Geodynamic monitoring at the GS RAS: Current state and development prospects

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Abstract Modern trends in geosciences includes numerical modeling based on vast amounts of direct earth's surface measurements. A significant increase in the accuracy, detail and scale of the aforementioned measurements in recent decades is based on the active development of space and satellite geodetic methods, as well as the creation of dense observation networks. GS RAS is one of the pioneers in the development of geodynamic monitoring systems based on the usage of satellite geodetic data on the territory of the Russian Federation. The goal of maintaining the leadership position of the GS RAS in the field of geodynamic monitoring emphasizes the development of modern satellite geodetic methods in conditions of limited resources and the need to develop import-substituting technologies. The article considers the existing scientific and methodological groundwork created in the geodynamic monitoring sector of the GS RAS, and formulates promising development areas of the geodynamic monitoring subsystem.

Keywords Satellite geodesy, geodynamical monitoring, modern displacements of earth's crust, numerical modeling, deformation processes, earthquake source modeling, tsunami forecast.

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