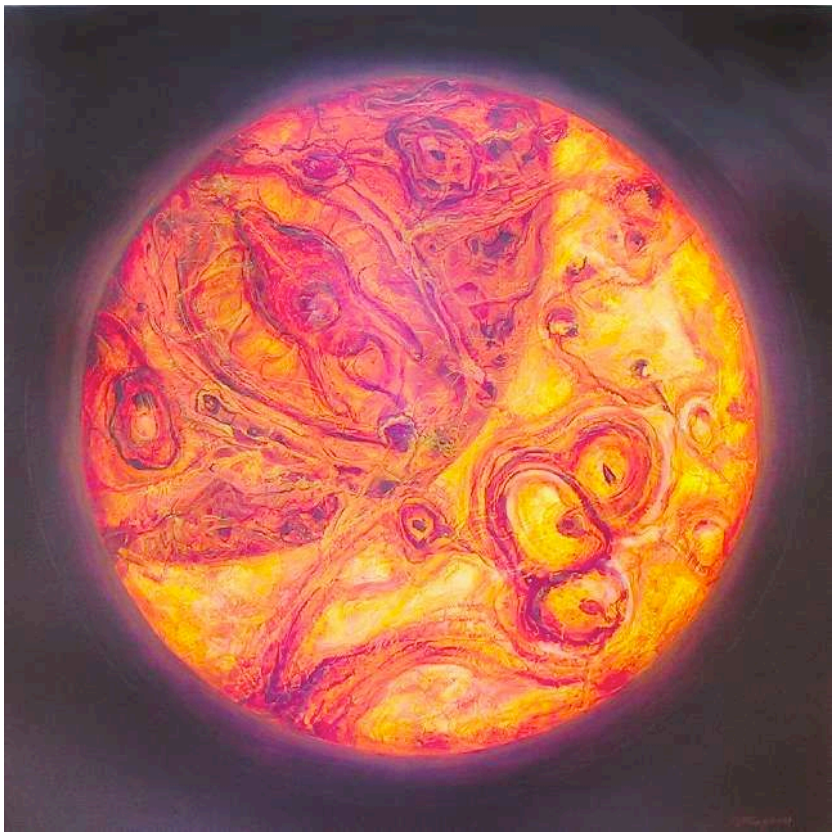
SPACE ART TRACK
25th International Space Development Conference

Co-Sponsored by the
National Space Society and the Planetary Society

May 4-7, 2006
Los Angeles, California



Io by Bettina Forget

The Zero Gravity Arts Consortium (ZGAC) in collaboration with the STUDIO For Creative Inquiry at the College of Fine Arts at Carnegie Mellon University will produce the Space Art Track

Lowry Burgess and Frank Pietronigro
Space Art Track Co-Chairs
Proceedings Editors

Lowry Burgess

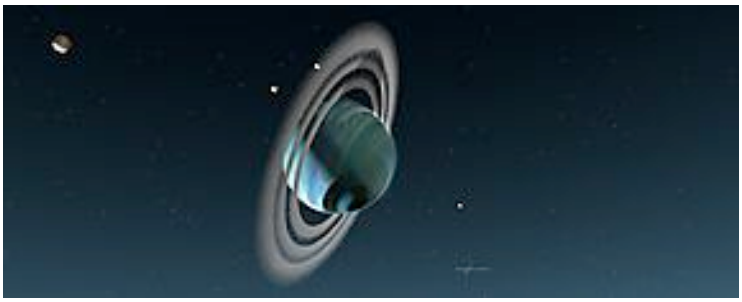
Professor, Distinguished Fellow
STUDIO for Creative Inquiry, The Center for the Arts and Society,
College o f Fine Arts, Carnegie Mellon University
http://artscool.cfa.cmu.edu:16080/~burgess/
http://www.cmu.edu/PR/releases05/050210_spaceart.html
United States

Lowry Burgess has worked with outer space for the past 35 years. Among celebrated space artworks is his 'Boundless Cubic Lunar Aperture,' as noted, the first 'official' non-scientific payload that was taken into outer space by the NASA Space shuttle Discovery in March 1989. He is Dean and Professor at Carnegie Mellon University and Distinguished Fellow of the Studio for Creative Inquiry and the Center for the Arts and Society. He was a Fellow of the Center for Advanced Visual Studies at MIT for 25 years.

Frank Pietronigro

Interdisciplinary Artist
Co-Founder and Project Director, Zero Gravity Arts Consortium
Co-Chair, Space Art Track, 25th International Space Development Conference
Associate Fellow, STUDIO For Creative Inquiry, College of Fine Arts, Carnegie Mellon University
http://www.pietronigro.com
http://www.zgac.org
United States

Frank Pietronigro is an interdisciplinary artist, educator and author. He is the first American painter to create "drift paintings" as a part of Research Project Number 33: Investigating the Creative Process in a Microgravity Environment developed as a part of NASA's Reduced Gravity Student Flight Program created in collaboration with the San Francisco Art Institute, the Texas and California Space Grant Consortia. The artist's body floated within a three-dimensional painting that he created in zero gravity aboard NASA's KC135 turbojet. He is Co-Founder and Project Director of the Zero Gravity Arts Consortium, an international Space Art organization dedicated to fostering greater access for artists to space flight technology and zero gravity through the creation of international partnerships with space explorers, arts organizations, corporations and leading universities. In 2004, Pietronigro was appointed Associate Fellow at the Studio for Creative Inquiry at the College of Fine Arts, Carnegie Mellon University.



Arrival by Be Johnson

SPACE ART DEVELOPMENT FUND

As Co-Chairs we hope you will join us in enthusiastically contributing support in any amount, knowing that various activities of this Space Art Development Fund will energize and strengthen the Space Art community as a whole. Please address your tax-deductible contributions as soon as possible to:

National Space Society
SPACE ART DEVELOPMENT FUND
1620 I St. NW, Suite 615
Washington, DC 20006

Please make your checks payable to:
National Space Society – Space Art Program

Long Shot at the Galactic Core by Aldo Spadoni, FIAAA

ABOUT THE SPACE ART TRACK OF

ISDC2006 Logo created by designer Karen Lau

The Zero Gravity Arts Consortium in collaboration with the STUDIO For Creative Inquiry at the College of Fine Arts at Carnegie Mellon University will produce the Space Art Track of the 25th International Space Development Conference, Co-Sponsored by the National Space Society and the Planetary Society, by creating the following projects:

- **SPACE ART TRACK PRESENTATIONS - ROOM B4**
- **ISDC SPACE ART EXHIBITION**
- **SPACE ART TRACK SCREENING**
- **THE LEONARDO DA VINCI SPACE ART AWARDS**
  CMU ALUMNI RELATIONS AWARDS EVENT
- **SKY STUDIO:**
  ZGAC Parabolic Research Flight For Artists
  Flown during ISDC2006

Shoot Seen by Be Johnson

SPACE ART TRACK PLENARY SESSION PRESENTATION
ROOM A

Note ISDC Schedule for exact date and time.

Introductions: Lowry Burgess and Frank Pietronigro, Co-Chairs
Panelists: Paivi Jukola, Lorelei Lisowsky, Tomoe Moriyama and Chris Robinson

Caloris Impact by Rick Sternbach

SPACE ART TRACK PRESENTATIONS - ROOM B4
THURSDAY, MAY 4, 2006

1:45 – 2:00 Space Art Track Introductions

2:00 – 2:20 Richard Lowenberg
Gravitational-Field-Day (1979-80): Past Work and Proposed Restart
United States

2:20 – 2:40 Paivi Jukola
The Art of Policymaking for Exploring New Worlds
Finland

2:40 – 2:55 Discussion, Q&A; Panel Moderator: Lowry Burgess

3:00 – 3:20 Rick Sternbach
Space Exploration – Science, Engineering, and Art
United States

3:20 – 3:40 Matthew Joscelyne
8 + 1 presents THE PLANETS
Australia

3:40 – 3:55 Discussion, Q&A; Panel Moderator: Geoffrey A. Landis

4:00 – 4:20 Marko Pelijhan
Art and Science of Aerospace Culture
Slovenia and the United States

4:20 – 4:40 Ricky Seabra
What Isadora Duncan Would Have Danced In Space: The Politics of Artistic Freedom in Space
Brazil and The Netherlands

4:40 – 4:55 Discussion, Q&A; Panel Moderator: Chris Robinson

5:00 – 5:20 Tania Fraga and Pricilla Arantes
InterAesthetic: Floating Connections
Brazil

5:20 – 5:40 Maugery Ariane and Guy Le Lay
Swarming Bodies in Bubble Universe
France

5:40 – 5:55 Discussion, Q&A; Panel Moderator: Jeremy Hight

6:00 – 6:20 Ayoko Ono
Visions for Future Space Art
Japan

6:20 – 6:40 Karen Lau
Yuri's Night and Space Art
United States

6:40 – 6:55 Discussion, Q&A; Panel Moderator: Jon Ramer

FRIDAY, MAY 5, 2006

1:40 – 2:00 Geoffrey A. Landis
Space and Science Fiction: A Reading
United States

2:00 – 2:20 Chris Robinson
Artist's Role in Space Development – Then and Now
United States

2:20 – 2:40 James D. Burke
International Space University Overview:
Opportunities for Space Art Collaborations

2:40 – 2:55 Discussion, Q&A; Panel Moderator: Richard Lowenberg

3:00 – 3:20 Jeremy Hight
Floating Points: The International Space Station and Locative Art
United States

3:20 – 3:40 Andrea Polli
Turning the Cosmos:
Soundscape and the Sonic Exploration of Space
United States

3:40 – 3:55 Discussion, Q&A; Panel Moderator: Dr. Michael Punt

4:00 – 4:20 Jim Plaxco
Mars Science As Art Using Subjective Image Processing
United States

4:20 – 4:40 Chris Thunblom
Drawing on Mars
United States

4:40 – 4:55 Discussion, Q&A; Panel Moderator: James D. Burke

5:00 – 5:20 Veronique Koken
ETERNAL VOYAGE: The Physics and Metaphysics of a Black Hole
United States

5:20 – 5:40 Martha Blassnigg and Michael Punt
Cosmology, Consciousness and Space Art
United Kingdom

5:40 – 5:55 Discussion, Q&A; Panel Moderator: Bradley Pitts

6:00 – 6:20 Bradley Pitts
Against Space Utilization (Cultural or Otherwise)
United States and the Netherlands

6:20 – 6:40 Lorelei Lisowsky
"Artist In Space – What for?"
United Kingdom

6:40 – 6:55 Discussion, Q&A; Panel Moderator: Paivi Jukola

SATURDAY, MAY 6, 2006

1:30 – 1:45 Lorelei Lisowsky and Chris Robinson
ZGAC Parabolic Flight Overview – Lorelei Lisowsky
ZGAC Parabolic Flight From My POV – Chris Robinson
United Kingdom and the United States

1:45 – 2:00 Lowry Burgess and Frank Pietronigro
Evolution and Overview of Gravity Pulse and DataFlux
United States

2:00 – 2:20 Frank Pietronigro, Tania Fraga and Gavin Starks
Gravity Fluxions: Pulsations
United States, Brazil and the United Kingdom

2:20 – 2:40 Celestine Star and the Golden Star Media Crew
The Nature of Space Media: Video Documentation
and Parabolic Flight Performances
United States

2:40 – 2:55 Discussion, Q&A; Panel Moderator: Andrea Polli

3:00 – 3:20 Lowry Burgess
The Seed of the Infinite Absolute
United States

3:20 – 3:40 Ishiguro Setsuko
The 'Flying Deities Project': Dances in Zero Gravity Environments
Japan

3:40 – 3:55 Discussion, Q&A; Panel Moderator: Chris Robinson

4:00 – 4:20 Lorelei Lisowsky and Lowena
Skylife Colony
By Bright Capsule
United Kingdom

4:20 – 4:40 Martha Blassnigg and Michael Punt
Beyond the Ubiquitous Spectrum – Tarot in Space
United Kingdom

4:40 – 4:55 Discussion, Q&A; Panel Moderator: Ricky Seabra

5:00 – 5:40 Sky Studio: Zero Gravity Arts Consortium Parabolic
Research Flight For Artists An Overview of the Flight
With a reading of a paper by Bettyann Holtzmann Kevles:
ZGAC Parabolic Flight: Overview From A Historical Perspective
United States

5:40 – 5:55 Discussion, Q&A; Panel Moderator: Lowry Burgess

SATURDAY, MAY 6, 2006 (CONT'D)

6:00 – 6:20 Bettyann Holtzmann Kevles
Performance in Space and Evolving Art
United States

6:20 – 6:40 Ricky Seabra
Isadora.orb, The Final Metaphor
and the 'Skipping Halls' in Lunar Gravity
Brazil and The Netherlands

6:40 – 6:55 Discussion, Q&A; Panel Moderator: Martha Blassnigg

SUNDAY, MAY 7, 2006

9:00 – 9:20 Marcello Luis Bonafanti
Cosmos, Images, Sounds and Sensations
Argentina

9:20 – 9:40 Maria Spanghero
About the Need to Overcome
Brazil

9:40 – 9:55 Discussion, Q&A; Panel Moderator: Tania Fraga

10:00 – 10:20 Tomoe Moriyama
"Mission – Frontier" – Next Generation of Space Art in Japan
Japan

10:20 – 10:40 Yoichiro Kawaguchi
Artists Gemotional Screen Responds as Living Entity
Japan

10:40 – 10:55 Discussion, Q&A; Panel Moderator: Jim Plaxco and Karen Lau

11:00 – 11:20 Jon Ramer and Kara Szathmary
International Association of Astronomical Artists (IAAA)

11:20 – 11:40 Annick Bureaud
Leonardo Space and the Arts Project
(Presented by Frank Pietronigro)

11:40 – 12:00 Lorelei Lisowsky and Frank Pietronigro
Opportunities with the Zero Gravity Arts Consortium

12:00 – 1:00 Lunch

SUNDAY, MAY 7, 2006 (CONT'D)

CONVERSATIONS WITH SPACE ART AND SPACE SCIENCE COMMUNITIES

1:00 – 1:20	Phil Smith Collier's II – The Need For A New Space Outreach Media Campaign
1:20 – 1:40	Lowry Burgess - The Three Whys of Space Art
1:40 – 2:30	Holly Henry and Chris Robinson Report Update: The Arts and Space Culture: The Common Ground of Creativity Workshop on Space Artist's Residencies and Collaborations
2:30 – 3:00	Space Art Track – Discussing the Future, Sharing the Gift
3:00	**Leonardo Da Vinci Space Art Track Awards Ceremony**

Exploration by Be Johnson

SPACE ART TRACK PRESENTERS


Andrea Polli.jpg


Ariane Maugery.tif


Ayako Ono.jpg


Bettyann Kevles.jpg


Bradley Pitts.tif


Celeste Star.tif


Chris Robinson.tiff


Chris Thunblom .tif


Frank Pietronigro.jpg


Geoffrey Landis.jpg


Guy Le Lay.tif


Holly Henry.jpg


Ishiguro Setsuko.b...


James D Burke.jpg


Jeremy Hight .jpg


Jim Plaxco.tif


Jon Ramer.tif


Karen Lau.jpg


Lorelei Liswosky.jpg


Lowry Burgess.tif


Maira Spanghero.jpg


Martha Blassnigg.jpg


Matthew Joscelyne....


Michael Punt.jpg


Richard Lowenberg...


Rickya Seabra.tif


Tania Fraga.tif


Tomoe Moriyama.TIF


Veronique Koken.tif


Yoichiro Kawaguch...

In honor of the great artist and scientist whose visions of flight inhabits our minds and whose first observations of light reflected from the Moon gave reverberant and reflective deep-space consciousness to us. Awarded during the Space Art Track of the 25th International Space Development Conference, Los Angeles, California - 2006 Co-Sponsored by the National Space Society, the Planetary Society, the STUDIO for Creative Inquiry at the College of Fine Arts, Carnegie Mellon University and the Zero Gravity Arts Consortium.

Special Space Art Awards

To **Lorelei Lisowsky** (United Kingdom) for contributing to the future of Space Art.
To **Ayoko Ono** (Japan) for worldwide Space Art representation and advocacy.
To **Anna Piva** and **Eddie George** (United Kingdom) for contributions to wider musical outer space listening.
To **Jon Ramer** (United States) for outstanding dedication and service to Space Art.
To **Douglas Vakoch** (United States) for dedication to the language and codes for broader cosmic reception and communication and their broader cultural meanings.
To **Arthur Woods** (Switzerland) for artistic achievement in outer space

Zero Gravity Art Awards

Awarded to pioneers who have consistently contributed to the zero gravity art community over many years:
To **Kitsou Dubois** (France) for her continuous and passionate pursuit of human movement in zero gravity.
To **Richard Lowenberg** (United States) for his dedication to the broader understanding of gravity.
To **Chris Robinson** (United States), for pioneering artistic parabolic flight with NASA.

And the first ISDC Artronaut Award

To **Frank Pietronigro** (United States), for his energetic efforts to expand and diversify the artistic community in microgravity space.

ISDC Space Art Scholastic and Curatorial Awards

Awarded to international scholars who have made exceptional contributions to the space art community:
To **Annick Bureaud** (France), for pioneering scholarship and advocacy of Space Art.
To **Jean Luc Soret** (France), for creating the first extensive exhibition and catalogue of Space Art in Paris in 2003.

ISDC Space Art Organization Award

Awarded to a Space Art organization dedicated to supporting Space Art:
To **The Arts Catalyst** (United Kingdom)
Rob LaFrenais and Nicola Triscott
To **International Association of Astronomical Artists** (IAAA)
Kara Szathmary
To **Leonardo/OLATS (l'Observatoire Leondardo des Arts et des Techno-Sciences)**
-Annick Bureaud and Roger Malina
To **Radioqualia**, (New Zealand)
Honor Harger and Adam Hyde
To **Zero Gravity Arts Consortium**, (United States and the United Kingdom)
Frank Pietronigro, Lorelei Lisowsky, Laura Knott

Space Art Advocate Award

Awarded to a space scientist or space science organization dedicated to supporting Space Art:
To **George Whitesides** (United States) for his dedication to building bridges between space science and the space art community and for helping establish the Space Art Development Fund

ISDC Space Art Life Dedication Awards

Awarded to:

Otto Piene (Germany), for 50 years of opening the skies to the arts and for sky artists including the space beyond and for the organization, and development of the Sky Arts community through conferences, exhibitions and manifestos for the past 30 years.

Lowry Burgess (United States), for 40 years of cosmic to art --for creating the NASA policy windows for the movement of the arts both payloads and people into outer space, and for the NASA first official Non- Scientific payload NASA taken into outer space in 1989, the “Boundless Cubic Lunar Aperture”.

Roger Malina (United States/France), for 20 years of pioneering support for and organization of Space Art community through many conferences and gatherings in Europe as well as creating and maintaining the publishing venue for the art, Leonardo magazine.

Tom Van Sant (United States), for a lifetime of artistic actions in and with the sky and outer space, including his brightly clear re-envisioning of the earth.

SPACE ART TRACK CO-CHAIRS WISH TO EXTEND THEIR SINCERE APPRECIATION TO

Space Art Development Fund Patrons

Space Art Track Sponsors including the National Space Society, the Planetary Society, the STUDIO For Creative Inquiry, Zero Gravity Corporation and the Zero Gravity Arts Consortium

Space Art Track Exhibition Artists and Presenters, Filmmakers and Panel Moderators

Members of the ISDC Organizing Committee with a special thank you to George Whitesides and Pat Montour

SPECIAL THANKS TO

@rt Outsiders International Festival and Jean-Luc Soret and Space Art One

Bob Bagar, Bargar Communications

Lars Lindberg Christensen, ESA/ESO

President Jared Cohon, Carnegie Mellon University

European Space Agency

Golden Star Productions, Celestine Star and the Golden Star Media Crew including Allan Lundell, Sun MacNamee, Scott Stender, Aaron W. Baum, Robin Silver, Michael Olsen

Patrick Gyger and the Maison d'Ailleurs in Yverdon-les-Bains, Switzerland

The Hubble European Space Agency Information Center

David King

Karen Lau

Peter Lore, Senior Designer\Client Advisor, Advantage Custom Design Group

Margaret Myers, STUDIO For Creative Inquiry, College of Fine Arts, Carnegie Mellon University

Jon Ramer and International Association of Astronomical Artists (IAAA)

Professor Luis Rico-Gutierrez, STUDIO For Creative Inquiry, College of Fine Arts, Carnegie Mellon University

Dean Hilary Robinson, College of Fine Arts, Carnegie Mellon University

Terry Rosenberger and the Alumni Relations at Carnegie Mellon University

Professor Susanne Slavick, Head of the School of Art, College of Fine Arts, Carnegie Mellon University

Eric Sloss, Public Relations, Carnegie Mellon University, Carnegie Mellon University

SKY STUDIO: ZGAC Parabolic Research Flight For Artists
May 4, 2006 at 11:00 AM – Burbank Airport - Flown by Zero Gravity Corporation.
May 4, 2006 – 8:00 AM – 11:30 – Flight Team Training
May 5, 2006,11:00 AM – 12Noon, Room H. - SKY STUDIO Video Screening:
May 6, 5:00 – 6:00 PM, Room B4 - SKY STUDIO Space Art Track Presentations:

Program highlights of the Space Art Track include a series of two flights, SKY STUDIO, a space art research flight scheduled to take place in Los Angeles on May 4, 2006 as a part of the Space Art Track of the 25th International Space Development Conference. To support SKY STUDIO, Zero Gravity Corporation [1] will ferry a Boeing 727 jet from their home base in Ft. Lauderdale to Los Angeles and will fly SKY STUDIO from Burbank Airport.

GRAVITY PULSE: ZGAC Parabolic Flight for Artists is the second flight planned by ZGAC that will fly from the Kennedy Space Center sometime during the summer of 2006. This interdisciplinary collaborative project will feature twelve teams of internationally acclaimed artists flying a variety of unique Space Art projects, while providing people worldwide with a glimpse into this fascinating genre via the internet as a part of a third project called DATAFLUX, planned for webcasting live from the jet. Gravity Pulse, which is the first flight of its kind to be flown in the United States, will showcase cutting-edge interdisciplinary, multicultural Space Art projects created by artists whose provocative new works are defining and expanding the scope of this fascinating genre.

ISDC SPACE ART EXHIBITION

May 4 – 7, 2005
Sheraton Gateway Hotel at Los Angeles International Airport, Los Angeles, CA

Produced in affiliation with International Association of Astronomical Artists, the STUDIO for Creative Inquiry at Carnegie Mellon University, Space Art One and the Zero Gravity Arts Consortium

Space Art Exhibition Committee Members
Lowry Burgess, Sam Coniglio, Lorelei Lisowsky, Frank Pietronigro, Jon Ramer, and Jean Luc Soret

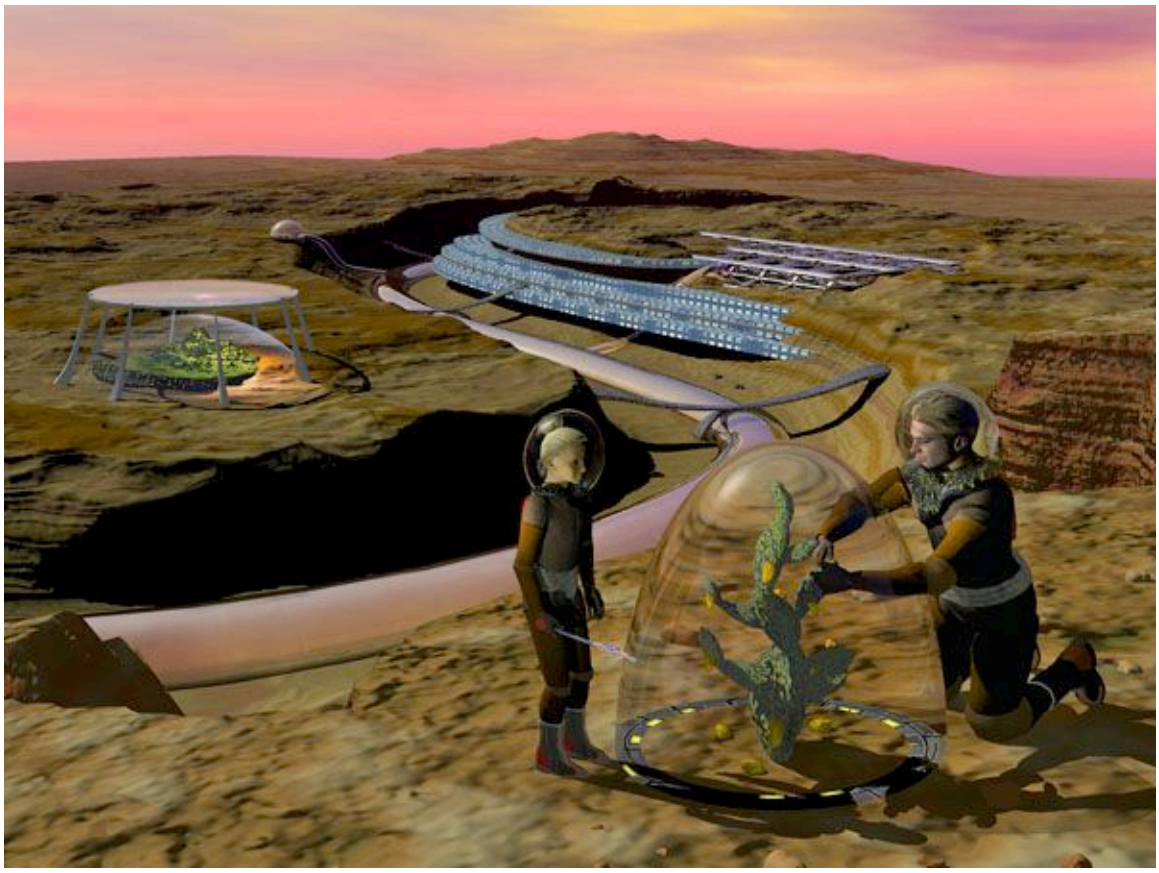
The Exhibition Committee of the ISDC2006 Space Art Exhibition built partnerships with international curators, space agency officials and cultural representatives to curate and install a multifaceted presentation that will offer a historical overview of the development of traditional and contemporary space art works from artists representing the international space art community past and present. Media will include video, paintings, multimedia, illustrations, drawings, space art project documents and artifacts.

