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Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach (3)

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SOJOURNER2020 - THE MAKING OF THE FIRST INTERNATIONAL ART OPEN CALL PAYLOAD
TO ISS.

Abstract

Through the ages, artists, writers, and filmmakers have always been inspired by space. Artists' visionary depictions of space as an environment for people have influenced the scientific and engineering feats we know so well today. How will artists continue to inspire the future of space exploration? What are the opportunities and challenges in the creation of art for our interplanetary futures? In 2019, we initiated an open call to invite artists to submit artworks for an International Space Station mission. After three rounds of reviews, nine groups of artists are selected to be on board Sojourner2020, an international art payload.

Sojourner2020 (a 1.5U size unit, 100mm x 100mm x 152.4mm) was successfully launched in March 2020 and stayed in ISS for about 30 days. It features a three-layer telescoping structure that creates three different "gravities": zero gravity, lunar gravity, and Martian gravity. Each layer of the structure rotates independently. The top layer remains still in weightlessness, while the middle and bottom layers spin at different speeds to produce centripetal accelerations that mimic lunar gravity and Martian gravity, respectively. Each layer carries six pockets that can hold projects.

The design of sojourner2020 follows the classic spinning space station designs such as von Braun wheel (Konstantin Tsiolkovsky, 1903) and later the Stanford torus (NASA, 1975). The spinning ring-shaped space station is a plausible speculation on space habitats as it creates an environment of artificial gravity for humans to live in. Though the space is limited, the artist groups proposed and accomplished artworks in various mediums, including carved stone sculpture, bio-art, film photography and more.

In this paper, we will present the project and share our learnings from this international space art open call in three categories.

First, the balance between artistic visions and technical challenges in a space mission. For example, how do we clarify the environmental stressors and payload limits to artists without much technical background in an open call.

Second, the necessities and obstacles to integrating the artistic creation process into the technological development of the payload. In most cases, the launch is only part of the creation. The artists are developing more complex narratives around, before and post the mission.

Finally, we will also share our experiences in this global collaboration and the challenges in facilitating an inclusive project considering the scarcity of access to space. We hope Sojourner 2020 can be an example and an advocate for more.