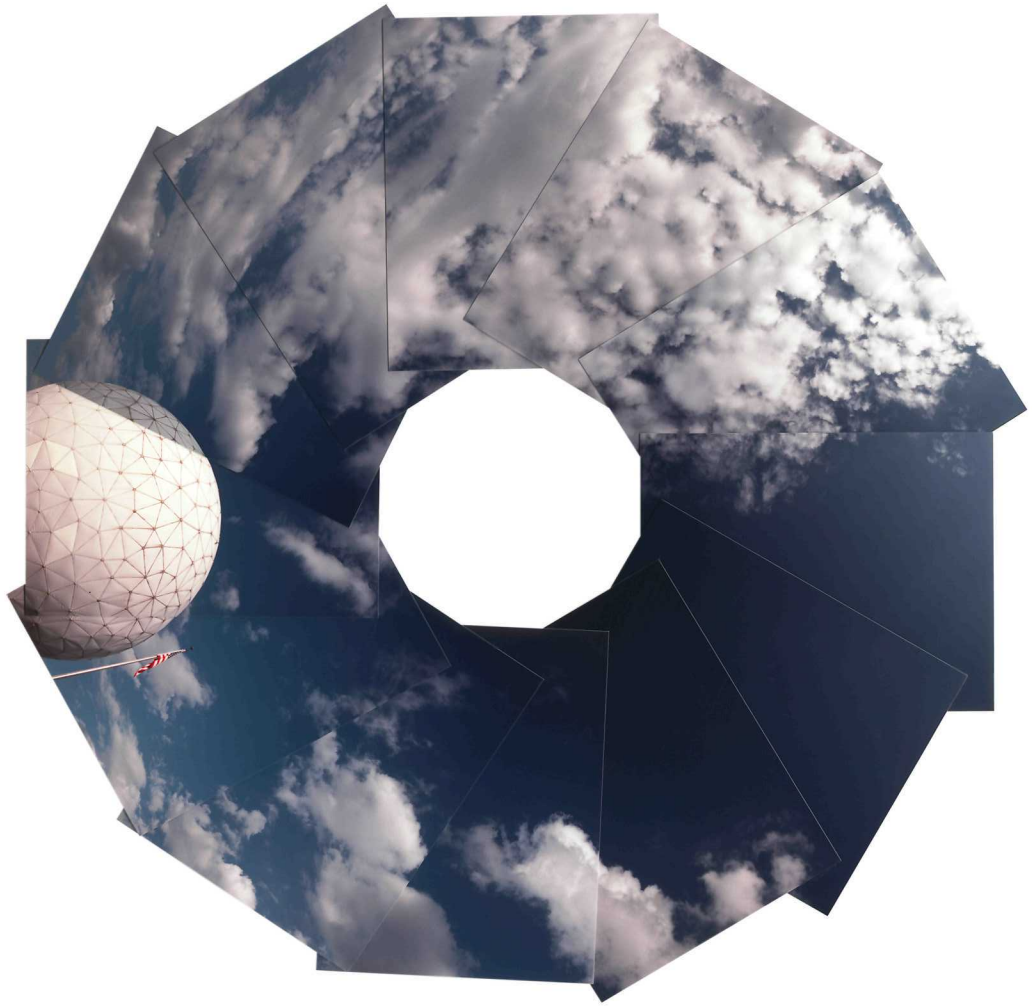


MIT Museum's Compton Gallery
February 18 – May 6, 2000

Artist in Residence Program
MIT Haystack Observatory

MIT

Observing the Observers...
Wenyon & Gamble

Front cover: Rotational Mosaic, Haystack Dome	Photographic collage	twelve photographs, 10" x 10" in frame 40" h x 40" w		**Observing the Observers...**

OBSERVING THE OBSERVERS...

WENYON & GAMBLE

ARTISTS IN RESIDENCE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
HAYSTACK OBSERVATORY

MIT MUSEUM'S COMPTON GALLERY
CAMBRIDGE, MASSACHUSETTS
FEBRUARY 18 – MAY 6, 2000

Design:
Judy Kohn, Kohn Cruikshank Inc., Boston

Printed and bound in Iceland
by Oddi Printing

FOREWORD

At its inception in 1990, the MIT Artist-in-Residence Program worked almost exclusively in the School of Humanities while it invented, developed, tested and refined a program that made sense for MIT and for the diverse population in the five schools of the Institute. Diversity of artists and diversity in the range of programming remains the aggressive and explicit hallmark of the Residency Program. In 1994, we began to broaden our scope to include the faculty and students in the Schools of Science and Engineering, the mainstays of MIT education. A new residency model is in the process of evolution while the fundamental principles by which we choose artists and create productive pairings with faculty and students in science and engineering remain. As we look ahead, we are proud to have developed a program that forges creative partnerships amongst artists and faculty and students in the five schools at MIT.

Wenyon & Gamble's *Observing the Observers...* is the result of three years of investigation into radio astronomy facilitated by Dr. Joseph Salah and his extraordinary staff at the Haystack Observatory, an MIT interdisciplinary research center in Westford, Massachusetts. Since 1996, the artists have worked with the Observatory to engage with radio astronomy and to allow room for their provocations to lead them into new media such as digital photography. Their artistic talent and astonishing insights are evident in the panoramas and other images of the Observatory you will see in the Compton Gallery and in this catalogue.

In their research, the artists have climbed the Observatory structures and instruments with their engineer, a trained tower climber. Artists and staff have collaborated on camera placements, assisted in scheduling 'dome' time, and planned the steps in recording internal and external shots of the Observatory landscapes. One of the staff became a "man measure" in one of the largest panoramas of the radome. Under Dr. Salah's

leadership, the staff of the Observatory have proved inquisitive and provocative residency partners.

