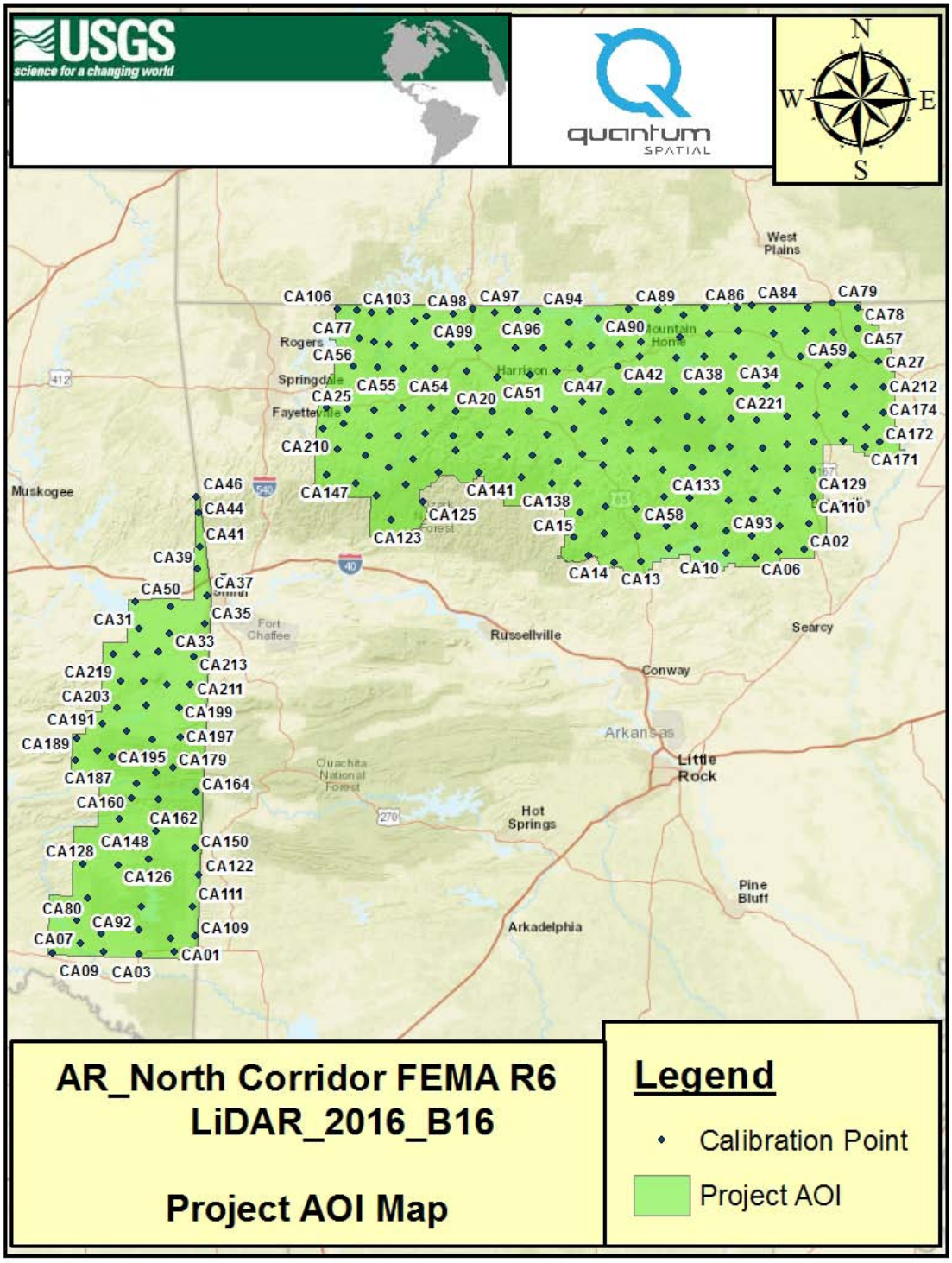
All point coordinates have been reported in the Universal Transverse Mercator Zone 15 (UTM15) coordinates in meters. Elevations are relative to the North American Vertical Datum of 1988 (NAVD 88) which were derived using the Geoid 12B model and are reported in meters.

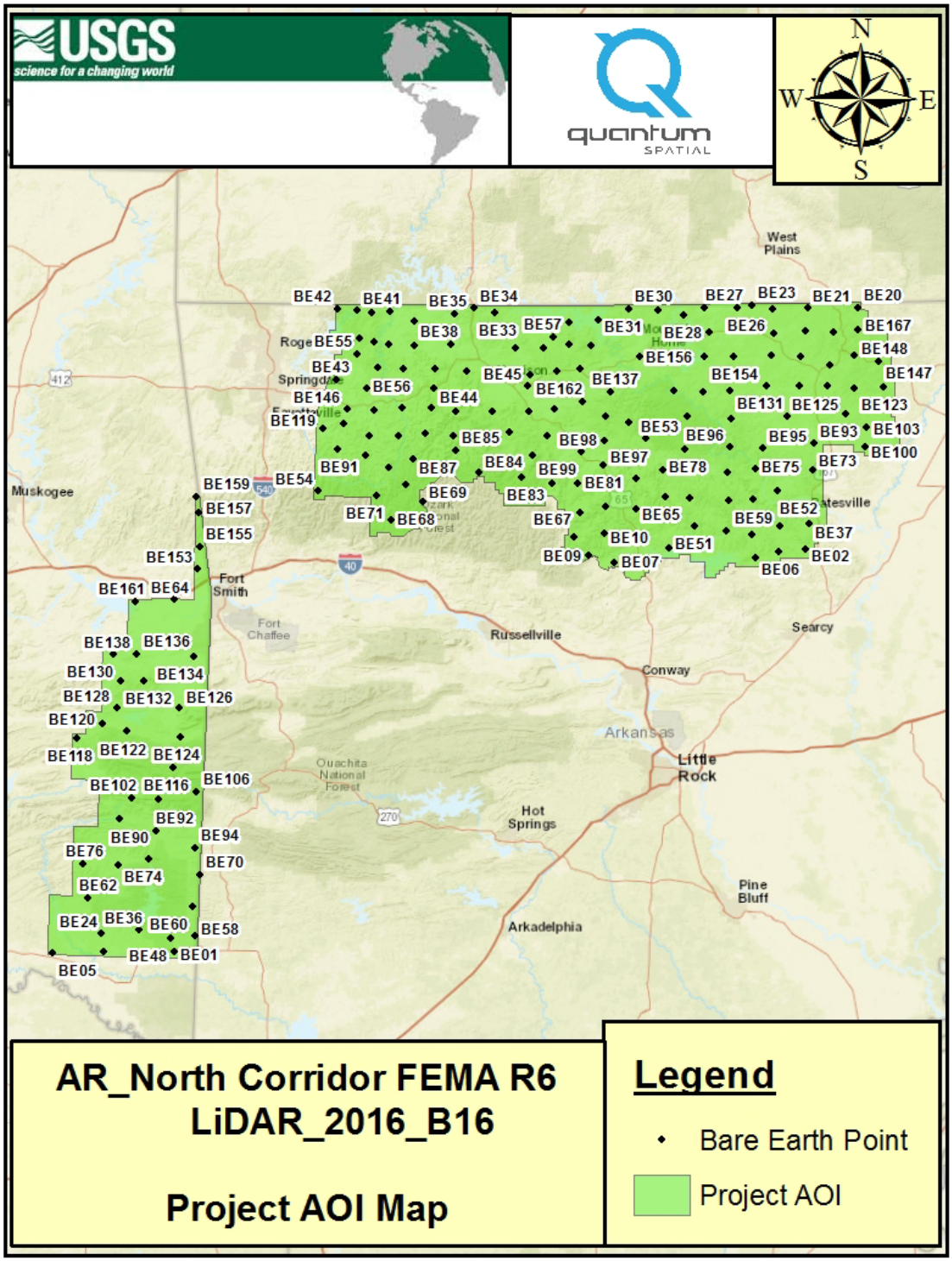
Calibration Points
Average Horizontal RMSE is 0.007 meter.
Average Elevation RMSE is 0.008 meter.
Average 3 dimensional RMSE is 0.010 meter.

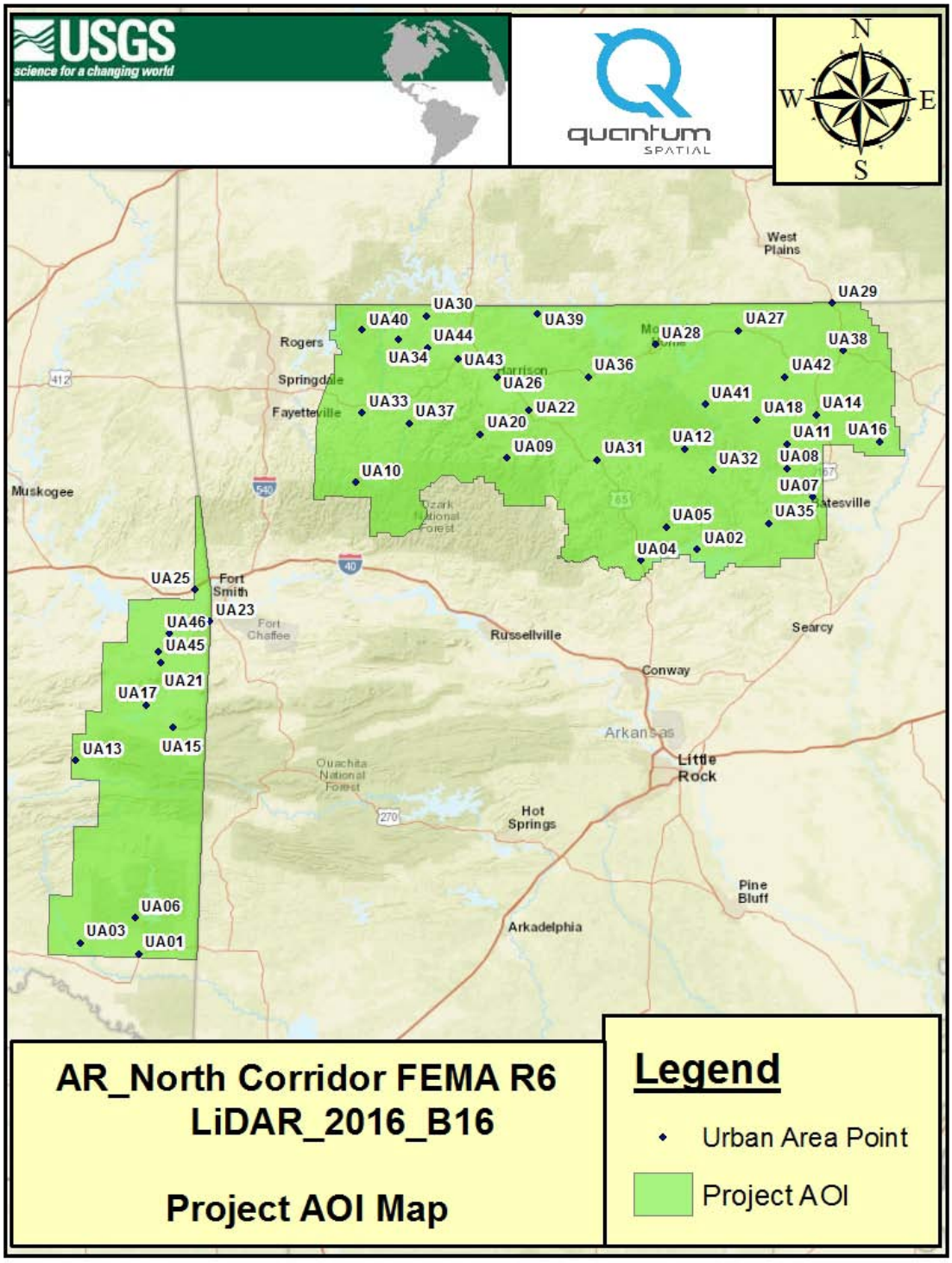
NVA Points
Average Horizontal RMSE is 0.008 meter.
Average Elevation RMSE is 0.008 meter.
Average 3 dimensional RMSE is 0.011 meter.

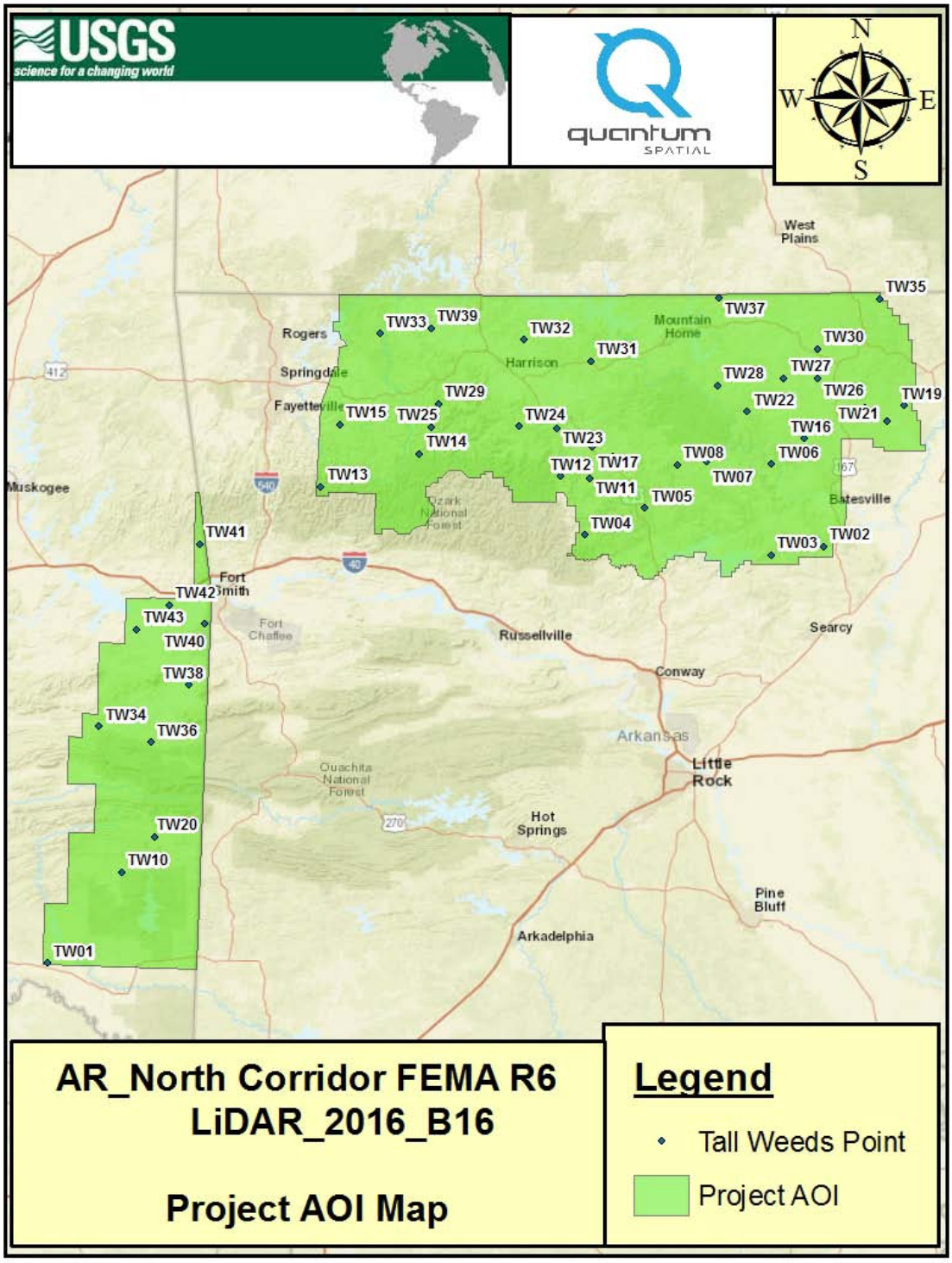
VVA Points
Average Horizontal RMSE is 0.012 meter.
Average Elevation RMSE is 0.009 meter.
Average 3 dimensional RMSE is 0.016 meter.

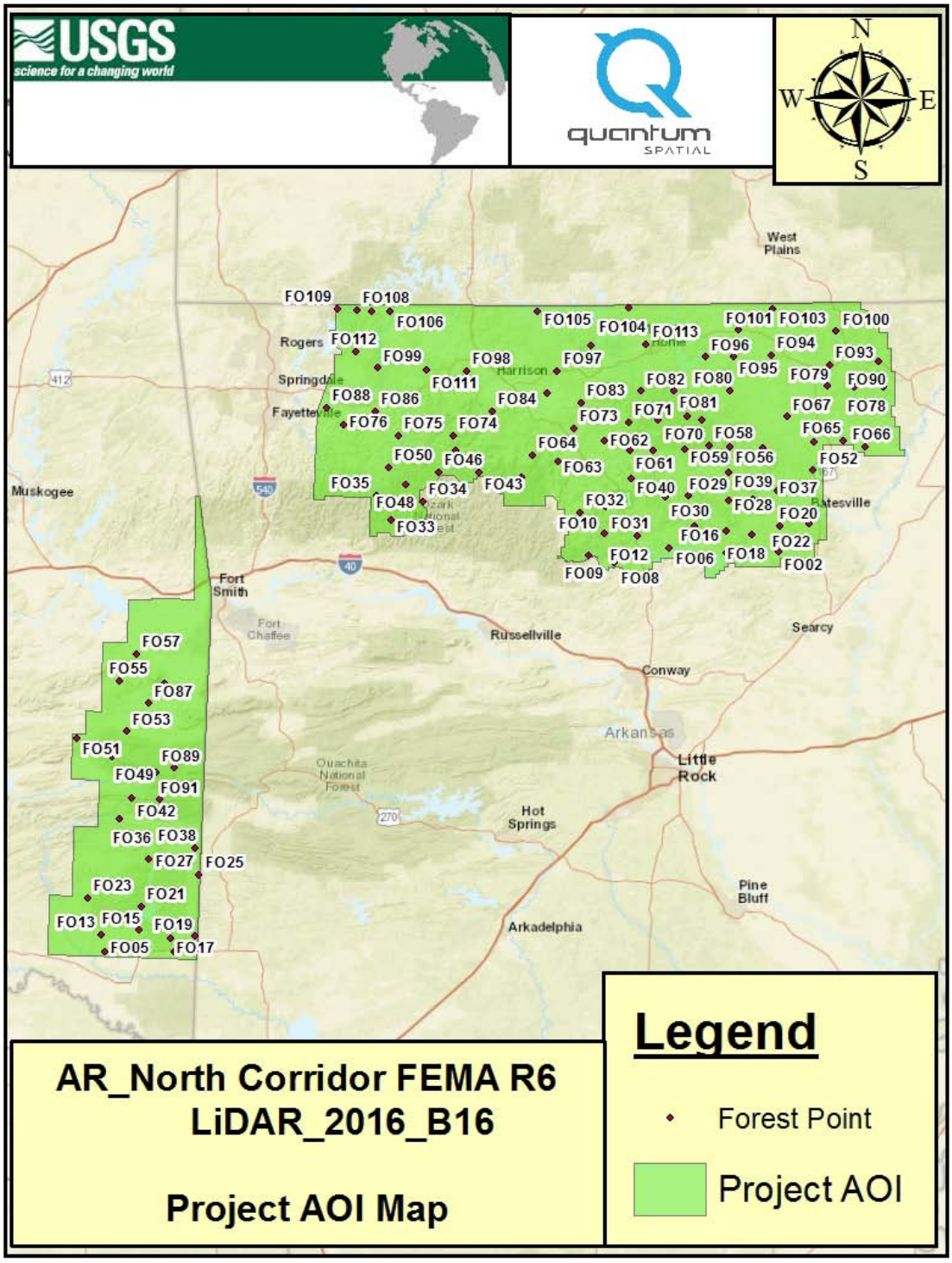
Project AOI & Point Location Maps

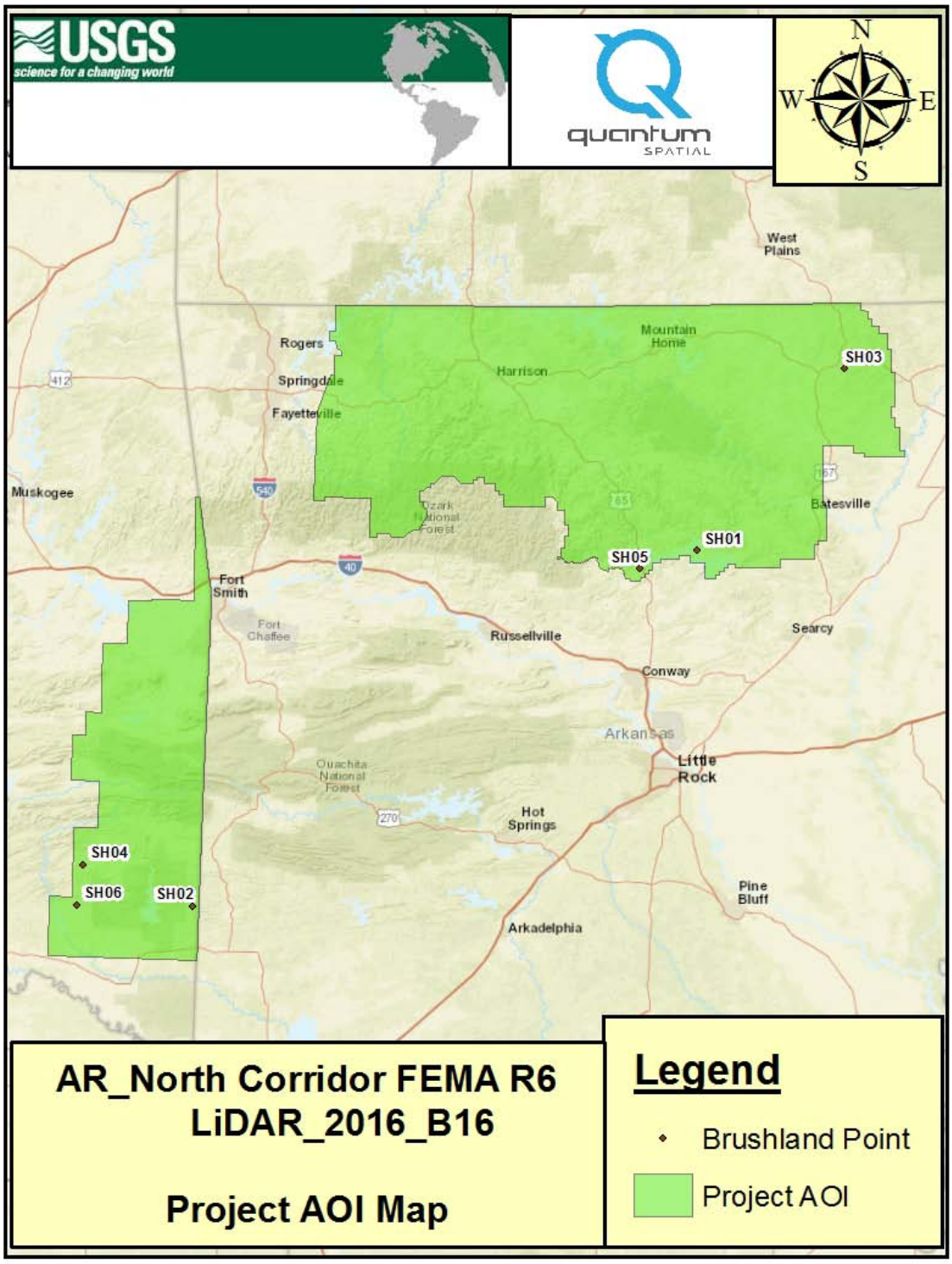

USGS
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N
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West Plains
Muskogee
Rogers
Springdale
Fayetteville
Harrison
Mountain Home
Russellville
Searcy
Conway
Arkansas
Little Rock
Hot Springs
Pine Bluff
Arkadelphia
Ouachita National Forest
Fort Chaffee
CA106 CA103 CA98 CA97 CA94 CA89 CA86 CA84 CA79
CA78 CA57 CA59 CA27 CA212 CA174 CA172 CA171
CA77 CA99 CA96 CA90 CA56 CA55 CA54 CA25 CA20 CA51 CA47 CA42 CA38 CA34 CA221
CA210 CA147 CA141 CA138 CA125 CA123 CA15 CA133 CA58 CA93 CA129 CA110 CA02
CA14 CA13 CA10 CA06
CA46 CA44 CA41 CA39 CA50 CA37 CA35 CA31 CA33 CA213 CA211 CA219 CA203 CA199 CA191 CA197 CA189 CA195 CA179 CA187 CA164 CA160 CA162 CA148 CA150 CA128 CA122 CA126 CA111 CA80 CA92 CA109 CA07 CA01 CA09 CA03
AR_North Corridor FEMA R6
LiDAR_2016_B16
Project AOI Map
Legend
Calibration Point
Project AOI


