DPOS REPORT
JAVAD POST-PROCESSING SERVICE

USER:
FILE: 5001

DATE: 10/9/2020
TIME: 1:07:48 PM

SOFTWARE: Justin v.3(8/28/2020 9:44:30 AM)
EPHEMERIS: brdc
OBS USED: 12532 / 13455
ANT NAME: JAVTRIUMPH_2A NONE
ANT HEIGHT: Slant(SHMP) 5.010(sf)
ANT DELTA N/E/H:0.000/0.000/0.000

START: 10/8/2020 5:08:31 PM
STOP: 10/8/2020 7:25:33 PM
TIME SPAN: 136
FIXED AMB: No
OVERALL RMS: 0.004(sf)

REF FRAME:	NAD83(2011)(EPOCH:2010.0000)		ITRF2014 (EPOCH:2020.7712)	
X:	3147709.633(sf)	0.002(sf)	3147706.698(sf)	0.002(sf)
Y:	-16630845.866(sf)	0.003(sf)	-16630841.040(sf)	0.003(sf)
Z:	12263585.623(sf)	0.002(sf)	12263585.334(sf)	0.002(sf)
LAT:	N 36° 06' 27.87591"	0.002(sf)	N 36° 06' 27.90441"	0.002(sf)
E LON:	E 280° 43' 03.20859"	0.003(sf)	E 280° 43' 03.18446"	0.003(sf)
W LON:	W 79° 16' 56.79141"	0.003(sf)	W 79° 16' 56.81554"	0.003(sf)
EL HGT:	508.588(sf)	0.003(sf)	504.147(sf)	0.003(sf)
ORTHO HGT:	607.885(sf)	0.003(sf)	[NAVD88 (Computed using GEOID18)]	

	UTM COORDINATES (UTM (Zone 17))	STATE PLANE COORDINATES (SPC (North Carolina))
Northing (Y) [survey feet]	13114359.015	858238.892
Easting (X) [survey feet]	2147619.426	1916565.479
Convergence [degrees]	1.01051115	-0.16301715
Point Scale	0.99989449	0.99998409
Combined Factor	0.99987016	0.99995976

US NATIONAL GRID DESIGNATOR:

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(sf)
NONE	ASUB	N 36° 12' 50.84468"	W 81° 40' 54.64805"	709400.331
NONE	DOBS	N 36° 25' 31.51453"	W 80° 43' 11.71060"	439289.088
NONE	DURH	N 35° 59' 46.12936"	W 78° 53' 58.03646"	120288.465
NONE	UVFM	N 37° 52' 43.46502"	W 78° 41' 37.24854"	667354.268
NONE	WVLE	N 37° 49' 20.20229"	W 80° 25' 18.55691"	707464.885

RESIDUALS OF POSITION

VECTOR	dX (sf)	dY (sf)	dZ (sf)	dN (sf)	dE (sf)	dU (sf)
	0.002	0.003	0.002	0.002	0.003	0.003
	0.002	0.003	0.002	0.002	0.003	0.003
	0.002	0.003	0.002	0.002	0.003	0.003

Single solution report

Solution name:	DOBS - 5001	Solution type:	Fixed
Processed at:	10/9/2020 1:07:30 PM	Fix ratio:	97%
Begin time:	10/8/2020 5:09:00 PM	Time span, min:	136
End time:	10/8/2020 7:25:30 PM	Rec interval, sec:	30.000
Measurement used:	11545 of 13981 (17% discarded)	RMS residual:	0.013(m)
Used satellites:	GPS(10)/GLONASS(9)		
Used obs:			

Ephemeris:	Broadcast	Temperature, °C:	20
Cut off ?ngle,°:	12	Pressure, hPa:	980
Processing mode:	Auto	Humidity, %:	50

