

Project information		Coordinate System	
Name:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints.vce	Name:	US State Plane 1983
Size:	634 KB	Datum:	NAD 1983 (Conus)
Modified:	3/11/2015 10:54:33 AM (UTC:-6)	Zone:	Arizona Central 0202
Time zone:	Mountain Standard Time	Geoid:	GEOID12A (Conus)
Reference number:		Vertical datum:	NAVD88
Description:			

Baseline Processing Report

Processing Summary

Observation	From	To	Solution Type	H. Prec. (International foot)	V. Prec. (International foot)	Geodetic Az.	Ellipsoid Dist. (International foot)	ΔHeight (International foot)
TUS_5 --- CON127 (B1)	TUS_5	CON127	Fixed	0.031	0.044	352°28'40"	25678.859	-210.250
TUS_5 --- CON128 (B2)	TUS_5	CON128	Fixed	0.028	0.037	354°24'40"	16529.367	-202.607
TUS_5 --- CON129 (B3)	TUS_5	CON129	Fixed	0.012	0.021	342°49'35"	3065.392	-114.318
TUS_5 --- CON130 (B4)	TUS_5	CON130	Fixed	0.029	0.041	144°21'04"	10680.303	-60.343
TUS_5 --- CON131 (B5)	TUS_5	CON131	Fixed	0.026	0.040	207°56'11"	13772.864	265.112
TUS_4 --- CON121 (B6)	TUS_4	CON121	Fixed	0.022	0.039	262°36'15"	98106.798	-1987.502
TUS_4 --- CON114 (B7)	TUS_4	CON114	Fixed	0.032	0.044	283°28'41"	123067.153	-1246.761
TUS_4 --- CON126 (B8)	TUS_4	CON126	Fixed	0.033	0.064	303°33'01"	88652.966	-2308.255
TUS_4 --- CON125 (B9)	TUS_4	CON125	Fixed	0.028	0.042	113°43'43"	67339.813	-17.536
TUS_4 --- CON123 (B10)	TUS_4	CON123	Fixed	0.026	0.035	158°23'55"	13993.706	-66.593
TUS_4 --- CON122 (B11)	TUS_4	CON122	Fixed	0.037	0.060	14°26'52"	52365.741	-1338.835
TUS_4 --- CON124 (B12)	TUS_4	CON124	Fixed	0.036	0.046	32°18'12"	76658.064	-1450.397
TUS_4 --- CON119 (B13)	TUS_4	CON119	Fixed	0.027	0.047	345°00'05"	73638.750	-1896.425
TUS_4 --- CON120 (B14)	TUS_4	CON120	Fixed	0.031	0.035	310°34'52"	54804.787	-1880.271

AVRA_APT_3 --- CON133 (B15)	AVRA_APT_3	CON133	Fixed	0.030	0.053	217°21'50"	55975.200	127.742
AVRA_APT_3 --- CON107 (B16)	AVRA_APT_3	CON107	Fixed	0.032	0.060	261°41'15"	27586.101	-27.028
AVRA_APT_3 --- CON106 (B17)	AVRA_APT_3	CON106	Fixed	0.033	0.042	309°39'24"	27325.530	-87.901
AVRA_APT_3 --- CON101 (B18)	AVRA_APT_3	CON101	Fixed	0.026	0.046	333°16'47"	60742.769	-122.733
AVRA_APT_3 --- CON102 (B19)	AVRA_APT_3	CON102	Fixed	0.037	0.049	22°43'13"	63403.420	653.809
AVRA_APT_3 --- CON103 (B20)	AVRA_APT_3	CON103	Fixed	0.025	0.041	52°52'08"	103694.88 1	1417.908
AVRA_APT_3 --- CON104 (B21)	AVRA_APT_3	CON104	Fixed	0.031	0.034	80°32'56"	86761.805	827.483
AVRA_APT_3 --- CON108 (B22)	AVRA_APT_3	CON108	Fixed	0.031	0.074	96°30'03"	62811.208	461.320
AVRA_APT_3 --- CON105 (B23)	AVRA_APT_3	CON105	Fixed	0.031	0.041	78°36'47"	42780.137	539.310
KTUS --- CON117 (B24)	KTUS	CON117	Fixed	0.044	0.058	248°54'36"	123464.73 3	459.066
KTUS --- CON116 (B25)	KTUS	CON116	Fixed	0.026	0.044	265°24'48"	95171.894	-85.310
KTUS --- CON118 (B26)	KTUS	CON118	Fixed	0.033	0.038	233°03'06"	41929.386	222.541
KTUS --- CON113 (B27)	KTUS	CON113	Fixed	0.023	0.045	296°39'18"	40359.659	46.336
KTUS --- CON132 (B28)	KTUS	CON132	Fixed	0.028	0.061	324°16'20"	62308.485	-109.834
KTUS --- CON111 (B29)	KTUS	CON111	Fixed	0.029	0.045	91°41'34"	72995.216	394.971
KTUS --- CON110 (B30)	KTUS	CON110	Fixed	0.029	0.060	37°48'35"	78614.068	92.400
KTUS --- CON112 (B31)	KTUS	CON112	Fixed	0.032	0.042	35°33'05"	37003.223	11.939
KTUS --- CON115 (B32)	KTUS	CON115	Fixed	0.021	0.035	85°47'44"	11372.472	73.186

Acceptance Summary

Processed	Passed	Flag	Fail
32	32	0	0

TUS_5 - CON127 (12:06:03 PM-12:38:51 PM) (S1)

Baseline observation: TUS_5 --- CON127 (B1)
 Processed: 3/11/2015 8:53:49 AM
 Solution type: Fixed
 Frequency used: Dual Frequency (L1, L2)
 Horizontal precision: 0.031 ft
 Vertical precision: 0.044 ft
 RMS: 0.007 ft
 Maximum PDOP: 2.288
 Ephemeris used: Broadcast
 Antenna model: NGS Absolute
 Processing start time: 2/19/2015 12:06:03 PM (Local: UTC-7hr)
 Processing stop time: 2/19/2015 12:38:51 PM (Local: UTC-7hr)
 Processing duration: 00:32:48
 Processing interval: 1 second

Vector Components (Mark to Mark)

From: TUS_5					
Grid		Local		Global	
Easting	1141493.340 ft	Latitude	N32°26'00.51694"	Latitude	N32°26'00.51693"
Northing	524383.461 ft	Longitude	W110°29'08.59181"	Longitude	W110°29'08.59181"
Elevation	2984.136 ft	Height	2892.162 ft	Height	2892.162 ft

To: CON127					
Grid		Local		Global	
Easting	1137790.178 ft	Latitude	N32°30'12.41478"	Latitude	N32°30'12.41478"
Northing	549797.049 ft	Longitude	W110°29'47.84423"	Longitude	W110°29'47.84423"
Elevation	2773.950 ft	Height	2681.912 ft	Height	2681.912 ft

Vector					
ΔEasting	-3703.162 ft	NS Fwd Azimuth	352°28'40"	ΔX	1696.319 ft
ΔNorthing	25413.588 ft	Ellipsoid Dist.	25678.859 ft	ΔY	14147.127 ft
ΔElevation	-210.187 ft	ΔHeight	-210.250 ft	ΔZ	21368.330 ft

Standard Errors

Vector errors:					
σ ΔEasting	0.008 ft	σ NS fwd Azimuth	0°00'00"	σ ΔX	0.010 ft
σ ΔNorthing	0.013 ft	σ Ellipsoid Dist.	0.012 ft	σ ΔY	0.018 ft
σ ΔElevation	0.022 ft	σ ΔHeight	0.022 ft	σ ΔZ	0.017 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000087207		
Y	0.0000080630	0.0000304833	
Z	-0.0000044036	-0.0000155512	0.0000278518

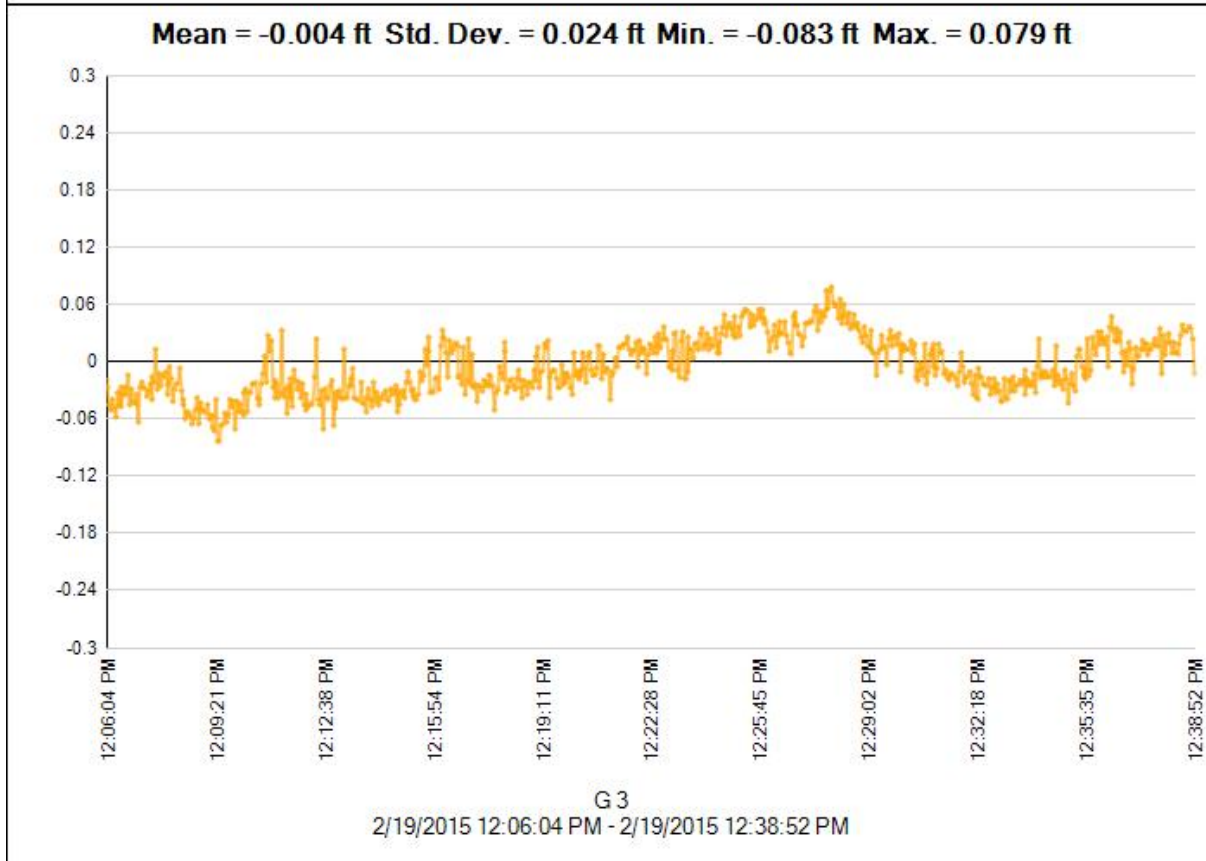
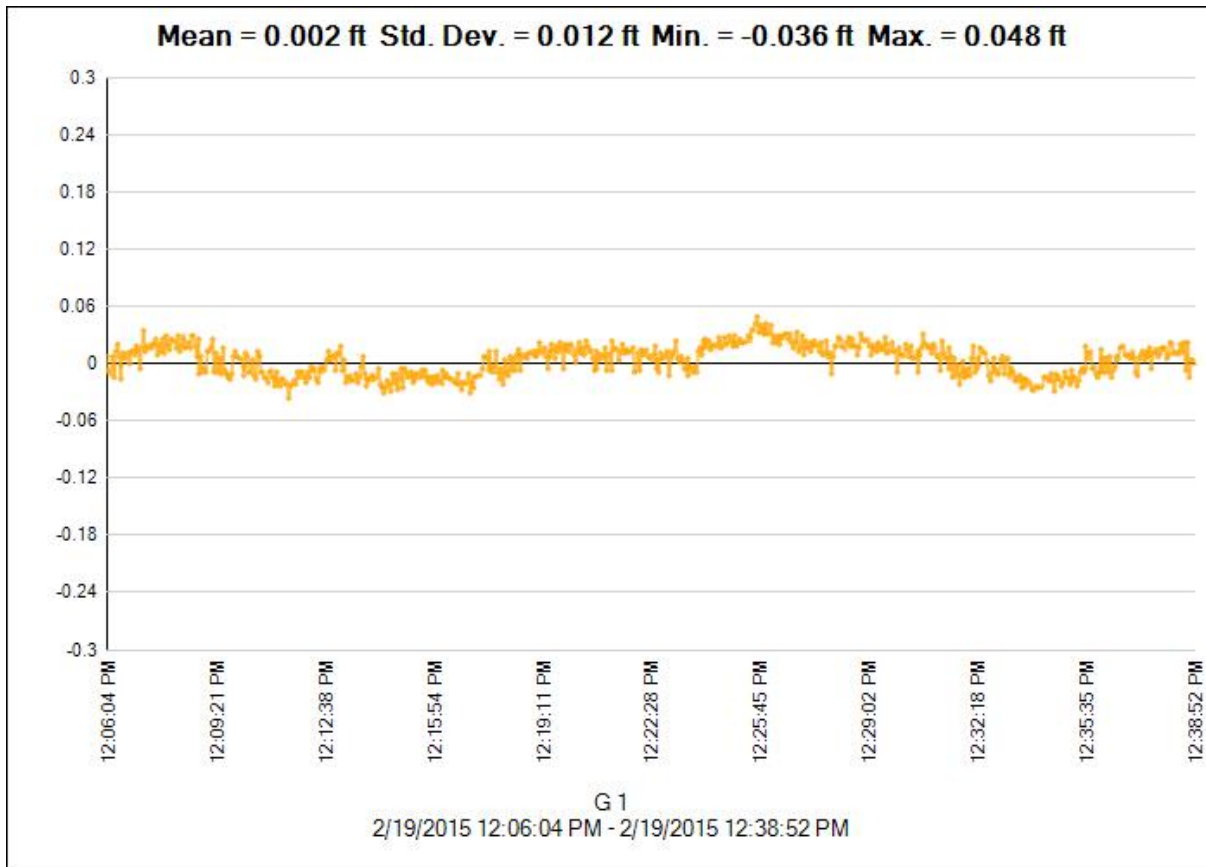
Occupations

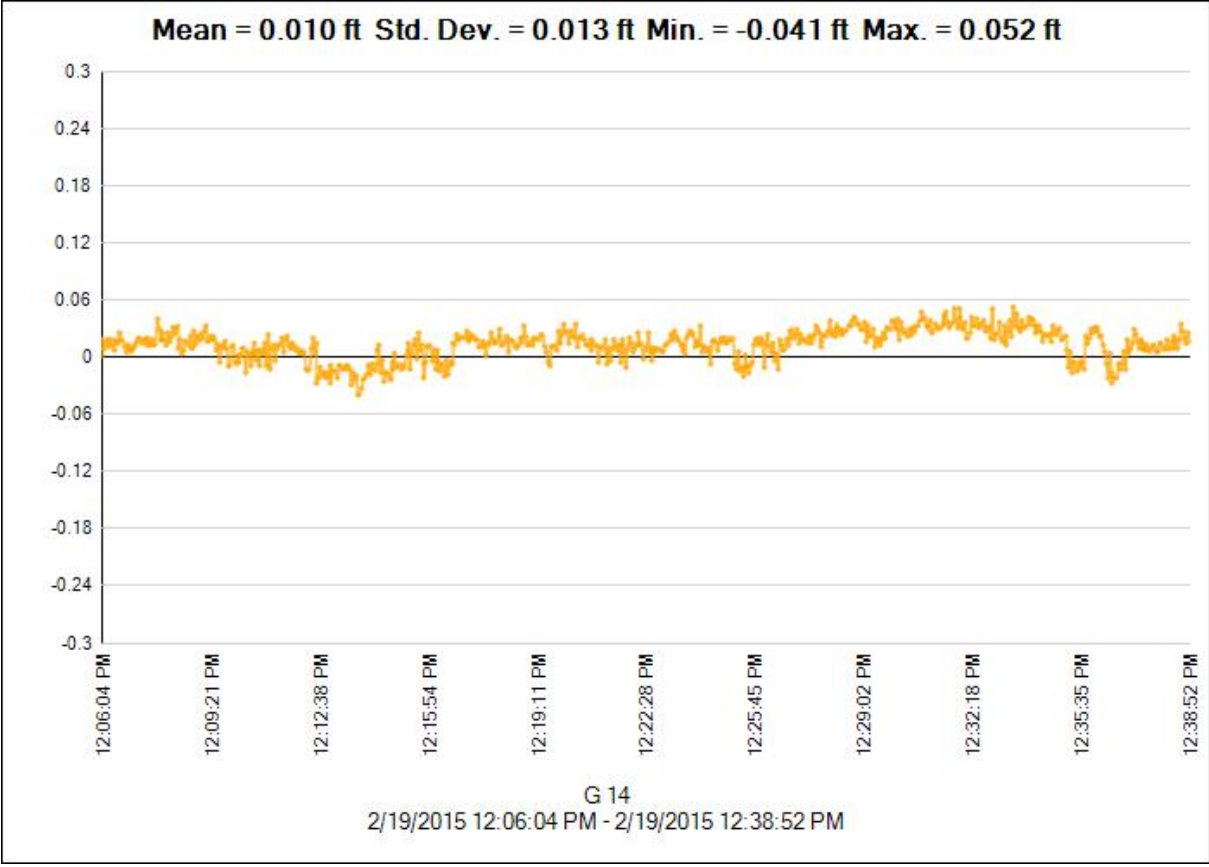
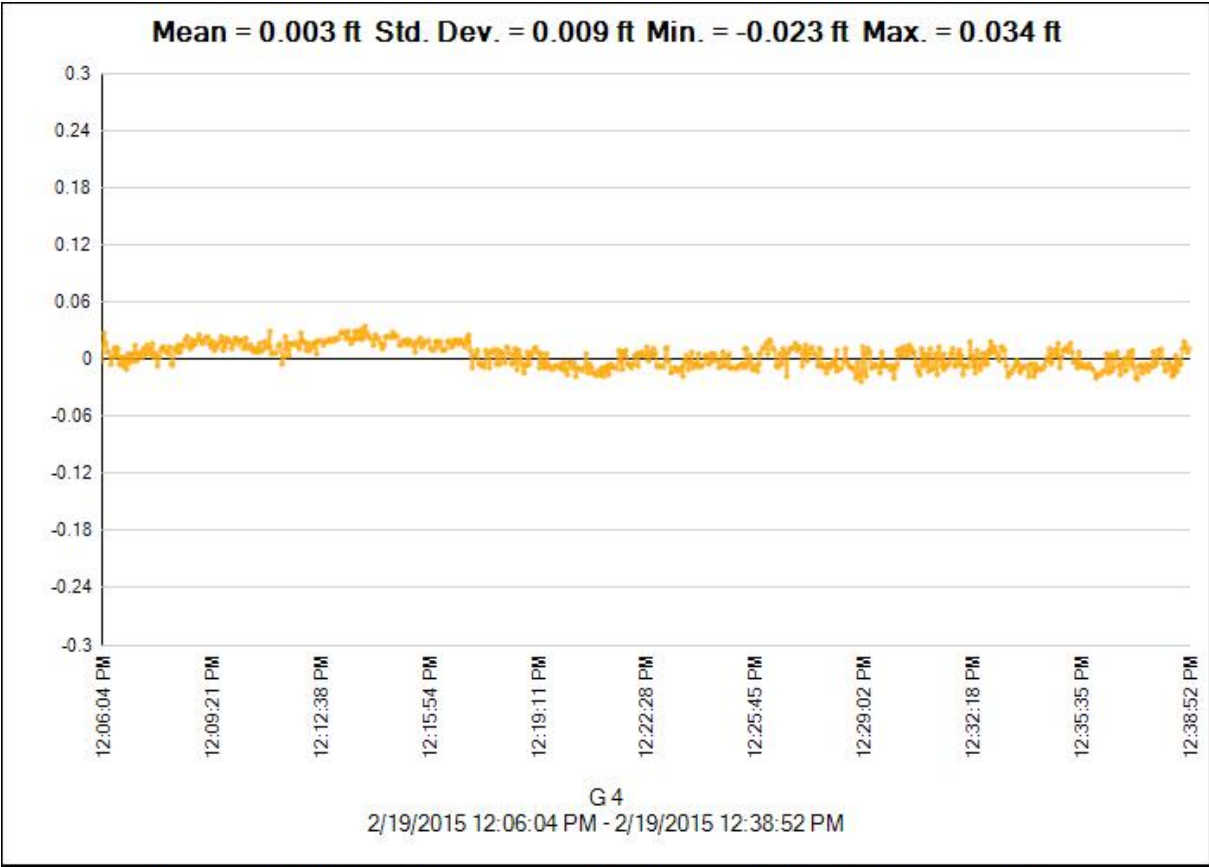
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Point ID:	TUS_5	CON127
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\29250500.t01	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840500.t01
Receiver type:	5700	5700
Receiver serial number:	0440102925	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	-----	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

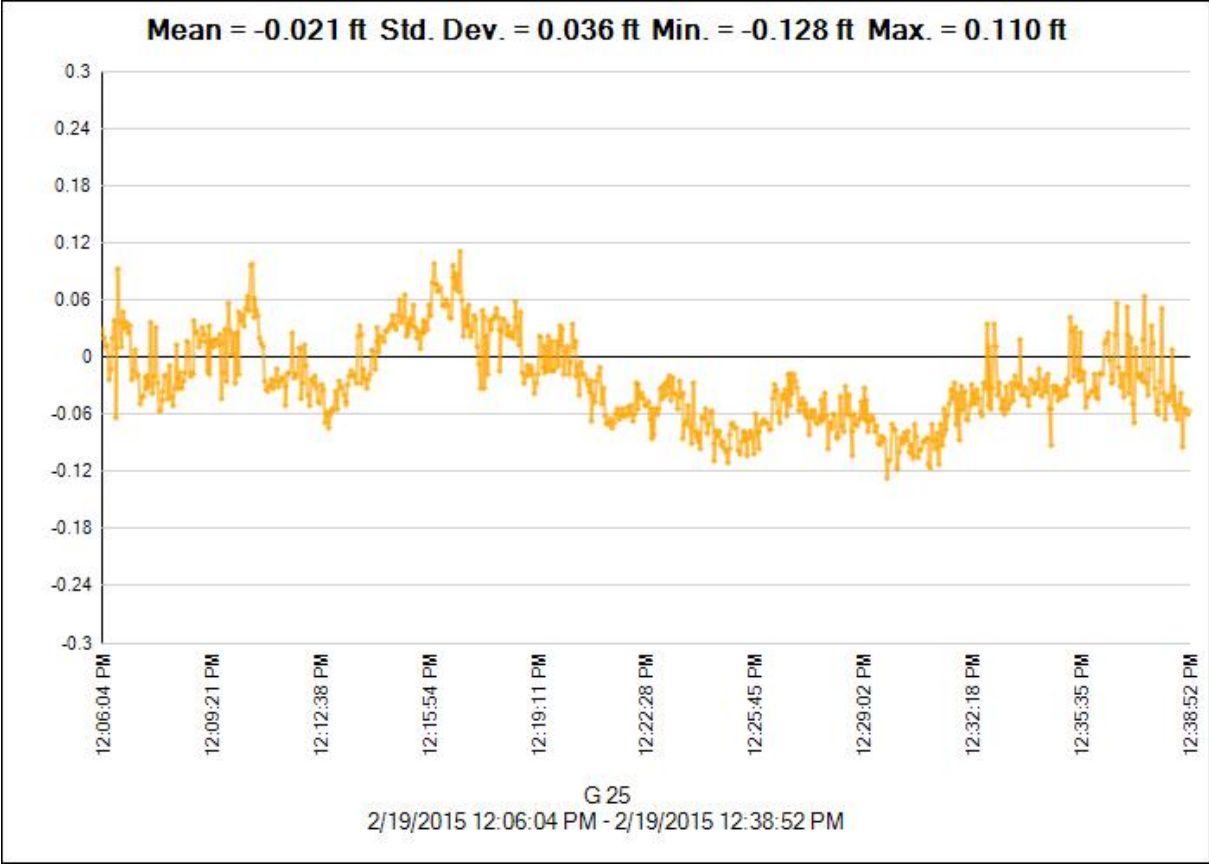
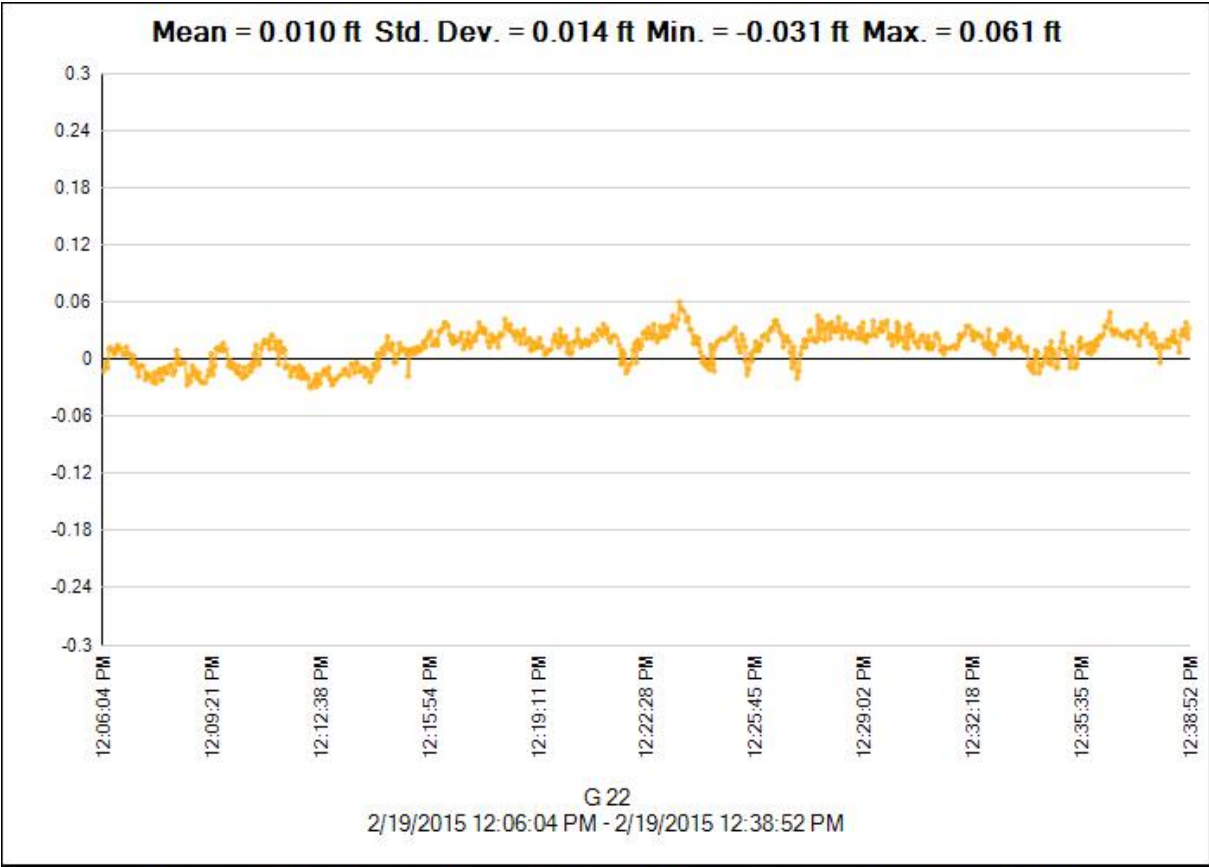
Tracking Summary

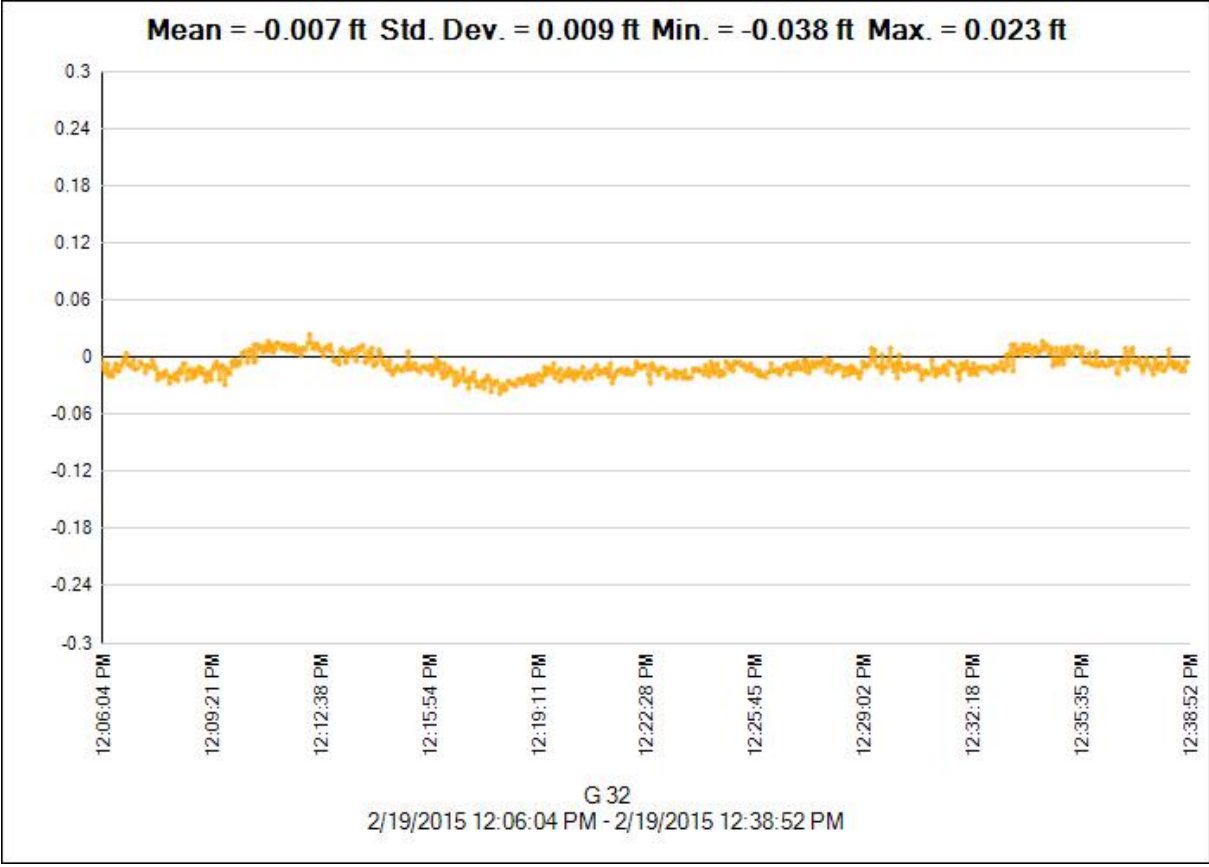
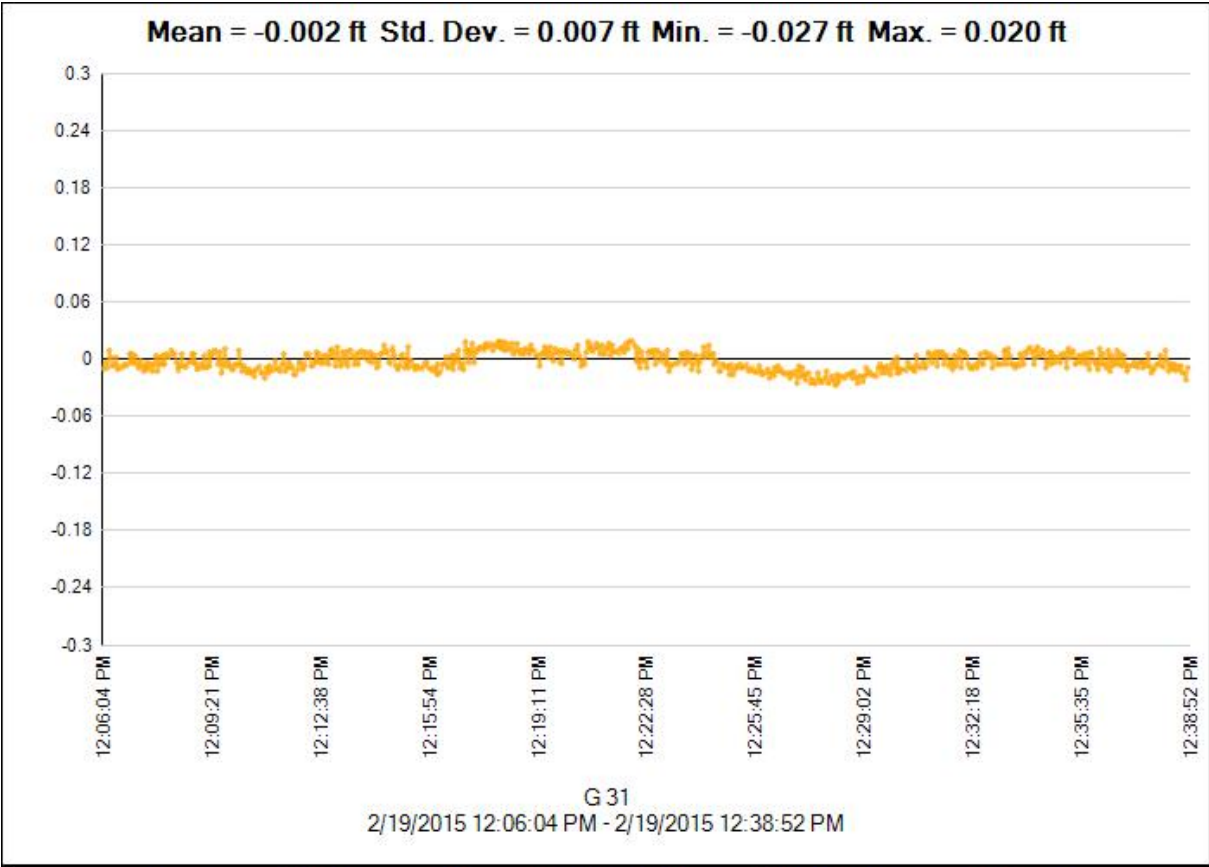
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G 3	L1 L2	[Timeline with horizontal bars]		
G 4	L1 L2	[Timeline with horizontal bars]		
G 14	L1 L2	[Timeline with horizontal bars]		
G 22	L1 L2	[Timeline with horizontal bars]		
G 23	L1 L2	[Timeline with horizontal bars]		
G 25	L1 L2	[Timeline with horizontal bars]		
G 31	L1 L2	[Timeline with horizontal bars]		
G 32	L1 L2	[Timeline with horizontal bars]		

Residuals











Processing style

Elevation mask: 14.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

TUS_5 - CON128 (12:50:23 PM-1:21:41 PM) (S2)

Baseline observation: TUS_5 --- CON128 (B2)
Processed: 3/11/2015 8:53:49 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.028 ft
Vertical precision: 0.037 ft
RMS: 0.002 ft
Maximum PDOP: 2.242
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/19/2015 12:50:23 PM (Local: UTC-7hr)
Processing stop time: 2/19/2015 1:21:41 PM (Local: UTC-7hr)
Processing duration: 00:31:18
Processing interval: 1 second

Vector Components (Mark to Mark)

From:		TUS_5			
Grid		Local		Global	
Easting	1141493.340 ft	Latitude	N32°26'00.51694"	Latitude	N32°26'00.51693"
Northing	524383.461 ft	Longitude	W110°29'08.59181"	Longitude	W110°29'08.59181"
Elevation	2984.136 ft	Height	2892.162 ft	Height	2892.162 ft

To:		CON128			
Grid		Local		Global	
Easting	1139662.931 ft	Latitude	N32°28'43.29351"	Latitude	N32°28'43.29350"
Northing	540813.203 ft	Longitude	W110°29'27.38374"	Longitude	W110°29'27.38374"
Elevation	2781.577 ft	Height	2689.555 ft	Height	2689.555 ft

Vector					
Δ Easting	-1830.409 ft	NS Fwd Azimuth	354°24'40"	Δ X	1641.756 ft
Δ Northing	16429.742 ft	Ellipsoid Dist.	16529.367 ft	Δ Y	8994.826 ft
Δ Elevation	-202.559 ft	Δ Height	-202.607 ft	Δ Z	13774.321 ft

Standard Errors

Vector errors:					
σ Δ Easting	0.008 ft	σ NS fwd Azimuth	0°00'00"	σ Δ X	0.010 ft
σ Δ Northing	0.011 ft	σ Ellipsoid Dist.	0.011 ft	σ Δ Y	0.017 ft
σ Δ Elevation	0.019 ft	σ Δ Height	0.019 ft	σ Δ Z	0.012 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000101065		
Y	0.0000090316	0.0000272722	
Z	-0.0000054961	-0.0000060833	0.0000132575

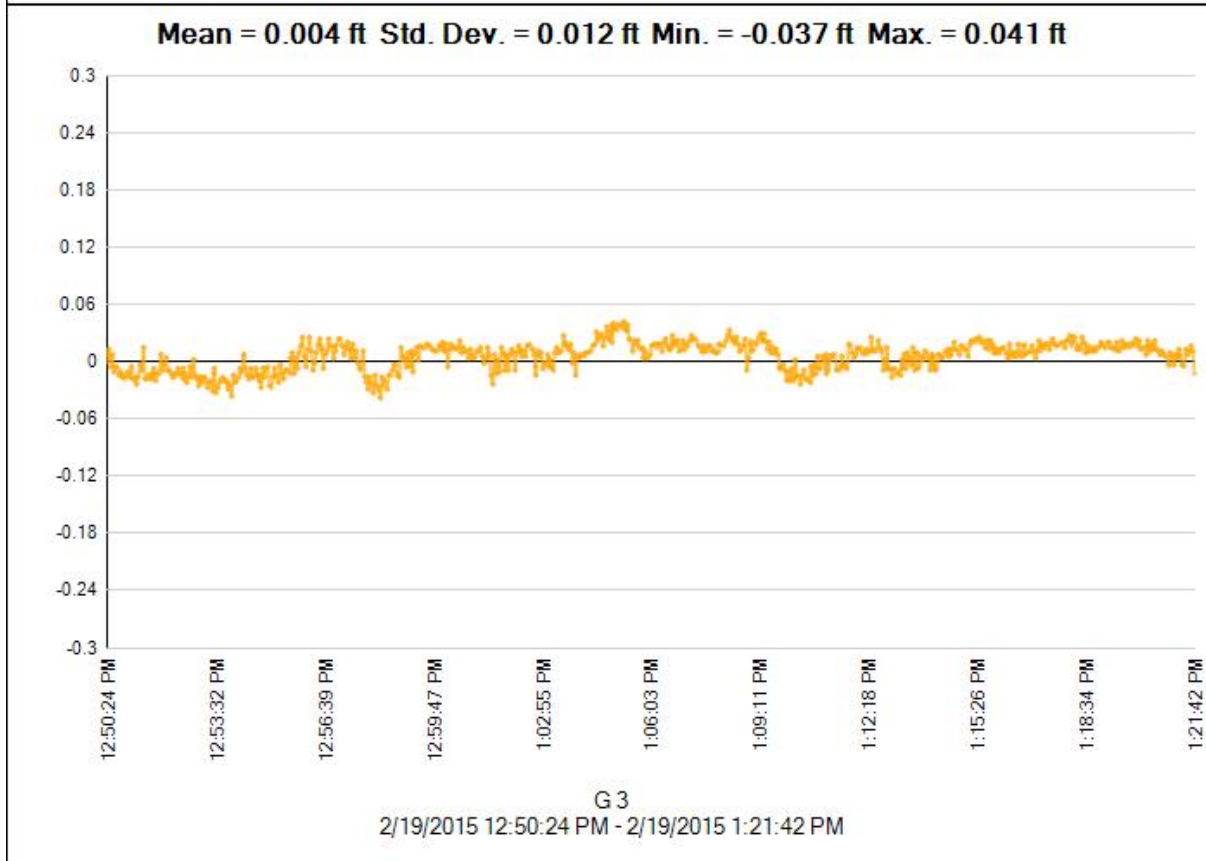
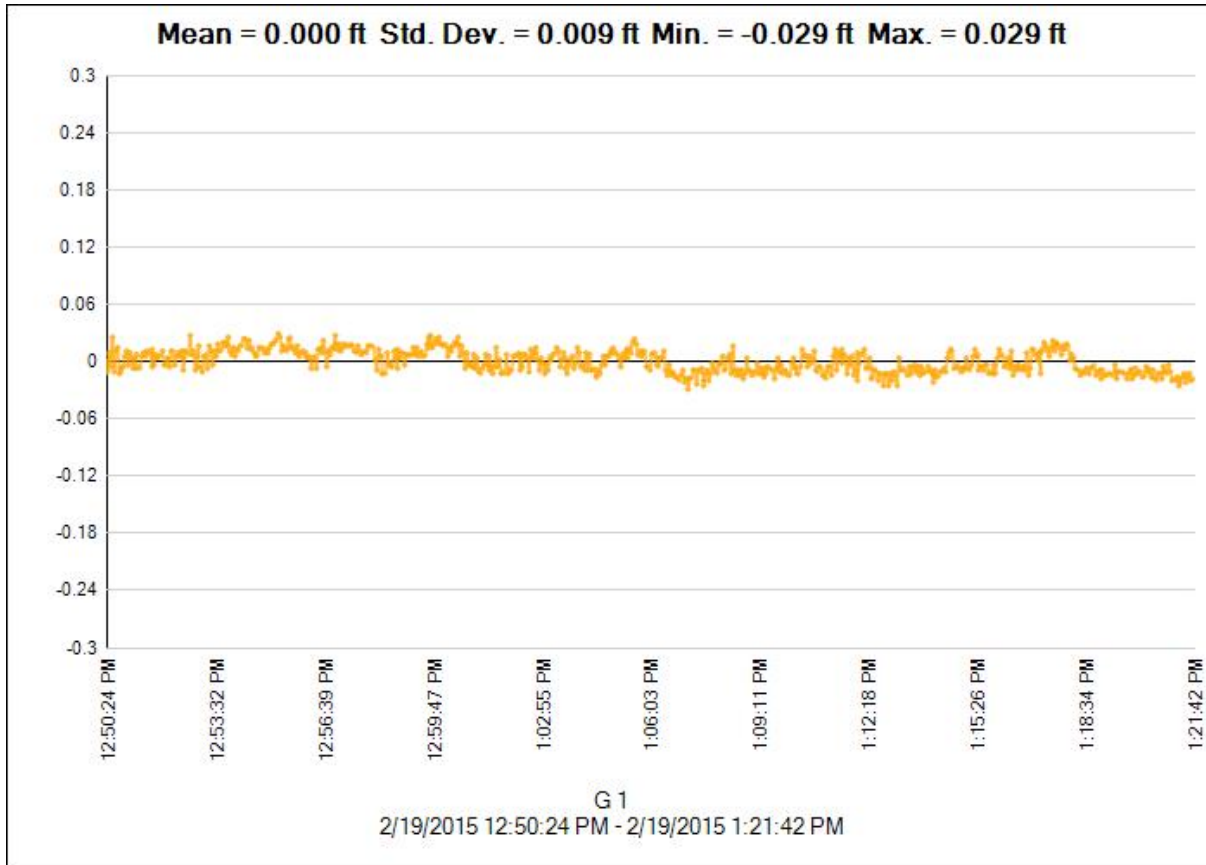
Occupations

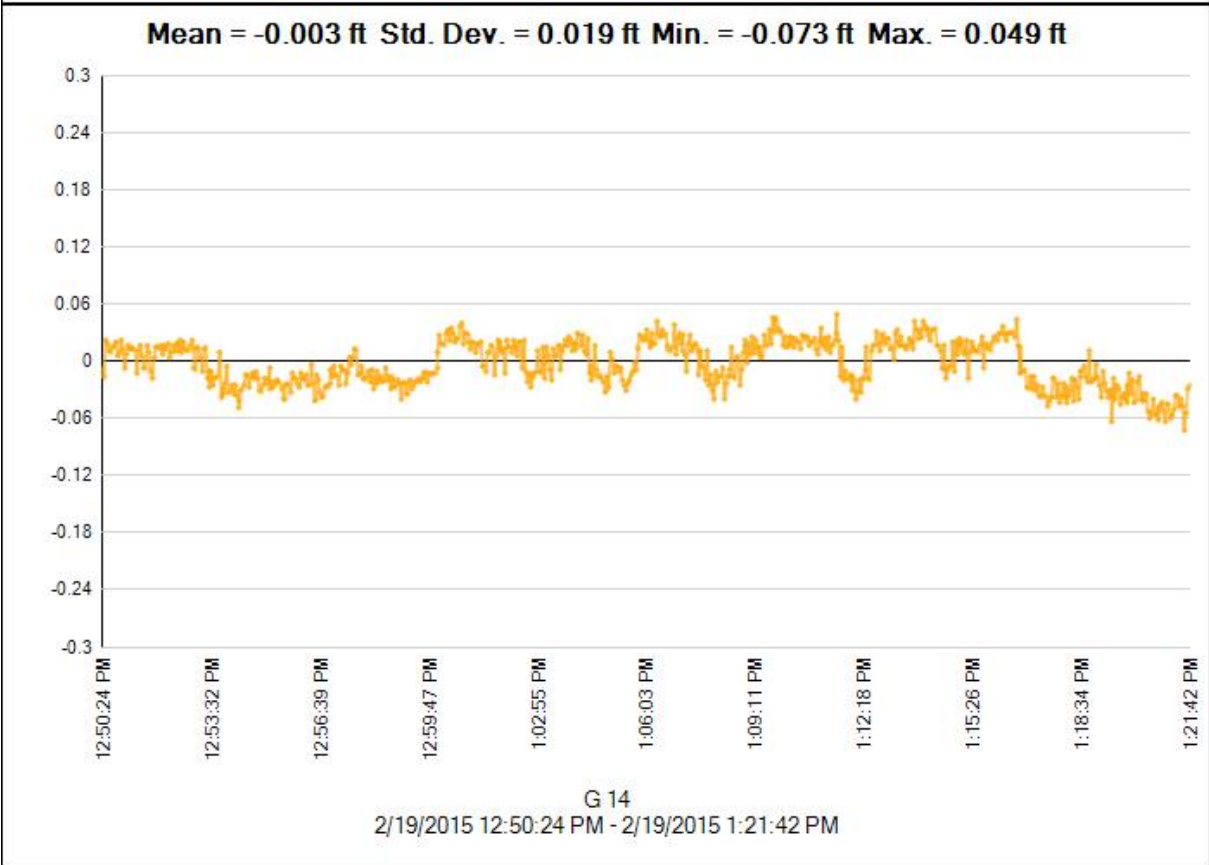
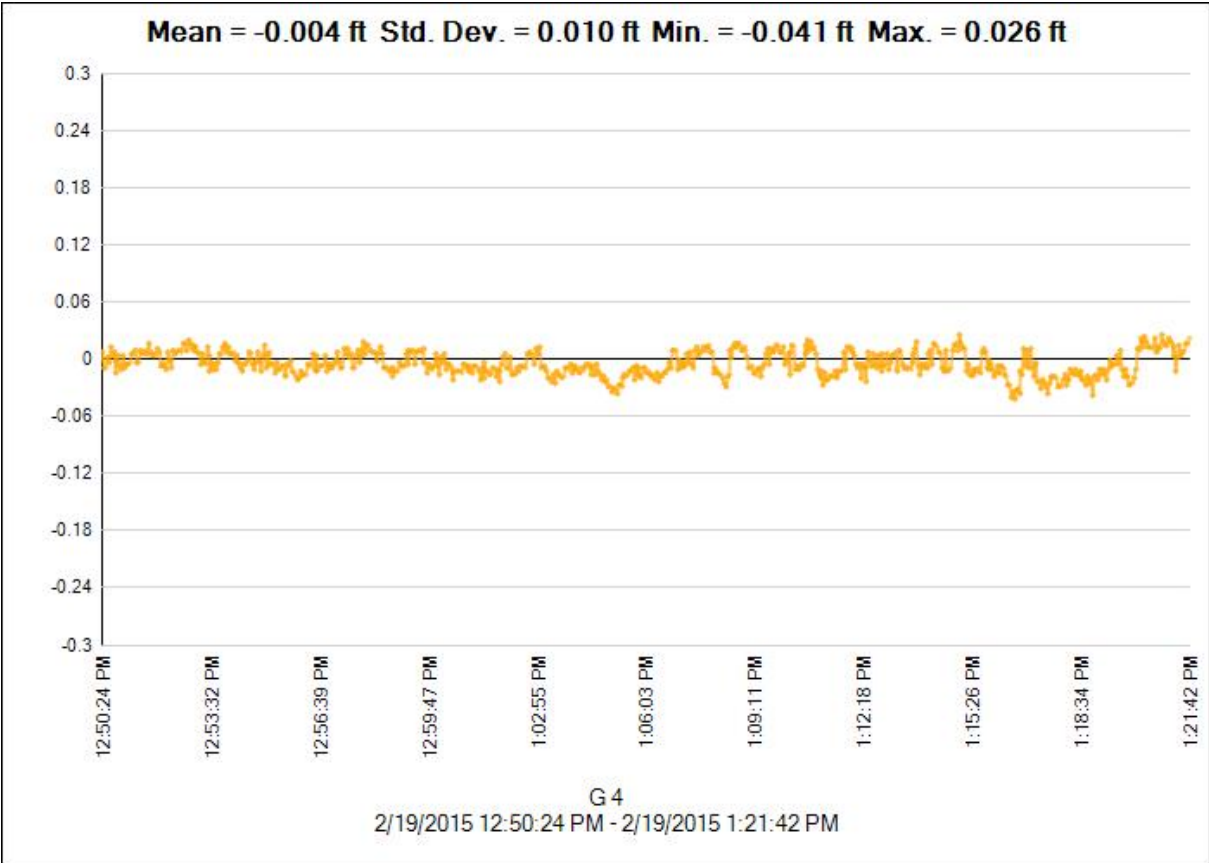
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Point ID:	TUS_5	CON128
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Receiver type:	5700	5700
Receiver serial number:	0440102925	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	-----	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

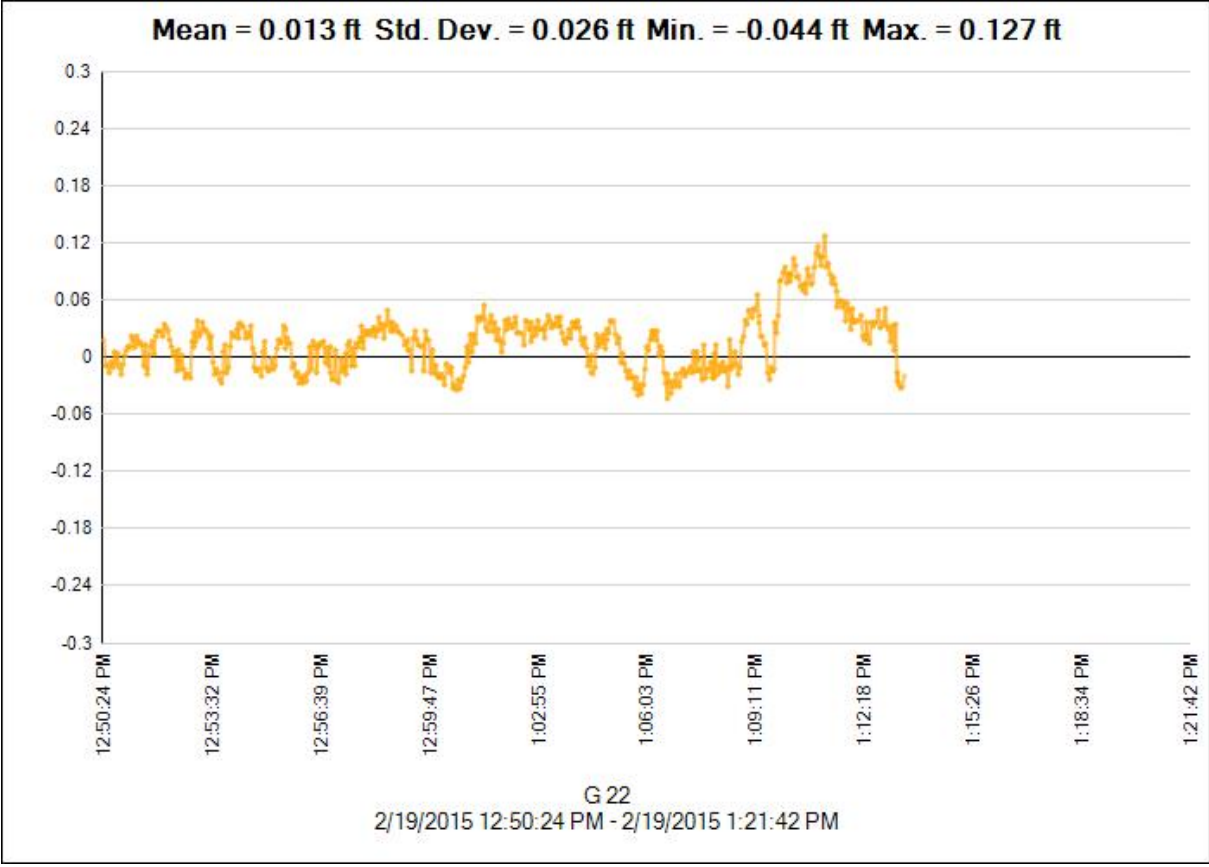
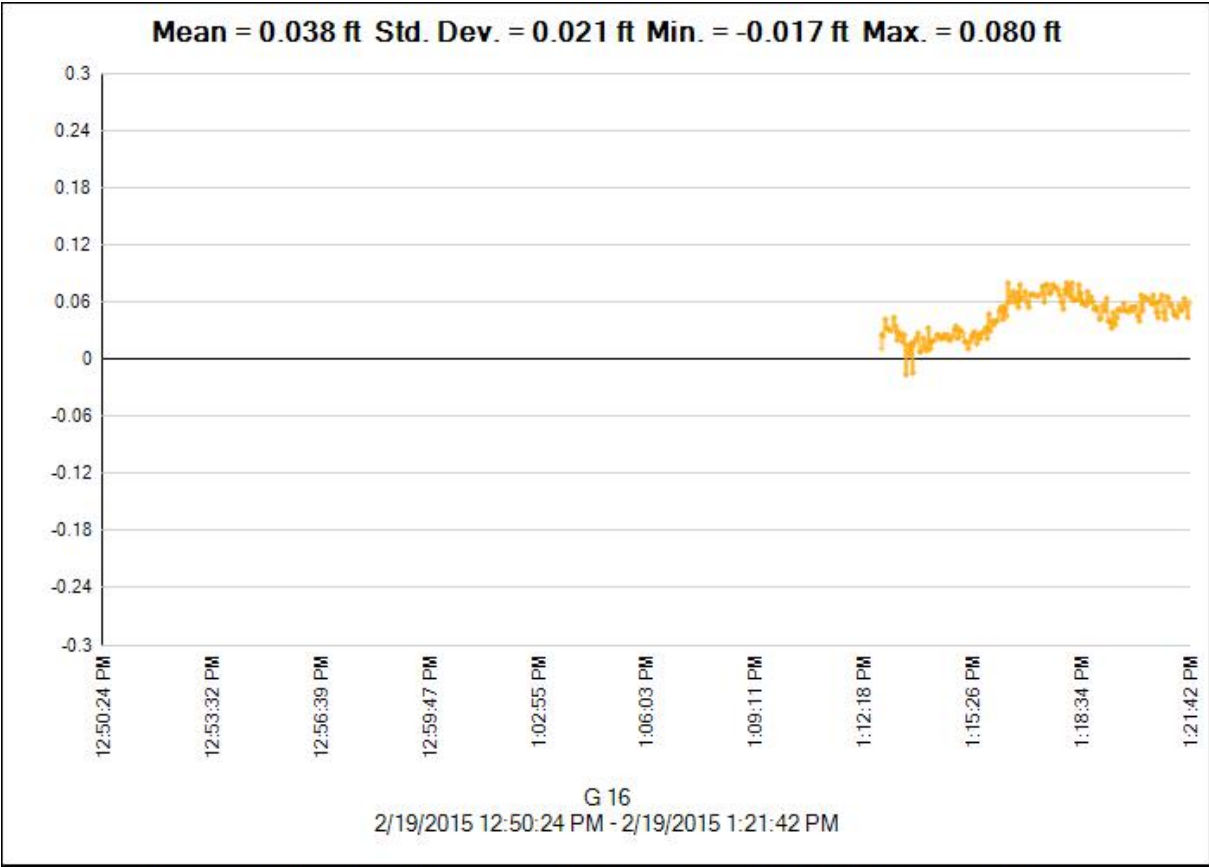
Tracking Summary

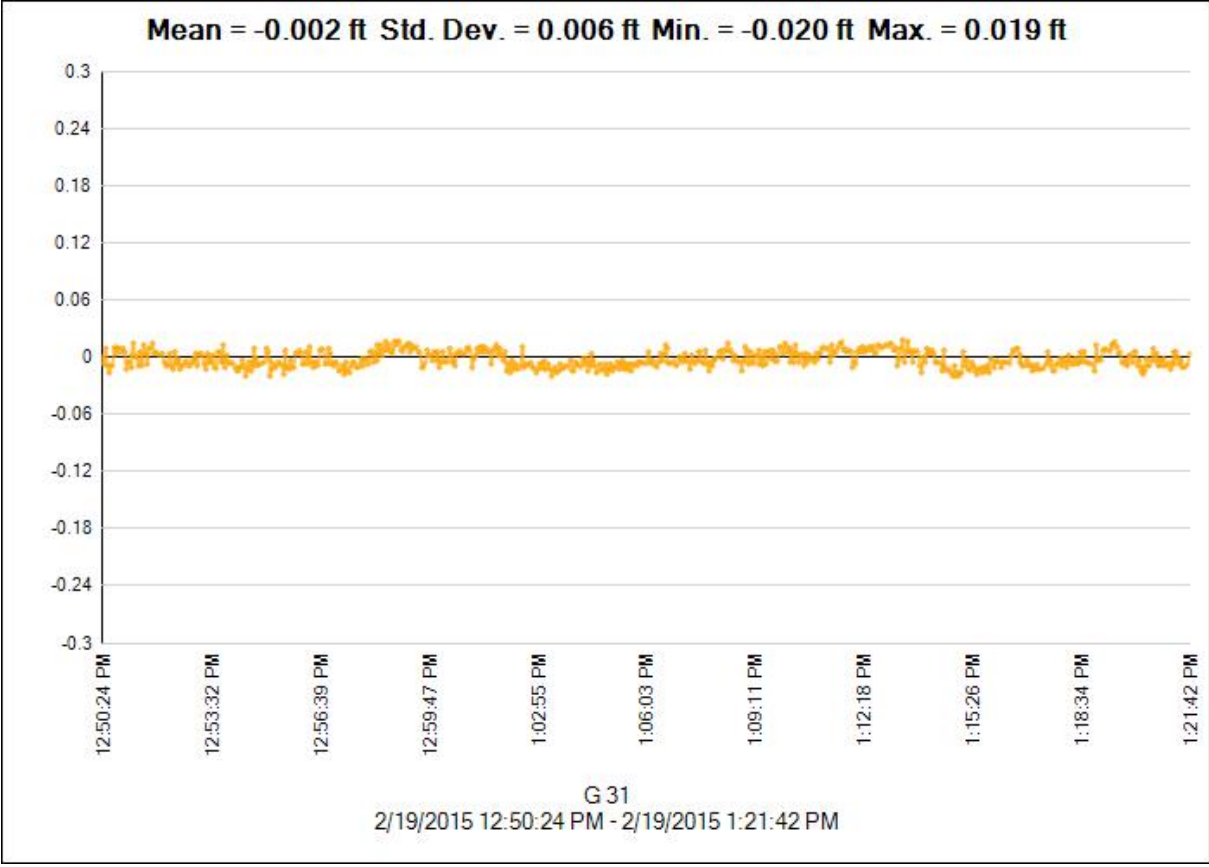
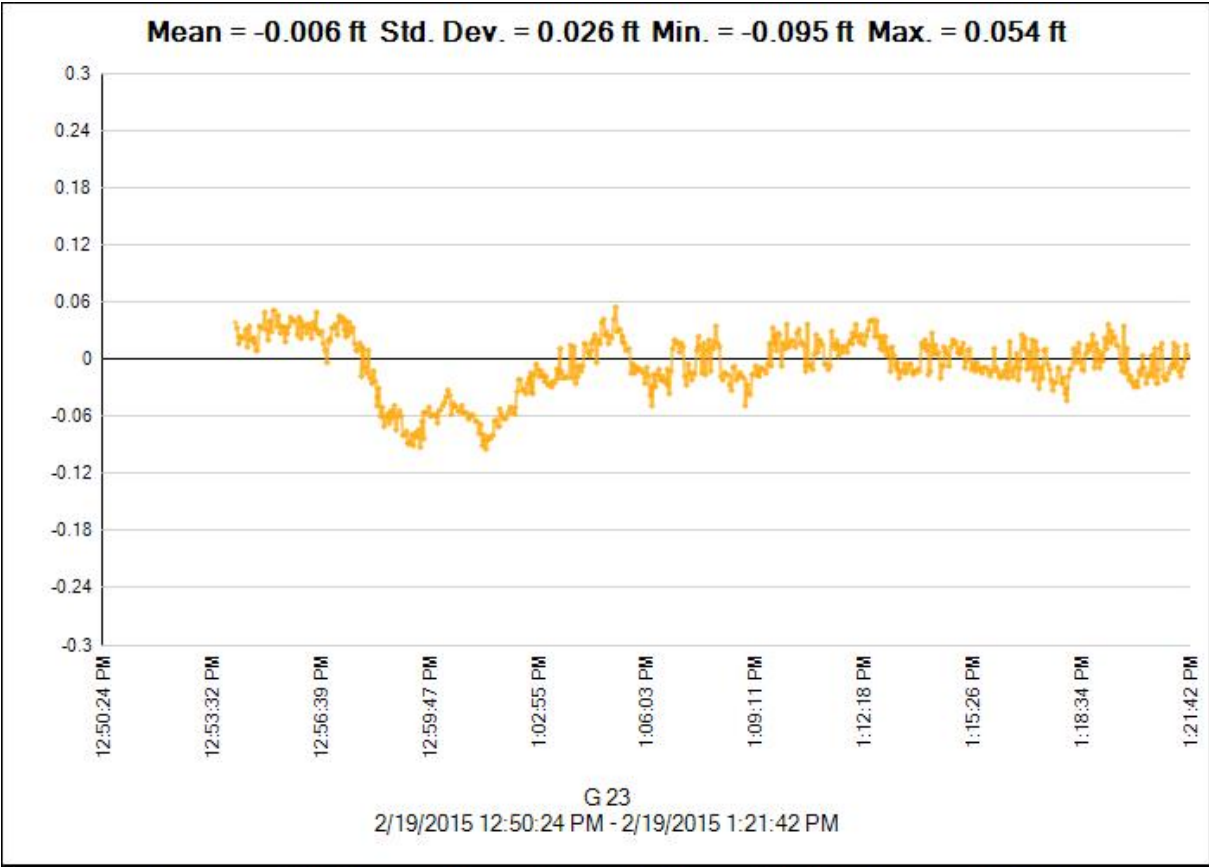
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G 1	L1					
	L2					
G 3	L1					
	L2					
G 4	L1					
	L2					
G 14	L1					
	L2					
G 16	L1					
	L2					
G 22	L1					
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G 32	L1					
	L2					

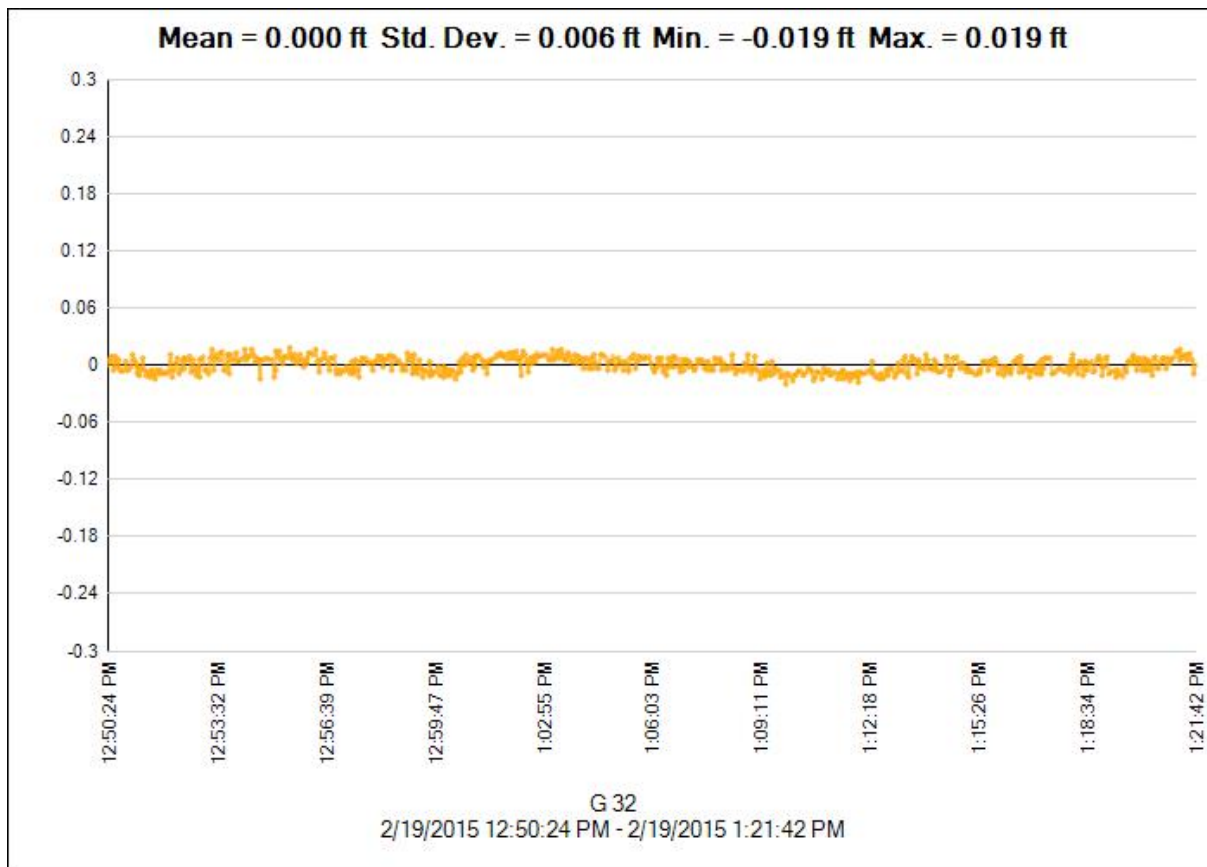
Residuals













Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

TUS_5 - CON129 (1:33:47 PM-2:06:45 PM) (S3)

Baseline observation: TUS_5 --- CON129 (B3)
 Processed: 3/11/2015 8:53:48 AM
 Solution type: Fixed
 Frequency used: Dual Frequency (L1, L2)
 Horizontal precision: 0.012 ft
 Vertical precision: 0.021 ft
 RMS: 0.001 ft
 Maximum PDOP: 2.715
 Ephemeris used: Broadcast
 Antenna model: NGS Absolute
 Processing start time: 2/19/2015 1:33:47 PM (Local: UTC-7hr)
 Processing stop time: 2/19/2015 2:06:45 PM (Local: UTC-7hr)
 Processing duration: 00:32:58
 Processing interval: 1 second

Vector Components (Mark to Mark)

From: TUS_5					
Grid		Local		Global	
Easting	1141493.340 ft	Latitude	N32°26'00.51694"	Latitude	N32°26'00.51693"
Northing	524383.461 ft	Longitude	W110°29'08.59181"	Longitude	W110°29'08.59181"
Elevation	2984.136 ft	Height	2892.162 ft	Height	2892.162 ft

To: CON129					
Grid		Local		Global	
Easting	1140548.961 ft	Latitude	N32°26'29.49597"	Latitude	N32°26'29.49596"
Northing	527300.152 ft	Longitude	W110°29'19.15307"	Longitude	W110°29'19.15307"
Elevation	2869.829 ft	Height	2777.845 ft	Height	2777.844 ft

Vector					
ΔEasting	-944.378 ft	NS Fwd Azimuth	342°49'35"	ΔX	-264.356 ft
ΔNorthing	2916.691 ft	Ellipsoid Dist.	3065.392 ft	ΔY	1878.962 ft
ΔElevation	-114.307 ft	ΔHeight	-114.318 ft	ΔZ	2410.782 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.005 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.007 ft
$\sigma \Delta$ Northing	0.004 ft	σ Ellipsoid Dist.	0.004 ft	$\sigma \Delta$ Y	0.009 ft
$\sigma \Delta$ Elevation	0.011 ft	$\sigma \Delta$ Height	0.011 ft	$\sigma \Delta$ Z	0.006 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000040808		
Y	0.0000035432	0.0000071968	
Z	-0.0000020279	-0.0000030716	0.0000033887

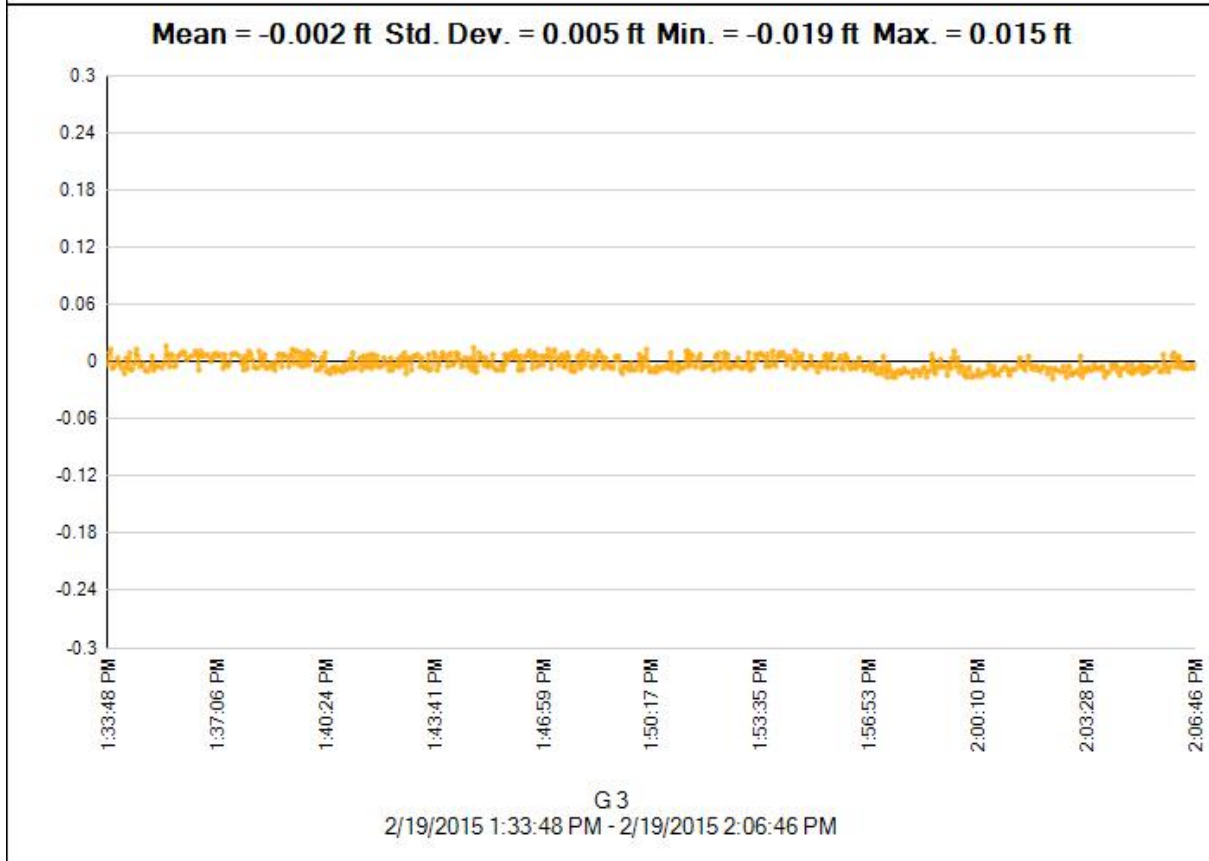
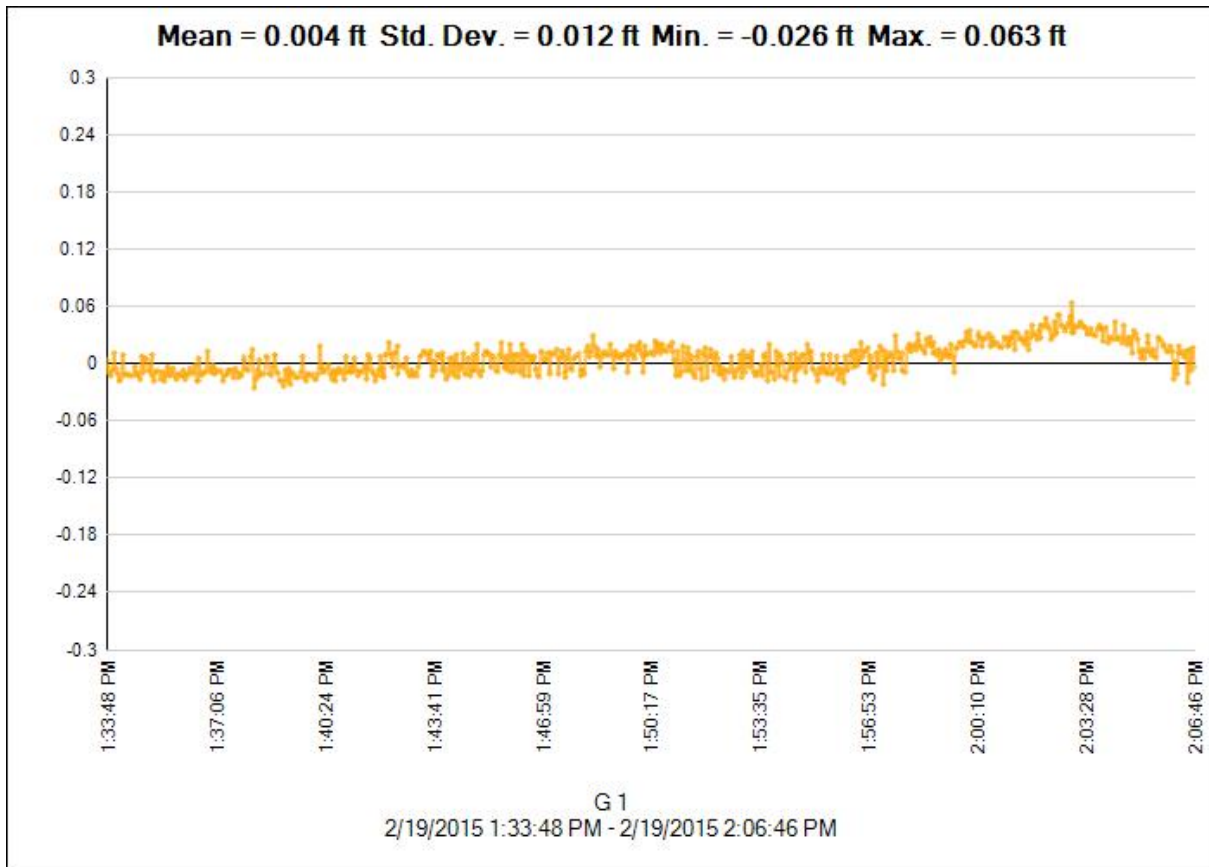
Occupations

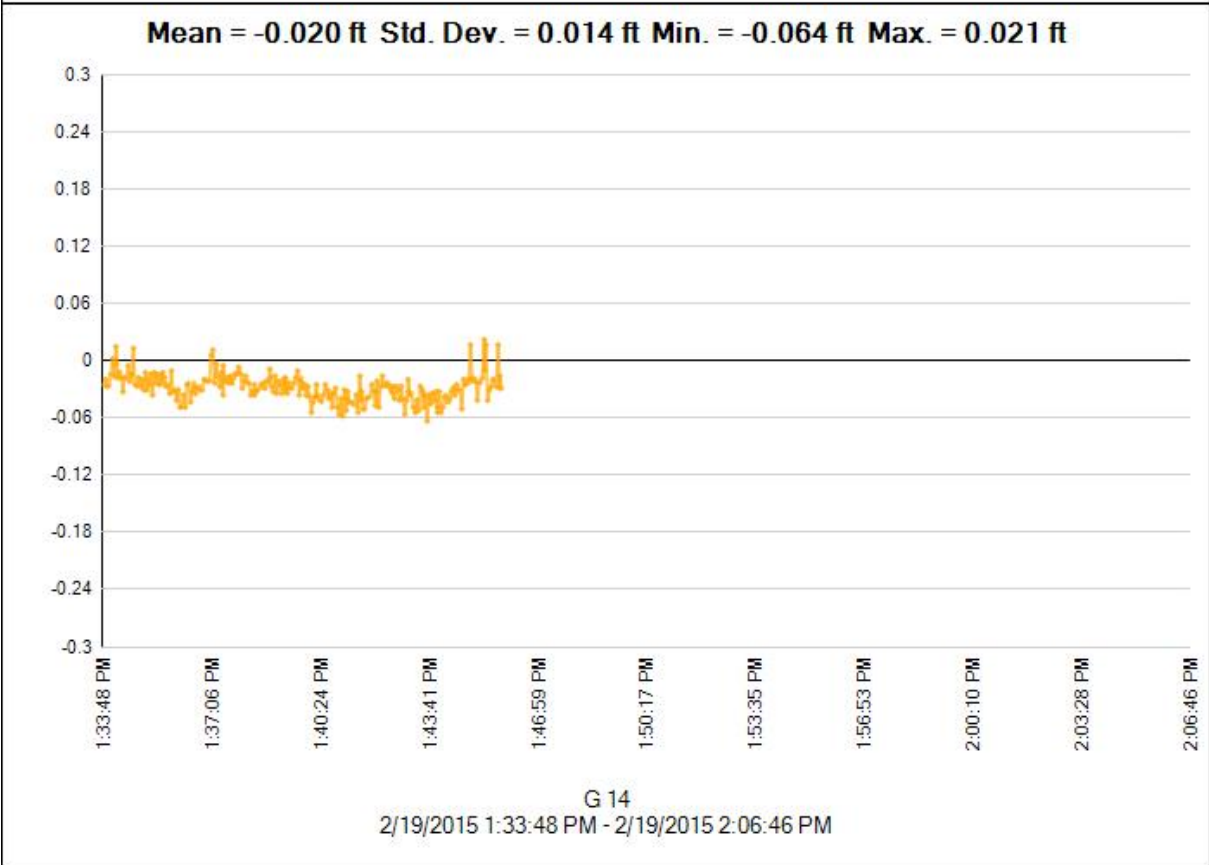
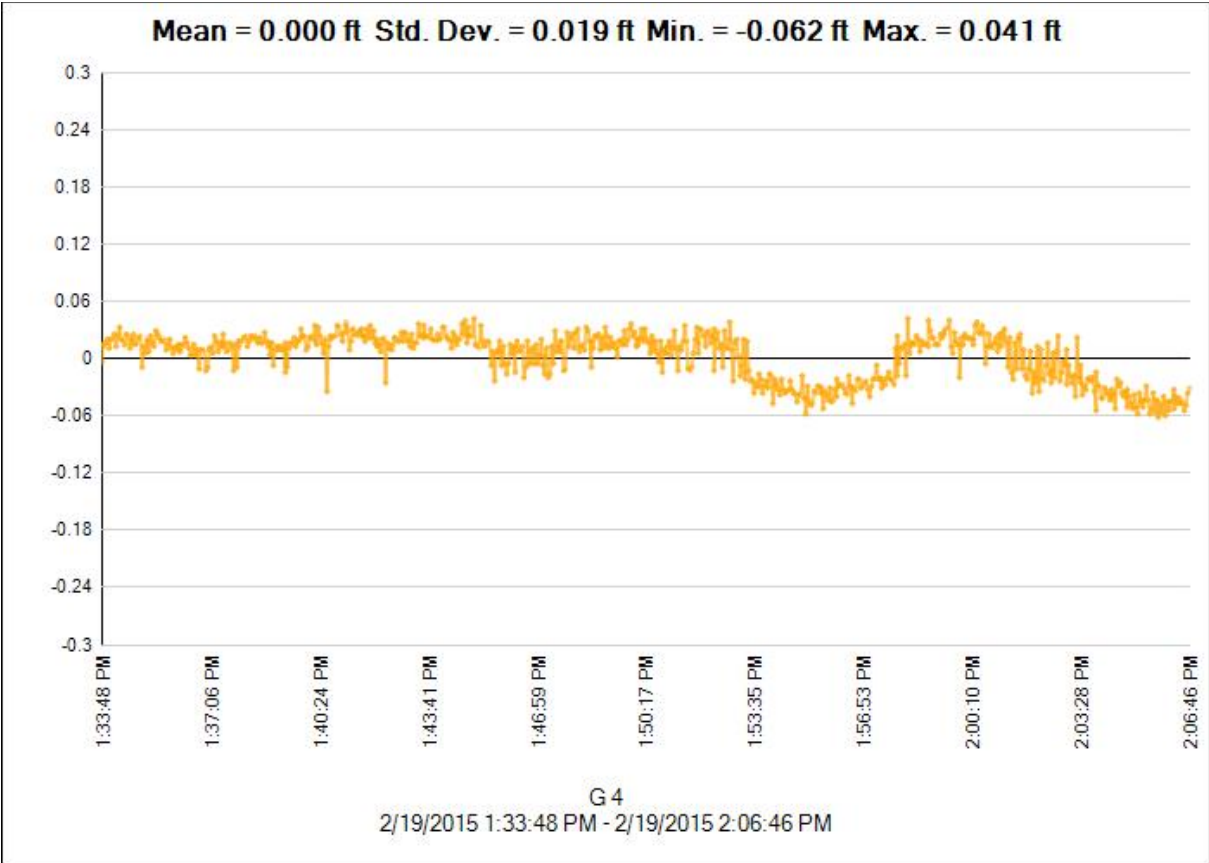
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Point ID:	TUS_5	CON129
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\29250500.t01	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840502.t01
Receiver type:	5700	5700
Receiver serial number:	0440102925	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	-----	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

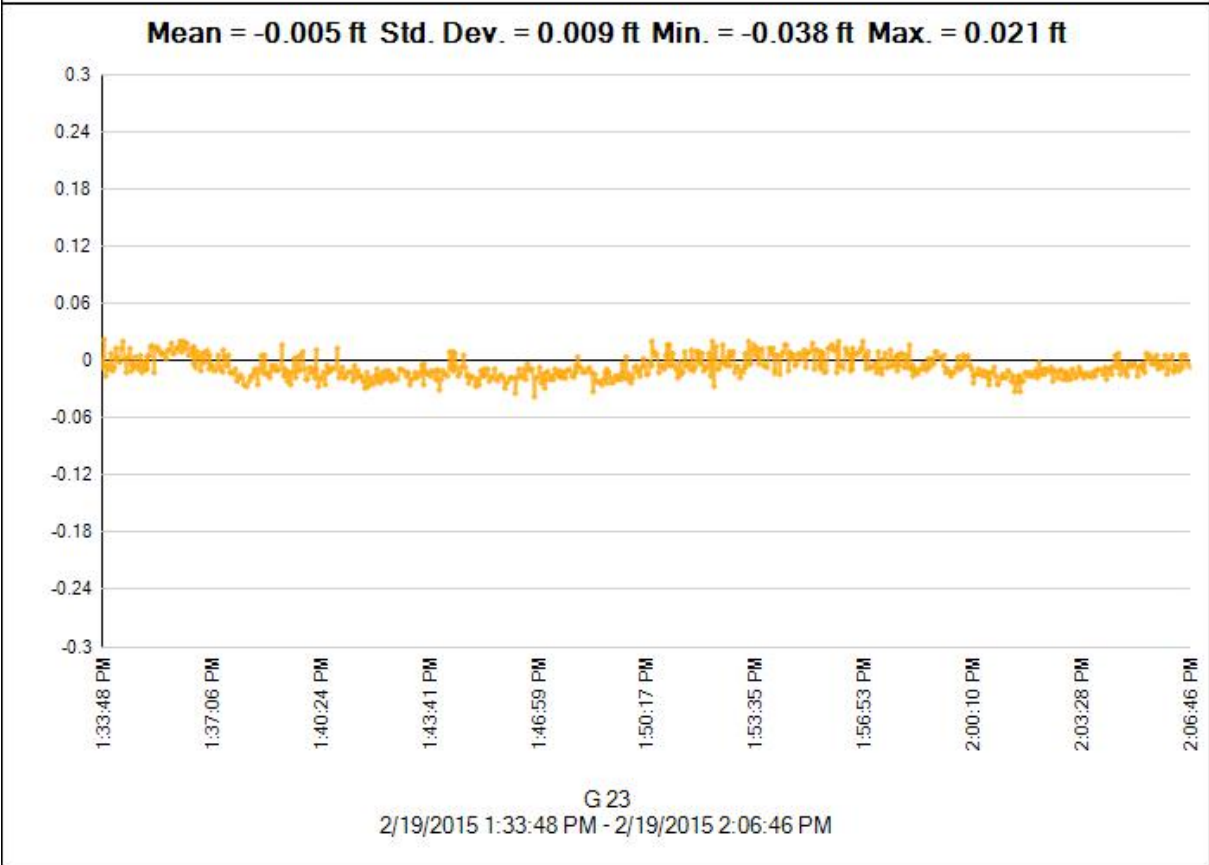
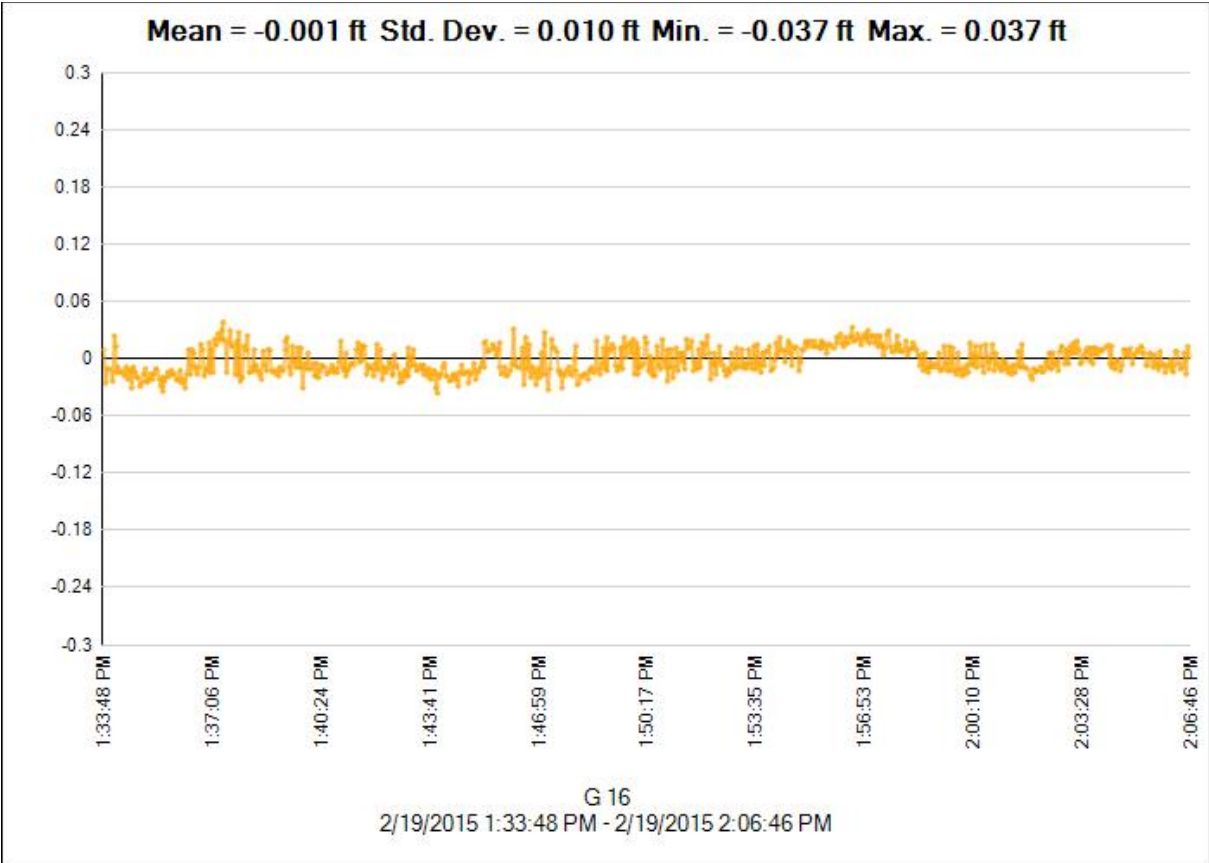
Tracking Summary

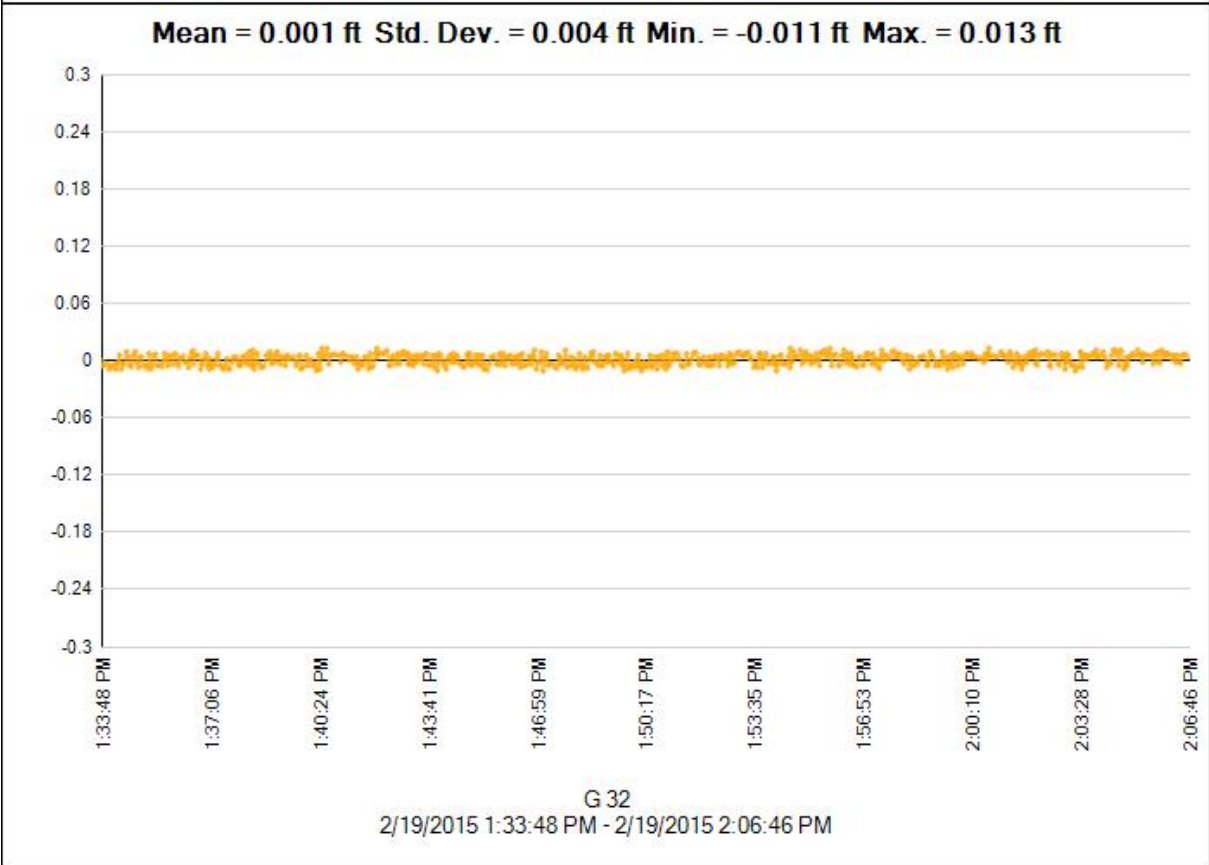
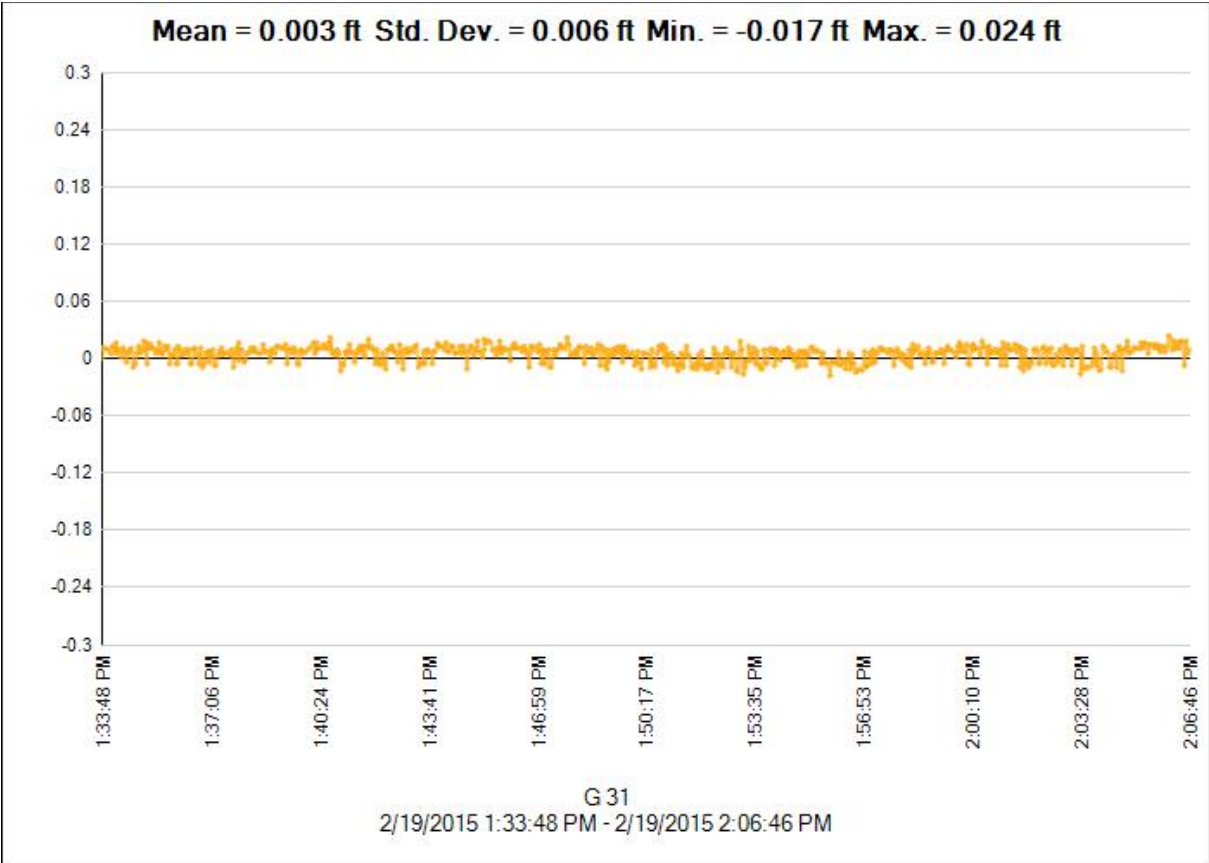
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G 1	L1 L2	[Timeline with horizontal bars]		
G 3	L1 L2	[Timeline with horizontal bars]		
G 4	L1 L2	[Timeline with horizontal bars]		
G 9	L1 L2	[Timeline with horizontal bars]		
G 14	L1 L2	[Timeline with horizontal bars]		
G 16	L1 L2	[Timeline with horizontal bars]		
G 22	L1 L2	[Timeline with horizontal bars]		
G 23	L1 L2	[Timeline with horizontal bars]		
G 31	L1 L2	[Timeline with horizontal bars]		
G 32	L1 L2	[Timeline with horizontal bars]		

Residuals











Processing style

Elevation mask: 14.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

TUS_5 - CON130 (2:20:24 PM-2:53:43 PM) (S4)

Baseline observation: TUS_5 --- CON130 (B4)
Processed: 3/11/2015 8:53:49 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.029 ft
Vertical precision: 0.041 ft
RMS: 0.003 ft
Maximum PDOP: 2.825
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/19/2015 2:20:24 PM (Local: UTC-7hr)
Processing stop time: 2/19/2015 2:53:43 PM (Local: UTC-7hr)
Processing duration: 00:33:19
Processing interval: 1 second

Vector Components (Mark to Mark)

From:		TUS_5			
Grid		Local		Global	
Easting	1141493.340 ft	Latitude	N32°26'00.51694"	Latitude	N32°26'00.51693"
Northing	524383.461 ft	Longitude	W110°29'08.59181"	Longitude	W110°29'08.59181"
Elevation	2984.136 ft	Height	2892.162 ft	Height	2892.162 ft

To:		CON130			
Grid		Local		Global	
Easting	1147834.470 ft	Latitude	N32°24'34.63532"	Latitude	N32°24'34.63532"
Northing	515787.660 ft	Longitude	W110°27'55.98470"	Longitude	W110°27'55.98470"
Elevation	2923.750 ft	Height	2831.819 ft	Height	2831.819 ft

Vector					
Δ Easting	6341.131 ft	NS Fwd Azimuth	144°21'04"	Δ X	4221.206 ft
Δ Northing	-8595.801 ft	Ellipsoid Dist.	10680.303 ft	Δ Y	-6489.766 ft
Δ Elevation	-60.386 ft	Δ Height	-60.343 ft	Δ Z	-7359.901 ft

Standard Errors

Vector errors:					
σ Δ Easting	0.010 ft	σ NS fwd Azimuth	0°00'00"	σ Δ X	0.011 ft
σ Δ Northing	0.010 ft	σ Ellipsoid Dist.	0.007 ft	σ Δ Y	0.017 ft
σ Δ Elevation	0.021 ft	σ Δ Height	0.021 ft	σ Δ Z	0.016 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000107295		
Y	0.0000050752	0.0000254893	
Z	-0.0000005552	-0.0000181763	0.0000228646

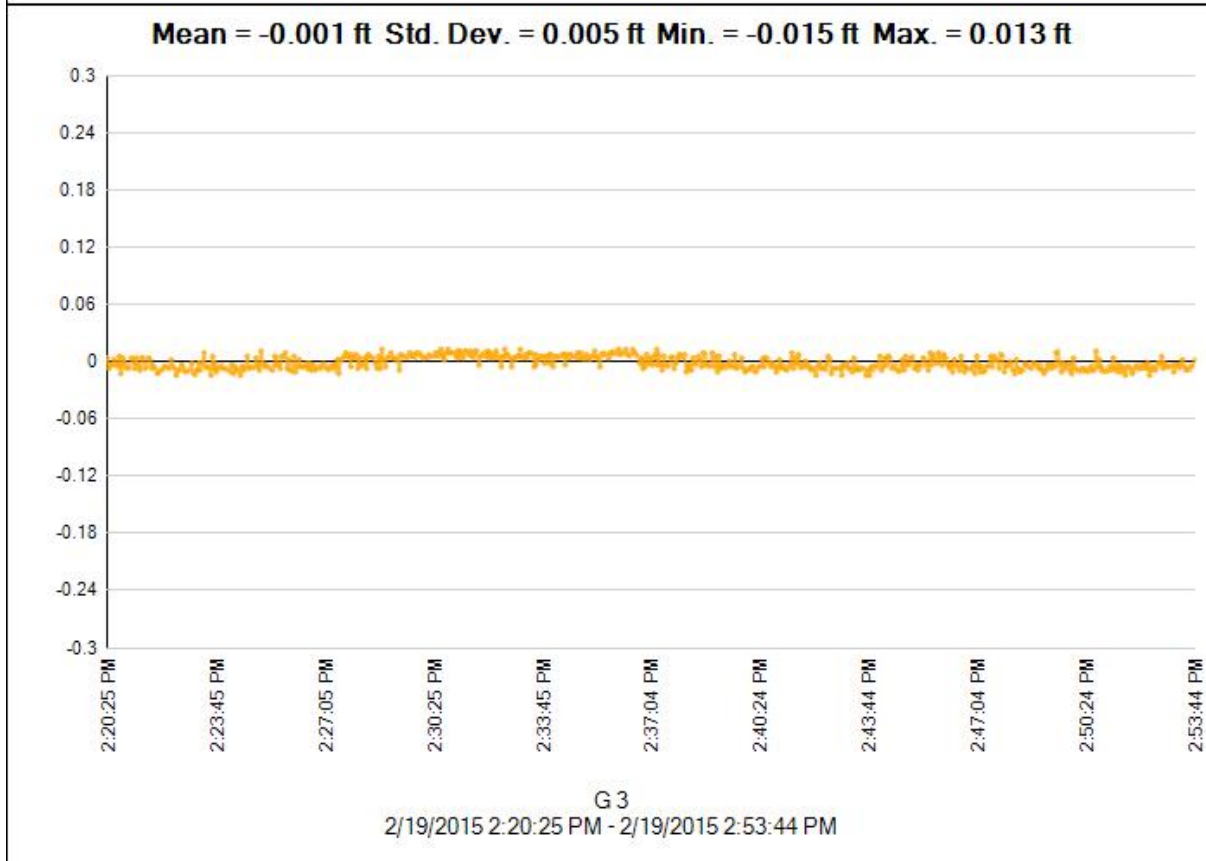
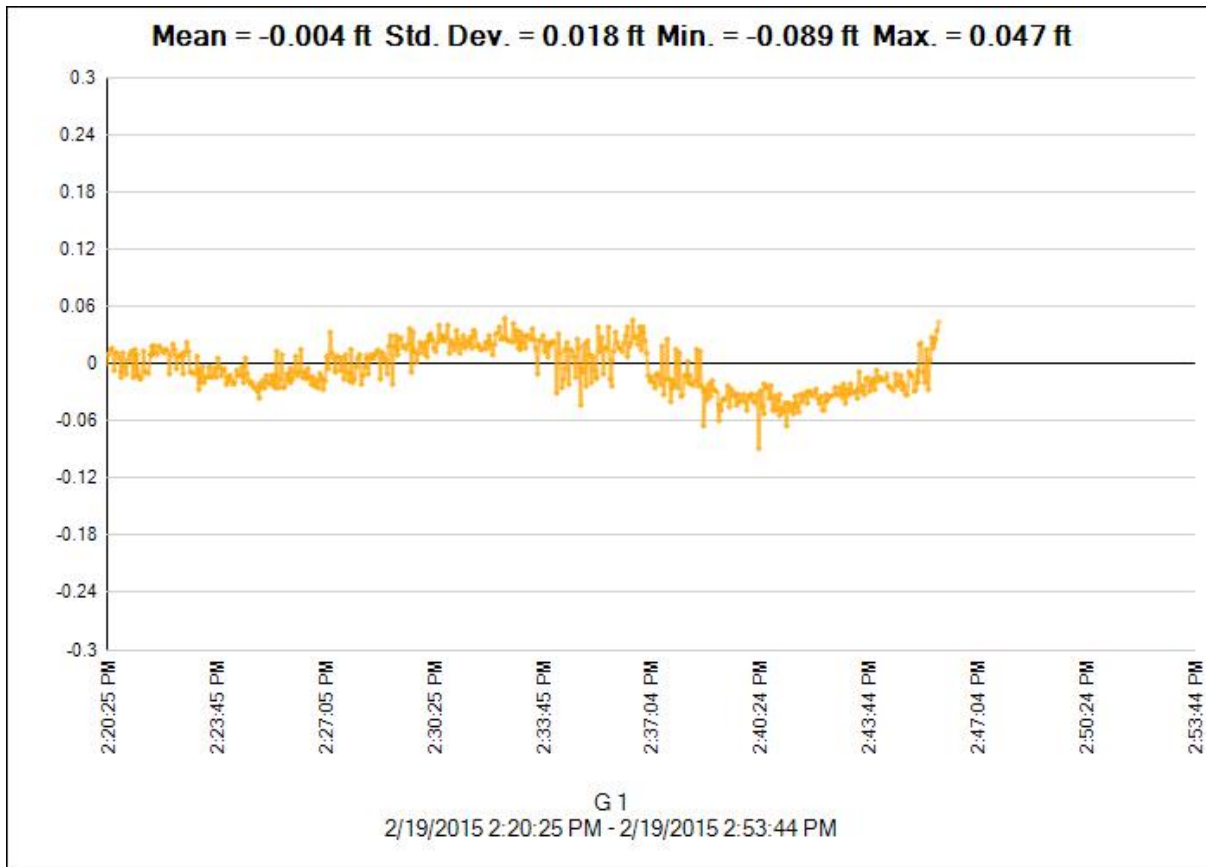
Occupations

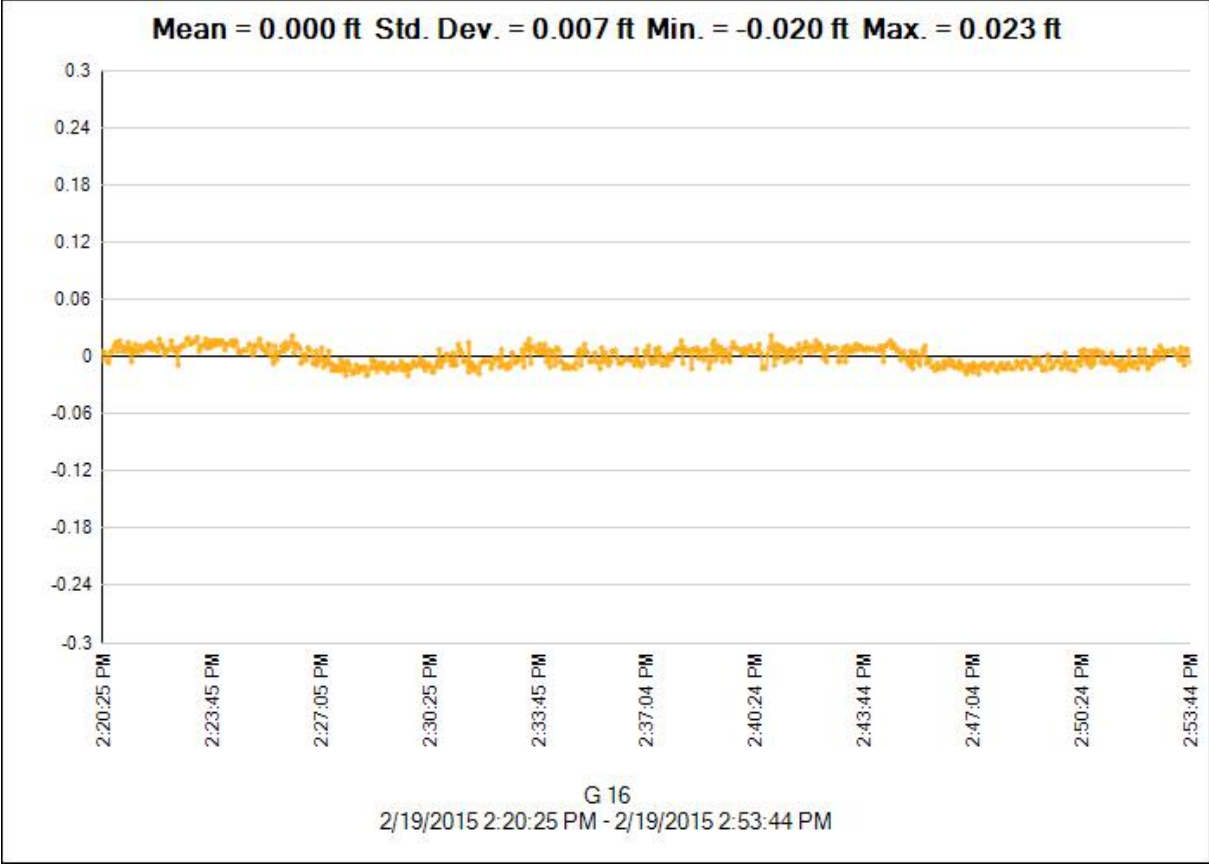
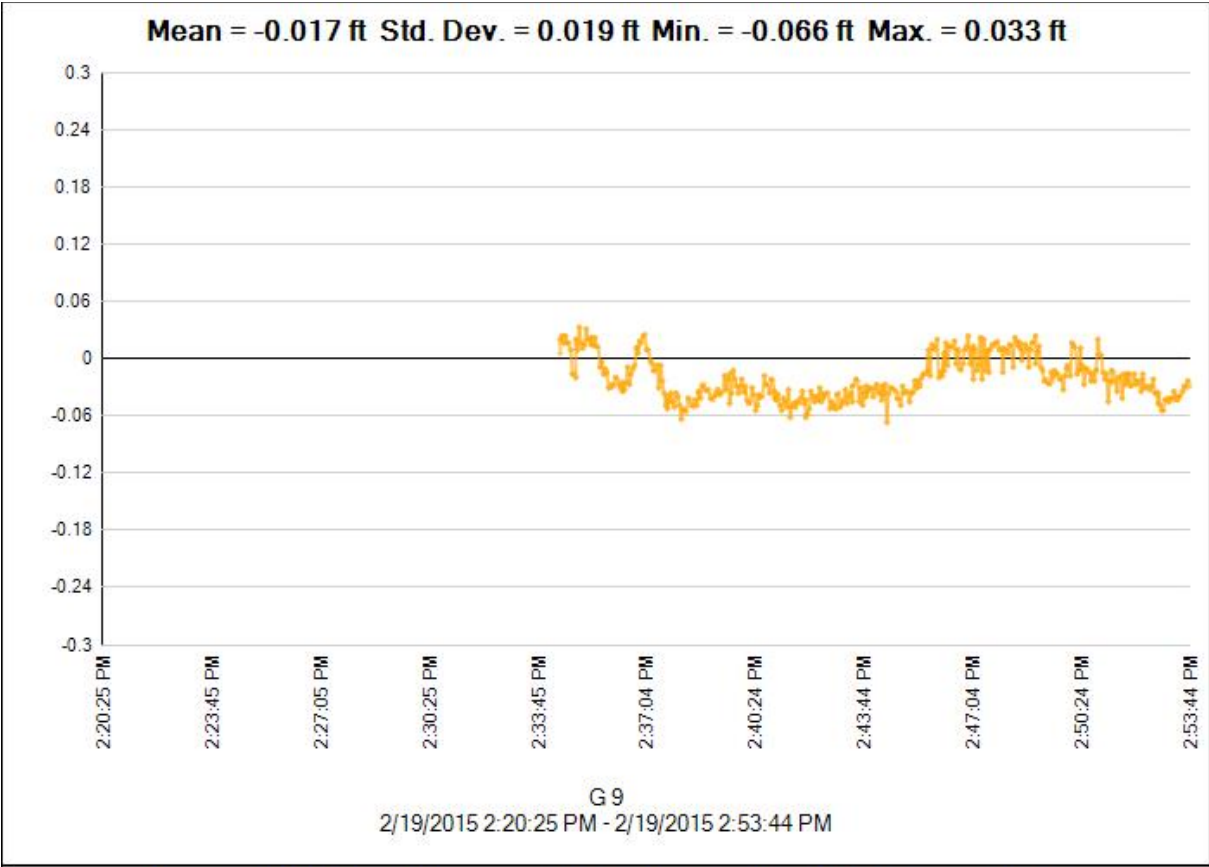
	From	To
Point ID:	TUS_5	CON130
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\29250500.t01	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840503.t01
Receiver type:	5700	5700
Receiver serial number:	0440102925	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	-----	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

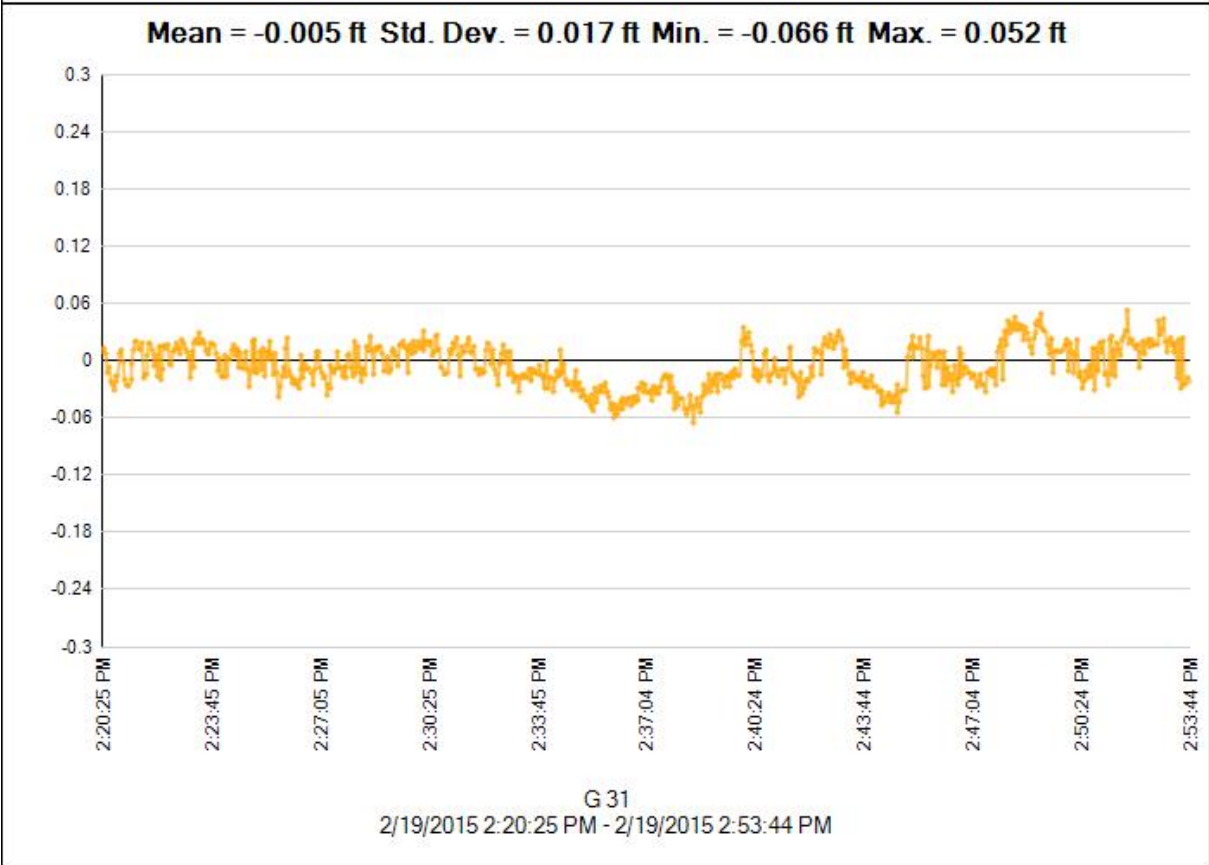
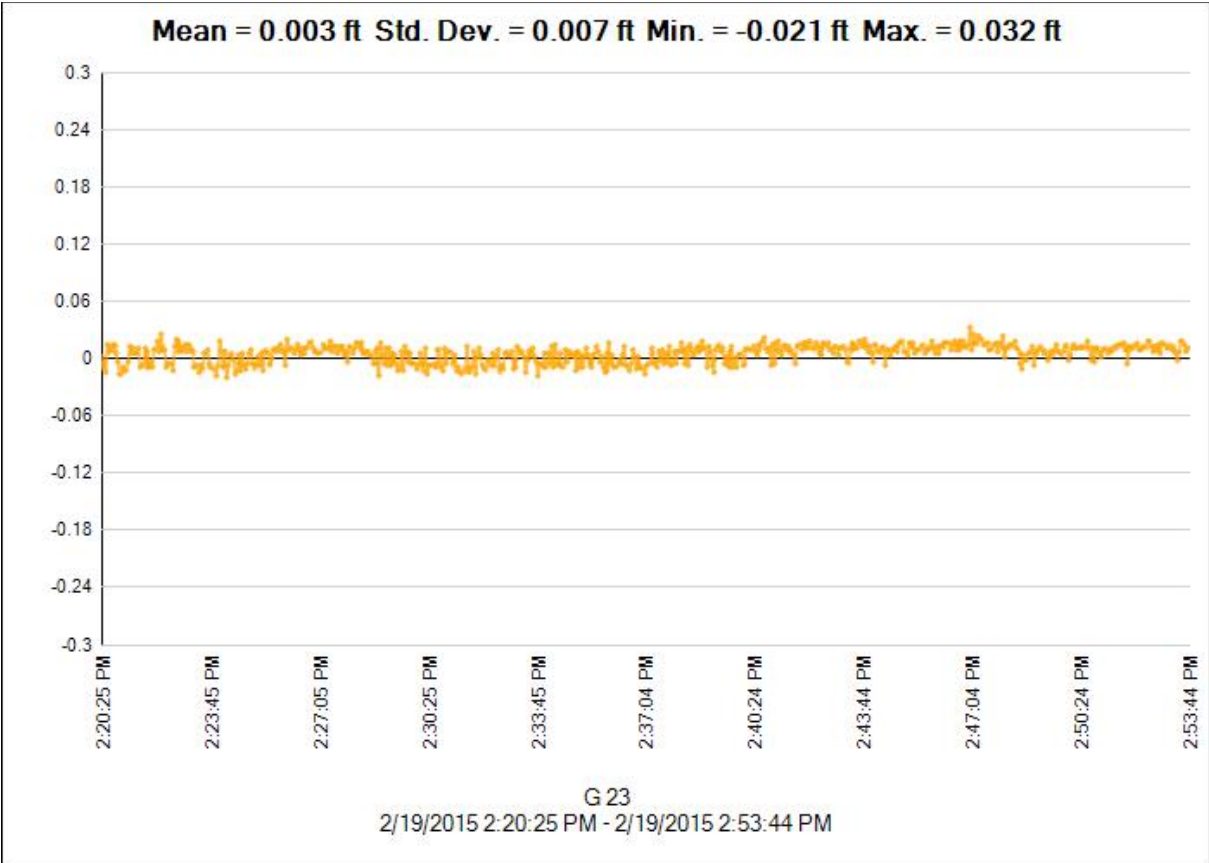
Tracking Summary

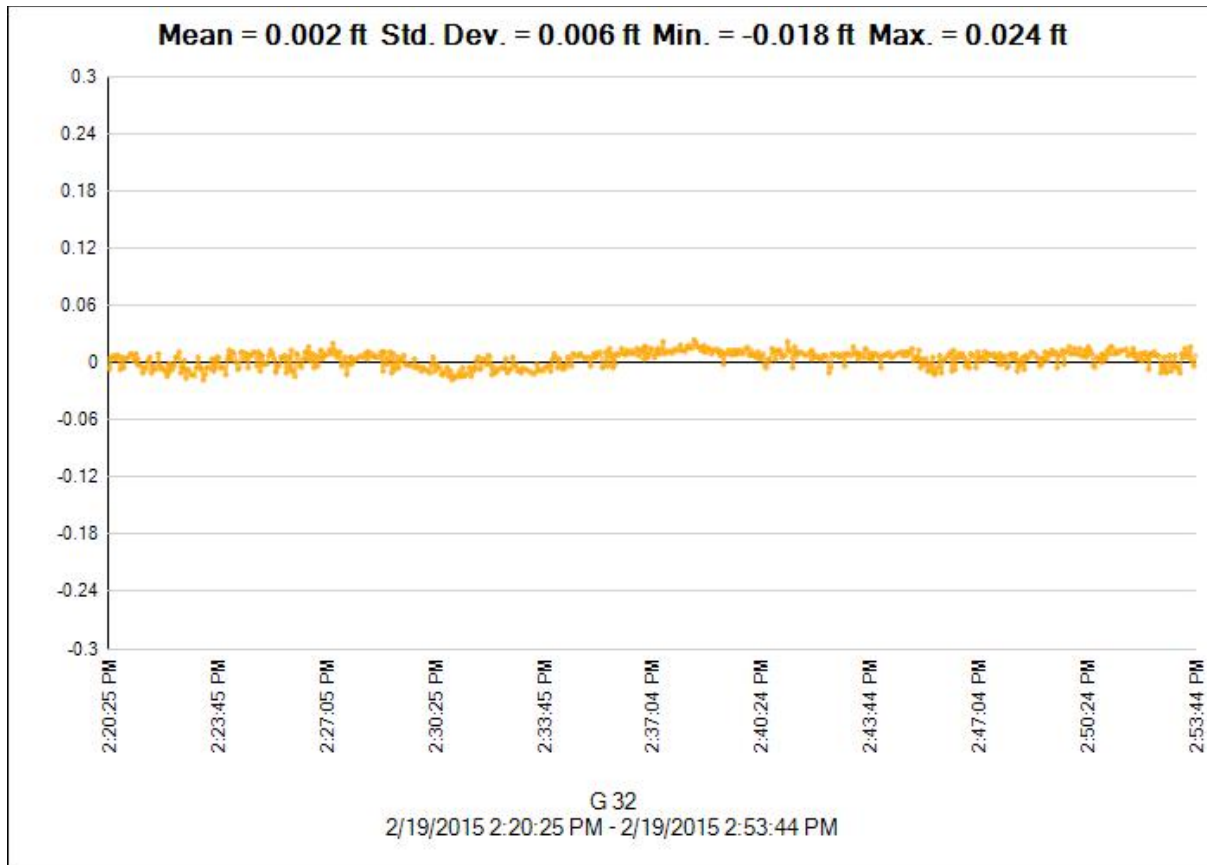
SV	2/19/2015 2:20:24 PM	Duration: 00:33:19	Major interval: 00:01:00	2/19/2015 2:53:43 PM
G 1	L1 L2			
G 3	L1 L2			
G 4	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 16	L1 L2			
G 20	L1 L2			
G 23	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

Residuals











Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

TUS_5 - CON131 (3:20:22 PM-3:54:31 PM) (S5)

Baseline observation: TUS_5 --- CON131 (B5)
 Processed: 3/11/2015 8:53:50 AM
 Solution type: Fixed
 Frequency used: Dual Frequency (L1, L2)
 Horizontal precision: 0.026 ft
 Vertical precision: 0.040 ft
 RMS: 0.002 ft
 Maximum PDOP: 2.824
 Ephemeris used: Broadcast
 Antenna model: NGS Absolute
 Processing start time: 2/19/2015 3:20:22 PM (Local: UTC-7hr)
 Processing stop time: 2/19/2015 3:54:31 PM (Local: UTC-7hr)
 Processing duration: 00:34:09
 Processing interval: 1 second

Vector Components (Mark to Mark)

From: TUS_5					
Grid		Local		Global	
Easting	1141493.340 ft	Latitude	N32°26'00.51694"	Latitude	N32°26'00.51693"
Northing	524383.461 ft	Longitude	W110°29'08.59181"	Longitude	W110°29'08.59181"
Elevation	2984.136 ft	Height	2892.162 ft	Height	2892.162 ft

To: CON131					
Grid		Local		Global	
Easting	1135203.630 ft	Latitude	N32°24'00.11134"	Latitude	N32°24'00.11133"
Northing	512128.794 ft	Longitude	W110°30'23.84810"	Longitude	W110°30'23.84810"
Elevation	3249.110 ft	Height	3157.274 ft	Height	3157.274 ft

Vector					
ΔEasting	-6289.710 ft	NS Fwd Azimuth	207°56'11"	ΔX	-8406.515 ft
ΔNorthing	-12254.668 ft	Ellipsoid Dist.	13772.864 ft	ΔY	-4061.589 ft
ΔElevation	264.974 ft	ΔHeight	265.112 ft	ΔZ	-10131.686 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.010 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.014 ft
$\sigma \Delta$ Northing	0.008 ft	σ Ellipsoid Dist.	0.010 ft	$\sigma \Delta$ Y	0.016 ft
$\sigma \Delta$ Elevation	0.020 ft	$\sigma \Delta$ Height	0.020 ft	$\sigma \Delta$ Z	0.011 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000178393		
Y	0.0000150833	0.0000234849	
Z	-0.0000074284	-0.0000114383	0.0000117679

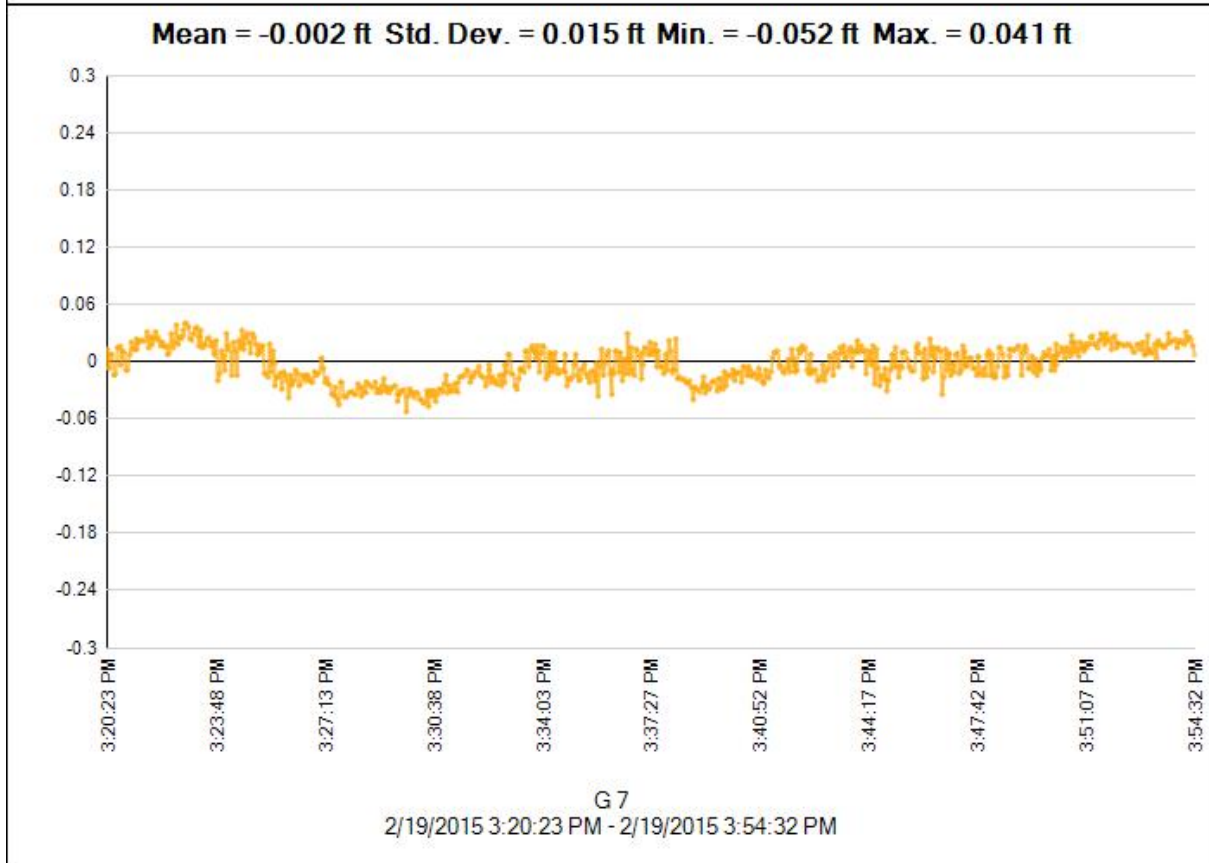
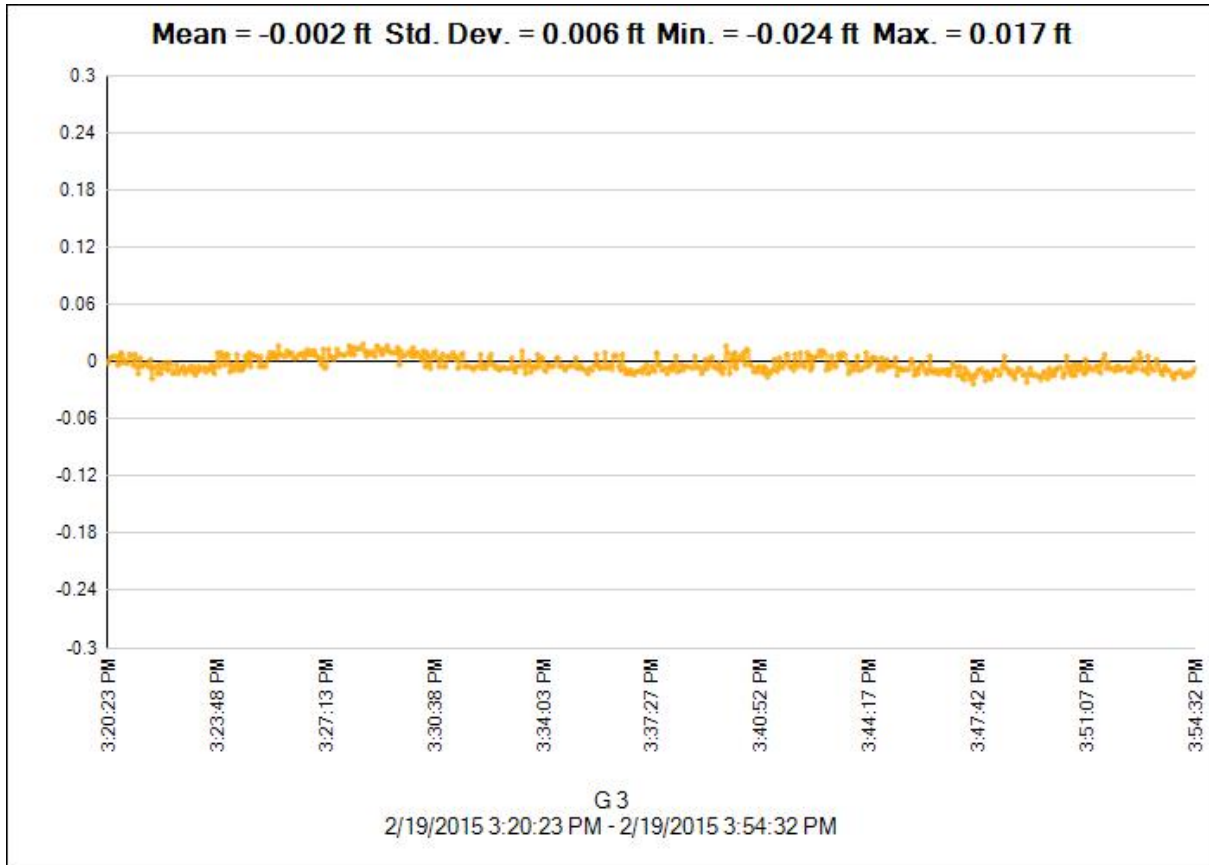
Occupations

