

OPTICKS / Echoes from the Moon

(April 13, 2019 - 12:30 AM)

OPTICKS is a live Networked Performance between the Earth and the Moon, during which images are transmitted to the Moon and back as radio signals in real time. The project has been conceived by visual artist Daniela de Paulis (IT/NL) and technically developed in collaboration with radio amateur Jan van Muijlwijk and the CAMRAS radio amateur's organisation based at the Dwingeloo radio telescope (NL). Each live performance is made possible thanks to the collaboration of international radio enthusiasts, including Bruce Halasz (Brazil) and Nando Pellegrini (IT).



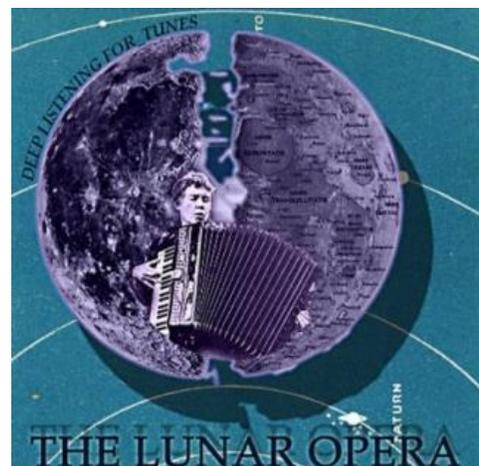
During each live performance of **OPTICKS**, the images are converted into radio waves and are transmitted to the Moon. The Moon's surface reflects the radio signals and scatters them all around the Space. Only a small percentage of the original signal is reflected on Earth and received by the Dwingeloo radio telescope's antenna, where it is converted back into the original images. The 'noise' showing in any moon bounced image is caused by the great distance travelled by the radio signals to the Moon and back (approximately 800,000 Kilometers) and by the poor reflective qualities of the Moon's surface.

The title **OPTICKS** is inspired by Newton's discoveries of the light spectrum, reflection and refraction. Similarly, the colors composing an image - converted into radio signals - are bounced off the Moon (reflected and refracted) by its surface during each live performance.

Echoes from the Moon

Daniela de Paulis and Carole IONE will host a special homage to American composer Pauline Oliveros and her seminal piece *Echoes From the Moon* by inviting our worldwide community following the live event to join our panel and send their voices to the Moon and back.

Pauline Oliveros (May 30, 1932 – November 24, 2016) was an American composer, accordionist and a central figure in the development of experimental and post-war electronic art music. - Via Wikipedia. Photo of Pauline (left) with accordion courtesy of Paula Court.



SPACE Technology And Education Private Limited

WZ-19, Asalatpur, A-3 Block, Janakpuri, New Delhi-110058. Phone: +91-11-45086320, 25522193
Fax: +91-11-25532193. E-mail: getintouch@space-india.com, Website: www.space-india.com

History

Echoes from the Moon was presented four times between 1987-99. In Echoes from the Moon, Oliveros was able to send sound to the Moon and to listen and to play with the echo that returned 2 1/2 seconds later.

She was delighted to make it an experience for as many participants as possible to enjoy. She was grateful for the support of Scot Gresham-Lancaster throughout her planning. Scot located the first Ham radio operators and helped determine the technology necessary to perform Echoes from the Moon. In 1987 she performed with Ham radio operator Dave Olean in New Lebanon, Maine. This was followed by a Gallery exhibition documenting the event. In 1996 Oliveros created '*Echoes From the Moon*' for a large audience in Hayward, California with the engineering of Scot Gresham-Lancaster during the Lunar Eclipse of September. In 1999 she created Echoes From the Moon at the "Brunnenhof" Hofe Fest in St. Polten Austria with Sound Artist, Andres Bossard. Sound/text artist, IONE performed with Oliveros and interacted with the audience, sending her text to the Moon. Image below: Kanazawa, Japan, IONE and Pauline Oliveros Heroko Ikeda.

About the artists

Daniela de Paulis is an interdisciplinary artist based in The Netherlands. She exhibits internationally, often collaborating with other artists, scientists and radio amateurs. She holds a BA from the Academy of Fine Arts in Rome, Italy, and a Master Degree in Media Arts from Plymouth University, UK. Since October 2009 she is the first artist in residence at the Dwingeloo radio telescope and ASTRON (www.astron.nl) where she developed, together with the CAMRAS and the ASTRON team, a technology called Visual Moonbounce. She is also the founder of the art programme at the Dwingeloo radio telescope, allowing international artists to work in collaboration with radio astronomers and radio operators. She is currently a guest researcher at ASCA (Amsterdam School for Cultural Analysis), University of Amsterdam, developing her research on Interstellar Transmissions. Since 2010 she has been collaborating with the international collective Astronomers Without Borders (AWB), as the founder and director of the AstroArts programme.

She is a reviewer for the Leonardo MIT Journal and the EVA (Electronic Visualization in the Arts) London conference, as well as a regular contributor for Astronomers Without Borders and www.astroblogs.nl amongst others. She has published her work with the Leonardo MIT Journal, Inderscience, Acta Astronautica and Cambridge University Press. She is a member of the international SETI (Search for Extraterrestrial Intelligence) committee as the speaker for SETI and culture. Carole IONEIONE is an author/playwright/director and an improvising text-sound artist. She is the author of the NY Times Notable Book, *Pride of Family; Four Generations of American Women of Color*. A specialist in dreams and the creative process, she teaches and performs throughout the world.

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