Wenyon & Gamble explore the place of contemporary scientific inquiry through a filter of the history of science. *Observing the Observers...* brings together the artists' imagination of vast spans of time with the astronomers' vision of heroic spans of space. The essay in this catalogue addresses only one element in this equation, the artist's imagination. It does not have the same appreciation of the sophisticated methods, concerns and passions of the staff of the Observatory that it does of the artists with whom they collaborated. This is perhaps appropriate. The writer is an art historian, not a scientist. In order to fully embody the extraordinary nature of the residency, we had hoped to include an essay on the work of the Observatory itself in this catalogue, an essay that would have made the science of radio astronomy more accessible to an audience unfamiliar with its complexity and rigor. The reasons for its absence can, perhaps, tell us as much about the pitfalls of a passionate collaboration between artists and scientists as the exhibit itself tells about its rich rewards.

The staff of the Observatory, as dedicated and principled in their work as Wenyon & Gamble are in theirs, welcomed the artists into their laboratory with remarkable generosity. The astronomers saw it as an opportunity to experience their work in a new light. The residency offered those possibilities all scientists embrace: enlarged understanding of one's self and one's world, a new creative vocabulary, colleagues who actively share in the pursuit of knowledge and truth. The residency yielded those riches. The staff was thrilled with the work that is represented in *Observing the Observers....*

Much to their surprise and disappointment, however, they found that the essay published in this catalogue misrepresented their work in a way that the exhibition did not. The central problem appeared to be one of scale and focus. When Wenyon & Gamble inquire into the nature of obsolescence through their work,

they think in terms of the sweep of history, of centuries. Many on the staff of the Observatory were concerned that the essay implied a contemporary characterization of the observatory that could affect internal morale and present a distorted and damaging public image. A conflict ensued. It was a conflict familiar to many in the worlds of both art and science. It centered on the disparate interests and rights of partners in complex collaborations. The essay at the heart of the contention is printed here in the form its author wished it. The Observatory, while still fully endorsing the exhibition itself, could not participate in or support the catalogue. The result is the missing essay and only a partial reflection of a remarkable collaboration. The viewers of *Observing the Observers...* will have to complete their experience with the material that the Observatory has made available in its own historical exhibit at the entrance to the Compton Gallery. This exhibit, it should be noted, was a part of MIT Museum's design from the inception of the exhibition project.

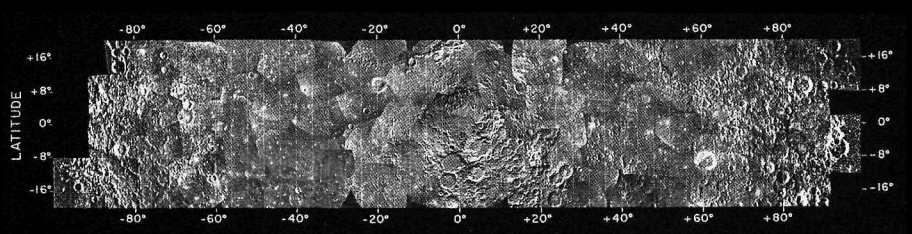
Wenyon & Gamble have joined a brilliant list of artists who have worked in the five schools of MIT to engage faculty and students and to provoke and challenge their assumptions in the performing, visual, literary arts and new media. Wenyon & Gamble have provided us with images which both connect us to the radio astronomy of the Haystack Observatory and challenge us to consider who inhabits the amazing environs that are tracked by the radio astronomers who spend their lives there.