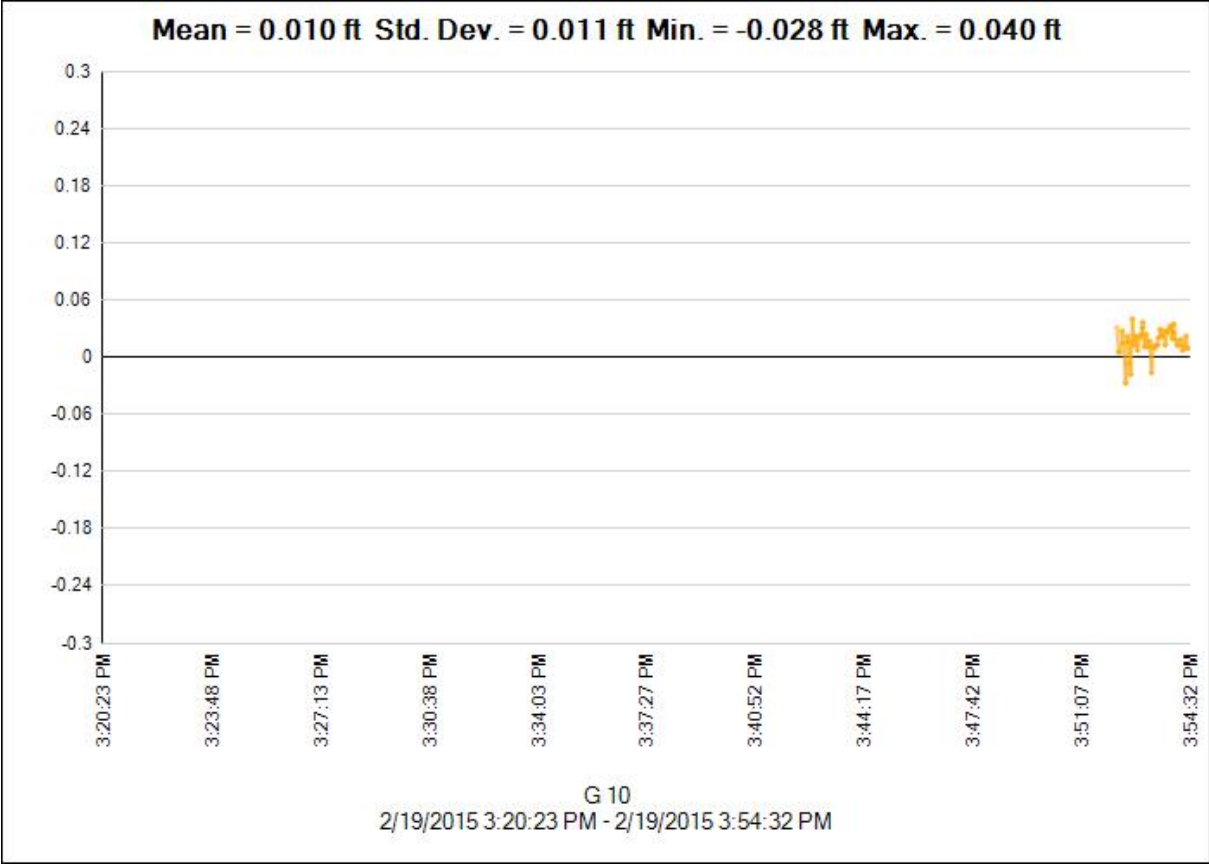
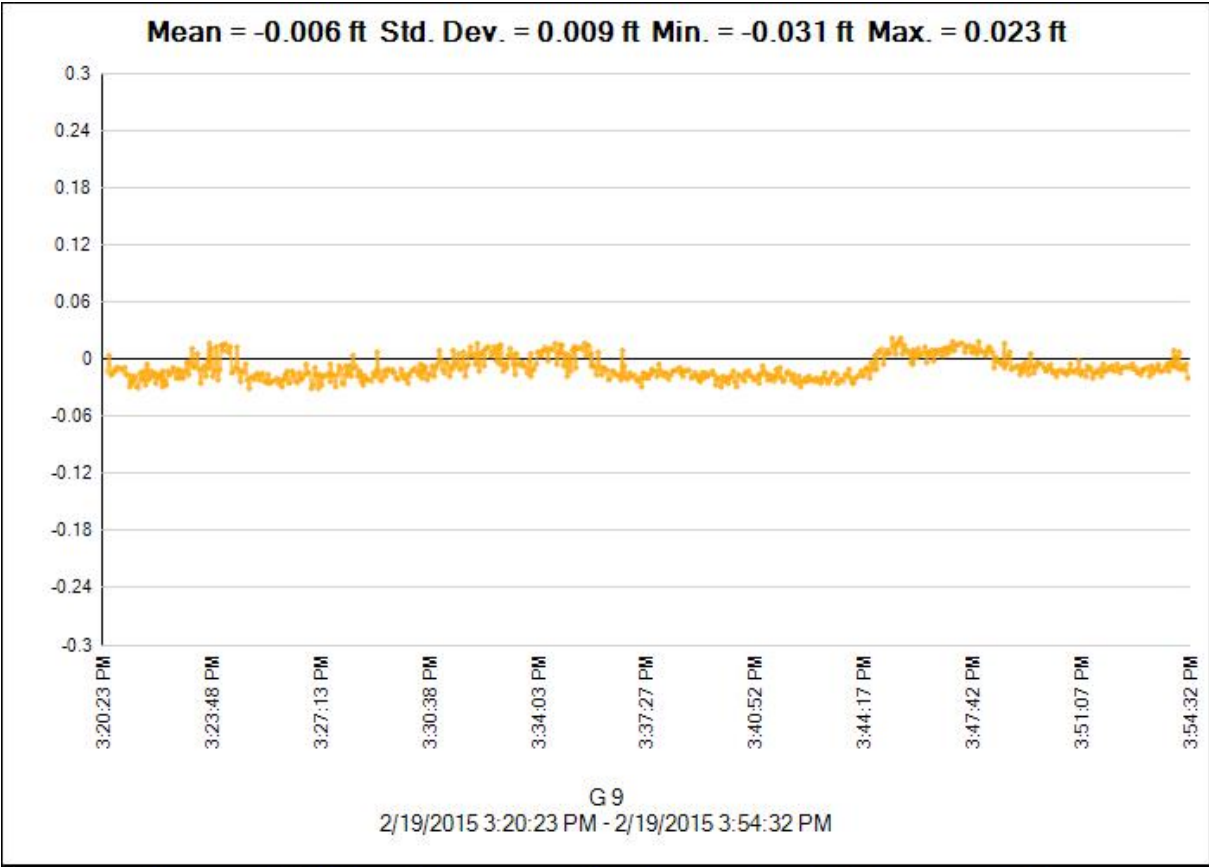
	From	To
Point ID:	TUS_5	CON131
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\29250500.t01	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840504.t01
Receiver type:	5700	5700
Receiver serial number:	0440102925	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	-----	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

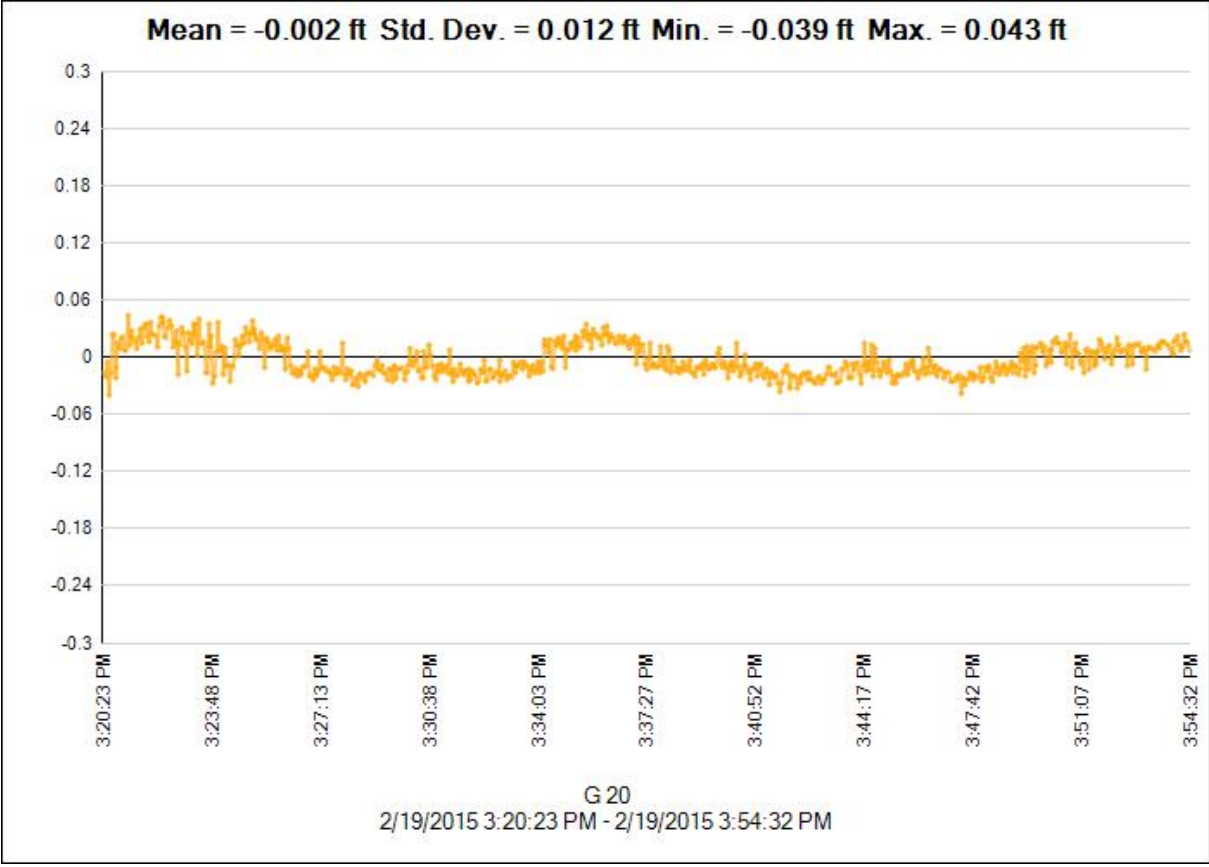
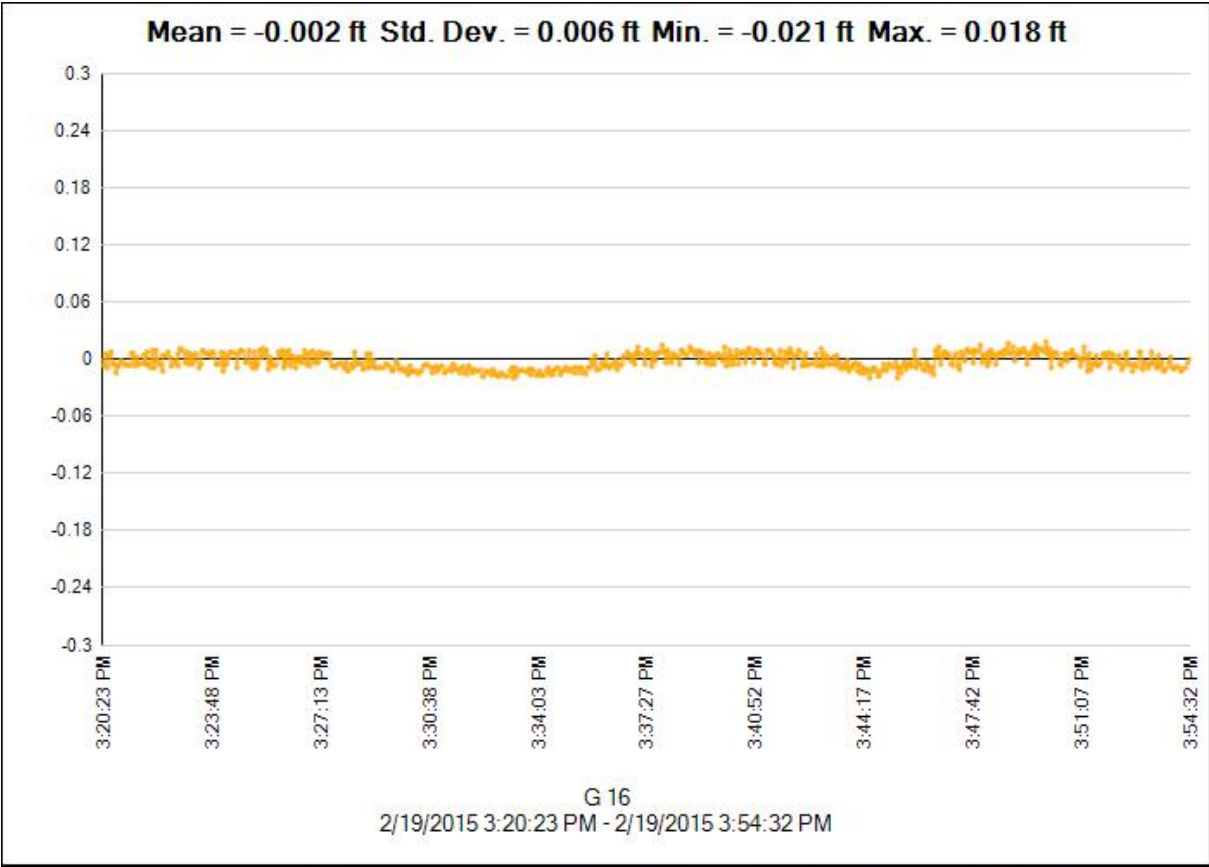
Tracking Summary

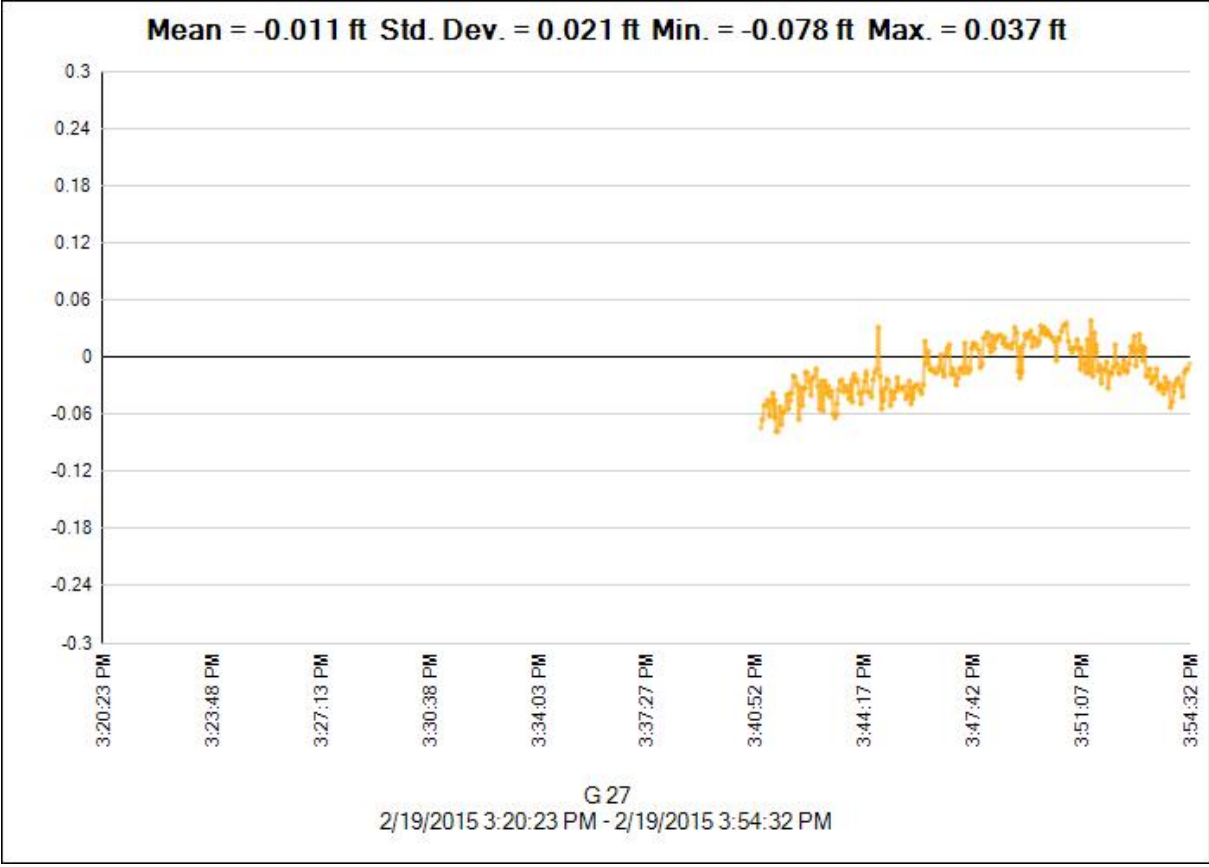
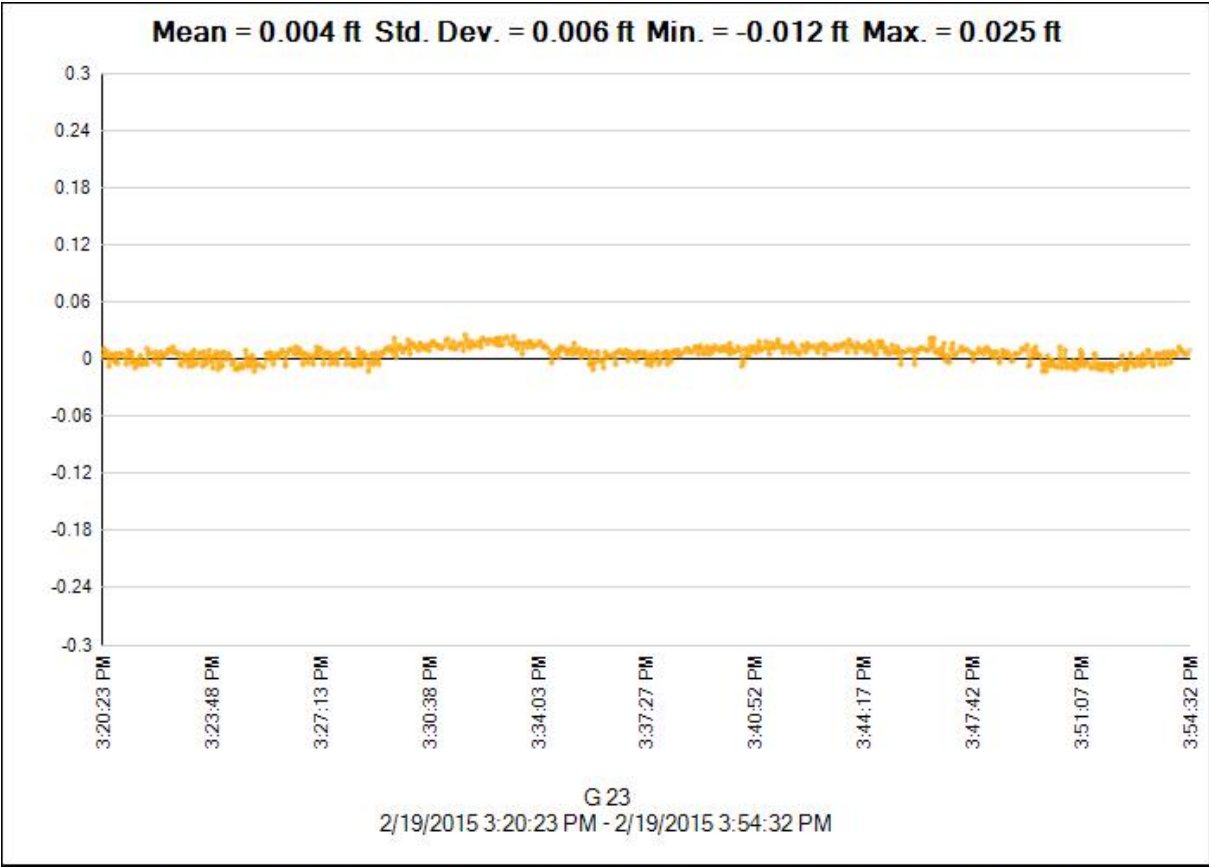
SV	2/19/2015 3:20:22 PM	Duration: 00:34:09	Major interval: 00:01:00	2/19/2015 3:54:31 PM
G 3	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 16	L1 L2			
G 19	L1 L2			
G 20	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

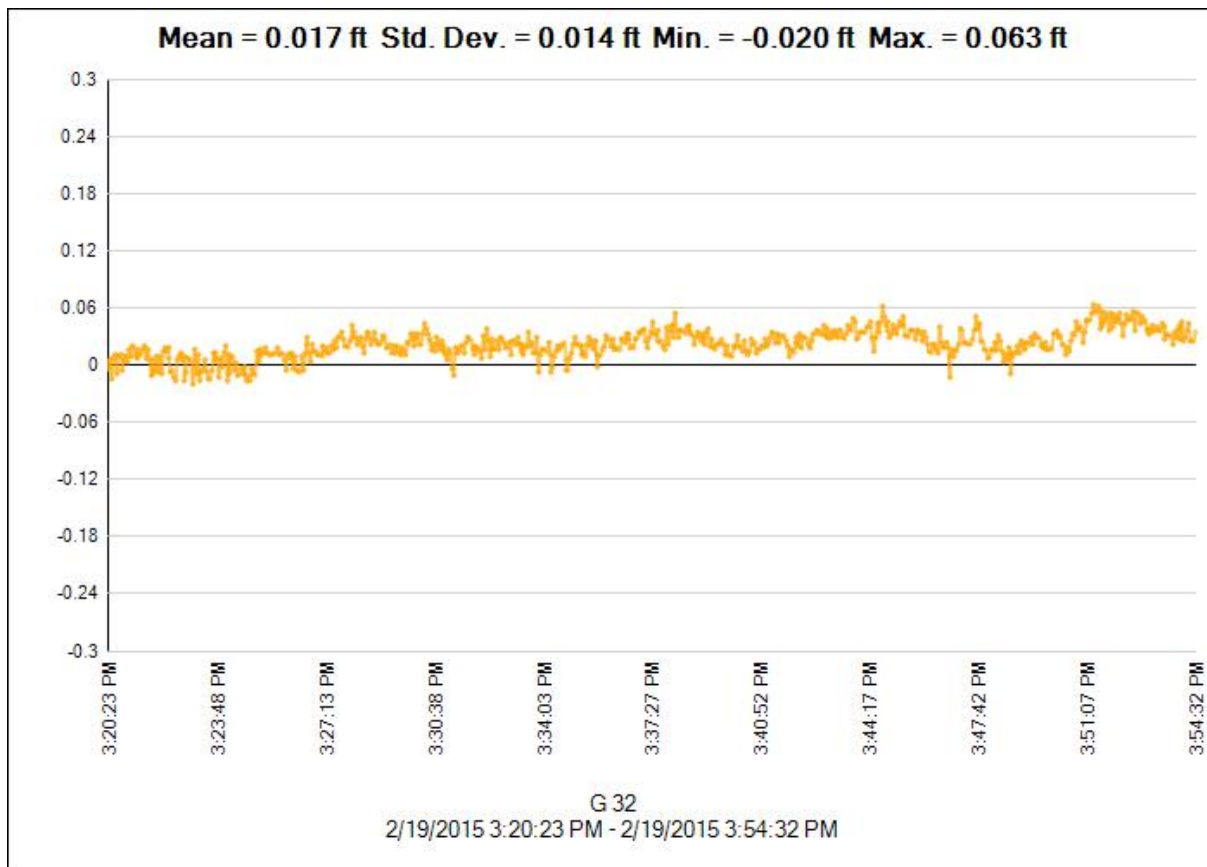
Residuals













Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

TUS_4 - CON121 (1:10:58 PM-1:43:34 PM) (S6)

Baseline observation: TUS_4 --- CON121 (B6)
 Processed: 3/11/2015 8:53:40 AM
 Solution type: Fixed
 Frequency used: Dual Frequency (L1, L2)
 Horizontal precision: 0.022 ft
 Vertical precision: 0.039 ft
 RMS: 0.005 ft
 Maximum PDOP: 2.722
 Ephemeris used: Broadcast
 Antenna model: NGS Absolute
 Processing start time: 2/22/2015 1:11:08 PM (Local: UTC-7hr)
 Processing stop time: 2/22/2015 1:43:23 PM (Local: UTC-7hr)
 Processing duration: 00:32:15
 Processing interval: 1 second

Vector Components (Mark to Mark)

From: TUS_4					
Grid		Local		Global	
Easting	1073400.564 ft	Latitude	N31°49'26.56898"	Latitude	N31°49'26.56898"
Northing	301798.149 ft	Longitude	W110°42'51.92491"	Longitude	W110°42'51.92491"
Elevation	5013.407 ft	Height	4920.337 ft	Height	4920.337 ft

To: CON121					
Grid		Local		Global	
Easting	976253.500 ft	Latitude	N31°47'20.21006"	Latitude	N31°47'20.21005"
Northing	288093.750 ft	Longitude	W111°01'39.11667"	Longitude	W111°01'39.11667"
Elevation	3029.935 ft	Height	2932.835 ft	Height	2932.835 ft

Vector					
ΔEasting	-97147.064 ft	NS Fwd Azimuth	262°36'15"	ΔX	-92703.051 ft
ΔNorthing	-13704.399 ft	Ellipsoid Dist.	98106.798 ft	ΔY	29949.883 ft
ΔElevation	-1983.471 ft	ΔHeight	-1987.502 ft	ΔZ	-11901.033 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.009 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.012 ft
$\sigma \Delta$ Northing	0.009 ft	σ Ellipsoid Dist.	0.009 ft	$\sigma \Delta$ Y	0.017 ft
$\sigma \Delta$ Elevation	0.020 ft	$\sigma \Delta$ Height	0.020 ft	$\sigma \Delta$ Z	0.011 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000136131		
Y	0.0000118135	0.0000260223	
Z	-0.0000071430	-0.0000094054	0.0000118619

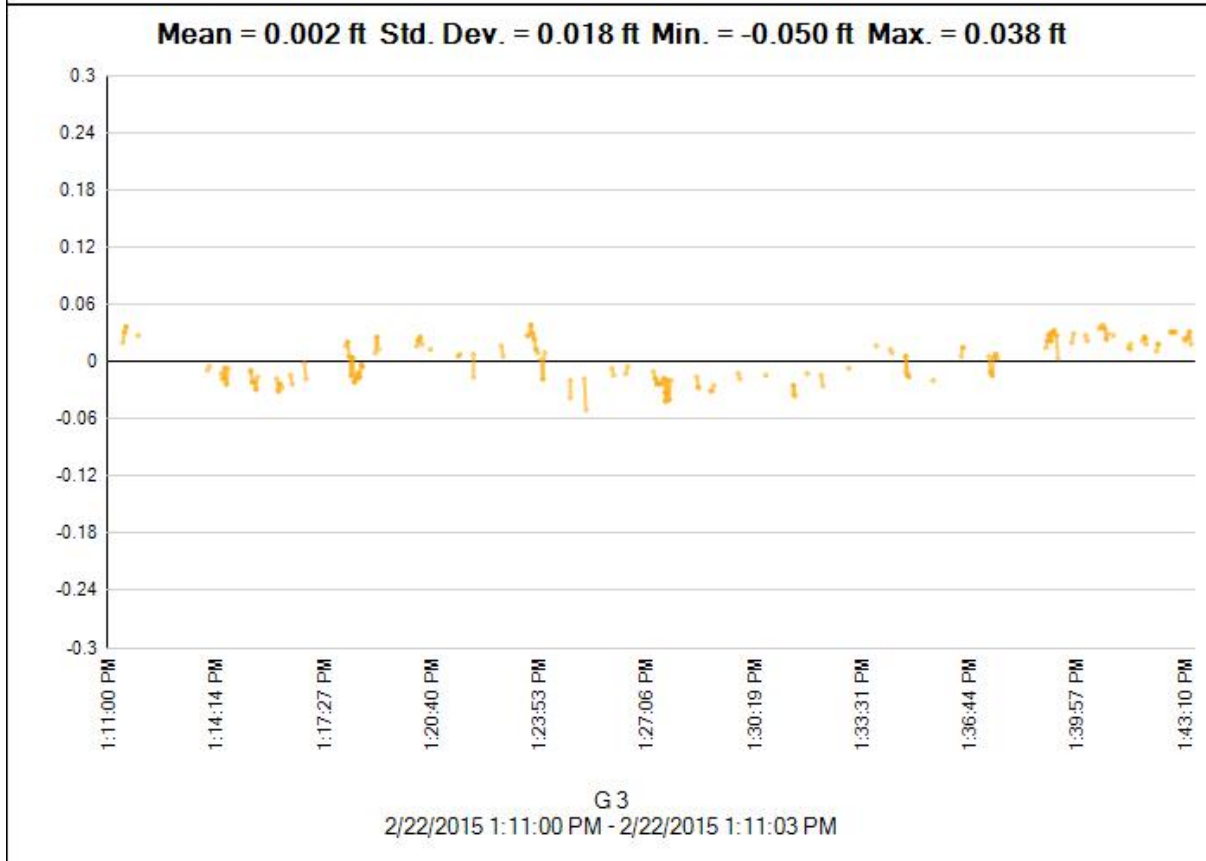
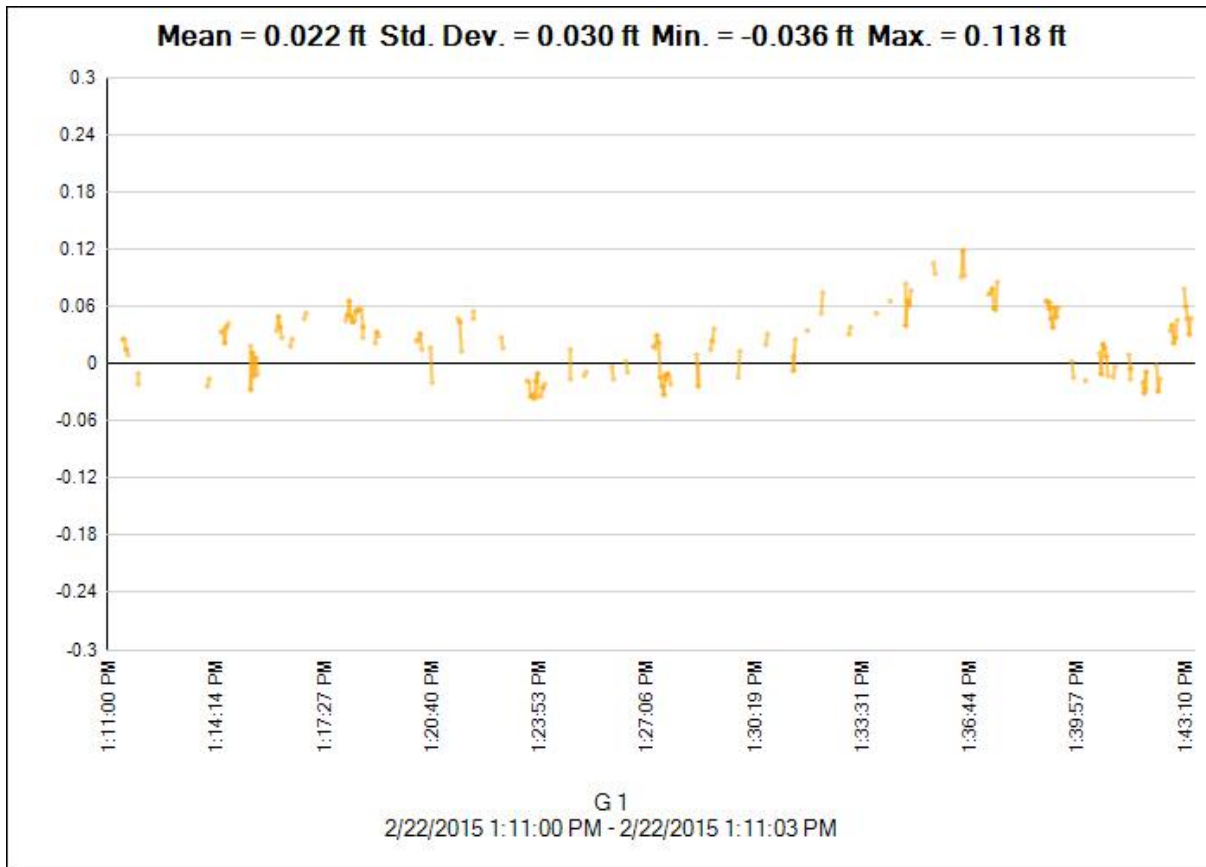
Occupations

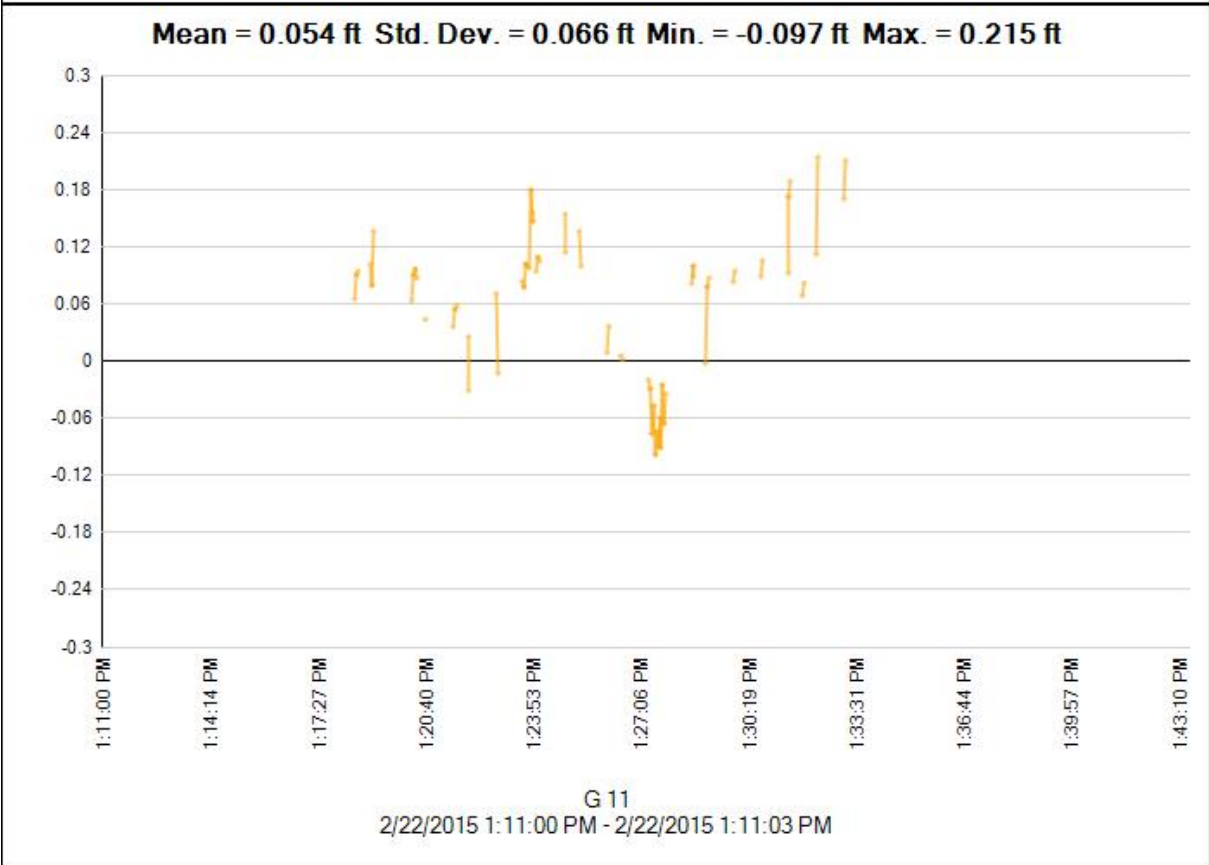
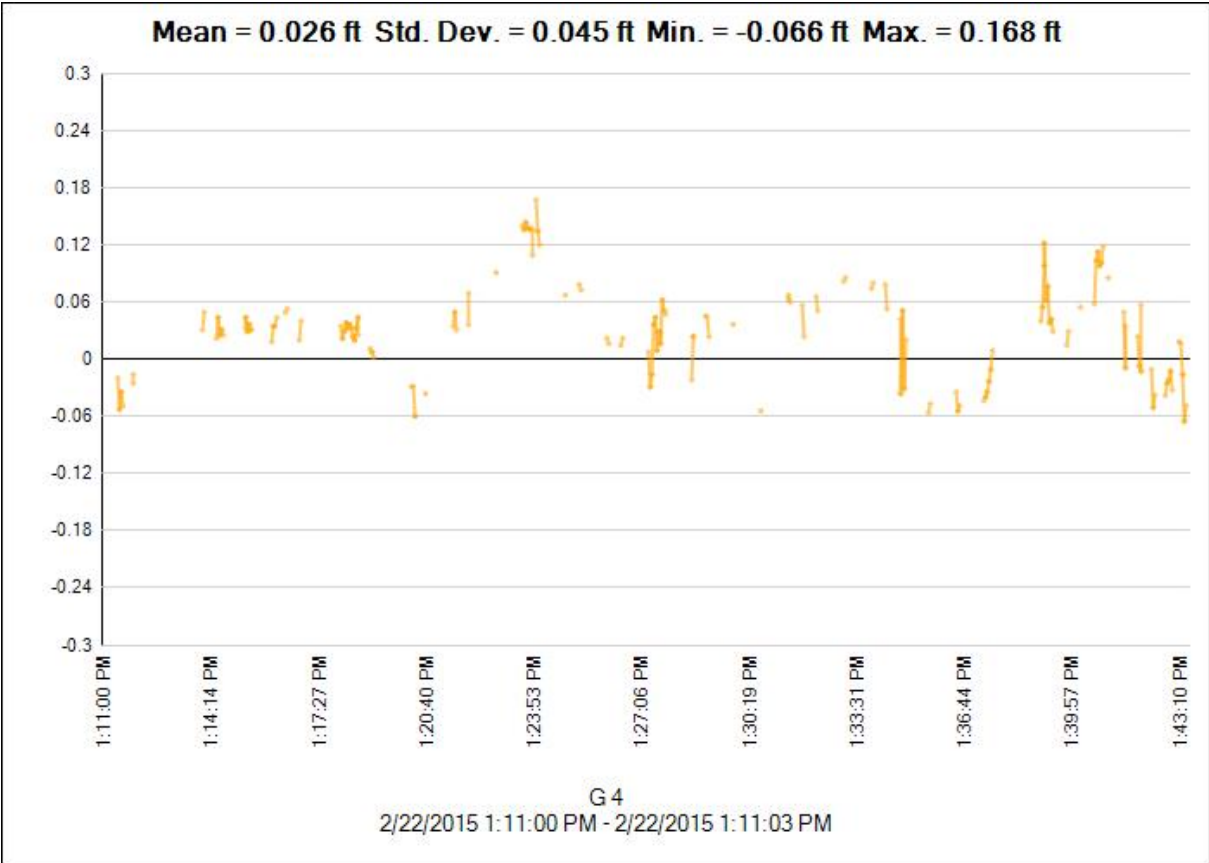
	From	To
Point ID:	TUS_4	CON121
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520530.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840530.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

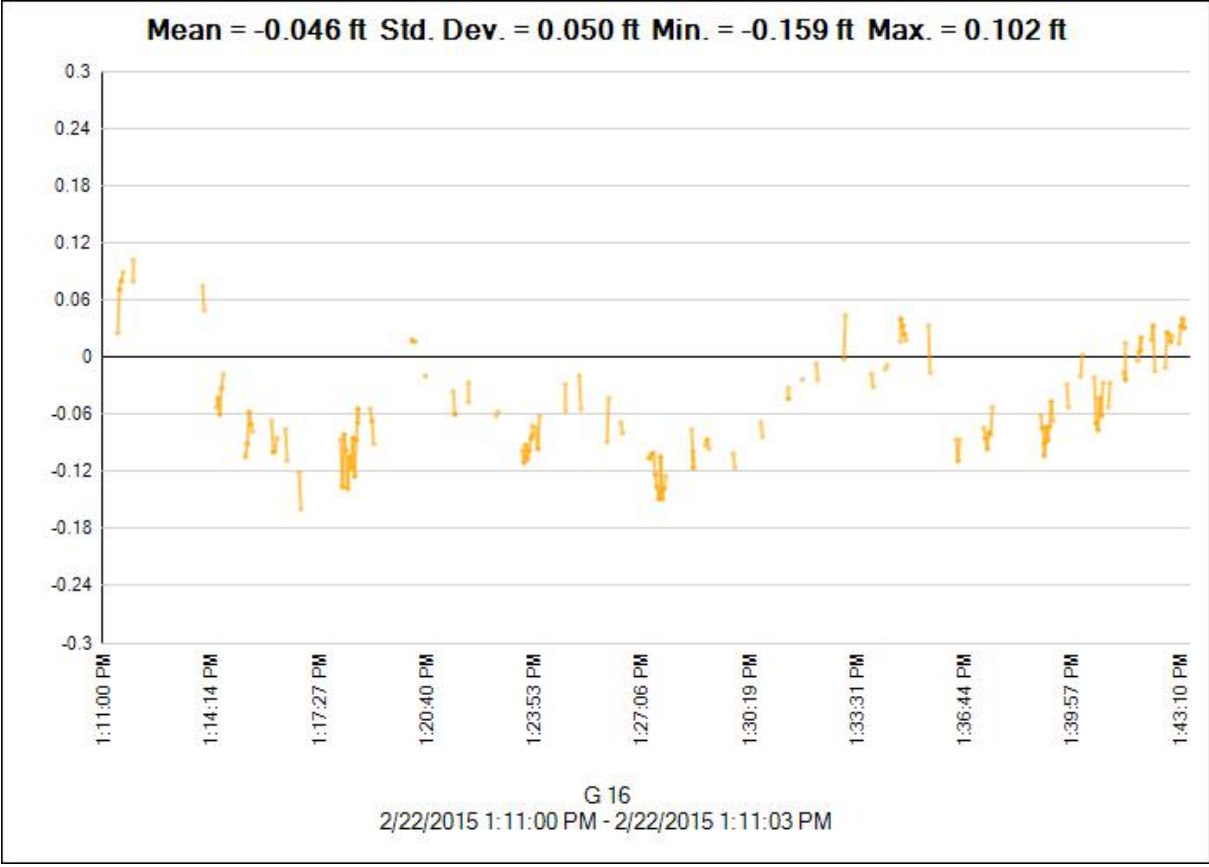
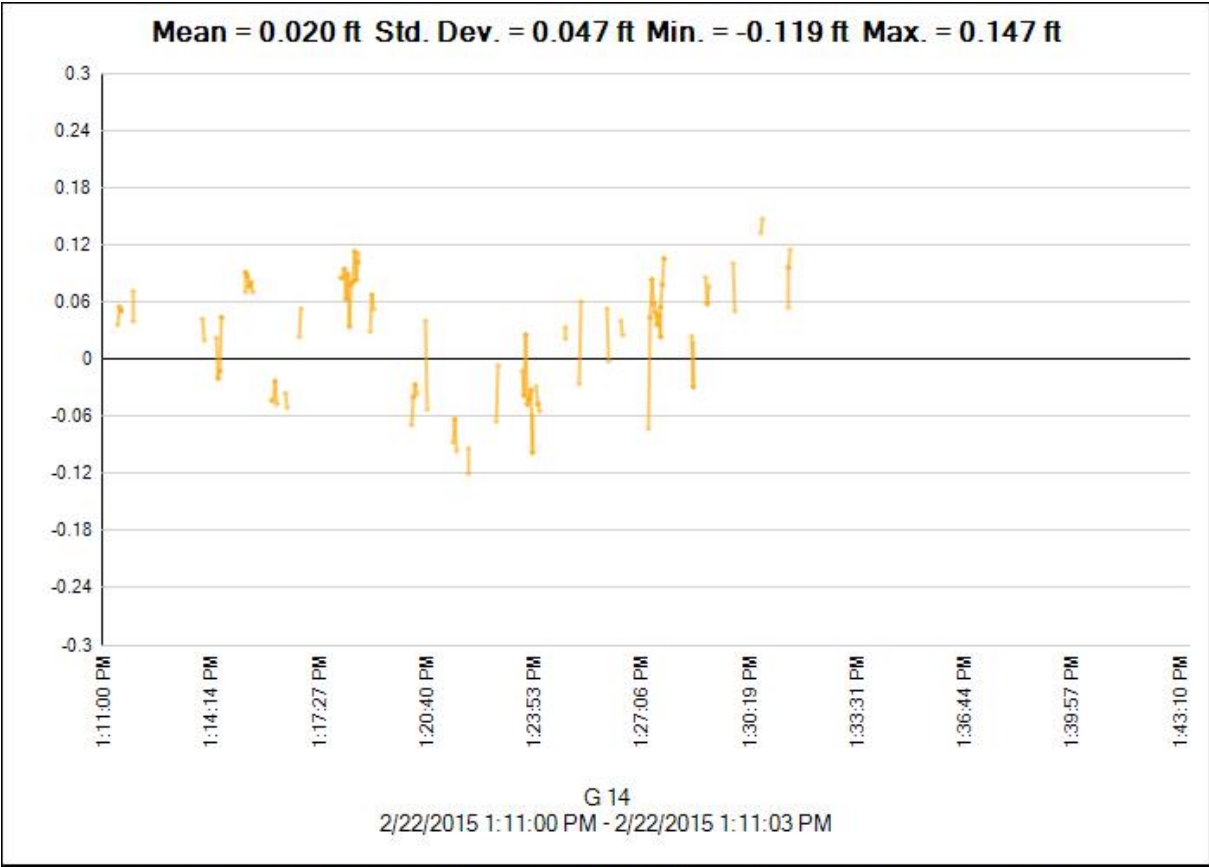
Tracking Summary

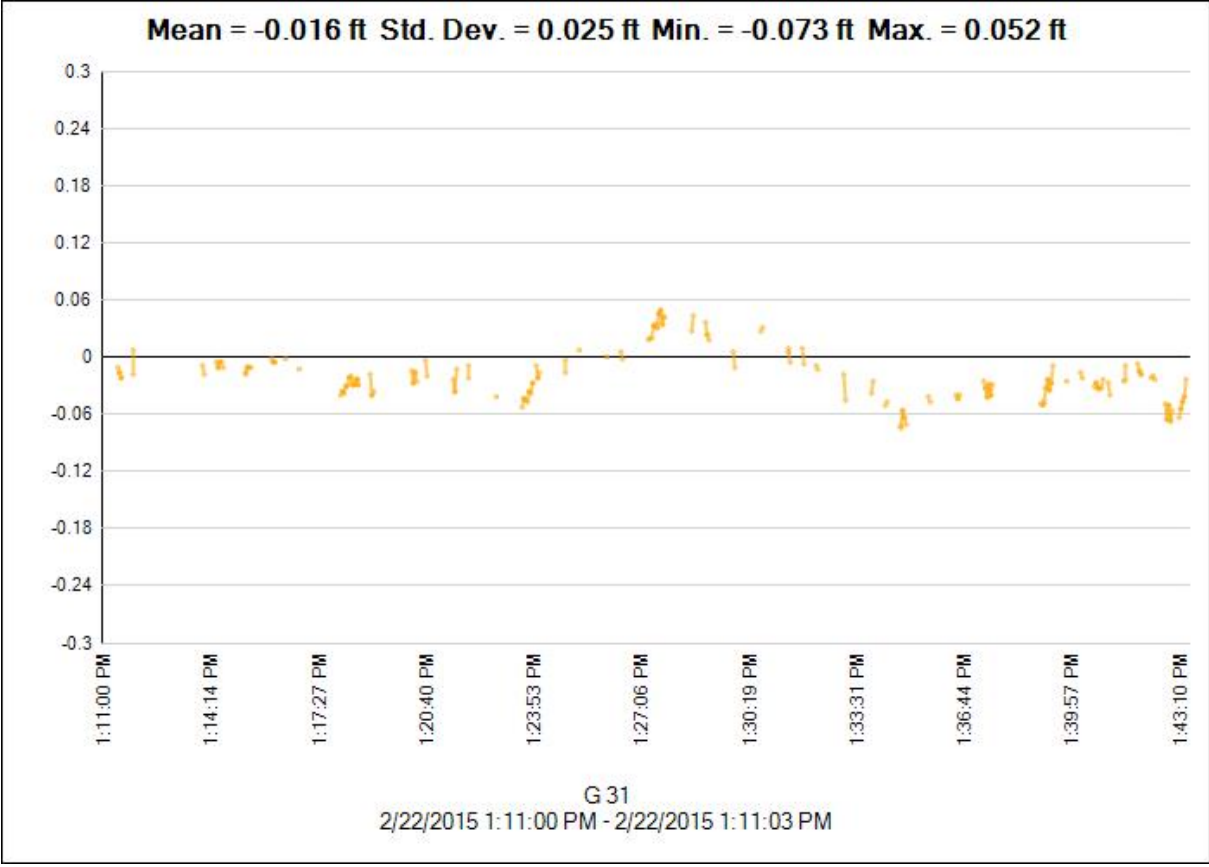
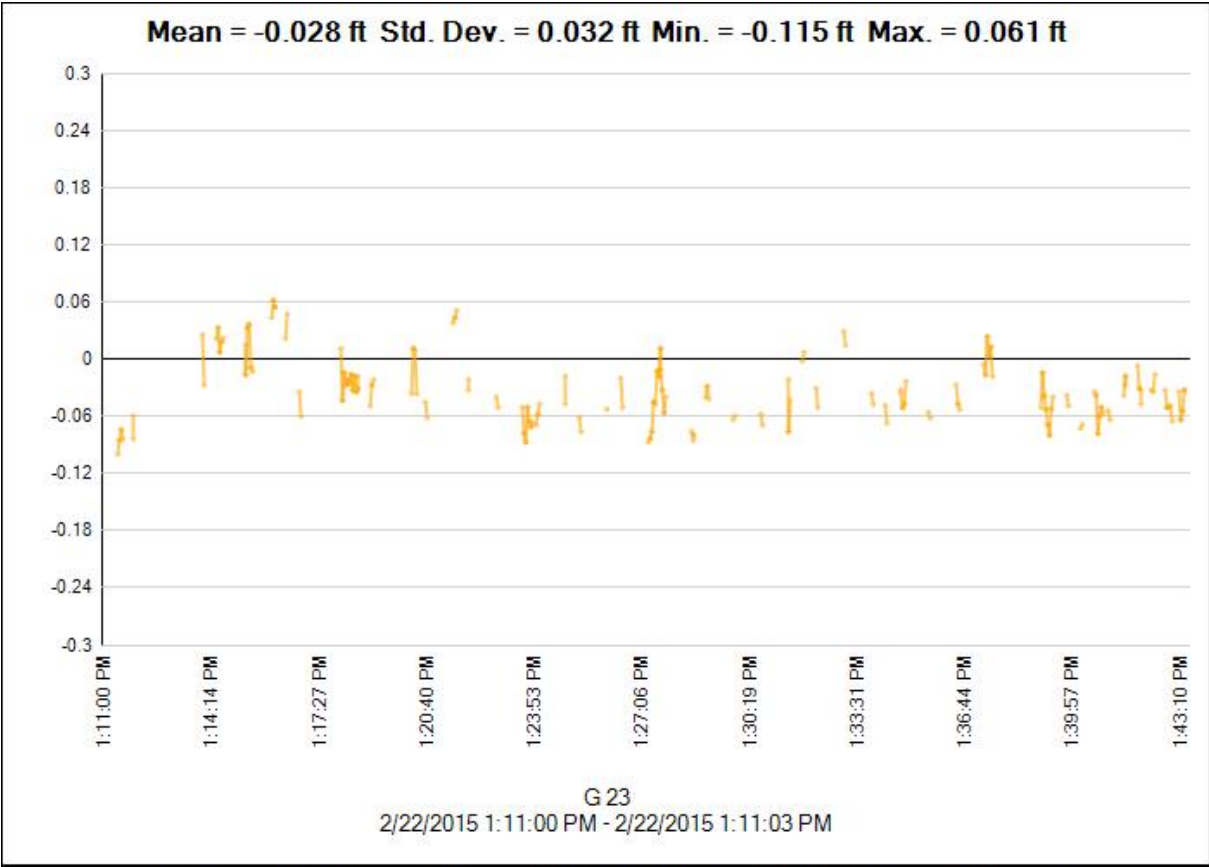
SV	2/22/2015 1:10:58 PM	Duration: 00:32:36	Major interval: 00:01:00	2/22/2015 1:43:34 PM
G 1				
G 3				
G 4				
G 11				
G 14				
G 16				
G 22				
G 23				
G 25				
G 31				
G 32				

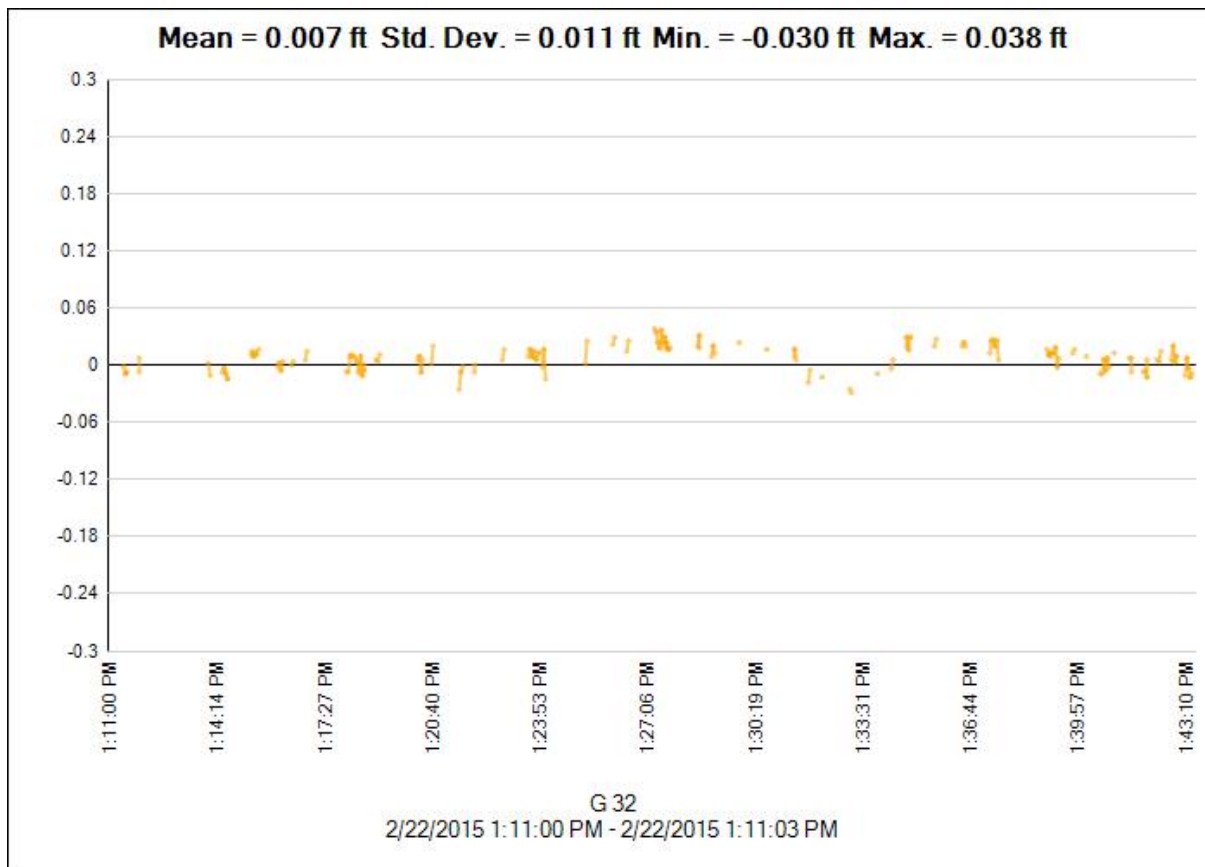
Residuals













Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

TUS_4 - CON114 (2:13:30 PM-2:47:19 PM) (S7)

Baseline observation: TUS_4 --- CON114 (B7)
 Processed: 3/11/2015 8:53:47 AM
 Solution type: Fixed
 Frequency used: Dual Frequency (L1, L2)
 Horizontal precision: 0.032 ft
 Vertical precision: 0.044 ft
 RMS: 0.005 ft
 Maximum PDOP: 2.823
 Ephemeris used: Broadcast
 Antenna model: NGS Absolute
 Processing start time: 2/22/2015 2:13:30 PM (Local: UTC-7hr)
 Processing stop time: 2/22/2015 2:47:19 PM (Local: UTC-7hr)
 Processing duration: 00:33:49
 Processing interval: 1 second

Vector Components (Mark to Mark)

From: TUS_4					
Grid		Local		Global	
Easting	1073400.564 ft	Latitude	N31°49'26.56898"	Latitude	N31°49'26.56898"
Northing	301798.149 ft	Longitude	W110°42'51.92491"	Longitude	W110°42'51.92491"
Elevation	5013.407 ft	Height	4920.337 ft	Height	4920.337 ft

To: CON114					
Grid		Local		Global	
Easting	953410.786 ft	Latitude	N31°54'08.31238"	Latitude	N31°54'08.31238"
Northing	329155.009 ft	Longitude	W111°06'00.18798"	Longitude	W111°06'00.18798"
Elevation	3770.428 ft	Height	3673.576 ft	Height	3673.576 ft

Vector					
ΔEasting	-119989.778 ft	NS Fwd Azimuth	283°28'41"	ΔX	-106125.873 ft
ΔNorthing	27356.859 ft	Ellipsoid Dist.	123067.153 ft	ΔY	57766.716 ft
ΔElevation	-1242.978 ft	ΔHeight	-1246.761 ft	ΔZ	23527.792 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.011 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.012 ft
$\sigma \Delta$ Northing	0.011 ft	σ Ellipsoid Dist.	0.010 ft	$\sigma \Delta$ Y	0.017 ft
$\sigma \Delta$ Elevation	0.022 ft	$\sigma \Delta$ Height	0.022 ft	$\sigma \Delta$ Z	0.017 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000129880		
Y	0.0000059923	0.0000279024	
Z	-0.0000003113	-0.0000200664	0.0000261274

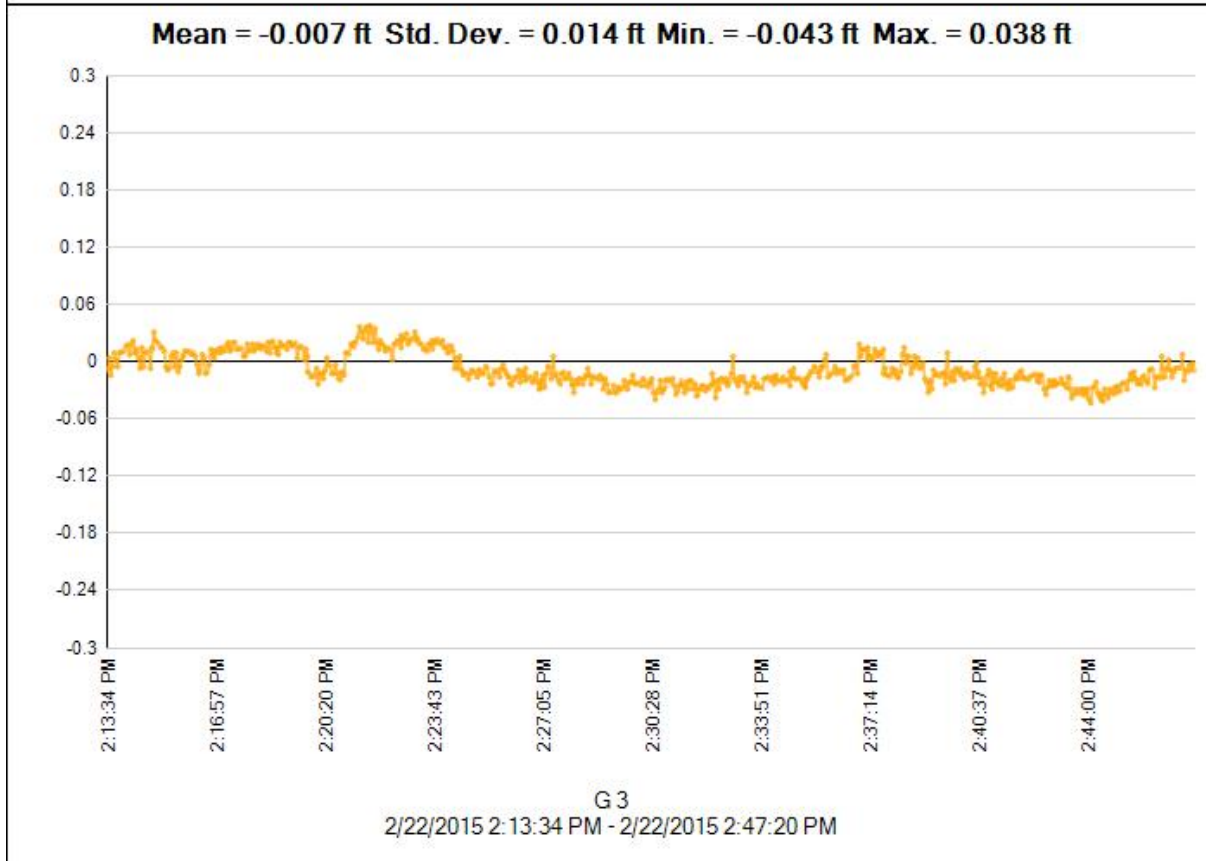
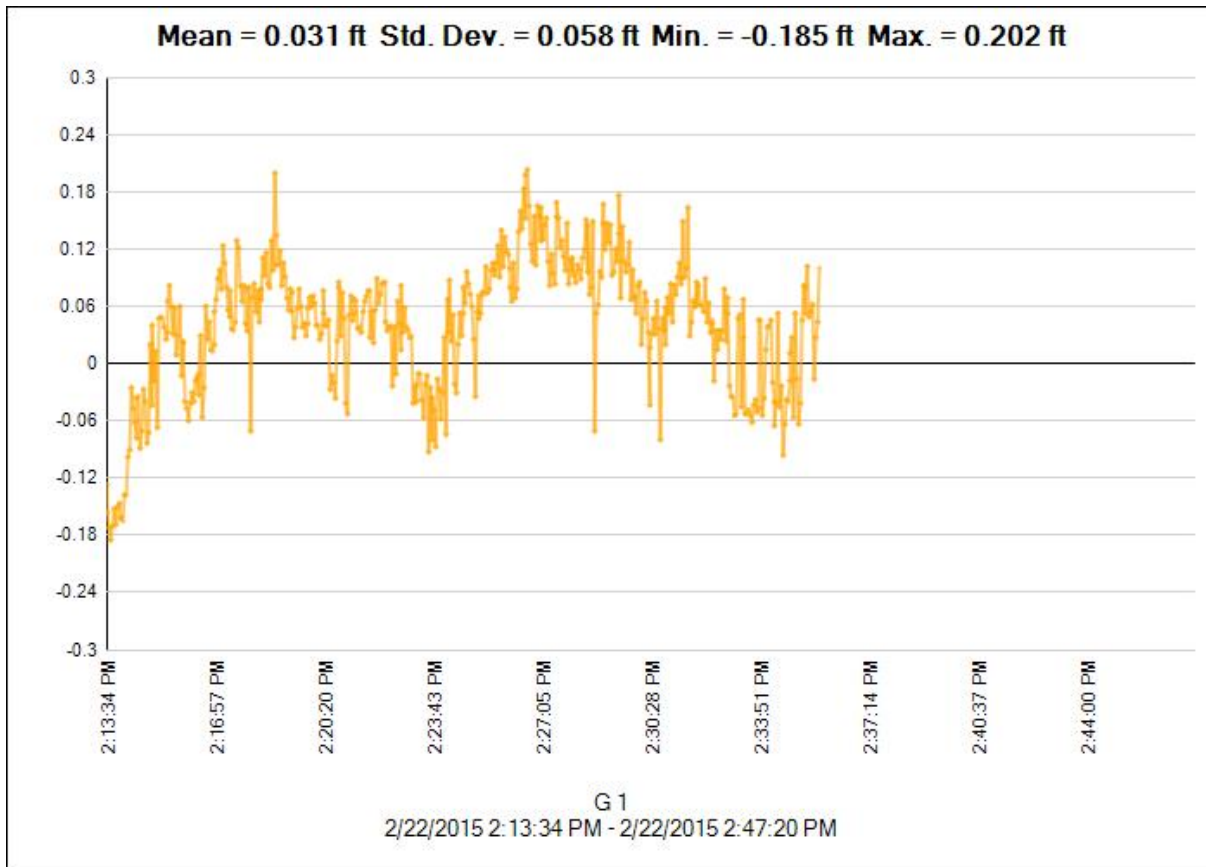
Occupations

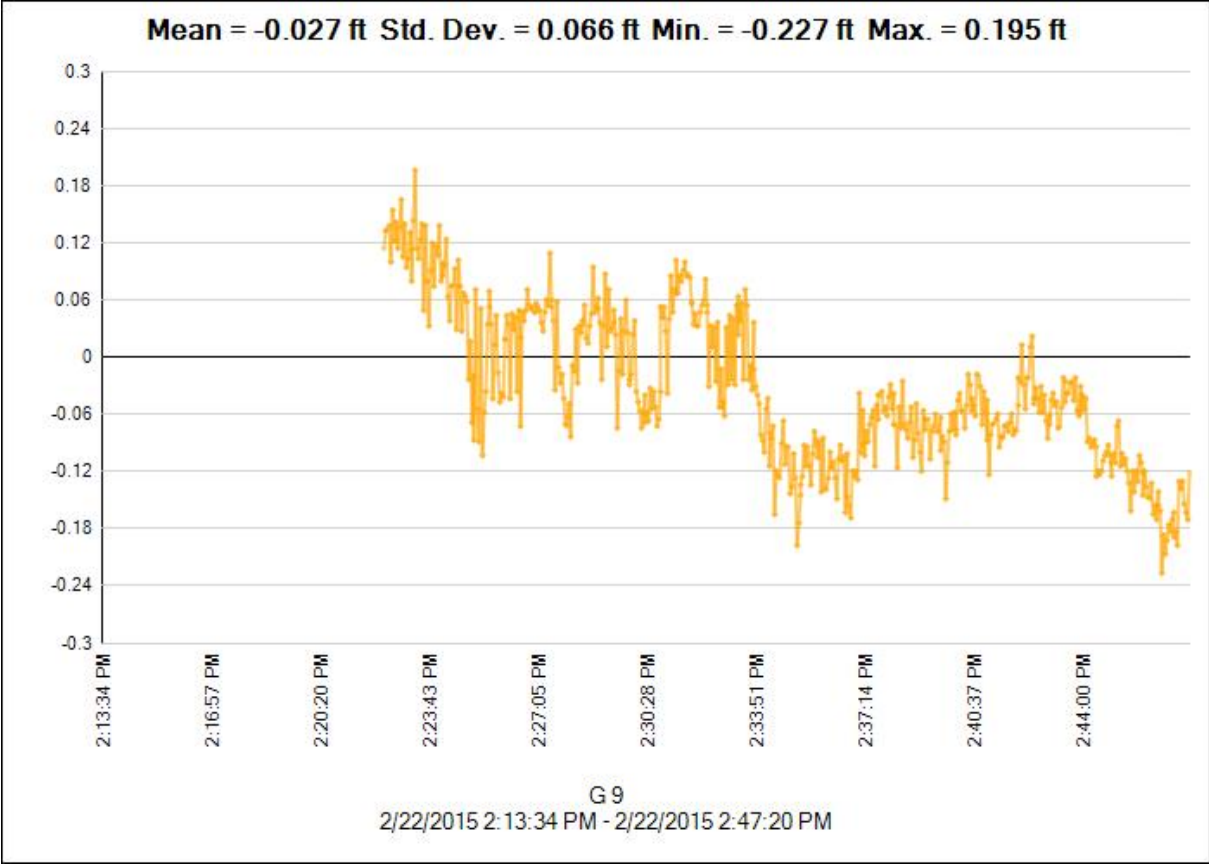
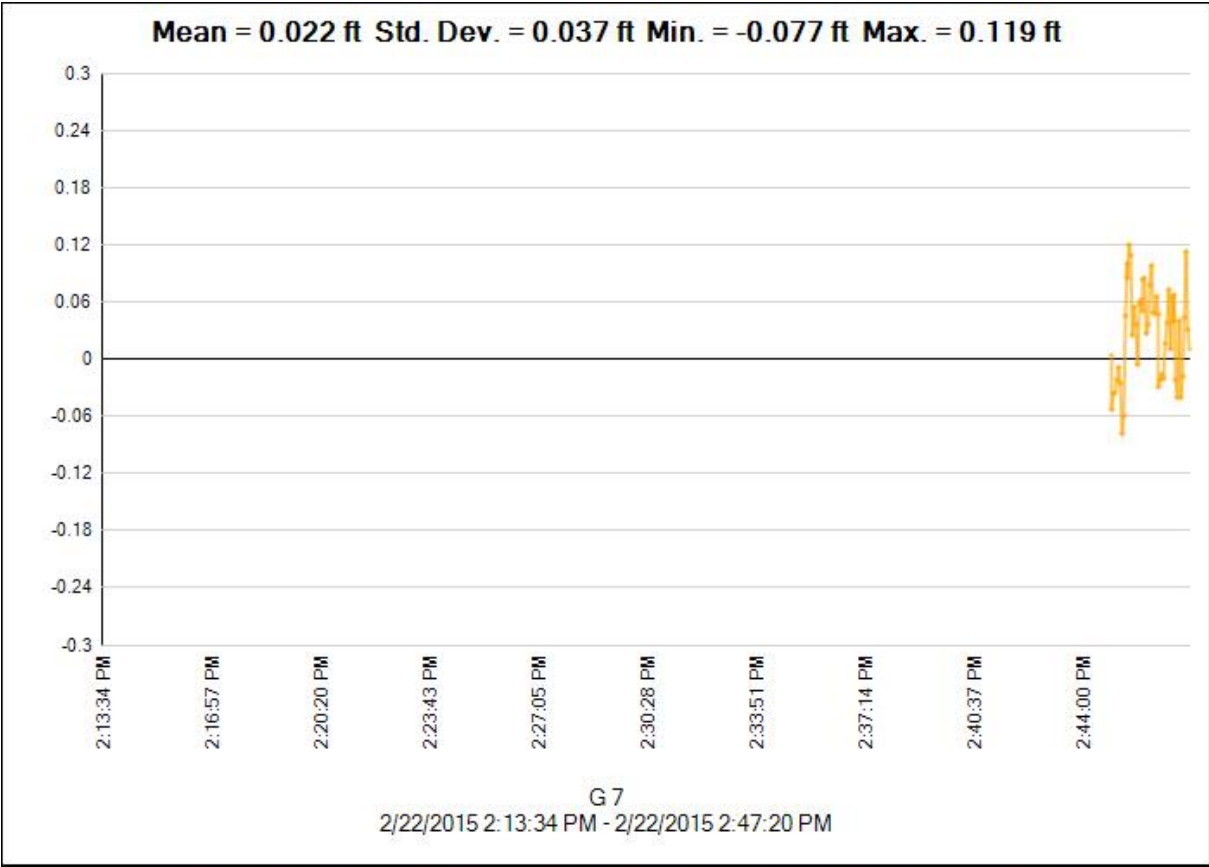
	From	To
Point ID:	TUS_4	CON114
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520530.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840531.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

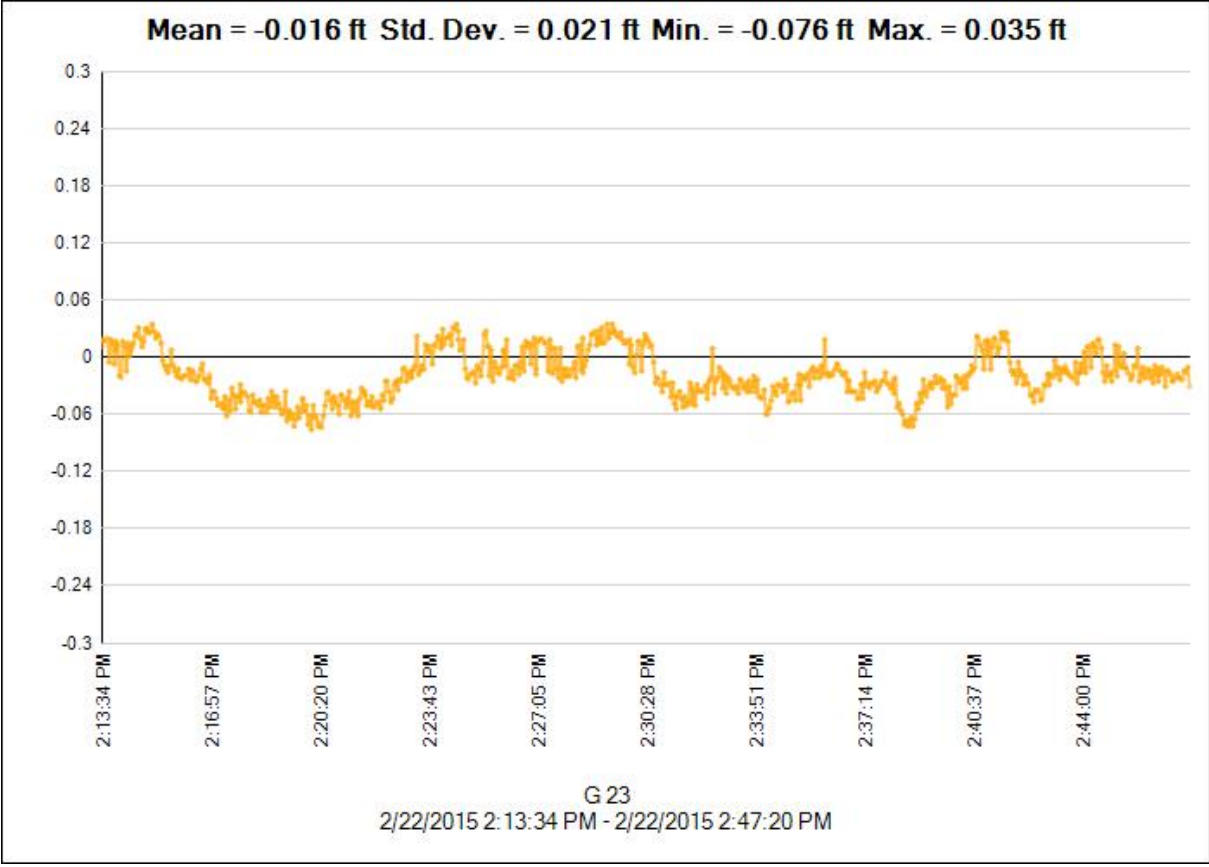
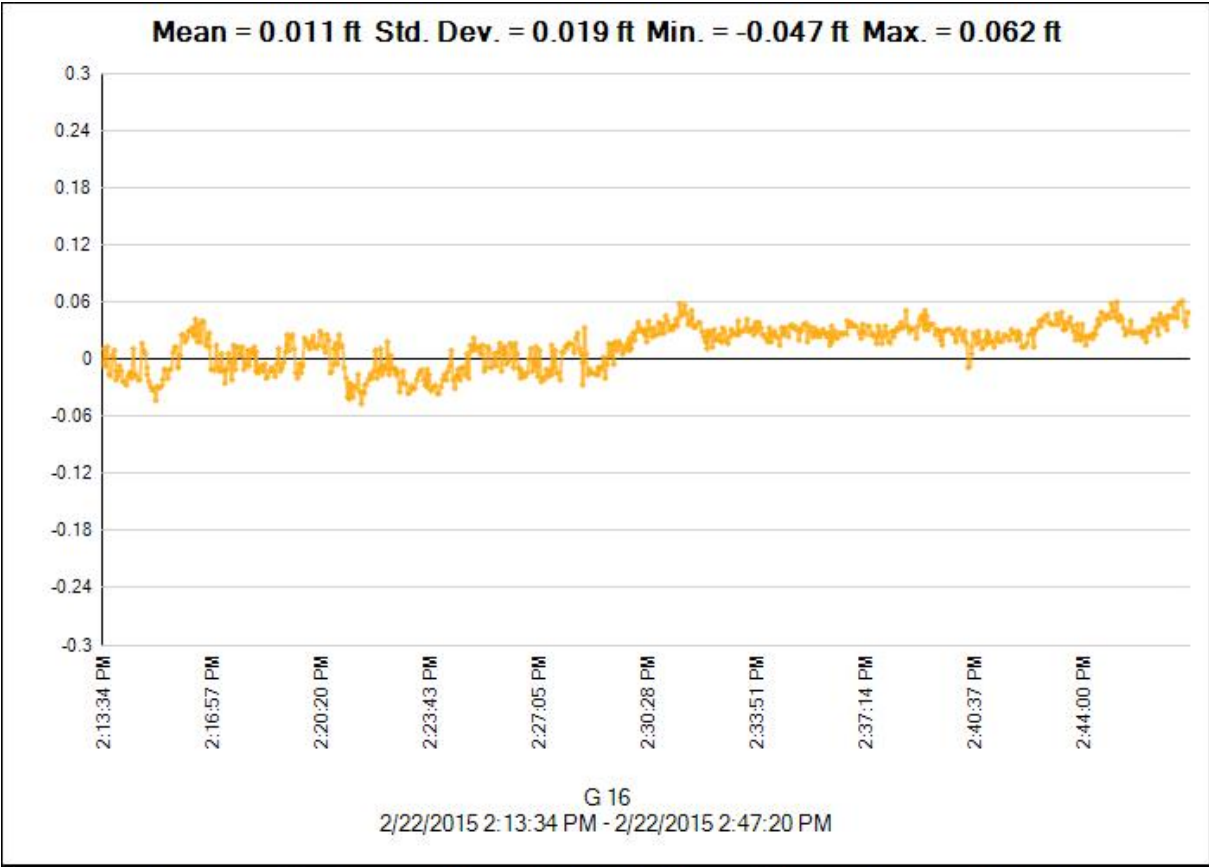
Tracking Summary

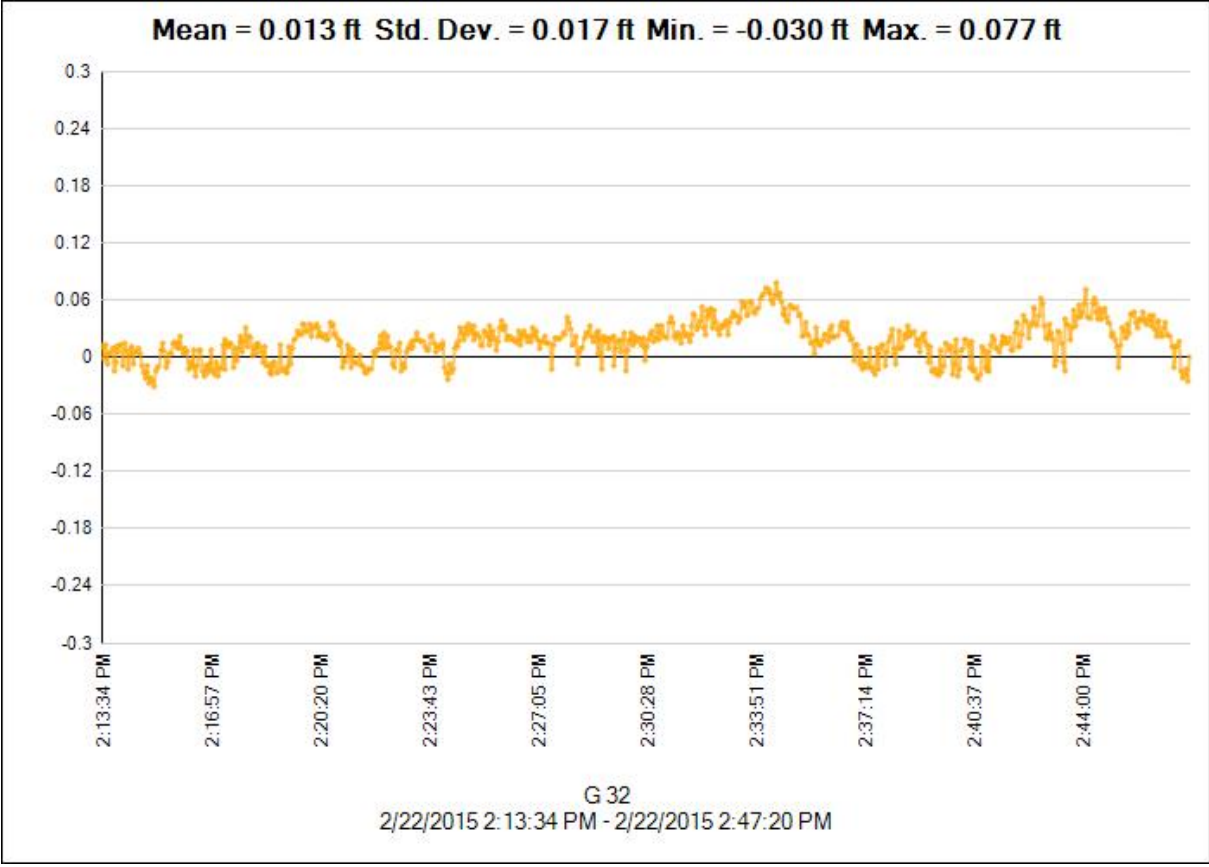
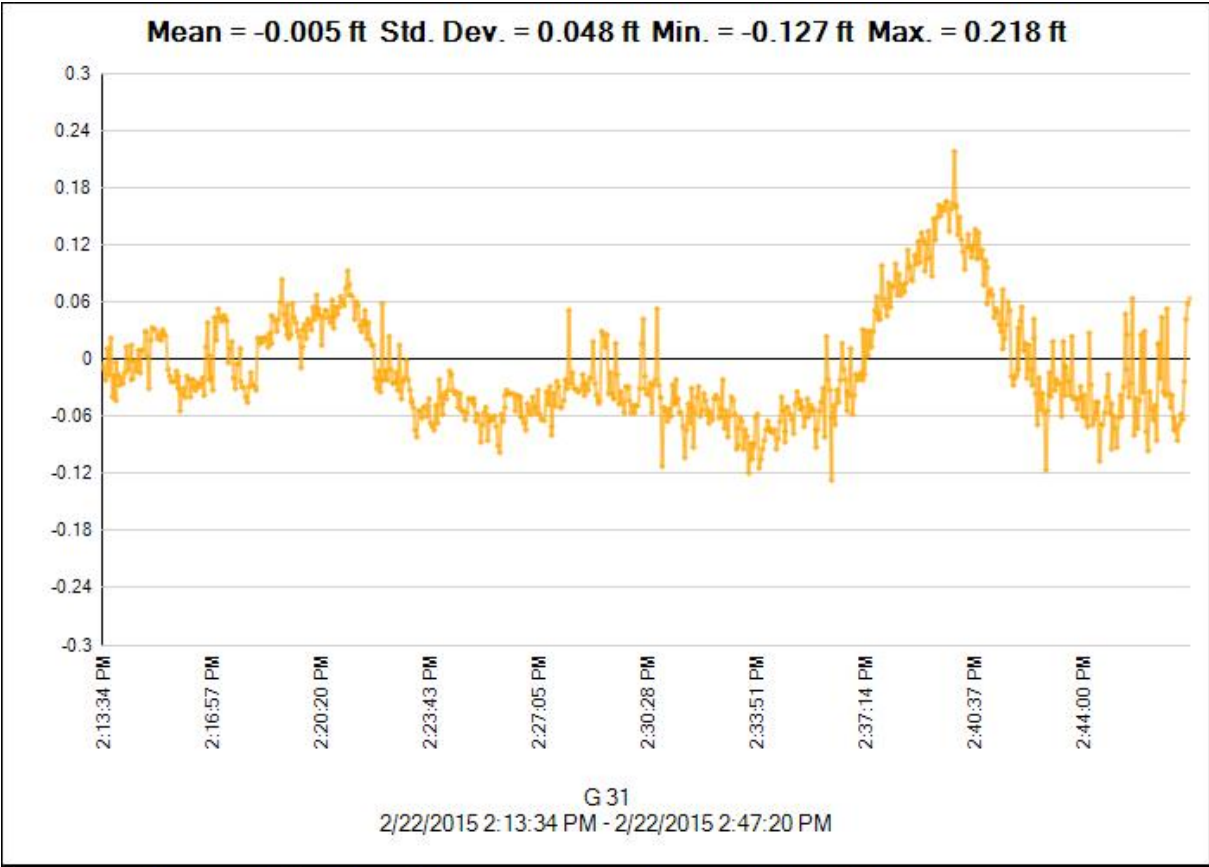
SV	2/22/2015 2:13:30 PM	Duration: 00:33:49	Major interval: 00:01:00	2/22/2015 2:47:19 PM
G 1	L1 L2			
G 3	L1 L2			
G 4	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 16	L1 L2			
G 20	L1 L2			
G 23	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

Residuals











Processing style

Elevation mask: 14.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

TUS_4 - CON126 (3:17:47 PM-3:49:45 PM) (S8)

Baseline observation: TUS_4 --- CON126 (B8)
Processed: 3/11/2015 8:57:57 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.033 ft
Vertical precision: 0.064 ft
RMS: 0.003 ft
Maximum PDOP: 5.949
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/22/2015 3:18:29 PM (Local: UTC-7hr)
Processing stop time: 2/22/2015 3:49:07 PM (Local: UTC-7hr)
Processing duration: 00:30:38
Processing interval: 1 second

Vector Components (Mark to Mark)

From:		TUS_4			
Grid		Local		Global	
Easting	1073400.564 ft	Latitude	N31°49'26.56898"	Latitude	N31°49'26.56898"
Northing	301798.149 ft	Longitude	W110°42'51.92491"	Longitude	W110°42'51.92491"
Elevation	5013.407 ft	Height	4920.337 ft	Height	4920.337 ft

To:		CON126			
Grid		Local		Global	
Easting	998976.262 ft	Latitude	N31°57'30.61141"	Latitude	N31°57'30.61141"
Northing	349973.278 ft	Longitude	W110°57'09.49406"	Longitude	W110°57'09.49406"
Elevation	2708.993 ft	Height	2612.082 ft	Height	2612.082 ft

Vector					
Δ Easting	-74424.302 ft	NS Fwd Azimuth	303°33'01"	Δ X	-59225.932 ft
Δ Northing	48175.128 ft	Ellipsoid Dist.	88652.966 ft	Δ Y	52289.175 ft
Δ Elevation	-2304.413 ft	Δ Height	-2308.255 ft	Δ Z	40319.061 ft

Standard Errors

Vector errors:					
σ Δ Easting	0.013 ft	σ NS fwd Azimuth	0°00'00"	σ Δ X	0.021 ft
σ Δ Northing	0.009 ft	σ Ellipsoid Dist.	0.012 ft	σ Δ Y	0.024 ft
σ Δ Elevation	0.033 ft	σ Δ Height	0.033 ft	σ Δ Z	0.018 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000414353		
Y	0.0000391080	0.0000520130	
Z	-0.0000264540	-0.0000316388	0.0000298514

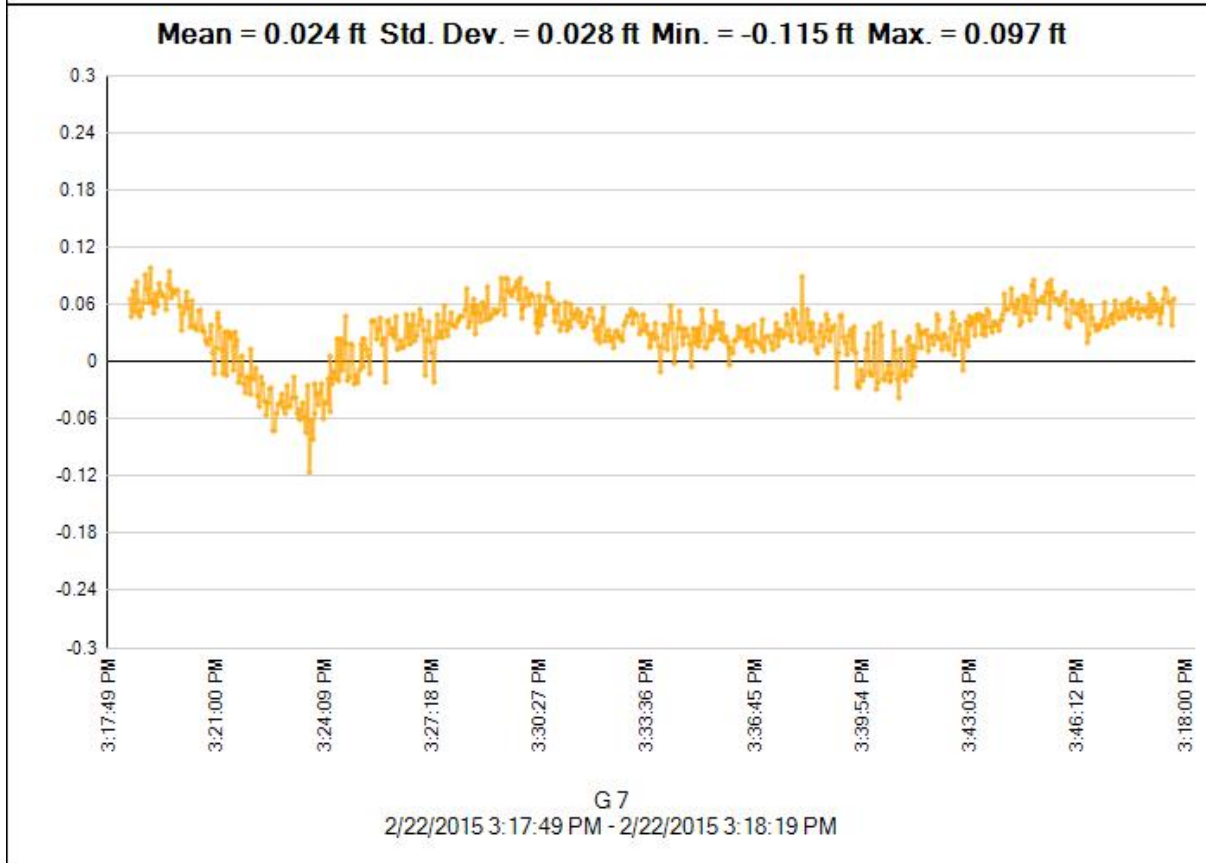
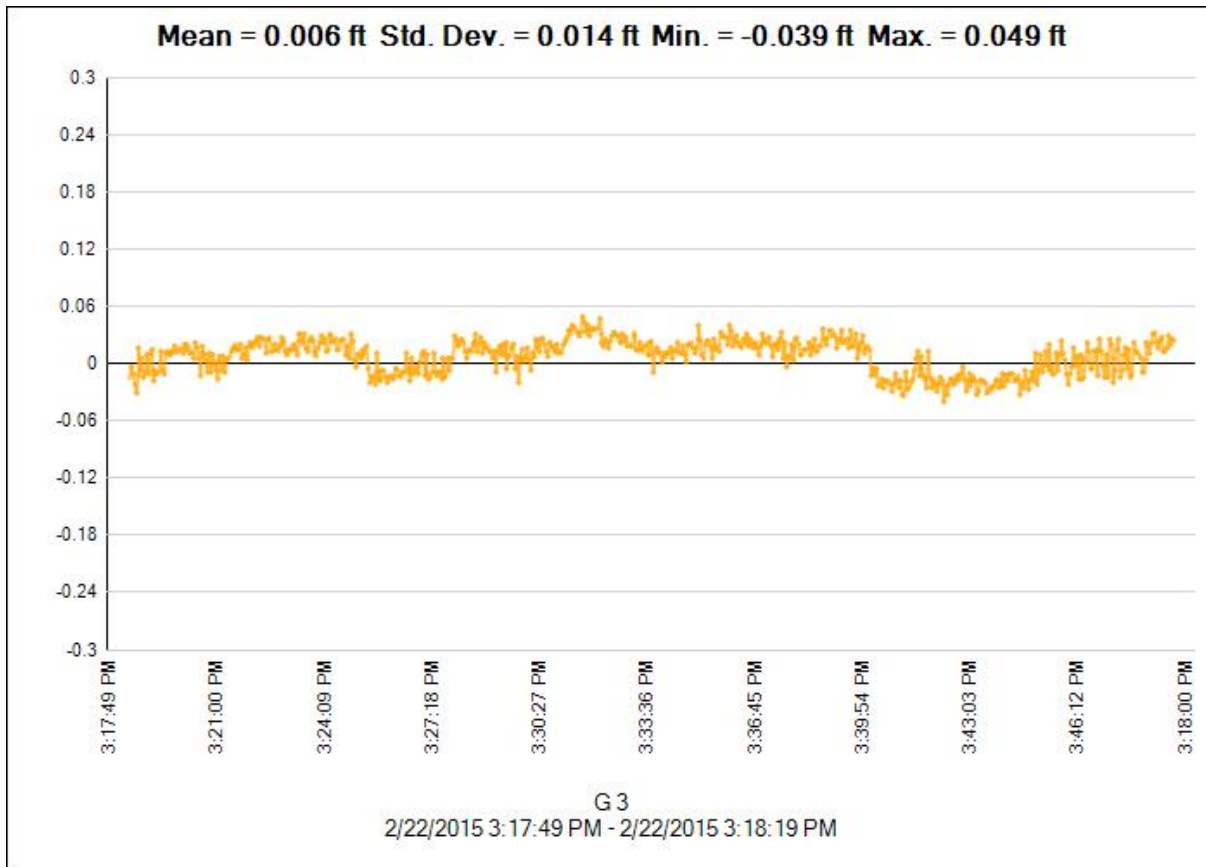
Occupations

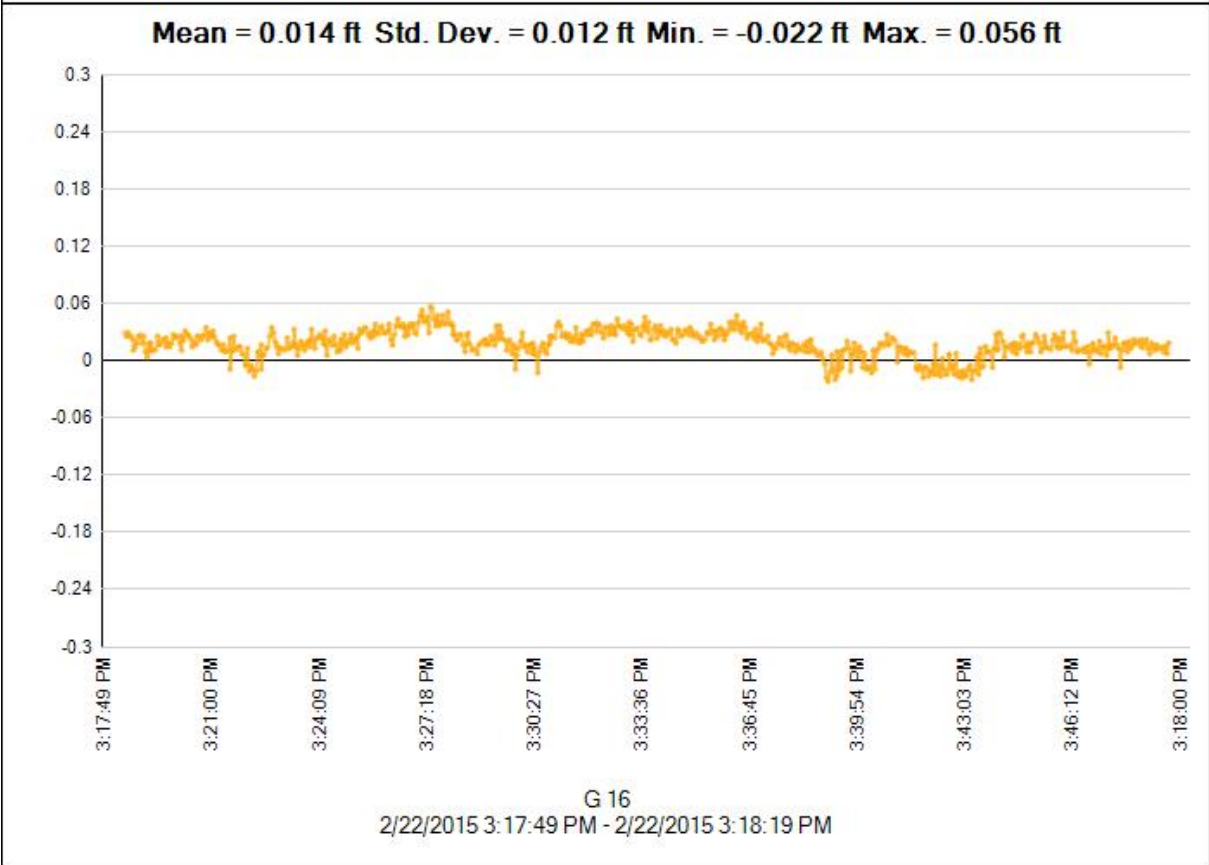
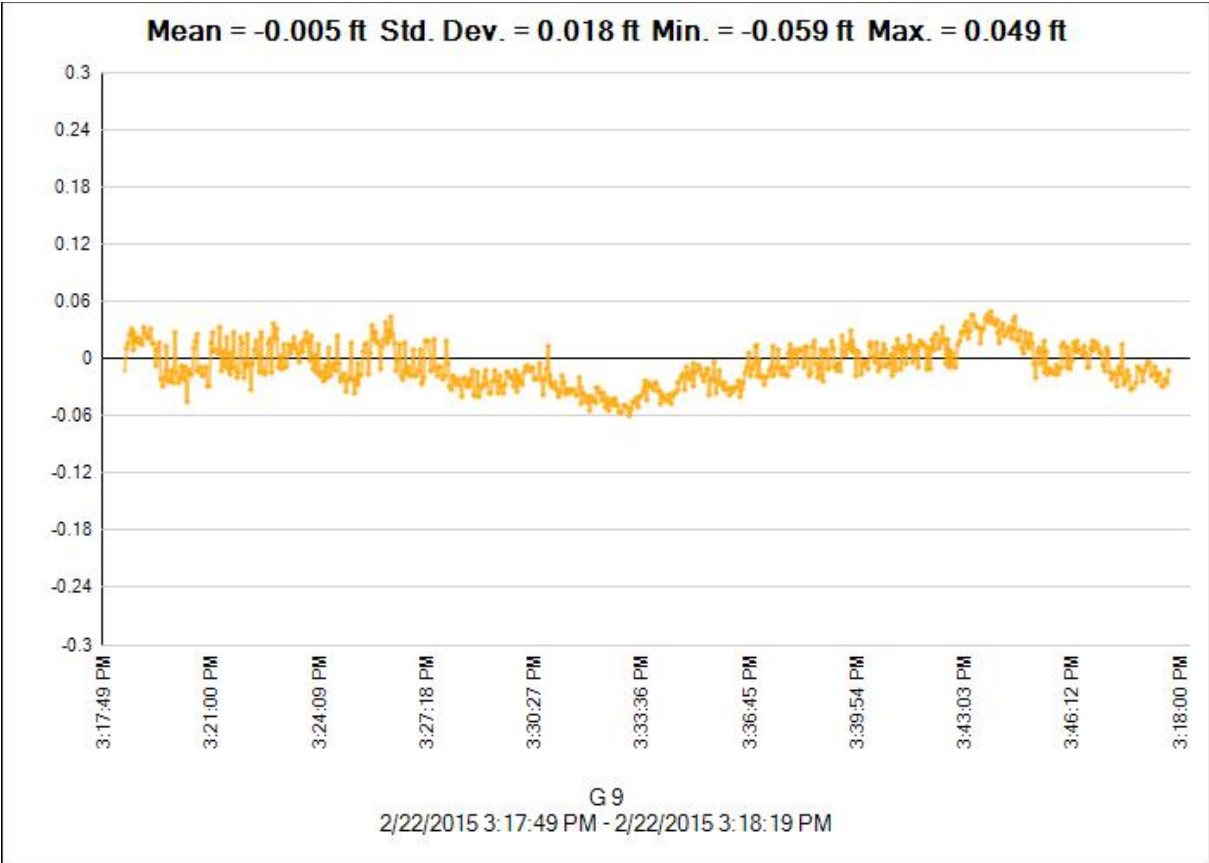
	From	To
Point ID:	TUS_4	CON126
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520530.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840532.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

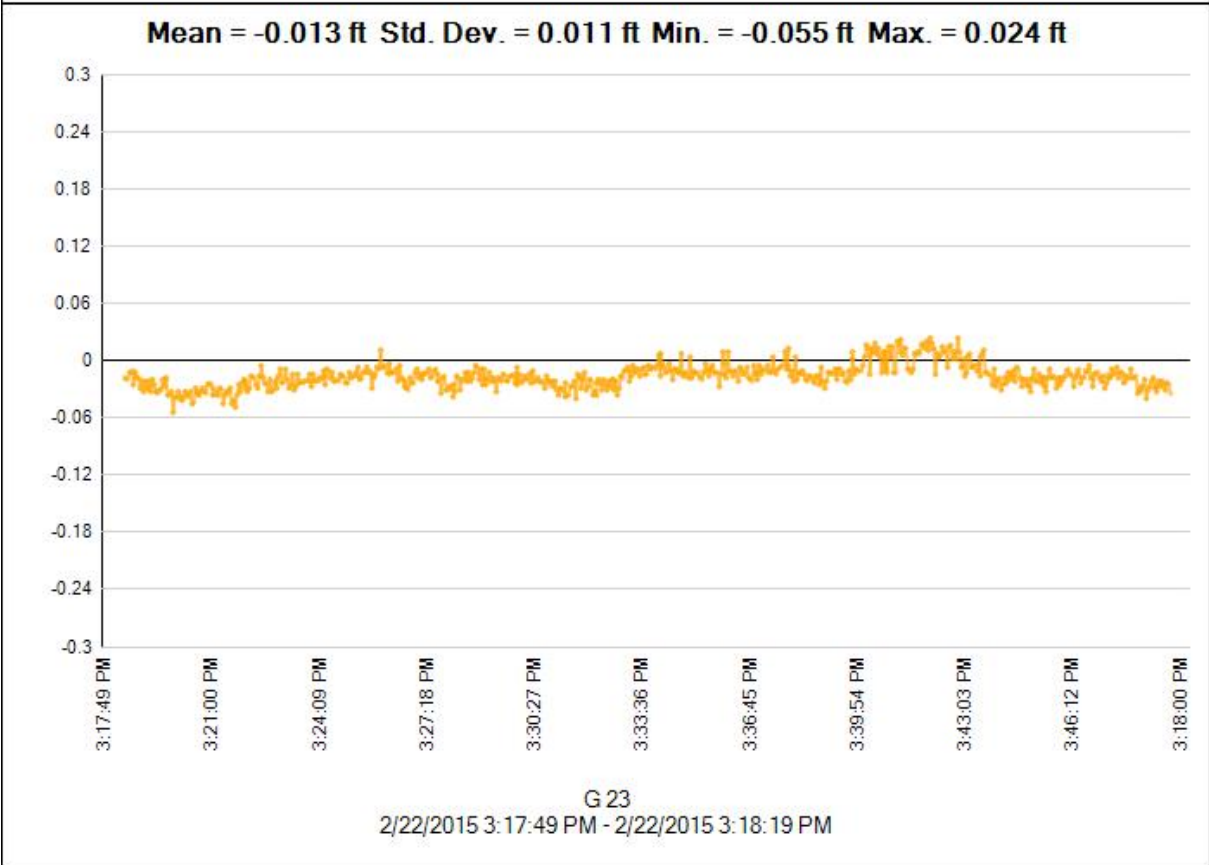
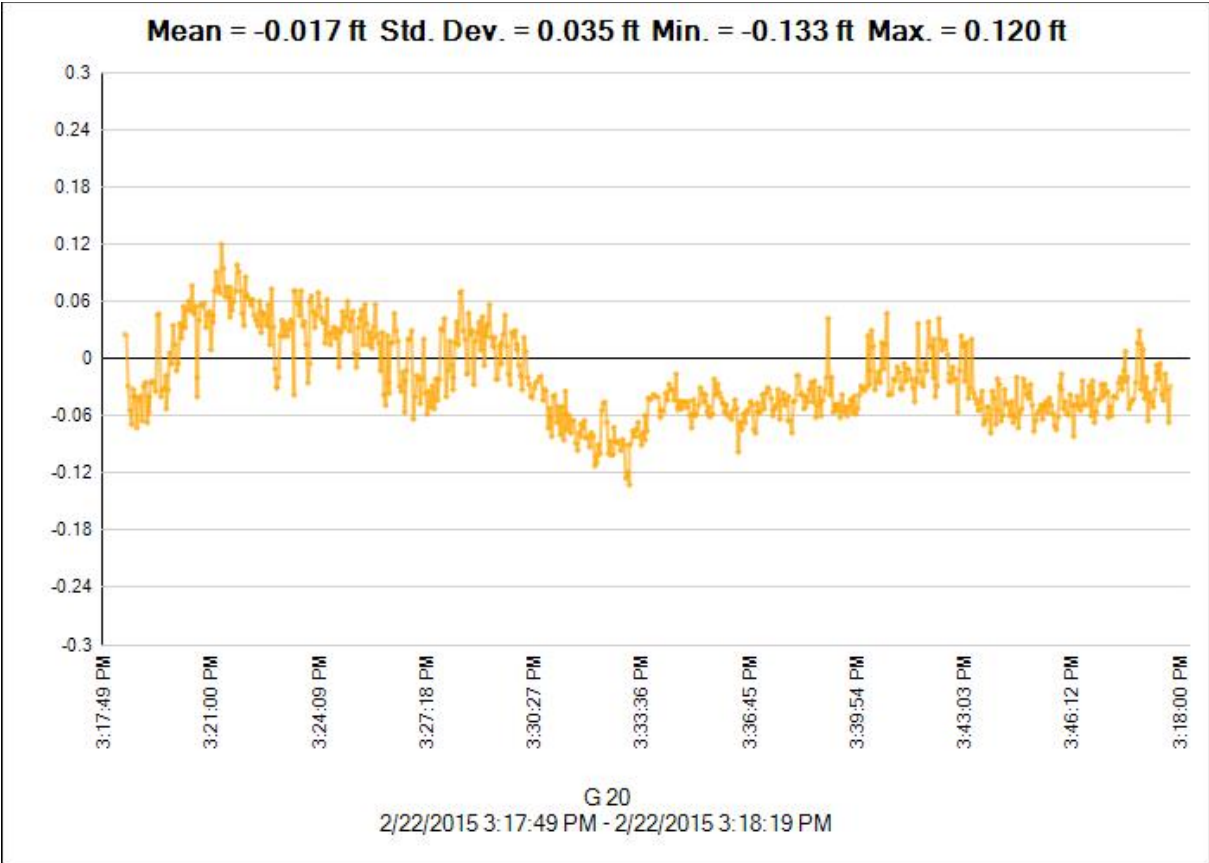
Tracking Summary

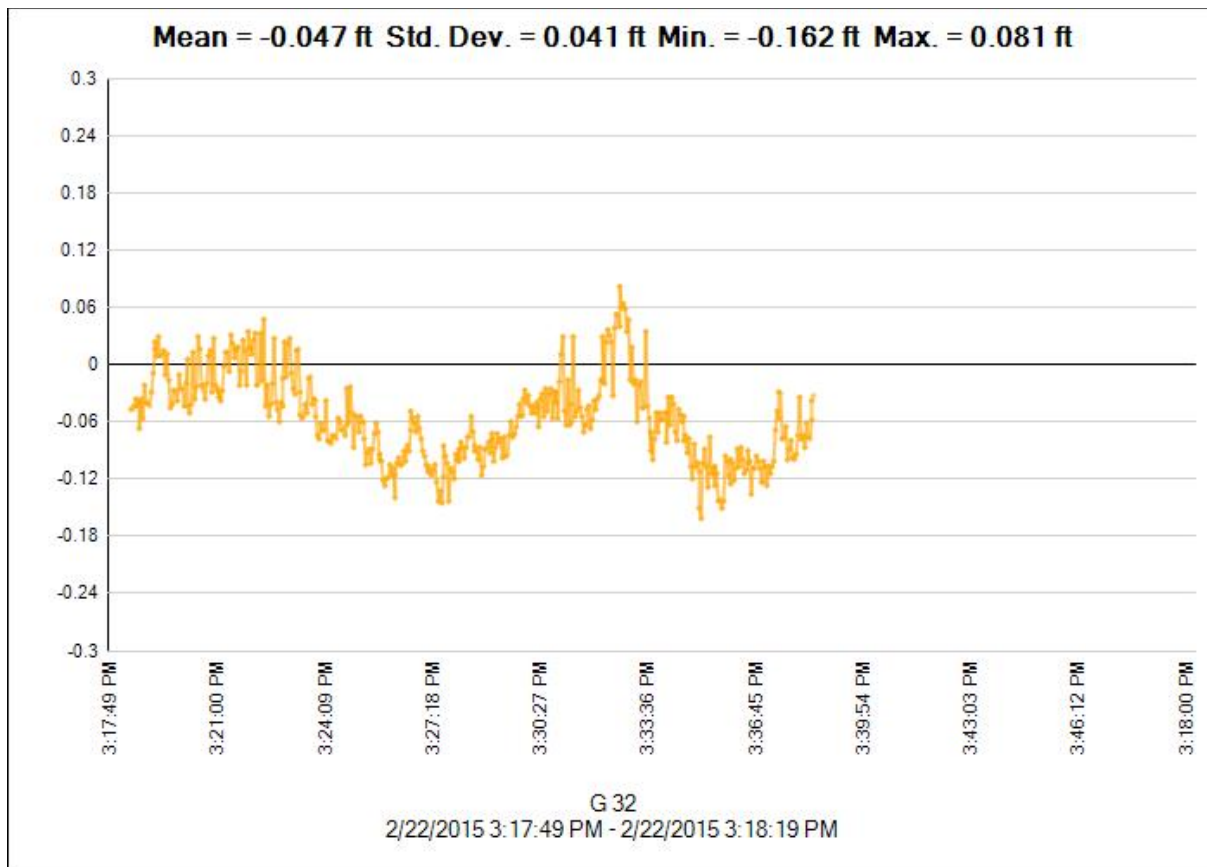
SV	2/22/2015 3:17:47 PM	Duration: 00:31:58	Major interval: 00:01:00	2/22/2015 3:49:45 PM
G 3	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 16	L1 L2			
G 19	L1 L2			
G 20	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 30	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

Residuals











Processing style

Elevation mask: 20.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

TUS_4 - CON125 (11:34:10 AM-12:06:29 PM) (S9)

Baseline observation: TUS_4 --- CON125 (B9)
 Processed: 3/11/2015 8:53:59 AM
 Solution type: Fixed
 Frequency used: Dual Frequency (L1, L2)
 Horizontal precision: 0.028 ft
 Vertical precision: 0.042 ft
 RMS: 0.006 ft
 Maximum PDOP: 3.670
 Ephemeris used: Broadcast
 Antenna model: NGS Absolute
 Processing start time: 2/24/2015 11:34:10 AM (Local: UTC-7hr)
 Processing stop time: 2/24/2015 12:06:29 PM (Local: UTC-7hr)
 Processing duration: 00:32:19
 Processing interval: 1 second

Vector Components (Mark to Mark)

From: TUS_4					
Grid		Local		Global	
Easting	1073400.564 ft	Latitude	N31°49'26.56898"	Latitude	N31°49'26.56898"
Northing	301798.149 ft	Longitude	W110°42'51.92491"	Longitude	W110°42'51.92491"
Elevation	5013.407 ft	Height	4920.337 ft	Height	4920.337 ft

To: CON125					
Grid		Local		Global	
Easting	1135348.820 ft	Latitude	N31°44'57.85758"	Latitude	N31°44'57.85757"
Northing	275381.127 ft	Longitude	W110°30'57.99722"	Longitude	W110°30'57.99722"
Elevation	4994.513 ft	Height	4902.801 ft	Height	4902.801 ft

Vector					
ΔEasting	61948.256 ft	NS Fwd Azimuth	113°43'43"	ΔX	52657.776 ft
ΔNorthing	-26417.022 ft	Ellipsoid Dist.	67339.813 ft	ΔY	-35078.622 ft
ΔElevation	-18.894 ft	ΔHeight	-17.536 ft	ΔZ	-23095.981 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.007 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.009 ft
$\sigma \Delta$ Northing	0.012 ft	σ Ellipsoid Dist.	0.007 ft	$\sigma \Delta$ Y	0.017 ft
$\sigma \Delta$ Elevation	0.021 ft	$\sigma \Delta$ Height	0.021 ft	$\sigma \Delta$ Z	0.017 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000078180		
Y	0.0000086653	0.0000255542	
Z	-0.0000054595	-0.0000148958	0.0000255809

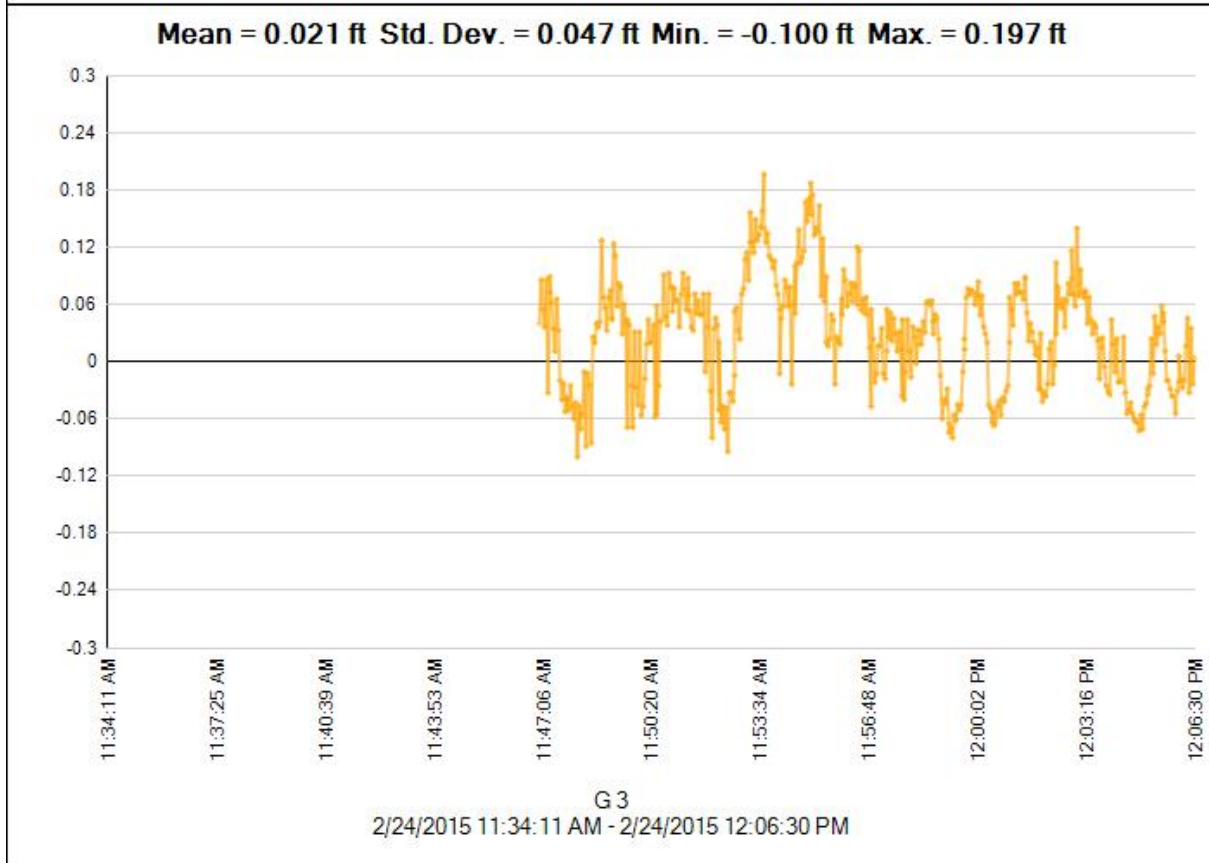
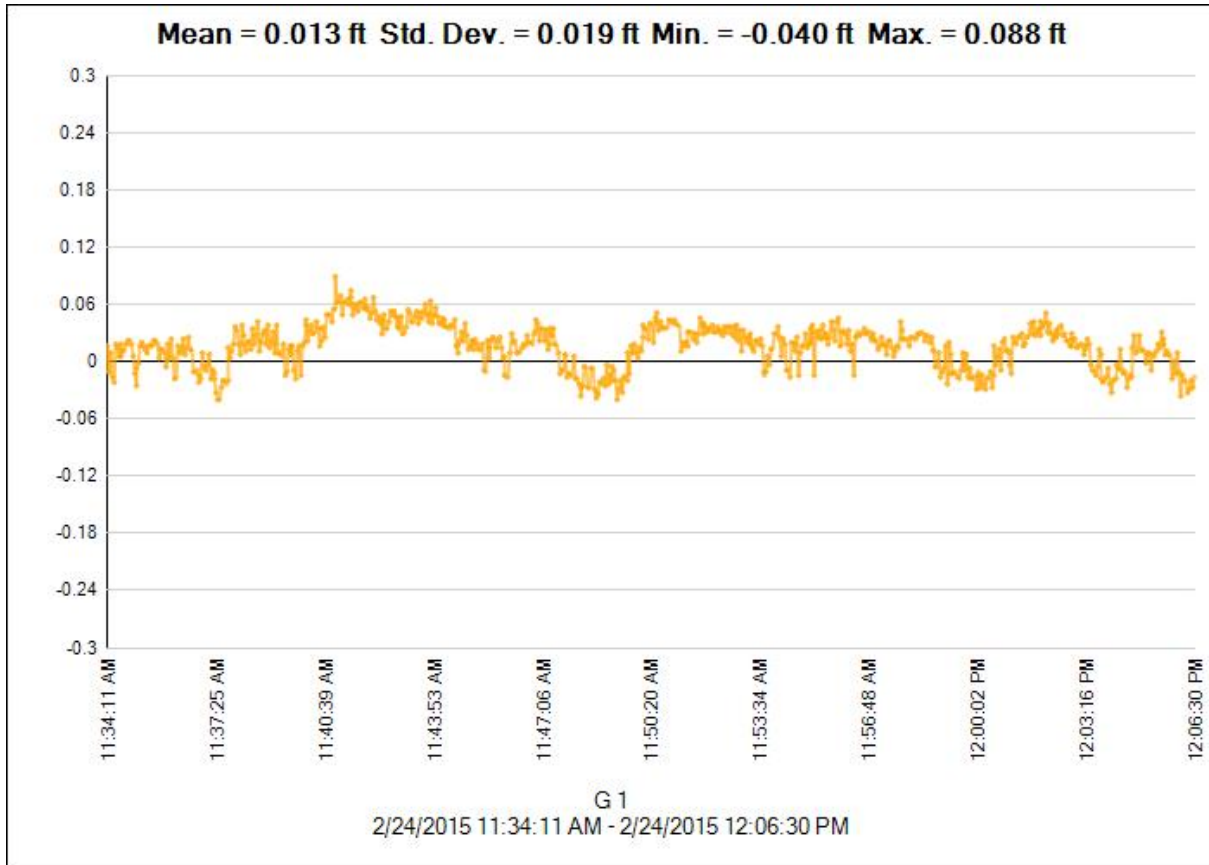
Occupations

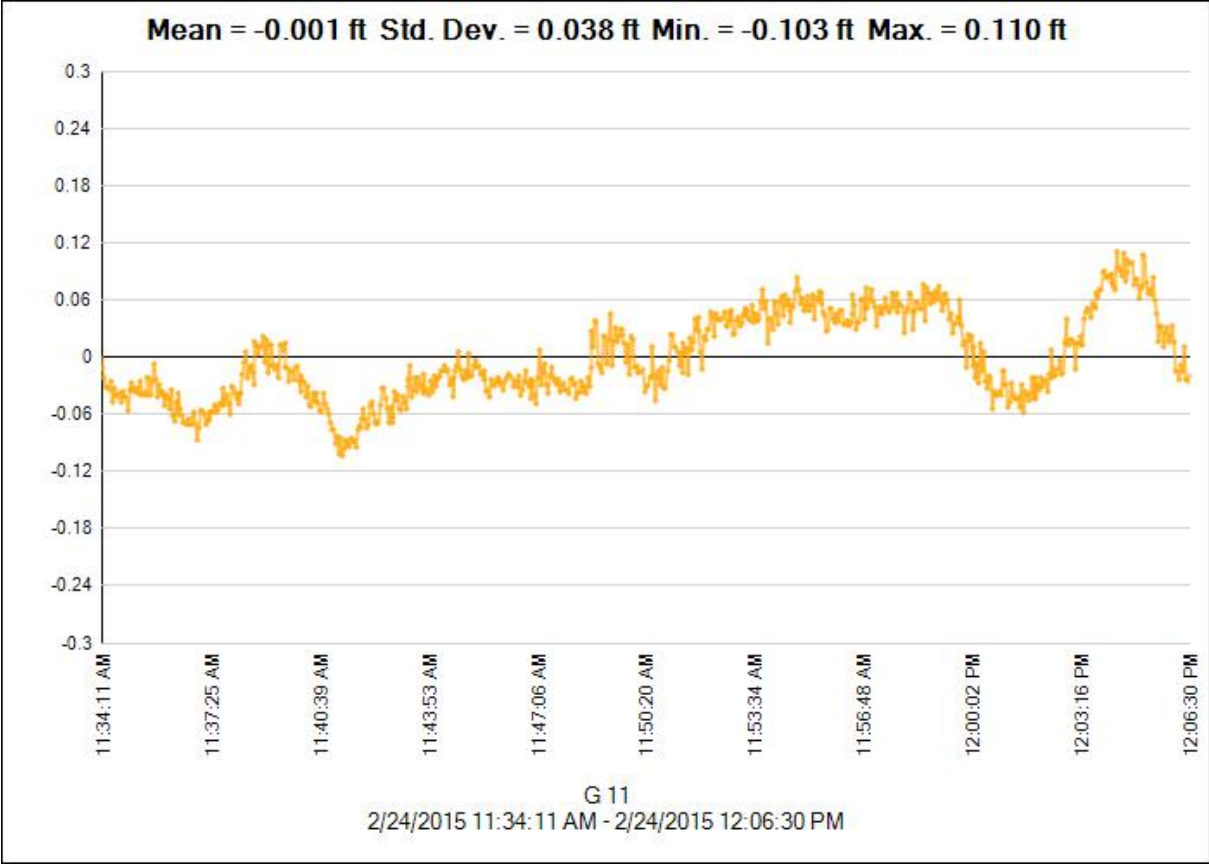
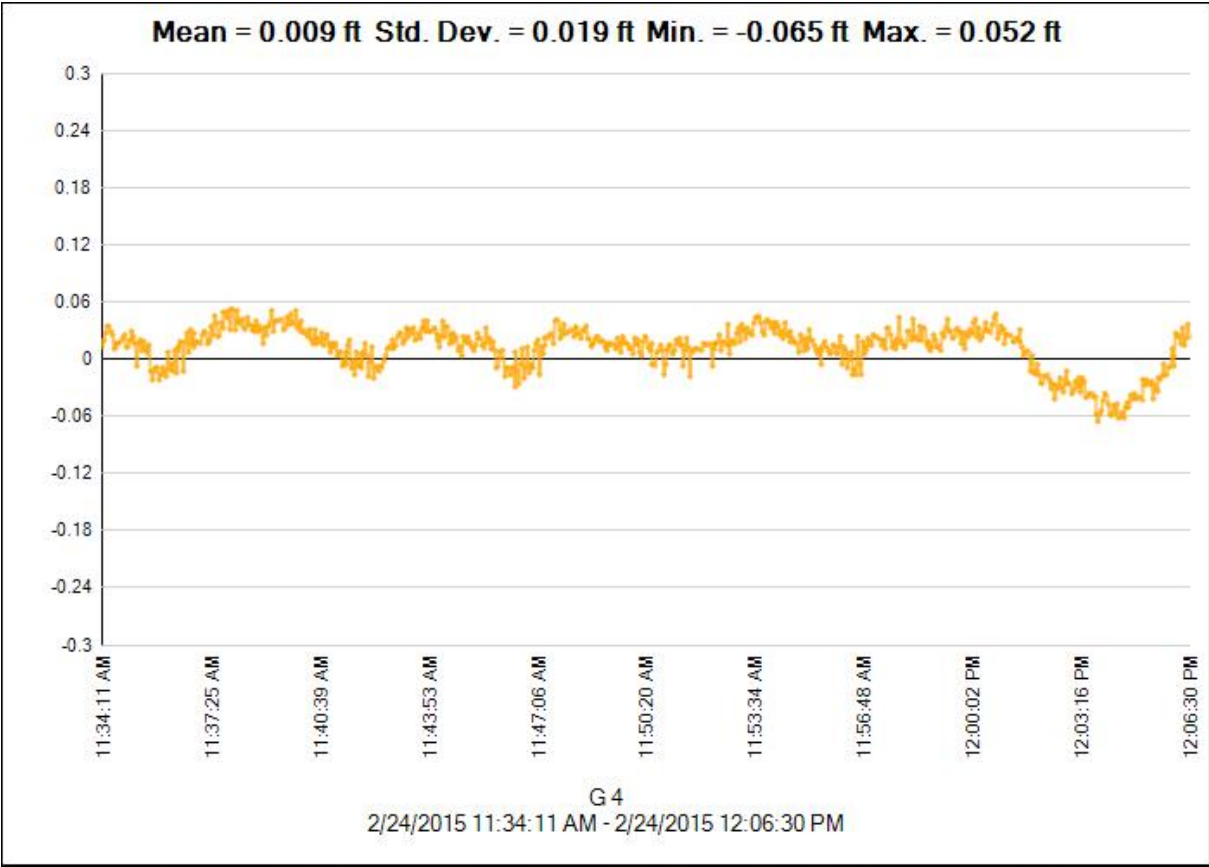
	From	To
Point ID:	TUS_4	CON125
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520550.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840550.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

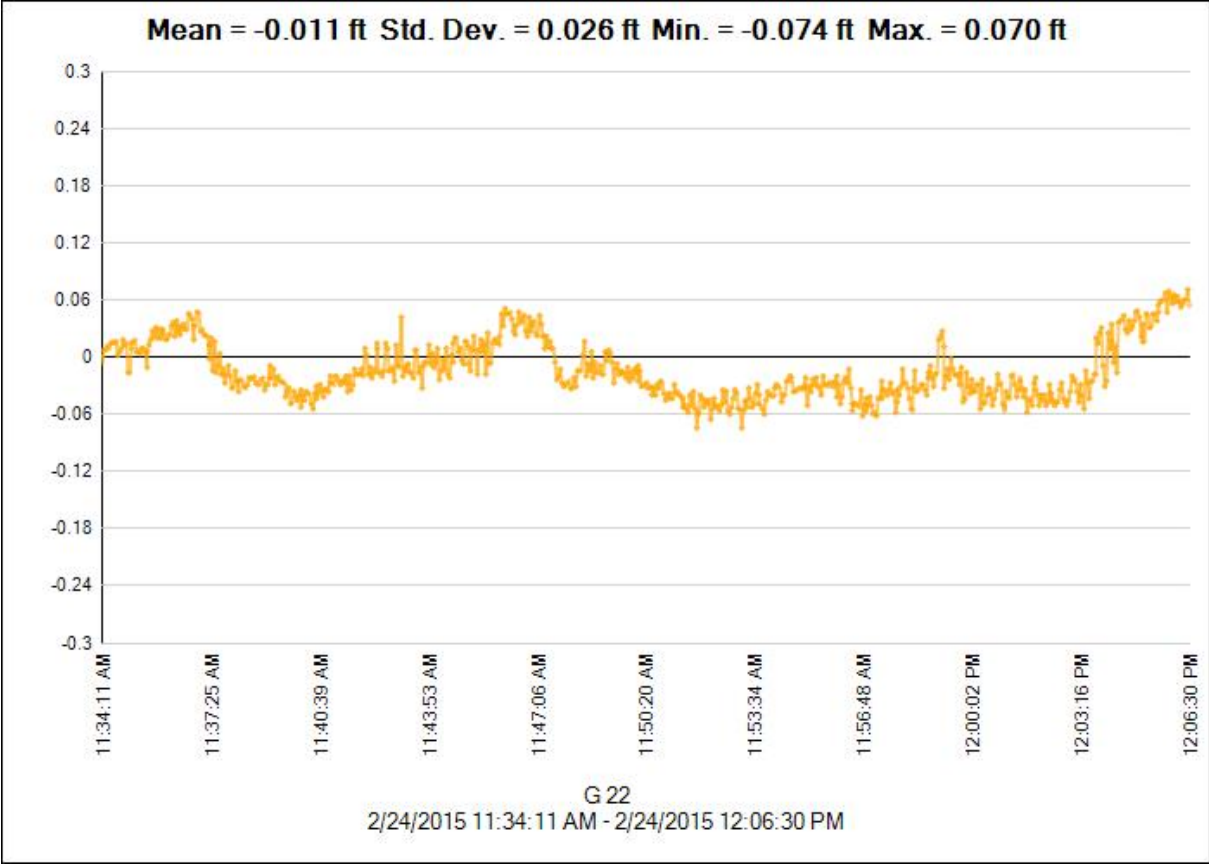
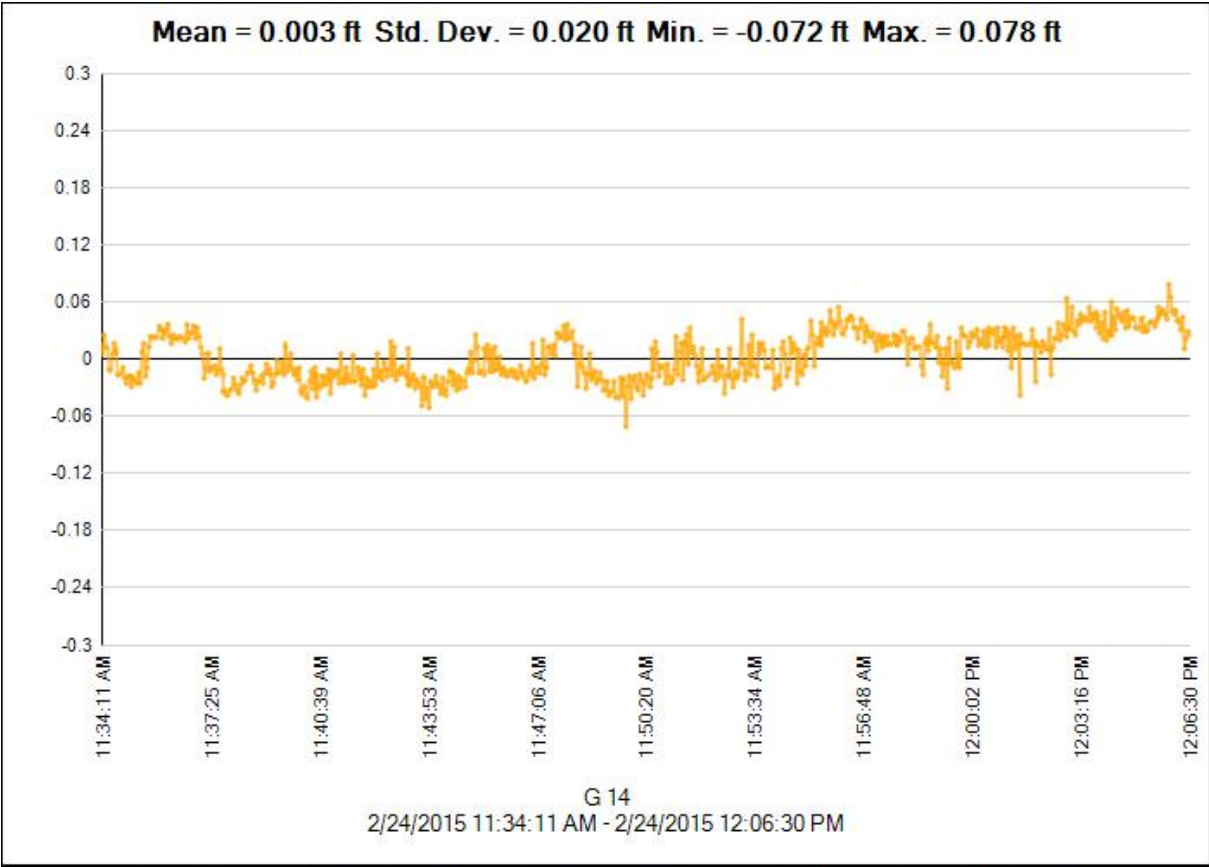
Tracking Summary

