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# MAIN RESULTS OF TRAINING AND ACTIVITY OF THE ISS-43/44/45/46 CREW IN THE COURSE OF A ONE-YEAR MISSION ABOARD THE ISS

**Abstract**

Two ISS crew members, Scott Kelly and Mikhail Kornienko, began to train for a one-year mission, in particular on the transport vehicle "Soyuz-TMA-M" and ISS RS, on October 1, 2013. The training program had been developed taking into account the tasks of a one-year mission and functional responsibilities of crew members. The "Soyuz-TMA-M" with its commander, Padalka Gennady Ivanovich, and two flight-engineers, Kornienko Mikhail Borisovich and Scott J. Kelly aboard was launched on March 27, 2015 from the Baikonur Cosmodrome (Kazakhstan). Completion of a one-year mission is scheduled for March 2, 2016. The report presents the main tasks of cosmonaut training for implementing a one-year mission. The results of the ISS 43/44/45/46 crew's activity onboard the ISS and TV "Soyuz-TMA-M" are considered. A comparative analysis and the evaluation of the crew's contribution to the general ISS program are given. Particular attention is paid to the scientific and applied research and experiments aboard the station. The peculiarities of a one-year stay aboard the ISS are shown. The analysis of M.B. Kornienko's performance after a long-term space mission and results of his post-flight rehabilitation are given in the report. The scientific and applied results based on a one-year mission and on the crew's comments and suggestions, have important practical and scientific value and they will be carefully analyzed by all the organizations interested in future deep space missions.