Alan Brody
Associate Provost for the Arts
Cambridge, Massachusetts
1999

PHOTOGRAPHS AND HOLOGRAMS OF THE HAYSTACK RADIO OBSERVATORY

WENYON & GAMBLE'S SPACE WAVES

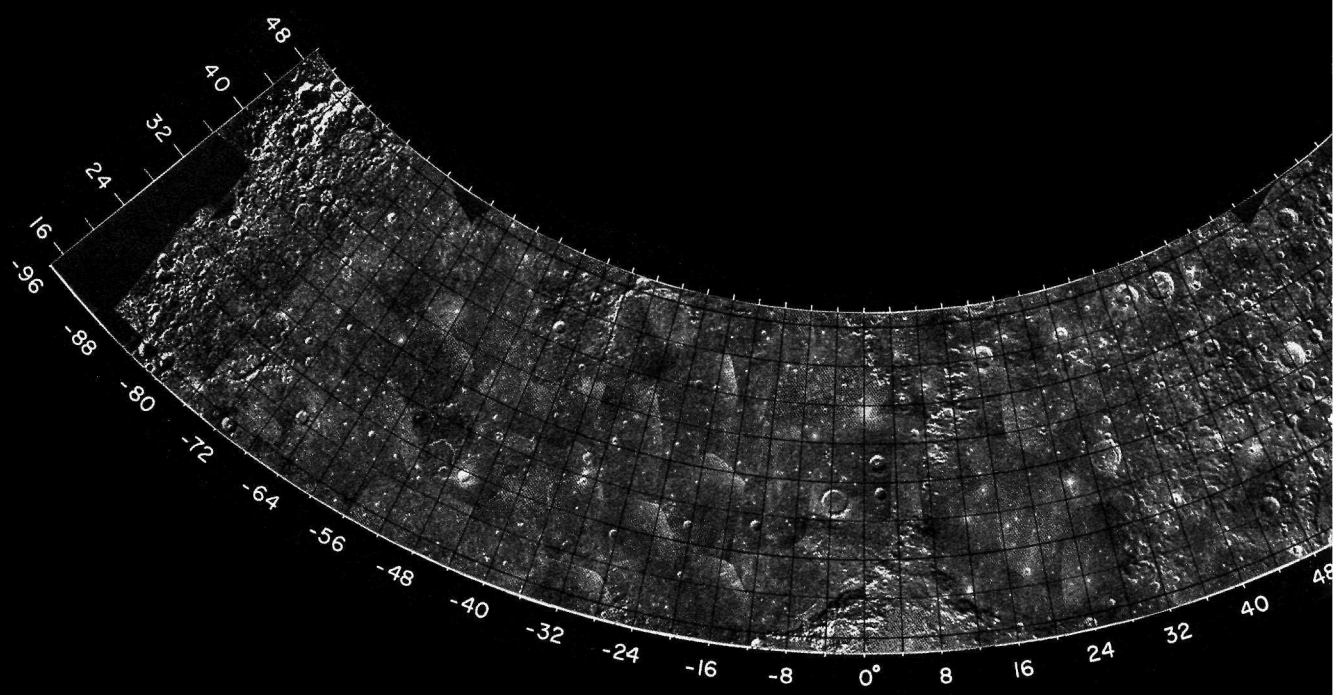
BY DEBRA BRICKER BALKEN



Radar Studies of the Moon, Final Report,
28 February 1970
(issued 17 September 1970)
by Lincoln Laboratory,
Lexington, Massachusetts,
under NASA contract NAS 9-7830

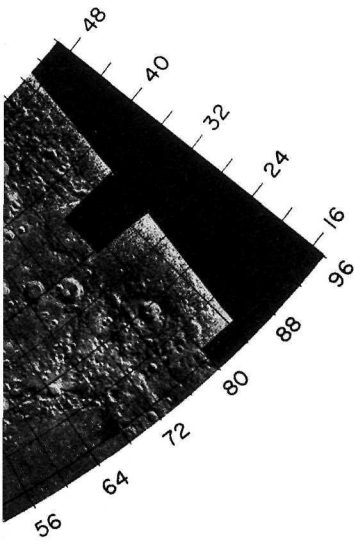
**Today the function of the artist
is to bring imagination
to science and science to imagination,
where they meet, in the myth.**

Cyril Connolly,
The Unquiet Grave



Radar Studies of the Moon,
Final Report,
28 February 1970
(issued 17 September 1970)
by Lincoln Laboratory,
Lexington, Massachusetts,
under NASA contract
NAS 9-7830

UNLIKE THE UTOPIAN ETHOS of many modernist artists who have turned to technology as both a subject and device, Susan Gamble and Michael Wenyon have always remained disaffected of the giddy overtones of these idealistic gestures. While the work of the Russian Constructivists, and later figures such as Naum Gabo and Antoine Pevsner, might have spawned (perhaps unwittingly) a widespread, yet frequently esoteric, implementation of science-based materials in the arts, Wenyon & Gamble have consciously dissociated themselves from these visionary pursuits. Rather than being seduced by technology's gambit – its magical and spectacular products — this collaborative artistic team has been drawn to the history of science, specifically, since 1986, to the study of astronomy and its practitioners, findings, innovations and instruments. From this distanced stance, they have come up with a more analytic, conceptual take on the imagery of science, one which reveals both its elegance and connections with art.



In fact, when Wenyon & Gamble became artists in residence at the Royal Greenwich Observatory, Sussex in 1987, they had already made a decision to avoid any of the obvious or flashy representations of contemporary science, believing the history of the field could be mined more effectively for visual content. As both artists have said, "instead of being inspired by the latest imagery of 'big science,' we would go back to the days when individuals struggled with hand-made equipment, half hoping to discover a way to make gold."[1] At the oldest scientific institution in Britain (the Royal Greenwich Observatory was founded in 1675), they came across what they have described as a "beautiful library of astronomical books, charts and photographs...as well as a separate archive of the most rare historical books on optics and astronomy."[2] In the seventeenth century setting of the Observatory's Library at Herstmonceux Castle, Wenyon & Gamble delved into Sir Isaac Newton's (first edition copy) of *Opticks* as well as the optical experiments of other scientists, such as Sir George Airy.

1.
Michael Wenyon, electronic mail letter to the author, August 11, 1999.

2.
Susan Gamble and Michael Wenyon, *In the Optical Realm: Wenyon & Gamble, Holographic Installations*, 1988-91, ex. cat., Wolverhampton, Wolverhampton Art Gallery, 1991, n.p.

Through their backward glance on the history of optics, both artists were struck not only by the aesthetic properties of Newton's and Airy's delicate drawings of their observations of the exquisite patterns of light that congeal into rings and dots when cast through a prism or a lens of a telescope, but also by the connections of these diagrams to the conceptual preoccupations and strategies of many contemporary artists. In the large-scale installations that grew out of Wenyon & Gamble's residency at the Observatory, these untapped aesthetic linkages became the subject of their work. In *Newton's Rings*, 1987, for example, a tri-part colour image of the light formations that Newton observed through his optical experiments is mounted on an easel (a metaphor or reference to the craft of art) against a backdrop of black and white photographic projections of sections of the stacks of books in the Observatory's library. But rather than duplicate through drawing or in paint the patterns that Newton artfully depicted in his *Opticks*, they are re-presented in Wenyon & Gamble's work through a hologram, a mid-twentieth century technological device that also grew out of the study of light.

Part of Wenyon & Gamble's interest in working at the Royal Greenwich Observatory was, as they have stated, to "explore optics and its relationship to holography."[3] While both artists had employed the medium in their work before they began working as a collaborative team in 1983,[4] the seemingly anomalous, if not quirky character of the hologram, attained a glory or stature when tied to a specific historic moment. But unlike Newton's optical drawings which are based wholly on observation, the hologram is all artifice, its colour applied by hand, and illusionary effects contrived in a dark room. Moreover, the images in Wenyon & Gamble's installations are purposefully theatrical, staged with ravishing lighting to overplay the juxtaposition of history and contemporary science.

