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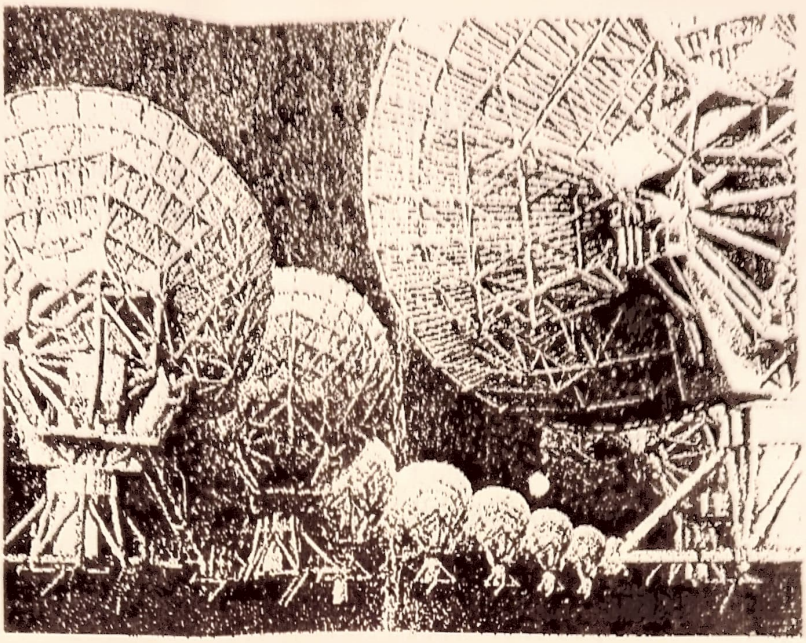

the VLA SUN DRAWING PROJECT

Connecting the Earth and Sky

BY JANET SAAD-COOK

The Sun Foundation

Project Office: P.O. Box 23540, Santa Fe, New Mexico 87502-3540 505-983-2884, Fax 505-983-3017
Board of Directors: 5700 Sherier Place NW, Washington, D.C. 20016 202-328-2010, Fax 202-234-2560

the Support

National Science Foundation, *Washington, D.C.*
National Radio Astronomy Observatory, Very Large Array, *Socorro, New Mexico*
ISAST and MIT Press, *publishers of Leonardo*
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the Foundation

The Sun Foundation is a non-profit organization whose purpose is to promote charitable, scientific, and educational activities that emphasize the connections between art and science. The production of the *VLA Sun Drawing Project* is the Foundation's first undertaking.

The National Science Foundation has approved construction of this work of art on land at the VLA, demonstrating its support for this innovative partnership between art and science. In addition to leading art professionals, many noted scientists have endorsed the project, including archaeo-astronomers who study the astronomy of ancient cultures.

The Sun Foundation believes that the *VLA Sun Drawing Project* will help increase the public's understanding and appreciation of the interrelationships that exist between art and science. The project will showcase scientific knowledge and embody it with an artist's vision of the sun as a source of timeless power, beauty, and energy.

the Project

The artist reflecting sunlight onto Wijiji sun symbol, Chaco Canyon, New Mexico

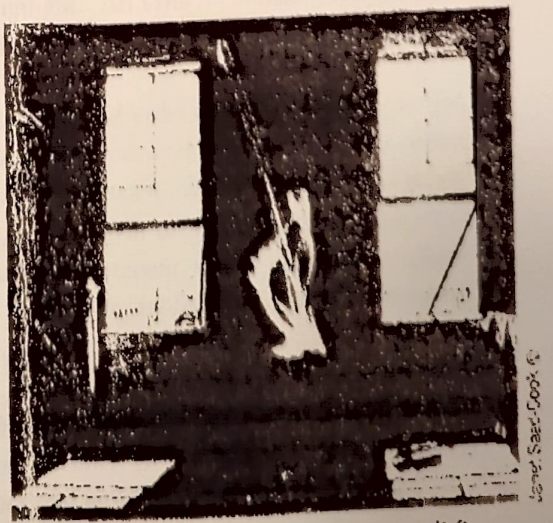
The *VLA Sun Drawing Project* is a major work of art by Janet Saad-Cook that combines natural phenomena with key principles of astronomy, optics and space technology.

In a show of support, the National Science Foundation has approved construction of this public art project on land located at the National Radio Astronomy Observatory's Very Large Array (VLA) near Socorro, New Mexico. The project architect is Eric Owen Moss, one of the most highly-regarded architects in America. The VLA, the world's most powerful radio telescope, will retain ownership of the work of art upon completion, and will open it to public viewing.