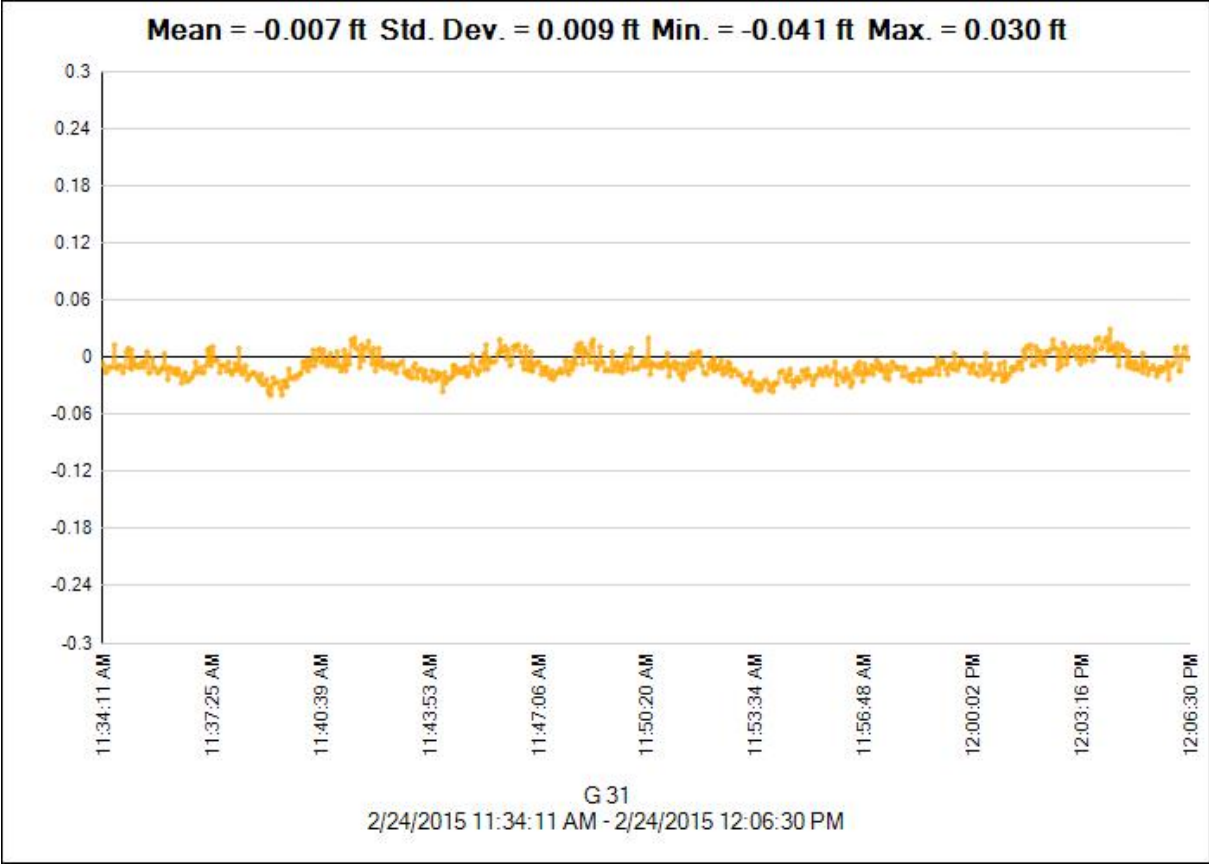
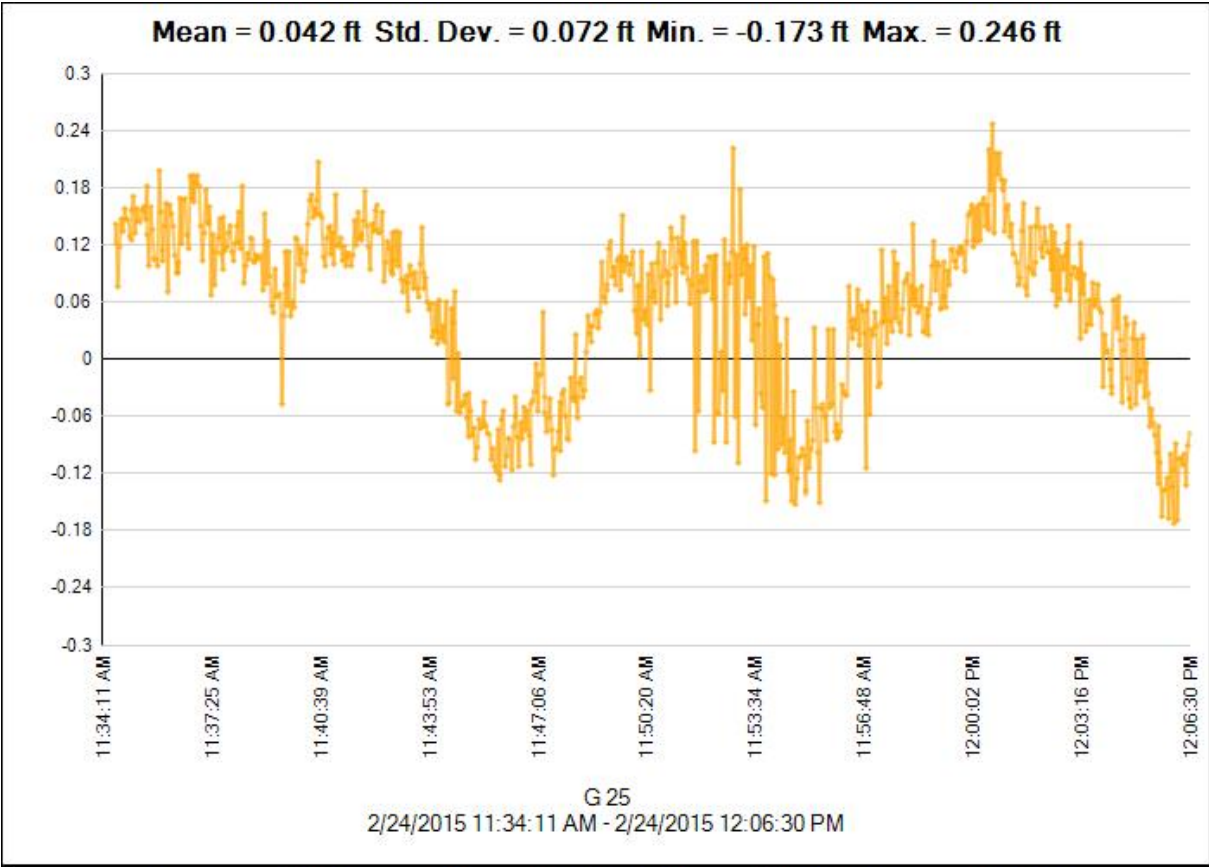
SV	2/24/2015 11:34:10 AM	Duration: 00:32:19	Major interval: 00:01:00	2/24/2015 12:06:29 PM
G 1	L1 L2	[Timeline with horizontal bars]		
G 3	L1 L2	[Timeline with horizontal bars]		
G 4	L1 L2	[Timeline with horizontal bars]		
G 11	L1 L2	[Timeline with horizontal bars]		
G 14	L1 L2	[Timeline with horizontal bars]		
G 18	L1 L2	[Timeline with horizontal bars]		
G 19	L1 L2	[Timeline with horizontal bars]		
G 22	L1 L2	[Timeline with horizontal bars]		
G 23	L1 L2	[Timeline with horizontal bars]		
G 25	L1 L2	[Timeline with horizontal bars]		
G 31	L1 L2	[Timeline with horizontal bars]		
G 32	L1 L2	[Timeline with horizontal bars]		

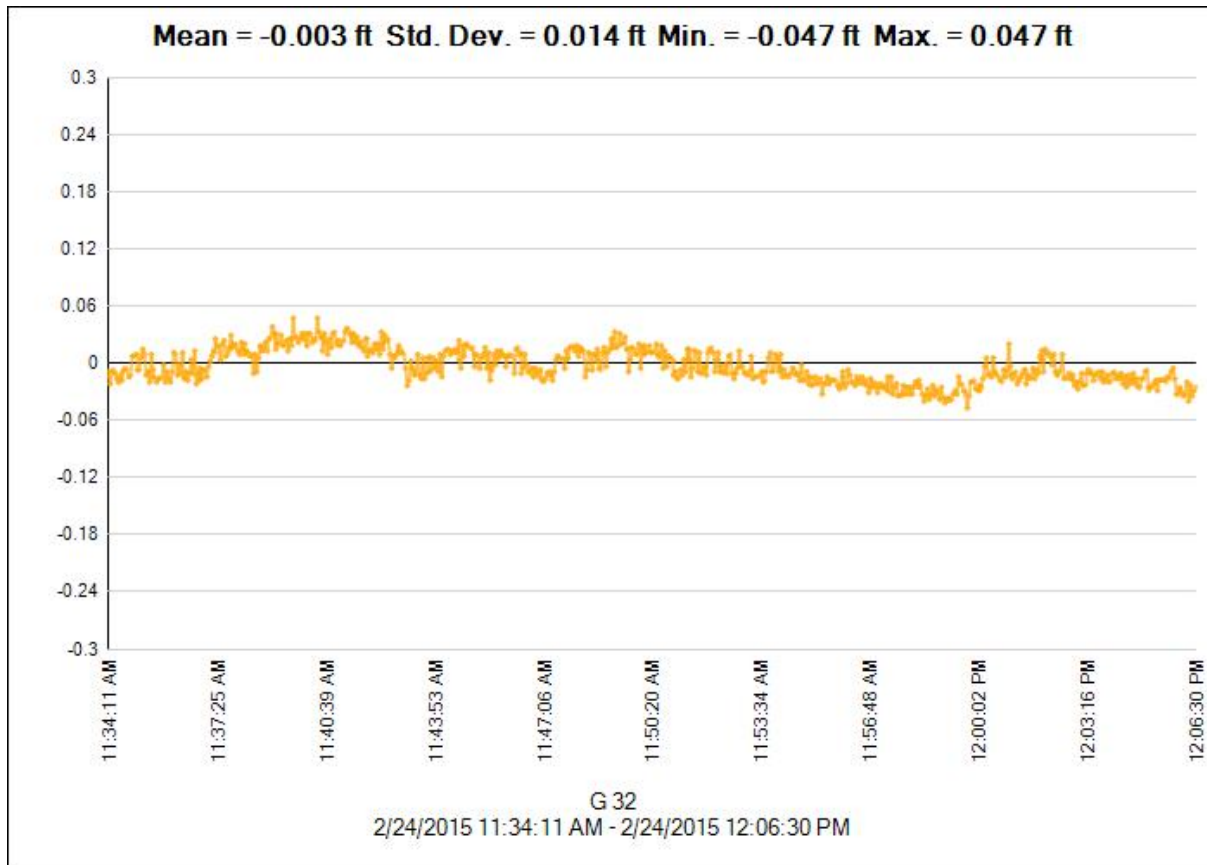
Residuals













Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

TUS_4 - CON123 (12:38:39 PM-1:09:37 PM) (S10)

Baseline observation: TUS_4 --- CON123 (B10)
 Processed: 3/11/2015 8:53:53 AM
 Solution type: Fixed
 Frequency used: Dual Frequency (L1, L2)
 Horizontal precision: 0.026 ft
 Vertical precision: 0.035 ft
 RMS: 0.005 ft
 Maximum PDOP: 1.867
 Ephemeris used: Broadcast
 Antenna model: NGS Absolute
 Processing start time: 2/24/2015 12:38:39 PM (Local: UTC-7hr)
 Processing stop time: 2/24/2015 1:09:32 PM (Local: UTC-7hr)
 Processing duration: 00:30:53
 Processing interval: 1 second

Vector Components (Mark to Mark)

From: TUS_4					
Grid		Local		Global	
Easting	1073400.564 ft	Latitude	N31°49'26.56898"	Latitude	N31°49'26.56898"
Northing	301798.149 ft	Longitude	W110°42'51.92491"	Longitude	W110°42'51.92491"
Elevation	5013.407 ft	Height	4920.337 ft	Height	4920.337 ft

To: CON123					
Grid		Local		Global	
Easting	1078696.216 ft	Latitude	N31°47'17.81189"	Latitude	N31°47'17.81189"
Northing	288844.225 ft	Longitude	W110°41'52.23829"	Longitude	W110°41'52.23829"
Elevation	4946.689 ft	Height	4853.744 ft	Height	4853.744 ft

Vector					
ΔEasting	5295.652 ft	NS Fwd Azimuth	158°23'55"	ΔX	2413.941 ft
ΔNorthing	-12953.925 ft	Ellipsoid Dist.	13993.706 ft	ΔY	-8184.773 ft
ΔElevation	-66.718 ft	ΔHeight	-66.593 ft	ΔZ	-11095.152 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.008 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.011 ft
$\sigma \Delta$ Northing	0.010 ft	σ Ellipsoid Dist.	0.011 ft	$\sigma \Delta$ Y	0.016 ft
$\sigma \Delta$ Elevation	0.018 ft	$\sigma \Delta$ Height	0.018 ft	$\sigma \Delta$ Z	0.011 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000110463		
Y	0.0000088784	0.0000224294	
Z	-0.0000072408	-0.0000057119	0.0000120454

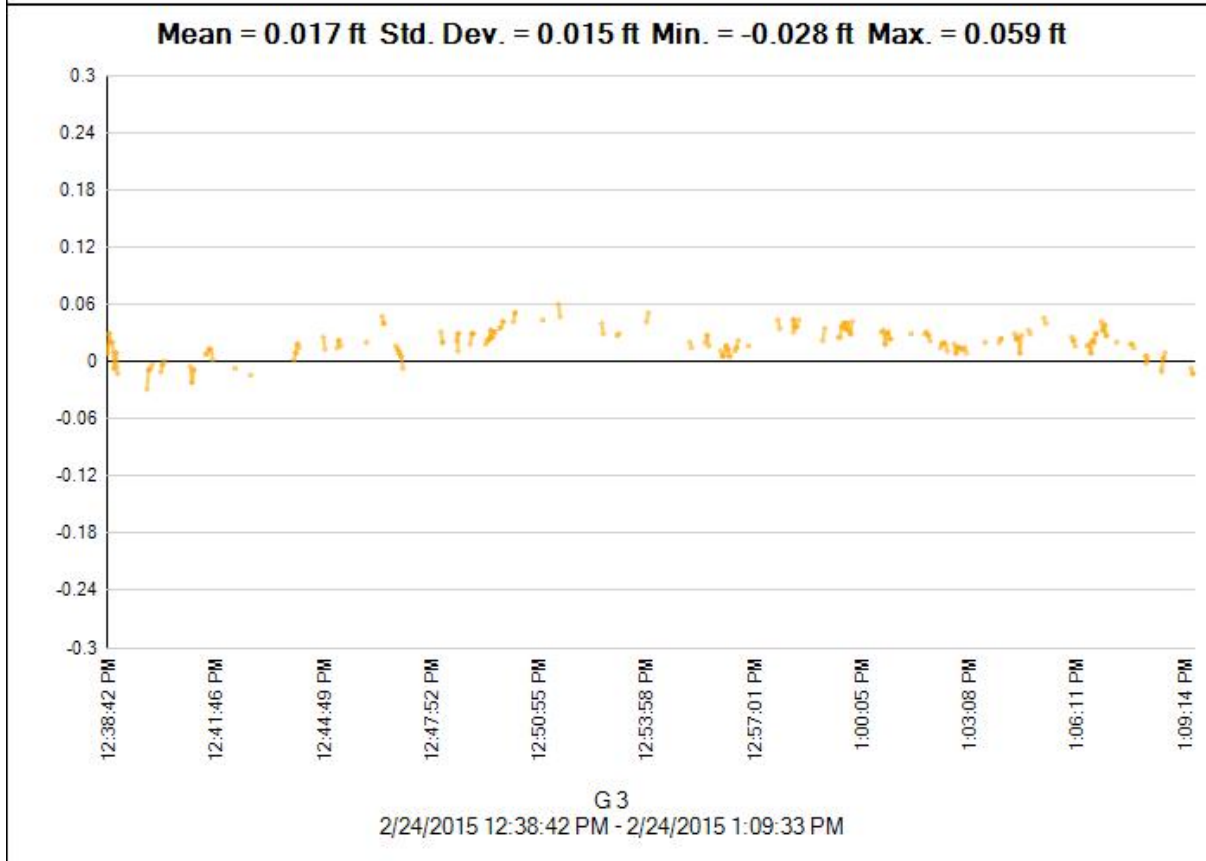
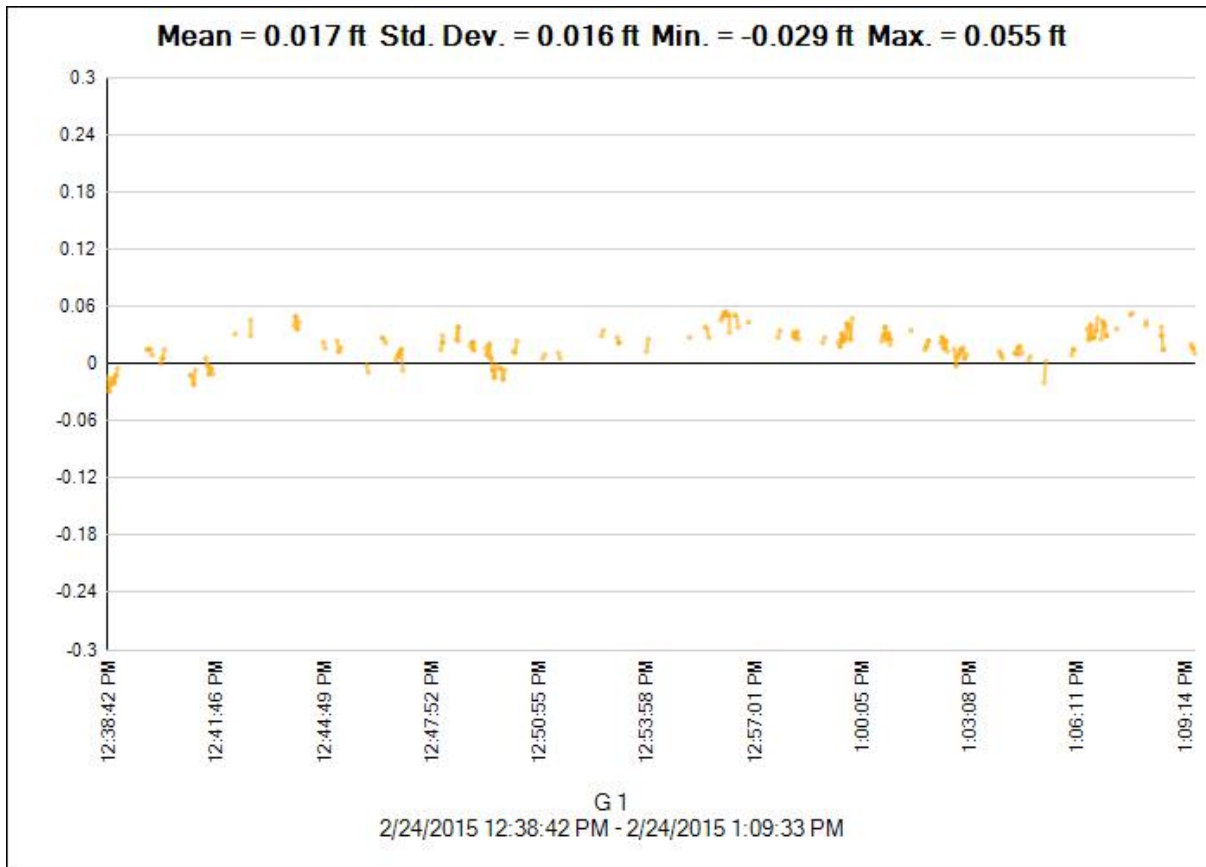
Occupations

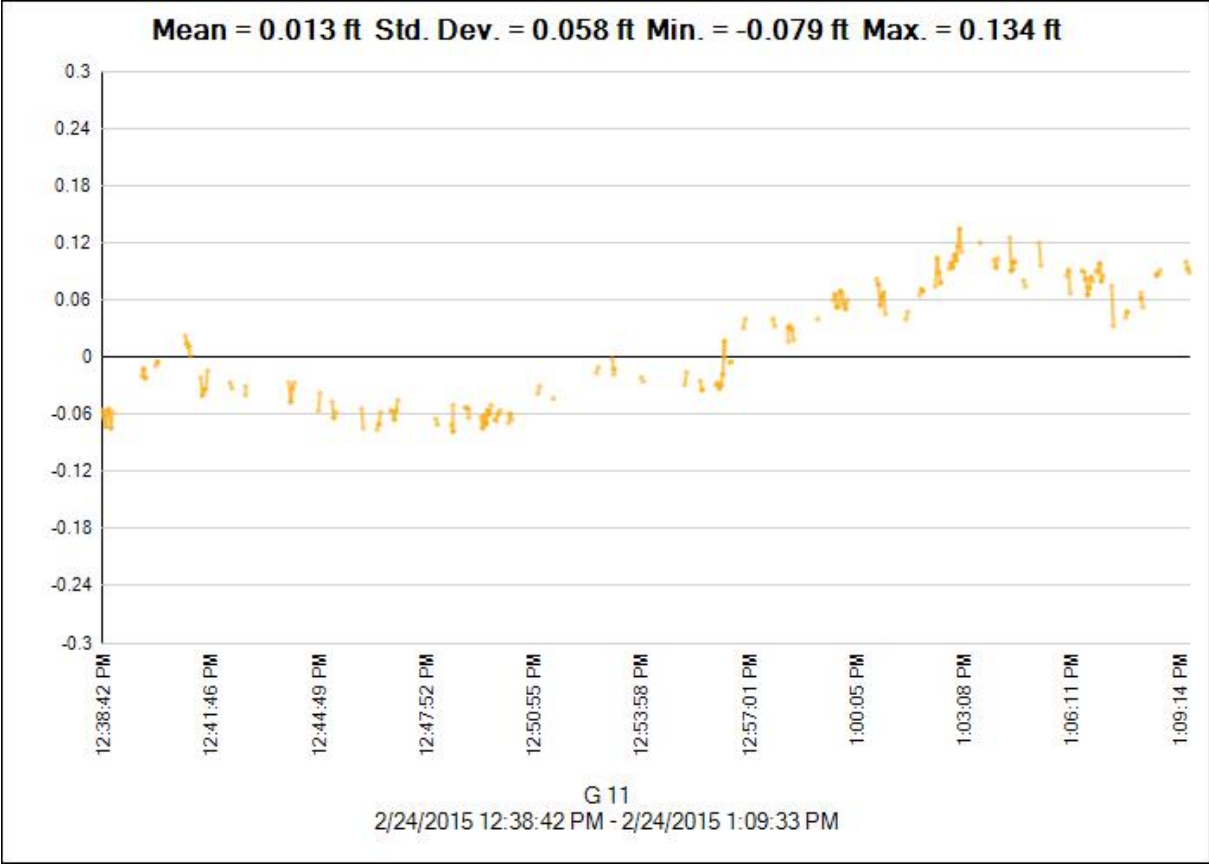
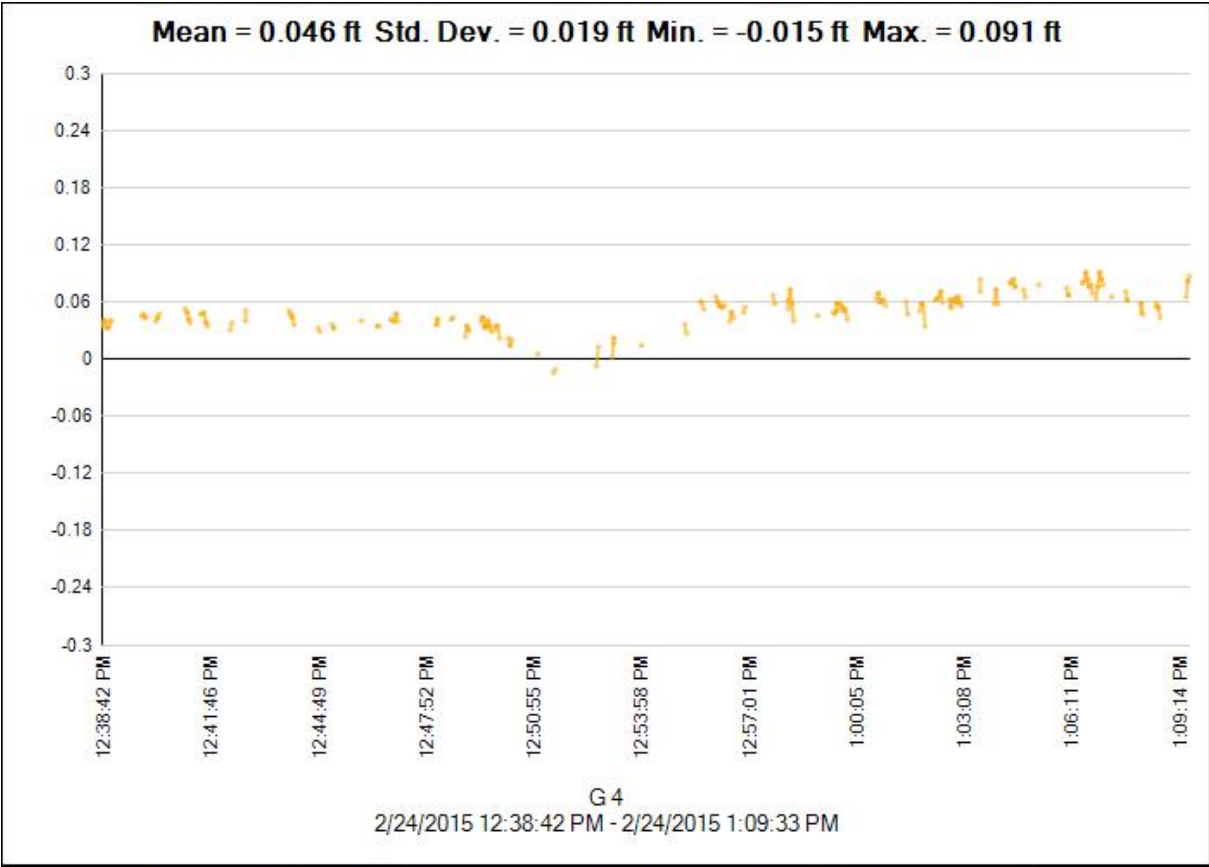
	From	To
Point ID:	TUS_4	CON123
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520550.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840551.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

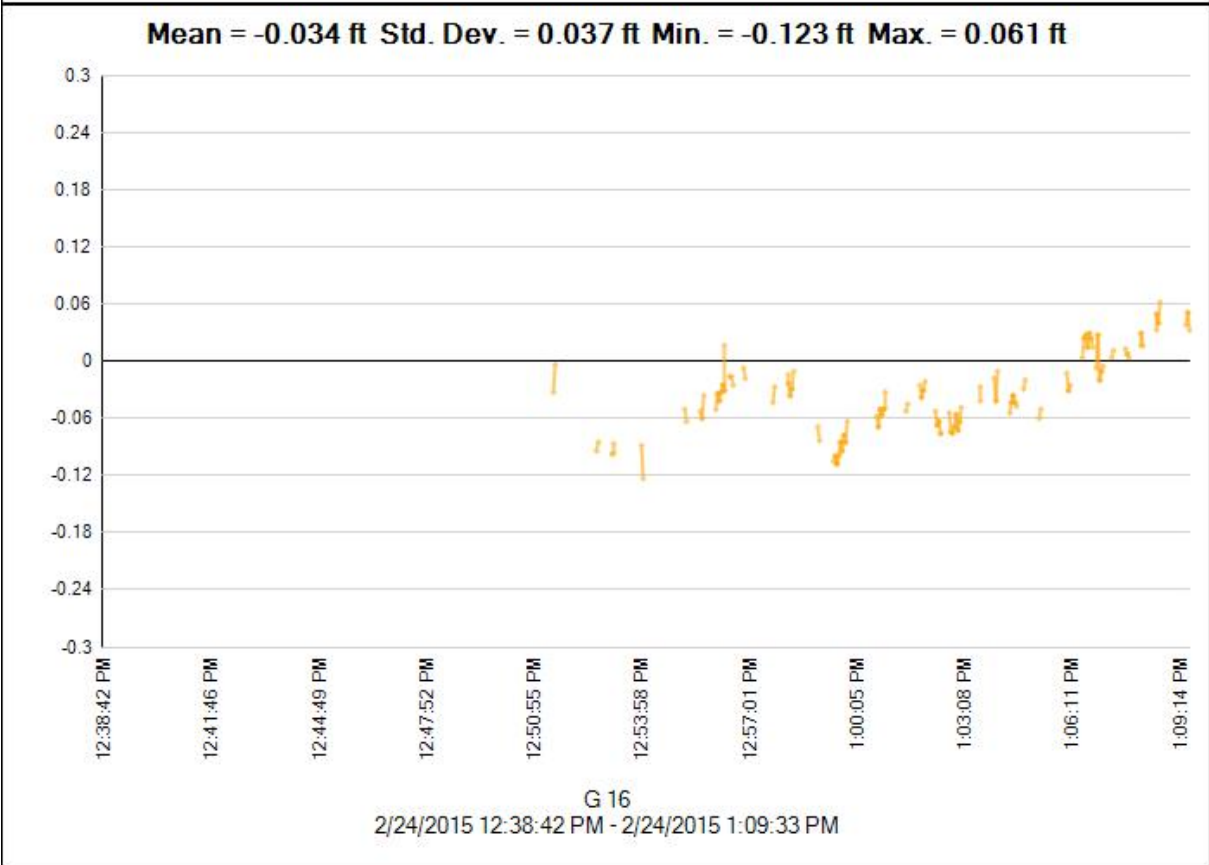
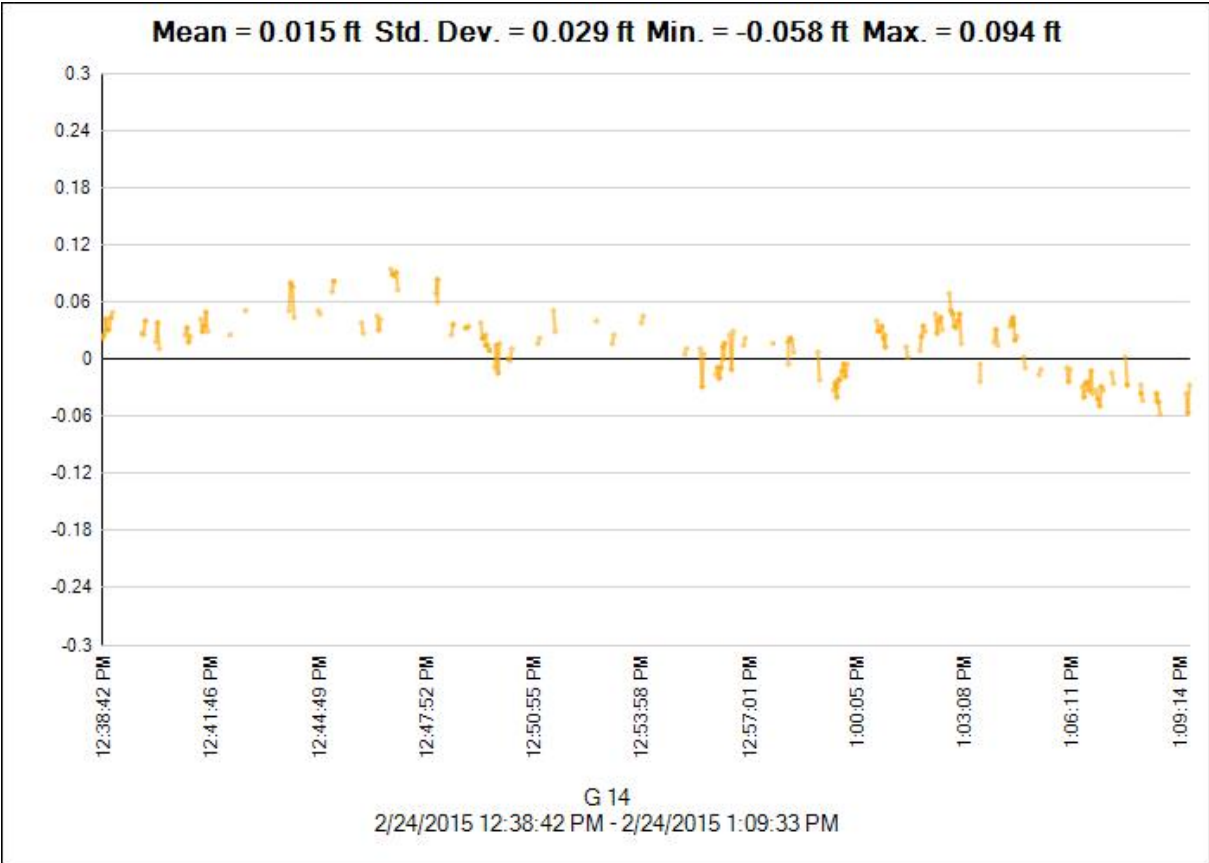
Tracking Summary

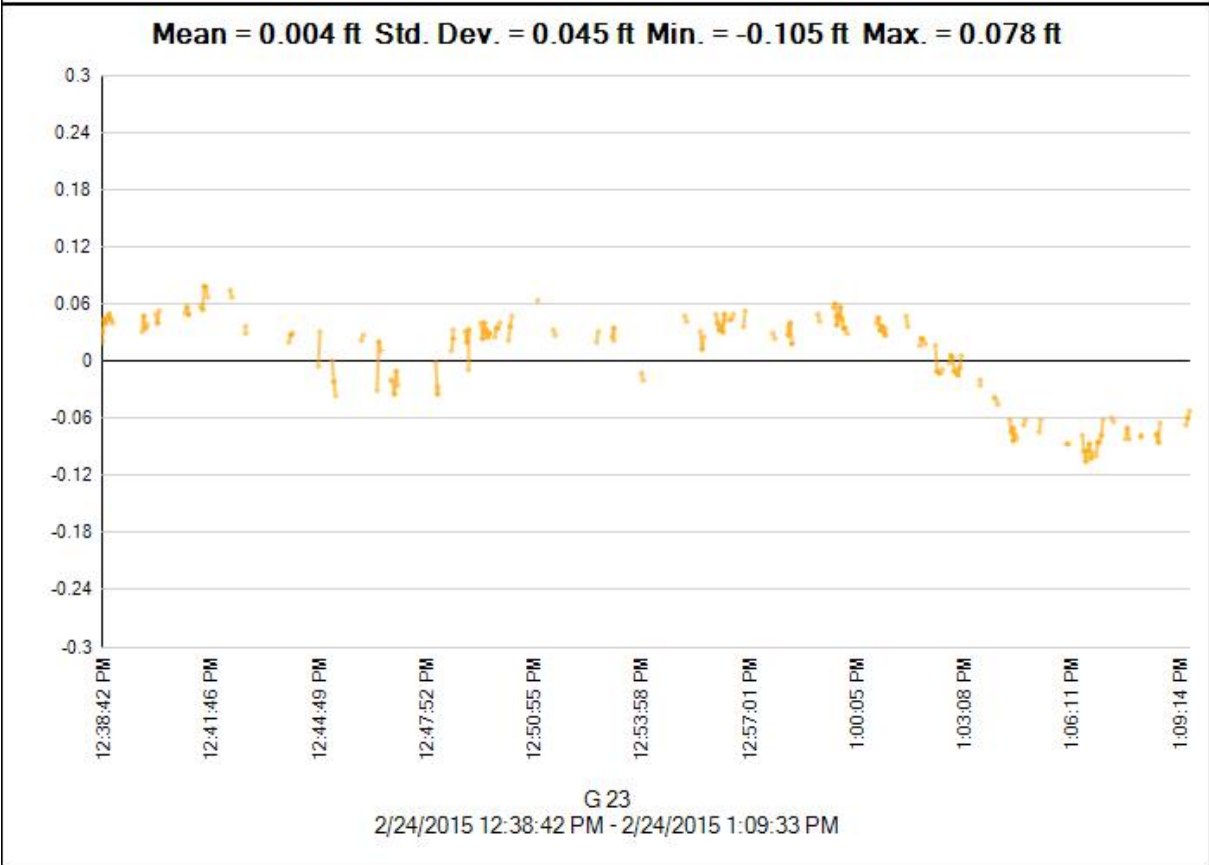
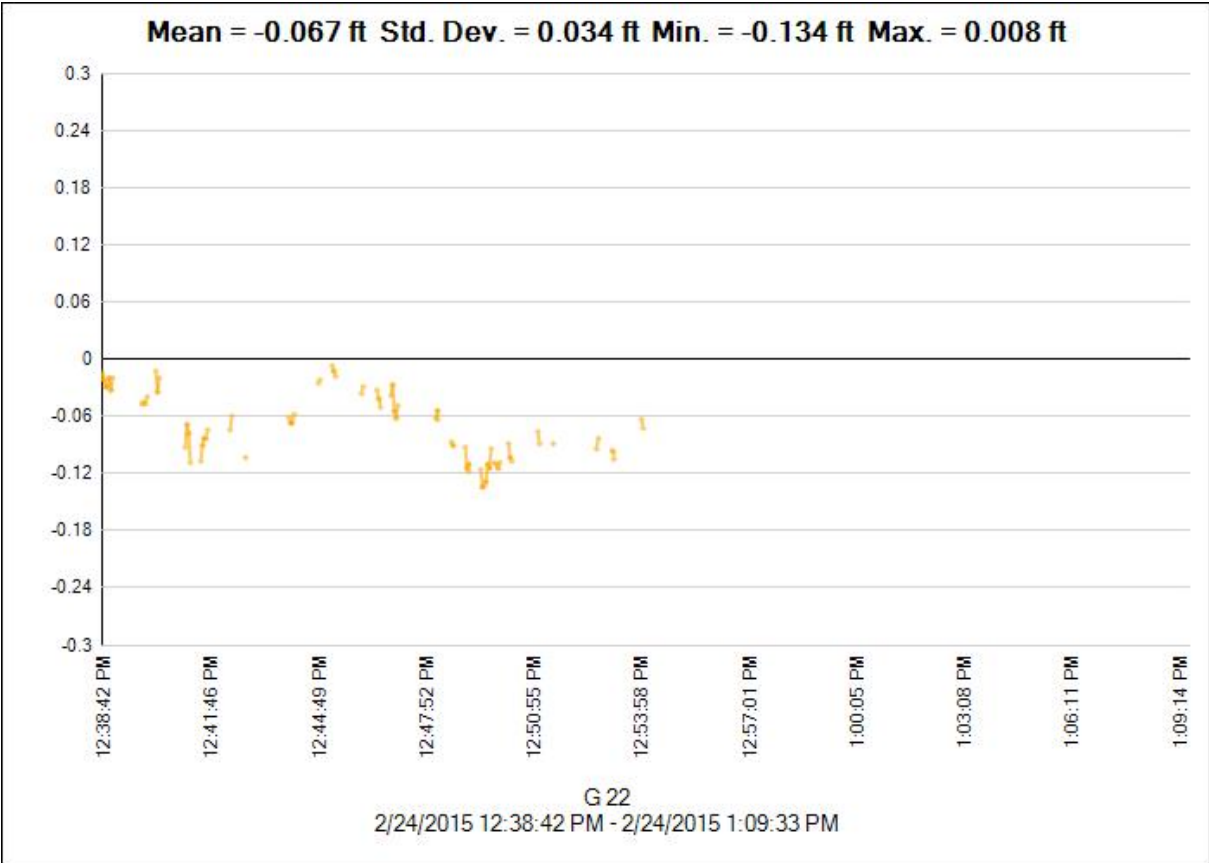
SV	2/24/2015 12:38:39 PM	Duration: 00:30:58	Major interval: 00:01:00	2/24/2015 1:09:37 PM
G 1				
G 3				
G 4				
G 11				
G 14				
G 16				
G 22				
G 23				
G 25				
G 31				
G 32				

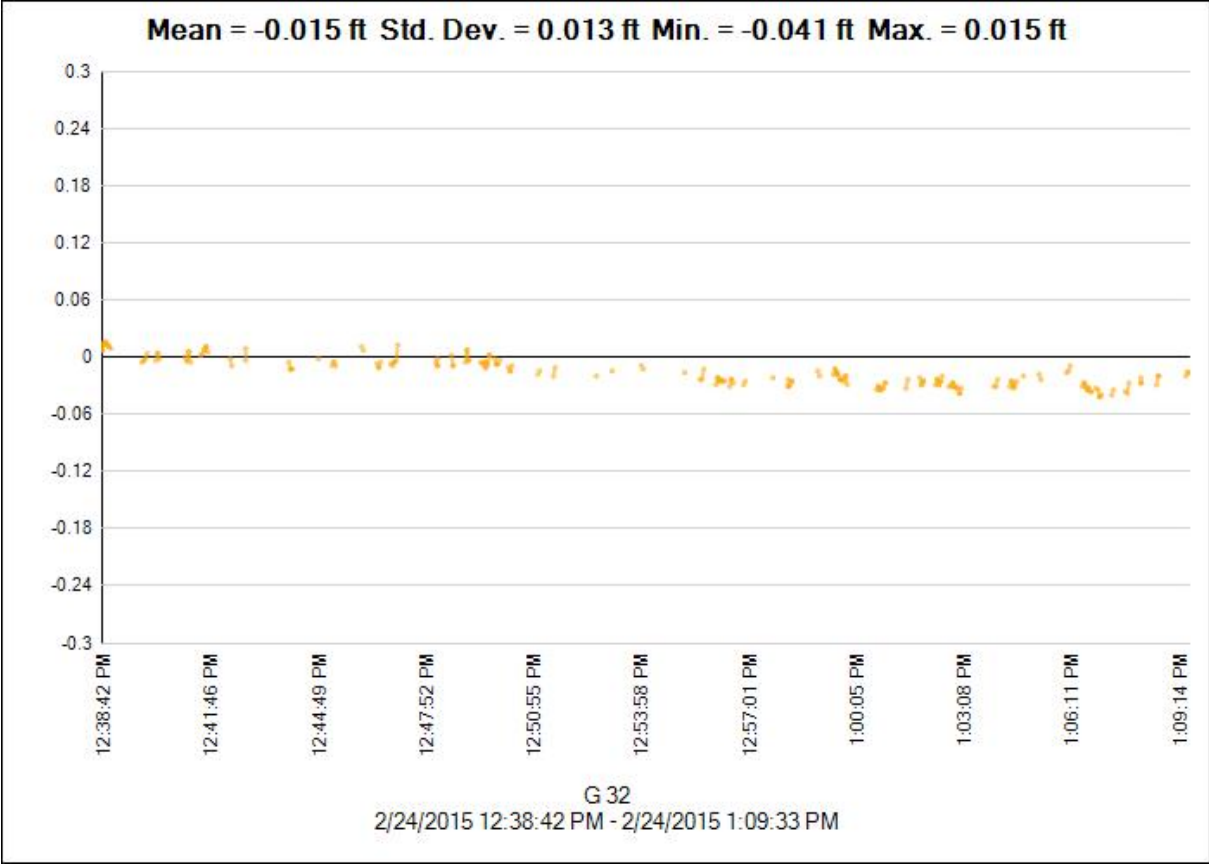
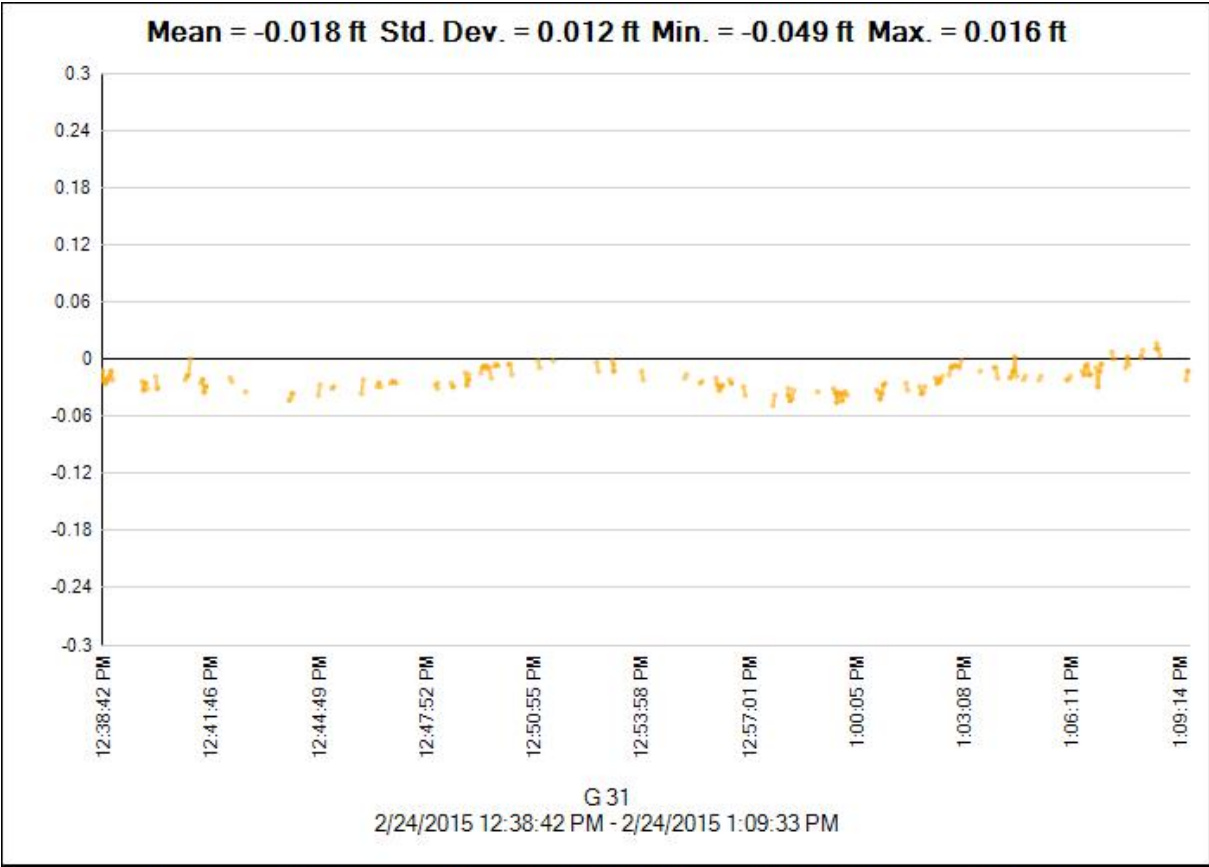
Residuals













Processing style

Elevation mask: 14.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

TUS_4 - CON122 (1:44:32 PM-2:02:40 PM) (S11)

Baseline observation: TUS_4 --- CON122 (B11)
Processed: 3/11/2015 8:53:56 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.037 ft
Vertical precision: 0.060 ft
RMS: 0.004 ft
Maximum PDOP: 2.552
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/24/2015 1:44:32 PM (Local: UTC-7hr)
Processing stop time: 2/24/2015 2:02:40 PM (Local: UTC-7hr)
Processing duration: 00:18:08
Processing interval: 1 second

Vector Components (Mark to Mark)

From:		TUS_4			
Grid		Local		Global	
Easting	1073400.564 ft	Latitude	N31°49'26.56898"	Latitude	N31°49'26.56898"
Northing	301798.149 ft	Longitude	W110°42'51.92491"	Longitude	W110°42'51.92491"
Elevation	5013.407 ft	Height	4920.337 ft	Height	4920.337 ft

To:		CON122			
Grid		Local		Global	
Easting	1085903.406 ft	Latitude	N31°57'48.35002"	Latitude	N31°57'48.35002"
Northing	352652.912 ft	Longitude	W110°40'20.26996"	Longitude	W110°40'20.26996"
Elevation	3674.556 ft	Height	3581.502 ft	Height	3581.502 ft

Vector					
ΔEasting	12502.841 ft	NS Fwd Azimuth	14°26'52"	ΔX	22104.481 ft
ΔNorthing	50854.763 ft	Ellipsoid Dist.	52365.741 ft	ΔY	21509.797 ft
ΔElevation	-1338.851 ft	ΔHeight	-1338.835 ft	ΔZ	42353.284 ft

Standard Errors

Vector errors:					
σ ΔEasting	0.014 ft	σ NS fwd Azimuth	0°00'00"	σ ΔX	0.017 ft
σ ΔNorthing	0.013 ft	σ Ellipsoid Dist.	0.014 ft	σ ΔY	0.025 ft
σ ΔElevation	0.031 ft	σ ΔHeight	0.031 ft	σ ΔZ	0.019 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000275569		
Y	0.0000208333	0.0000577529	
Z	-0.0000096347	-0.0000301827	0.0000338786

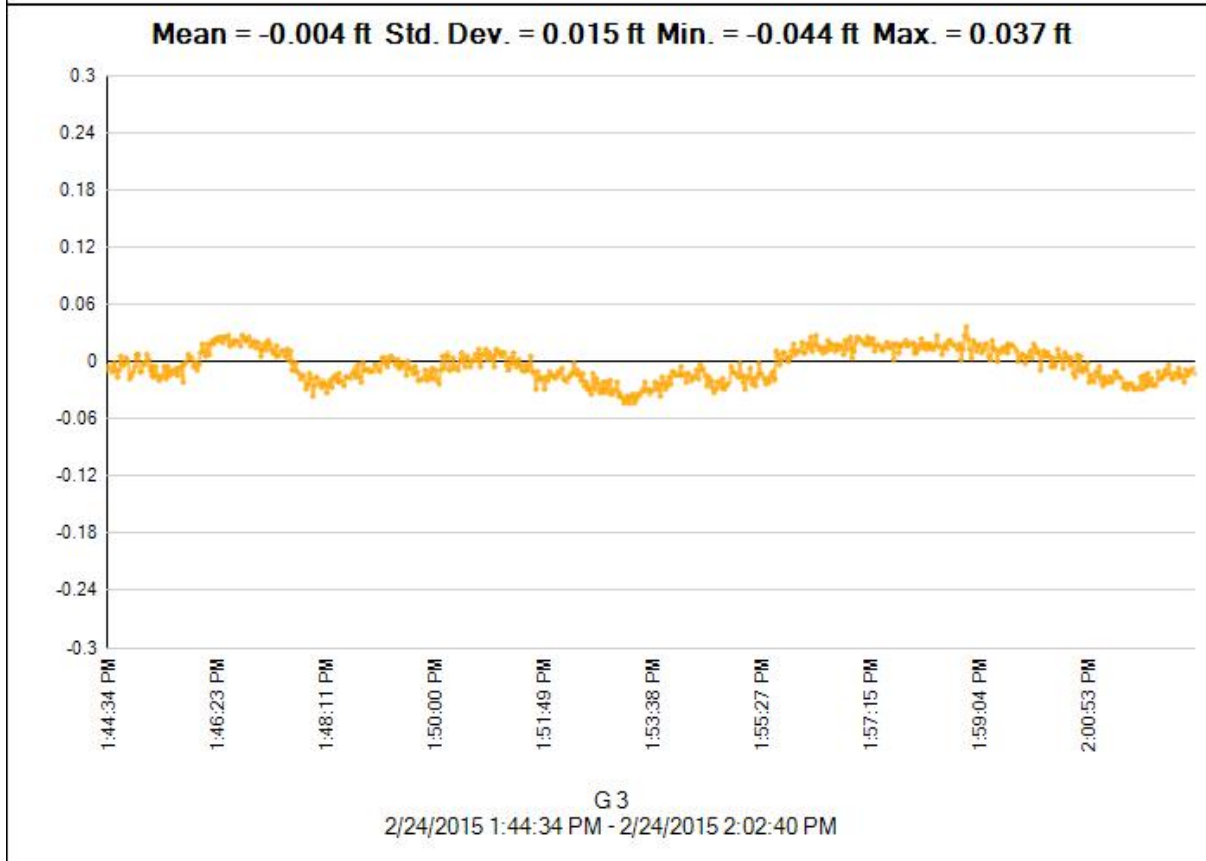
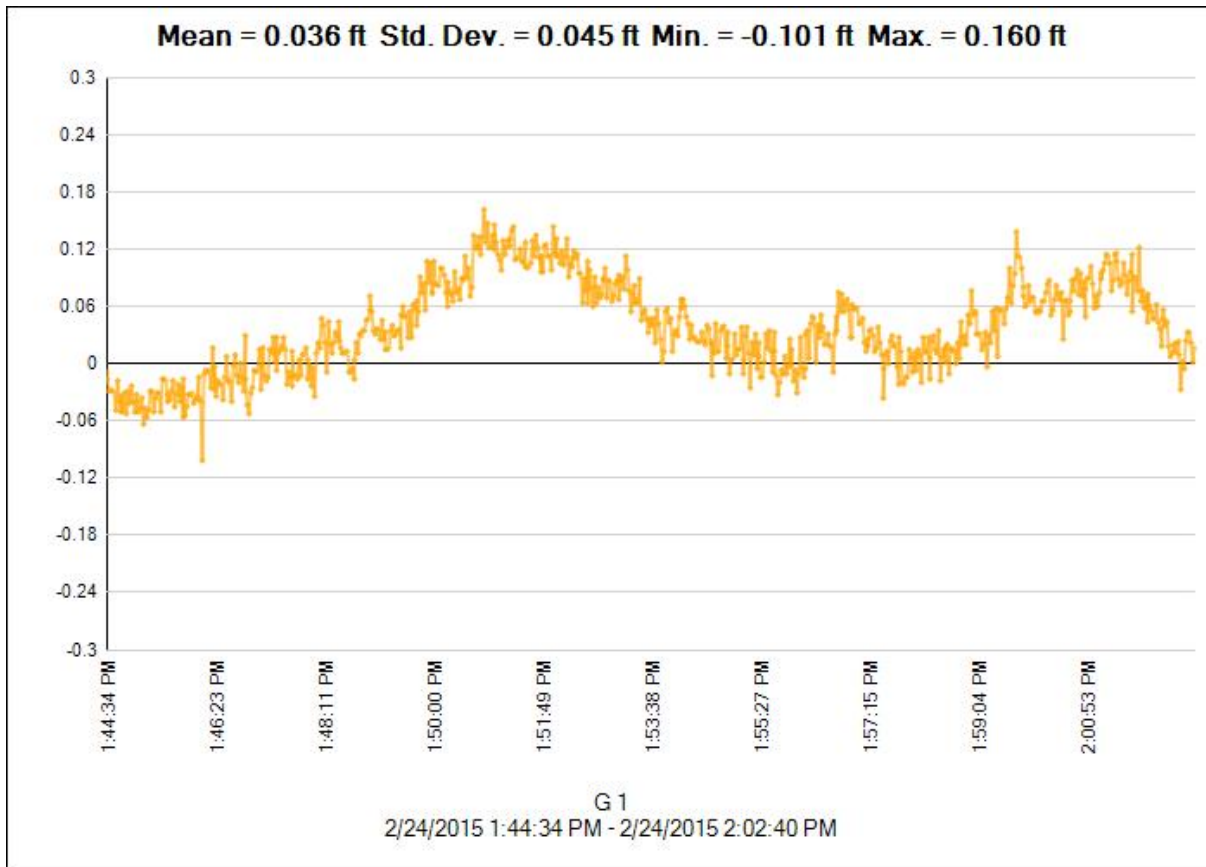
Occupations

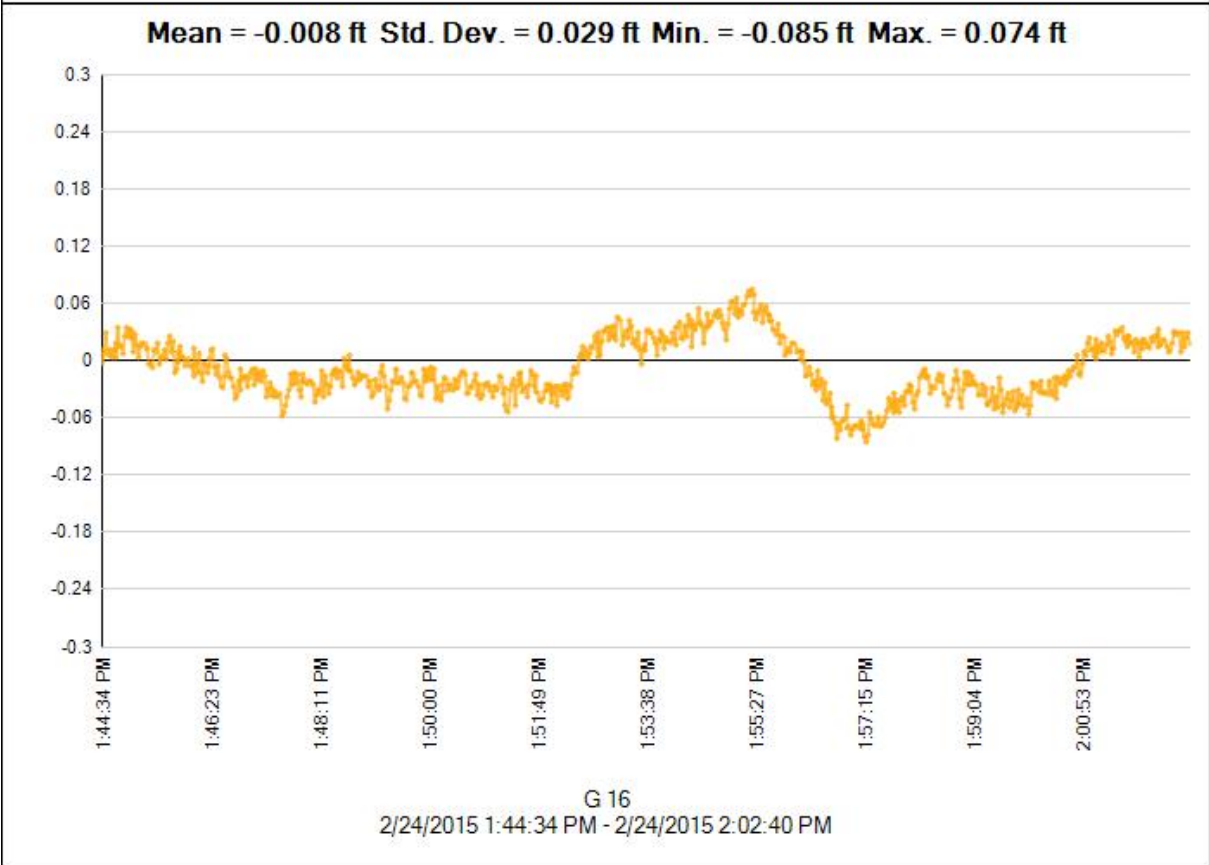
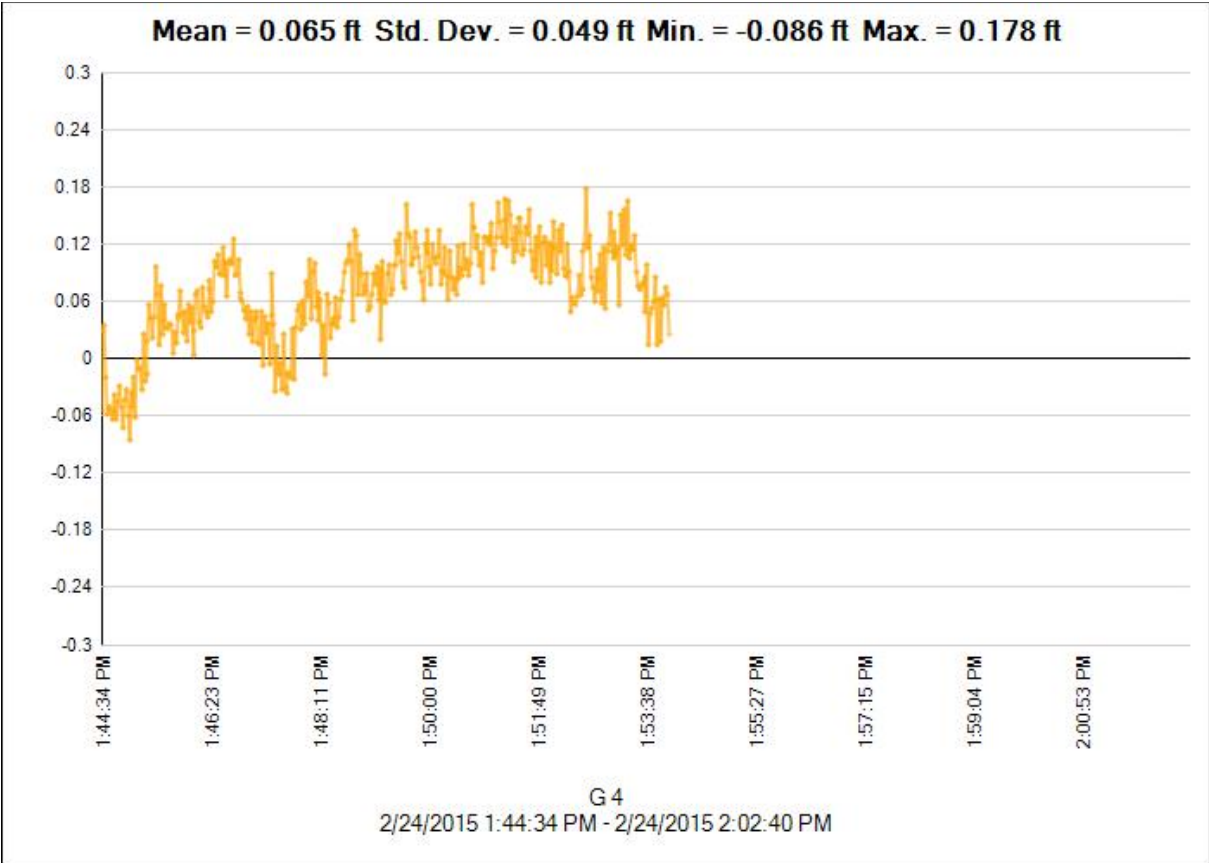
	From	To
Point ID:	TUS_4	CON122
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520550.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840552.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

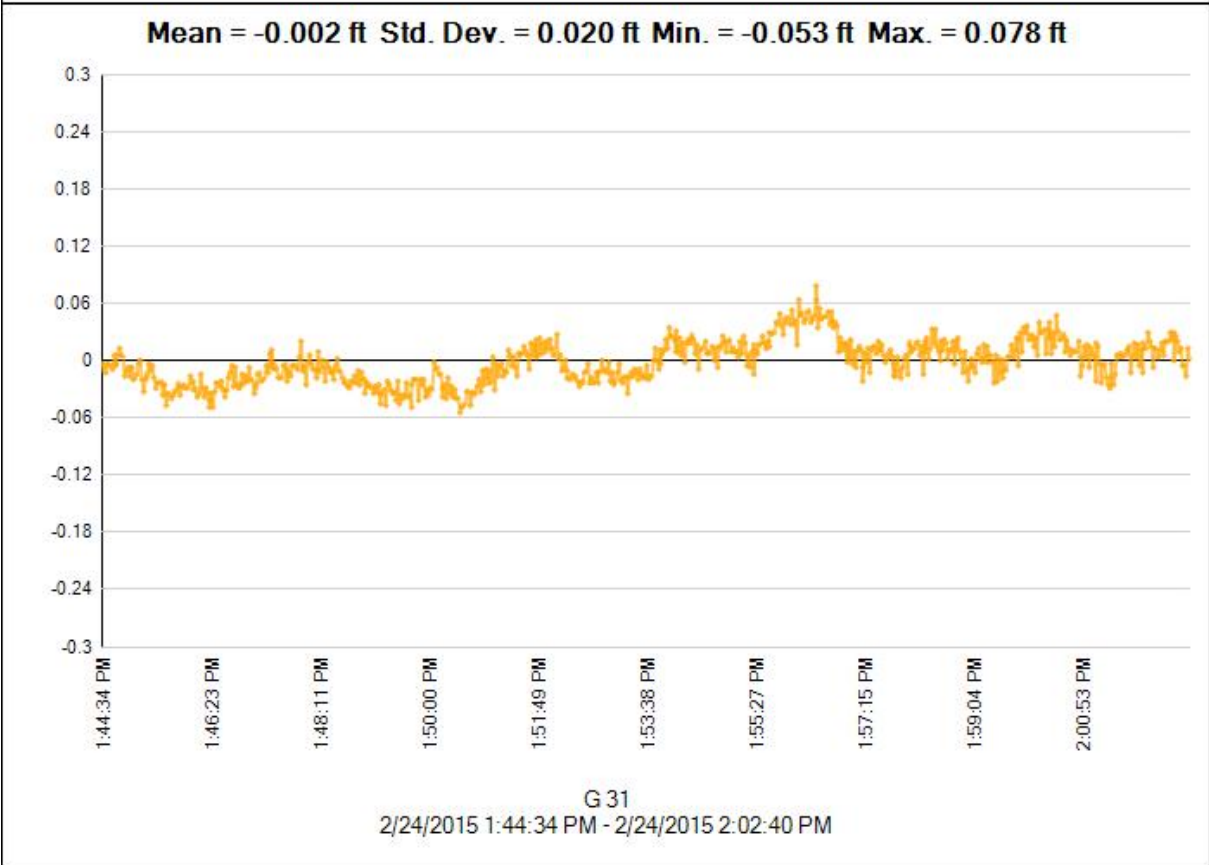
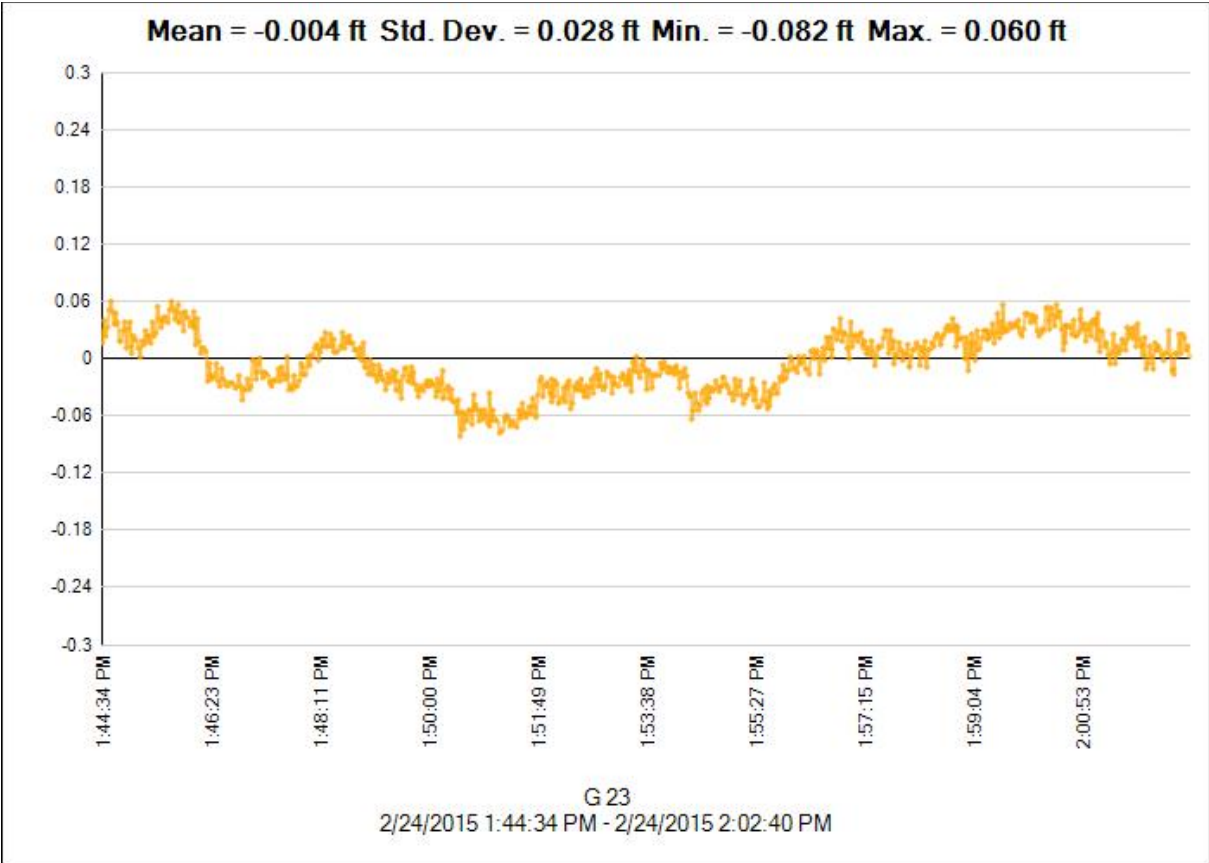
Tracking Summary

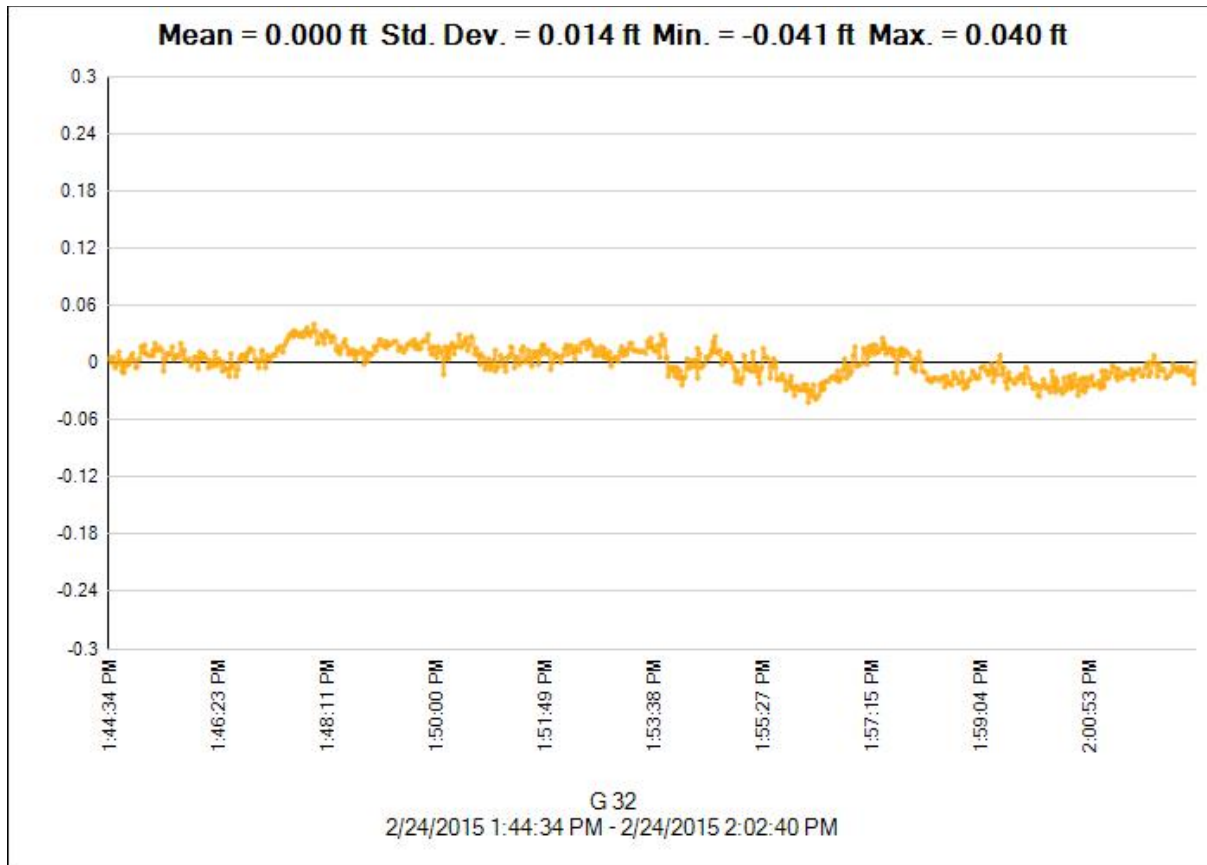
SV	2/24/2015 1:44:32 PM	Duration: 00:18:08	Major interval: 00:01:00	2/24/2015 2:02:40 PM
G 1	L1 L2			
G 3	L1 L2			
G 4	L1 L2			
G 9	L1 L2			
G 11	L1 L2			
G 14	L1 L2			
G 16	L1 L2			
G 23	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

Residuals











Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

TUS_4 - CON124 (2:27:17 PM-2:59:55 PM) (S12)

Baseline observation: TUS_4 --- CON124 (B12)
 Processed: 3/11/2015 8:53:53 AM
 Solution type: Fixed
 Frequency used: Dual Frequency (L1, L2)
 Horizontal precision: 0.036 ft
 Vertical precision: 0.046 ft
 RMS: 0.005 ft
 Maximum PDOP: 3.203
 Ephemeris used: Broadcast
 Antenna model: NGS Absolute
 Processing start time: 2/24/2015 2:27:22 PM (Local: UTC-7hr)
 Processing stop time: 2/24/2015 2:59:55 PM (Local: UTC-7hr)
 Processing duration: 00:32:33
 Processing interval: 1 second

Vector Components (Mark to Mark)

From: TUS_4					
Grid		Local		Global	
Easting	1073400.564 ft	Latitude	N31°49'26.56898"	Latitude	N31°49'26.56898"
Northing	301798.149 ft	Longitude	W110°42'51.92491"	Longitude	W110°42'51.92491"
Elevation	5013.407 ft	Height	4920.337 ft	Height	4920.337 ft

To: CON124					
Grid		Local		Global	
Easting	1113648.340 ft	Latitude	N32°00'07.49814"	Latitude	N32°00'07.49814"
Northing	367047.568 ft	Longitude	W110°34'56.20610"	Longitude	W110°34'56.20610"
Elevation	3562.159 ft	Height	3469.940 ft	Height	3469.939 ft

Vector					
ΔEasting	40247.776 ft	NS Fwd Azimuth	32°18'12"	ΔX	50889.324 ft
ΔNorthing	65249.419 ft	Ellipsoid Dist.	76658.064 ft	ΔY	18735.264 ft
ΔElevation	-1451.248 ft	ΔHeight	-1450.397 ft	ΔZ	54223.471 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.012 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.015 ft
$\sigma \Delta$ Northing	0.011 ft	σ Ellipsoid Dist.	0.014 ft	$\sigma \Delta$ Y	0.018 ft
$\sigma \Delta$ Elevation	0.024 ft	$\sigma \Delta$ Height	0.024 ft	$\sigma \Delta$ Z	0.017 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000198665		
Y	0.0000115428	0.0000313508	
Z	-0.0000024193	-0.0000201997	0.0000268334

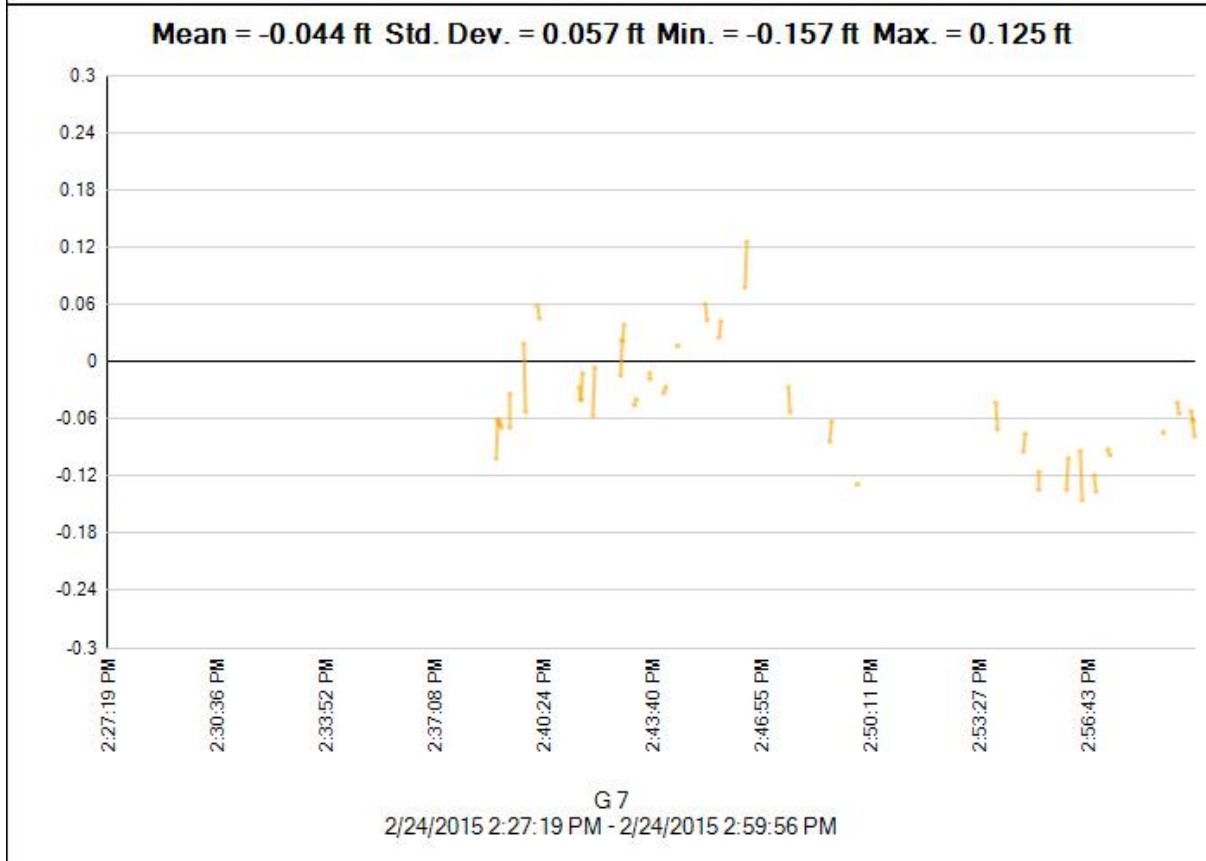
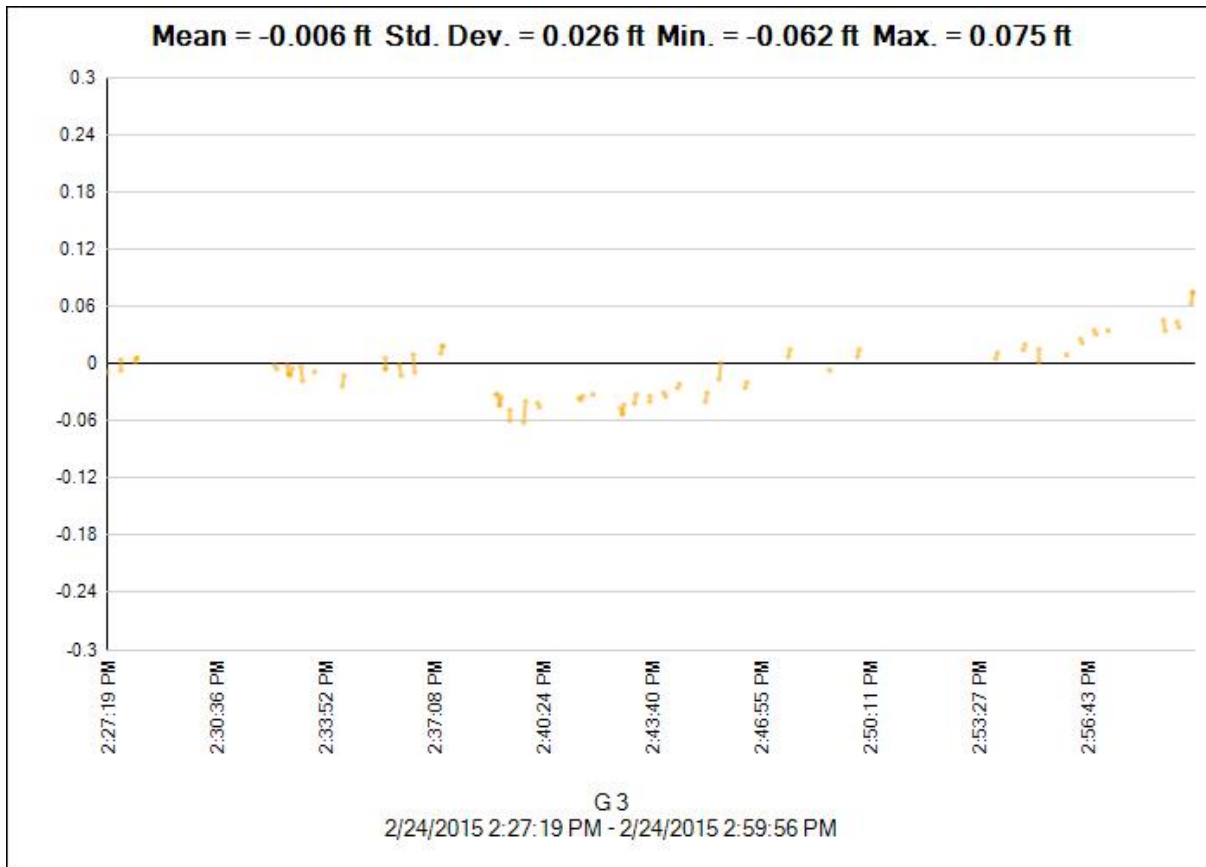
Occupations

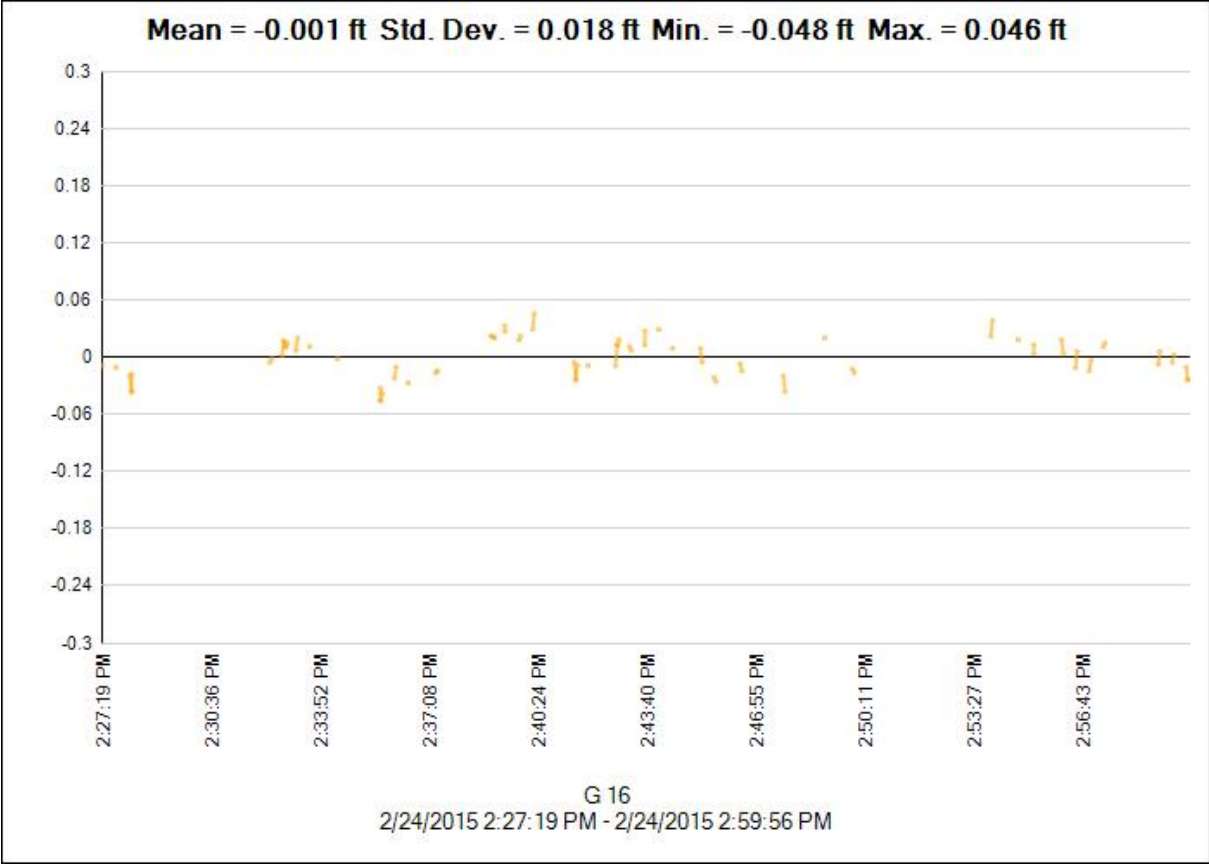
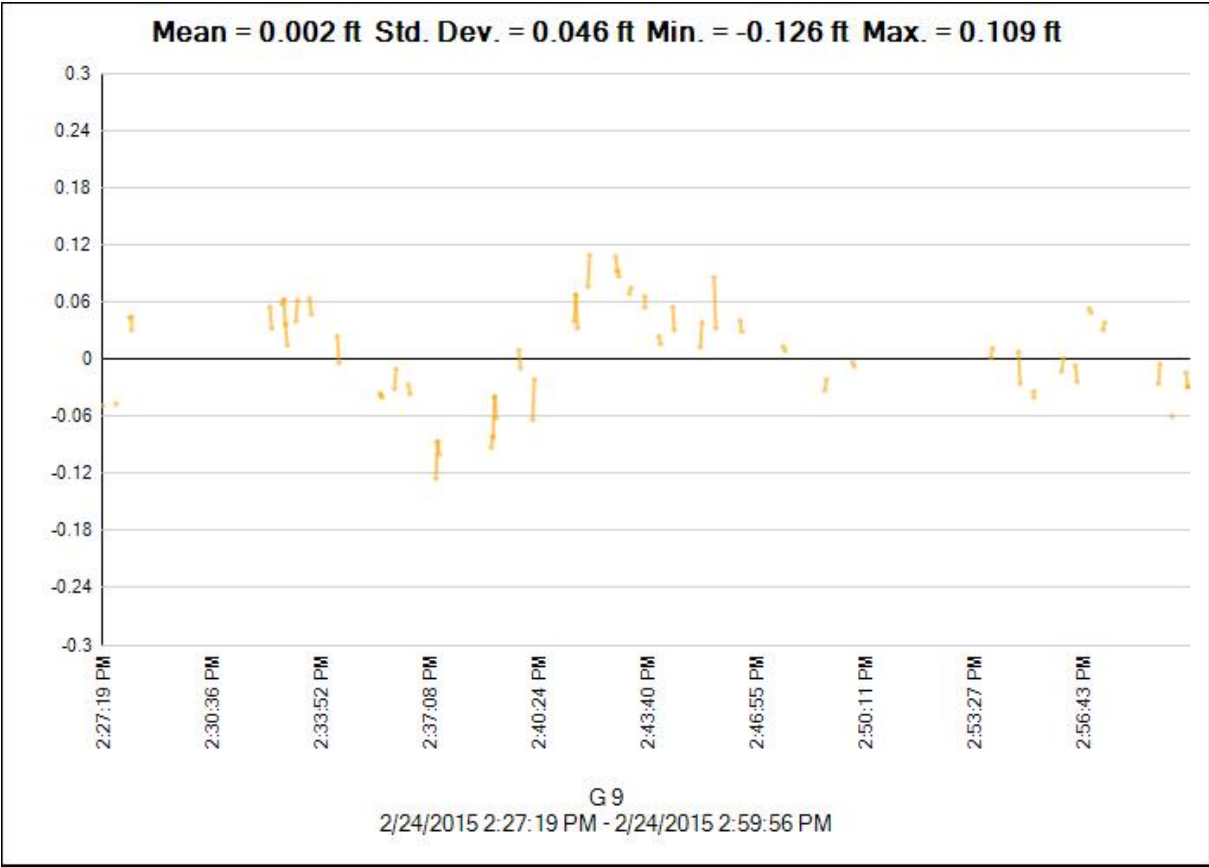
	From	To
Point ID:	TUS_4	CON124
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520550.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840553.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

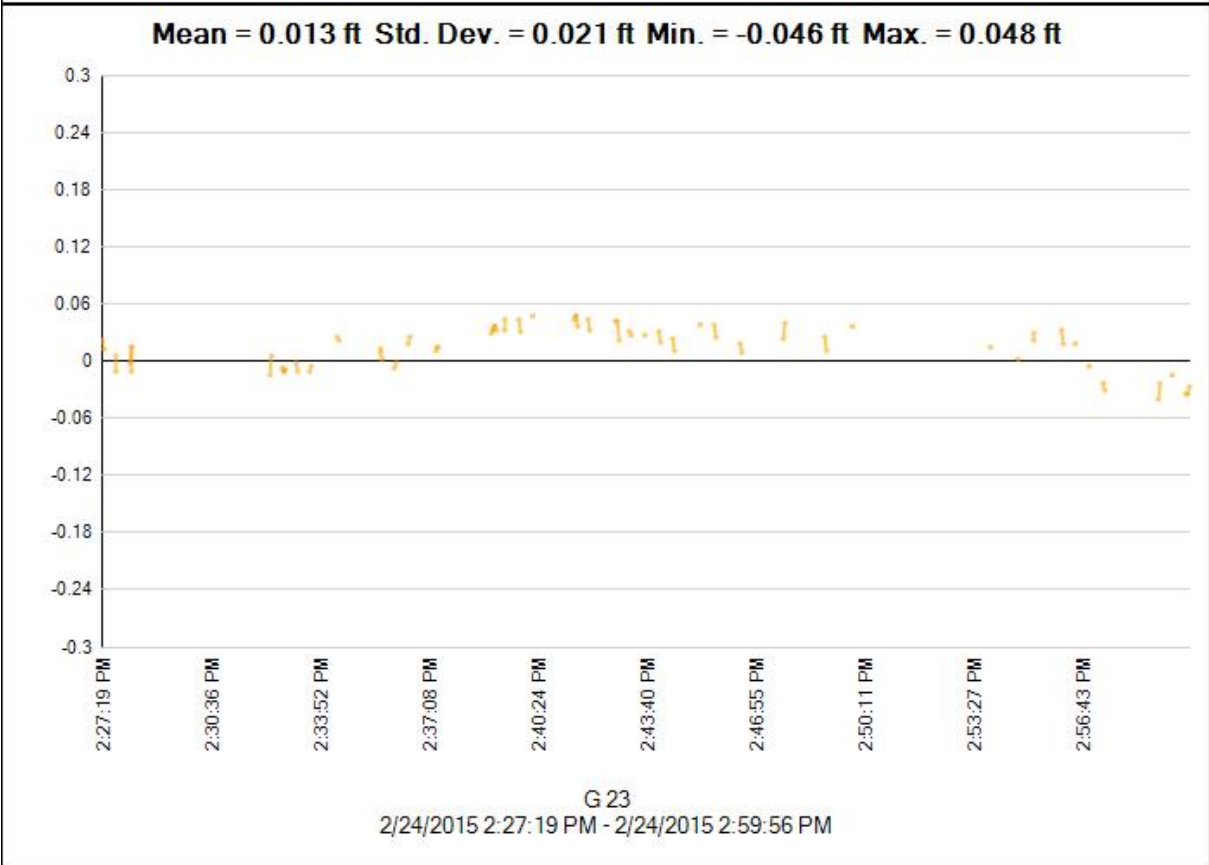
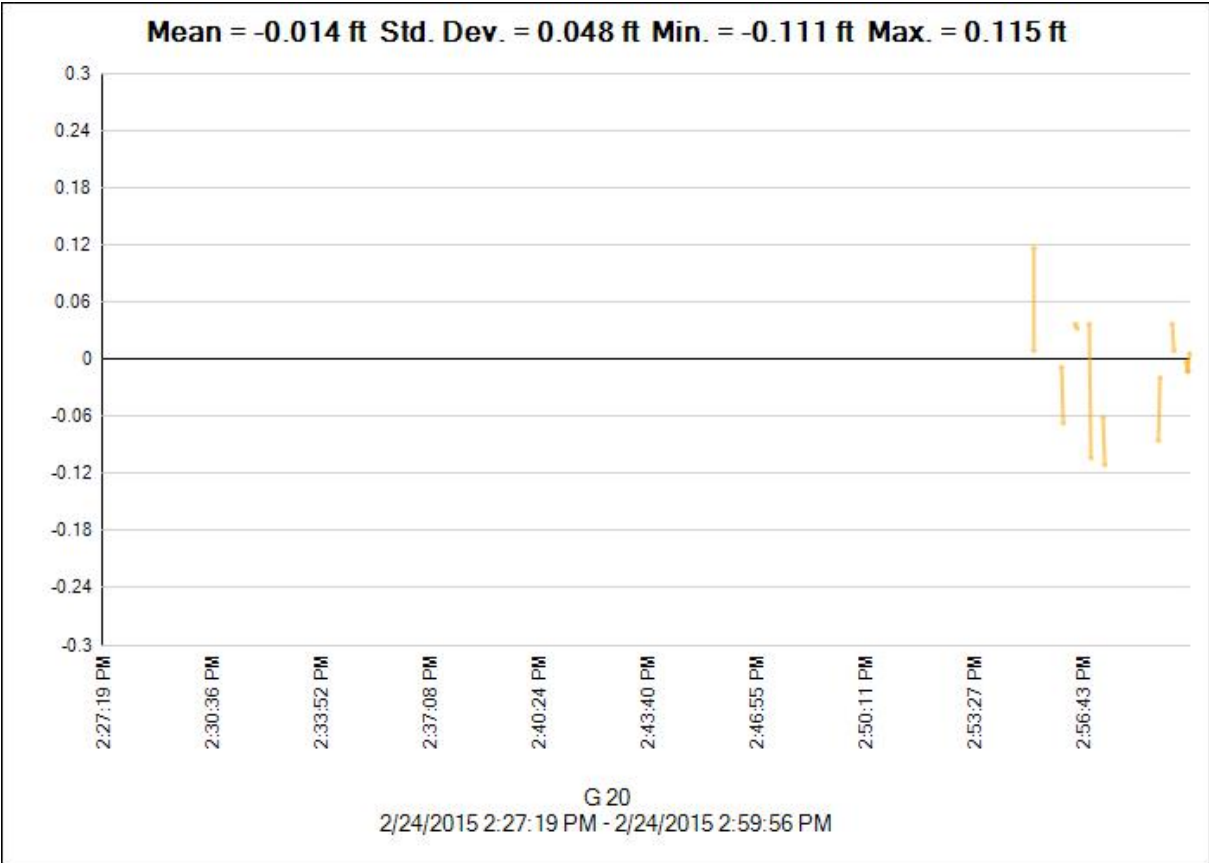
Tracking Summary

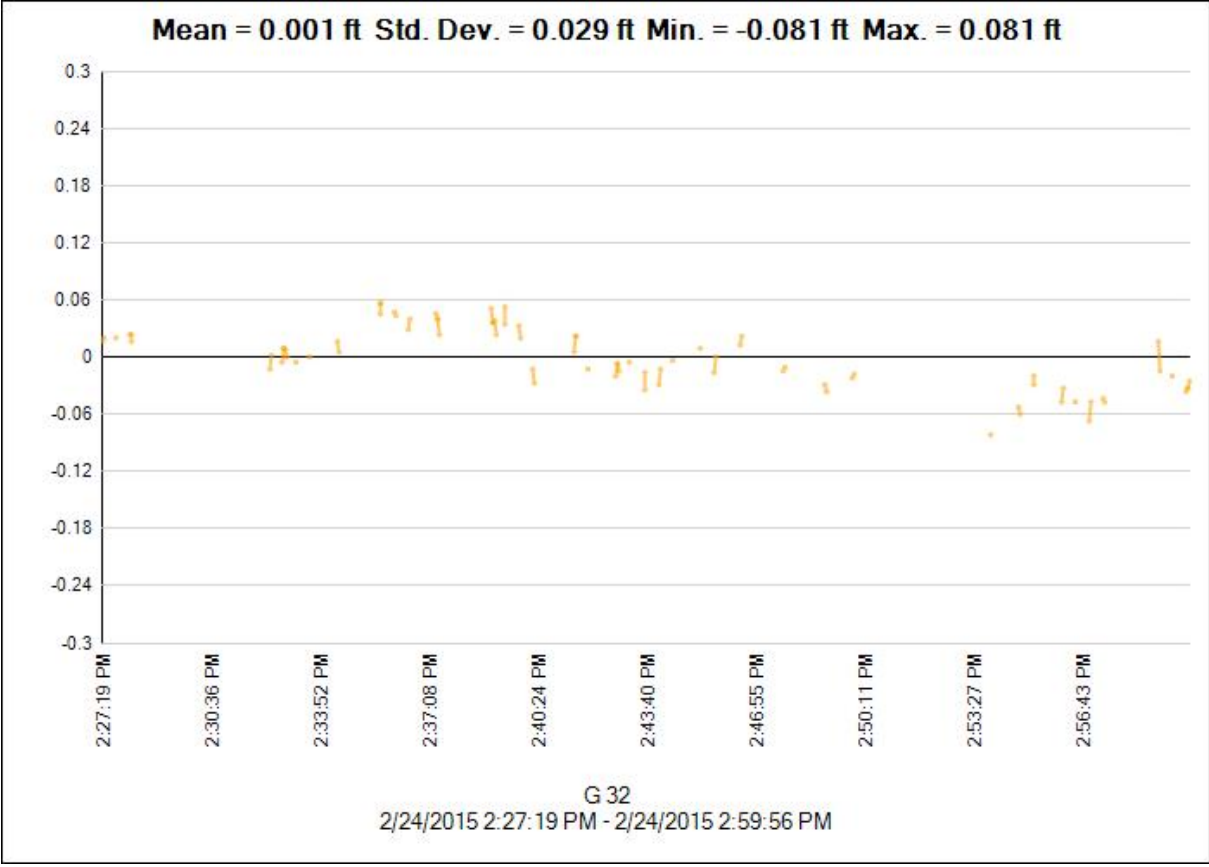
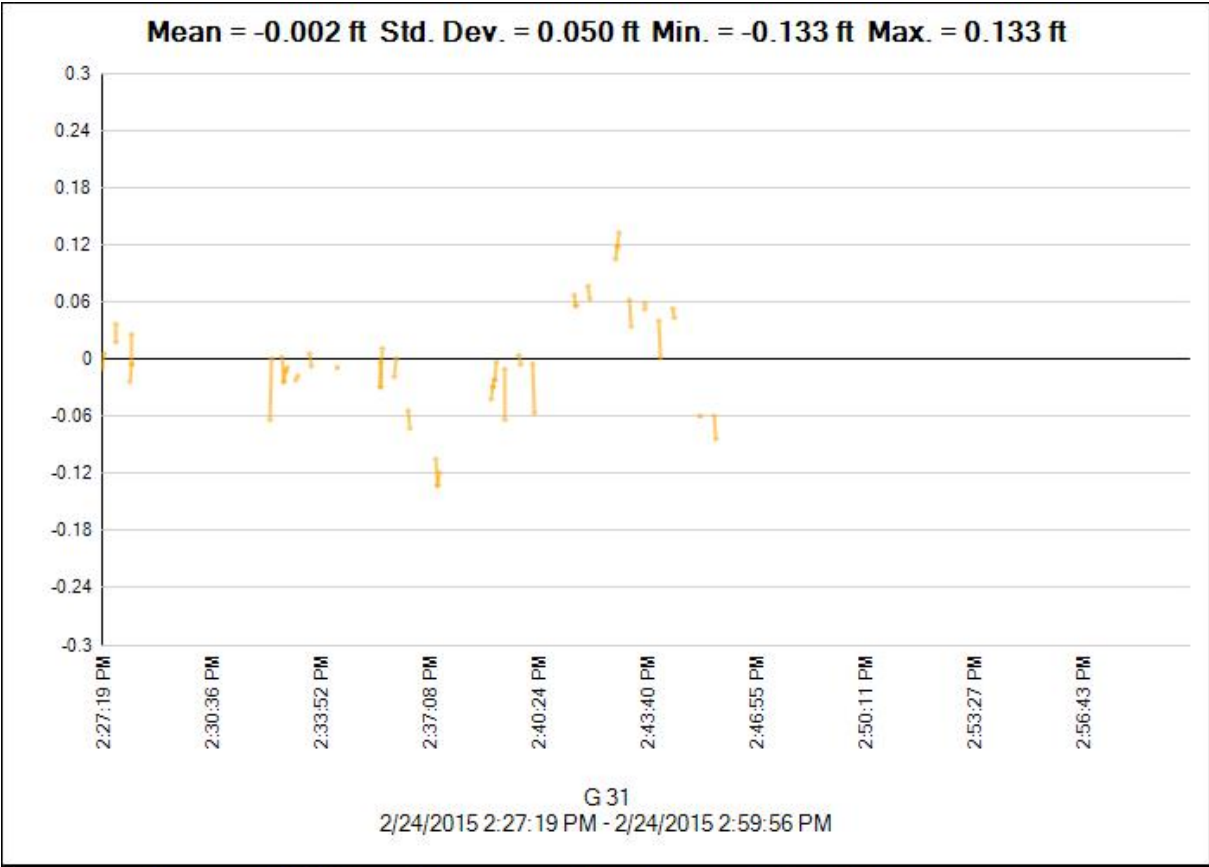
SV	2/24/2015 2:27:17 PM	Duration: 00:32:38	Major interval: 00:01:00	2/24/2015 2:59:55 PM
G 1	L1 L2			
G 3	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 16	L1 L2			
G 20	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

Residuals











Processing style

Elevation mask: 14.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

TUS_4 - CON119 (3:31:42 PM-4:02:40 PM) (S13)

Baseline observation: TUS_4 --- CON119 (B13)
Processed: 3/11/2015 8:53:58 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.027 ft
Vertical precision: 0.047 ft
RMS: 0.007 ft
Maximum PDOP: 2.285
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/24/2015 3:31:42 PM (Local: UTC-7hr)
Processing stop time: 2/24/2015 4:02:40 PM (Local: UTC-7hr)
Processing duration: 00:30:58
Processing interval: 1 second

Vector Components (Mark to Mark)

From:		TUS_4			
Grid		Local		Global	
Easting	1073400.564 ft	Latitude	N31°49'26.56898"	Latitude	N31°49'26.56898"
Northing	301798.149 ft	Longitude	W110°42'51.92491"	Longitude	W110°42'51.92491"
Elevation	5013.407 ft	Height	4920.337 ft	Height	4920.337 ft

To:		CON119			
Grid		Local		Global	
Easting	1053553.956 ft	Latitude	N32°01'10.39075"	Latitude	N32°01'10.39075"
Northing	372715.952 ft	Longitude	W110°46'33.27288"	Longitude	W110°46'33.27288"
Elevation	3118.798 ft	Height	3023.912 ft	Height	3023.911 ft

Vector					
ΔEasting	-19846.609 ft	NS Fwd Azimuth	345°00'05"	ΔX	-3950.307 ft
ΔNorthing	70917.803 ft	Ellipsoid Dist.	73638.750 ft	ΔY	43440.403 ft
ΔElevation	-1894.609 ft	ΔHeight	-1896.425 ft	ΔZ	59377.176 ft

Standard Errors

Vector errors:					
σ ΔEasting	0.010 ft	σ NS fwd Azimuth	0°00'00"	σ ΔX	0.015 ft
σ ΔNorthing	0.010 ft	σ Ellipsoid Dist.	0.009 ft	σ ΔY	0.020 ft
σ ΔElevation	0.024 ft	σ ΔHeight	0.024 ft	σ ΔZ	0.013 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000197675		
Y	0.0000200111	0.0000355946	
Z	-0.0000093737	-0.0000149583	0.0000159768

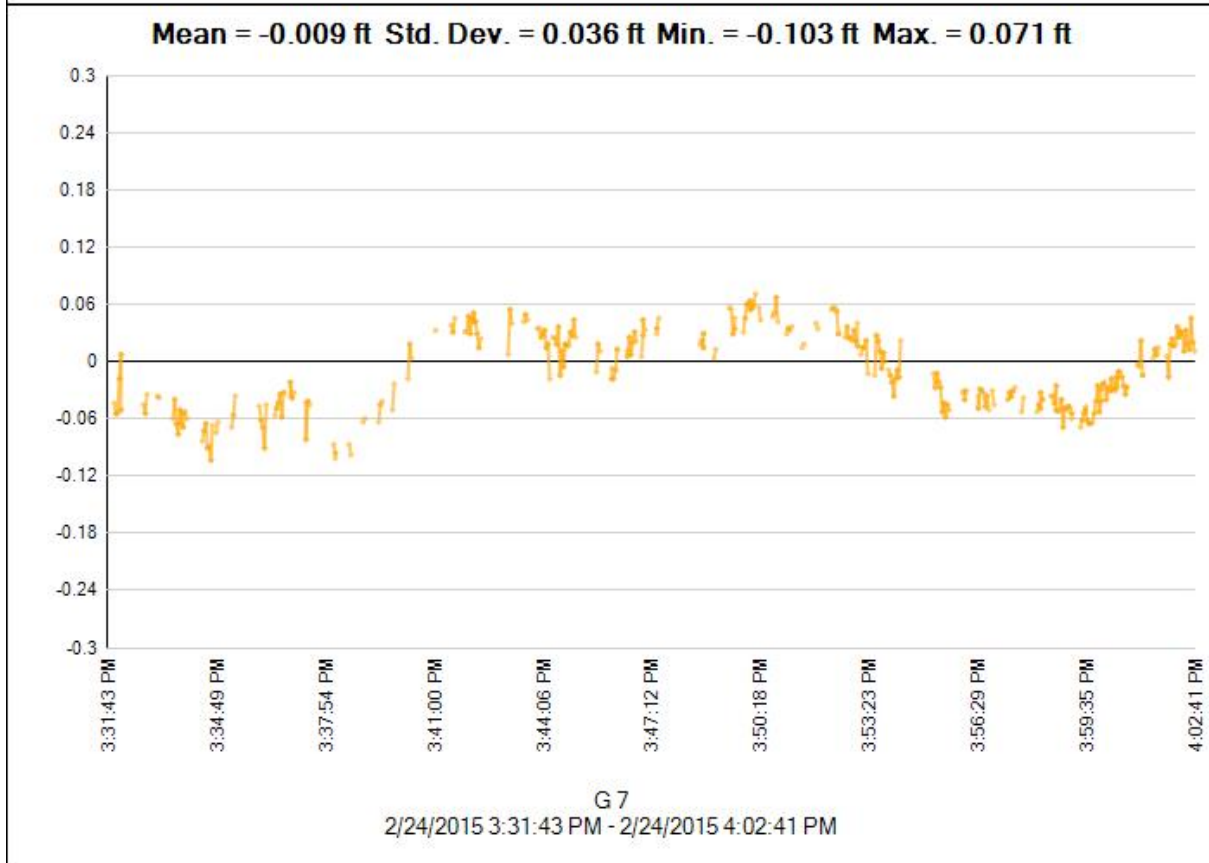
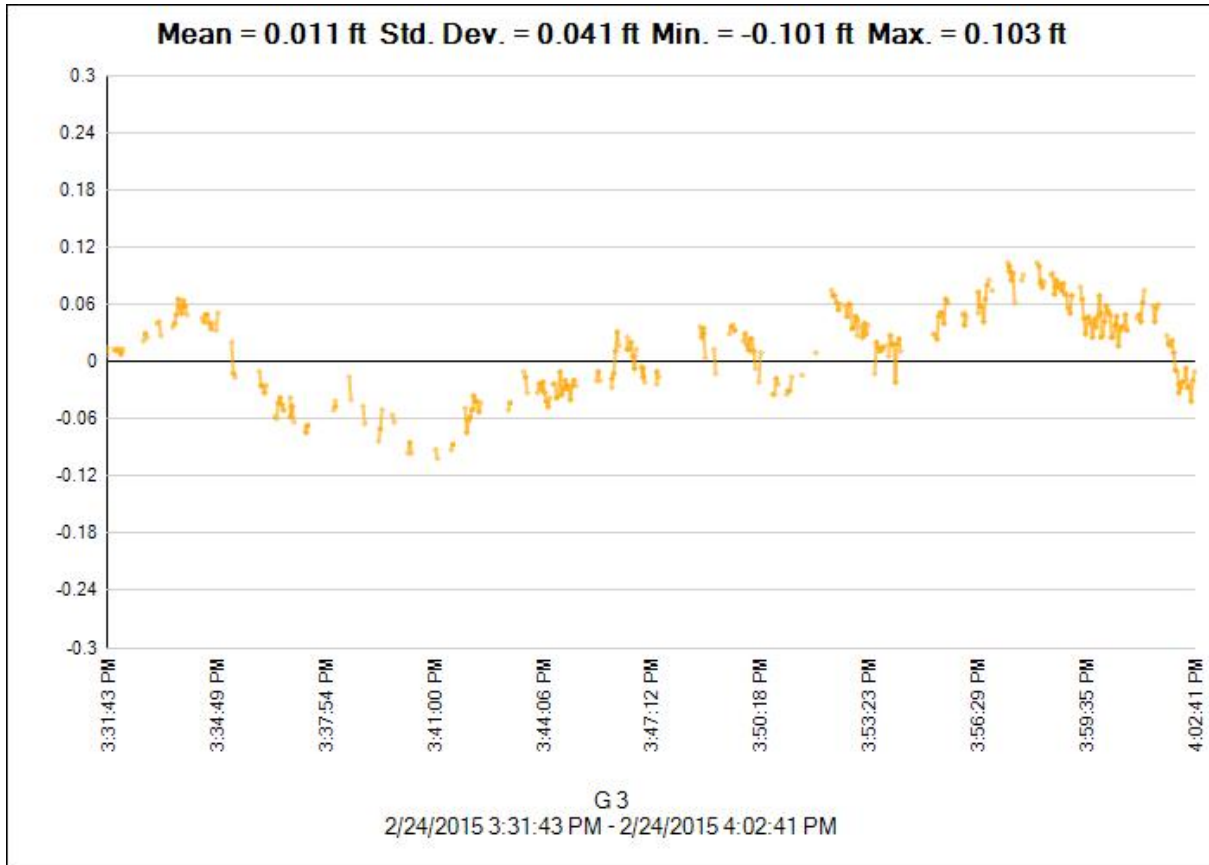
Occupations

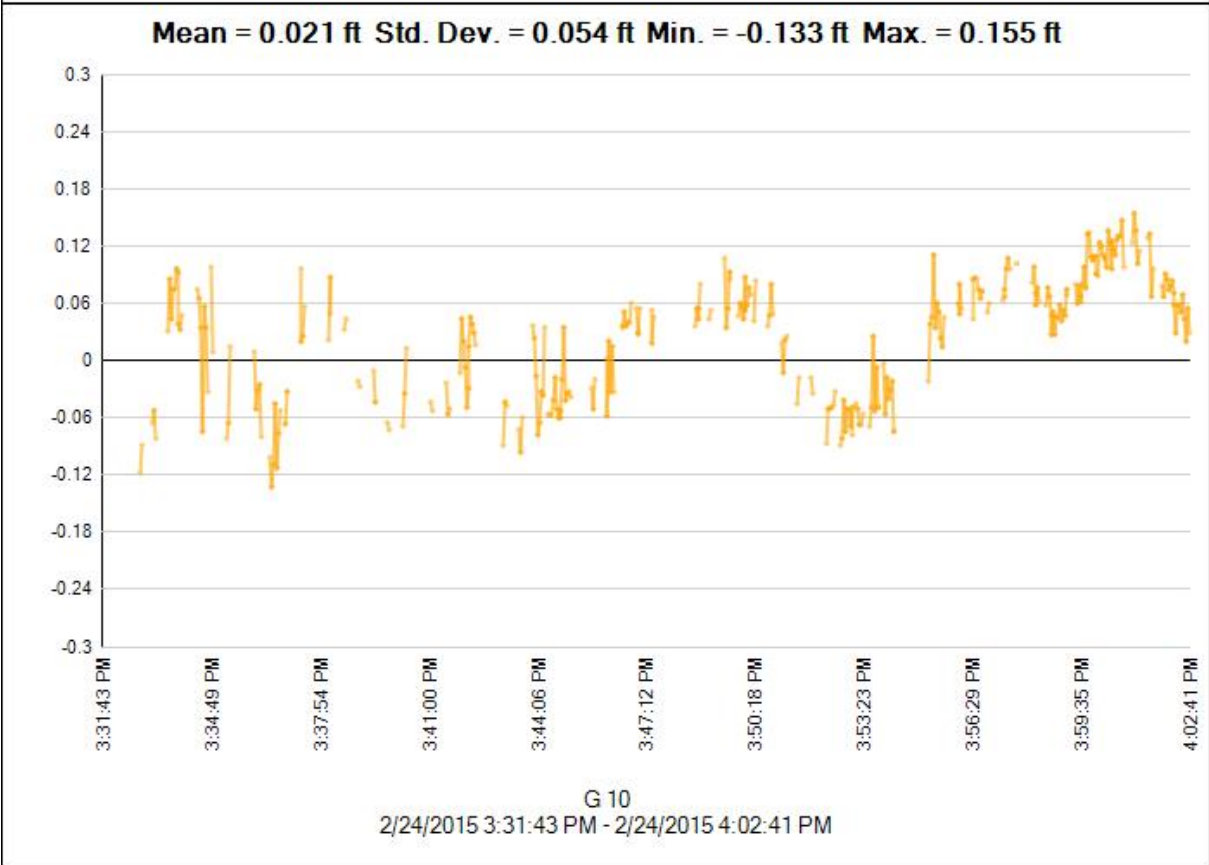
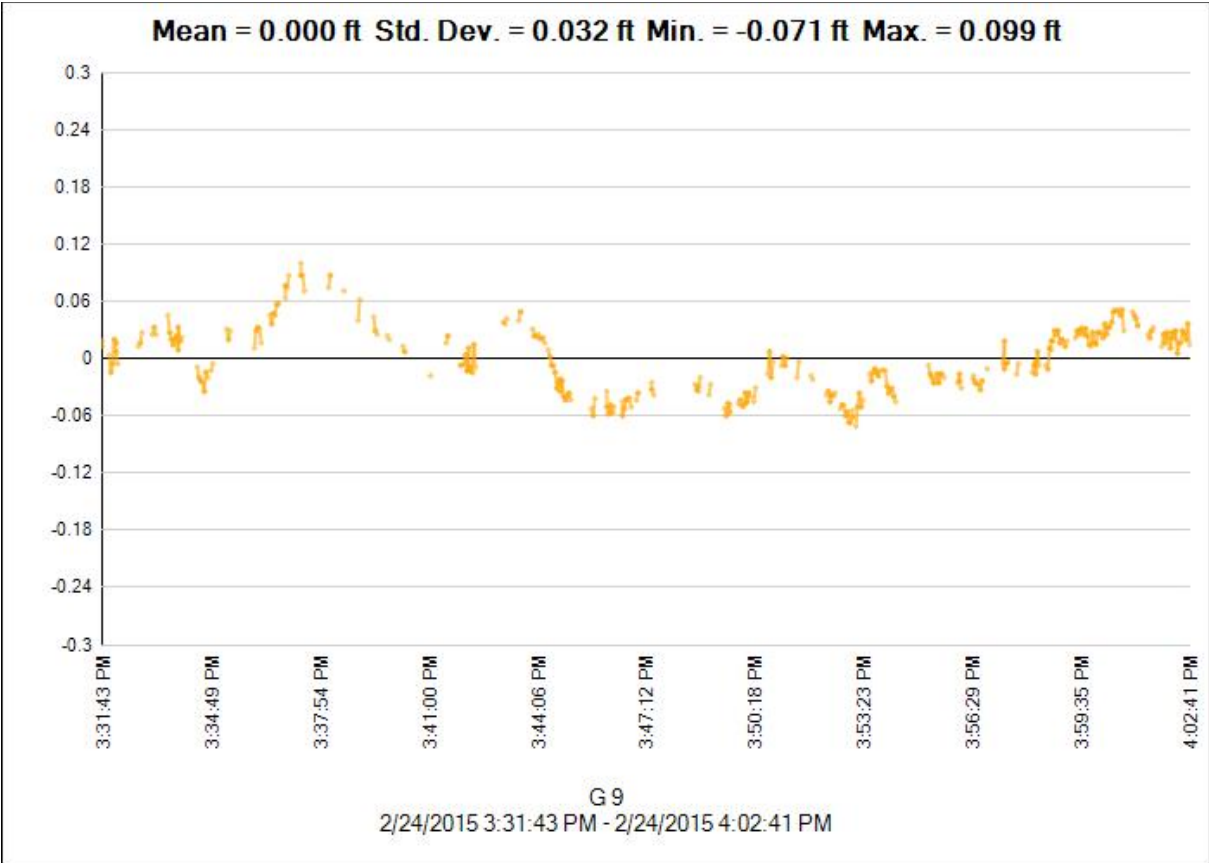
	From	To
Point ID:	TUS_4	CON119
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520550.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840554.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

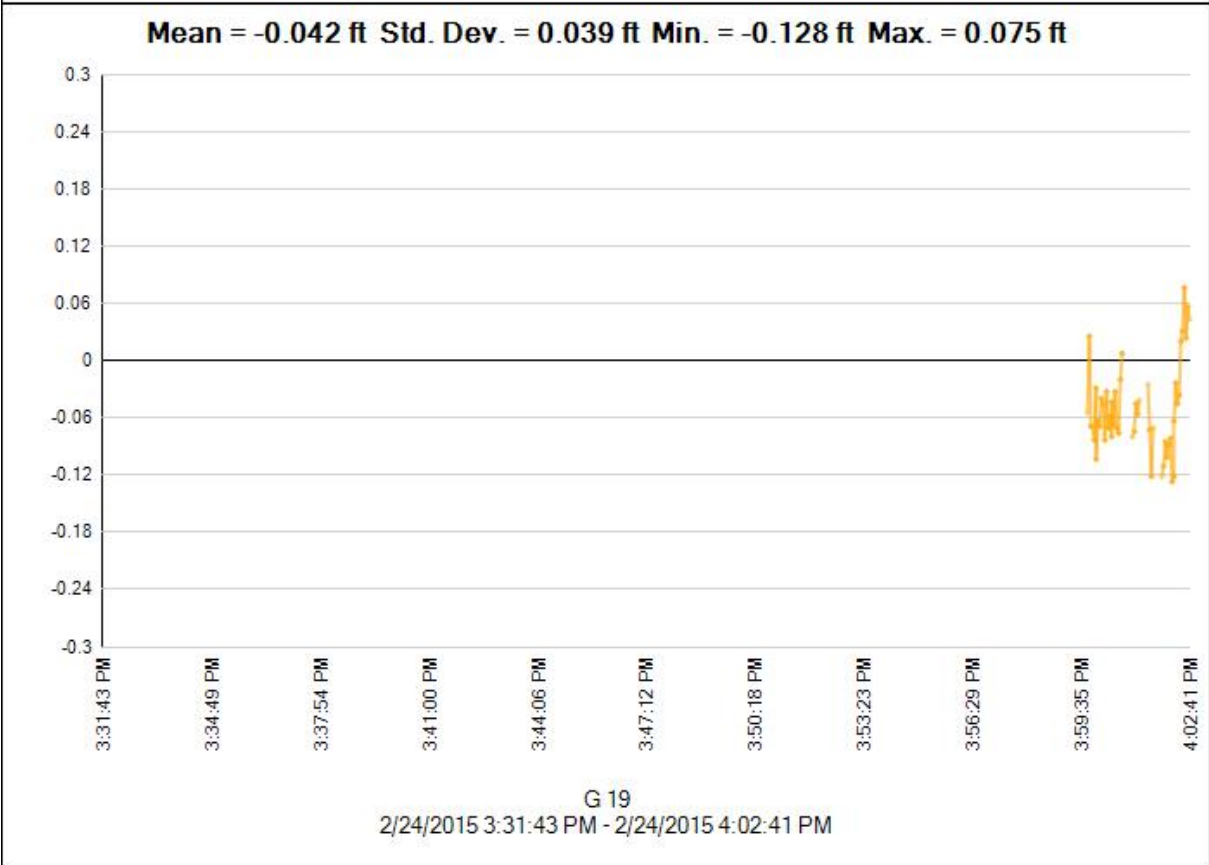
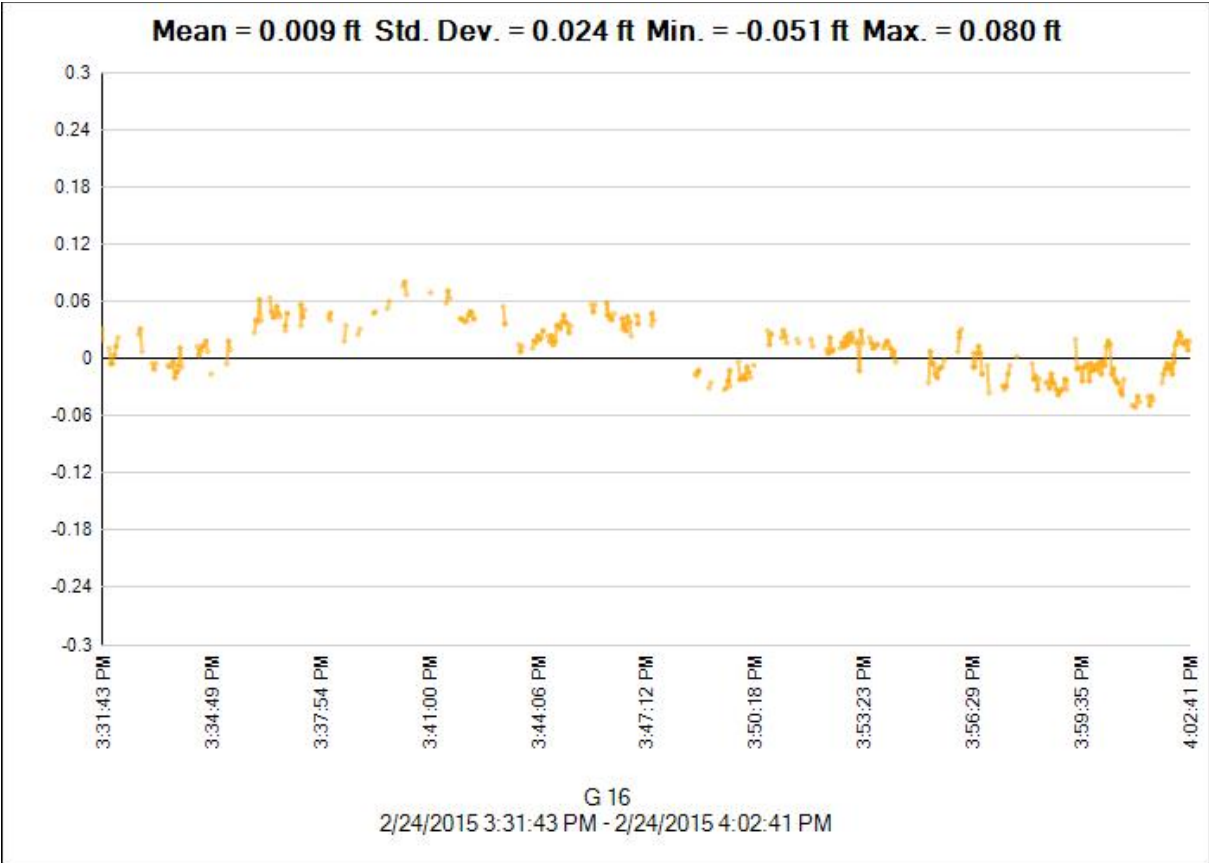
Tracking Summary

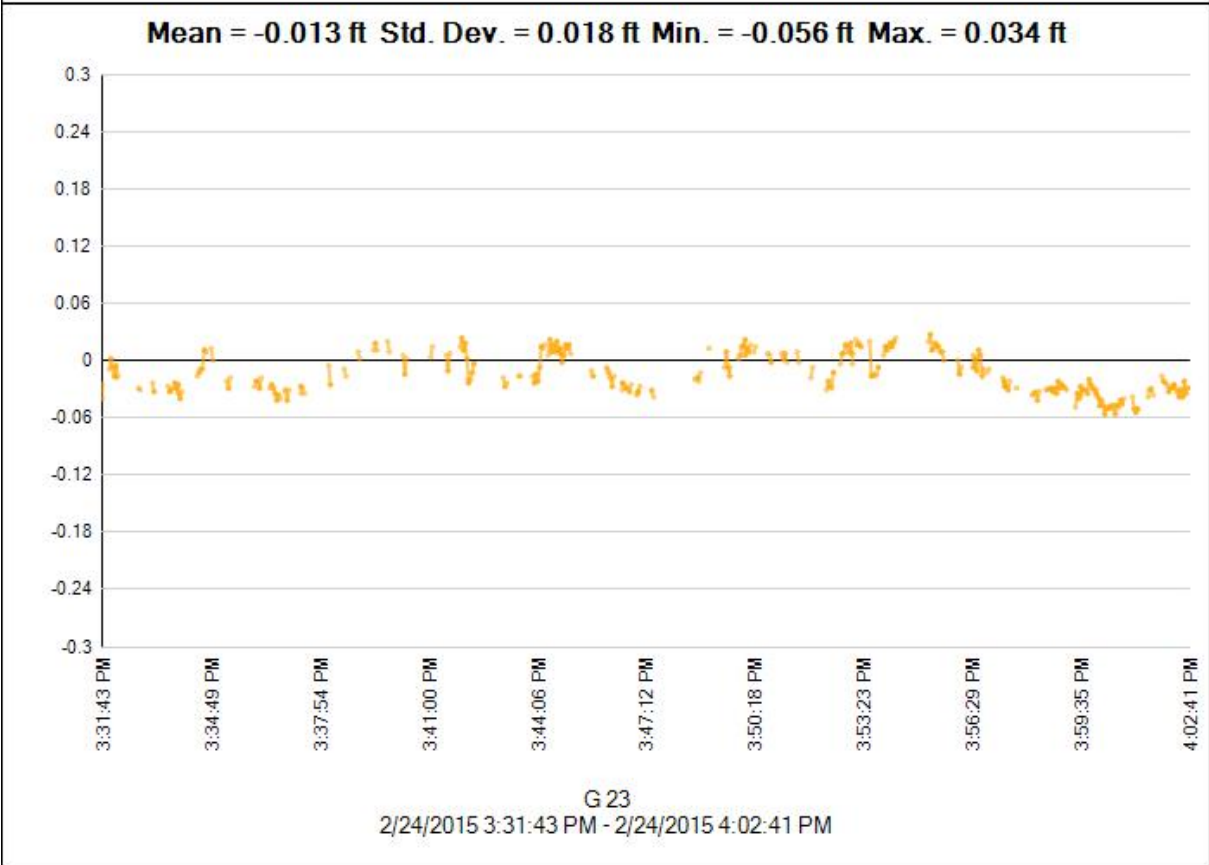
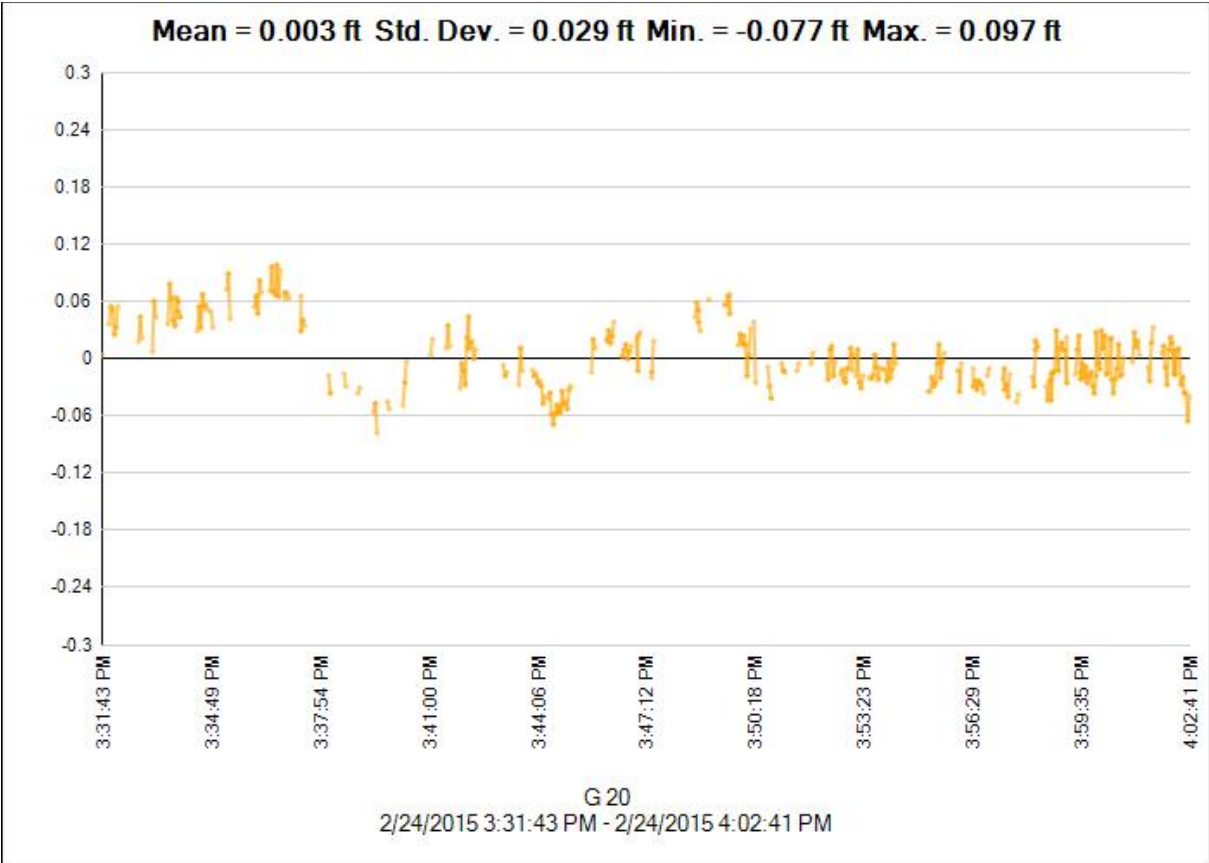
SV	2/24/2015 3:31:42 PM	Duration: 00:30:58	Major interval: 00:01:00	2/24/2015 4:02:40 PM
G 3				
G 7				
G 9				
G 10				
G 16				
G 19				
G 20				
G 23				
G 27				
G 30				
G 32				

