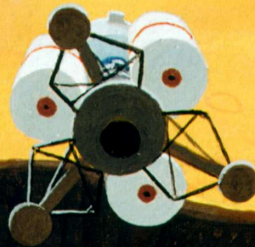


DESTINATION: MARS

AN EXHIBITION OF MARS THEMED SPACE ART BY ARTISTS OF THE
INTERNATIONAL ASSOCIATION OF ASTRONOMICAL ARTISTS



PRESENTED AT THE
FIRST INTERNATIONAL CONFERENCE
ON THE EXPLORATION OF
PHOBOS AND DEIMOS



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Robin Hart
William Hartmann, *FIAAA*
Gary Harwood, *FIAAA*
Frank Hettick
Steven Hobbs
B. E. Johnson, *FIAAA*
Julie Jones
Gavin Mundy
Walter Myers
Pat Rawlings, *FIAAA*

Curator

Bettina Forget
Director of Exhibitions
IAAA

front cover art::
William K. Hartmann
Phobos Rounding the Bend

THE CONFERENCE

NASA Ames Research Centre
Moffet Field, CA, USA
5 - 7 November, 2007

The First International Conference on the Exploration of Phobos and Deimos: The Science, Robotic Reconnaissance, and Human Exploration of the Two Moons of Mars is the first international meeting focused on Phobos and Deimos, and on how their exploration relates to that of the Moon, Mars, and the solar system beyond. The conference is an open international forum bringing together scientists, engineers, space exploration professionals, and students interested in discussing the status and advancement of the exploration of Mars' satellites, and the exploration of Mars itself and other near-Earth objects (NEOs) through them.

THE EXHIBITION

The exhibition "Destination: Mars" was curated specifically for the First International Conference on the Exploration of Phobos and Deimos. It features 26 Mars-themed artworks from 14 artists of the International Association of Astronomical Artists (IAAA).

In this exhibition the visitor is invited to explore past, present, and future vistas of Mars and its moons, imagine scenarios of living and working on the red planet, and observe Mars, Phobos and Deimos both from an orbital perspective and in extreme close-up.

Every painting has a story, and in this catalogue you'll find background information for all artworks in the "Destination: Mars" exhibit written by each IAAA artist.

We hope to inspire those who inspired us.

Bettina Forget
Director of Exhibitions, IAAA

A WORD FROM THE ORGANIZERS

As the National Aeronautics and Space Administration (NASA) and other space agencies around the world take concrete steps to return humans to the Moon and plan their future journeys to Mars and beyond, the First International Conference on the Exploration of Phobos and Deimos represents a timely opportunity to collectively pause and think about the scientific significance of the two moons of Mars and the key roles their exploration could play in the future.

To remind us of earlier ideas, expand on current thinking, and inspire new visions for the future, we are delighted to include in this conference an exhibition of original space art by members of the International Association of Astronomical Artists (IAAA) titled "Destination: Mars". Space art is a powerful engine of space exploration. We hope that this exhibition, hosted by NASA Ames Research Center and co-sponsored by the IAAA and the Mars Institute, will give its visitors a taste of the wonderful journeys ahead.

Pascal Lee

*Mars Institute, SETI Institute,
and NASA Ames Research Center*

The International Association of Astronomical Artists (IAAA) is the world's premier organization dedicated to the advancement of the genre of space art. Its diverse, global membership participates in mankind's scientific exploration of the universe, visualizing and sharing scientific discoveries via a variety of forms of artistic expression including painting, sculpture, music and dance.

Our "Destination: Mars" exhibition, is but a small snippet of a much larger body of work which is spread far and wide across the globe in exhibition halls, corrector galleries, private homes and artists studios. We hope this window of space art inspires wonder and awe which the heavens have provided since mankind first gazed into the starry canopy of night.

Kara Szathmary

Persident, IAAA



QUICK REFERENCE LIST

p3 Joe Bergeron	joe@joebergeron.com
p4 Richard Bizley	richard@bizleyart.com
p5 Sean Brady	seanbrady2@blueyonder.co.uk
p6 Michael Carroll	cosmicart@stock-space-images.com
p7 Robin Hart	rhstarbird@earthlink.net
p8 William K. Hartmann	hartmann@psi.edu
p9 Garry L. Harwood	glh@nataraja.demon.co.uk
p10 Frank Hettick	fhettick@hotmail.com
p11 Steven Hobbs	swhobbs2000@hotmail.com
p12 B. E. Johnson	bj@spaceart.org
p13 Julie Jones	JulieJones@ArtFromTheSoul.com
p14 Gavin Mundy	artist@mundyart.co.uk
p15 Walter Myers	spaceart@arcadiastreet.com
p16 Pat Rawlings	roy.p.rawlings@saic.com

Most works in the “Destination: Mars” exhibit are for sale by the artist. For more information, please contact the artist directly via the e-mail addresses provided above.

JOE BERGERON

ABOUT THE ARTIST

Joe Bergeron has been a professional space artist in one capacity or another since 1976. His works have appeared in numerous publications and in planetarium shows throughout the world. An accomplished amateur astronomer, Bergeron considers the stars some of his closest friends, though they don't write very often.