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N
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West Plains
Muskogee
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Fort Chaffee
Russellville
Searcy
Conway
Arkansas
Little Rock
Ouachita National Forest
Hot Springs
Pine Bluff
Arkadelphia
BE42 BE41 BE35 BE34 BE30 BE27 BE23 BE21 BE20
BE38 BE33 BE57 BE31 BE28 BE26 BE167
BE55 BE156 BE148
BE43 BE45 BE137 BE154 BE147
BE56 BE162
BE146 BE44 BE131 BE125 BE123
BE119 BE53 BE96 BE95 BE93 BE103
BE85 BE98 BE100
BE91 BE87 BE84 BE99 BE97 BE78 BE75 BE73
BE54 BE159 BE69 BE81 BE83
BE157 BE71 BE68 BE67 BE65 BE59 BE52
BE155 BE10 BE37
BE153 BE51 BE02
BE09 BE07 BE06
BE161 BE64
BE138 BE136
BE130 BE134
BE128 BE132 BE126
BE120
BE118 BE122 BE124
BE102 BE116 BE106
BE92
BE90 BE94
BE76 BE70
BE62 BE74
BE24 BE36 BE60 BE58
BE48 BE01
BE05
AR_North Corridor FEMA R6
LiDAR_2016_B16
Project AOI Map
Legend
Bare Earth Point
Project AOI


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Fort Smith
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Fort Chaffee
Russellville
Searcy
UA45
Conway
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UA17
Arkansas
UA13
UA15
Little Rock
Ouachita National Forest
Hot Springs
Pine Bluff
UA06
UA03
UA01
Arkadelphia
AR_North Corridor FEMA R6
LiDAR_2016_B16
Project AOI Map
Legend
Urban Area Point
Project AOI


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West Plains
Rogers
Springdale
Fayetteville
Harrison
Mountain Home
Muskogee
Fort Smith
Fort Chaffee
Ozark National Forest
Ouachita National Forest
Russellville
Searcy
Conway
Arkansas
Little Rock
Hot Springs
Pine Bluff
Arkadelphia
Batesville
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TW03
TW02
AR_North Corridor FEMA R6
LiDAR_2016_B16
Project AOI Map
Legend
Tall Weeds Point
Project AOI


USGS
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Fayetteville
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Fort Smith
Fort Chaffee
Russellville
Searcy
Conway
Arkansas
Little Rock
Hot Springs
Pine Bluff
Arkadelphia
Batesville
Ouachita National Forest
FO109 FO108 FO106 FO105 FO104 FO113 FO101 FO103 FO100
FO112 FO99 FO98 FO97 FO96 FO94 FO93
FO111 FO95 FO79 FO90
FO88 FO86 FO84 FO83 FO82 FO80
FO76 FO75 FO74 FO73 FO71 FO81 FO67 FO78
FO64 FO62 FO70 FO58 FO65 FO66
FO50 FO46 FO63 FO61 FO59 FO56 FO52
FO35 FO34 FO43 FO40 FO29 FO39 FO37
FO48 FO32 FO28
FO33 FO10 FO31 FO30 FO20
FO16 FO22
FO12 FO06 FO18 FO02
FO09 FO08
FO57 FO55 FO87 FO53 FO51 FO89 FO49 FO91 FO42 FO36 FO38 FO27 FO25 FO23 FO21 FO13 FO15 FO19 FO05 FO17
AR_North Corridor FEMA R6
LiDAR_2016_B16
Project AOI Map
Legend
Forest Point
Project AOI


USGS
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quantum SPATIAL
N
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West Plains
Mountain Home
Rogers
Springdale
Fayetteville
Harrison
SH03
Muskogee
Ozark National Forest
Batesville
SH01
SH05
Fort Smith
Fort Chaffee
Russellville
Searcy
Conway
Arkansas
Little Rock
Ouachita National Forest
Hot Springs
SH04
SH06
SH02
Pine Bluff
Arkadelphia
AR_North Corridor FEMA R6
LiDAR_2016_B16
Project AOI Map
Legend
Brushland Point
Project AOI

Final Point Coordinates

Calibration Point Coordinates

Horizontal Datum - NAD83(2011)
UTM ZONE 15
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
CA01	3767360.702	354620.742	122.394
CA02	3936832.595	619493.743	187.826
CA03	3766425.147	339478.723	142.626
CA04	3935540.468	608700.906	251.404
CA05	3767615.222	325009.241	120.603
CA06	3933171.335	598831.972	249.999
CA07	3771166.569	314848.672	124.306
CA08	3935296.752	586622.256	182.572
CA09	3766821.454	303285.466	164.045
CA10	3936434.017	574575.730	173.723
CA11	3937129.785	562818.220	255.061
CA12	3931691.093	550830.509	166.201
CA13	3930811.580	539813.653	200.044
CA14	3934147.868	528915.128	433.722
CA15	3941524.640	522569.042	504.331
CA16	3998494.983	526045.455	376.488
CA17	3995690.407	514687.027	392.235
CA18	3994760.033	503925.777	336.811
CA19	3994592.804	488298.860	313.499
CA20	3994673.336	472768.774	658.519
CA21	3995865.810	462714.937	456.227
CA22	3995922.762	450599.830	412.429
CA23	3994855.705	438842.551	486.303
CA24	3995725.613	427144.851	496.598
CA25	3995929.334	418632.788	392.127
CA26	3943073.956	535609.211	422.078
CA27	4015458.837	650892.933	166.918
CA28	4018208.845	640159.958	110.627
CA29	4014028.985	630027.858	214.674

CA30	4017810.170	617881.559	245.186
CA31	3903052.128	339771.272	149.258
CA32	4018073.283	605697.954	224.074
CA33	3901029.944	352399.539	149.618
CA34	4017853.749	589667.008	274.842
CA35	3905549.938	367579.333	161.902
CA36	4017439.430	577560.258	223.423
CA37	3917313.338	368408.947	126.240
CA38	4017339.152	565801.562	173.228
CA39	3928236.610	364322.680	176.785
CA40	4017723.016	550190.622	232.214
CA41	3937632.568	365128.371	237.042
CA42	4013416.849	541082.006	132.041
CA43	3942096.016	549173.765	265.289
CA44	3951769.390	364708.230	277.952
CA45	4012478.935	525024.805	240.504
CA46	3958744.616	363829.990	524.008
CA47	4011634.730	515699.451	234.212
CA48	3912769.411	352809.143	142.530
CA49	4009836.529	504035.538	366.901
CA50	3914759.660	338094.971	159.724
CA51	4008995.518	490147.117	318.742
CA52	4011522.357	477577.480	442.458
CA53	4012574.707	464022.253	589.111
CA54	4012502.961	450778.517	408.280
CA55	4012877.888	440094.833	450.485
CA56	4013321.971	429854.451	481.780
CA57	4029505.048	641996.288	263.286
CA58	3946103.547	561528.106	167.372
CA59	4028078.052	631906.282	128.669
CA60	4028202.966	619895.241	209.428
CA61	4027369.810	606940.114	191.513
CA62	4028535.709	591827.659	257.766
CA63	4027235.701	579424.129	266.580
CA64	4025828.802	567125.935	177.413
CA65	4023994.207	551039.378	286.547
CA66	4022672.744	542045.082	140.688
CA67	4022276.460	529781.449	338.864
CA68	4022723.760	520560.608	369.007
CA69	3946564.552	573445.639	350.206
CA70	4021253.419	509686.575	393.004

CA71	4021036.101	497909.543	400.646
CA72	4020974.967	481923.799	414.046
CA73	4022639.773	471081.000	346.315
CA74	4021971.328	455388.343	426.012
CA75	4022931.600	444726.561	357.481
CA76	4023637.777	438794.534	351.443
CA77	4025369.647	432420.900	485.395
CA78	4038288.998	642134.107	285.864
CA79	4039958.784	631188.575	154.429
CA80	3780537.450	313557.695	170.784
CA81	3944495.498	586759.325	233.061
CA82	4037892.684	621202.621	215.456
CA83	4037694.954	606348.521	247.309
CA84	4039114.521	597348.240	246.715
CA85	4038134.626	591329.759	291.460
CA86	4038313.218	577387.464	247.274
CA87	4034805.983	568666.399	276.010
CA88	4037242.758	558227.139	265.152
CA89	4037671.412	545916.316	370.099
CA90	4033252.448	533169.915	210.568
CA91	4031941.572	520707.496	284.750
CA92	3774930.573	323708.316	138.618
CA93	3942501.388	597388.821	319.464
CA94	4036630.492	507209.581	203.409
CA95	4036840.631	499332.232	209.590
CA96	4036238.940	489489.869	405.104
CA97	4037816.786	480274.502	414.358
CA98	4035551.759	472145.826	287.199
CA99	4034655.296	460770.025	409.298
CA100	4032358.869	455595.305	358.313
CA101	4036696.526	445328.495	347.768
CA102	4036313.655	437552.664	373.333
CA103	4036939.043	431354.735	278.836
CA104	3776484.440	339563.486	193.600
CA105	3947458.960	621765.155	210.923
CA106	4037532.734	423465.146	484.369
CA107	3773297.145	352807.742	170.451
CA108	3946358.036	609096.494	275.322
CA109	3773937.160	363230.244	125.078
CA110	3958476.143	622992.547	81.289
CA111	3786579.381	362064.896	269.849

CA112	3961105.023	608448.428	165.850
CA113	3786314.710	340514.143	203.606
CA114	3957443.179	598065.153	386.453
CA115	3790145.050	318217.286	239.044
CA116	3957054.047	587661.433	385.695
CA117	3958332.291	571435.132	284.307
CA118	3958846.436	560854.887	408.116
CA119	3953509.129	548778.520	398.502
CA120	3954689.631	536110.937	449.156
CA121	3952204.725	525030.844	524.609
CA122	3799991.374	365044.026	349.339
CA123	3949047.809	445838.848	292.150
CA124	3806472.204	344018.880	199.199
CA125	3956590.582	459207.762	690.434
CA126	3803608.447	331038.330	263.438
CA127	3959377.523	439495.558	658.999
CA128	3804367.923	316317.197	346.402
CA129	3969961.002	623099.505	200.967
CA130	3970487.942	612458.829	214.489
CA131	3970362.742	598783.265	220.131
CA132	3968810.618	587490.614	241.562
CA133	3971219.578	572265.008	193.635
CA134	3970106.952	560193.621	267.315
CA135	3966593.563	549051.752	423.364
CA136	3971843.850	535035.442	397.251
CA137	3964332.649	524410.654	545.491
CA138	3964460.054	513306.286	586.660
CA139	3966717.278	500500.584	642.156
CA140	3975524.163	494559.507	288.053
CA141	3968853.818	482800.763	664.032
CA142	3978148.136	472869.155	305.920
CA143	3969048.579	465764.776	649.103
CA144	3963805.739	452090.073	708.445
CA145	3964513.521	430814.199	455.890
CA146	3823121.257	331493.225	316.013
CA147	3967889.758	418701.510	415.418
CA148	3818175.360	346978.025	252.228
CA149	3974470.932	455026.134	693.230
CA150	3811226.192	363100.686	336.307
CA151	3971200.363	444658.417	631.419
CA152	3976109.283	434929.805	557.805

CA153	3978705.990	422991.807	429.107
CA154	3981480.239	623546.643	182.633
CA155	3980492.469	612370.271	198.278
CA156	3978987.254	602085.337	265.137
CA157	3979459.975	588258.705	214.147
CA158	3979204.006	580353.187	100.166
CA159	3979320.156	570339.081	263.268
CA160	3832215.991	336487.482	675.805
CA161	3978034.303	555902.395	245.510
CA162	3831338.037	347981.140	624.969
CA163	3977982.699	546358.105	212.075
CA164	3834770.842	363727.572	329.431
CA165	3982374.719	535357.868	346.697
CA166	3976596.032	526134.616	202.470
CA167	3973642.438	516106.271	234.555
CA168	3976147.432	505319.958	461.193
CA169	3992857.892	624604.648	140.967
CA170	3982208.945	635807.965	173.472
CA171	3979636.391	645032.426	110.192
CA172	3981773.566	651372.898	108.686
CA173	3993514.376	636994.938	140.829
CA174	3994157.180	652786.477	103.539
CA175	3987669.239	645862.901	96.269
CA176	3992324.918	612524.220	209.565
CA177	3838087.475	338496.297	229.250
CA178	3990940.950	599726.410	188.728
CA179	3844715.440	354214.310	250.937
CA180	3991713.825	588862.435	121.798
CA181	3842807.570	346684.384	579.893
CA182	3990986.882	576672.626	196.011
CA183	3849406.884	328363.504	498.165
CA184	3992525.725	570086.439	327.168
CA185	3852197.687	322040.724	432.093
CA186	3990962.509	558250.336	363.712
CA187	3847960.894	313227.697	215.257
CA188	3989759.288	545862.909	298.885
CA189	3857398.106	313584.080	191.715
CA190	3994584.482	535223.147	319.889
CA191	3863448.164	324284.640	171.685
CA192	3987389.148	522550.485	275.703
CA193	3860041.339	334663.040	183.702

CA194	3984549.134	511258.438	319.324
CA195	3856840.105	345274.826	162.178
CA196	3985663.251	495638.823	380.312
CA197	3857575.773	356901.346	160.310
CA198	3984780.918	483247.122	257.580
CA199	3870158.478	356555.976	181.053
CA200	3984409.312	471829.764	534.160
CA201	3871209.779	342791.269	155.757
CA202	3985405.917	460106.425	675.610
CA203	3869847.208	330403.750	177.136
CA204	3984392.839	448777.037	545.501
CA205	3881224.627	331737.504	289.165
CA206	3984267.278	436645.590	437.983
CA207	3881105.044	341872.869	244.301
CA208	3989187.572	425587.523	422.501
CA209	3879821.782	351697.560	146.313
CA210	3987389.567	417175.524	388.340
CA211	3879956.465	361131.384	163.165
CA212	4004749.254	652720.671	208.716
CA213	3891666.225	362585.194	149.819
CA214	4004593.230	640491.611	214.950
CA215	3893667.723	347941.061	139.064
CA216	4005103.464	629409.281	175.593
CA217	3892595.695	338780.056	162.218
CA218	4005393.942	617398.792	201.072
CA219	3892375.195	328929.689	173.228
CA220	4005247.887	603810.206	246.076
CA221	4003248.125	588481.776	222.702
CA222	4002524.542	576805.085	214.110
CA223	4003377.072	564609.007	193.483
CA224	4002613.336	550072.616	127.946
CA225	4002797.658	538178.984	197.940

Bare Earth Point Coordinates

Horizontal Datum - NAD83(2011)
UTM ZONE 15
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
BE01	3767340.904	354631.447	121.804
BE02	3936708.972	620189.448	184.705
BE03	3767558.846	324982.039	120.387
BE04	3935551.751	608758.271	250.832
BE05	3766836.589	303283.289	164.059
BE06	3933153.512	598791.050	250.821
BE07	3930765.893	539812.857	200.908
BE08	3934154.854	528875.261	432.647
BE09	3941537.777	522560.849	504.391
BE10	3943154.253	535614.538	425.203
BE11	3946560.052	573399.041	350.478
BE12	3944426.091	586756.630	224.959
BE13	3942532.144	597412.164	319.573
BE14	4021035.693	497887.148	400.455
BE15	4022648.817	471075.719	345.769
BE16	4022003.173	455364.228	427.489
BE17	4022930.749	444884.126	360.933
BE18	4023622.460	438800.648	352.416
BE19	4025380.807	432424.096	484.855
BE20	4038279.927	642143.499	285.810
BE21	4037911.697	621197.485	214.074
BE22	4037710.662	606298.724	250.834
BE23	4039095.067	597335.652	246.503
BE24	3774945.781	323733.472	138.567
BE25	3946377.310	609153.405	273.195
BE26	4038129.664	591323.006	291.490
BE27	4038296.176	577385.903	246.200
BE28	4034869.773	568682.742	275.563
BE29	4037227.195	558218.802	265.002
BE30	4037698.587	545889.138	368.565

BE31	4033205.664	533045.580	201.685
BE32	4031942.032	520699.723	284.803
BE33	4036229.193	489497.646	405.042
BE34	4037920.029	480549.788	420.051
BE35	4035565.378	472210.051	282.945
BE36	3776504.284	339573.746	193.156
BE37	3947488.619	621697.626	210.749
BE38	4032353.042	455583.351	358.105
BE39	4036686.300	445317.718	347.811
BE40	4036306.726	437536.199	374.248
BE41	4036967.770	431328.290	279.360
BE42	4037542.872	423482.797	484.783
BE43	4007977.866	422700.584	438.680
BE44	4004328.556	463703.765	402.735
BE45	4005120.162	503040.695	313.478
BE46	3994695.936	503848.886	338.085
BE47	3992284.930	535816.946	311.589
BE48	3773264.310	352802.805	170.128
BE49	3957430.547	598029.533	386.459
BE50	3978621.956	569337.500	238.771
BE51	3937148.840	562798.583	255.331
BE52	3961197.734	608451.319	166.950
BE53	3983029.714	552866.063	369.144
BE54	3961001.248	414793.573	731.408
BE55	4018652.076	431655.184	495.555
BE56	4004307.080	435687.732	478.907
BE57	4025805.522	513800.268	270.446
BE58	3773932.799	363203.585	125.558
BE59	3957067.999	587640.582	386.254
BE60	3786591.956	362053.691	269.985
BE61	3958323.359	571408.471	284.311
BE62	3790127.495	318217.333	238.994
BE63	3958878.009	560886.267	411.449
BE64	3915349.972	354472.488	143.636
BE65	3953504.107	548766.066	397.903
BE66	3954704.861	536130.147	449.749
BE67	3952190.205	525037.850	524.863
BE68	3949021.208	445875.807	292.133
BE69	3956545.647	459172.507	693.449
BE70	3799996.811	365052.246	349.619
BE71	3959376.489	439487.704	658.997

