

Building of a Prototype of Expert-Diagnostic System for the Analysis of Spacecraft Flight Path Measurement Information

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Abstract. The article presents the technology of building of a prototype expert-diagnostic system (EDS) for analysis of flight path measurement information. The main function of the EDS is the identification and subsequent removal of abnormal measurements and the formation of a collection of correct information for further use in the cycle of ballistic and navigational support (BNO) calculations. The main analysis tool is filtering — a sequential comparison of each measurement with the system of criteria (filters), the values of which are determined based on the technical characteristics of the spacecraft of this type and the parameters of the medium in which the measurements were made. The proposed EDS project allows producing of a high-quality sample of abnormal measurements from the data collections for most types of flight path information and can be used in the BNO calculation cycle for spacecraft control.

Keywords: expert-diagnostic system, filtration, flight path measurement information