

GLOBAL NAVIGATION SATELLITE SYSTEM OBSERVATION AS A PART OF COMPLEX GEOPHYSICAL OBSERVATION SYSTEMS

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Today the most important tools to monitor of the global changes are the global navigation satellite systems (GNSS). They widely used not only in navigation and geodesy but also for a solution of geophysical and hydrometeorological tasks. The most important results of GNSS application are the global coordinate and time frames realization and estimation of the Earth's surface movements. Recently GNSS became an important instrument for estimation of ionosphere and troposphere conditions. There are some examples of effective usage of GNSS in studies of the Arctic atmosphere. GNSS determination of the ionosphere total electron content (TEC) is actively used for earthquake precursors search and tsunami warning system creation. Modern geophysical observatories demand a reliable spatial-temporal reference frame which is also provided by GNSS. Results of GNSS in geophysical investigations are presented in this report. The necessity and possibility of incorporation of GNSS observation sites to a structure of geophysical observatories is also proven here. It is confirmed by achievement of ability of complex researches, for example, of magnetosphere and atmosphere investigation. We are suggesting to include the recommendations on GNSS installation in the guides for geophysical observation, for example, on INTERMAGNET network stations.