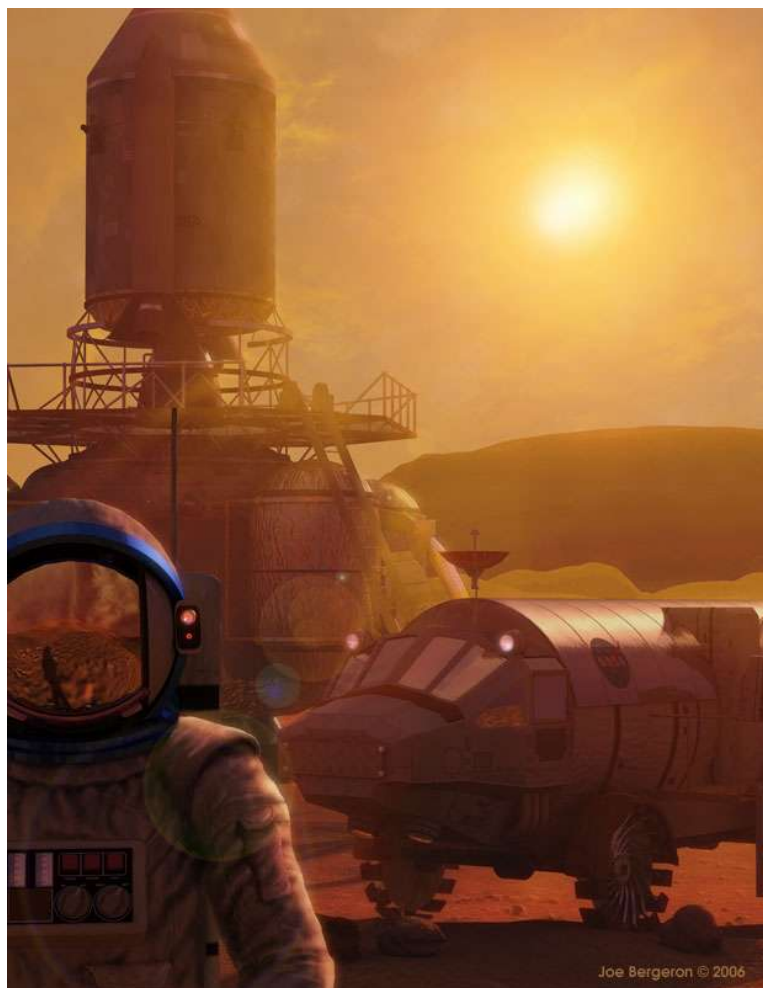
ABOUT THE ARTWORK

This digital work depicts future Mars vehicles which are extrapolations of NASA's new lunar spacecraft which are under development. Given the Martian atmosphere, the artist supposes an aerodynamic ascent stage might be desirable. A larger spacecraft for the return to Earth presumably waits in Martian orbit.

ARTIST CONTACT

joe@joebergeron.com

www.joebergeron.com



A Fantasy of Mars
digital print
2006

RICHARD BIZLEY

Mars and Phobos
acrylic on canvas
2007



ABOUT THE ARTIST

I was born profoundly deaf in 1959 and have had a life-long interest in art and the natural sciences as well as many other subjects, but astronomical art is special to me. I am a Fellow of the IAAA (International Association of Astronomical Artists) and my paintings have been published in various magazines and books and have been exhibited around Great Britain; this is my first painting to be exhibited in the States. I work full time in my own gallery which is open to the public. My pictures are traditionally painted using acrylics.

ABOUT THE ARTWORK

It was rather a coincidence as I did this painting about a month before hearing about a request for Phobos/Mars images for this exhibition, and this is my first painting of Phobos. I decided to show both Mars and Phobos in gibbous phases for added interest and to show light against dark. Also showing them with different colours and shapes in front of each other created an interesting balance.

This painting is available for sale. Please email me if you wish to purchase.

ARTIST CONTACT

www.bizleyart.com
richard@bizleyart.com

SEAN BRADY

ABOUT THE ARTIST

I'm a recently retired A/V technician who lives in Scotland with my wife and way too many cats. I've painted stars and planets for most of my life. I migrated a few years ago from the more traditional oils and acrylics to a variety of digital programs and now do most of my work in that medium. For inspiration I look to the fantastic photographs taken by H.S.T. and the other great telescopes we take so much for granted these days. But most of all I'm inspired by going out of my back door on a crisp winter's night, looking up and out, and just letting my mind wander.

ABOUT THE ARTWORK

I also enjoy transposing local landscapes offplanet. The landscapes in both the Mars paintings are based on local scenery.

"Olympos Station" shows a group of astronauts setting up an automatic weather station on the lower slopes of Mons Olympus. Rather than the usual heavy tracked vehicle I considered that a series of two wheeled "boxcars" with a semirigid but flexible membrane between them might be more suitable for the terrain, each wheel having it's own driving mechanism, each "box" capable of being isolated from the others.

"North Wall" depicts an astronaut taking ground readings on the floor of Valles Marineris. I thought I'd try my hand at doing a more fanciful, science fictiony, environmental suit. There is, however, no local scenery in "Rope Walk". Because of the low gravity on Phobos, I imagine it might be quite difficult to take a step never mind walk about on that moon, so in this painting I assume that among all their other accomplishments astronauts will also have to learn the use of pitons and carabiners.

