**OPUS Solution for Day 1**

FILE: 44570150.13o OP1359147692722  
  
 NGS OPUS SOLUTION REPORT  
 ========================  
  
All computed coordinate accuracies are listed as peak-to-peak values.  
For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>  
  
 USER: [dvaryu@usbr.gov](mailto:dvaryu@usbr.gov) DATE: January 25, 2013  
RINEX FILE: 4457015p.13o TIME: 21:02:21 UTC  
  
  
 SOFTWARE: page5 1209.04 [master53.pl](http://master53.pl/) 082112 START: 2013/01/15 15:22:00  
 EPHEMERIS: igr17232.eph [rapid] STOP: 2013/01/16 01:04:00  
 NAV FILE: brdc0150.13n OBS USED: 19822 / 20945 : 95%  
 ANT NAME: TRM\_R8\_GNSS NONE # FIXED AMB: 82 / 102 : 80%  
ARP HEIGHT: 1.718 OVERALL RMS: 0.014(m)  
  
  
 REF FRAME: NAD\_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2013.0406)  
  
  X: -2602196.541(m) 0.007(m) -2602197.393(m) 0.007(m)  
  Y: -4129651.517(m) 0.008(m) -4129650.248(m) 0.008(m)  
  Z: 4091816.619(m) 0.002(m) 4091816.608(m) 0.002(m)  
  
  LAT: 40 9 44.75448 0.004(m) 40 9 44.76716 0.004(m)  
  E LON: 237 47 2.20820 0.006(m) 237 47 2.14915 0.006(m)  
  W LON: 122 12 57.79180 0.006(m) 122 12 57.85085 0.006(m)  
 EL HGT: 48.480(m) 0.008(m) 48.000(m) 0.008(m)  
 ORTHO HGT: 76.981(m) 0.026(m) [NAVD88 (Computed using GEOID12A)]  
  
 UTM COORDINATES STATE PLANE COORDINATES  
  UTM (Zone 10) SPC (0401 CA 1)  
Northing (Y) [meters] 4446080.384 592084.832  
Easting (X) [meters] 566758.984 1981594.866  
Convergence [degrees] 0.50563036 -0.14127385  
Point Scale 0.99965486 0.99996305  
Combined Factor 0.99964726 0.99995545  
  
US NATIONAL GRID DESIGNATOR: 10TEK6675846080(NAD 83)  
  
  
 BASE STATIONS USED  
PID DESIGNATION LATITUDE LONGITUDE DISTANCE(m)  
DG7417 P026 HATCHARPT\_NM2004 CORS ARP N323932.244 W1071141.500 1576626.8  
DK7586 P120 CLINESCORNNM2007 CORS ARP N350026.823 W1053733.831 1566295.6  
DI2266 P107 GRANTS\_\_\_\_NM2006 CORS ARP N350755.832 W1075248.029 1378249.5  
  
  NEAREST NGS PUBLISHED CONTROL POINT  
LU1961 DIAMOND N400935.651 W1221326.307 730.3  
  
This position and the above vector components were computed without any  
knowledge by the National Geodetic Survey regarding the equipment or  
field operating procedures used.

**OPUS Solution for Day 2**

 FILE: 44570160.13o OP1359147747777  
  
 NGS OPUS SOLUTION REPORT  
 ========================  
  
All computed coordinate accuracies are listed as peak-to-peak values.  
For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>  
  
 USER: [dvaryu@usbr.gov](mailto:dvaryu@usbr.gov) DATE: January 25, 2013  
RINEX FILE: 4457016p.13o TIME: 21:03:28 UTC  
  
  
 SOFTWARE: page5 1209.04 [master2.pl](http://master2.pl/) 0821123 START: 2013/01/16 15:33:00  
 EPHEMERIS: igr17233.eph [rapid] STOP: 2013/01/17 00:07:00  
 NAV FILE: brdc0160.13n OBS USED: 17505 / 18840 : 93%  
 ANT NAME: TRM\_R8\_GNSS NONE # FIXED AMB: 97 / 118 : 82%  
ARP HEIGHT: 1.798 OVERALL RMS: 0.015(m)  
  
  
 REF FRAME: NAD\_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2013.0434)  
  
  X: -2602196.529(m) 0.041(m) -2602197.382(m) 0.041(m)  
  Y: -4129651.505(m) 0.046(m) -4129650.236(m) 0.046(m)  
  Z: 4091816.617(m) 0.015(m) 4091816.606(m) 0.015(m)  
  
  LAT: 40 9 44.75478 0.028(m) 40 9 44.76745 0.028(m)  
  E LON: 237 47 2.20835 0.012(m) 237 47 2.14927 0.012(m)  
  W LON: 122 12 57.79165 0.012(m) 122 12 57.85073 0.012(m)  
 EL HGT: 48.466(m) 0.056(m) 47.986(m) 0.056(m)  
 ORTHO HGT: 76.967(m) 0.097(m) [NAVD88 (Computed using GEOID12A)]  
  
 UTM COORDINATES STATE PLANE COORDINATES  
  UTM (Zone 10) SPC (0401 CA 1)  
Northing (Y) [meters] 4446080.393 592084.841  
Easting (X) [meters] 566758.987 1981594.870  
Convergence [degrees] 0.50563039 -0.14127382  
Point Scale 0.99965486 0.99996305  
Combined Factor 0.99964726 0.99995545  
  
US NATIONAL GRID DESIGNATOR: 10TEK6675846080(NAD 83)  
  
  
 BASE STATIONS USED  
PID DESIGNATION LATITUDE LONGITUDE DISTANCE(m)  
DI2266 P107 GRANTS\_\_\_\_NM2006 CORS ARP N350755.832 W1075248.029 1378249.5  
DG7417 P026 HATCHARPT\_NM2004 CORS ARP N323932.244 W1071141.500 1576626.8  
DK7586 P120 CLINESCORNNM2007 CORS ARP N350026.823 W1053733.831 1566295.6  
  
  NEAREST NGS PUBLISHED CONTROL POINT  
LU1961 DIAMOND N400935.651 W1221326.307 730.3  
  
This position and the above vector components were computed without any  
knowledge by the National Geodetic Survey regarding the equipment or  
field operating procedures used.