

44th HISTORY OF ASTRONAUTICS SYMPOSIUM (E4)
History of Contributions to Astronautics of former Czechoslovakia (4)

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RESULTS OF THE LABORATORY SIMULATION OF LONG LASTING SPACE FLIGHTS IN CZECH
REPUBLIC INCLUDING FORMER CZECHOSLOVAKIA

Abstract

Research was performed in the Laboratory of Stress Research (Stress Research Center of the Czech Army), headed by dr. Sýkora, in cooperation with the Institute of Medico-Biological Problems, Moscow, ultimately with the Czech Acad Sci, Tomas Bata University, Zlin and QUEDGROUP, Inc., Prague. Last but not least the experience from the armed forces battle experience was incorporated. Following research projects were realized, sponsored by Interkosmos through Cz Acad Sci, Czech Army, and by ESA too, under laboratory conditions, with groups in simulators of sensory deprivation. It was near of Tisnov city, (CzR), in the special underground confinement under the name STOLA 87, with experiments lasting one week, STOLA 88 three weeks together with biological subjects (hens, naked hens, quails, egg-hatching, fishes,). The continuation was in the several others international experiments, as a HUBES 1994, SFINCSS 1995, ECOPSY 2004, and in the IMBP Mars 500 mission simulator in Moscow, inexpressive of experiments in – flight, aimed at:

- • the problem of the selection of the crew members
- • the positive role of female astronaut
- • the importance of cross-cultural purposes in crew selection
- • the monotone habitat
- • the possibility of the objective estimation of in-group psycho-social relations

The main task of all scientific and research activities was aimed at the questions of the limited and extremal loads on the man and small social groups under the stress conditions, for the most part in the isolated confinements, on the air during the aircraft performance (experiments with the stays of the overload and weightlessness). As a first-line result is the use of the self-developmented special analytical method with clear intelligible graphical output – called SOCIOMAPPING. It can be used in large measurement in several areas of the human activities.