SPACE ART TRACK EXHBITION ARTISTS

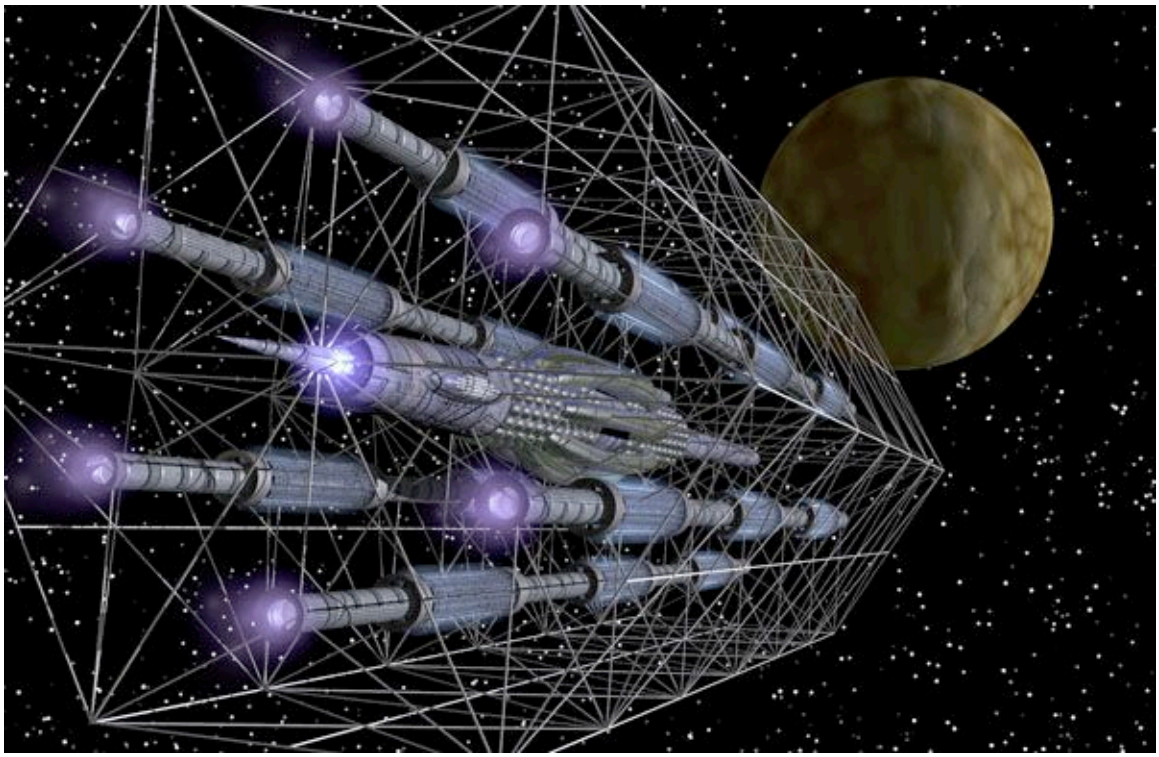
Aldo Spadoni - Ayako Ono - BE Johnson - Betsy Smith Bettina Forget - Charley Kohlase - Cheryl Cotman - Chris Robinson - Dan Durda - David Hardy - David Robinson Frank Hettick - Frank Lewecke - Frank Pietronigro - Jackie Burns - James Scotti - Joe Bergeron - Joe Tucciarone Jon Ramer - Joy Day - Julie Jones - Kathleen Johnson Lynn Perkins - Lynette Cook - Matthew Joscelyne- Marcelo Bonafati - Mark Garlick - Mark Maxwell - Michael Carroll Rick Sternbach - Robin Hart - San Coniglio - Sam Deitze- Steven Florides - William Stolpin

The Artists' Universe Space Art Exhibition is a juried traveling exhibition of 100 astronomical artworks by artists reflecting various representative media, subject matter, and styles of International Association of Astronomical Artists.

Arrakis-Dune by Be Johnson

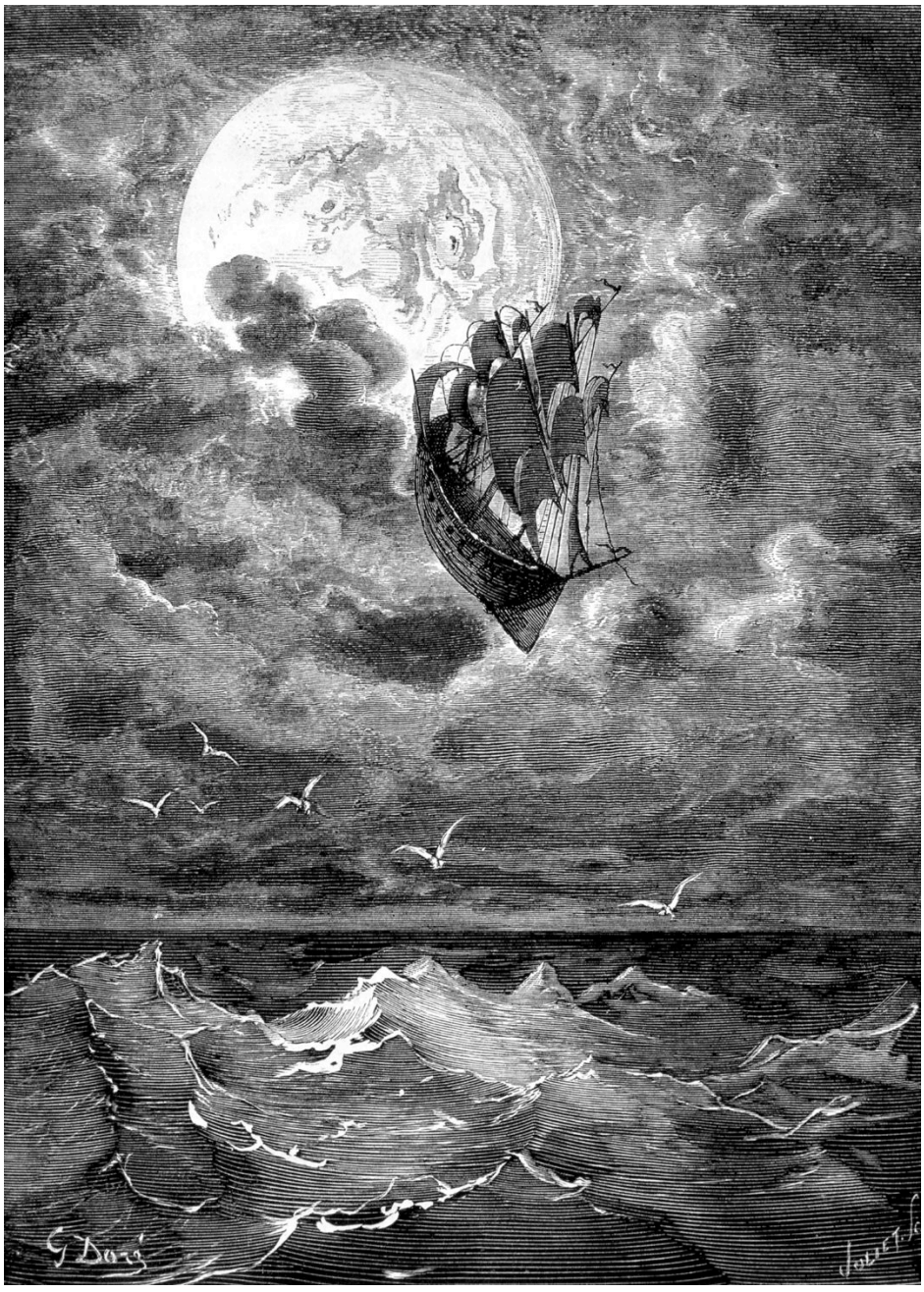


Canyon City, Mars by D Charley Kohlhase



Lattice Ship 1 by D Charley Kohlhase

Science Fiction / Technology Fact – selected works from a European Space Agency's exhibition based on a study that was carried out by Maison d'Ailleurs in Yverdon-les-Bains, Switzerland, which houses one of the world's largest collections of science fiction literature in the world.



Wood engraving based on a drawing by Gustave Doré, in Gottfried Bürger, Les Aventures du baron de Münchhausen, Jouvet & Cie éd., 1862, p. 193.

SPACE ART TRACK SCREENING

Space Art Screenings – Room H and Room 201, Salon F2
May 4 and 5, 2006, 9:00 AM – 12:00 Noon - Room H
May 4 – 7, 2006, Daily from 9:00 AM – 6:00 PM – Room 201

See ISDC Internet Schedule for exact times. Feature fascinating art and space science collaborations created by various space artists, new works in film and special documentaries presented in collaboration with the @rt Outsiders International Festival, Golden Star Media Crew, the Hubble European Space Agency Information Center, Jean-Luc Soret, Patrick Gyger and the Maison d'Ailleurs, the STUDIO for Creative Inquiry at Carnegie Mellon University, Space Art One and the Zero Gravity Arts Consortium.

HUBBLE: 15 Years of Discovery

Presented in collaboration with The Hubble European Space Agency Information Center (www.spacetelescope.org). The Hubble Space Telescope is a project of international cooperation between European Space Agency & NASA.

Messier 101 (the Pinwheel Galaxy)
Image Courtesy of the European Space Agency & NASA

Microgravity

– a film by David Ethan Sanders, written by Seth Talley, starring Tarika Brandt and Peter Marks, production design by Mamiko Otsubo (www.microgravityfilm.com)

Microgravity tells the story of Eniko, a young Russian Cosmonaut in orbit around the moon. Eniko must fight for her survival against cabin fever, technical difficulties and self-doubt when her return to Earth is repeatedly postponed.

Tarika Brandt in Microgravity

'Drift Painting in a Microgravity Environment'

Video documentation of Research Project Number 33: Investigating the Creative Process in a Microgravity Environment featuring Frank Pietronigro engaged in the process of creating "Drifting Painting' aboard NASA'S KC135 turbojet as a part of the NASA Reduced Gravity Student Flight Program, a program of the Texas Space Grant Consortium produced in collaboration with the California Space Grant Program and the San Francisco Art Institute. (www.pietronigro.com)

Special Presentations

Including films, plans and projects created by students participating in the Space Art Studio Seminar held at the College of Fine Arts, Carnegie Mellon University during the Spring 2006 semester working under the guidance of Professor Lowry Burgess.

SPACE ART: Exploring New Territories!

In 2003, the International @rt Outsiders Festival, presented an historical event based on the "Space Art" theme, which was held at the Maison Européenne de la Photographie. This was the very first time a festival, exclusively dedicated to space art, have been organized in France. What needs to be done is to define "Space Art" in general terms, without going into a long drawn-out listing of all the disciplines that it covers, which in fact encompass almost all fields of contemporary creation.

"Space Art" is all those contemporary artistic practices that are inspired by space research or space activity. It is, therefore, not an aesthetic current that imposes shared formal rules of presentation or representation, but rather an artistic current defined by a subject: space, drawing on a community of passionate, lively interests by an infinite scope of investigation that is as yet little explored.

The panorama of the works which are shown here enables us to forcefully demonstrate the extraordinary vitality of contemporary creation via the novelty and diversity of the fields of experimentation that it covers: artistic experiments in weightlessness, collective and participatory works intended for space voyages, sub-orbital and environmental projects, multimedia installations based on radio-astronomy and radio-telescopy, cosmic representations, weightless sculpture and architecture, digital creations concerning fantasy, esthetics or the history of the conquest of space.

These unique artists, painters, plastic artists, architects, sculptors, film makers, musicians and poets appropriate each in their own way the collective imagination linked to the exploration of space, providing us with fascinating works, that reveal a particular awareness of the incomparable social-cultural changes that are associated with technological progress.

This video program tries to illustrate to the prodigious force of evocation that this Terra Incognita has always held for the human community.

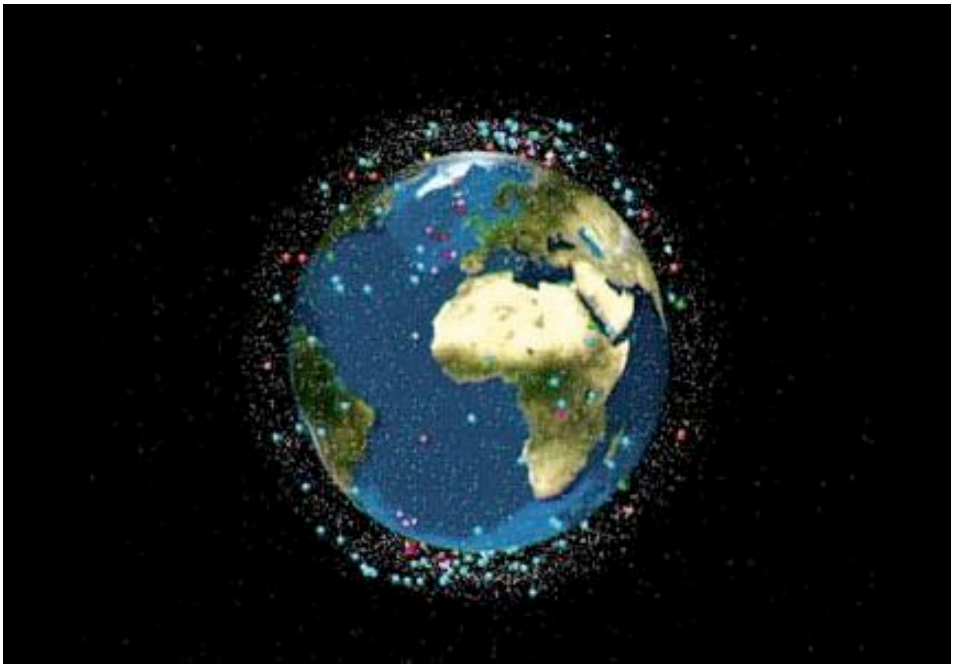
Jean-Luc Soret, Curator
Festival @rt Outsiders / Maison Européenne de la Photographie / Paris / France
Web : www.art-outsiders.com - E-Mail : soret@art-outsiders.com

1) “COLLISION II”, Richard Clar, (2003)
Music: Marc Battier
Durée: 4:00 mn

http://www.arttechnologies.com

COLLISION II, an orbital debris constellation sculpture in low-Earth orbit, is represented in a multimedia video installation featuring music by the French composer, Marc Battier. Attention is focused on the serious problem of orbital debris, particularly in low-Earth orbit.

Selected for COLLISION II, 192 orbital debris objects (color-coded by country of origin) are shown in the installation video along with the remainder of the 10,000 objects (small white dots) currently in the U.S. Space Command's catalog of tracked orbital debris objects. Surrounding our planet Earth, the trajectories of all of these debris, which at first might appear to be chaotic, are in fact known and listed in the U.S. Space Command's catalog of orbital debris objects in space. Using data from this catalog, and a super-computer, the Naval Research Laboratory in Washington, D.C., created the simulations seen in the COLLISION II presentation.



2) “KEO”, Jean-Marc Philippe, (2001)
Durée: 5:15 mn

Selected as the " Project for the 21st century" by Unesco, Keo is a satellite prepared for launching by 2007 for a long journey around the planet Earth in order to land in about 50 000 years later and deliver to our remote descendants any message given nowadays by each of us.
Once Keo on orbit, all our messages - which will remain strictly anonymous within the archives kept on Earth - are going to be analyzed by linguists and sociologists. The content will be summarized by cartographers in order to set up a public debate, a scientific device which will enable us to answer a couple of main questions such as "who are we?" and what kind of world and society could we build starting today in terms of human betterment?

www.keo.org

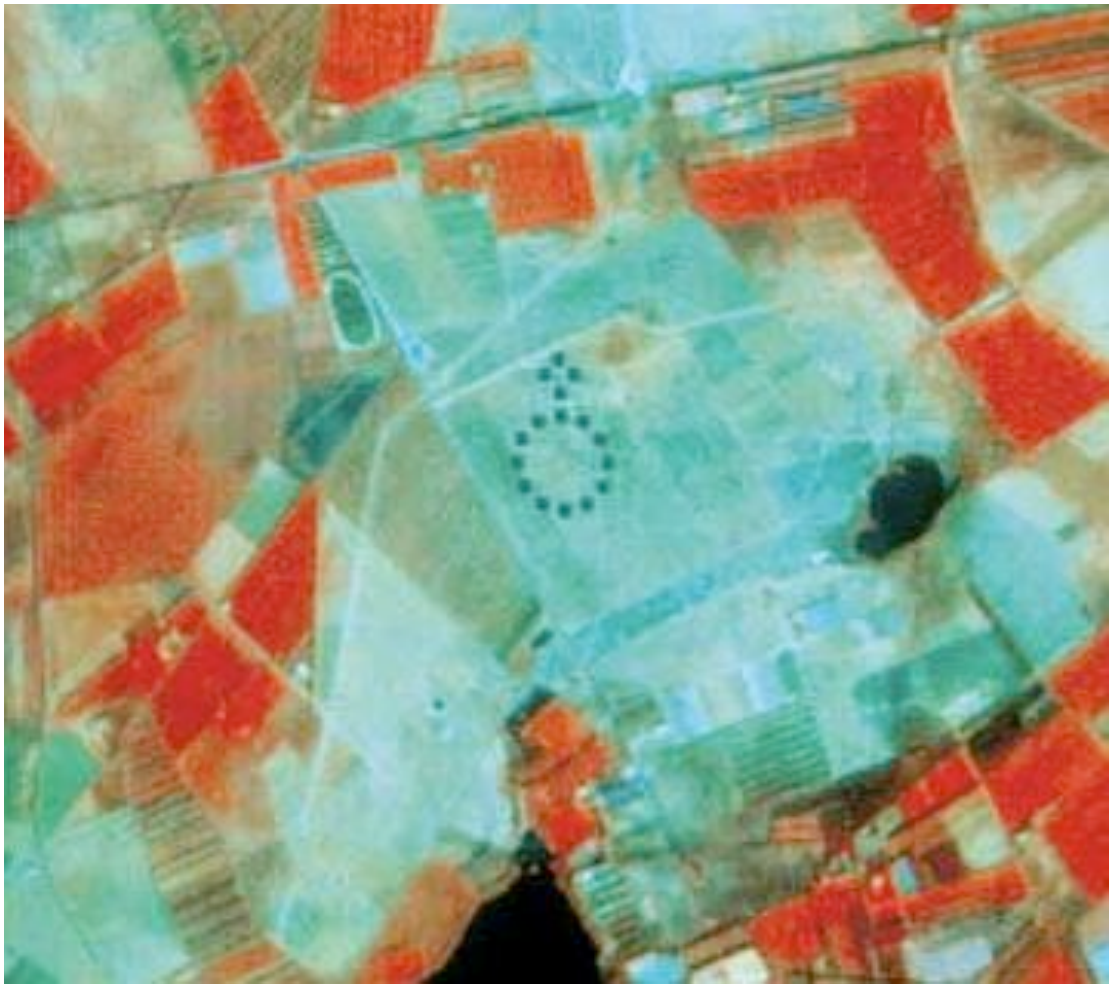
3) “OPEN SKY”, Ewen Chardronnet and "RT32", Rasa Smite, Martins Ratkins, Raitis Smits, (2003)
Durée: 24:20 mn

"Open Sky" looks how artists explore conversions from military to civilian in space and sky arts. It presents a film that shows how to open the sky to stimulate possible conversions and investigate orbital information systems in the context of post-Apollo to post-Cold War/DesertStorm esthetics and politics. “Open sky” shows also the background of the conversion for civil use of the "RT 32" telescope of Irbene in Latvia.

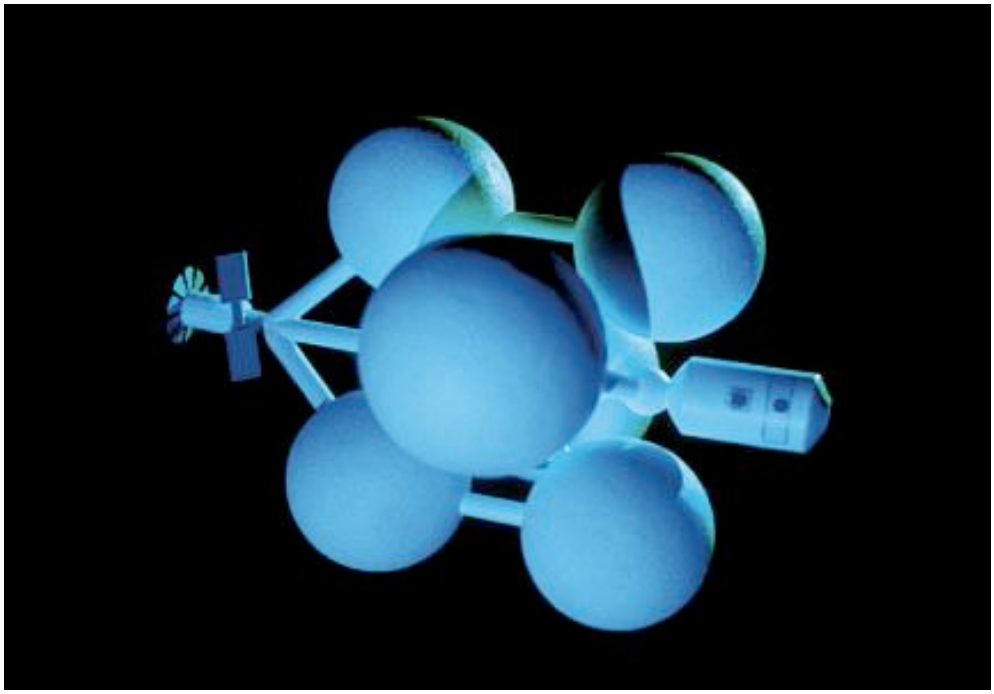
http://acoustic.space.re-lab.net
http://www.rixc.lv
http://www.radioqualia.net

4) “SIGNATURE TERRE” + “PROGRAMME BIOSPACE” + “ZERO G. ART”, Pierre Comte, (2003)
Durée: 7:00 mn

Visible from space, **"Signature Terre"** is a gigantic ground installation that reaches its full significance with the satellite views presented.



"Biospace Program" a project that endeavors to prove that the ideal architecture for weightlessness is a sphere. An original work that gives us a glimpse of tomorrow's space shuttle cockpit.



"Zero G. Art" thanks to backing by the CNES, ESA and NASA, Pierre Comte has created very particular plastic works, in which the interest lies ó amongst other things ó in the way in which they move about in space.