Point name:	DOBS	5001	
Session name:	dobs2820.20d.Z	5001_130811.jps	
Receiver type:	TRIMBLE ALLOY	JAVAD TRIUMPH2	
Receiver number:		00037	
Receiver ID:	5818R40024	014NCYOOD95AA1K6A742KICKQG	
Antenna type:	TRM115000.00 NONE	JAVTRIUMPH_2A NONE	
Serial number:	6122223871		
Antenna ARP height,(m)	Vertical(ARP)-0.000	Slant(SHMP)-1.527	
Antenna delta N/E/H,(m)	0.000/0.000/0.000	0.000/0.000/0.000	
Phase center variations:			
X, m	828618.663	36.4959422.92295	36.107751242803
Y, m	-5071130.926	-80.-5069090.4873	-79.2824487605324
Z, m	3766480.888	339.3737948.2881	153.665653059282
Latitude	N 36° 25' 31.54270"	N 36° 06' 27.90447"	
Longitude	W 80° 43' 11.73652"	W 79° 16' 56.81554"	
Height, m	339.305	153.666	

DX,(m):	130804.2620	Sigma X, m:	0.0026
DY,(m):	2040.4013	Sigma Y, m:	0.0026
DZ,(m):	-28532.5836	Sigma Z, m:	0.0026
Baseline length,(m):	133895.5807	SL,(m):	0.0126

Covariance matrix,(m):	X	Y	Z
X	6.786832E-006		
Y	-1.785873E-005	9.573838E-005	
Z	1.366921E-005	-6.972388E-005	5.681954E-005

Ellipsoidal distance,(m): 133892.73761739
Forward azimuth,°: 104.83838241
Back azimuth,°: 285.689
Elevation angle forward,°: -0.680
Elevation angle backward,°: -0.521
Height difference,(m): -185.639

Solution name:	DURH - 5001	Solution type:	Fixed
Processed at:	10/9/2020 1:07:30 PM	Fix ratio:	100%
Begin time:	10/8/2020 5:09:00 PM	Time span, min:	136
End time:	10/8/2020 7:25:30 PM	Rec interval, sec:	30.000
Measurement used:	12609 of 13980 (10% discarded)	RMS residual:	0.014(m)

Used satellites: GPS(10)/GLONASS(10)
Used obs:

Ephemeris:	Broadcast	Temperature, °C:	20
Cut off ?ngle,°:	12	Pressure, hPa:	980
Processing mode:	Auto	Humidity, %:	50

Point name:	DURH	5001	
Session name:	durh2820.20d.Z	5001_130811.jps	
Receiver type:	TRIMBLE NETR9	JAVAD TRIUMPH2	
Receiver number:		00037	
Receiver ID:	5245K40273	014NCYOOD95AA1K6A742KICKQG	
Antenna type:	TRM57971.00 NONE	JAVTRIUMPH_2A NONE	
Serial number:	2612177119		
Antenna ARP height,(m)	Vertical(ARP)-0.000	Slant(SHMP)-1.527	
Antenna delta N/E/H,(m)	0.000/0.000/0.000	0.000/0.000/0.000	
Phase center variations:			
X, m	994682.285	35.9959422.92275	36.107751242803
Y, m	-5069685.596	-78.-5069090.4873	-79.2824487605324
Z, m	3727914.750	116.3737948.2881	153.665653059282
Latitude	N 35° 59' 46.15800"	N 36° 06' 27.90447"	
Longitude	W 78° 53' 58.06010"	W 79° 16' 56.81554"	
Height, m	116.106	153.666	

DX,(m):	-35259.3634	Sigma X, m:	0.0027
DY,(m):	595.0612	Sigma Y, m:	0.0027
DZ,(m):	10033.5902	Sigma Z, m:	0.0027
Baseline length,(m):	36664.0115	SL,(m):	0.0139

Covariance matrix,(m):	X	Y	Z
X	7.498619E-006		
Y	-2.144141E-005	1.184718E-004	
Z	1.661130E-005	-8.625228E-005	6.831673E-005

