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ARATUSAT: CASE STUDY OF A NANOSATELLITE FOR THE DISSEMINATION OF SPACE CULTURE AMONG THE LATIN AMERICAN COMMUNITY

Abstract

AratuSat: case study of a nanosatellite for the dissemination of space culture among the Latin American community

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Abstract

This article presents a study case of the diffusion of space culture in Latin America: ARTSAT II [1]: a Spatial Art Workshop organised by INPE - Brazilian National Institute for Space Research [2], which took place between 2021 and 2022. This workshop was part of a program to disseminate space culture to the Latin American community, which involved participants from Brazil, Argentina and Chile, including researchers, scientists, artists and students of all ages. At the end of the workshop, participants came together to create a nanosatellite called: AratuSat: a nanosatellite that promoted the interconnection between multiple knowledge, uniting art, science and technology.

AratuSat is a name that comes from Aratu, a species of Brazilian crustacean known for promoting the cleaning of sea coasts, known locally as mangroves. The objective of this nanosatellite is to promote the democratisation of space data, more specifically by collecting and distributing data about the South Atlantic magnetic anomaly [3], a space phenomenon that primarily affects Latin America, in addition to proposing an innovative approach to waste treatment. space, using detectors and claws capable of identifying, approaching and destroying space debris present in Earth's orbit, through the process of deorbiting this space debris.

The article focus on two moments of this process: 1) the process of disseminating spatial culture by INPE's Artsat Workshop, as well as the presentation of its pedagogical process and the formation of collective debates, exposing its way of functioning, meetings and debates in around the scientific dissemination of space culture and 2) the process of creation, operation and data collection of the AratuSat nanosatellite. It is important to highlight that this meeting was held during the pandemic and online, which allowed people from various parts of the planet to participate in the meetings, lectures and the process of creating the nanosatellite.

Finally, the main objective of the article is both to show processes of diffusion of spatial culture and its appropriation by the Latin American community, in order to inspire other initiatives of this type and contribute to the democratisation of access to knowledge.

References [1] ARTSAT workshop: http://www.inpe.br/artsat/2021/ [2] INPE - Instituto Nacional de Pesquisa Espacial do Brasil : http://www.inpe.br/ [3] Anomalia magnética do Atlantico Sul. http://www.inpe.br/posgradu