5) GRAVITATION OFF! Arts Catalyst, (2003)
Durée: 11:45 mn

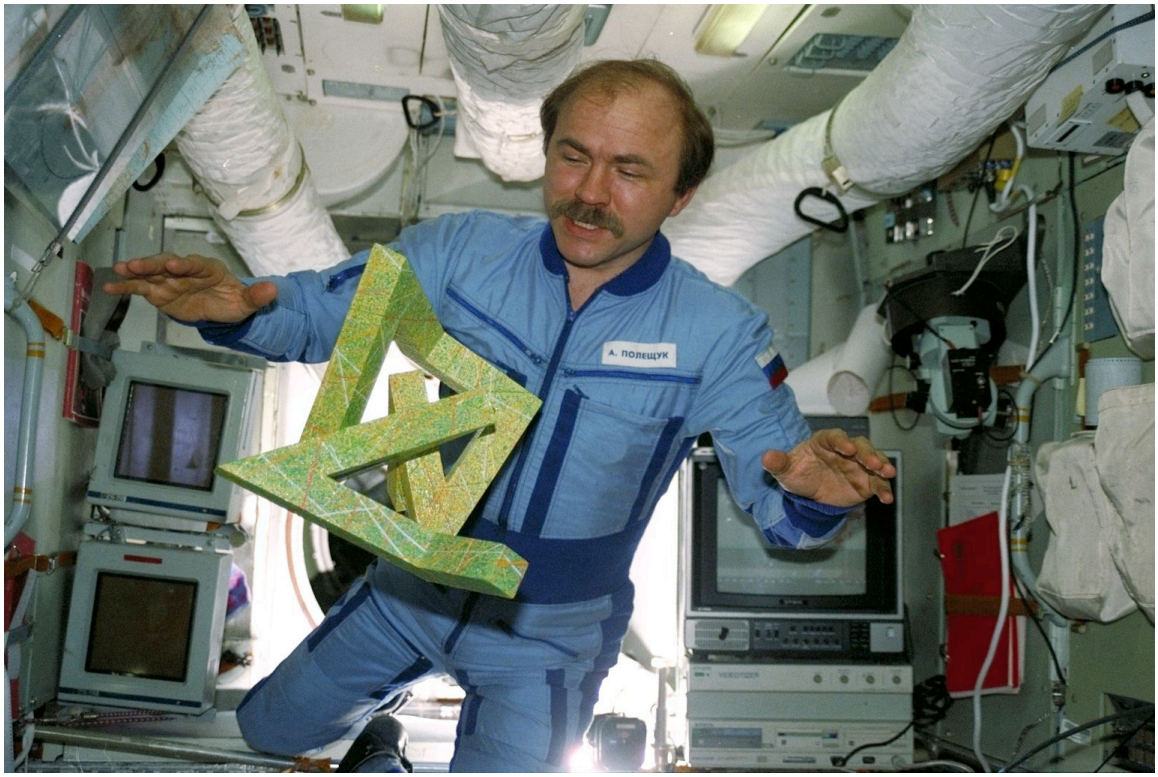
The Arts Catalyst founded in 1993 by Nicola Triscott, is a European agency based in London that specializes in the relationship between art and science whose goal is to encourage dialog, exchange and collaboration between artists and scientists. This organization whose curator is Rob La Frenais thus opens up new territories and spaces for creation with the setting up of multidisciplinary research laboratories including activities such as zero gravity flights.
"Gravitation off!" leads us to discover the extraordinary video documents of these artistic experiments performed in weightlessness.

www.artscatalyst.org

6) “COSMIC DANCER”, Arthur Woods, (1993)
Durée: 6:20 mn

On Friday, March 23, 2001: the MIR space station plunged into the south Pacific in flames. Along with the station, the "Cosmic Dancer," the first sculpture on board the MIR since 1993, that was specifically created for the station and for weightlessness, disappeared into the ocean. With no attachment points, this sculpture offers viewers a multitude of perceptual points or rather position points, creating a three dimensional kinetic relationship with the cosmonauts.
A captivating video documentary that enables the public to observe the birth and realization of this historical, yet ephemeral work.

www.cosmicdancer.com



SPACE ART TRACK SPONSORS

The National Space Society
The National Space Society (NSS) is an independent, international, educational, grassroots nonprofit 501(c) 3 organization dedicated to the creation of a space faring civilization. The NSS has more than 22,000 members, and 75 chapters in the United States, Canada, Mexico, Australia, Germany, Ireland, and the United Kingdom. The NSS, founded in 1974 by Wernher von Braun, is widely acknowledged as the preeminent citizen's voice on space.

www.nss.org

The Planetary Society
The Planetary Society, founded in 1980 by Carl Sagan, Bruce Murray, and Louis Friedman, inspires and involves the world's public in space exploration through advocacy, projects, and education. Today, The Planetary Society is the largest and most influential public space organization group on Earth. Dedicated to exploring the solar system and seeking life beyond Earth, The Planetary Society is non-governmental and nonprofit and is funded by the support of its members.

www.planetary.org

STUDIO For Creative Inquiry
College of Fine Arts, Carnegie Mellon University
The STUDIO is a center for experimental and interdisciplinary arts in the College of Fine Arts at Carnegie Mellon University. Founded in 1989, the STUDIO connects artistic enterprises to academic disciplines across the Carnegie Mellon campus, to the community of Pittsburgh and beyond. The STUDIO's mission is to support creation and exploration in the arts, especially interdisciplinary projects that bring together the arts, sciences, technology, and the humanities, and impact local and global communities.

www.cmu.edu/studio/

ZGAC ZERO GRAVITY ARTS CONSORTIUM

Zero Gravity Arts Consortium

Zero Gravity Arts Consortium (ZGAC) is a international Space Art organization dedicated to fostering greater access for artists to space flight technology through the creation of international partnerships with space agencies, arts organizations, corporations and leading universities. Based in the United States, ZGAC is the first organization of its kind, facilitating parabolic flight projects that will set the stage for teams of artists to have permanent access to space. ZGAC supports international Space Art conference programs as a way for artists from all over the globe to affiliate our programs.

Zero Gravity Arts Consortium welcomes you participation in our organization. For more information on how you can contribute please email: frank@pietronigro.com

www.zgac.org

Zero Gravity Corporation

Zero Gravity Corporation (also known as ZERO-G) is a Fort Lauderdale-based company that operates weightless flights. The company operates a modified Boeing 727 which flies parabolic arcs similar to those of NASA's KC-135 Reduced Gravity Aircraft. Ansari X Prize Chairman Peter Diamandis is the Co-Founder, Chairman, and Chief Executive Officer of ZERO-G.

www.GoZeroG.com

AFFILIATE / COLLABORATING INSTITUTIONS

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California Space Grant Consortium, United States
ECHO: Center for Experimentation and Development in Multimedia Technologies, Canada
Exequo, the Open Broadcast Network, London, United Kingdom
European Space Agency's Hubble Office
Foundation for Space Exploration, United States
General Orbital Corporation, United States
Golden Star Productions, United States
Goianesia Communities, Brazil
Hunter College, Department of Film and Media, United States
International Association of Astronomical Artists
ItauLab - Itau Cultural Institute, Sao Paulo, Brazil
Itau Cultural, Brazil
Japan Aerospace Exploration Agency, Space Environment Utilization Center, Utilization Planning and Integration Office, Japan
Lateq/UnB – Laboratory of Applied Chemistry from the University of Brasilia, Brazil
Leonardo / OLATS, France
Leonardo Space Art Working Group
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Maison d'Ailleurs, Switzerland
New York University, Interactive Telecommunications Program, United States
Philcorp, United States
Rijksakademie van beeldende junsten, Netherlands
San Francisco Art Institute, Center for Art+Science, United States
Skedio, Brazil
Texas Space Grant Consortium, University of Texas Center For Space Research
University of California Santa Barbara Media Arts and Technology Department, United States
University of South Carolina, Art Department, United States
University of Plymouth, School of Computing, Communications and Electronics
Space Art One, France
Zavod Projekt Atol Institute, Slovenia
Zero G Arts Lab, United Kingdom

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Chairman of the Post Graduate Studies for Interactive Medias – SENAC,
Supervisor (Advisor) of Art and Technology Habilitation in Digital Media at Pontifícia Universidade Católica de São Paulo, Brazil.

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Leonardo/Olats
Leonardo Space Art Working Group

James D. Burke
International Space University

Richard Clar
Art Technologies

Marcos Cuzziol
ItauLab - Itau Cultural Institute, Sao Paulo, Brazil

Burke Fort
President, Foundation For Space Exploration and Director, Texas Space Grant Consortium, University of Texas Center For Space Research

Dr. Tania Fraga (Tania Regina Fraga da Silva)
Artist and Freelance Architect
Researcher at the University of Brasilia, Brazil

Holly Henry
California State University, San Bernardino

Jeffrey Hoffman
Former NASA Astronaut

Bettyann Holtzmann Kevles
The Planetary Society Member
Professor of History, Yale University

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Director Zavod Projekt Atol Institute, Slovenia

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Radlab

Roger Malina
International Academy of Astronautics
Leonardo Space Art Working Group

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Space Environment Utilization Center
Japan Aerospace Exploration Agency

SPACE ART TRACK
ABOUT THE PRESENTERS AND THEIR PRESENTATIONS

Priscila Arantes and Dr. Tania Fraga (Tania Regina Fraga da Silva)
http://www.priscilaarantes.com.br
http://www.lsi.usp.br/~tania/
http;//www.unb.br/vis/lvpa/
http://www.planeta.terra.com.br/arte/lvpa2002/ResponsiveSurface/
Brazil

InterAesthetic: Floating Connections
InterAesthetic is a de-stabilizing concept opening ways for the emergence of a new epistemology pointing to vectors defining an aesthetic established when art, technical domain and science are assembled to reinvent new experimental zones. One such zone is the synergetic experimentation of situations where it is possible to hypothesize over experiences related with fluidity, disorientation, insecurity and transient sensations well known in microgravity situations. The creative proposal analyzed is part of the work in progress “Gravity Fluxions: Pulsations”, a collaborative artwork by the artists Frank Pietronigro (USA), Gavin Starks (UK) and Tania Fraga (Brazil).

Boto – Robotic Sculpture for use during Gravity Fluxions: Pulsations
Created by Tania Fraga

In this artwork the artists plan to conduct, during parabolic flight, a performance testing an experimental hypothesis on the spatial behavior of a fluid rubber structure currently being built, inquiring how this structure will grow in weightlessness, how will it floats with the body of the artists, what kind of behavior such structure may have when going from microgravity to 2G, how will it change from its total flatness to a full three-dimensional volume. They plan to take this experience to earthbound audiences, metaphorically, creating responsive installations where reactive rubber objects colored with pigments responsive to black light and embedded with sensors that produce fluid movements, provoking for the viewers a poetic sense of disorientation, instability, and des-stabilization of their sense of verticality.

ABOUT THE PRESENTERS
Priscila Arantes (www.priscilaarantes.com.br) is a new media art critic and researcher. She is professor of digital art and technological aesthetic at Pontifícia Universidade Católica de São Paulo (PUC/SP) and coordinator of Post graduate studies at SENAC/SP. She is author of Art and media: perspectives of digital aesthetics (Ed.SENAC/2005). She is a researcher at the PEPG in Communication and Semiotics (PUC-SP), where she developed her doctorate New Media Art in Brazil: for an aesthetic in digital time, nominated for the 3rd Cultural Prize of Sérgio Motta Foundation (São Paulo/Brazil).

Tania Fraga is a Brazilian architect and artist. She holds a PhD. of the Communication and Semiotics Program at the Catholic University of Sao Paulo (PUC). In the course of 1999, Tania developed a Post Doctoral research project at CAiiA-STAR, UK with a research grant from CAPES, the Brazilian Agency for the Improvement of Higher Education Personnel. She was Professor and Co-Coordinator of the Graduation Studies of the Art Institute at University of Brasilia, Brazil, where she is Associated Researcher. She was member of the Advisory Research Committee of the Banff New Media Centre in 2003, Canada. She was Visiting Scholar at the Computer Science Department at The George Washington University, Washington DC, 1991/1992 and Artist-in-Residence at The Bemis Foundation, USA, 1986, with a grant from the Fulbright Commission. She has been showing and publishing her work in many national and international exhibitions, lectures, workshops, seminars and congresses. Tania's current field of research is the creation of interactive cyber-worlds, for interactive stage performances and interactive art installations.

Martha Blassnigg / Dr. Michael Punt
Trans-technology Research at University of Plymouth
United Kingdom
http://www.trans-techresearch.net

Beyond the Ubiquitous spectrum - Tarot in Space
Following our Mars Patent project Design for Absolute Openness (www.mars-patent.org) we are testing the possibility that the telepathic dimension may be influenced significantly by gravity. This project exploits the defamiliarization of zero gravity and applies a 'Ganzfeld Methodology' to create a series of pictograms based on the major Arcana.

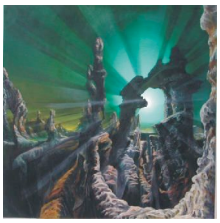
ABOUT THE PRESENTERS
Martha Blassnigg is a Cultural Anthropologist and Film and Media Theorist. She works as research assistant with Trans-technology Research at the University of Plymouth and is a reviewer for Leonardo Reviews. Her recent articles can be found in Leonardo and Convergence where her research makes a contribution to the way we think about spiritual and metaphysical implications of contemporary technology and its popular interpretation.

Dr. Michael Punt is a Reader in Art and Technology at the University of Plymouth and is Editor in Chief of Leonardo Reviews. He is a member of the Leonardo/ISATS Advisory Board, and the MIT/ Leonardo Book Series Committee. He has made 15 films and published over eighty articles on cinema and digital media in the last decade. His most recent book with Robert Pepperell will be published by Rodopi this year under the title Screen Consciousness: cinema, mind and world.

Marcello Luis Bonafanti
http://www.marcelobonfanti.com.ar
Argentina


Undiacomun


Rigel


Verde

Cosmos: Images, Sounds and Sensations
Space Art in the social environment in which I work. It has always got me passionate the exploration of exotic worlds through science or art; they are a challenge to the imagination and to aesthetic parameters of our planetary art. Working in Astronomy art is a little difficult in Argentina, a society with very low knowledge in Astronomy and space technology, perhaps because the space aerial development was never set as a goal in the national policies. In South America, art is orientated in general to show and to confront to the spectator with social problems, or on the other hand, to express the artist ´inner self'. It almost does not exist a cosmologic conscience… in fact; it is the paradise for anthropocentrism. I understand that I am pioneering in Argentina in astronomy art. • Images and sounds my creative process for worlds of high probability of existence, is based on three points: science, visual arts, and sound. I am working in astronomy art since 1982. I have always used music during the development of paintings; I choose them thinking about the general conditions of the planet that I want to represent. This process has evolved since early days for nowadays I compose my own sounds, mixing own sound effects of the place, with subjective sounds that transmit the emotions of the astonished traveler one. • How does it work? For the exhibition I use great spaces, I prefer non habitual public spaces, I need the absolute dark, I usually alter the floor with different materials so that it generates certain insecurity to the visitor, each work has its own support and light to order them in space form. Suddenly, a picture illuminates and reproduces its sounds; when finalizing it disappears and it begins another one; in programmed sequences that take the viewer in a voyage to space; at the end, all paintings are illuminated and each one has a description with scientific information. Information: www.marcelobonfanti.com.ar/multimedia.htm When beginning a piece of art, I think about geological, climatic, astronomical chemistries aspect, etc., I think about its aesthetic, colors, lights, shades etc. I consider its noises or silences and the sonorous distortions of the place and the emotions that I would feel if I was there. The investigation of auditive and visual landscapes is very interesting; the combination of a fixed image with a sound tempo forces the spectator to imagine the environment. When he or she incorporates movement in their mind, they are ventured to walk it or may stand still, scared by the unknown, but this experience mainly meets them again with the state of contemplation, almost extinct in the frenetic life of present man. (Main important difference with respect to video) I try to represent with sound the exact geologic image, color composition, forms, etc. At the moment I am experimenting with noises that have no aesthetic harmonies in order to enter landscapes without aesthetic lines of vision (terrestrial). Work group: formed by astrophysicists of National University of Córdoba and musicians. RESULTS - My research is totally artistic; but I have found an excellent form of scientific spreading.

Lowry Burgess
Professor, Distinguished Fellow
STUDIO for Creative Inquiry, The Center for the Arts and Society,
College o f Fine Arts, Carnegie Mellon University
http://artscool.cfa.cmu.edu:16080/~burgess/
http://www.cmu.edu/PR/releases05/050210_spaceart.html
United States

Moments In The Infinite Absolute
Burgess's monumental work, 'The Seed of the Infinite Absolute' will float in microgravity above Los Angeles, generating brilliant flashes of light as it transits from OG to 2Gs. It is formed by an elaborate series of processes and distillations created, in different global climates, over the past 25 years. Its shell, a geometrically complex, hand size 'seed' is a fusion of the 12 'royal' metals. It contains a unified emulsion of the essences of 44 trees, 52 flowers, 36 waters, 32 bloods and 120 telepathic hopes representing, in essence, the entire Earth. All these elements are unified into one essential, hand-held form to be 'released' by the artist at the edge of the absolute state of micro-gravity.

ABOUT THE PRESENTER
Lowry Burgess has worked with outer space for the past 35 years. Among celebrated space artworks is his 'Boundless Cubic Lunar Aperture,' as noted, the first 'official' non-scientific payload that was taken into outer space by the NASA Space shuttle Discovery in March 1989. He is Dean and Professor at Carnegie Mellon University and Distinguished Fellow of the Studio for Creative Inquiry and the Center for the Arts and Society. He was a Fellow of the Center for Advanced Visual Studies at MIT for 25 years.

James D. Burke
http://www.isunet.edu/

International Space University Overview: Opportunities for Space Art Collaborations

ABOUT THE PRESENTER
Jim Burke is a graduate of the Webb School of California and Caltech. After service as a U.S. naval aviator he joined the Caltech Jet Propulsion Laboratory in 1949, where he was employed until his retirement in 2001. Beginning in 1989, on annual summer leaves from JPL, he joined the faculty of the International Space University. His main professional interest is in the exploration and settlement of the Moon. Jim and his wife, Lin, married since 1950, have five grown children and three grandchildren, all lovers of mountain, airborne and seaborne recreations. Jim is a Fellow of the British Interplanetary Society and a member of the American Geophysical Union, the American Institute of Aeronautics and Astronautics, the Space Studies Institute at Princeton and The Planetary Society. Jim advocates the development of a functioning civilization on the Moon, with early involvement of the fine and lively arts.

Tania Fraga, Frank Pietronigro and Gavin Starks:
Collaborating Artists
Brazil, United States, United Kingdom

Gravity Fluxions: Pulsations
The artists plan to conduct, during parabolic flight, a performance testing an experimental hypothesis on the spatial behavior of a fluid rubber structure created with materials, currently being researched, that aim to be used for sustained development projects supporting small communities in the Amazon. Considered as an artificial organism' by the artists, the structure will grow in weightlessness, floating with the body of the artist, from total flatness to a three-dimensional volume. To extend a metaphorical experience of fluidity and weightlessness to earthbound audiences, the artists can create a responsive installation, using ultraviolet light over a responsive rubber structure embedded with programmable sensors to produce fluid movements. It is the intention of the artists that this work will reconstruct for earthbound viewers a poetic sense similar to what happens to people in microgravity: immersion, disorientation, ephemeral sensations, lack of verticality and instability.

Gavin Starks will also attempt to directly affect the shape and movement of the ‘artificial being’ by playing sound directly at the ‘artificial being’ - making it resonate at certain frequencies, while using a strobe light or high shutter-speed camera to macro-film its surface. Certainly given the fluid nature of the object and the links with "acoustic" resonant phenomena being discovered in everything from galactic dust clouds to black holes, there are many references relative to this project convention. For example, "resonant" frequencies in cosmological models will be experimented with as the artists will take "standard 3d visual references" for cosmological models, such as the "saddle" topology and then create some form of resonance to change this topology into something else using the memory of the material contained in the ‘artificial being’. Even a planar surface of the ‘artificial being’ would yield an interesting, malleable aesthetic.

ABOUT THE PRESENTERS
Biographical information on Tania Fraga provided above
Biographical information for Gavin Starks and Frank Pietronigro below.

Dr. Holly Henry
Associate Professor of English
California State University, San Bernardino

The Arts and Space Culture: The Common Ground of Creativity
This presentation highlights current and proposed collaborations between space artists and space science organizations. Panelists will discuss key points of a report that resulted from the Workshop on Space Artist's Residencies and Collaborations held in February 2005 at Carnegie Mellon University West at the NASA Ames Research Center, Moffett Field, CA.

ABOUT THE PRESENTER
Holly Henry is an associate professor of English at the California State University, San Bernardino. Her book, Virginia Woolf and the Discourse of Science: The Aesthetics of Astronomy (Cambridge UP 2003), explores how advances in astronomy in the early twentieth century helped shape Woolf's literature and her aesthetics. Dr. Henry was a member of the Space Generation Forum at UNISPACE III: The Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space held in 1999 in Vienna, Austria.

Jeremy Hight
The first locative narrative/spatial narrative project “34 North 118 West”:
http://www.34n118w.net
Hourly earthquake data edited text and image project “Carrizo Parkfielld Diaries”:
http://www.artport.whitney.org/gatepages/march05.shtm
My essay on spatial narrative and GPS “Narrative Archaeology”:
http://www.xcp.bfn.org/hight.html
My essay on reading landscape and its various data “Narrative Archaeology: Reading the Landscape
http://www.web.mit.edu/comm-forum/mit4/papers/hight.pdf
United States

Floating Points:
The International Space Station and Locative Art
This paper will discuss the utilization of the ISS as not only an avenue of artistic exploration, but of recontextualization and pushing forward of the concepts and boundaries of locative media as well as locative media art. My project looks at the station as location, as well as of how there is a second station that is the experimental architecture of the experiences and the processing of tasks and moments of the astronauts and how they communicate this while above the earth and at work or rest.

One of the primary concepts of locative media is that there is a trigger point that is measured onsite by latitude and longitude. This also can apply to thousands of miles above that place. The GPS signal range and the flight altitude make this possible. The moments that astronauts observe the earth from above, can this also be a trigger point for locative information and narrative? Yes. The work can be viewed by the astronauts onboard and from those on the ground, does this create a communication of place as not only of surface based location, but also of what is above? With a series of locations selected across the earth along the trajectory of the flight path as locative works to

trigger both by individuals on the ground and by the passing of the space station and astronauts above and with the collaboration and interactions of astronauts from several different countries together in the station itself, how does this expand or elucidate the concepts of diversity and community?

ABOUT THE PRESENTER
Jeremy Hight is a locative/new media artist/writer. He worked on the pioneering locative media narrative project "34 north 118 west" (winner of the grand jury prize at the art in motion festival and considered by some to be the first of its kind). He collaborated on the hourly seismic data edited text and image narrative project "Carrizo Parkfield Diaries" (In the Whitney Museum Artport). He has published several papers on locative media. He is currently editing a book of essays that with 21 authors from around the world will provide various perspectives within and an overview of locative media. He has lectured about his work and his theories of locative media and narrative at the University of Iowa, The international symposium on technology and text "Trace" at the university of Nottingham, and at Massachusetts Institute of Technology at the "Mitt 4 work of stories" conference. He has an essay on locative media and the landscape coming out soon in the journal Leonardo out of MIT, and has another paper on the MIT website.

Bettyann Holtzmann Kevles
Lecturer, History Department
Yale University, the Planetary Society
United States

About the Zero Gravity Arts Consortium Parabolic Flight for Artists

ABOUT THE PRESENTER
I've been writing about space for years, starting with short columns in the Los Angeles Times and articles in the Planetary Report. In 2003 I published ALMOST HEAVEN: THE STORY OF WOMEN IN SPACE, and a revised and updated edition in 2006. I teach about space and the connection between science and art at Yale.

Matthew Joscelyne
Artistic Director / ARTIST
NSS, ESA, 8+1 Global tour of THE PLANETS
http://www.1-planet.org

8 + 1 presents THE PLANETS

8 + 1 = 9 PLANETS
1 = EARTH
8 = MERCURY, VENUS, MARS, JUPITER, SATURN, URANUS, NEPTUNE & PLUTO

This is the world's first exhibition of the planets that will travel to 9 cities around the globe. The exhibition is a *light*, *sound* and *motion* spectacular. The planets are giant Lanterns all internally illuminated. All the exhibitions will be held in beautiful landscapes with the worlds premier being held on one of California's Beaches. The inspiration for this spectacular light show is the beauty of Earth the love of the _environment and space. This is a celebration of humanity on Earth all living together in a giant solar system. We are a part of something much bigger: LOOK UP!

ABOUT THE PRESENTER
Matthew Joscelyne has been a part of some of the world's most spectacular events. Barcelona 1992 Olympic Games, Atlanta 1996 Olympic Games, Sydney 2000 Olympic Games, Handover Ceremony, Hong Kong 1997, Super-bowl 1997. In 1998 Matthew started his own company to illuminate Sydney for the Millennium Celebrations, the Olympic games. Matthew has now successfully set up a global tour of his Exhibition called THE PLANETS.

The tour was launched in May 2004 in Los Angeles and has now been to the world Space Congress in Vancouver, July 4th with NASA, Aquarium of the Pacific, Xprize Cup 2005 in New Mexico.

Paivi Jukola
Vice President Finnish Astronautical Society, Visual Artist, Architect SAFA
http://www.sats-saff.fi
Finland

The Art of Policymaking for Exploring New Worlds
The future policymaking for creating space related art works is the focus of this paper. Current digital technology and recent achievements in space research enable even the big public to participate and to create space related works of art, or works simply intended to give pleasure over the leisure time. However, there is no machinery to enable artists and non-professionals to obtain material of one's own preference, such as sounds, or satellite imagery or remote sensing data. Scientists and artists, the movie industry and computer game makers as well as the mobile entertainment sector will profit from future space imagery. The paper suggests, that an open source databank and funds for creation of space related art works are needed in order to allow non-scientists to participate in exploring new worlds. The initiation of an interactive, international debate on the future of our environments, the creation of communication among the

artists, scientists, policymakers and the big public is as meaningful as the process of making art, the final works of art.

ABOUT THE PRESENTER

Yoichiro Kawaguchi
Japan

Gemotion In Space
Artistic Gemotional Screen Responds as Living Entity

Now, imagine a flat screen suddenly stretch and contract. Imagine the surprise of witnesses' shock at seeing such an unexpected phenomenon. What would happen if the screen in a movie theater, for instance, began to move toward the audience, bulging and collapsing as if it lived and breathed? For quite a while now, I have wanted to create this moment of pure, child-like, novel surprise. I have been fascinated by the idea of projecting images that create the complete illusion of three-dimensionality (3D) onto a screen, making it seem to stretch and contract like a mollusk to elicit the full range of human emotion captured in child-like wonder. This is where my concept for GEMOTION, "generative, emotional, interactive artwork," began. Realizing that it was technically impossible to jump immediately to a movie theater-size screen, I decided to conduct my first experiment on a miniature screen, stretched over one end of a cylindrical tube. First, 3D images were projected onto the cylinder's false-bottom undulating screen. In the same manner, it is also projected onto the surfaces of the surrounding environment, giving the audience, who are enveloped by these images, the impression that they actually standing inside the image itself. The audience approaches the cylindrical screen placed at the center of the installation space. As they do, the flat screen senses their movement and stirs to life. When the seemingly flat screen suddenly begins to move, the audience reacts with shock and surprise. Amazed, they move closer to the cylinder at the center of the room, and as they do, it suddenly begins to bubble up and collapse into itself, creating even more surprise. The screen rises and falls in sync with the 3D effect of CGI, making the audience believe that it is a real living entity. Mixing cyber and real space has an oddly stimulating effect that is felt throughout the entire body, and it is this aspect that is attracting more and more attention to GEMOTION artworks. What is involved in generating real-time responses from a projection screen to make it seem as if it were a living entity? Where are the sensors located? Is it possible for a work of art to respond while going through the natural progression of emotions like a living being does? Emotional reactions take many forms: intensity, quiet, serenity, seductiveness, childishness, innocence, weakness, and anger, among others. As described above, I have named this type of experiment GEMOTION. The word GEMOTION, meaning Gene, Growth + Emotion, has the same emotional connotation as the concepts behind my new pieces. Hypothesizing genetic codes, growth and emotion, these pieces are designed to open the doors to a new world of reality for art. Seeing with one's eyes, touching with one's hands, feeling on one's skin, eliciting reaction -- these are the basic behaviors involved in human contact. Moving one's body, gesturing, dancing, when the audience wishes to confront a work of art in these ways, this interactive space is transformed into a living, breathing "channel" that makes possible a new type of human-art communication.

