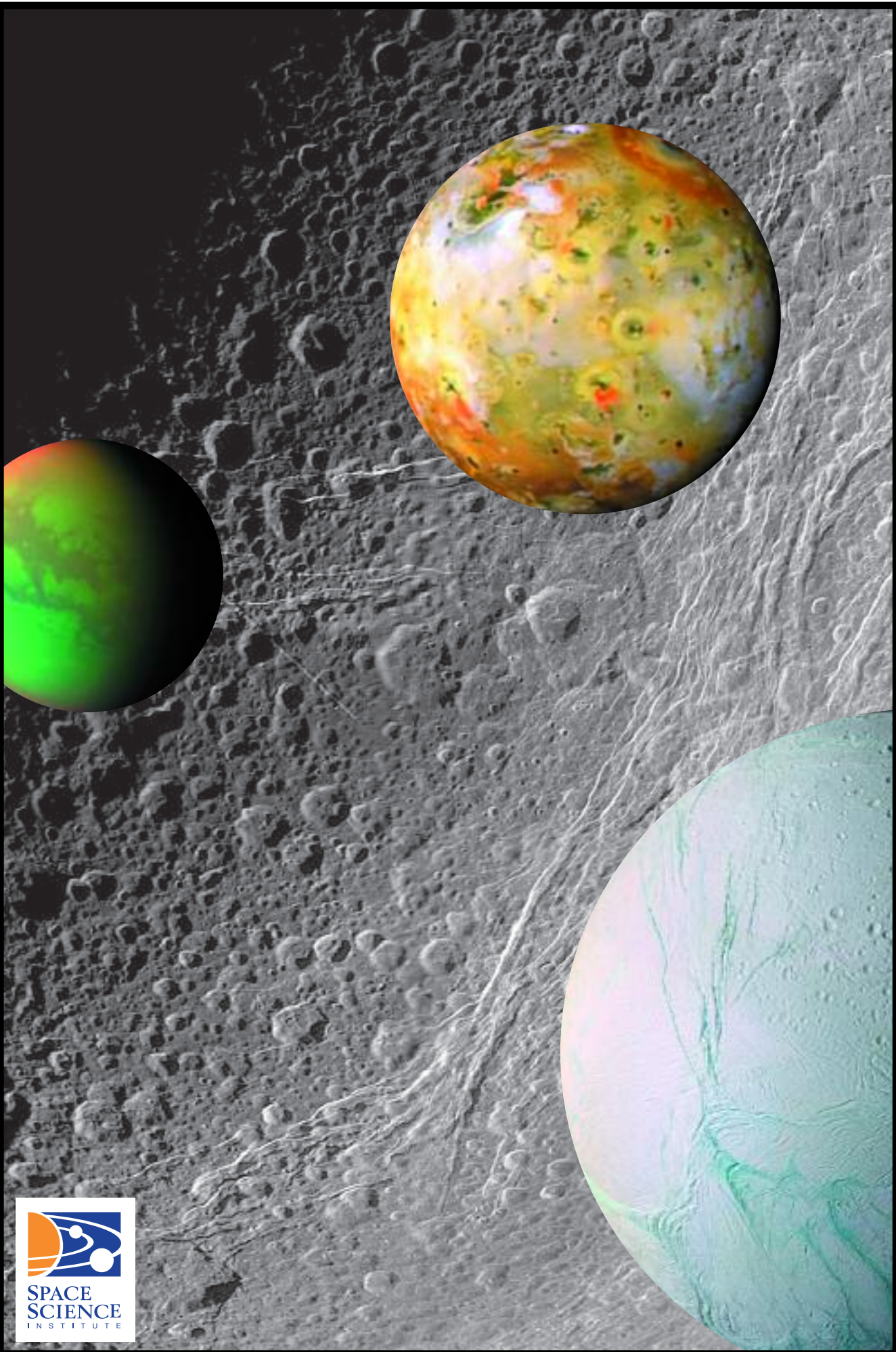


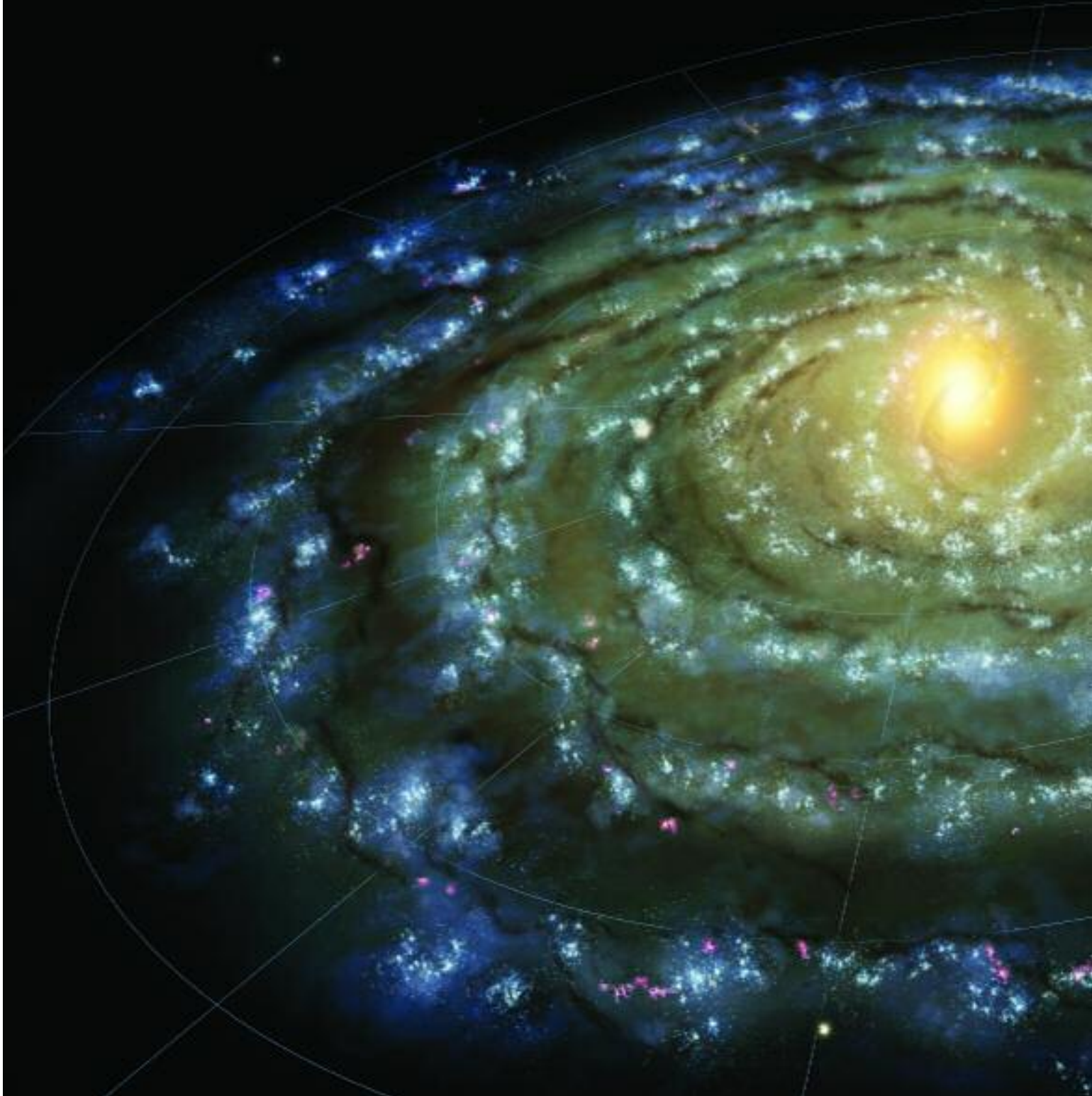
ANNUAL REPORT 2005

Space Science Institute · 4750 Walnut Street · Suite 205 · Boulder, Colorado 80301 · 720.974.5888 · www.space-science.org



Vision Statement

The Space Science Institute is a thriving center of talented, entrepreneurial scientists, educators, and other professionals who make outstanding contributions to humankind's understanding and appreciation of planet Earth, the Solar System, the galaxy, and beyond.





From Our Director

Excite. Explore. Discover. These words aptly describe what we do in the research realm as well as in education. In fact, they define the essence of our mission. Our mission is facilitated by a unique blend of on- and off-site researchers coupled with an extensive portfolio of education and public outreach (EPO) projects. This past year has seen SSI grow from \$4.1M to over \$4.3M in grants, an increase of nearly 6%. We now have over fifty full and part-time staff. SSI's support comes mostly from NASA and the National Science Foundation.

Our Board of Directors now numbers eight. Their guidance and vision—along with that of senior management—have created an environment that continues to draw world-class scientists to the Institute and allows us to develop education and outreach programs that benefit millions of people worldwide.

SSI has a robust scientific research program that includes robotic missions such as the Mars Exploration Rovers, flight missions such as Cassini and the Spitzer Space Telescope, Hubble Space Telescope (HST), and ground-based programs. Dr. Tom McCord joined the Institute in 2005 as a Senior Research Scientist. He directs the Bear Fight Center, a 3,000 square-foot research and meeting facility in Washington state. SSI researchers also serve on a number of scientific committees helping to plan future missions.

SSI's Mission Operations branch is home to Cassini's imaging laboratory. Cassini is a flagship mission to Saturn, supported by both the American and European planetary exploration programs. The Cassini spacecraft operated successfully throughout the past year, including the Huygens Probe landing on the surface of Saturn's moon Titan.

In 2005, SSI's Education branch conducted numerous workshops for both scientists and educators. The 5,000 square-foot MarsQuest and the 600 square-foot Destination Mars exhibitions are on national tours. The 3,000 square-foot Alien Earths exhibition began its national tour in 2005. We are currently developing the Giant Worlds traveling exhibit, which will begin its tour in 2008.

Having our headquarters located in Boulder, Colorado, allows us to maintain strong collaborations with the University of Colorado, NOAA's Space Environment Center, and the National Center for Atmospheric Research. However, our impact goes far beyond Colorado. Our nexus of off-site researchers stretches across the United States. We seek and encourage strong ties to corporations, foundations, and institutions in Colorado and elsewhere that share our mission and values.

The upcoming year is one of great promise: new missions will begin, new researchers will be recruited, and new EPO programs will be launched that engage the public and excite their imaginations about the wonder and beauty of the universe. Come join our voyage of discovery.

Paul B. Dusenbery, Ph.D.
Executive Director



About SSI

The Space Science Institute (SSI) is a non-profit, public benefit corporation established in 1992 to carry out world-class research in space and earth science together with innovative science education programs that inspire and deepen the public's understanding of planet Earth and our place in the Universe. SSI's integrated research and education programs span planetary science, space physics, astrophysics, astrobiology, and earth science. SSI programs engage scientists effectively in education, enhance science literacy, and contribute to a capable and diverse technical workforce. We also provide unique opportunities for exceptional scientists and educators to carry out their work at off-site locations defined by personal choices about where to live.

We collaborate with universities and corporations, as well as with governments. By doing this not only locally, but also regionally, nationally, and internationally, SSI enhances the global vision and impact of science and technology. Our strategic partnerships and alliances enable us to implement a variety of high-quality projects and make us especially well poised to bring exciting scientific discoveries to the public through our education programs. Events, such as planetary missions, are catalysts for learning the content and process of science, consistent with national and state education standards. In addition, our programs help cultivate a greater appreciation and understanding of science in the general public.

www.space-science.org





*top: Boulder, CO
btm right: SSI Headquarters, Boulder, CO*

Research

SSI's Research Branch scientists are participants in a broad array of space science activities. Our research program (both on-site and off-site) includes earth science, planetary science, and astrophysics. Many SSI research staff continue to focus on Mars research, with participation in the Mars Reconnaissance Orbiter mission, which is scheduled to arrive in March 2006, and Mars Express, which is currently in Mars orbit. Their work with the Mars Exploration Rover mission is ongoing, as Spirit and Opportunity continue their explorations today. In addition to current missions, our researchers are actively engaged in developing future Mars exploration missions.

SSI maintains a strong focus on the rest of the universe, too, using ground- and space-based telescopes. Our research team's expertise continues to expand, and now includes investigations of phenomena in the galaxy and beyond: quasars (the most distant objects known), the early stages of the life cycles of stars, and nascent planetary systems around other stars. SSI researchers are intimately connected to the operations of current space facilities such as the Spitzer and Hubble Space Telescopes, and are deeply engaged in future space science projects including the James Webb Space Telescope, the Terrestrial Planet Finder Mission, and many missions within the Solar System. SSI is also home to the central laboratory for imaging science for the Cassini mission to Saturn – the current flagship planetary mission for both the American and European planetary exploration programs.

SSI's twelve off-site and five on-site researchers form a network of entrepreneurial scientists who are each supported by individual grants. Our structure allows dynamic, collaborative efforts among fields of research that are typically separated in academic institutions. This year, SSI researchers have begun a dialogue to identify our institution's unique strengths and common scientific threads, and how we might use them in new and creative opportunities. We look forward to exploring these concepts to increase the health and vitality of our Research Branch.

