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MULTI CRITERIA STUDY OF THE EFFECT AND RISKS ON HUMAN PHYSIOLOGY AND PSYCHOLOGY IN AEROSPACE AND THE EFFECT OF THE ROBOTICS ALTERNATIVE IN SPACE COMMUNICATION AND EXPLORATION

Abstract

Despite the difficulty of going to space, the longtime trips take, and the lack of oxygen, humans have managed to go to space over the past few decades spacecrafts can either be operated by Human crew on board or by ground stations without any human intervention. Space is a different environment for the nature of the human body, as astronauts may face many physiology challenges and dangers such as microgravity and high levels of radiation during their long trips, and they may undergo physiological changes. In this paper, authors will compare the alternative variables that effect the human physiology and psychology during the aerospace missions. In fact, special preparations before, during and after the space mission must be established and the human health factor is certainly one of the valuable keys. According to the NASA Human Research Program, spaceflight has multiple effects on the physical and psychological health of the human body. In this context, our paper will highlight the main effects and risks of these trips on the human body such as radiation which can lead to death for people outside the protection of Earth's magnetic field. This paper will also recommend different solutions that will help prevent such accidents and come over these difficulties. With the growth of the artificial intelligence applications and as recent solution to that, the new trips are totally operated using robots and managed from the ground stations.Based on the literature review and our multicriteria study, we will present some recommendations for future missions.