SPACE LIFE SCIENCES SYMPOSIUM (A1)
Behaviour, Performance and Psychosocial Issues in Space (1)

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DIFFERENCES IN THE PERCEPTION OF SOUND/RHYTHM AND THE EFFECT ON GYMNASTICS PERFORMANCE IN MICROGRAVITY (THE ZER0GMN PROJECT)

Abstract

The Rhythmic Gymnastics in microgravity to improve the Human Movement Space is the theme of a project we have attempted to develop with the students in SUISM of the Turin University using the facilities offered by the space industry Torino such as Thales Alenia, or in 0g situations like parabolic flights. The immediate aspect of the proposal is likely to evaluate the difference in the perception of sound/rhythm and the effect on performance in gymnastics engagement on Earth and in Microgravity, taking advantage of the opportunity to study the particular aspect of human movement and the feeling expressed by this Olympic sport. Gymnast, an activity that is essentially "gravitation based". We present some physical training exercises aimed to orientation education in space as a function of microgravity. Three areas/sectors have been identified: on the ground, with tools and water. 10 exercises on the ground are presented in ten study sessions prepared with the collaboration of SUISM students. Technical difficulties and environmental change in the regulations have been delaying the possibility of continuing the experiment in microgravity. The preparation of specific exercises developed in an environment of Neutral Buoyancy increasingly using collaborative structures, aerospace industrial environment existing in Turin, the exchange of actual experiences with the Technical University of Berlin and ESA-ESTEC allow developing this new field of investigation.