SSI Northwest Opens for Business

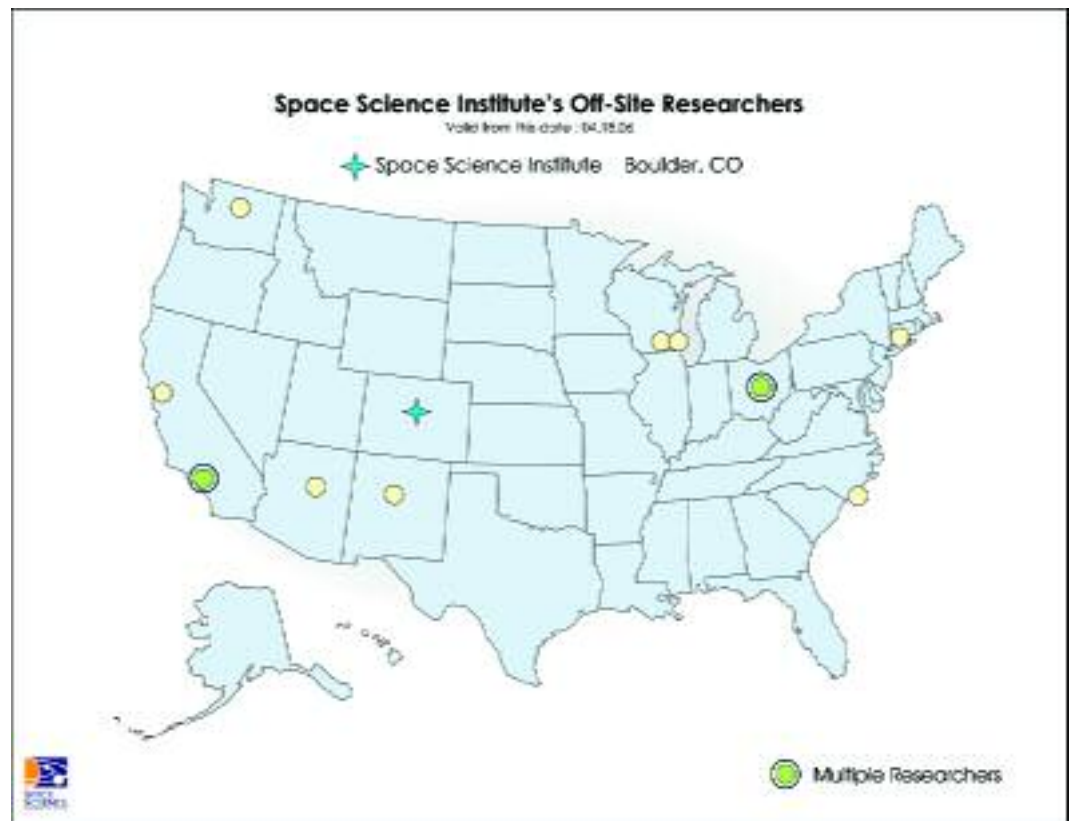
Thomas B. McCord and his research group joined SSI in 2005; they are based in the state of Washington. Tom has many years experience in conducting spacecraft exploration of the Solar System. Although he has studied all types of solar system bodies with solid surfaces, his emphases over the past decade have been on the study of Mars, the icy galilean satellites of Jupiter, and the satellites of Saturn. He is currently analyzing Rosetta VIRTIS data from the recent Earth-Moon encounter. Tom and his collaborators are also involved in planning and developing the Dawn mission to Ceres and Vesta, and the Chandra-1 MMM investigation of the lunar surface. He is currently leading efforts to study the composition of Titan's surface, the thermal-chemical evolution of Ceres, the color-compositional properties of the Mars surface using the Mars Express HRS Camera, and the behavior and optical properties of hydrated salt minerals and acids on Europa.

GLIMPSE project, Spitzer Space Telescope (NASA)

The Off-Site Research Option

SSI has been a pioneer in remote employment, a mode that is both family- and environmentally-friendly. The long-distance nature of most scientific collaborative research is conducive to remote employment, since interactions can be readily accomplished via the internet and phone, and supplemented by occasional travel. Access to fast computers no longer requires large institutional support, and most journals are fully accessible over the internet, mitigating the need for institutional libraries. Instrument development, which does require large institutional support, can be done in collaboration with existing facilities such as those at Lockheed Martin and Ball Aerospace. The map below shows where SSI's off-site researchers are located in the United States.

SSI's off-site option is one of our fastest-growing areas. SSI management is aware of the potential challenges of expanding too rapidly. During the past year we have devoted time and energy into codifying basic principles that will enable our institution and our researchers to grow and thrive.

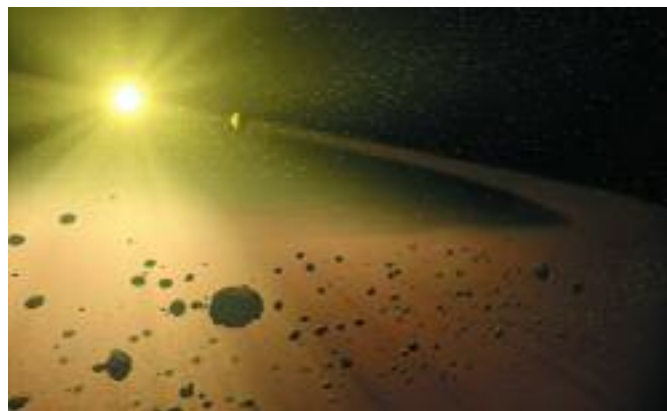


2005 Research Highlights

Spitzer Team Says Debris Disk Could Be Forming Infant Terrestrial Planets

A team of astronomers led by Dean C. Hines of the Space Science Institute (New Mexico Office) has found a debris disk around a sun-like star that may be forming or has formed terrestrial planets. The disk was discovered while using NASA's Spitzer Space Telescope to look for thermal (heat) emission from dust produced during the formation of planetary systems around nearby sun-like stars. "This is one of a very rare class of objects that may give us a glimpse into what our solar system may have looked like during the formation of our terrestrial planets," said Hines. "We see evidence that this star might have an asteroid belt, roughly at the distance Jupiter is from our sun."

(Belt of Dust (Artist's Concept) NASA/JPL)



Newly discovered rings around Uranus reveal colors similar to those of Saturn

The outermost ring of Uranus, discovered just last year, is bright blue, making it only the second known blue ring in the solar system, according to a recent report in the journal *Science* co-authored by SSI Senior Research Scientist Heidi B. Hammel (Connecticut Office). Perhaps not coincidentally, the blue rings of both Uranus and Saturn are associated with small moons. Many scientists ascribed Saturn's blue E ring to the small dust, gas and ice particles spewed into Enceladus' orbit by newly discovered plumes on that moon's surface. However, this is unlikely to be the case with the tiny Uranian moon Mab embedded in the blue ring of Uranus (Mab is one-twentieth the diameter of Enceladus). Instead, both rings may owe their blue color to subtle forces acting on dust in the rings that allow smaller particles to survive while larger ones are recaptured by the moon. The team plans further observations of the Uranus system to discover more about the rings as well as about the planet's atmosphere.

(Schematic illustration of Saturn and Uranus ring systems created by M. Showalter and H. Hammel.)





Theoretical Studies of Ceres examine water's role in asteroid formation/evolution

SSI Researcher Tom McCord (Washington Office) and his colleagues have developed thermal evolution models of the asteroid Ceres that are yielding insights into the nature of “proto-planets” and making predictions for the Dawn mission. The team modeled several thermal evolution scenarios for Ceres that are consistent with the recently measured difference between the asteroid’s equatorial and polar radii. They found that Ceres’ existence and evolution depends critically on it containing water during its formation, which in turn depends strongly on a number of factors, including when the body formed, and how much aluminium was present in the pre-Ceres >1-km-sized objects. Slightly more aluminium or earlier formation produces a dry Vesta-like object. Melting and freezing, plus mineralization, would lead to several variations in the size and shape of Ceres over time, creating topographic features, zones of weakness, and perhaps disruptions in the crust. The DAWN mission to Ceres will directly map the surface of the asteroid.

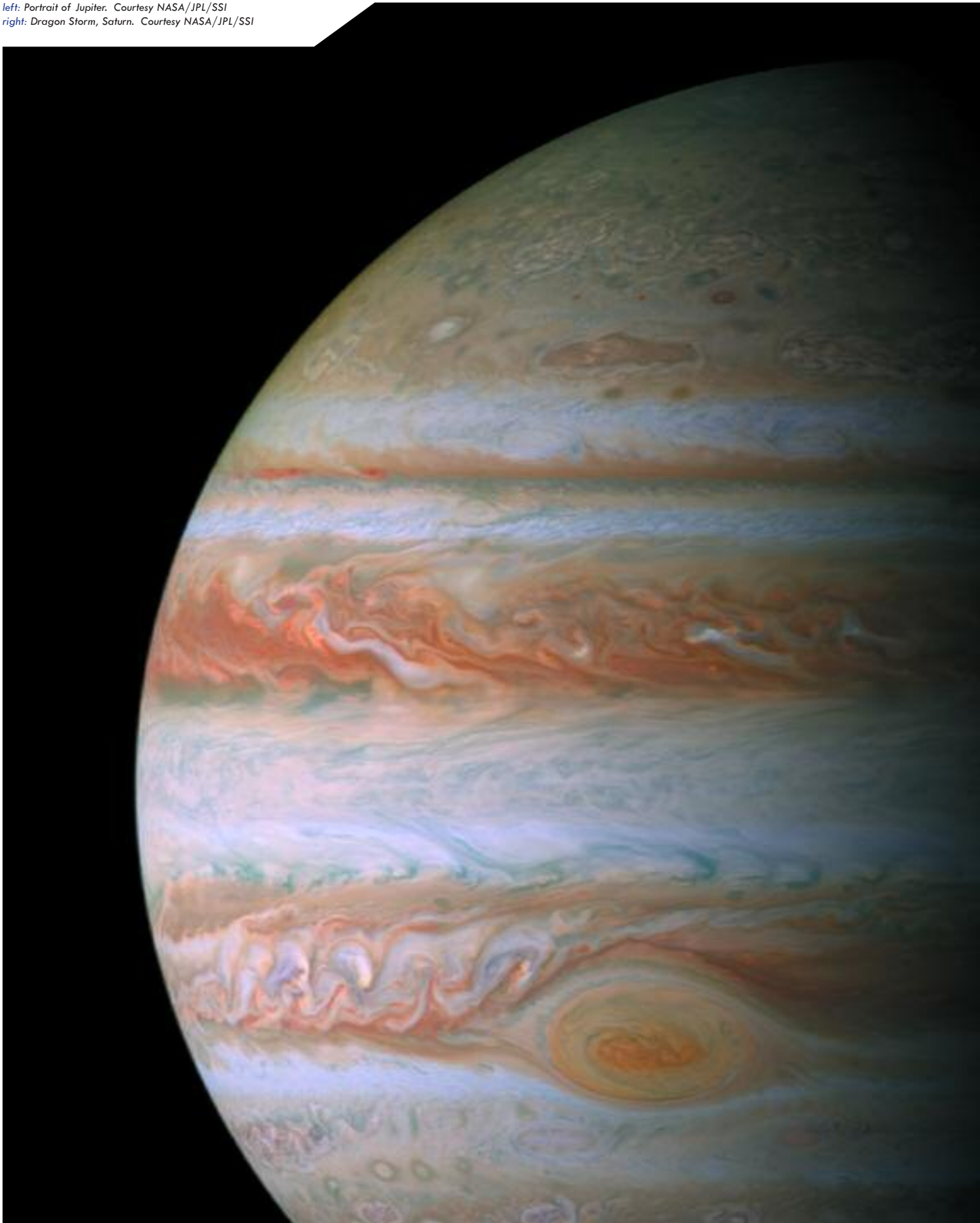
(HST image credit: NASA/ESA/STScI - J. Parker, P. Thomas, and L. McFadden; composite by Francis Reddy)



Exploration of Mars by SSI Researchers Continues

NASA successfully launched the Mars Reconnaissance Orbiter (MRO) in August 2005. It carries a payload of unprecedented capability for studying the Martian climate and weathering history, such as the CRISM and MARCI instruments whose science teams include SSI researchers R. Todd Clancy and Mike Wolff (North Carolina and Wisconsin Offices, respectively). MRO—the most ambitious orbital mission to Mars ever undertaken—will examine the planet in unprecedented detail, and will return more data than all previous Mars missions combined. The spacecraft will gather data from the upper reaches of the Martian atmosphere to the subsurface. It will also support future missions by examining potential landing sites and will act as a communications relay for future landers.

left: Portrait of Jupiter. Courtesy NASA/JPL/SSI
right: Dragon Storm, Saturn. Courtesy NASA/JPL/SSI



Cassini Flight Operations

The Cassini-Huygens mission is changing the way we view the outer Solar System. Since arriving at Saturn in the summer of 2004, the intrepid spacecraft has completed more than a dozen close flybys, providing new perspectives and a wealth of data about the planet's unique retinue of moons. Cassini has monitored powerful lightning-generated radio outbursts and cloud activity produced by giant storms on Saturn that dwarf those on Earth. The Huygens probe landing on haze-shrouded Titan, and Cassini's continuing survey from space, have provided tantalizing glimpses of a world that is at once remarkably earthlike and also frigid and alien. And the recent revelation that Saturn's small, icy moon Enceladus may possess underground reservoirs of liquid water has widened the range of environments that might be clement for life.

The Cassini Imaging Central Laboratory for Operations (CICLOPS) is the nerve center for the imaging team of the Cassini mission to Saturn. All images produced by the two powerful telescopic cameras onboard Cassini (the Imaging Science Subsystem) make their way across more than a billion kilometers of space to be processed and archived by CICLOPS and made available to researchers across the globe. CICLOPS is also the home of activities related to the planning of images to be taken by Cassini. Staff work with the spacecraft's flight plan to optimize the imaging opportunities (and thus the scientific return) at Saturn, capturing the planet, its icy moons, and dazzling rings.