ABOUT THE PRESENTER

Kawaguchi Yoichiro is a professor of the University of Tokyo/Interfaculty Initiative in Information Studies. He is also a CG artist. Since SIGGRAPH'82, he consistently presents work in the United States. Major awards include the EUROGRAPHICS Best Artistic Award (Copenhagen) 1984, the Shibata Award (1984), France Nouvelle Image Exhibition Grand Prix (1987), France IMAGINA Exhibition First Prize [art](Monte Carlo)(1991), International Electronic Cinema Festival '91 First Prize [High-vision art](Switzerland)(1991), ARS ELECTRONICA Distinction Award (Linz, Austria)(1991), EUROGRAPHICS'92 First Prize [art](London)(1992), MMA Multimedia Grand Prix Chairman Award (1993), the First L'Oreal Award Grand Prize(1997),and the Tokyo Techno Forum Gold Medal(1997).

Veronique Koken

M.S., Doctoral Student; Stanford University; Member of the National Space Society, American Institute of Aeronautics and Astronautics, Academy of American Poets, NASA AMES Research Center Docent
http://www.eternalvoyage.com
United States

ETERNAL VOYAGE: The Physics and Metaphysics of a Black Hole

ETERNAL VOYAGE is an artistic interpretation of the controversial boundaries that have traditionally existed between the disciplines of Physics and Metaphysics. As humankind advances in our exploration of the universe, we attempt to define new paradigms with updated models for science and art, while non-secular notions seem to endure the passage of space and time. I envision a parallel between dynamic, scientific theories and spiritual, artistic conceptions by embarking on a journey through a black hole.

ABOUT THE PRESENTER
For the last two years, Veronique Koken, M.S., has been studying Modern Theoretical Physics at Stanford University. By combining her interests in science, arts, space, and poetry, Veronique has conceived the project "Eternal Voyage", which she is presenting for the first time at the 2006 ISDC.

Geoffrey A. Landis
Award winning science fiction writer.
NASA John Glenn Research Center and the Massachusetts Institute of Technology
http://www.sff.net/people/geoffrey.landis
United States

Space and Science Fiction (reading)
Science fiction writer Geoffrey A. Landis' fiction draws from his work as a space scientist, and very often features accurate depictions of spaceflight, as well as innovative concepts of future science and technology. His novel MARS CROSSING has been praised as being the most accurate novel about Mars exploration ever written. In this session, he will read from some of his most recent work.

ABOUT THE PRESENTER
Dr. Geoffrey A. Landis is a scientist and a science fiction writer. As a scientist, he is a member of the Mars Exploration Rovers science team, and was also on the Sojourner rover team. He holds six patents, and has written over 400 scientific papers on astronautics and physics. As a writer, he has won the Hugo and Nebula awards, and has written a novel, MARS CROSSING, and a short story collection, IMPACT PARAMETER. His work has been published across the world, appearing in 20 languages on five continents. His most recent story, "Derelict," appears in the anthology Escape from Earth, published by the Science Fiction Book Club this November.

Lorelei Lisowsky and Lowena
Zero g Arts Lab, Zero Gravity Arts Consortium
United Kingdom

Skylife Colony By Bright Capsule
"The heart refuses to be imprisoned; in its first and narrowest pulses, it already tends outward with a vast force and to immense and innumerable expansions." Emerson Ralph Waldo The Skylife Colony" is a study in 'Telepathic Electronics' and attempts to create a "Multimind" network with kisses and mind exchanges. A participatory site-specific action this performance uses the body as instigator. It is a mimetic thought gift that is passed around the inside of the plane while flying 35000 feet in the air examining empathetic connective ness of the individuals as a floating group. This will be one of several interactive works Lorelei has performed with her daughter.

ABOUT THE PRESENTER
Lorelei Lisowsky (USA/UK) is an organizer, curator and interactive artist specializing in zero gravity art performance. She holds a BFA in Interdisciplinary Art from San Francisco Art Institute (USA) (2001), and is currently applying for Mphil/Phd study at the Institute for Digital Art and Technology (UK) in the University of Plymouth School of Technology (UK).

Her research focuses on the Transhuman potential of parabolic flight and how spaceflight can be further explored phenomenological using social and relational experiments, intuition, the senses and ubiquitous technologies. Her earlier work with community interactions has developed into social performances that challenge our capabilities as human beings. Involved in DIY cultural activity in London, ecological and community activity and public art projects in England and San Francisco, exhibiting in both. Founder of Zero g Arts Lab in San Francisco and of 'The Artist Into Space Program' currently Assistant Project Director of the Zero Gravity Arts Consortium. Awarded with one year funded residency from Washington Research Institute, USA.

Richard Lowenberg
Cultural Activist, RADLab
http://www.radlab.com
United States

"Gravitational Field Day" (1979-80)
"Gravitational Field Day" was a dedicated art and sciences project initiated in 1979-80. It involved a group of specially skilled performers (aerobatic dancer, high diver, gymnast) and videographer, documenting collaboration with NASA scientists, astronauts and staff in various gravitational simulation-training settings. The presentation will take a brief look back at this pioneering project, historically and as an example for continuing arts and sciences exchanges.

ABOUT THE PRESENTER
I have been inventing a creative life at the intersection of the arts, sciences and society since the late 1960s. This has included formal and informal collaborations with NASA facilities and personnel on personal creative projects from 1972-85. My current works artfully explore the ecology of economics, communications and technological development.

Ariane Maugery / Guy Le Lay
http://chaosmos.free.fr
France

"Swarming bodies in bubble universes"
"Swarming bodies" is an artistic video (duration: five minutes) created by Ariane Maugery from photos of solar flares taken by the SOHO satellite and from films recorded during the first flight of the International Microgravity Laboratory (IML-1) on board Discovery. As a Physics Researcher Guy Le Lay was co-principal investigator of the Mercuric Iodide Crystal Growth experiment in µg conditions inside IML-1. In this video, fluid levitating bodies slide from macro-perceptions in Euclidian spaces regulated by smooth surfaces to fluctuating states within a quantum topology.

ABOUT THE PRESENTERS

Ariane Maugery is an artist in visual arts with strong emphasis on video, sound and special interests at the interface between art and science. She especially realized in 2005, in the context of the World Year of Physics, a video-installation “Ultra-relativistic e-motion”, with a dancing movement from the contemporary ballet, Preljocaj. Guy Le Lay is a full professor in Physics at the Université de Provence in Marseille, France, with a special interest in nanosciences and art and science

Tomoe Moriyama
Curator/Project Associate Professor
Tokyo Metropolitan Museum of Photography/The University of Tokyo
http:// www.syabi.com

“Mission: Frontier” –Next Generation of Space Art in Japan

This presentation shows a new aspect and current situation of Space Art in Japan. I introduce this unique, brand-new field throughout the exhibition entitled “Mission: Frontier –deep space of our perception,” which I directed as a curator and co-organized by Tokyo Metropolitan Museum of Photography and Miraikan, MeSci: The National Museum of Emerging Science and Innovation. I tried to show a kind of unknown visual frontier, united 2 different fields of art and science throughout interactive pieces of media art, various educational materials on virtual reality technology, also materials of scientific studies and survey, to explore the next stage of our perception.

ABOUT THE PRESENTER

Tomoe Moriyama is a media art curator and has organized over 30 media art exhibitions including ‘Re-Imagination’, ‘Mission: Frontier’, ‘Meta-Visual’, etc at Tokyo Metropolitan Museum of Photography since 1989. She is a jury member of Prix Ars Electronica 2003-2005, SIGGRAPH 2005 Art Gallery, Japan Media Arts Festival. She is an invited researcher at ZKM, Karlsruhe and MIT Media-Lab., Boston in 2003 and had lectures at Bauhaus University, Weimar, UCLA in Los Angels. She works as a project associate professor at The University of Tokyo, also at the Waseda University, its postgraduate course and other art schools.

Ayako Ono
A Trainee of Japanese Government Overseas Study Program for Artists
Affiliate Institute: European Space Agency (ESA)
http://www.geocities.jp/cosmo21art/
Japan

Visions for Future Space Art

This presentation presents a proposal for cultural utilization of outer space highlighting two specific examples of Space Art and design. One is use of artistic internet contents in outer space, and the other is use of art and design in a micro-gravity environment. These are pointed out as a long-term vision, a middle-term expectation, and short-term tasks.

ABOUT THE PRESENTER
Ayako Ono lives and works in Paris, France. From 2005 to 2006 she serves as Japanese Government Overseas Study Programme for Artists. In 2002, she achieved a Masters in Fine Arts from theTokyo National University of Fine
Arts and Music.

Frank Pietronigro
Interdisciplinary Artist
Co-Founder and Project Director, Zero Gravity Arts Consortium
Co-Chair, Space Art Track, 25th International Space Development Conference
Associate Fellow, STUDIO For Creative Inquiry, College of Fine Arts, Carnegie Mellon University
http://www.pietronigro.com
http://www.zgac.org
United States

DataFlux - Flags In Space! - Gravity Fluxions: Pulsations

Frank Pietronigro will present on a variety of space art projects on which he is involved. He is instrumental in directing and helping conceiving DataFlux, a live interactive webcast from ZGAC's Parabolic Flight for Artists. The concept of creating a live interactive webcast, during parabolic flight, was considered for implementation by the artists during his first flight in 1998. This initial intention will be actualized as the project DataFlux in partnership with Lowry Burgess, the STUDIO for Creativity and the Golden Star Media Crew during GRAVITY PULSE: Zero Gravity Arts Consortium Parabolic Flight for Artists proposed for flight in the summer of 2006. During this flight, Pietronigro will work on two projects, Gravity Fluxions: Pulsations, an interactive robotic space art collaboration with Tania Fraga and Gavin Starks (See Tania Fraga) and he will work on another microgravity project Flags in Space! This presentation will discuss a project proposed for parabolic flight that will serve as the basis for a performance that integrates a cultural dance tradition created within the Lesbian, Gay, Bi-sexual, Transgender community. The performance will reflect the fact that despite speaking unique languages and using different methodologies, artists and scientists share a common desire to contribute to the enrichment of the human condition and to improve the quality of life for all people.

(Information on Gravity Fluxions: Pulsations - See Tania Fraga Above)

ABOUT THE PRESENTER
Frank Pietronigro is an interdisciplinary artist, educator and author. He is the first American painter to create "drift paintings" as a part of Research Project Number 33: Investigating the Creative Process in a Microgravity Environment developed as a part of NASA's Reduced Gravity Student Flight Program created in collaboration with the San Francisco Art Institute, the Texas and California Space Grant Consortia. The artist's body floated within a three-dimensional painting that he created in zero gravity aboard NASA's KC135 turbojet. He is Co-Founder and Project Director of the Zero Gravity Arts Consortium, an international Space Art organization dedicated to fostering greater access for artists to space flight technology and zero gravity through the creation of international partnerships with space explorers, arts organizations, corporations and leading universities. In 2004, Pietronigro was appointed Associate Fellow at the Studio for Creative Inquiry at the College of Fine Arts, Carnegie Mellon University.

Bradley Pitts
Artist, Rijksakademie van beeldende kunsten
http://www.Bradleypitts.info
United States and the Netherlands

Against Space Utilization (Cultural or Otherwise)
Singular Oscillations

u•til•ize (y t l- z): To put to use, especially to find a profitable or practical use for. [French utiliser, from Italian utilizzare, from utile, useful, from Latin tilis, from t, to use.] Synonyms: use, employ, utilize These verbs mean to avail oneself of someone or something in order to make him, her, or it useful, functional, or beneficial. To use is to put into service or apply for a purpose: uses a hearing aid; used the press secretary as spokesperson; using a stick to stir the paint. Employ is often interchangeable with use: She employed her education to maximum advantage. It can also denote engaging or maintaining the services of another: "When men are employed, they are best contented" (Benjamin Franklin). Utilize is especially appropriate in the narrower sense of making something profitable or of finding new and practical uses for it: Waterpower was once widely utilized to generate electricity. There is no utilization of space, the void of mater and knowledge. One can only utilize what is already obvious: what one thinks they already know. To speak of the utilization of space is to impose the "known" on the unknown: to repeat old habits, to kill future possibilities. To impose on the unknown is to neglect its very existence. Space is a void that has yet to be explored experientially as such. The unknown teaches us. We do not fill it or complete it as we explore its realms. It remains whole and unaltered as we swim in its depths. If we listen, it informs us as we pass through it. It is not a resource to be mined, but an entity to converse with. We all listen before we can speak.

ABOUT THE PRESENTER
Bradley Pitts is an artist with two degrees in Aeronautics and Astronautics (MIT B.S. '00, M.S. '03). He has flown aboard NASA's KC-135 twice and has researched advanced spacesuit design under a grant from NASA's Institute for Advanced Concepts. He has also worked at NASA's Johnson Space Center designing space station interiors. For the past three years he has devoted himself fulltime to his art practice and is currently a resident artist at the world-renowned Rijksakademie van beeldende kunsten in Amsterdam, the Netherlands. By employing the infrastructure of technological rationalism (concepts, tools, methods, and apparatus) in his

artwork, he restores science and technology to a place where it can be used to investigate philosophical questions and subjective realities.

Jim Plaxco
Chicago Society for Space Studies, International Association of Astronomical Artists, NASA JPL
http://www.marsartgallery.com/
http://www.artsnova.com/
United States

Mars Science As Art Using Subjective Image Processing
Availability of Mars mission data via the Internet coupled with image processing software makes it possible for space activists and artists to create their own images of Mars. This presentation explains how to acquire and process PDS image files in order to create your own Mars art. Emphasis is on creating images that can serve as a foundation for educational presentations.

ABOUT THE PRESENTER
Jim Plaxco is a member of the International Association of Astronomical Artists and the National Association of Photoshop Professionals. He is also a NASA JPL Solar System Ambassador and a Vice President of the Chicago Society for Space Studies. Jim was formerly a Vice President of the National Space Society and the Planetary Studies Foundation. Some of Jim's images of Mars can be seen on the web at http://www.marsartgallery.com.

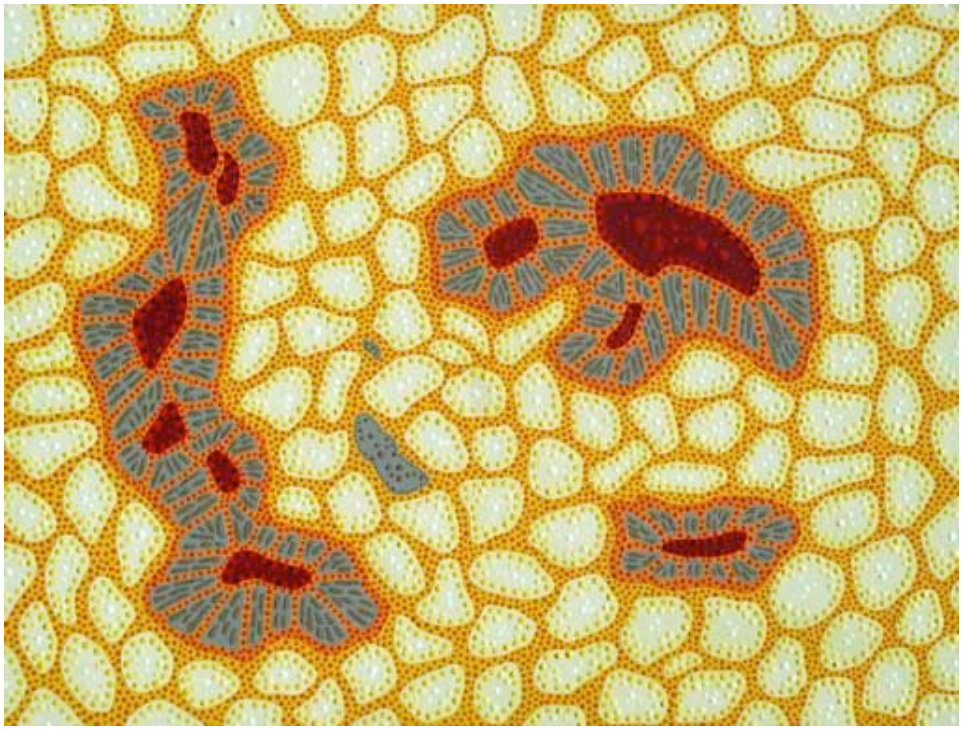
Andrea Polli
MFA Director and Associate Professor of Integrated Media Arts
Hunter College
http://www.andreapolli.com
United States

Tuning the Cosmos: Soundscape and the Sonic Exploration of Space
This presentation will introduce some of the models, techniques and resulting works that have emerged in the field of Acoustic Ecology and to present examples of sonifications of data from both Earth and space in order to open a discussion of ways artists might work with scientists to explore the natural Cosmic soundscape, and to more consciously design the future man-made
soundscape in space.

ABOUT THE PRESENTER
Andrea Polli is an electronic media artist in New York City and Director of the MFA Program and Associate Professor of Integrated Media at Hunter College. Andrea Polli 's artwork resides in the intersection between art and science, and she has developed projects related to perception and cognition, complexity science, and human behavior. Her projects are hybrids that feed into multiple areas of research and her work often offers new ‘readings’ of data produced b natural systems that bring to light unfamiliar aspects of the information.

Jon Ramer
Artist
International Association of Astronomical Artists
http://www.iaaa.org
United States

The International Association of Astronomical Artists
This is a presentation about the IAAA, who we are and what we do. Presents some history of the IAAA, as well as current activities and membership.



Sun Spots by Jon Ramer

ABOUT THE PRESENTER
Jon Ramer is a lifetime artist member of the IAAA and a self-taught astronomical artist as well as an active duty Air Force officer.

Chris Robinson
Associate Chair and Associate Professor of Art; Principal of Preston College
University of South Carolina (Department of Art, NanoCenter)
http://www.cas.sc.edu/art/Faculty/robinsonc/robinsonc.htm
NanoCenter: http://www.nano.sc.edu/
United States

Report Update: The Arts and Space Culture: The Common Ground of Creativity

Workshop on Space Artist's Residencies and Collaborations

The Artist's Role in Space Development - Then and Now

What role should the visual arts play in space? Should we send earth objects into that realm or does the artist have some active role in space flight? These are some of the questions asked twenty-five years ago when artists, with the advent of the space shuttle, envisioned real opportunity for inclusion and participation in space development. Most other disciplines had some formal history or connection; the visual arts by comparison had little or none. Several artists explored these questions, first for the powerful images and mystery of the endeavor, then later in an effort to develop a base of information, so we would be able to make informed use of whatever opportunity might occur.

In seeking the foundations of space flight, I had the opportunity to fly complex military aircraft and train on NASA's "Weightless Wonder" with the hopes of being one of the first Citizen Observers from the visual arts. I enjoyed the artist's luxury of curiosity and observation, found and produced important images, and realized what a crucial role these could play in mediating complex information from physics and astronomy to the public. Like so many unexpected occurrences, the Challenger disaster changed the operational landscape and space agencies still struggle to regain trust and maintain momentum and enthusiasm about exploration. Manned flight still competes with smart unmanned probes, technological spin-offs compete with the warmth of the hand, and looking in to the nanoscale offers strong similarity and insight to looking out to the expanse of space. The visual arts have entered a second generation of enthusiastic interest and blossomed in participants, opportunity, and the possibility for contribution and meaning. Early illustrative art is being joined by wide ranging ideas, performance, and installation. New commercial enterprises and zero gravity flights provide the opportunity to compare and reflect on those early experiences and find new connections. Our world changes rapidly and we must be prepared to envision and learn from new ideas and ways of thinking.

Eigler's Eye by Chris Robinson

ABOUT THE PRESENTER
Chris Robinson is a visual artist who has focused on science and technology throughout his career. He was an early proponent of the artist's role in space development and established a base of information for visual citizen observers on the space shuttle, became a likely participant, and trained on the Weightless Wonder. He has lectured and exhibited at a wide range of international venues and his current scholarly work is National Science Foundation funded research on the societal implications and role of images in nanoscience and technology.

Ricky Seabra
Performer / Designer
http://www.rickyseabra.com
The Netherlands and Brazil

The Politics of Artistic Freedom in Space
Isadora.org, The Final Metaphor
In this presentation I tell a short story about what Isadora Duncan would have performed in space had she lived during the era of space exploration. In this story she goes into space with one plan or project in mind to satisfy her sponsors. Yet upon arrival and, awestruck by the sight of Earth below, she performs something completely different. This story reveals the serious conflict that artists will encounter within scientific and political communities; to use the International Space Station as an art residency… a place for true artistic experimentation rather than a hoop through which artist would jump and show off for space agency public relation departments.

The artistic method of experimentation is very different from that of the scientific method. And in order for true artistic innovation to happen in space, agencies and policy-makers

will have to understand this difference. How can the art community convince space agencies and politicians to invest millions of dollars to put people in orbit who cannot (or should not) know what they are going to do ahead of time (unlike what occurs in scientific exploration)? In this lecture I hope to open the discussion on how artists can best make our case made to agencies and policy makers. These questions will also bring us to how artist selection should be made. What IS the “right stuff” for artists to go into space?

ABOUT THE PRESENTER
Ricky Seabra is a Brazilian-American designer and performer born in Washington and raised in Brasilia. He graduated from Parsons School of Design in New York in Communication Design and has a Masters Degree in Industrial Design from the Design Academy Eindhoven, Holland where he lived for 8 years. He has been developing his theater works at the Kunstencentrum nOna in Mechelen, Belgium since 2002. He has shown his first monologue called Airplanes & Skyscrapers in 20 European cities and 3 in Brazil. His latest work together with Andrea Jabor is Isadora.Orb, The Final Metaphor that premiered in February 2005 and is about the poetic potential of space as a new and unexplored realm for artistic creation and presents a plan of how to get artists aboard the ISS. This piece is roughly based on his Masters Thesis in Industrial Design that proposed an actual design for an Art Module, an orbital residency for artists, on the International Space Station called the ISADORA Module. This thesis has been presented at a number of aerospace industry conferences (STAIF and IAF) in the US and Europe.

Ishiguro Setsuko
Ochanomizu University
http://www.ishiguro@sky.plala.or.jp
Japan

The 'Flying Deities Project': Dances in Zero Gravity Environments
Studying effective movements in zero gravity. Bending backward like as 'Flying Deities' is one of the artistic rules in zero gravity.

As activities in space become more common, it is increasingly important to examine human behavior in zero gravity from the viewpoint of arts and culture. This study examines the performance of certain dances in a zero gravity environment, and makes a comparison between such performances and what ancient people imagined it to be like dancing in this kind of environment. Among the many cultures that have imagined flying celestial beings, this study focuses on the murals of flying deities [hiten] in Dunhuang (China) and Asuka (Japan).

The 'Flying Deities Project': Dances in Zero Gravity Environments
Setsuko Ishiguro

ABOUT THE PRESENTER
Choreographer, Professor of the postgraduate school of 'Ochanomizu University' in Japan. Setsuko received the Agency for Cultural Affairs Art Festival Award in 1985 and 1987. Setsuko is the author of Origin of the Dance-Figures of Ancient India (1997, Tokyo), Dance as Image Communication (1989, Tokyo). The Flying Deities Project, Body as medium of meaning. LIT Verlag: Berlin.2004. Started Flying Deities Project supported by JAXA. (2001) Flying Deities Project 2 was put into execution supported financial help from the Agency for Cultural Affairs Government of Japan.

Phil Smith
United States

Collier's II – The Need For A New Space Outreach Media Campaign
Unbeknownst to most people, art plays a critical role in the grand drama that is human migration into space. The realm of the stars has been rendered or interpreted using

various media through the millennia, culminating during the past 150 years with an extraordinary proliferation of genres based on the human experience in space.

Beginning with the works of Jules Verne, who deftly combined his passion for fiction writing with his fascination with accelerating scientific discoveries of the Industrial Revolution, is often cited as a key inspirational source for those associated with ushering in what is often called the “Space Age”. Likewise, paintings created by architect Chesley Bonestell depicting realistic scenes of humans in space played a very important role in inspiring many young people to dream of living their lives in space, a concept so alien before Bonestell’s paintings were published in magazines and books. Today, “space artists” are credited for creating a sort of mythos, or certainly a preconceived notion, of what we might expect in terms of our future in space.

NASA realized this in the 1950s when it hired the talents of Bonestell, fiction writer Wiley Ley, Walt Disney, and Collier’s magazine to communicate to the public that humans will eventually “conquer” space. I argue it is time to develop a similar campaign today in an effort to elevate the sophistication with which ordinary people perceive the human experience in space.

The intricate tapestry representing a vision of our future in space is too complex to reveal in one fell swoop or with one form of communications. A multimedia campaign is needed to reveal the wonders and opportunities that lay ahead in space for ordinary people.