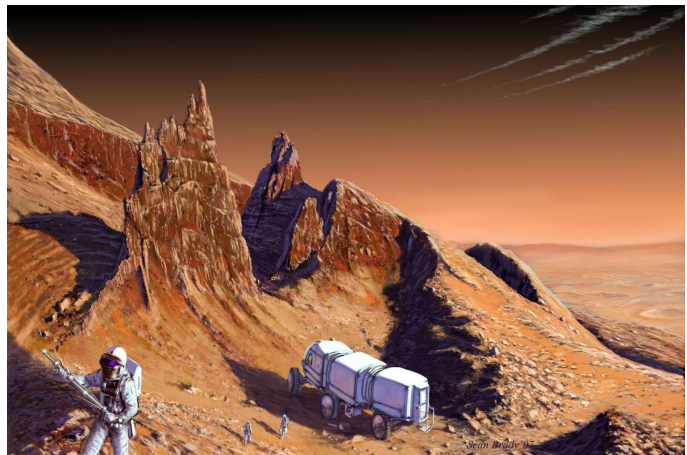
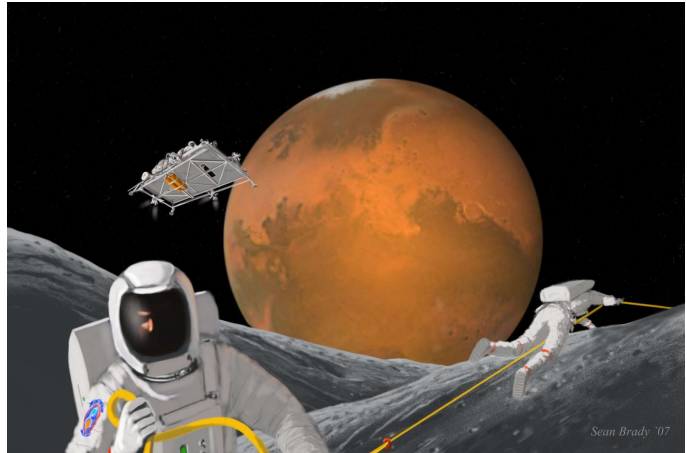
ARTIST CONTACT

seanbrady2@blueyonder.co.uk

Rope Walk, digital print, 2007

Olympos Station, digital print, 2007

North Wall, digital print, 2007



MICHAEL CARROLL



ABOUT THE ARTIST

Michael Carroll has been doing astronomical art for 25 years. His work has appeared in a host of books and magazines including National Geographic, TIME, OMNI, Astronomy and Sky & Telescope. He has done commissioned paintings and murals for NASA, JPL, Lockheed/Martin and many science museums. He lives in Littleton, Colorado,

ABOUT THE ARTWORK

Argyre Sea

Some research suggests that the Argyre impact basin was once ringed with glaciers feeding into a shallow sea. This painting depicts such a Martian past, with a more dense atmosphere scattering light across a much-bluer sky. Phobos and Deimos are both visible above.

Mars Volcano

Most volcanoes on Mars are either shields or small cones. Still others are eroded, steep-sided strato-volcanoes. Here, a volcanic eruption triggers outgassing as lava comes into contact with subsurface ices.

Polar Impact

An asteroid impacts the Martian northern polar cap. In the foreground we see layered terrain, based on similar morphology of Icelandic glaciers. Some terraforming scenarios suggest directing carbonaceous chondritic asteroids into the poles to darken the surface. The sunlight would then heat the darkened ice, releasing CO₂ and water vapor.



Argyre, digital print, 2006

Mars, digital print, 2006

Polar Impact, digital print, 2006

ARTIST CONTACT

cosmicart@stock-space-images.com

<http://stock-space-images.com>

ROBIN HART

ABOUT THE ARTIST

Art has always been at the center of Robin Hart's life. Along with it, almost entwined like a double helix, is her love of space and the cosmos. Born into that generation of boomers that grew up with the space age, from the launch of the first satellites, through the manned space program and beyond to the outer reaches of the solar system; she has followed these events with great enthusiasm. During her college years, Robin was encouraged by one of her professors to incorporate something she was passionate about into her art. Her love of space was that passion. When she began to integrate that subject matter into her work, there was an explosion of creativity that has continued over the years. Robin counts herself among the interpretive space artists. She often realistically renders a space environment, but adds something terrestrial to it or has something terrestrial that seems to be morphing into space. She uses these themes to illustrate her passion, emotion and wonderment of the extraterrestrial environments she envisions. Sometimes she likes to add a touch of humor as well. Robin Hart has had 2 one woman art shows at the Griffith Observatory, been in many space art exhibits, exhibited her work internationally and has been a member of the IAAA for many years.

ABOUT THE ARTWORK

This surreal painting ponders the age old question about the chances of life on Mars. The flower and the helix shaped floating rock suggest the potential for life yet to be discovered on the red planet.