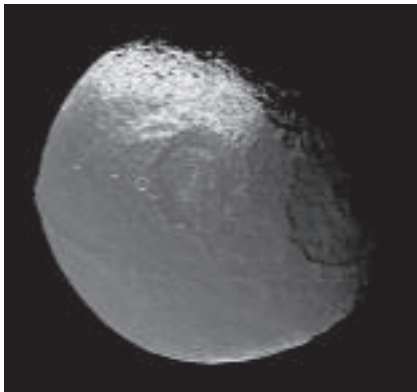
Finally, images taken by Cassini are selected for release to the public at CICLOPS. Chosen images are processed to ensure quality and visibility of features. The final products are sent to NASA's Jet Propulsion Laboratory (JPL), which manages the Cassini mission. CICLOPS also maintains a web site (<http://ciclops.org>) that showcases all of these fascinating views from Saturn.

Cassini's in-depth exploration of the ringed planet, its mysterious moons, stunning rings, and complex magnetic environment continues. The Cassini-Huygens mission is a cooperative project of NASA, the European Space Agency, and the Italian Space Agency. The Jet Propulsion Laboratory, a division of the California Institute of Technology in Pasadena, manages the Cassini-Huygens mission for NASA's Science Mission Directorate, Washington, D.C.



Cassini / Saturn Research

Led by Carolyn Porco, the Cassini Imaging Team is comprised of fourteen scientists from the United States and Europe who use Cassini's cameras to investigate many unique features of the Saturnian system. The Imaging Team continues to publish findings from their investigations, deepening our knowledge about Saturn and the processes by which planets – and whole planetary systems – form and develop with time.



2005 Cassini Highlights

Startling, equatorial ridge on Iapetus

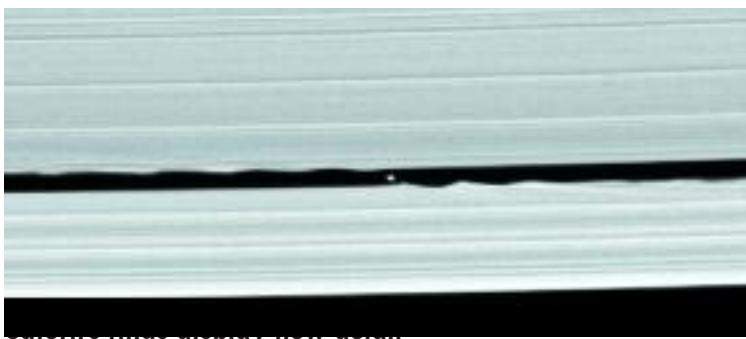
This unprecedented feature bisects the extremely dark region known as Cassini Regio. The narrow ridge reaches 20 kilometers high (12 miles)—rivaling Olympus Mons on Mars—and extends over 1,300 kilometers (808 miles) around the icy moon.

(Image NASA/JPL/SSI)

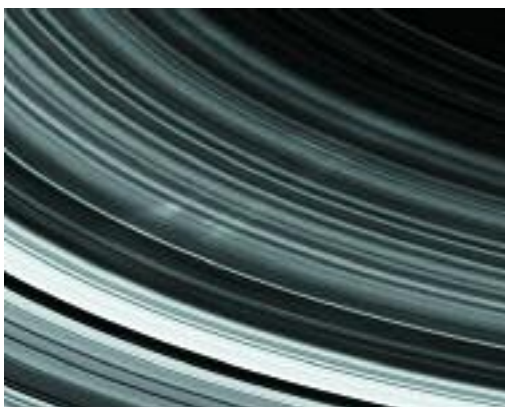
Tiny moon nestled in the Keeler gap in Saturn's outer A ring revealed

Images show the new moon, provisionally named "Daphnis," and the waves its gravitational influence raises in the surrounding ring material. The Keeler gap is located about 250 kilometers (155 miles) inside the outer edge of the A ring, which is also the outer edge of the bright main rings. Daphnis is about 7 kilometers (4 miles) across.

(Image NASA/JPL/SSI)



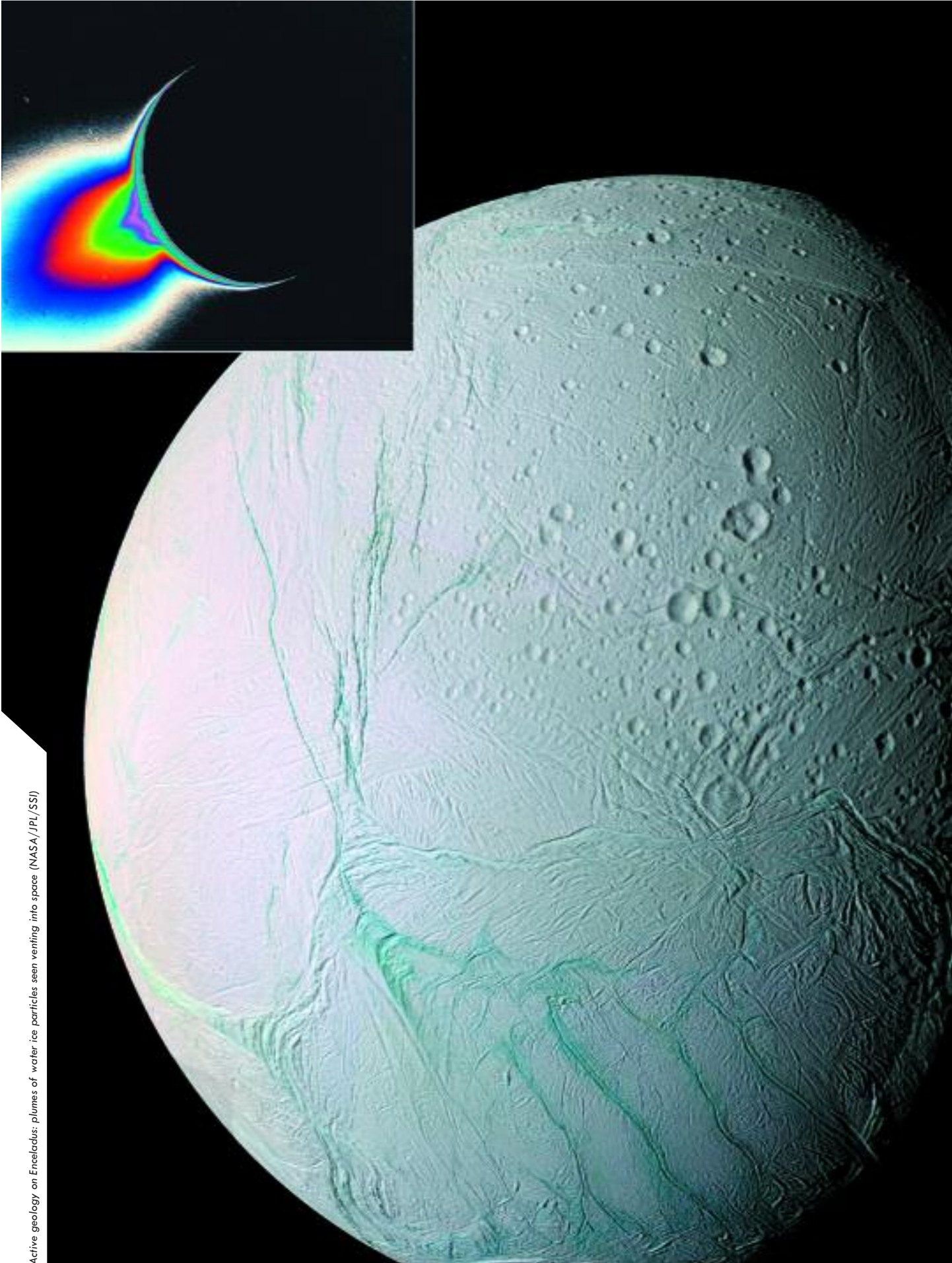
Faint ringlets flanking the thin F ring (just outside the bright main rings) form a completely unexpected spiral arm around the planet. Parts of the D ring (Saturn's innermost ring) have changed in brightness and moved inward by as much as 200 kilometers (124 miles) since the Voyager flybys of 1980-1981. And the ghostly ring features called "spokes" were finally seen by Cassini's cameras. *(Image NASA/JPL/SSI)*



Active geology on Enceladus: plumes of water ice particles seen venting into space

Detailed images of the south polar region of Enceladus reveal distinctive geological features and extremely youthful terrains. Jets of fine, icy particles streaming from great fractures in the south polar region provide unambiguous visual evidence that the moon is geologically active today.

See image to the right.



Active geology on Enceladus: plumes of water ice particles seen venting into space (NASA/JPL/SSI)

Education and Public Outreach

SSI's Education Branch is involved in a variety of innovative projects that foster collaboration between scientists and educators to bring the knowledge and excitement of scientific discovery to audiences across the country. Our education and public outreach programs span a range of audience needs and delivery methods, including traveling museum exhibitions; award-winning web sites and on-line interactives; hands-on teaching resources and activities; teacher and scientist professional development workshops; outreach to underserved audiences, such as girls' groups and Native Americans; and successful partnership building between scientists and educators.

Guiding Principles

- Plan strategically for continued innovation
- Integrate science research and science education
- Ensure scientific accuracy in all activities
- Evaluate all products and disseminate results
- Cultivate mutually beneficial partnerships in science and education communities
- Excite learners of all ages, ethnicities, and learning modalities with the thrill of scientific discovery

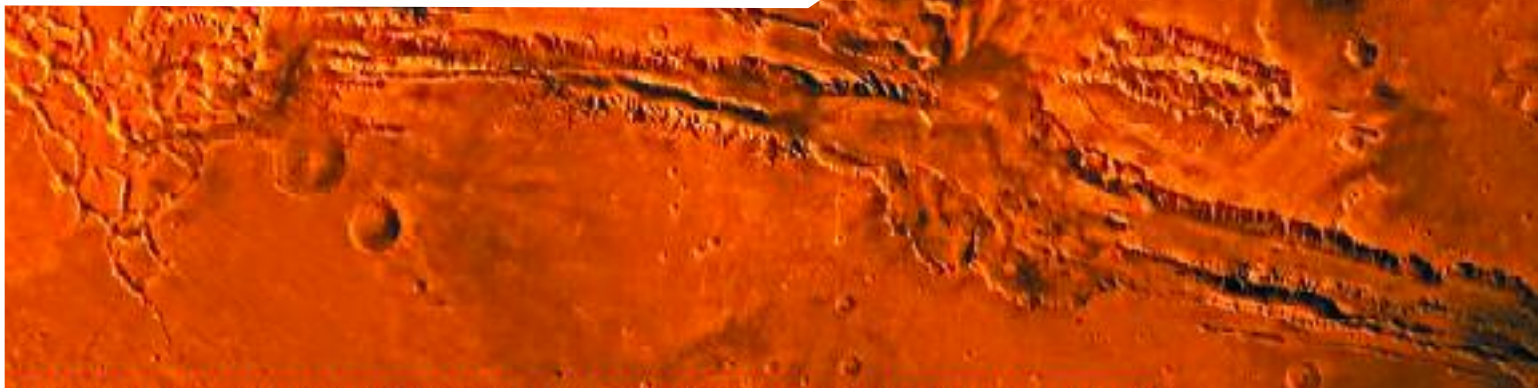
Our programs impact people

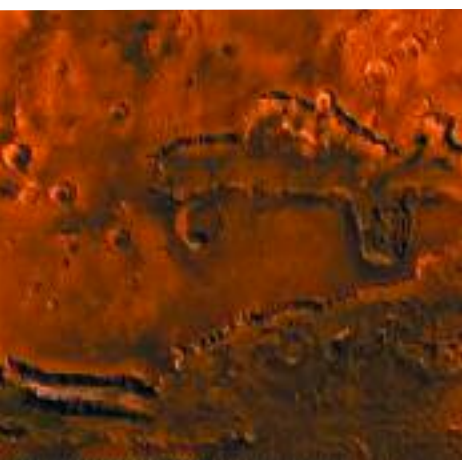
(locally, nationally, and even internationally):

- 300,000 visitors to SSI museum exhibits both nationally and internationally
- 1,000 visitors per day to SSI educational web sites
- 200 participants in exhibit-based educator workshops
- 5,000 educational materials, activities, and CDs distributed
- 800 reached in underserved / underrepresented outreach events
- 360 school children participating in Colorado Project ASTRO-GEO's inaugural year



top Alien Earths - National Traveling Exhibition. SSI
middle: MarsQuest - National Traveling Exhibition. SSI
btm: Valles Marineris, Mars. Courtesy NASA/JPL



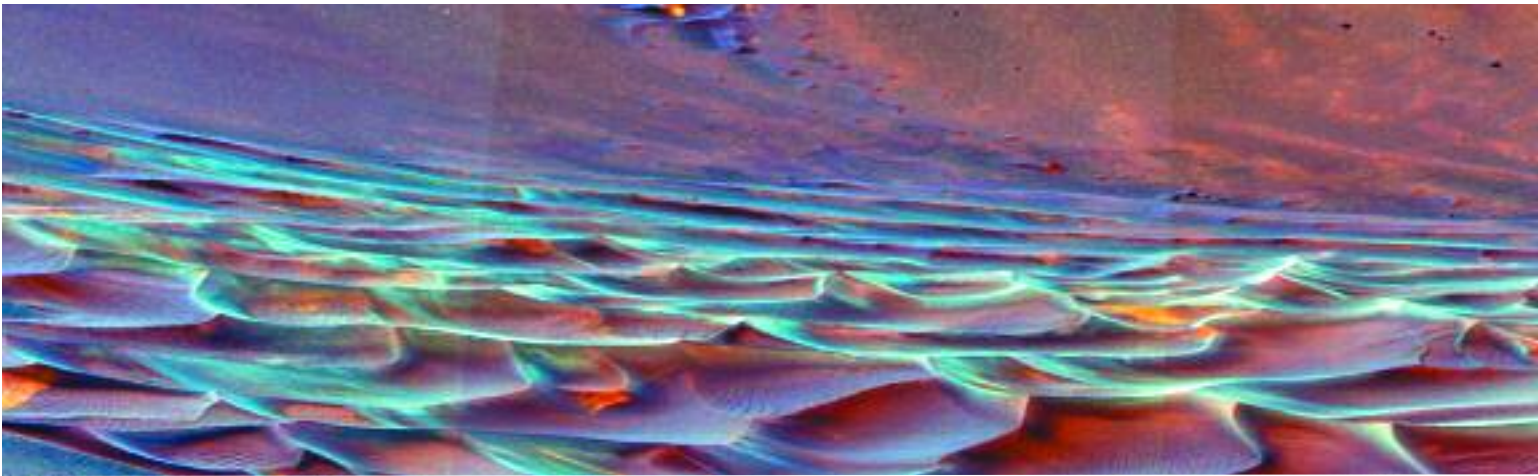


Our educational projects include both large-scale, institutional-level projects supported by the National Science Foundation and NASA, as well as smaller-scale programs that focus on individual scientists seeking educational support for their research projects and educators seeking scientist collaboration. This strategic approach allows SSI to leverage the needs and effectiveness of both kinds of endeavors and allows our staff to explore new educational methods and effectively “scale-up” those that show promise.