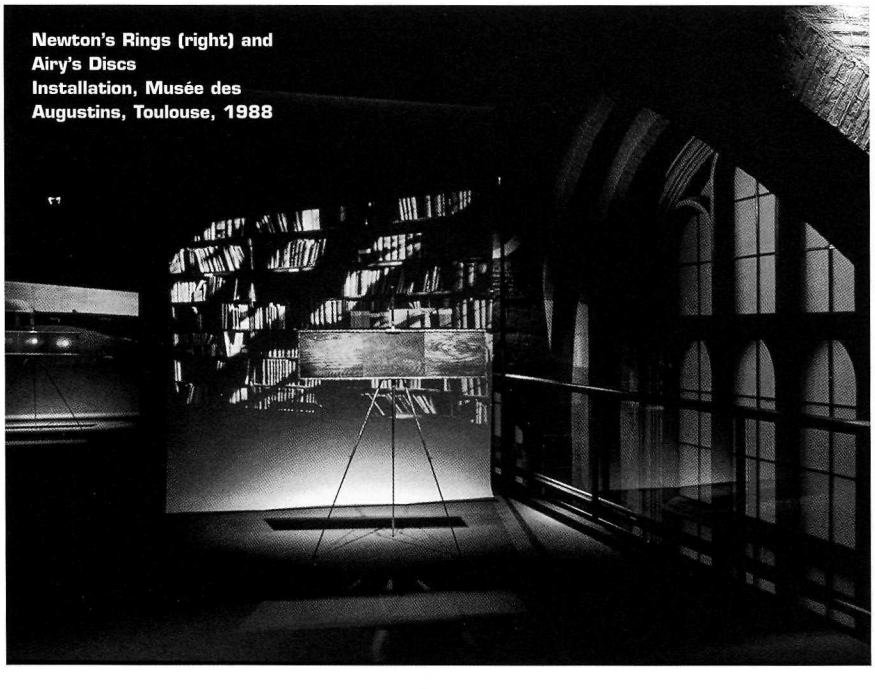
Through their research at the Observatory's library, both artists gained the realization that the practice of science is largely conjectural — most often inconclusive — a condition which

3.
Susan Gamble, electronic mail letter to the author, August 5, 1999.

4.
Michael Wenyon, who studied physics and optics at both Bristol University and Imperial College, London, wrote *Understanding Holography*, New York, 1978 prior to meeting Susan Gamble in 1980 at Goldsmith's College, London, where she had studied. Together, they co-taught a workshop on holography at Goldmith's from 1980 to 1984.

accounts not only for its often magnificent breakthroughs and spin-off inventions, but also for its ongoing failures and technological peculiarities. While the hologram has for the most part been vulgarized through its commercial application as a beguiling object, incapable of yielding further technological change, Wenyon & Gamble, even before they turned to the history of science, had expressed a desire to reveal the medium's inherent yet untapped beauty. Like the unassuming art in Newton's drawings for his *Opticks*, there was something about the allusion to fluid, luminous spaces and "imaginary worlds"[5] that Wenyon & Gamble knew to be a property of art. The optical forms produced by the hologram could, they discovered, be manipulated for certain (ironically) painterly effects. In their pre-1987 holograms, such as those that make up *The Chemical Change*, 1984, ordinary domestic objects and foodstuffs — a whisk, egg, and saucepan — float in a seemingly endless, viscous, mottled space. While the objects are real — props brought into the dark room where the holograms are produced — the fictional attributes, that is, the suggestion of a hypothetical space, take over or supercede

5.
Wenyon & Gamble, in "Exposure," *The British Journal of Photography*, October 11, 1985, 1148-1149.



Newton's Rings (right) and Airy's Discs Installation, Musée des Augustins, Toulouse, 1988

whatever illusion is generated through the process. The leap to the study of astronomy became a logical development in Wenyon & Gamble's preoccupation with optics.

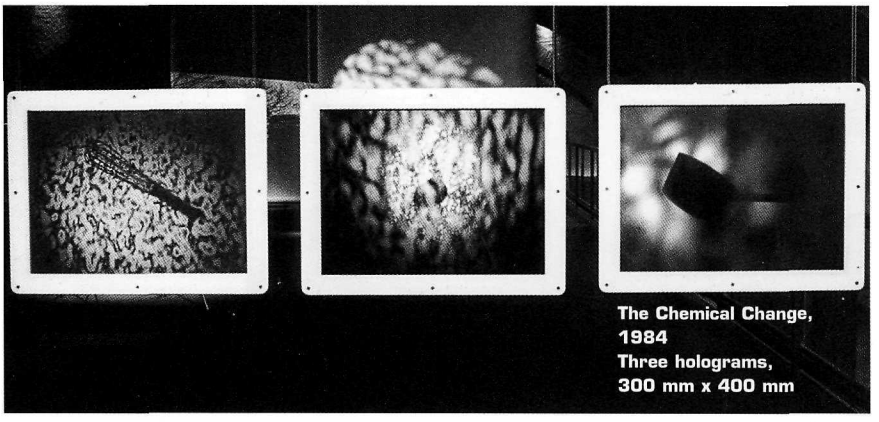
While both artists also pursued a residency at The Royal Observatory in Edinburgh in 1994, a project that led to the investigation of the work of two Scottish mid-nineteenth century scientists — James Clerk Maxwell and Charles Piazzi Smyth, both of whom focused their analysis on the electromagnetic spectrum — they came to feel a need to move away from what they have described as "historical science to contemporary science."[6] The shift was part of a growing recognition of the consumerist dimension of science, its zeal and constant necessity to outpace the ongoing obsolescence of equipment and instruments. As they felt that, "going backwards in time to find 'sources' for our images seemed like a way to subvert or at least frustrate the utopian art-science construction,"[7] this focus became delimiting, or at least, in need of revision or redirection as their understanding of the culture of science extended to its voracious requirement for new technology. That the Royal Greenwich Observatory was moved to Cambridge and closed subsequent to their residency — receded into history , it buildings and holdings rendered as monuments and artefacts — added to this understanding.

But when Wenyon & Gamble began to work at the MIT Haystack Radio Observatory in Westford, Massachusetts in 1996, their "sense of history"[8] was not lost on this modernist facility.