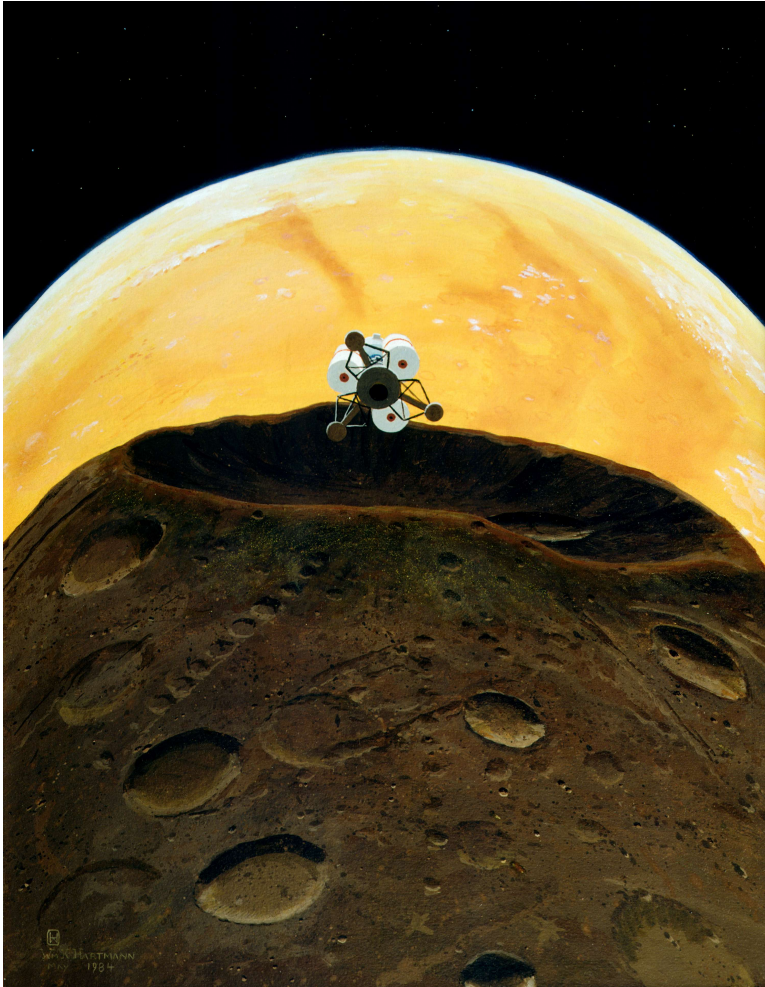
ARTIST CONTACT

rhstarbird@earthlink.net



Is There Really Life on Mars
digital painting
2000

WILLIAM K. HARTMANN



Phobos Rounding the Bend
acrylic on canvas
1984

ARTIST CONTACT
hartmann@psi.edu
www.psi.edu/hartmann/index.html

ABOUT THE ARTIST

William K. Hartmann is recognized internationally as a painter, scientist, and writer. He is especially known for paintings of astronomical subjects based on recent discoveries. These paintings have been published in magazines including *Natural History*, *Smithsonian*, *Science* and *the Economist* and other magazines in Japan, Russia, France, Germany, England, and Italy. In 1997, Hartmann was named first winner of the Carl Sagan Medal of the American Astronomical Society, in recognition of his communication of science to the public, in part through his artwork. Asteroid 3341 is named after him in recognition of his planetary research, and he was given the Lucien Rudaux Lifetime Achievement Award of the International Association of Astronomical Artists. A 2007 profile in the leading U.S. scientific journal, "Science," was titled "Renaissance Man of the Solar System."

Hartmann holds a Ph.D. in Astronomy and M.S. in Geology, both from the University of Arizona, and a B.S. in Physics from Pennsylvania State University. Although his paternal grandfather was a painter, he is primarily self-taught and has been painting since the early 1970s.

ABOUT THE ARTWORK

This painting was done for the 1984 book "Out of the Cradle" by William Hartmann, Ron Miller, and Pamela Lee. The book described goals of human space exploration in the 21st century, in a context of discovery and possible energy and material shortages on Earth. The painting shows a future spacecraft moving past Phobos toward Mars. The painting depicts large craters and crater chains on Phobos, and the striking difference in color between Phobos and Mars.

GARRY L. HARWOOD



ARTIST CONTACT

glh@nataraja.demon.co.uk

The Long Fall

oil on canvas board, 24" x 20"

2007

ABOUT THE ARTIST

Garry L. Harwood was born in 1959 in London, England and studied for a career as a marine biologist and physical oceanographer. After two decades in the jewellery industry he decided to return to his roots and make painting his chosen profession. His interest in the natural and physical sciences occasionally influences his artwork and in this guise his astronomical paintings are an attempt to visualize and communicate scientific data to the public. His work has been widely exhibited and is in private collections world wide. When not getting lost in some remote corner of the globe, he divides his time between London and the far west of Cornwall where he can often be found painting on the cliff tops a short distance from his studio. He is a lifetime member and Fellow of the International Association of Astronomical Artists.

ABOUT THE ARTWORK

Despite much number crunching and head scratching the origin of Mars' two moons Phobos and Deimos presents an outstanding problem for planetary scientists. One attractive possibility is that both moons are asteroids which became gravitationally bound to Mars sometime in the early history of the solar system.

In this painting, Phobos and proto-Mars are backlit against sunlight scattered by dust grains in the inner solar system. Mars casts a shadow through an extended envelope of material left over from its formation and sports an atmosphere temporarily choked with impact generated dust. Disturbed from its original location in the main asteroid belt Phobos makes another close encounter with Mars but this time will not escape from that planets gravitational embrace. As a new satellite of Mars subsequent passages will modify Phobos' position until it occupies the decaying orbit we see today. On Phobos the large impact crater Stickney is deep in shadow while the night-side is briefly illuminated as a small piece of high-speed debris from the outer solar system slams into the surface to make yet another crater.