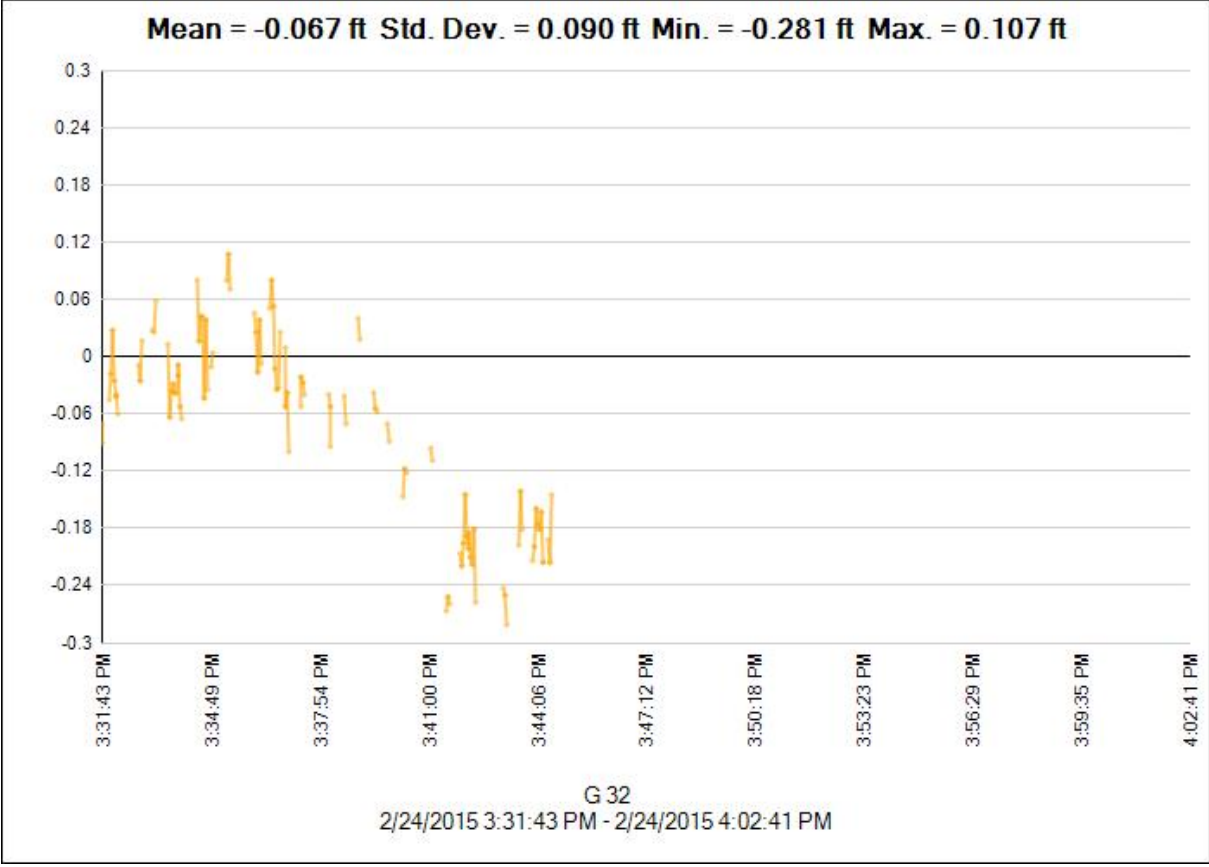
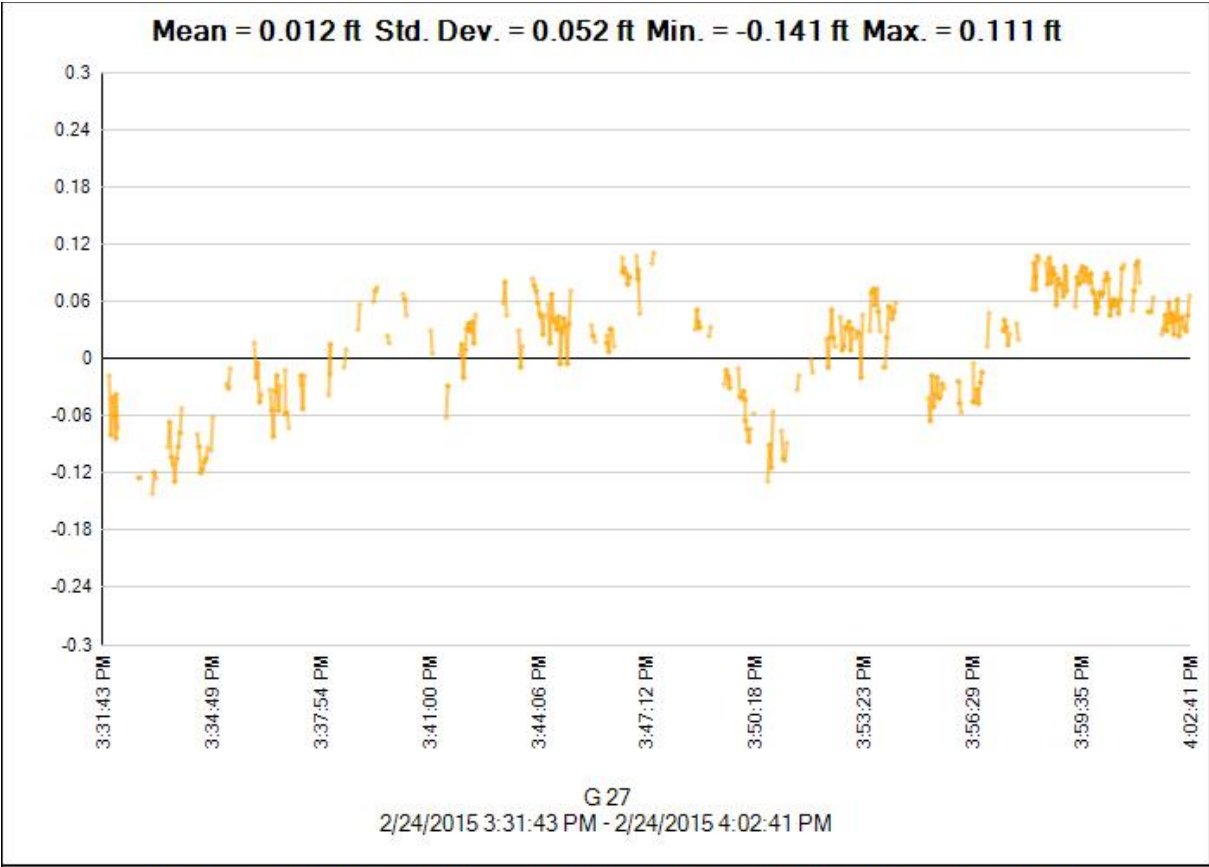
Residuals













Processing style

Elevation mask: 14.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

TUS_4 - CON120 (4:37:11 PM-5:08:39 PM) (S14)

Baseline observation: TUS_4 --- CON120 (B14)
Processed: 3/11/2015 8:54:06 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.031 ft
Vertical precision: 0.035 ft
RMS: 0.003 ft
Maximum PDOP: 2.218
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/24/2015 4:37:11 PM (Local: UTC-7hr)
Processing stop time: 2/24/2015 5:08:39 PM (Local: UTC-7hr)
Processing duration: 00:31:28
Processing interval: 1 second

Vector Components (Mark to Mark)

From:		TUS_4			
Grid		Local		Global	
Easting	1073400.564 ft	Latitude	N31°49'26.56898"	Latitude	N31°49'26.56898"
Northing	301798.149 ft	Longitude	W110°42'51.92491"	Longitude	W110°42'51.92491"
Elevation	5013.407 ft	Height	4920.337 ft	Height	4920.337 ft

To:		CON120			
Grid		Local		Global	
Easting	1031382.789 ft	Latitude	N31°55'19.11327"	Latitude	N31°55'19.11326"
Northing	336988.006 ft	Longitude	W110°50'54.85993"	Longitude	W110°50'54.85993"
Elevation	3135.909 ft	Height	3040.066 ft	Height	3040.066 ft

Vector					
ΔEasting	-42017.775 ft	NS Fwd Azimuth	310°34'52"	ΔX	-31701.112 ft
ΔNorthing	35189.857 ft	Ellipsoid Dist.	54804.787 ft	ΔY	33863.087 ft
ΔElevation	-1877.498 ft	ΔHeight	-1880.271 ft	ΔZ	29267.272 ft

Standard Errors

Vector errors:					
σ ΔEasting	0.007 ft	σ NS fwd Azimuth	0°00'00"	σ ΔX	0.010 ft
σ ΔNorthing	0.012 ft	σ Ellipsoid Dist.	0.008 ft	σ ΔY	0.015 ft
σ ΔElevation	0.018 ft	σ ΔHeight	0.018 ft	σ ΔZ	0.014 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000092090		
Y	0.0000091481	0.0000220965	
Z	-0.0000011927	-0.0000067993	0.0000175545

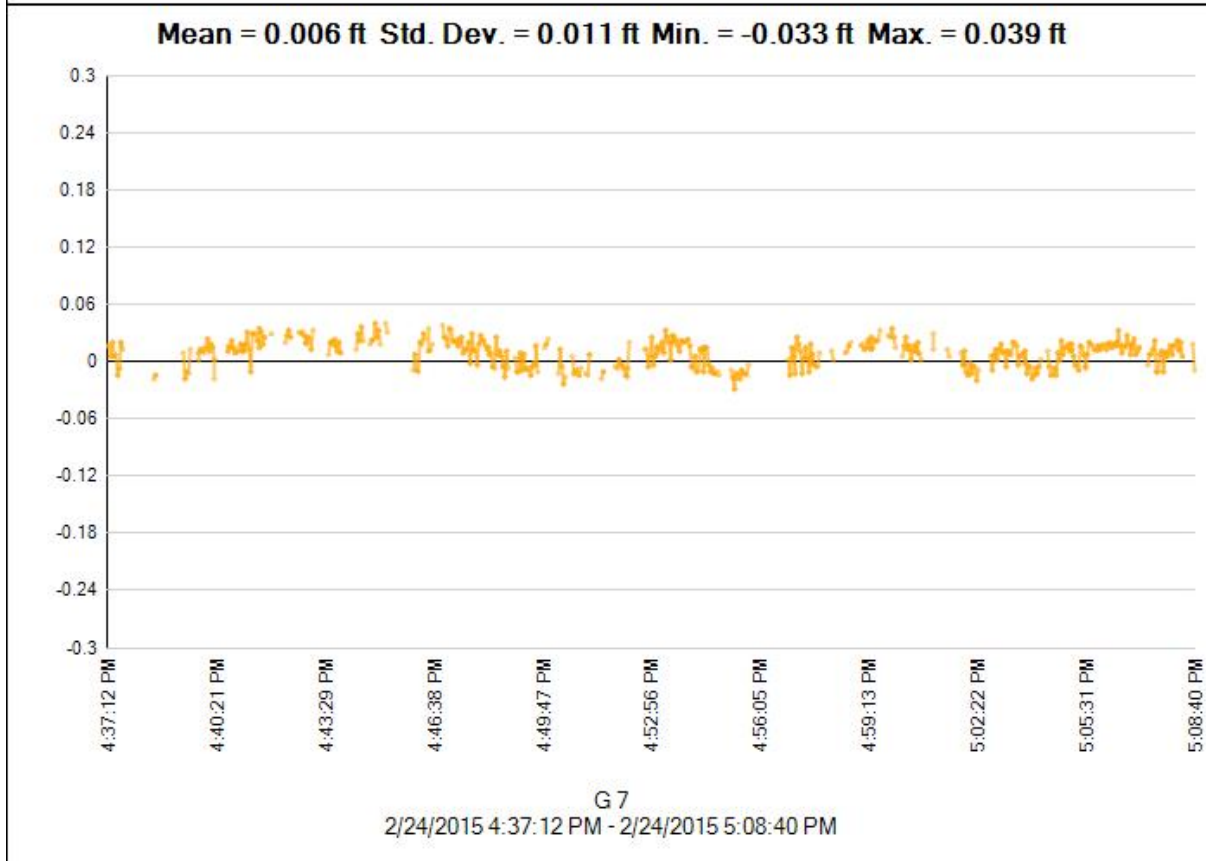
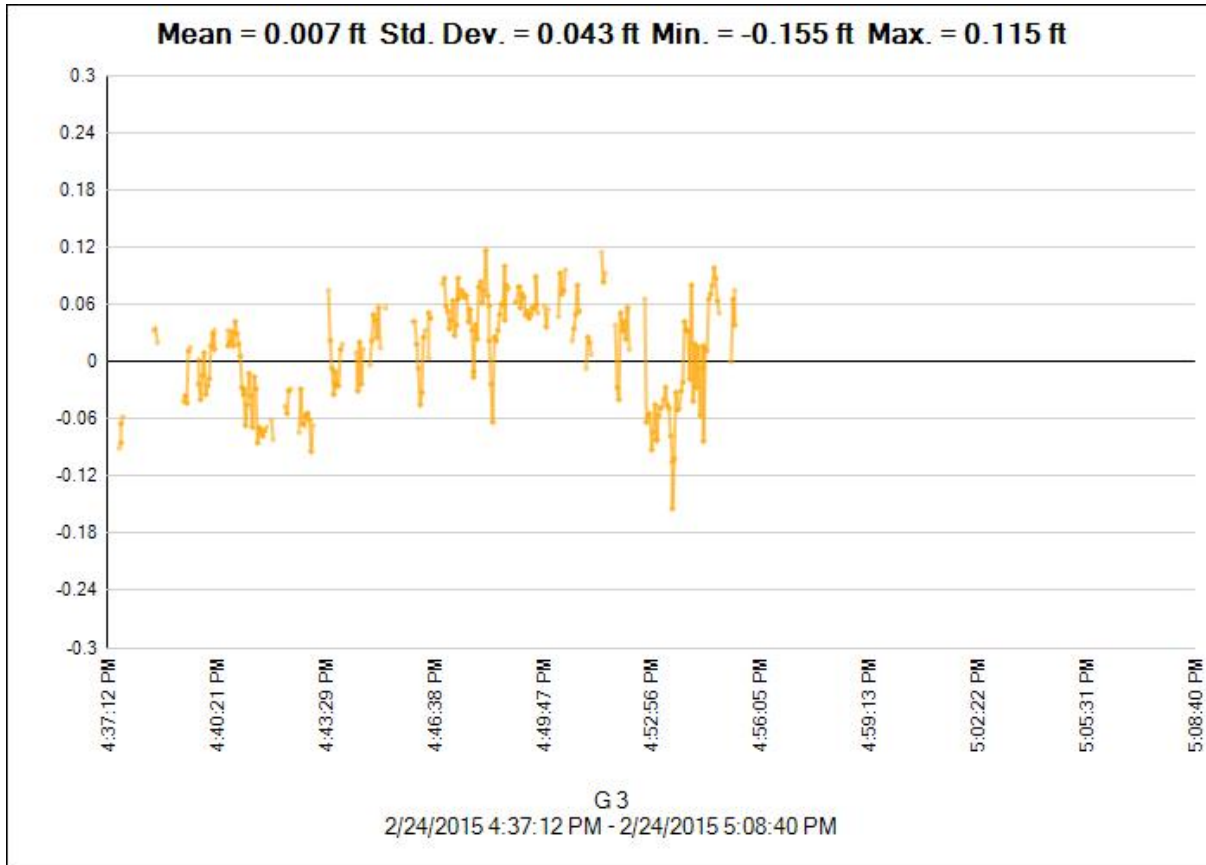
Occupations

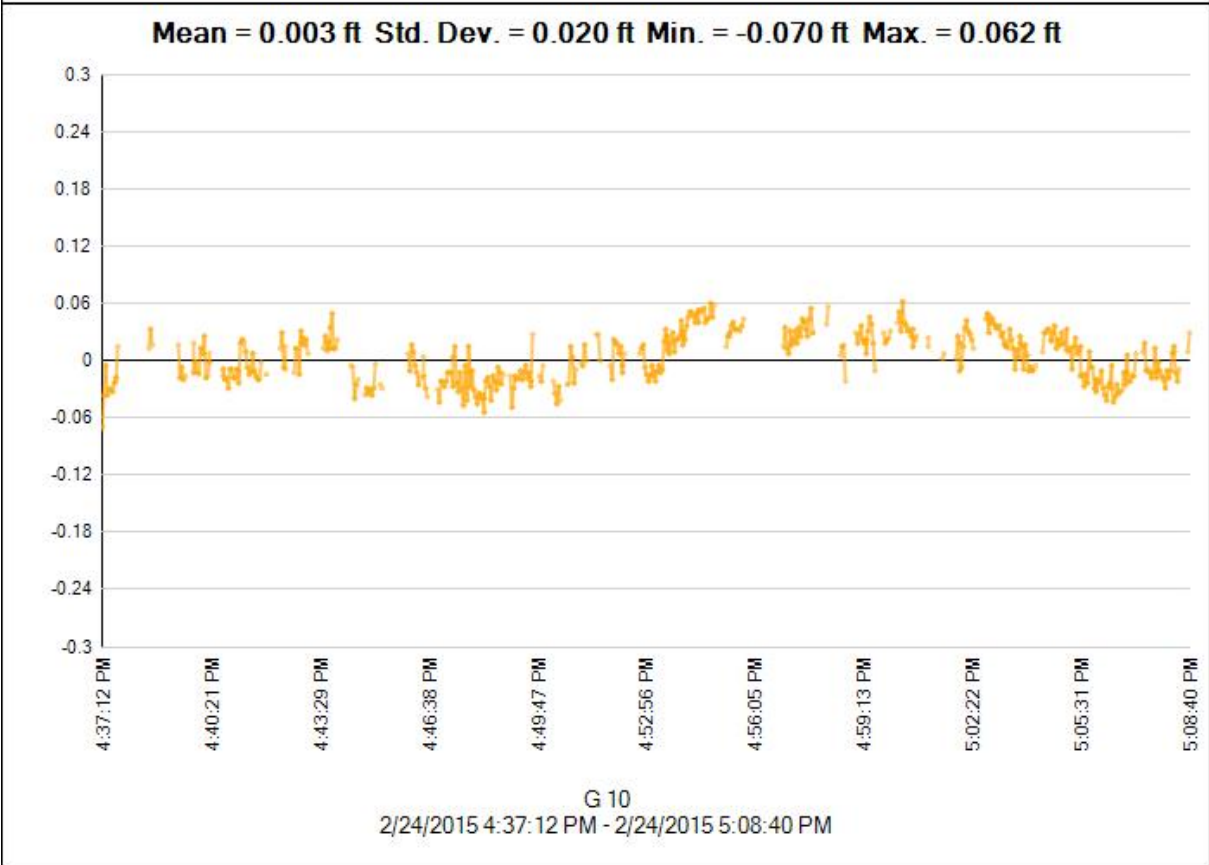
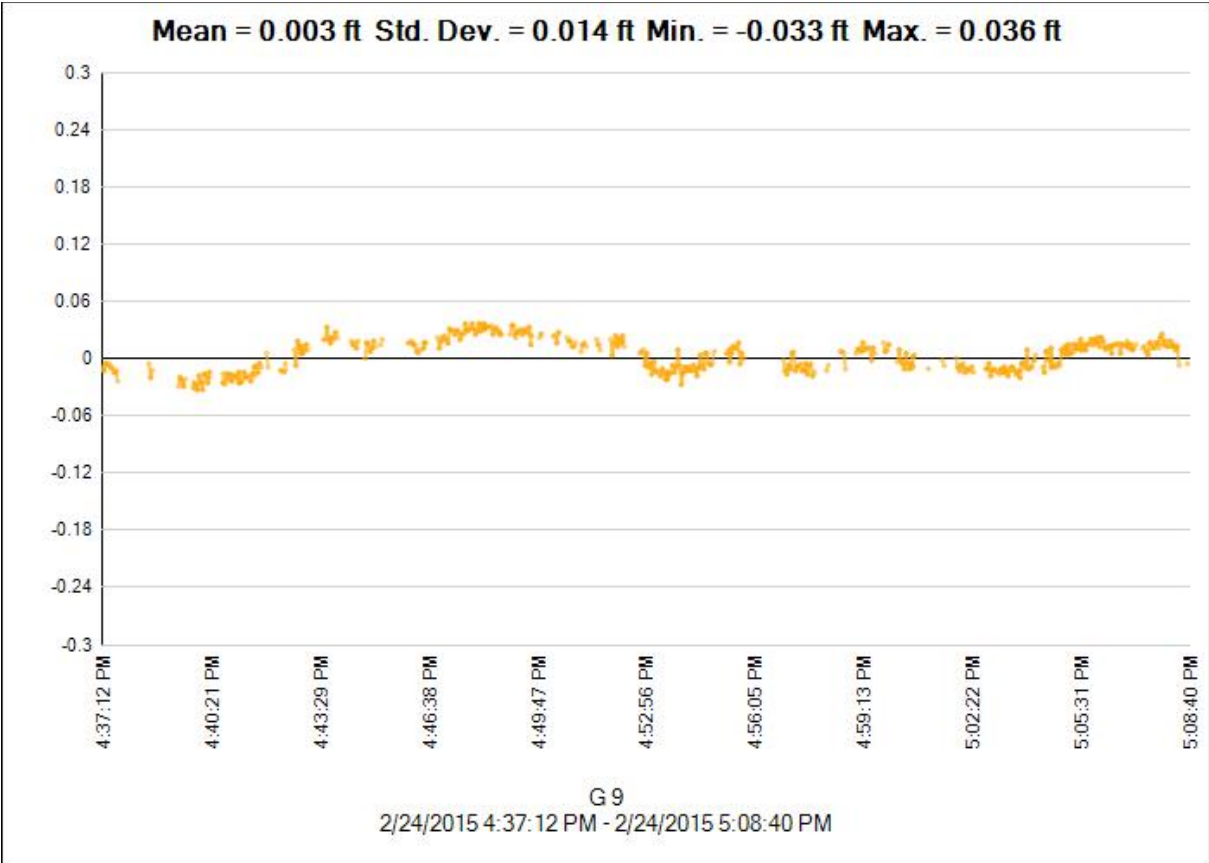
	From	To
Point ID:	TUS_4	CON120
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520550.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840555.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

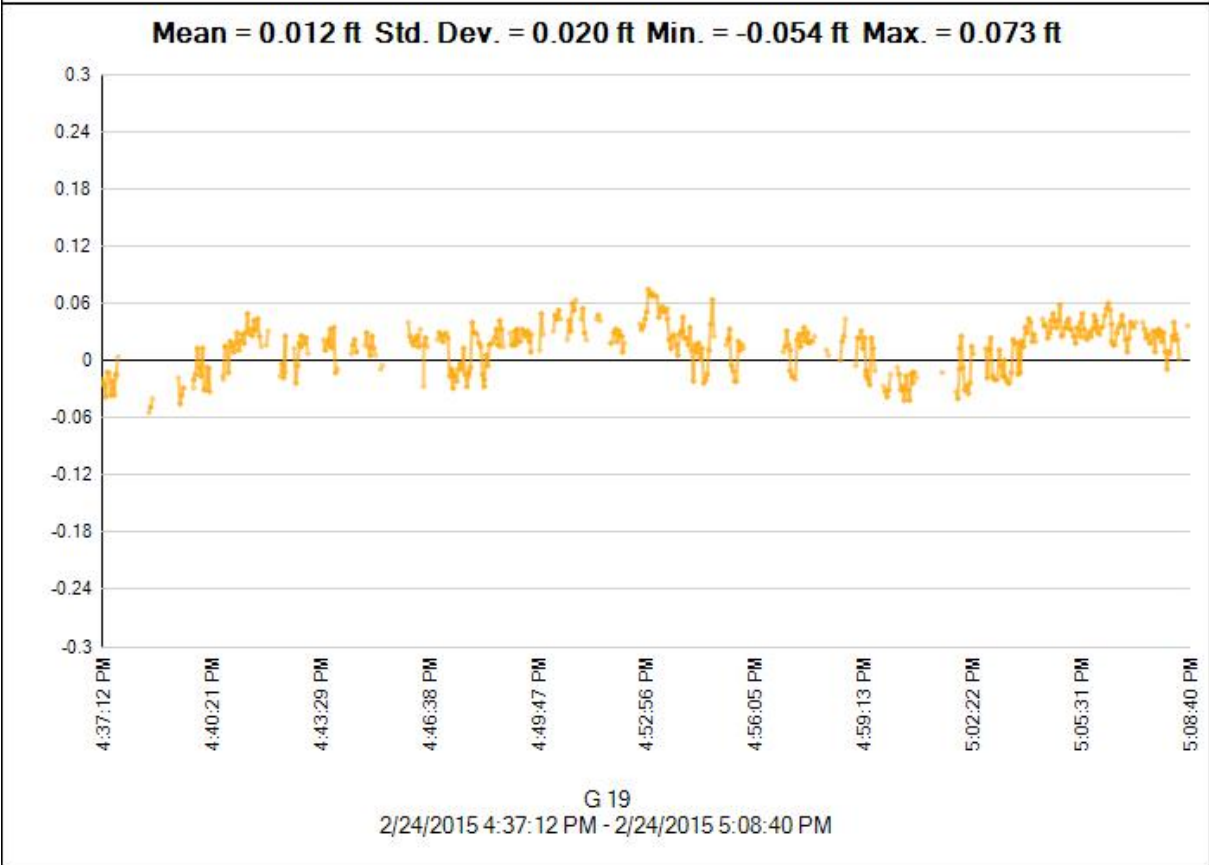
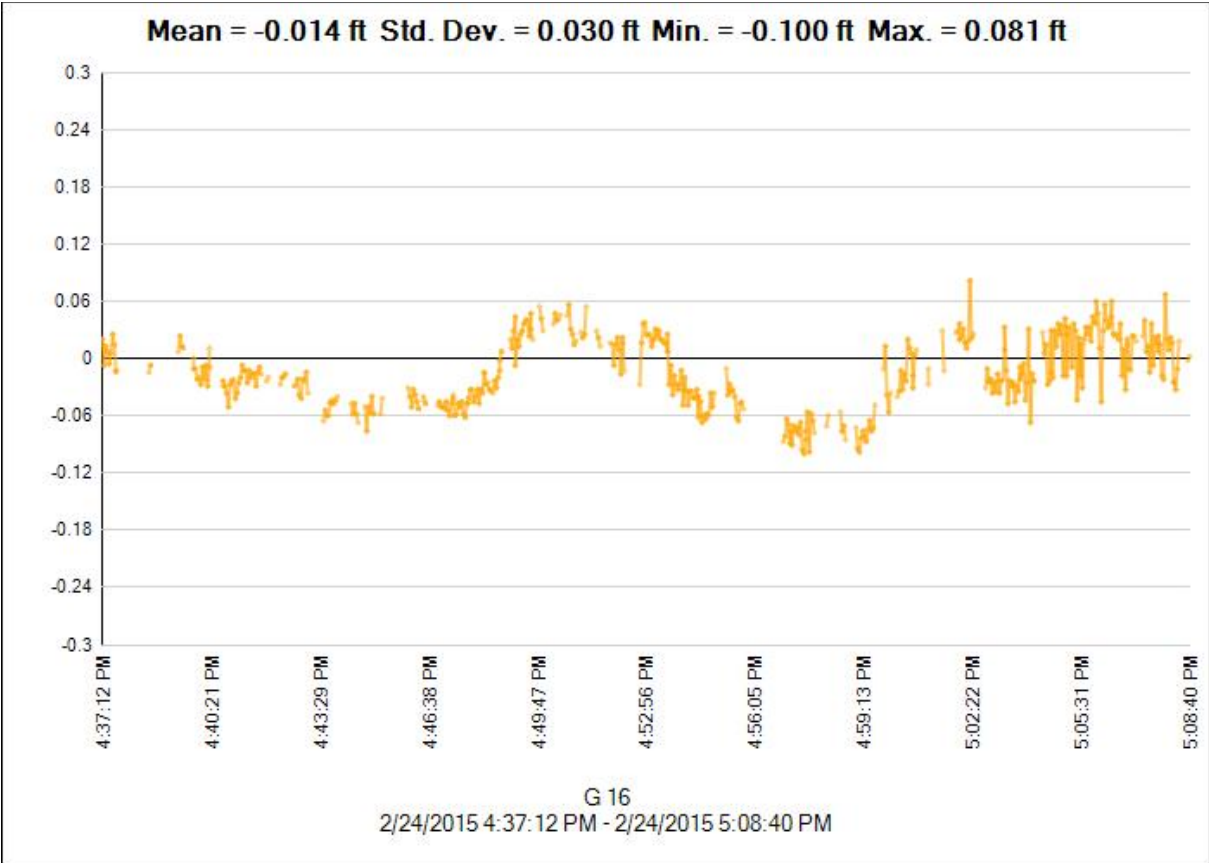
Tracking Summary

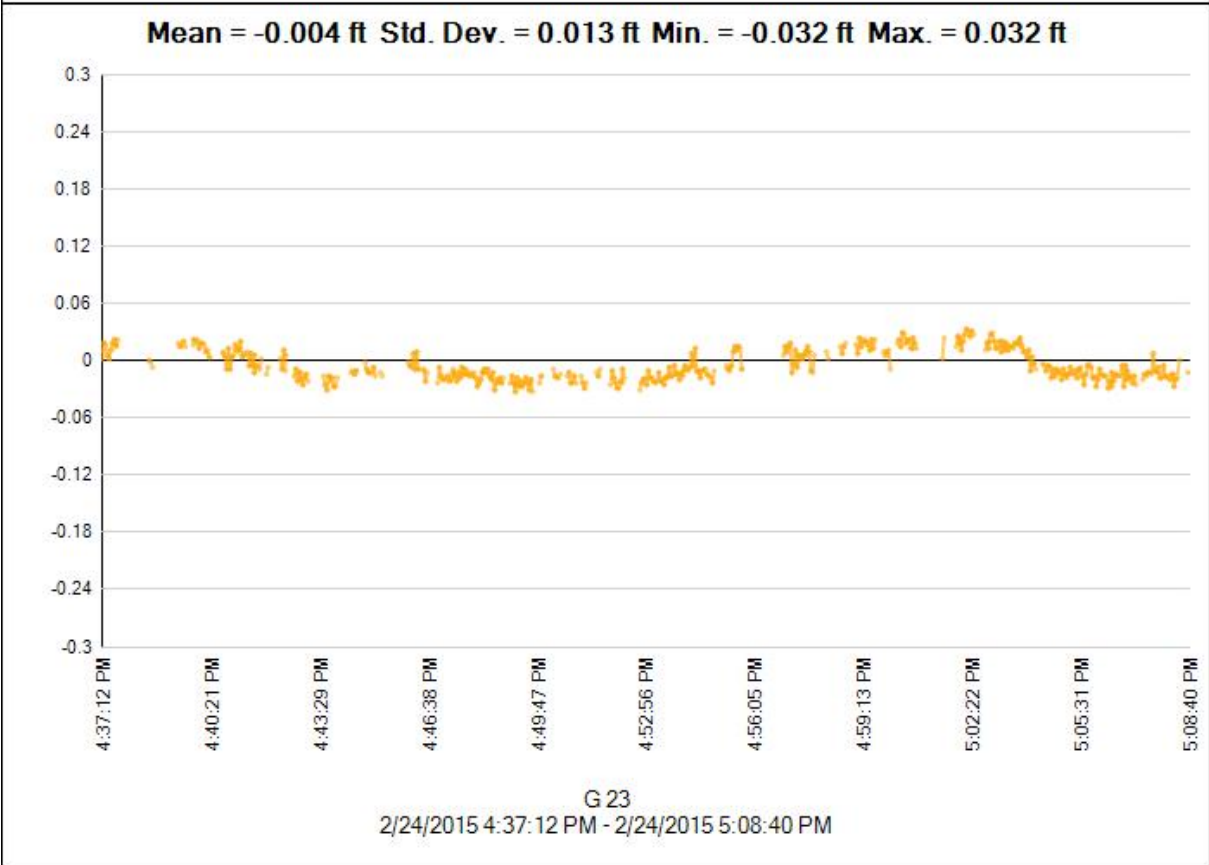
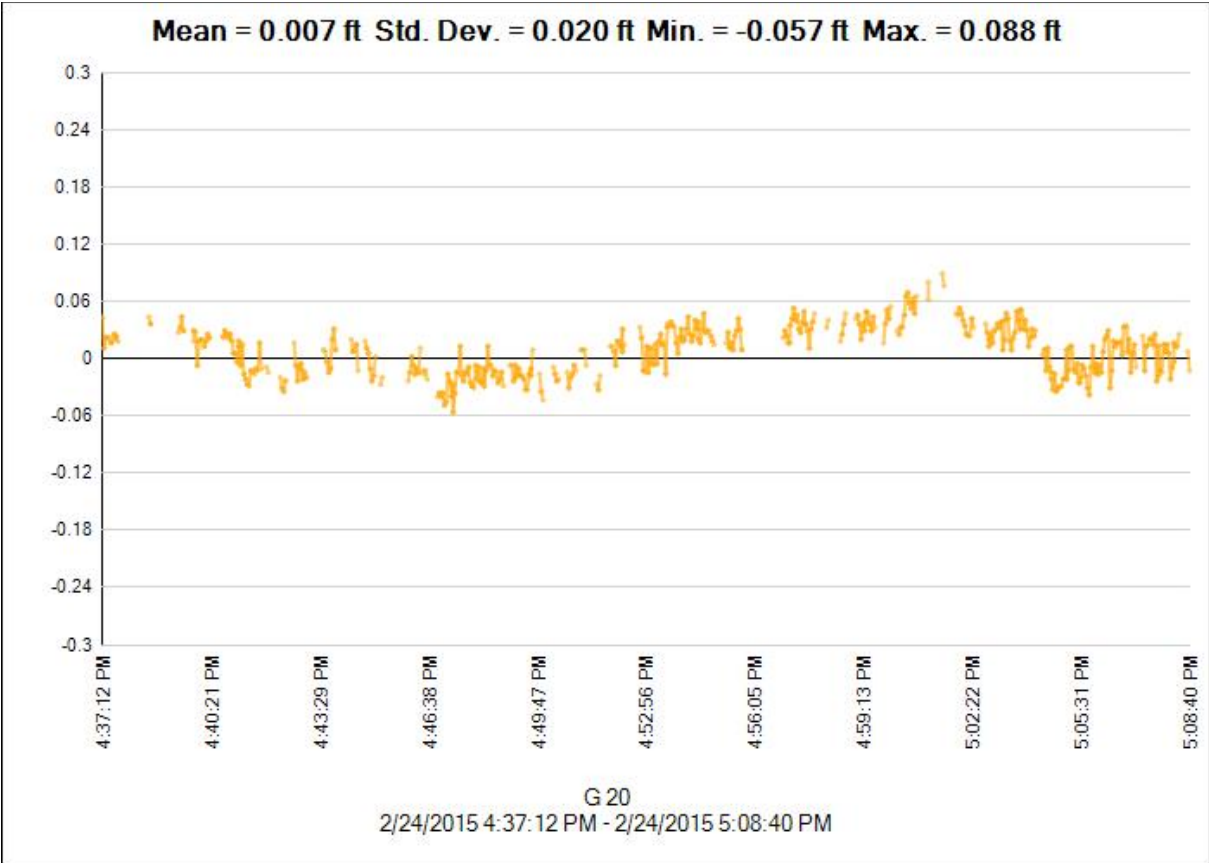
SV	2/24/2015 4:37:11 PM	Duration: 00:31:28	Major interval: 00:01:00	2/24/2015 5:08:39 PM
G 3	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 16	L1 L2			
G 19	L1 L2			
G 20	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

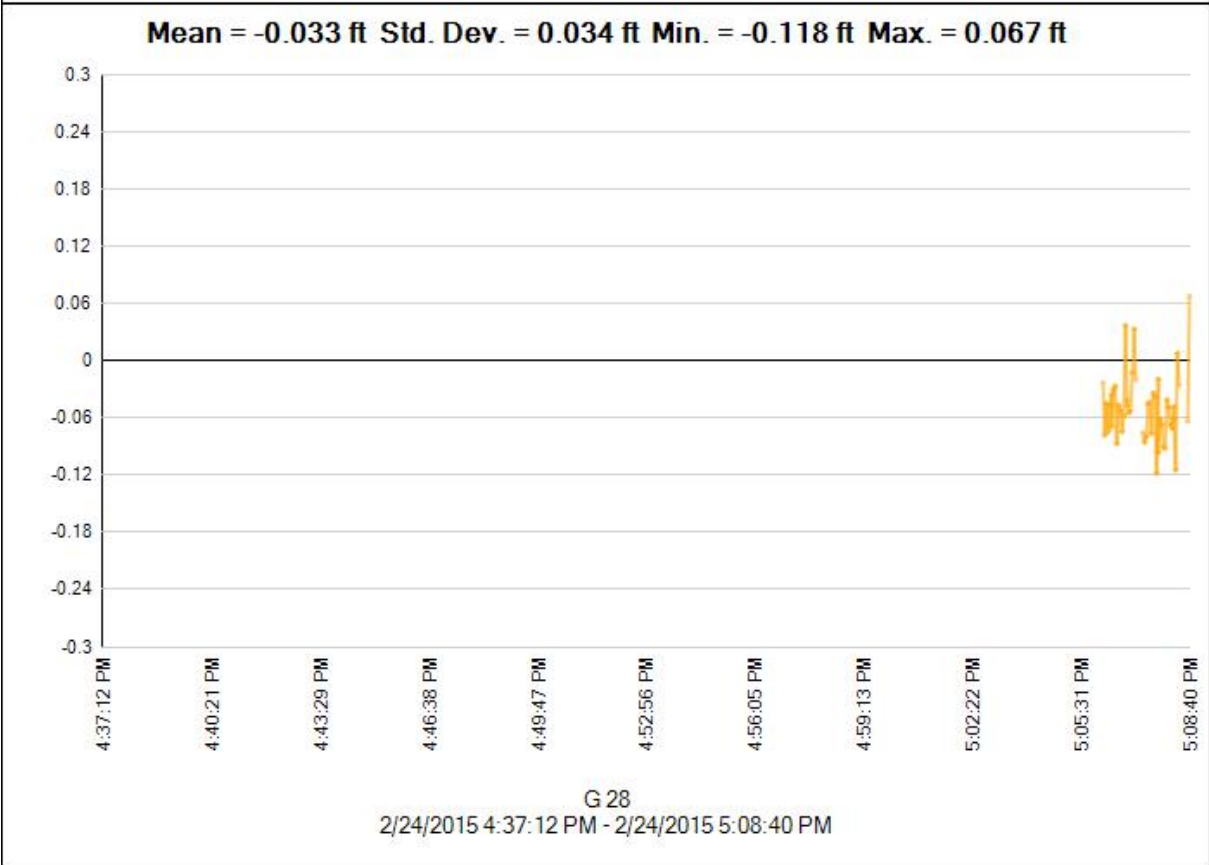
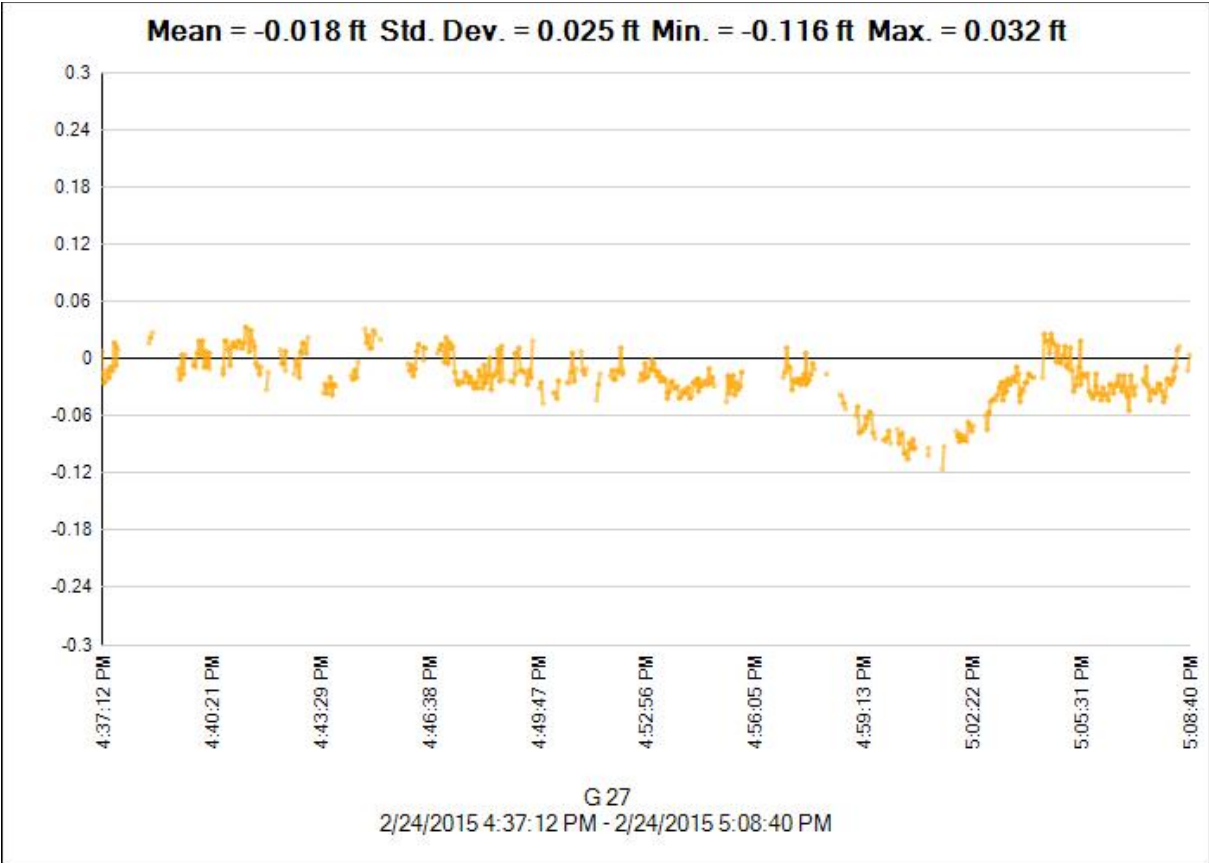
Residuals

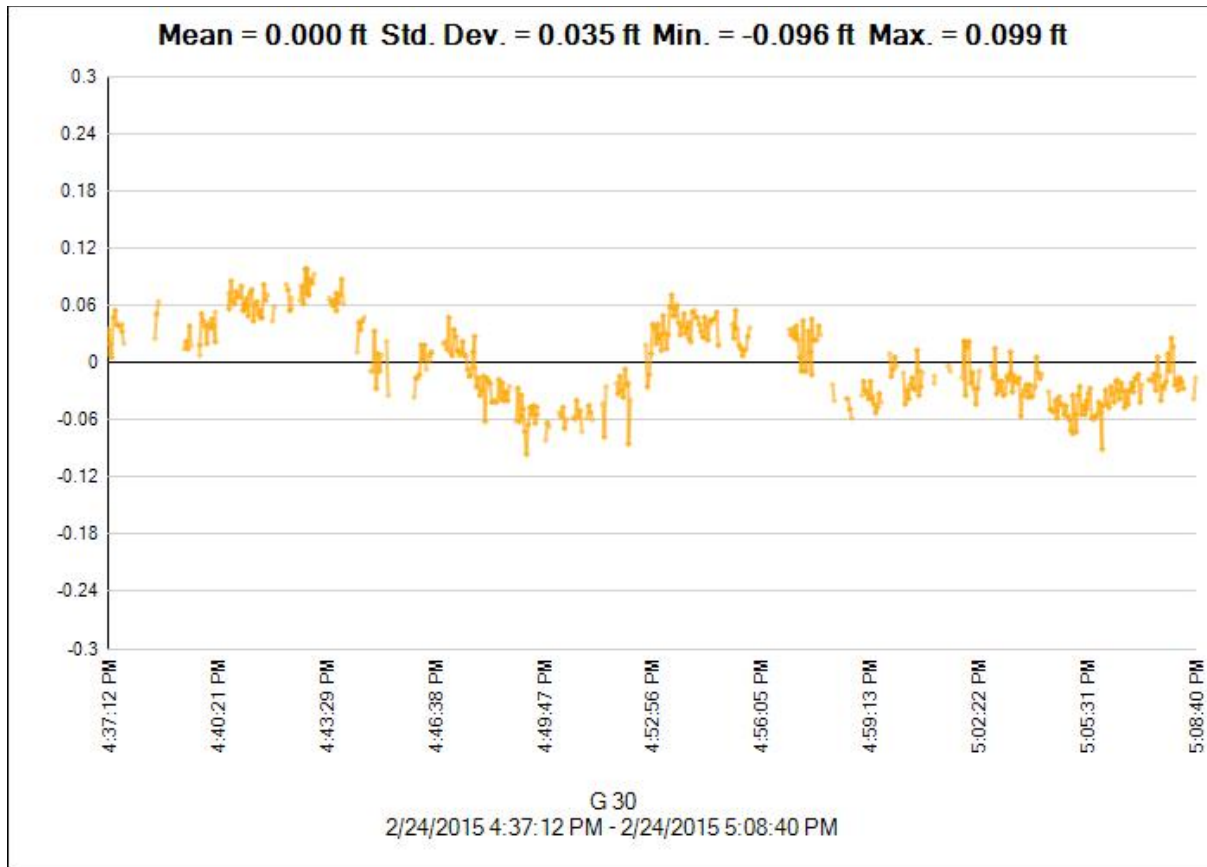














Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

AVRA_APT_3 - CON133 (10:25:03 AM-10:55:51 AM) (S15)

Baseline observation: AVRA_APT_3 --- CON133 (B15)
 Processed: 3/11/2015 8:54:07 AM
 Solution type: Fixed
 Frequency used: Dual Frequency (L1, L2)
 Horizontal precision: 0.030 ft
 Vertical precision: 0.053 ft
 RMS: 0.009 ft
 Maximum PDOP: 2.481
 Ephemeris used: Broadcast
 Antenna model: NGS Absolute
 Processing start time: 2/25/2015 10:25:03 AM (Local: UTC-7hr)
 Processing stop time: 2/25/2015 10:55:51 AM (Local: UTC-7hr)
 Processing duration: 00:30:48
 Processing interval: 1 second

Vector Components (Mark to Mark)

From: AVRA_APT_3					
Grid		Local		Global	
Easting	916316.445 ft	Latitude	N32°24'11.18150"	Latitude	N32°24'11.18150"
Northing	511086.706 ft	Longitude	W111°12'56.74858"	Longitude	W111°12'56.74858"
Elevation	2040.375 ft	Height	1943.121 ft	Height	1943.121 ft

To: CON133					
Grid		Local		Global	
Easting	882640.235 ft	Latitude	N32°16'50.79265"	Latitude	N32°16'50.79265"
Northing	466378.816 ft	Longitude	W111°19'32.42716"	Longitude	W111°19'32.42716"
Elevation	2168.969 ft	Height	2070.863 ft	Height	2070.863 ft

Vector					
ΔEasting	-33676.211 ft	NS Fwd Azimuth	217°21'50"	ΔX	-40315.047 ft
ΔNorthing	-44707.891 ft	Ellipsoid Dist.	55975.200 ft	ΔY	-9973.989 ft
ΔElevation	128.594 ft	ΔHeight	127.742 ft	ΔZ	-37537.398 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.010 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.016 ft
$\sigma \Delta$ Northing	0.011 ft	σ Ellipsoid Dist.	0.012 ft	$\sigma \Delta$ Y	0.022 ft
$\sigma \Delta$ Elevation	0.027 ft	$\sigma \Delta$ Height	0.027 ft	$\sigma \Delta$ Z	0.015 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000234827		
Y	0.0000261377	0.0000434512	
Z	-0.0000112113	-0.0000199326	0.0000206557

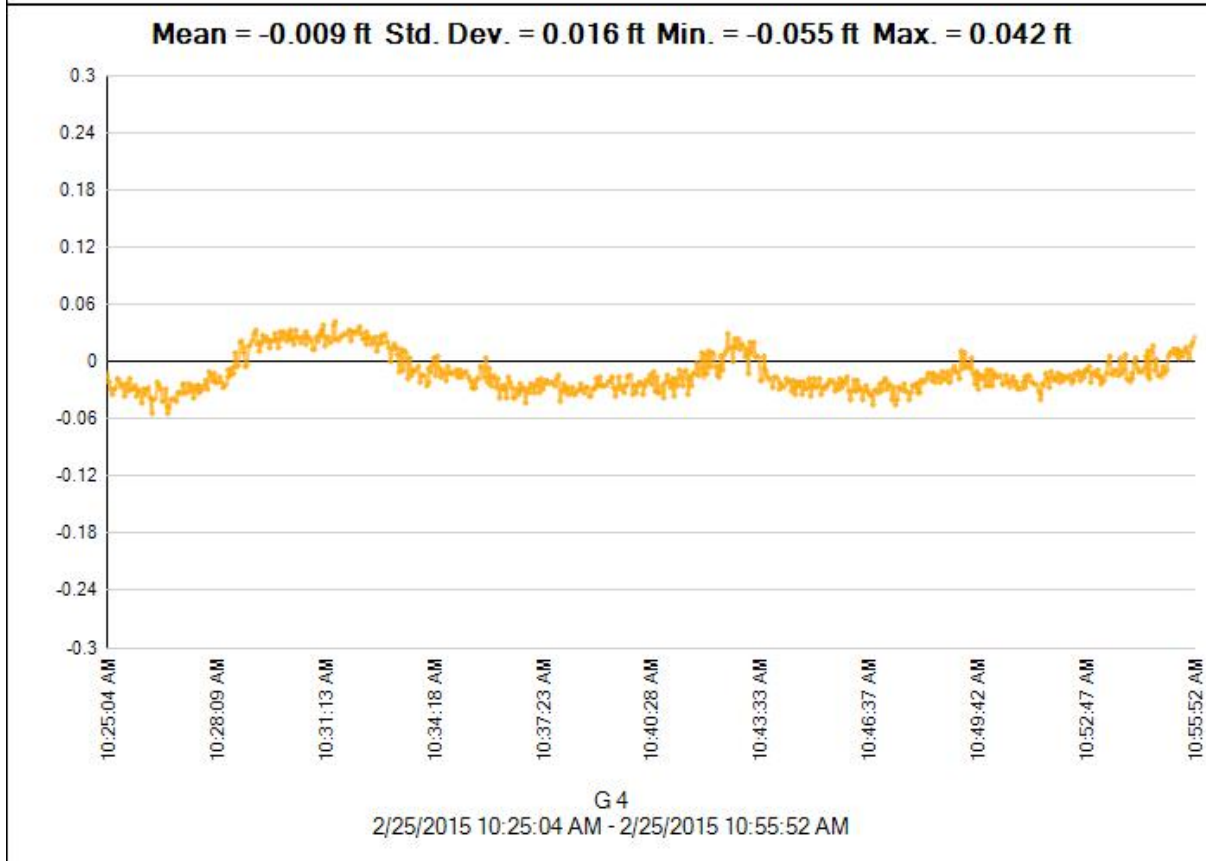
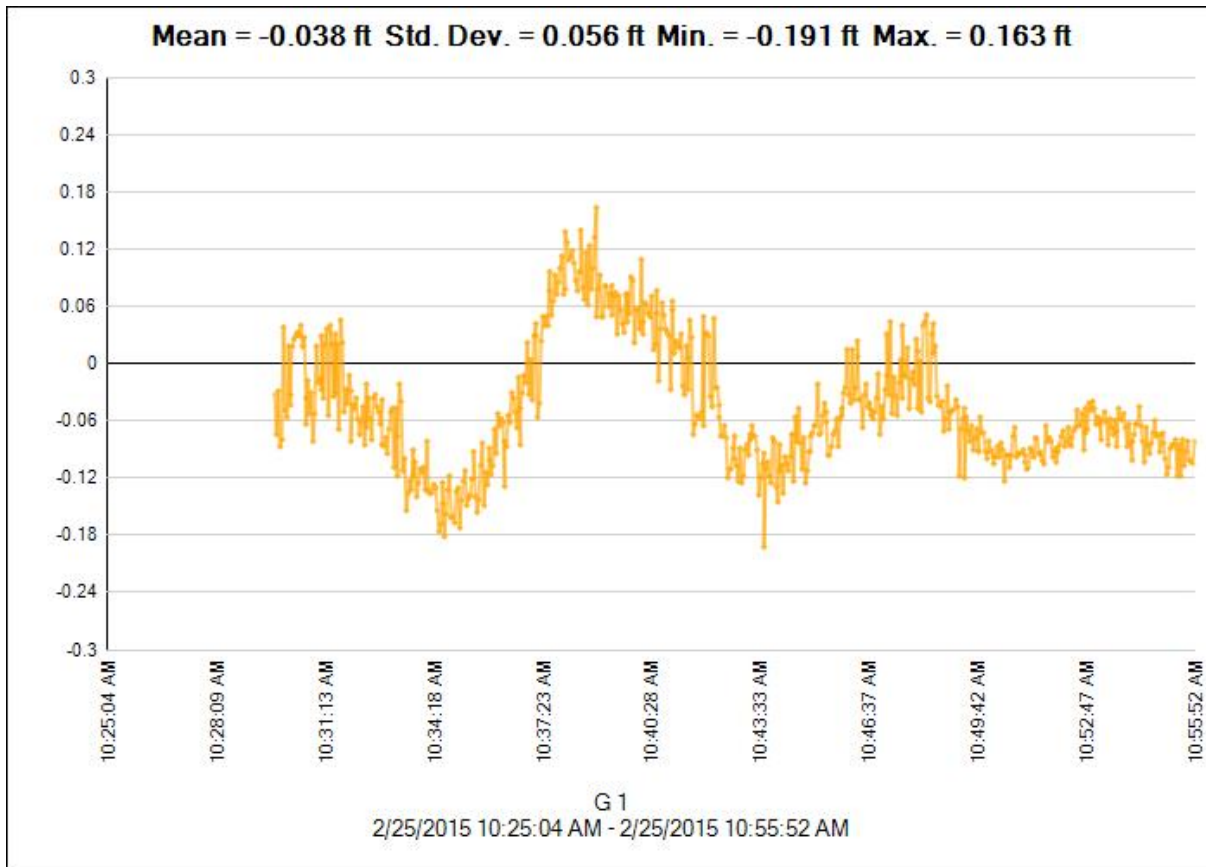
Occupations

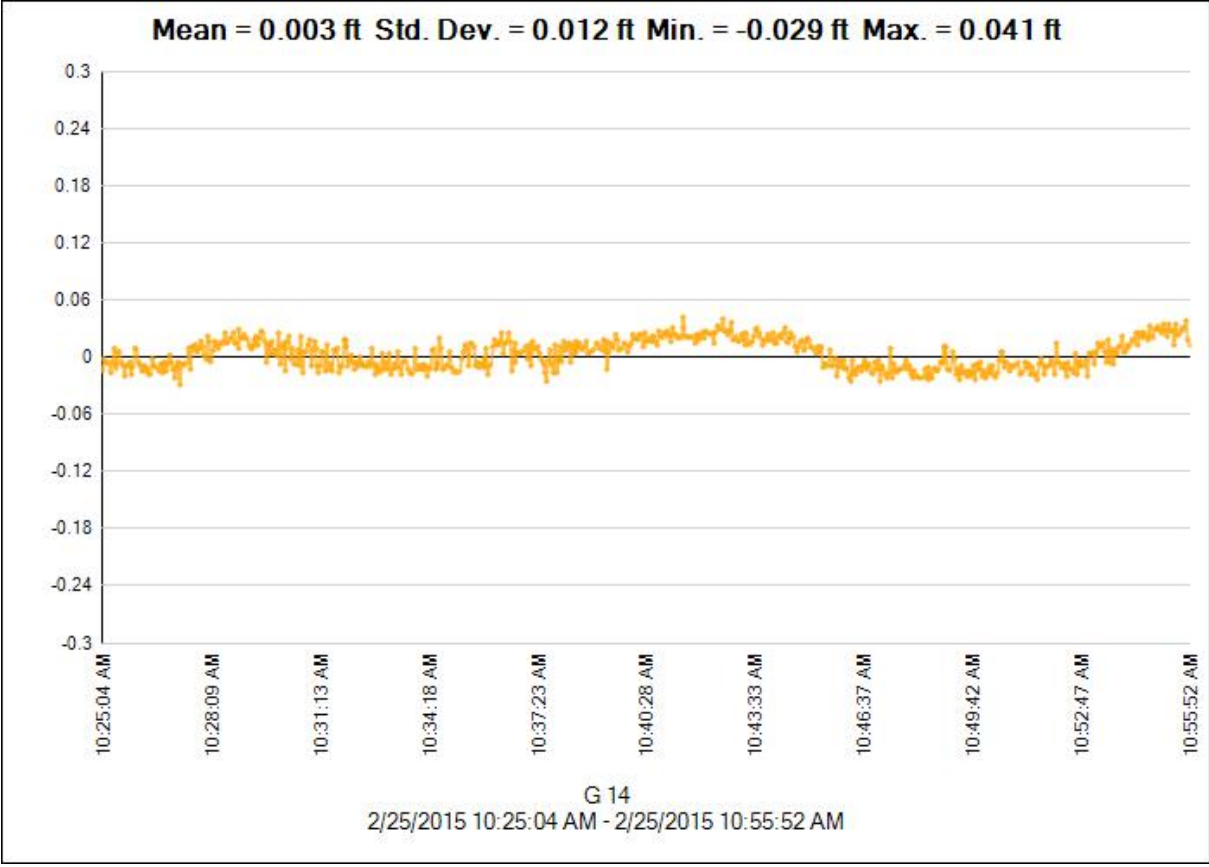
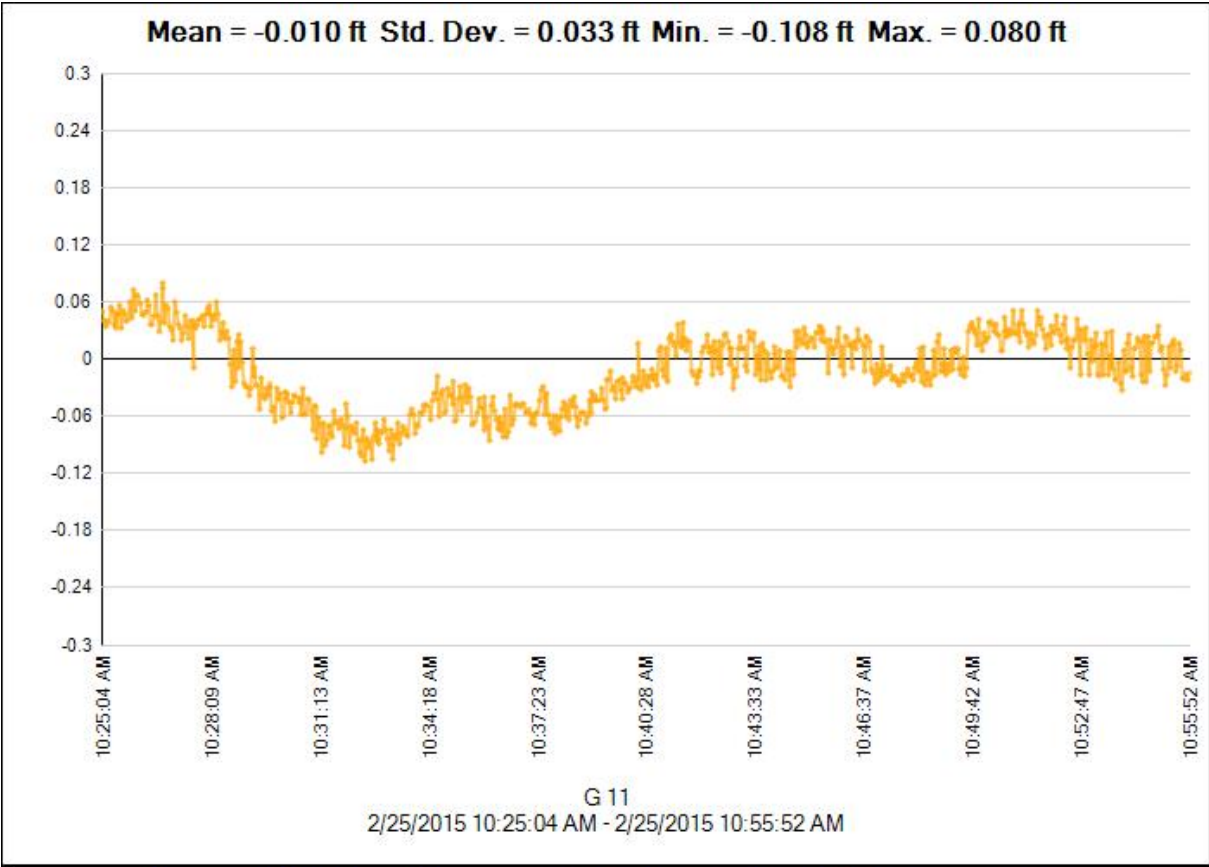
	From	To
Point ID:	AVRA_APT_3	CON133
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520560.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840560.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

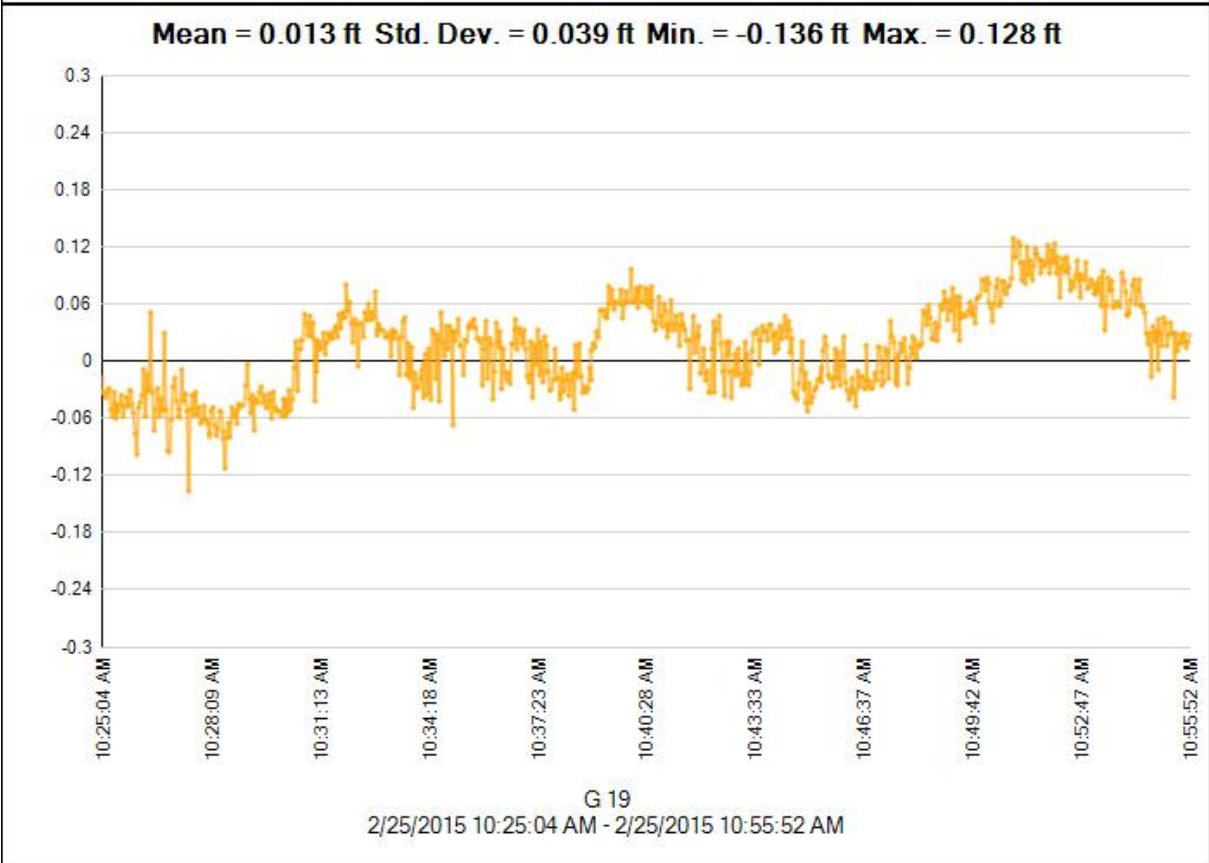
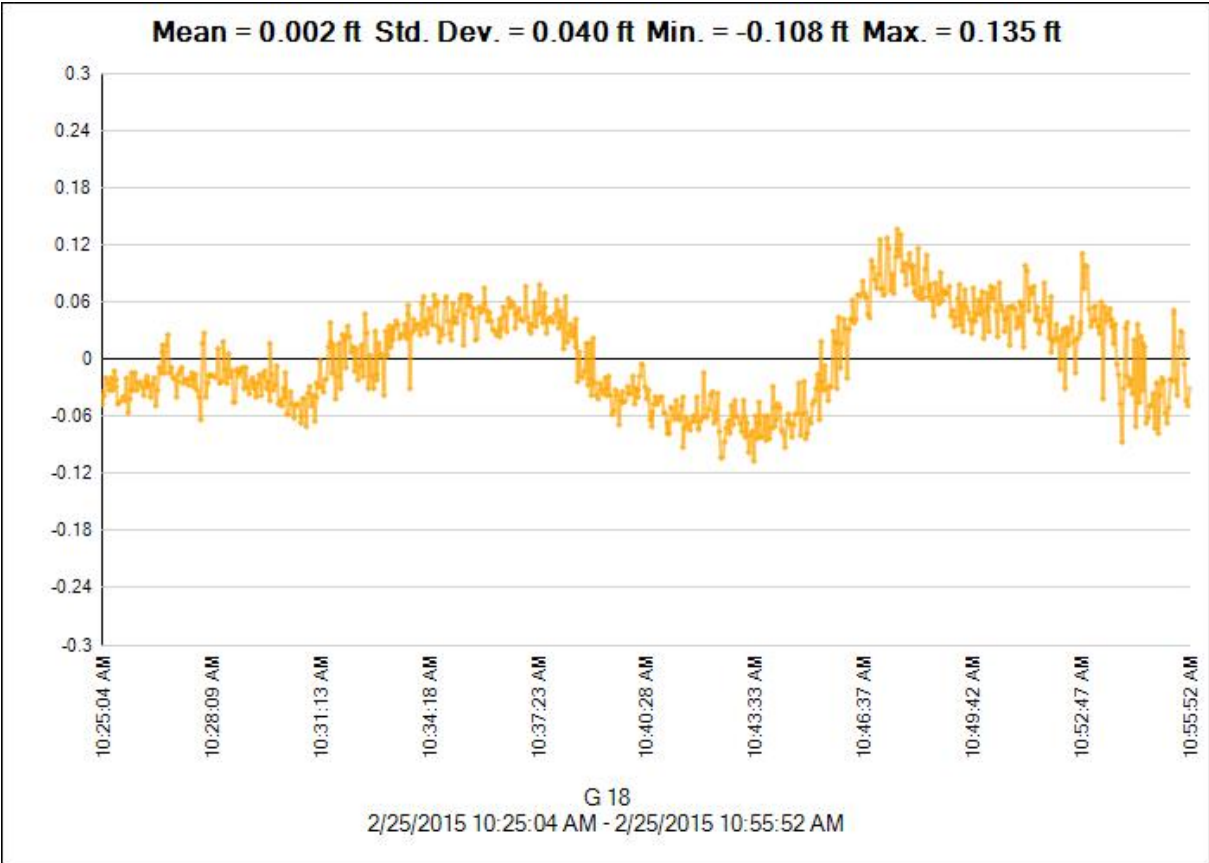
Tracking Summary

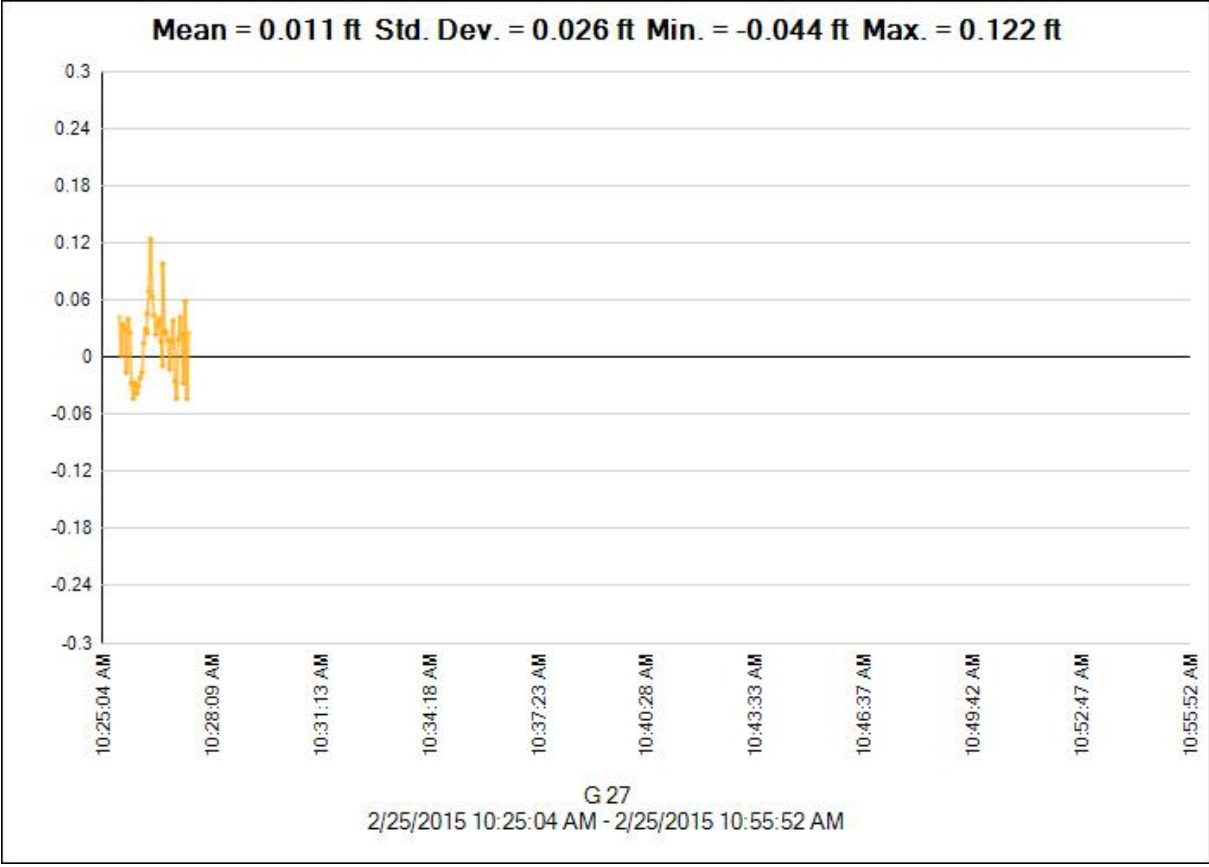
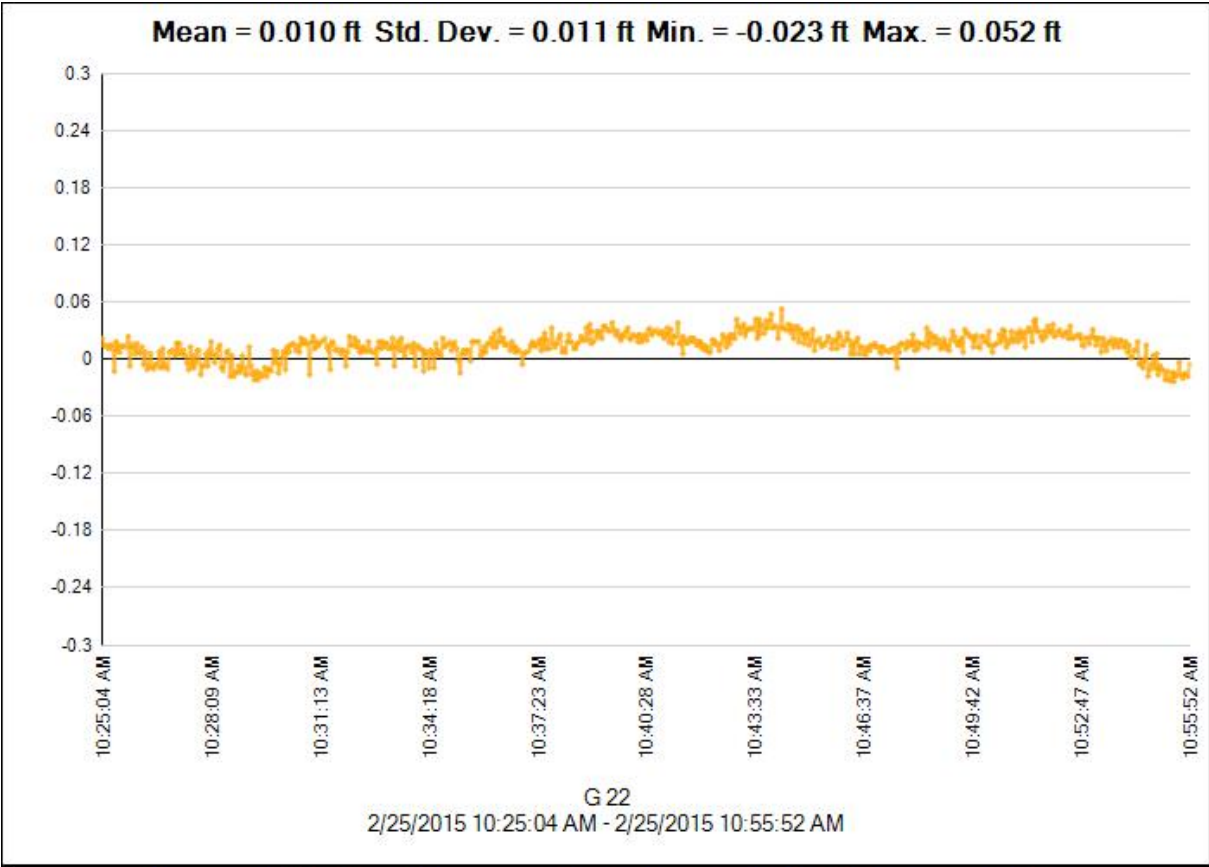
SV	2/25/2015 10:25:03 AM	Duration: 00:30:48	Major interval: 00:01:00	2/25/2015 10:55:51 AM
G 1	L1 L2			
G 4	L1 L2			
G 11	L1 L2			
G 14	L1 L2			
G 18	L1 L2			
G 19	L1 L2			
G 21	L1			
G 22	L1 L2			
G 25	L1			
G 27	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

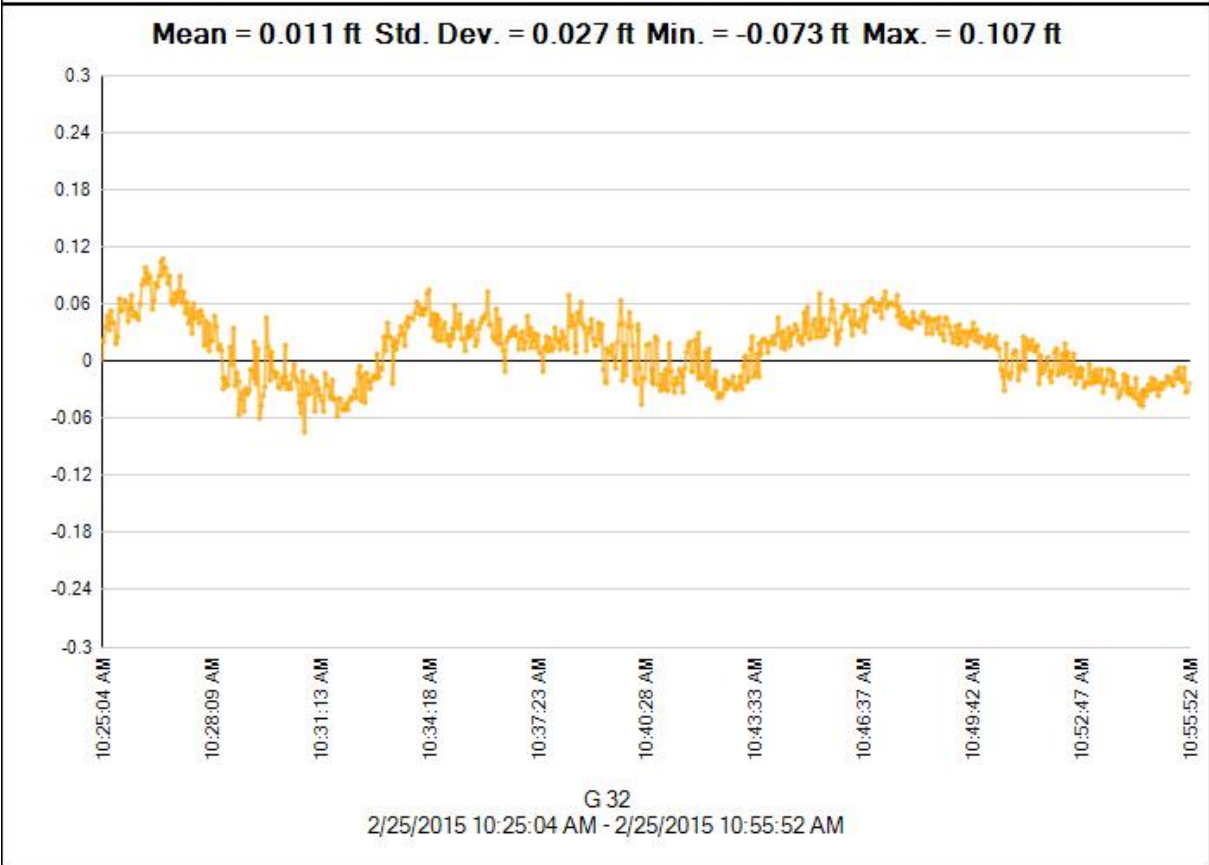
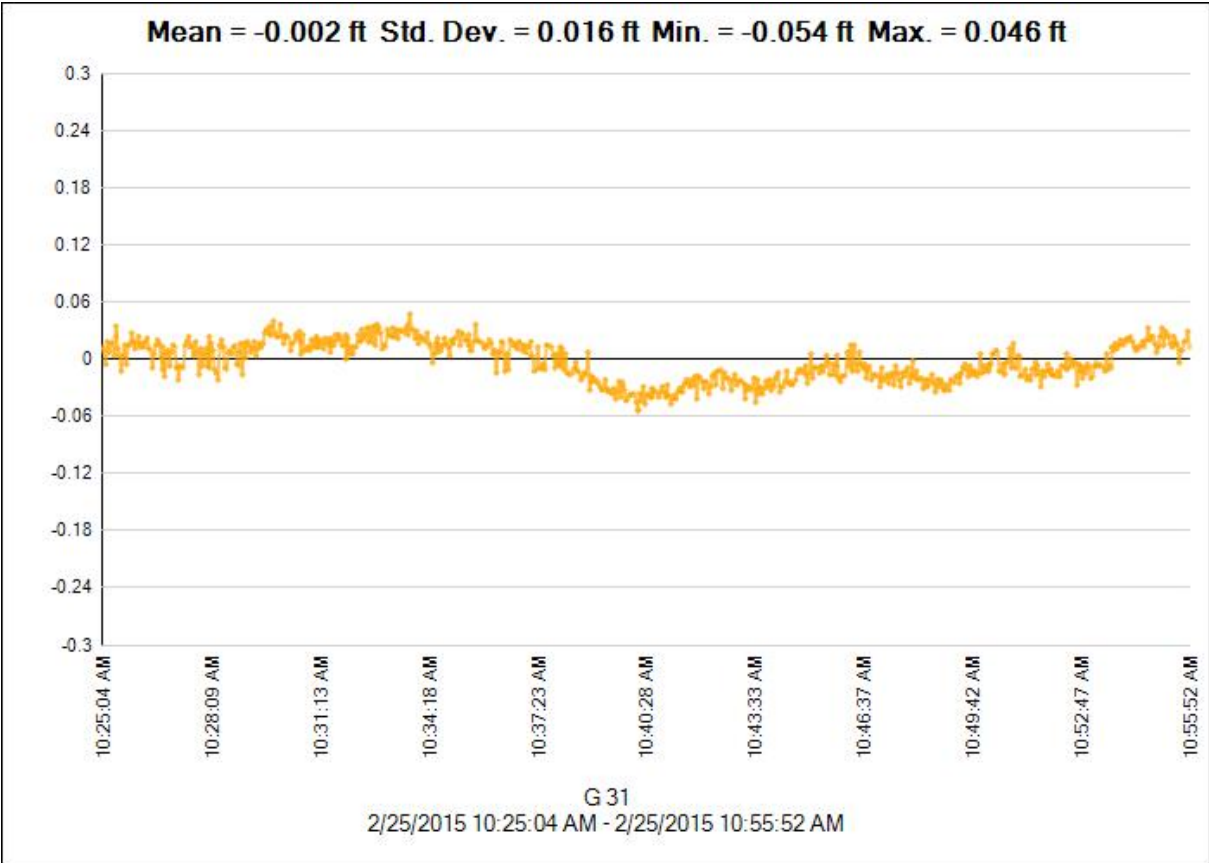
Residuals













Processing style

Elevation mask: 14.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

AVRA_APT_3 - CON107 (11:19:57 AM-11:51:45 AM) (S16)

Baseline observation: AVRA_APT_3 --- CON107 (B16)
Processed: 3/11/2015 8:53:58 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.032 ft
Vertical precision: 0.060 ft
RMS: 0.007 ft
Maximum PDOP: 4.181
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/25/2015 11:20:15 AM (Local: UTC-7hr)
Processing stop time: 2/25/2015 11:51:34 AM (Local: UTC-7hr)
Processing duration: 00:31:19
Processing interval: 1 second

Vector Components (Mark to Mark)

From:		AVRA_APT_3			
Grid		Local		Global	
Easting	916316.445 ft	Latitude	N32°24'11.18150"	Latitude	N32°24'11.18150"
Northing	511086.706 ft	Longitude	W111°12'56.74858"	Longitude	W111°12'56.74858"
Elevation	2040.375 ft	Height	1943.121 ft	Height	1943.121 ft

To:		CON107			
Grid		Local		Global	
Easting	889048.321 ft	Latitude	N32°23'31.60761"	Latitude	N32°23'31.60760"
Northing	506919.949 ft	Longitude	W111°18'15.08279"	Longitude	W111°18'15.08279"
Elevation	2014.163 ft	Height	1916.093 ft	Height	1916.092 ft

Vector					
ΔEasting	-27268.125 ft	NS Fwd Azimuth	261°41'15"	ΔX	-26208.240 ft
ΔNorthing	-4166.758 ft	Ellipsoid Dist.	27586.101 ft	ΔY	7922.011 ft
ΔElevation	-26.212 ft	ΔHeight	-27.028 ft	ΔZ	-3391.718 ft

Standard Errors

Vector errors:					
σ ΔEasting	0.008 ft	σ NS fwd Azimuth	0°00'00"	σ ΔX	0.012 ft
σ ΔNorthing	0.013 ft	σ Ellipsoid Dist.	0.008 ft	σ ΔY	0.022 ft
σ ΔElevation	0.030 ft	σ ΔHeight	0.030 ft	σ ΔZ	0.023 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000140511		
Y	0.0000184459	0.0000468244	
Z	-0.0000134330	-0.0000344320	0.0000472944

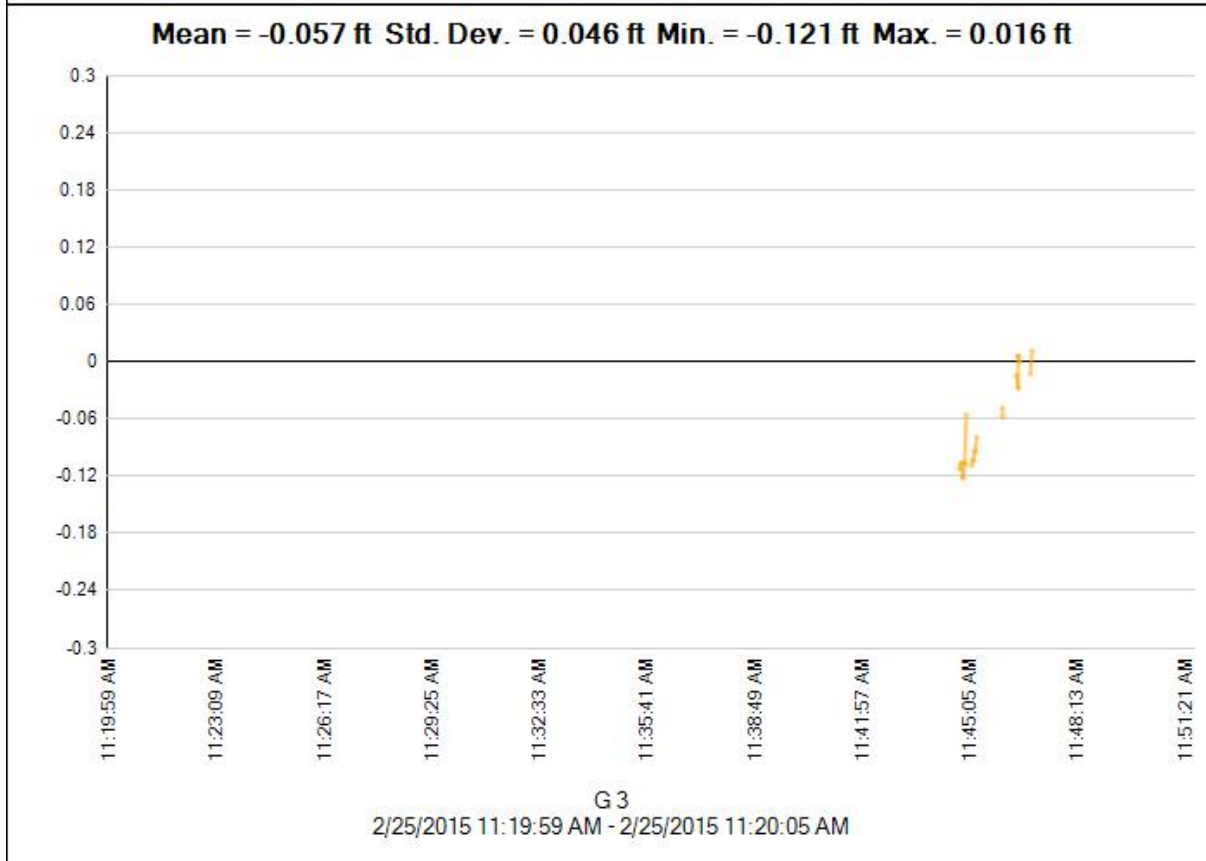
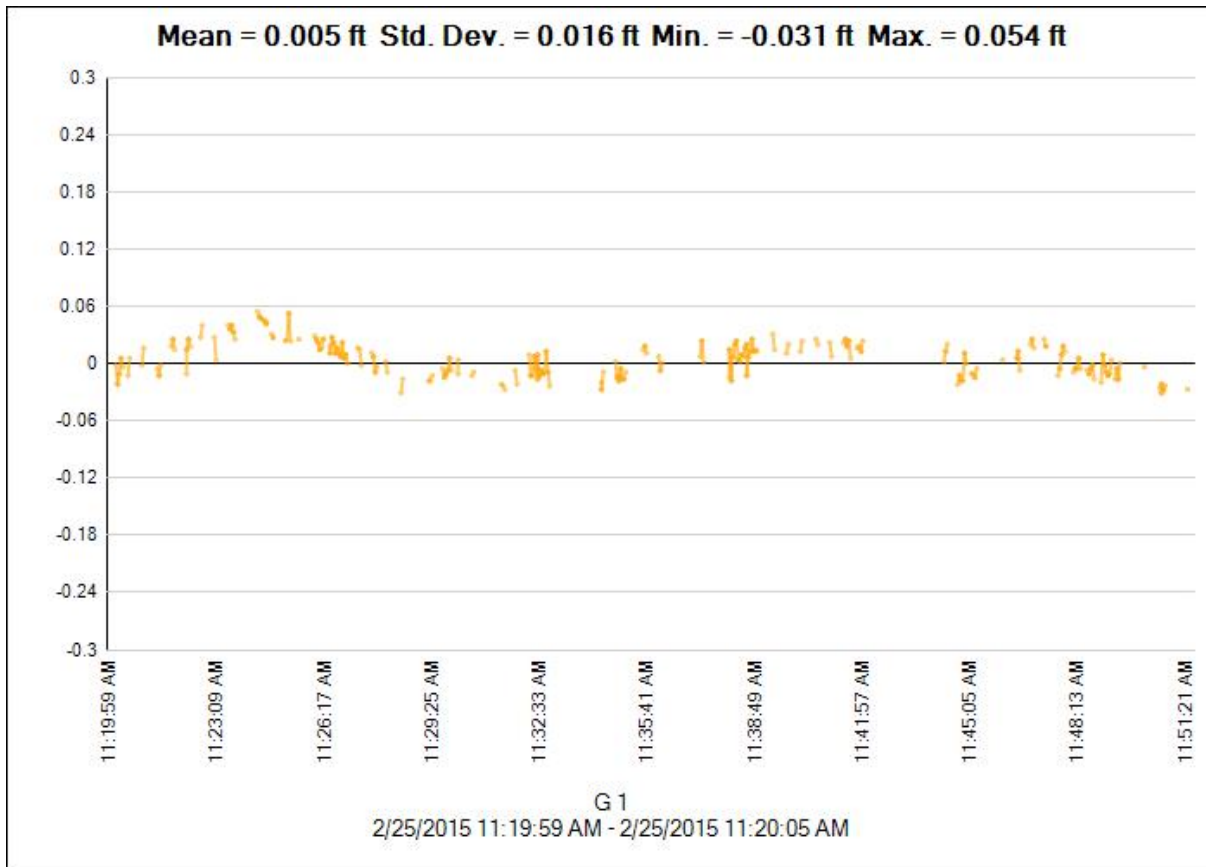
Occupations

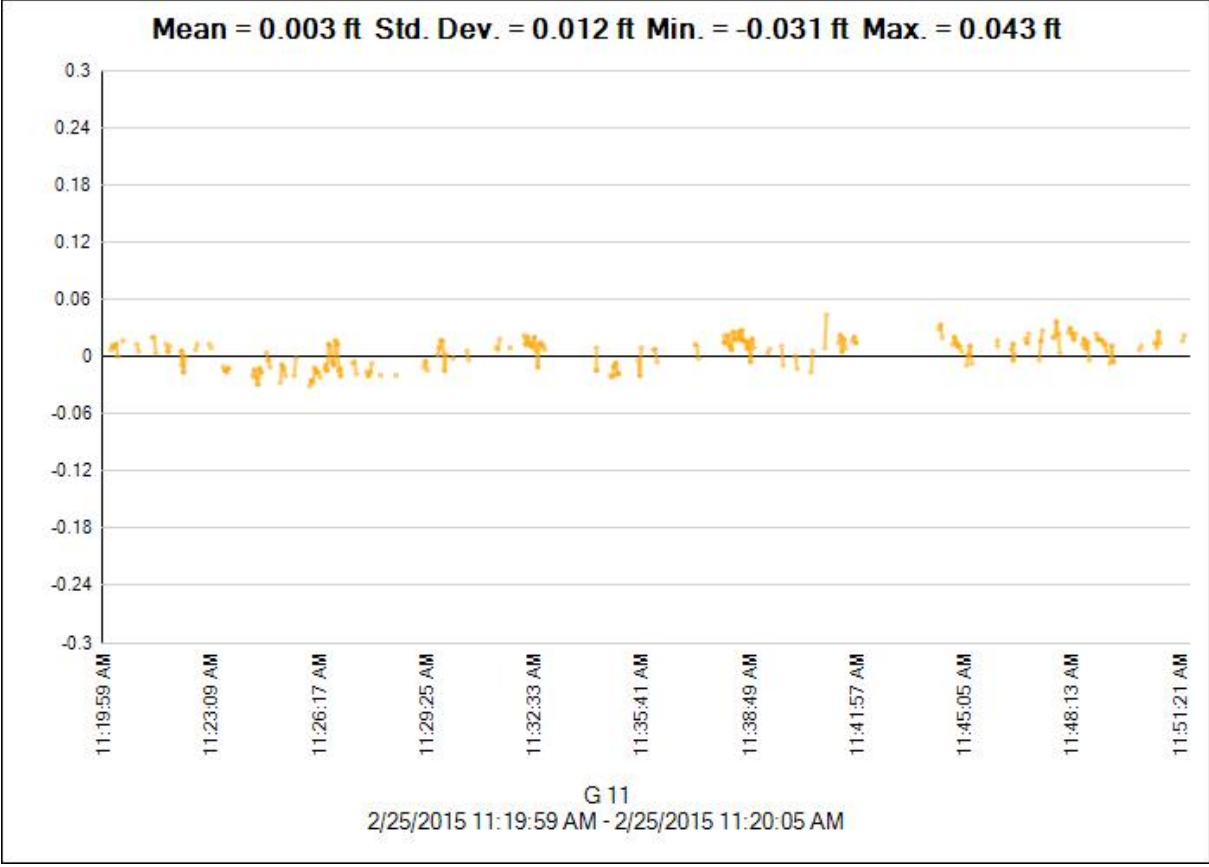
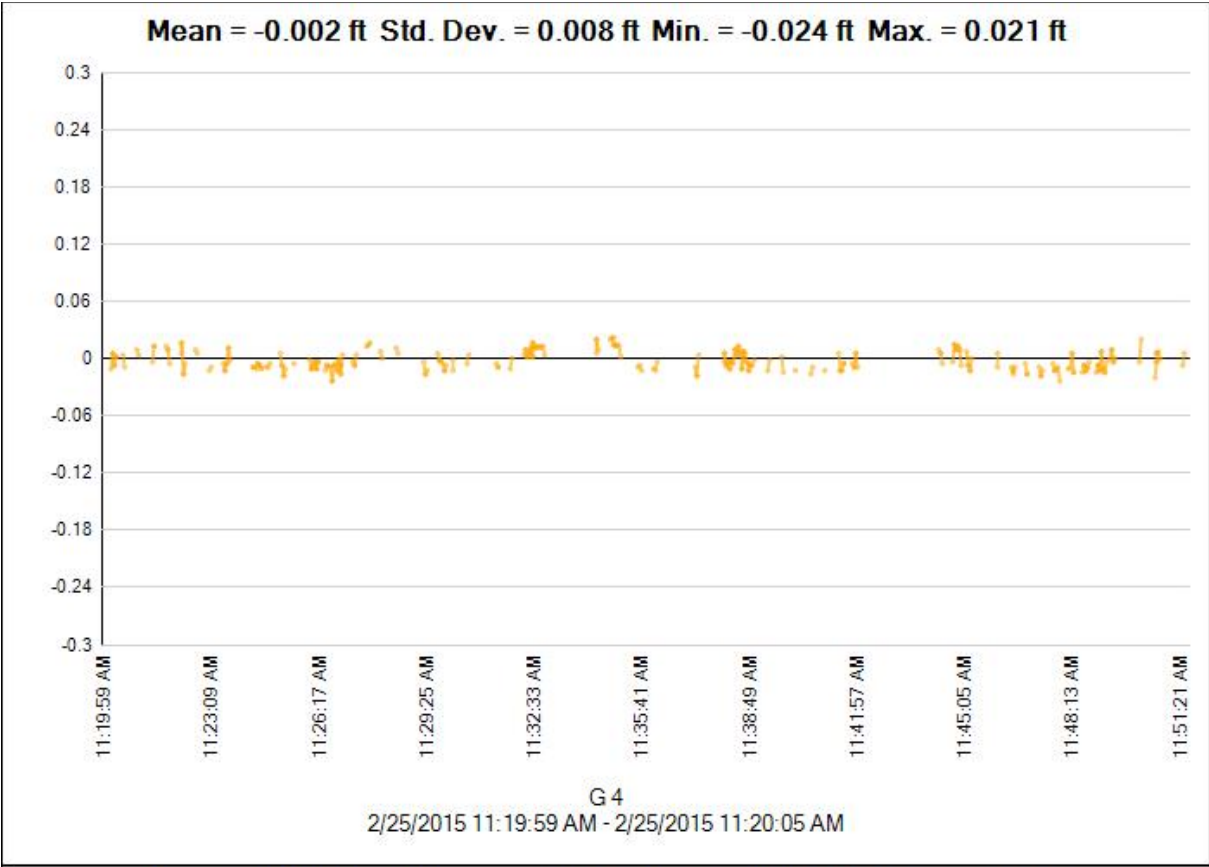
	From	To
Point ID:	AVRA_APT_3	CON107
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520560.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840561.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

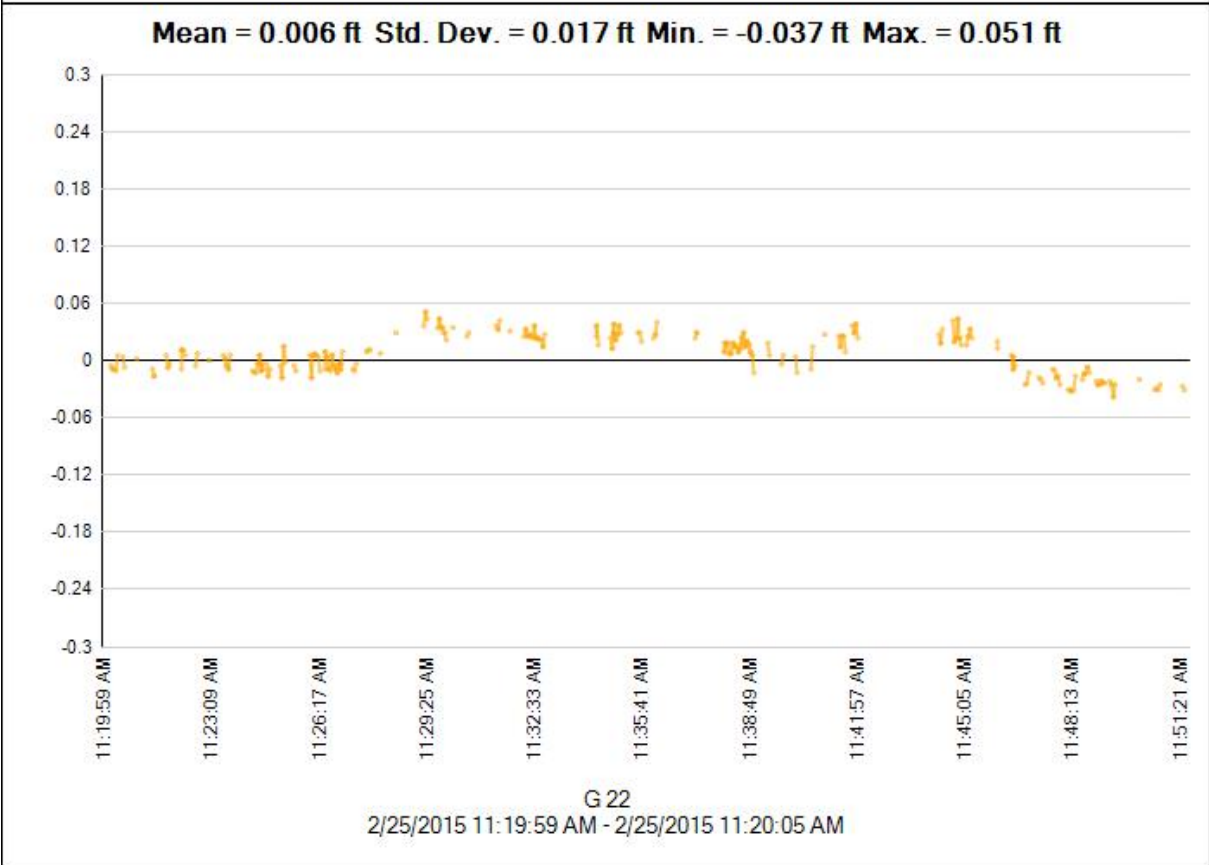
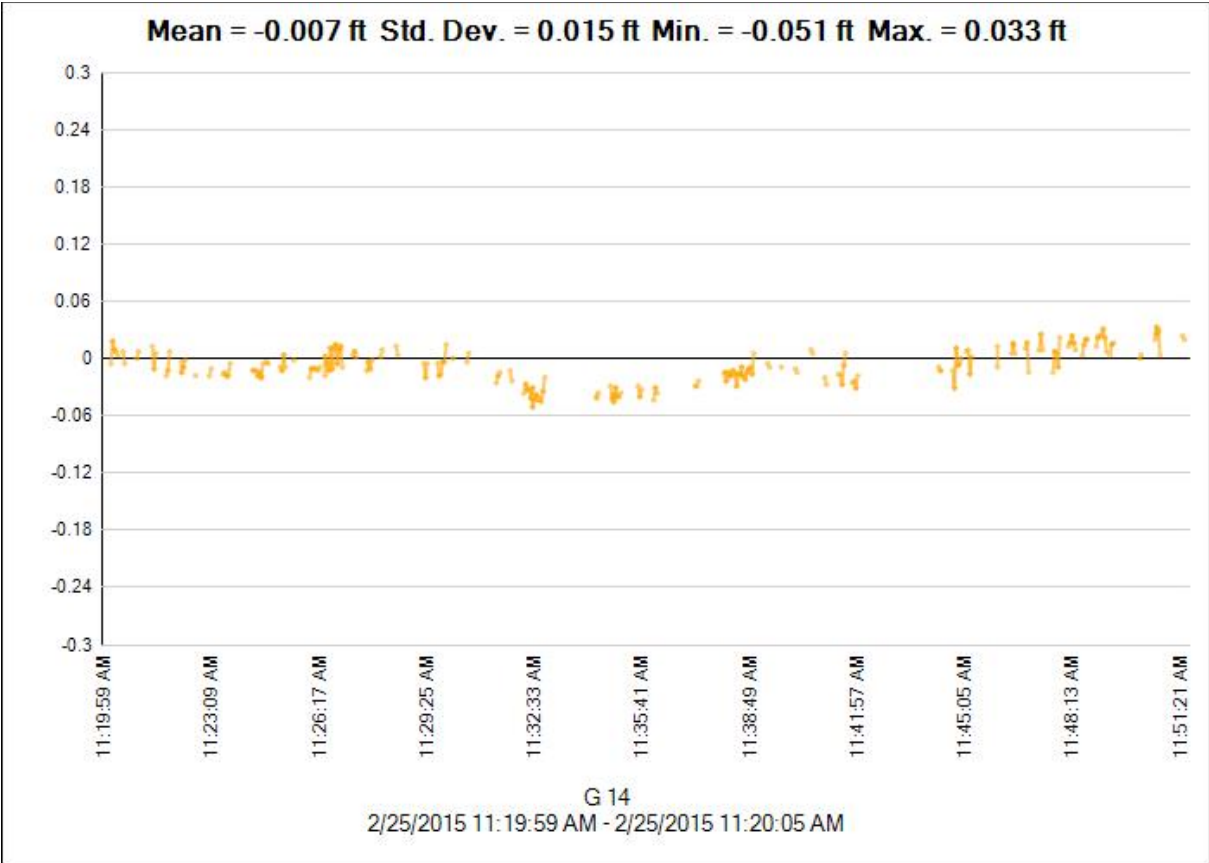
Tracking Summary

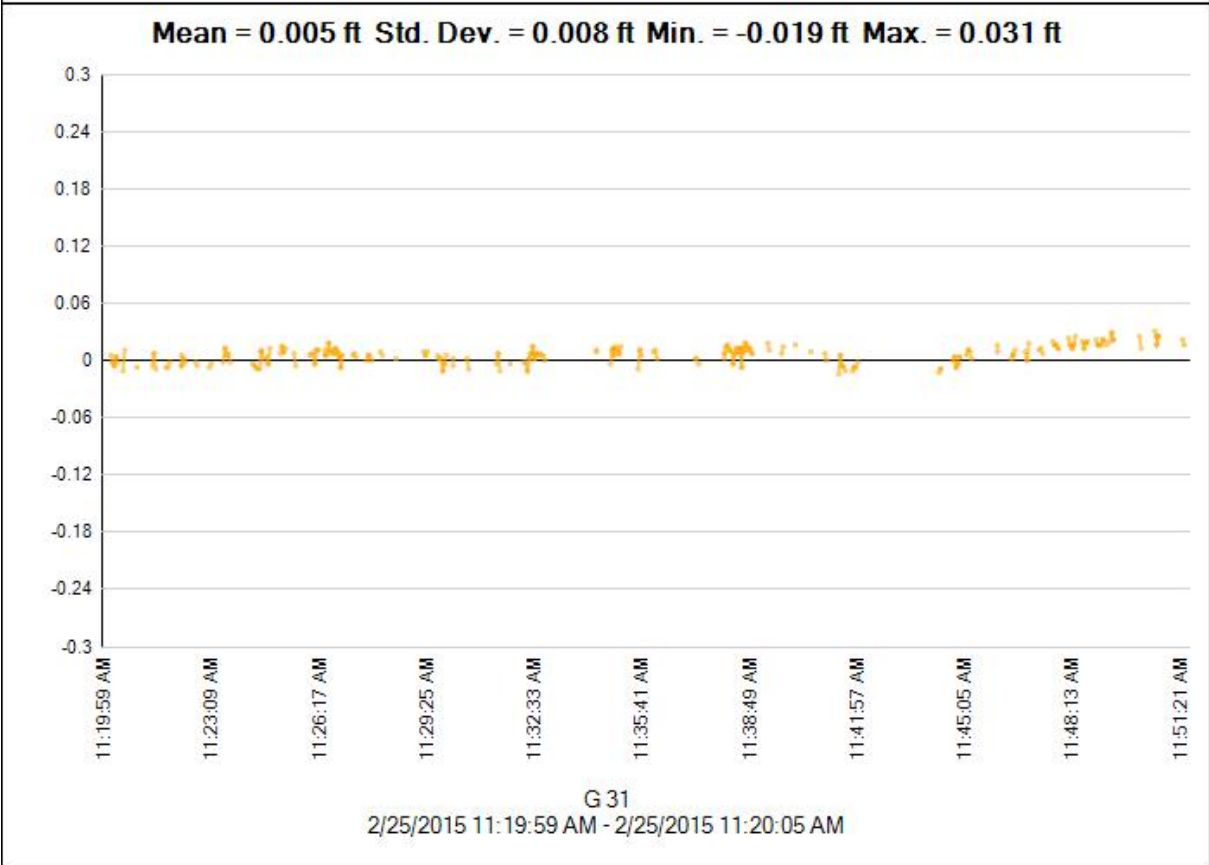
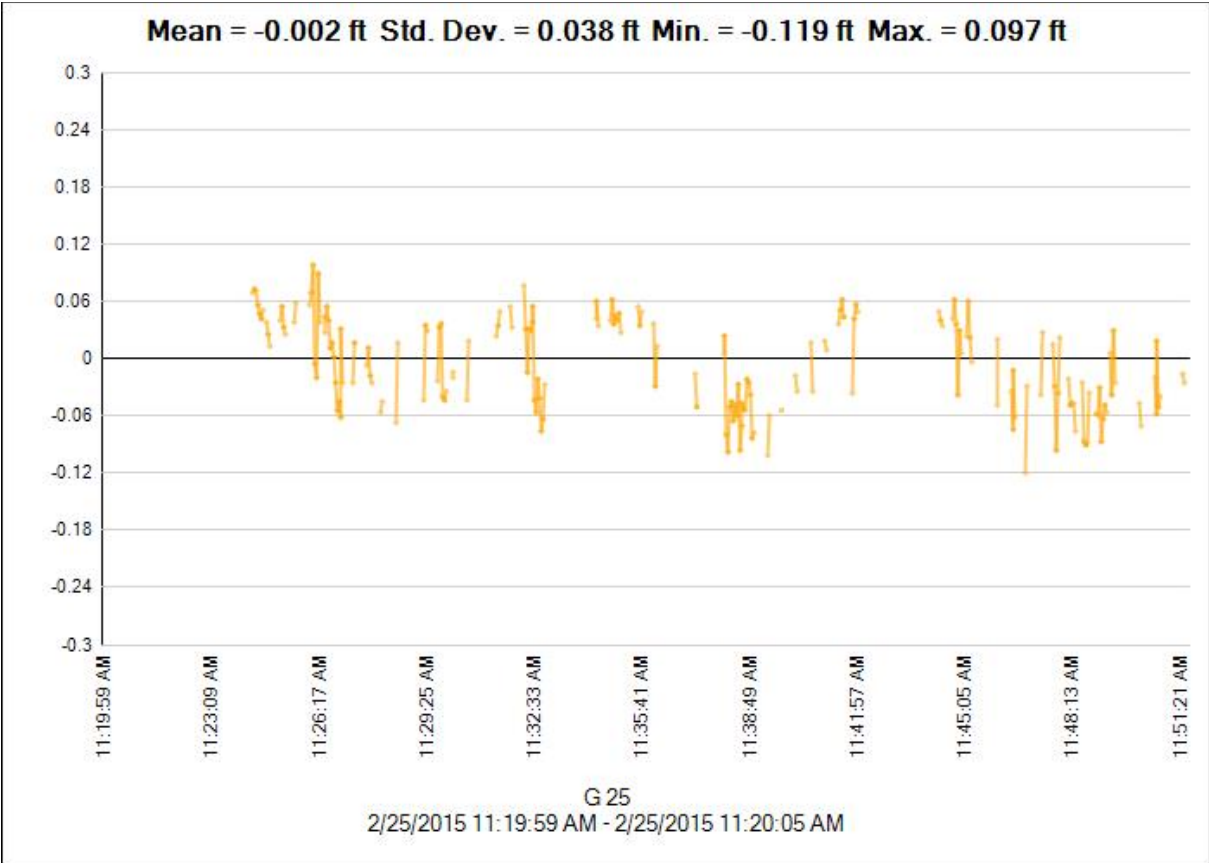
SV	2/25/2015 11:19:57 AM	Duration: 00:31:48	Major interval: 00:01:00	2/25/2015 11:51:45 AM
G 1				
G 3				
G 4				
G 11				
G 14				
G 18				
G 19				
G 22				
G 25				
G 31				
G 32				

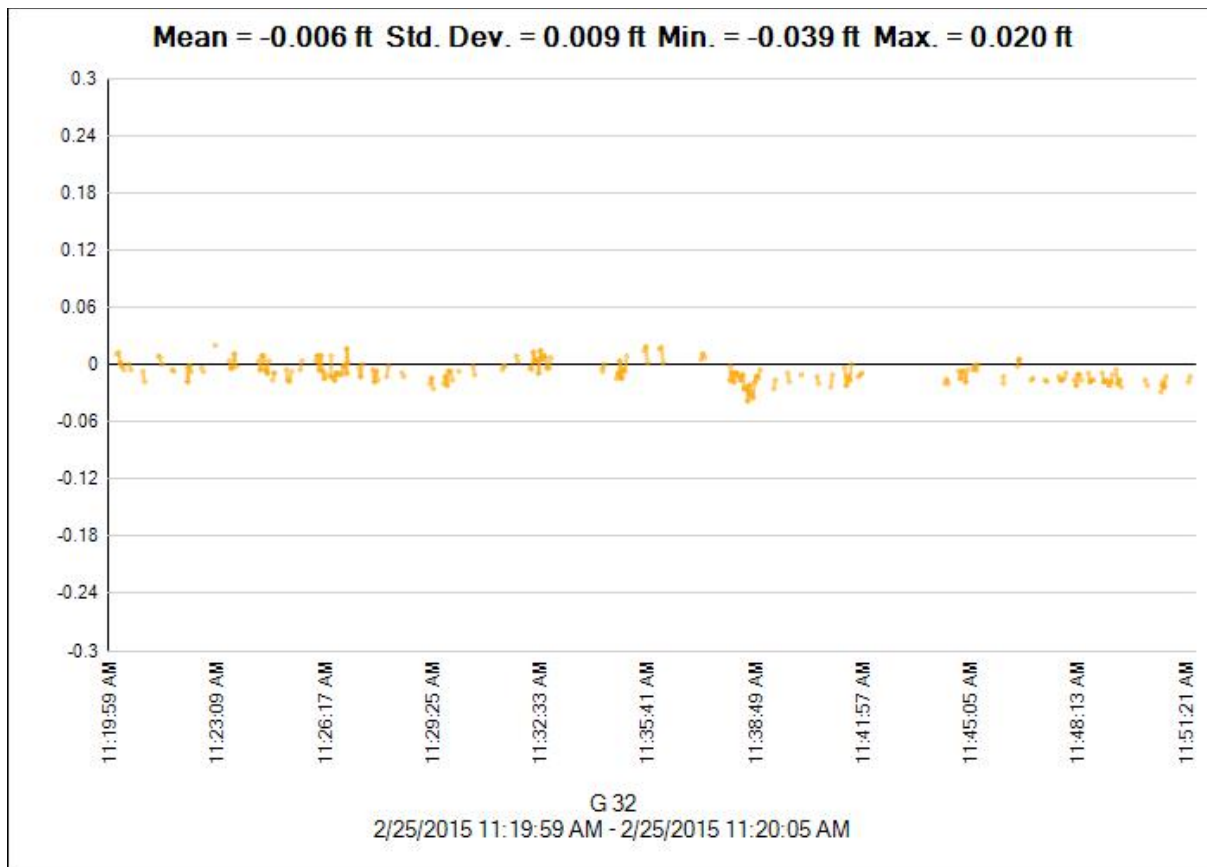
Residuals













Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

AVRA_APT_3 - CON106 (12:06:23 PM-12:37:41 PM) (S17)

Baseline observation: AVRA_APT_3 --- CON106 (B17)
 Processed: 3/11/2015 8:53:58 AM
 Solution type: Fixed
 Frequency used: Dual Frequency (L1, L2)
 Horizontal precision: 0.033 ft
 Vertical precision: 0.042 ft
 RMS: 0.004 ft
 Maximum PDOP: 2.097
 Ephemeris used: Broadcast
 Antenna model: NGS Absolute
 Processing start time: 2/25/2015 12:06:30 PM (Local: UTC-7hr)
 Processing stop time: 2/25/2015 12:37:24 PM (Local: UTC-7hr)
 Processing duration: 00:30:54
 Processing interval: 1 second

Vector Components (Mark to Mark)

From: AVRA_APT_3					
Grid		Local		Global	
Easting	916316.445 ft	Latitude	N32°24'11.18150"	Latitude	N32°24'11.18150"
Northing	511086.706 ft	Longitude	W111°12'56.74858"	Longitude	W111°12'56.74858"
Elevation	2040.375 ft	Height	1943.121 ft	Height	1943.121 ft

To: CON106					
Grid		Local		Global	
Easting	895166.137 ft	Latitude	N32°27'03.66850"	Latitude	N32°27'03.66850"
Northing	528386.191 ft	Longitude	W111°17'02.25058"	Longitude	W111°17'02.25058"
Elevation	1952.893 ft	Height	1855.220 ft	Height	1855.220 ft

Vector					
ΔEasting	-21150.308 ft	NS Fwd Azimuth	309°39'24"	ΔX	-16198.986 ft
ΔNorthing	17299.485 ft	Ellipsoid Dist.	27325.530 ft	ΔY	16409.331 ft
ΔElevation	-87.482 ft	ΔHeight	-87.901 ft	ΔZ	14668.149 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.009 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.012 ft
$\sigma \Delta$ Northing	0.013 ft	σ Ellipsoid Dist.	0.012 ft	$\sigma \Delta$ Y	0.020 ft
$\sigma \Delta$ Elevation	0.022 ft	$\sigma \Delta$ Height	0.022 ft	$\sigma \Delta$ Z	0.014 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000124884		
Y	0.0000124605	0.0000357885	
Z	-0.0000069936	-0.0000078803	0.0000183826

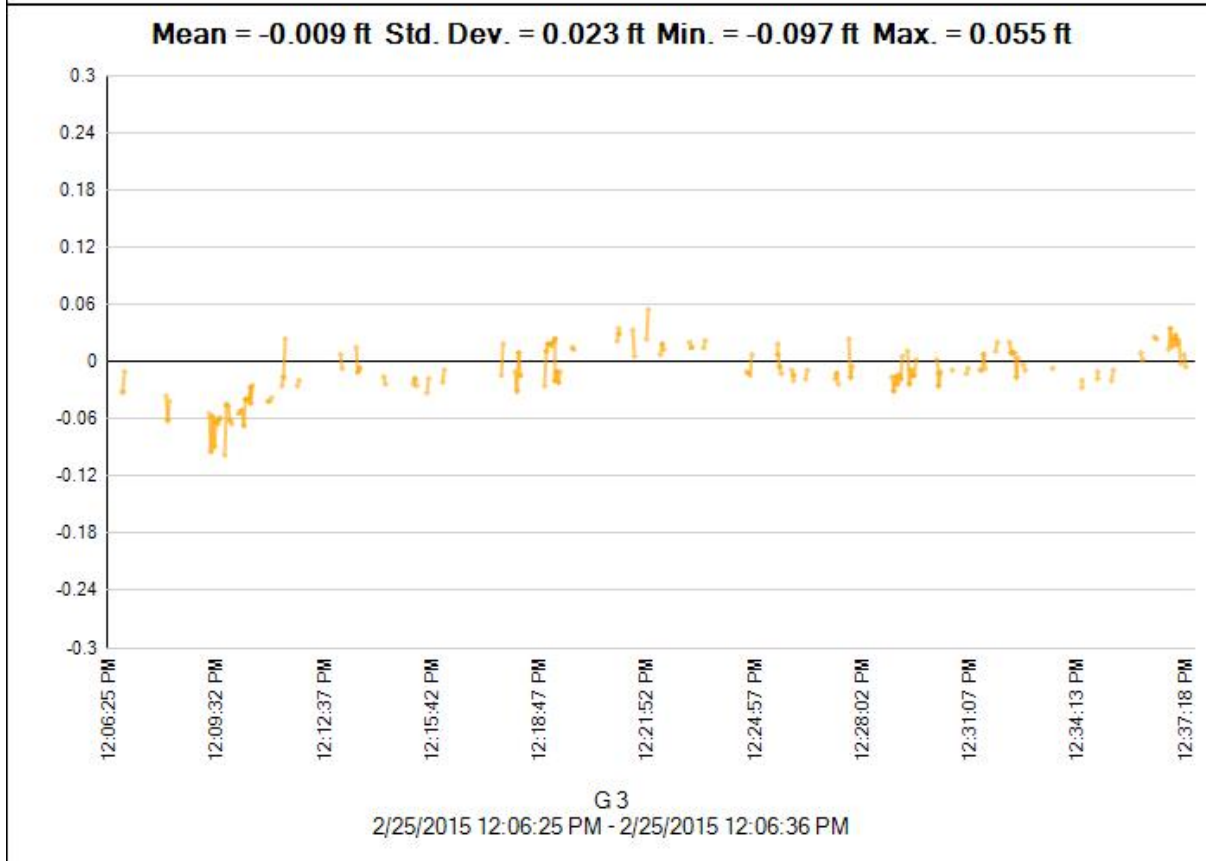
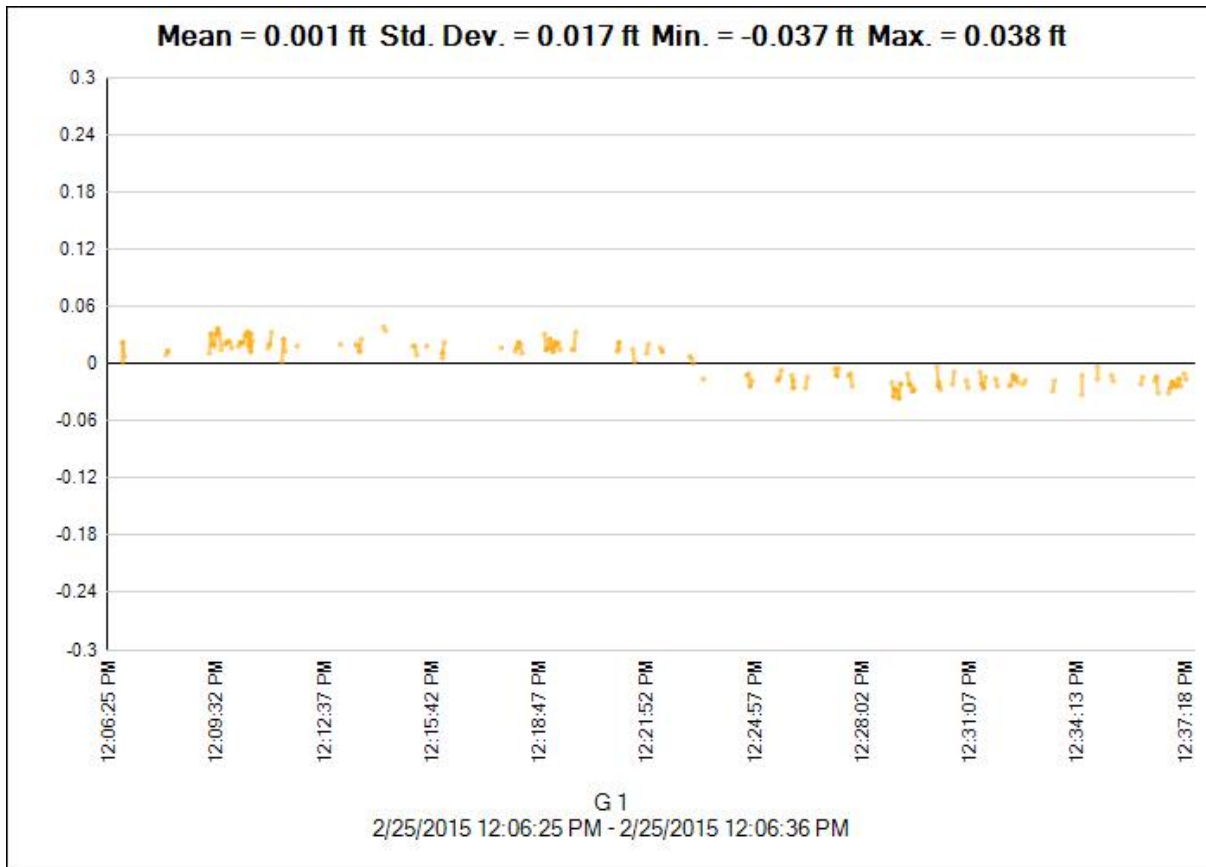
Occupations

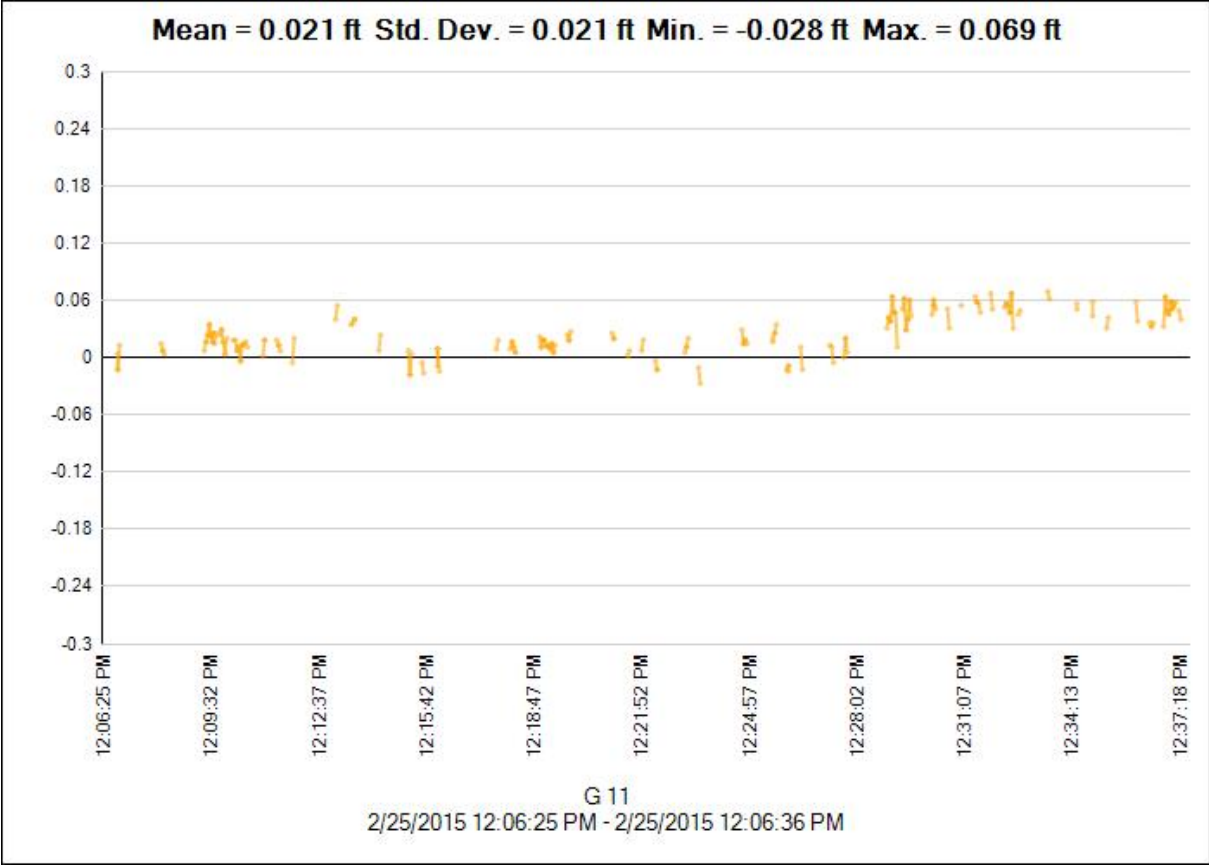
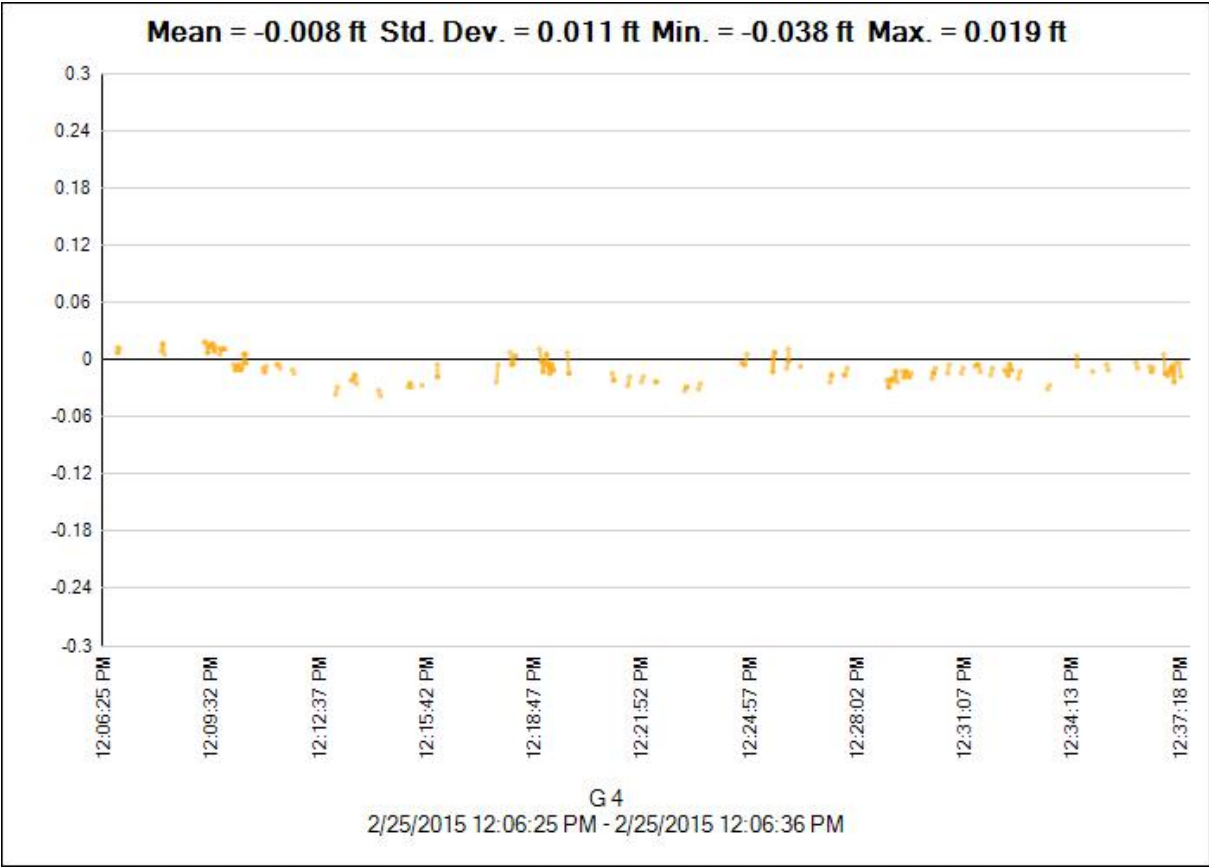
	From	To
Point ID:	AVRA_APT_3	CON106
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520560.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840562.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