6.
Michael Wenyon,
electronic mail to the author,
August 11, 1999.

7.
Ibid.

8.
Susan Gamble,
electronic mail to the author,
August 5, 1999.



The Chemical Change, 1984
Three holograms, 300 mm x 400 mm

The Buckminister Fuller-type geodesic dome that housed the large radio telescope was read by both artists as a quintessential emblem of mid-twentieth century technology, a "curiosity"[9] that already portended future disuse. This architectural invention, which once signified progress and technological change, emerged as a cultural artifact, now an object of beauty that could be pursued for its aesthetic traits. Like the Royal Greenwich Observatory and the telescopes used by astronomers there, the set-up at the Haystack was one that, especially, given its scale, seemed to suggest eventual elimination. And, as Wenyon & Gamble have deemed, "going to observatories you see science forever trying to stay ahead of the changing use of equipment, and throwing away the old. As a culture we have preserved nineteenth-century telescopes often for use by amateurs; this was easy to do with elegant brass instruments, but [we] doubt if anyone could preserve the Haystack telescope and radome for future use."[10]

9.
Susan Gamble, electronic mail to the author, August 11, 1999.

10.
Ibid.

Of the work that has grown out of Wenyon & Gamble's residency at the Haystack Observatory, the majority of their images are made up of digital photographs, a medium that most easily enables the mapping of the interior spaces of the immense radome. Attached to its vast telescope, their camera traced the various architectural features of the dome as the instrument slowly moved in its routine, sometimes diurnal documentation of radio waves. From the myriad images recorded in this process, both artists have culled selected shots that have been seamlessly stitched together on the computer into fluid, elongated panoramas. *The Haystack Radome, Mapped with Its Own Telescope*, 2000, for example, is a single, splayed, longitudinal view of the surface of the dome, which when flattened in this digital format becomes a mosaic of geometric patterns. Similarly, *The Dish Lensed, Haystack Observatory*, 2000, reveals the enormous dish of the telescope skewed against the backdrop of the tiles of the dome to be a luminous, floating, ambiguous object rather than as a contraption or mere technological device. These images are replete with the

grandeur of science but they are also, ironically, transformative, recasting clinical spaces and machines into imaginary, and sometimes ethereal, environments.

In the archives of the Observatory Library, Wenyon & Gamble came across various photographs of the moon and planets made by astronomers at the Haystack in 1968 who worked on the Apollo space mission. Like their discovery of the unattributed art in Newton's drawings for his *Opticks*, they realized, as they put it, that these "hand-made photographic mosaics of the moon grew out of a struggle to see both high-resolution and the bigger picture which brings scientists close to the process by which an artist traditionally works."[11] The multiple and distorted viewpoints that structure *The Dish Lensed, Haystack Observatory*, as well as compositions such as *Beneath the Radio Telescope, Haystack Observatory*, 2000 and *View from Inside the Incoherent Scatter Radar, Millstone Hill*, 2000 build on the same kinds of scientific observations that determined the astronomers' photographs of the moon. What with the enormity and curvilinear shape of both the radome and lunar landscape, it is impossible to grasp their entirety in a single take. Hence, the flattened or fractured views in both sets of photographs.

11.
Susan Gamble and Michael Wenyon, "Observing — How we are scientized now," proposal for forthcoming paper at the College Art Association annual meeting, February 2000.

Wenyon & Gamble have noted that a primary architecture underlies and unifies both the mapping of the moon and their own photographic reconstructions of the radome. They have found that "from...examination of these astronomical mosaics and the mathematical relationships we construct our own projections and reflect upon the architectonic nature of seeing."[12] A certain geometry or symmetry, then, emerges from both photographic investigations, the difference resting on the issue of use — the Apollo shots of the moon have been designated as scientific documents; Wenyon & Gamble's images are defined as art. But unlike astronomy, these artists have also played with this basic geometry, working it to elaborate and metaphoric ends. In *Rotational Mosaic, Haystack Dome*, 2000, for example, an exterior view of the radome is engulfed by images of clouds configured as

12.
Ibid.

a concentric pattern. While the shape of this "mosaic" of photographs echos that of the dome, it also alludes to the quest of astronomy and its study of celestial bodies.

In other works such as *The Dark Side of the Dome*, 2000, and *Dome Explored in Lunar Form*, 2000, the references to the photographs from the Apollo space mission, as well as the internal history of research at the Haystack Observatory, are mined with clever visual ends. The various lunar stages become an artistic means to compose single photographs of the radome into either crescent or partial shapes. These fragmentary images with their alternatively stark and warm colours endow the radome with a certain mystery that its technological efficiency otherwise dispels.

Wenyon & Gamble believe the dome's "sheer scale and bright whiteness...make it seem to belong to the modern era of the 1960s,"[13] a not so distanced moment whose culture is only now being reassessed. While works such as *Rotational Mosaic, Haystack Dome* and *Dome Explored in Lunar Form* might allude to the metaphorical dimensions of science, these artists's images of the machines or technological apparatuses at the Haystack Observatory reveal the practice of astronomy to be a highly methodical pursuit. The banks of computers and recording devices that are featured in *The Correlator, Haystack Observatory*, 1999 and *The Control Room, Haystack Observatory*, 2000, while rendered with the same broken or multitudinous perspective system that structures *The Dish Lensed, Haystack Observatory*, are dead-pan representations that demystify the industry of science and its fetishistic dependence upon equipment.

