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EXPERIENCE OF ANALOG ASTRONAUTS IN BRAZIL: THE HABITAT MARS CASE STUDY

Abstract

Analog space missions are of utmost importance in the preparation of space explorers, and also open up opportunities for diverse people to learn and provide improvements to the area, thus democratizing space-related issues through simulations in analog habitats. In these projects, the focus is the dissemination of Science, Technology, Engineering, Arts and Mathematics (STEAM) through the spatial approach: Space for STEAM (S4STEAM), in order to reach the entire community with the application of practical training and research experience. In the Brazilian analog station called Habitat Marte, located in the city of Caçara do Rio do Vento, in Rio Grande do Norte, in the northeast of the country, a semi-arid climate is found, with characteristics similar to Mars, due to its semi desertification (with unique vegetation such as the Caatinga) and the scarcity of water resources. Among several goals, this project aims during the training of analog astronauts to analyze the physiological behavioral effects; such as tiredness, teamwork, the emotional factor, and other several aspects, in order to better understand how these factors can affect during actual space missions. It was observed that since the beginning of their activities in 2017, the crews of the face-to-face missions were composed mostly by the male audience, where this trend is also observed in research centers and industries involved in the space sector. Thus, this article aims to conduct a case study of the analog station, Habitat Marte, about female emotional experiences and after training analog astronauts. To this end, a questionnaire was applied, where the analogs astronauts who took the face-to-face course, answered questions related to education and gender inequalities, since in the global number of analog astronauts, they still have minority participation in missions. Therefore, this research aims to understand how missions, with an audience little represented by women, may affect the overall experience of the project and in the context of making the space environment more egalitarian.