ABOUT THE PRESENTER
Phil is a Senior Futurist with the National Aerospace Development Center (NADC), headquartered in Atlanta, Georgia.

Phil served eight years in the military working with nuclear weapons and later for an air transportable hospital. In 1997, he made an unsuccessful bid for a city council seat in Omaha, Nebraska. He earned a graduate degree in space studies from the University of North Dakota in 1998, then moved to Washington, DC to work as a defense policy analyst for the Pentagon. In 2000, Phil moved on to Futron Corporation, working as a Space Industry Analyst. Phil is also a freelance artist specializing in astronautical and space subjects.

Maíra Spanghero

About the Need to Overcome
http://www.cena11.com.br
Brazil

The objective of this communication is to present and discuss the work of the Brazilian contemporary dance group "Cena 11" which has been in development for the last few years. The choreographer Alejandro Ahmed and his dancers have developed a corporal technique based on risk, on the study of control and the command of body movement and its relation to the gravitational environment. They communicate risk through voluntary, repeated, automated and provoked falls. So, what is happening to these bodies that contradict the internal involuntary system that is working to avoid a fall, keeping us upright?

ABOUT THE PRESNTER
Maíra Spanghero is a PhD professor, writer and researcher interested in the body, its movement and its relationship to technology. She wrote the book "The dance of the bright encephalo" (2003), which was derived from a Master's research of dance/technology and on the work of the "Cena 11" dance group.

Celestine Star and the Golden Star Media Crew
United States

DataFlus: Operations
A presentation from the Golden Star Media Crew, Celestine Star*, Sun Marian MacNamee, Al Lundell, Robin Silver, Aaron W. Baum and Scott Stender, supporting the concept of “Gravity Flux”, as Co-Authored by Frank Pietronigro and Lowry Burgess. David King, Chief Engineer and Director of the Biometrics. “DataFlux” is a satellite uplink network, created for the Zero Gravity Arts Consortium’s Parabolic Flight fro Artists. The webcast will join Frank Pietronigro, Lowry Burgess, and the Golden Star Media Crew to the ground. Discussion will include observations by the team relative to the technical opportunities and obstacles that they experienced in making “Gravity Flux” a reality. The purpose of this talk is to inspire and inform the audience of the dynamic team that came together to make “Gravity Flux” a reality.

ABOUT THE PRESENTER
Celestine Star* is a Northern California Media and Events Producer for over 20 years. She is an accomplished Filmmaker, Videographer, Post Production Editor and Graphics Designer, dedicated to the Education and Evolution of Humanity through Artistic endeavors Educated in London, England and the Northern California, United States in Business, Arts and Science, and Transpersonal Psychology.

Gavin Starks
http://www.dgen.net
United Kingdom

Gravity Fluxions: Pulsations
(Information on Gravity Fluxions See Tania Fraga Above)

ABOUT THE PRESENTER
Gavin Starks is an astronomer, musician, entrepreneur as well as an expert in broadcasting on the Internet. He holds a Master of Music degree in Computer-Music, 3-D Sound, Virtual Reality Audio and a second Master Degree in Astronomy, Physics, Mathematics and Computing from the University of Glasgow.

Currently, Gavin is the Managing Director of Consolidated Independent; a company aggregating the music catalogues of the Independent music labels (e.g. Beggars Group) and piping them into Digital Music Services (e.g. iTunes, Napster). He is also Founder and Director of Exequo ltd, an open, non-profit, collaborative Internet broadcasting network working with NGO's, community collectives and artists. He is Founder and CEO

of Tornado Productions Ltd. a company that is involved in every aspect of creating and running one of the largest webcasting companies in Europe. He is also Aggregator and Founder d::gen network Ltd., a collection of projects and people. He is founding member and now Chairman of the IWA-Europe, a consortium encouraging all forms of broadcasting on the Internet.

He served as Chief Technology Officer at AssetTV Ltd. a company leading the development and launch of a touch-screen, closed-network IP TV channel for the Financial Sector. He was Senior Consultant at Servecast Ltd. where he assisted product development, sales and business development. Servecast's acquisition of Tornado makes it the largest webcasting company in Europe. Gavin served as Strategic Consultant, Webcasting Producer, and Technical Manager for Virgin Net, where as employee #5, he was involved in the definition of the ISP, the development of content channels and pioneering webcasting. He worked as Experimental Officer, Jodrell Bank, Radio Astronomy, Quasar Research, Software Development, Web Development, and Tutoring

Rick Sternbach, FIAAA
President, Space Model Systems Inc.
International Association of Astronomical Artists
ricksternbach.com, spacemodelsystems.com
United States

Space Exploration - Science, Engineering, and Art
The history of space exploration, from the earliest observations to robotic and human landings on other worlds, has involved an unbreakable bond between art and technology. Every real space project in the last sixty years began with artistic representations for the purposes of design work or communication of concept, and imaginary voyages have been rendered for a few hundred years before that. Today, astronomical and space hardware artists continue to present historical images, support current missions, and suggest views of new destinations using a combination of traditional and high-tech art tools.

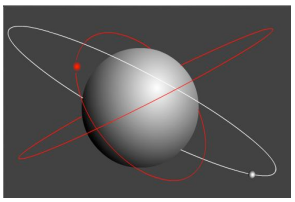
ABOUT THE PRESENTER
Rick Sternbach has been a space and science fiction artist since the early 1970s, often combining both interests in a project. His clients include NASA, Sky and Telescope, Data Products, Random House, Smithsonian, Analog, Astronomy, The Planetary Society, and Time-Life Books. He was Assistant Art Director, Illustrator, and Special Visual Effects Designer for COSMOS, Carl Sagan Productions. He is a founding member and Fellow of the International Association of Astronomical Artists (IAAA), which was formed in 1981. Rick received an Emmy Award for Outstanding Individual Achievement in a Creative Technical Craft, visual effects for COSMOS: On the Shores of the Cosmic Ocean, 1980-1981; and the Hugo Award, Best Professional Science Fiction Artist 1977 and 1978, World Science Fiction Society.

Chrisneilan Thunblom
Instructor

FRCC

Moon Score
I design the wheels of a moon rover to lay down a musical score on the moons surface. The wheels, when they contact the moons surface create notes due to rocks etc. This music is then transmitted back to earth in a video format. The format sent to anyone who wants to use via the Internet, such as a symphony orchestra or a high school Jazz band etc.

ABOUT THE PRESENTER
Went to Carnegie Mellon University, traveled and now located in Denver. Recently had a baby girl, Flower.



Leonardo Space and the Arts Project

www.olats.org/space/space.php

Leonardo has a long history regarding space art. The first article "On the Visual fine Arts in the Space Age" by Frank J. Malina, has been published in the journal in 1970. Since that time more than 40 artists's articles have been published.

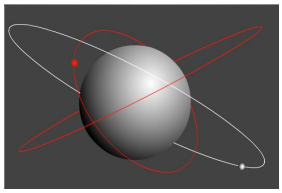
In 1997, Leonardo/Olats (the French branch of Leonardo) initiated the "Space and the Arts Workshops" and the space and the arts bibliography. In 2003, Leonardo/Olats participated in the MIR Campaign under the direction of Arts Catalyst that undertook a parabolic flight in Star City that led to a special issue of Leonardo Electronic Almanac and the organization of a symposium in collaboration with the Paris-based International Festival @rt Outsiders. The same year, Leonardo/Olats launched SpaceartS, the Space and the Arts Database in collaboration with The OURS Foundation. In 2005-2006, Leonardo/Olats participated in the ESA study on the culturization of the ISS, together with Arts Catalyst and Delta Utec.

Space and the Arts Bibliography

The Leonardo Space and the Arts Bibliography originally started by listing articles and books related, in a broad sense, to space art. It is now open to CDs and DVDs as well.
It is meant to be a tool for everyone interested in the field. In this respect, as much as possible, an abstract and a review are provided to the users.
Currently, this bibliography includes items that we are aware of and mostly in languages that we master. English and French publications are therefore well represented with some others items in German and Russian.

Development
We are interested in inproving this bibliography that is unique in the world. In this respect, we welcome entries that we are not aware of, in any languages.
This bibliography follows professional academic rules and format. To propose new items, we invite you to send us all the precise references and an abstract. We encourage strongly reviews as well.

This bibliography is under the direction of Annick Bureaud, info@olats.org



SpaceartS, the Space and the Arts Database, www.spacearts.info

SpaceartS, the space and the arts database is a joint project of Leonardo/Olats (France) and the OURS Foundation (Switzerland). Its goal is to provide online information and documentation about the artists world-wide who have created artworks in which content, subject or techniques are in relation to outer space since the middle of the 19th century. SpaceartS is tri-lingual English, French and German.

The content of ***SpaceartS*** is curated. It is open to public submission and each record is evaluated and edited before being added to the publicly accessible database.
The co-editors of ***SpaceartS*** are Annick Bureaud and Arthur Woods. The entries in the ***SpaceartS*** database are written by the artists (and checked-proofed by the editorial managers), by Annick Bureaud and Arthur Woods and by art historians, musicologists and theoreticians.

The presentation of the information follows the academic and museum standards and procedures and their evolution, especially concerning the new media arts (Leonardo/Olats is a member of the Docam research project of the Daniel Langlois Foundation, www.docam.ca).

Partners & Sponsors of SpaceartS

ESA, the Technology Transfer and Promotion Office (TTPO) of ESA sponsored the development phase of ***SpaceartS;*** the ***MINT*** (Musicology, Informatics and New Technologies Lab of the University of Paris IV – Sorbonne) concerning the entries in the field of music. Other institutions supporting this endeavour are: @rt Outsiders & SpaceArt One, Paris; Arts Catalyst, London; V2, Rotterdam; Maison d'Ailleurs, Yverdon; IAA, International Academy of Astronautics; IAAA, International Association of Astronomical Artists

Development

SpaceartS is meant to serve and promote space art. It is also meant to inscribe it within the more general framework of the art world. Therefore, it has a very strong constraint in following professional formats, standards and procedures, which has a cost. Moreover, being tri-lingual increases the budget needed to develop its content.

Leonardo/Olats is open to proposals on how to secure the future of this database for the benefit of the artistic and cultural community and the potential sponsors alike and to develop a working model that would be economically sustainable.
Contact : Annick Bureaud, info@olats.org

SKY STUDIO: ZGAC Parabolic Research Flight For Artists
May 4, 2006, Los Angeles, Burbank Airport

GRAVITY PULSE: ZGAC Parabolic Flight For Artists
Summer of 2006, NASA Kennedy Space Center

DATAFLUX: LIVE INTERACTIVE PARABOLIC FLIGHT WEBCAST

Digital Simulation of DataFlux Concept by Frank Pietronigro, 2006

SKY STUDIO: ZGAC Parabolic Research Flight For Artists

Program highlights of the Space Art Track include a series of two flights, **SKY STUDIO**, a space art research flight scheduled to take place in Los Angeles on May 4, 2006 as a part of the Space Art Track of the 25th International Space Development Conference. To support **SKY STUDIO**, Zero Gravity Corporation [1] will ferry a Boeing 727 jet from their home base in Ft. Lauderdale to Los Angeles and will fly **SKY STUDIO** from Burbank Airport.

GRAVITY PULSE: ZGAC Parabolic Flight for Artists, is the second flight planned by ZGAC that will fly from the Kennedy Space Center sometime during the summer of 2006. This interdisciplinary collaborative project will feature twelve teams of internationally acclaimed artists flying a variety of unique Space Art projects, while providing people worldwide with a glimpse into this fascinating genre via the internet as a part of a third project called **DATAFLUX**, planned for webcasting live from the jet. Gravity Pulse, which is the first flight of its kind to be flown in the United States, will showcase cutting-edge interdisciplinary, multicultural Space Art projects created by artists whose provocative new works are defining and expanding the scope of this fascinating genre.

To fortify the connection between Gravity Pulse flight, taking place later in the summer of 2006 and the Space Art Track, most of the artists flying projects during Gravity Pulse will publish and present papers about their work during the Space Art Track of the 25th International Space Development Conference 2006. Art projects proposed for flight will be discussed during presentations as a way of informing and inspiring conference attendees to the conceptual relationship between the parabolic flight, the Space Art Track and new visions for cultural activities in space. Multiple projects that directly respond to the unique conditions of microgravity will be flown including projects created by teams of experts in the fine arts, webcasting, engineering, space sciences, psychology, history and cultural theory. Some of the artists, representing various cultures from around the world, will create new art that reflects their cultural experience in microgravity reinforcing opportunities for international projects and audiences.

It is proposed that via DataFlux audiences worldwide will experience the artists and their work during an interactive webcast that will be presented direct from Gravity Pulse fight that will be flown from the NASA Kennedy Space Center in the summer of 2006.

The Sky Studio research flight will be flown from Burbank Airport on May 4, 2006, as a way for the artists to engage in flight research that will be discussed and refined during he Space Art Track. The SKY STUDIO flight will be enjoyed during a Space Art Screening at the ISDC conference hotel following the flight on May 5, 2006.

PARABOLIC FLIGHT THEATRE

To help foster greater access to space, these two flights will showcase a 'Zero Gravity Theatre' where audience members will experience the artists and their microgravity art processes first hand, while floating in weightlessness, as a unique theatre experience. Multiple seats on the flight be reserved for a theater audience as a way of fortifying the relationship between audience and artists. A 'Theatre Ticket' will be sold for each audience seat as one way of generating revenue for the project. Marketing the flight in such a way may prove to facilitate unforeseen benefits for sponsors and affiliate institutions as well as set the stage for microgravity and space tourists' theatres of the future.

SPACE ART HISTORY

To expand upon the historical precedents of traditional space art forms such as: painting, drawing and illustration, a new breed of Space Artists has arrived on the scene, some of whom combine artistic methodologies with the technologies utilized by space science and the space explorer, while in partnership with scientists their collaborative teams are expanding the cultural utilization of space exploration in ways that will fascinate a new generation of space explorers to dream and become inspired with the possibilities of their future lives in space.

GRAVITY PULSE: SPACE ARTIST FLIGHT TEAMS AND PROJECTS include:

Lowry Burgess and Kristen Burgess Agee
Moments in the Infinite Absolute
United States

Tania Fraga, Frank Pietronigro and Gavin Starks
Gravity Fluxions: Pulsations
Brazil, United States and United Kingdom

Japanese Artist
Project Title: TBD
Country: Japan

Lorelei Lisowsky and Lowena Hearn
Skylife Colony (Evolution Colony Testbed) by Bright Capsule
United Kingdom

Bradley Pitts
Singular Oscillations
United States

Ricky Seabra
Isadora.orb, The Final Metaphor and the 'Skipping Halls' in Lunar Gravity
The Netherlands

STUDIO For Creative Inquiry Artists Team
Project Titles: Germination
United States

Martha Blassnigg and Michael Punt
Project Titles: Beyond the Ubiquitous Spectrum
United Kingdom

GRAVITY PULSE: CULTURAL OBSERVERS

Chris Robinson
Observing
United States

Bettyann Kevles
Historian
United States

Michael Olsen
Photographer
United States

Ivan Imato
Journalist
United States

DATA FLUX: LIVE INTERACTIVE WEBCAST

A further level of concept development for Zero Gravity Arts Consortium (ZGAC) Parabolic Flight for Artist: Gravity Pulse is a interdisciplinary new media project called DataFlux – The Third Space a collaboration of artists and engineers who will facilitate a live interactive webcast from inside a jet flying roller-coaster parabolas between 24,000 and 34,000 feet over the Pacific Ocean. Flying from Ft. Lauderdale, Florida sometime in the summer of 2006, DataFlux will offer multiple interdisciplinary multicultural space art projects that will serve as the subject matter for interactive webcasts, video documentaries and other publishing projects

The goal of this webcast is to enrich an international audience's understanding of the sensations artists feel during parabolic flights, and to educate larger audiences to the diversity of space art projects and plans for the cultural utilization of space. This dynamic interdisciplinary live interactive webcast with music, audio and biometric data feeds will extend this unique space artists

‘theatre’ to international audiences who will experience the flight virtually through a the live interactive webcast.

David King, of General Orbital Corporation, and Gavin Starks, the Founder and Director of Exequo ltd, an open, non-profit, collaborative Internet broadcasting network working with community collectives and artists, will support the production of the webcast. Gavin Starks is Founder and CEO of Tornado Productions Ltd. a company that is involved in every aspect of creating and running one of the largest webcasting companies in Europe. He is founding member and now Chairman of the IWA-Europe, a consortium encouraging all forms of broadcasting on the Internet.

ZGAC also proposes to work in partnership with scientists, engineers, psychologists, programmers and other technicians at Carnegie Mellon University and other educational institutions to develop new technical systems that combine robotics and multimedia to create future ground-to-zero gravity-to-internet interactive connections so that a webcast audience can interact with the space artists and impact the art being created, in real time, on this parabolic flight.

As a part of the Gravity Pulse flight, affiliate institutions from around the global will be invited to host live interactive webcasts from their various institutions.

Coined by Lowry Burgess, the jet itself will serve as a unique ‘sensing sculpture’ capturing fascinating video, audio as well as monitor various biological functions, including their cerebral activity of the artists, while they create in microgravity. This data produced by artists onboard the flight will be made available to Affiliate/Collaborating Institutions who, in turn, will use that information as the basis to produce new artistic responses, reflecting that data, as multiple live interactive webcasts originating from their institutions. Sponsors are encouraged to join us in this production.

The collaborations supporting these ZGAC Parabolic Flights for Artists will serve as a conceptual model to study similar new media Space Art projects that would propose, in the future, to use the International Space Station as a similar ‘sensing sculpture’.

DataFlux – The Third Space
Jet To Ground - From Sky To Earth

DataFlux is the structuring of extraordinary potential to map multiple parallel data flows by scanning the human body from the outside and inside as it fluxes upon the parabolic waves from 1G to 0G to 1G to 2Gs to 1/6thG and so on, repeating again and again, within the envelope of the jet.

DataFlux is the imaging of the ‘data-halo’ that surrounds the jet and the artists

creating during flight. Flows of data, from these onboard DATA CREATORS are transmitted by sensing technologies mapping the activities of sight, sound, touch, thermal, movement, taste, smell, as well as reactions of the heart, brain, and general biometrics. All in a continuous DataFlux that has important correspondences, a fugue or multi-voice score will be co-created fostering many interacting data voices that can be simultaneously displayed, digitally modified then presented and further studied. Raw data will be archived in a database and will be further developed as extended art forms by affiliate institutions and data-imaging artists not only during the flight, but also as live interactive webcast or used for scientific research and art making at a later date. The ZGAC Parabolic Flight for Artists: Gravity Pulse develops the holistic opportunity to creatively image these simultaneous data flows by new kinds of artists during live interactive webcasts originating from affiliate institutions.

Within Zero Gravity Corporation's Boeing 727 aircraft, the DataFlux project builds and structures an externally sensing architecture both physical and electronic as if the normal sensorial were turned inside out forming a sensing cylinder around the gravitationally activated human core pulsing upon and within the parabolic gravity waves. The human being in multiple states of gravity is the object of the sensing, being sensed from both inside and out. DataFlux is the technological sensing architecture that surrounds the Gravity Pulse flight. This DataFlux is both processed on board by DATA CREATORS and on the ground by DATA USERS via a DATA SERVER.

Within the parallel ground station space (laboratory/exhibition) the multiple data flows are reformed as image, sound and movement, light and pulse -- a living envelope around the participants that places their sensorial systems within the living real-time Data Flux being experienced by the parabolic flight team. Within this DataFlux synaesthetic envelope the participant will tele-replicate the Gravity-Pulse experience to webcast audiences via live interactive webcasts emanating from their respective institutions. Beyond this tele-direct experience of microgravity space, the DataFlux databank, containing raw data gathered during the flight, will be used for further research in science and art while providing new imaging experiences to webcast audiences who experience DataFlux during live interactive and post production DVD projects. All content of the databank will serve as the basis for new artistic projects.

THE THIRD SPACE
IN THE AIR - ON THE GROUND - VIRTUAL

DATA CREATORS - DATA SERVERS - DATA USERS

DATA CREATORS

The Zero Gravity Arts Consortium Parabolic Flight In-Flight Artistic Teams will

support the project as DATA CREATORS while Golden Star Productions provides all video documentation of the process, mixing the data into a video, audio uplink to a satellite in support of DataFlux webcast. DATA CREATION will be facilitated in collaboration with Lowry Burgess, Frank Pietronigro, Celestine Star, Gavin Starks, David King, and others TBD.

DATA SERVERS

Webcast service providers (Exequo, the Open Broadcast Network, London, United Kingdom) will serve raw data from the jet to the DATA USERS

DATA USERS

will include individual artists, scientists and multiple international institutions collaborating with the Zero Parabolic Flight for Artists: Gravity Pulse through the execution of personal work conceived, developed and presented from their various individual and organizational websites, offering the live and Interactive portion of webcasts produced by various DATA USERS. 3D modeling, video, text based, audio, gaming and other new media projects are encouraged and welcomed. Websites created by all DATA USERS will be posted on each website, in addition to the ZGAC website, the STUDIO, National Space Society, the Planetary Society and/or the ISDC websites.

DATA USER INSTITUTIONS

A variety of international affiliate and collaborating institutions may access the data on the servers in order to create new projects based on the data created by DATA CREATORS.

ABOUT ZGAC PARABLIC ARTISTS FLIGHT TEAMS AND THEIR PROJECTS

Of the artists slated to fly on this ZGAC Parabolic Flight, four have previous experience in parabolic flight including: Lorelei Lisowsky, Frank Pietronigro, Bradley Pitts and Chris Robinson. Lowry Burgess had his artwork taken aboard the Space Shuttle ‘Discovery’ as a purely artistic initiative becoming the first non-scientific payload in NASA history. Pietronigro is the first American painter to create "drift paintings" where his body floated within a three-dimensional painting that he created in zero gravity aboard NASA's KC135 turbojet in April of 1998.

Participating artists come from diverse disciplines, including choreography, performance, the visual arts and aerospace engineering. However diverse, these artists share the belief that integrating artistic production into long-term space missions will keep the human spirit alive as we travel through space.

Martha Blassnigg and Michael Punt

Project Titles: Beyond the Ubiquitous Spectrum
United Kingdom

This project concerns the tracking of changes in the shift of the normal spectrum of forces that we are accustomed to in particular looking at auras and soundscapes that are normally so familiar as to be invisible. In an environment in which there are extreme variations in gravity and acceleration, we expect in this series of artistic and transpersonal experiments to show how a slight shift in the dynamics in the forces that surrounds us will reveal presences and changes that we are familiar with. This project builds on the validated experiences of certain individuals, in particular artists who are sensitized to reach out into dimensions beyond the normal spectrum of perception and who are also alert to changes in their own sensorium as part of their artwork. The experiments described below are going to be conducted amongst the flight team during the flight and involving photographs to be taken of other willing participants before and after the flight.

Electrograph of Hand by Len Massey

Our research group will comprise three multi-skilled artists experienced with working with technologies of extended spectra who will use instruments and personal sensitivities to record images, sounds and sensations that lie beyond normal experience. In the cycle of both weightlessness and amplified gravity we will be drawing on technologies based on modified forms similar to Kirlian photography, sensitive audio recording machines, visual filters pioneered by Dr. Kilner applied to still and Video cameras, and furthermore catalysts for interaction used in professional transpersonal consultations such as a Random Number Generator developed by the Institute of Noetic Sciences, crystal pendulum, etc.
We will compile a portfolio of data beyond the ubiquitous spectrum, which will be valuable to both the artists involved and the research team who will be videoing the whole process as part of a film project.

Project Goals/Artistic Objectives:

Our main goal is to produce a series of images and sounds that document possible shifts and changes beyond the ubiquitous spectrum. The emphasis lies on aspects of transpersonal psychology and its significance for creative practice. Transpersonal psychology in this context is the study of those states and processes in which people experience a deeper sense of who they are or a greater sense of connectedness of others, with nature or the spiritual dimension. Consistent with our original proposal and the work with our Mars Patent project we are testing the possibility that this dimension may be influenced significantly by gravity. We will conduct a series of experiments amongst the flight team to test this hypothesis and expect to publish the outcomes as an artwork with which people are invited to connect with. In this way it is hoped that we may even produce artworks that, as they emerge from microgravity, will have particular resonance for those scientists and workers who spend extended periods on the internal space station.

Broadly speaking we will use the cycle of parabolas to test

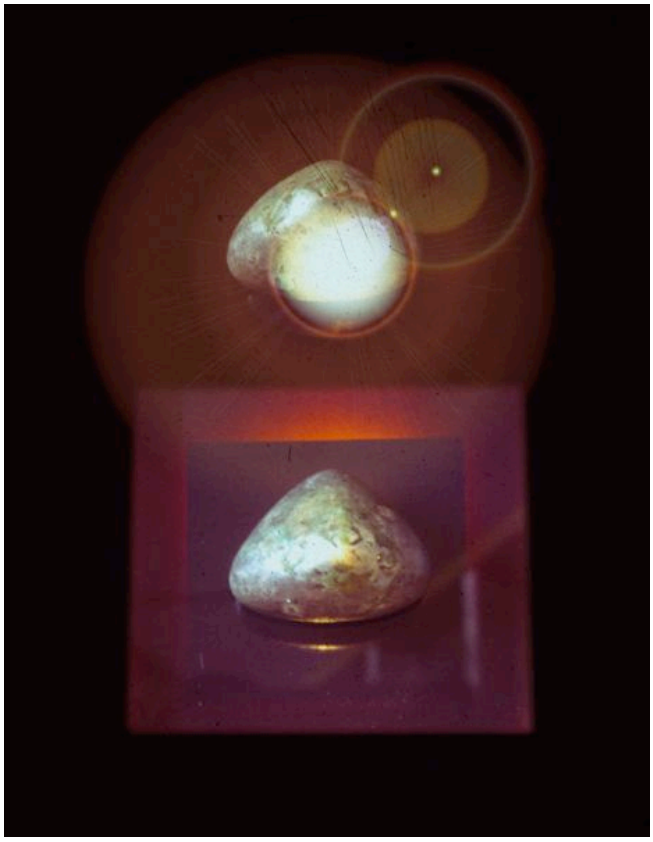
- (1) auratic distortion using digital aura photography amongst the flight team and if possible on a number of the participating artists on board
- (2) transpersonal communication between subjects of the flight team using standard Ganzfeld procedures between the two main researchers of this proposal
- (3) measuring the impact of gravity on standard catalysts for interaction used in professional transpersonal consultations (e.g. Tarot, Random Number Generator, crystal pendulum)

Along with debriefing data will be examined subsequently to produce a brief textual report to accompany a Mnemosyne atlas of the event. (The idea of the Mnemosyne atlas it taken from the art-historian Aby Warburg's early 20th century visual method which he used to substantiate his claim that art springs from deep impulses which are independent of the specificities of time and culture.