That Wenyon & Gamble have employed the digital photograph to produce this body of work has less to do with foregoing the medium of the hologram than the practicality of working within the confines of the Observatory's space. With the absence of a darkroom at the Westford facility, only one holographic installation emerged from this residency. *Radio Waves From*

13.
Susan Gamble,
electronic mail to the author,
August 13, 1999.

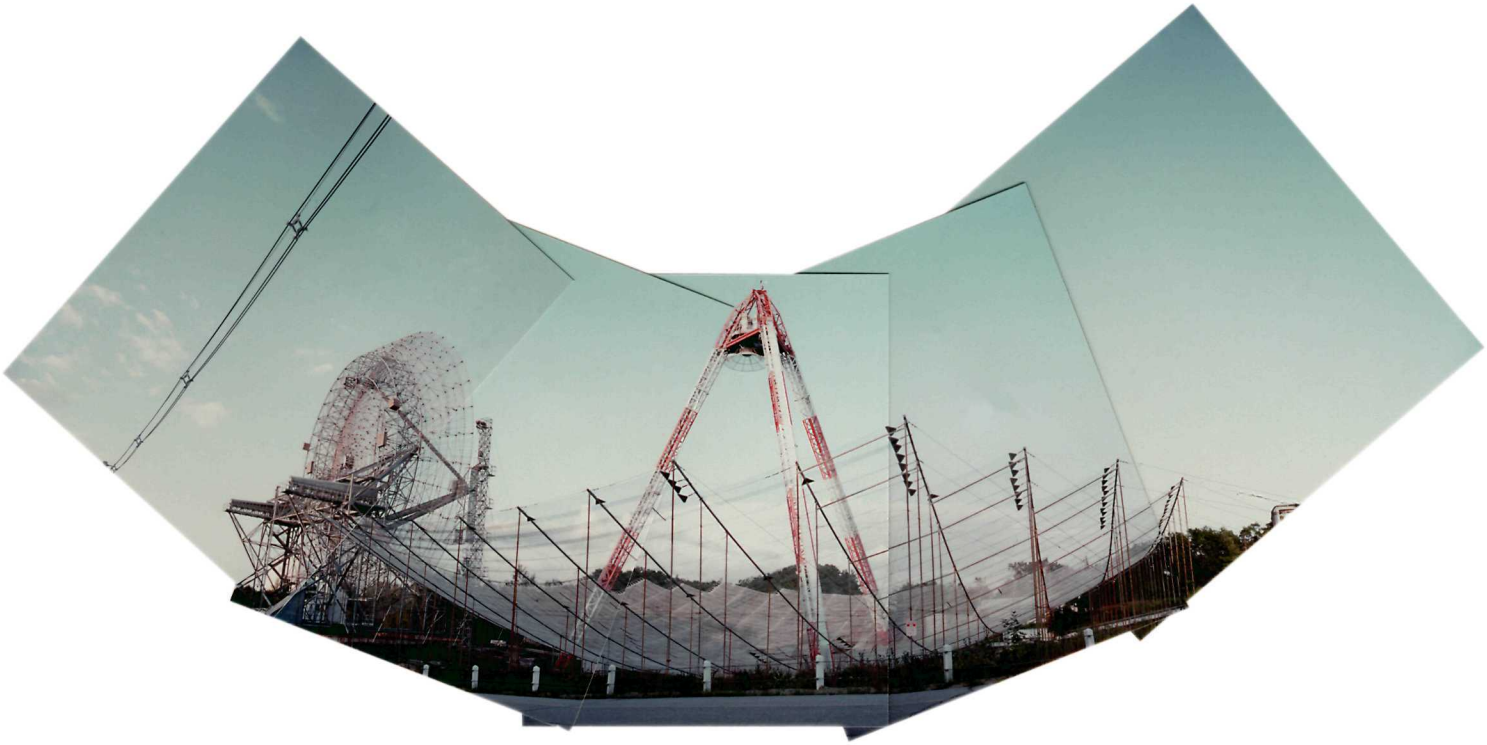
Space, 2000, is a multi-color work, an electric or pseudo-spectrum which bathes holographic images of a set of disks used at the Haystack to store data of the various planets such as Venus, Jupiter and Mars. While the installation underscores Wenyon & Gamble's ongoing interest in the obsolescence of scientific equipment, here reinforced by the literal inaccessibility of these objects which are unreadable in their now enshrined state, they have also admitted that the medium has, like all technological innovations, inherent limitations. In fact, they have recently declared that "digital photography throws up more chance results because you can capture so many more images and make selection a part of the process. The digital photograph seems so fluid and easy compared to holography."[14] A move to keep a pace of their subjects?

14.
Susan Gamble, electronic mail to the author, August 13, 1999.

Like the teamwork involved in scientific experimentation, Wenyon & Gamble also work collaboratively, with the same result that the subjectivity of each artist is de-emphasized and a certain anonymity pervades each work. No trace, mark, or imprint of each figure's ego or voice can be located in these works, a feature that echos the interactions of the astronomers at the Haystack Observatory as they collate and interpret data from space. And in this similarity of professional practice, a commonality exists that informs both the content and style of Wenyon & Gamble's work.

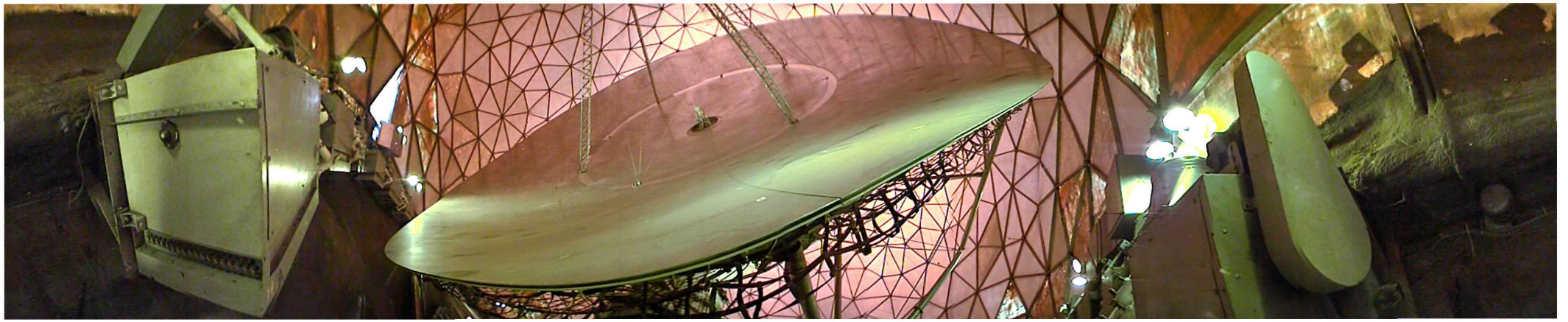
OBSERVING THE OBSERVERS...