BE72	3806407.076	343962.706	202.075
BE73	3969976.145	623139.473	200.104
BE74	3803604.900	331012.448	263.548
BE75	3970315.179	598837.059	221.771
BE76	3804377.243	316320.578	346.113
BE77	3968818.111	587509.907	243.251
BE78	3970109.465	560165.974	267.065
BE79	3966591.979	549068.829	422.781
BE80	3971824.800	535053.935	396.106
BE81	3964320.571	524394.878	546.958
BE82	3964441.224	513303.225	586.356
BE83	3966726.308	500500.834	642.492
BE84	3968908.428	482770.700	662.529
BE85	3978156.949	472886.827	305.931
BE86	3963810.647	452083.309	708.137
BE87	3974507.378	455057.835	694.505
BE88	3971206.224	444667.756	631.305
BE89	3976116.068	434931.531	557.731
BE90	3823131.524	331470.216	316.501
BE91	3978690.933	422981.311	429.419
BE92	3818191.763	346983.280	253.114
BE93	3981423.216	623574.112	182.584
BE94	3811226.016	363072.145	337.197
BE95	3978968.071	602098.392	265.648
BE96	3979448.658	588238.108	212.917
BE97	3982404.927	535385.366	348.808
BE98	3977477.496	525552.592	199.511
BE99	3976146.306	505310.269	460.951
BE100	3979678.833	645039.495	109.697
BE101	3993527.309	636973.289	139.664
BE102	3832186.340	336504.747	676.390
BE103	3987659.002	645893.876	94.751
BE104	3831341.087	347952.436	625.380
BE105	3992348.284	612559.172	209.065
BE106	3834743.887	363764.440	331.774
BE107	3991686.772	589003.187	121.775
BE108	3992516.890	570094.894	327.070
BE109	3989769.665	545876.268	298.628
BE110	3984544.133	511258.069	319.429
BE111	3985673.106	495632.845	380.113
BE112	3984434.712	471835.150	534.634

BE113	3985418.698	460089.128	675.168
BE114	3984383.890	448768.017	546.464
BE115	3984245.391	436619.776	434.857
BE116	3844729.956	354251.547	250.843
BE117	3989167.049	425564.855	423.195
BE118	3857405.681	313598.636	191.816
BE119	3987392.202	417126.569	387.324
BE120	3863461.688	324284.962	171.637
BE121	4004720.344	652676.647	208.454
BE122	3860041.505	334704.775	180.862
BE123	4004531.164	640521.786	213.981
BE124	3857590.729	356967.189	160.980
BE125	4005076.724	629376.902	177.901
BE126	3870158.225	356561.678	181.337
BE127	4005493.869	617488.661	207.585
BE128	3869834.004	330393.157	176.901
BE129	4005271.452	603827.750	246.153
BE130	3881213.603	331758.390	286.892
BE131	4003231.151	588485.935	222.521
BE132	3881111.097	341859.657	244.167
BE133	4002505.713	576783.191	212.455
BE134	3891667.022	362579.609	149.878
BE135	4003365.579	564611.064	193.728
BE136	3892597.496	338758.451	162.324
BE137	4002805.049	538191.470	199.068
BE138	3892367.940	328960.640	172.842
BE139	3998497.167	526054.952	376.716
BE140	3995702.768	514692.562	391.669
BE141	3994592.607	488287.634	313.658
BE142	3994720.361	472788.498	658.558
BE143	3995866.555	462709.184	456.197
BE144	3995907.305	450593.071	412.062
BE145	3994869.789	438848.919	486.871
BE146	3995716.442	427138.972	496.611
BE147	4015391.887	650853.119	165.841
BE148	4018076.571	640564.702	111.566
BE149	4014069.307	630078.514	216.483
BE150	4017777.080	617867.504	244.694
BE151	4018091.177	605701.177	225.162
BE152	4017855.531	589683.026	275.194
BE153	3928245.488	364331.611	176.512

BE154	4017440.947	577546.693	223.734
BE155	3937627.299	365142.625	236.604
BE156	4017707.623	550200.298	232.514
BE157	3951777.008	364717.259	277.705
BE158	4012445.264	525019.442	239.227
BE159	3958742.905	363846.987	524.192
BE160	4011608.045	515719.887	233.921
BE161	3914767.568	338103.594	159.406
BE162	4009838.965	504014.886	367.517
BE163	4011542.486	477576.621	442.644
BE164	4012587.913	464026.513	589.158
BE165	4012510.443	450786.428	408.444
BE166	4012867.012	440078.237	450.230
BE167	4028659.013	642004.123	263.179
BE168	4028063.970	631915.758	129.385
BE169	4028178.457	619897.029	209.360
BE170	4027345.162	606929.357	191.178
BE171	4027733.545	579475.519	265.267
BE172	4022274.811	529804.537	339.355
BE173	4022733.766	520562.571	368.792
BE174	4021256.392	509692.833	392.996

Urban Area Point Coordinates

Horizontal Datum - NAD83(2011)
UTM ZONE 15
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
UA01	3766457.279	339471.256	143.432
UA02	3936411.265	574574.472	173.777
UA03	3771131.823	314879.453	123.686
UA04	3931770.192	550843.682	167.067
UA05	3946050.129	561546.700	165.558
UA06	3781651.667	338001.253	230.344
UA07	3958487.496	622973.696	81.392
UA08	3970494.084	612491.713	214.102
UA09	3975155.549	494583.402	277.173
UA10	3964597.696	430883.571	457.319
UA11	3980630.830	612324.817	196.398
UA12	3978641.052	569356.168	237.751
UA13	3847958.352	313210.450	215.143
UA14	3992925.052	624607.672	142.939
UA15	3861573.152	353989.262	171.110
UA16	3981769.615	651349.836	108.453
UA17	3871194.672	342793.072	155.421
UA18	3990961.687	599756.207	188.766
UA19	3879858.241	351710.291	146.433
UA20	3984758.798	483241.499	258.195
UA21	3888841.610	348728.613	140.007
UA22	3994887.212	503927.116	337.228
UA23	3906158.888	369173.755	161.459
UA24	4013625.336	541240.225	150.867
UA25	3919502.892	363440.864	135.706
UA26	4008899.417	490193.962	320.066
UA27	4028562.280	591918.019	259.831
UA28	4022490.721	556921.478	245.891
UA29	4039965.505	631162.892	154.482

UA30	4034658.300	460795.811	409.383
UA31	3974224.766	532665.285	297.749
UA32	3969715.848	580903.075	238.719
UA33	3993899.242	433486.471	450.015
UA34	4024845.818	448673.335	373.620
UA35	3947392.455	604535.050	317.659
UA36	4008914.332	528773.360	179.973
UA37	3989667.178	453331.944	415.533
UA38	4019976.677	636174.940	111.920
UA39	4035543.768	507439.538	242.261
UA40	4028641.858	433729.540	386.631
UA41	3997383.059	577825.342	141.817
UA42	4008936.619	611600.572	223.541
UA43	4016682.733	473805.389	346.435
UA44	4021159.109	461127.706	408.137
UA45	3893678.803	347949.613	139.273
UA46	3901053.436	352377.851	149.442

Tall Weed Point Coordinates

Horizontal Datum - NAD83(2011)
UTM ZONE 15
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
TW01	3766855.209	303279.730	164.372
TW02	3936677.087	620184.168	184.716
TW03	3933163.987	598792.846	250.000
TW04	3941529.445	522593.473	504.472
TW05	3952378.967	547187.858	425.864
TW06	3970319.708	598860.917	224.957
TW07	3971229.519	572244.381	194.579
TW08	3970096.404	560134.812	265.997
TW09	3973467.241	533768.549	334.506
TW10	3803925.053	333518.096	278.071
TW11	3964298.078	524381.170	548.935
TW12	3965351.178	512811.616	572.349
TW13	3961004.161	414814.117	731.735
TW14	3974522.929	455071.263	694.828
TW15	3986552.804	422602.459	391.806
TW16	3980689.171	612322.607	197.429
TW17	3977470.372	525557.835	199.628
TW18	3993500.596	636954.726	140.419
TW19	3994167.369	652824.017	102.500
TW20	3818221.400	347000.074	255.579
TW21	3987798.784	645727.013	97.283
TW22	3991687.070	588869.672	121.252
TW23	3984681.746	511204.519	328.330
TW24	3985684.745	495610.423	380.080
TW25	3985387.033	460120.633	675.730
TW26	4005485.798	617386.308	204.380
TW27	4005269.746	603814.179	246.298
TW28	4002522.512	576838.759	215.480
TW29	3994965.663	462976.321	453.454
TW30	4017473.764	617607.689	232.142

TW31	4012482.623	525003.621	241.839
TW32	4021034.508	497636.139	403.612
TW33	4023612.365	438823.993	355.397
TW34	3863448.163	324301.740	171.843
TW35	4037555.659	642712.506	265.603
TW36	3856834.719	345298.923	161.519
TW37	4038304.005	577391.509	246.475
TW38	3880345.121	361130.462	158.206
TW39	4025814.477	459833.209	365.372
TW40	3905511.416	367605.541	162.732
TW41	3937620.993	365144.171	236.166
TW42	3912783.350	352818.665	142.866
TW43	3903042.388	339762.354	149.282

Forest Point Coordinates

Horizontal Datum - NAD83(2011)
UTM ZONE 15
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
FO01	3767318.713	354597.354	120.456
FO02	3935519.132	608717.267	251.602
FO03	3766812.891	338305.916	131.950
FO04	3935294.957	586644.715	182.782
FO05	3767569.099	325066.321	119.803
FO06	3937134.882	562853.725	257.136
FO07	3931806.193	550907.420	166.274
FO08	3930812.602	539791.109	199.868
FO09	3934190.335	528888.755	431.382
FO10	3943084.420	535591.567	421.932
FO11	3780537.220	313590.672	177.086
FO12	3942033.476	549234.866	260.666
FO13	3774892.903	323745.949	139.750
FO14	3946592.941	573446.644	350.998
FO15	3776535.205	339614.352	192.923
FO16	3944488.938	586740.424	235.346
FO17	3773274.755	352770.676	167.070
FO18	3942558.833	597416.008	319.164
FO19	3773897.490	363204.941	125.756
FO20	3946399.134	609150.236	274.241
FO21	3786375.099	340478.469	202.837
FO22	3947486.120	621779.970	208.994
FO23	3790108.829	318239.531	239.239
FO24	3961035.496	608407.105	165.089
FO25	3800005.440	365044.005	348.987
FO26	3957485.124	598067.022	387.463
FO27	3806373.639	343980.162	196.793
FO28	3957103.088	587634.215	387.348
FO29	3959085.763	571052.234	310.467

FO30	3958805.841	560870.915	408.594
FO31	3954718.939	536144.899	450.234
FO32	3952200.975	525002.805	526.936
FO33	3949054.005	445897.664	292.932
FO34	3956606.160	459245.160	689.865
FO35	3959393.698	439468.833	661.769
FO36	3823098.684	331486.407	314.486
FO37	3969943.364	623093.850	201.987
FO38	3811196.446	363065.049	337.775
FO39	3968819.767	587526.588	244.981
FO40	3966346.373	546821.493	453.016
FO41	3966729.991	500529.960	639.086
FO42	3832222.158	336447.472	675.068
FO43	3968919.752	482709.415	664.633
FO44	3834801.748	363705.509	328.282
FO45	3978160.277	472924.877	307.981
FO46	3969050.598	465740.265	648.764
FO47	3842785.489	346663.396	580.697
FO48	3963798.278	452057.979	705.093
FO49	3849391.358	328416.780	498.739
FO50	3971200.825	444702.150	627.676
FO51	3857357.827	313482.780	191.274
FO52	3981472.202	623519.718	185.211
FO53	3859996.706	334643.556	185.138
FO54	3979000.975	602106.766	267.818
FO55	3881209.631	331717.616	289.994
FO56	3979479.733	588276.395	213.746
FO57	3892582.362	338809.995	162.760
FO58	3980187.641	579427.716	229.454
FO59	3978615.348	569310.696	239.659
FO60	3978033.993	555870.342	243.890
FO61	3977978.964	546407.153	212.489
FO62	3982409.945	535358.804	347.831
FO63	3973660.681	516125.031	233.647
FO64	3976165.737	505293.870	460.119
FO65	3982216.257	635824.257	173.431
FO66	3979692.168	645028.565	109.558
FO67	3992295.668	612540.482	208.893
FO68	3990912.695	576662.192	194.801
FO69	3992499.485	570112.020	328.590
FO70	3990933.700	558234.376	362.474

FO71	3989844.806	545727.011	325.539
FO72	3994607.805	535183.492	322.267
FO73	3987288.287	522760.550	267.755
FO74	3984397.986	471856.899	533.567
FO75	3984367.969	448777.278	547.220
FO76	3989085.578	425632.387	417.220
FO77	4004726.384	652740.155	209.473
FO78	4004564.844	640478.713	214.237
FO79	4005073.526	629352.581	178.296
FO80	4003271.309	588474.573	221.294
FO81	4003351.346	564635.769	190.934
FO82	4003153.083	550703.926	129.755
FO83	3998378.301	525902.610	365.830
FO84	3994604.447	488322.985	311.396
FO85	3880466.900	350627.821	207.273
FO86	3994726.153	438883.890	483.596
FO87	3871805.158	343587.565	148.988
FO88	3996008.749	418640.553	385.383
FO89	3844644.046	354392.441	252.672
FO90	4015436.798	650905.126	166.069
FO91	3831295.758	348137.336	626.668
FO92	4018169.613	640449.775	119.964
FO93	4014071.161	630103.415	217.824
FO94	4018094.661	605689.167	225.483
FO95	4017845.499	589638.581	272.600
FO96	4017504.064	578112.640	190.904
FO97	4011627.110	515738.766	232.709
FO98	4011561.264	477587.531	443.506
FO99	4012830.291	440077.812	449.599
FO100	4028237.445	633083.800	177.836
FO101	4028632.023	591941.639	257.536
FO102	4022257.508	529791.355	338.106
FO103	4037724.854	606303.854	251.709
FO104	4037914.462	545626.291	365.462
FO105	4036601.502	507358.424	217.440
FO106	4036704.702	445306.151	348.937
FO107	4036335.850	437549.080	373.916
FO108	4037059.946	431259.251	280.327
FO109	4037537.040	423443.741	478.582
FO110	4002253.588	511447.466	269.198
FO111	4012045.380	460520.076	397.839

FO112	4019784.409	431149.786	460.021
FO113	4022695.042	553005.830	287.883

Brushland Point Coordinates

Horizontal Datum - NAD83(2011)
UTM ZONE 15
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
SH01	3936494.829	574688.258	174.274
SH02	3786938.613	362011.128	276.101
SH03	4012856.306	636601.546	212.131
SH04	3804382.168	316285.286	347.763
SH05	3928744.529	550249.400	243.800
SH06	3787516.903	313720.245	222.785

Point Data and Accuracy Log Sheets

Calibration Point Log Sheets

Point ID	CA01
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Eagletown

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3767360.702	354620.742	122.394

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-18-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	CA02
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Pleasant Plains

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3936832.595	619493.743	187.826

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-2-2017
RMSE Hz	0.010
RMSE Z	0.010
GPS Method	Static

PHOTOS:






Point ID	CA03
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Broken Bow

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3766425.147	339478.723	142.626

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-16-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA04
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Floral

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3935540.468	608700.906	251.404

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

Date (MM-DD-YYYY)	4-2-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA05
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Golden

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3767615.222	325009.241	120.603

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-16-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA06
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Greers Ferry Dam

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3933171.335	598831.972	249.999

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

Date (MM-DD-YYYY)	4-2-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA07
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Wright City

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3771166.569	314848.672	124.306

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-03-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA08
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Brownsville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3935296.752	586622.256	182.572

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-2-2017
RMSE Hz	0.011
RMSE Z	0.010
GPS Method	Static

PHOTOS:









Point ID	CA09
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Swink

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3766821.454	303285.466	164.045

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-16-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:





Point ID	CA10
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Greers Ferry

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3936434.017	574575.730	173.723

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-4-2017
RMSE Hz	0.006
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA11
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Fairfield Bay

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3937129.785	562818.220	255.061

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-20-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA12
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Clinton

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3931691.093	550830.509	166.201

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

Date (MM-DD-YYYY)	4-22-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA13
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Scotland

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3930811.580	539813.653	200.044

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

Date (MM-DD-YYYY)	4-22-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA14
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Rex

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3934147.868	528915.128	433.722

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

Date (MM-DD-YYYY)	4-22-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA15
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Van Buren
Quad	Lost Corner

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3941524.640	522569.042	504.331

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA16
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Yellville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3998494.983	526045.455	376.488

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-03-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA17
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	St. Joe

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3995690.407	514687.027	392.235

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-31-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA18
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Western Grove

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994760.033	503925.777	336.811

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-30-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA19
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Jasper

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994592.804	488298.860	313.499

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-25-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA20
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Ponca

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994673.336	472768.774	658.519

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51333472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-25-2017
RMSE Hz	0.010
RMSE Z	0.012
GPS Method	Static

PHOTOS:



Point ID	CA21
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Osage SW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3995865.810	462714.937	456.227

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-26-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA22
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Kingston

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3995922.762	450599.830	412.429

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-28-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	CA23
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Huntsville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994855.705	438842.551	486.303

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-28-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA24
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Hartwell

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3995725.613	427144.851	496.598

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-25-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	CA25
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Goshen

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3995929.334	418632.788	392.127

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-25-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA26
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Van Buren
Quad	Botkinburg

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3943073.956	535609.211	422.078

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.010
RMSE Z	0.017
GPS Method	Static

PHOTOS:









Point ID	CA27
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Williford

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4015458.837	650892.933	166.918

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5-1-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA28
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Sharp
Quad	Hardy

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4018208.845	640159.958	110.627

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA29
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Stuart

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4014028.985	630027.858	214.674

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5-5-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA30
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Agnos

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4017810.170	617881.559	245.186

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:






Point ID	CA31
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Le Flore
Quad	Robert S. Kerr Dam

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3903052.128	339771.272	149.258

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51334702526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-21-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA32
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Salem

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4018073.283	605697.954	224.074

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:






Point ID	CA33
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Le Flore
Quad	Spiro

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3901029.944	352399.539	149.618

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51334702526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-21-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:





Point ID	CA34
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Elizabeth

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4017853.749	589667.008	274.842

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA35
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Le Flore
Quad	South Fort Smith

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3905549.938	367579.333	161.902

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51334702526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-21-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA36
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Elizabeth

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4017439.430	577560.258	223.423

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-07-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA37
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Sequoya
Quad	Fort Smith

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3917313.338	368408.947	126.240

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-20-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	CA38
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Mountain Home East

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4017339.152	565801.562	173.228

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-06-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	CA39
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Sequoya
Quad	Fort Smith

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3928236.610	364322.680	176.785

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-19-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	CA40
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Mountain Home West

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4017723.016	550190.622	232.214

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-05-2017
RMSE Hz	0.008
RMSE Z	0.012
GPS Method	Static

PHOTOS:









Point ID	CA41
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Sequoya
Quad	Uniontown

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3937632.568	365128.371	237.042

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-19-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA42
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Cotter

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4013416.849	541082.006	132.041

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-03-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA43
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Clinton

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3942096.016	549173.765	265.289

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

Date (MM-DD-YYYY)	4-20-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA44
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Adair
Quad	Natural Dam

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3951769.390	364708.230	277.952

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-19-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA45
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Cotter SW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4012478.935	525024.805	240.504

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:







Point ID	CA46
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Adair
Quad	Stilwell East

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3958744.616	363829.990	524.008

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-19-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA47
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Bruno

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4011634.730	515699.451	234.212

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-31-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Point ID	CA48
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Sequoya
Quad	Muldrow

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3912769.411	352809.143	142.530

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51333470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-20-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	CA49
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Everton

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4009836.529	504035.538	366.901

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-31-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	CA50
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Sequoya
Quad	Robert S. Kerr Dam

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3914759.660	338094.971	159.724

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-20-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA51
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Harrison

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4008995.518	490147.117	318.742

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-30-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA52
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Gaither

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4011522.357	477577.480	442.458

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-06-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	CA53
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Green Forest

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4012574.707	464022.253	589.111

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-04-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA54
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Berryville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4012502.961	450778.517	408.280

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-04-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Point ID	CA55
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Rockhouse

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4012877.888	440094.833	450.485

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-03-2017
RMSE Hz	0.007
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	CA56
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Sandstone Mountain

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4013321.971	429854.451	481.780

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-26-2017
RMSE Hz	0.010
RMSE Z	0.015
GPS Method	Static

PHOTOS:



Point ID	CA57
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Sharp
Quad	Wirth

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4029505.048	641996.288	263.286

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA58
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Shirley

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3946103.547	561528.106	167.372

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

Date (MM-DD-YYYY)	4-20-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA59
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Mammoth Spring

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4028078.052	631906.282	128.669

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-02-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA60
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Camp

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4028202.966	619895.241	209.428

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-02-2017
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	Static

PHOTOS:









Point ID	CA61
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Salem Knob

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4027369.810	606940.114	191.513

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Point ID	CA62
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Viola

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4028535.709	591827.659	257.766

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA63
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Gepp

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4027235.701	579424.129	266.580

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-07-2017
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	Static

PHOTOS:



Point ID	CA64
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Clarkridge

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4025828.802	567125.935	177.413

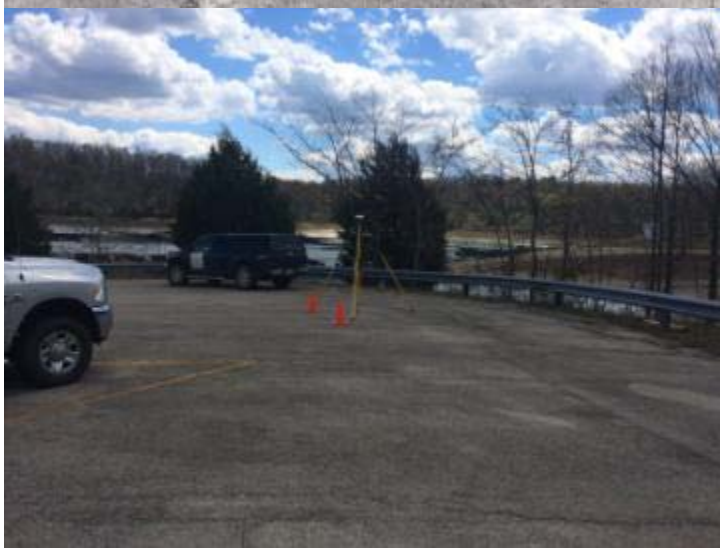
Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-06-2017
RMSE Hz	0.008
RMSE Z	0.014
GPS Method	Static