With the materials and recordings gathered before, during and after the flight we will build a portfolio of these visual and auditory records for an exhibition at the Royal College of Art in London. The work will also constitute material for an article in a leading journal possibly *Leonardo.* Finally this project is seen as a pilot for a more ambiguous future project in space to investigate this further.

Lowry Burgess and Kristen Burgess Agee
Moments in the Infinite Absolute
United States

Burgess's monumental work, 'The Seed of the Infinite Absolute' will float in microgravity above Los Angeles, generating brilliant flashes of light as it transits from OG to 2Gs. It is formed by an elaborate series of processes and distillations created, in different global climates, over the past 25 years. Its shell, a geometrically complex, hand size 'seed' is a fusion of the 12 'royal' metals. It contains a unified emulsion of the essences of 44 trees, 52 flowers, 36 waters, 32 bloods and 120 telepathic hopes representing, in essence, the entire Earth. All these elements are unified into one essential, hand-held form to be 'released' by the artist at the edge of the absolute state of micro-gravity.



The Seed of the Infinite Absolute by Lowry Burgess, 2005

The concept for this artwork in micro-gravity is the simple gesture of release from a human hand of the hand-sized form of "the Seed of the Infinite Absolute" into repeated moments of weightlessness (moments of 'equant' balance) and double-density/double-gravity weighted ness. (It is actually quite a dense and heavy small pear sized object). At the moment of its weightlessness, it flashes with bright white stroboscopic light (the flashing brilliance of its approach to the Absolute).

The "Seed of the Infinite Absolute" is a distilled seed-form which by its nature establishes an entity which is the unit, root, measure, proportion/portion of the single one' or the absolute unit or measure of this cosmos -- its source and end. It is the geometric and ritualistic gravitational center of a nest of infinities within the larger artwork called the "Quiet Axis".

The "Seed of the Infinite Absolute' is formed by an elaborate series of processes and distillations over the past 25 years. The shell of the 'seed' is a meld of 12 metals 'distilled' at the foot of Mount Whitney and 'poured from the sun' at twilight. This shell contains an emulsion of the essences of 44 trees, 52 flowers, 36 waters, 32 bloods and 120 hopes. In it all these are brought together into one essential form.

Tania Fraga, David King, Frank Pietronigro and Gavin Starks
Gravity Fluxions: Pulsations
Brazil, United States, United Kingdom

The artists plan to conduct, during parabolic flight, a performance testing an experimental hypothesis on the spatial behavior of a fluid rubber structure created with materials, currently being researched, that aim to be used for sustained development projects supporting small communities in the Amazon. Considered as an artificial organism' by the artists, the structure will grow in weightlessness, floating with the body of the artist, from total flatness to a three-dimensional volume.

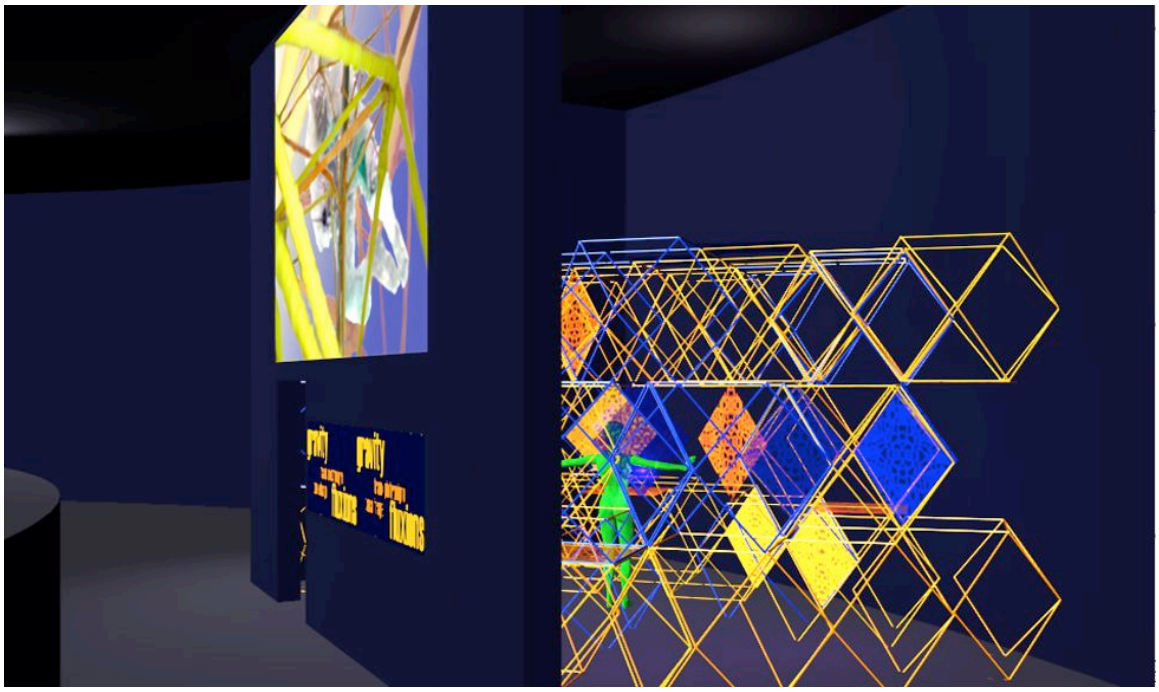
Gravity Fluxions: Simulation by Frank Pietronigro, 2005

To extend a metaphorical experience of fluidity and weightlessness to earthbound audiences, the artists can create a responsive installation as a part of the ISDC2006 Space Art Exhibition, using ultraviolet light over a responsive rubber structure embedded with programmable sensors to produce fluid movements. It is the intention of the artists that this work will reconstruct for earthbound viewers a poetic sense similar to what happens to people in microgravity: immersion, disorientation, ephemeral sensations, lack of verticality and instability.

Gavin Starks will also attempt to directly affect the shape and movement of the ‘artificial being’ by playing sound directly at the ‘artificial being’ - making it resonate at certain frequencies, while using a strobe light or high shutter-speed camera to macro-film its surface. Certainly given the fluid nature of the object and the links with "acoustic" resonant phenomena being discovered in everything from galactic dust clouds to black holes, there are many references relative to this project convention. For example, "resonant" frequencies in cosmological models will be experimented with as the artists will take "standard 3d visual references" for cosmological models, such as the "saddle" topology and then create some form of resonance to change this topology into something else using the memory of the material contained in the ‘artificial being’. Even a planar surface of the ‘artificial being’ would yield an interesting, malleable aesthetic.

Gravity Fluxion: Pulsations Model by Tania Fraga

Depending upon the fluidity of the ‘artificial being’ the artist intends to encourage a significant spatial change and / or shorten the experiment, film it at high speed, and then replay the effect slowly.


Gravity Fluxions: Simulation, A View of the installation showing audience interacting with the ‘Artificial Being” - Project Visualization by Tania Fraga

When asking why and how the artist’s role may influence space exploration and how the presence of artists impacts various technologies and issues associated with human space travel, while also considering the questions as to why humans should go into space at all when it is cheaper and easier to have space explored by robots; we began to see an answer emerging that inferences the imperative to carry our human sensibilities and sensitivities out to space, something the robots of our time cannot do. Our project sets up a contrasts and a complimentary bridge between an ‘artificial being’ and human beings with the intention that an ISDC2006 audience will also reflect upon such questions. Since artists are not constrained by methodologies that may inhibit free speculations and their subjectivity is trained to explore its own mind realm, the objective and subjective sides of knowledge become more balanced through such art and science collaborations.

Project Affiliate Institutions include: Exequo, the Open Broadcast Network, United Kingdom; General Orbital Corporation, United States; Goianesia Communities, Brazil; ItauLab - Itau Cultural Institute, Sao Paulo, Brazil; Itau Cultural Institute; Lateq/UnB – Laboratory of Applied Chemistry from the University of Brasilia, Brazil; Philcorp, United States and Skedio Technologies, Brazil.

Lorelei Lisowsky and Lowena Hearn
Skylife Colony (Evolution Colony Testbed)
By Bright Capsule
United Kingdom

A mother and daughter share a morning in microgravity space.

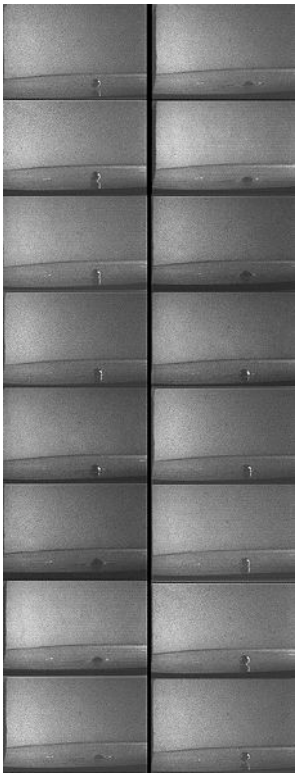
An interactive performance describing a manifesto for life without gravity and a path to return to nature. A participatory site-specific action using the body as instigator. A mimetic thought gift that is capable of making the many 'one' by exploring our empathic abilities and mind-reading skills and connective ness of the floating group through touch.

Lorelei Lisowsky in Flight

The performance starts within a fabric bubble and then moves around the plane. Inside a floating, tencile, bubble, the girl speaks into a small microphone recording her experience. As the bubble falls and collapses the color inside the sphere changes color. As she rises again, she describes what her senses feel and a camera documents her facial expressions, the sounds of breathing and speech. On the third parabola, she breaks open the bubble and enters the shared space. A question is asked to another flyer and is answered accordingly, then that person asks the same question to the next person etc. The 'q and a' is passed between every person on the flight and is recorded and accompanying the 'q and a' is a kiss exchanged between the two people. Our body consists mainly of water and the fluid body transmutates in the altered gravity condition. As gravity is alleviated, our perpendicular state becomes circular and life force energies begin to move outwards from the centre point of the body, in all directions. This adjustment of the 'flow' enables the normally 'body-centered' human to develop a wireless network of communication that spherically conducts channels of information to each of the flyers inside the parabolic plane. This is the Skylife colony that is a consensual 'Multimind' network.

> *"The heart refuses to be imprisoned; in its first and narrowest pulses, it already tends outward with a vast force and to immense and innumerable expansions."*
>
> **Emerson, Ralph Waldo**

Bradley Pitts
Singular Oscillations
United States

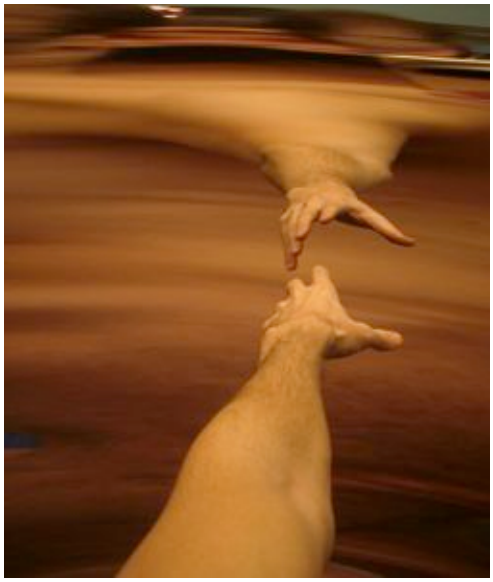


A volume responding directly to gravity oscillations. Bradley Pitts 2006.

The three-dimensional freedom provided by weightlessness has yet to be explored in its purity. Due to the disorienting nature of this environment the architectures sent to space have been designed with a multitude of reference points. While weightlessness is an isotropic environment, the designed architectures introduce “vectored” elements, setting up artificial “up’s” and “down’s.” Although such architectures create practical environments for scientific experimentation, they impose a geocentric perspective on the pristine, universal nature of weightlessness. I am interested in experiencing this pristine environment and fusing with it. I want to melt into four-dimensional space-time and hug its curves.

In order to experience and become pure space, I will inhabit an inflated spherical mirror aboard the parabolic flight. The sphere will be designed such that under gravity it will distort under its own weight, but will return to a sphere in weightlessness. Thus the entire geometry of the enclosure will be gravity-dependent, becoming isotropic when following the natural curves of space (under free-fall/weightlessness) and vectored when that path is interrupted (under acceleration/gravity).

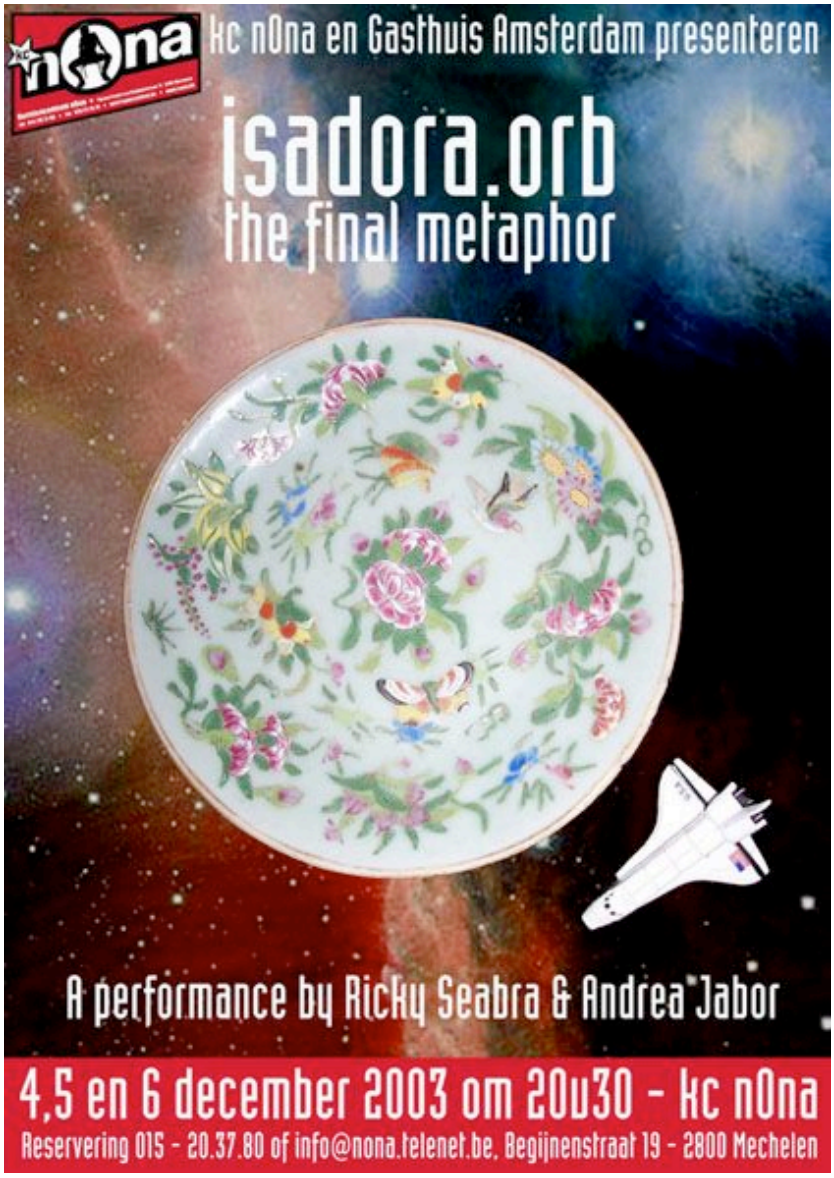
Because the walls are mirrored, the light inside the spheroid will be “shaped” by gravity. Inhabited by a single, nude body, the interior surface will be defined by the distorted body’s image. The experience of gravity, light, body, or enclosure will be inseparable from the rest of the elements, creating a fusion/implosion of context and experience: a singular union of the individual with space-time.



A photo from within an introspective optic. Bradley Pitts 2005.

Beyond the personal experience this investigation will provide, it will be documented with video from various vantage points including 1) exterior shots of the sphere oscillating under its own weight; 2) interior shots in which the cameras are fixed to the sphere; 3) body perspective shots with cameras mounted to my body. In order to decrease the weight of the cameras and reduce the cords needed, some of these cameras will be wireless. Outside the enclosure, I will use multiple tape decks to record the feeds.

Ricky Seabra
Isadora.org, The Final Metaphor
The Netherlands



Isadora.Orb, The Final Metaphor is a performance I made in collaboration with choreographer Andrea Jabor and the Kunstencentrum Nona in Belgium where I have worked as an artist in residence since 2002. In this performance I tells stories about my desire to go into space and an arts module I designed for the International Space Station called the ISADORA Module. In this piece I create images and tell of my plan to get artists in space while Andrea lays down the soundtrack and dances. She performs as a component of my imagination as is a metaphor for the poetic potential of zero gravity. I speak of the ISADORA Module design, the space conferences I attended, and some of the space art I discovered like the first song written in space. But at no point do I myself really go into space during the piece.

The parabolic flight I intend to go on with ZGAC would be just another part of my plan to one day go into space. It seems logical to update this performance and show myself floating in simulated zero-G. I would wear the same "Hang Loose" surfer's shirt I wear during the performance. I will take the objects I manipulate during the performance too; a replica of the first sculpture on the moon, an antique plate that I use as Earth, and a toy space shuttle amongst other things. I have no plans for text as of now and I don't think I will use any special lighting or backgrounds. Showing other artists behind me creating in zero-G will add to "realness" of this desire and strategy to get artists into space. Dirk Verstockt, the artistic director of the Kunstencentrum Nona will film my experience and the resulting footage will be edited down and incorporated into the performance Isadora.Orb, The Final Metaphor.

Skipping Halls in Lunar Gravity

In a design proposal of mine entitled "Guidelines for Lunar Construction" I came up with architectural guidelines that architects, engineers and urban planners should follow for the construction of lunar bases and habitats. One architectural principal for large habitats would be to introduce 'skipping halls' as opposed to transport systems. Since bone marrow loss will be considerable on the moon and it would be somewhat difficult to oblige future moon inhabitants to exercise and work out, the structure of the city itself would force people to work out. Cities would be terraced and built on steep craters or hills like Mediterranean cities Competa and Santorini or like Brazilian favelas. This would force people to constantly climb steps working out the legs. The 'skipping halls' would be long hallways hundreds of meters long that would serve as expressways between large distances within the cities and between cities. Moon inhabitants would enter these hallways and start skipping (kind of how Neil Armstrong famously did on the first lunar landing). So for the $1/6^{th}$ portion of the Gravity Pulse on the parabolic flight I would have the two athletes I am taking on board for my Bodies of Water project (along with anyone on board who would want to join in) to skip from the rear of the plane to the front and back to see what kind of height, distances and speed people achieve.

ZERO GRAVITY THEATRE

To expand the cultural utilization of space and to amplify the historical importance of this event, these two flights will showcase a 'Zero Gravity Theatre' where audience members will experience the artists and their microgravity art processes first hand, while floating in weightlessness, as a unique theatre experience.

DATAFLUX

It is proposed that via DataFlux audiences worldwide will experience the artists and their work during an interactive webcast that will be presented direct from Gravity Pulse fight that will be flown from the NASA Kennedy Space Center in the summer of 2006. The Sky Studio research flight will be flown from Los Angeles International Airport on May 4, 2006, as a way for the artists to engage in flight research that will be discussed and refined during he Space Art Track. The SKY STUDIO flight will be enjoyed during a Space Art Screening at the ISDC conference hotel following the flight.

As a part of the Gravity Pulse flight, affiliate institutions from around the global will be invited to host live interactive webcasts from their various institutions. The DataFlux webcast will be engineered by partners including: Exequo, the Open Broadcast Network, General Orbital Corporation and other Affiliate / Collaborating Institutions.

Coined by Lowry Burgess, the jet itself will serve as a unique 'sensing sculpture' capturing fascinating video, audio as well as monitor various biological functions, including their cerebral activity of the artists, while they create in microgravity. This data produced by artists onboard the flight will be made available to Affiliate/Collaborating Institutions who, in turn, will use that information as the basis to produce new artistic responses, reflecting that data, as multiple live interactive webcasts originating from their institutions. Sponsors are encouraged to join us in this production.

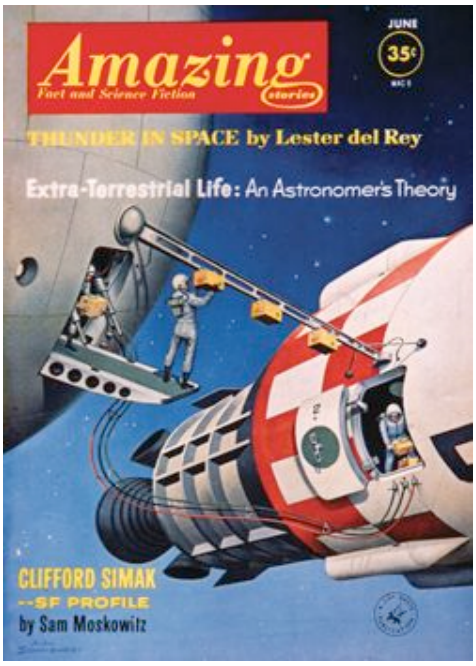
The collaborations supporting these ZGAC Parabolic Flights for Artists will serve as a conceptual model to study similar new media Space Art projects that would propose, in the future, to use the International Space Station as a similar 'sensing sculpture'.

SPACE ART HISTORY

Projects flown on the parabolic flight will expand and enrich, for international audiences, the traditional notion of Space Art, such as the compelling works created by members of the International Association of Astronomical Artists (IAAA) that celebrate the achievements, the technologies, discoveries and visions of the space industry to date.

To expand upon the historical precedents of traditional space art forms such as: painting, drawing and illustration, a new breed of Space Artists has arrived on the scene, some of whom combine artistic methodologies with the technologies utilized by space science and the space explorer, while in partnership with scientists their collaborative teams are expanding the cultural utilization of space exploration in ways that will fascinate a new generation of space explorers to dream and become inspired with the possibilities of their future lives in space.

To fortify connections to Space Art history and expand the education value of the Space Art Track, artists representing the International Association of Astronomical Artists (IAAA) will present their artwork during a Space Art Exhibition to be held in conjunction with the Space Art Track and the proposed ZGAC Parabolic Flight For Artists. Showcasing the art created by members of IAAA will establish the historical context of Space Art with such presentations by IAAA members offering a rich contrast to the new works created by the Space Artists flying on the ZGAC Parabolic Flight for Artists sponsored by YOU!

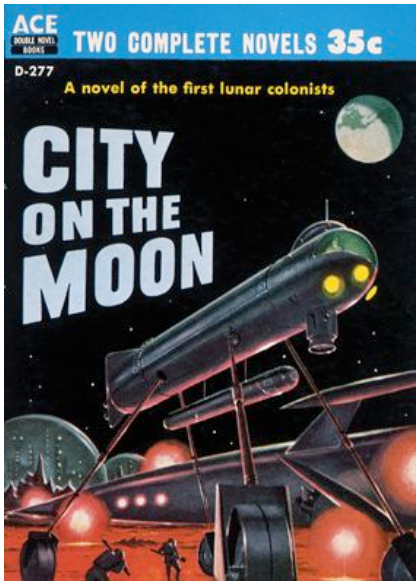


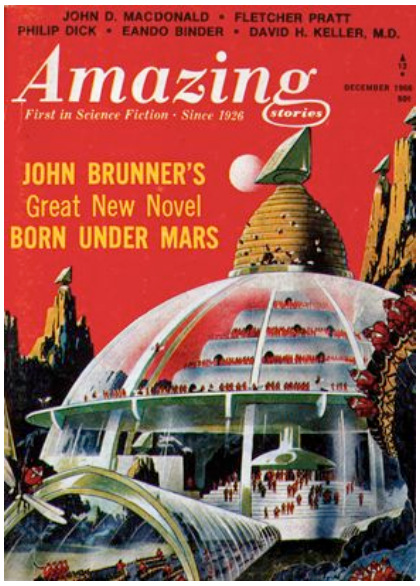
PARABOLIC FLIGHT THEATRE

5 seats on the flight be reserved for a theater audience as a way of fortifying the relationship between audience and artists. A 'Theatre Ticket' will be sold for each audience seat as one way of generating revenue for the project. Marketing the flight in such a way may prove to facilitate unforeseen benefits for sponsors and affiliate institutions as well as set the stage for microgravity and space tourists' theatres of the future.