A Sun Drawing is a moving mural of light. To create one, artist Janet Saad-Cook carefully shapes and assembles highly reflective materials (mirrored steel and bronze, and optically coated glass) and positions the reflective instruments in a pre-selected path of direct sunlight. As sunlight touches the reflective elements, an image of light very gradually appears on the surrounding walls and ceiling, an image that slowly and subtly changes with the earth's rotation. In 1989, the U.S. Patent Office granted Saad-Cook a patent for this process.

The *VLA Sun Drawing Project* is envisioned to be a sculptural structure that contains a 3,000 square foot enclosed chamber into which sunlight is directed in very deliberate ways. The interior will encase the Sun Drawing, the heart of this work of art. Inside this space, the artist will position hundreds of reflective elements directly in the sun's path, thereby reflecting and transforming sunlight into images and colors that continually change in harmony with the sun's cycle. Special seating will be provided so that the public can spend time in the quiet, contemplative atmosphere of the art.

The artist's intention is that this continuously evolving drawing of light will create a direct experience of the sun/earth dynamic, thereby connecting the earth and sky. The project will serve as a vital link between contemporary art and some of the most advanced scientific technology of our time. As such, it will become an educational resource and place of inspiration for the thousands of visitors who come to the VLA, and for the many scientists worldwide who use this facility.



Sun Drawing in the artist's studio, Washington, D.C.

the Artist

Janet Saad-Cook is an artist whose work has been critically acclaimed and supported by America's artistic, corporate and scientific communities. Her art, exhibited in one-person museum shows throughout the country, has been the subject of numerous articles in national and international publications, including scientific journals.

Described as a new kind of artist - a groundbreaker - Saad-Cook uses contemporary science and technology in combination with the ageless cycle of the sun to create her art. The artist has been developing and refining the Sun Drawing process since 1981. Her studies on the scientific and historic aspects of her art have involved years of research and site work at ancient astronomical locations in the U.S., Mexico and India. As a result, she has twice received the rare distinction of giving a paper before the Commission on the History of Astronomy at the General Assembly of the International Astronomical Union, in 1985 in New Delhi, India, and in 1988 in Baltimore, Maryland.

Sun Drawing installations have been funded by several major museums, including the Smithsonian Institution, which commissioned one of the sculptures for a three-year nationwide tour.

Janet Saad-Cook

In 1989 Saad-Cook was awarded the Coler-Maxwell Medal for Excellence by the International Society for the Arts, Sciences and Technology (previous winners include Rudolf Arnheim and Otto Piene). The artist lectures regularly about her art and her archaeoastronomy studies for scientific and university audiences throughout the country.

the Process

A Sun Drawing can begin as a simple silver arc of reflected light appearing on the wall at daybreak, and, as the day progresses, it can be transformed into golden triangles, birds, and brilliantly-colored forms of nature. Each materializes and slowly dissolves, resulting in shimmering images that evolve and change, moment-to-moment as sunlight passes through the space.

The reflective elements Saad-Cook uses to create a Sun Drawing include mirrored metals (such as steel and bronze) and optically-coated glass. When activated by sunlight, the optical coatings on the glass break up light into its pure colors through the phenomenon of light interference, thereby giving the artist her palette - the *pure* colors of light, not pigmented colors. These colors continuously change with the shifting angle of sunlight. Art critic/historian Judith Bell describes a Sun Drawing installation as follows:

"The reflected colors are intensely beautiful, vivid, and of a purity that pigmented color cannot begin to approach. Helixes of pink and green, feathers of burnt orange, flower-like bursts of cobalt and magenta, slowly emerge and disappear only to be replaced by equally ephemeral forms.

"This is meditative art at its best, belying with its simple beauty the complexities of astronomy, optics and physics involved in its making."

A Chronology of the VLA Sun Drawing Project, Janet Saad-Cook, Artist

1978 Artist Janet Saad-Cook begins working interactively with sunlight as an additive sculptural element

1981 Artist begins working directly with sunlight as the sculptural object, making Sun Drawing elements and room-sized works

1982 Artist conceives idea to design and create large permanent structure for a multiple Sun Drawing that would work in harmony with the sun's cycles, and begins work on the Sun Drawing Project

1983 Vernal Equinox, artist begins astronomy studies at ancient sun marking sites throughout the world, does research and site work at Tsiping.

