

IAF HUMAN SPACEFLIGHT SYMPOSIUM (B3)
Astronaut Training, Accommodation, and Operations in Space (5)

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WAYS OF PROFESSIONAL INTERACTION OF COSMONAUTS WITH AN
ANTHROPOMORPHOUS ROBOT OF SPACE PURPOSE IN A MASTER-SLAVE MODE

Abstract

The paper deals with the issues of the creation of anthropomorphous robots of space purpose (AR of SP) and the interaction of cosmonauts with robots in a master-slave mode. Currently, the special attention is paid to the development of robots, controlled by an operator in a master-slave mode. These robots represent a prototype of an indispensable assistant to cosmonauts in long-term autonomous (interplanetary) missions and for operations on the surface of other planets. The use of a qualitative system of criteria and indicators of the necessity and possibility of performing flight operations by an anthropomorphous robot in a master-slave mode allowed determining the tasks of professional intravehicular activity that can be entrusted to this robot at the present time. The determination of ways of professional interaction of a cosmonaut with an anthropomorphous robot in a master-slave mode will make it possible to plan extravehicular/intravehicular and on-planet activities maximum efficiently.