

The development of algorithm for geodetic network combination Ground observation, satellite observation*

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Abstract

The algorithm of merging geodetic network based on ground observation (ground network) and the geodetic network observed by satellite global positioning system (GPS) has been studied by many researchers in this discipline.

This study suggests mathematical model of algorithm, that merges geodetic and GPS observation, and suggests anew method that performs a set of corrections and modifications on the matrix of the geodetic – base observations, measured in the geodetic networks.

This operation is considered as an essential guidance to evaluate the accuracy of the results, and modify the global observation and transfer them into another coordinates system.

Keywords: GPS, Ground observation, satellite observation, adjustment of triangulation networks, Geodetic base.

* For the paper in Arabic see pages (11-22)

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