PHOTOS:









Point ID	CA65
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Mountain Home West

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4023994.207	551039.378	286.547

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-05-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	CA66
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Cotter

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4022672.744	542045.082	140.688

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-03-2017
RMSE Hz	0.008
RMSE Z	0.011
GPS Method	Static

PHOTOS:









Point ID	CA67
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Cotter SW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4022276.460	529781.449	338.864

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA68
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Pyatt

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4022723.760	520560.608	369.007

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-01-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA69
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Parma

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3946564.552	573445.639	350.206

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-20-2017
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	Static

PHOTOS:









Point ID	CA70
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Zinc

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4021253.419	509686.575	393.004

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-01-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA71
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Bergman

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4021036.101	497909.543	400.646

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-23-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA72
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Batavia

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4020974.967	481923.799	414.046

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-06-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA73
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Alpena

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4022639.773	471081.000	346.315

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-05-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	CA74
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Green Forest

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4021971.328	455388.343	426.012

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-03-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA75
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Berryville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4022931.600	444726.561	357.481

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-02-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	CA76
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Rockhouse

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4023637.777	438794.534	351.443

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-03-2017
RMSE Hz	0.004
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	CA77
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Sandstone Mountain

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4025369.647	432420.900	485.395

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-01-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	CA78
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Sharpe
Quad	Wirth

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4038288.998	642134.107	285.864

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:






Point ID	CA79
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Mammoth Spring

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4039958.784	631188.575	154.429

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-02-2017
RMSE Hz	0.010
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	CA80
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Alikchi

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3780537.450	313557.695	170.784

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51333470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-02-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:





Point ID	CA81
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Prim

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3944495.498	586759.325	233.061

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-4-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA82
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Camp

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037892.684	621202.621	215.456

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-02-2017
RMSE Hz	0.010
RMSE Z	0.010
GPS Method	Static

PHOTOS:









Point ID	CA83
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Salem Knob

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037694.954	606348.521	247.309

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA84
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Viola

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4039114.521	597348.240	246.715

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA85
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Viola

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4038134.626	591329.759	291.460

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA86
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Gamaliel

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4038313.218	577387.464	247.274

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-07-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:






Point ID	CA87
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Gamaliel

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4034805.983	568666.399	276.010

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-06-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA88
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Clarkridge

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037242.758	558227.139	265.152

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-06-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA89
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Midway

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037671.412	545916.316	370.099

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-05-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA90
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Cotter NW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4033252.448	533169.915	210.568

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.010
RMSE Z	0.008
GPS Method	Static

PHOTOS:






Point ID	CA91
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Peel

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4031941.572	520707.496	284.750

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-01-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	CA92
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Golden

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3774930.573	323708.316	138.618

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51333470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-03-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA93
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Greers Ferry Dam

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3942501.388	597388.821	319.464

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-4-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA94
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Diamond City

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4036630.492	507209.581	203.409

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-23-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA95
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Omaha NE

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4036840.631	499332.232	209.590

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-23-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA96
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Omaha NE

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4036238.940	489489.869	405.104

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-23-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA97
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Omaha

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037816.786	480274.502	414.358

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-06-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:









Point ID	CA98
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Denver

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4035551.759	472145.826	287.199

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-05-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:





Point ID	CA99
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Blue Eye

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4034655.296	460770.025	409.298

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-05-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA100
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Blue Eye

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4032358.869	455595.305	358.313

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-05-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	CA101
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Grandview

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4036696.526	445328.495	347.768

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-02-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:









Point ID	CA102
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Eureka Springs

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4036313.655	437552.664	373.333

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-02-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	CA103
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Beaver

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

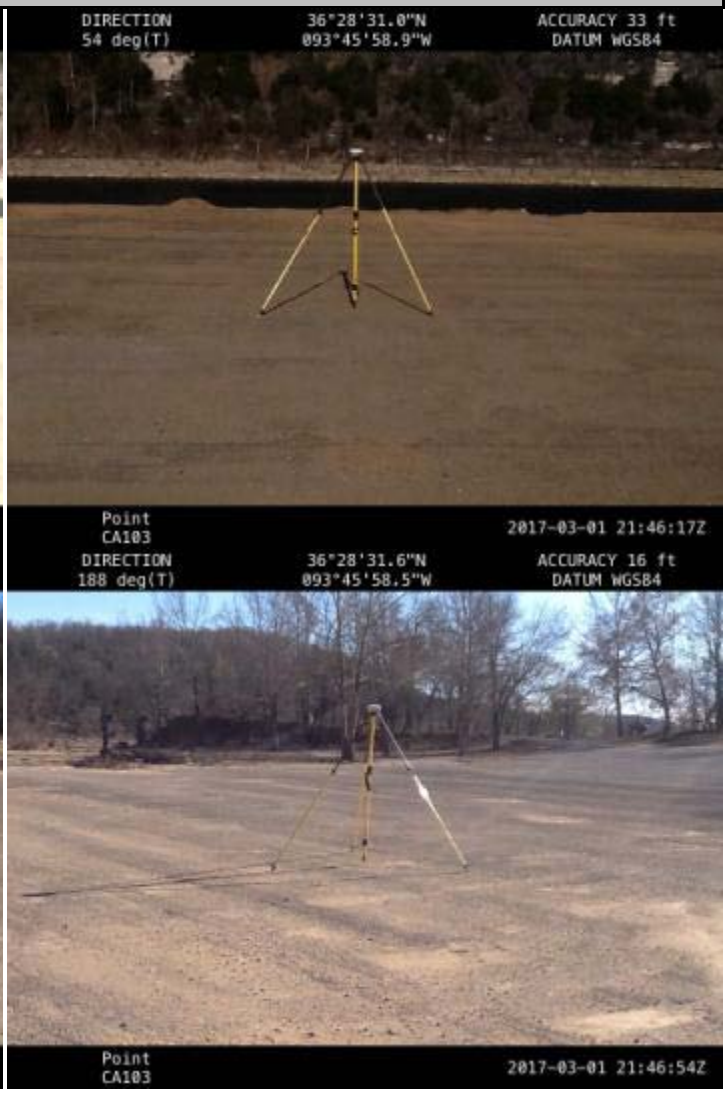
Northing	Easting	Elevation
4036939.043	431354.735	278.836

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-01-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	CA104
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Broken Bow

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3776484.440	339563.486	193.600

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-17-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA105
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Jamestown

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3947458.960	621765.155	210.923

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-4-2017
RMSE Hz	0.007
RMSE Z	0.005
GPS Method	Static

PHOTOS:









Point ID	CA106
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Beaver

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037532.734	423465.146	484.369

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-01-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	CA107
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Eagletown

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3773297.145	352807.742	170.451

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-18-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA108
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Concord

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3946358.036	609096.494	275.322

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-4-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA109
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Chapel Hill

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3773937.160	363230.244	125.078

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-18-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA110
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Batesville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3958476.143	622992.547	81.289

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-22-2017
RMSE Hz	0.013
RMSE Z	0.013
GPS Method	Static

PHOTOS:



Point ID	CA111
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	DeQueen NW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3786579.381	362064.896	269.849

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472625
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-18-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:





Point ID	CA112
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Bethesda

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3961105.023	608448.428	165.850

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-28-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	CA113
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Stevens Gap

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3786314.710	340514.143	203.606

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-17-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	CA114
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Marcella

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3957443.179	598065.153	386.453

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

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA115
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Bear Mountain

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3790145.050	318217.286	239.044

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-02-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	CA116
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Mountain View

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3957054.047	587661.433	385.695

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

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	CA117
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Mountain View SW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3958332.291	571435.132	284.307

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

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA118
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Fox

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3958846.436	560854.887	408.116

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

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	CA119
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Van Buren
Quad	Old Lexington

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3953509.129	548778.520	398.502

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA120
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Van Buren
Quad	Botkinburg

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3954689.631	536110.937	449.156

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA121
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Van Buren
Quad	Alread

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3952204.725	525030.844	524.609

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.011
RMSE Z	0.012
GPS Method	Static

PHOTOS:









Point ID	CA122
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Bog Springs

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3799991.374	365044.026	349.339

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA123
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Johnson
Quad	Oark

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3949047.809	445838.848	292.150

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	02-23-2017
RMSE Hz	0.006
RMSE Z	0.010
GPS Method	Static

PHOTOS:





Point ID	CA124
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Smithville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3806472.204	344018.880	199.199

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.006
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA125
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Fallsville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3956590.582	459207.762	690.434

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-27-2017
RMSE Hz	0.011
RMSE Z	0.014
GPS Method	Static

PHOTOS:





Point ID	CA126
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Bethel

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3803608.447	331038.330	263.438

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA127
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Pettigrew

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3959377.523	439495.558	658.999

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-21-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	CA128
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Rocky Creek

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3804367.923	316317.197	346.402

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-02-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA129
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Batesville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3969961.002	623099.505	200.967

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

Date (MM-DD-YYYY)	4-28-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	CA130
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Bethesda

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3970487.942	612458.829	214.489

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-28-2017
RMSE Hz	0.006
RMSE Z	0.008
GPS Method	Static

PHOTOS:









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Point ID	CA131
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Marcella

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3970362.742	598783.265	220.131

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

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA132
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Mountain View

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3968810.618	587490.614	241.562

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

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	Static

PHOTOS:



Point ID	CA133
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Fiftysix

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3971219.578	572265.008	193.635

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

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	CA134
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Fox

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3970106.952	560193.621	267.315

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

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA135
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Oxley

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3966593.563	549051.752	423.364

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA136
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Harriet

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3971843.850	535035.442	397.251

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA137
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Canaan

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3964332.649	524410.654	545.491

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA138
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Witt Springs

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3964460.054	513306.286	586.660

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA139
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Moore

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

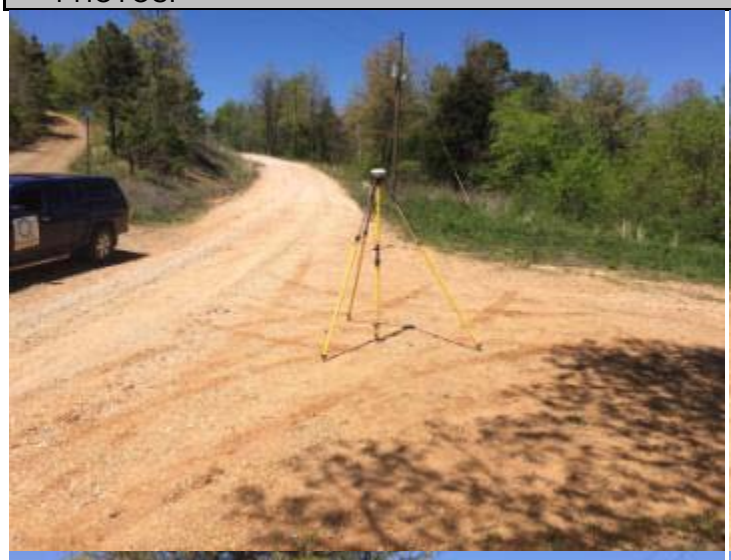
Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3966717.278	500500.584	642.156

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:






Point ID	CA140
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Mt. Judea

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3975524.163	494559.507	288.053

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-28-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA141
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Deer

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3968853.818	482800.763	664.032

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-28-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA142
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Murray

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3978148.136	472869.155	305.920

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-28-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	CA143
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Fallsville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3969048.579	465764.776	649.103

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-27-2017
RMSE Hz	0.011
RMSE Z	0.010
GPS Method	Static

PHOTOS:



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Point ID	CA144
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Boston

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

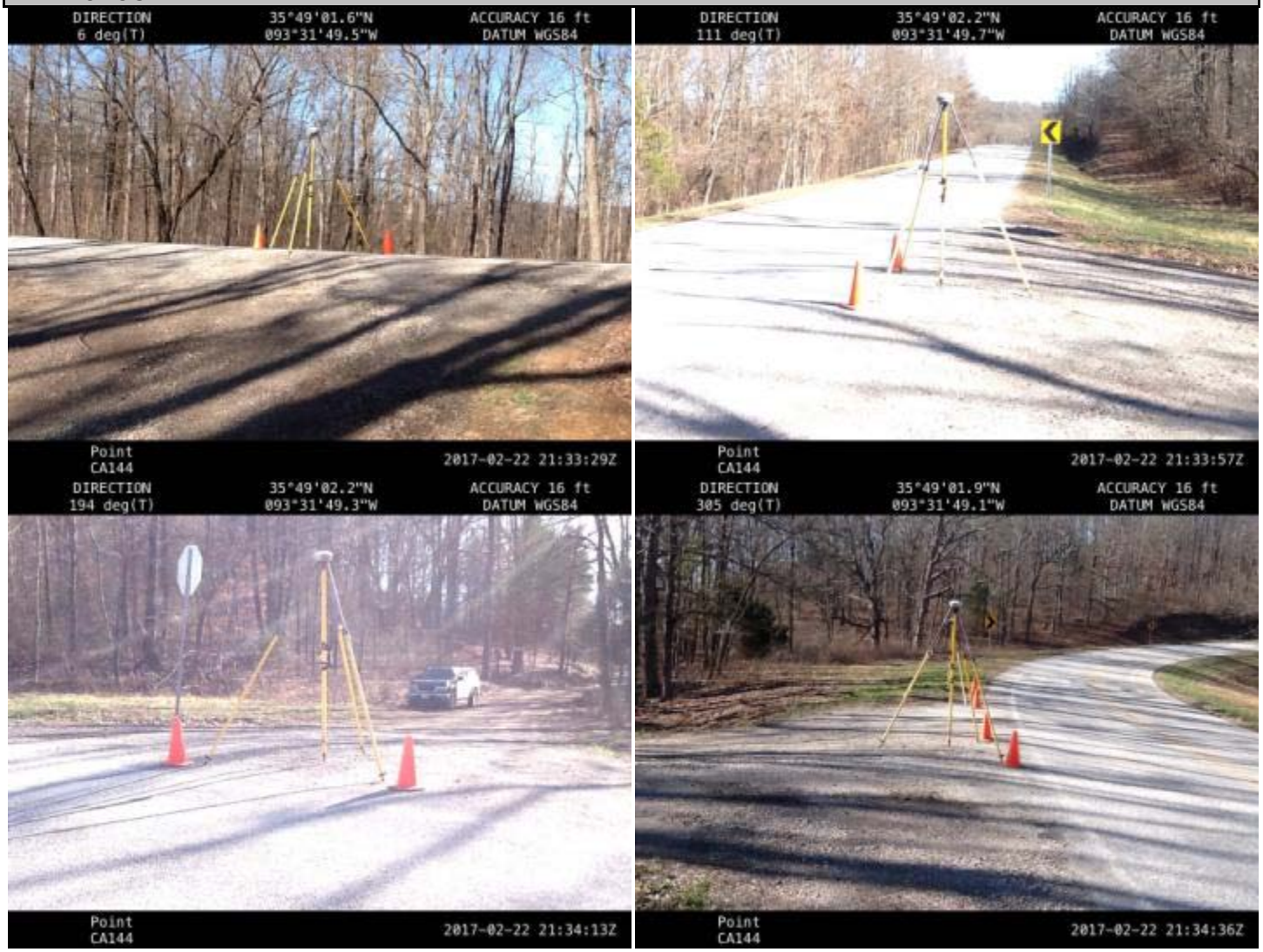
Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3963805.739	452090.073	708.445

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-22-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA145
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	St. Paul

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3964513.521	430814.199	455.890

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-21-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA146
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Ludlow

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3823121.257	331493.225	316.013

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-29-2017
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	Static

PHOTOS:





Point ID	CA147
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Delaney

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3967889.758	418701.510	415.418

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-21-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:





Point ID	CA148
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Smithville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3818175.360	346978.025	252.228

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA149
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Boxely

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3974470.932	455026.134	693.230

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-27-2017
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	Static

PHOTOS:









Point ID	CA150
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Cove

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3811226.192	363100.686	336.307

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA151
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Weathers

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3971200.363	444658.417	631.419

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-22-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA152
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Witter

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3976109.283	434929.805	557.805

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-25-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Point ID	CA153
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Japton

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3978705.990	422991.807	429.107

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-24-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	CA154
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Sandtown

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3981480.239	623546.643	182.633

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-28-2017
RMSE Hz	0.010
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	CA155
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Izard
Quad	Mount Pleasant

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3980492.469	612370.271	198.278

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5106461067
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5-3-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA156
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Mount Pleasant

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3978987.254	602085.337	265.137

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

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.006
RMSE Z	0.009
GPS Method	Static

PHOTOS:



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Point ID	CA157
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Sylamore

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3979459.975	588258.705	214.147

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

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.006
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Point ID	CA158
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Sylamore

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3979204.006	580353.187	100.166

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

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.007
RMSE Z	0.013
GPS Method	Static

PHOTOS:



Point ID	CA159
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Fiftysix

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3979320.156	570339.081	263.268

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

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA160
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Ludlow

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3832215.991	336487.482	675.805

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-30-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:





Point ID	CA161
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Stone
Quad	Landis

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3978034.303	555902.395	245.510

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA162
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Octavia

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3831338.037	347981.140	624.969

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-29-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	CA163
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Landis

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3977982.699	546358.105	212.075

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	CA164
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Mountain Fork

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3834770.842	363727.572	329.431

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51333470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-28-2017
RMSE Hz	0.006
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA165
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Harriet

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3982374.719	535357.868	346.697

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:






Point ID	CA166
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Marshall

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3976596.032	526134.616	202.470

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-23-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA167
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Snoball

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3973642.438	516106.271	234.555

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-23-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Point ID	CA168
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Eula

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3976147.432	505319.958	461.193

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:






Point ID	CA169
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Evening Shade

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3992857.892	624604.648	140.967

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

Date (MM-DD-YYYY)	4-28-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA170
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Grange

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3982208.945	635807.965	173.472

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-27-2017
RMSE Hz	0.010
RMSE Z	0.007
GPS Method	Static

PHOTOS:



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Point ID	CA171
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Grange

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3979636.391	645032.426	110.192

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

Date (MM-DD-YYYY)	4-27-2017
RMSE Hz	0.008
RMSE Z	0.014
GPS Method	Static

PHOTOS:



Point ID	CA172
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Lawrence
Quad	Strawberry

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3981773.566	651372.898	108.686

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

Date (MM-DD-YYYY)	4-27-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA173
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Poughkeepsie

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3993514.376	636994.938	140.829

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5-1-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA174
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Lawrence
Quad	Smithville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994157.180	652786.477	103.539

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-27-2017
RMSE Hz	0.010
RMSE Z	0.011
GPS Method	Static

PHOTOS:









Point ID	CA175
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Poughkeepsie

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3987669.239	645862.901	96.269

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-27-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



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Point ID	CA176
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Zion

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3992324.918	612524.220	209.565

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

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.007
RMSE Z	0.019
GPS Method	Static

PHOTOS:



Point ID	CA177
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Muse

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3838087.475	338496.297	229.250

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-28-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA178
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Melbourne

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3990940.950	599726.410	188.728

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

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.004
RMSE Z	0.004
GPS Method	Static

PHOTOS:



Point ID	CA179
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Mountain Fork

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3844715.440	354214.310	250.937

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-28-2017
RMSE Hz	0.006
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA180
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Boswell

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3991713.825	588862.435	121.798

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

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.004
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA181
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Big Cedar

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3842807.570	346684.384	579.893

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-28-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	CA182
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Stone
Quad	Calico Rock

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3990986.882	576672.626	196.011

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	CA183
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Backjack Ridge

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3849406.884	328363.504	498.165

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	01-27-2017
RMSE Hz	0.004
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA184
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Norfolk Dam South

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3992525.725	570086.439	327.168

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA185
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Backjack Ridge

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3852197.687	322040.724	432.093

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-27-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	CA186
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Norfolk SE

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3990962.509	558250.336	363.712

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.008
RMSE Z	0.012
GPS Method	Static

PHOTOS:









Point ID	CA187
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Talihina

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3847960.894	313227.697	215.257

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-27-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA188
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Big Flat

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3989759.288	545862.909	298.885

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:






Point ID	CA189
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Talihina

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3857398.106	313584.080	191.715

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-27-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:





Point ID	CA190
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Cozahome

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994584.482	535223.147	319.889

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA191
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Le Flore

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3863448.164	324284.640	171.685

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-25-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA192
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Maumee

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3987389.148	522550.485	275.703

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-22-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	CA193
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Le Flore SE

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3860041.339	334663.040	183.702

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-25-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA194
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Western Grove

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3984549.134	511258.438	319.324

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-23-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:






Point ID	CA195
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Hodgen

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3856840.105	345274.826	162.178

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-26-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA196
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Hasty

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3985663.251	495638.823	380.312

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-30-2017
RMSE Hz	0.010
RMSE Z	0.015
GPS Method	Static

PHOTOS:





Point ID	CA197
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Hontubby

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3857575.773	356901.346	160.310

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-26-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA198
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Jasper

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3984780.918	483247.122	257.580

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-25-2017
RMSE Hz	0.008
RMSE Z	0.011
GPS Method	Static

PHOTOS:



Point ID	CA199
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Heavener

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3870158.478	356555.976	181.053

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-26-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	CA200
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Ponca

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3984409.312	471829.764	534.160

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-25-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	CA201
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Wister

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3871209.779	342791.269	155.757

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-24-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA202
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Osage SW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3985405.917	460106.425	675.610

