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## Technology for Additional Testing of Onboard Equipment at the Orbital Station

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**Abstract.** The procedure of preparation and testing of on-board equipment of spacecraft in open space is considered, which makes it possible to increase the reliability of experimental testing. The structural and technological appearance of the stand has been clarified, including test blocks inside a sealed compartment of the orbital station and a crate in open space for installing standardized modules with the onboard equipment being tested. The technical requirements for the crate have been determined. A preliminary design of a crate for testing on-board service and target equipment of spacecraft as part of unified modules in outer space was completed.

The authors note that the test results increase the degree of compliance of the digital twin with on-board equipment. At the same time, the risk of large financial losses associated with possible failures of on-board equipment during flight tests, making further full-fledged normal operation of the spacecraft impossible, is reduced. Unification of the stages of preparation and testing reduces the required time and financial costs and makes them accessible for on-board equipment for various purposes.

**Keywords:** destabilizing factors of outer space, equipment, robotic manipulator, crate, unified module

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