FRANK HETTICK



View of Home II, mixed media canvas print, 2006

ABOUT THE ARTIST

The entire universe is the subject for Frank Hettick's photo-realistic depictions of distant planets, moons and alien landscapes. The artist's home-base and studio are now located in the high desert of Central Oregon although he travels extensively to exotic locations studying the geology and gaining inspiration for his unusual art pieces. His attention to lighting and use of detail in his works cause many viewers to believe his "other-worldly" paintings are fine photographs! However - the subjects Frank renders have never been seen or photographed by any human before. His goals include encouraging today's youth towards the same enthusiasm for space and other worlds as he had in those early days before the Apollo missions - when he was growing up. Hettick is a member of the International Association of Astronomical Artists; The National Space Society; The Mars Society; The Planetary Society; sits on the Space Art Committee of Federation of Galaxy Explorers; and a Honorary Member conferred by Star- Ships of the Third Fleet writer's group.

ABOUT THE ARTWORK

'View Of Home' won First Place in The Mars Society' international competition in August 2004. Hettick explains "the piece was something I just had to paint - it pictures very simply the huge vastness of space, the loneliness of exploration, the potential danger of being in a strange, unknown land and utterly alone in both time and distance from other human assistance – and that single astronaut just has to be concerned about every decision he will be called upon to make." 'View Of Home' was also selected to be the backdrop piece for the on-stage guest speaker at the 25th Anniversary Celebration of The Planetary Society. Ray Bradbury was the speaker and we exchanged letters regarding how the piece had just seemed so appropriate and fitting for the occasion.

ARTIST CONTACT

fhettick@hotmail.com
www.skyhighgallery.com

STEVEN HOBBS

ABOUT THE ARTIST

Although an Air Force Photographer by trade I have been interested in space most of my life and have produced artworks on a professional basis for the last 5 years. Based in Australia my work has been used by NASA, Canadian television documentaries, Weldon Owen Publishing Ltd and a variety of other publications including The 'New' Sky and Space Magazine, Design Graphics Magazine and Teen Weekly. I aim to promote the awareness of Space exploration in my own country and also world wide.

ABOUT THE ARTWORK

Opportunity Mars Rover

A blue Martian dawn reveals the Opportunity Mars rover about to start work with its Rock Abrasion Tool. Designed to last for just three months, Opportunity is still going strong after three years on the hostile Martian Surface.

MRO in Orbit

Mars Reconnaissance Orbiter sports the most sophisticated camera ever to be used on the Red Planet. Here it passes over Mars' enormous Valles Marineris canyon, discovered and named after Mars's first successful orbital mission, Mariner 9.

Mariner 6 and 7 Images

Originally released as black and white these colour restored Mariner 6 and 7 images provided some of the first close up looks of the Martian surface. By sheer bad luck both probes completely missed Mars' enormous valleys, volcanoes and outflow channels. Scientists falsely believed that Mars always had been a dead, cratered world similar to our moon.

ARTIST CONTACT

swhobbs2000@hotmail.com

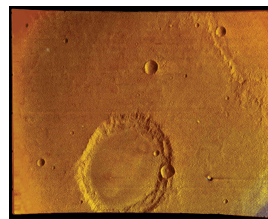
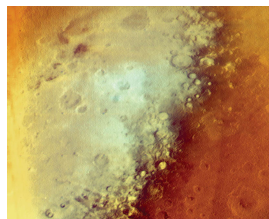
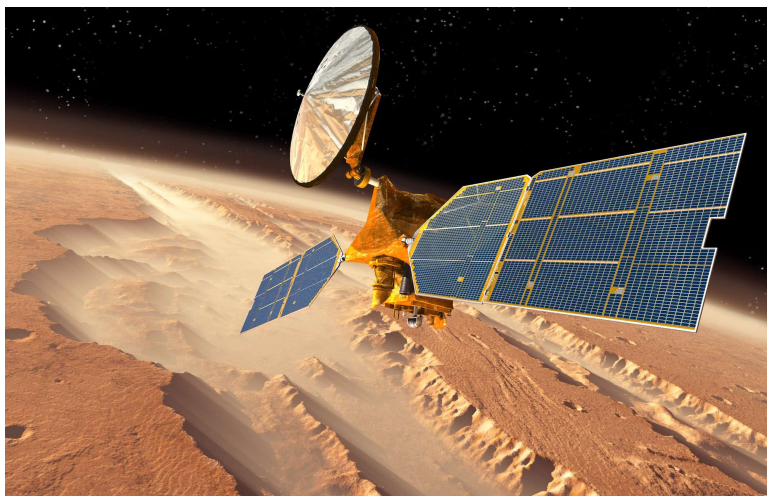
Mars Rover, digital print, 2007