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-26-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA203
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Summerfield

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3869847.208	330403.750	177.136

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-24-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA204
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Kingston

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3984392.839	448777.037	545.501

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-26-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA205
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Potato Peaks

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3881224.627	331737.504	289.165

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-25-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA206
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Huntsville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3984267.278	436645.590	437.983

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-25-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	CA207
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Poteau West

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3881105.044	341872.869	244.301

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-24-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CE208
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Hartwell

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

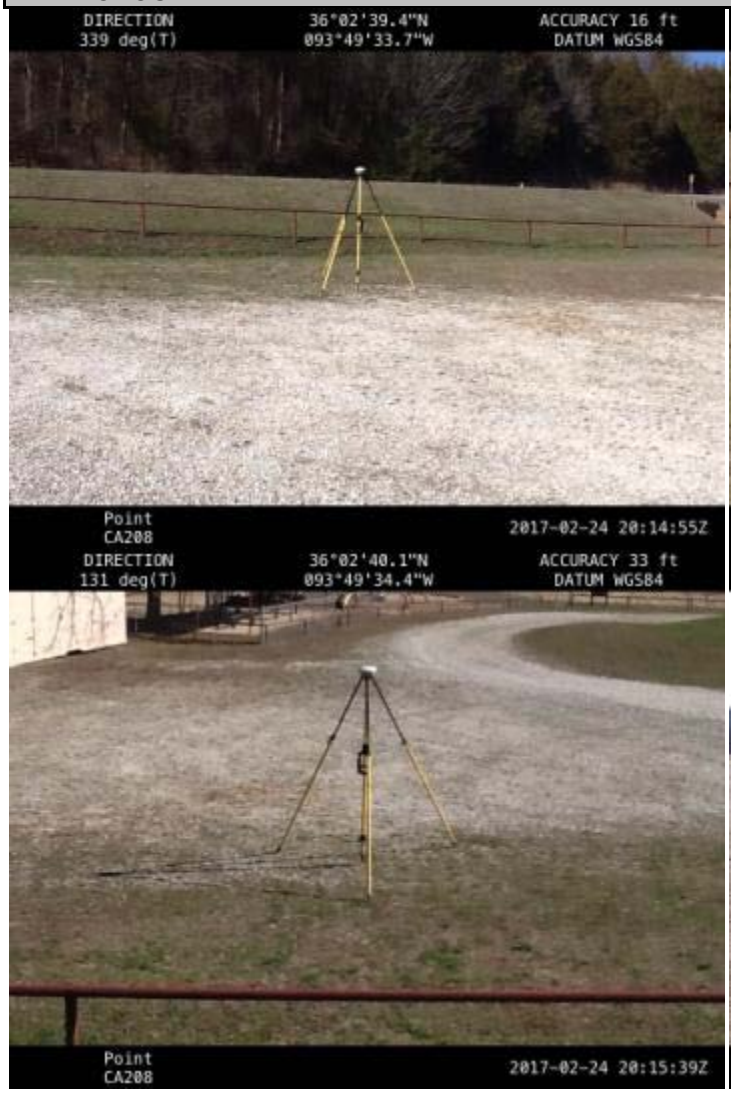
Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3989187.572	425587.523	422.501

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-24-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	CA209
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Poteau West

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3879821.782	351697.560	146.313

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-23-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA210
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Goshen

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3987389.567	417175.524	388.340

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-24-2017
RMSE Hz	0.011
RMSE Z	0.013
GPS Method	Static

PHOTOS:









Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	CA211
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Poteau East

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3879956.465	361131.384	163.165

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-24-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	CA212
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Lawrence
Quad	Ravenden

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4004749.254	652720.671	208.716

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5-1-2017
RMSE Hz	0.011
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA213
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Spiro

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3891666.225	362585.194	149.819

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-23-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA214
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Sitka

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4004593.230	640491.611	214.950

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5-1-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA215
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Le Flore
Quad	Panama

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3893667.723	347941.061	139.064

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-21-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	CA216
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Sharp
Quad	Ash Flat

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4005103.464	629409.281	175.593

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

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.006
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Point ID	CA217
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Bokashe

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3892595.695	338780.056	162.218

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-23-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA218
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Myron

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4005393.942	617398.792	201.072

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

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.004
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	CA219
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	McCurtain

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3892375.195	328929.689	173.228

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51364702526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-23-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA220
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Franklin

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4005247.887	603810.206	246.076

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

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	CA221
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Izard
Quad	Pineville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4003248.125	588481.776	222.702

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	CA222
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Stone
Quad	Norfolk Dam South

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4002524.542	576805.085	214.110

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-08-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	CA223
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Norfolk

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4003377.072	564609.007	193.483

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-08-2017
RMSE Hz	0.008
RMSE Z	0.013
GPS Method	Static

PHOTOS:









Point ID	CA224
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Buffalo City

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4002613.336	550072.616	127.946

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-08-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	CA225
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Rea Valley

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4002797.658	538178.984	197.940

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.006
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Bare Earth Point Log Sheets

Point ID	BE01
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Eagletown

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3767340.904	354631.447	121.804

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-18-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	BE02
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Pleasant Plains

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3936708.972	620189.448	184.705

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-2-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	BE03
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Golden

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3767558.846	324982.039	120.387

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-16-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	BE04
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Floral

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3935551.751	608758.271	250.832

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-2-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	BE05
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Swink

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3766836.589	303283.289	164.059

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-16-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	BE06
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Greers Ferry Dam

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3933153.512	598791.050	250.821

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-2-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	BE07
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Scotland

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3930765.893	539812.857	200.908

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-22-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE08
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Rex

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3934154.854	528875.261	432.647

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-22-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	BE09
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Van Buren
Quad	Lost Corner

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3941537.777	522560.849	504.391

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	BE10
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Van Buren
Quad	Botkinburg

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3943154.253	535614.538	425.203

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.016
RMSE Z	0.017
GPS Method	Static

PHOTOS:









Point ID	BE11
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Parma

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3946560.052	573399.041	350.478

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

Date (MM-DD-YYYY)	4-20-2017
RMSE Hz	0.011
RMSE Z	0.011
GPS Method	Static

PHOTOS:



Point ID	BE12
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Prim

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3944426.091	586756.630	224.959

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

Date (MM-DD-YYYY)	4-4-2017
RMSE Hz	.0007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE13
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Greers Ferry Dam

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3942532.144	597412.164	319.573

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

Date (MM-DD-YYYY)	4-4-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE14
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Bergman

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4021035.693	497887.148	400.455

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-23-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:






Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE15
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Alpena

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4022648.817	471075.719	345.769

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-05-2017
RMSE Hz	0.007
RMSE Z	0.011
GPS Method	Static

PHOTOS:



Point ID	BE16
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Green Forest

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4022003.173	455364.228	427.489

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-03-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	BE17
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Berryville

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

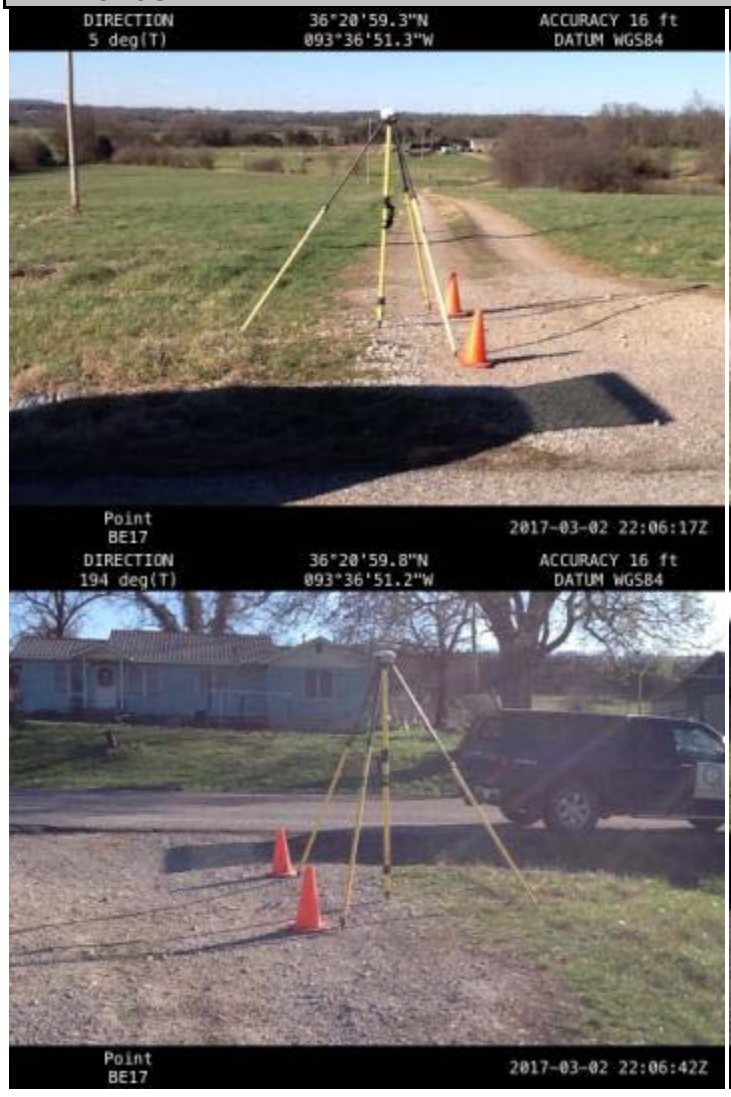
Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4022930.749	444884.126	360.933

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-02-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE18
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Rockhouse

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4023622.460	438800.648	352.416

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-03-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	BE19
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Sandstone Mountain

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4025380.807	432424.096	484.855

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-01-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	BE20
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Sharpe
Quad	Wirth

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4038279.927	642143.499	285.810

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	BE21
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Camp

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037911.697	621197.485	214.074

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-02-2017
RMSE Hz	0.011
RMSE Z	0.011
GPS Method	Static

PHOTOS:









Point ID	BE22
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Salem Knob

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037710.662	606298.724	250.834

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.008
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	BE23
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Viola

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4039095.067	597335.652	246.503

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:






Point ID	BE24
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Golden

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3774945.781	323733.472	138.567

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-03-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	BE25
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Concord

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3946377.310	609153.405	273.195

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

Date (MM-DD-YYYY)	4-4-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	BE26
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Viola

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4038129.664	591323.006	291.490

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE27
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Gamaliel

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4038296.176	577385.903	246.200

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-07-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	BE28
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Gamaliel

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4034869.773	568682.742	275.563

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-06-2017
RMSE Hz	0.010
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	BE29
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Clarkridge

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037227.195	558218.802	265.002

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-06-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	BE30
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Midway

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037698.587	545889.138	368.565

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-05-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE31
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Cotter NW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4033205.664	533045.580	201.685

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.011
RMSE Z	0.010
GPS Method	Static

PHOTOS:









Point ID	BE32
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Peel

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4031942.032	520699.723	284.803

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-01-2017
RMSE Hz	0.010
RMSE Z	0.011
GPS Method	Static

PHOTOS:









Point ID	BE33
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Omaha NE

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4036229.193	489497.646	405.042

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-23-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:





Point ID	BE34
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Omaha

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037920.029	480549.788	420.051

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-06-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	BE35
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Denver

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4035565.378	472210.051	282.945

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-05-2017
RMSE Hz	0.007
RMSE Z	0.005
GPS Method	Static

PHOTOS:





Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE36
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Broken Bow

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3776504.284	339573.746	193.156

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-17-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	BE37
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Jamestown

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3947488.619	621697.626	210.749

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

Date (MM-DD-YYYY)	4-4-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE38
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Blue Eye

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

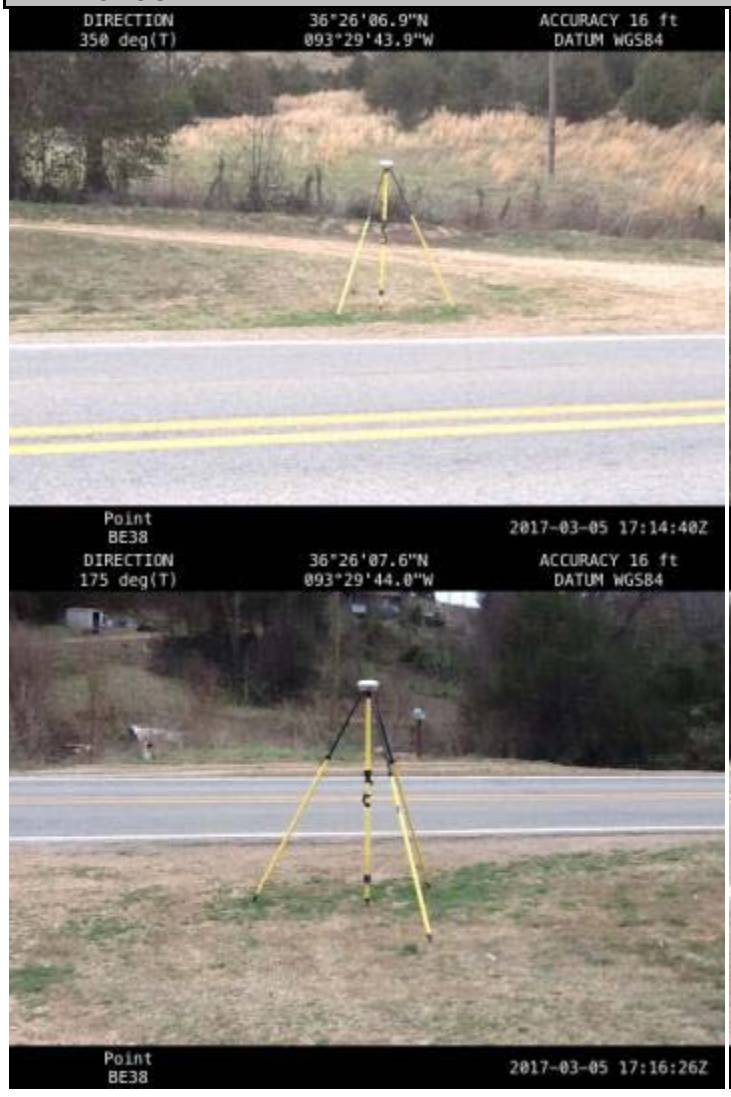
Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4032353.042	455583.351	358.105

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-05-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	BE39
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Grandview

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4036686.300	445317.718	347.811

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-02-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE40
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Eureka Springs

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4036306.726	437536.199	374.248

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51333470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-02-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	BE41
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Beaver

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4036967.770	431328.290	279.360

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-01-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE42
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Beaver

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037542.872	423482.797	484.783

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-01-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	BE43
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Hindsville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4007977.866	422700.584	438.680

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-26-2017
RMSE Hz	0.007
RMSE Z	0.013
GPS Method	Static

PHOTOS:





Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE44
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Osage

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

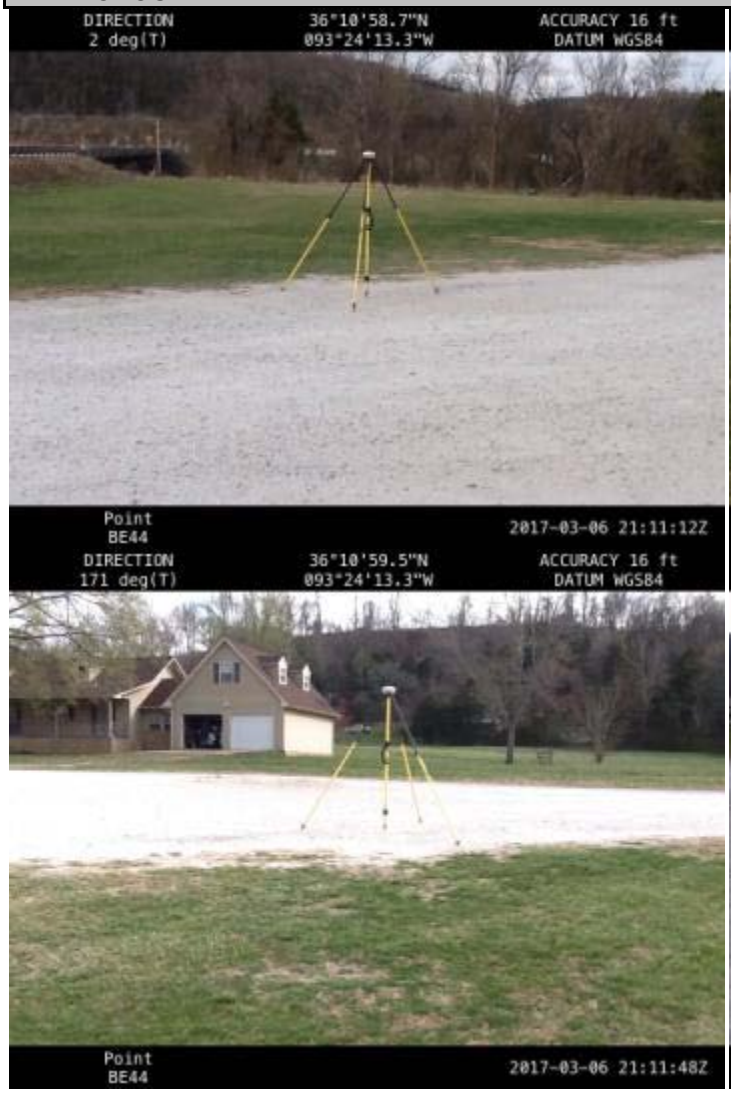
Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4004328.556	463703.765	402.735

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-06-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:





Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE45
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Everton

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4005120.162	503040.695	313.478

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-30-2017
RMSE Hz	0.011
RMSE Z	0.013
GPS Method	Static

PHOTOS:



Point ID	BE46
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Western Grove

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994695.936	503848.886	338.085

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461844
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	03-30-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	BE47
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Cozahome

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3992284.930	535816.946	311.589

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.010
RMSE Z	0.013
GPS Method	Static

PHOTOS:









Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE48
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Eagletown

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3773264.310	352802.805	170.128

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-18-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	BE49
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Marcella

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3957430.547	598029.533	386.459

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

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	BE50
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Fiftysix

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3978621.956	569337.500	238.771

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

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Point ID	BE51
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Fairfield Bay

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3937148.840	562798.583	255.331

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

Date (MM-DD-YYYY)	4-20-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE52
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Bethesda

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3961197.734	608451.319	166.950

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

Date (MM-DD-YYYY)	4-28-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:









Point ID	BE53
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Landis

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3983029.714	552866.063	369.144

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.011
RMSE Z	0.017
GPS Method	Static

PHOTOS:









Point ID	BE54
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Delaney

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3961001.248	414793.573	731.408

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-21-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE55
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carrol
Quad	Sandstone Mountain

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4018652.076	431655.184	495.555

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-26-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE56
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Forum

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4004307.080	435687.732	478.907

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-26-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	BE57
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Peel

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4025805.522	513800.268	270.446

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-01-2017
RMSE Hz	0.010
RMSE Z	0.013
GPS Method	Static

PHOTOS:









Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE58
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Chapel Hill

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3773932.799	363203.585	125.558

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-18-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE59
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Mountain View

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3957067.999	587640.582	386.254

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

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE60
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	DeQueen NW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3786591.956	362053.691	269.985

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-18-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:





Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE61
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Mountain View SW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3958323.359	571408.471	284.311

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

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE62
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Bear Mountain

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3790127.495	318217.333	238.994

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51333470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-02-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	BE63
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Fox

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3958878.009	560886.267	411.449

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

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	BE64
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Sequoya
Quad	Fort Coffee

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3915349.972	354472.488	143.636

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-20-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	BE65
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Van Buren
Quad	Old Lexington

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3953504.107	548766.066	397.903

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	BE66
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Van Buren
Quad	Botkinburg

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3954704.861	536130.147	449.749

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE67
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Van Buren
Quad	Alread

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3952190.205	525037.850	524.863

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.016
RMSE Z	0.012
GPS Method	Static

PHOTOS:






Point ID	BE68
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Johnson
Quad	Oark

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3949021.208	445875.807	292.133

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-23-2017
RMSE Hz	0.006
RMSE Z	0.010
GPS Method	Static

PHOTOS:



Point ID	BE69
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Fallsville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3956545.647	459172.507	693.449

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-27-2017
RMSE Hz	0.008
RMSE Z	0.013
GPS Method	Static

PHOTOS:



Point ID	BE70
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Bog Springs

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3799996.811	365052.246	349.619

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



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Point ID	BE71
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Pettigrew

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3959376.489	439487.704	658.997

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-21-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE72
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Smithville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3806407.076	343962.706	202.075

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	BE73
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Batesville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3969976.145	623139.473	200.104

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-28-2017
RMSE Hz	0.007
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE74
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Bethel

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3803604.900	331012.448	263.548

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	BE75
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Marcella

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3970315.179	598837.059	221.771

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

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	BE76
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Rocky Creek

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3804377.243	316320.578	346.113

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-02-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	BE77
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Mountain View

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3968818.111	587509.907	243.251

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

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	Static

PHOTOS:



Point ID	BE78
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3970109.465	560165.974	267.065

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

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	BE79
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Oxley

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3966591.979	549068.829	422.781

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE80
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Harriet

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3971824.800	535053.935	396.106

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:






Point ID	BE81
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Canaan

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3964320.571	524394.878	546.958

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	BE82
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Witt Springs

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3964441.224	513303.225	586.356

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	BE83
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Moore

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3966726.308	500500.834	642.492

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	BE84
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Deer

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3968908.428	482770.700	662.529

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-28-2017
RMSE Hz	0.010
RMSE Z	0.011
GPS Method	Static

PHOTOS:









Point ID	BE85
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Murray

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3978156.949	472886.827	305.931

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-28-2017
RMSE Hz	0.011
RMSE Z	0.011
GPS Method	Static