ISDC SPACE ART EXHIBITION

May 4 – 7, 2005
Sheraton Gateway Hotel at Los Angeles International Airport, Los Angeles, CA





Produced in affiliation with International Association of Astronomical Artists, the STUDIO for Creative Inquiry at Carnegie Mellon University, Space Art One and the Zero Gravity Arts Consortium
Exhibition Committee Members: Lowry Burgess, Sam Coniglio, Lorelei Lisowsky, Jon Ramer, and Jean Luc Soret

The Exhibition Committee of the ISDC2006 Space Art Exhibition proposes to build partnerships with international curators, space agency officials and cultural representatives to curate and install a multifaceted presentation that will offer a historical overview of the development of traditional and contemporary space art works from artists representing the international space art community past and present. Media will include video, paintings, multimedia, illustrations, drawings, space art project documents and artifacts.

Specifically, the Exhibition Committee proposes to feature:

- THE ARTISTS' UNIVERSE

  The Artists' Universe is a juried traveling exhibition of 32 astronomical artworks by 25 artists reflecting various representative media, subject

matter, and styles of International Association of Astronomical Artists. Jon Ramer of the IAAA will curate this exhibition component. The goal of The Artists' Universe is to evoke a fresh excitement about astronomy and space exploration and to increase interest in the appreciation of astronomical art. The Artists' Universe will introduce visitors to both the art and science of astronomical illustration. The exhibit experience will instill in them a new realization that artworks in this genre are not mere fantasy; they require disciplined study, meticulous rendering, and they can be essential extensions of a very real and rigorous science. To see some of the actual art works that will be included in the exhibition please visit:

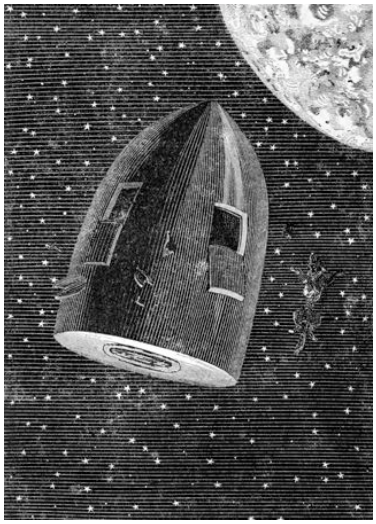
http://www.iaaa.org/exhibit/art-univ-index.html

Reflections by Be Johnson

- ZGAC Parabolic Flight For Artists - an installation of the artifacts, project documents and live video of the Zero Gravity Arts Consortium Parabolic Flight for Artists will also be included in the exhibition. Lorelei Lisowsky, Assistant Project Director of the Zero Gravity Arts Consortium, will help curate this portion of the ISDC2006 Space Art Exhibition.

- Video from Europe's International @rt Outsiders Festival Space Art Exhibition and Symposium an historic Parisian museum exhibition featuring many works by contemporary space artists including video of artworks actually taken into space as well as video documentation of space artwork that inhabits microgravity environments. This portion of the exhibition will be curated by Jean Luc Soret, President of Space Art One and Curator of International @rts Outsiders Festival.

- Science Fiction / Technology Fact – selected works from a European Space Agency's exhibition based on a study that was carried out by Maison d'Ailleurs in Yverdon-les-Bains, Switzerland, which houses one of the world's largest collections of science fiction literature in the world. "Artwork has played an influential and central role in science fiction literature. It has partly defined the scope of the genre and has brought the startling and imaginative visions of outer space, exploration of other worlds, interplanetary spaceflight and extraterrestrial beings into the minds and consciousness of the general public. In magazines and books, film and television, advertising and video, the artist's vision has transformed words into dazzling and compelling images that still life the spirits and brighten the soul." The exhibition juxtaposes images of what say the space station actually looks like today compared with how artists many years ago imagined they might appear, long before they were on the drawing boards and even before the first satellite had been launched. Exhibition component facilitated by David Raitt, Senior Technology Officer, European Space Agency and Patrick Gyger of Maison d'Ailleurs in Yverdon-les-Bains, Switzerland.



Science Fiction

Technology Fact

LIVE INTERACTIVE WEBCAST

A further level of concept development for Zero Gravity Arts Consortium (ZGAC) Parabolic Flight for Artist: Gravity Pulse is a interdisciplinary new media project called DataFlux – The Third Space a collaboration of artists and engineers who

will facilitate a live interactive webcast from inside a jet flying roller-coaster parabolas between 24,000 and 34,000 feet over the Pacific Ocean. Flying from Los Angeles International Airport, DataFlux will offer multiple interdisciplinary multicultural space art projects that will serve as the subject matter for interactive webcasts, video documentaries and other publishing projects

The goal of this webcast is to enrich an international audience's understanding of the sensations artists feel during parabolic flights, and to educate larger audiences to the diversity of space art projects and plans for the cultural utilization of space. This dynamic interdisciplinary live interactive webcast with music, audio and biometric data feeds will extend this unique space artists 'theatre' to international audiences who will experience the flight virtually through a the live interactive webcast.

David King, of General Orbital Corporation, and Gavin Starks, the Founder and Director of Exequo ltd, an open, non-profit, collaborative Internet broadcasting network working with community collectives and artists, will support the production of the webcast. Gavin Starks is Founder and CEO of Tornado Productions Ltd. a company that is involved in every aspect of creating and running one of the largest webcasting companies in Europe. He is founding member and now Chairman of the IWA-Europe, a consortium encouraging all forms of broadcasting on the Internet.

ZGAC also proposes to work in partnership with scientists, engineers, psychologists, programmers and other technicians at Carnegie Mellon University and other educational institutions to develop new technical systems that combine robotics and multimedia to create future ground-to-zero gravity-to-internet interactive connections so that a webcast audience can interact with the space artists and impact the art being created, in real time, on this parabolic flight.

DataFlux – The Third Space
Jet To Ground - From Sky To Earth

DataFlux is the structuring of extraordinary potential to map multiple parallel data flows by scanning the human body from the outside and inside as it fluxes upon the parabolic waves from 1G to 0G to 1G to 2Gs to 1/6thG and so on, repeating again and again, within the envelope of the jet.

DataFlux is the imaging of the 'data-halo' that surrounds the jet and the artists creating during flight. Flows of data, from these onboard DATA CREATORS are transmitted by sensing technologies mapping the activities of sight, sound, touch, thermal, movement, taste, smell, as well as reactions of the heart, brain, and general biometrics. All in a continuous DataFlux that has important correspondences, a fugue or multi-voice score will be co-created fostering many interacting data voices that can be simultaneously displayed, digitally modified then presented and further studied. Raw data will be archived in a database and

will be further developed as extended art forms by affiliate institutions and data-imaging artists not only during the flight, but also as live interactive webcast or used for scientific research and art making at a later date. The ZGAC Parabolic Flight for Artists: Gravity Pulse develops the holistic opportunity to creatively image these simultaneous data flows by new kinds of artists during live interactive webcasts originating from affiliate institutions.

Within Zero Gravity Corporation's Boeing 727 aircraft, the DataFlux project builds and structures an externally sensing architecture both physical and electronic as if the normal sensorial were turned inside out forming a sensing cylinder around the gravitationally activated human core pulsing upon and within the parabolic gravity waves. The human being in multiple states of gravity is the object of the sensing, being sensed from both inside and out. DataFlux is the technological sensing architecture that surrounds the Gravity Pulse flight. This DataFlux is both processed on board by DATA CREATORS and on the ground by DATA USERS via a DATA SERVER.

Within the parallel ground station space (laboratory/exhibition) the multiple data flows are reformed as image, sound and movement, light and pulse -- a living envelope around the participants that places their sensorial systems within the living real-time Data Flux being experienced by the parabolic flight team. Within this DataFlux synaesthetic envelope the participant will tele-replicate the Gravity-Pulse experience to webcast audiences via live interactive webcasts emanating from their respective institutions. Beyond this tele-direct experience of microgravity space, the DataFlux databank, containing raw data gathered during the flight, will be used for further research in science and art while providing new imaging experiences to webcast audiences who experience DataFlux during live interactive and post production DVD projects. All content of the databank will serve as the basis for new artistic projects.

THE THIRD SPACE
IN THE AIR - ON THE GROUND - VIRTUAL

DATA CREATORS - DATA SERVERS - DATA USERS

DATA CREATORS

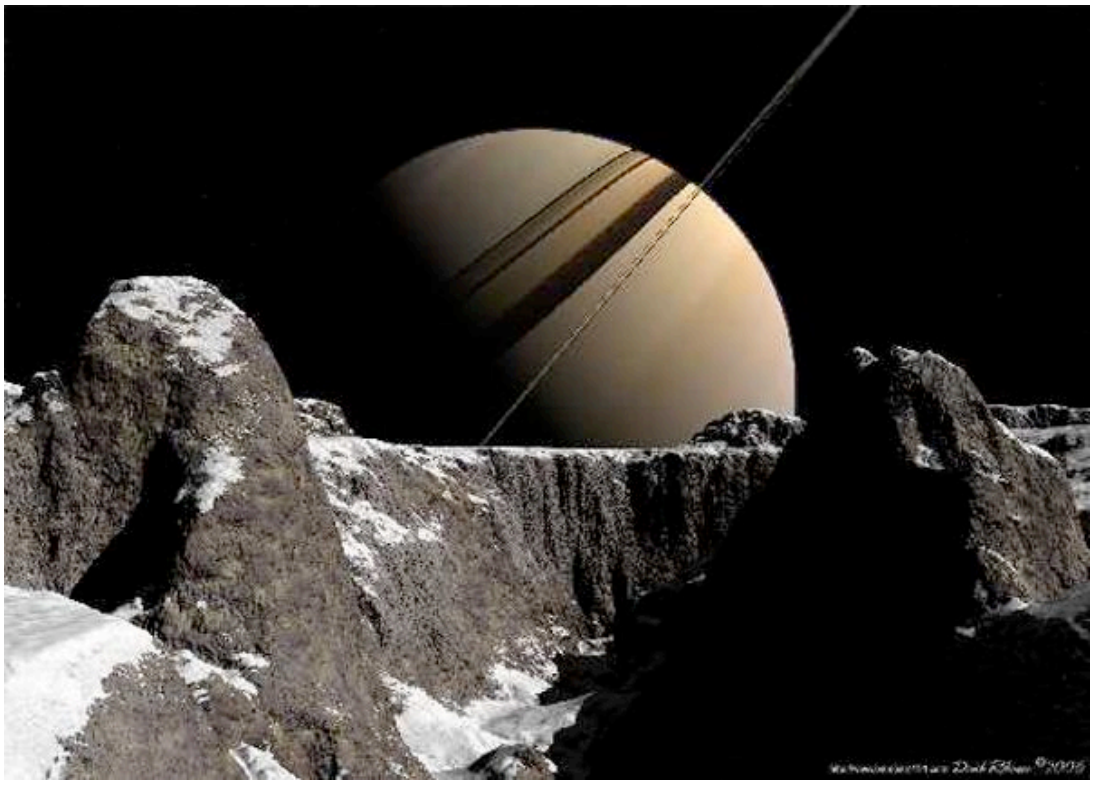
The Zero Gravity Arts Consortium Parabolic Flight In-Flight Artistic Teams will support the project as DATA CREATORS while Golden Star Productions provides all video documentation of the process, mixing the data into a video, audio uplink to a satellite in support of DataFlux webcast. DATA CREATION will be facilitated in collaboration with Lowry Burgess, Frank Pietronigro, Celestine Star, Gavin Starks, David King, and others TBD.

DATA SERVERS
Webcast service providers (Exequo, the Open Broadcast Network, London, United Kingdom) will serve raw data from the jet to the DATA USERS

DATA USERS
will include individual artists, scientists and multiple international institutions collaborating with the Zero Parabolic Flight for Artists: Gravity Pulse through the execution of personal work conceived, developed and presented from their various individual and organizational websites, offering the live and Interactive portion of webcasts produced by various DATA USERS. 3D modeling, video, text based, audio, gaming and other new media projects are encouraged and welcomed. Websites created by all DATA USERS will be posted on each website, in addition to the ZGAC website, the STUDIO, National Space Society, the Planetary Society and/or the ISDC websites.

DATA USER INSTITUTIONS
A variety of international affiliate and collaborating institutions may access the data on the servers in order to create new projects based on the data created by the DATA CREATORS. Institutions such as:

The National Space Society and/or The Planetary Society
Gallery, STUDIO For Creative Inquiry, Carnegie Mellon University
Golden Star Productions
Goianesia Communities, Brazil
ItauLab - Itau Cultural Institute, Sao Paulo, Brazil
Japan Aerospace Exploration Agency, Space Environment Utilization Center, Utilization Planning and Integration Office, Japan
Leonardo Space Art Working Group
New York University, Interactive Telecommunications Program, United States
San Francisco Art Institute, Center for Art+Science, United States
University of California Santa Barbara Media Arts and Technology Department
University of South Carolina, Art Department, United States



View From Lapetus by David Robinson

SPACE ART EDUCATION

To expand the educational value of Gravity Pulse and to publicize the work created by artists during the flight, multiple historians, writers, art curators, videographers, photographers and other cultural documentarians will be onboard to document the flight using multimedia, video and other technology. This documentation will be used to educate larger audiences to these interdisciplinary collaborations and the information will be showcased during subsequent exhibitions, published on websites and presented at future international conferences. We welcome sponsor ideas on helping with the distribution of these educational materials.

An interactive webcast will be broadcast direct from the ISDC2006 Space Art Track as a way of extending the reach of our project to worldwide audience and to enrich the educational value of the ISDC2006 Space Art Track, Exhibition and Parabolic Flight. The website and webcast will expand access for an international audience to the track participants and their projects, affiliate organizations and exhibition. This event will provide opportunities to educate international audiences to access, contribute to and learn about the cultural utilization of space. This live interactive webcast will be produced in partnership with Exequo, the Open Broadcast Network, located in London and General Orbital Corporation and other Affiliate / Collaborating Institutions. We welcome

ideas from prospective sponsors on how your organization can participate in this exciting space adventure.

SPACE ARTISTS STUDIO SEMINAR
At the STUDIO For Creative Inquiry, Carnegie Mellon University

An educational Space Artists Studio Seminar will be conducted by the STUDIO For Creative Inquiry in partnership with ZGAC's Space Artists Education Program as a way to prepare and train the space artists for flying on the ZGAC Parabolic Flight For Artist scheduled to fly in May 2006. Carnegie Mellon University students, attending the seminar, will mentor with 'seasoned' space artists and they will also fly projects of their own choosing during the flight. Lowry Burgess, Frank Pietronigro, Lorelei Lisowsky, Bradley Pitts and others will prepare the curriculum while teach and mentoring students during the seminar.

INTERGENERATION COLLABORATIONS

In additional to flying with a student team from Carnegie Mellon University, it is proposed that a second teams of San Francisco Art Institute students also fly projects as a way of enriching intergenerational collaborations among seasoned space artists and a new generation of space explorers.

FLIGHT OPERATIONS

The jet will be divided into 7 equally spaced 9-foot long 'staging areas' running down the length of the jet. Some of the staging areas will accommodate more than one team of artists. Each staging area will have a unique schedule or 'script' for all artists creating within that staging area to follow with each script identifying: tasks, participants, technology required, etc.

A flight profile of 40 parabolas is requested (35 parabolas in 0G, 5 parabolas in lunar gravity) so that each team gets to fly 15 parabolas. In some cases, the staging area will be divided for use by multiple team projects and artists, when each of those teams do not require the use of a full 15 parabolas each. If Zero Gravity Corporation cannot accommodate 40 parabolas during the flight; then, the total number of parabolas flown will be divided in half and that number of parabolas will be utilized by each of the parabolic flight teams.

Staging areas on the jet will be allocated according to project technical requirements, project schedules and artistic needs. It will be requested that one staging area remain dark, with black plastic tarp tapping off that area so that ultraviolet light can be utilized in that staging area for documenting a project.

ABOUT PARABOLIC FLIGHTS

How does parabolic flight work?

Specially trained pilots fly the parabolic flight maneuvers between approximately 24,000 and 32,000 feet altitude. The maneuver is somewhat like a roller coaster in that the plane is initially pulled up to approximately 45 degrees 'nose high.' Next the plane is 'pushed over' to begin the zero gravity segment of the parabolas. For the next 25 – 30 seconds everything in the plane is weightless. At approximately 30 degrees 'nose low' a gentle pull out is started which allows the participants to stabilize on the aircraft floor. Finally, the g-force is increased smoothly to about 1.8 g's until the aircraft reaches a flight altitude of approximately 24,000 feet. The maneuver is then repeated.

ABOUT THE AIRCRAFT

How does the Boeing 727 compare with NASA's KC-135?

- The Boeing 727 is nearly identical in size and volume to NASA's KC-13 with a larger cargo door (140" x 86") and an approximately 70+ foot long area for experiments or floating.
- The Boeing 727 is also a new aircraft, on the average about 20 years newer than the KC-135.
- The Boeing 727 cargo aircraft has a built in pallet handling system that allows different interiors to be quickly loaded and unloaded to accommodate various customers.

Return to the Moon 2 by Mark Maxwell

ABOUT THE ZGAC PARABOLIC FLIGHT ARTISTS

MARTHA BLASSNIGG
United Kingdom

Martha Blassnigg is currently a research assistant with Trans-technology Research, at the Faculty of Technology at the University of Plymouth.

Her original interests in fine arts, music, dance, photography and philosophy have converged in studying and working with film in the areas film theory, documentary, projection and restoration. In her Masters thesis of the University of Amsterdam *Seeing Angels and the Spiritual in Film: An Interdisciplinary Study of a Sensuous Experience* for the studies of Film-theory and Cultural Anthropology she has compared cinema technology with the metaphysical phenomenon of appearances. Her documentary film *Shapes of Light*, 2000, which was part of her thesis, presents four Austrian artists who express their belief in angels and mediate their own clairvoyant sensitivity in their artwork. In her latest documentary film, *Lotte Hahn*, 2004, a portrait of her grandmother's artistic and personal life, she treats the subject of memory in its relation to time and space. The film reflects fragmented and discontinuous remembrances of her past. At several points the director attempts to rupture the flow of the narrative in order to reflect upon the way the medium film can express the transience and complexity that underlies the working of our consciousness in our interaction with history. Before joining Trans-technology research she worked as filmrestaurer in the Nederlands Filmmuseum and subsequently in the Computer Software sector.

The interrelations of metaphysical themes with aspects of technology, in particular cinema and photography, are brought together in her Ph.D project at Trans-technology Research. Drawing on evidence of claims for human extensions into other dimensions, such as in the way technology is said to provide a gateway to spirituality, the thesis examines how the historically determined concept of the angel becomes connected to the popular use of photographic and cinematographic technology. The aim of the thesis is to make a contribution to the way we think about the spiritual and metaphysical implications of contemporary technology and its popular interpretation.

This project falls within a large scale research project by Trans-technology at the University of Plymouth to examine the epistemological implications of new technologies:

Trans-technology Research
www.trans-tecresearch.org

Trans-technology Research supports both full-time and part-time PhD research undertaken on site in the Faculty of Technology at the University of Plymouth. Led from a historical and theoretical perspective its key concern is the understanding of science and technology as a manifestation of a range of human desires and cultural imperatives. In particular topics currently being researched concern the spiritual aspects of nineteenth century and digital technology, early cinema and the technological imaginary, anoetic technology, the interpretation of science and technology in popular and culture, and the historiography of technology. Trans-technology Research is currently developing a major research project dealing with the philosophical aspects of science and technology and the history of popular arts.

Trans-technology Research benefits from the presence on site of the Leonardo Reviews editorial office. http://leonardoreviews.mit.edu/

For further information please contact Dr. Michael Punt, Reader in Digital Art and Technology at michael.punt@plymouth.ac.uk

LOWRY BURGESS
United States

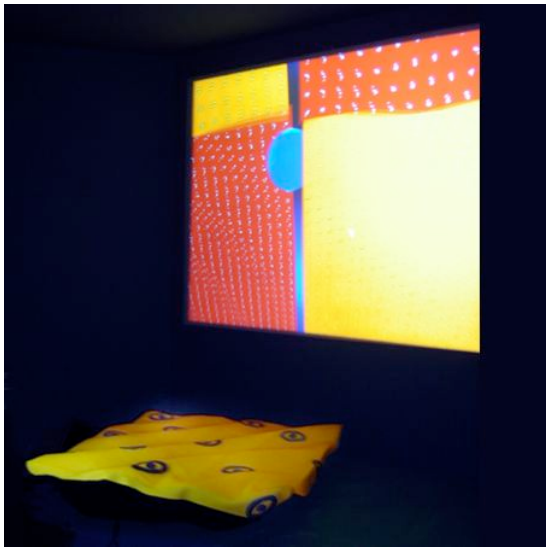
Lowry Burgess has worked with outer space for the past 35 years. Among celebrated space artworks is his 'Boundless Cubic Lunar Aperture,' as noted, the first 'official' non-scientific payload that was taken into outer space by the NASA Space shuttle Discovery in March 1989. He is Dean and Professor at Carnegie Mellon University and Distinguished Fellow of the Studio for Creative Inquiry and the Center for the Arts and Society. He was a Fellow of the Center for Advanced Visual Studies at MIT for 25 years.

URLs:
http://artscool.cfa.cmu.edu:16080/~burgess/
http://www.cmu.edu/PR/releases05/050210_spaceart.html

TANIA FRAGA
Brazil

Tania Fraga is a Brazilian architect and artist. She holds a PhD. of the Communication and Semiotics Program at the Catholic University of Sao Paulo (PUC). In the course of 1999, Tania developed a Post Doctoral research project at CAiiA-STAR, UK with a research grant from CAPES, the Brazilian Agency for the Improvement of Higher Education Personnel. She was Professor and Co-Coordinator of the Graduation Studies of the Art Institute at University of Brasilia, Brazil, where she is Associated Researcher. She was member of the Advisory Research Committee of the Banff New Media Centre in 2003, Canada. She was Visiting Scholar at the Computer Science Department at The George Washington University, Washington DC, 1991/1992 and Artist-in-Residence at The Bemis Foundation, USA, 1986, with a grant from the Fulbright Commission. She has been showing and publishing her work in many national and international exhibitions, lectures, workshops, seminars and congresses. Tania's current field of research is the creation of interactive cyber-worlds, for interactive stage performances and interactive art installations. They are based on 3D modeling, animation and VRML (Virtual Reality Modeling Language), JavaScript and Java 3D languages.

URLs:
www.lsi.usp.br/~tania/
www.unb.br/vis/lvpa/
planeta.terra.com.br/arte/lvpa2002/ResponsiveSurface/



"Responsive Membrane"
Tania Fraga, Artist - An artificial organism in the context of an installation commissioned by Itau Cultural Institute, Brazil, 2005

LORELEI LISOWSKY
United Kingdom

Lorelei Lisowsky (USA/UK) is an organizer, curator and interactive artist specializing in zero gravity art performance. She holds a BFA in Interdisciplinary Art from San Francisco Art Institute (USA) (2001), and is currently applying for Mphil/Phd study at the Institute for Digital Art and Technology (UK) in the University of Plymouth School of Technology (UK).

Her research focuses on the Transhuman potential of parabolic flight and how spaceflight can be further explored phenomenological using intuition, the senses crossing over into ubiquitous technologies. Her earlier work with community interactions has developed into virtual networks where cyberspace and material space collide creating "moist media". Involved in DIY cultural activity in London, ecological and community activity and public art projects in England and San Francisco, exhibited in both. Founder of Zero g Arts Lab in San Francisco and currently Assistant Project Director of the Zero Gravity Arts Consortium. Awarded with one year funded residency from Washington Research Institute, USA.

FRANK PIETRONIGRO
United States

‘Drift Painting’ in a Microgravity Environment, Frank Pietronigro, Artist, 1998
(Original Video Footage: Courtesy of NASA)

Frank Pietronigro is an interdisciplinary artist, educator, and author residing in San Francisco, California. In 2004, Frank Pietronigro was appointed Associate Fellow at the Studio For Creative Inquiry at the College of Fine Arts, Carnegie Mellon University and currently serves as Co-Founder and Project Director of the Zero Gravity Arts Consortium (ZGAC), an international Space Art organization that is dedicated to fostering greater access for artists to microgravity space and space flight technology. Frank also serves as Co-Chair for the 25th International Space Development Conference Space Art Track, a conference co-sponsored by the National Space Society and the Planetary Society that will be held in Los Angeles in 2006.

He served as Co-Organizer for the 2005 Workshop on Space Artist’s Residencies and Collaborations that was held at Carnegie Mellon University West at the NASA Ames Research Center at Moffett Field, California. As Project Founder of Research Project Number 33: Investigating the Creative Process in a Microgravity Environment, Frank Pietronigro became the first American painter to create ‘drift paintings’ while he and the painting floated in zero gravity aboard NASA’s KC135 turbojet.

The artist has presented and published his work during lectures, workshops and congresses at national and international galleries, museum and other institutions including: Maison Europeenne de la Photographie, Paris, France; Biennale Internationale Dell’Arte Contemporanea, Florence, Italy; Smart Project Space, Amsterdam, The Netherlands; Museum Fur Gestaltung, Zurich, Switzerland; Galeria Ze Dos Bois, Lisbon, Portugal; and the Atlanta Contemporary Arts Center. Pietronigro received his Bachelor of Fine Arts in 1996 from the San Francisco Art Institute in Interdisciplinary Arts and also received a certificate from the Multimedia Studies Program at San Francisco State University in 1998. He studied fine art at the

Philadelphia College of Art from 1975 to 1977 and was appointed by the San Francisco Art Commission to direct the 39th Annual San Francisco Arts Festival. He also produced San Francisco's Art In The Park in 1982 and 1983.

