

IAF HUMAN SPACEFLIGHT SYMPOSIUM (B3)
Commercial Human Spaceflight Programs (2)

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SPACE EXCURSIONIST (SE) TRAINING FOR SPACEFLIGHT

Abstract

The presentation provides a short analysis of the documents that define the status of “space excursionist” and the process of SE preparation for the spaceflight. Space excursionists are non-professional participants of short duration spaceflight performed for cognitive purposes. Typically such a spaceflight is financed by the excursionists, lasts for a few orbits and doesn’t include temporary assignment covered by a short-term contract. The presentation includes the analyses of typical flight tasks, functions and responsibilities of the SE. Functions of the SFP onboard the spacecraft are: • To perform a spaceflight in a designated seat as part of a cabin crew implementing procedures identified in the flight plan; • To perform comm sessions with the professional crew member; • To provide his/her own life support inflight and after landing; • To perform emergency procedures; • To implement the ISS flight plan and instructions. During spaceflight the SE is responsible for following: • His/her functions on the spacecraft; • The onboard documentation requirements, MCC directions; • Professional crew member directions. The presentation provides analysis of approaches to SE preparation and training setup. Spaceflight participants training is a motivated process targeted at developing knowledge, skills, qualifications and other qualities (psychological, moral, etc.) required for successful implementation of spaceflight tasks. Spaceflight participants as a rule complete a restricted spaceflight training program. The number of tasks delegated to the SE do not include assembling, operational and maintenance operations. The bulk of the SFP training is dedicated to theoretical and practical Soyuz TMA and RS ISS training, Russian language, physical, biomedical and psychological training, special types of training for spaceflight factors and other types. Preliminary content, volume, duration, procedures for SE training and its monitoring are developed by the Gagarin Cosmonaut Training Center named after Yu.A. Gagarin based on the assumption that practical skills and physical condition of the SE should allow to complete the space flight safely and gain new experience and knowledge to share. The presentation provides analysis of the unique experience gained by the Russian side of enhancing training and spaceflight implementation. SE training program is specifically characterized by the need to provide the SE (and crew) safety while the training time is minimized. The presentation provides analysis of applying the SE training experience to the variety of perspective projects of orbital and suborbital flights.