Ellipsoidal distance,(m): 36663.25385965
Forward azimuth,°: -70.14803731
Back azimuth,°: 109.627
Elevation angle forward,°: -0.106
Elevation angle backward,°: -0.223
Height difference,(m): 37.559

Solution name:	ASUB - 5001	Solution type:	Float
Processed at:	10/9/2020 1:07:30 PM	Fix ratio:	0%
Begin time:	10/8/2020 5:09:00 PM	Time span, min:	136
End time:	10/8/2020 7:25:30 PM	Rec interval, sec:	30.000
Measurement used:	13097 of 14005 (6% discarded)	RMS residual:	0.071(m)

Used satellites: GPS(10)/GLONASS(10)
Used obs:

Ephemeris:	Broadcast	Temperature, °C:	20
Cut off ?ngle,°:	12	Pressure, hPa:	980
Processing mode:	Auto	Humidity, %:	50

Point name:	ASUB	5001
Session name:	asub2820.20d.Z	5001_130811.jps

Receiver type:	TRIMBLE NETR5	JAVAD TRIUMPH2	
Receiver number:		00037	
Receiver ID:	5003K65297	014NCYOOD95AA1K6A742KICKQG	
Antenna type:	TRM57971.00 NONE	JAVTRIUMPH_2A NONE	
Serial number:	1441003041		
Antenna ARP height,(m)	Vertical(ARP)-0.000	Slant(SHMP)-1.527	
Antenna delta N/E/H,(m)	0.000/0.000/0.000	0.000/0.000/0.000	
Phase center variations:			
X, m	745448.901	36.2959422.92234	36.107751242803
Y, m	-5098561.752	-81.-5069090.4879	-79.2824487605324
Z, m	3747953.095	956.3737948.2889	153.665653059282
Latitude	N 36° 12' 50.87224"	N 36° 06' 27.90447"	
Longitude	W 81° 40' 54.67491"	W 79° 16' 56.81554"	
Height, m	956.576	153.666	

DX,(m):	213974.0262	Sigma X, m:	0.0003
DY,(m):	29471.2685	Sigma Y, m:	0.0003
DZ,(m):	-10004.8133	Sigma Z, m:	0.0003
Baseline length,(m):	216225.6595	SL,(m):	0.0006

Covariance matrix,(m):

	X	Y	Z
X	8.008792E-008		
Y	1.859930E-009	1.399865E-007	
Z	-4.574463E-009	-8.227649E-008	8.831553E-008

Ellipsoidal distance,(m):	216215.69633369
Forward azimuth,°:	92.42107685
Back azimuth,°:	273.837
Elevation angle forward,°:	-1.183
Elevation angle backward,°:	-0.757
Height difference,(m):	-802.911

Solution name:	UVFM - 5001	Solution type:	Float
Processed at:	10/9/2020 1:07:29 PM	Fix ratio:	0%
Begin time:	10/8/2020 5:09:00 PM	Time span, min:	136
End time:	10/8/2020 7:25:30 PM	Rec interval, sec:	30.000
Measurement used:	12532 of 13455 (7% discarded)	RMS residual:	0.071(m)
Used satellites:	GPS(10)/GLONASS(9)		
Used obs:			

Ephemeris:	Broadcast	Temperature, °C:	20
Cut off ?ngle,°:	12	Pressure, hPa:	980
Processing mode:	Auto	Humidity, %:	50

Point name:	UVFM	5001	
Session name:	uvfm2820.20d.Z	5001_130811.jps	
Receiver type:	TRIMBLE NETR9	JAVAD TRIUMPH2	
Receiver number:		00037	
Receiver ID:	5037K70399	014NCYOOD95AA1K6A742KICKQG	
Antenna type:	ASH701945E_M NONE	JAVTRIUMPH_2A NONE	
Serial number:	CR620012202		
Antenna ARP height,(m)	Vertical(ARP)-0.000	Slant(SHMP)-1.527	
Antenna delta N/E/H,(m)	0.000/0.000/0.000	0.000/0.000/0.000	
Phase center variations:			
X, m	988330.490	37.8959422.92285	36.107751242803
Y, m	-4943276.264	-78.-5069090.487	-79.2824487605324
Z, m	3895144.843	512.3737948.2889	153.665653059282
Latitude	N 37° 52' 43.49517"	N 36° 06' 27.90447"	
Longitude	W 78° 41' 37.27323"	W 79° 16' 56.81554"	
Height, m	512.946	153.666	

DX,(m):	-28907.5748	Sigma X, m:	0.0003
DY,(m):	-125814.2212	Sigma Y, m:	0.0003
DZ,(m):	-157196.5512	Sigma Z, m:	0.0003
Baseline length,(m):	203409.9846	SL,(m):	0.0005

Covariance matrix,(m):

	X	Y	Z
X	7.382735E-008		
Y	3.402136E-009	1.332514E-007	
Z	-4.145425E-009	-7.853066E-008	8.328947E-008

Ellipsoidal distance,(m):	203407.67988710
Forward azimuth,°:	-164.89064222
Back azimuth,°:	14.755
Elevation angle forward,°:	-1.017
Elevation angle backward,°:	-0.815
Height difference,(m):	-359.281

Solution name:	WVLE - 5001	Solution type:	Float
Processed at:	10/9/2020 1:07:29 PM	Fix ratio:	0%
Begin time:	10/8/2020 5:09:00 PM	Time span, min:	136
End time:	10/8/2020 7:25:30 PM	Rec interval, sec:	30.000
Measurement used:	13097 of 14005 (6% discarded)	RMS residual:	0.071(m)
Used satellites:	GPS(10)/GLONASS(10)		
Used obs:			

Ephemeris:	Broadcast	Temperature, °C:	20
Cut off ?ngle,°:	12	Pressure, hPa:	980
Processing mode:	Auto	Humidity, %:	50

Point name:	WVLE	5001	
Session name:	wvle2820.20d.Z	5001_130811.jps	
Receiver type:	TRIMBLE NETR5	JAVAD TRIUMPH2	
Receiver number:		00037	
Receiver ID:	4922K62087	014NCYOOD95AA1K6A742KICKQG	
Antenna type:	TRM57971.00 NONE	JAVTRIUMPH_2A NONE	
Serial number:	1440921229		
Antenna ARP height,(m)	Vertical(ARP)-0.000	Slant(SHMP)-1.527	
Antenna delta N/E/H,(m)	0.000/0.000/0.000	0.000/0.000/0.000	
Phase center variations:			
X, m	839464.243	37.8959422.92226	36.107751242803
Y, m	-4974736.098	-80.-5069090.4873	-79.2824487605324
Z, m	3890283.221	655.3737948.2888	153.665653059282
Latitude	N 37° 49' 20.23162"	N 36° 06' 27.90447"	
Longitude	W 80° 25' 18.58348"	W 79° 16' 56.81554"	
Height, m	655.209	153.666	

DX,(m):	119958.6814	Sigma X, m:	0.0003
DY,(m):	-94354.3946	Sigma Y, m:	0.0003
DZ,(m):	-152334.9301	Sigma Z, m:	0.0003
Baseline length,(m):	215635.7297	SL,(m):	0.0005

Covariance matrix,(m):

	X	Y	Z
X	7.824287E-008		
Y	1.794114E-009	1.366090E-007	
Z	-4.419081E-009	-8.012331E-008	8.624086E-008

Ellipsoidal distance,(m):	215631.75670211
Forward azimuth,°:	151.58674235
Back azimuth,°:	332.272
Elevation angle forward,°:	-1.104
Elevation angle backward,°:	-0.837
Height difference,(m):	-501.543