GEODETIC DEFORMATION ANALYSIS REPORT

by DefAn-for-GNSS-networks

01 09 2021

Parameters and Coordinates

Number of stations: 7

Table 1: Coordinates of Epoch on 26-07-2016

	X	Y	Z
OBJ1	4243567.00431	2704027.40407	3908127.17313
REF1	4243518.20000	2703302.02670	3908682.53772
REF2	4242829.72119	2704599.89340	3908471.96318
REF3	4243560.22072	2704124.37826	3908055.15874
REF4	4243857.45420	2705157.21786	3906968.93647
REF5	4244172.14953	2703935.77248	3907567.35177
REF6	4243885.68739	2703794.60289	3907970.26256

Table 2: Coordinates of Epoch on 27-07-2016

	X	Y	Z
OBJ1	4243567.00966	2704027.40129	3908127.17277
REF1	4243518.19917	2703302.02720	3908682.53788
REF2	4242829.72039	2704599.89391	3908471.96331
REF3	4243560.21989	2704124.37873	3908055.15883
REF4	4243857.45330	2705157.21831	3906968.93643
REF5	4244172.14845	2703935.77289	3907567.35174
REF6	4243885.68648	2703794.60332	3907970.26261

Variance Ratio Test

A Posteriori RMS of Unit Weight of Epoch on 26-07-2016 : 0.00143~m

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Pooled Variance Factor on 27-07-2016 : 2.04

Pooled variance factor values are in mm^2 .

Significance Level of Variance Ratio Test : $0.05\,$

Variance ratio test passed for 27-07-2016

Results of Geodetic Deformation Analysis

Number of Iterations: 3

Significance Level of Single Point Test: 0.05

Critical Value on 27-07-2016: 2.6049

Table 3: Single Point Test Results on 27-07-2016

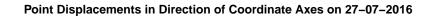
Station	DX (mm)	DY (mm)	DZ (mm)	Disp Vector (mm)	Test Value	Status
OBJ1 REF1	6.2417 0.0617	-3.2417 0.0383	-0.4200 0.1000	7.0458 0.1236	8.0295 0.0245	unstable stable
REF2	0.0917	0.0483	0.0700	0.1251	0.0168	stable
REF3 REF4	0.0617 -0.0083	0.0083 -0.0117	0.0300 -0.1000	$0.0691 \\ 0.1010$	$0.0178 \\ 0.0415$	$rac{ ext{stable}}{ ext{stable}}$
REF5 $ REF6$	-0.1883 -0.0183	-0.0517 -0.0317	-0.0900 -0.0100	$0.2150 \\ 0.0379$	$0.0874 \\ 0.0056$	stable stable

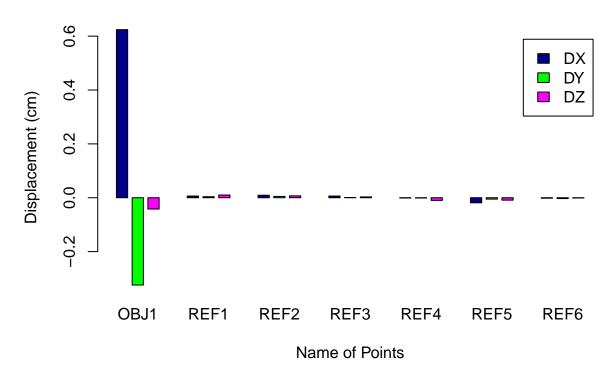
Table 4: Displacements in Local Geodetic Coordinate System on 27-07-2016

Station	Dn (mm)	De (mm)	Du (mm)	Disp Vector (mm)
OBJ1	-2.5002	-6.0880	2.5157	7.0458
REF1	0.0340	-0.0008	0.1188	0.1236
REF2	-0.0085	-0.0085	0.1245	0.1251
REF3	-0.0112	-0.0261	0.0630	0.0691
REF4	-0.0706	-0.0054	-0.0721	0.1010
REF5	0.0440	0.0576	-0.2024	0.2150
REF6	0.0121	-0.0169	-0.0317	0.0379

Plots of Point Displacements

Plots of displacements are given as follows.





Point Displacements in Direction of Topocentric Coordinate Axes on 27-07-2016

