

Opportunities with the Zero Gravity Arts Consortium (ZGAC)

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JOIN IN SUPPORT OF THE ZERO GRAVITY ARTS CONSORTIUM

Participants of the 25th International Space Development Conference are encouraged to join in support of the management and creation of various ZGAC program as identified below. The organization welcomes new people to join us in actualizing our programs in support of the larger space art community. The presentation will present a variety of ways for you to become involved with ZGAC.

INTRODUCTION

Space flight technology serves as a site where artists and space flight professionals can meet to learn from and collaborate with one another while sharing their unique experiences, thoughts, and observations between two cultures that share, I believe, similar dreams. Despite speaking unique languages and using different methodologies our desires to contribute to the enrichment of the human condition and improve the quality of life for all people is the same. In educating one another to the different worlds we inhabit; in discovering the similarities that exist when seeing ourselves in one another, despite the significant differences; a new cooperation will unfold and the discovery of a rich common language will expand the horizons of each of our cultures. For artists parabolic flight and space flight technology serve as a site where mediation takes place between science, artistic production, ritual, economics and politics. This site is as exotic for us as it is for scientists and space presents challenges and opportunities unlike those that artists find in our gravity-bound studios. Scientists have been able to expand their understanding of nature by going into space and the contributions to the human spirit that have unfolded prompts me to wonder how artists too might harness such experience to create new works that are sublime. This new art, that can only be created through cooperation, may inspire wonder and awe in our scientific colleagues who are now called upon to play a significant part in the development of a new Space Art genre.

“The many energies and links are a fabric, all one,
But separate strands, each with its own knowledge and purpose,
Equally important, a flowing mesh without gaps.
The balancing of all these is the greatest form of love;
The clearest insight into truth is through joy!
Therefore be one with the earth as one would make the sand fire,
And the fire the sun.” Lowry Burgess, The Quiet Axis [1]

It is my hope that private and public space ventures including the European Space Agency, NASA and other space flight agencies will officially integrate art production into space missions. In order for this rich new language to evolve, artists should have access to these technologies, as do scientists. If human space flight is to proceed successfully, then it is imperative for the arts to be harmoniously integrated into scientific space exploration.

I strongly believe that were astronauts to engage in artistic production as formal flight manifest activities scheduled during long-term space missions, it would help reduce stress, decrease boredom, build stronger interpersonal bonds between members of international space crews and rejuvenate astronauts for a return to their scientific and analytic activities. Psychological, physiological and social benefits for people who produce art in microgravity should be quantified.

As a part of the Space Art Track of the ISDC we extend our hands out to welcome one another into a new education that will at first be awkward. Artists need to better understand the extreme conditions that astronauts actually face during their time getting to, living in and returning from space. The naiveté of a novice space artist like myself needs to be shattered through comprehensive education programs that bring the artist to terms with the real challenges they will face in space and on parabolic flights. As a result of this thinking, the ZGAC Space Artists Education Program was established. As a part of the preparation for my 1998 KC135 flight, NASA provided extensive education and training programs to help me begin to understand the new space of microgravity; but I was not prepared for the reality I experienced during parabolic flight. Consequently, I understand the requirement of educating and training space artists as rigorously as astronauts are trained.

Kitsu Dubois [2] and her methodologies for working in microgravity serve as an excellent example of how artists train for their work in weightlessness. They also realize something the space flight technologists already know. Specifically, that this space must be experienced multiple times by an individual or that the period of experience in microgravity needs to be extended in order to establish first hand knowledge as to how the space (and the space flight agencies) operate.

The need for ZGAC to fortify the organization’s Space Arts Education Program and ZGAC Parabolic Flight Program for artists is clear.

ABOUT THE ZERO GRAVITY ARTS CONSORTIUM

ZGAC is an artist created international space arts organization dedicated to fostering greater access for artists to space flight technology and zero gravity space through the creation of international partnerships with space agencies, arts organizations and leading universities. ZGAC is the first organization of its kind, based in the United States, facilitating parabolic flight projects that will set the stage for teams of artists to have permanent access to space transportation systems including the International Space Station. I serve ZGAC as Co-Founder and Project Director and in this capacity I have been responsible for the administration and management of the Space Art Workshop on Space Artists' Residencies and Collaborations that was held at Carnegie Mellon University West at NASA Ames Research Center in February 2006 and for organizing major portions of the Space Art Track of the 25th International Space Development Conference. This service to the community was completed in support of ZGAC's International Outreach and Conference Program as described below.

ZGAC programs include: the Artists Into Space Program, the Parabolic Flight Program For Artists, the International Outreach and Conference Program, Building A Global Space Arts Community, the Space Artist Education Program and Levity Lab: A Youth Space Art Program. ZGAC programs are established to foster the spirit of cooperation and strengthen relationships between the established space flight community of scientists and the global community of artists.