In keeping with that strategy, SSI is pursuing new directions for educational programming: the development of documentary film production capabilities; an innovative “29th Street Mall” public outreach project in Boulder, Colorado; and applications of internet and multimedia technologies to facilitate social learning experiences. SSI and its partners are leading the way to a new generation of educational innovation that bridges the worlds of science research and science communication.

In the Spotlight

The year 2005 saw the debut of SSI’s film production capabilities with the creation of two video trailers. These short videos encapsulate the content, excitement, and spectacular imagery of the science behind our traveling museum exhibitions, Alien Earths and Giant Worlds. Using special effects, scientists, child actors, and a dazzling combination of mission footage, animations, and driving soundtracks, these videos were originally designed to market SSI’s exhibitions to potential host museums and science centers. However, they have also been used for marketing our exhibitions to the general public, fundraising, and as components to educational programs in schools and museums and in professional development training workshops. Future plans for film production include more video trailers, multimedia productions for in-exhibit presentation and on-line activities, as well as short-form and feature-length documentaries.



2005 Education and Public Outreach Highlights

Alien Earths

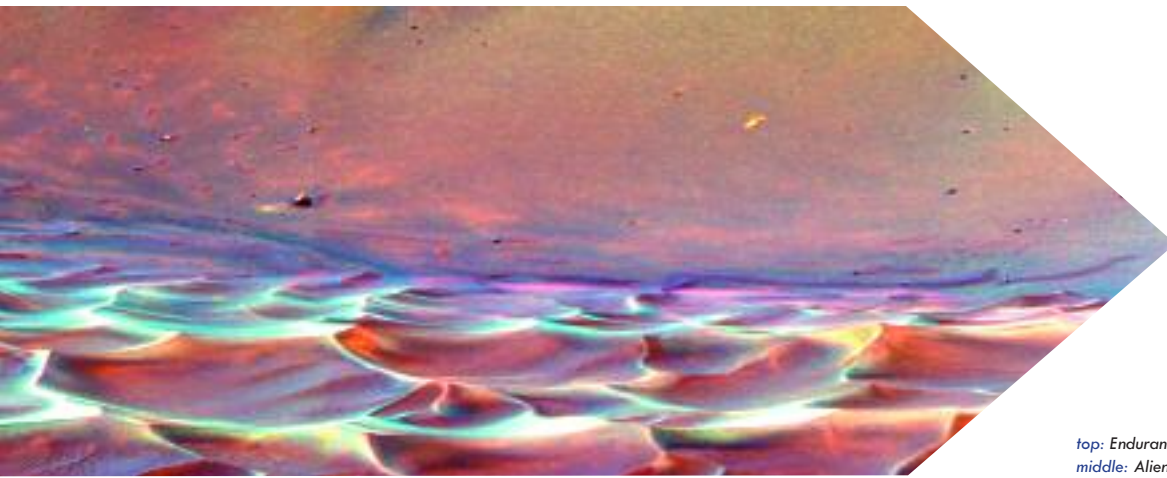
With funding from the National Science Foundation and NASA, the Space Science Institute and its partners developed a 3,000 square-foot traveling exhibition, called Alien Earths. It brings the science behind our search for planets and life elsewhere in the Universe to students and public audiences across the United States. Alien Earths has four interrelated exhibit areas: Our Place in Space, Star Birth, Planet Quest, and Search for Life. In early 2005 it began its initial 3-year tour (managed by the Association of Science-Technology Centers) to 9 host museums and science centers, starting at the Lawrence Hall of Science in Berkeley, California. In addition to the exhibit, the project includes in-person and virtual workshops for educators and docents at host sites, as well as a cutting-edge public web site (www.alienearts.org) that features exciting web interactives and dynamic exhibit content that will help visitors answer the question, Are we alone?

SSI has also begun to market an interactive computer-based solar system design program called Planet Families that was originally created for the Alien Earths exhibit. Using a real physical model, it allows visitors to build their own solar systems, and then watch as their planets and star interact. A multi-player, online version is scheduled for launch in mid-2006.

Expanding Your Horizons

SSI is home to one of NASA's Broker/Facilitator programs for space science education. Research in SSI's Broker region revealed that it holds 34 of the nation's 89 annual science career fairs for girls in grades 6-12 (Expanding Your Horizons - EYH). SSI surveyed EYH conference directors to assess their interest in having a space science-related keynote and workshops and selected Utah Valley State College for our 2005 project. This EYH conference reached over 1,000 girls, 300 teachers, and parents from as far away as rural western Utah and Native American reservations. The event also featured a star party open to the local





top: Endurance Dunes Mars. Courtesy of NASA/JPL
middle: Alien Earths- National Traveling Exhibition. SSI



community, co-facilitated by Clark Planetarium as well as other workshops.

Mars Outreach

SSI's MarsQuest exhibition has been on tour for over five years. In 2005, it left the U.S. for two venues in England: one in Newcastle-upon-Tyne and another in Manchester. In Fall 2006, MarsQuest will return to the United States for a booking in Fort Lauderdale, Florida. In 2005, SSI collaborated with NASA's Phoenix Mars Lander mission to develop a new Phoenix component for MarsQuest. The Phoenix lander mission will explore the Martian arctic. It's equipped with a digging arm and instruments for determining the chemical composition of soil samples. The Phoenix exhibit component consists of a model of the lander that has a working digging arm. Visitors use joysticks to control the arm and test a sample of simulated Martian soil. This engaging interactive will join MarsQuest late in 2006. MarsQuest Online (www.marsquestonline.org) continues to track the MER rovers with its real-time rover image galleries, and will be adding a global 3D flyover capability in late 2006.

Space Weather Outreach

SSI's Space Weather Outreach project includes workshops for educators, educational resources, and the Space Weather Center web site (www.spaceweathercenter.org). The web site (intended for general audiences) is one of the most comprehensive and accessible space weather information resources available online today. 2005 brought a major enhancement to the web site: e-cards. The Space Weather e-card system is populated with stunning images of the Sun, aurora, spacecraft and more. Visitors can decorate their cards, and then send them to their friends. The e-card system is a significant addition to the site for several reasons. First, it replaces the traditional "gallery of images" with a more dynamic and engaging system that lets visitors share images with friends. Second, that sharing provides another level of marketing for the web site. Finally, the system is an experiment in alternative ways of engaging visitors.

Summary Statement of Financial Position

as of December 31, 2005 and 2004

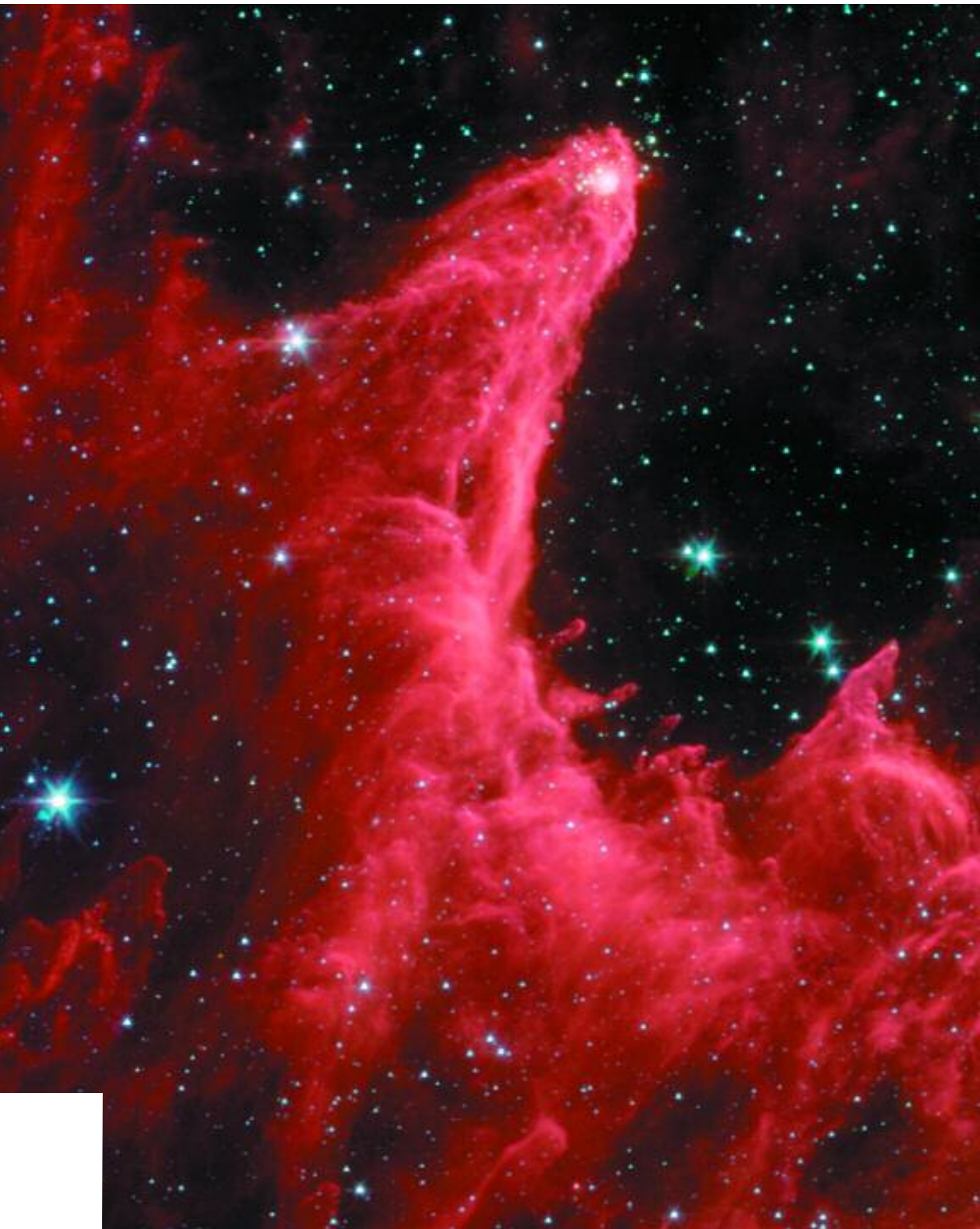
	2005	2004
Assets		
<i>Assets</i>		
Cash and cash equivalents	\$ 253,633	\$ 73,207
Accounts receivable	701,429	481,300
Prepaid expenses and deposits	70,079	58,165
Net furniture, equipment, and property	<u>131,247</u>	<u>192,338</u>
<i>Total assets</i>	<u>\$ 1,156,388</u>	<u>\$ 805,010</u>
Liabilities and Net Assets		
<i>Liabilities</i>		
Accounts payable and accrued liabilities	\$ 240,107	\$ 178,955
Capital lease obligations	27,038	59,748
Deferred revenues	284,969	118,996
Line of credit	372,224	137,500
Other	<u>-</u>	<u>-</u>
<i>Total liabilities</i>	<u>924,339</u>	<u>495,199</u>
<i>Net assets</i>		
Unrestricted	198,215	233,485
Temporarily restricted	<u>33,835</u>	<u>76,326</u>
<i>Total net assets</i>	<u>232,050</u>	<u>309,811</u>
<i>Total liabilities and net assets</i>	<u>\$ 1,156,389</u>	<u>\$ 805,010</u>

Summary Statement of Activities for the years ended December 31, 2005 and 2004

	2005	2004
Support and revenue		
Grants, contracts, and cooperative agreements	\$ 4,344,790	\$ 4,110,277
Contributions	-	-
Equipment	28,664	75,956
Exhibit income	108,036	63,500
Interest income	864	241
Other income	9,250	15,247
Gain on disposal of equipment	<u>-</u>	<u>-</u>
<i>Total support and revenue</i>	<u>4,491,604</u>	<u>4,265,221</u>
Expenses		
Program services	4,541,358	4,252,177
Management and general	<u>28,007</u>	<u>(47,962)</u>
<i>Total expenses</i>	<u>4,569,365</u>	<u>4,204,215</u>
Change in net assets	<u>(77,761)</u>	<u>61,006</u>
Net assets, beginning of year	<u>309,811</u>	<u>248,805</u>
Net assets, end of year	<u>\$ 232,050</u>	<u>\$ 309,811</u>

This summary financial information does not include sufficient detail or disclosures to constitute presentation in conformity with accounting principles generally accepted in the United States of America. If the omitted detail or disclosures were included, they might influence the user's conclusions about the Organization's financial position, changes in net assets, and cash flows. Accordingly such information should be read in conjunction with the Organization's audited financial statements for the years ended December 31, 2005 and 2004, from which the summarized information was derived. A copy is available upon request.