Previous page, and below: Radio Waves from Space	Holographic installation, holograms of data tapes	thirteen holograms, each 16.5" h x 3.1" w	18	Observing the Observers...



Elements from a Global Array	Photographic collage	five photographs, 10" x 10" in frame 27" h x 41" w	19	Observing the Observers...

The Correlator, Haystack Observatory	Inkjet print from original digital camera image	size variable up to 40" h x 200" w	20	Observing the Observers...

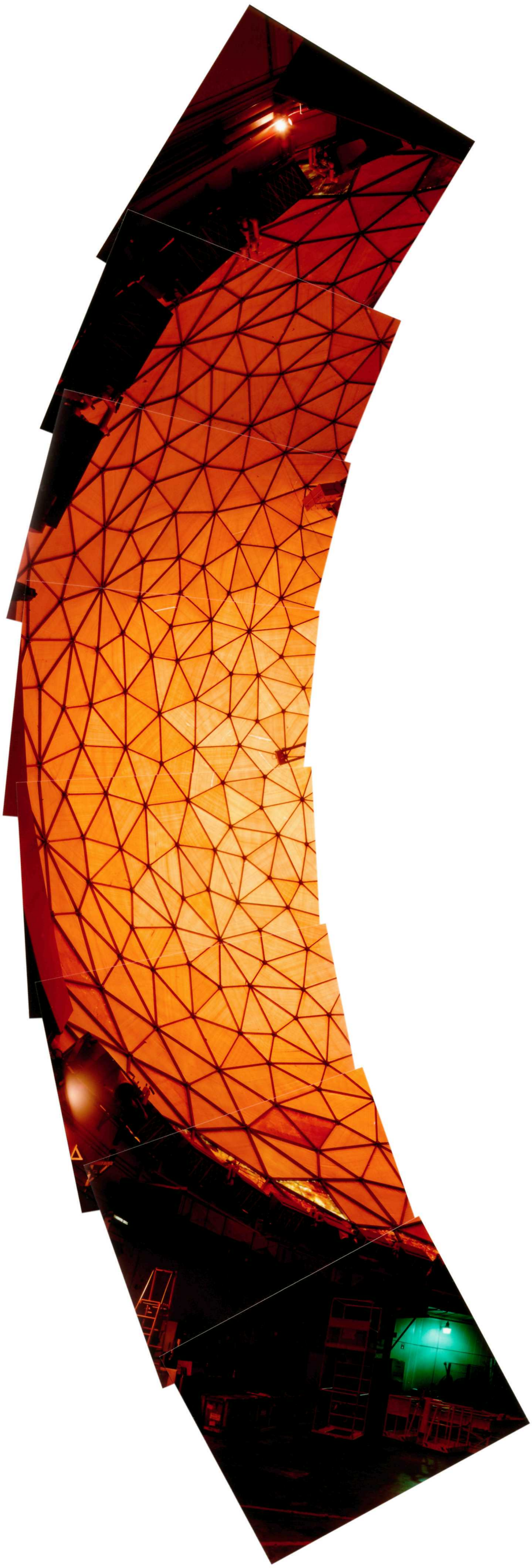


The Dish Lensed, Haystack Observatory	Inkjet print from original digital camera image	Size variable up to 40" h x 200" w	21	Observing the Observers...

Observatory Library, Haystack (journals)	Inkjet print from original digital camera image	Size variable up to 40" h x 200" w	22	Observing the Observers...

The Haystack Radome Mapped with Its Own Telescope	Inkjet print from original digital camera image	Size variable up to 40" h x 200" w	23	Observing the Observers...

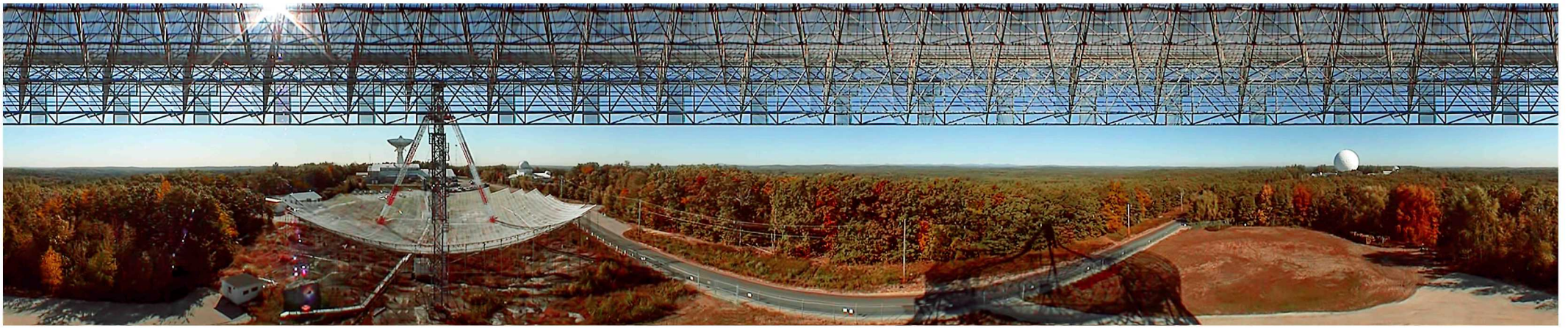
Dome Explored in Lunar Form	Photographic collage	eight photographs, 10" x 10" in frame 58" h x 35" w	24	Observing the Observers...



View from Inside the Incoherent Scatter Radar, Millstone Hill	Inkjet print from original digital camera image	Size variable up to 40" h x 200" w	26	Observing the Observers...

