

METHODS OF LONG BASELINE GNSS-BASED GEODETIC TIE IN THE GSK-2011 REFERENCE FRAME

Nikolai A. Bovshin

Federal Scientific and Technical Center of Geodesy, Cartography and Spatial Data Infrastructure, 26, Onezhskaya St., Moscow, 125413, Russia, Leading Scientist, e-mail: bovshin_na@nsdi.rosreestr.ru

On a base of GNSS processing of two-year observations on experimental geodetic network the methods of long baseline geodetic tie in the GSK-2011 reference frame were investigated. From the point of view of systematic errors affecting final results – estimation of station coordinates – were studied both rigorous and simplified methods of geodetic tie, those of practical demand. From different long baseline geodetic tie methods' results comparison systematic errors' main properties were estimated, both their possible level in the present and their behavior in dependence of using geodetic tie method. The article gives the recommendations for the use of approximate geodetic tie methods how to avoid significant coordinate deformations, caused by systematic errors of long baseline geodetic tie, in the coordinates of both standalone station and local geodetic network.

Keywords: GSK-2011 reference frame, long baseline geodetic tie, coordinate reduction to the epoch, transformations between GSK-2011 and ITRF reference frames, reference station, ITRF2014, auxiliary frame GSK-2011-FE, FAGN

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