Towering Infernos - NASA/JPL-Caltech/L. Allen (Harvard-Smithsonian CfA)



Publications and Activities 2005

R. Todd Clancy

PROFESSIONAL ORGANIZATIONS & SERVICE

NASA Mars Fundamental Research Program Review Panel
NASA Participating Scientist Program for Venus Express Review Panel
NASA Mars Data Analysis Program Review Panel (Chair Atm. section)
ALMA North American Science Advisory Committee

PUBLICATIONS

Sandor, B.J., R.T. Clancy., Water Vapor Variations in the Venus Mesosphere from Microwave Spectra. *Icarus*, 177, 129-143, 2005

Paul B. Dusenbery

PROFESSIONAL ORGANIZATIONS & SERVICE

Proposal Reviewer, National Science Foundation
Proposal Reviewer, National Aeronautics and Space Administration
Member, 29th Street Education Project
Member of American Geophysical Union
Member of American Association of the Advancement of Science
Member of America Astronomical Society
Member of National Science Teachers Association
Member of the Association for Supervision & Curriculum Development

MEETINGS AND CONFERENCE PROCEEDINGS

Morrow, C., Harold, J., Dusenbery, P., Science Communication Efforts in Space Weather: Benefits and Challenges of the 'Weather' Analogy", 85th Meeting of the AMS, San Diego, CA, January 2005
Dusenbery, P., Communicating Science through Exhibitions (Invited), APS, Tampa, FL, April 2005
Dusenbery, P., Harold, J., The Space Weather Center (demonstration), Museums and the Web, Montreal, Canada, April 2005

Dusenbery, P., Morrow, C., Harold, J., MarsQuest: Bringing the Excitement of Mars Exploration to the Public, DPS, Cambridge, England, September 2005

Dusenbery, P., Curtis, L., Harold, J., SSI booth, ASTC, Richmond, VA, October 2005

Dusenbery, P., Harold, J., Space Weather Education Conference, Division of Plasma Physics, APS, October 2005

Bill Farrand

PROFESSIONAL ORGANIZATIONS & SERVICE

Geological Society of America

American Astronomical Society, Division of Planetary Science

American Society of Photogrammetry and Remote Sensing

American Geophysical Union

PUBLICATIONS

Farrand, W.H., L.R. Gaddis, and L. Keszthelyi Pitted cones and domes on Mars: Observations in Acidalia Planitia and Cydonia Mensae with MOC, THEMIS and TES data, *J. Geophys. Res.: Planets*, 110, E05005, doi:10.1029/2004JE002297, 2005

Clark, B.C., R.V. Morris, S.M. McLennan, R. Gellert, B. Jolliff, A.H. Knoll, S.W. Squyres, T.K. Lowenstein, D.W. Ming, N.J. Tosca, A. Yen, P.R. Christensen, S. Gorevan, J. Brückner, W. Calvin, G. Dreibus, W. Farrand, et al. Chemistry and mineralogy of outcrops at Meridiani Planum, *Earth and Planetary Science Letters*, 240, 73-94, 2005

McLennan, S.M., J.F. Bell III, W.M. Calvin, P.R. Christensen, B.C. Clark, P.A. de Souza, J. Farmer, W.H. Farrand, et al. Provenance and diagenesis of evaporite-bearing Burns formation, Meridiani Planum, Mars, *Earth and Planetary Science Letters*, 240, 95-12, 2005

MEETINGS AND CONFERENCE PROCEEDINGS

Farrand, W.H., J.F. Bell III, J.R. Johnson, VNIR spectral classes of rocks in the Columbia Hills, Gusev Crater, Mars as observed by the Mars Exploration Rover Spirit's Pancam, *Am. Geophys. Union Fall Mtg.*, P21A-0129, 2005

Farrand, W.H., J.F. Bell III, J.R. Johnson, B.C. Clark, and B.L. Jolliff, Visible/Near Infrared spectral characterization of in situ rock outcrops at Meridiani Planum as observed by the Mars Exploration Rover Opportunity, *Lunar and Planetary Science XXXVI*, #2082, 2005

Farrand, W.H., E. Merényi, S. Murchie, O.S. Barnouin-Jha Spectral class distinctions observed in the MPF IMP SuperPan using a self-organizing map, *Lunar and Planetary Science XXXVI*, #2009, 2005

Bell, J.F. III, H.M. Arneson, W.H. Farrand, et al., Large multispectral and albedo panoramas acquired by the Pancam instruments on the Mars Exploration Rovers Spirit and Opportunity, *Lunar and Planetary Science XXXVI*, #1337, 2005

Clark, B.C., S.M. McLennan, R.V. Morris, R. Gellert, B. Jolliff, A. Knoll, T.K. Lowenstein, D.W. Ming, N.J. Tosca, P.R. Christensen, A. Yen, J. Brückner, W. Calvin, W.H. Farrand, J. Zipfel, S. Gorevan, and S.W. Squyres, Results and implications of mineralogical models for chemical sediments at Meridiani Planum, *Lunar and Planetary Science XXXVI*, #1446,

2005

Johnson, J.R., R.A. Arvidson, J.F. Bell III, W.H. Farrand, E. Guinness, M. Johnson, K.E. Herkenhoff, M. Lemmon, R.V. Morris, F. Seelos, IV, J. Soderblom, L. Soderblom, S.W. Squyres, and M. Wolff, Photometric observations of soils and rocks at the Mars Exploration Rover landing sites, *Lunar and Planetary Science XXXVI*, #1815, 2005

McLennan, S.M., J.F. Bell, W.M. Calvin, P.R. Christensen, B.C. Clark, P.A. de Souza, W.H. Farrand, et al., Provenance and diagenesis of impure evaporitic sedimentary rocks on Meridiani Planum, Mars, *Lunar and Planetary Science XXXVI*, #1884, 2005

Ming, D.W., R.V. Morris, R. Gellert, A. Yen, J.F. Bell III, D. Blaney, P.R. Christensen, L. Crumpler, P. Chu, W.H. Farrand, S. Gorevan, K.E. Herkenhoff, G. Klingelhofer, R. Rieder, D.S. Rodionov, S.W. Ruff, C. Schroeder, S.W. Squyres, Geochemical and mineralogical indicators for aqueous processes on the West Spur of the Columbia Hills in Gusev Crater, *Lunar and Planetary Science XXXVI*, #2125, 2005

Weitz, C.M., R.C. Anderson, J.F. Bell III, N.A. Cabrol, W.M. Calvin, B.L. Ehlmann, W.H. Farrand, R. Greeley, K.E. Herkenhoff, J.R. Johnson, B.L. Joliff, R.V. Morris, L.A. Soderblom, S.W. Squyres, R.J. Sullivan, Seeing the soils of Meridiani Planum through the eyes of Pancam and Microscopic Imager, *Lunar and Planetary Science XXXVI*, #1362, 2005

OTHER PRESENTATIONS

Gave public presentations on the MER mission to several groups including the annual meeting of the Mars Society and the Geology Department at the University of Northern Colorado

Heidi Hammel

PROFESSIONAL ORGANIZATIONS & SERVICE

The Planetary Society, Board of Directors

AURA Board of Directors

AAAS Section D - Astronomy, Member-at-large

NASA Advisory Committees

Education Strategic Roadmap Committee – “SRM3”

Solar System Exploration Strategic Roadmap Committee- “SRM12”, Ex Officio, Education Liaison

Space Science Advisory Committee - SScAC

NASA Science Investigations

Team Member and Chair of Giant Planets Sub-panel, NASA Science and Technology Definition Team, Terrestrial

Planet Finder – Coronagraph Mission

Interdisciplinary Scientist, James Webb Space Telescope

Science Coordinator, “Giant Worlds: A Voyage to the Outer Solar System” Museum Exhibit, Space Science Institute, Boulder, CO

Speaker, D’Onofrio Technology Series, “Inspiring Girls in Science: Local Women Talk Tech,” Ridgefield Public Library, Ridgefield, CT

John J. McCarthy Observatory, New Milford, CT, Board of Directors

Astronomy commentator, The Danbury News-Times, Danbury, CT
December 2005, the discovery of new rings and moons around Uranus
August 2005, the future of space-based telescopes
July 2005, Deep Impact comet impact mission

School Visits and Similar Activities (see also Project Astro Connecticut entry)
November 2005, St. Mary's School, Ridgefield, CT
November 2005, East Ridge Middle School, Ridgefield, CT
May 2005, Girl Scout Brownie Troop 264, Ridgefield, CT
February 2005, Children's Corner Kindergarten Classes, Ridgefield, CT

PUBLICATIONS

Hammel, H. B., I. de Pater, S. Gibbard, G. W. Lockwood, and K. Rages., Uranus in 2003: Zonal Winds, Banded Structure, and Discrete Features. *Icarus* 175, 534-545, 2005

Hammel, H. B., I. de Pater, S. G. Gibbard, G. W. Lockwood, and K. Rages. New Cloud Activity on Uranus in 2004: First Detection of a Southern Feature at 2.2 microns. *Icarus* 175, 284-288, 2005

de Pater, I., S. Gibbard, E. Chiang, H. B. Hammel, B. Macintosh, F. Marchis, S. Martin, H. G. Roe, and M. Showalter. The dynamic neptunian ring arcs: gradual disappearance of Liberté and a resonant jump of Courage. *Icarus* 174, 263-272, 2005

Gibbard, S. G., I. de Pater, I., and H. B. Hammel. Near-infrared adaptive optics imaging of the satellites and individual rings of Uranus. *Icarus* 174, 253-262, 2005

Hammel, H. B. "Women Speakers: Make the Most of your Moments" in *A Hand Up: Women Mentoring Women in Science*, D. C. Fort, editor, Association for Women in Science (Washington, DC, 2005: 3rd Edition; 1995: 2nd Edition; 1993)

Zalucha, A., J. L. Elliot, A. Fitzsimmons, V. Dhillon, T. Marsh, H. B. Hammel, P. Irwin, J. Thomas-Osip, and F. Taylor. High Altitude, Wavelength-dependent Extinction in Titan's Atmosphere from the 2003 Nov. 14 Occultation. *Bull. Amer. Astron. Soc.* 37, 723, 2005

Hammel, H. B., M. L. Sitko, D. K. Lynch, R. W. Russell, T. Hewagama, and L. Bernstein. Mid-Infrared Ethane Emission on Neptune and Uranus. *Bull. Amer. Astron. Soc.* 37, 662-663, 2005

"Beyond Jupiter: The Story of Planetary Astronomer Heidi Hammel," biography published, written by Alfred Bortz, in *The National Academies Press "Women's Adventures in Science" series* (<http://www.nap.edu/was/>), ISBN 0-531-16775-5, 2005

MEETINGS AND CONFERENCE PROCEEDINGS

Hammel, H. B., Invited Colloquium, Massachusetts Institute of Technology, Department of Earth, Atmospheric, and Planetary Sciences, "Evolving Atmospheres of the Ice Giant Planets," Cambridge, MA, March 2005

Hammel, H. B., Invited Speaker on panel with B. Oppenheimer, J. Kasting, W. Traub, and C. Beichman, "Searching for Other Earths." Hayden Planetarium at the American Museum of Natural History, New York, NY [general public], September 2005

Hammel, H. B., Invited Speaker, "Telescopes in Space," Ridgefield Discovery Center, Ridgefield, CT [general public],

August 2005

Hammel, H. B., NASA Astronomy Update: "Spitzer Space Telescope Discovers Light from Extrasolar Planets," NASA Television, NASA Headquarters, Washington, DC. (Participated in pre-conference planning and pre-conference interviews, but missed actual press conference due to last-minute rescheduling caused by to an embargo violation), April 2005

James B. Harold

PROFESSIONAL ORGANIZATIONS & SERVICE

Member of AGU

MEETINGS AND CONFERENCE PROCEEDINGS

Dusenbery, P., Morrow, C., Harold, J., MarsQuest: Bringing the Excitement of Mars Exploration to the Public, DPS, Cambridge, England, September 2005

Morrow, C., Cooper, L., Lebofsky, L., Harold, J., McLain, B., SCIWG Workshop, ASP, Tucson, AZ, September 2005

Harold, J., Space Weather Outreach, NCAR, Boulder, CO, October 2005

Morrow, C., Harold, J., Dusenbery, P., Science Communication Efforts in Space Weather: Benefits and Challenges of the "Weather" Analogy", 85th Meeting of the AMS, San Diego, CA, January 2005

Dusenbery, P., Harold, J., The Space Weather Center (demonstration), Museums and the Web, Montreal, Canada, April 2005

Dusenbery, P., Curtis, L., Harold, J., SSI booth, ASTC, Richmond, VA, October 2005

Alan Harris

PROFESSIONAL ORGANIZATIONS & SERVICE

American Astronomical Society (AAS)

AAS Division for Planetary Sciences (DPS)

AAS Division on Dynamical Astronomy (DDA)

AAS Historical Astronomy Division (HAD);

American Geophysical Union

Fellow of the American Association for the Advancement of Science (AAAS)

International Astronomical Union

Member of Large Synoptic Survey Telescope (LSST) Site Selection committee

Chair of NSF Planetary Astronomy proposal review panel

Member of NASA Planetary Atmospheres Comet review panel

Chair of NASA Outer Planets review panel

Member of Scientific Organizing Committee for Asteroids, Comets, Meteors (ACM) 2005 meeting, Buzios, Brazil

Associate editor, Earth, Moon & Planets, for contributed papers from ACM 2005

Local host of AAS/DDA meeting, Santa Barbara, CA, 2005

Chair of LOC for AAS/DDA meeting, Pasadena, CA 2006

PUBLICATIONS

Pravec, P., and 19 colleagues. Tumbling asteroids. *Icarus* 173, 108-131, 2005

Pravec, P., and 55 co-authors. Photometric Survey of Binary Near-Earth Asteroids. *Icarus*, in press, 2005

