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COMPOSITION, DECODING AND INTERPRETATION OF THE SIMULATED EXTRATERRESTRIAL MESSAGE IN THE INTERDISCIPLINARY PROJECT "A SIGN IN SPACE".

Abstract

"A Sign in Space" is an interdisciplinary project by media artist Daniela de Paulis, in collaboration with the European Space Agency, the Green Bank Observatory, the SETI Institute, the Italian Institute for Radio Astronomy and a team of international advisors. The project, planned to take place in May 2023, is intended to simulate the reception of an extraterrestrial message as part of a live performance. The message will be encoded within a radio signal and transmitted towards Earth by the Trace Gas Orbiter, an ESA spacecraft that studies the Martian atmosphere and provides relay communications to the surface. The signal has been designed to be received by the Green Bank Telescope, the Medicina Radio Observatory and the Allen Telescope Array as part of a live event organised in collaboration with the SETI Institute. Here we present the collaborative methodology, the various stages of the technical and scientific plan, and the challenges that led to the development of the project; we disclose the thought process, the artistic and scientific decisions that led to the composition of the message. We also elaborate on the artistic, scientific and technical challenges of the project and their possible relevance for current SETI work.