URLS:
www.zgac.org
www.pietronigro.com
www.kqed.org/spark/artists-orgs/spaceart.jsp

BRADLEY PITTS
United States and the Netherlands

Artist Statement

"The ancient mythological nexus talked about life more than anything else, whereas the whole of [Positivist, rational thought, i.e. science] concentrates on death: that is, on matter. … the first phase of the development of human consciousness - that is, of the process of liberation - must necessarily pass through death." - Joseph Beuys

As an engineer at MIT (B.S. 2000, M.S. 2003), I dedicated much of my education to the study of physics: the study of material interactions. This study led me to space exploration and the technologies necessary to explore with a human presence. As an artist, however, I move beyond physics to metaphysics; beyond matter to meaning. I approach my artwork as a mode of investigation/play: a bridge connecting the material with the human, the universal with the personal. In this way, I restore science and technology to a place where it can be used to investigate philosophical questions and subjective realities.

Because knowledge evolves, cutting-edge thought contains the entirety of a culture's intellectual and artistic history. Thus, at frontiers, the extremes of contemporary thought and our human origins meet. For this reason I was drawn to space exploration. As a cognitive, technological, and physical frontier, space is an arena that requires significant resources. It therefore raises questions of purpose and validation: what goal/task/endeavor is worthy of these resources? Thus far the response of western cultures has been the furthering of science/technology: the extreme of rational thought. My interests, however, concern the bridging of our material world investigations, as represented by space exploration, and our "inner world" explorations that may be represented by art. My graduate research in engineering addressed these seemingly oppositional pursuits by creating a spacesuit; a skin to facilitate inward exploration in outer space.

In my work I employ the infrastructure of technological rationalism (concepts, tools, methods, and apparatus) in order to explore personal, intuitive realities. Thus technology is not used/developed within the traditional framework of man as Creator, but man as "experiencer": a subjective being, a soul. This work leads to the development of personal, artistic explorations, as well as the development of tools capable of facilitating/creating profound expressions of human experience/freedom: art.

URLs:
Bradleypitts.info

MICHAEL PUNT
United Kingdom

Michael Punt is Editor in Chief of Leonardo Reviews a member of the Leonardo/ISATS Advisory Board, and the MIT/Leonardo Book Series Committee. He gained his PhD at the University of Amsterdam and is now a Reader for Art and Technology at the University of Plymouth and leads the Trans-technology Research Center at the Faculty of Technology. He has made 15 films and published over eighty articles on cinema and digital media in the last decade. His recent publications include a book-length study on early cinema, (Early Cinema and the Technological Imaginary, 2000) and regular articles on cinema history and digital technology for The Velvet Light Trap, Leonardo, Design Issues and Convergence. Between 1996 and 2000 he was a regular contributor to Skrien, a Dutch journal of film and television criticism, where he wrote a monthly column on cinema, art and the Internet. His most recent book, in collaboration with Robert Pepperell, The Post-Digital Membrane: imagination, technology and desire, was published by Intellect Books in 2000. Its associated webpage is at www.postdigital.org. His essay 'More Sign than Star: Diana, Death and the Internet', is published in Stars in Our Eyes - the Star Phenomenon in the Contemporary Era, edited by Angela Ndalianis, (Westport: Praeger, 2002). His most recent major articles include 'The Postdigital Analogue and Human Consciousness', (Leonardo 35 (2)) and 'A Taxi Ride to late Capitalism: Hypercapitalism, Imagination and Artificial Intelligence' (AI and Society (2002), The Martian in the Multiverse at http://www.refractory.unimelb.edu.au/journalissues/vol3/vol3.htm, (2003) and his ongoing project, the transdisciplinary wunderkammer, is at www.extraordinaryconnections.org . A full list of publications and exhibitions can be found at: www.http://people.i-dat.org.

References: Please see links in the brief bios above. Links:

www.postdigital.org
www.extraordinaryconnections.org
www.wirelessobscura.org
www.vilec.org
www.rca.ac.uk
www.stemarts.org
www.mars-patent.org

RICKY SEABRA
Netherlands

Ricky Seabra is a Brazilian-American designer and performer born in Washington and raised in Brasilia. He graduated from Parsons School of Design in New York in Communication Design and has a Masters Degree in Industrial Design from the Design Academy Eindhoven, Holland where he lived for 8 years. He has been developing his theater works at the Kunstencentrum nOna in Mechelen, Belgium since 2002. He has shown his first monologue called Airplanes & Skyscrapers in 20 European cities and 3 in Brazil. His latest work together with Andrea Jabor is Isadora.Orb, The Final Metaphor that premiered in February 2005 and is about the poetic potential of space as a new and unexplored realm for artistic creation and presents a plan of how to get artists aboard the

ISS. This piece is roughly based on his Masters Thesis in Industrial Design that proposed an actual design for an Art Module, an orbital residency for artists, on the International Space Station called the ISADORA Module. This thesis has been presented at a number of aerospace industry conferences (STAIF and IAF) in the US and Europe.

In his pieces for theater Seabra recontextualizes images and memories through a mixture of live-action animation, music and storytelling. He makes a sort of live cinema on stage using no special effects or Photoshop. He seeks to preserve what he calls the "visual integrity" of the image (and the creative process), a central theme in his method of storytelling. Seabra believes that a great part of the poetics of an image lies within its origin. He is currently touring with Airplanes & Skyscrapers and Isadora.Orb in Europe and will start developing a new monologue in January 2006.

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GAVIN STARKS
United Kingdom

Gavin Starks is an astronomer, musician, entrepreneur as well as an expert in broadcasting on the Internet. He holds a Master of Music degree in Computer-Music, 3-D Sound, Virtual Reality Audio and a second Master Degree in Astronomy, Physics, Mathematics and Computing from the University of Glasgow.

Currently, Gavin is the Managing Director of Consolidated Independent; a company aggregating the music catalogues of the Independent music labels (e.g. Beggars Group) and piping them into Digital Music Services (e.g. iTunes, Napster). He is also Founder and Director of Exequo ltd, an open, non-profit, collaborative Internet broadcasting network working with NGO's, community collectives and artists. He is Founder and CEO of Tornado Productions Ltd. a company that is involved in every aspect of creating and running one of the largest webcasting companies in Europe. He is also Aggregator and Founder d::gen network Ltd., a collection of projects and people. He is founding member and now Chairman of the IWA-Europe, a consortium encouraging all forms of broadcasting on the Internet.

He served as Chief Technology Officer at AssetTV Ltd. a company leading the development and launch of a touch-screen, closed-network IP TV channel for the Financial Sector. He was Senior Consultant at Servecast Ltd. where he assisted product development, sales and business development. Servecast's acquisition of Tornado makes it the largest webcasting company in Europe. Gavin served as Strategic Consultant, Webcasting Producer, and Technical Manager for Virgin Net, where as employee #5, he was involved in the definition of the ISP, the development of content channels and pioneering webcasting. He worked as Experimental Officer, Jodrell Bank, Radio Astronomy, Quasar Research, Software Development, Web Development, and Tutoring

URLs: www.dgen.net

Gravity Pulse: Theme For A Parabolic Flight

The following theme, **Gravity Pulse**, was originally conceived and written by Lowry Burgess, Professor of Art at the College of Fine Arts at Carnegie Mellon University, and will be used as a guide during the development of the Space Art Track of the 25th International Space Development Conference and proposed Zero Gravity Arts Consortium parabolic flights to support as a thematic guide for space art projects flown in conjunction with this event.

Gravity Pulse

Gravity Pulse is a theme for a parabolic/ microgravity art flight formed to embrace all of the gravity conditions of parabolic flight: normal gravity, zero gravity, and double gravity. It is meant to extend the range of artistic creativity and meditation on the interacting continuum between zero gravity and varying densities of gravity, to artistically explore the holism of gravity between OG and multiple Gs.

In parabolic flight the wave of gravity pulses between zero gravity and double gravity with normal gravity as a node between. Gravity pulsation from 1G to 0G to 2G and back to 1G during the lofty arcs of the parabolic flight is seen as a PULSE of gravity, like the heart beating, like breathing -- the alternating PULSE of gravity and zero gravity flowing through everyone and every thing like an energy current or invigorating living sap. What is most profound is the sense of the flow of gravity through people and things within the multiple flight parabolas. And on the other hand it is a force like a wave that can be surfed and admired.

The ZGAC Parabolic Flight For Artists and the art created will reveal new imaginative insights into the medium of gravity that so completely engulfs us, the 'gravit-ium'. Artists and teams will collaborate in developing an ensemble of artworks to explore and express the continuous interacting presence of all three states of gravity within the pulsation of the parabolic flight.

> For example: in zero gravity there is a constant fascination with the generation of the effects of 1 or 2 G's: in two Gs an equal obsession is with means of release; in 1G what other wonders are created to simulate 0G and 1G.

Space Art Declaration
By Lowry Burgess

"The Three Whys of Space Art"

> *"What entity, short of God, could be nobler or worthier of man's attention than the cosmos itself?"*
>
> Rudy Rucker, The Fourth Dimension

> *" If we are to move human beings into outer space we are going to have to move their culture with them"*
>
> Lowry Burgess, Fortune Magazine, September 2005

There is a profound need to engage the fuller participation of the arts in space exploration and to engage space exploration in the general frameworks of the arts to gain the mutual advantage of the holistic human imagination toward the cosmos.

Within this larger framework there is the problem of productively interfacing two vastly different cultures, the Arts and the Sciences, with all their separate languages, logics, methodologies, behaviors and traditions as well as issues of different customs of authorship, intellectual property and ownership.

When one asks 'why space art' one is really asking one of three whys ? the why in the present, the why from the past, and the why for the future. What follows is a brief attempt to answer these three 'whys'.

The Why Then (in the Past)?:

Since the first human looked upward to the vast and profoundly meaning-filled sky and reached outward and beyond to the starry cosmos, humans have pressed their archetypal feelings and concepts into that vast, beautiful and receptive surface that surrounds all of us. When we look up, we all look into the mirror of the utterly fundamental mind.

Each generation's most imaginative intuitions concerning the meaning of human BEING is formed by its concept of sky and cosmos. It is there in that overarching sky that mythic
logic ? the logic of the mind in framing the unknown ? plays out and finds initial form that gives birth to the cultural frameworks of society ? art and language, morals and ethics, science and technology, economics and politics.

The framing the new cosmic mythos marks new historical epochs. Usually each new celestial epoch forms a unique view. Each ages' utopic aspirations are often seen in an outer space, a place beyond -- a transcendent locus (heaven) that, nevertheless, impinges and drives the cultural belief frameworks (mythologies) of immediate ecological, social, scientific and technological reality.

Human perception and understanding of our world, its nature and reason is intimately connected to or sense of the universe, the cosmic matrix in which we all hover. Often this led to the belief that outer space, the celestial sphere, leads to other worlds filled with life or death, gods and other life forms from the future or the past, or in fact, even beyond!

Recently, in the middle of the last Century, it became possible to displace the whole of humanity, mind, heart and body from the surface of the earth to venture into cosmic space and time. From that moment a limited number of artists have been engaged with this new context to unfold it broader meanings. Projects known and unknown, public and private have engendered broad creative thinking and aspirations toward outer space within the various arts communities.

In the process of the emergence of more recent space related art practice, there has been, by definition, close interaction between artists, scientists and technologists, as well

as unusual institutional relationships, requiring openness toward unique interactions far beyond the usual frameworks and practice of the arts. This has lead to the necessity to further understand and articulate the underlying structures that can best support artistic/cultural aspirations toward the Cosmos.

Possibly the most important set of developments to the space art community in the past decade is the establishment of a fundamental cultural policy within JAXA. This policy enunciates the goals of fostering the consciousness of diversity, creating a new human viewpoint with the purpose of engendering a culture of human harmony: and integrating science and technology with the humanities and social sciences.

The Why Now?:

In a time of extraordinary global CULTURAL tensions (quite different from, but somewhat relevant to derived economic, political, or social conflicts) the global community needs to reach toward and express shared human feelings, feelings that all people have -- in particular, those feelings associated with the universal surrounding sky with its starry cosmos from which we derive our very being.

Not to address culture in outer space, and particularly feeling-filled meaning creation there in space, is to strangle the life-blood of imagination reaching out to our newly, much expanded cosmos ? and there searching for a destiny! . Just as in many cosmic myths the creator gazes into the mirror of the cosmos, a mirror their godly selves, so we gaze upward to the celestial mirror where beneath, we are suspended.

For the past 50 years the many disconnects between ecstatic experiences with zero gravity and the earth-bound habits that bind us have isolated much of the advanced perception sensing of our species from general culture. The question has become: How to lift the earth into unfettered freedom and bring ecstatic experience to earth -- how to communicate and evolve the experiences, knowledge and precedents that have emerged from outer space into the transformation of earthbound culture at its evolutionary edges: in space law, science, technology, communications, extra-terrestrial resources -- what can be called the new field of ‘exospherics’.

The phenomenology of zero gravity confronts consciousness and the entirety of mind and body with a fundamental disengagement and subsequent release into a state of levitation. Reciprocally, whenever high states of consciousness are achieved on earth, we experience ecstasis: the sensation of floating, astral or out of body experiences are common and in zero gravity a sense that the body looses its boundaries or in some cases, even physical levitation has been reported. Disengaged consciousness is characteristic of high states of creativity or inspiration and can be read in the many biographies of important creators. This correspondence is the anti-gravitational core, a region where we wait and abide and that gradually opens toward a broad horizon becoming an enchanted region in which everything belonging there rests, reconciled to itself. This region gathers to itself as if nothing were happening, freely turning towards itself letting everything merge and float, guided by their own gravitational nature, pulled overall by the coming forth of truth’s transcendent nature or a creative dawning. This truth also simultaneously abides in the origin of ones own essential nature and in a transcendental otherness. Here a floating released region newly integrated truth can reveal integrative being, unfolding within time. The experience of relationships among

people, things and disciplines is in a free-space. This sense of ‘free-space’ is critical counterbalance to our world’s more and more rigid adherence to outmoded and disfunctional behaviors and methodologies.

Opening up such free-space dialogues both in outer space, on earth and within social and institutional relationships is an essential agenda for this time. Opening up a profound depth of monologue and bringing that depth of self-communication into a broader social and political dialogue is essential to the perception of a larger, more universal humanity. It is our ‘released’ monologue with transcendent truth, and as Jaques Derrida says ‘always futuring’ that is the levitational pull. On the other hand, our internal monologue responding to its internal call must engender an intense dialogue with the other (another time, another society, another person) in the impossible and continuous promise making us responsible to the future in the other and in oneself. This commanding communal essence resides within various forms of disengagement -- the micro-gravitational flickering in and out of the absolute from 1G to 0Gs, to 1G, to 2Gs and back to 1G? a gravitational axis between release toward transcendent truth and the gravitational weight of incarnate responsibility.

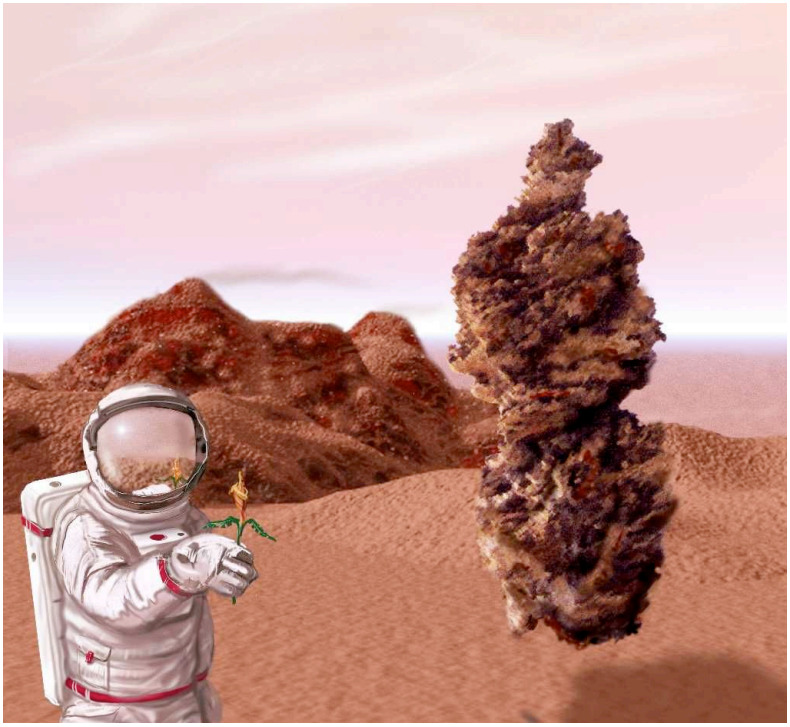
Releasement engenders increased pull upon and articulation of the mesh of our individual and social realities --the release from both internal and external ‘gravities’. Through many global telecommunications events we all experience a constant sense of cyber and virtual disengagement and release, we have seen elements of a vocabulary of the art of disengaged body/consciousness. The conditions exist to integrate these technologies and contexts in a more extensive and continuous framework at every level and to connect and communicate this shared extraordinary experience with our broader communities more intensively.

Zero gravity’s effect is not what one would assume from conceptual thought or seeming reason. When I observe interactions in zero gravity, it has surprised me that zero gravity appears as an energy that flows through things causing them to live and grow out ? to fan out with new potentialities! Zero gravity energy flows through and out and so doing pulls things inside-out! It manifests as a vital energy, a grace that lives and moves through everything. It is powerful in all its transformations -- its disengagement and releasement requires broad reperception. It is demandingly vital!

In parallel, a fundament shift of human perception and culture formation is being augmented by extraordinarily significant scientific and technological and particularly communications transformations, all requiring the evolution of aesthetics and specifically a Space Art aesthetics. Some of these deep structure transformations are:

1. The new infinite cosmology?the open universe, infinite?
2. Life as a universal presence--Mars, and beyond?
3. DNA--control of life forms, cloning, inside out reversals--DNA controlled life-- life is now controlling DNA, agro-genetics?
4. The computer combined with global communications systems, the simultaneous cyber-communications sphere?
5. Brain re-forming chemistry alters mind/body relationships?
6. Internal and external robotics--the micro/macro machine?
7. Shared dream-culture, a lucid dreaming, within the communications tele-sphere...
8. The simultaneous interactive tele-sphere ? tele-presence and remote multi-

sensing?
9. The instant cyber-economics of the Global finance System



Life on Mars by Robin Hart

The Why in the Future?:

The human mind must face its deep future. What do we see as the ultimate goal for human consciousness in the cosmos? Or is everything we know and feel destined to vanish with the planet earth? To undertake such ontological and teleological exploration raises all the questions about those things that are most essentially human. Again we face the tasks of the utmost capacities of the mind/body.

Humans are creatures that MAKE meaning. Imaginers/artists give initial intuitive form to those meanings that give guide and compass to the ongoing of our being. The deepest and most primordial meanings are and always have been shaped within and upon the sky/cosmos. Hence, it is to this shared common in the upward and beyond that we Space Artists direct our hearts and minds and to the sharing of those intuitions through a wide range of artworks for the inspiration of this WHOLE planet! This provocative condition requires artistically original plots, narratives and choreographs -- a new kinesthetic and dramaturgy. New artistic/poetic invention fashions and explores, together with the new technologies and techniques, an expressive, intimate, synaesthetic/multi-sensory consciousness evolving within a vibrant mesh of actions and events pulled by a tremendously vital anti-gravitational force toward the integration of the senses in synesthesia driven by the desire for higher coherence in multi dimensional ‘zero gravity’, consciousness.

This future calls for new networks of large university, institutional, and space agency support in Europe, Asia, India, as well as involving the cultural potentials of the International Space Station. These 'ground-to-zero-gravity linkages' need to be explored in a variety of settings and conditions involving new communications technologies to build broader educational and cultural participation.

Within this larger framework there is the problem of productively interfacing two vastly different cultures, the Arts and the Sciences, with all their separate languages, logics, methodologies, behaviors and traditions as well as issues of different customs of authorship, intellectual property and ownership.

In general, such artistic/scientific/technological residencies and collaborations can foster and develop themes addressing the futures of outer space such as: new forms of education and learning, --a curriculum of zero gravity; whole new sciences and technologies; new graphical imaging; new zero gravity explorations and understandings; the understanding of a joined earth to space reality -- a 3rd space; imagining new energies; anticipating new propulsion systems and power for transport; dreaming and planning sustained communities; create new forms of social organization; new laws and policies, new forms of nourishment; architecture, habitat, environment; new health and medicine; new spiritual/religious feelings, ideas and values; new forms of art making, new forms of art; new understandings of intimacy and love; being able to express how being in space affects humans on the inside; showing all aspects of the experience, deeper understandings of life with other life-forms; imagining new forms of happiness and freedom, longing, sorrow, and death -- deeply understanding human risk in space; new concepts of comfort and repose; even new humor; lunar 1/6 g life; lifting/levitating activities on earth NASA's microgravity drop tower; double-g experiences as powerful as zero gravity experience: new language experience (a multi-directional poem read in 360 degrees), new vocabulary, new grammars; creating new space skins/suits and hardware as holistic set -- as a form of space art; imagining even new forms of human life These are just a few of the potentials for creative imagining which our artistic communities have been developing and can contribute.

Projects will link the ground-based disengagement environments to micro-gravity disengagement in the hyperbolic flight in an effort to open wider horizons for the direct and indirect experiences of zero gravity consciousness to an interdisciplinary group of artists and experts. This nexus of disengagement and releasement is a precondition to the exploration of nascent aesthetic formulations that are inherent to zero gravity or released experience.

This zero gravity vitality disengages and releases a new topological image: that of the new, zero state, mind/ body/context, dominated by inversions, reversals and inside-outedness. These body/context changes are archetypal, and assembled as a whole; represent a new paradigm, a new surface and form. For example, the natural and the human have been displaced, inverted, as if the body were turned inside-out. Both body and nature are combined in a 4th dimensional 'Kline Bottle'. (A Kline Bottle is a mathematical topology where the inside and outside are one continuous infinite surface.) In this metaphor, mind/body/nature creates an infinite skin/landscape?an infinite surface for the newly blooming body, an infinite, 4th dimensional, 'Kline bottle' body. This 'body' and its surrounding surface constitutes a new 'garden' or zone of potential, an intimate region of mutual exaltation--where nature and the human exalt each other. Now, the

unknowable wilderness is at our core, surrounded by nature, which is now within the body--all surrounded by the mind and its struggles to form meaning. Further still, this inversion becomes infinitely extensive becoming the layers of an infinite and continuous surface-- the skin/landscape--an intimate and infinite “Garden” wherein gravity locked time becomes unfettered and unfolds itself as a flower of petals of simultaneous times.

In this disengaged zero-gravity garden, communications networks both inward biological and outward technological, become complex holographic mirrors that image the largest axiologies of culture, producing an interference pattern that gives rise to new gestalts, feeding back upon our fundamental psychic processes. What is most radical is the multifaceted flowing and multidirectional dynamism that inhabits this holistically interactive mesh with its communicative and expressive power -- a new intimate poetics -- new forms addressing existential necessities, i.e., redemption, propitiation, liberation, transcendence and ecstasy. What we need is to extract the particulars from the structures that are being shown-- to see the larger forms, the archetypal ‘organisms’ of this new aesthetic reality. In the zero state one floats among these blinding, seemingly random, highly significant stroboscopic flashes. This newly evolving drama is flickering back and forth between the intimate sensorial field of mental life and externalized physical substance, energy and society. In this interface, we can enter a more flowing relationship between the mind and sensorial physicality, a communicative, interactive multi-draft, multi-drift “garden” constituting its own new forms, structures and contents. Images and words, music and sounds, gestures and touch, do not live comfortably in this disengaged, zero gravity reality. They want to be more dynamic, more rapid, more explorative, and inquisitive; they want to be more democratic, more synaesthetic, more polyvalent, more free-associative. This new framework demands a de-gestalting and fragmentation-- then a re-assembly on another plane of consciousness. It requires entirely new image formulations -- dynamic, hieroglyphic and synaesthetic in nature-- all in a mutual ‘inter-relational’ mesh filled with new aesthetic meanings to be formed by artistic effort.

We do not know what the genome wishes to become in zero gravity or beyond our glowing blue planet. Certainly, most of the physical and mental structures that have evolved to enable the genome in gravity will become superfluous in zero gravity. What is it that life is to become in the zero gravity garden, this zero 3rd Space? What does this evolution imply for the evolving dialogue with such a gravity formed creature as us? In this reality the human body, with all its meaning and history, becomes enfolded and engulfed, swallowing all external society and nature in its gravitation - totally inverted and pulled inside-out, flowing through the zero space-zero gravity garden of releasement. Surely, within this evolving experience reside new emotions and feelings, a plenum for a newly emerging aesthetic framework for many artists and collaborators to articulate and develop in conjunction with the invention of new technologies and a science of the magneto-gravitational spectrum.

This potentiality for humanity requires linkages and interconnects that integrate an extraordinary plenum and potential for human creativity and freedom within and among networked groups, institutions, and facilities, scattered around the world. It calls upon these, the world’s Space Community, its space agencies, research and academic institutions to extend a deep cultural hospitality to the arts and humanities within the scientific, technological and technical frameworks that exist -- to engage in a broad imagining with and for the whole of humankind such that the vast potentials we see will be enabled among us all by a more generous and loving spirit that our life so deeply

requires.

Weightlessness comes on abruptly. I
Soared as if I were inside a soap bubble --
Like an infant in the womb of my
Spacecraft, still a child of my mother Earth.

Miroslav Hermaszewski

Comet Encounter by Sam Det

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