MEETINGS AND CONFERENCE PROCEEDINGS

American Astronomical Society, San Diego: LSST solar system surveys

Society for Astronomical Sciences, Big Bear, CA: Lightcurve reporting

Asteroids, Comets, Meteors, Buzios, Brazil: Rotational properties of asteroids, comets, and TNOs (invited review), 2005

OTHER PRESENTATIONS

Asteroid Impact Mitigation: What can, or should, be done? Invited presentation to “Universus 2005” symposium, Montecorvino, Italy

Disaster! From 9/11 to Katrina to Killer Asteroids. A Skeptical Look at How We Respond to Hazards, Natural and Unnatural. Public lecture given at Center for Inquiry-West, Hollywood, CA, December, 2005

Dean Hines

PROFESSIONAL ORGANIZATIONS & SERVICE

NASA Science Investigations: NICMOS/HST Instrument & Science Team

MIPS/Spitzer Instrument and Science Team

FEPS Legacy Program Data Lead

American Astronomical Society

Spitzer User Panel

Referee for *Astrophysical Journal*, *Astrophysical Letters*

PUBLICATIONS

Meakin, C.A., Hines, D.C., Thompson, R.I., “Young stars and dust in AFGL437: NICMOS/HST polarimetric imaging of an

outflow source," *ApJ*, 634, 1146, 2005

Kim, J.S., Hines, D.C., et al., "Formation and Evolution of Planetary Systems: Cold Outer Disks Associated with Sun-like Stars," *ApJ*, 632, 659, 2005

Schneider, G., Silverstone, M.D. & Hines, D.C., "Discovery of a Nearly Edge-on Disk around HD 32297," *ApJ*, 629, L117, 2005

Shi, Y., Rieke, G. Hines, D.C. et al., "Far-Infrared Observations of Radio Quasars and FR II Radio Galaxies," *ApJ*, 629, 88, 2005

Su, K.Y.L. et al., "The Vega Debris Disk: A Surprise from Spitzer," *ApJ*, 628, 487, 2005

Stauffer, J.R. et al., "Spitzer Observations of G Dwarfs in the Pleiades: Circumstellar Debris Disks at 100 Myr Age," *AJ*, 130, 1834, 2005

Low, F.J., Smith, P. S., Werner, M., Chen, C., Krause, V., Jura, M. & Hines, D.C., "Exploring Terrestrial Planet Formation in the TW Hydrae Association," *ApJ*, 631, 1170, 2005

MEETINGS AND CONFERENCE PROCEEDINGS

Shi, Y. et al. 2005, "9.7 um Silicate Features in AGNs: the New Insight to Unification Models," American Astronomical Society Meeting Abstracts, 207

Richards, G.T. et al., "The Mid-IR/Optical Properties of Type 1 Quasars," American Astronomical Society Meeting Abstracts, 207, 2005

OTHER PRESENTATIONS

"Polarimetry with NICMOS," at 2005 HST Calibration Workshop, STScI, October 2005

"The Spitzer Space Telescope and the Infrared Cosmos," Public Lecture Series, Lodestar Planetarium, Albuquerque, NM, April 2005

"New Results from the Spitzer Space Telescope," New Mexico Astronomy Symposium, Socorro, NM, October 2005

"Unified Schemes and the Most Luminous Active Galaxies," Astronomy Seminar Series, Astronomy Department, The University of New Mexico, November 2005

Phil James

PROFESSIONAL ORGANIZATIONS & SERVICE

Cycle 15 Proposal Review, Space Telescope Science Institute

PUBLICATIONS

James, P.B., G. Hansen, and T. Titus, The CO₂ Cycle, *Advances in Space Research*, 35/1, 14-20, 2005

Benson, J.L. and P.B. James. Yearly Comparisons of the Martian Polar Caps: 1999-2003 Mars Orbiter Camera Observations. *Icarus* 174, 513-523, 2005

James, P.B., B.P. Bonev, and M.J. Wolff. Visible Albedo of Mars' South Polar Cap: 2003 HST Observations. *Icarus* 174,

596-599, 2005

P.C. Thomas, M.C. Malin, P.B. James, B.A. Cantor, R.M.E. Williams and P. Gierasch. South polar residual cap of Mars: Features, stratigraphy, and changes. *Icarus* 174, 535-559, 2005

Bonev, P.B., G.B. Hansen, D.A. Glenar, P.B. James, and J.E. Bjorkman. Near-perihelion global dust storms and the stability of the perennial south polar cap on Mars. *Planetary and Space Science*, December 2005

Benson, J.L., P.B. James, B.A. Cantor, and R. Remigo. Interannual variability of water ice clouds over major Martian volcanoes observed by MOC. *Icarus*, November 2005

Bonev, B.P., P.B. James, G.B. Hansen, J.E. Bjorkman, and M.J. Wolff. Effects of atmospheric dust on residual south polar cap stability. LPSC, 2005

MEETINGS AND CONFERENCE PROCEEDINGS

James, P.B., B.P. Bonev, G.B. Hansen, and M.J. Wolff. Effects of atmospheric dust on sublimation of the Martian residual south polar cap. *Eos Trans. AGU*, 86(52). Fall Meeting Supp., Abstract P23C-03 Invited

Benson, J.L., D.A. Glenar, P.B. James, M.J. Wolff, and M.D. Smith. Spatially resolved properties of Martian aphelion clouds from combined MGS MOC and TES measurements. Abstract 33.30, 37th DPS Meeting, 2005

James, P.B., B.P. Bonev, G.B. Hansen, D.A. Glenar, and M.J. Wolff. Effects of perihelic dust storms on residual south cap (of Mars). Second Mars Polar Atmosphere Surface Interactions Workshop. Flagstaff, AZ, July 2005

James, P.B. MARCI/CTX Cameras on Mars Reconnaissance Orbiter. Second Mars Polar Atmosphere Surface Interactions Workshop. Flagstaff, AZ, July 2005

Brad McLain

PROFESSIONAL ORGANIZATIONS & SERVICE

McLain, B., ROSS E/PO Review, NASA Research and Education Support Services, Washington, DC, June 2005

MEETINGS AND CONFERENCE PROCEEDINGS

McLain, B., Morrow, C., NEI / Saturn Educators Workshop, LodeStar, Albuquerque, NM, January 2005

Morrow, C., McLain, B., Education Workshops at opening of Alien Earths, Lawrence Hall of Science, Berkeley, CA, February 2005

Morrow, C., McLain, B., NAI E/PO Workshop / Alien Earths, Lawrence Hall of Science, Berkeley, CA, March 2005

McLain, B., NASA Explorer Institute Meeting, AMNH, New York, NY, March 2005

McLain, B., Colorado Project ASTRO-GEO, Boulder, April 2005

McLain, B., Taste of Arlington, NSF, Arlington, VA, May 2005

McLain, B., Colorado Project ASTRO-GEO, DMNS, Denver, July 2005 Educator Workshop

McLain, B., Project ASTRO Site Leaders Meeting, Redwood City, CA, August 2005

Morrow, C., Cooper, L., Lebofsky, L., Harold, J., McLain, B., SCIWG Workshop, ASP, Tucson, AZ, September 2005

McLain, B., Colorado Project ASTRO-GEO, DMNS, Denver, October 2005

McLain, B., IDEAS Review Panel, STScI, Baltimore, MD, November 2005

McLain, B., Wilkerson, A., Education resources booth, Colorado Science Convention, Denver, CO, November 2005

Tom McCord

PUBLICATIONS

Barnes, J. W., Brown, R. H. Turtle, E. P. McEwen, A. S., Lorenz, R. D. Janssen, M., Schaller, E. L., Brown, M. E., Buratti, B. J., Sotin, C. Griffith, C., Clark, Perry, J., Fussner, S., Barbara, J., West, R., Elachi, C., Bouchez, A. HJ., Roe, H. G., Baines, K. H. Bellucci, G., Bibring, J.-P., Capaccioni, F., Cerroni, P., Combes, M., Coradini, A., Cruikshank, D. P., Drossart, P., Formisano, V., Jaumann, R., Langevin, Y., Matson, D. L., McCord, T. B., Nicholson, P. D., Sicardy, B. A., 5-Micron-Bight Spot on Titan: Evidence for Surface Diversity, *Science*, 310, 92-95, 2005

Clark, Roger N., R. H. Brown, R. Jaumann, D. P. Cruikshank, Nelson, R. M., Buratti, B. J., T. B. McCord, Luine, J., Baines, K. H. Bellucci, G., Bibring, J.-P., Capaccioni, F., Cerroni, P. Coradini, A. Formisano, V., Langevine, Y., Matson, D. L. Mennella, V., Nicholson, P.d. Sicardy, B. Sotin, C., Hoefen, T. M., Curchin, J. M., Hansen, G., Hibbits., Matz, K.-D., Compositional maps of Saturn's moon Phoebe from imaging spectroscopy, *Nature*, 435, 66-69, 2005

McCord, T. B. and C. Sotin, Ceres: Evolution and Current state, *J. Geophys. Res.*, 110, 2005

Orlando, T. M., T. B. McCord and G. A. Grieves, The chemical nature of Europa surface material and the relation to a sub-surface ocean, *Icarus* 177, 528-533, 2005

Russell, C. T., F. Capaccioni, A. Coradini, U. Christensen, M. c. De Sanctis, W. C. Feldman, R. Jaumann, H. U. Heller, A. Konopliv, T. B. McCord, L. A. McFadden, H. Y. McSween, S. Mottola, G. Neukum, C. M. Pieters, T. H. Prettyman, C. A. Raymond, D. E. Smith, M. Sykes, B. Williams, and M. Zuber, Dawn Discovery Mission to Vesta and Ceres: Present Status, Dawn Discovery mission to Vesta and Ceres: Present status? *Advances in Space Research*, In Press, Corrected Proof, Available online 5, March 2005

Sotin, C., R. Jaumann, B. J. Buratti, R. H. Brown, R. N. Clark, L. A. Soderblom, K. H. Baines, G. Bellucci, J.-P. Bibring, F. Capaccioni, P. Cerroni, M. Combes, A. Coradini, D. P. Cruikshank, P. Drossart, V. Formisano, Y. Langevin, D. L. Matson, T. B. McCord, R. M. Nelson, P. D. Nicholson, B. Sicardy, S. LeMouelic, S. Rodriguez, K. Stephan, and C. K. Scholz, Release of volatiles from a possible cryovolcano from near-infrared imaging of Titan, *Nature*, 435, 786-789, 2005

Cherilynn Morrow

PROFESSIONAL ORGANIZATIONS & SERVICE

Principal Investigators for the NASA Space Science Broker program

Chair of the Space Physics and Aeronomy Education Committee for the AGU

Member of the NASA Space Science Education and Public Outreach Executive Council

Chair of the Astrobiology Science Communication Working Group

Advisor for the Center for Integrated Space Weather Modeling

Member of the Science & Technology committee for CU Boulder's Conference on World Affairs

MEETINGS AND CONFERENCE PROCEEDINGS

Morrow, C., Winning Small Grants to Do Education & Public Outreach with NASA

Office of Space Science Programs (Pre-conference workshop), 205th Meeting of the AAS, San Diego, CA, January 2005

Morrow, C., Presentation on Alien Earths exhibit at WISE E/PO Kick-Off Meeting, 205th Meeting of the AAS, San Diego, CA, January 2005

Morrow, C., Zawaski, M., Kinesthetic Astronomy: Significant Upgrades to the Sky Time Lesson that Support Student Learning, 205th Meeting of the AAS, San Diego, CA, January 2005

Morrow, C., Harold, J., Dusenbery, P., Science Communication Efforts in Space Weather: Benefits and Challenges of the "Weather" Analogy", 85th Meeting of the AMS, San Diego, CA, January 2005

McLain, B., Morrow, C., NEI / Saturn Educators Workshop, LodeStar, Albuquerque, NM, January 2005

Morrow, C., McLain, B., Education Workshops at opening of Alien Earths, Lawrence Hall of Science, Berkeley, CA, February 2005

Morrow, C., Scientists' Involvement in Developing Space Science Traveling Exhibitions (Invited), AAAS, Washington, DC, February 2005

Morrow, C., McLain, B., NAI E/PO Workshop / Alien Earths, Lawrence Hall of Science, Berkeley, CA, March 2005

Morrow, C., The Latest Results of Saturn Exploration, Expanding Your Horizons Conference, Utah Valley State College, Orem, UT, March 2005

Morrow, C., Ellingson, E., Exploring the Mysteries of the Universe, Expanding Your Horizons Conference, Utah Valley State College, Orem, UT, March 2005

Morrow, C., Ellingson, E., Girls and Galaxies (Keynote), Expanding Your Horizons Conference, Utah Valley State College, Orem, UT, March 2005

Morrow, C., Ellingson, E., Kinesthetic Astronomy, Expanding Your Horizons Conference, Utah Valley State College, Orem, UT, March 2005

Johnson, D. (Clark Planetarium), Morrow, C., Ellingson, E., Star Party, Expanding Your Horizons Conference, Utah Valley State College, Orem, UT, March 2005

Morrow, C., Kinesthetic Astronomy presentation at GIFT Workshop (Convener: C. Laj), EGU General Assembly, Vienna, Austria, April 2005

Race, M., Morrow, C., Oliver, C., Co-Babe Ammann, E., Scalice, D., Development of an Astrobiology Communication Roadmap (poster), NAI, Boulder, CO, April 2005

Morrow, C., Wilmoth, K., Alien Earths Education Program: Lessons Learned in the Communication of Astrobiology (poster), NAI, Boulder, CO, April 2005

Morrow, C. (Chair), Geosciences Education around the World: A Diversity of Models (Conveners: C. Manduca & C. Laj), EGU General Assembly, Vienna, Austria, April 2005

Johnson, R., Morrow, C. (co-conveners), Space Physics in the Undergraduate Curriculum I (Oral), AGU, New Orleans, LA, May 2005