The Control Room, Haystack Observatory	Inkjet print from original digital camera image	Size variable up to 40" h x 200" w	27	Observing the Observers...

Beneath the Radio Telescope, Haystack Observatory	Inkjet print from original digital camera image	Size variable up to 40" h x 200" w	28	Observing the Observers...



Panorama from the Steerable Antenna, Millstone Hill	Inkjet print from original digital camera image	Size variable up to 40" h x 200" w	29	Observing the Observers...

SUSAN GAMBLE

born, 1957 London

Fellow, Center for Advanced Visual Studies, MIT, Cambridge, Massachusetts, 1995-1996

Leverhulme Research Fellowship, 1994

MPhil History and Philosophy of Science, Cambridge University, 1998

BA Fine Art, Goldsmiths' College, University of London, 1976–79

Foundation Course, Winchester School of Art, 1975

MICHAEL WENYON

born, 1955 Dayton, Ohio

Leverhulme Research Fellowship, 1994

Winston Churchill Fellowship, 1982

MSc Optics, Imperial College, University of London, 1978

BSc Physics, Bristol University, 1974–77

POSITIONS HELD

1996 & continues, Visiting Artists, Massachusetts Institute of Technology

1997–99
Artists in Residence, The Boston Athenæum

1993–94
Artists in Residence, Royal Observatory, Edinburgh

1990–92
Visiting Professors, Institute of Art & Design, University of Tsukuba, Japan

1987–89
Artists in Residence, Royal Greenwich Observatory

1983–
formation of professional partnership 'Wenyon & Gamble'

1980-85
Goldsmiths' College, Dept of Fine Art, University of London, Founding staff members of Goldsmiths' Holography Workshop, open-access facility

AWARDS, PRIZES

1998
LEF Foundation

1993
UNESCO prize for aesthetic development of technological art

1992
British Council fine art travel grant, exhibition in Japan

1988
Arts Council Great Britain

1987
Shearwater Foundation

1984
British Council fine art travel grant, exhibition in Germany

1982
Winston Churchill Fellowship

INDIVIDUAL EXHIBITIONS

2000
Observing the Observers...,
MIT Museum's Compton Gallery, MIT

1998
Bibliomancy, The Boston Athenæum, Boston, Massachusetts

1994
Light & Dark, Royal Observatory, Edinburgh, Scotland, Edinburgh festival

1993
Volumes, The Photographer's Gallery, London, England and Collins Gallery, Glasgow (1994)

1992
Bibliography, Art Tower Mito, Mito, Japan

1991
In the Optical Realm,
Wolverhampton Art Gallery

1990
The Heavens, Het Apollohuis, Eindhoven, Netherlands

1989
The Heavens, installation for MultiMediale, Zentrum für Kunst und Medientechnologie, Karlsruhe, Germany

1988
Musée des Augustins, Toulouse, France

1987
Ramsgate Library Gallery & Museum, Ramsgate

1986
Williamson Art Gallery & Museum, Birkenhead

Art by Laser, Salisbury Library Gallery, Salisbury

1985
Speckle Holograms, Goldsmiths' College Gallery, London

1984
Wenyon & Gamble: New Holograms, Glynn Vivian Art Gallery & Museum, Swansea; The Cooper Gallery, Barnsley, Yorkshire, Gallery Peter Ludwig, Cologne

1983
Butler Gallery, Kilkenny Castle, Ireland

GROUP EXHIBITIONS

2000
Particle Accelerators, Boston Photographic Resource Center, Boston, Massachusetts.

1998-9
Dark Matter, Harris Museum & Art Gallery, Preston, England, + tour

1997
The Physics of Art, The Fuller Museum, Brockton, Massachusetts

1996
Northern Lights, The Fruitmarket Gallery, Edinburgh, Scotland

1995
The Landscape Reinvented, The Mississippi Museum of Art + tour

1994
The Ghost in the Machine,
MIT List Visual Arts Center, Cambridge, Massachusetts

1992
Installation Age, Tokyo Metropolitan Museum of Photography, Japan

1991
Les Artistes et La Lumiere, Centre National Art et Technologie, Reims, France

New Film & Video Series, Whitney Museum of American Art, New York

1989
Towards a Bigger Picture II,
Tate Gallery, Liverpool, England

Artec International Biennale,
Nagoya, Japan

3-Dimensionele Fotografie,
Perspektief Gallery, Rotterdam, Netherlands

1987
Towards A Bigger Picture, Victoria & Albert Museum, London, England

Künstlichkeit und Wirklichkeit, Volkshochschule, Wuppertal, Germany

1985
A Imagem Holografica (joint curator), Gulbenkian Museum, Lisbon, Portugal

Artware, InterMedia Congress, Hamburg, Germany

1982
The Holography Show (touring exhibition, joint organizer): The Orchard Gallery, Derry, and Ulster Museum, Belfast, Northern Ireland; Chapter Arts Center, Cardiff, Wales; Wolverhampton Art Gallery; Spectro Gallery, Newcastle-upon-Tyne; Stoke-on-Trent City Museum and Art Gallery; Aberystwyth Arts Center; Williamson Art Gallery and Museum, Birkenhead, England

1981
Spotlights and Glass Plates, Goldsmiths' Holography Workshop, Goldsmiths' College, London, England

CATALOGS AND BOOKS

1998
Bryson, Norman, *Books Too Have Their Destinies: Wenyon & Gamble's "Bibliomancy"*, and Wentworth, Michael, introduction in Bibliomancy, Boston Athenæum (catalog)

1998
Cazeaux, Clive; Green, James, and Peat, David, *Dark Matter: A Visual Exploration of The New Physics*, The Harris Museum & Art Gallery, Preston (catalog)

1995
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Back cover: The Amateurs, Westford, Massachusetts	Photographic collage	twelve photographs, 10" x 10" in frame 40" h x 40" w	Observing the Observers...