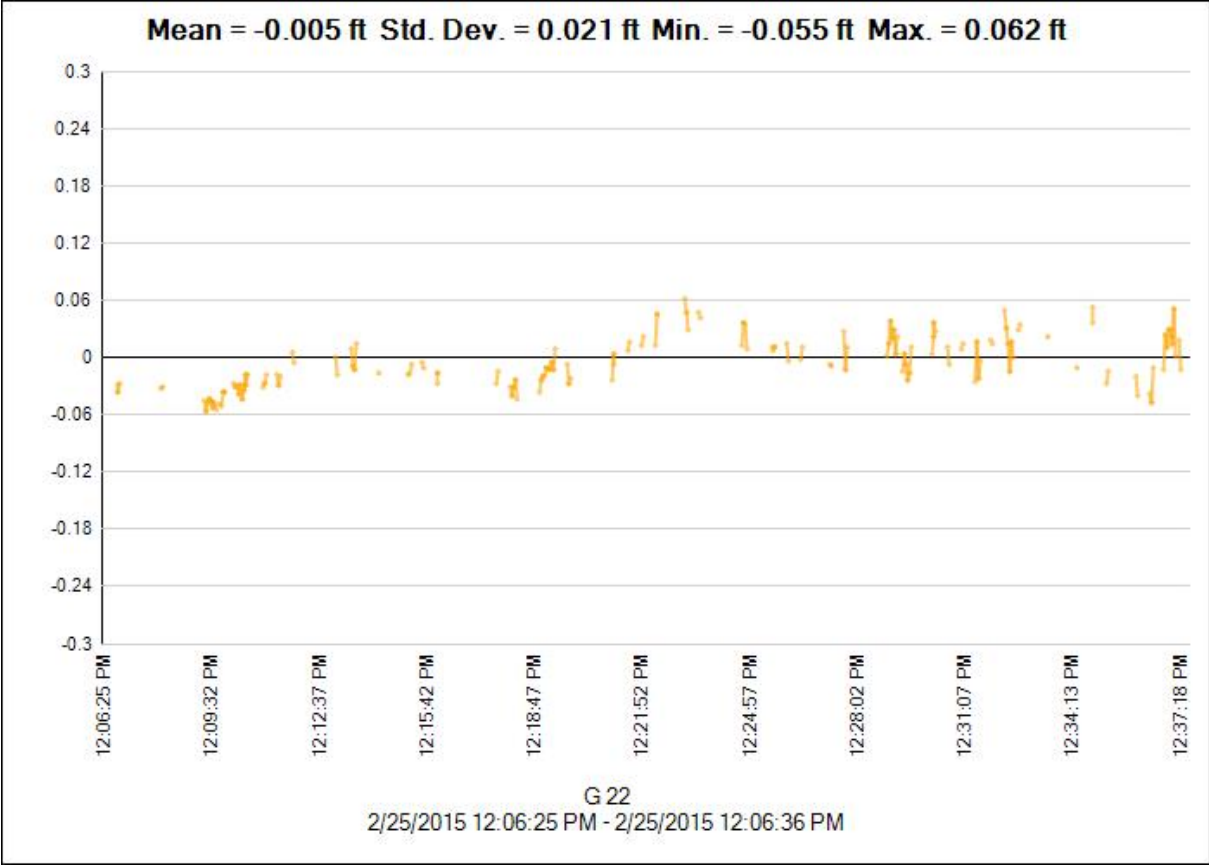
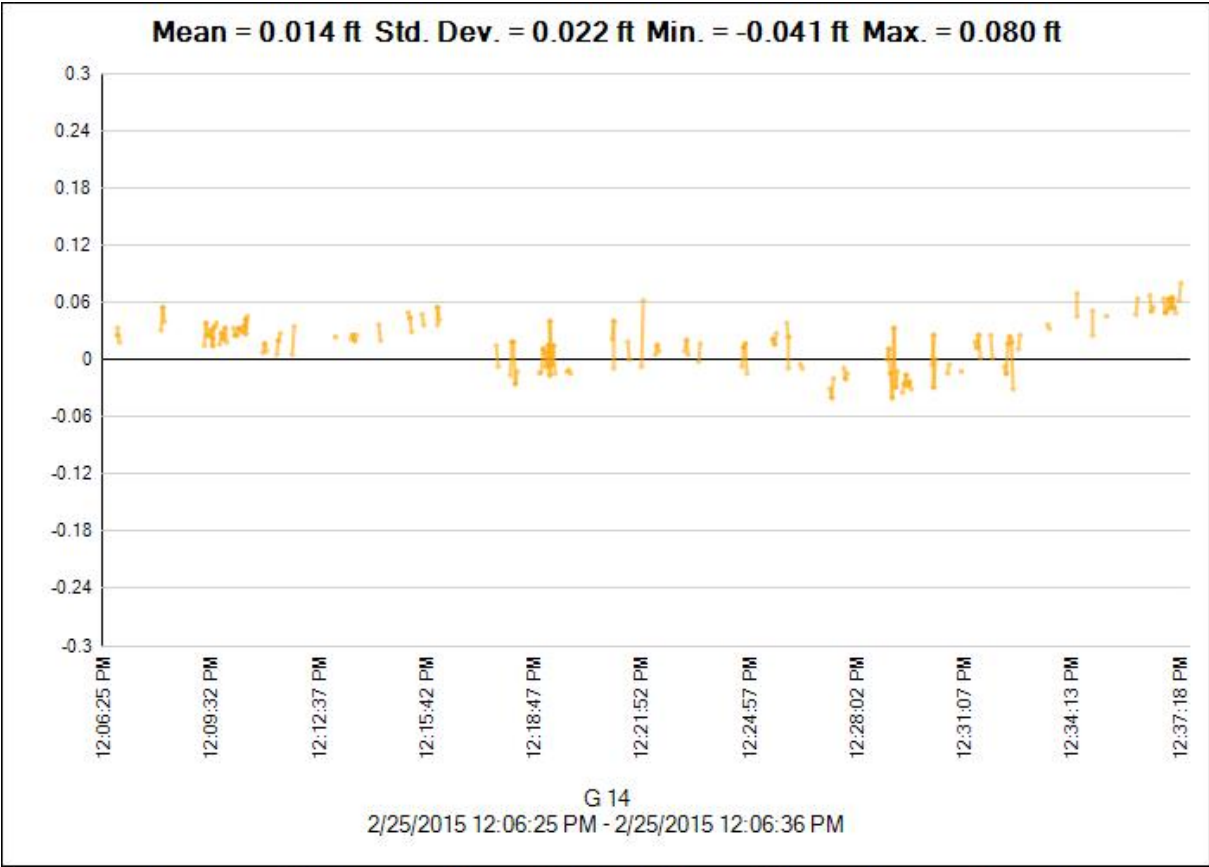
Tracking Summary

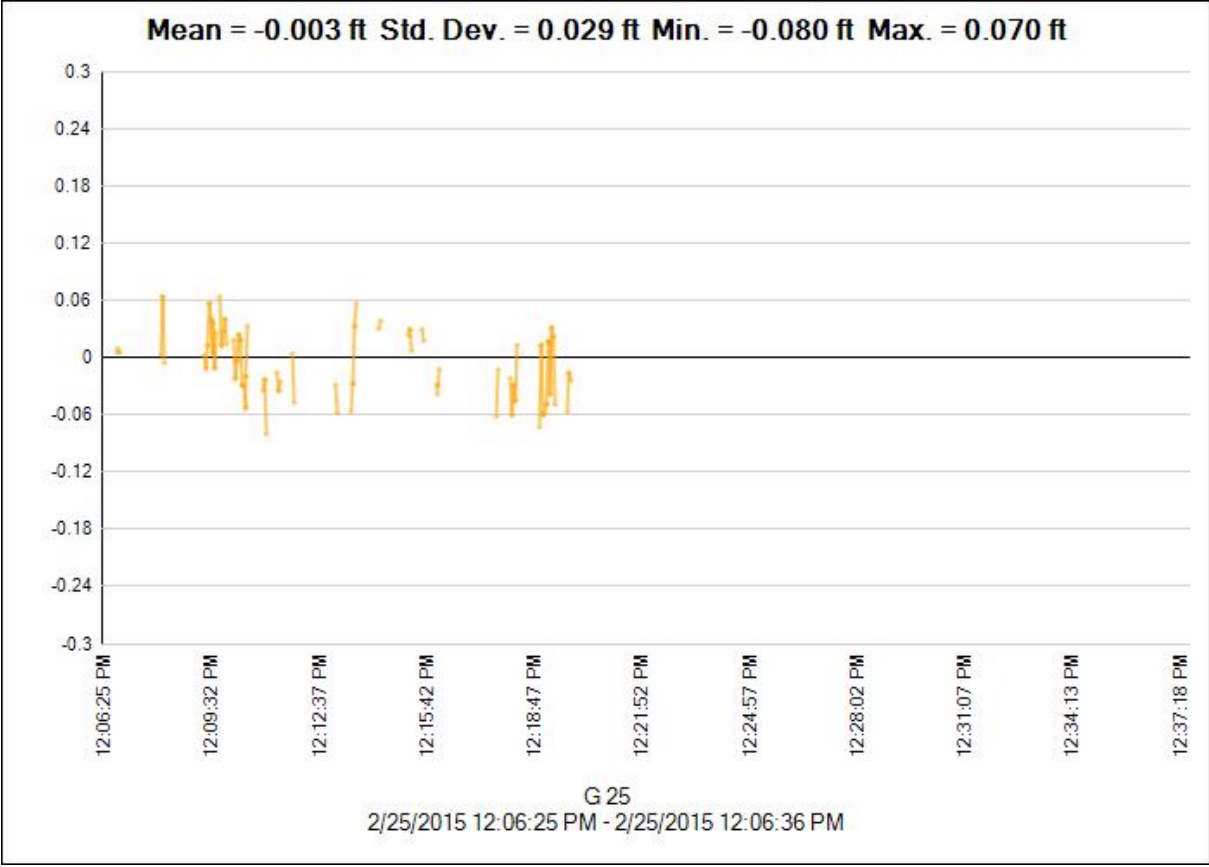
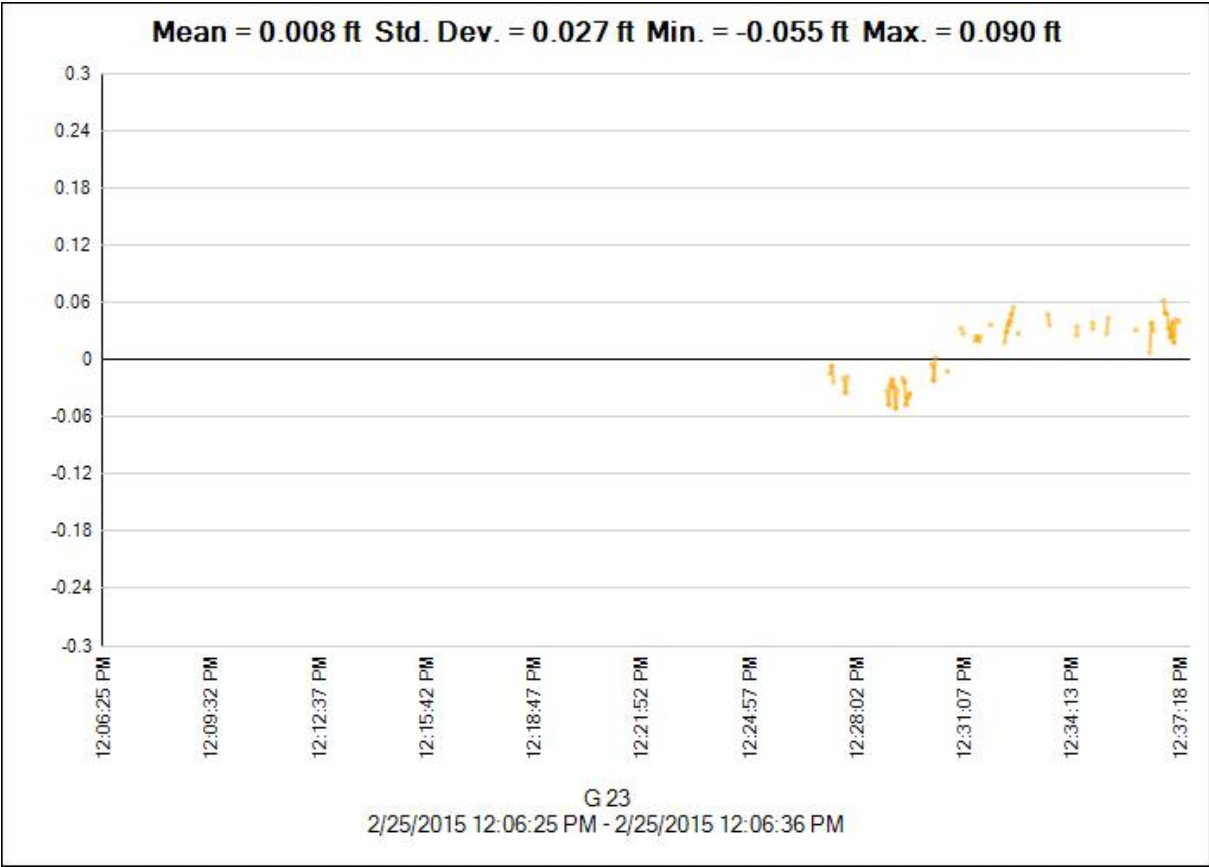
SV	2/25/2015 12:06:23 PM	Duration: 00:31:18	Major interval: 00:01:00	2/25/2015 12:37:41 PM
G 1				
G 3				
G 4				
G 11				
G 14				
G 16				
G 22				
G 23				
G 25				
G 31				
G 32				

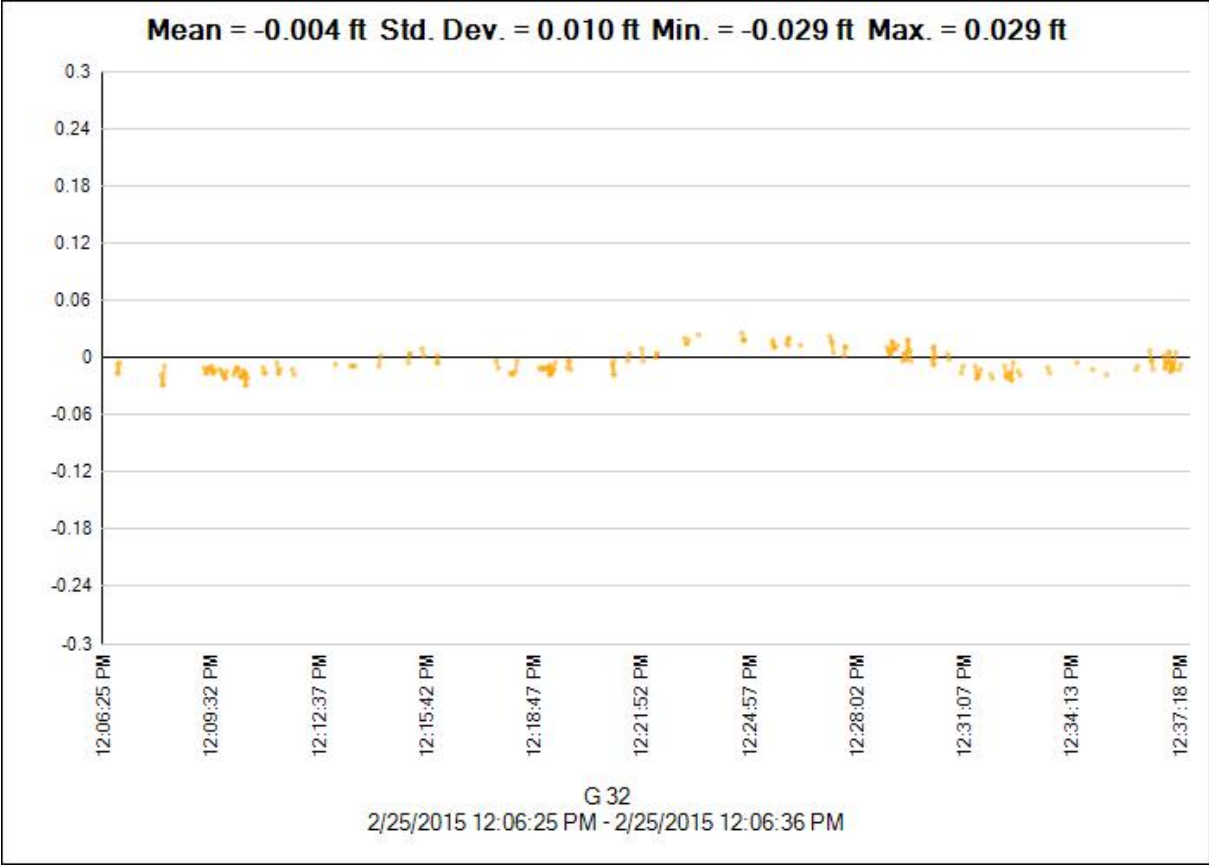
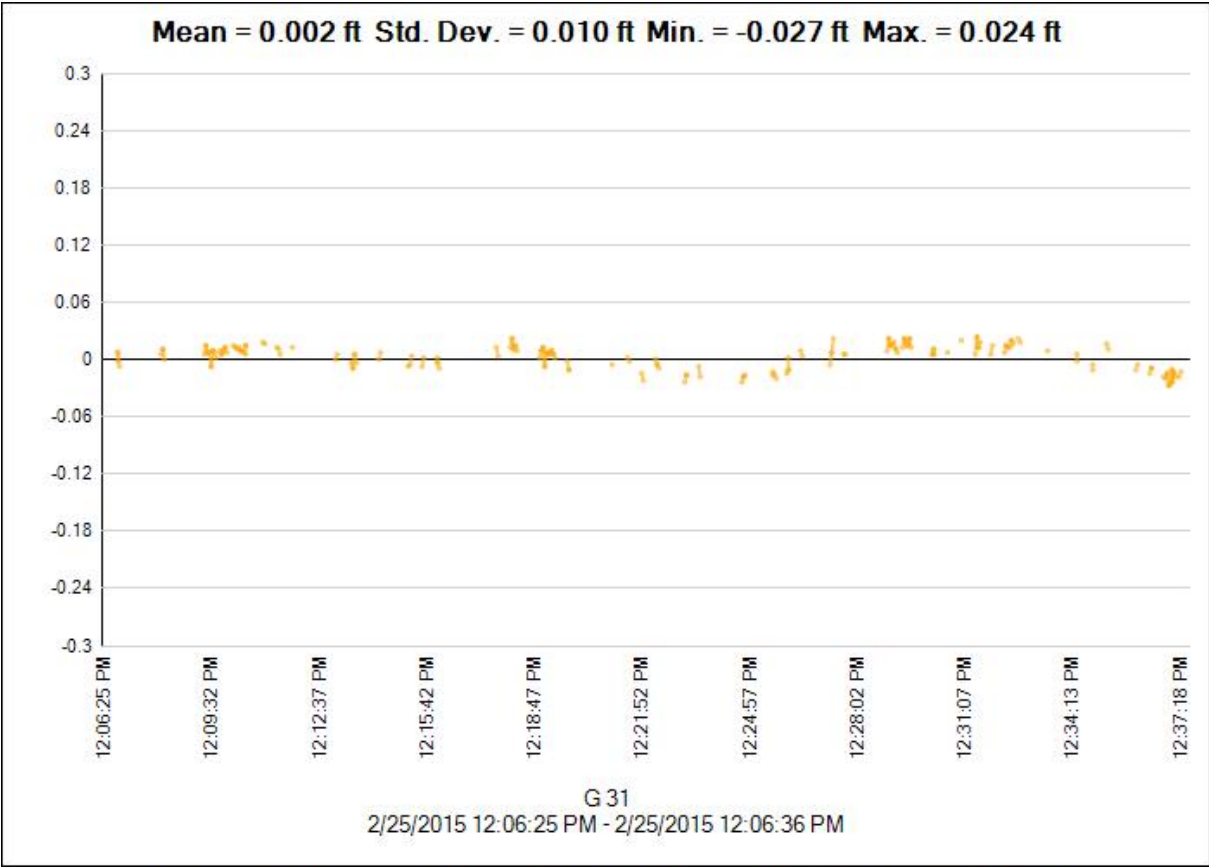
Residuals













Processing style

Elevation mask: 14.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

AVRA_APT_3 - CON101 (1:13:41 PM-1:45:19 PM) (S18)

Baseline observation: AVRA_APT_3 --- CON101 (B18)
Processed: 3/11/2015 8:54:12 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.026 ft
Vertical precision: 0.046 ft
RMS: 0.005 ft
Maximum PDOP: 2.738
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/25/2015 1:13:41 PM (Local: UTC-7hr)
Processing stop time: 2/25/2015 1:45:19 PM (Local: UTC-7hr)
Processing duration: 00:31:38
Processing interval: 1 second

Vector Components (Mark to Mark)

From:		AVRA_APT_3			
Grid		Local		Global	
Easting	916316.445 ft	Latitude	N32°24'11.18150"	Latitude	N32°24'11.18150"
Northing	511086.706 ft	Longitude	W111°12'56.74858"	Longitude	W111°12'56.74858"
Elevation	2040.375 ft	Height	1943.121 ft	Height	1943.121 ft

To:		CON101			
Grid		Local		Global	
Easting	888650.116 ft	Latitude	N32°33'07.92099"	Latitude	N32°33'07.92098"
Northing	565159.502 ft	Longitude	W111°18'15.82985"	Longitude	W111°18'15.82985"
Elevation	1917.707 ft	Height	1820.388 ft	Height	1820.388 ft

Vector					
ΔEasting	-27666.329 ft	NS Fwd Azimuth	333°16'47"	ΔX	-14876.192 ft
ΔNorthing	54072.796 ft	Ellipsoid Dist.	60742.769 ft	ΔY	37156.950 ft
ΔElevation	-122.668 ft	ΔHeight	-122.733 ft	ΔZ	45699.255 ft

Standard Errors

Vector errors:					
σ ΔEasting	0.010 ft	σ NS fwd Azimuth	0°00'00"	σ ΔX	0.014 ft
σ ΔNorthing	0.009 ft	σ Ellipsoid Dist.	0.009 ft	σ ΔY	0.019 ft
σ ΔElevation	0.023 ft	σ ΔHeight	0.023 ft	σ ΔZ	0.013 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000187546		
Y	0.0000163312	0.0000336156	
Z	-0.0000090771	-0.0000146042	0.0000158565

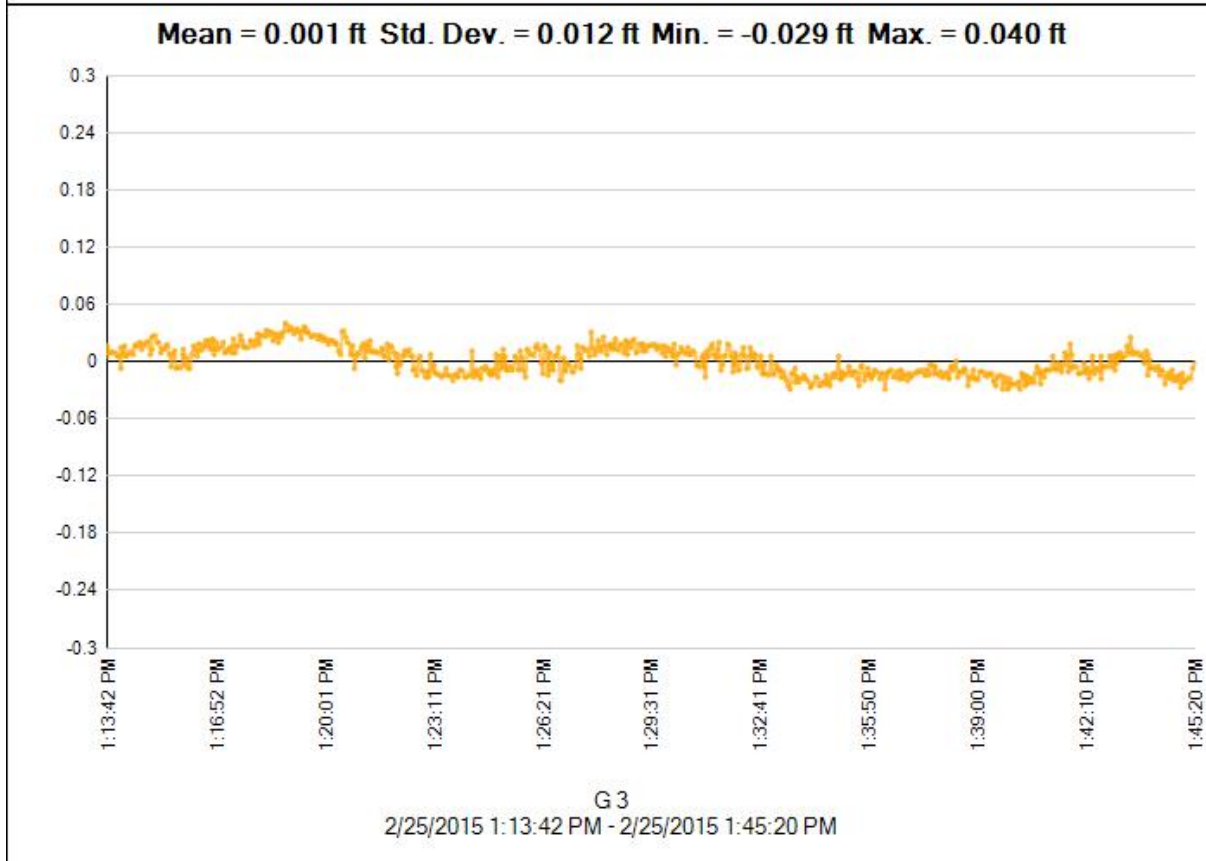
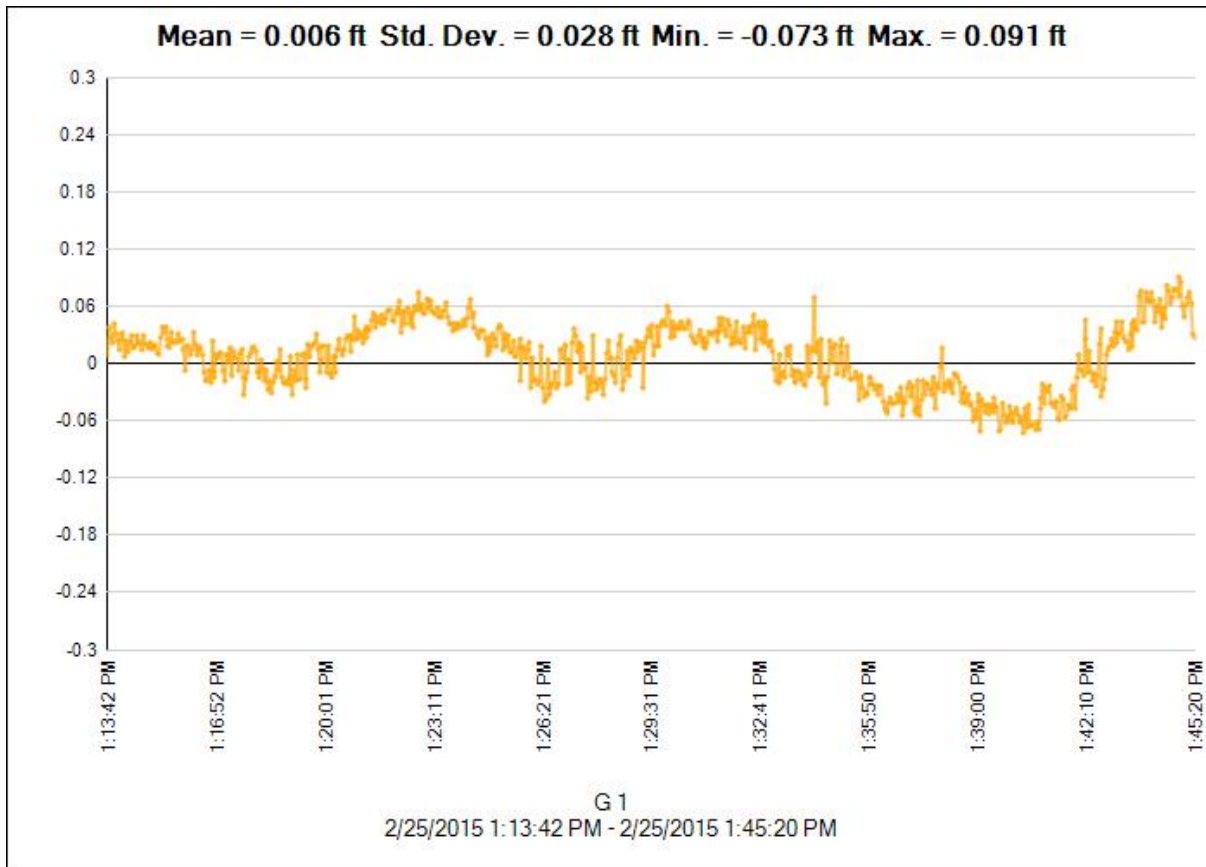
Occupations

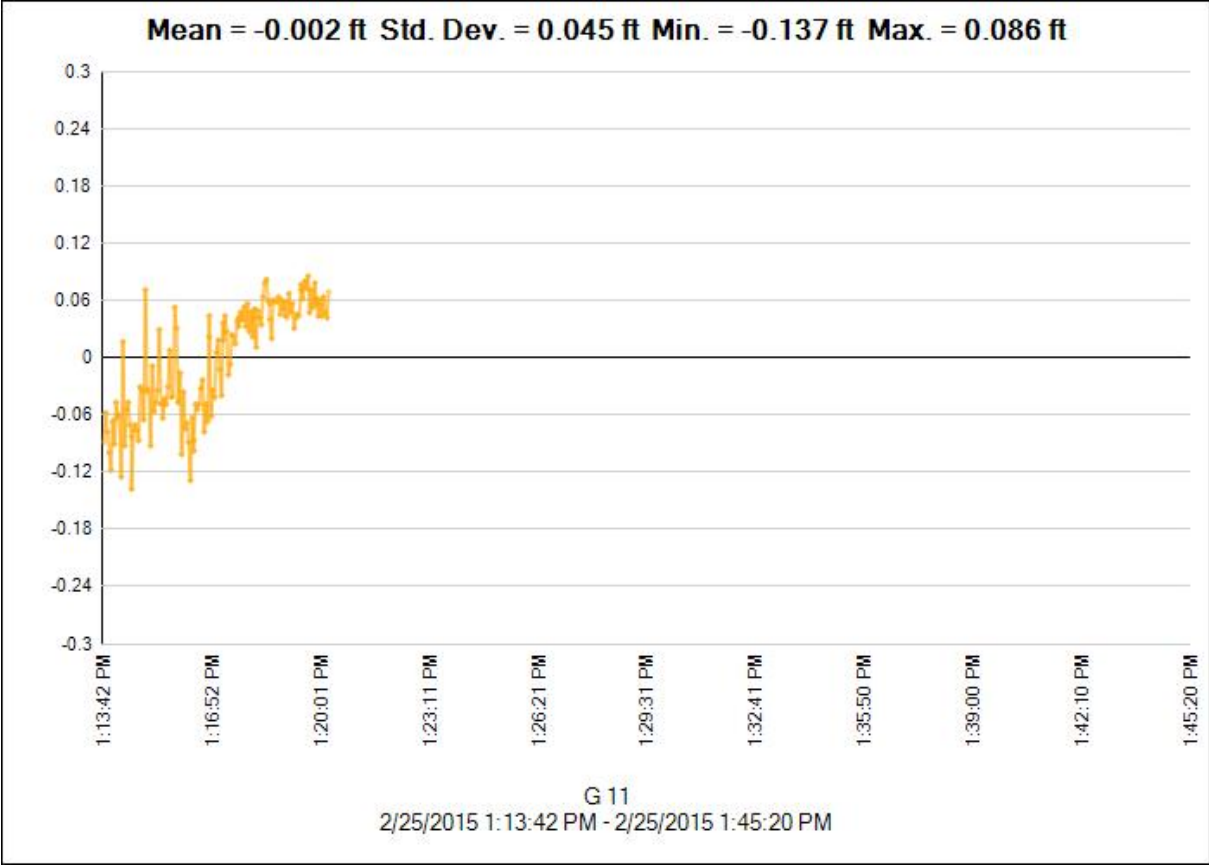
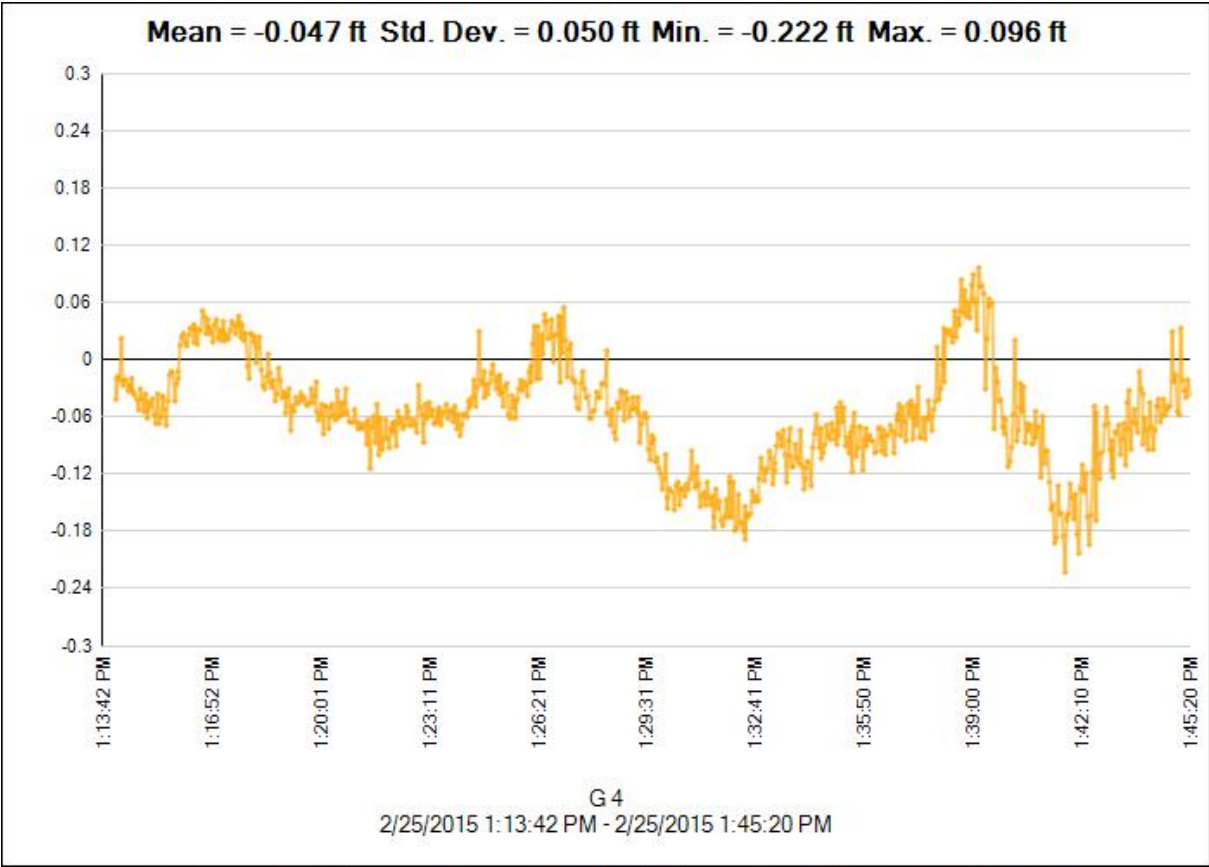
	From	To
Point ID:	AVRA_APT_3	CON101
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520560.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840563.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

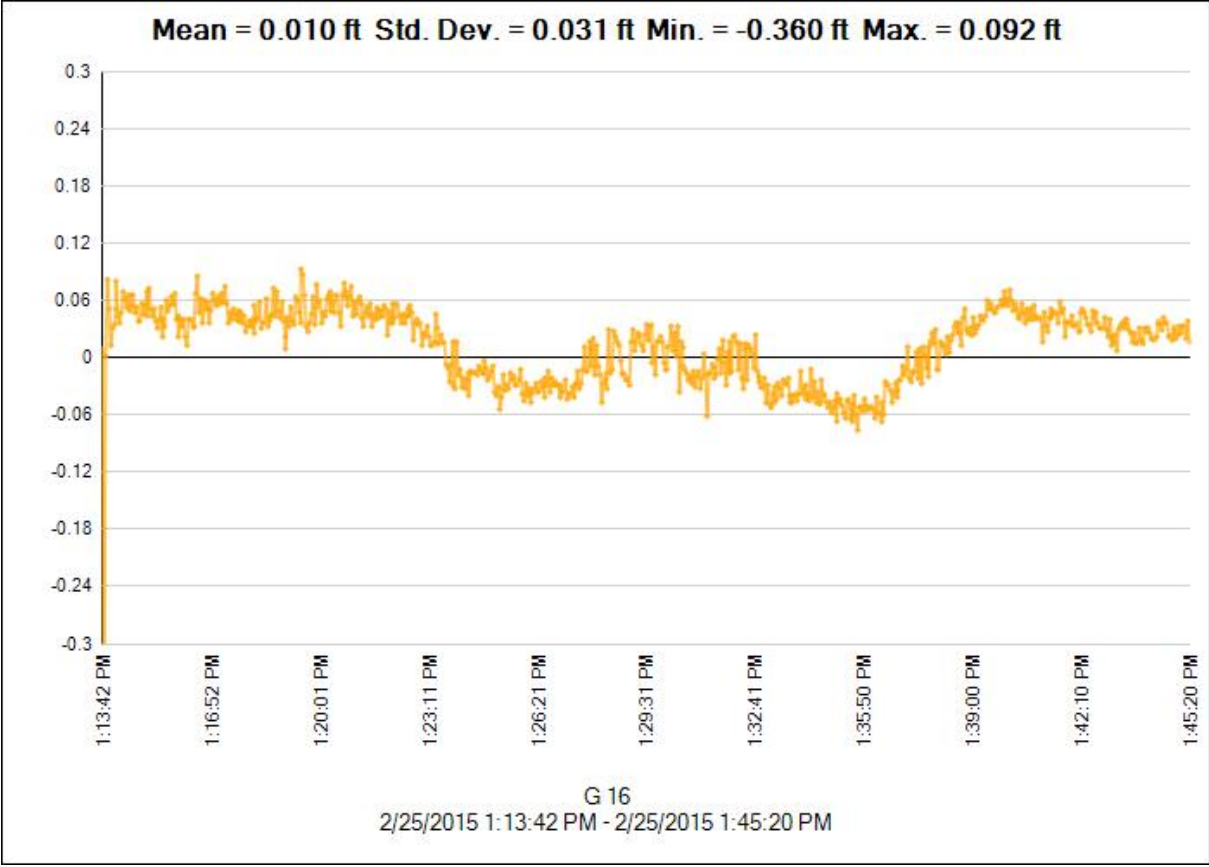
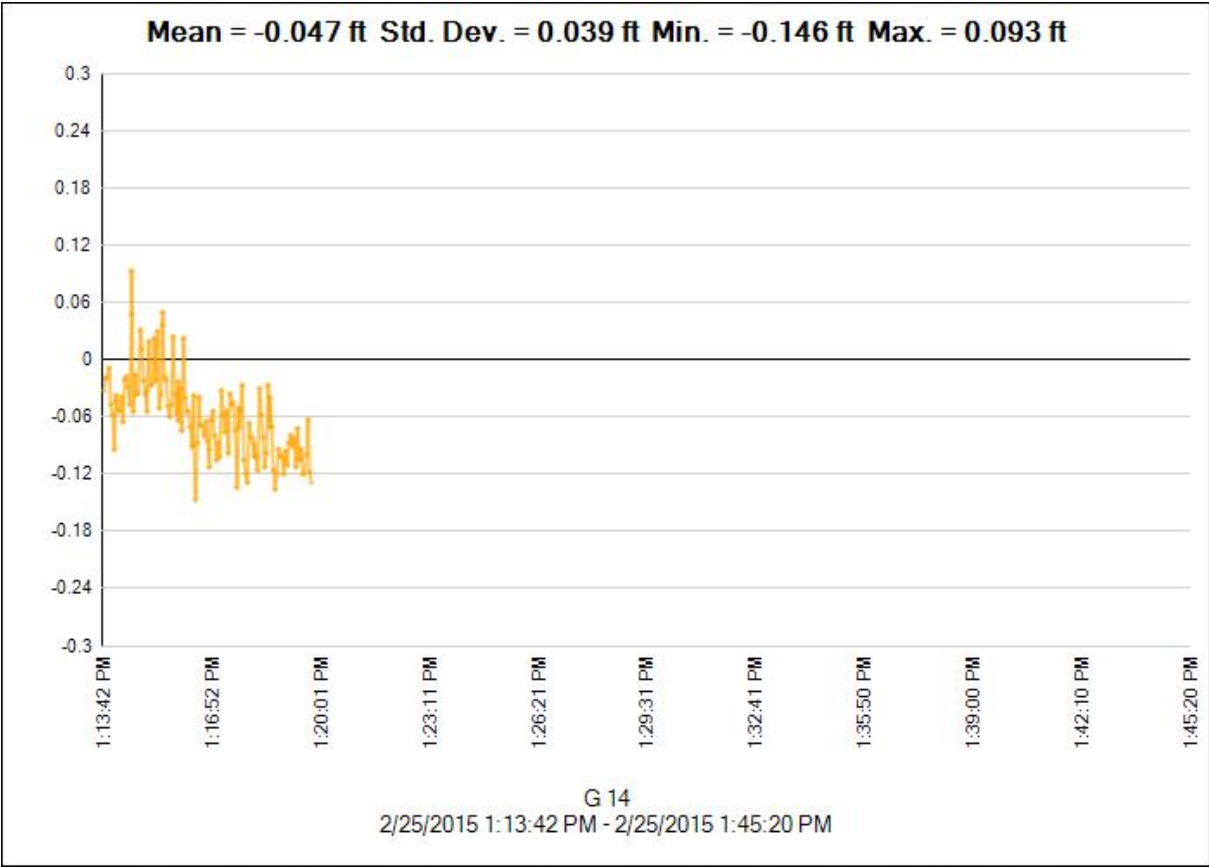
Tracking Summary

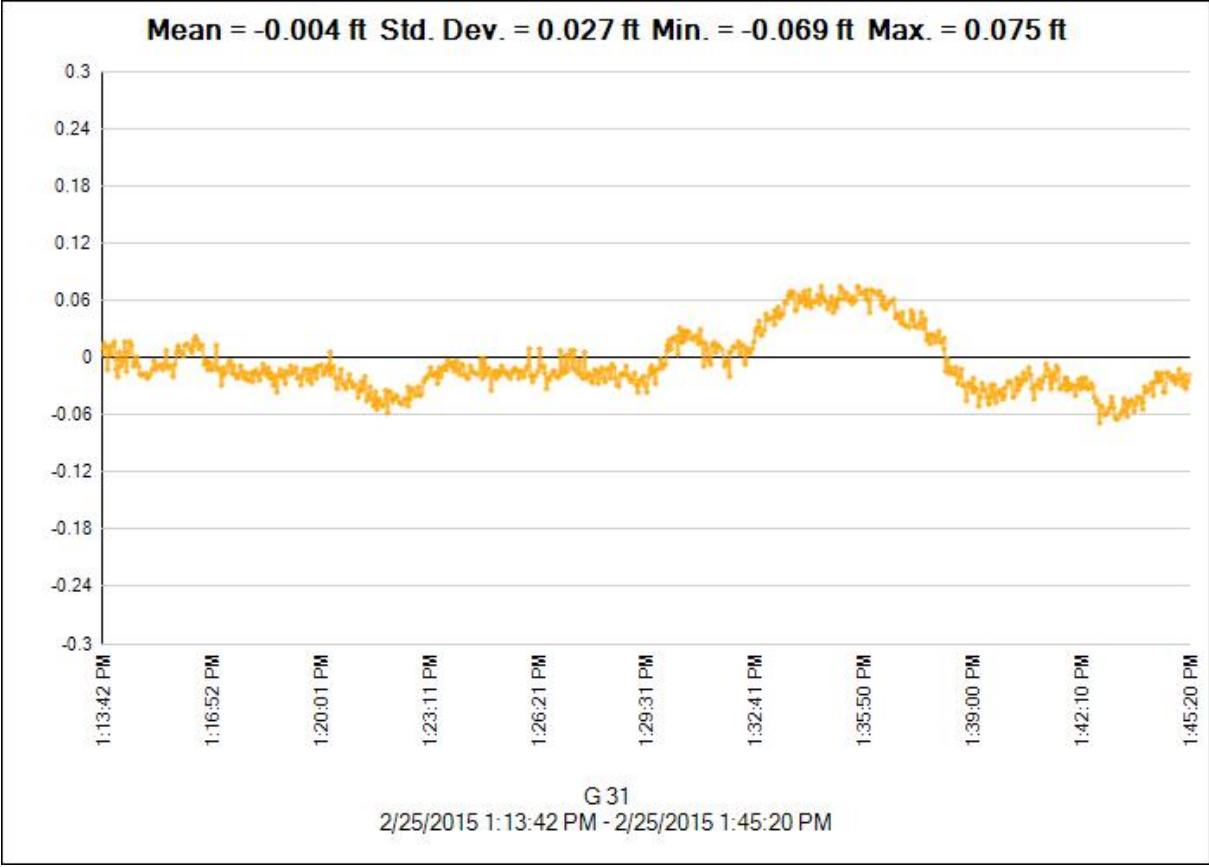
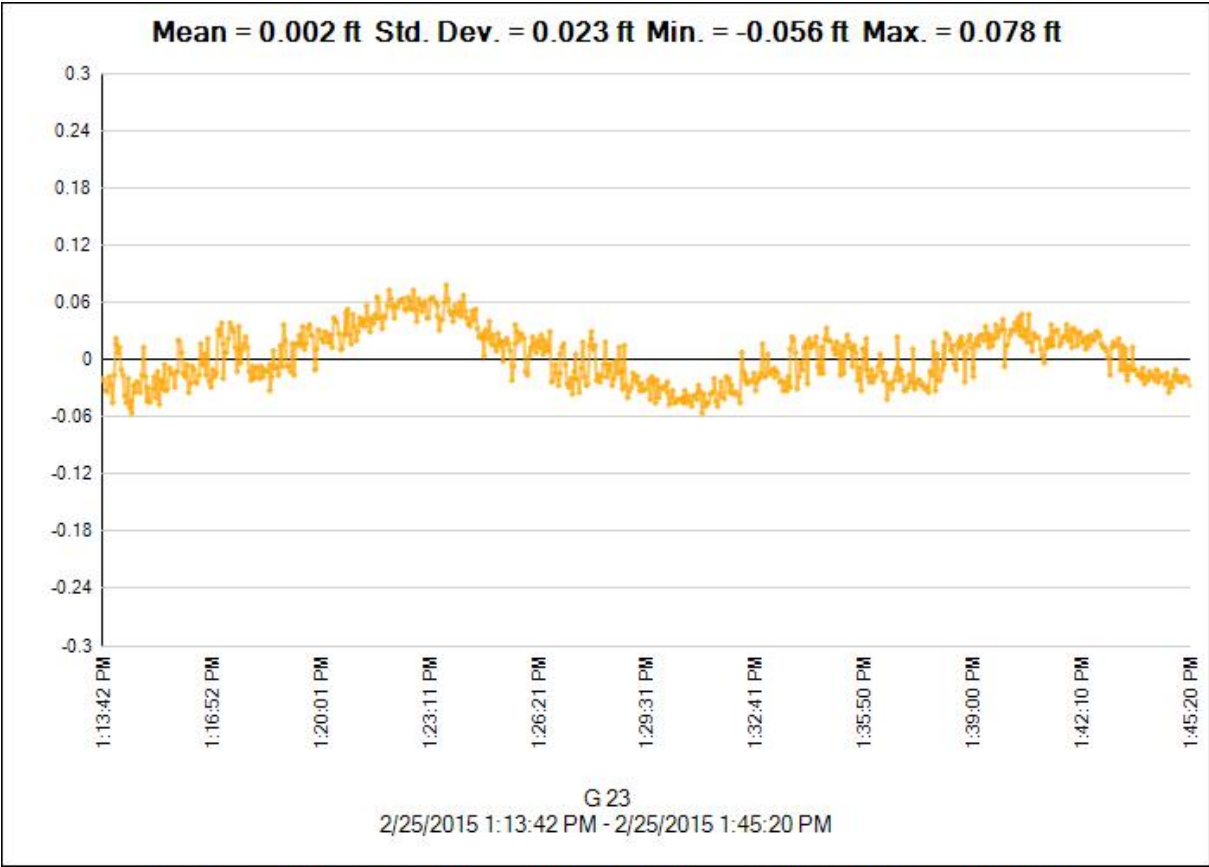
SV	2/25/2015 1:13:41 PM	Duration: 00:31:38	Major interval: 00:01:00	2/25/2015 1:45:19 PM
G 1	L1 L2			
G 3	L1 L2			
G 4	L1 L2			
G 9	L1 L2			
G 11	L1 L2			
G 14	L1 L2			
G 16	L1 L2			
G 23	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

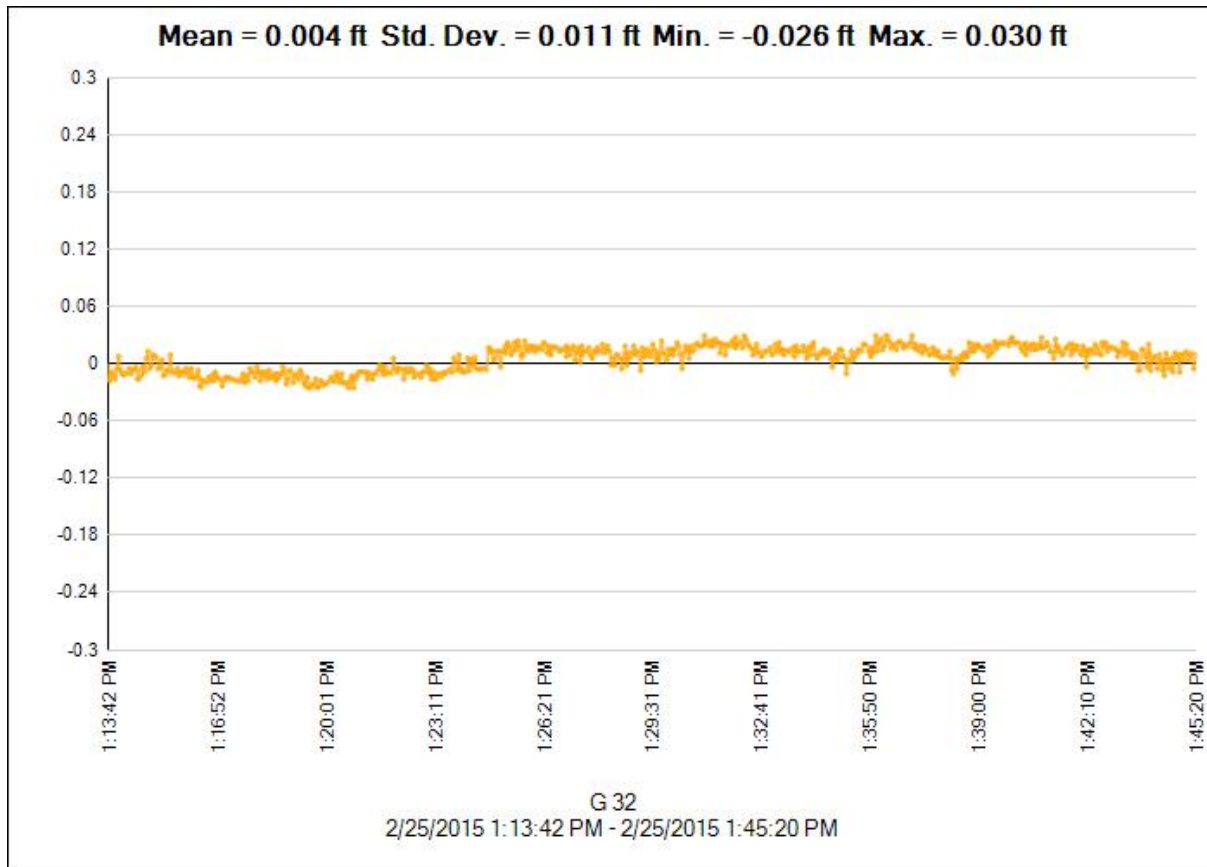
Residuals













Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

AVRA_APT_3 - CON102 (2:24:12 PM-2:56:21 PM) (S19)

Baseline observation: AVRA_APT_3 --- CON102 (B19)
Processed: 3/11/2015 8:54:02 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.037 ft
Vertical precision: 0.049 ft
RMS: 0.010 ft
Maximum PDOP: 3.199
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/25/2015 2:24:12 PM (Local: UTC-7hr)
Processing stop time: 2/25/2015 2:56:09 PM (Local: UTC-7hr)
Processing duration: 00:31:57
Processing interval: 1 second

Vector Components (Mark to Mark)

From: AVRA_APT_3					
Grid		Local		Global	
Easting	916316.445 ft	Latitude	N32°24'11.18150"	Latitude	N32°24'11.18150"
Northing	511086.706 ft	Longitude	W111°12'56.74858"	Longitude	W111°12'56.74858"
Elevation	2040.375 ft	Height	1943.121 ft	Height	1943.121 ft

To: CON102					
Grid		Local		Global	
Easting	940419.047 ft	Latitude	N32°33'49.76967"	Latitude	N32°33'49.76967"
Northing	569727.433 ft	Longitude	W111°08'10.61851"	Longitude	W111°08'10.61851"
Elevation	2691.890 ft	Height	2596.930 ft	Height	2596.930 ft

Vector					
ΔEasting	24102.602 ft	NS Fwd Azimuth	22°43'13"	ΔX	34003.761 ft
ΔNorthing	58640.727 ft	Ellipsoid Dist.	63403.420 ft	ΔY	19917.484 ft
ΔElevation	651.515 ft	ΔHeight	653.809 ft	ΔZ	49682.301 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.012 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.015 ft
$\sigma \Delta$ Northing	0.012 ft	σ Ellipsoid Dist.	0.014 ft	$\sigma \Delta$ Y	0.019 ft
$\sigma \Delta$ Elevation	0.025 ft	$\sigma \Delta$ Height	0.025 ft	$\sigma \Delta$ Z	0.017 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000216272		
Y	0.0000131443	0.0000345555	
Z	-0.0000031151	-0.0000216757	0.0000283201

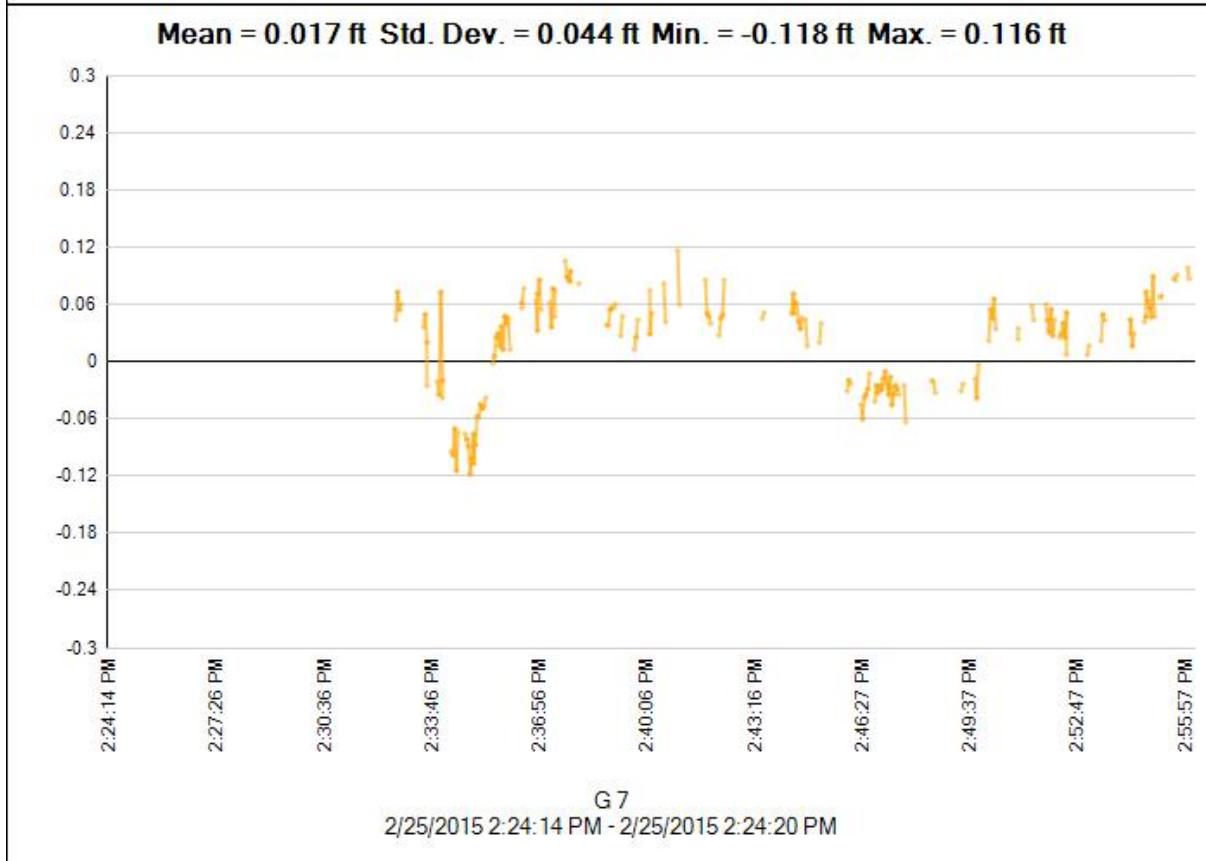
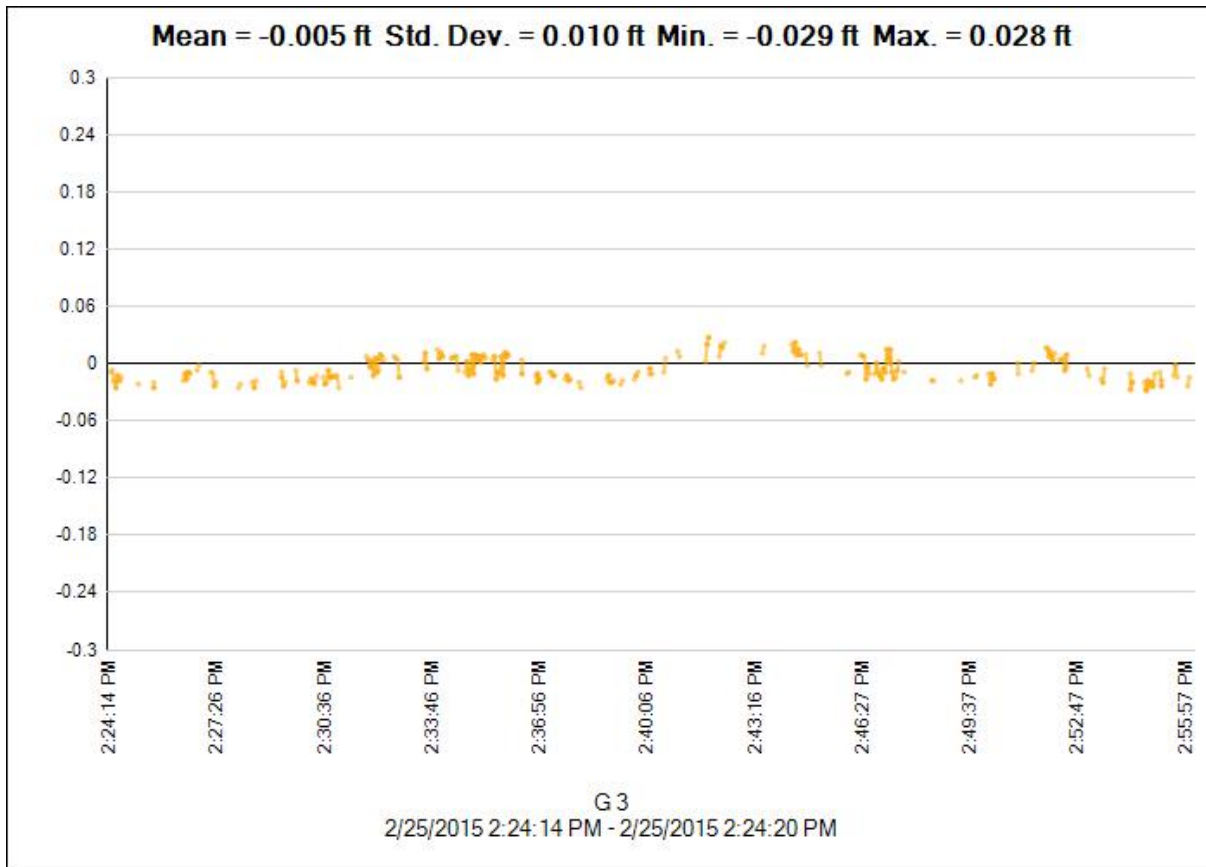
Occupations

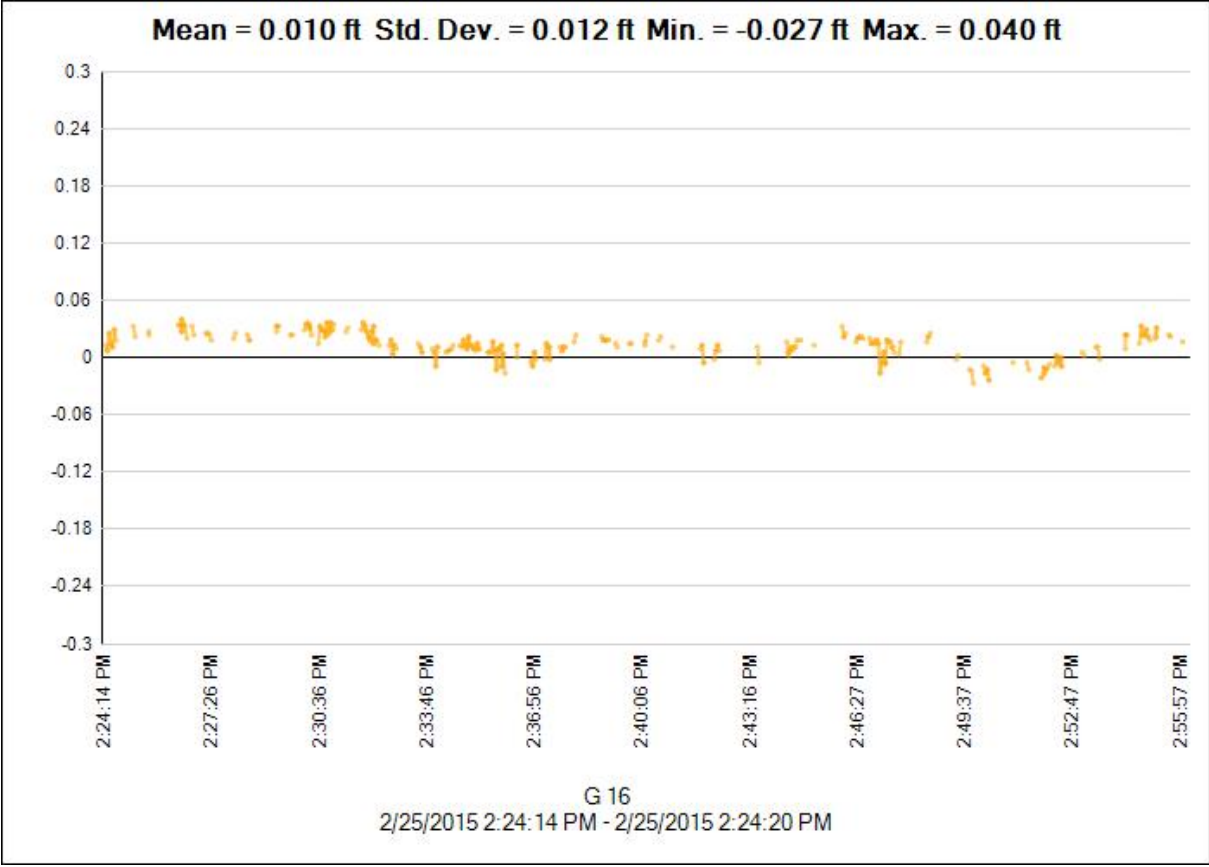
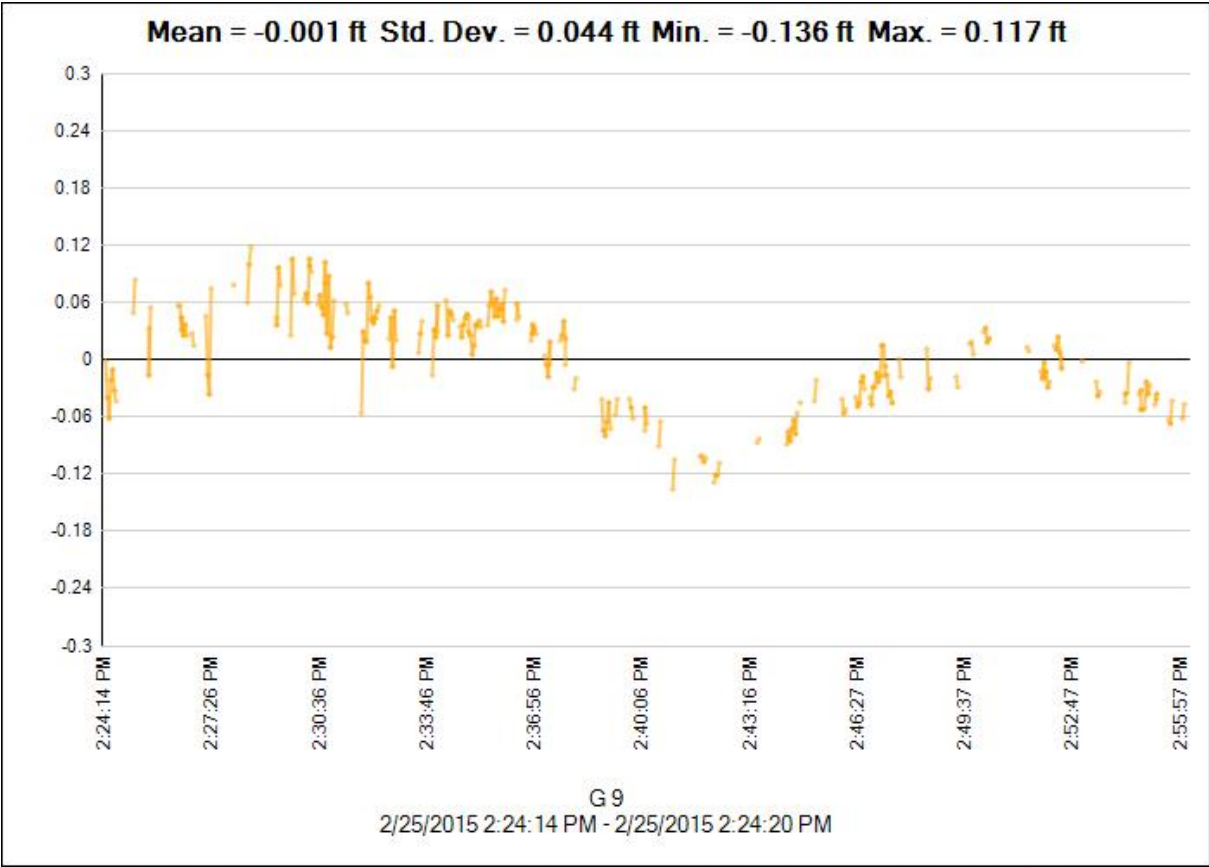
	From	To
Point ID:	AVRA_APT_3	CON102
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520560.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840564.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

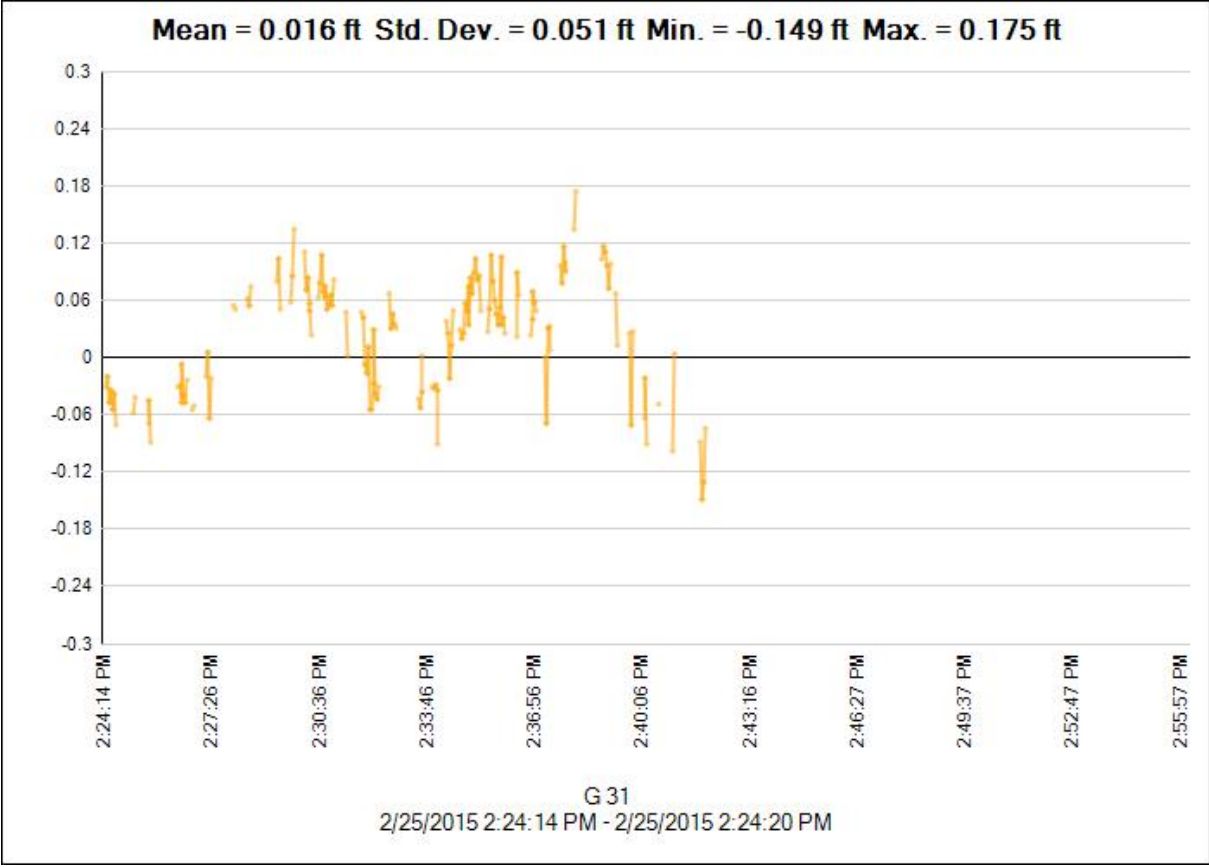
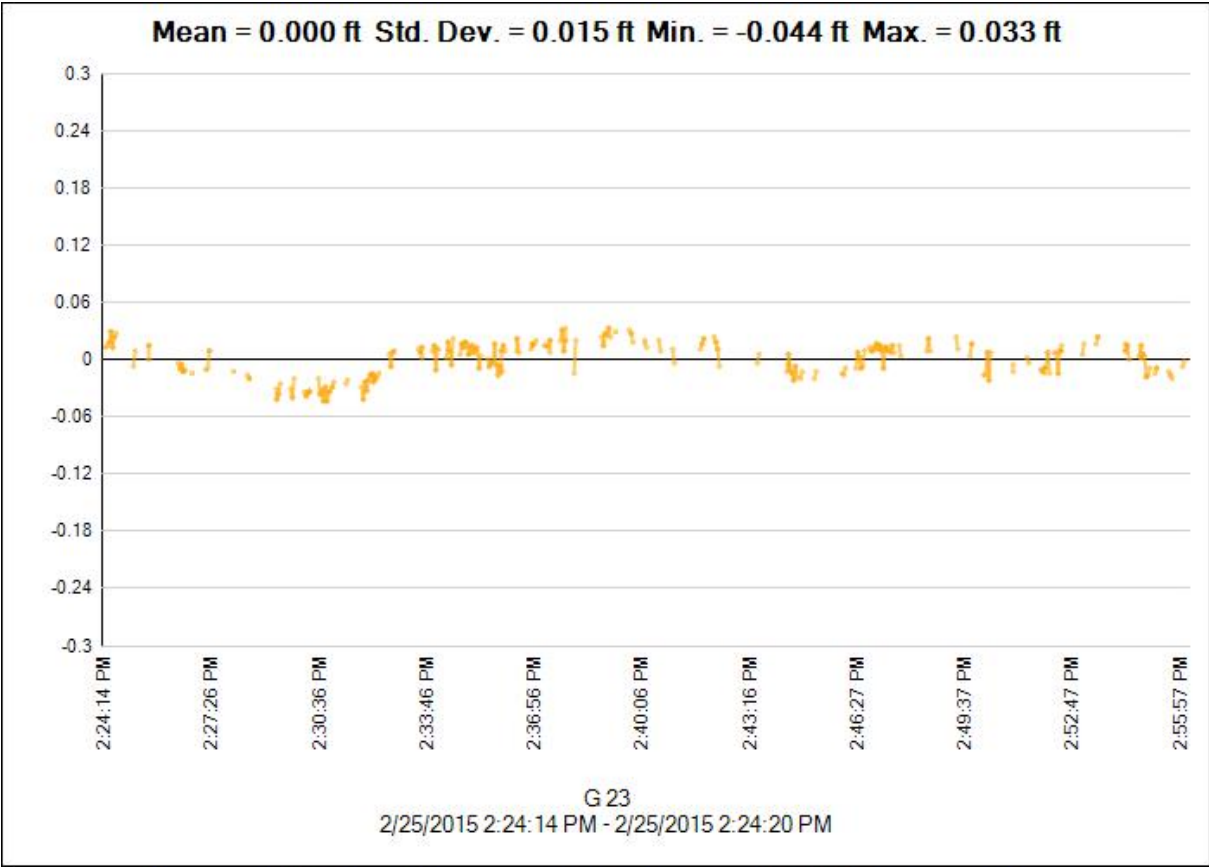
Tracking Summary

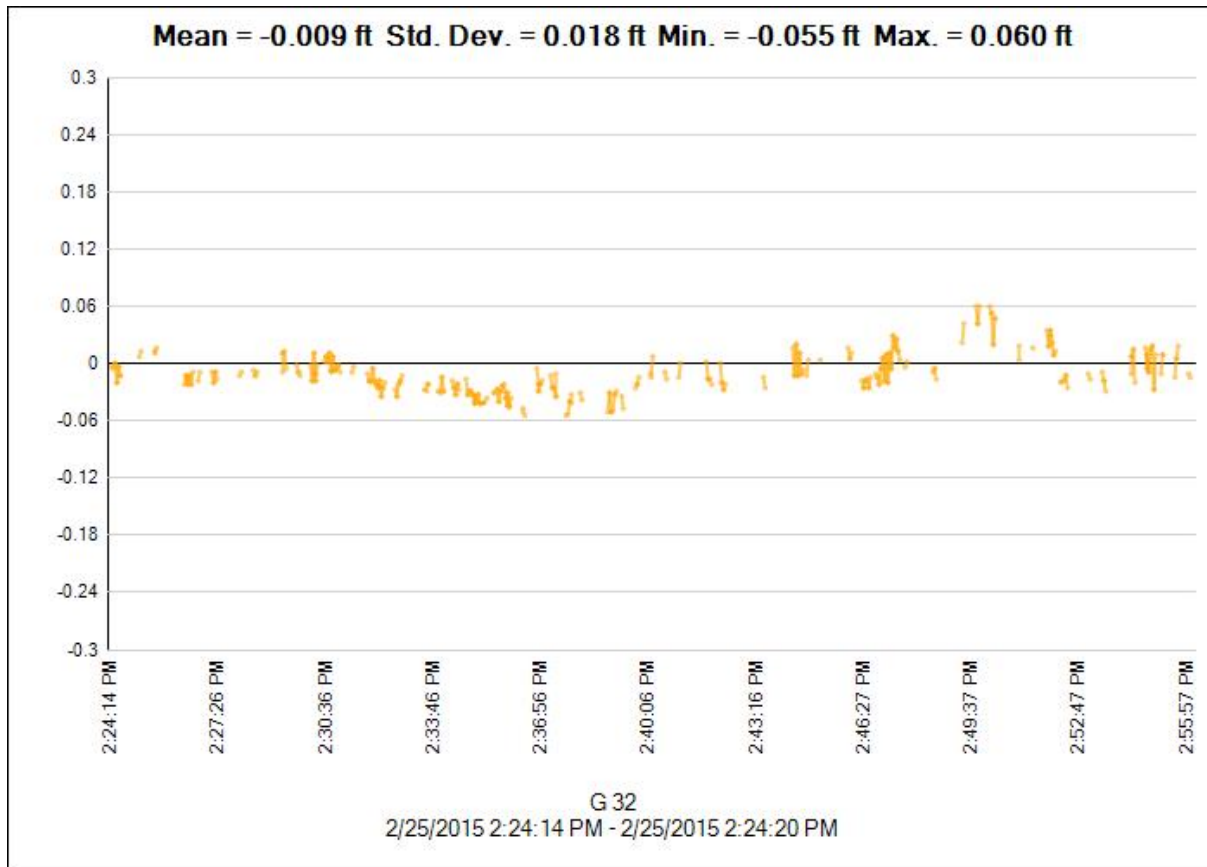
SV	2/25/2015 2:24:12 PM	Duration: 00:32:09	Major interval: 00:01:00	2/25/2015 2:56:21 PM
G 1	L1 L2			
G 3	L1 L2			
G 6	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 16	L1 L2			
G 20	L1			
G 23	L1 L2			
G 27	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

Residuals











Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

AVRA_APT_3 - CON103 (3:41:00 PM-4:11:39 PM) (S20)

Baseline observation: AVRA_APT_3 --- CON103 (B20)
Processed: 3/11/2015 8:54:14 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.025 ft
Vertical precision: 0.041 ft
RMS: 0.006 ft
Maximum PDOP: 2.425
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/25/2015 3:41:00 PM (Local: UTC-7hr)
Processing stop time: 2/25/2015 4:11:39 PM (Local: UTC-7hr)
Processing duration: 00:30:39
Processing interval: 1 second

Vector Components (Mark to Mark)

From: AVRA_APT_3					
Grid		Local		Global	
Easting	916316.445 ft	Latitude	N32°24'11.18150"	Latitude	N32°24'11.18150"
Northing	511086.706 ft	Longitude	W111°12'56.74858"	Longitude	W111°12'56.74858"
Elevation	2040.375 ft	Height	1943.121 ft	Height	1943.121 ft

To: CON103					
Grid		Local		Global	
Easting	998572.679 ft	Latitude	N32°34'29.50880"	Latitude	N32°34'29.50880"
Northing	574221.770 ft	Longitude	W110°56'50.67019"	Longitude	W110°56'50.67019"
Elevation	3454.537 ft	Height	3361.029 ft	Height	3361.029 ft

Vector					
ΔEasting	82256.233 ft	NS Fwd Azimuth	52°52'08"	ΔX	88866.045 ft
ΔNorthing	63135.063 ft	Ellipsoid Dist.	103694.881 ft	ΔY	438.718 ft
ΔElevation	1414.162 ft	ΔHeight	1417.908 ft	ΔZ	53478.765 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.008 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.012 ft
$\sigma \Delta$ Northing	0.010 ft	σ Ellipsoid Dist.	0.010 ft	$\sigma \Delta$ Y	0.018 ft
$\sigma \Delta$ Elevation	0.021 ft	$\sigma \Delta$ Height	0.021 ft	$\sigma \Delta$ Z	0.011 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000144794		
Y	0.0000155061	0.0000293619	
Z	-0.0000055483	-0.0000099650	0.0000115952

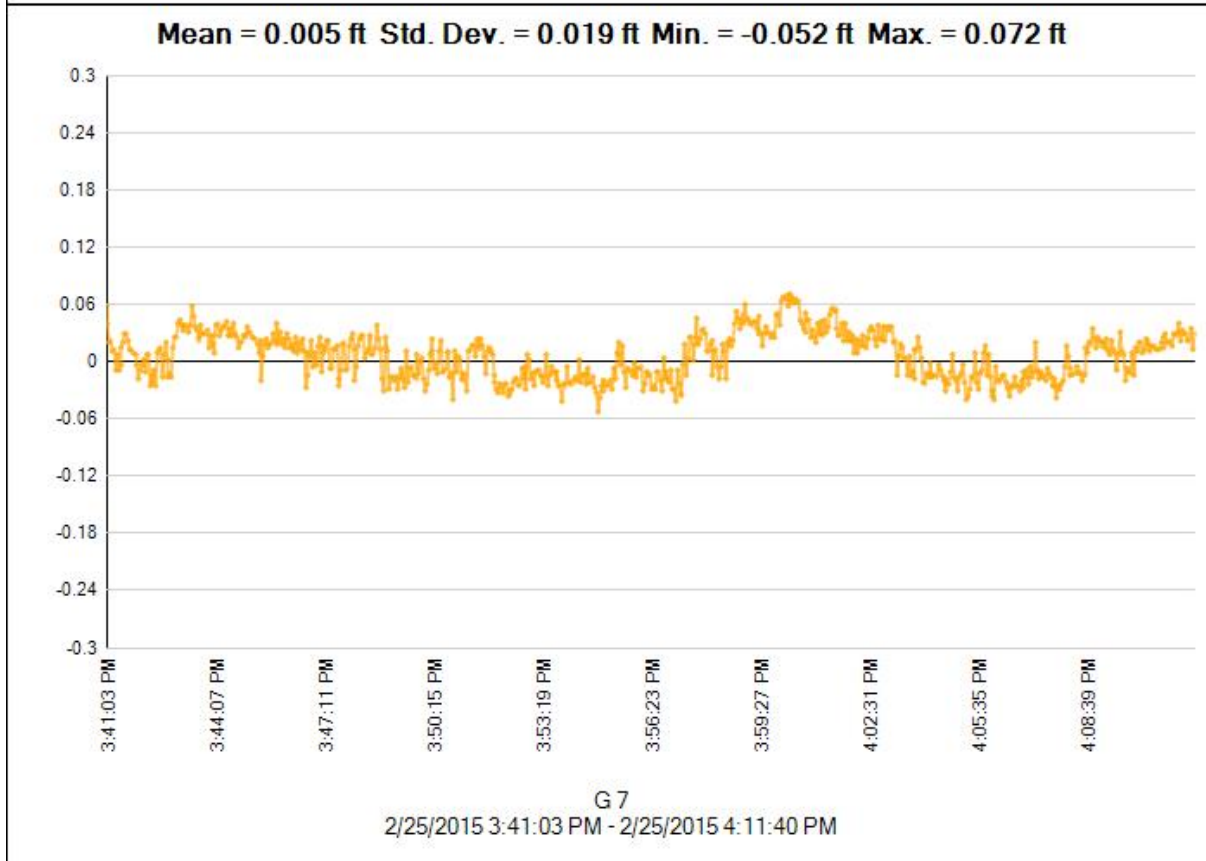
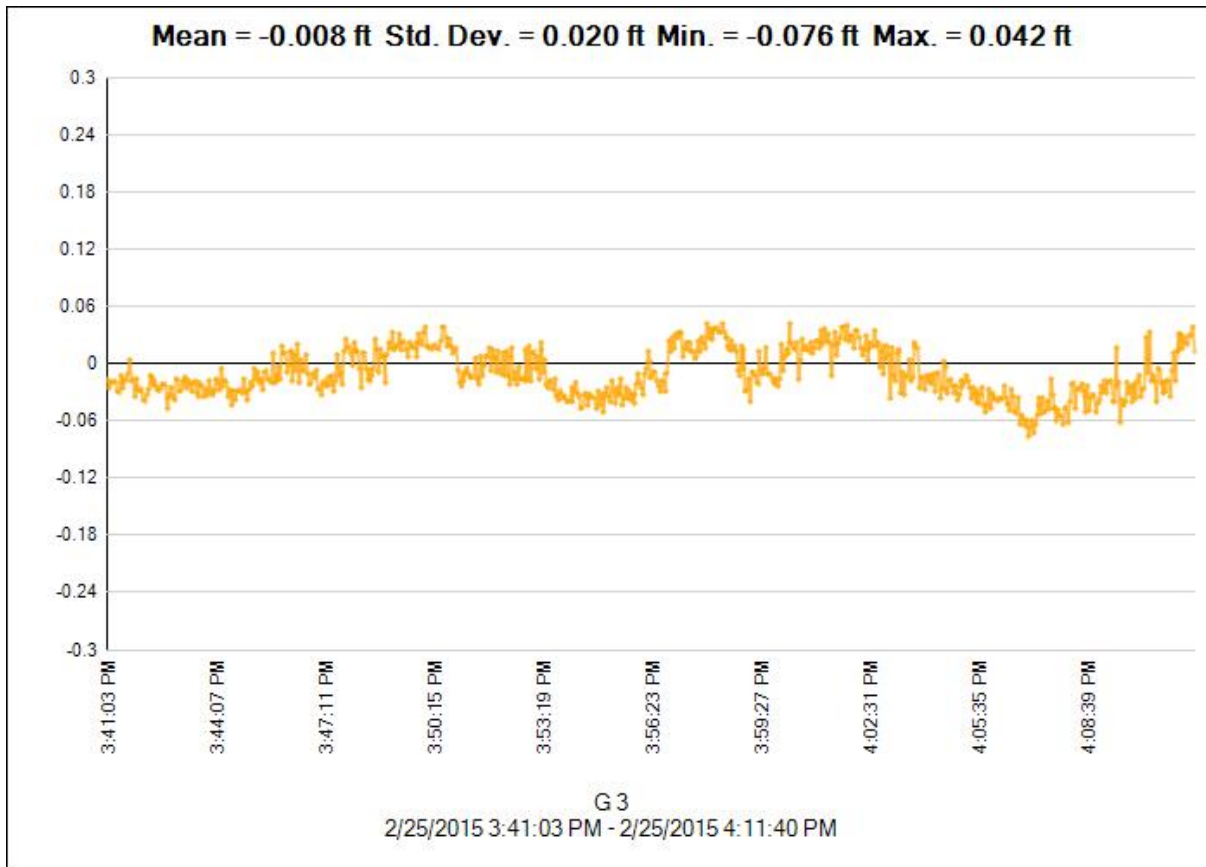
Occupations

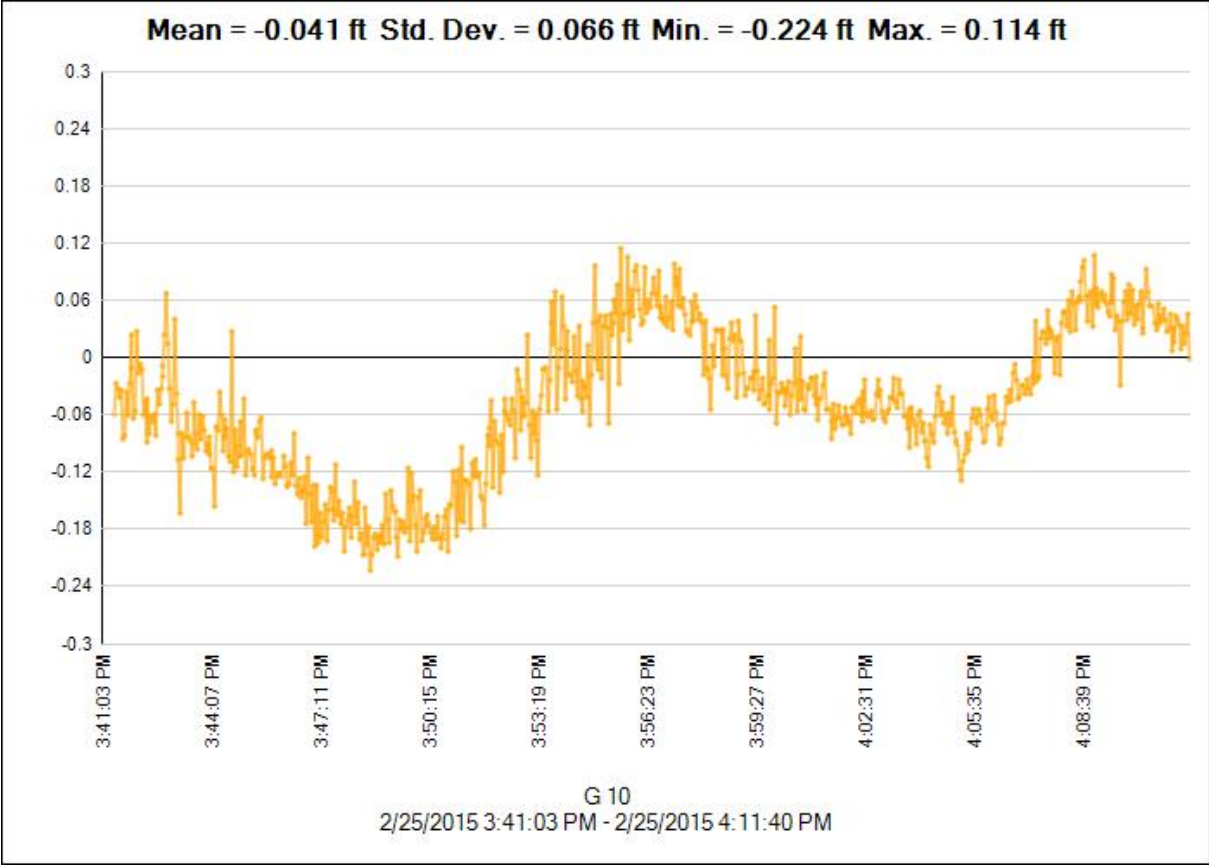
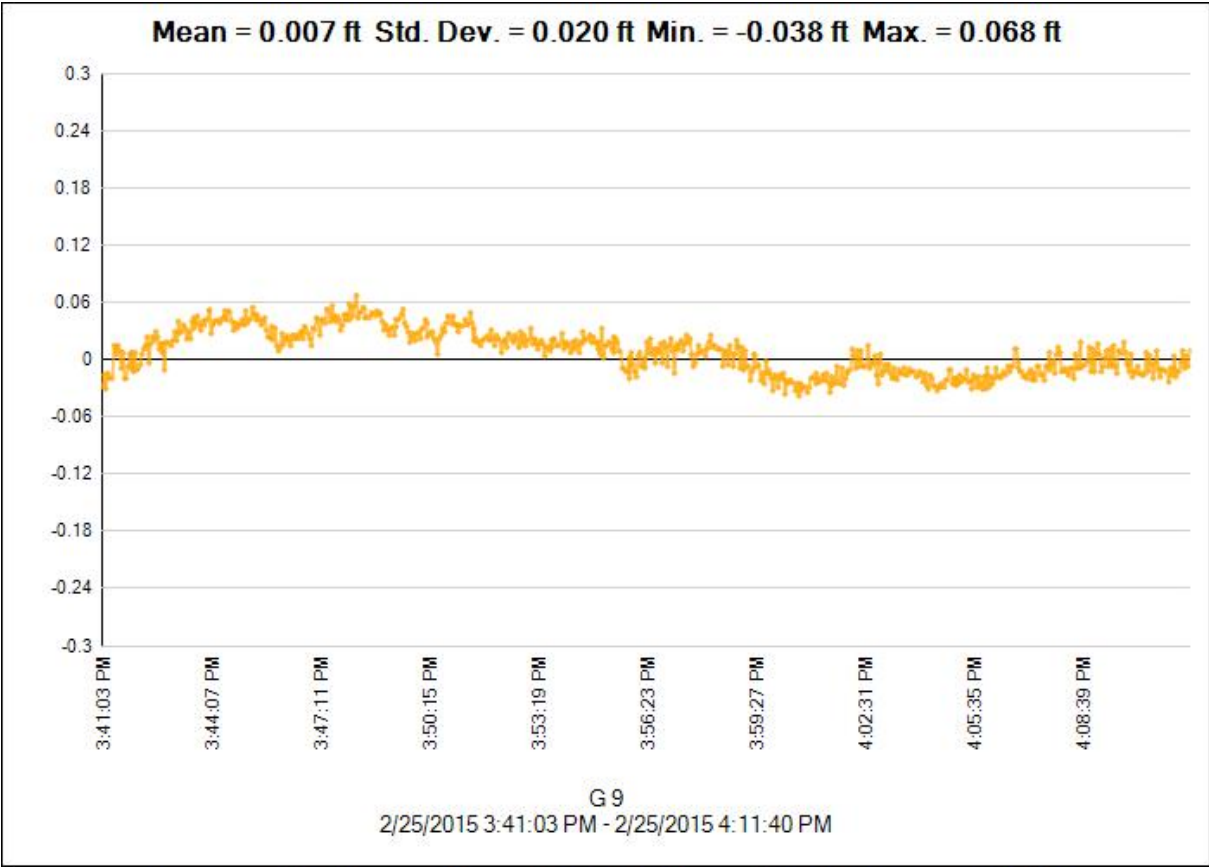
	From	To
Point ID:	AVRA_APT_3	CON103
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520560.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840565.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

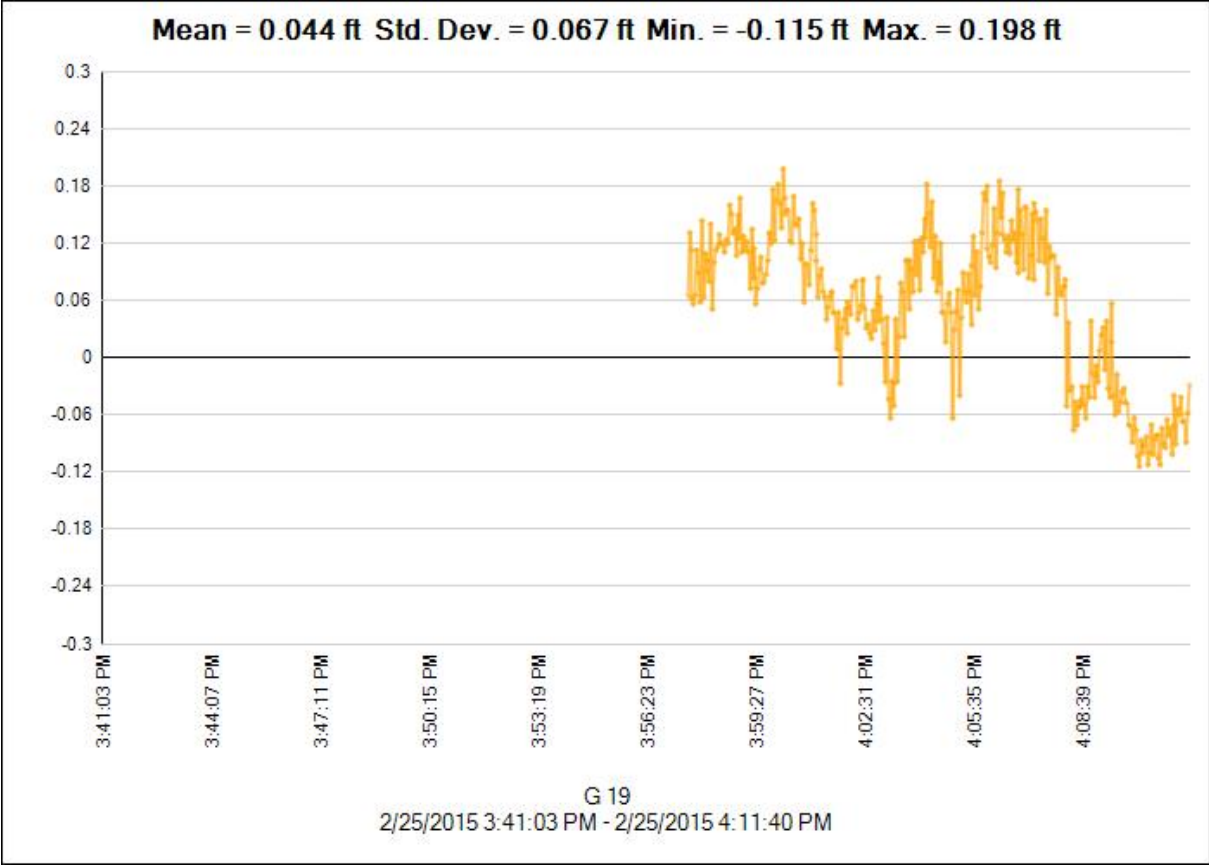
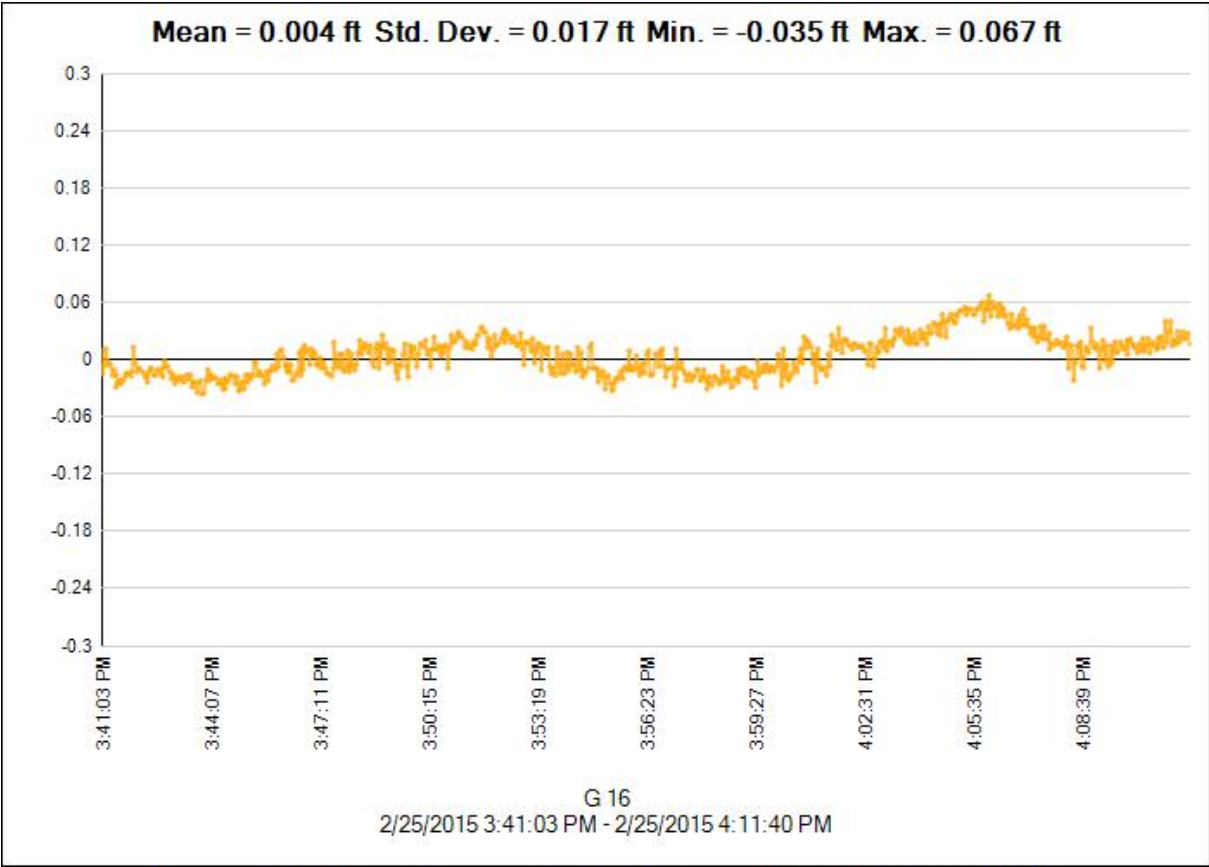
Tracking Summary

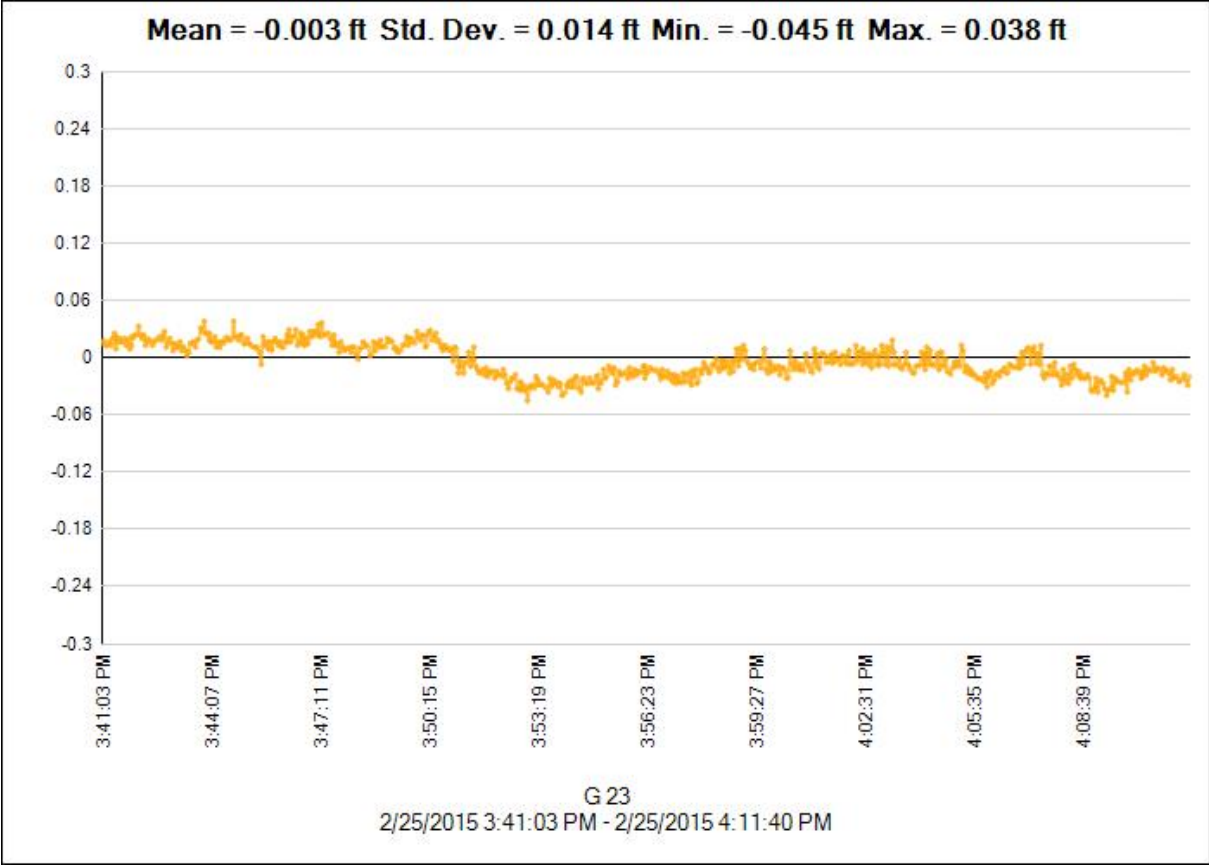
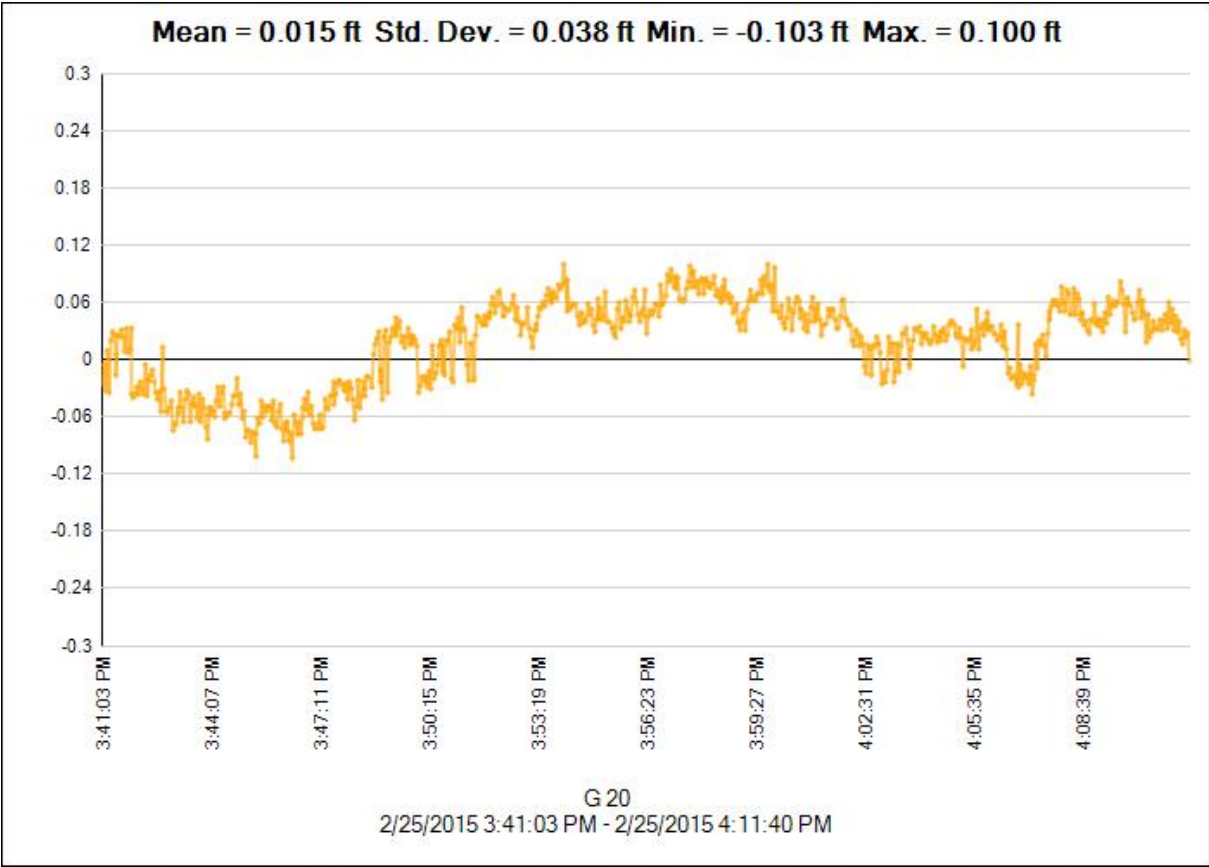
SV	2/25/2015 3:41:00 PM	Duration: 00:30:39	Major interval: 00:01:00	2/25/2015 4:11:39 PM
G 3	L1 L2	[Timeline visualization for G 3]		
G 7	L1 L2	[Timeline visualization for G 7]		
G 9	L1 L2	[Timeline visualization for G 9]		
G 10	L1 L2	[Timeline visualization for G 10]		
G 16	L1 L2	[Timeline visualization for G 16]		
G 19	L1 L2	[Timeline visualization for G 19]		
G 20	L1 L2	[Timeline visualization for G 20]		
G 23	L1 L2	[Timeline visualization for G 23]		
G 27	L1 L2	[Timeline visualization for G 27]		
G 30	L1 L2	[Timeline visualization for G 30]		
G 32	L1 L2	[Timeline visualization for G 32]		

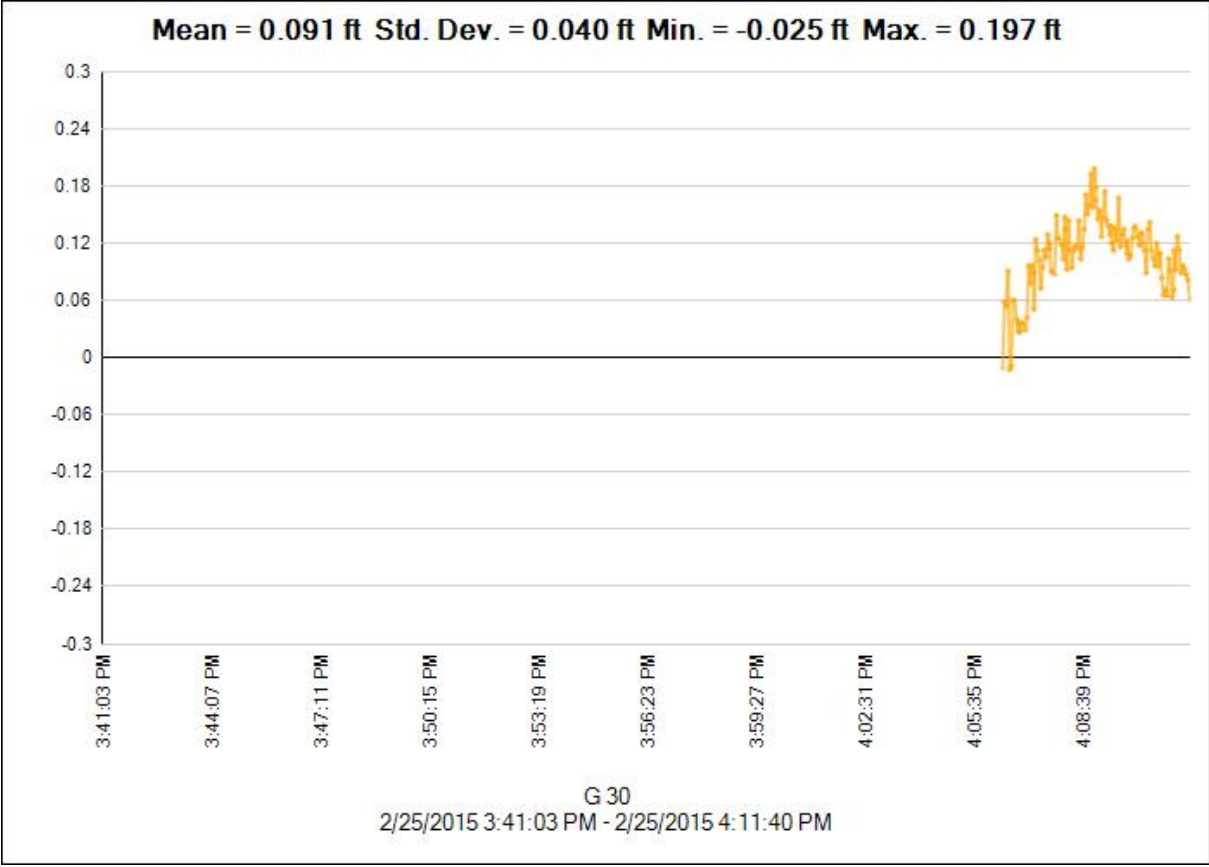
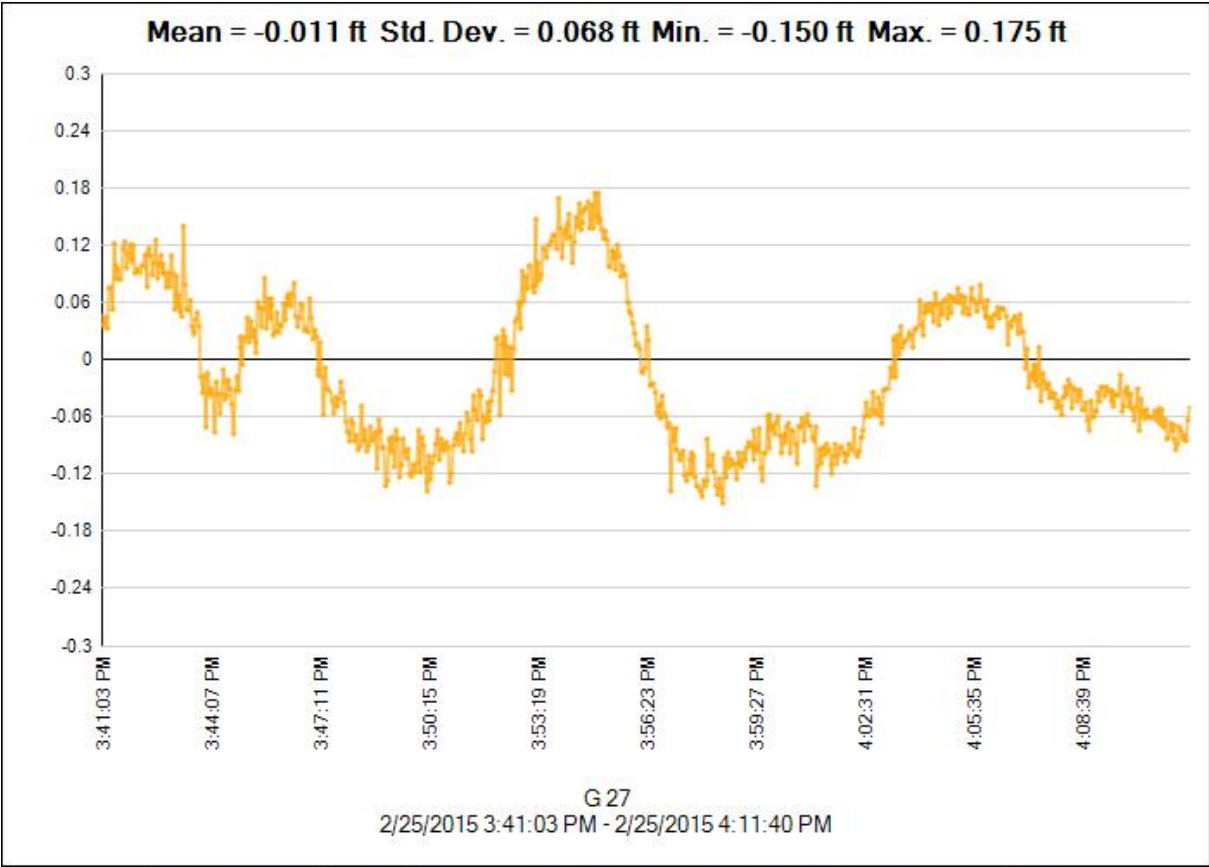
Residuals













Processing style

Elevation mask: 14.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

AVRA_APT_3 - CON104 (4:34:53 PM-5:05:21 PM) (S21)

Baseline observation: AVRA_APT_3 --- CON104 (B21)
Processed: 3/11/2015 8:54:19 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.031 ft
Vertical precision: 0.034 ft
RMS: 0.004 ft
Maximum PDOP: 2.222
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/25/2015 4:34:53 PM (Local: UTC-7hr)
Processing stop time: 2/25/2015 5:05:21 PM (Local: UTC-7hr)
Processing duration: 00:30:28
Processing interval: 1 second

Vector Components (Mark to Mark)

From: AVRA_APT_3					
Grid		Local		Global	
Easting	916316.445 ft	Latitude	N32°24'11.18150"	Latitude	N32°24'11.18150"
Northing	511086.706 ft	Longitude	W111°12'56.74858"	Longitude	W111°12'56.74858"
Elevation	2040.375 ft	Height	1943.121 ft	Height	1943.121 ft

To: CON104					
Grid		Local		Global	
Easting	1001803.328 ft	Latitude	N32°26'31.05291"	Latitude	N32°26'31.05290"
Northing	525894.337 ft	Longitude	W110°56'18.10181"	Longitude	W110°56'18.10181"
Elevation	2864.432 ft	Height	2770.604 ft	Height	2770.604 ft

Vector					
Δ Easting	85486.882 ft	NS Fwd Azimuth	80°32'56"	Δ X	82359.130 ft
Δ Northing	14807.631 ft	Ellipsoid Dist.	86761.805 ft	Δ Y	-24367.101 ft
Δ Elevation	824.057 ft	Δ Height	827.483 ft	Δ Z	12377.283 ft

Standard Errors

Vector errors:					
σ Δ Easting	0.007 ft	σ NS fwd Azimuth	0°00'00"	σ Δ X	0.009 ft
σ Δ Northing	0.013 ft	σ Ellipsoid Dist.	0.007 ft	σ Δ Y	0.014 ft
σ Δ Elevation	0.017 ft	σ Δ Height	0.017 ft	σ Δ Z	0.015 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000077017		
Y	0.0000075434	0.0000184242	
Z	-0.0000007084	-0.0000065125	0.0000199324

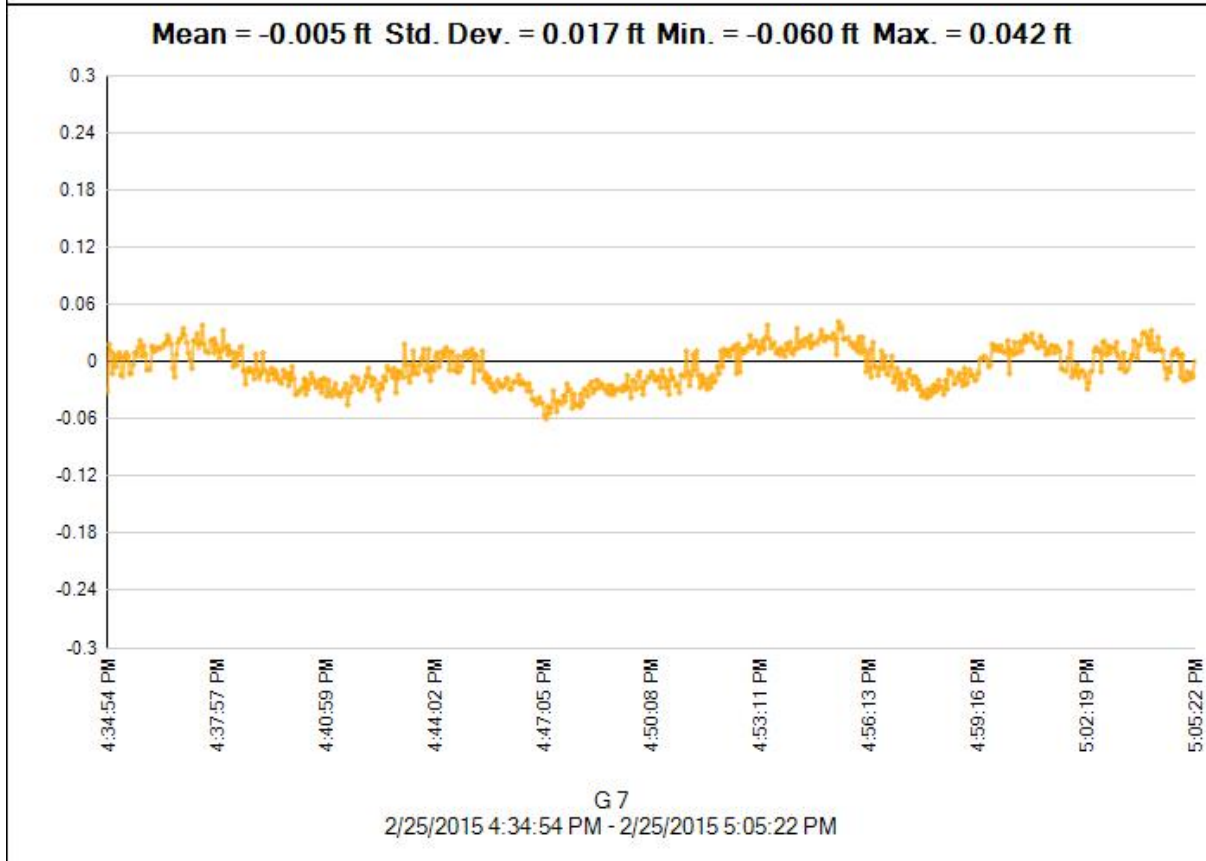
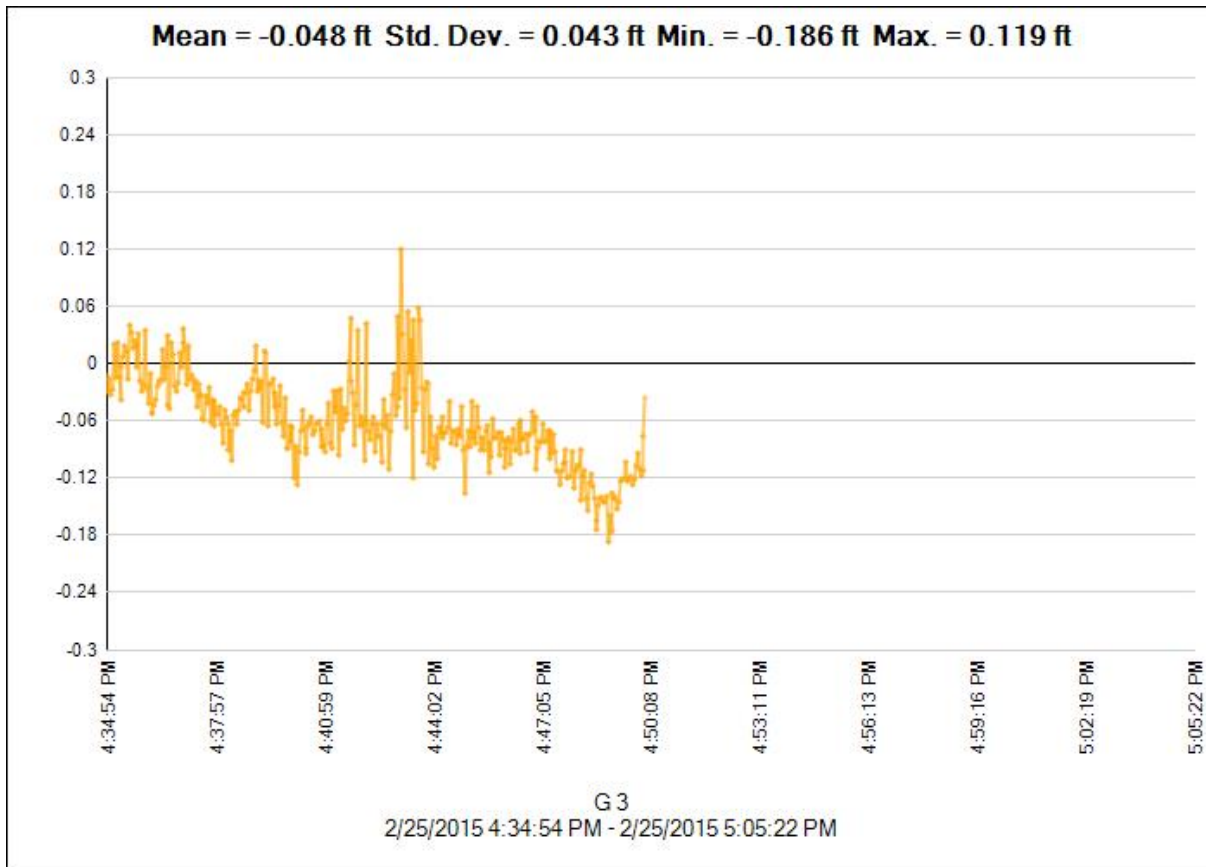
Occupations

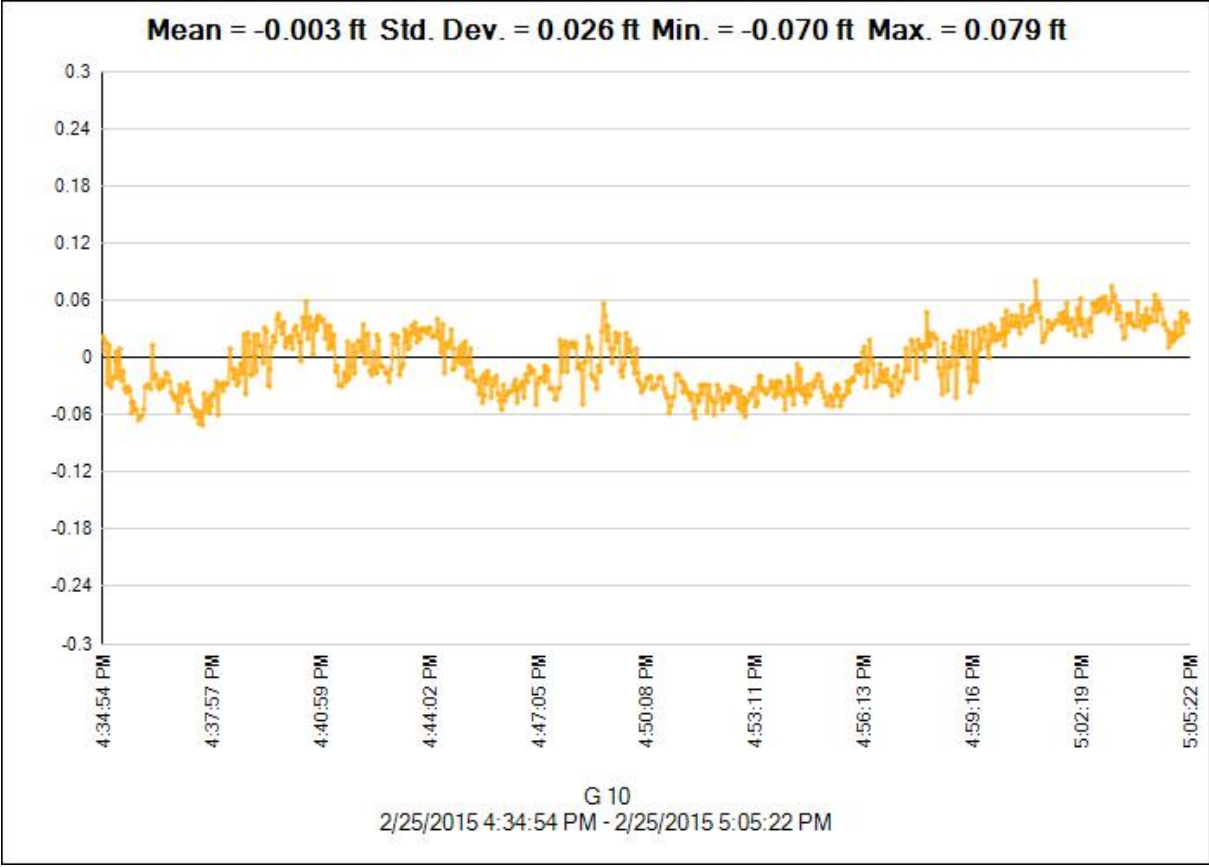
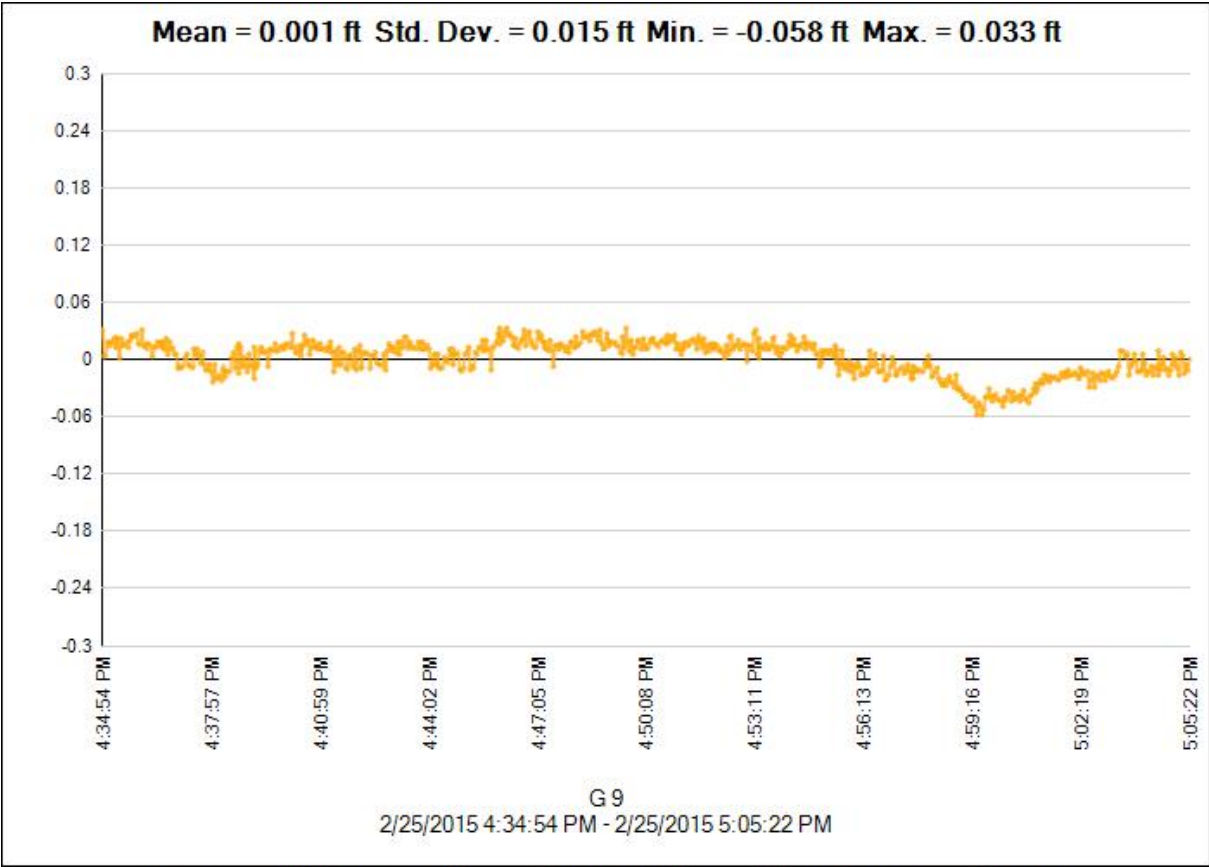
	From	To
Point ID:	AVRA_APT_3	CON104
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520560.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840566.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