Mars Rover in Orbit, digital print, 2007

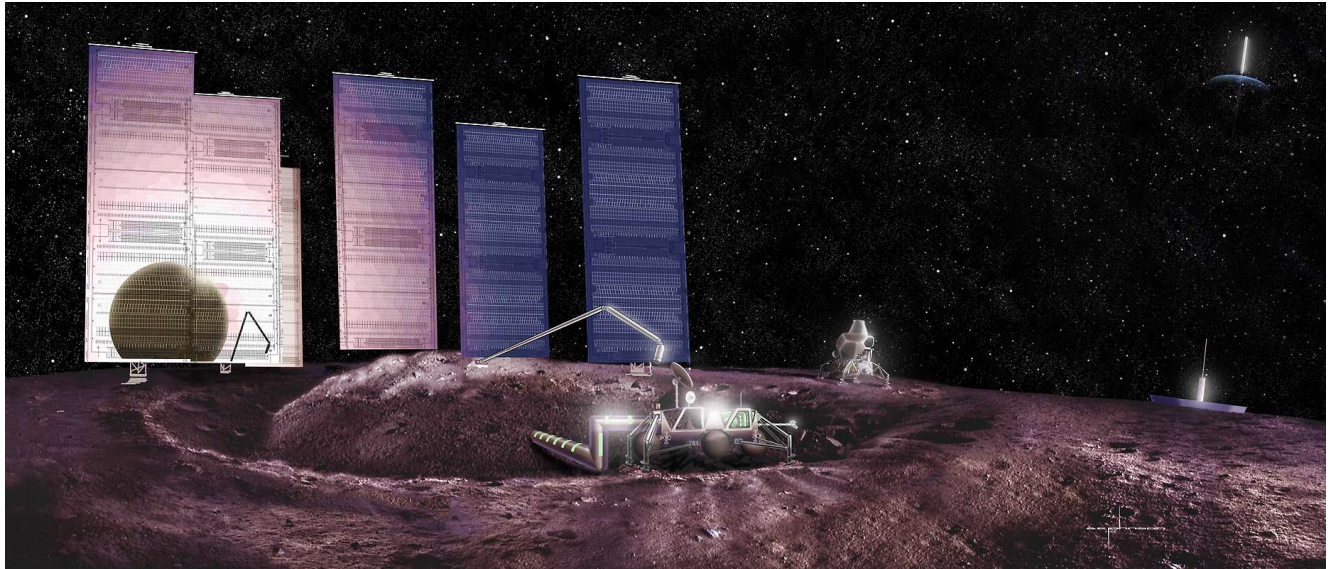
Marsiner 7, Pole, digital print, 2007

Marsiner 6, Crater Colse-up, digital print, 2007

Marsiner 7, Limb, digital print, 2007



B. E. JOHNSON



The Deimos Moon Base
digital print
2007

ABOUT THE ARTIST

I've been interested in astronomy and space since I was a kid and marveled at the art I saw in books and magazines about space, space flight and space exploration. I read everything I could get my hands on. Perhaps one day I could go.

Now I do. Little did I know that later I would become a space artist myself and inspire new generations to explore space and, in so doing, I visualize myself in the place that I am painting in order to convey the sense of what it's like to live and work in space.

ARTIST CONTACT

bj@spaceart.org
<http://spaceart.org>

ABOUT THE ARTWORK

This artwork was created for Scientific American Magazine for an article entitled: *To Mars by Way of its Moons* by S. Fred Singer.

This three view image, combined with the polar photography below, gives us a good handle on where we are going. The chosen crater indicated in this image is nearly 1/8 mile in diameter, making it a good target for landing. It sits just forward of the nearly horizontal polar table with respect to the equator and is tipped slightly toward Mars for a good view while providing lateral and aft shielding with its walls. The rotating solar array can be anchored on the smooth plain just behind and above the habitat/lab crater (to the left in the North and 90° views) at highest latitude, less than 1/10 mile away, though I am exploring methods of locating it right on top of the lab.

JULIE JONES

ABOUT THE ARTIST

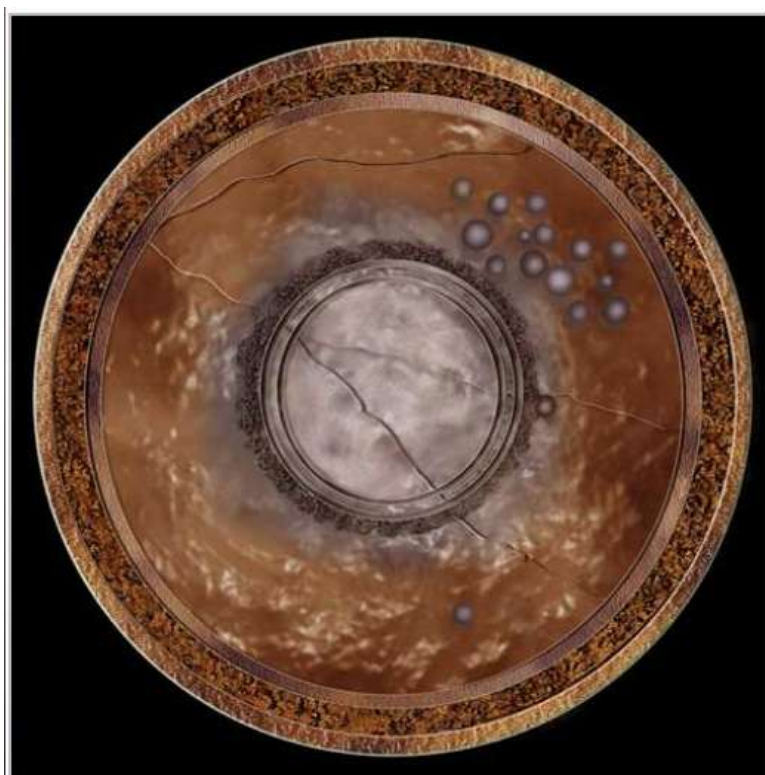
After a 33 year career at the Lawrence Berkeley National Lab writing research and development contracts, Julie Rodriguez Jones left corporate America to pursue her art full time in 2003. Her interests in space and space art began at an early age but she did not seriously pursue her art until late in her career. After college and while at LBNL she studied art with Arngunner Yr, Lien Truong and Gwyneth Welch. Julie's art incorporates that initial training but now she primarily uses a digital airbrush. Julie's art includes a wide variety of award winning pieces from her space art and flowers to her liturgical art. She has been published both nationally and internationally including book covers, corporate art, magazines and more.