ZGAC will work to create an international network of affiliations to support our programs and services. To this end ZGAC has established the ZGAC Advisory Board, ZGAC Affiliate Institutions and the ZGAC Ambassadors. ZGAC welcomes inquiries from workshop participants on how they and their organizations can cooperate with ZGAC. ZGAC is currently partnered with institutions including the Zero Gravity Corporation, STUDIO for Creative Inquiry, College of Fine Arts, Carnegie Mellon University, the Texas Space Grant Program and the Foundation for Space Exploration. Zero Gravity Corporation is a private company who will facilitate parabolic flights for ZGAC and was founded and is operated by former NASA officials and astronauts who will provide training and technical support for artists participating in ZGAC flight projects. Lowry Burgess, ZGAC Advisor, and prominent Parabolic Flight Team Artist, proposes development of new networks of large universities and institutional support in Europe, Asia, India, and the US connected with ESA, NASDA, and NASA. Lowry is fostering increased collaboration within the space art community, in tandem with NASA, the Sparta Institute and the British Arts Council.

ZGAC Programs That Need Your Support

ZGAC seeks individuals to work in a variety of management and administrative capacities to support the following ZGAC programs. If you are interested in working with our team please email frank@pietronigro.com

ZGAC's Artists Into Space Program

One ZGAC goal is to contribute to international activities and dialogue, through our *Artists Into Space Program* thus setting the stage for teams of artists to travel into space. Political advocacy is a key feature of this program as we hope to work on changing policies that inhibit artists from access to public technologies to which they, as tax payers have the right to use.

I believe that it would be a mistake to send one 'first artist in space' the very first time space agencies send artists into space. I strongly advocate that an international team of artists should make this significant journey together so as to share the experience in community with scientific colleagues. The selection of the team is a symbolic act that can reflect the spirit of international collaboration. A team rather than the one artist, better represents the diversity of our world, various disciplines and cultures, that colorful spectrum of differing points of view and cultures. I believe that no individual artist, nor their chosen media or creative process can represent the significant development to use space flight technology for artistic production. The team must include people from the developing nations of the world. Individuals from cultures or nations that are typically resource deprived to the rich need to be represented. To support this ZGAC has instituted its Building A Global Space Arts Community Program with the intention to bring people, from all over the world into our programs, especially those whose economics would preclude them from accessing these technologies.

ZGAC's International Outreach and Conference Program

My work as Co-Chair of the Space Art Track of the 25th International Space Development Conference was conducted in support of the ZGAC program and all of the tasks that I engaged in to manage and administer the Space Art Track were done in support of this ZGAC International Conference Program. Part of the work relating to conferences is being fostered by Lorelei Lisowsky, ZGAC Assistant Project Director, in support of our global outreach efforts in Africa, Asia, Latin and Central America, Europe, Australia, and Russia. ZGAC will host conferences as a way to build bridges between ZGAC and diverse global communities and provide educational opportunities, to stimulate ideas from different cultural perspectives on new projects. This program will provide bridges to parabolic flight opportunities for people, from around the globe, who would not otherwise have access.

In addition, ZGAC and I played a major role in the creation of the Workshop on Space Artists' Residencies and Collaborations held at Carnegie Mellon University West at the NASA Ames Research Center in February, 2005. As a part of that work a major space art report was published titled, *The Arts and Space Culture: The Common Ground of Creativity*. This report is currently being revised and the collaboration process will continue during the Space Art Track when an updated version will be presented to key stakeholders during the Space Art Track at the International Space Development Conference taking place in Los Angeles, May 4 – 7. 2006.

Workshop Format

The model for the workshop included private, public and internet spaces created to support a process of international collaboration. In addition to the workshop, the Organizing Committee created a public space art event, sponsored in part by ZeroOne: The Art and Technology Network and the STUDIO For Creative Inquiry at Carnegie Mellon University, hosted by and held at the facilities of the nearby SETI (Search for Extraterrestrial Intelligence) Institute that was well attended and covered by the media.

The workshop at Carnegie Mellon University West at NASA Ames Research Center began with a plenary session to establish the task framework and timetable. The Workshop participants had opportunities to work in small groups to extract the themes and components of the Guidelines document. A core group, with a representative from each Pod /focus group, has created a draft document to present to the whole group. Participants were broken out into pods that addressed themes including:

In order to reach our goals we did the following:

collect and discuss case studies of various art/science collaborations, obtained input from people who have supported the arts within space agencies, discussed a list of questions that range from the challenges of artists in the scientific process to how to mobilize the larger community of artists interested in space.

Those questions included:

What institutional conditions create the most productive residencies and collaborations?

What are the best conditions to create new integrations of art, science and technology?

What steps or what set of methods and processes will develop a rich set of resources both institutional and fiscal to yield a deeper experiential base and deepen the knowledge base?

How do we respond to the demand in research and higher education for interdisciplinary, collaboration, creativity and new forms of integration and learning in all areas of invention?

Discussion took place among the workshop participants and the report focused on six key areas:

Residencies

Collaborations

Funding

Space Art to the Broader Public

Education

Archiving, Chronologies, Bibliographies, Databases and Scholarship

ZGAC's Parabolic Flight Program for Artists

Among ZGAC's initial projects are a series of parabolic flights created for artists taking place at various locations around the globe. Selection of artists will be international in scope.