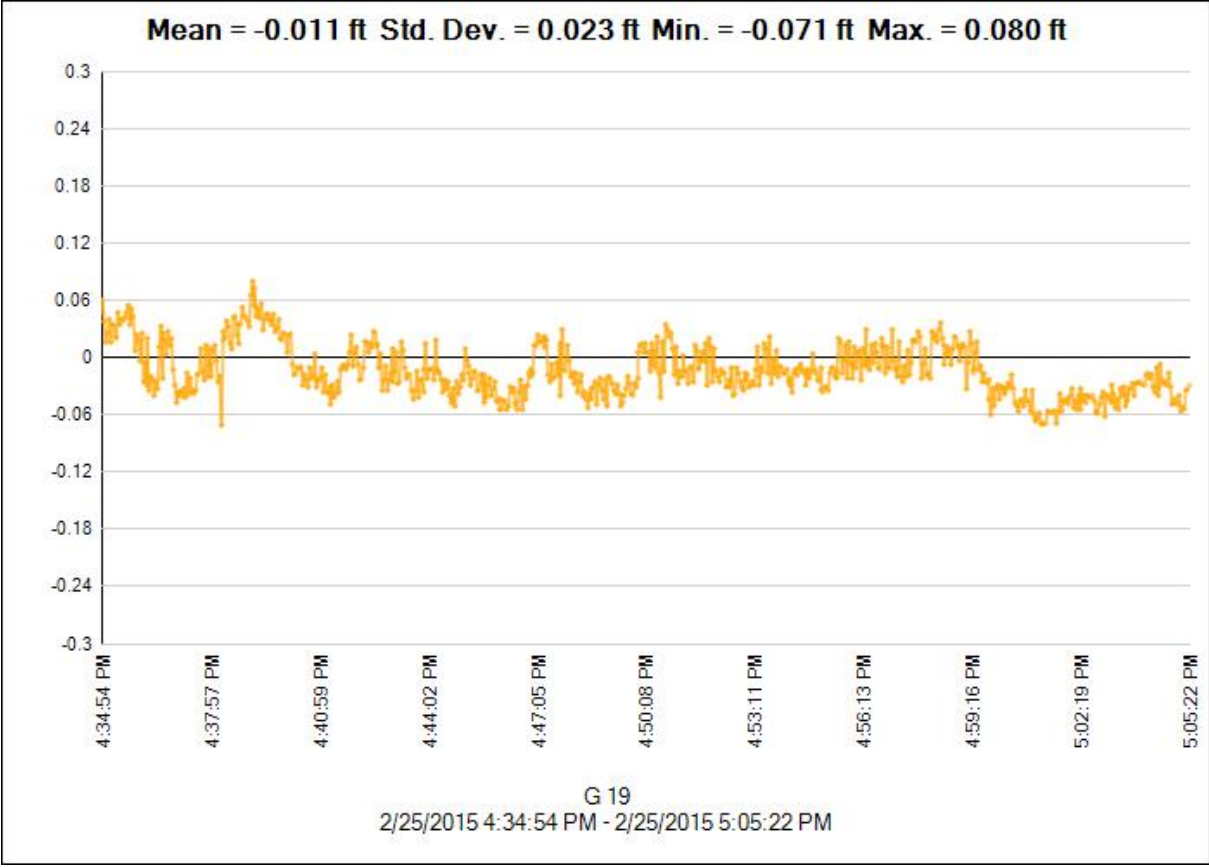
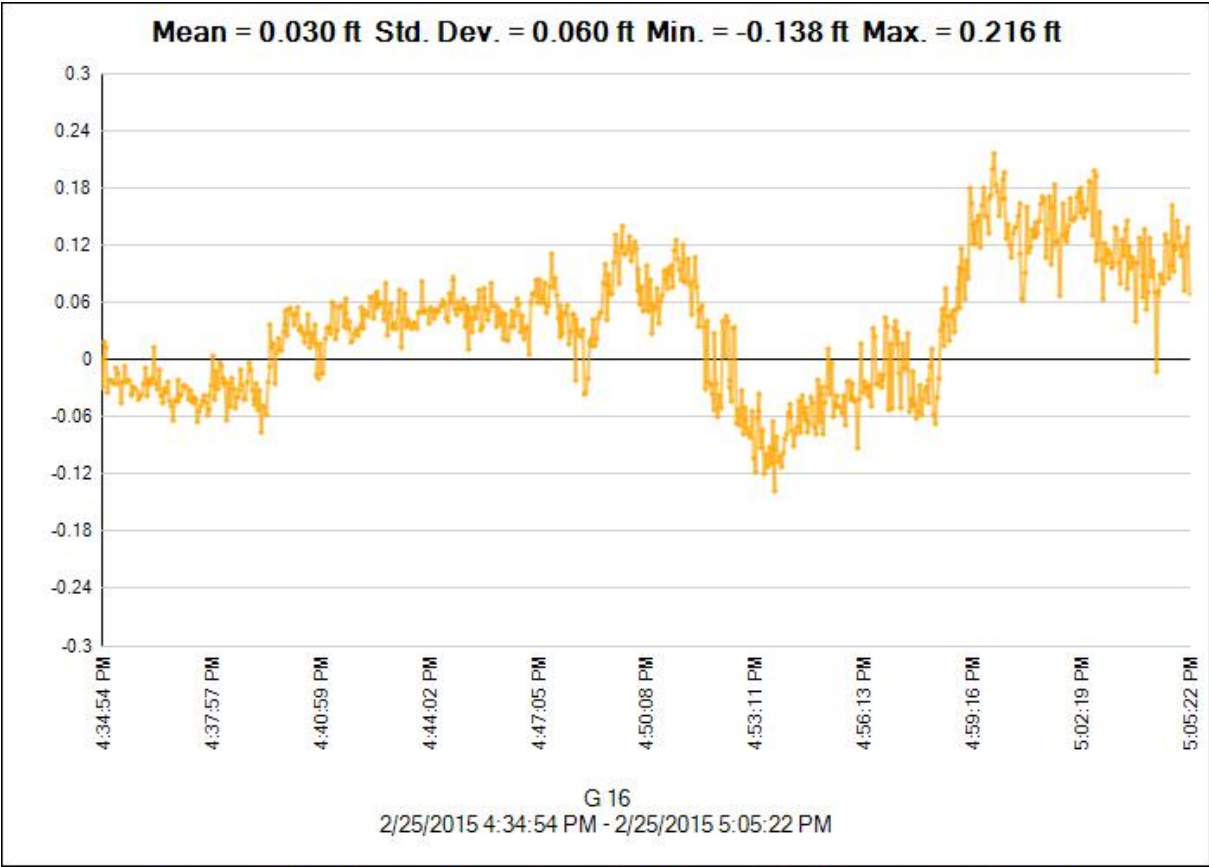
Tracking Summary

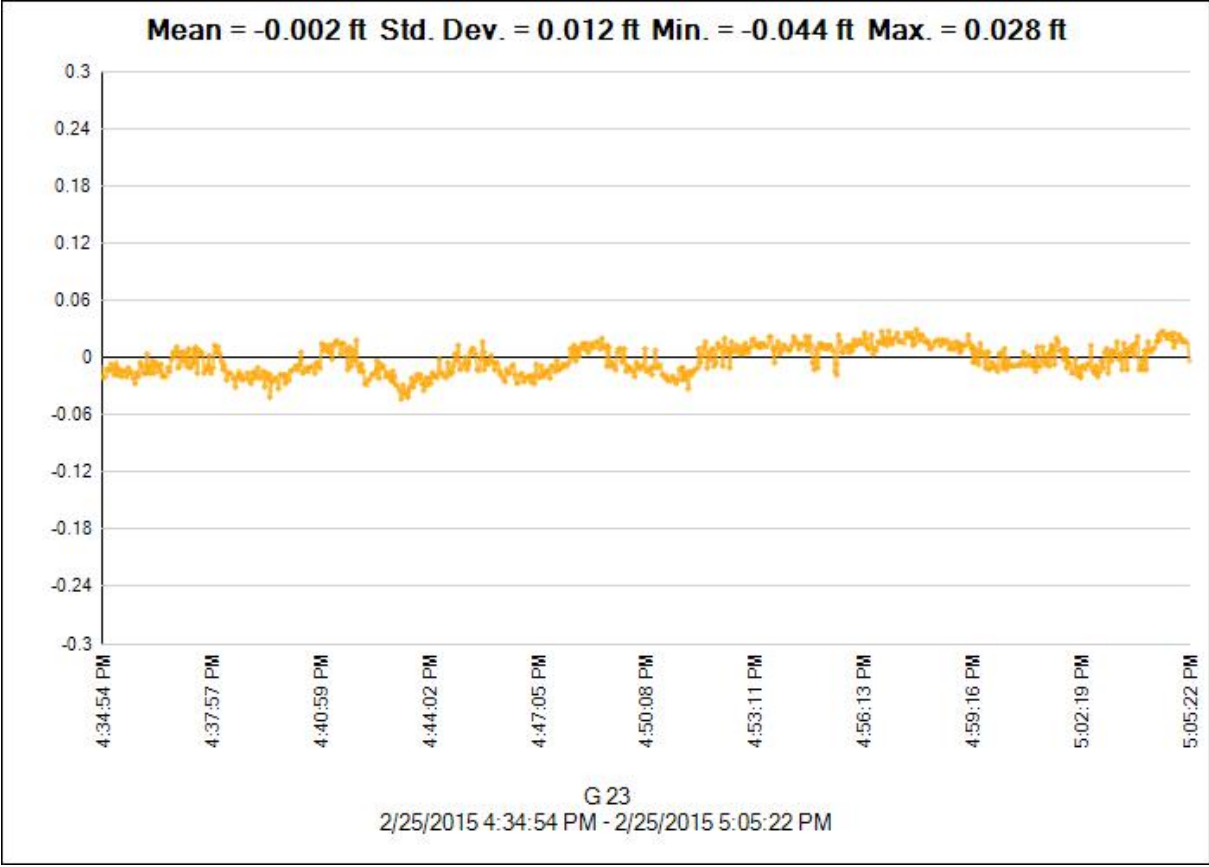
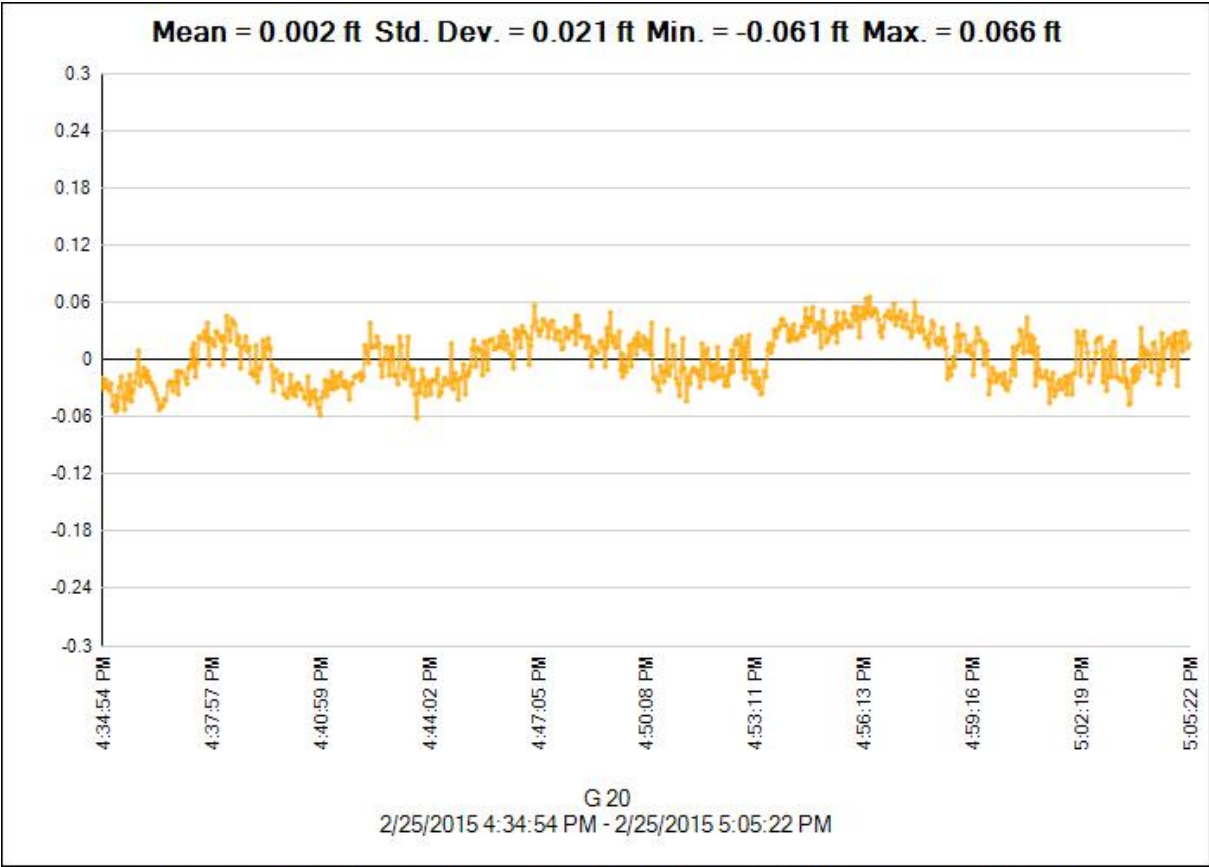
SV	2/25/2015 4:34:53 PM	Duration: 00:30:28	Major interval: 00:01:00	2/25/2015 5:05:21 PM
G 3	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 16	L1 L2			
G 19	L1 L2			
G 20	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

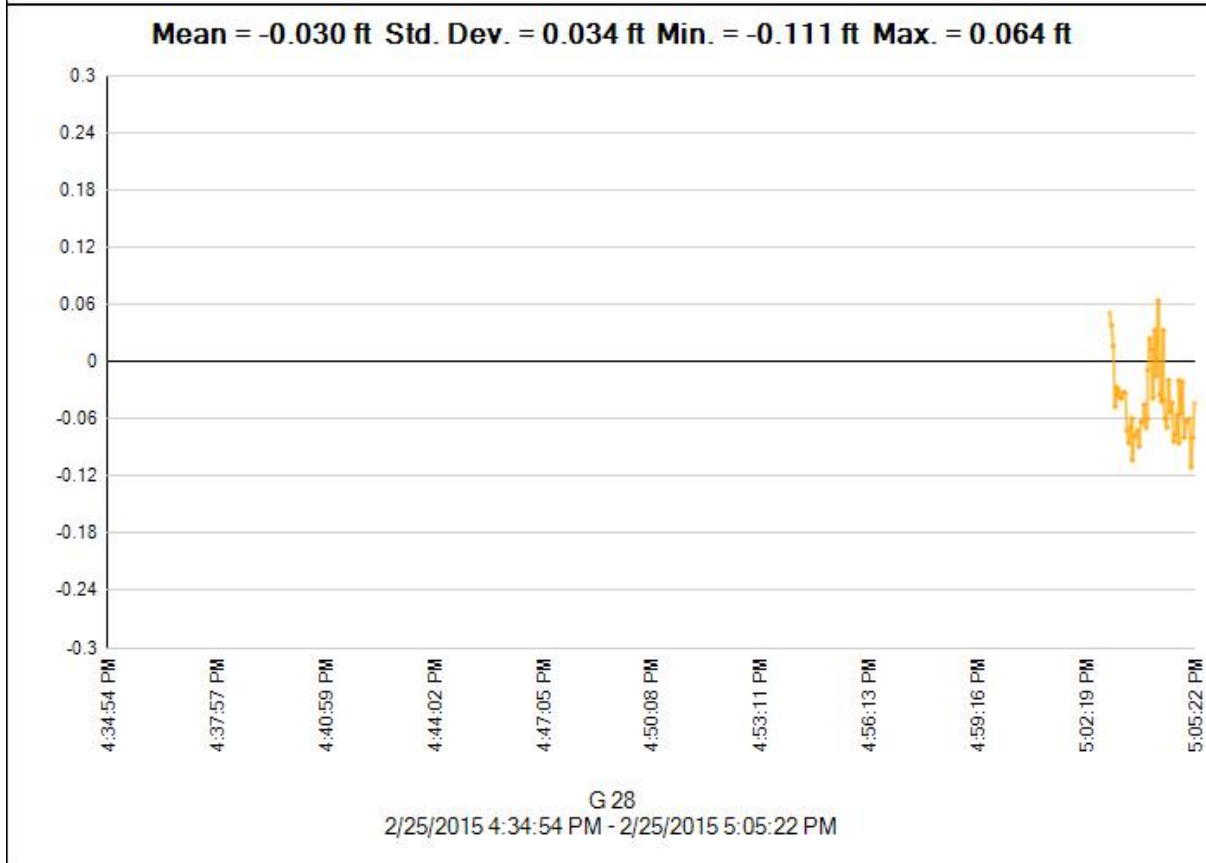
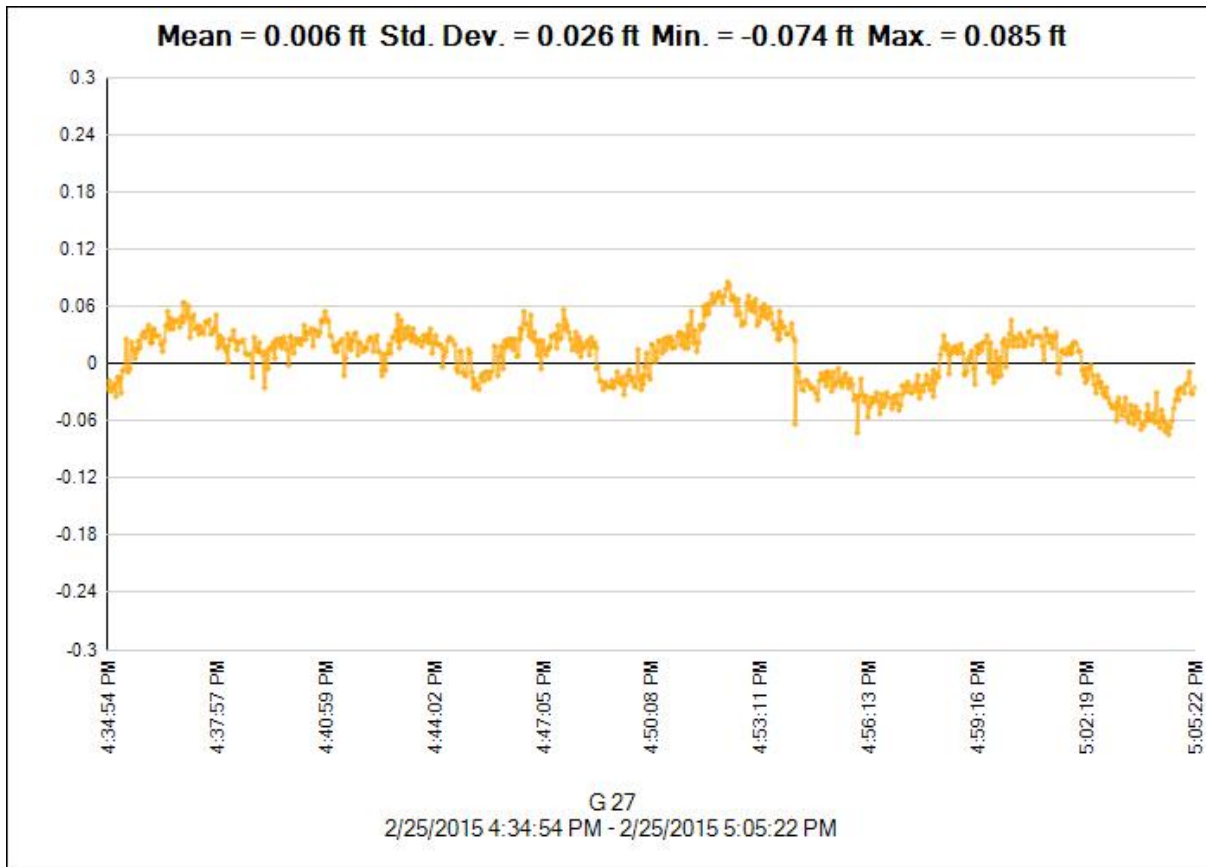
Residuals

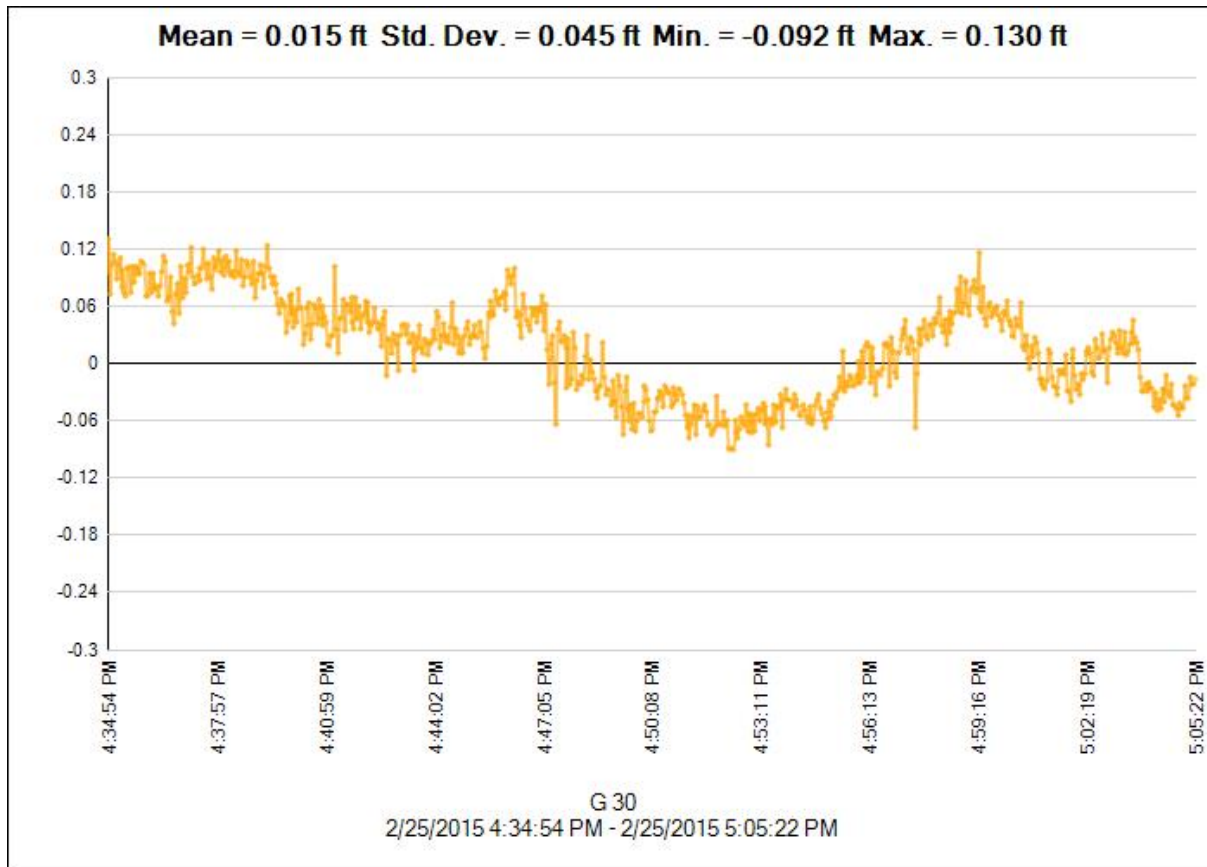














Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

AVRA_APT_3 - CON108 (10:47:09 AM-11:18:58 AM) (S22)

Baseline observation: AVRA_APT_3 --- CON108 (B22)
 Processed: 3/11/2015 8:54:01 AM
 Solution type: Fixed
 Frequency used: Dual Frequency (L1, L2)
 Horizontal precision: 0.031 ft
 Vertical precision: 0.074 ft
 RMS: 0.009 ft
 Maximum PDOP: 4.442
 Ephemeris used: Broadcast
 Antenna model: NGS Absolute
 Processing start time: 2/28/2015 10:47:21 AM (Local: UTC-7hr)
 Processing stop time: 2/28/2015 11:18:44 AM (Local: UTC-7hr)
 Processing duration: 00:31:23
 Processing interval: 1 second

Vector Components (Mark to Mark)

From:		AVRA_APT_3			
Grid		Local		Global	
Easting	916316.445 ft	Latitude	N32°24'11.18150"	Latitude	N32°24'11.18150"
Northing	511086.706 ft	Longitude	W111°12'56.74858"	Longitude	W111°12'56.74858"
Elevation	2040.375 ft	Height	1943.121 ft	Height	1943.121 ft

To:		CON108			
Grid		Local		Global	
Easting	978767.229 ft	Latitude	N32°23'00.23317"	Latitude	N32°23'00.23316"
Northing	504384.836 ft	Longitude	W111°00'49.01246"	Longitude	W111°00'49.01246"
Elevation	2499.680 ft	Height	2404.441 ft	Height	2404.441 ft

Vector					
ΔEasting	62450.784 ft	NS Fwd Azimuth	96°30'03"	ΔX	56692.895 ft
ΔNorthing	-6701.871 ft	Ellipsoid Dist.	62811.208 ft	ΔY	-26428.395 ft
ΔElevation	459.304 ft	ΔHeight	461.320 ft	ΔZ	-5807.948 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.008 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.015 ft
$\sigma \Delta$ Northing	0.013 ft	σ Ellipsoid Dist.	0.008 ft	$\sigma \Delta$ Y	0.027 ft
$\sigma \Delta$ Elevation	0.038 ft	$\sigma \Delta$ Height	0.038 ft	$\sigma \Delta$ Z	0.027 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000198396		
Y	0.0000293764	0.0000659517	
Z	-0.0000238459	-0.0000564357	0.0000660372

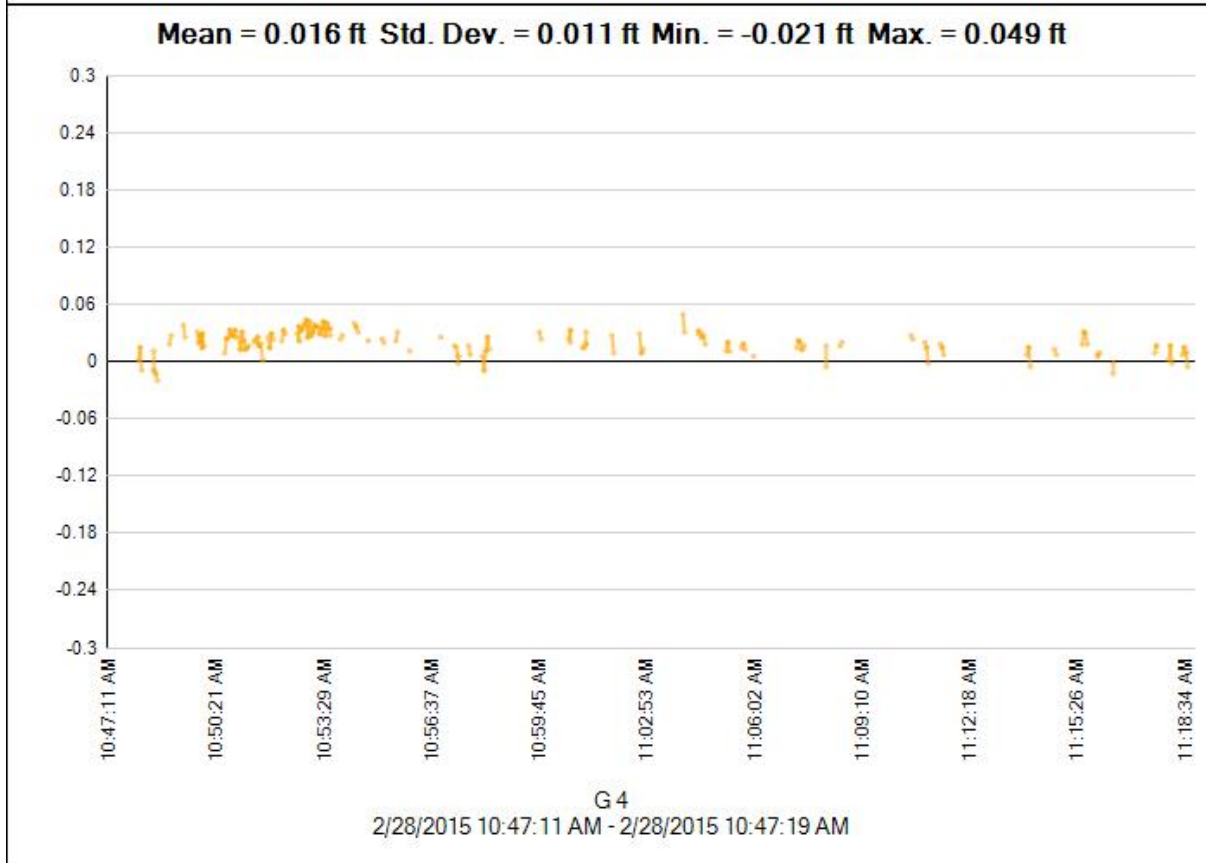
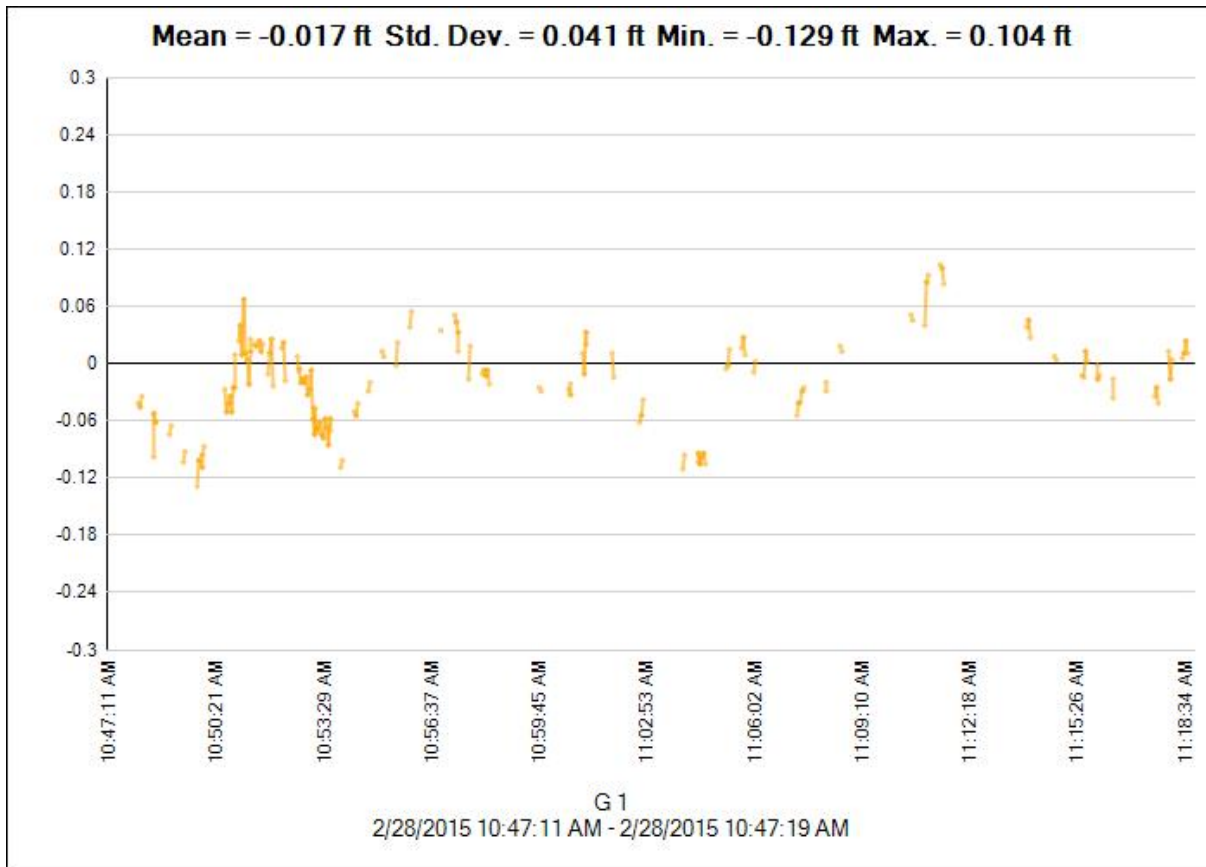
Occupations

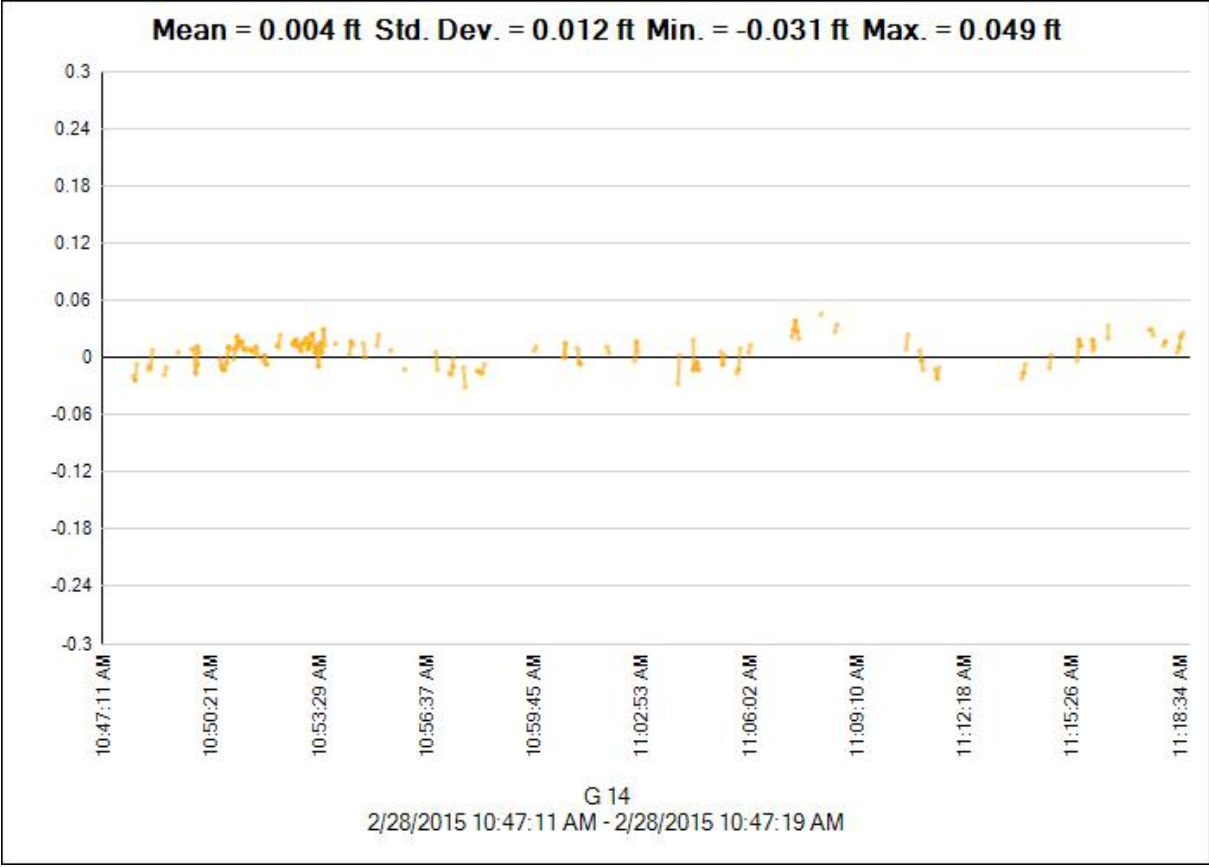
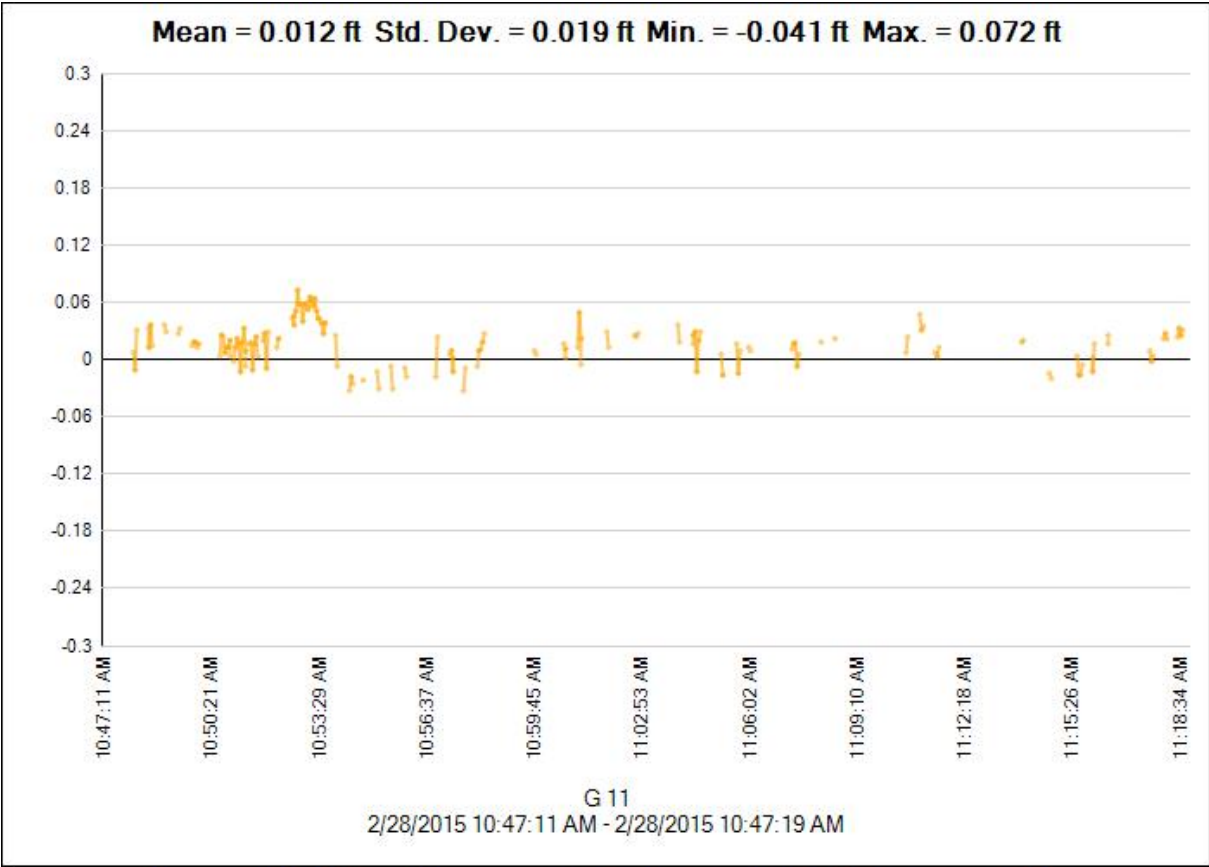
	From	To
Point ID:	AVRA_APT_3	CON108
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520590.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840590.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

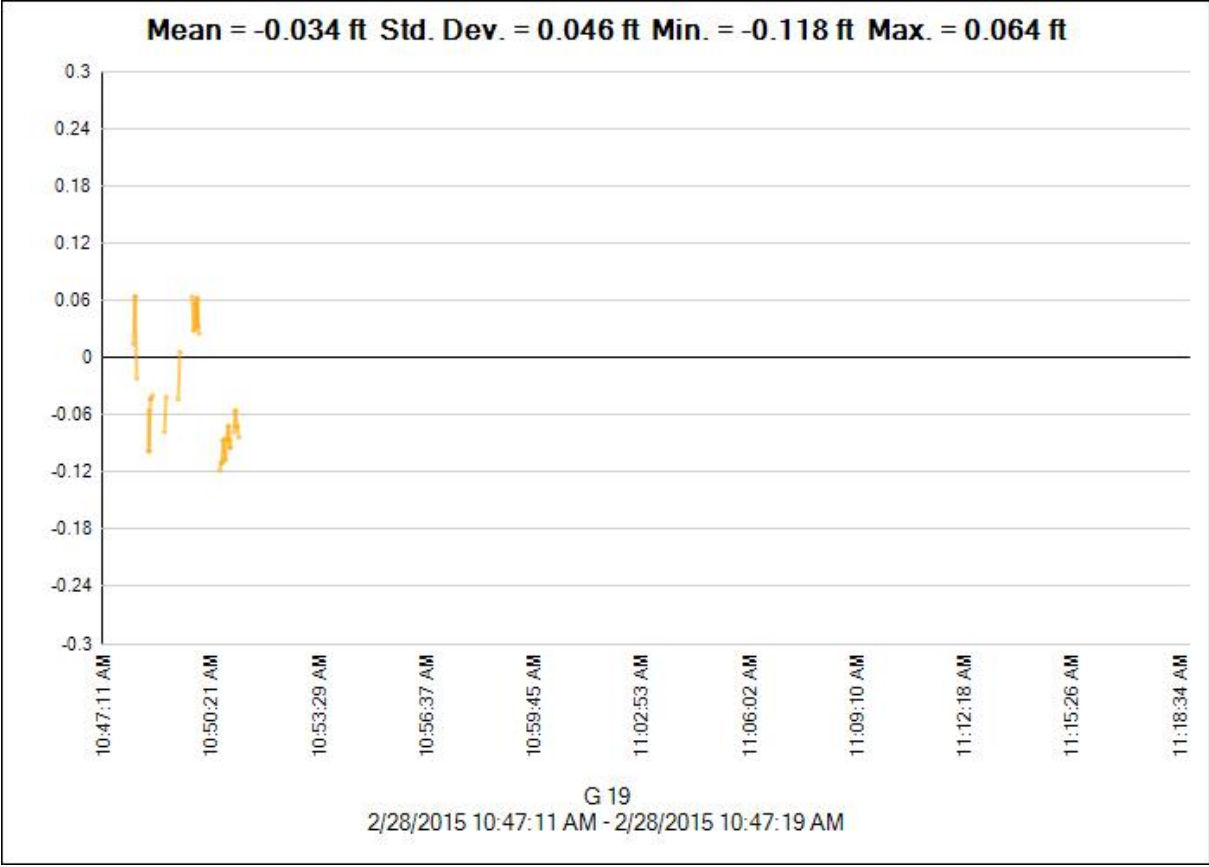
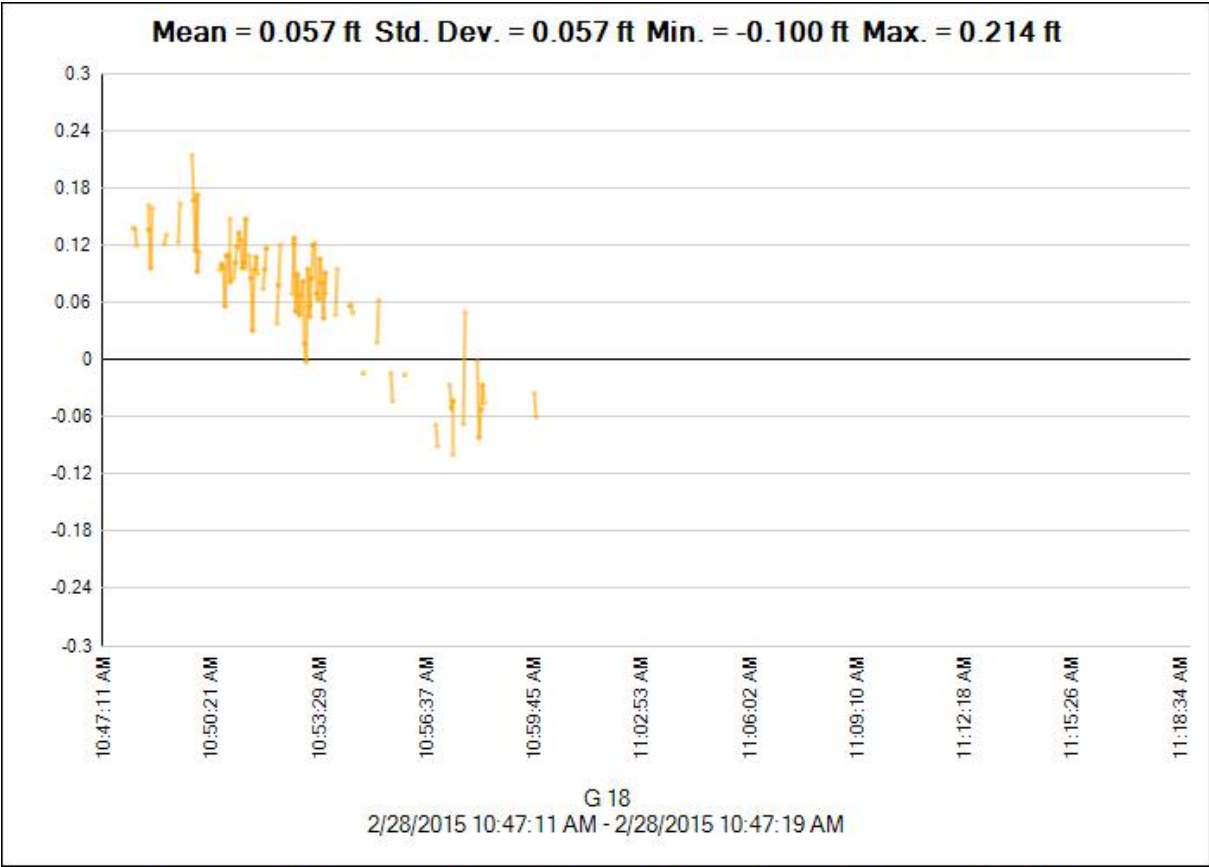
Tracking Summary

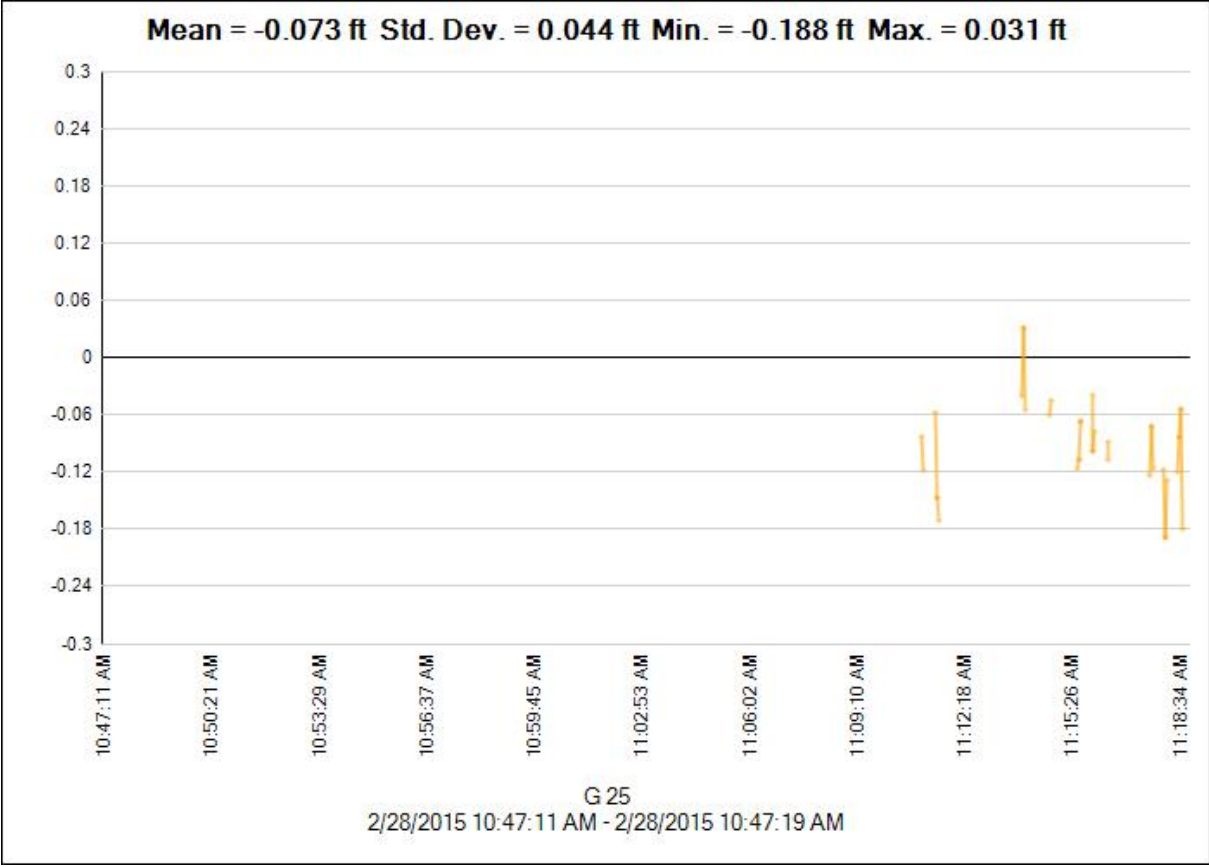
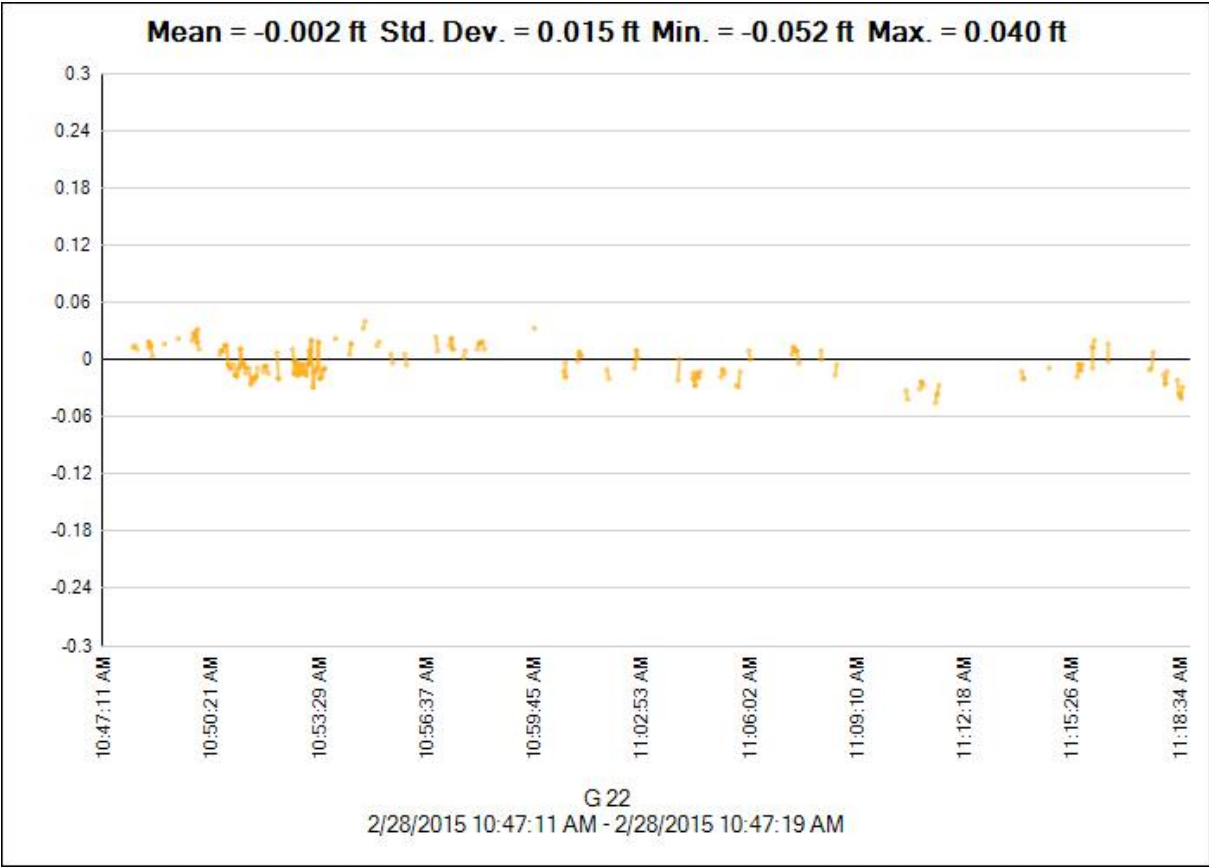
SV	2/28/2015 10:47:09 AM	Duration: 00:31:49	Major interval: 00:01:00	2/28/2015 11:18:58 AM
G 1	L1 L2			
G 3	L1			
G 4	L1 L2			
G 11	L1 L2			
G 14	L1 L2			
G 18	L1 L2			
G 19	L1 L2			
G 22	L1 L2			
G 25	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

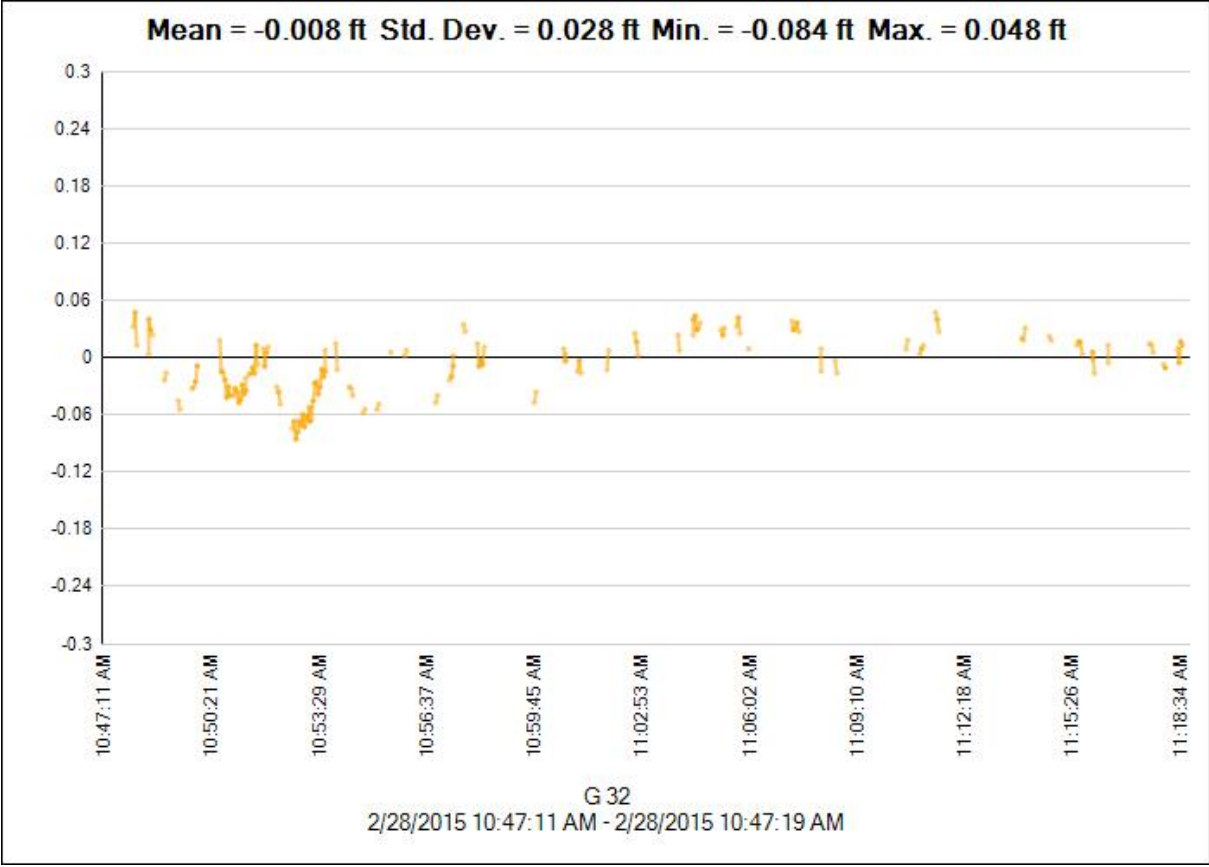
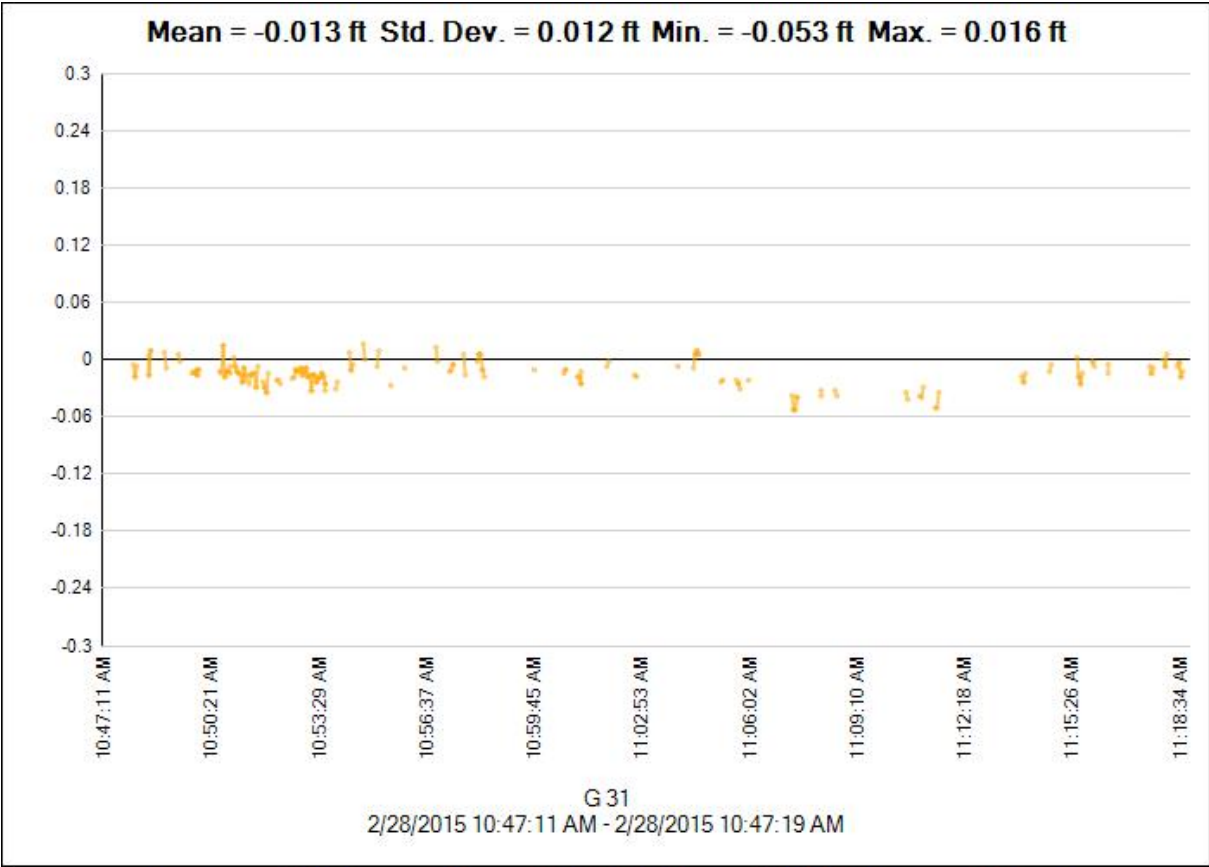
Residuals













Processing style

Elevation mask: 14.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

AVRA_APT_3 - CON105 (11:37:17 AM-12:08:36 PM) (S23)

Baseline observation: AVRA_APT_3 --- CON105 (B23)
Processed: 3/11/2015 8:54:11 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.031 ft
Vertical precision: 0.041 ft
RMS: 0.007 ft
Maximum PDOP: 2.306
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/28/2015 11:37:17 AM (Local: UTC-7hr)
Processing stop time: 2/28/2015 12:08:36 PM (Local: UTC-7hr)
Processing duration: 00:31:19
Processing interval: 1 second

Vector Components (Mark to Mark)

From:		AVRA_APT_3			
Grid		Local		Global	
Easting	916316.445 ft	Latitude	N32°24'11.18150"	Latitude	N32°24'11.18150"
Northing	511086.706 ft	Longitude	W111°12'56.74858"	Longitude	W111°12'56.74858"
Elevation	2040.375 ft	Height	1943.121 ft	Height	1943.121 ft

To:		CON105			
Grid		Local		Global	
Easting	958196.745 ft	Latitude	N32°25'34.49155"	Latitude	N32°25'34.49154"
Northing	519807.439 ft	Longitude	W111°04'47.47516"	Longitude	W111°04'47.47516"
Elevation	2577.804 ft	Height	2482.431 ft	Height	2482.431 ft

Vector					
ΔEasting	41880.300 ft	NS Fwd Azimuth	78°36'47"	ΔX	40586.967 ft
ΔNorthing	8720.733 ft	Ellipsoid Dist.	42780.137 ft	ΔY	-11348.637 ft
ΔElevation	537.429 ft	ΔHeight	539.310 ft	ΔZ	7397.544 ft

Standard Errors

Vector errors:					
σ ΔEasting	0.008 ft	σ NS fwd Azimuth	0°00'00"	σ ΔX	0.010 ft
σ ΔNorthing	0.013 ft	σ Ellipsoid Dist.	0.008 ft	σ ΔY	0.018 ft
σ ΔElevation	0.021 ft	σ ΔHeight	0.021 ft	σ ΔZ	0.015 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000092484		
Y	0.0000092440	0.0000297090	
Z	-0.0000054609	-0.0000097047	0.0000211332

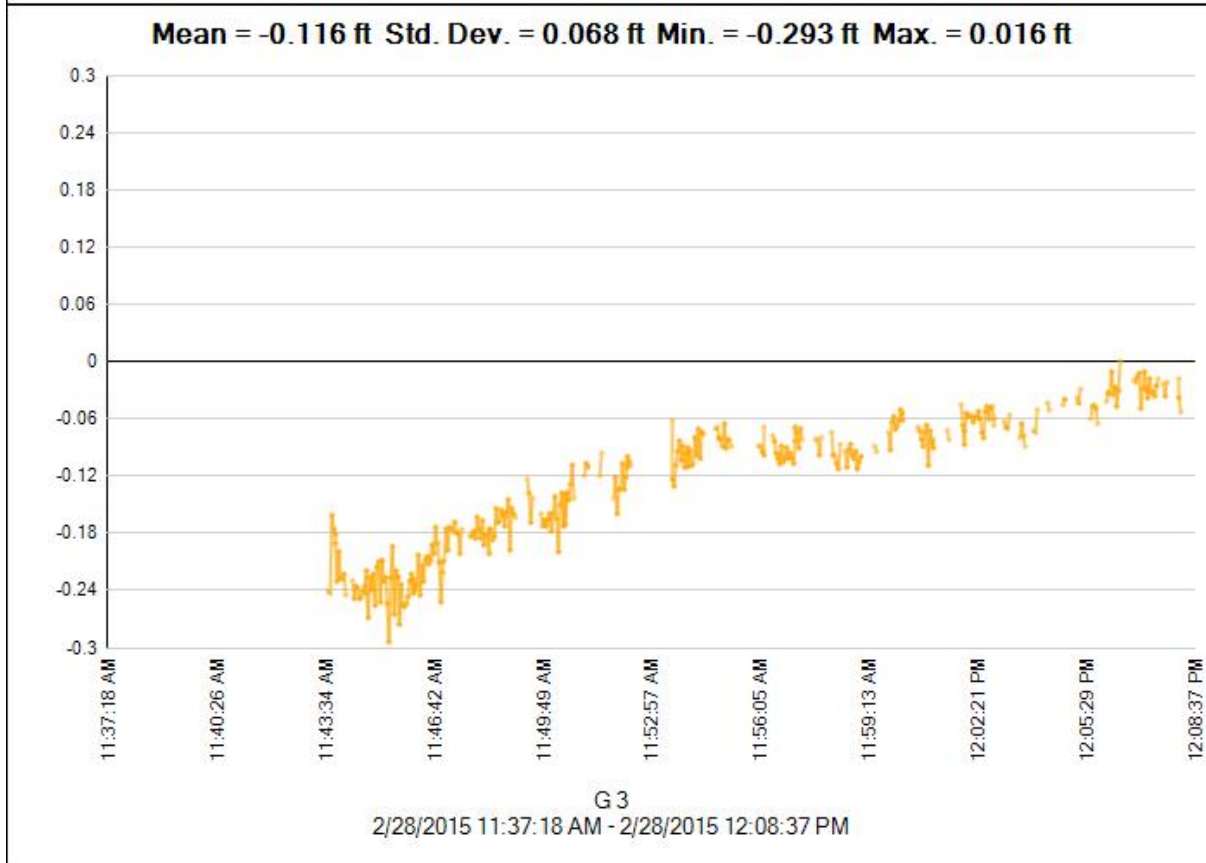
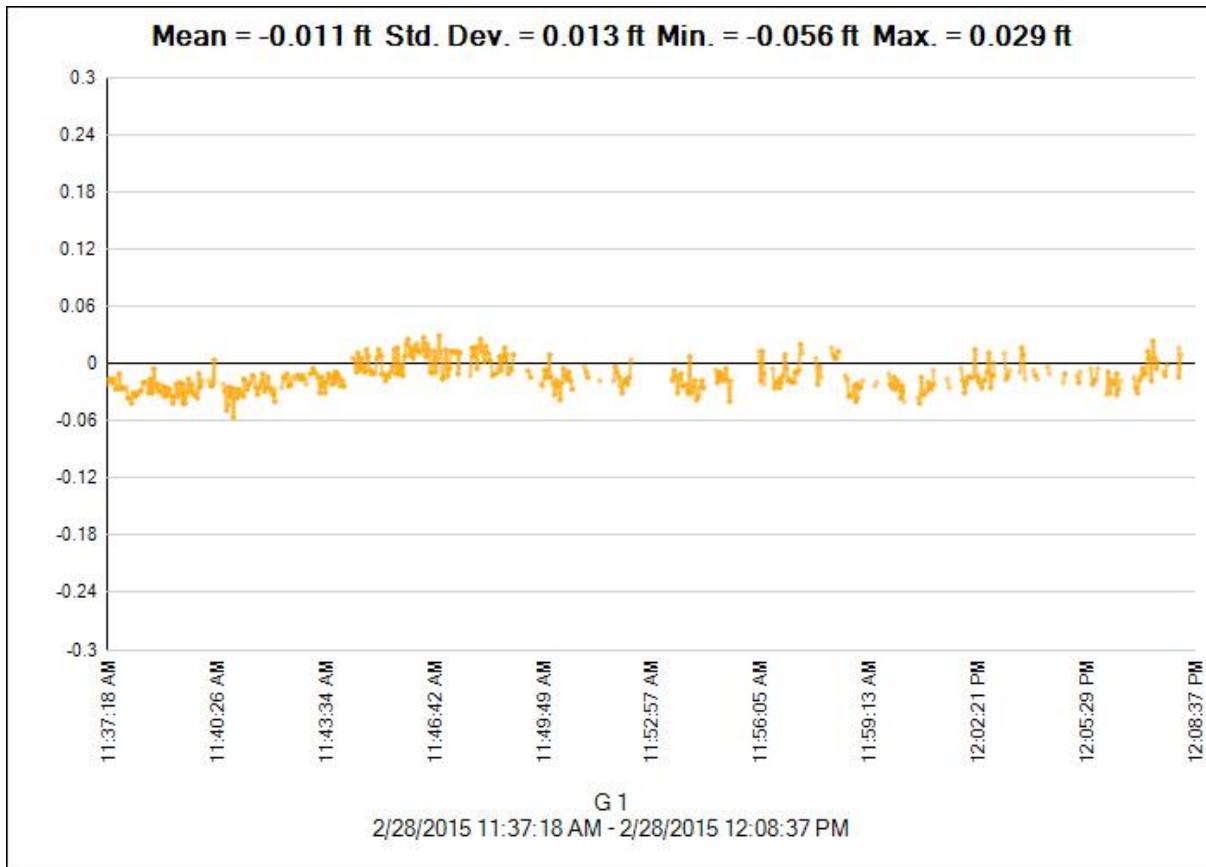
Occupations

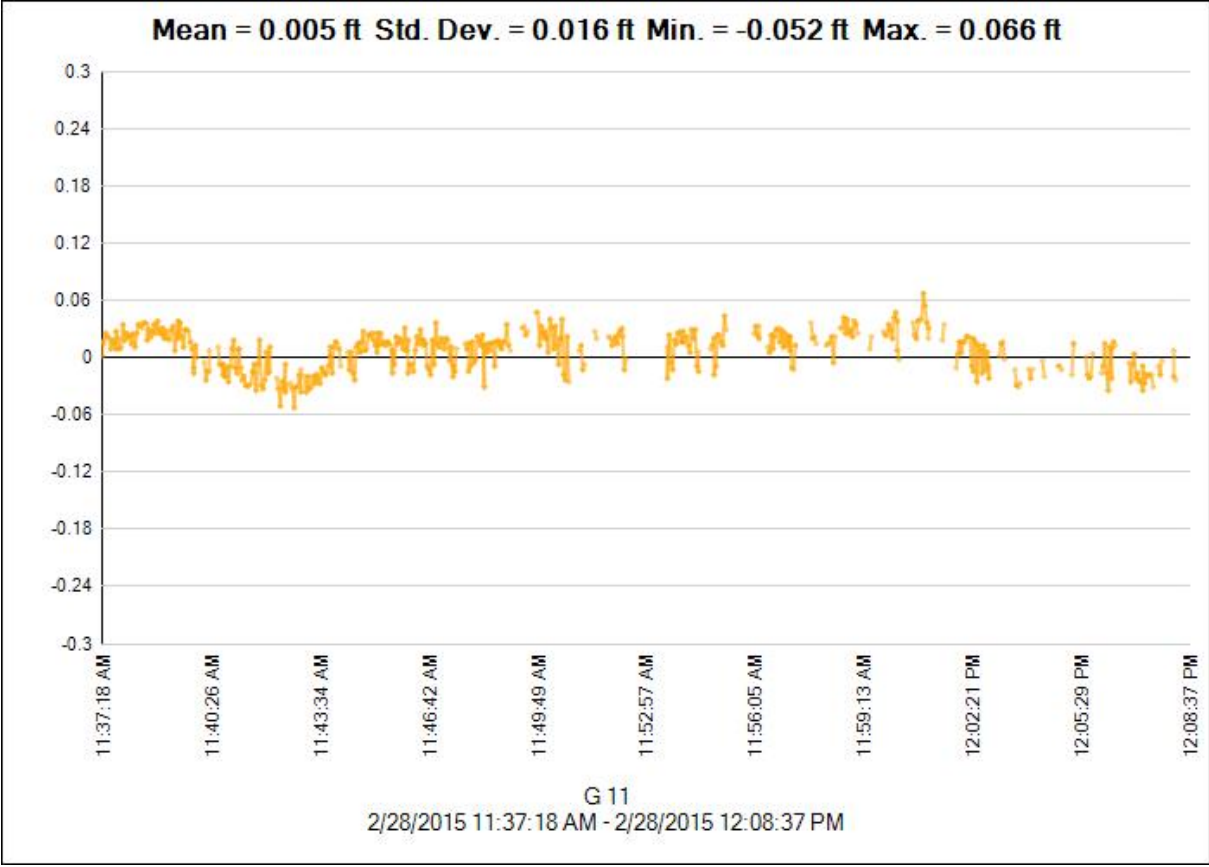
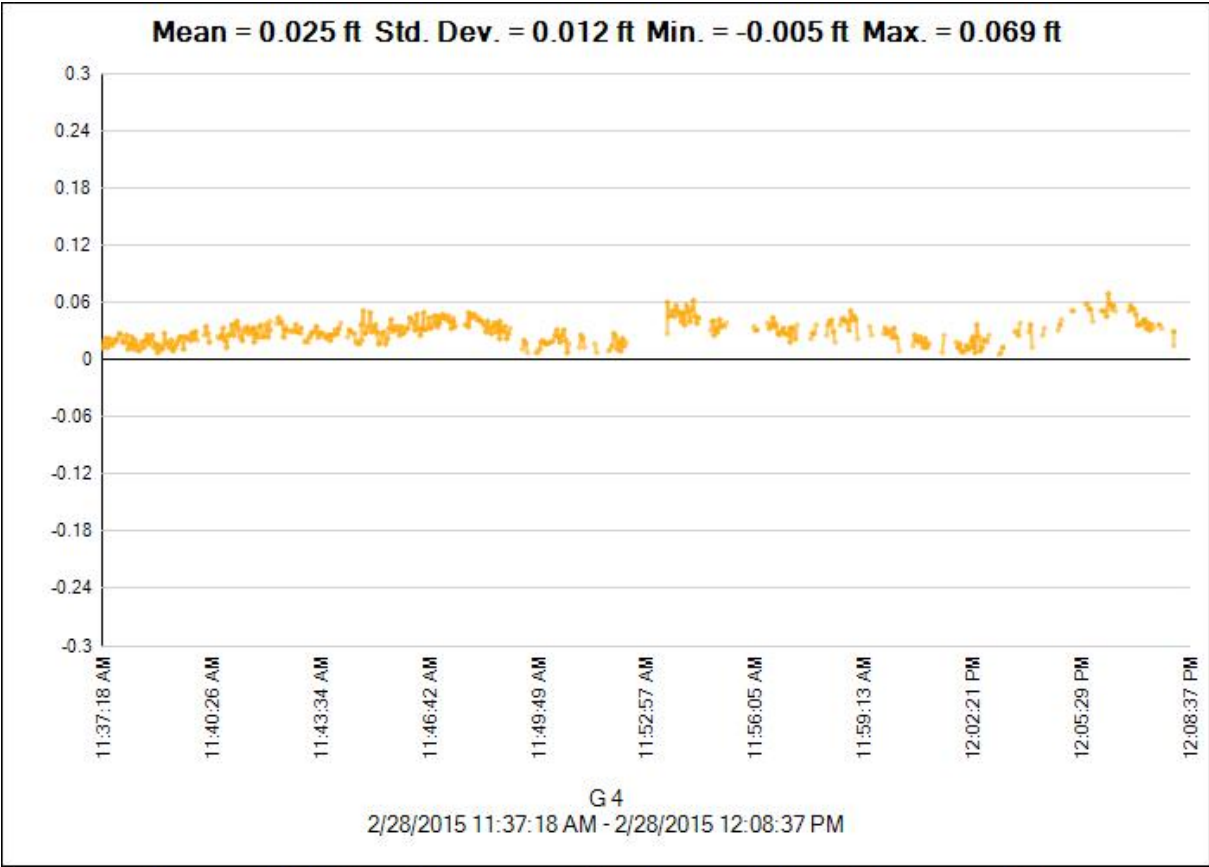
	From	To
Point ID:	AVRA_APT_3	CON105
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520590.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840591.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

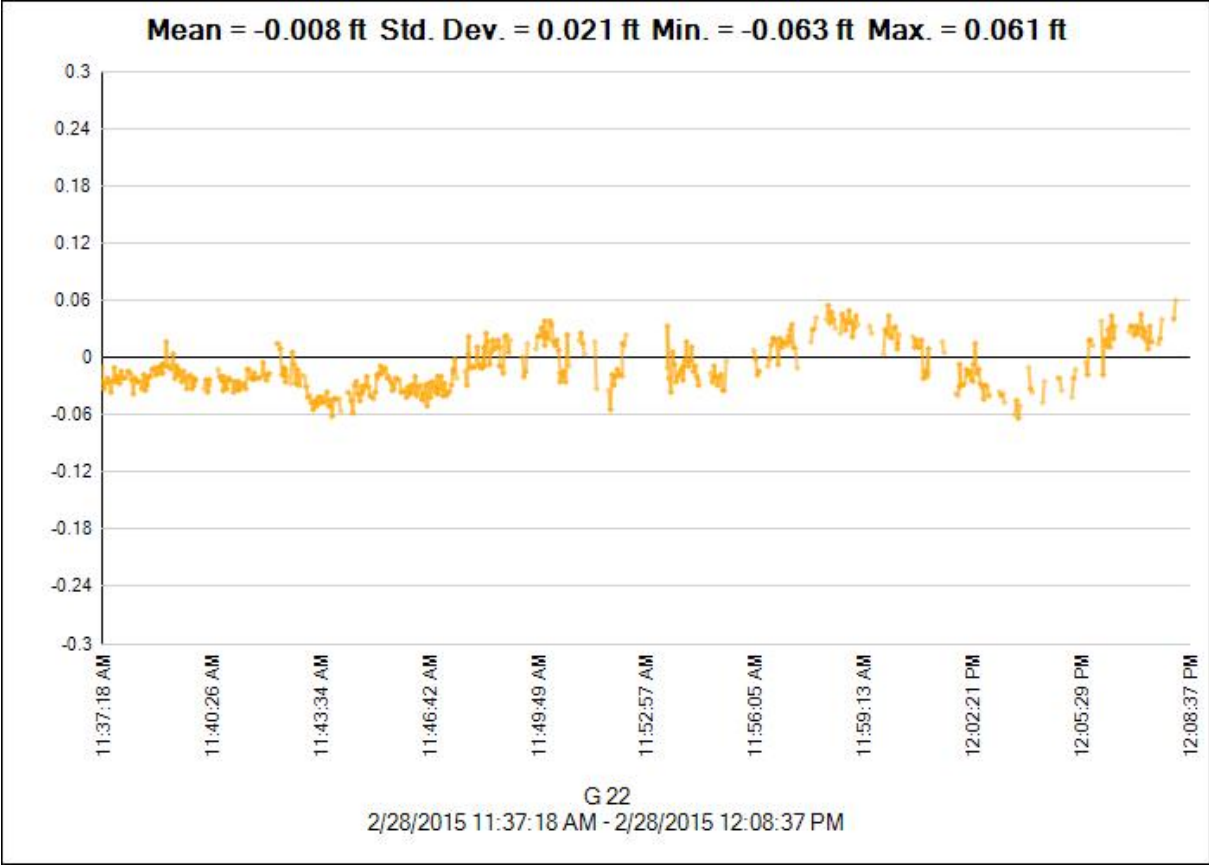
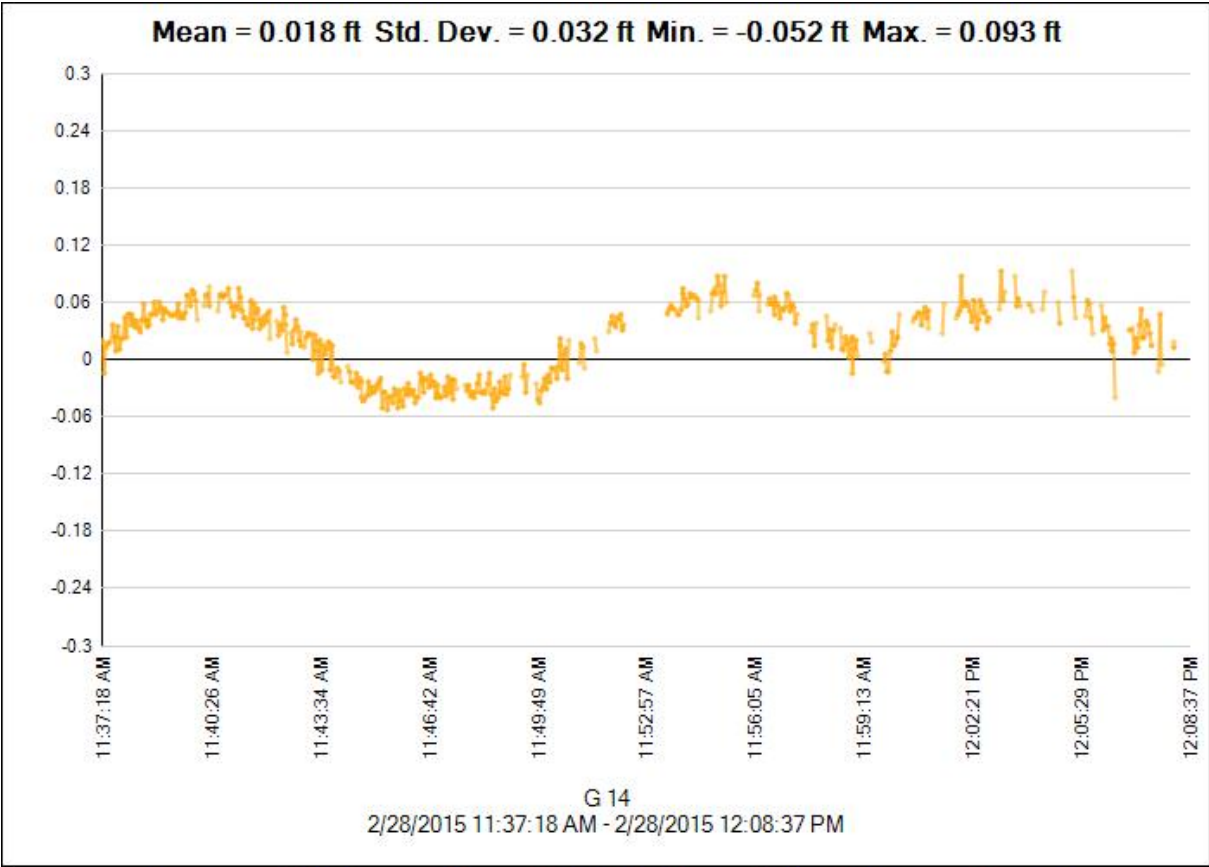
Tracking Summary

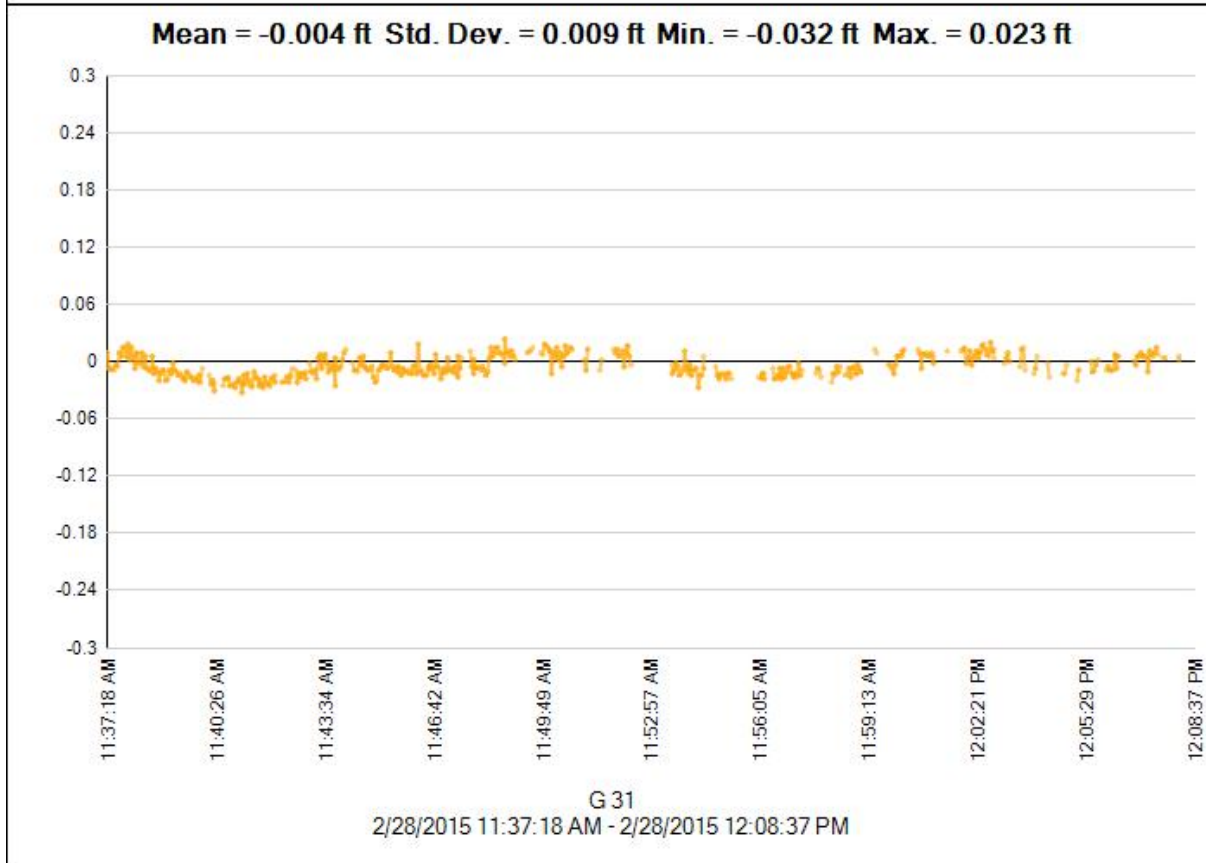
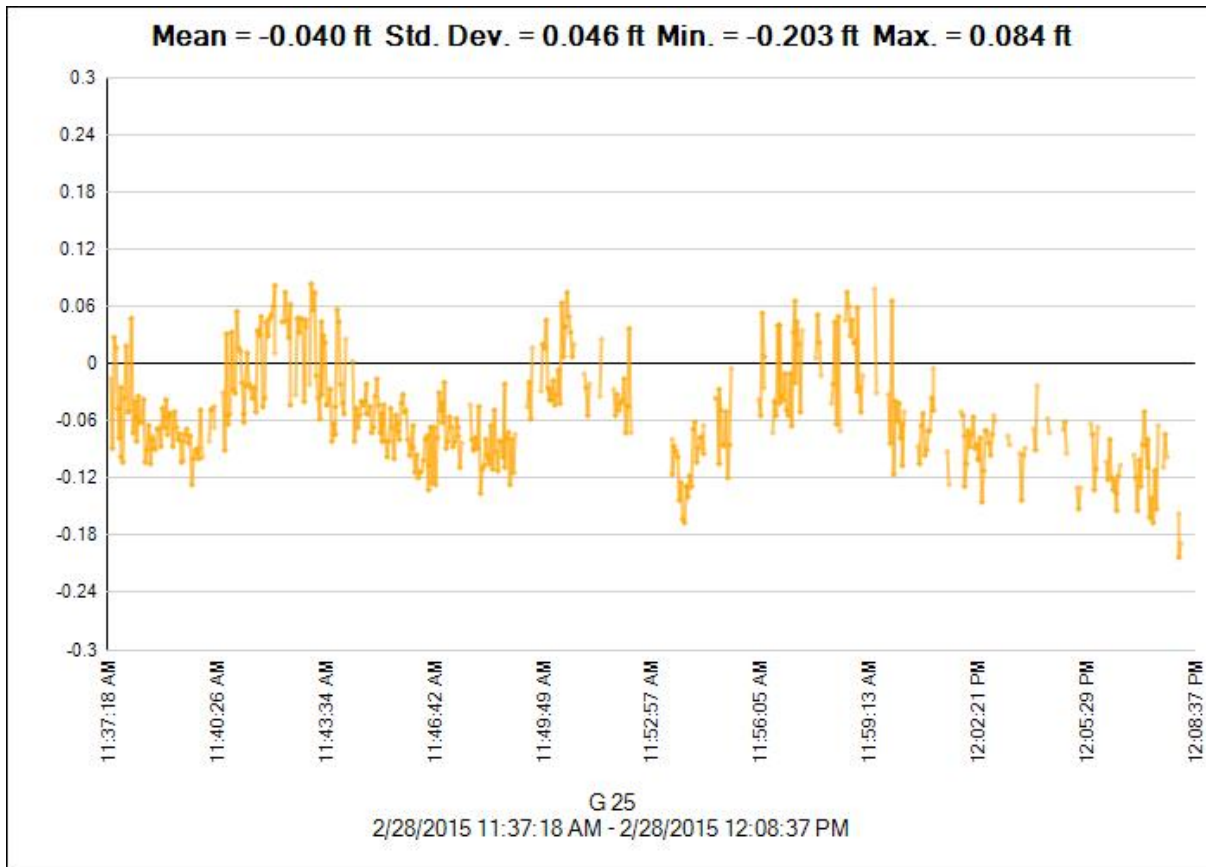
SV	2/28/2015 11:37:17 AM	Duration: 00:31:19	Major interval: 00:01:00	2/28/2015 12:08:36 PM
G 1	L1 L2			
G 3	L1 L2			
G 4	L1 L2			
G 11	L1 L2			
G 14	L1 L2			
G 22	L1 L2			
G 23	L1 L2			
G 25	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

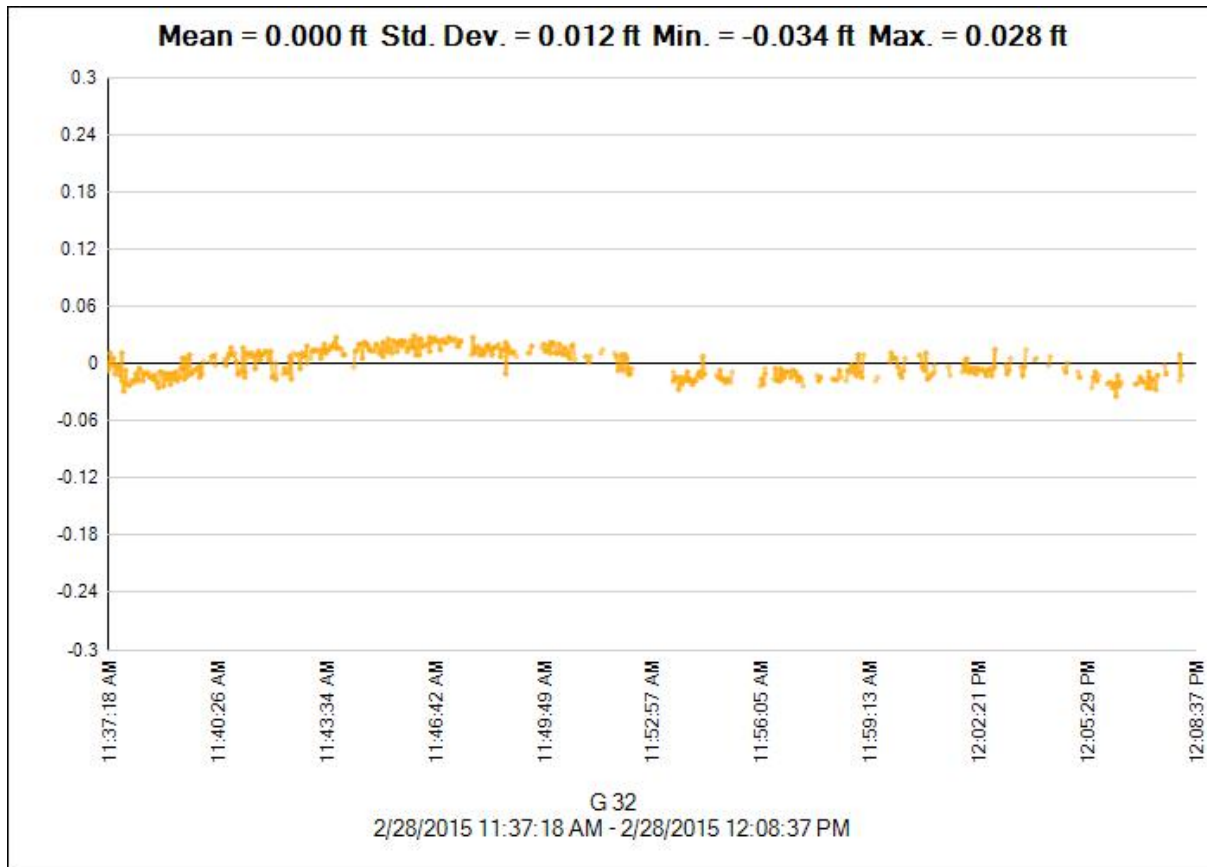
Residuals













Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

KTUS - CON117 (2:25:29 PM-2:56:17 PM) (S24)

Baseline observation: KTUS --- CON117 (B24)
 Processed: 3/11/2015 8:57:37 AM
 Solution type: Fixed
 Frequency used: Dual Frequency (L1, L2)
 Horizontal precision: 0.044 ft
 Vertical precision: 0.058 ft
 RMS: 0.002 ft
 Maximum PDOP: 3.800
 Ephemeris used: Broadcast
 Antenna model: NGS Absolute
 Processing start time: 2/28/2015 2:25:52 PM (Local: UTC-7hr)
 Processing stop time: 2/28/2015 2:56:17 PM (Local: UTC-7hr)
 Processing duration: 00:30:25
 Processing interval: 1 second

Vector Components (Mark to Mark)

From: KTUS					
Grid		Local		Global	
Easting	1000781.483 ft	Latitude	N32°07'29.11397"	Latitude	N32°07'29.11396"
Northing	410474.784 ft	Longitude	W110°56'42.22351"	Longitude	W110°56'42.22351"
Elevation	2586.404 ft	Height	2489.851 ft	Height	2489.851 ft

To: CON117					
Grid		Local		Global	
Easting	885995.134 ft	Latitude	N32°00'07.52935"	Latitude	N32°00'07.52935"
Northing	365013.893 ft	Longitude	W111°18'59.92644"	Longitude	W111°18'59.92644"
Elevation	3047.146 ft	Height	2948.917 ft	Height	2948.917 ft

Vector					
ΔEasting	-114786.349 ft	NS Fwd Azimuth	248°54'36"	ΔX	-116072.511 ft
ΔNorthing	-45460.890 ft	Ellipsoid Dist.	123464.733 ft	ΔY	19042.832 ft
ΔElevation	460.742 ft	ΔHeight	459.066 ft	ΔZ	-37579.390 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.016 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.022 ft
$\sigma \Delta$ Northing	0.012 ft	σ Ellipsoid Dist.	0.018 ft	$\sigma \Delta$ Y	0.023 ft
$\sigma \Delta$ Elevation	0.030 ft	$\sigma \Delta$ Height	0.030 ft	$\sigma \Delta$ Z	0.017 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000429841		
Y	0.0000288132	0.0000487270	
Z	-0.0000106944	-0.0000274773	0.0000277089

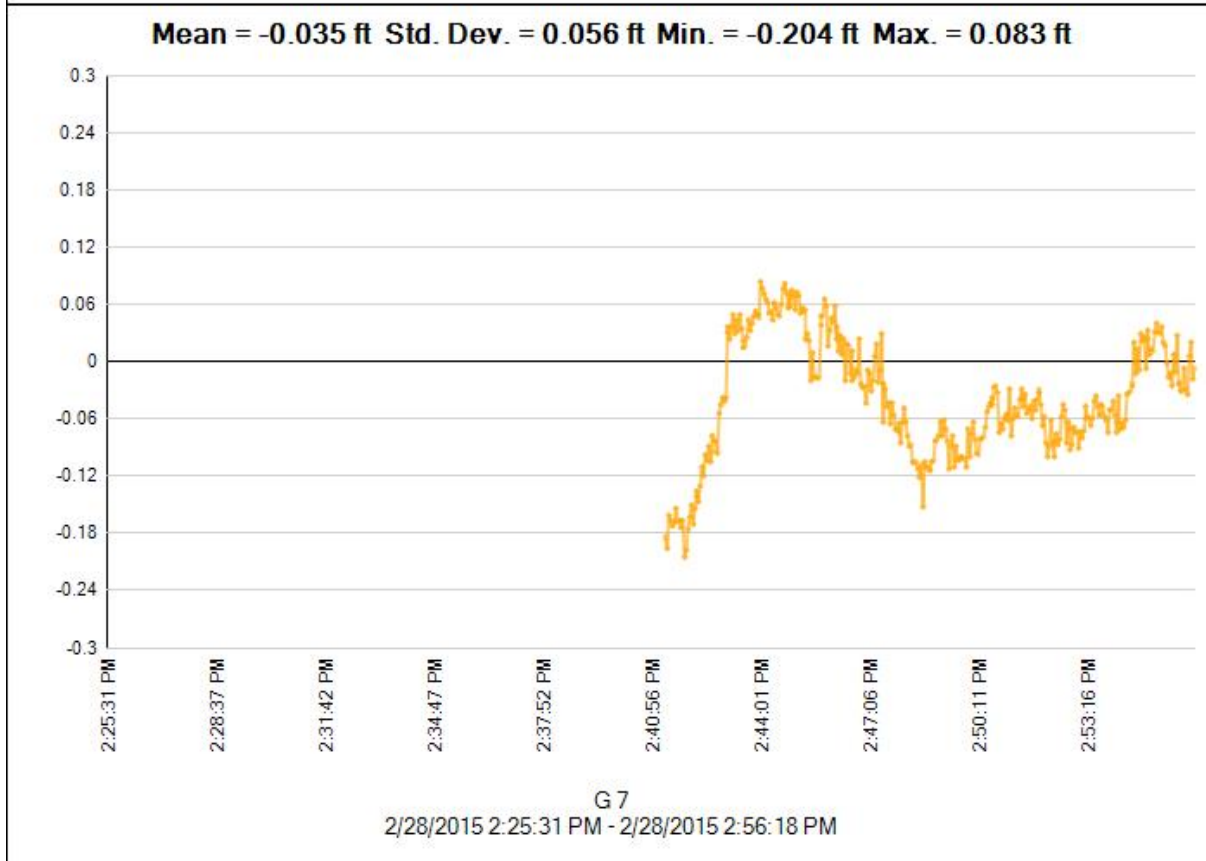
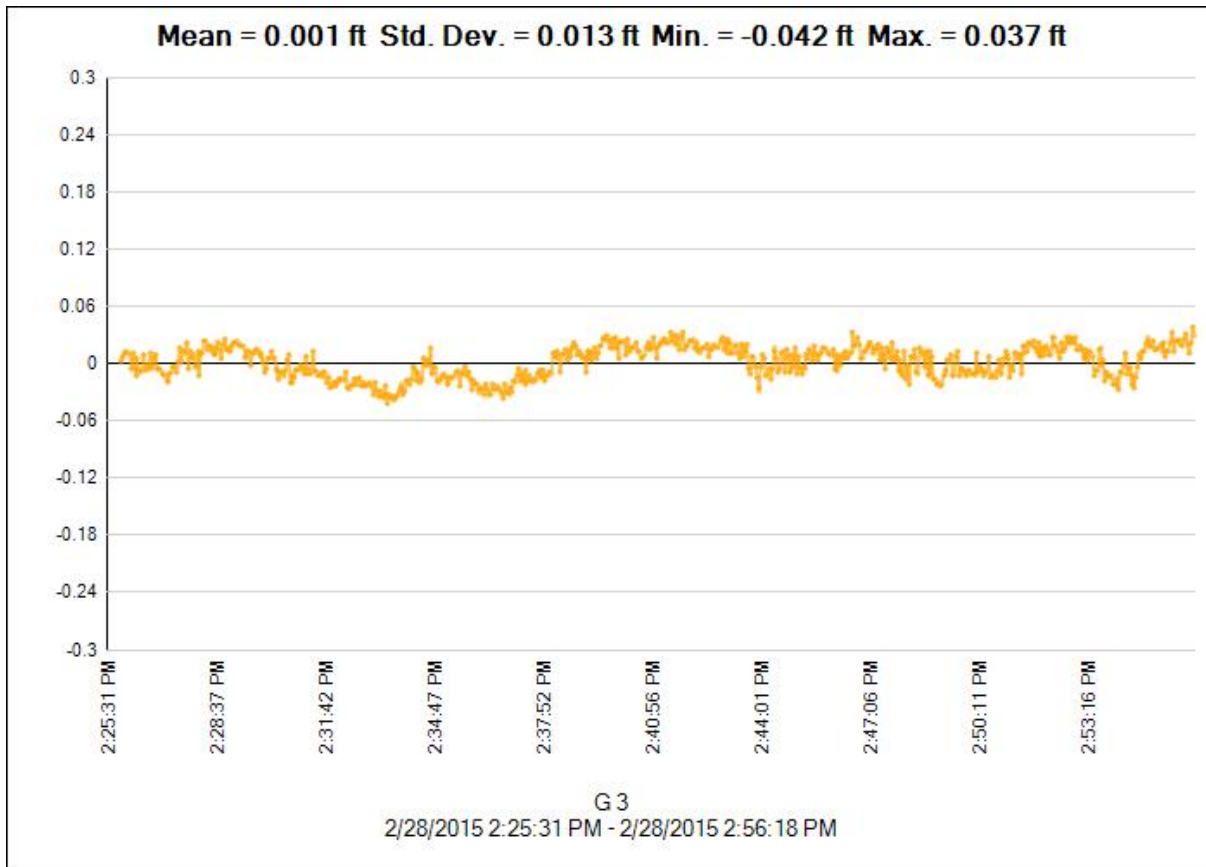
Occupations

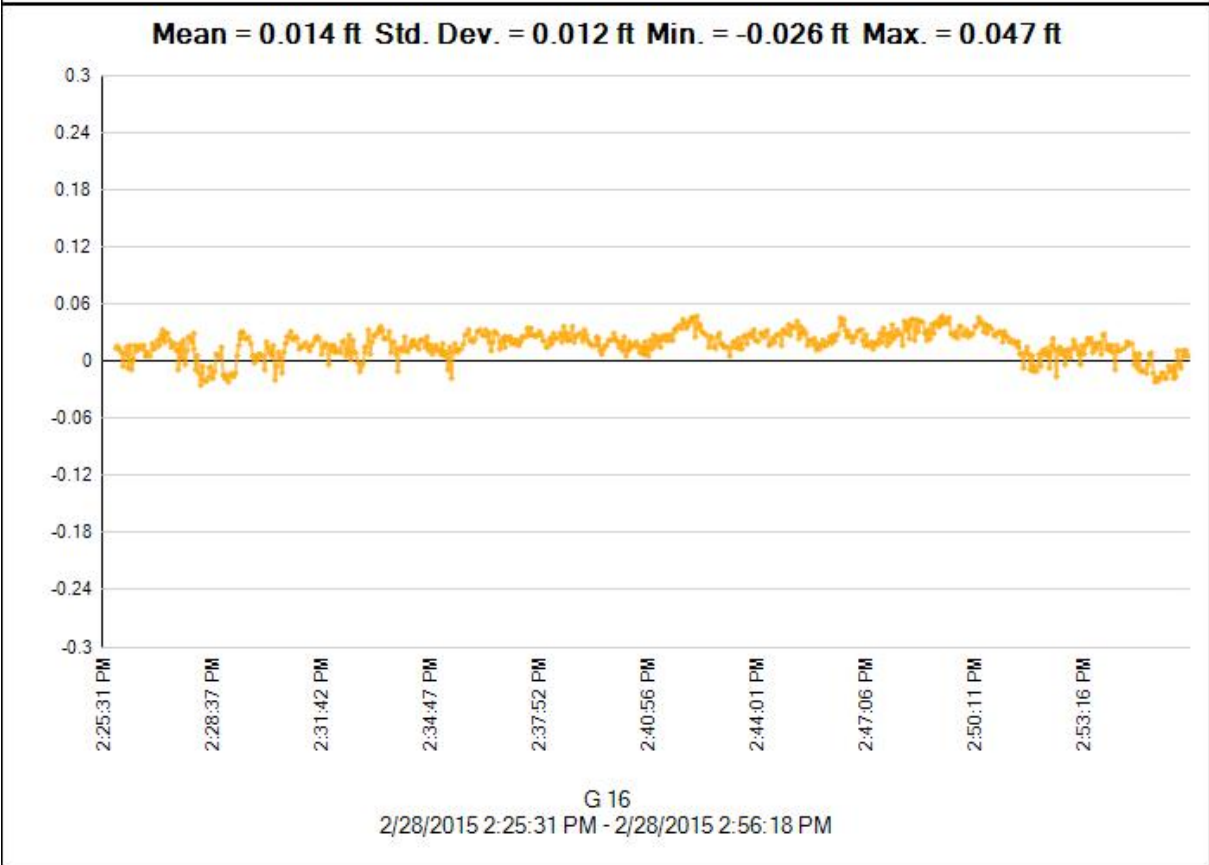
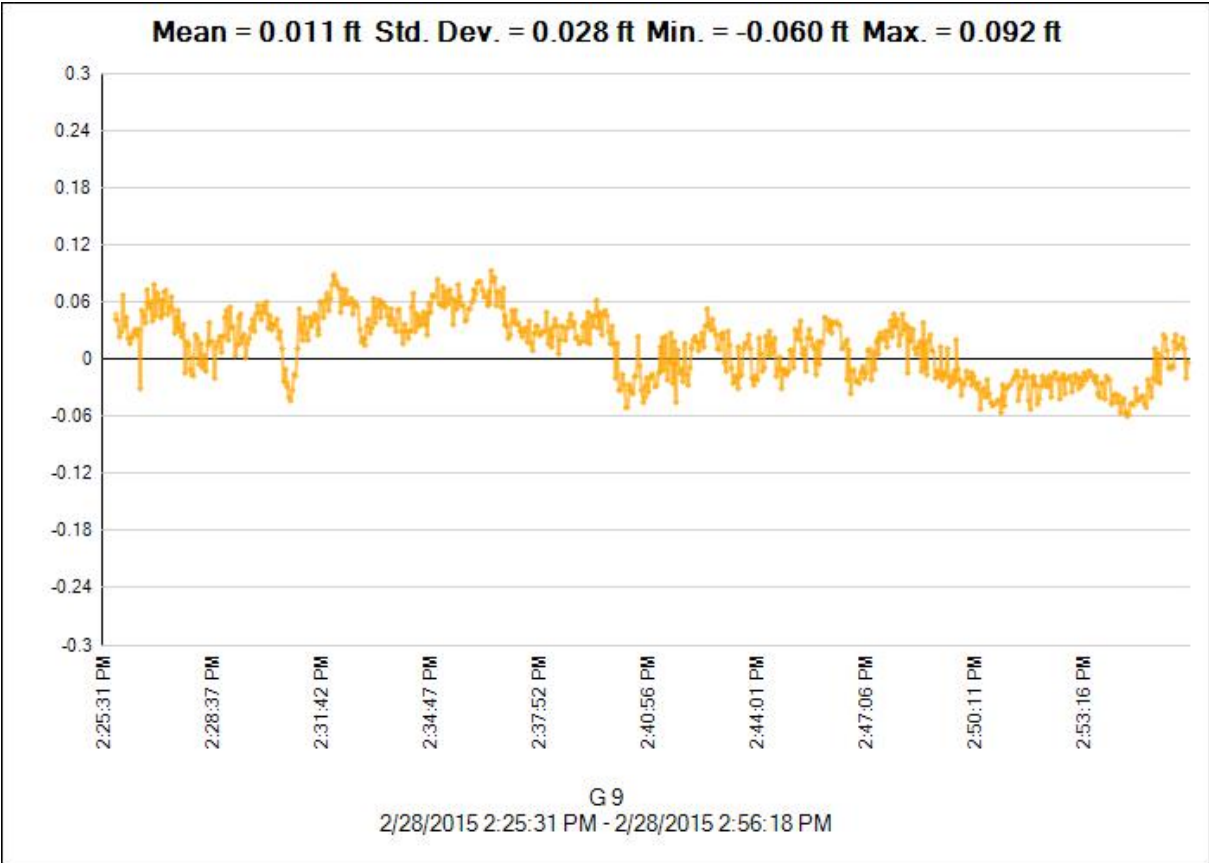
	From	To
Point ID:	KTUS	CON117
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520591.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840592.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

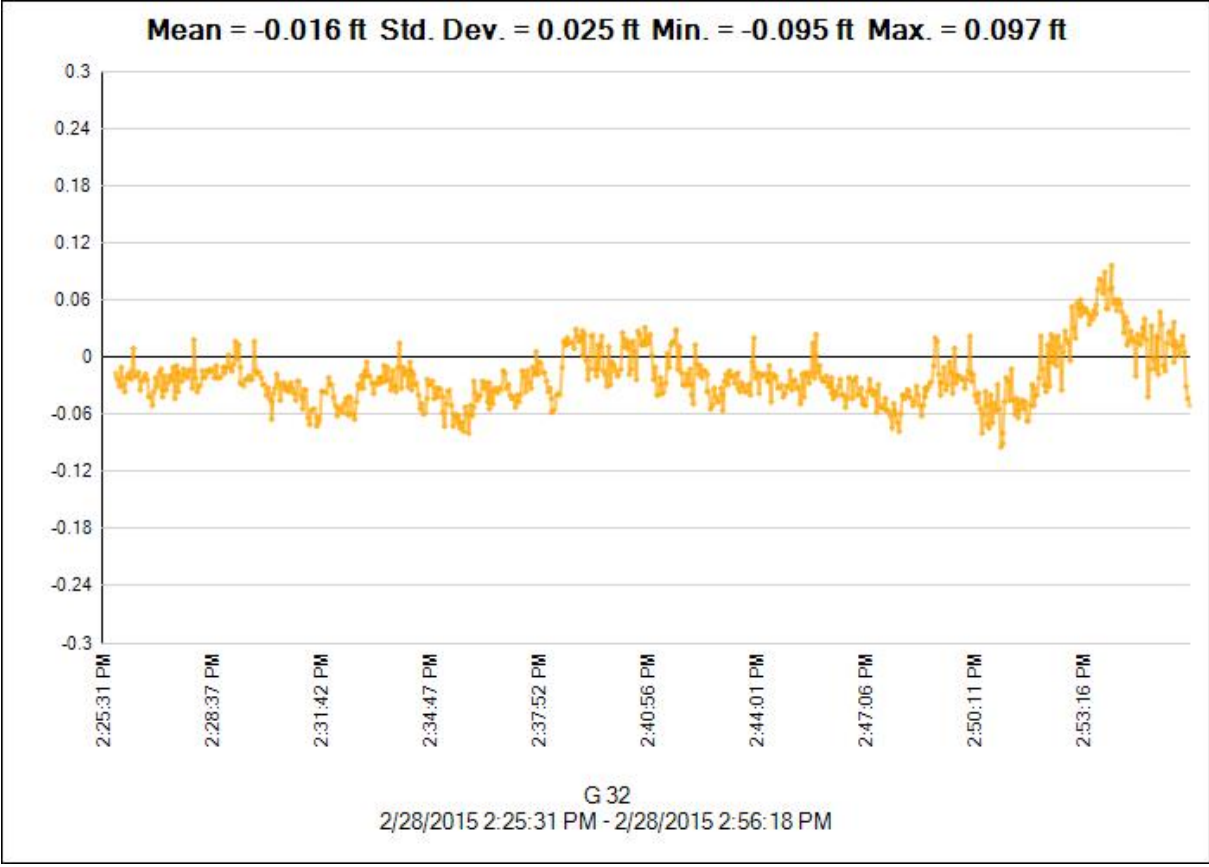
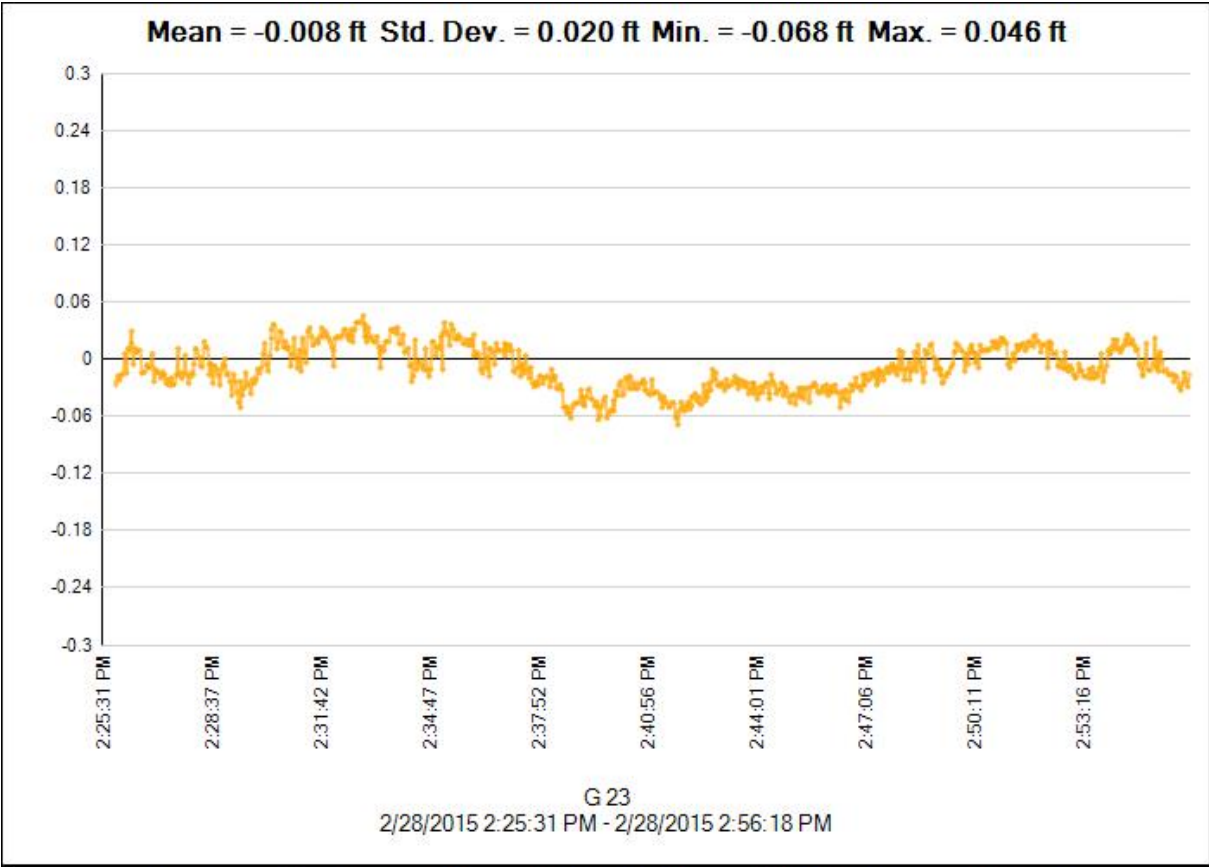
Tracking Summary

SV	2/28/2015 2:25:29 PM	Duration: 00:30:48	Major interval: 00:01:00	2/28/2015 2:56:17 PM
G 1	L1 L2			
G 3	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 16	L1 L2			
G 20	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

Residuals









Processing style

Elevation mask: 20.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

KTUS - CON116 (3:22:04 PM-3:54:32 PM) (S25)

Baseline observation: KTUS --- CON116 (B25)
Processed: 3/11/2015 8:54:06 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.026 ft
Vertical precision: 0.044 ft
RMS: 0.003 ft
Maximum PDOP: 2.271
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/28/2015 3:22:19 PM (Local: UTC-7hr)
Processing stop time: 2/28/2015 3:54:25 PM (Local: UTC-7hr)
Processing duration: 00:32:06
Processing interval: 1 second

Vector Components (Mark to Mark)

From:		KTUS			
Grid		Local		Global	
Easting	1000781.483 ft	Latitude	N32°07'29.11397"	Latitude	N32°07'29.11396"
Northing	410474.784 ft	Longitude	W110°56'42.22351"	Longitude	W110°56'42.22351"
Elevation	2586.404 ft	Height	2489.851 ft	Height	2489.851 ft

To:		CON116			
Grid		Local		Global	
Easting	905989.276 ft	Latitude	N32°06'12.46978"	Latitude	N32°06'12.46978"
Northing	402009.385 ft	Longitude	W111°15'05.08775"	Longitude	W111°15'05.08775"
Elevation	2502.792 ft	Height	2404.541 ft	Height	2404.540 ft

Vector					
ΔEasting	-94792.207 ft	NS Fwd Azimuth	265°24'48"	ΔX	-89964.081 ft
ΔNorthing	-8465.399 ft	Ellipsoid Dist.	95171.894 ft	ΔY	30374.599 ft
ΔElevation	-83.612 ft	ΔHeight	-85.310 ft	ΔZ	-6606.491 ft

Standard Errors

Vector errors:					
σ ΔEasting	0.009 ft	σ NS fwd Azimuth	0°00'00"	σ ΔX	0.013 ft
σ ΔNorthing	0.010 ft	σ Ellipsoid Dist.	0.009 ft	σ ΔY	0.018 ft
σ ΔElevation	0.022 ft	σ ΔHeight	0.022 ft	σ ΔZ	0.013 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000166398		
Y	0.0000171090	0.0000312892	
Z	-0.0000076213	-0.0000122452	0.0000155565

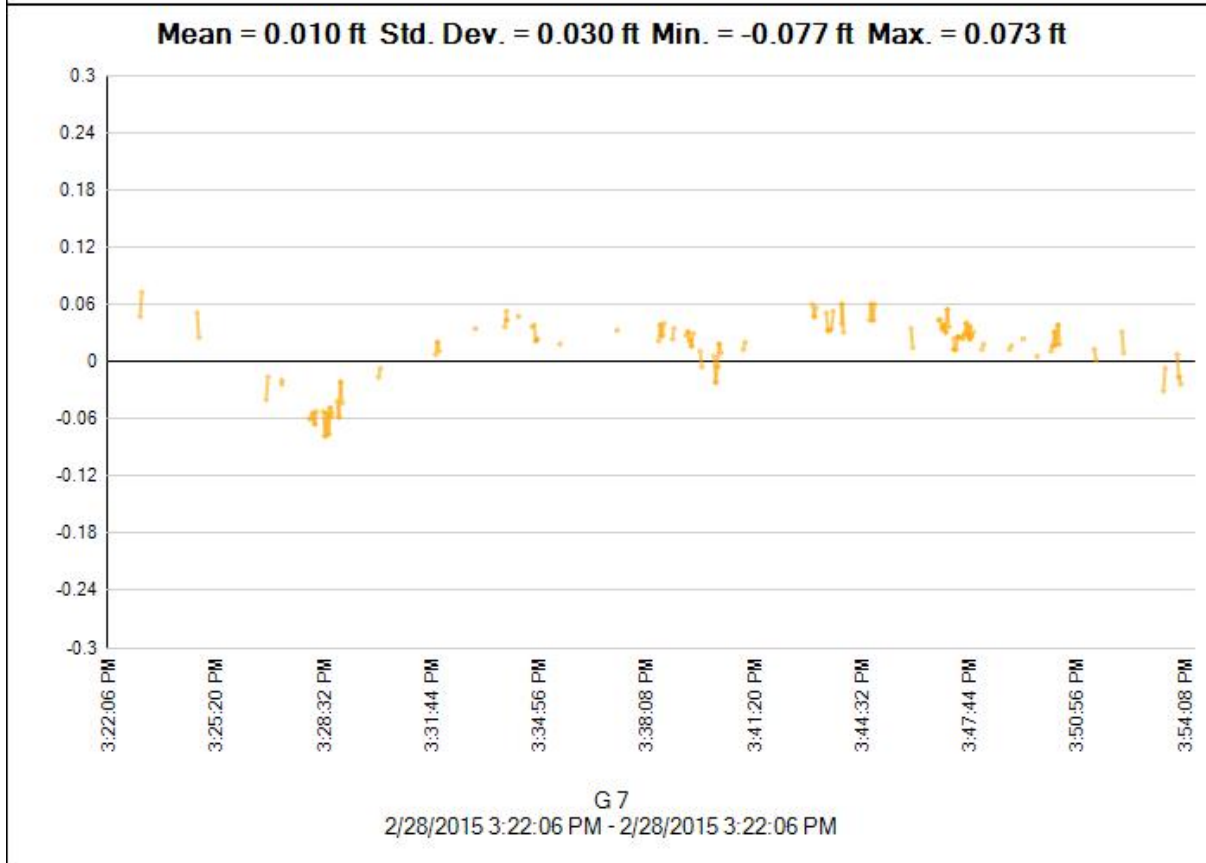
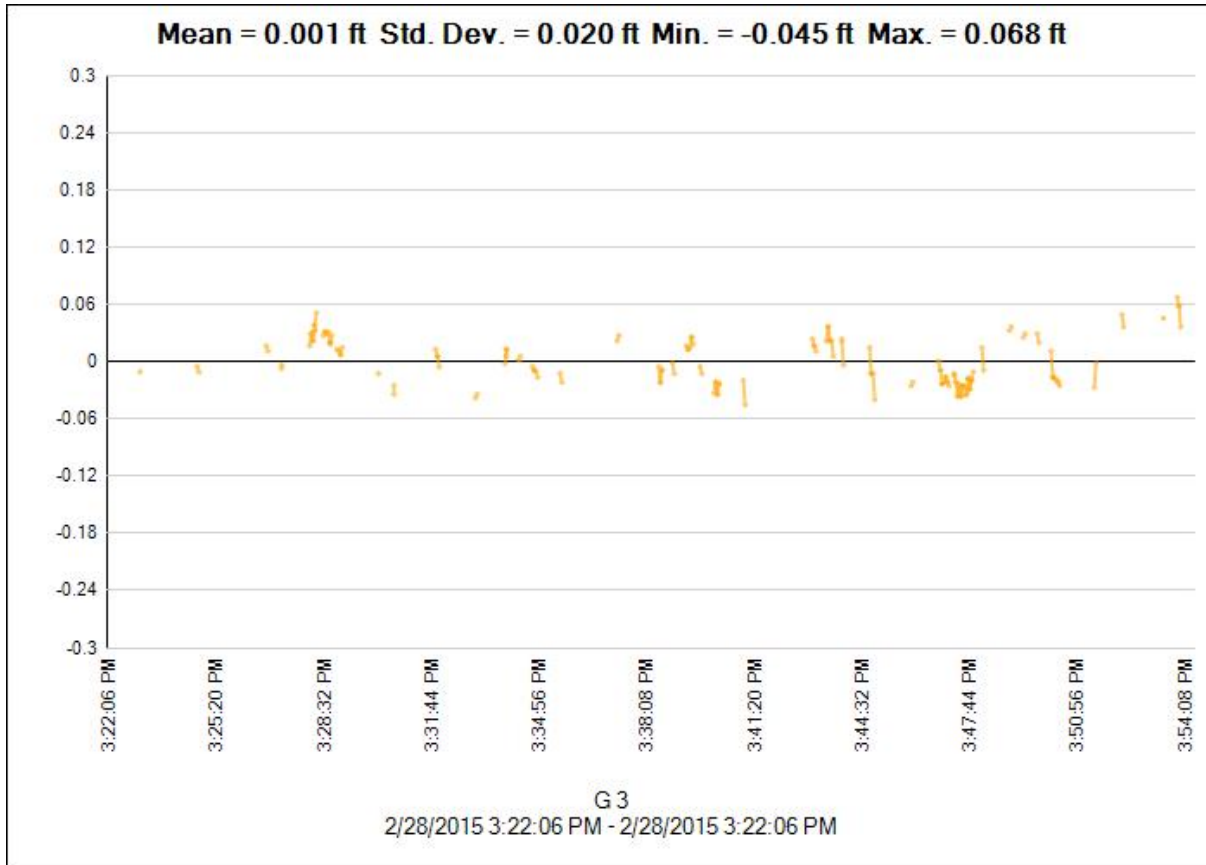
Occupations

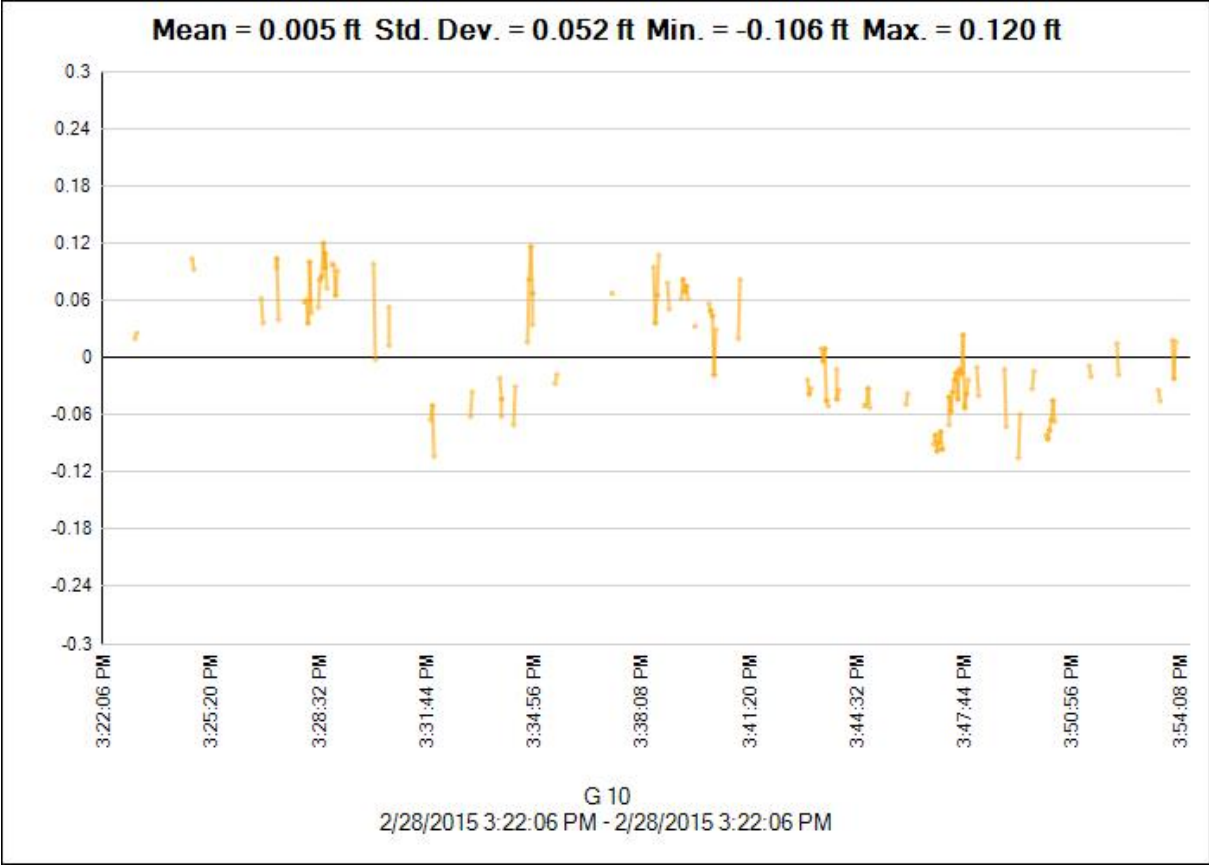
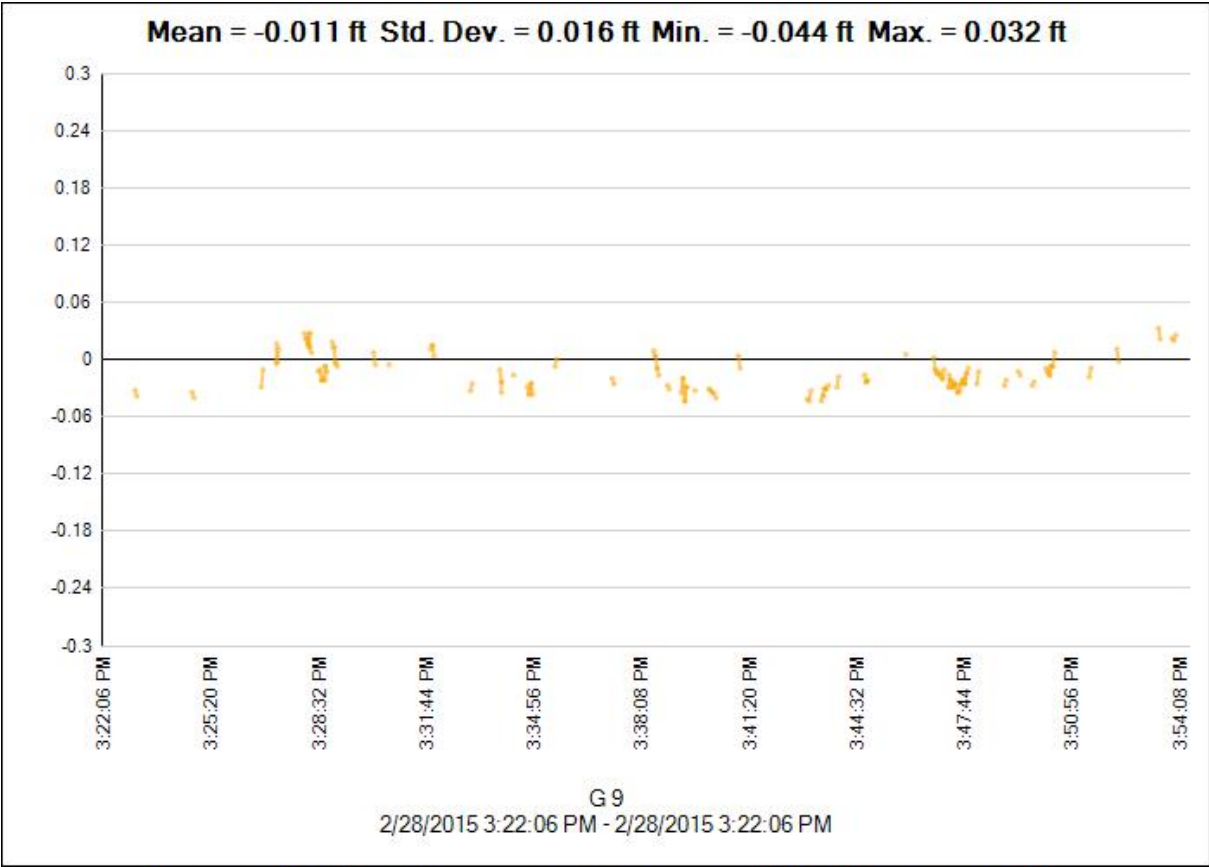
	From	To
Point ID:	KTUS	CON116
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520591.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840593.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

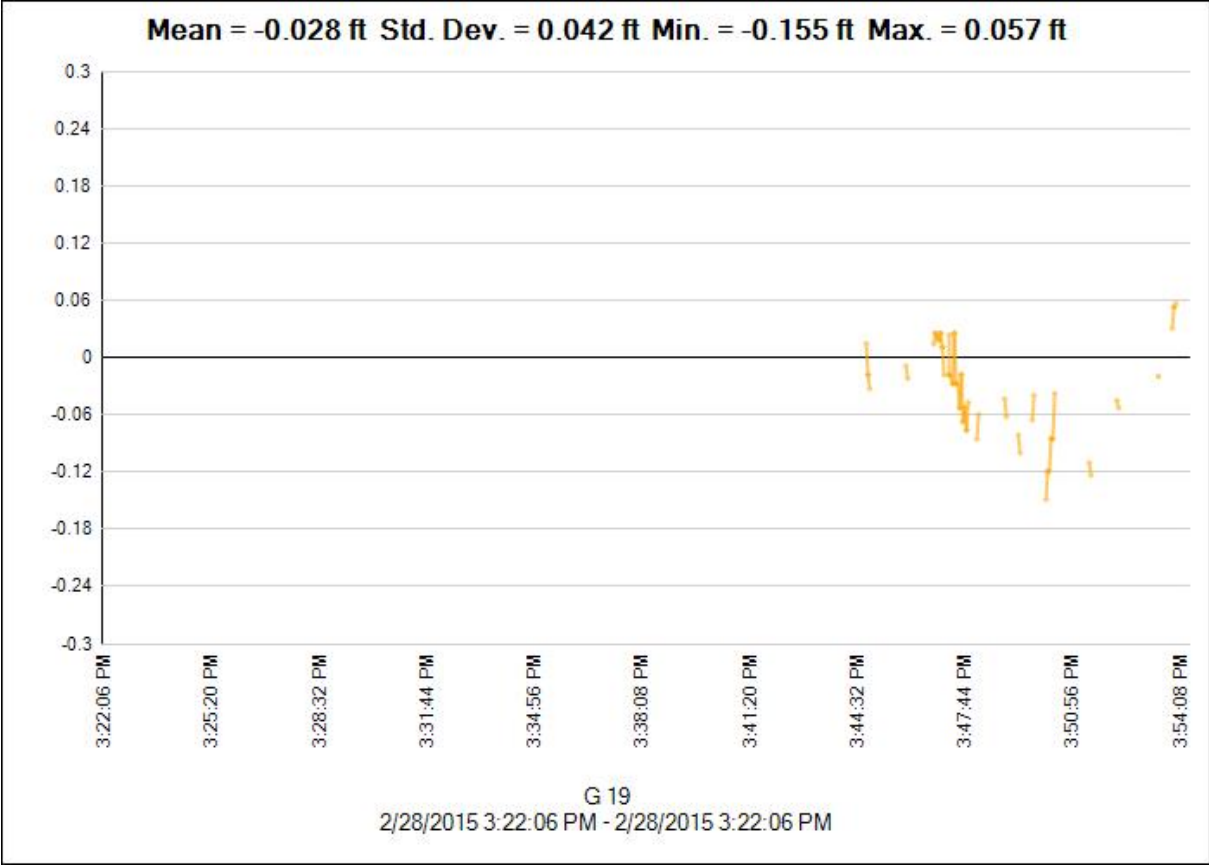
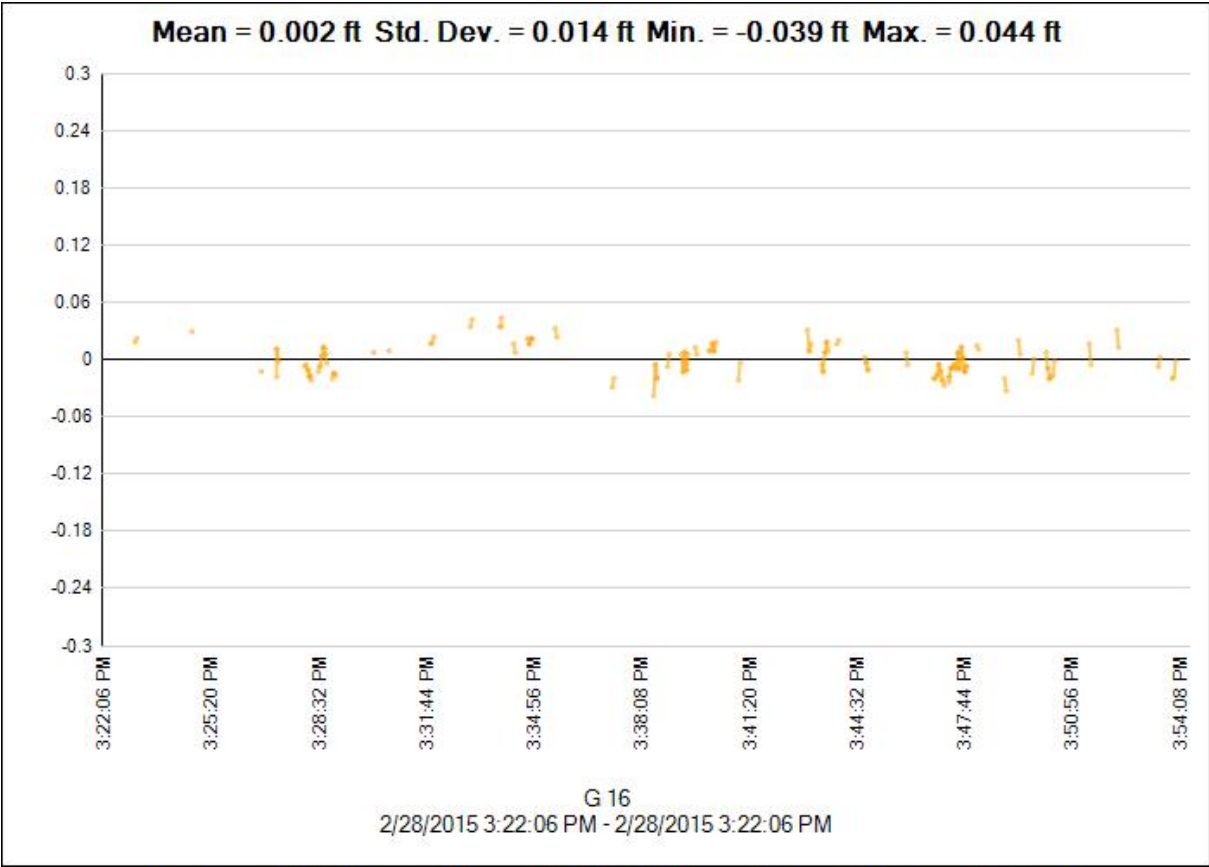
Tracking Summary

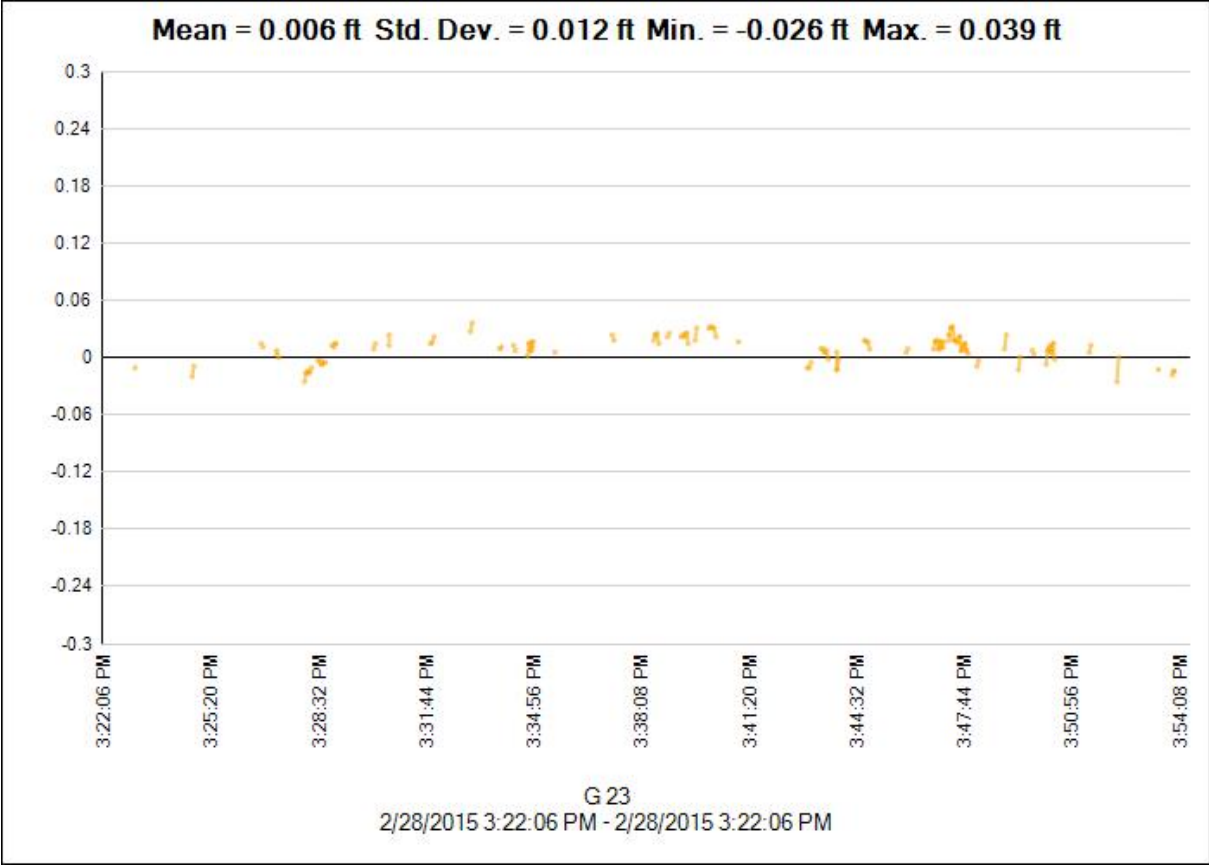
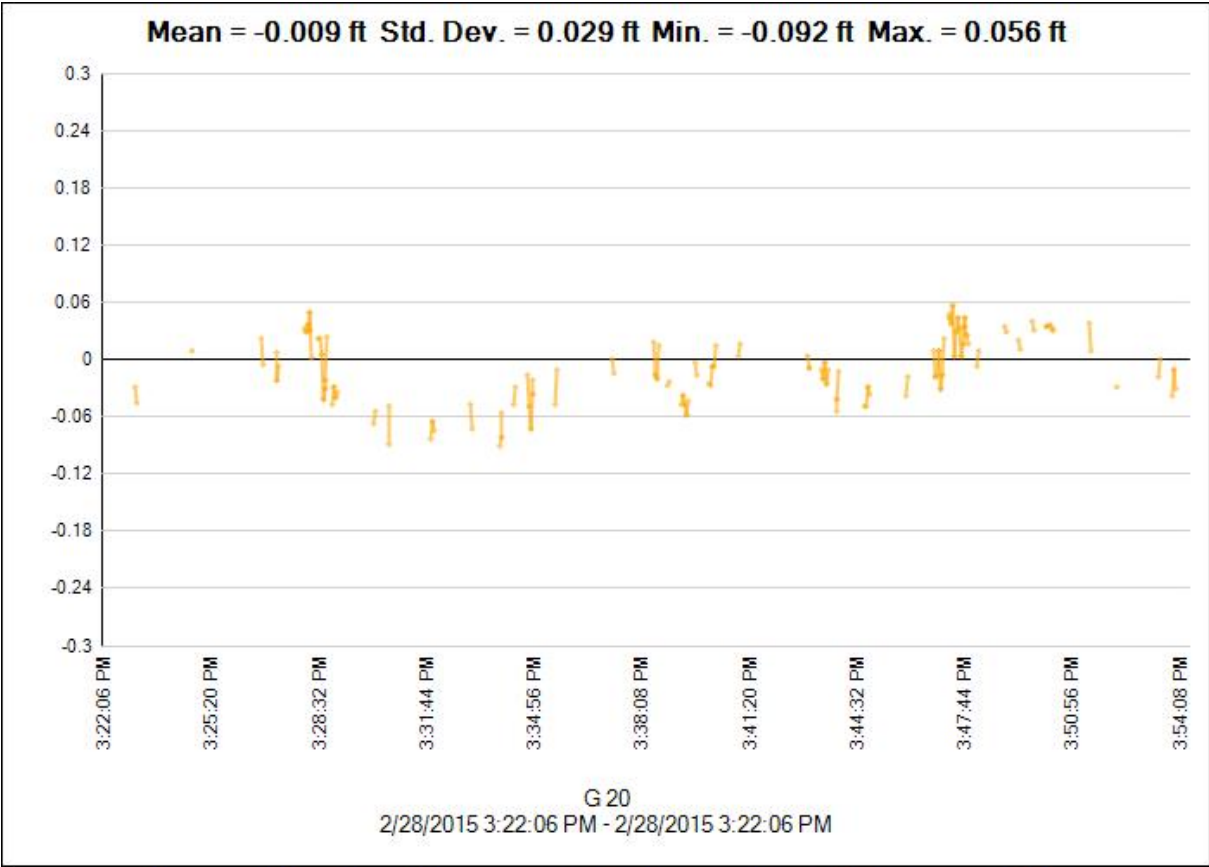
SV	2/28/2015 3:22:04 PM	Duration: 00:32:28	Major interval: 00:01:00	2/28/2015 3:54:32 PM
G 3				
G 7				
G 9				
G 10				
G 16				
G 19				
G 20				
G 23				
G 27				
G 30				
G 32				

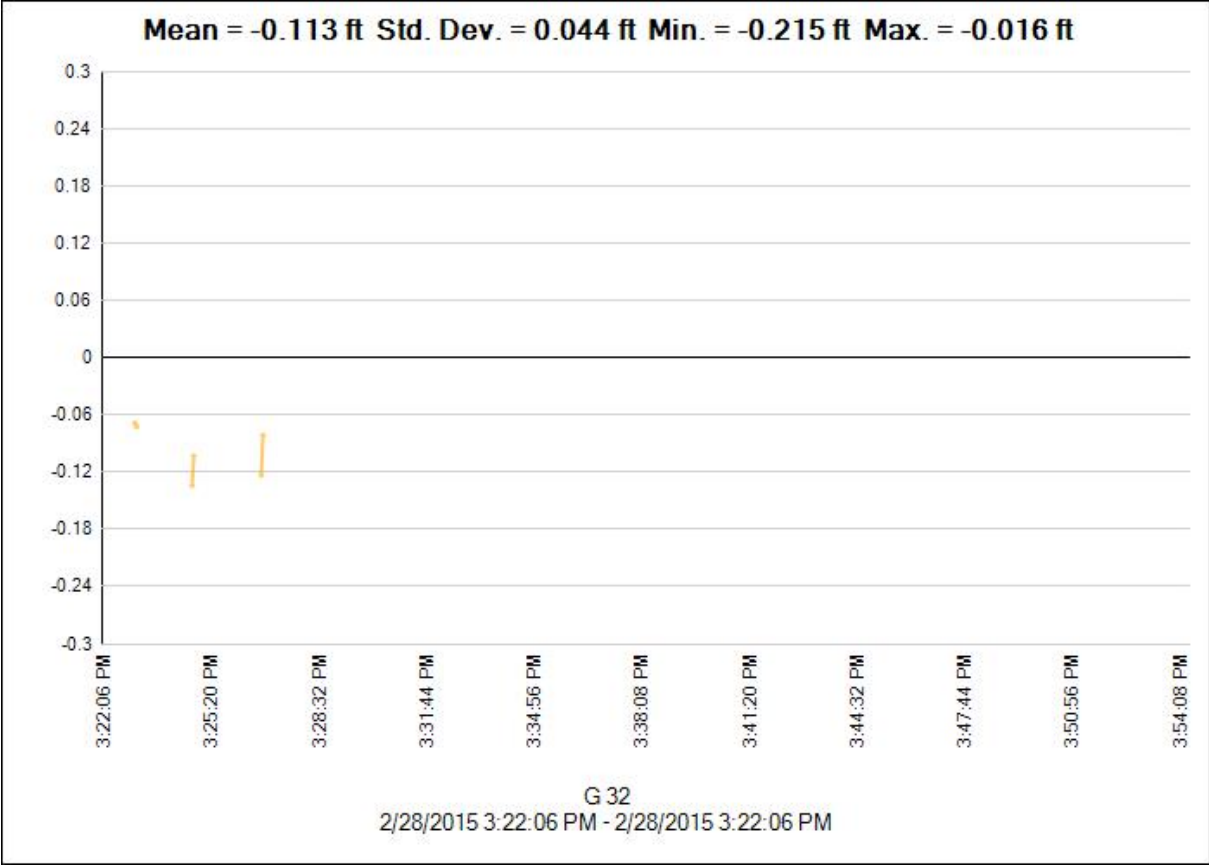
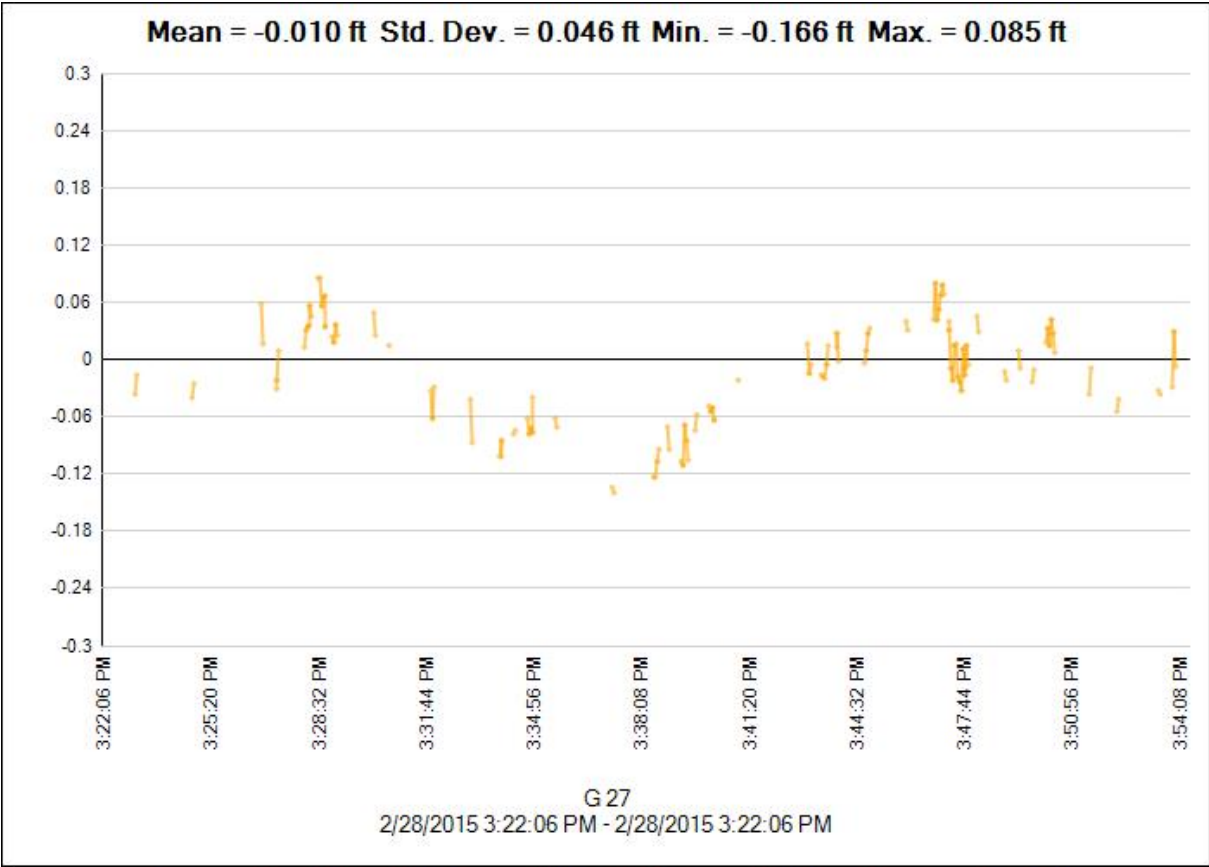
Residuals













Processing style

Elevation mask: 14.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

KTUS - CON118 (4:34:41 PM-5:04:59 PM) (S26)

Baseline observation: KTUS --- CON118 (B26)
Processed: 3/11/2015 8:54:18 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.033 ft
Vertical precision: 0.038 ft
RMS: 0.005 ft
Maximum PDOP: 2.233
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/28/2015 4:34:41 PM (Local: UTC-7hr)
Processing stop time: 2/28/2015 5:04:59 PM (Local: UTC-7hr)
Processing duration: 00:30:18
Processing interval: 1 second

Vector Components (Mark to Mark)

From:		KTUS			
Grid		Local		Global	
Easting	1000781.483 ft	Latitude	N32°07'29.11397"	Latitude	N32°07'29.11396"
Northing	410474.784 ft	Longitude	W110°56'42.22351"	Longitude	W110°56'42.22351"
Elevation	2586.404 ft	Height	2489.851 ft	Height	2489.851 ft

To:		CON118			
Grid		Local		Global	
Easting	967501.072 ft	Latitude	N32°03'19.55047"	Latitude	N32°03'19.55046"
Northing	384970.635 ft	Longitude	W111°03'11.57454"	Longitude	W111°03'11.57454"
Elevation	2809.627 ft	Height	2712.392 ft	Height	2712.392 ft

Vector					
ΔEasting	-33280.411 ft	NS Fwd Azimuth	233°03'06"	ΔX	-36145.182 ft
ΔNorthing	-25504.149 ft	Ellipsoid Dist.	41929.386 ft	ΔY	-680.984 ft
ΔElevation	223.223 ft	ΔHeight	222.541 ft	ΔZ	-21251.397 ft

Standard Errors

Vector errors:					
σ ΔEasting	0.008 ft	σ NS fwd Azimuth	0°00'00"	σ ΔX	0.010 ft
σ ΔNorthing	0.013 ft	σ Ellipsoid Dist.	0.011 ft	σ ΔY	0.016 ft
σ ΔElevation	0.020 ft	σ ΔHeight	0.020 ft	σ ΔZ	0.016 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000097906		
Y	0.0000093754	0.0000233629	
Z	-0.0000020143	-0.0000096082	0.0000245139

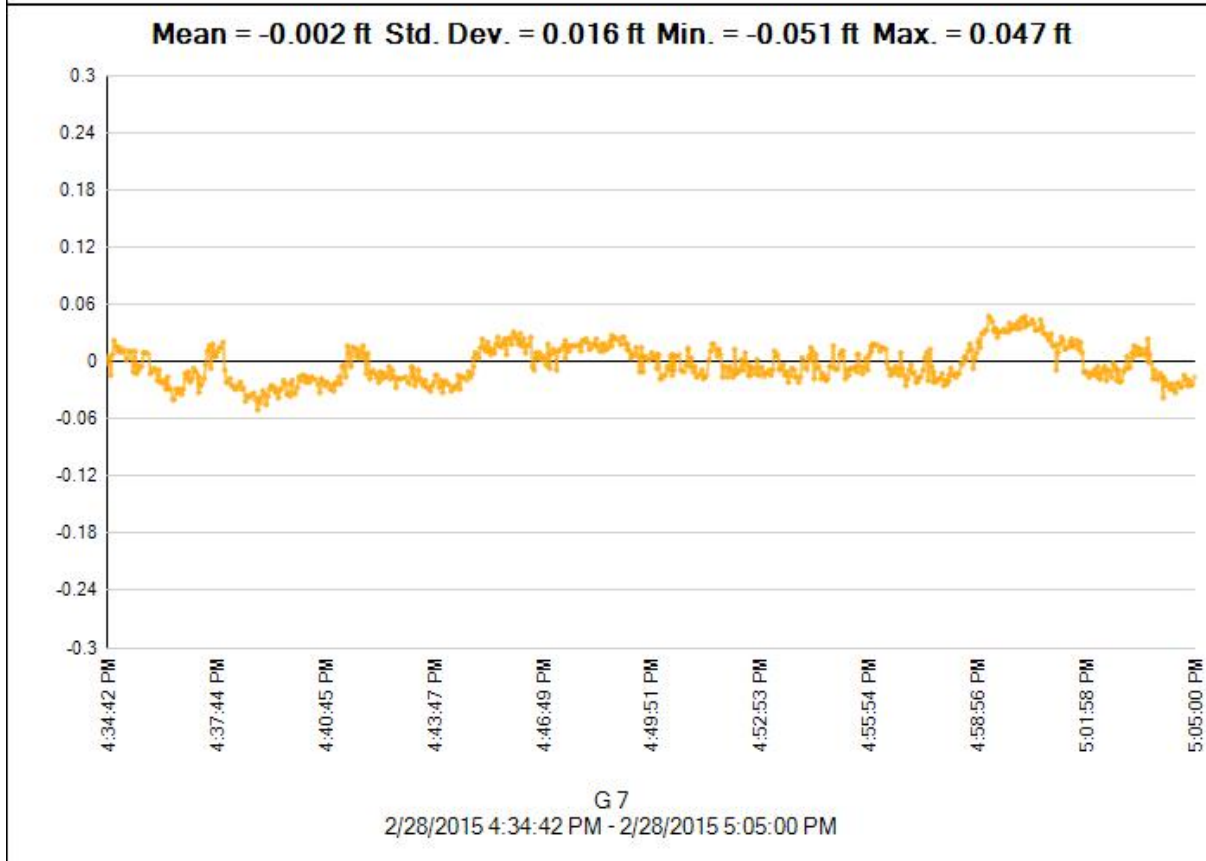
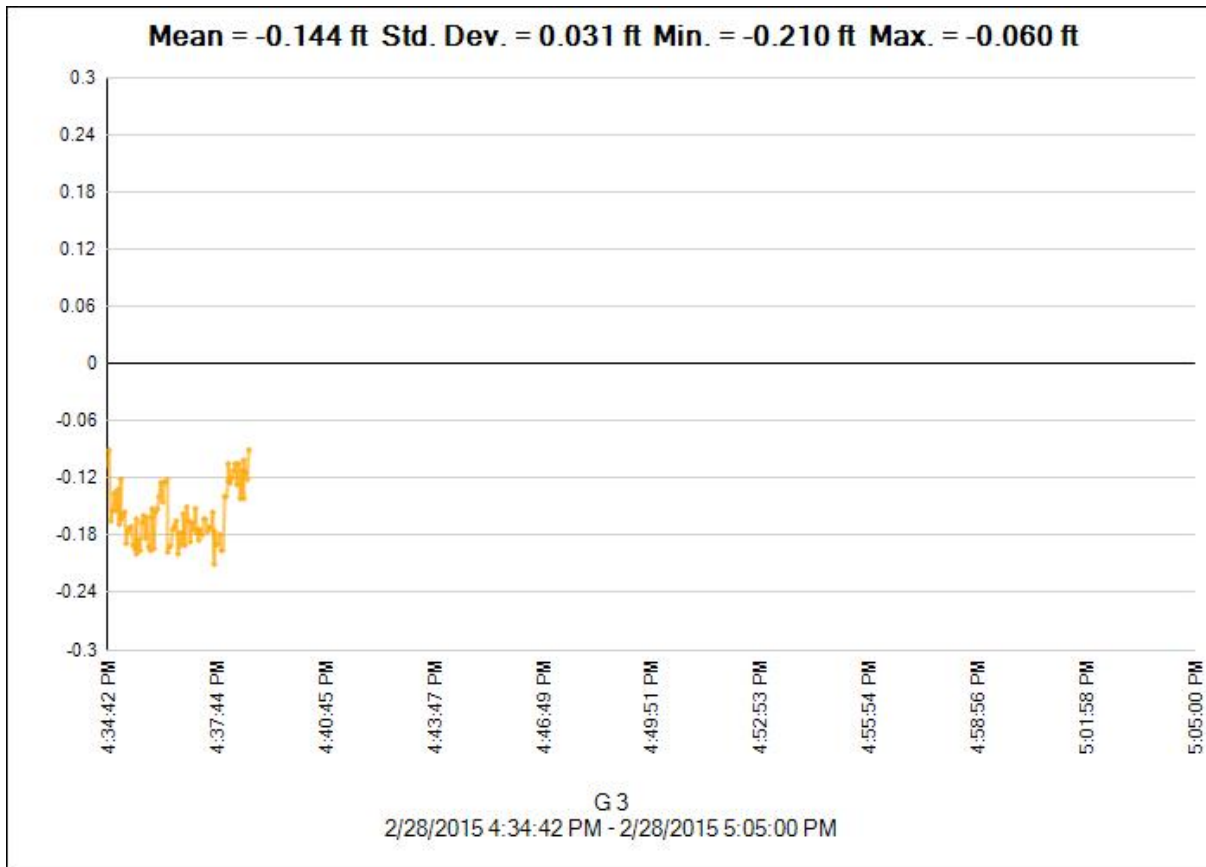
Occupations

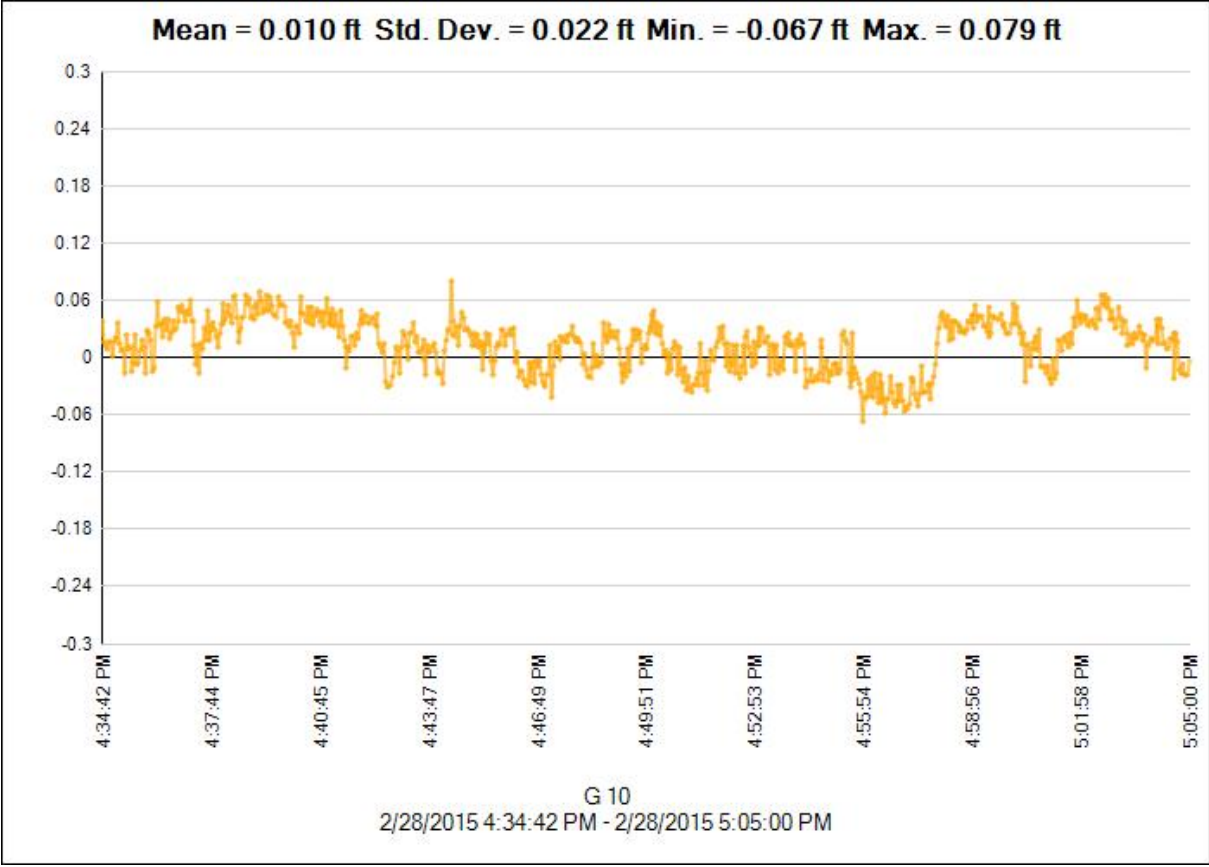
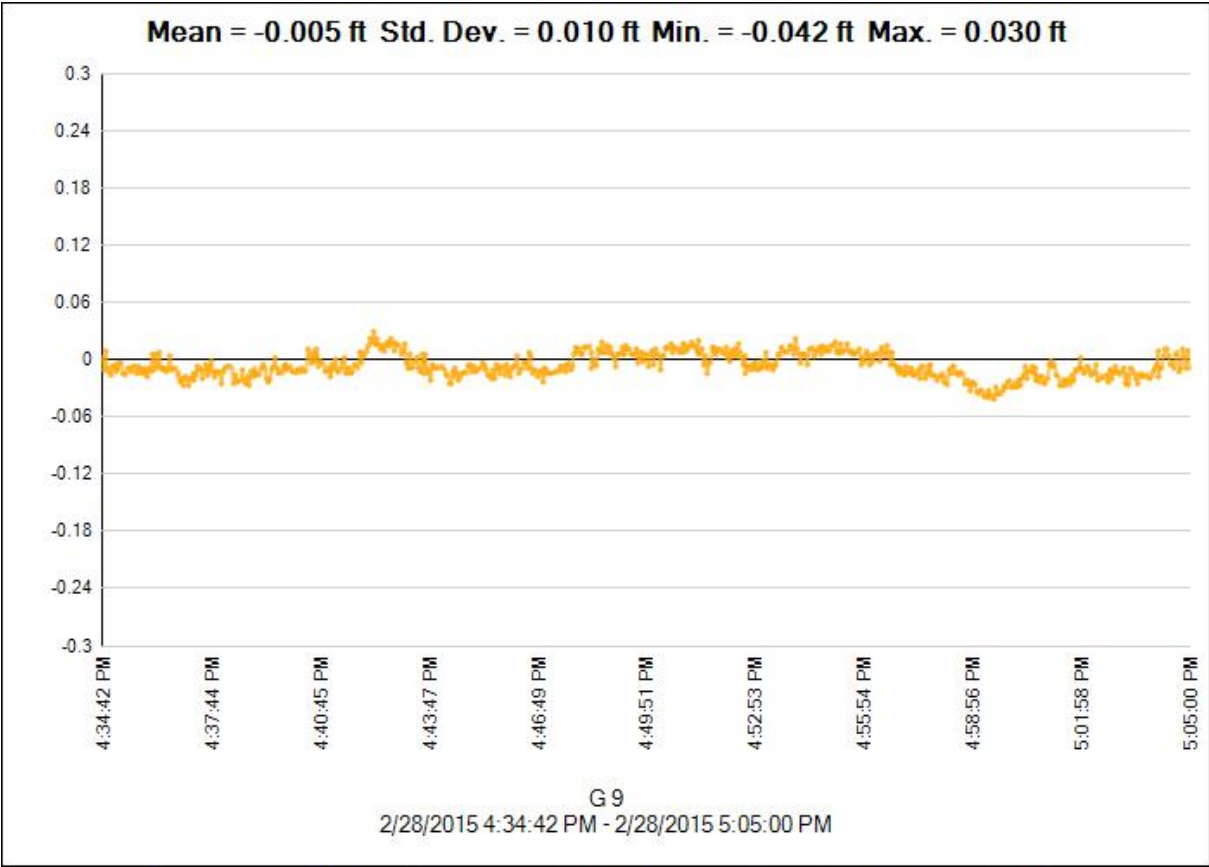
	From	To
Point ID:	KTUS	CON118
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520591.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840594.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

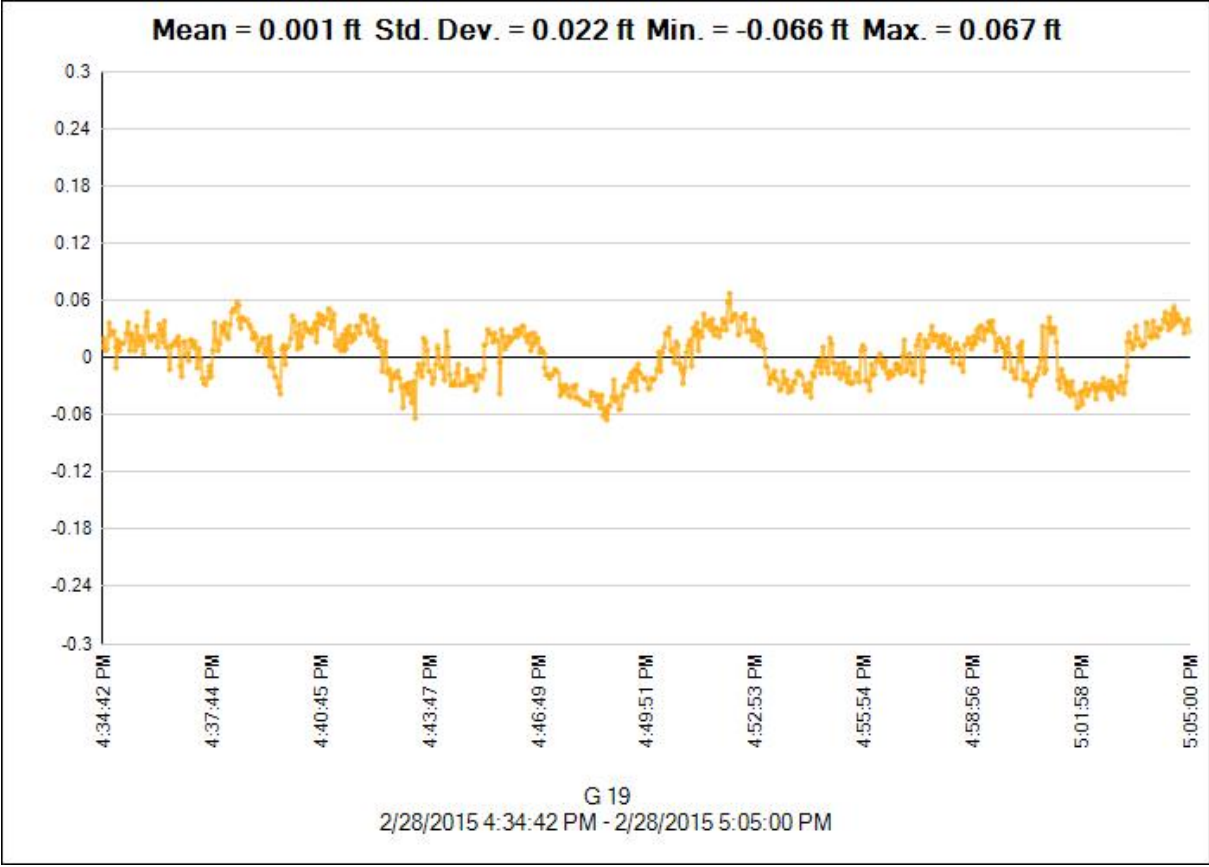
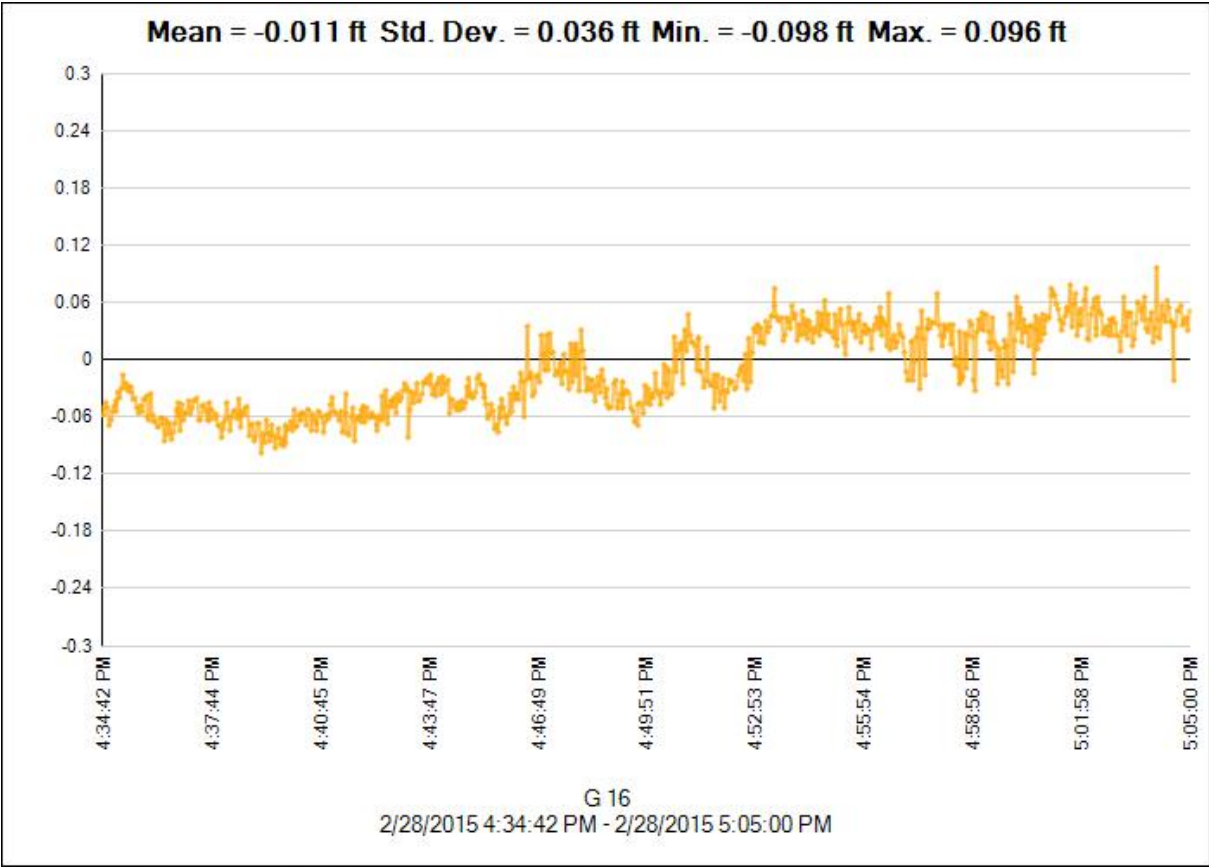
Tracking Summary

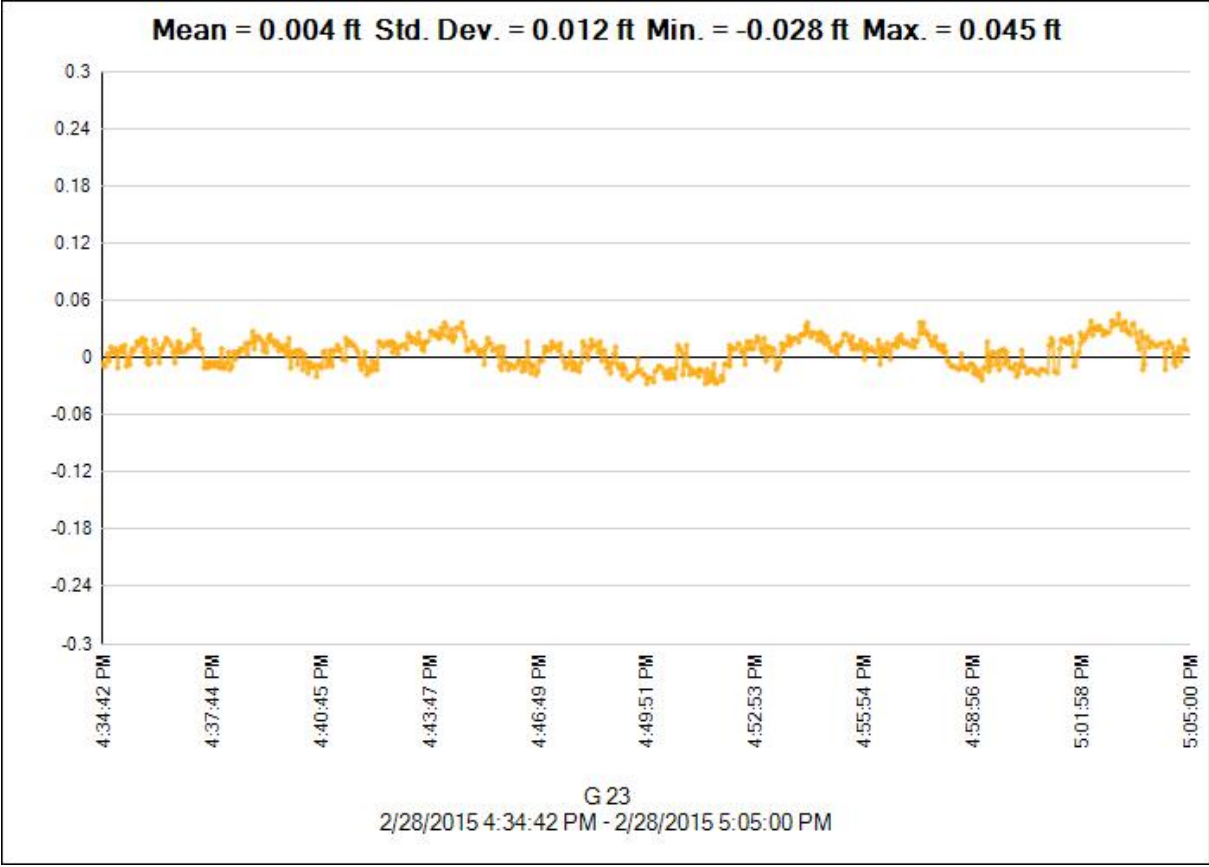
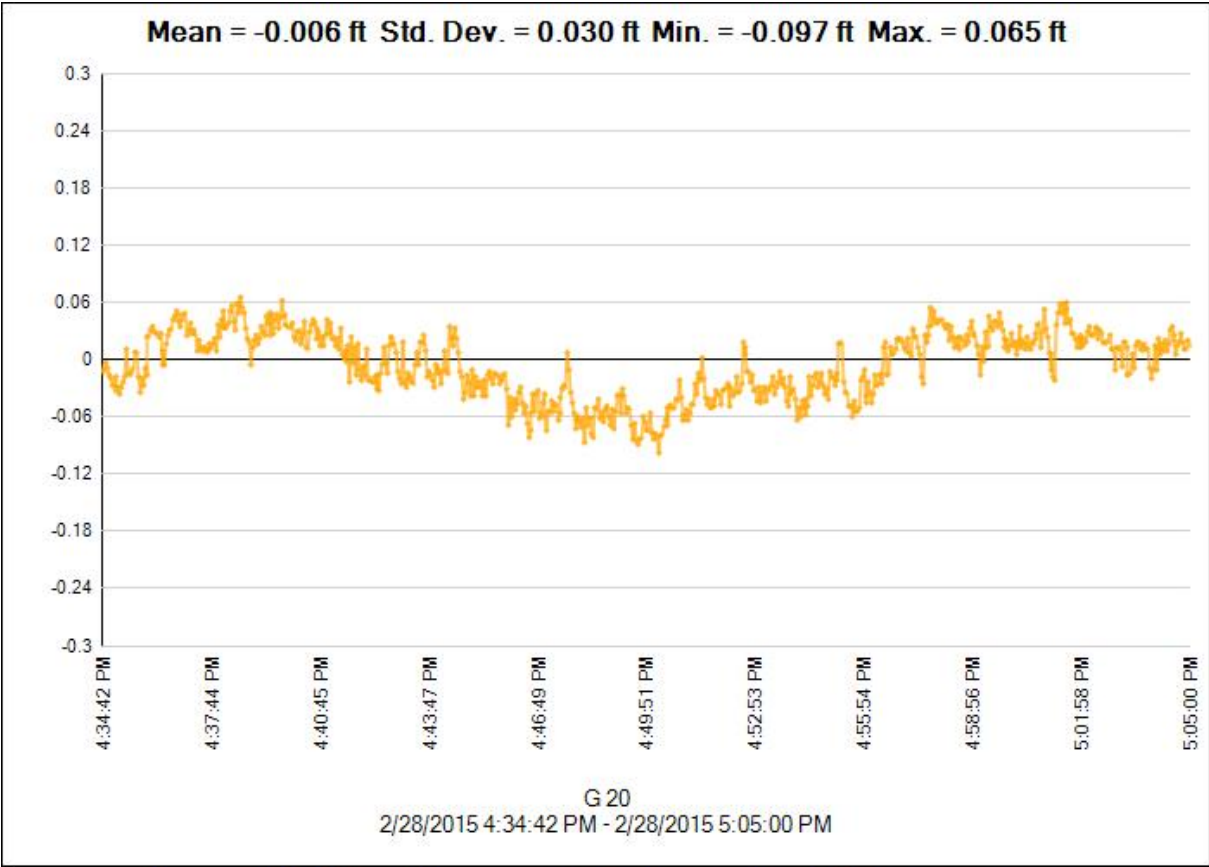
SV	2/28/2015 4:34:41 PM	Duration: 00:30:18	Major interval: 00:01:00	2/28/2015 5:04:59 PM
G 3	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 16	L1 L2			
G 19	L1 L2			
G 20	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

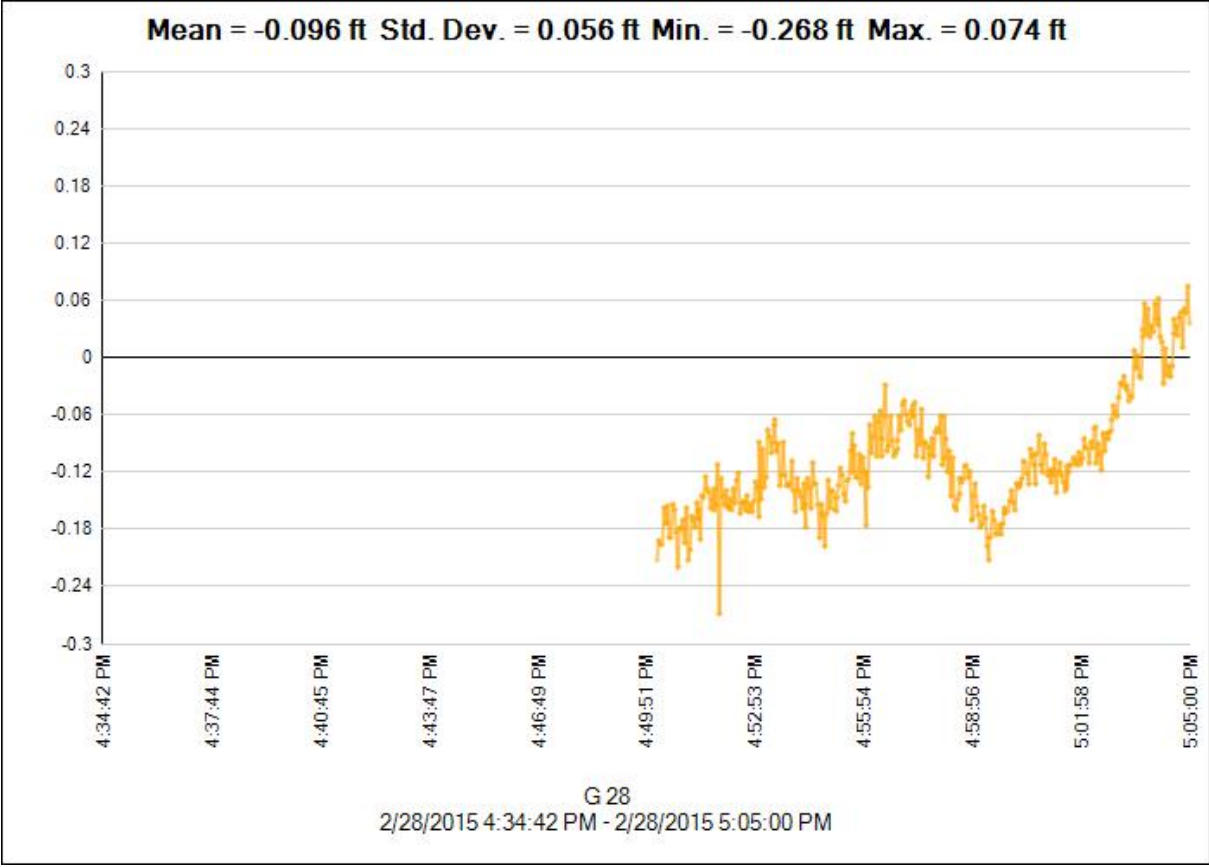
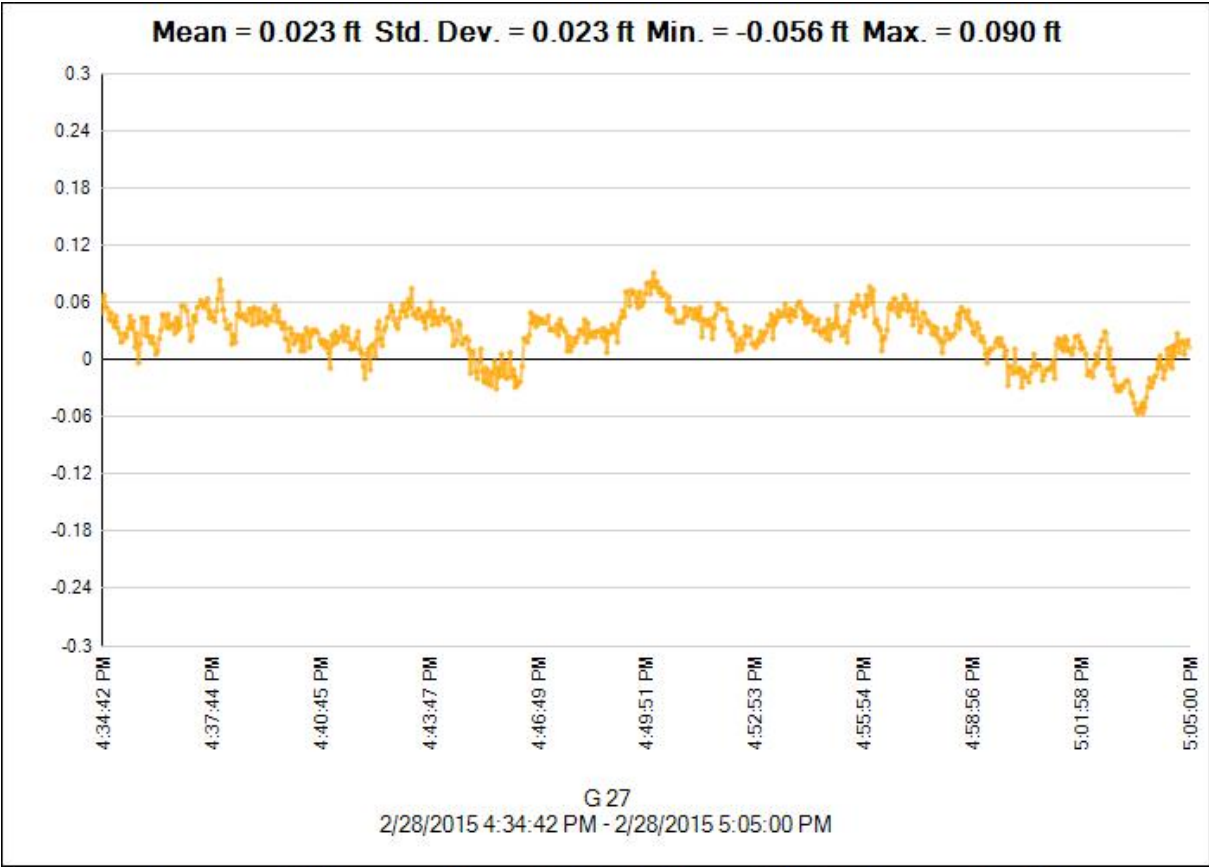
Residuals

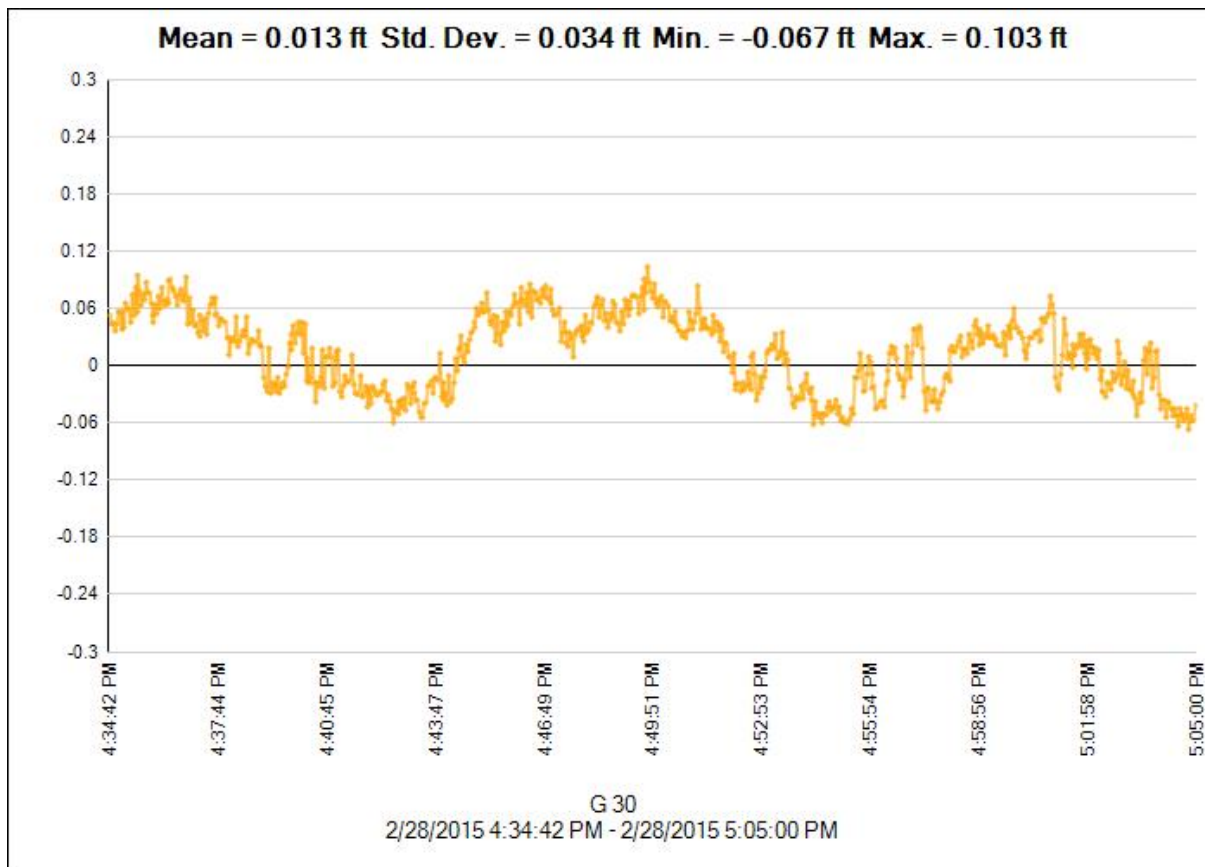














Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

KTUS - CON113 (5:29:42 PM-5:59:51 PM) (S27)

Baseline observation: KTUS --- CON113 (B27)
Processed: 3/11/2015 8:54:18 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.023 ft
Vertical precision: 0.045 ft
RMS: 0.003 ft
Maximum PDOP: 2.240
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/28/2015 5:29:42 PM (Local: UTC-7hr)
Processing stop time: 2/28/2015 5:59:51 PM (Local: UTC-7hr)
Processing duration: 00:30:09
Processing interval: 1 second

Vector Components (Mark to Mark)

From: KTUS					
Grid		Local		Global	
Easting	1000781.483 ft	Latitude	N32°07'29.11397"	Latitude	N32°07'29.11396"
Northing	410474.784 ft	Longitude	W110°56'42.22351"	Longitude	W110°56'42.22351"
Elevation	2586.404 ft	Height	2489.851 ft	Height	2489.851 ft

To: CON113					
Grid		Local		Global	
Easting	964549.469 ft	Latitude	N32°10'28.08472"	Latitude	N32°10'28.08471"
Northing	428254.433 ft	Longitude	W111°03'41.87939"	Longitude	W111°03'41.87939"
Elevation	2632.841 ft	Height	2536.187 ft	Height	2536.187 ft

Vector					
ΔEasting	-36232.014 ft	NS Fwd Azimuth	296°39'18"	ΔX	-30251.084 ft
ΔNorthing	17779.649 ft	Ellipsoid Dist.	40359.659 ft	ΔY	21882.913 ft
ΔElevation	46.437 ft	ΔHeight	46.336 ft	ΔZ	15339.653 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.008 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.012 ft
$\sigma \Delta$ Northing	0.009 ft	σ Ellipsoid Dist.	0.009 ft	$\sigma \Delta$ Y	0.019 ft
$\sigma \Delta$ Elevation	0.023 ft	$\sigma \Delta$ Height	0.023 ft	$\sigma \Delta$ Z	0.013 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000123078		
Y	0.0000127737	0.0000336160	
Z	-0.0000074833	-0.0000151963	0.0000167486

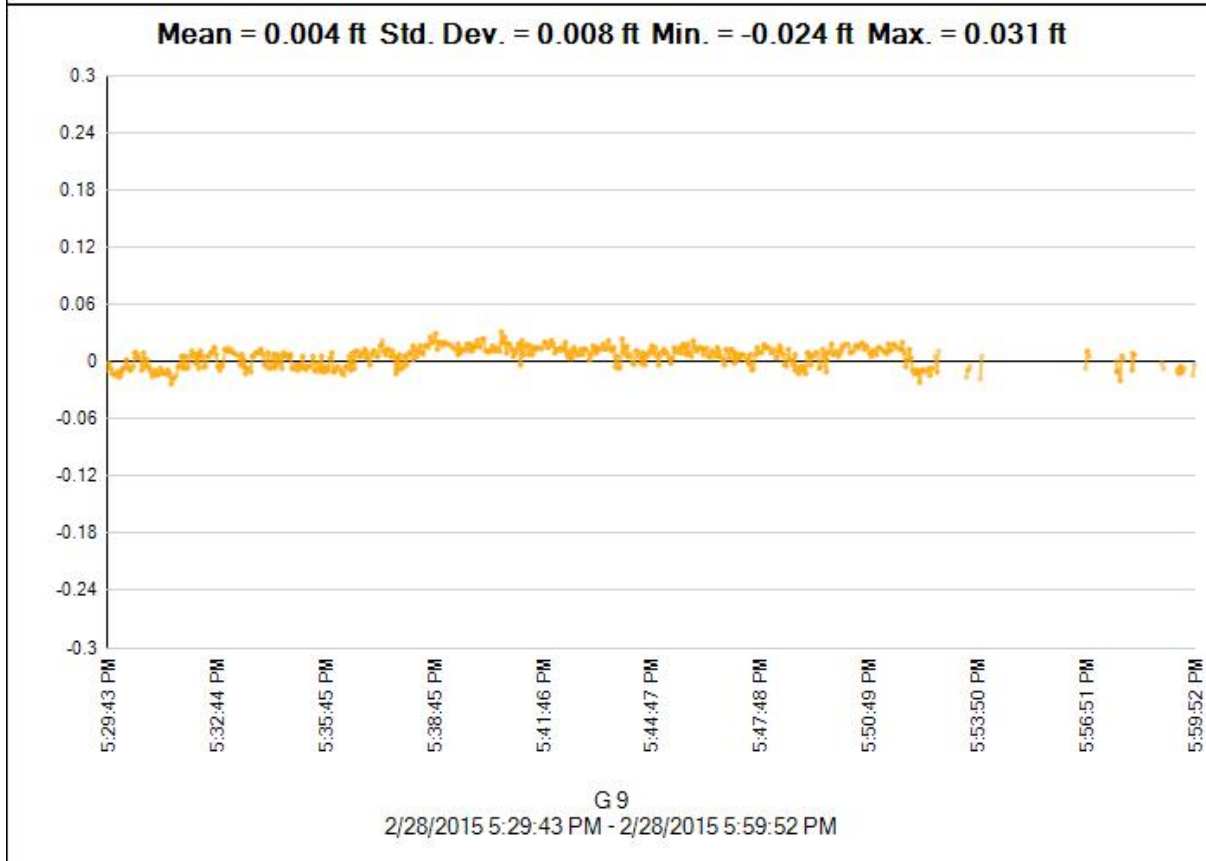
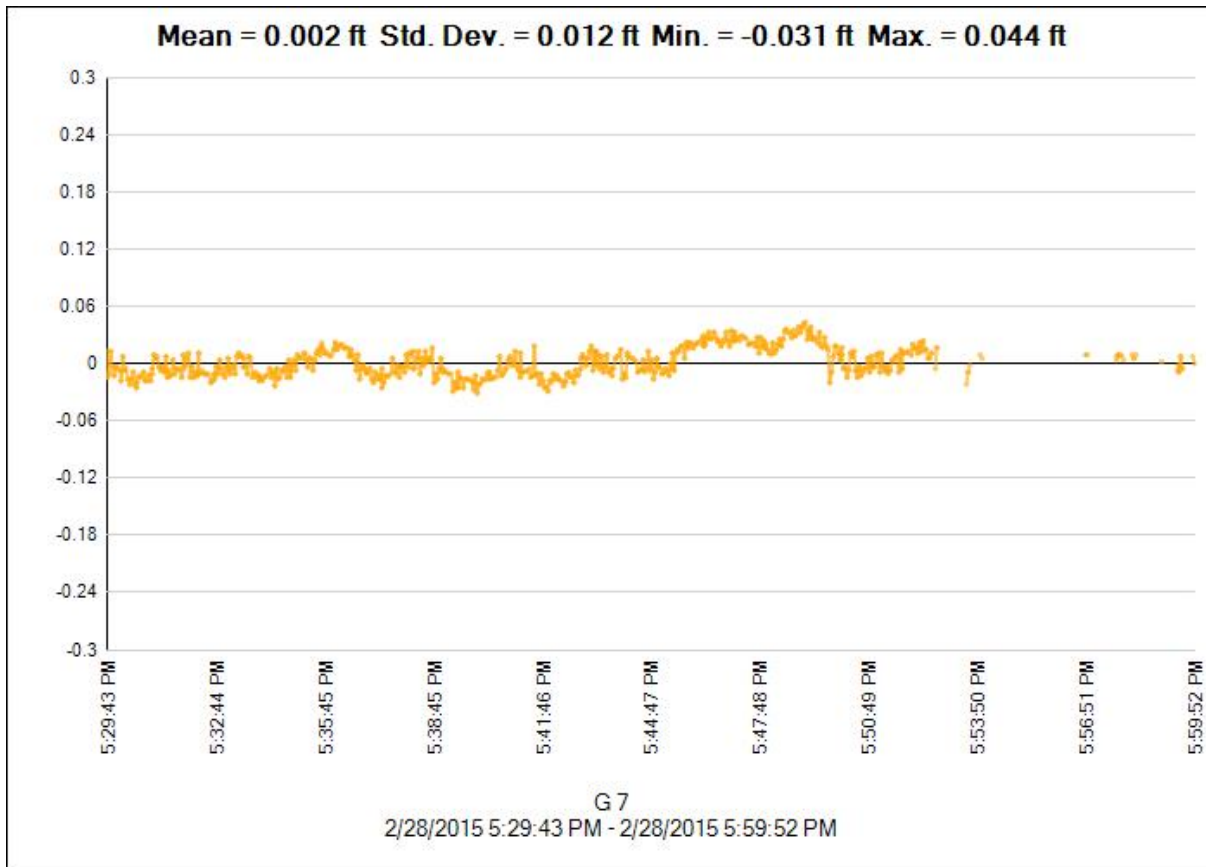
Occupations

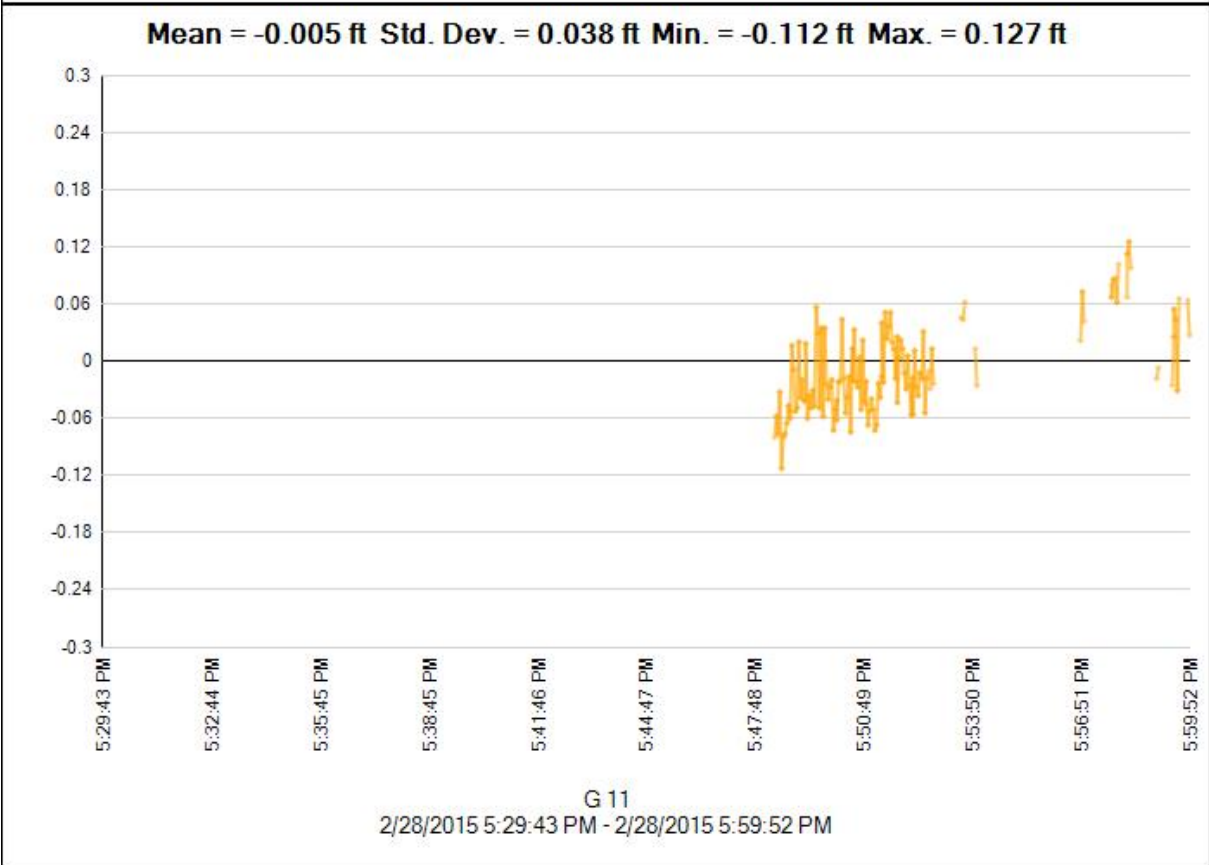
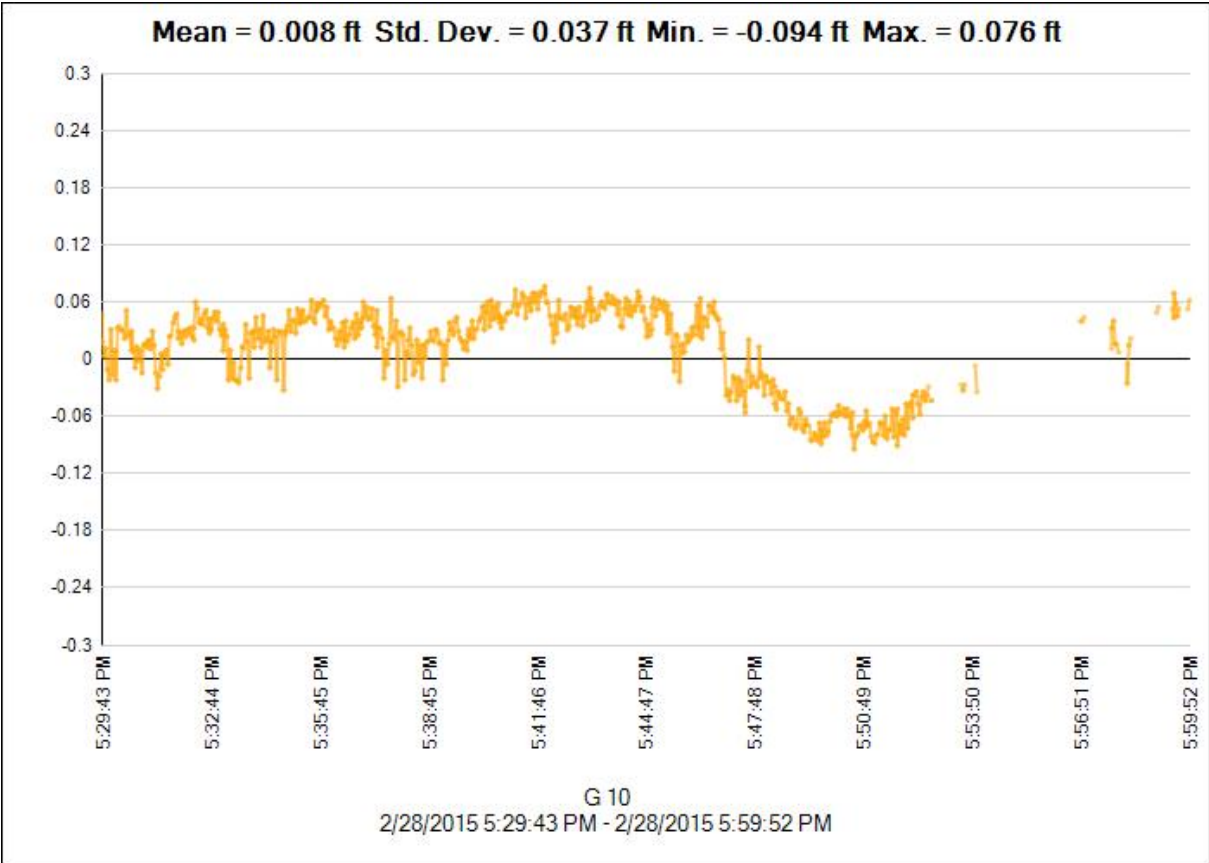
	From	To
Point ID:	KTUS	CON113
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520591.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840600.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

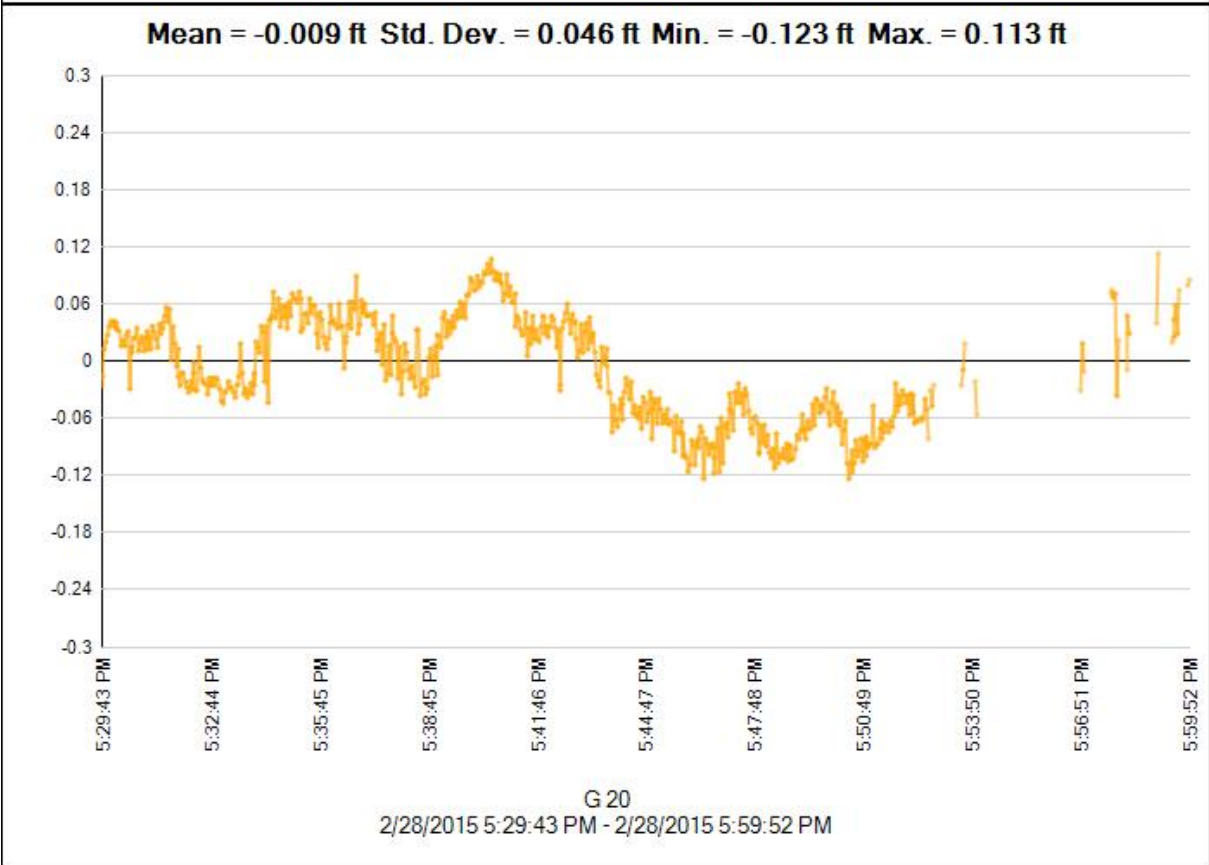
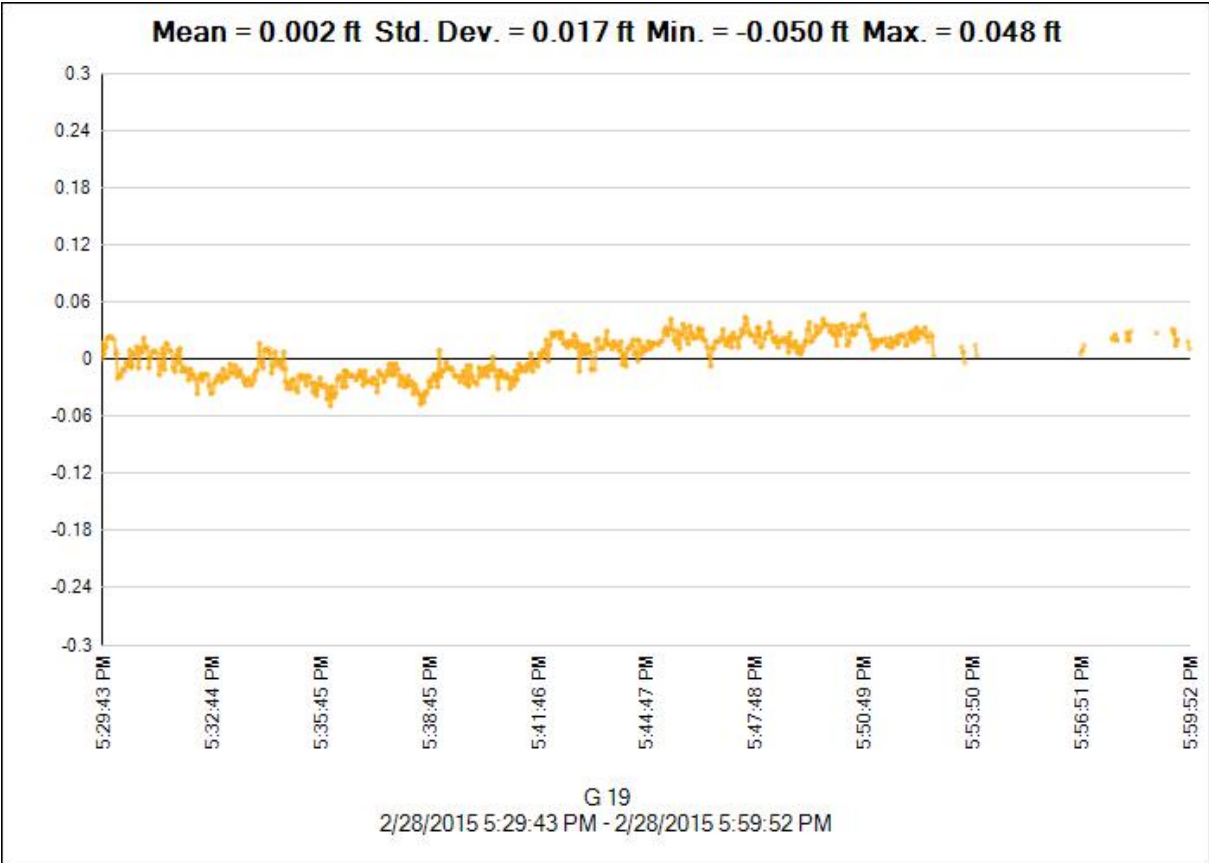
Tracking Summary

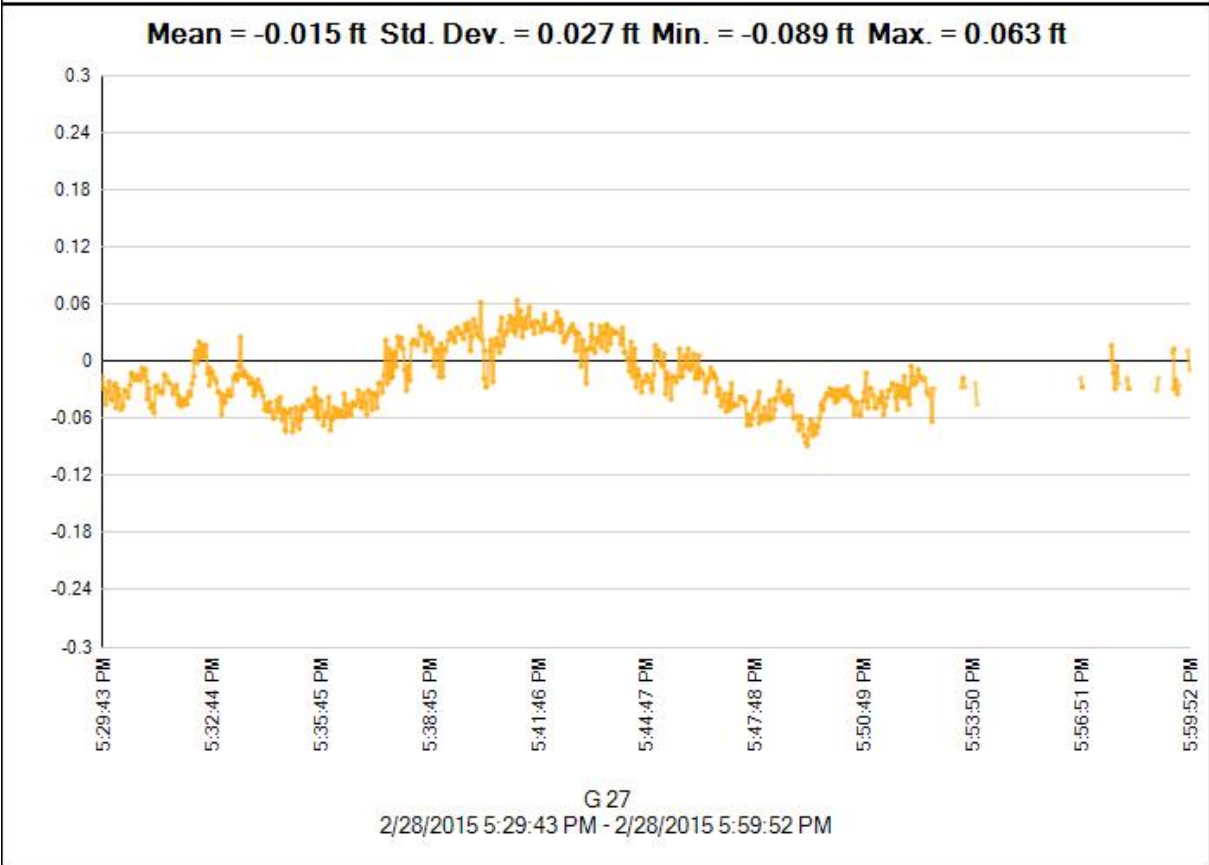
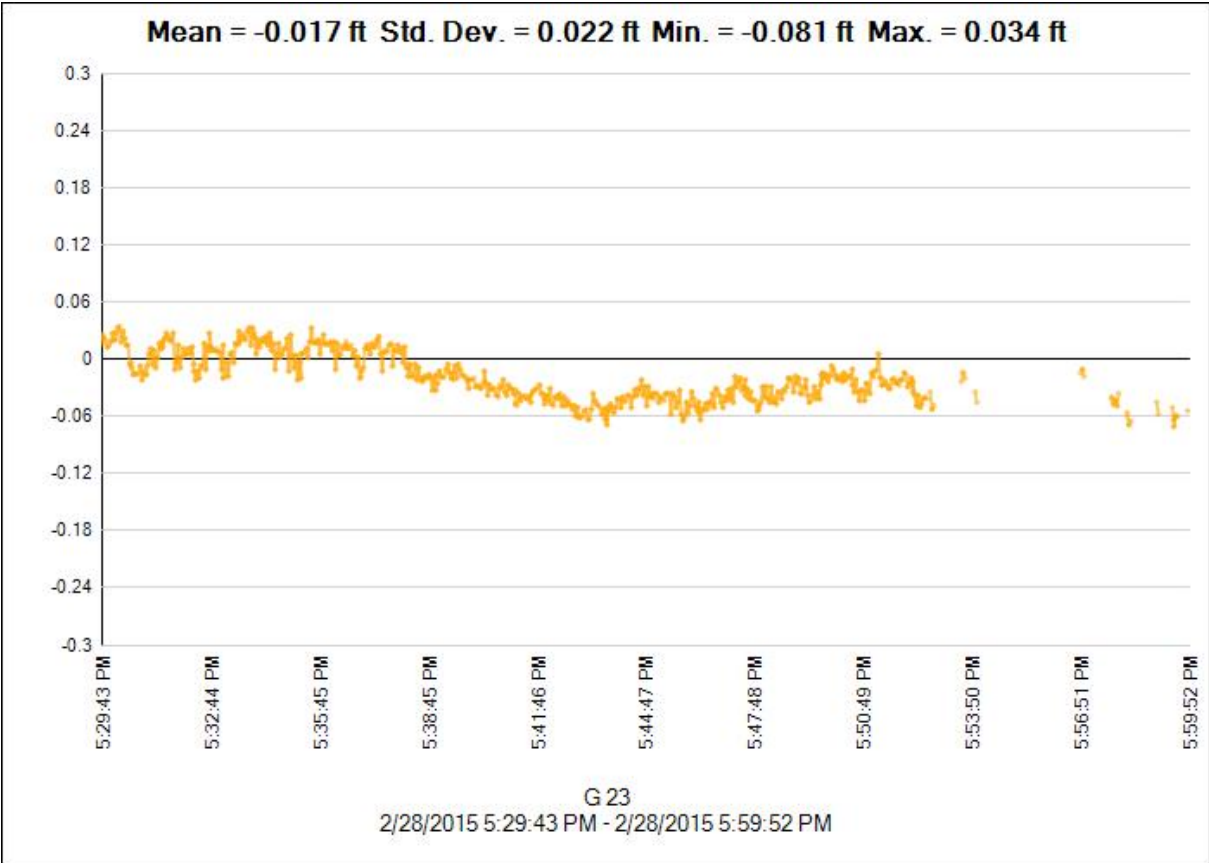
SV	2/28/2015 5:29:42 PM	Duration: 00:30:09	Major interval: 00:01:00	2/28/2015 5:59:51 PM
G 5	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 11	L1 L2			
G 16	L1			
G 19	L1 L2			
G 20	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

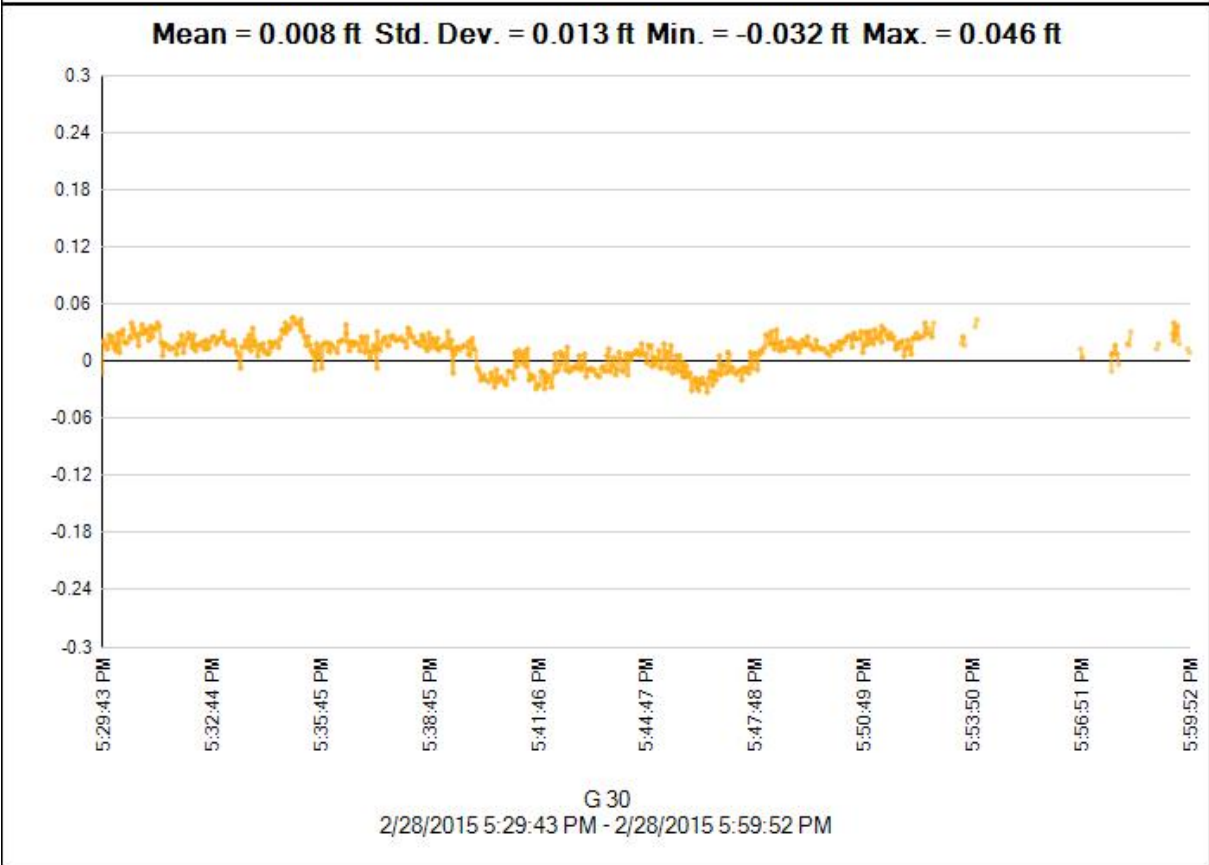
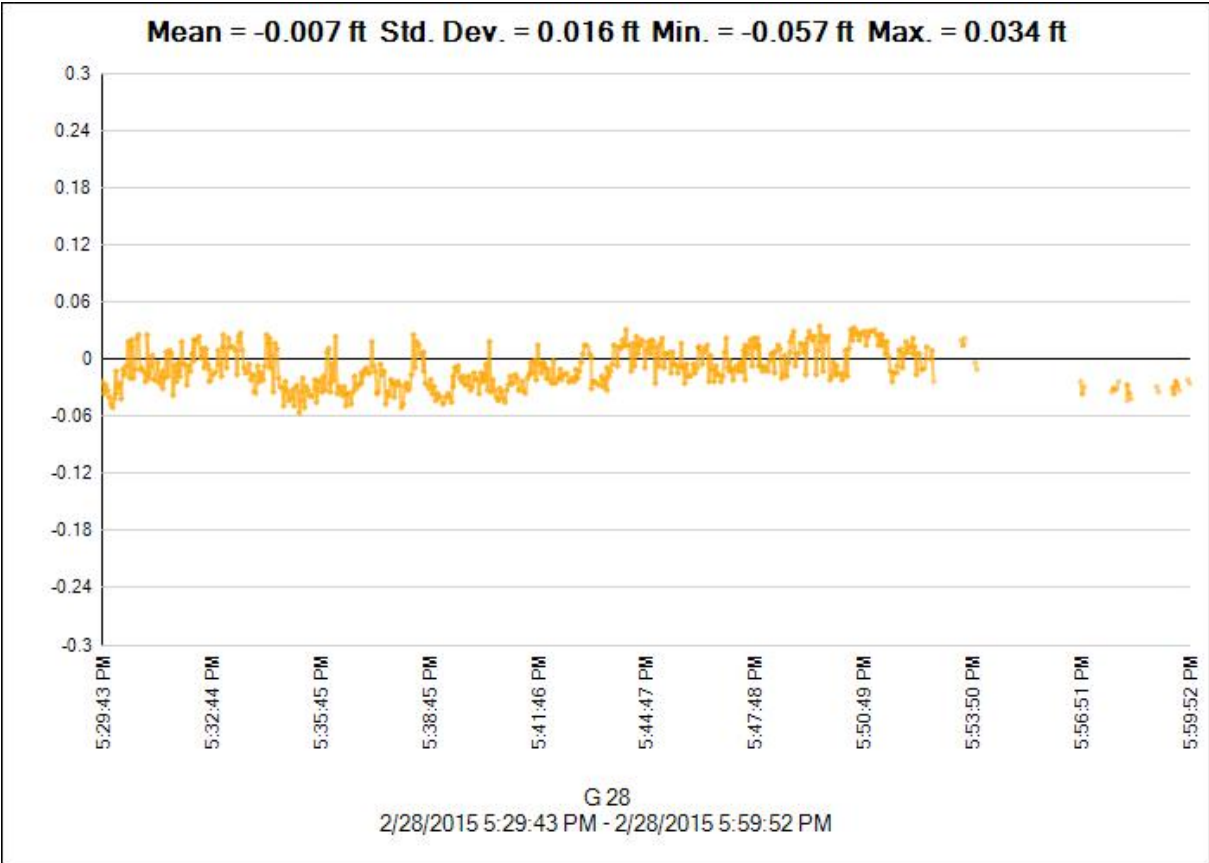
Residuals













Processing style

Elevation mask: 14.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

KTUS - CON132 (6:27:29 PM-6:57:37 PM) (S28)

Baseline observation: KTUS --- CON132 (B28)
Processed: 3/11/2015 8:54:14 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.028 ft
Vertical precision: 0.061 ft
RMS: 0.007 ft
Maximum PDOP: 4.140
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 2/28/2015 6:27:44 PM (Local: UTC-7hr)
Processing stop time: 2/28/2015 6:57:37 PM (Local: UTC-7hr)
Processing duration: 00:29:53
Processing interval: 1 second

Vector Components (Mark to Mark)

From: KTUS					
Grid		Local		Global	
Easting	1000781.483 ft	Latitude	N32°07'29.11397"	Latitude	N32°07'29.11396"
Northing	410474.784 ft	Longitude	W110°56'42.22351"	Longitude	W110°56'42.22351"
Elevation	2586.404 ft	Height	2489.851 ft	Height	2489.851 ft

To: CON132					
Grid		Local		Global	
Easting	963942.222 ft	Latitude	N32°15'49.43647"	Latitude	N32°15'49.43646"
Northing	460725.652 ft	Longitude	W111°03'45.94223"	Longitude	W111°03'45.94223"
Elevation	2476.289 ft	Height	2380.017 ft	Height	2380.017 ft

Vector					
Δ Easting	-36839.261 ft	NS Fwd Azimuth	324°16'20"	Δ X	-24306.059 ft
Δ Northing	50250.868 ft	Ellipsoid Dist.	62308.485 ft	Δ Y	38291.461 ft
Δ Elevation	-110.116 ft	Δ Height	-109.834 ft	Δ Z	42734.548 ft

Standard Errors

Vector errors:					
σ Δ Easting	0.010 ft	σ NS fwd Azimuth	0°00'00"	σ Δ X	0.012 ft
σ Δ Northing	0.011 ft	σ Ellipsoid Dist.	0.011 ft	σ Δ Y	0.029 ft
σ Δ Elevation	0.031 ft	σ Δ Height	0.031 ft	σ Δ Z	0.015 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000127345		
Y	0.0000182180	0.0000789796	
Z	-0.0000071674	-0.0000282789	0.0000195459

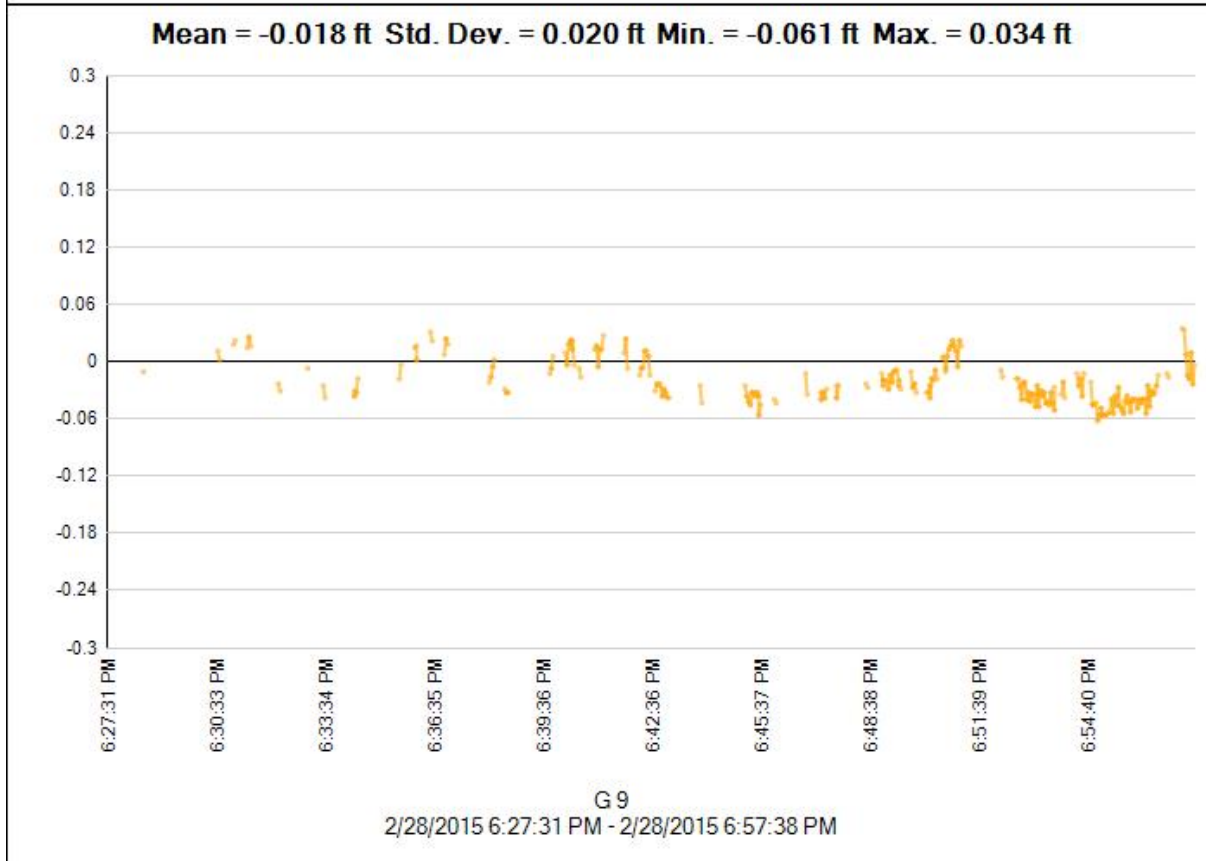
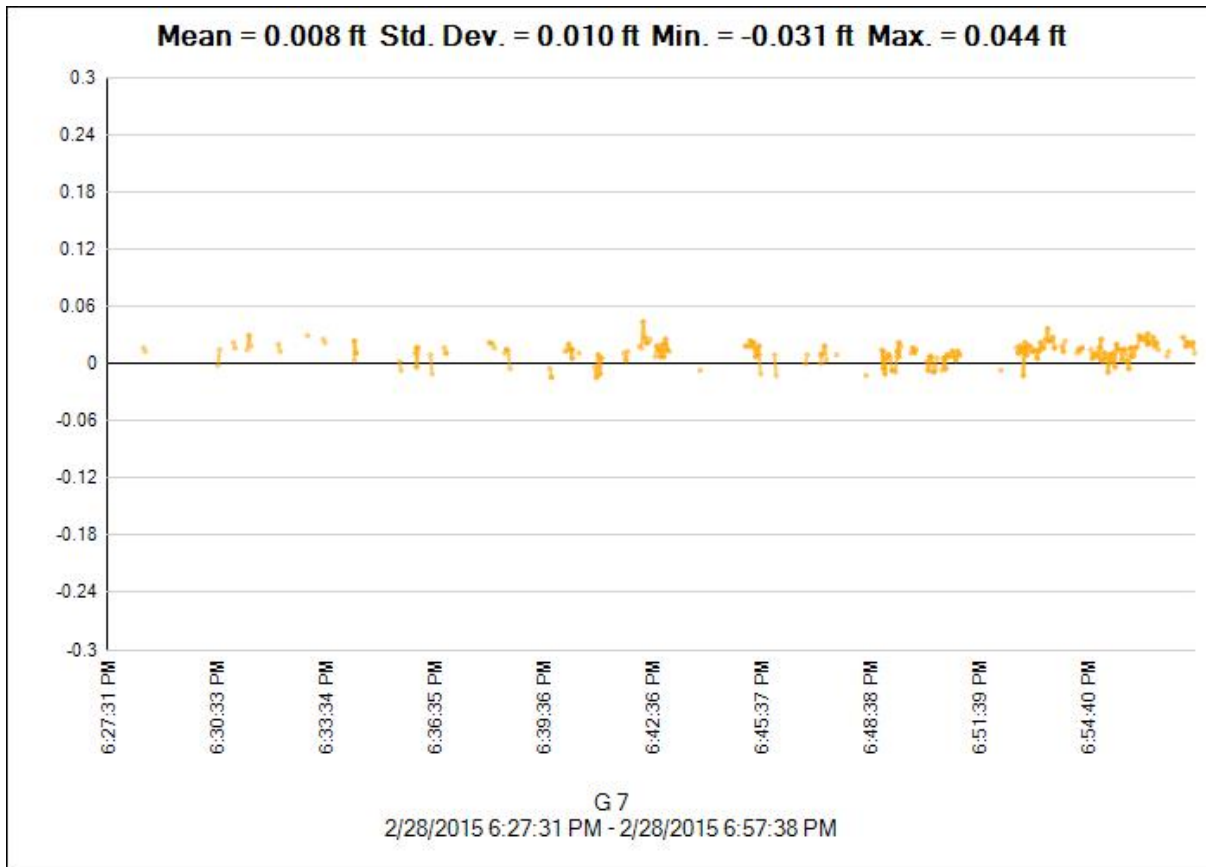
Occupations

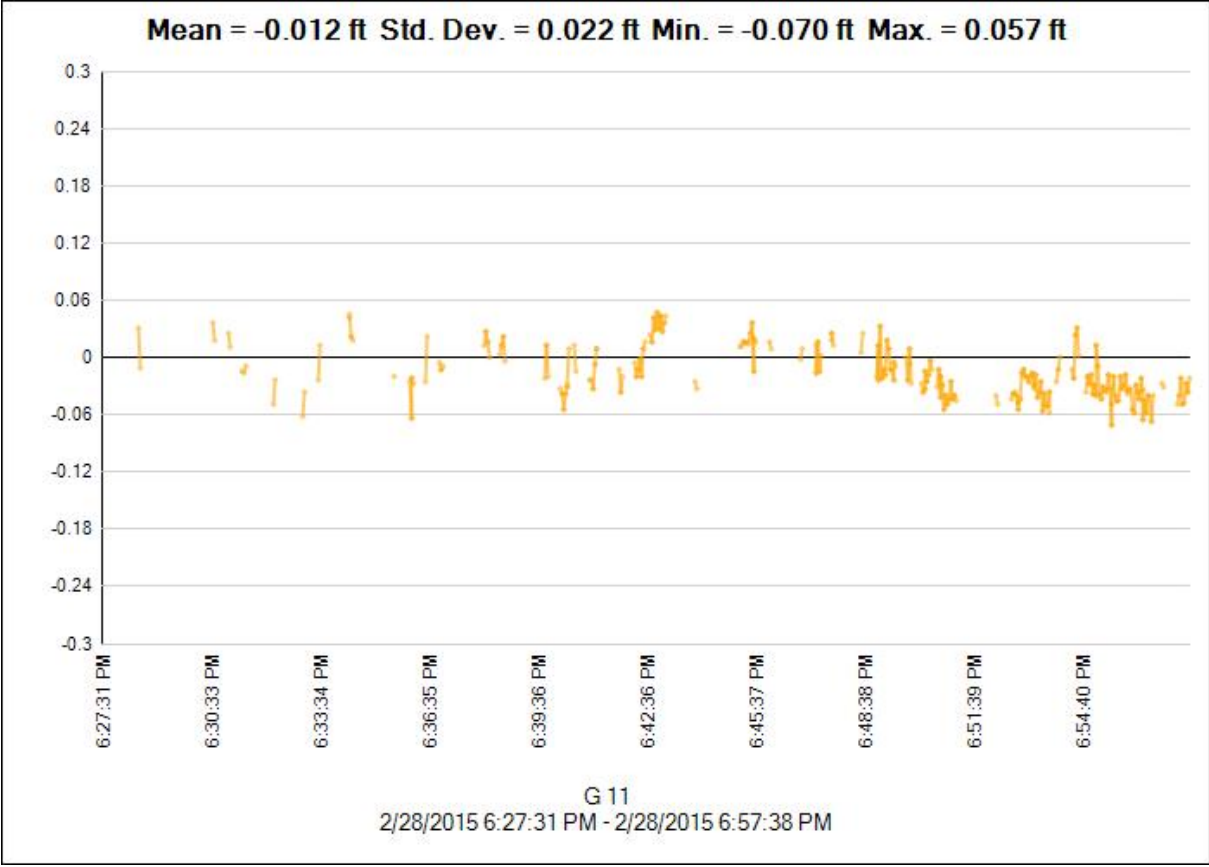
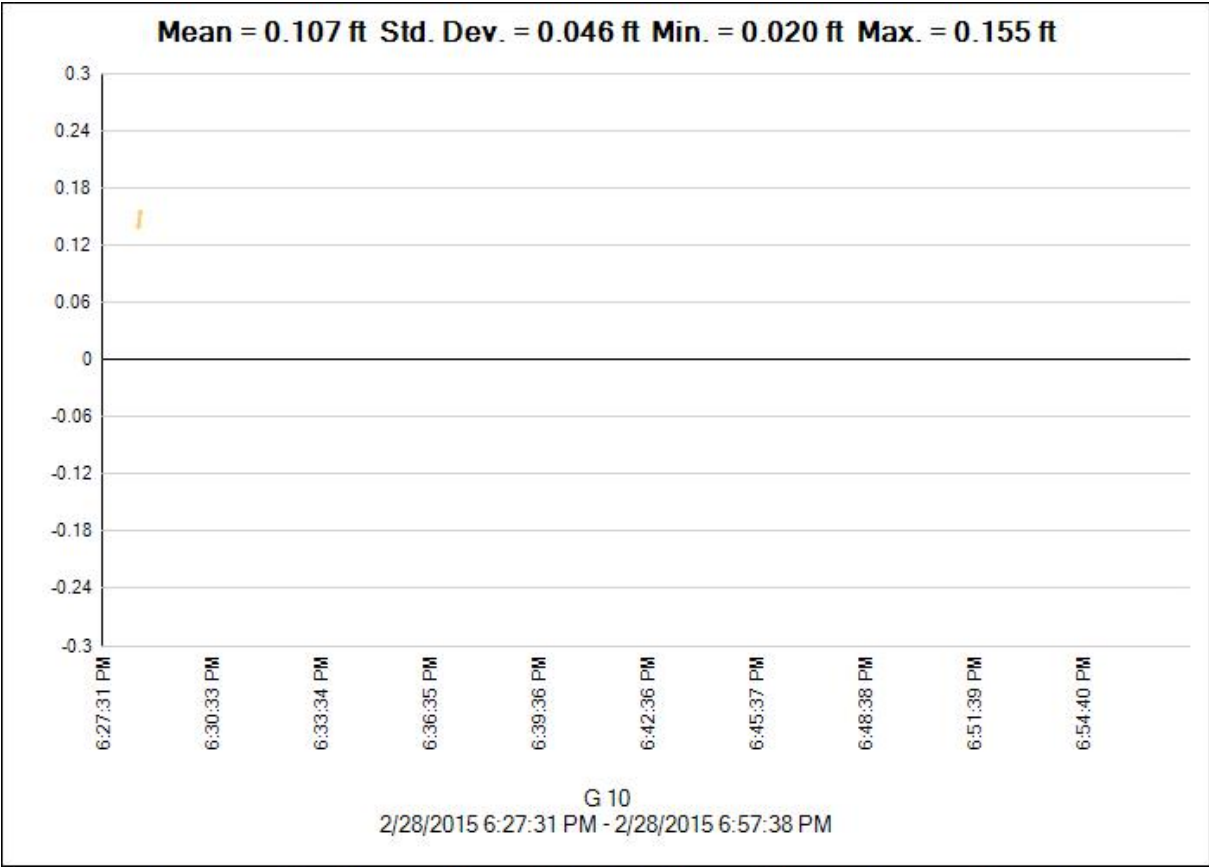
	From	To
Point ID:	KTUS	CON132
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520591.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840601.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

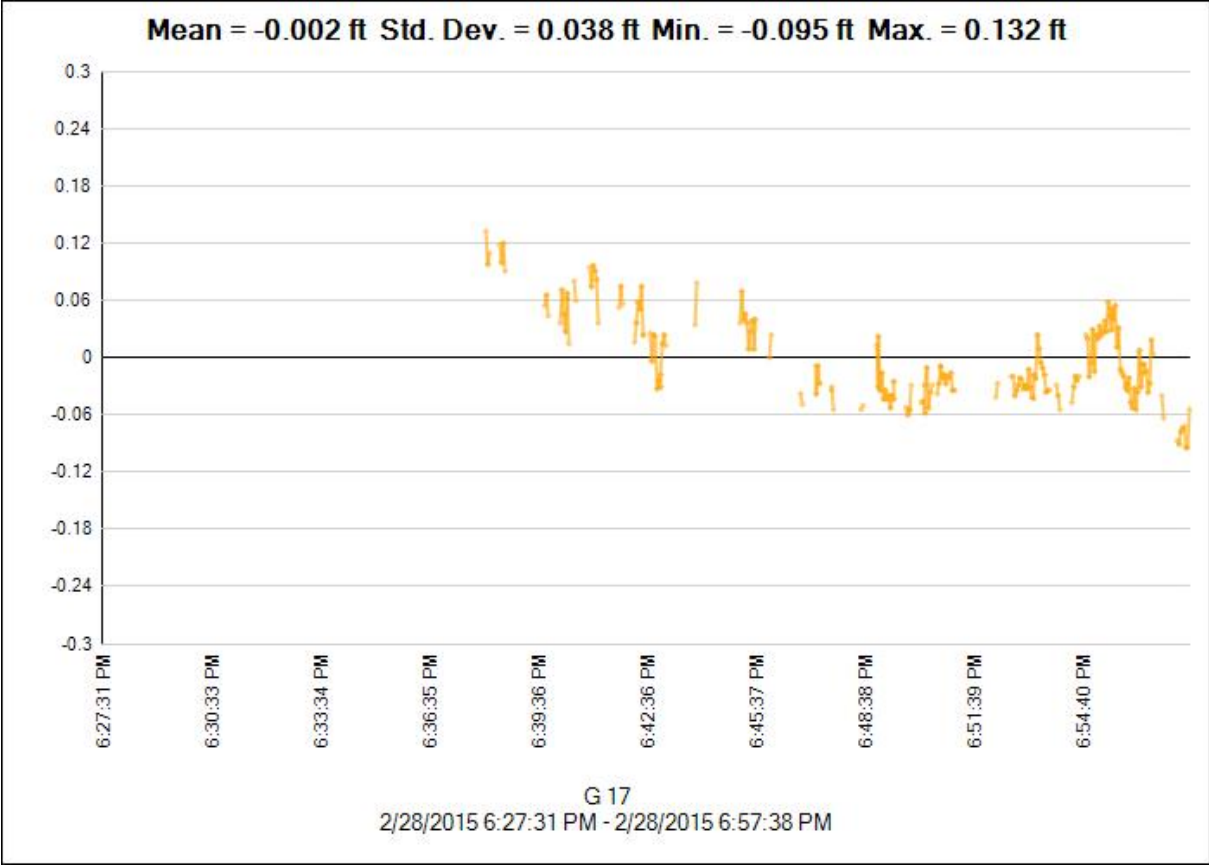
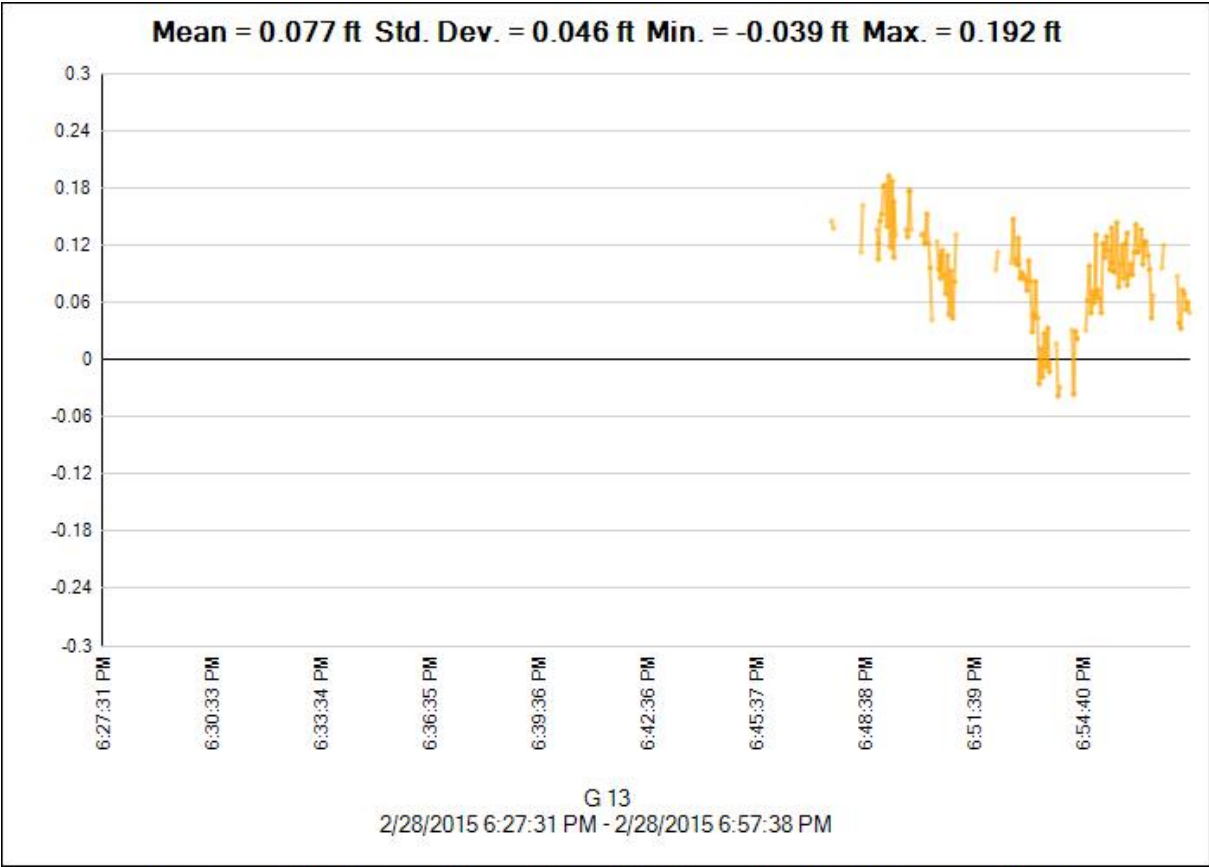
Tracking Summary

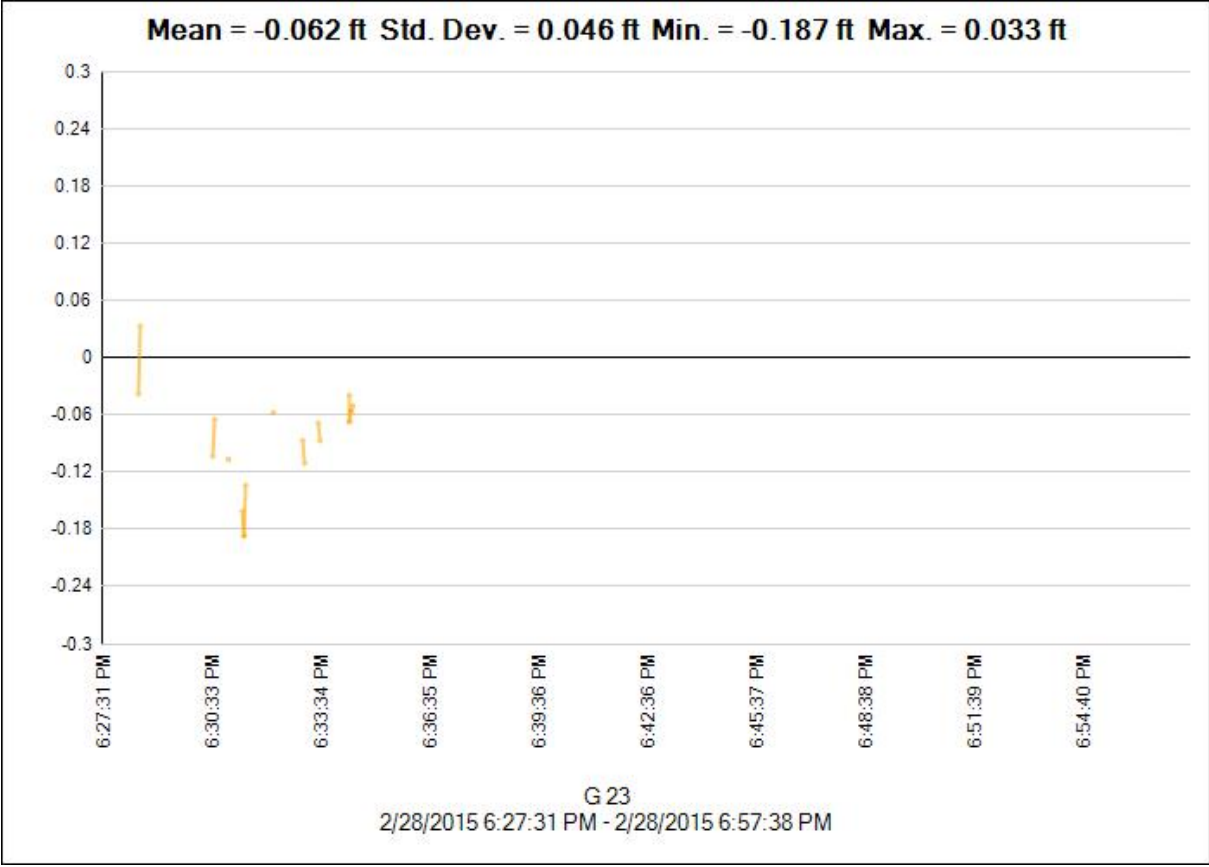
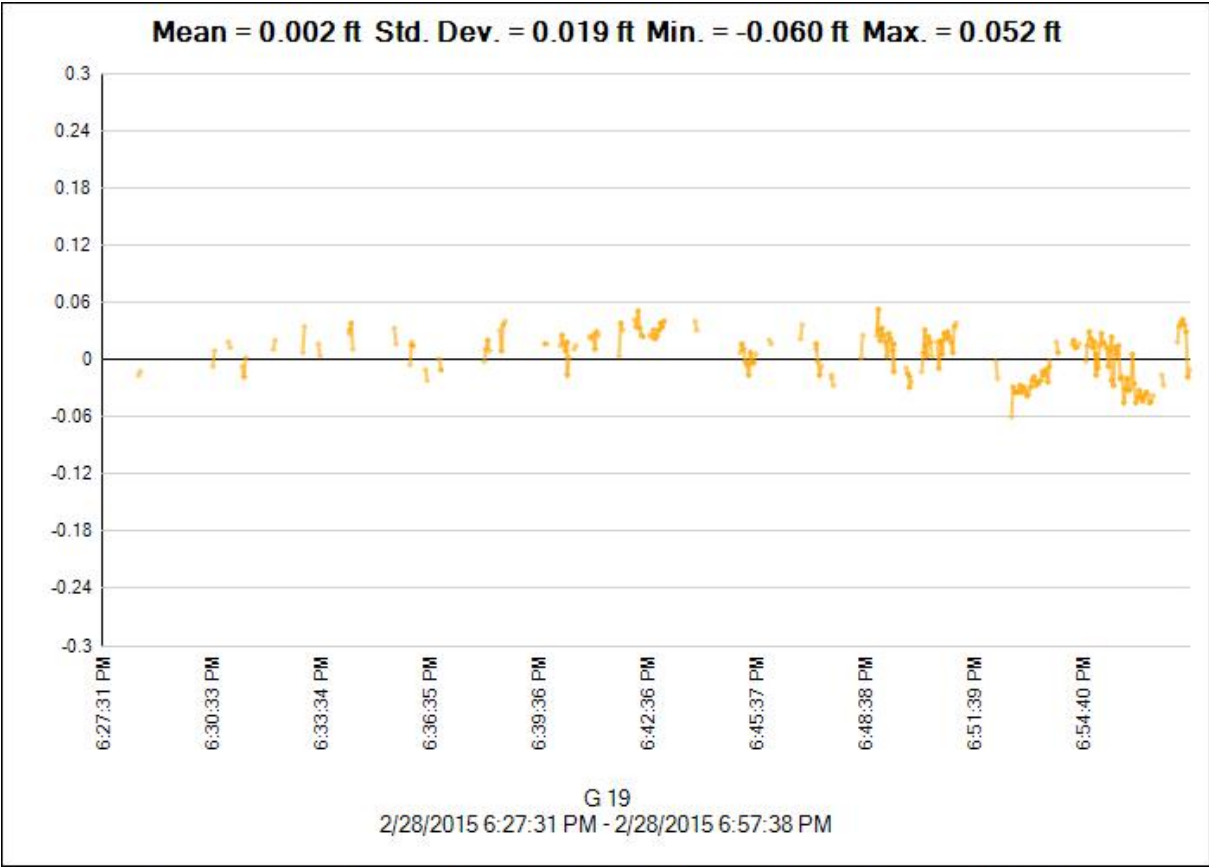
SV	2/28/2015 6:27:29 PM	Duration: 00:30:08	Major interval: 00:01:00	2/28/2015 6:57:37 PM
G 1	L1 L2			
G 4	L1 L2			
G 5	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 11	L1 L2			
G 13	L1 L2			
G 17	L1 L2			
G 19	L1 L2			
G 20	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

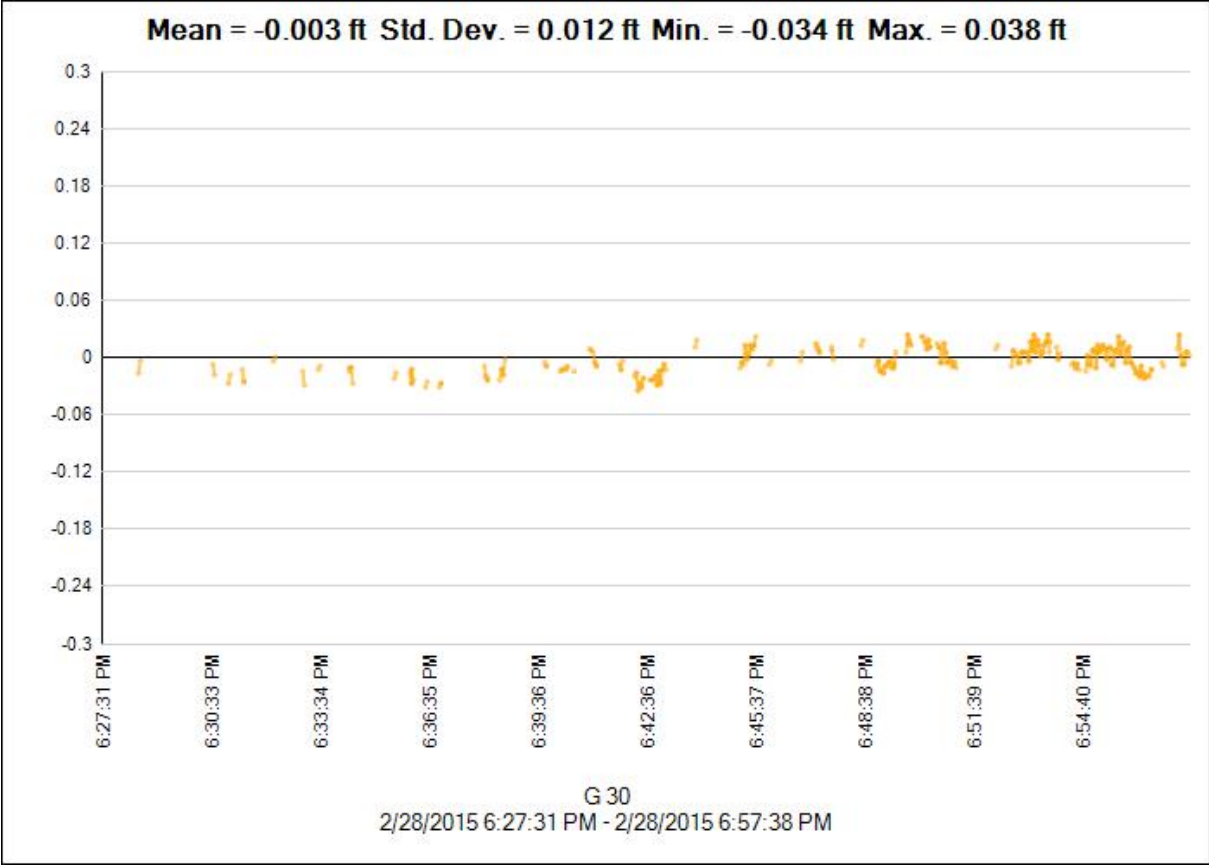
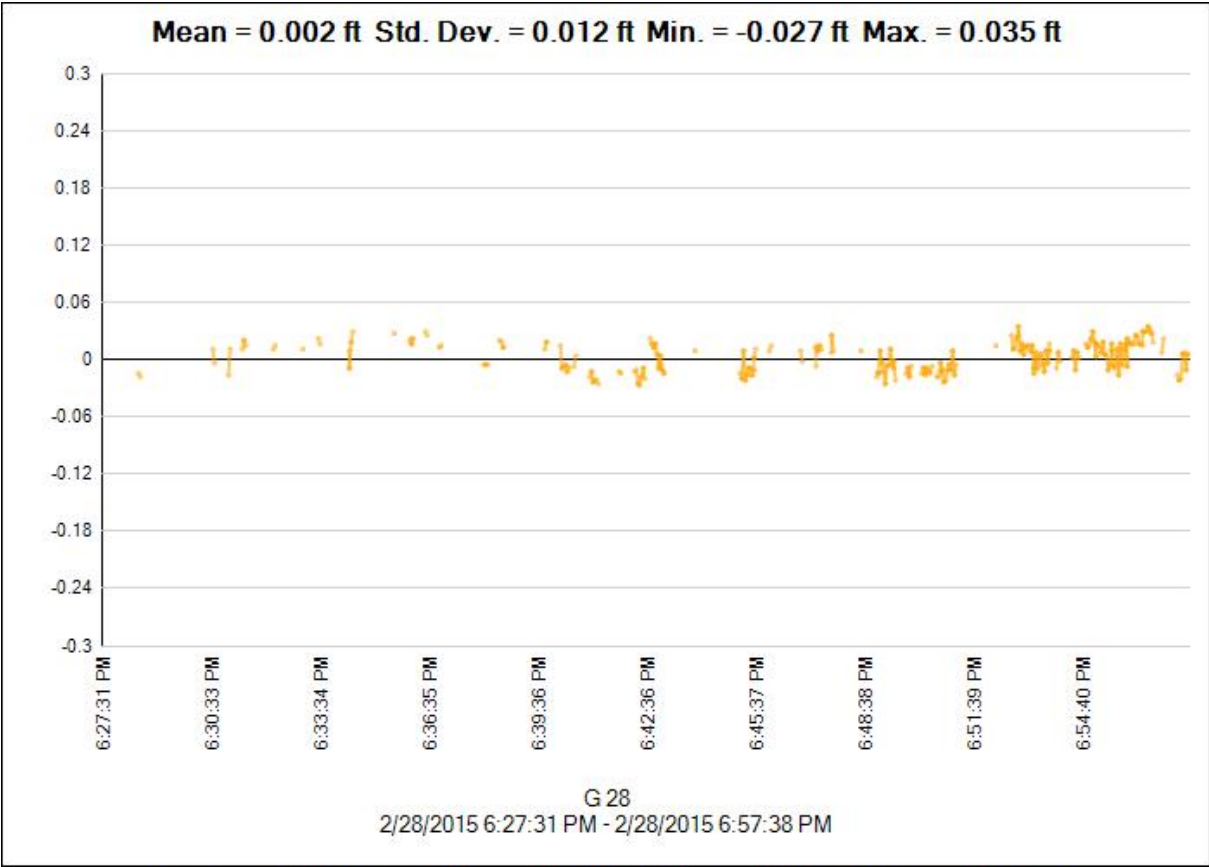
Residuals













Processing style

Elevation mask: 14.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

KTUS - CON111 (9:48:34 AM-10:19:42 AM) (S29)

Baseline observation: KTUS --- CON111 (B29)
Processed: 3/11/2015 8:54:20 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.029 ft
Vertical precision: 0.045 ft
RMS: 0.003 ft
Maximum PDOP: 2.484
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 3/1/2015 9:48:34 AM (Local: UTC-7hr)
Processing stop time: 3/1/2015 10:19:28 AM (Local: UTC-7hr)
Processing duration: 00:30:54
Processing interval: 1 second

Vector Components (Mark to Mark)

From:		KTUS			
Grid		Local		Global	
Easting	1000781.483 ft	Latitude	N32°07'29.11397"	Latitude	N32°07'29.11396"
Northing	410474.784 ft	Longitude	W110°56'42.22351"	Longitude	W110°56'42.22351"
Elevation	2586.404 ft	Height	2489.851 ft	Height	2489.851 ft

To:		CON111			
Grid		Local		Global	
Easting	1073763.572 ft	Latitude	N32°07'06.98890"	Latitude	N32°07'06.98890"
Northing	408976.640 ft	Longitude	W110°42'33.85852"	Longitude	W110°42'33.85852"
Elevation	2978.483 ft	Height	2884.822 ft	Height	2884.822 ft

Vector					
Δ Easting	72982.089 ft	NS Fwd Azimuth	91°41'34"	Δ X	67660.478 ft
Δ Northing	-1498.144 ft	Ellipsoid Dist.	72995.216 ft	Δ Y	-27368.663 ft
Δ Elevation	392.079 ft	Δ Height	394.971 ft	Δ Z	-1683.874 ft

Standard Errors

Vector errors:					
σ Δ Easting	0.009 ft	σ NS fwd Azimuth	0°00'00"	σ Δ X	0.015 ft
σ Δ Northing	0.011 ft	σ Ellipsoid Dist.	0.009 ft	σ Δ Y	0.019 ft
σ Δ Elevation	0.023 ft	σ Δ Height	0.023 ft	σ Δ Z	0.012 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000198983		
Y	0.0000206926	0.0000339500	
Z	-0.0000071837	-0.0000109519	0.0000130112

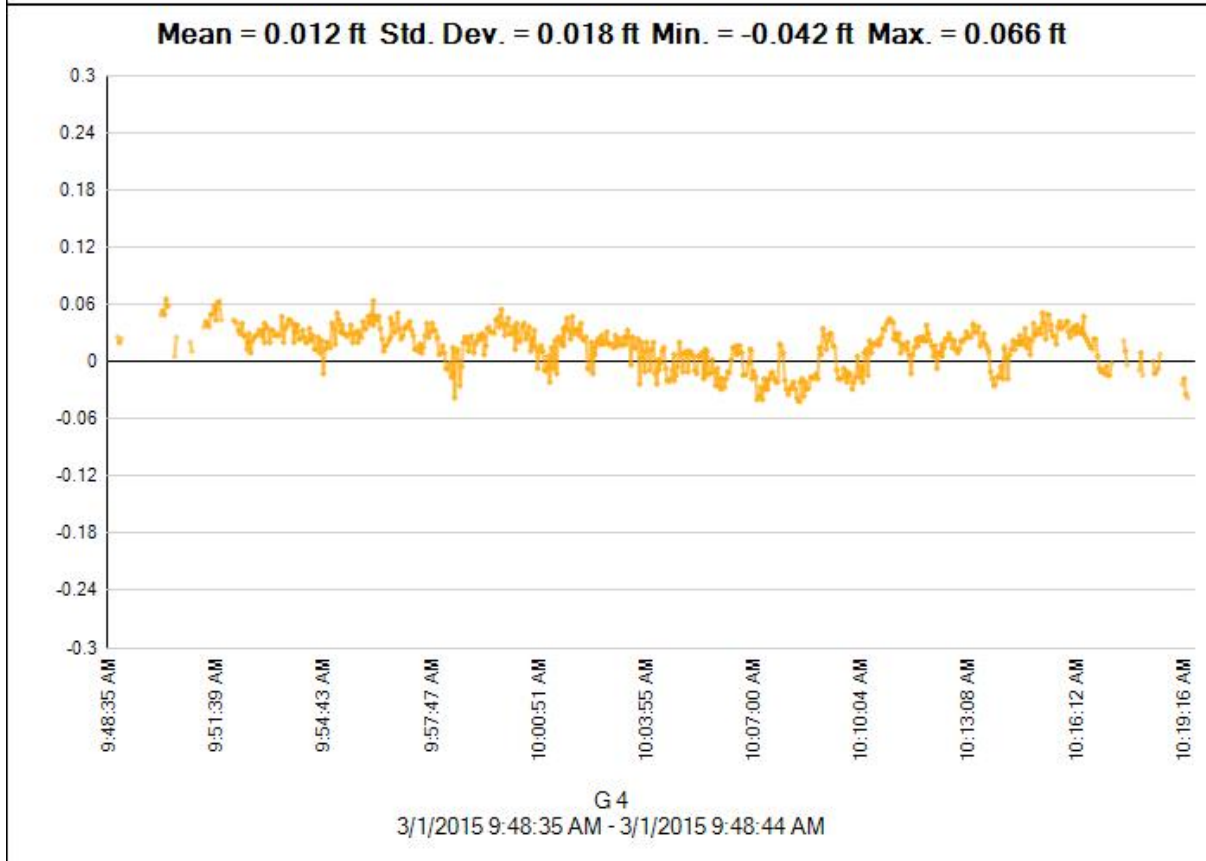
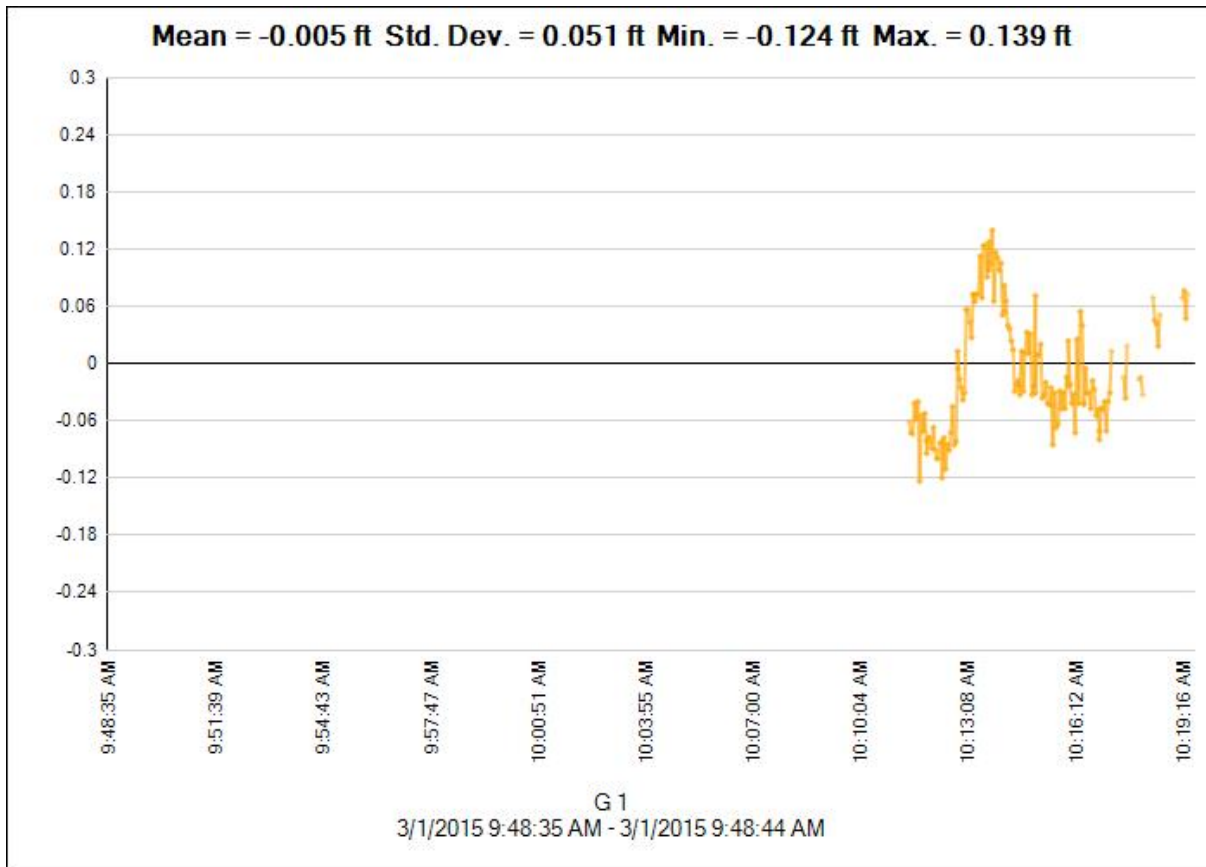
Occupations

