



Preliminary Adjustment of New Coordinate System S-JTSK/05

A. Cepek (1), J. Kostelecky (1,2), J. Pytel (1)

(1) CTU, Faculty of Civil Engineering, CZ - 166 29 Praha 6 (cepek@fsv.cvut.cz), (2) Research
Intitute of Geodesy, CZ - 251 65 Zdiby 98 (kost@fsv.cvut.cz)

Preliminary adjustment of new coordinate system S-JTSK/05. Since the beginning of the nineties, a formation of a unified reference frame for Europe has been in progress, under the International Association of Geodesy (IAG) umbrella. The Czech Republic (the Czechoslovakia at that time) joined this project in 1991 when the first international campaign EUREF-CS/H-91 was launched. From 1996 two independent observation campaigns has been carried in the Czech Republic resulting in 3094 trigonometric points with coordinates based on GPS technology and about 30 thousands of densification points. These observation results are going to be a subject of a new sequential adjustment based constrained to coordinates of the CZEPOS permanent stations with known coordinates in ETRS89. This new adjustment will lead to an improved coordinate system S-JTSK/05. For the adjustment of the given sets of GPS vectors with given variance-covariance matrices has been selected free software GNU Gama.