ABOUT THE ARTWORK

When the Mars Exploration rovers, Spirit and Opportunity, began transmitting images of the rock surfaces after having been ground by the rock abrasion tool, Julie found them to be quite unusual and equally beautiful. This is an abstract/representational piece of the many images sent to Earth. Joel Hagen, Fellow IAAA, says about this piece, "For my money, it ranks high in the top 10 paintings ever produced by IAAA artists. Really a remarkably fine work." This is a limited edition of only 99 pieces.

ARTIST CONTACT

JulieJones@ArtFromTheSoul.com
www.ArtFromTheSoul.com



Abraded Surface
archival giclee
limited edition of 99

GAVIN MUNDY



ABOUT THE ARTIST

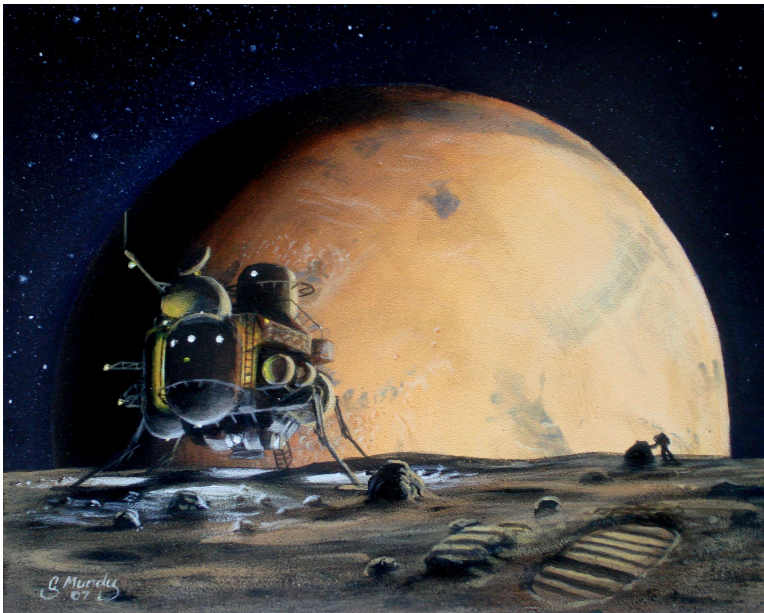
Gavin's lifelong interests in art and space converge on regular occasions. He views space as the extension of nature beyond Earth but enjoys depicting natural wonders down here too. Human endeavour is also a source of inspiration.

Light, texture and form he finds intriguing and recreating this in paint brings with it a closer understanding of the subject.

ABOUT THE ARTWORK

MER

A depiction of a Mars Exploration Rover cresting a hill. Looking towards a Martian sunset. Its solar panels will shortly be deprived of the starlight that also powers an inquisitive neighbouring planet. A foreground rock bears the scar of its grinding tool.



Phobos Landing

After some robotic explorations to lay the groundwork humans arrive to fine-tune studies and construction. Here a large spacecraft, a mixture of space station and Lander rests idly on the surface of Phobos while a geologist studies some interesting detail in a boulder. Behind them Mars dominates the heavens.

ARTIST CONTACT

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www.mundyart.co.uk

MER, oil on board, 2005

Mars Explorers, acrylic on board, 2007

WALTER MYERS

ABOUT THE ARTIST

I was born in Indiana in the USA just a few months after Sputnik I made world history. I now live near Chicago and am a freelance computer graphics artist, in addition to whatever other gigs I can drum up. I've been a space enthusiast and interested in astronomy for as long as I can remember. Professionally, I've worked as a graphic artist, photographer, computer programmer, web designer, instructional designer, and projected media designer. My space art strives toward photorealism, hopefully with the resultant image being more interesting and informative than anything a still camera can produce. My work has been described as "sober," and that I take as a complement.

ABOUT THE ARTWORK

In these computer graphic images I indulge in two of my interests: the worlds beyond Earth as the ultimate expression of nature's wilderness, and the many and varied details of manned space exploration and technology. I've rendered each of Mars' exotic moons with an attention to their orientation to, and distance from, the martian surface. I've also attempted to contrast the stark barren surfaces of Phobos and Deimos with Mars' dynamic environment.