PHOTOS:









Point ID	BE86
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Boston

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3963810.647	452083.309	708.137

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-22-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	BE87
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Boxely

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3974507.378	455057.835	694.505

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-27-2017
RMSE Hz	0.008
RMSE Z	0.011
GPS Method	Static

PHOTOS:



Point ID	BE88
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Weathers

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3971206.224	444667.756	631.305

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-22-2017
RMSE Hz	0.008
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	BE89
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Witter

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3976116.068	434931.531	557.731

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-25-2017
RMSE Hz	0.006
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE90
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Ludlow

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3823131.524	331470.216	316.501

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-29-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	BE91
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Japton

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3978690.933	422981.311	429.419

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-24-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	BE92
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Smithville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3818191.763	346983.280	253.114

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	BE93
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Sandtown

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3981423.216	623574.112	182.584

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

Date (MM-DD-YYYY)	4-28-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	BE94
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Cove

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3811226.016	363072.145	337.197

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	BE95
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Mount Pleasant

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3978968.071	602098.392	265.648

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

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Point ID	BE96
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Sylamore

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3979448.658	588238.108	212.917

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

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Point ID	BE97
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Harriet

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3982404.927	535385.366	348.808

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	BE98
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Marshall

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3977477.496	525552.592	199.511

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-23-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	BE99
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Eula

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3976146.306	505310.269	460.951

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	BE100
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Grange

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3979678.833	645039.495	109.697

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-27-2017
RMSE Hz	0.011
RMSE Z	0.014
GPS Method	Static

PHOTOS:









Point ID	BE101
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Poughkeepsie

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3993527.309	636973.289	139.664

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

Date (MM-DD-YYYY)	5-1-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	BE102
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Ludlow

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3832186.340	336504.747	676.390

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-30-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Point ID	BE103
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Poughkeepsie

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3987659.002	645893.876	94.751

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

Date (MM-DD-YYYY)	4-27-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	BE104
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Octavia

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3831341.087	347952.436	625.380

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-29-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	BE105
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Zion

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3992348.284	612559.172	209.065

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

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.010
RMSE Z	0.019
GPS Method	Static

PHOTOS:



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Point ID	BE106
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Mountain Fork

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3834743.887	363764.440	331.774

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-28-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



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Point ID	BE107
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Boswell

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3991686.772	589003.187	121.775

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

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	BE108
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Norfolk Dam South

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3992516.890	570094.894	327.070

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.010
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	BE109
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Big Flat

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3989769.665	545876.268	298.628

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.010
RMSE Z	0.010
GPS Method	Static

PHOTOS:









Point ID	BE110
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Western Grove

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3984544.133	511258.069	319.429

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-23-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:






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Point ID	BE111
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Hasty

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3985673.106	495632.845	380.113

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-30-2017
RMSE Hz	0.012
RMSE Z	0.020
GPS Method	Static

PHOTOS:





Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE112
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Ponca

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3984434.712	471835.150	534.634

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51333472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-25-2017
RMSE Hz	0.010
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE113
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Osage SW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3985418.698	460089.128	675.168

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-26-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	BE114
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Kingston

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3984383.890	448768.017	546.464

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-26-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE115
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Huntsville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3984245.391	436619.776	434.857

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-25-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE116
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Mountain Fork

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3844729.956	354251.547	250.843

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-28-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE117
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Hartwell

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3989167.049	425564.855	423.195

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-24-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE118
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Talihina

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3857405.681	313598.636	191.816

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-27-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	BE119
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Goshen

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3987392.202	417126.569	387.324

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-24-2017
RMSE Hz	0.008
RMSE Z	0.011
GPS Method	Static

PHOTOS:





Point ID	BE120
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Le Flore

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3863461.688	324284.962	171.637

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-25-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	BE121
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Lawrence
Quad	Ravenden

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4004720.344	652676.647	208.454

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

Date (MM-DD-YYYY)	5-1-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE122
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Le Flore SE

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3860041.505	334704.775	180.862

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-25-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	BE123
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Sitka

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4004531.164	640521.786	213.981

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

Date (MM-DD-YYYY)	5-1-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	BE124
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Hontubby

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3857590.729	356967.189	160.980

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-26-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	BE125
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Sharp
Quad	Ash Flat

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4005076.724	629376.902	177.901

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

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	Static

PHOTOS:



Point ID	BE126
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Heavener

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3870158.225	356561.678	181.337

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-26-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	BE127
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Myron

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4005493.869	617488.661	207.585

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

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.004
RMSE Z	0.005
GPS Method	Static

PHOTOS:



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Point ID	BE128
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Summerfield

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3869834.004	330393.157	176.901

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-24-2017
RMSE Hz	0.010
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Point ID	BE129
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Franklin

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4005271.452	603827.750	246.153

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

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	BE130
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Potato Peaks

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3881213.603	331758.390	286.892

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-25-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	BE131
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Izard
Quad	Pineville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4003231.151	588485.935	222.521

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE132
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Poteau West

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3881111.097	341859.657	244.167

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-24-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	BE133
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Stone
Quad	Norfolk Dam South

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4002505.713	576783.191	212.455

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-08-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









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Point ID	BE134
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Spiro

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3891667.022	362579.609	149.878

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-23-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	BE135
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Norfolk

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4003365.579	564611.064	193.728

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-08-2017
RMSE Hz	0.011
RMSE Z	0.013
GPS Method	Static

PHOTOS:









Point ID	BE136
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Bokashe

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3892597.496	338758.451	162.324

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-23-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	BE137
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Rea Valley

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4002805.049	538191.470	199.068

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.008
RMSE Z	0.011
GPS Method	Static

PHOTOS:









Point ID	BE138
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	McCurtain

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3892367.940	328960.640	172.842

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-23-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE139
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Yellville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3998497.167	526054.952	376.716

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-03-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE140
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	St. Joe

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3995702.768	514692.562	391.669

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-31-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE141
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Jasper

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994592.607	488287.634	313.658

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-25-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE142
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Ponca

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994720.361	472788.498	658.558

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-25-2017
RMSE Hz	0.010
RMSE Z	0.010
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE143
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Osage SW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3995866.555	462709.184	456.197

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-26-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE144
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Kingston

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3995907.305	450593.071	412.062

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-28-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE145
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Huntsville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994869.789	438848.919	486.871

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-28-2017
RMSE Hz	0.004
RMSE Z	0.005
GPS Method	Static

PHOTOS:









Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE146
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Hartwell

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3995716.442	427138.972	496.611

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-25-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:





Point ID	BE147
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Williford

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4015391.887	650853.119	165.841

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

Date (MM-DD-YYYY)	5-1-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE148
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Sharp
Quad	Hardy

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4018076.571	640564.702	111.566

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.010
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	BE149
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Stuart

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4014069.307	630078.514	216.483

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

Date (MM-DD-YYYY)	5-5-2017
RMSE Hz	0.008
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	BE150
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Agnos

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4017777.080	617867.504	244.694

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:









Point ID	BE151
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Salem

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4018091.177	605701.177	225.162

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.010
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE152
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Elizabeth

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4017855.531	589683.026	275.194

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE153
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Sequoya
Quad	Fort Smith

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3928245.488	364331.611	176.512

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-19-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:





Point ID	BE154
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Elizabeth

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4017440.947	577546.693	223.734

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-07-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	BE155
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Sequoya
Quad	Uniontown

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3937627.299	365142.625	236.604

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-19-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	BE156
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Mountain Home West

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4017707.623	550200.298	232.514

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-05-2017
RMSE Hz	0.010
RMSE Z	0.014
GPS Method	Static

PHOTOS:









Point ID	BE157
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Adair
Quad	Natural Dam

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3951777.008	364717.259	277.705

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-19-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	BE158
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Cotter SW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4012445.264	525019.442	239.227

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	BE159
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Adair
Quad	Stilwell East

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3958742.905	363846.987	524.192

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-19-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



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Point ID	BE160
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Bruno

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4011608.045	515719.887	233.921

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-31-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	BE161
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Sequoya
Quad	Muldrow

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3914767.568	338103.594	159.406

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-20-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	BE162
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Everton

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4009838.965	504014.886	367.517

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-31-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:



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Point ID	BE163
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Gaither

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4011542.486	477576.621	442.644

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-06-2017
RMSE Hz	0.007
RMSE Z	0.005
GPS Method	Static

PHOTOS:





Point ID	BE164
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Green Forest

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4012587.913	464026.513	589.158

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-04-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



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Point ID	BE165
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Berryville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4012510.443	450786.428	408.444

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-04-2017
RMSE Hz	0.006
RMSE Z	0.008
GPS Method	Static

PHOTOS:





Point ID	BE166
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Rockhouse

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4012867.012	440078.237	450.230

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-03-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	BE167
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Sharp
Quad	Wirth

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4028659.013	642004.123	263.179

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.010
RMSE Z	0.014
GPS Method	Static

PHOTOS:









Point ID	BE168
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Mammoth Spring

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4028063.970	631915.758	129.385

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-02-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









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Point ID	BE169
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Camp

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4028178.457	619897.029	209.360

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-02-2017
RMSE Hz	0.010
RMSE Z	0.011
GPS Method	Static

PHOTOS:



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Point ID	BE170
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Salem Knob

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4027345.162	606929.357	191.178

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.008
RMSE Z	0.011
GPS Method	Static

PHOTOS:









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Point ID	BE171
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Gepp

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4027733.545	579475.519	265.267

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-07-2017
RMSE Hz	0.010
RMSE Z	0.012
GPS Method	Static

PHOTOS:



Point ID	BE172
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Cotter SW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4022274.811	529804.537	339.355

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.011
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	BE173
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Pyatt

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4022733.766	520562.571	368.792

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-01-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	BE174
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Zinc

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4021256.392	509692.833	392.996

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-01-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Urban Area Point Log Sheets

Point ID	UA01
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Broken Bow

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3766457.279	339471.256	143.432

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-16-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Point ID	UA02
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Greers Ferry

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3936411.265	574574.472	173.777

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

Date (MM-DD-YYYY)	4-4-2017
RMSE Hz	0.006
RMSE Z	0.008
GPS Method	Static

PHOTOS:









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Point ID	UA03
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Wright City

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3771131.823	314879.453	123.686

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-03-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	UA04
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Clinton

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3931770.192	550843.682	167.067

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-22-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	UA05
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Shirley

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3946050.129	561546.700	165.558

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-20-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:









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Point ID	UA06
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Old Glory Mountain

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3781651.667	338001.253	230.344

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-17-2017
RMSE Hz	0.008
RMSE Z	0.011
GPS Method	Static

PHOTOS:





Point ID	UA07
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Batesville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3958487.496	622973.696	81.392

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

Date (MM-DD-YYYY)	4-22-2017
RMSE Hz	0.013
RMSE Z	0.013
GPS Method	Static

PHOTOS:









Point ID	UA08
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Bethesda

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3970494.084	612491.713	214.102

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

Date (MM-DD-YYYY)	4-28-2017
RMSE Hz	0.006
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	UA09
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Mt. Judea

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3975155.549	494583.402	277.173

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-28-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	UA10
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	St. Paul

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3964597.696	430883.571	457.319

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-21-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	UA11
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Izard
Quad	Mount Pleasant

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3980630.830	612324.817	196.398

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

Date (MM-DD-YYYY)	5-3-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	UA12
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Fiftysix

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3978641.052	569356.168	237.751

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

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.006
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	UA13
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Talihina

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3847958.352	313210.450	215.143

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-27-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	UA14
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Evening Shade

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3992925.052	624607.672	142.939

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-28-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	UA15
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Heavener

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3861573.152	353989.262	171.110

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-26-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	UA16
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Lawrence
Quad	Strawberry

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3981769.615	651349.836	108.453

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-27-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	UA17
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Wister

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3871194.672	342793.072	155.421

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-24-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	UA18
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Melbourne

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3990961.687	599756.207	188.766

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

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.004
RMSE Z	0.004
GPS Method	Static

PHOTOS:



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Point ID	UA19
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Poteau West

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3879858.241	351710.291	146.433

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-23-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	UA20
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Jasper

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3984758.798	483241.499	258.195

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-25-2017
RMSE Hz	0.007
RMSE Z	0.010
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	UA21
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Panama

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3888841.610	348728.613	140.007

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-23-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	UA22
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Western Grove

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994887.212	503927.116	337.228

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	513472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-30-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Point ID	UA23
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Le Flore
Quad	South Fort Smith

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

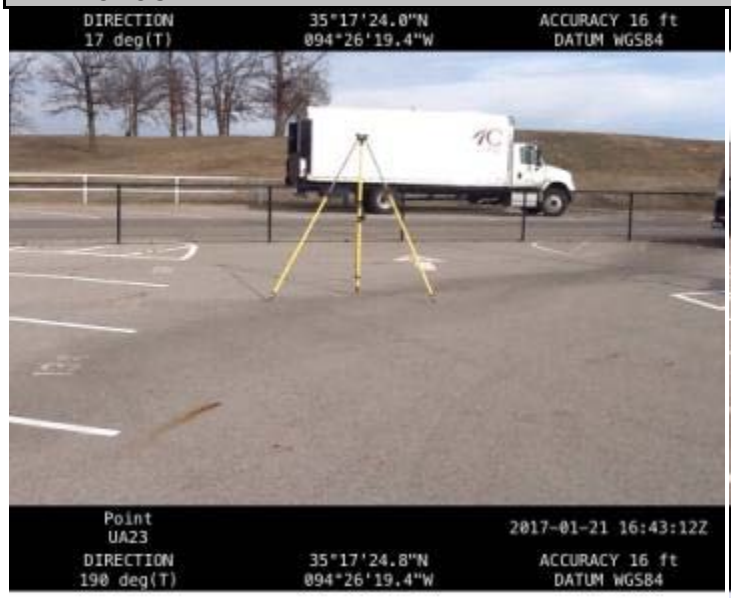
Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3906158.888	369173.755	161.459

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-21-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	UA24
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Cotter

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4013625.336	541240.225	150.867

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-03-2017
RMSE Hz	0.010
RMSE Z	0.010
GPS Method	Static

PHOTOS:









Point ID	UA25
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Sequoya
Quad	Muldrow

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3919502.892	363440.864	135.706

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	513472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-20-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:





Point ID	UA26
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Harrison

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4008899.417	490193.962	320.066

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-30-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	UA27
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Viola

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4028562.280	591918.019	259.831

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-30-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	UA28
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Mountain Home East

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4022490.721	556921.478	245.891

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-05-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	UA29
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Mammoth Spring

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4039965.505	631162.892	154.482

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-02-2017
RMSE Hz	0.010
RMSE Z	0.010
GPS Method	Static

PHOTOS:









Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	UA30
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Blue Eye

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4034658.300	460795.811	409.383

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-05-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	UA31
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Marshall

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3974224.766	532665.285	297.749

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:






Point ID	UA32
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Mountain View

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3969715.848	580903.075	238.719

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

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	UA33
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Huntsville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3993899.242	433486.471	450.015

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-24-2017
RMSE Hz	0.010
RMSE Z	0.014
GPS Method	Static

PHOTOS:



Point ID	UA34
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Berryville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4024845.818	448673.335	373.620

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-02-2017
RMSE Hz	0.008
RMSE Z	0.013
GPS Method	Static

PHOTOS:



Point ID	UA35
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Concord

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3947392.455	604535.050	317.659

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-2-2017
RMSE Hz	0.007
RMSE Z	0.009
GPS Method	Static

PHOTOS:









Point ID	UA36
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Yellville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4008914.332	528773.360	179.973

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.011
RMSE Z	0.011
GPS Method	Static

PHOTOS:









Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	UA37
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Kingston

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3989667.178	453331.944	415.533

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-28-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	UA38
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Sharpe
Quad	Hardy

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4019976.677	636174.940	111.920

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.004
RMSE Z	0.011
GPS Method	Static

PHOTOS:









Point ID	UA39
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Diamond City

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4035543.768	507439.538	242.261

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-23-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





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Point ID	UA40
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Eureka Springs

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4028641.858	433729.540	386.631

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-01-2017
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	Static

PHOTOS:



Point ID	UA41
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Izard
Quad	Calico Rock

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3997383.059	577825.342	141.817

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	UA42
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Izard
Quad	Franklin

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4008936.619	611600.572	223.541

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-06-2017
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	Static

PHOTOS:









Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	UA43
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Batavia

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4016682.733	473805.389	346.435

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-06-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



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Point ID	UA44
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Green Forest

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4021159.109	461127.706	408.137

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51333470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-04-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	UA45
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Le Flore
Quad	Panama

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3893678.803	347949.613	139.273

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-21-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	UA46
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Le Flore
Quad	Spiro

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3901053.436	352377.851	149.442

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-21-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Tall Weed Point Log Sheets

Point ID	TW01
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Swink

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3766855.209	303279.730	164.372

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-16-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:





Point ID	TW02
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Pleasant Plains

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3936677.087	620184.168	184.716

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

Date (MM-DD-YYYY)	4-2-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









Point ID	TW03
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Greers Ferry Dam

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3933163.987	598792.846	250.000

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-2-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	TW04
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Van Buren
Quad	Lost Corner

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3941529.445	522593.473	504.472

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	TW05
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Van Buren
Quad	Old Lexington

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3952378.967	547187.858	425.864

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	TW06
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Marcella

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3970319.708	598860.917	224.957

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

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	TW07
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Fiftysix

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3971229.519	572244.381	194.579

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

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	TW08
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Fox

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3970096.404	560134.812	265.997

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

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	TW09
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Harriet

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3973467.241	533768.549	334.506

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.004
RMSE Z	0.005
GPS Method	Static

PHOTOS:









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Point ID	TW10
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Bethel

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3803925.053	333518.096	278.071

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.003
RMSE Z	0.003
GPS Method	Static

PHOTOS:



Point ID	TW11
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Canaan

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3964298.078	524381.170	548.935

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	TW12
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Witt Springs

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3965351.178	512811.616	572.349

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:









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Point ID	TW13
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Delaney

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3961004.161	414814.117	731.735

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	02-21-2017
RMSE Hz	0.004
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	TW14
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Boxely

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3974522.929	455071.263	694.828

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	03-27-2017
RMSE Hz	0.011
RMSE Z	0.011
GPS Method	Static

PHOTOS:





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Point ID	TW15
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Hartwell

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3986552.804	422602.459	391.806

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	02-24-2017
RMSE Hz	0.004
RMSE Z	0.005
GPS Method	Static

PHOTOS:









Point ID	TW16
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Izard
Quad	Mount Pleasant

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3980689.171	612322.607	197.429

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	55328439860
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5-3-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	TW17
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Marshall

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3977470.372	525557.835	199.628

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-23-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:






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Point ID	TW18
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Poughkeepsie

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3993500.596	636954.726	140.419

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5-1-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	TW19
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Lawrence
Quad	Smithville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994167.369	652824.017	102.500

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

Date (MM-DD-YYYY)	4-27-2017
RMSE Hz	0.010
RMSE Z	0.011
GPS Method	Static

PHOTOS:









Point ID	TW20
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Smithville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3818221.400	347000.074	255.579

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	TW21
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Poughkeepsie

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3987798.784	645727.013	97.283

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

Date (MM-DD-YYYY)	4-27-2017
RMSE Hz	0.008
RMSE Z	0.011
GPS Method	Static

PHOTOS:









Point ID	TW22
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Boswell

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3991687.070	588869.672	121.252

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

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	TW23
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Western Grove

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3984681.746	511204.519	328.330

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-23-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:






Point ID	TW24
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Hasty

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3985684.745	495610.423	380.080

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	03-30-2017
RMSE Hz	0.010
RMSE Z	0.018
GPS Method	Static

PHOTOS:





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Point ID	TW25
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Osage SW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3985387.033	460120.633	675.730

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	03-26-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	TW26
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Myron

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

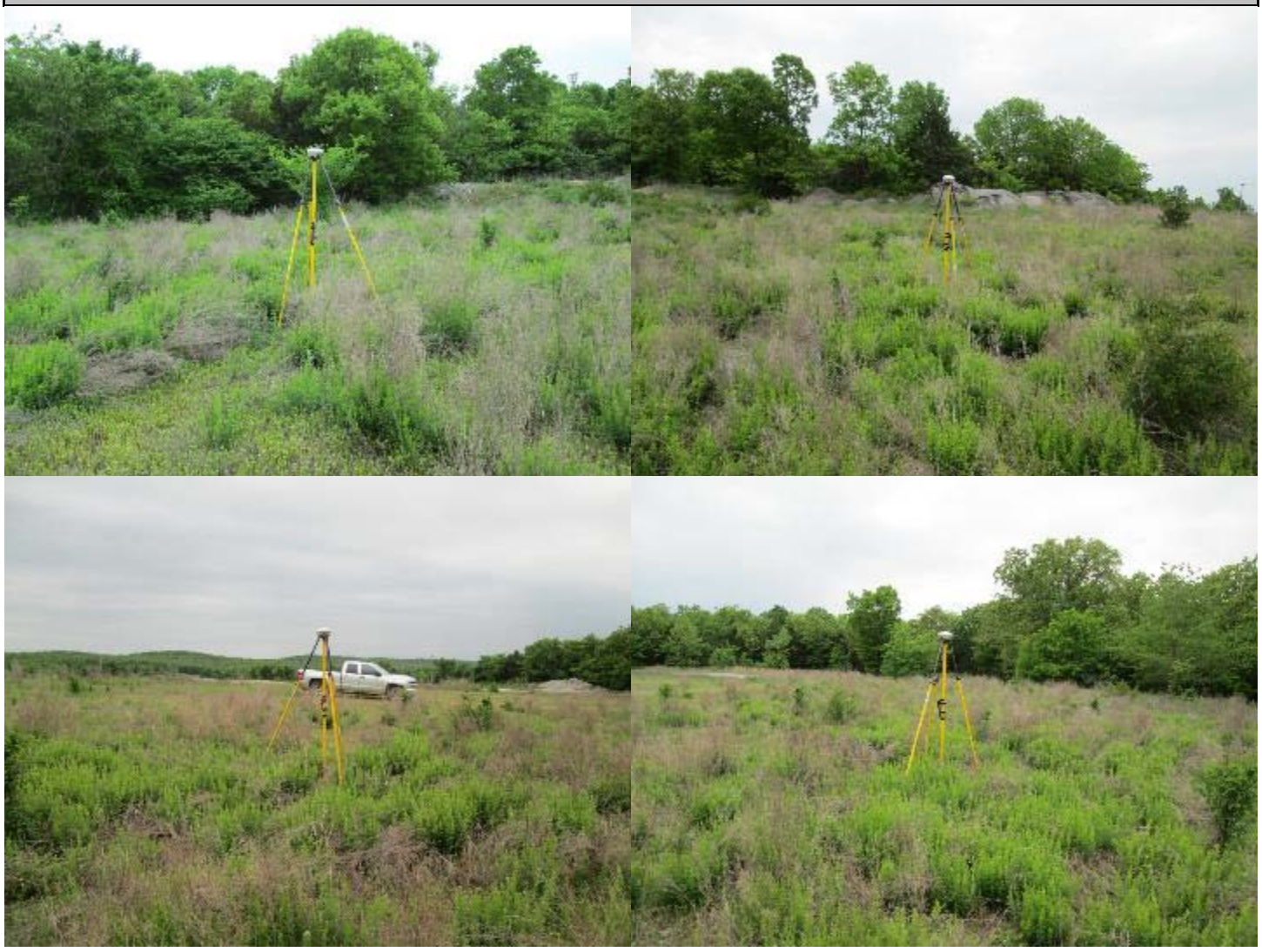
Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4005485.798	617386.308	204.380

