

Using of Global Navigation Satellite System Galileo for Crisis Situations Monitoring

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Yuzhnoye SDO is carrying out work to create the space navigation system compatible with international navigation systems specifically with EGNOS (Galileo) system. Such integration will help to create EGNOS “eastern branch” on the basis of Ukraine space navigation system (SNS) with using of Yuzhnoye SDO Operator Center.

The analysis of construction of Ukraine's SNS for creation of EGNOS Galileo “eastern branch” and its application in the crisis (emergency) situations monitoring is given.

Methods and techniques of the research of gravitation potential on the surface in various local points of the Earth for studying of geophysical anomalies with using of high stable frequency signal radiated by Galileo system spacecraft are proposed.

The connection between these anomalies and various inside displacements of the earth's crust, leading to appearing of seismic hazard, along with people's psychophysical condition, social tension in different regions and other natural and social disasters is considered.

The options of developments of automated control system for individual protection means for those who got involved in a crisis situation, individual means of call for help and early warning using global navigation system are considered.

The organizational structure of specific ground-based complexes for support of continuous monitoring of territories, borders and regions conditions; the composition and construction of program-technical complexes for analysis, processing, registration and archiving of information coming from SNS, for creation of various emergency situations data base (seismology, floods, fires, explosions, conflicting situations, terrorism, est.) are described.