Morrow, C., Stockman, S. (co-conveners), Great Ideas for Integrating Earth and Space Science Education II, AGU, New Orleans, LA, May 2005

Morrow, C., Maryboy, N., Begay, D., Native American Science Education: A Compelling Opportunity for the Integration of Earth and Space Science, AGU, New Orleans, LA, May 2005

Morrow, C., Zawaski, M., Kinesthetic Astronomy Workshop for Navajo Educators, Navajo Nation Museum, Window Rock, AZ, June 2005

Morrow, C., Undergraduate poster presentation judge, SACNAS, Denver, CO, September 2005

Dusenbery, P., Morrow, C., Harold, J., MarsQuest: Bringing the Excitement of Mars Exploration to the Public, DPS, Cambridge, England, September 2005

Morrow, C., Innovations in Informal Education for Planetariums & Tips for Tapping NASA Resources, Western Alliance of Planetariums Conference (WAC), Denver/Boulder, CO, September 2005

Morrow, C., Meteor presentation at Journey to the Center of the Earth: GIFT Workshop, AGU, San Francisco, CA, December 2005

Morrow, C., Stockman, S. (co-conveners), The Benefits and Challenges of Integrating Scientific Research and Education I (Oral), AGU, San Francisco, CA, December 2005

Morrow, C., Realizing Benefits and Overcoming Challenges of Education Programs Associated with Scientific Research Programs, AGU, San Francisco, CA, December 2005

Morrow, C., SCIWG Retreat, Marriott, Boulder, CO, October 2005

Morrow, C., Zawaski, M., Kinesthetic Astronomy, AEE, Tucson, AZ, November 2005

Morrow, C., Grier, J., The Scientist Communication & Involvement Working Group (SCIWG) (Poster), ASP, Tucson, AZ, September 2005

Morrow, C., Cooper, L., Lebofsky, L., Harold, J., McLain, B., SCIWG Workshop, ASP, Tucson, AZ, September 2005

Morrow, C., Wilkerson, A., Kinesthetic Astronomy Workshop for Navajo Educators, Navajo Nation Museum, Window Rock, AZ, September 2005

Carolyn Porco

PROFESSIONAL ORGANIZATIONS & SERVICE

Member of several NASA advisory committees:

Solar System Exploration Subcommittee

Mars Observer Recovery Study Team

Solar System Road Map Development Team

Vice Chair of the Steering Group for the Solar System Decadal Survey, sponsored by the National Academy of Sciences and NASA

CEO of Diamond Sky Productions

PUBLICATIONS

Dyudina, U.A., Sackett, P.D., Bayliss, D.D.R., Seager, S., Porco, C.C., Throop, H.B., Dones, L., Phase Light Curves for Extra solar Jupiters and Saturns. *Icarus* 618, 973-986, 2005

Porco, C.C., et al., Cassini Imaging Science: Initial Results on Saturn's Rings and Small Satellites, *Science* 307, 1226-1236, 2005

Porco, C.C., et al., Cassini Imaging Science: Initial Results on Phoebe and Iapetus, *Science* 307, 1237-1242, 2005

Porco, C.C., et al., Cassini Imaging Science: Initial Results on Saturn's Atmosphere, *Science* 307, 1243-1247, 2005

Porco, C.C., et al., Imaging Titan from the Cassini Spacecraft, *Nature* 434, 159-168, 2005

Murray, C.D., Chavez, C., Beurle, K., Cooper, N., Evans, M.W., Burns, J.A., Porco, C.C., How Prometheus creates structure in Saturn's F ring. *Nature* 437, 1326-1329, 2005

Charnoz, S., Porco, C.C., Deau, E., Brahic, A., Spitale, J.N., Bacques, G., Baillie, K. Cassini Discovers a Kinematic Spiral Ring around Saturn. *Science* 310, 1241-1351, 2005

Roatsch, Th., Wählisch, M., Scholten, F., Hoffmeister, A., Matz, K.-D., Denk, T., Neukum, G., Thomas, P., Helfenstein, P., Porco, C., Mapping of the icy Saturnian satellites: First results from Cassini-ISS. *Planetary and Space Science*. In press, 2005

Giese, B., Neukum, G., Roatsch, T., Denk, T., Porco, C.C., Phoebe, stereo image analysis of Cassini-ISS observations and implications. *Planetary and Space Science*. In press, 2005

"To the Planets with Robot Eyes." An essay in *Beautiful Universe*, a Sky and Telescope special publication, edition 2005

MEETINGS AND CONFERENCE PROCEEDINGS

"In Orbit! The Adventures of Cassini at Saturn". Invited public presentation at the Expanding Canada's Frontiers in Space symposium, University of Toronto, Toronto, CA, January 2005

"In Orbit! Cassini Explores the Saturn System". Invited public presentation hosted by the Institute for Advanced Studies, Princeton, NJ, April 2005

"In Orbit! Cassini Explores the Saturn System". Invited public presentation hosted by the Astrobiology program, University of Washington, Seattle, WA, April 2005

"Adventures in the Promised Land: Cassini in Orbit Around Saturn". Kaufmanis Lecture. Invited public presentation at the American Astronomical Society meeting, Minneapolis, Minn., May 2005

"Highlights of Cassini's Imaging Adventures at Saturn". Invited presentation to the British Amateur Astronomer's Association, Cambridge, England, 2005

"In Orbit! Cassini Explores the Saturn System". Charles Simonyi Lecture. Invited public presentation at the Oxford Playhouse, Oxford, England, September 2005

"Saturn's Rings and Small Satellites". Invited presentation to the Public Forum at the Geological Society of America meeting, Salt Lake City, October 2005

“Adventures in the Promised Land: Cassini In Orbit Around Saturn”. Invited presentation to the Pop!tech 2005 Conference, Camden, Maine, October 2005

“In the Promised Land: Cassini’s Exploration of the Saturn System”. The Shoemaker Lecture. American Geophysical Union meeting, San Francisco, December 2005

“Planets, Piety, and Politics”. Invited presentation to The Amazing Meeting 4 (TAM4) of the James Randi Educational Foundation, Las Vegas, NV, January 2006

OTHER PRESENTATIONS

Many web, print, radio and TV interviews on Cassini’s exploration of Saturn. Notable ones are:

‘Titan: The New World’. CBS ‘60 Minutes’ segment on Cassini and Huygens

CNN Live commentary during Huygens Landing, January 2005

BBC Documentaries on Cassini

Australian TV: Catalyst: ‘Saturn’ and ‘Descent to Titan’

Profiles in CNN.com & Space.com

Science Times, New York Times article on Cassini, July 2005

Profile/Interview in ‘Physics Education’, Journal of the UK Institute of Physics, 2005

Press conferences associated with the DPS, GSA and AGU meetings, 2005

Discovery Science Channel documentary on Cassini (Parts 1 and 2), 2005

Brad Sandor

PROFESSIONAL ORGANIZATIONS & SERVICE

American Geophysical Union

American Astronomical Society, Division of Planetary Sciences

Referee for Icarus

PUBLICATIONS

Sandor, B.J., and R.T. Clancy. Water Vapor Variations in the Venus Mesosphere from Microwave Spectra. *Icarus*, 177. 129-143, 2005

Michael Sitko

PROFESSIONAL ORGANIZATIONS & SERVICE

Cincinnati Observatory Center: Board of Directors & Education Committee

International Astronomical Union member

American Astronomical Society member

Division for Planetary Sciences member

Astronomical Society of the Pacific member

Meteoritical Society member

Planetary Society member

Referee for Science, Astronomical Journal, Icarus, ASP Conference Series

PUBLICATIONS

Dust Morphology and Composition in FU Orionis Stars², E.F. Polomski, C.E. Woodward, C.E. Telesco, R. Piña, H. Butner, E. Holmes, D.K. Lynch, R.W. Russell, M.L. Sitko, and D.H. Wooden, *AJ*, 129, 1035-1048, 2005

Coronagraphic Imaging of pre-Main-Sequence Stars with the Hubble Space Telescope Space Telescope Imaging Spectrograph. I. The Herbig Stars¹, C.A. Grady, B.E. Woodgate, C.W. Bowers, T.R. Gull, M.L. Sitko, W.J. Carpenter, D.K. Lynch, R.W. Russell, R.B. Perry, G.M. Williger, A. Roberge, J.-C. Bouret, and M. Sahu, *ApJ*, 630, 958, 2005

MEETINGS AND CONFERENCE PROCEEDINGS

The HST/STIS Coronagraphic Survey of Pre-main Sequence Stars², C. Grady, B. Woodgate, K. Stabelfeldt, D. Padgett, Th. Ening, V. Grinin, A. Quirrenbach, C. Eiroa, M. Sitko, W.J. Carpenter, D.K. Lynch, R.W. Russell, G.M. Williger, J.-C. Bouret, A. Roberge, M. Sahu, R. Kinble, T. Gull, C. Bowers, and R.B. Perry. *AAS*, abstract 205.1717, January 2005

Mid-Infrared Ethane Emission on Neptune and Uranus², H.B. Hammel, M.L. Sitko, D.K. Lynch, R.W. Russell, T. Hewegama, and L. Bernstein, *DPS*, abstract 37.2209, September 2005

OTHER PRESENTATIONS

Radio Astronomy, Physics for the 21st Century, University of Cincinnati, 2005

The Science of Deep Impact, Cincinnati Observatory Center \rightarrow ScopeOut 2005

Gordon Videen

PROFESSIONAL ORGANIZATIONS & SERVICE

Co-Chair: NATO Advanced Research Workshop on "Optics of Biological Particles," Novosibirsk Russia, October 2005

Editorial Board, *Journal of Quantitative Spectroscopy and Radiative Transfer*

PUBLICATIONS

Shkuratov Y., M. Kreslavsky, V. Kaydash, G. Videen, J. Bell III, M. Wolff, M. Hubbard, K. Noll, and A. Lubenow, "Hubble Space Telescope imaging polarimetry of Mars during the 2003 opposition," *Icarus* 176, 1-11, 2005

Sun W., N.G. Loeb, S. Tanev, G. Videen, Finite-difference time domain solution of light scattering by an infinite dielectric column immersed in an absorbing medium, *Appl. Opt.* 44, 1977-1983, 2005

Videen G., M. Aslan, and M.P. Mengüç, Characterization of metallic nano-particles via surface wave scattering: A. Theo

retical framework and formulation, *J. Quant. Spectrosc. Radiative Transfer* 93, 196-206

Aslan M., M.P.Mengüç, and G. Videen, Characterization of metallic nano-particles via surface wave scattering: B. Physical concept and numerical experiments, *J. Quant. Spectrosc. Radiative Transfer* 93, 207-217, 2005

MEETINGS AND CONFERENCE PROCEEDINGS

Proceedings of NATO ARW on Optics of Biological Particles, edited by G. Videen, Novosibirsk, 2005

Kaydash V., M. Kreslavsky, Yu. Shkuratov, G. Videen, M. Wolff, J. Bell, "Synoptic wind measurements in the Martian atmosphere close to perihelion," The 42-nd Vernadsky/Brown Microsymposium on Comparative Planetology, October 2005

Zubko E., Muinonen K., Nousiainen T., Shkuratov Yu., and Videen G., "Influence of surface roughness on scattering properties of wavelength-size particles simulating regolith grains," The 42-nd Vernadsky/Brown Microsymposium on Comparative Planetology, October 2005

Videen G., "Aerosol elastic scattering," NATO Advanced Research Institute on Optics of Biological Particles, October 2005

Petrov D., Y. Shkuratov, E. Synelnyk, G. Videen, J. Eversole, M. Hart, and K. Scotto "T-matrix calculations of photopolarimetric properties of biological particles with complicated structure," NATO Advanced Research Institute on Optics of Biological Particles, October 2005

Voshchinnikov N., G. Videen "Core-mantle spheroidal model of electroporated vesicles," NATO Advanced Research Institute on Optics of Biological Particles, October 2005

Ovcharenko A., S. Bondarenko, Y. Shkuratov, G. Videen, J. Eversole, and Matthew Hart, "Backscattering of surfaces composed with dry biological particles," NATO Advanced Research Institute on Optics of Biological Particles, October 2005

Videen G., Y. Shkuratov, E. Zubko, D. Petrov, W. Sun, T. Nousiainen, K. Muinonen, N. Voshchinnikov, and V. Il'in, "Modeling irregular aerosols and their scattered light," Proceedings of the Conference on light scattering by nonspherical particles, Salobreña, Spain, edited by F. Moreno, J.J. López-Moreno, O. Muñoz, and A. Molina, 305-308, 2005

Muinonen K., W. Sun, G. Videen, and D. Ngo, "Light scattering by tetrahedral particles using physical-optics and finite-difference time-domain techniques," Proceedings of the Conference on light scattering by nonspherical particles, Salobreña, Spain, edited by F. Moreno, J.J. López-Moreno, O. Muñoz, and A. Molina, 237-240, 2005

Ovcharenko A., S. Bondarenko, Y. Shkuratov, G. Videen, J. Eversole, and M. Hart, "Photometric and polarimetric characterization of particulate substrates consisting of spherical particles," Proceedings of the Conference on light scattering by nonspherical particles, Salobreña, Spain, edited by F. Moreno, J.J. López-Moreno, O. Muñoz, and A. Molina, 261-264, 2005

Petrov D., E. Zubko, Y. Shkuratov, and G. Videen, "Scattering by agglomerated debris particles with different internal structure," Proceedings of the Conference on light scattering by nonspherical particles, Salobreña, Spain, edited by F. Moreno, J.J. López-Moreno, O. Muñoz, and A. Molina, 269-272, 2005

Voshchinnikov N., V. Il'in, T. Henning, and G. Videen, "Optical properties of fluffy particles with different internal structure," Proceedings of the Conference on light scattering by nonspherical particles, Salobreña, Spain, edited by F. Moreno, J.J. López-Moreno, O. Muñoz, and A. Molina, 317-320, 2005

