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Data treatment system in the ALFA-ELECTRON space experiment onboard International space station

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The system of data collection, pre-processing and scientific information transfer on Earth from the onboard charged particle spectrometer is described. The system consists of high-speed units for converting of amplitude information into digital code, the logical block of information on the operation of the spectrometer, and a distributed system for collecting, processing and transferring information in the telemetry channels. The system has an additional channel of rapid processing and visualization of scientific information in the cosmonaut-researcher workplace. The basic functional units of the system, data collection and pre-processing of information algorithms, the creation of such systems on base of radiation-resistant elements are presented also.

Presentation type

Poster

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