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

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.004
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	TW27
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Izard
Quad	Franklin

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4005269.746	603814.179	246.298

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

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.004
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	TW28
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Stone
Quad	Norfolk Dam South

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4002522.512	576838.759	215.480

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-08-2017
RMSE Hz	0.008
RMSE Z	0.007
GPS Method	Static

PHOTOS:






Point ID	TW29
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Osage SW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994965.663	462976.321	453.454

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	03-26-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Point ID	TW30
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Agnos

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4017473.764	617607.689	232.142

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	05-01-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:









Point ID	TW31
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Cotter SW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4012482.623	525003.621	241.839

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-02-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	TW32
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Bergman

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4021034.508	497636.139	403.612

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	03-23-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









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Point ID	TW33
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Rockhouse

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4023612.365	438823.993	355.397

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-03-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:





Point ID	TW34
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Le Flore

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3863448.163	324301.740	171.843

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-25-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	TW35
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Sharp
Quad	Wirth

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037555.659	642712.506	265.603

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:









Point ID	TW36
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Hodgen

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3856834.719	345298.923	161.519

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-26-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:





Point ID	TW37
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Gamaliel

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4038304.005	577391.509	246.475

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-07-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:









Point ID	TW38
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Poteau East

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3880345.121	361130.462	158.206

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-24-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



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Point ID	TW39
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Blue Eye

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4025814.477	459833.209	365.372

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-05-2017
RMSE Hz	0.004
RMSE Z	0.004
GPS Method	Static

PHOTOS:



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Point ID	TW40
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Le Flore
Quad	South Fort Smith

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3905511.416	367605.541	162.732

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-21-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	TW41
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Sequoya
Quad	Uniontown

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3937620.993	365144.171	236.166

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-19-2017
RMSE Hz	0.007
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	TW42
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Sequoya
Quad	Fort Coffee

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3912783.350	352818.665	142.866

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-20-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:









Point ID	TW43
Project No.	29679
Project Name	AR FEMA R6
State	Oklahoma
County	Le Flore
Quad	Robert S. Kerr Dam

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3903042.388	339762.354	149.282

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-21-2017
RMSE Hz	0.006
RMSE Z	0.005
GPS Method	Static

PHOTOS:









Forest Point Log Sheets

Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Oklahoma
County	McCurtain
Quad	Eagletown

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3767318.713	354597.354	120.456

PT Number	FO01
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	2/18/2017
Occupy PT	BE01
Back Sight PT	CA01

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Flora

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3935519.132	608717.267	251.602

PT Number	FO02
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/24/2017
Occupy PT	FO02TP
Back Sight PT	FO02BS

PHOTOS:



Point ID	FO03
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Steel Junction

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3766812.891	338305.916	131.950

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-17-2017
RMSE Hz	0.010
RMSE Z	0.013
GPS Method	Static

PHOTOS:









Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Brownsville

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3935294.957	586644.715	182.782

PT Number	FO04
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/23/2017
Occupy PT	CA08
Back Sight PT	FO04BS

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Oklahoma
County	McCurtain
Quad	Golden

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3767569.099	325066.321	119.803

PT Number	FO05
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	2/16/2017
Occupy PT	CA05
Back Sight PT	BE03

PHOTOS:









Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Fairfield Bay

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3937134.882	562853.725	257.136

PT Number	FO06
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/24/2017
Occupy PT	CA11
Back Sight PT	BE51

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Clinton

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3931806.193	550907.420	166.274

PT Number	FO07
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/25/2017
Occupy PT	UA04
Back Sight PT	CA12

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Scotland

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3930812.602	539791.109	199.868

PT Number	FO08
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/25/2017
Occupy PT	CA13
Back Sight PT	BE07

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Rex

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3934190.335	528888.755	431.382

PT Number	FO09
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/25/2017
Occupy PT	BE08
Back Sight PT	CA14

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Botkinburg

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3943084.420	535591.567	421.932

PT Number	FO10
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/25/2017
Occupy PT	CA26
Back Sight PT	BE10

PHOTOS:



Point ID	FO11
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Steel Junction

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3780537.220	313590.672	177.086

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-02-2017
RMSE Hz	0.018
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Clinton

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3942033.476	549234.866	260.666

PT Number	FO12
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/25/2017
Occupy PT	FO12TP
Back Sight PT	CA43

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Oklahoma
County	McCurtain
Quad	Golden

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3774892.903	323745.949	139.750

PT Number	FO13
Operator	William Neville
Instrument Model	Leica 1103
Date (MM-DD-YYYY)	2/03/2017
Occupy PT	CA92
Back Sight PT	BE24

PHOTOS:









Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Parma

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3946592.941	573446.644	350.998

PT Number	FO14
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/23/2017
Occupy PT	CA69
Back Sight PT	BE11

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Oklahoma
County	McCurtain
Quad	Stevens Gap

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3776535.205	339614.352	192.923

PT Number	FO15
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	2/17/2017
Occupy PT	BE36
Back Sight PT	CA104

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Prim

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3944488.938	586740.424	235.346

PT Number	FO16
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/23/2017
Occupy PT	CA81
Back Sight PT	BE12

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Oklahoma
County	McCurtain
Quad	Eagletown

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3773274.755	352770.676	167.070

PT Number	FO17
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	2/18/2017
Occupy PT	BE48
Back Sight PT	CA107

PHOTOS:






Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Greers Ferry Dam

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3942558.833	597416.008	319.164

PT Number	FO18
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/23/2017
Occupy PT	BE13
Back Sight PT	CA93

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Oklahoma
County	McCurtain
Quad	Chapel Hill

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3773897.490	363204.941	125.756

PT Number	FO19
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	2/18/2017
Occupy PT	BE58
Back Sight PT	CA109

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Concord

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3946399.134	609150.236	274.241

PT Number	FO20
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/23/2017
Occupy PT	BE25
Back Sight PT	CA108

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Oklahoma
County	McCurtain
Quad	Stevens Gap

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3786375.099	340478.469	202.837

PT Number	FO21
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	2/17/2017
Occupy PT	FO21TP
Back Sight PT	CA113

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Jamestown

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3947486.120	621779.970	208.994

PT Number	FO22
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/24/2017
Occupy PT	CA105
Back Sight PT	BE37

PHOTOS:



Point ID	FO23
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Steel Junction

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

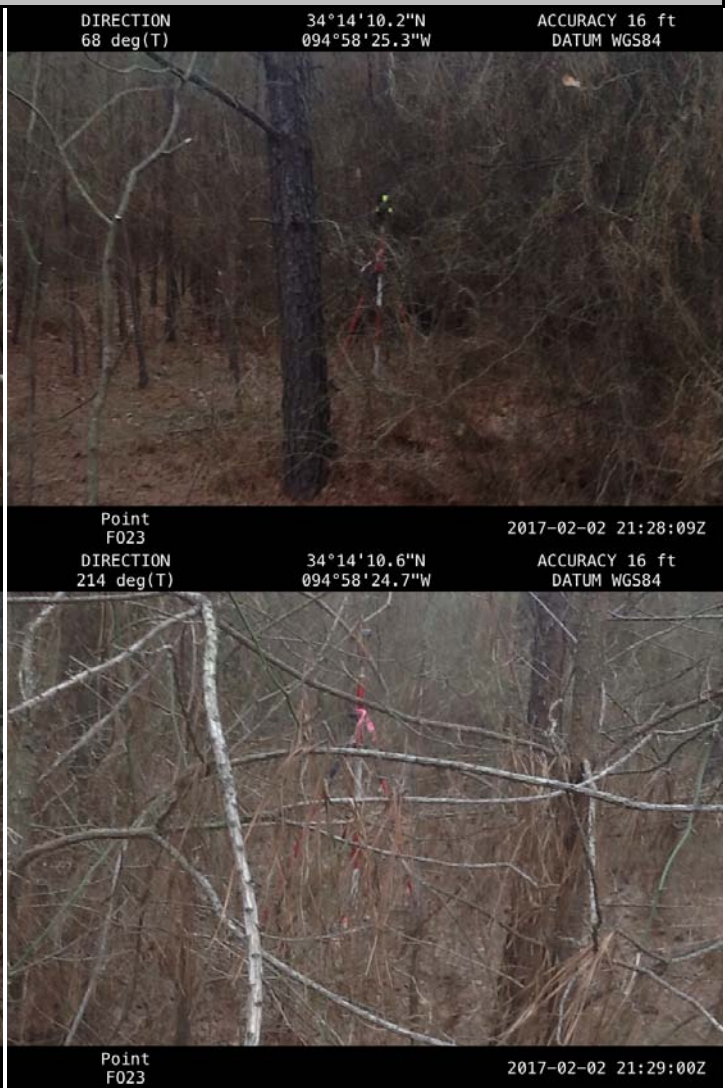
Northing	Easting	Elevation
3790108.829	318239.531	239.239

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-02-2017
RMSE Hz	0.018
RMSE Z	0.006
GPS Method	Static

PHOTOS:





Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Bethesda

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3961035.496	608407.105	165.089

PT Number	FO24
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	5/3/2017
Occupy PT	CA112
Back Sight PT	BE52

PHOTOS:



Point ID	FO25
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Bog Springs

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

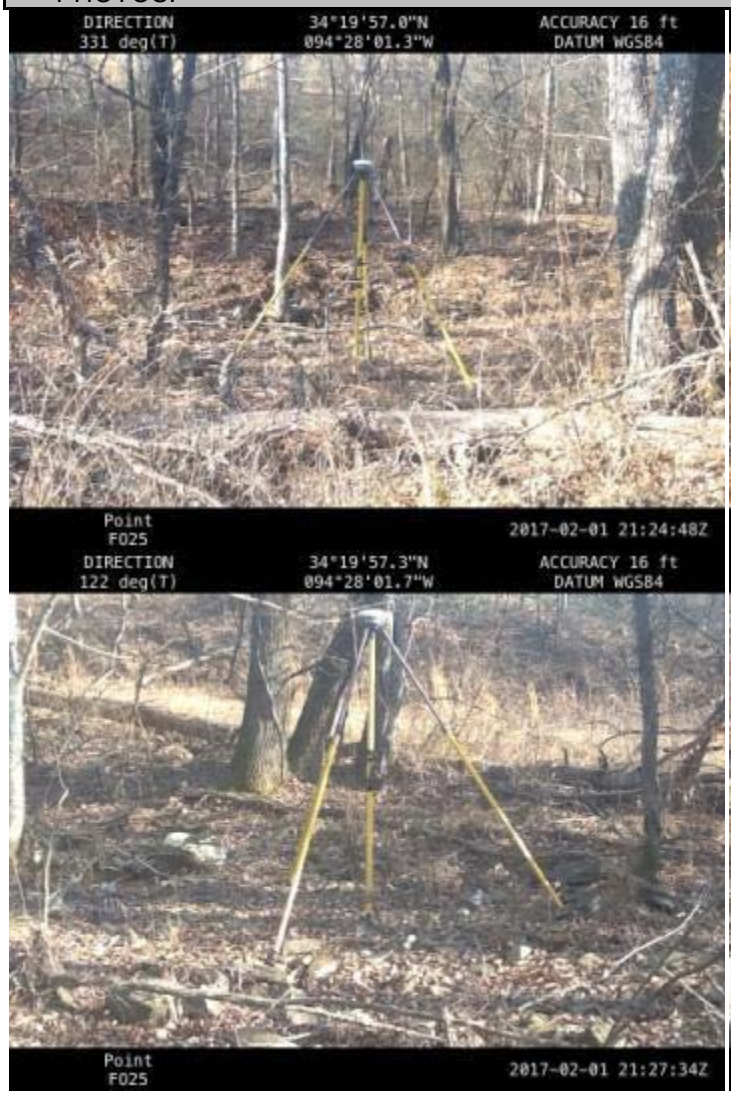
Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3800005.440	365044.005	348.987

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:





Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Stone
Quad	Marcella

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3957485.124	598067.022	387.463

PT Number	FO26
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/24/2017
Occupy PT	CA114
Back Sight PT	BE49

PHOTOS:



Point ID	FO27
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Smithville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3806373.639	343980.162	196.793

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.008
RMSE Z	0.012
GPS Method	Static

PHOTOS:






Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Stone
Quad	Mountain View

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3957103.088	587634.215	387.348

PT Number	FO28
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/24/2017
Occupy PT	BE59
Back Sight PT	CA116

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Stone
Quad	Mountain View SW

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3959085.763	571052.234	310.467

PT Number	FO29
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/25/2017
Occupy PT	FO29TP
Back Sight PT	FO29BS

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Stone
Quad	Fox

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3958805.841	560870.915	408.594

PT Number	FO30
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/25/2017
Occupy PT	CA118
Back Sight PT	BE63

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Botkinburg

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3954718.939	536144.899	450.234

PT Number	FO31
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/27/2017
Occupy PT	BE66
Back Sight PT	CA120

PHOTOS:






Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Alread

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3952200.975	525002.805	526.936

PT Number	FO32
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/27/2017
Occupy PT	CA121
Back Sight PT	BE67

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Johnson
Quad	Oark

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3949054.005	445897.664	292.932

PT Number	FO33
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	2/23/2017
Occupy PT	BE68
Back Sight PT	CA123

PHOTOS:



Point ID	FO34
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Fallsville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3956606.160	459245.160	689.865

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	03-27-2017
RMSE Hz	0.011
RMSE Z	0.015
GPS Method	Static

PHOTOS:









Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Madison
Quad	Pettigrew

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3959393.698	439468.833	661.769

PT Number	FO35
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	2/21/2017
Occupy PT	BE71
Back Sight PT	CA127

PHOTOS:



Point ID	FO36
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Ludlow

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

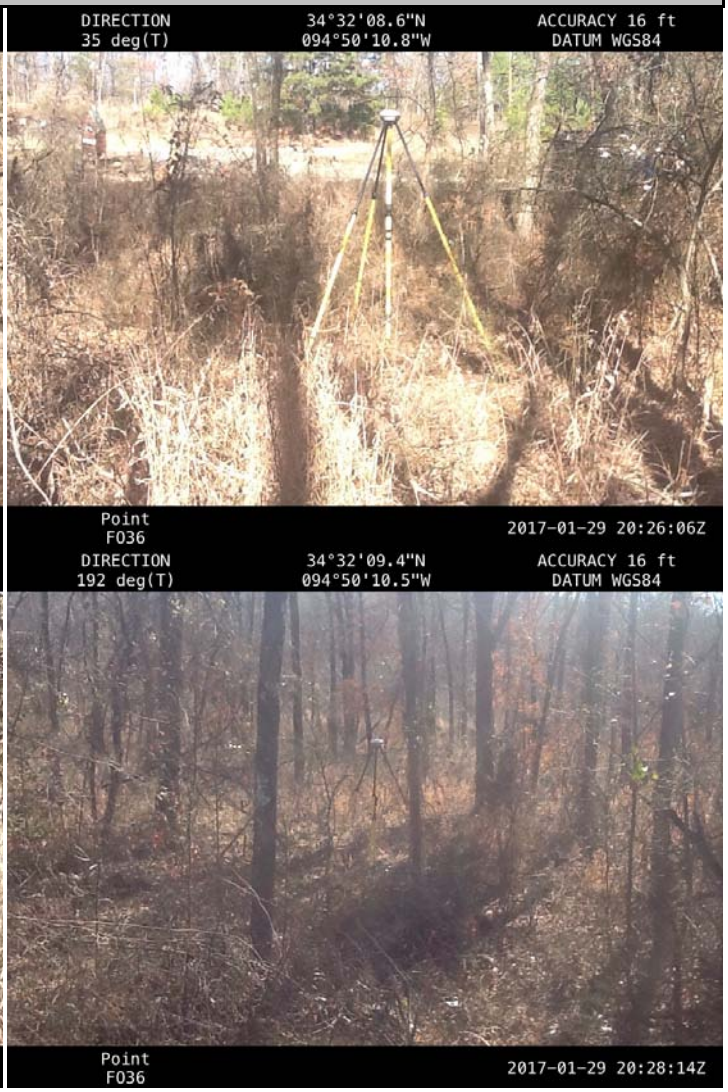
Northing	Easting	Elevation
3823098.684	331486.407	314.486

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-29-2017
RMSE Hz	0.008
RMSE Z	0.013
GPS Method	Static

PHOTOS:





Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Independence
Quad	Batesville

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3969943.364	623093.850	201.987

PT Number	FO37
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	5/3/2017
Occupy PT	CA129
Back Sight PT	BE73

PHOTOS:



Point ID	FO38
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Cove

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3811196.446	363065.049	337.775

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-31-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Stone
Quad	Mountain View

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3968819.767	587526.588	244.981

PT Number	FO39
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	4/27/2017
Occupy PT	CA132
Back Sight PT	BE77

PHOTOS:



Point ID	FO40
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Oxley

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

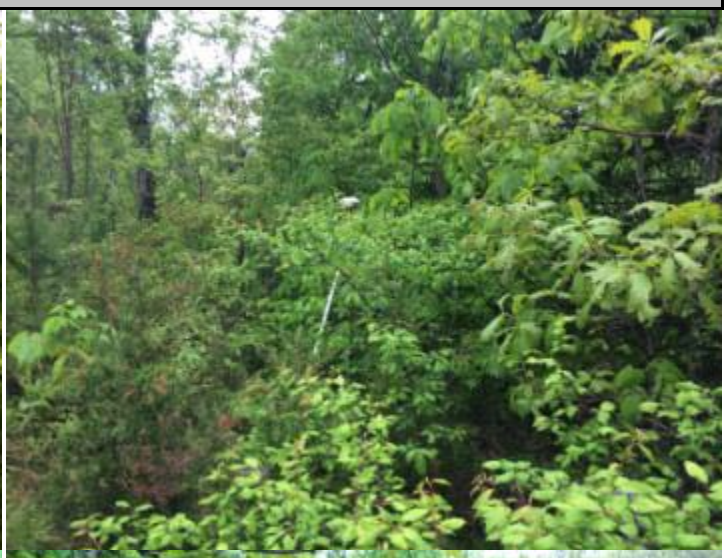
Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3966346.373	546821.493	453.016

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.008
RMSE Z	0.012
GPS Method	Static

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Searcy
Quad	Eula

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3966729.991	500529.960	639.086

PT Number	FO41
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/24/2017
Occupy PT	CA139
Back Sight PT	BE83

PHOTOS:






Point ID	FO42
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Ludlow

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3832222.158	336447.472	675.068

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-30-2017
RMSE Hz	0.013
RMSE Z	0.012
GPS Method	Static

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Newton
Quad	Deer

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3968919.752	482709.415	664.633

PT Number	FO43
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	3/28/2017
Occupy PT	BE84
Back Sight PT	CA141

PHOTOS:






Point ID	FO44
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Big Cedar

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

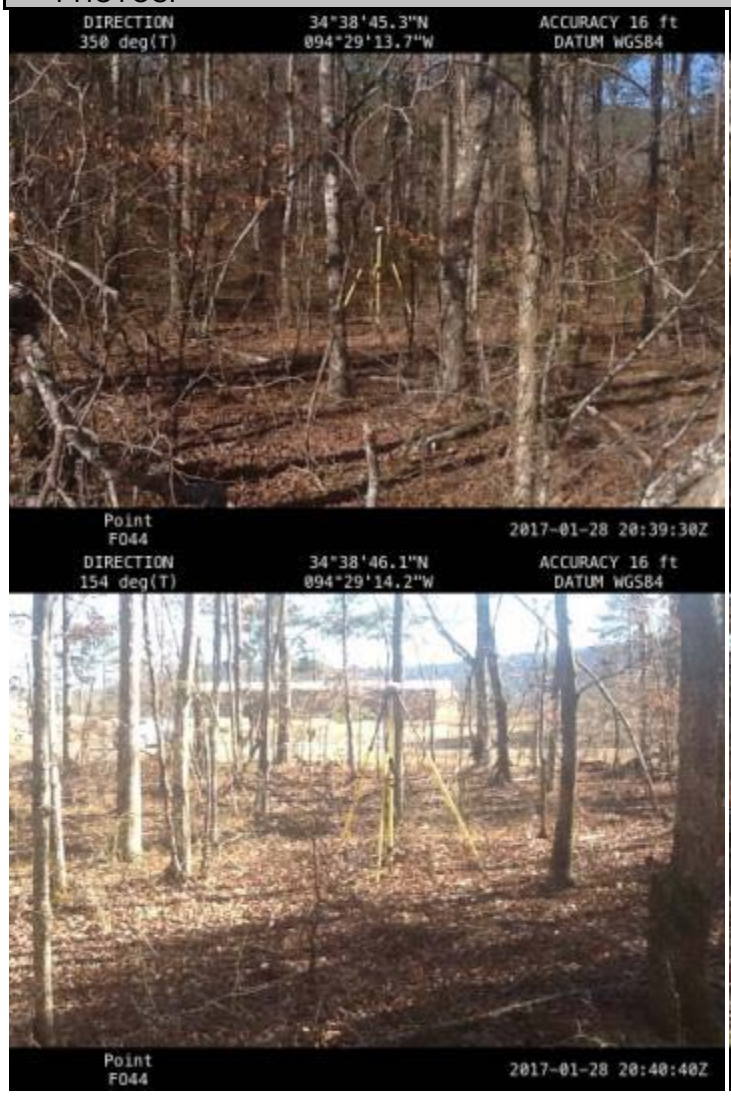
Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3834801.748	363705.509	328.282

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-28-2017
RMSE Hz	0.010
RMSE Z	0.012
GPS Method	Static

PHOTOS:





Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Newton
Quad	Murray

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3978160.277	472924.877	307.981

PT Number	FO45
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	3/28/2017
Occupy PT	BE85
Back Sight PT	CA142

PHOTOS:



Point ID	FO46
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Fallsville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3969050.598	465740.265	648.764

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	03-27-2017
RMSE Hz	0.004
RMSE Z	0.005
GPS Method	Static

PHOTOS:



Point ID	FO47
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Big Cedar

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3842785.489	346663.396	580.697

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-28-2017
RMSE Hz	0.010
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Madison
Quad	Boston

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3963798.278	452057.979	705.093

PT Number	FO48
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	2/22/2017
Occupy PT	BE86
Back Sight PT	CA144

PHOTOS:



Point ID	FO49
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Backjack Ridge

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3849391.358	328416.780	498.739

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-27-2017
RMSE Hz	0.010
RMSE Z	0.010
GPS Method	Static

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Madison
Quad	Weathers

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3971200.825	444702.150	627.676

PT Number	FO50
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	2/22/2017
Occupy PT	BE88
Back Sight PT	CA151

PHOTOS:



Point ID	FO51
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Talihina

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3857357.827	313482.780	191.274

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-27-2017
RMSE Hz	0.010
RMSE Z	0.010
GPS Method	Static

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Sandtown

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3981472.202	623519.718	185.211

PT Number	FO52
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	5/2/2017
Occupy PT	CA154
Back Sight PT	BE93

PHOTOS:



Point ID	FO53
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Le Flore SE

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3859996.706	334643.556	185.138

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-25-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Izard
Quad	Mount Pleasant

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3979000.975	602106.766	267.818

PT Number	FO54
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	5/01/2017
Occupy PT	CA156
Back Sight PT	BE95

PHOTOS:



Point ID	FO55
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Potato Peaks

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3881209.631	331717.616	289.994

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-25-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:






Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Izard
Quad	Sylamore

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3979479.733	588276.395	213.746

PT Number	FO56
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	5/01/2017
Occupy PT	CA157
Back Sight PT	BE96

PHOTOS:



Point ID	FO57
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Bokashe

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3892582.362	338809.995	162.760

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-23-2017
RMSE Hz	0.007
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	FO58
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Stone
Quad	Sylamore

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3980187.641	579427.716	229.454

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	05-06-2017
RMSE Hz	0.020
RMSE Z	0.018
GPS Method	Static

PHOTOS:






Point ID	FO59
Project No.	29679
Project Name	AK FEMA R6
State	Arkansas
County	Stone
Quad	Fiftysix

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3978615.348	569310.696	239.659

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

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.010
RMSE Z	0.011
GPS Method	Static

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Stone
Quad	Landis

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3978033.993	555870.342	243.890

PT Number	FO60
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/18/2017
Occupy PT	FO60TP
Back Sight PT	CA161

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Searcy
Quad	Landis

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3977978.964	546407.153	212.489

PT Number	FO61
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/20/2017
Occupy PT	FO61TP
Back Sight PT	CA163

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Searcy
Quad	Harriet

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3982409.945	535358.804	347.831

PT Number	FO62
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/20/2017
Occupy PT	BE97
Back Sight PT	CA165

PHOTOS:






Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Searcy
Quad	Snoball

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3973660.681	516125.031	233.647

PT Number	FO63
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/23/2017
Occupy PT	FO63TP
Back Sight PT	CA167

PHOTOS:






Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Searcy
Quad	Eula

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3976165.737	505293.870	460.119

PT Number	FO64
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/24/2017
Occupy PT	BE99
Back Sight PT	CA168

PHOTOS:






Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Grange

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3982216.257	635824.257	173.431

PT Number	FO65
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	5/2/2017
Occupy PT	CA170
Back Sight PT	FO65RESET

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Grange

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3979692.168	645028.565	109.558

PT Number	FO66
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	5/2/2017
Occupy PT	BE100
Back Sight PT	CA171

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Izard
Quad	Zion

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3992295.668	612540.482	208.893

PT Number	FO67
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	5/01/2017
Occupy PT	CA176
Back Sight PT	BE105

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Stone
Quad	Calico Rock

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3990912.695	576662.192	194.801

PT Number	FO68
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/19/2017
Occupy PT	FO68TP
Back Sight PT	CA182

PHOTOS:









Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Baxter
Quad	Norfolk Dam South

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3992499.485	570112.020	328.590

PT Number	FO69
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/18/2017
Occupy PT	BE108
Back Sight PT	CA184

PHOTOS:






Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Baxter
Quad	Norfolk SE

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3990933.700	558234.376	362.474

PT Number	FO70
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/18/2017
Occupy PT	FO70TP
Back Sight PT	CA186

PHOTOS:



Point ID	FO71
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Searcy
Quad	Big Flat

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3989844.806	545727.011	325.539

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-04-2017
RMSE Hz	0.011
RMSE Z	0.011
GPS Method	Static

PHOTOS:






Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Marion
Quad	Cozahome

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994607.805	535183.492	322.267

PT Number	FO72
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/04/2017
Occupy PT	FO72TP
Back Sight PT	CA190

PHOTOS:






Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Searcy
Quad	Maumee

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3987288.287	522760.550	267.755

PT Number	FO73
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/22/2017
Occupy PT	FO73TP
Back Sight PT	CA192

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Newton
Quad	Ponca

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3984397.986	471856.899	533.567

PT Number	FO74
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	3/25/2017
Occupy PT	CA200
Back Sight PT	BE112

PHOTOS:





Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Madison
Quad	Kingston

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3984367.969	448777.278	547.220

PT Number	FO75
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	3/26/2017
Occupy PT	CA204
Back Sight PT	BE114

PHOTOS:






Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Madison
Quad	Hartwell

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3989085.578	425632.387	417.220

PT Number	FO76
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	2/24/2017
Occupy PT	BE117
Back Sight PT	CA208

PHOTOS:





Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Lawrence
Quad	Ravenden

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4004726.384	652740.155	209.473

PT Number	FO77
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	5/2/2017
Occupy PT	CA212
Back Sight PT	BE121

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Sitka

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4004564.844	640478.713	214.237

PT Number	FO78
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	5/2/2017
Occupy PT	CA214
Back Sight PT	BE123

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Ash Flat

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4005073.526	629352.581	178.296

PT Number	FO79
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	5/05/2017
Occupy PT	BE125
Back Sight PT	CA216

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Izard
Quad	Pineville

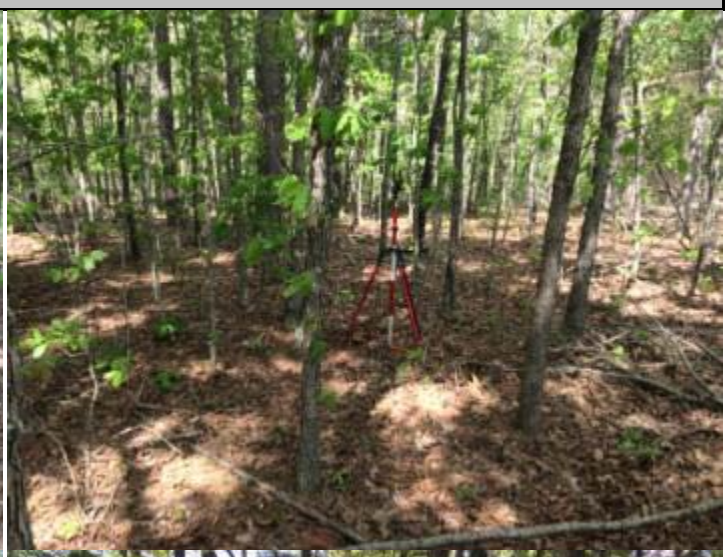
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4003271.309	588474.573	221.294

PT Number	FO80
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/19/2017
Occupy PT	CA221
Back Sight PT	BE131

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Baxter
Quad	Norfolk

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4003351.346	564635.769	190.934

PT Number	FO81
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/08/2017
Occupy PT	BE135
Back Sight PT	CA223

PHOTOS:






Point ID	FO82
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Buffalo City

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4003153.083	550703.926	129.755

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	04-08-2017
RMSE Hz	0.006
RMSE Z	0.010
GPS Method	Static

PHOTOS:






Point ID	FO83
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Yellville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3998378.301	525902.610	365.830

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-03-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:






Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Newton
Quad	Jasper

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994604.447	488322.985	311.396

PT Number	FO84
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	3/25/2017
Occupy PT	CA19
Back Sight PT	BE141

PHOTOS:



Point ID	F085
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Poteau West

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3880466.900	350627.821	207.273

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-24-2017
RMSE Hz	0.011
RMSE Z	0.019
GPS Method	Static

PHOTOS:



Point ID	FO86
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Huntsville

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3994726.153	438883.890	483.596

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-28-2017
RMSE Hz	0.006
RMSE Z	0.008
GPS Method	Static

PHOTOS:





Point ID	F087
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Wister

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3871805.158	343587.565	148.988

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-24-2017
RMSE Hz	0.011
RMSE Z	0.023
GPS Method	Static

PHOTOS:






Point ID	FO88
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Madison
Quad	Goshen

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3996008.749	418640.553	385.383

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-25-2017
RMSE Hz	0.010
RMSE Z	0.010
GPS Method	Static

PHOTOS:









Point ID	FO89
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Mountain Fork

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3844644.046	354392.441	252.672

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-28-2017
RMSE Hz	0.008
RMSE Z	0.009
GPS Method	Static

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Williford

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4015436.798	650905.126	166.069

PT Number	FO90
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	5/2/2017
Occupy PT	CA27
Back Sight PT	BE147

PHOTOS:



Point ID	FO91
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	Le Flore
Quad	Octavia

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3831295.758	348137.336	626.668

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	01-29-2017
RMSE Hz	0.010
RMSE Z	0.010
GPS Method	Static

PHOTOS:



Point ID	FO92
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Sharp
Quad	Hardy

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4018169.613	640449.775	119.964

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.013
RMSE Z	0.016
GPS Method	Static

PHOTOS:



Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Stuart

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4014071.161	630103.415	217.824

PT Number	FO93
Operator	Kevin Chapman
Instrument Model	Trimble M3 2”
Date (MM-DD-YYYY)	5/5/2017
Occupy PT	BE149
Back Sight PT	CA29

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Fulton
Quad	Salem

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4018094.661	605689.167	225.483

PT Number	FO94
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	5/01/2017
Occupy PT	BE151
Back Sight PT	CA32

PHOTOS:






Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Fulton
Quad	Elizabeth

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4017845.499	589638.581	272.600

PT Number	FO95
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/30/2017
Occupy PT	CA34
Back Sight PT	BE152

PHOTOS:






Point ID	FO96
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Newton
Quad	Elizabeth

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4017504.064	578112.640	190.904

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-07-2017
RMSE Hz	0.010
RMSE Z	0.010
GPS Method	Static

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Marion
Quad	Bruno

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4011627.110	515738.766	232.709

PT Number	FO97
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	3/31/2017
Occupy PT	BE160
Back Sight PT	CA47

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Boone
Quad	Osage NE

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4011561.264	477587.531	443.506

PT Number	FO98
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	3/06/2017
Occupy PT	CA52
Back Sight PT	BE163

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Madison
Quad	Rockhouse

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4012830.291	440077.812	449.599

PT Number	FO99
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	3/03/2017
Occupy PT	BE39
Back Sight PT	CA101

PHOTOS:





Point ID	FO100
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Fulton
Quad	Mammoth Spring

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4028237.445	633083.800	177.836

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	05-02-2017
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	Static

PHOTOS:






Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Fulton
Quad	Viola

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4028632.023	591941.639	257.536

PT Number	FO101
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/30/2017
Occupy PT	UA27
Back Sight PT	CA62

PHOTOS:






Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Marion
Quad	Cotter SW

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4022257.508	529791.355	338.106

PT Number	FO102
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	4/02/2017
Occupy PT	BE172
Back Sight PT	CA67

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Fulton
Quad	Salem Knob

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037724.854	606303.854	251.709

PT Number	FO103
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	5/01/2017
Occupy PT	BE22
Back Sight PT	CA83

PHOTOS:






Point ID	FO104
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Midway

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037914.462	545626.291	365.462

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-05-2017
RMSE Hz	0.010
RMSE Z	0.010
GPS Method	Static

PHOTOS:



Point ID	FO105
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Boone
Quad	Diamond City

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4036601.502	507358.424	217.440

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-23-2017
RMSE Hz	0.010
RMSE Z	0.012
GPS Method	Static

PHOTOS:



Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Carroll
Quad	Grandview

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4036704.702	445306.151	348.937

PT Number	FO106
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	3/02/2017
Occupy PT	BE39
Back Sight PT	CA101

PHOTOS:






Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Carroll
Quad	Eureka Springs

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4036335.850	437549.080	373.916

PT Number	FO107
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	3/02/2017
Occupy PT	CA102
Back Sight PT	BE40

PHOTOS:





Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Carroll
Quad	Beaver

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037059.946	431259.251	280.327

PT Number	FO108
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	3/01/2017
Occupy PT	BE41
Back Sight PT	CA103

PHOTOS:









Project No.	29679
Project Name	AR North Corridor FEMA R6
State	Arkansas
County	Carroll
Quad	Beaver

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

NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4037537.040	423443.741	478.582

PT Number	FO109
Operator	William Neville
Instrument Model	Leica TCR1103
Date (MM-DD-YYYY)	3/01/2017
Occupy PT	CA106
Back Sight PT	BE42

PHOTOS:









Point ID	FO110
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Marion
Quad	Bruno

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4002253.588	511447.466	269.198

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-31-2017
RMSE Hz	0.007
RMSE Z	0.015
GPS Method	Static

PHOTOS:









Point ID	FO111
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Green Forest

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4012045.380	460520.076	397.839

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51333470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-04-2017
RMSE Hz	0.008
RMSE Z	0.010
GPS Method	Static

PHOTOS:









Point ID	FO112
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Carroll
Quad	Sandstone Mountain

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4019784.409	431149.786	460.021

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	03-01-2017
RMSE Hz	0.011
RMSE Z	0.012
GPS Method	Static

PHOTOS:





Point ID	FO113
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Arkansas
County	Baxter
Quad	Mountain Home West

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4022695.042	553005.830	287.883

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5108461884
Antenna Height	2.250 Meters

Date (MM-DD-YYYY)	04-05-2017
RMSE Hz	0.010
RMSE Z	0.018
GPS Method	Static

PHOTOS:






Brushland Point Log Sheets

Quantum Spatial, Inc. – 1410 Indian Trail Rd., Norcross, GA 30093 – Ph. 770-564-9843 - www.quantumspatial.com

Point ID	SH01
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Cleburne
Quad	Greers Ferry

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3936494.829	574688.258	174.274

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

Date (MM-DD-YYYY)	4-4-2017
RMSE Hz	0.010
RMSE Z	0.010
GPS Method	Static

PHOTOS:



Point ID	SH02
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	DeQueen NW

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3786938.613	362011.128	276.101

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5133470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-18-2017
RMSE Hz	0.007
RMSE Z	0.008
GPS Method	Static

PHOTOS:





Point ID	SH03
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Sharp
Quad	Sitka

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

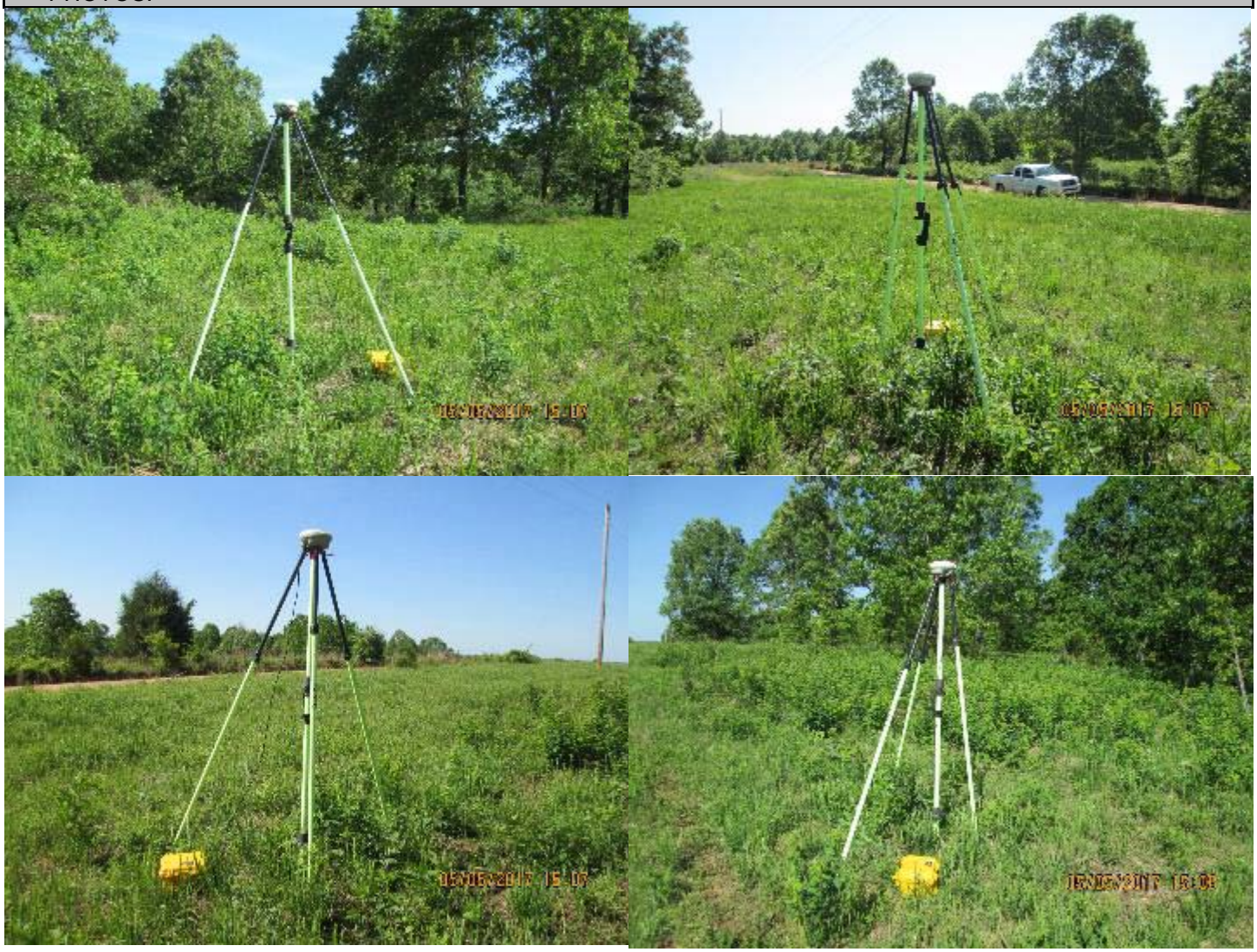
Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4012856.306	636601.546	212.131

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	5-5-2017
RMSE Hz	0.006
RMSE Z	0.007
GPS Method	Static

PHOTOS:



Point ID	SH04
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Rocky Creek

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3804382.168	316285.286	347.763

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	5136472526
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-02-2017
RMSE Hz	0.006
RMSE Z	0.006
GPS Method	Static

PHOTOS:



Point ID	SH05
Project No.	29679
Project Name	AR Northern Corridor FEMA R6
State	Arkansas
County	Van Buren
Quad	Clinton

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3928744.529	550249.400	243.800

Operator	Zeke Ingram
Receiver Model	Trimble R-8, Model 4
Receiver S/N	5046455718
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	4-19-2017
RMSE Hz	0.011
RMSE Z	0.011
GPS Method	Static

PHOTOS:



Point ID	SH06
Project No.	29679
Project Name	Arkansas - North Corridor - FEMA R6
State	Oklahoma
County	McCurtain
Quad	Alikchi

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

Coordinate System
NAD83(2011)
UTM ZONE 15
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
3787516.903	313720.245	222.785

Operator	William Neville
Receiver Model	Trimble R-8, Model 3
Receiver S/N	51333470976
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	02-03-2017
RMSE Hz	0.008
RMSE Z	0.008
GPS Method	Static

PHOTOS:

