

Project information		Coordinate System	
Name:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID.vce	Name:	US State Plane 1983
Size:	696 KB	Datum:	NAD 1983 (Conus)
Modified:	5/29/2015 2:27:40 PM (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)
AH8499 --- PAG110 (B1)	AH8499	PAG110	Fixed	0.023	0.039	137°50'10"	116922.919	1063.696
AH8499 --- PAG106 (B2)	AH8499	PAG106	Fixed	0.203	0.153	113°51'43"	172822.406	1813.510
AH8499 --- PAG105 (B3)	AH8499	PAG105	Fixed	0.064	0.112	109°11'23"	119825.568	918.315
AH8499 --- PAG120 (B4)	AH8499	PAG120	Fixed	0.062	0.108	101°47'07"	58216.692	421.917
AH8499 --- PAG109 (B5)	AH8499	PAG109	Fixed	0.041	0.064	161°13'36"	118256.778	764.960
AH8499 --- PAG107 (B6)	AH8499	PAG107	Fixed	0.038	0.064	140°03'01"	235099.948	2592.344
AH8499 --- PAG108 (B7)	AH8499	PAG108	Fixed	0.179	0.166	153°41'25"	201301.122	2413.874
AH8499 --- PAG112 (B8)	AH8499	PAG112	Fixed	0.071	0.123	181°38'46"	83664.560	355.331
AH8499 --- PAG111 (B9)	AH8499	PAG111	Fixed	0.181	0.158	188°05'38"	184411.917	687.279
AH8499 --- PAG115 (B10)	AH8499	PAG115	Fixed	0.093	0.130	241°25'06"	70898.312	54.687
AH8499 --- PAG113 (B11)	AH8499	PAG113	Fixed	0.049	0.060	235°02'15"	150149.504	398.678
AH8499 --- PAG119 (B12)	AH8499	PAG119	Fixed	0.054	0.063	293°11'59"	20785.504	51.431
AH8499 --- PAG103 (B13)	AH8499	PAG103	Fixed	0.027	0.033	6°27'35"	58929.803	471.894
AH8499 --- PAG114 (B14)	AH8499	PAG114	Fixed	0.022	0.041	280°47'25"	125917.445	-231.577

AH8499 --- PAG117 (B15)	AH8499	PAG117	Fixed	0.051	0.077	314°14'54"	110117.88 0	-383.715
AH8499 --- PAG101 (B16)	AH8499	PAG101	Fixed	0.039	0.104	319°40'43"	174108.83 7	-521.187
AH8499 --- PAG116 (B17)	AH8499	PAG116	Fixed	0.043	0.076	337°31'13"	132497.64 7	308.736
AH8499 --- PAG118 (B18)	AH8499	PAG118	Fixed	0.023	0.042	9°35'03"	106204.62 1	861.378
AH8499 --- PAG102 (B19)	AH8499	PAG102	Fixed	0.025	0.033	15°56'59"	138456.49 9	1518.641
AH8499 --- PAG121 (B20)	AH8499	PAG121	Fixed	0.037	0.095	54°12'23"	179097.98 2	376.264
AH8499 --- PAG122 (B21)	AH8499	PAG122	Fixed	0.027	0.042	59°35'16"	173178.44 0	454.640
AH8499 --- PAG123 (B22)	AH8499	PAG123	Fixed	0.054	0.193	67°43'50"	151650.05 9	1120.561
AH8499 --- PAG124 (B23)	AH8499	PAG124	Fixed	0.026	0.045	69°53'00"	171267.83 8	637.031
AH8499 --- PAG104 (B24)	AH8499	PAG104	Fixed	0.025	0.044	65°10'56"	95602.122	1985.598

### Acceptance Summary

Processed	Passed	Flag	Fail
24	24	0	0

### AH8499 - PAG110 (6:22:26 PM-6:58:35 PM) (S1)

<b>Baseline observation:</b>	AH8499 --- PAG110 (B1)
<b>Processed:</b>	5/29/2015 12:53:58 PM
<b>Solution type:</b>	Fixed
<b>Frequency used:</b>	Dual Frequency (L1, L2)
<b>Horizontal precision:</b>	0.023 ft
<b>Vertical precision:</b>	0.039 ft
<b>RMS:</b>	0.009 ft
<b>Maximum PDOP:</b>	2.086
<b>Ephemeris used:</b>	Broadcast
<b>Antenna model:</b>	NGS Absolute
<b>Processing start time:</b>	4/29/2015 6:23:04 PM (Local: UTC-6hr)
<b>Processing stop time:</b>	4/29/2015 6:57:49 PM (Local: UTC-6hr)
<b>Processing duration:</b>	00:34:45
<b>Processing interval:</b>	5 seconds

**Vector Components (Mark to Mark)**

<b>From:</b>		AH8499			
<b>Grid</b>		<b>Local</b>		<b>Global</b>	
<b>Easting</b>	992160.250 ft	<b>Latitude</b>	N32°13'39.03073"	<b>Latitude</b>	N32°13'39.03072"
<b>Northing</b>	447782.882 ft	<b>Longitude</b>	W110°58'18.65788"	<b>Longitude</b>	W110°58'18.65788"
<b>Elevation</b>	2422.647 ft	<b>Height</b>	2326.617 ft	<b>Height</b>	2326.617 ft

<b>To:</b>		PAG110			
<b>Grid</b>		<b>Local</b>		<b>Global</b>	
<b>Easting</b>	1071403.803 ft	<b>Latitude</b>	N31°59'20.52492"	<b>Latitude</b>	N31°59'20.52492"
<b>Northing</b>	361805.224 ft	<b>Longitude</b>	W110°43'07.37907"	<b>Longitude</b>	W110°43'07.37907"
<b>Elevation</b>	3484.111 ft	<b>Height</b>	3390.313 ft	<b>Height</b>	3390.313 ft

<b>Vector</b>					
<b>ΔEasting</b>	79243.553 ft	<b>NS Fwd Azimuth</b>	137°50'10"	<b>ΔX</b>	56530.030 ft
<b>ΔNorthing</b>	-85977.658 ft	<b>Ellipsoid Dist.</b>	116922.919 ft	<b>ΔY</b>	-71839.478 ft
<b>ΔElevation</b>	1061.464 ft	<b>ΔHeight</b>	1063.696 ft	<b>ΔZ</b>	-72933.198 ft

**Standard Errors**

<b>Vector errors:</b>					
<b>σ ΔEasting</b>	0.009 ft	<b>σ NS fwd Azimuth</b>	0°00'00"	<b>σ ΔX</b>	0.011 ft
<b>σ ΔNorthing</b>	0.008 ft	<b>σ Ellipsoid Dist.</b>	0.009 ft	<b>σ ΔY</b>	0.018 ft
<b>σ ΔElevation</b>	0.020 ft	<b>σ ΔHeight</b>	0.020 ft	<b>σ ΔZ</b>	0.010 ft

**Aposteriori Covariance Matrix (International foot²)**

	<b>X</b>	<b>Y</b>	<b>Z</b>
<b>X</b>	0.0000113786		
<b>Y</b>	0.0000090478	0.0000305863	
<b>Z</b>	-0.0000046988	-0.0000098076	0.0000090536

## Occupations

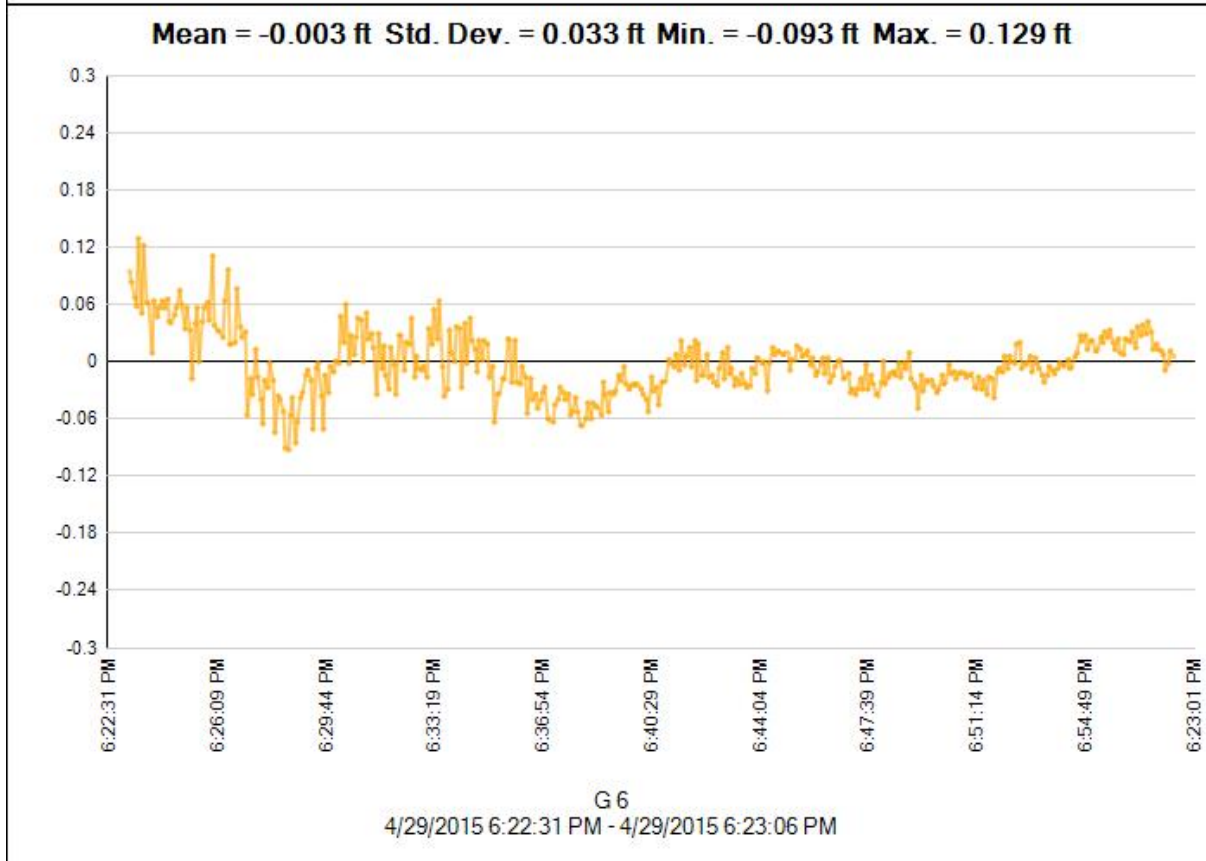
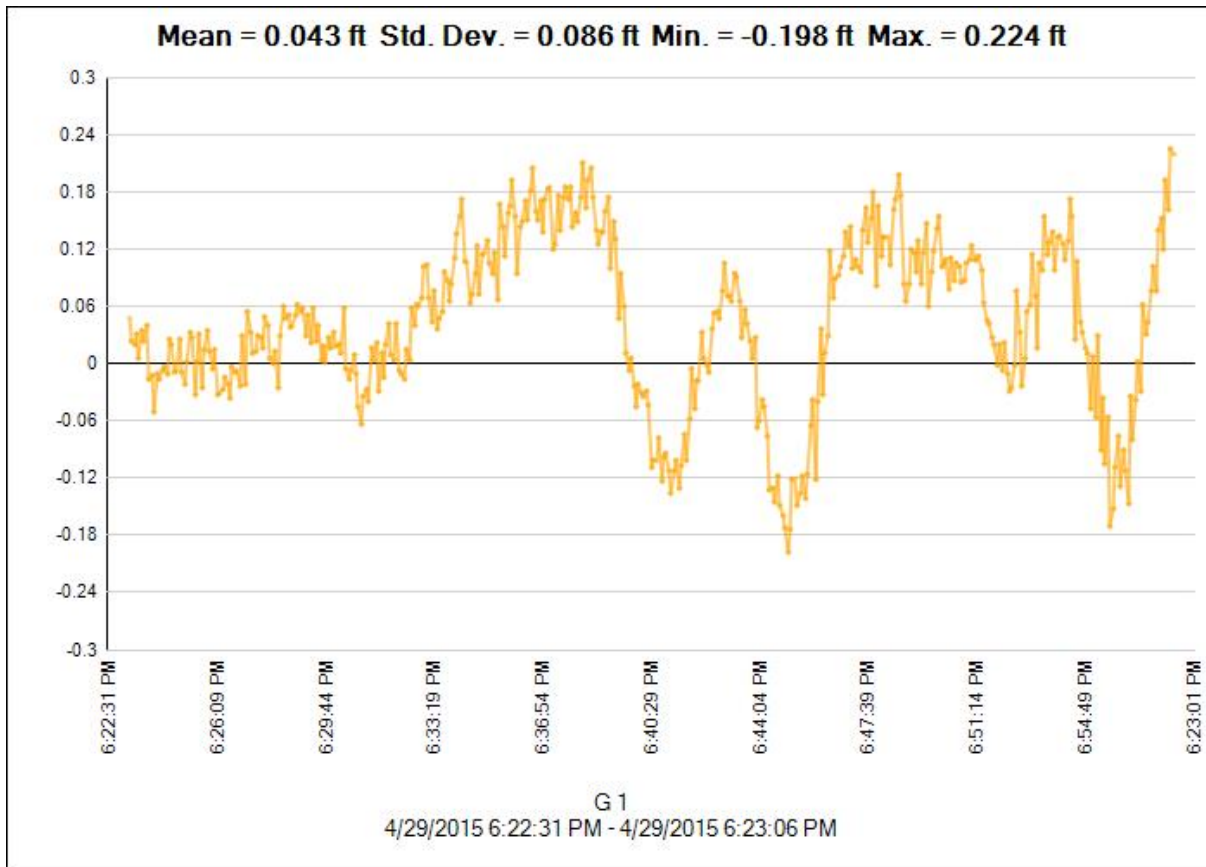
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Receiver serial number:		0220271185
Antenna type:	702 Rev 3.00	Zephyr
Antenna serial number:	-----	00000000
Antenna height (measured):	4.908 ft	5.531 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

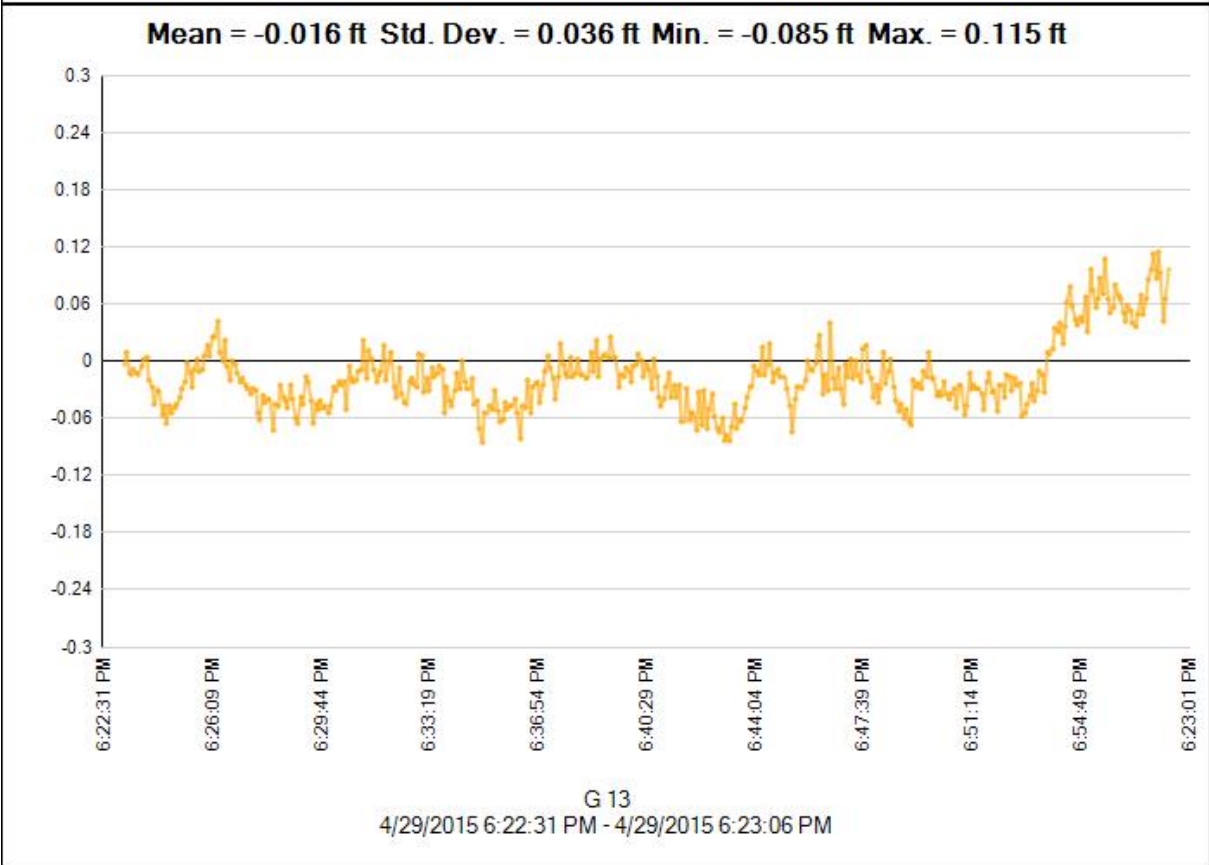
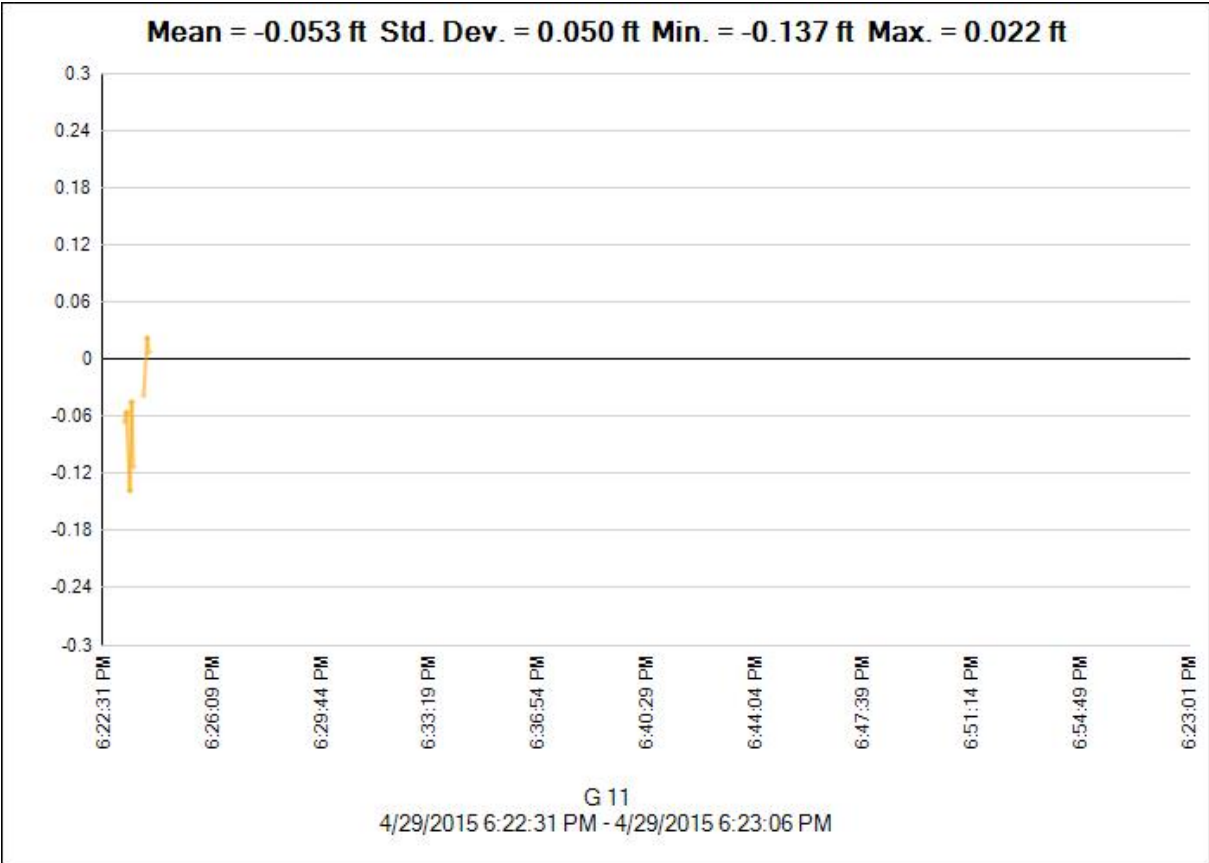


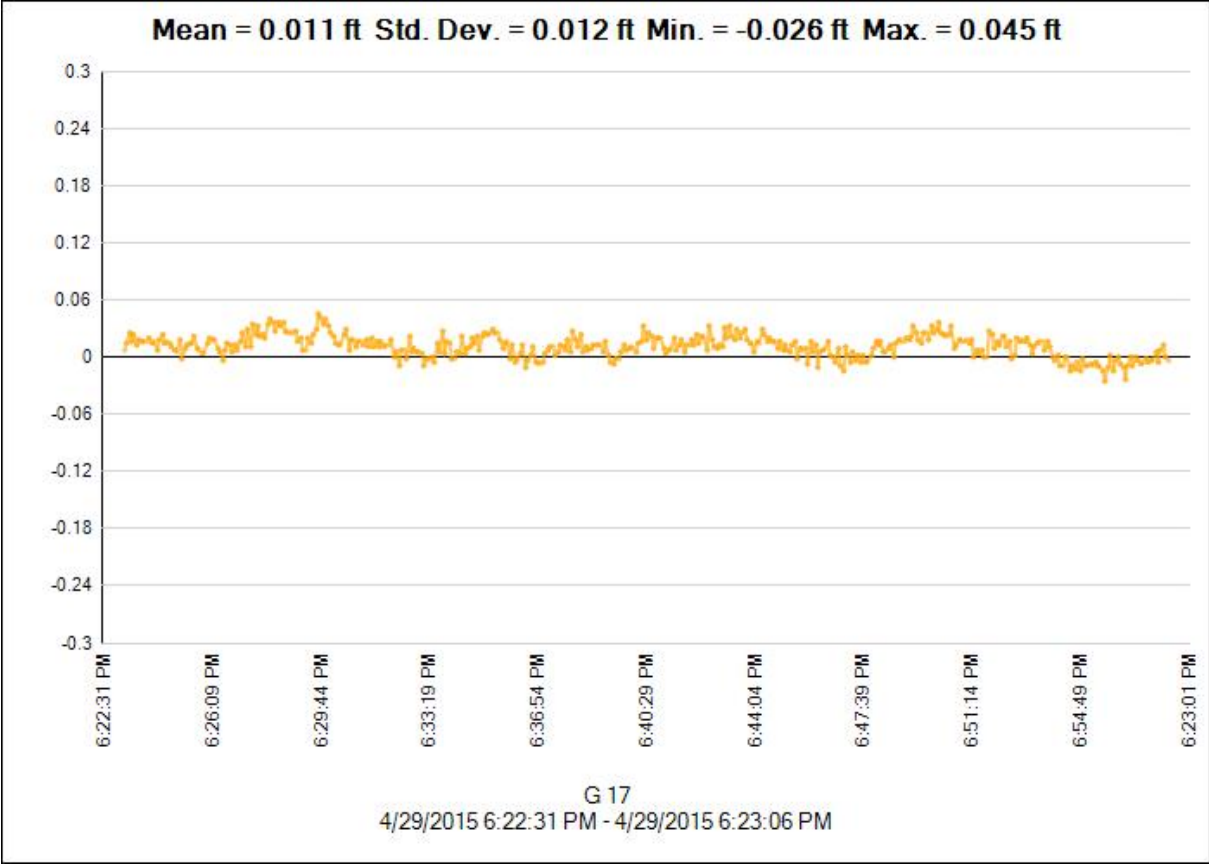
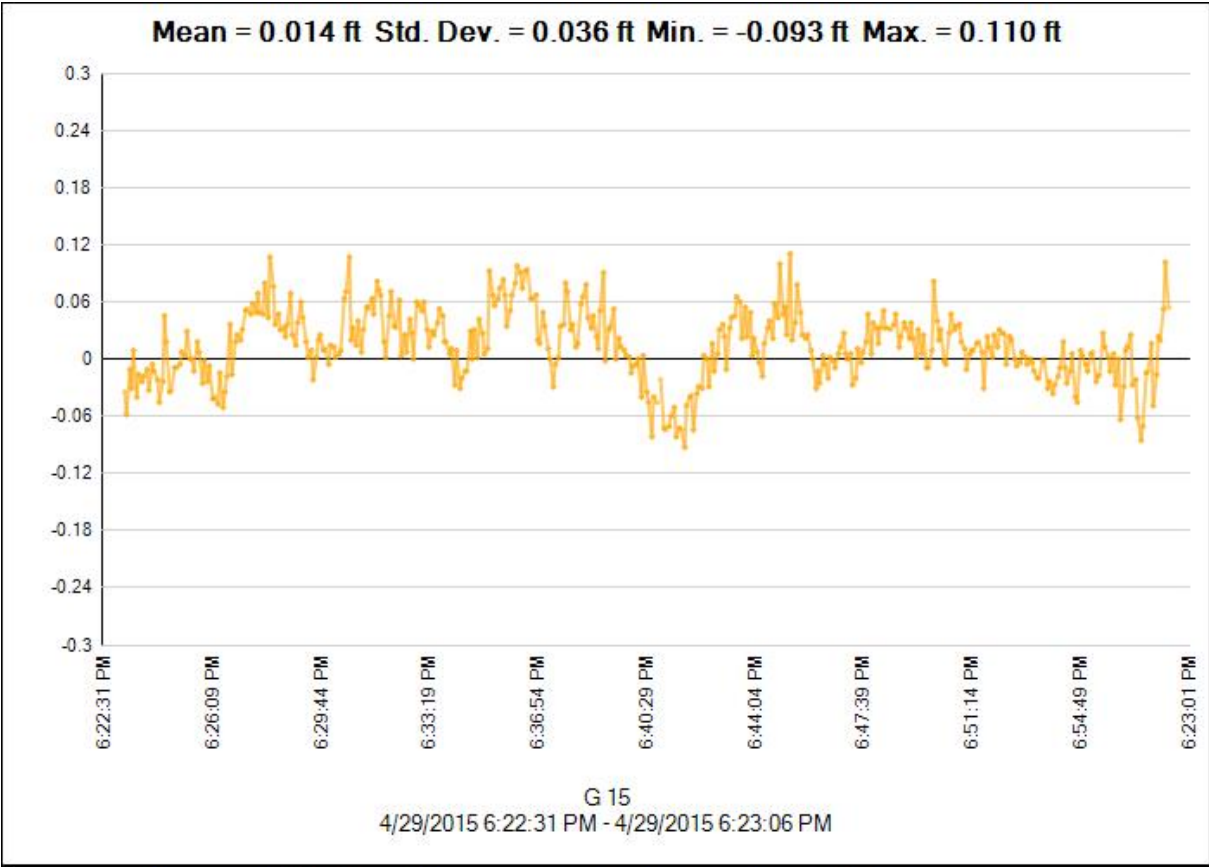
# Tracking Summary

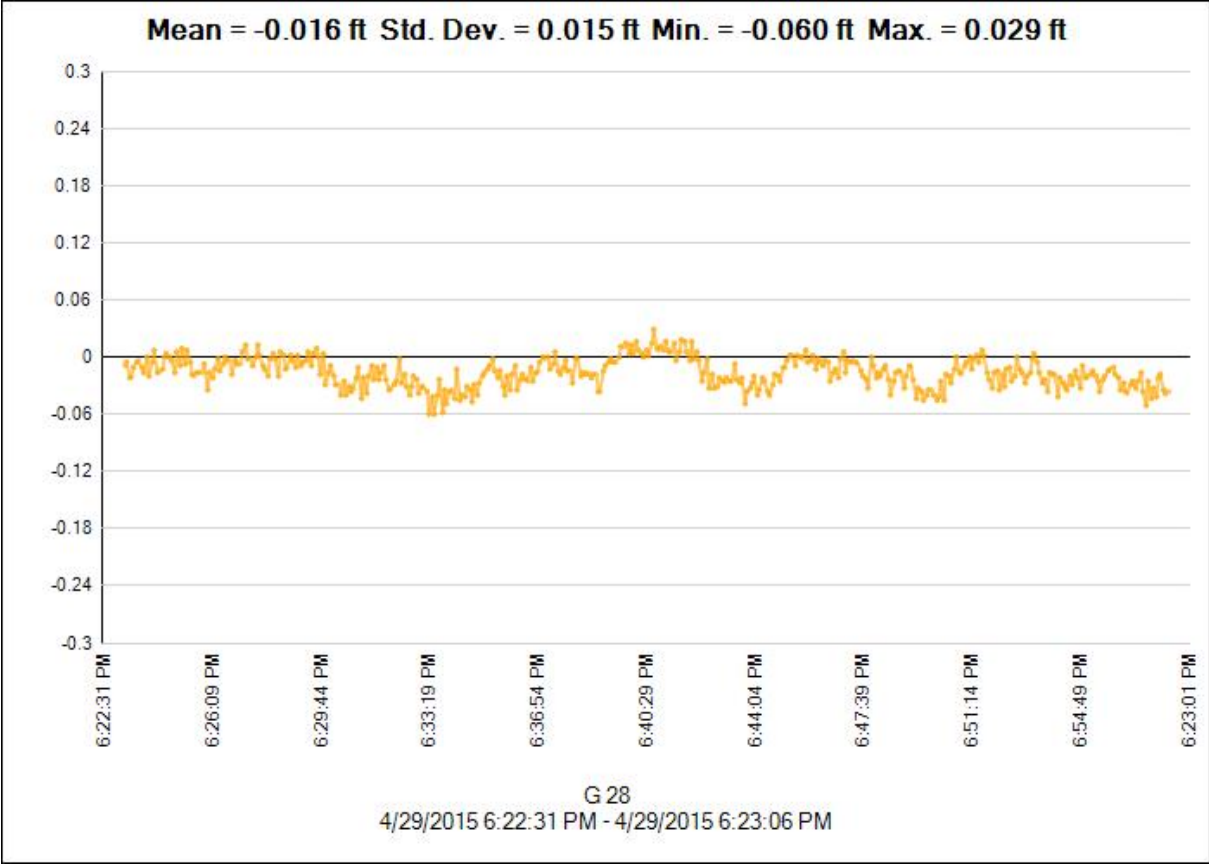
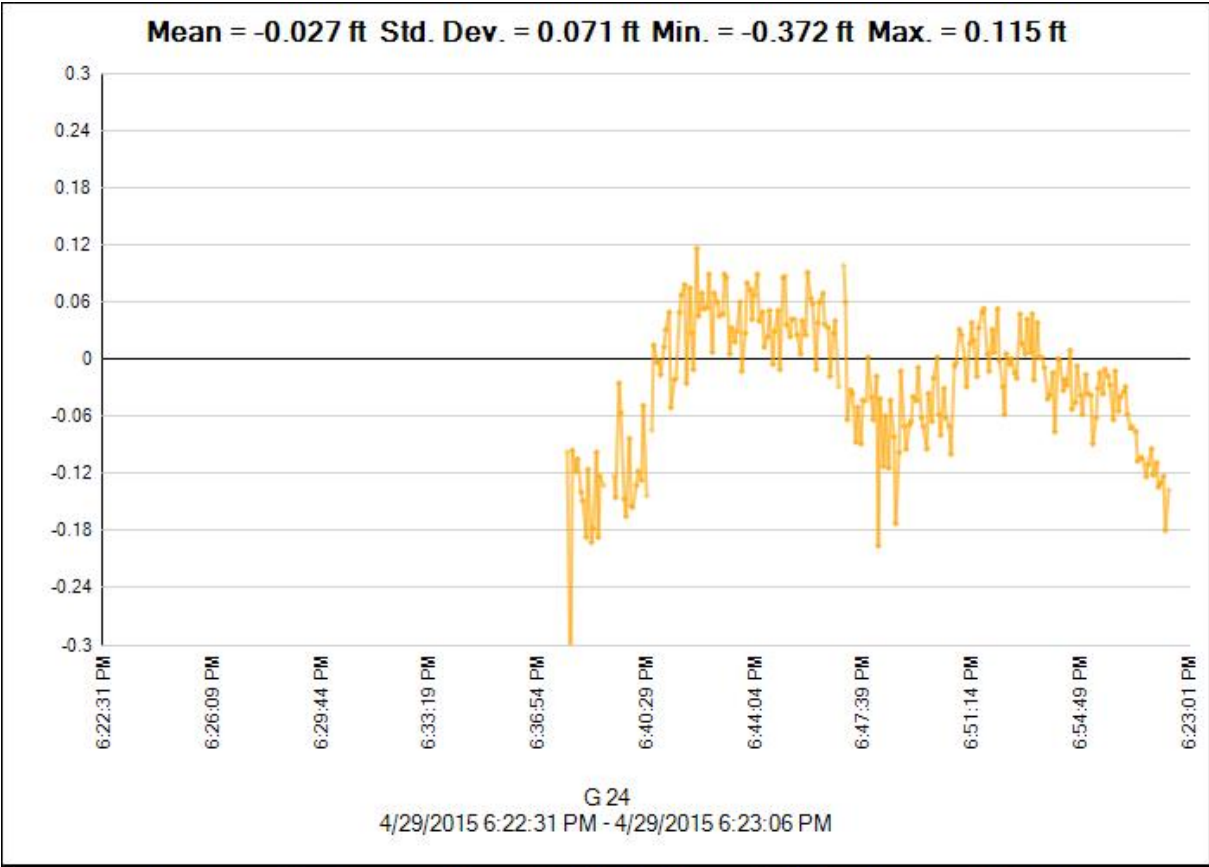
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G 2	L1			
G 6	L1 L2			
G 7	L1			
G 11	L1 L2			
G 13	L1 L2			
G 15	L1 L2			
G 17	L1 L2			
G 24	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

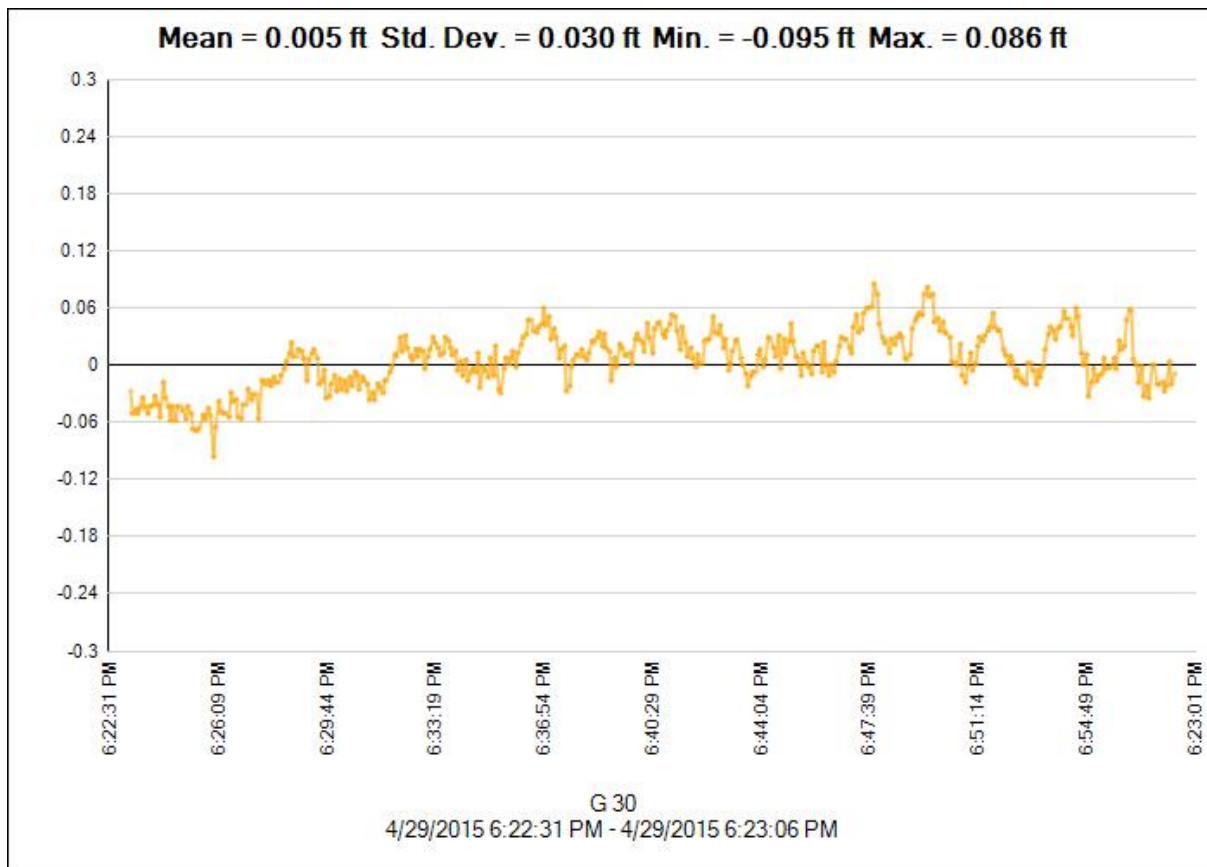
# Residuals













### Processing style

Elevation mask: 10.0 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

**AH8499 - PAG106 (5:09:28 PM-5:46:12 PM) (S2)**

Baseline observation: AH8499 --- PAG106 (B2)  
 Processed: 5/29/2015 12:56:54 PM  
 Solution type: Fixed  
 Frequency used: Dual Frequency (L1, L2)  
 Horizontal precision: 0.203 ft  
 Vertical precision: 0.153 ft  
 RMS: 0.005 ft  
 Maximum PDOP: 2.149  
 Ephemeris used: Broadcast  
 Antenna model: NGS Absolute  
 Processing start time: 4/29/2015 5:09:54 PM (Local: UTC-6hr)  
 Processing stop time: 4/29/2015 5:25:14 PM (Local: UTC-6hr)  
 Processing duration: 00:15:20  
 Processing interval: 5 seconds

**Vector Components (Mark to Mark)**

From: AH8499					
Grid		Local		Global	
Easting	992160.250 ft	Latitude	N32°13'39.03073"	Latitude	N32°13'39.03072"
Northing	447782.882 ft	Longitude	W110°58'18.65788"	Longitude	W110°58'18.65788"
Elevation	2422.647 ft	Height	2326.617 ft	Height	2326.617 ft

To: PAG106					
Grid		Local		Global	
Easting	1150826.757 ft	Latitude	N32°02'03.52008"	Latitude	N32°02'03.52008"
Northing	379254.524 ft	Longitude	W110°27'42.65047"	Longitude	W110°27'42.65047"
Elevation	4231.494 ft	Height	4140.127 ft	Height	4140.127 ft

Vector					
ΔEasting	158666.507 ft	NS Fwd Azimuth	113°51'43"	ΔX	133928.258 ft
ΔNorthing	-68528.358 ft	Ellipsoid Dist.	172822.406 ft	ΔY	-92266.754 ft
ΔElevation	1808.846 ft	ΔHeight	1813.510 ft	ΔZ	-58566.206 ft

**Standard Errors**

Vector errors:					
$\sigma \Delta$ Easting	0.081 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.064 ft
$\sigma \Delta$ Northing	0.047 ft	$\sigma$ Ellipsoid Dist.	0.082 ft	$\sigma \Delta$ Y	0.097 ft
$\sigma \Delta$ Elevation	0.078 ft	$\sigma \Delta$ Height	0.078 ft	$\sigma \Delta$ Z	0.038 ft

**Aposteriori Covariance Matrix (International foot<sup>2</sup>)**

	X	Y	Z
X	0.0003751096		
Y	-0.0002502749	0.0008712473	
Z	0.0000452049	-0.0001004729	0.0001348644

**Occupations**

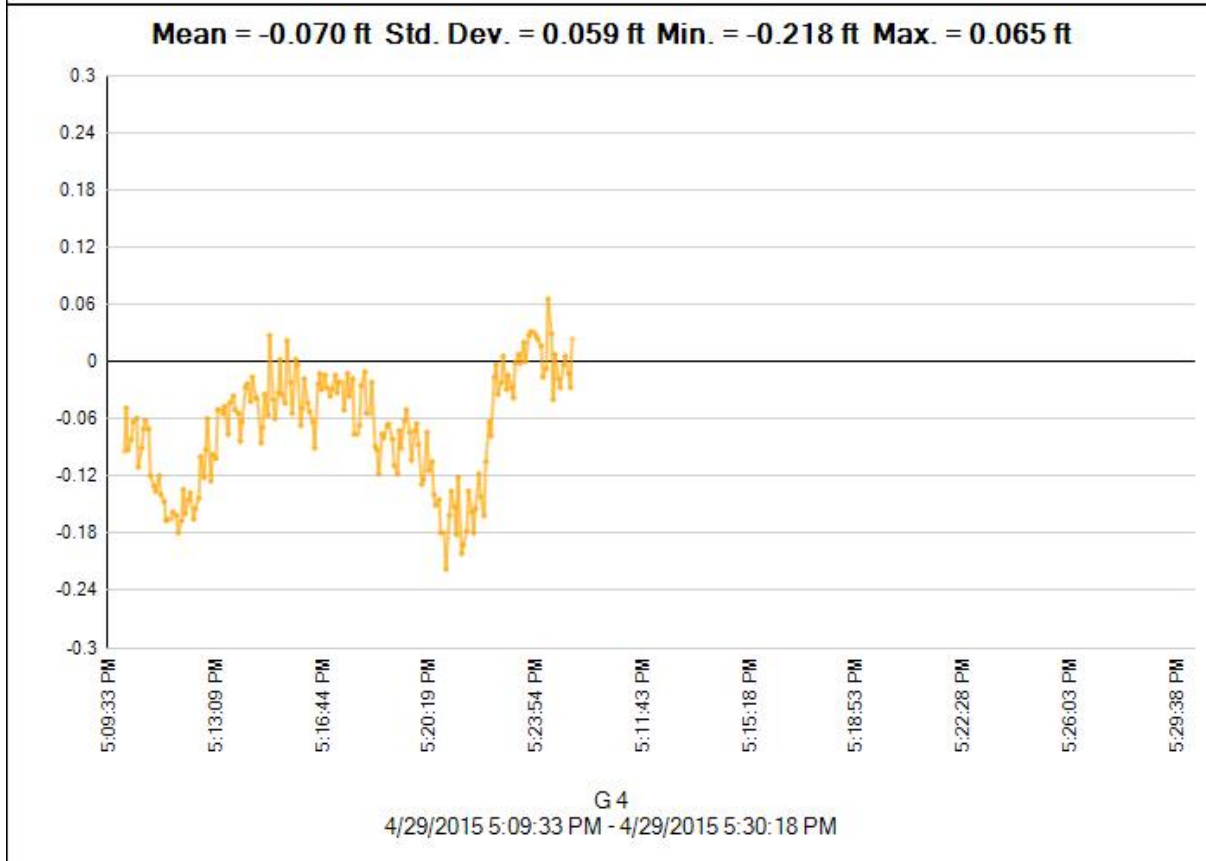
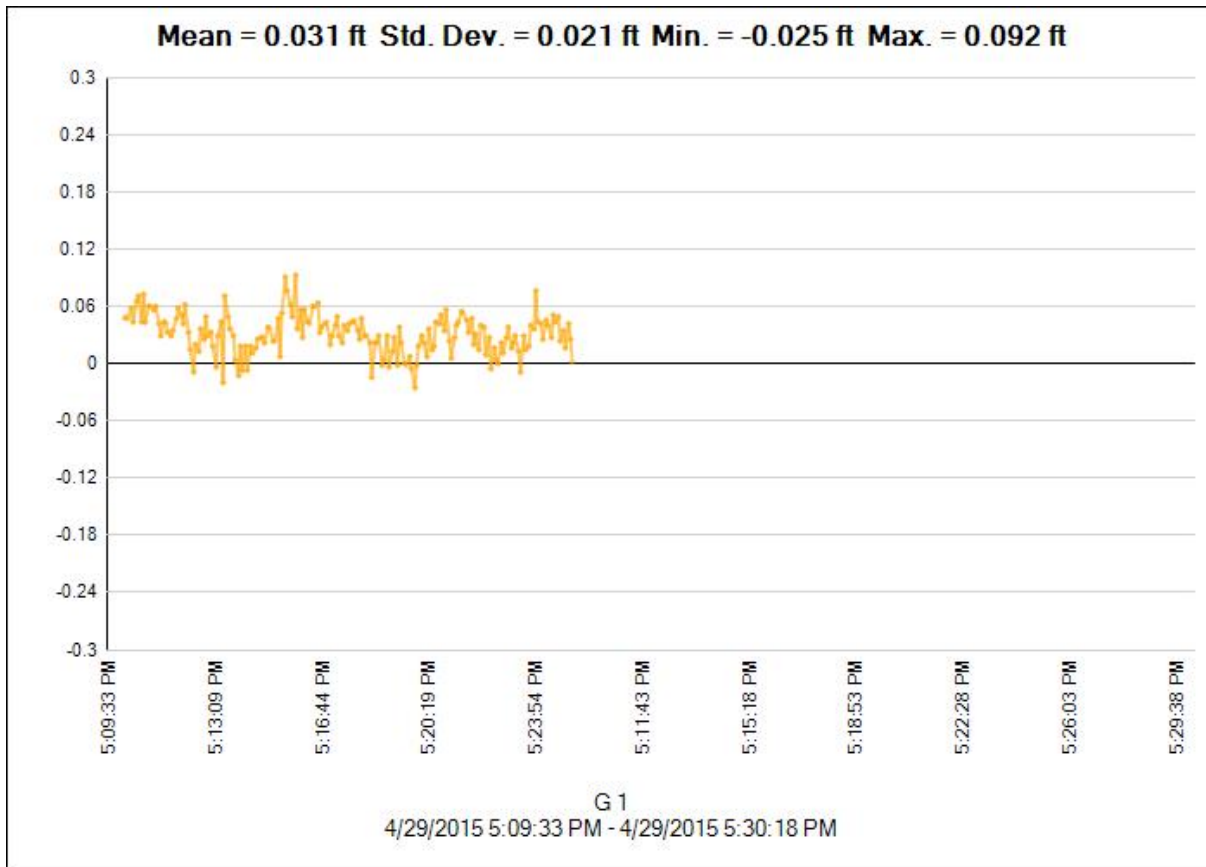
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Receiver type:	Geo Explorer 3	5700
Receiver serial number:		0220271185
Antenna type:	702 Rev 3.00	Zephyr
Antenna serial number:	-----	00000000
Antenna height (measured):	4.908 ft	5.249 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

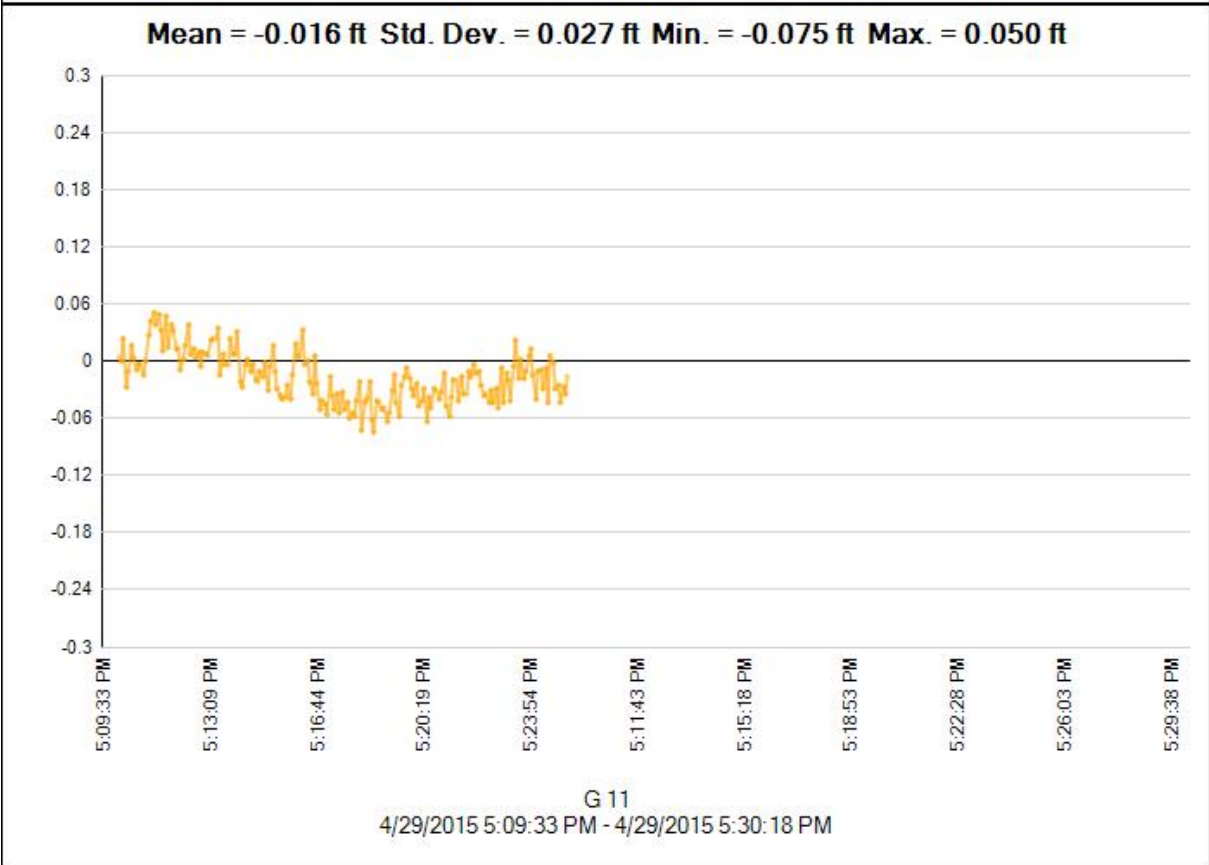
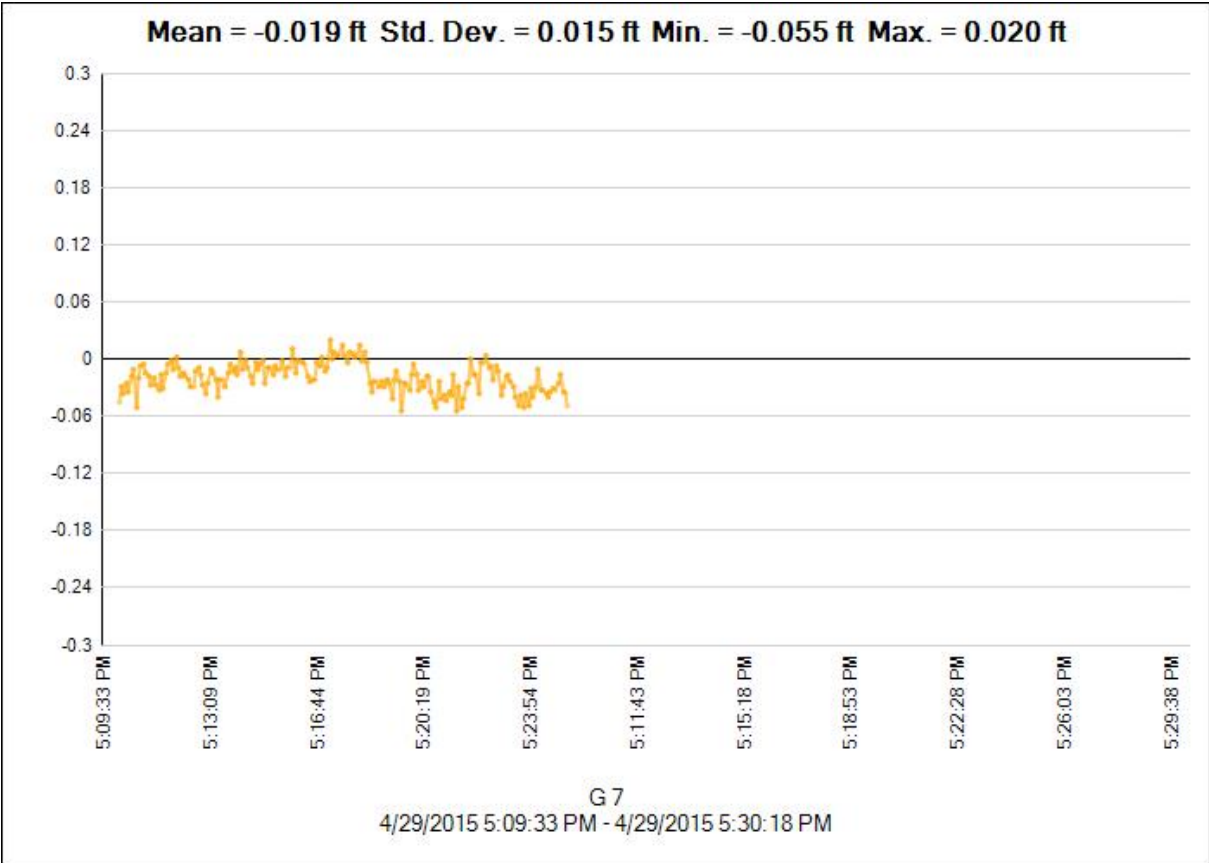


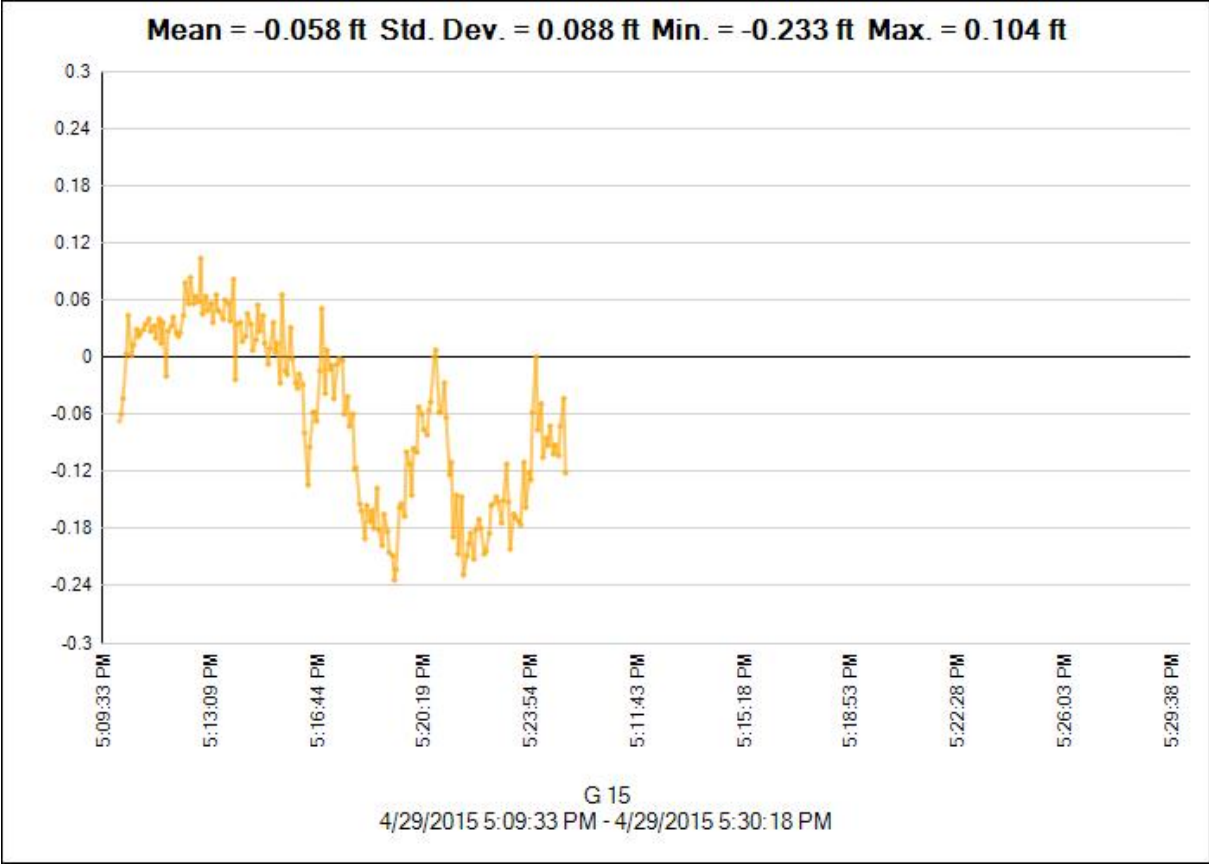
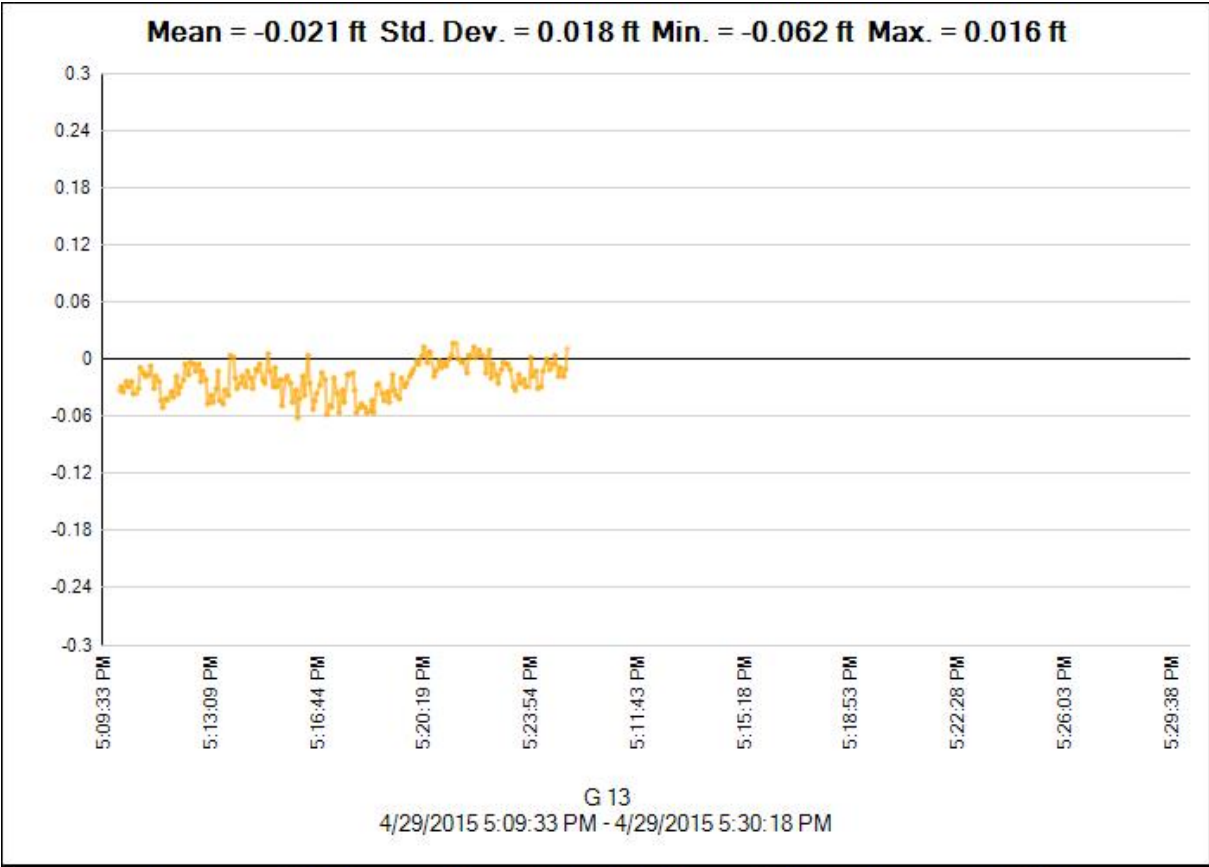
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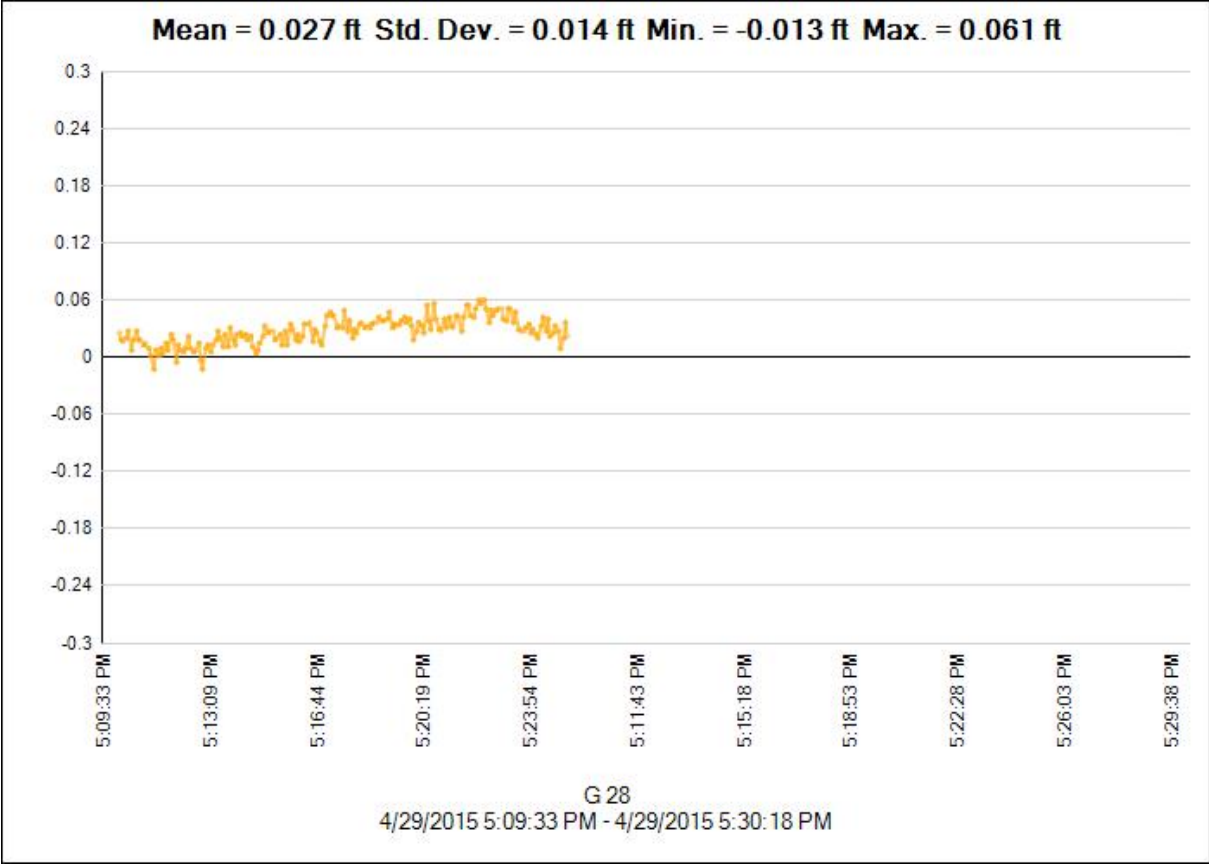
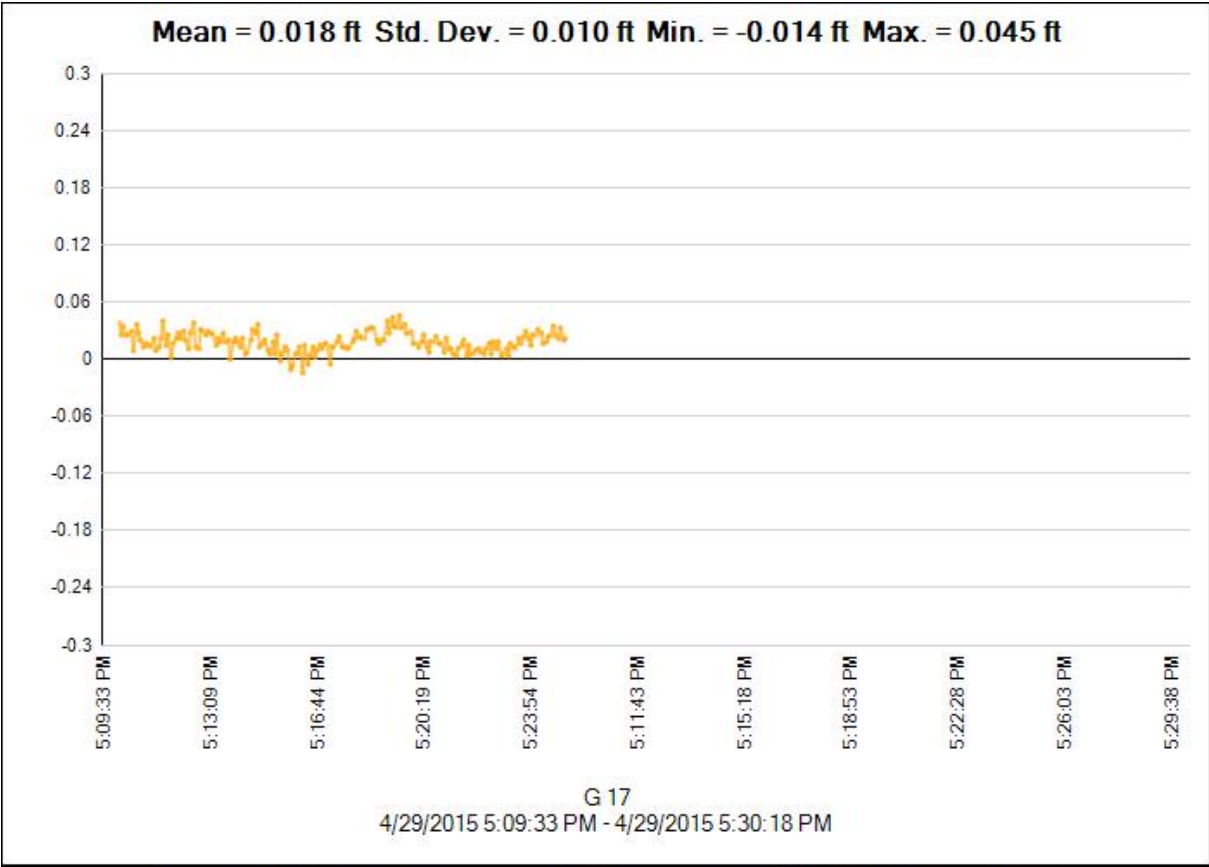
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G 4	L1 L2			
G 6	L1 L2			
G 7	L1 L2			
G 11	L1 L2			
G 13	L1 L2			
G 15	L1 L2			
G 17	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

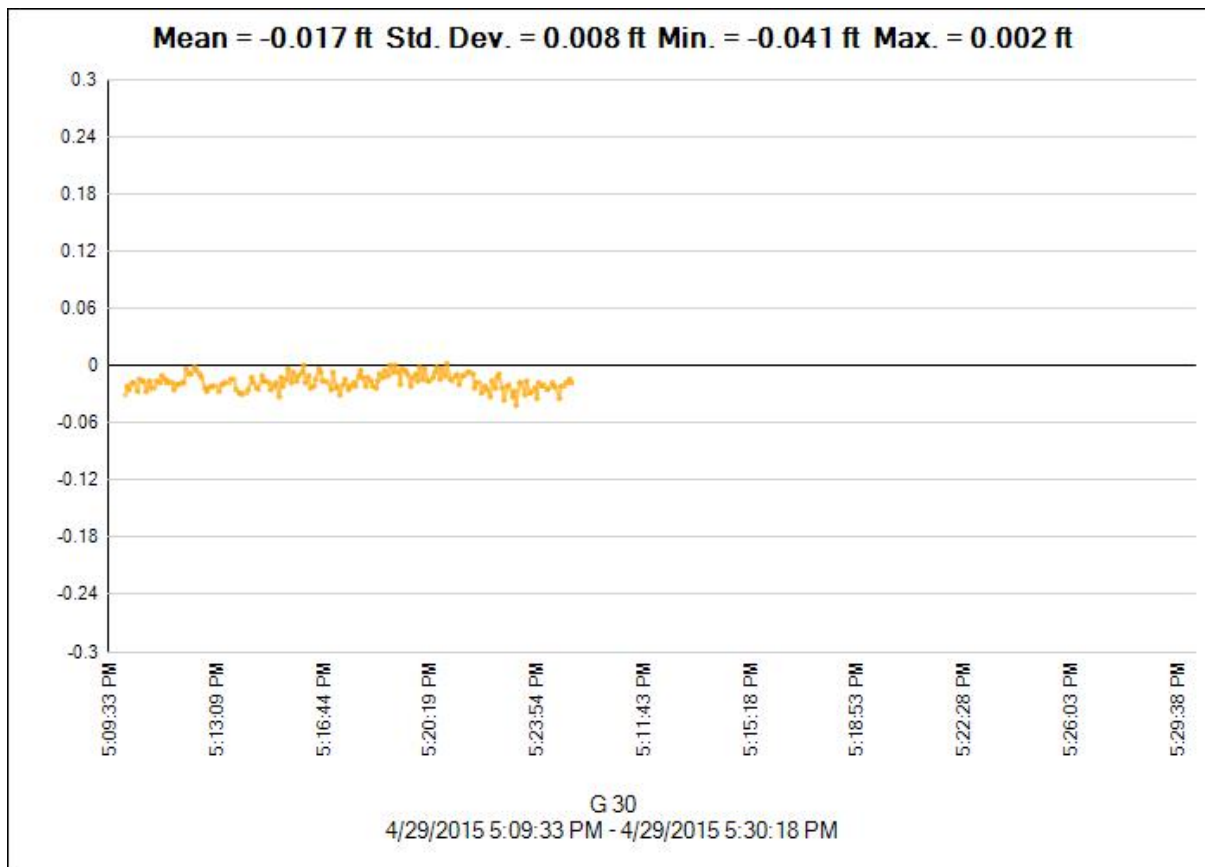
# Residuals













### Processing style

Elevation mask: 10.0 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

### AH8499 - PAG105 (3:35:56 PM-4:10:07 PM) (S3)

**Baseline observation:** AH8499 --- PAG105 (B3)  
**Processed:** 5/29/2015 12:53:20 PM  
**Solution type:** Fixed  
**Frequency used:** Dual Frequency (L1, L2)  
**Horizontal precision:** 0.064 ft  
**Vertical precision:** 0.112 ft  
**RMS:** 0.006 ft  
**Maximum PDOP:** 1.768  
**Ephemeris used:** Broadcast  
**Antenna model:** NGS Absolute  
**Processing start time:** 4/29/2015 3:41:49 PM (Local: UTC-6hr)  
**Processing stop time:** 4/29/2015 4:10:04 PM (Local: UTC-6hr)  
**Processing duration:** 00:28:15  
**Processing interval:** 5 seconds

#### Vector Components (Mark to Mark)

From: AH8499					
Grid		Local		Global	
<b>Easting</b>	992160.250 ft	<b>Latitude</b>	N32°13'39.03073"	<b>Latitude</b>	N32°13'39.03072"
<b>Northing</b>	447782.882 ft	<b>Longitude</b>	W110°58'18.65788"	<b>Longitude</b>	W110°58'18.65788"
<b>Elevation</b>	2422.647 ft	<b>Height</b>	2326.617 ft	<b>Height</b>	2326.617 ft

To: PAG105					
Grid		Local		Global	
<b>Easting</b>	1105673.793 ft	<b>Latitude</b>	N32°07'07.39059"	<b>Latitude</b>	N32°07'07.39059"
<b>Northing</b>	409390.042 ft	<b>Longitude</b>	W110°36'22.82636"	<b>Longitude</b>	W110°36'22.82636"
<b>Elevation</b>	3337.086 ft	<b>Height</b>	3244.933 ft	<b>Height</b>	3244.932 ft

Vector					
<b>ΔEasting</b>	113513.543 ft	<b>NS Fwd Azimuth</b>	109°11'23"	<b>ΔX</b>	97993.778 ft
<b>ΔNorthing</b>	-38392.840 ft	<b>Ellipsoid Dist.</b>	119825.568 ft	<b>ΔY</b>	-60579.828 ft
<b>ΔElevation</b>	914.439 ft	<b>ΔHeight</b>	918.315 ft	<b>ΔZ</b>	-33016.605 ft

**Standard Errors**

Vector errors:					
$\sigma \Delta$ Easting	0.019 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.026 ft
$\sigma \Delta$ Northing	0.026 ft	$\sigma$ Ellipsoid Dist.	0.020 ft	$\sigma \Delta$ Y	0.055 ft
$\sigma \Delta$ Elevation	0.057 ft	$\sigma \Delta$ Height	0.057 ft	$\sigma \Delta$ Z	0.024 ft

**Aposteriori Covariance Matrix (International foot<sup>2</sup>)**

	X	Y	Z
X	0.0000617625		
Y	0.0000864217	0.0002840513	
Z	-0.0000198159	-0.0000699249	0.0000554072

**Occupations**

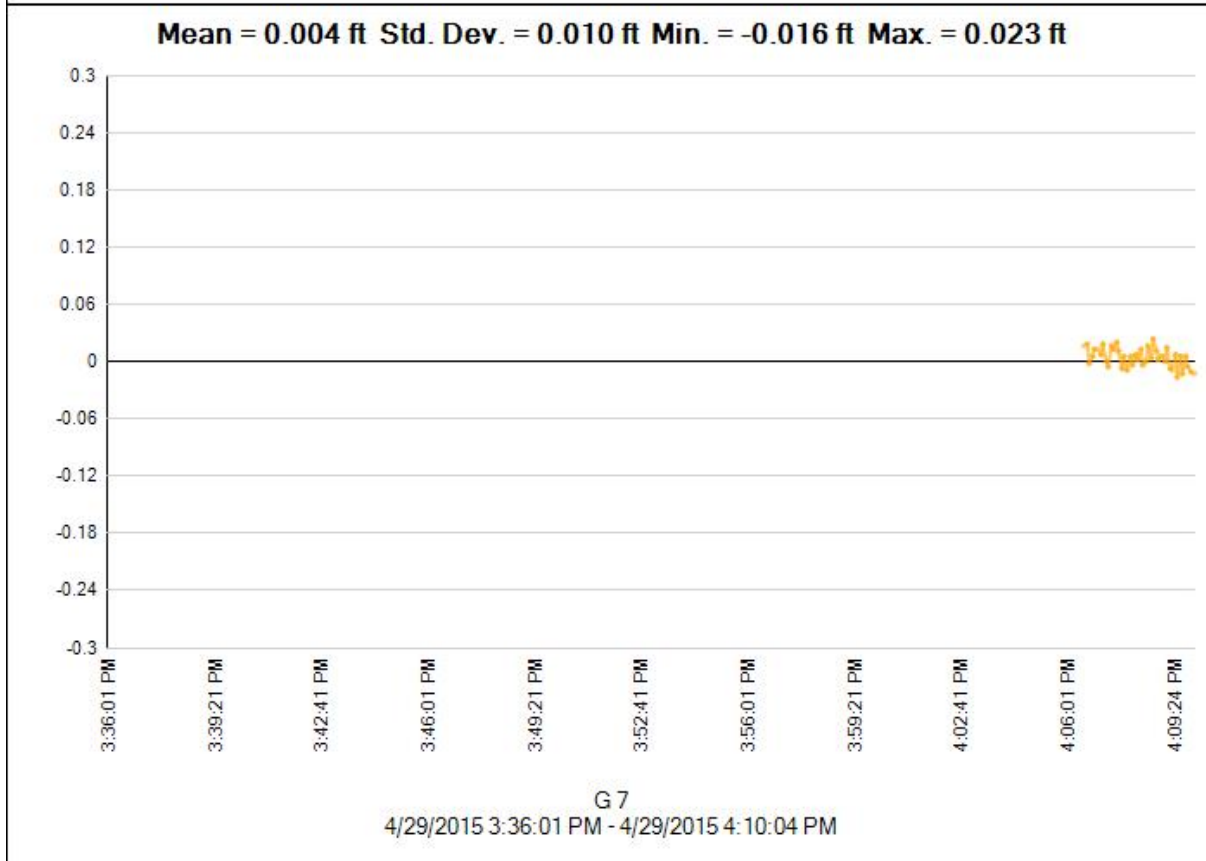
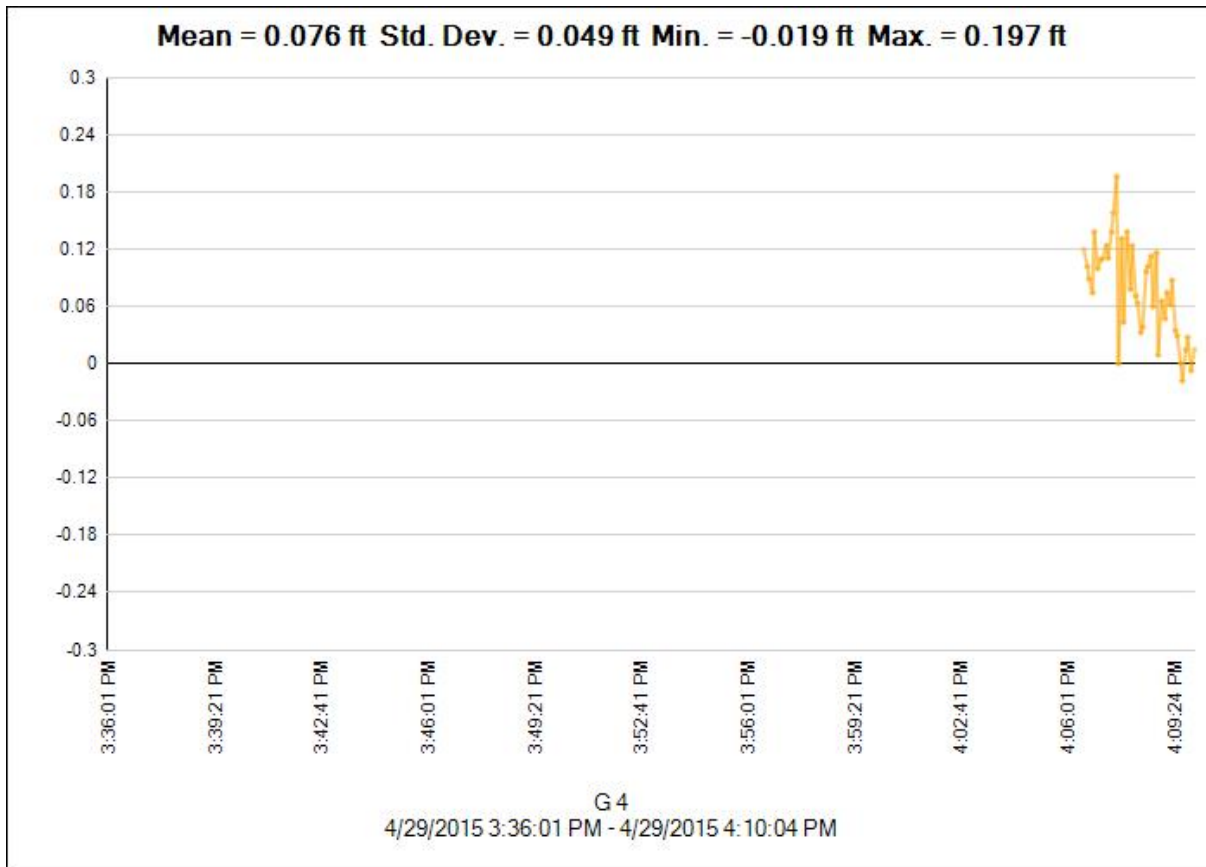
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Receiver type:	Geo Explorer 3	5700
Receiver serial number:		0220271185
Antenna type:	702 Rev 3.00	Zephyr
Antenna serial number:	-----	00000000
Antenna height (measured):	4.908 ft	5.322 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

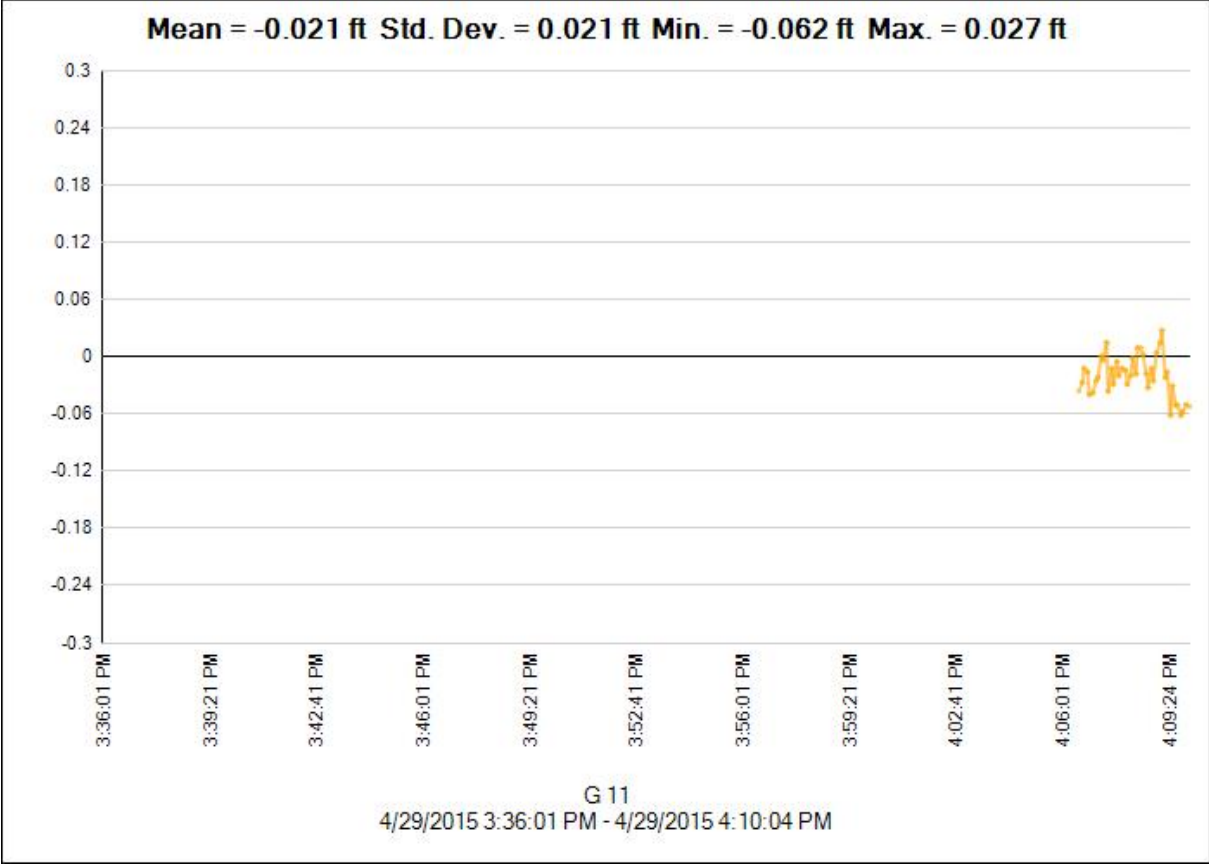
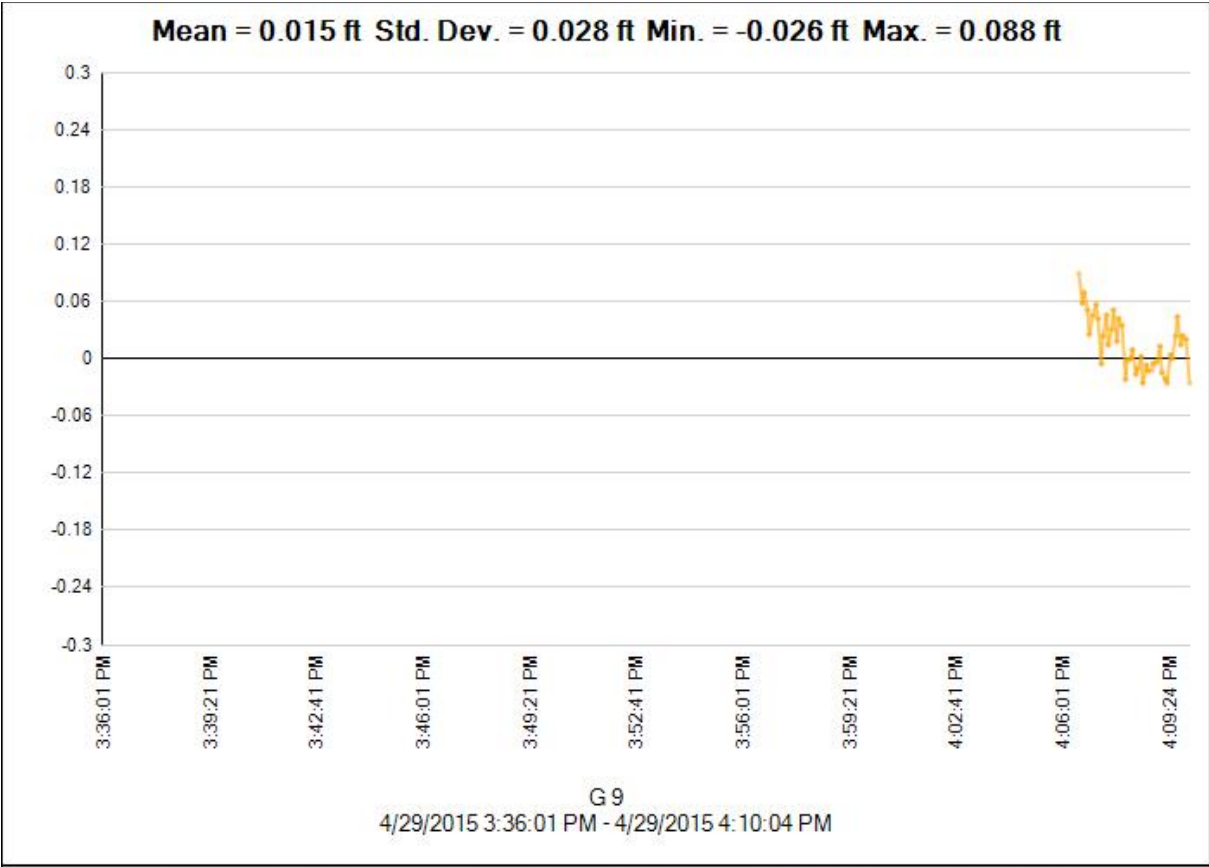


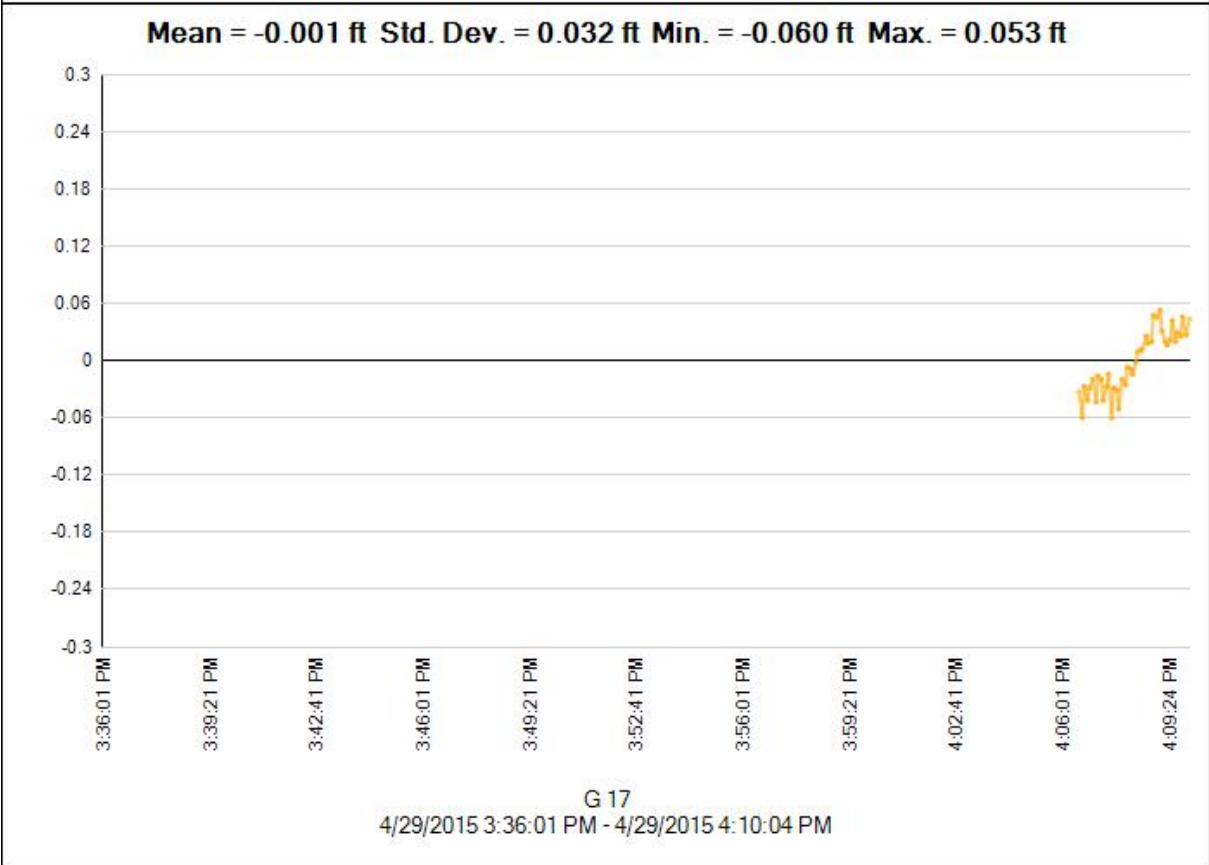
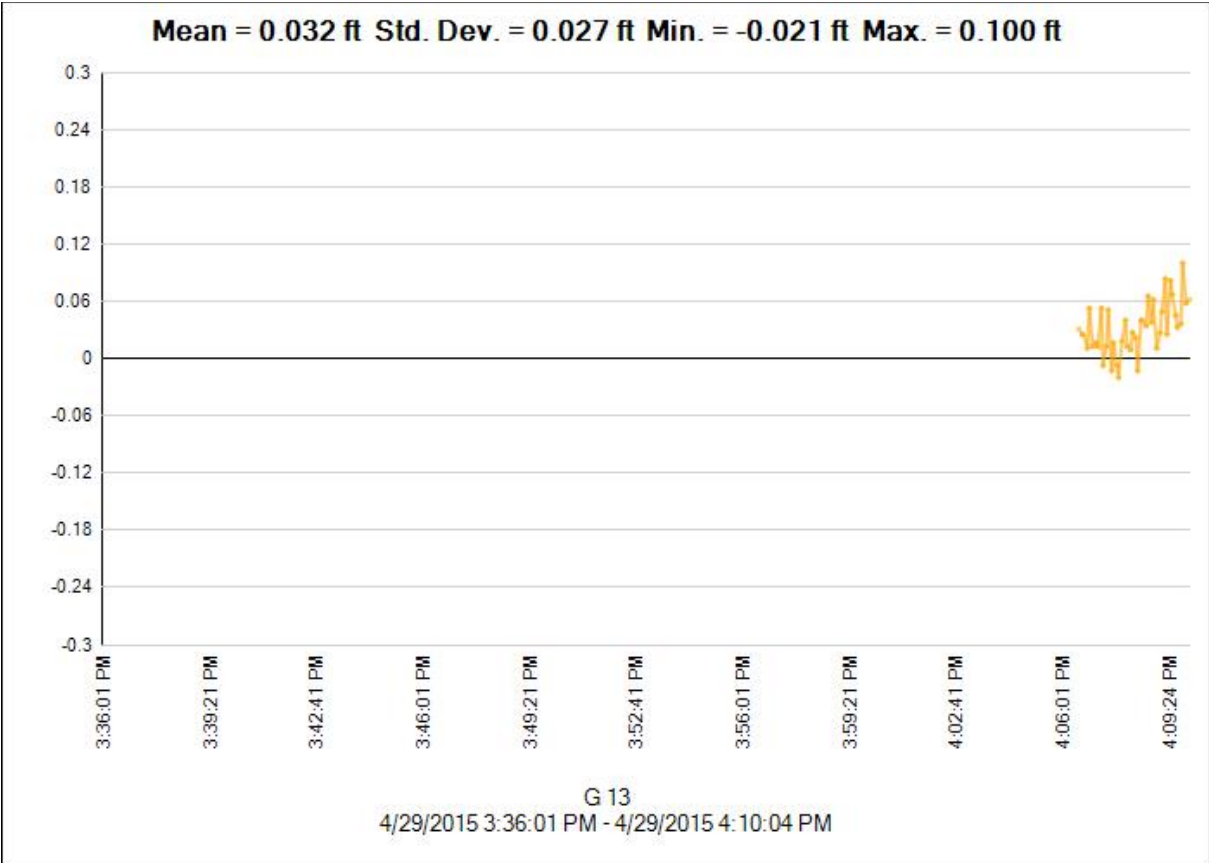
# Tracking Summary

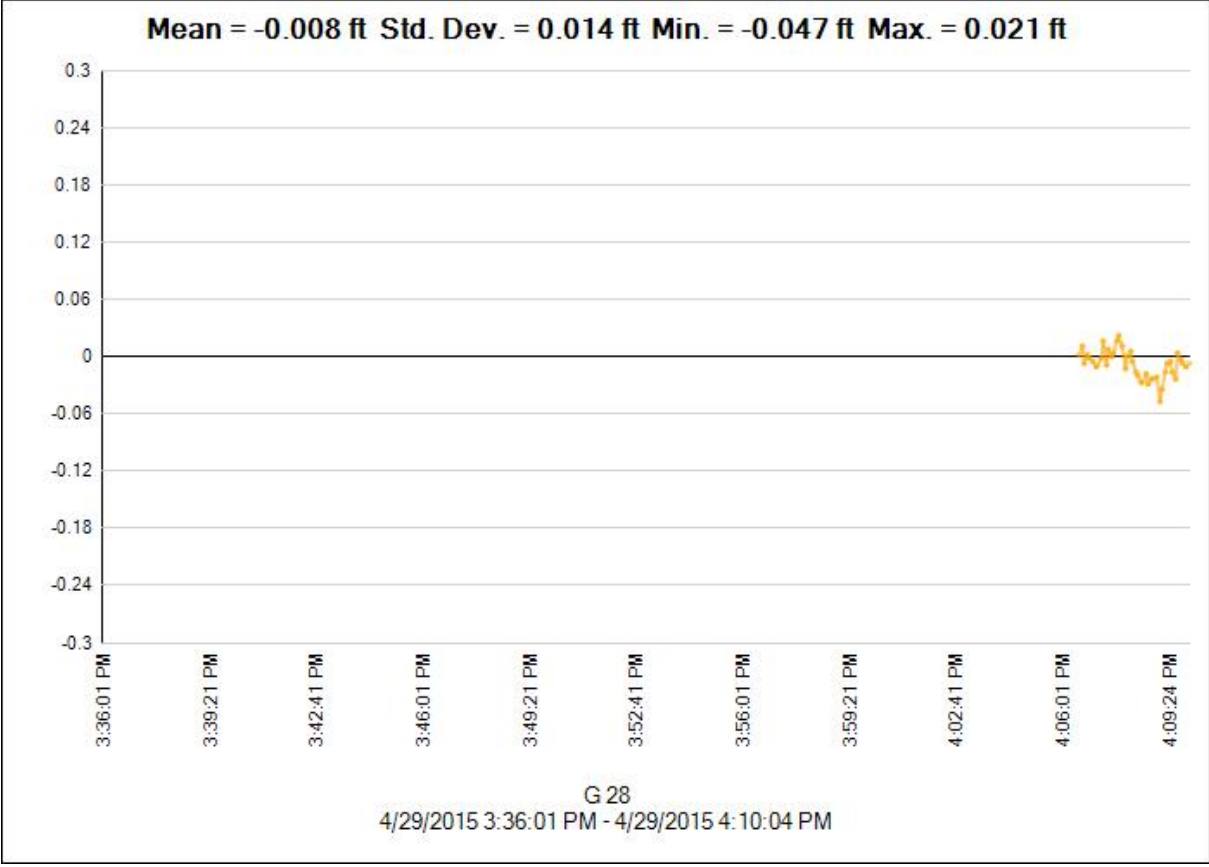
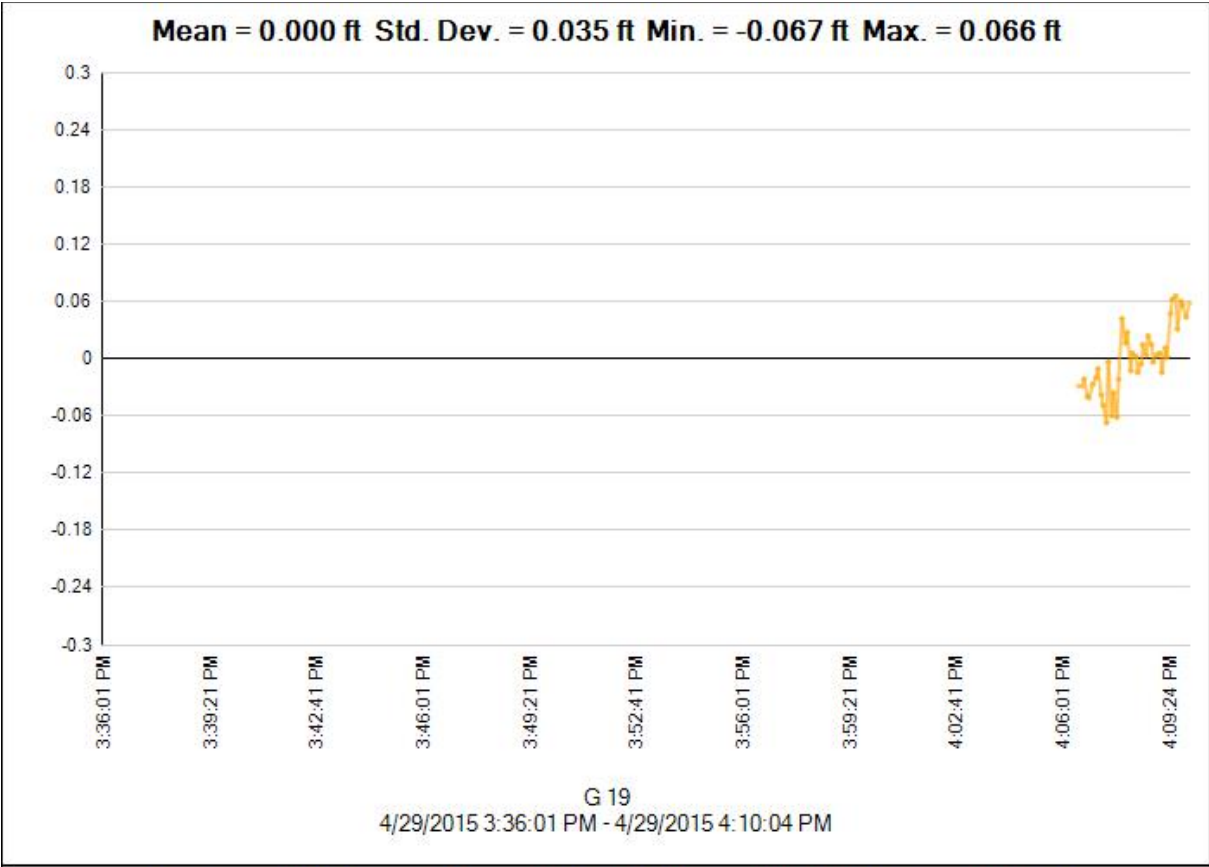
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G 4	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 11	L1 L2			
G 13	L1 L2			
G 17	L1 L2			
G 19	L1 L2			
G 23	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

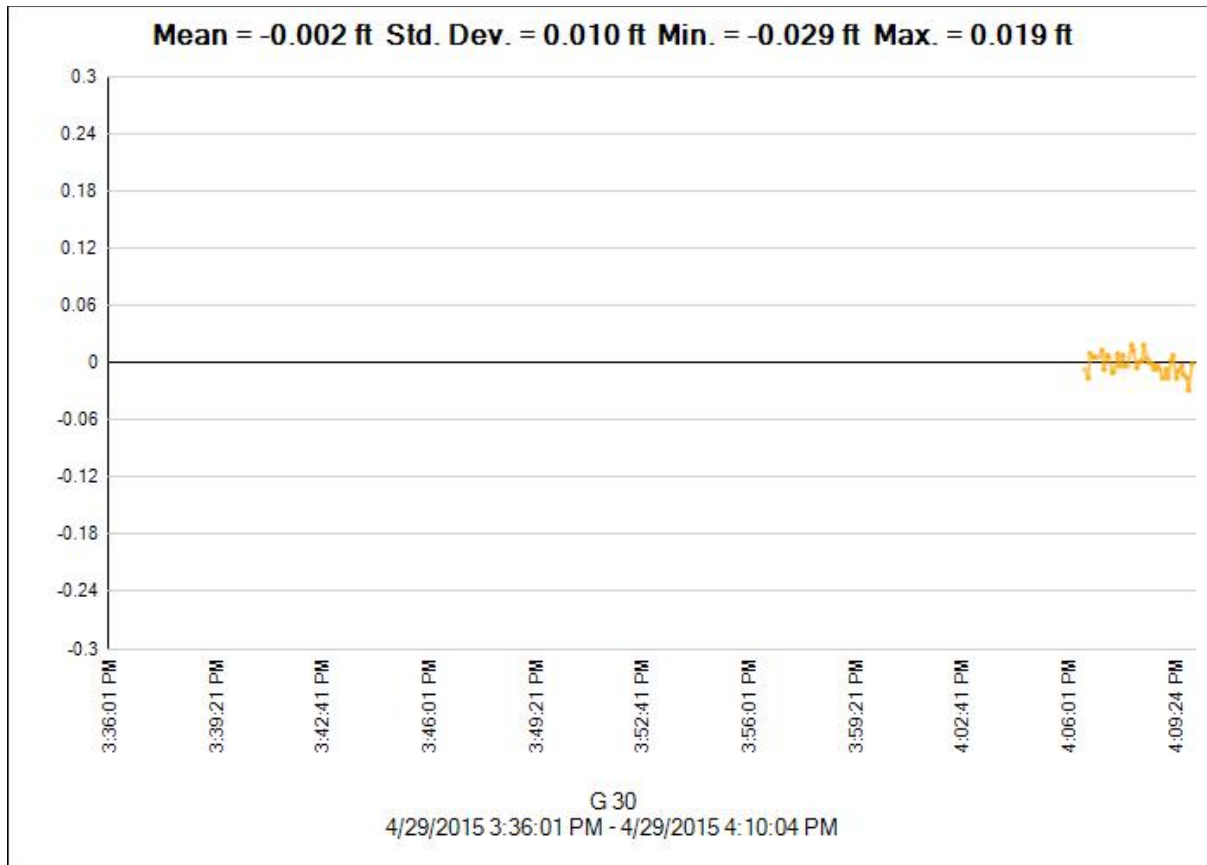
# Residuals













### Processing style

Elevation mask: 10.0 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

### AH8499 - PAG120 (2:12:40 PM-2:48:13 PM) (S4)

**Baseline observation:** AH8499 --- PAG120 (B4)  
**Processed:** 5/29/2015 12:53:20 PM  
**Solution type:** Fixed  
**Frequency used:** Dual Frequency (L1, L2)  
**Horizontal precision:** 0.062 ft  
**Vertical precision:** 0.108 ft  
**RMS:** 0.006 ft  
**Maximum PDOP:** 2.379  
**Ephemeris used:** Broadcast  
**Antenna model:** NGS Absolute  
**Processing start time:** 4/29/2015 2:13:04 PM (Local: UTC-6hr)  
**Processing stop time:** 4/29/2015 2:48:04 PM (Local: UTC-6hr)  
**Processing duration:** 00:35:00  
**Processing interval:** 5 seconds

#### Vector Components (Mark to Mark)

From: AH8499					
Grid		Local		Global	
<b>Easting</b>	992160.250 ft	<b>Latitude</b>	N32°13'39.03073"	<b>Latitude</b>	N32°13'39.03072"
<b>Northing</b>	447782.882 ft	<b>Longitude</b>	W110°58'18.65788"	<b>Longitude</b>	W110°58'18.65788"
<b>Elevation</b>	2422.647 ft	<b>Height</b>	2326.617 ft	<b>Height</b>	2326.617 ft

To: PAG120					
Grid		Local		Global	
<b>Easting</b>	1049253.070 ft	<b>Latitude</b>	N32°11'40.88896"	<b>Latitude</b>	N32°11'40.88896"
<b>Northing</b>	436393.592 ft	<b>Longitude</b>	W110°47'15.47527"	<b>Longitude</b>	W110°47'15.47527"
<b>Elevation</b>	2842.951 ft	<b>Height</b>	2748.535 ft	<b>Height</b>	2748.535 ft

Vector					
<b>ΔEasting</b>	57092.820 ft	<b>NS Fwd Azimuth</b>	101°47'07"	<b>ΔX</b>	50848.156 ft
<b>ΔNorthing</b>	-11389.290 ft	<b>Ellipsoid Dist.</b>	58216.692 ft	<b>ΔY</b>	-26590.768 ft
<b>ΔElevation</b>	420.304 ft	<b>ΔHeight</b>	421.917 ft	<b>ΔZ</b>	-9878.087 ft

**Standard Errors**

Vector errors:					
$\sigma \Delta$ Easting	0.022 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.024 ft
$\sigma \Delta$ Northing	0.017 ft	$\sigma$ Ellipsoid Dist.	0.020 ft	$\sigma \Delta$ Y	0.046 ft
$\sigma \Delta$ Elevation	0.055 ft	$\sigma \Delta$ Height	0.055 ft	$\sigma \Delta$ Z	0.034 ft

**Aposteriori Covariance Matrix (International foot<sup>2</sup>)**

	X	Y	Z
X	0.0000531316		
Y	0.0000369932	0.0001951416	
Z	-0.0000079072	-0.0001232937	0.0001059725

**Occupations**

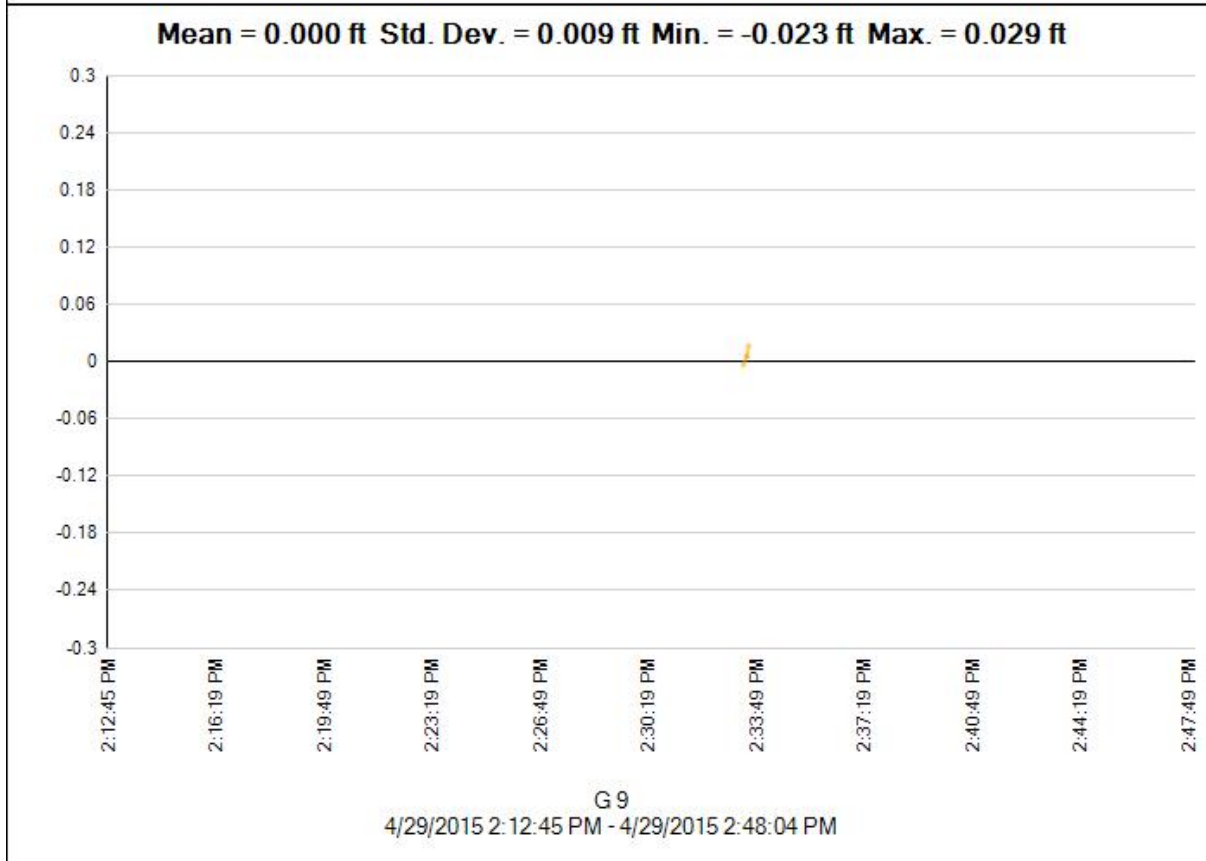
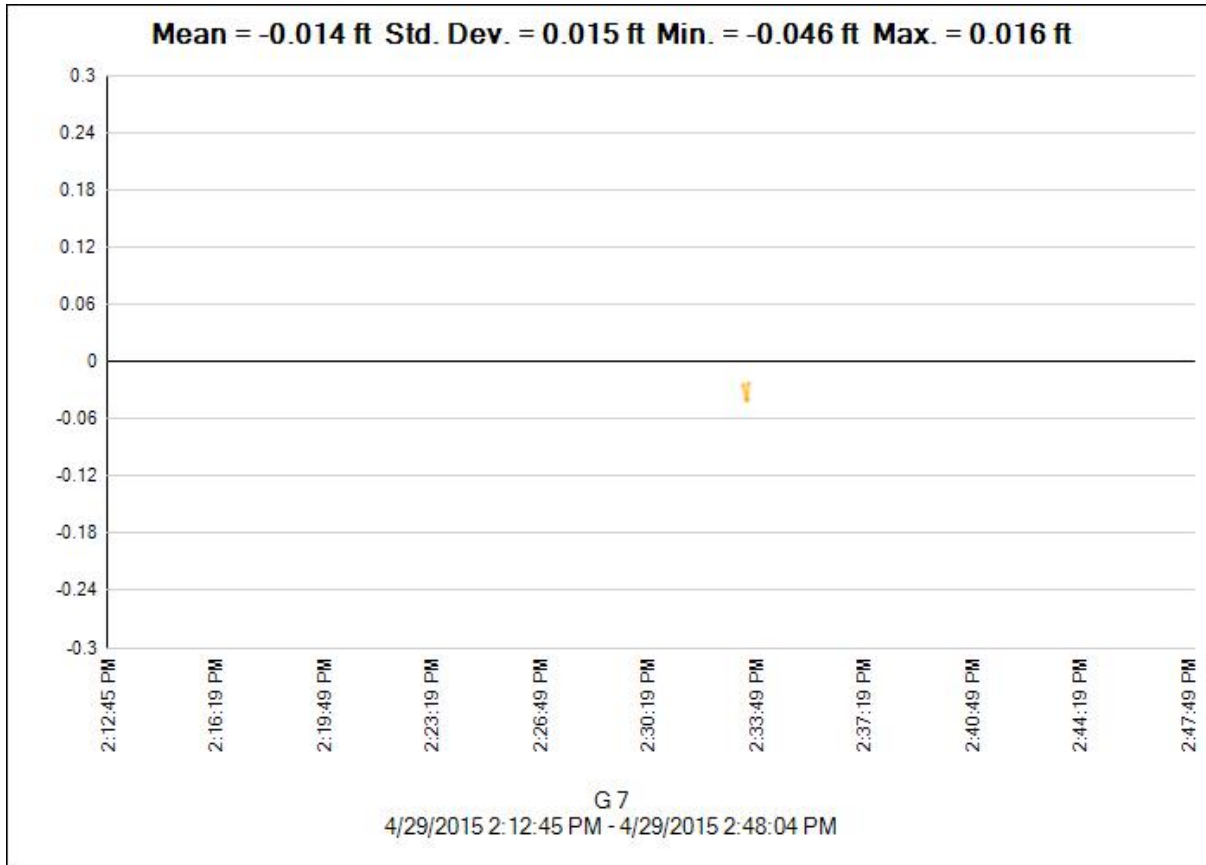
	From	To
Point ID:	AH8499	PAG120
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191190 (resampled).15o	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851190.t00
Receiver type:	Geo Explorer 3	5700
Receiver serial number:		0220271185
Antenna type:	702 Rev 3.00	Zephyr
Antenna serial number:	-----	00000000
Antenna height (measured):	4.908 ft	5.515 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

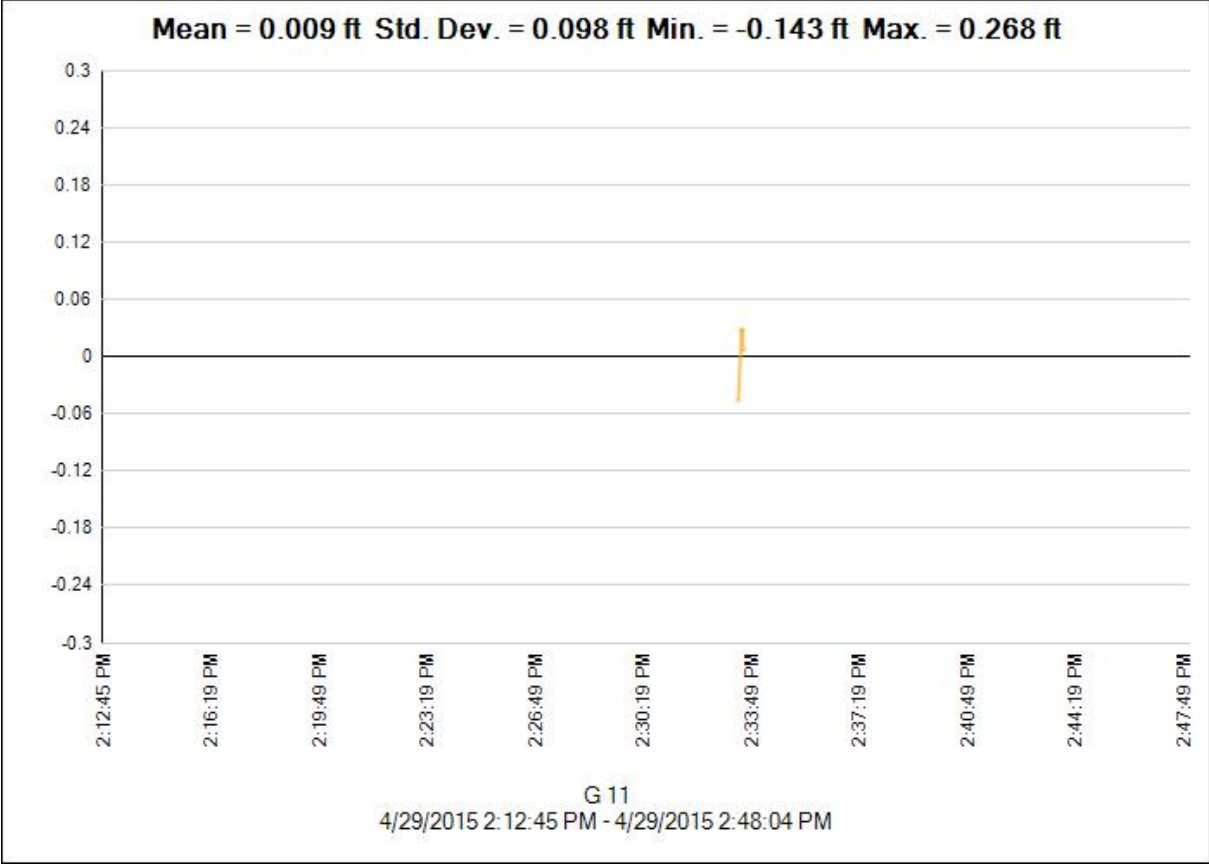
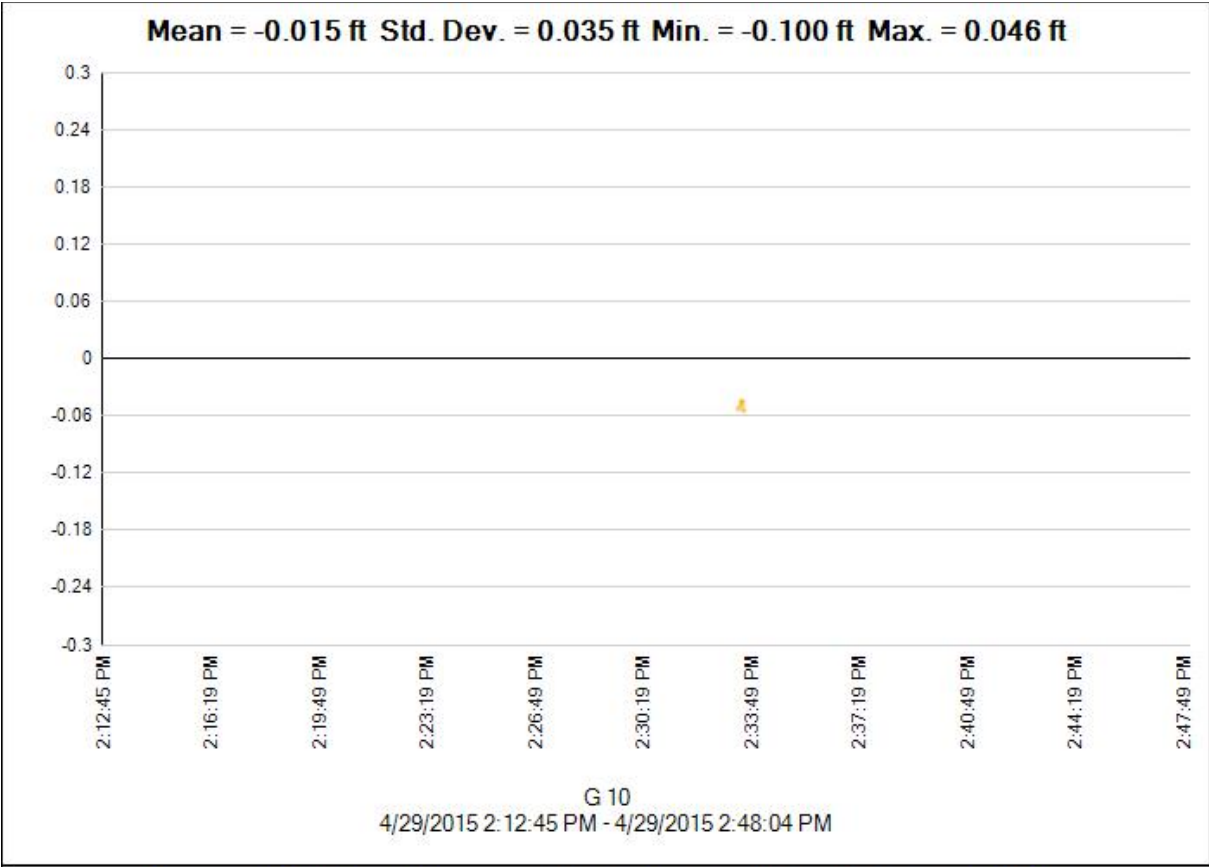


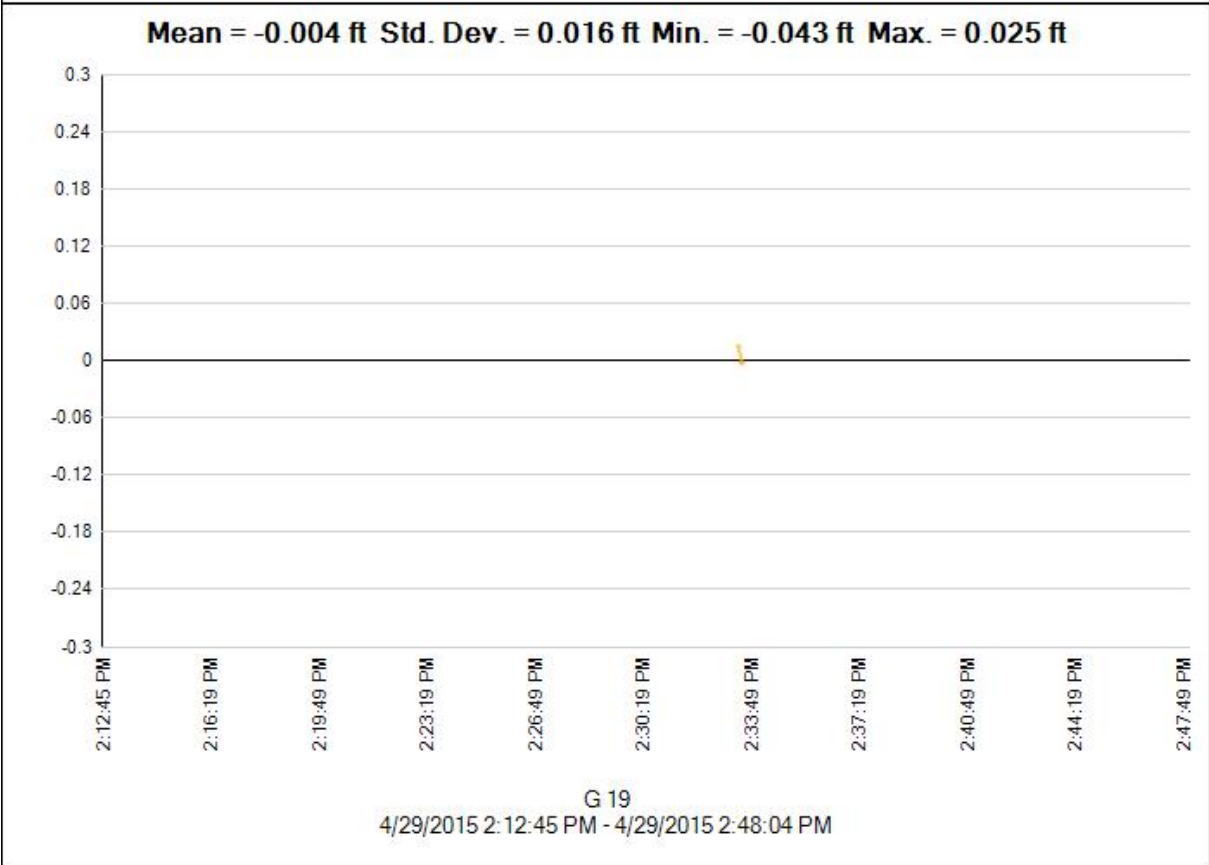
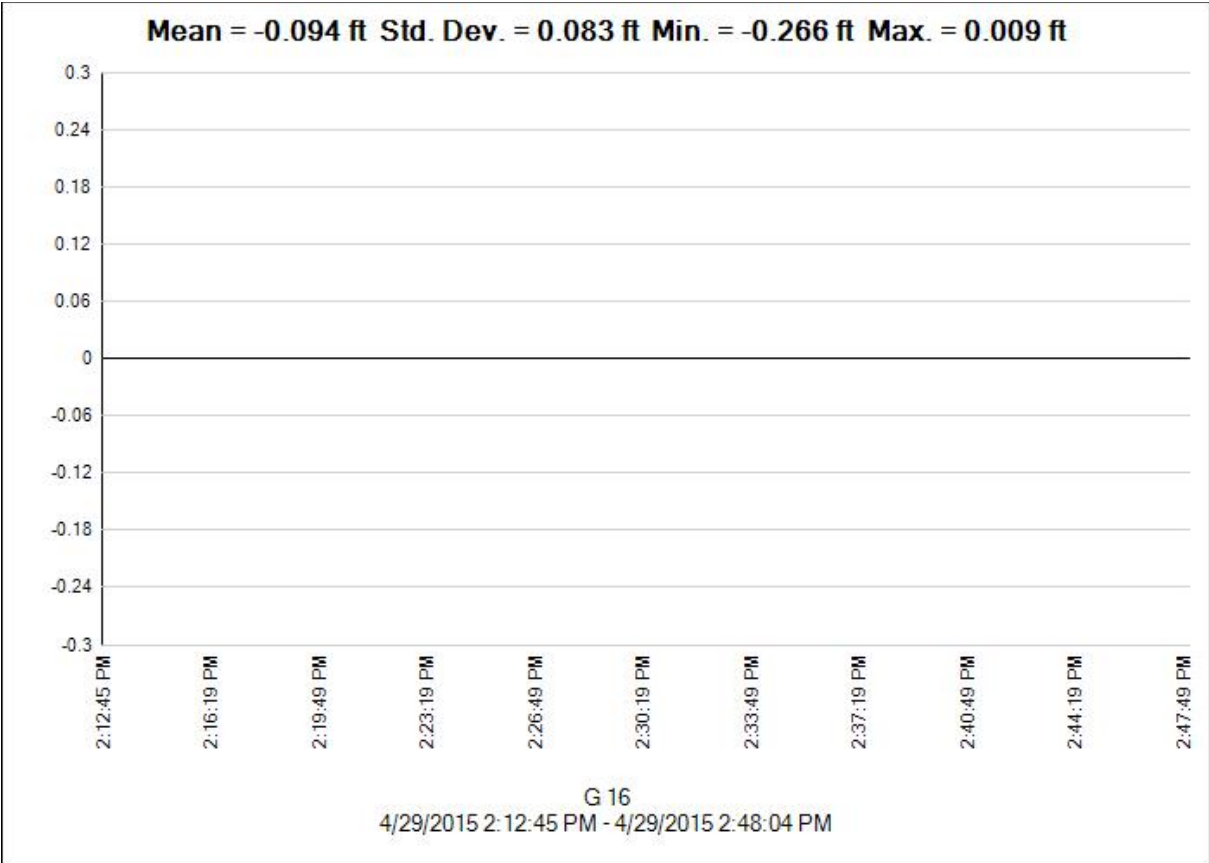
# Tracking Summary

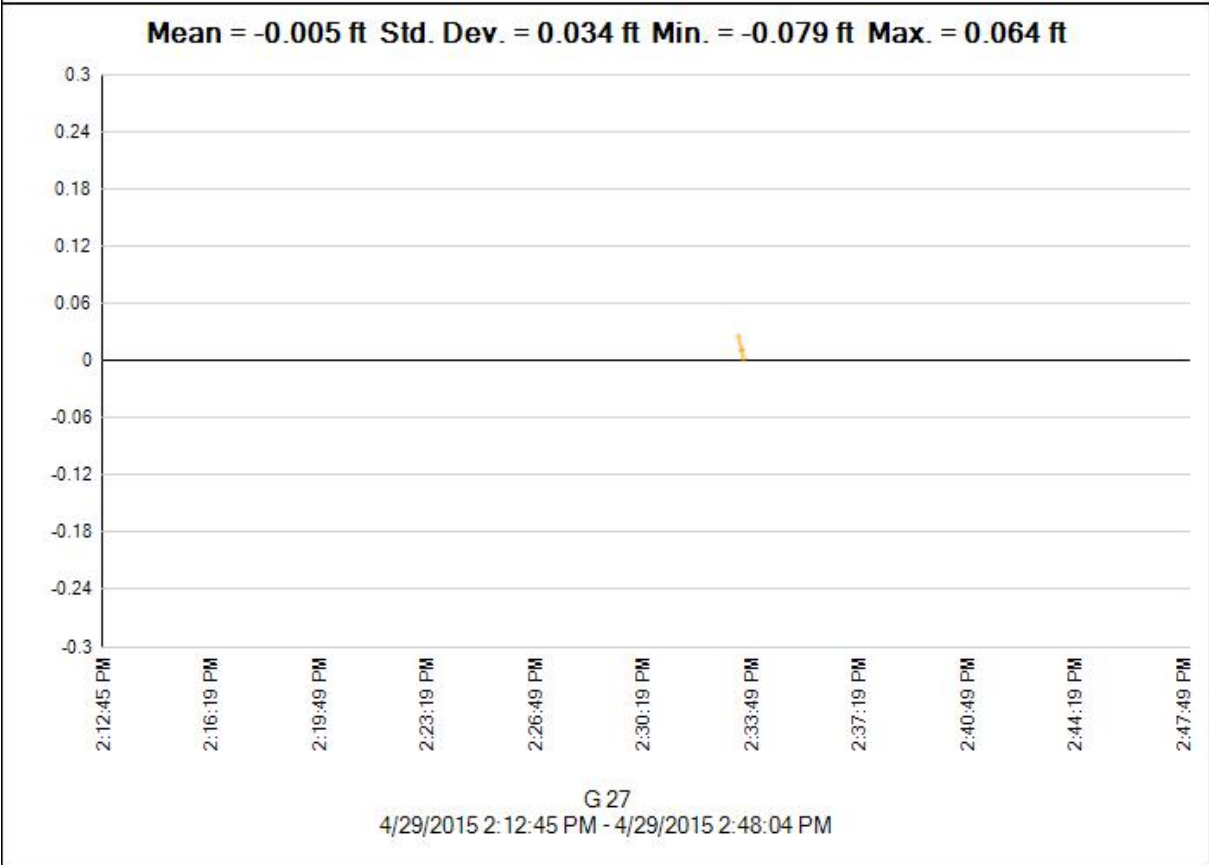
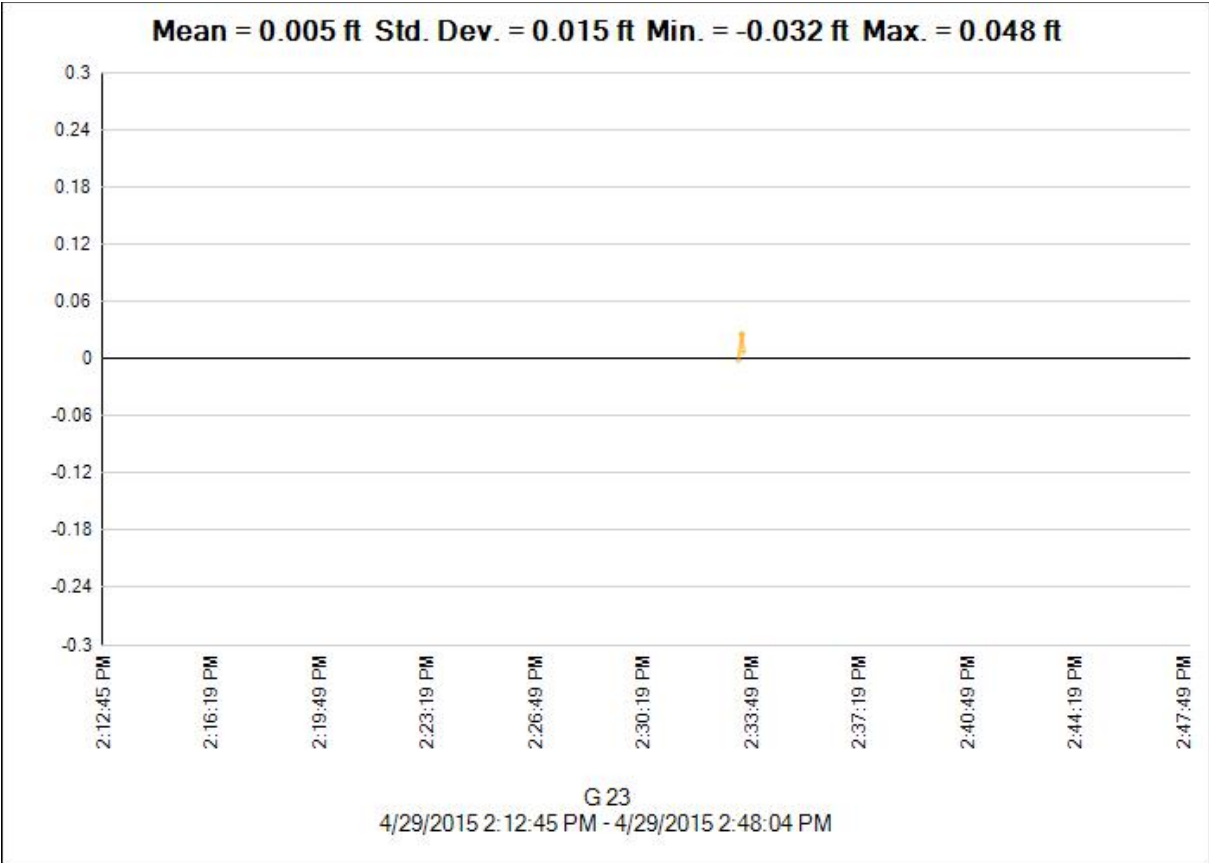
SV	4/29/2015 2:12:40 PM	Duration: 00:35:33	Major interval: 00:01:00	4/29/2015 2:48:13 PM
G 5	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 11	L1 L2			
G 16	L1 L2			
G 19	L1 L2			
G 20	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

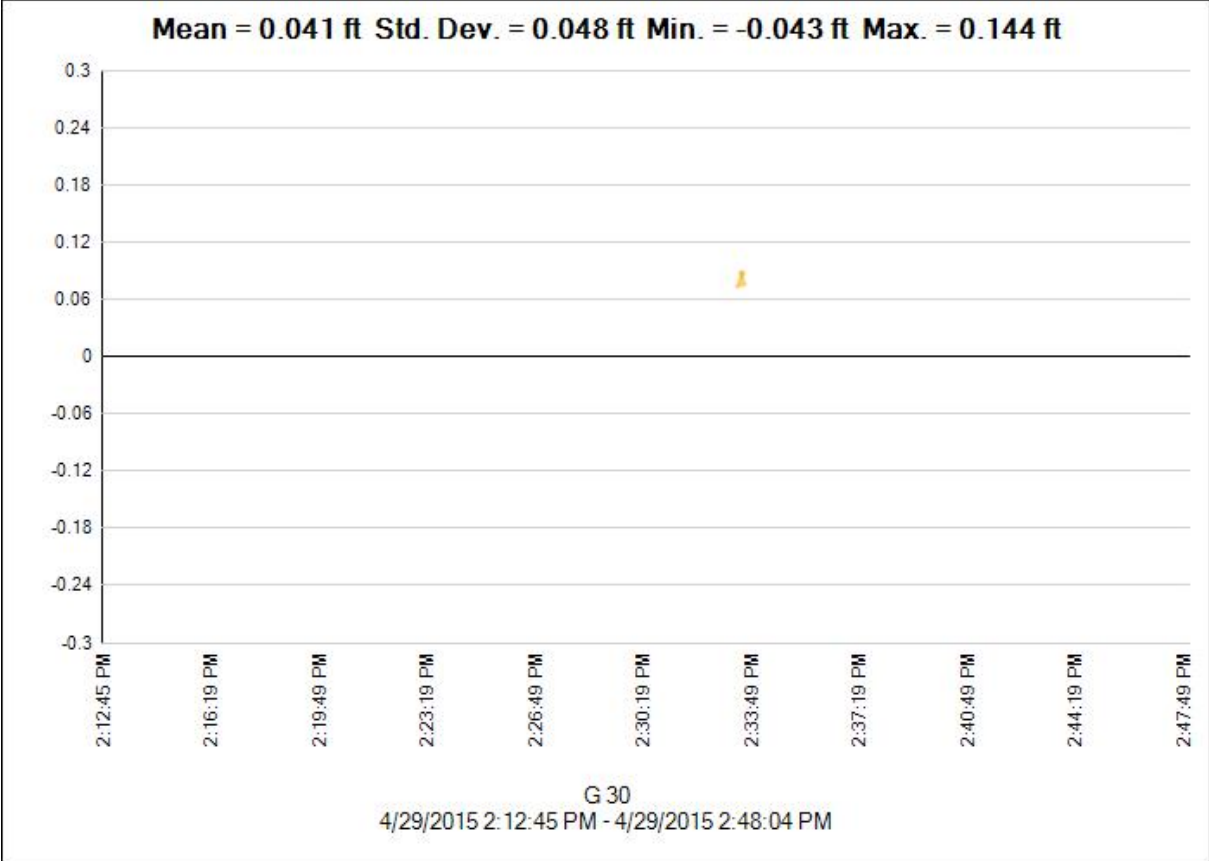
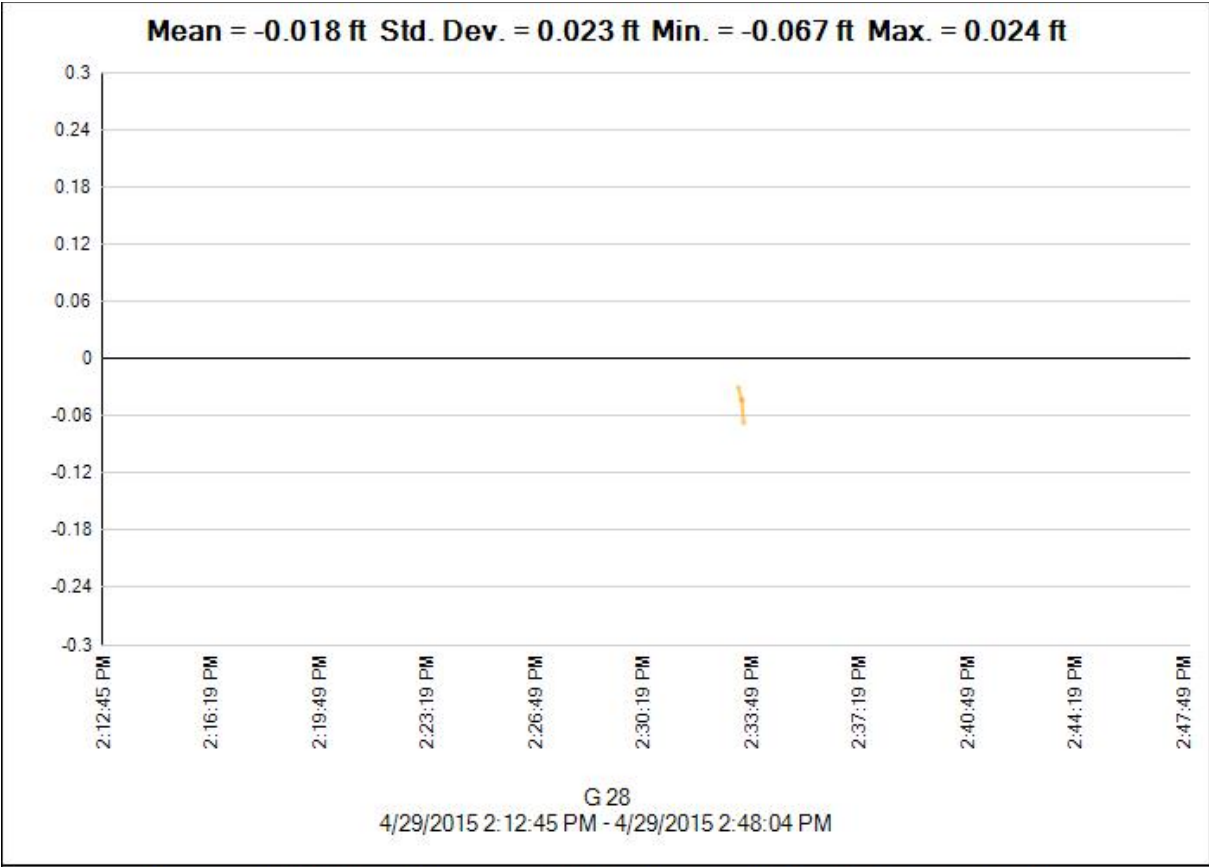
# Residuals













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**Processing style**

Elevation mask: 10.0 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

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**AH8499 - PAG109 (6:04:28 PM-6:40:34 PM) (S5)**

---

Baseline observation: AH8499 --- PAG109 (B5)  
Processed: 5/29/2015 12:58:45 PM  
Solution type: Fixed  
Frequency used: Dual Frequency (L1, L2)  
Horizontal precision: 0.041 ft  
Vertical precision: 0.064 ft  
RMS: 0.007 ft  
Maximum PDOP: 2.393  
Ephemeris used: Broadcast  
Antenna model: NGS Absolute  
Processing start time: 4/30/2015 6:04:29 PM (Local: UTC-6hr)  
Processing stop time: 4/30/2015 6:40:29 PM (Local: UTC-6hr)  
Processing duration: 00:36:00  
Processing interval: 5 seconds

### Vector Components (Mark to Mark)

From:		AH8499			
Grid		Local		Global	
Easting	992160.009 ft	Latitude	N32°13'38.88589"	Latitude	N32°13'38.88589"
Northing	447768.242 ft	Longitude	W110°58'18.66219"	Longitude	W110°58'18.66219"
Elevation	2402.045 ft	Height	2306.015 ft	Height	2306.015 ft

To:		PAG109			
Grid		Local		Global	
Easting	1031197.218 ft	Latitude	N31°55'10.73084"	Latitude	N31°55'10.73083"
Northing	336139.030 ft	Longitude	W110°50'57.10989"	Longitude	W110°50'57.10989"
Elevation	3166.816 ft	Height	3070.976 ft	Height	3070.975 ft

Vector					
$\Delta$ Easting	39037.209 ft	NS Fwd Azimuth	161°13'36"	$\Delta$ X	14038.286 ft
$\Delta$ Northing	-111629.212 ft	Ellipsoid Dist.	118256.778 ft	$\Delta$ Y	-69724.279 ft
$\Delta$ Elevation	764.770 ft	$\Delta$ Height	764.960 ft	$\Delta$ Z	-94500.108 ft

### Standard Errors

Vector errors:					
$\sigma$ $\Delta$ Easting	0.016 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma$ $\Delta$ X	0.016 ft
$\sigma$ $\Delta$ Northing	0.015 ft	$\sigma$ Ellipsoid Dist.	0.016 ft	$\sigma$ $\Delta$ Y	0.030 ft
$\sigma$ $\Delta$ Elevation	0.032 ft	$\sigma$ $\Delta$ Height	0.032 ft	$\sigma$ $\Delta$ Z	0.019 ft

### Aposteriori Covariance Matrix (International foot<sup>2</sup>)

	X	Y	Z
X	0.0000227299		
Y	0.0000110475	0.0000851659	
Z	-0.0000075256	-0.0000294632	0.0000351539



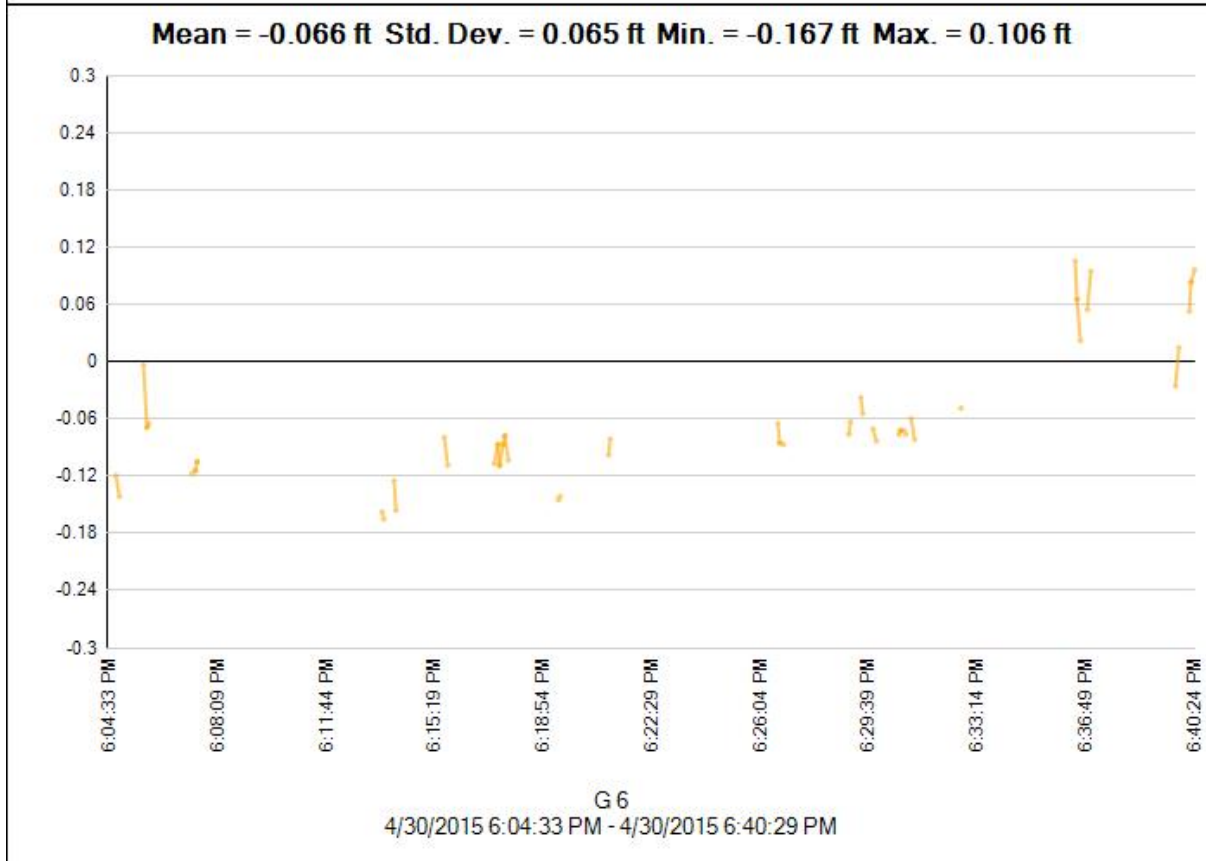
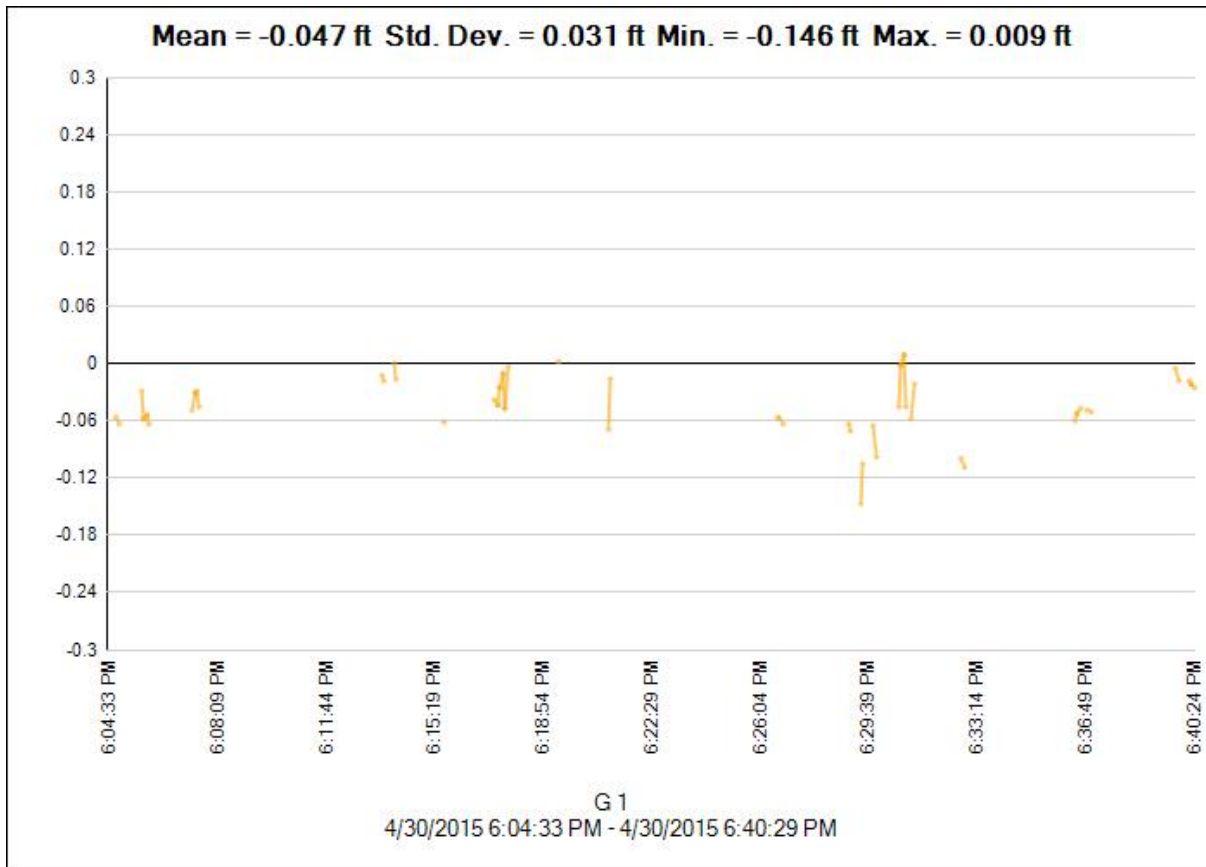
## Occupations

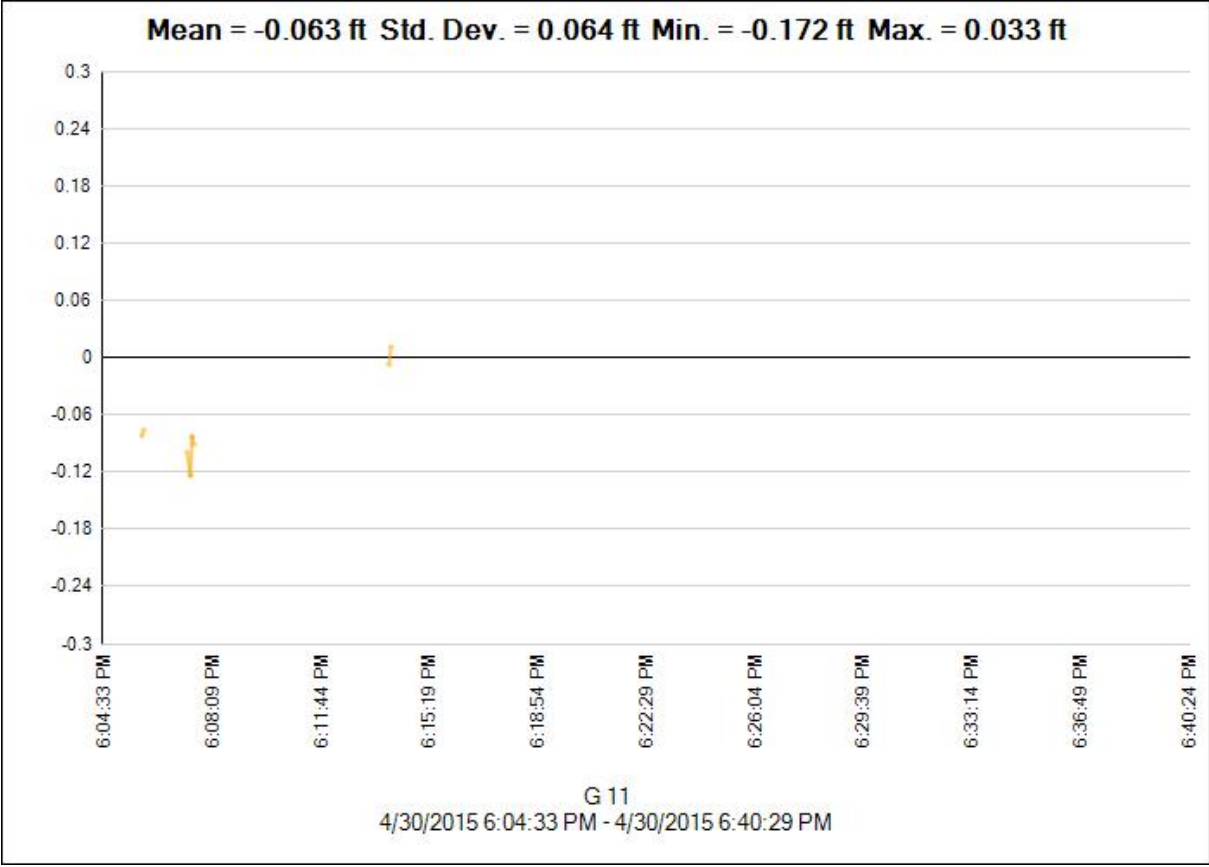
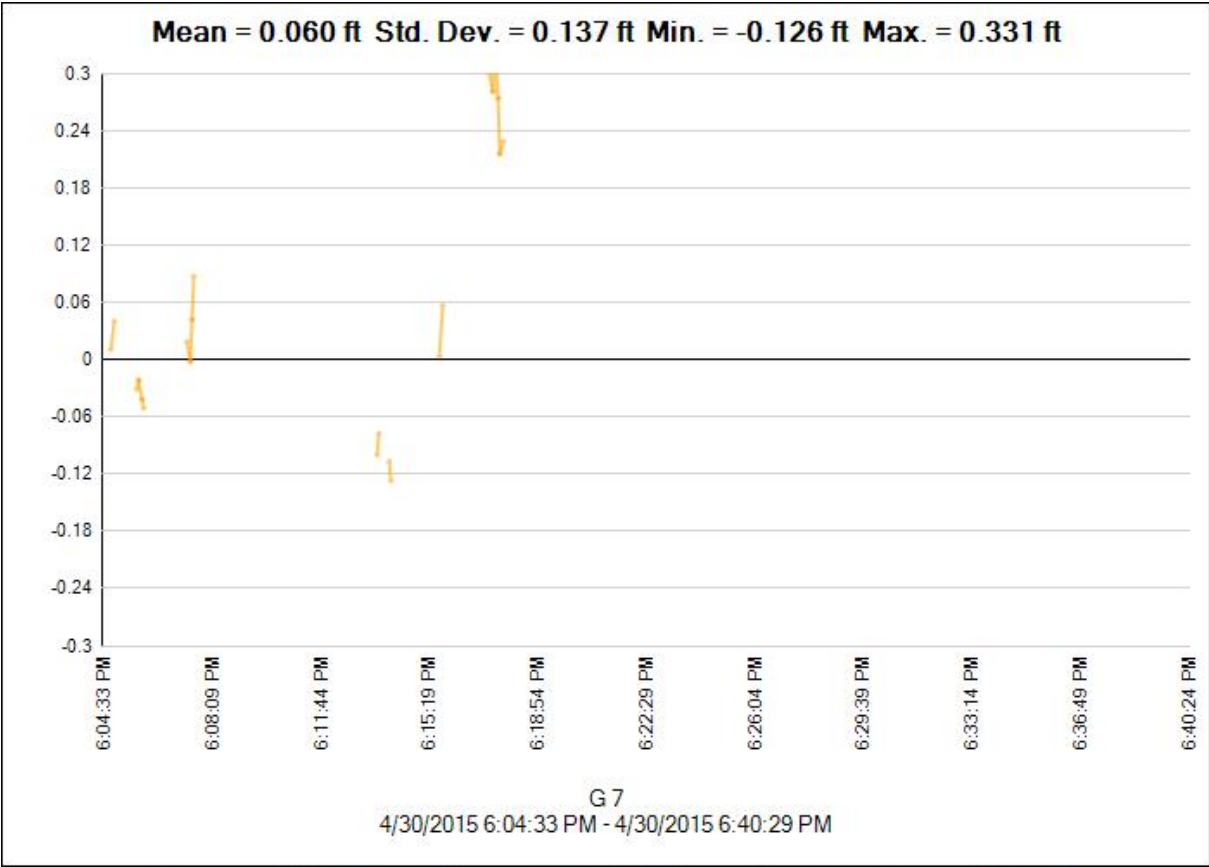
	From	To
Point ID:	AH8499	PAG109
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191200 (resampled).15o	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851210.t00
Receiver type:	Geo Explorer 3	5700
Receiver serial number:		0220271185
Antenna type:	702 Rev 3.00	Zephyr
Antenna serial number:	-----	00000000
Antenna height (measured):	4.951 ft	5.282 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

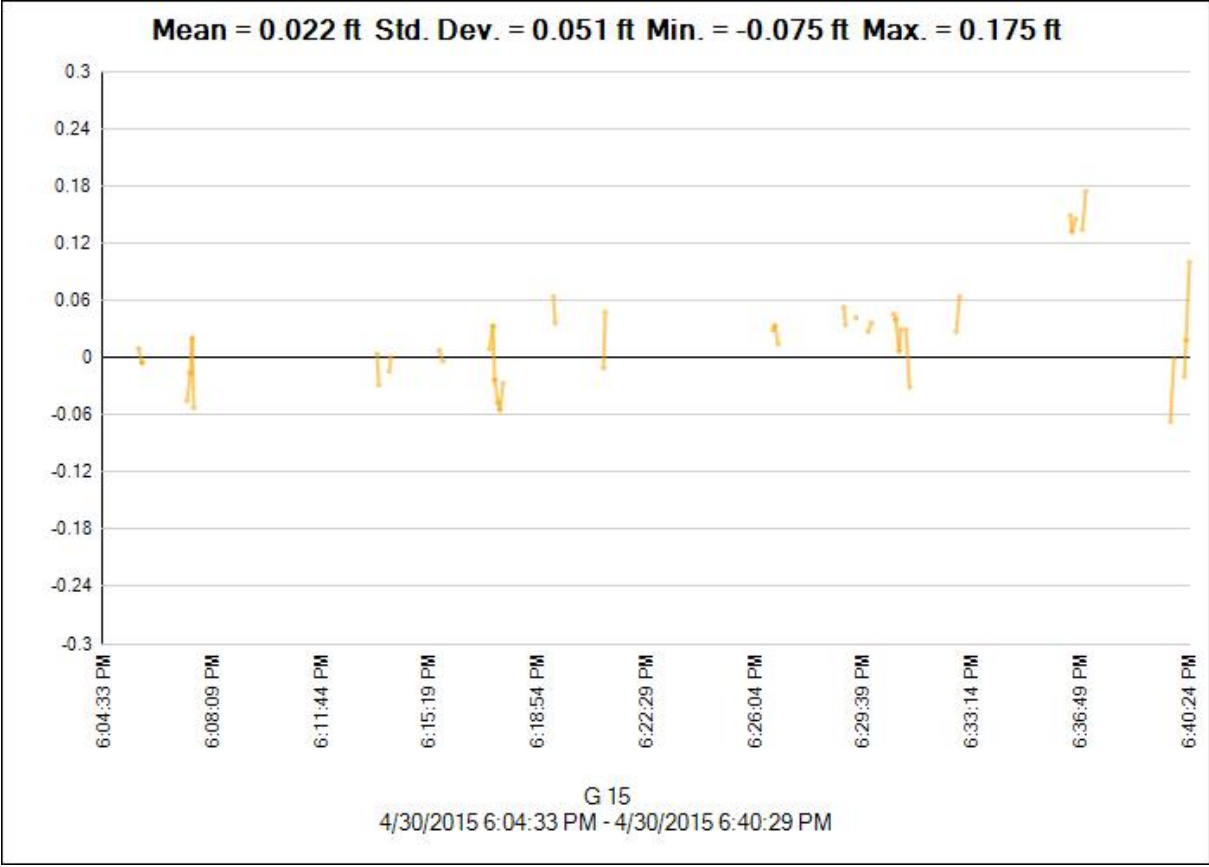
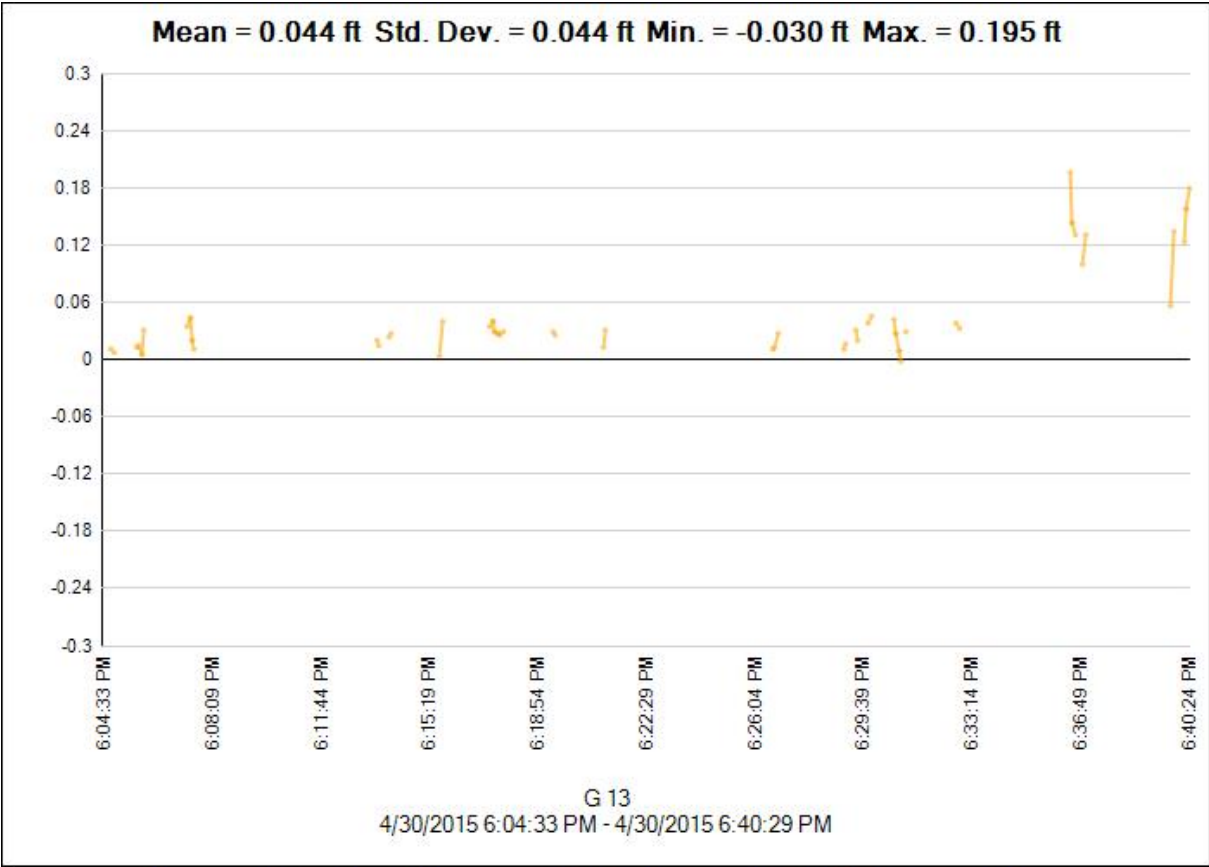
# Tracking Summary

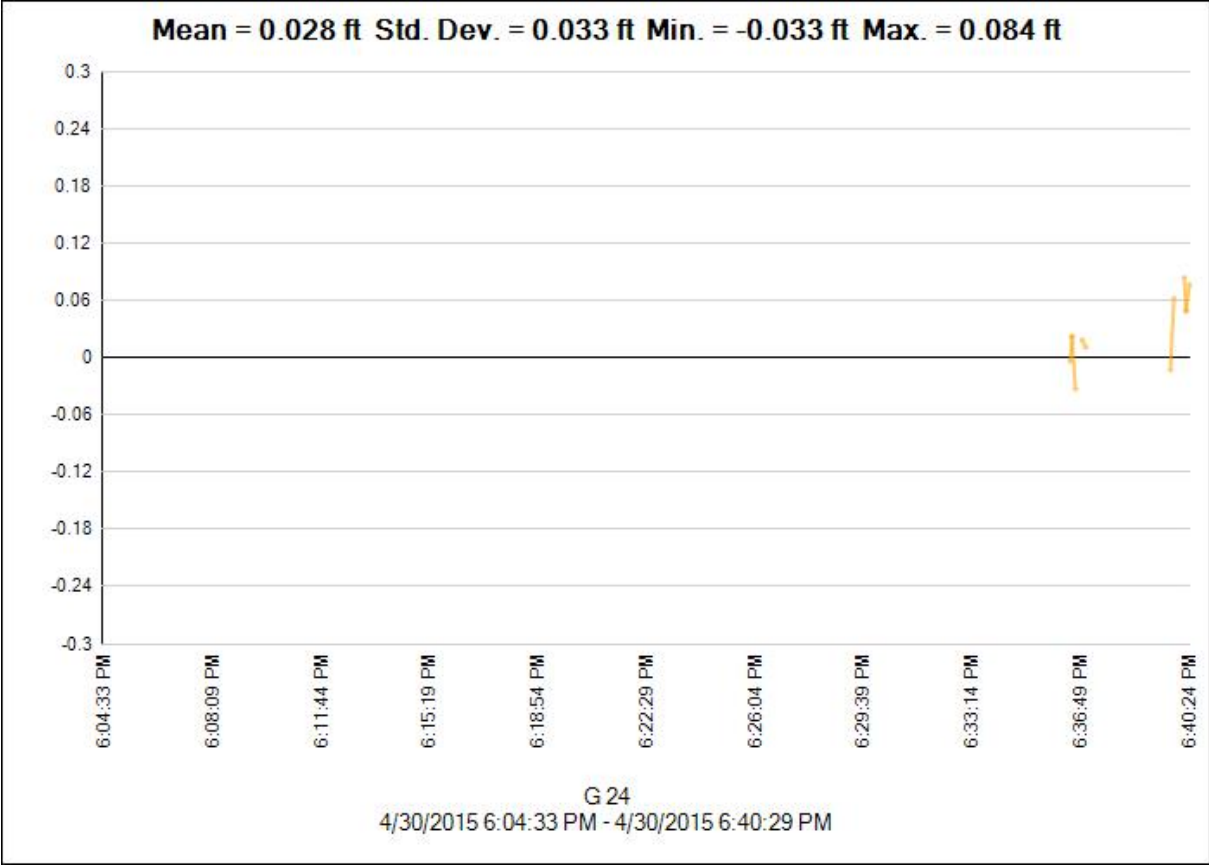
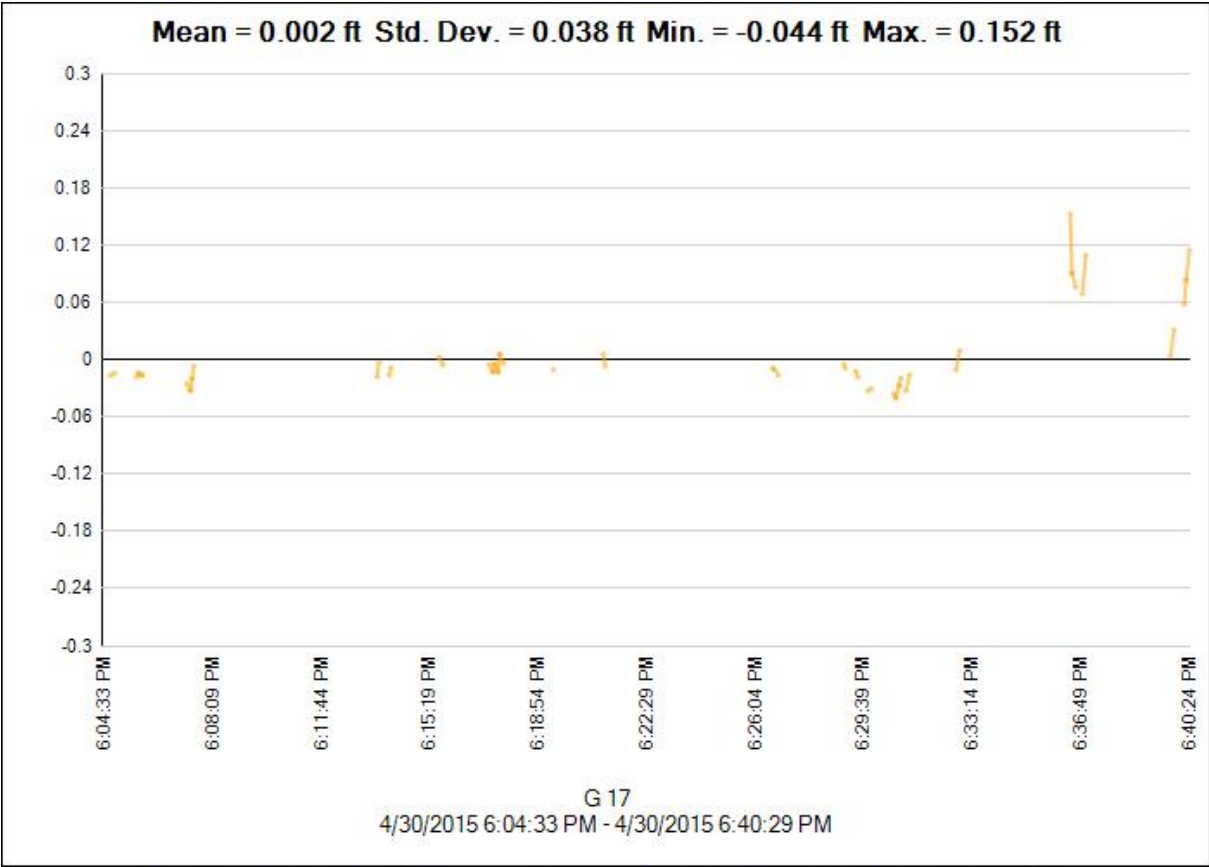
SV	4/30/2015 6:04:28 PM	Duration: 00:36:06	Major interval: 00:01:00	4/30/2015 6:40:34 PM
G 1				
G 4				
G 6				
G 7				
G 11				
G 13				
G 15				
G 17				
G 24				
G 28				
G 30				

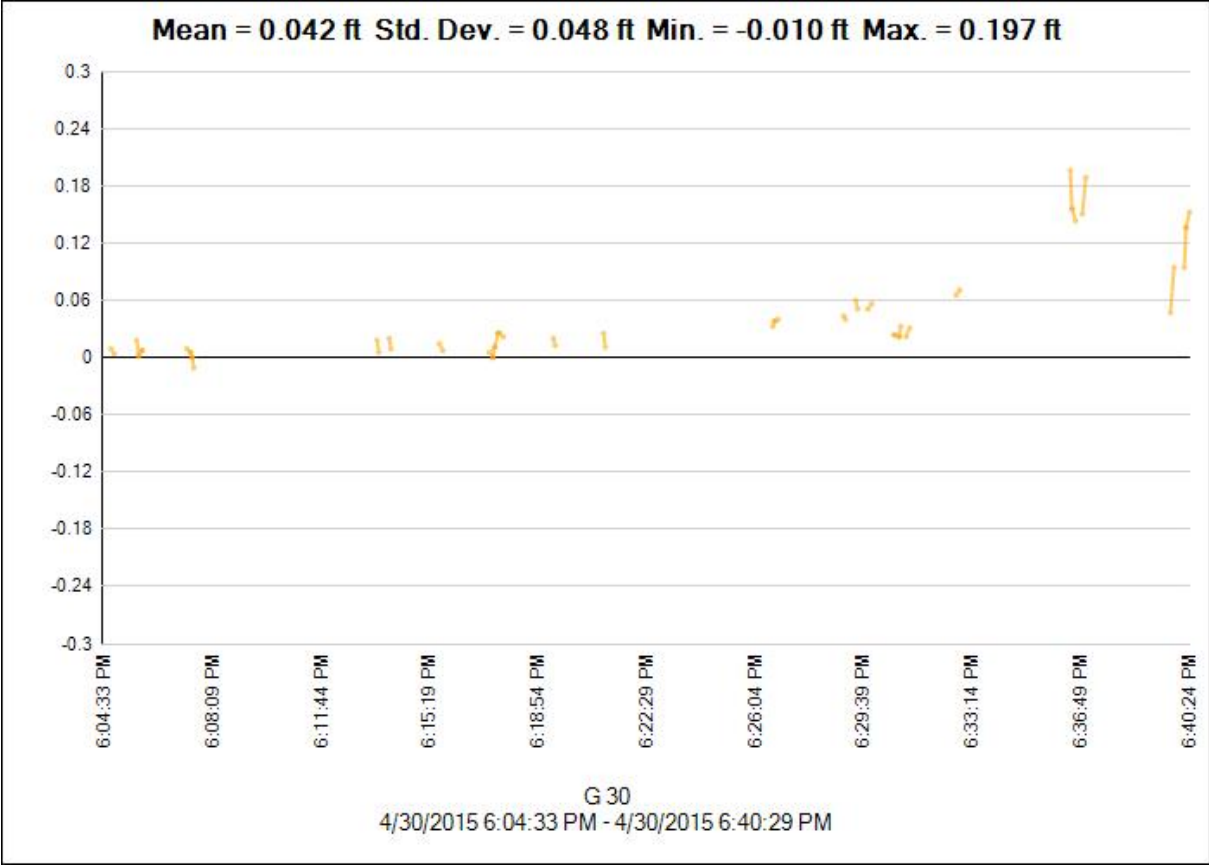
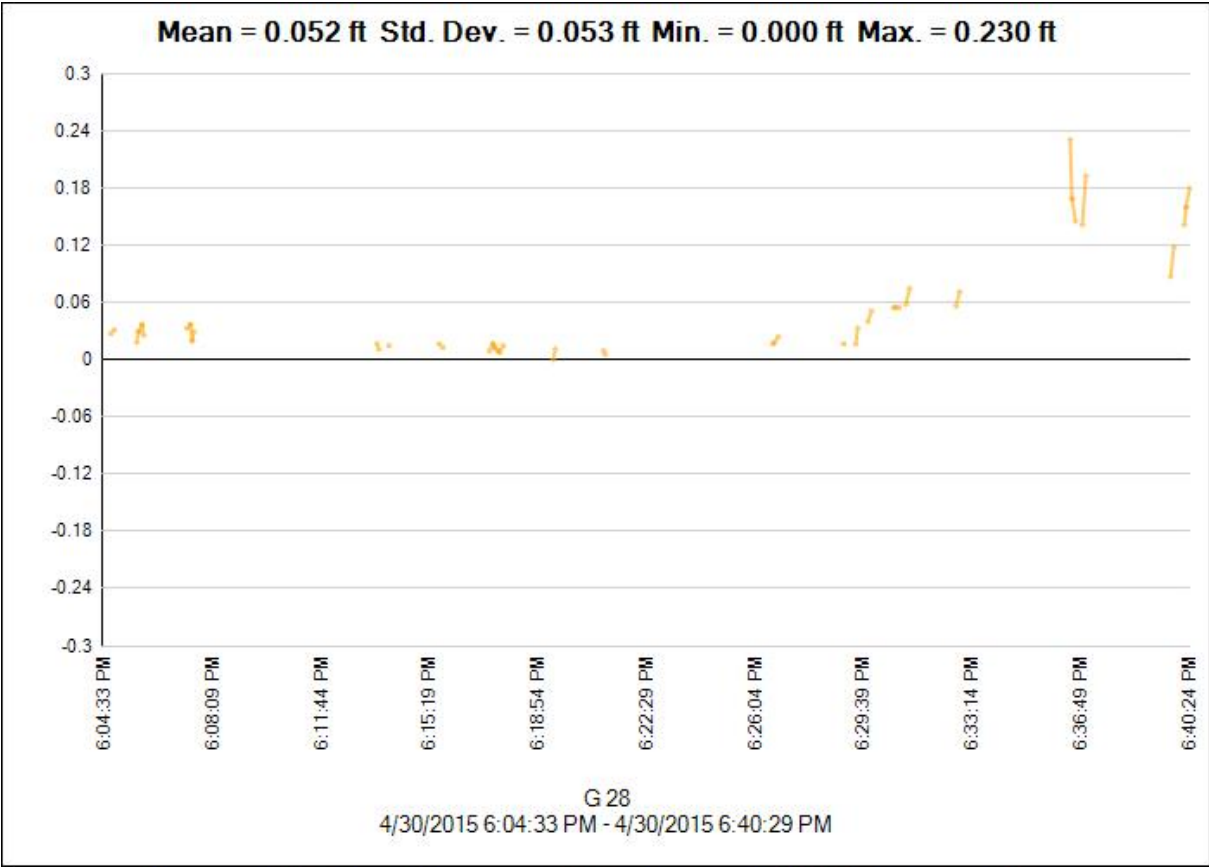
# Residuals













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**Processing style**

Elevation mask: 10.0 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

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**AH8499 - PAG107 (4:23:27 PM-5:00:17 PM) (S6)**

---

Baseline observation: AH8499 --- PAG107 (B6)  
Processed: 5/29/2015 12:59:20 PM  
Solution type: Fixed  
Frequency used: Dual Frequency (L1, L2)  
Horizontal precision: 0.038 ft  
Vertical precision: 0.064 ft  
RMS: 0.003 ft  
Maximum PDOP: 2.674  
Ephemeris used: Broadcast  
Antenna model: NGS Absolute  
Processing start time: 4/30/2015 4:24:04 PM (Local: UTC-6hr)  
Processing stop time: 4/30/2015 4:59:39 PM (Local: UTC-6hr)  
Processing duration: 00:35:35  
Processing interval: 5 seconds



### Vector Components (Mark to Mark)

From:		AH8499			
Grid		Local		Global	
Easting	992160.009 ft	Latitude	N32°13'38.88589"	Latitude	N32°13'38.88589"
Northing	447768.242 ft	Longitude	W110°58'18.66219"	Longitude	W110°58'18.66219"
Elevation	2402.045 ft	Height	2306.015 ft	Height	2306.015 ft

To:		PAG107			
Grid		Local		Global	
Easting	1144696.383 ft	Latitude	N31°43'52.05722"	Latitude	N31°43'52.05722"
Northing	268852.010 ft	Longitude	W110°29'10.75971"	Longitude	W110°29'10.75971"
Elevation	4989.953 ft	Height	4898.359 ft	Height	4898.359 ft

Vector					
$\Delta$ Easting	152536.374 ft	NS Fwd Azimuth	140°03'01"	$\Delta$ X	106199.421 ft
$\Delta$ Northing	-178916.232 ft	Ellipsoid Dist.	235099.948 ft	$\Delta$ Y	-144809.665 ft
$\Delta$ Elevation	2587.908 ft	$\Delta$ Height	2592.344 ft	$\Delta$ Z	-151819.080 ft

### Standard Errors

Vector errors:					
$\sigma$ $\Delta$ Easting	0.011 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma$ $\Delta$ X	0.012 ft
$\sigma$ $\Delta$ Northing	0.016 ft	$\sigma$ Ellipsoid Dist.	0.013 ft	$\sigma$ $\Delta$ Y	0.028 ft
$\sigma$ $\Delta$ Elevation	0.033 ft	$\sigma$ $\Delta$ Height	0.033 ft	$\sigma$ $\Delta$ Z	0.022 ft

### Aposteriori Covariance Matrix (International foot<sup>2</sup>)

	X	Y	Z
X	0.0000136036		
Y	0.0000146688	0.0000748392	
Z	-0.0000046787	-0.0000352512	0.0000447506

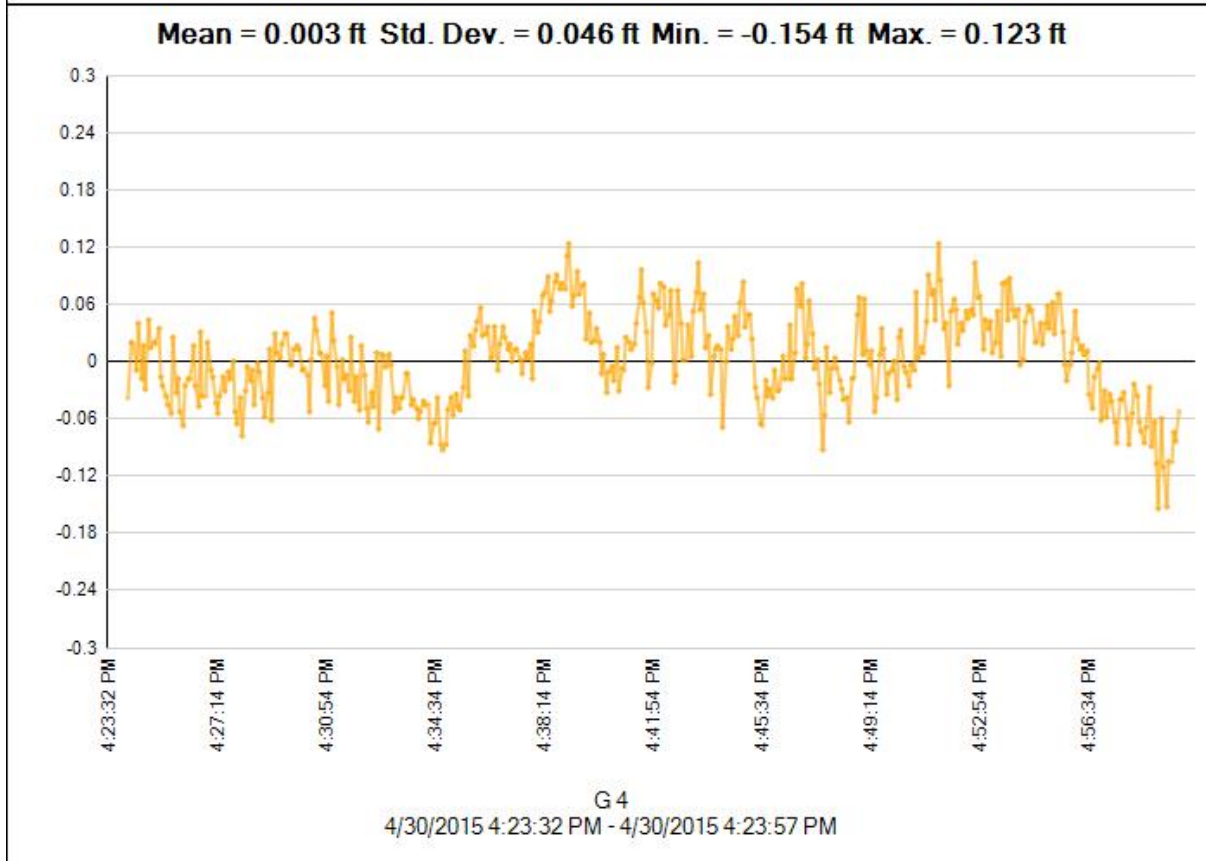
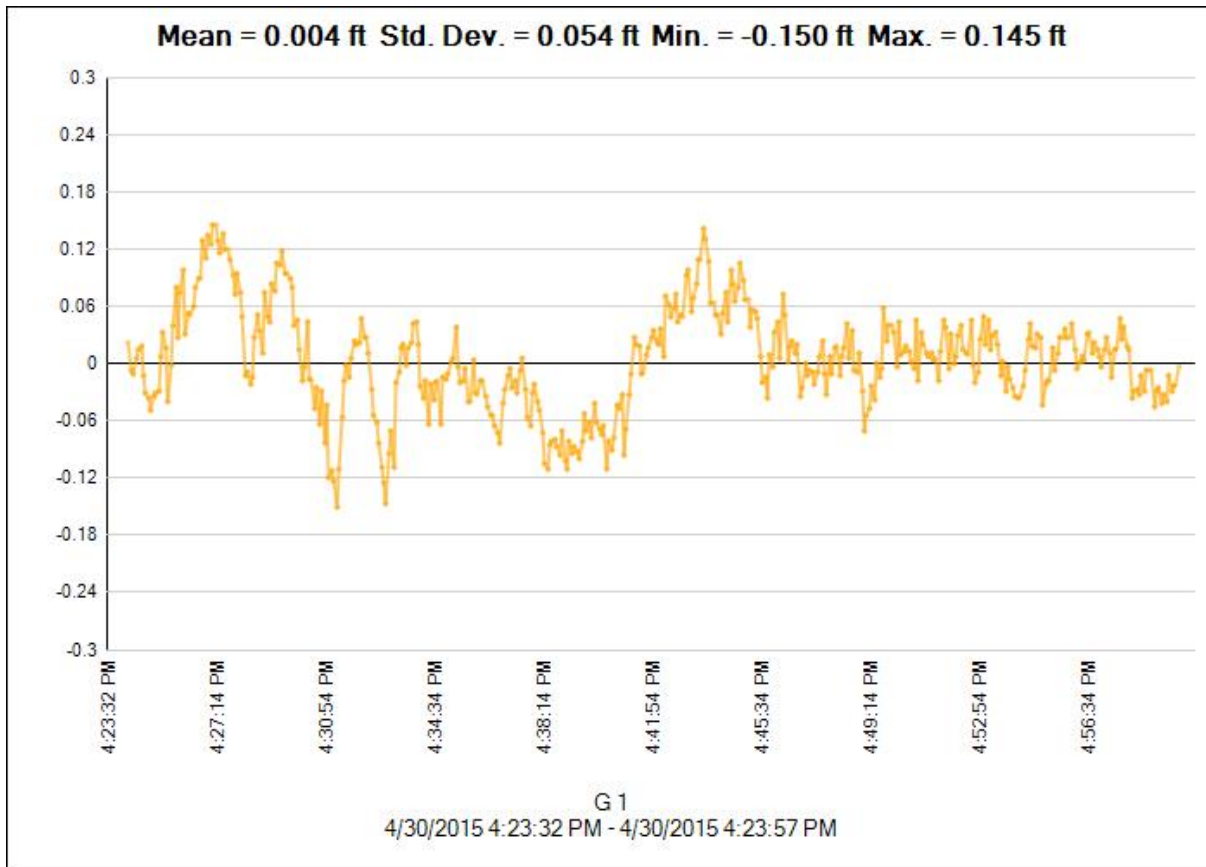
## Occupations

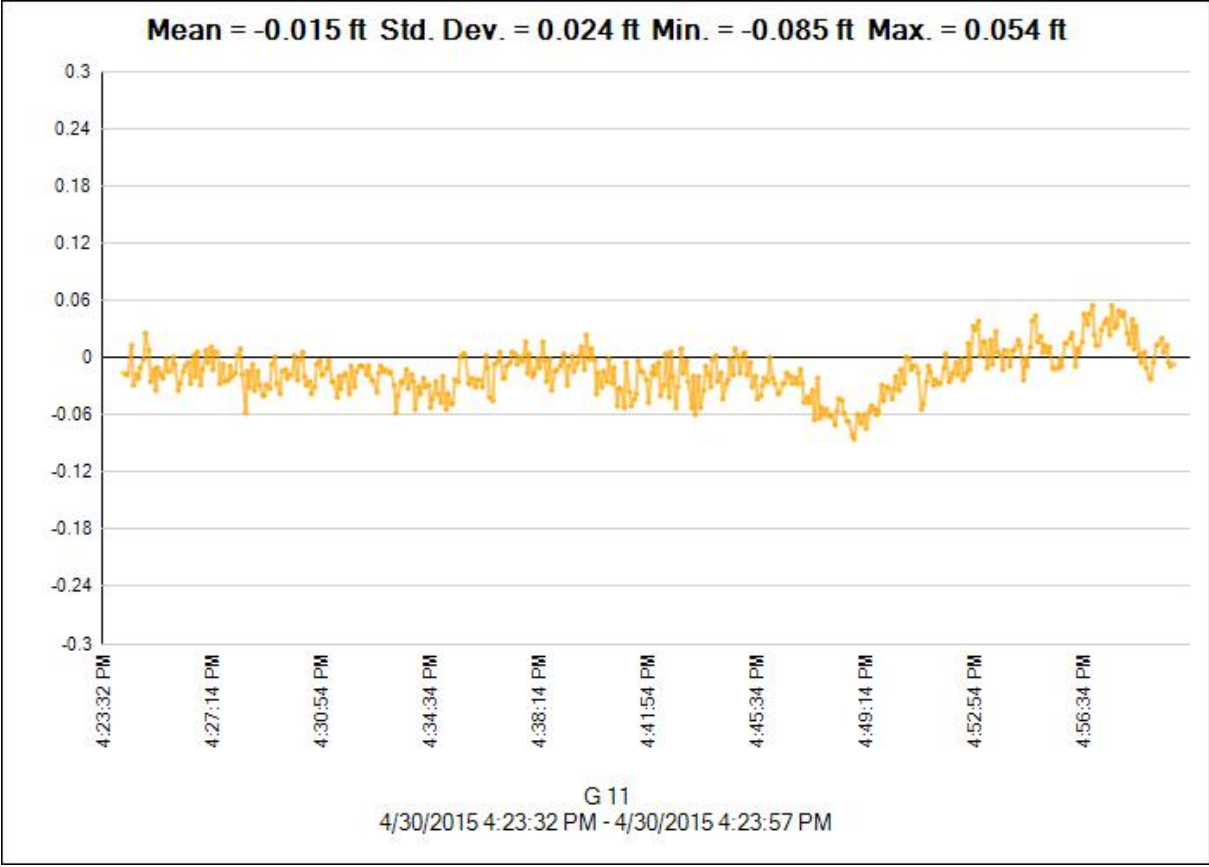
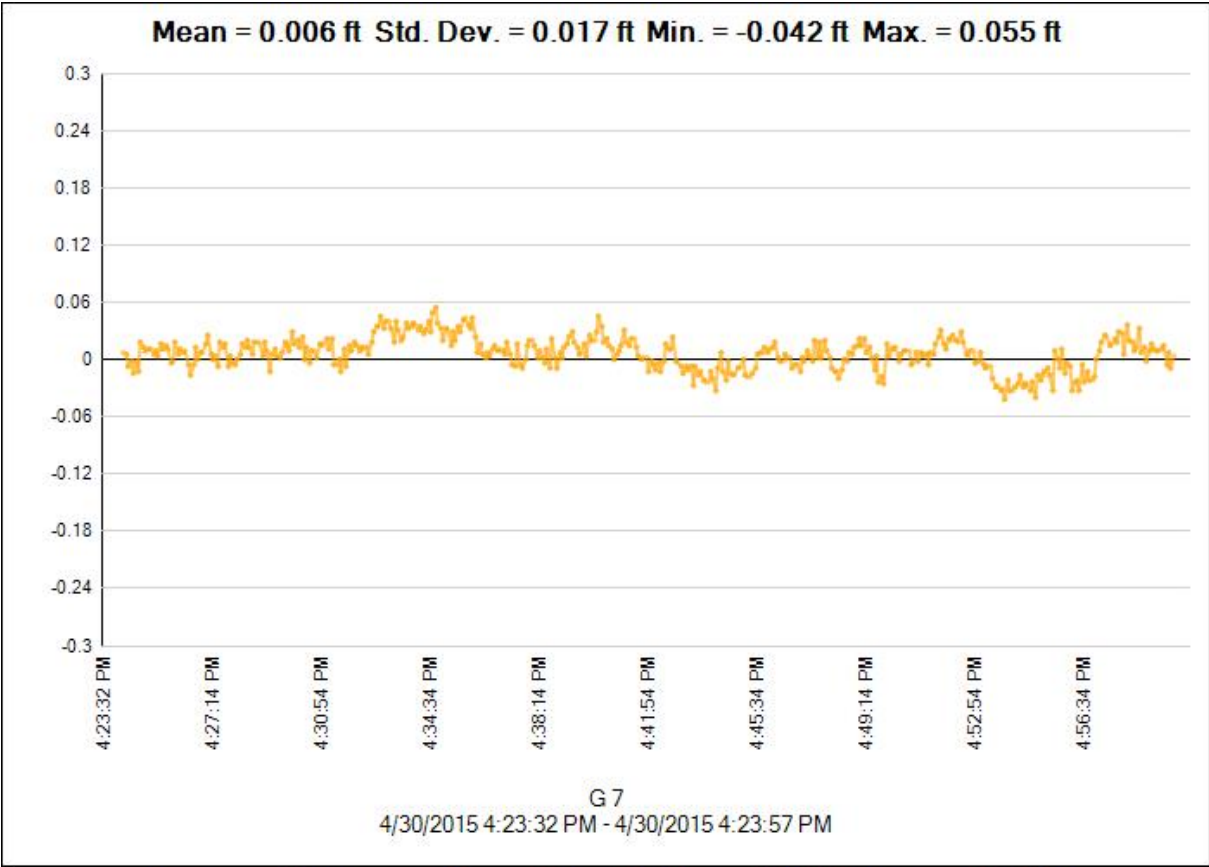
	From	To
<b>Point ID:</b>	AH8499	PAG107
<b>Data file:</b>	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191200 (resampled).15o	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851202.t00
<b>Receiver type:</b>	Geo Explorer 3	5700
<b>Receiver serial number:</b>		0220271185
<b>Antenna type:</b>	702 Rev 3.00	Zephyr
<b>Antenna serial number:</b>	-----	00000000
<b>Antenna height (measured):</b>	4.951 ft	5.344 ft
<b>Antenna method:</b>	Antenna Phase Center	Antenna Phase Center

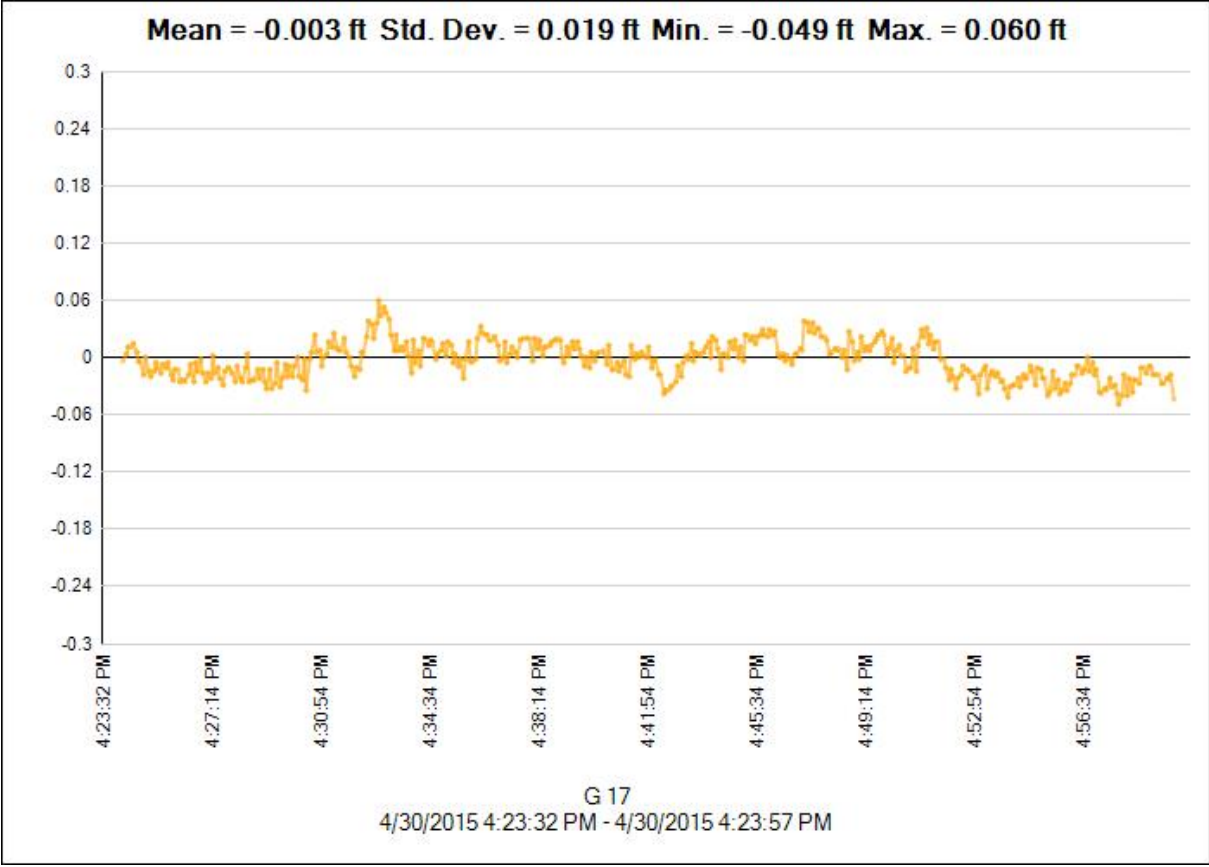
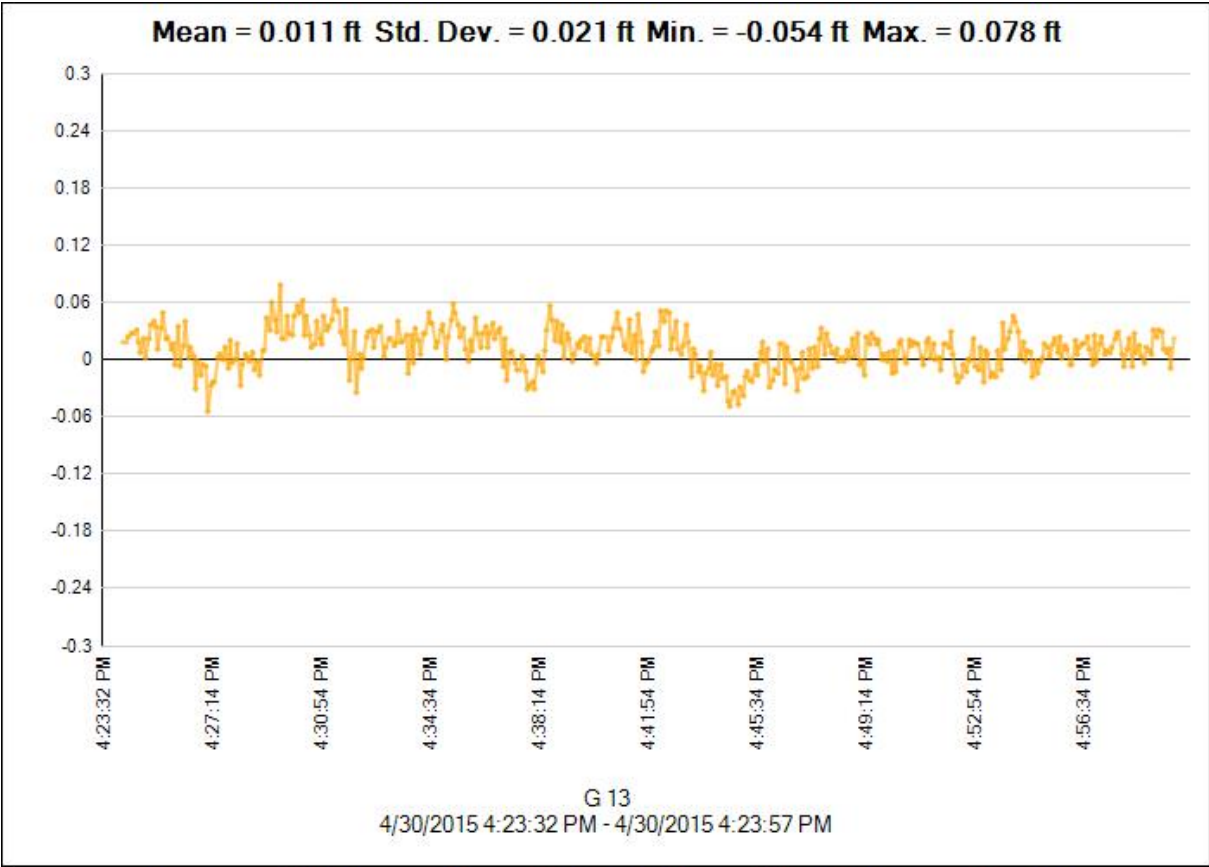
# Tracking Summary

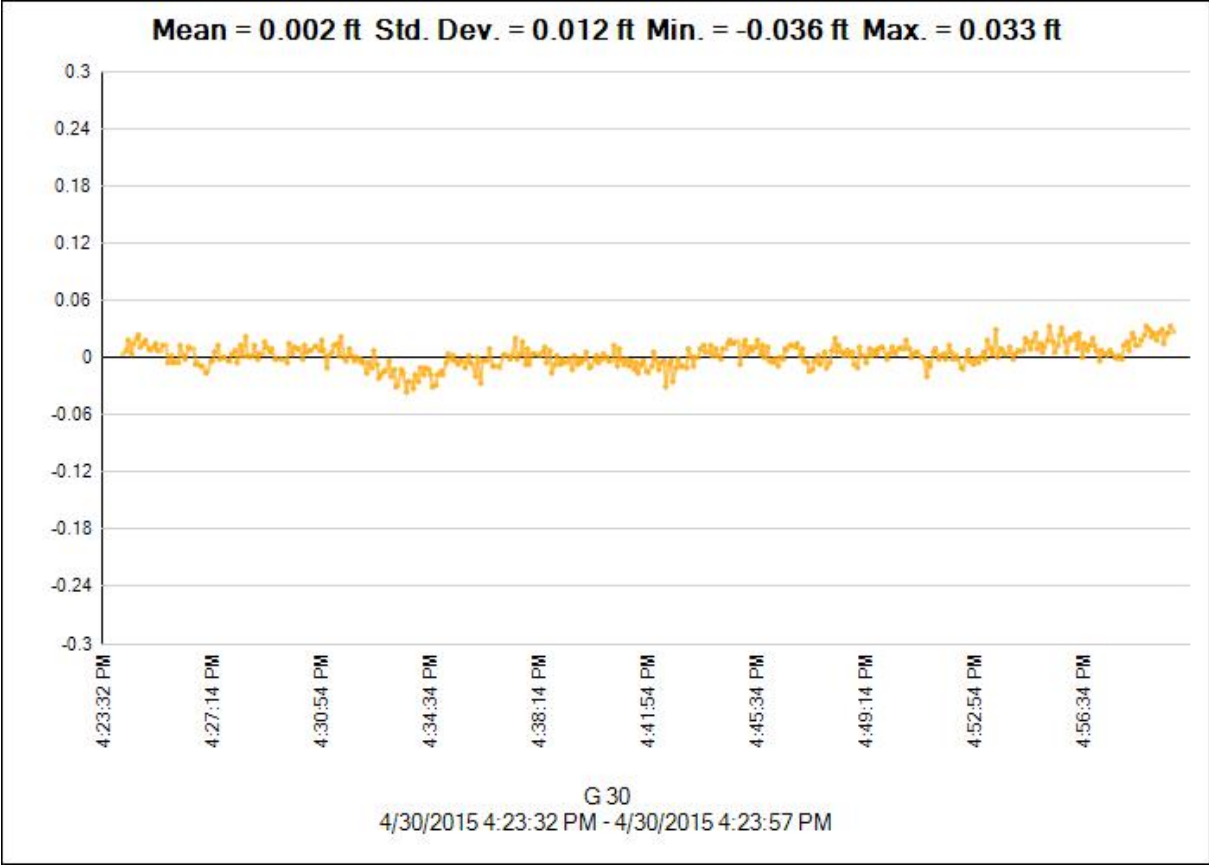
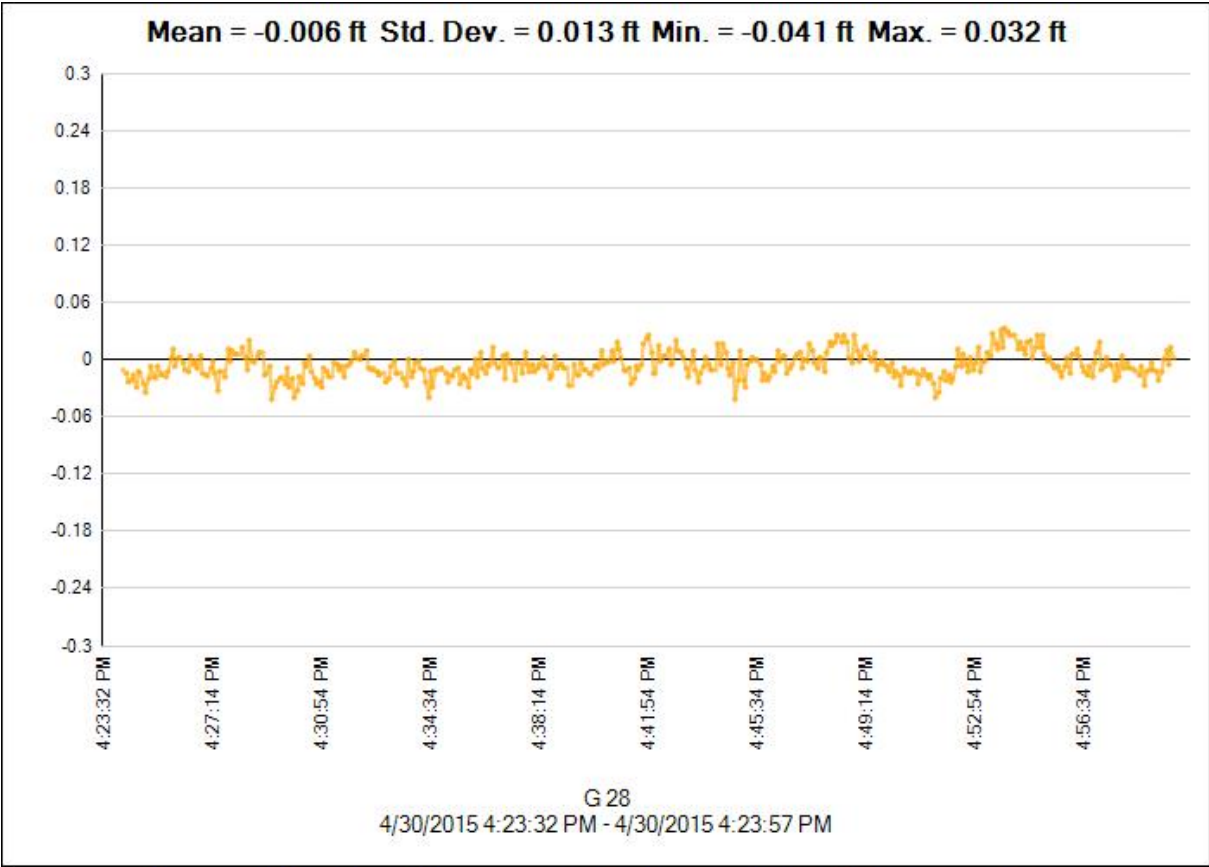
SV	4/30/2015 4:23:27 PM	Duration: 00:36:50	Major interval: 00:01:00	4/30/2015 5:00:17 PM
G 1	L1 L2			
G 4	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 11	L1 L2			
G 13	L1 L2			
G 15	L1 L2			
G 17	L1 L2			
G 19	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

# Residuals











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**Processing style**

Elevation mask: 10.0 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

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**AH8499 - PAG108 (2:55:45 PM-3:37:37 PM) (S7)**

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Baseline observation: AH8499 --- PAG108 (B7)  
Processed: 5/29/2015 1:01:27 PM  
Solution type: Fixed  
Frequency used: Dual Frequency (L1, L2)  
Horizontal precision: 0.179 ft  
Vertical precision: 0.166 ft  
RMS: 0.005 ft  
Maximum PDOP: 2.372  
Ephemeris used: Broadcast  
Antenna model: NGS Absolute  
Processing start time: 4/30/2015 2:56:29 PM (Local: UTC-6hr)  
Processing stop time: 4/30/2015 3:17:24 PM (Local: UTC-6hr)  
Processing duration: 00:20:55  
Processing interval: 5 seconds



### Vector Components (Mark to Mark)

From:		AH8499			
Grid		Local		Global	
Easting	992160.009 ft	Latitude	N32°13'38.88589"	Latitude	N32°13'38.88589"
Northing	447768.242 ft	Longitude	W110°58'18.66219"	Longitude	W110°58'18.66219"
Elevation	2402.045 ft	Height	2306.015 ft	Height	2306.015 ft

To:		PAG108			
Grid		Local		Global	
Easting	1082955.803 ft	Latitude	N31°43'52.07837"	Latitude	N31°43'52.07837"
Northing	268099.653 ft	Longitude	W110°41'05.61403"	Longitude	W110°41'05.61403"
Elevation	4812.860 ft	Height	4719.889 ft	Height	4719.889 ft

Vector					
$\Delta$ Easting	90795.794 ft	NS Fwd Azimuth	153°41'25"	$\Delta$ X	48442.912 ft
$\Delta$ Northing	-179668.589 ft	Ellipsoid Dist.	201301.122 ft	$\Delta$ Y	-122953.630 ft
$\Delta$ Elevation	2410.815 ft	$\Delta$ Height	2413.874 ft	$\Delta$ Z	-151911.125 ft

### Standard Errors

Vector errors:					
$\sigma$ $\Delta$ Easting	0.050 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma$ $\Delta$ X	0.050 ft
$\sigma$ $\Delta$ Northing	0.065 ft	$\sigma$ Ellipsoid Dist.	0.073 ft	$\sigma$ $\Delta$ Y	0.099 ft
$\sigma$ $\Delta$ Elevation	0.085 ft	$\sigma$ $\Delta$ Height	0.085 ft	$\sigma$ $\Delta$ Z	0.040 ft

### Aposteriori Covariance Matrix (International foot<sup>2</sup>)

	X	Y	Z
X	0.0002348416		
Y	0.0001299907	0.0009119545	
Z	-0.0000922854	0.0000728089	0.0001501662

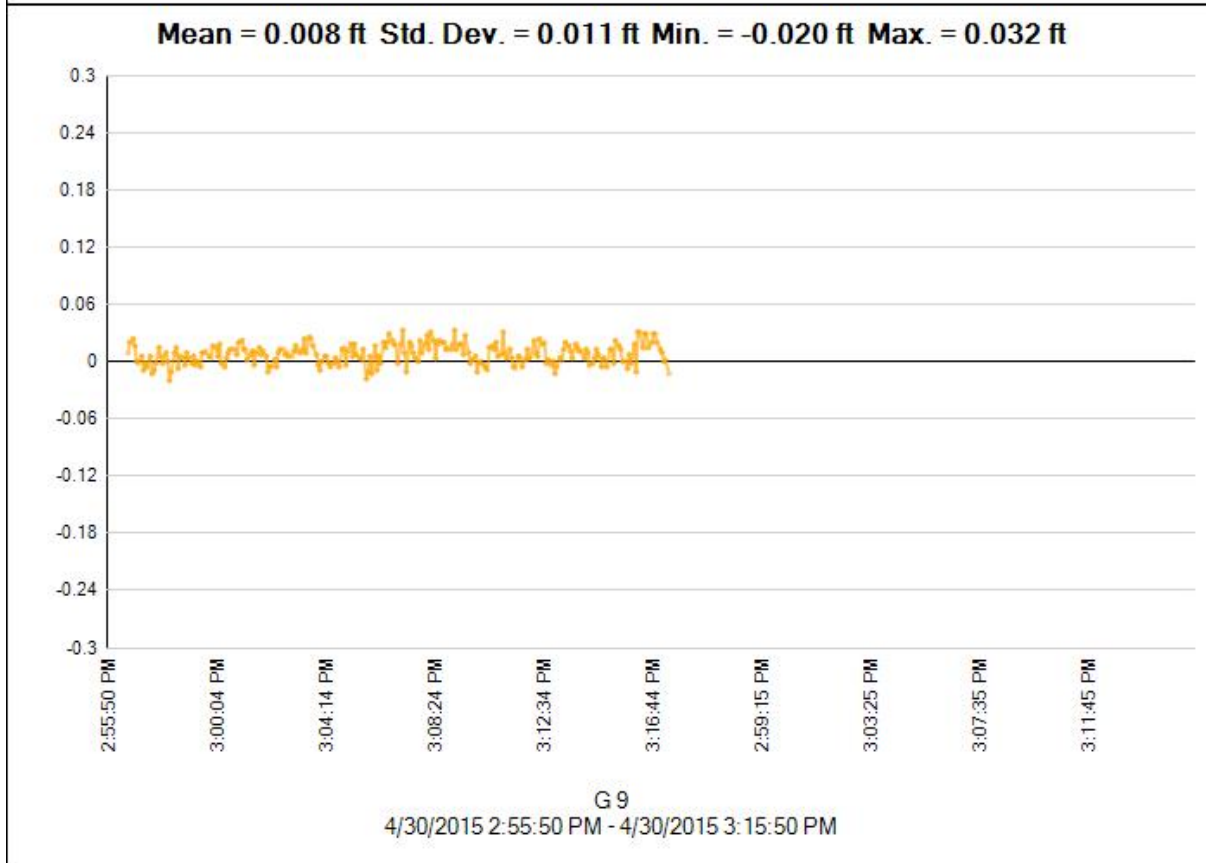
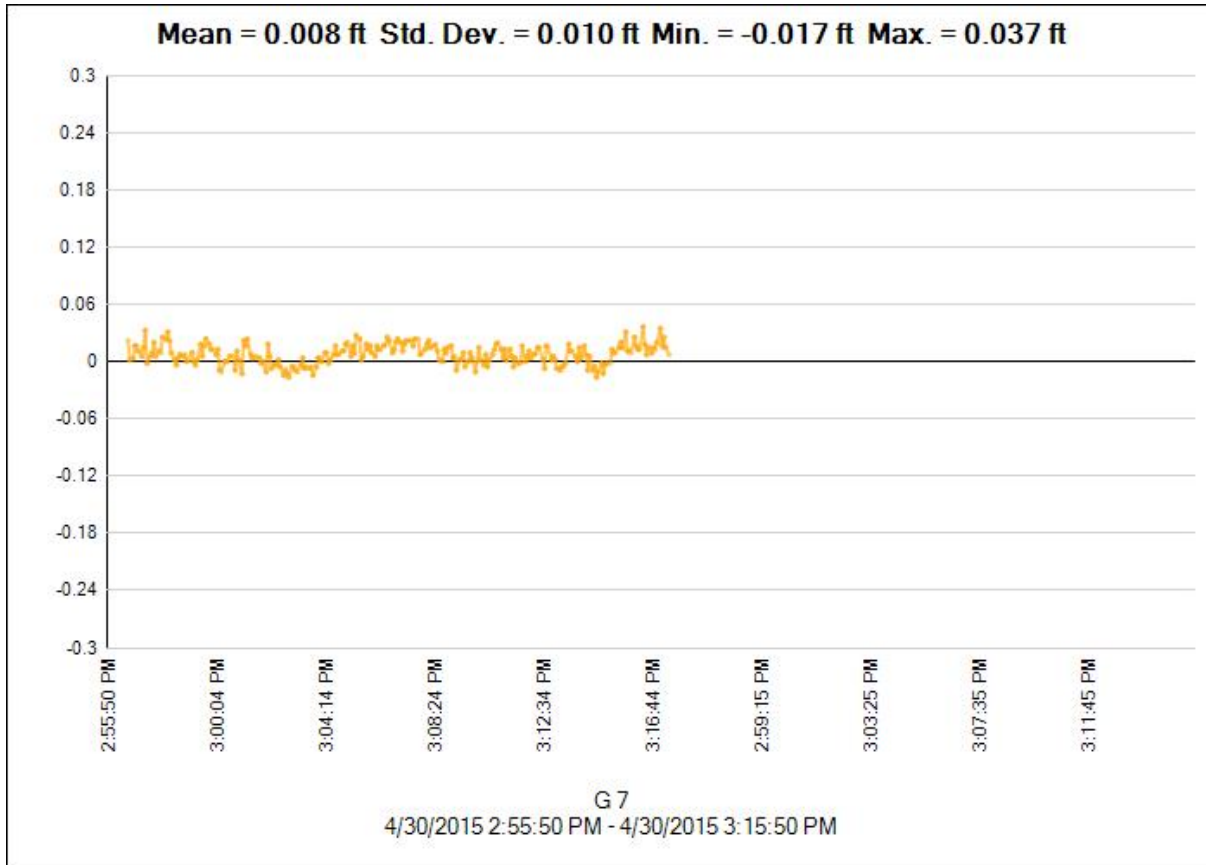
## Occupations

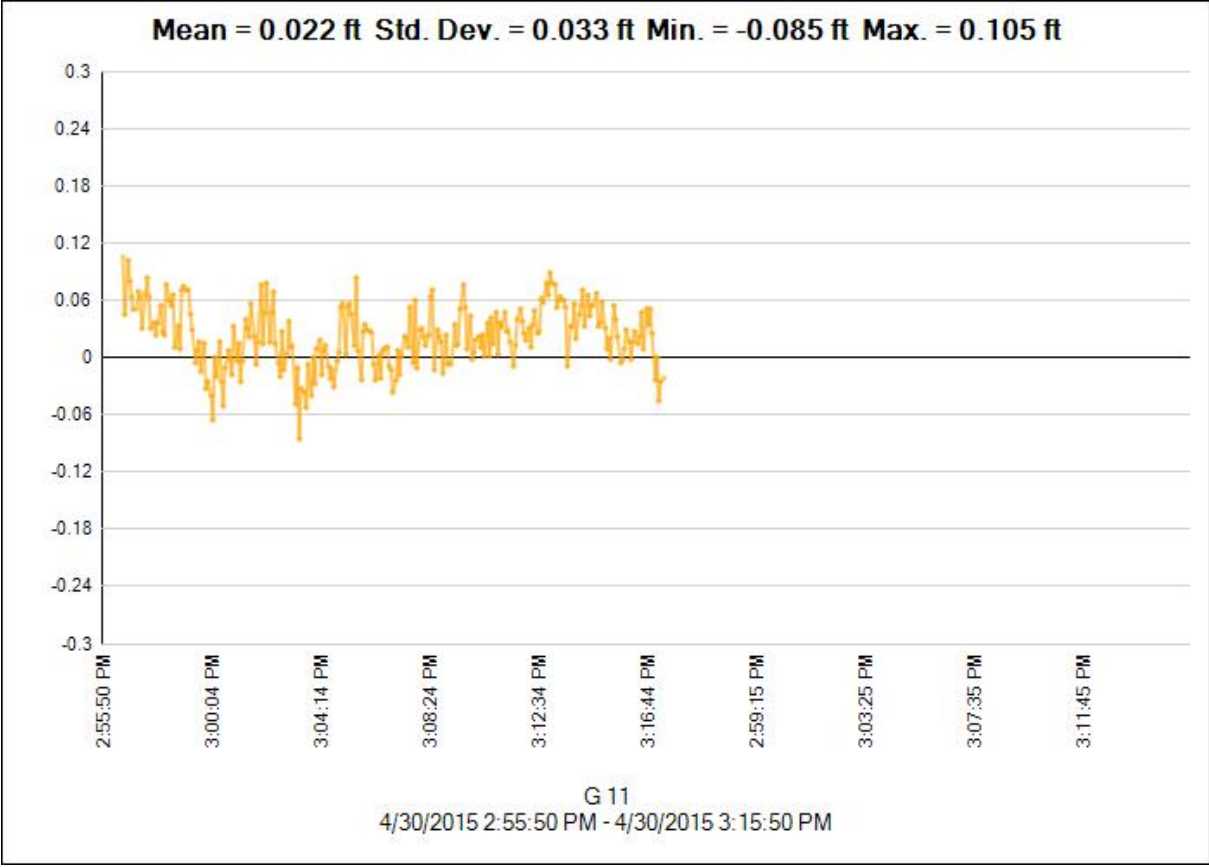
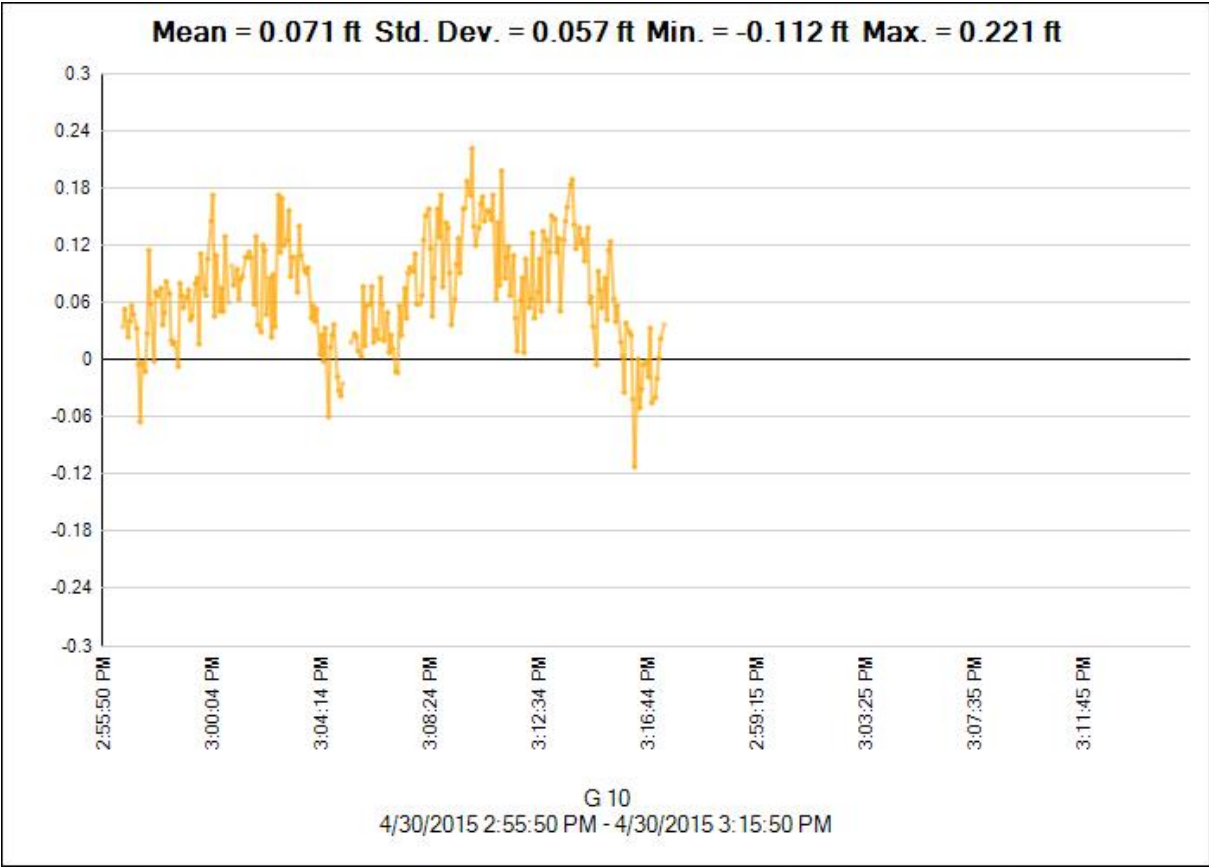
	From	To
Point ID:	AH8499	PAG108
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191200 (resampled).15o	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851201.t00
Receiver type:	Geo Explorer 3	5700
Receiver serial number:		0220271185
Antenna type:	702 Rev 3.00	Zephyr
Antenna serial number:	-----	00000000
Antenna height (measured):	4.951 ft	5.210 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

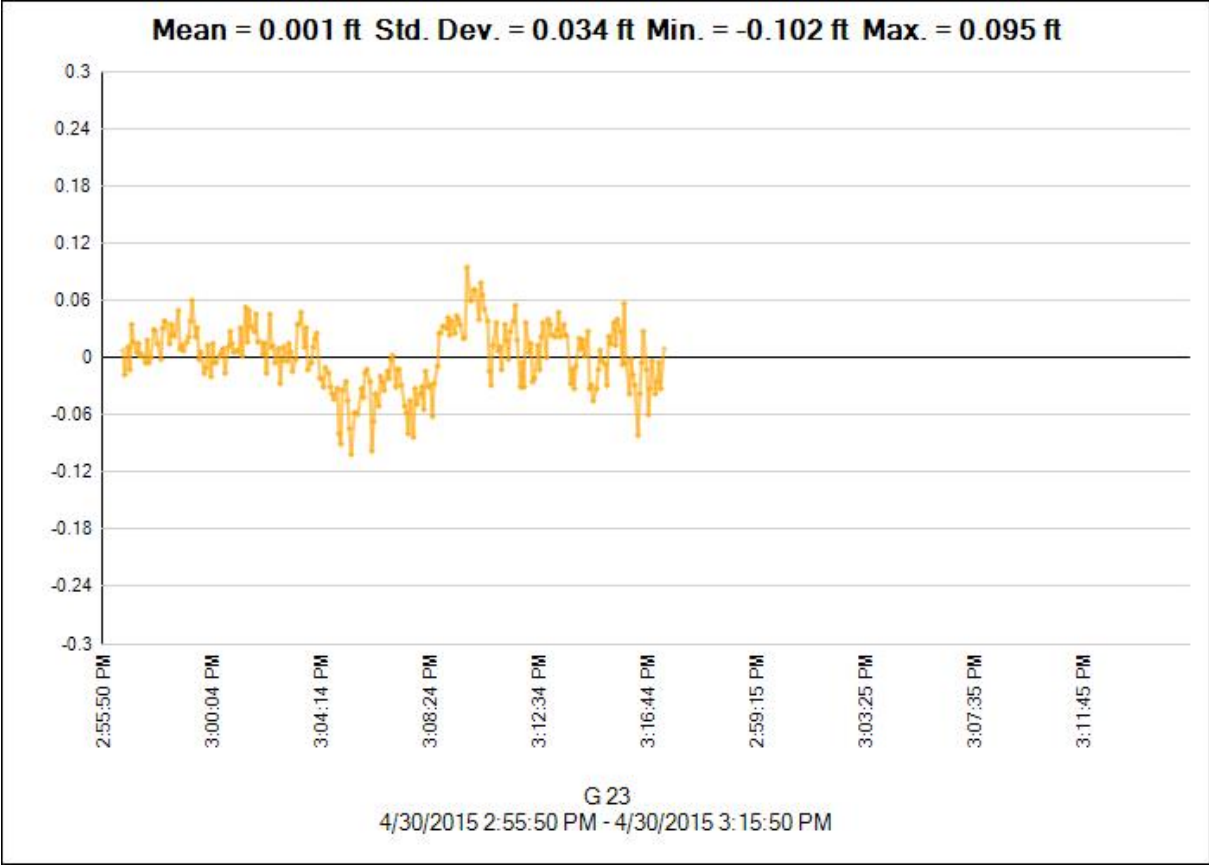
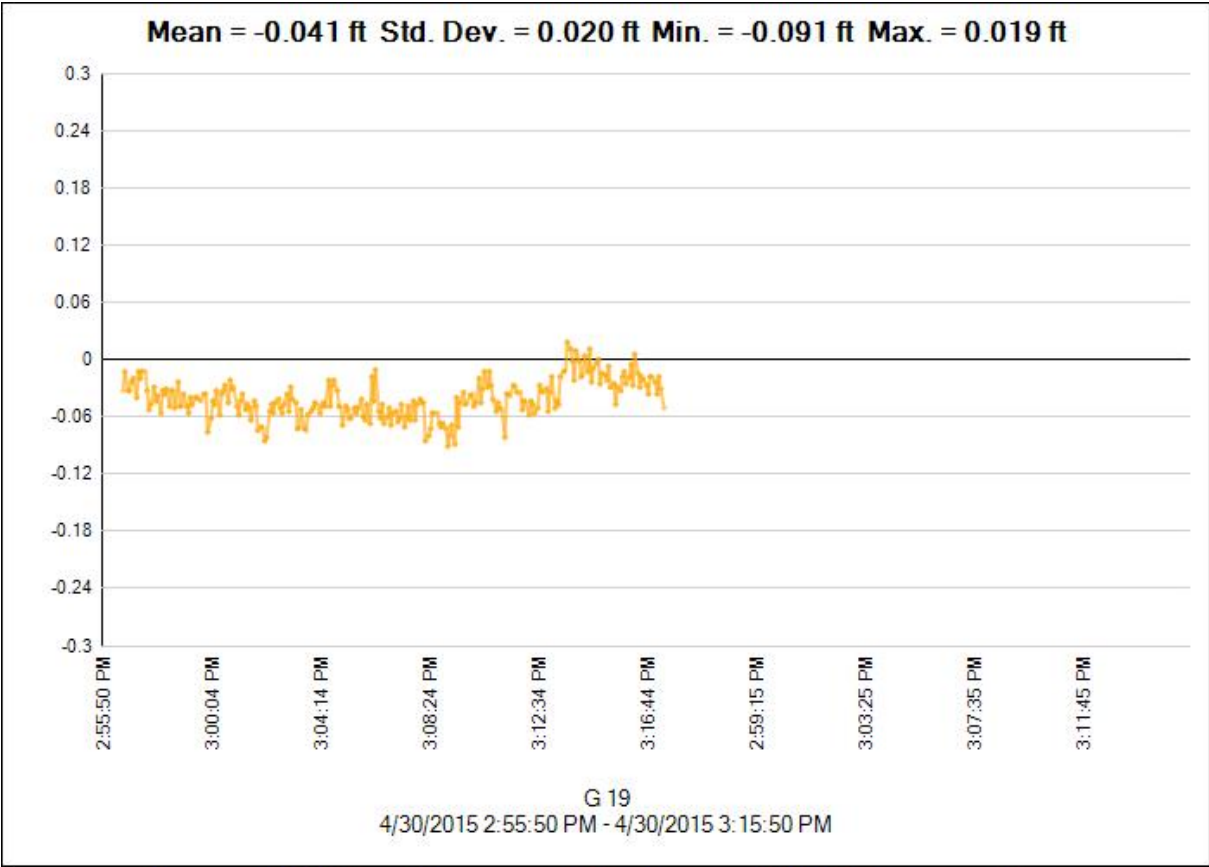
### Tracking Summary

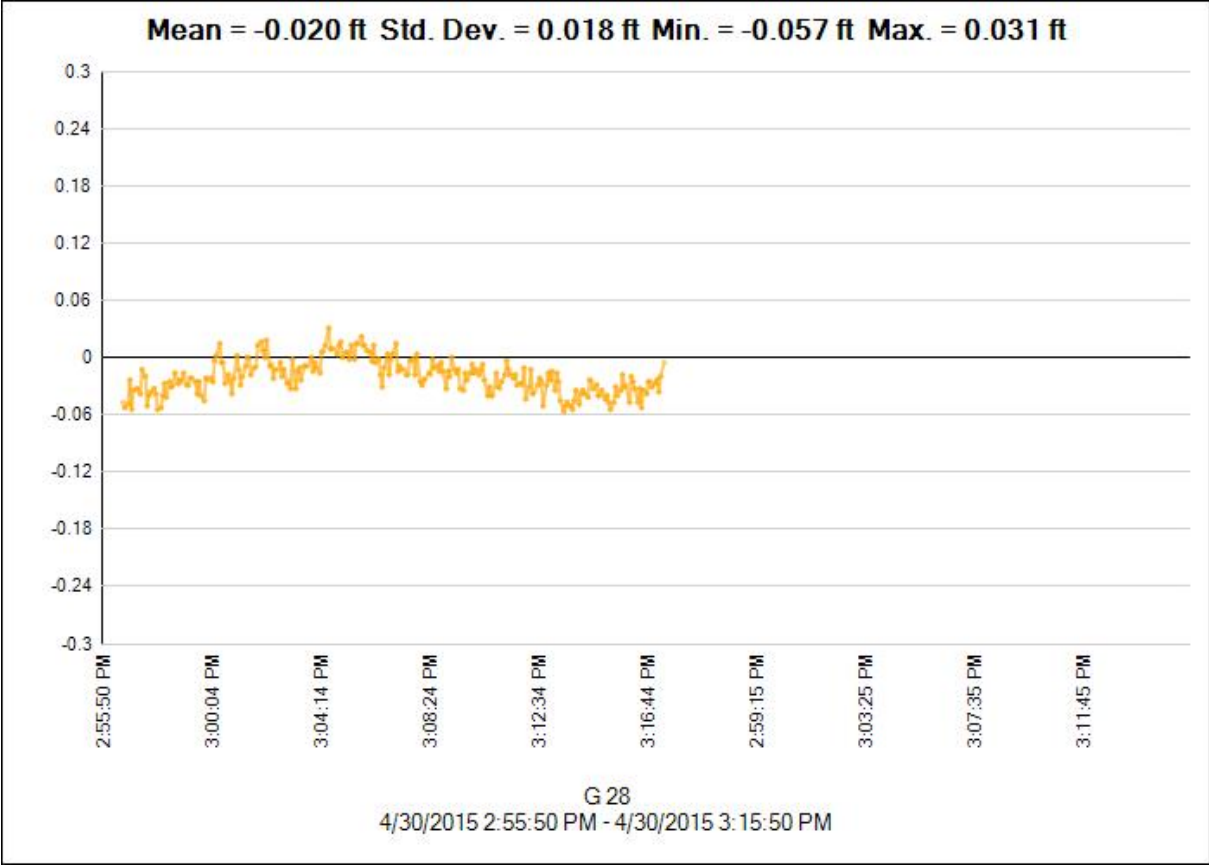
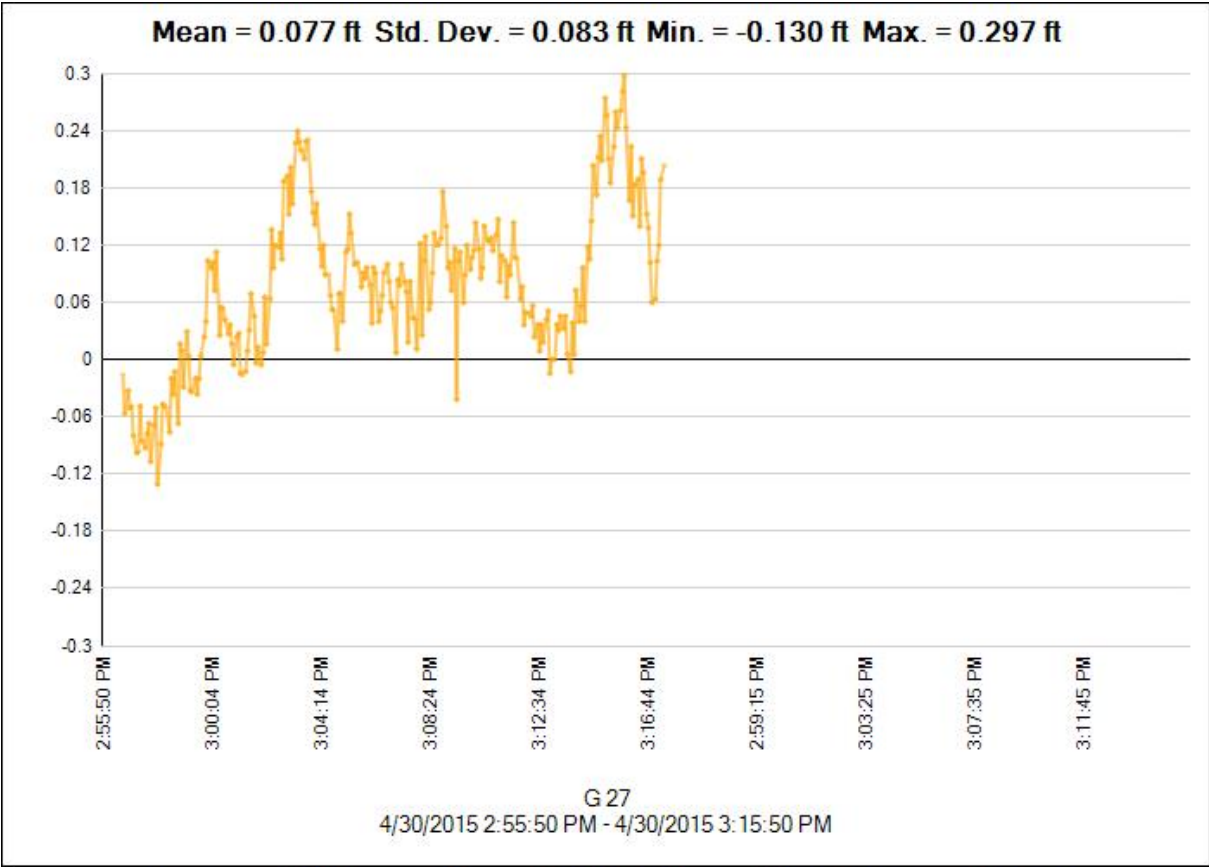
SV	4/30/2015 2:55:45 PM	Duration: 00:41:52	Major interval: 00:10:00	4/30/2015 3:37:37 PM
G 1	L1 L2			
G 4	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 11	L1 L2			
G 13	L1			
G 17	L1 L2			
G 19	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

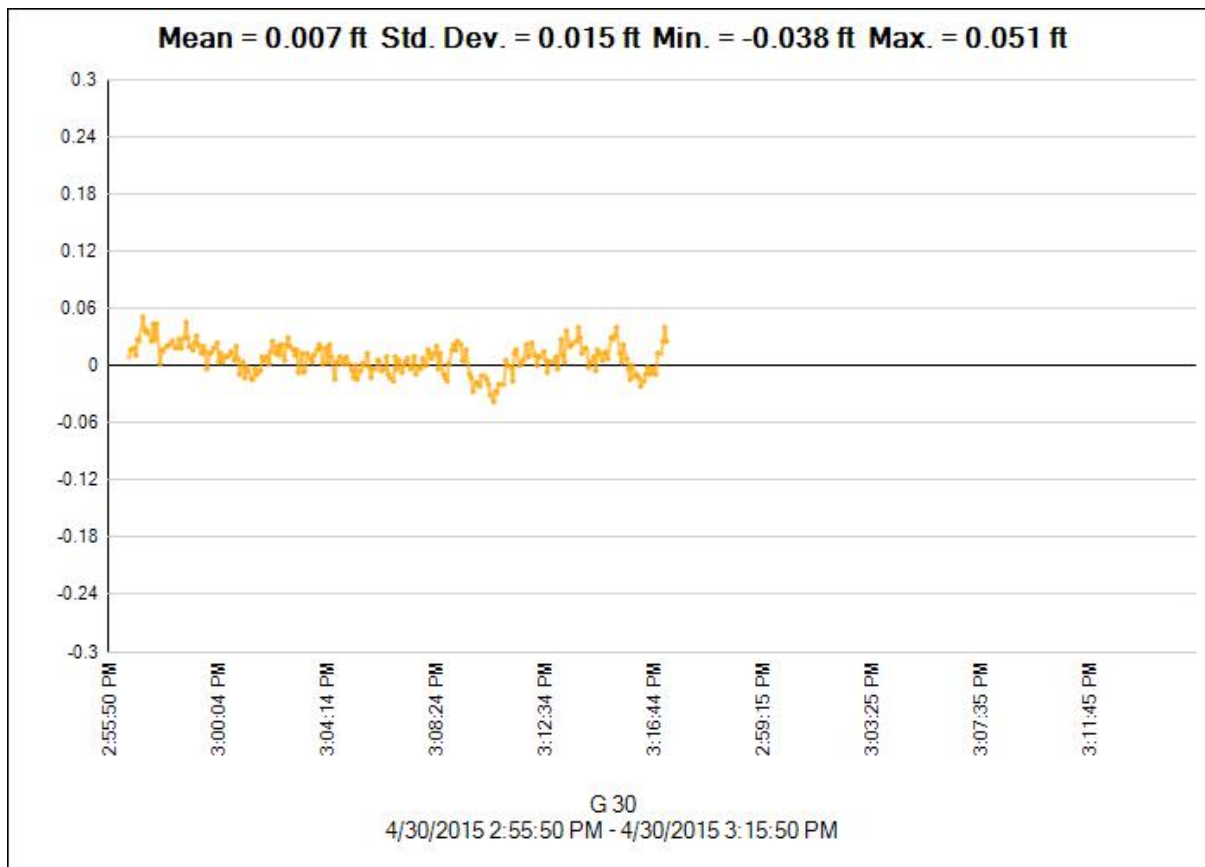
# Residuals













### Processing style

Elevation mask: 10.0 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



## AH8499 - PAG112 (6:57:31 PM-7:35:18 PM) (S8)

**Baseline observation:** AH8499 --- PAG112 (B8)  
**Processed:** 5/29/2015 1:04:18 PM  
**Solution type:** Fixed  
**Frequency used:** Dual Frequency (L1, L2)  
**Horizontal precision:** 0.071 ft  
**Vertical precision:** 0.123 ft  
**RMS:** 0.009 ft  
**Maximum PDOP:** 3.355  
**Ephemeris used:** Broadcast  
**Antenna model:** NGS Absolute  
**Processing start time:** 5/3/2015 6:57:34 PM (Local: UTC-6hr)  
**Processing stop time:** 5/3/2015 7:34:19 PM (Local: UTC-6hr)  
**Processing duration:** 00:36:45  
**Processing interval:** 5 seconds

### Vector Components (Mark to Mark)

From: AH8499					
Grid		Local		Global	
<b>Easting</b>	992155.779 ft	<b>Latitude</b>	N32°13'38.92734"	<b>Latitude</b>	N32°13'38.92734"
<b>Northing</b>	447772.394 ft	<b>Longitude</b>	W110°58'18.71101"	<b>Longitude</b>	W110°58'18.71101"
<b>Elevation</b>	2426.788 ft	<b>Height</b>	2330.757 ft	<b>Height</b>	2330.757 ft

To: PAG112					
Grid		Local		Global	
<b>Easting</b>	990485.664 ft	<b>Latitude</b>	N31°59'51.38052"	<b>Latitude</b>	N31°59'51.38051"
<b>Northing</b>	364124.738 ft	<b>Longitude</b>	W110°58'46.61842"	<b>Longitude</b>	W110°58'46.61842"
<b>Elevation</b>	2783.110 ft	<b>Height</b>	2686.088 ft	<b>Height</b>	2686.088 ft

Vector					
<b>ΔEasting</b>	-1670.115 ft	<b>NS Fwd Azimuth</b>	181°38'46"	<b>ΔX</b>	-18265.358 ft
<b>ΔNorthing</b>	-83647.655 ft	<b>Ellipsoid Dist.</b>	83664.560 ft	<b>ΔY</b>	-40937.037 ft
<b>ΔElevation</b>	356.322 ft	<b>ΔHeight</b>	355.331 ft	<b>ΔZ</b>	-70654.767 ft

**Standard Errors**

Vector errors:					
$\sigma \Delta$ Easting	0.029 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.030 ft
$\sigma \Delta$ Northing	0.019 ft	$\sigma$ Ellipsoid Dist.	0.019 ft	$\sigma \Delta$ Y	0.055 ft
$\sigma \Delta$ Elevation	0.063 ft	$\sigma \Delta$ Height	0.063 ft	$\sigma \Delta$ Z	0.035 ft

**Aposteriori Covariance Matrix (International foot<sup>2</sup>)**

	X	Y	Z
X	0.0000818011		
Y	0.0000452590	0.0002856061	
Z	-0.0000217872	-0.0001425446	0.0001110994

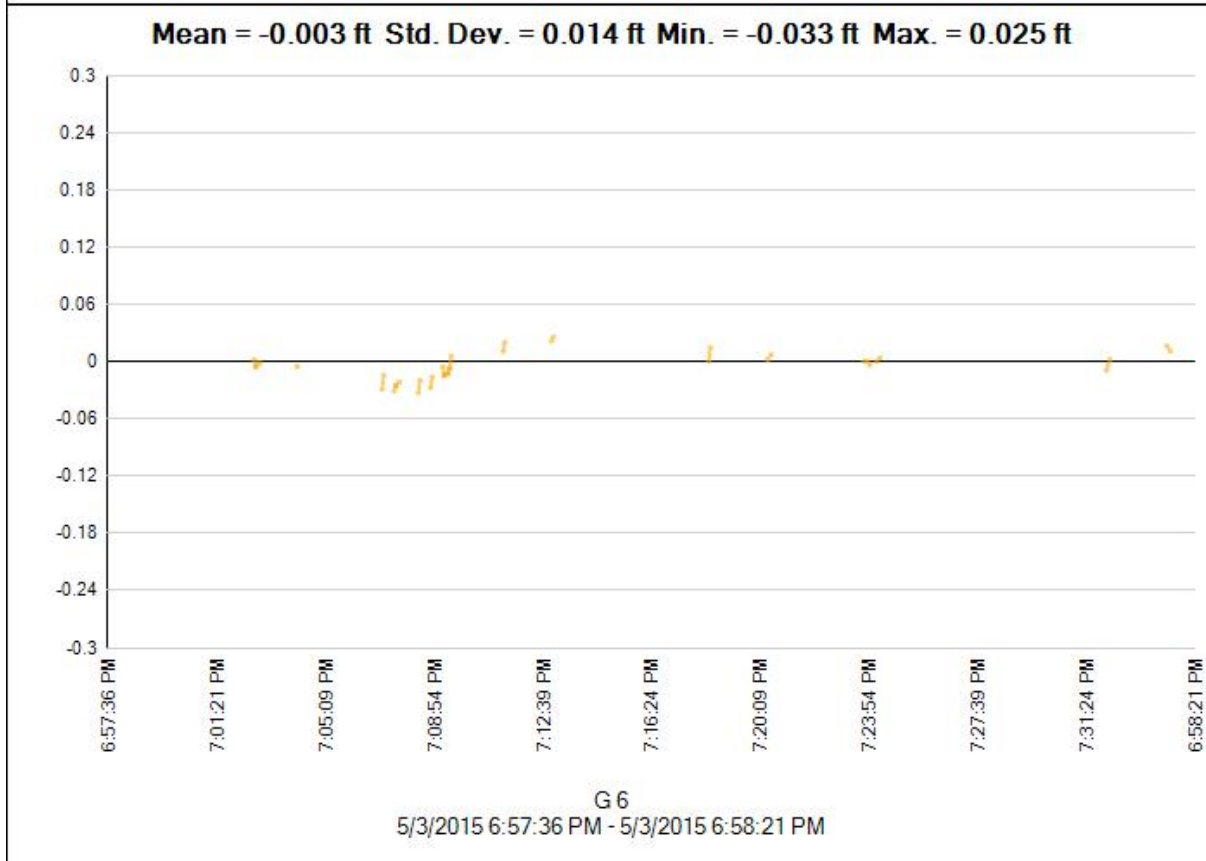
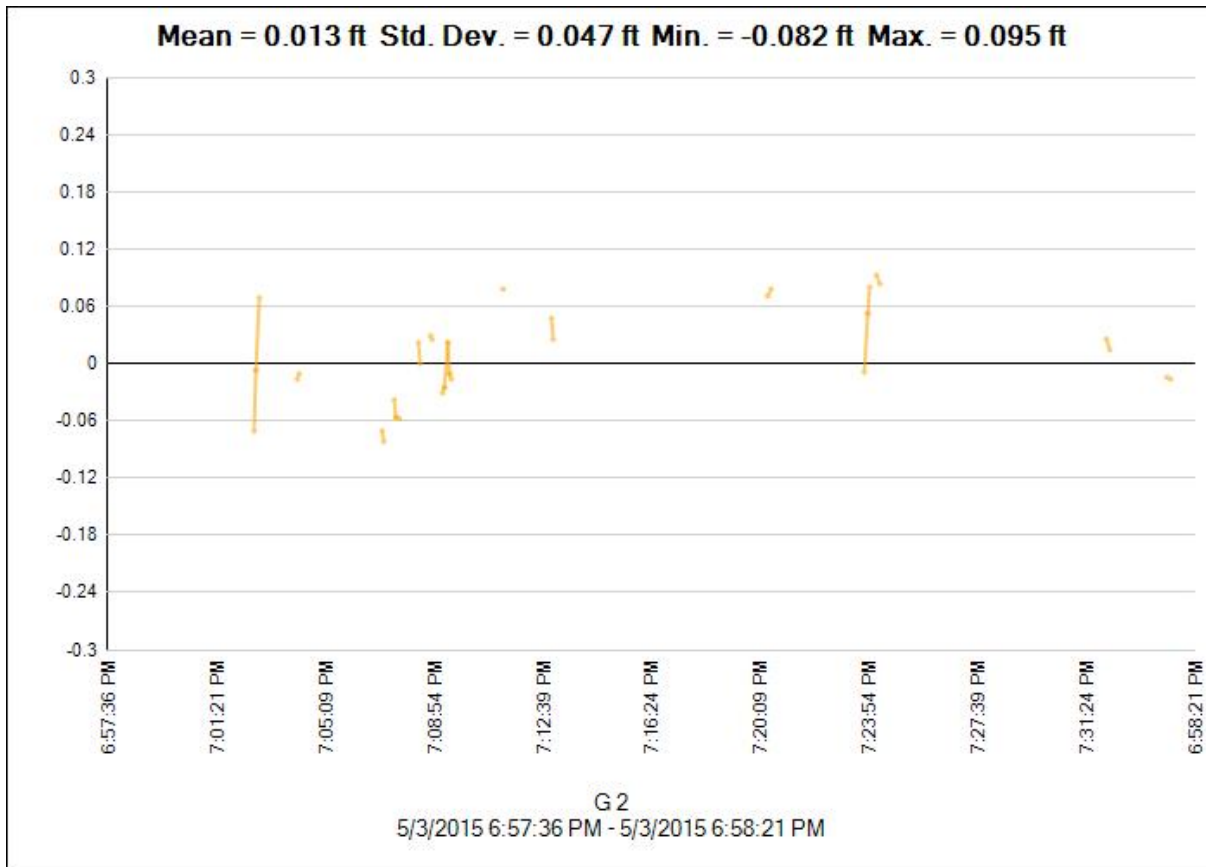
**Occupations**

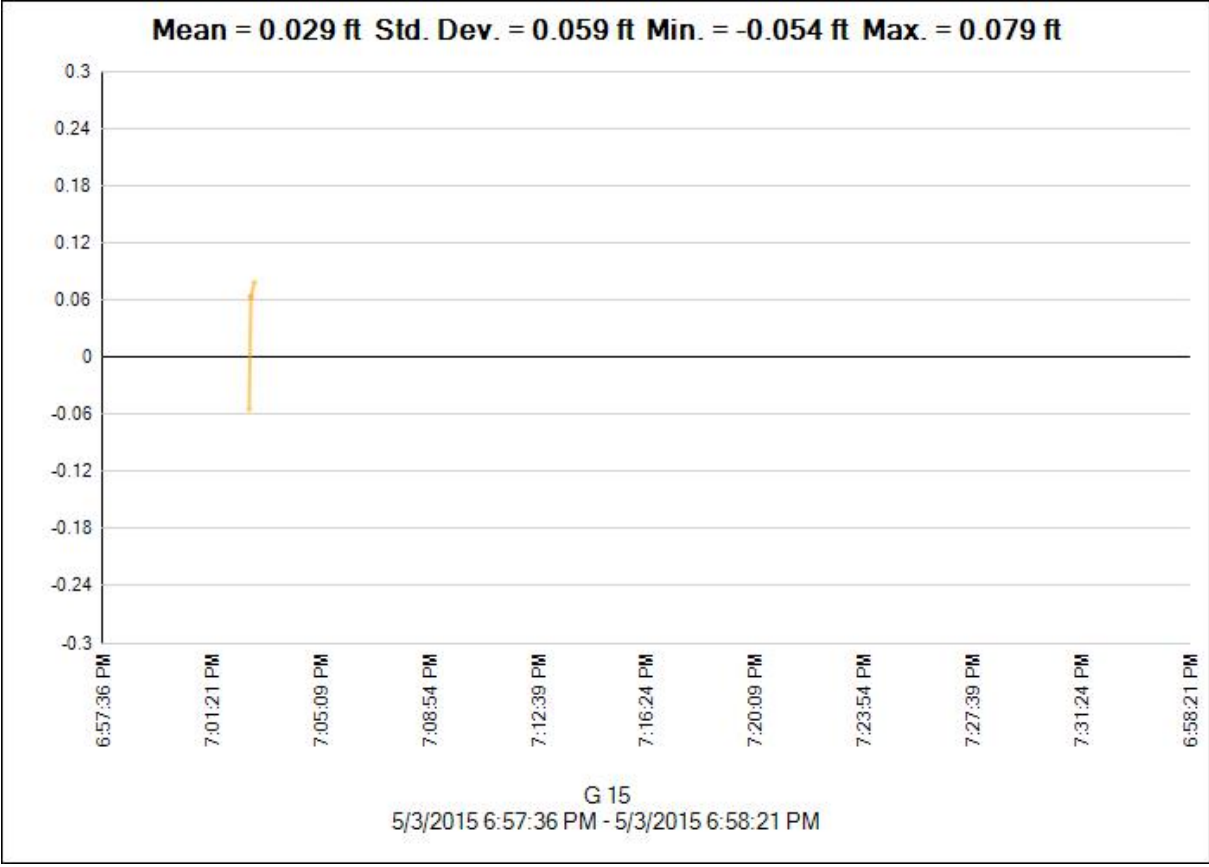
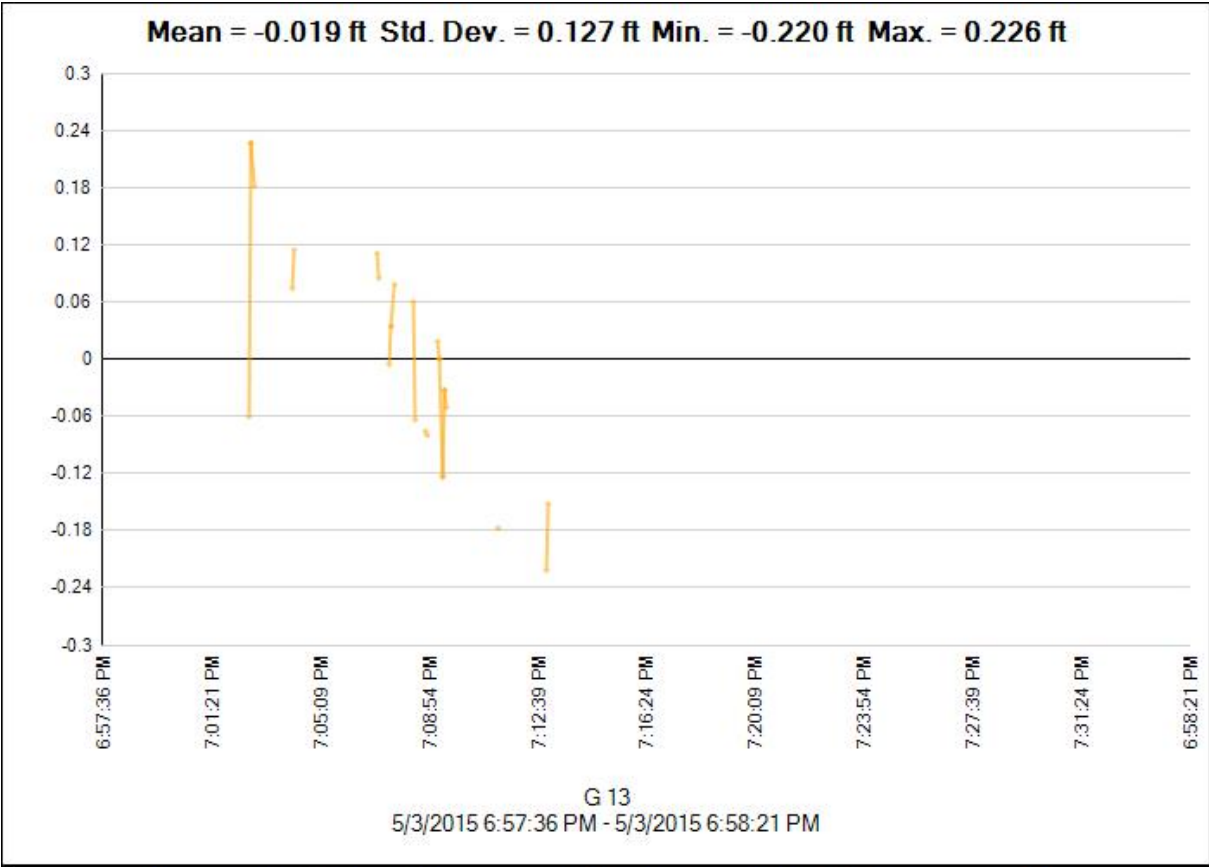
	From	To
Point ID:	AH8499	PAG112
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191231 (resampled).15o	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851240.t00
Receiver type:	Geo Explorer 3	5700
Receiver serial number:		0220271185
Antenna type:	702 Rev 3.00	Zephyr
Antenna serial number:	-----	00000000
Antenna height (measured):	5.892 ft	5.413 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

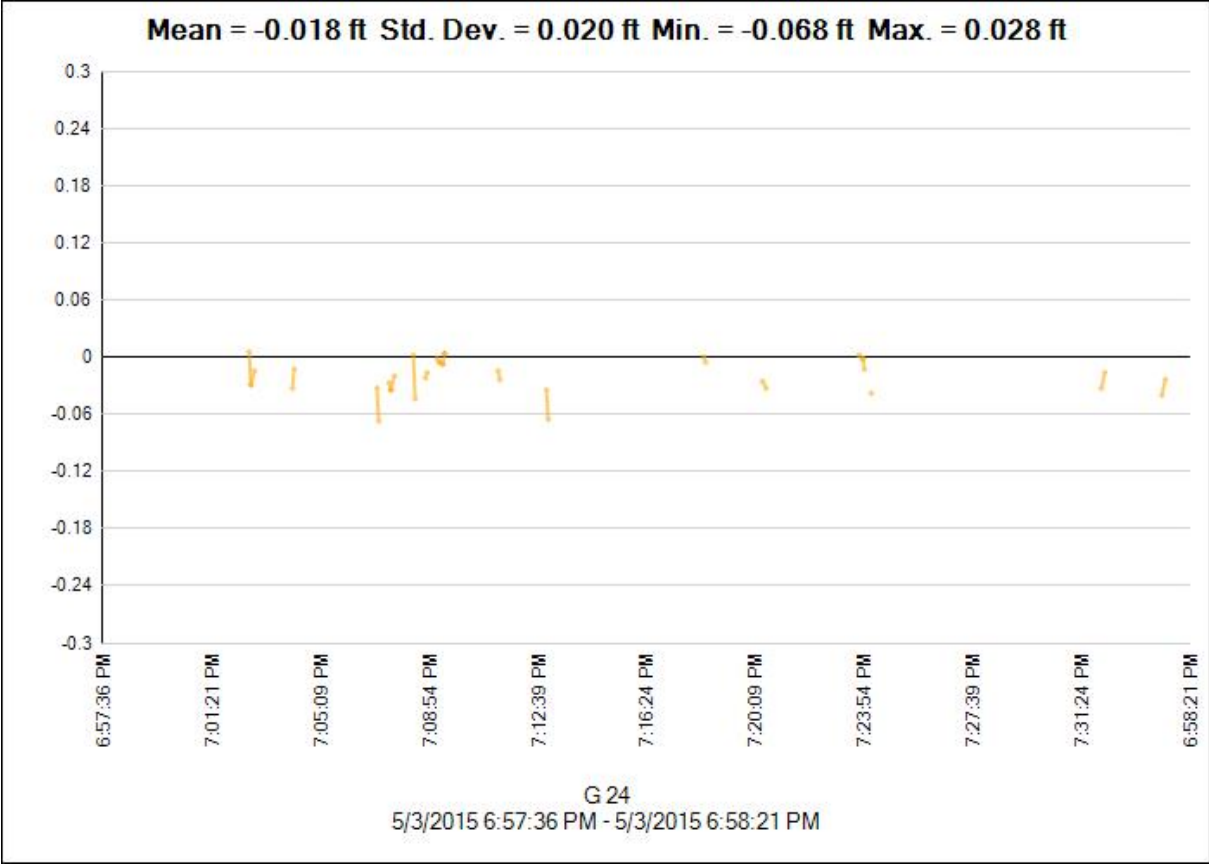
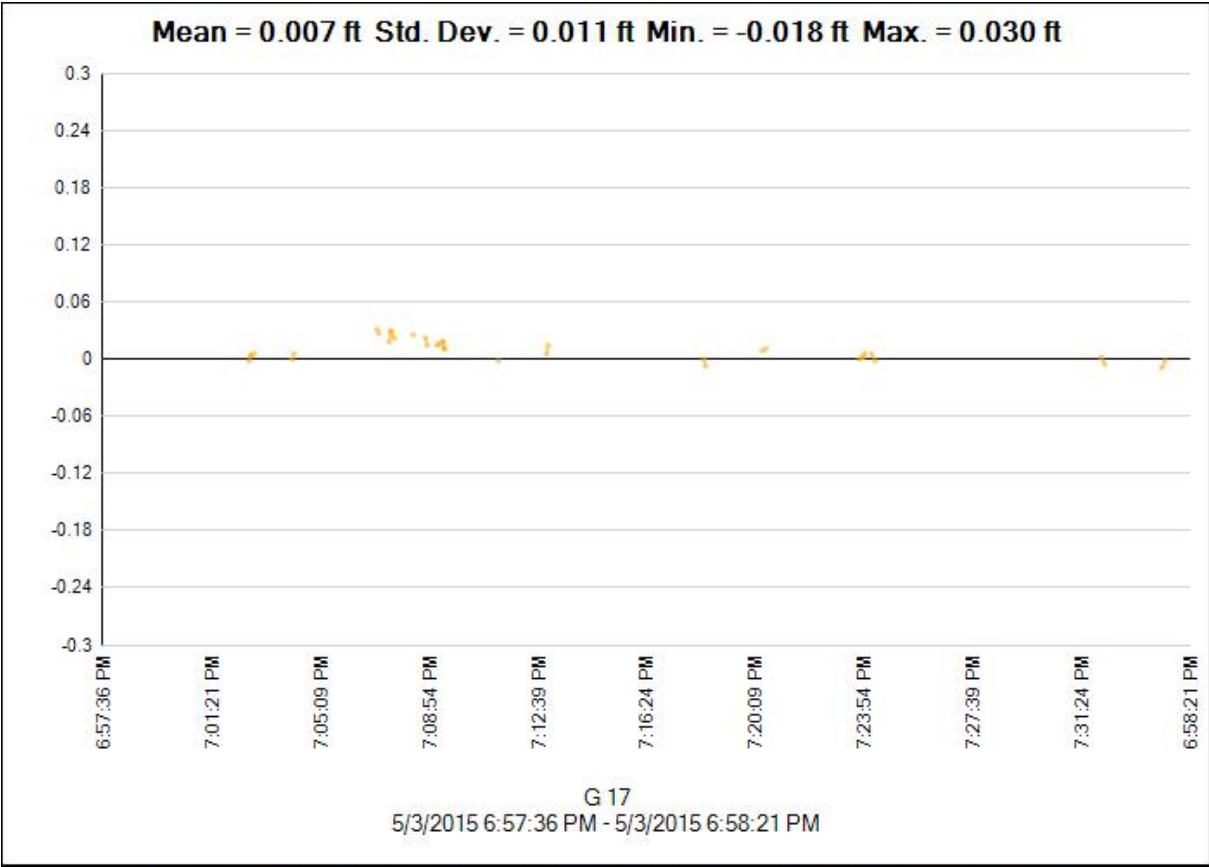
# Tracking Summary

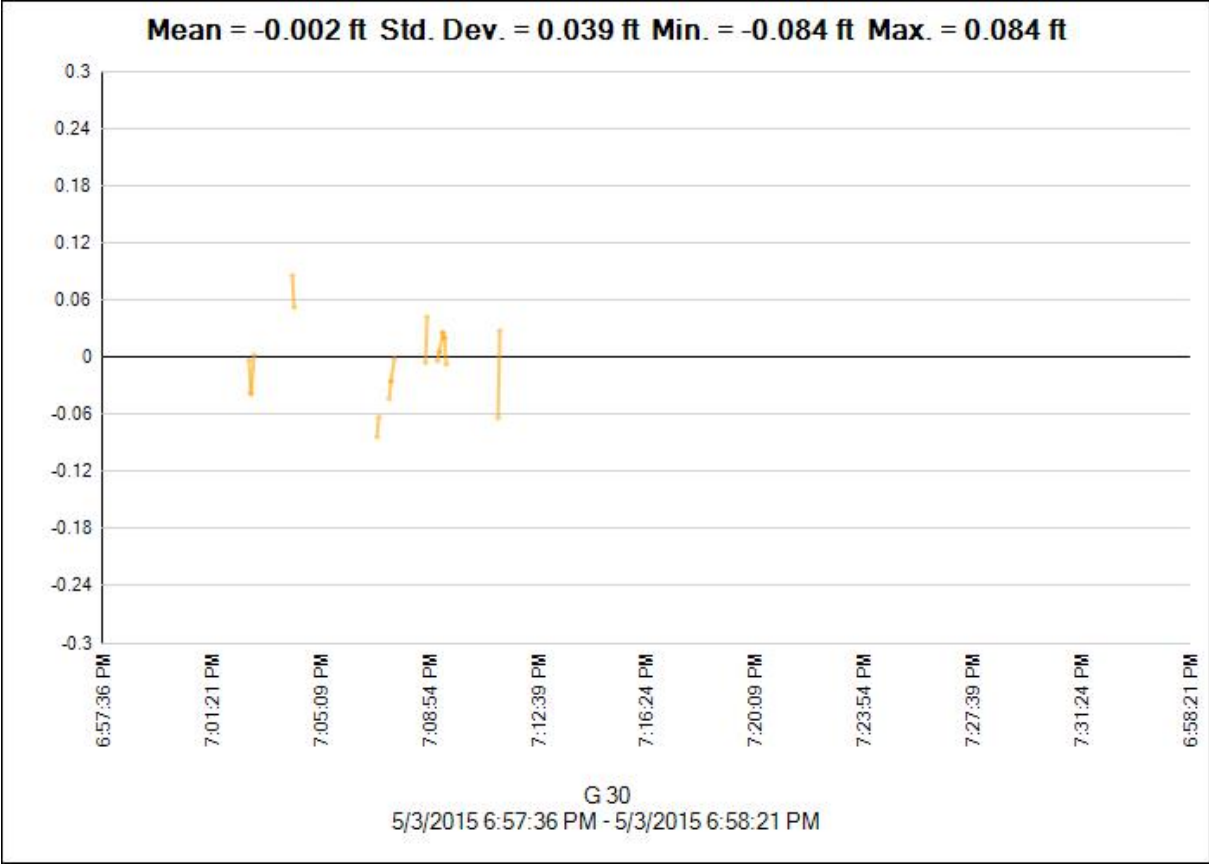
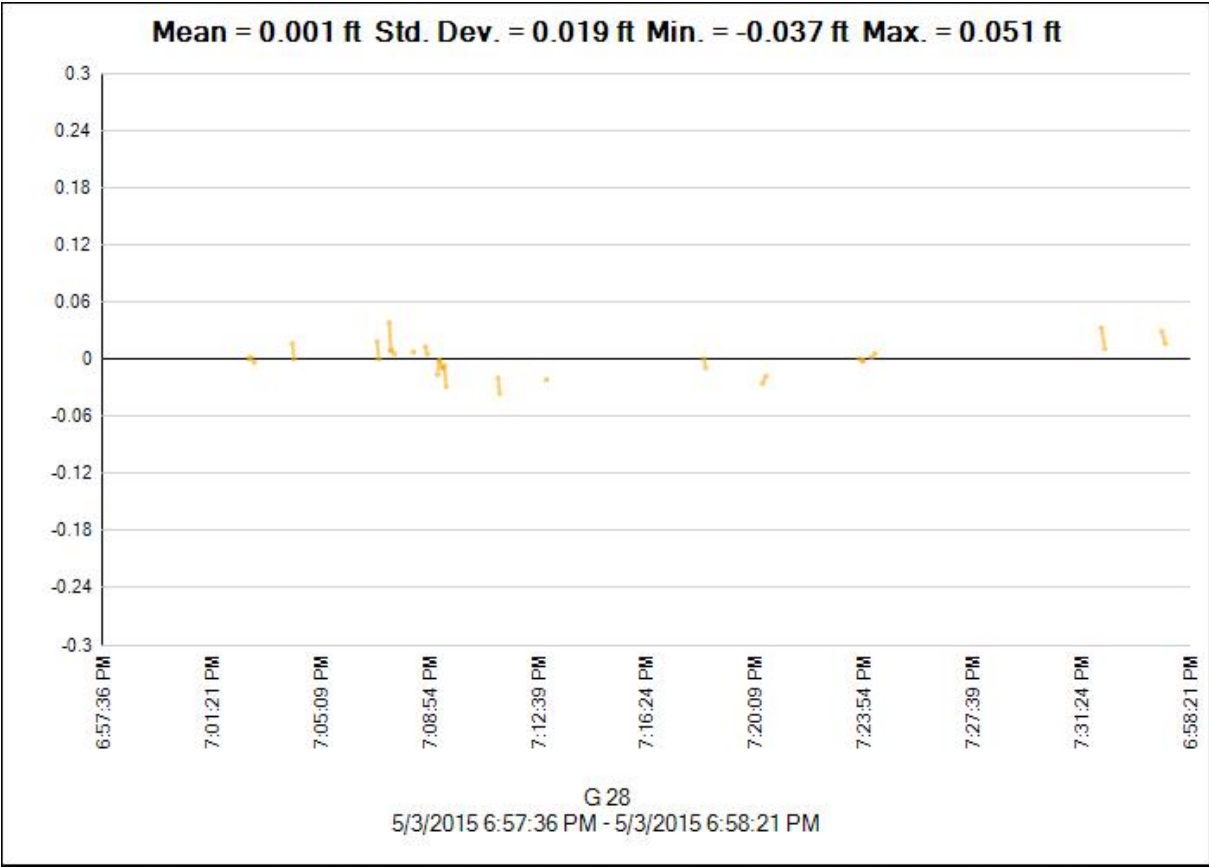
SV	5/3/2015 6:57:31 PM	Duration: 00:37:47	Major interval: 00:01:00	5/3/2015 7:35:18 PM
G 2	L1 L2			
G 6	L1 L2			
G 10	L1			
G 12	L1 L2			
G 13	L1 L2			
G 15	L1 L2			
G 17	L1 L2			
G 24	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

# Residuals











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**Processing style**

Elevation mask: 13.0 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

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**AH8499 - PAG111 (5:27:15 PM-6:05:18 PM) (S9)**

---

Baseline observation: AH8499 --- PAG111 (B9)  
Processed: 5/29/2015 1:05:18 PM  
Solution type: Fixed  
Frequency used: Dual Frequency (L1, L2)  
Horizontal precision: 0.181 ft  
Vertical precision: 0.158 ft  
RMS: 0.006 ft  
Maximum PDOP: 1.915  
Ephemeris used: Broadcast  
Antenna model: NGS Absolute  
Processing start time: 5/3/2015 5:32:44 PM (Local: UTC-6hr)  
Processing stop time: 5/3/2015 5:50:09 PM (Local: UTC-6hr)  
Processing duration: 00:17:25  
Processing interval: 5 seconds



**Vector Components (Mark to Mark)**

<b>From:</b>		AH8499			
<b>Grid</b>		<b>Local</b>		<b>Global</b>	
<b>Easting</b>	992155.779 ft	<b>Latitude</b>	N32°13'38.92734"	<b>Latitude</b>	N32°13'38.92734"
<b>Northing</b>	447772.394 ft	<b>Longitude</b>	W110°58'18.71101"	<b>Longitude</b>	W110°58'18.71101"
<b>Elevation</b>	2426.788 ft	<b>Height</b>	2330.757 ft	<b>Height</b>	2330.757 ft

<b>To:</b>		PAG111			
<b>Grid</b>		<b>Local</b>		<b>Global</b>	
<b>Easting</b>	967787.016 ft	<b>Latitude</b>	N31°43'32.15229"	<b>Latitude</b>	N31°43'32.15229"
<b>Northing</b>	264979.540 ft	<b>Longitude</b>	W111°03'19.32510"	<b>Longitude</b>	W111°03'19.32510"
<b>Elevation</b>	3115.301 ft	<b>Height</b>	3018.036 ft	<b>Height</b>	3018.036 ft

<b>Vector</b>					
<b>ΔEasting</b>	-24368.763 ft	<b>NS Fwd Azimuth</b>	188°05'38"	<b>ΔX</b>	-59061.076 ft
<b>ΔNorthing</b>	-182792.854 ft	<b>Ellipsoid Dist.</b>	184411.917 ft	<b>ΔY</b>	-81530.385 ft
<b>ΔElevation</b>	688.513 ft	<b>ΔHeight</b>	687.279 ft	<b>ΔZ</b>	-154535.814 ft

**Standard Errors**

<b>Vector errors:</b>					
<b>σ ΔEasting</b>	0.073 ft	<b>σ NS fwd Azimuth</b>	0°00'00"	<b>σ ΔX</b>	0.078 ft
<b>σ ΔNorthing</b>	0.050 ft	<b>σ Ellipsoid Dist.</b>	0.049 ft	<b>σ ΔY</b>	0.048 ft
<b>σ ΔElevation</b>	0.080 ft	<b>σ ΔHeight</b>	0.080 ft	<b>σ ΔZ</b>	0.077 ft

**Aposteriori Covariance Matrix (International foot²)**

	<b>X</b>	<b>Y</b>	<b>Z</b>
<b>X</b>	0.0005715394		
<b>Y</b>	0.0000366837	0.0002144679	
<b>Z</b>	-0.0002316989	-0.0001977992	0.0005508274

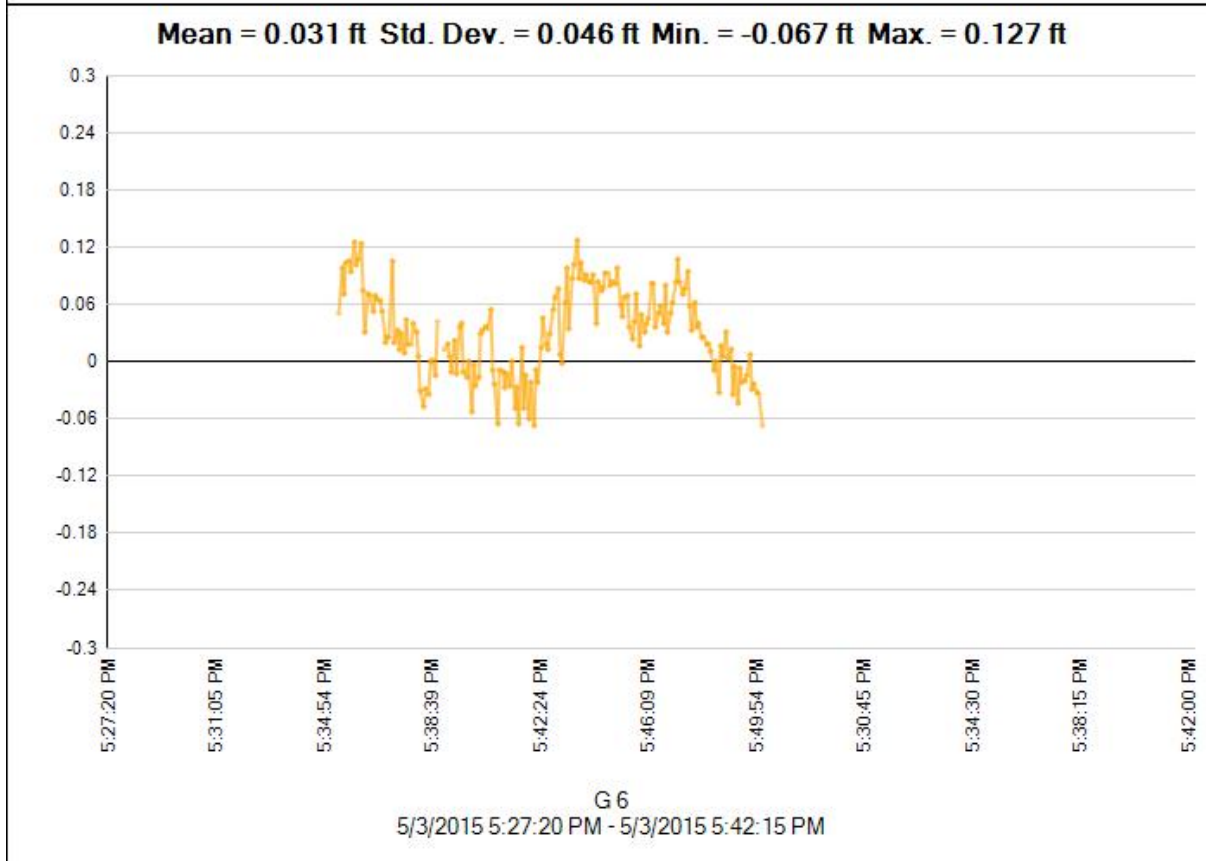
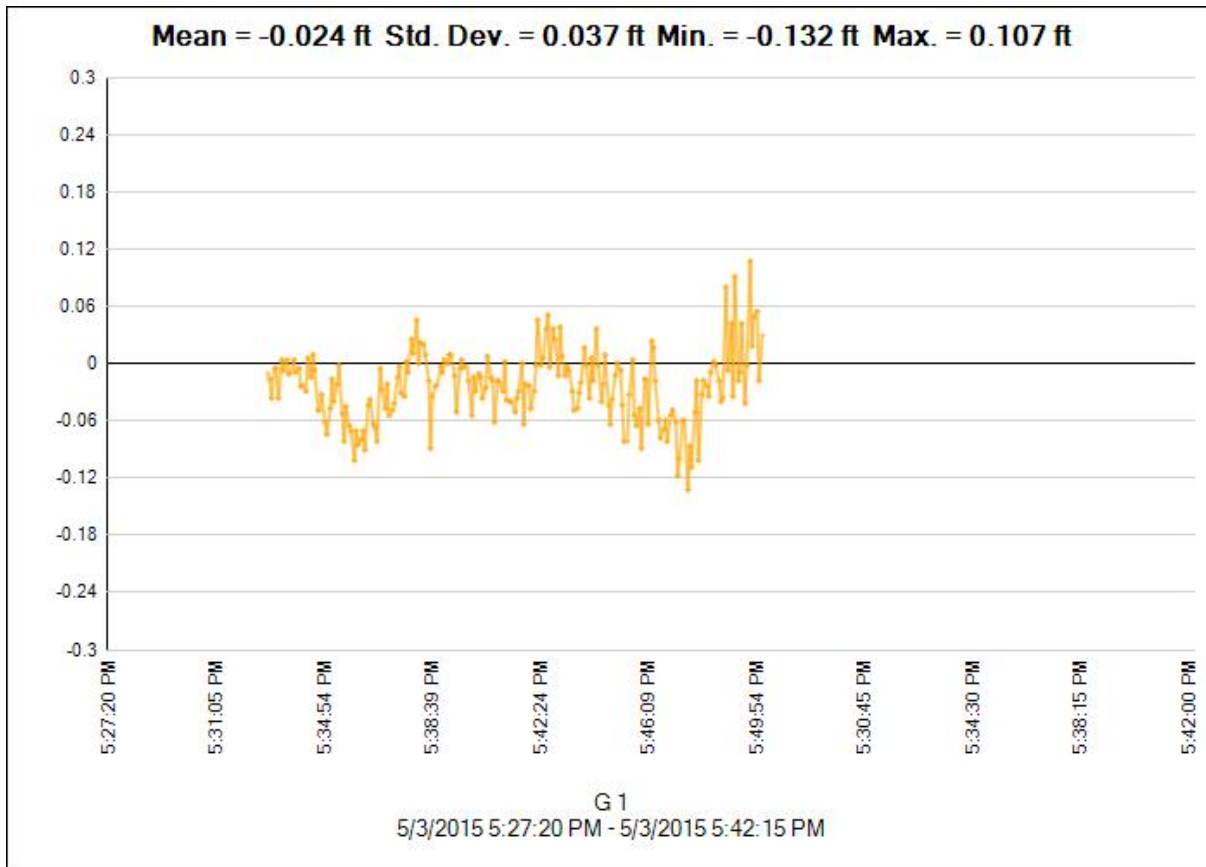
## Occupations

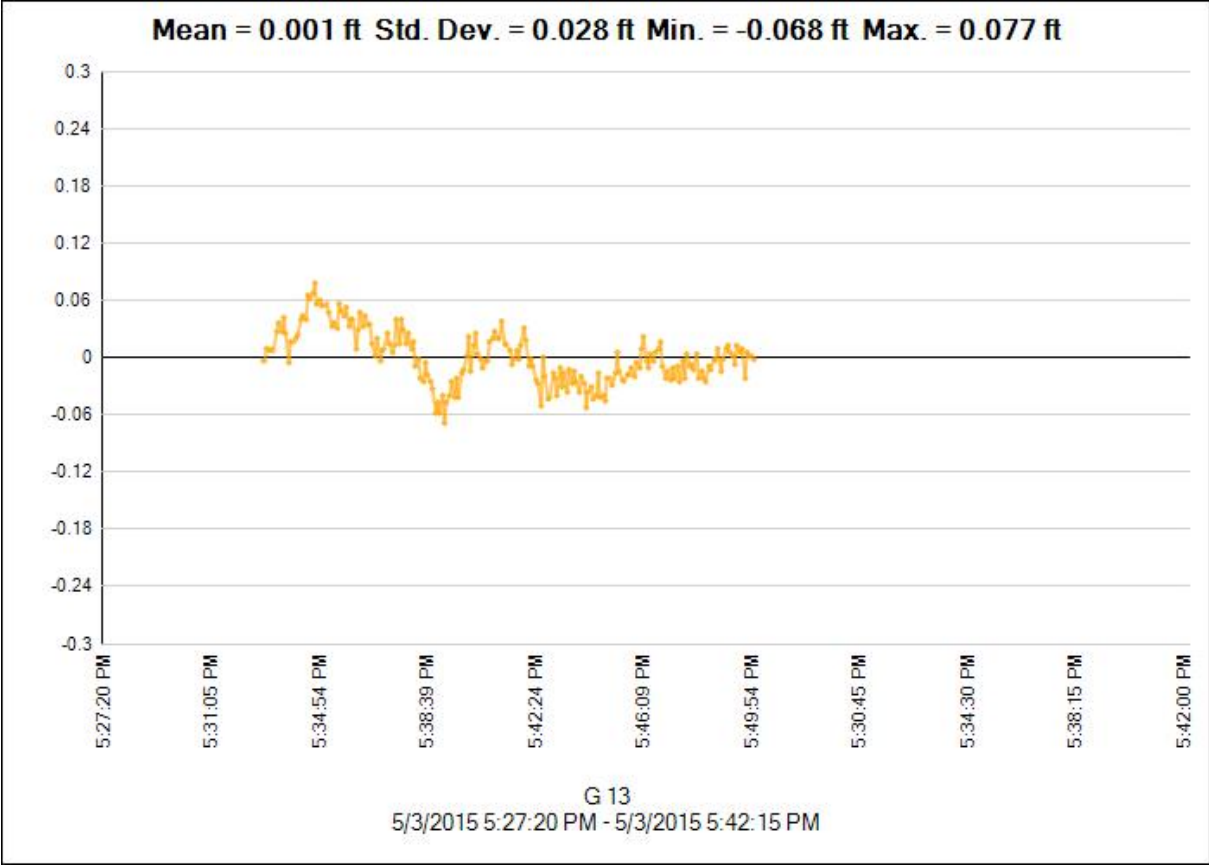
	From	To
<b>Point ID:</b>	AH8499	PAG111
<b>Data file:</b>	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191231 (resampled).15o	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851233.t00
<b>Receiver type:</b>	Geo Explorer 3	5700
<b>Receiver serial number:</b>		0220271185
<b>Antenna type:</b>	702 Rev 3.00	Zephyr
<b>Antenna serial number:</b>	-----	00000000
<b>Antenna height (measured):</b>	5.892 ft	5.574 ft
<b>Antenna method:</b>	Antenna Phase Center	Antenna Phase Center

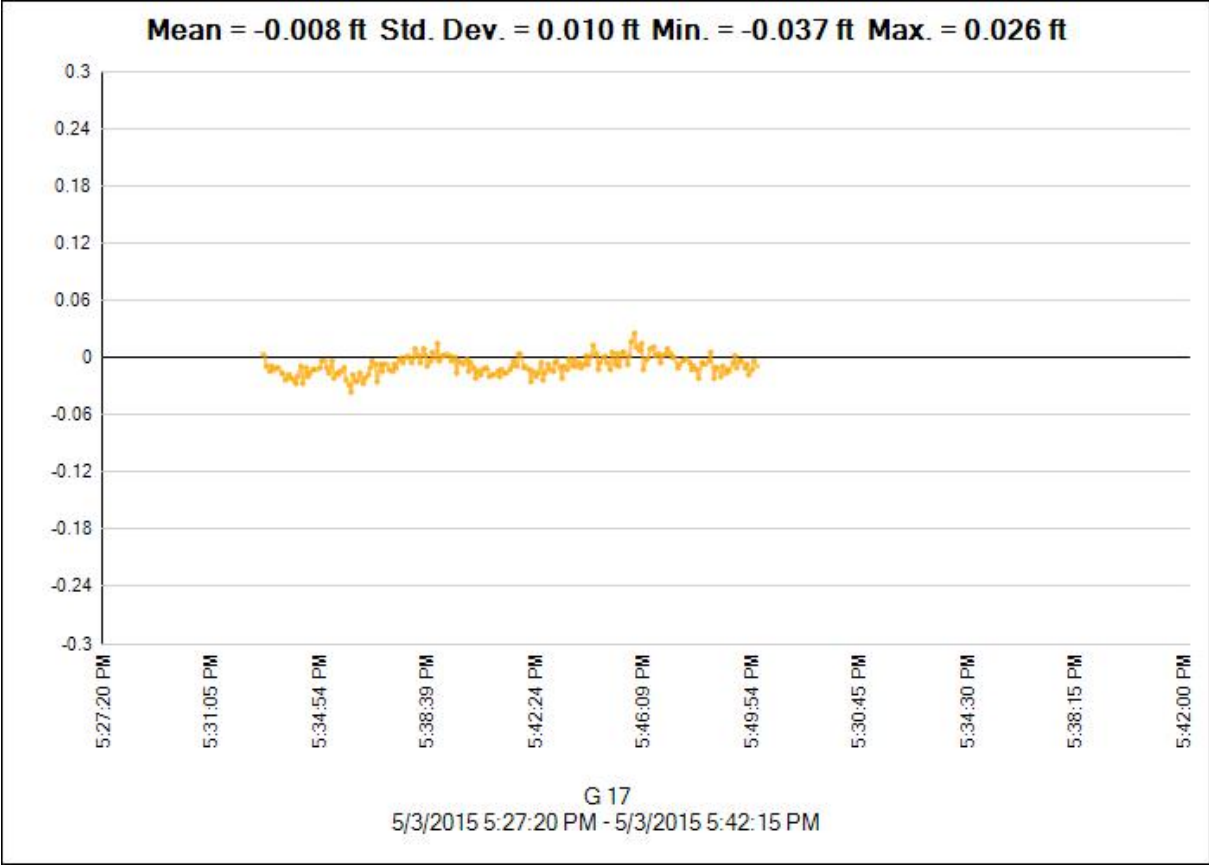
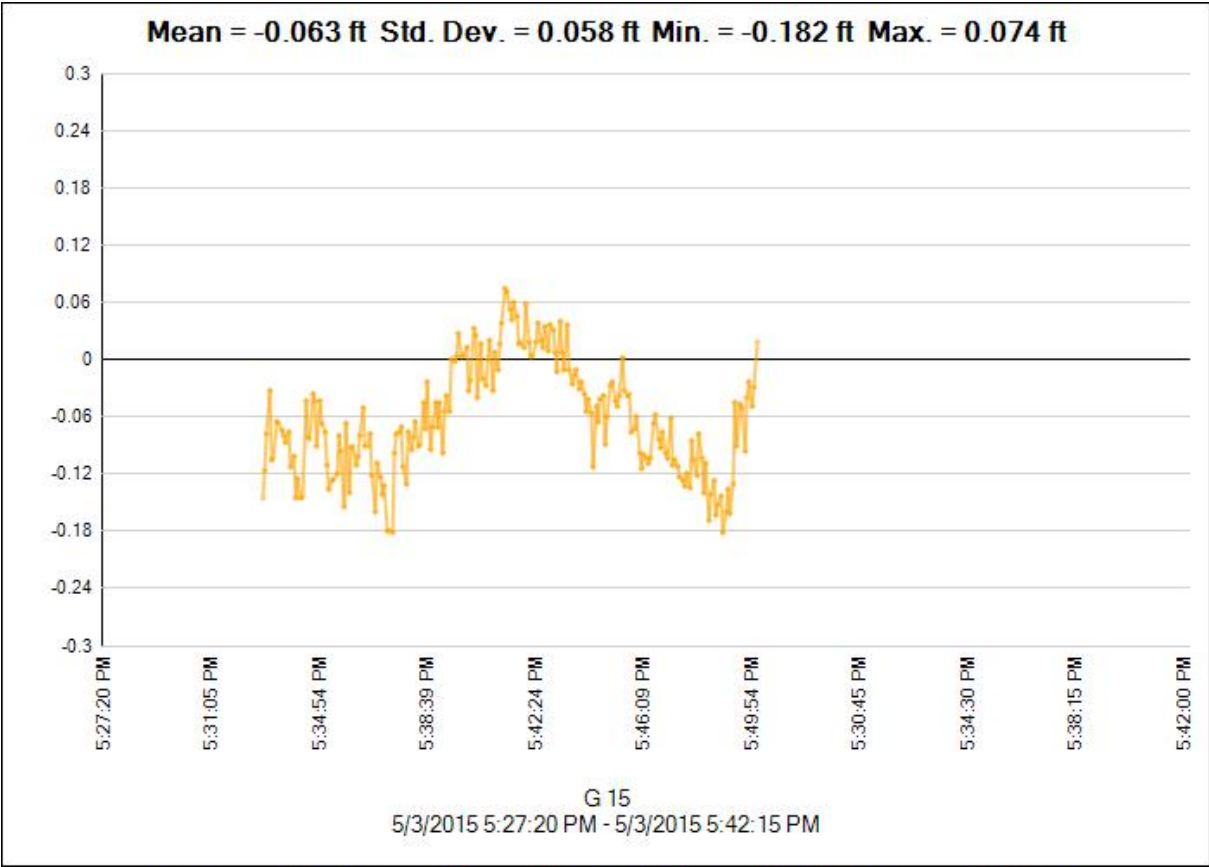
# Tracking Summary

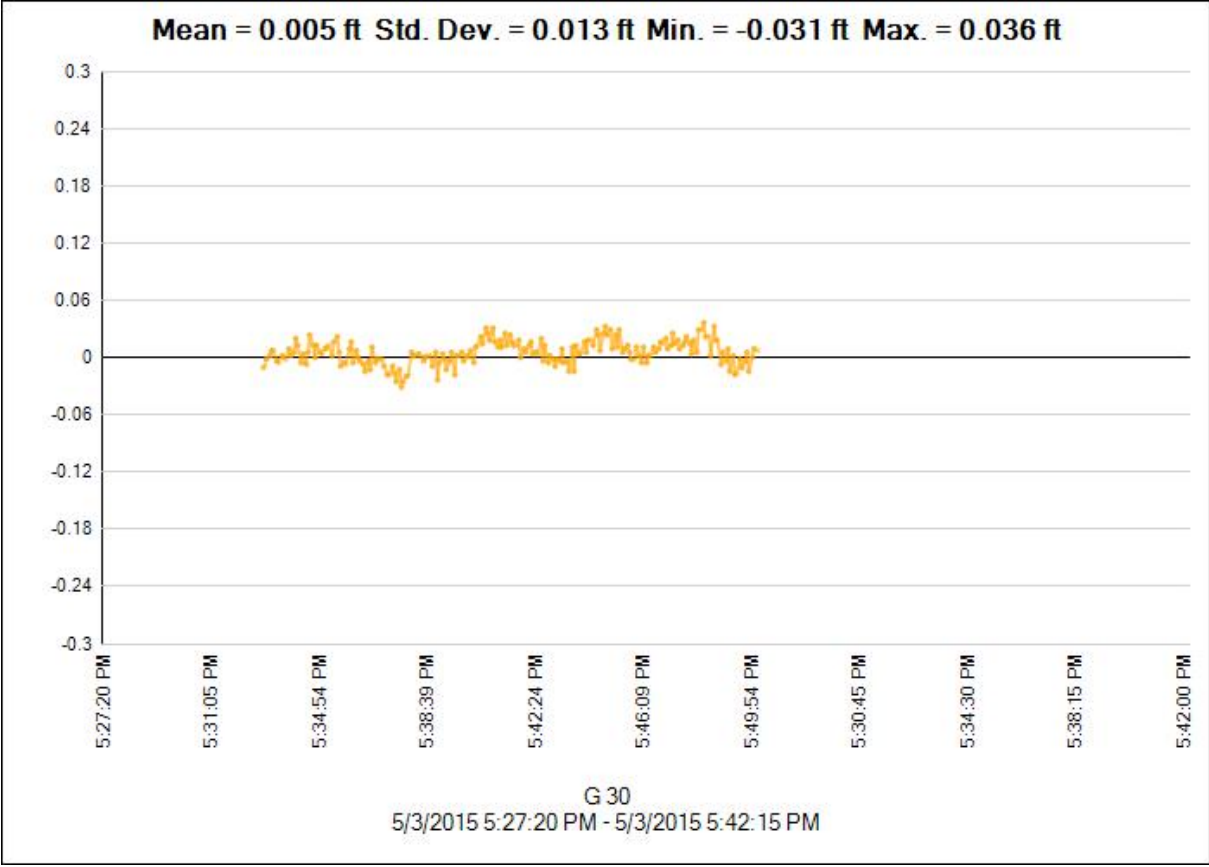
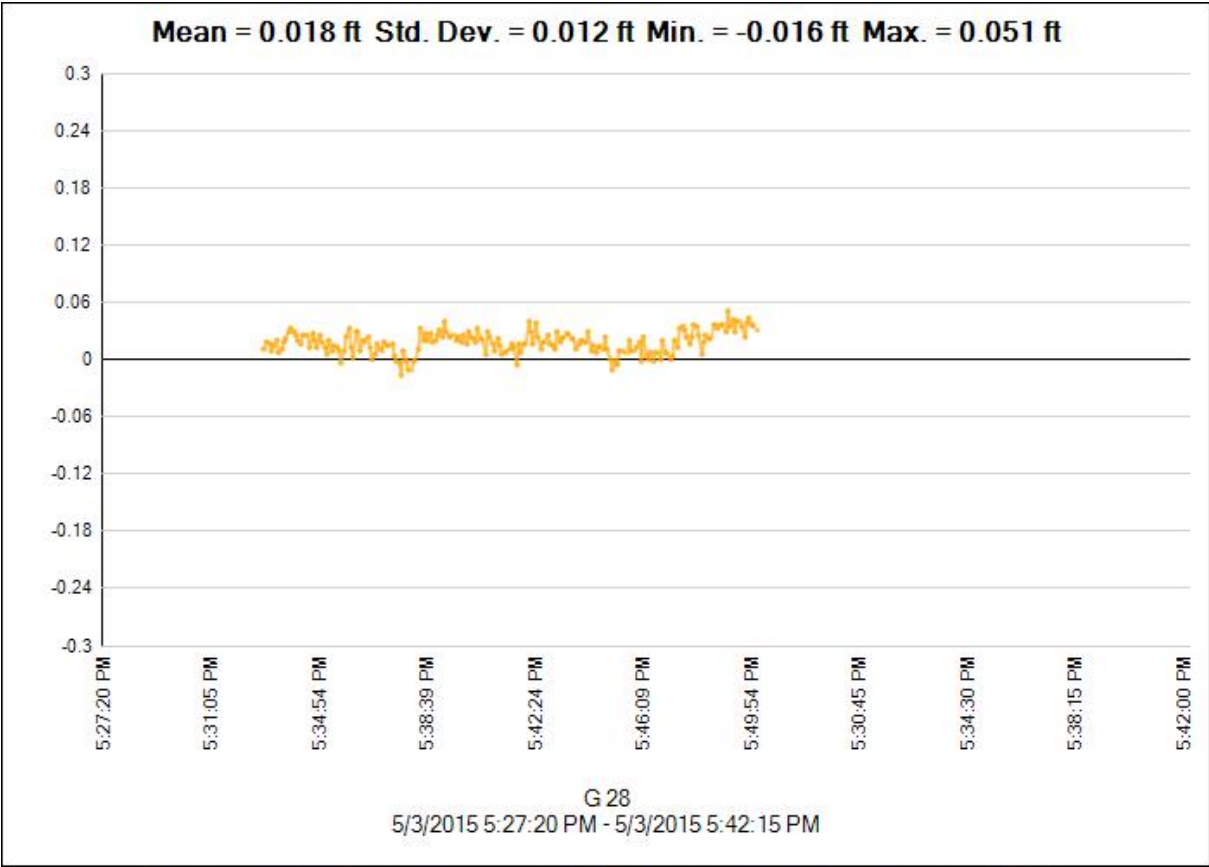
SV	5/3/2015 5:27:15 PM	Duration: 00:38:03 Major interval: 00:01:00	5/3/2015 6:05:18 PM
G 1	L1 L2		
G 4	L1		
G 6	L1 L2		
G 7	L1 L2		
G 11	L1		
G 13	L1 L2		
G 15	L1 L2		
G 17	L1 L2		
G 28	L1 L2		
G 30	L1 L2		

# Residuals











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**Processing style**

Elevation mask: 13.0 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

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**AH8499 - PAG115 (3:54:48 PM-4:38:17 PM) (S10)**

---

Baseline observation: AH8499 --- PAG115 (B10)  
Processed: 5/29/2015 1:04:07 PM  
Solution type: Fixed  
Frequency used: Dual Frequency (L1, L2)  
Horizontal precision: 0.093 ft  
Vertical precision: 0.130 ft  
RMS: 0.006 ft  
Maximum PDOP: 2.543  
Ephemeris used: Broadcast  
Antenna model: NGS Absolute  
Processing start time: 5/3/2015 3:54:49 PM (Local: UTC-6hr)  
Processing stop time: 5/3/2015 4:38:14 PM (Local: UTC-6hr)  
Processing duration: 00:43:25  
Processing interval: 5 seconds



### Vector Components (Mark to Mark)

From:		AH8499			
Grid		Local		Global	
Easting	992155.779 ft	Latitude	N32°13'38.92734"	Latitude	N32°13'38.92734"
Northing	447772.394 ft	Longitude	W110°58'18.71101"	Longitude	W110°58'18.71101"
Elevation	2426.788 ft	Height	2330.757 ft	Height	2330.757 ft

To:		PAG115			
Grid		Local		Global	
Easting	930199.087 ft	Latitude	N32°08'02.71989"	Latitude	N32°08'02.71988"
Northing	413309.039 ft	Longitude	W111°10'22.72763"	Longitude	W111°10'22.72763"
Elevation	2483.325 ft	Height	2385.444 ft	Height	2385.444 ft

Vector					
$\Delta$ Easting	-61956.692 ft	NS Fwd Azimuth	241°25'06"	$\Delta$ X	-64595.471 ft
$\Delta$ Northing	-34463.355 ft	Ellipsoid Dist.	70898.312 ft	$\Delta$ Y	5445.216 ft
$\Delta$ Elevation	56.537 ft	$\Delta$ Height	54.687 ft	$\Delta$ Z	-28731.111 ft

### Standard Errors

Vector errors:					
$\sigma$ $\Delta$ Easting	0.023 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma$ $\Delta$ X	0.024 ft
$\sigma$ $\Delta$ Northing	0.037 ft	$\sigma$ Ellipsoid Dist.	0.031 ft	$\sigma$ $\Delta$ Y	0.061 ft
$\sigma$ $\Delta$ Elevation	0.066 ft	$\sigma$ $\Delta$ Height	0.066 ft	$\sigma$ $\Delta$ Z	0.045 ft

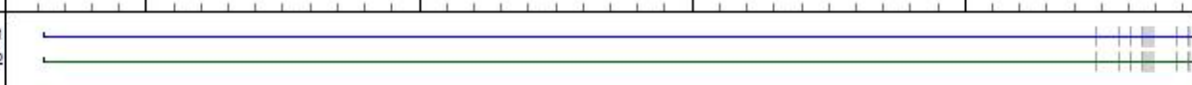

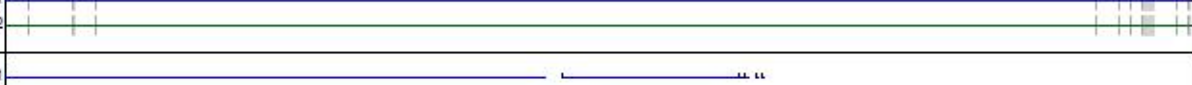
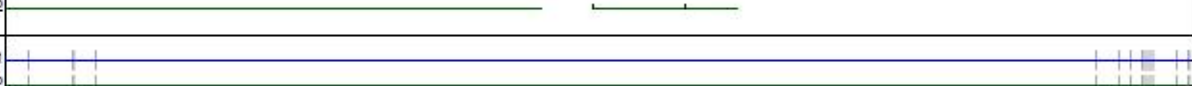
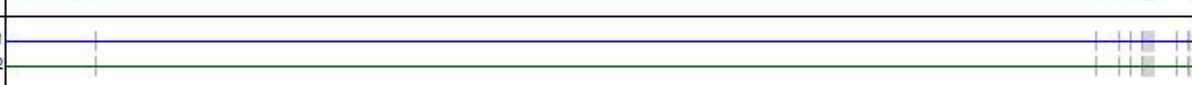
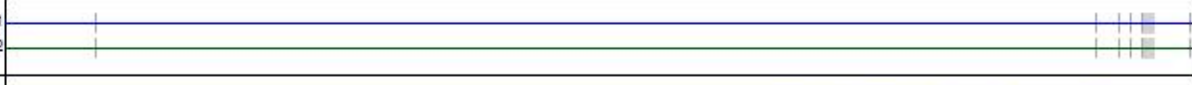
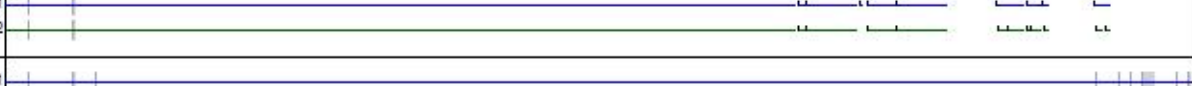
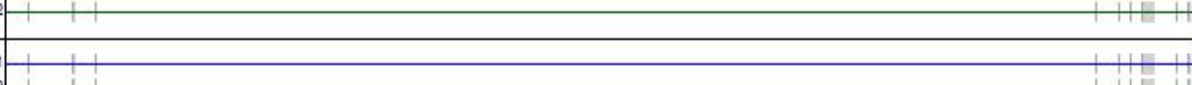


### Aposteriori Covariance Matrix (International foot<sup>2</sup>)

	X	Y	Z
X	0.0000523821		
Y	0.0000601852	0.0003435410	
Z	0.0000157808	-0.0001322644	0.0001904396

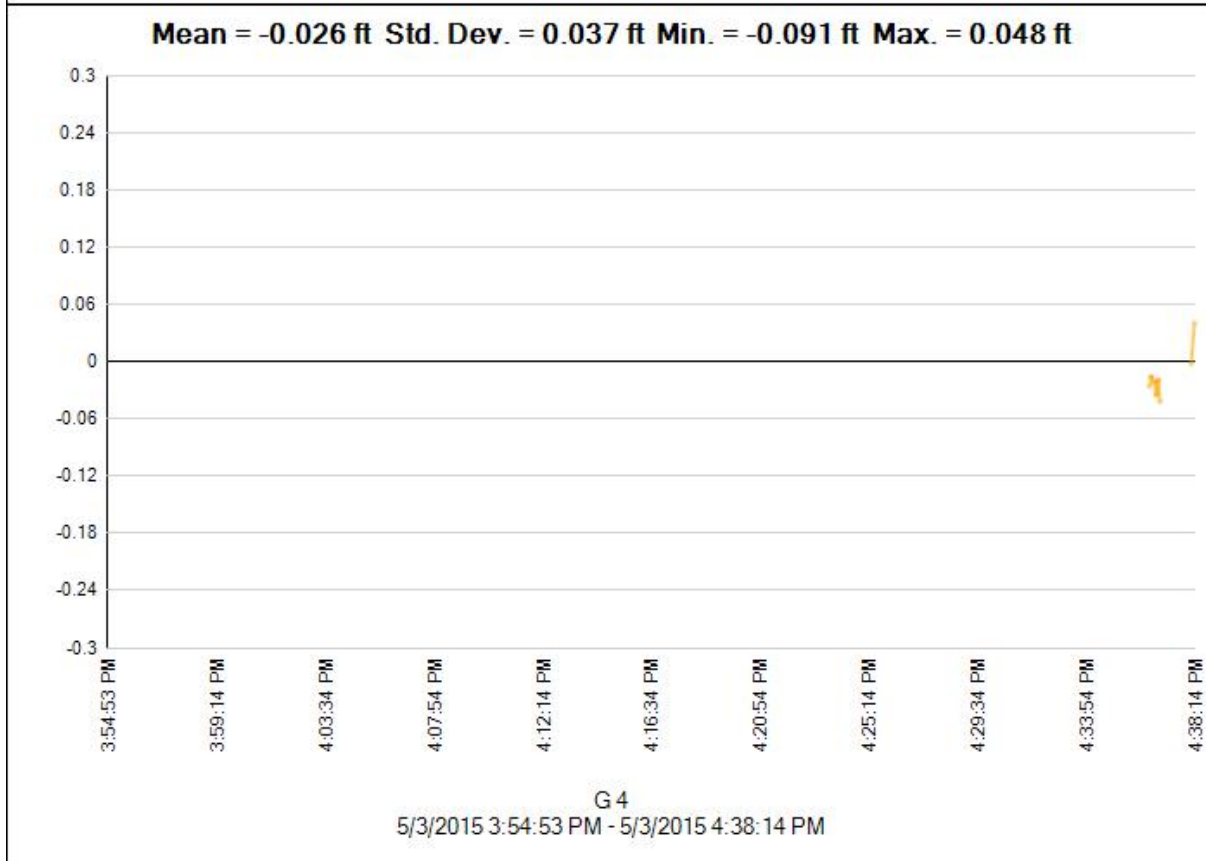
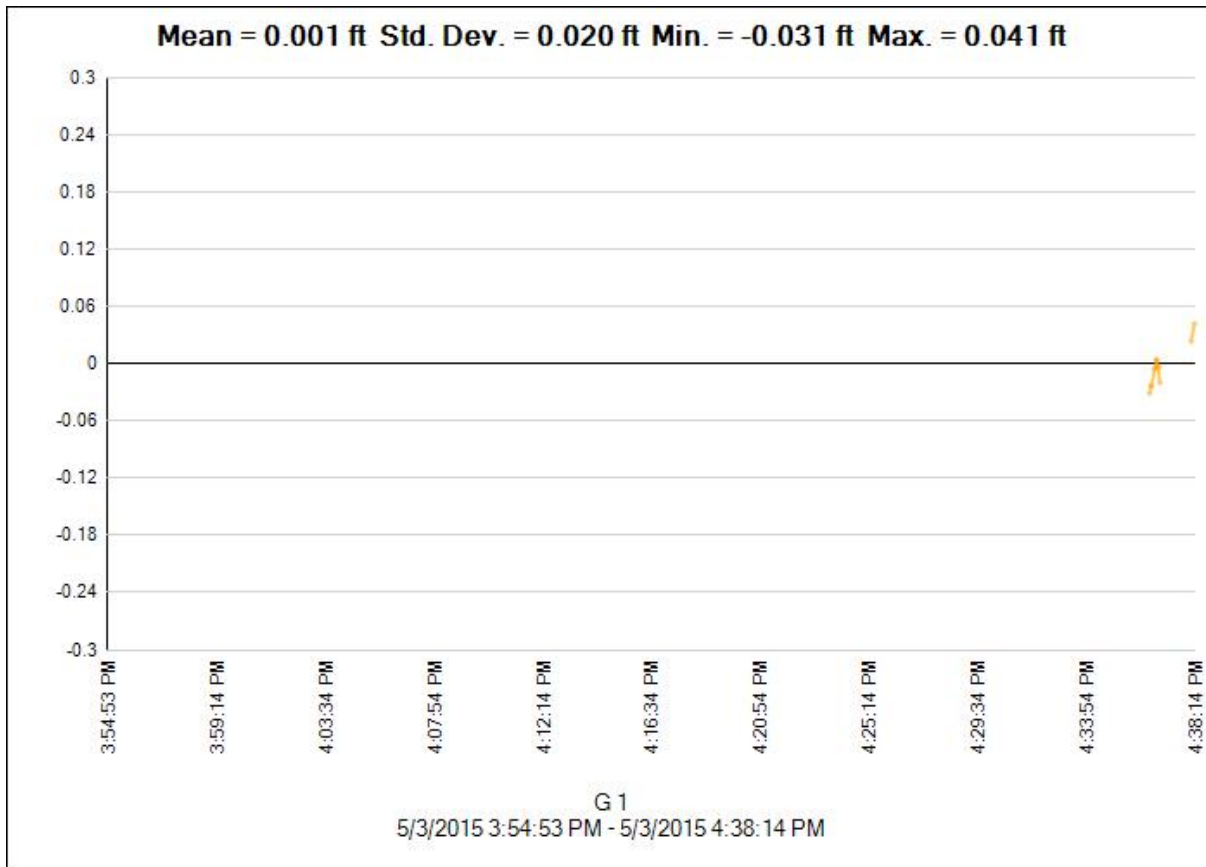
## Occupations

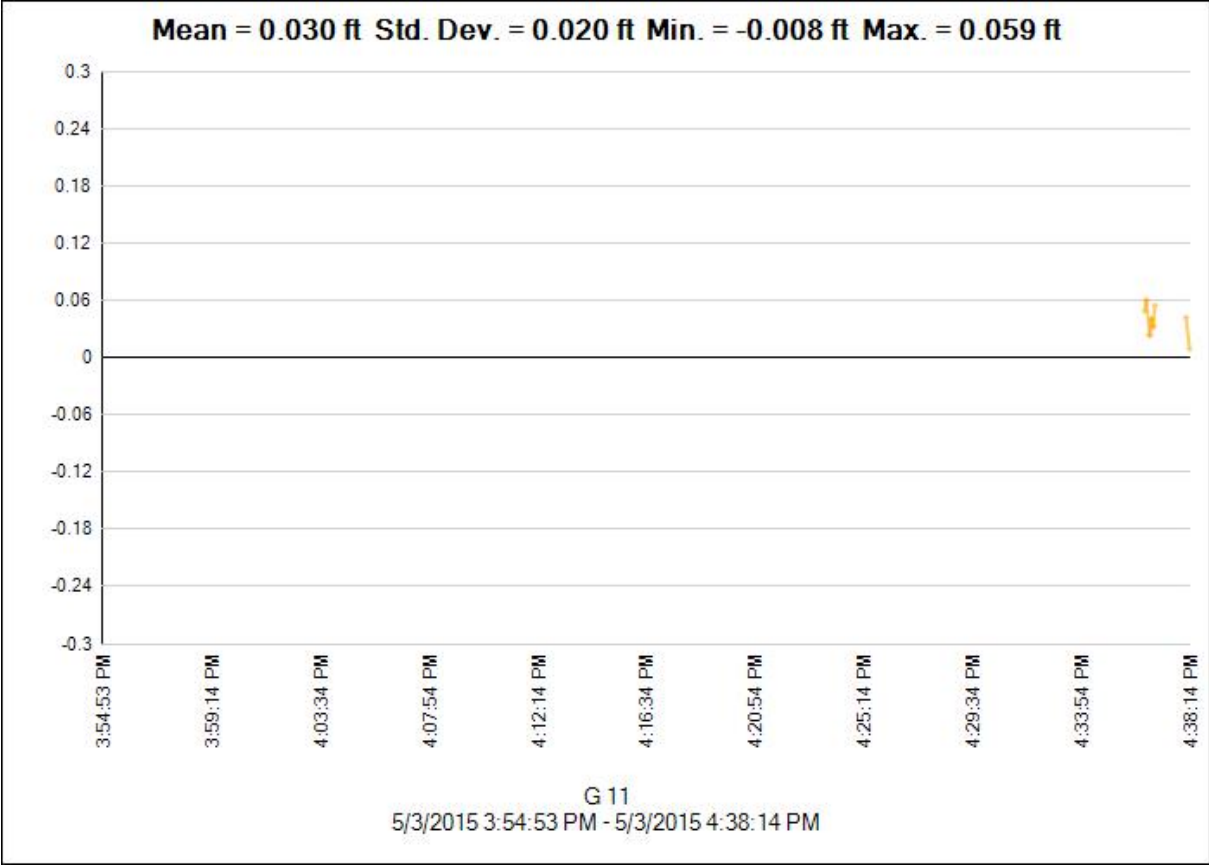
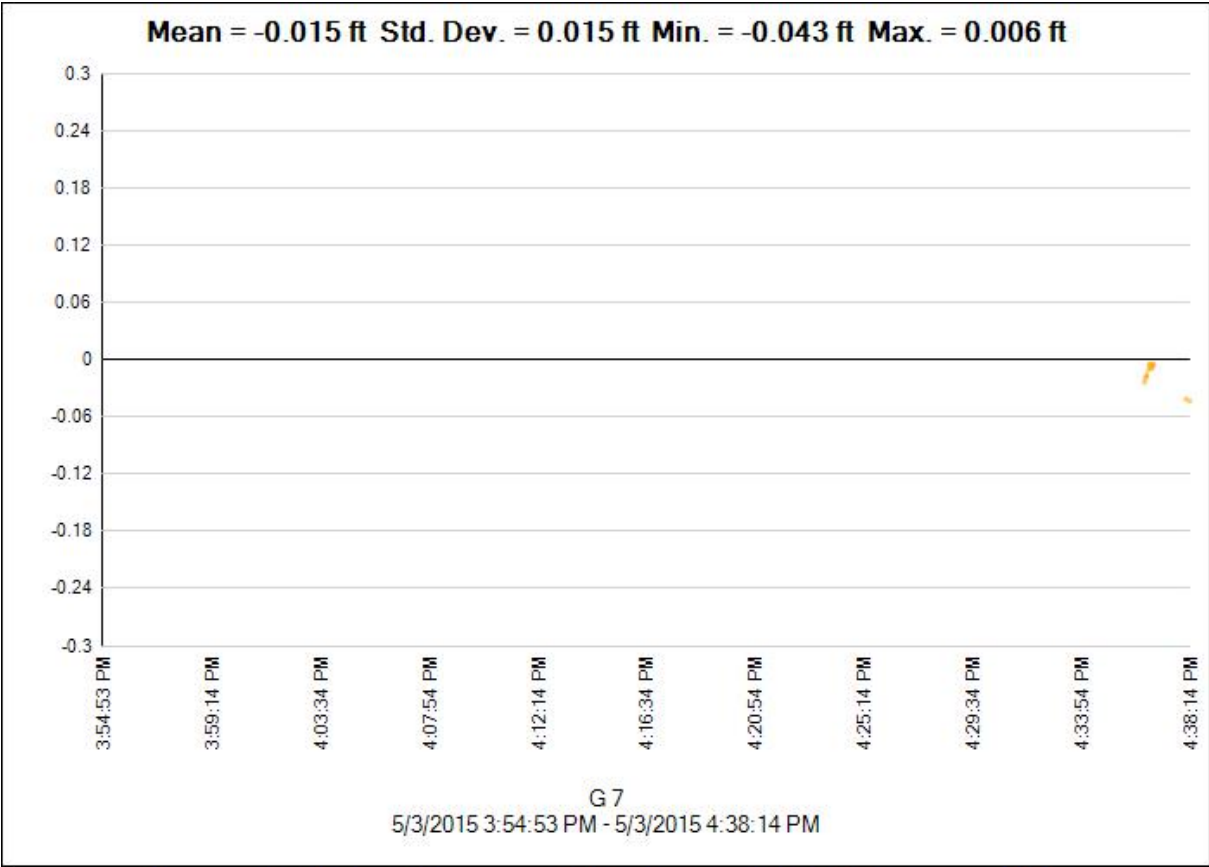
	From	To
<b>Point ID:</b>	AH8499	PAG115
<b>Data file:</b>	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191231 (resampled).15o	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851232.t00
<b>Receiver type:</b>	Geo Explorer 3	5700
<b>Receiver serial number:</b>		0220271185
<b>Antenna type:</b>	702 Rev 3.00	Zephyr
<b>Antenna serial number:</b>	-----	00000000
<b>Antenna height (measured):</b>	5.892 ft	5.469 ft
<b>Antenna method:</b>	Antenna Phase Center	Antenna Phase Center

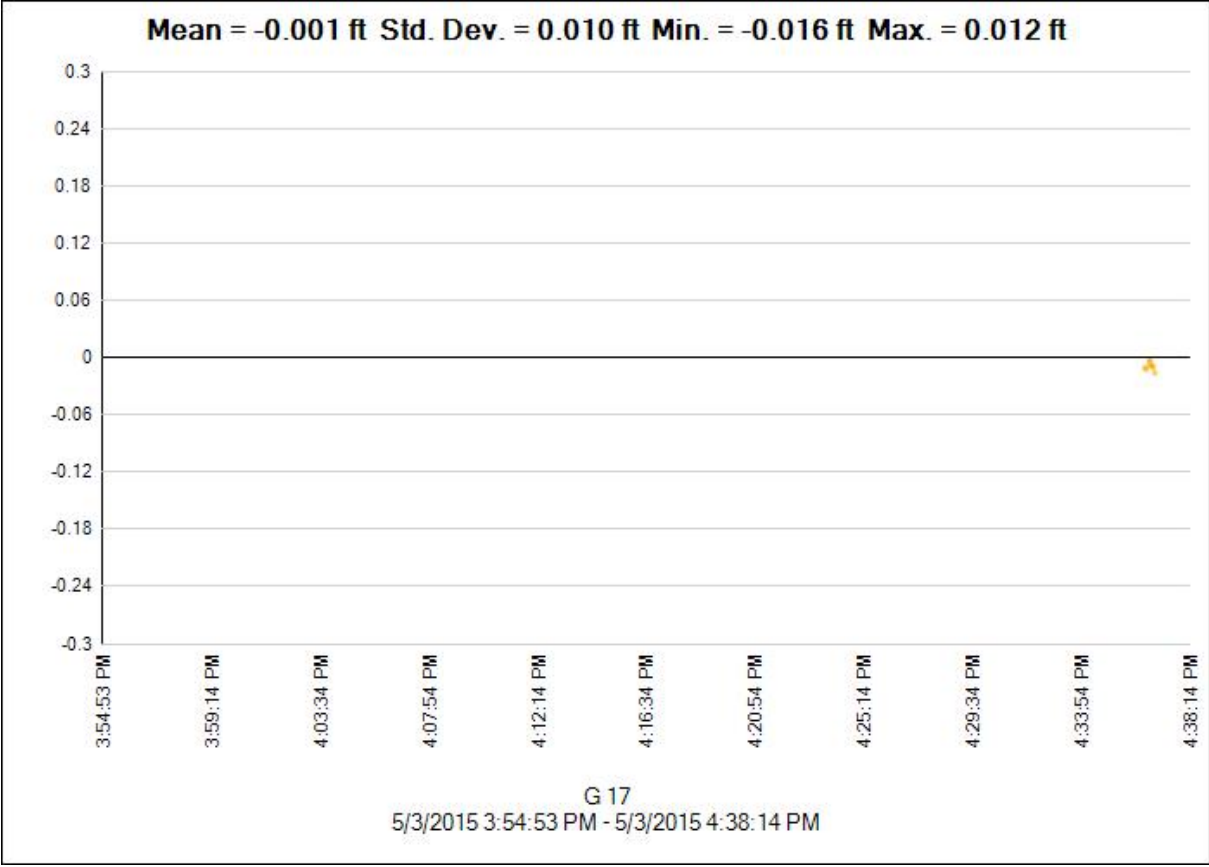
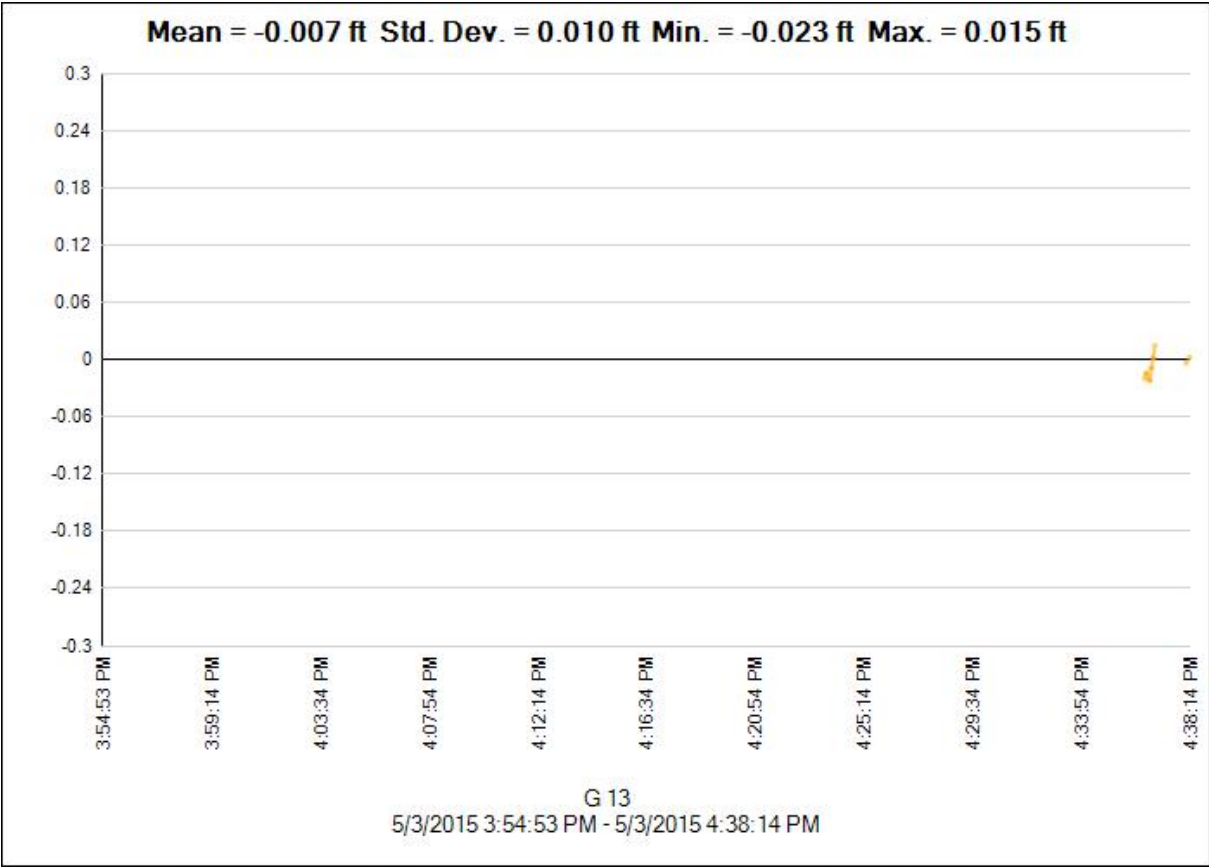
# Tracking Summary

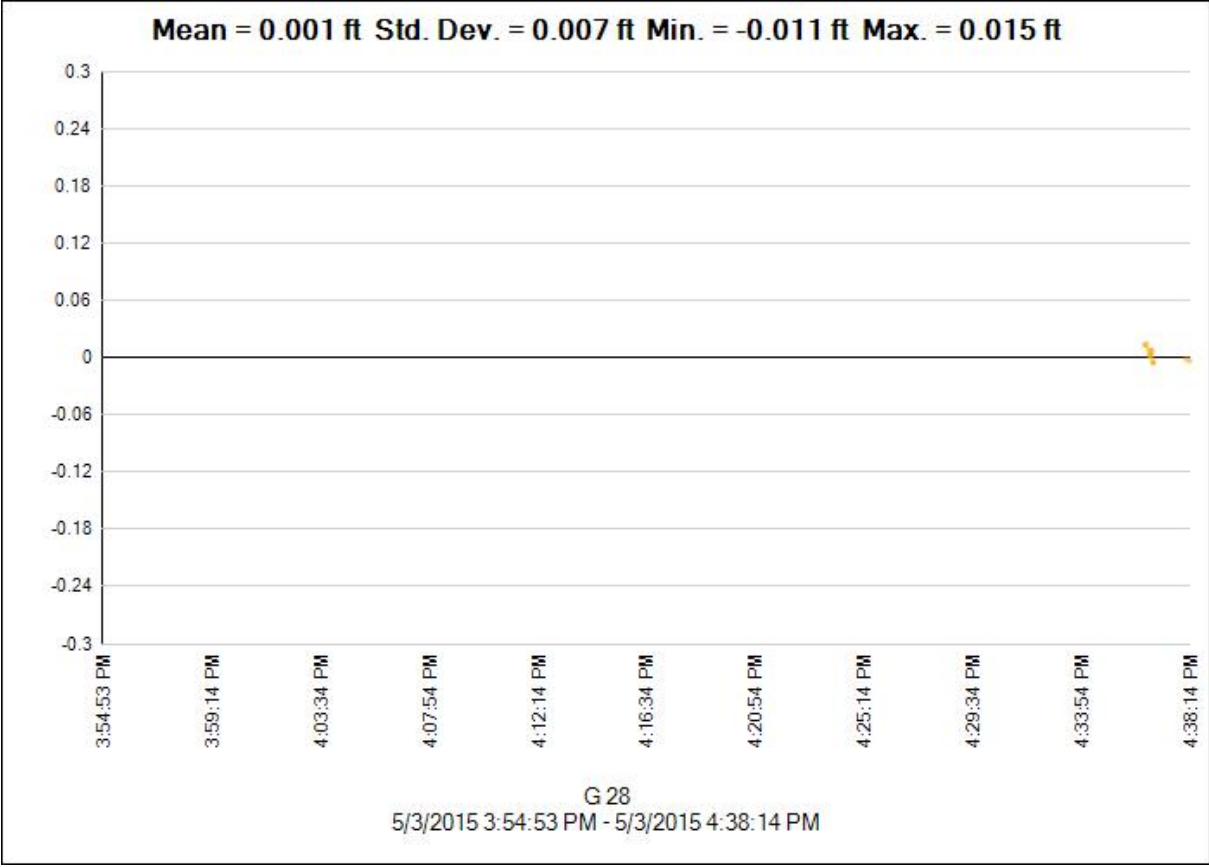
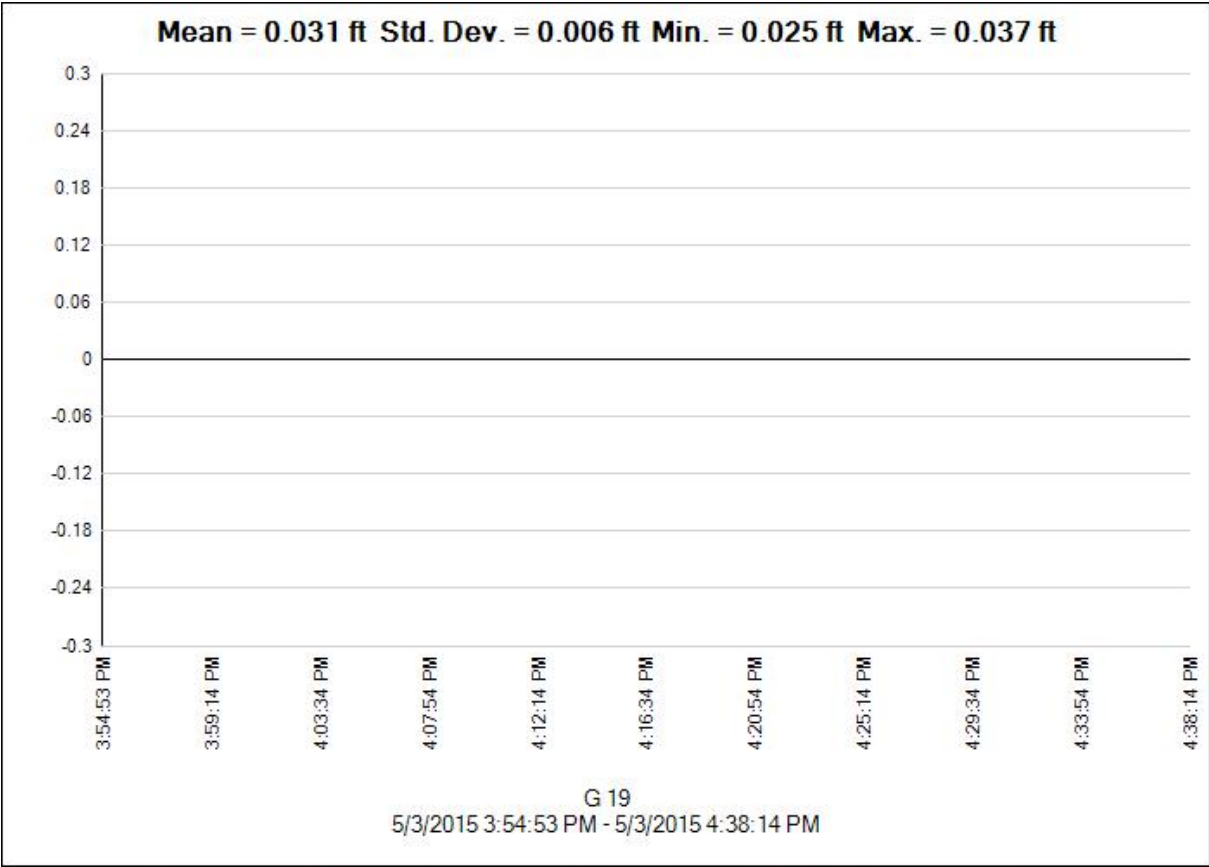
SV	5/3/2015 3:54:48 PM	Duration: 00:43:29 Major interval: 00:10:00	5/3/2015 4:38:17 PM
G 1	L1 L2		
G 4	L1 L2		
G 7	L1 L2		
G 9	L1 L2		
G 11	L1 L2		
G 13	L1 L2		
G 17	L1 L2		
G 19	L1 L2		
G 28	L1 L2		
G 30	L1 L2		

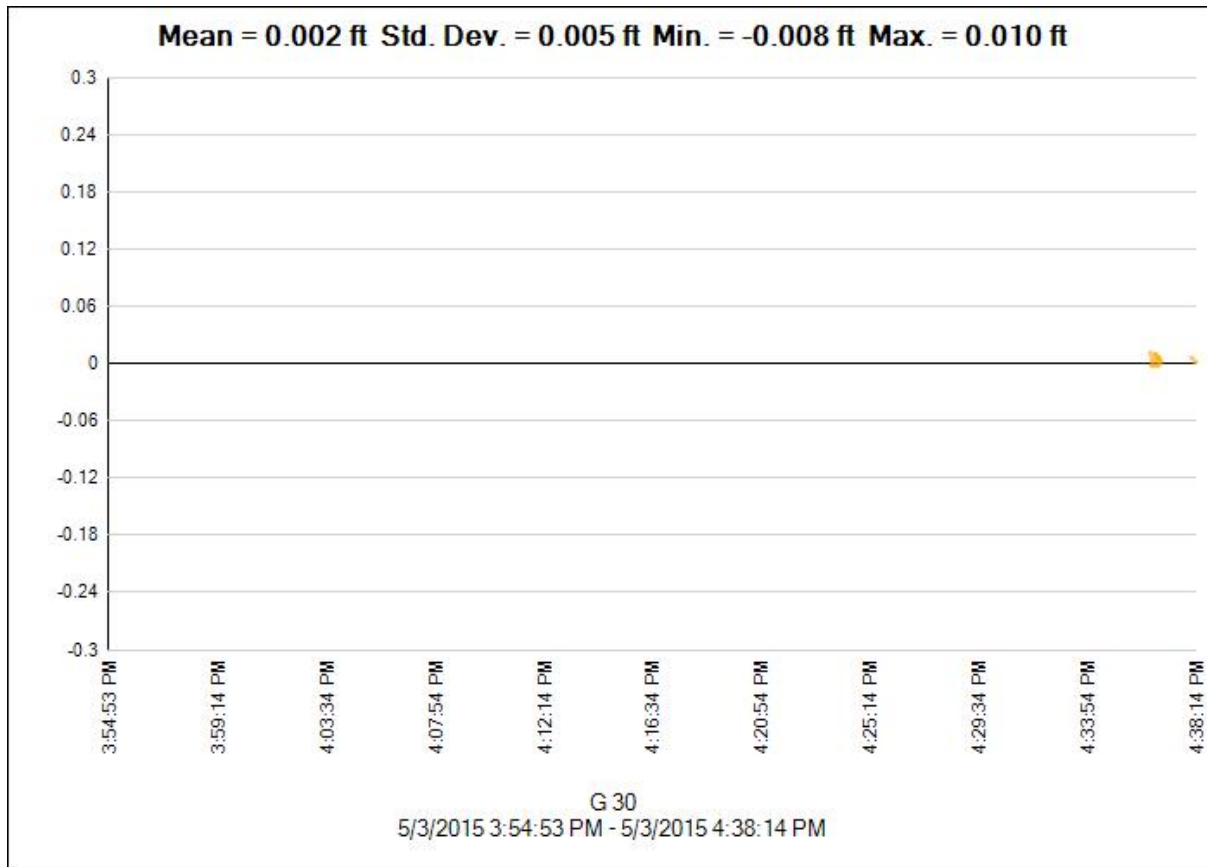
# Residuals













### Processing style

Elevation mask: 13.0 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



**AH8499 - PAG113 (2:44:16 PM-3:22:28 PM) (S11)**

Baseline observation: AH8499 --- PAG113 (B11)  
 Processed: 5/29/2015 1:05:58 PM  
 Solution type: Fixed  
 Frequency used: Dual Frequency (L1, L2)  
 Horizontal precision: 0.049 ft  
 Vertical precision: 0.060 ft  
 RMS: 0.003 ft  
 Maximum PDOP: 4.274  
 Ephemeris used: Broadcast  
 Antenna model: NGS Absolute  
 Processing start time: 5/3/2015 2:45:54 PM (Local: UTC-6hr)  
 Processing stop time: 5/3/2015 3:21:09 PM (Local: UTC-6hr)  
 Processing duration: 00:35:15  
 Processing interval: 5 seconds

**Vector Components (Mark to Mark)**

From:		AH8499			
Grid		Local		Global	
Easting	992155.779 ft	Latitude	N32°13'38.92734"	Latitude	N32°13'38.92734"
Northing	447772.394 ft	Longitude	W110°58'18.71101"	Longitude	W110°58'18.71101"
Elevation	2426.788 ft	Height	2330.757 ft	Height	2330.757 ft

To:		PAG113			
Grid		Local		Global	
Easting	869868.057 ft	Latitude	N31°59'25.27171"	Latitude	N31°59'25.27171"
Northing	360658.111 ft	Longitude	W111°22'07.46855"	Longitude	W111°22'07.46855"
Elevation	2827.927 ft	Height	2729.436 ft	Height	2729.435 ft

Vector					
ΔEasting	-122287.721 ft	NS Fwd Azimuth	235°02'15"	ΔX	-131296.149 ft
ΔNorthing	-87114.282 ft	Ellipsoid Dist.	150149.504 ft	ΔY	1307.372 ft
ΔElevation	401.139 ft	ΔHeight	398.678 ft	ΔZ	-72869.771 ft

**Standard Errors**

Vector errors:					
$\sigma \Delta$ Easting	0.018 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.023 ft
$\sigma \Delta$ Northing	0.013 ft	$\sigma$ Ellipsoid Dist.	0.020 ft	$\sigma \Delta$ Y	0.027 ft
$\sigma \Delta$ Elevation	0.031 ft	$\sigma \Delta$ Height	0.031 ft	$\sigma \Delta$ Z	0.013 ft

**Aposteriori Covariance Matrix (International foot<sup>2</sup>)**

	X	Y	Z
X	0.0000489140		
Y	0.0000310821	0.0000691734	
Z	-0.0000049365	-0.0000221449	0.0000150351

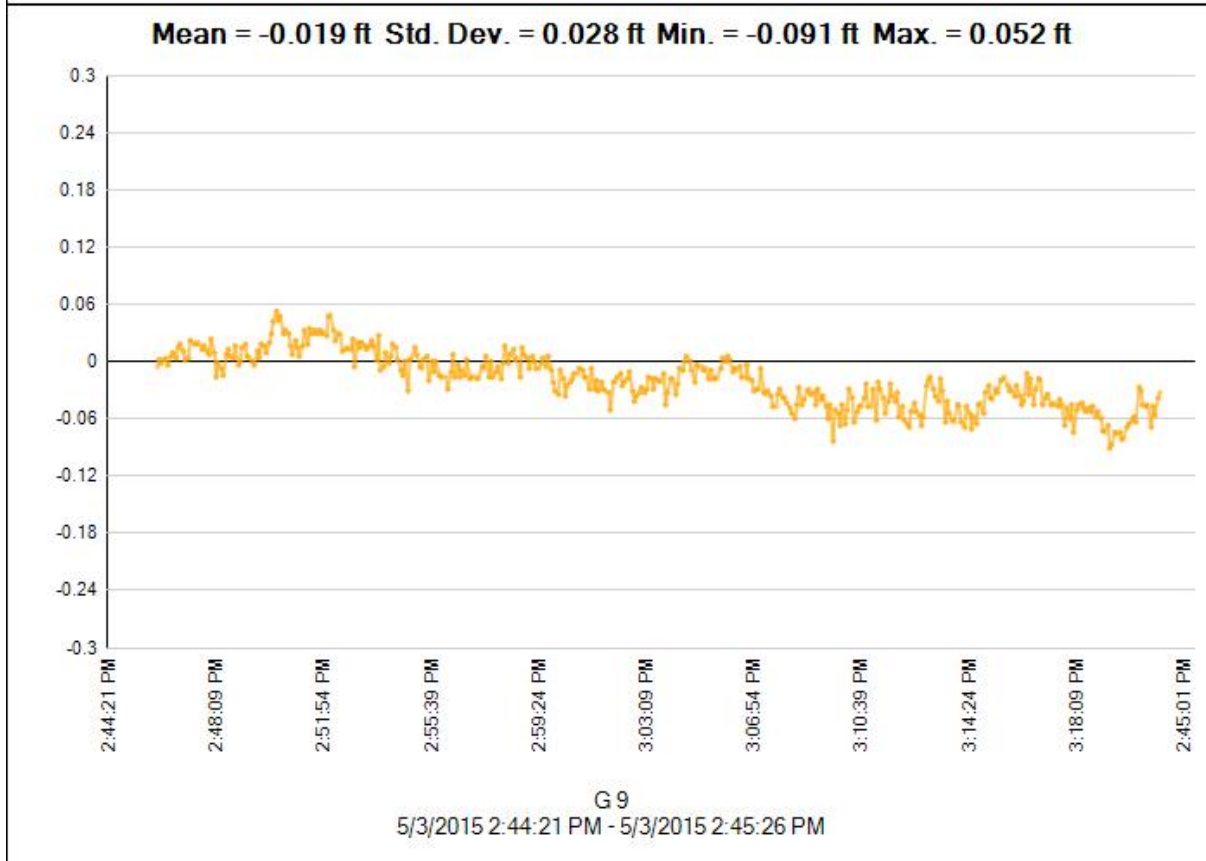
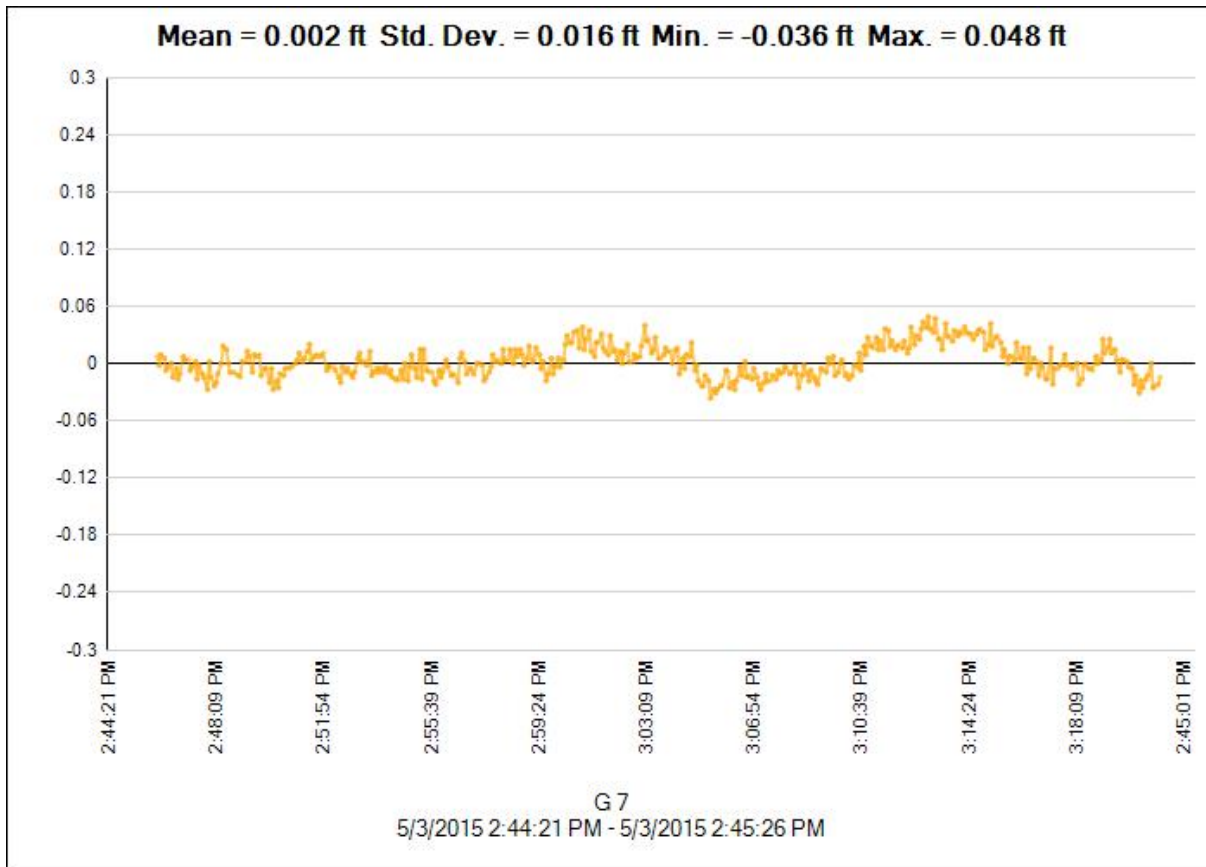
**Occupations**

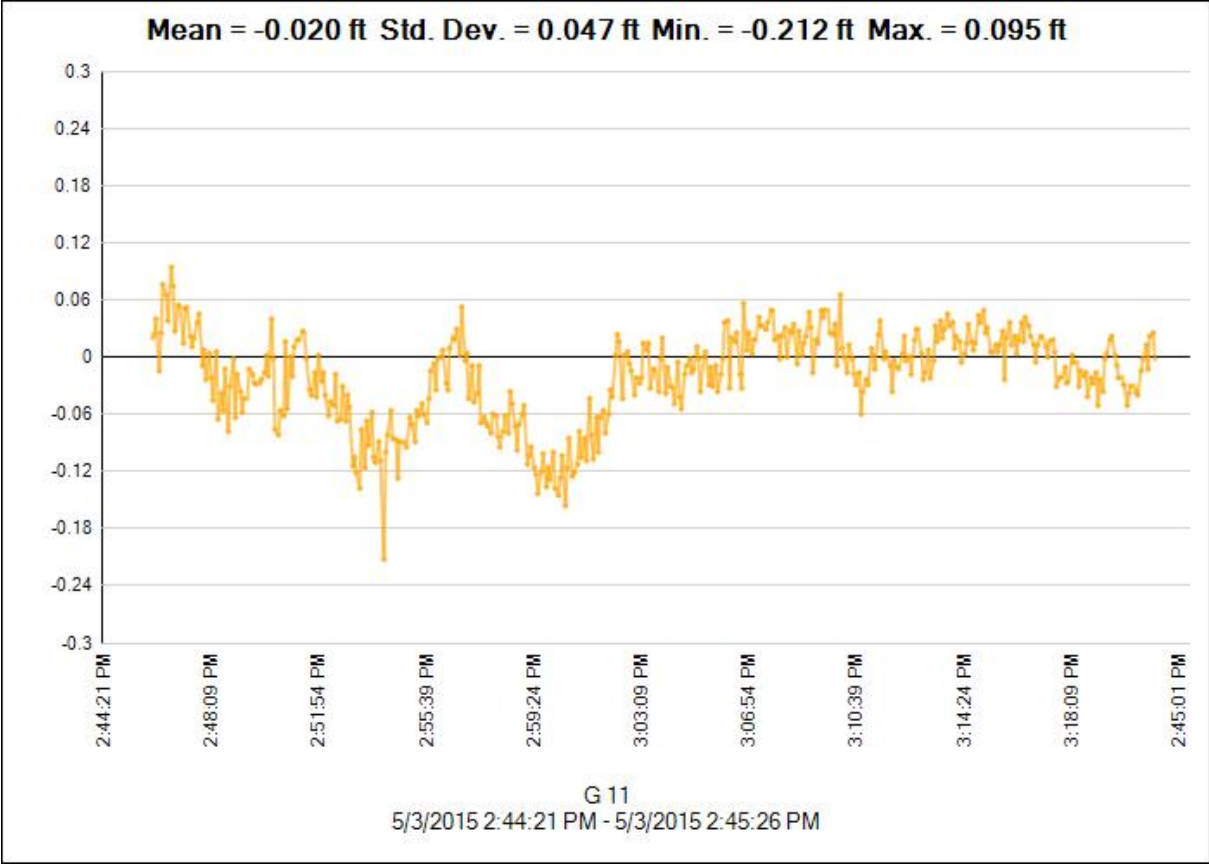
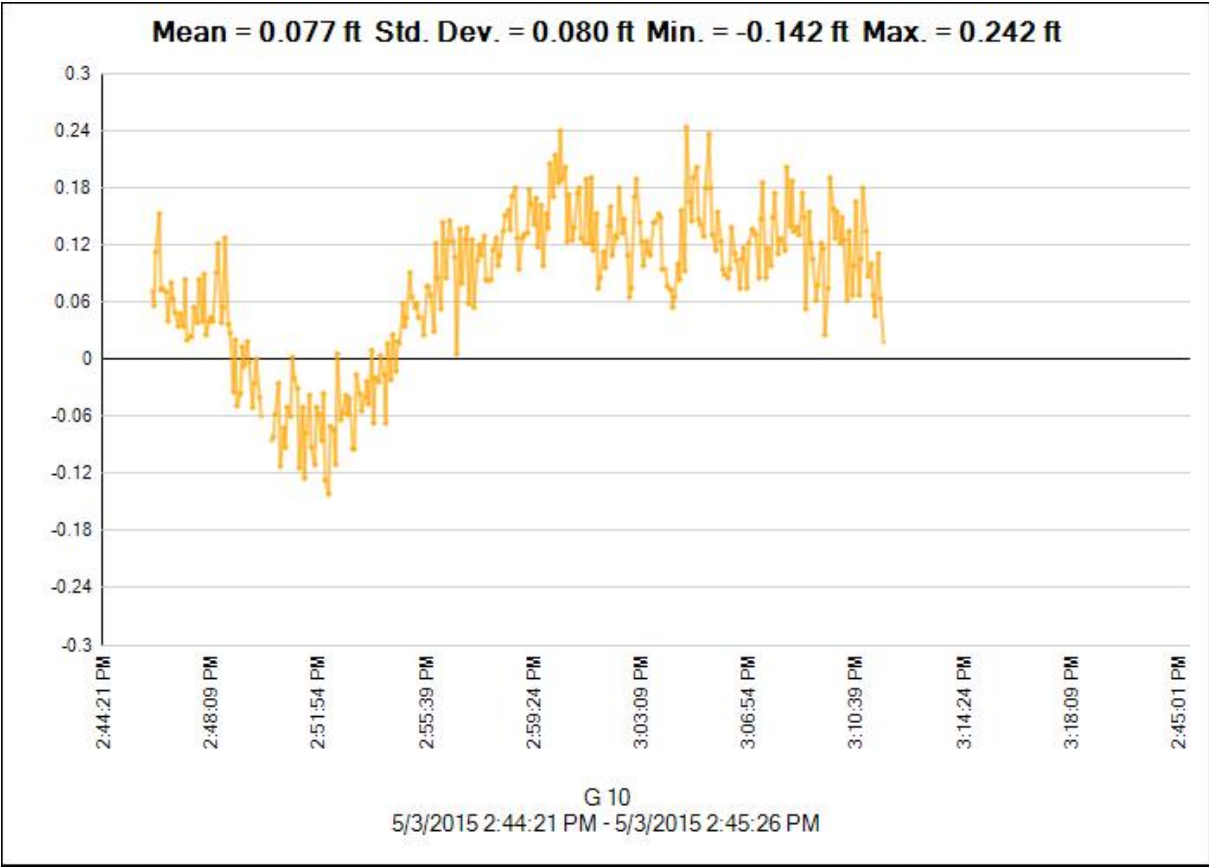
	From	To
Point ID:	AH8499	PAG113
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191231 (resampled).15o	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851231.t00
Receiver type:	Geo Explorer 3	5700
Receiver serial number:		0220271185
Antenna type:	702 Rev 3.00	Zephyr
Antenna serial number:	-----	00000000
Antenna height (measured):	5.892 ft	5.249 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

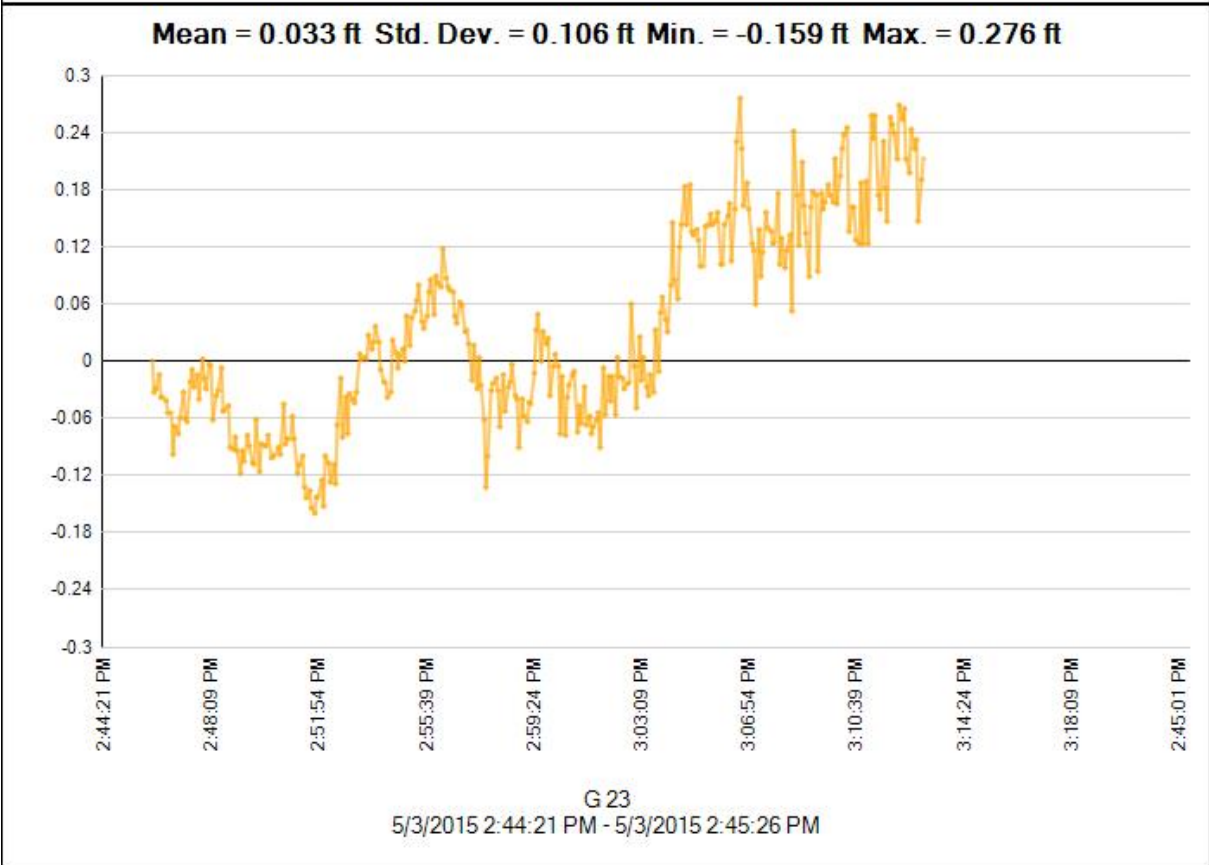
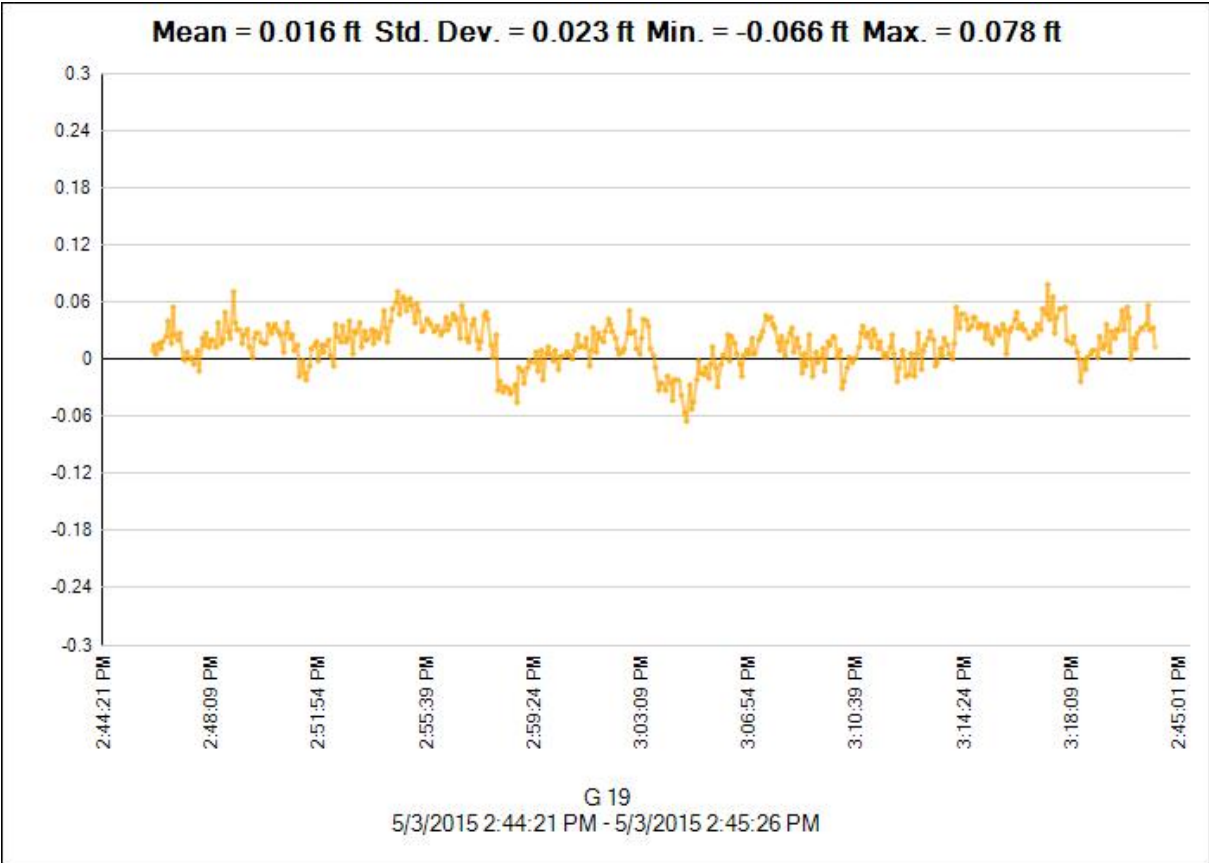
# Tracking Summary

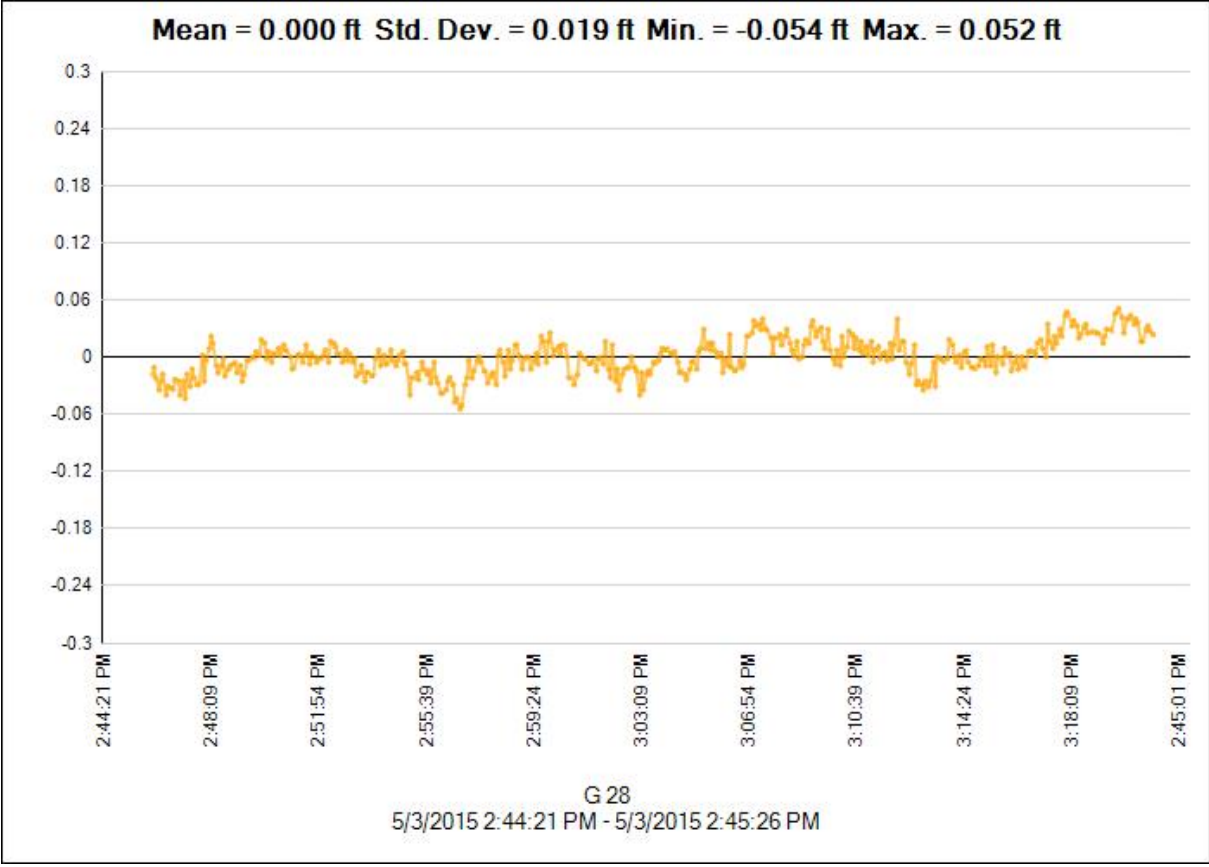
SV	5/3/2015 2:44:16 PM	Duration: 00:38:12	Major interval: 00:01:00	5/3/2015 3:22:28 PM
G 1	L1			
G 4	L1 L2			
G 5	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 11	L1 L2			
G 13	L1 L2			
G 17	L1 L2			
G 19	L1 L2			
G 20	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

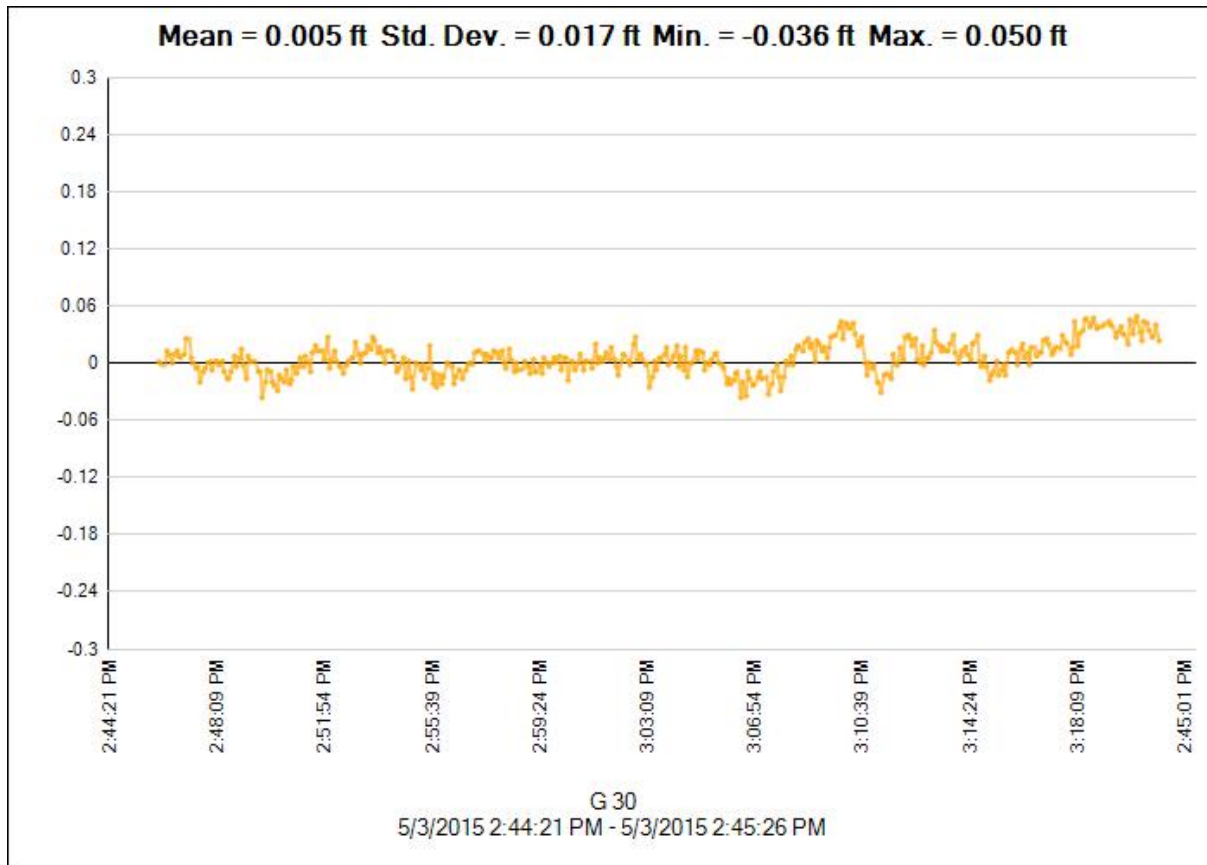
# Residuals













### Processing style

Elevation mask: 13.0 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



### AH8499 - PAG119 (12:56:03 PM-1:39:26 PM) (S12)

**Baseline observation:** AH8499 --- PAG119 (B12)  
**Processed:** 5/29/2015 1:04:07 PM  
**Solution type:** Fixed  
**Frequency used:** Dual Frequency (L1, L2)  
**Horizontal precision:** 0.054 ft  
**Vertical precision:** 0.063 ft  
**RMS:** 0.007 ft  
**Maximum PDOP:** 1.845  
**Ephemeris used:** Broadcast  
**Antenna model:** NGS Absolute  
**Processing start time:** 5/3/2015 12:56:04 PM (Local: UTC-6hr)  
**Processing stop time:** 5/3/2015 1:39:24 PM (Local: UTC-6hr)  
**Processing duration:** 00:43:20  
**Processing interval:** 5 seconds

#### Vector Components (Mark to Mark)

From: AH8499					
Grid		Local		Global	
<b>Easting</b>	992155.779 ft	<b>Latitude</b>	N32°13'38.92734"	<b>Latitude</b>	N32°13'38.92734"
<b>Northing</b>	447772.394 ft	<b>Longitude</b>	W110°58'18.71101"	<b>Longitude</b>	W110°58'18.71101"
<b>Elevation</b>	2426.788 ft	<b>Height</b>	2330.757 ft	<b>Height</b>	2330.757 ft

To: PAG119					
Grid		Local		Global	
<b>Easting</b>	972979.936 ft	<b>Latitude</b>	N32°14'59.89647"	<b>Latitude</b>	N32°14'59.89647"
<b>Northing</b>	455792.173 ft	<b>Longitude</b>	W111°02'01.16579"	<b>Longitude</b>	W111°02'01.16579"
<b>Elevation</b>	2478.389 ft	<b>Height</b>	2382.189 ft	<b>Height</b>	2382.189 ft

Vector					
<b>ΔEasting</b>	-19175.843 ft	<b>NS Fwd Azimuth</b>	293°11'59"	<b>ΔX</b>	-16290.582 ft
<b>ΔNorthing</b>	8019.780 ft	<b>Ellipsoid Dist.</b>	20785.504 ft	<b>ΔY</b>	10883.900 ft
<b>ΔElevation</b>	51.601 ft	<b>ΔHeight</b>	51.431 ft	<b>ΔZ</b>	6949.441 ft

**Standard Errors**

Vector errors:					
$\sigma \Delta$ Easting	0.013 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.017 ft
$\sigma \Delta$ Northing	0.021 ft	$\sigma$ Ellipsoid Dist.	0.012 ft	$\sigma \Delta$ Y	0.026 ft
$\sigma \Delta$ Elevation	0.032 ft	$\sigma \Delta$ Height	0.032 ft	$\sigma \Delta$ Z	0.027 ft

**Aposteriori Covariance Matrix (International foot²)**

	X	Y	Z
X	0.0000262074		
Y	0.0000214166	0.0000629675	
Z	-0.0000025175	-0.0000302655	0.0000671307

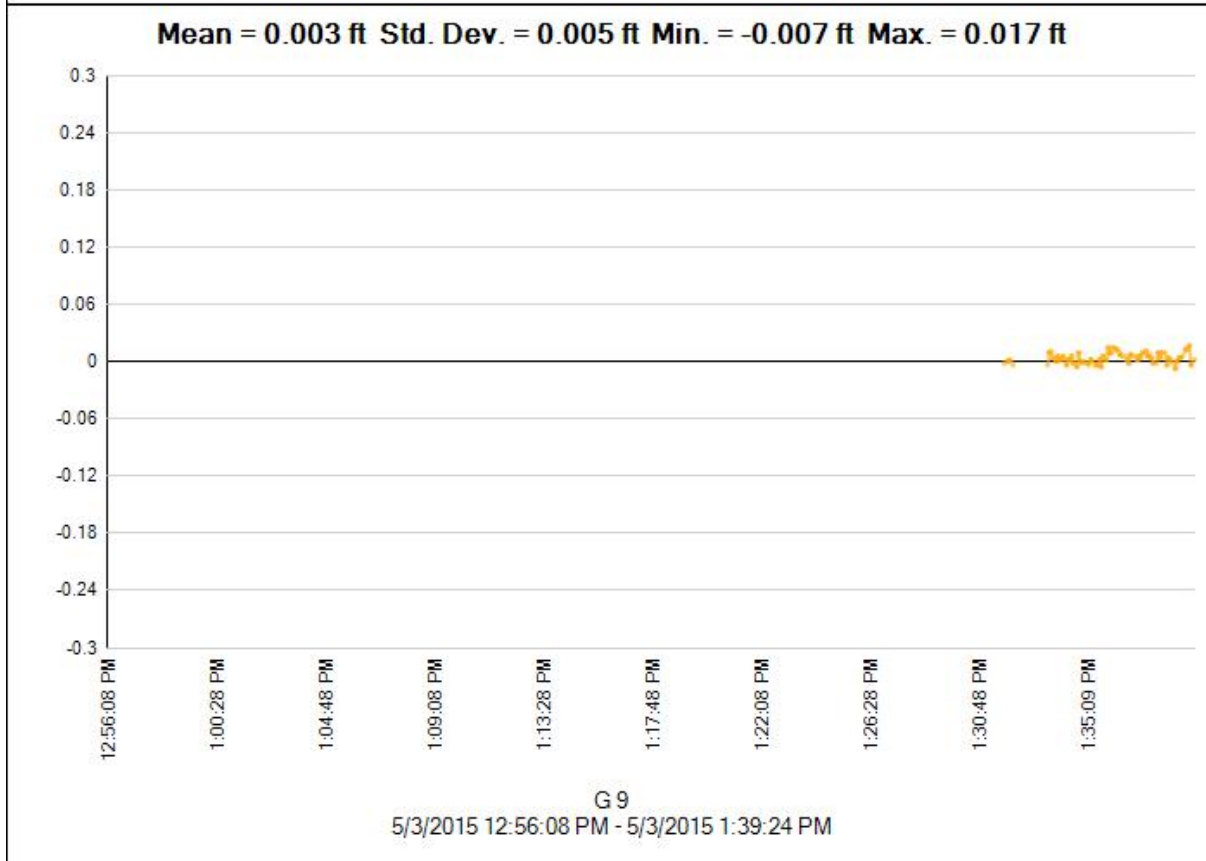
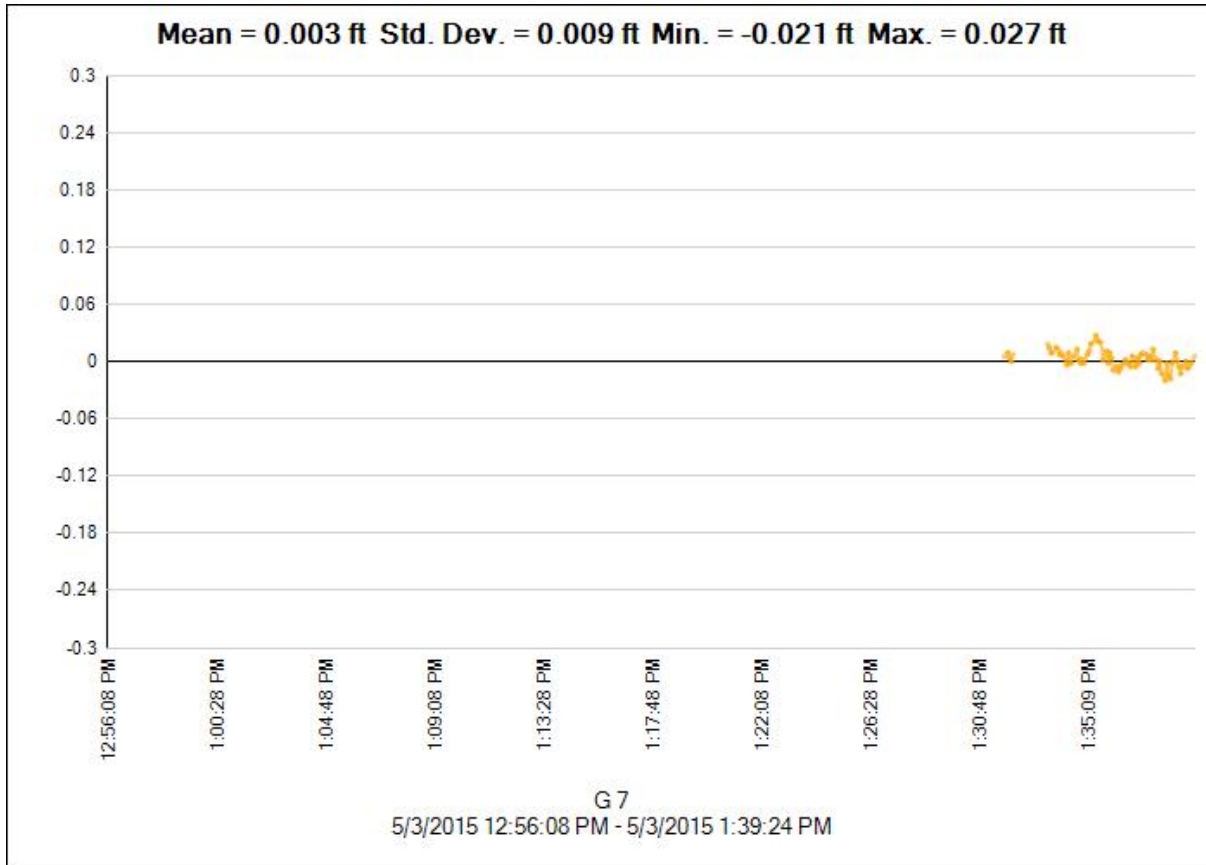
**Occupations**

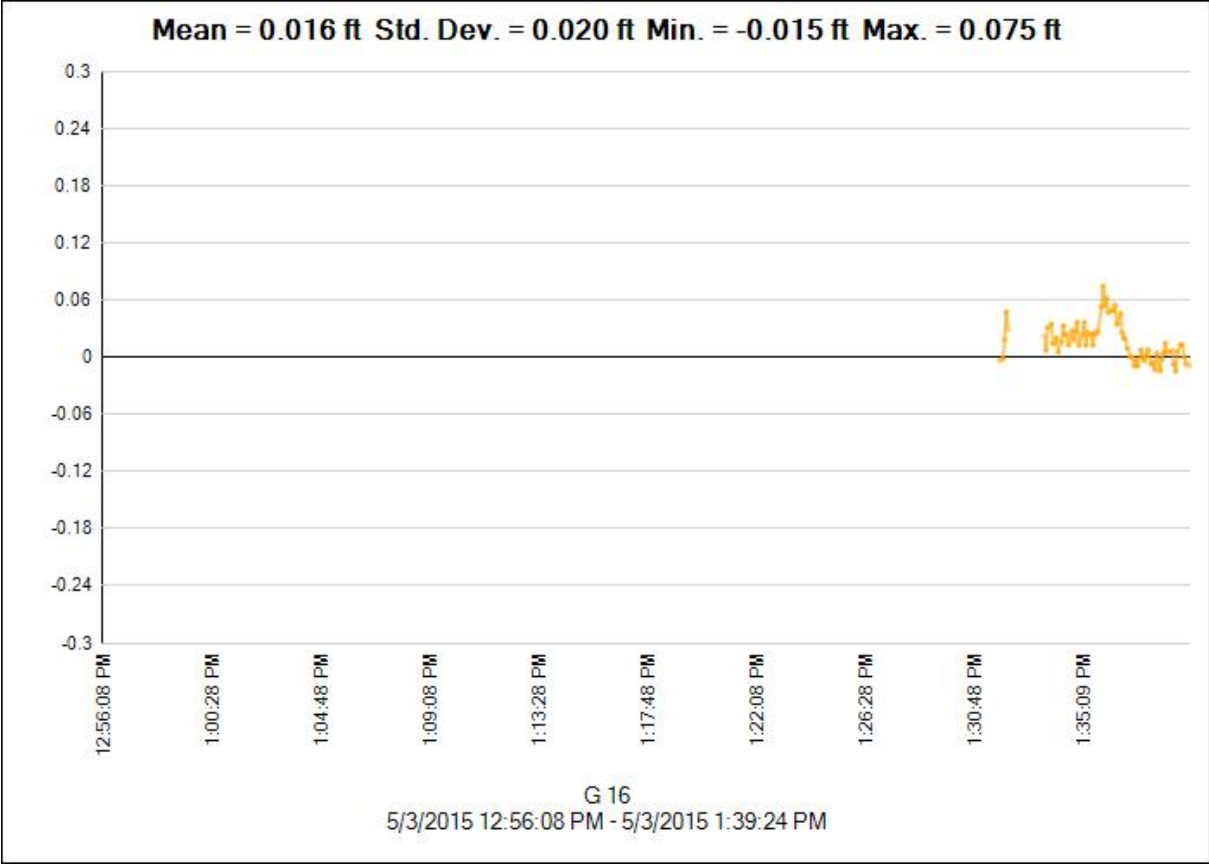
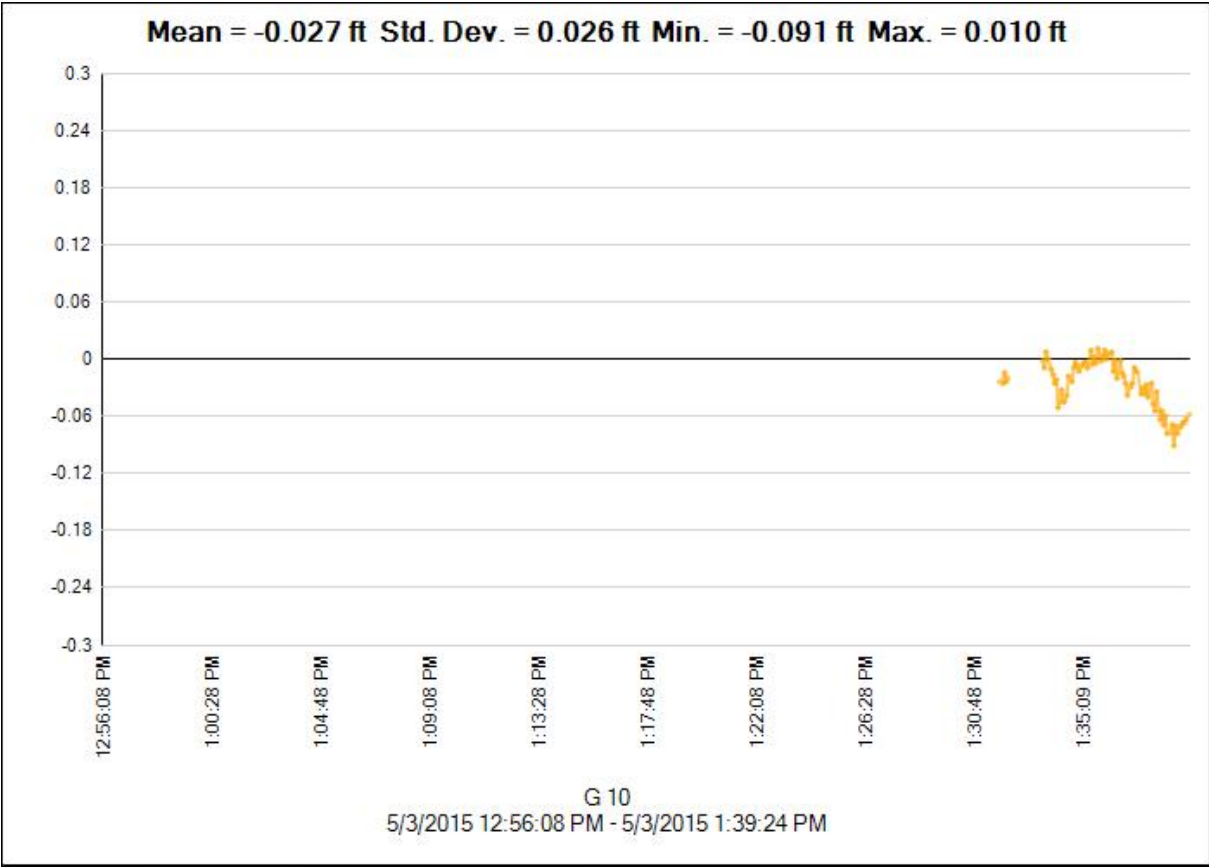
	From	To
Point ID:	AH8499	PAG119
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191231 (resampled).15o	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851230.t00
Receiver type:	Geo Explorer 3	5700
Receiver serial number:		0220271185
Antenna type:	702 Rev 3.00	Zephyr
Antenna serial number:	-----	00000000
Antenna height (measured):	5.892 ft	5.732 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

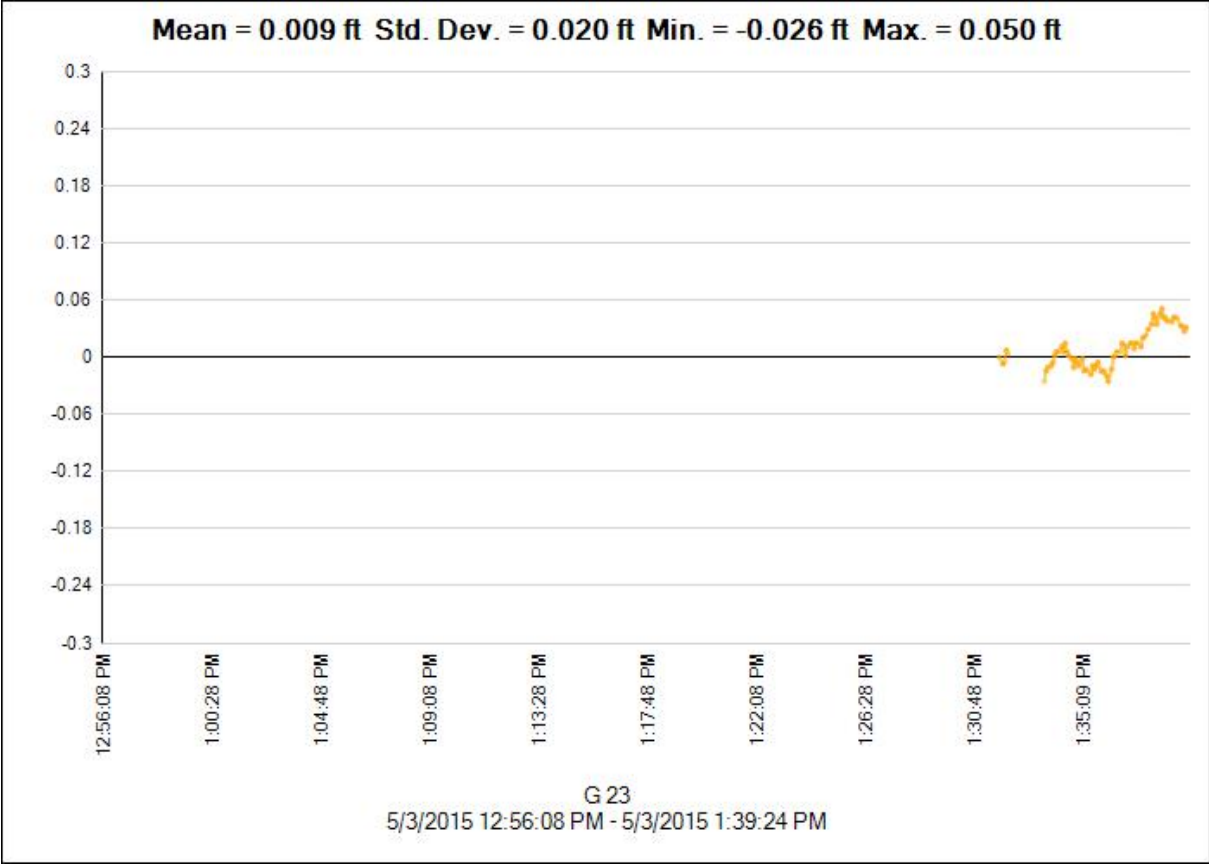
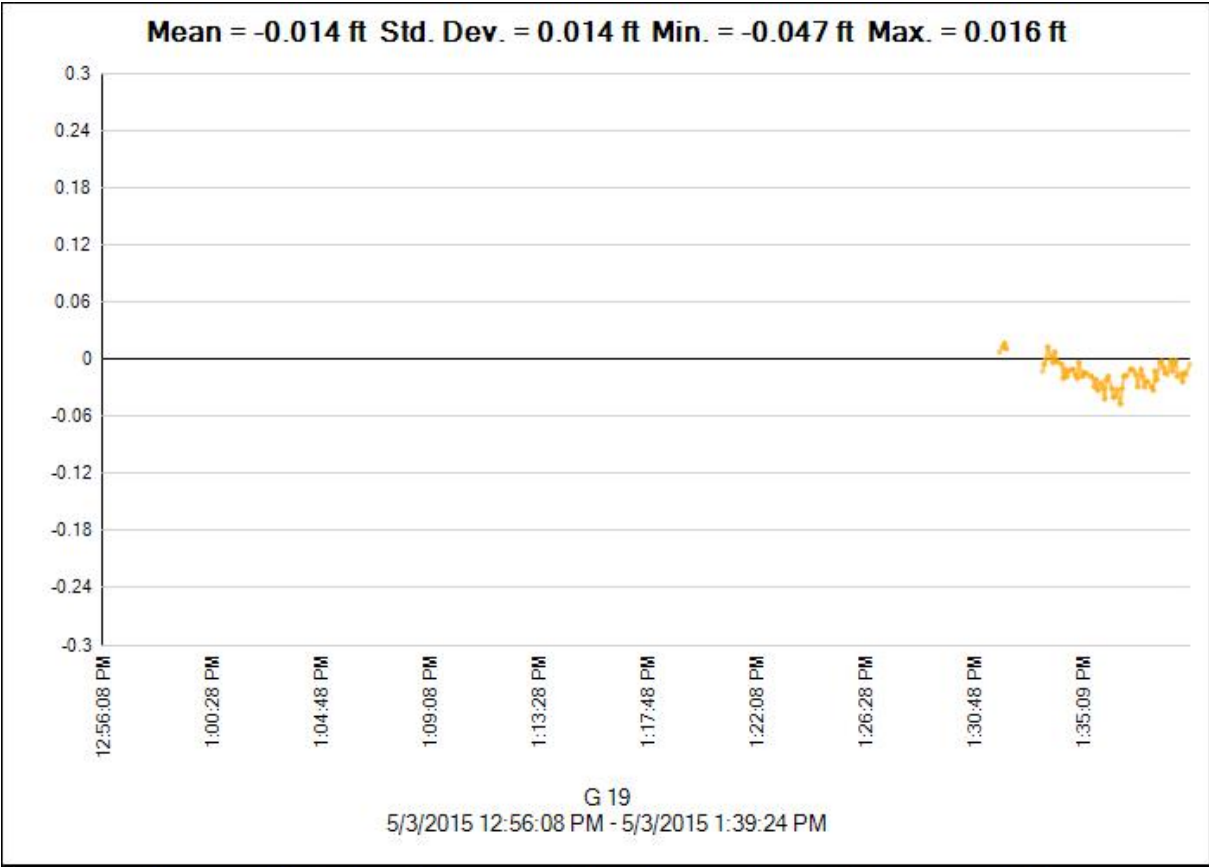
# Tracking Summary

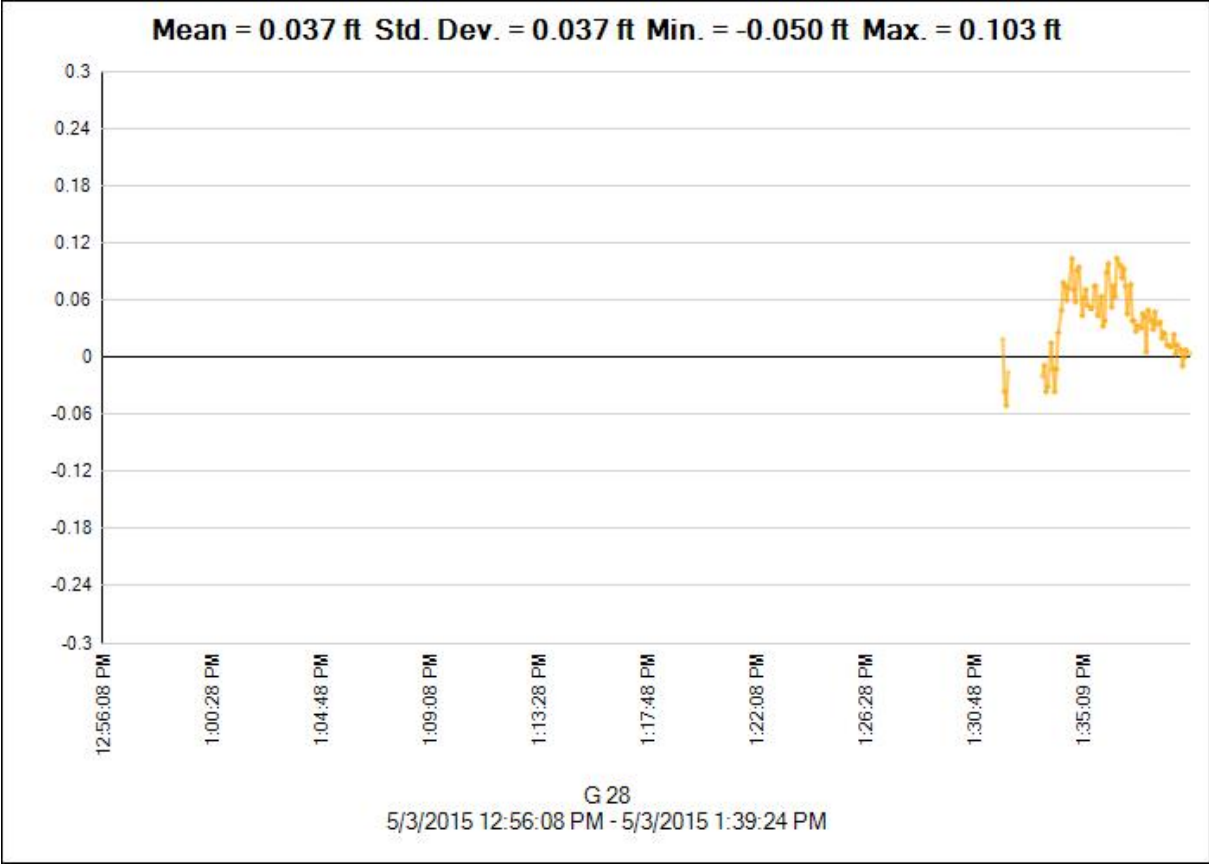
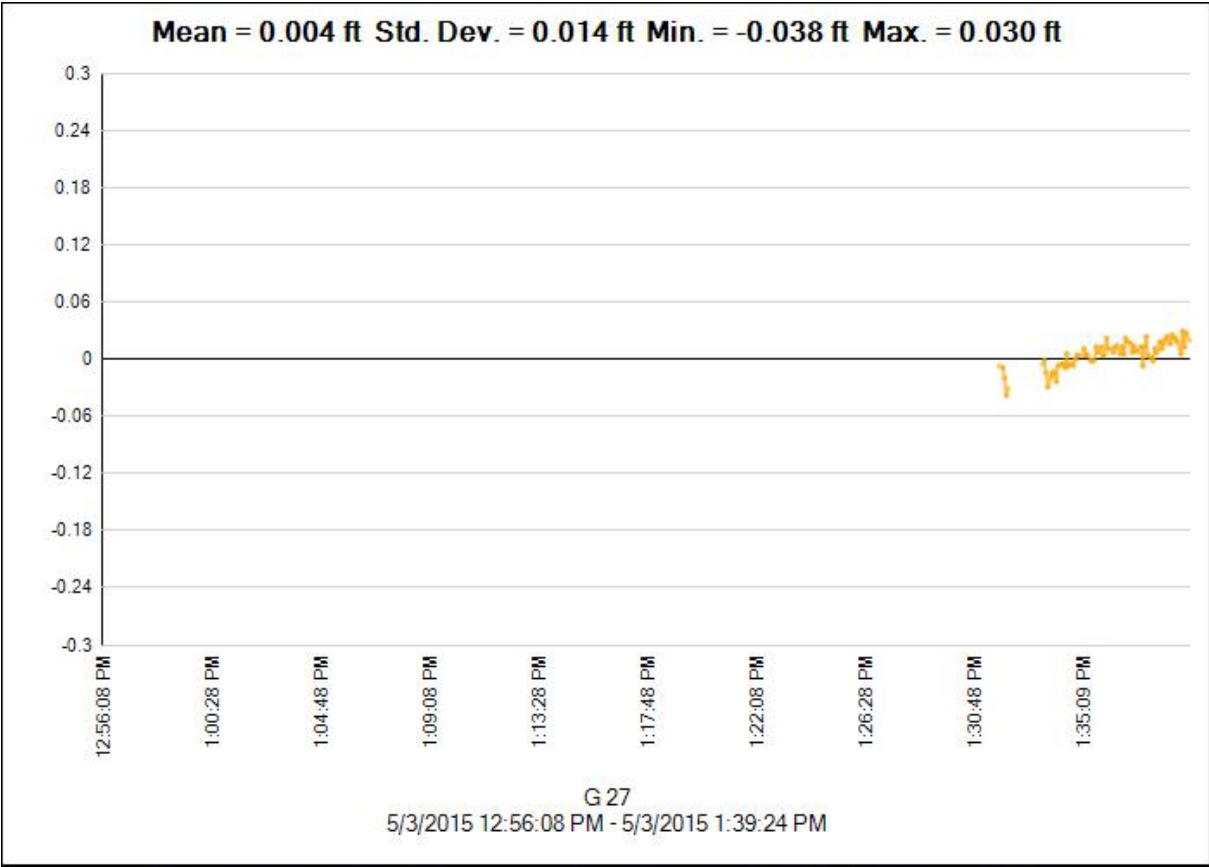
SV	5/3/2015 12:56:03 PM	Duration: 00:43:23	Major interval: 00:10:00	5/3/2015 1:39:26 PM
G 3	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 16	L1 L2			
G 19	L1 L2			
G 23	L1 L2			
G 26	L1 L2			
G 27	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

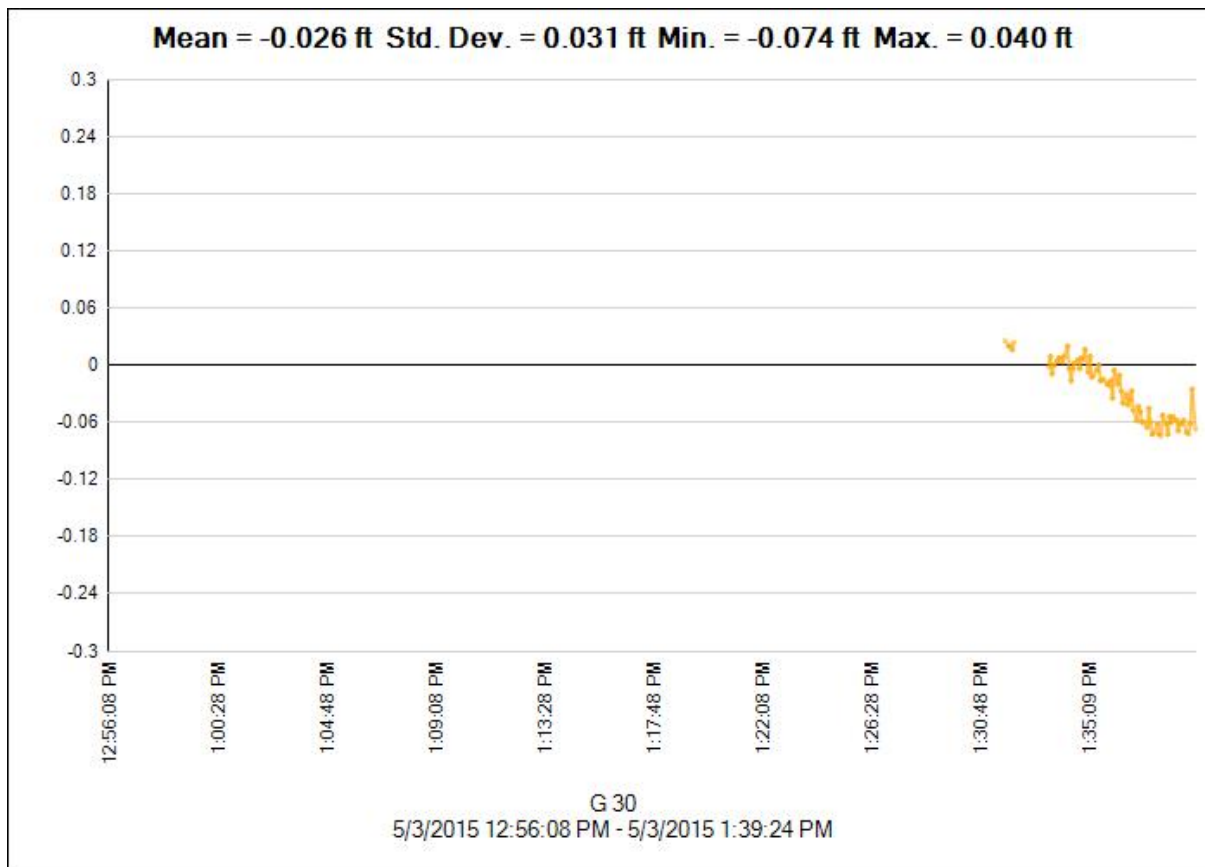
# Residuals













### Processing style

Elevation mask: 13.0 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



### AH8499 - PAG103 (12:38:39 PM-1:15:30 PM) (S13)

**Baseline observation:** AH8499 --- PAG103 (B13)  
**Processed:** 5/29/2015 1:07:29 PM  
**Solution type:** Fixed  
**Frequency used:** Dual Frequency (L1, L2)  
**Horizontal precision:** 0.027 ft  
**Vertical precision:** 0.033 ft  
**RMS:** 0.013 ft  
**Maximum PDOP:** 2.085  
**Ephemeris used:** Broadcast  
**Antenna model:** NGS Absolute  
**Processing start time:** 5/4/2015 12:38:54 PM (Local: UTC-6hr)  
**Processing stop time:** 5/4/2015 1:15:29 PM (Local: UTC-6hr)  
**Processing duration:** 00:36:35  
**Processing interval:** 5 seconds

#### Vector Components (Mark to Mark)

From: AH8499					
Grid		Local		Global	
<b>Easting</b>	992145.736 ft	<b>Latitude</b>	N32°13'38.93941"	<b>Latitude</b>	N32°13'38.93941"
<b>Northing</b>	447773.525 ft	<b>Longitude</b>	W110°58'18.82780"	<b>Longitude</b>	W110°58'18.82780"
<b>Elevation</b>	2428.616 ft	<b>Height</b>	2332.585 ft	<b>Height</b>	2332.585 ft

To: PAG103					
Grid		Local		Global	
<b>Easting</b>	998259.231 ft	<b>Latitude</b>	N32°23'18.34205"	<b>Latitude</b>	N32°23'18.34204"
<b>Northing</b>	506385.346 ft	<b>Longitude</b>	W110°57'01.51262"	<b>Longitude</b>	W110°57'01.51262"
<b>Elevation</b>	2898.666 ft	<b>Height</b>	2804.479 ft	<b>Height</b>	2804.479 ft

Vector					
<b>ΔEasting</b>	6113.495 ft	<b>NS Fwd Azimuth</b>	6°27'35"	<b>ΔX</b>	17251.660 ft
<b>ΔNorthing</b>	58611.821 ft	<b>Ellipsoid Dist.</b>	58929.803 ft	<b>ΔY</b>	26481.849 ft
<b>ΔElevation</b>	470.050 ft	<b>ΔHeight</b>	471.894 ft	<b>ΔZ</b>	49748.264 ft

**Standard Errors**

Vector errors:					
$\sigma \Delta$ Easting	0.007 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.010 ft
$\sigma \Delta$ Northing	0.010 ft	$\sigma$ Ellipsoid Dist.	0.011 ft	$\sigma \Delta$ Y	0.015 ft
$\sigma \Delta$ Elevation	0.017 ft	$\sigma \Delta$ Height	0.017 ft	$\sigma \Delta$ Z	0.011 ft

**Aposteriori Covariance Matrix (International foot<sup>2</sup>)**

	X	Y	Z
X	0.0000091494		
Y	0.0000084660	0.0000212702	
Z	-0.0000011686	-0.0000060683	0.0000118184

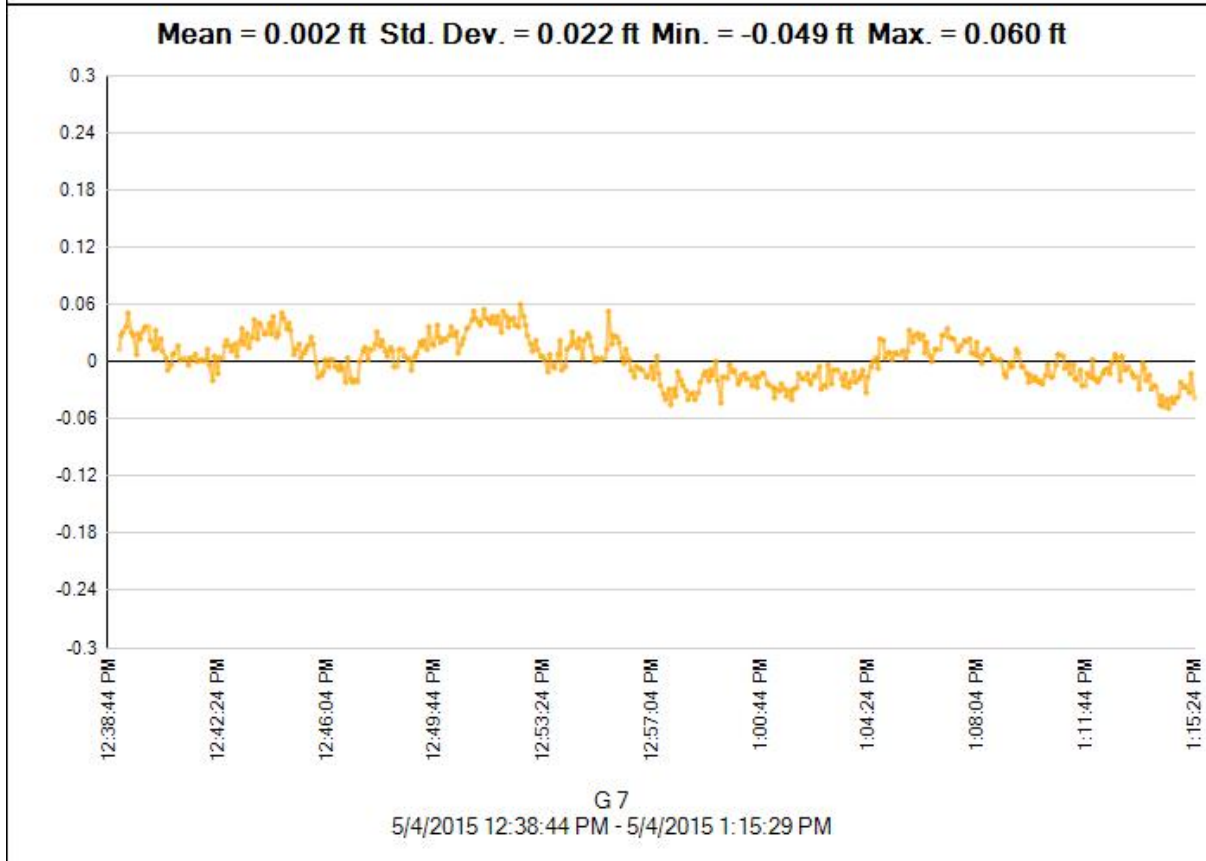
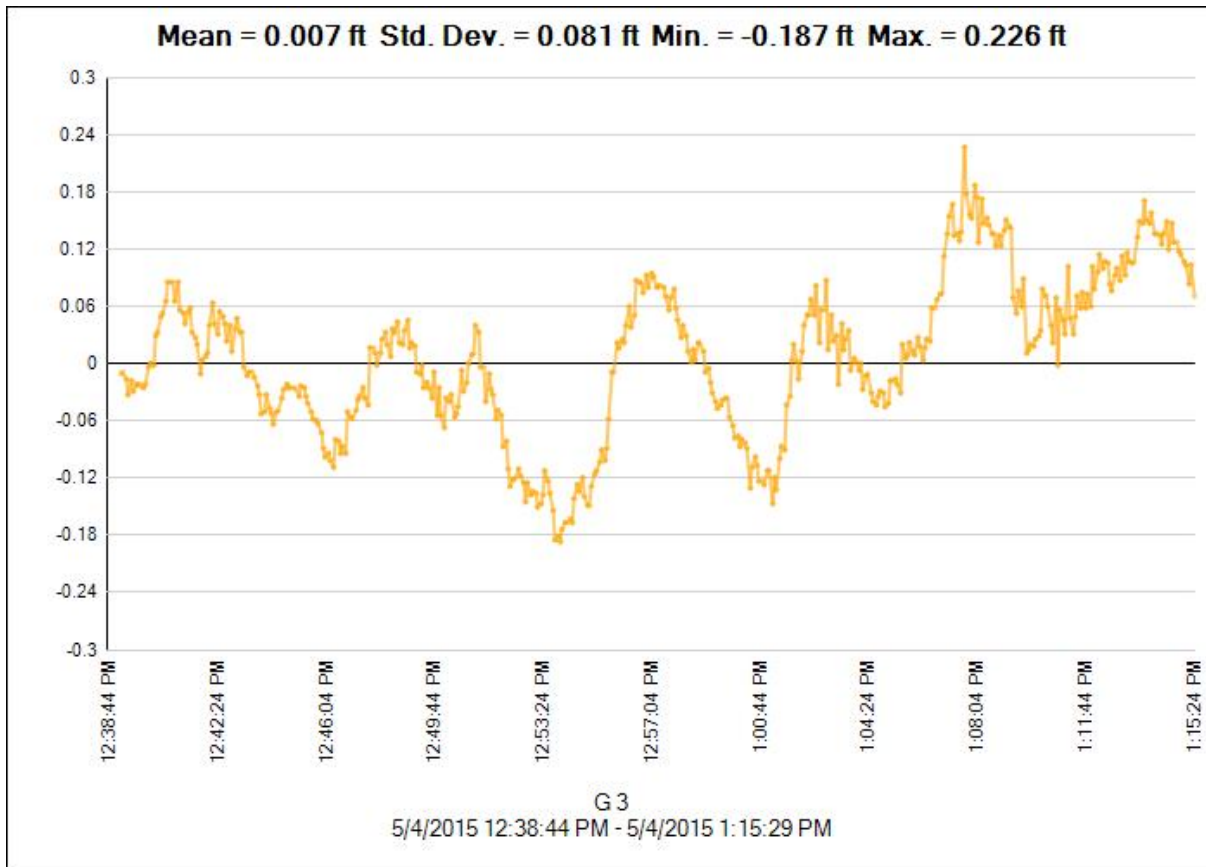
**Occupations**

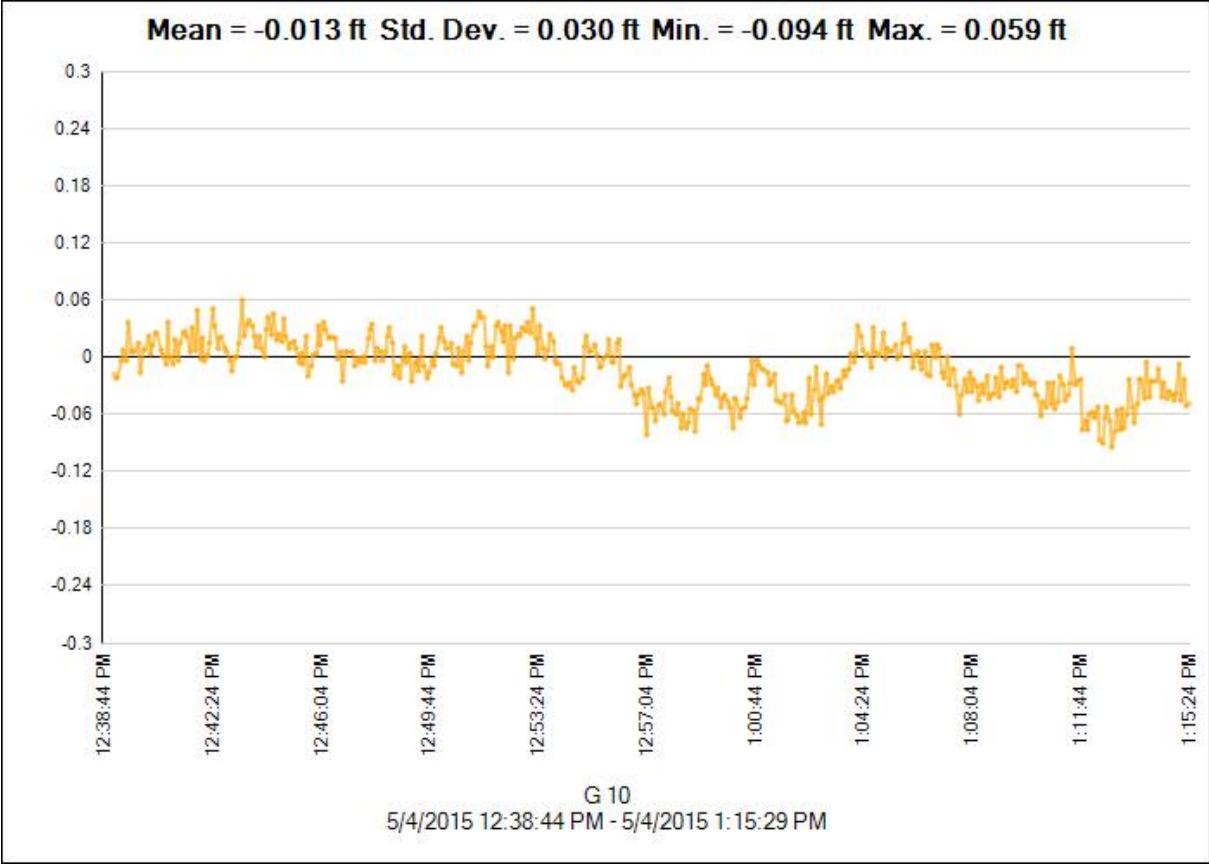
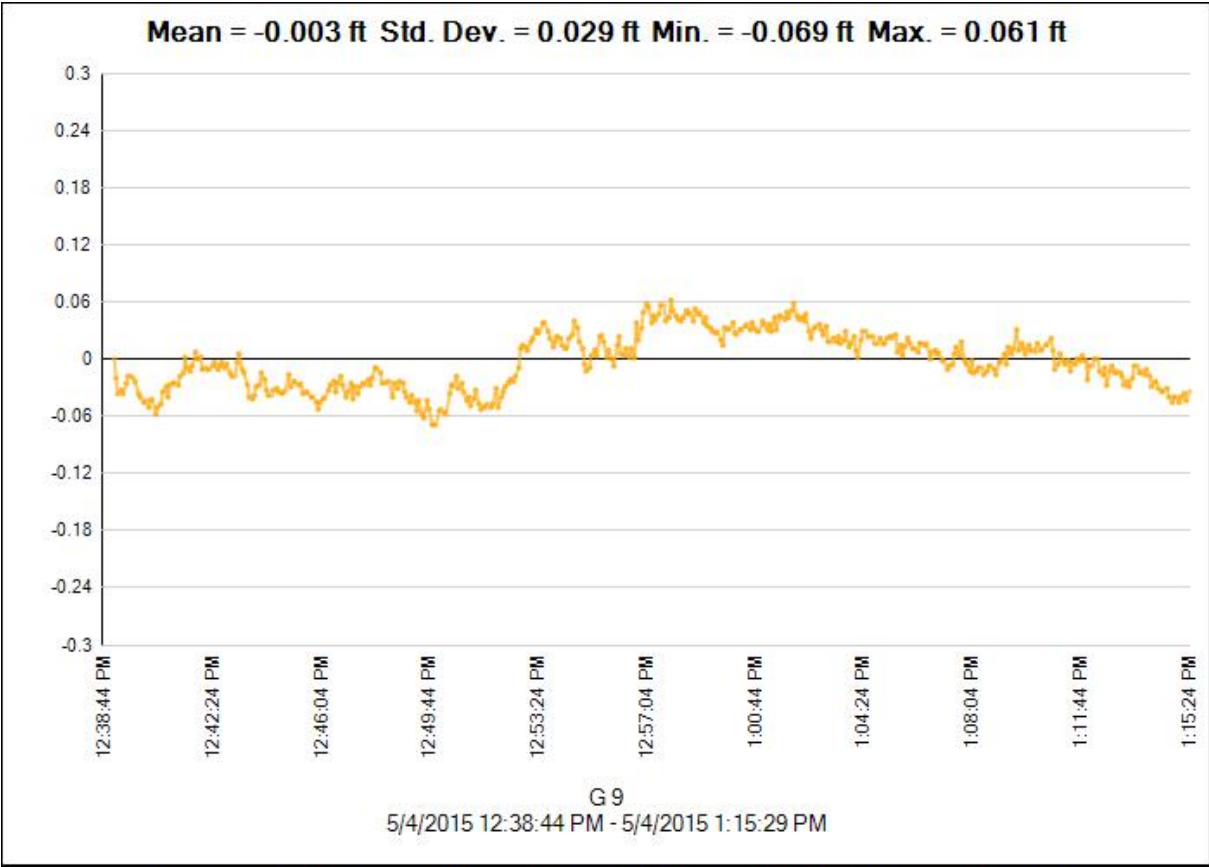
	From	To
Point ID:	AH8499	PAG103
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Receiver type:	Geo Explorer 3	5700
Receiver serial number:		0220271185
Antenna type:	702 Rev 3.00	Zephyr
Antenna serial number:	-----	00000000
Antenna height (measured):	5.751 ft	5.495 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

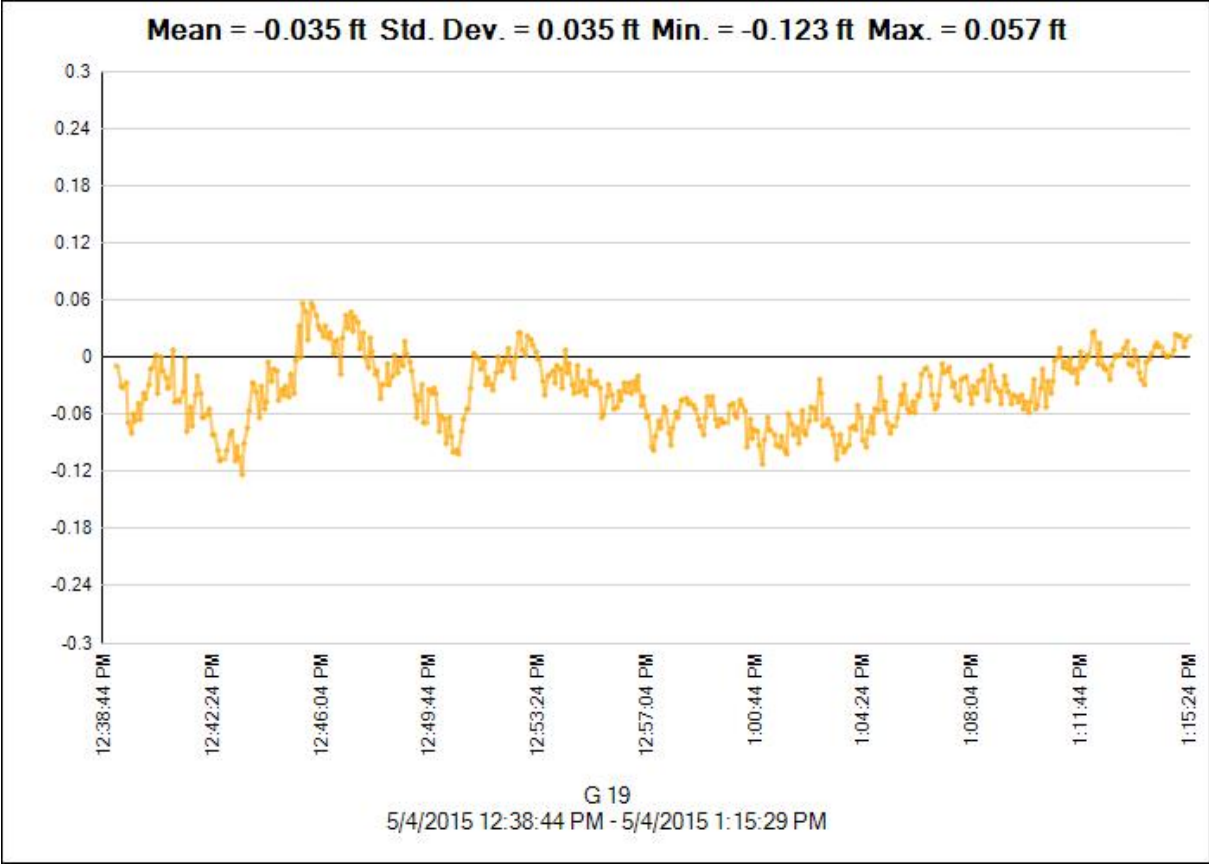
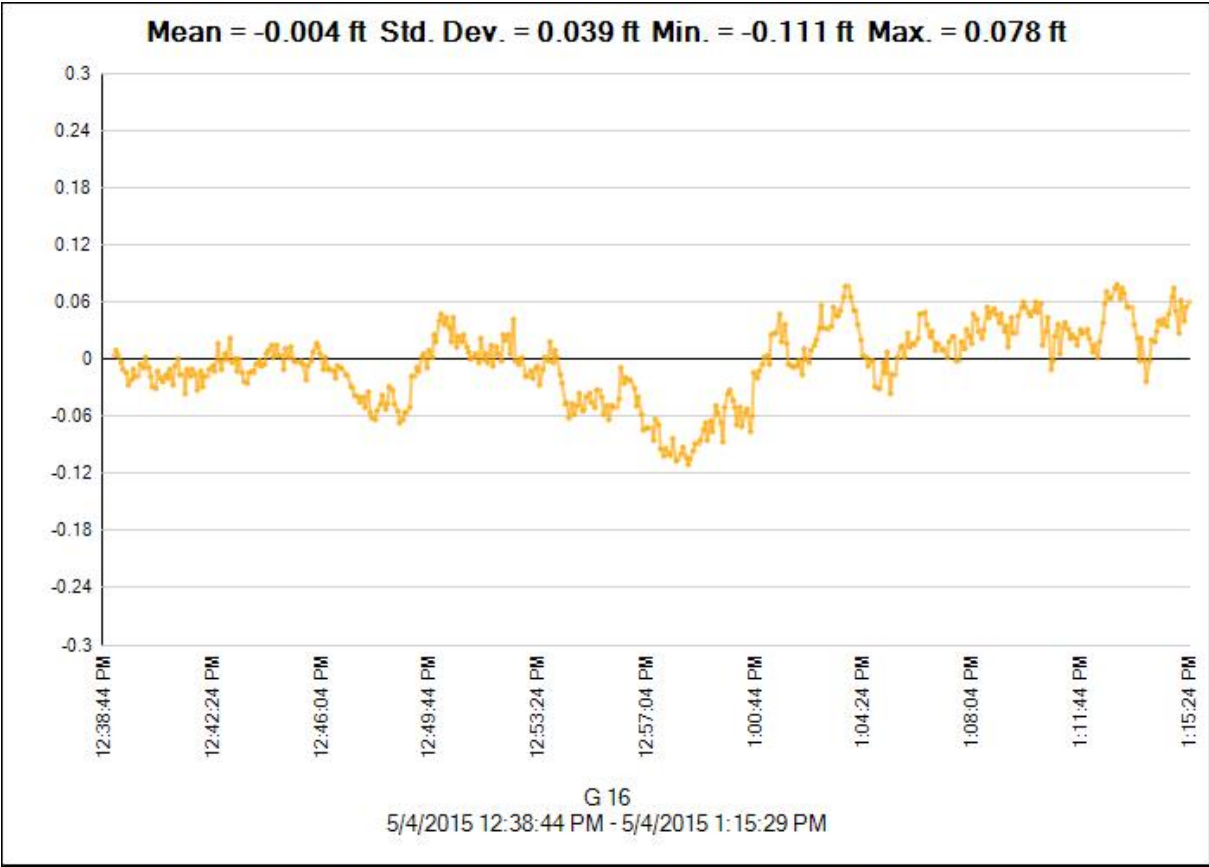
# Tracking Summary

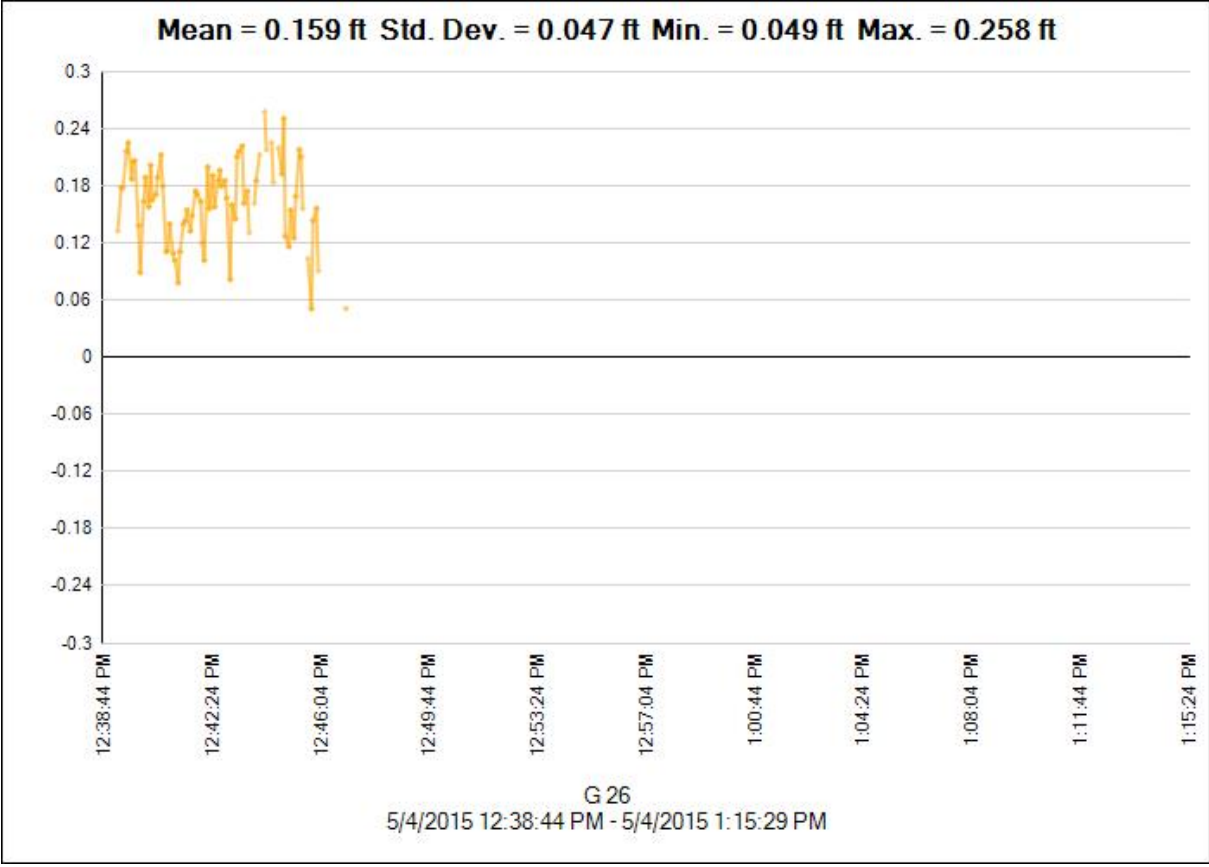
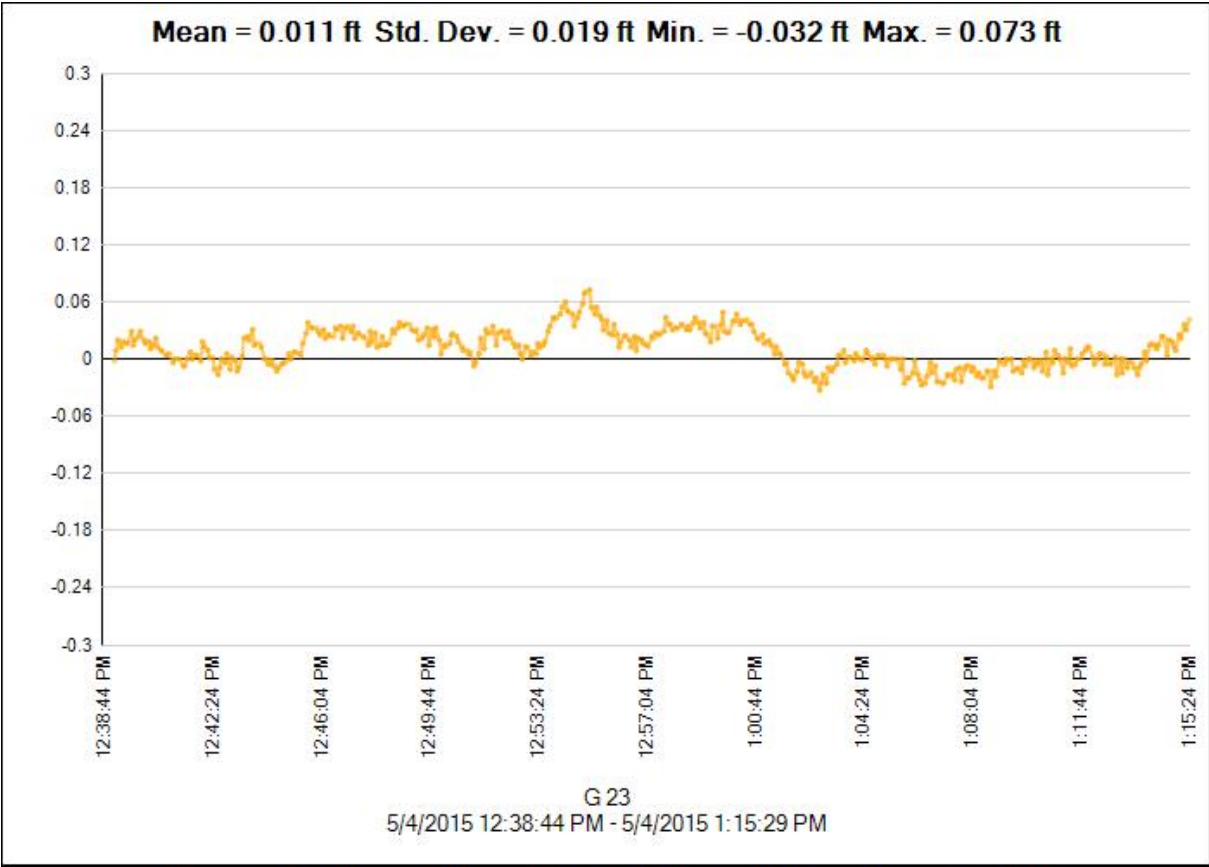
SV	5/4/2015 12:38:39 PM	Duration: 00:36:51	Major interval: 00:01:00	5/4/2015 1:15:30 PM
G 3	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 16	L1 L2			
G 19	L1 L2			
G 23	L1 L2			
G 26	L1 L2			
G 27	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

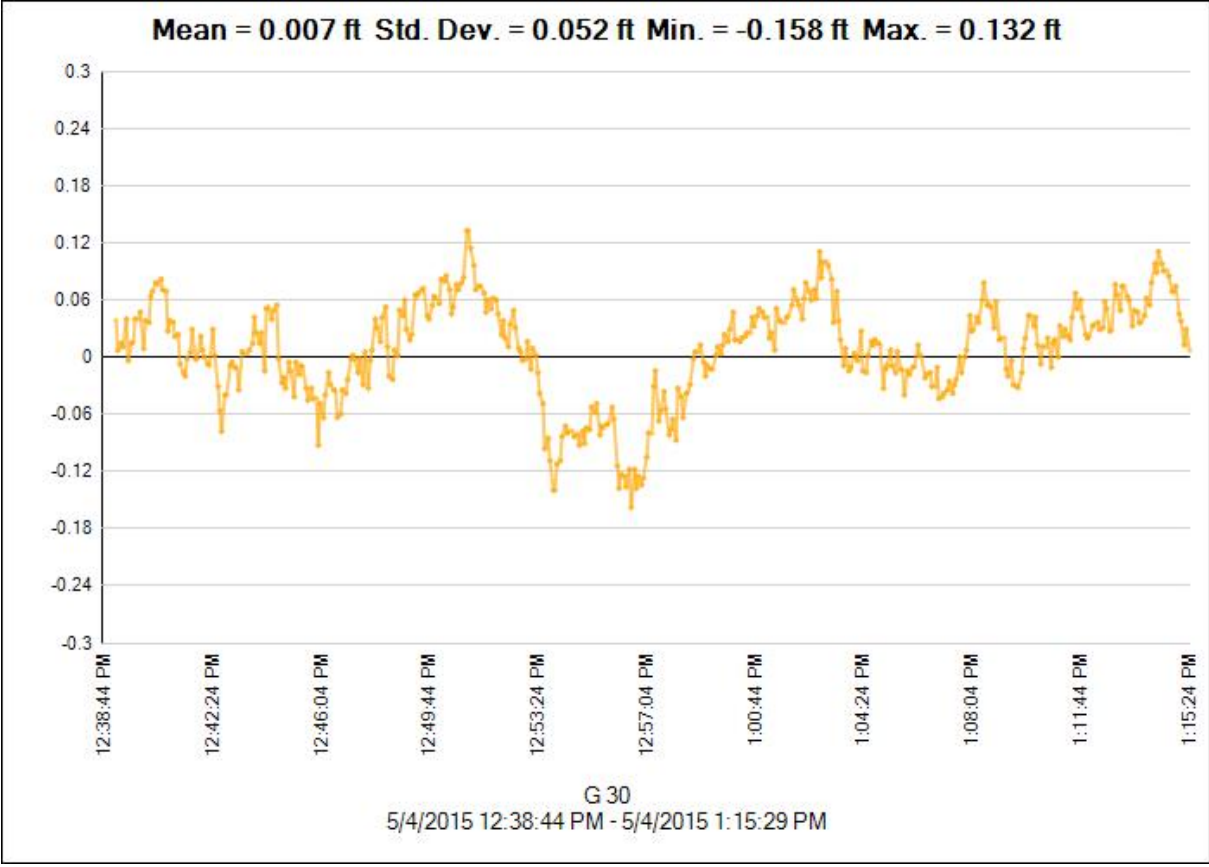
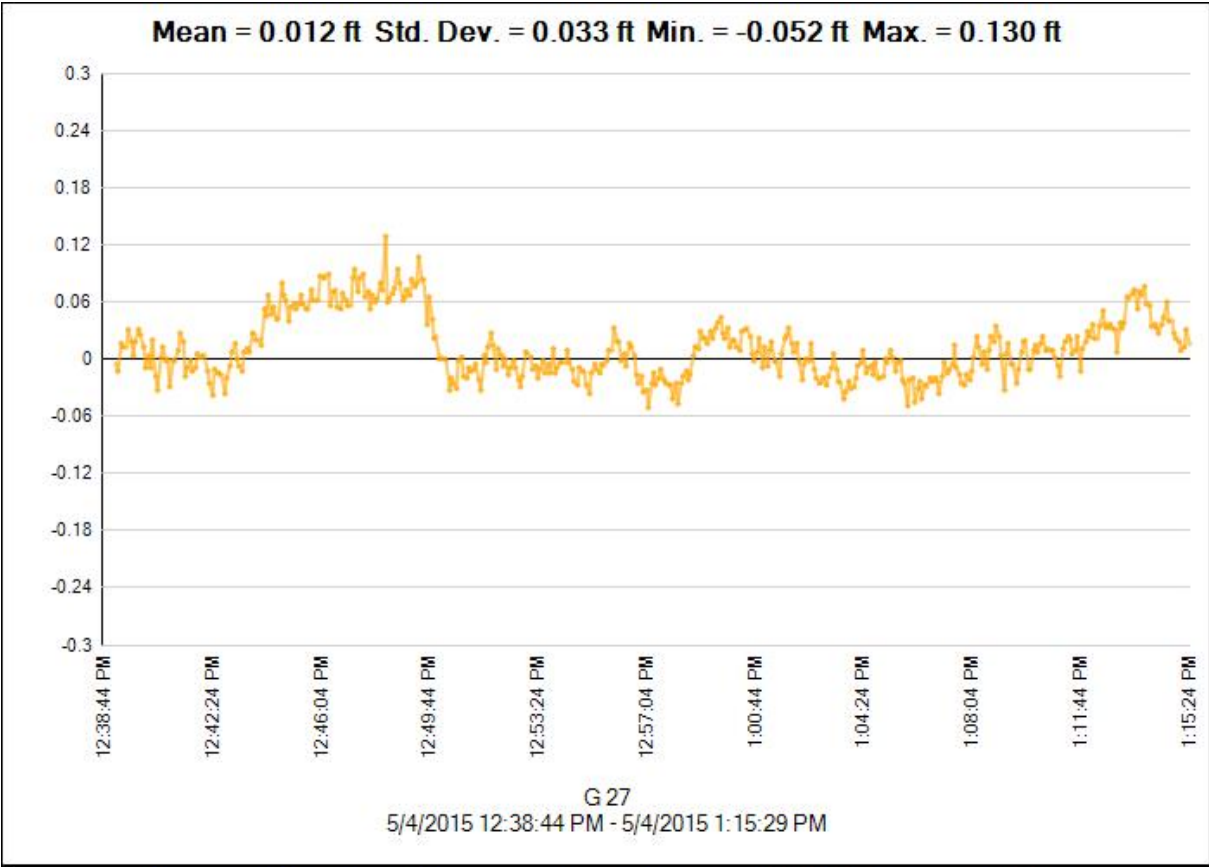
# Residuals















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**Processing style**

Elevation mask: 13.0 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

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**AH8499 - PAG114 (9:08:19 AM-9:47:19 AM) (S14)**

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Baseline observation: AH8499 --- PAG114 (B14)  
Processed: 5/29/2015 1:08:50 PM  
Solution type: Fixed  
Frequency used: Dual Frequency (L1, L2)  
Horizontal precision: 0.022 ft  
Vertical precision: 0.041 ft  
RMS: 0.005 ft  
Maximum PDOP: 2.818  
Ephemeris used: Broadcast  
Antenna model: NGS Absolute  
Processing start time: 5/12/2015 9:08:19 AM (Local: UTC-6hr)  
Processing stop time: 5/12/2015 9:47:19 AM (Local: UTC-6hr)  
Processing duration: 00:39:00  
Processing interval: 5 seconds

### Vector Components (Mark to Mark)

From:		AH8499			
Grid		Local		Global	
Easting	992147.715 ft	Latitude	N32°13'38.90695"	Latitude	N32°13'38.90695"
Northing	447770.262 ft	Longitude	W110°58'18.80510"	Longitude	W110°58'18.80510"
Elevation	2394.258 ft	Height	2298.228 ft	Height	2298.228 ft

To:		PAG114			
Grid		Local		Global	
Easting	868258.671 ft	Latitude	N32°17'29.89068"	Latitude	N32°17'29.89068"
Northing	470253.764 ft	Longitude	W111°22'19.72183"	Longitude	W111°22'19.72183"
Elevation	2164.800 ft	Height	2066.651 ft	Height	2066.651 ft

Vector					
$\Delta$ Easting	-123889.044 ft	NS Fwd Azimuth	280°47'25"	$\Delta$ X	-110823.372 ft
$\Delta$ Northing	22483.502 ft	Ellipsoid Dist.	125917.445 ft	$\Delta$ Y	56496.114 ft
$\Delta$ Elevation	-229.459 ft	$\Delta$ Height	-231.577 ft	$\Delta$ Z	19618.433 ft

### Standard Errors

Vector errors:					
$\sigma$ $\Delta$ Easting	0.007 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma$ $\Delta$ X	0.011 ft
$\sigma$ $\Delta$ Northing	0.008 ft	$\sigma$ 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	0.012 ft

### Aposteriori Covariance Matrix (International foot<sup>2</sup>)

	X	Y	Z
X	0.0000109127		
Y	0.0000115505	0.0000265177	
Z	-0.0000053724	-0.0000134815	0.0000139461

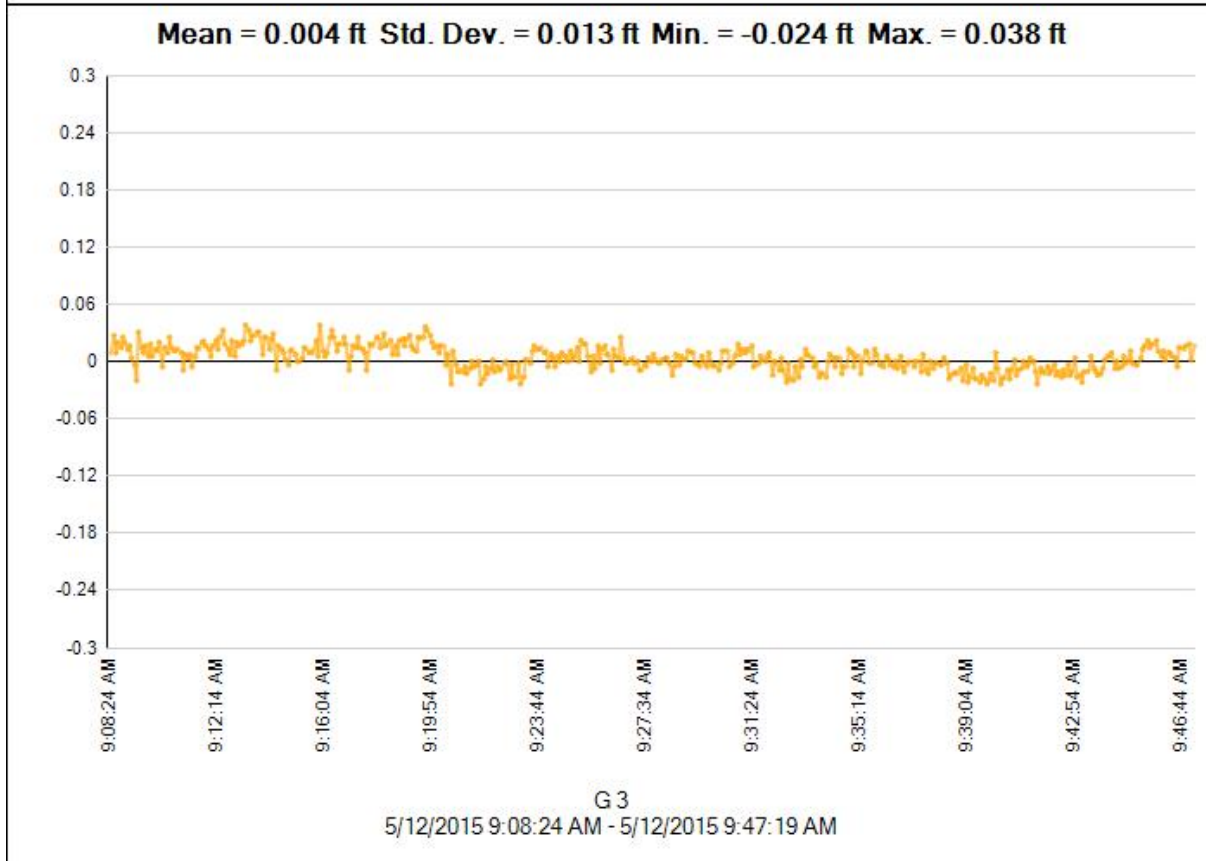
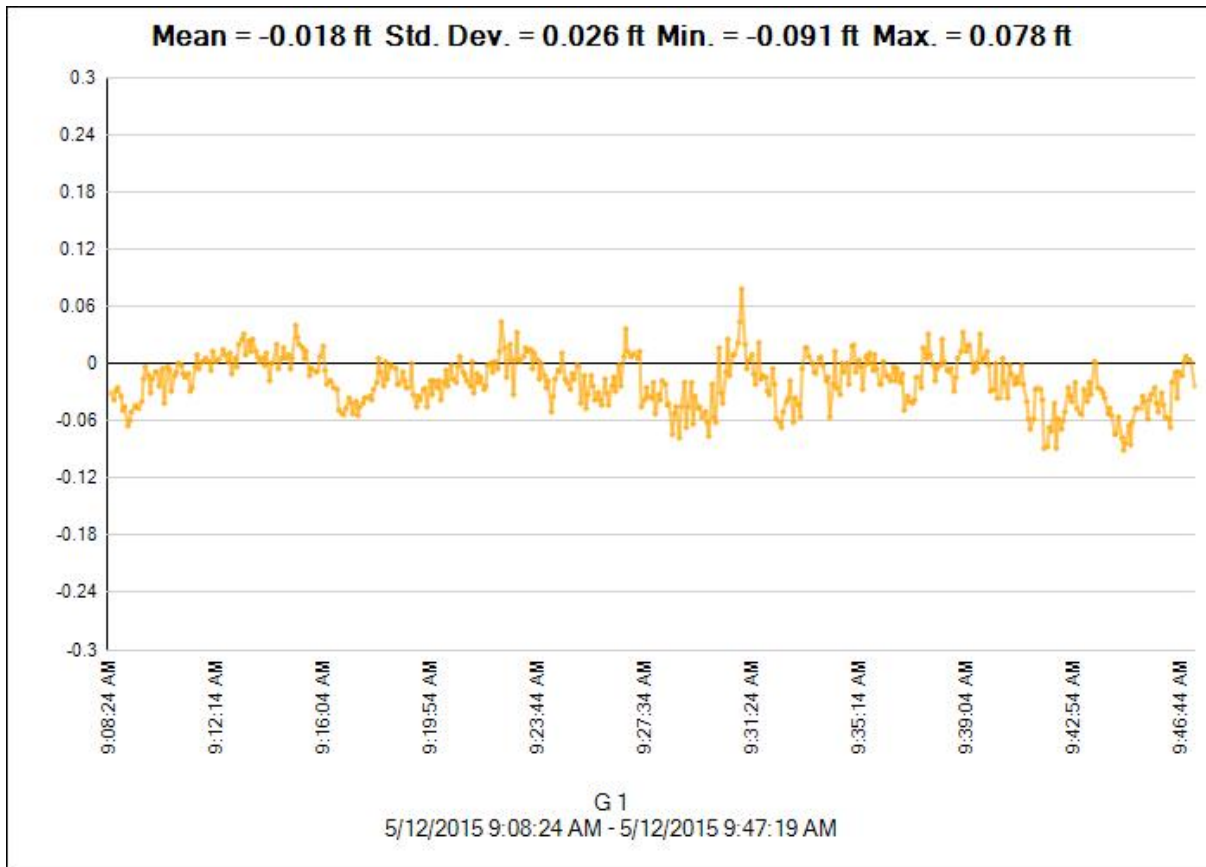
## Occupations

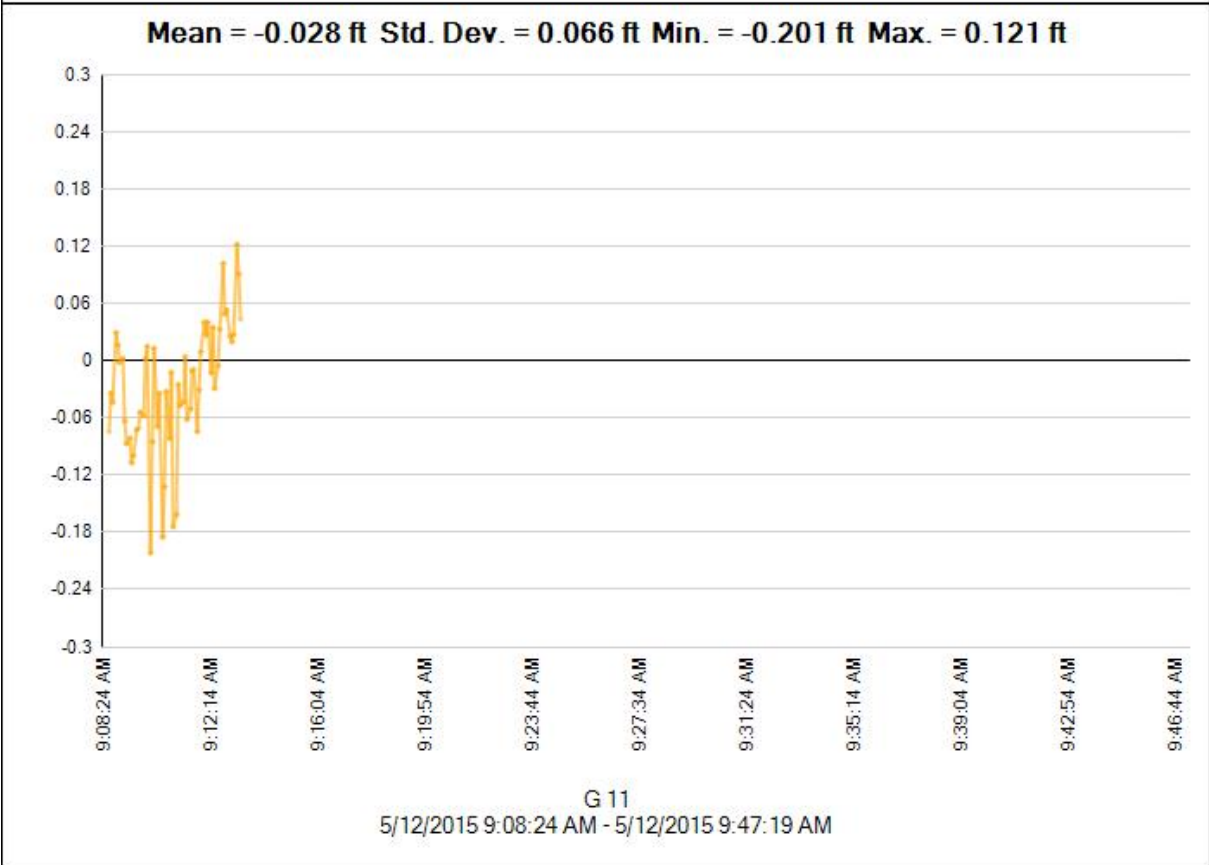
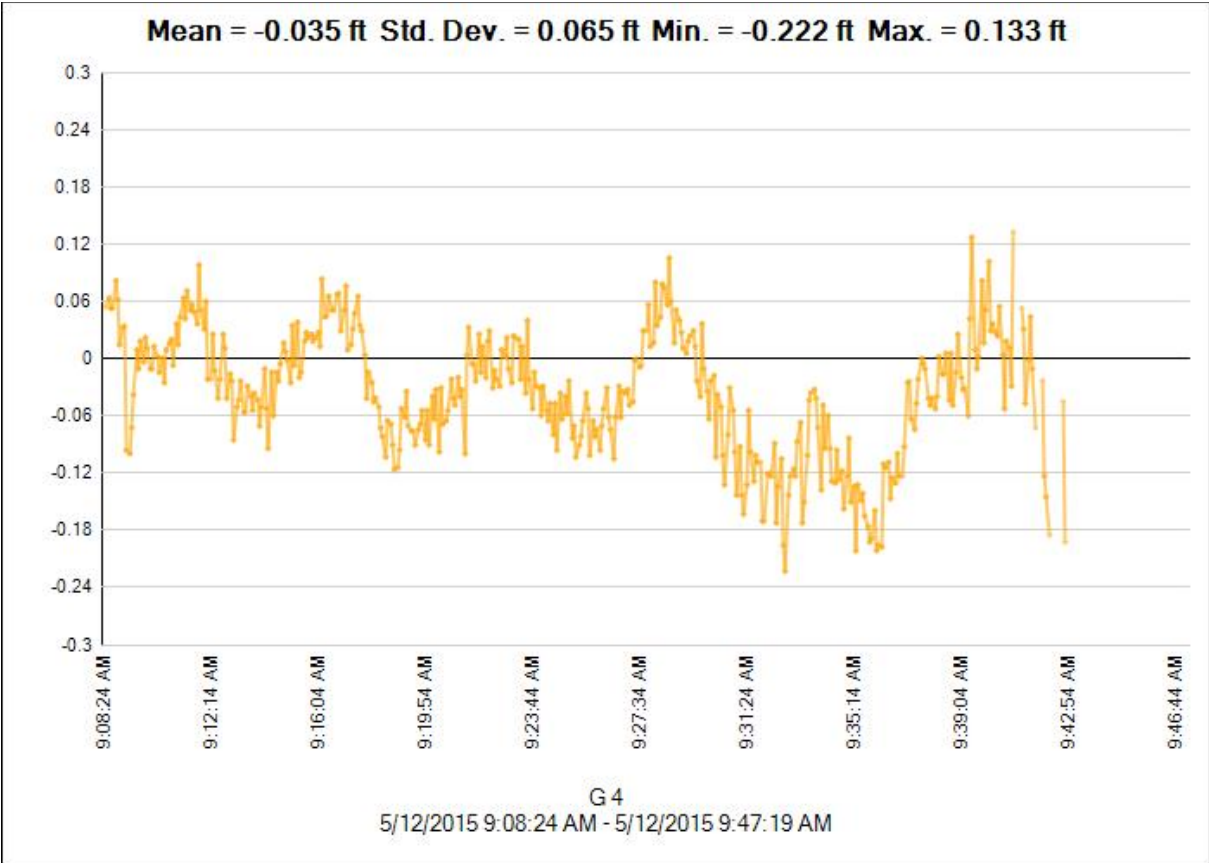
	From	To
Point ID:	AH8499	PAG114
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191320 (resampled).15o	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851320.t00
Receiver type:	Geo Explorer 3	5700
Receiver serial number:		0220271185
Antenna type:	702 Rev 3.00	Zephyr
Antenna serial number:	-----	00000000
Antenna height (measured):	5.663 ft	5.246 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

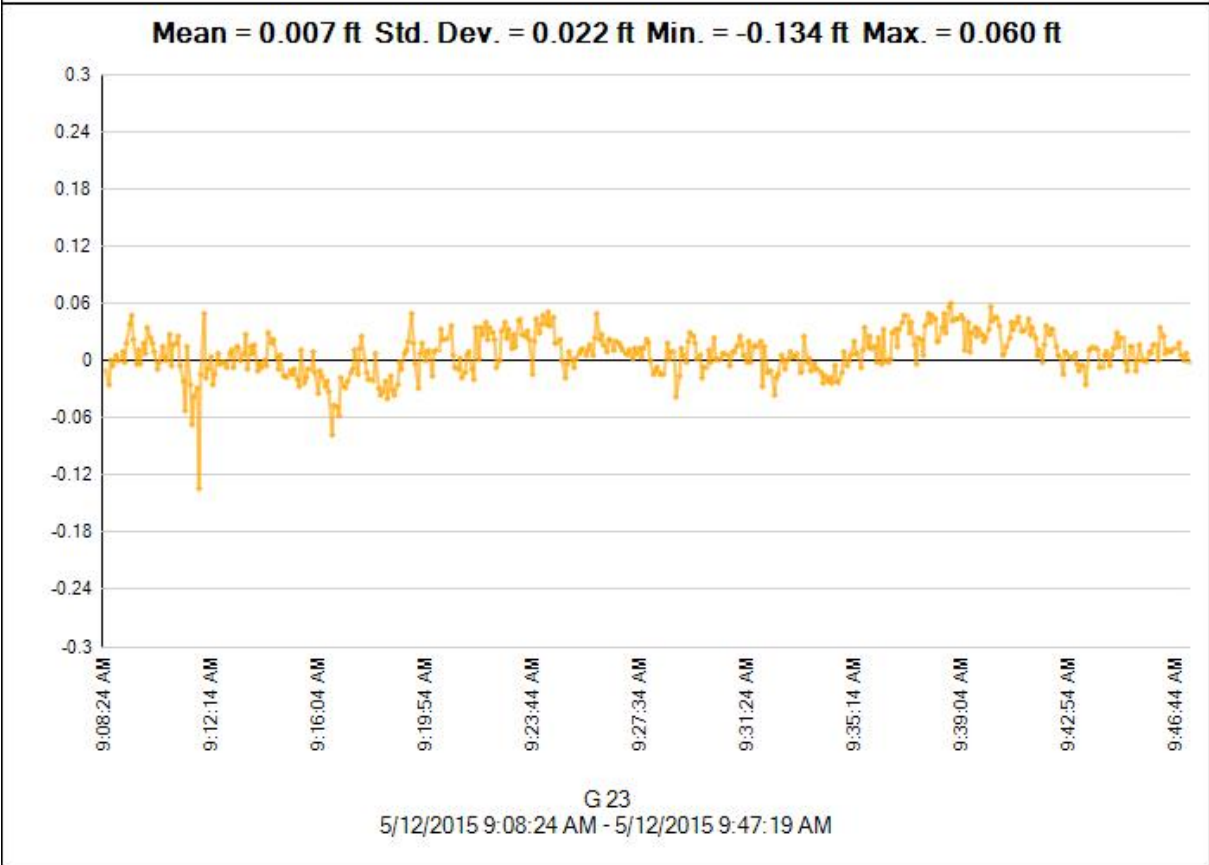
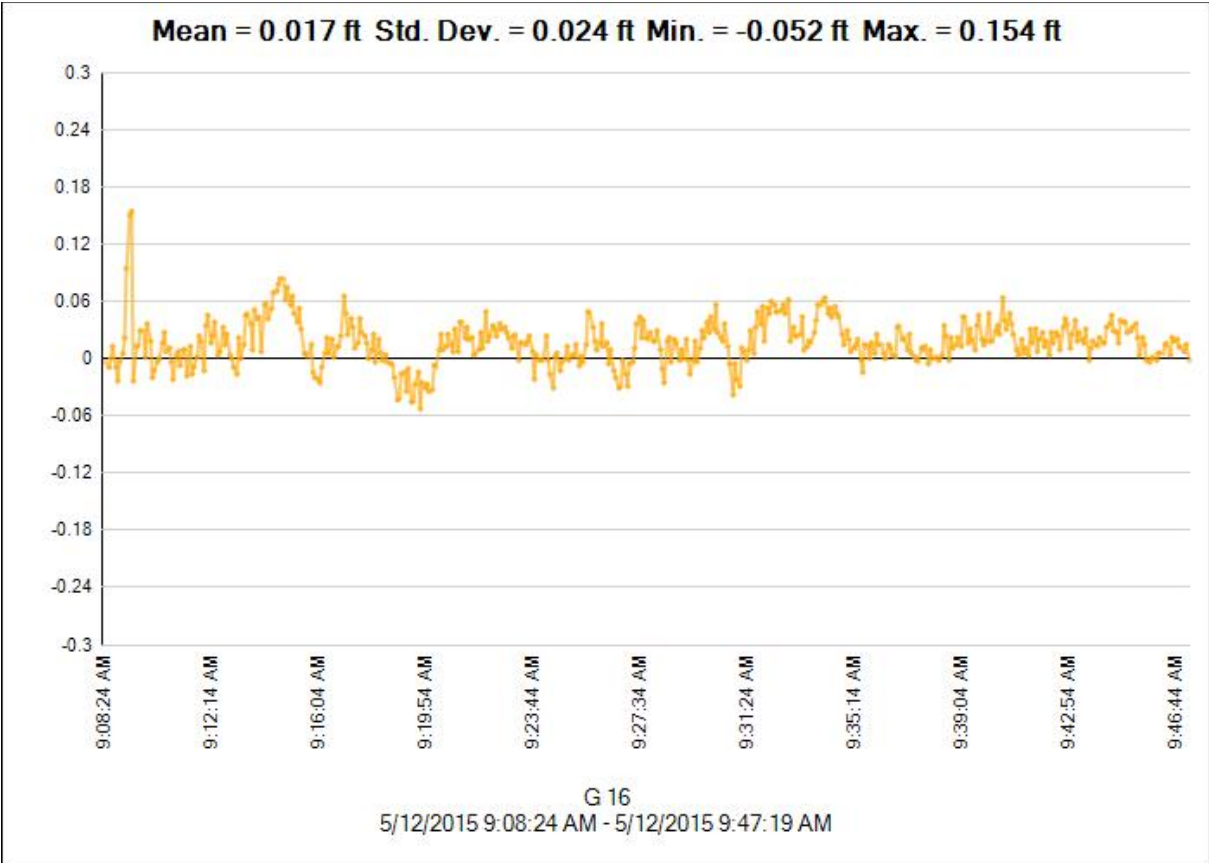
# Tracking Summary

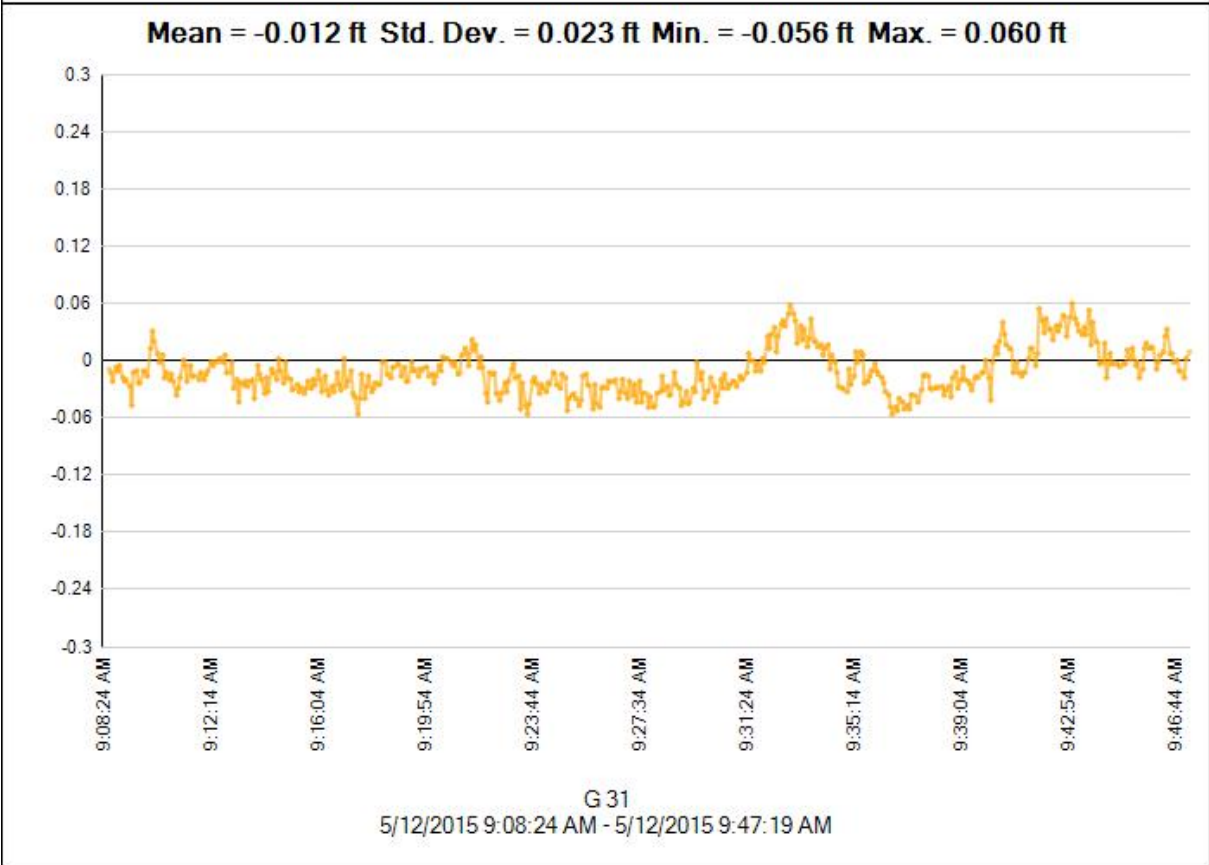
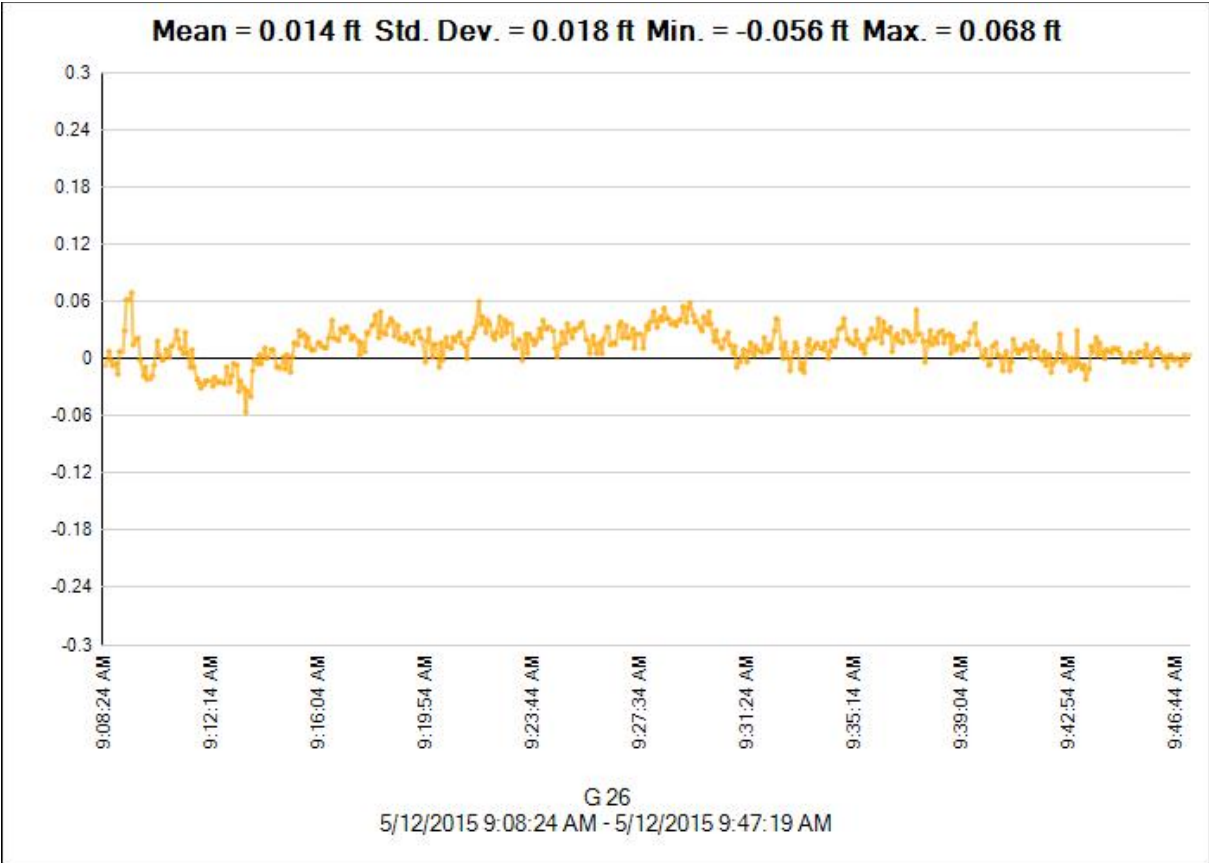
SV	5/12/2015 9:08:19 AM	Duration: 00:39:00	Major interval: 00:10:00	5/12/2015 9:47:19 AM
G 1	L1 L2			
G 3	L1 L2			
G 4	L1 L2			
G 9	L1 L2			
G 11	L1 L2			
G 14	L1 L2			
G 16	L1 L2			
G 23	L1 L2			
G 26	L1 L2			
G 31	L1 L2			
G 32	L1 L2			

# Residuals

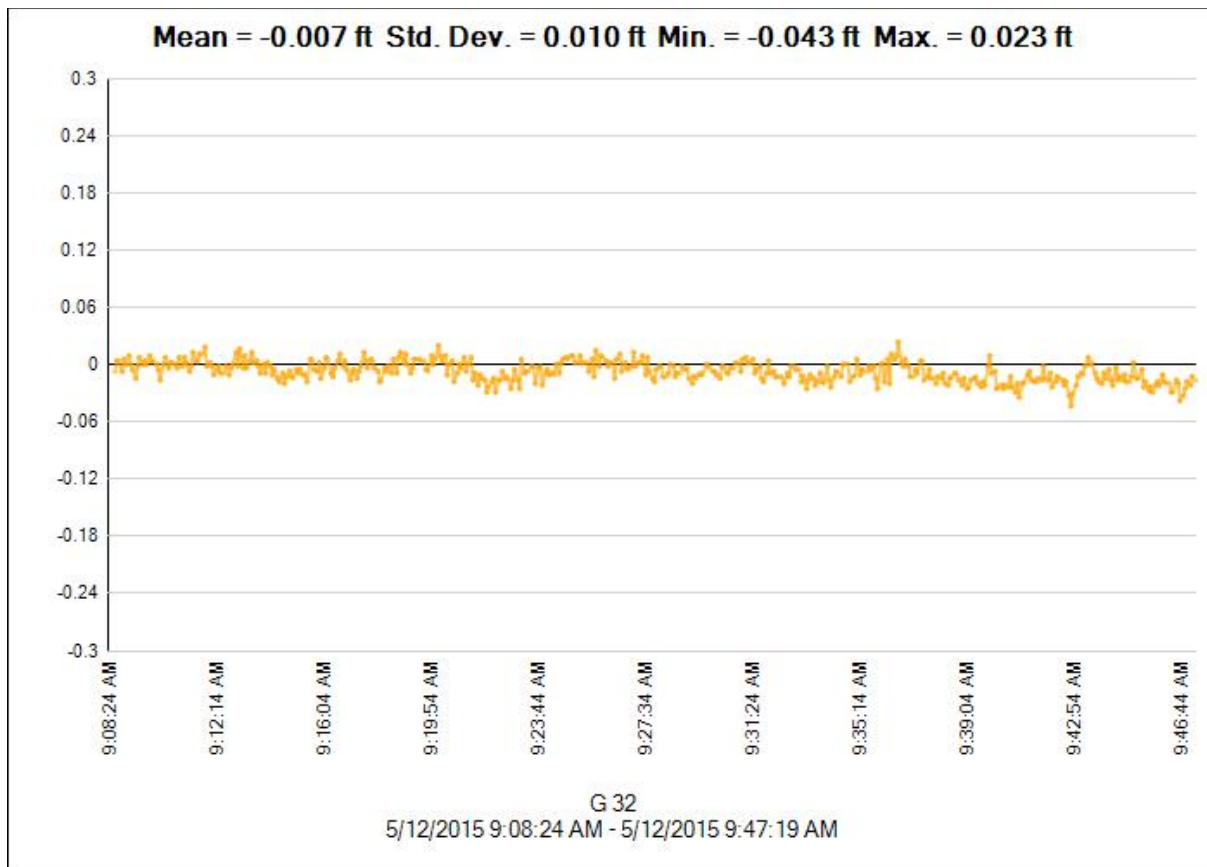














### Processing style

Elevation mask: 13.0 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

**AH8499 - PAG117 (1:15:29 PM-2:00:39 PM) (S15)**

Baseline observation: AH8499 --- PAG117 (B15)  
 Processed: 5/29/2015 1:11:15 PM  
 Solution type: Fixed  
 Frequency used: Dual Frequency (L1, L2)  
 Horizontal precision: 0.051 ft  
 Vertical precision: 0.077 ft  
 RMS: 0.009 ft  
 Maximum PDOP: 2.386  
 Ephemeris used: Broadcast  
 Antenna model: NGS Absolute  
 Processing start time: 5/14/2015 1:16:04 PM (Local: UTC-6hr)  
 Processing stop time: 5/14/2015 1:59:24 PM (Local: UTC-6hr)  
 Processing duration: 00:43:20  
 Processing interval: 5 seconds

**Vector Components (Mark to Mark)**

From: AH8499					
Grid		Local		Global	
Easting	992153.874 ft	Latitude	N32°13'38.95427"	Latitude	N32°13'38.95426"
Northing	447775.098 ft	Longitude	W110°58'18.73290"	Longitude	W110°58'18.73290"
Elevation	2365.888 ft	Height	2269.858 ft	Height	2269.858 ft

To: PAG117					
Grid		Local		Global	
Easting	912601.495 ft	Latitude	N32°26'18.32142"	Latitude	N32°26'18.32141"
Northing	523911.326 ft	Longitude	W111°13'39.11474"	Longitude	W111°13'39.11474"
Elevation	1983.325 ft	Height	1886.143 ft	Height	1886.143 ft

Vector					
ΔEasting	-79552.379 ft	NS Fwd Azimuth	314°14'54"	ΔX	-58790.165 ft
ΔNorthing	76136.228 ft	Ellipsoid Dist.	110117.880 ft	ΔY	67031.202 ft
ΔElevation	-382.563 ft	ΔHeight	-383.715 ft	ΔZ	64645.287 ft

**Standard Errors**

Vector errors:					
$\sigma \Delta$ Easting	0.015 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.022 ft
$\sigma \Delta$ Northing	0.020 ft	$\sigma$ Ellipsoid Dist.	0.014 ft	$\sigma \Delta$ Y	0.031 ft
$\sigma \Delta$ Elevation	0.039 ft	$\sigma \Delta$ Height	0.039 ft	$\sigma \Delta$ Z	0.027 ft

**Aposteriori Covariance Matrix (International foot<sup>2</sup>)**

	X	Y	Z
X	0.0000451079		
Y	0.0000451049	0.0000881313	
Z	-0.0000183125	-0.0000454394	0.0000674770

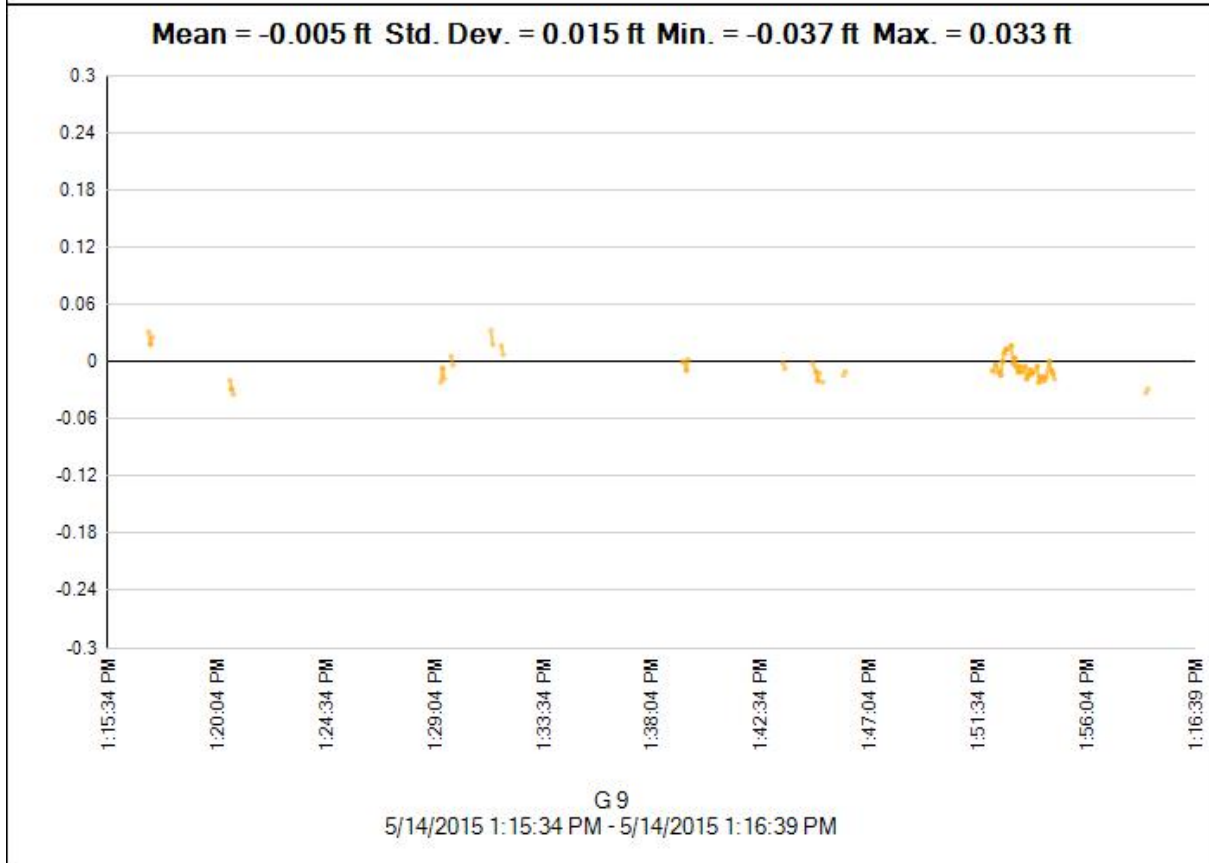
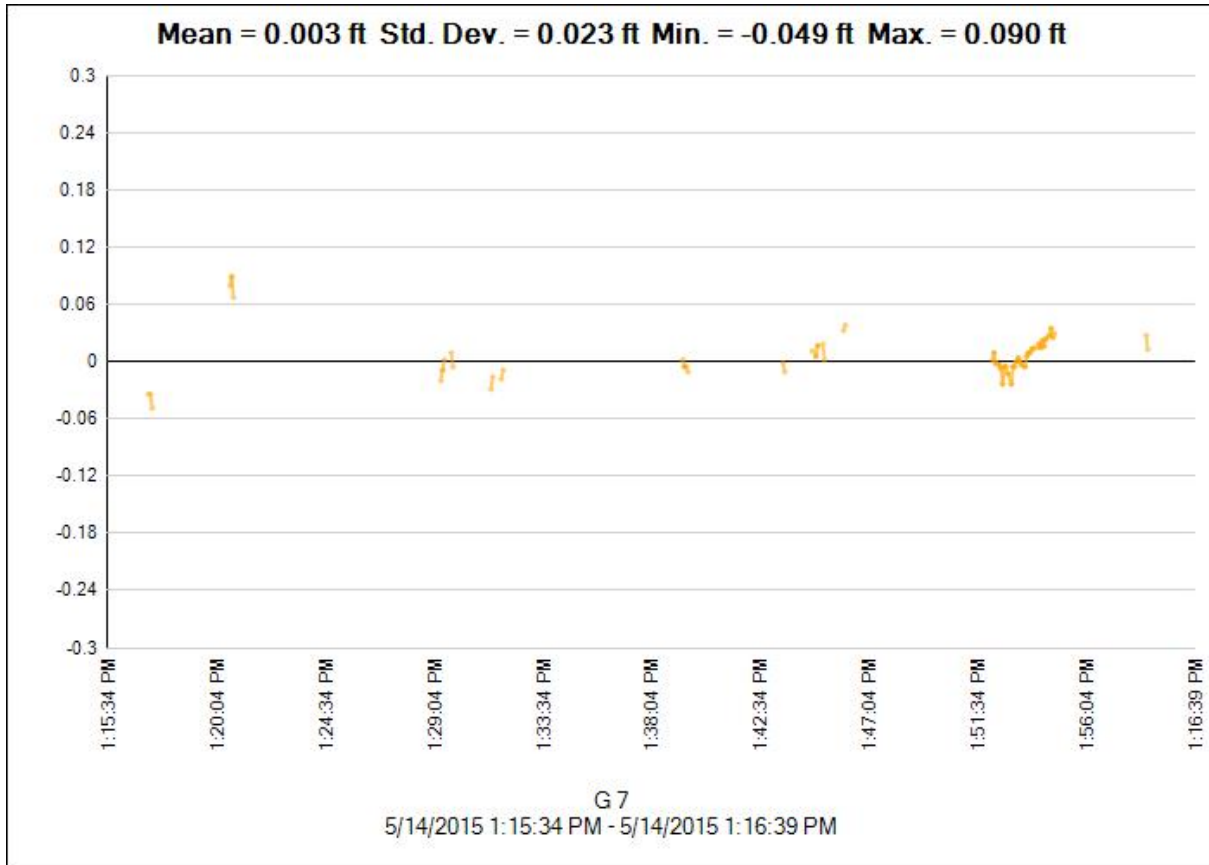
**Occupations**

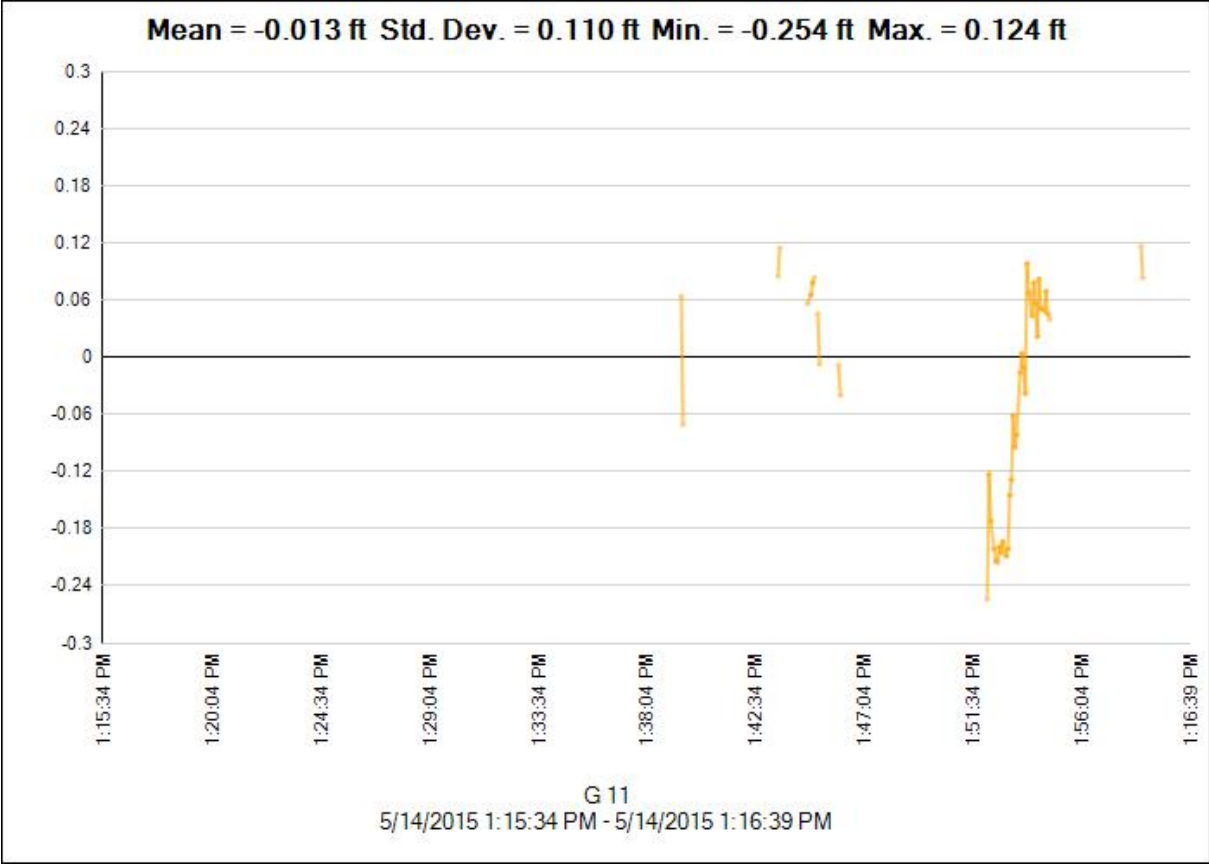
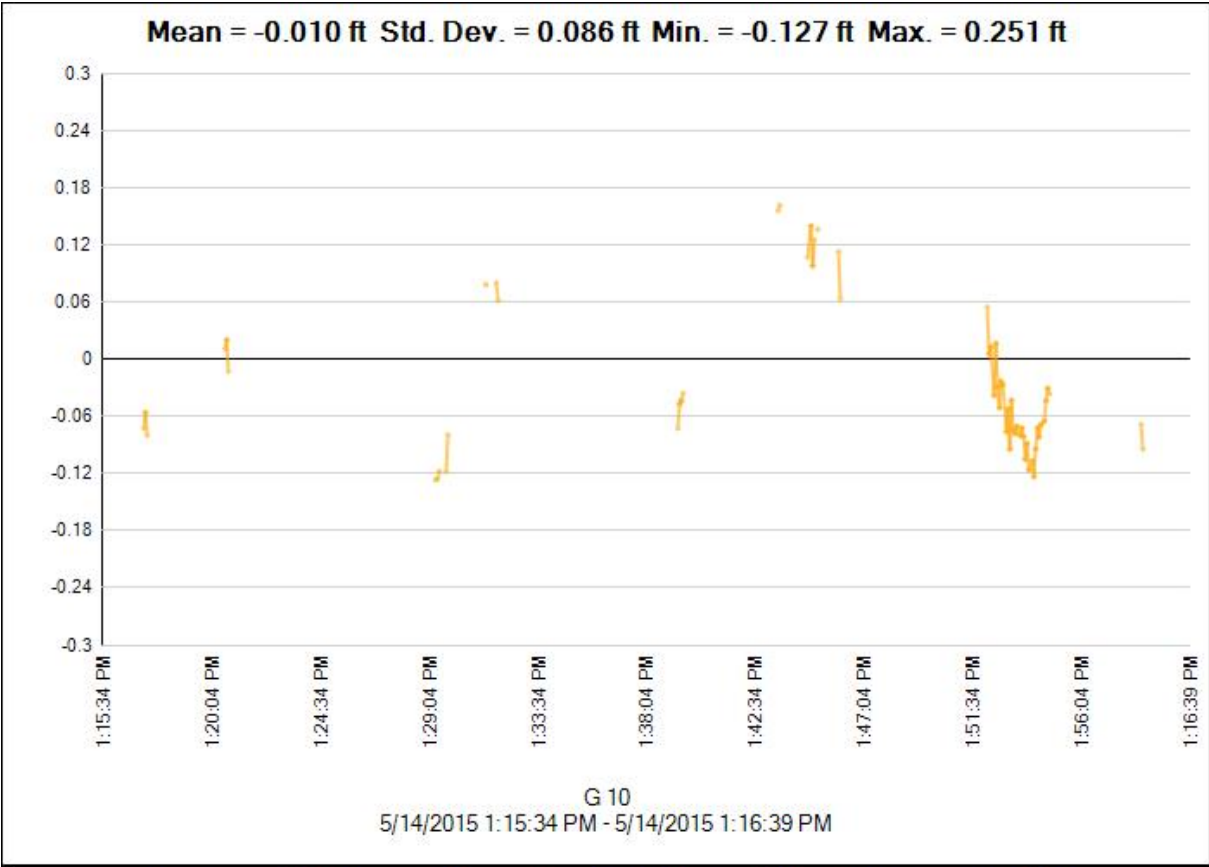
	From	To
Point ID:	AH8499	PAG117
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851340.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191340 (resampled).15o
Receiver type:	5700	Geo Explorer 3
Receiver serial number:	0220271185	
Antenna type:	Zephyr	702 Rev 3.00
Antenna serial number:	00000000	-----
Antenna height (measured):	5.282 ft	5.315 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

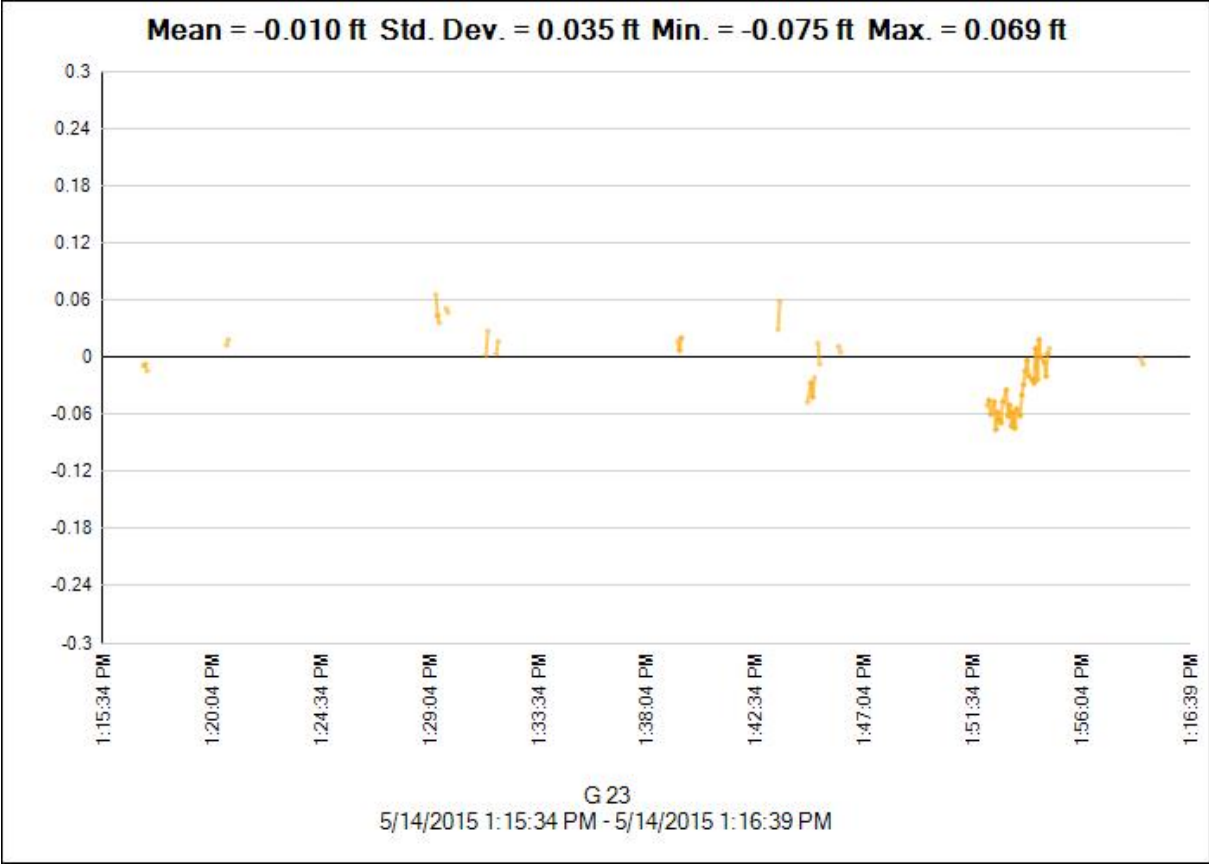
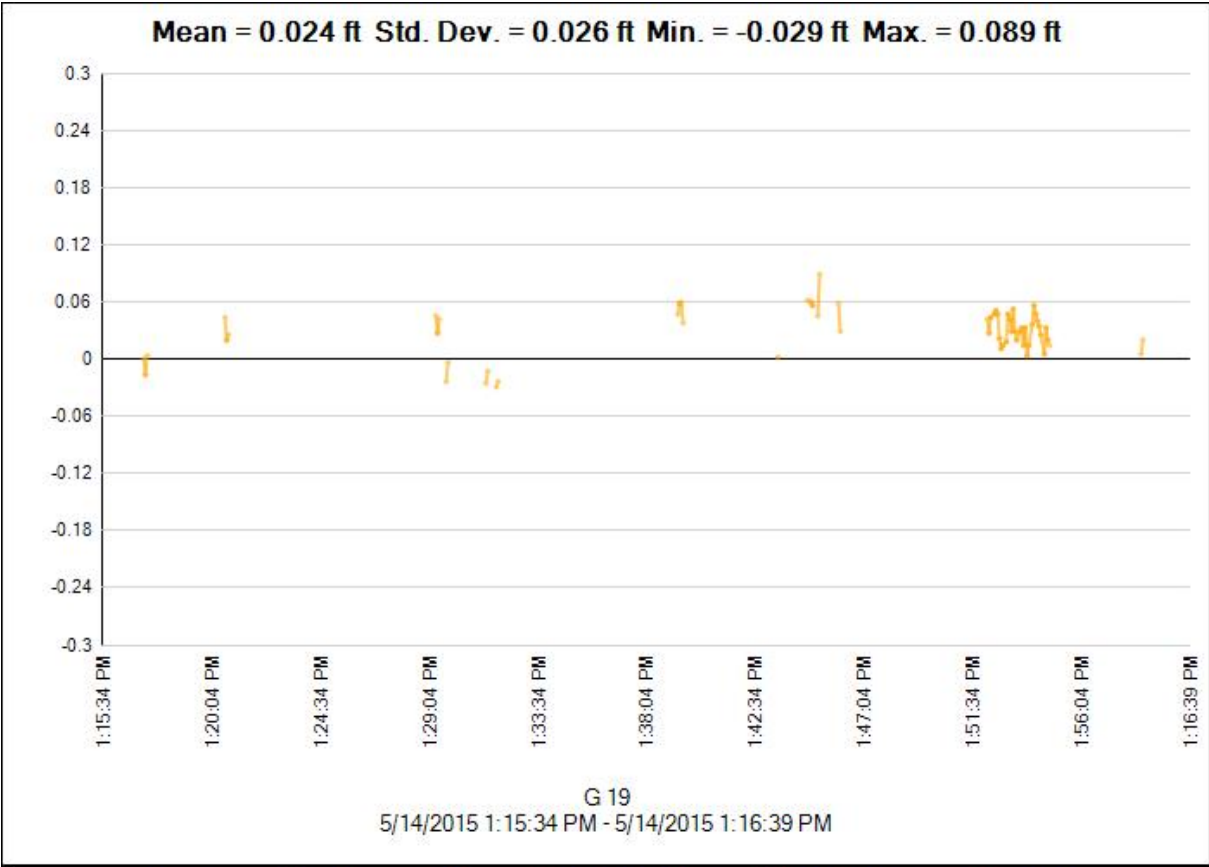
# Tracking Summary

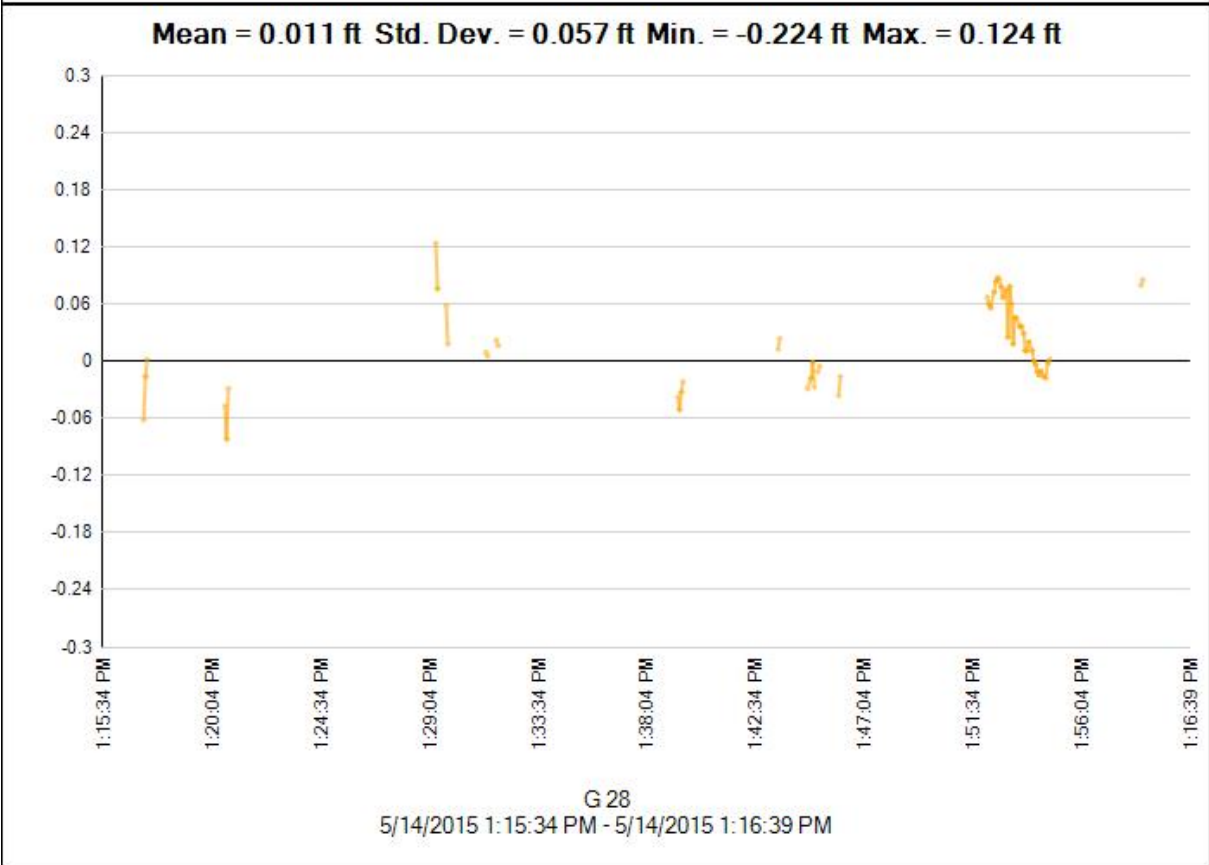
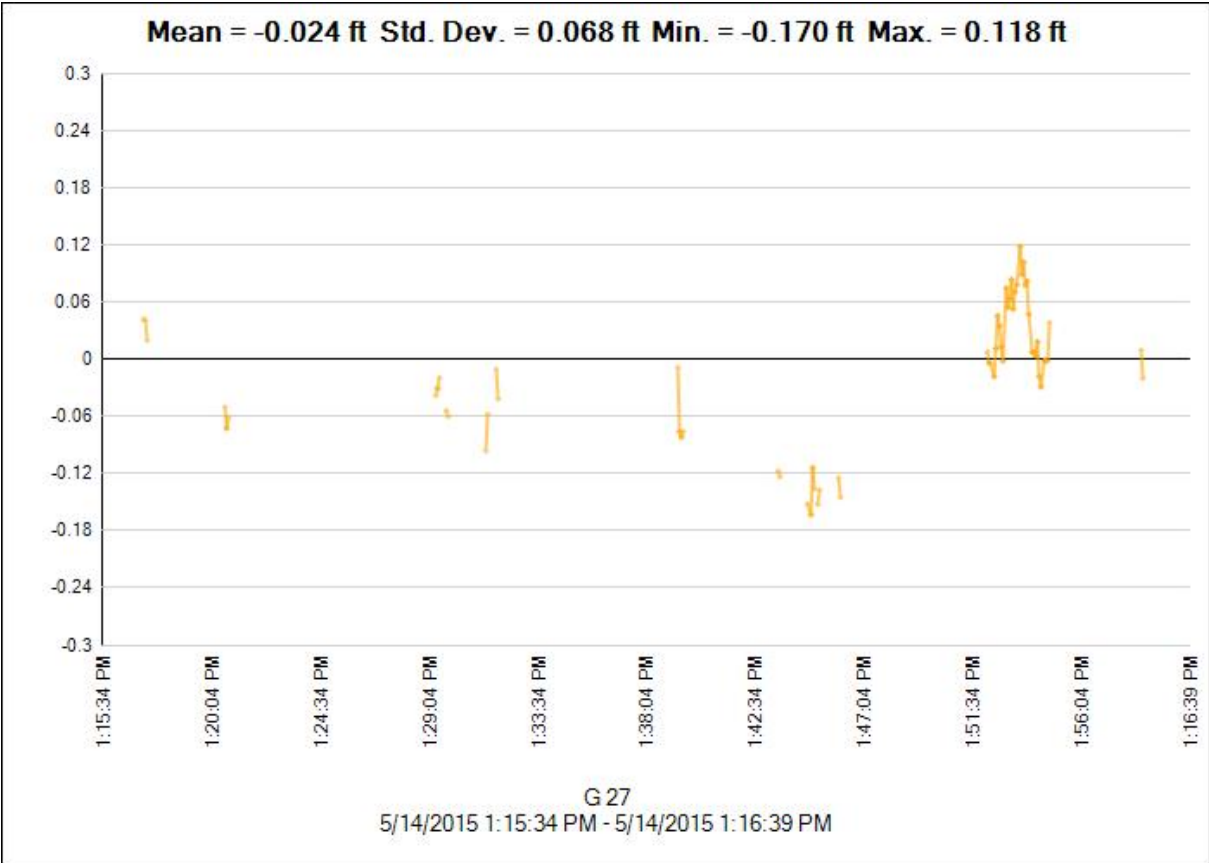
SV	5/14/2015 1:15:29 PM	Duration: 00:45:10	Major interval: 00:10:00	5/14/2015 2:00:39 PM
G 4	L1 L2			
G 5	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 11	L1 L2			
G 16	L1 L2			
G 19	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

# Residuals

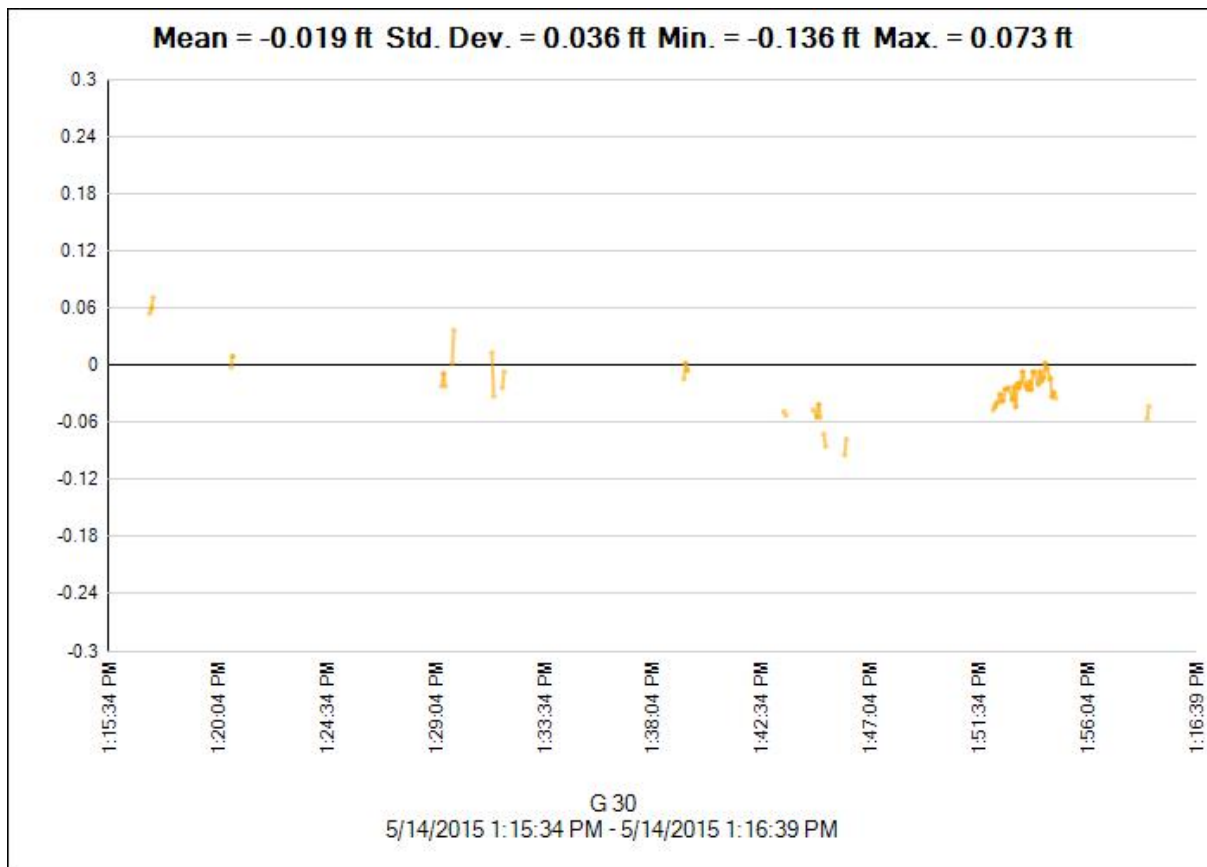














### Processing style

Elevation mask: 13.0 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

**AH8499 - PAG101 (2:23:24 PM-3:03:09 PM) (S16)**

Baseline observation: AH8499 --- PAG101 (B16)  
 Processed: 5/29/2015 1:11:16 PM  
 Solution type: Fixed  
 Frequency used: Dual Frequency (L1, L2)  
 Horizontal precision: 0.039 ft  
 Vertical precision: 0.104 ft  
 RMS: 0.006 ft  
 Maximum PDOP: 4.306  
 Ephemeris used: Broadcast  
 Antenna model: NGS Absolute  
 Processing start time: 5/14/2015 2:23:24 PM (Local: UTC-6hr)  
 Processing stop time: 5/14/2015 3:03:09 PM (Local: UTC-6hr)  
 Processing duration: 00:39:45  
 Processing interval: 5 seconds

**Vector Components (Mark to Mark)**

From: AH8499					
Grid		Local		Global	
Easting	992153.874 ft	Latitude	N32°13'38.95427"	Latitude	N32°13'38.95426"
Northing	447775.098 ft	Longitude	W110°58'18.73290"	Longitude	W110°58'18.73290"
Elevation	2365.888 ft	Height	2269.858 ft	Height	2269.858 ft

To: PAG101					
Grid		Local		Global	
Easting	878328.179 ft	Latitude	N32°35'30.54295"	Latitude	N32°35'30.54294"
Northing	579515.194 ft	Longitude	W111°20'15.51238"	Longitude	W111°20'15.51238"
Elevation	1846.099 ft	Height	1748.671 ft	Height	1748.671 ft

Vector					
ΔEasting	-113825.695 ft	NS Fwd Azimuth	319°40'43"	ΔX	-79490.113 ft
ΔNorthing	131740.096 ft	Ellipsoid Dist.	174108.837 ft	ΔY	107416.400 ft
ΔElevation	-519.789 ft	ΔHeight	-521.187 ft	ΔZ	111637.156 ft

**Standard Errors**

Vector errors:					
$\sigma \Delta$ Easting	0.012 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.015 ft
$\sigma \Delta$ Northing	0.015 ft	$\sigma$ Ellipsoid Dist.	0.016 ft	$\sigma \Delta$ Y	0.050 ft
$\sigma \Delta$ Elevation	0.053 ft	$\sigma \Delta$ Height	0.053 ft	$\sigma \Delta$ Z	0.021 ft

**Aposteriori Covariance Matrix (International foot<sup>2</sup>)**

	X	Y	Z
X	0.0000215508		
Y	0.0000532586	0.0002321996	
Z	-0.0000178671	-0.0000841371	0.0000413070

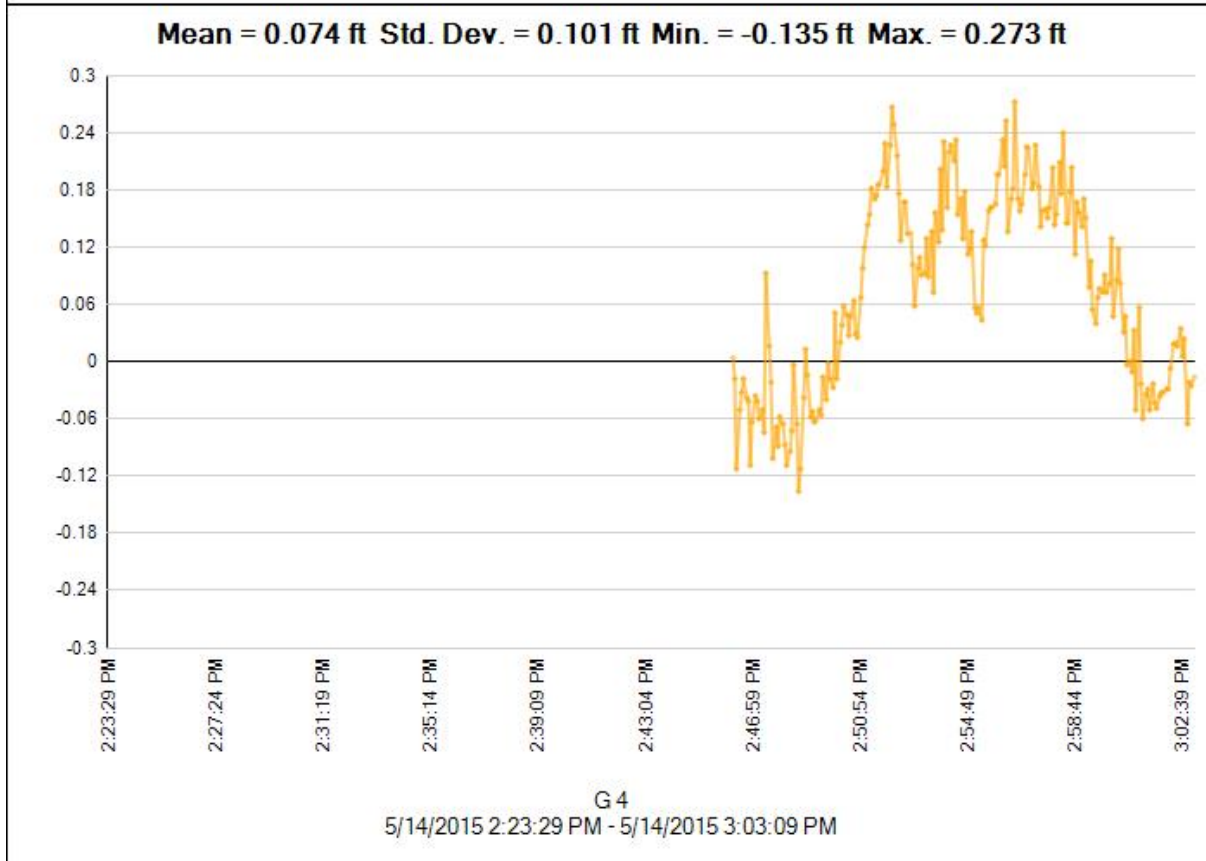
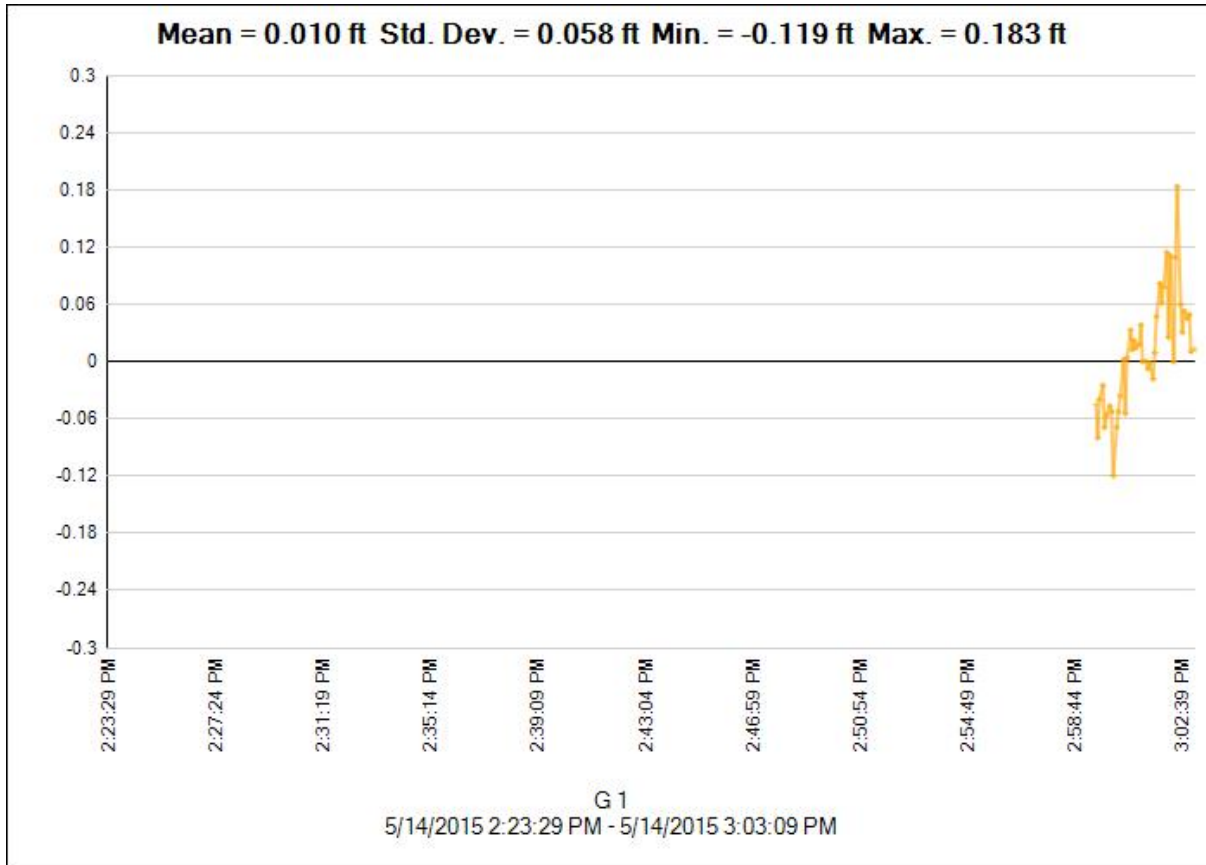
**Occupations**

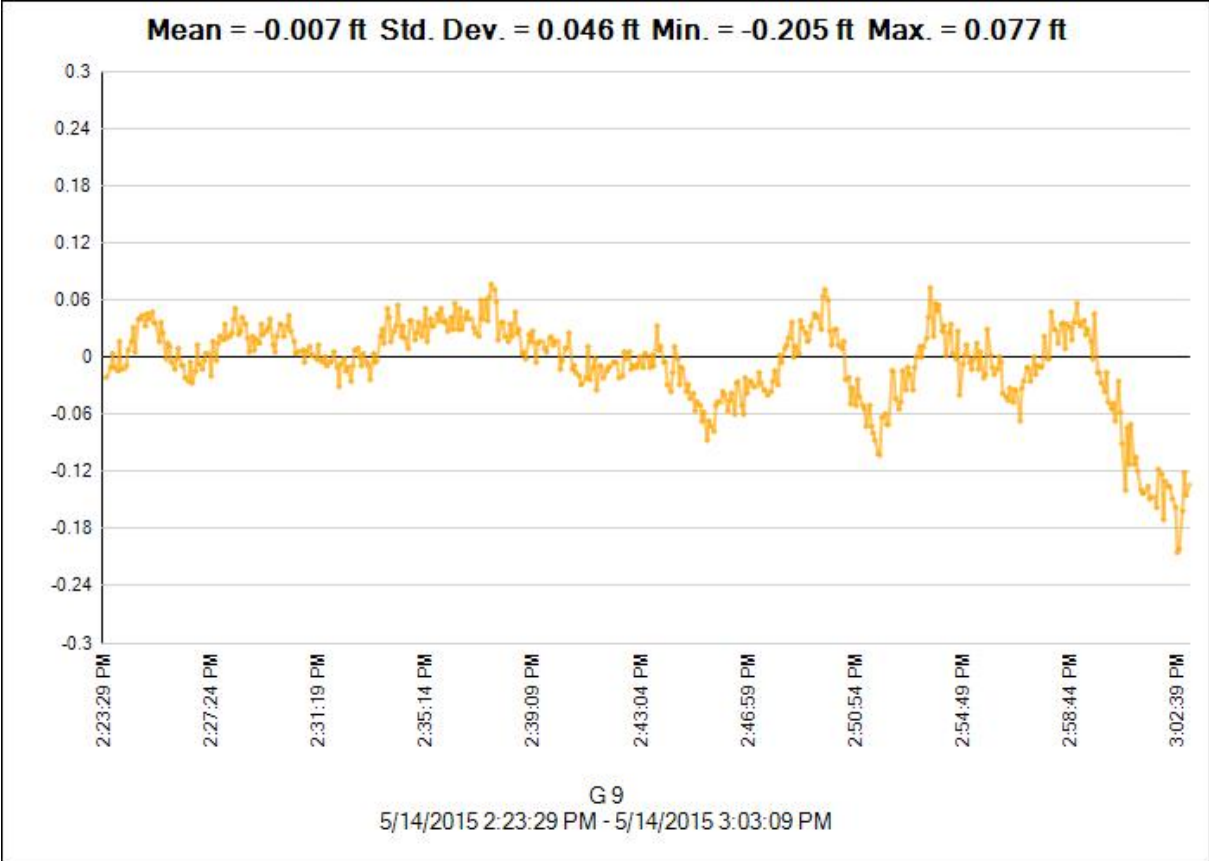
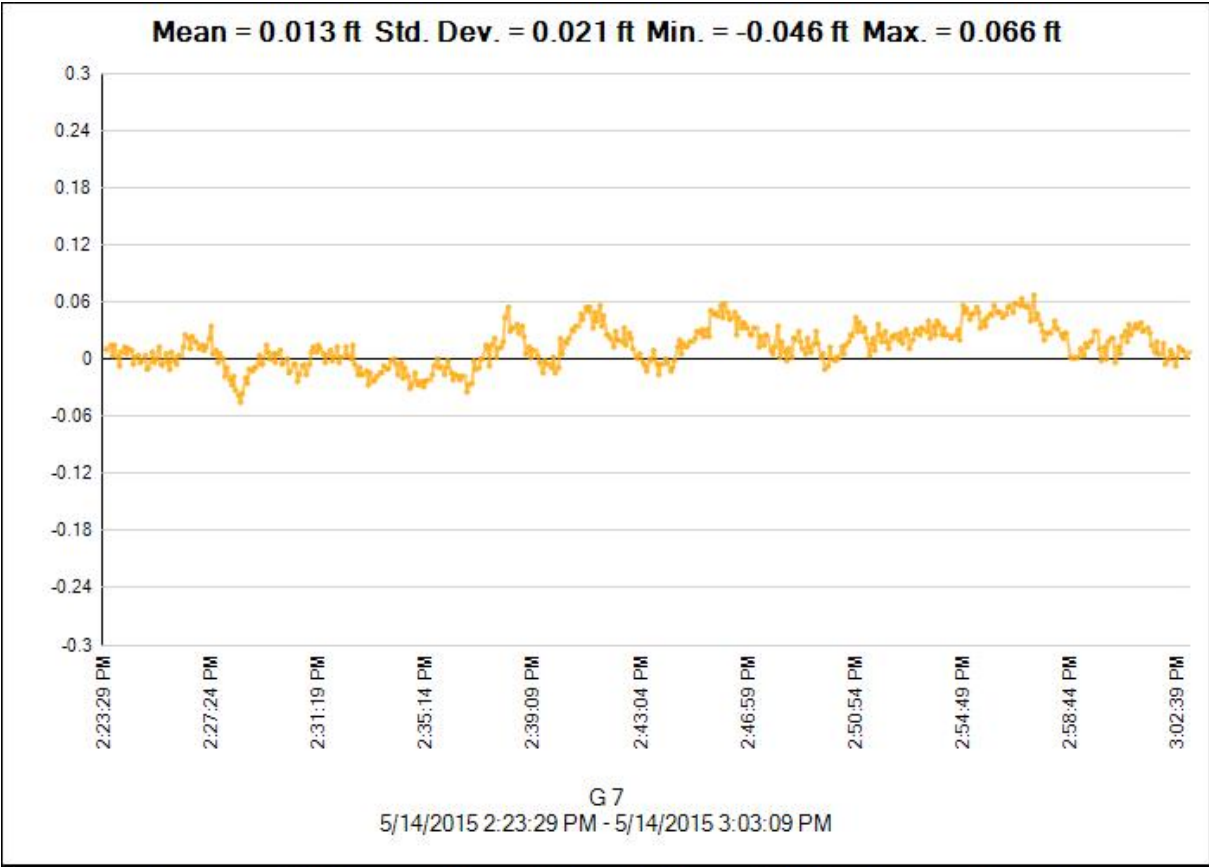
	From	To
Point ID:	AH8499	PAG101
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851340.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191341 (resampled).15o
Receiver type:	5700	Geo Explorer 3
Receiver serial number:	0220271185	
Antenna type:	Zephyr	702 Rev 3.00
Antenna serial number:	00000000	-----
Antenna height (measured):	5.282 ft	5.400 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

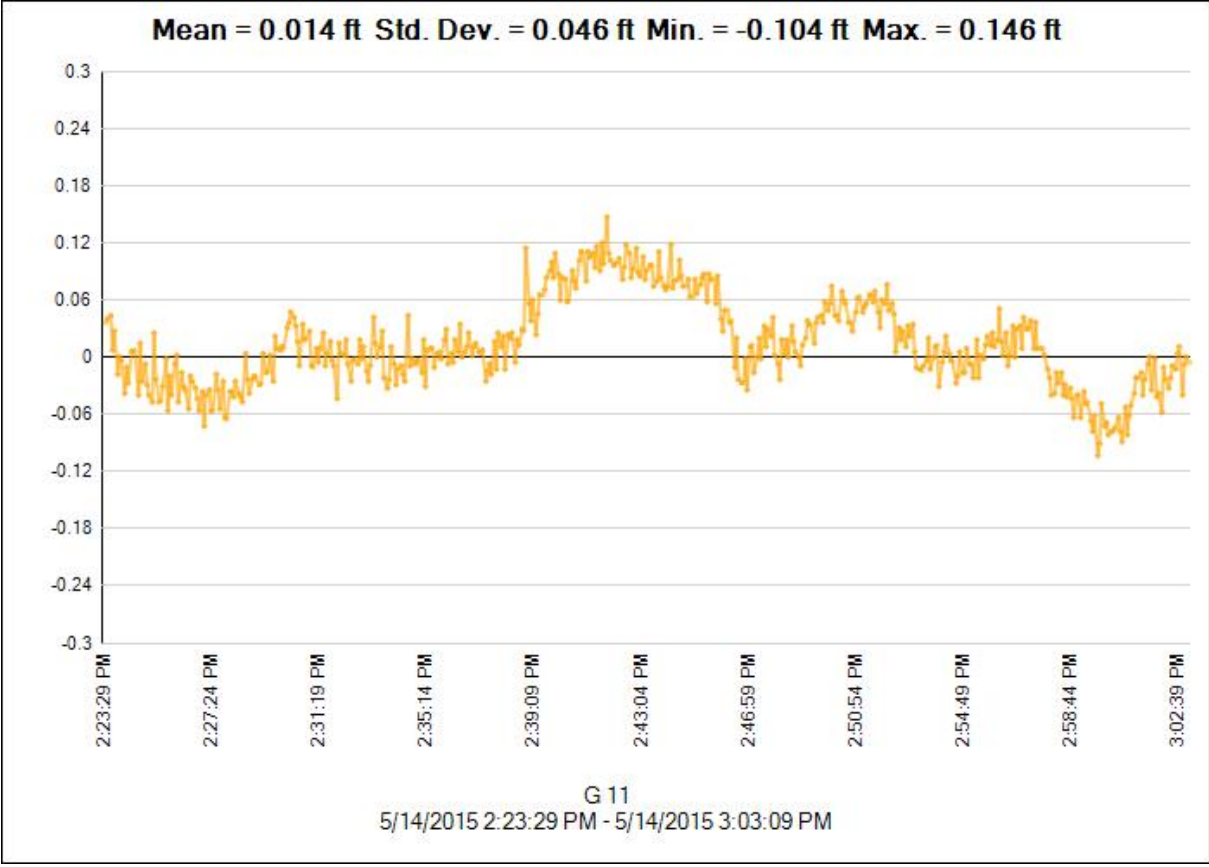
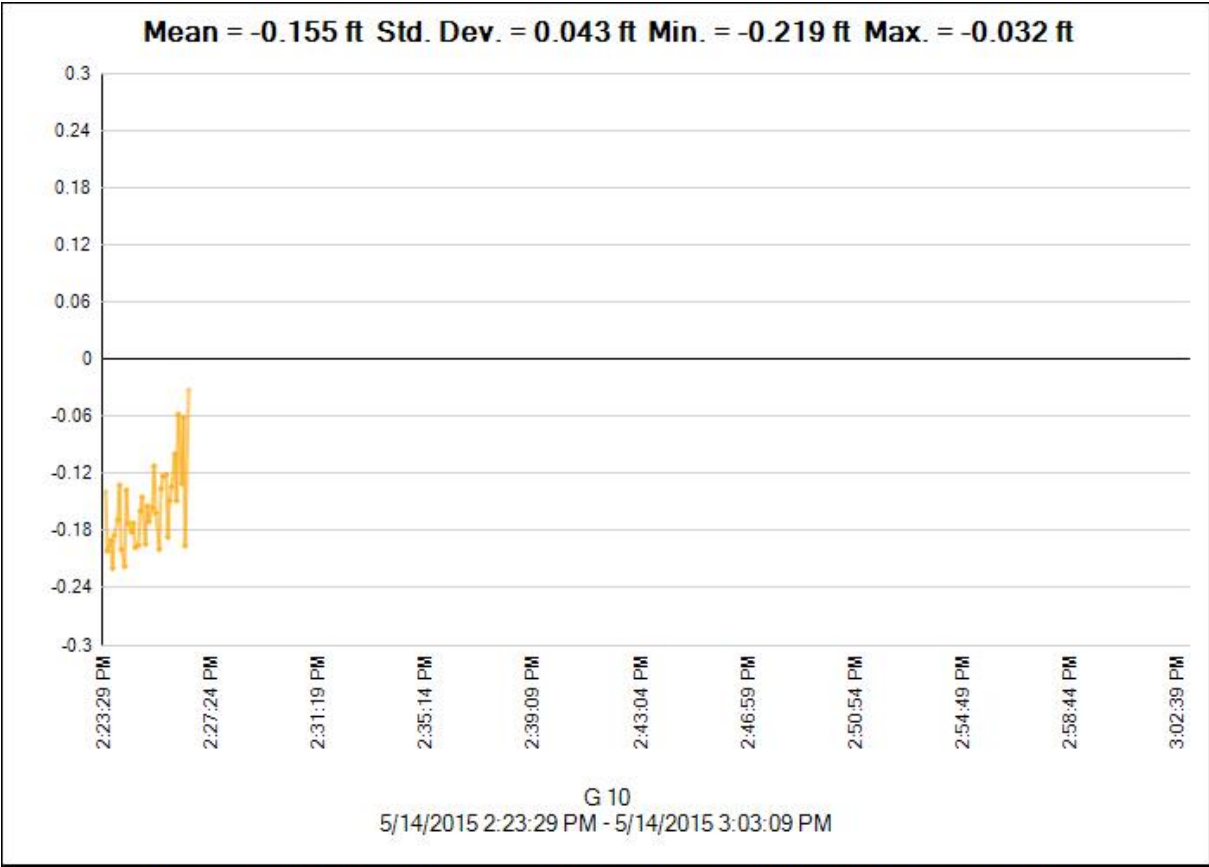
# Tracking Summary

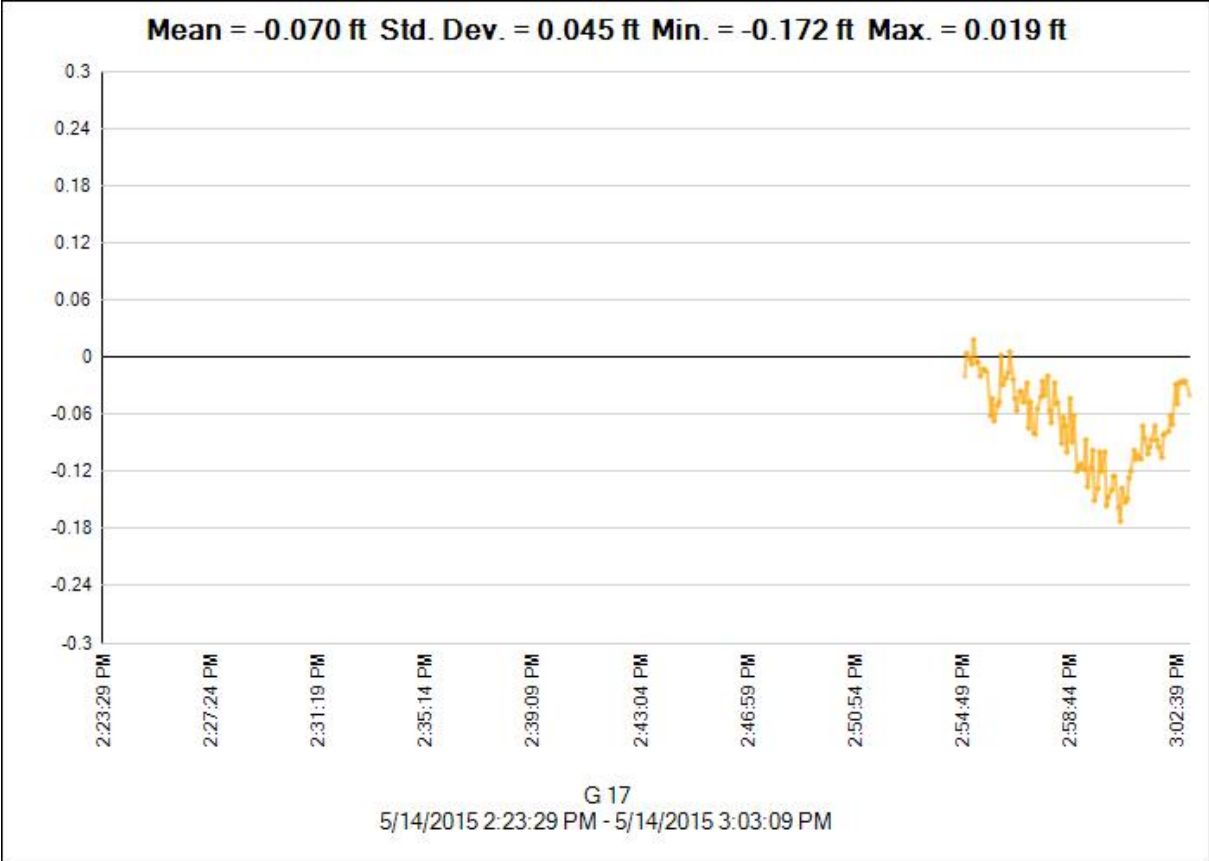
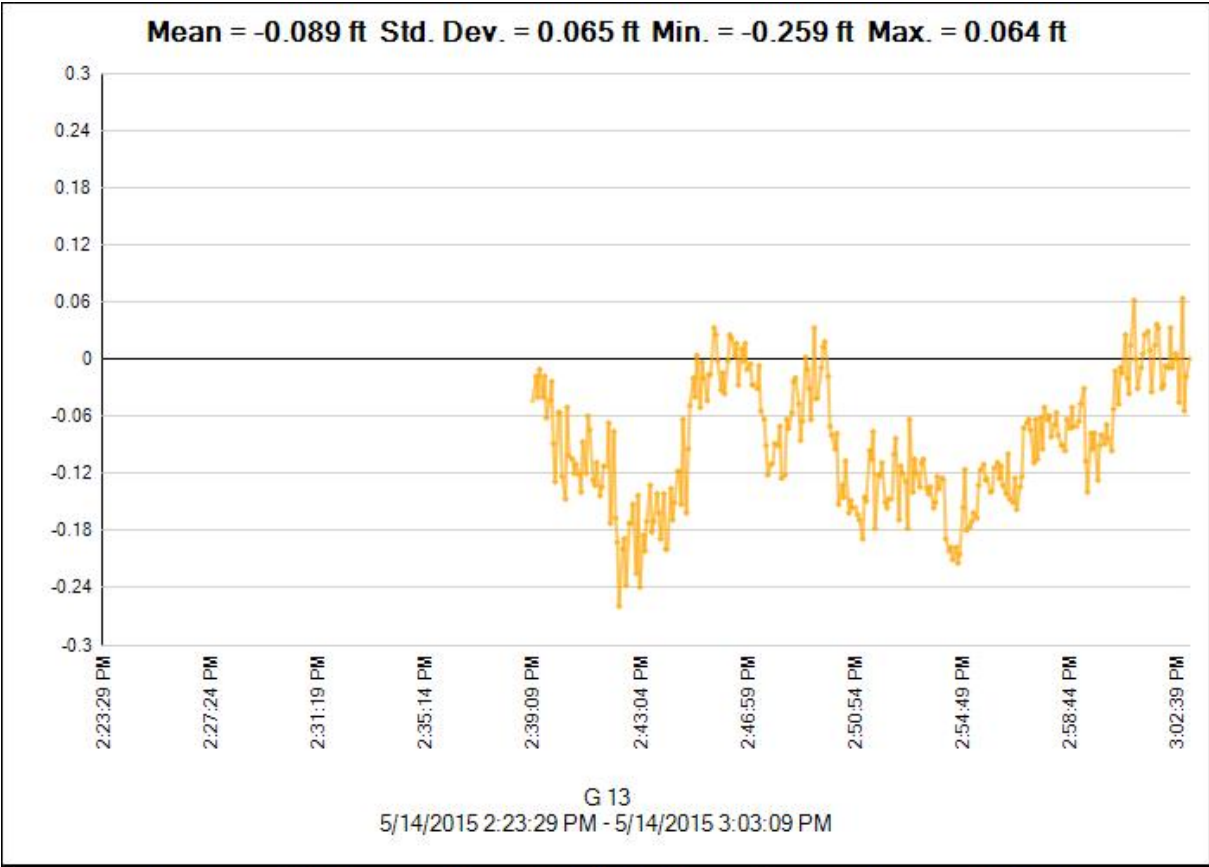


# Residuals

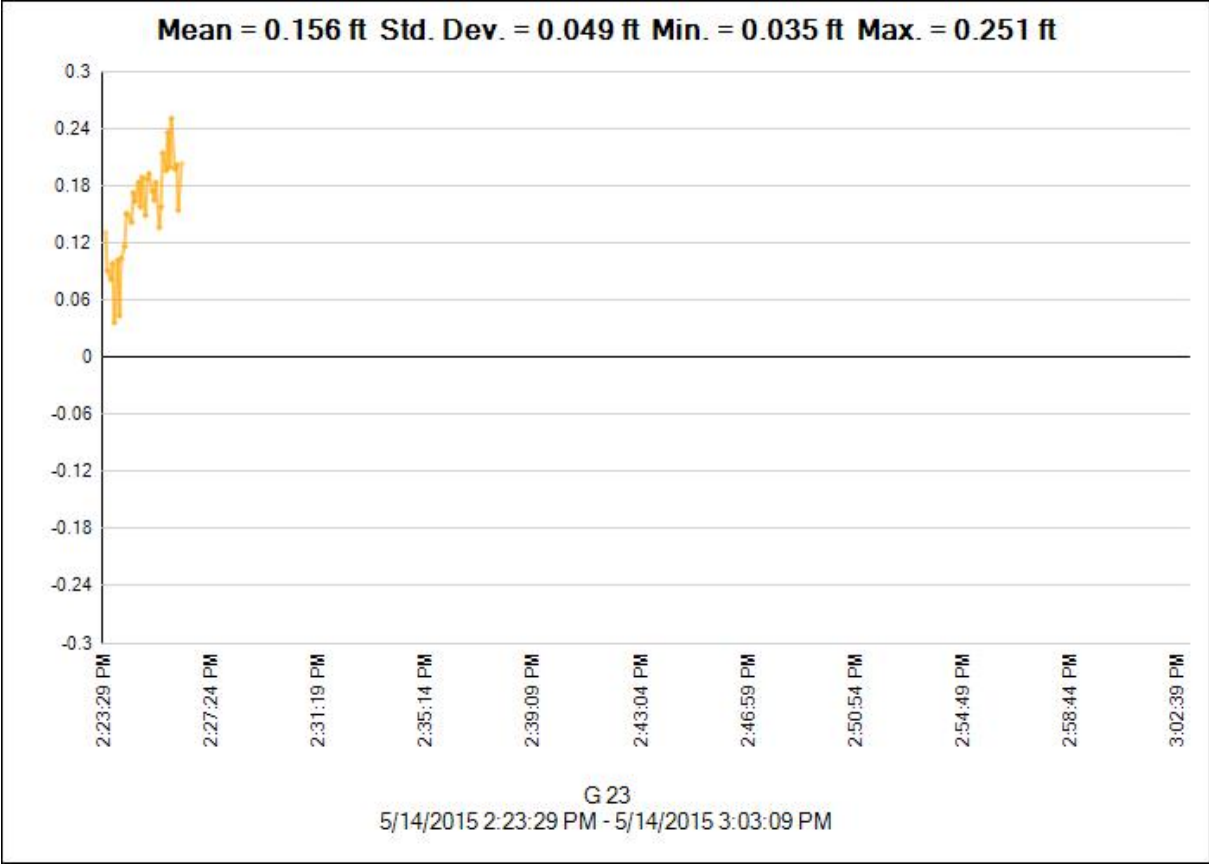
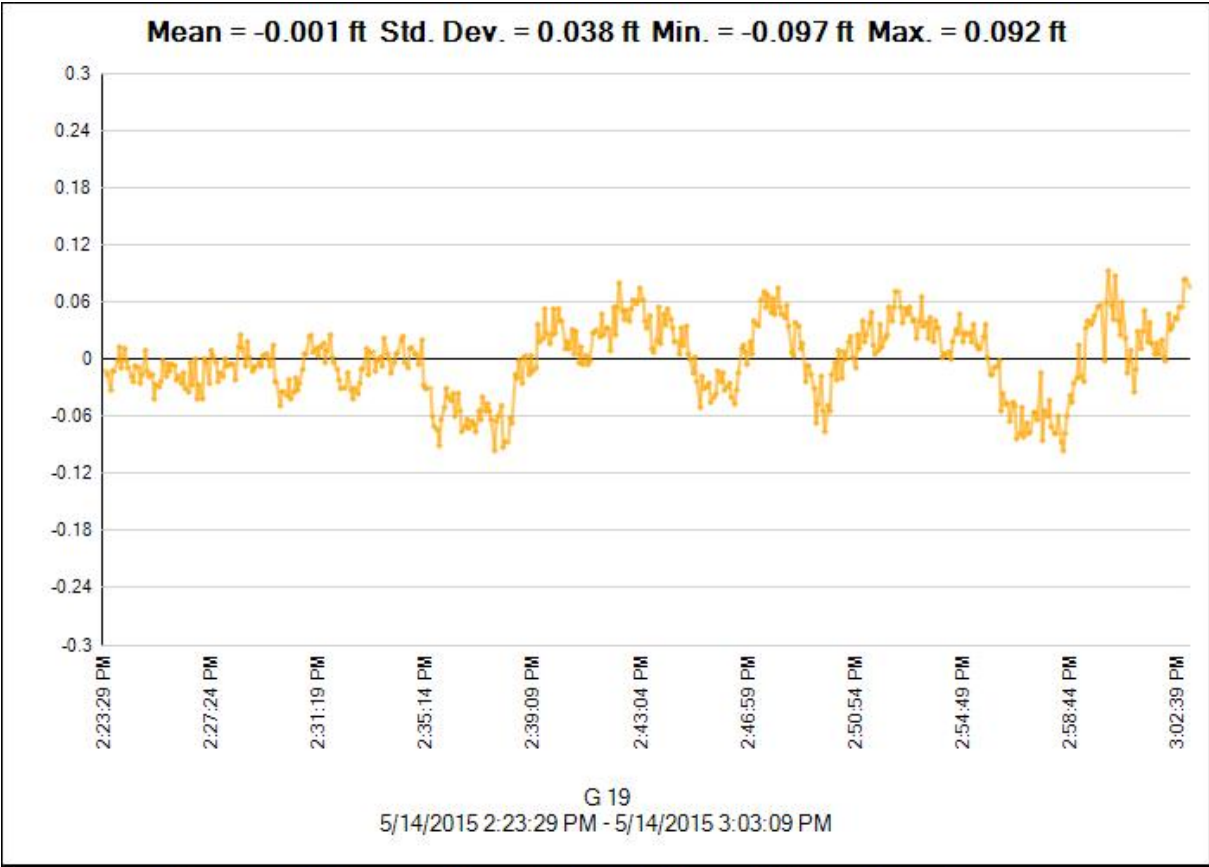


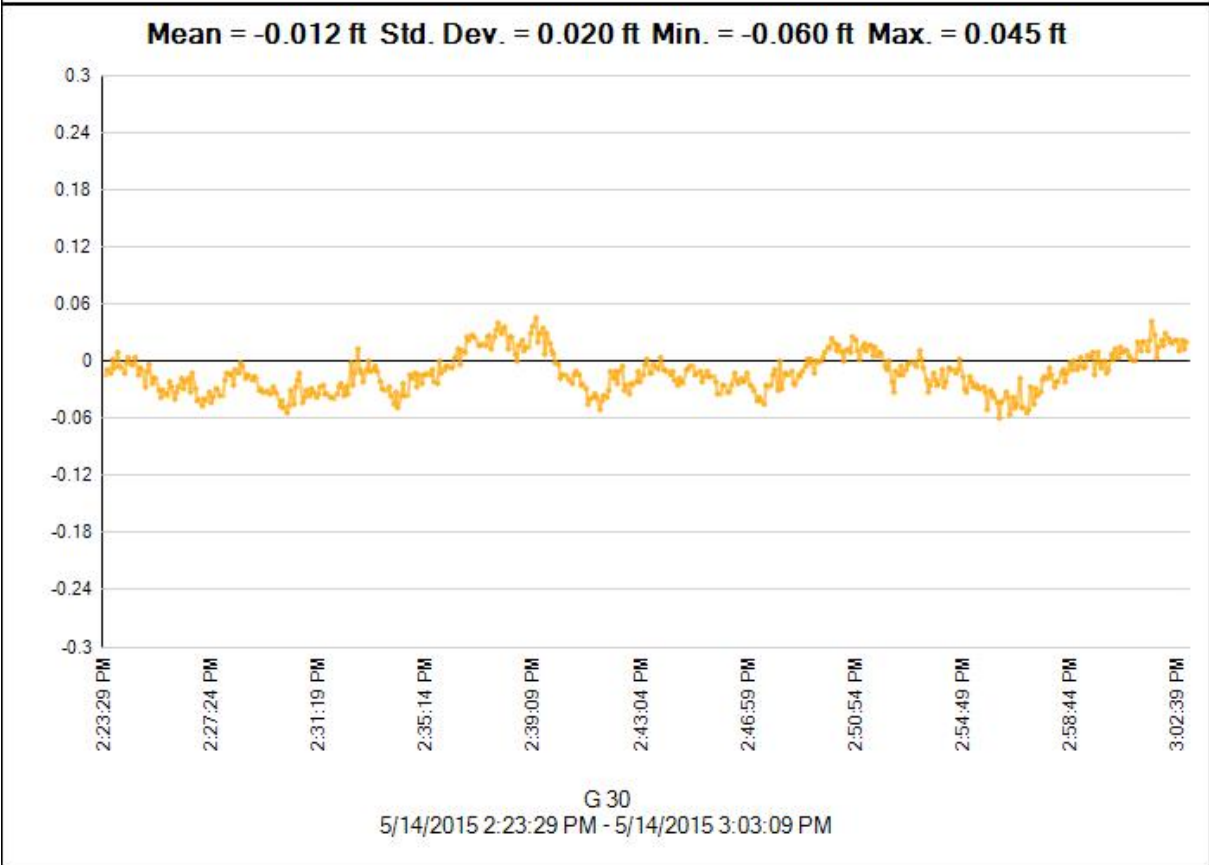
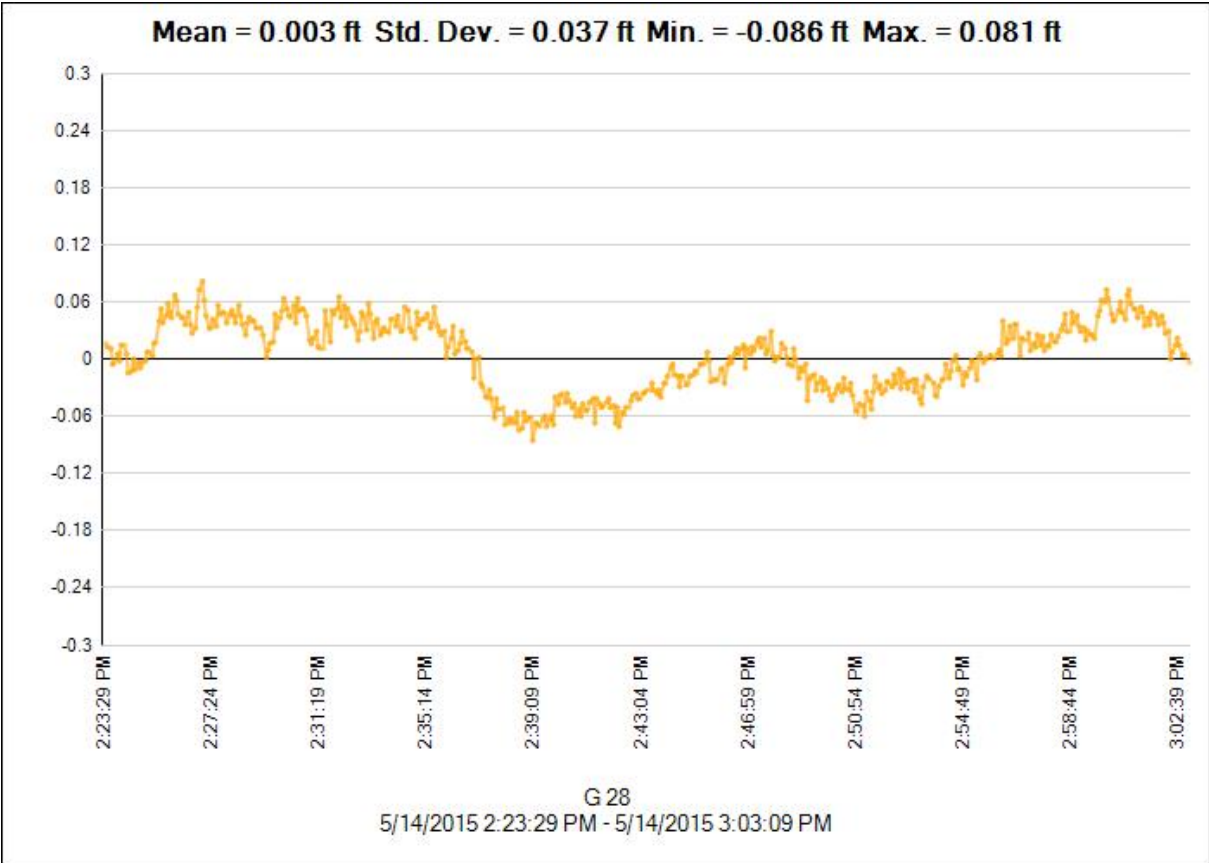














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**Processing style**

Elevation mask: 13.0 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

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**AH8499 - PAG116 (3:51:14 PM-4:35:34 PM) (S17)**

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Baseline observation: AH8499 --- PAG116 (B17)  
Processed: 5/29/2015 1:11:05 PM  
Solution type: Fixed  
Frequency used: Dual Frequency (L1, L2)  
Horizontal precision: 0.043 ft  
Vertical precision: 0.076 ft  
RMS: 0.007 ft  
Maximum PDOP: 2.718  
Ephemeris used: Broadcast  
Antenna model: NGS Absolute  
Processing start time: 5/14/2015 3:53:59 PM (Local: UTC-6hr)  
Processing stop time: 5/14/2015 4:34:49 PM (Local: UTC-6hr)  
Processing duration: 00:40:50  
Processing interval: 5 seconds

### Vector Components (Mark to Mark)

From: AH8499					
Grid		Local		Global	
Easting	992153.874 ft	Latitude	N32°13'38.95427"	Latitude	N32°13'38.95426"
Northing	447775.098 ft	Longitude	W110°58'18.73290"	Longitude	W110°58'18.73290"
Elevation	2365.888 ft	Height	2269.858 ft	Height	2269.858 ft

To: PAG116					
Grid		Local		Global	
Easting	940413.890 ft	Latitude	N32°33'49.99629"	Latitude	N32°33'49.99628"
Northing	569750.298 ft	Longitude	W111°08'10.67681"	Longitude	W111°08'10.67681"
Elevation	2673.553 ft	Height	2578.594 ft	Height	2578.593 ft

Vector					
$\Delta$ Easting	-51739.984 ft	NS Fwd Azimuth	337°31'13"	$\Delta$ X	-23906.603 ft
$\Delta$ Northing	121975.200 ft	Ellipsoid Dist.	132497.647 ft	$\Delta$ Y	79194.605 ft
$\Delta$ Elevation	307.665 ft	$\Delta$ Height	308.736 ft	$\Delta$ Z	103520.201 ft

### Standard Errors

Vector errors:					
$\sigma$ $\Delta$ Easting	0.012 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma$ $\Delta$ X	0.014 ft
$\sigma$ $\Delta$ Northing	0.017 ft	$\sigma$ Ellipsoid Dist.	0.017 ft	$\sigma$ $\Delta$ Y	0.030 ft
$\sigma$ $\Delta$ Elevation	0.039 ft	$\sigma$ $\Delta$ Height	0.039 ft	$\sigma$ $\Delta$ Z	0.029 ft

### Aposteriori Covariance Matrix (International foot<sup>2</sup>)

	X	Y	Z
X	0.0000194286		
Y	0.0000207917	0.0000845151	
Z	-0.0000169303	-0.0000550798	0.0000762011

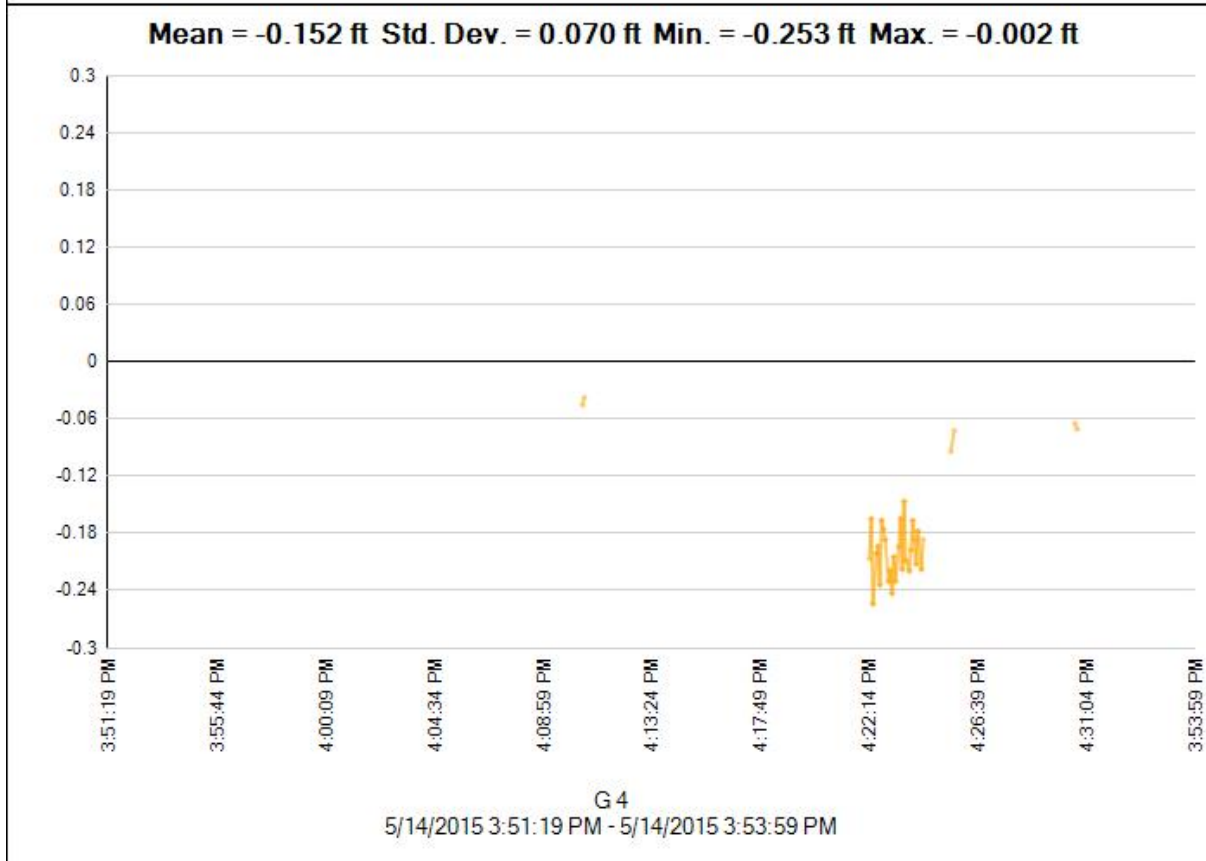
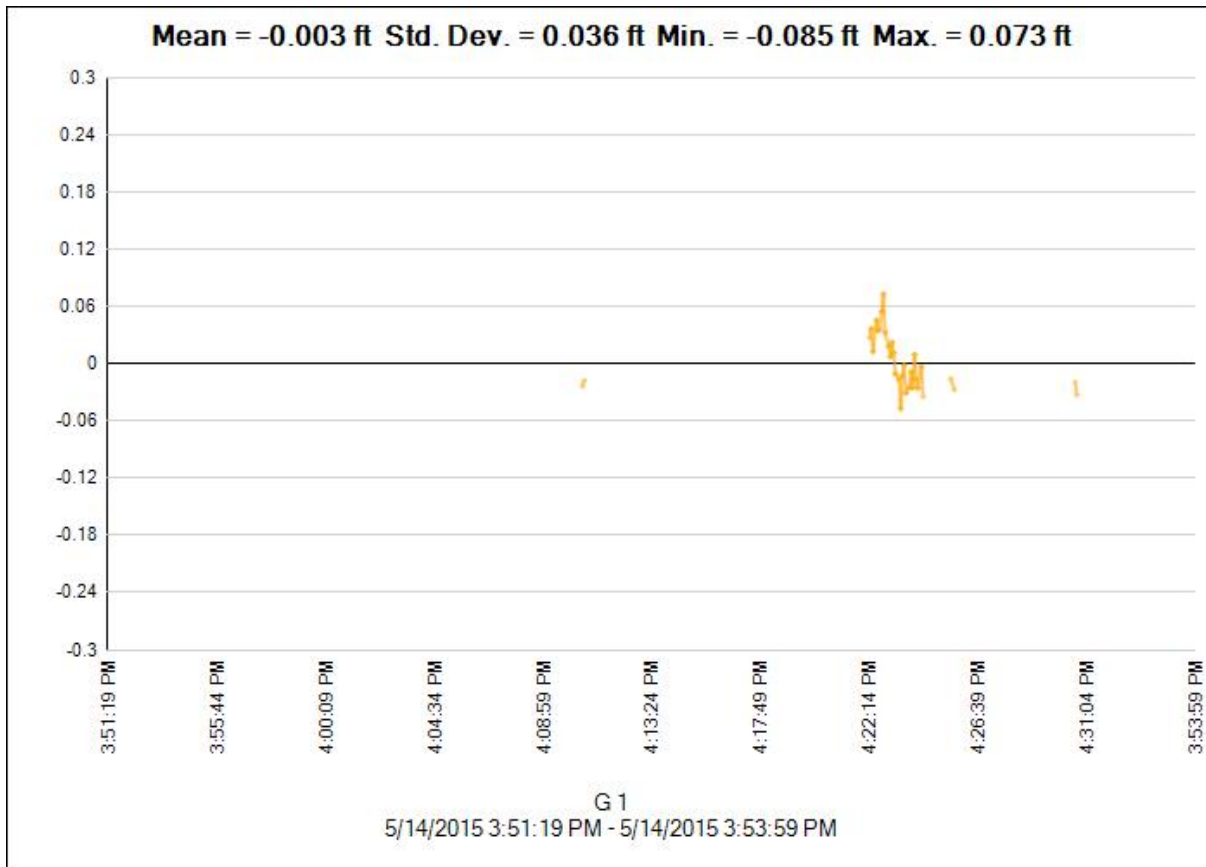
## Occupations

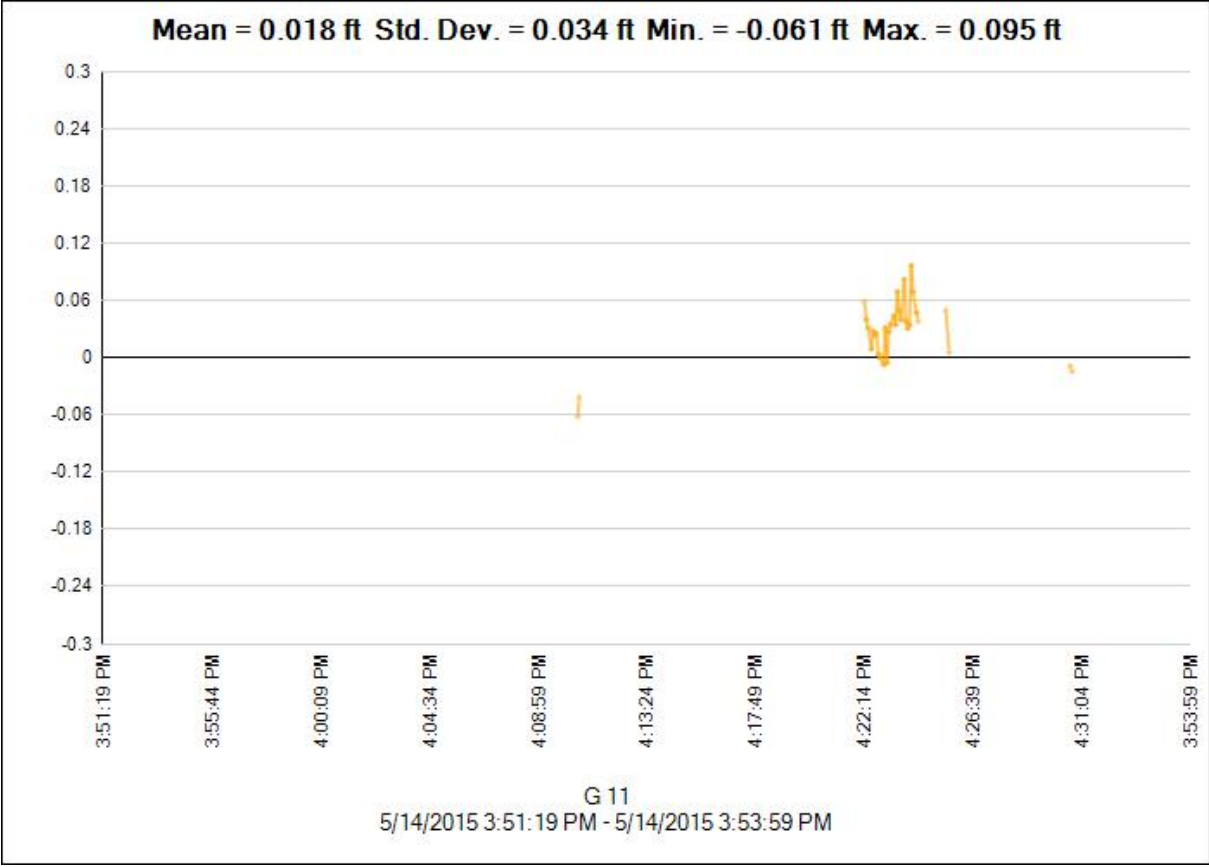
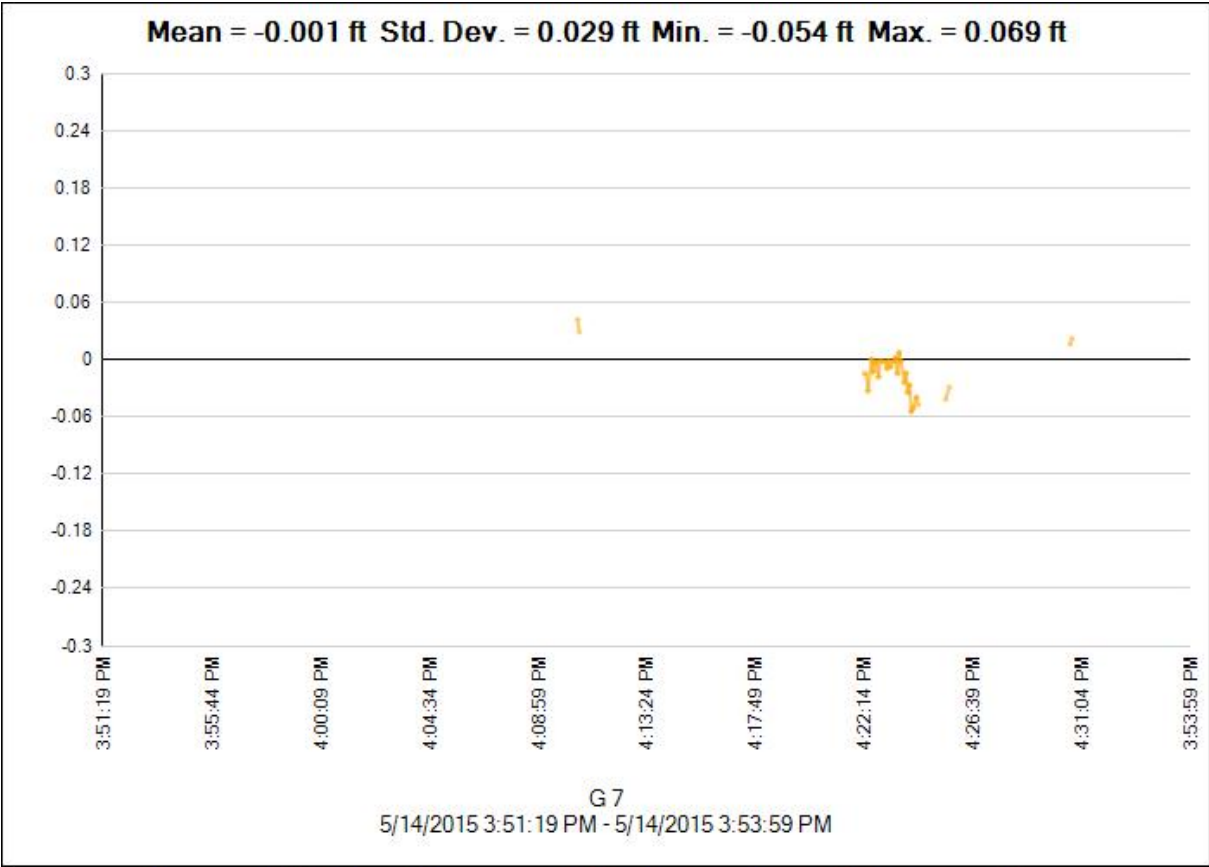
	From	To
Point ID:	AH8499	PAG116
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851340.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191342 (resampled).15o
Receiver type:	5700	Geo Explorer 3
Receiver serial number:	0220271185	
Antenna type:	Zephyr	702 Rev 3.00
Antenna serial number:	00000000	-----
Antenna height (measured):	5.282 ft	5.282 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

# Tracking Summary

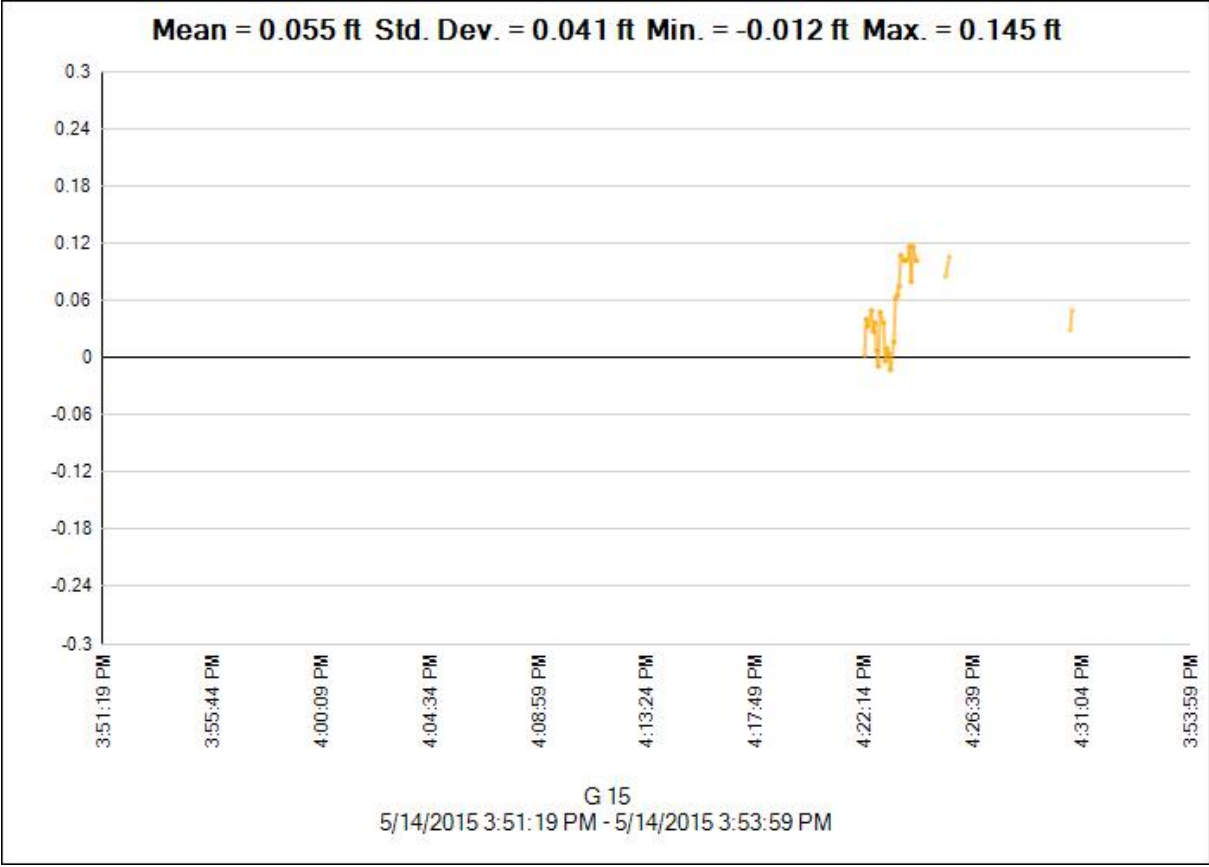
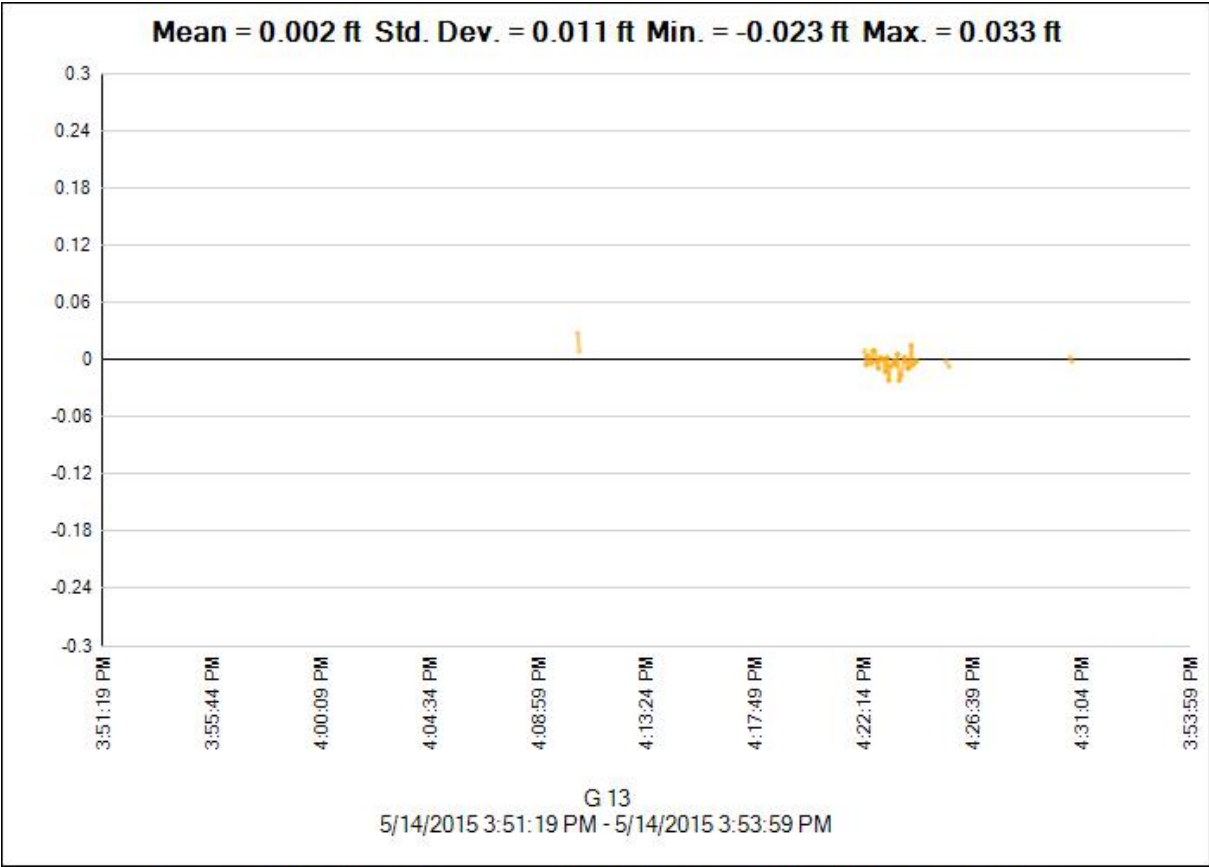


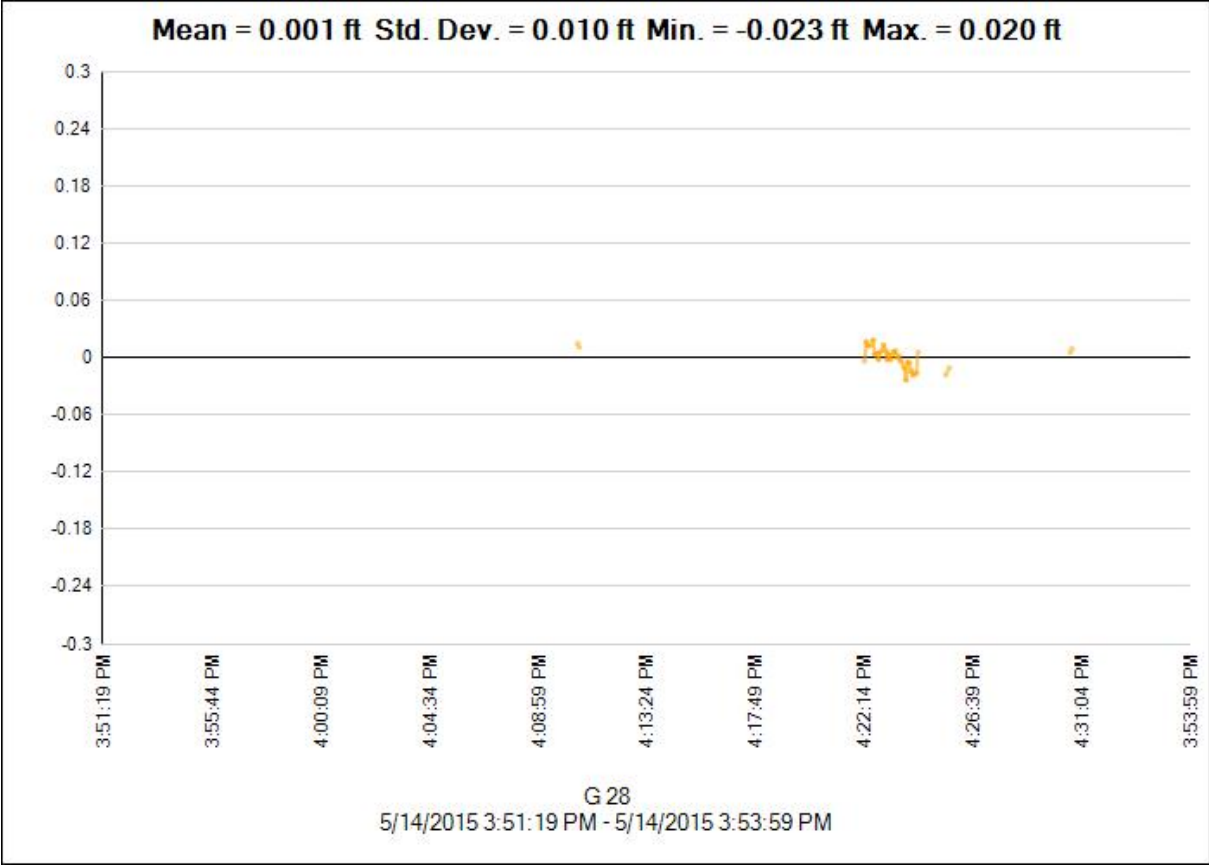
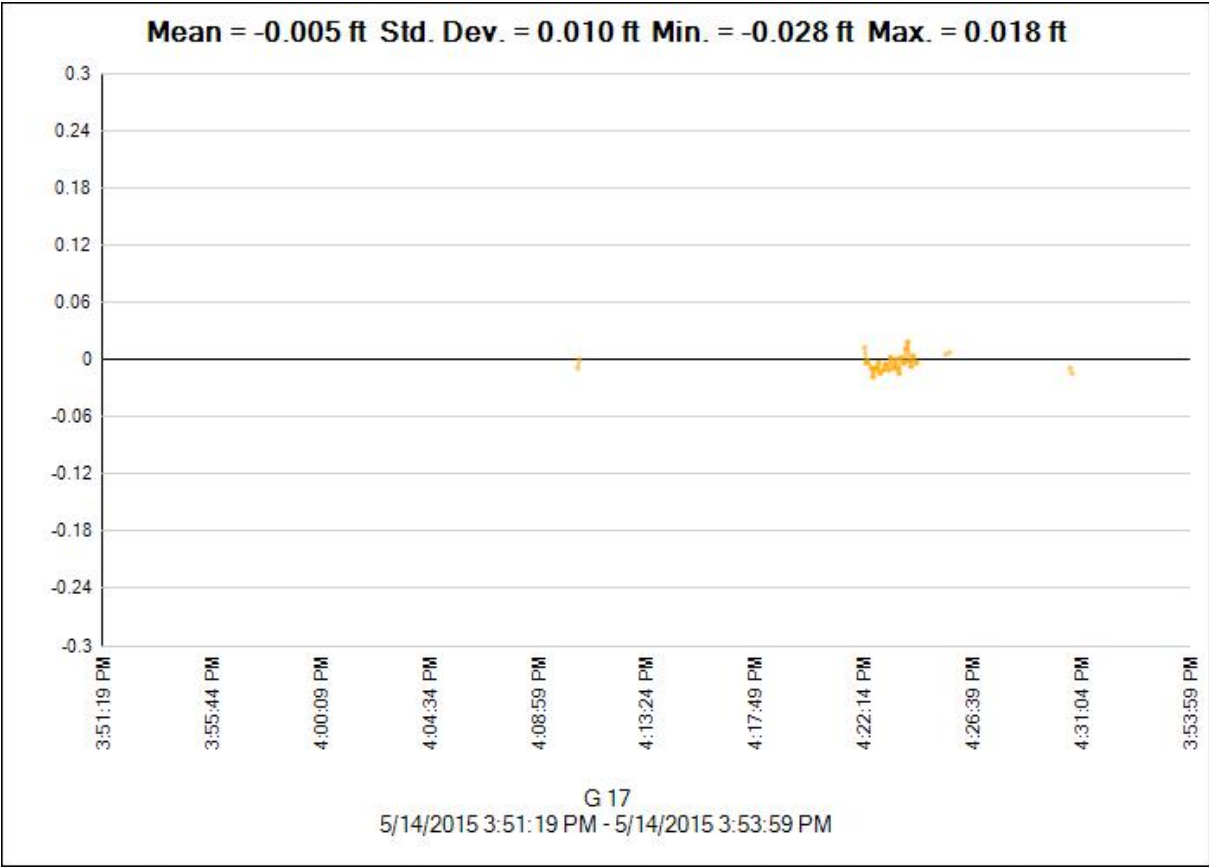
# Residuals

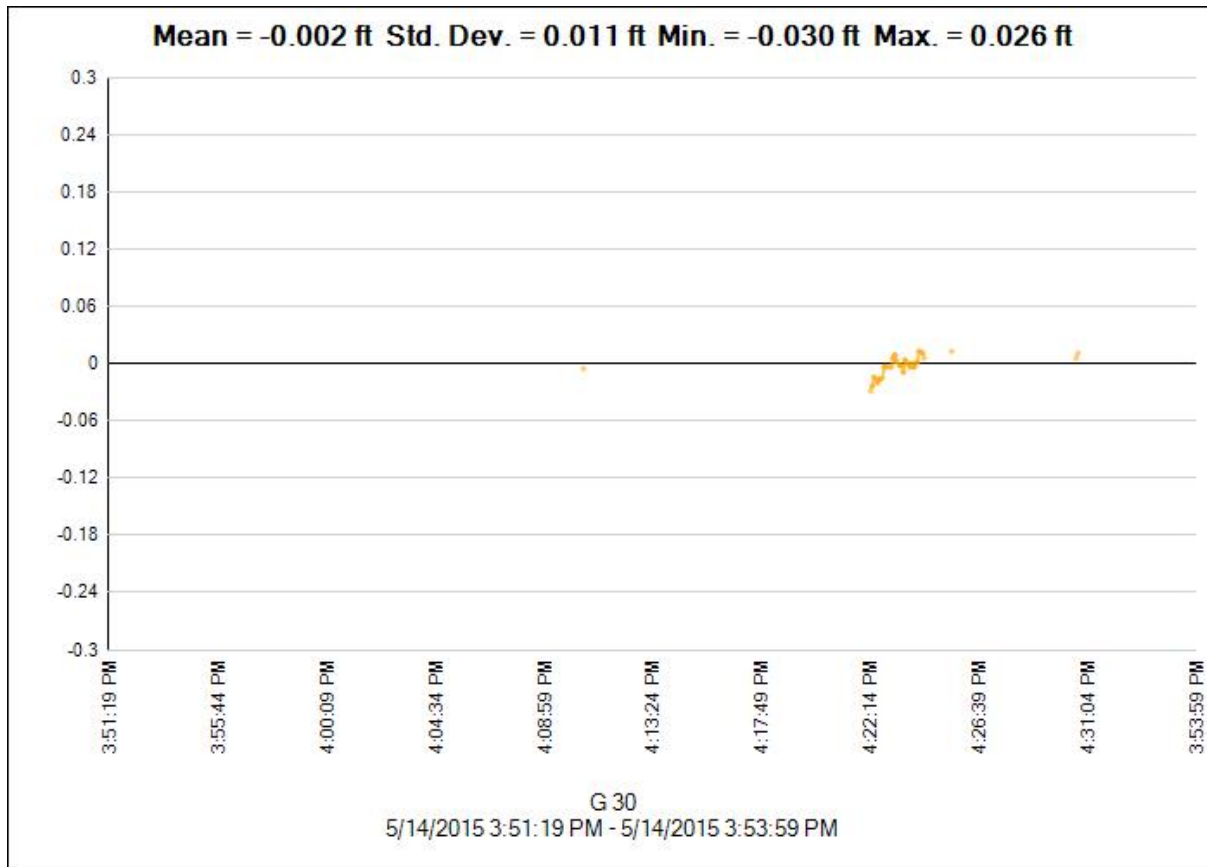












**Processing style**

Elevation mask: 13.0 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

**AH8499 - PAG118 (5:45:09 PM-6:34:34 PM) (S18)**

Baseline observation: AH8499 --- PAG118 (B18)  
 Processed: 5/29/2015 1:11:07 PM  
 Solution type: Fixed  
 Frequency used: Dual Frequency (L1, L2)  
 Horizontal precision: 0.023 ft  
 Vertical precision: 0.042 ft  
 RMS: 0.007 ft  
 Maximum PDOP: 3.343  
 Ephemeris used: Broadcast  
 Antenna model: NGS Absolute  
 Processing start time: 5/14/2015 5:45:09 PM (Local: UTC-6hr)  
 Processing stop time: 5/14/2015 6:34:34 PM (Local: UTC-6hr)  
 Processing duration: 00:49:25  
 Processing interval: 5 seconds

**Vector Components (Mark to Mark)**

From:		AH8499			
Grid		Local		Global	
Easting	992153.874 ft	Latitude	N32°13'38.95427"	Latitude	N32°13'38.95426"
Northing	447775.098 ft	Longitude	W110°58'18.73290"	Longitude	W110°58'18.73290"
Elevation	2365.888 ft	Height	2269.858 ft	Height	2269.858 ft

To:		PAG118			
Grid		Local		Global	
Easting	1008911.267 ft	Latitude	N32°30'55.12481"	Latitude	N32°30'55.12481"
Northing	552649.735 ft	Longitude	W110°54'52.23398"	Longitude	W110°54'52.23398"
Elevation	3224.675 ft	Height	3131.236 ft	Height	3131.236 ft

Vector					
ΔEasting	16757.393 ft	NS Fwd Azimuth	9°35'03"	ΔX	36325.770 ft
ΔNorthing	104874.637 ft	Ellipsoid Dist.	106204.621 ft	ΔY	45358.195 ft
ΔElevation	858.787 ft	ΔHeight	861.378 ft	ΔZ	88916.444 ft

**Standard Errors**

Vector errors:					
$\sigma \Delta$ Easting	0.009 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.013 ft
$\sigma \Delta$ Northing	0.007 ft	$\sigma$ Ellipsoid Dist.	0.008 ft	$\sigma \Delta$ Y	0.018 ft
$\sigma \Delta$ Elevation	0.022 ft	$\sigma \Delta$ Height	0.022 ft	$\sigma \Delta$ Z	0.010 ft

**Aposteriori Covariance Matrix (International foot<sup>2</sup>)**

	X	Y	Z
X	0.0000156204		
Y	0.0000139695	0.0000308552	
Z	-0.0000075322	-0.0000125600	0.0000102174

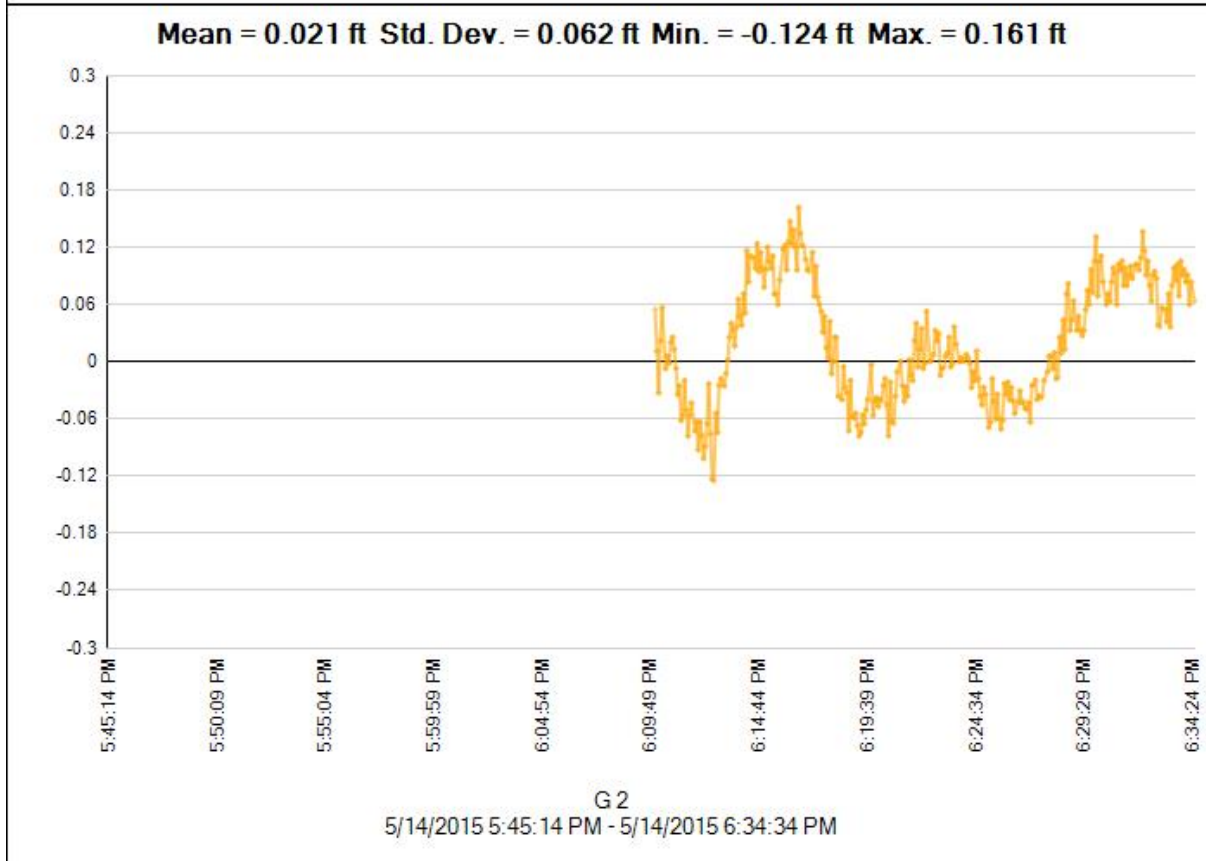
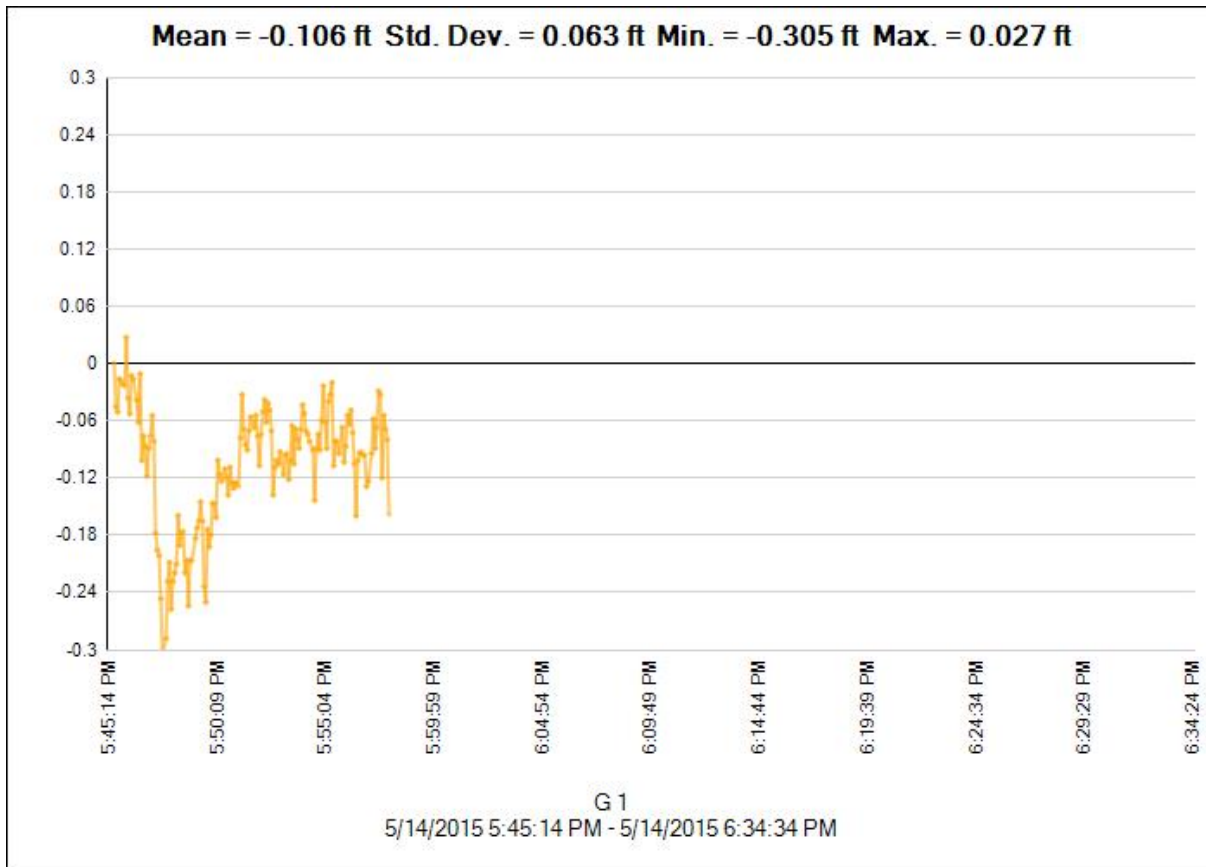
**Occupations**

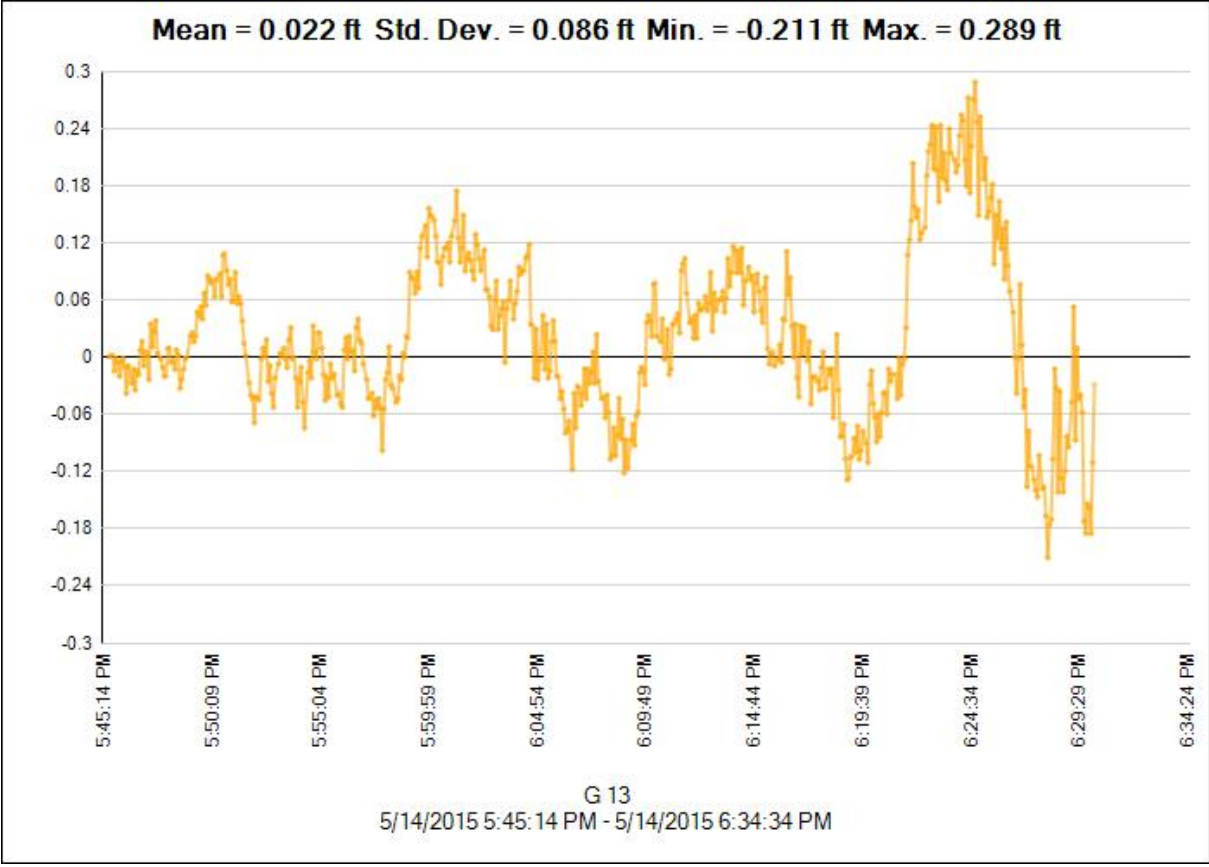
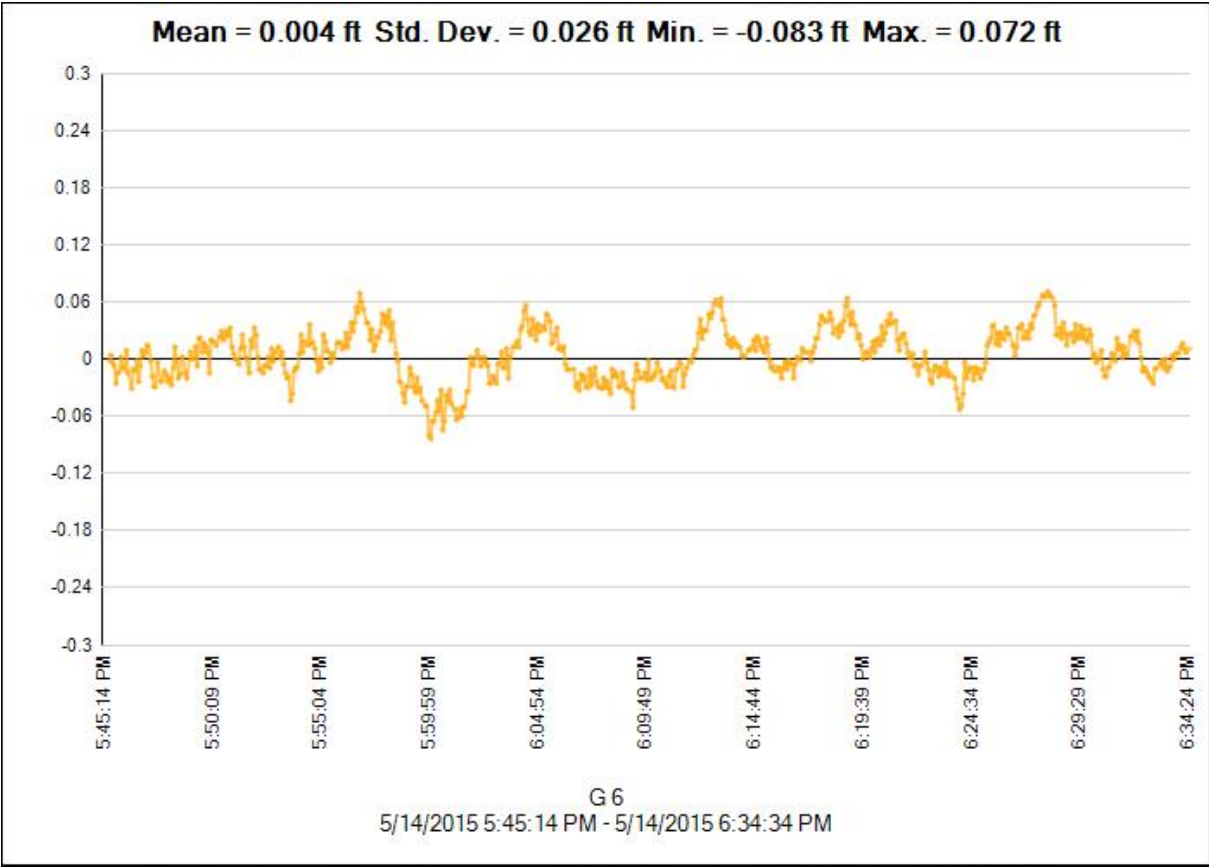
	From	To
Point ID:	AH8499	PAG118
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851340.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191343 (resampled).15o
Receiver type:	5700	Geo Explorer 3
Receiver serial number:	0220271185	
Antenna type:	Zephyr	702 Rev 3.00
Antenna serial number:	00000000	-----
Antenna height (measured):	5.282 ft	5.456 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

# Tracking Summary

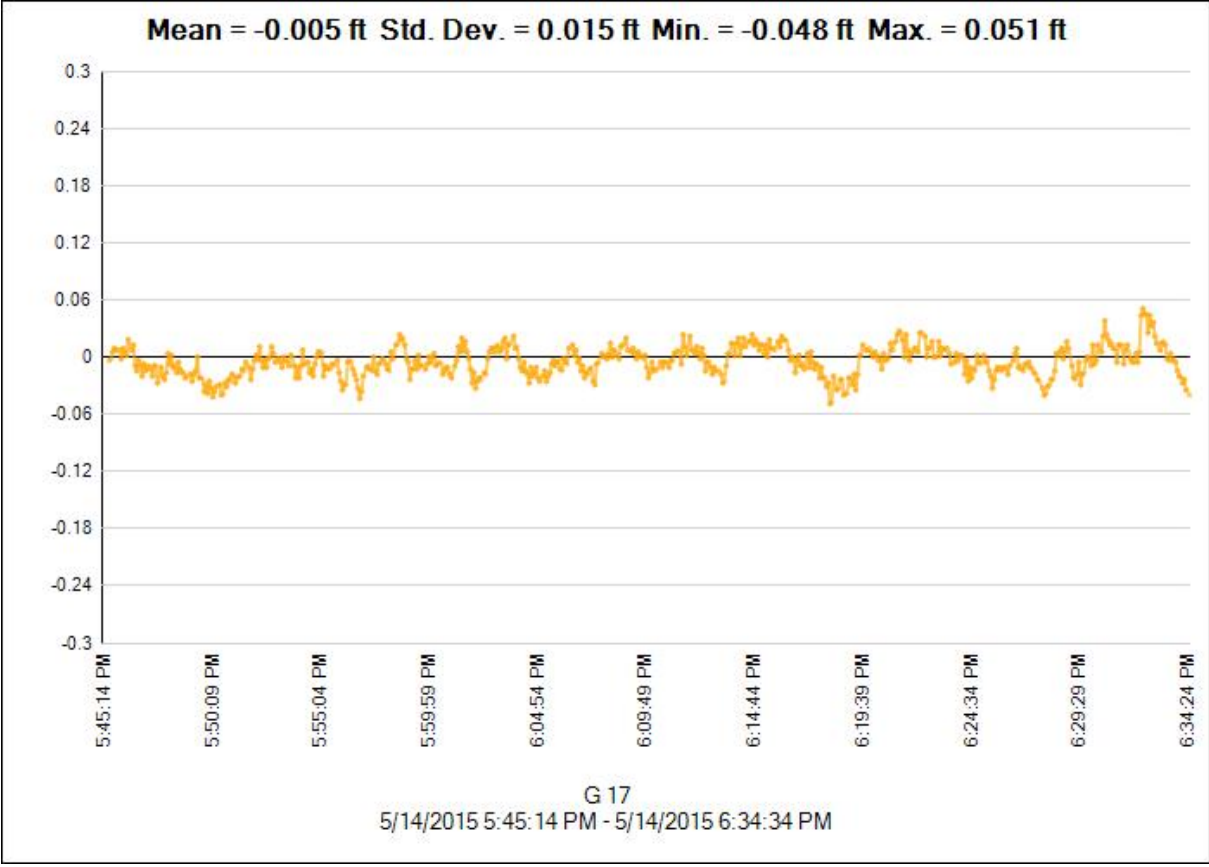
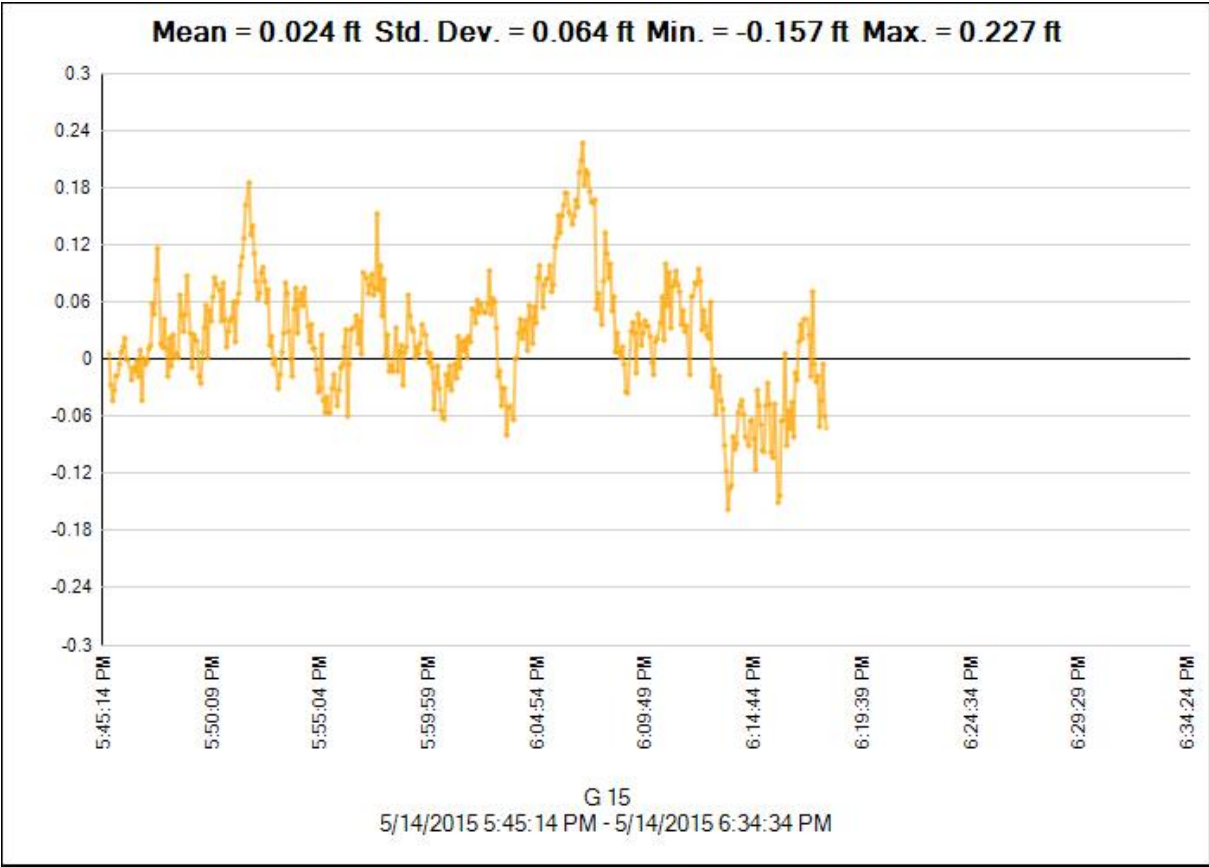
SV	5/14/2015 5:45:09 PM	Duration: 00:49:25	Major interval: 00:10:00	5/14/2015 6:34:34 PM
G 1	L1 L2			
G 2	L1 L2			
G 3	L1 L2			
G 6	L1 L2			
G 11	L1 L2			
G 13	L1 L2			
G 15	L1 L2			
G 17	L1 L2			
G 24	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

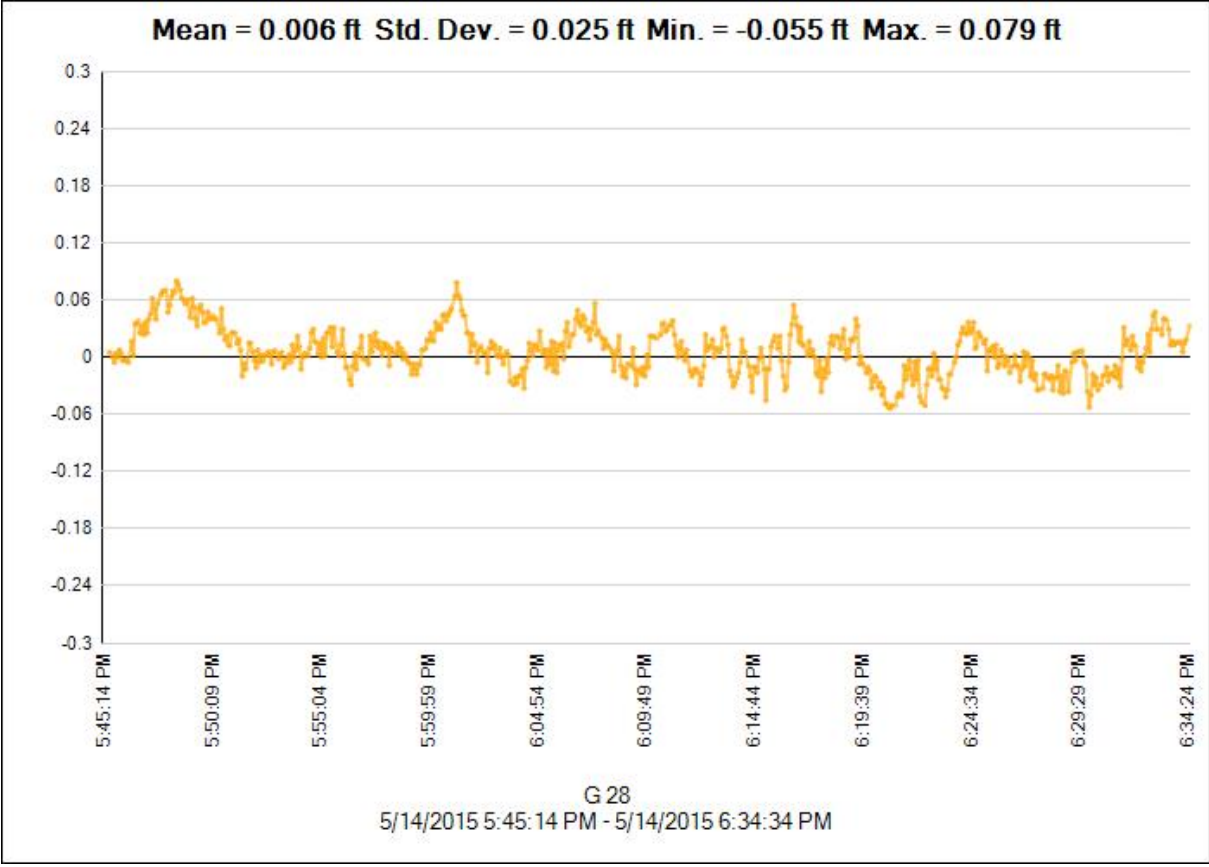
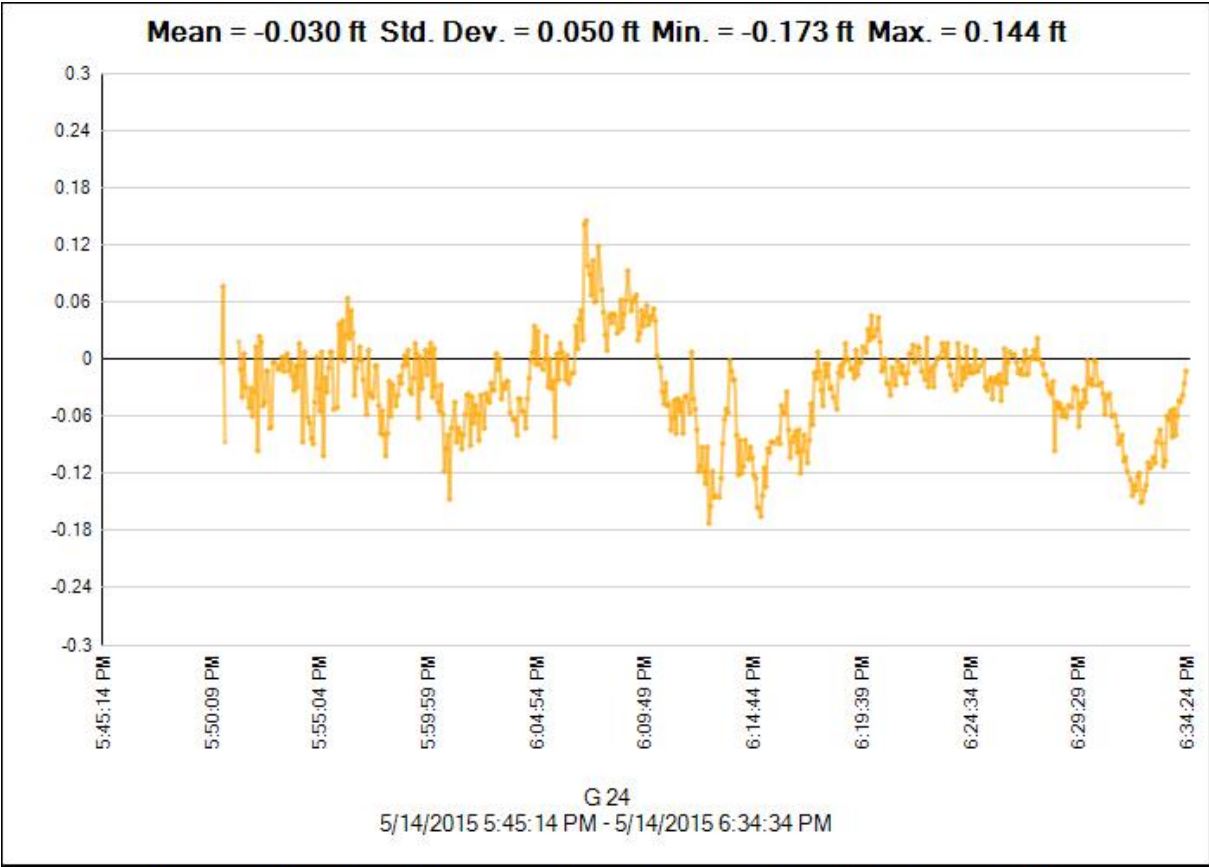
# Residuals

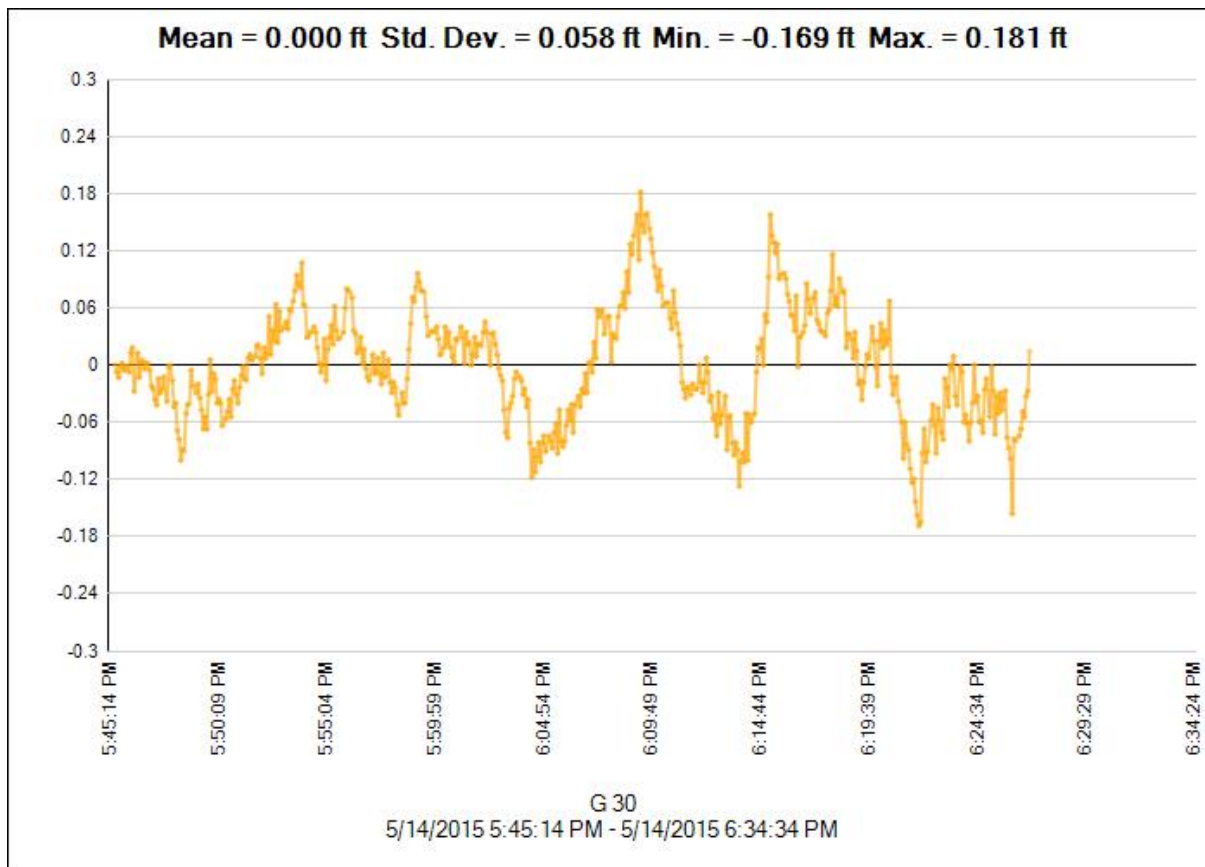














### Processing style

Elevation mask: 13.0 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

**AH8499 - PAG102 (12:29:04 PM-1:11:29 PM) (S19)**

Baseline observation: AH8499 --- PAG102 (B19)  
 Processed: 5/29/2015 1:14:43 PM  
 Solution type: Fixed  
 Frequency used: Dual Frequency (L1, L2)  
 Horizontal precision: 0.025 ft  
 Vertical precision: 0.033 ft  
 RMS: 0.005 ft  
 Maximum PDOP: 2.365  
 Ephemeris used: Broadcast  
 Antenna model: NGS Absolute  
 Processing start time: 5/15/2015 12:30:24 PM (Local: UTC-6hr)  
 Processing stop time: 5/15/2015 1:09:29 PM (Local: UTC-6hr)  
 Processing duration: 00:39:05  
 Processing interval: 5 seconds

**Vector Components (Mark to Mark)**

From: AH8499					
Grid		Local		Global	
Easting	992150.996 ft	Latitude	N32°13'38.95375"	Latitude	N32°13'38.95375"
Northing	447775.021 ft	Longitude	W110°58'18.76641"	Longitude	W110°58'18.76641"
Elevation	2367.959 ft	Height	2271.928 ft	Height	2271.928 ft

To: PAG102					
Grid		Local		Global	
Easting	1029020.253 ft	Latitude	N32°35'36.00158"	Latitude	N32°35'36.00158"
Northing	581233.878 ft	Longitude	W110°50'54.06650"	Longitude	W110°50'54.06650"
Elevation	3883.136 ft	Height	3790.570 ft	Height	3790.570 ft

Vector					
ΔEasting	36869.256 ft	NS Fwd Azimuth	15°56'59"	ΔX	60626.271 ft
ΔNorthing	133458.858 ft	Ellipsoid Dist.	138456.499 ft	ΔY	51846.251 ft
ΔElevation	1515.177 ft	ΔHeight	1518.641 ft	ΔZ	113200.853 ft

**Standard Errors**

Vector errors:					
$\sigma \Delta$ Easting	0.006 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.008 ft
$\sigma \Delta$ Northing	0.010 ft	$\sigma$ Ellipsoid Dist.	0.010 ft	$\sigma \Delta$ Y	0.013 ft
$\sigma \Delta$ Elevation	0.017 ft	$\sigma \Delta$ Height	0.017 ft	$\sigma \Delta$ Z	0.013 ft

**Aposteriori Covariance Matrix (International foot<sup>2</sup>)**

	X	Y	Z
X	0.0000062353		
Y	0.0000057038	0.0000164365	
Z	-0.0000019791	-0.0000088107	0.0000167613

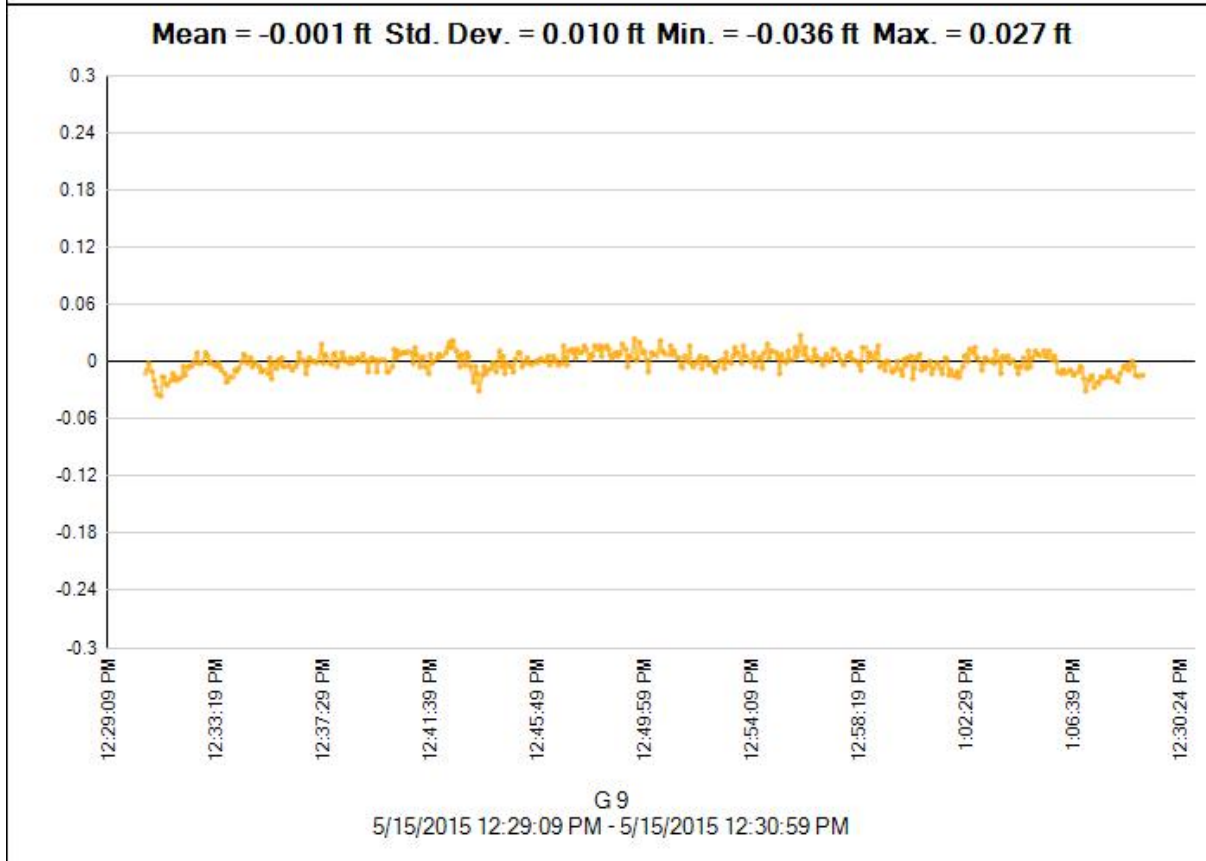
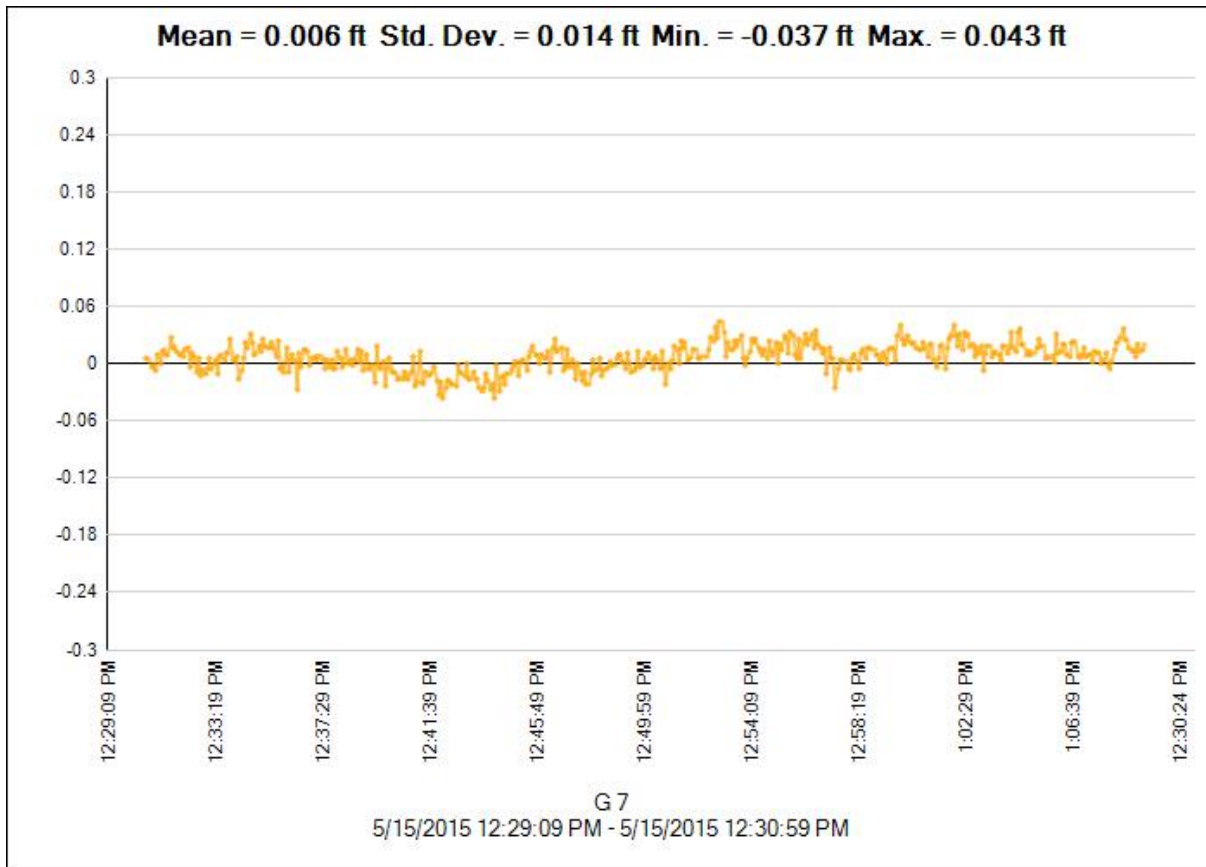
**Occupations**

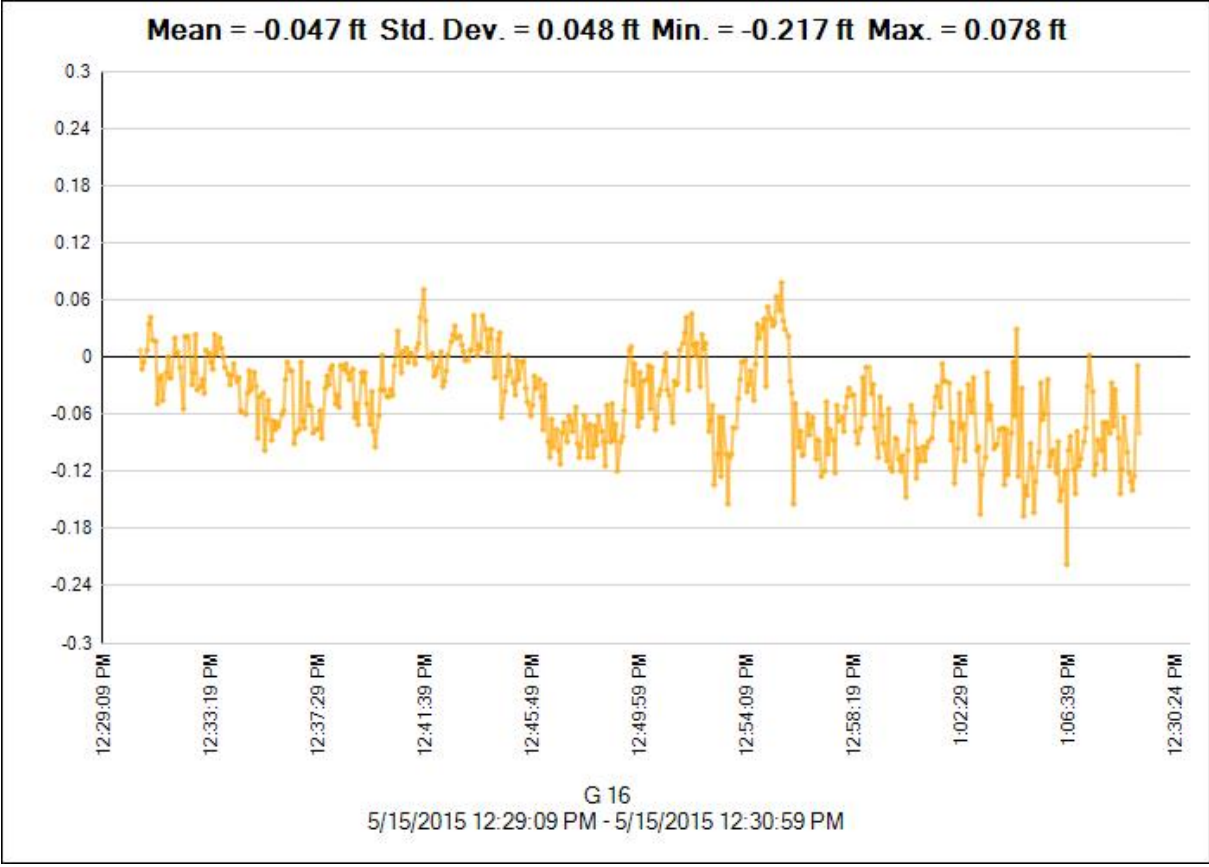
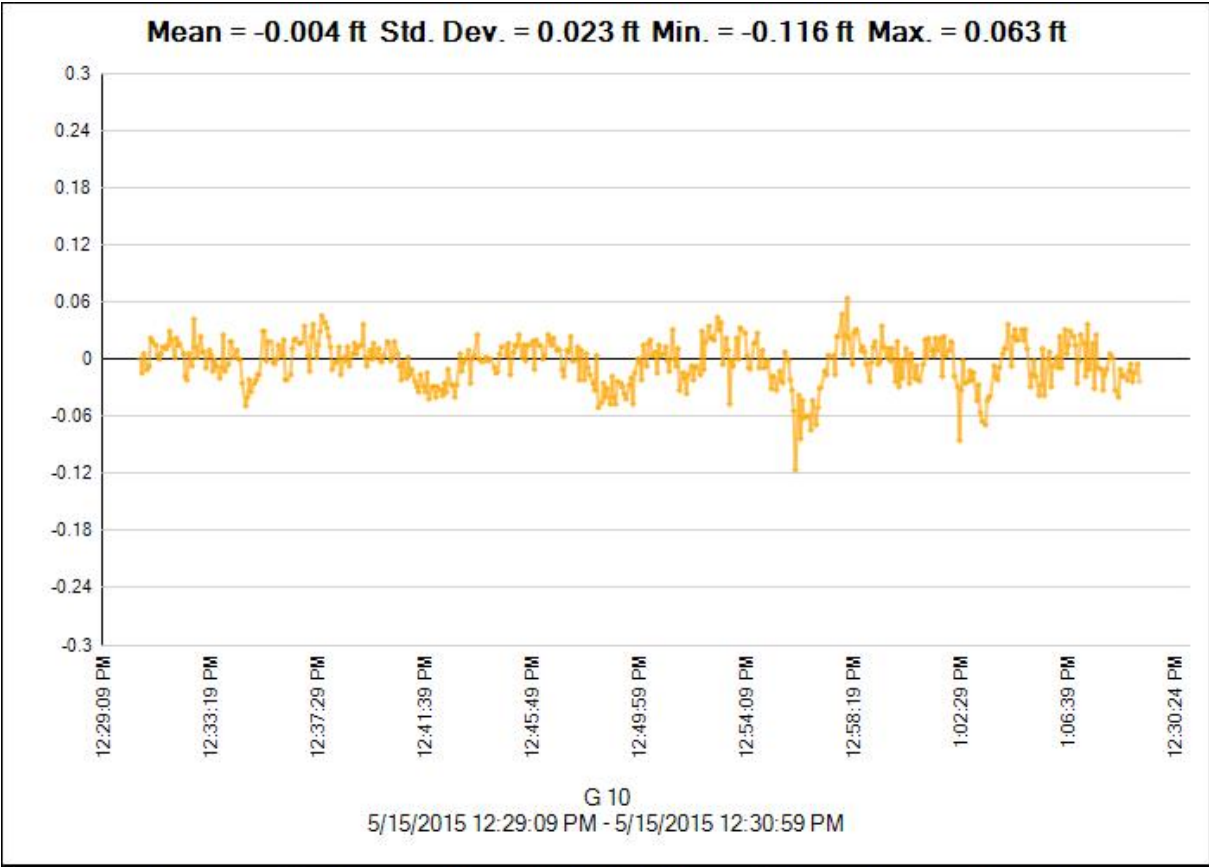
	From	To
Point ID:	AH8499	PAG102
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851350.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191350 (resampled).15o
Receiver type:	5700	Geo Explorer 3
Receiver serial number:	0220271185	
Antenna type:	Zephyr	702 Rev 3.00
Antenna serial number:	00000000	-----
Antenna height (measured):	5.679 ft	5.341 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

# Tracking Summary

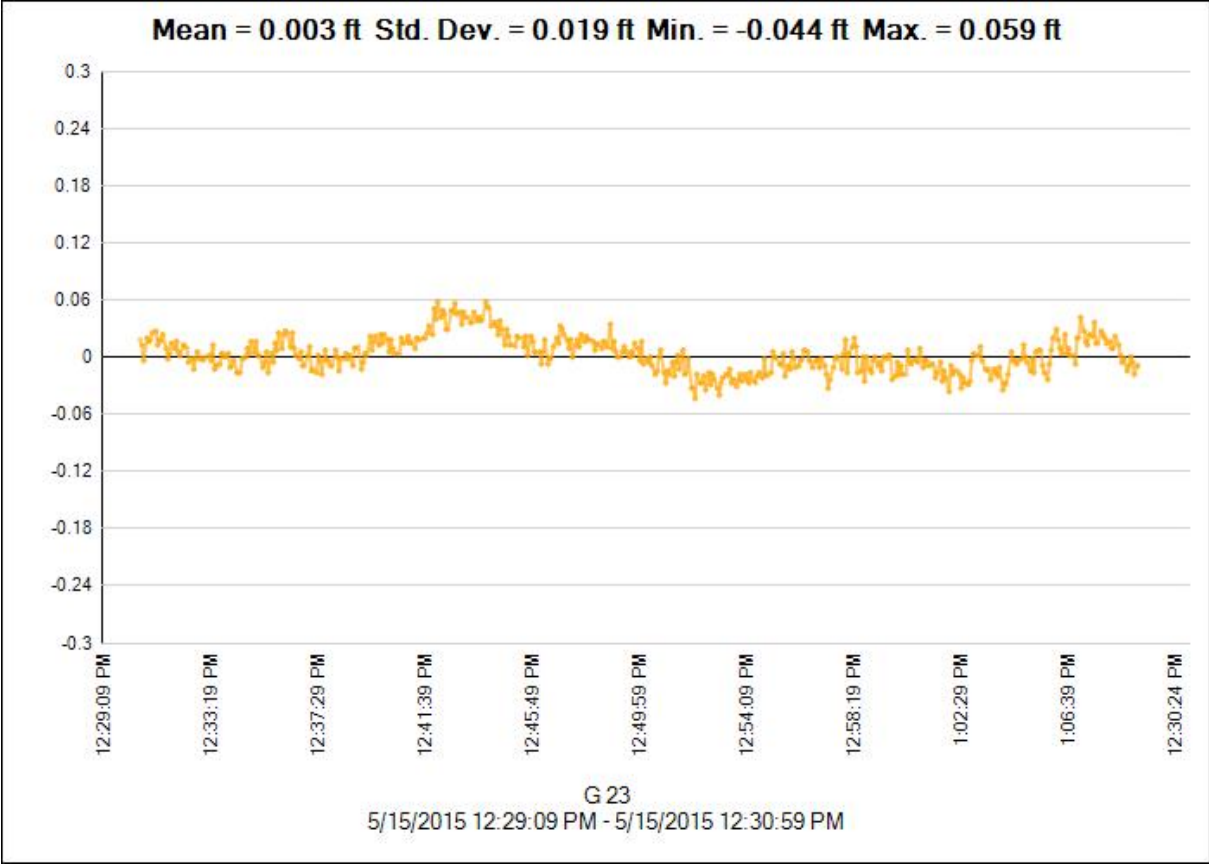
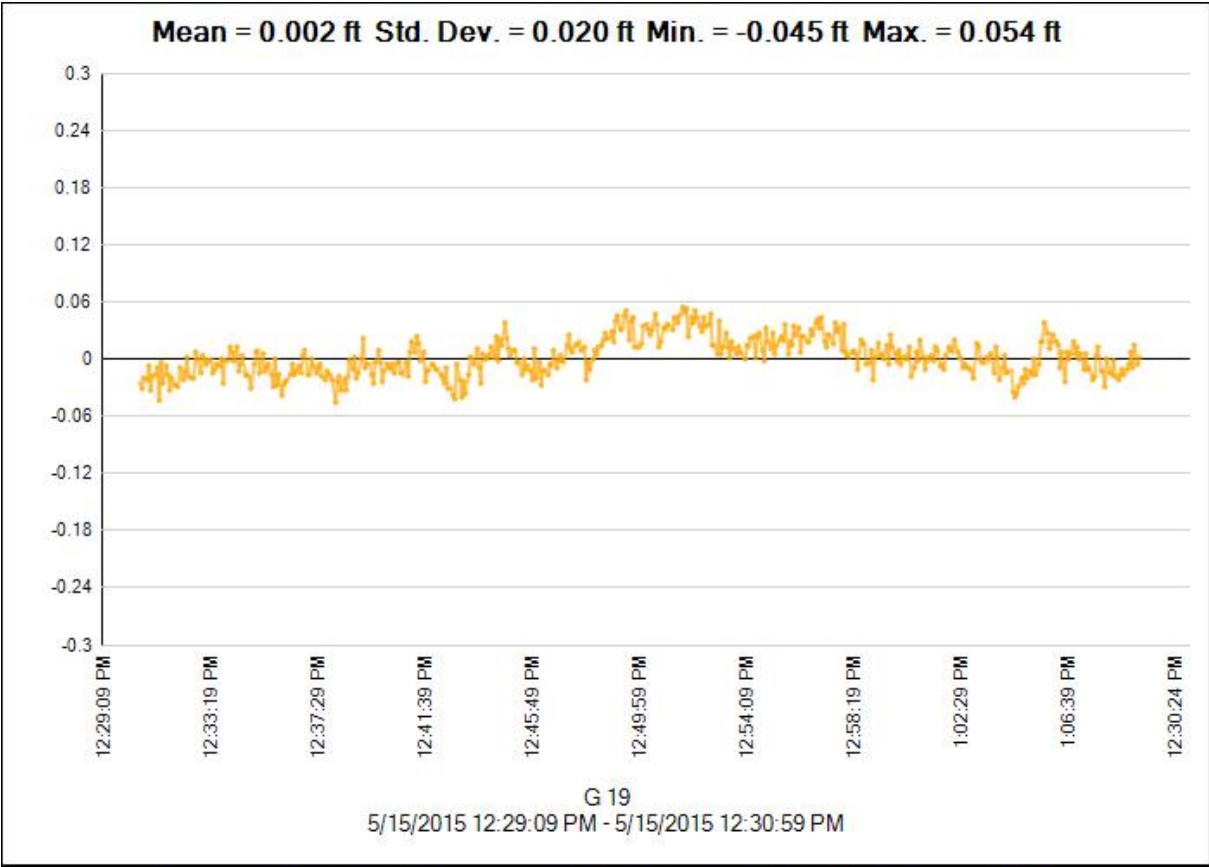
SV	5/15/2015 12:29:04 PM	Duration: 00:42:25	Major interval: 00:10:00	5/15/2015 1:11:29 PM
G 3	L1 L2			
G 5	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 11	L1 L2			
G 16	L1 L2			
G 19	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

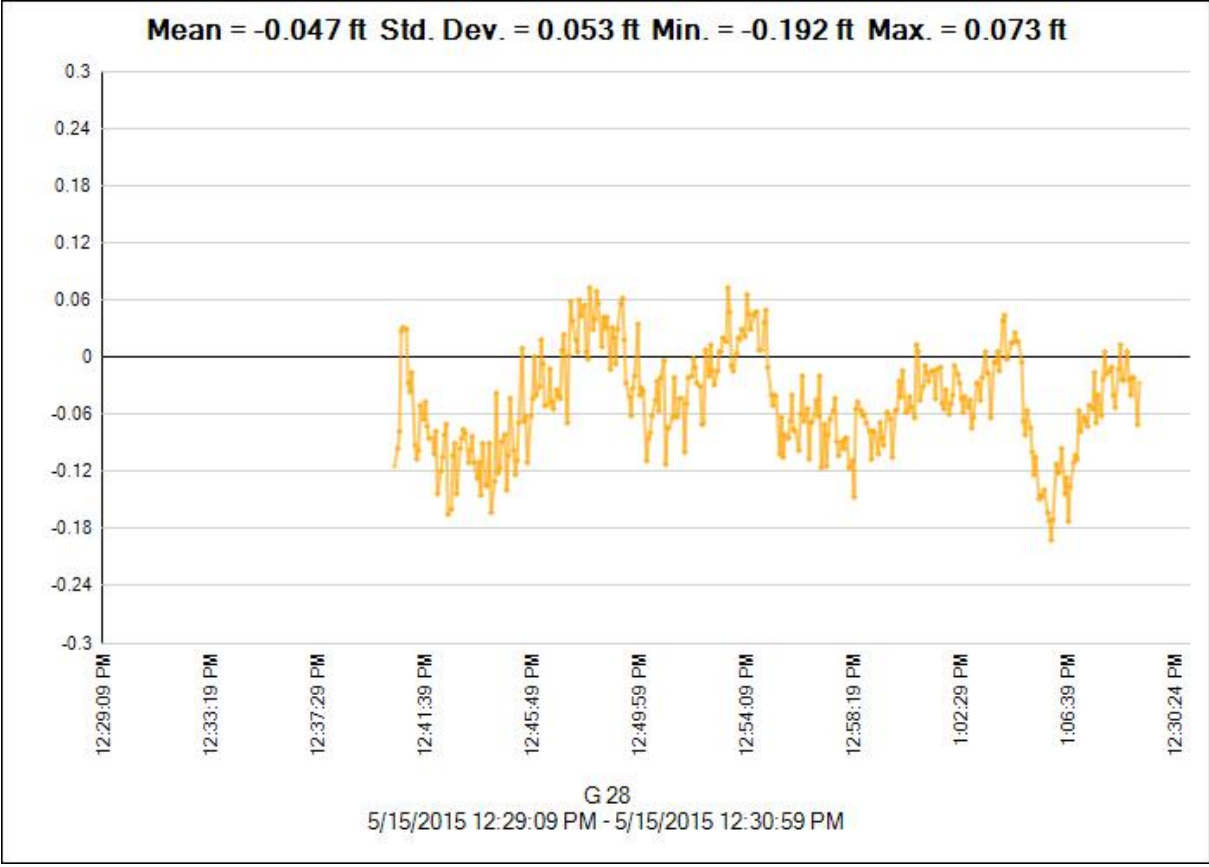
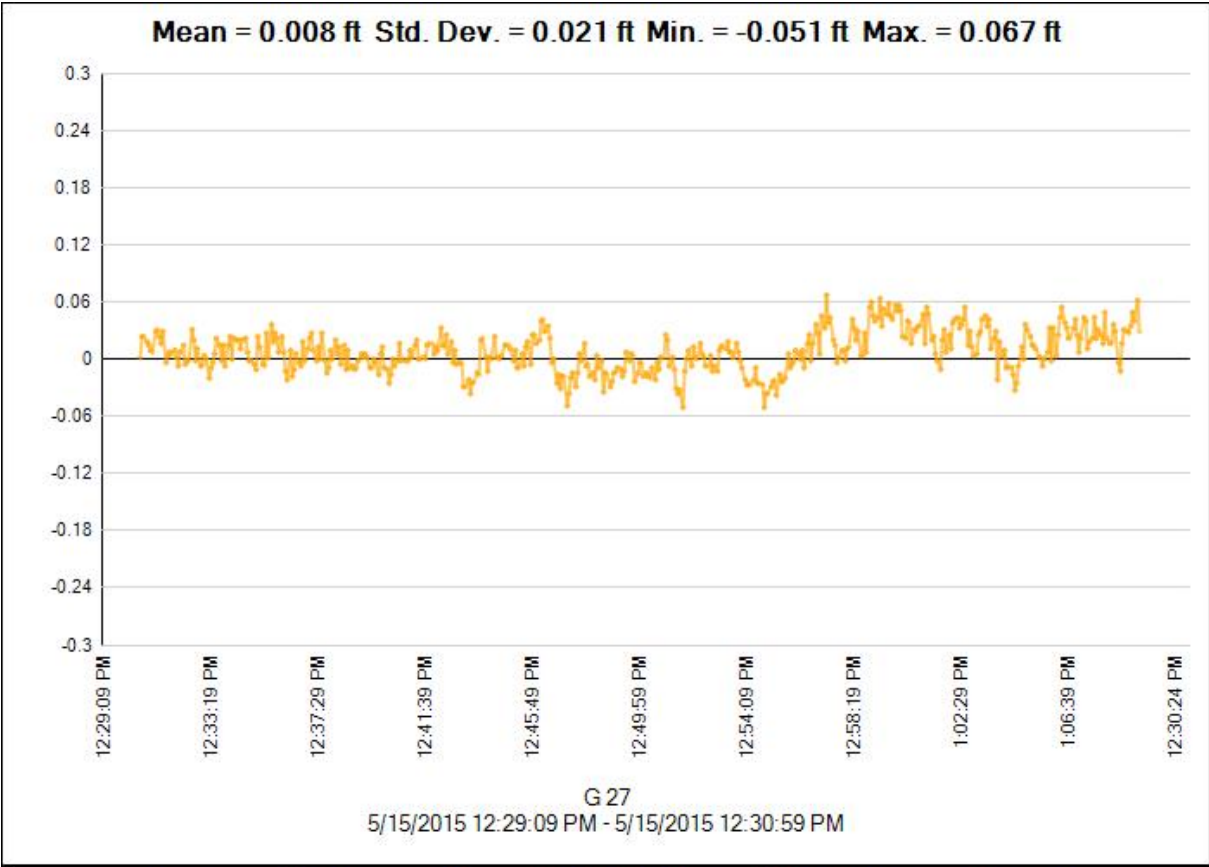
# Residuals

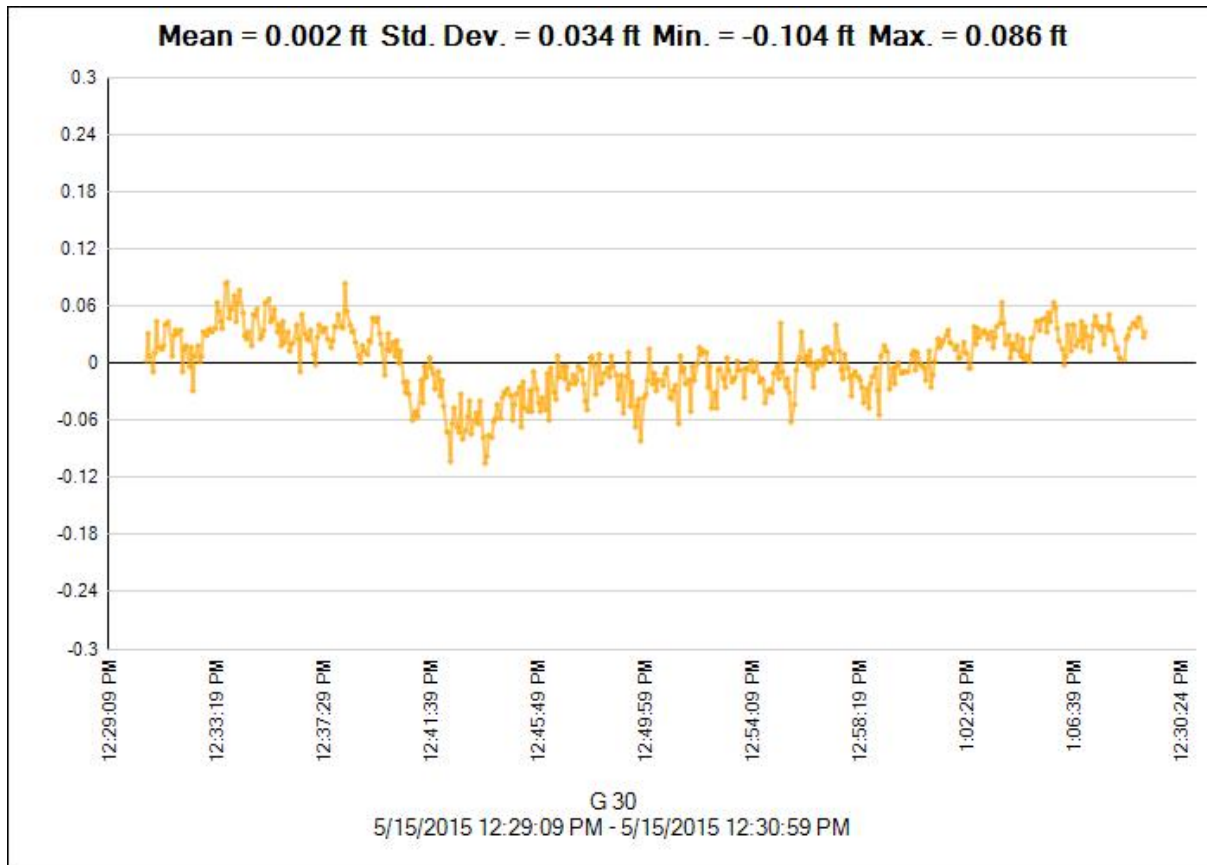














### Processing style

Elevation mask: 13.0 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

**AH8499 - PAG121 (1:59:54 PM-2:42:24 PM) (S20)**

Baseline observation: AH8499 --- PAG121 (B20)  
 Processed: 5/29/2015 1:15:25 PM  
 Solution type: Fixed  
 Frequency used: Dual Frequency (L1, L2)  
 Horizontal precision: 0.037 ft  
 Vertical precision: 0.095 ft  
 RMS: 0.008 ft  
 Maximum PDOP: 4.307  
 Ephemeris used: Broadcast  
 Antenna model: NGS Absolute  
 Processing start time: 5/15/2015 2:01:09 PM (Local: UTC-6hr)  
 Processing stop time: 5/15/2015 2:41:09 PM (Local: UTC-6hr)  
 Processing duration: 00:40:00  
 Processing interval: 5 seconds

**Vector Components (Mark to Mark)**

From: AH8499					
Grid		Local		Global	
Easting	992150.996 ft	Latitude	N32°13'38.95375"	Latitude	N32°13'38.95375"
Northing	447775.021 ft	Longitude	W110°58'18.76641"	Longitude	W110°58'18.76641"
Elevation	2367.959 ft	Height	2271.928 ft	Height	2271.928 ft

To: PAG121					
Grid		Local		Global	
Easting	1136499.082 ft	Latitude	N32°30'52.27244"	Latitude	N32°30'52.27244"
Northing	553808.891 ft	Longitude	W110°30'02.29442"	Longitude	W110°30'02.29442"
Elevation	2740.245 ft	Height	2648.192 ft	Height	2648.192 ft

Vector					
ΔEasting	144348.086 ft	NS Fwd Azimuth	54°12'23"	ΔX	155777.287 ft
ΔNorthing	106033.871 ft	Ellipsoid Dist.	179097.982 ft	ΔY	474.852 ft
ΔElevation	372.287 ft	ΔHeight	376.264 ft	ΔZ	88412.618 ft

**Standard Errors**

Vector errors:					
$\sigma \Delta$ Easting	0.015 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.011 ft
$\sigma \Delta$ Northing	0.011 ft	$\sigma$ Ellipsoid Dist.	0.012 ft	$\sigma \Delta$ Y	0.046 ft
$\sigma \Delta$ Elevation	0.049 ft	$\sigma \Delta$ Height	0.049 ft	$\sigma \Delta$ Z	0.023 ft

**Aposteriori Covariance Matrix (International foot<sup>2</sup>)**

	X	Y	Z
X	0.0000106528		
Y	0.0000212984	0.0001928911	
Z	-0.0000082650	-0.0000861718	0.0000478746

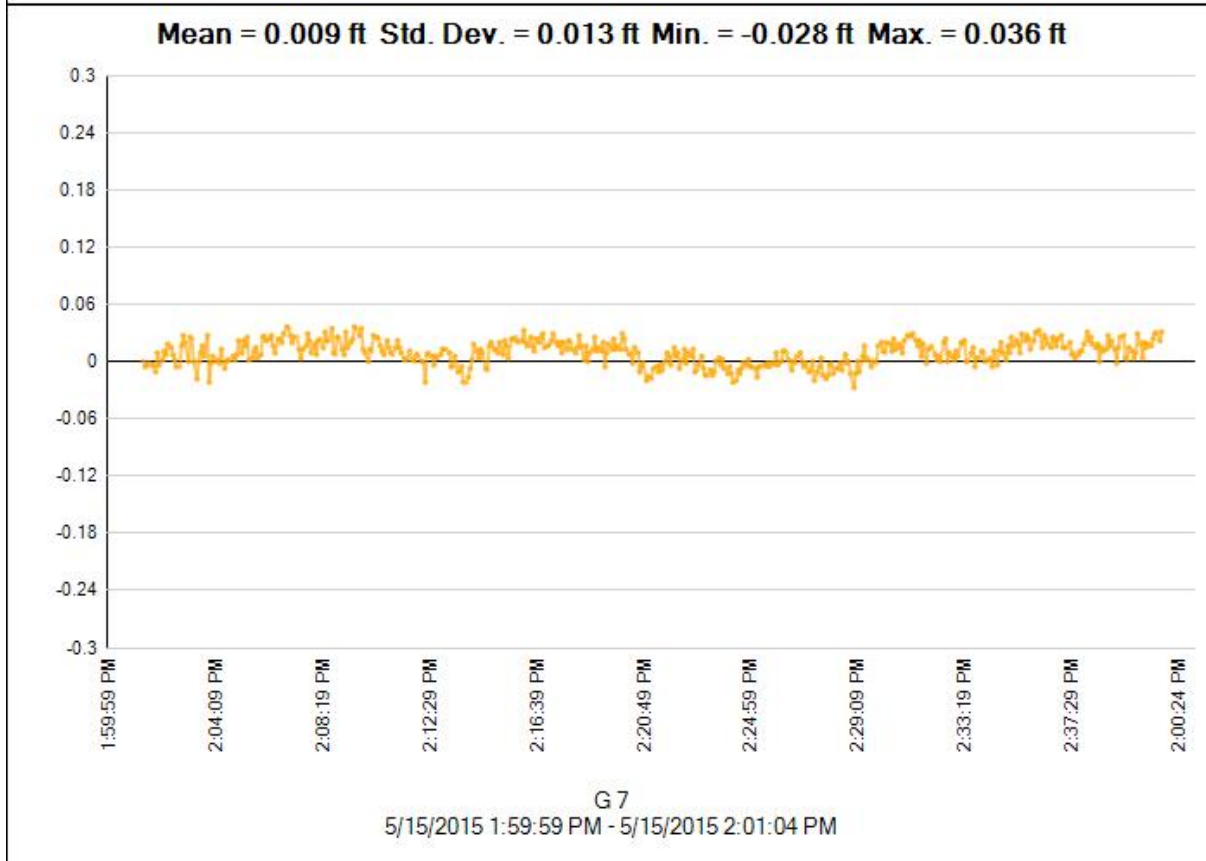
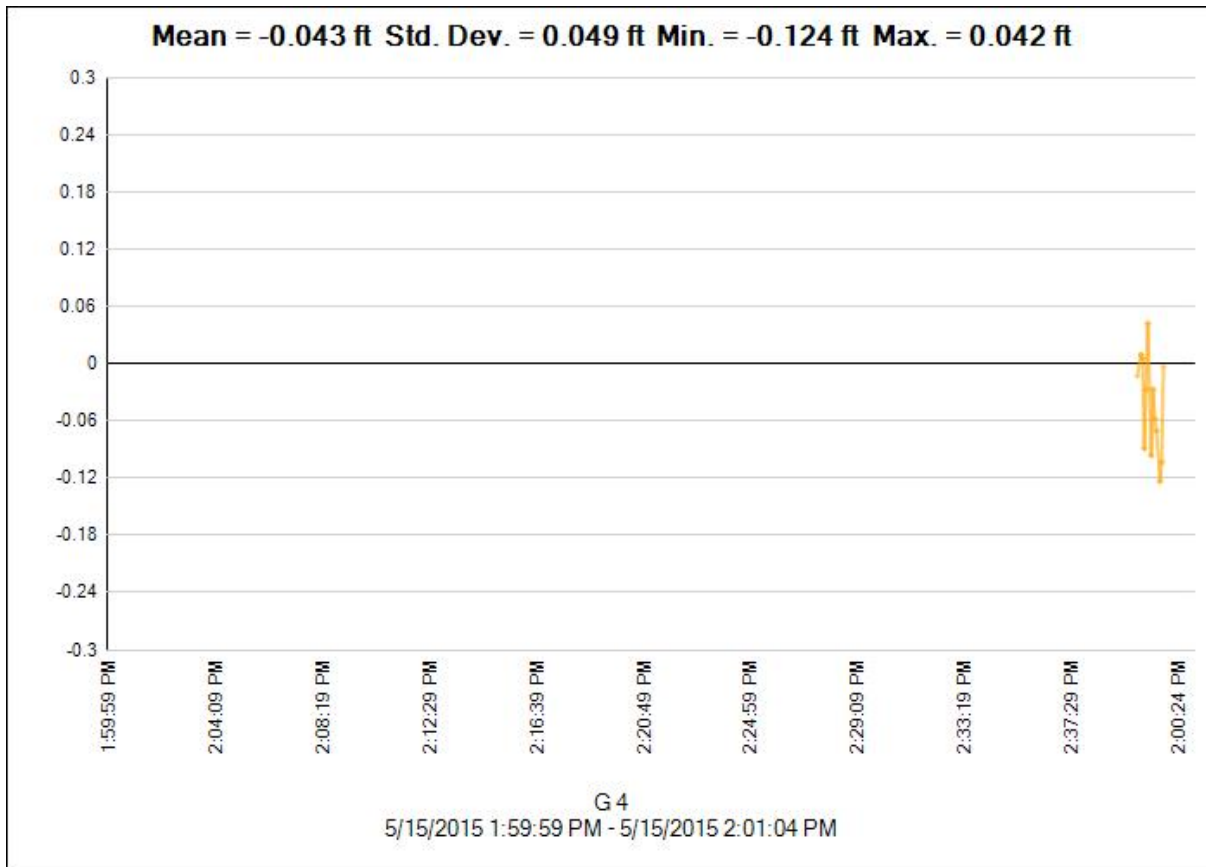
**Occupations**

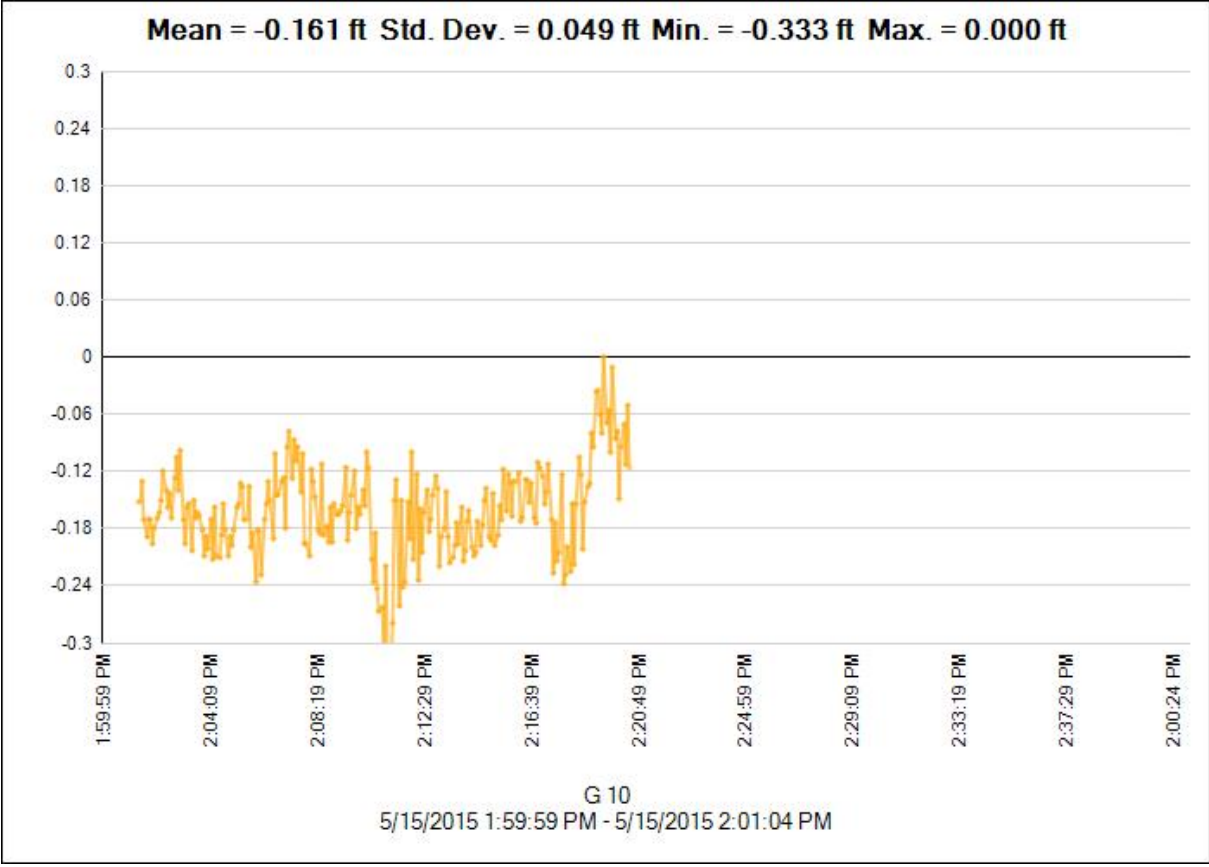
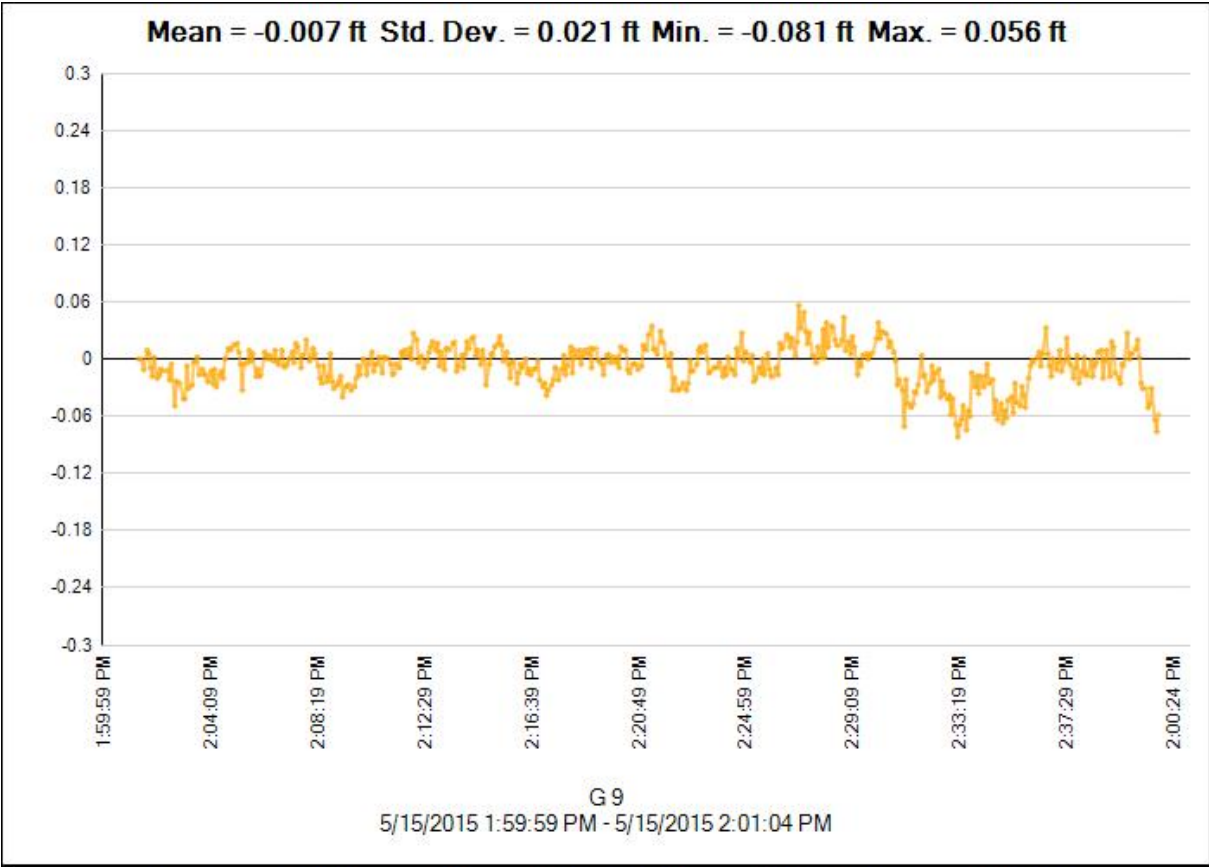
	From	To
Point ID:	AH8499	PAG121
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851350.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191351 (resampled).15o
Receiver type:	5700	Geo Explorer 3
Receiver serial number:	0220271185	
Antenna type:	Zephyr	702 Rev 3.00
Antenna serial number:	00000000	-----
Antenna height (measured):	5.679 ft	5.213 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

### Tracking Summary

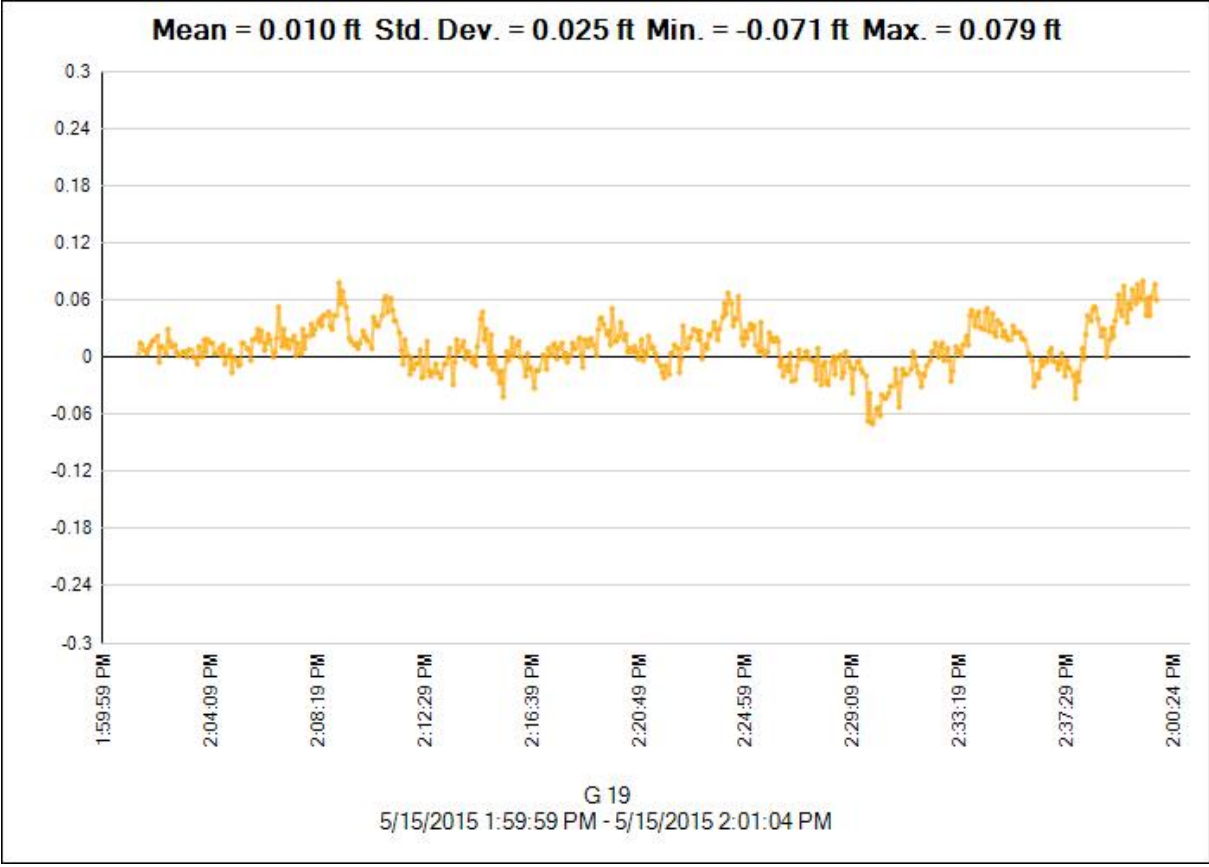
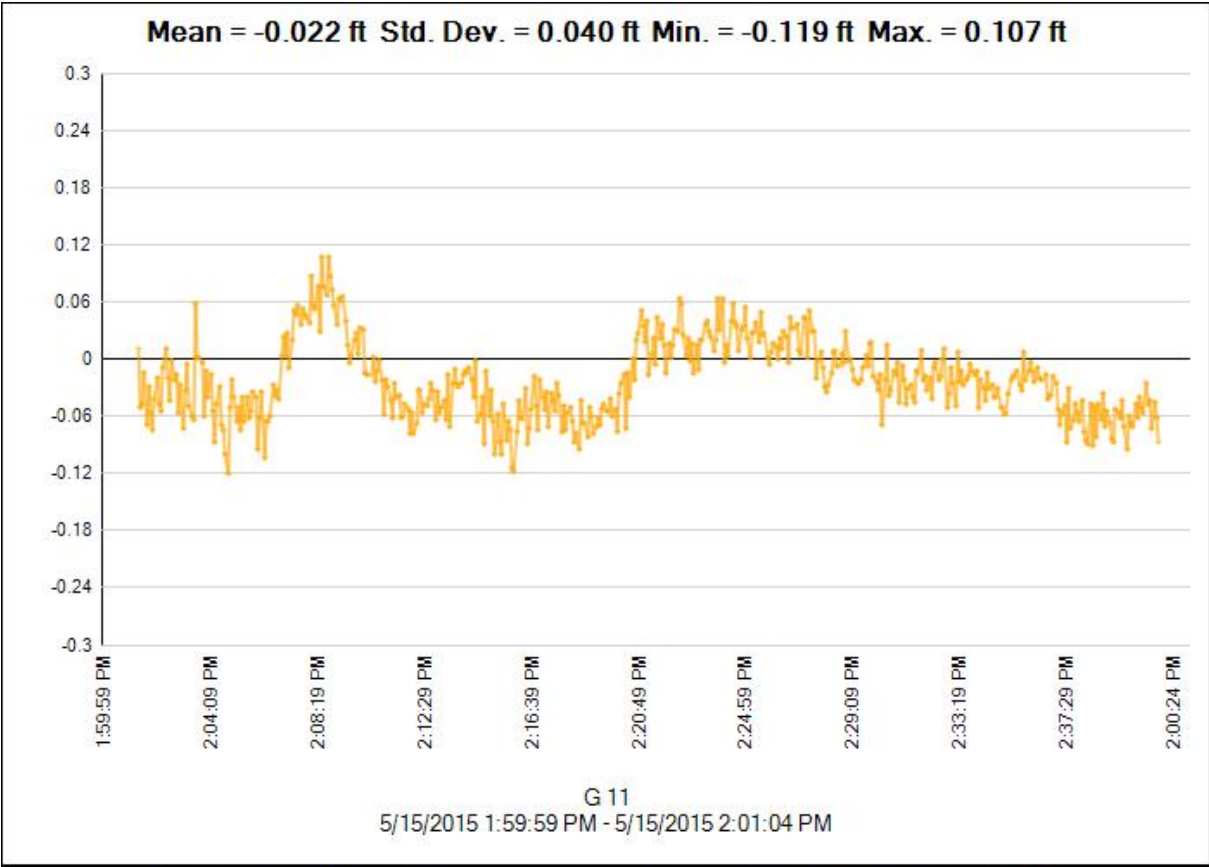
SV	5/15/2015 1:59:54 PM	Duration: 00:42:30	Major interval: 00:10:00	5/15/2015 2:42:24 PM
G 4	L1 L2			
G 5	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 10	L1 L2			
G 11	L1 L2			
G 13	L1 L2			
G 19	L1 L2			
G 23	L1 L2			
G 27	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

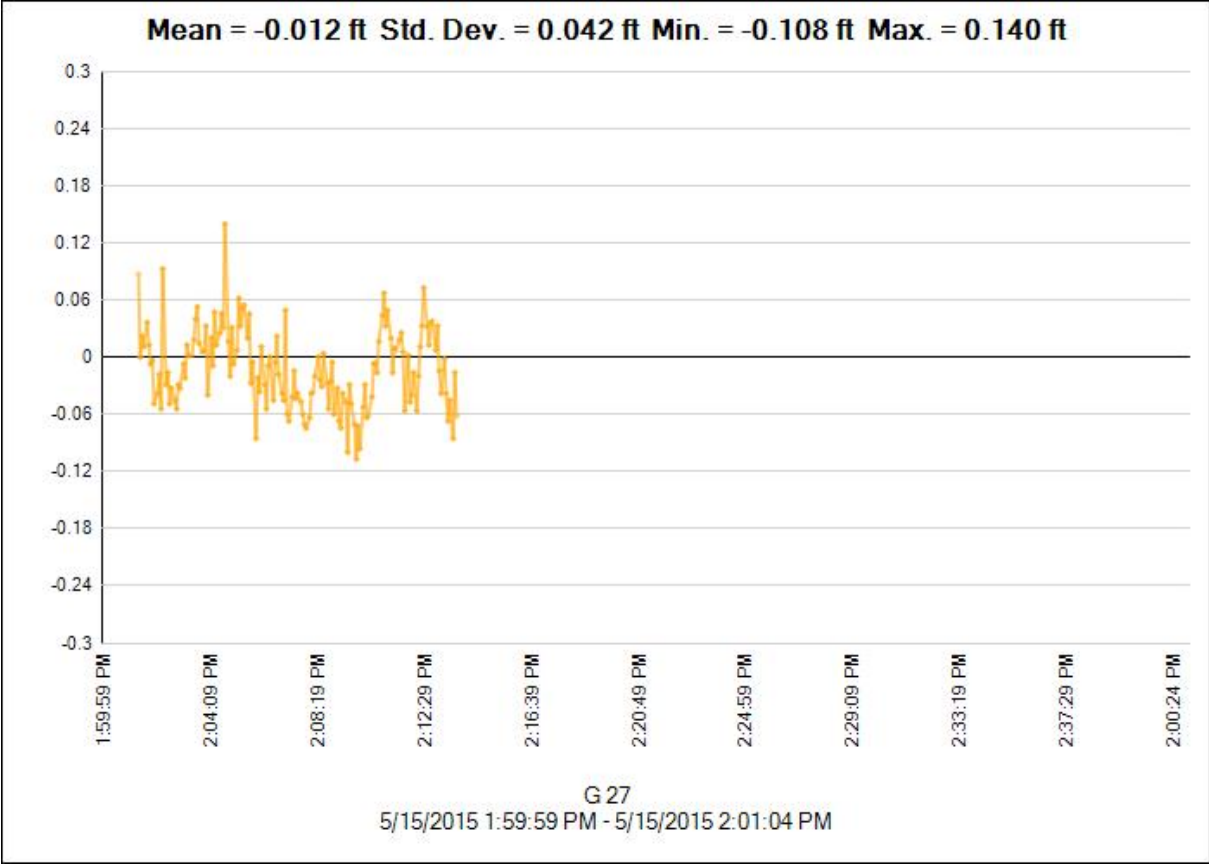
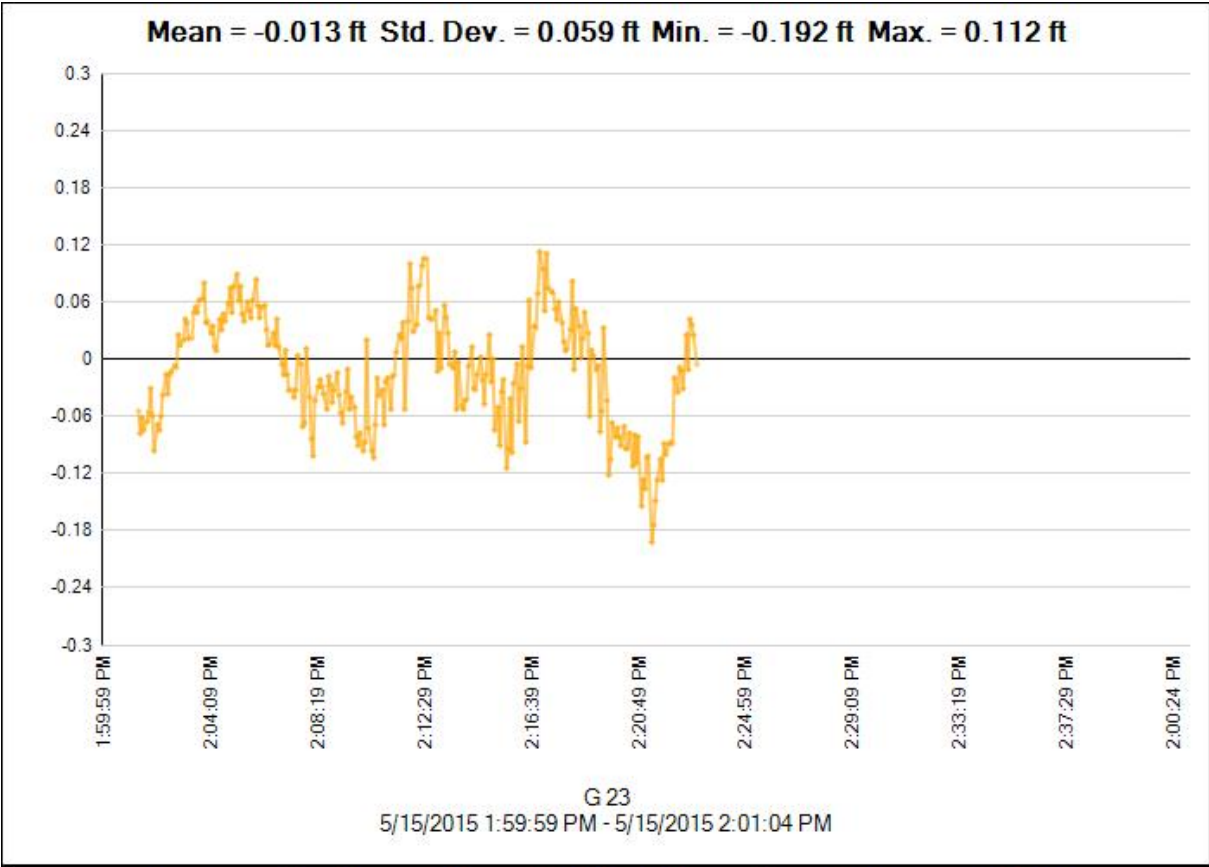
# Residuals

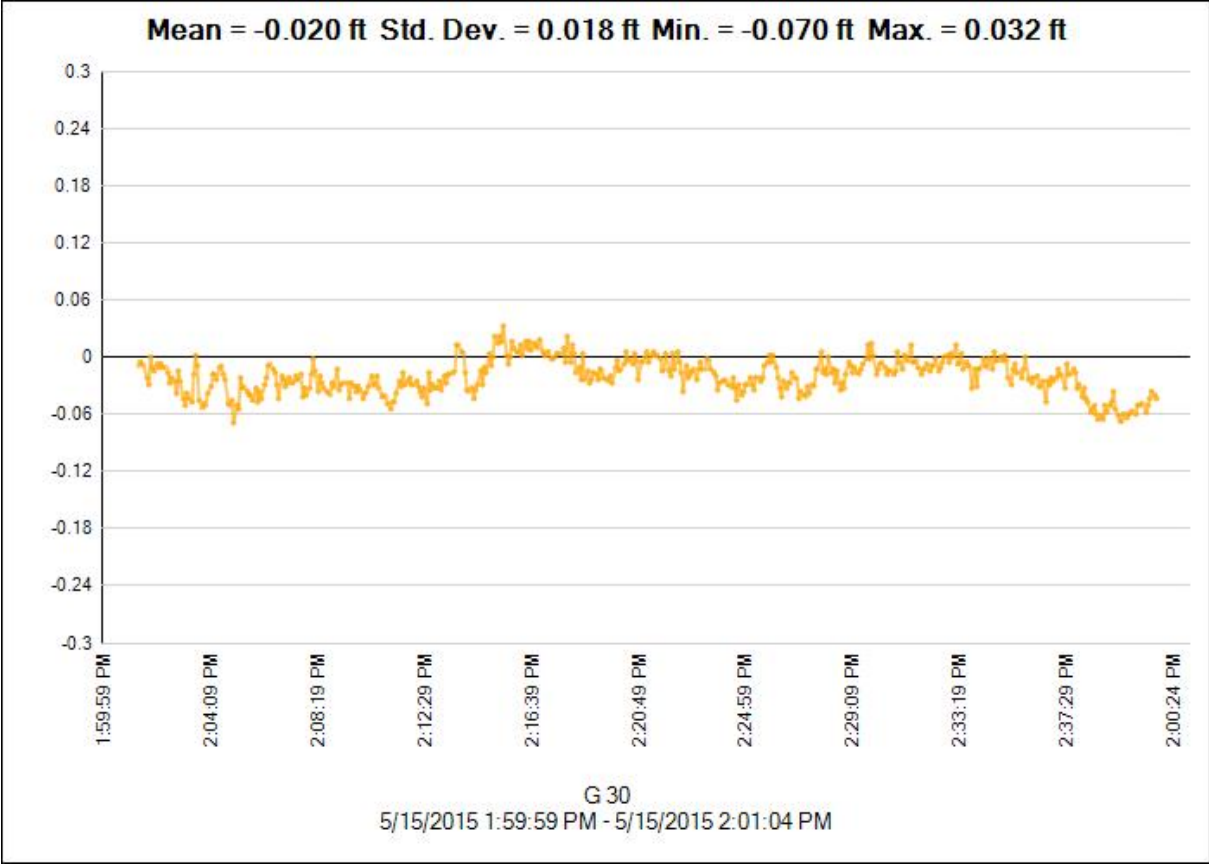
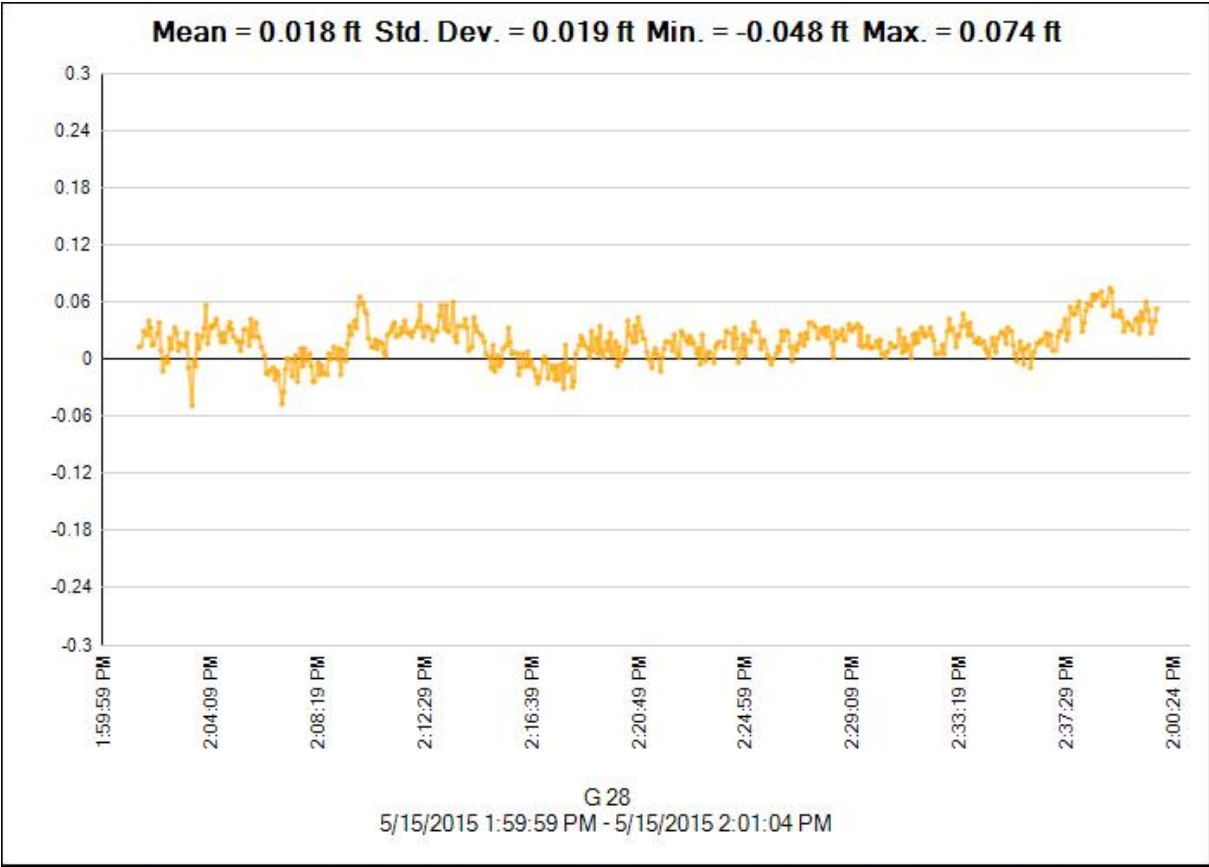














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**Processing style**

Elevation mask: 13.0 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

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**AH8499 - PAG122 (3:02:19 PM-3:39:19 PM) (S21)**

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Baseline observation: AH8499 --- PAG122 (B21)  
Processed: 5/29/2015 1:15:53 PM  
Solution type: Fixed  
Frequency used: Dual Frequency (L1, L2)  
Horizontal precision: 0.027 ft  
Vertical precision: 0.042 ft  
RMS: 0.006 ft  
Maximum PDOP: 2.336  
Ephemeris used: Broadcast  
Antenna model: NGS Absolute  
Processing start time: 5/15/2015 3:03:29 PM (Local: UTC-6hr)  
Processing stop time: 5/15/2015 3:36:54 PM (Local: UTC-6hr)  
Processing duration: 00:33:25  
Processing interval: 5 seconds

**Vector Components (Mark to Mark)**

<b>From:</b>		AH8499			
<b>Grid</b>		<b>Local</b>		<b>Global</b>	
<b>Easting</b>	992150.996 ft	<b>Latitude</b>	N32°13'38.95375"	<b>Latitude</b>	N32°13'38.95375"
<b>Northing</b>	447775.021 ft	<b>Longitude</b>	W110°58'18.76641"	<b>Longitude</b>	W110°58'18.76641"
<b>Elevation</b>	2367.959 ft	<b>Height</b>	2271.928 ft	<b>Height</b>	2271.928 ft

<b>To:</b>		PAG122			
<b>Grid</b>		<b>Local</b>		<b>Global</b>	
<b>Easting</b>	1140729.542 ft	<b>Latitude</b>	N32°28'03.06727"	<b>Latitude</b>	N32°28'03.06726"
<b>Northing</b>	536761.202 ft	<b>Longitude</b>	W110°29'15.56886"	<b>Longitude</b>	W110°29'15.56886"
<b>Elevation</b>	2818.579 ft	<b>Height</b>	2726.569 ft	<b>Height</b>	2726.569 ft

<b>Vector</b>					
<b>ΔEasting</b>	148578.546 ft	<b>NS Fwd Azimuth</b>	59°35'16"	<b>ΔX</b>	156287.042 ft
<b>ΔNorthing</b>	88986.182 ft	<b>Ellipsoid Dist.</b>	173178.440 ft	<b>ΔY</b>	-9594.046 ft
<b>ΔElevation</b>	450.620 ft	<b>ΔHeight</b>	454.640 ft	<b>ΔZ</b>	74028.970 ft

**Standard Errors**

<b>Vector errors:</b>					
<b>σ ΔEasting</b>	0.009 ft	<b>σ NS fwd Azimuth</b>	0°00'00"	<b>σ ΔX</b>	0.010 ft
<b>σ ΔNorthing</b>	0.011 ft	<b>σ Ellipsoid Dist.</b>	0.010 ft	<b>σ ΔY</b>	0.020 ft
<b>σ ΔElevation</b>	0.022 ft	<b>σ ΔHeight</b>	0.022 ft	<b>σ ΔZ</b>	0.013 ft

**Aposteriori Covariance Matrix (International foot²)**

	<b>X</b>	<b>Y</b>	<b>Z</b>
<b>X</b>	0.0000090432		
<b>Y</b>	0.0000085838	0.0000373754	
<b>Z</b>	-0.0000016780	-0.0000123541	0.0000150710

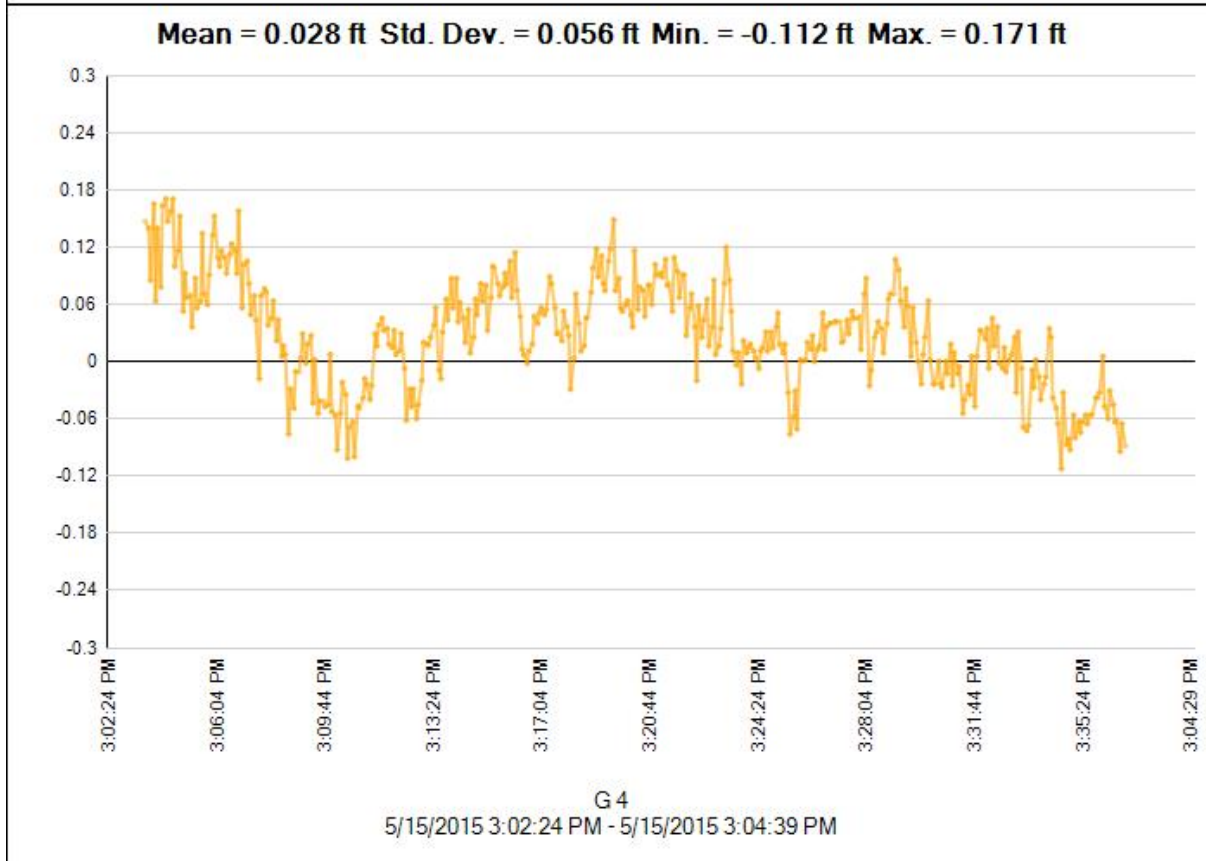
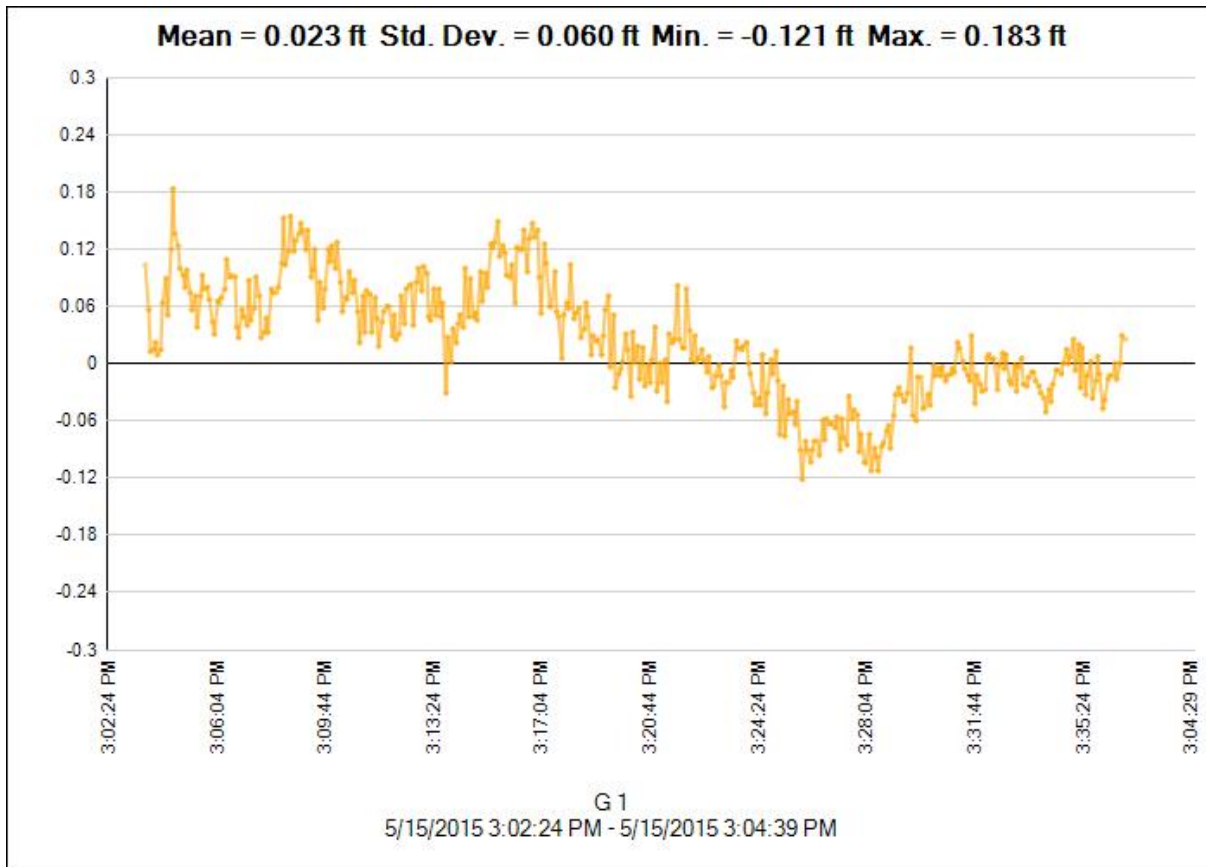
## Occupations

	From	To
<b>Point ID:</b>	AH8499	PAG122
<b>Data file:</b>	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851350.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191352 (resampled).15o
<b>Receiver type:</b>	5700	Geo Explorer 3
<b>Receiver serial number:</b>	0220271185	
<b>Antenna type:</b>	Zephyr	702 Rev 3.00
<b>Antenna serial number:</b>	00000000	-----
<b>Antenna height (measured):</b>	5.679 ft	5.489 ft
<b>Antenna method:</b>	Antenna Phase Center	Antenna Phase Center

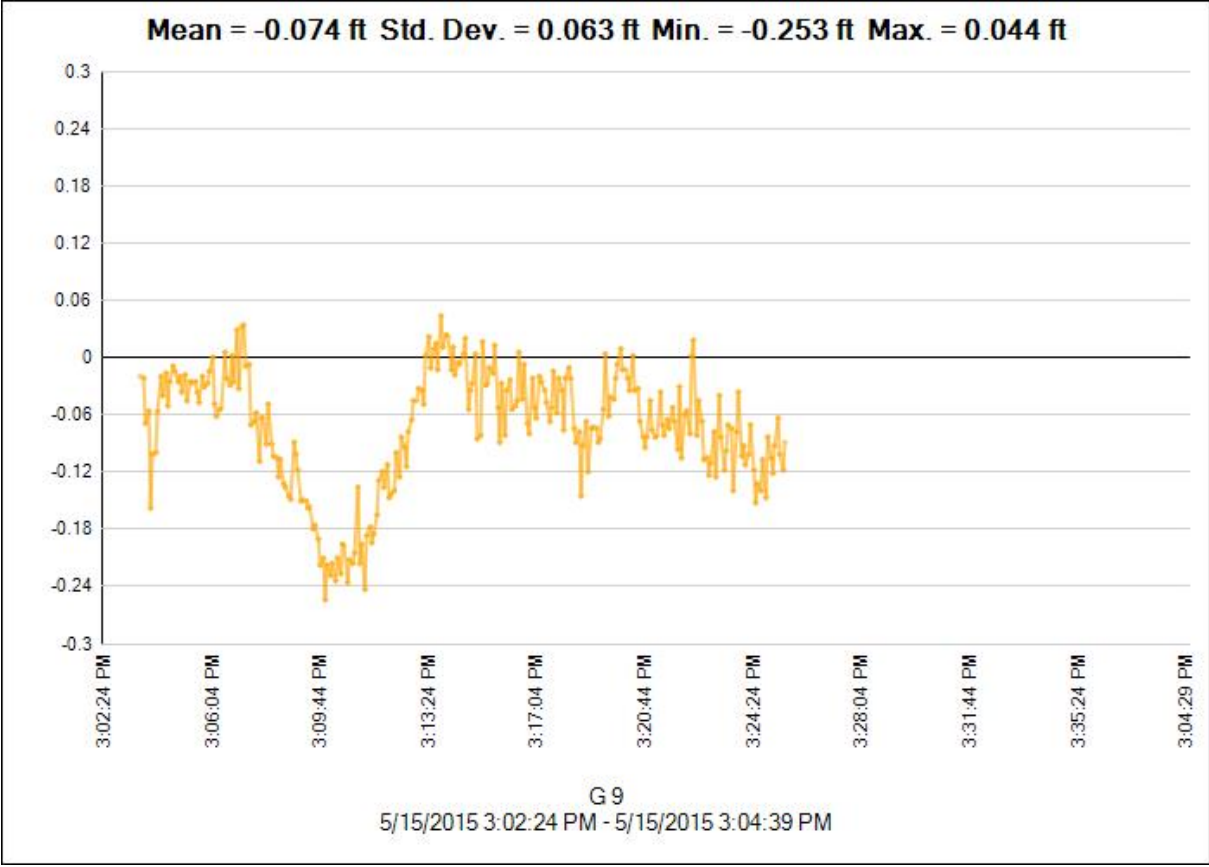
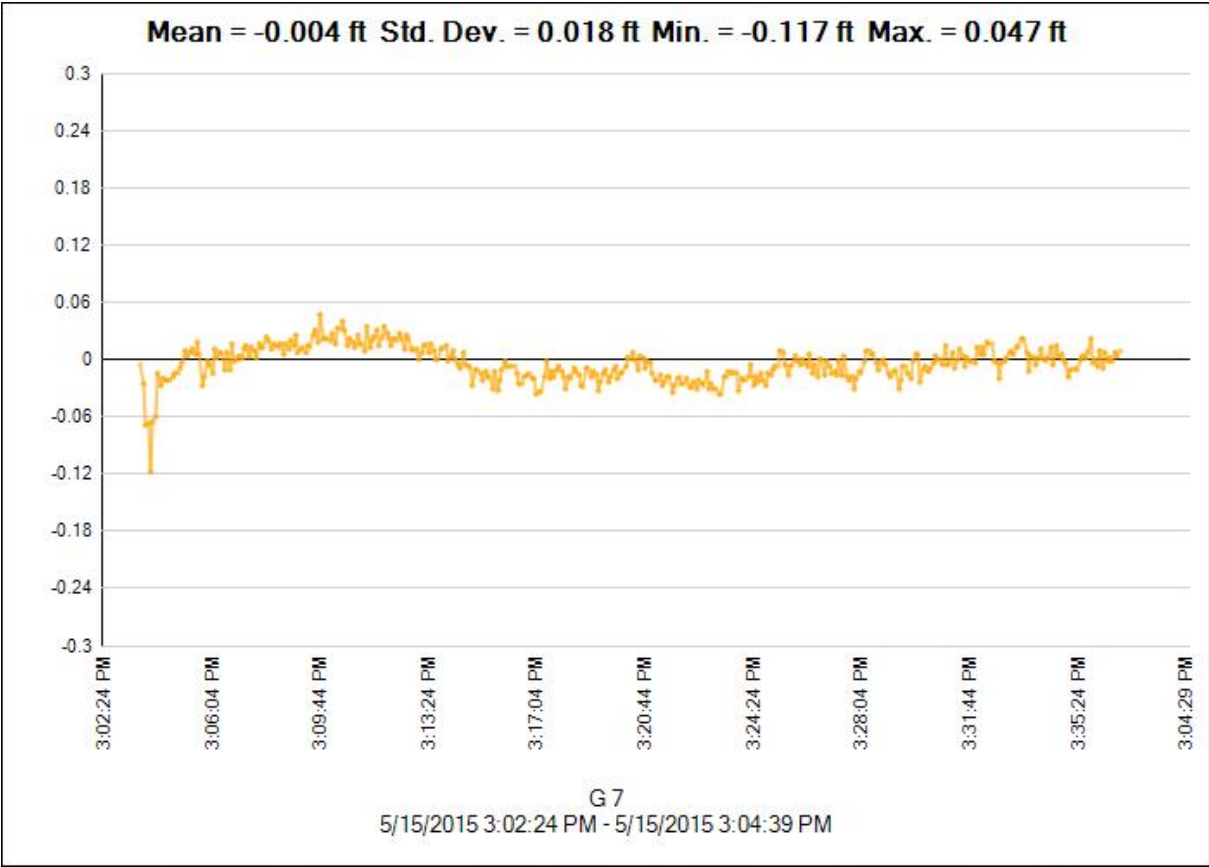
### Tracking Summary

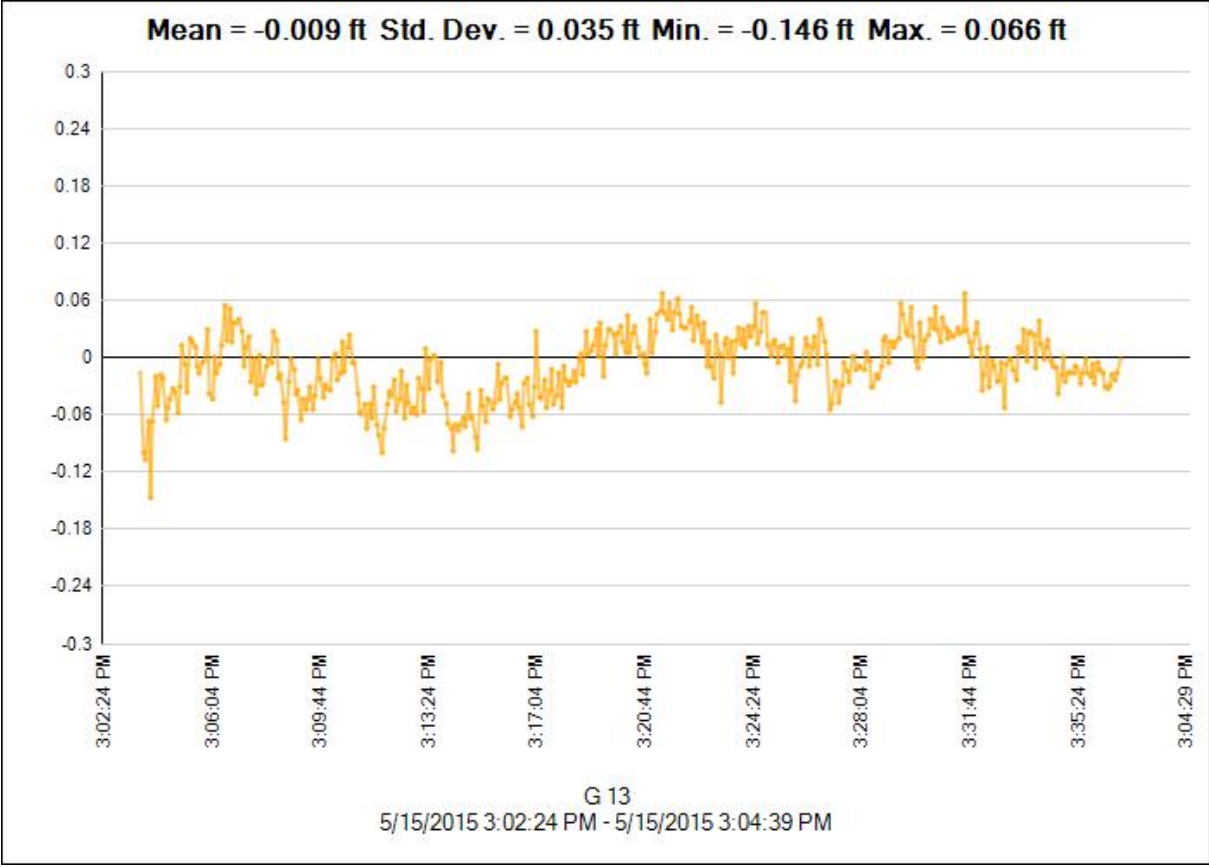
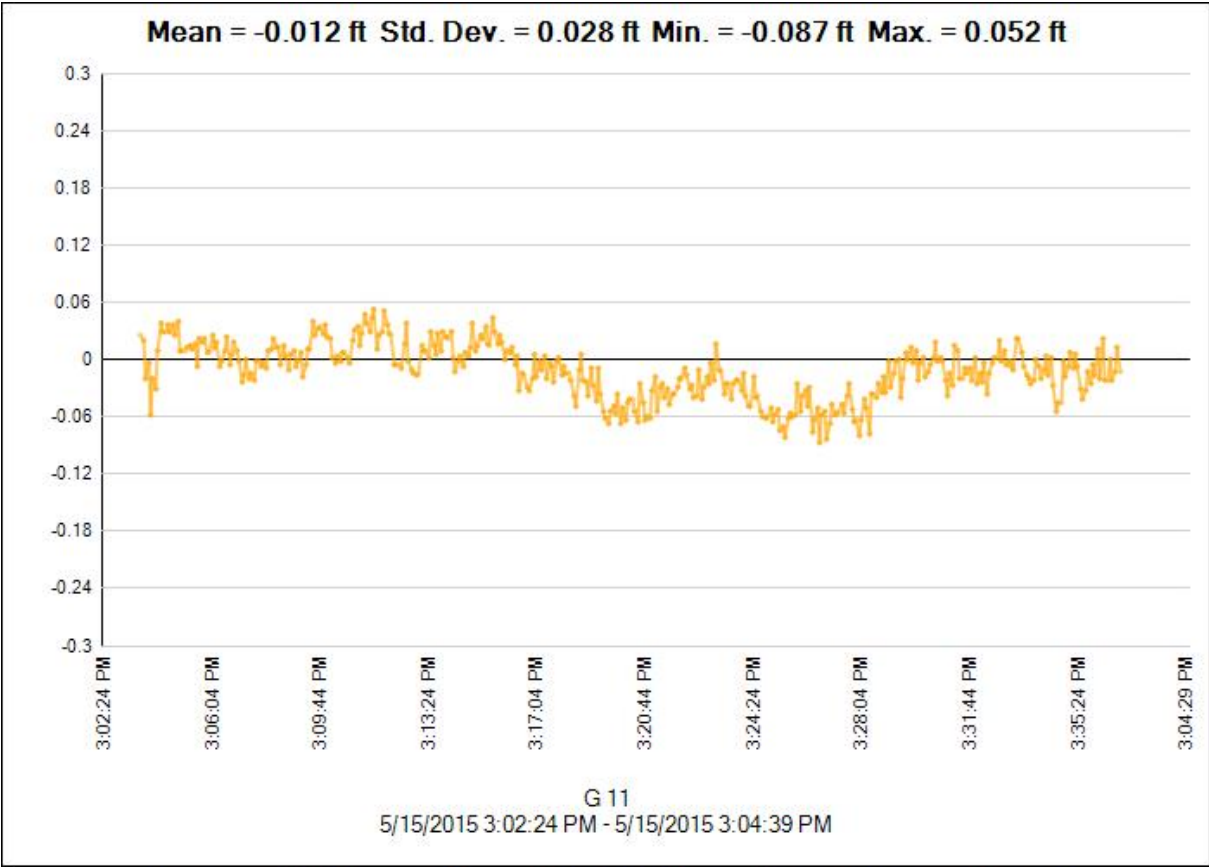
SV	5/15/2015 3:02:19 PM	Duration: 00:37:00	Major interval: 00:01:00	5/15/2015 3:39:19 PM
G 1	L1 L2			
G 4	L1 L2			
G 7	L1 L2			
G 9	L1 L2			
G 11	L1 L2			
G 13	L1 L2			
G 15	L1 L2			
G 17	L1 L2			
G 19	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

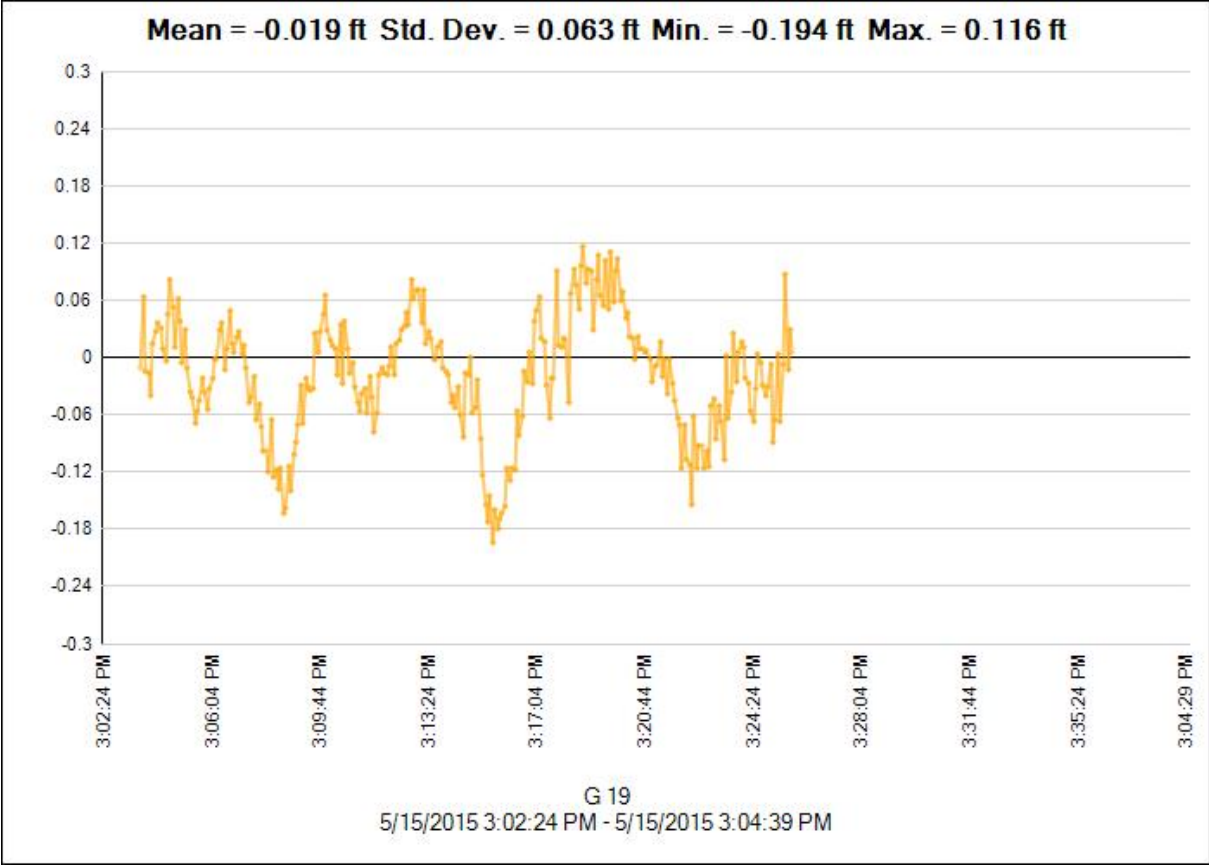
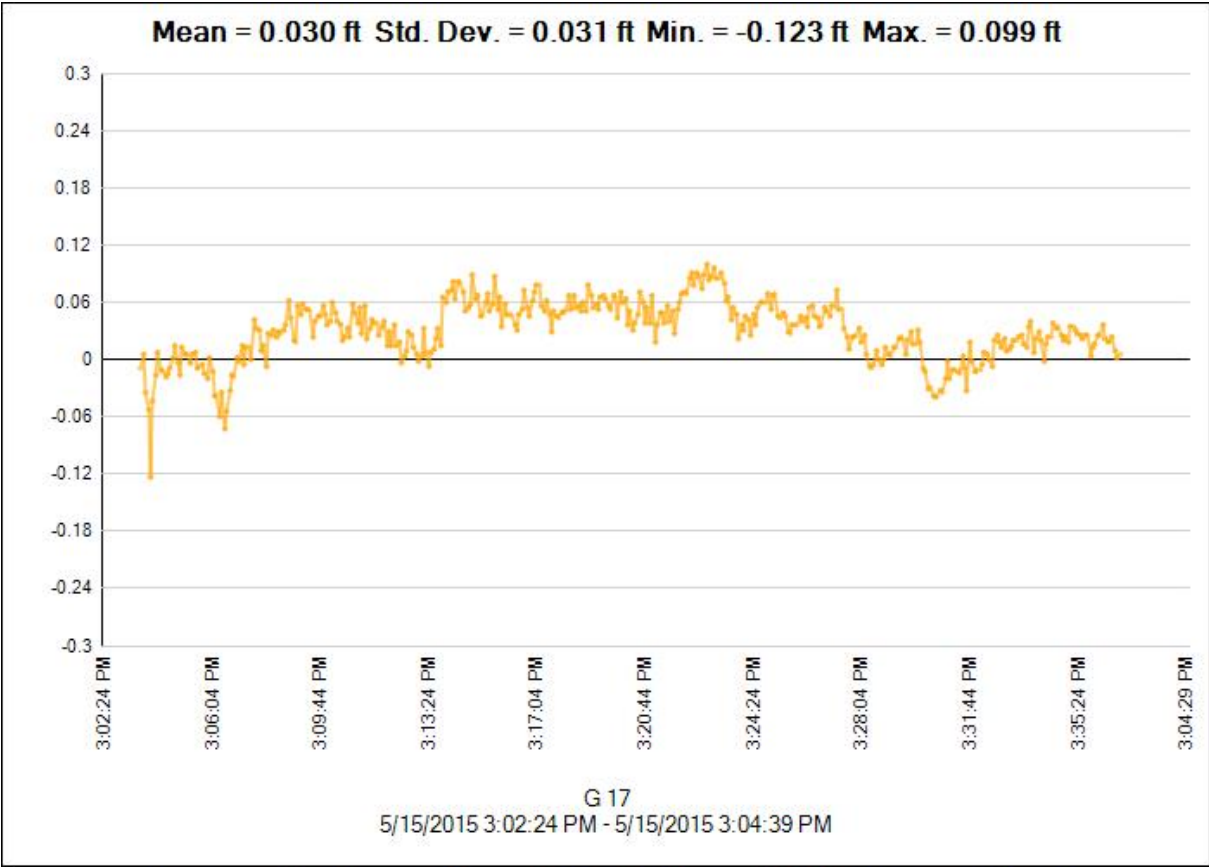
# Residuals

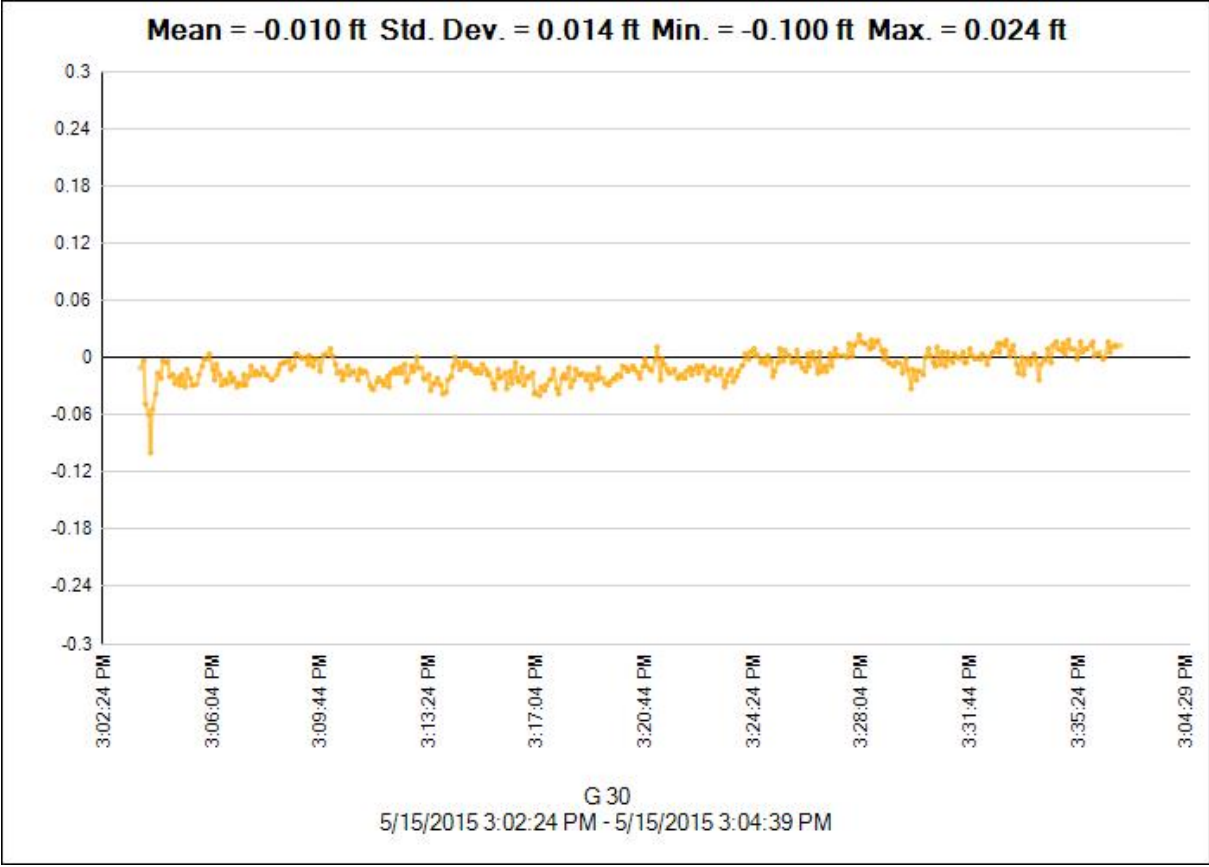
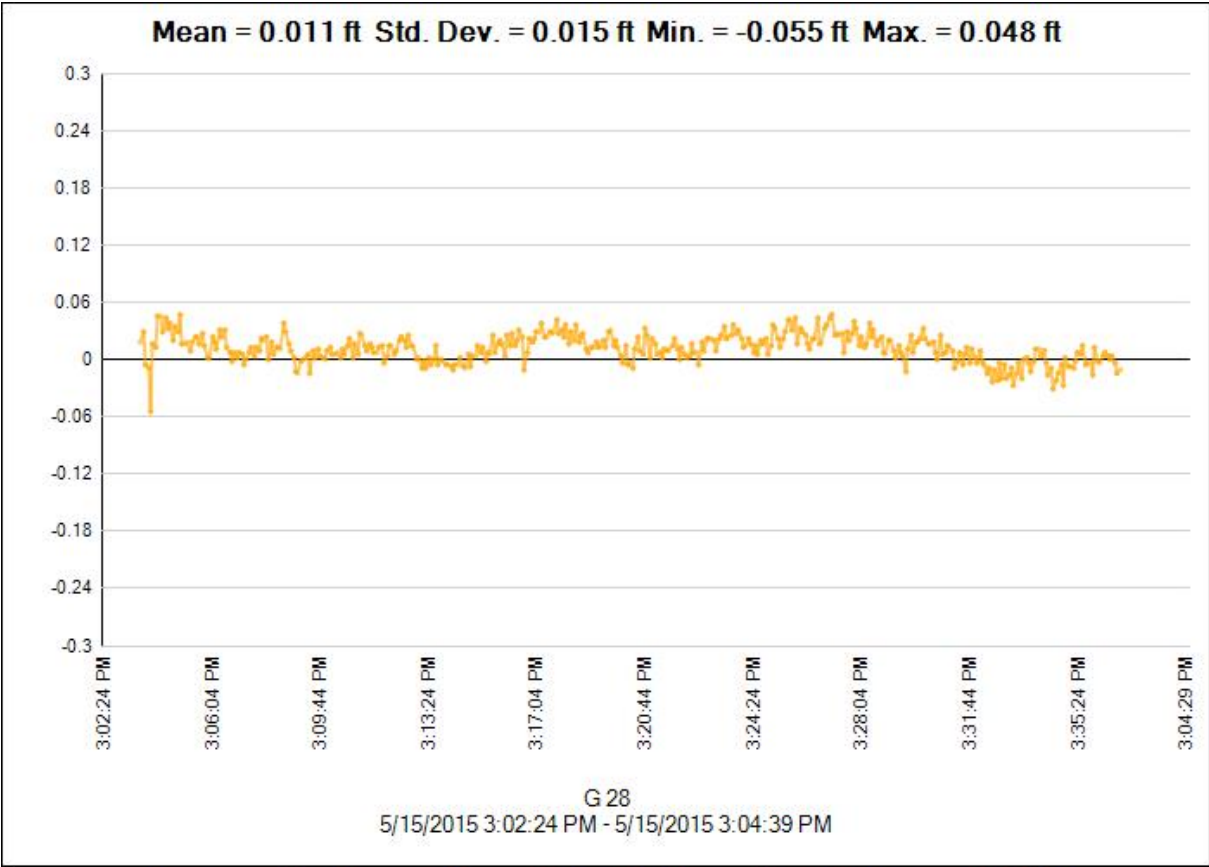














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**Processing style**

Elevation mask: 13.0 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

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**AH8499 - PAG123 (4:04:49 PM-4:42:44 PM) (S22)**

---

Baseline observation: AH8499 --- PAG123 (B22)  
Processed: 5/29/2015 1:16:15 PM  
Solution type: Fixed  
Frequency used: Dual Frequency (L1, L2)  
Horizontal precision: 0.054 ft  
Vertical precision: 0.193 ft  
RMS: 0.006 ft  
Maximum PDOP: 2.718  
Ephemeris used: Broadcast  
Antenna model: NGS Absolute  
Processing start time: 5/15/2015 4:06:04 PM (Local: UTC-6hr)  
Processing stop time: 5/15/2015 4:40:49 PM (Local: UTC-6hr)  
Processing duration: 00:34:45  
Processing interval: 5 seconds

### Vector Components (Mark to Mark)

From:		AH8499			
Grid		Local		Global	
Easting	992150.996 ft	Latitude	N32°13'38.95375"	Latitude	N32°13'38.95375"
Northing	447775.021 ft	Longitude	W110°58'18.76641"	Longitude	W110°58'18.76641"
Elevation	2367.959 ft	Height	2271.928 ft	Height	2271.928 ft

To:		PAG123			
Grid		Local		Global	
Easting	1131985.025 ft	Latitude	N32°23'04.67223"	Latitude	N32°23'04.67223"
Northing	506482.576 ft	Longitude	W110°31'02.24140"	Longitude	W110°31'02.24140"
Elevation	3484.212 ft	Height	3392.490 ft	Height	3392.490 ft

Vector					
$\Delta$ Easting	139834.028 ft	NS Fwd Azimuth	67°43'50"	$\Delta$ X	141860.183 ft
$\Delta$ Northing	58707.555 ft	Ellipsoid Dist.	151650.059 ft	$\Delta$ Y	-22065.873 ft
$\Delta$ Elevation	1116.254 ft	$\Delta$ Height	1120.561 ft	$\Delta$ Z	48927.551 ft

### Standard Errors

Vector errors:					
$\sigma$ $\Delta$ Easting	0.021 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma$ $\Delta$ X	0.043 ft
$\sigma$ $\Delta$ Northing	0.014 ft	$\sigma$ Ellipsoid Dist.	0.017 ft	$\sigma$ $\Delta$ Y	0.070 ft
$\sigma$ $\Delta$ Elevation	0.099 ft	$\sigma$ $\Delta$ Height	0.099 ft	$\sigma$ $\Delta$ Z	0.060 ft

### Aposteriori Covariance Matrix (International foot<sup>2</sup>)

	X	Y	Z
X	0.0001725101		
Y	0.0002535900	0.0004579226	
Z	-0.0002218915	-0.0003740161	0.0003294460

## Occupations

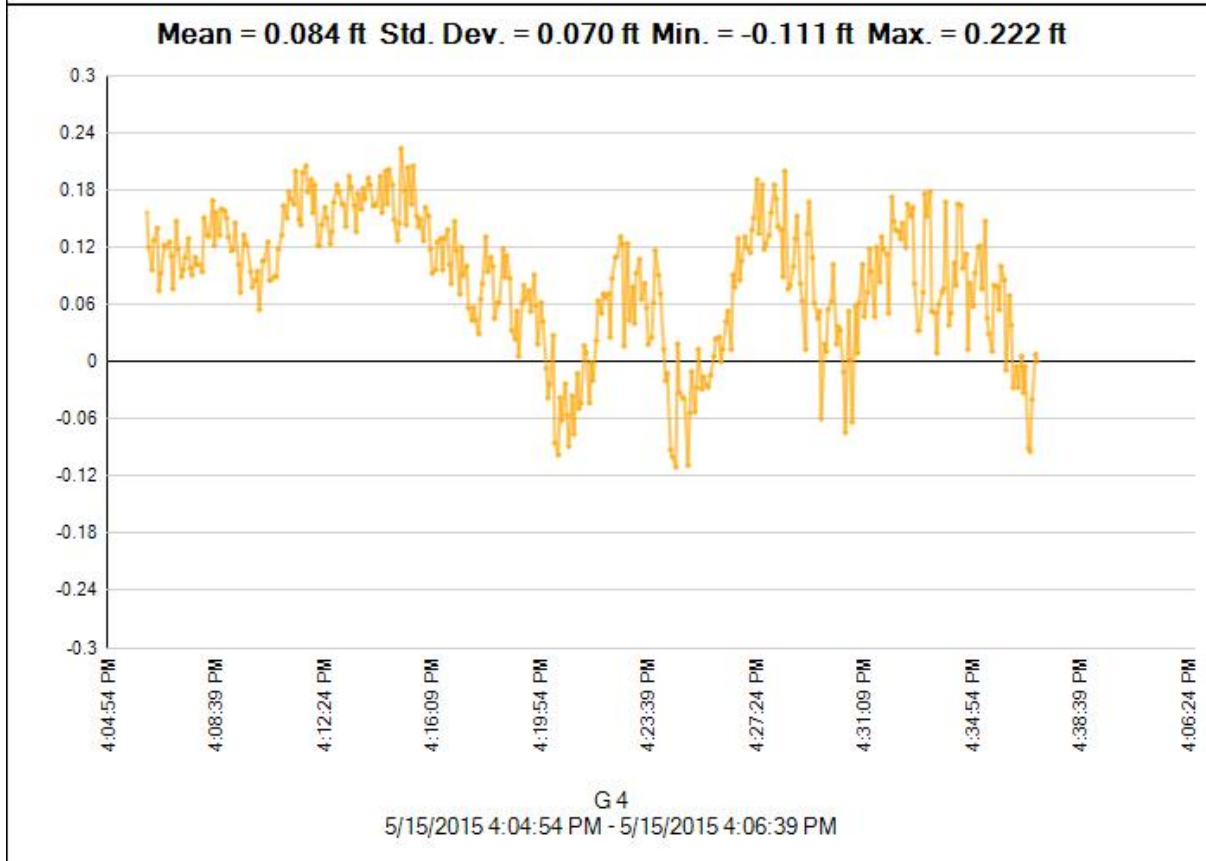
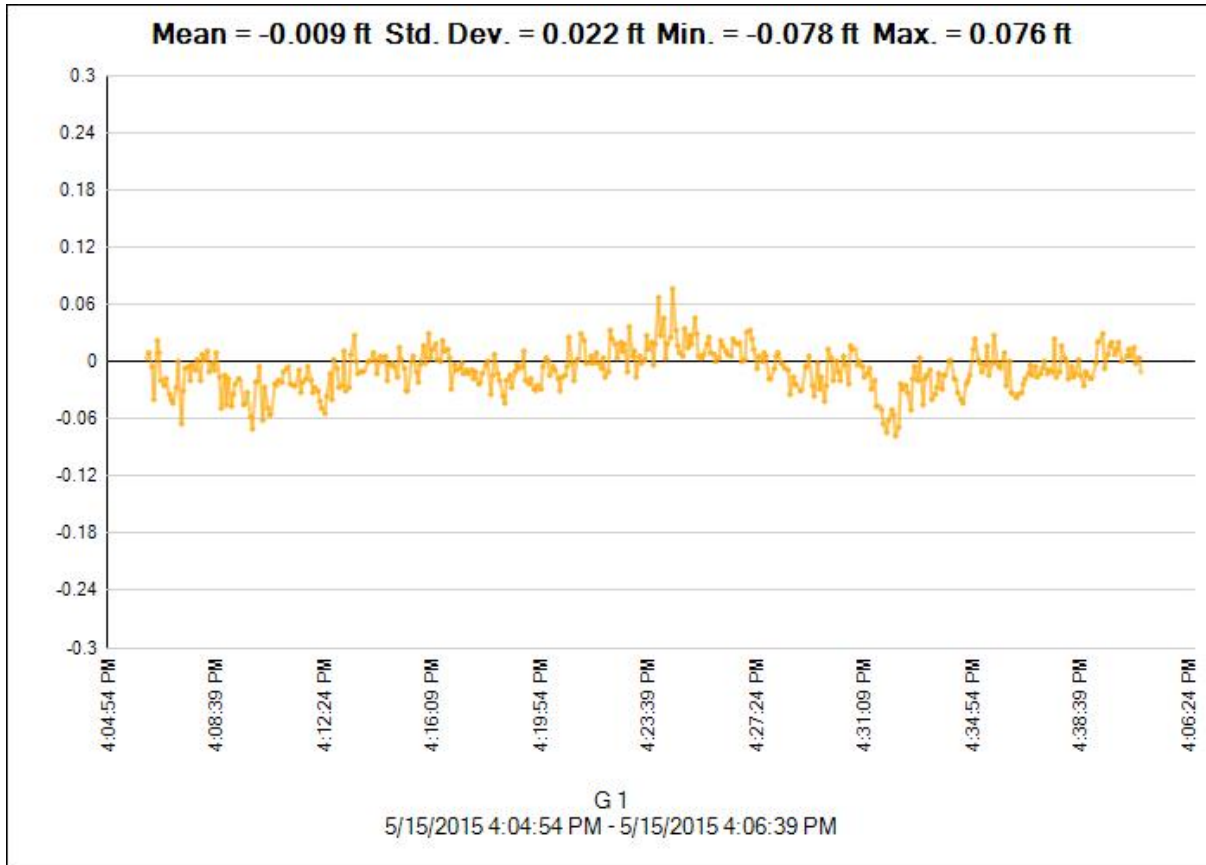
	From	To
Point ID:	AH8499	PAG123
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851350.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191353 (resampled).15o
Receiver type:	5700	Geo Explorer 3
Receiver serial number:	0220271185	
Antenna type:	Zephyr	702 Rev 3.00
Antenna serial number:	00000000	-----
Antenna height (measured):	5.679 ft	4.990 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

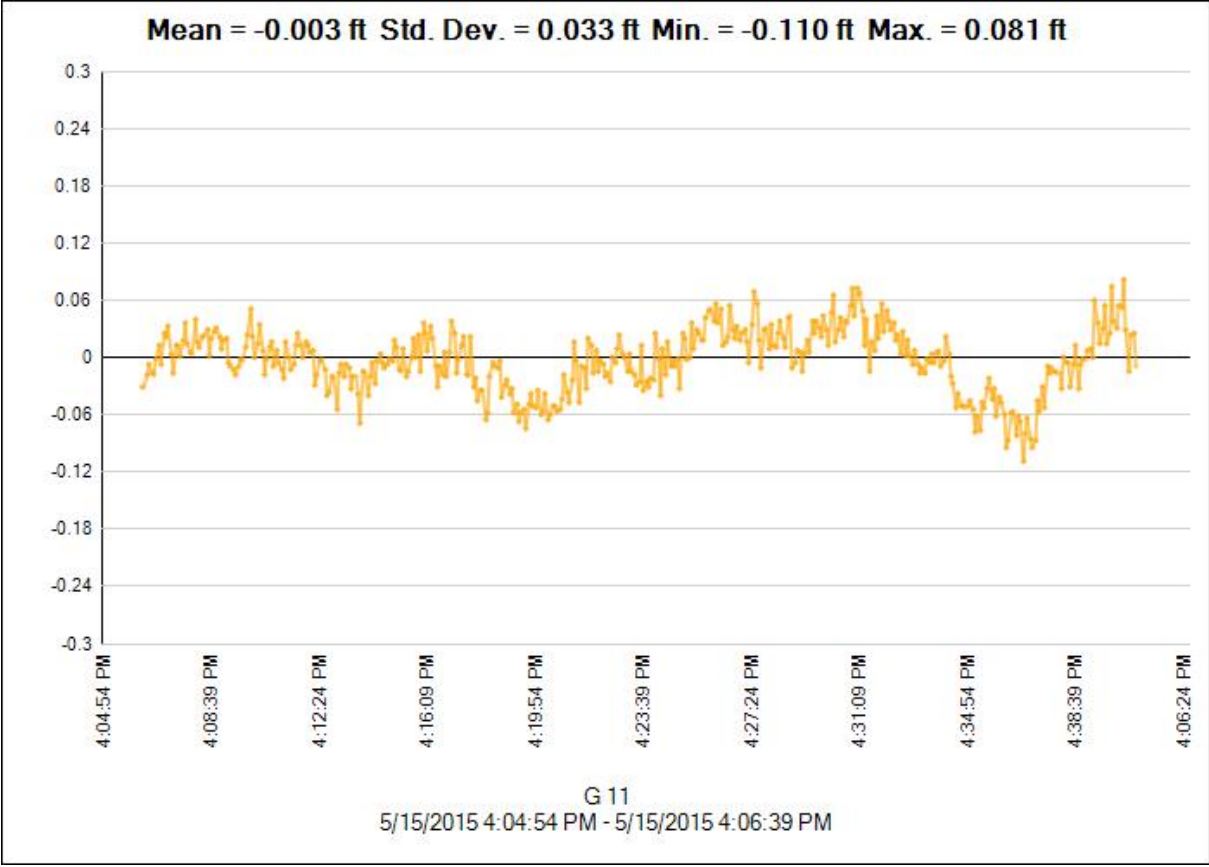
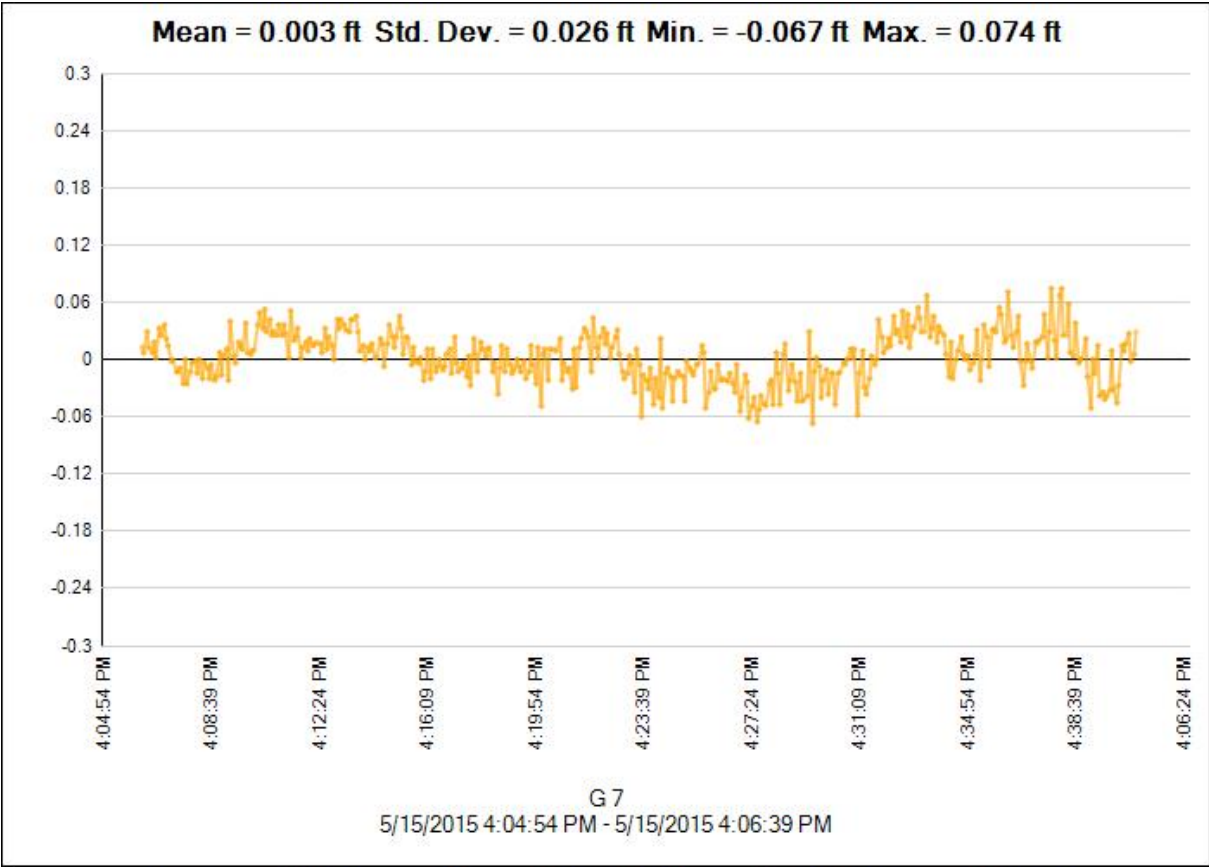
### Tracking Summary

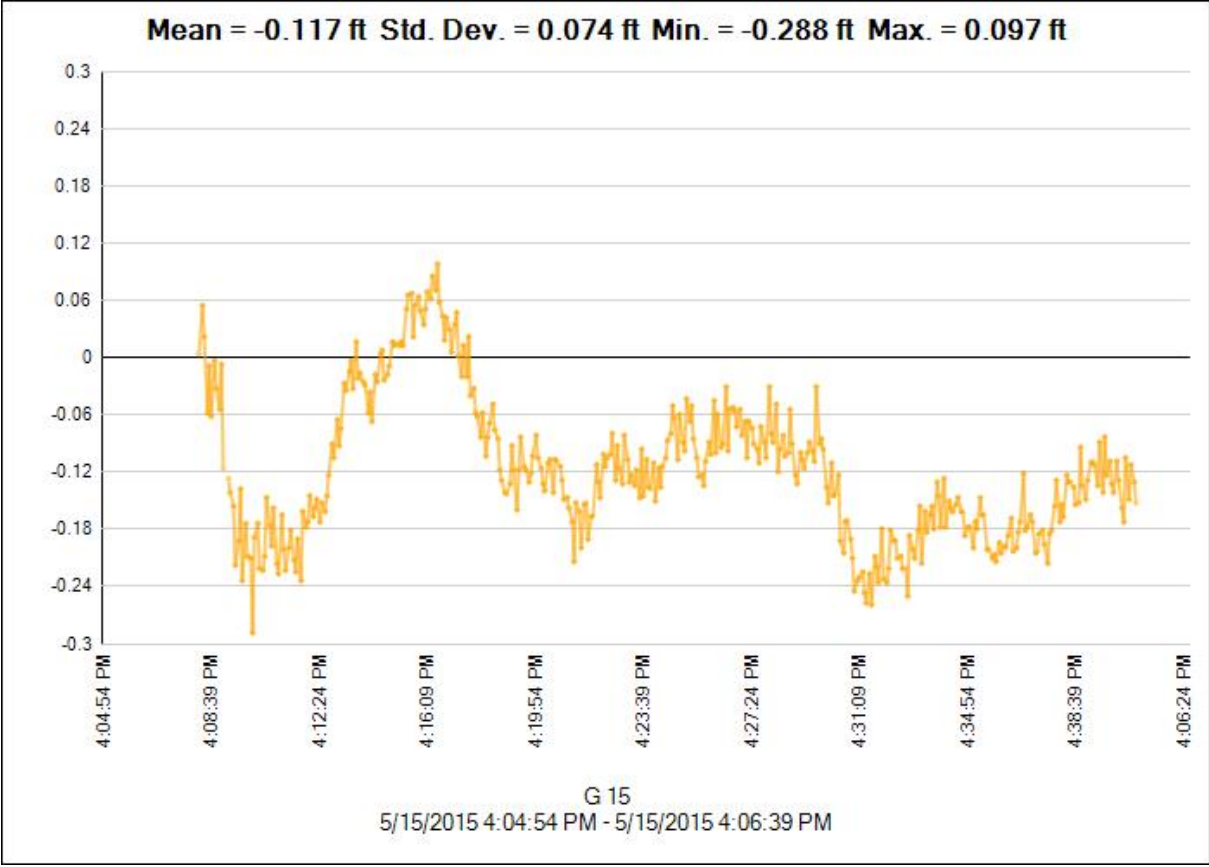
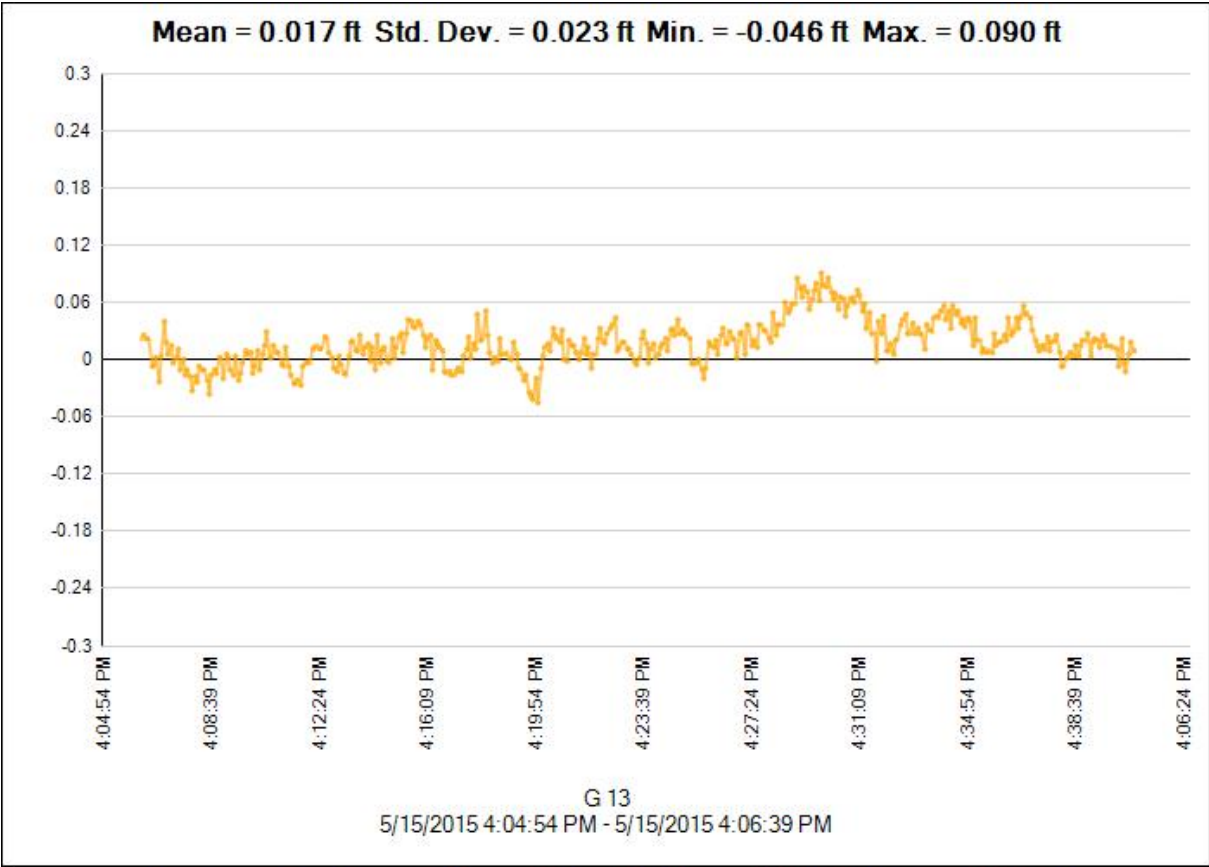
SV	5/15/2015 4:04:49 PM	Duration: 00:37:55	Major interval: 00:01:00	5/15/2015 4:42:44 PM
G 1	L1 L2			
G 4	L1 L2			
G 6	L1 L2			
G 7	L1 L2			
G 11	L1 L2			
G 13	L1 L2			
G 15	L1 L2			
G 17	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

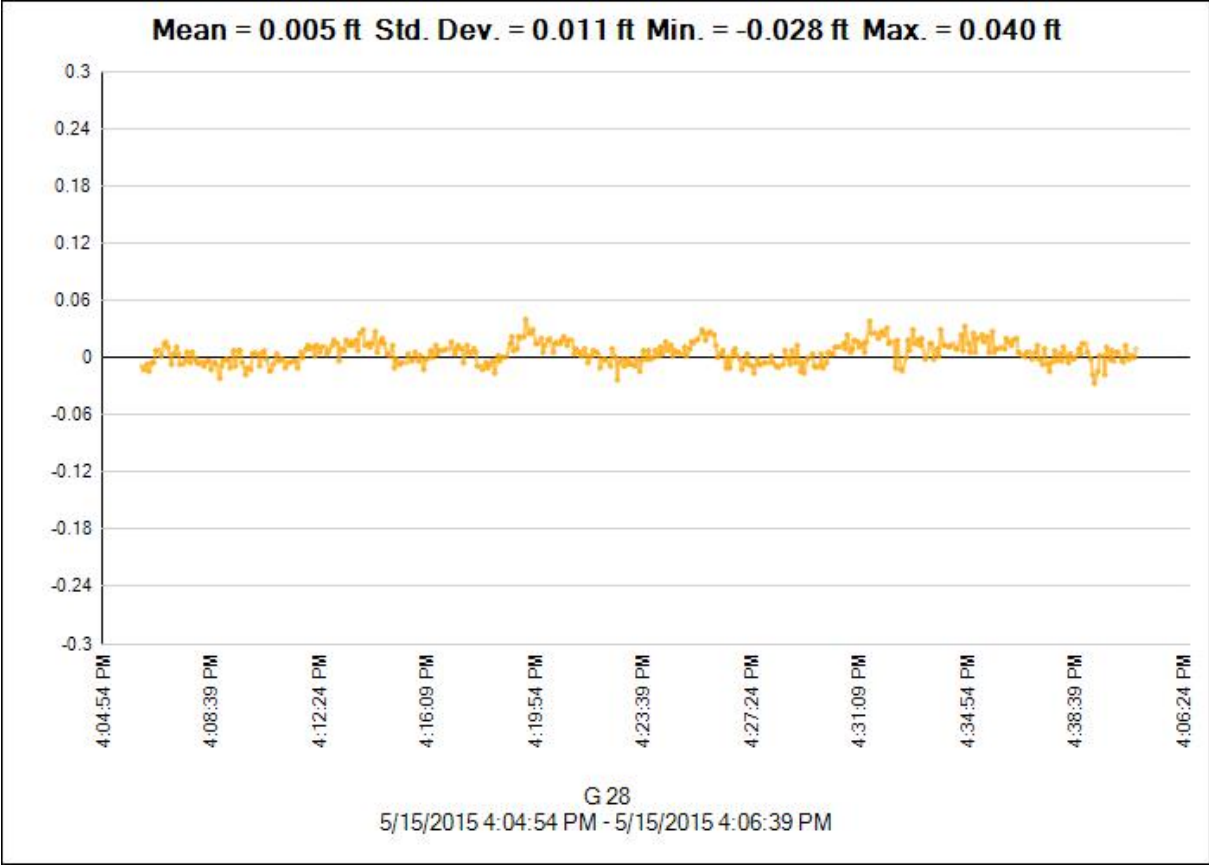
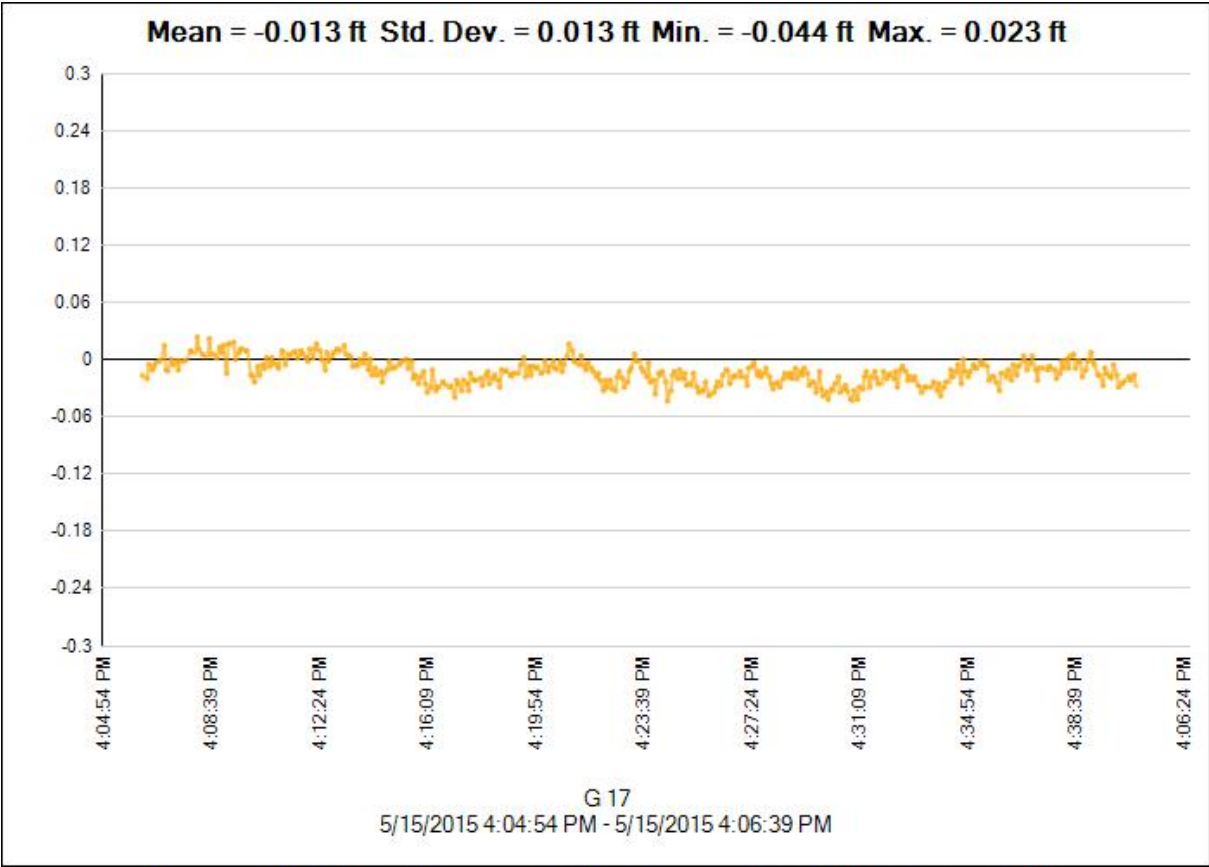


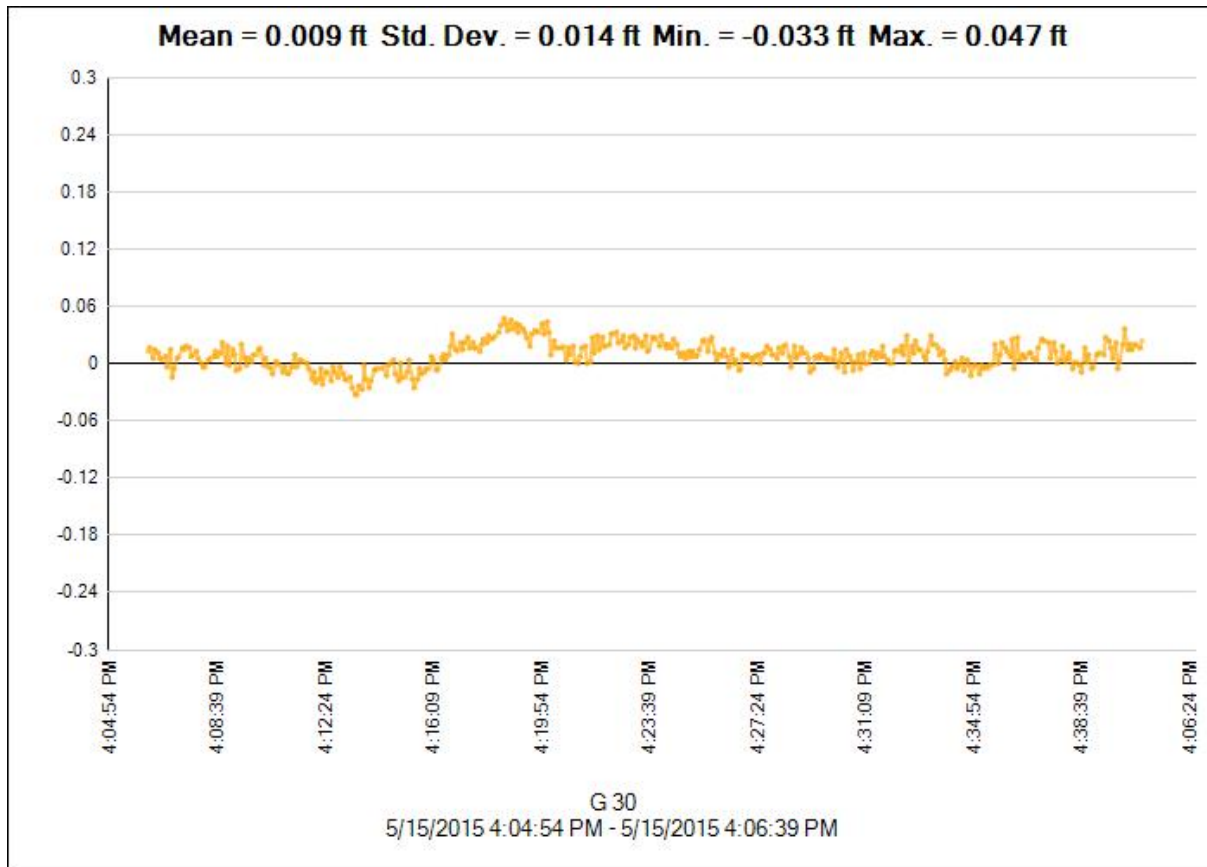
# Residuals













### Processing style

Elevation mask: 13.0 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

### AH8499 - PAG124 (5:11:04 PM-5:47:49 PM) (S23)

**Baseline observation:** AH8499 --- PAG124 (B23)  
**Processed:** 5/29/2015 1:14:11 PM  
**Solution type:** Fixed  
**Frequency used:** Dual Frequency (L1, L2)  
**Horizontal precision:** 0.026 ft  
**Vertical precision:** 0.045 ft  
**RMS:** 0.004 ft  
**Maximum PDOP:** 2.079  
**Ephemeris used:** Broadcast  
**Antenna model:** NGS Absolute  
**Processing start time:** 5/15/2015 5:11:29 PM (Local: UTC-6hr)  
**Processing stop time:** 5/15/2015 5:47:49 PM (Local: UTC-6hr)  
**Processing duration:** 00:36:20  
**Processing interval:** 5 seconds

#### Vector Components (Mark to Mark)

From: AH8499					
Grid		Local		Global	
<b>Easting</b>	992150.996 ft	<b>Latitude</b>	N32°13'38.95375"	<b>Latitude</b>	N32°13'38.95375"
<b>Northing</b>	447775.021 ft	<b>Longitude</b>	W110°58'18.76641"	<b>Longitude</b>	W110°58'18.76641"
<b>Elevation</b>	2367.959 ft	<b>Height</b>	2271.928 ft	<b>Height</b>	2271.928 ft

To: PAG124					
Grid		Local		Global	
<b>Easting</b>	1152454.542 ft	<b>Latitude</b>	N32°23'17.95506"	<b>Latitude</b>	N32°23'17.95506"
<b>Northing</b>	508099.445 ft	<b>Longitude</b>	W110°27'03.33561"	<b>Longitude</b>	W110°27'03.33561"
<b>Elevation</b>	3000.846 ft	<b>Height</b>	2908.960 ft	<b>Height</b>	2908.959 ft

Vector					
<b>ΔEasting</b>	160303.546 ft	<b>NS Fwd Azimuth</b>	69°53'00"	<b>ΔX</b>	161449.019 ft
<b>ΔNorthing</b>	60324.425 ft	<b>Ellipsoid Dist.</b>	171267.838 ft	<b>ΔY</b>	-28180.095 ft
<b>ΔElevation</b>	632.887 ft	<b>ΔHeight</b>	637.031 ft	<b>ΔZ</b>	49802.320 ft

**Standard Errors**

Vector errors:					
$\sigma \Delta$ Easting	0.010 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma \Delta$ X	0.012 ft
$\sigma \Delta$ Northing	0.010 ft	$\sigma$ Ellipsoid Dist.	0.009 ft	$\sigma \Delta$ Y	0.020 ft
$\sigma \Delta$ Elevation	0.023 ft	$\sigma \Delta$ Height	0.023 ft	$\sigma \Delta$ Z	0.013 ft

**Aposteriori Covariance Matrix (International foot<sup>2</sup>)**

	X	Y	Z
X	0.0000144074		
Y	0.0000128825	0.0000375472	
Z	-0.0000075785	-0.0000132731	0.0000150230

**Occupations**

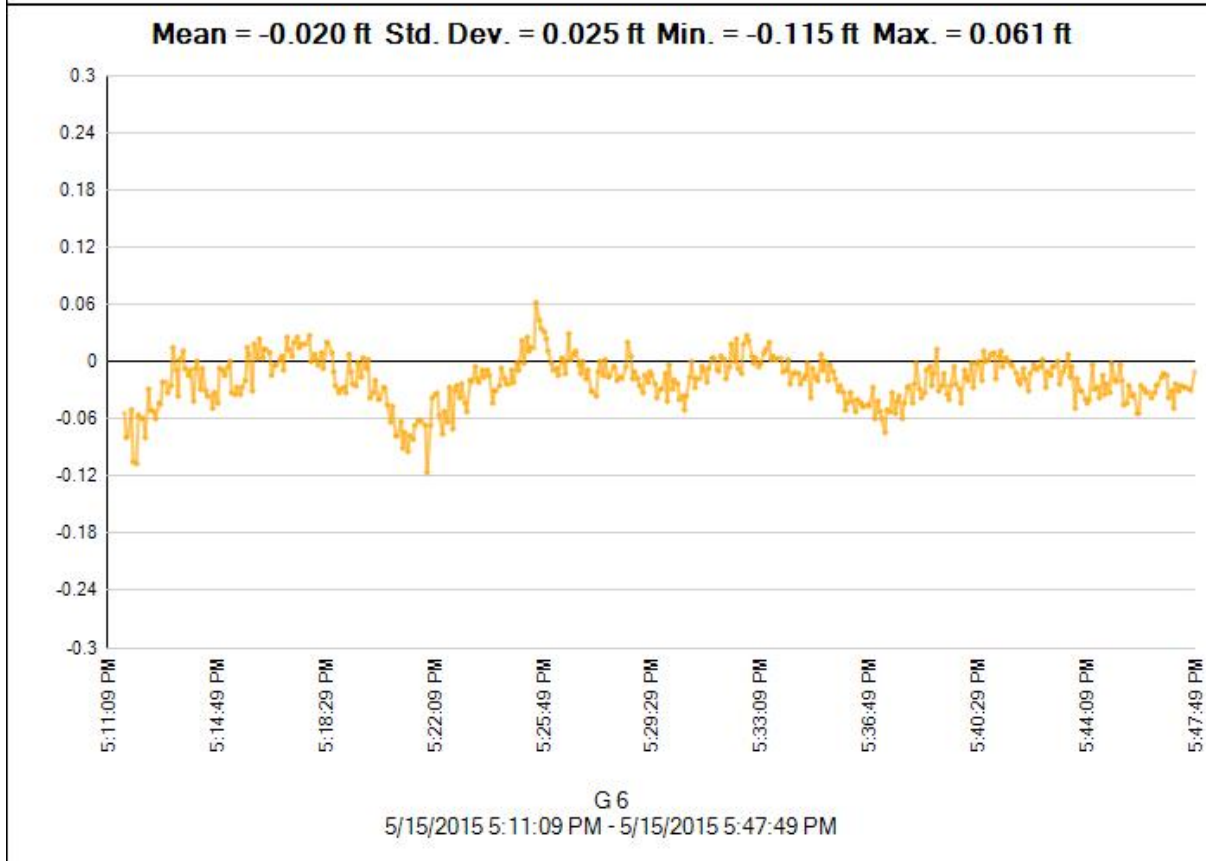
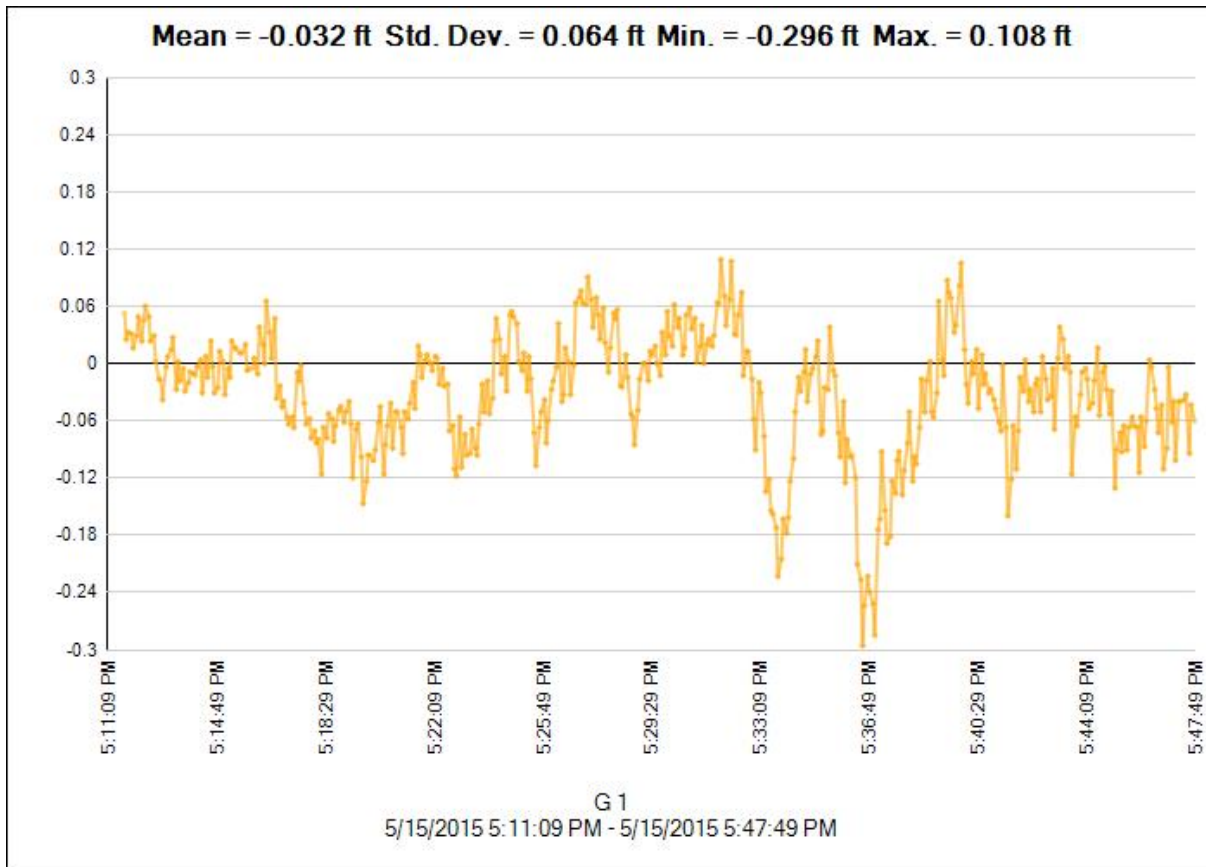
	From	To
Point ID:	AH8499	PAG124
Data file:	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851350.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191354 (resampled).15o
Receiver type:	5700	Geo Explorer 3
Receiver serial number:	0220271185	
Antenna type:	Zephyr	702 Rev 3.00
Antenna serial number:	00000000	-----
Antenna height (measured):	5.679 ft	5.062 ft
Antenna method:	Antenna Phase Center	Antenna Phase Center

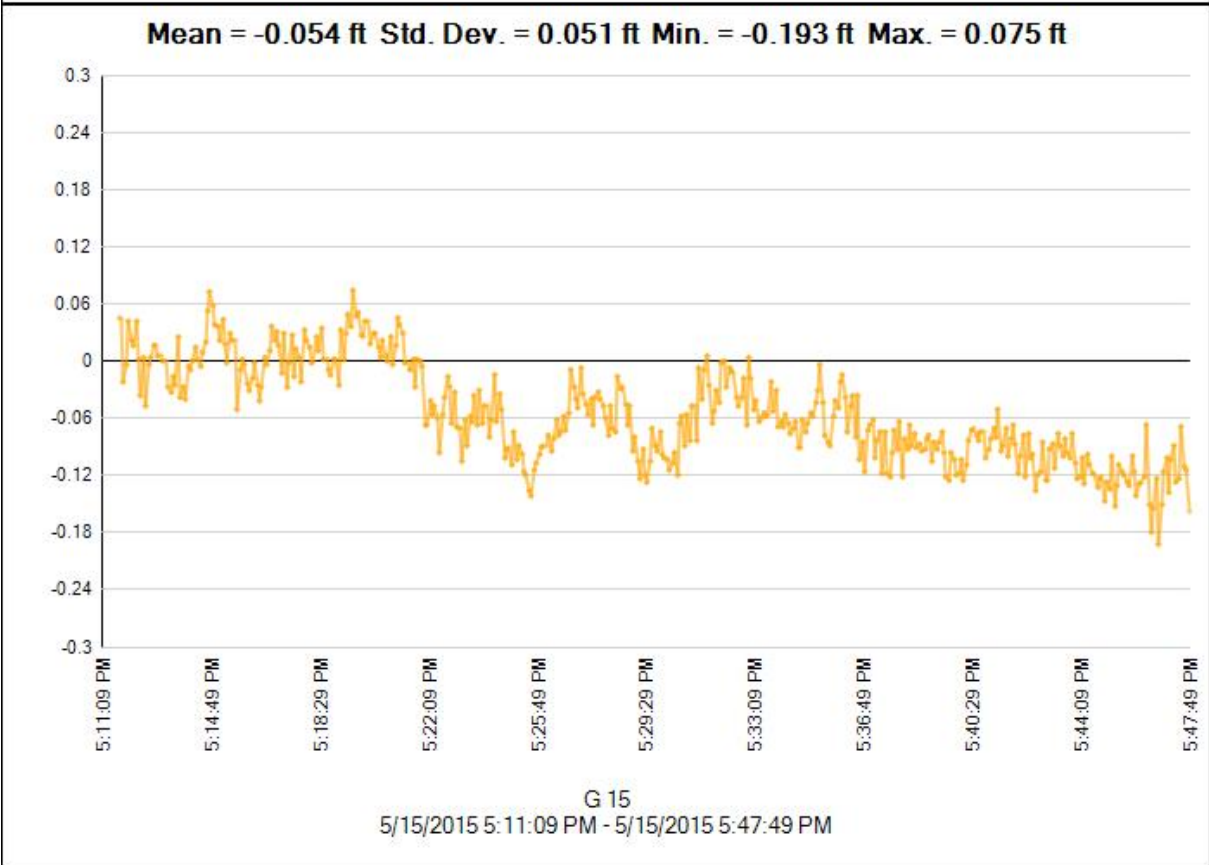
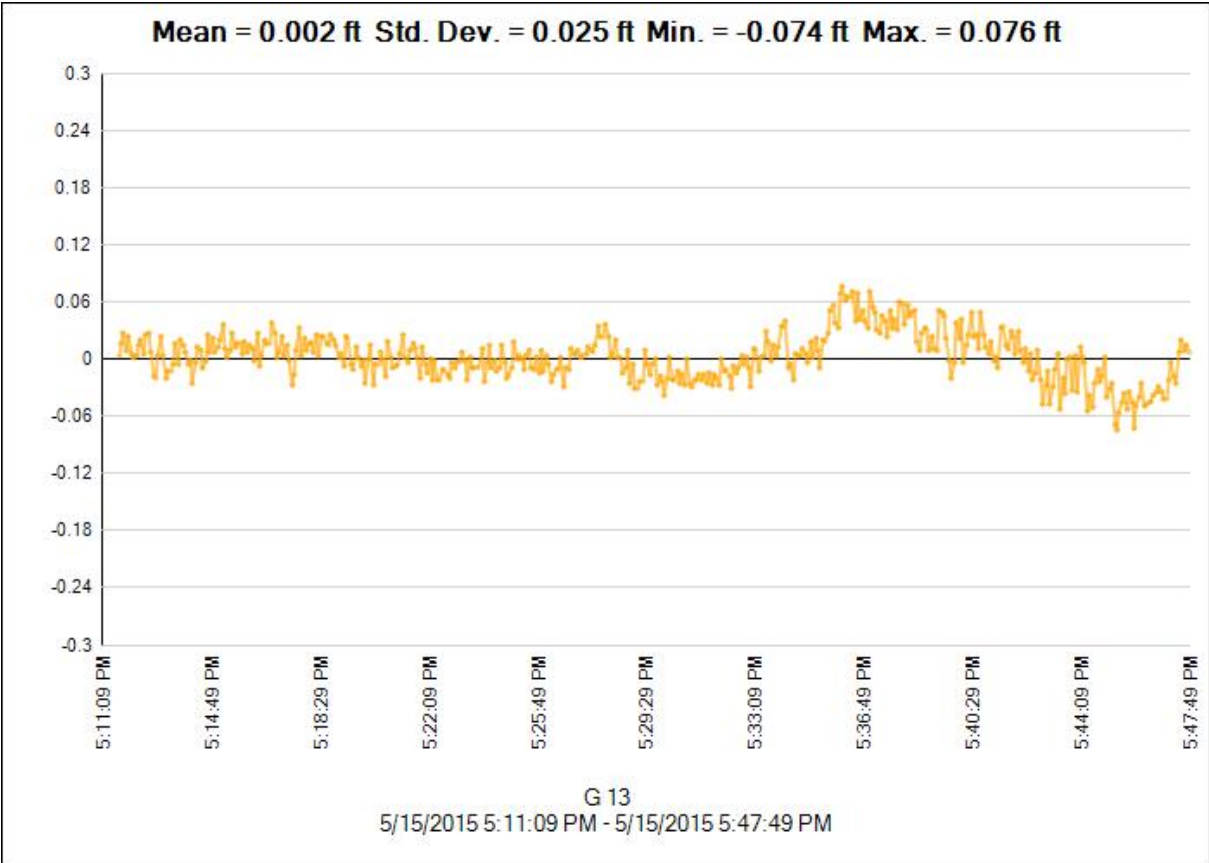
# Tracking Summary

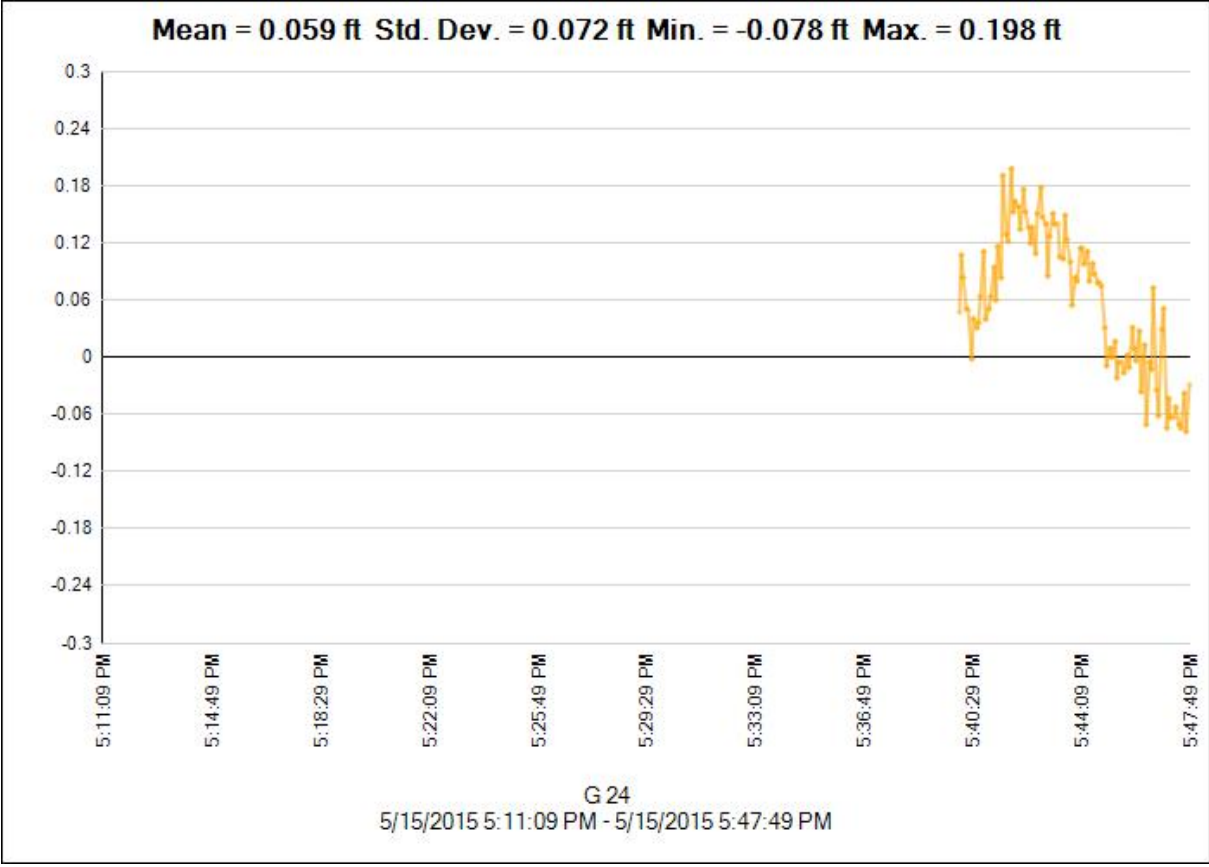
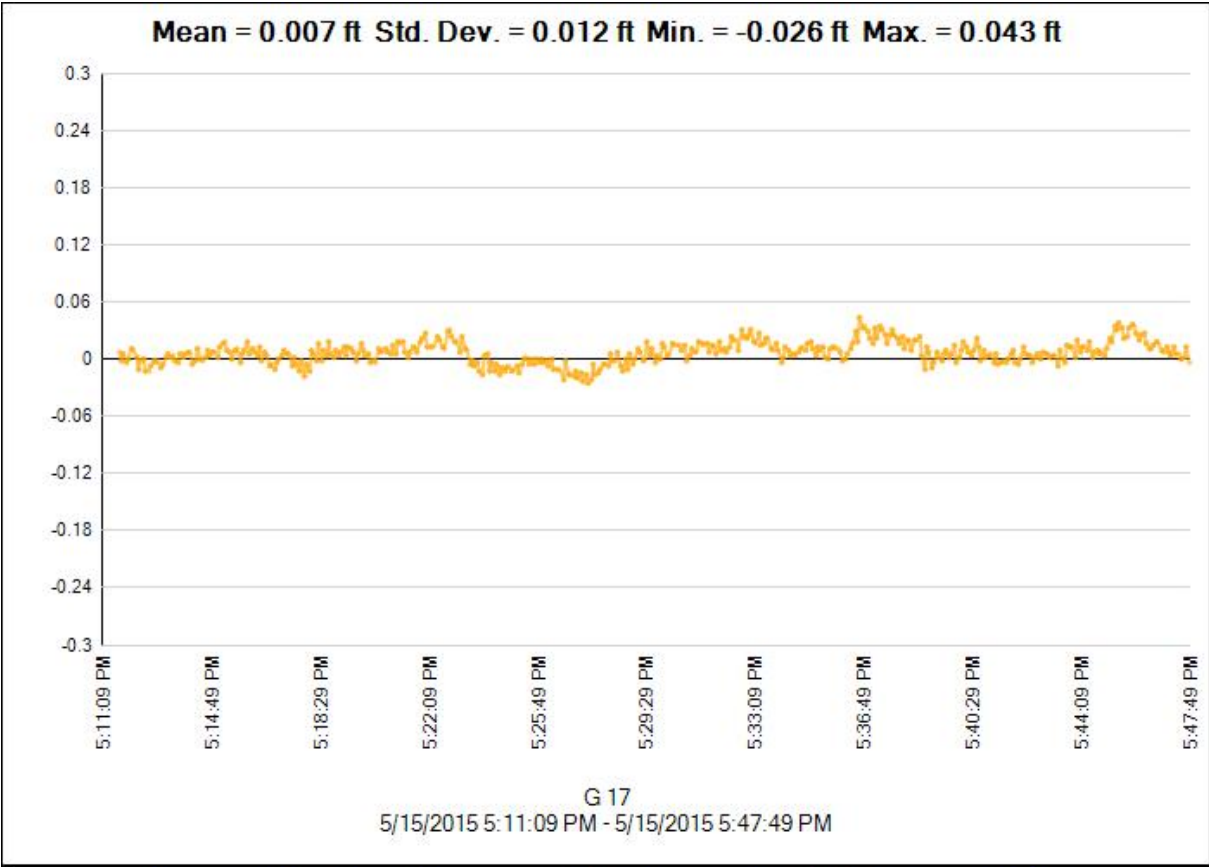
SV	5/15/2015 5:11:04 PM	Duration: 00:36:45	Major interval: 00:01:00	5/15/2015 5:47:49 PM
G 1	L1 L2			
G 2	L1 L2			
G 4	L1 L2			
G 6	L1 L2			
G 7	L1 L2			
G 11	L1 L2			
G 13	L1 L2			
G 15	L1 L2			
G 17	L1 L2			
G 24	L1 L2			
G 28	L1 L2			
G 30	L1 L2			

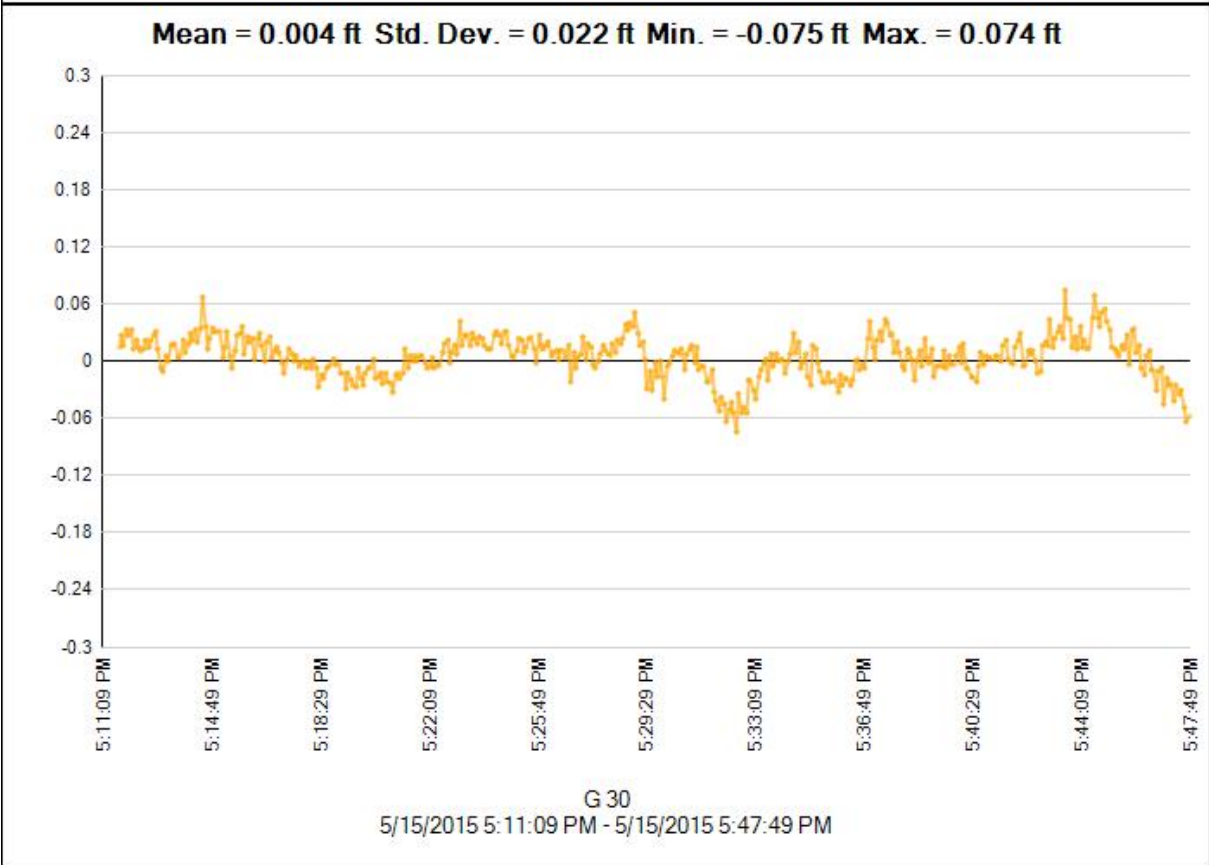
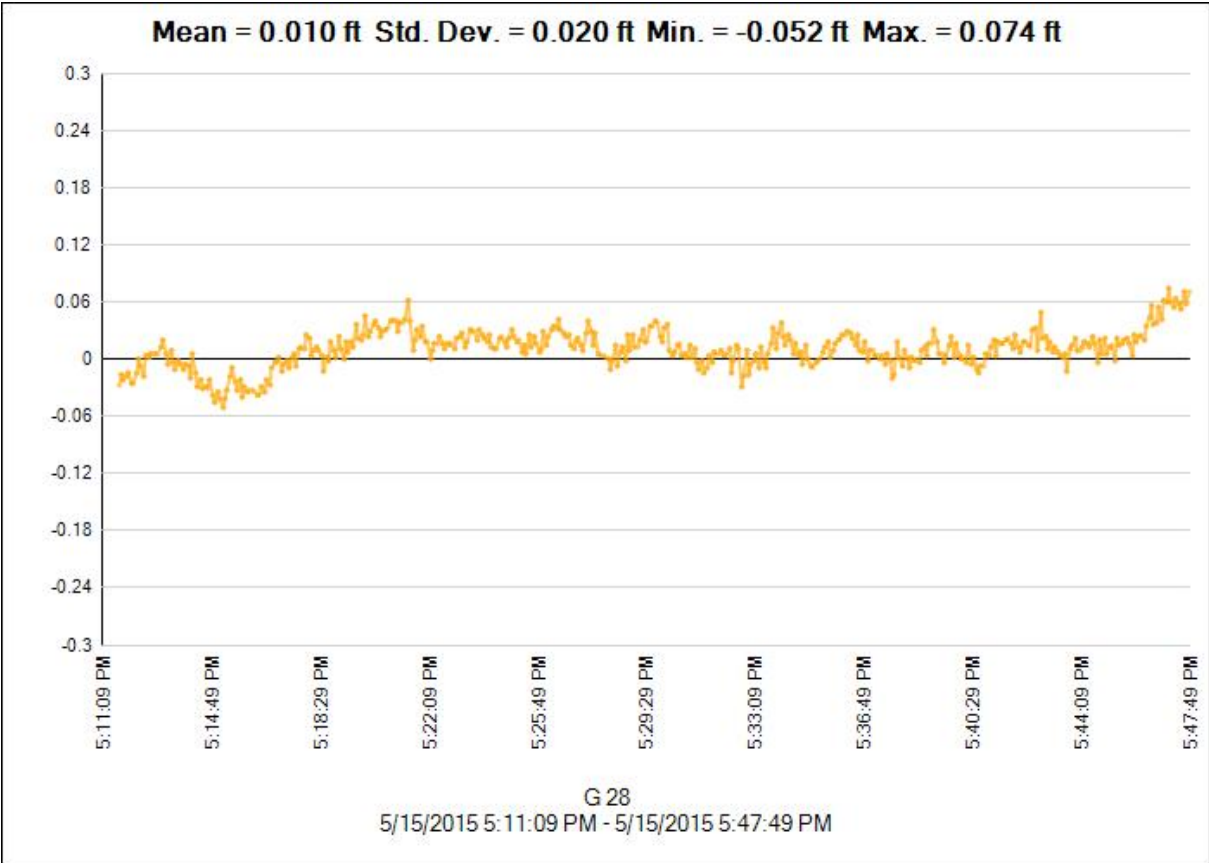


# Residuals











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**Processing style**

Elevation mask: 13.0 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

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**AH8499 - PAG104 (7:40:24 PM-8:16:54 PM) (S24)**

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Baseline observation: AH8499 --- PAG104 (B24)  
Processed: 5/29/2015 1:13:53 PM  
Solution type: Fixed  
Frequency used: Dual Frequency (L1, L2)  
Horizontal precision: 0.025 ft  
Vertical precision: 0.044 ft  
RMS: 0.003 ft  
Maximum PDOP: 2.970  
Ephemeris used: Broadcast  
Antenna model: NGS Absolute  
Processing start time: 5/15/2015 7:40:24 PM (Local: UTC-6hr)  
Processing stop time: 5/15/2015 8:16:54 PM (Local: UTC-6hr)  
Processing duration: 00:36:30  
Processing interval: 5 seconds

### Vector Components (Mark to Mark)

From:		AH8499			
Grid		Local		Global	
Easting	992150.996 ft	Latitude	N32°13'38.95375"	Latitude	N32°13'38.95375"
Northing	447775.021 ft	Longitude	W110°58'18.76641"	Longitude	W110°58'18.76641"
Elevation	2367.959 ft	Height	2271.928 ft	Height	2271.928 ft

To:		PAG104			
Grid		Local		Global	
Easting	1078569.653 ft	Latitude	N32°20'14.89416"	Latitude	N32°20'14.89415"
Northing	488666.598 ft	Longitude	W110°41'27.41287"	Longitude	W110°41'27.41287"
Elevation	4349.001 ft	Height	4257.526 ft	Height	4257.526 ft

Vector					
$\Delta$ Easting	86418.657 ft	NS Fwd Azimuth	65°10'56"	$\Delta$ X	88166.482 ft
$\Delta$ Northing	40891.577 ft	Ellipsoid Dist.	95602.122 ft	$\Delta$ Y	-12473.255 ft
$\Delta$ Elevation	1981.042 ft	$\Delta$ Height	1985.598 ft	$\Delta$ Z	34894.608 ft

### Standard Errors

Vector errors:					
$\sigma$ $\Delta$ Easting	0.007 ft	$\sigma$ NS fwd Azimuth	0°00'00"	$\sigma$ $\Delta$ X	0.009 ft
$\sigma$ $\Delta$ Northing	0.010 ft	$\sigma$ Ellipsoid Dist.	0.008 ft	$\sigma$ $\Delta$ Y	0.018 ft
$\sigma$ $\Delta$ Elevation	0.022 ft	$\sigma$ $\Delta$ Height	0.022 ft	$\sigma$ $\Delta$ Z	0.016 ft

### Aposteriori Covariance Matrix (International foot<sup>2</sup>)

	X	Y	Z
X	0.0000071475		
Y	0.0000074155	0.0000300693	
Z	-0.0000058436	-0.0000170081	0.0000231671

## Occupations

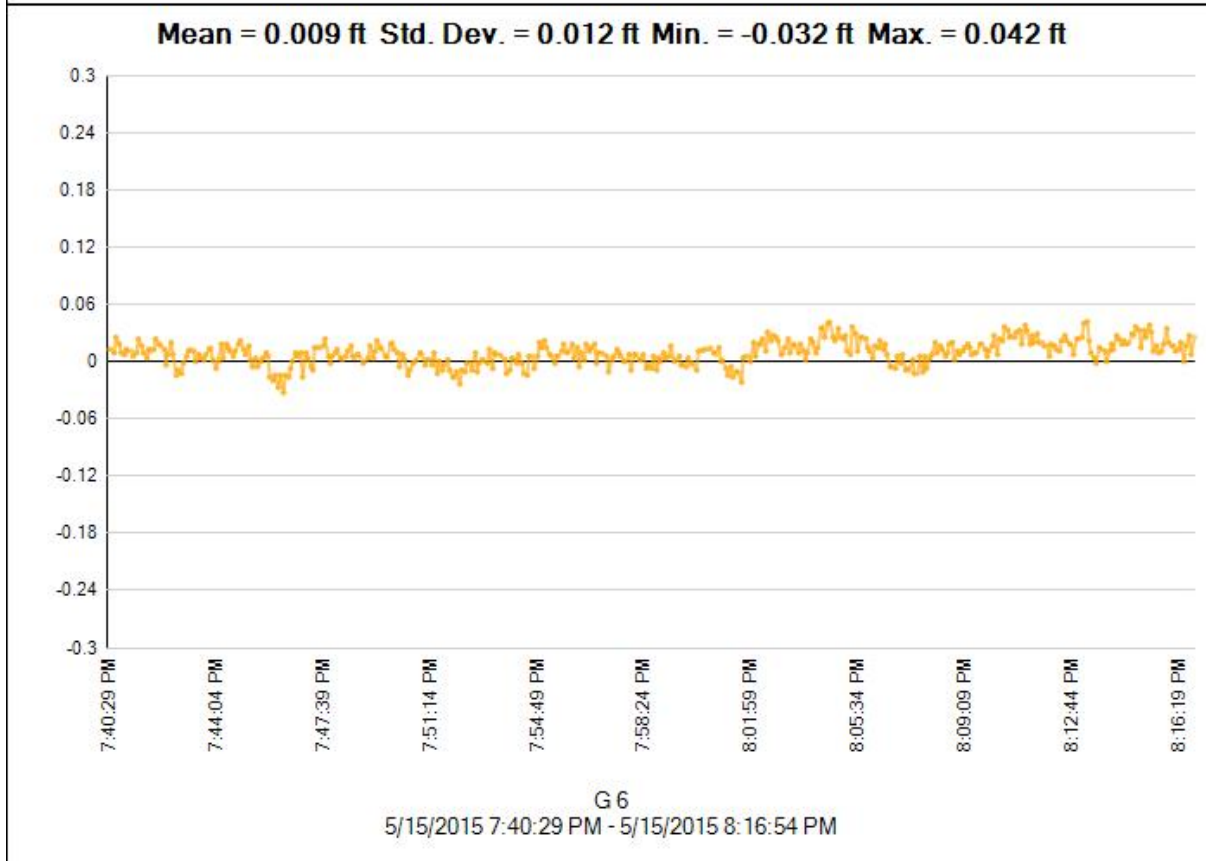
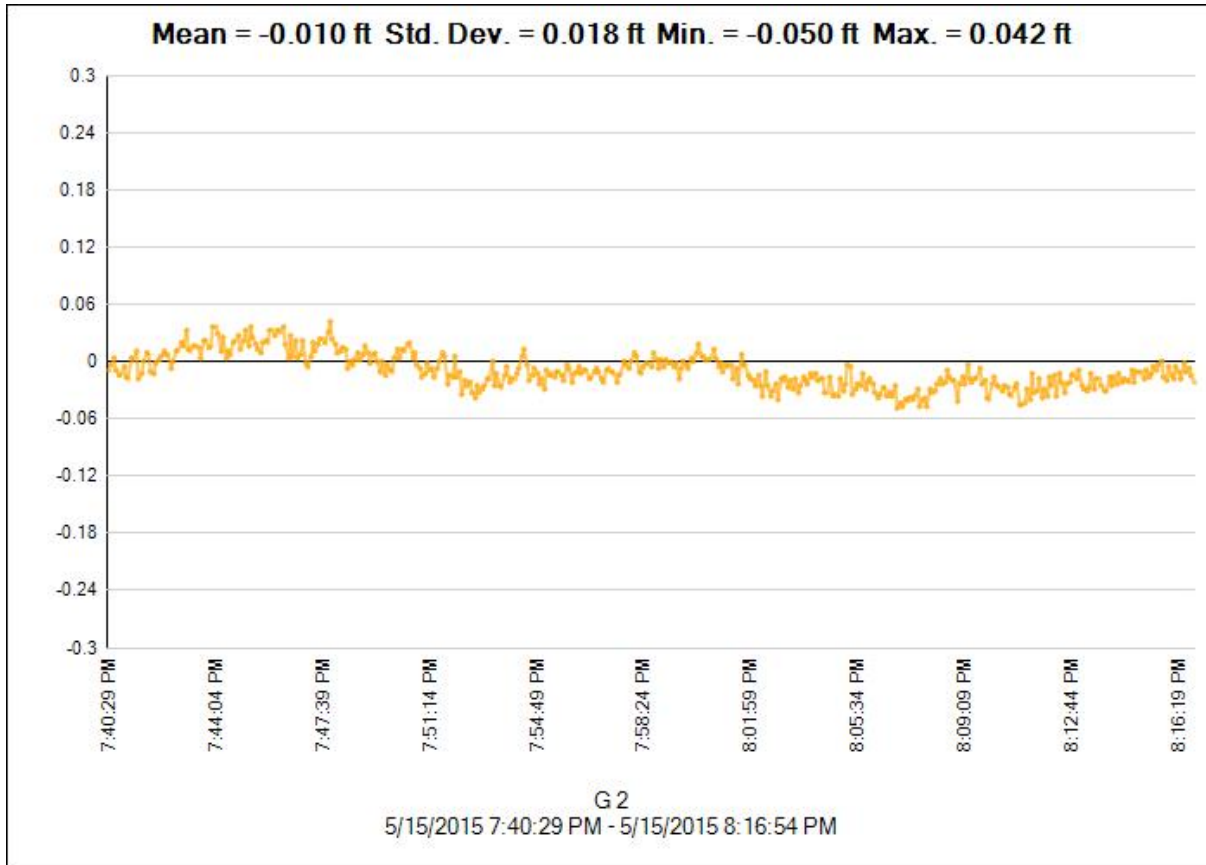
	From	To
<b>Point ID:</b>	AH8499	PAG104
<b>Data file:</b>	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\11851350.t00	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID\00191360 (resampled).15o
<b>Receiver type:</b>	5700	Geo Explorer 3
<b>Receiver serial number:</b>	0220271185	
<b>Antenna type:</b>	Zephyr	702 Rev 3.00
<b>Antenna serial number:</b>	00000000	-----
<b>Antenna height (measured):</b>	5.679 ft	5.646 ft
<b>Antenna method:</b>	Antenna Phase Center	Antenna Phase Center

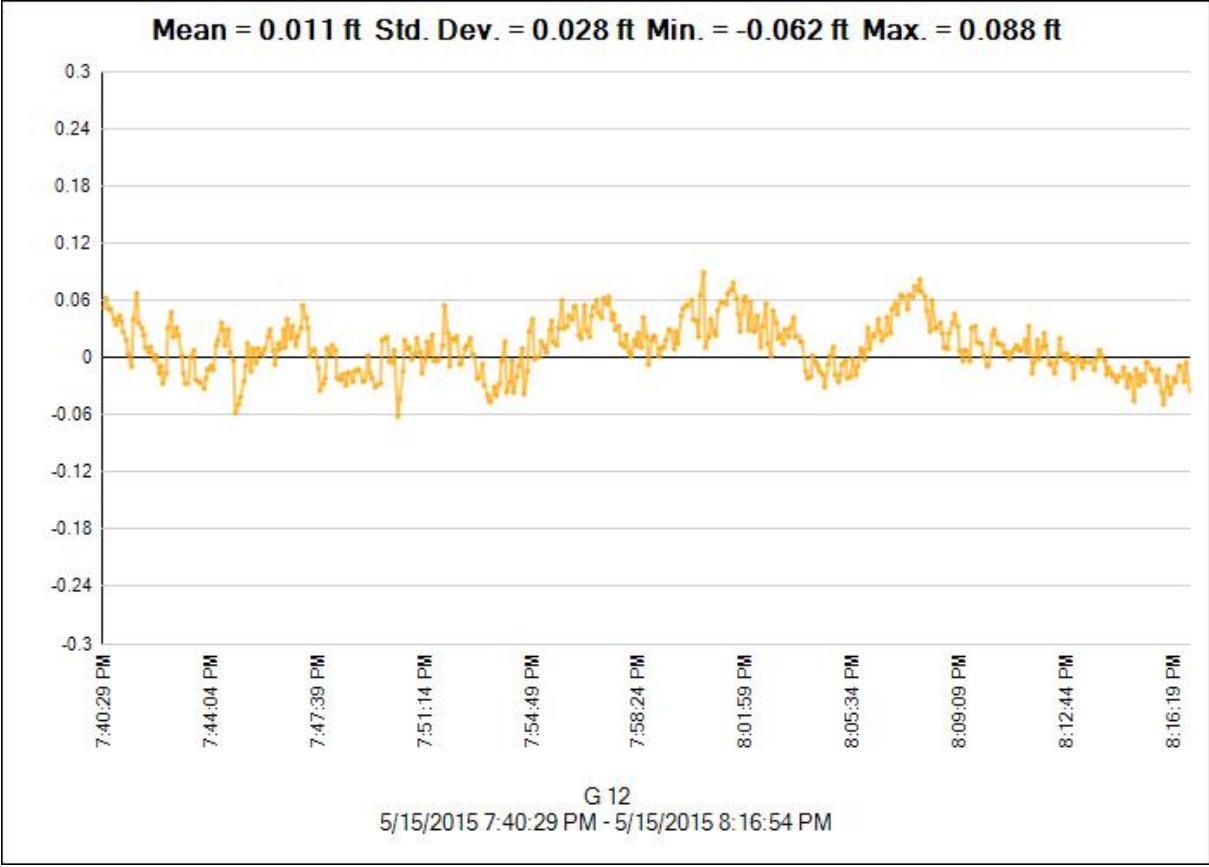
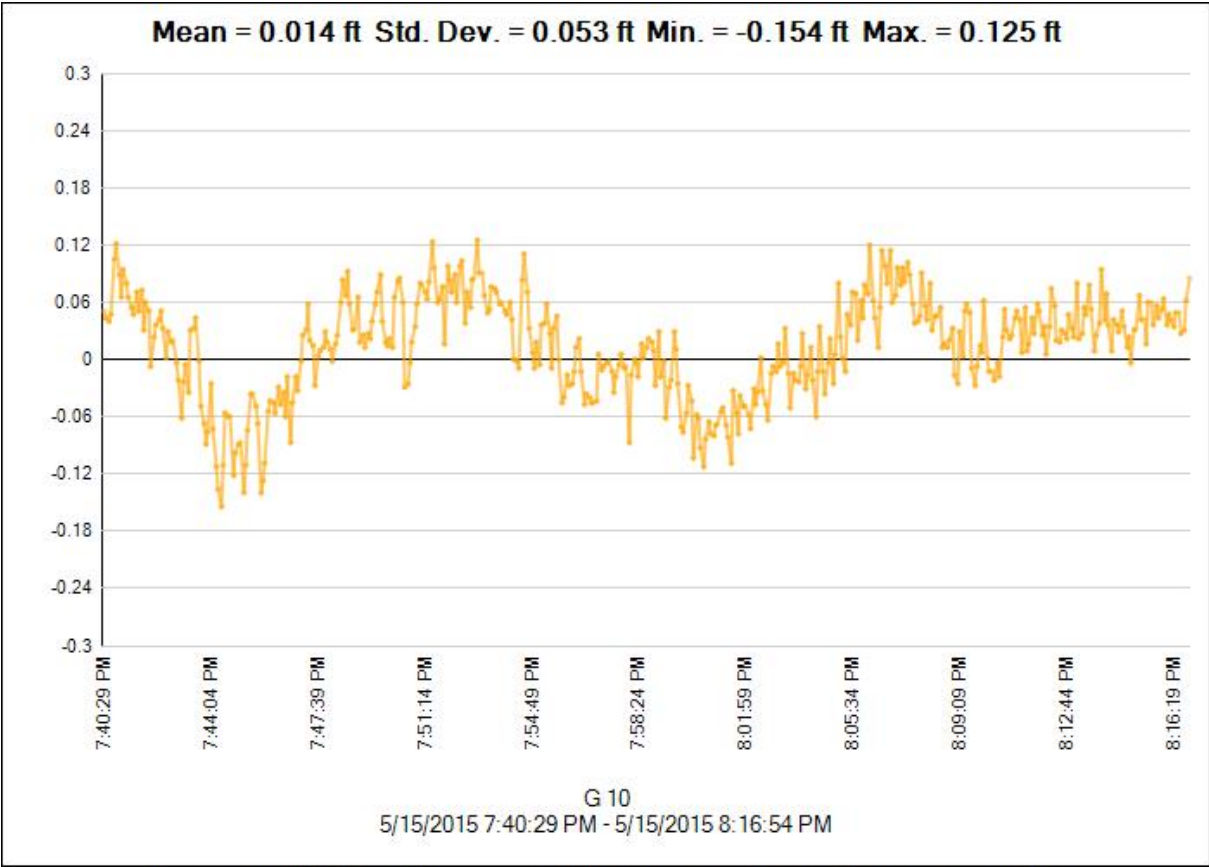
Tracking Summary

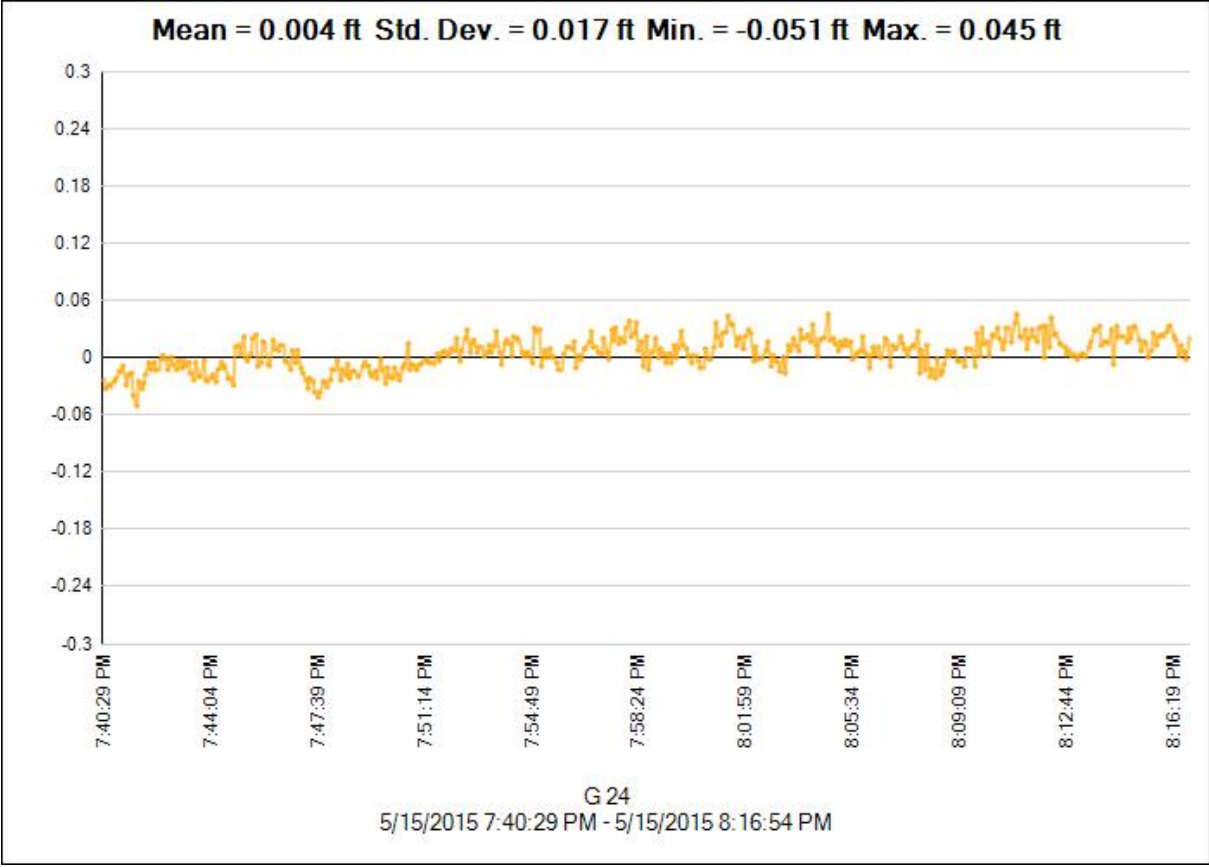
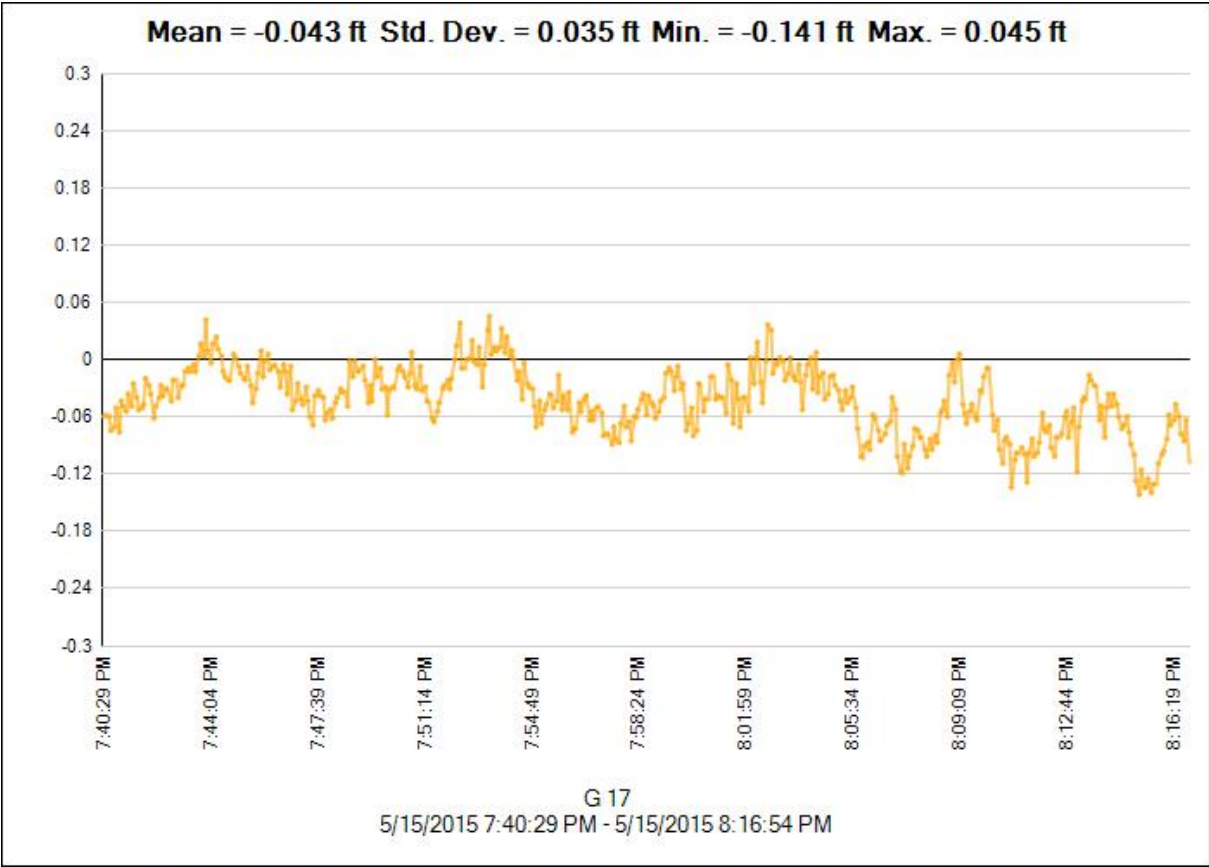
SV	5/15/2015 7:40:24 PM	Duration: 00:36:30 Major interval: 00:01:00	5/15/2015 8:16:54 PM
G 2	L1 L2		
G 6	L1 L2		
G 10	L1 L2		
G 12	L1 L2		
G 17	L1 L2		
G 24	L1 L2		



# Residuals









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**Processing style**

Elevation mask: 13.0 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 1:13:10 PM	\\conas\projects \312014478_PAG_2015\Acquisition \Ground_Survey\Adjustments\4478 PAG Photo PID.vce	Trimble Business Center
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