

Evaluation of coordinate correction parameter of the 2011 off the Pacific coast of Tohoku Earthquake

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The 2011 off the Pacific coast of Tohoku Earthquake with a moment magnitude of 9.0 occurred on 11 March, 2011. Remarkable crustal deformation associated with the earthquake was observed by the GPS-based control stations in an extensive area of eastern Japan. Geospatial Information Authority of Japan (GSI) suspended the publication of survey results of control points located in eastern Japan on 14 March, 2011, because these control points largely moved and the survey results needed to be revised.

The most desirable method to revise the survey results of control points is to conduct observations at all the control points in order to improve the accuracy of the coordinates. However, it is not realistic because the number of control points which were affected by the earthquake was more than 40,000.

Crustal deformation associated with the earthquake was relatively uniform, so GSI carried out observations at about 2,000 control points, and revised the coordinates of the other control points by calculation using coordinate correction parameter.

In this presentation, we will report the method of calculation and the result of evaluation of coordinate correction parameter of the 2011 off the Pacific coast of Tohoku Earthquake.

Keywords: the 2011 off the Pacific coast of Tohoku Earthquake, survey results, coordinate correction parameter