- Summer Solstice, conducts astronomy research and site work at Chaco Canyon and at Hovenweep, Anasazi sun marking sites
- July, creates prototype Sun Drawing Project for the Virginia Museum of Fine Arts, Richmond
- Winter Solstice, continuing research and site work at Chaco Canyon and Hovenweep

1984 April, creates second prototype Sun Drawing Project for the Smithsonian Institution, which travels the exhibit for three years

- Summer Solstice, completes research and site work at Chaco Canyon and Hovenweep; completes *Southwest Portfolio*, photographic works of temporary Sun Drawings created at the sites
- Autumnal Equinox, conducts astronomy research at the pyramids of Teotihuacan, near Mexico City

1985 Spring, artist shifts to new materials, now using mirrored metals and optically coated glass

- April, artist publishes limited edition book, *Sun Drawing*
- October to December, journeys to India to study the astronomical instruments at the 18th century observatories of Jai Singh, Delhi and Jaipur
- November, artist gives paper, "Sun Drawing: Ancient and Modern," before the Commission on the History of Astronomy at the XIX General Assembly of the International Astronomical Union, New Delhi, India

1985 September 1985-April 1986, Saad-Cook is Artist-in-Residence in the Physics Department at Catholic University of America, Washington, D.C., refines technique of forming glass for creating Sun Drawing images for the project

1986 May-August, artist conducts site search in New Mexico, travelling over 6,000 miles throughout the state, locates eight possible sites, selects National Radio Astronomy Observatory's Very Large Array on the Plains of San Agustin as site for Sun Drawing Project

- September, artist submits proposal to Dr. Ron Ekers, Director of VLA, to build Sun Drawing Project on this site
- October, The Sun Foundation incorporates as not-for-profit educational organization

1987 December, VLA Sun Drawing Project is accepted by National Science Foundation, National Radio Astronomy Observatories and Associated Universities, Inc.

1988 The Sun Foundation Board of Directors begins building a state-wide and national support network for the project

- August, artist gives paper, "The Observatory of Jai Singh, Jaipur, India," before the Commission on the History of Astronomy at the XX General Assembly of the International Astronomical Union, Baltimore, Maryland

1989 U.S. Patent Office grants Saad-Cook a patent for the Sun Drawing process

1990 & 1991 "Sun Drawing: Connecting the Earth and Sky," one-person museum exhibition by artist sponsored by American Association for the Advancement of Science which travels it to museums throughout the U.S.; exhibit includes Sun Drawing installation and documentation of the evolution of this work of art

1991 June, IRS grants The Sun Foundation permanent status as nonprofit 501(c)(3) organization

- July, Saad-Cook selects Eric Owen Moss as project architect for collaboration on designing sculptural enclosure for VLA Sun Drawing Project
- October, the foundation receives appropriation of $10,000, awarded by New Mexico State Legislature through the Office of Cultural Affairs

1992 July, Community Counselling Services, a national fund raising consulting firm, conducts feasibility study; study concludes that there is wide-spread national interest in and potential financial support for constructing the project

- October, The Sun Foundation establishes project office in Santa Fe, New Mexico

1993 Foundation establishes the FIRSTLIGHT Group to fund the design phase of the VLA Sun Drawing Project

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The Sun Foundation

The VLA Sun Drawing Project, Janet Saad-Cook, Artist
1994 Update

The VLA Sun Drawing Project is expanding into a new dimension that will make it a *global* experience of the sun/earth dynamic. This will be done by placing Sun Drawing installations in public spaces around the world and connecting them *conceptually* to the VLA Sun Drawing Project. These spaces will include, but not be limited to, museums, astronomical observatories, and universities.

With the VLA Sun Drawing Project as the reference point, all of the connecting sites will become a radiant web of light that illuminates sequentially or simultaneously throughout the world by the sun's interaction with the earth. By means of markers incorporated at each site, all of the locations where Sun Drawings are occurring will be documented with data such as time of day each appears, latitude, longitude, seasonal differences, etc., thereby making the viewer aware of the greater, more profound implications of time/space, and of the intimacy and connection we all share through the sun/earth experience.

Initial List of Potential Locations:

- The Australia Telescope
- B. M. Birla Science Center, Hyderabad, India
- Bradbury Science Museum, Los Alamos, New Mexico
- National Optical Astronomy Observatories, Kitt Peak, Tucson, Arizona
- Maryland Science Center, Baltimore, Maryland
- MIT Haystack Observatory, Massachusetts
- Museum of Art, University of Arizona, Tucson, Arizona
- The National Garden, The Environmental Learning Center, The Mall, Washington, D.C.
- Nobeyama Radio Observatory, Nagano, Japan
- Santa Monica Science Center, Santa Monica Community College, Santa Monica, California
- Tata Institute of Fundamental Research, Pune, India

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