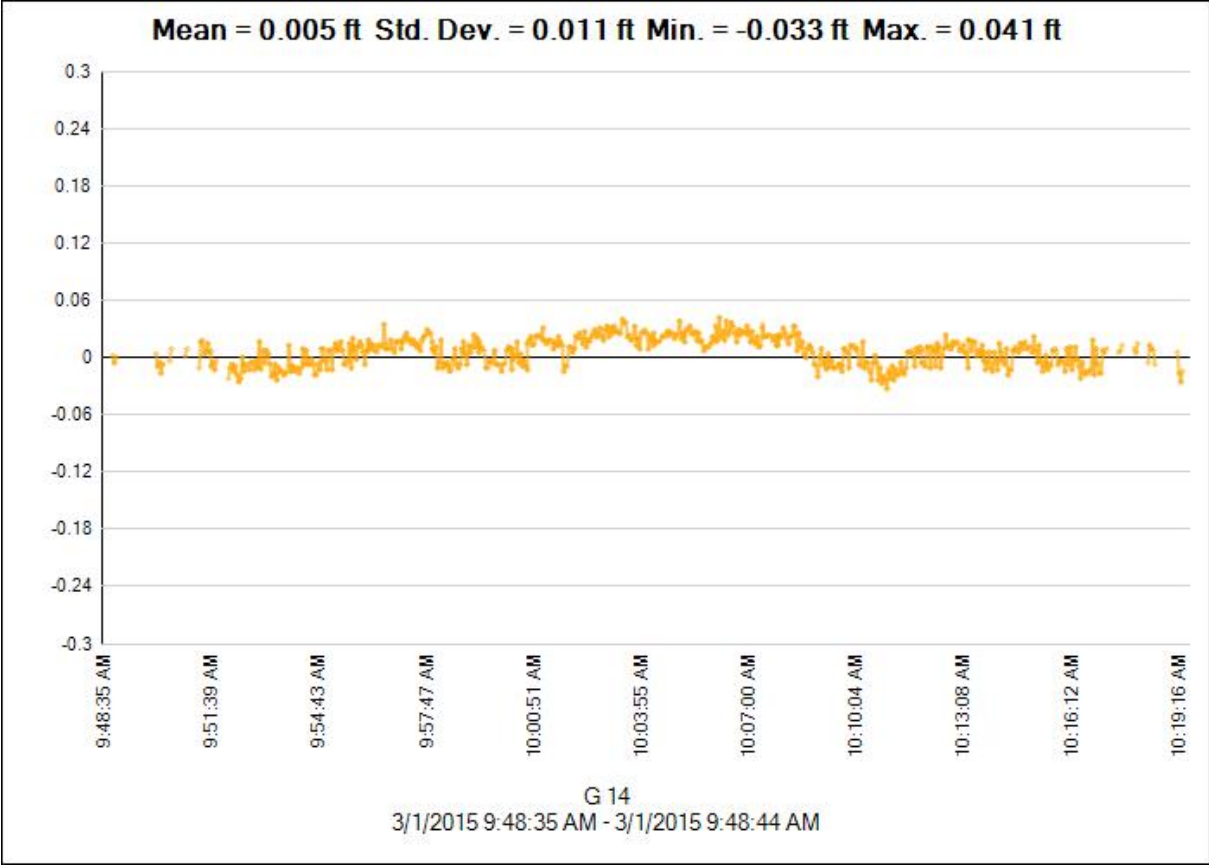
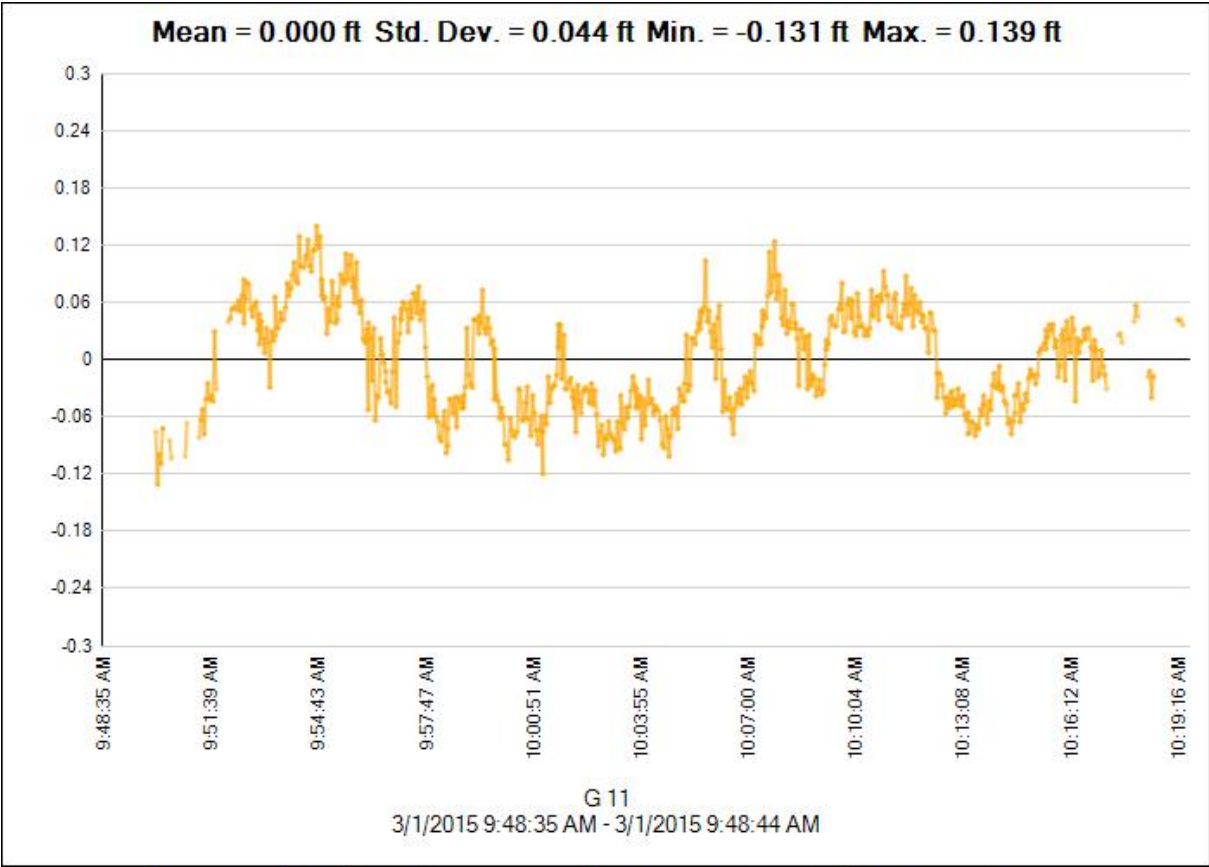
	From	To
Point ID:	KTUS	CON111
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520600.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840602.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

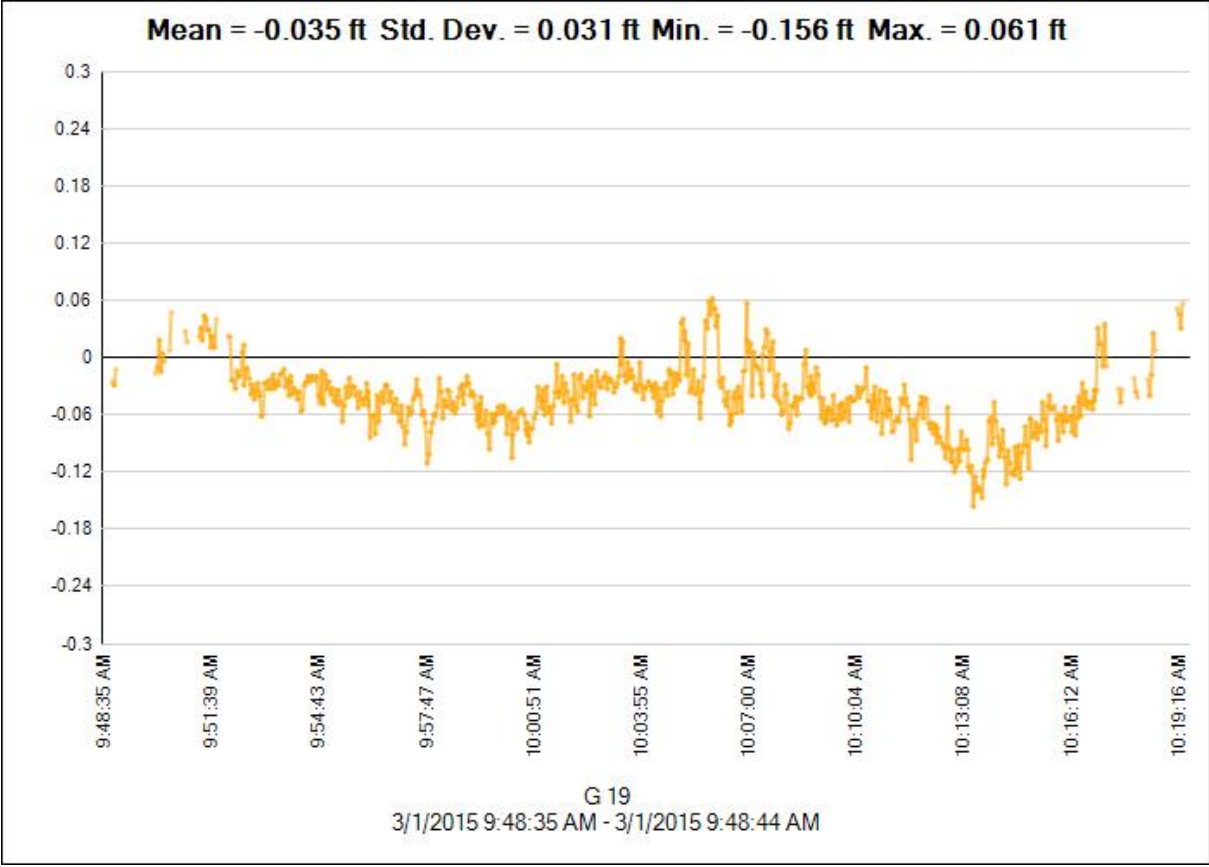
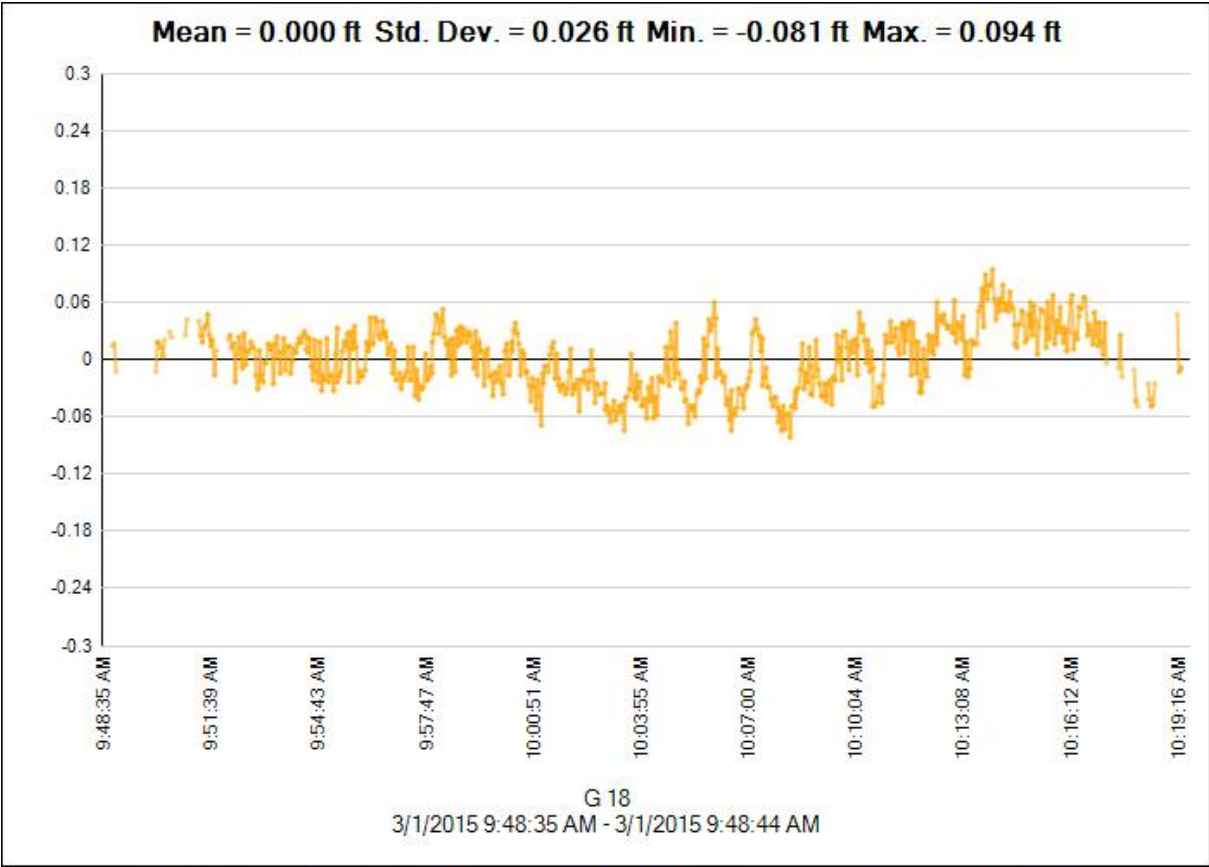
Tracking Summary

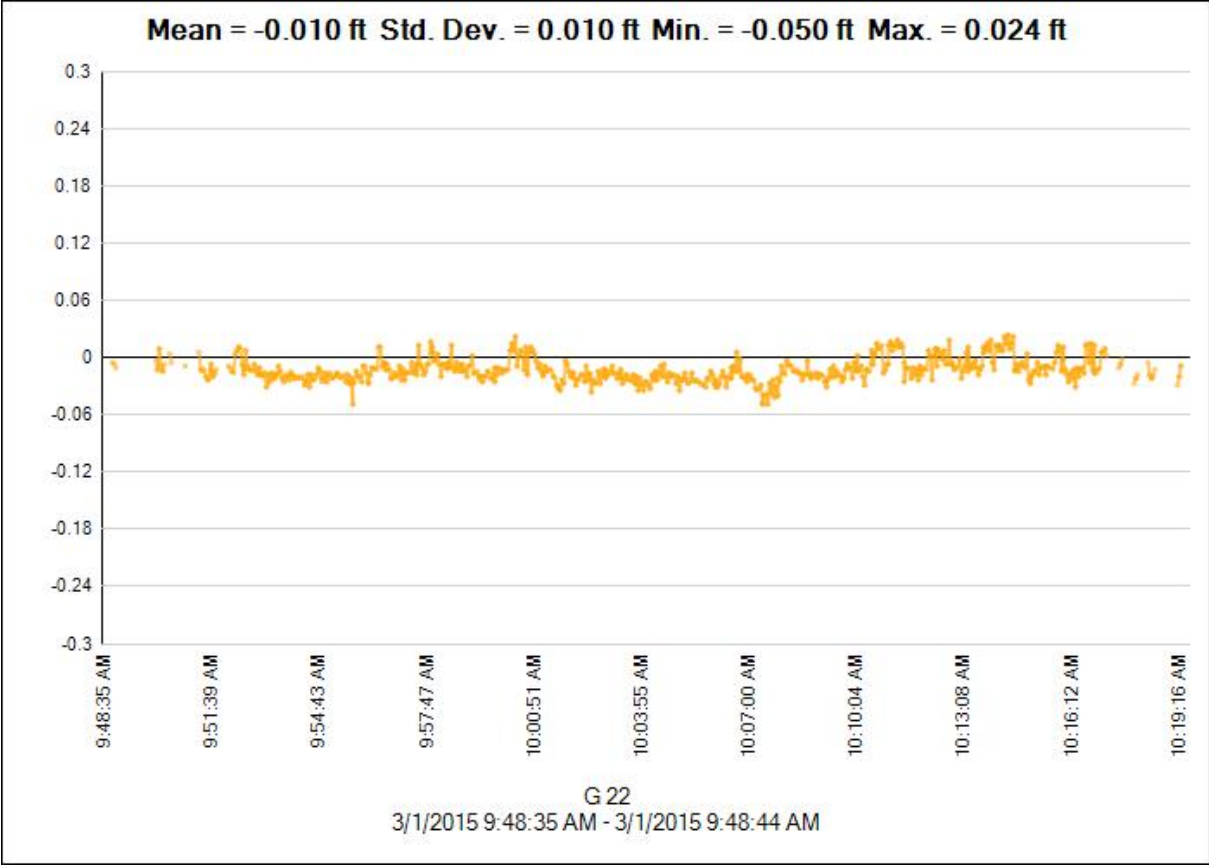
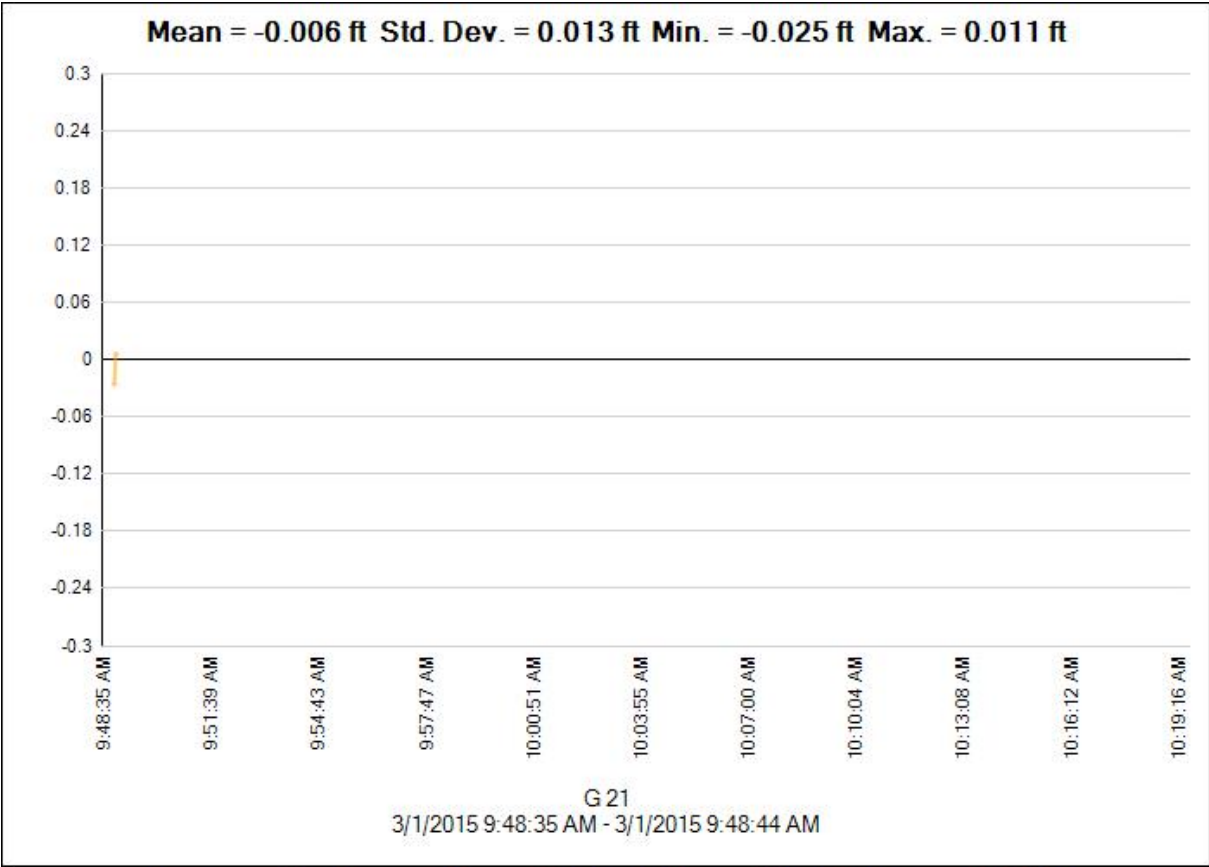
SV	3/1/2015 9:48:34 AM	Duration: 00:31:08 Major interval: 00:01:00	3/1/2015 10:19:42 AM
G 1	L1 L2		
G 4	L1 L2		
G 11	L1 L2		
G 14	L1 L2		
G 18	L1 L2		
G 19	L1 L2		
G 21	L1 L2		
G 22	L1 L2		
G 24	L1 L2		
G 25	L1		
G 27	L1 L2		
G 31	L1 L2		
G 32	L1 L2		

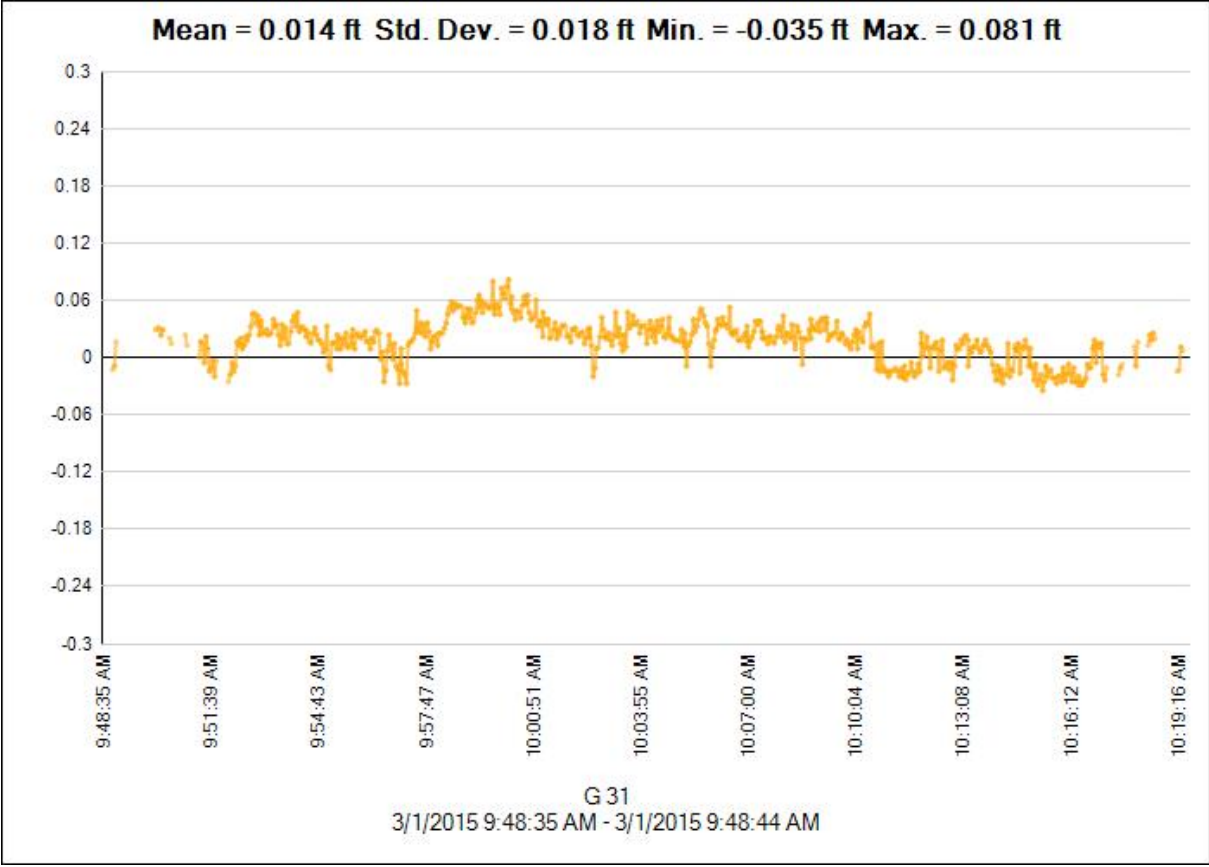
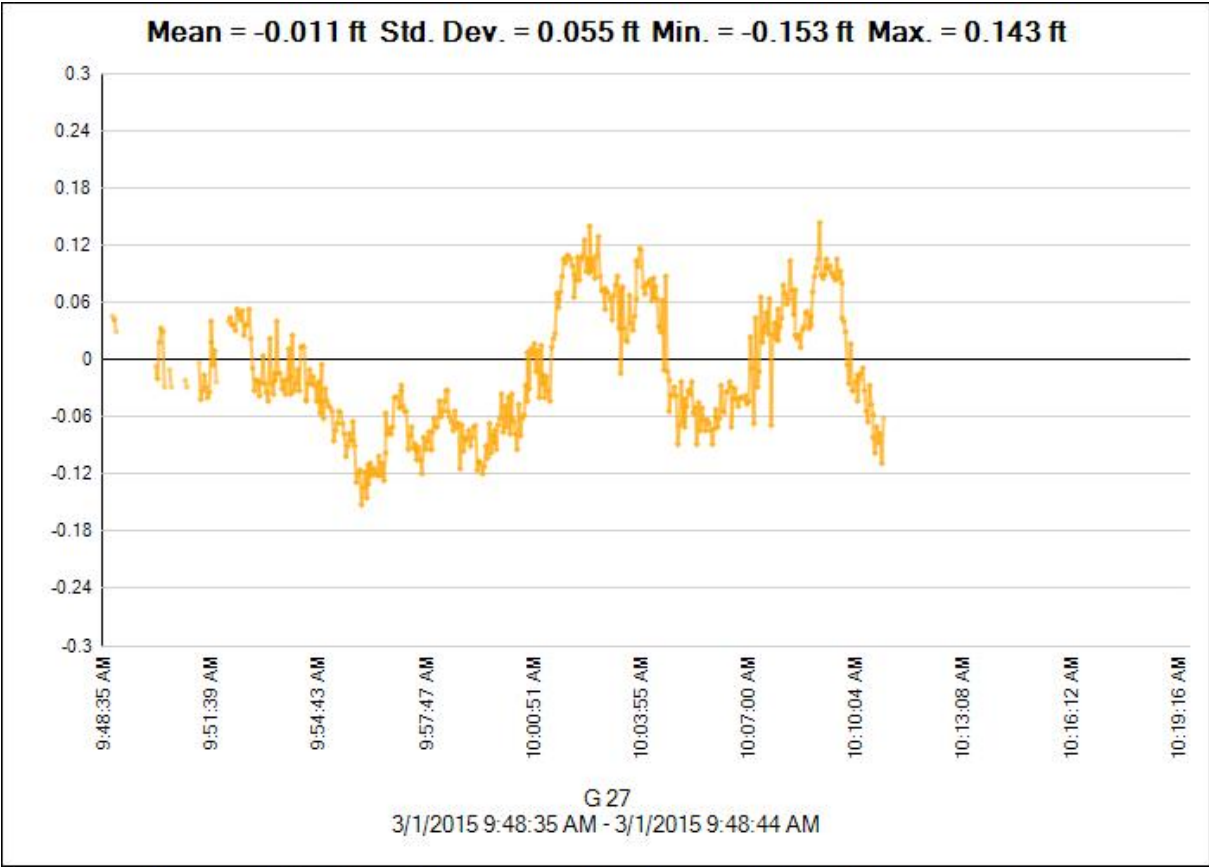
Residuals

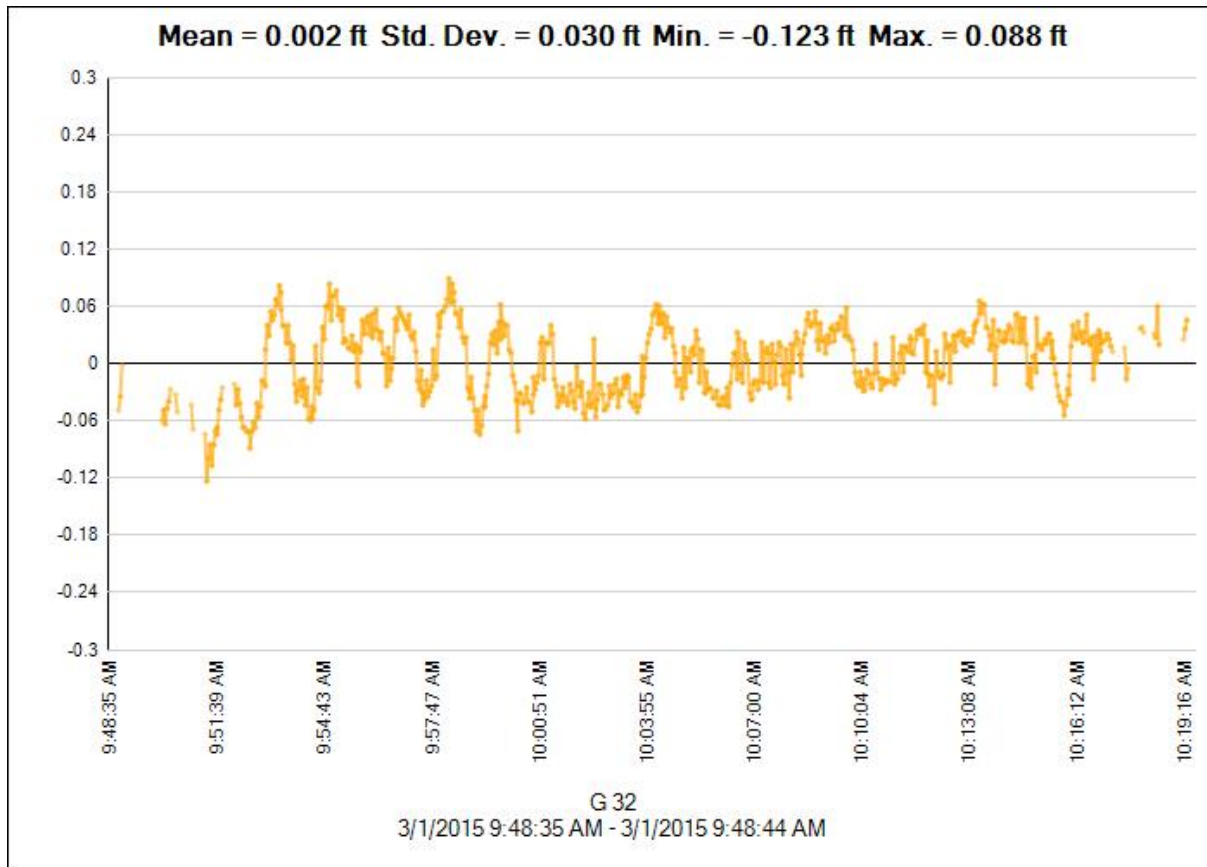














Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

KTUS - CON110 (10:51:17 AM-11:22:45 AM) (S30)

Baseline observation: KTUS --- CON110 (B30)
Processed: 3/11/2015 8:54:20 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.029 ft
Vertical precision: 0.060 ft
RMS: 0.004 ft
Maximum PDOP: 4.412
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 3/1/2015 10:51:17 AM (Local: UTC-7hr)
Processing stop time: 3/1/2015 11:22:45 AM (Local: UTC-7hr)
Processing duration: 00:31:28
Processing interval: 1 second

Vector Components (Mark to Mark)

From: KTUS					
Grid		Local		Global	
Easting	1000781.483 ft	Latitude	N32°07'29.11397"	Latitude	N32°07'29.11396"
Northing	410474.784 ft	Longitude	W110°56'42.22351"	Longitude	W110°56'42.22351"
Elevation	2586.404 ft	Height	2489.851 ft	Height	2489.851 ft

To: CON110					
Grid		Local		Global	
Easting	1048412.567 ft	Latitude	N32°17'43.34915"	Latitude	N32°17'43.34914"
Northing	473018.447 ft	Longitude	W110°47'20.77999"	Longitude	W110°47'20.77999"
Elevation	2675.518 ft	Height	2582.251 ft	Height	2582.251 ft

Vector					
ΔEasting	47631.083 ft	NS Fwd Azimuth	37°48'35"	ΔX	56839.233 ft
ΔNorthing	62543.663 ft	Ellipsoid Dist.	78614.068 ft	ΔY	13662.882 ft
ΔElevation	89.114 ft	ΔHeight	92.400 ft	ΔZ	52576.624 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.007 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.012 ft
$\sigma \Delta$ Northing	0.012 ft	σ Ellipsoid Dist.	0.011 ft	$\sigma \Delta$ Y	0.022 ft
$\sigma \Delta$ Elevation	0.031 ft	$\sigma \Delta$ Height	0.031 ft	$\sigma \Delta$ Z	0.023 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000125034		
Y	0.0000178237	0.0000449422	
Z	-0.0000140719	-0.0000377836	0.0000481490

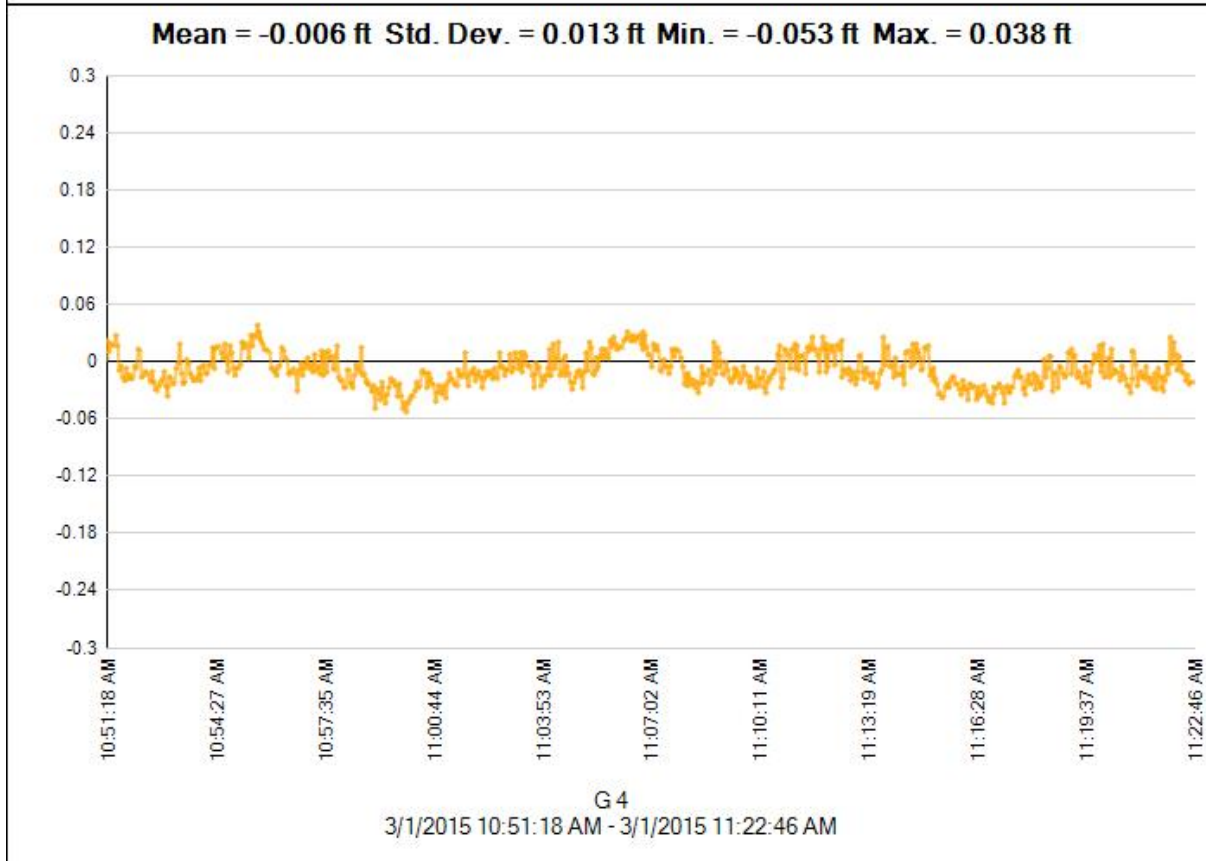
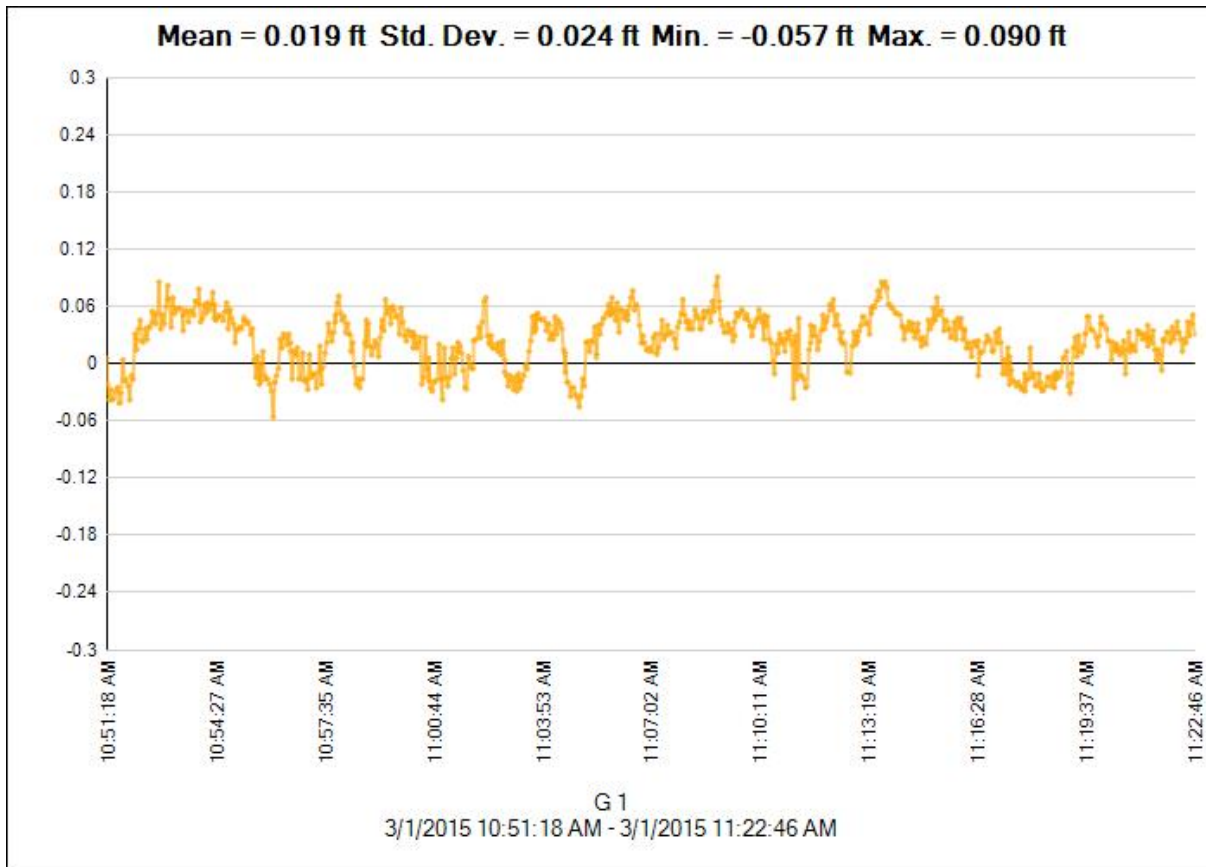
Occupations

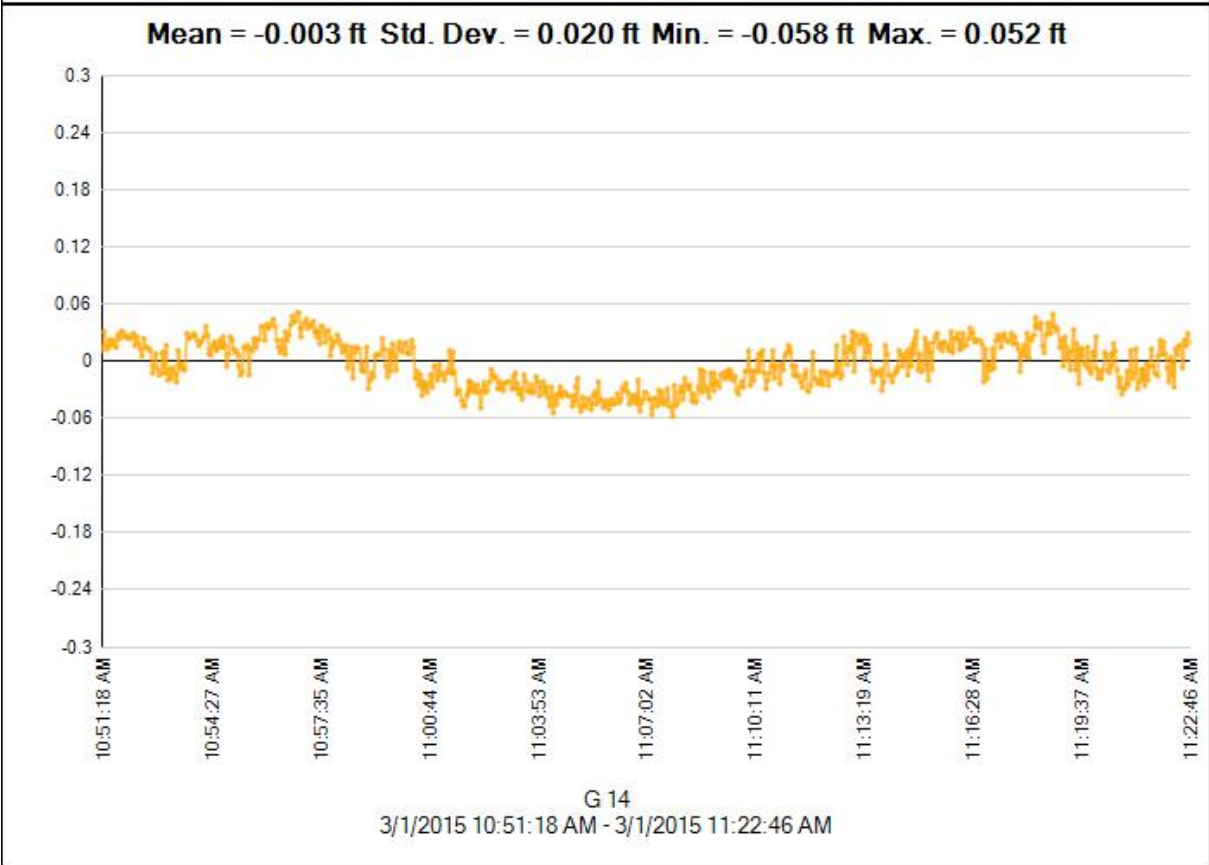
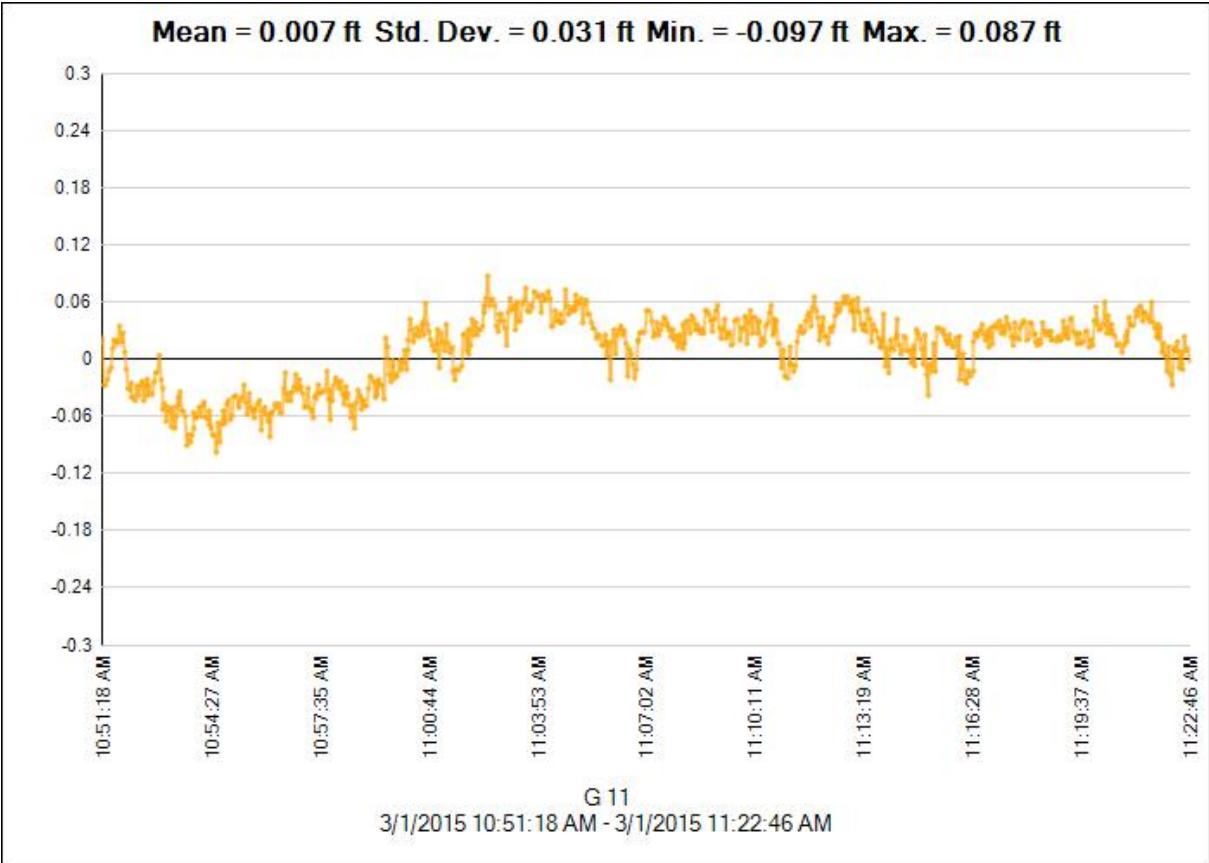
	From	To
Point ID:	KTUS	CON110
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520600.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840603.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

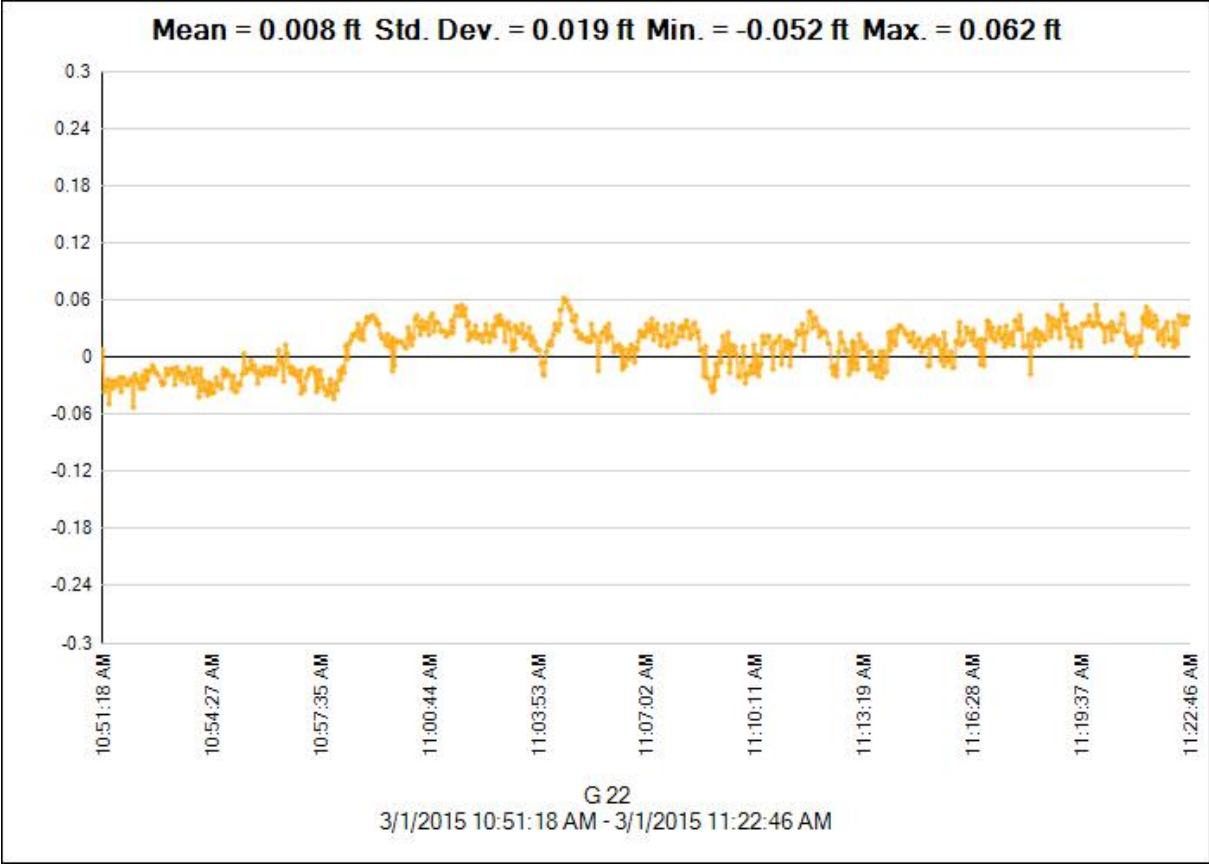
Tracking Summary

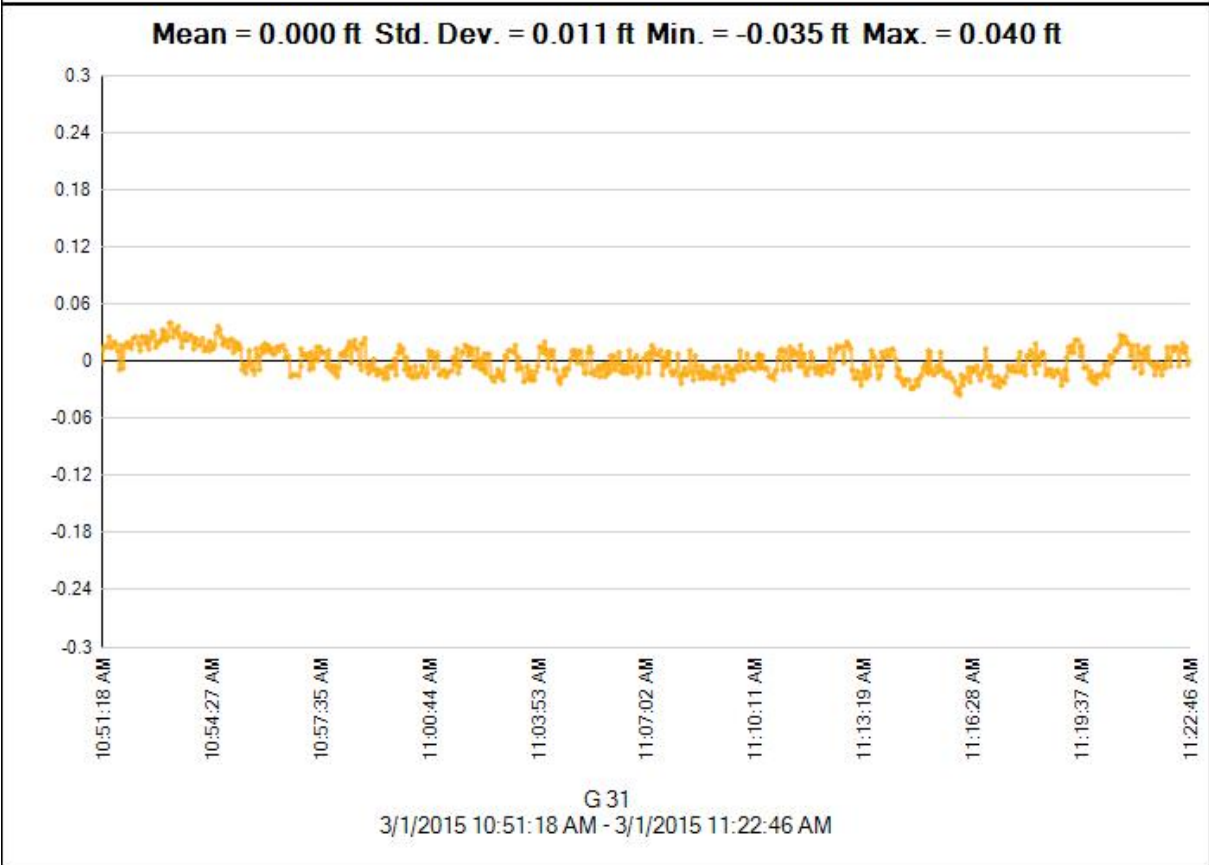
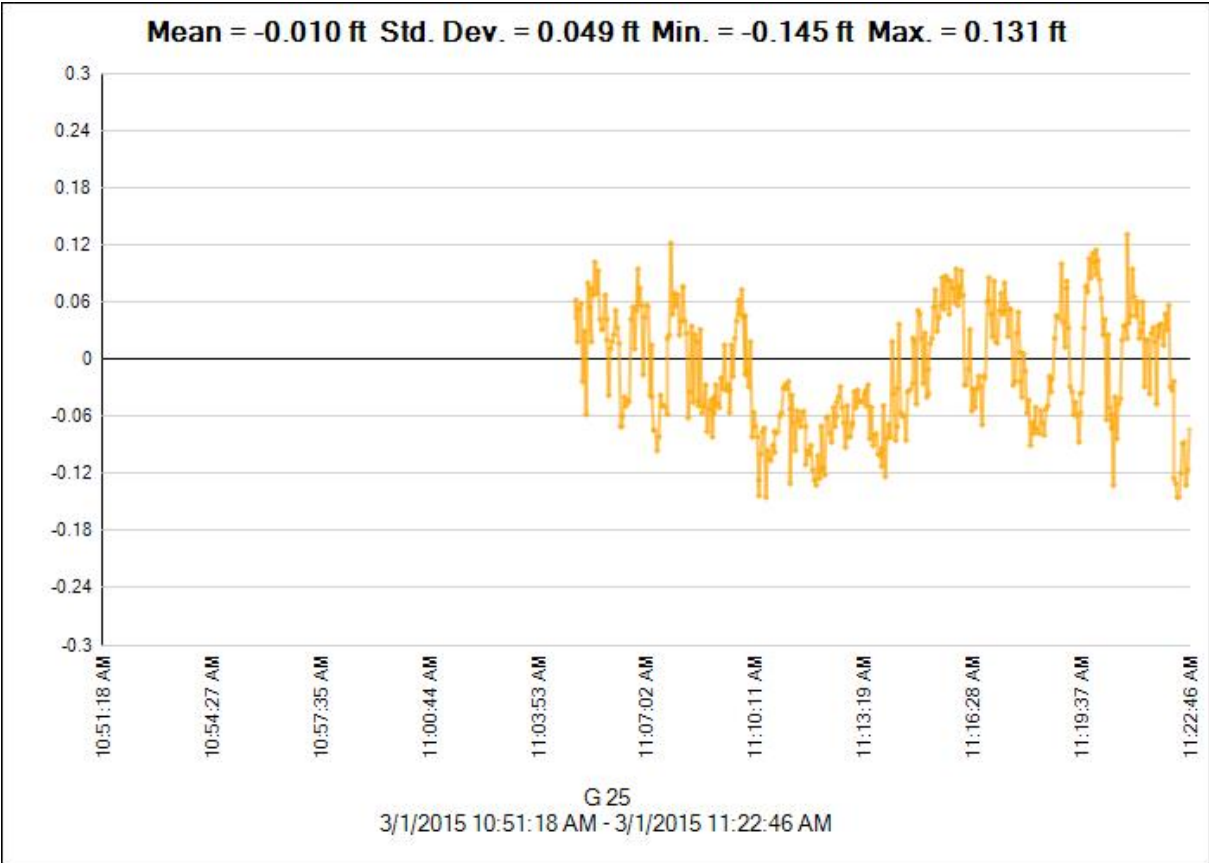
SV	3/1/2015 10:51:17 AM	Duration: 00:31:28	Major interval: 00:01:00	3/1/2015 11:22:45 AM
G 1	L1 L2			
G 3	L1 L2			
G 4	L1 L2			
G 11	L1 L2			
G 14	L1 L2			
G 18	L1 L2			
G 19	L1 L2			
G 22	L1 L2			
G 25	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

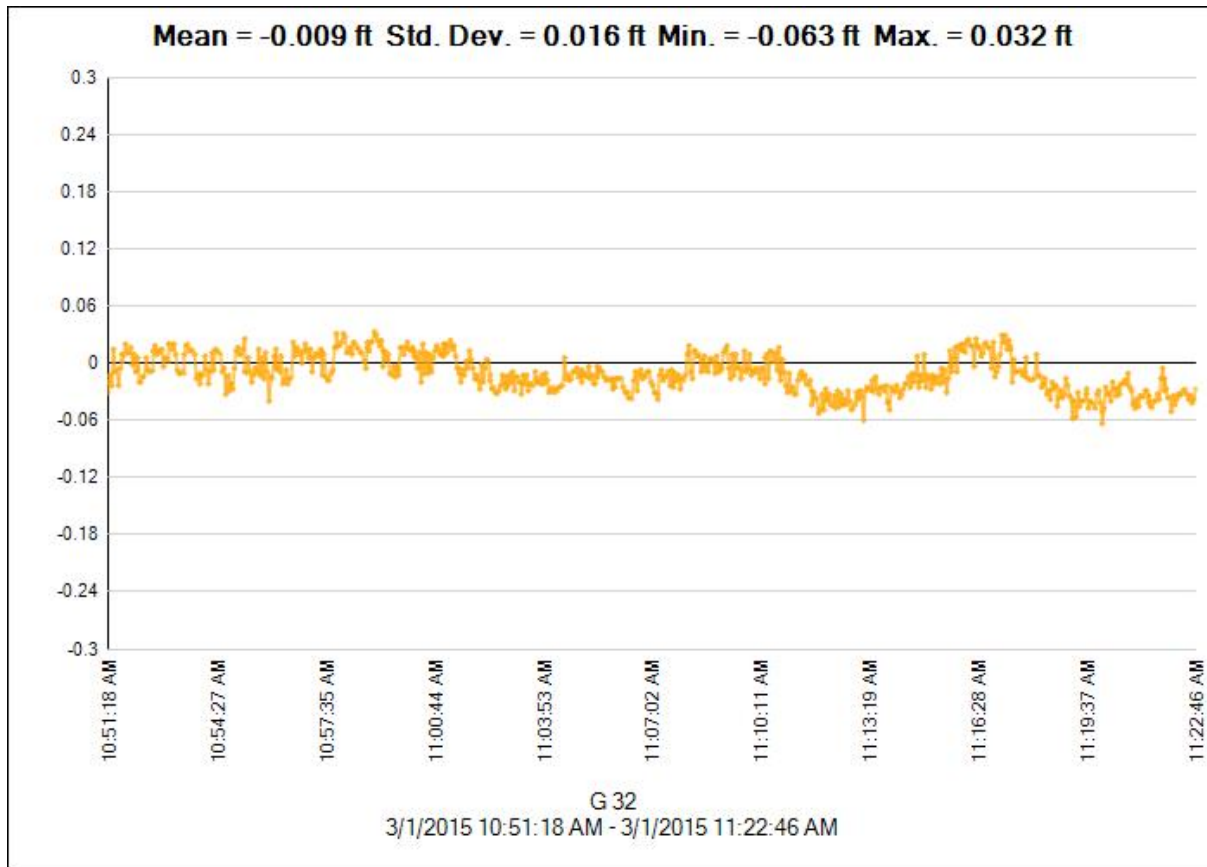
Residuals













Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

KTUS - CON112 (11:48:59 AM-12:20:37 PM) (S31)

Baseline observation: KTUS --- CON112 (B31)
 Processed: 3/11/2015 8:54:21 AM
 Solution type: Fixed
 Frequency used: Dual Frequency (L1, L2)
 Horizontal precision: 0.032 ft
 Vertical precision: 0.042 ft
 RMS: 0.005 ft
 Maximum PDOP: 2.966
 Ephemeris used: Broadcast
 Antenna model: NGS Absolute
 Processing start time: 3/1/2015 11:48:59 AM (Local: UTC-7hr)
 Processing stop time: 3/1/2015 12:20:37 PM (Local: UTC-7hr)
 Processing duration: 00:31:38
 Processing interval: 1 second

Vector Components (Mark to Mark)

From: KTUS					
Grid		Local		Global	
Easting	1000781.483 ft	Latitude	N32°07'29.11397"	Latitude	N32°07'29.11396"
Northing	410474.784 ft	Longitude	W110°56'42.22351"	Longitude	W110°56'42.22351"
Elevation	2586.404 ft	Height	2489.851 ft	Height	2489.851 ft

To: CON112					
Grid		Local		Global	
Easting	1022023.884 ft	Latitude	N32°12'26.94761"	Latitude	N32°12'26.94761"
Northing	440773.783 ft	Longitude	W110°52'31.82170"	Longitude	W110°52'31.82170"
Elevation	2597.221 ft	Height	2501.790 ft	Height	2501.790 ft

Vector					
ΔEasting	21242.400 ft	NS Fwd Azimuth	35°33'05"	ΔX	25825.438 ft
ΔNorthing	30299.000 ft	Ellipsoid Dist.	37003.223 ft	ΔY	7277.682 ft
ΔElevation	10.817 ft	ΔHeight	11.939 ft	ΔZ	25488.189 ft

Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.009 ft	σ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.011 ft
$\sigma \Delta$ Northing	0.013 ft	σ Ellipsoid Dist.	0.011 ft	$\sigma \Delta$ Y	0.020 ft
$\sigma \Delta$ Elevation	0.021 ft	$\sigma \Delta$ Height	0.021 ft	$\sigma \Delta$ Z	0.014 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000121014		
Y	0.0000122493	0.0000355149	
Z	-0.0000065807	-0.0000077315	0.0000179896

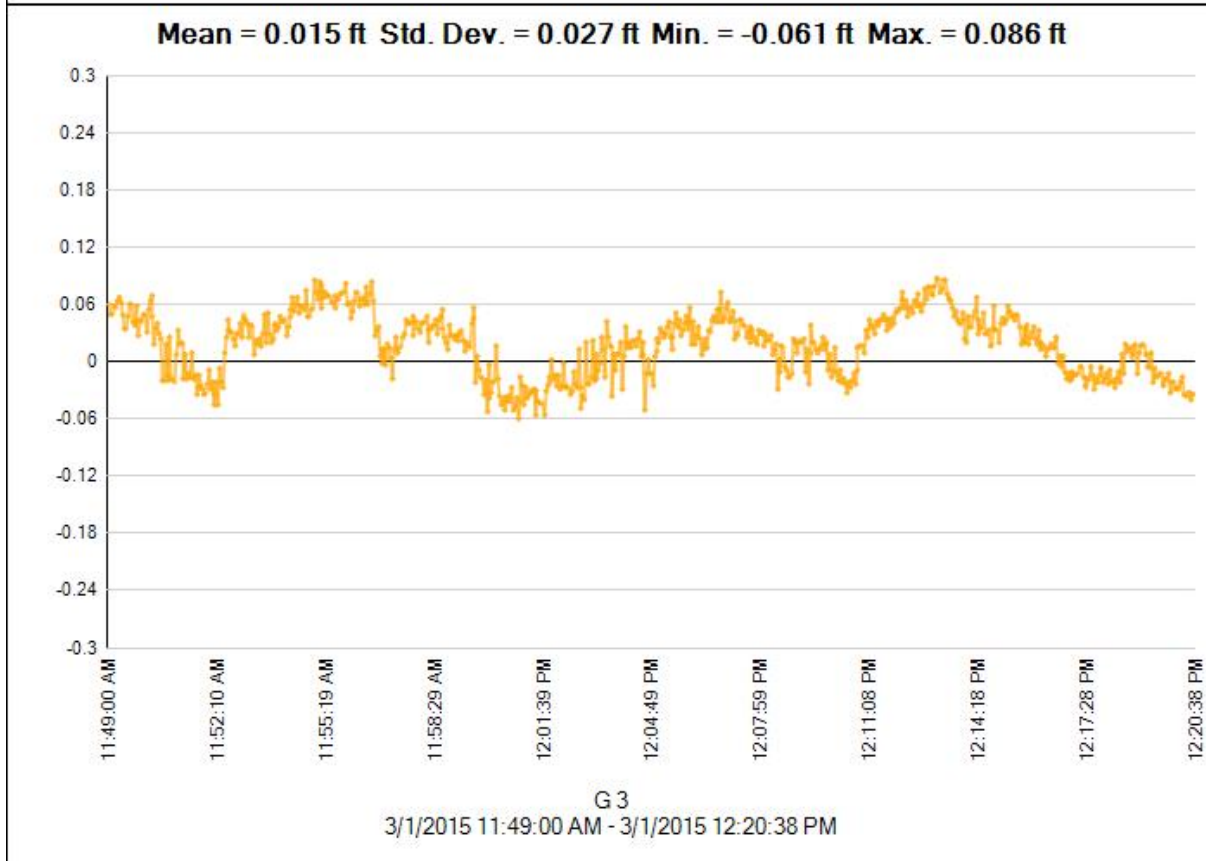
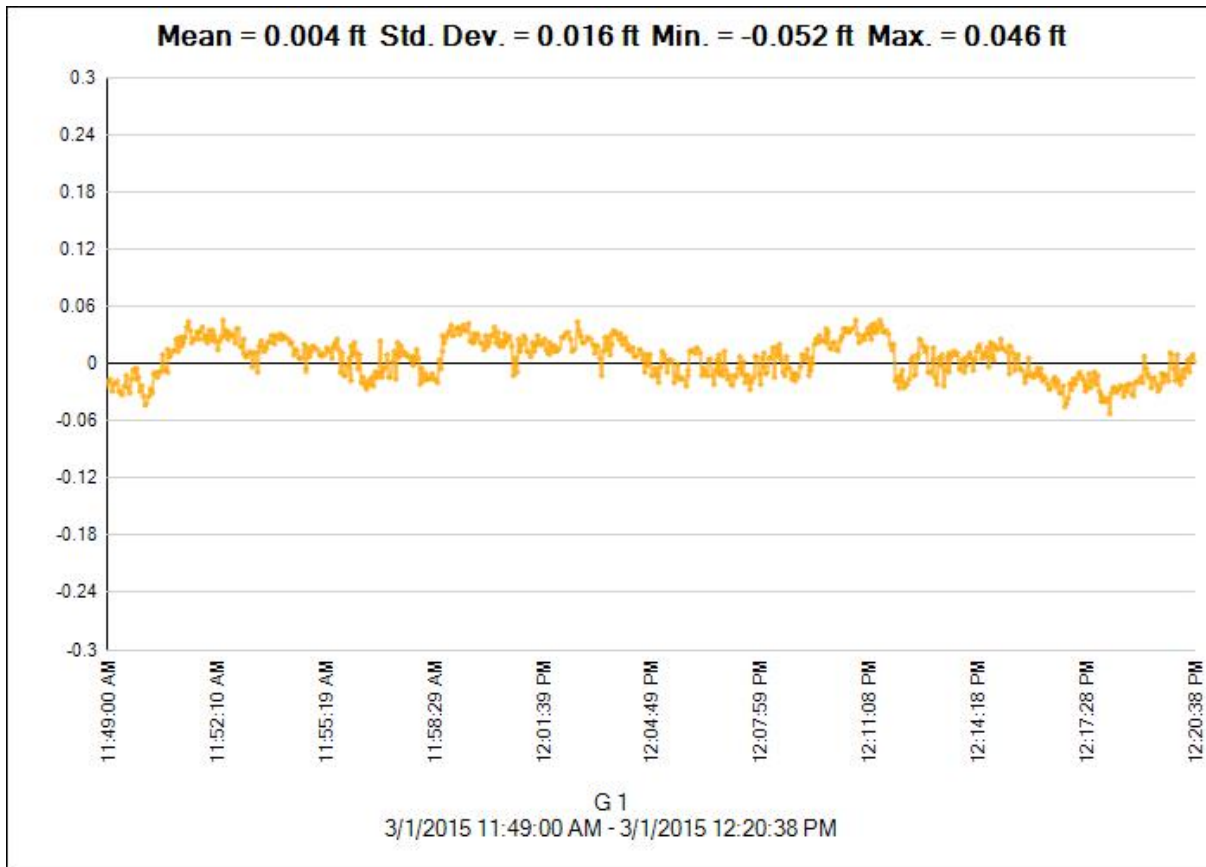
Occupations

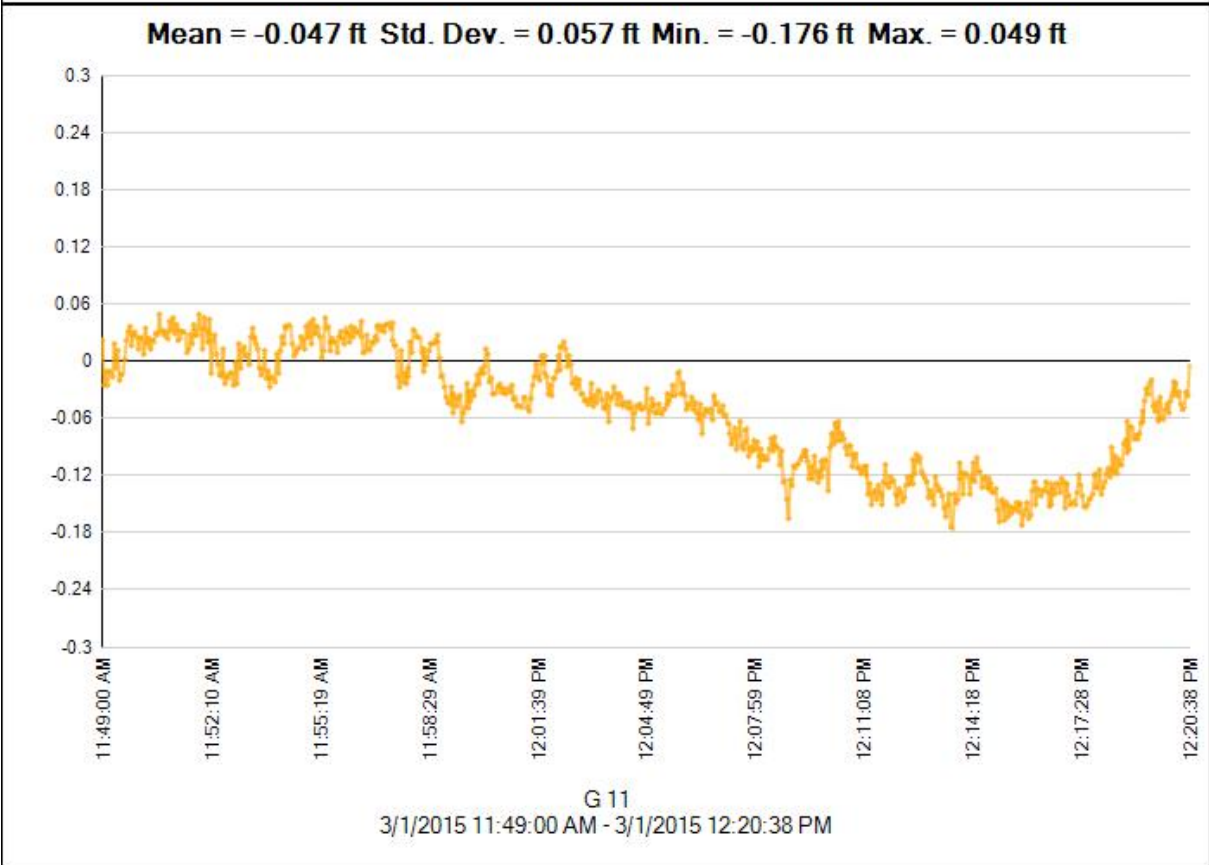
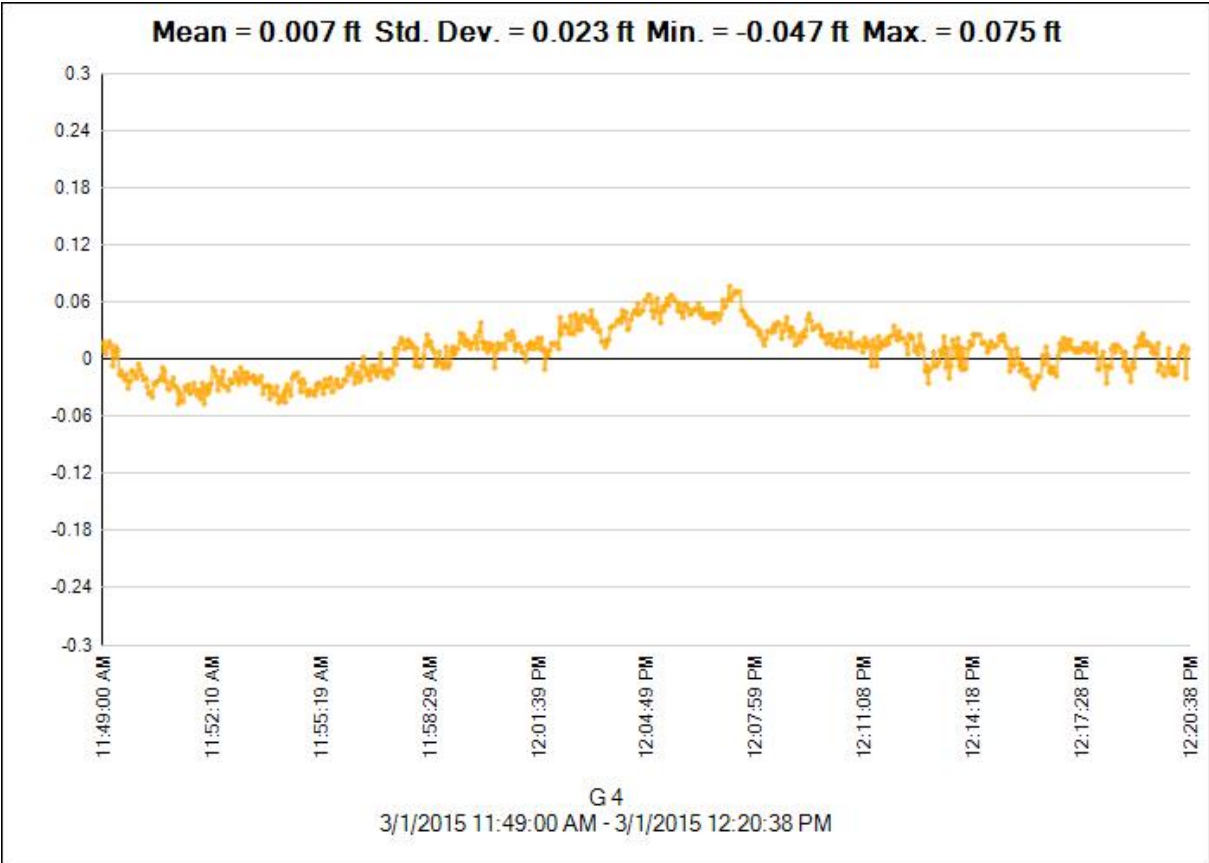
	From	To
Point ID:	KTUS	CON112
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520600.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840604.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

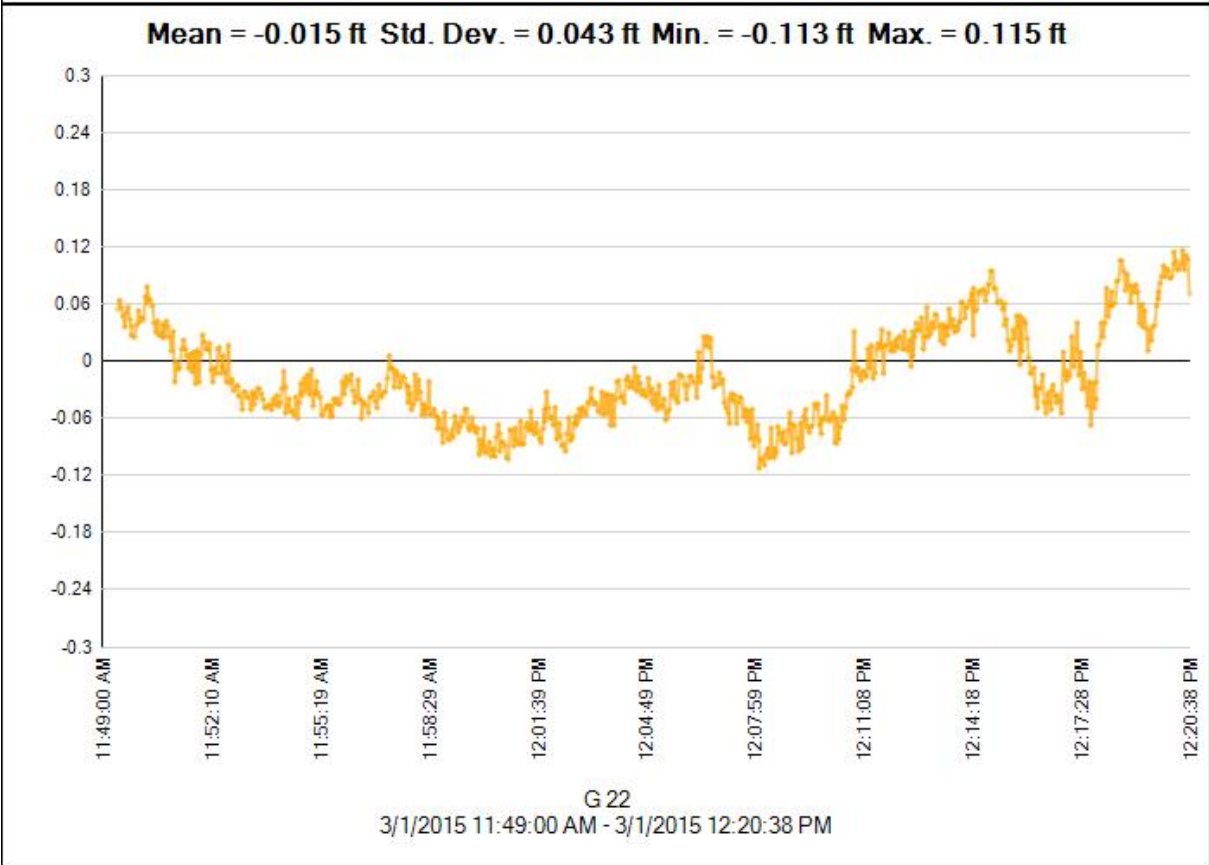
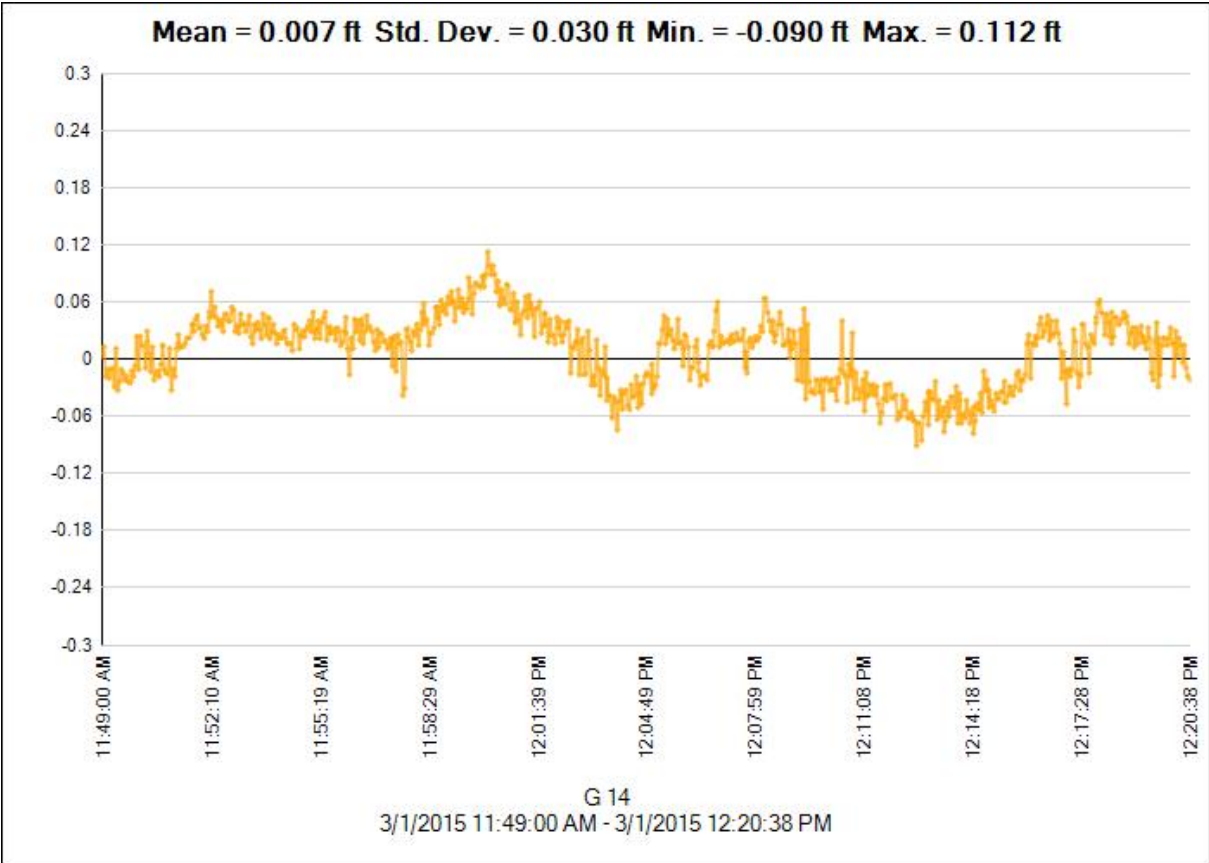
Tracking Summary

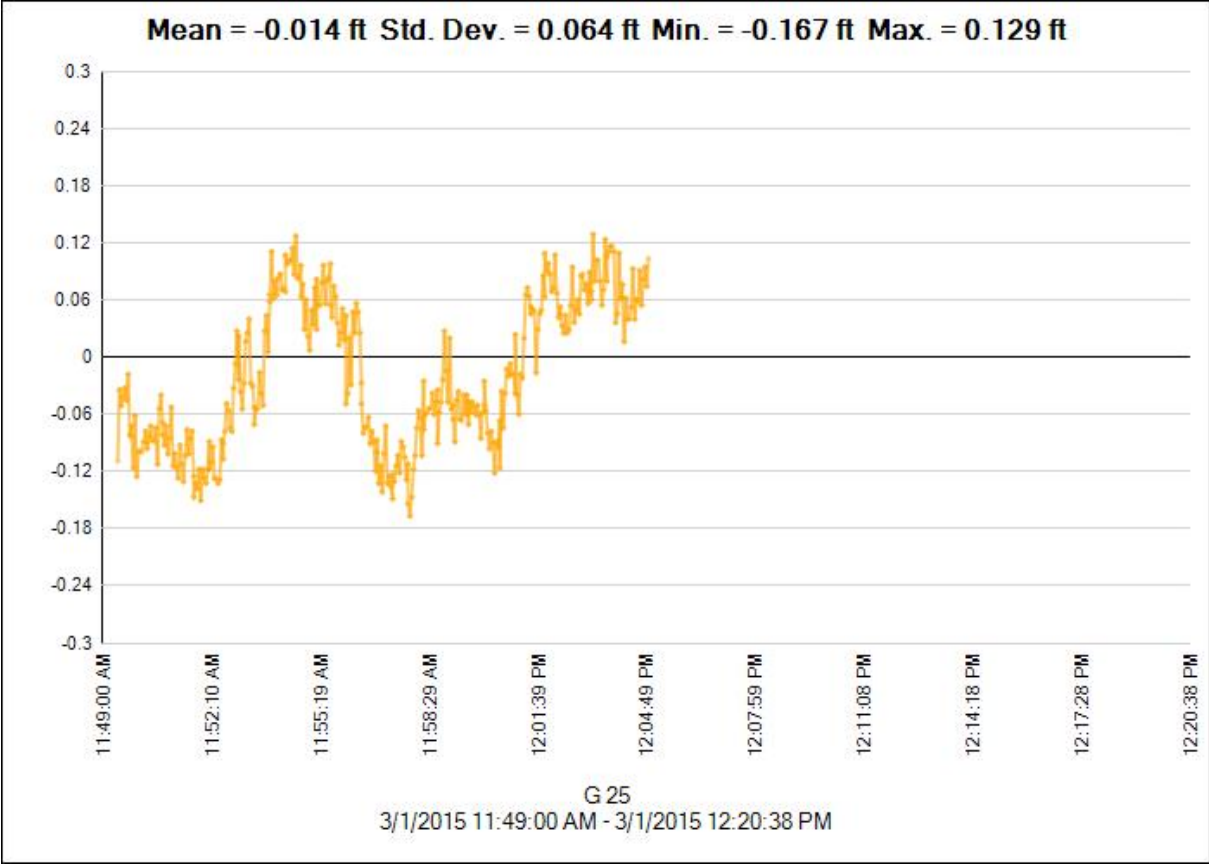
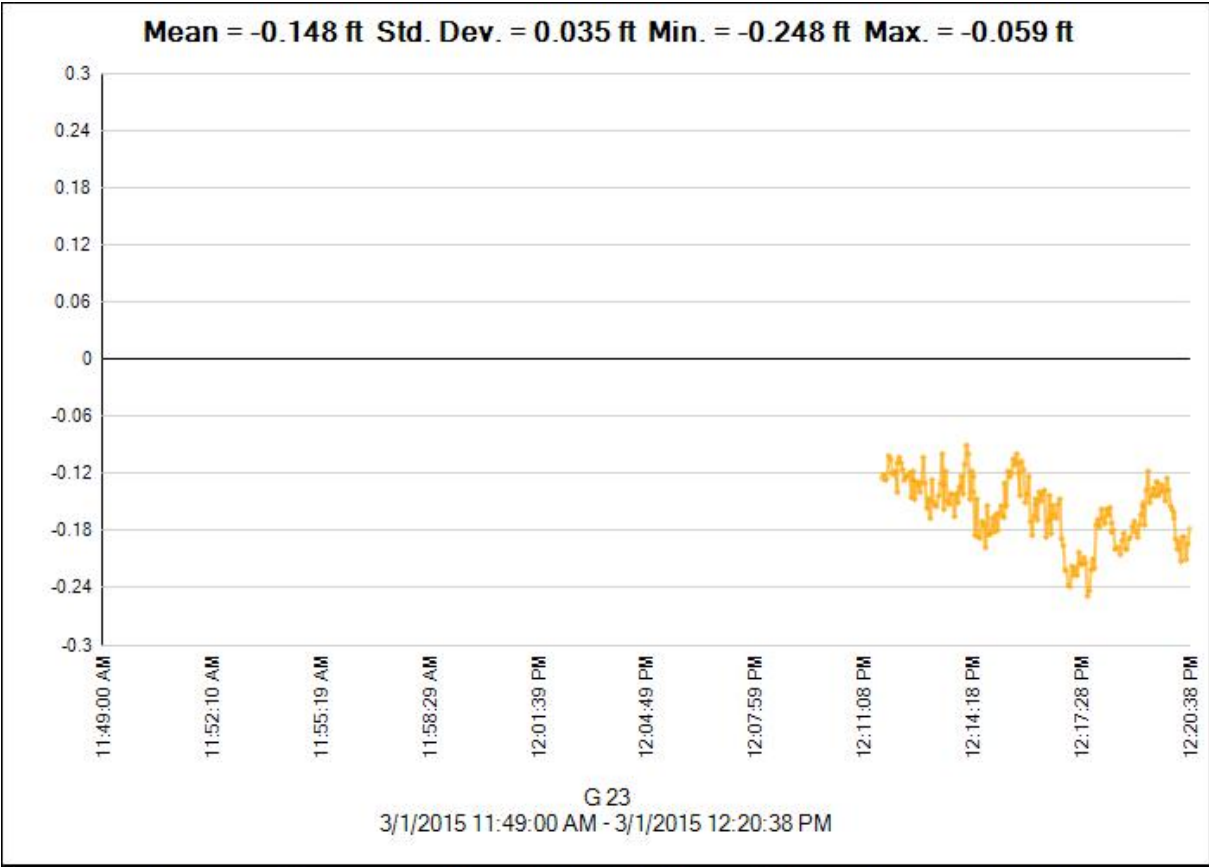
SV	3/1/2015 11:48:59 AM	Duration: 00:31:38	Major interval: 00:01:00	3/1/2015 12:20:37 PM
G 1	L1 L2			
G 3	L1 L2			
G 4	L1 L2			
G 11	L1 L2			
G 14	L1 L2			
G 16	L1 L2			
G 22	L1 L2			
G 23	L1 L2			
G 25	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

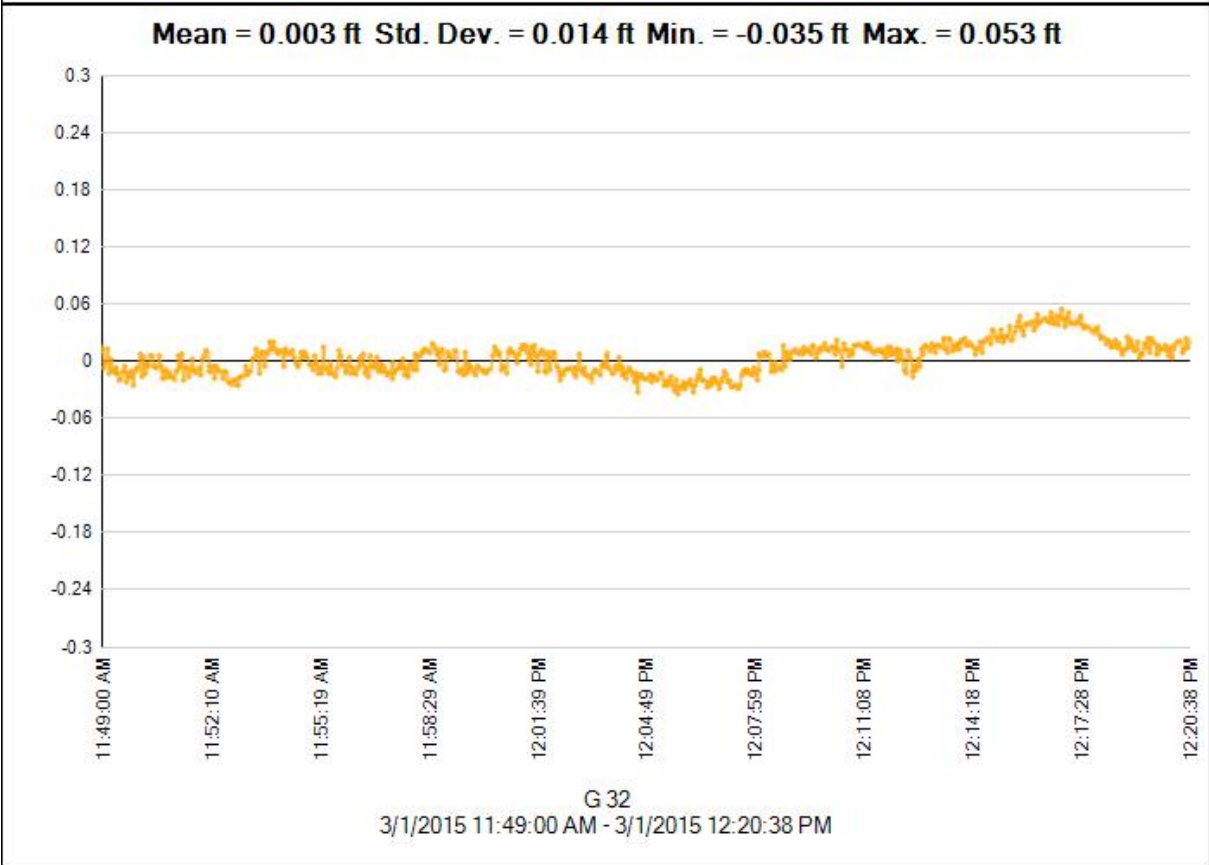
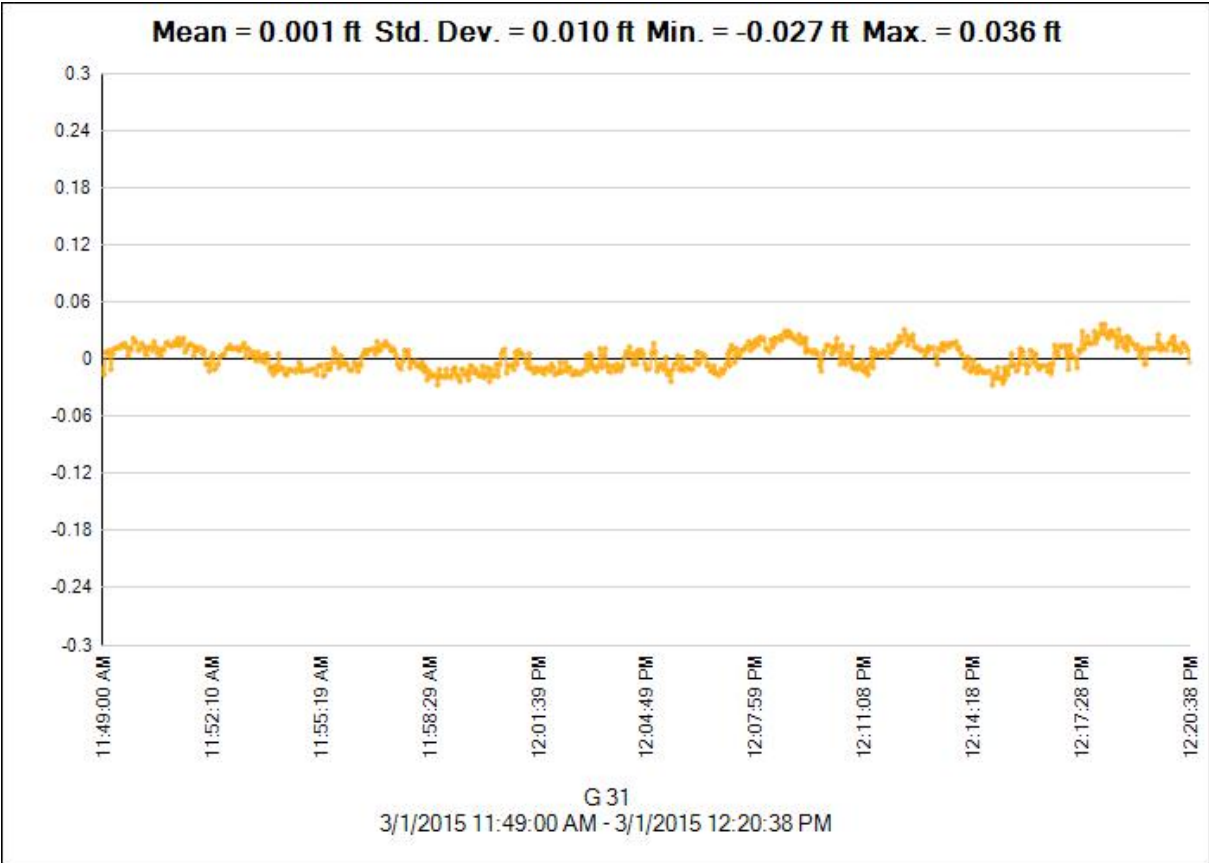
Residuals













Processing style

Elevation mask: 14.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

KTUS - CON115 (12:39:05 PM-1:11:33 PM) (S32)

Baseline observation: KTUS --- CON115 (B32)
Processed: 3/11/2015 8:54:22 AM
Solution type: Fixed
Frequency used: Dual Frequency (L1, L2)
Horizontal precision: 0.021 ft
Vertical precision: 0.035 ft
RMS: 0.003 ft
Maximum PDOP: 3.921
Ephemeris used: Broadcast
Antenna model: NGS Absolute
Processing start time: 3/1/2015 12:39:05 PM (Local: UTC-7hr)
Processing stop time: 3/1/2015 1:11:33 PM (Local: UTC-7hr)
Processing duration: 00:32:28
Processing interval: 1 second

Vector Components (Mark to Mark)

From:		KTUS			
Grid		Local		Global	
Easting	1000781.483 ft	Latitude	N32°07'29.11397"	Latitude	N32°07'29.11396"
Northing	410474.784 ft	Longitude	W110°56'42.22351"	Longitude	W110°56'42.22351"
Elevation	2586.404 ft	Height	2489.851 ft	Height	2489.851 ft

To:		CON115			
Grid		Local		Global	
Easting	1012115.457 ft	Latitude	N32°07'37.34512"	Latitude	N32°07'37.34512"
Northing	411410.795 ft	Longitude	W110°54'30.33648"	Longitude	W110°54'30.33648"
Elevation	2659.348 ft	Height	2563.037 ft	Height	2563.037 ft

Vector					
ΔEasting	11333.974 ft	NS Fwd Azimuth	85°47'44"	ΔX	10731.021 ft
ΔNorthing	936.011 ft	Ellipsoid Dist.	11372.472 ft	ΔY	-3696.231 ft
ΔElevation	72.944 ft	ΔHeight	73.186 ft	ΔZ	743.462 ft

Standard Errors

Vector errors:					
σ ΔEasting	0.008 ft	σ NS fwd Azimuth	0°00'00"	σ ΔX	0.011 ft
σ ΔNorthing	0.008 ft	σ Ellipsoid Dist.	0.008 ft	σ ΔY	0.015 ft
σ ΔElevation	0.018 ft	σ ΔHeight	0.018 ft	σ ΔZ	0.010 ft

Aposteriori Covariance Matrix (International foot²)

	X	Y	Z
X	0.0000108326		
Y	0.0000092565	0.0000211762	
Z	-0.0000058106	-0.0000070739	0.0000096619

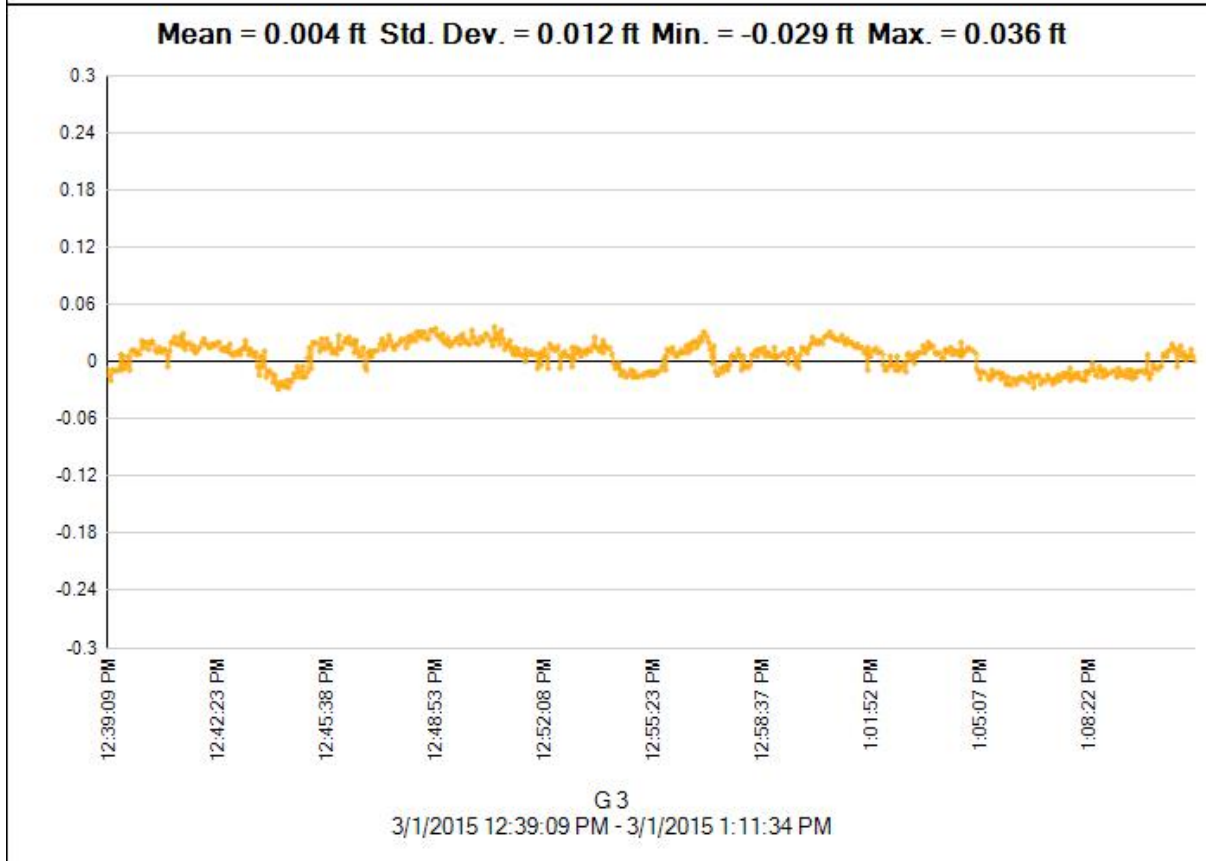
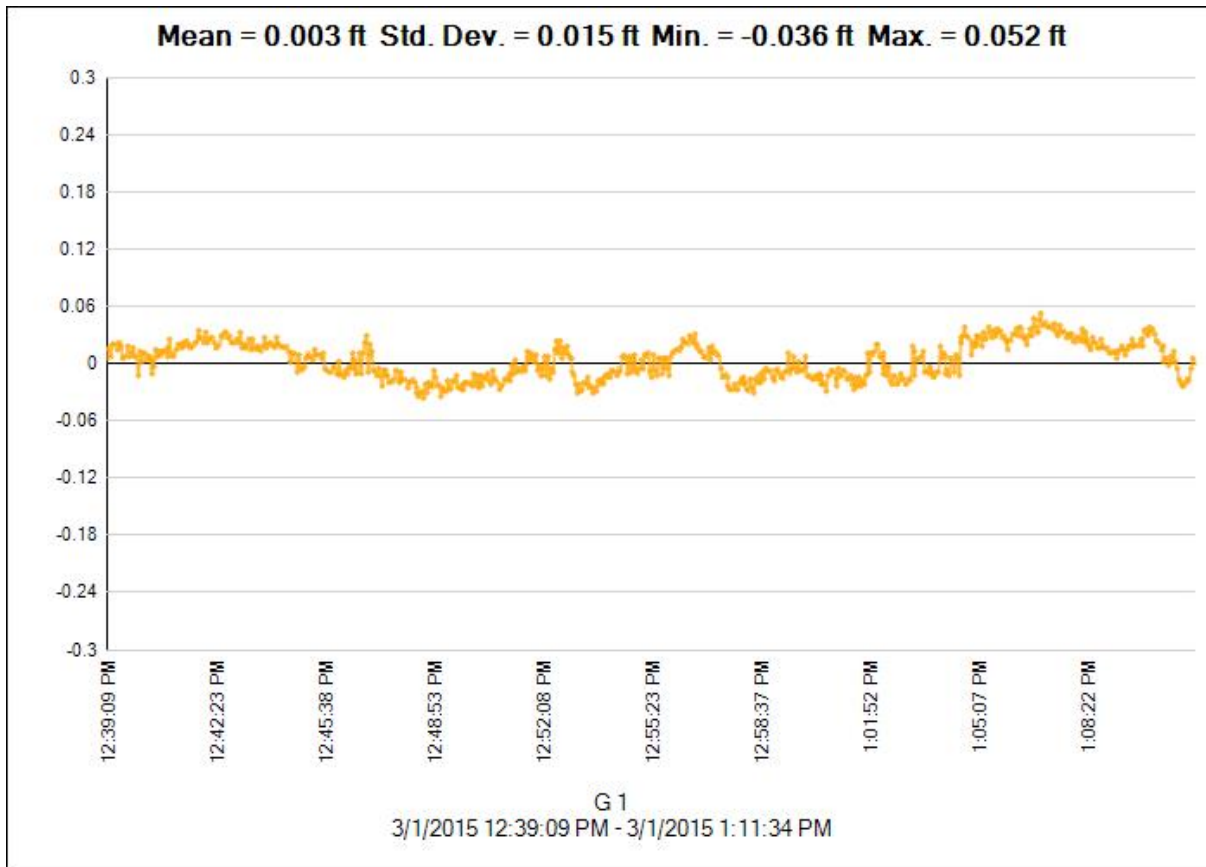
Occupations

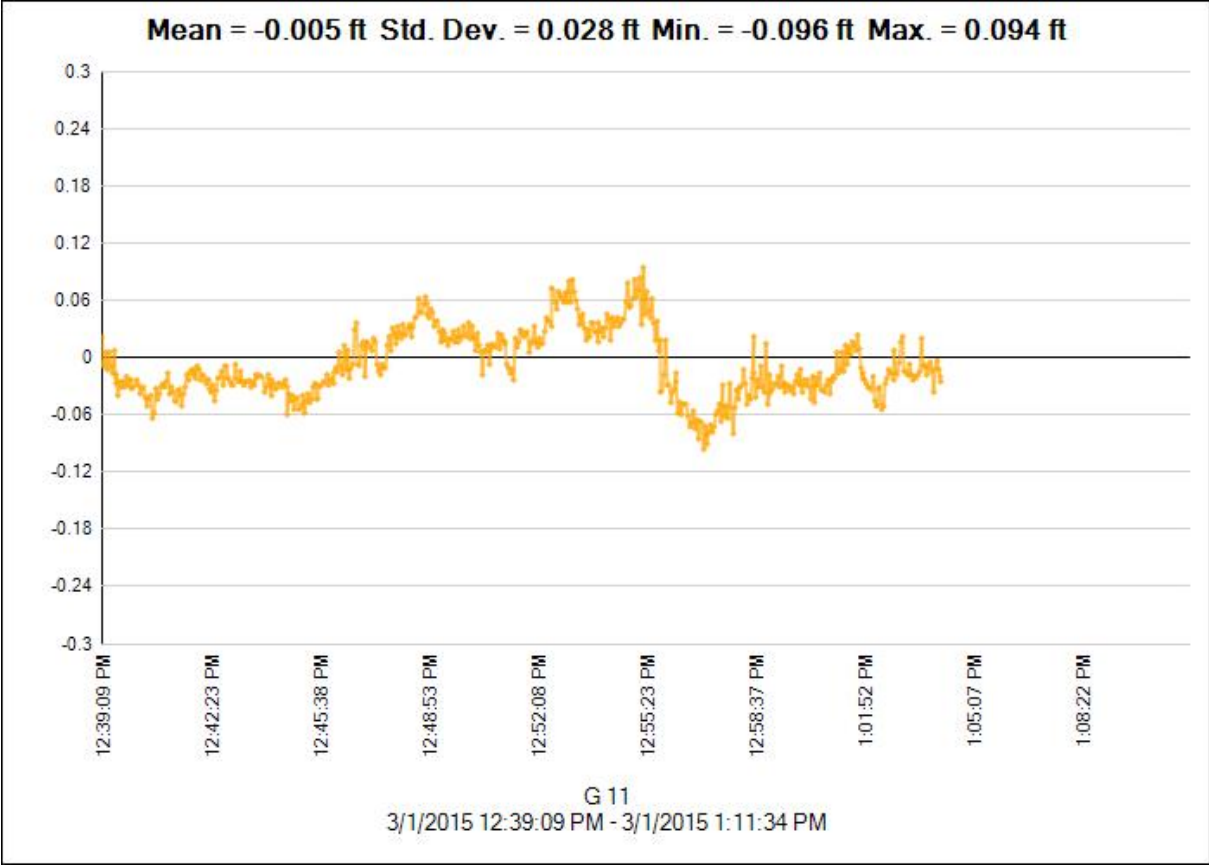
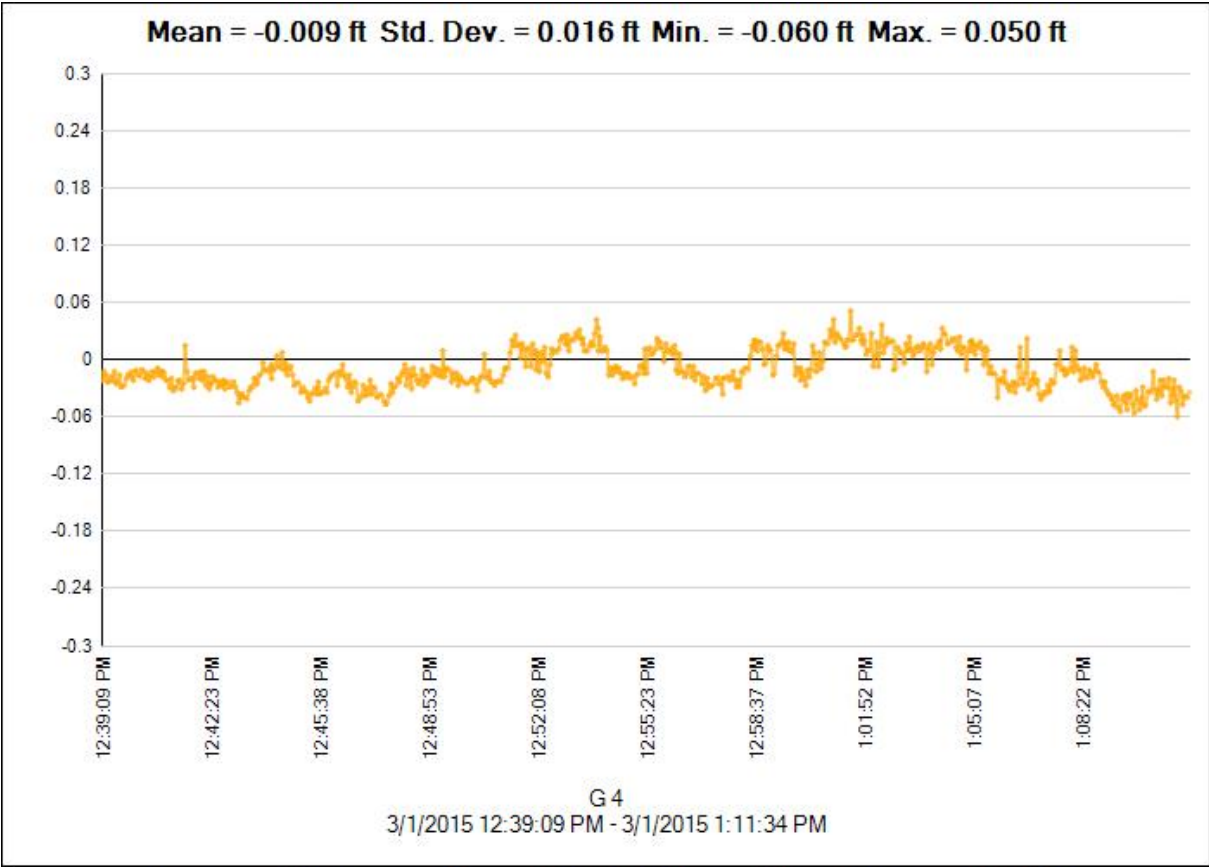
	From	To
Point ID:	KTUS	CON115
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\11520600.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints\39840605.t01
Receiver type:	5700	5700
Receiver serial number:	0220271152	0440103984
Antenna type:	Zephyr Geodetic	Zephyr Geodetic
Antenna serial number:	00000000	-----
Antenna height (measured):	4.921 ft	4.921 ft
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

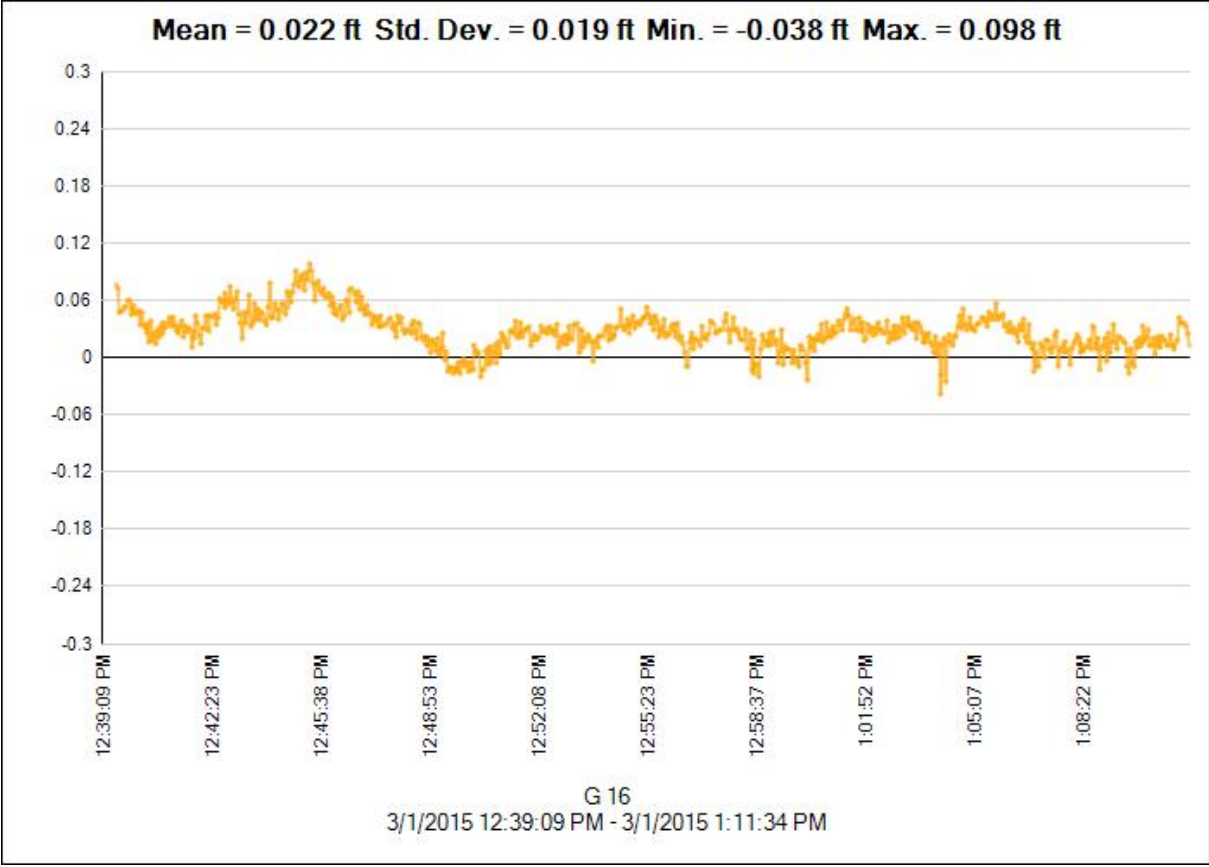
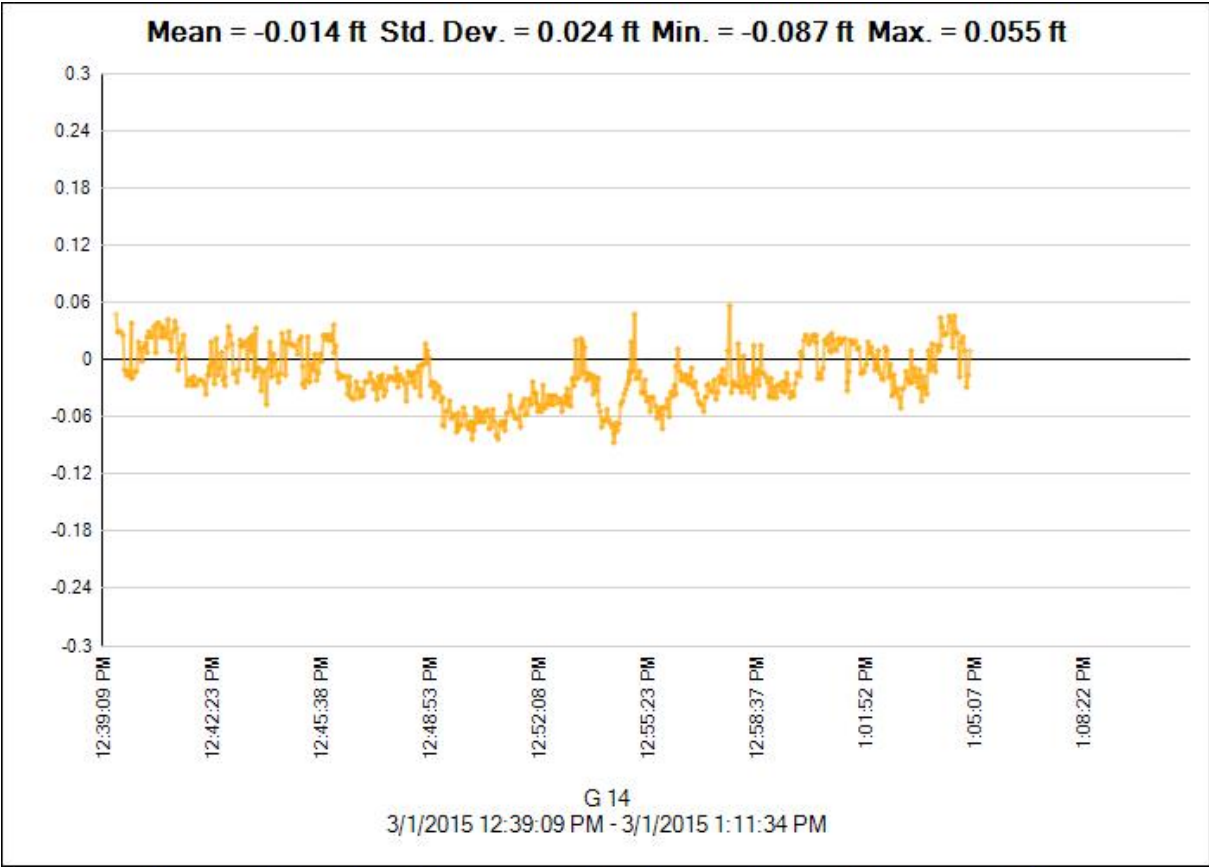
Tracking Summary

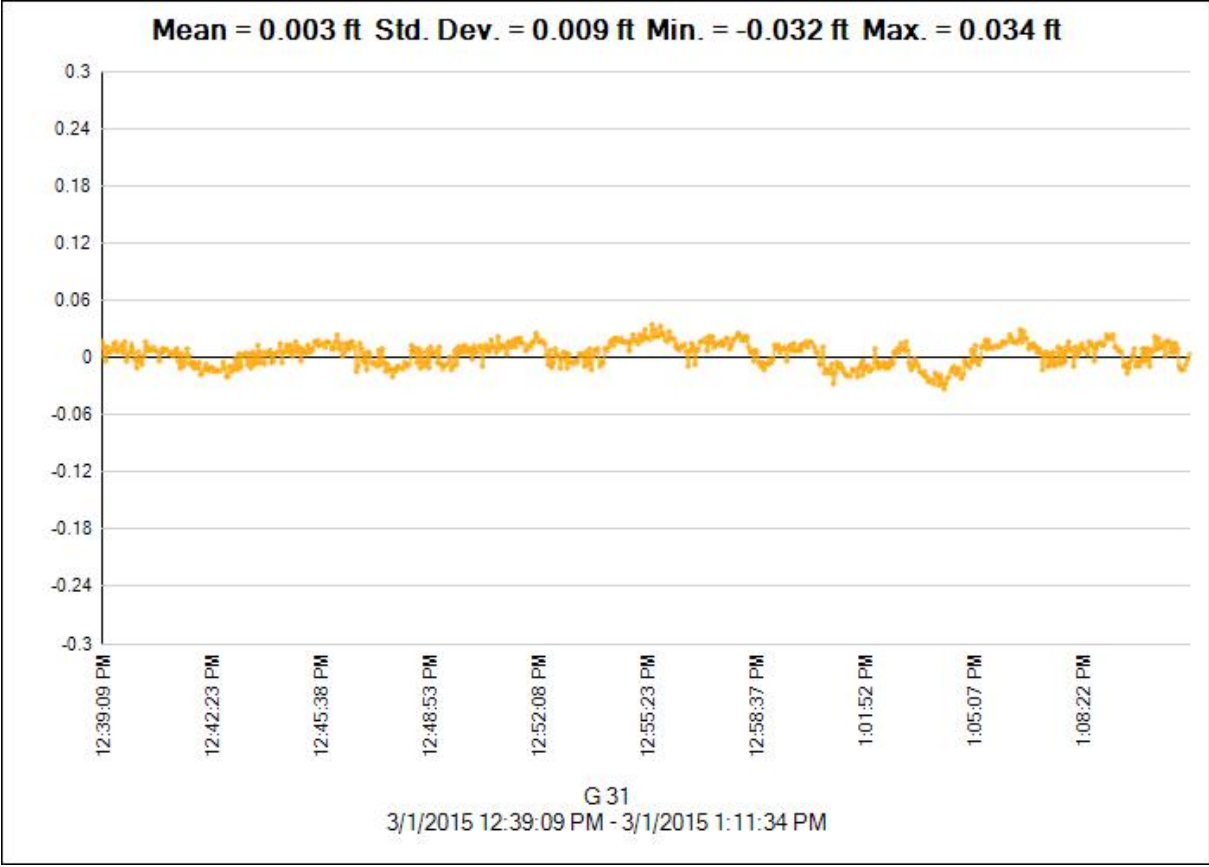
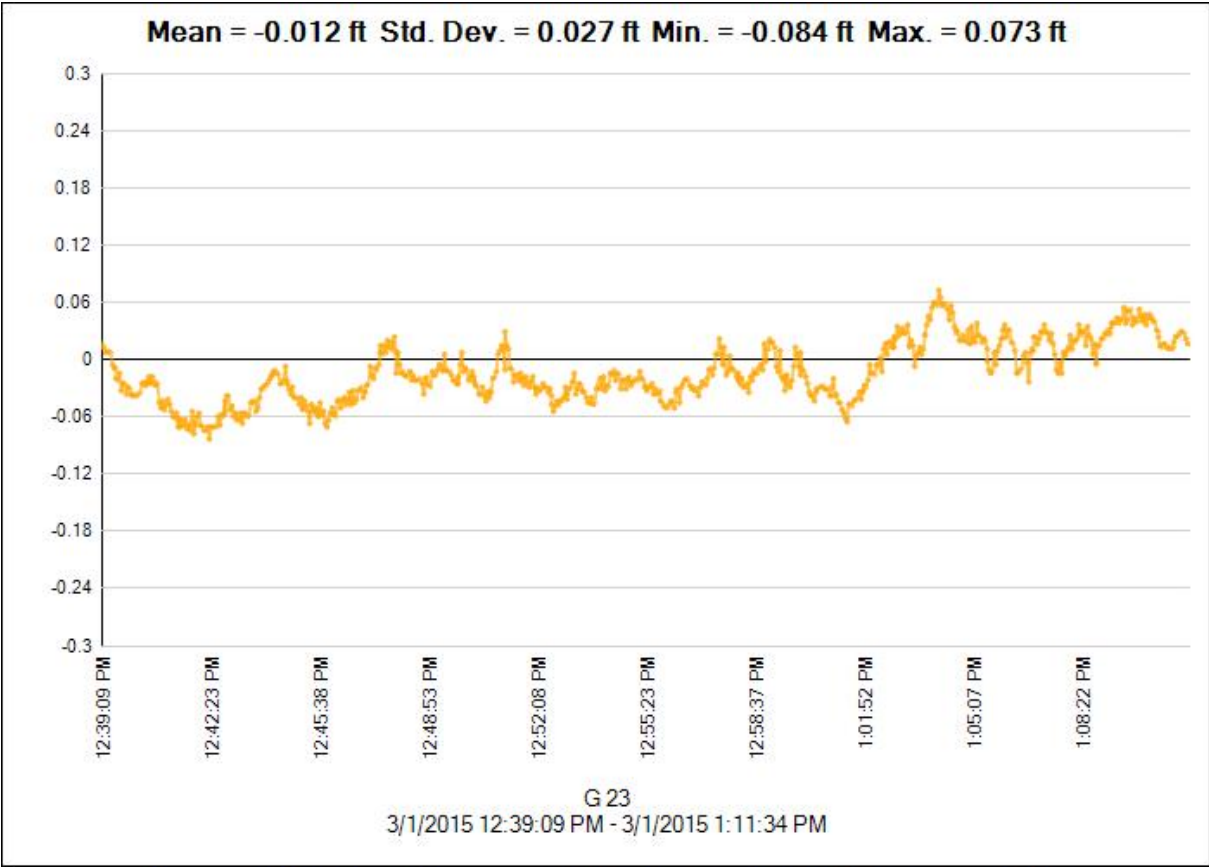
SV	3/1/2015 12:39:05 PM	Duration: 00:32:28	Major interval: 00:01:00	3/1/2015 1:11:33 PM
G 1	L1 L2	[Timeline with blue and green bars]		
G 3	L1 L2	[Timeline with blue and green bars]		
G 4	L1 L2	[Timeline with blue and green bars]		
G 11	L1 L2	[Timeline with blue and green bars]		
G 14	L1 L2	[Timeline with blue and green bars]		
G 16	L1 L2	[Timeline with blue and green bars]		
G 22	L1 L2	[Timeline with blue and green bars]		
G 23	L1 L2	[Timeline with blue and green bars]		
G 31	L1 L2	[Timeline with blue and green bars]		
G 32	L1 L2	[Timeline with blue and green bars]		

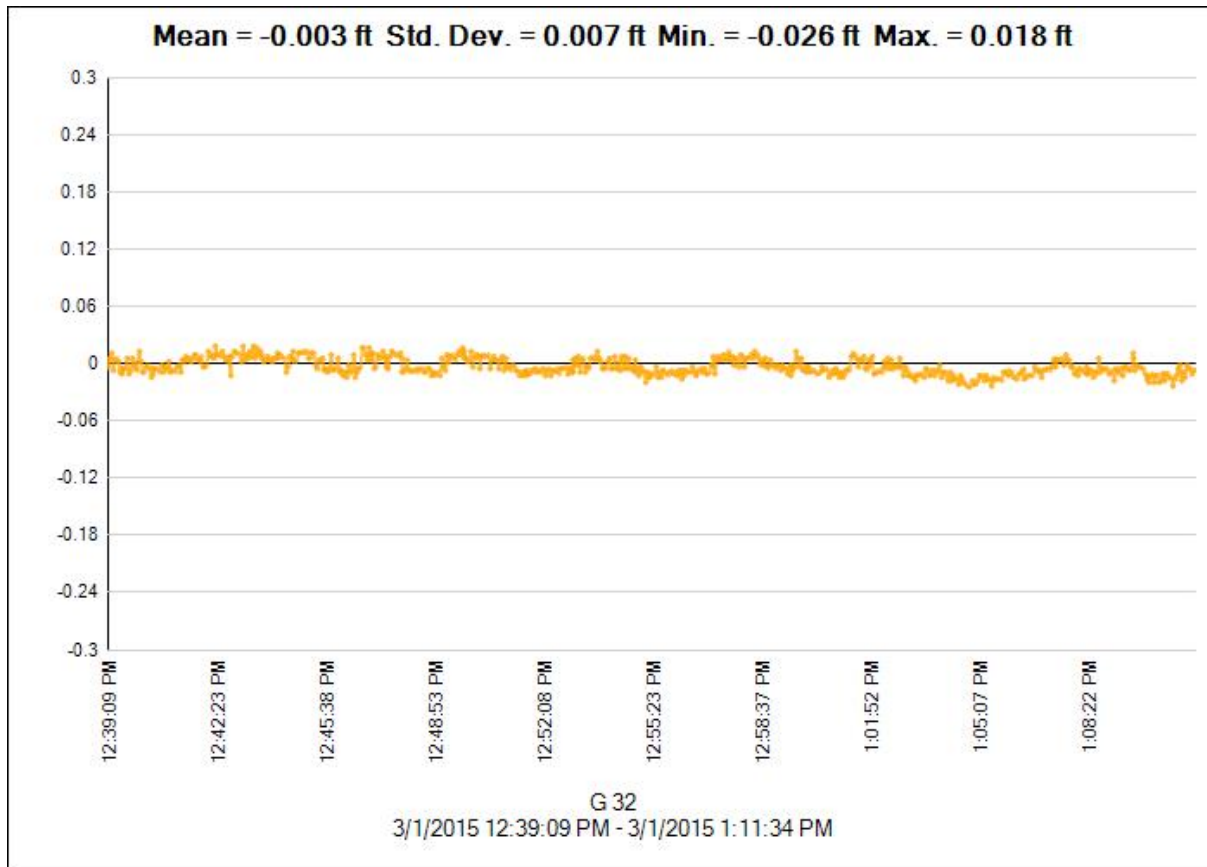
Residuals













Processing style

Elevation mask: 14.0 deg
 Auto start processing: Yes
 Start automatic ID numbering: AUTO0001
 Continuous vectors: No
 Generate residuals: Yes
 Antenna model: Automatic
 Ephemeris type: Automatic
 Frequency: Multiple Frequencies
 Processing Interval: Use all data
 Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.164 ft + 1.000 ppm	0.328 ft + 1.000 ppm
Vertical Precision >	0.328 ft + 1.000 ppm	0.656 ft + 1.000 ppm

10/29/2015 1:17:36 PM	\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG LiDAR CheckPoints.vce	Trimble Business Center
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