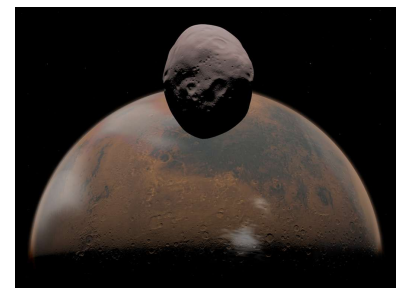
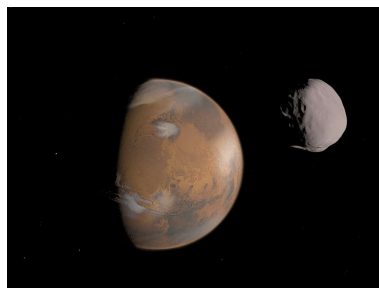
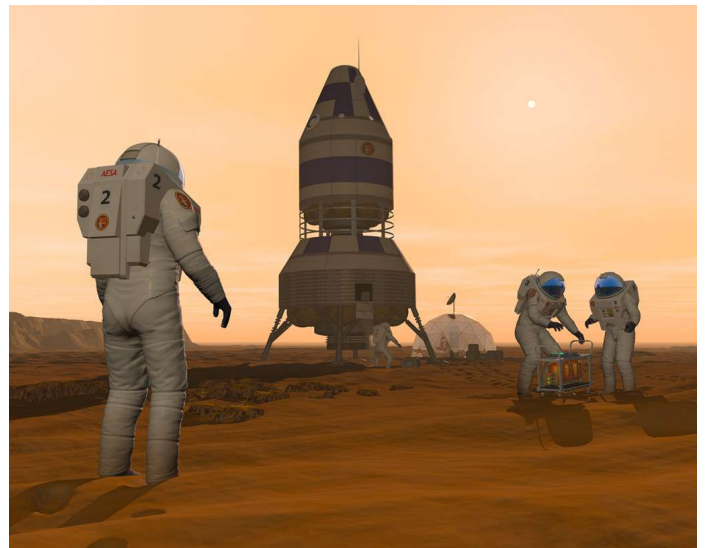
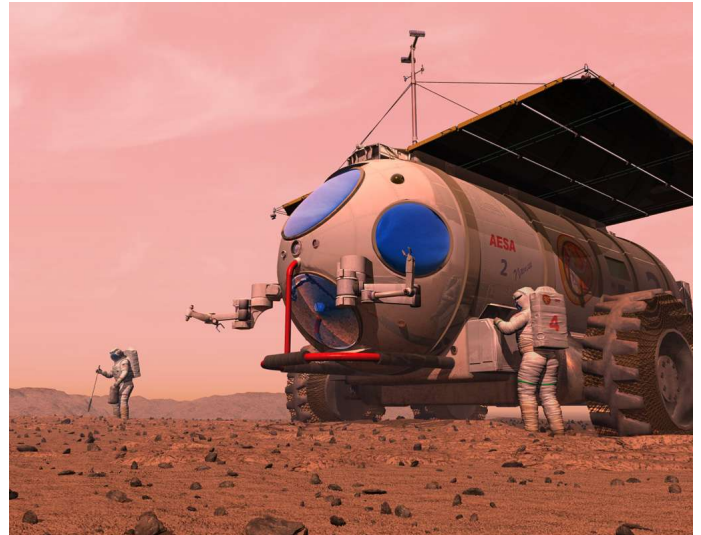
The manned exploration images suggest how missions to Mars may be realized within the next 30 to 60 years. Obviously, these missions will be all about the logistics and details of getting there, living and working effectively in a very hostile environment, and getting home. The technologies represented are drawn primarily from my imagination, based upon a (amateur) sense of what will be required to achieve the dual goals of exploring exotic worlds while meeting the moment-by-moment needs of the human explorers.

ARTIST CONTACT

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Martian Motor Home
digital print
2007
Martian Pioneers
digital print
2007

Mars and Deimos
digital print
2006
Mars and Phobos
digital print
2006



PAT RAWLINGS



The Island
acrylic on board
2006

ABOUT THE ARTIST

For over two decades, internationally recognized space illustrator and designer, Pat Rawlings has visually documented the future of space exploration. His highly realistic views of both human and robotic exploration provide a chronology of the plans, hopes and desires of the planet's best space visionaries.

Rawlings' paintings, digital images and designs have been reproduced in and on hundreds of magazines, books, television programs and films in both in the U.S. and abroad. His artwork for all of the NASA Centers reflects more than 2 decades of space exploration plans, ranging from robotic planetary missions to the human exploration of Mars and beyond.

To ensure scientific and technical accuracy in his compositions, Mr. Rawlings consults with astronauts and experts in spacecraft design, mission design, mission operations, planetary geology, meteorology, and other related fields. The resulting photorealistic images give the viewer a sense of "being there."

ABOUT THE ARTWORK

Two astronauts explore the rugged surface near the North Pole of Phobos with Mars looming on the horizon. The mother ship, powered by solar energy, orbits Mars while astronauts inside remotely operate rovers on the Martian surface. The explorers have landed on Phobos in a small excursion vehicle that fires a line into the soil to anchor the unit. The astronaut on the right is examining a one thousand pound boulder (Earth pounds) which weighs a mere pound in the low gravity of Phobos.

NASA Office of Exploration Artwork by Pat
Rawlings/SAIC
Collection of the Artist

ARTIST CONTACT

www.patrawlings.com



FOR MORE INFORMATION
ABOUT THE IAAA

Please visit our website at

www.iaaa.org

back cover art::
Michael Carroll
Argyre



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