

OPUS-RS solution : 018773_14_269_A0.14O OP1411942728720

opus <opus@ngs.noaa.gov>

Sun 9/28/2014 4:23 PM

To: John Freetly <John.Freetly@neciusa.com>;

FILE: 018773_14_269_A0.14O OP1411942728720

6011 Warning - OPUS-RS was able to find a set of reference stations
6011 with data suitable for use with your dataset. However, your
6011 position does not fall within the polygon enclosing these reference
6011 stations. This means that the geographic interpolation algorithms
6011 performed within OPUS-RS must instead perform extrapolation.
6011 Extrapolation, especially if your position is far from the
6011 reference stations, is prone to error. Use this solution with
6011 caution.

wysh

mtei

bil6

p051

p722

Your station is 10.9 KM outside the polygon enclosing the reference stations

NGS OPUS-RS SOLUTION REPORT

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All computed coordinate accuracies are listed as 1-sigma RMS values.

For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: john.freetly@neciusa.com

DATE: September 28, 2014

RINEX FILE: 0187269u.14o

TIME: 22:23:04 UTC

SOFTWARE: rsgps 1.37 RS91.prl 1.99.2

START: 2014/09/26 20:49:30

EPHEMERIS: igr18115.eph [rapid]

STOP: 2014/09/26 21:48:30

NAV FILE: brdc2690.14n

OBS USED: 2220 / 2900 : 77%

ANT NAME: CHCX90D-OPUS NONE

QUALITY IND. 4.30/ 42.62

ARP HEIGHT: 1.8000

NORMALIZED RMS: 0.293

REF FRAME: NAD_83(2011)(EPOCH:2010.0000)

IGS08 (EPOCH:2014.73668)

X: -1327027.498(m) 0.006(m) -1327028.357(m) 0.006(m)

Y: -4310347.972(m) 0.016(m) -4310346.716(m) 0.016(m)

Z: 4496933.053(m) 0.014(m) 4496933.009(m) 0.014(m)

LAT: 45 6 33.32706 0.007(m) 45 6 33.34779 0.007(m)
 E LON: 252 53 16.66640 0.004(m) 252 53 16.61195 0.004(m)
 W LON: 107 6 43.33360 0.004(m) 107 6 43.38805 0.004(m)
 EL HGT: 1421.512(m) 0.021(m) 1420.812(m) 0.021(m)
 ORTHO HGT: 1435.551(m) 0.023(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

Northing (Y) [meters]	4997257.564	98370.367
Easting (X) [meters]	333855.921	787884.037
Convergence [degrees]	-1.49662190	1.74680489
Point Scale	0.99993942	0.99993618
Combined Factor	0.99971661	0.99971337

US NATIONAL GRID DESIGNATOR: 13TCK3385597257(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	35254.7
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	136319.3
DI3064	BIL6 BILLINGS 6 CORS ARP	N455816.251	W1075948.499	118137.9
DL7728	P051 BILLINGSAPMT2005 CORS ARP	N454823.741	W1083246.070	136361.2
DL7758	P722 YNPBASSRCHMT2005 CORS ARP	N452725.985	W1093415.586	196789.2

NEAREST NGS PUBLISHED CONTROL POINT

QV0414	BEAR	N450830.066	W1070941.881	5310.9
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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.