

HUMAN SPACEFLIGHT SYMPOSIUM (B3)  
Utilization & Exploitation of Human Spaceflight Systems (3)

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THE ASSESSMENT OF CREWMEMBERS' ROLE OVER INCREASING OF UTILIZATION  
EFFECTIVENESS OF THE ISS RUSSIAN SEGMENT

**Abstract**

This paper analysis results of the Russian Segment of the International Space Station (ISS RS) utilization, obtained within 2000-2016, from the standpoint of how crewmembers' activities affect on the utilization process effectiveness. Statistical data about degree of crews' involvement in scientific research (execution of experiments with participation of cosmonauts) and their activities associated with onboard systems maintenance are analyzed. With use of concrete examples at the ISS RS utilization practice and quantitative assessments, the crewmembers' role and effectiveness of their actions at contingencies during the research program execution are described. An impact of this activity on results of scientific research is also presented. Some recommendations over use in the future of the ISS RS crews' experience, associated with research programs realization, are suggested. The assessment of cosmonauts' expected contribution into the process of scientific venture at accomplishment of long-duration missions beyond low-Earth orbit is also made.