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

ZGAC
ZERO GRAVITY ARTS CONSORTIUM
PARABOLIC FLIGHT FOR ARTIST
FLOWN BY ZERO GRAVITY CORPORATION

IN COLLABORATION WITH
STUDIO
FOR CREATIVE INQUIRY

7 ONBOARD ARTISTS' STAGING AREAS
RUNNING DOWN THE LENGTH OF JET
9' long x 10' wide x 62" high

DVCameras Documenting In each Staging Area
Proposed Blue Screen
AVProjector In some areas
Camera Mounts

FLIGHT WEBCAST
A post-flight webcast will be produced in Collaboration with Exequo, the Open Broadcast Network, General Orbital Corporation and Philcorp

international space development conference
National Space Society

Flight Team Artist: Kristen Burgess Agee, Lowry Burgess, Tania Fraga, Lorelei Lisowsky, Otto Piene, Frank Pietronigro, Brad Pitts, Gavin Starks, Chris Robinson, Ricky Seabra, plus proposed team of students from the College of Fine Arts at Carnegie Mellon University and the San Francisco Art Institute.

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 ZGAC Parabolic Flights for Artists, **SKY STUDIO**, a space art research flight scheduled to take place as a part of the Space Art Track in Los Angeles and **GRAVITY PULSE: ZGAC Parabolic Flight for Artists**, an interdisciplinary collaborative project that will feature twelve teams of internationally acclaimed artists flying a variety of unique Space Art projects, each described below, while providing people worldwide with a glimpse into this fascinating genre via the internet as a part of the project **DATAFLUX**. This will be the first time in history that such flights will take place in the United States.

To support SKY STUDIO, Zero Gravity Corporation will ferry a Boeing 727 jet from their home base in Ft. Lauderdale to Los Angeles and a research flight for space artists will take place on May 4, 2006 as a part of the 25th International Space Development Conference flying from Burbank Airport. Gravity Pulse: ZGAC Parabolic Flight for Artists, which is the first of its kind to be flown in the United States, will showcase cutting-edge interdisciplinary, multicultural Space Art projects created by prominent 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.

Future ZGAC Parabolic Flight Program plans include periodic flights that will feature college science and art students who will fly together. A national call for proposals will be conducted among teams of students studying at arts and science schools who compete to fly experiments and artwork of their choosing. These parabolic flights are being co-organized with Burke Fort, President of the Foundation For Space Exploration and the Director of the Texas Space Grant Consortium and Lowry Burgess, Professor of Art at the STUDIO For Creative Inquiry at Carnegie Mellon University. Burke Fort was instrumental in setting up NASA's Reduced Gravity Student Flight Program as administered by the Texas Space Grant Consortium. A unique competition will be organized by ZGAC affiliate institutions in order to extend educational opportunities for selected college teams.

ZGAC's Space Arts Educational Program

ZGAC's *Space Arts Educational Program* will mentor artists in as a way of building long-term commitments between space artists and space agency programs. ZGAC will institute and formalize the Space Artists Education Program in order to teach space artists about space art methodologies and media, space art history and historical precedents, space art project organization and logistics, space agency relations, programs and opportunities, and other topics that fortify the success of future space artists. Artists need to better understand the extreme conditions that astronauts actually face getting to, living in and returning from space. The naiveté of a novice space artist like myself needs to be shattered through comprehensive education programs that bring the artist to terms with the real challenges they will face in space.

As a part of my Associate Fellowship at the STUDIO For Creative Inquiry, I would like to see a Space Art Education Program or Space Art Instituted, at Carnegie Mellon University West at NASA Ames Research Center as a part of the College of Fine Arts at Carnegie Mellon. I am still in the process of discovering and learning from Lowry Burgess what it really takes to establish such institutions within a large organization such as Carnegie Mellon University.

ZGAC Levity Lab: Youth and Space Art Program

ZGAC Levity Lab: Youth and Space Art Program offers opportunities for elementary and high schools students to participate in ZGAC Parabolic Flight Programs, joining artist flight teams on virtual field trips aboard the jet so they can directly participate in space art projects. Students will experience ZGAC's parabolic flights through live, interactive Webcasts that virtually take them aboard a ZGAC parabolic flight. ZGAC Parabolic Flight Webcasts will be available in classrooms worldwide through this Distant Learning program. Educators will be provided with support materials to include in-class, hands-on exercises, and a history of space art and directions on how to participate in ZGAC Parabolic Flight Program's Virtual Field Trips.

REFERENCES AND NOTES

- [1] R. Vezino, Burgess, *The Quite Axis*, (Quebec, Canada: Editions du Trecarre, Saint-Laurent, 1987).
- [2] K. Dubois, "Dance and Weightlessness: Dancers' Training and Adaptation Problems in Microgravity," *Leonardo*, Vol. 7, No. 1, 57-64 (1994).