Zubko E., Y. Shkuratov, and G. Videen, "Light scattering by very irregular dielectric particles at small phase angles," Proceedings of the Conference on light scattering by nonspherical particles, Salobreña, Spain, edited by F. Moreno, J.J. López-Moreno, O. Muñoz, and A. Molina, 337-340, 2005

OTHER PRESENTATIONS

Videen G., "Some studies of the negative polarization branch of irregular particles," seminar at University of Amsterdam, The Netherlands, December 2005

Videen G., "Light Scattering Polarization for Remote Sensing," seminar at University of Cantabria, Spain, June 2005

Brian Warner

PROFESSIONAL ORGANIZATIONS & SERVICE

AAS/DPS - full member

Board of Trustees, Society for Astronomical Sciences

Chairman, Program Committee, 25th Annual Conference of the Society for

Astronomical Sciences

PUBLICATIONS

Warner, B.D., A Practical Guide to Lightcurve Photometry and Analysis (second edition). Springer, pp. 298, 2006

Warner, B.D., Rotation Rates for Numbered Asteroids 242, 893, 921,

1373, 1853, 2120, 2448, 3022, 6490, 6517, 7187, 7757, and 18108, Minor Planet Bulletin 32, 4-7, 2005

Warner, B.D., Asteroid-Deepsky Appulses in 2005, Minor Planet Bulletin 32, 12, 2005

Warner, B.D., Kaasalainen, M., Pravec, P., Harris, A. W., Asteroid Photometry Opportunities, January-March 2005, Minor Planet Bulletin, 32, 22-23, 2005

Warner, B.D., Revised lightcurve Analysis for 1022 Olympiada and 3285 Ruth Wolfe, Minor Planet Bulletin 32, 26, 2005

Warner, B.D., Asteroid Lightcurve Analysis at the Palmer Divide Observatory - Fall 2004, Minor Planet Bulletin 32, 29-32, 2005

Warner, B.D., Bembrick, C., A Revised Period for 3447 Burckhalter, Minor Planet Bulletin 32, 40-41, 2005

Warner, B.D., Asteroid Lightcurve Analysis at the Palmer Divide Observatory - Winter 2004-2005, Minor Planet Bulletin 32, 54-58, 2005

Warner, B.D., Kaasalainen, M., Pravec, P., Harris, A. W., Asteroid Photometry Opportunities, July-September 2005, Minor Planet Bulletin, 32, 69-71, 2005

Warner, B.D., Asteroid Lightcurve Analysis at the Palmer Divide Observatory - Spring 2005, Minor Planet Bulletin 32, 90-92, 2005

Warner, B.D., Kaasalainen, M., Pravec, P., Harris, A. W., Asteroid Photometry Opportunities - October-December 2005, Minor Planet Bulletin, 32, 95-96, 2005

Warner, B., Pravec, P., Kusnirak, P., Pray, D., Galad, A., Gajdos, S., Brown, P., Krzeminski, Z., A New Binary Asteroid: 5905

Johnson, IAUC 8511, 2005

Warner, B.D., Pravec, P., Pray, D., A New Binary Asteroid: (76818) 2000 RG79. IAUC 8592, 2005

Warner, B.D., Pravec, P., Kusnirak, P., Cooney Jr., W., Gross, J., Terrell, D., Nudds, S., A New Binary Asteroid: 3309 Brorfelde, CBET 279, 2005

Warner, B.D., Pray, D., Pravec, P., Cooney Jr., W., Gross, J., Terrell, D., A New Binary Asteroid: (34706) 2001 OP83, CBET 341, 2005

MEETINGS AND CONFERENCE PROCEEDINGS

Warner, B.D., Pravec, P., Harris, A.W., Galad, A., Kusnirak, P., Pray,

D.P., Brown, P., Krzeminski, Z., Cooney Jr., W.R., Binary Hungarias

(5905) Johnson and (9069) Hovland: Their Relations to Small Binary Vestoids and NEAs. 2005, Abstracts Book ACM (IAU Symposium 229). Poster P10.14, p. 89, 2005

Warner, B.D., Harris, A.W., Pravec, P., A Lightcurve Study of the Inner

Main-Belt Hungaria Asteroids, Abstracts Book ACM 2005 (IAU

Symposium 229). Poster P15.24, p. 134, 2005

OTHER PRESENTATIONS

Warner, B.D., Using MPO Canopus and PhotoRed for Deriving Asteroid

Lightcurves and Reducing Observations to Standard Magnitudes.

Photometry Workshop, 24th Annual Conference of the Society for Astronomical Sciences, May 2005

John Weiss

PROFESSIONAL ORGANIZATIONS & SERVICE

Member, AAS (Divisions for Planetary Science and Dynamical Astronomy)

Member, Sigma Xi

PUBLICATIONS

M. S. Tiscareno, J. A. Burns, M. M. Hedman, C. C. Porco, J. W. Weiss, C. D. Murray, and L. Dones, Observation of "Propellers" Indicates 100-metre Diameter Moonlets Reside in Saturn's A-Ring, *Nature*, accepted

MEETINGS AND CONFERENCE PROCEEDINGS

J. W. Weiss, C. C. Porco, M. S. Tiscareno, J. A. Burns, and L. Dones, Determination of the Masses of Ring-Embedded Moons from their Effects on Nearby Ring Particles, Cassini Program Science Group meeting #36

J. W. Weiss, C. C. Porco, M. S. Tiscareno, J. A. Burns, and L. Dones, Determination of the Masses of Ring-Embedded Moons from their Effects on Nearby Ring Particles, DPS 37th Annual Meeting

C. C. Porco, P. Thomas, J. Spitale, R. A. Jacobson, T. Denk, S. Charnoz, S., C. C. Richardson, L. Dones, E. Baker, J. W. Weiss, Physical and Orbital Properties of Some of Saturn's Small Satellites, DPS 37th Annual Meeting

J. W. Weiss, C. C. Porco, P. Thomas, D. C. Richardson, Accretion of Small Satellites: Results of Simulations, Cassini Program Science Group meeting #37

Cassini Project Science Group meetings 36 and 37 (presented at both)

OTHER PRESENTATIONS

"Science of Science Fiction" public planetarium show given at Fiske Planetarium in November 2005

Barbara A. Whitney

PROFESSIONAL ORGANIZATIONS & SERVICE

Reviewed several articles for the Astrophysical Journal

PUBLICATIONS

Cohen, M., Green, A. J., Roberts, M. S. E., Meade, M. R., Babler, B., Indebetouw, R., Whitney, B. A., Watson, C., Wolfire, M., Wolff, M. J., Mathis, J. S., and Churchwell, E. B., "G313.3+00.3: A New Planetary Nebula Discovered by the Australia Telescope Compact Array and the Spitzer Space Telescope," *Astrophysical Journal*, 627, 446—453, 2005

Benjamin, R. A., Churchwell, E., Babler, B. L., Indebetouw, R., Meade, M. R., Whitney, B. A., Watson, C., Wolfire, M. G., Wolff, M. J. and 13 other co-authors, "First GLIMPSE Results on the Stellar Structure of the Galaxy," *Astrophysical Journal*, 630, L149--L152, 2005

Uzpen, B., Kobulnicky, H. A., Olsen, K. A. G., Clemens, D. P., Laurance, T. L., Meade, M. R., Babler, B. L., Indebetouw, R., Whitney, B. A., Watson, C., Wolfire, M. G., Wolff, M. J., and 14 other co-authors, "Identification of Main-Sequence Stars with Mid-Infrared Excesses Using GLIMPSE: Beta-Pictoris Analogs?" *Astrophysical Journal*, 629, 512—525, 2005

Buschermohle, M., Whittet, D. C. B., Chrysostomou, A., Hough, J. H., Lucas, P. W., Adamson, A. J., Whitney, B. A., and Wolff, M. J., "An Extended Search for Circularly Polarized Infrared Radiation from the OMC-1 Region of Orion," *Astrophysical Journal*, 624, 821—826, 2005

Indebetouw, R., Mathis, J. S., Babler, B. L., Meade, M. R., Watson, C., Whitney, B. A., Wolff, M. J., and 13 other co-authors, "The Wavelength Dependence of Interstellar Extinction from 1.25 to 8.0 microns Using GLIMPSE Data," *Astrophysical Journal*, 619, 931-938, 2005

Michael J. Wolff

PROFESSIONAL ORGANIZATIONS & SERVICE

Member AAS, DPS, AGU, IAU

NASA Planetary Atmospheres Program External Reviewer

NASA Planetary Geology and Geophysics Program External Reviewer

Hubble Space Telescope Cycle 14 Allocation Review Panel (Solar System)

NASA Mars Exploration Rovers Participating Scientist Program Review Panel (Atmospheres, Panel Chair)

NASA Mars Fundamental Research Program Review Panel (Atmospheres, Panel Chair 2005)

NASA Mars Data Analysis Program External Reviewer

PUBLICATIONS

Mercer, E. P., Clemens, D. P., Meade, M. R., Babler, B. L., Indebetouw, R., Whitney, B. A., Watson, C., Wolfire, M. G., Wolff, M. J. and 11 other co-authors, "New Star Clusters Discovered in the GLIMPSE Survey," *Astrophysical Journal*, 635, 560—569, 2005

Benjamin, R. A., Churchwell, E., Babler, B. L., Indebetouw, R., Meade, M. R., Whitney, B. A., Watson, C., Wolfire, M. G., Wolff, M. J. and 13 other co-authors, "First GLIMPSE Results on the Stellar Structure of the Galaxy," *Astrophysical Journal*, 630, L149--L152, 2005

Cartledge, Stefan I. B., Clayton, G. C., Gordon, K. D., Rachford, B. L., Draine, B. T., Martin, P. G., Mathis, J. S., Misselt, K. A., Sofia, U. J., Whittet, D. C. B., and Wolff, M. J., "FUSE Measurements of Far-Ultraviolet Extinction. II. Magellanic Cloud Sight Lines," *Astrophysical Journal*, 630, 355—367, 2005

Pitman, K. M., Wolff, M. J., and Clayton, G. C., "Application of modern radiative transfer tools to model laboratory quartz emissivity," *Journal of Geophysical Research - Planets*, 110, CitelD E08003 (DOI: 10.1029/2005JE002428), 2005

Uzpen, B., Kobulnicky, H. A., Olsen, K. A. G., Clemens, D. P., Laurance, T. L., Meade, M. R., Babler, B. L., Indebetouw, R., Whitney, B. A., Watson, C., Wolfire, M. G., Wolff, M. J., and 14 other co-authors, "Identification of Main-Sequence Stars with Mid-Infrared Excesses Using GLIMPSE: Beta-Pictoris Analogs?" *Astrophysical Journal*, 629, 512—525, 2005

Bell, J. F., Lemmon, M. T., Duxbury, T. C., Hubbard, M. Y. H., Wolff, M. J., Squyres, S. W., Craig, L., and Ludwinski, J. M., "Solar eclipses of Phobos and Deimos observed from the surface of Mars," *Nature*, 436, 55—57, 2005

Shkuratov, Y., Kreslavsky, M., Kaydash, V., Videen, G., Bell III, J., Wolff, M., Hubbard, M., Noll, K., and Lubenow, A., "Hubble Space Telescope imaging polarimetry of Mars during the 2004 opposition," *Icarus*, 176, 1—11, 2005

Cohen, M., Green, A. J., Roberts, M. S. E., Meade, M. R., Babler, B., Indebetouw, R., Whitney, B. A., Watson, C., Wolfire, M., Wolff, M. J., Mathis, J. S., and Churchwell, E. B., "G313.3+00.3: A New Planetary Nebula Discovered by the Australia Telescope Compact Array and the Spitzer Space Telescope," *Astrophysical Journal*, 627, 446—453, 2005

Sofia, U. J., Wolff, M. J., and 9 other co-authors, "FUSE Measurements of FUV Extinction. I. Galactic Sight Lines," *Astrophysical Journal*, 625, 167—180, 2005

Buschermohle, M., Whittet, D. C. B., Chrysostomou, A., Hough, J. H., Lucas, P. W., Adamson, A. J., Whitney, B. A., and Wolff, M. J., "An Extended Search for Circularly Polarized Infrared Radiation from the OMC-1 Region of Orion," *Astrophysical Journal*, 624, 821—826, 2005

McGough, C., Clayton, G. C., Gordon, K. D., and Wolff, M. J., "Measuring Extinction Curves of Lensing Galaxies," *Astrophysical Journal*, 624, 118-123, 2005

James, P. B., Bonev, B. P., and Wolff, M. J., "Visible albedo of Mars' south polar cap: 2003 HST observations," *Icarus*, 174, 596-599, 2005

Arvidson, R. E., Poulet, F., Bibring, J.-P., Wolff, M. J., and 6 additional co-authors, "Spectral Reflectance and Morphologic Correlations in Eastern Terra Meridiani, Mars," *Science*, 307, 1591-1594, 2005

Indebetouw, R., Mathis, J. S., Babler, B. L., Meade, M. R., Watson, C., Whitney, B. A., Wolff, M. J., and 13 other co-authors, "The Wavelength Dependence of Interstellar Extinction from 1.25 to 8.0 microns Using GLIMPSE Data," *Astrophysical Journal*, 619, 931-938, 2005

Kobulnicky, H. A., Monson, A. J., Buckalew, B. A., Darnel, J. M., Uzpen, B., Meade, M. R., Babler, B. L., Indebetouw, R., Whitney, B. A., Watson, C., Churchwell, E., Wolfire, M. G., Wolff, M. J., and 16 other co-authors, "Discovery of a New Low-Latitude Milky Way Globular Cluster Using GLIMPSE," *Astronomical Journal*, 129, 239—250, 2005

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